EAU

JANUARY 2021

PROJECT ID: **1021-00-78**

WITH: 1021-00-79 / 1021-04-77 / 1021-04-78

COUNTY: **ST. CROIX**

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 = 550

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1021-00-78	WISC 2021100	1
1021-00-79	WISC 2021101	1
1021-04-77	WISC 2021102	1
1021-04-78	WISC 2021103	1

BALDWIN - MENOMONIE
CTH NN BRIDGE EAST BOUND B-55-0271
I-94
ST. CROIX

STATE PROJECT NUMBER
1021-00-78

BALDWIN - MENOMONIE
CTH NN BRIDGE WEST BOUND B-55-0270
I-94
ST. CROIX

STATE PROJECT NUMBER
1021-00-79

BALDWIN - MENOMONIE
CARR CREEK EB BRG B-55-0281 & 0285
I-94
ST. CROIX

STATE PROJECT NUMBER
1021-04-77

BALDWIN - MENOMONIE
CARR CREEK WB BRG B-55-0282 & 0286
I-94
ST. CROIX

STATE PROJECT NUMBER
1021-04-78

N

END PROJECT 1021-04-77
STA 62+97.29 'EB'
N = 327823.2906
E = 636040.6578

END PROJECT 1021-04-78
STA 57+10.35 'WB'
N = 327851.6110
E = 635407.2534

BEGIN PROJECT 1021-04-77
STA 24+50 'EB'
N = 327853.3897
E = 632196.4772

BEGIN PROJECT 1021-04-78
STA 8+23.67 'WB'
N = 327958.5449
E = 630522.6176

STRUCTURE B-55-0286 (RAMP A)
STRUCTURE B-55-0282 (I-94 WB)

STRUCTURE B-55-0281 (I-94 EB)
STRUCTURE B-55-0285 (RAMP B)

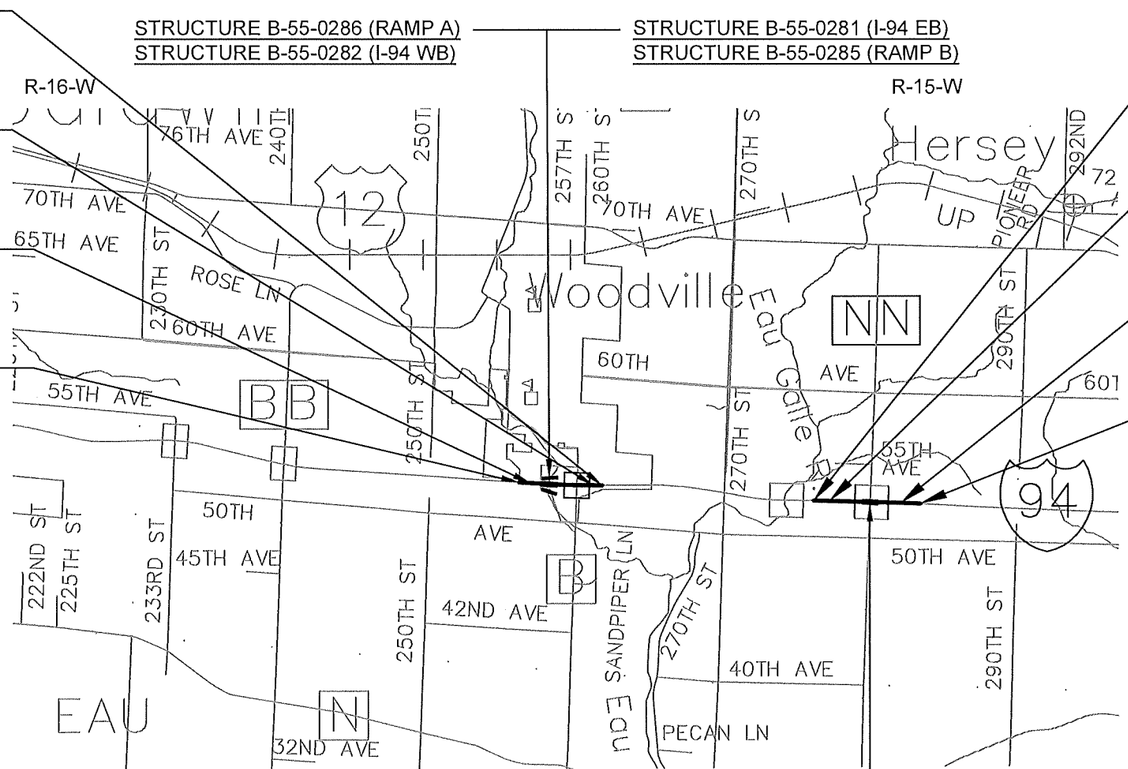
BEGIN PROJECT 1021-00-79
STA 137+08 'WB'
N = 327585.1845
E = 643381.3937

BEGIN PROJECT 1021-00-78
STA 145+50 'EB'
N = 327491.0922
E = 644227.0238

END PROJECT 1021-00-78
STA 169+50 'EB'
N = 327510.1848
E = 646626.7532

END PROJECT 1021-00-79
STA 179+58 'WB'
N = 327596.2268
E = 647629.9890

STRUCTURE B-55-0270 (I-94 WB)
STRUCTURE B-55-0271 (I-94 EB)



LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.455 MI (1021-00-78)
0.805 MI (1021-00-79)
0.729 MI (1021-04-77)
0.926 MI (1021-04-78)

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, ST. CROIX COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

DESIGN DESIGNATION 1021-00-08 / 1021-00-09

A.A.D.T.	2021	=	34600 (CTH NN - 140)
A.A.D.T.	2041	=	44900 (CTH NN - 170)
D.H.V.		=	19.2
D.D.		=	60/40
T.		=	30.0%
DESIGN SPEED		=	70 MPH
ESALS		=	57,000,000

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES
- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WILLIAM HOLME
Designer	KOU THAO
Project Manager	STACIE LAMBELE
Regional Examiner	JENNIFER OLDENBURG
Regional Supervisor	NICOLE PASSUELLO

APPROVED FOR THE DEPARTMENT
DATE: 11/20/20 Nicole Passuello (Signature)

E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\010101-TI-IH94.DWG PLOT DATE : 11/19/2020 8:46 AM PLOT BY : THAO, KOU PLOT NAME :

LIST OF STANDARD ABBREVIATIONS

ABUT.	ABUTMENT
AGG.	AGGREGATE
AH.	AHEAD
APPROX.	APPROXIMATE
A.E.W.	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
AZ.	AZIMUTH
BK.	BACK
BEG.	BEGIN
B.M.	BENCH MARK
C/L	CENTER LINE
CONC.	CONCRETE
CONST.	CONSTRUCTION
CO.	COUNTY
C.T.H.	COUNTY TRUNK HIGHWAY
X-SEC.	CROSS SECTION
CR.	CRUSHED
CFS	CUBIC FEET/SECOND
C.Y., CU. YD.	CUBIC YARD
CULV.	CULVERT
C.P.	CULVERT PIPE
D.O.T.	DEPARTMENT OF TRANSPORTATION
D.H.V.	DESIGN HOUR VOLUME
DIA.	DIAMETER
D.	DIRECTIONAL DISTRIBUTION
DISCH. OR DIS.	DISCHARGE
EA.	EACH
ELECT.	ELECTRIC
EL. OR ELEV.	ELEVATION
EMB.	EMBANKMENT
E.B.S.	EXCAVATION BELOW SUBGRADE
EXIST.	EXISTING
FERT.	FERTILIZE
F.E.	FIELD ENTRANCE
FIN.	FINISHED
FT.	FOOT
F.L.	FLOW LINE
GA.	GAUGE
HORIZ.	HORIZONTAL
CWT.	HUNDREDWEIGHT
INL.	INLET
LT.	LEFT
L.H.F.	LEFT-HAND FORWARD
LIN.	LINEAR
LIN. FT.	LINEAR FOOT
L.S.	LUMP SUM
MAX.	MAXIMUM
MI.	MILE
MISC.	MISCELLANEOUS
N.E.	NORTH EAST
N.W.	NORTH WEST
PAV'T	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.O.T.	POINT ON TANGENT
LB.	POUND
P.E.	PRIVATE ENTRANCE
PROJ.	PROJECT
R.	RANGE
REQ'D	REQUIRED
RT.	RIGHT
R.H.F.	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHR.	SHRINKAGE
SL.	SLOPE
STD.	STANDARD
S.D.D.	STANDARD DETAIL DRAWINGS
S.T.H.	STATE TRUNK HIGHWAY
STA.	STATION
S.P.P.A.	STRUCTURAL PLATE PIPE ARCH
STRUCT.	STRUCTURE
SURF.	SURFACE
TEL.	TELEPHONE
TN.	TOWN
T.	TRUCKS (PERCENT OF)
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND
V.	VELOCITY OR DESIGN SPEED
V.C.	VERTICAL CURVE

UTILITIES

COMMUNICATIONS LINE

AT&T LEGACY
BRAD KEMPH (LOCATOR)
715-254-5238
COPY ALL CORRESPONDENCE TO:
BILL KOENIG (ENGINEER)
JMC ENGINEERS & ASSOCIATES
128 W SUNSET AVENUE
APPLETON, WI 54911
608-628-0575 (MOBILE)
wekoenig@att.net

BALDWIN TELECOM, INC.
MATT KNEGENDORF
930 MAPLE ST.
BALDWIN, WI 54002
715-688-1034 (OFFICE)
mknegendorf@lswi.net

CENTURYLINK COMMUNICATIONS
KENDALL WILLIAMS-ZETINA
100 S. CINNCINNATI AVE., SUITE 1200
TULSA, OK 74103
918-547-0547
Kendall.Zetina@centurylink.com
CenturyLinkNationalOSPRelocations@centurylink.com

LEVEL 3 COMMUNICATIONS
KENNETH NINE
110 N. MAIN ST.
CULVER, IN 46511
574-842-8830 (OFFICE)
574-904-6336 (MOBILE)
Knine@jmceainc.com
COPY ALL CORRESPONDENCE TO:
NationalRelo@centurylink.com

ELECTRICITY - DISTRIBUTION

ST. CROIX ELECTRIC COOPERATIVE
ROB DOOLEY
1925 RIDGEWAY ST.
P.O. BOX 160
HAMMOND, WI 54015-0160
715-796-5637 (OFFICE)
715-781-2295 (MOBILE)
robdoo@secnet.net

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

GENERAL NOTES

HORIZONTAL CONTROL POINTS AND ANY OTHER SURVEY INFORMATION WILL BE PROVIDED BY NORTHWEST REGION TECHNICAL SERVICES UPON REQUEST.

CURVE DATA IS BASED ON THE ARC DEFINITION.

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

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.

DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.

TYPICAL FINISHED SECTIONS SHOW THE GENERAL ROADWAY FEATURES THROUGHOUT THE PROJECT. SLOPES AND DISTANCES MAY VARY WITHIN THE STATION LIMITS.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

WETLANDS MAY EXIST IN LOCATIONS THAT ARE NOT SHOWN ON THE PLANS. DO NOT STAGE IN OR DISTURB WETLAND AREAS.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT SHOWN ON THE CROSS SECTIONS, BUT IS MEASURED AND PAID FOR AS EXCAVATION COMMON. THE LOCATIONS AND LIMITS FOR EBS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

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

THE 4" HMA PAVEMENT SHALL BE PLACED IN TWO LAYER WITH TWO-2" 4MT58-28S.

THE 6" HMA PAVEMENT SHALL BE PLACED IN TWO LAYERS WITH A 4" 3MT58-28S LOWER LAYER AND A 2" 4MT58-28S UPPER LAYER.

THE 7" HMA PAVEMENT SHALL BE PLACED IN THREE LAYERS WITH A 5"(TWO-2.5" LAYERS) 3MT58-28S LOWER LAYERS AND A 2" 4MT58-34S UPPER LAYER.

THE PAVEMENT STRUCTURE FOR TEMPORARY MEDIAN CROSSOVERS AND TEMPORARY ROADWAY SHALL CONSIST OF 6 INCHES OF ASPHALTIC SURFACE TEMPORARY OVER 12 INCHES BASE AGGREGATE DENSE 1 1/4-INCH.

PAVE ASPHALTIC SHOULDERS ADJACENT TO PERMANENT BEAMGUARD TO A WIDTH FLUSH WITH BEAMGUARD FACE.

CROSS DRAIN PIPE ELEVATIONS, LENGTHS, AND LOCATIONS AS SHOWN ON THE PLANS MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ALL CONCRETE PIPE SHALL HAVE THE APRON ENDWALL AND THE FIRST TWO PIPE JOINTS TIED AT THE JOINTS, (THREE JOINTS TOTAL).

INLET DEPTHS ARE APPROXIMATE AND MUST BE FIELD VERIFIED.

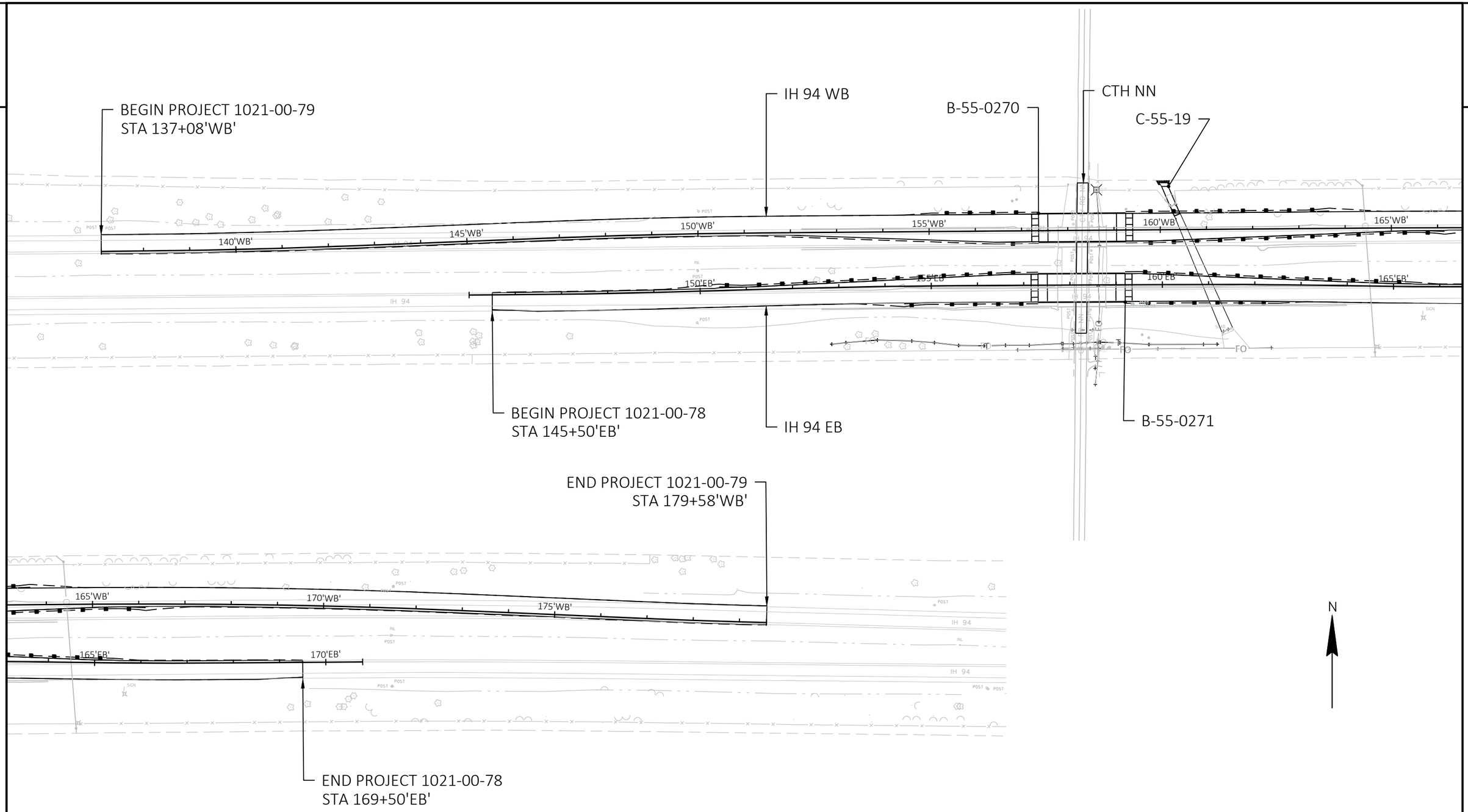
PIPE LENGTHS SHOWN ON THE STORM SEWER ARE TO CENTER OF STRUCTURE(S).

EXISTING RIGHT OF WAY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE APPROXIMATE LOCATIONS.

WISCONSIN DNR CONTACT

AMY L. LESIK
DEPARTMENT OF NATURAL RESOURCES
WEST CENTRAL REGION HDQTRS
1300 W CLAIREMONT AVENUE
PO BOX 4001
EAU CLAIRE, WI 54701-4001
(715) 836-6571

2



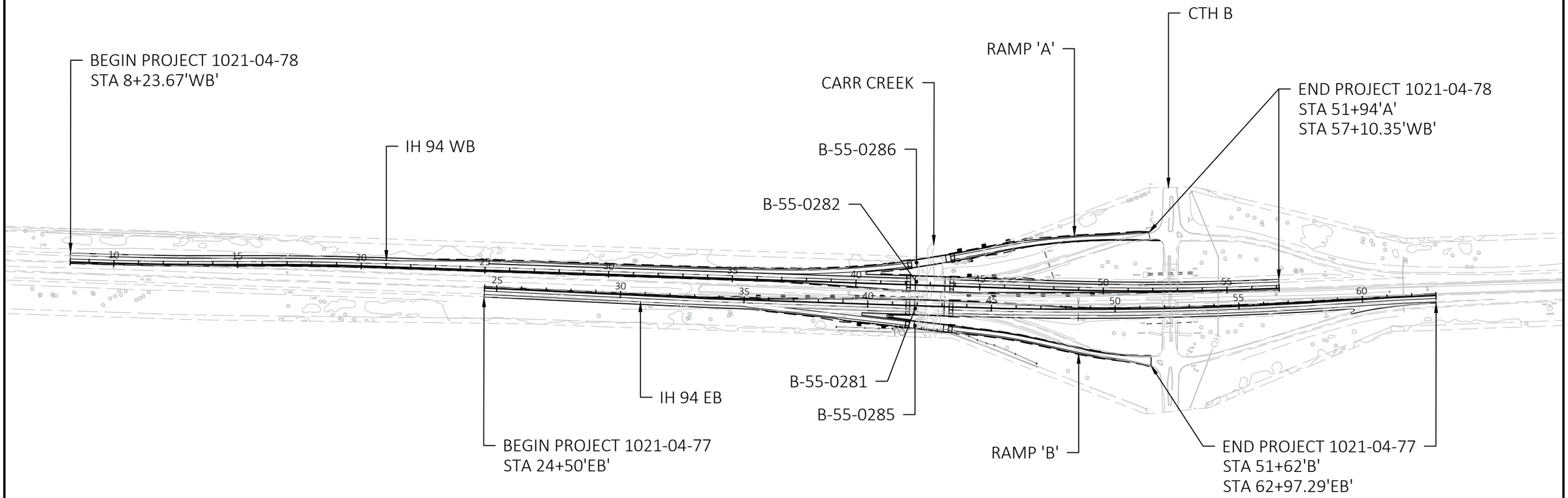
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\020202-PO-IH94.DWG
LAYOUT NAME - 01

PLOT DATE : 9/30/2020 5:42 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:200 FT

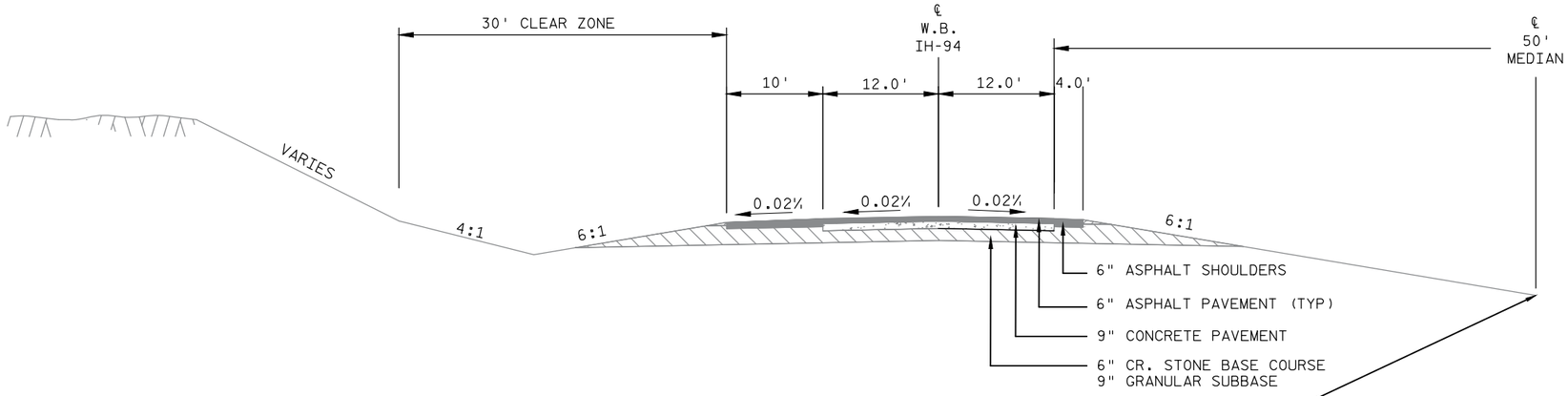
2

N



PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PROJECT OVERVIEW	SHEET 4	E

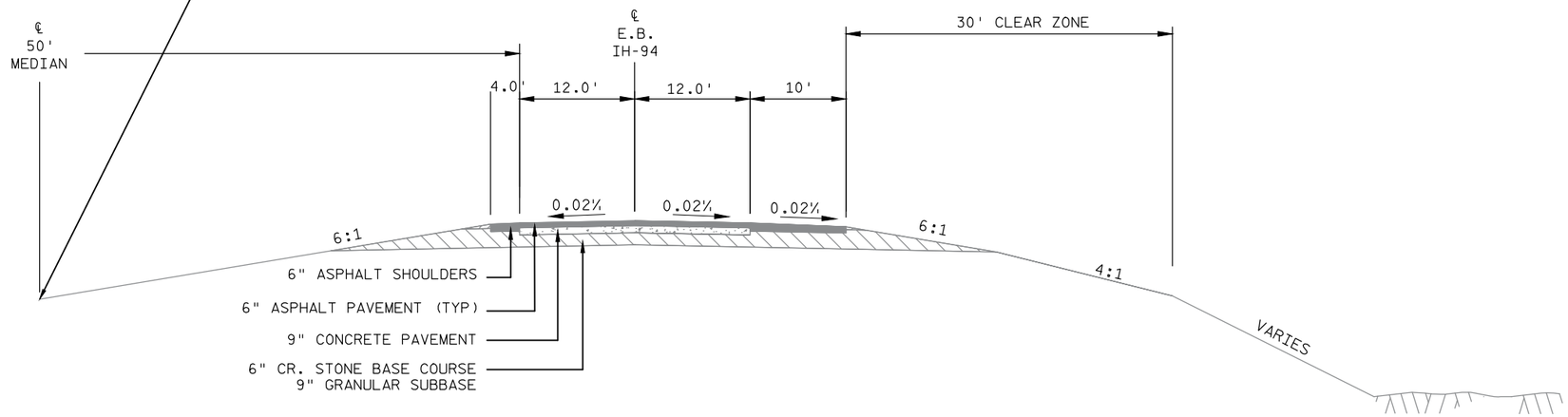
2



STA. 137+08'WB' - STA. 179+58'WB'

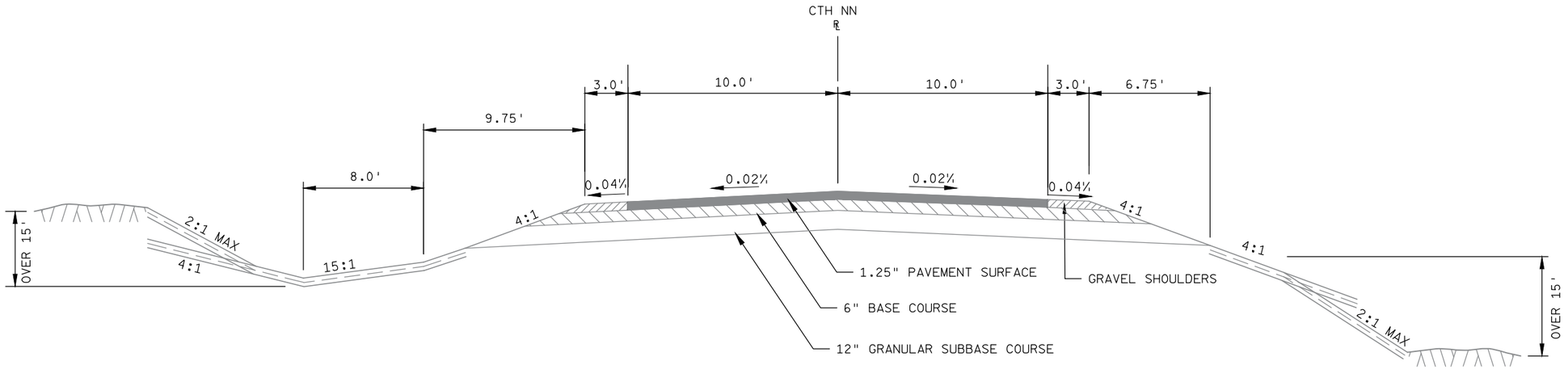
SAME POINT

EXISTING TYPICAL SECTION
IH 94



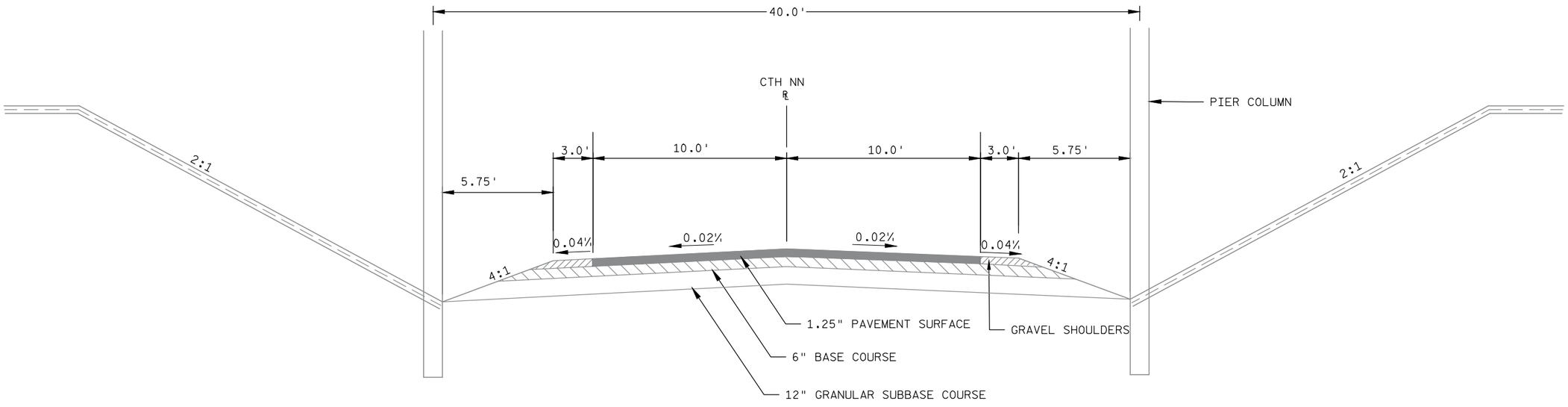
STA. 145+50'EB' - STA. 169+50'EB'

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EXISTING TYPICAL SECTIONS	SHEET 5	E



STA. 103+00'NN' - STA. 107+00'NN'

** 4-INCH TOPSOIL & SEEDING AREA



STA. SECTION UNDER BRIDGE

EXISTING TYPICAL SECTION
CTH NN

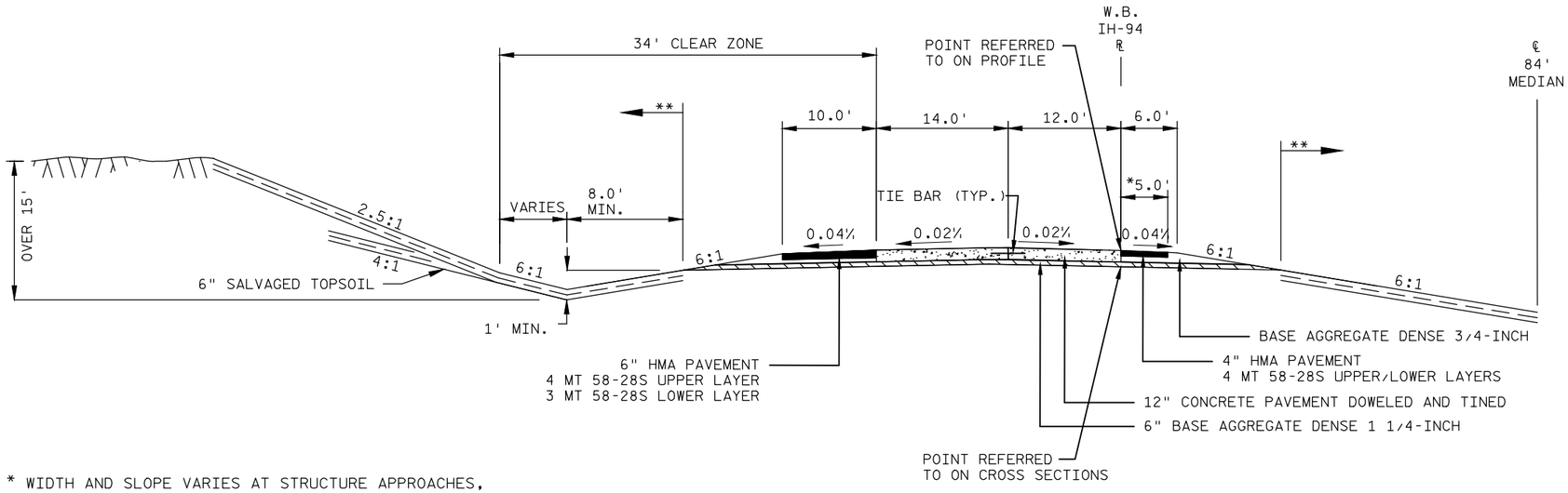
PROJECT NO: 1021-00-78,79	HWY: IH 94	COUNTY: ST. CROIX	EXISTING TYPICAL SECTIONS	SHEET 6	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\020301-TS-I94.DWG
LAYOUT NAME - 02

PLOT DATE : 6/10/2020 11:45 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1IN:15 FT

WISDOT/CADDS SHEET 42

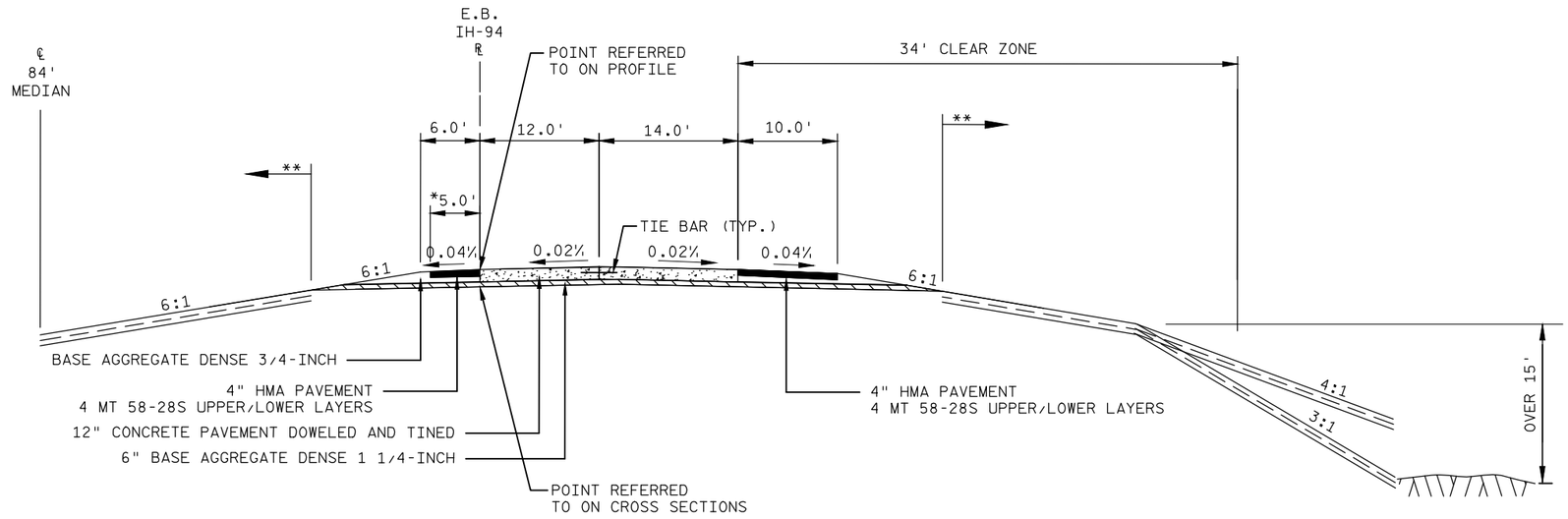
2



* WIDTH AND SLOPE VARIES AT STRUCTURE APPROACHES, SEE CROSS SECTIONS.

** SEE EROSION CONTROL PLAN FOR SEEDING, FERTILIZING,MULCHING AND EROSION MAT.

STA. 137+08'WB' - STA. 179+58'WB'

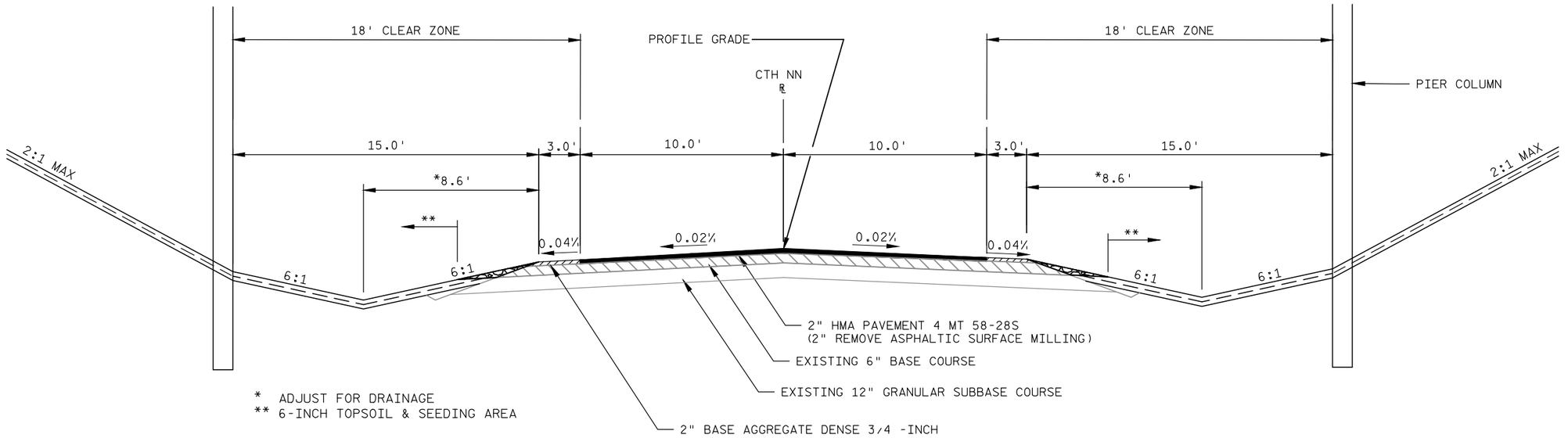


STA. 145+50'EB' - STA. 169+50'EB'

FINISHED TYPICAL SECTION
IH 94

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	FINISHED TYPICAL SECTIONS	SHEET 7	E

2



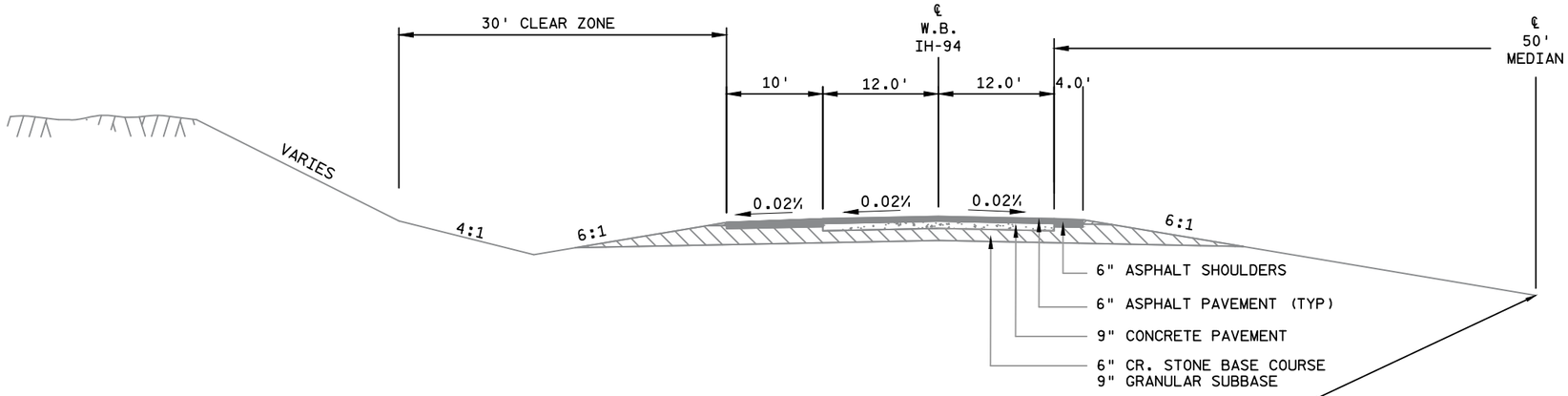
* ADJUST FOR DRAINAGE
** 6-INCH TOPSOIL & SEEDING AREA

STA. 103+50'NN' - 106+75'NN'

FINISHED TYPICAL SECTION
CTH NN

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	FINISHED TYPICAL SECTIONS	SHEET 8	E

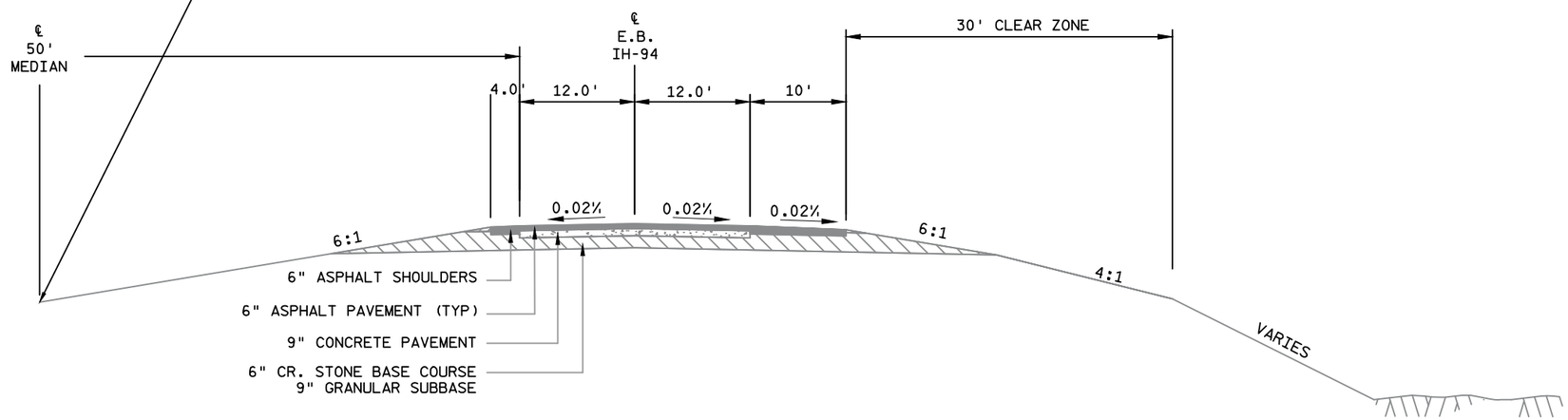
2



STA. 8+23'WB' - STA. 57+10'WB'

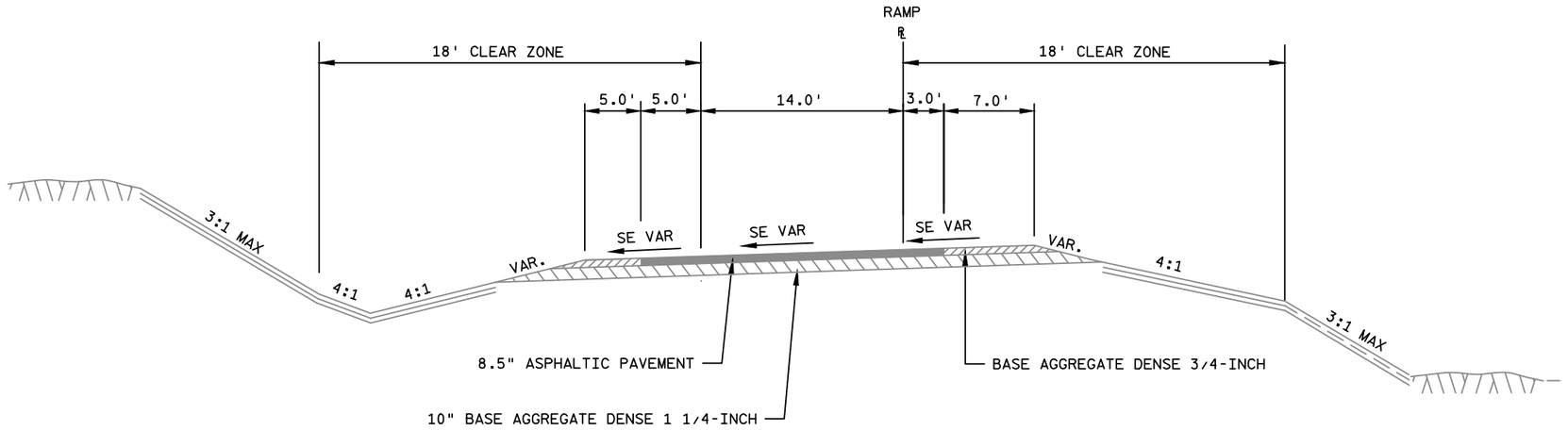
SAME POINT

EXISTING TYPICAL SECTION
IH 94

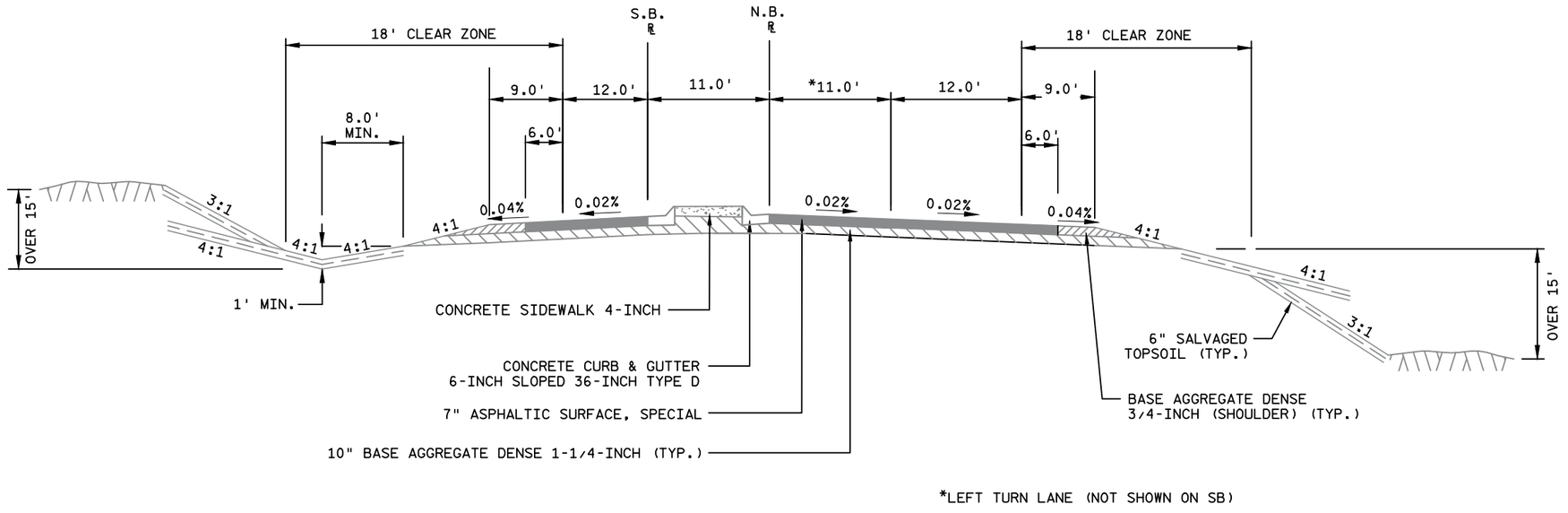


STA. 24+50'EB' - STA. 62+97'EB'

PROJECT NO: 1021-04-77,78	HWY: IH 94	COUNTY: ST. CROIX	EXISTING TYPICAL SECTIONS	SHEET 9	E



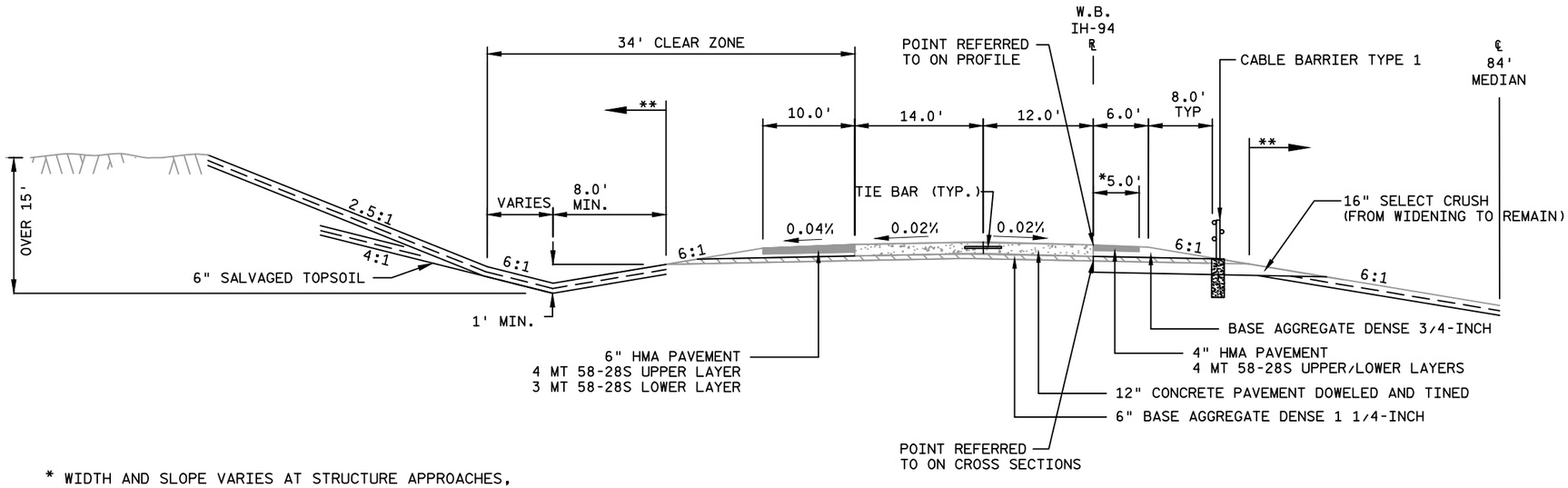
EXISTING TYPICAL SECTION
RAMP



*LEFT TURN LANE (NOT SHOWN ON SB)

EXISTING TYPICAL SECTION
CTH B

PROJECT NO: 1021-04-77,78	HWY: IH 94	COUNTY: ST. CROIX	EXISTING TYPICAL SECTIONS	SHEET 10	E

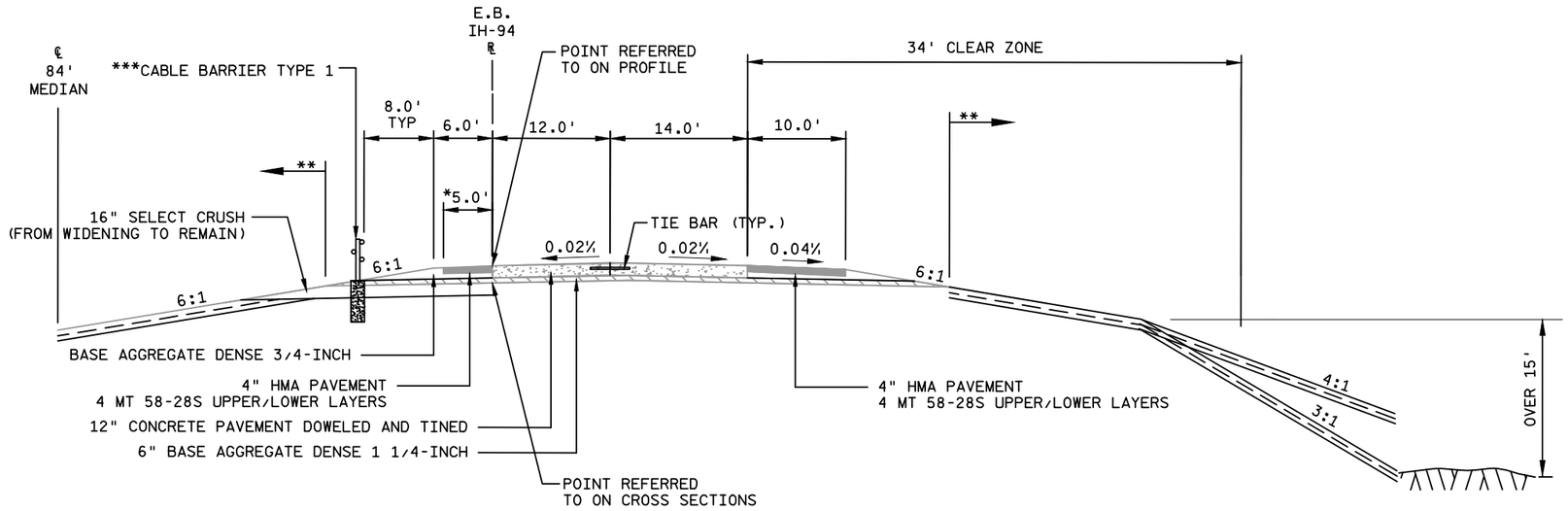


* WIDTH AND SLOPE VARIES AT STRUCTURE APPROACHES, SEE CROSS SECTIONS.

** SEE EROSION CONTROL PLAN FOR SEEDING, FERTILIZING,MULCHING AND EROSION MAT.

*** SEE PLAN SHEETS FOR LOCATIONS. SEE SDD CABLE BARRIER TYPE 1 LAYOUT FOR DETAILS.

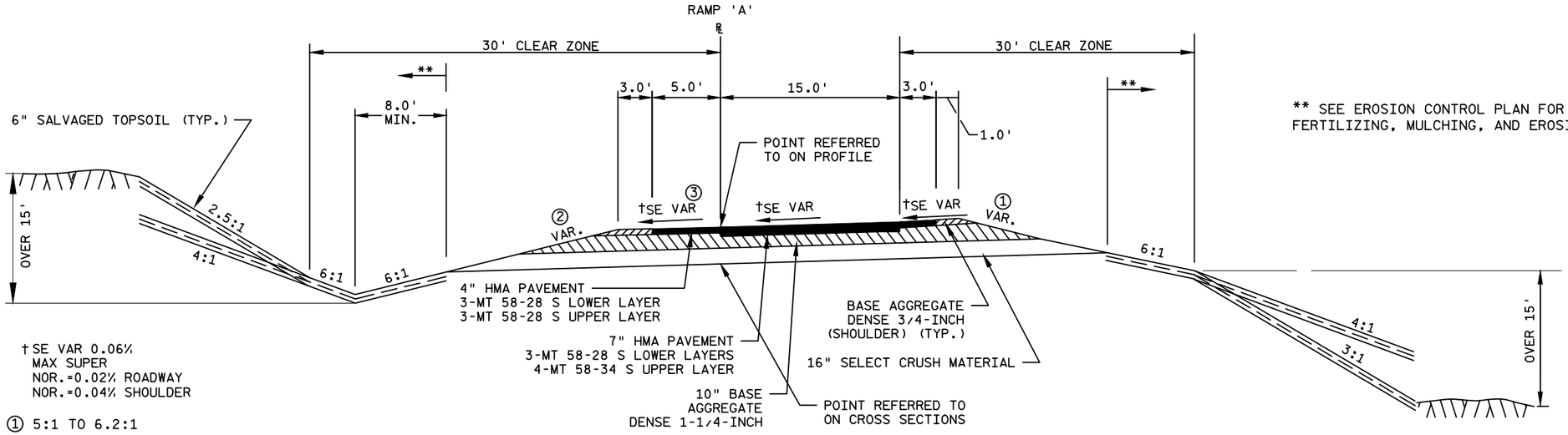
STA.8+23.67'WB' - STA. 57+10.35'WB'



STA.24+50'EB' - STA. 62+97.29'EB'

FINISHED TYPICAL SECTION
IH 94

PROJECT NO: 1021-04-77,78	HWY: IH 94	COUNTY: ST. CROIX	FINISHED TYPICAL SECTIONS	SHEET 11	E



** SEE EROSION CONTROL PLAN FOR SEEDING, FERTILIZING, MULCHING, AND EROSION MAT

† SE VAR 0.06%
MAX SUPER
NOR.=0.02% ROADWAY
NOR.=0.04% SHOULDER

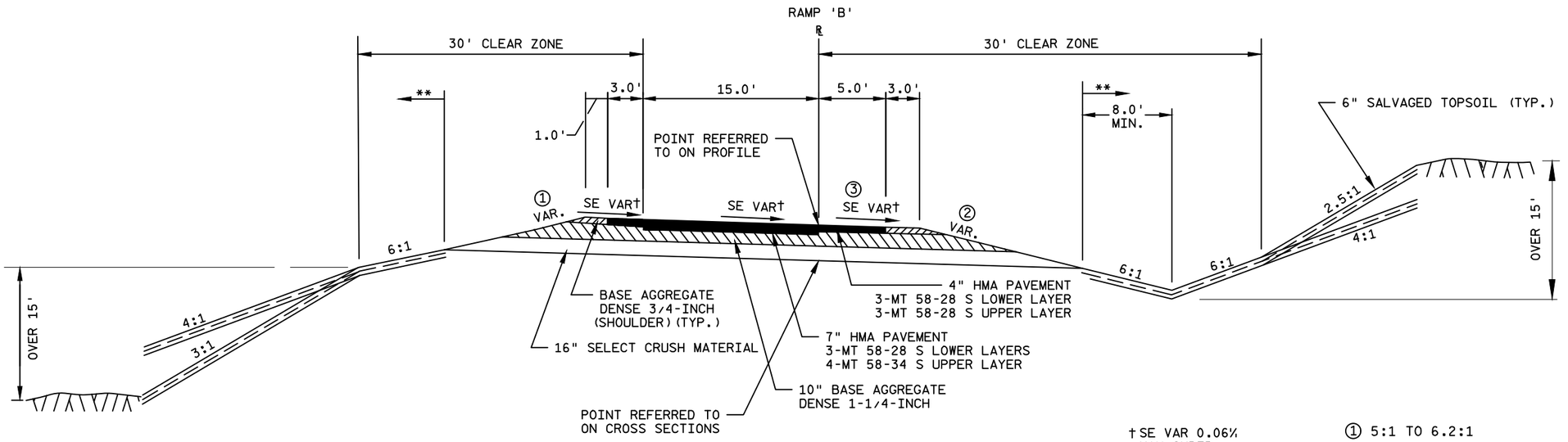
① 5:1 TO 6.2:1

② 4.5:1 TO 6:1

③ 0.04% NOR.
EQUALS SE WHEN
SE GREATER THAN 0.04%

FINISHED TYPICAL SECTION
RAMP A (WB ENTRANCE)

STA. 25+21'A' - STA. 52+18'A'



** SEE EROSION CONTROL PLAN FOR SEEDING, FERTILIZING, MULCHING, AND EROSION MAT

† SE VAR 0.06%
MAX SUPER
NOR.=0.02% ROADWAY
NOR.=0.04% SHOULDER

① 5:1 TO 6.2:1

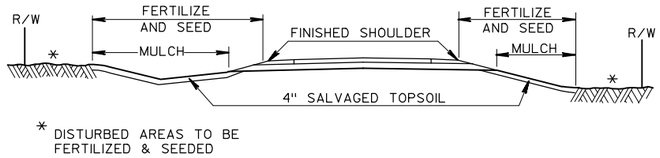
② 4.5:1 TO 6:1

③ 0.04% NOR.
EQUALS SE WHEN
SE GREATER THAN 0.04%

FINISHED TYPICAL SECTION
RAMP B (EB EXIT)

STA. 35+27'B' - STA. 52+12'B'

PROJECT NO: 1021-04-77,78	HWY: IH 94	COUNTY: ST. CROIX	FINISHED TYPICAL SECTIONS	SHEET 12	E

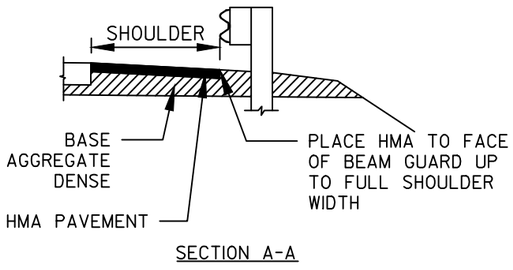


DETAIL FOR FINISHING ITEMS

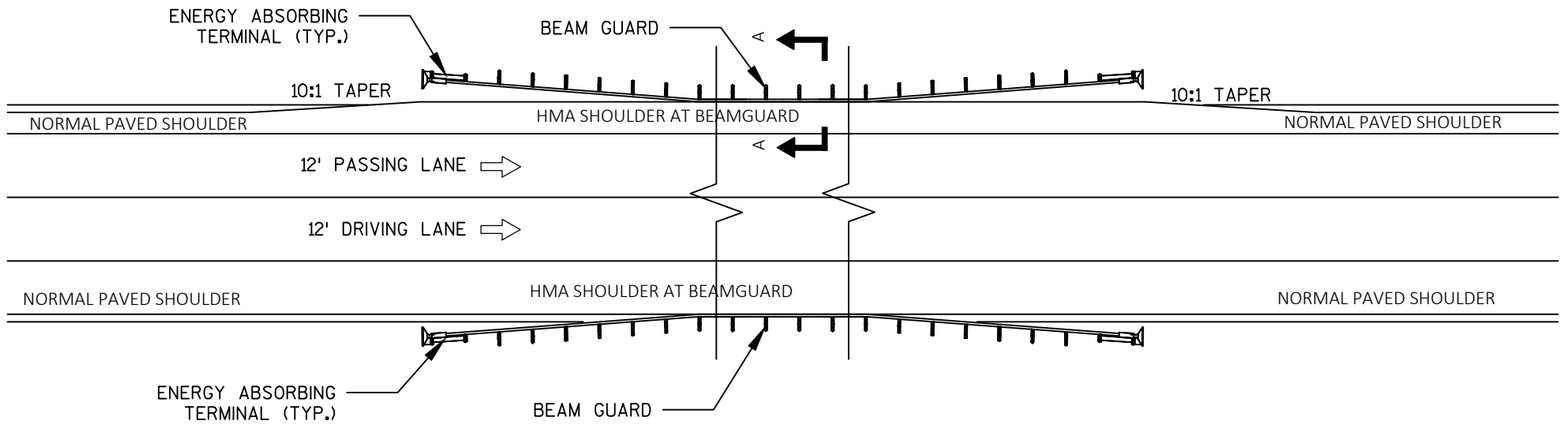
RUNOFF COEFFICIENT TABLE

	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 = 50 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 20 ACRES

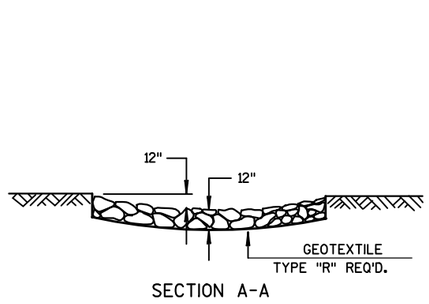


SECTION A-A

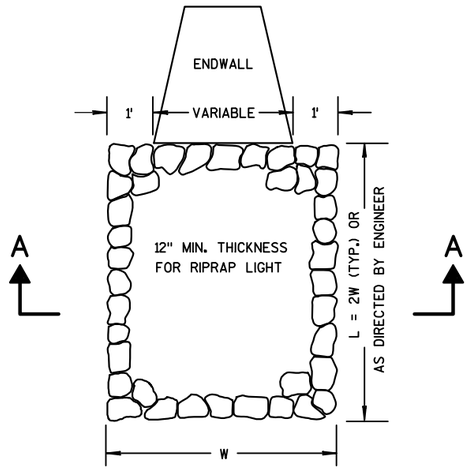


PLAN VIEW

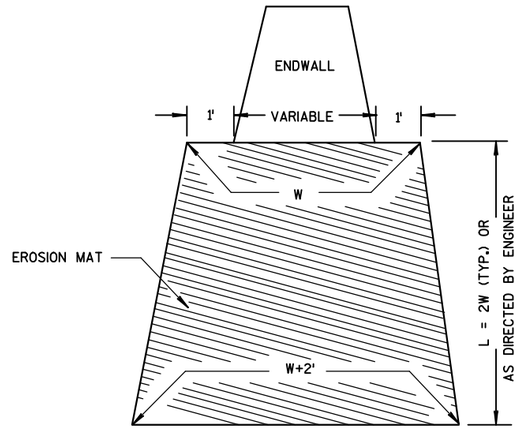
HMA SHOULDER AT BEAM GUARD DETAIL



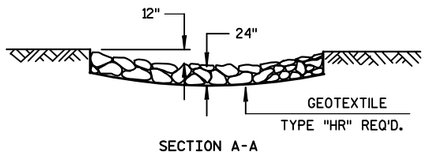
SECTION A-A



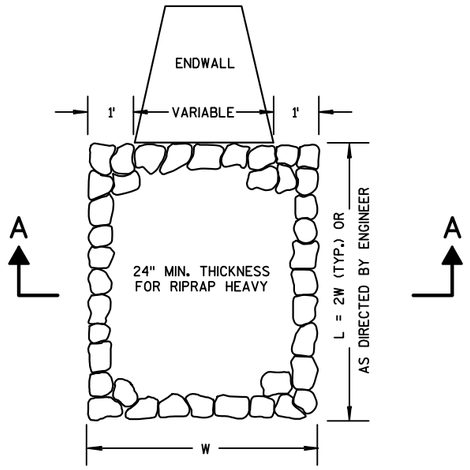
RIPRAP LIGHT TREATMENT AT CULVERTS



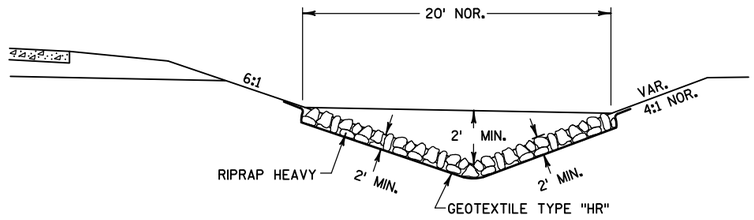
EROSION MAT TREATMENT AT CULVERTS



SECTION A-A



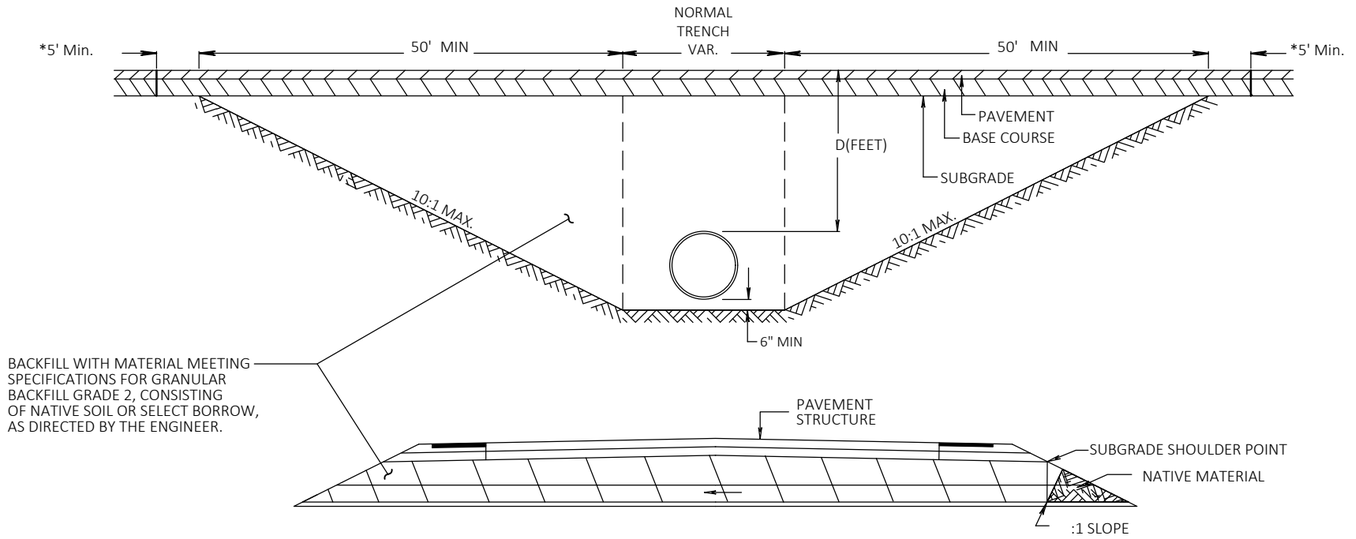
RIPRAP HEAVY TREATMENT AT CULVERTS



DETAIL OF RIPRAP HEAVY DITCH

PROJECT NO: 1021-00-78,79 & 1021-04-77,78	HWY: IH 94	COUNTY: ST. CROIX	CONSTRUCTION DETAILS	SHEET 14	E

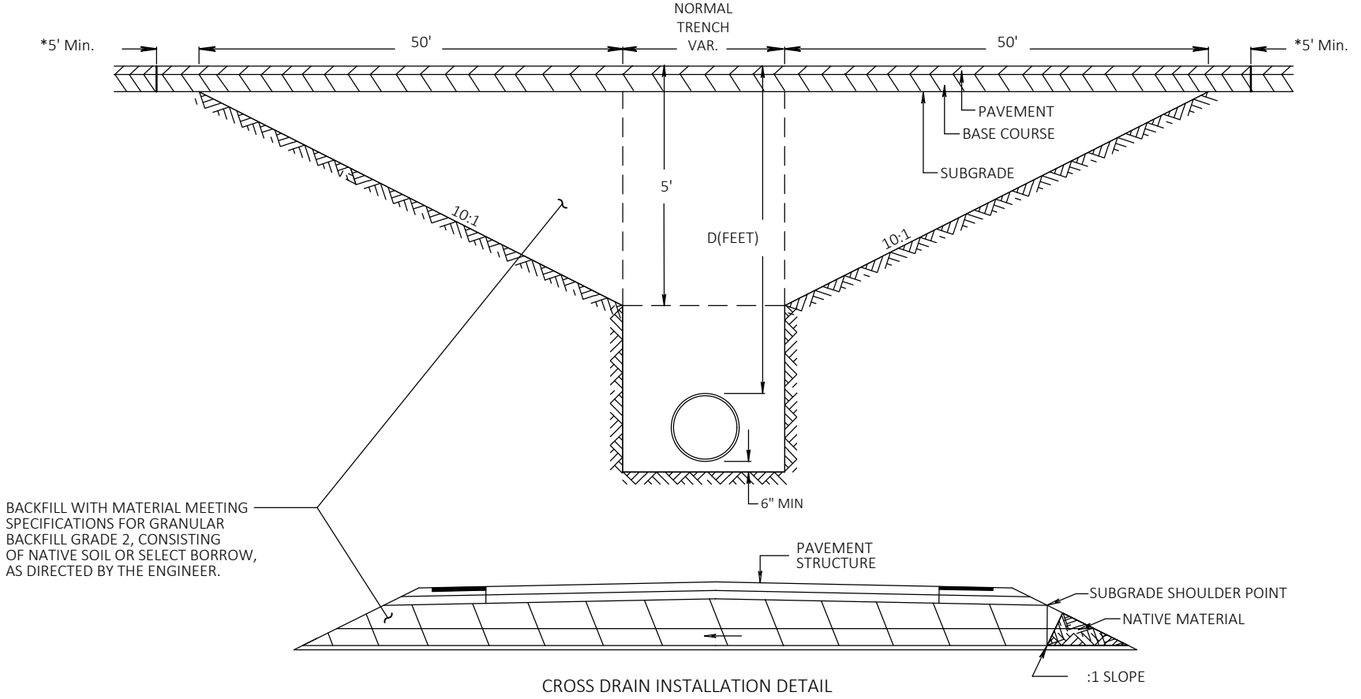
2



CROSS DRAIN INSTALLATION DETAIL

FOR D < 5'_

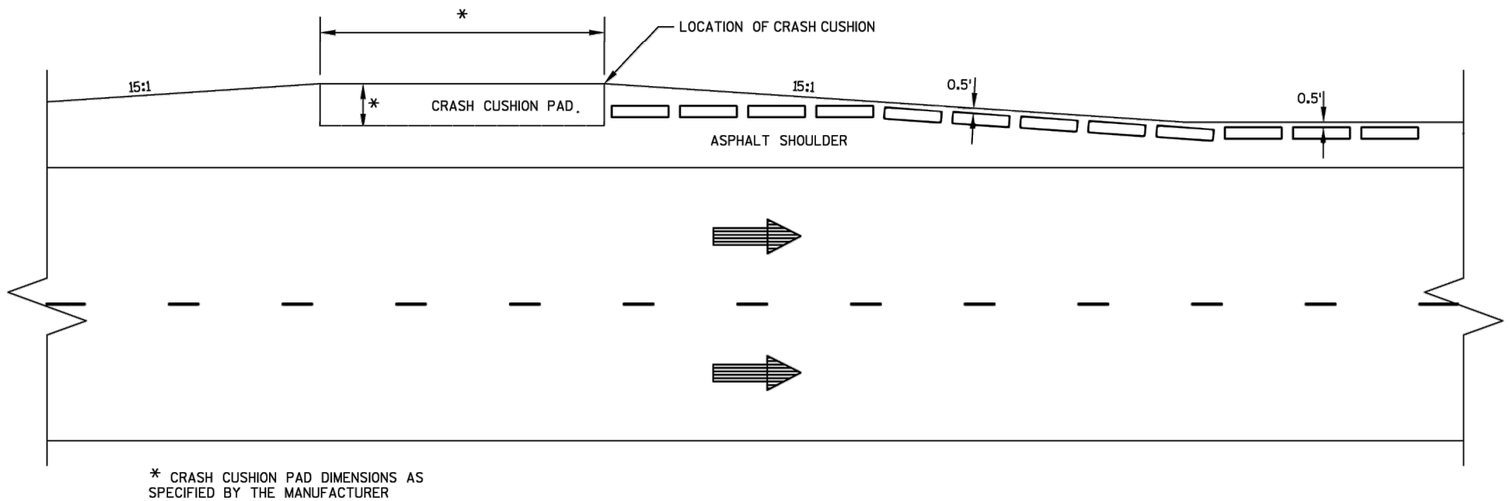
* PAVEMENT REMOVAL LIMITS (TYP.)



CROSS DRAIN INSTALLATION DETAIL

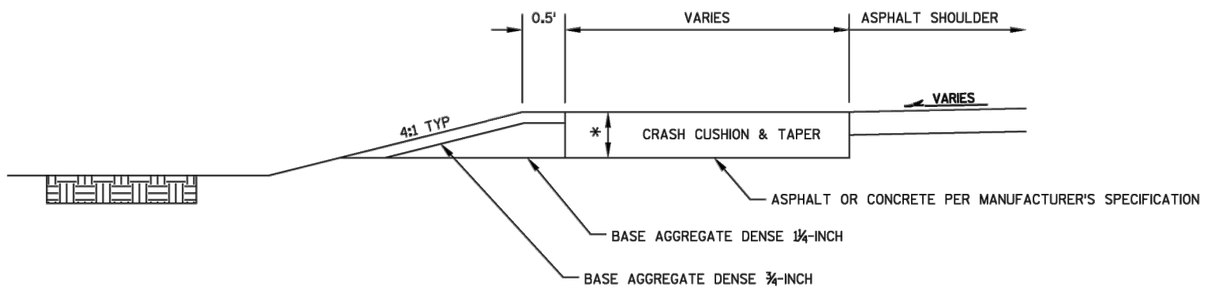
FOR D > 5'_

2



* CRASH CUSHION PAD DIMENSIONS AS SPECIFIED BY THE MANUFACTURER

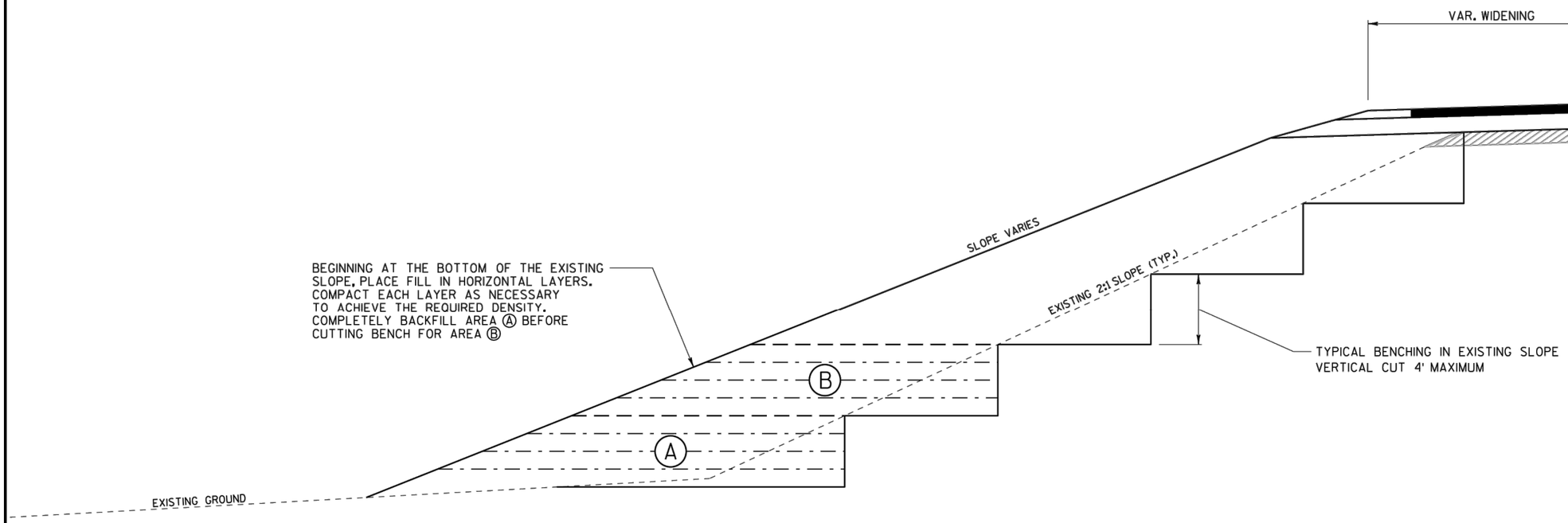
TEMPORARY CRASH CUSHION LAYOUT



* CRASH CUSHION PAD DIMENSIONS AS SPECIFIED BY THE MANUFACTURER

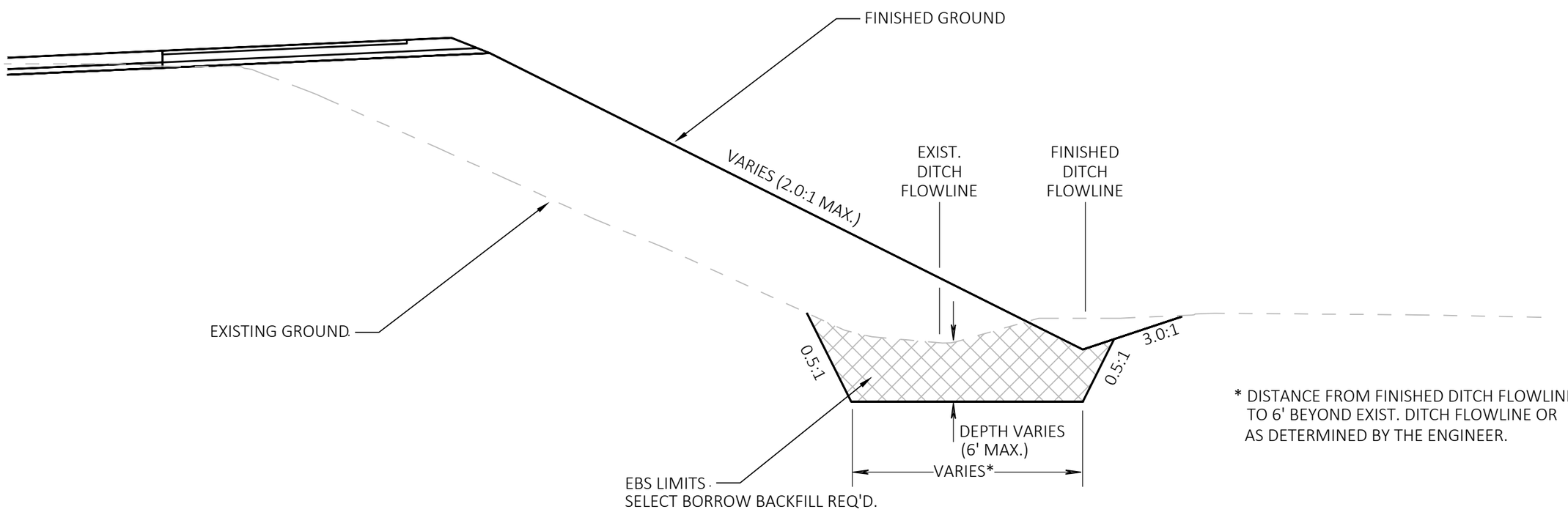
TEMPORARY CRASH CUSHION PAD DETAIL

2



DETAIL SHOWING METHOD FOR
BENCHING FILL INTO EXISTING EMBANKMENT

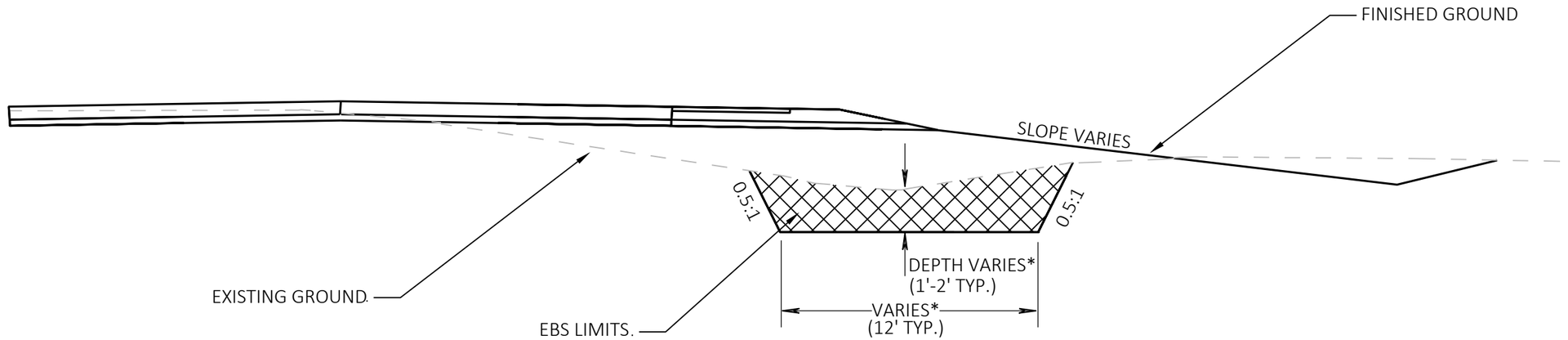
2



* DISTANCE FROM FINISHED DITCH FLOWLINE TO 6' BEYOND EXIST. DITCH FLOWLINE OR AS DETERMINED BY THE ENGINEER.

DETAIL FOR EXCAVATION BELOW SUBGRADE (EBS) AT TOE OF SLOPE

LOCATIONS FOR EBS WILL BE DETERMINED BY THE ENGINEER.



* TYP. LISTED OR AS DETERMINED BY THE ENGINEER.

DETAIL FOR EXCAVATION BELOW SUBGRADE (EBS) AT EXIST. DITCH LOCATIONS

STA 140+00 - 146+00 (CTH NN PROJECTS - 94 EB CROSSOVER MEDIAN)
STA 178+00 - 183+00 (CTH NN PROJECTS - 94 EB CROSSOVER MEDIAN)
STA 5+00 - 44+65 (CARR CREEK PROJECTS - 94 WB CROSSOVER MEDIAN)
STA 45+80 - 51+20 (CARR CREEK PROJECTS - 94 WB CROSSOVER MEDIAN)
STA 58+25 - 65+00 (CARR CREEK PROJECTS - 94 WB CROSSOVER MEDAIN)
STA 15+50'WB' - 18+50'WB' (CARR CREEK PROJECTS - 94 WB OUTSIDE)
STA 26+50'WB' - 29+50'WB' (CARR CREEK PROJECTS - 94 WB OUTSIDE)

OTHER LOCATIONS FOR EBS WILL BE DETERMINED BY THE ENGINEER.

2

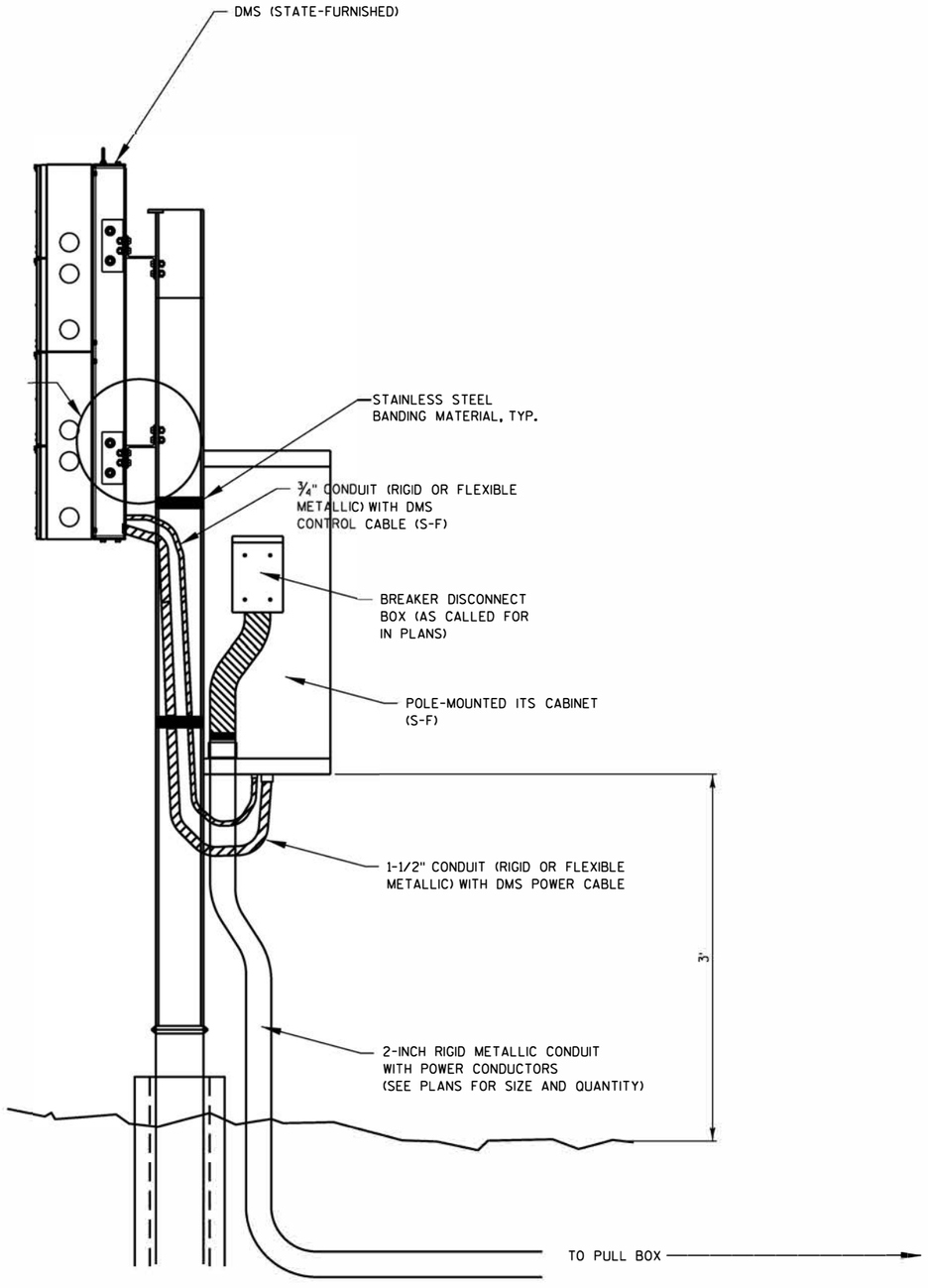
LEGEND	PROPOSED	EXISTING
FTMS CONVENTIONAL SYMBOLS		
POLE MOUNTED CABINET	⊠	⊠
METER BREAKER PEDESTAL	⊠	⊠
24X42-INCH CSCP PULL BOX	⊖	⊖
FTMS (ITS) CONDUIT	– –	– –
BREAKER DISCONNECT BOX	⊞	⊞
GROUND MOUNT DMS AND STRUCTURE		

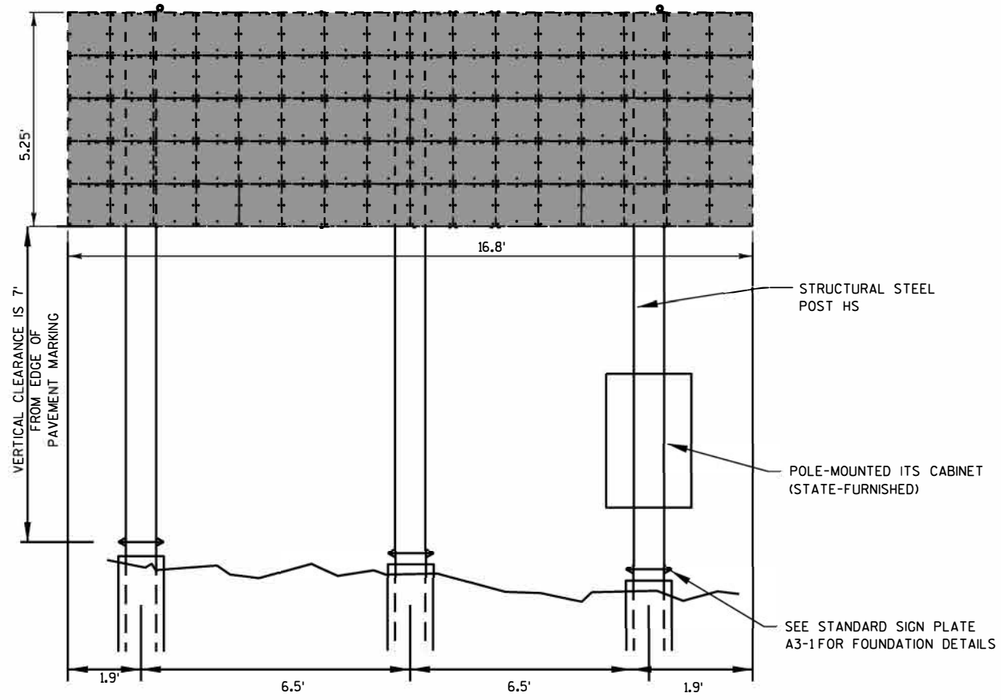
FTMS STANDARD ABBREVIATIONS

CB	CONTROLLER CABINET
PB	PULL BOX
EX	EXISTING
S-F	STATE-FURNISHED
DMS	DYNAMIC MESSAGE SIGN

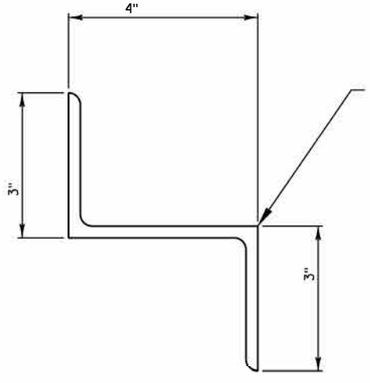
FTMS GENERAL NOTES

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





DMS-18-0025: IH 94 EB AT CR NN



TWO Z-BRACKETS ARE BOLTED TO THE REAR OF THE DISPLAY BY ADAPTIVE DISPLAY. THE VERTICAL SUPPORTS SHOWN ARE STRUCTURAL STEEL SIGN SUPPORTS. EACH Z-BRACKET IS ATTACHED TO THE SIGN ENCLOSURE USING * ½" A325 MECHANICALLY GALVANIZED STRUCTURAL GRADE HARDWARE.

Z-BRACKETS ARE
3" X 2 11/16 " X ¼"
WEB X FLANGE X THINKNESS
ALUMINUM 6061-T6-ALLOY

DETAIL A

DETAIL A

2

2

N

CTH NN

IH 94

160'WB'

165'WB'

170'WB'

165'EB'

170'EB'

INL

PROPOSED EDGE
OF PAVEMENT

DMS-18-0025 (RELOCATED)
(1) SALVAGED DMS
SIGN SUPPORTS STRUCTURAL STEEL HS
SIGN SUPPORTS CONCRETE MASONRY
(1) POLE-MOUNTED CABINET (SALVAGED)
(1) BREAKER DISCONNECT BOX (SALVAGED)
(1) CELLULAR MODEM (SALVAGED)

EX-DMS-18-0025
(1) SALVAGE EXISTING DMS
(STORE FOR LATER REINSTALLATION)
(1) REMOVE STRUCTURAL STEEL SIGN SUPPORTS
(3) REMOVE CONCRETE BASES
(1) SALVAGE EXISTING POLE-MOUNTED CABINET
AND CONTENTS
(STORE FOR LATER REINSTALLATION)

75°

REMOVE EXISTING CABLES
AND ABANDON CONDUIT

6-FEET FROM FACE OF
PROPOSED GUARD-RAIL
TO EDGE OF DMS

PBNN01

SIGN

N

EXPB01
(1) REMOVE PULL BOX

PBNN02

REMOVE EXISTING CABLES
AND ABANDON CONDUIT

SLAB

POST

FO

EXMB01

(1) 2-INCH NONMETALLIC CONDUIT WITH
(3) NO. 6 AWG LIGHTING ELECTRICAL WIRES

(1) 2-INCH METALLIC CONDUIT WITH
(3) NO. 6 AWG LIGHTING ELECTRICAL WIRES

PROJECT NO: 1021-00-78	HWY: IH 94	COUNTY: ST. CROIX	FTMS DESIGN	SHEET	E

FILE NAME : T:\68581\base\st_croix\10210078_ftms.dgn PLOT DATE : 6/24/2020 PLOT BY : PKutz PLOT NAME : PLOT SCALE : 100:1

2

LEGEND

EROSION MAT CLASS I, TYPE B

SILT FENCE

SLOPE INTERCEPT

SURFACE WATER FLOW

RIP RAP

*FERTILIZE AND SEED ALL DISTURB AREAS

N

IH 94 WB

140'WB'

145'WB'

150'WB'

IH 94

IH 94 EB

POST

C-55-19

B-55-270

155'WB'

160'WB'

165'WB'

N

SIGN

2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 1	SHEET 23	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\022001-EC1-I94.DWG
LAYOUT NAME - 01

PLOT DATE : 9/30/2020 1:12 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 41

2

LEGEND

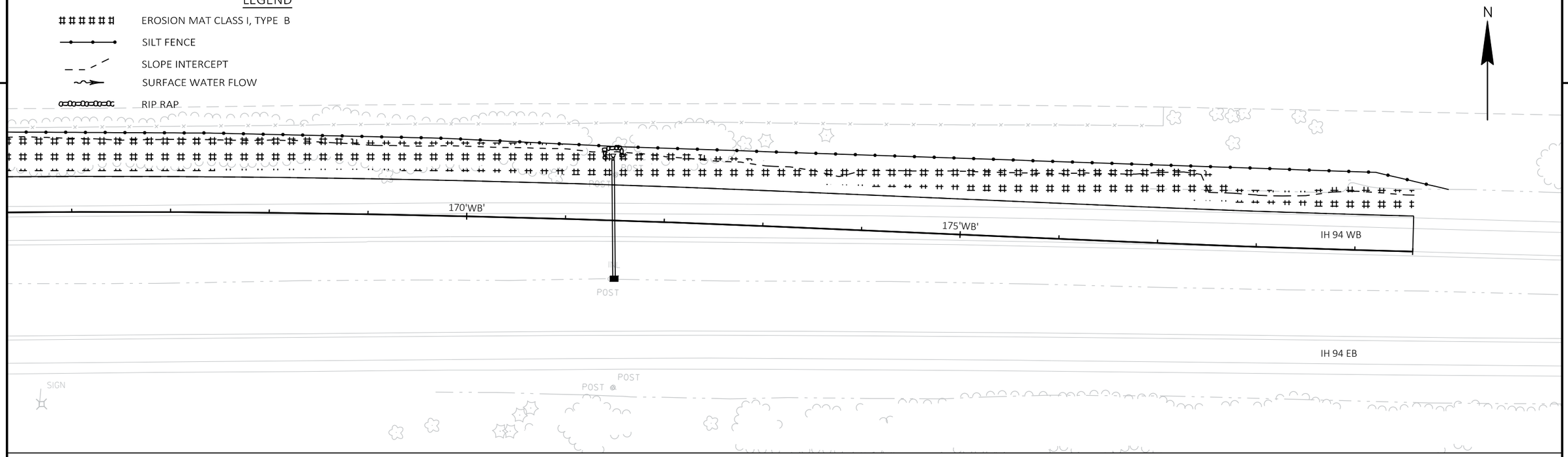
EROSION MAT CLASS I, TYPE B

SILT FENCE

SLOPE INTERCEPT

SURFACE WATER FLOW

RIP RAP



2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 1	SHEET 24	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\022001-EC1-I94.DWG
LAYOUT NAME - 02

PLOT DATE : 9/30/2020 1:12 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 41

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- SURFACE WATER FLOW
- RIP RAP
- MULCH
- EC DITCH CHECK
- INLET PROTECTION TYP A

*FERTILIZE AND SEED ALL DISTURB AREAS

N

IH 94 WB

IH 94

IH 94 EB

135

140

145

POST

C-55-19

B-55-270

B-55-271

CITY RD NN

150

150'EB'

155

155'EB'

160

160'EB'

SLAB

2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 2	SHEET 25	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\022002-EC2-I94.DWG
LAYOUT NAME - 01

PLOT DATE : 11/17/2020 10:09 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 41

2

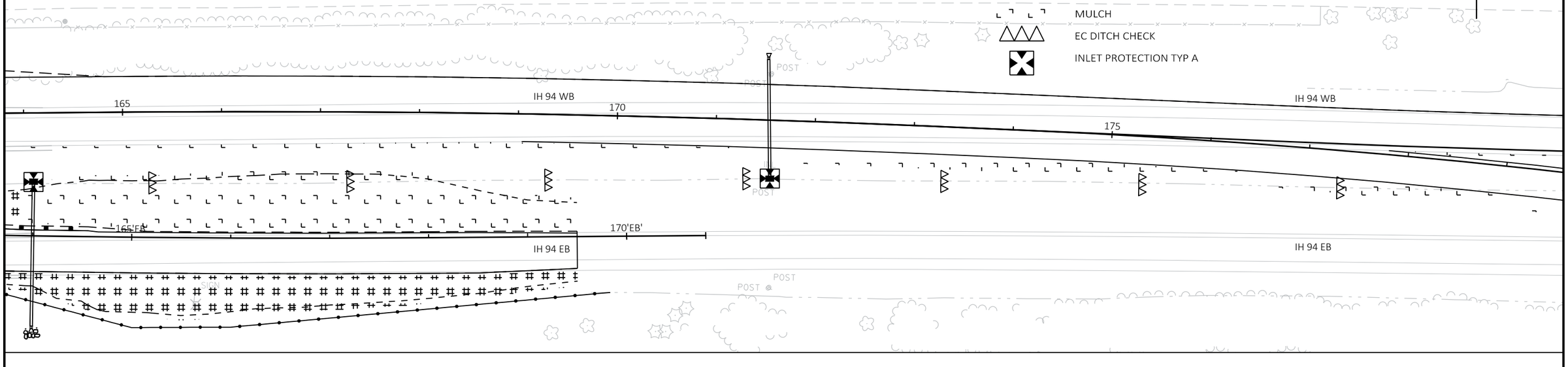
2

*FERTILIZE AND SEED ALL DISTURB AREAS

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- SURFACE WATER FLOW
- RIP RAP
- MULCH
- EC DITCH CHECK
- INLET PROTECTION TYP A

N



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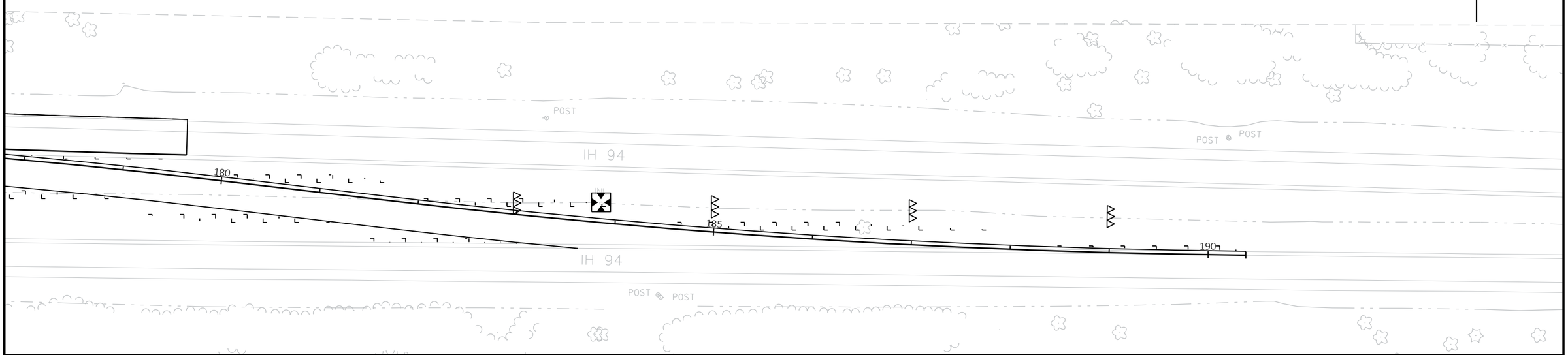


PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 2	SHEET 26	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\022002-EC2-I94.DWG
LAYOUT NAME - 02

PLOT DATE : 11/17/2020 10:09 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 41

2

LEGEND

EC DITCH CHECK

SILT FENCE

SLOPE INTERCEPT

SURFACE WATER FLOW

RIP RAP

MULCH

*FERTILIZE AND SEED ALL DISTURB AREAS

N

'WB EX'

135'WB EX'

IH 94 WB

140'WB EX'

140'WB'

145'WB'

145'WB EX'

IH 94

IH 94 EB

C-55-19

N

IH 94 WB

145'WB'

145'WB EX'

150'WB'

150'WB EX

155'WB'

155'WB EX'

B-55-270

160'WB'

160'WB EX'

B-55-271

IH 94

IH 94 EB

CTY RD NN

2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 3	SHEET 27	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\022003-EC3-I94.DWG
LAYOUT NAME - 01

PLOT DATE : 9/30/2020 1:22 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 41

2

LEGEND

- EC DITCH CHECK
- SILT FENCE
- SLOPE INTERCEPT
- SURFACE WATER FLOW
- RIP RAP
- MULCH

C-55-19

N

160'WB'
160'WB EX'
165'WB'
165'WB EX'
PC: 169+06.29'WB EX'
170'WB'
170'WB EX'
175'WB EX'
175'WB'
IH 94 WB
IH 94 EB
POST
SIGN
SLAB

N

175'WB EX'
175'WB'
PT: 177+07.45'WB EX'
IH 94 WB
180'WB EX'
185'WB EX'
190'WB EX'
IH 94 EB
IH 94
POST

2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 3	SHEET 28	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\022003-EC3-I94.DWG
LAYOUT NAME - 02

PLOT DATE : 9/30/2020 1:23 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 41

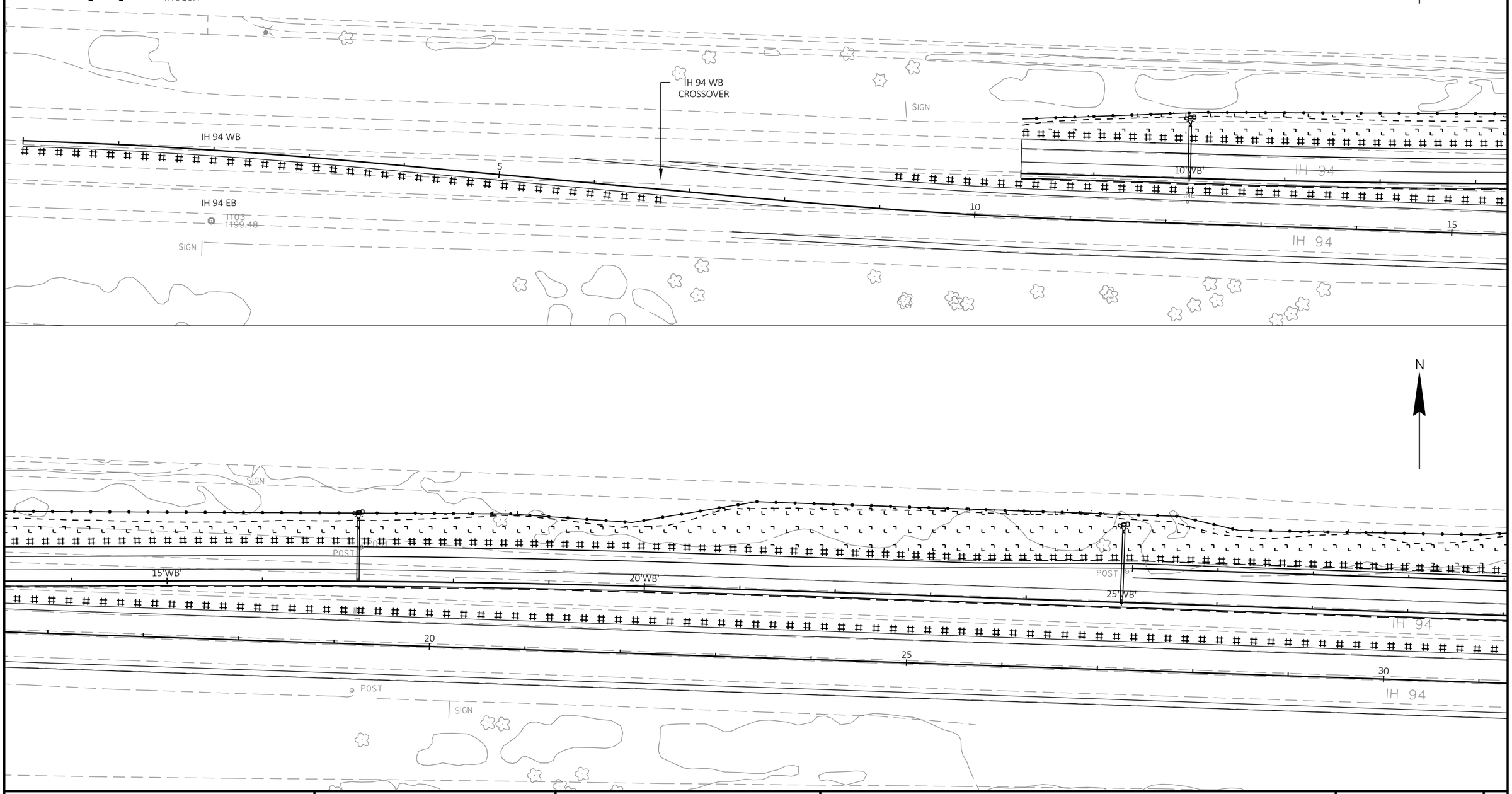
2

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- SURFACE WATER FLOW
- RIP RAP
- MULCH

*FERTILIZE AND SEED ALL DISTURB AREAS

N



N

PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 1	SHEET 29	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\022001-EC1-IH94-CTHB.DWG
LAYOUT NAME - 01

PLOT DATE : 9/15/2020 2:59 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

LEGEND

EROSION MAT CLASS I, TYPE B

SILT FENCE

SLOPE INTERCEPT

SURFACE WATER FLOW

RIP RAP

MULCH

N

SEE STRUCTURE PLAN FOR RIPRAP PLACEMENT

B-55-286

RAMP A

IH 94 WB

IH 94 EB

IH 94

30'WB'

35'WB'

40'WB'

45'WB'

50'WB'

55'WB'

50'A'

70'A'

30

35

40

45

50

55

60

SIGN

POST

RIPRAP

CTH B

T121
1114.93

T122
1114.46

T123
1111.94

T124
1111.78

IH 94 EB
WIDENING

PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 1	SHEET 30	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\022001-EC1-IH94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 9/15/2020 3:00 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

EROSION MAT CLASS I, TYPE B

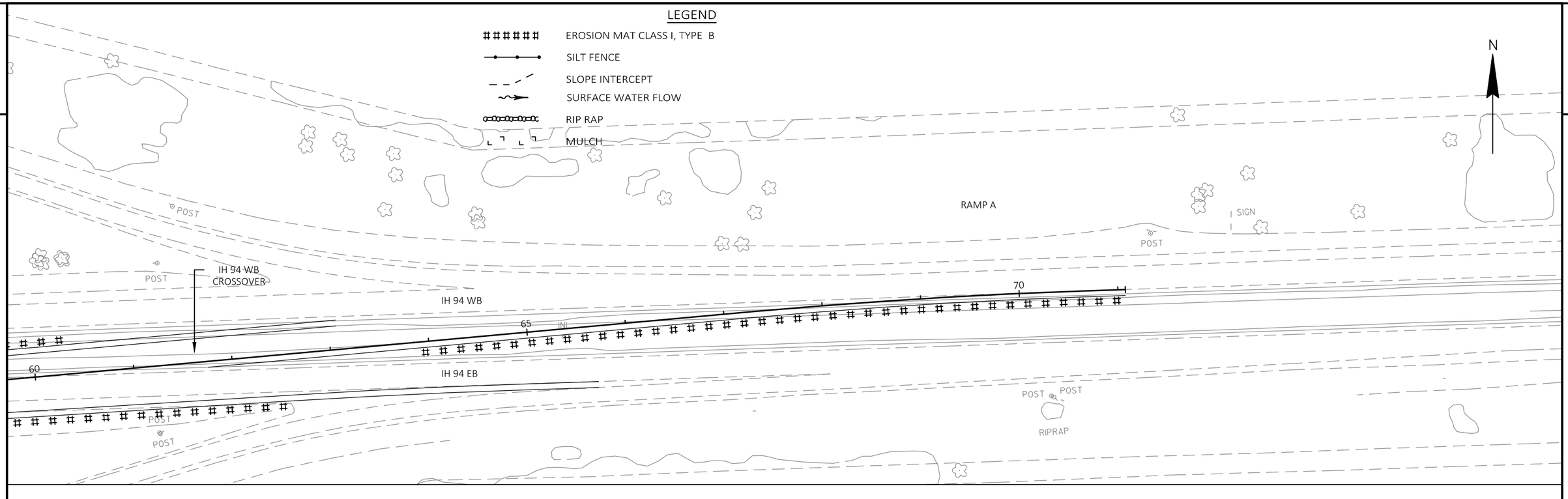
SILT FENCE

SLOPE INTERCEPT

SURFACE WATER FLOW

RIP RAP

MULCH



PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 1	SHEET 31	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\022001-EC1-IH94-CTHB.DWG
LAYOUT NAME - 03

PLOT DATE : 9/15/2020 3:00 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

EROSION MAT CLASS I, TYPE B

SILT FENCE

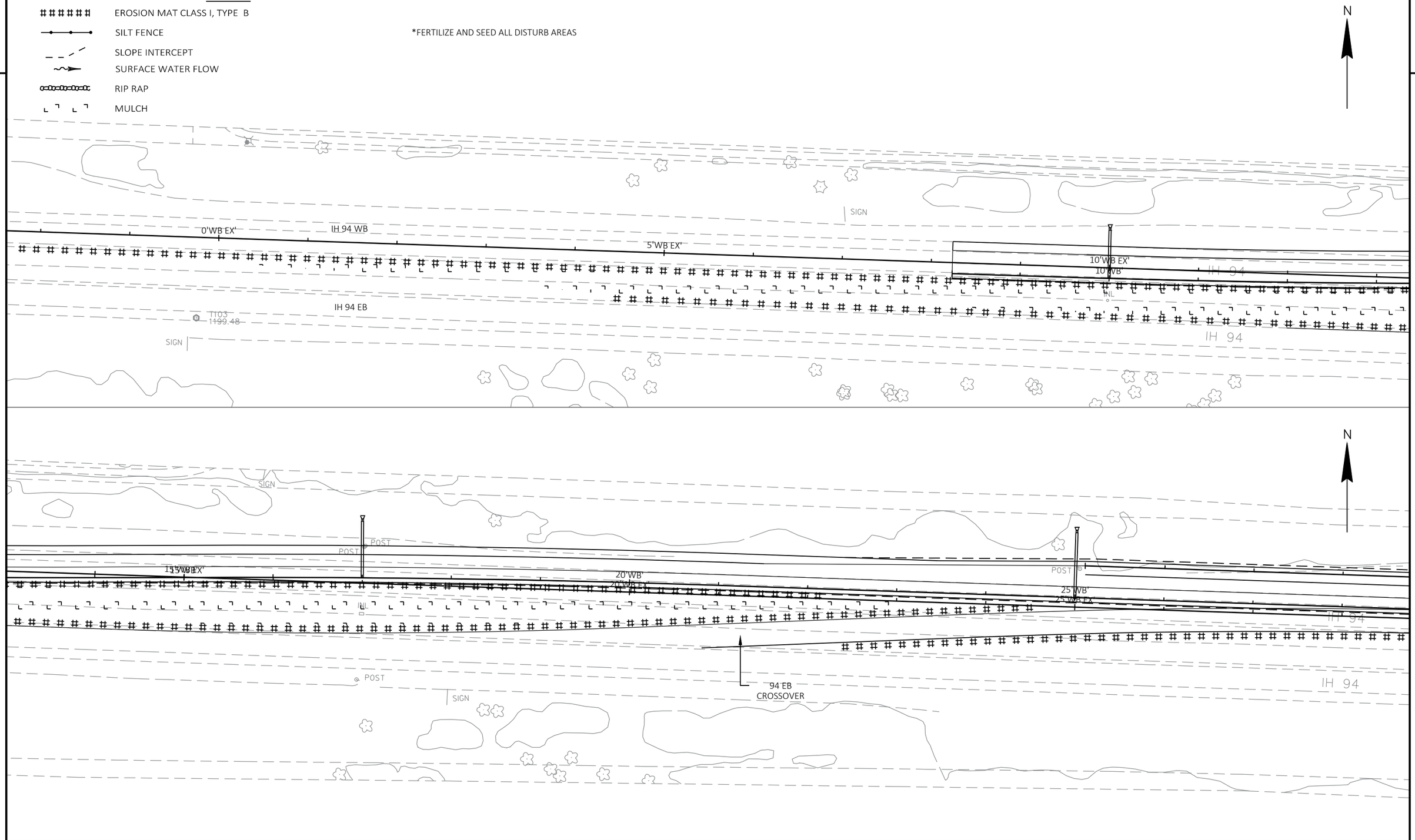
SLOPE INTERCEPT

SURFACE WATER FLOW

RIP RAP

MULCH

*FERTILIZE AND SEED ALL DISTURB AREAS



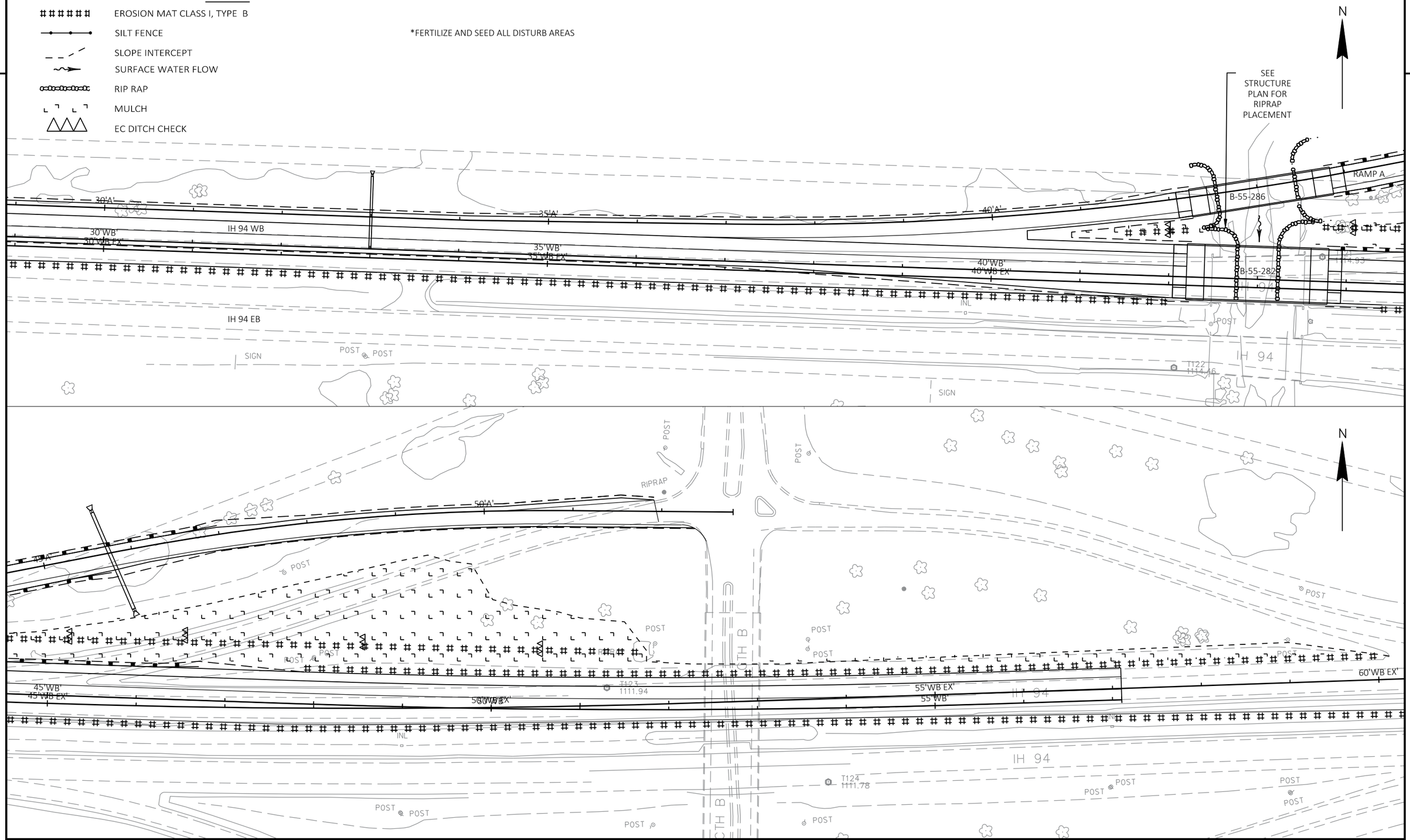
PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 2	SHEET 32	E

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- SURFACE WATER FLOW
- RIP RAP
- MULCH
- EC DITCH CHECK

*FERTILIZE AND SEED ALL DISTURB AREAS



PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 2	SHEET 33	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\022002-EC2-IH94-CTHB.DWG
LAYOUT NAME - 02

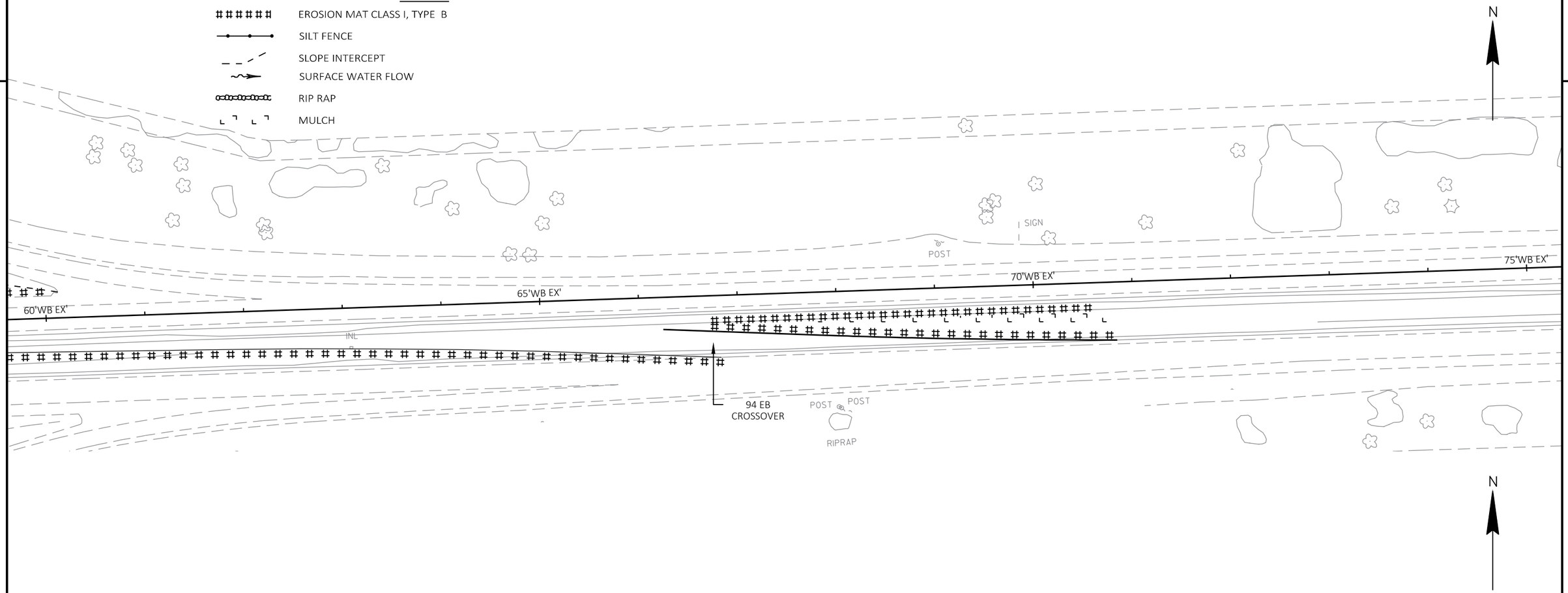
PLOT DATE : 9/15/2020 3:04 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- SURFACE WATER FLOW
- RIP RAP
- MULCH



2

PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 2	SHEET 34	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\022002-EC2-IH94-CTHB.DWG
LAYOUT NAME - 03

PLOT DATE : 9/15/2020 3:04 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

EROSION MAT CLASS I, TYPE B

SILT FENCE

SLOPE INTERCEPT

SURFACE WATER FLOW

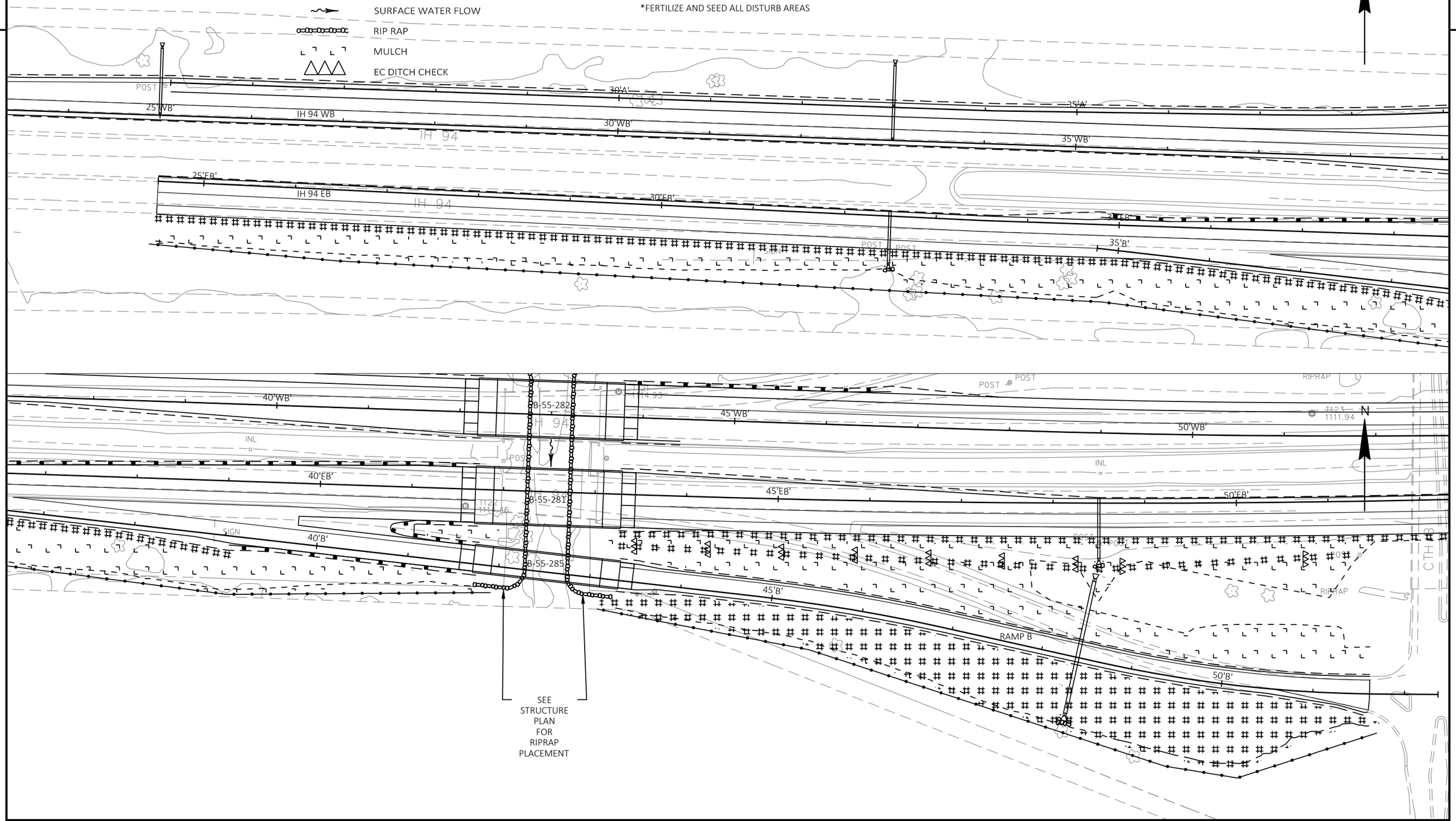
RIP RAP

MULCH

EC DITCH CHECK

*FERTILIZE AND SEED ALL DISTURB AREAS

N

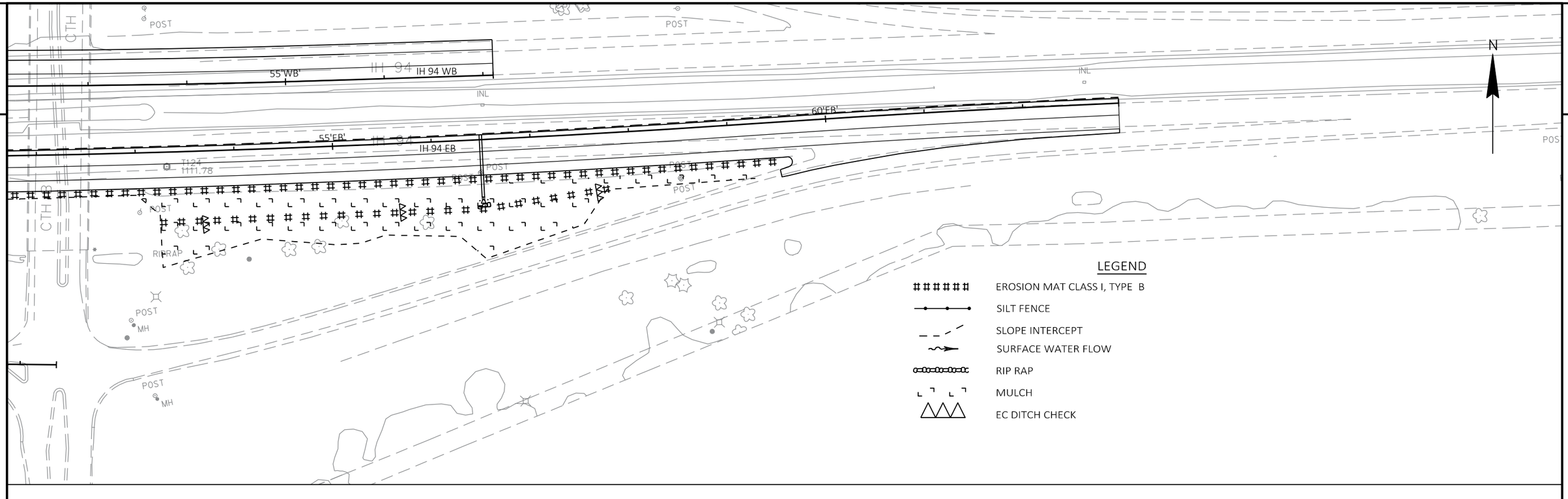


PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 3	SHEET 35	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\022003-EC3-IH94-CTHB.DWG
LAYOUT NAME - 01

PLOT DATE : 8/7/2020 12:39 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 3	SHEET 36	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\022003-EC3-IH94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 8/7/2020 12:39 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

LEGEND

EROSION MAT CLASS I, TYPE B

SILT FENCE

SLOPE INTERCEPT

SURFACE WATER FLOW

RIP RAP

MULCH

EC DITCH CHECK

*FERTILIZE AND SEED ALL DISTURB AREAS

N

SIGN

POST

POST

POST

POST

SIGN

15'WB EX'

20

20'WB EX'

25

25'WB EX'

IH 94 WB

IH 94

30'A'

30

30'WB EX'

25

IH 94 EB

IH 94

30'A'

30

30'WB EX'

35'A'

35

35'WB EX'

40'A'

40

40'WB EX'

B-55-286

B-55-282

B-55-281

B-55-285

45

45'WB EX'

45

45'B'

30

SIGN

POST

POST

35'B'

40'B'

SIGN

PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 4	SHEET 37	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\022004-EC4-IH94-CTHB.DWG
LAYOUT NAME - 01

PLOT DATE : 8/7/2020 12:33 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

RAMP A

RAMP B

CTH B

IH 94 WB

IH 94 EB

50'WB EX'

55'WB EX'

60'WB EX'

65'WB EX'

70'WB EX'

75'WB EX'

50'B'

45'B'

T123
1111.94

T124
1111.78

RIPRAP

POST

INL

MH

SIGN

45

50

55

60

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- SURFACE WATER FLOW
- RIP RAP
- MULCH
- EC DITCH CHECK

PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 4	SHEET 38	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\022004-EC4-IH94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 8/7/2020 12:34 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

FOR PAVEMENT MARKING INSTALLATION,
FOLLOW SDD "LONGITUDINAL MARKING (MAILINE)"

MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE EDGELINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE LANE LINE)

MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW EDGELINE)

MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE EDGELINE)

140'WB

145'WB

150'WB

150'EB'

IH 94

POST

INL

LEGEND

SIGN MOUNTED ON WOOD POST(S)

ALL SIGNS ARE MOVING SIGNS AND
INSTALLED ON NEW POSTS.

MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE EDGELINE)

MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW EDGELINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE LANE LINE)

MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE EDGELINE)

155'WB

160'WB

165'WB

155'EB'

160'EB'

165'EB'

1-1 Hwy NN M1-94

1-2 W5-52L

1-3 W5-52R

1-4 W5-52L

1-5 W5-52R

1-6 Hwy NN M1-94

Hwy NN

CUTLER RD NN

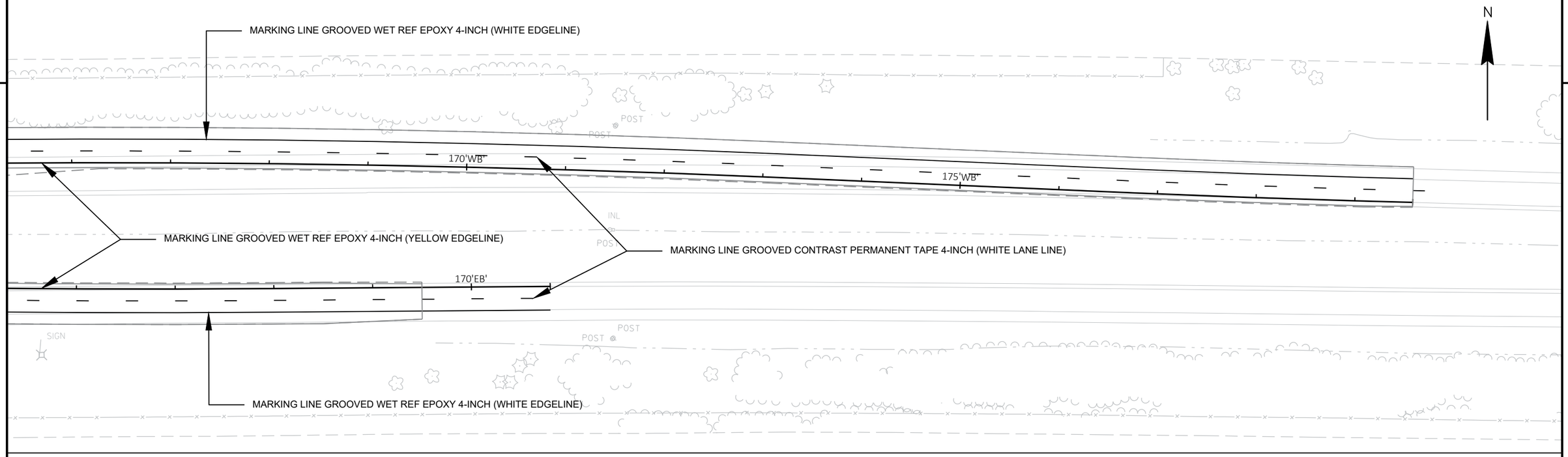
SIGN

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 39	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\023001-PS-PM-I94.DWG
LAYOUT NAME - 01

PLOT DATE : 10/19/2020 9:49 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 41



2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PERMANENT SIGNING & PAVEMENT MARKING STAGE 1	SHEET 40	E

2

LEGEND

SIGN MOUNTED ON WOOD POST(S)

SIGN MOUNTED ON STEEL POST

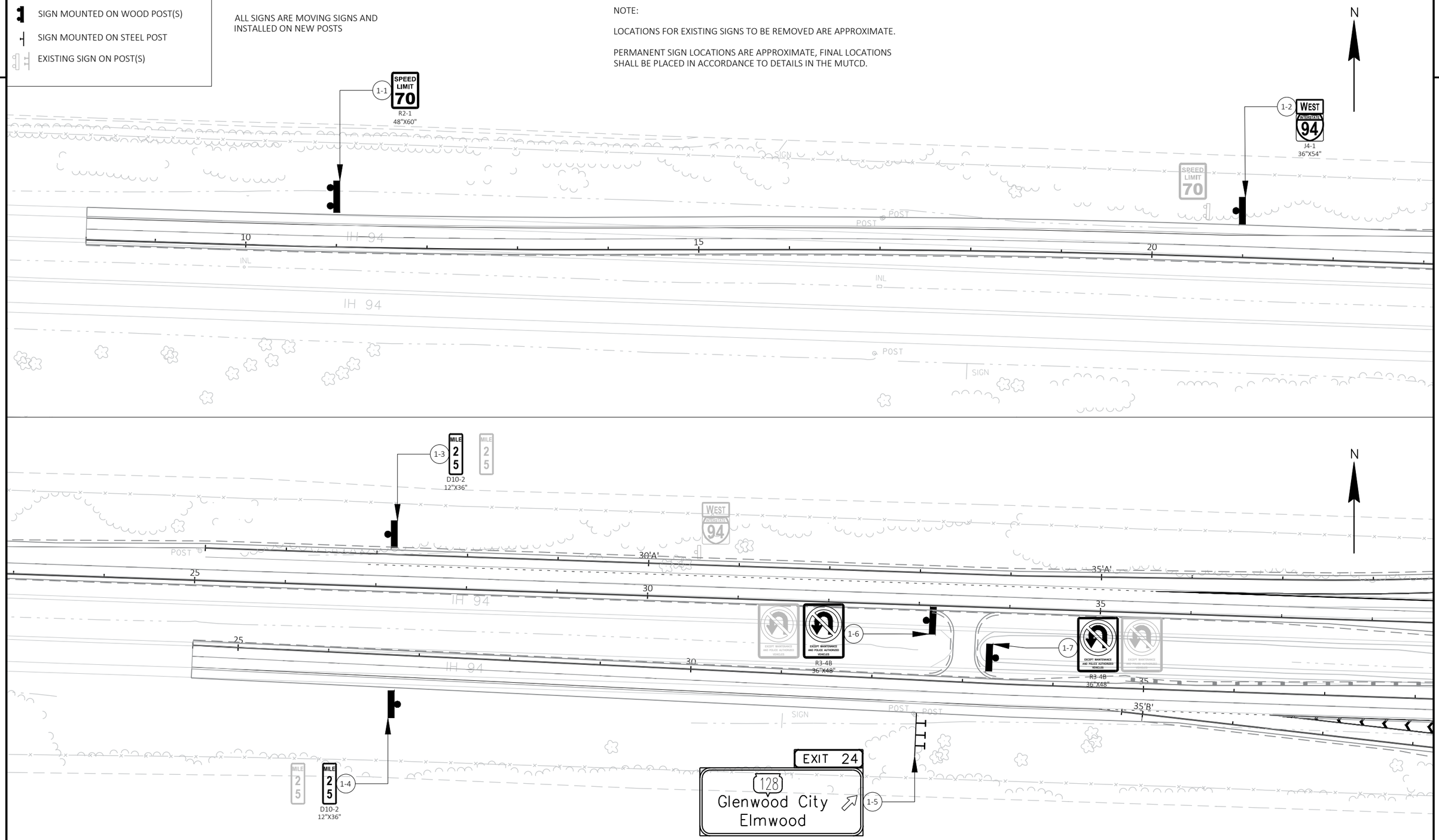
EXISTING SIGN ON POST(S)

ALL SIGNS ARE MOVING SIGNS AND INSTALLED ON NEW POSTS

NOTE:

LOCATIONS FOR EXISTING SIGNS TO BE REMOVED ARE APPROXIMATE.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE, FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS IN THE MUTCD.



PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PERMANENT SIGNING	SHEET 41	E

2

LEGEND

SIGN MOUNTED ON WOOD POST(S)

SIGN MOUNTED ON STEEL POST

EXISTING SIGN ON POST(S)

ALL SIGNS ARE MOVING SIGNS AND INSTALLED ON NEW POSTS

2-17 W5-52R 12"X36"

2-16 W5-52L 12"X36"

2-15 W5-52R 12"X36"

2-18 W4-1R 36"X36"

2-19 NO PARKING ON RAMP EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES R7-64 48"X30"

NO PARKING ON RAMP

2-20 PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED R5-57 36"X36"

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED

2-5 W5-52L 12"X36"

2-4 W5-52R 12"X36"

2-14 W5-52L 12"X36"

2-6 NO PARKING ON RAMP EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES R7-64 48"X30"

NO PARKING ON RAMP

2-1

2-3 W5-52L 12"X36"

2-2 W5-52R 12"X36"

Woodville
Spring Valley
Eau Galle Rec Area

2-7

Woodville
Spring Valley
Eau Galle Rec Area D1-3 103"X42"

2-9 WRONG WAY R5-1A 36"X24"

WRONG WAY

2-8 WRONG WAY R5-1A 36"X24"

WRONG WAY

DO NOT ENTER REMOVE

2-10 DO NOT ENTER R5-1 30"X30"

2-11 STOP R1-1 30"X30"

STOP

2-12 DIVIDED HIGHWAY R6-3 30"X24"

DIVIDED HIGHWAY

2-13 ONE WAY R6-2L 24"X30"

ONE WAY

EXIST SIGN TO REMAIN STOP

EXIT 24

128 Glenwood City Elmwood

2-1 EXIT 24 E5-1A 72"X60"

2-21 W4-1R 36"X36"

IH 94

CTH B

40'A' 40 40'B' 45'A' 45 45'B' 50'A' 50 50'B' 55 55 60

POST RIPRAP INL SIGN T123 1111.94 T124 1111.78

N

2

LEGEND

SINGLE DELINEATOR POST

DOUBLE DELINEATOR POST

N

MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE EDGELINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE LANE LINE)

MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW EDGELINE)

10 15 20

IH 94

INL

POST

SIGN

MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE EDGELINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE 3' LINE, 9' GAP)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE GORE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE LANE LINE)

MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW EDGELINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE GORE)

MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE EDGELINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE 3' LINE, 9' GAP)

MARKING CHEVRON EPOXY 24-INCH

25 30 35

30'A' 35'A' 35'B'

IH 94

POST SIGN

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PAVEMENT MARKING	SHEET 43	E

2

LEGEND

SINGLE DELINEATOR POST

DOUBLE DELINEATOR POST

MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE EDGELINE)

MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW EDGELINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE GORE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE LANE LINE)

MARKING CHEVRON EPOXY 24-INCH

MARKING STOP LINE EPOXY 18-INCH

45'A'

50'A'

40'A'

40

45

50

40'B'

45'B'

50'B'

IH 94

CTH B

RIPRAP

POST

INL

N

2

MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE EDGELINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE LANE LINE)

MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW EDGELINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE GORE)

MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE EDGELINE)

55

60

IH 94

T124
1111.78

POST

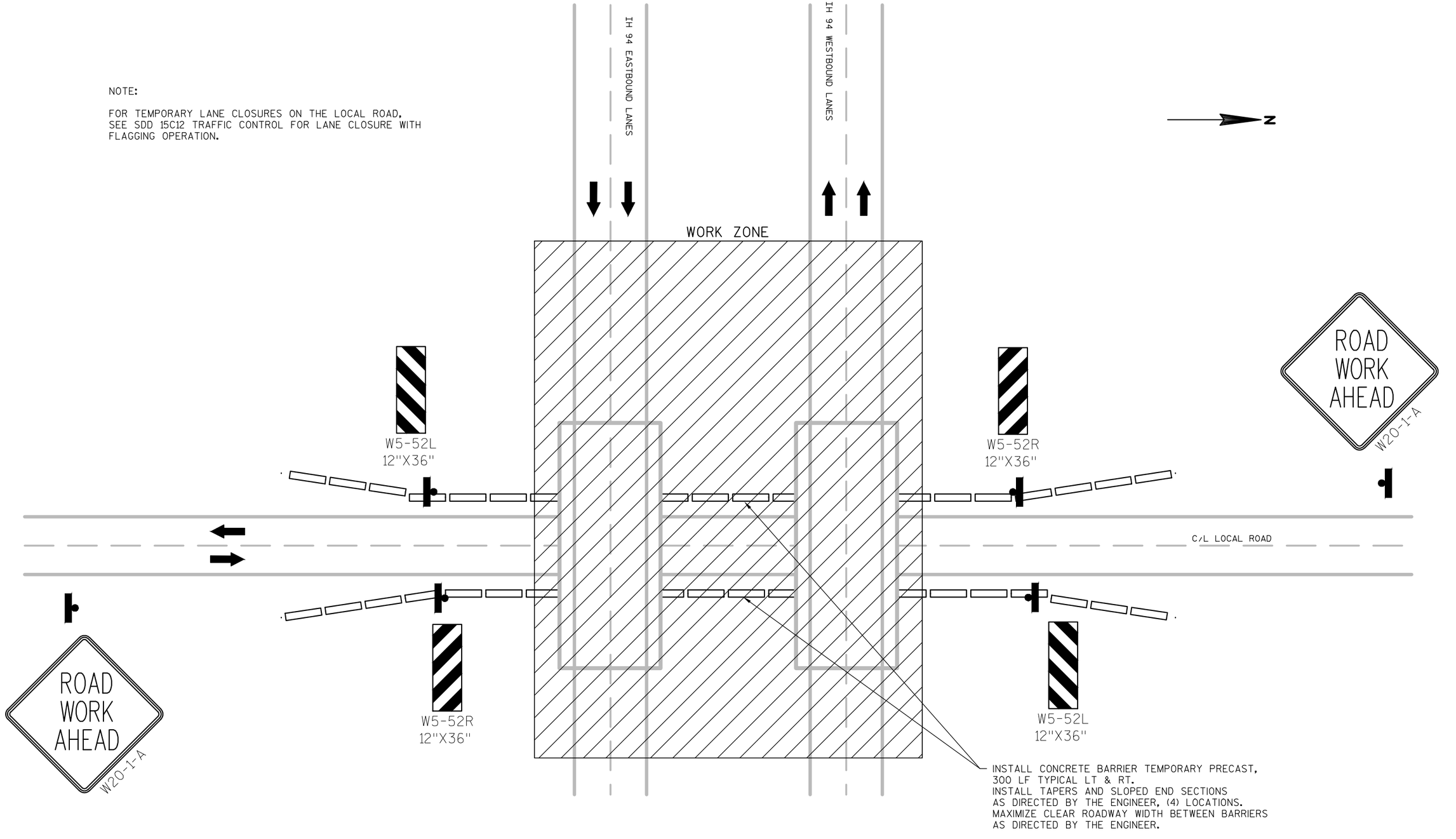
RIPRAP

N

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PAVEMENT MARKING	SHEET 44	E

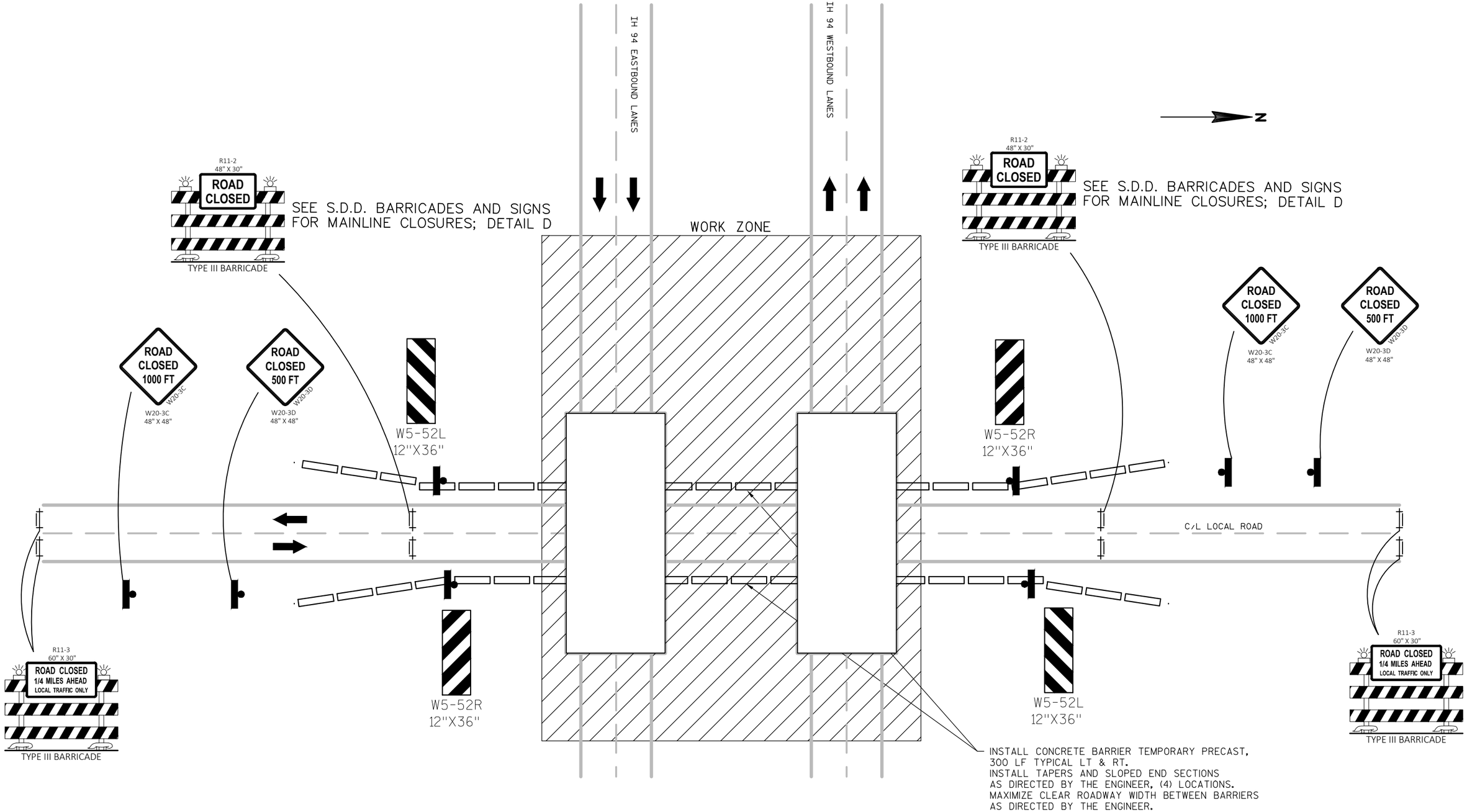
NOTE:

FOR TEMPORARY LANE CLOSURES ON THE LOCAL ROAD, SEE SDD 15C12 TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION.



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN: TRAFFIC CONTROL - TYPICAL LOCAL ROAD UNDERPASS	SHEET 45	E

2



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN: TRAFFIC CONTROL - TYPICAL LOCAL ROAD UNDERPASS CLOSE	SHEET 46	E

2

2

LEGEND

- POST WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- DMS — EXIST. DYNAMIC MESSAGE SIGN (APPROX. LOCATION)

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.

COORDINATE LOCATIONS OF TRAFFIC CONTROL SIGNING WITH DETAILS SHOWN ON ALTERNATE ROUTE DETAIL.

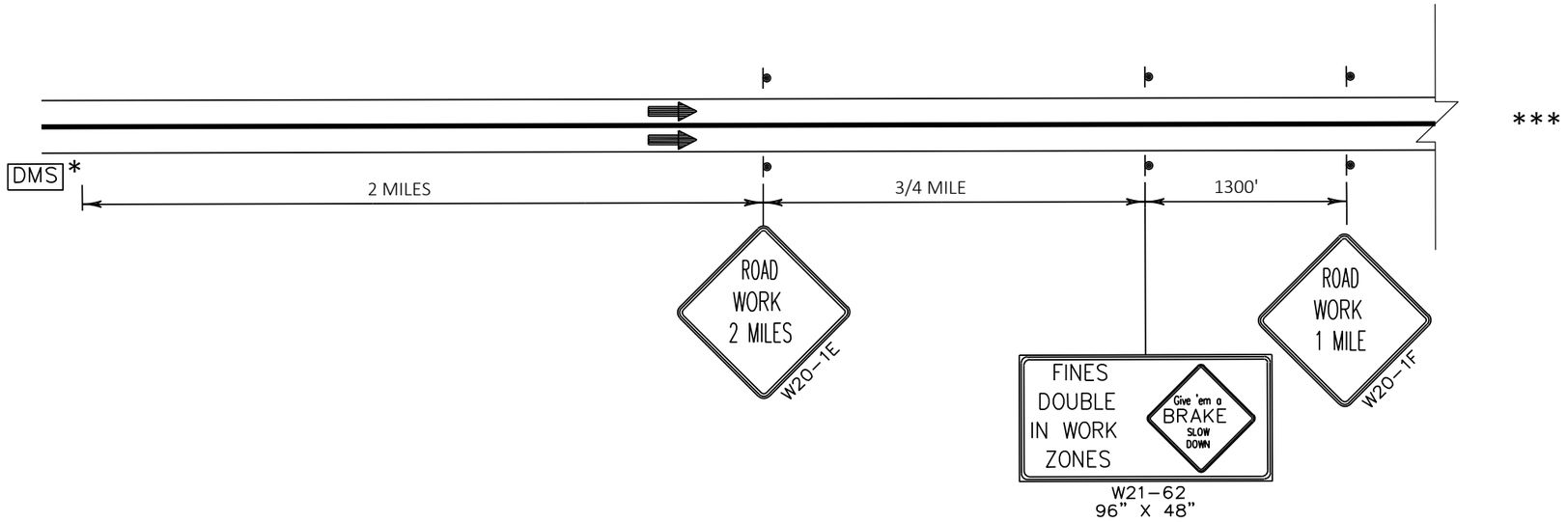
ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH 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.

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.

INCLUDE "END ROAD WORK" SIGNS 500 FEET BEYOND THE WORK AREA.



* EXIST DYNAMIC MESSAGE SIGN IS ON EB IH 94 ONLY. PCMS NEEDED FOR WB IH 94.

*** FOR TRAFFIC CONTROL LAYOUT BEYOND THE "ROAD WORK 1 MILE" SIGN, SEE SDD 15D12 SHEET B TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION.

TRAFFIC CONTROL ADVANCED WARNING - LANE CLOSURE

PROJECT NO: 1021-00-78,79 & 1021-04-77,78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL ADVANCED WARNING - LANE CLOSURE	SHEET 47	E

2

2

LEGEND

- POST WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- DMS — EXIST. DYNAMIC MESSAGE SIGN (APPROX. LOCATION)

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.

COORDINATE LOCATIONS OF TRAFFIC CONTROL SIGNING WITH DETAILS SHOWN ON ALTERNATE ROUTE DETAIL.

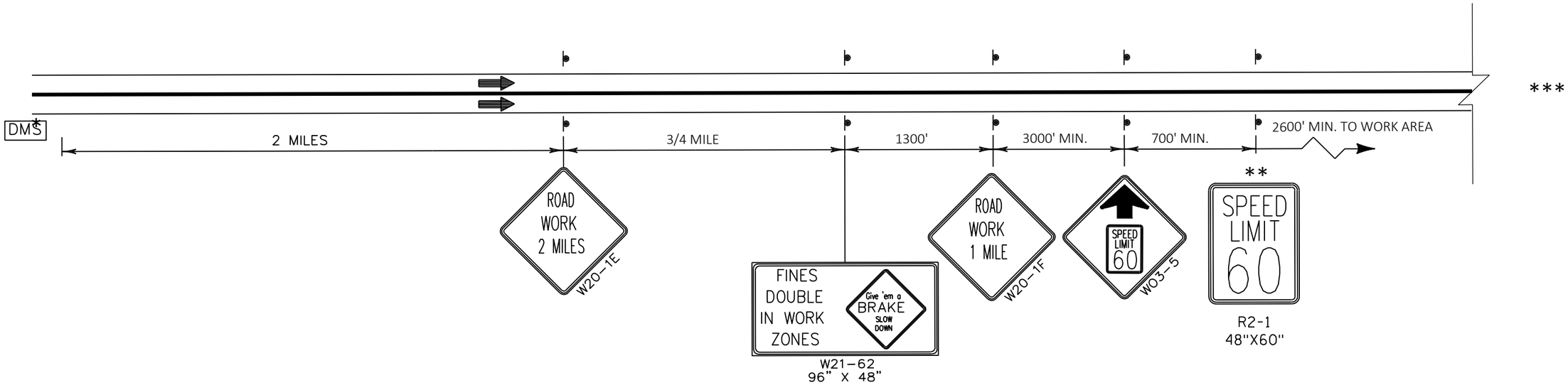
ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH 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.

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.

INCLUDE "END ROAD WORK" SIGNS 500 FEET BEYOND THE WORK AREA.



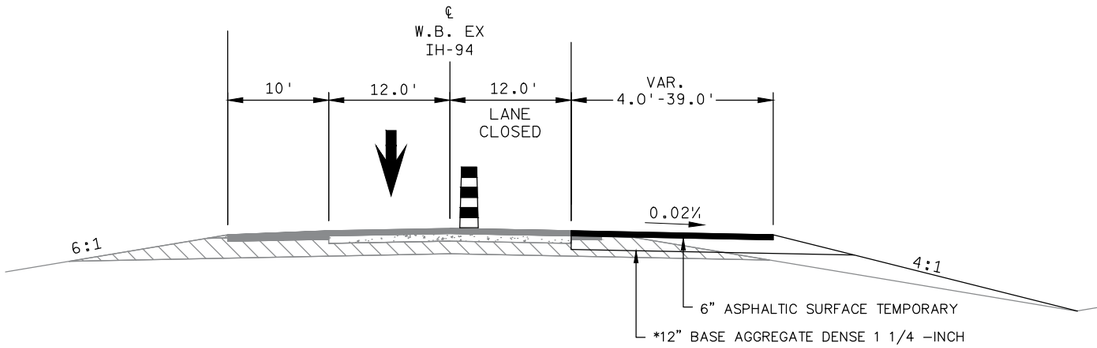
* EXIST DYNAMIC MESSAGE SIGN IS ON EB IH 94 ONLY. PCMS NEEDED FOR WB IH 94.

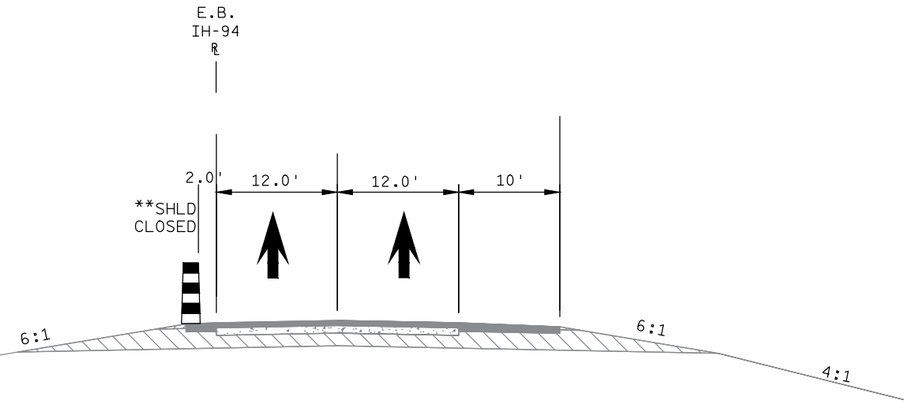
** A SPEED LIMIT SIGN SHALL ALSO BE LOCATED AT THE CTH B EASTBOUND AND WESTBOUND ENTRANCE RAMPS.
INCLUDE 70 MPH SPEED LIMIT SIGNS 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END ROAD WORK" SIGNS.

*** FOR TRAFFIC CONTROL LAYOUT BEYOND THE "SPEED LIMIT 60" SIGN,
SEE TRAFFIC CONTROL STAGE PLANS.

TRAFFIC CONTROL ADVANCED WARNING - NO LANE CLOSURE

CARR CREEK PROJECTS - TRAFFIC CONTROL STAGE 2, 3, 4A, 5A AND 5B
CTH NN PROJECTS - TRAFFIC CONTROL STAGE 1B AND 2B,

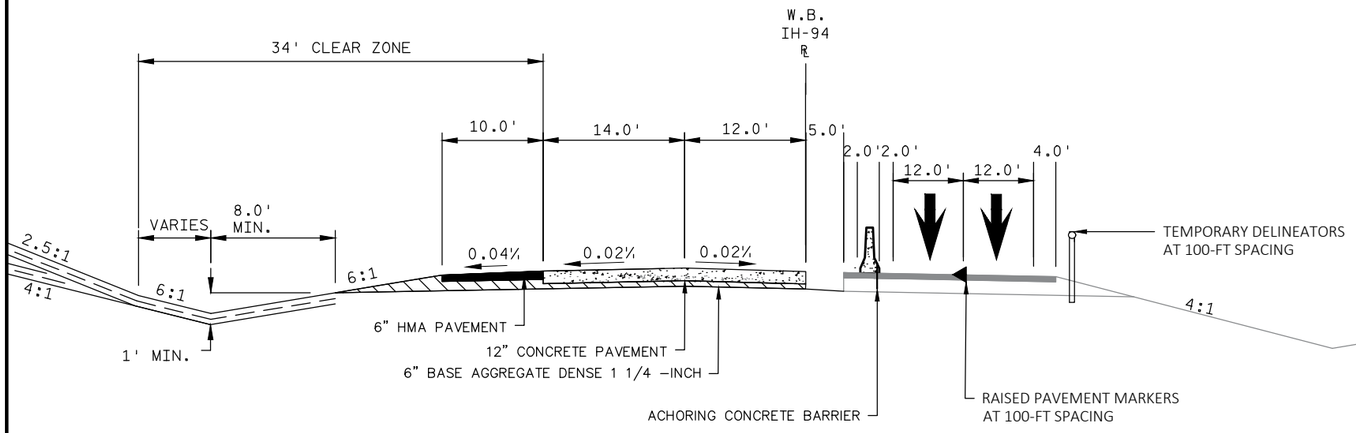


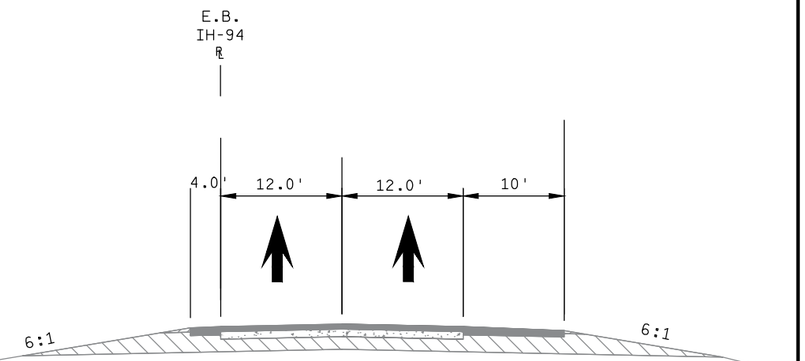


* BASE SHALL BE IN–PLACE PRIOR TO OPENING ADJACENT LANE WITH 3:1 SAFETY SLOPE AND 2' WIDE TOP.

** SHOULDER CLOSURE WHEN NEEDED FOR MEDIUM WORK ON IH 94 WB INSIDE WIDENING..

STAGE 1A
CONSTRUCT IH 94 WB INSIDE WIDENING



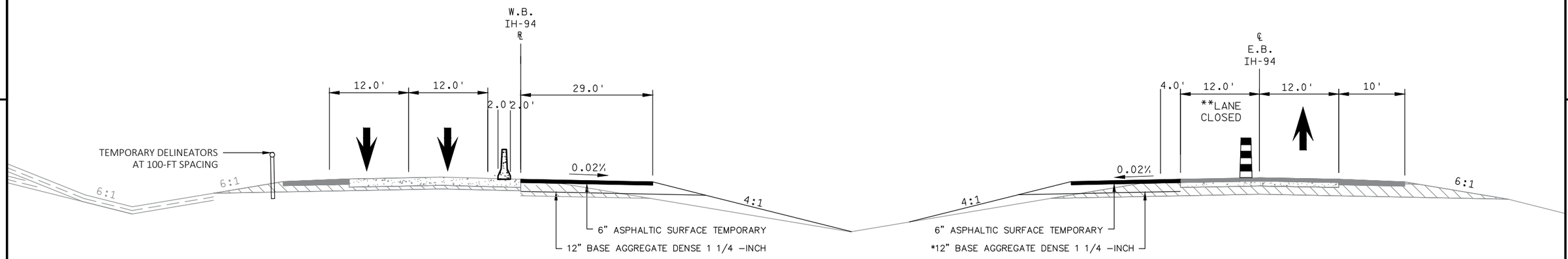


STAGE 1B
CONSTRUCT IH 94 WB LANES

PROJECT NO: 1021-00-78,79	HWY: IH 94	COUNTY: ST. CROIX	TYPICAL SECTIONS FOR TRAFFIC CONTROL STAGING	SHEET 49	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026000-S-TS.DWG
LAYOUT NAME - 01

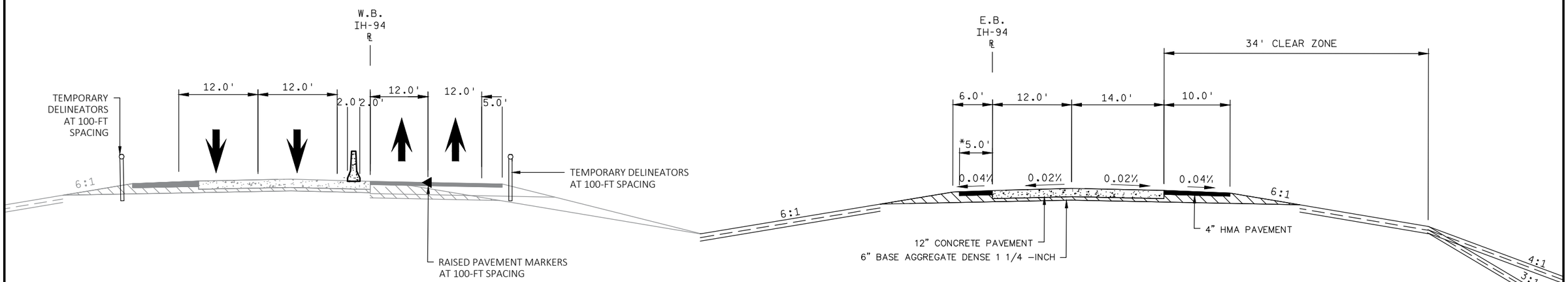
PLOT DATE : 10/27/2020 2:13 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1IN:15 FT



* BASE SHALL BE IN–PLACE PRIOR TO OPENING ADJACENT LANE WITH 3:1 SAFETY SLOPE AND 2' WIDE TOP

** DURING OFF PEAK HOURS ONLY FOR CROSSOVER CONSTRUCTION.

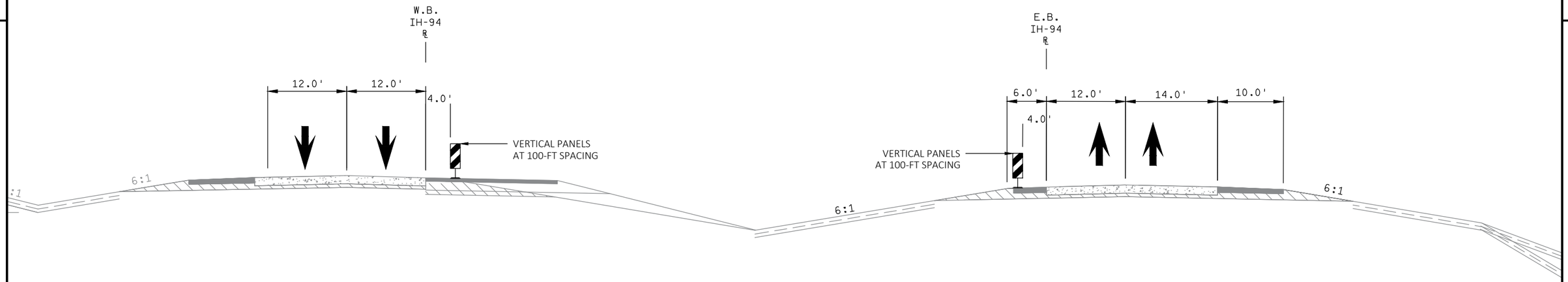
STAGE 2A
CONSTRUCT IH 94 WB ROADWAY APPROACH
CONSTRUCT IH 94 WB WIDENING
CONSTRUCT IH 94 EB CROSS OVER



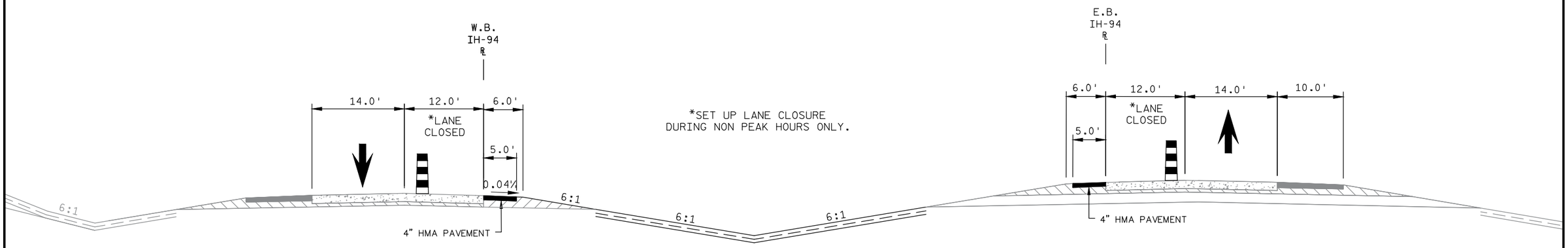
STAGE 2B
CONSTRUCT IH 94 EB LANES

PROJECT NO: 1021-00-78,79	HWY: IH 94	COUNTY: ST. CROIX	TYPICAL SECTIONS FOR TRAFFIC CONTROL STAGING	SHEET 50	E

2



STAGE 2C
WINTER SHUTDOWN



STAGE 3
CONSTRUCT IH 94 WB INSIDE SHOULDERS
RESTORE IH 94 MEDIAN

PROJECT NO: 1021-00-78,79	HWY: IH 94	COUNTY: ST. CROIX	TYPICAL SECTIONS FOR TRAFFIC CONTROL STAGING	SHEET 51	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026000-S-TS.DWG
LAYOUT NAME - 03

PLOT DATE : 10/27/2020 2:13 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1IN:15 FT

LEGEND

TYPE III BARRICADE WTH ATTACHED SIGN

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

WORK AREA

DIRECTION OF TRAFFIC

N

115'WB EX'

120'WB EX'

125'WB EX'

SIGN

STAGE 1A:
TRAFFIC
SINGLE LANE CLOSURE ON I94 WB LANES DURING OFF PEAK HOURS.

CONSTRUCTION:
CONSTRUCT TEMPORARY WIDENING ON I94WB MEDIAN.

SEE SDD 15D12-B TRAFFIC CONTROL, LANE CLOSURE SPEED REDUCTION

POST

IH 94

RIPRAP

130

130'WB EX'

135'WB EX'

140'WB EX'

140

145'WB

POST POST

TEMPORARY WIDENING

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1A	SHEET 52	E

2

LEGEND

TYPE III BARRICADE WTH ATTACHED SIGN

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

WORK AREA

DIRECTION OF TRAFFIC

N

POST

POST

150

150'WB EX'

155'WB EX'

160'WB EX'

PIER PIER

PIER PIER

PIER PIER

PIER PIER

FILLING RUMBLE STRIPS

165'WB EX'

170

170'WB EX'

175'WB EX'

FILLING RUMBLE STRIPS

SIGN

SLAB

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1A	SHEET 53	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026001-S1A.DWG
LAYOUT NAME - 02

PLOT DATE : 8/14/2020 12:49 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC

N

180'WB EX'
180
185
185'WB EX'
190
190'WB EX'
POST
IH 94
TEMPORARY WIDENING

195'WB EX'
200'WB EX'
205'WB EX'
BUFFER SPACE
SEE SDD 15D12-B TRAFFIC CONTROL, LANE CLOSURE SPEED REDUCTION
R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE
SIGN

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1A	SHEET 54	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026001-S1A.DWG
LAYOUT NAME - 03

PLOT DATE : 8/14/2020 12:49 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR
- TEMPORARY RAISED PAVEMENT MARKER

FOR ADDITONAL TRAFFIC CONTROL DETAILS,

SEE SDD 15D41 TRAFFIC CONTROL,
MULTIPLE LANE SHIFT MULTILANE DIVIDED ROAD

SEE TRAFFIC CONTROL ADVANCED WARNING -
NO LANE CLOSURE.

N

115'WB EX'

SIGN

INL

STAGE 1B:
TRAFFIC
SHIFT I94WB TRAFFIC TO THE INSIDE LANES.

CONSTRUCTION:
CONSTRUCT IH 94WB LANES.
CONSTRUCT NORTH HALF OF STRUCTURE B-55-070.
CONSTRUCT EXTENSION OF BOX CULVERT C-55-19.

120'WB EX'

125'WB EX'

T106
1119.61

IH 94

POST

IH 94

RIPRAP

FILL RUMBLE STRIPS

130

130'WB EX'

135'WB EX'

POST

POST

140'WB EX'

140

145'WB

IH 94

T114
1118.90

IH 94

2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1B	SHEET 55	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026001-S1B.DWG
LAYOUT NAME - 01

PLOT DATE : 8/14/2020 12:51 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

N

POST

POST

POST

150

150 WB EX

155 WB EX

160 WB EX

PIER

PIER

PIER

PIER

PIER

PIER

IH 94

T128

LEGEND

INL

POST

TYPE III BARRICADE WTH ATTACHED SIGN

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

WORK AREA

DIRECTION OF TRAFFIC

POST

CONCRETE BARRIER TEMPORARY PRECAST

TEMPORARY CRASH CUSHION

TEMPORARY DELINEATOR

TEMPORARY RAISED PAVEMENT MARKER

TAPER 4' SHOULDER ON ROADWAY TO
1' SHOULDER ON BRIDGE
STA 155+18'WB EX' - 157+38'WB EX'

W01-4BL
48"X48"

165 WB EX

170

170 WB EX

175'WB EX'

INL

POST

TAPER 1' SHOULDER ON BRIDGE TO
4' SHOULDER ON ROADWAY
STA 159+33'WB EX' - 161+53'WB EX'

SIGN

SLAB

POST

POST

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1B	SHEET 56	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026001-S1B.DWG
LAYOUT NAME - 02

PLOT DATE : 8/14/2020 12:51 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

FILL RUMBLE STRIPS

N

POST

180'WB EX'

185'WB EX'

POST

190'WB EX'

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR
- TEMPORARY RAISED PAVEMENT MARKER

R11-2
48" X 30"
ROAD CLOSED

TYPE III BARRICADE

IH 94

WO1-6
48" X 24"

POST POST

TYPE III BARRICADE

195'WB EX'

200'WB EX'

205'WB EX'

IH 94

INL

WO1-4BL
48"X48"

POST

POST

IH 94

FOR ADDITONAL TRAFFIC CONTROL DETAILS
SEE SDD 15D41 TRAFFIC CONTROL,
MULTIPLE LANE SHIFT MULTILANE DIVIDED ROAD

SIGN

POST

POST

POST POST

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1B	SHEET 57	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026001-S1B.DWG
LAYOUT NAME - 03

PLOT DATE : 8/14/2020 12:51 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STAGE 2A:
TRAFFIC
I94WB TRAFFIC ON THE OUTSIDE LANES.
I94EB TRAFFIC ON EB LANES. SINGLE LANE CLOSURE ON I94 EB INSIDE LANE DURING OFF PEAK HOURS.

CONSTRUCTION:
CONSTRUCT SOUTH HALF OF STRUCTURE B-55-270.
CONSTRUCT IH 94 WB ROADWAY APPROACH AND B-55-270 STRUCTURE APPROACH SLABS.
CONSTRUCT I94EB CROSSOVERS AND WIDEN I94WB INSIDE LANES.

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

N

115'WB EX'
120'WB EX'
125'WB EX'
SIGN
INL
115'EB EX'
120'EB EX'
125'EB EX'
POST
T108
1119.61
IH 94
RIPRAP

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

420 FT TAPER
POST
POST
130'WB EX'
135'WB EX'
140'WB EX'
130'EB EX'
135'EB EX'
140'EB EX'
T114
1118.90

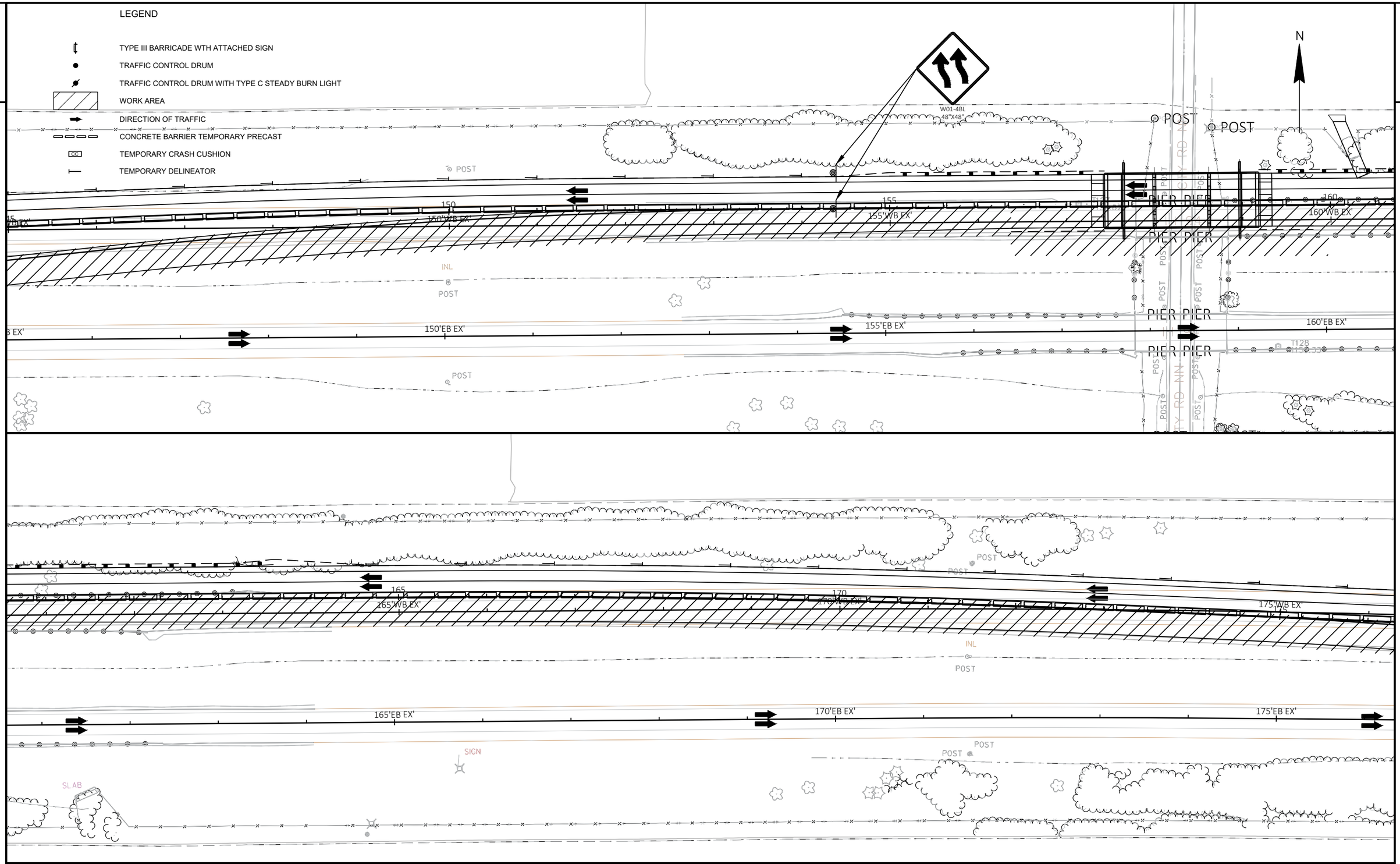
SINGLE LANE CLOSURE DURING OFF PEAK HOURS WHEN NEEDED.
SEE SDD 15D12B TRAFFIC CONTROL, LANE CLOSURE SPEED REDUCTION

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2A	SHEET 58	E

2

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR



2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2A	SHEET 59	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026002-S2A.DWG
LAYOUT NAME - 02

PLOT DATE : 10/15/2020 2:43 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

R11-2
48" X 30"
ROAD CLOSED

TYPE III BARRICADE

420 FT TAPER

WO1-6
48" X 24"

TYPE III BARRICADE

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

FOR ADDITONAL TRAFFIC CONTROL DETAILS, SEE TRAFFIC CONTROL ADVANCED WARNING - NO LANE CLOSURE.

N

POST
180'WB EX'
IH 94
185'WB EX'
CC
INL
POST
POST
190'WB EX'
180'EB EX'
IH 94
185'EB EX'
190'EB EX'
POST
POST

SINGLE LANE CLOSURE DURING OFF PEAK HOURS WHEN NEEDED.
SEE SDD 15D12B TRAFFIC CONTROL, LANE CLOSURE SPEED REDUCTION

2

POST
W01-4BR
48"X48"
POST
195'WB EX'
200'WB EX'
205'WB EX'
IH 94
INL
INL
195'EB EX'
200'EB EX'
205'EB EX'
IH 94
SIGN
POST
POST
POST
POST

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2A	SHEET 60	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026002-S2A.DWG
LAYOUT NAME - 03

PLOT DATE : 10/15/2020 2:43 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

STAGE 2B:
TRAFFIC
I94WB TRAFFIC ON THE OUTSIDE LANES.
SHIFT I94EB TRAFFIC ONTO CROSSOVER AND I94WB INSIDE LANES.

CONSTRUCTION:
CONSTRUCT I94EB AND STRUCTURE B-55-0271.

FOR ADDITONAL TRAFFIC CONTROL DETAILS,
SEE TRAFFIC CONTROL ADVANCED WARNING -
NO LANE CLOSURE.

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

N

115'WB EX'
120'WB EX'
125'WB EX'
130'WB EX'
135'WB EX'
140'WB EX'
145'WB EX'

WO1-4BL

WO1-6
48" X 24"

R11-2
48" X 30"
ROAD
CLOSED

TYPE III BARRICADE

TYPE III BARRICADE

IH 94

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2B	SHEET 61 E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026002-S2B.DWG
LAYOUT NAME - 01

PLOT DATE : 8/17/2020 1:55 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

2

2

N

W01-4BL
48"X48"

W01-4BR
48"X48"

POST

POST

PIER PIER

PIER PIER

PIER PIER

150

150'WB EX'

155

155'WB EX'

160

160'WB EX'

STEEL PLATE BEAM GUARD TEMPORARY

INL

POST

165

165'WB EX'

170

170'WB EX'

175

175'WB EX'

INL

POST

POST

POST

SLOPE

SLAB

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2B	SHEET 62	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026002-S2B.DWG
LAYOUT NAME - 02

PLOT DATE : 8/17/2020 1:56 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

N

180'WB EX'
180
185'WB EX'
185
190'WB EX'
190
CC
POST
INL
IH 94
WO1-6
48" X 24"
TYPE III BARRICADE

195'WB EX'
200'WB EX'
205'WB EX'
W01-4BR
48"X48"
SIGN

2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2B	SHEET 63	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026002-S2B.DWG
LAYOUT NAME - 03

PLOT DATE : 8/17/2020 1:56 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

STAGE 2C:
TRAFFIC
I94 WB TRAFFIC ON NEW CONSTRUCTED WB LANES.
I94 EB TRAFFIC ON NEW CONSTRUCTED EB LANES.

CONSTRUCTION:
WINTER SHUTDOWN

LEGEND

- DIRECTION OF TRAFFIC
- VERTICAL PANEL
- TYPE III BARRICADE WTH ATTACHED SIGN

N

115'WB EX'
120'WB EX'
125'WB EX'
115'EB EX'
120'EB EX'
125'EB EX'
SIGN
INL
POST
HOE 1119.61
RIPRAP

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

130'WB EX'
135'WB EX'
140'WB EX'
145'WB EX'
130'EB EX'
135'EB EX'
140'EB EX'
145'EB EX'
POST
POST
T114 1118.86

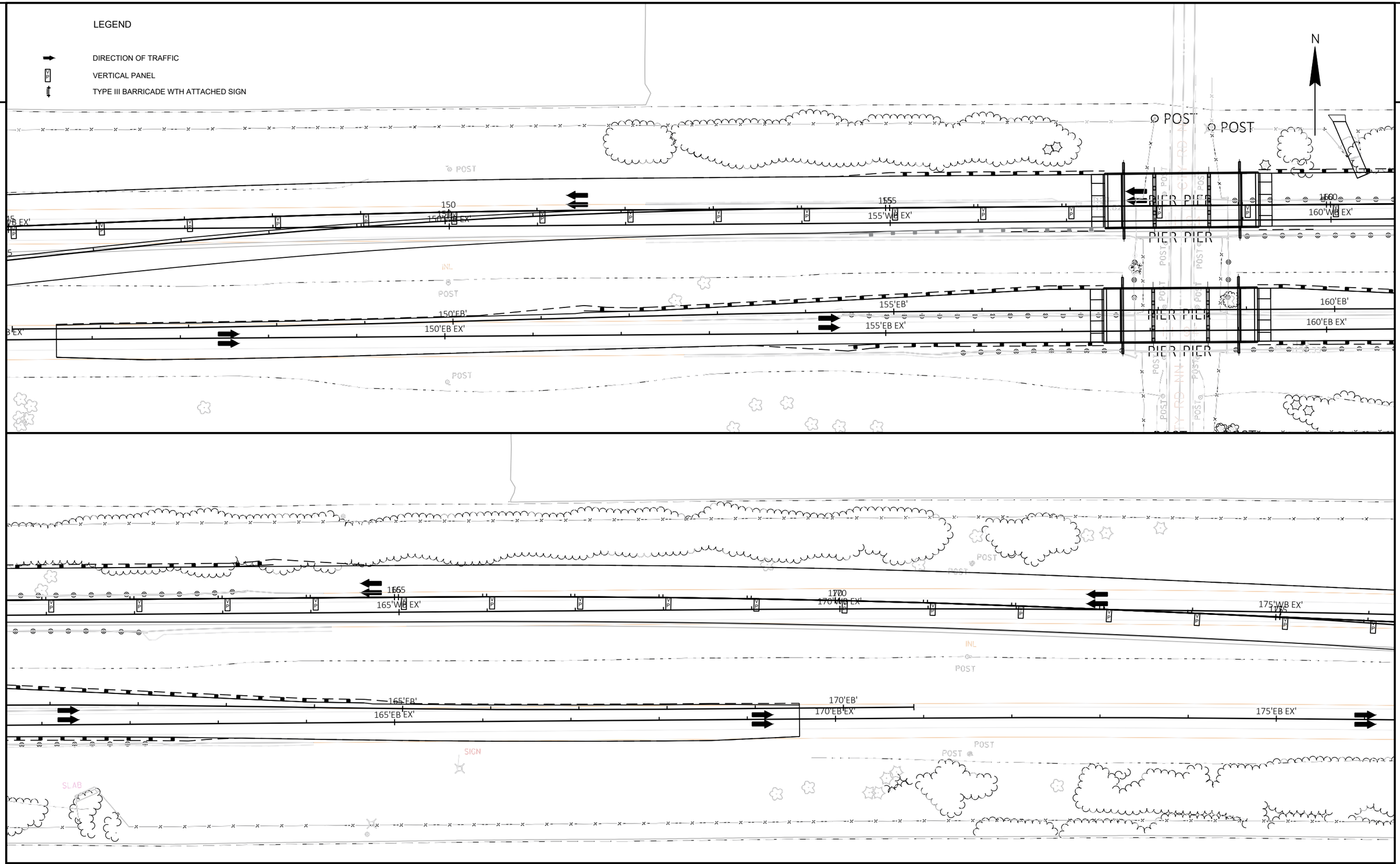
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2C - WINTER SHUTDOWN	SHEET 64	E

LEGEND

DIRECTION OF TRAFFIC

VERTICAL PANEL

TYPE III BARRICADE WTH ATTACHED SIGN



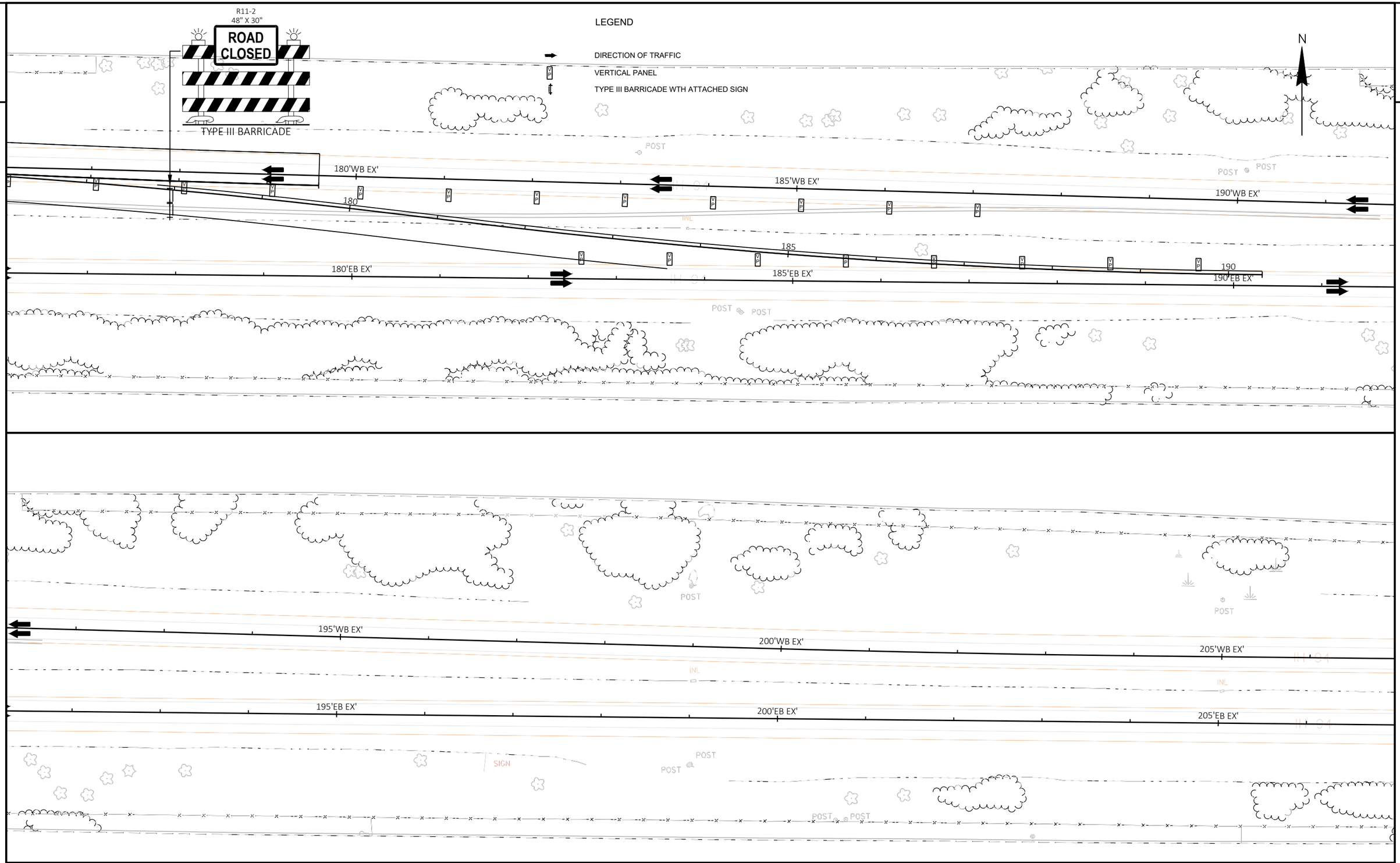
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2C - WINTER SHUTDOWN	SHEET 65	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026003-S2C.DWG
LAYOUT NAME - 02

PLOT DATE : 8/17/2020 2:05 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2C - WINTER SHUTDOWN	SHEET 66	E

STAGE 3:
TRAFFIC
I94 WB TRAFFIC ON NEW CONSTRUCTED WB LANES.
I94 EB TRAFFIC ON NEW CONSTRUCTED EB LANES.
SINGLE LANE CLOSURES ON I94 EB OR I94 WB LANES DURING OFF PEAK HOURS WHEN NEEDED.

CONSTRUCTION:
REMOVE I94 EB CROSS OVER AND REMOVE TEMPORARY WIDENING ON I94 WB INSIDE LANES.
CONSTRUCT INSIDE SHOULDERS ON I94 WB AND I94 EB.
GRADE AND RESTORE MEDIAN SLOPES AND DITCH.

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC

N

115'WB EX'
120'WB EX'
125'WB EX'
115'EB EX'
120'EB EX'
125'EB EX'
SIGN
INL
POST
T108
1119.61
IH 94
RIPRAP

FOR ADDITONAL TRAFFIC CONTROL DETAILS,
SEE TRAFFIC CONTROL ADVANCE WARNING

130'WB EX'
135'WB EX'
140'WB EX'
145'WB
130'EB EX'
135'EB EX'
140'EB EX'
145'EB
POST
POST
BP: 137+08.63'WB'
PC: 137+58.63'WB'
PT: 142+58.63'WB'
T114
1118.90

SINGLE LANE CLOSURE DURING OFF PEAK HOURS WHEN NEEDED.
SEE SDD 15D12B TRAFFIC CONTROL, LANE CLOSURE SPEED REDUCTION

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 3	SHEET 67	E

2

LEGEND

TYPE III BARRICADE WTH ATTACHED SIGN

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

WORK AREA

DIRECTION OF TRAFFIC

N

PC: 146+64.51'WB'

PT: 151+64.18'WB'

150'WB'

150'WB EX'

155'WB'

155'WB EX'

160'WB'

160'WB EX'

150'EB'

150'EB EX'

155'EB'

155'EB EX'

160'EB'

160'EB EX'

PIER PIER

PC: 165+08.63'WB'

PT: 173+08.63'WB'

165'WB'

165'WB EX'

170'WB'

170'WB EX'

175'WB EX'

175'WB

165'EB'

165'EB EX'

170'EB'

170'EB EX'

175'EB EX'

POST

INL

SIGN

SLAB

2

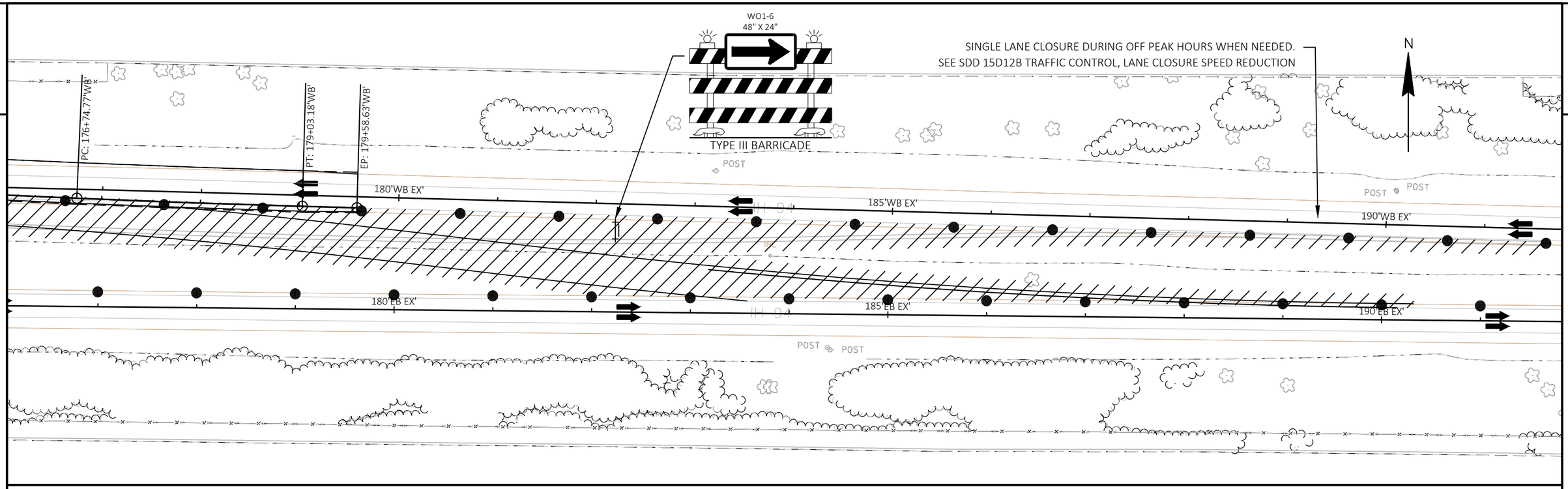
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 3	SHEET 68	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026003-S3.DWG
LAYOUT NAME - 02

PLOT DATE : 10/26/2020 3:14 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

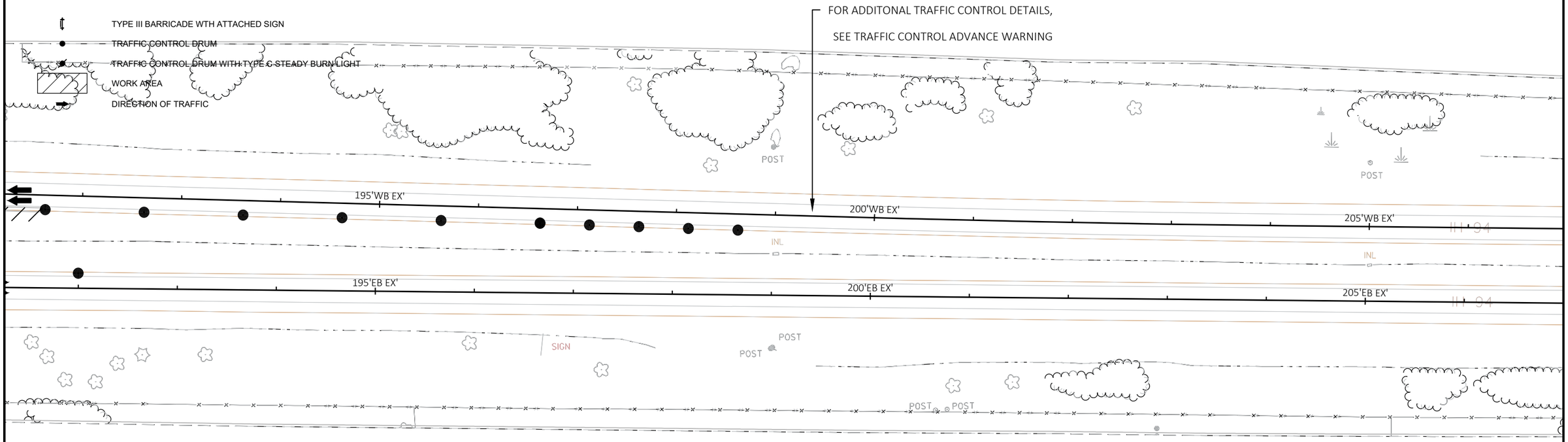
WISDOT/CADDS SHEET 44

2



LEGEND

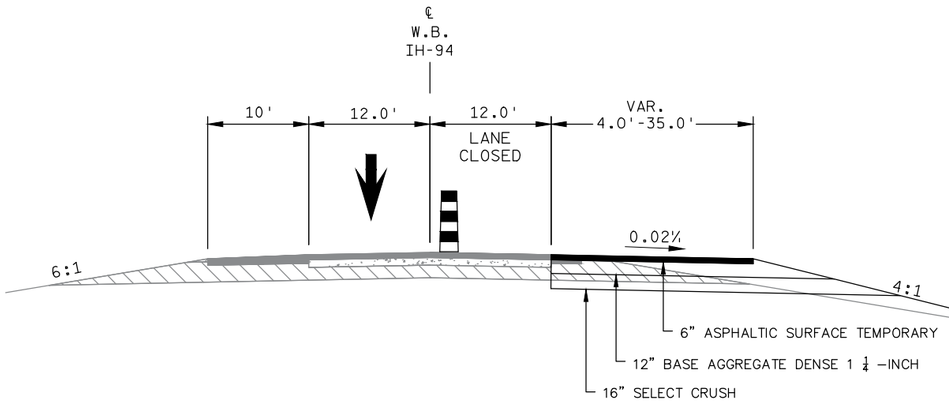
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC



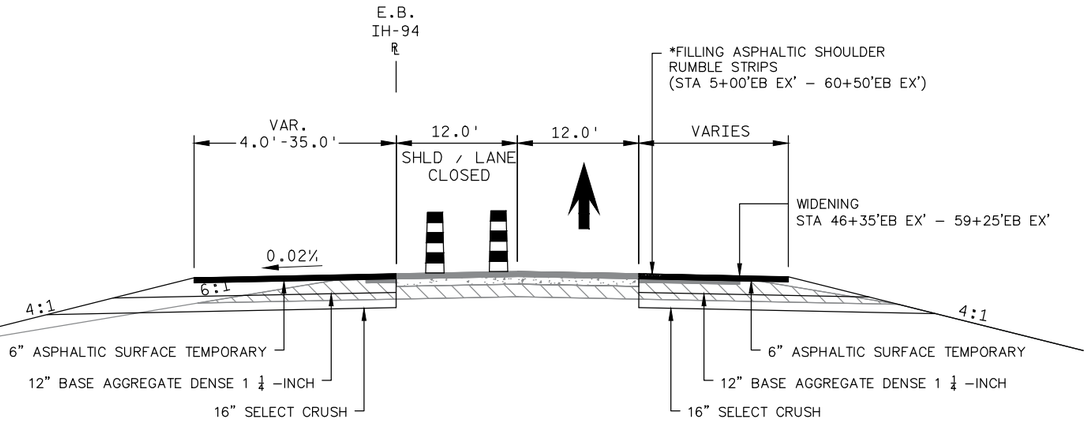
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 3	SHEET 69	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026003-S3.DWG
LAYOUT NAME - 03

PLOT DATE : 10/26/2020 3:14 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT



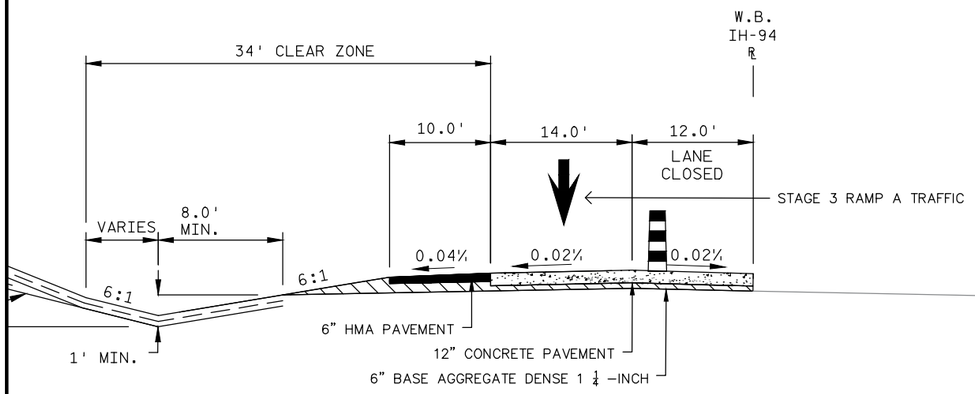
NOTE: BASE SHALL BE IN-PLACE PRIOR TO OPENING ADJACENT LANE WITH 3:1 SAFETY SLOPE AND 2' WIDE TOP.

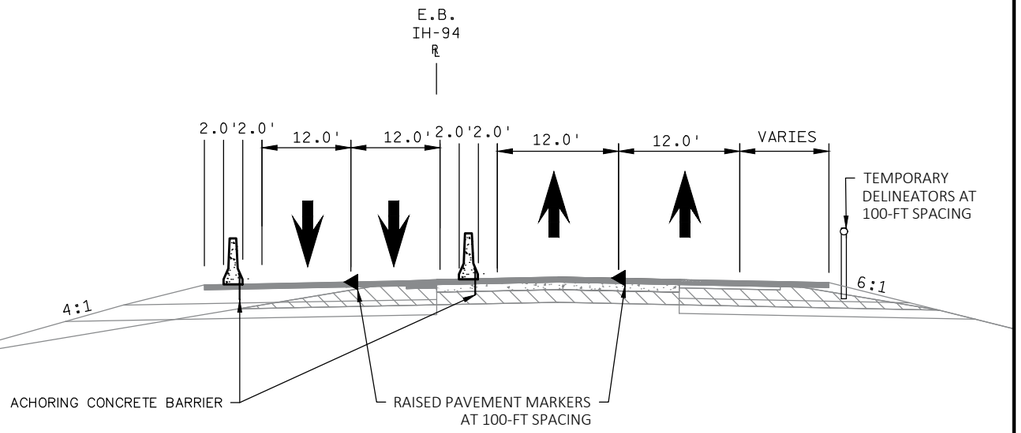


*FILL ASPHALTIC SHOULDERS PRIOR TO CLOSING INSIDE SHOULDERS

STAGE 1

CONSTRUCT IH 94 WB CROSS OVERS
CONSTRUCT IH 94 EB TEMPORARY WIDENING
CONSTRUCT B-55-12 TEMPORARY WIDENING
CONSTRUCT IH 94 EB OUTSIDE WIDENING

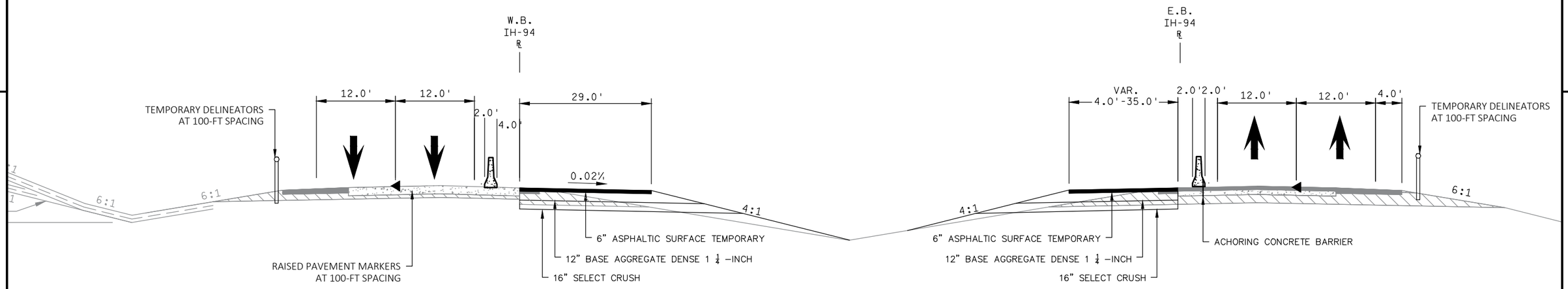




STAGE 2 & 3

CONSTRUCT RAMP A (STAGE 2)
CONSTRUCT STRUCTURE B-55-0286 (STAGE 2)
CONSTRUCT IH 94 WB LANES (STAGE 2 & 3)
CONSTRUCT STRUCTURE B-55-0282 (STAGE 3)

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TYPICAL SECTIONS FOR TRAFFIC CONTROL STAGING	SHEET 70	E

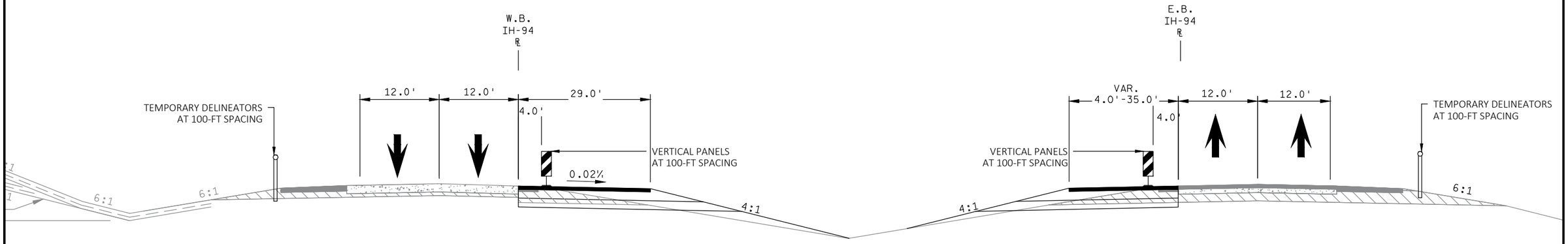


STAGE 4A

REMOVE IH 94 WB CROSS OVERS

CONSTRUCT IH 94 EB CROSS OVERS

CONSTRUCT IH 94 WB TEMPORARY WIDENING



STAGE 4B

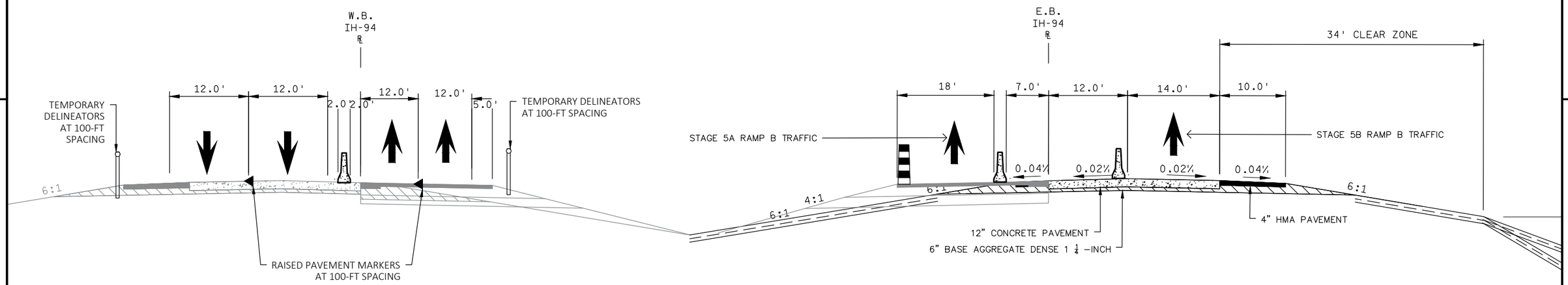
WINTER SHUTDOWN

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TYPICAL SECTIONS FOR TRAFFIC CONTROL STAGING	SHEET 71	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026000-S-TS-I94-CTHB.DWG
LAYOUT NAME - 02

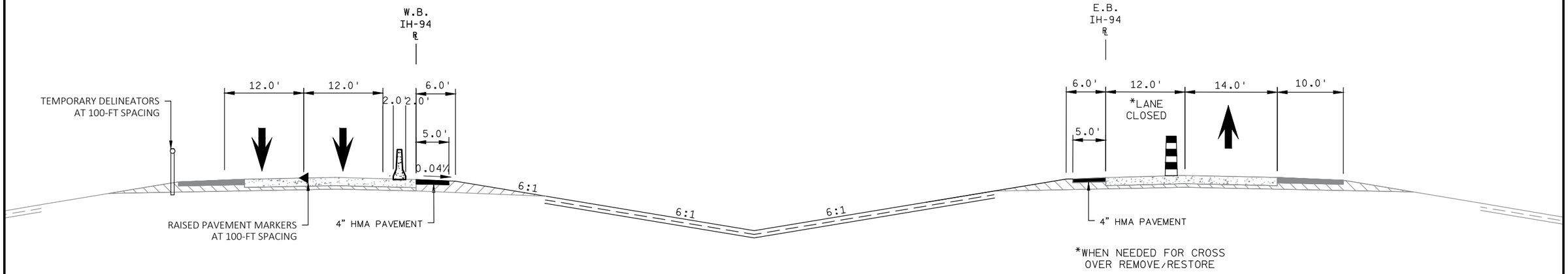
PLOT DATE : 10/27/2020 1:31 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1IN:15 FT

WISDOT/CADDS SHEET 42



STAGE 5A & 5B

CONSTRUCT STRUCTURE B–55–0285 (STAGE 5A)
CONSTRUCT RAMP B AND RAMP B TEMPORARY WIDENING (STAGE 5A)
CONSTRUCT IH 94 EB LANES (STAGE 5A & 5B)
CONSTRUCT STRUCTURE B–55–0281 (STAGE 5B)



STAGE 6

REMOVE IH 94 EB CROSS OVERS
REMOVE IH 94 WB TEMPORARY WIDENING
CONSTRUCT IH 94 WB INSIDE SHOULDERS
RESTORE IH 94 MEDIAN
REMOVE RAMP B TEMPORARY WIDENING
CONSTRUCT RAMP B OUTSIDE SHOULDERS

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TYPICAL SECTIONS FOR TRAFFIC CONTROL STAGING	SHEET 72	E

2

STAGE 1:
TRAFFIC
SINGLE LANE CLOSURE ON I94 EB AND I94 WB DURING OFF PEAK HOURS.

CONSTRUCTION:
CONSTRUCT I94WB CROSSOVERS AND WIDEN I94EB LANES.
CONSTRUCT B-55-12 WIDENING.

FOR ADDITONAL TRAFFIC CONTROL DETAILS,
SEE TRAFFIC CONTROL ADVANCED WARNING.

N

2

IH 94 WB CROSSOVER

-5'WB EX'
0'WB EX'
5'WB EX'
-5'EB EX'
0'EB EX'
5'EB EX'
T103
1199.48
SIGN

LEGEND

- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA

SINGLE LANE CLOSURE DURING OFF PEAK HOURS.
SEE SDD 15D12-B TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

SHOULDER CLOSURE.
SEE SDD 15D27-03 TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

SIGN
POST
POST
POST
POST
SIGN

10'WB EX'
15'WB EX'
20'WB EX'
25'WB EX'
IH 94
INL
10'EB EX'
15'EB EX'
20'EB EX'
25'EB EX'
IH 94
INL
POST
SIGN

FILL RUMBLE STRIPS

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1	SHEET 73	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026001-S1-I94-CTHB.DWG
LAYOUT NAME - 01

PLOT DATE : 10/27/2020 1:06 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

IH 94

30'WB EX'

35'WB EX'

40'WB EX'

30'EB EX'

35'EB EX'

40'EB EX'

SIGN

POST

SIGN

LEGEND

DIRECTION OF TRAFFIC

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

WORK AREA

SEE SDD 15D15-05D
FOR LANE CLOSRE AT
ENTRANCE RAMP

B-55-12 WIDENING
SEE STRUCTURE PLANS

T121
1114.93

45'WB EX'

45'EB EX'

SEE SDD 15D15-05E
FOR LANE CLOSRE AT EXIT
RAMP

RIPRAP

POST

TEMPORARY WIDENING

T123
1111.94

50'WB EX'

50'EB EX'

FILL RUMBLE STRIPS
AND TEMPORARY WIDENING

CTH B

55'WB EX'

55'EB EX'

INL

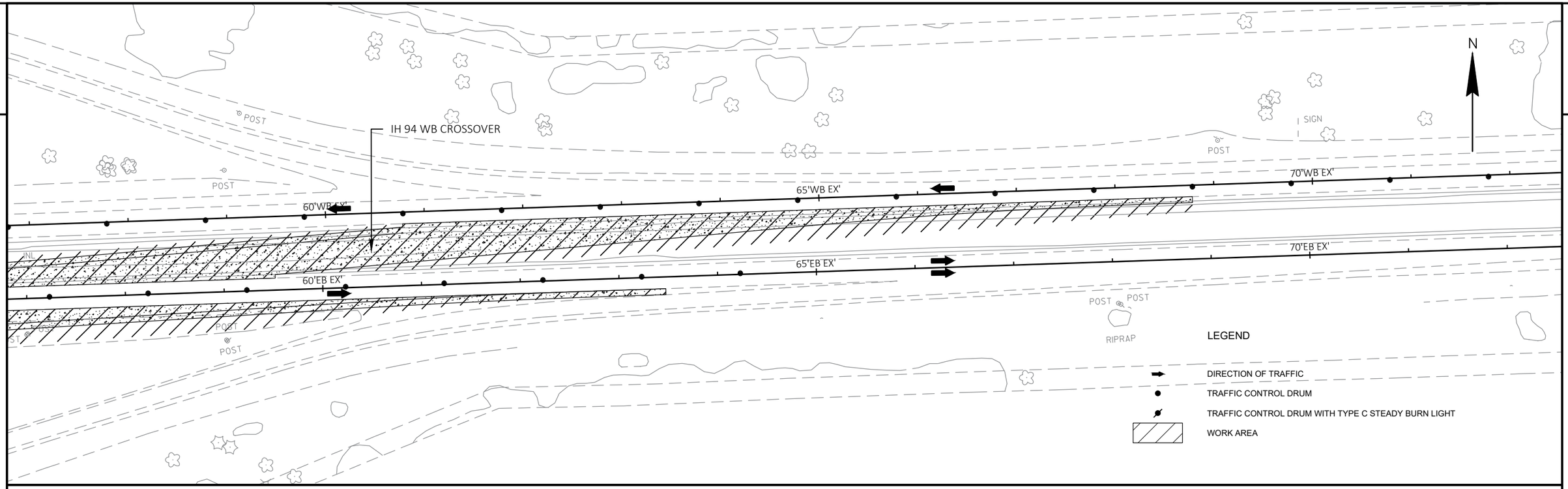
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1	SHEET 74	E

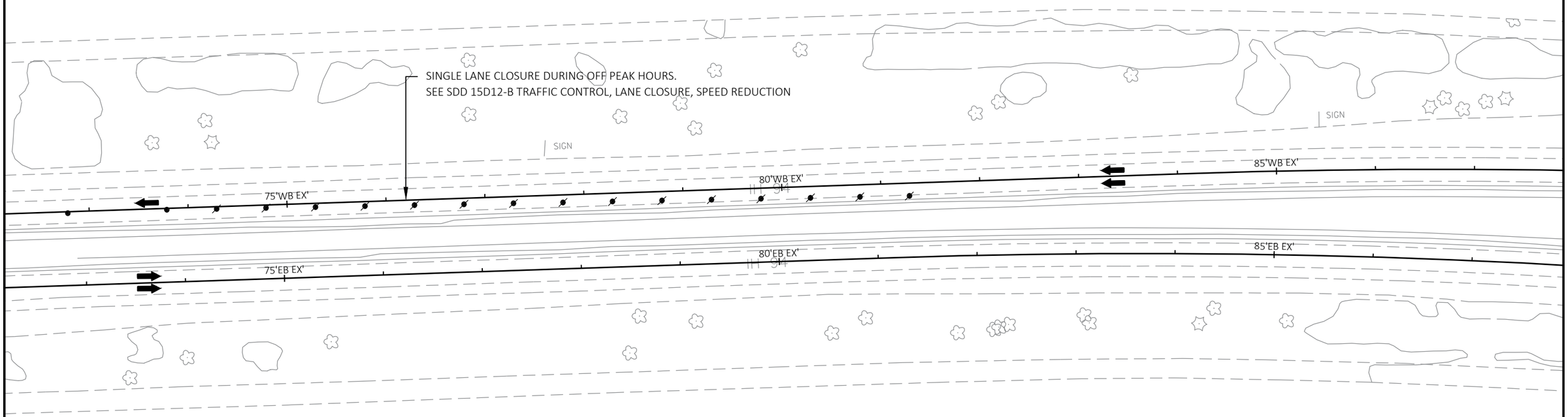
FILE NAME : C:\C3D\10210407\SHEETSPLAN\026001-S1-I94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 10/27/2020 1:07 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2





PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1	SHEET 75	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026001-S1-I94-CTHB.DWG
LAYOUT NAME - 03

PLOT DATE : 10/27/2020 1:07 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

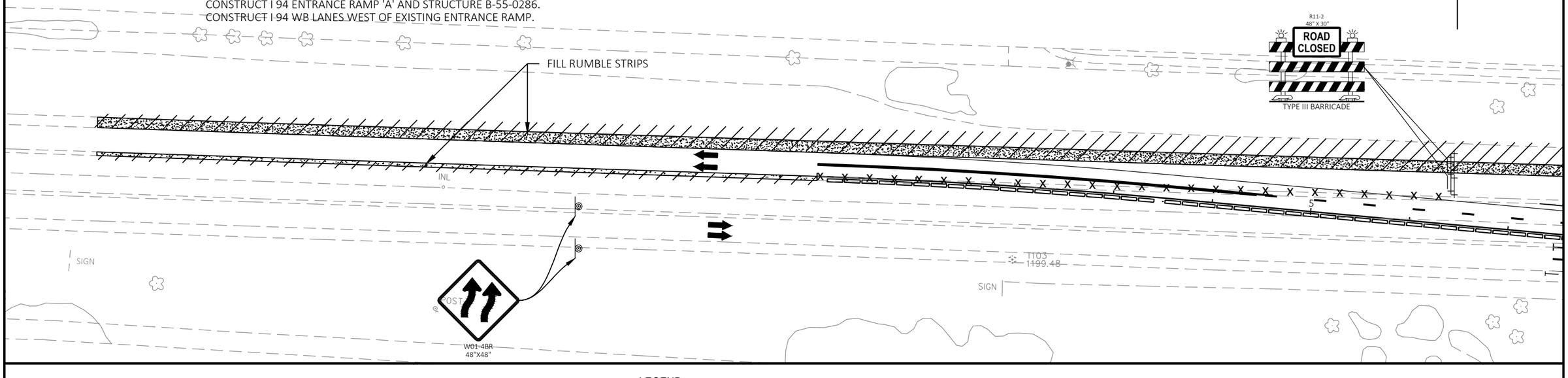
STAGE 2:
TRAFFIC
SHIFT I 94 WB TRAFFIC ONTO THE TEMPORARY ROAD.
SHIFT I 94 EB TRAFFIC TO THE OUTSIDE.
SINGLE LANE CLOSURE DURING OFF PEAK HOURS.

CONSTRUCTION:
CONSTRUCT I 94 ENTRANCE RAMP 'A' AND STRUCTURE B-55-0286.
CONSTRUCT I 94 WB LANES WEST OF EXISTING ENTRANCE RAMP.

FOR ADDITONAL TRAFFIC CONTROL DETAILS,
SEE TRAFFIC CONTROL ADVANCED WARNING.

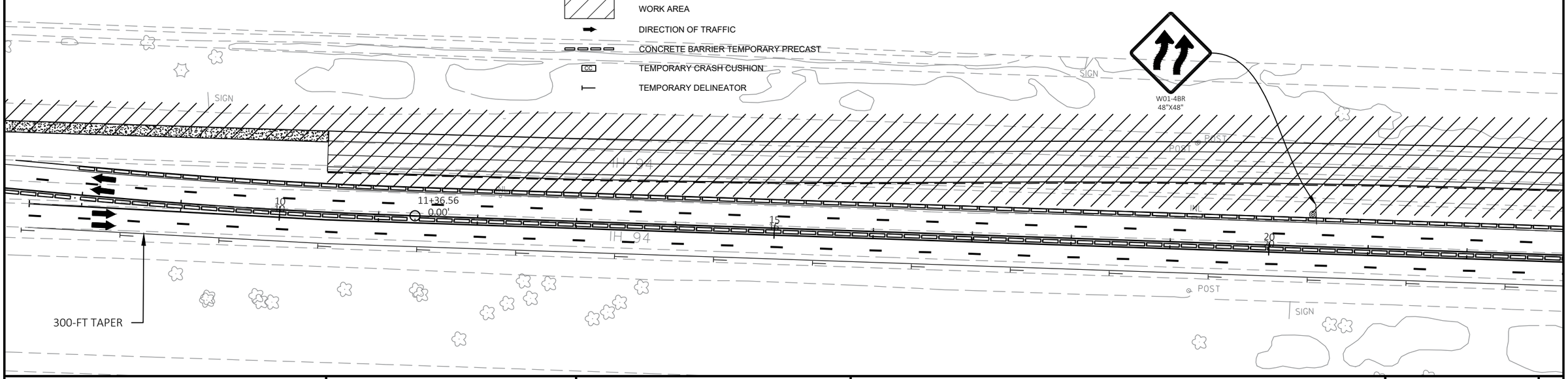
N

2



LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR



PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2	SHEET 76	E

2

2

N

600-FT PARALLEL LANE

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

SEE SDD 15D15-B TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE

W4-1R
36"X36"

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2	SHEET 77 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026002-S2-I94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 8/20/2020 11:28 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

N

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

EXIT
E5-1
72"X60"

WO1-6
48" X 24"
TYPE III BARRICADE

66+35.20
-24.00'

65+43.50
-24.00'

W01-4BL
48"X48"

FILL RUMBLE STRIPS

FILL RUMBLE STRIPS

SIGN

SIGN

IH 94

IH 94

IH 94

CTH B

CTH B

T123
1111.94

T124
1111.78

INL

POST

RIPRAP

AP

70

60

65

55

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2	SHEET 78	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026002-S2-I94-CTHB.DWG
LAYOUT NAME - 03

PLOT DATE : 8/20/2020 11:28 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STAGE 3:
TRAFFIC
SHIFT I 94 WB ENTRANCE RAMP TRAFFIC ONTO THE NEW RAMP 'A.'

CONSTRUCTION:
REMOVE EXISTING I 94 WB ENTRANCE RAMP.
CONSTRUCT I 94 WB STRUCTURE B-55-0282.
CONSTRUCT I 94 WB LANES EAST OF ENTRANCE RAMP.

FOR ADDITONAL TRAFFIC CONTROL DETAILS,
SEE TRAFFIC CONTROL ADVANCED WARNING.

N

600-FT PARALLEL LANE

300-FT TAPER

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

W01-4BR
48"X48"

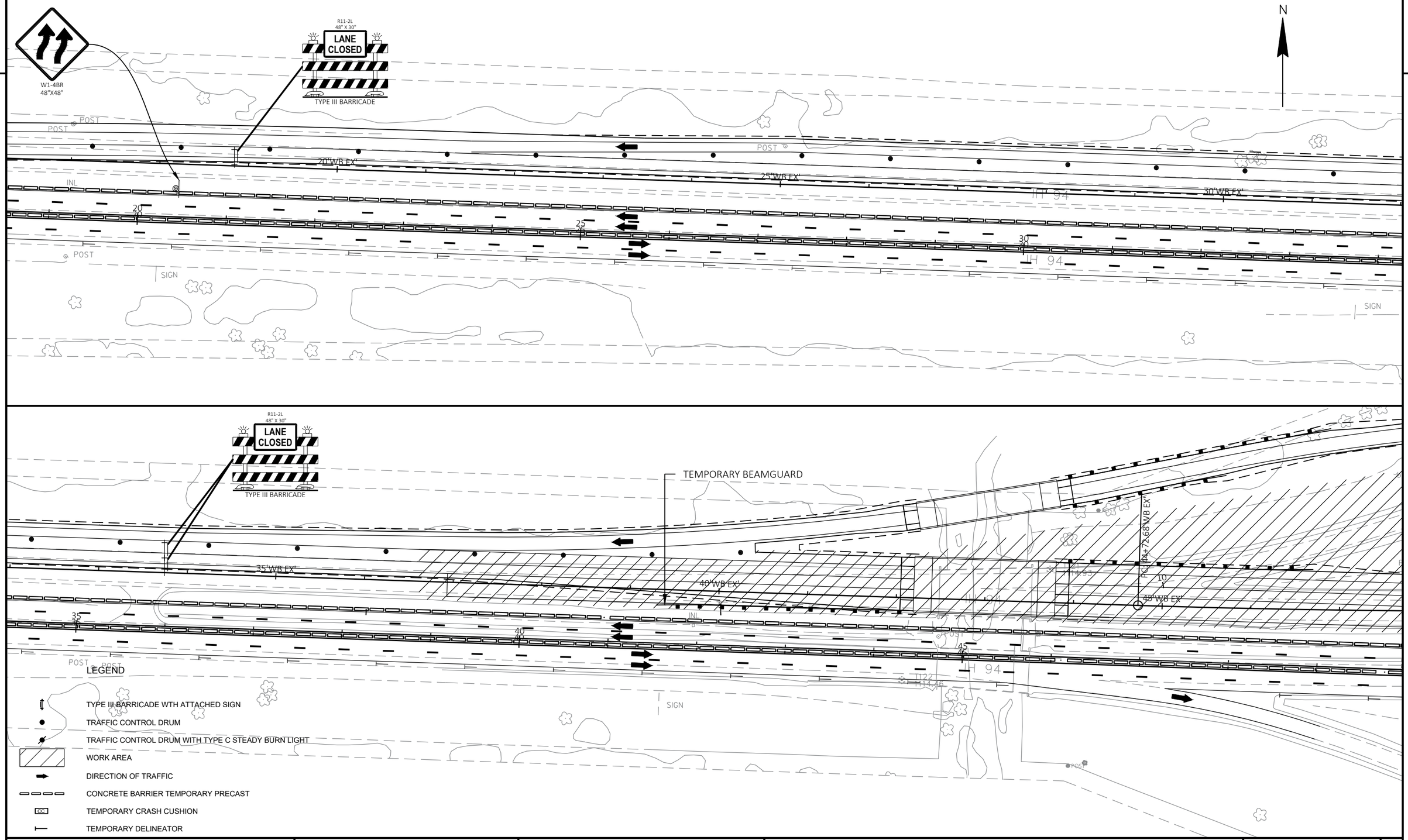
SEE SDD 15D15-B TRAFFIC CONTROL,
ENTRANCE RAMP WITHIN LANE CLOSURE

W04-4R

300-FT TAPER

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 3	SHEET 79	E

2



2

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 3	SHEET 80	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026003-S3-I94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 8/26/2020 1:09 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

N

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

EXIT
E5-1
72"X60"

W01-6
48" X 24"
TYPE III BARRICADE

W01-4BL
48"X48"

CTH B

PT: 52+47.30 WB EX'

50'WB EX'

55'WB EX'

60'WB EX'

65'WB EX'

70'WB EX'

75'WB EX'

66+35.20
-24.00'

65+43.20
24.00'

65+45.20
24.00'

T124
1111.78

INL

RIPRAP

POST

SIGN

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 3	SHEET 81	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026003-S3-I94-CTHB.DWG
LAYOUT NAME - 03

PLOT DATE : 8/26/2020 1:10 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

STAGE 4A:
TRAFFIC
SHIFT I 94 WB TRAFFIC ONTO THE NEW I 94 WB LANES.
CLOSE INSIDE SHOULERS ON I 94.

CONSTRUCTION:
CONSTRUCT I 94 EB CROSS OVERS.
RESTORE I 94 MEDIAN AREA OUTSIDE OF THE I 94 EB CROSS OVER LIMITS.

FOR ADDITONAL TRAFFIC CONTROL DETAILS,
SEE TRAFFIC CONTROL ADVANCED WARNING.

N

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

SEE SDD 15D27 TRAFFIC CONTROL,
SHOULDER CLOSURE ON DIVIDED ROADWAY,
SPEEDS GREATER THAN 40 MPH

W01-4BR
48"X48"

B EX'
-10'WB EX'
-5'WB EX'
0'WB EX'
IH 94
INL
SIGN
POST
T103
1199.48

5'WB EX'
BP: 8+23.67'WB'
PC: 9+73.67'WB'
PT: 14+10.46'WB'
PC: 15+59.54'WB'
10'WB EX'
10'WB'
15'WB EX'
300-FT TAPER

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 4A	SHEET 82	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026004-S4A-I94-CTHB.DWG
LAYOUT NAME - 01
PLOT DATE : 8/26/2020 1:27 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

2

N

PT: 20+92.06'WB'

POST

20'WB'
20'WB EX

25'WB'
25'WB EX

30'WB'
30'WB EX

INL

20

25

30

IH 94

SIGN

35'WB'
35'WB EX

40'WB'
40'WB EX

45'WB'
45'WB EX

35

40

45

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 4A	SHEET 83	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026004-S4A-I94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 8/26/2020 1:28 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

N

CTH B

PC: 47+73.55'WB'

PT: 55+60.34'WB'

EP: 57+10.35'WB'

50'WB EX'

55'WB EX'

55'WB'

60'WB EX'

T123
1111.94

T124
1111.78

TH 94

INL

65'WB EX'

70'WB EX'

75'WB EX'

SIGN

RIPRAP

POST

300-FT TAPER

W01-4BR
48"X48"

SEE SDD 15D27 TRAFFIC CONTROL,
SHOULDER CLOSURE ON DIVIDED ROADWAY,
SPEEDS GREATER THAN 40 MPH

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 4A	SHEET 84	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026004-S4A-I94-CTHB.DWG
LAYOUT NAME - 03

PLOT DATE : 8/26/2020 1:28 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

STAGE 4B:
WINTER SHUTDOWN

LEGEND

DIRECTION OF TRAFFIC

VERTICAL PANEL

TYPE III BARRICADE WTH ATTACHED SIGN

N

B EX'

IH 94

-10'WB EX'

-5'WB EX'

0'WB EX'

INL

EX'

IH 94

-10'EB EX'

-5'EB EX'

0'EB EX'

INL

T103
1199.48

POST

SIGN

SIGN

POST

SEE SDD 15D27 TRAFFIC CONTROL SHOULDER CLOSURE
ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

SIGN

SIGN

5'WB EX'

10'WB EX'

IH 94

15'WB EX'

INL

5'EB EX'

10'EB EX'

IH 94

15'EB EX'

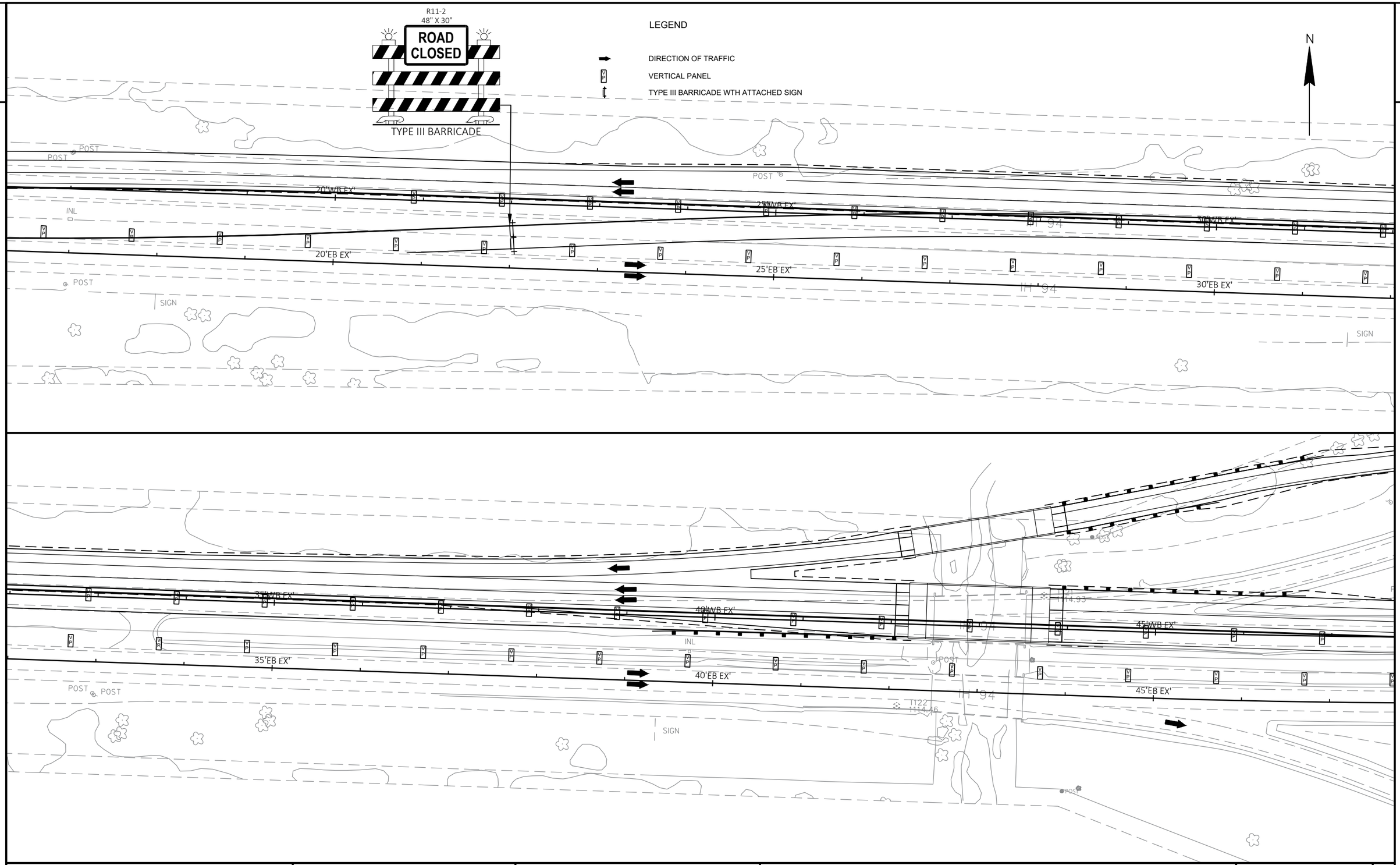
2

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 4B	SHEET 85	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026004-S4B-I94-CTHB.DWG
LAYOUT NAME - 01

PLOT DATE : 8/26/2020 1:30 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 4B	SHEET 86	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026004-S4B-I94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 8/26/2020 1:30 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

LEGEND

DIRECTION OF TRAFFIC

VERTICAL PANEL

TYPE III BARRICADE WTH ATTACHED SIGN

CTH B

RIPRAP

POST

INL

T123
1111.94

T124
1111.78

IH 94

50'WB EX'

55'WB EX'

60'WB EX'

50'EB EX'

55'EB EX'

60'EB EX'

R11-2
48" X 30"

ROAD CLOSED

TYPE III BARRICADE

SEE SDD 15D27 TRAFFIC CONTROL SHOULDER CLOSURE
ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

SIGN

65'WB EX'

70'WB EX'

75'WB EX'

65'EB EX'

70'EB EX'

75'EB EX'

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 4B	SHEET 87	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026004-S4B-I94-CTHB.DWG
LAYOUT NAME - 03

PLOT DATE : 8/26/2020 1:30 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STAGE 5A:
TRAFFIC
SHIFT I 94 EB ON TO THE I 94 EB CROSS OVER.
I 94 EB TRAFFIC EXITING ONTO CTH B WILL UTILIZE THE I 94 WB CROSS OVER IN PREVIOUS STAGES.

CONSTRUCTION:
CONSTRUCT I 94 EB MAINLINE UP TO THE GORE AREA AT RAMP B.
CONSTRUCT RAMP B AND STRUCTURE B-55-0285.

FOR ADDITONAL TRAFFIC CONTROL DETAILS,
SEE TRAFFIC CONTROL ADVANCED WARNING.

N

B EX'
IH 94
-10'WB EX'
-5'WB EX'
PI - 0+00.00 WB EX'
0'WB EX'
INL
IH 94
INL
LEGEND
TYPE III BARRICADE WTH ATTACHED SIGN
TRAFFIC CONTROL DRUM
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
WORK AREA
DIRECTION OF TRAFFIC
CONCRETE BARRIER TEMPORARY PRECAST
TEMPORARY CRASH CUSHION
TEMPORARY DELINEATOR
POST
SIGN
POST
T103
1199.48
SIGN
WO1-4BL
SIGN
5'WB EX'
10'WB EX'
10'WB
IH 94
INL
15'WB EX'
IH 94
14+00.00
0.00'
15
SIGN

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 5A	SHEET 88	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026005-S5A-I94-CTHB.DWG
LAYOUT NAME - 01
PLOT DATE : 8/26/2020 1:31 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

2

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CC TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

N

20'WB'
20'WB EX

25'WB'
25'WB EX

30'WB'
30'WB EX

POST

INL

20

22+17.51
24.00'

23+81.36
24.00'

30+00.00
26.00'

IH 94

SIGN

WO1-6
48"X24"

R11-2
48" X 30"

ROAD CLOSED

TYPE III BARRICADE

EXIT
24

E5-1A
72"X60"

35'WB'
35'WB EX

40'WB'
40'WB EX

45'WB'
45'WB EX

PCI 44+72.68 WB EX

37+49.68
26.00'

41+49.68
21.00'

45+00.00
21.00'

WO1-6
48"X24"

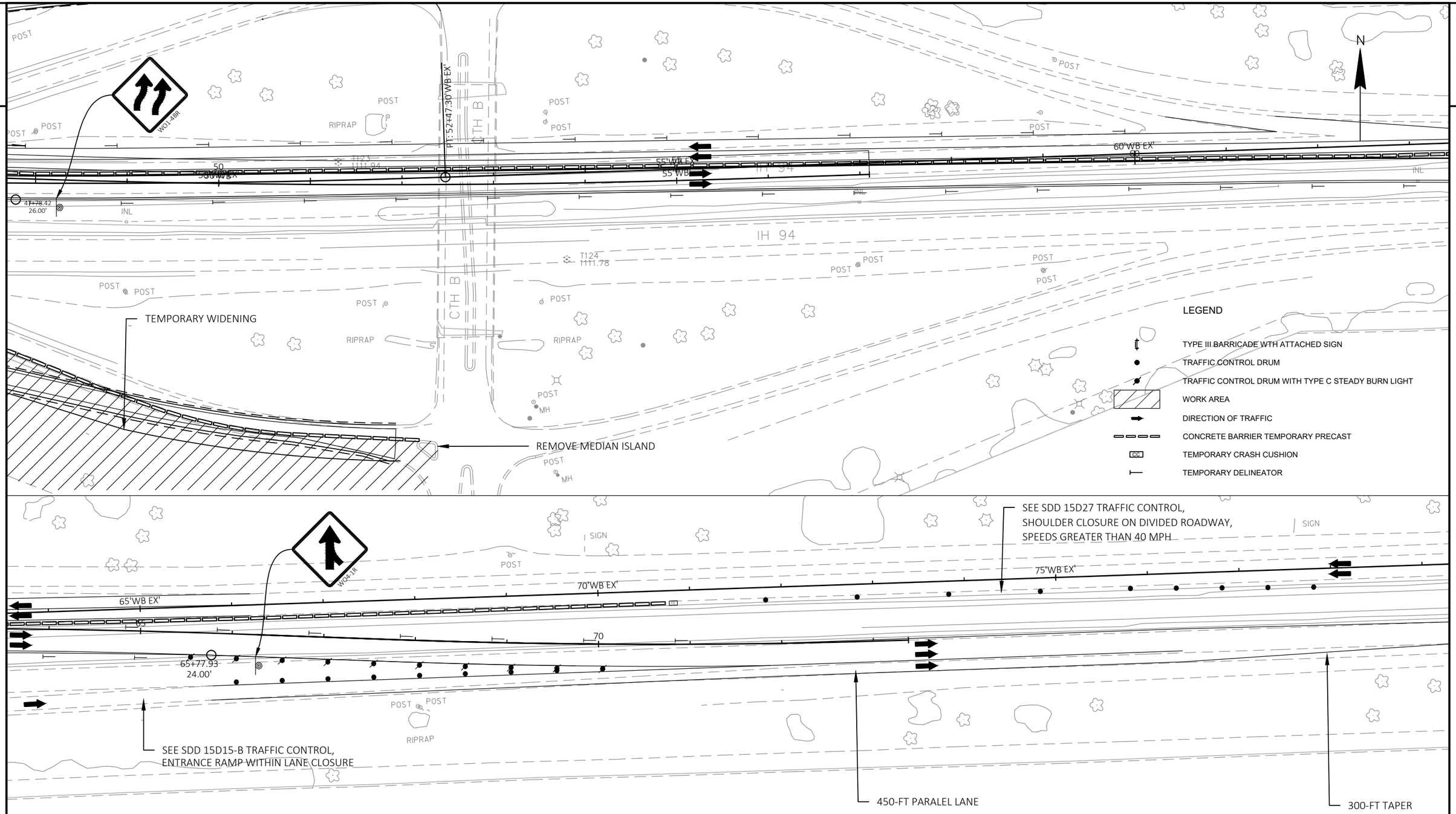
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 5A	SHEET 89	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026005-S5A-I94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 8/26/2020 1:32 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2



PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 5A	SHEET 90	E

STAGE 5B:
TRAFFIC
SHIFT I 94 EB EXIT RAMP TRAFFIC ONTO NEW RAMP B.

CONSTRUCTION:
COMPLETE CONSTRUCTION OF I 94 EB AND CONSTRUCT STRUCTURE B-55-0281.
COMPLETE CONSTRUCTION OF RAMP B.

FOR ADDITONAL TRAFFIC CONTROL DETAILS,
SEE TRAFFIC CONTROL ADVANCED WARNING.

N

WO1-4BL

5'WB EX'

10'WB EX'
10'WB

INL

IH 94

15'WB EX'

14+00.00
0.00'

15

SIGN

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

N

POST

20'WB'
20'WB EX'

INL

20

20+17.32
24.00'

25'WB'
25'WB EX'

30'WB'
30'WB EX'

30+00.00
26.00'

WO1-6
48"X24"

EXIT
24
E5-1A
72"X60"

R11-2
48" X 30"
ROAD
CLOSED
TYPE III BARRICADE

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 5B	SHEET 91	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026005-S5B-I94-CTHB.DWG
LAYOUT NAME - 01

PLOT DATE : 8/26/2020 1:41 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : ############

WISDOT/CADDS SHEET 44

2

2

POST

POST

POST

2

2

SEE SDD 15D27 TRAFFIC CONTROL,
SHOULDER CLOSURE ON DIVIDED ROADWAY,
SPEEDS GREATER THAN 40 MPH

SIGN

POST

WQ4-1R

65'WB EX'

70'WB EX'

75'WB EX'

INL

65

70

65+77.93
24.00'

69+86.79
24.00'

POST POST

RIPRAP

15-FT

BEGIN TAPER
STA 69+86.79

SEE SDD 15D15-B TRAFFIC CONTROL,
ENTRANCE RAMP WITHIN LANE CLOSURE

1000-FT TAPER

SIGN

SIGN

POST

75'WB EX'

80'WB EX'

85'WB EX'

90'WB EX'

IH 94

IH 94

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 5B	SHEET 93	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026005-S5B-I94-CTHB.DWG
LAYOUT NAME - 03

PLOT DATE : 8/26/2020 1:42 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

STAGE 6:
TRAFFIC
SHIFT I 94 EB ONTO NEW EASTBOUND LANES.
SINGLE LANE CLOSURE ON I 94 EB AND I 94 WB DURING OFF PEAK HOURS.

CONSTRUCTION:
CONSTRUCT I 94 WB INSIDE SHOULDERS AND OUTSIDE SHOULDERS WHERE NEEDED
REMOVE I 94 EB CROSS OVERS AND RESTORE MEDIAN AREA.

CONSTRUCT RAMP B OUTSIDE SHOULDERS AT TEMPORARY RAMP WIDENING.

FOR ADDITONAL TRAFFIC CONTROL DETAILS,
SEE TRAFFIC CONTROL ADVANCED WARNING.

N

2

B EX'
-10'WB EX'
IH 94
INL
-5'WB EX'
0'WB EX'
EX'
-10'EB EX'
IH 94
INL
-5'EB EX'
0'EB EX'
T103
1199.48
POST
SIGN
POST
SIGN

SIGN
SIGN
5'WB EX'
10'WB EX'
10'WB
IH 94
15'WB EX'
INL
5'EB EX'
10'EB EX'
IH 94
15'EB EX'

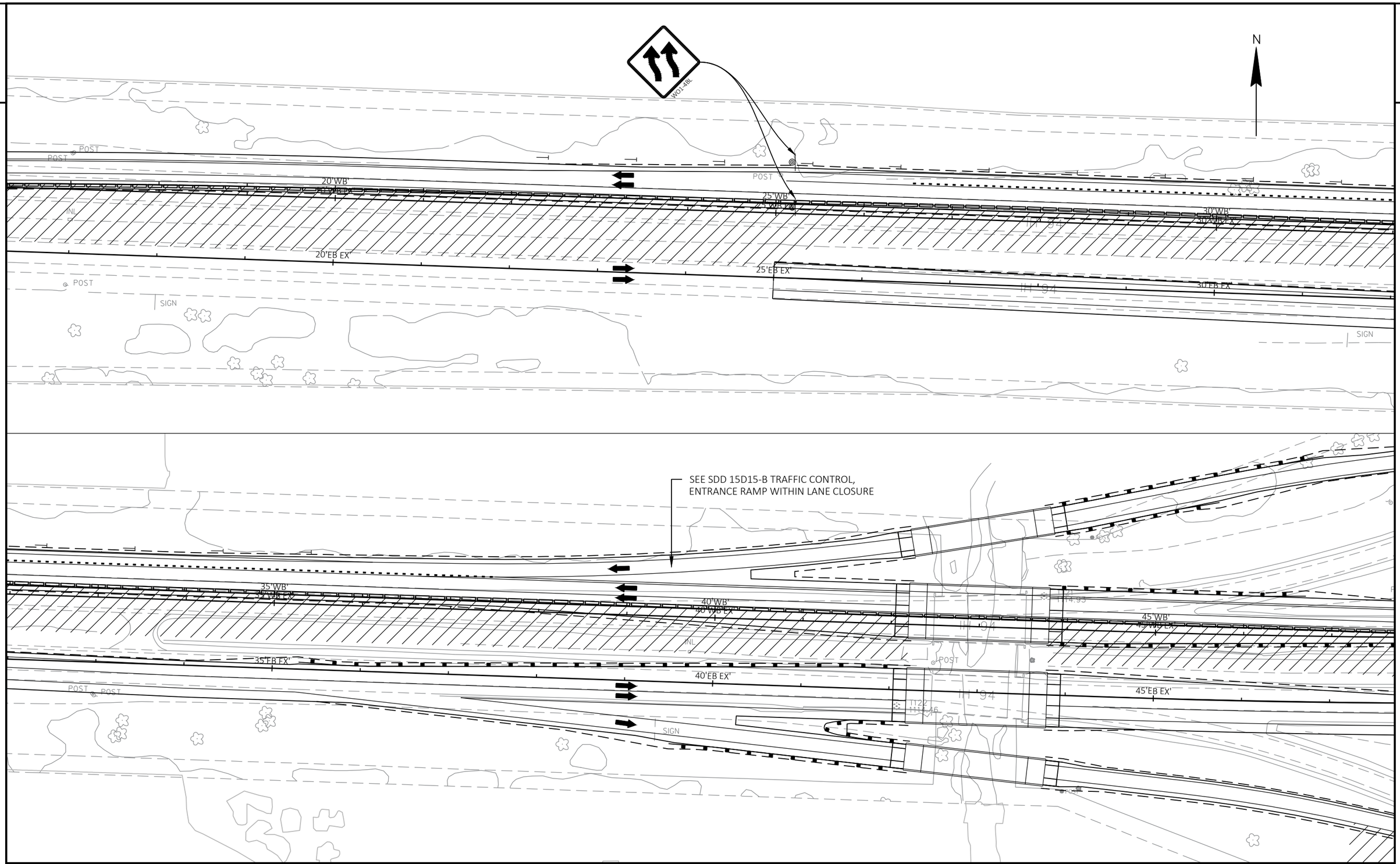
SINGLE LANE CLOSURE DURING OFF PEAK HOURS WHEN NEEDED.
SEE SDD 15D12-B TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 6	SHEET 94	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026006-S6-I94-CTHB.DWG
LAYOUT NAME - 01
PLOT DATE : 8/20/2020 3:23 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

2



PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 6	SHEET 95	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026006-S6-I94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 8/20/2020 3:23 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

N

SEE SDD 15D15-E TRAFFIC CONTROL,
PARALLEL EXIT RAMP WITHIN LANE CLOSURE

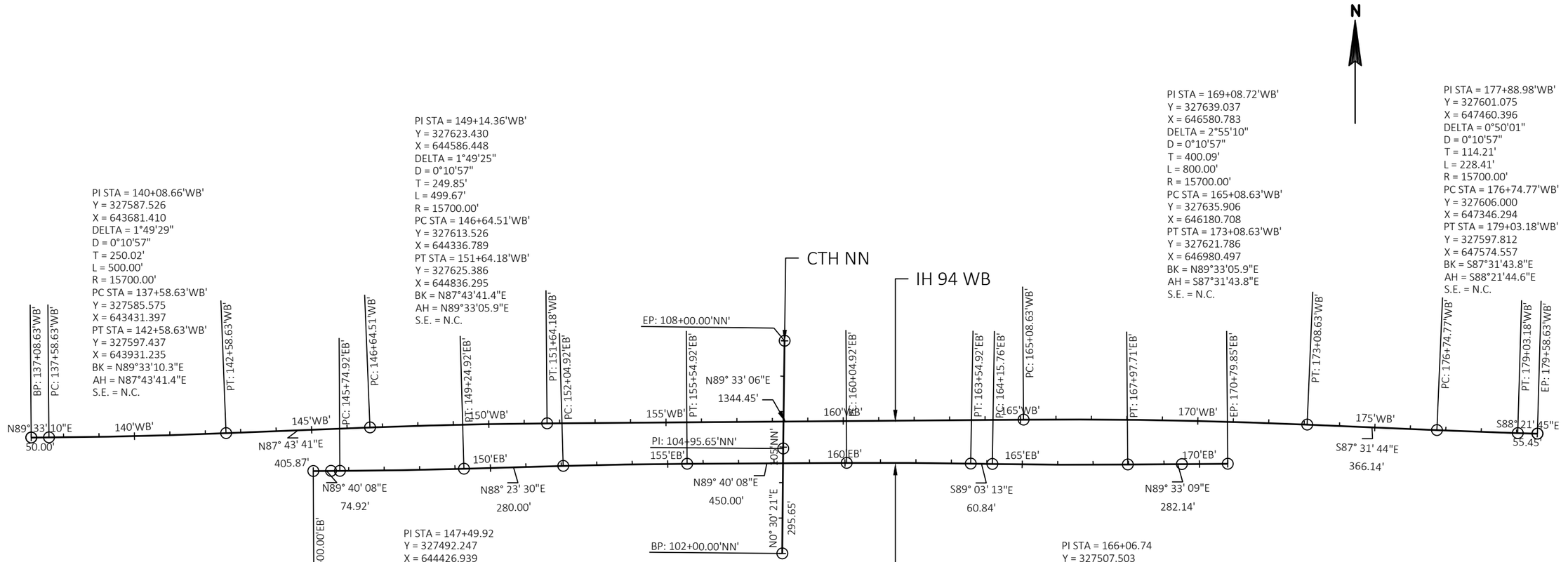
SINGLE LANE CLOSURE DURING OFF PEAK HOURS WHEN NEEDED.
SEE SDD 15D12-B TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

55'WB EX'
55'WB
50'WB EX'
60'WB EX'
55'EB EX'
50'EB EX'
60'EB EX'
IH 94
CTH B
POST
RIPRAP
INL
T123
1111.94
T124
1111.78
MH
SIGN
65'WB EX'
70'WB EX'
75'WB EX'
65'EB EX'
70'EB EX'
75'EB EX'

SINGLE LANE CLOSURE DURING OFF PEAK HOURS WHEN NEEDED.
SEE SDD 15D12-B TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 6	SHEET 96	E

2



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - PROPOSED	SHEET 97	E

2

2

N

130 135 140 145 N89° 33' 06"E 150 155 160

4511.86'

130 135 140 145 N89° 33' 11"E 150 155 160

4688.69'

Alignment=94WB-EXIST
Station=130+00.00
Offset=0.000
Northing=327579.6394
Easting=642672.8426

Alignment=94EB-EXIST
Station=130+00.00
Offset=0.000
Northing=327478.9234
Easting=642667.6783

PI STA = 173+06.71
Y = 327613.340
X = 646979.421
DELTA = 2°00'10"
D = 0°15'00"
T = 400.41'
L = 800.74'
R = 22906.50'
PC STA = 169+06.30
Y = 327610.207
X = 646579.022
PT STA = 177+07.04
Y = 327602.477
X = 647379.684
BK = N89°33'05.9"E
AH = S88°26'43.7"E
S.E. = N.C.

PC: 169+06.30

PC: 170+82.81

PT: 174+93.50

PT: 177+07.04

160 165 170 175 180 S88° 26' 44"E 185 190

2325.79'

160 165 170 175 180 S89° 25' 15"E 185 190

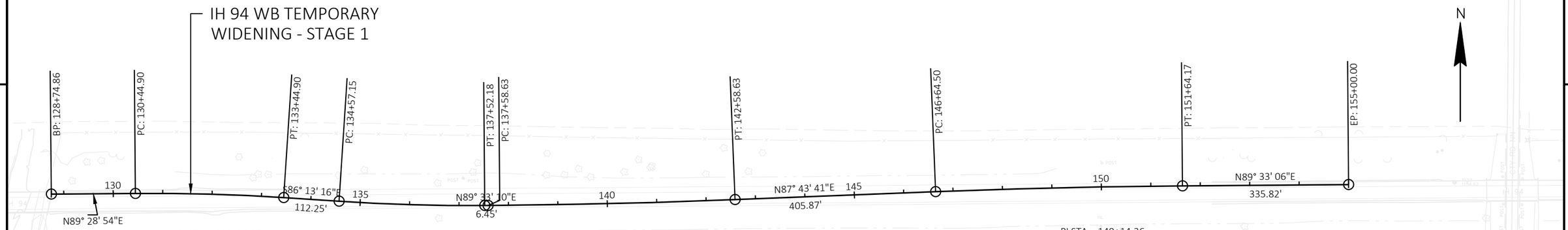
7043.34'

PI STA = 172+88.16
Y = 327512.374
X = 646955.707
DELTA = 1°01'34"
D = 0°15'00"
T = 205.35'
L = 410.69'
R = 22930.24'
PC STA = 170+82.81
Y = 327510.772
X = 646750.361
PT STA = 174+93.50
Y = 327510.298
X = 647161.049
BK = N89°33'11.0"E
AH = S89°25'14.7"E
S.E. = N.C.

Alignment=94WB-EXIST
Station=190+00.00
Offset=0.000
Northing=327567.4015
Easting=648672.1690

Alignment=94EB-EXIST
Station=190+00.00
Offset=0.000
Northing=327495.0678
Easting=648667.4713

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - EXIST	SHEET 98	E

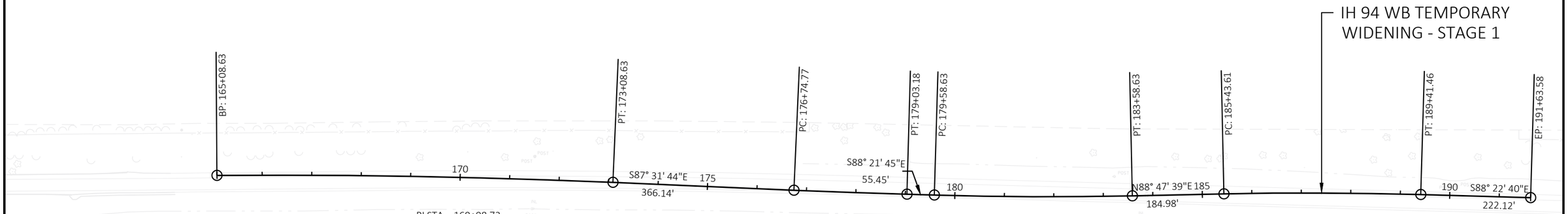


PI STA = 131+94.97
Y = 327611.388
X = 642868.362
DELTA = 4°17'50"
D = 1°25'57"
T = 150.07'
L = 300.00'
R = 4000.00'
PC STA = 130+44.90
Y = 327610.030
X = 642718.298
PT STA = 133+44.90
Y = 327601.497
X = 643018.106
BK = N89°28'54.1"E
AH = S86°13'16.1"E
S.E. = 3.6%

PI STA = 136+04.73
Y = 327584.373
X = 643277.372
DELTA = 4°13'34"
D = 1°25'57"
T = 147.58'
L = 295.03'
R = 4000.00'
PC STA = 134+57.15
Y = 327594.099
X = 643130.111
PT STA = 137+52.18
Y = 327585.524
X = 643424.950
BK = S86°13'16.1"E
AH = N89°33'10.3"E
S.E. = 3.6%

PI STA = 140+08.65
Y = 327587.526
X = 643681.410
DELTA = 1°49'29"
D = 0°21'54"
T = 250.02'
L = 500.00'
R = 15700.00'
PC STA = 137+58.63
Y = 327585.575
X = 643431.397
PT STA = 142+58.63
Y = 327597.437
X = 643931.235
BK = N89°33'10.3"E
AH = N87°43'41.4"E
S.E. = N.C.

PI STA = 149+14.36
Y = 327623.430
X = 644586.448
DELTA = 1°49'25"
D = 0°21'54"
T = 249.85'
L = 499.67'
R = 15700.00'
PC STA = 146+64.50
Y = 327613.526
X = 644336.789
PT STA = 151+64.17
Y = 327625.386
X = 644836.295
BK = N87°43'41.4"E
AH = N89°33'05.9"E
S.E. = N.C.



PI STA = 169+08.72
Y = 327639.037
X = 646580.783
DELTA = 2°55'10"
D = 0°21'54"
T = 400.09'
L = 800.00'
R = 15700.00'
PC STA = 165+08.63
Y = 327635.906
X = 646180.708
PT STA = 173+08.63
Y = 327621.786
X = 646980.497
BK = N89°33'05.9"E
AH = S87°31'43.8"E
S.E. = N.C.

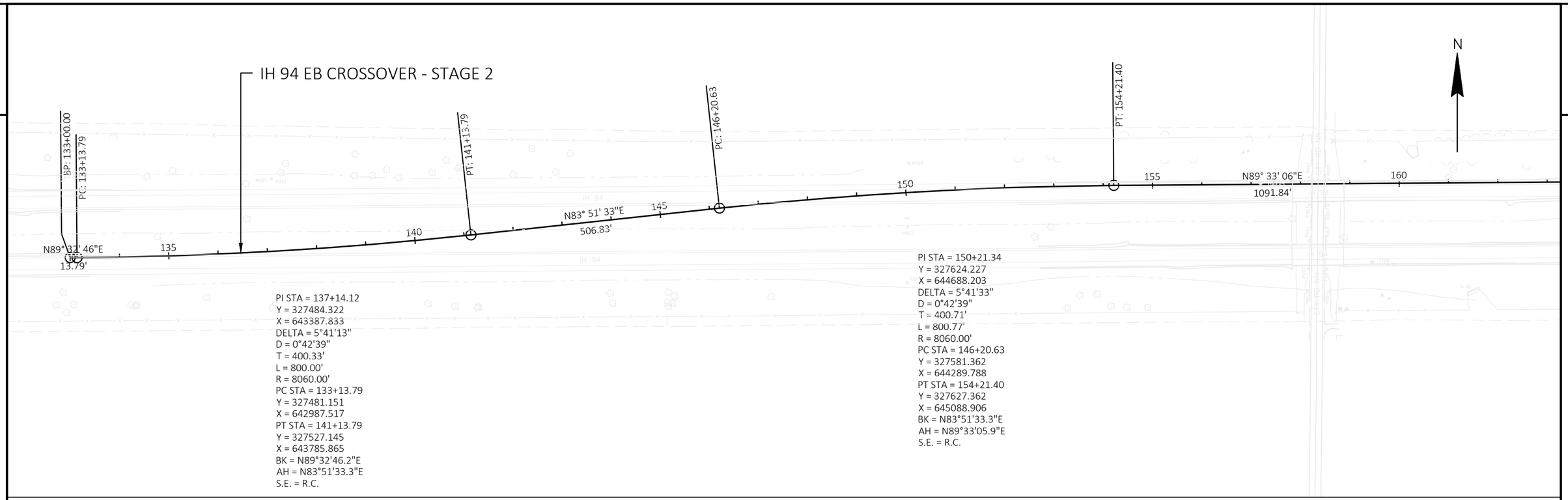
PI STA = 177+88.98
Y = 327601.075
X = 647460.396
DELTA = 0°50'01"
D = 0°21'54"
T = 114.21'
L = 228.41'
R = 15700.00'
PC STA = 176+74.77
Y = 327606.000
X = 647346.294
PT STA = 179+03.18
Y = 327597.812
X = 647574.557
BK = S87°31'43.8"E
AH = S88°21'44.6"E
S.E. = N.C.

PI STA = 181+58.67
Y = 327590.510
X = 647829.948
DELTA = 2°50'36"
D = 0°42'39"
T = 200.04'
L = 400.00'
R = 8060.00'
PC STA = 179+58.63
Y = 327596.227
X = 647629.989
PT STA = 183+58.63
Y = 327594.720
X = 648029.945
BK = S88°21'44.6"E
AH = N88°47'38.9"E
S.E. = R.C.

PI STA = 187+42.57
Y = 327602.800
X = 648413.800
DELTA = 2°49'41"
D = 0°42'39"
T = 198.96'
L = 397.85'
R = 8060.00'
PC STA = 185+43.61
Y = 327598.613
X = 648214.879
PT STA = 189+41.46
Y = 327597.167
X = 648612.685
BK = N88°47'38.9"E
AH = S88°22'39.7"E
S.E. = R.C.

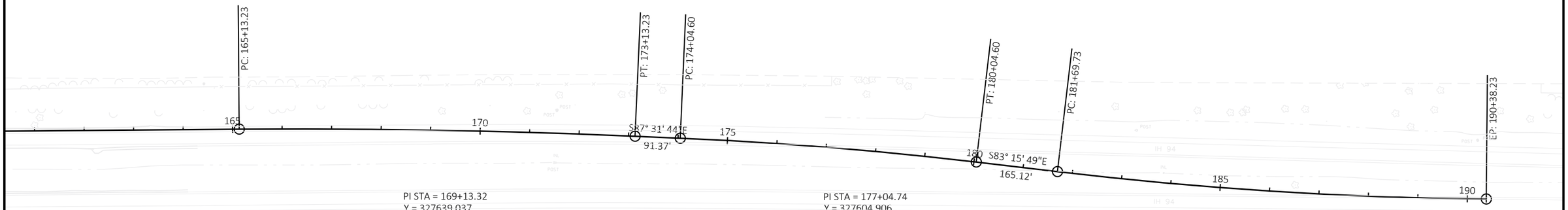
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - TEMPORARY	SHEET 99	E

2



PI STA = 137+14.12
Y = 327484.322
X = 643387.833
DELTA = 5°41'13"
D = 0°42'39"
T = 400.33'
L = 800.00'
R = 8060.00'
PC STA = 133+13.79
Y = 327481.151
X = 642987.517
PT STA = 141+13.79
Y = 327527.145
X = 643785.865
BK = N89°32'46.2"E
AH = N83°51'33.3"E
S.E. = R.C.

PI STA = 150+21.34
Y = 327624.227
X = 644688.203
DELTA = 5°41'33"
D = 0°42'39"
T = 400.71'
L = 800.77'
R = 8060.00'
PC STA = 146+20.63
Y = 327581.362
X = 644289.788
PT STA = 154+21.40
Y = 327627.362
X = 645088.906
BK = N83°51'33.3"E
AH = N89°33'05.9"E
S.E. = R.C.



PI STA = 169+13.32
Y = 327639.037
X = 646580.783
DELTA = 2°55'10"
D = 0°21'54"
T = 400.09'
L = 800.00'
R = 15700.00'
PC STA = 165+13.23
Y = 327635.906
X = 646180.708
PT STA = 173+13.23
Y = 327621.786
X = 646980.497
BK = N89°33'05.9"E
AH = S87°31'43.8"E
S.E. = N.C.

PI STA = 177+04.74
Y = 327604.906
X = 647371.642
DELTA = 4°15'55"
D = 0°42'39"
T = 300.14'
L = 600.00'
R = 8060.00'
PC STA = 174+04.60
Y = 327617.847
X = 647071.782
PT STA = 180+04.60
Y = 327569.699
X = 647669.708
BK = S87°31'43.8"E
AH = S83°15'49.1"E
S.E. = R.C.

PI STA = 186+04.40
Y = 327499.342
X = 648265.367
DELTA = 6°10'26"
D = 0°42'39"
T = 434.67'
L = 868.51'
R = 8060.00'
PC STA = 181+69.73
Y = 327550.330
X = 647833.693
PT STA = 190+38.23
Y = 327495.075
X = 648700.020
BK = S83°15'49.1"E
AH = S89°26'15.2"E
S.E. = R.C.

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - TEMPORARY	SHEET 100	E

2

2

BP: 8+23.67'WB'
PC: 9+73.67'WB'
PT: 14+10.46'WB'
PC: 15+59.54'WB'
PT: 20+92.06'WB'
BP: 25+10.52'A'
PI: 34+10.33'A'
PC: 37+10.52'A'
S89° 10' 43"E
300.19'
10'WB'
15'WB'
20'WB'
25'WB'
S88° 01' 58"E
899.81'
30'A'
30'WB'
35'A'
35'WB'
S88° 01' 58"E
25'EB'
S87° 16' 08"E
900.00'
30'EB'
2681.48'
35'EB'
35'B'
S88° 01' 58"E
998.03'
BP: 24+50.00'EB'
PI: 33+50.00'EB'
BP: 34+76.84'B'

IH 94 WB

IH 94 EB

RAMP A

PC: 37+10.52'A'

PI STA = 40+71.06'A'
Y = 327920.625
X = 633770.152
DELTA = 11°45'46"
D = 0°49'07"
T = 360.54'
L = 718.55'
R = 3500.00'
PC STA = 37+10.52'A'
Y = 327925.793
X = 633409.647
PT STA = 44+29.07'A'
Y = 327989.058
X = 634124.140
BK = S89°10'43.1"E
AH = N79°03'30.7"E

PT: 44+29.07'A'

PI STA = 48+39.08'A'
Y = 328066.881
X = 634526.700
DELTA = 11°27'02"
D = 1°08'42"
T = 250.84'
L = 500.00'
R = 2501.89'
PC STA = 45+88.25'A'
Y = 328019.271
X = 634280.424
PT STA = 50+88.25'A'
Y = 328064.652
X = 634777.525
BK = N79°03'30.7"E
AH = S89°29'27.5"E

PC: 45+88.25'A'

PT: 50+88.25'A'

EP: 52+80.30'A'

40'A'
45'A'
N79° 03' 31"E
159.18'
50'A'
S89° 29' 28"E
192.05'
PC: 47+73.55'WB'
PT: 55+60.34'WB'
EP: 57+10.35'WB'
40'WB'
45'WB'
50'WB'
55'WB'
S88° 03' 58"E
998.03'
40'EB'
45'EB'
50'EB'
55'EB'
60'EB'
40'B'
S83° 27' 32"E
1010.82'
45'B'
S77° 28' 41"E
179.59'
50'B'
S89° 29' 28"E
69.45'

PC: 43+48.03'EB'

PI STA = 45+87.75'B'
Y = 327653.627
X = 634325.006
DELTA = 5°58'51"
D = 1°29'43"
T = 100.09'
L = 200.00'
R = 1915.95'
PC STA = 44+87.66'B'
Y = 327665.029
X = 634225.566
PT STA = 46+87.66'B'
Y = 327631.926
X = 634422.716
BK = S83°27'32.4"E
AH = S77°28'41.1"E

PC: 44+87.66'B'

PT: 46+87.66'B'

PC: 48+67.25'B'

PI STA = 50+17.80'B'
Y = 327560.346
X = 634745.007
DELTA = 12°00'46"
D = 2°00'08"
T = 150.55'
L = 300.00'
R = 1430.86'
PC STA = 48+67.25'B'
Y = 327592.988
X = 634598.037
PT STA = 51+67.25'B'
Y = 327559.009
X = 634895.553
BK = S77°28'41.1"E
AH = S89°29'27.5"E

PT: 51+67.25'B'

EP: 52+36.70'B'

PI STA = 51+44.06'EB'
Y = 327748.925
X = 634888.455
DELTA = 5°53'04"
D = 0°11'06"
T = 796.03'
L = 1590.65'
R = 15488.00'
PC STA = 43+48.03'EB'
Y = 327776.249
X = 634092.899
PT STA = 59+38.68'EB'
Y = 327803.306
X = 635682.621
BK = S88°01'58.4"E
AH = N86°04'57.8"E

PT: 59+38.68'EB'

PC: 59+38.68'EB'

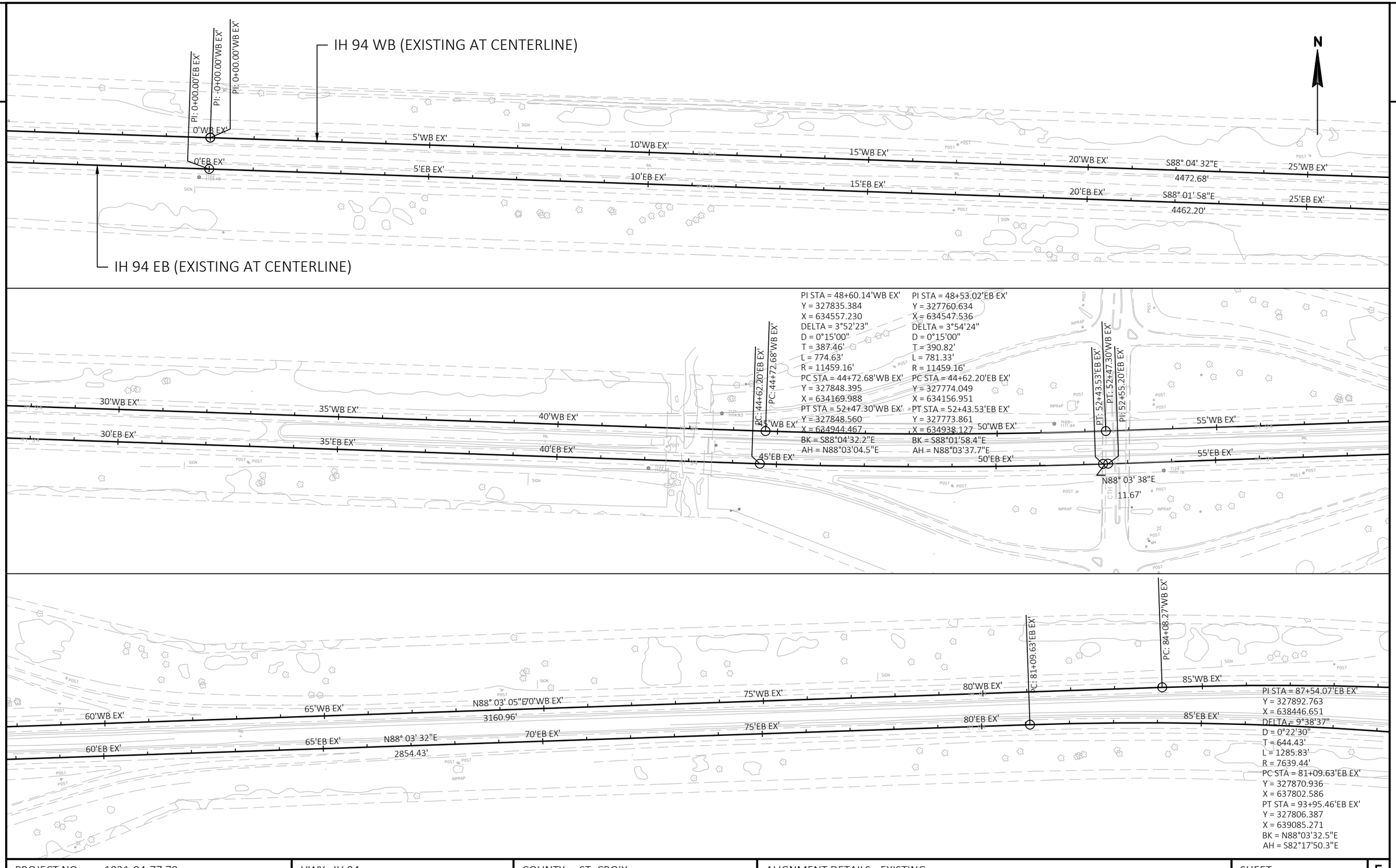
PI STA = 61+17.99'EB'
Y = 327815.556
X = 635861.514
DELTA = 1°26'43"
D = 0°12'05"
T = 179.31'
L = 358.60'
R = 14217.61'
PC STA = 59+38.68'EB'
Y = 327803.306
X = 635682.622
PT STA = 62+97.29'EB'
Y = 327823.291
X = 636040.658
BK = N86°04'57.8"E
AH = N87°31'40.3"E

EP: 62+97.29'EB'

RAMP B

PROJECT NO: 1021-04-77,78	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - PROPOSED	SHEET 101	E

2



PROJECT NO: 1021-04-77,78	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - EXISTING	SHEET 102	E

2

BP: 0+00.00
PT: 3+50.00
PC: 7+92.63
PT: 11+36.56
S84° 45' 25"E
442.63'
S88° 02' 28"E
3474.34'
IH 94
IH 94 WB CROSSOVER (STAGE 2 & 3)

PI STA = 1+75.05
Y = 327986.916
X = 629652.385
DELTA = 3°20'32"
D = 0°57'18"
T = 175.05'
L = 350.00'
R = 6000.00'
PC STA = 0+00.00
Y = 327992.723
X = 629477.431
PT STA = 3+50.00
Y = 327970.920
X = 629826.702
BK = S88°05'56.7"E
AH = S84°45'24.6"E

PI STA = 9+64.64
Y = 327914.752
X = 630438.773
DELTA = 3°17'04"
D = 0°57'18"
T = 172.01'
L = 343.94'
R = 6000.00'
PC STA = 7+92.63
Y = 327930.471
X = 630267.478
PT STA = 11+36.56
Y = 327908.872
X = 630610.687
BK = S84°45'24.6"E
AH = S88°02'28.2"E

RAMP A CROSSOVER (STAGE 2)

PI STA = 3+50.14
Y = 327832.371
X = 633549.616
DELTA = 4°46'29"
D = 0°57'18"
T = 250.14'
L = 500.00'
R = 6000.00'
PC STA = 1+00.00
Y = 327840.921
X = 633299.618
PT STA = 6+00.00
Y = 327844.659
X = 633799.459
BK = S88°02'28.2"E
AH = N87°11'03.1"E

PI STA = 10+54.64
Y = 327866.993
X = 634253.547
DELTA = 14°57'14"
D = 3°45'26"
T = 200.15'
L = 398.02'
R = 1525.00'
PC STA = 8+54.49
Y = 327857.161
X = 634053.642
PT STA = 12+52.51
Y = 327928.077
X = 634444.145
BK = N87°11'03.1"E
AH = N72°13'48.8"E

PI STA = 16+06.85
Y = 328036.218
X = 634781.577
DELTA = 15°48'44"
D = 13°37'26"
T = 58.40'
L = 116.06'
R = 420.56'
PC STA = 15+48.44
Y = 328018.394
X = 634725.960
PT STA = 16+64.51
Y = 328038.213
X = 634839.945
BK = N72°13'48.8"E
AH = N88°02'32.6"E

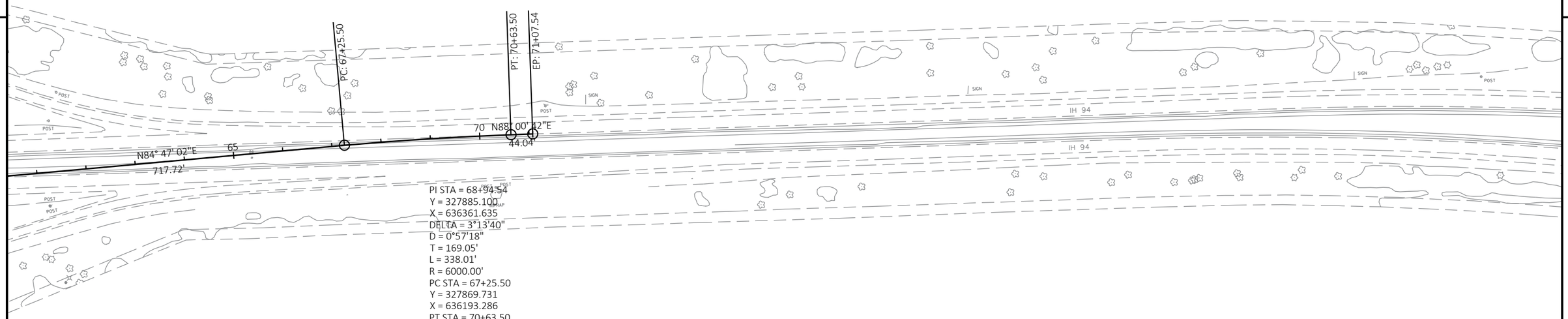
PI STA = 17+62.85
Y = 328041.572
X = 634938.229
DELTA = 82°34'15"
D = 143°14'22"
T = 35.12'
L = 57.65'
R = 40.00'
PC STA = 17+27.72
Y = 328040.373
X = 634903.127
PT STA = 17+85.37
Y = 328006.920
X = 634943.958
BK = N88°02'32.6"E
AH = S09°23'12.2"E

PI STA = 54+92.54
Y = 327757.512
X = 634964.035
DELTA = 7°20'07"
D = 0°42'39"
T = 516.65'
L = 1031.88'
R = 8060.00'
PC STA = 49+75.90
Y = 327776.617
X = 634447.742
PT STA = 60+07.78
Y = 327804.482
X = 635478.543
BK = S87°52'50.9"E
AH = N84°47'02.0"E

BP: 1+00.00
PT: 6+00.00
PC: 8+54.49
EP: 10+46+10.90
PT: 11+52.51
PC: 49+75.90
PT: 16+64.51
PC: 15+48.44
PC: 17+27.72
PT: 17+85.37
EP: 17+94.46
PT: 60+07.78
N87° 11' 03"E
254.49'
S87° 52' 51"E
365.00'
N72° 13' 49"E
295.93'
N88° 02' 33"E
63.22'
S09° 23' 12"E
99.09'
CTH B
IH 94
RIPRAP
POST
SIGN
INL

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - TEMPORARY	SHEET 103	E

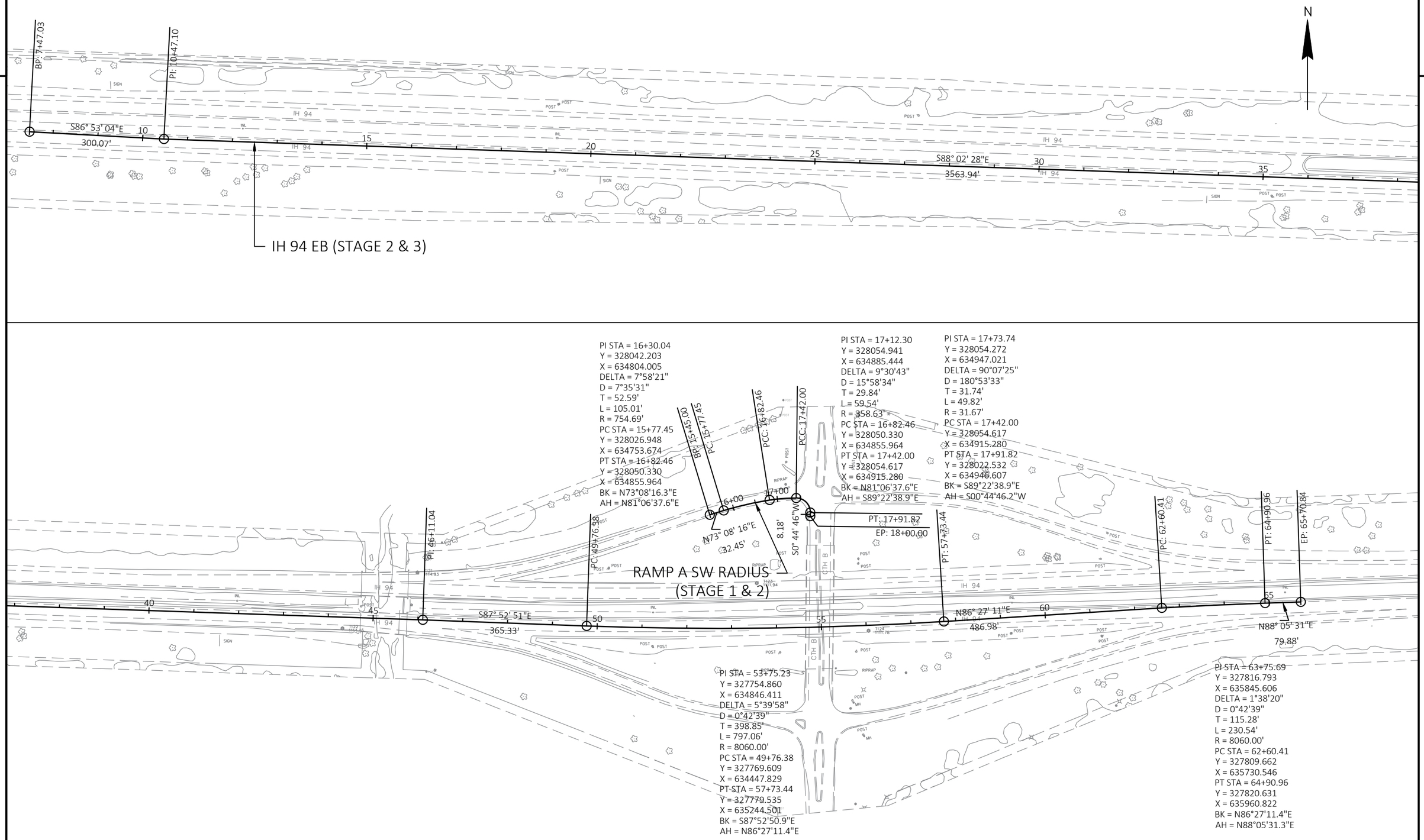
2



PI STA = 68+94.54
Y = 327885.100
X = 636361.635
DELTA = 3°13'40"
D = 0°57'18"
T = 169.05'
L = 338.01'
R = 6000.00'
PC STA = 67+25.50
Y = 327869.731
X = 636193.286
PT STA = 70+63.50
Y = 327890.965
X = 636530.582
BK = N84°47'02.0"E
AH = N88°00'41.9"E

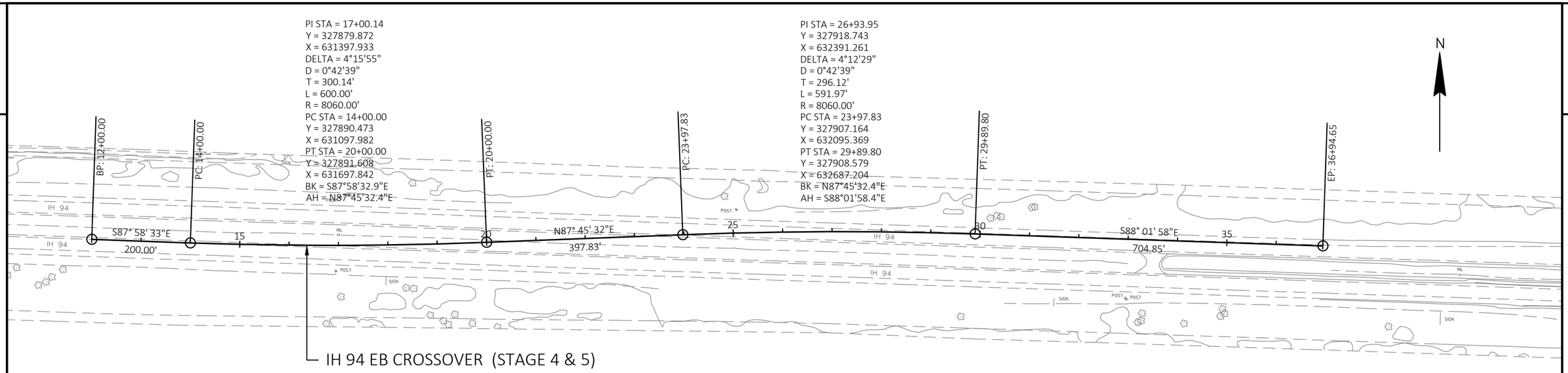
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - TEMPORARY	SHEET 104	E

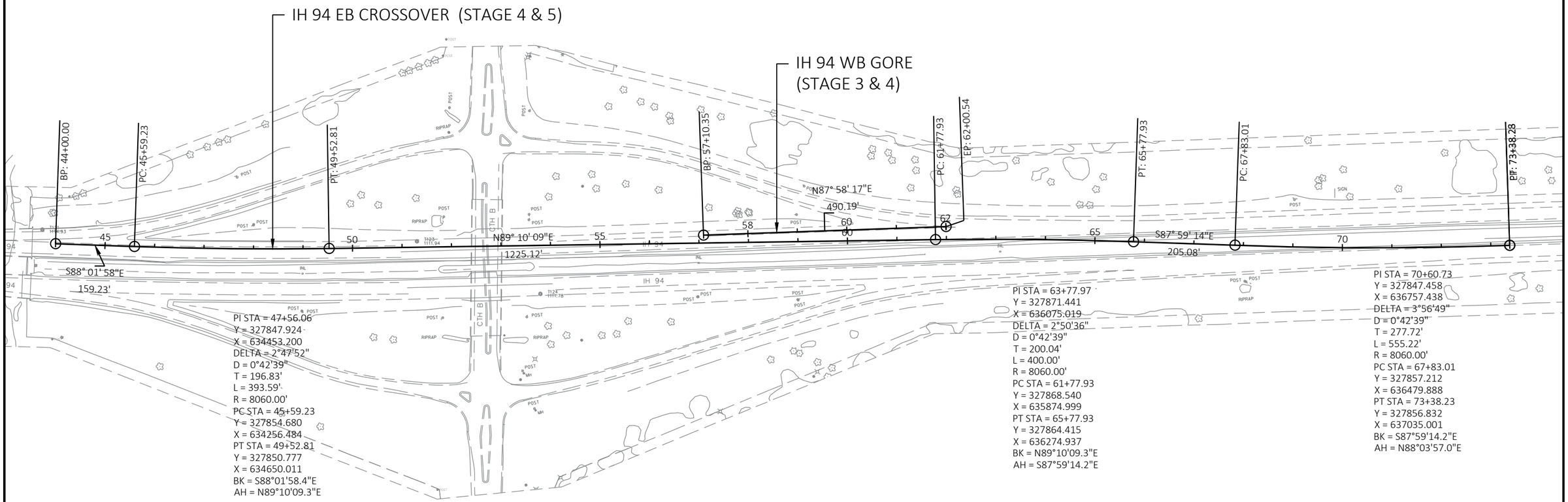
2



PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - TEMPORARY	SHEET 105	E

2





PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - TEMPORARY	SHEET 106	E

FILE NAME : N:\PDS\C3D\10210407\SHEETSPLAN\027003-AD-I94-CTHB-TEMP3.DWG
LAYOUT NAME - 01
PLOT DATE : 12/12/2019 11:49 AM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

Estimate Of Quantities

Line	Item	Item Description	Unit	Total	1021-00-78 Qty	1021-00-79 Qty	1021-04-77 Qty	1021-04-78 Qty
0002	201.0105	Clearing	STA	74.000		20.000	10.000	44.000
0004	201.0205	Grubbing	STA	74.000		20.000	10.000	44.000
0006	203.0100	Removing Small Pipe Culverts	EACH	14.000	2.000	2.000	5.000	5.000
0008	203.0200	Removing Old Structure (station) 01. 158+25.29 WB	LS	1.000	1.000			
0010	203.0200	Removing Old Structure (station) 02. 158+31.35 WB	LS	1.000		1.000		
0012	203.0200	Removing Old Structure (station) 03. 160+50.91	LS	1.000		1.000		
0014	203.0200	Removing Old Structure (station) 04. STA 42+48	LS	1.000				1.000
0016	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 42+50	LS	1.000			1.000	
0018	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 02. STA 43+00	LS	1.000				1.000
0020	204.0100	Removing Concrete Pavement	SY	39,922.000	6,120.000	11,060.000	9,982.000	12,760.000
0022	204.0120	Removing Asphaltic Surface Milling	SY	5,430.000		930.000		4,500.000
0024	204.0155	Removing Concrete Sidewalk	SY	18.000			18.000	
0026	204.0165	Removing Guardrail	LF	1,835.000	1,060.000	775.000		
0028	204.0170	Removing Fence	LF	11,890.000	480.000	4,150.000	2,810.000	4,450.000
0030	204.0180	Removing Delineators and Markers	EACH	14.000	5.000	9.000		
0032	204.0195	Removing Concrete Bases	EACH	3.000	3.000			
0034	204.0220	Removing Inlets	EACH	11.000	2.000	1.000	4.000	4.000
0036	204.9090.S	Removing (item description) 01. Cable Barrier	LF	3,475.000			855.000	2,620.000
0038	205.0100	Excavation Common	CY	150,234.000	10,595.000	35,203.000	54,151.000	50,285.000
0040	206.1000	Excavation for Structures Bridges (structure) 01. B-55-0271	LS	1.000	1.000			
0042	206.1000	Excavation for Structures Bridges (structure) 02. B-55-0270	LS	1.000		1.000		
0044	206.1000	Excavation for Structures Bridges (structure) 03. B-55-0281	LS	1.000			1.000	
0046	206.1000	Excavation for Structures Bridges (structure) 04. B-55-0285	LS	1.000			1.000	
0048	206.1000	Excavation for Structures Bridges (structure) 05. B-55-0282	LS	1.000				1.000
0050	206.1000	Excavation for Structures Bridges (structure) 06. B-55-0286	LS	1.000				1.000
0052	206.2000	Excavation for Structures Culverts (structure) 01. C-55-19	LS	1.000		1.000		
0054	208.0100	Borrow	CY	116,051.000	17,753.000	38,570.000	8,882.000	50,846.000
0056	208.1100	Select Borrow	CY	2,593.000	2,593.000			
0058	210.1500	Backfill Structure Type A	TON	1,832.000	424.000	408.000	492.000	508.000
0060	210.2500	Backfill Structure Type B	TON	685.000		685.000		
0062	213.0100	Finishing Roadway (project) 01. 1021-00-78	EACH	1.000	1.000			
0064	213.0100	Finishing Roadway (project) 02. 1021-00-79	EACH	1.000		1.000		

					1021-00-78	1021-00-79	1021-04-77	1021-04-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0066	213.0100	Finishing Roadway (project) 03. 1021-04-77	EACH	1.000			1.000	
0068	213.0100	Finishing Roadway (project) 04. 1021-04-78	EACH	1.000				1.000
0070	305.0110	Base Aggregate Dense 3/4-Inch	TON	27,635.000	3,260.000	7,145.000	14,220.000	3,010.000
0072	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	91,532.000	17,794.000	17,494.000	22,584.000	33,660.000
0074	311.0115	Breaker Run	CY	57.000		57.000		
0076	312.0115	Select Crushed Material	CY	6,118.000	978.000			5,140.000
0078	415.0120	Concrete Pavement 12-Inch	SY	43,635.000	6,350.000	11,690.000	10,490.000	15,105.000
0080	415.0410	Concrete Pavement Approach Slab	SY	900.000	200.000	200.000	200.000	300.000
0082	416.0620	Drilled Dowel Bars	EACH	128.000	32.000	32.000	32.000	32.000
0084	416.1010	Concrete Surface Drains	CY	24.000	4.000	4.000	8.000	8.000
0086	416.1110	Concrete Shoulder Rumble Strips	LF	13,555.000	2,200.000	4,045.000	3,150.000	4,160.000
0088	450.4000	HMA Cold Weather Paving	TON	1,860.000	1,080.000		780.000	
0090	455.0605	Tack Coat	GAL	5,785.000	1,420.000	435.000	1,665.000	2,265.000
0092	460.2000	Incentive Density HMA Pavement	DOL	7,150.000	690.000	1,830.000	2,350.000	2,280.000
0094	460.6223	HMA Pavement 3 MT 58-28 S	TON	6,475.000	540.000	1,655.000	2,065.000	2,215.000
0096	460.6224	HMA Pavement 4 MT 58-28 S	TON	4,745.000	540.000	1,200.000	1,665.000	1,340.000
0098	465.0110	Asphaltic Surface Patching	TON	1,155.000	220.000	180.000	180.000	575.000
0100	465.0125	Asphaltic Surface Temporary	TON	23,810.000	5,400.000	3,360.000	3,550.000	11,500.000
0102	465.0400	Asphaltic Shoulder Rumble Strips	LF	16,900.000	2,200.000	4,885.000	3,650.000	6,165.000
0104	501.1000.S	Ice Hot Weather Concreting	LB	24,830.000	6,500.000	6,500.000	5,680.000	6,150.000
0106	502.0100	Concrete Masonry Bridges	CY	4,178.000	864.000	867.000	1,184.000	1,263.000
0108	502.3200	Protective Surface Treatment	SY	5,643.000	1,198.000	1,198.000	1,613.000	1,634.000
0110	502.3210	Pigmented Surface Sealer	SY	979.000	173.000	173.000	316.000	317.000
0112	502.4205	Adhesive Anchors No. 5 Bar	EACH	42.000		42.000		
0114	503.0128	Prestressed Girder Type I 28-Inch	LF	2,590.000			1,293.000	1,297.000
0116	503.0137	Prestressed Girder Type I 36W-Inch	LF	1,855.000	795.000	1,060.000		
0118	504.0100	Concrete Masonry Culverts	CY	101.000		101.000		
0120	505.0400	Bar Steel Reinforcement HS Structures	LB	89,475.000	12,570.000	24,595.000	24,360.000	27,950.000
0122	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	559,320.000	134,980.000	137,990.000	142,420.000	143,930.000
0124	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	10,655.000	2,110.000	2,110.000	3,200.000	3,235.000
0126	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	216.000	36.000	48.000	66.000	66.000
0128	506.4000	Steel Diaphragms (structure) 01. B-55-0271	EACH	15.000	15.000			
0130	506.4000	Steel Diaphragms (structure) 02. B-55-0270	EACH	21.000		21.000		
0132	506.4000	Steel Diaphragms (structure) 03. B-55-0281	EACH	18.000			18.000	
0134	506.4000	Steel Diaphragms (structure) 04. B-55-0285	EACH	9.000			9.000	
0136	506.4000	Steel Diaphragms (structure) 05. B-55-0282	EACH	18.000				18.000
0138	506.4000	Steel Diaphragms (structure) 06. B-55-0286	EACH	9.000				9.000
0140	511.1100	Temporary Shoring	SF	1,700.000		1,200.000	250.000	250.000
0142	511.1200	Temporary Shoring (structure) 01. C-55-19	SF	1,660.000		1,660.000		
0144	511.1200	Temporary Shoring (structure) 02. B-55-0270	SF	650.000		650.000		

					1021-00-78	1021-00-79	1021-04-77	1021-04-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0146	511.1200	Temporary Shoring (structure) 03. B-55-0285	SF	1,500.000			1,500.000	
0148	511.1200	Temporary Shoring (structure) 04. B-55-0282	SF	1,350.000				1,350.000
0150	511.1200	Temporary Shoring (structure) 05. B-55-0286	SF	300.000				300.000
0152	516.0500	Rubberized Membrane Waterproofing	SY	181.000	34.000	43.000	52.000	52.000
0154	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	4.000				4.000
0156	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	1.000			1.000	
0158	520.1036	Apron Endwalls for Culvert Pipe 36-Inch	EACH	4.000			2.000	2.000
0160	520.2018	Culvert Pipe Temporary 18-Inch	LF	1,400.000	774.000			626.000
0162	520.3424	Culvert Pipe Class III-A Non-metal 24-Inch	LF	238.000			238.000	
0164	520.3636	Culvert Pipe Class III-B Non-metal 36-Inch	LF	266.000			148.000	118.000
0166	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	937.000	146.000	120.000	266.000	405.000
0168	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	279.000	129.000	150.000		
0170	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	5.000	5.000			
0172	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	9.000	1.000	1.000	3.000	4.000
0174	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	1.000	1.000		
0176	531.1100	Concrete Masonry Ancillary Structures Type NS	CY	7.000	3.000		4.000	
0178	531.1140	Steel Reinforcement HS Ancillary Structures Type NS	LB	870.000	330.000		540.000	
0180	550.0020	Pre-Boring Rock or Consolidated Materials	LF	1,470.000	720.000	750.000		
0182	550.0500	Pile Points	EACH	168.000	18.000	18.000	54.000	78.000
0184	550.1120	Piling Steel HP 12-Inch X 53 Lb	LF	3,315.000	1,485.000	1,830.000		
0186	550.2106	Piling CIP Concrete 10 3/4 X 0.365-Inch	LF	8,140.000			4,045.000	4,095.000
0188	601.0576	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type J	LF	50.000			50.000	
0190	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	560.000	120.000	80.000	160.000	200.000
0192	602.0405	Concrete Sidewalk 4-Inch	SF	160.000			160.000	
0194	603.8000	Concrete Barrier Temporary Precast Delivered	LF	38,810.000	4,800.000	4,960.000	14,600.000	14,450.000
0196	603.8125	Concrete Barrier Temporary Precast Installed	LF	55,580.000	4,800.000	4,960.000	30,800.000	15,020.000
0198	603.8500	Anchoring Concrete Barrier Temporary Precast	LF	11,850.000				11,850.000
0200	603.8505	Anchoring Concrete Barrier Temporary Precast on Bridge Decks	LF	205.000		100.000		105.000
0202	604.0500	Slope Paving Crushed Aggregate	SY	1,380.000	690.000	690.000		
0204	606.0100	Riprap Light	CY	66.000	10.000	14.000	26.000	16.000
0206	606.0300	Riprap Heavy	CY	2,068.000		11.000	931.000	1,126.000
0208	611.0430	Reconstructing Inlets	EACH	5.000	1.000			4.000
0210	611.0642	Inlet Covers Type MS	EACH	12.000	3.000	1.000	5.000	3.000
0212	611.3901	Inlets Median 1 Grate	EACH	8.000	1.000	1.000	3.000	3.000
0214	611.3902	Inlets Median 2 Grate	EACH	2.000	1.000		1.000	
0216	611.8120.S	Cover Plates Temporary	EACH	7.000			4.000	3.000

Line	Item	Item Description	Unit	Total	1021-00-78 Qty	1021-00-79 Qty	1021-04-77 Qty	1021-04-78 Qty
0218	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	600.000	100.000	100.000	200.000	200.000
0220	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	1,220.000	260.000	260.000	350.000	350.000
0222	613.1100.S	Cable Barrier Type 1	LF	7,250.000	2,875.000		2,450.000	1,925.000
0224	613.1200.S	Cable Barrier End Terminal Type 1	EACH	14.000	4.000	4.000	4.000	2.000
0226	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	24.000	4.000	4.000	8.000	8.000
0228	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	1.000			1.000	
0230	614.0360	Steel Plate Beam Guard Temporary	LF	240.000	240.000			
0232	614.0380	Steel Plate Beam Guard Energy Absorbing Terminal Temporary	EACH	1.000	1.000			
0234	614.0905	Crash Cushions Temporary	EACH	10.000	1.000	1.000	6.000	2.000
0236	614.0920	Salvaged Rail	LF	1,226.000			386.000	840.000
0238	614.2300	MGS Guardrail 3	LF	4,613.000	1,550.000	1,163.000	775.000	1,125.000
0240	614.2500	MGS Thrie Beam Transition	LF	576.000	96.000	96.000	192.000	192.000
0242	614.2610	MGS Guardrail Terminal EAT	EACH	10.000	2.000	2.000	2.000	4.000
0244	614.2620	MGS Guardrail Terminal Type 2	EACH	12.000	2.000	2.000	4.000	4.000
0246	616.0100	Fence Woven Wire (height) 01. 4-FT	LF	11,630.000	350.000	4,150.000	2,740.000	4,390.000
0248	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1021-00-78	EACH	1.000	1.000			
0250	618.0100	Maintenance And Repair of Haul Roads (project) 02. 1021-00-79	EACH	1.000		1.000		
0252	618.0100	Maintenance And Repair of Haul Roads (project) 03. 1021-04-77	EACH	1.000			1.000	
0254	618.0100	Maintenance And Repair of Haul Roads (project) 04. 1021-04-78	EACH	1.000				1.000
0256	619.1000	Mobilization	EACH	1.000	0.250	0.250	0.250	0.250
0258	620.0300	Concrete Median Sloped Nose	SF	14.000			14.000	
0260	624.0100	Water	MGAL	918.000	200.000	170.000	215.000	333.000
0262	625.0500	Salvaged Topsoil	SY	191,795.000	28,105.000	58,490.000	45,545.000	59,655.000
0264	627.0200	Mulching	SY	119,215.000	16,400.000	36,930.000	33,440.000	32,445.000
0266	628.1504	Silt Fence	LF	15,135.000	5,040.000	2,410.000	2,900.000	4,785.000
0268	628.1520	Silt Fence Maintenance	LF	15,135.000	5,040.000	2,410.000	2,900.000	4,785.000
0270	628.1905	Mobilizations Erosion Control	EACH	10.000	3.000	3.000	2.000	2.000
0272	628.1910	Mobilizations Emergency Erosion Control	EACH	8.000	2.000	2.000	2.000	2.000
0274	628.2002	Erosion Mat Class I Type A	SY	21,560.000		21,560.000		
0276	628.2004	Erosion Mat Class I Type B	SY	54,730.000	11,705.000		12,105.000	30,920.000
0278	628.7005	Inlet Protection Type A	EACH	11.000	2.000	2.000	4.000	3.000
0280	628.7504	Temporary Ditch Checks	LF	2,280.000	360.000	1,200.000	720.000	
0282	628.7560	Tracking Pads	EACH	12.000	2.000	2.000	4.000	4.000
0284	628.7570	Rock Bags	EACH	50.000	8.000	8.000	17.000	17.000
0286	629.0210	Fertilizer Type B	CWT	121.000	18.000	37.000	28.000	38.000
0288	630.0130	Seeding Mixture No. 30	LB	2,855.000	330.000	1,055.000	830.000	640.000

					1021-00-78	1021-00-79	1021-04-77	1021-04-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0290	630.0200	Seeding Temporary	LB	5,190.000	760.000	1,580.000	1,240.000	1,610.000
0292	630.0300	Seeding Borrow Pit	LB	2,360.000	345.000	720.000	560.000	735.000
0294	630.0500	Seed Water	MGAL	1,082.000	158.000	330.000	259.000	335.000
0296	633.0100	Delineator Posts Steel	EACH	65.000	6.000	6.000	21.000	32.000
0298	633.0500	Delineator Reflectors	EACH	65.000	6.000	6.000	21.000	32.000
0300	633.1100	Delineators Temporary	EACH	332.000	84.000	56.000	138.000	54.000
0302	633.5200	Markers Culvert End	EACH	12.000			6.000	6.000
0304	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	28.000	4.000	4.000	12.000	8.000
0306	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	6.000			4.000	2.000
0308	635.0200	Sign Supports Structural Steel HS	LB	3,535.000	1,402.000		2,133.000	
0310	637.2230	Signs Type II Reflective F	SF	12.000			6.000	6.000
0312	638.2101	Moving Signs Type I	EACH	1.000			1.000	
0314	638.2102	Moving Signs Type II	EACH	27.000	3.000	3.000	13.000	8.000
0316	638.3000	Removing Small Sign Supports	EACH	27.000	3.000	3.000	12.000	9.000
0318	638.3100	Removing Structural Steel Sign Supports	EACH	5.000	3.000		2.000	
0320	642.5201	Field Office Type C	EACH	1.000	0.250	0.250	0.250	0.250
0322	643.0300	Traffic Control Drums	DAY	58,975.000	11,760.000	15,135.000	15,560.000	16,520.000
0324	643.0420	Traffic Control Barricades Type III	DAY	5,230.000	1,120.000	1,240.000	870.000	2,000.000
0326	643.0705	Traffic Control Warning Lights Type A	DAY	7,190.000	1,680.000	2,170.000	940.000	2,400.000
0328	643.0715	Traffic Control Warning Lights Type C	DAY	20,280.000	9,240.000	4,750.000	3,600.000	2,690.000
0330	643.0800	Traffic Control Arrow Boards	DAY	1,830.000	560.000	450.000	560.000	260.000
0332	643.0900	Traffic Control Signs	DAY	27,830.000	7,280.000	9,930.000	5,320.000	5,300.000
0334	643.0920	Traffic Control Covering Signs Type II	EACH	2.000		2.000		
0336	643.1051	Traffic Control Signs PCMS with Cellular Communications	DAY	1,820.000	280.000	450.000	560.000	530.000
0338	643.4100.S	Traffic Control Interim Lane Closure	EACH	215.000	35.000	80.000	75.000	25.000
0340	643.5000	Traffic Control	EACH	1.000	0.250	0.250	0.250	0.250
0342	645.0105	Geotextile Type C	SY	186.000		186.000		
0344	645.0111	Geotextile Type DF Schedule A	SY	622.000	120.000	120.000	190.000	192.000
0346	645.0120	Geotextile Type HR	SY	3,135.000		28.000	1,426.000	1,681.000
0348	645.0130	Geotextile Type R	SY	140.000	24.000	24.000	52.000	40.000
0350	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	36,395.000	5,180.000	8,500.000	10,615.000	12,100.000
0352	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	3,925.000	650.000	1,075.000	975.000	1,225.000
0354	646.3555	Marking Line Grooved Contrast Permanent Tape 8-Inch	LF	2,261.000			1,010.000	1,251.000
0356	646.6120	Marking Stop Line Epoxy 18-Inch	LF	40.000			40.000	
0358	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	10,720.000	5,830.000			4,890.000
0360	646.7220	Marking Chevron Epoxy 24-Inch	LF	180.000			180.000	
0362	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	41,750.000	17,000.000		24,750.000	
0364	649.0105	Temporary Marking Line Paint 4-Inch	LF	120,970.000	20,200.000	19,300.000	48,160.000	33,310.000
0366	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	41,750.000	17,000.000		24,750.000	

					1021-00-78	1021-00-79	1021-04-77	1021-04-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0368	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	18,175.000	4,720.000	3,400.000	4,200.000	5,855.000
0370	649.0760	Temporary Marking Raised Pavement Marker Type I	EACH	350.000	48.000	42.000	202.000	58.000
0372	650.4000	Construction Staking Storm Sewer	EACH	12.000		2.000	5.000	5.000
0374	650.4500	Construction Staking Subgrade	LF	30,459.000	7,960.000	8,869.000	5,220.000	8,410.000
0376	650.5000	Construction Staking Base	LF	38,284.000	5,740.000	4,789.000	12,780.000	14,975.000
0378	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	610.000	120.000	80.000	210.000	200.000
0380	650.6500	Construction Staking Structure Layout (structure) 01. B-55-0271	LS	1.000	1.000			
0382	650.6500	Construction Staking Structure Layout (structure) 02. B-55-0270	LS	1.000		1.000		
0384	650.6500	Construction Staking Structure Layout (structure) 03. C-55-19	LS	1.000		1.000		
0386	650.6500	Construction Staking Structure Layout (structure) 04. B-55-0281	LS	1.000			1.000	
0388	650.6500	Construction Staking Structure Layout (structure) 05. B-55-0285	LS	1.000			1.000	
0390	650.6500	Construction Staking Structure Layout (structure) 06. B-55-0282	LS	1.000				1.000
0392	650.6500	Construction Staking Structure Layout (structure) 07. B-55-0286	LS	1.000				1.000
0394	650.7000	Construction Staking Concrete Pavement	LF	14,755.000	2,220.000	4,080.000	3,690.000	4,765.000
0396	650.9910	Construction Staking Supplemental Control (project) 01. 1021-00-78	LS	1.000	1.000			
0398	650.9910	Construction Staking Supplemental Control (project) 02. 1021-00-79	LS	1.000		1.000		
0400	650.9910	Construction Staking Supplemental Control (project) 03. 1021-04-77	LS	1.000			1.000	
0402	650.9910	Construction Staking Supplemental Control (project) 04. 1021-04-78	LS	1.000				1.000
0404	650.9920	Construction Staking Slope Stakes	LF	37,024.000	7,960.000	8,869.000	5,220.000	14,975.000
0406	652.0125	Conduit Rigid Metallic 2-Inch	LF	10.000	10.000			
0408	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	265.000	265.000			
0410	653.0140	Pull Boxes Steel 24x42-Inch	EACH	2.000	2.000			
0412	653.0905	Removing Pull Boxes	EACH	1.000	1.000			
0414	655.0625	Electrical Wire Lighting 6 AWG	LF	870.000	870.000			
0416	670.0100	Field System Integrator	LS	1.000	1.000			
0418	670.0200	ITS Documentation	LS	1.000	1.000			
0420	674.0300	Remove Cable	LF	110.000	110.000			
0422	690.0150	Sawing Asphalt	LF	12,394.000	52.000	7,774.000	4,556.000	12.000
0424	690.0250	Sawing Concrete	LF	369.000	76.000	76.000	113.000	104.000
0426	715.0415	Incentive Strength Concrete Pavement	DOL	13,361.000	1,965.000	3,567.000	3,207.000	4,622.000
0428	715.0502	Incentive Strength Concrete Structures	DOL	25,710.000	5,190.000	5,820.000	7,120.000	7,580.000

					1021-00-78	1021-00-79	1021-04-77	1021-04-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0430	715.0710	Optimized Aggregate Gradation Incentive	DOL	60,130.000	8,850.000	16,050.000	14,430.000	20,800.000
0432	740.0440	Incentive IRI Ride	DOL	12,660.000	2,580.000	3,470.000	2,910.000	3,700.000
0434	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,100.000	525.000	525.000	525.000	525.000
0436	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,400.000	600.000	600.000	600.000	600.000
0438	SPV.0060	Special 01. Relocate Ground Mount DMS	EACH	1.000	1.000			
0440	SPV.0060	Special 02. Traffic Control Vertical Panels	EACH	169.000	70.000		99.000	
0442	SPV.0060	Special 03. Manholes Special 4-FT Diameter Temporary	EACH	4.000				4.000
0444	SPV.0060	Special 04. Temporary Inlets Median 1 Grate	EACH	2.000				2.000
0446	SPV.0105	Special 01. Project Concrete Crack Mitigation and Repair, 1021-00-78	LS	1.000	1.000			
0448	SPV.0105	Special 02. Project Concrete Crack Mitigation and Repair, 1021-00-79	LS	1.000		1.000		
0450	SPV.0105	Special 03. Project Concrete Crack Mitigation and Repair, 1021-04-77	LS	1.000			1.000	
0452	SPV.0105	Special 04. Project Concrete Crack Mitigation and Repair, 1021-04-78	LS	1.000				1.000
0454	SPV.0105	Special 05. Temporary Bridge Widening B-55-12	LS	1.000				1.000

3

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	LOCATION	203.0100 EACH	REMARKS
0010	149+96'EB'	IH 94 MEDIAN	1	30-INCH, METAL PIPE, L = 116 FT
0010	163+94'EB'	IH 94 MEDIAN	1	15-INCH, METAL PIPE, L = 148 FT
		TOTAL 0010	2	

REMOVING CONCRETE PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 SY	REMARKS
0010	145+50'EB'	-	157+73'EB'	IH 94 EB	3260	
0010	158+77'EB'	-	169+50'EB'	IH 94 EB	2860	
				TOTAL 0010	6120	

REMOVING GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 LF	REMARKS
0010	154+41'EB'	-	157+73'EB'	IH 94 EB	330	
0010	155+54'EB'	-	157+73'EB'	IH 94 EB	220	
0010			157+73'EB'	IH 94 MEDIAN	80	
0010			158+78'EB'	IH 94 MEDIAN	80	
0010	158+78'EB'	-	162+28'EB'	IH 94 EB	350	
				TOTAL 0010	1060	

REMOVING FENCE

CATEGORY	STATION	LOCATION	204.0170 LF	REMARKS
0010	157+82'EB'	IH 94 MEDIAN	95	BETWEEN STRUCTURES
0010	158+70'EB'	IH 94 MEDIAN	95	BETWEEN STRUCTURES
0010	157+82'EB'	IH 94 EB	140	OUTSIDE SLOPE
0010	158+70'EB'	IH 94 EB	150	OUTSIDE SLOPE
		TOTAL 0010	480	

REMOVING DELINEATORS AND MARKERS

CATEGORY	STATION	TO	STATION	LOCATION	204.0180 EACH	REMARKS
0010	145+50'EB'	-	169+50'EB'	IH 94 EB, RT	5	OUTSIDE SHLD & ENDWALLS/INLETS
				TOTAL 0010	5	

REMOVING INLETS

CATEGORY	STATION	LOCATION	204.0220 EACH	REMARKS
0010	149+96'EB'	IH 94 MEDIAN	1	
0010	163+94'EB'	IH 94 MEDIAN	1	
		TOTAL 0010	2	

EARTHWORK SUMMARY TABLE

FILL FACTOR = 1.30

GROUP CODE	STATION	TO	STATION	LOCATION	CUT VOLUME CY	(1) ASPHALT PAVEMENT CY	(1) CONCRETE PAVEMENT CY	(2) USEABLE MATERIAL CY	EXPANDED FILL CY	208.0100 BORROW CY	208.1100 SELECT BORROW CY	312.0115 SELECT CRUSH MATERIAL CY	205.0100 EXCAVATION COMMON CY	(3) SUITABLE WASTE CY	(4) UNSUITABLE WASTE CY	(5) EXCAVATION BELOW SUBGRADE CY
010	145+50'EB'	-	169+50'EB'	94 EB	2519	640	2961	-1082	16671	17753	0	0	2519	0	0	0
010	133+13	-	190+00	94 EB CROSSOVER	7098	475	3051	3572	6165	0	2593	978	8076	0	978	978
				STAGE 2 SUBTOTAL	9617	1115	6012	2490	22836	17753	2593	978	10595	0	978	978
				Total	9617	1115	6012	2490	22836	17753	2593	978	10595	0	978	978

(1) PAVEMENT (INCLUDES ASPHALT AND CONCRETE) IS INCLUDED IN THE QUANTITY OF EXCAVATION COMMON. PAVEMENT IS CONSIDERED SALVAGEABLE FOR OTHER PURPOSES AND IS NOT INCLUDED IN THE QUANTITIY OF USEABLE MATERIAL.
(2) USEABLE MATERIAL = EXCAVATION COMMON - EBS - PAVEMENT
(3) SUITABLE WASTE IS SURPLUS MATERIAL SUITABLE FOR USE AS FILL THAT IS BEYOND THE VOLUME NEEDED FOR THE PROJECT.
(4) UNSUITABLE WASTE = EBS
(5) EXCAVATION BELOW SUBGRADE IS NOT USED TO BALANCE EARTHWORK. QUANTITY IS INCLUDED AND PAID FOR IN THE ITEM OF EXCAVATION COMMON.

3

BASE AGGREGATE DENSE 3/4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 TON	REMARKS
0010	145+50'EB'	-	169+50'EB'	IH 94 EB	2900	STAGE 2
0010	133+13	-	190+00	IH 94 EB CROSS OVER	360	STAGE 2
				TOTAL 0010	3260	

BASE AGGREGATE DENSE 1 1/4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	305.0120 TON	REMARKS
0010	145+50'EB'	-	169+50'EB'	IH 94 EB	4900	STAGE 2
0010	133+13	-	190+00	IH 94 EB CROSS OVER	12500	STAGE 2
				TOTAL 0010	17400	

CONCRETE PAVEMENT 12-INCH

CATEGORY	STATION	TO	STATION	LOCATION	415.0120 SY	REMARKS
0010	145+50'EB'	-	157+23'EB'	IH 94 EB	3390	
0010	159+27'EB'	-	169+50'EB'	IH 94 EB	2960	
				TOTAL 0010	6350	

CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STATION	TO	STATION	LOCATION	415.0410 SY	REMARKS
0010	157+23'EB'	-	157+38'EB'	IH 94 EB	100	
0010	159+12'EB'	-	159+27'EB'	IH 94 EB	100	
				TOTAL 0010	200	

DRILLED DOWEL BARS

CATEGORY	STATION	LOCATION	416.0620 EACH	REMARKS
0010	145+50'EB'	IH 94 EB	16	2 LANES
0010	169+50'EB'	IH 94 EB	16	2 LANES
		TOTAL 0010	32	

CONCRETE SURFACE DRAINS

CATEGORY	STATION	LOCATION	416.1010 CY	REMARKS
0010	156+94'EB', 40'RT	IH 94 EB	2	FLUME
0010	156+94'EB', 28'LT	IH 94 EB	2	FLUME
		TOTAL 0010	4	

CONCRETE RUMBLE STRIPS SHOULDER

CATEGORY	STATION	TO	STATION	LOCATION	416.1110 LF	REMARKS
0010	145+50'EB'	-	157+23'EB'	IH 94 EB	1175	
0010	159+27'EB'	-	169+50'EB'	IH 94 EB	1025	
				TOTAL 0010	2200	

ASPHALTIC SHOULDER RUMBLE STRIP

CATEGORY	STATION	TO	STATION	LOCATION	465.0400 LF	REMARKS
0010	145+50'EB'	-	157+23'EB'	IH 94 EB	1175	
0010	159+27'EB'	-	169+50'EB'	IH 94 EB	1025	
				TOTAL 0010	2200	

HMA PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	HMA COLD WEATHER PAVING 450.4000 TON	TACK COAT 455.0605 GAL	HMA PAVEMENT 3 MT 58-28S 460.6223 TON	HMA PAVEMENT 4 MT 58-28S 460.6224 TON	ASPHALTIC SURFACE PATCHING 465.0110 TON	ASPHALTIC SURFACE TEMPORARY 465.0125 TON	REMARKS
0010	145+50'EB'	-	157+23'EB'	IH 94 EB, LT	280	85	140	140	-	-	SHLD - STAGE 2
0010	145+50'EB'	-	157+23'EB'	IH 94 EB, RT	300	90	150	150	-	-	SHLD - STAGE 2
0010	159+27'EB'	-	169+50'EB'	IH 94 EB, LT	240	75	120	120	-	-	SHLD - STAGE 2
0010	159+27'EB'	-	169+50'EB'	IH 94 EB, RT	260	80	130	130	-	-	SHLD - STAGE 2
0010	133+00	-	190+38	IH 94 EB CROSS OVER	-	1090	-	-	-	5400	STAGE 2, 6-INCH
0010			PROJECT	IH 94	-	-	-	-	220	-	UNDISTRIBUTED
				TOTAL 0010	1080	1420	540	540	220	5400	

ICE HOT WEATHER CONCRETING

CATEGORY	STATION	LOCATION	501.1000.S LB	REMARKS
0010	PROJECT	STRUCTURES	6500	
		TOTAL 0010	6500	

CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT

CATEGORY	STATION	TO	STATION	LOCATION	601.0590 LF	REMARKS
0010	156+78'EB'	-	157+38'EB'	IH 94 EB, LT	60	
0010	156+78'EB'	-	157+38'EB'	IH 94 EB, RT	60	
				TOTAL 0010	120	

CULVERT PIPE

CATEGORY	INLET STATION	INLET ELEVATION	OUTLET STATION	OUTLET ELEVATION	SLOPE %	LOCATION	CULVERT PIPE TEMPORARY 18-INCH 520.2018 LF	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH 522.0124 LF	CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH 522.0130 LF	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH 522.1018 EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH 522.1024 EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH 522.1030 EACH	REMARKS
0010	143+33, 33.0' RT	1131.19	140+96, 11.0' LT	1125.99	2.2	IH 94 EB CROSSOVER	240	-	-	2	-	-	
0010	183+35, 16.1' LT	1162.66	178+67, 3845' RT	1156.59	1.3	IH 94 EB CROSSOVER	470	-	-	2	-	-	
0010	184+50, 23.4' LT	1162.40	183+85, 19.9' LT	1158.50	6.0	IH 94 EB CROSSOVER	64	-	-	1	-	-	RECONSTRUCT INLET
0010	164+00'EB', 54.3' LT	1144.58	164+00'EB', 91.1' RT	1143.85	0.5	IH 94 EB	-	146	-	-	1	-	
0010	149+98'EB', 59.1' LT	1138.05	149+96.8'EB', 69.4' RT	1135.48	2.0	IH 94 EB	-	-	129	-	-	1	
						TOTAL 0010	774	146	129	5	1	1	

CONCRETE BARRIER

CATEGORY	STATION	TO	STATION	LOCATION	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED 603.8000 LF	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED 603.8125 LF	REMARKS
0010	137+00'WB EX'	-	185+00'WB EX'	IH 94 WB	4800	4800	STAGE 2A-2B
				TOTAL 0010	4800	4800	

RIPRAP LIGHT

CATEGORY	STATION	LOCATION	606.0100 CY	REMARKS
0010	164+00'EB', 91.1' RT	IH 94 EB	2	AEW
0010	149+96.8'EB', 69.4' RT	IH 94 EB	2	AEW
0010	156+94'EB', 40'RT	IH 94 EB	3	FLUME
0010	156+94'EB', 28'LT	IH 94 EB	3	FLUME
		TOTAL 0010	10	

3

RECONSTRUCTING INLETS

CATEGORY	STATION	LOCATION	611.0430 EACH	REMARKS
0010	183+85, 19.9' LT	IH 94 MEDIAN	1	
		TOTAL 0010	1	

CRASH CUSHIONS TEMPORARY

CATEGORY	STATION	LOCATION	614.0905 EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
0010	185+00'WB EX'	IH 94 WB	1	2.00	OM-3L	TL-3	UNIDIRECTIONAL	LT	END OF TEMP. BARRIER	STAGE 2
		TOTAL 0010	1							

MGS GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	MGS GUARDRAIL 3 614.2300 LF	MGS THRIE BEAM TRANSITION 614.2500 LF	MGS GUARDRAIL TERMINAL EAT 614.2610 EACH	MGS GUARDRAIL TERMINAL TYPE 2 614.2620 EACH	REMARKS
0010	152+29'EB'	-	157+01'EB'	IH 94 EB, LT	500	-	-	-	
0010	155+00'EB'	-	157+01'EB'	IH 94 EB, RT	200	-	-	-	
0010	159+18'EB'	-	164+43'EB'	IH 94 EB, LT	525	-	-	-	
0010	159+18'EB'	-	162+43'EB'	IH 94 EB, RT	325	-	-	-	
0010			157+01'EB'	IH 94 EB, LT	-	40	-	-	
0010			157+01'EB'	IH 94 EB, RT	-	40	-	-	
0010			159+10'EB'	IH 94 EB, LT	-	8	-	-	
0010			159+10'EB'	IH 94 EB, RT	-	8	-	-	
0010			151+61'EB'	IH 94 EB, LT	-	-	1	-	
0010			154+60'EB'	IH 94 EB, RT	-	-	1	-	
0010			164+43'EB'	IH 94 EB, LT	-	-	-	1	
0010			162+43'EB'	IH 94 EB, RT	-	-	-	1	
				TOTAL 0010	1550	96	2	2	

WATER

CATEGORY	STATION	TO	STATION	LOCATION	624.0100 MGAL	REMARKS
0010	145+50'EB'	-	169+50'EB'	IH 94 EB	75	BASE AGG / DUST
0010	133+13	-	190+00	IH 94 EB CROSS OVER	125	BASE AGG / DUST
				TOTAL 0010	200	

INLET

CATEGORY	STATION	LOCATION	GRATE ELEVATION	DEPTH	COVERS TYPE MS 611.0642 EACH	MEDIAN 1 GRATE 611.3901 EACH	MEDIAN 2 GRATE 611.3902 EACH	INLET PROTECTION TYPE A 628.7005 EACH	REMARKS
0010	149+98'EB'	IH 94 MEDIAN	1140.10	5.20	2	-	1	1	59.4'LT
0010	164+00'EB'	IH 94 MEDIAN	1148.00	3.70	1	1	-	1	54.9' LT
		TOTAL 0010			3	1	1	2	

TEMPORARY GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	STEEL PLATE BEAM GUARD TEMPORARY 614.0360 LF	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL TEMPORARY 614.0380 EACH	REMARKS
0010	154+53'WB EX'	-	157+45'WB EX'	IH 94 WB	240	1	STAGE 2B, FOR 94 EB CROSSOVER
				TOTAL 0010	240	1	

TEMPORARY DITCH CHECKS

CATEGORY	STATION	TO	STATION	LOCATION	628.7504 LF	REMARKS
0010	136+00'WB EX'	-	146+00'WB EX'	IH 94 MEDIAN	180	STAGE 2, 6 @ 30-FT
0010	179+00'WB EX'	-	189+00'WB EX'	IH 94 MEDIAN	180	STAGE 2, 6 @ 30-FT
				TOTAL 0010	360	

SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	REMARKS
0010	158+68'WB'	-	179+59'WB'	IH 94 WB, LT	2190	2190	STAGE 2
0010	145+50'EB'	-	157+60'EB'	IH 94 EB, RT	1260	1260	STAGE 2
0010	158+90'EB'	-	169+50'EB'	IH 94 EB, RT	1130	1130	STAGE 2
0010			PROJECT	IH 94	460	460	UNDISTRIBUTED
				TOTAL 0010	5040	5040	

3

3

FENCE WOVEN WIRE (4-FT)

CATEGORY	STATION	LOCATION	616.0100 LF	REMARKS
0010	157+38'EB'	IH 94 MEDIAN	70	BETWEEN STRUCTURES
0010	159+13'EB'	IH 94 MEDIAN	70	BETWEEN STRUCTURES
0010	157+38'EB'	IH 94 EB	105	OUTSIDE SLOPE
0010	159+13'EB'	IH 94 EB	105	OUTSIDE SLOPE
		TOTAL 0010	350	

MOBILIZATIONS

CATEGORY	STATION	LOCATION	MOBILIZATIONS EROSION CONTROL 628.1905 EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EACH	REMARKS
0010	PROJECT	IH 94	3	2	
		TOTAL 0010	3	2	

SIGNING ITEMS

APPROX. STATION LOCATION	SIGN GROUP NUMBER	SIGN CODE	SIGN MESSAGE	SIGN SIZE W x H (INCHES)	POSTS WOOD 4x6-INCH x 14-FT 634.0614 EACH	MOVING SIGNS TYPE 11 4x6-INCH x 16-FT 638.2102 EACH	REMOVING SMALL SIGN SUPPORTS 638.3000 EACH	REMARKS
157+10'EB', RT	1-1	M1-94	Hwy NN	66 x 21	2	1	1	
157+36'EB', LT	1-2	W5-52L	CLEARANCE STRIP DOWN RIGHT	12 x 36	1	1	1	
157+36'EB', RT	1-3	W5-52R	CLEARANCE STRIP DOWN LEFT	12 x 36	1	1	1	
				SUBTOTAL 0010	4	3	3	

PIPE UNDERDRAIN UNPERFORATED 6-INCH

CATEGORY	STATION	LOCATION	612.0206 LF	REMARKS
0010	PROJECT	IH 94	100	AT STRUCTURES
		TOTAL 0010	100	

ROCK BAGS

CATEGORY	STATION	LOCATION	628.7570 EACH	REMARKS
0010	164+00'EB'	IH 94 EB	5	
0010	149+97.5'EB'	IH 94 EB	3	
		TOTAL 0010	8	

RESTORATION

CATEGORY	STATION	TO	STATION	LOCATION	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	EROSION MAT CLASS 1 TYPE B 628.2004 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 30 630.0130 LB	SEEDING TEMPORARY 630.0200 LB	SEEDING BORROW PIT 630.0300 LB	SEED WATER 630.0500 MGAL	REMARKS
0010	152+00'EB'	-	157+60'EB'	IH 94 EB, LT	2260	-	2260	1.4	41	61	-	13	STAGE 2
0010	158+90'EB'	-	163+90'EB'	IH 94 EB, LT	1760	-	1760	1.1	32	48	-	10	STAGE 2
0010	145+50'EB'	-	157+60'EB'	IH 94 EB, RT	3920	-	3920	2.5	71	106	-	22	STAGE 2
0010	158+90'EB'	-	169+50'EB'	IH 94 EB, RT	2700	-	2700	1.7	49	74	-	15	STAGE 2
0010	145+50'EB'	-	152+00'EB'	IH 94 EB, LT	2730	2730	-	1.7	49	74	-	15	STAGE 2
0010	163+90'EB'	-	169+50'EB'	IH 94 EB, LT	3230	3230	-	2.0	58	87	-	18	STAGE 2
0010	133+00	-	190+00	IH 94 EB CROSSOVER	8950	8950	-	5.6	-	240	-	50	STAGE 2
0010			PROJECT	IH 94	2555	1490	1065	2.0	30	70	345	15	UNDISTRIBUTED
				TOTAL 0010	28105	16400	11705	18	330	760	345	158	

DELINEATOR

CATEGORY	STATION	LOCATION	POSTS STEEL 633.0100 EACH	DELINEATOR REFLECTORS 633.0500 EACH	DELINEATORS TEMPORARY 633.1100 EACH	REMARKS
0010	PROJECT	IH 94 EB	6	6	-	OUTSIDE SHLD AT 400' INTERVALS
0010	PROJECT	IH 94 EB	-	-	38	STAGE 2, OUTSIDE SHLD
0010	PROJECT	IH 94 EB CROSSOVER	-	-	46	STAGE 2B, 100' INTERVALS
		TOTAL 0010	6	6	84	

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	MARKING LINE GROOVED WET REF EPOXY 4-INCH 646.1040 LF	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH 646.1555 LF	COLD WEATHER MARKING EPOXY 4-INCH 646.6464 LF	MARKING REMOVAL LINE WATER BLASTING 4-INCH 646.9010 LF	TEMPORARY MARKING LINE PAINT 4-INCH 649.0105 LF	TEMPORARY MARKING LINE EPOXY 4-INCH 649.0120 LF	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH 649.0150 LF	TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE 1 649.0760 EACH	REMARKS
0010	145+00'EB	-	171+00'EB'	IH 94 EB, LT	2600	-	2600	-	-		-	-	EDGELINE - STAGE 2
0010	145+00'EB	-	171+00'EB'	IH 94 EB, RT	2580	-	2580	-	-		-	-	EDGELINE -STAGE 2
0010	145+00'EB	-	171+00'EB'	IH 94 EB	-	650	650	-	-		-	-	CENTERLINE - STAGE 2
0010			PROJECT	IH 94 WB	-	-	-	17000	-	17000	2520	-	STAGE 2
0010	133+00	-	187+75	IH 94 EB CROSSOVER	-	-	-	-	20200	-	2200	48	STAGE 2
				TOTAL 0010	5180	650	5830	17000	20200	17000	4720	48	

PROJECT NO: 1021-00-78	HWY: IH 94	COUNTY: ST. CROIX	MISCELLANEOUS QUANTITIES	SHEET 118	E

TRAFFIC CONTROL

CATEGORY	STATION	LOCATION	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643.0715 DAY	TRAFFIC CONTROL ARROW BOARDS 643.0800 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	TRAFFIC CONTROL SIGNS PCMS WITH CELLULAR COMMUNICATIONS 643.1051 DAY	TRAFFIC CONTROL INTERIM LANE CLOSURE 643.4100.S EACH	REMARKS
0010	PROJECT	IH 94 WB	11760	-	-	-	-	-	-	35	STAGE 2
0010	LANE CLOSURE	IH 94 WB	-	1120	1680	9240	560	-	-	-	STAGE 2
0010	ADVANCE WARNING	IH 94 EB	-	-	-	-	-	2240	-	-	STAGE 2
0010	ADVANCE WARNING	IH 94 WB	-	-	-	-	-	2240	-	-	STAGE 2
0010	LANE CLOSURE	IH 94	-	-	-	-	-	1960	-	-	STAGE 2
0010	ADVANCE WARNING	CTH NN	-	-	-	-	-	840	-	-	STAGE 2
0010	ADVANCE WARNING	IH 94	-	-	-	-	-	-	280	-	STAGE 2
		TOTAL 0010	11760	1120	1680	9240	560	7280	280	35	

TRACKING PADS

CATEGORY	STATION	LOCATION	628.7560 EACH	REMARKS
0010	PROJECT	IH 94	2	
		TOTAL 0010	2	

GEOTEXTILE FABRIC TYPE R

CATEGORY	STATION	LOCATION	645.0130 SY	REMARKS
0010	164+00'EB', 91.1' RT	IH 94 EB	4	AEW
0010	149+96.8'EB', 69.4' RT	IH 94 EB	4	AEW
0010	156+94'EB', 40'RT	IH 94 EB	8	FLUME
0010	156+94'EB', 28'LT	IH 94 EB	8	FLUME
		TOTAL 0010	24	

SAWING CONCRETE

CATEGORY	STATION	LOCATION	690.0250 LF	REMARKS
0010	145+50'EB'	IH 94 EB	38	
0010	169+50'EB'	IH 94 EB	38	
		TOTAL 0010	76	

SAWING ASPHALT

CATEGORY	STATION	TO	STATION	LOCATION	690.0150 LF	REMARKS
0010	145+50'EB'	-	169+50'EB'	IH 94 EB	28	SHOULDERS
0010	133+13	-	190+00	IH 94 EB CROSS OVER	24	SHOULDERS
				TOTAL 0010	52	

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	CONSTRUCTION STAKING SUBGRADE 650.4500 LF	CONSTRUCTION STAKING BASE 650.5000 LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER 650.5500 LF	CONSTRUCTION STAKING CONCRETE PAVEMENT 650.7000 LF	CONSTRUCTION STAKING SLOPE STAKES 650.9920 LF	REMARKS
0010	145+50'EB'	-	157+28'EB'	IH 94 EB	1180	-	-	1180	1180	
0010	159+12'EB'	-	169+50'EB'	IH 94 EB	1040	-	-	1040	1040	
0010	133+00	-	190+38	IH 94 EB CROSS OVER	5740	5740	-	-	5740	
0010	156+78'EB'	-	157+38'EB'	IH 94 EB, LT	-	-	60	-	-	
0010	156+78'EB'	-	157+38'EB'	IH 94 EB, RT	-	-	60	-	-	
				TOTAL 0010	7960	5740	120	2220	7960	

TRAFFIC CONTROL VERTICAL PANELS

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0060.02 EACH	REMARKS
0010	133+00'WB EX'	-	187+00'WB EX'	IH 94 WB	55	STAGE 2C
0010	135+00'EB EX'	-	141+00'EB EX'	IH 94 EB	7	STAGE 2C
0010	182+50'EB EX'	-	189+50'EB EX'	IH 94 EB	8	STAGE 2C
				TOTAL 0010	70	

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FTMS PULL BOXES

CATEGORY 0030	ITEM ID	LOCATION	653.0140 PULL BOXES STEEL 24 x 42-INCH EACH	653.0905 REMOVING PULL BOXES EACH
	PBNN01	IH 94 EB @ CTH NN	1	--
	PBNN02	IH 94 EB @ CTH NN	1	
	EXPB01	IH 94 EB @ CTH NN	--	1
		TOTAL	2	1

FTMS CONDUIT AND CABLE

CATEGORY 0030	FROM	TO	LINEAR DISTANCE	652.0125 CONDUIT RIGID METALLIC 2-INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	674.0300 REMOVE CABLE LF
	EXMB01	PBNN01	265	--	265	810	--
	PBNN01	DMS-18-0025	10	10	--	60	--
	EXMB01	EXDMS-18-0025	110	--	--	--	110
		TOTAL		10	265	870	110

FTMS LUMP SUM QUANTITIES

CATEGORY 0030	ROAD	LOCATION	670.0100 FIELD SYSTEM INTEGRATOR LS	670.0200 ITS DOCUMENTATION LS
	IH 94	PROJECT	1	1
		TOTAL	1	1

FTMS DYNAMIC MESSAGE SIGNS

CATEGORY 0030	ITEM I.D.	LOCATION	STEEL POST TYPE	204.0195 REMOVING CONCRETE BASES EACH	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS LB	531.1100 CONCRETE MASONRY ANCILLARY STRUCTURES TYPE NS CY	531.1140 STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS LB	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS EACH	SPV.0060.01 RELOCATE GROUND MOUNT DMS EACH	INFO ONLY - POST LENGTHS TO BE VERIFIED BY CONTRACTOR POST NO. 1 LENGTH FT	POST NO. 2 LENGTH FT	POST NO. 3 LENGTH FT
	EXDMS-18-0025	STA. 165+60	12 x 19	3	--	--	--	3	--	--	--	--
	DMS-18-0025	STA. 162+00 EB	8 x 21	--	1402	3	330	--	1	14.08	16.63	18.36
			TOTAL	3	1402	3	330	3	1			

3

CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	CLEARING 201.0105 STA	GRUBBING 201.0205 STA	REMARKS
0010	151+50'WB'	-	157+50'WB'	IH 94 WB, LT	6	6	
0010	159+00'WB'	-	173+00'WB'	IH 94 WB, LT	14	14	
				TOTAL 0010	20	20	

REMOVING DELINEATORS AND MARKERS

CATEGORY	STATION	TO	STATION	LOCATION	204.0180 EACH	REMARKS
0010	137+08'WB'	-	179+59'WB'	IH 94 WB	9	OUTSIDE SHLD, ENDWALLS
				TOTAL 0010	9	

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	LOCATION	203.0100 EACH	REMARKS
0010	150+00'WB'	IH 94 WB	1	30-INCH, METAL PIPE, L = 128 FT
0010	171+51'WB'	IH 94 WB	1	18-INCH, CONCRETE PIPE, L =105 FT
		TOTAL 0010	2	

REMOVING CONCRETE PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 SY	REMARKS
0010	137+08'WB'	-	157+79'WB'	IH 94 WB	5525	
0010	158+83'WB'	-	179+58'WB'	IH 94 WB	5535	
				TOTAL 0010	11060	

REMOVING FENCE

CATEGORY	STATION	TO	STATION	LOCATION	204.0170 LF	REMARKS
0010	137+08'WB'	-	158+00'WB'	IH 94 WB, LT	2185	
0010	158+65'WB'	-	177+00'WB'	IH 94 WB, LT	1965	
				TOTAL 0010	4150	

REMOVING GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 LF	REMARKS
0010	158+84'WB'	-	163+28'WB'	IH 94 WB	445	
0010	158+84'WB'	-	162+15'WB'	IH 94 WB	330	
				TOTAL 0010	775	

REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	STATION	TO	STATION	LOCATION	204.0120 SY	REMARKS
0010	151+50'WB EX'	-	165+00'WB EX'	IH 94 WB	550	FILL RUMBLES - STAGE 1A
0010	132+88'WB EX'	-	137+08'WB EX'	IH 94 WB	190	FILL RUMBLES - STAGE 1B
0010	179+58'WB EX'	-	183+78'WB EX'	IH 94 WB	190	FILL RUMBLES - STAGE 1B
				TOTAL 0010	930	

REMOVING INLETS

CATEGORY	STATION	LOCATION	204.0220 EACH	REMARKS
0010	171+51'WB	IH 94 MEDIAN	1	
		TOTAL 0010	1	

EARTHWORK SUMMARY TABLE

FILL FACTOR = 1.30

GROUP CODE	STATION	TO	STATION	LOCATION	CUT VOLUME CY	(1) ASPHALT PAVEMENT CY	(1) CONCRETE PAVEMENT CY	(2) USEABLE MATERIAL CY	EXPANDED FILL CY	208.0100 BORROW CY	205.0100 EXCAVATION COMMON CY	(3) SUITABLE WASTE CY	(4) UNSUITABLE WASTE CY	(5) EXCAVATION BELOW SUBGRADE CY
010	137+08'WB'	-	179+59'WB'	94 WB	9620	677	1755	7188	44960	37772	9620	0	0	0
010	130+45	-	154+00	94 WB, WEST	1868	198	0	1670	1901	231	1868	0	0	0
010	165+08	-	189+42	95 WB, EAST	1822	162	0	1660	2227	567	1822	0	0	0
				STAGE 1 SUBTOTAL	13310	1037	1755	10518	49088	38570	13310	0	0	0
010	137+08'WB'	-	179+59'WB'	94 WB	13651	2924	683	10044	29	0	13651	10015	0	0
010	130+45	-	144+00	94 MEDIAN	3872	243	0	3629	89	0	3872	3540	0	0
010	179+58	-	189+91	94 MEDIAN	4370	722	0	3648	403	0	4370	3245	0	0
				STAGE 3 SUBTOTAL	21893	3889	2438	17321	521	0	21893	16800	0	0
				Total	35203	4926	4193	27839	49609	38570	35203	16800	0	0

(1) PAVEMENT (INCLUDES ASPHALT AND CONCRETE) IS INCLUDED IN THE QUANTITY OF EXCAVATION COMMON. PAVEMENT IS CONSIDERED SALVAGEABLE FOR OTHER PURPOSES AND IS NOT INCLUDED IN THE QUANTITIY OF USEABLE MATERIAL.
(2) USEABLE MATERIAL = EXCAVATION COMMON - EBS - PAVEMENT
(3) SUITABLE WASTE IS SURPLUS MATERIAL SUITABLE FOR USE AS FILL THAT IS BEYOND THE VOLUME NEEDED FOR THE PROJECT.
(4) UNSUITABLE WASTE = EBS
(5) EXCAVATION BELOW SUBGRADE IS NOT USED TO BALANCE EARTHWORK. QUANTITY IS INCLUDED AND PAID FOR IN THE ITEM OF EXCAVATION COMMON.

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BASE AGGREGATE DENSE 3/4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 TON	REMARKS
0010	137+08'WB'	-	179+59'WB'	94 WB	2035	STAGE 1
0010	130+45	-	154+00	94 WB, WEST	100	STAGE 1
0010	165+08	-	189+42	95 WB, EAST	110	STAGE 1
0010	137+08'WB'	-	179+59'WB'	94 WB	3050	STAGE 3
0010	130+45	-	144+00	94 MEDIAN	830	STAGE 3
0010	179+58	-	189+91	94 MEDIAN	1020	STAGE 3
				TOTAL 0010	7145	

BASE AGGREGATE DENSE 1 1/4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	305.0120 TON	REMARKS
0010	137+08'WB'	-	179+59'WB'	94 WB	6420	STAGE 1
0010	130+45	-	154+00	94 WB, WEST	3740	STAGE 1
0010	165+08	-	189+42	95 WB, EAST	4375	STAGE 1
0010	137+08'WB'	-	179+59'WB'	94 WB	680	STAGE 3
0010	130+45	-	144+00	94 MEDIAN	885	STAGE 3
0010	179+58	-	189+91	94 MEDIAN	1000	STAGE 3
				TOTAL 0010	17100	

CONCRETE PAVEMENT 12-INCH

CATEGORY	STATION	TO	STATION	LOCATION	415.0120 SY	REMARKS
0010	137+08'WB'	-	157+29'WB'	IH 94 WB	5840	
0010	159+33'WB'	-	179+59'WB'	IH 94 WB	5850	
				TOTAL 0010	11690	

CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STATION	TO	STATION	LOCATION	415.0410 SY	REMARKS
0010	157+29'WB'	-	157+44'WB'	IH 94 WB	100	
0010	159+18'WB'	-	159+33'WB'	IH 94 WB	100	
				TOTAL 0010	200	

DRILLED DOWEL BARS

CATEGORY	STATION	LOCATION	416.0620 EACH	REMARKS
0010	137+08'WB'	IH 94 WB	16	2 LANES
0010	179+59'WB'	IH 94 WB	16	2 LANES
		TOTAL 0010	32	

CONCRETE SURFACE DRAINS

CATEGORY	STATION	LOCATION	416.1010 CY	REMARKS
0010	157+20'WB', 40' LT	IH 94 WB	2	FLUME
0010	157+20'WB', 28' RT	IH 94 WB	2	FLUME
		TOTAL 0010	4	

CONCRETE RUMBLE STRIPS SHOULDER

CATEGORY	STATION	TO	STATION	LOCATION	416.1110 LF	REMARKS
0010	137+08'WB'	-	157+29'WB'	IH 94 WB	2020	
0010	159+33'WB'	-	179+59'WB'	IH 94 WB	2025	
				TOTAL 0010	4045	

ASPHALTIC SHOULDER RUMBLE STRIP

CATEGORY	STATION	TO	STATION	LOCATION	465.0400 LF	REMARKS
0010	132+88'WB EX'	-	137+08'WB EX'	IH 94 WB	420	
0010	137+08'WB'	-	157+29'WB'	IH 94 WB	2020	
0010	159+33'WB'	-	179+59'WB'	IH 94 WB	2025	
0010	179+59'WB EX'	-	183+78'WB EX'	IH 94 WB	420	
				TOTAL 0010	4885	

HMA PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	TACK COAT 455.0605 GAL	HMA PAVEMENT 3 MT 58-28S 460.6223 TON	HMA PAVEMENT 4 MT 58-28S 460.6224 TON	ASPHALTIC SURFACE PATCHING 465.0110 TON	ASPHALTIC SURFACE TEMPORARY 465.0125 TON	REMARKS
0010	131+36	-	151+64	IH 94 WB WIDENING	105	-	-	-	1485	STAGE 1, WIDENING
0010	165+08	-	189+41	IH 94 WB WIDENING	125	-	-	-	1765	STAGE 1, WIDENING
0010	151+50'WB EX'	-	165+00'WB EX'	IH 94 WB	40				60	STAGE 1,FILL RUMBLE STRIPS
0010	134+58'WB EX'	-	137+08'WB EX'	IH 94 WB	15	-	-	-	25	STAGE 1,FILL RUMBLE STRIPS
0010	179+58'WB EX'	-	182+08'WB EX'	IH 94 WB	15	-	-	-	25	STAGE 1,FILL RUMBLE STRIPS
0010	137+08'WB'	-	157+29'WB'	IH 94 WB, LT	30	515	260	-	-	STAGE 1, 6" SHLD
0010	137+08'WB'	-	157+29'WB'	IH 94 WB, RT	25	205	205	-	-	STAGE 1, 4" SHLD
0010	159+33'WB'	-	179+59'WB'	IH 94 WB, LT	30	515	260	-	-	STAGE 1, 6" SHLD
0010	159+33'WB'	-	179+59'WB'	IH 94 WB, RT	20	200	200	-	-	STAGE 1, 4" SHLD
0010	130+46	-	137+08	IH 94 WB	5	35	35	-	-	STAGE 3, EXISTING SHLD
0010	133+20	-	143+90	IH 94 EB	10	70	70	-	-	STAGE 3, EXISTING SHLD
0010	179+57	-	189+33	IH 94 WB	5	50	50	-	-	STAGE 3, EXISTING SHLD
0010	179+60	-	189+94	IH 94 EB	10	65	65	-	-	STAGE 3, EXISTING SHLD
0010	103+50'NN'	-	106+75'NN'	CTH NN	-	-	55	-	-	STAGE 3, 2-INCH
0010			PROJECT	IH 94	-	-	-	180	-	UNDISTRIBUTED
				TOTAL 0010	435	1655	1200	180	3360	

TEMPORARY SHORING

CATEGORY	STATION	LOCATION	511.1100 SF	REMARKS
0010	150+00'WB'	IH 94 WB	400	STAGE 1B - CULVERT PIPE INSTALL
0010	150+00'WB'	IH 94 WB	400	STAGE 1C - CULVERT PIPE INSTALL
0010	171+50'WB'	IH 94 WB	200	STAGE 1B - CULVERT PIPE INSTALL
0010	171+50'WB'	IH 94 WB	200	STAGE 1C - CULVERT PIPE INSTALL
		TOTAL 0010	1200	

CRASH CUSHIONS TEMPORARY

CATEGORY	STATION	LOCATION	614.0905 EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
0010	184+00'WB EX'	IH 94 WB	1	2.00	OM-3R	TL-3	UNIDIRECTIONAL	RT	END OF TEMP. BARRIER	STAGE 1B
		TOTAL 0010	1							

ICE HOT WEATHER CONCRETING

CATEGORY	STATION	LOCATION	501.1000.S LB	REMARKS
0010	PROJECT	STRUCTURES	6500	
		TOTAL 0010	6500	

CULVERT PIPE

CATEGORY	INLET STATION	INLET ELEVATION	OUTLET STATION	OUTLET ELEVATION	SLOPE %	LOCATION	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH 522.0124 LF	CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH 522.0130 LF	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH 522.1024 EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH 522.1030 EACH	REMARKS
0010	171+51.3'WB', 58.6' RT	1149.00	171+46.3'WB', 61.1' LT	1148.40	0.5	IH 94 WB	120	-	1	-	
0010	150+00'WB', 63.8' RT	1135.25	150+00'WB', 85.6' LT	1132.25	2.0	IH 94 WB	-	150	-	1	
						TOTAL 0010	120	150	1	1	

CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT

CATEGORY	STATION	TO	STATION	LOCATION	601.0590 LF	REMARKS
0010	157+04'WB'	-	157+44'WB'	IH 94 WB, LT	40	
0010	157+04'WB'	-	157+44'WB'	IH 94 WB, RT	40	
				TOTAL 0010	80	

CONCRETE BARRIER

CATEGORY	STATION	TO	STATION	LOCATION	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED 603.8000 LF	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED 603.8125 LF	ANCHORING CONCRETE BARRIER TEMPORARY PRECAST 603.8500 LF	ANCHORING CONCRETE BARRIER TEMPORARY PRECAST ON BRIDGE DECKS 603.8505 LF	REMARKS
0010	130+50'WB EX'	-	189+80'WB EX'	IH 94 WB	4950	4950	4850	100	STAGE 1B
				TOTAL 0010	4950	4950	4850	100	

MGS GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	MGS GUARDRAIL 3 614.2300 LF	MGS THRIE BEAM TRANSITION 614.2500 LF	MGS GUARDRAIL TERMINAL EAT 614.2610 EACH	MGS GUARDRAIL TERMINAL TYPE 2 614.2620 EACH	REMARKS
0010	155+13'WB'	-	157+38'WB'	IH 94 WB, LT	225	-	-	-	
0010	156+51'WB'	-	157+38'WB'	IH 94 WB, RT	87.5	-	-	-	
0010	159+55'WB'	-	163+05'WB'	IH 94 WB, LT	350	-	-	-	
0010	159+55'WB'	-	164+56'WB'	IH 94 WB, RT	500	-	-	-	
0010	157+38'WB'	-	157+46'WB'	IH 94 WB, LT	-	8	-	-	
0010	157+38'WB'	-	157+46'WB'	IH 94 WB, RT	-	8	-	-	
0010	159+16'WB'	-	159+55'WB'	IH 94 WB, LT	-	40	-	-	
0010			159+55'WB'	IH 94 WB, RT	-	40	-	-	
0010			163+46'WB'	IH 94 WB, LT	-	-	1	-	
0010			164+97'WB'	IH 94 WB, RT	-	-	1	-	
0010			155+00'WB'	IH 94 WB, LT	-	-	-	1	
0010			156+37'WB'	IH 94 WB, RT	-	-	-	1	
				TOTAL 0010	1163	96	2	2	

INLET

CATEGORY	STATION	LOCATION	GRATE ELEVATION	DEPTH	INLET COVERS TYPE MS 611.0642 EACH	INLETS MEDIAN 1 GRATE 611.3901 EACH	REMARKS
0010	171+51'WB'	IH 94 MEDIAN	1153.05	4.30	1	1	59.1' RT
		TOTAL 0010			1	1	

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PIPE UNDERDRAIN UNPERFORATED 6-INCH

CATEGORY	STATION	LOCATION	612.0206 LF	REMARKS
0010	PROJECT	IH 94	100	AT STRUCTURES
		TOTAL 0010	100	

FENCE WOVEN WIRE (4-FT)

CATEGORY	STATION	TO	STATION	LOCATION	616.0100 LF	REMARKS
0010	137+08'WB'	-	158+00'WB'	IH 94 WB, LT	2200	
0010	158+65'WB'	-	177+00'WB'	IH 94 WB, LT	1950	
				TOTAL 0010	4150	

MOBILIZATIONS

CATEGORY	STATION	LOCATION	MOBILIZATIONS EROSION CONTROL 628.1905 EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EACH	REMARKS
0010	PROJECT	IH 94	3	2	
		TOTAL 0010	3	2	

RESTORATION

CATEGORY	STATION	TO	STATION	LOCATION	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	EROSION MAT CLASS 1 TYPE A 628.2002 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 30 630.0130 LB	SEEDING TEMPORARY 630.0200 LB	SEEDING BORROW PIT 630.0300 LB	SEED WATER 630.0500 MGAL	REMARKS
0010	137+00'WB'	-	158+00'WB'	IH 94 WB, LT	11670	-	11670	7.4	210	316	-	65	STAGE 1
0010	158+68'WB'	-	179+59'WB'	IH 94 WB, LT	7930	-	7930	5.0	143	215	-	44	STAGE 1
0010	130+50	-	157+60	IH 94 MEDIAN	16600	16600	-	10.5	299	448	-	93	STAGE 3
0010	158+90	-	189+80	IH 94 MEDIAN	16970	16970	-	10.7	306	458	-	95	STAGE 3
0010			PROJECT	IH 94	5320	3360	1960	3.4	97	143	720	32	UNDISTRIBUTED
				TOTAL 0010	58490	36930	21560	37	1055	1580	720	330	

INLET PROTECTION TYPE A

CATEGORY	STATION	LOCATION	628.7005 EACH	REMARKS
0010	171+51'WB'	IH 94 MEDIAN	1	59.1' RT
0010	183+84	IH 94 MEDIAN	1	EB CROSSOVER, 19.6' LT
		TOTAL 0010	2	

WATER

CATEGORY	STATION	TO	STATION	LOCATION	624.0100 MGAL	REMARKS
0010	137+08'WB'	-	179+59'WB'	94 WB	64	BASE / DUST CONTROL
0010	130+45	-	154+00	94 WB, WEST	36	BASE / DUST CONTROL
0010	165+08	-	189+42	95 WB, EAST	44	BASE / DUST CONTROL
0010	137+08'WB'	-	179+59'WB'	94 WB	8	BASE / DUST CONTROL
0010	130+45	-	144+00	94 MEDIAN	8	BASE / DUST CONTROL
0010	179+58	-	189+91	94 MEDIAN	10	BASE / DUST CONTROL
				TOTAL 0010	170	

TEMPORARY DITCH CHECKS

CATEGORY	STATION	TO	STATION	LOCATION	628.7504 LF	REMARKS
0010	132+00'WB EX'	-	190+00'WB EX'	IH 94 MEDIAN	1200	30 CHECKS AT 40 FT EACH
				TOTAL 0010	1200	

SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	REMARKS
0010	137+00'WB'	-	158+00'WB'	IH 94 WB, LT	2190	2190	STAGE 1
0010			PROJECT	IH 94	220	220	UNDISTRIBUTED
				TOTAL 0010	2410	2410	

TRACKING PADS

CATEGORY	STATION	LOCATION	628.7560 EACH	REMARKS
0010	PROJECT	IH 94	2	
		TOTAL 0010	2	

ROCK BAGS

CATEGORY	STATION	LOCATION	628.7570 EACH	REMARKS
0010	150+00'WB'	IH 94 WB	5	
0010	171+46'WB'	IH 94 WB	3	
		TOTAL 0010	8	

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DELINEATOR

CATEGORY	STATION	LOCATION	POSTS STEEL 633.0100 EACH	DELINEATOR RELECTORS 633.0500 EACH	DELINEATOR TEMPORARY 633.1100 EACH	REMARKS
0010	PROJECT	IH 94	6	6	-	
0010	PROJECT	IH 94 EB CROSSOVER	-	-	56	STAGE 1B
		TOTAL 0010	6	6	56	

SIGNING ITEMS

APPROX. STATION LOCATION	SIGN GROUP NUMBER	SIGN CODE	SIGN MESSAGE	SIGN SIZE W x H (INCHES)	POSTS WOOD 4x6-INCH x 14-FT 634.0614 EACH	MOVING SIGNS TYPE 11 4x6-INCH x 16-FT 638.2102 EACH	REMOVING SMALL SIGN SUPPORTS 638.3000 EACH	REMARKS
159+22'WB', LT	1-4	W5-52R	CLEARANCE STRIP DOWN LEFT	12 x 36	1	1	1	
159+22'WB', RT	1-5	W5-52L	CLEARANCE STRIP DOWN RIGHT	12 x 36	1	1	1	
159+44'WB', LT	1-6	M1-94	Hwy NN	66 x 21	2	1	1	
				SUBTOTAL 0010	4	3	3	

TRAFFIC CONTROL

CATEGORY	STATION	LOCATION	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643.0715 DAY	TRAFFIC CONTROL ARROW BOARDS 643.0800 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	TRAFFIC CONTROL COVERING SIGNS TYPE II 643.0920 EACH	CONTROL SIGNS PCMS WITH CELLULAR COMMUNICATIONS 643.1051 DAY	TRAFFIC CONTROL INTERIM LANE CLOSURE 643.4100.S EACH	REMARKS
0010	LANE CLOSURE	IH 94 WB	2280	-	-	750	60	-	-	-	-	STAGE 1A
0010	TRAFFIC SHIFT	IH 94 WB	3125	-	-	2250	250	-	-	-	-	STAGE 1B
0010	LANE CLOSURE / SHIFT	IH 94 WB/EB	9730	140	280	1750	140	-	-	-	40	STAGE 3
0010	LANE CLOSURE / SHIFT	IH 94 WB	-	620	930	-	-	-	-	-	-	STAGE 1A, 1B
0010	ADVANCE WARNING	IH 94 EB	-	-	-	-	-	3600	2	225	-	STAGE 1 & 3
0010	ADVANCE WARNING	IH 94 WB	-	-	-	-	-	3600	-	225	-	STAGE 1 & 3
0010	LANE CLOSURE	IH 94	-	-	-	-	-	420	-	-	40	STAGE 1
0010	ADVANCE WARNING/CLOSURE	CTH NN	-	480	960	-	-	2310	-	-	-	STAGE 1 & 3
		TOTAL 0010	15135	1240	2170	4750	450	9930	2	450	80	

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH 646.1040 LF	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH 646.1555 LF	TEMPORARY MARKING LINE PAINT 4-INCH 649.0105 LF	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH 649.0150 LF	TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE 1 649.0760 EACH	REMARKS
0010	137+09'WB'	-	179+58'WB'	IH 94 WB	8500	-	-	-	-	EDGELINE
0010	137+09'WB'	-	179+58'WB'	IH 94 WB	-	1075	-	-	-	CENTERLINE
0010			PROJECT	IH 94 WB	-	-	10800	2400	42	STAGE 1B
0010			PROJECT	IH 94 WB	-	-	8500	1000	-	STAGE 1C
				TOTAL 0010	8500	1075	19300	3400	42	

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GEOTEXTILE FABRIC TYPE R

CATEGORY	STATION	LOCATION	645.0130 SY	REMARKS
0010	171+46.3'WB', 61.1' LT	IH 94 WB	4	AEW
0010	150+00'WB', 85.6' LT	IH 94 WB	4	AEW
0010	157+20'WB', LT	IH 94 WB	8	FLUME
0010	157+20'WB', RT	IH 94 WB	8	FLUME
		TOTAL 0010	24	

CONSTRUCTION STAKING STORM SEWER

CATEGORY	STATION	LOCATION	650.4000 EACH	REMARKS
0010	150+00'WB'	IH 94 WB	1	
0010	171+51'WB'	IH 94 WB	1	
		TOTAL 0010	2	

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	CONSTRUCTION STAKING SUBGRADE 650.4500 LF	CONSTRUCTION STAKING BASE 650.5000 LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER 650.5500 LF	CONSTRUCTION STAKING CONCRETE PAVEMENT 650.7000 LF	CONSTRUCTION STAKING SLOPE STAKES 650.9920 LF	REMARKS
0010	137+08'WB'	-	157+44'WB'	IH 94 WB	2040	-	-	2040	2040	
0010	159+18'WB'	-	179+58'WB'	IH 94 WB	2040	-	-	2040	2040	
0010	130+45	-	154+00	94 WB, WEST	2355	2355	-	-	2355	TEMP WIDENING
0010	165+08	-	189+42	95 WB, EAST	2434	2434	-	-	2434	TEMP WIDENING
0010	157+04'WB'	-	157+44'WB'	IH 94 WB, LT	-	-	40	-	-	
0010	157+04'WB'	-	157+44'WB'	IH 94 WB, RT	-	-	40	-	-	
				TOTAL 0010	8869	4789	80	4080	8869	

SAWING ASPHALT

CATEGORY	STATION	TO	STATION	LOCATION	690.0150 LF	REMARKS
0010	131+36	-	151+64	IH 94 WB WIDENING	8	STAGE 1, WIDENING
0010	165+08	-	189+41	IH 94 WB WIDENING	8	STAGE 1, WIDENING
0010			134+58'WB EX'	IH 94 WB	10	STAGE 1, OUTSIDE SHLD
0010			182+08'WB EX'	IH 94 WB	10	STAGE 1, OUTSIDE SHLD
0010			137+08'WB'	IH 94 WB, RT	4	STAGE 1
0010			179+59'WB'	IH 94 WB, RT	4	STAGE 1
0010	130+45'WB EX'	-	157+44'WB EX'	IH 94 WB	2700	STAGE 3, SHLD
0010	134+00'EB EX'	-	143+80'EB EX'	IH 94 EB	980	STAGE 3, SHLD
0010	159+18'WB EX'	-	189+32'WB EX'	IH 94 WB	3015	STAGE 3, SHLD
0010	179+57'EB EX'	-	189+91'EB EX'	IH 94 EB	1035	STAGE 3, SHLD
				TOTAL 0010	7774	

SAWING CONCRETE

CATEGORY	STATION	LOCATION	690.0250 LF	REMARKS
0010	137+08'WB'	IH 94 WB	38	2-LANE
0010	179+58'WB'	IH 94 WB	38	2-LANE
		TOTAL 0010	76	

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CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	CLEARING 201.0105 STA	GRUBBING 201.0205 STA	REMARKS
0010	32+00'EB'	-	33+00'EB	IH 94 EB, RT	2	2	
0010	37+50'B'	-	45+50'B'	RAMP B, RT	8	8	
				TOTAL 0010	10	10	

REMOVING CONCRETE PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 SY	REMARKS
0010	24+50'EB'	-	41+98'EB'	IH 94 EB	4662	
0010	43+02'EB'	-	62+97'EB'	IH 94 EB	5320	
				TOTAL 0010	9982	

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	TO	STATION	LOCATION	203.0100 EACH	REMARKS
0010			33+00	IH 94 EB	1	36-INCH, CONCRETE PIPE, L = 72 FT
0010	39+25'EB'	-	42+00'EB'	IH 94 EB	1	24-INCH, METAL PIPE, L = 275 FT
0010			48+50'EB'	IH 94 EB	1	12-INCH, CONCRETE PIPE, L = 75 FT
0010			56+50'EB'	IH 94 EB	1	15-INCH, CONCRETE PIPE, L = 68 FT
0010			48+40'B'	RAMP B	1	30-INCH, METAL PIPE, L = 116 FT
				TOTAL 0010	5	

REMOVING CONCRETE SIDEWALK

CATEGORY	STATION	LOCATION	204.0155 SY	REMARKS
0010	52+00'B'	RAMP B	18	RAMP B MEDIAN ISLAND
		TOTAL 0010	18	

REMOVING FENCE

CATEGORY	STATION	TO	STATION	LOCATION	204.0170 LF	REMARKS
0010	24+50'EB'	-	51+43'EB'	IH 94 EB, RAMP B	2810	R/W FENCE
				TOTAL 0010	2810	

EARTHWORK SUMMARY TABLE

FILL FACTOR = 1.30

CATEGORY	STATION	TO	STATION	LOCATION	CUT VOLUME CY	(1) ASPHALT PAVEMENT CY	(1) CONCRETE PAVEMENT CY	(2) USEABLE MATERIAL CY	EXPANDED FILL CY	208.0100 BORROW CY	205.0100 EXCAVATION COMMON CY	(3) SUITABLE WASTE CY	(4) UNSUITABLE WASTE CY	209.0100 BACKFILL GRANULAR CY	(5) EXCAVATION BELOW SUBGRADE CY
010	57+10	-	70+85	IH 94 EB CROSSOVER, EAST	1594	381	0	1213	107	0	1594	1106	0	0	0
010	12+00	-	36+94	IH 94 EB CROSSOVER, WEST	4338	642	1084	2612	182	0	4338	2430	0	0	0
010	-2+22	-	12+00	IH 94 EB CROSSOVER, WEST	2581	579	0	2002	66	0	2581	1936	0	0	0
				STAGE 4 SUBTOTALS	8513	1602	1084	5827	355	0	8513	5472	0	0	0
010	24+50	-	63+00	IH 94 EB	27409	2508	4159	20742	3493	0	27409	17249	0	0	0
010	34+76	-	51+62	RAMP B	4834	518	0	4316	13096	8780	4834	0	0	0	0
				STAGE 5 SUBTOTALS	32243	3026	5243	25058	16589	8780	32243	17249	0	0	0
010	15+75	-	57+10	IH 94 MEDIAN, SHLD	10651	2002	468	8181	1687	0	10651	6494	0	0	0
010	57+10	-	70+84	IH 94 MEDIAN, SHLD	2315	656	0	1659	155	0	2315	1504	0	0	0
010	46+87	-	51+62	RAMP B	429	152	0	277	379	102	429	0	0	0	0
				STAGE 6 SUBTOTALS	13395	2810	468	10117	2221	102	13395	7998	0	0	0
				Total	54151	7438	6795	41002	19165	8882	54151	30719	0	0	0

(1) PAVEMENT (INCLUDES ASPHALT AND CONCRETE) IS INCLUDED IN THE QUANTITY OF EXCAVATION COMMON. PAVEMENT IS CONSIDERED SALVAGEABLE FOR OTHER PURPOSES AND IS NOT INCLUDED IN THE QUANTITIY OF USEABLE MATERIAL.
(2) USEABLE MATERIAL = EXCAVATION COMMON - EBS - PAVEMENT
(3) SUITABLE WASTE IS SURPLUS MATERIAL SUITABLE FOR USE AS FILL THAT IS BEYOND THE VOLUME NEEDED FOR THE PROJECT.
(4) UNSUITABLE WASTE = EBS
(5) EXCAVATION BELOW SUBGRADE IS NOT USED TO BALANCE EARTHWORK. QUANTITY IS INCLUDED AND PAID FOR IN THE ITEM OF EXCAVATION COMMON.

REMOVING INLETS

CATEGORY	STATION	LOCATION	204.0220 EACH	REMARKS
0010	39+50'EB'	IH 94 EB, LT	1	
0010	48+50'EB'	IH 94 EB	1	
0010	56+50'EB'	IH 94 EB	1	
0010	32+50'EB'	IH 94 EB	1	
		TOTAL 0010	4	

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REMOVING (CABLE BARRIER)

CATEGORY	STATION	TO	STATION	LOCATION	204.9090.S LF	REMARKS
0010	33+25'EB'	-	41+80'EB	IH 94 MEDIAN	855	
				TOTAL 0010	855	

PREPARE FOUNDATION FOR ASPHALTIC PAVING (1021-04-77)

CATEGORY	STATION	LOCATION	211.0100 LS	REMARKS
0010	52+00'B'	RAMP B	1	RAMP B MEDIAN ISLAND
		TOTAL 0010	1	

CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STATION	TO	STATION	LOCATION	415.0410 SY	REMARKS
0010	41+54'EB'	-	41+69'EB'	IH 94 EB	100	STAGE 5
0010	43+29'EB'	-	43+44'EB'	IH 94 EB	100	STAGE 5
				TOTAL 0010	200	

BASE AGGREGATE DENSE 3/4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 TON	REMARKS
0010	57+10	-	70+85	IH 94 EB CROSSOVER, EAST	60	STAGE 4
0010	12+00	-	36+94	IH 94 EB CROSSOVER, WEST	330	STAGE 4
0010	-2+22	-	12+00	IH 94 EB CROSSOVER, WEST	440	STAGE 4
0010	32+63'EB'	-	33+37'EB'	MAINTENANCE CROSSOVER	50	STAGE 5
0010	24+50'EB'	-	63+00'EB'	IH 94 EB	4600	STAGE 5
0010	34+76'B'	-	51+62'B'	RAMP B	4540	STAGE 5
0010	15+75	-	70+84	IH 94 MEDIAN/SHLD	4250	STAGE 6
				TOTAL 0010	14270	

DRILLED DOWEL BARS

CATEGORY	STATION	LOCATION	416.0620 EACH	REMARKS
0010	24+50'EB'	IH 94 EB	16	2 LANES
0010	62+97'EB'	IH 94 EB	16	2 LANES
		TOTAL 0010	32	

CONCRETE SURFACE DRAINS

CATEGORY	STATION	LOCATION	416.1010 CY	REMARKS
0010	43+53'EB', 28'LT	IH 94 EB	2	FLUME
0010	43+53'EB', 40'RT	IH 94 EB	2	FLUME
0010	43+55'B', 24'LT	RAMP B	2	FLUME
0010	43+55'B', 12'RT	RAMP B	2	FLUME
		TOTAL 0010	8	

CONCRETE SHOULDER RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	416.1110 LF	REMARKS
0010	24+50'EB'	-	41+54'EB'	IH 94 EB	1200	
0010	43+44'EB'	-	62+97'EB'	IH 94 EB	1950	
				TOTAL 0010	3150	

BASE AGGREGATE DENSE 1 1/4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	305.0120 TON	REMARKS
0010	57+10	-	70+85	IH 94 EB CROSSOVER, EAST	2480	STAGE 4
0010	12+00	-	36+94	IH 94 EB CROSSOVER, WEST	4630	STAGE 4
0010	-2+22	-	12+00	IH 94 EB CROSSOVER, WEST	2180	STAGE 4
0010	32+63'EB'	-	33+37'EB'	MAINTENANCE CROSSOVER	550	STAGE 5
0010	24+50'EB'	-	63+00'EB'	IH 94 EB	8170	STAGE 5
0010	34+76'B'	-	51+62'B'	RAMP B	3950	STAGE 5
				TOTAL 0010	21960	

ICE HOT WEATHER CONCRETING

CATEGORY	STATION	LOCATION	501.1000.S LB	REMARKS
0010	PROJECT	STRUCTURES	5680	
		TOTAL 0010	5680	

CONCRETE PAVEMENT 12-INCH

CATEGORY	STATION	TO	STATION	LOCATION	415.0120 SY	REMARKS
0010	24+50'EB'	-	41+54'EB'	IH 94 EB	4840	STAGE 5
0010	43+44'EB'	-	62+97'EB'	IH 94 EB	5650	STAGE 5
				TOTAL 0010	10490	

ASPHALTIC SHOULDER RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	465.0400 LF	REMARKS
0010	24+50'EB'	-	41+54'EB'	IH 94 EB, LT	1700	INSIDE SHLD
0010	43+44'EB'	-	62+97'EB'	IH 94 EB, LT	1950	INSIDE SHLD
				TOTAL 0010	3650	

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HMA PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	HMA COLD WEATHER PAVING 450.4000 TON	TACK COAT 455.0605 GAL	HMA PAVEMENT 3 MT 58-28S 460.6223 TON	HMA PAVEMENT 4 MT 58-28S 460.6224 TON	ASPHALTIC SURFACE PATCHING 465.0110 TON	ASPHALTIC SURFACE TEMPORARY 465.0125 TON	REMARKS
0010	24+50'EB'	-	41+54'EB'	IH 94 EB, LT	-	95	185	185	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	24+50'EB'	-	41+54'EB'	IH 94 EB, RT	-	105	205	205	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	43+44'EB'	-	62+97'EB'	IH 94 EB, LT	-	90	175	170	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	43+44'EB'	-	62+97'EB'	IH 94 EB, RT	-	135	260	260	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	35+39'B'	-	41+57'B'	RAMP B, RT	-	25	50	50	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	37+89'B'	-	41+57'B'	RAMP B, LT	-	15	30	30	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	43+46'B'	-	54+61'B'	RAMP B, RT	-	35	65	65	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	43+46'B'	-	54+61'B'	RAMP B, LT	-	20	35	35	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	34+76'B'	-	41+57'B'	RAMP B	-	120	280	115	-	-	5" LOWER LAYER/2" UPPER LAYER
0010	43+46'B'	-	54+61'B'	RAMP B	-	165	390	160	-	-	5" LOWER LAYER/2" UPPER LAYER
0010	-2+22	-	8+23	IH 94 WB	140	35	70	70	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	5+00	-	15+75	IH 94 EB	140	35	70	70	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	15+75	-	25+00	IH 94 EB	120	30	60	60	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	57+10	-	59+65	IH 94 WB	70	20	35	35	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	57+10	-	68+78	IH 94 WB	150	40	75	75	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	63+42	-	70+84	IH 94 EB	100	25	50	50	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	32+63'EB'	-	33+37'EB'	MAINTENANCE CROSSOVER	60	15	30	30	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	15+75	-	36+95	IH 94 EB CROSSOVER	-	390	-	-	-	2230	STAGE 4
0010	57+10	-	70+85	IH 94 EB CROSSOVER	-	230	-	-	-	1310	STAGE 4
0010			52+00'B'	RAMP B	-					10	RAMP B MEDIAN ISLAND
0010			PROJECT	IH 94	-	-	-	-	180	-	UNDISTRIBUTED
				TOTAL 0010	780	1625	2065	1665	180	3550	

TEMPORARY SHORING

CATEGORY	STATION	LOCATION	511.1100 SF	REMARKS
0010	32+50'EB'	IH 94 EB	250	STAGE 5 - CULVERT PIPE INSTALL
		TOTAL 0010	250	

CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J

CATEGORY	STATION	LOCATION	601.0576 LF	REMARKS
0010	52+00'B'	RAMP B	50	RAMP B MEDIAN ISLAND
		TOTAL 0010	50	

CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT

CATEGORY	STATION	TO	STATION	LOCATION	601.0590 LF	REMARKS
0010	43+29'EB'	-	43+69'EB'	IH 94 EB	40	
0010	43+29'EB',	-	43+69'EB',	IH 94 EB	40	
0010	43+31'B'	-	43+71'B'	RAMP B	40	
0010	43+31'B'	-	43+71'B'	RAMP B	40	
				TOTAL 0010	160	

CULVERT PIPE

CATEGORY	INLET STATION	INLET ELEVATION	OUTLET STATION	OUTLET ELEVATION	SLOPE %	LOCATION	APRON ENDWALLS FOR CULVERT PIPE 24-INCH 520.1024 EACH	APRON ENDWALLS FOR CULVERT PIPE 36-INCH 520.1036 EACH	CULVERT PIPE CLASS III-A NON-METAL 24-INCH 520.3424 LF	CULVERT PIPE CLASS III-B NON-METAL 36-INCH 520.3636 LF	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH 522.0124 LF	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH 522.1024 EACH	REMARKS
0010	32+50.3'EB', 50.9' RT	1129.12	32+49.1'EB', 36.5' LT	1125.99	3.6	IH 94 EB	-	-	-	-	88	1	
0010	39+49.6'EB', 35.6' LT	1111.93	41+87.6'EB', 34.3' LT	1109.55	1.0	IH 94 EB, LT	1	-	238	-	-	-	
0010	48+50'EB', 31.6' LT	1104.16	48+50'EB', 60.3' RT	1103.70	0.5	IH 94 EB	-	-	-	-	92	1	
0010	56+50'EB', 27.8' LT	1108.55	56+50'EB', 58.2' RT	1108.12	0.5	IH 94 EB	-	-	-	-	86	1	
0010	48+40'B', 84.9' LT	1103.70	48+40'B', 62.3' RT	1101.93	1.2	RAMP B	-	2	-	148	-	-	
						TOTAL 0010	1	2	238	148	266	3	

CONCRETE SIDEWALK 4-INCH

CATEGORY	STATION	LOCATION	602.0405 SF	REMARKS
0010	52+00'B'	RAMP B	160	RAMP B MEDIAN ISLAND
		TOTAL 0010	160	

RIPRAP LIGHT

CATEGORY	STATION	LOCATION	606.0100 CY	REMARKS
0010	43+53'EB', 28'LT	IH 94 EB	4	FLUME
0010	43+53'EB', 40'RT	IH 94 EB	4	FLUME
0010	43+55'B', 24'LT	RAMP B	4	FLUME
0010	43+55'B', 12'RT	RAMP B	4	FLUME
0010	32+50'EB'	IH 94 EB	2	
0010	41+88'EB'	IH 94 EB, LT	2	MEDIAN
0010	48+50'EB'	IH 94 EB	2	
0010	56+50'EB'	IH 94 EB	2	
0010	48+40'B'	RAMP B	2	
		TOTAL 0010	26	

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CONCRETE BARRIER

CATEGORY	STATION	TO	STATION	LOCATION	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED 603.8000 LF	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED 603.8125 LF	REMARKS
0010	-2+20	-	70+80	IH 94 WB	7300	7300	STAGE 4
0010	-2+20	-	70+80	IH 94 EB	7300	7300	STAGE 4
0010	21+00	-	70+80	IH 94 WB	-	4850	STAGE 5A
0010	24+00	-	52+00	RAMP B	-	2875	STAGE 5A
0010	24+00	-	52+00	RAMP B	-	2875	STAGE 5B
0010	15+00	-	70+80	IH 94 WB	-	5600	STAGE 6
				TOTAL 0010	14600	30800	

CABLE BARRIER

CATEGORY	STATION	TO	STATION	LOCATION	CABLE BARRIER TYPE 1 613.1100.S LF	CABLE BARRIER END TERMINAL TYPE 1 613.1200.S EACH	REMARKS
0010	8+25'WB'	-	32+50'WB'	IH 94 MEDIAN	2325	-	
0010	33+50'EB'	-	35+75'EB'	IH 94 MEDIAN	125	-	
0010			8+25'WB'	IH 94 MEDIAN	-	1	
0010			32+50'WB'	IH 94 MEDIAN	-	1	
0010			33+25'EB'	IH 94 MEDIAN	-	1	
0010			35+75'EB'	IH 94 MEDIAN	-	1	
				TOTAL 0010	2450	4	

INLET

CATEGORY	STATION	LOCATION	GRATE ELEVATION	DEPTH	INLET COVERS TYPE MS 611.0642 EACH	INLETS MEDIAN 1 GRATE 611.3901 EACH	INLETS MEDIAN 2 GRATE 611.3902 EACH	REMARKS
0010	32+50'EB'	IH 94 EB	1129.15	3.45	2	-	1	
0010	39+50'EB'	IH 94 EB, LT	1114.95	3.30	1	1	-	
0010	48+50'EB'	IH 94 EB	1107.15	3.30	1	1	-	
0010	56+50'EB'	IH 94 EB	1111.60	3.30	1	1	-	
		TOTAL 0010			5	3	1	

COVER PLATES TEMPORARY

CATEGORY	STATION	TO	STATION	LOCATION	611.8120.S EACH	REMARKS
0010	33+00'EB'	-	56+50'EB'	IH 94 MEDIAN	4	MEDIAN INLETS
				TOTAL 0010	4	

SALVAGED RAIL

CATEGORY	STATION	TO	STATION	LOCATION	614.0920 LF	REMARKS
0010	39+54'EB'	-	41+97'EB'	IH 94 EB	243	
0010	40+54'EB'	-	41+97'EB'	IH 94 EB	143	
				TOTAL 0010	386	

MGS GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	MGS GUARDRAIL 3 614.2300 LF	MGS THRIE BEAM TRANSITION 614.2500 LF	MGS GUARDRAIL TERMINAL EAT 614.2610 EACH	MGS GUARDRAIL TERMINAL TYPE 2 614.2620 EACH	REMARKS
0010	35+28'EB'	-	41+32'EB'	IH 94 EB, LT	600	-	-	-	
0010	39+57'B'	-	41+35'B'	RAMP B, RT	175	-	-	-	
0010	41+32'EB'	-	41+71'EB'	IH 94 EB, RT	-	40	-	-	
0010	41+32'EB'	-	41+71'EB'	IH 94 EB, LT	-	40	-	-	
0010	43+27'EB'	-	43+35'EB'	IH 94 EB, RT	-	8	-	-	
0010	43+27'EB'	-	43+35'EB'	IH 94 EB, LT	-	8	-	-	
0010	41+35'B'	-	41+73'B'	RAMP B, RT	-	40	-	-	
0010	41+35'B'	-	41+73'B'	RAMP B, LT	-	40	-	-	
0010	43+29'B'	-	43+37'B'	RAMP B, RT	-	8	-	-	
0010	43+29'B'	-	43+37'B'	RAMP B, LT	-	8	-	-	
0010	34+79'EB'	-	35+28'EB'	IH 94 EB, LT	-	-	1	-	
0010	39+04'B'	-	39+57'B'	RAMP B, RT	-	-	1	-	
0010			43+35'EB'	IH 94 EB, RT	-	-	-	1	
0010			43+35'EB'	IH 94 EB, LT	-	-	-	1	
0010			43+37'B'	RAMP B, RT	-	-	-	1	
0010			43+37'B'	RAMP B, LT	-	-	-	1	
				TOTAL 0010	775	192	2	4	

PIPE UNDERDRAIN UNPERFORATED 6-INCH

CATEGORY	STATION	LOCATION	612.0206 LF	REMARKS
0010	PROJECT	IH 94	200	AT STRUCTURES
		TOTAL 0010	200	

STEEL THRIE BEAM

CATEGORY	STATION	TO	STATION	LOCATION	STEEL THRIE BEAM BULLNOSE TERMINAL 614.0220 EACH	STEEL THRIE BEAM 614.0230 LF	REMARKS
0010	40+78'EB'	-	40+95'EB'	RAMP B GORE	1	-	
0010	40+95'EB'	-	41+32'E'B	IH 94 EB	-	37	
0010	40+94'B'	-	41+35'B'	RAMP B	-	41	
0010	51+27'EB'	-	53+21'EB'	IH 94 MEDIAN	2	175	
				TOTAL 0010	3	253	

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CRASH CUSHIONS TEMPORARY

CATEGORY	STATION	LOCATION	614.0905 EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
0010	-2+16'WB EX'	IH 94 EB	1	2	OM-3L	TL-3	UNIDIRECTIONAL	LT	END OF TEMP. BARRIER	STAGE 4A
0010	70+80'WB EX'	IH 94 WB	1	2	OM-3L	TL-3	UNIDIRECTIONAL	LT	END OF TEMP. BARRIER	STAGE 4A
0010	23+80'WB EX'	IH 94 EB	1	2	OM-3R	TL-3	UNIDIRECTIONAL	RT	END OF TEMP. BARRIER	STAGE 5A
0010	41+90'WB EX'	IH 94 EB	1	2	OM-3L	TL-3	UNIDIRECTIONAL	LT	END OF TEMP. BARRIER	STAGE 5A
0010	70+80'WB EX'	IH 94 WB	1	2	OM-3L	TL-3	UNIDIRECTIONAL	LT	END OF TEMP. BARRIER	STAGE 5A
0010	24+45'WB EX'	IH 94 EB	1	2	OM-3L	TL-3	UNIDIRECTIONAL	LT	END OF TEMP. BARRIER	STAGE 5B
		TOTAL 0010	6							

FENCE WOVEN WIRE (HEIGHT)

CATEGORY	STATION	TO	STATION	LOCATION	616.0100 LF	REMARKS
0010	24+50'EB'	-	51+43'EB'	IH 94 EB, RAMP B	2740	R/W FENCE
				TOTAL 0010	2740	

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RESTORATION

CATEGORY	STATION	TO	STATION	LOCATION	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	MAT CLASS 1 TYPE B 628.2004 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 30 630.0130 LB	SEEDING TEMPORARY 630.0200 LB	SEEDING BORROW PIT 630.0300 LB	SEED WATER 630.0500 MGAL	REMARKS
0010	24+50'EB'	-	42+00'EB'	IH 94 EB, RT & GORE	7450	7450	-	4.7	135	205	-	40	STAGE 3
0010	43+11'B'	-	51+62'B'	RAMP B, RT	4840	-	4840	3.0	90	130	-	30	STAGE 3
0010	15+76	-	70+80	IH 94 EB MEDIAN	22950	22950	-	14.4	415	620	-	130	STAGE 4
0010	15+75	-	42+40	IH 94 WB, MEDIAN DITCH	3525	-	3525	1.2	65	95	-	20	STAGE 4
0010	43+60	-	63+40	IH 94 WB, MEDIAN DITCH	2640	-	2640	1.7	50	75	-	15	STAGE 4
0010			PROJECT	IH 94	4140	3040	1100	3.0	75	115	560	24	UNDISTRIBUTED
				TOTAL 0010	45545	33440	12105	28	830	1240	560	259	

ROCK BAGS

CATEGORY	STATION	LOCATION	628.7570 EACH	REMARKS
0010	32+50'EB'	IH 94 EB	3	
0010	41+88'EB'	IH 94 EB, LT	3	MEDIAN
0010	48+50'EB'	IH 94 EB	3	
0010	56+50'EB'	IH 94 EB	3	
0010	48+40'B'	RAMP B	5	
		TOTAL 0010	17	

WATER

CATEGORY	STATION	TO	STATION	LOCATION	624.0100 MGAL	REMARKS
0010	57+10	-	70+85	IH 94 EB CROSSOVER, EAST	25	STAGE 4 - BASE/DUST
0010	12+00	-	36+94	IH 94 EB CROSSOVER, WEST	46	STAGE 4 - BASE/DUST
0010	-2+22	-	12+00	IH 94 EB CROSSOVER, WEST	22	STAGE 4 - BASE/DUST
0010	24+50	-	63+00	IH 94 EB	82	STAGE 5 - BASE/DUST
0010	34+76	-	51+62	RAMP B	40	STAGE 5 - BASE/DUST
				TOTAL 0010	215	

CONCRETE MEDIAN SLOPED NOSE

CATEGORY	STATION	LOCATION	620.0300 SF	REMARKS
0010	51+88'B'	RAMP B	14	RAMP B MEDIAN ISLAND
		TOTAL 0010	14	

TEMPORARY DITCH CHECKS

CATEGORY	STATION	TO	STATION	LOCATION	628.7504 LF	REMARKS
0010	43+25'EB'	-	57+75'EB'	IH 94 EB	240	GORE AREAS - 12 AT 20FT EACH
0010	16+00'WB EX'	-	63+50'WB EX'	IH 94	480	MEDIAN
				TOTAL 0010	720	

SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	REMARKS
0010	24+50'EB'	-	42+00'EB'	IH 94 EB, RT & GORE	1750	1750	STAGE 3
0010	43+11'B'	-	57+70'B'	RAMP B	885	885	STAGE 3
0010			PROJECT	IH 94	265	265	UNDISTRIBUTED
				TOTAL 0010	2900	2900	

MOBILIZATIONS

CATEGORY	STATION	LOCATION	MOBILIZATIONS EROSION CONTROL 628.1905 EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EACH	REMARKS
0010	PROJECT	IH 94	2	2	
		TOTAL 0010	2	2	

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INLET PROTECTION TYPE A

CATEGORY	TO STATION	LOCATION	628.7005 EACH	REMARKS
0010	32+50'EB'	IH 94 EB	1	
0010	39+50'EB'	IH 94 EB, LT	1	
0010	48+50'EB'	IH 94 EB	1	
0010	56+50'EB'	IH 94 EB	1	
		TOTAL 0010	4	

TRACKING PADS

CATEGORY	STATION	LOCATION	628.7560 EACH	REMARKS
0010	PROJECT	IH 94	4	UNDISTRIBUTED
		TOTAL 0010	4	

DELINEATOR

CATEGORY	STATION	TO STATION	LOCATION	DELINEATOR POSTS STEEL 633.0100 EACH	DELINEATOR REFLECTORS 633.0500 EACH	DELINEATOR TEMPORARY 633.1100 EACH	REMARKS
0010	24+50'EB'	- 34+76'EB'	IH 94 EB	3	3	-	EVERY 400'
0010	32+40'EB'	- 33+60'EB'	IH 94 MEDIAN	2	2	-	MAINTENANCE CROSSOVER
0010	34+76'B'	- 51+60'B'	RAMP B	16	16	-	EVERY 100'
0010	7+50	- 62+00	IH 94 EB	-	-	54	STAGE 4A
0010	14+00	- 71+00	IH 94 EB CROSSOVER	-	-	57	STAGE 5A,5B
0010	22+00'WB'	- 60+00'WB'	IH 94 WB	-	-	27	STAGE 5A,5B,6
			TOTAL 0010	21	21	138	

SIGNING ITEMS

CATEGORY	APPROX. STATION LOCATION	SIGN GROUP NUMBER	SIGN CODE	SIGN MESSAGE	SIGN SIZE W x H (INCHES)	SIGNS TYPE II 637.2230 REFLECTIVE F	POSTS WOOD 4x6-INCH x 14-FT 634.0614 EACH	POSTS WOOD 4x6-INCH x 16-FT 634.0616 EACH	MOVING SIGNS TYPE II 638.2102 EACH	REMOVING SMALL SIGN SUPPORTS 638.3 EACH	REMARKS
0010	26+74'EB', RT	1-4	D10-2	MILE 25	12 x 36	-	1	-	1	1	
0010	32+60'EB', LT	1-6	R3-4B	NO U TURN	36 x 48	-	1	-	1	1	
0010	33+35'EB', LT	1-7	R3-4B	NO U TURN	36 x 48	-	1	-	1	-	
0010	39+99'B', LT	2-1	E5-1A	EXIT 24	72 x 60	-	-	2	1	2	
0010	41+67'B', RT	2-2	W5-52R	CLEARANCE STRIP DOWN LEFT	12 x 36	3.00	1	-	-	-	
0010	41+67'B', LT	2-3	W5-52L	CLEARANCE STRIP DOWN RIGHT	12 x 36	3.00	1	-	-	-	
0010	41+64'EB', RT	2-4	W5-52R	CLEARANCE STRIP DOWN LEFT	12 x 36	-	1	-	1	1	
0010	41+64'EB', LT	2-5	W5-52L	CLEARANCE STRIP DOWN RIGHT	12 x 36	-	1	-	1	1	
0010	44+17'B', RT	2-6	R7-64	NO PARKING ON RAMP	48 x 30	-	1	-	1	1	
0010	45+90'B' RT	2-7	D1-3	WOODVILLE/SPRING VALLEY/EAU GALLE REC AREA	103x 42	-	-	2	1	2	
0010	45+90'B' RT	2-8	R5-1A	WONG WAY	36 x 24	-	1	-	-	-	SAME POST AS 2-7
0010	45+90'B' LT	2-9	R5-1A	WONG WAY	36 x 24	-	1	-	1	1	
0010	51+34 'B', LT	2-10	R5-1	DO NOT ENTER	30 x 30	-	1	-	1	1	
0010	51+99'B', RT	2-11	R1-1	STOP	30 X 30	-	1	-	1	1	
0010	51+99'B', RT	2-12	R6-3	DIVIDED HIGHWAY	30 X 24	-	-	-	1	-	SAME POST AS 2-11
0010	51+99'B', RT	2-13	R6-2L	ONE WAY	24 X 30	-	-	-	1	-	SAME POST AS 2-11
					SUBTOTAL 0010	6.00	12	4	13	12	

MARKERS CULVERT END

CATEGORY	STATION	LOCATION	633.5200 EACH	REMARKS
0010	32+50'EB'	IH 94 EB	1	
0010	41+88'EB'	IH 94 EB, LT	1	MEDIAN
0010	48+50'EB'	IH 94 EB	1	
0010	56+50'EB'	IH 94 EB	1	
0010	48+40'B'	RAMP B	2	
		TOTAL 0010	6	

SIGNS TYPE 1

CATEGORY	STATION	LOCATION	SIGN SUPPORTS STRUCTURAL STEEL HS 635.0200 LB	CONCRETE MASONRY ANCILLARY STRUCTURES TYPE NS 531.1100 CY	STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS 531.1140 LB	MOVING SIGNS TYPE 1 638.2101 EACH	REMOVING STRUCTURAL STEEL SIGN SUPPORTS 638.3100 EACH	REMARKS
0010	32+50'EB'	IH 94 EB	2133	4	540	-	-	SIGN 1-5
0010	38+87'B'	IH 94 EB	-	-	-	1	2	SIGN 1-5
		TOTAL 0010	2133	4	540	1	2	

TRAFFIC CONTROL

CATEGORY	STATION	LOCATION	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643.0715 DAY	TRAFFIC CONTROL ARROW BOARDS 643.0800 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	TRAFFIC CONTROL SIGNS PCMS WITH CELLULAR COMMUNICATIONS 643.1051 DAY	TRAFFIC CONTROL INTERIM LANE CLOSRE 643.4100.S EACH	REMARKS
0010	PROJECT	IH 94	540	-	-	-	60	360	60	-	STAGE 4A
0010	PROJECT	IH 94	4680	540	720	1620	180	2160	180	25	STAGE 5A
0010	PROJECT	IH 94	4840	330	220	1980	220	2200	220	25	STAGE 5B
0010	PROJECT	IH 94	5500	-	-	-	100	600	100	25	STAGE 6
		TOTAL 0010	15560	870	940	3600	560	5320	560	75	

GEOTEXTILE TYPE R

CATEGORY	STATION	LOCATION	645.0130 SY	REMARKS
0010	43+53'EB', 28'LT	IH 94 EB	8	FLUME
0010	43+53'EB', 40'RT	IH 94 EB	8	FLUME
0010	43+55'B', 24'LT	RAMP B	8	FLUME
0010	43+55'B', 12'RT	RAMP B	8	FLUME
0010	32+50'EB'	IH 94 EB	4	
0010	41+88'EB'	IH 94 EB, LT	4	MEDIAN
0010	48+50'EB'	IH 94 EB	4	
0010	56+50'EB'	IH 94 EB	4	
0010	48+40'B'	RAMP B	4	
		TOTAL 0010	52	

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	MARKING LINE GROOVED WET REF EPOXY 4-INCH 646.1040 LF	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH 646.1555 LF	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH 646.3555 LF	MARKING STOP LINE EPOXY 18-INCH 646.6120 LF	MARKING CHEVRON EPOXY 24-INCH 646.7220 LF	MARKING REMOVAL LINE WATER BLASTING 4-INCH 646.9010 LF	TEMPORARY MARKING LINE PAINT 4-INCH 649.0105 LF	TEMPORARY MARKING LINE EPOXY 4-INCH 649.0120 LF	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH 649.0150 LF	TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE 1 649.0760 EACH	REMARKS
0010	24+50'EB'	-	59+38'EB'	IH 94 EB, RT	3490	-	-	-	-	-	-	-	-	-	WHITE EDGELINE
0010	24+50'EB'	-	62+97'EB'	IH 94 EB, LT	3900	-	-	-	-	-	-	-	-	-	YELLOW EDGELINE
0010	31+76'B'	-	51+60'B'	RAMP B, RT	2025	-	-	-	-	-	-	-	-	-	WHITE EDGELINE
0010	39+75'B'	-	51+60'B'	RAMP B, LT	1200	-	-	-	-	-	-	-	-	-	YELLOW EDGELINE
0010	24+50'EB'	-	62+97'EB'	IH 94 EB	-	975	-	-	-	-	-	-	-	-	WHITE LANELINE
0010	36+40'EB'	-	39+78'EB'	IH 94 EB	-	-	650	-	-	-	-	-	-	-	RAMP GORE
0010	59+38'EB'	-	62+97'EB'	IH 94 EB	-	-	360	-	-	-	-	-	-	-	RAMP GORE
0010			52+00'B'	RAMP B	-	-	-	40	-	-	-	-	-	-	THRU & RT TURN STOP LINES
0010	36+40'EB'	-	39+78'EB'	IH 94 EB	-	-	-	-	180	-	-	-	-	-	RAMP GORE
0010	7+00	-	66+00	IH 94 EB	-	-	-	-	-	-	2900	-	-	-	CENTERLINE STAGE 4
0010	7+00	-	66+00	IH 94 EB	-	-	-	-	-	-	12400	-	-	-	EDGELINE STAGE 4
0010	8+23	-	63+50	IH 94 WB	-	-	-	-	-	22000	-	22000	-	-	EDGELINE STAGE 5A
0010	12+00	-	73+38	IH 94 EB	-	-	-	-	-	-	24000	-	-	-	EDGELINE STAGE 5A
0010	8+23	-	63+50	IH 94 WB	-	-	-	-	-	2750	-	2750	-	-	CENTERLINE STAGE 5A
0010	12+00	-	73+38	IH 94 EB	-	-	-	-	-	-	3000	-	-	-	CENTERLINE STAGE 5A
0010	23+81	-	46+00	IH 94 EB / RAMP B	-	-	-	-	-	-	4900	-	-	-	EDGELINE STAGE 5A
0010	46+87'B'	-	54+67'B'	RAMP B	-	-	-	-	-	-	960	-	-	-	EDGELINE STAGE 5B
0010	-2+20	-	70+80	IH 94 WB	-	-	-	-	-	-	-	-	600	-	STAGE 4 - LN CLOSURE
0010	7+00	-	66+00	IH 94 EB	-	-	-	-	-	-	-	-	600	-	STAGE 4 - LN CLOSURE
0010	8+23	-	63+50	IH 94 WB	-	-	-	-	-	-	-	-	600	-	STAGE 5 - LN CLOSURE
0010	12+00	-	73+38	IH 94 EB	-	-	-	-	-	-	-	-	600	-	STAGE 5 - LN CLOSURE
0010	8+23	-	63+50	IH 94 WB	-	-	-	-	-	-	-	-	1200	-	STAGE 6 - LN CLOSURE
0010	12+00	-	73+38	IH 94 EB	-	-	-	-	-	-	-	-	600	-	STAGE 6 - LN CLOSURE
0010	-2+20	-	70+80	IH 94	-	-	-	-	-	-	-	-	-	146	STAGE 4A & 6
0010	14+50	-	71+00	IH 94 EB CROSSOVER	-	-	-	-	-	-	-	-	-	56	STAGE 5A-5B
				TOTAL 0010	10615	975	1010	40	180	24750	48160	24750	4200	202	

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	CONSTRUCTION STAKING SUBGRADE 650.4500 LF	CONSTRUCTION STAKING BASE 650.5000 LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER 650.5500 LF	CONSTRUCTION STAKING CONCRETE PAVEMENT 650.7000 LF	CONSTRUCTION STAKING SLOPE STAKES 650.9920 LF	REMARKS
0010	24+50'EB'	-	62+97'EB'	IH 94 EB	3690	-	-	3690	3690	STAGE 5
0010	34+76'B'	-	51+62'B'	RAMP B	1530	-	-	-	1530	STAGE 5
0010	-2+22'WB'	-	36+94'WB'	IH 94 WB	-	3920	-	-	-	IH 94 EB CROSSOVER - STAGE 4
0010	57+10	-	70+84	IH 94 WB	-	1375	-	-	-	IH 94 EB CROSSOVER - STAGE 4
0010	34+76'B'	-	51+62'B'	RAMP B	-	1530	-	-	-	STAGE 5
0010	15+60'WB'	-	70+38'WB'	IH 94 WB	-	5480	-	-	-	IH 94 MEDIAN SHLD - STAGE 6
0010	46+87'B'	-	51+62'B'	RAMP B	-	475	-	-	-	RAMP B SHLD WIDENING - STAGE 6
0010			52+00'B'	RAMP B	-	-	50	-	-	RAMP B MEDIAN ISLAND
0010	43+29'EB'	-	43+69'EB'	IH 94 EB	-	-	40	-	-	
0010	43+29'EB',	-	43+69'EB',	IH 94 EB	-	-	40	-	-	
0010	43+31'B'	-	43+71'B'	RAMP B	-	-	40	-	-	
0010	43+31'B'	-	43+71'B'	RAMP B	-	-	40	-	-	
				TOTAL 0010	5220	12780	210	3690	5220	

SAWING CONCRETE

CATEGORY	STATION	LOCATION	690.0250 LF	REMARKS
0010	24+50'EB'	IH 94 EB	40	
0010	62+97'EB'	IH 94 EB	40	
0010	51+62'B'	RAMP B	33	
		TOTAL 0010	113	

SAWING ASPHALT

CATEGORY	STATION	LOCATION	690.0150 LF	REMARKS
0010	PROJECT	94 EB CROSSOVER	16	STAGE 4 - SHLD AT CROSSOVERS
0010	PROJECT	94 EB CROSSOVER	880	STAGE 6 - SHLD AT CROSSOVERS
0010	PROJECT	IH 94 WB	3660	STAGE 6 - SHLD AT TEMP WIDENING
		TOTAL 0010	4556	

CONSTRUCTION STAKING STORM SEWER

CATEGORY	STATION	LOCATION	650.4000 EACH	REMARKS
0010	32+50'EB'	IH 94 EB	1	
0010	41+88'EB'	IH 94 EB, LT	1	MEDIAN
0010	48+50'EB'	IH 94 EB	1	
0010	56+50'EB'	IH 94 EB	1	
0010	48+40'B'	RAMP B	1	
		TOTAL 0010	5	

TRAFFIC CONTROL VERTICAL PANELS

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0060.02 EACH	REMARKS
0010	21+00'WB EX'	-	70+00'WB EX'	IH 94 WB	50	STAGE 4B
0010	17+00'EB EX'	-	59+00'WB EX'	IH 94 EB	43	STAGE 4B
0010	65+00'EB EX'	-	70+00'EB EX'	IH 94 EB	6	STAGE 4B
				TOTAL 0010	99	

CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	CLEARING 201.0105 STA	GRUBBING 201.0205 STA	REMARKS
0010	8+00'WB'	-	40+00'WB'	IH 94 WB, LT	32	32	
0010	49+50'WB'	-	51+50'WB'	IH 94 WB, LT	2	2	
0010	40+00'A'	-	50+00'A'	RAMP A, LT	10	10	
				TOTAL 0010	44	44	

REMOVING FENCE

CATEGORY	STATION	TO	STATION	LOCATION	204.0170 LF	REMARKS
0010	8+23'WB'	-	51+90'WB'	IH 94 WB, RAMP A	4450	R/W FENCE
				TOTAL 0010	4450	

REMOVING INLETS

CATEGORY	STATION	LOCATION	204.0220 EACH	REMARKS
0010	10+00'WB'	IH 94 WB	1	MEDIAN
0010	17+00'WB'	IH 94 WB	1	MEDIAN
0010	25+03'WB'	IH 94 WB	1	MEDIAN
0010	39+72'WB'	IH 94 WB	1	MEDIAN
		TOTAL 0010	4	

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	LOCATION	203.0100 EACH	REMARKS
0010	11+00'WB'	IH 94 WB	1	12-INCH, METAL PIPE, L = 76 FT
0010	17+00'WB'	IH 94 WB	1	24-INCH, METAL PIPE, L = 76 FT
0010	25+00'WB'	IH 94 WB	1	12-INCH, CONCRETE PIPE, L = 76 FT
0010	33+00'WB'	IH 94 WB	1	36-INCH, CONCRETE PIPE, L = 90 FT
0010	47+75'A'	RAMP A	1	36x30-INCH, HORIZONTAL METAL PIPE, L = 105 FT
		TOTAL 0010	5	

REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	STATION	TO	STATION	LOCATION	204.0120 SY	REMARKS
0010	5+00	-	60+50	IH 94 EB OUTSIDE SHLD	2230	STAGE 1, FILL RUMBLES
0010			PROJECT	IH 94	2270	STAGE 2, FILL RUMBLES
				TOTAL 0010	4500	

EARTHWORK SUMMARY TABLE

FILL FACTOR = 1.30

CATEGORY	STATION	TO	STATION	LOCATION	CUT VOLUME CY	(1) ASPHALT PAVEMENT CY	(1) CONCRETE PAVEMENT CY	(2) USEABLE MATERIAL CY	EXPANDED FILL CY	208.0100 BORROW CY	312.0115 SELECT CRUSH MATERIAL CY	205.0100 EXCAVATION COMMON CY	(3) SUITABLE WASTE CY	(4) UNSUITABLE WASTE CY	(5) EXCAVATION BELOW SUBGRADE CY
010	0+00	-	71+08	IH 94 WB CROSSOVER	11857	576	0	10231	1820	-1050	1050	12907	8411	1050	1050
010	48+60	-	61+50	IH 94 EB WIDENING	1750	231	0	-2031	89	-1430	3550	5300	0	3550	3550
010	16+15	-	17+96	RAMP A, TEMP WIDENNING	98	25	0	73	6	0	0	98	67	0	0
				STAGE 1 SUBTOTALS	13705	832	0	8273	1915	-2480	4600	18305	8478	4600	4600
010	8+23	-	36+94	IH 94 WB	7854	596	1754	4964	15683	10179	540	8394	0	540	540
010	36+94	-	51+91	RAMP A	778	131	0	647	43794	43147	0	778	0	0	0
				STAGE 2 SUBTOTALS	8632	727	1754	5611	59477	53326	540	9172	0	540	540
010	36+94	-	57+10	IH 94 WB	22633	927	2221	19485	142	0	0	22633	19343	0	0
010	57+10	-	60+25	IH 94 WB, NE GORE	175	54	0	121	121	0	0	175	0	0	0
				STAGE 3 SUBTOTALS	22808	981	2221	19606	263	0	0	22808	19343	0	0
			Total		45145	2540	3975	33490	61655	50846	5140	50285	27821	5140	5140

(1) PAVEMENT (INCLUDES ASPHALT AND CONCRETE) IS INCLUDED IN THE QUANTITY OF EXCAVATION COMMON. PAVEMENT IS CONSIDERED SALVAGEABLE FOR OTHER PURPOSES AND IS NOT INCLUDED IN THE QUANTITIY OF USEABLE MATERIAL.
(2) USEABLE MATERIAL = EXCAVATION COMMON - EBS - PAVEMENT
(3) SUITABLE WASTE IS SURPLUS MATERIAL SUITABLE FOR USE AS FILL THAT IS BEYOND THE VOLUME NEEDED FOR THE PROJECT.
(4) UNSUITABLE WASTE = EBS
(5) EXCAVATION BELOW SUBGRADE IS NOT USED TO BALANCE EARTHWORK. QUANTITY IS INCLUDED AND PAID FOR IN THE ITEM OF EXCAVATION COMMON.

REMOVING CONCRETE PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 SY	REMARKS
0010	8+23'WB'	-	42+48'WB'	IH 94 WB	9135	
0010	43+52'WB'	-	57+10'WB'	IH 94 WB	3625	
				TOTAL 0010	12760	

REMOVING (CABLE BARRIER)

CATEGORY	STATION	TO	STATION	LOCATION	204.9090.S LF	REMARKS
0010	43+84	-	70+00	IH 94 WB	2620	
				TOTAL 0010	2620	

BASE AGGREGATE DENSE 3/4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 TON	REMARKS
0010	0+00	-	71+08	IH 94 WB CROSSOVER	170	STAGE 1
0010	48+60	-	61+50	IH 94 EB WIDENING	40	STAGE 1
0010	16+15	-	17+96	RAMP A, TEMP WIDENNING	20	STAGE 1
0010	8+23	-	36+94	IH 94 WB	1850	STAGE 2
0010	36+94	-	51+91	RAMP A	780	STAGE 2
0010	36+94	-	57+10	IH 94 WB	140	STAGE 3
0010	57+10	-	60+25	IH 94 WB, NE GORE	10	STAGE 3
				TOTAL 0010	3010	

BASE AGGREGATE DENSE 1 1/4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	305.0120 TON	REMARKS
0010	0+00	-	71+08	IH 94 WB CROSSOVER	14770	STAGE 1
0010	48+60	-	61+50	IH 94 EB WIDENING	1940	STAGE 1
0010	16+15	-	17+96	RAMP A, TEMP WIDENNING	200	STAGE 1
0010	8+23	-	36+94	IH 94 WB	5130	STAGE 2
0010	36+94	-	51+91	RAMP A	3560	STAGE 2
0010	36+94	-	57+10	IH 94 WB	7050	STAGE 3
0010	57+10	-	60+25	IH 94 WB, NE GORE	380	STAGE 3
				TOTAL 0010	33030	

CONCRETE SHOULDER RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	416.1110 LF	REMARKS
0010	8+23'WB'	-	36+60'WB'	IH 94 WB	2840	
0010	43+94'WB'	-	57+10'WB'	IH 94 WB	1320	
				TOTAL 0010	4160	

CONCRETE PAVEMENT 12-INCH

CATEGORY	STATION	TO	STATION	LOCATION	415.0120 SY	REMARKS
0010	8+23'WB'	-	42+04'WB'	IH 94 WB	11315	
0010	43+94'WB'	-	57+10'WB'	IH 94 WB	3790	
				TOTAL 0010	15105	

CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STATION	TO	STATION	LOCATION	415.0410 SY	REMARKS
0010	42+04'WB'	-	42+19'WB'	IH 94 WB	100	
0010	43+79'WB'	-	43+94'WB'	IH 94 WB	100	
0010	42+04'A'	-	42+24'A'	RAMP A	50	
0010	43+82'A'	-	43+91'A'	RAMP A	50	
				TOTAL 0010	300	

DRILLED DOWEL BARS

CATEGORY	STATION	LOCATION	416.0620 EACH	REMARKS
0010	8+23'WB'	IH 94 WB	16	2 LANES
0010	57+10'WB'	IH 94 WB	16	2 LANES
		TOTAL 0010	32	

CONCRETE SURFACE DRAINS

CATEGORY	STATION	LOCATION	416.1010 CY	REMARKS
0010	44+23'EB', 40' LT	IH 94 WB	2	
0010	44+23'EB', 28' RT	IH 94 WB	2	
0010	42+00'A', 12' LT	RAMP A	2	
0010	42+00'A', 24' RT	RAMP A	2	
		TOTAL 0010	8	

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ASPHALTIC SHOULDER RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	465.0400 LF	REMARKS
0010	8+23'WB'	-	36+60'WB'	IH 94 WB	2840	
0010	43+94'WB'	-	57+10'WB'	IH 94 WB	1320	
0010	-4+72'WB EX'	-	8+23'WB EX'	IH 94 WB	1440	
0010	66+20'WB EX'	-	71+28'WB EX'	IH 94 WB	565	
				TOTAL 0010	6165	

ICE HOT WEATHER CONCRETING

CATEGORY	STATION	LOCATION	501.1000.S LB	REMARKS
0010	PROJECT	STRUCTURES	6150	
		TOTAL 0010	6150	

HMA PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	TACK COAT 455.0605 GAL	HMA PAVEMENT 3 MT 58-28S 460.6223 TON	HMA PAVEMENT 4 MT 58-28S 460.6224 TON	ASPHALTIC SURFACE PATCHING 465.0110 TON	ASPHALTIC SURFACE TEMPORARY 465.0125 TON	REMARKS
0010	8+23'WB'	-	36+60'WB'	IH 94 WB, LT	120	540	270	-	-	4" LOWER LAYER/2" UPPER LAYER
0010	36+60'WB'	-	42+04'WB'	IH 94 WB, LT	25	100	50	-	-	4" LOWER LAYER/2" UPPER LAYER
0010	8+23'WB'	-	42+04'WB'	IH 94 WB, RT	120	275	275	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	43+94'WB'	-	57+10'WB'	IH 94 WB, LT	75	335	170	-	-	4" LOWER LAYER/2" UPPER LAYER
0010	43+94'WB'	-	57+10'WB'	IH 94 WB, RT	65	150	150	-	-	2" LOWER LAYER/2" UPPER LAYER
0011	36+60'A'	-	42+08'A'	RAMP A	45	265	105	-	-	5" LOWER LAYER/2" UPPER LAYER
0010	43+99'A'	-	51+89'A'	RAMP A	70	380	150	-	-	5" LOWER LAYER/2" UPPER LAYER
0010	36+60'A'	-	42+08'A'	RAMP A, LT	15	35	35	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	39+00'A'	-	42+08'A'	RAMP A, RT	10	20	20	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	43+99'A'	-	51+89'A'	RAMP A, LT	35	75	75	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	43+99'A'	-	51+89'A'	RAMP A, RT	15	40	40	-	-	2" LOWER LAYER/2" UPPER LAYER
0010	0+00	-	71+07	IH 94 WB CROSSOVER	1140	-	-	-	7865	STAGE 1
0010	48+59	-	61+48	IH 94 EB WIDENING	130	-	-	-	910	STAGE 1
0010	5+00	-	60+50	IH 94 EB OUTSIDE SHLD	110	-	-	-	255	STAGE 1, FILL RUMBLES
0010	16+15	-	17+96	RAMP A	10	-	-	-	70	STAGE 1
0010			PROJECT	IH 94	115	-	-	-	260	STAGE 2, FILL RUMBLES
0010	36+93'WB'	-	57+10'WB'	IH 94 WB SHLDS	435	-	-	-	3000	STAGE 3
0010	57+10	-	60+25	IH 94 WB SHLD	35	-	-	-	220	STAGE 3
0010			PROJECT	IH 94	-	-	-	575	-	UNDISTRIBUTED
				TOTAL 0010	2570	2215	1340	575	12580	

CULVERT PIPE

CATEGORY	INLET STATION	INLET ELEVATION	OUTLET STATION	OUTLET ELEVATION	SLOPE %	LOCATION	APRON ENDWALLS FOR CULVERT PIPE 36-INCH 520.1036 EACH	CULVERT PIPE TEMPORARY 18-INCH 520.2018 LF	CULVERT PIPE CLASS III-B NON-METAL 36-INCH 520.3636 LF	CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH 522.0118 LF	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH 522.0121 LF	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH 522.1024 LF	REMARKS
0010	7+25, 7.8'RT	1196.30	10+46, 33.3'LT	1194.70	0.5	IH 94 MEDIAN	-	320	-	1			
0010	11+75, 34.3' LT	1193.26	12+08.6, 22.7' LT	1189.67	10	IH 94 MEDIAN	-	38	-	1	-	-	
0010	12+12.6, 22.7' LT	1189.67	12+21.3, 22.6' LT	1189.07	6.3	IH 94 MEDIAN	-	8	-	-	-	-	
0010	18+75, 35.6' LT	1181.16	19+08, 24.9' LT	1177.00	11.6	IH 94 MEDIAN	-	38	-	1	-	-	
0010	19+12, 24.9' LT	1177.00	19+21.6, 25.4' LT	1176.50	6.3	IH 94 MEDIAN	-	8	-	-	-	-	
0010	51+25.9, 27.3'LT	1105.50	51+34.6, 27.5' LT	1106.00	6.3	IH 94 MEDIAN	-	8	-	-	-	-	
0010	51+38.6, 27.5' LT	1106.00	51+75, 32.8' LT	1108.50	6.9	IH 94 MEDIAN	-	38	-	1	-	-	
0010	59+27.7, 25' LT	1110.50	59+36.4, 24.1' LT	1111.00	6.3	IH 94 MEDIAN	-	8	-	-	-	-	
0010	59+40.4, 24.1' LT	1111.00	59+98, 6.6' RT	1112.92	1.2	IH 94 MEDIAN	-	160	-	-	-	-	
0010	10+00'WB', 25.3' RT	1189.66	10+00'WB',55.2' LT	1189.26	0.5	IH 94 WB	-	-	-	-	80	1	
0010	17+00'WB', 31.5' RT	1175.50	17+00'WB', 63.4' LT	1175.03	0.5	IH 94 WB	-	-	-	-	95	1	
0010	25+00'WB', 29.8' RT	1152.50	25+00'WB', 72.8' LT	1150.44	2.0	IH 94 WB	-	-	-	-	103	1	
0010	33+00'WB', 36.5' RT	1125.98	33+00'WB', 81.5' LT	1124.71	1.0	IH 94 WB	-	-	-	-	127	1	
0010	45+90.4'A', 66.8' RT	1106.50'	45+64.3'A', 48.4' LT	1105.50	0.8	RAMP A	2	-	118	-	-	-	
						TOTAL 0010	2	626	118	4	405	4	

TEMPORARY SHORING

CATEGORY	STATION	LOCATION	511.1100 SF	REMARKS
0010	33+00'WB'	IH 94 WB	250	STAGE 2 - CULVERT PIPE INSTALL
		TOTAL 0010	250	

CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT

CATEGORY	STATION	TO	STATION	LOCATION	601.0590 LF	REMARKS
0010	47+79'WB'	-	44+39'WB'	IH 94 WB, LT	60	
0010	47+79'WB'	-	44+39'WB'	IH 94 WB, RT	60	
0010	41+83'A'	-	42+23'A'	RAMP A, LT	40	
0010	41+83'A'	-	42+23'A'	RAMP A, RT	40	
				TOTAL 0010	200	

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CONCRETE BARRIER

CATEGORY	STATION	TO	STATION	LOCATION	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED 603.8000 LF	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED 603.8125 LF	ACHORING CONCRETE BARRIER TEMPORARY PRECAST 603.8500 LF	ACHORING CONCRETE BARRIER TEMPORARY PRECAST ON BRIDGE DECKS 603.8505 LF	REMARKS
0010	4+00	-	54+00	IH 94 WB & ON RAMP	4700	4700	4700	-	STAGE 2
0010	3+68	-	15+75	ON RAMP GORE	350	350	350	-	STAGE 2
0010	00+00	-	71+00	IH 94 WB CROSS OVER	9400	9400	6800	105	STAGE 2
0010	35+25	-	40+95	IH 94 WB CROSS OVER	-	570	-	-	STAGE 3
				TOTAL 0010	14450	15020	11850	105	

RIPRAP LIGHT

CATEGORY	STATION	LOCATION	606.0100 CY	REMARKS
0010	44+23'EB', LT	IH 94 WB	4	AT FLUME
0010	44+23'EB', RT	IH 94 WB	4	AT FLUME
0010	42+00'A', LT	RAMP A	4	AT FLUME
0010	42+00'A','RT	RAMP A	4	AT FLUME
0010	11+00'WB', 53' LT	IH 94 WB	2	AT AEW
0010	17+00'WB', 64' LT	IH 94 WB	2	AT AEW
0010	25+00'WB', 73' LT	IH 94 WB	2	AT AEW
0010	33+00'WB', 82' LT	IH 94 WB	2	AT AEW
0010	45+64.3'A', 49' LT	RAMP A	2	AT AEW
		TOTAL 0010	16	

PIPE UNDERDRAIN UNPERFORATED 6-INCH

CATEGORY	STATION	LOCATION	612.0206 LF	REMARKS
0010	PROJECT	IH 94	200	AT STRUCTURES
		TOTAL 0010	200	

CABLE BARRIER

CATEGORY	STATION	TO	STATION	LOCATION	CABLE BARRIER TYPE 1 613.1100.S LF	CABLE BARRIER END TERMINAL TYPE 1 613.1200.S EACH	REMARKS
0010	49+75	-	70+00	IH 94 WB	1925	-	
0010			49+75	IH 94 WB	-	1	
0010			70+00	IH 94 WB	-	1	
				TOTAL 0010	1925	2	

COVER PLATES TEMPORARY

CATEGORY	STATION	TO	STATION	LOCATION	611.8120.S EACH	REMARKS
0010	10+00	-	25+00	IH 94 MEDIAN	3	MEDIAN INLETS
				TOTAL 0010	3	

ADJUSTING INLET COVERS

CATEGORY	STATION	LOCATION	611.8115 EACH	REMARKS
0010	41+96, 21.4'LT	IH 94 MEDIAN	1	STAGE 1 - MATCH TEMP ROADWAY
		TOTAL 0010	1	

INLET

CATEGORY	STATION	LOCATION	GRATE ELEVATION	DEPTH	INLET COVERS TYPE MS 611.0642 EACH	INLETS MEDIAN 1 GRATE 611.3901 EACH	REMARKS
0010	10+00'WB'	IH 94 WB	1192.95	3.50	1	1	25.4' RT
0010	17+00'WB'	IH 94 WB	1178.75	3.50	1	1	31.5' RT
0010	25+00'WB'	IH 94 WB	1155.75	3.60	1	1	29.8' RT
		TOTAL 0010			3	3	

RECONSTRUCTING INLETS

CATEGORY	STATION	LOCATION	EXIST GRATE ELEVATION	EXIST DEPTH	611.0430 EACH	REMARKS
0010	12+22.3, 22.6' LT	IH 94 MEDIAN	1191.17	2.10	1	
0010	19+22.6, 25.4' LT	IH 94 MEDIAN	1178.90	2.90	1	
0010	51+23.9, 27.3' LT	IH 94 MEDIAN	1107.92	2.50	1	
0010	59+25.7, 25.0' LT	IH 94 MEDIAN	1112.17	1.70	1	
		TOTAL 0010			4	

MGS GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	MGS GUARDRAIL 3 614.2300 LF	MGS THRIE BEAM TRANSITION 614.2500 LF	MGS GUARDRAIL TERMINAL EAT 614.2610 EACH	MGS GUARDRAIL TERMINAL TYPE 2 614.2620 EACH	REMARKS
0010	44+17'WB'	-	46+16'WB'	IH 94 WB, LT	200	-	-	-	
0010	44+17'WB'	-	50+15'WB'	IH 94 WB, RT	600	-	-	-	
0010	44+22'A'	-	45+20'A'	RAMP A, RT	100	-	-	-	
0010	44+22'A'	-	46+46'A'	RAMP A, LT	225	-	-	-	
0010	42+14'WB'	-	42+22'WB'	IH 94 WB, LT	-	8	-	-	
0010	42+14'WB'	-	42+22'WB'	IH 94 WB, RT	-	8	-	-	
0010	43+77'WB'	-	44+17'WB'	IH 94 WB, LT	-	40	-	-	
0010	43+77'WB'	-	44+17'WB'	IH 94 WB, RT	-	40	-	-	
0010	42+18'A'	-	42+26'A'	RAMP A, RT	-	8	-	-	
0010	42+18'A'	-	42+26'A'	RAMP A, LT	-	8	-	-	
0010	43+82'A'	-	44+22'A'	RAMP A, RT	-	40	-	-	
0010	43+82'A'	-	44+22'A'	RAMP A, LT	-	40	-	-	
0010	46+16'WB'	-	46+69'WB'	IH 94 WB, LT	-	-	1	-	
0010	50+16'WB'	-	50+69'WB'	IH 94 WB, RT	-	-	1	-	
0010	45+20'A'	-	45+73'A'	RAMP A, RT	-	-	1	-	
0010	46+46'A'	-	46+98'A'	RAMP A, LT	-	-	1	-	
0010			42+00'WB'	IH 94 WB, LT	-	-	-	1	
0010			42+00'WB'	IH 94 WB, RT	-	-	-	1	
0010			42+03'A'	RAMP A, RT	-	-	-	1	
0010			42+03'A'	RAMP A, LT	-	-	-	1	
				TOTAL 0010	1125	192	4	4	

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COVER PLATES TEMPORARY

CATEGORY	STATION	TO	STATION	LOCATION	611.8120.S EACH	REMARKS
0010	10+00	-	25+00	IH 94 MEDIAN	3	MEDIAN INLETS
				TOTAL 0010	3	

CRASH CUSHIONS TEMPORARY

CATEGORY	STATION	LOCATION	614.0905 EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
0010	64+20	IH 94 WB	1	2	OM-3R	TL-3	UNIDIRECTIONAL	RT	END OF TEMP. BARRIER	STAGE 2-3
0010	71+07	IH 94 WB	1	2	OM-3L	TL-3	UNIDIRECTIONAL	LT	END OF TEMP. BARRIER	STAGE 2-3
		TOTAL 0010	2							

SALVAGED RAIL

CATEGORY	STATION	TO	STATION	LOCATION	614.0920 LF	REMARKS
0010	43+54'WB'	-	46+22'WB'	IH 94 WB, RT	270	
0010	43+54'WB'	-	44+83'WB'	IH 94 WB, LT	130	
0010			43+57'WB'	MEDIAN	30	
0010	51+74'WB'	-	53+67'WB'	MEDIAN	410	
				TOTAL 0010	840	

RESTORATION

CATEGORY	STATION	TO	STATION	LOCATION	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	EROSION MAT CLASS 1 TYPE B 628.2002 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 30 630.0130 LB	SEEDING TEMPORARY 630.0200 LB	SEEDING BORROW PIT 630.0300 LB	SEED WATER 630.0500 MGAL	REMARKS
0010	8+23'WB'	-	42+28'WB'	IH 94 WB	14370	14370	-	9.1	260	390	-	80	STAGE 1
0010	49+50'A'	-	52+40'A'	RAMP A, RT	1215	1215	-	0.8	25	35	-	7	STAGE 1
0010	43+64'A'	-	51+92'A'	RAMP A, LT	4855	-	4855	3.1	90	130	-	27	STAGE 1
0010	43+64'A'	-	49+50'A'	RAMP A, RT	3100	-	3100	2.0	55	85	-	17	STAGE 1
0010	0+00	-	71+00	IH 94 WB CROSSOVER	5250	-	5250	3.3	-	140	-	30	STAGE 1
0010	49+00	-	62+00	IH 94 EB WIDENING	1330	-	1330	0.8	-	35	-	8	STAGE 1
0010	-2+00'WB EX'	-	71+00'WB EX'	IH 94 MEDIAN	15700	7350	8350	9.9	-	420	-	88	STAGE 2
0010	41+00'WB EX'	-	60+00'WB EX'	IH 94 WB	8410	6560	1850	5.3	150	230	-	47	STAGE 2
0010			PROJECT	IH 94	5425	2950	2475	3.7	60	145	735	31	UNDISTRIBUTED
				TOTAL 0010	59655	32445	27210	38	640	1610	735	335	

FENCE WOVEN WIRE (HEIGHT)

CATEGORY	STATION	TO	STATION	LOCATION	616.0100 LF	REMARKS
0010	8+23'WB'	-	51+83'WB'	IH 94 WB / RAMP A	4390	R/W FENCE
				TOTAL 0010	4390	

WATER

CATEGORY	STATION	TO	STATION	LOCATION	624.0100 MGAL	REMARKS
0010	0+00	-	71+08	IH 94 WB CROSSOVER	148	STAGE 1 - BASE AGG/DUST CONTROL
0010	48+60	-	61+50	IH 94 EB WIDENING	20	STAGE 1 - BASE AGG/DUST CONTROL
0010	16+15	-	17+96	RAMP A, TEMP WIDENNING	2	STAGE 1 - BASE AGG/DUST CONTROL
0010	8+23	-	36+94	IH 94 WB	52	STAGE 2 - BASE AGG/DUST CONTROL
0010	36+94	-	51+91	RAMP A	36	STAGE 2 - BASE AGG/DUST CONTROL
0010	36+94	-	57+10	IH 94 WB	71	STAGE 3 - BASE AGG/DUST CONTROL
0010	57+10	-	60+25	IH 94 WB, NE GORE	4	STAGE 3 - BASE AGG/DUST CONTROL
				TOTAL 0010	333	

SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	REMARKS
0010	8+23'WB'	-	42+28'WB'	IH 94 WB	3460	3460	STAGE 1
0010	43+64'A'	-	51+92'A'	RAMP A, LT	890	890	STAGE 1
0010			PROJECT	IH 94	435	435	UNDISTRIBUTED
				TOTAL 0010	4785	4785	

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MOBILIZATIONS

CATEGORY	STATION	LOCATION	MOBILIZATIONS EROSION CONTROL 628.1905 EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EACH	REMARKS
0010	PROJECT	IH 94	2	2	
		TOTAL 0010	2	2	

TRACKING PADS

CATEGORY	STATION	LOCATION	628.7560 EACH	REMARKS
0010	PROJECT	IH 94	4	UNDISTRIBUTED
		TOTAL 0010	4	

INLET PROTECTION TYPE A

CATEGORY	STATION	LOCATION	628.7005 EACH	REMARKS
0010	11+00'WB', 26' RT	IH 94 WB	1	
0010	17+00'WB', 32' RT	IH 94 WB	1	
0010	25+00'WB', 30' RT	IH 94 WB	1	
		TOTAL 0010	3	

ROCK BAGS

CATEGORY	STATION	LOCATION	628.7570 EACH	REMARKS
0010	11+00'WB'	IH 94 WB	3	52.8' LT
0010	17+00'WB'	IH 94 WB	3	63.4' LT
0010	25+00'WB'	IH 94 WB	3	72.8' LT
0010	33+00'WB'	IH 94 WB	3	81.5' LT
0010	45+64.3'A'	RAMP A	5	48.4' LT
		TOTAL 0010	17	

DELINEATOR

CATEGORY	STATION	TO	STATION	LOCATION	DELINEATOR POSTS STEEL 633.0100 EACH	DELINEATOR REFLECTORS 633.0500 EACH	DELINEATOR TEMPORARY 633.1100 EACH	REMARKS
0010	8+23'WB'	-	25+10'WB'	IH 94 WB	5	5	-	EVERY 400'
0010	25+10'A'	-	52+00'A'	RAMP A	27	27	-	EVERY 100'
0010	7+50'EB'	-	62+00'EB'	IH 94 EB	-	-	54	STAGE 2-3
				TOTAL 0010	32	32	54	

GEOTEXTILE TYPE R

CATEGORY	TO	STATION	LOCATION	645.0130 SY	REMARKS
0010		44+23'EB', LT	IH 94 WB	10	AT FLUME
0010		44+23'EB', RT	IH 94 WB	10	AT FLUME
0010		42+00'A', LT	RAMP A	10	AT FLUME
0010		42+00'A',' RT	RAMP A	10	AT FLUME
0010		11+00'WB', 53' LT	IH 94 WB	8	AT AEW
0010		17+00'WB', 64' LT	IH 94 WB	8	AT AEW
0010		25+00'WB', 73' LT	IH 94 WB	8	AT AEW
0010		33+00'WB', 82' LT	IH 94 WB	8	AT AEW
0010		45+64.3'A', 49' LT	RAMP A	8	AT AEW
			TOTAL 0010	40	

MARKERS CULVERT END

CATEGORY	STATION	LOCATION	633.5200 EACH	REMARKS
0010	11+00'WB'	IH 94 WB	1	52.8' LT
0010	17+00'WB'	IH 94 WB	1	63.4' LT
0010	25+00'WB'	IH 94 WB	1	72.8' LT
0010	33+00'WB'	IH 94 WB	1	81.5' LT
0010	45+64.3'A'	RAMP A	1	48.4' LT
0010	45+89.9'A'	RAMP A	1	66.8' RT
		TOTAL 0010	6	

SIGNING ITEMS

CATEGORY	APPROX. STATION LOCATION	SIGN GROUP NUMBER	SIGN CODE	SIGN MESSAGE	SIGN SIZE W x H (INCHES)	SIGNS TYPE II 637.2230 REFLECTIVE F	POSTS WOOD 4x6-INCH x 14-FT 634.0614 EACH	POSTS WOOD 4x6-INCH x 16-FT 634.0616 EACH	MOVING SIGNS TYPE II 638.2102 EACH	REMOVING SMALL SIGN SUPPORTS 638.3000 EACH	REMARKS
0010	11+00'WB'	1-1	R2-1	SPEED LIMIT 70	48 x 60	-	-	2	1	2	
0010	21+1'WB'	1-2	J4-1	WEST I94	36 x 54	-	1	-	1	1	
0010	27+21'WB'	1-3	D10-2	MILE 25	12 x 36	-	1	-	1	1	
0010	43+84'WB'	2-14	W5-52L	CLEARANCE STRIP DOWN RIGHT	12 x 36	-	-	-	1	1	
0010	43+84'WB'	2-15	W5-52R	CLEARANCE STRIP DOWN LEFT	12 x 36	-	1	-	1	1	
0010	43+89'A'	2-16	W5-52L	CLEARANCE STRIP DOWN RIGHT	12 x 36	3.00	1	-	-	-	
0010	43+89'A'	2-17	W5-52R	CLEARANCE STRIP DOWN LEFT	12 x 36	3.00	1	-	-	-	
0010	45+00'WB	2-18	W4-1R	MERGE	36 x 36	-	1	-	1	1	
0010	48+26'A'	2-19	R7-64	NO PARKING ON RAMP	48 x 30	-	1	-	1	1	
0010	50+30'A'	2-20	R5-57	PEDESTRIANS BICYCLES	36 x 36	-	1	-	1	1	
					SUBTOTAL 0010	6.00	8	2	8	9	

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TRAFFIC CONTROL

CATEGORY	STATION	LOCATION	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643.0715 DAY	TRAFFIC CONTROL ARROW BOARDS 643.0800 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	TRAFFIC CONTROL SIGNS PCMS WITH CELLULAR COMMUNICATIONS 643.1051 DAY	TRAFFIC CONTROL INTERIM LANE CLOSURE 643.4100.S EACH	REMARKS
0010	LANE CLOSURE	IH 94	12220	-	-	1690	260	-	-	-	STAGE 1
0010	LANE/ROAD CLOSURE	IH 94 WB	1000	1200	1200	1000	-	-	-	-	STAGE 2
0010	LANE CLOSURE	RAMP A	3300	-	-	-	-	-	-	-	STAGE 3
0010	LANE/ROAD CLOSURE	IH 94 WB	-	800	1200	-	-	-	-	-	STAGE 3
0010	CLOSURES/ADVANCE WARNING	IH 94	-	-	-	-	-	5300	530	25	STAGE 1-3
		TOTAL 0010	16520	2000	2400	2690	260	5300	530	25	

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	MARKING LINE GROOVED WET REF EPOXY 4-INCH 646.1040 LF	COLD WEATHER MARKING EPOXY 4-INCH 646.6464 LF	LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH 646.1555 LF	LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH 646.3555 LF	TEMPORARY MARKING LINE PAINT 4-INCH 649.0105 LF	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH 649.0150 LF	TEMPORARY MARKING RAISED PAVEMENT MARKING TYPE 1 649.0760 EACH	REMARKS
0010	8+23'WB'	-	35+60'WB'	IH 94 WB, LT	2740	-	-	-	-	-	-	WHITE EDGELINE
0010	40+40'WB'	-	57+10'WB'	IH 94 WB, LT	1670	-	-	-	-	-	-	WHITE EDGELINE
0010	8+23'WB'	-	57+10'WB'	IH 94 WB, RT	4890	4890	-	-	-	-	-	YELLOW EDGELINE
0010	35+60'A'	-	51+97'A'	RAMP A, LT	1640	-	-	-	-	-	-	WHITE EDGELINE
0010	40+40'A'	-	51+97'A'	RAMP A, RT	1160	-	-	-	-	-	-	YELLOW EDGELINE
0010	8+23'WB'	-	57+10'WB'	IH 94 WB, RT	-	-	1225	-	-	-	-	WHITE LANE LINE
0010	35+60'WB'	-	40+40'WB'	IH 94 WB & RAMP A	-	-	-	960	-	-	-	WHITE GORE
0010	26+90'WB'	-	35+60'WB'	IH 94 WB & RAMP A	-	-	-	291	-	-	-	WHITE 3' LINE, 9' GAP
0010	0+00	-	71+07	IH 94 WB	-	-	-	-	12860	-	-	EDGELINE, STAGE 2
0010	0+00	-	71+07	IH 94 WB	-	-	-	-	1550	-	-	CENTERLINE, STAGE 2
0010	0+00	-	18+00	RAMP A	-	-	-	-	3600	-	-	EDGELINE, STAGE 2
0010	7+00	-	66+00	IH 94 EB	-	-	-	-	2900	-	-	CENTERLINE, STAGE 2
0010	7+00	-	66+00	IH 94 EB	-	-	-	-	12400	-	-	EDGELINE, STAGE 2
0010	-4+75	-	0+25	IH 94 EB	-	-	-	-	-	550	-	STAGE 1
0010	73+75	-	81+25	IH 94 WB	-	-	-	-	-	750	-	STAGE 1
0010	0+00	-	6+46	IH 94 WB CROSSOVER	-	-	-	-	-	1555	-	STAGE 2
0010	63+97	-	71+07	IH 94 WB CROSSOVER	-	-	-	-	-	2110	-	STAGE 2
0010	1+75	-	4+00	IH 94 WB	-	-	-	-	-	230	-	STAGE 3
0010	21+50	-	25+25	IH 94 WB	-	-	-	-	-	360	-	STAGE 3
0010	35+25	-	38+25	IH 94 WB	-	-	-	-	-	300	-	STAGE 3
0010	7+50'EB'	-	65+50'EB'	IH 94 EB	-	-	-	-	-	-	58	STAGE 2-3
				TOTAL 0010	12100	4890	1225	1251	33310	5855	58	

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CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	CONSTRUCTION STAKING SUBGRADE 650.4500 LF	CONSTRUCTION STAKING BASE 650.5000 LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER 650.5500 LF	CONSTRUCTION STAKING CONCRETE PAVEMENT 650.7000 LF	CONSTRUCTION STAKING SLOPE STAKES 650.9920 LF	REMARKS
0010	0+00	-	71+07	IH 94 WB CROSSOVER	7110	7110	-	-	7110	STAGE 1
0010	48+59'EB'	-	61+50'EB'	IH 94 EB	1300	1300	-	-	1300	STAGE 1 - WIDENING
0010	16+15	-	17+96	RAMP A, TEMP WIDENNING	-	180	-	-	180	STAGE 1
0010	8+23	-	36+94	IH 94 WB	-	2870	-	-	2870	STAGE 2
0010	36+94	-	51+91	RAMP A	-	1340	-	-	1340	STAGE 2
0010	36+94	-	57+10	IH 94 WB	-	1860	-	-	1860	STAGE 3
0010	57+10	-	60+25	IH 94 WB, NE GORE	-	315	-	-	315	STAGE 3
0010	8+23'WB'	-	42+19'WB'	IH 94 WB	-	-	-	3395	-	STAGE 2
0010	43+79'WB'	-	57+10'WB'	IH 94 WB	-	-	-	1330	-	STAGE 2
0010	42+04'A'	-	42+24'A'	RAMP A	-	-	-	20	-	STAGE 2
0010	43+82'A'	-	43+91'A'	RAMP A	-	-	-	20	-	STAGE 2
0010	47+79'WB'	-	44+39'WB'	IH 94 WB, LT	-	-	60	-	-	
0010	47+79'WB'	-	44+39'WB'	IH 94 WB, RT	-	-	60	-	-	
0010	41+83'A'	-	42+23'A'	RAMP A, LT	-	-	40	-	-	
0010	41+83'A'	-	42+23'A'	RAMP A, RT	-	-	40	-	-	
				TOTAL 0010	8410	14975	200	4765	14975	

CONSTRUCTION STAKING STORM SEWER

CATEGORY	STATION	LOCATION	650.4000 EACH	REMARKS
0010	11+00'WB', 25.4' RT	IH 94 WB	1	
0010	17+00'WB', 31.5' RT	IH 94 WB	1	
0010	25+00'WB', 29.8' RT	IH 94 WB	1	
0010	33+00'WB', 36.5' RT	IH 94 WB	1	
0010	45+90.4'A', 66.8' RT	RAMP A	1	
		TOTAL 0010	5	

SAWING ASPHALT

CATEGORY	STATION	LOCATION	690.0150 LF	REMARKS
0010	-4+72'WB EX'	IH 94 WB	4	STAGE 3 - SHLD
0010	66+20'WB EX'	IH 94 WB	4	STAGE 3 - SHLD
0010	71+28'WB EX'	IH 94 WB	4	STAGE 3 - SHLD
		TOTAL 0010	12	

SAWING CONCRETE

CATEGORY	STATION	LOCATION	690.0250 LF	REMARKS
0010	8+23'WB'	IH 94 WB	40	
0010	57+10'WB'	IH 94 WB	40	
0010	51+89'A'	RAMP A	24	
		TOTAL 0010	104	

SPECIAL 03. MANHOLES SPECIAL 4-FT DIAMETER TEMPORARY

CATEGORY	STATION	LOCATION	COVER ELEVATION	DEPTH	SPV.0060 EACH	REMARKS
0010	12+10.6, 22.6' LT	IH 94 MEDIAN	1193.17	3.10	1	STAGE 1
0010	19+10, 24.9' LT	IH 94 MEDIAN	1180.70	3.70	1	STAGE 1
0010	51+36.6, 27.5' LT	IH 94 MEDIAN	1108.00	2.00	1	STAGE 1
0010	59+38.4, 24.1' LT	IH 94 MEDIAN	1113.00	2.00	1	STAGE 1
				TOTAL 0010	4	

SPECIAL 04. TEMPORARY INLETS MEDIAN 1 GRATE

CATEGORY	STATION	LOCATION	COVER ELEVATION	DEPTH	SPV.0060 EACH	REMARKS
0010	7+25, 7.9' RT	IH 94 CROSSOVER	1199.70	3.50	1	STAGE 1
0010	61+00, 6.6' RT	IH 94 CROSSOVER	1117.40	4.50	1	STAGE 2
				TOTAL 0010	2	

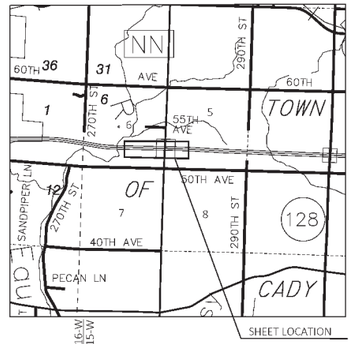
TRANSPORTATION PROJECT PLAT NO: 1021-00-20 - 4.01

PART OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 6, AND PART OF THE NORTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 5, TOWNSHIP 28 NORTH, RANGE 15 WEST, TOWN OF CADY, ST. CROIX COUNTY, WISCONSIN.

RELOCATION ORDER I-94 - BALDWIN-MENOMONIE (CTH NN BRIDGE WESTBOUND B-55-0018)

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 NAMED 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 NAMED 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.



NTS

T-29-N
T-28-N

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
1	MARK P. WALLESVERD	FEE	0.228	0.132	0.360
2	DANIEL C. GINGERICH AND REBECCA D. GINGERICH	FEE	0.230	0.126	0.356

ALL AREAS SHOWN IN ACRES UNLESS OTHERWISE NOTED

UTILITY SCHEDULE & INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
200	WEST WISCONSIN TELCOM COOPERATIVE, INC.	RELEASE OF RIGHTS
201	ST. CROIX ELECTRIC COOPERATIVE	RELEASE OF RIGHTS

1080139
BETH PABST
REGISTER OF DEEDS
ST. CROIX CO., WI
RECEIVED FOR RECORD
04/12/2019 12:14 PM
EXEMPT #
PLAT FEE 25.00
VOLUME: TPP1
PAGES: 155
PAGES: 1
****The above recording information verifies that this document has been electronically recorded & returned to the submitter**

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1021-00-20 - 4.01
AMENDMENT NO:___

R/W COURSE TABLE

100-101	N76°54'41"E	33.96'
101-102	N89°41'21"E	186.95'
102-103	S76°34'40"E	156.37'
103-104	S00°22'51"W	350.04'
104-105	S89°32'37"W	333.52'
105-106	S89°32'37"W	40.01'
106-107	S89°32'37"W	40.01'
107-108	S89°32'37"W	831.60'
108-109	N01°36'30"W	360.08'
109-110	N01°36'30"W	10.35'
110-111	N89°21'25"E	852.67'
111-100	N76°54'41"E	33.96'

R/W POINT COORDINATES

POINT#	Y	X
100	327750.031	645506.047
101	327757.722	645539.124
102	327758.736	645726.074
103	327722.437	645878.174
104	327372.408	645875.847
105	327369.751	645542.335
106	327369.432	645502.330
107	327369.114	645462.325
108	327362.489	644630.752
109	327722.420	644620.646
110	327732.771	644620.356
111	327742.341	645472.971

CONVENTIONAL ABBREVIATIONS

ACRES	AC.	PERMANENT LIMITED EASEMENT	PLE
CENTERLINE	C/L	PROPERTY LINE	PL
CERTIFIED SURVEY MAP	CSM	RECORDED AS	(100')
CORNER	COR.	REFERENCE LINE	R/L
DOCUMENT	DOC.	REMAINING	REM.
EASEMENT	EASE.	RIGHT-OF-WAY	R/W
HIGHWAY EASEMENT	H.E.	SECTION	SEC.
LAND CONTRACT	LC	STATION	STA.
MONUMENT	MON.	TEMPORARY LIMITED EASEMENT	TLE
PAGE	P.	VOLUME	V.

LOCATION SKETCH

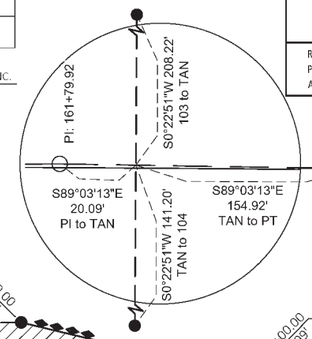
LOCATION SKETCH NOT TO SCALE

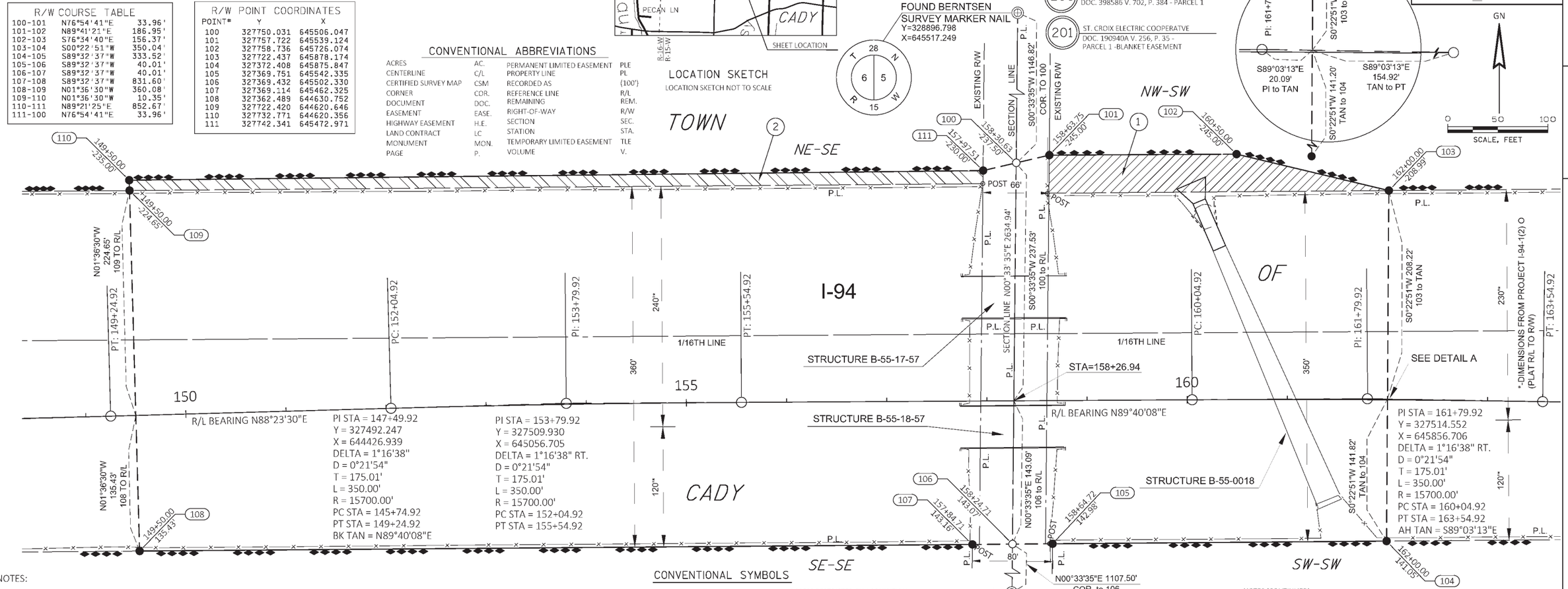
FOUND BERNTSEN SURVEY MARKER NAIL
Y=328896.798
X=645517.249

200 WEST WISCONSIN TELCOM COOPERATIVE, INC.
DOC. 398586 V. 702, P. 384 - PARCEL 1

201 ST. CROIX ELECTRIC COOPERATVE
DOC. 190940A V. 256, P. 35 - PARCEL 1 -BLANKET EASEMENT

DETAIL A
Scale: 1"=40'





NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), ST. CROIX COUNTY ZONE, NAD83 <2011> IN US 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 3/4"X24" REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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.

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.

FOR THE CURRENT ACCESS CONTROL INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN EAU CLAIRE, WISCONSIN.

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.

EXISTING ACCESS CONTROL ALONG I-94 HAS BEEN ESTABLISHED FROM PREVIOUS PROJECT I-94-1(2) O.

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)

TRANSMISSION STRUCTURES
BUILDING
TO BE REMOVED
BRIDGE
SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED)
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER (25)
UTILITY NUMBER (40)
TLE POINT NUMBER T100
PARALLEL OFFSETS

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

CONVENTIONAL UTILITY SYMBOLS

GAS	G
TELEPHONE	T
OVERHEAD TRANSMISSION LINES	OH
ELECTRIC	E
CABLE TELEVISION	TV
FIBER OPTIC	FO

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

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

EXISTING HIGHWAY RIGHT-OF-WAY FOR I-94 ESTABLISHED FROM PREVIOUS PROJECT I-94-1(2) O.

EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH NN ESTABLISHED FROM PREVIOUS PROJECT I-94-1(2) O AND 66 FOOT WIDTH CENTERED ON THE WEST LINE OF SECTION 5 PER STATE STATUTE 82.31 (2).

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

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 1021-00-20-4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

JAMES R. CAPPEART — 4/11/2019
REGISTRATION NUMBER: S-3044

AYRES ASSOCIATES

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

DEBRA STENSLAND — 4/11/2019

FILE NAME : V:\SURVEY\EC\0SURVEY\0DGN\740375.09 CTH NN UNDER I 94 TPP\C3D\SHEETSPLAN\040101 RP REVISED 022819.DWG
APPRAISAL PLAT DATE : 04-11-2019
PLOT DATE : 4/11/2019 10:12 AM
PLOT BY : CAPPEART, JAMES
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

TRANSPORTATION PROJECT PLAT NO: 1021-04-27 - 4.01

PART OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4, THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 AND THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4, IN THE TOWN OF EAU GALLE, AND PART OF LOT 2 OF CERTIFIED SURVEY MAP RECORDED IN VOLUME 24, PAGE 5696 AS DOCUMENT NO. 913879 IN THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 AND PART OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4, IN THE VILLAGE OF WOODVILLE, ALL IN SECTION 2, TOWNSHIP 28 NORTH, RANGE 16 WEST, ST. CROIX COUNTY, WISCONSIN.

RELOCATION ORDER I-94 - BALDWIN-MENOMONIE (CARR CREEK EB BRIDGE B-55-0012), ST. CROIX COUNTY

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 NAMED 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 NAMED 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.

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
1	DANIEL AND BARBARA GINGERICH	FEE	0.009	----	0.009
2	TIMOTHY R. AND JENNIFER L. PEDERSEN	FEE	0.226	----	0.226
3	MGM PROPERTIES OF MINNESOTA, LLP	FEE	1.337	----	1.337
4	WILSON PROPERTY MANAGEMENT, LLC	FEE	0.102	----	0.102

ALL AREAS SHOWN IN ACRES UNLESS OTHERWISE NOTED

1079784
BETH PABST
REGISTER OF DEEDS
ST. CROIX CO., WI
RECEIVED FOR RECORD
04/04/2019 08:21 AM
EXEMPT #
PLAT FEE 25.00

VOLUME: TPP1
PAGES: 154
PAGES: 1
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RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER: 1021-04-27 - 4.01
AMENDMENT NO:___

R/W POINT COORDINATES

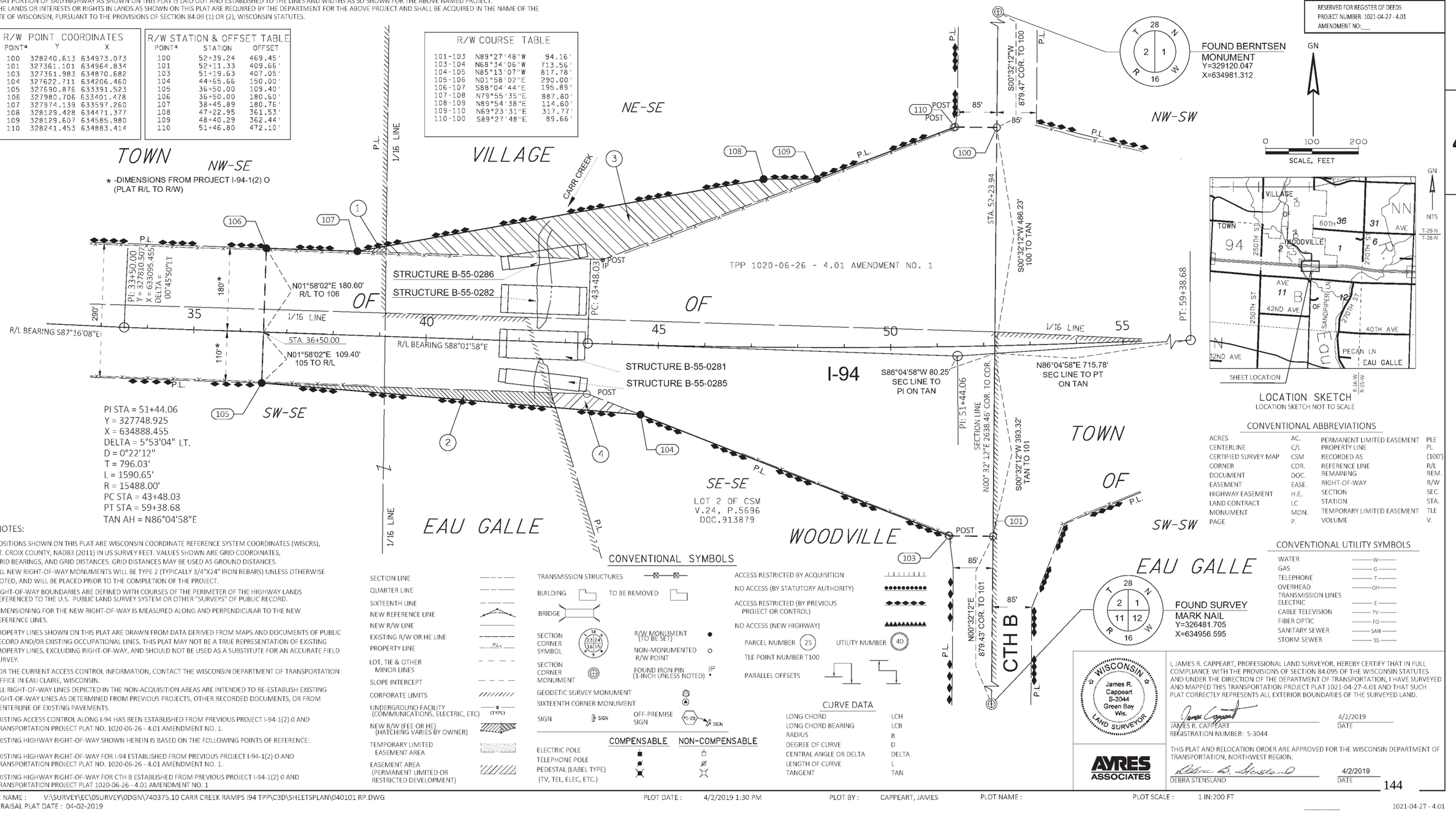
POINT#	Y	X
100	328240.613	634973.073
101	327361.101	634964.834
103	327361.983	634870.682
104	327622.711	634206.460
105	327630.876	633351.523
106	327980.706	633401.478
107	327974.139	633597.260
108	328129.428	634471.377
109	328129.607	634585.980
110	328241.453	634883.414

R/W STATION & OFFSET TABLE

POINT#	STATION	OFFSET
100	52+39.24	469.45'
101	52+11.33	409.66'
103	51+19.63	407.05'
104	44+65.66	150.00'
105	36+50.00	109.40'
106	36+50.00	180.60'
107	38+45.89	180.76'
108	47+22.95	361.53'
109	48+40.29	362.44'
110	51+46.80	472.10'

R/W COURSE TABLE

101-103	N89°27'48"W	94.16'
103-104	N68°34'06"W	713.56'
104-105	N85°13'07"W	817.78'
105-106	N01°58'02"E	290.00'
106-107	S88°04'44"E	195.89'
107-108	N79°55'35"E	887.80'
108-109	N89°54'38"E	114.60'
109-110	N69°23'31"E	317.77'
110-100	S89°27'48"E	89.66'



LOCATION SKETCH
LOCATION SKETCH NOT TO SCALE

CONVENTIONAL ABBREVIATIONS

ACRES	AC.	PERMANENT LIMITED EASEMENT	PLE
CENTERLINE	C/L	PROPERTY LINE	PL
CERTIFIED SURVEY MAP	CSM	RECORDED AS	(100')
CORNER	COR.	REFERENCE LINE	R/L
DOCUMENT	DOC.	REMAINING	REM.
EASEMENT	EASE.	RIGHT-OF-WAY	R/W
HIGHWAY EASEMENT	H.E.	SECTION	SEC.
LAND CONTRACT	LC	STATION	STA.
MONUMENT	MON.	TEMPORARY LIMITED EASEMENT	TLE
PAGE	P.	VOLUME	V.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), ST. CROIX COUNTY, NAD83 (2011) IN US 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 3/4"X24" IRON REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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.

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, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

FOR THE CURRENT ACCESS CONTROL INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN EAU CLAIRE, WISCONSIN.

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.

EXISTING ACCESS CONTROL ALONG I-94 HAS BEEN ESTABLISHED FROM PREVIOUS PROJECT I-94-1(2) 0 AND TRANSPORTATION PROJECT PLAT NO. 1020-06-26 - 4.01 AMENDMENT NO. 1.

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

EXISTING HIGHWAY RIGHT-OF-WAY FOR I-94 ESTABLISHED FROM PREVIOUS PROJECT I-94-1(2) O AND TRANSPORTATION PROJECT PLAT NO. 1020-06-26 - 4.01 AMENDMENT NO. 1.

EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH B ESTABLISHED FROM PREVIOUS PROJECT I-94-1(2) 0 AND TRANSPORTATION PROJECT PLAT 1020-06-26 - 4.01 AMENDMENT NO. 1

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC) — W (TYPE)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)

TRANSMISSION STRUCTURES
BUILDING — TO BE REMOVED
BRIDGE
SECTION CORNER SYMBOL
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
SECTION CORNER MONUMENT
FOUND IRON PIN (1-INCH UNLESS NOTED) IP
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN — SIGN
OFF-PREMISE SIGN — I-25 — SIGN

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER 25 — UTILITY NUMBER 40
TLE POINT NUMBER T100
PARALLEL OFFSETS

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

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

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

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 1021-04-27-4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

JAMES R. CAPPEART — 4/2/2019 DATE
REGISTRATION NUMBER: S-3044

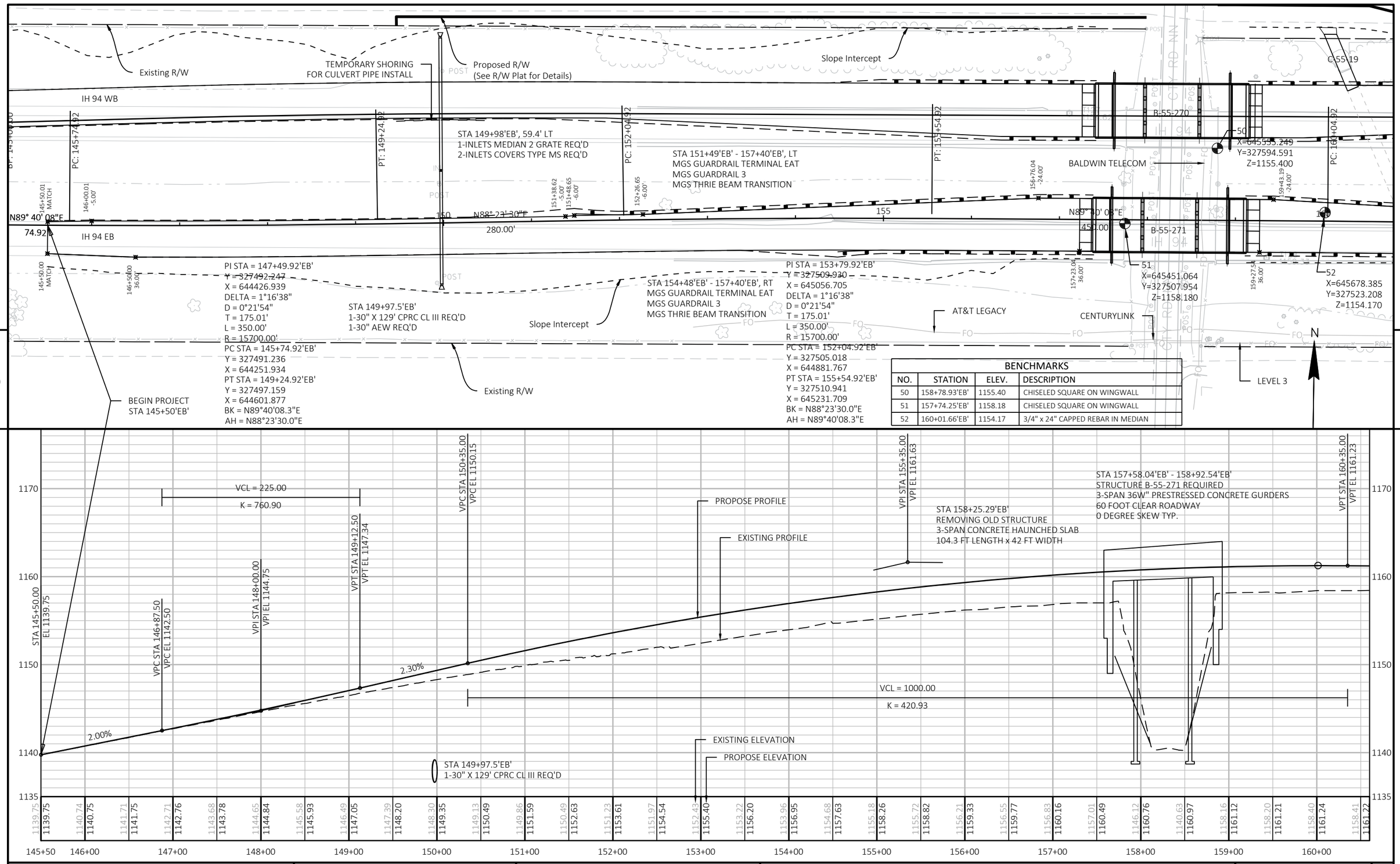
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION, NORTHWEST REGION.

DEBRA STENSLAND — 4/2/2019 DATE

AYRES ASSOCIATES

FILE NAME : V:\SURVEY\EC\0SURVEY\0DGN\740375.10 CARR CREEK RAMPS I94 TPP\C3D\SHEETSPLAN\040101 RP.DWG
APPRAISAL PLAT DATE : 04-02-2019
PLOT DATE : 4/2/2019 1:30 PM
PLOT BY : CAPPEART, JAMES
PLOT NAME :
PLOT SCALE : 1 IN:200 FT

1021-04-27 - 4.01



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB	SHEET 145	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\050101-PP-I94EB-CTHNN.DWG
LAYOUT NAME - 01
PLOT DATE : 10/26/2020 9:54 AM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

Proposed R/W

Slope Intercept

Existing R/W

ST. CROIX ELECTRIC

STA 159+10'EB' - 164+56'EB', LT
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL TYPE 2

PT: 163+54.92

PC: 164+15.76

STA 164+00'EB', 54.9' LT
1-INLETS MEDIAN 1 GRATE REQ'D
1-INLETS COVERS TYPE MS REQ'D

164+56.17
-6.01'
164+66.17
-5.00'

PT: 167+97.71

168+50.00
-5.00'

169+50.01
MATCH

EP: 170+79.85

POST

S89° 03' 13"E

60.84'

165

N89° 33' 09"E

170

282.14'

PI STA = 161+79.92'EB'
Y = 327514.552
X = 645856.706
DELTA = 1°16'38"
D = 0°21'54"
T = 175.01'
L = 350.00'
R = 15700.00'
PC STA = 160+04.92'EB'
Y = 327513.541
X = 645681.702
PT STA = 163+54.92'EB'
Y = 327511.662
X = 646031.689
BK = N89°40'08.3"E
AH = S89°03'13.5"E

STA 164+00'EB'
1-24" X 146' CPRC CL III REQ'D
1-24" AEW REQ'D

STA 159+10'EB' - 162+57'EB', RT
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL TYPE 2

PI STA = 166+06.74'EB'
Y = 327507.503
X = 646283.484
DELTA = 1°23'38"
D = 0°21'54"
T = 190.99'
L = 381.95'
R = 15700.00'
PC STA = 164+15.76'EB'
Y = 327510.657
X = 646092.525
PT STA = 167+97.71'EB'
Y = 327508.995
X = 646474.464
BK = S89°03'13.5"E
AH = N89°33'08.5"E

168+50.00
36.00'

169+50.01
MATCH

Slope Intercept

Existing R/W

END PROJECT
STA 169+50'EB'

N

5

5

STA 169+50.00
EL 1160.50

-0.08%

STA 164+00'EB'
1-24" X 146' CPRC CL III REQ'D

EXISTING CONCRETE BOX CULVERT C-55-19
DUAL 293' x 6' x 4' (L x W x H)
23 Degrees R.H.F.

1170
1160
1150
1140
1130

1161.21 1158.76 1161.18 1159.31 1161.14 1159.57 1161.10 1159.79 1161.06 1159.83 1161.02 1159.99 1160.98 1160.07 1160.94 1160.18 1160.90 1160.31 1160.86 1160.38 1160.82 1160.45 1160.78 1160.47 1160.74 1160.48 1160.70 1160.53 1160.66 1160.55 1160.62 1160.56 1160.58 1160.50 1160.54 1160.50 1160.50

161+00 162+00 163+00 164+00 165+00 166+00 167+00 168+00 169+00

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB	SHEET 146	E

Existing R/W

Slope Intercept

BP: 137+08.63'WB'

137+08.63 MATCH

PC: 137+58.63'WB'

137+58.63 30.00'

PT: 142+58.63'WB'

PC: 146+64.51'WB'

PI STA = 149+14.36'WB'
Y = 327623.430
X = 644586.448
DELTA = 1°49'25"
D = 0°21'54"
T = 249.85'
L = 499.67'
R = 15700.00'
PC STA = 146+64.51'WB'
Y = 327613.526
X = 644336.789
PT STA = 151+64.18'WB'
Y = 327625.386
X = 644836.295
BK = N87°43'41.4"E
AH = N89°33'05.9"E

PT: 151+64.18'WB'

N

STA 150+00'EB'
1-30" X 150' CPRC CL III REQ'D
1-30" AEW REQ'D

Proposed R/W
(See R/W Plat for Details)

IH 94 WB

N89° 33' 10"E

250.00

140'WB'

N87° 43' 41.4"E

405.87'

145'WB'

150'WB'

137+08.63 MATCH

137+58.63 5.00'

TEMPORARY SHORING
FOR CULVERT PIPE INSTALL

151+87.73

PI STA = 140+08.66'WB'
Y = 327587.526
X = 643681.410
DELTA = 1°49'29"
D = 0°21'54"
T = 250.02'
L = 500.00'
R = 15700.00'
PC STA = 137+58.63'WB'
Y = 327585.575
X = 643431.397
PT STA = 142+58.63'WB'
Y = 327597.437
X = 643931.235
BK = N89°33'10.3"E
AH = N87°43'41.4"E

STA 150+00'EB', 64.7' RT
1-INLETS MEDIAN 2 GRATE REQ'D
2-INLETS COVERS TYPE MS REQ'D

IH 94 EB

5

5

Existing R/W

BEGIN PROJECT
STA 137+08.63'WB'

Slope Intercept

VCL = 225.00

K = 395.43

PROPOSE PROFILE

EXISTING PROFILE

STA 137+08.63
EL 1123.60

VPC STA 137+24.32
VPC EL 1123.82

VPI STA 138+36.82
VPI EL 1125.43

VPT STA 139+49.32
VPT EL 1127.69

2.00%

1.03%

VPC STA 149+87.96
VPC EL 1148.47

VCL = 1000.00

K = 471.98

STA 150+00'EB'
1-30" X 150' CPRC CL III REQ'D

EXISTING ELEVATION

PROPOSE ELEVATION

1120 1130 1140 1150

| | | |

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
50	158+82.87'WB'	1155.40	CHISELED SQUARE ON WINGWALL
51	157+78.01'WB'	1158.18	CHISELED SQUARE ON WINGWALL
52	160+05.44'WB'	1154.17	3/4" x 24" CAPPED REBAR IN MEDIAN

Proposed R/W (See R/W Plat for Details)

Existing R/W

Proposed R/W

N

PT: 151+64.18'WB'

PC: 165+08.63'WB'

STA 155+00'WB' - 157+46'WB', LT
MGS GUARDRAIL TERMINAL TYPE 2
MGS GUARDRAIL 3
MGS THRIE BEAM TRANSITION

157+29.12
-36.01'

159+33.62
-36.00'

C-55-19

STA 159+16'WB' - 163+58'WB', LT
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL EAT

B-55-270
N89° 33' 06"E
1344.45'

155'WB'

160'WB'

165'WB'

151+87.73
5.00'

156+37.33
24.00'

157+29.09
24.00'

159+33.95
24.00'

159+80.60
24.00'

164+31.37
6.00'

165+09.38
6.00'

165+19.38
5.00'

STA 156+37'WB' - 157+46'WB', RT
MGS GUARDRAIL TERMINAL TYPE 2
MGS GUARDRAIL 3
MGS THRIE BEAM TRANSITION

50
X=645555.249
Y=327594.591
Z=1155.400

STA 159+16'WB' - 165+09'WB', RT
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL EAT

BALDWIN TELECOM

ST. CROIX ELECTRIC

B-55-271

IH 94

52
X=645678.385
Y=327523.208
Z=1154.170

51
X=645451.064
Y=327507.954
Z=1158.180

Slope Intercept

AT&T LEGACY

CENTURYLINK

Slope Intercept

SIGN

SLAB

Existing R/W

LEVEL 3

5

5

STA 157+64.10'WB' - 158+98.60'WB'
STRUCTURE B-55-270 REQUIRED
3-SPAN 36W" PRESTRESSED CONCRETE GURDERS
60 FOOT CLEAR ROADWAY
0 DEGREE SKEW TYP.

VPI STA 154+87.96
VPI EL 1158.48

STA 158+25.29'EB'
REMOVING OLD STRUCTURE
3-SPAN CONCRETE HAUNCHED SLAB
104.3 FT LENGTH x 42 FT WIDTH

VPT STA 159+87.96
VPT EL 1157.89

-0.12%

VCL = 1000.00

K = 471.98

EXISTING CONCRETE BOX CULVERT C-55-19
DUAL 293' x 6' x 4' (L x W x H)
23 Degrees R.H.F.

1170
1160
1150
1140
1132

1149.05	1149.73	1150.37	1150.99	1151.59	1152.14	1152.64	1153.12	1153.54	1153.92	1154.25	1154.56	1154.74	1154.83	1145.19	1137.33	1155.37	1155.63	1155.81	1155.87	1155.94	1155.95	1155.89	1155.82	1155.87	1155.93	1155.88	1155.84	1155.87	1155.85
1150.58	1151.44	1152.24	1152.99	1153.69	1154.33	1154.92	1155.46	1155.94	1156.37	1156.75	1157.08	1157.35	1157.57	1157.74	1157.85	1157.91	1157.92	1157.88	1157.82	1157.76	1157.70	1157.64	1157.58	1157.53	1157.47	1157.41	1157.35	1157.29	1157.23

151+00 152+00 153+00 154+00 155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00 165+00

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 148	E

PI STA = 169+08.72'WB'
Y = 327639.037
X = 646580.783
DELTA = 2°55'10"
D = 0°21'54"
T = 400.09'
L = 800.00'
R = 15700.00'
PC STA = 165+08.63'WB'
Y = 327635.906
X = 646180.708
PT STA = 173+08.63'WB'
Y = 327621.786
X = 646980.497
BK = N89°33'05.9"E
AH = S87°31'43.8"E

STA 171+48.9'WB'
1-24" X 120' CPRC CL III REQ'D
1-24" AEW REQ'D

Slope Intercept

Existing R/W

N

PC: 165+08.63'WB'

PT: 173+08.63'WB'

PC: 176+74.77'WB'

PT: 179+03.18'WB'

EP: 179+58.63'WB'

179+08.63 5.00'

179+58.63 MATCH

65'WB'

170'WB'

S87°37'5"E

366.14'

S88° 21' 45"E

55.45'

165+09.38 6.00'

165+19.38 5.00'

POST

TEMPORARY SHORING
FOR CULVERT PIPE INSTALL

STA 171+51.3'WB', 59.1' RT
1-INLETS MEDIAN 1 GRATE REQ'D
1-INLETS COVERS TYPE MS REQ'D

PI STA = 177+88.98'WB'
Y = 327601.075
X = 647460.396
DELTA = 0°50'01"
D = 0°21'54"
T = 114.21'
L = 228.41'
R = 15700.00'
PC STA = 176+74.77'WB'
Y = 327606.000
X = 647346.294
PT STA = 179+03.18'WB'
Y = 327597.812
X = 647574.557
BK = S87°31'43.8"E
AH = S88°21'44.6"E

END PROJECT
STA 179+58.63'WB'

SIGN

Existing R/W

Slope Intercept

5

5

STA 179+58.63
EL 1161.97

VCL = 800.00
K = 629.52

1.15%

VPC STA 170+55.55
VPC EL 1156.64

STA 171+48.9'WB'
1-24" X 120' CPRC CL III REQ'D

VPI STA 174+55.55
VPI EL 1156.17

VPT STA 178+55.55
VPT EL 1160.78

1155.83	1155.88	1155.91	1155.99	1156.04
1157.17	1157.11	1157.06	1157.00	1156.94
1156.08	1156.12	1156.12	1156.14	1156.16
1156.88	1156.82	1156.76	1156.70	1156.64
1156.24	1156.34	1156.47	1156.70	1156.89
1156.60	1156.60	1156.63	1156.71	1156.83
1157.06	1157.24	1157.48	1157.71	1157.97
1156.98	1157.18	1157.41	1157.69	1158.00
1158.29	1158.74	1159.14	1159.63	1160.14
1158.35	1158.75	1159.18	1159.65	1160.17
1160.71	1161.29	1161.86		
1160.72	1161.30	1161.87		

1180
1170
1160
1150
1140

166+00 167+00 168+00 169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 149 E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\050101-PP-I94WB-CTHNN.DWG
LAYOUT NAME - 03

PLOT DATE : 10/26/2020 9:51 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STA 103+50'NN' - 106+75'NN'
2-INCH REMOVING ASPHALTIC SURFACE
2-INCH HMA PAVEMENT 4 MT 58-28S

AT&T LEGACY

CENTURYLINK

LEVEL 3

BALDWIN TELECOM

BEGIN PROJECT
STA 103+50'NN'

END PROJECT
STA 106+75'NN'

BP: 102+00.00'NN'

PI: 104+95.00'NN'

EP: 108+00.00'NN'

T127
1154.62

158'LT

158'RT

N0° 30' 21"E
295.65'

CTY RD NN

POST

FO

N

EXISTING PROFILE TO REMAIN

1147.71	1146.83	1145.96	1145.09	1144.22	1143.35	1142.59	1141.90	1141.23	1140.59	1139.95	1139.30	1138.62	1137.98	1137.43	1136.94	1136.45	1136.02	1135.61	1135.47	1135.34	1135.23	1135.12
1147.71	1146.83	1145.96	1145.09	1144.22	1143.35	1142.59	1141.90	1141.23	1140.59	1139.95	1139.30	1138.62	1137.98	1137.43	1136.94	1136.45	1136.02	1135.61	1135.47	1135.34	1135.23	1135.12

1150
1140
1130

103+00 104+00 105+00 106+00 107+00

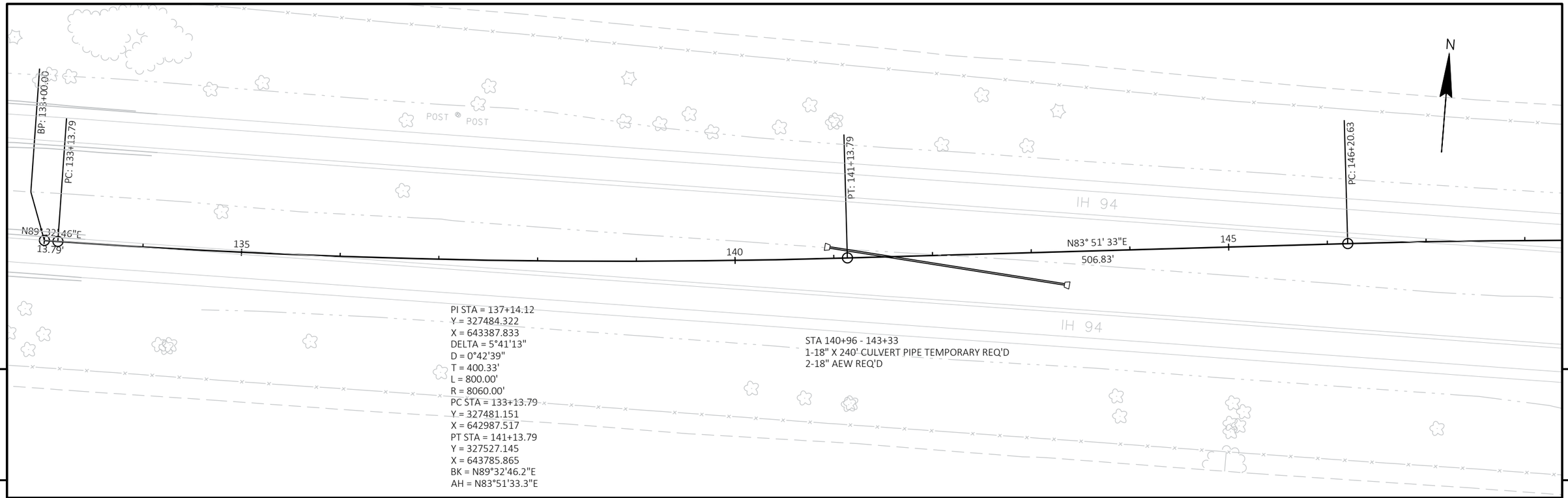
5

5

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: CTH NN (EXISTING)	SHEET 150	E

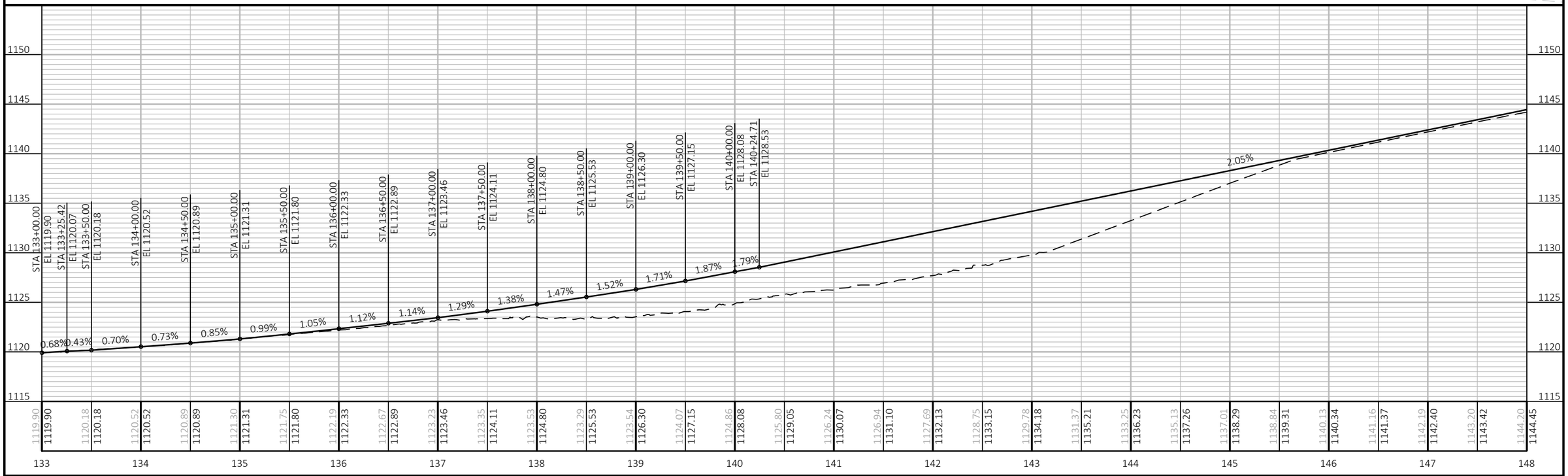
FILE NAME : C:\C3D\10210008\SHEETSPLAN\050101-PP-CTHNN.DWG
LAYOUT NAME - 3

PLOT DATE : 9/30/2020 1:03 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:50 FT

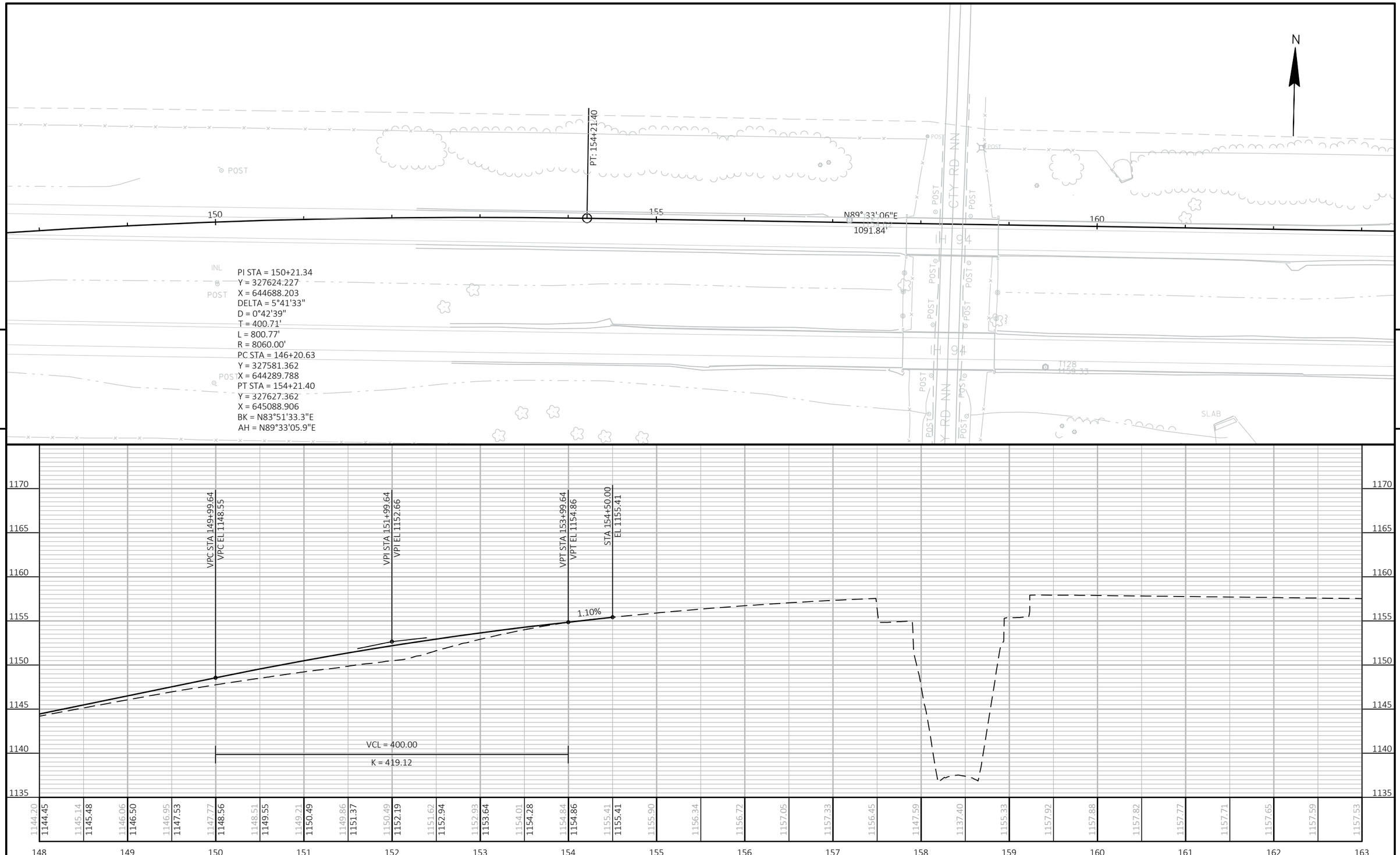


PI STA = 137+14.12
Y = 327484.322
X = 643387.833
DELTA = 5°41'13"
D = 0°42'39"
T = 400.33'
L = 800.00'
R = 8060.00'
PC STA = 133+13.79
Y = 327481.151
X = 642987.517
PT STA = 141+13.79
Y = 327527.145
X = 643785.865
BK = N89°32'46.2"E
AH = N83°51'33.3"E

STA 140+96 - 143+33
1-18" X 240' CULVERT PIPE TEMPORARY REQ'D
2-18" AEW REQ'D



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB CROSSOVER - STAGE 2	SHEET 151	E



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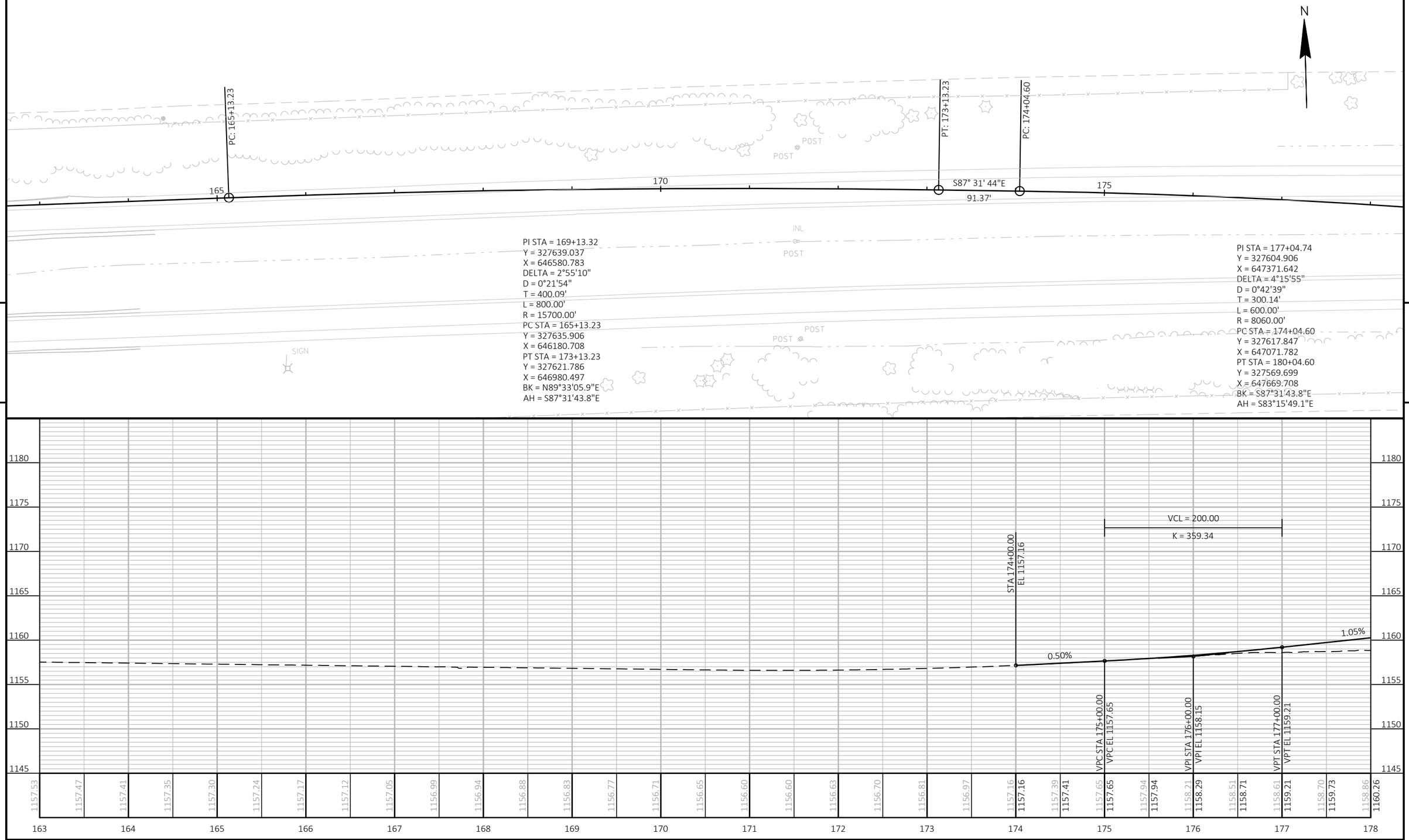
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB CROSSOVER - STAGE 2	SHEET 152	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\050101-PP-I94EB-CTHNN-CROSSOVER.DWG
LAYOUT NAME - 02

PLOT DATE : 10/13/2020 11:02 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT



5

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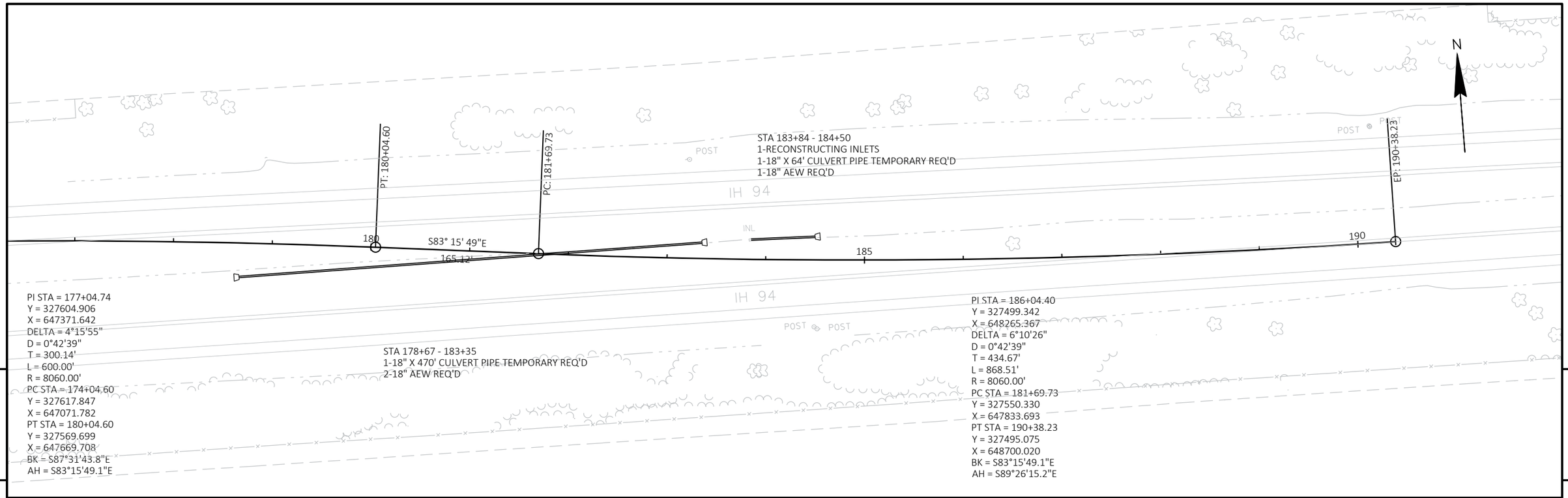
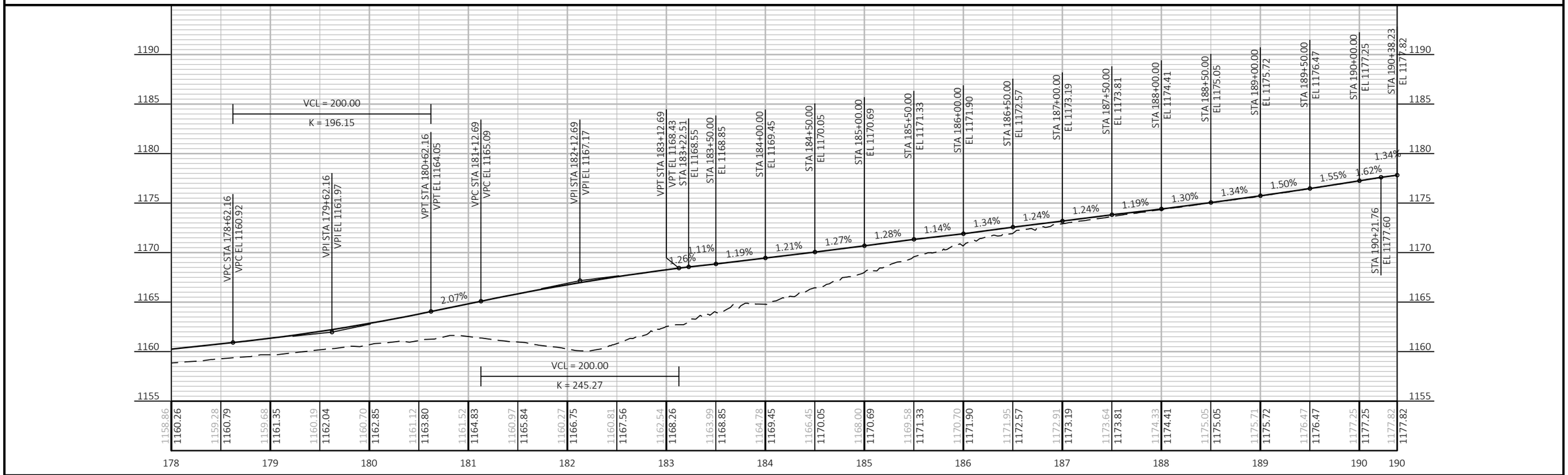
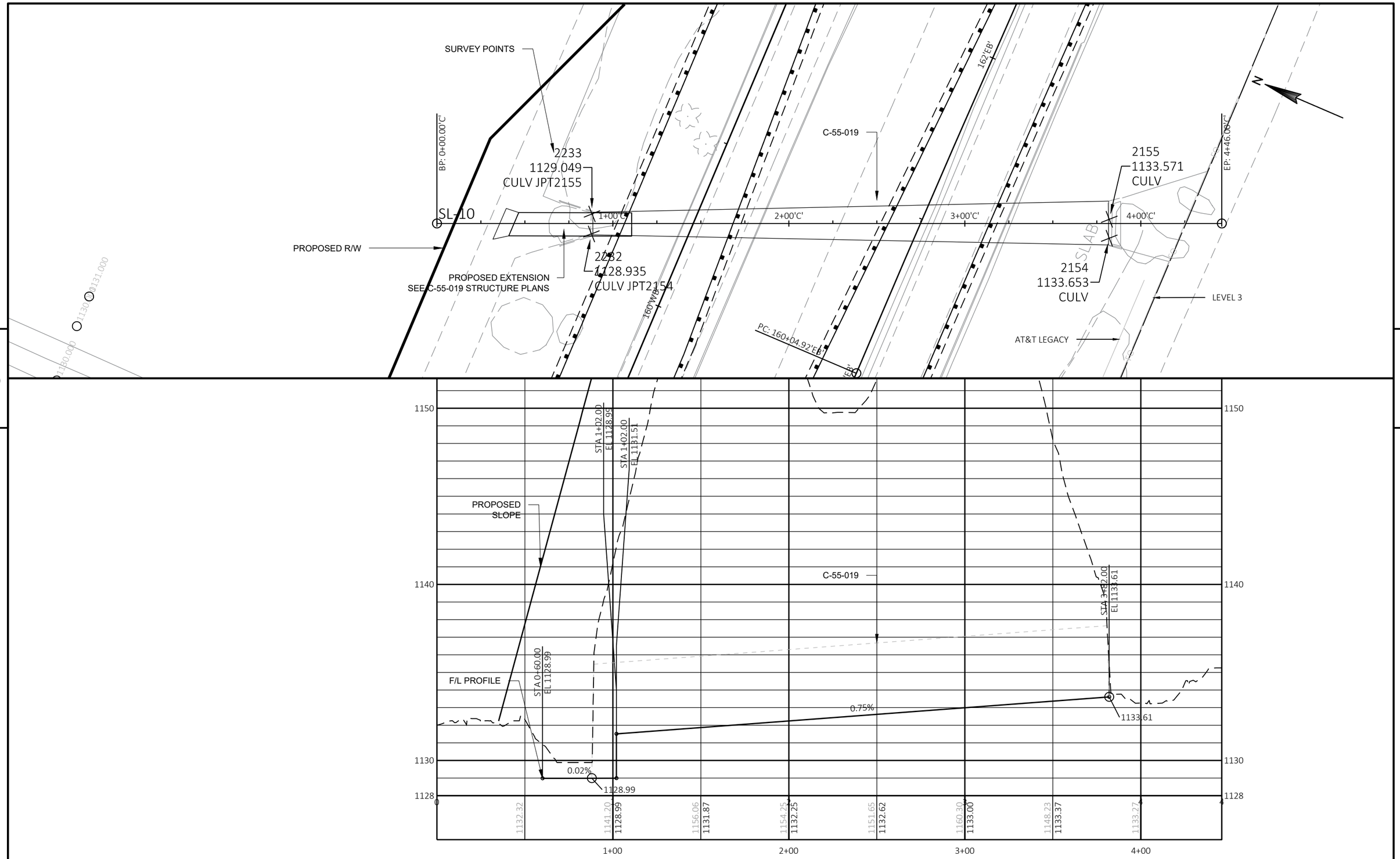
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB CROSSOVER - STAGE 2	SHEET 153	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\050101-PP-I94EB-CTHNN-CROSSOVER.DWG
LAYOUT NAME - 03
PLOT DATE : 10/13/2020 11:03 AM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44





PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB CROSSOVER - STAGE 2	SHEET 154 E

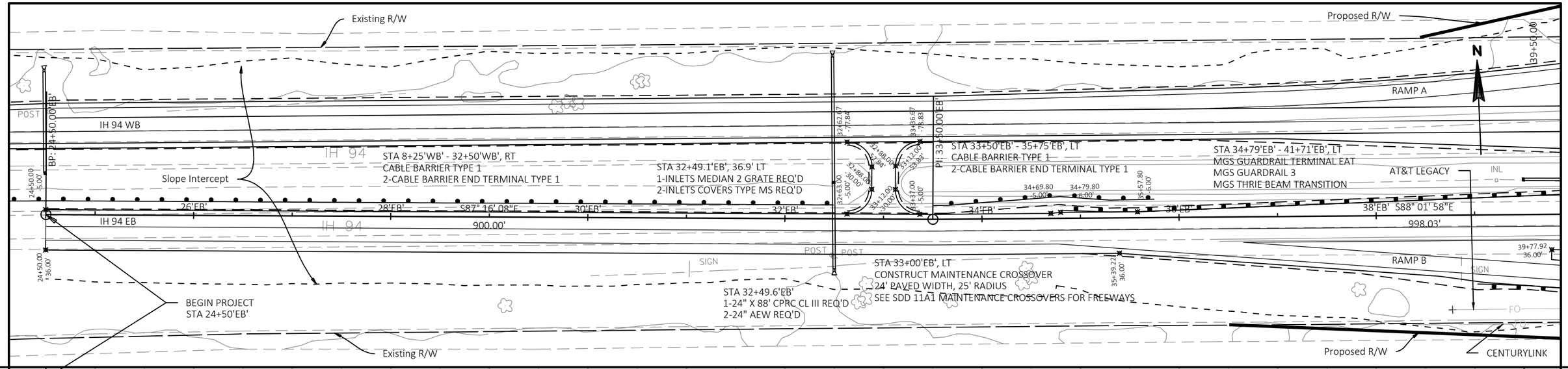


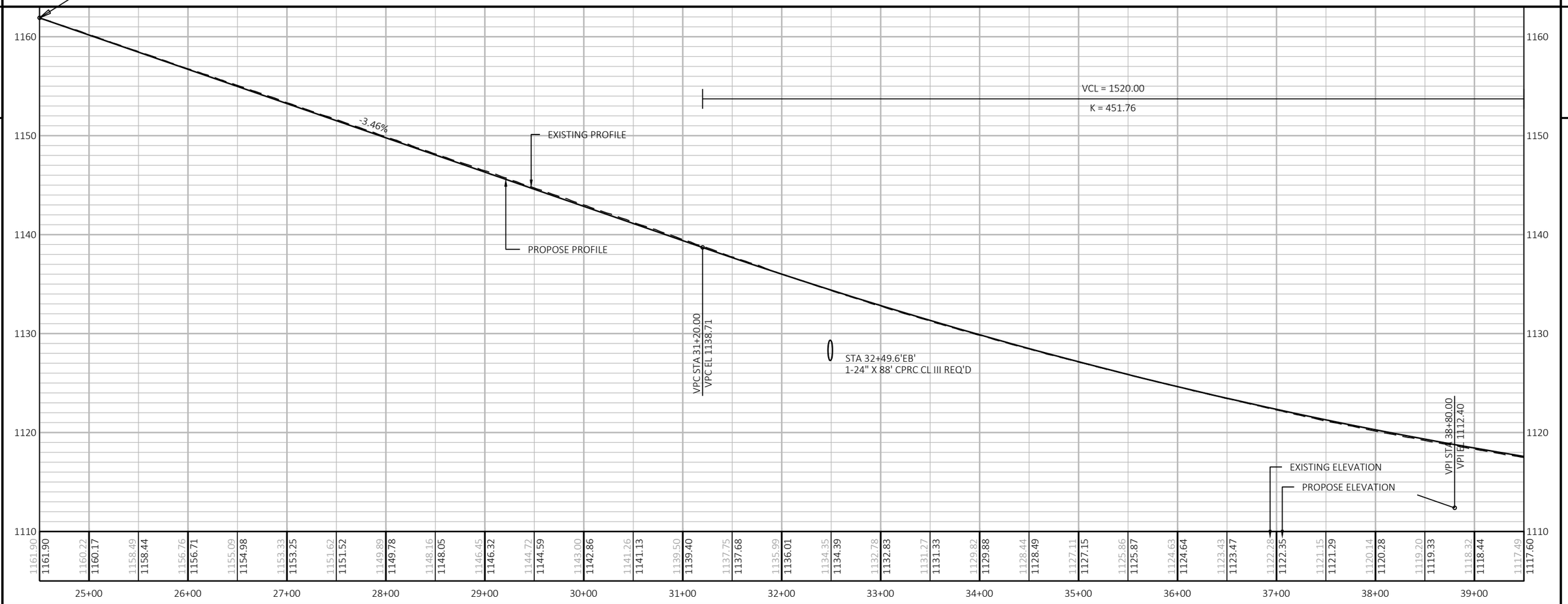
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	C-55-019	SHEET 155	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\050102-PP-CULVERT.DWG
LAYOUT NAME - 4

PLOT DATE : 9/30/2020 2:13 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44





PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB	SHEET 156	E

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
70	41+98.99'EB'	1116.14	CHISELED SQUARE ON WINGWALL
71	41+99.00'EB'	1113.80	CHISELED SQUARE ON WINGWALL
72	45+52.87'EB'	1113.90	3/4" x 24" CAPPED REBAR IN GRAVEL

70
X=633947.645
Y=327889.105
Z=1116.140

71
X=633944.627
Y=327801.051
Z=1113.800

72
X=634299.893
Y=327876.705
Z=1113.900

B-55-286
B-55-282
B-55-281
B-55-285

PC 43+48.03'EB'

STA 43+27'EB' - 43+48'EB', LT
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL TERMINAL TYPE 2

STA 48+50.1'EB', 31.7' LT
1-INLETS MEDIAN 1 GRATE REQ'D
1-INLETS COVERS TYPE MS REQ'D

STA 48+50'EB'
1-24" X 92' CPRC CL III REQ'D
1-24" AEW REQ'D

PI STA = 51+44.06
Y = 327748.925
X = 634888.455
DELTA = 5°53'04"
D = 0°11'06"
T = 796.03'
L = 1590.65'
R = 15488.00'
PC STA = 43+48.03
PT STA = 59+38.68
S.E. = N.C.

STA 51+27'EB' - 53+21'EB', LT
STEEL THRIE BEAM BULL NOSE TERMINAL
STEEL THRIE BEAM

STA 39+49.6'EB', 35.6' LT
1-INLETS MEDIAN 1 GRATE REQ'D
1-INLETS COVERS TYPE MS REQ'D

STA 39+49.6'EB'- 41+87.6'EB'
1-24" X 238' CPRC CL III REQ'D
1-24" AEW REQ'D

STA 40+78'EB' - 41+32'EB', RT
STEEL THRIE BEAM BULL NOSE TERMINAL
STEEL THRIE BEAM

AT&T LEGACY
CENTURYLINK
XCEL ENERGY
Slope Intercept
Proposed R/W

VCL = 1520.00
K = 451.76

STA 42+50'EB'
REMOVING OLD STRUCTURE
3-SPAN CONCRETE HAUNCHED SLAB
104 FT LENGTH x 42-47 FT WIDTH

STA 41+89.51'EB' - 43+09.01'EB'
STRUCTURE B-55-281 REQUIRED
3-SPAN 28W" PRESTRESSED CONCRETE GURDERS
60 FOOT CLEAR ROADWAY
0 DEGREE SKEW TYP.

VCL = 664.00
K = 413.09

-0.10%

VPT STA 46+40.00
VPT EL 1111.66

STA 48+50'EB'
1-24" X 92' CPRC CL III REQ'D

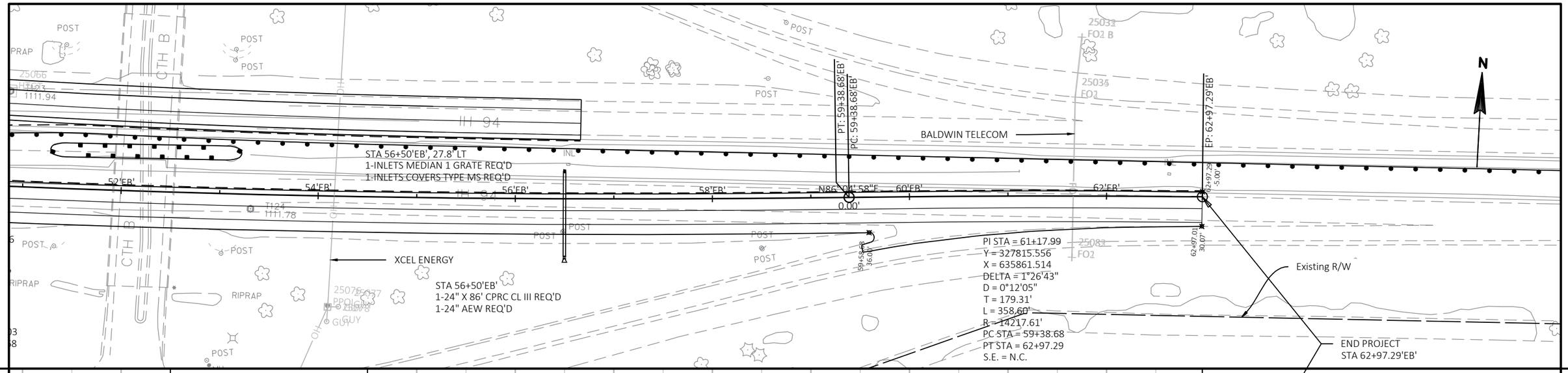
VPC STA 50+28.00
VPC EL 1111.28

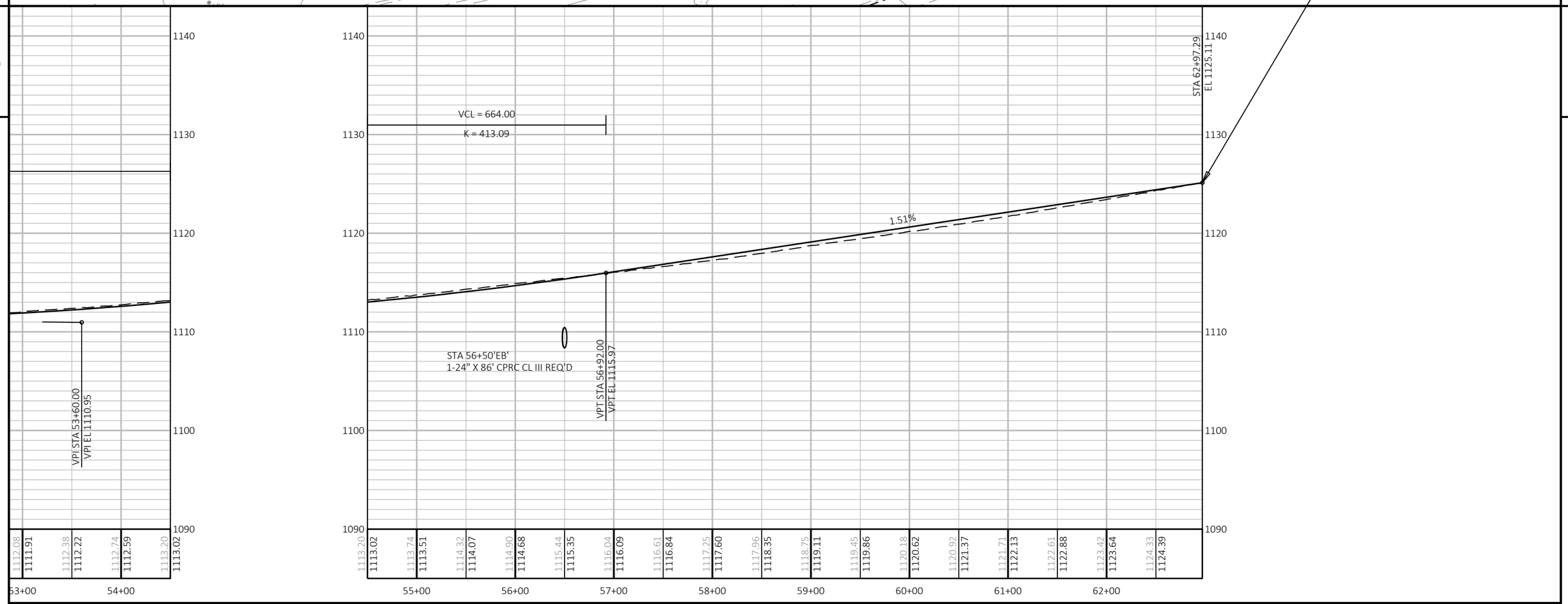
VPI STA 53+60.00
VPI EL 1110.95

40+00	41+00	42+00	43+00	44+00	45+00	46+00	47+00	48+00	49+00	50+00	51+00	52+00	53+00	54+00
1117.49	1116.71	1116.00	1115.37	1114.74	1114.24	1097.55	1108.46	1113.05	1112.88	1112.62	1112.35	1112.19	1112.03	1111.84
1117.60	1116.81	1116.08	1115.41	1114.79	1114.23	1113.72	1113.27	1112.87	1112.53	1112.24	1112.01	1111.83	1111.71	1111.65
1111.68	1111.57	1111.47	1111.41	1111.32	1111.28	1111.21	1111.20	1111.31	1111.48	1111.56	1111.74	1112.08	1112.38	1112.74
1111.60	1111.55	1111.50	1111.45	1111.40	1111.35	1111.30	1111.26	1111.27	1111.34	1111.47	1111.66	1111.91	1112.22	1112.59

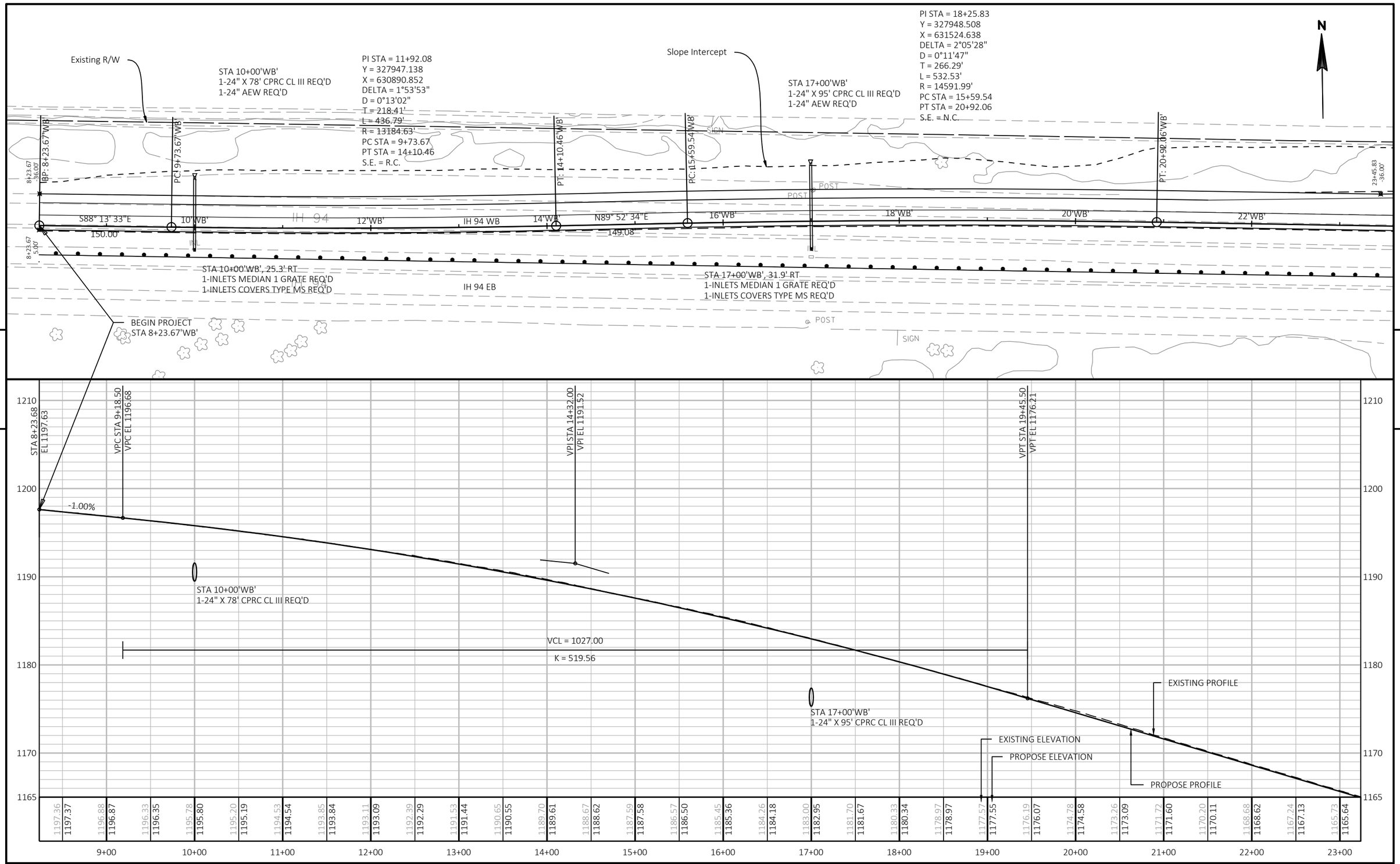
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB	SHEET 157 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-EB.DWG
LAYOUT NAME - 5
PLOT DATE : 10/22/2020 2:28 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

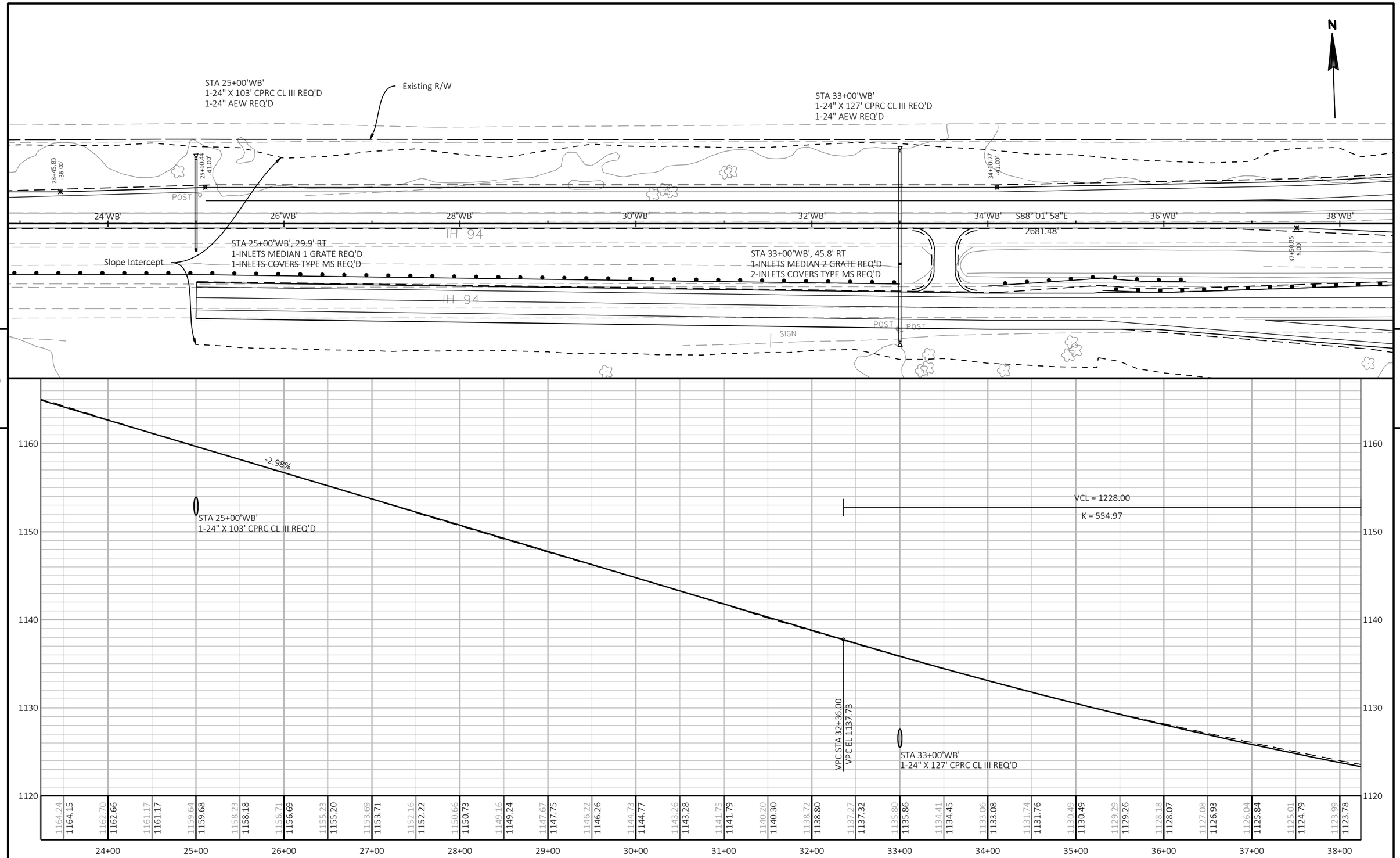




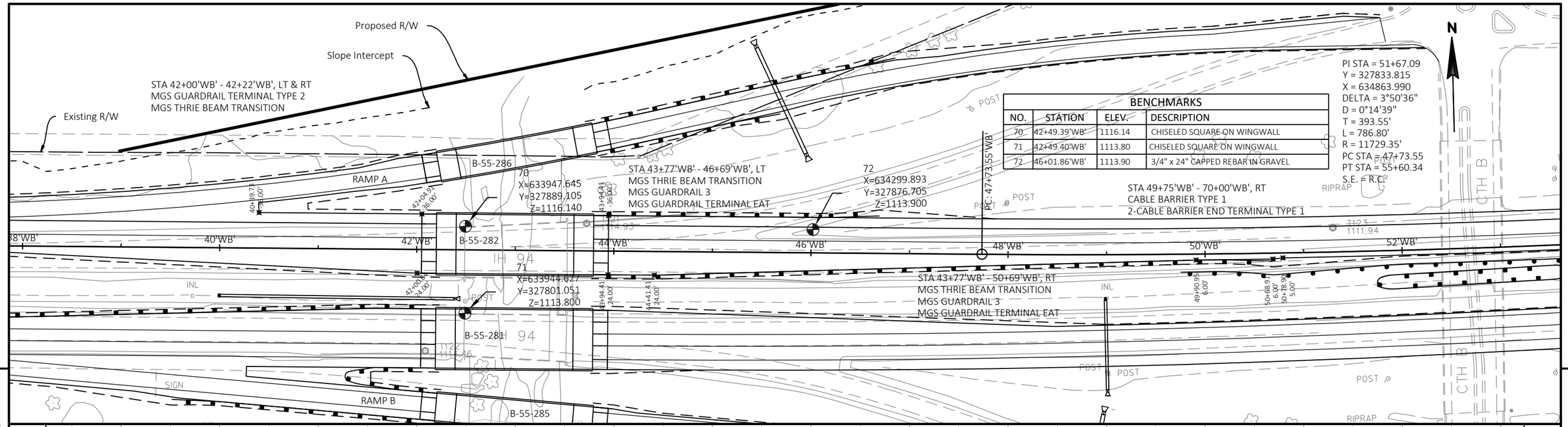
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB	SHEET 158 E



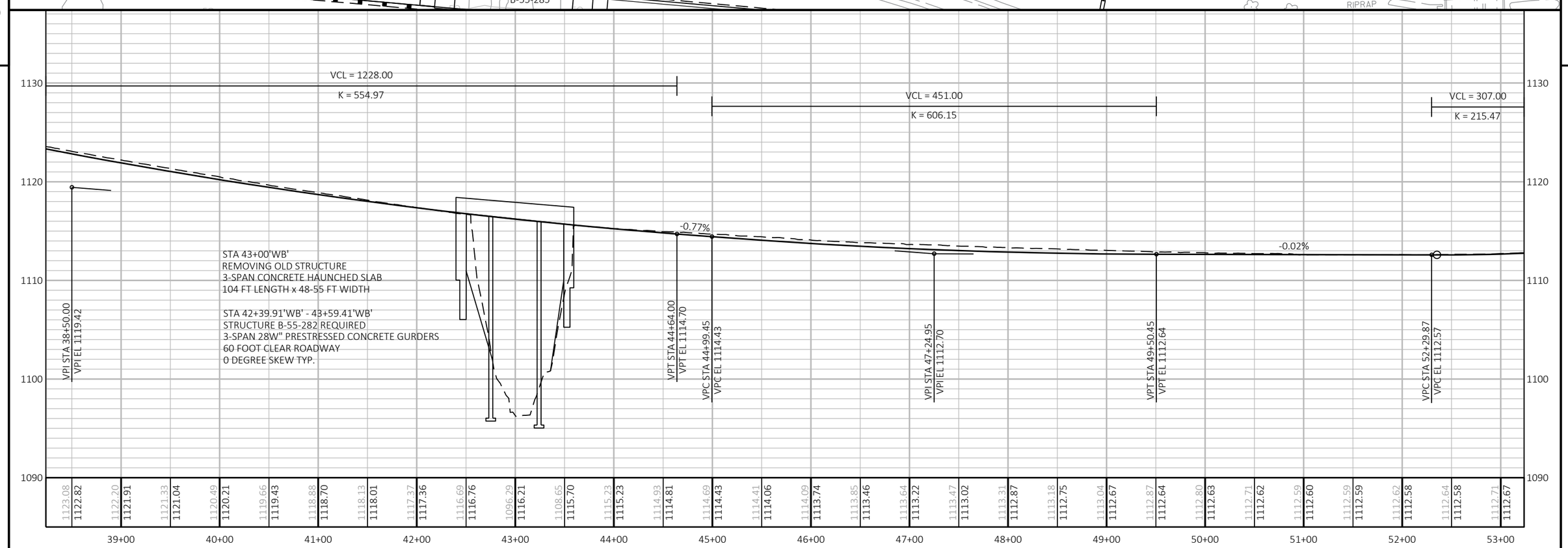
PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 159	E



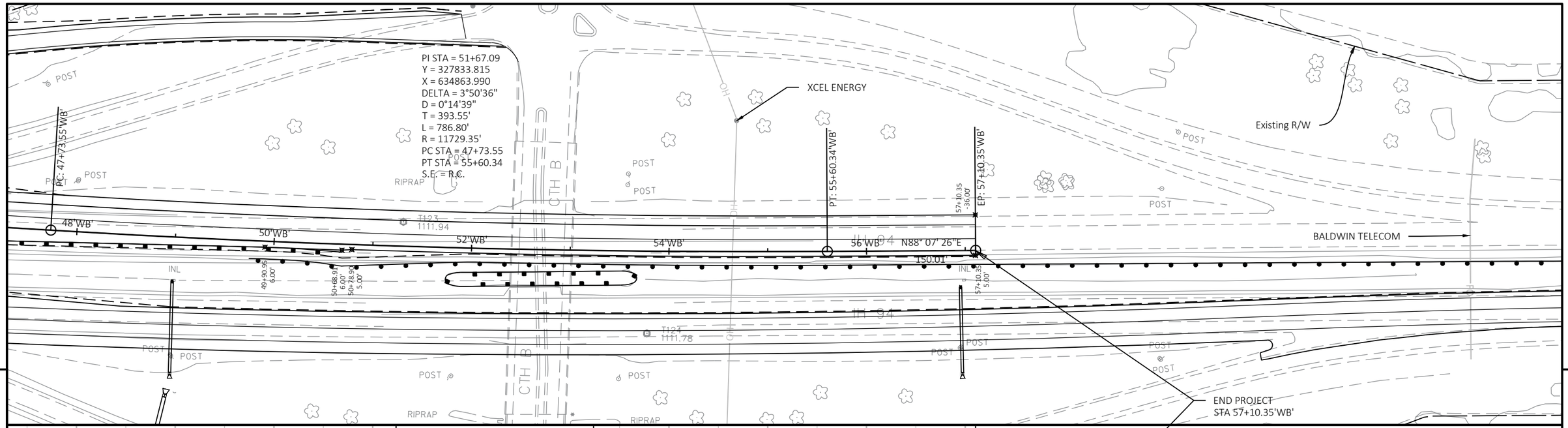
PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 160	E

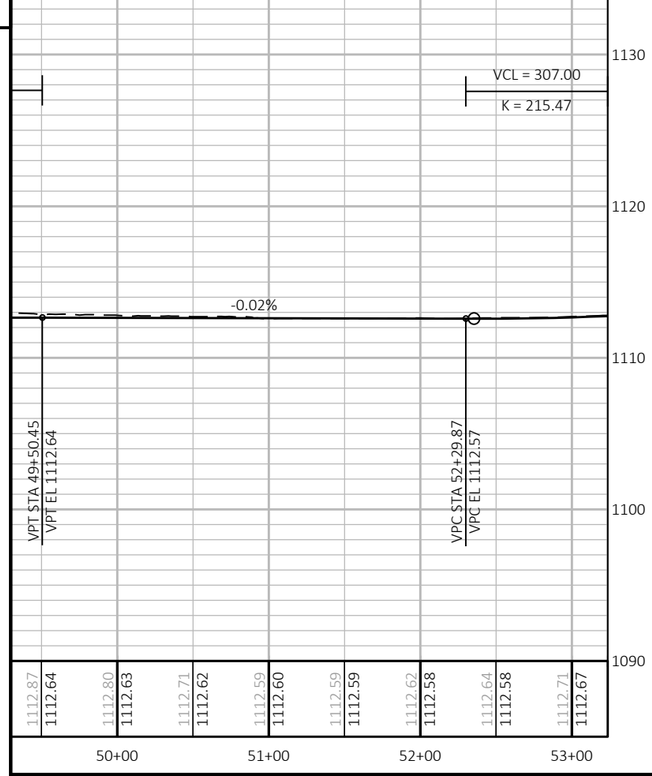


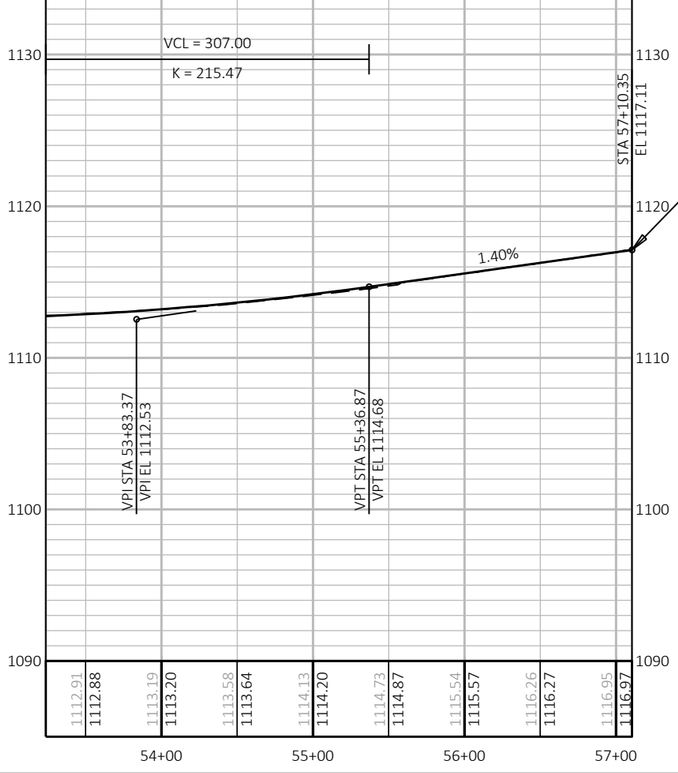
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
70	42+49.39'WB'	1116.14	CHISELED SQUARE ON WINGWALL
71	42+49.40'WB'	1113.80	CHISELED SQUARE ON WINGWALL
72	46+01.86'WB'	1113.90	3/4" x 24" CAPPED REBAR IN GRAVEL



PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 161	E





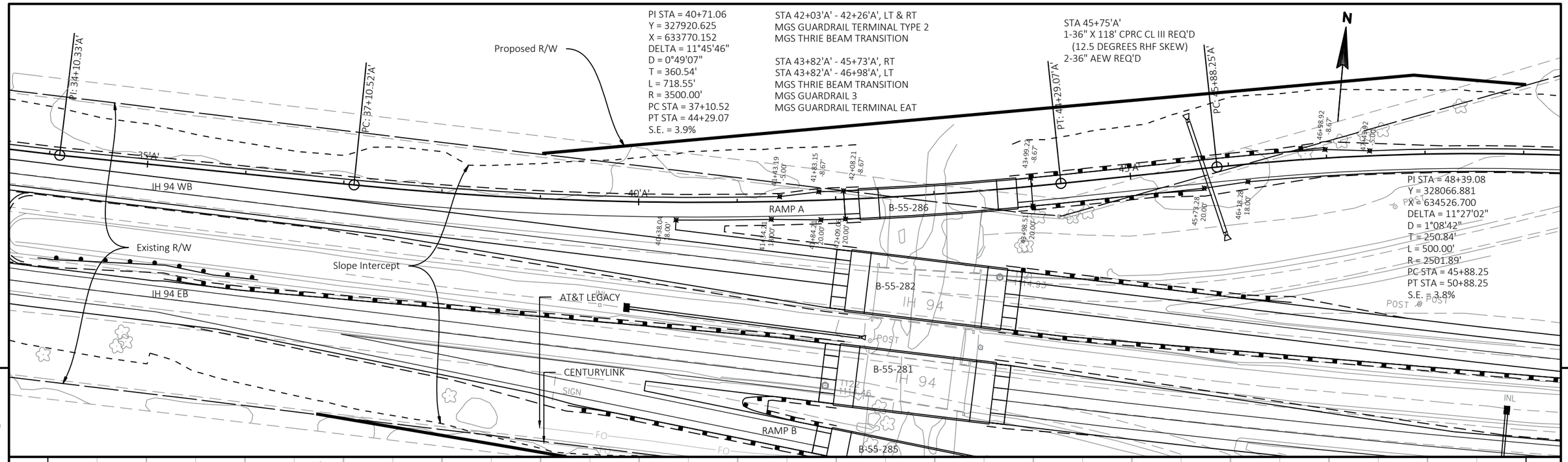


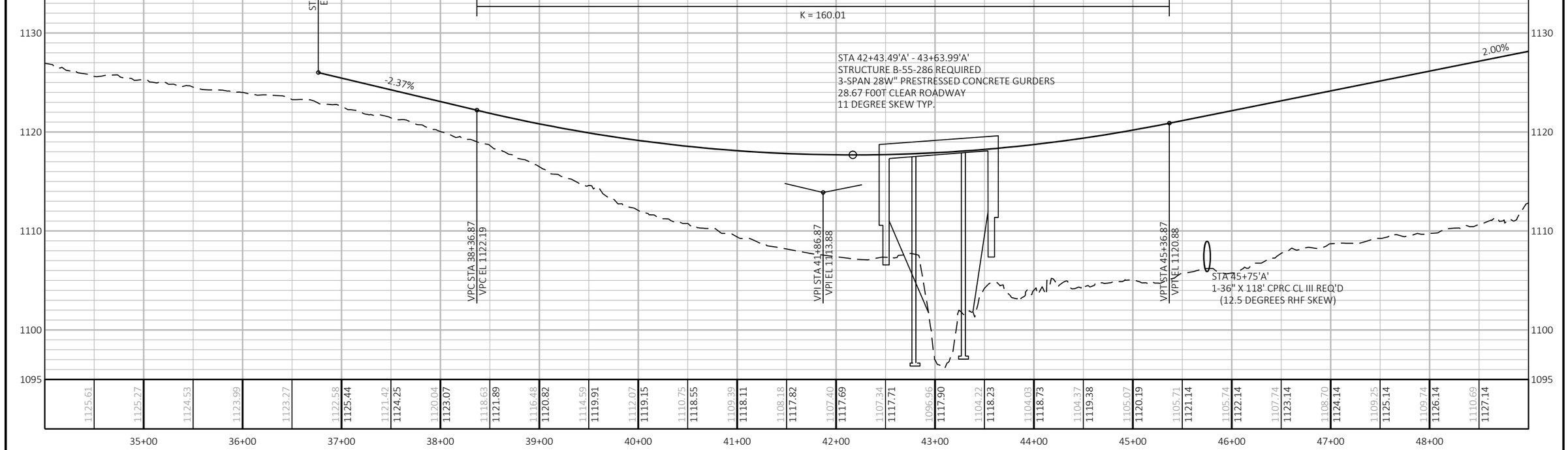
PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 162	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-WB.DWG
LAYOUT NAME - 8

PLOT DATE : 10/22/2020 2:38 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

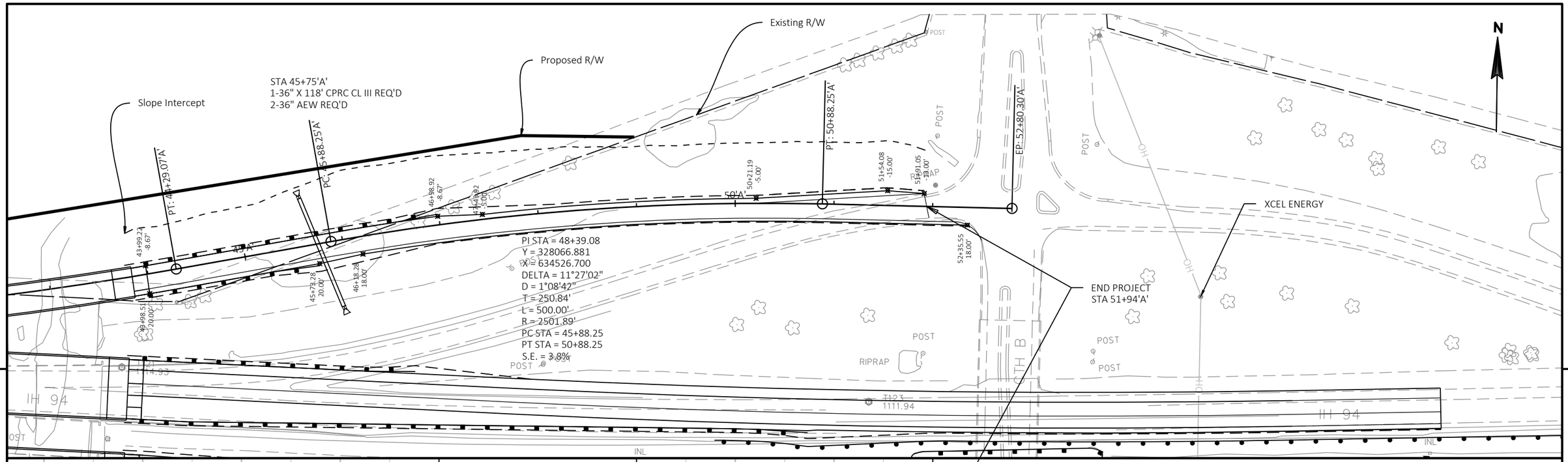
WISDOT/CADDS SHEET 44

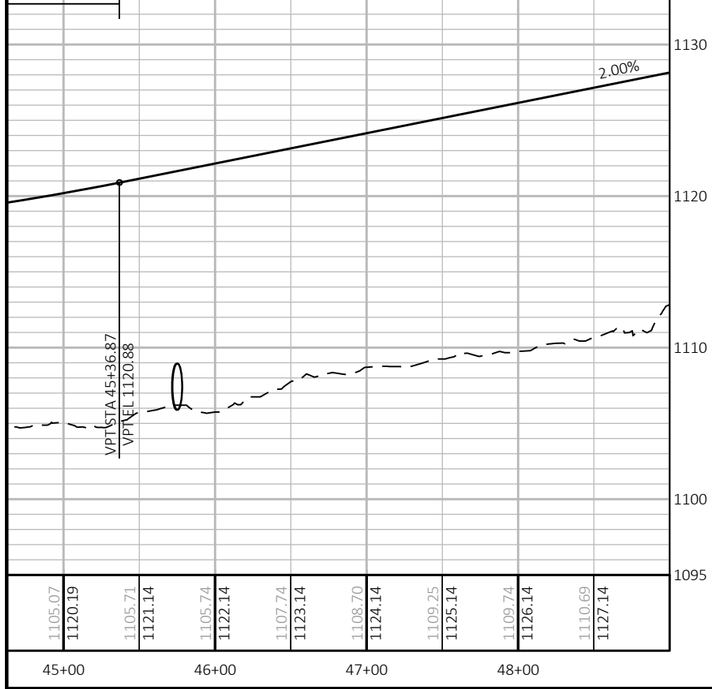


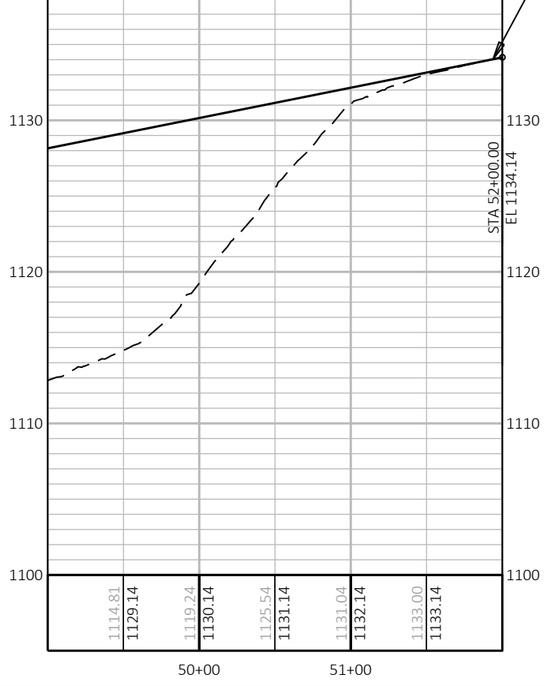


PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: RAMP A	SHEET 163	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-RAMPA.DWG
LAYOUT NAME - 3
PLOT DATE : 10/22/2020 2:23 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44





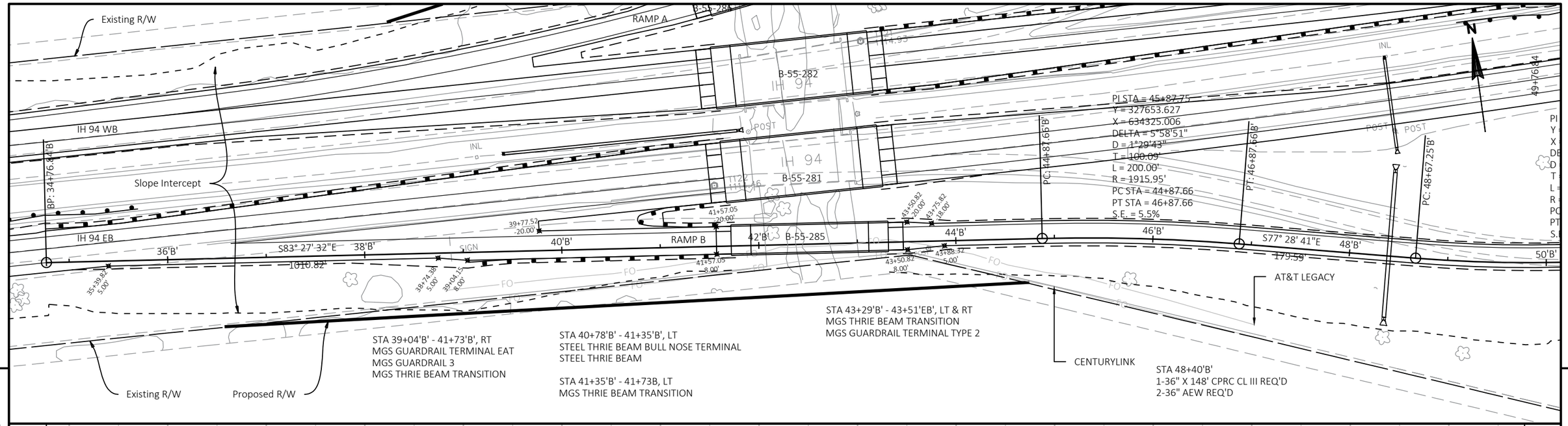


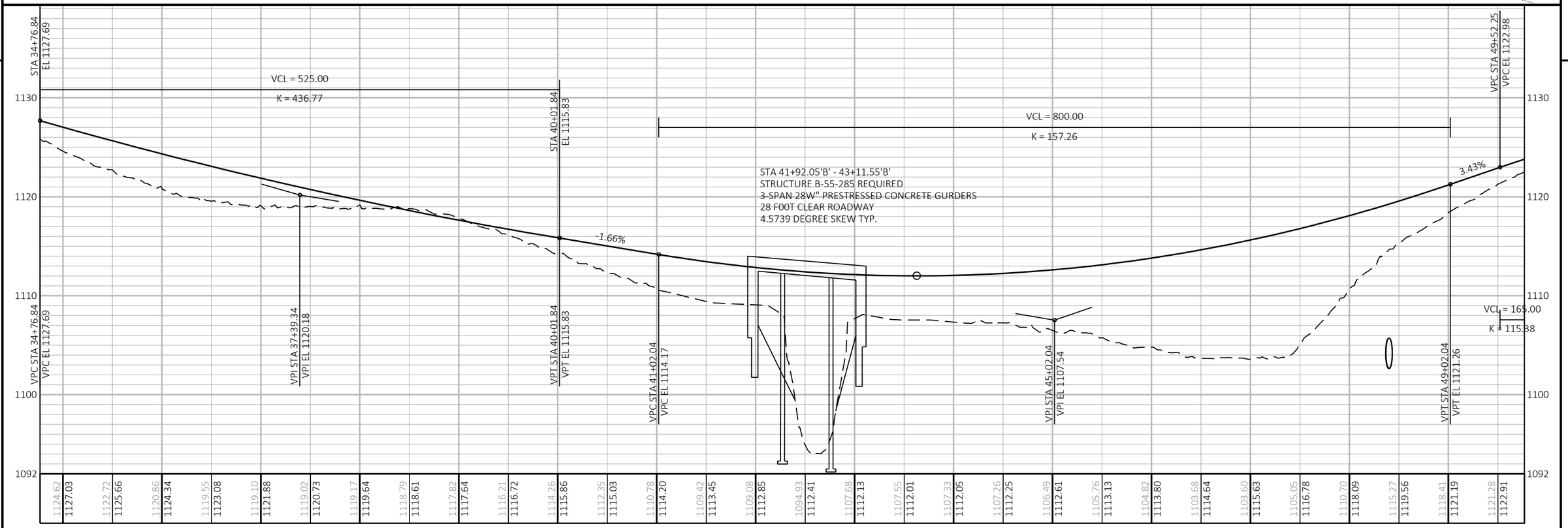
PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: RAMP A	SHEET 164 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-RAMPA.DWG
LAYOUT NAME - 4

PLOT DATE : 10/22/2020 2:23 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



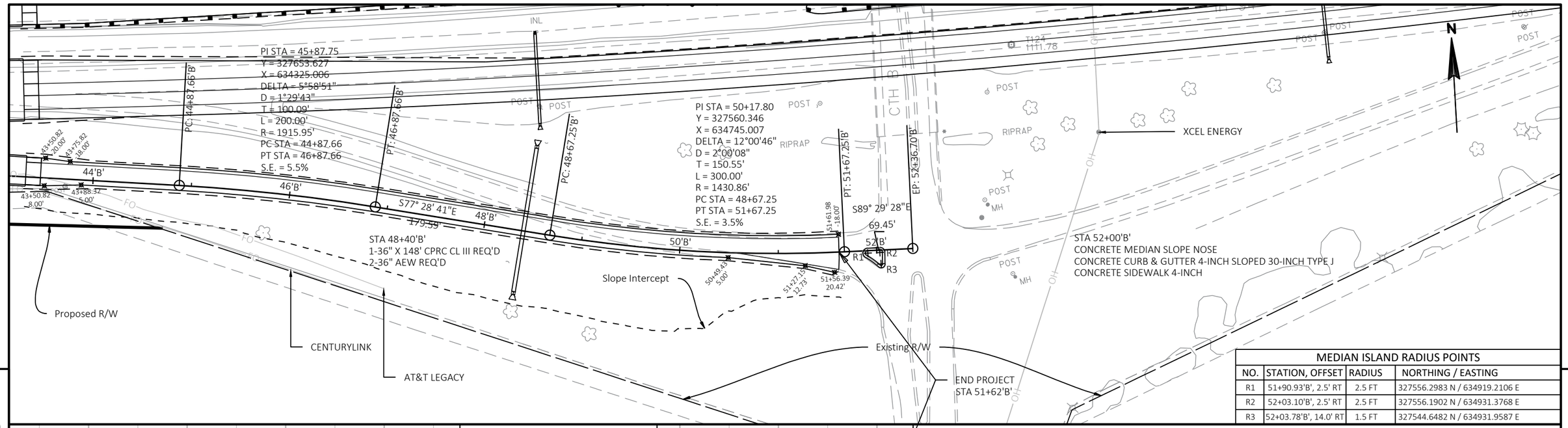


PROJECT NO: 1021-04-77	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: RAMP B	SHEET 165 E

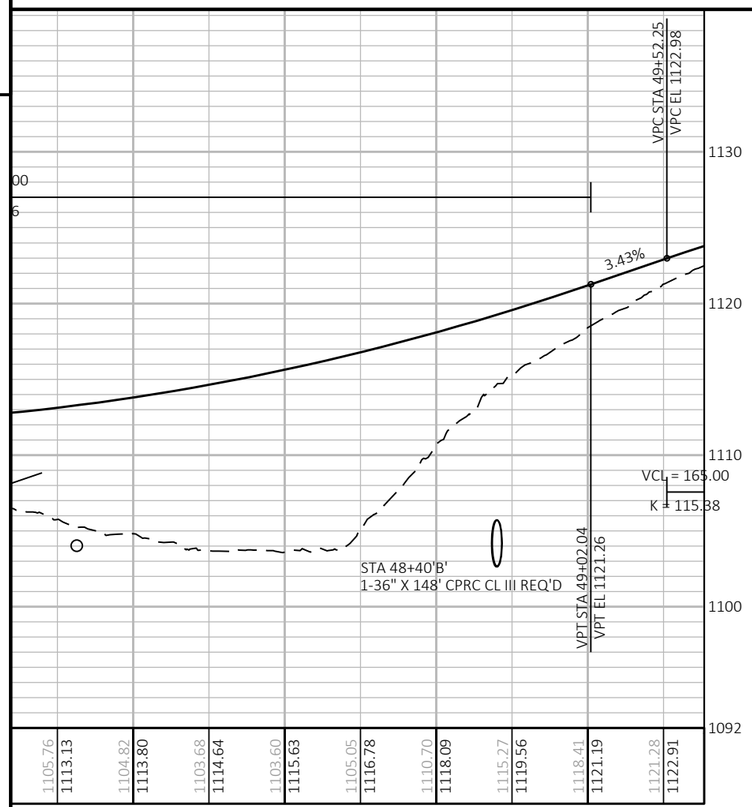
FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-RAMPB.DWG
LAYOUT NAME - 1

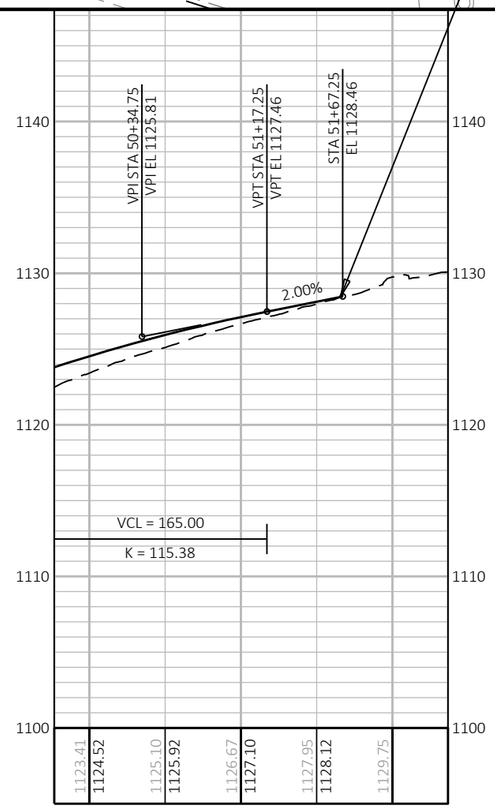
PLOT DATE : 11/18/2020 12:03 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



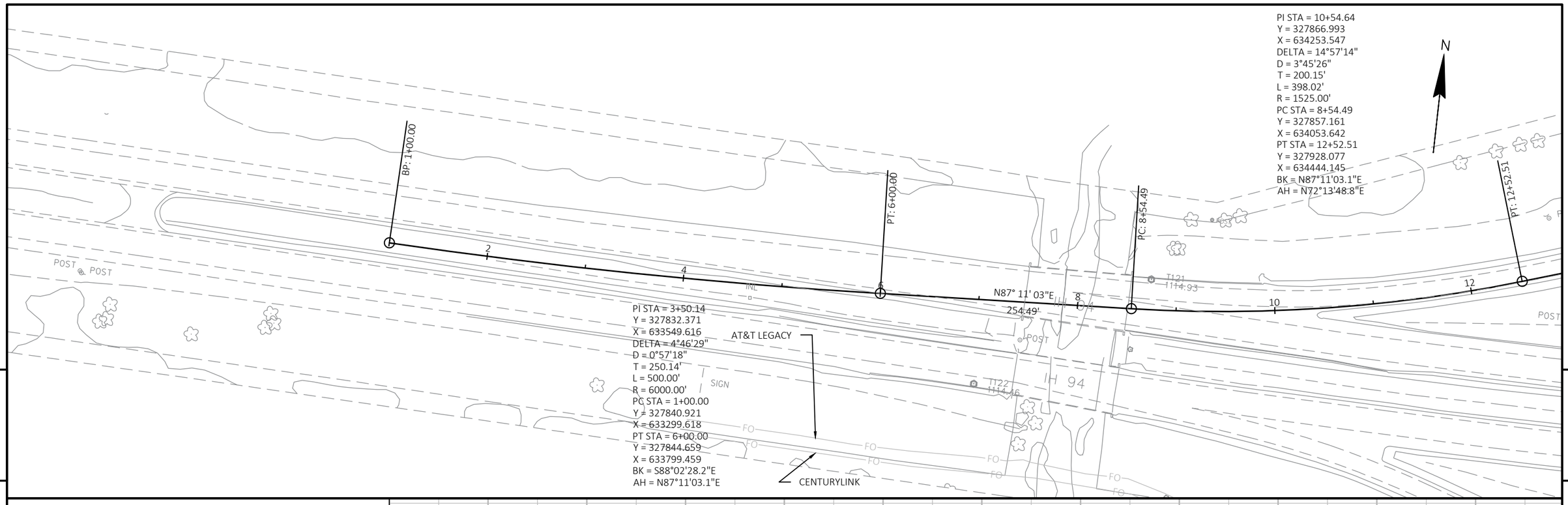
MEDIAN ISLAND RADIUS POINTS			
NO.	STATION, OFFSET	RADIUS	NORTHING / EASTING
R1	51+90.93'B', 2.5' RT	2.5 FT	327556.2983 N / 634919.2106 E
R2	52+03.10'B', 2.5' RT	2.5 FT	327556.1902 N / 634931.3768 E
R3	52+03.78'B', 14.0' RT	1.5 FT	327544.6482 N / 634931.9587 E

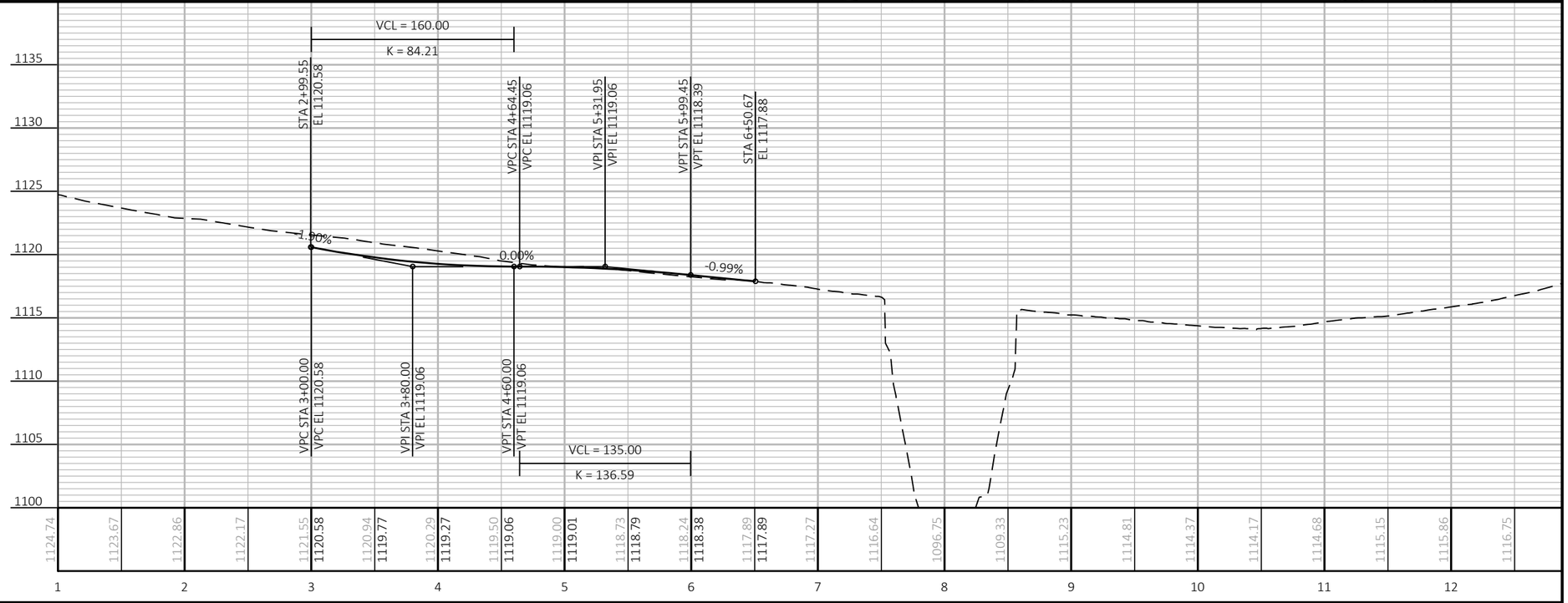




PROJECT NO: 1021-04-77	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: RAMP B	SHEET 166	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-RAMPB.DWG
LAYOUT NAME - 2
PLOT DATE : 11/18/2020 12:04 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44





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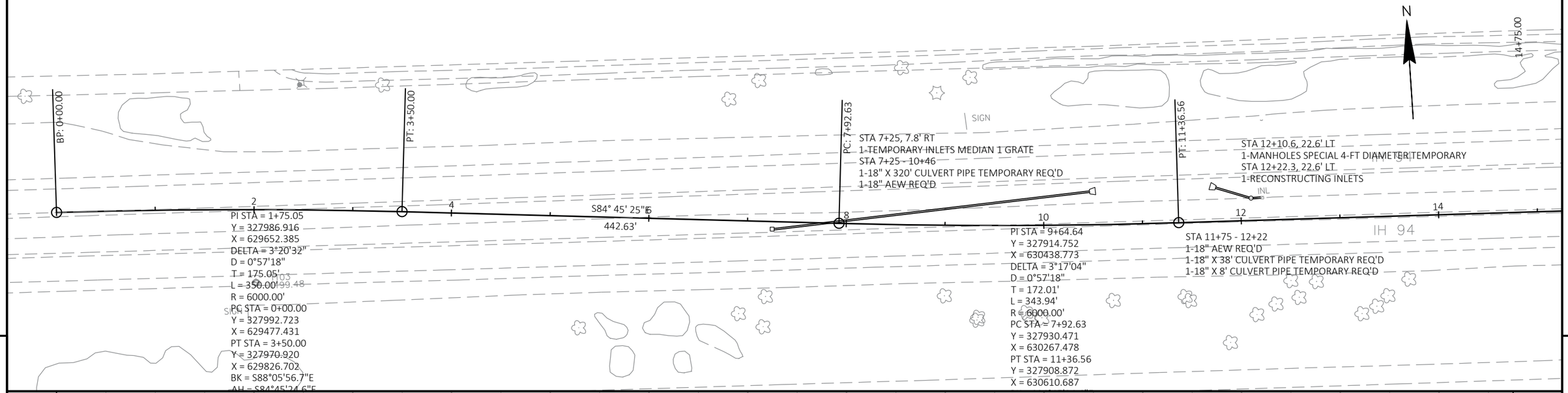
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: RAMP A CROSSOVER (STAGE 2)	SHEET 167	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050102-PP-I94-CTHB-RAMPA-S1.DWG
LAYOUT NAME - 01
PLOT DATE : 9/29/2020 12:31 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB CROSS OVER - STAGE 2 & 3	SHEET 168	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050102-PP-I94-CTHB-WB-S1-XOVER.DWG
LAYOUT NAME - 01
PLOT DATE : 10/28/2020 12:17 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

N

29+75.00

SIGN

POST

POST

POST

STA 19+10, 24.9' LT
1-MANHOLES SPECIAL 4-FT DIAMETER TEMPORARY
STA 19+22.6, 25.4' LT
1-RECONSTRUCTING INLETS

INL

16 18 20 22 24 26 28 S88° 02' 28"E 30

3474.34'

STA 18+75 - 19+22
1-18" AEW REQ'D
1-18" X 38' CULVERT PIPE TEMPORARY REQ'D
1-18" X 8' CULVERT PIPE TEMPORARY REQ'D

SIGN

5 00 5

1195 1190 1185 1180 1175 1170 1165 1160 1155 1150

EXISTING PROFILE TO REMAIN

1192.33 1191.92 1191.08 1190.21 1189.27 1188.24 1187.34 1186.37 1185.38 1184.31 1183.12 1182.02 1180.89 1179.73 1178.56 1177.26 1175.95 1174.64 1173.25 1171.84 1170.39 1168.93 1167.43 1165.84 1164.23 1162.63 1160.96 1159.24 1157.51 1155.79 1154.08 1153.17

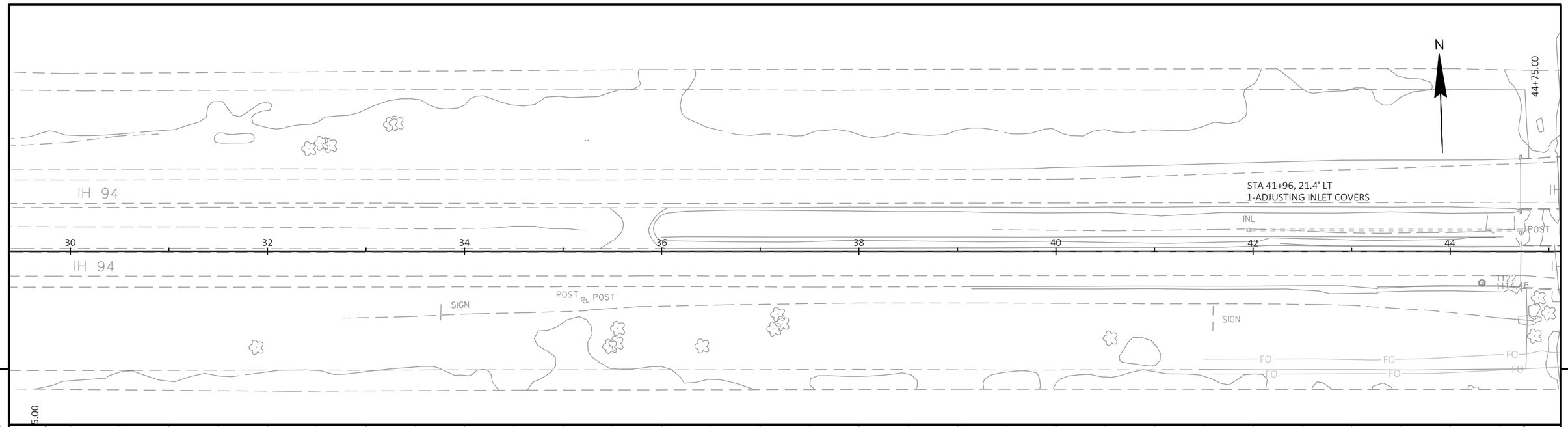
14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 29

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB CROSSOVER - STAGE 2 & 3	SHEET 169	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050102-PP-I94-CTHB-WB-S1-XOVER.DWG
LAYOUT NAME - 02

PLOT DATE : 10/28/2020 12:17 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



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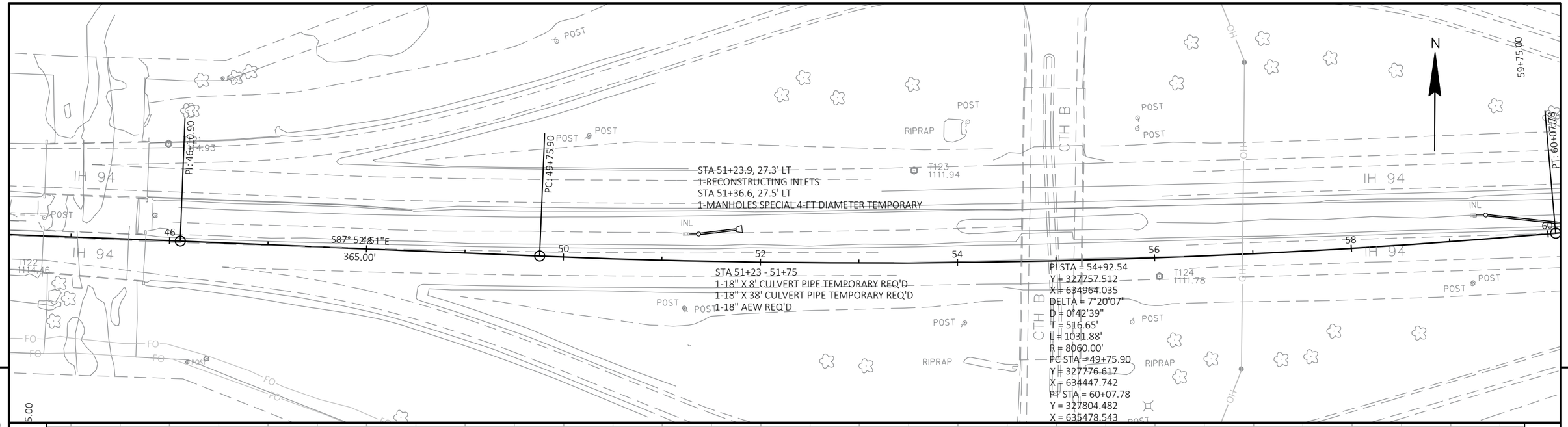
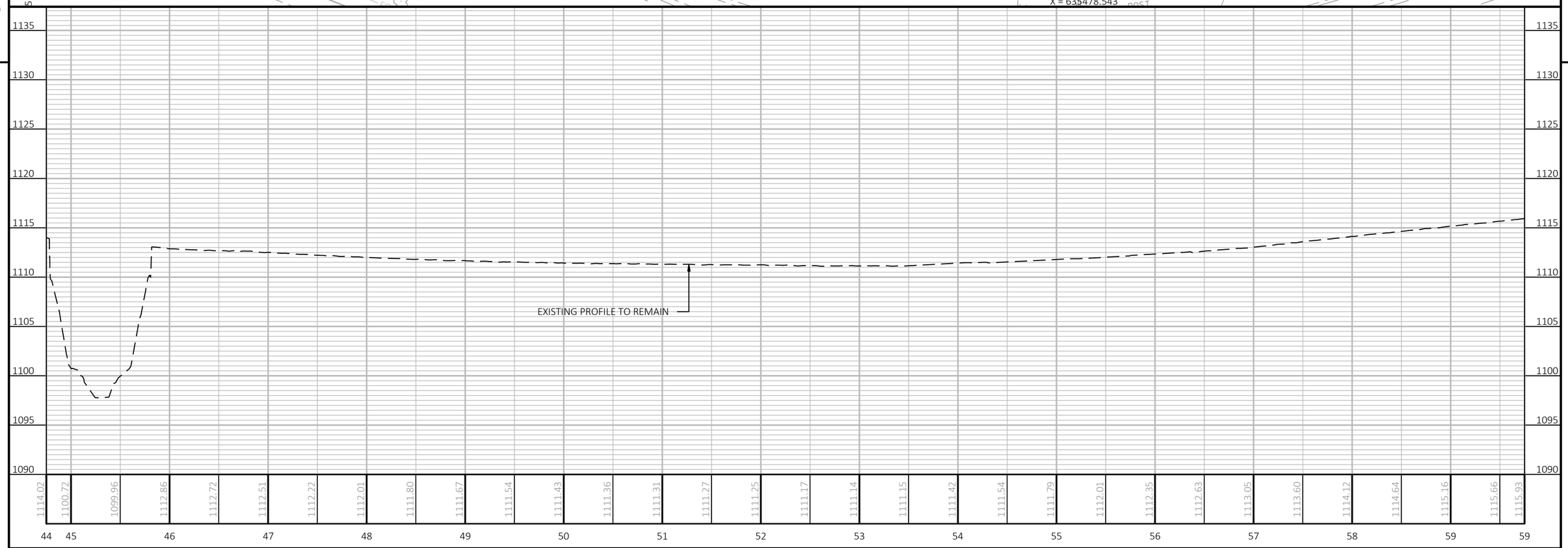
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB CROSSOVER - STAGE 2 & 3	SHEET 170	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050102-PP-I94-CTHB-WB-S1-XOVER.DWG
LAYOUT NAME - 03

PLOT DATE : 10/28/2020 12:17 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

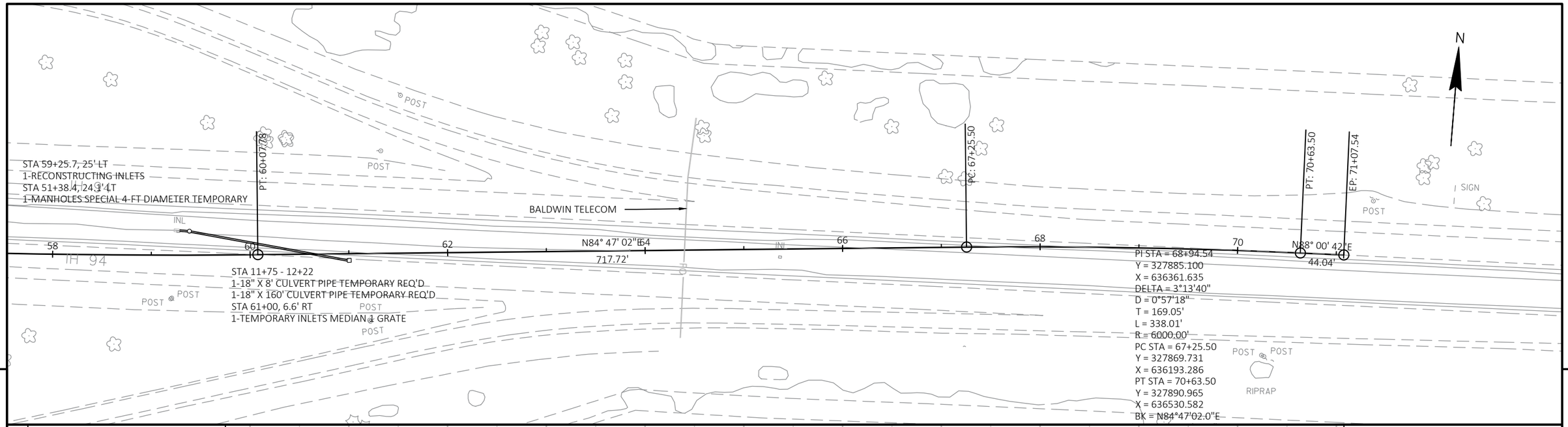
WISDOT/CADDS SHEET 44

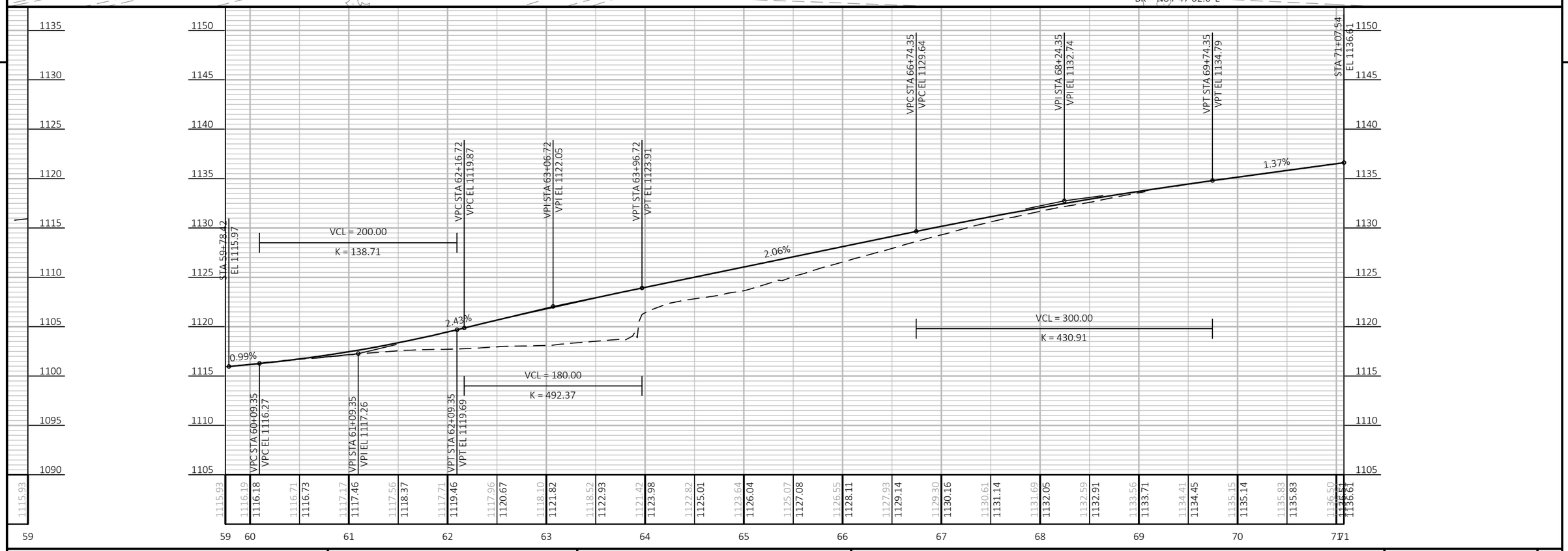




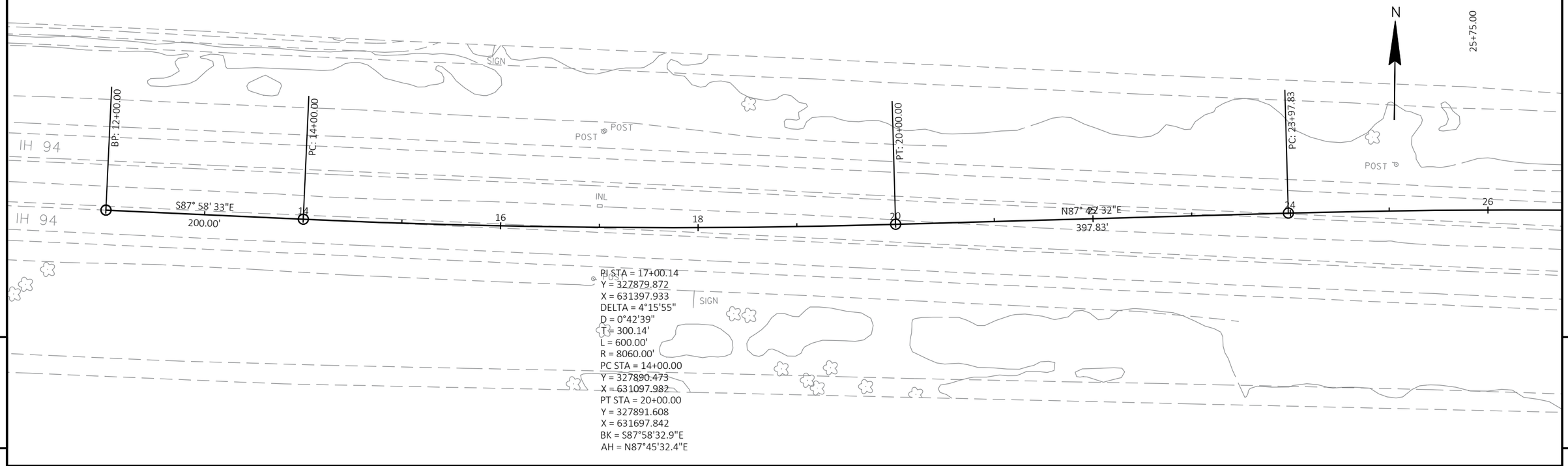
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB CROSSOVER - STAGE 2 & 3	SHEET 171	E

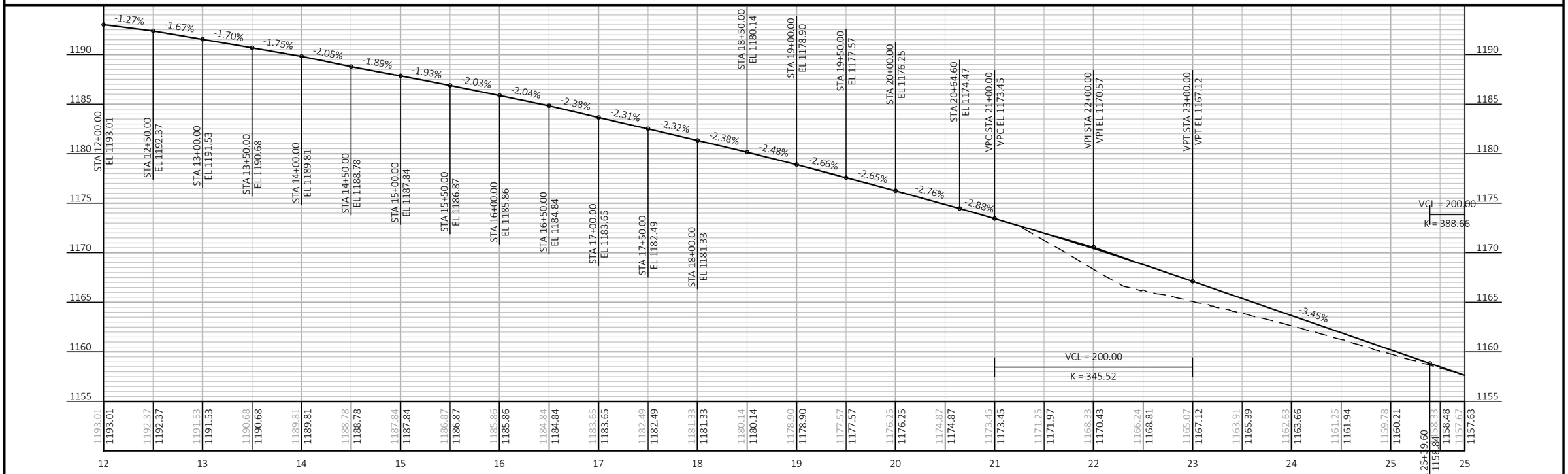
FILE NAME : C:\C3D\10210407\SHEETSPLAN\050102-PP-I94-CTHB-WB-S1-XOVER.DWG
LAYOUT NAME - 04
PLOT DATE : 10/28/2020 12:17 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44





PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB CROSSOVER - STAGE 2 & 3	SHEET 172	E





5

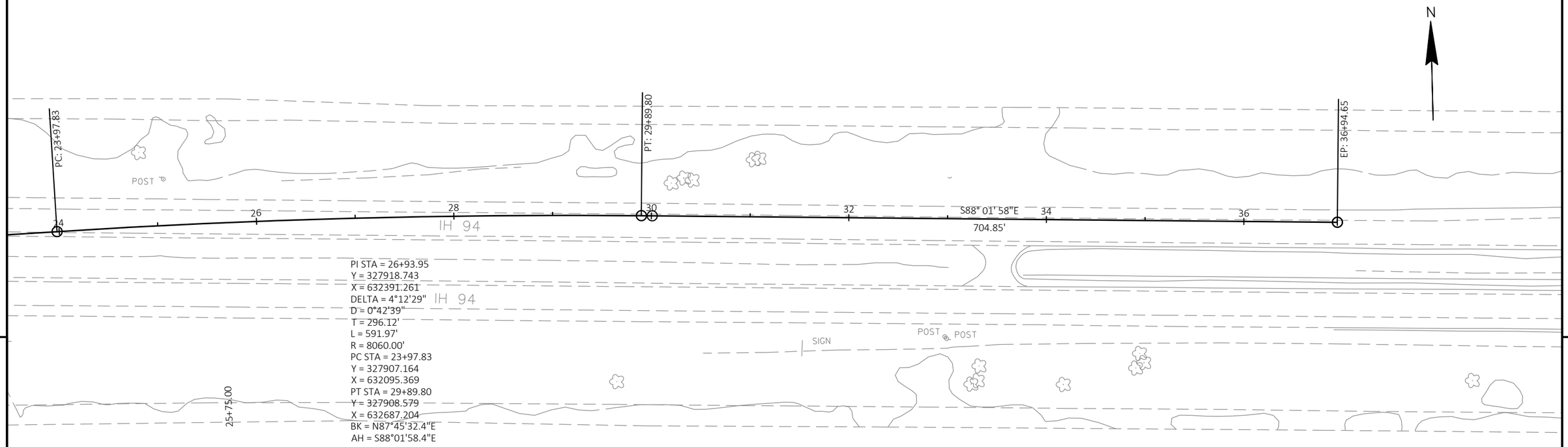
5

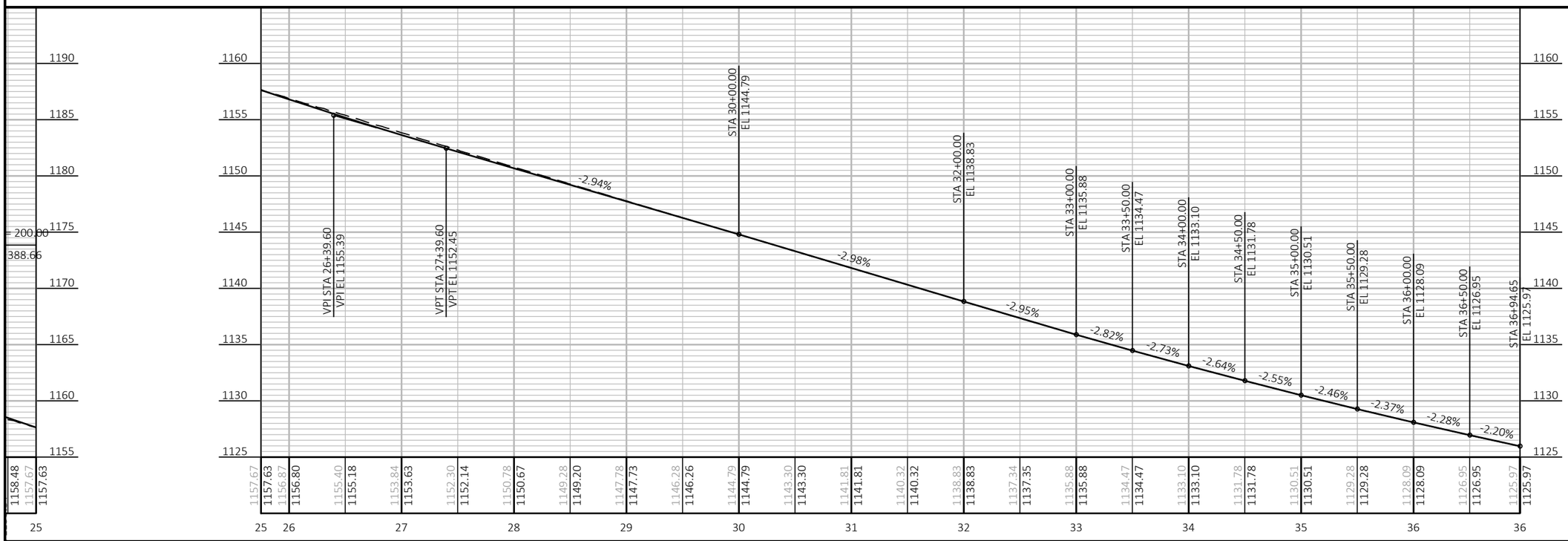
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB CROSSOVER - STAGE 4 & 5	SHEET 173	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050103-PP-I94-CTHB-EB-S4-XOVER-WEST.DWG
LAYOUT NAME - 01

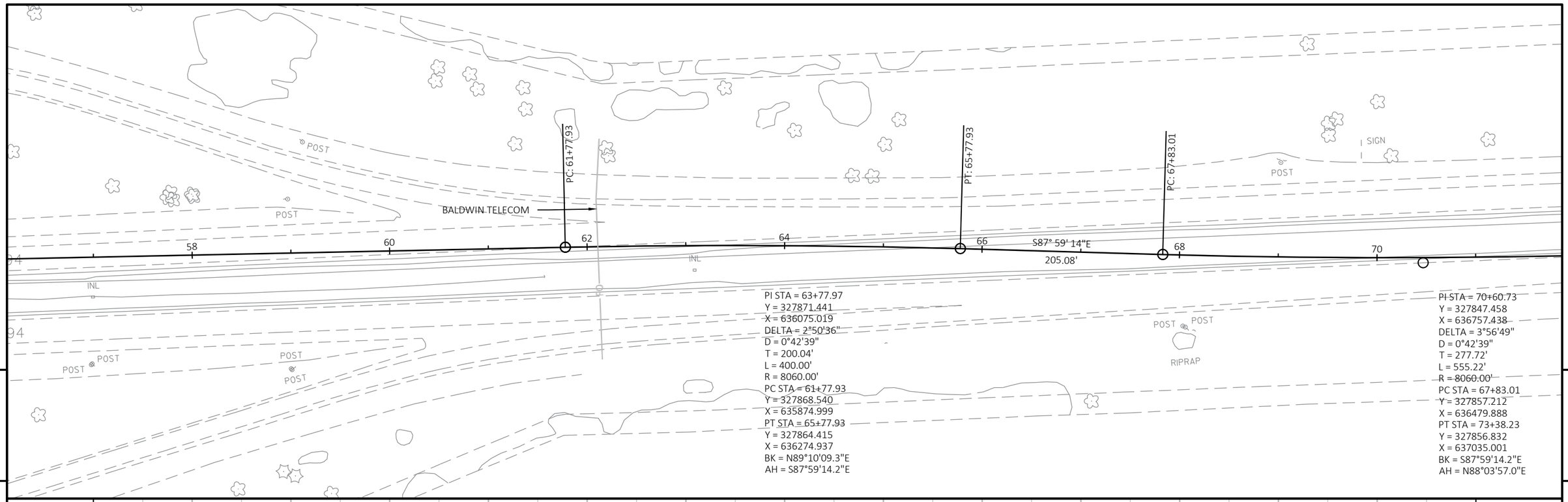
PLOT DATE : 7/17/2020 11:43 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

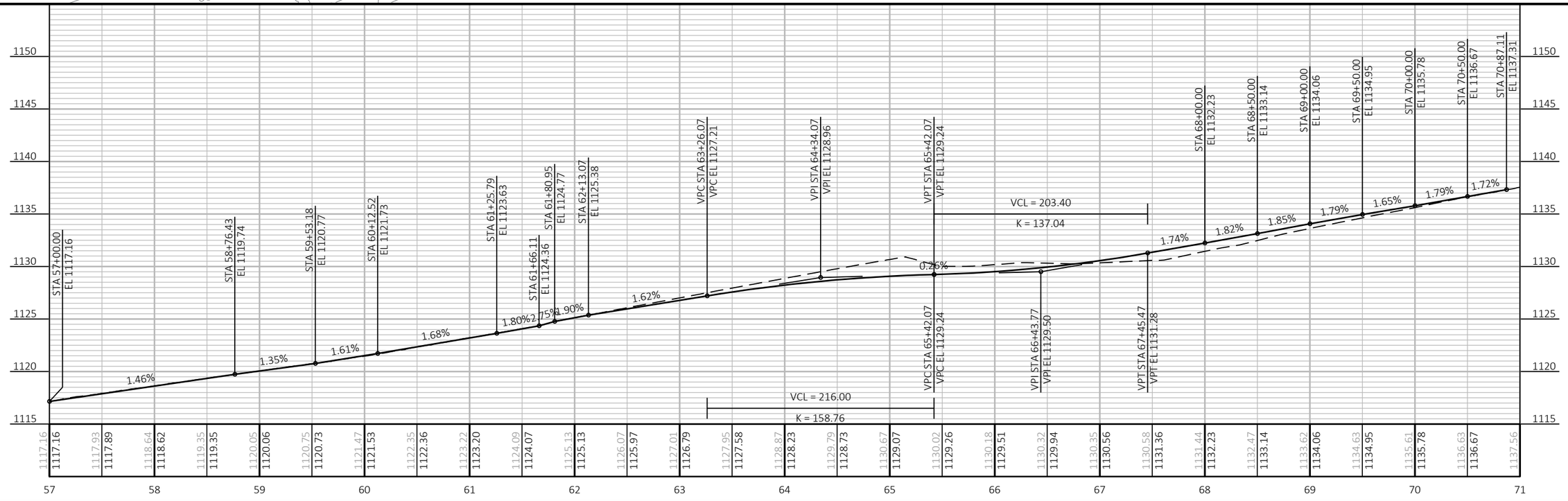
WISDOT/CADDS SHEET 44





PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB CROSSOVER - STAGE 4 & 5	SHEET 174	E





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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB CROSSOVER - STAGE 4 & 5	SHEET 175	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050103-PP-I94-CTHB-EB-S4-XOVER-EAST.DWG
LAYOUT NAME - 03

PLOT DATE : 9/29/2020 12:23 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

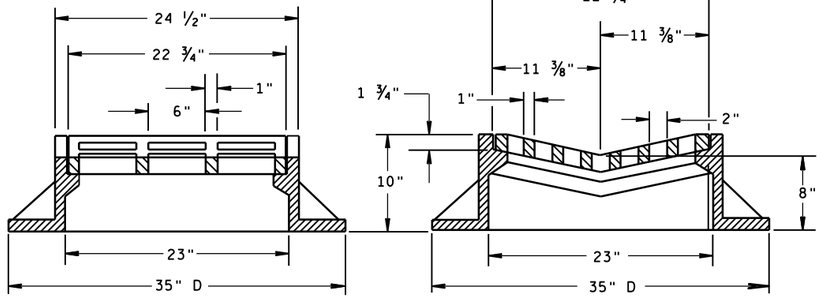
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D02-07A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-11	PULL BOX
09H11-01	IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	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
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B52-01A	CABLE BARRIER TYPE 1 LAYOUT
14B52-01B	CABLE BARRIER TYPE 1 LAYOUT
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15A01-13B	FLEXIBLE MARKER POST FOR RIGHT-OF-WAY
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-05C	DELINEATOR POST WITH REFLECTIVE SHEETING
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE

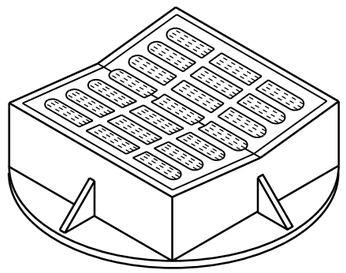
6

Standard Detail Drawing List

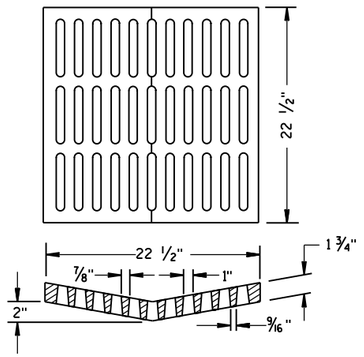
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C27-03B	PAVEMENT MARKING (ISLANDS)
15C31-03A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-03C	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-08B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-05B	TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-05D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-05E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D41-01	TRAFFIC CONTROL, MULTIPLE LANE SHIFT, MULTILANE DIVIDED ROAD
15D42-01	TRAFFIC CONTROL, TWO LANE FULL FREEWAY CLOSURE

6



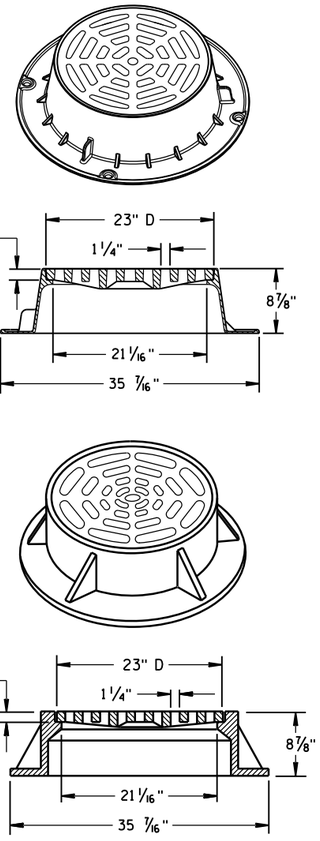


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

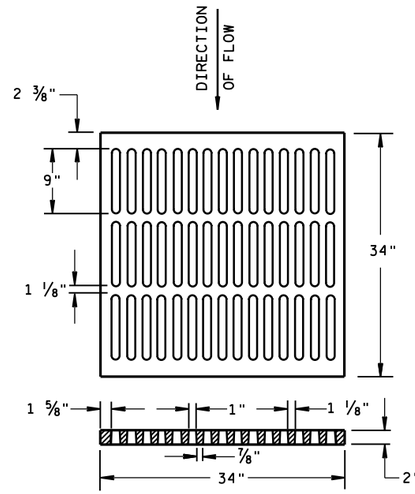
NOTE: EITHER CASTING IS ACCEPTABLE

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.

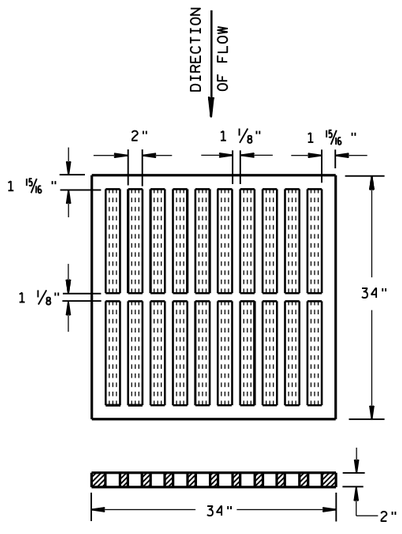
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



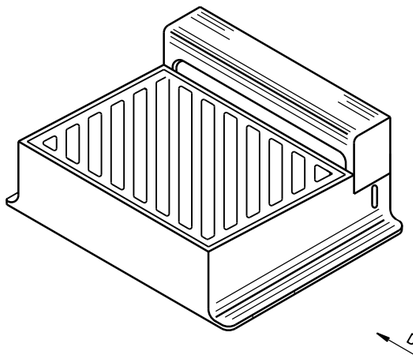
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

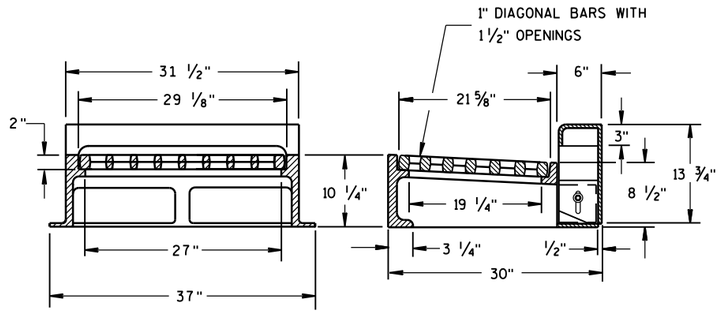


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

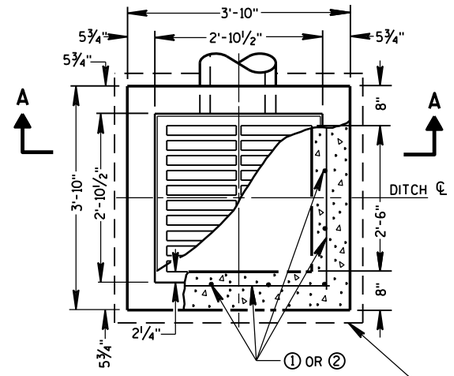
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

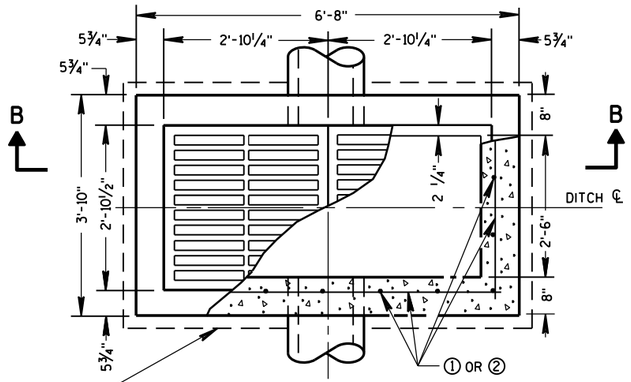
APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

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

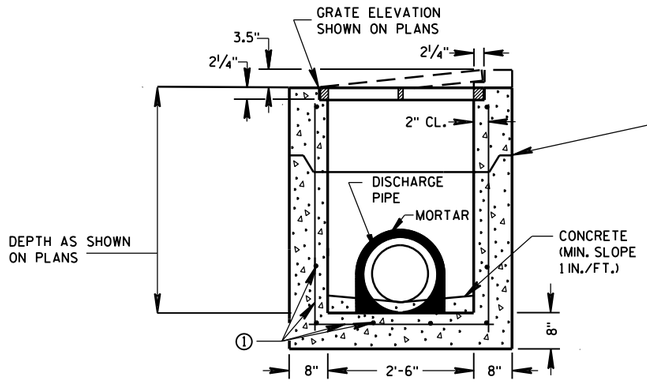


PLAN VIEW

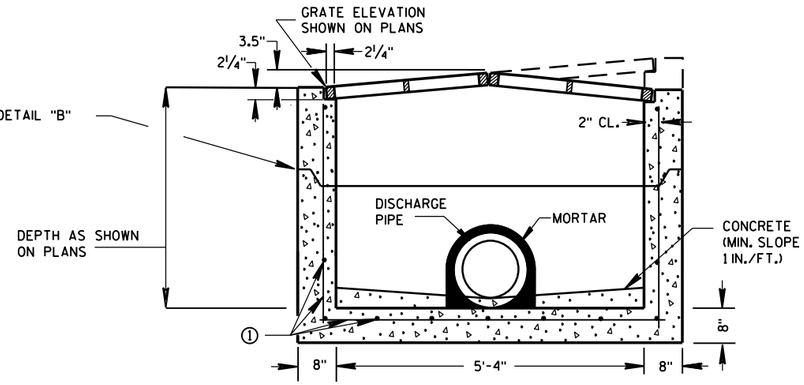


PLAN VIEW

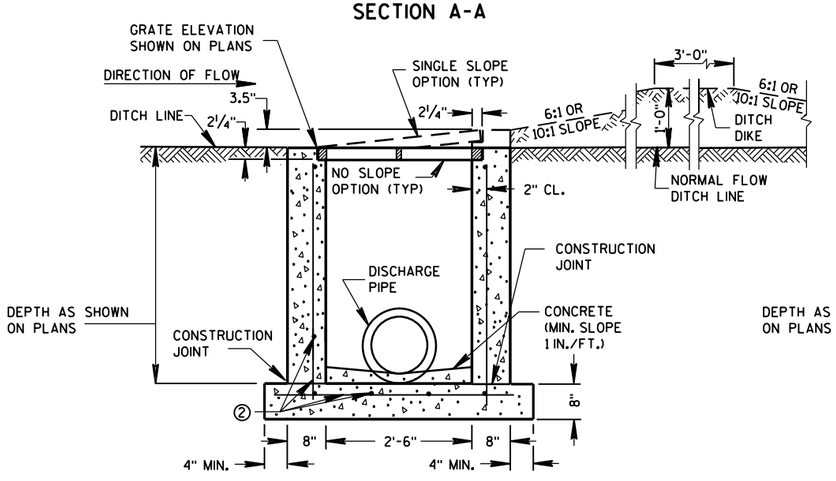
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



PRECAST REINFORCED CONCRETE SECTION A-A

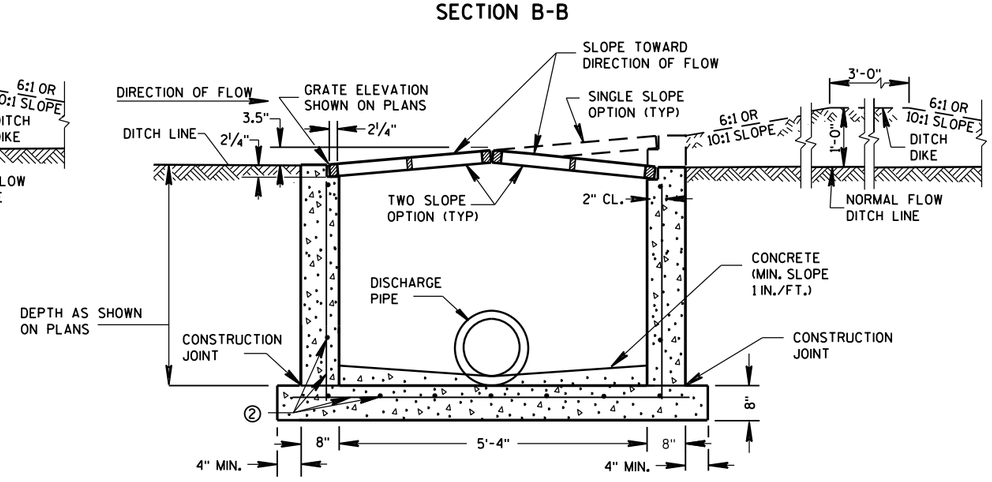


PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 2 GRATE

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 INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

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

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

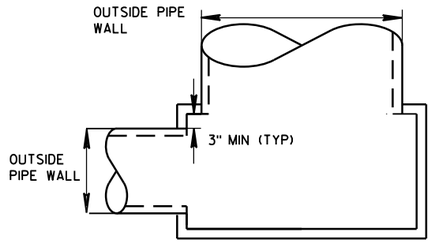
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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.

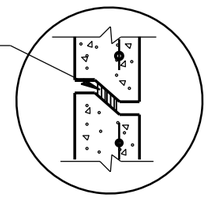
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVI ENT
FHWA

6
S.D.D. 8 C 8-2

GENERAL NOTES

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

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

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

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

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

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

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

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

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

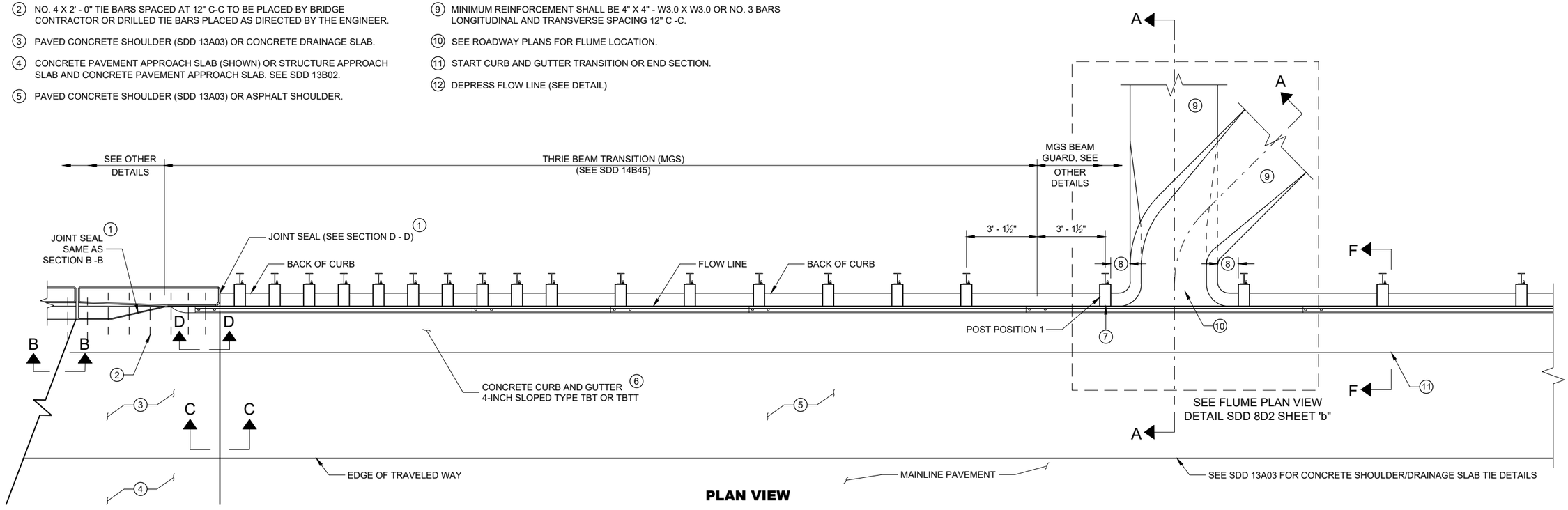
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

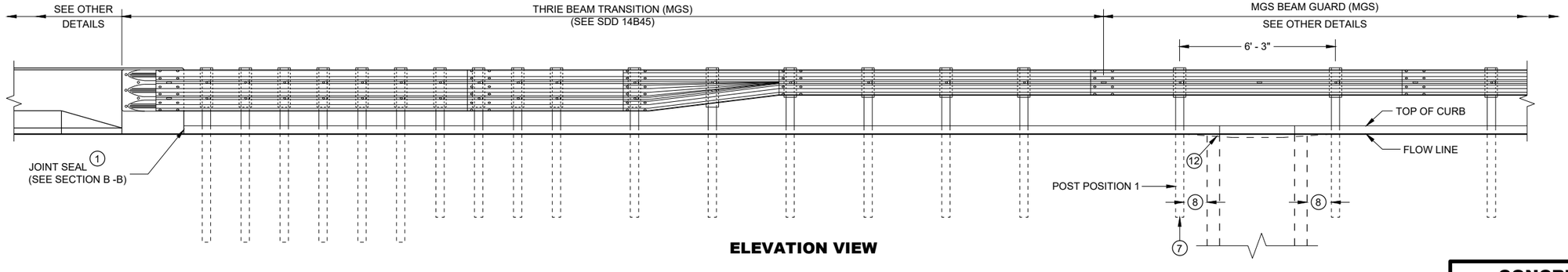
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



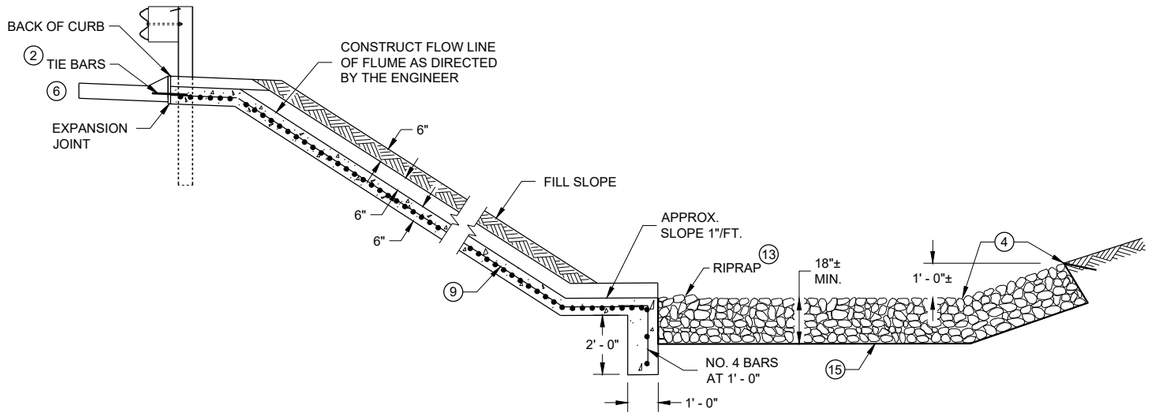
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

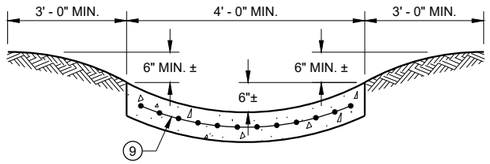
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D02 - 07a

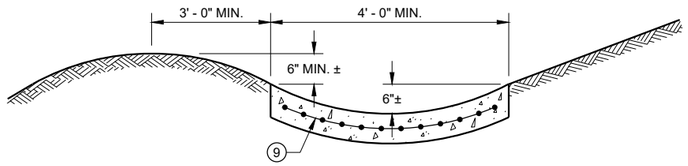
SDD 08D02 - 07a



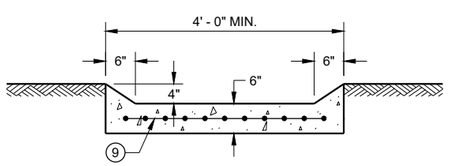
SECTION A - A



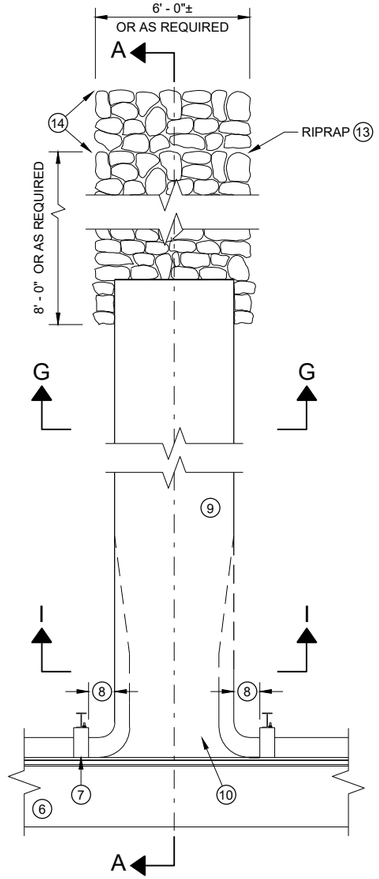
SECTION G - G



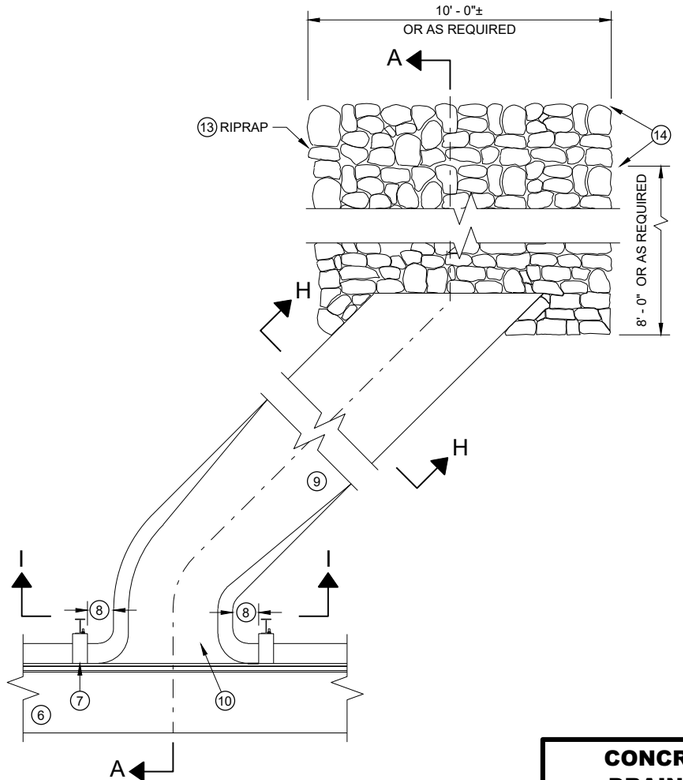
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

GENERAL NOTES

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

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

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

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

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

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

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

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

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

(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(14) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.

(15) GEOTEXTILE FABRIC TYPE HR.

6

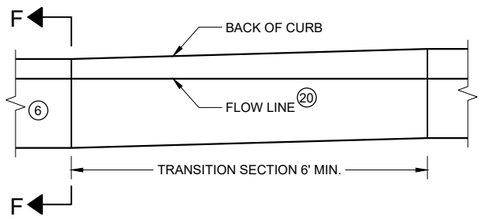
SDD 08D02 - 07b

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

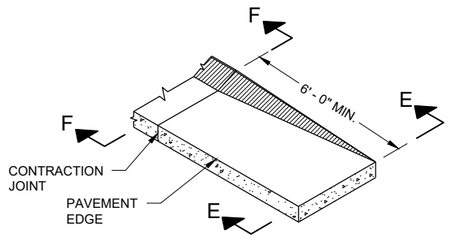
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTAT

6

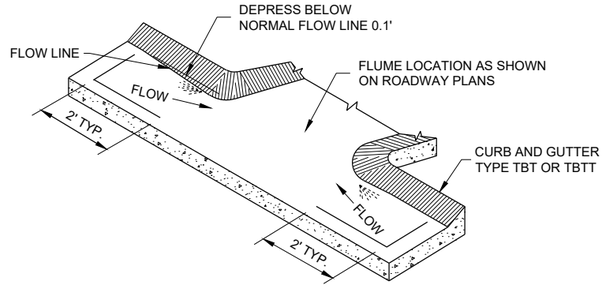
SDD 08D02 - 07b



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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

(15) GEOTEXTILE FABRIC TYPE HR.

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

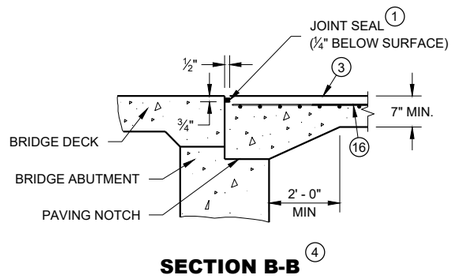
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

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

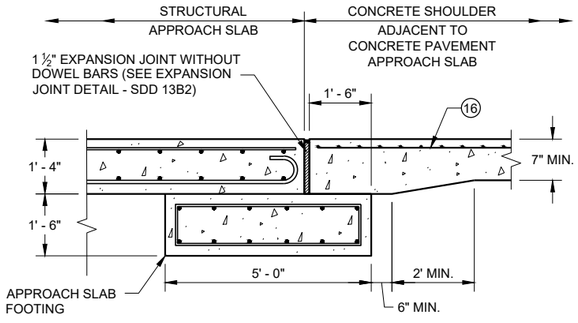
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

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

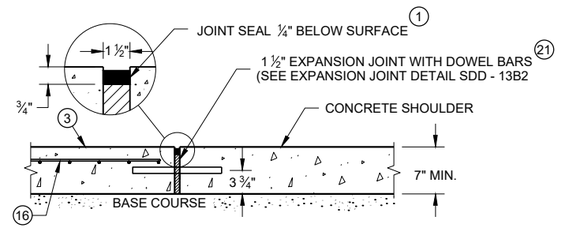
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



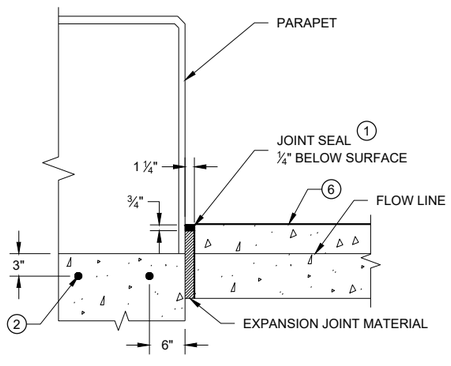
SECTION B-B (4)



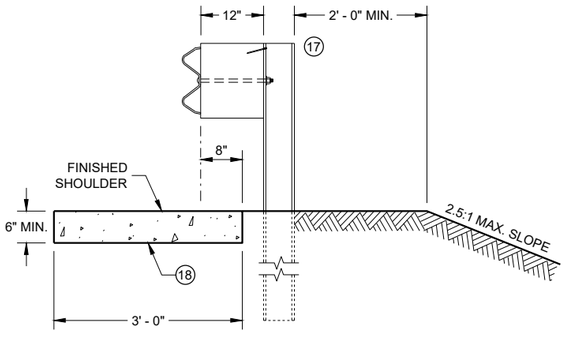
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



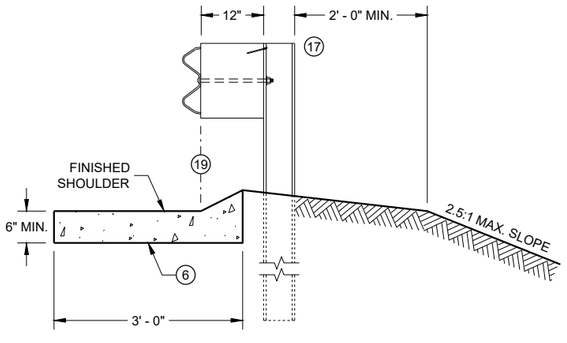
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

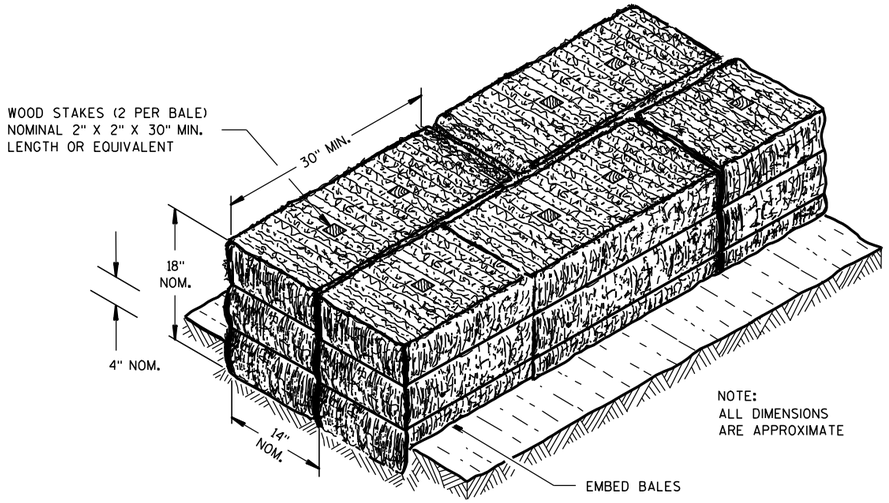
APPROVED
February 2020
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

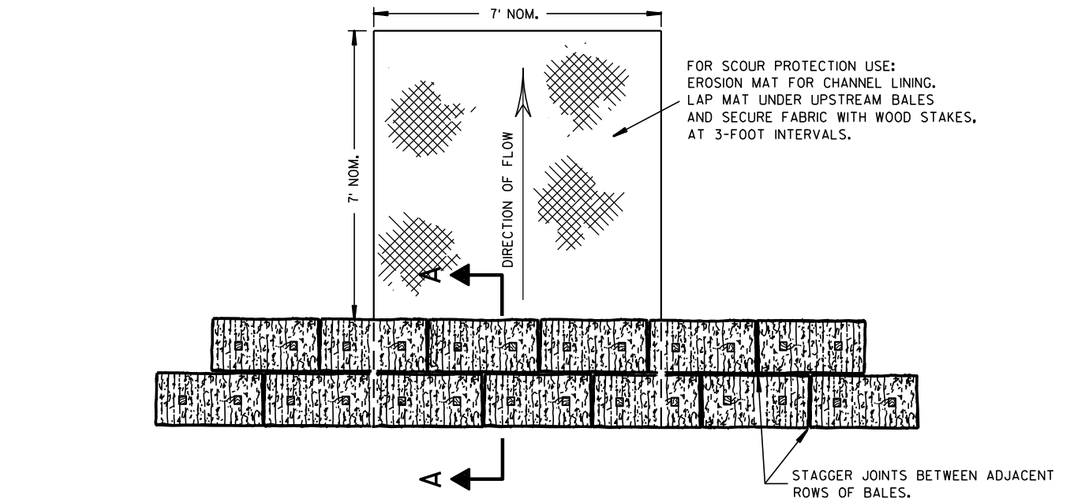
FHWA

SDD 08D02 - 07c

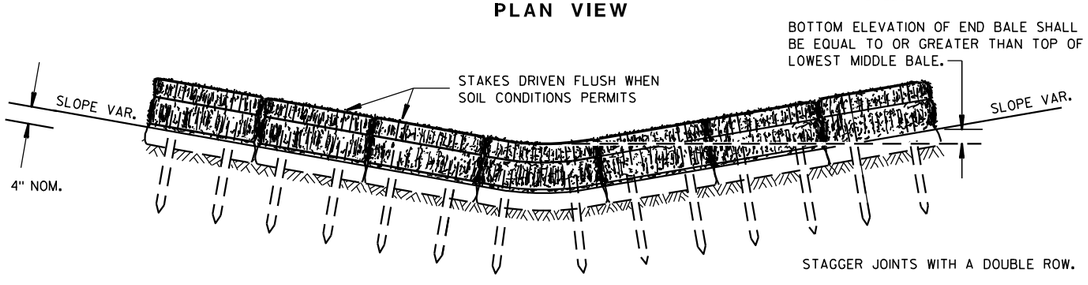
SDD 08D02 - 07c



SECTION A-A



PLAN VIEW



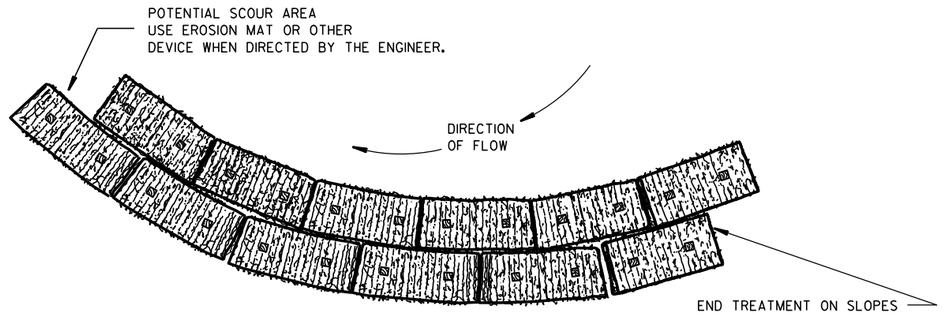
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

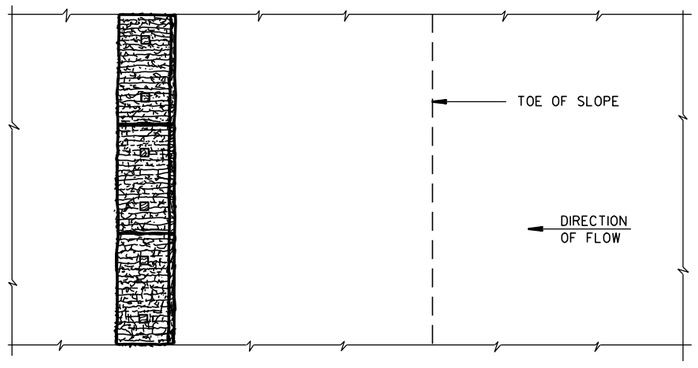
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

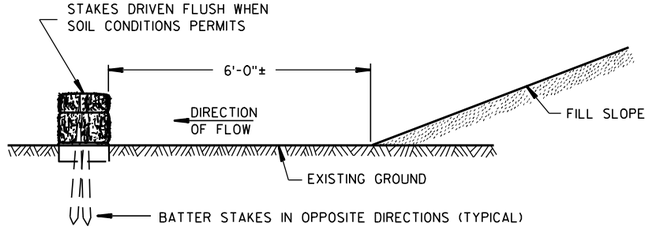


PLAN VIEW

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

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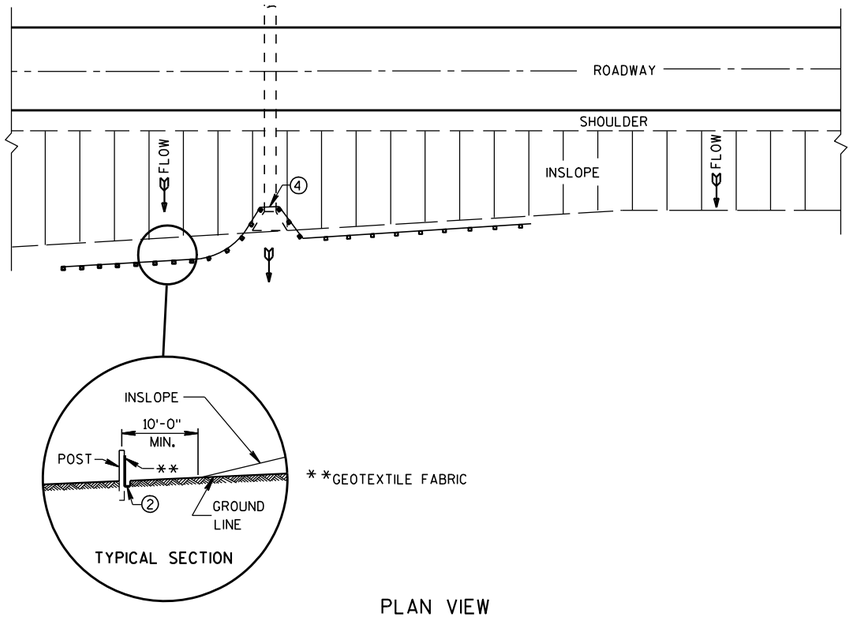
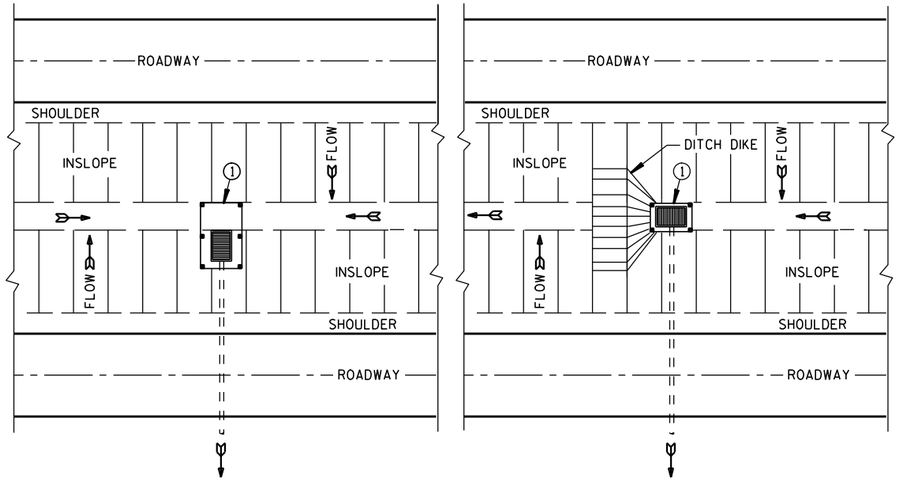
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



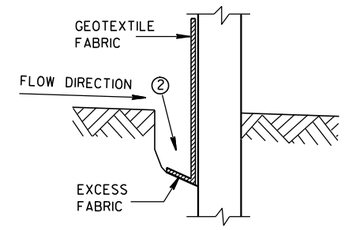
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

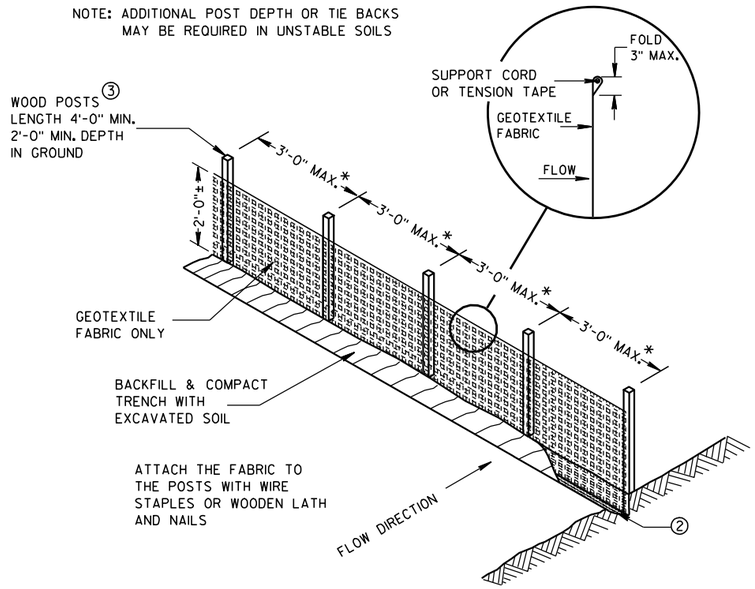
GENERAL NOTES

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

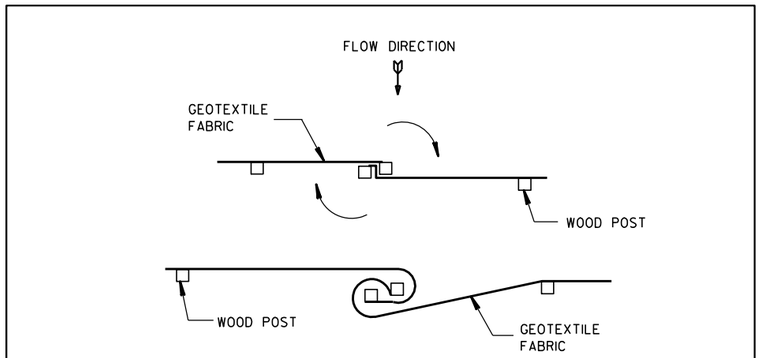
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



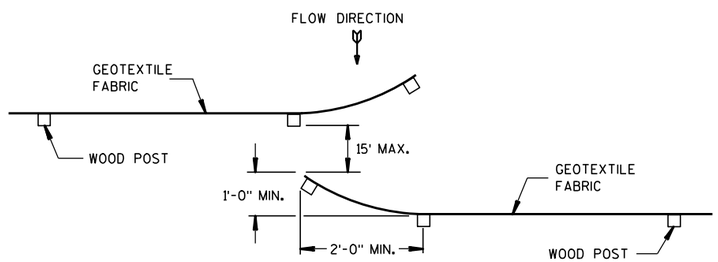
TRENCH DETAIL



SILT FENCE

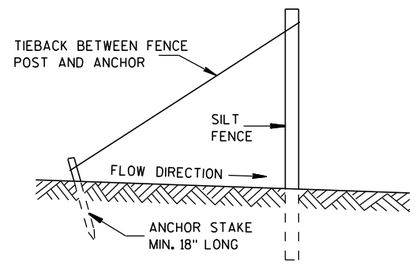


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 9-6

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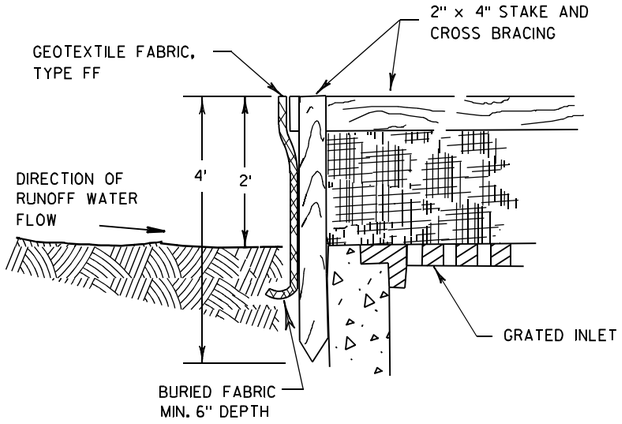
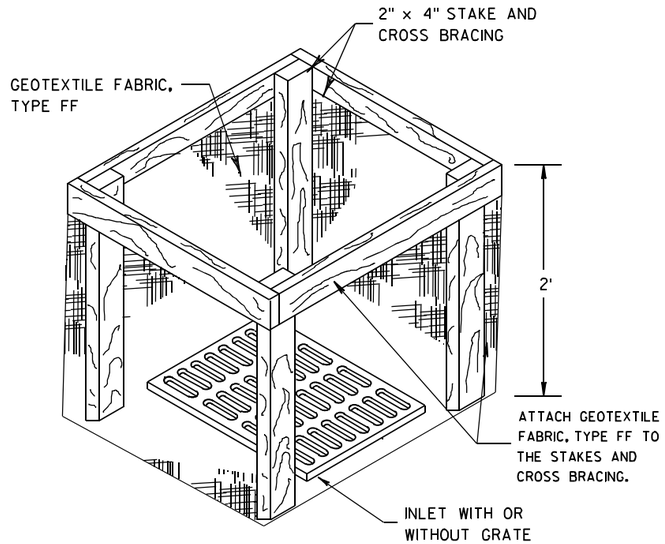
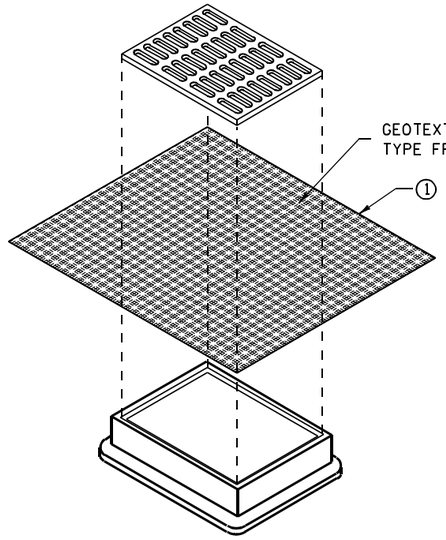
S.D.D. 8 E 9-6



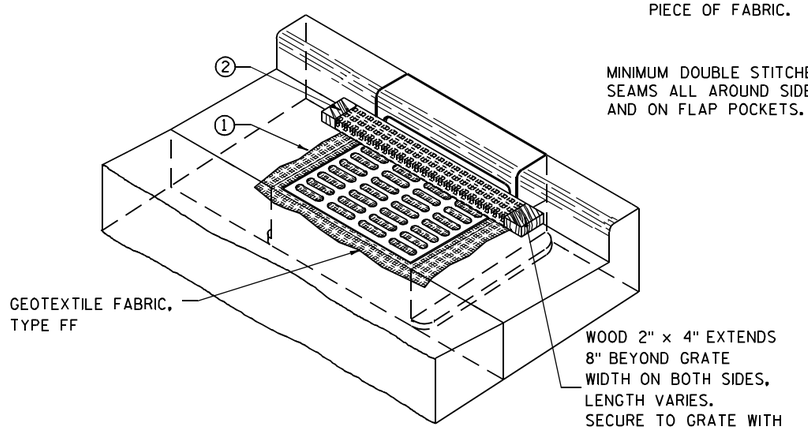


INLET PROTECTION, TYPE A

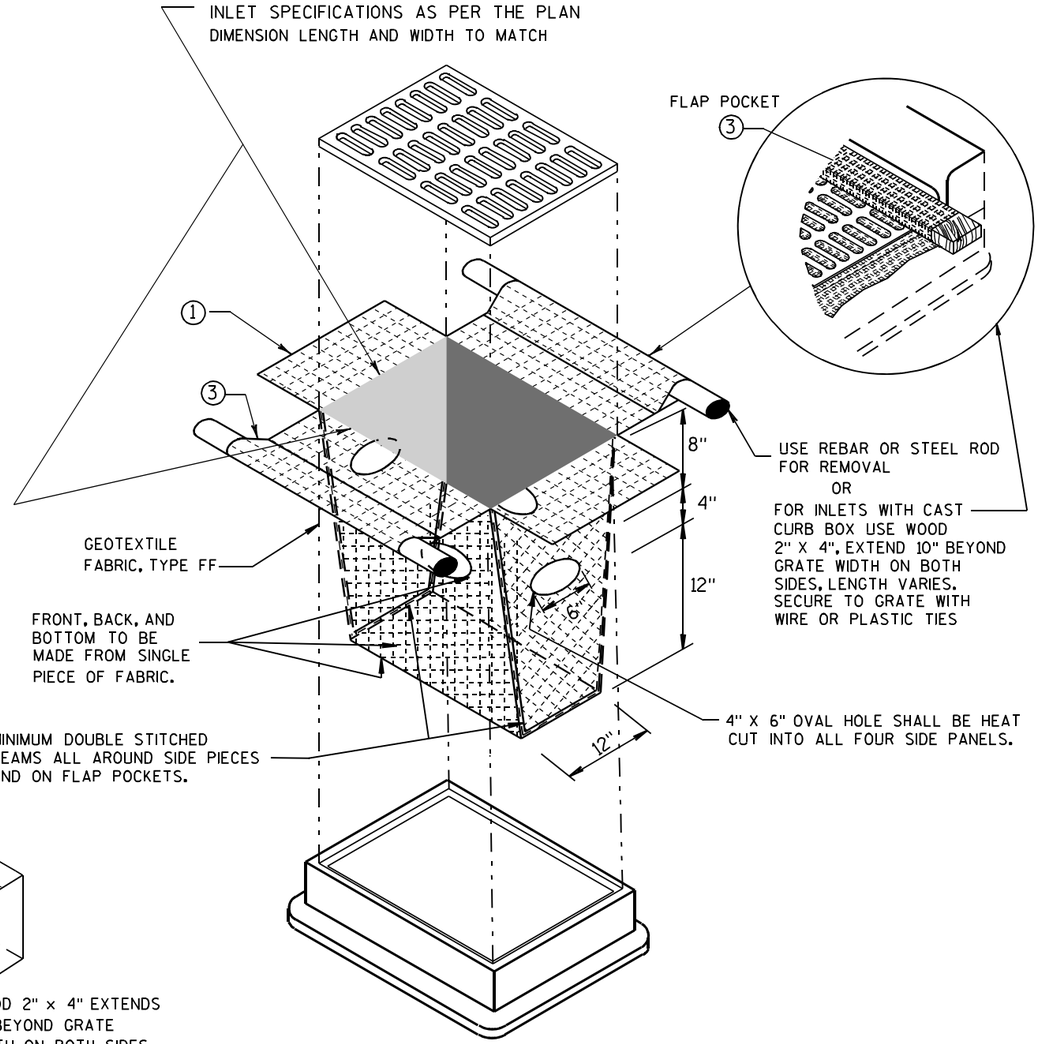


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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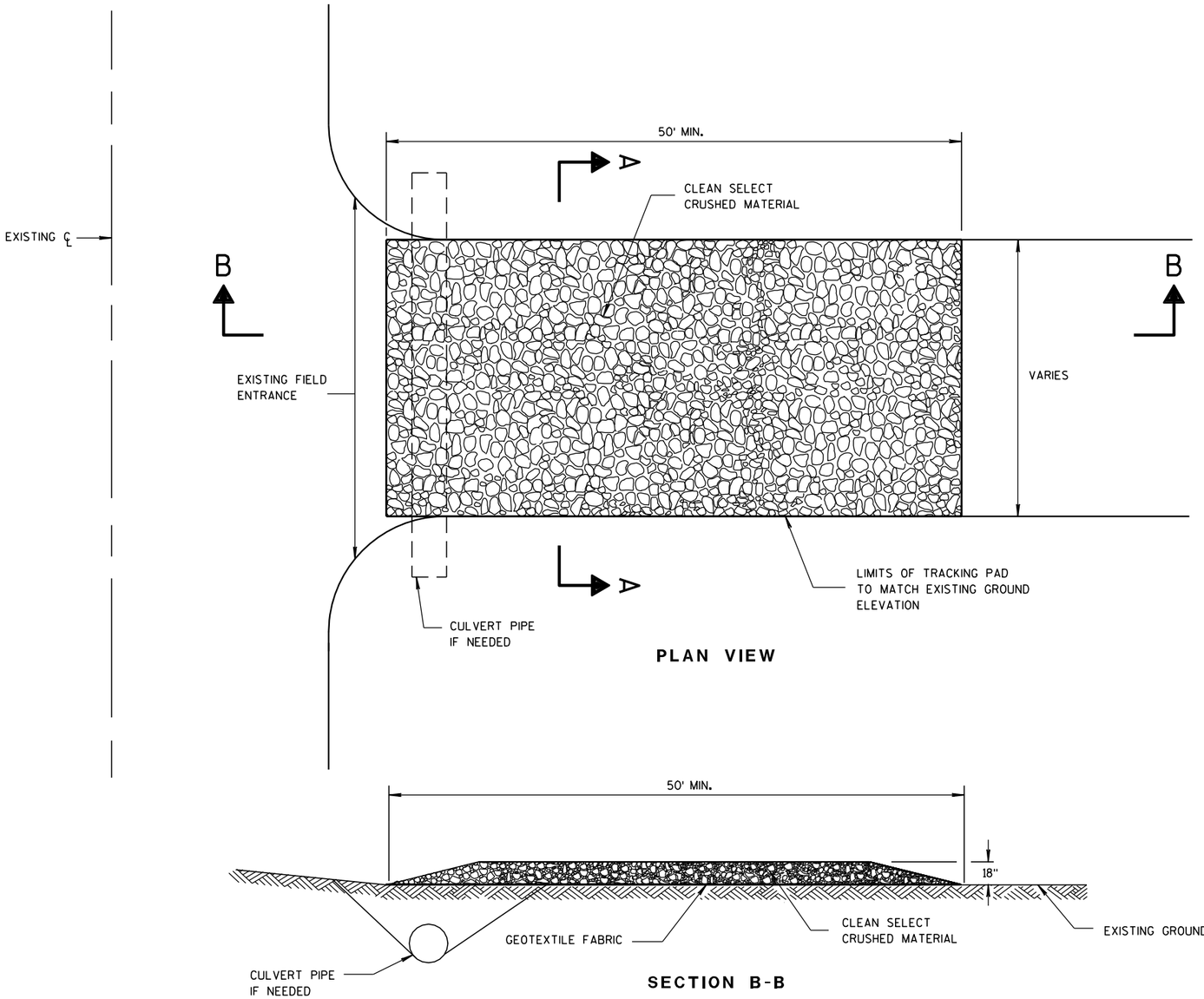
S.D.D. 8 E 10-2



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.

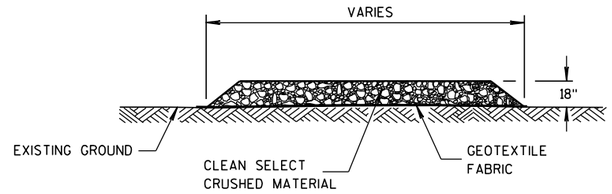
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER

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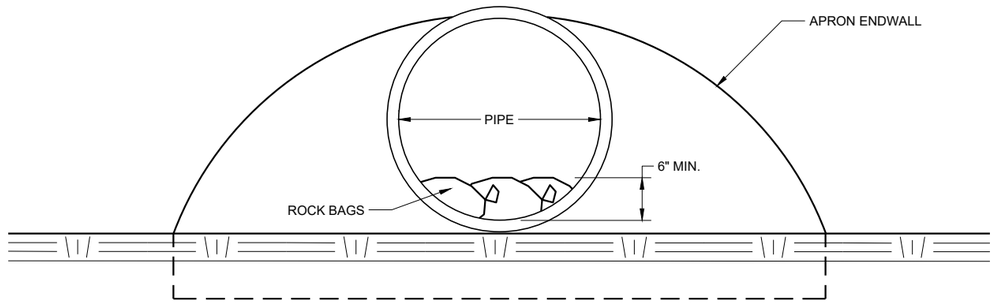
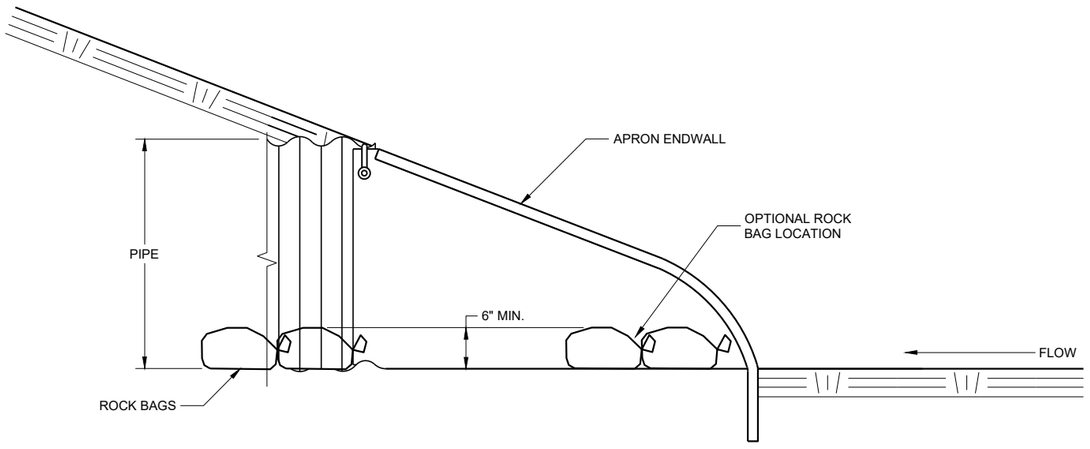


END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI
FHWA	

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SDD 08E15 - 01

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SDD 08E15 - 01

METAL APRON ENDWALLS

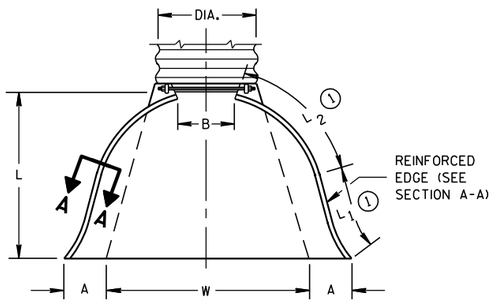
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

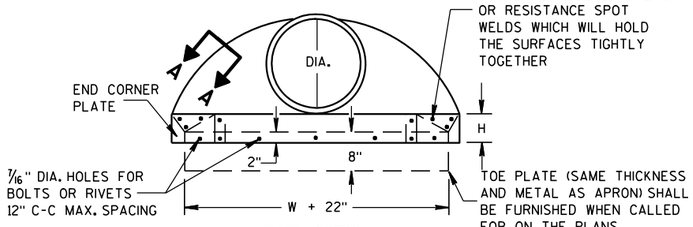
REINFORCED CONCRETE APRON ENDWALLS

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

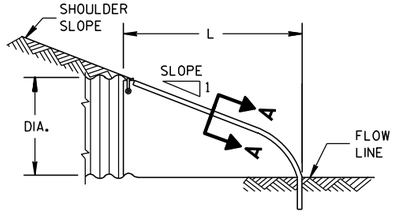
*MINIMUM
**MAXIMUM



PLAN VIEW

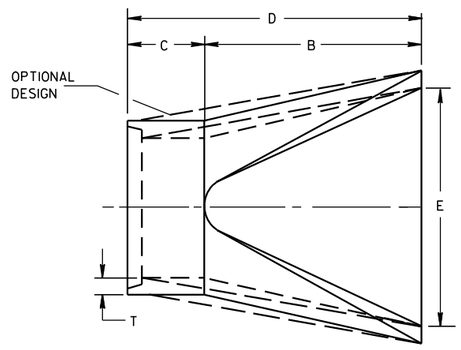


END VIEW

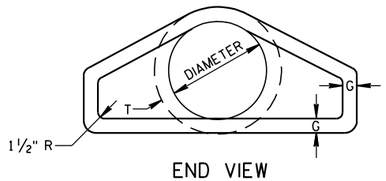


SIDE ELEVATION

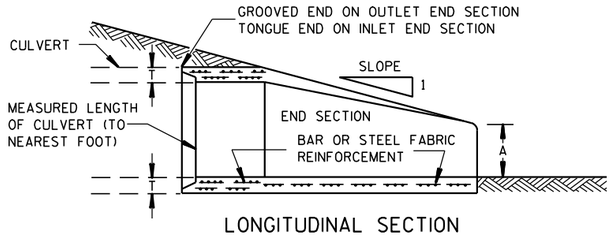
METAL ENDWALLS



PLAN

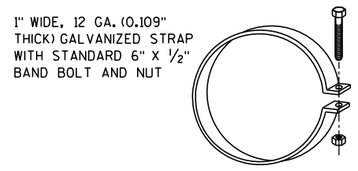


END VIEW



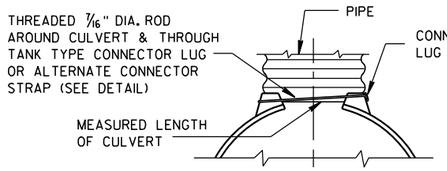
LONGITUDINAL SECTION

CONCRETE ENDWALLS

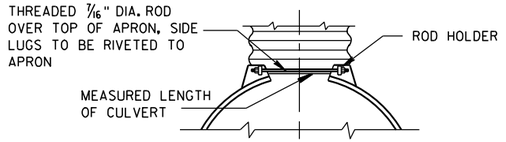


ALTERNATE FOR TYPE 1 CONNECTION

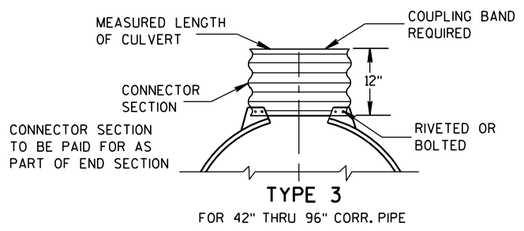
END SECTION CONNECTOR STRAP



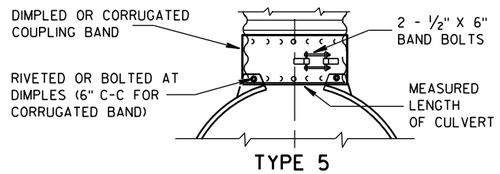
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

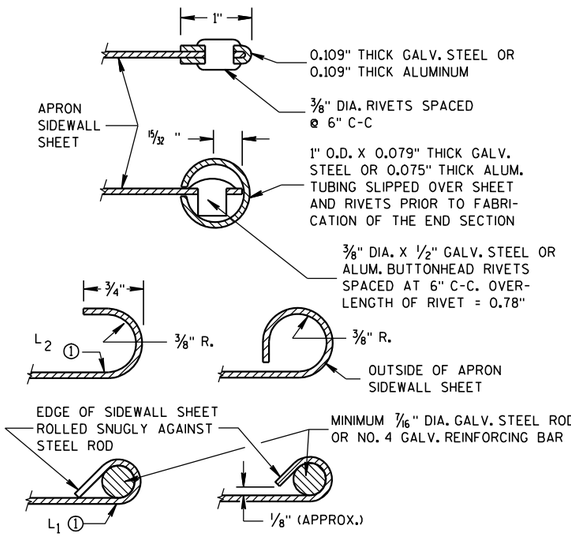
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

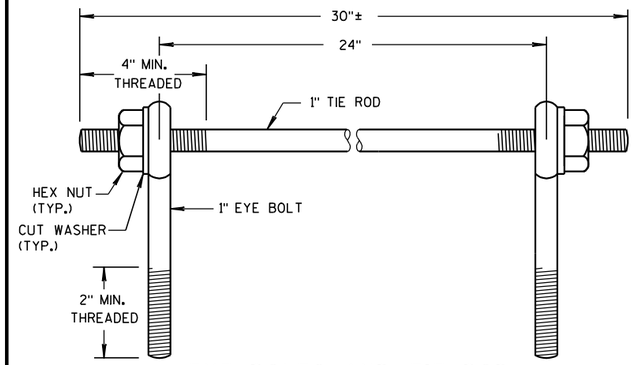
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

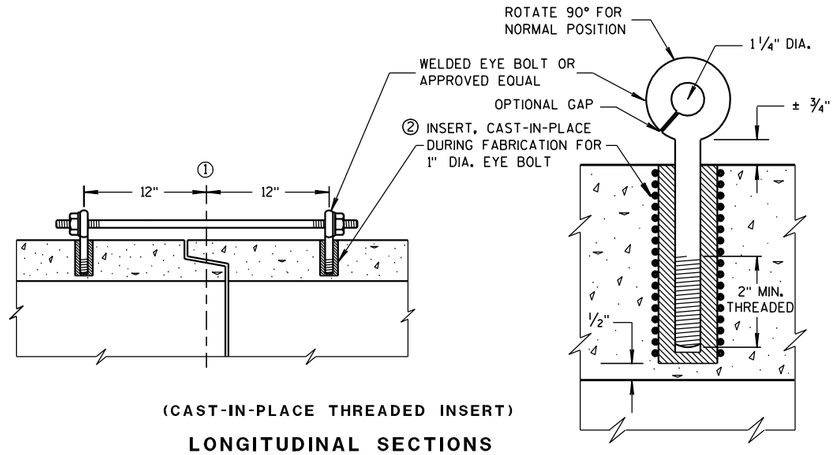
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



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.

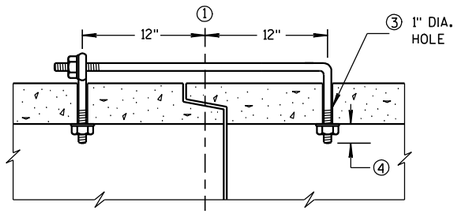
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

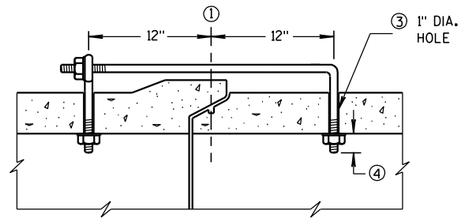
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

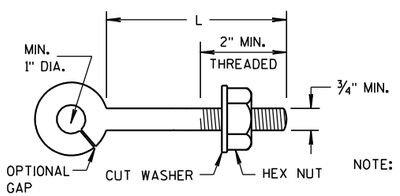


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

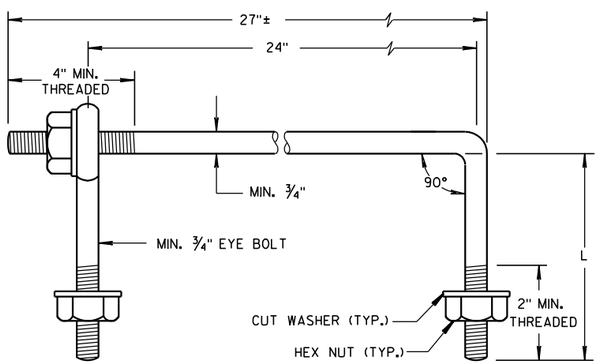
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

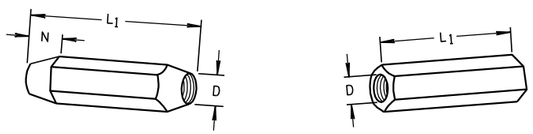
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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 7/16

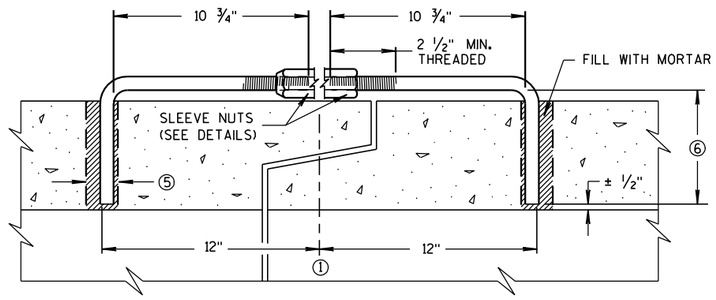
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

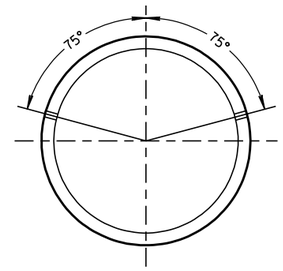
SLEEVE NUTS



LONGITUDINAL SECTION

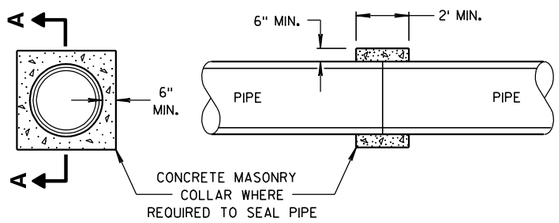
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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

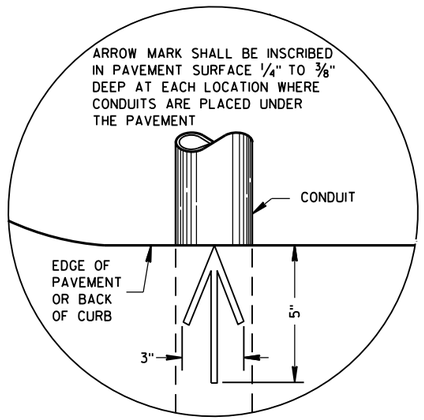
APPROVED
6/5/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 F 4-7

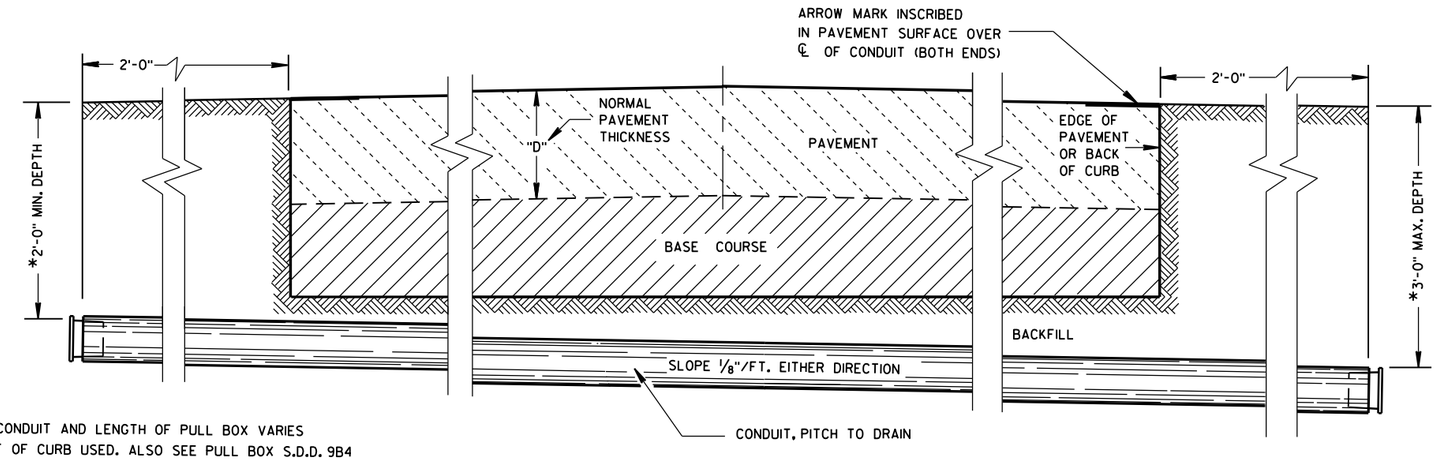
6

S.D.D. 8 F 4-7



PLAN VIEW

ARROW MARK



*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

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

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

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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

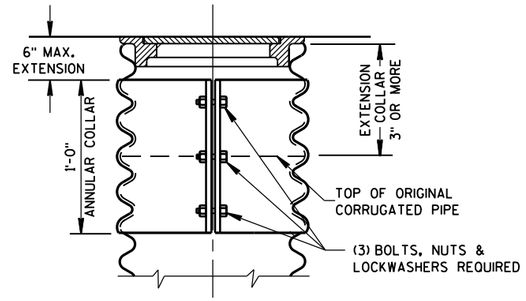
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

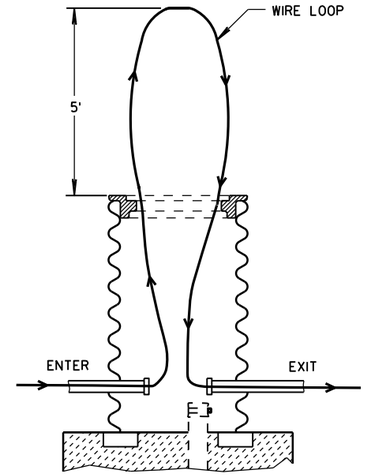
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

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

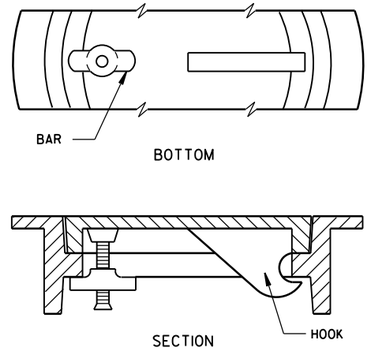
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

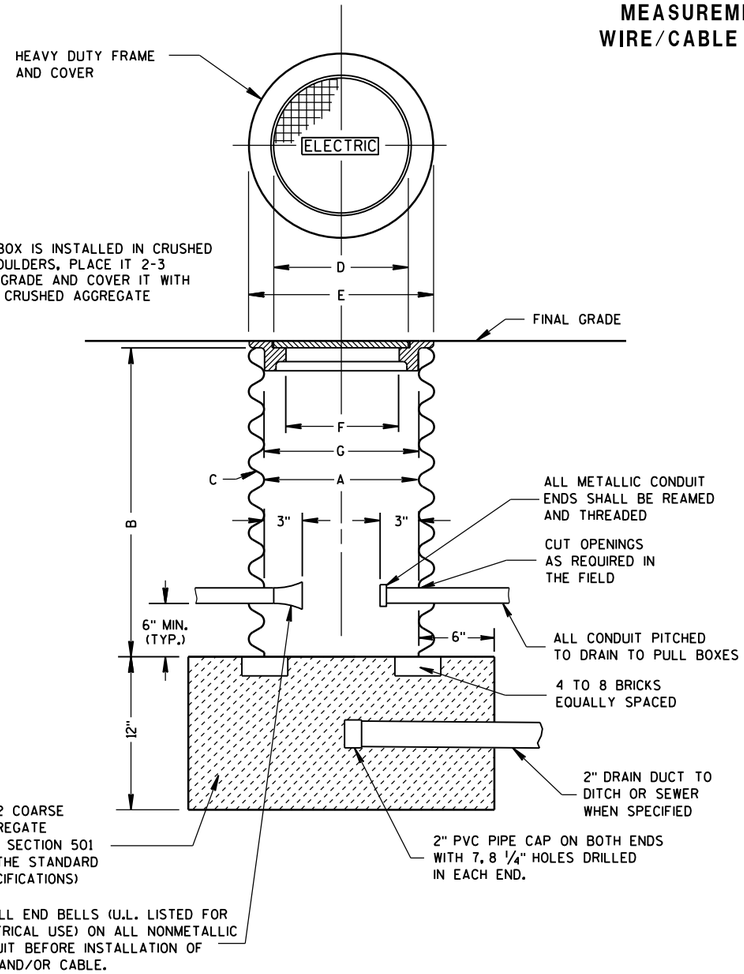


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



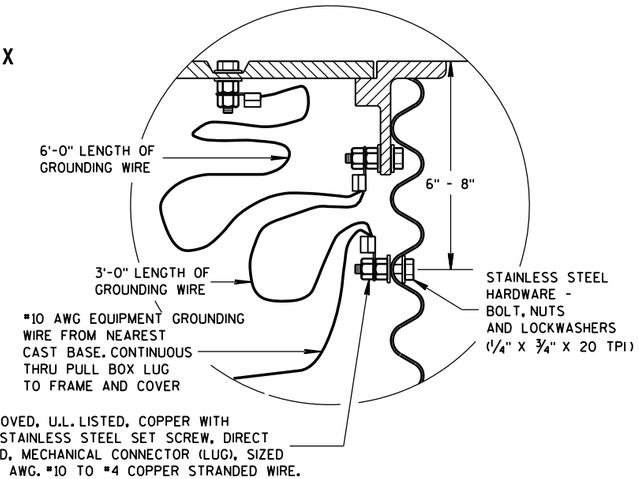
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



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

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

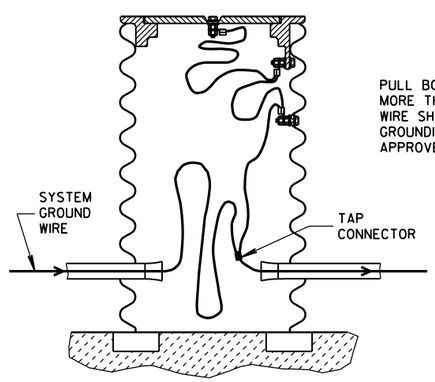
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

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

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

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



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

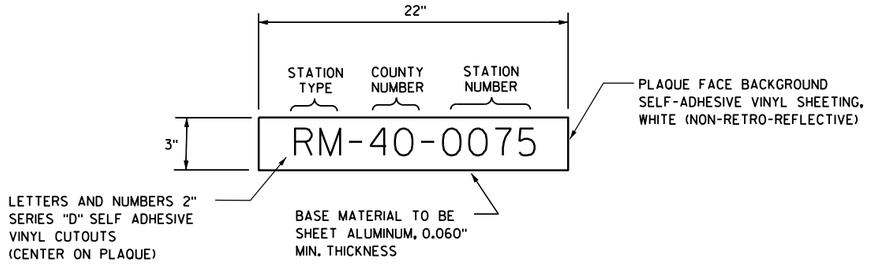
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

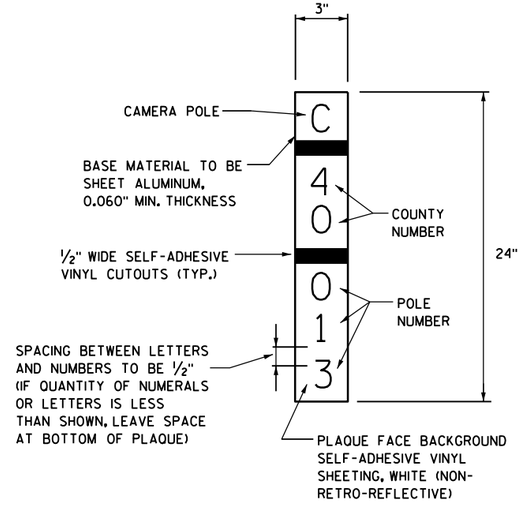
APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

6

S.D.D. 9 B 4-11



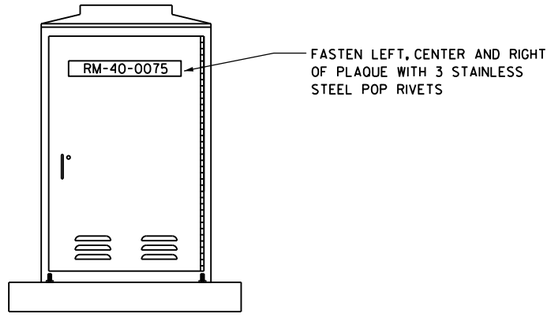
CONTROL CABINET IDENTIFICATION PLAQUE DETAIL



POLE IDENTIFICATION PLAQUE DETAIL

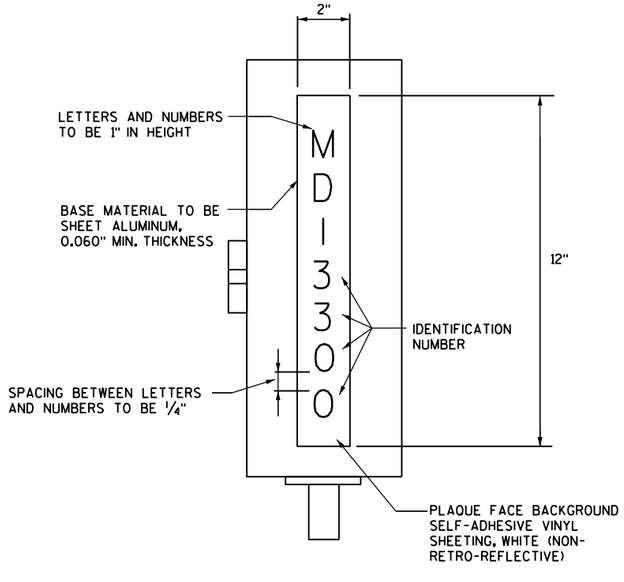
GENERAL NOTES

1. TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
2. FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
3. FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE (2), FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
4. COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.



CONTROL CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)



MICROWAVE DETECTOR FIELD CABINET IDENTIFICATION PLAQUE DETAIL

LEGEND STATION TYPE

RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR

IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demribilek — STATE ELECTRICAL
FHWA

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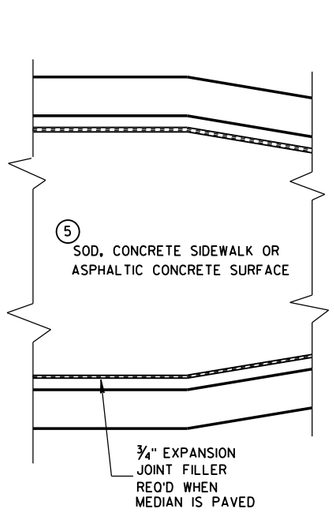
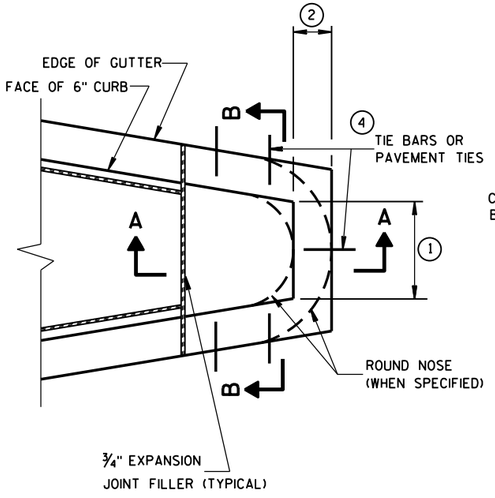
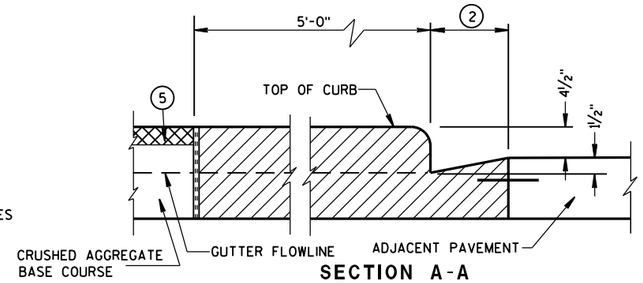
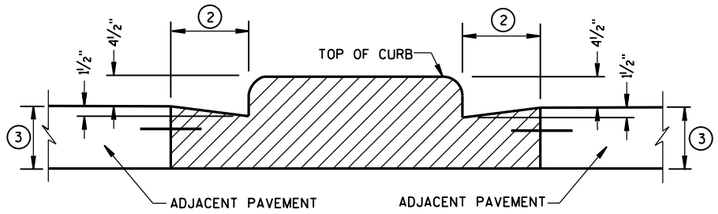
S.D.D. 9 H 11-1







SECTION A-A



SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

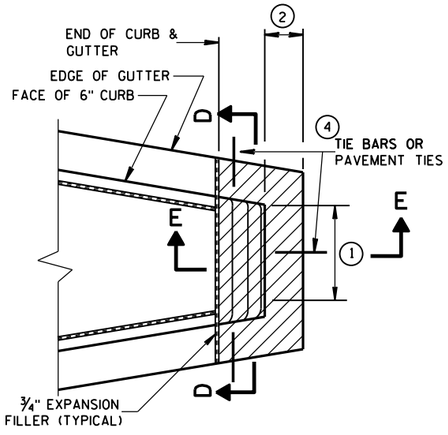
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

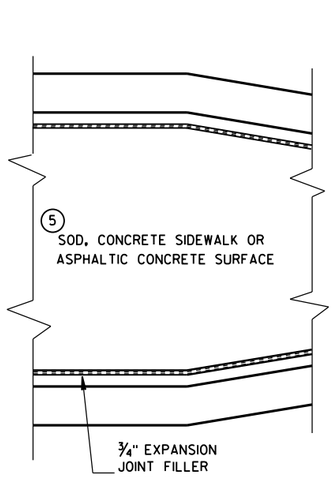
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

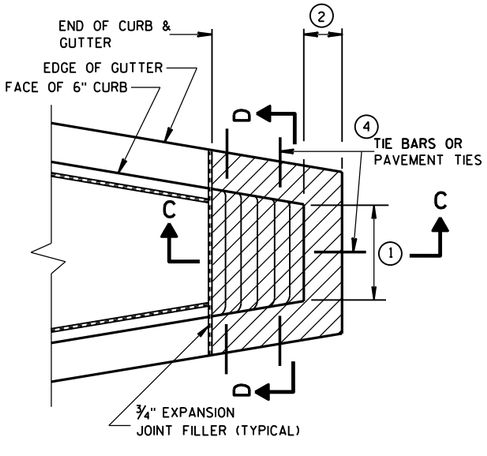
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

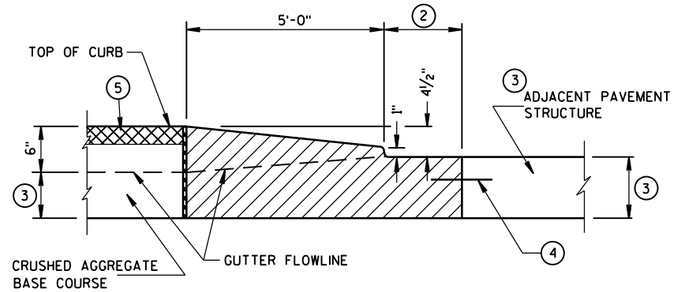
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

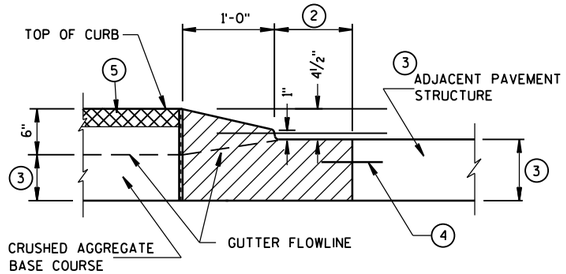








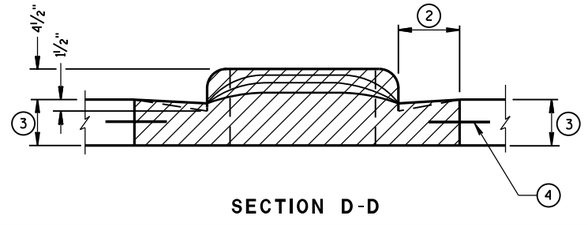
SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER

FHWA

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S.D.D. 11 B 2-2

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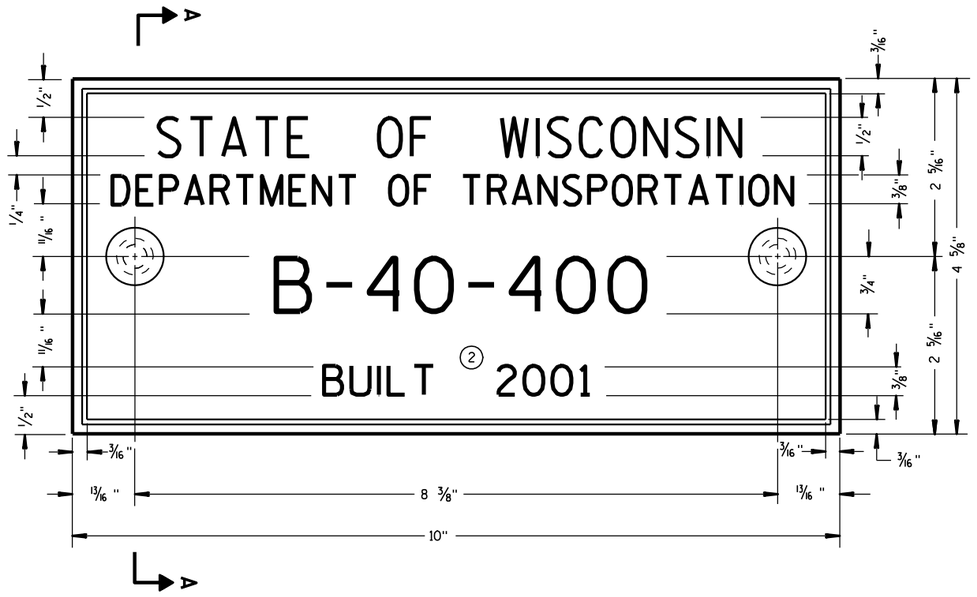
S.D.D. 11 B 2-2



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

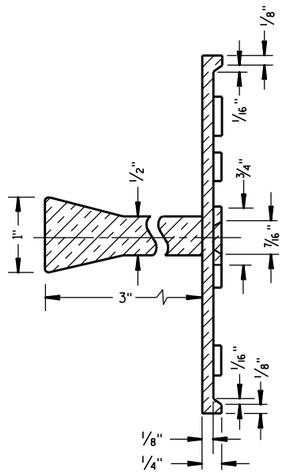
GENERAL NOTES

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.

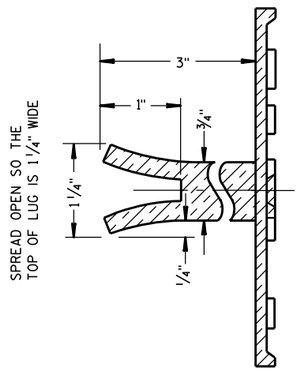
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(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.

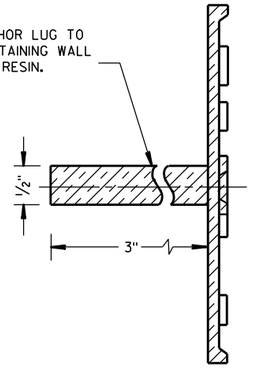


SECTION A-A



ALTERNATE LUG

(1) ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



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 DEVELOP ENGINEER
FHWA	

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S.D.D. 12 A 3-10

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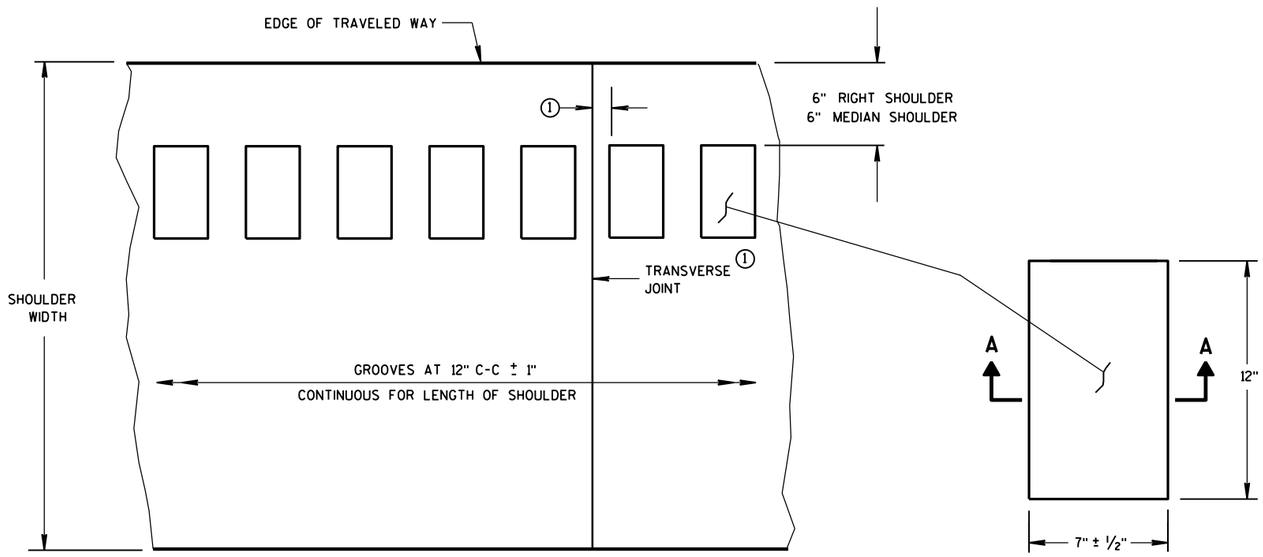
S.D.D. 12 A 3-10



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

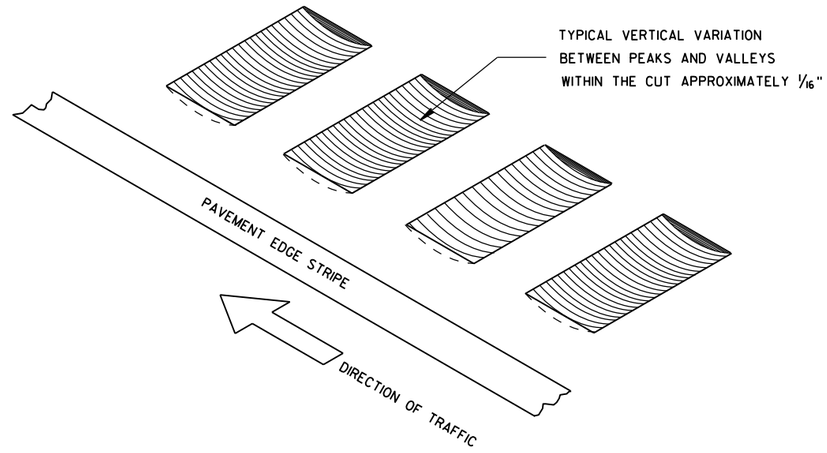
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

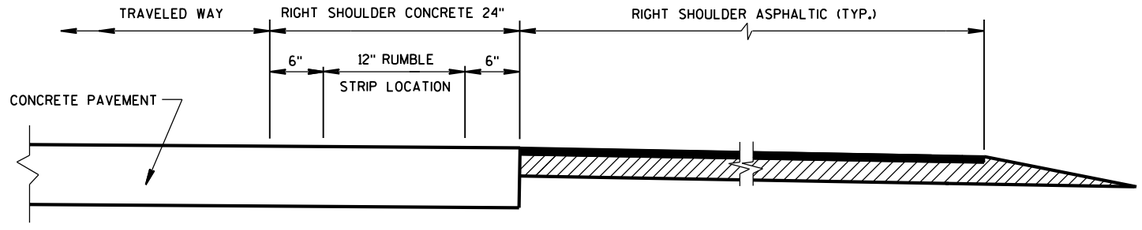
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

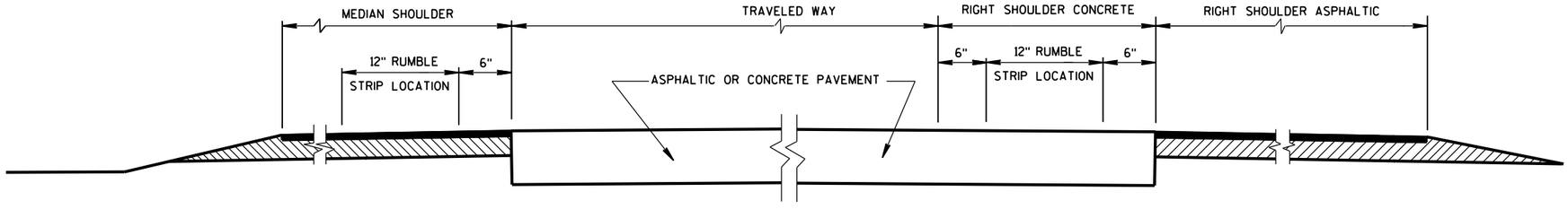
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



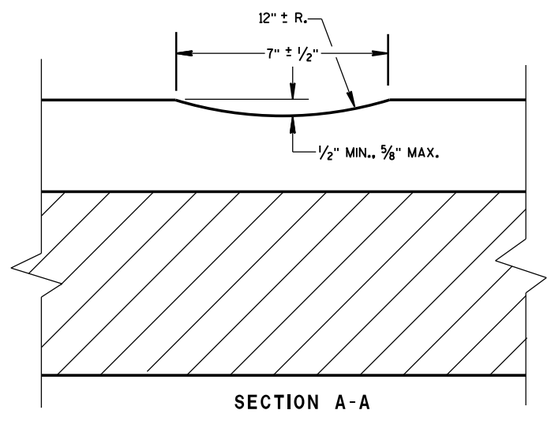
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 A 5-5a

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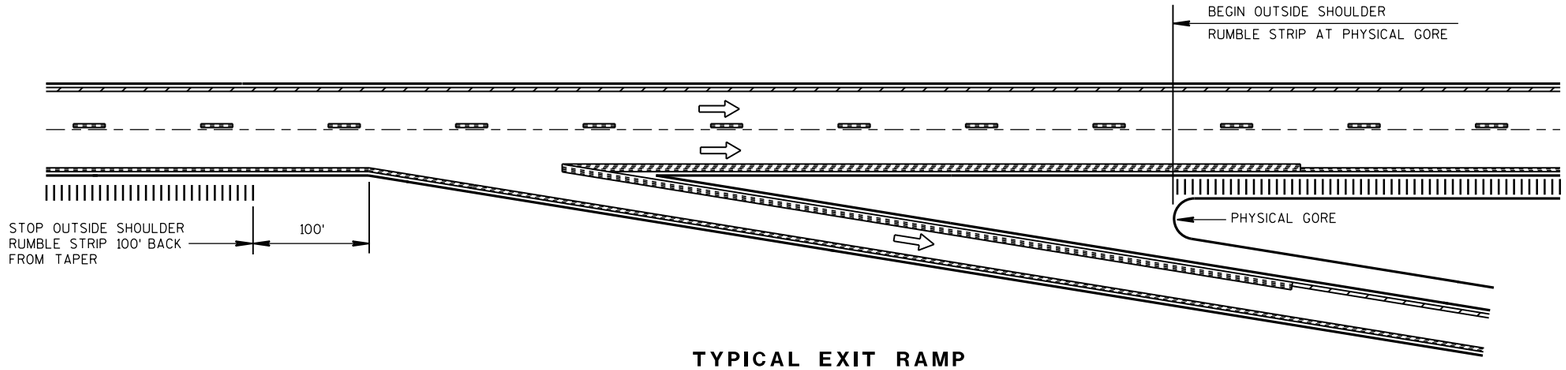
S.D.D. 13 A 5-5a



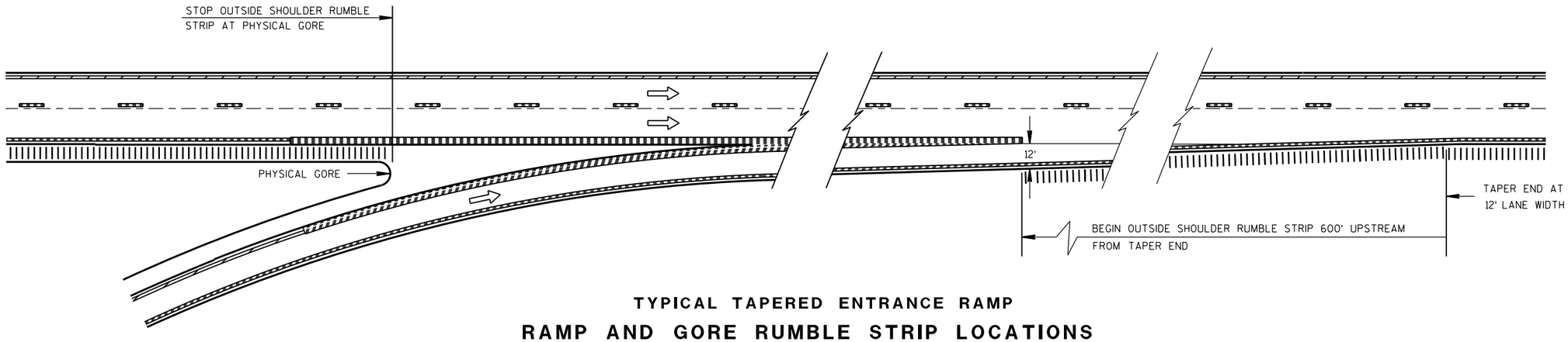
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

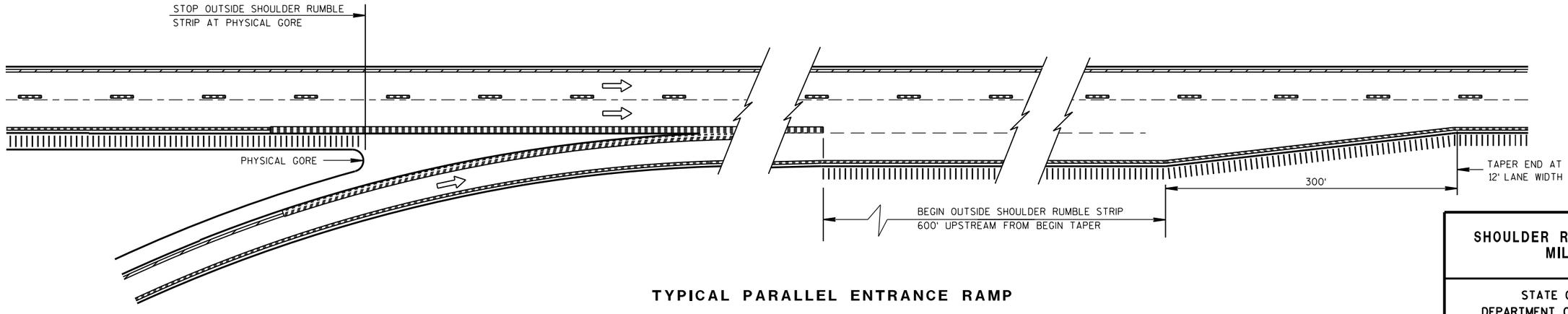
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

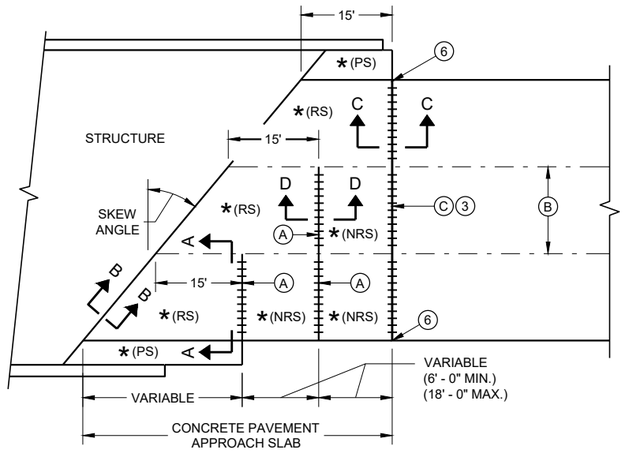
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/17/2012 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 13 A 5-5b



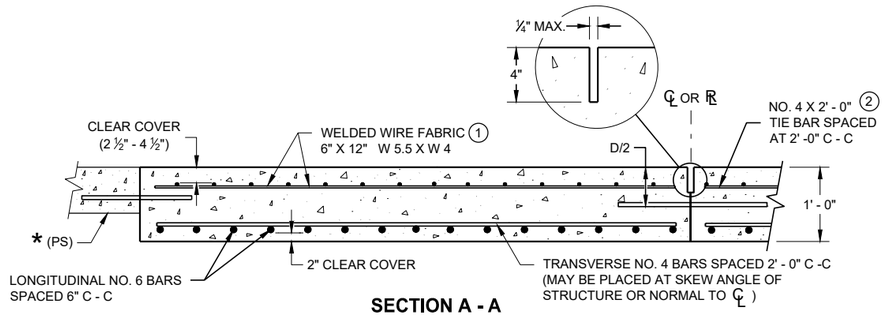
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

(RS) = REINFORCED CONCRETE SLAB

(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

(NRS) - NON - REINFORCED CONCRETE SLAB

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



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

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

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

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

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

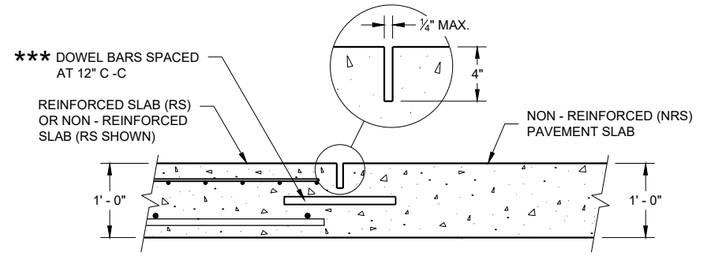
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

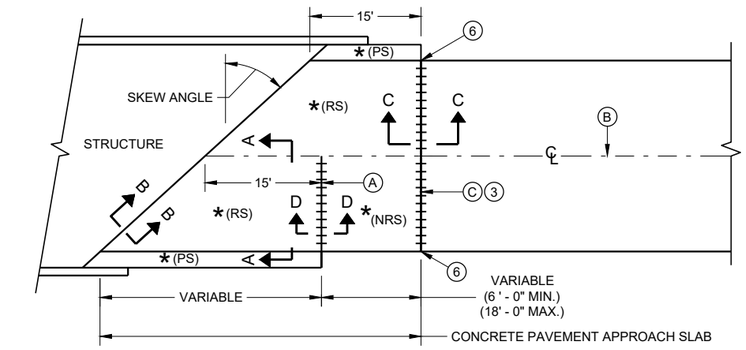
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

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

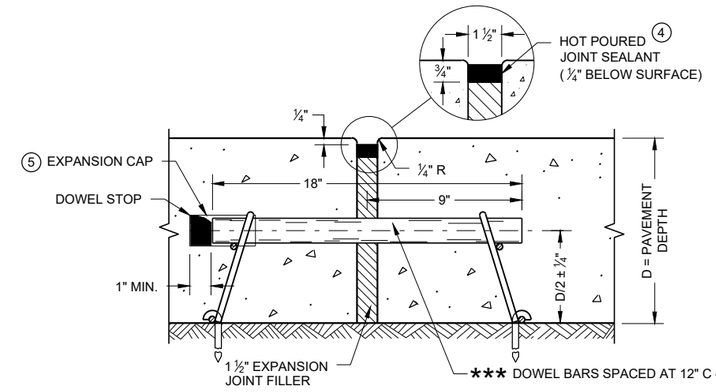


SECTION D - D
CONTRACTION JOINT

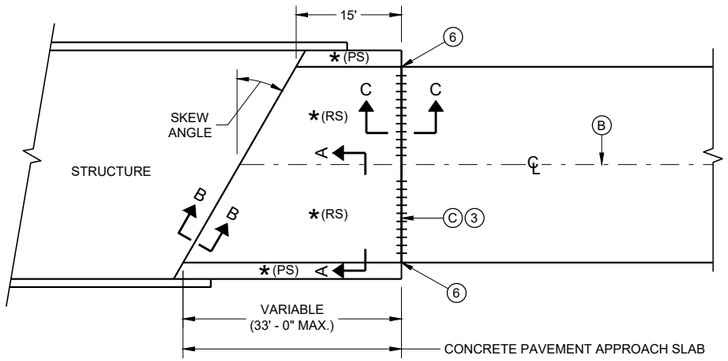


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

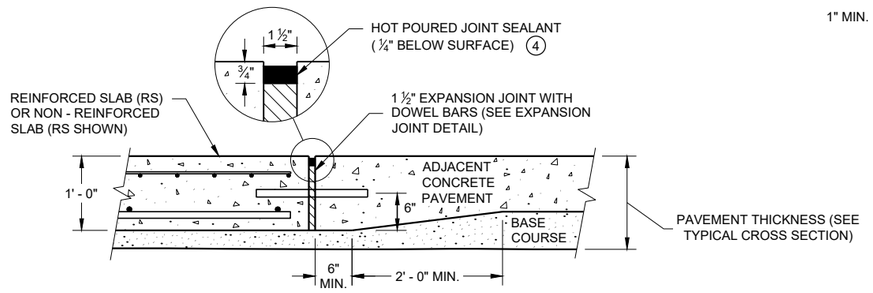


EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

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

FHWA

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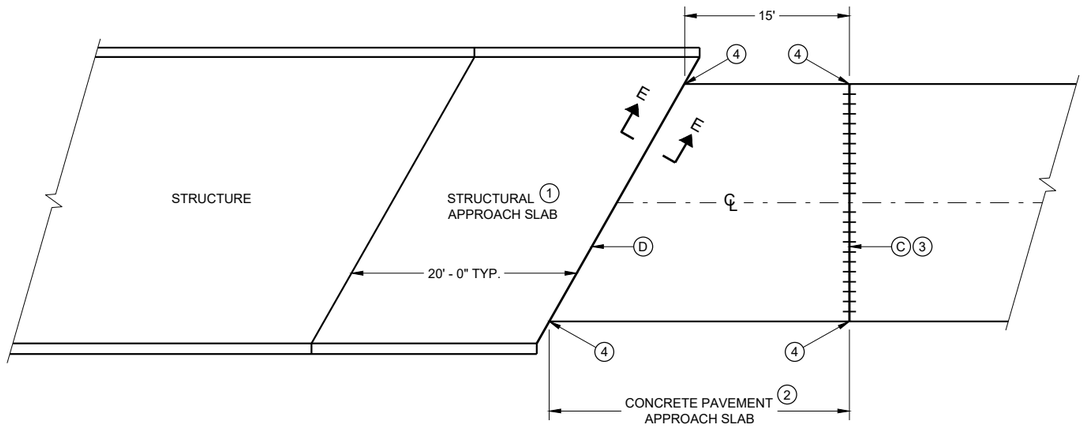
SDD 13B02 - 09a



BRIDGE APPROACHES

GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

(1) SEE BRIDGE PLAN.

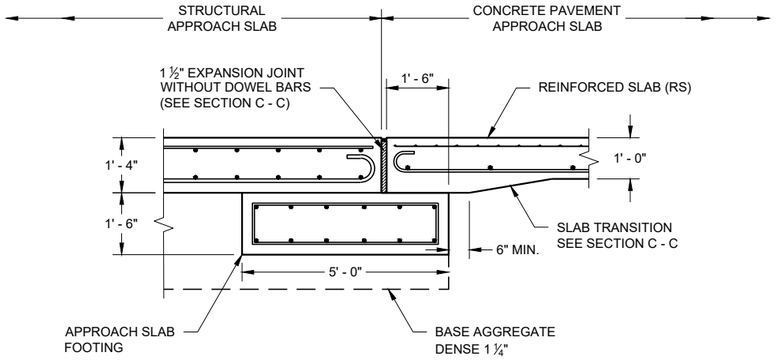
(2) CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS

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

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

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

(D) 1 ½" EXPANSION JOINT (NO DOWELS)



SECTION E - E
FOOTING DETAIL
STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

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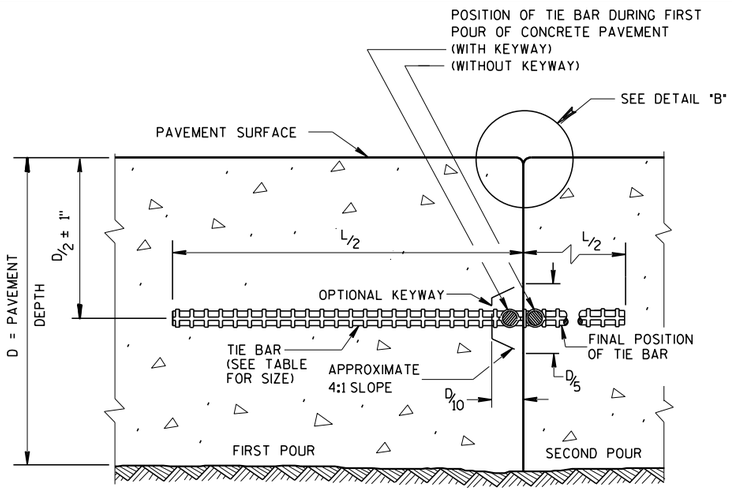
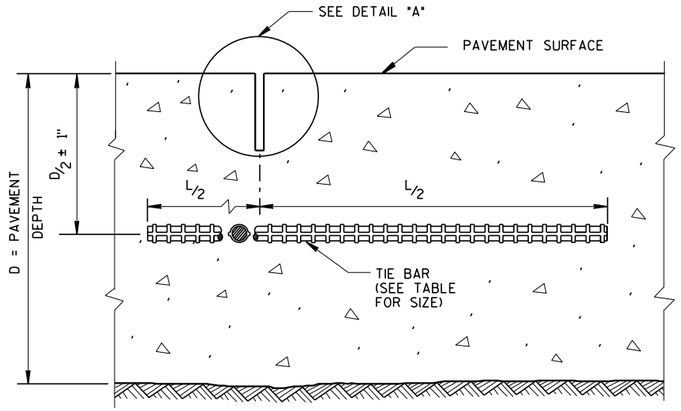
SDD 13B02 - 09b



CONSTRUCTION JOINT



SAWED JOINT

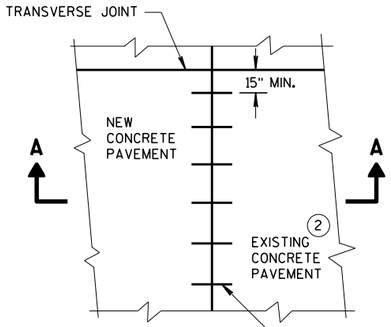
GENERAL NOTES

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

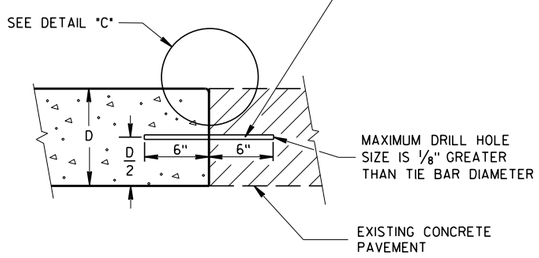
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

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

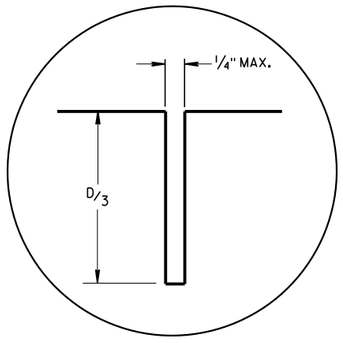


PLAN VIEW

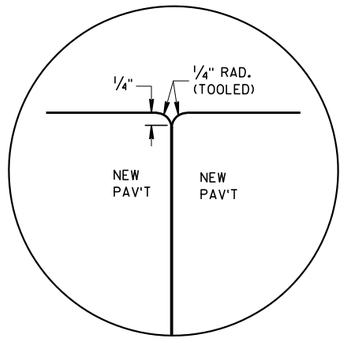


SECTION A-A

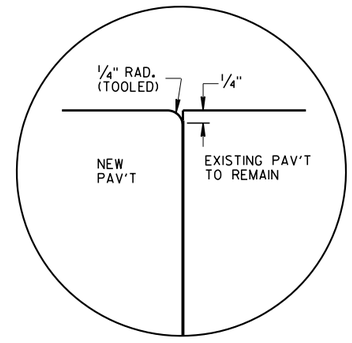
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



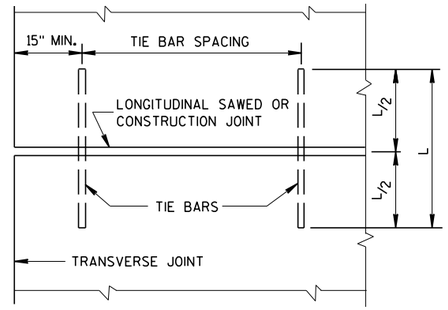
DETAIL "C"

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
March 2018 — DATE
/S/ Peter Kerr, P.E. — PAVEMENT SUPE
FHWA

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S.D.D. 13 C 1-19

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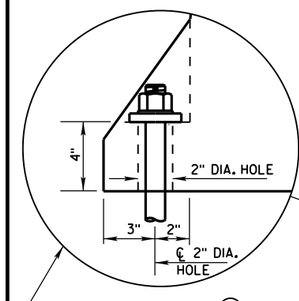
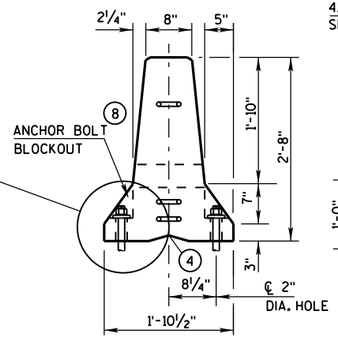
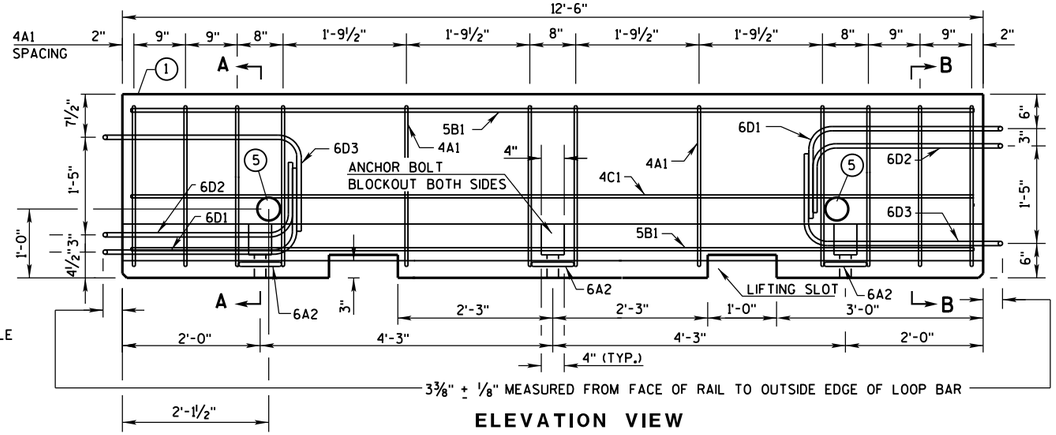
S.D.D. 13 C 1-19



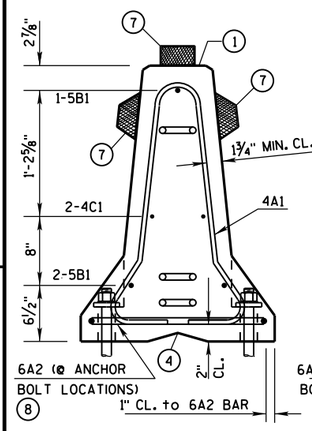
ANCHOR ON TRAFFIC SIDE (8) ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



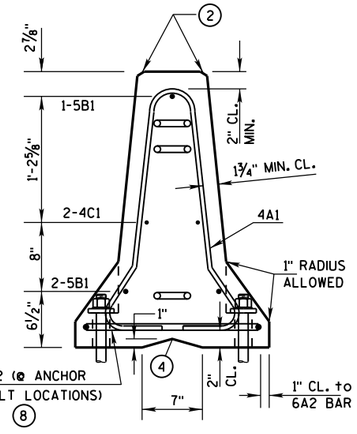
END VIEW



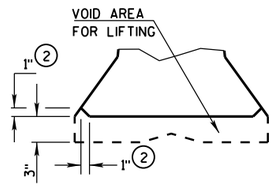
ELEVATION VIEW



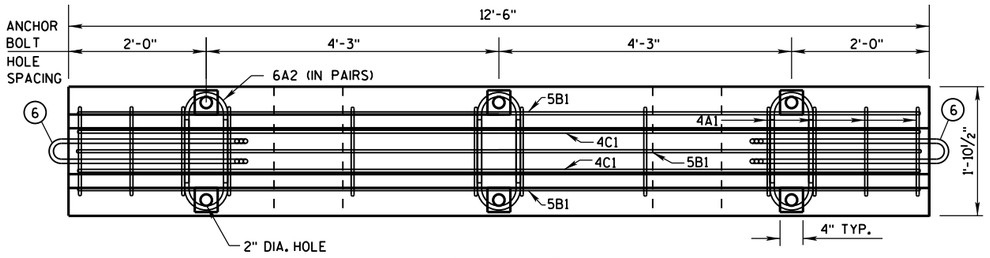
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

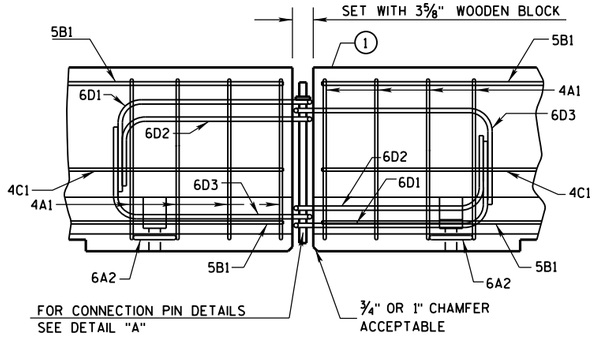


DETAIL "B"
LIFTING SLOT DETAIL

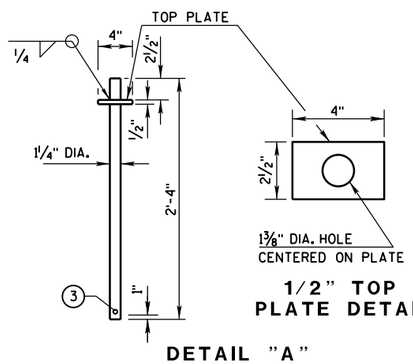


PLAN VIEW

DETAILS OF BARRIER SECTION

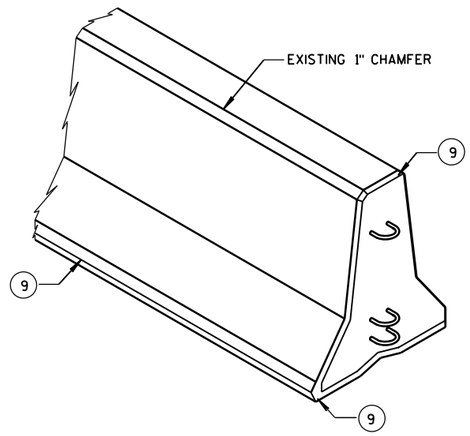


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

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.

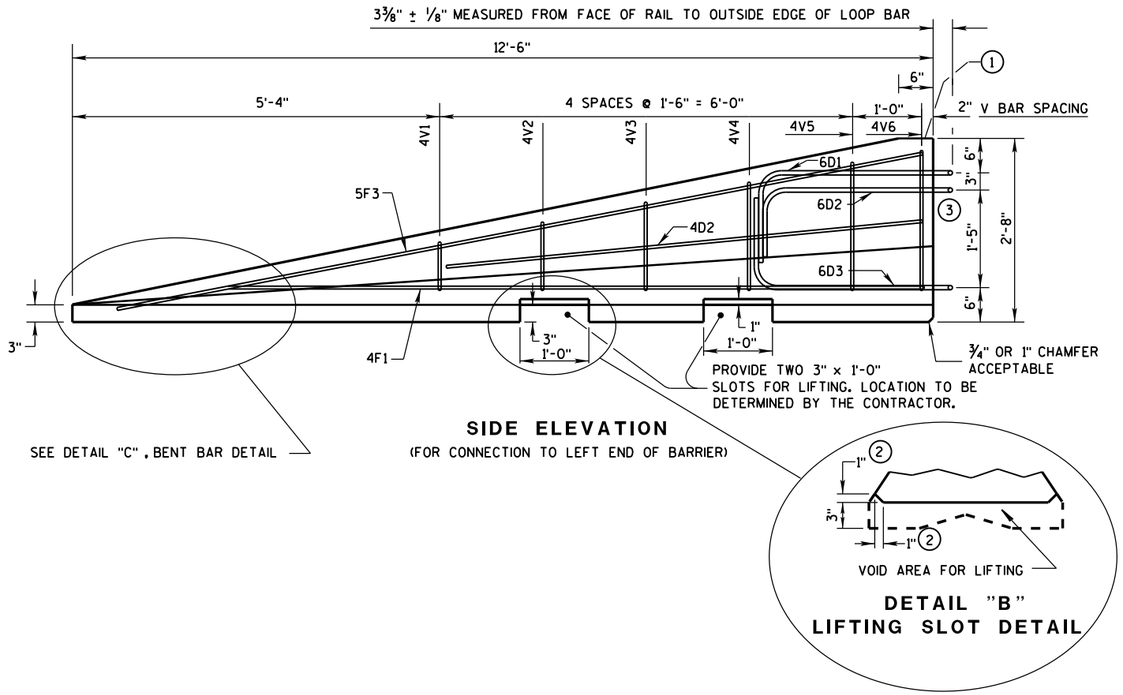
(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

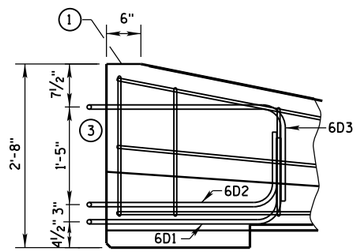
(9) 1" CHAMFER OPTIONAL.

f'c = 4,000 psi

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

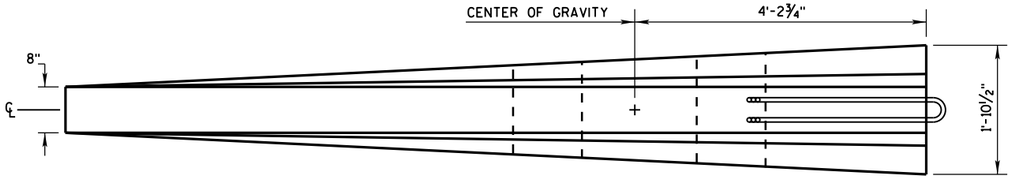
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 200

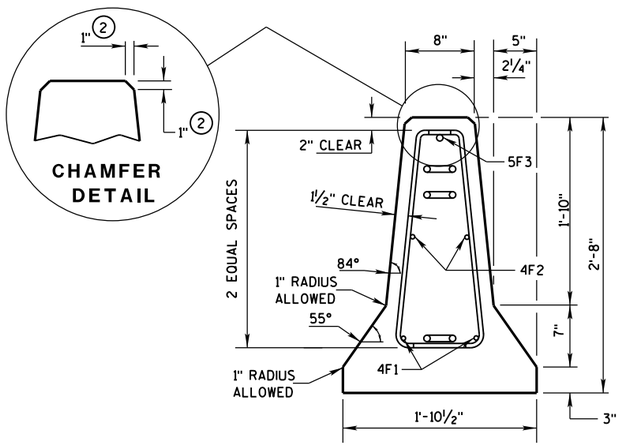


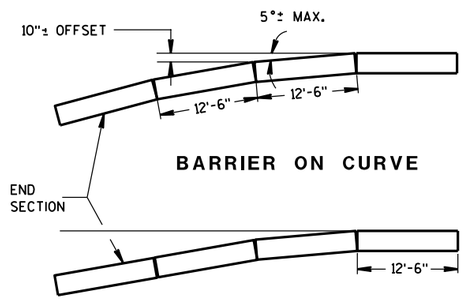


GENERAL NOTES

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"

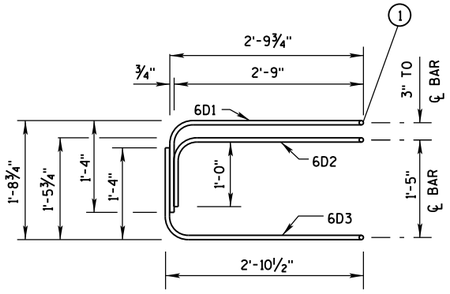
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15b

BARRIER TAPER SECTION BILL OF MATERIALS

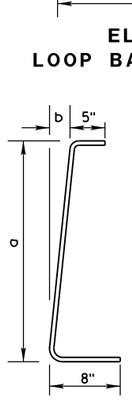
(PER 12'-6" BARRIER TAPER SECTION)

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.

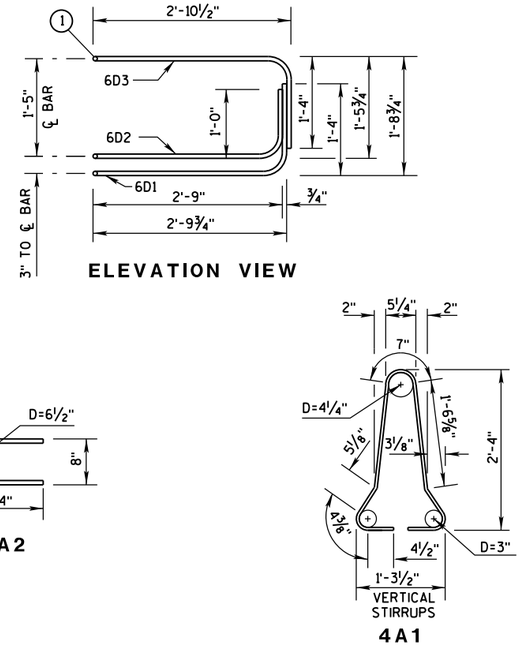
BARRIER SECTION BILL OF MATERIALS

(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)

6A2



ELEVATION VIEW

4A1

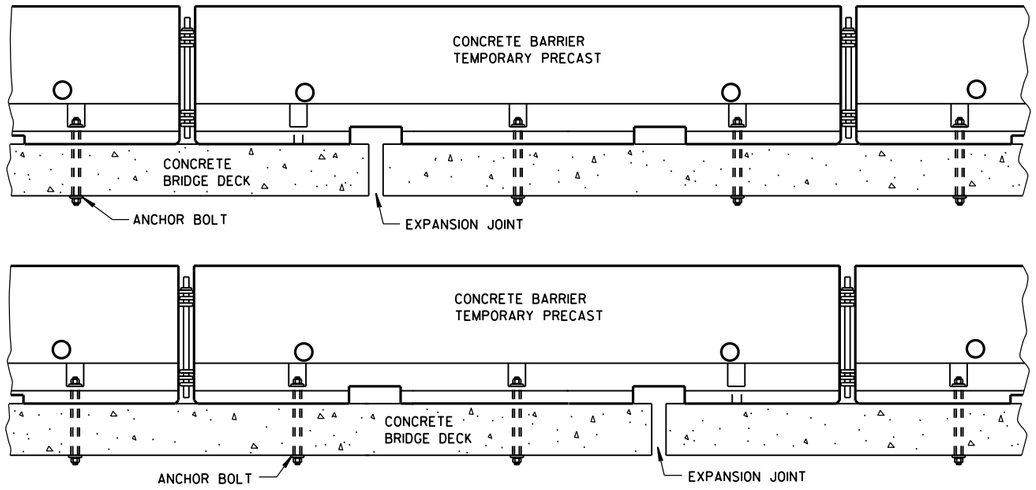
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 7-15c



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.)

GENERAL NOTES

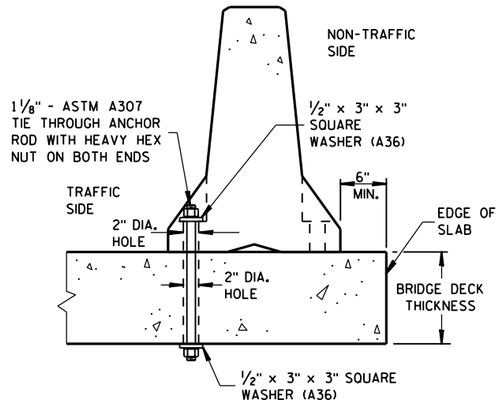
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERICAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(1) 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.

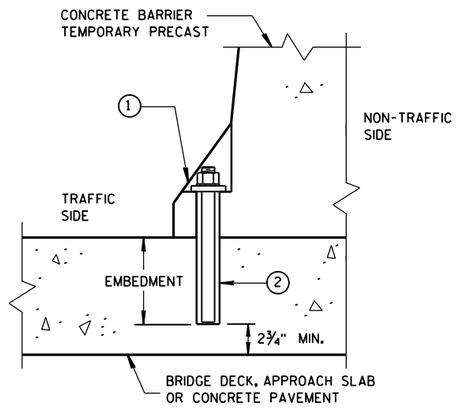
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

(3) ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



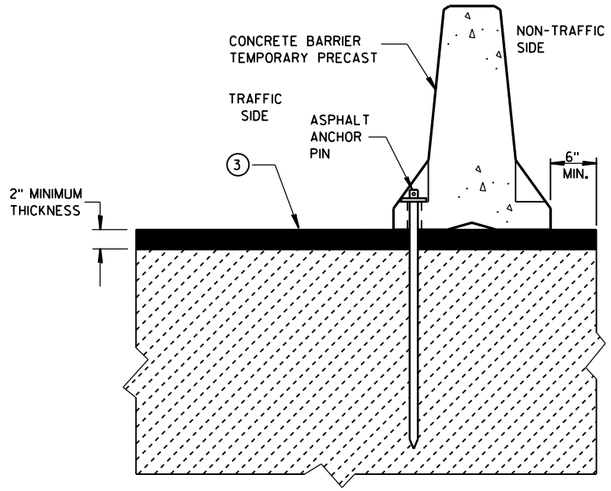
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

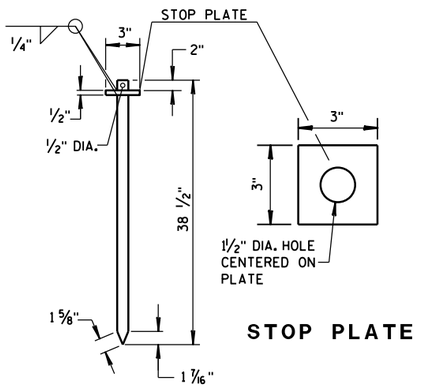


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



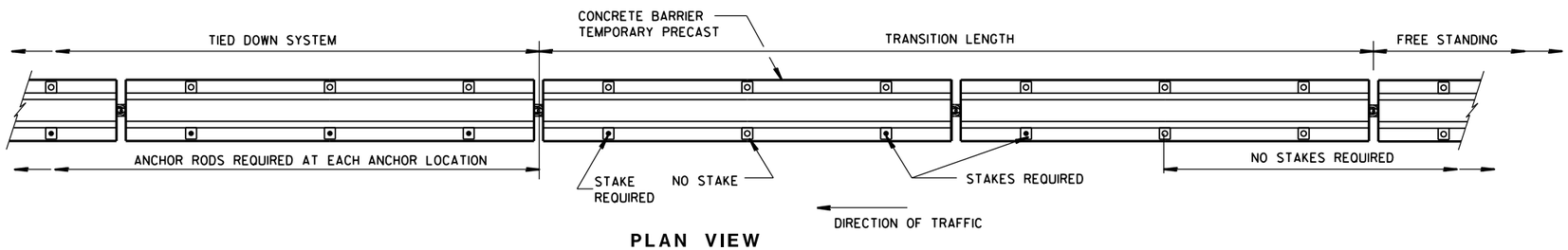
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

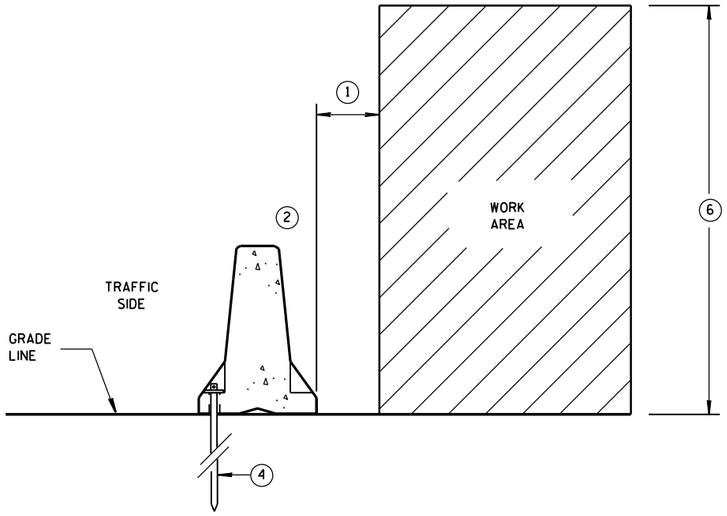
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

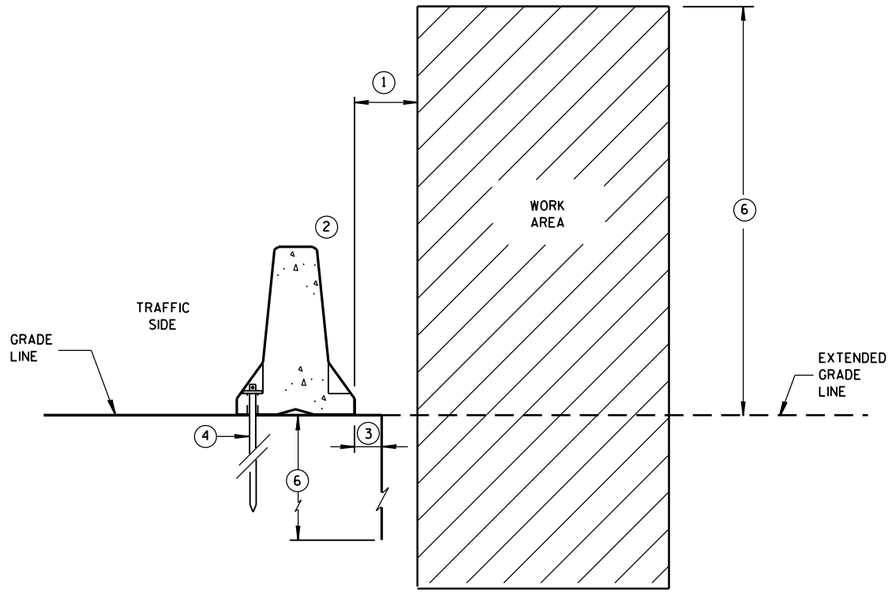
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15d



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

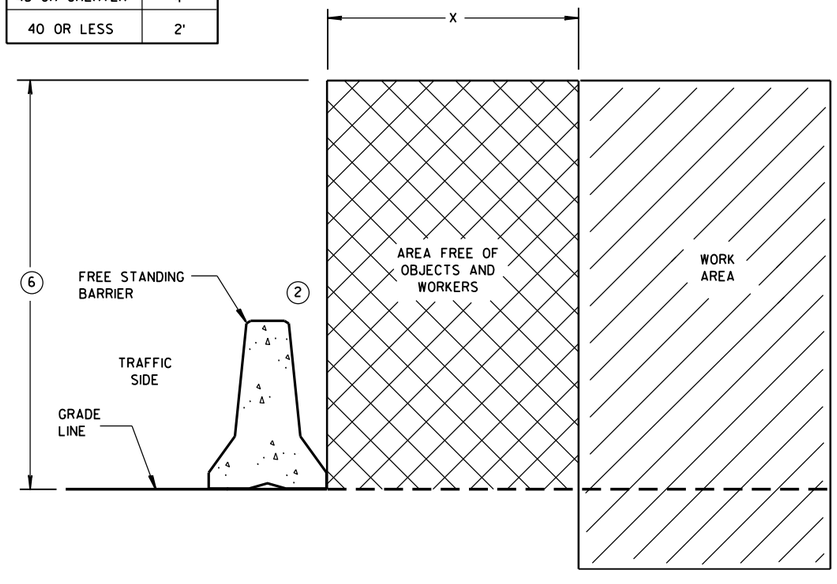


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

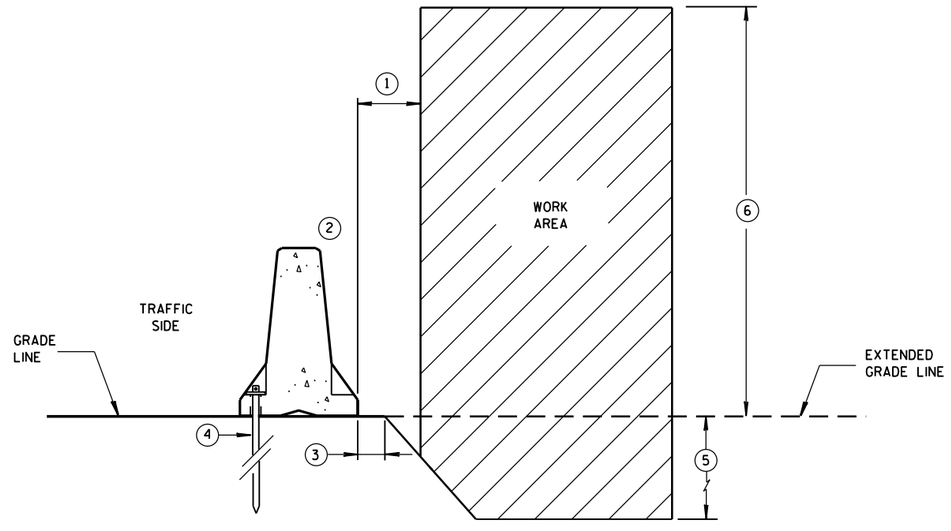
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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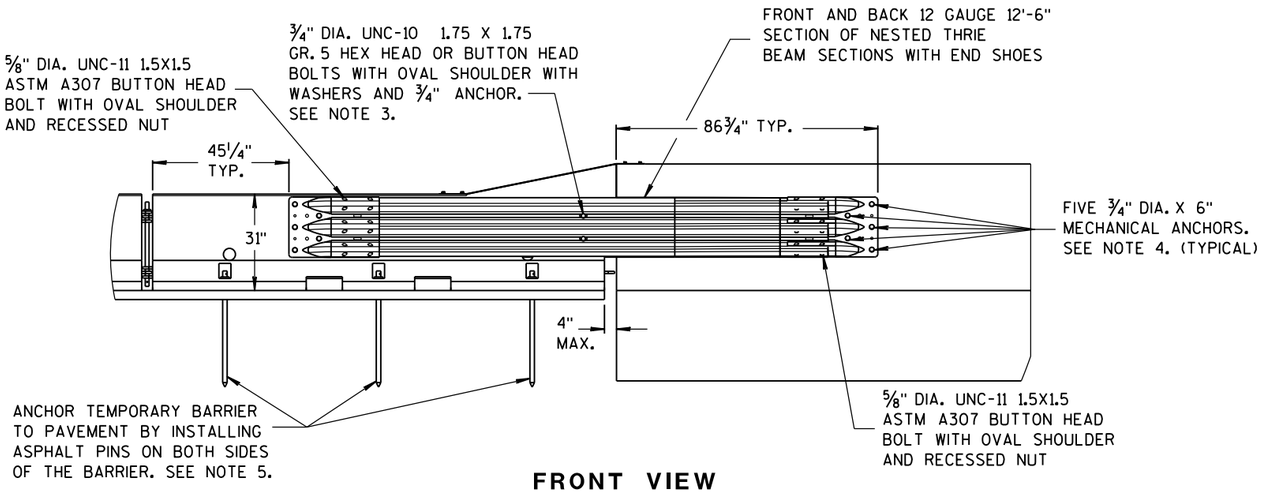
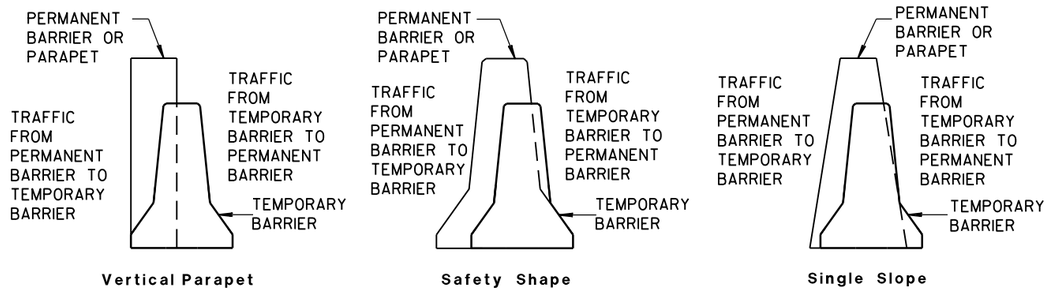
S.D.D. 14 B 7-15e



FRONT VIEW

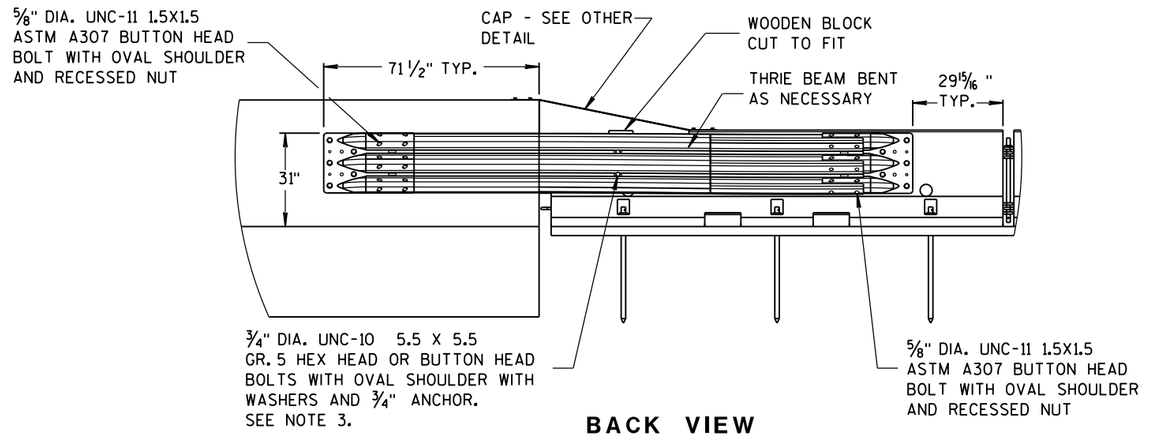


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

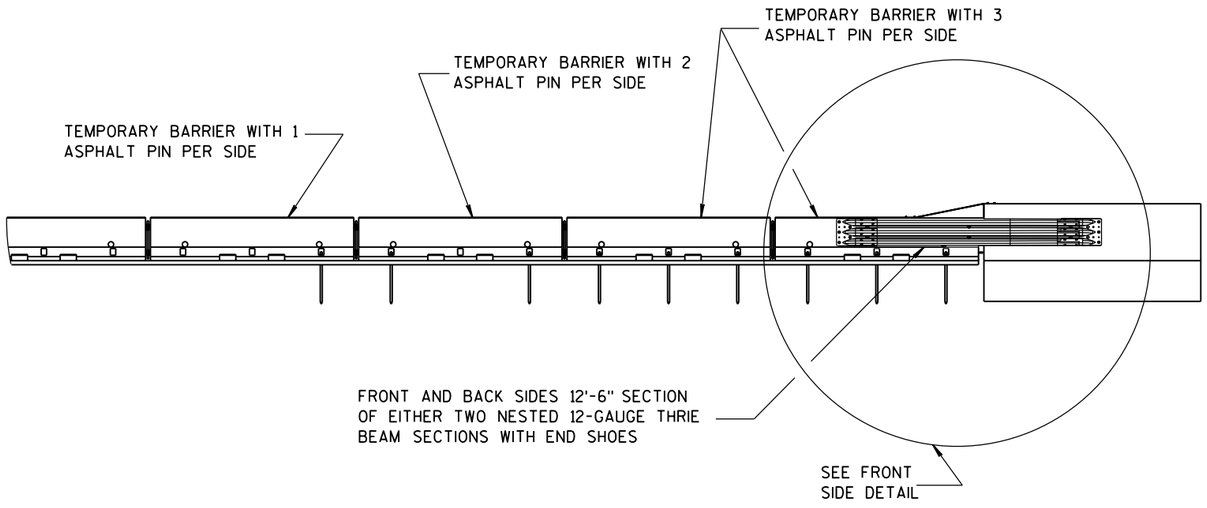
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS REGARDLESS OF TRAFFIC.

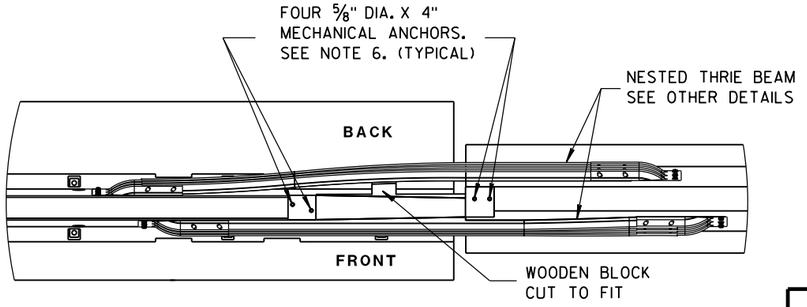
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 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

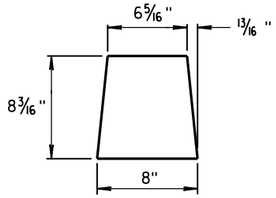
BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

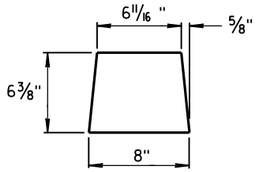
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

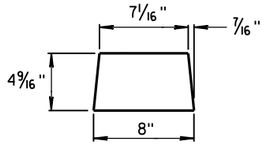
S.D.D. 14 B 7-15f



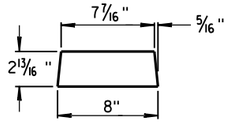
GUSSET 1



GUSSET 2

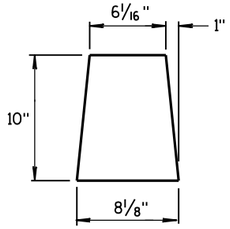


GUSSET 3

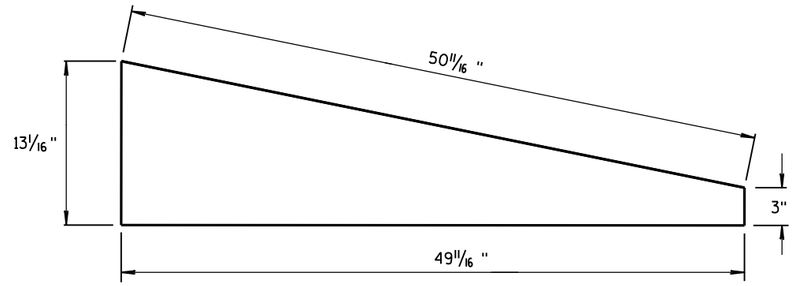


GUSSET 4

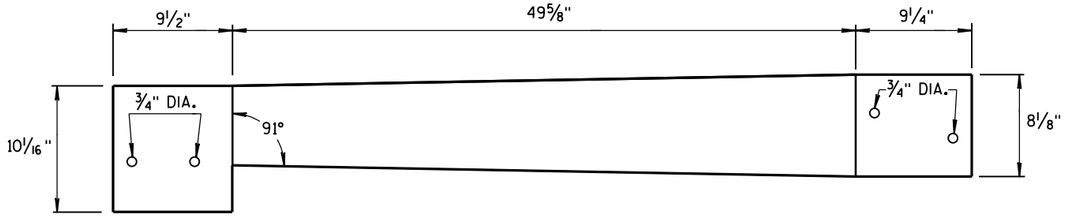
GUSSETS

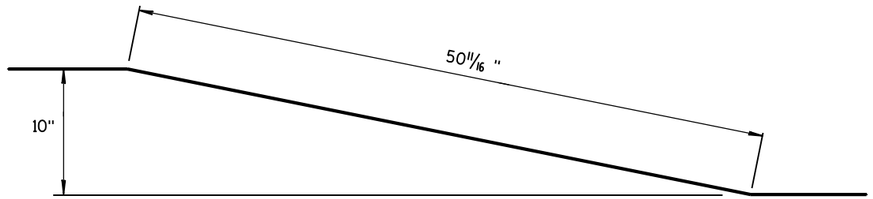


END PLATE



SIDE PLATE

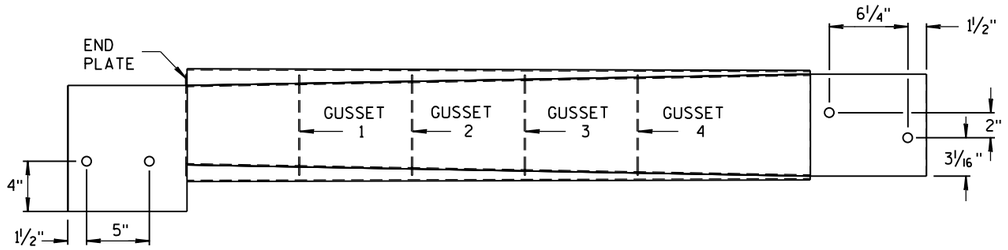


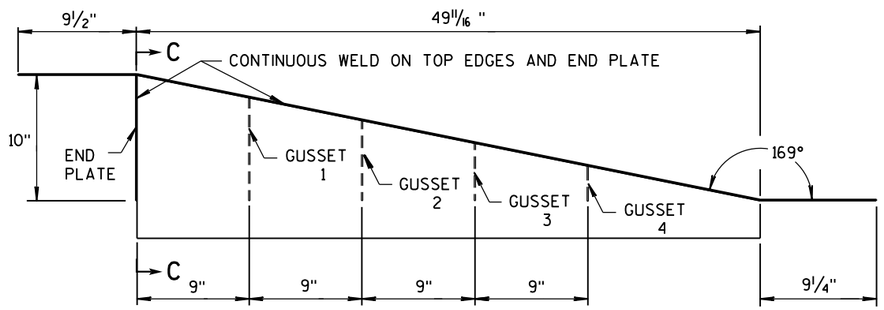


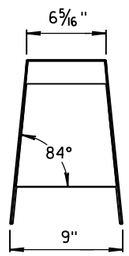
TOP PLATE

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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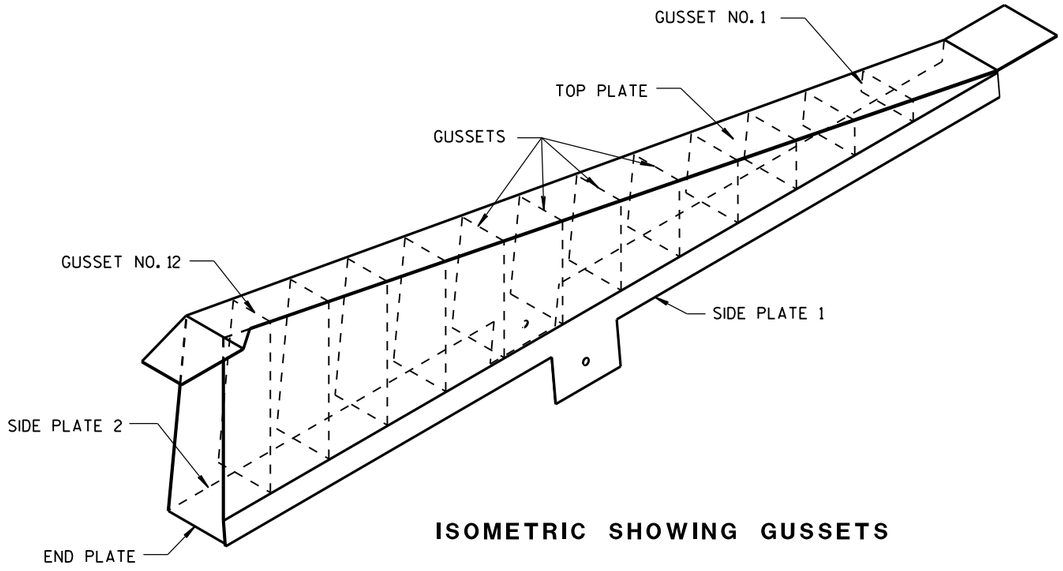
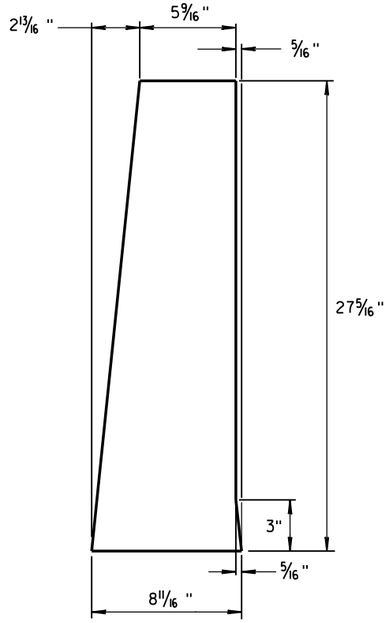
S.D.D. 14 B 7-15g

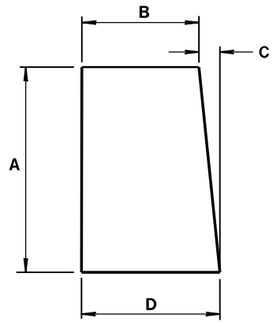


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



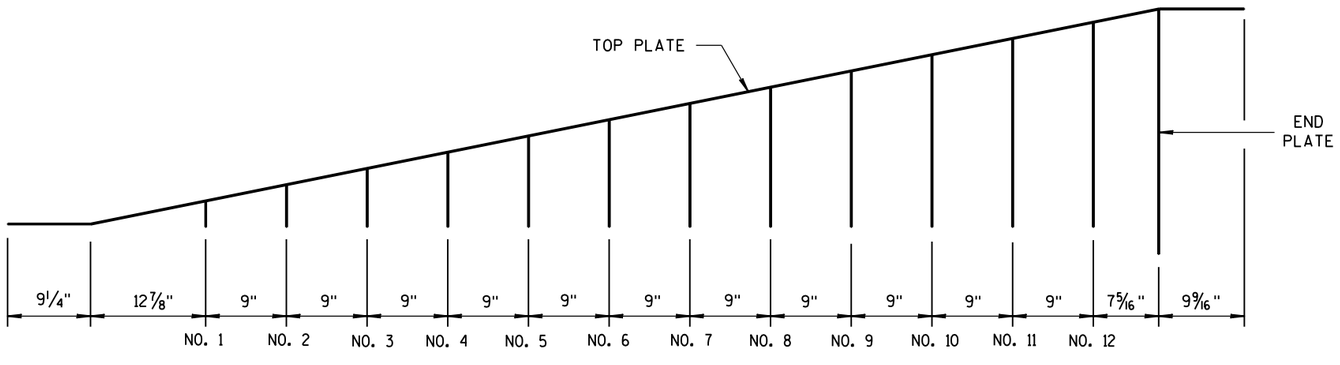
GUSSETS 1 - 12

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

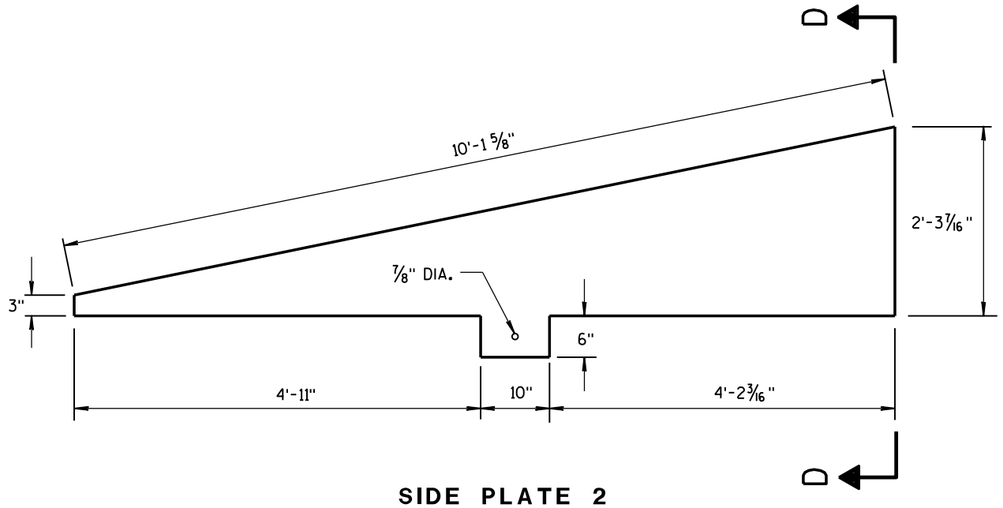
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

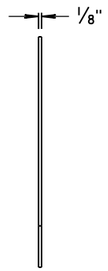
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

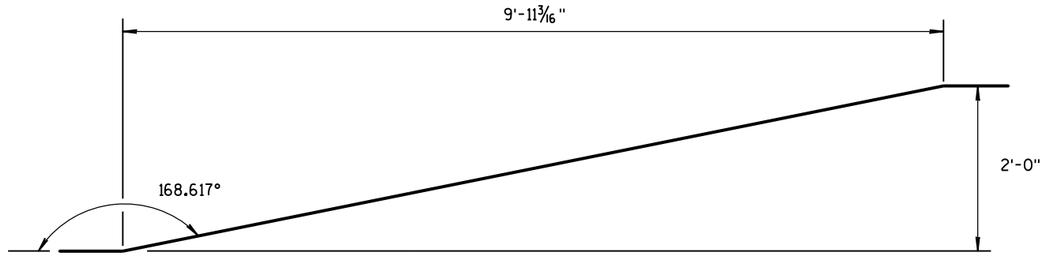
S.D.D. 14 B 7-15h



SIDE PLATE 2

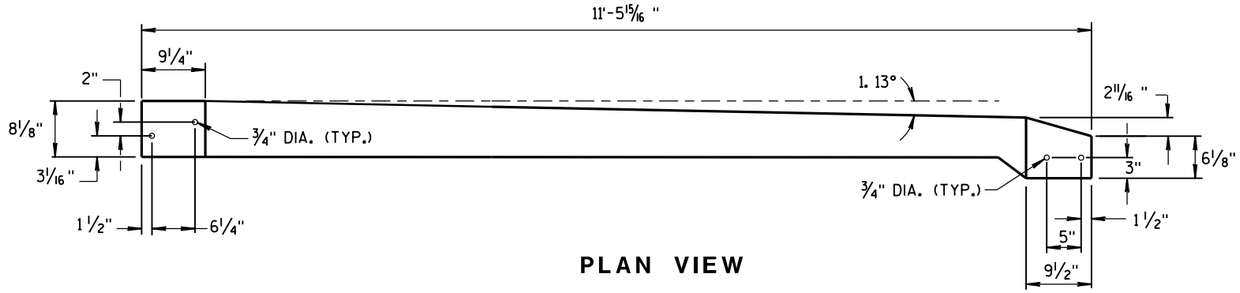


END VIEW



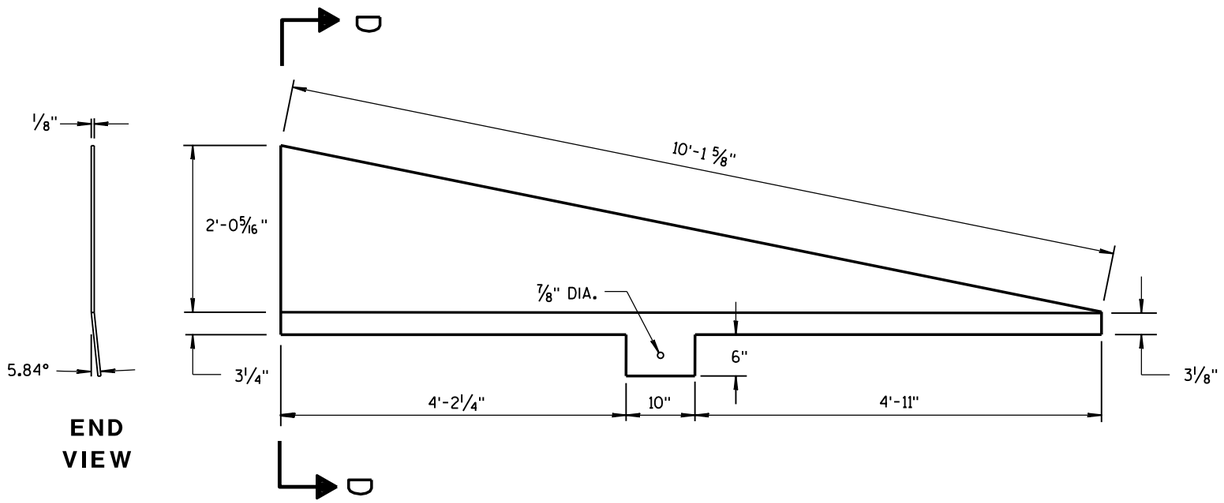
SIDE VIEW

TOP PLATE



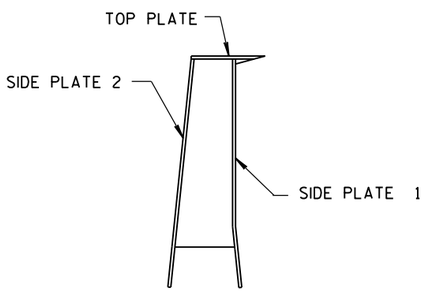
PLAN VIEW

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 2017
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV
208
ENT
FHWA

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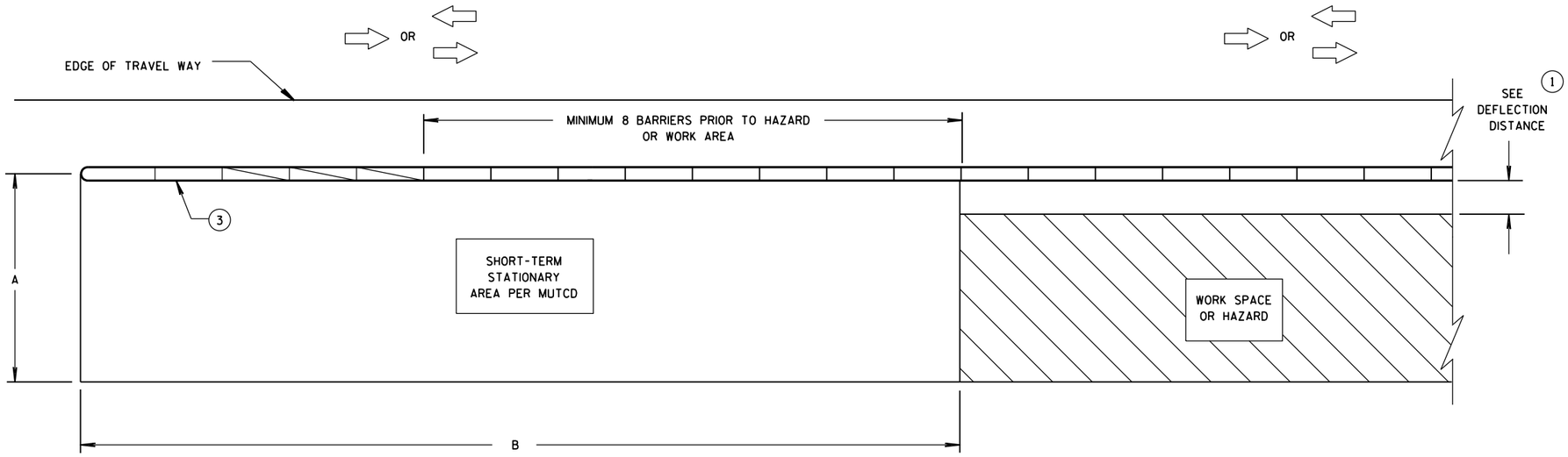
S.D.D. 14 B 7-15i



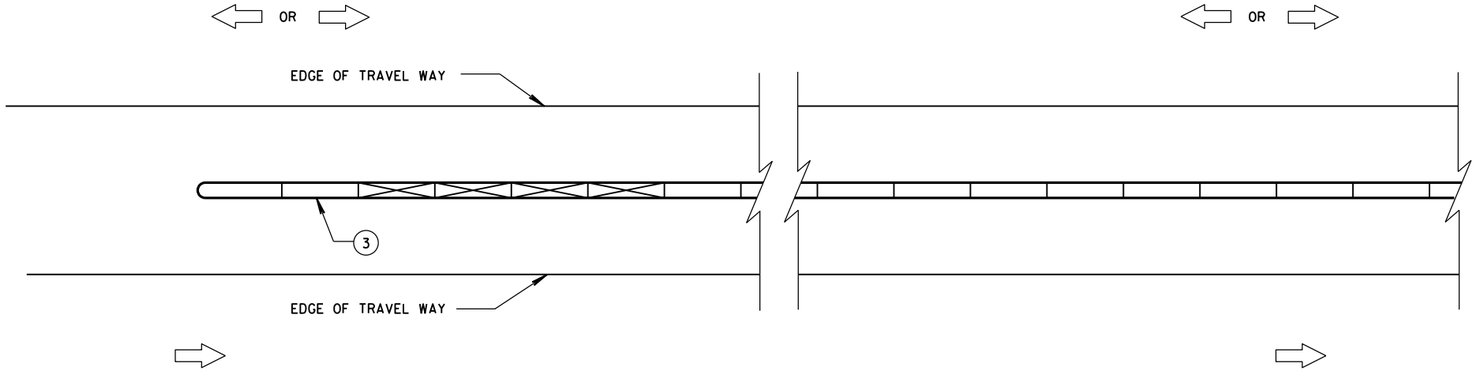
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

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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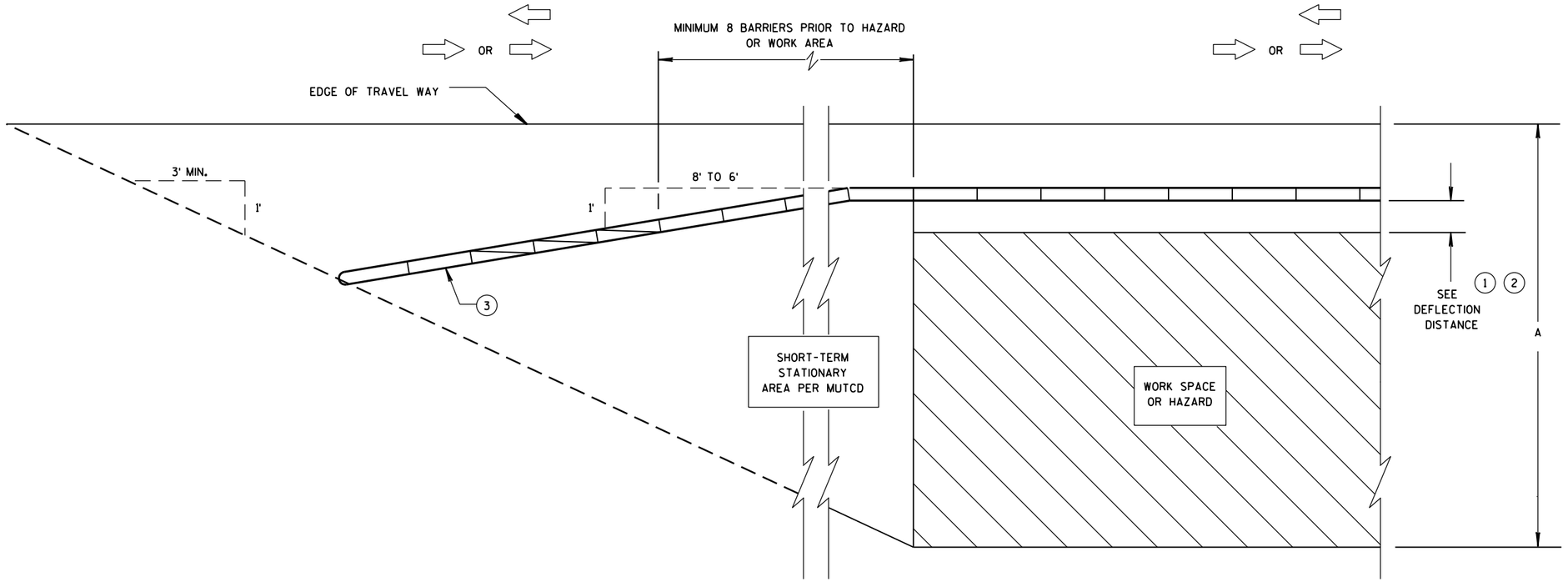
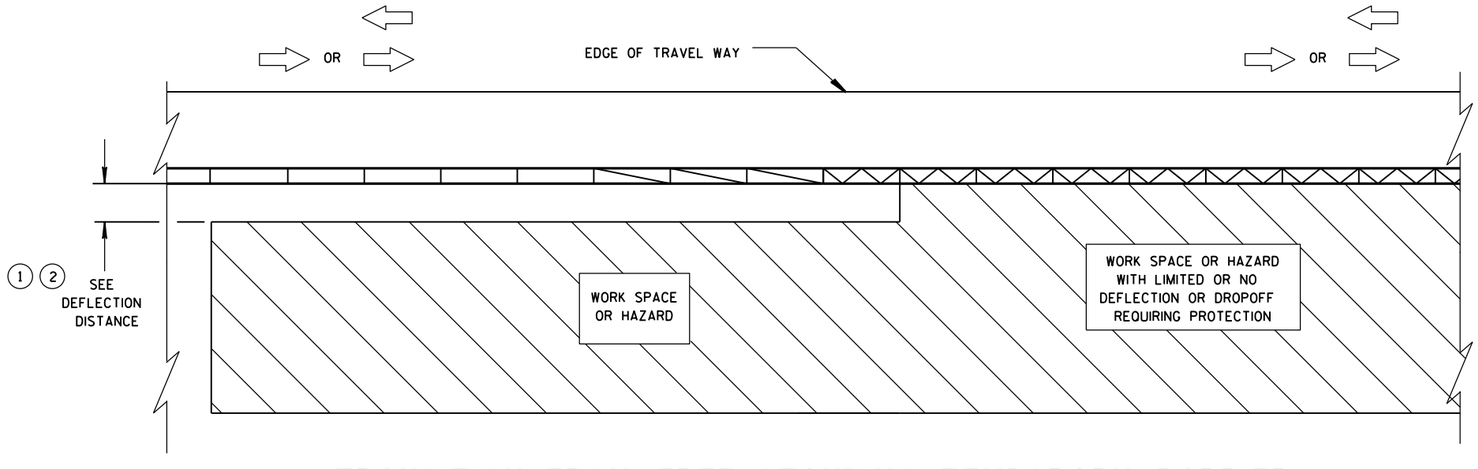
S.D.D. 14 B 8-2a



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

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S.D.D. 14 B 8-2b

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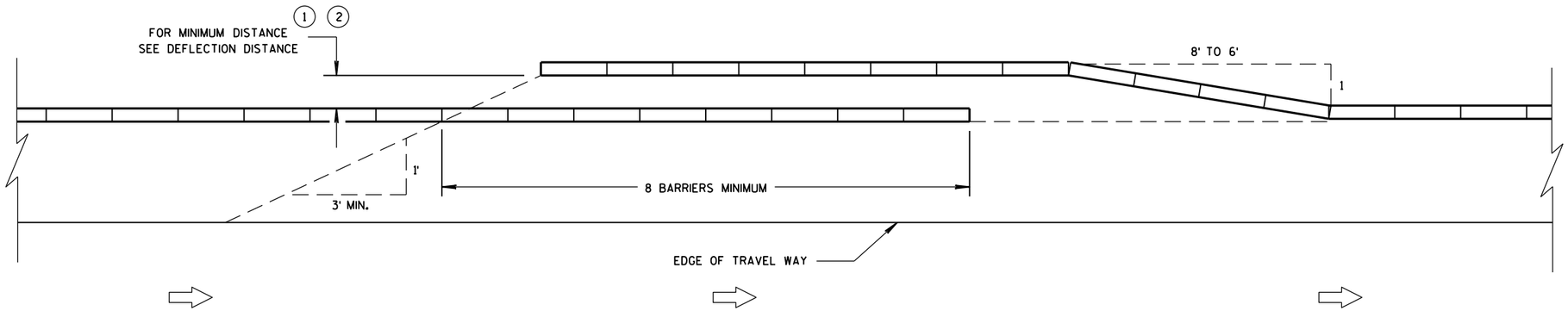
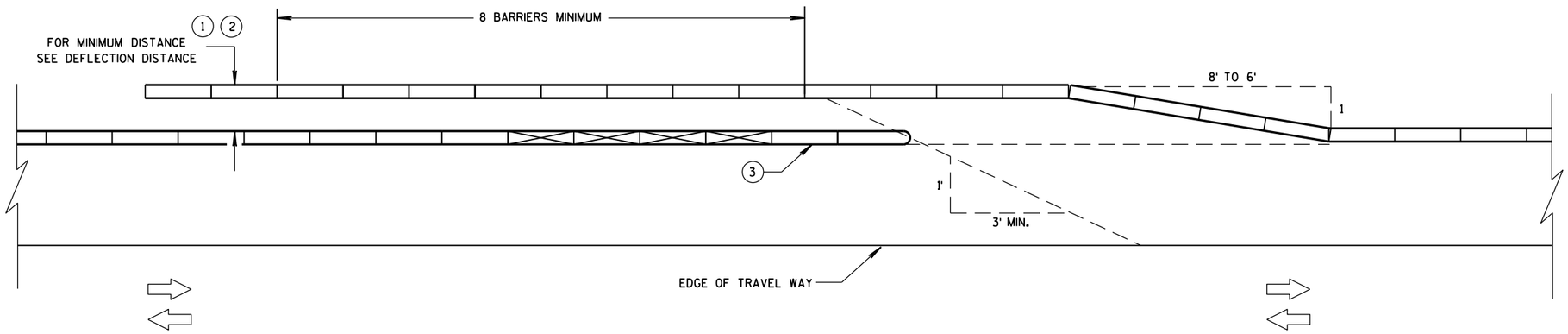
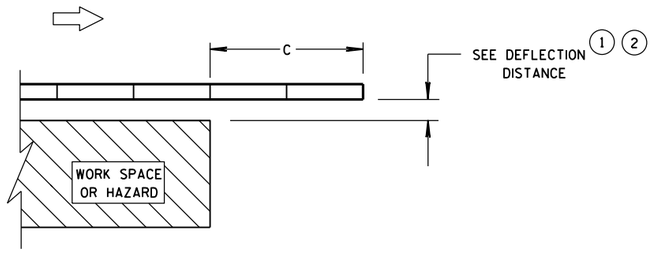
S.D.D. 14 B 8-2b



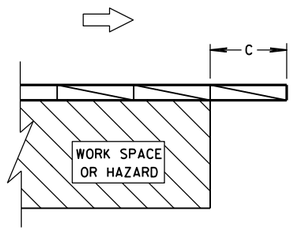
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



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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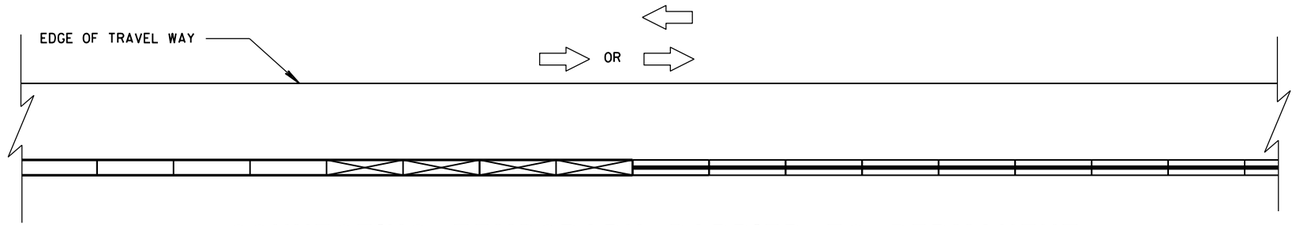
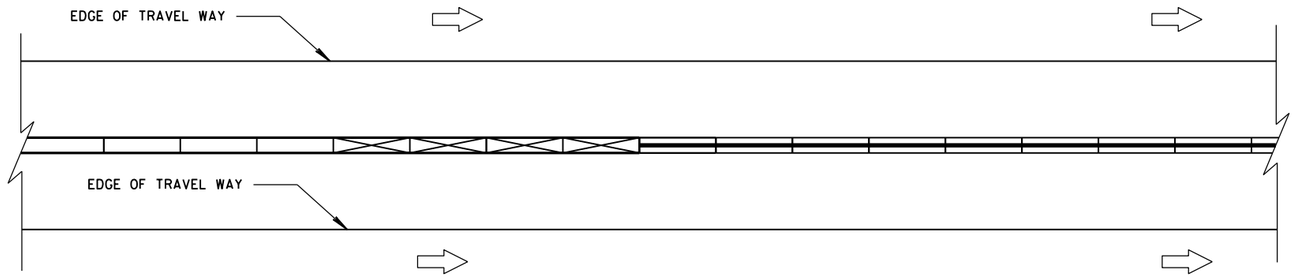
S.D.D. 14 B 8-2c



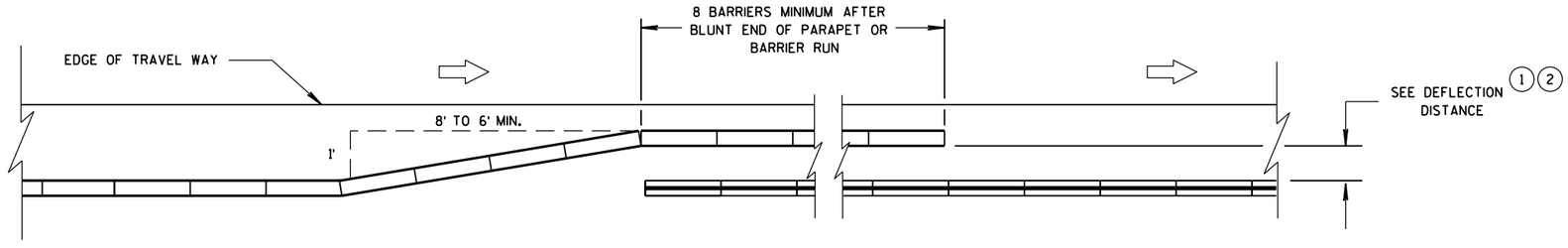
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



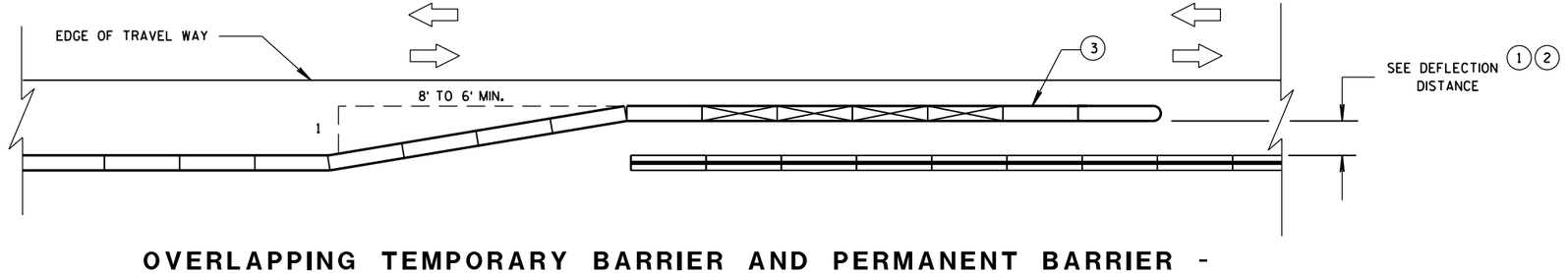
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

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

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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

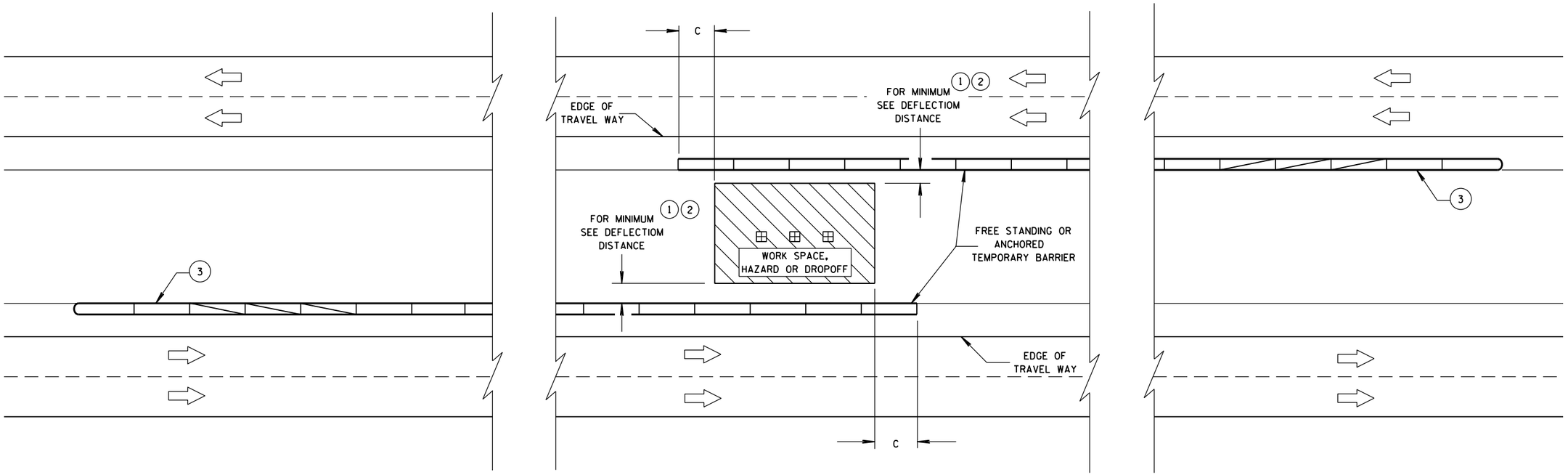
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

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

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

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

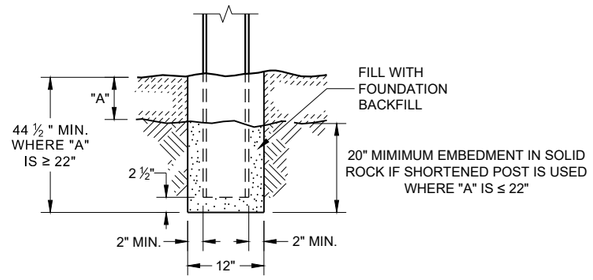
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

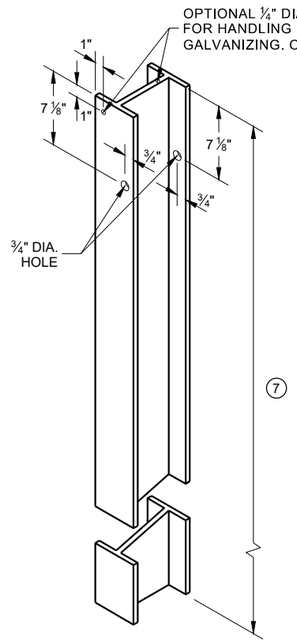
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

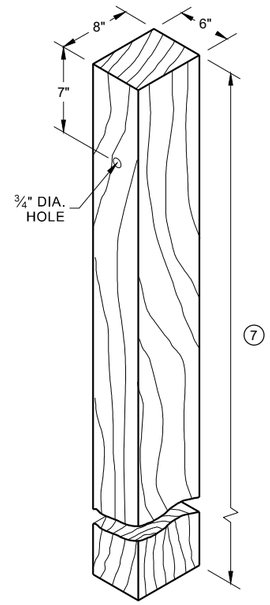
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



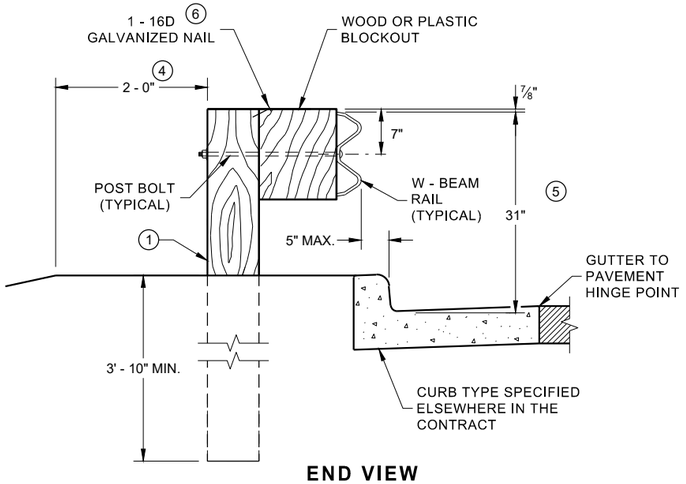
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



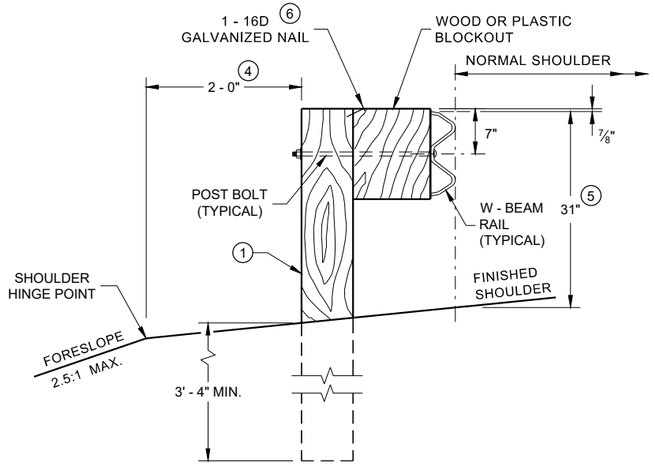
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



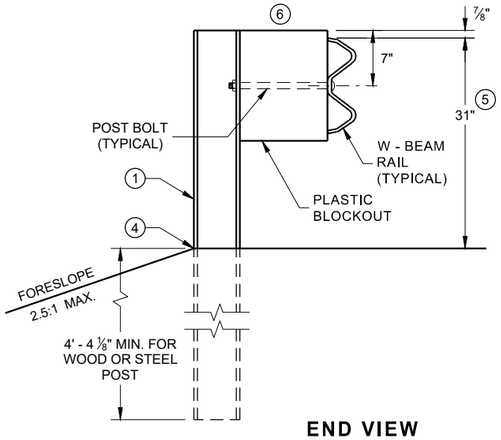
WOOD POST (6" X 8") NOMINAL (1)



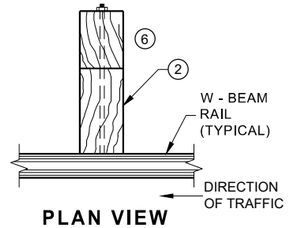
END VIEW
LOCATED ALONG A CURBED ROADWAY



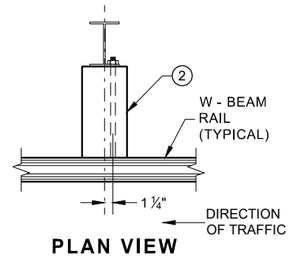
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



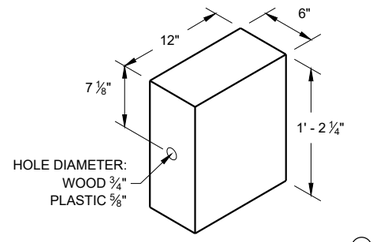
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
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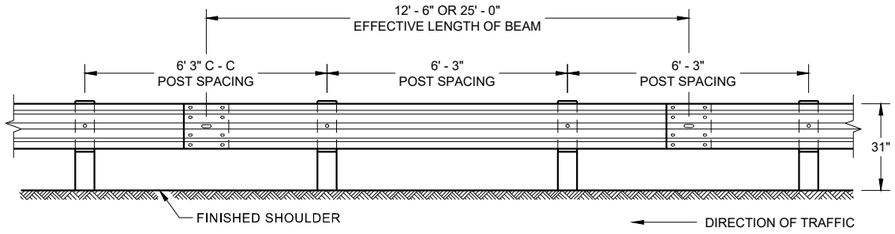
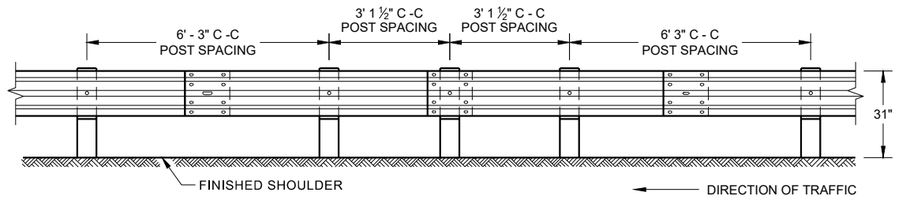
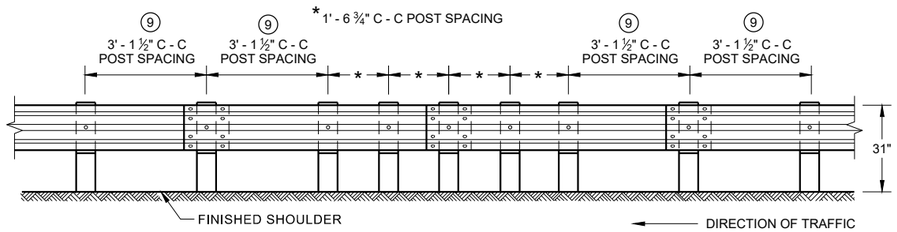


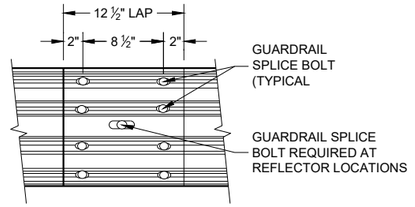
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

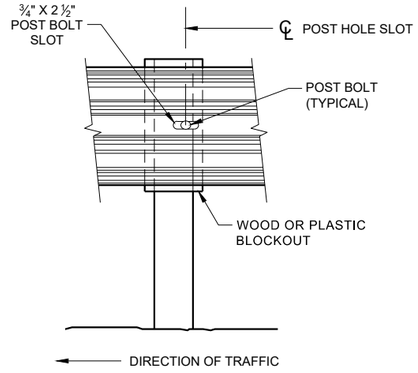
GENERAL NOTES

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

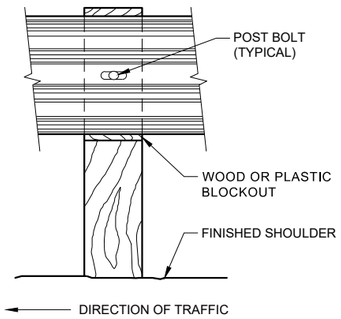
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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

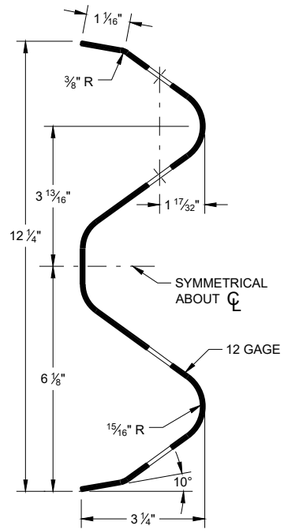
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



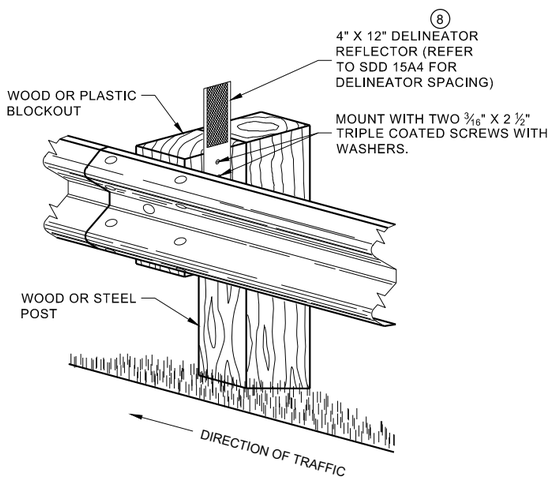
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
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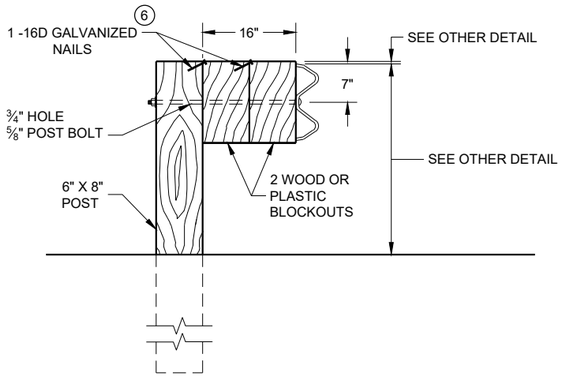
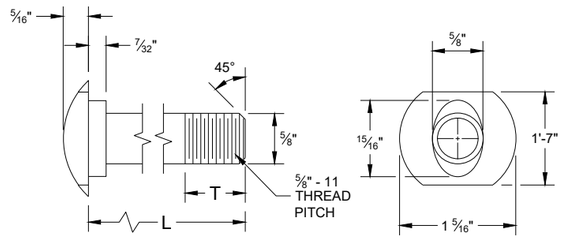


DETAIL FOR 16" BLOCKOUT DEPTH

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

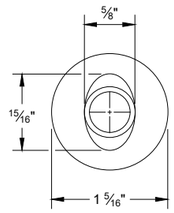
NOTE:

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

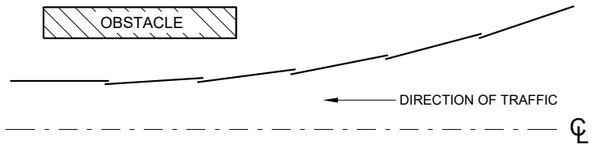


POST BOLT TABLE

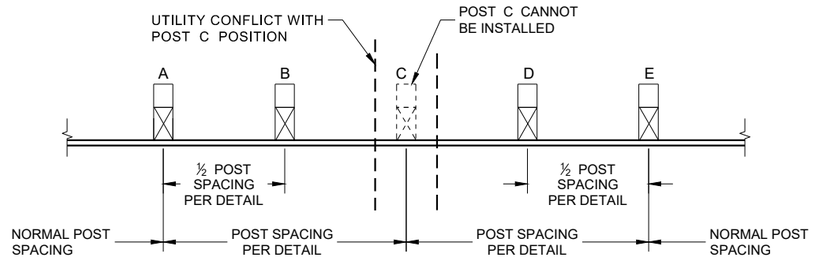
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



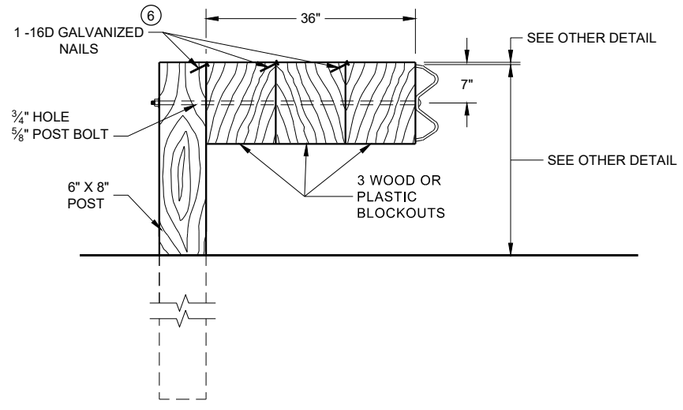
ALTERNATE BOLT HEAD



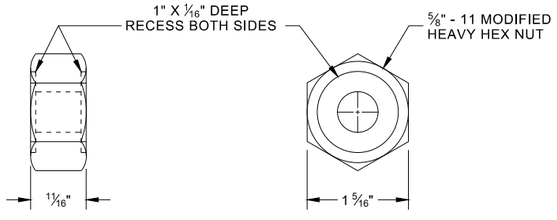
PLAN VIEW
BEAM LAPPING DETAIL



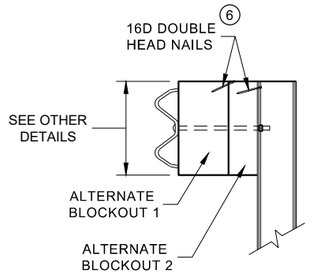
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



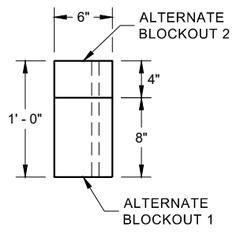
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

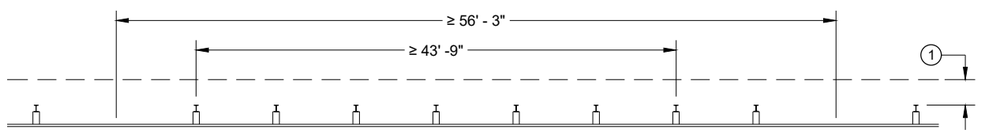
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

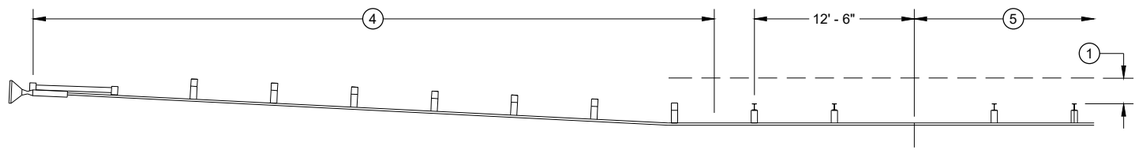
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

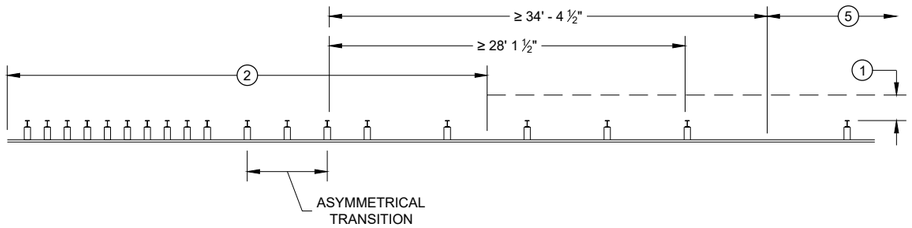
SDD 14B42 - 06c



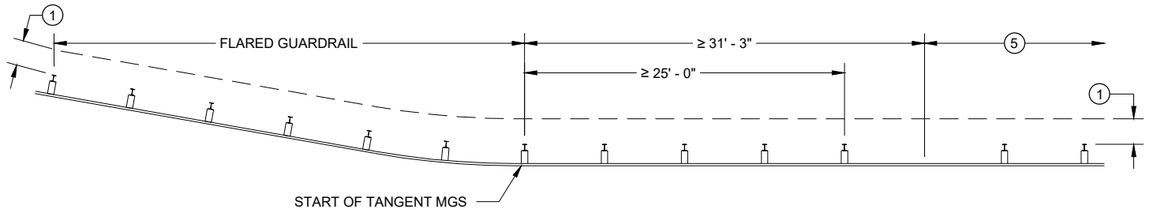
MISSING POST IN NORMAL BEAM GUARD RUN



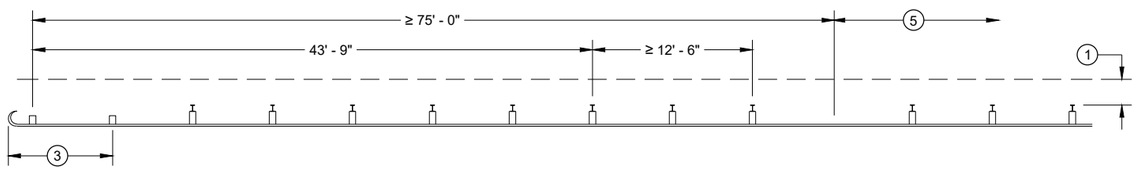
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



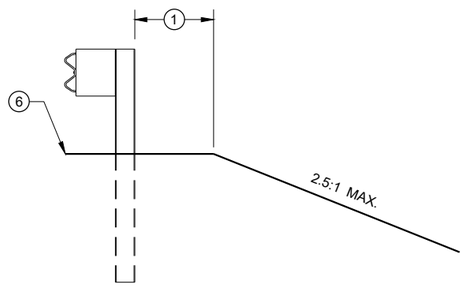
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
FHWA

6

SDD 14B42 - 06d

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 MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

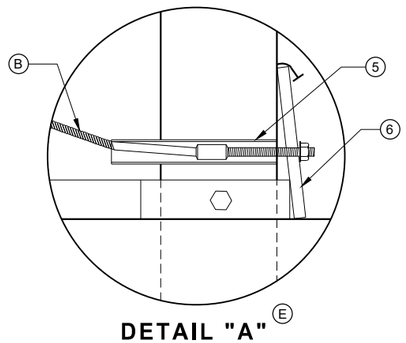
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

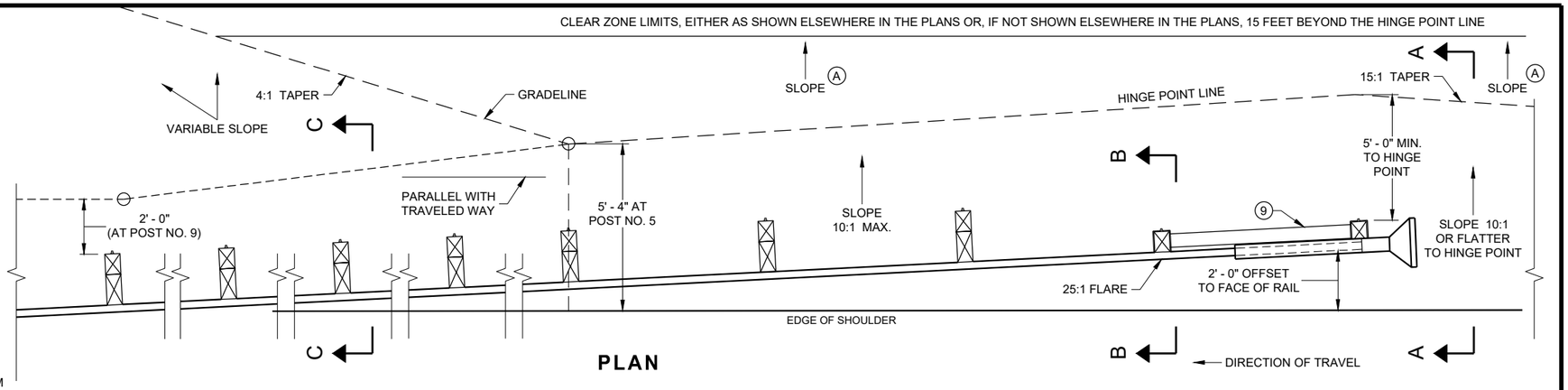
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

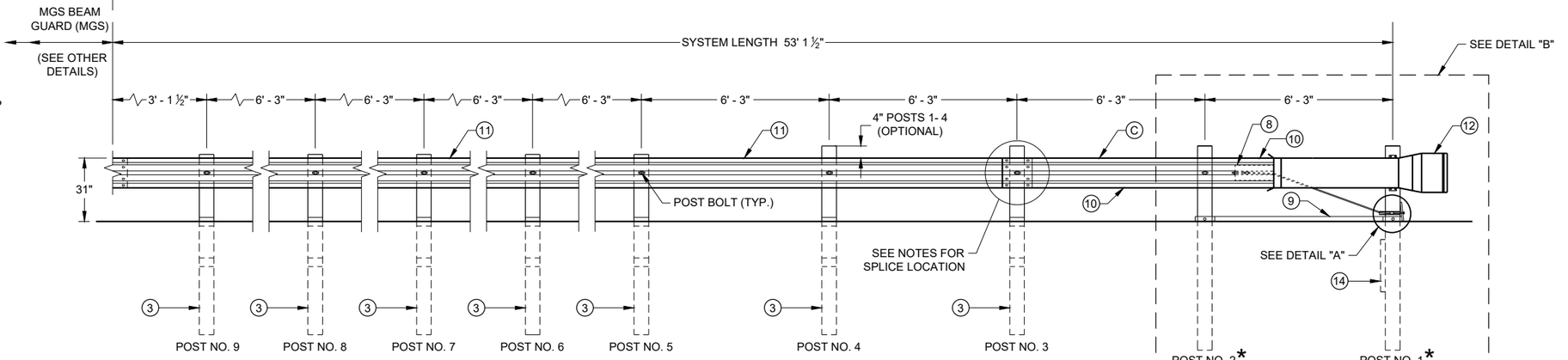
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

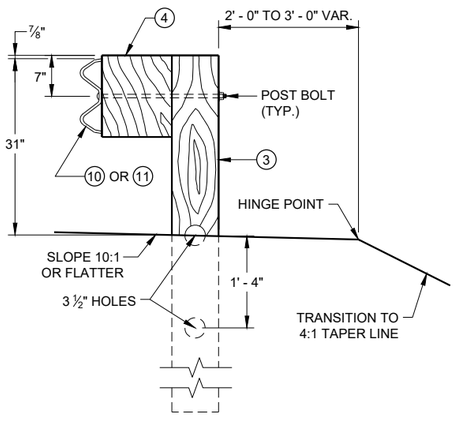
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



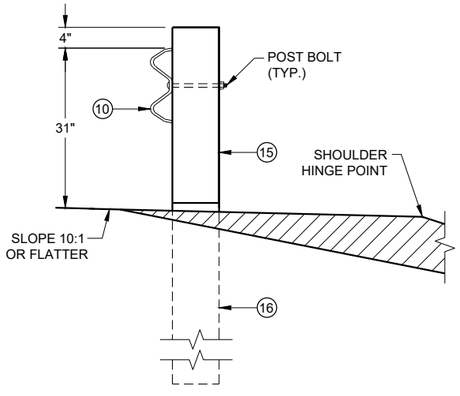
DETAIL "A" (E)



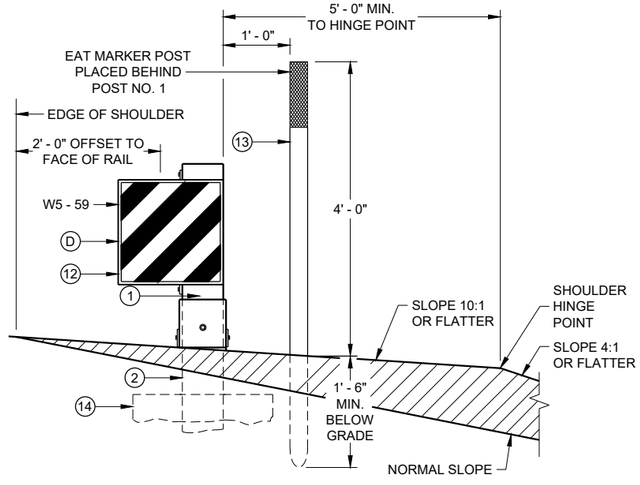




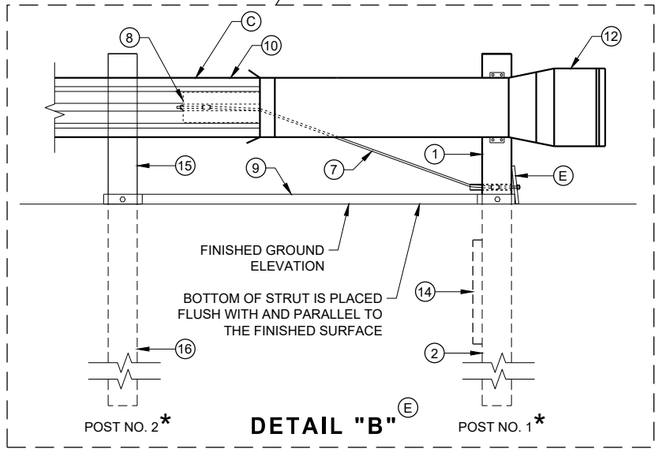
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



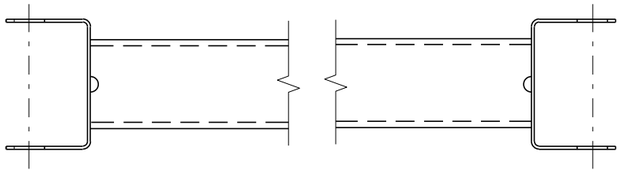
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

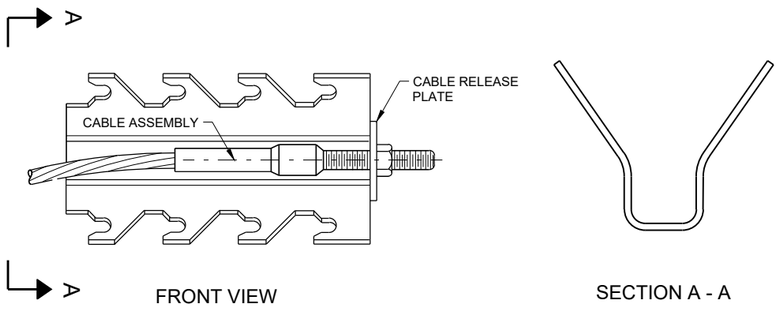
SDD 14B44 - 04a



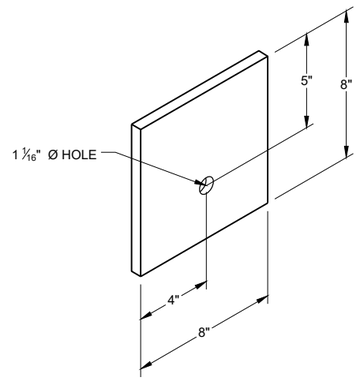
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

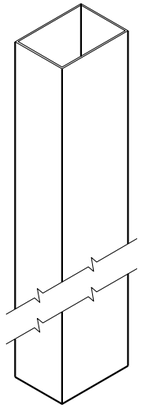
6

SDD 14B44 - 04b

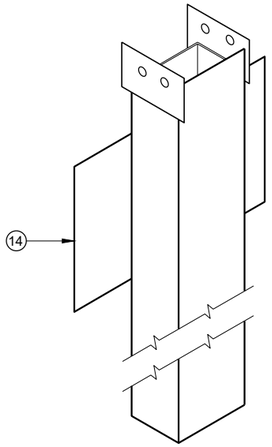
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

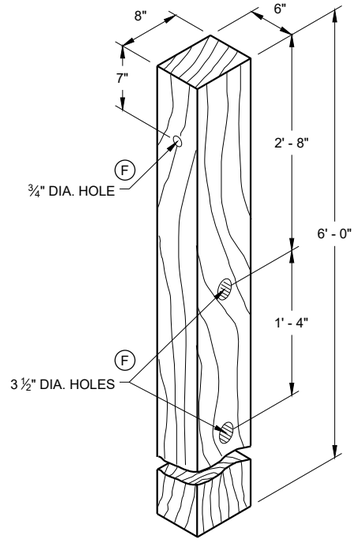
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



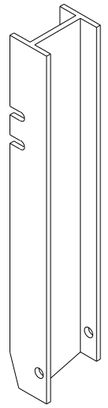
UPPER POST NO. 1 ① Ⓔ



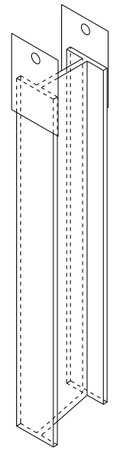
LOWER POST NO. 1 ② Ⓔ



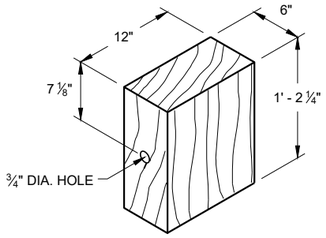
WOOD CRT POST ③ Ⓔ
POSTS NUMBER 3-9



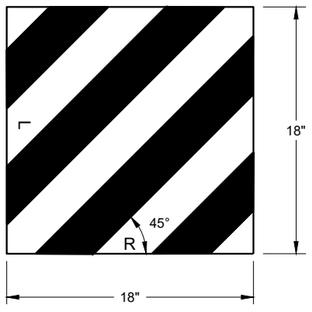
UPPER POST NO. 2 ⑮ Ⓔ



LOWER POST NO. 2 ⑯ Ⓔ

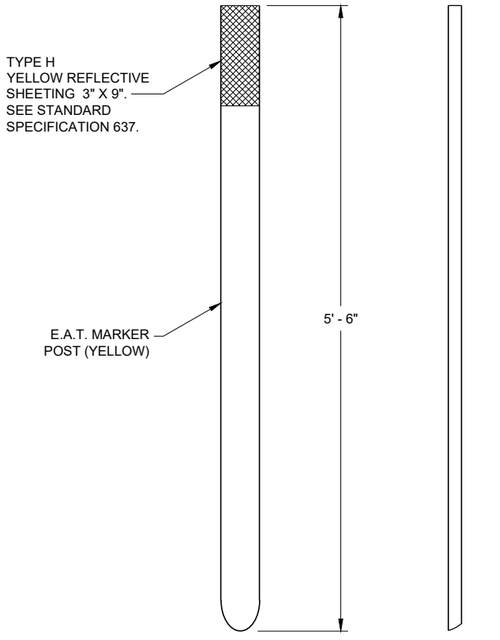


WOOD BLOCKOUT ④
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



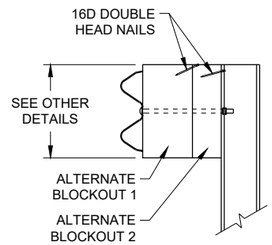
W5 - 59

REFLECTIVE SHEETING DETAIL Ⓔ

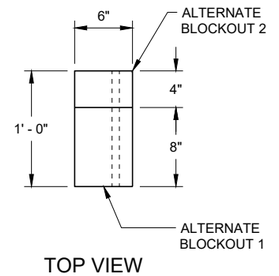


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST ⑬



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

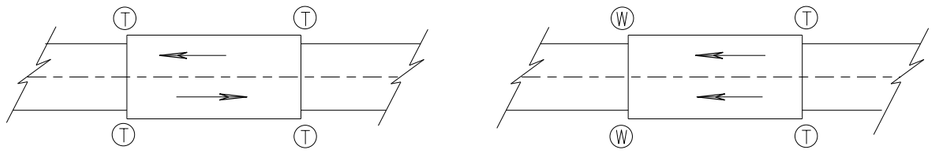
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

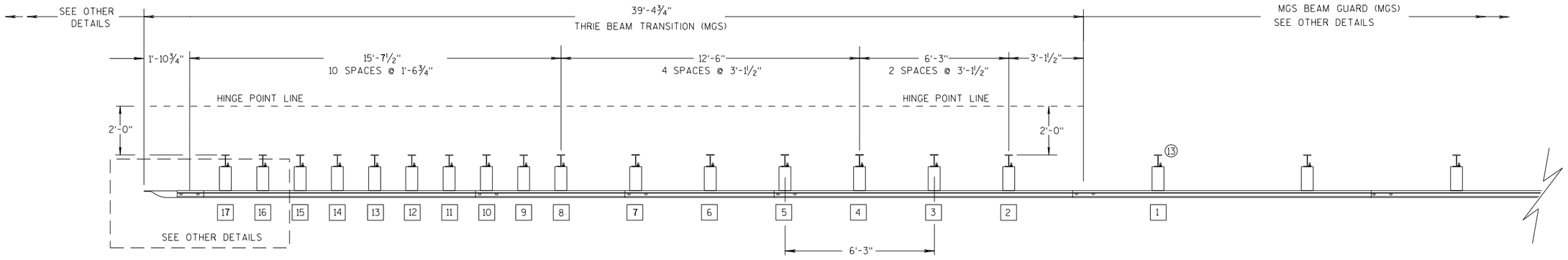
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

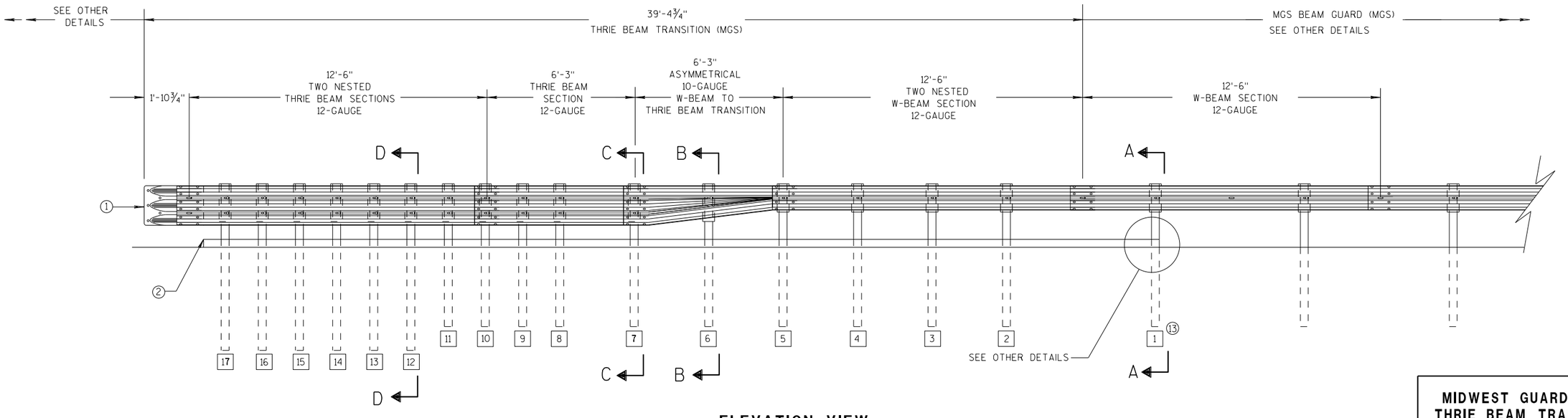
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 221

6

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

6

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

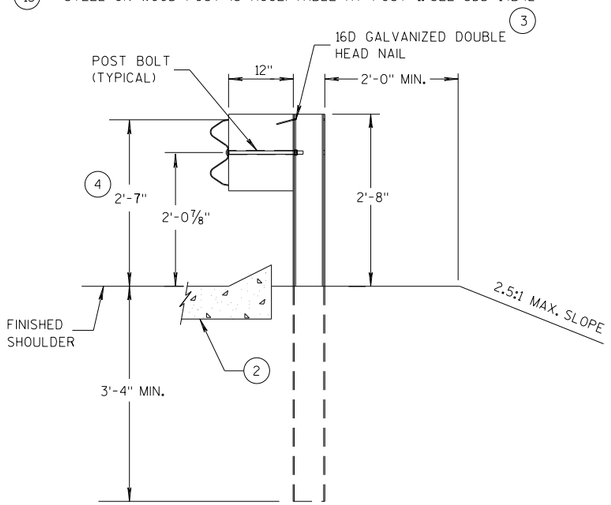
GENERAL NOTES

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

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

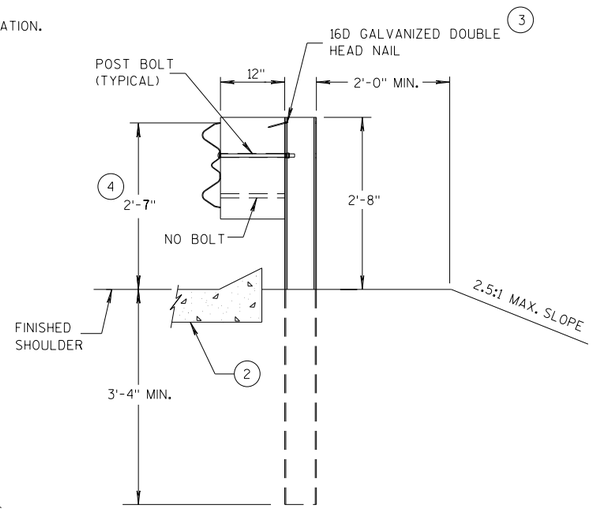
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



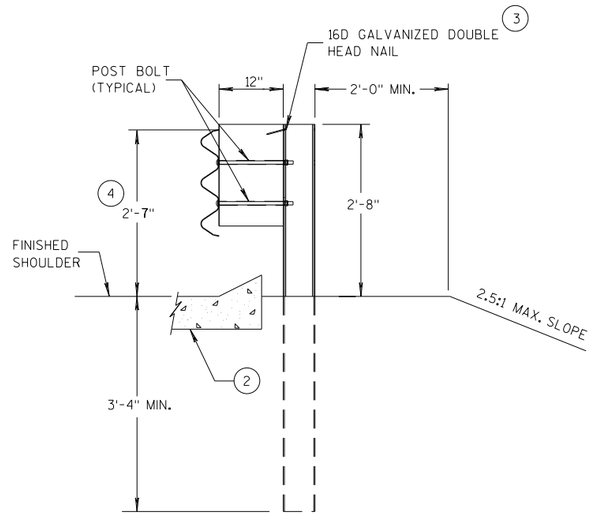
SECTION A-A (13)

POSTS 1-5



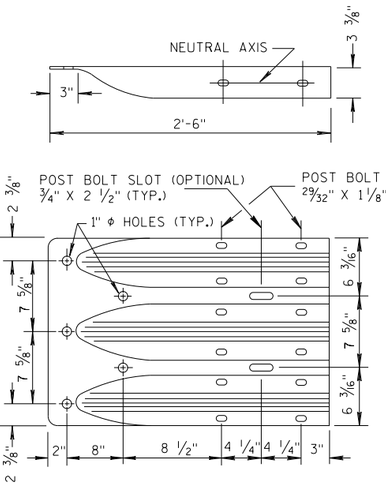
SECTION B-B

POST 6

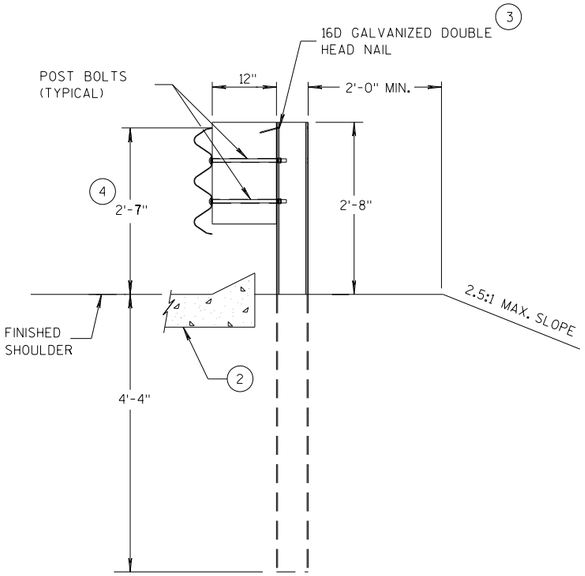


SECTION C-C

POSTS 7-11

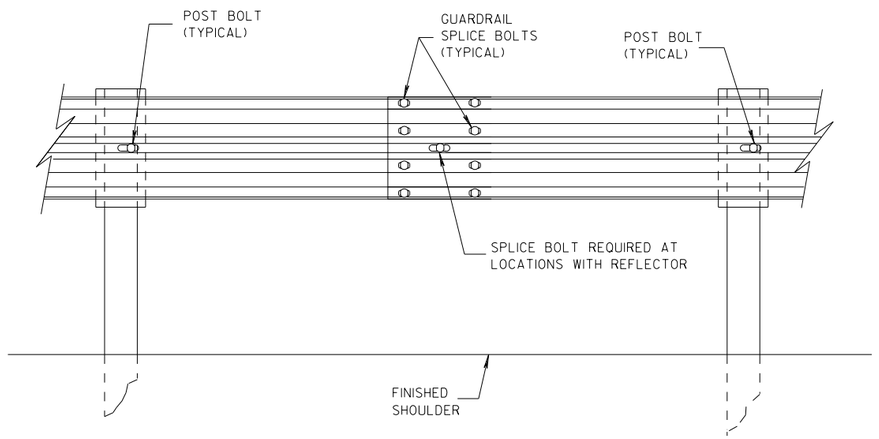


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

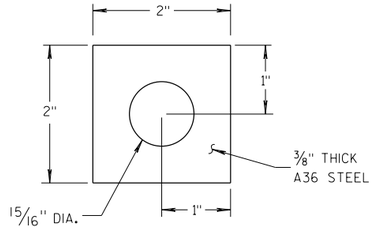
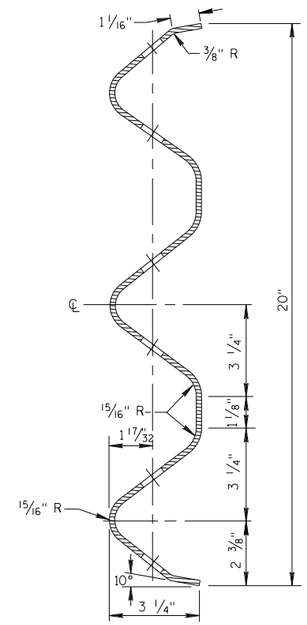


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

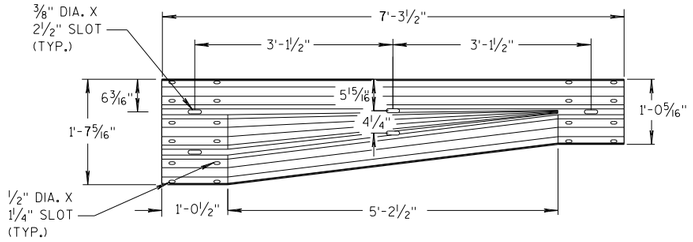
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 222

6

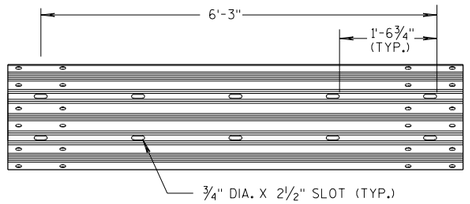
S.D.D. 14 B 45-5b

6

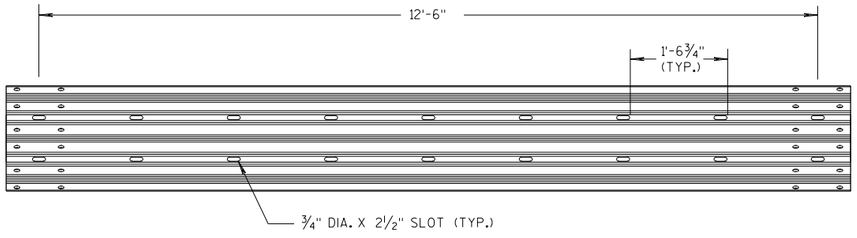
S.D.D. 14 B 45-5b



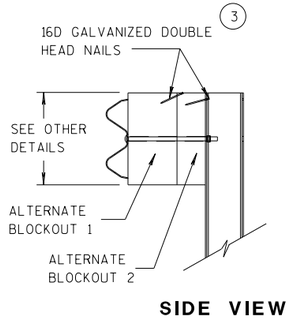
W-BEAM TO THRIE BEAM TRANSITION SECTION



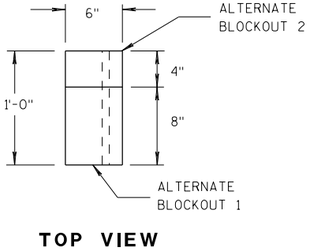
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

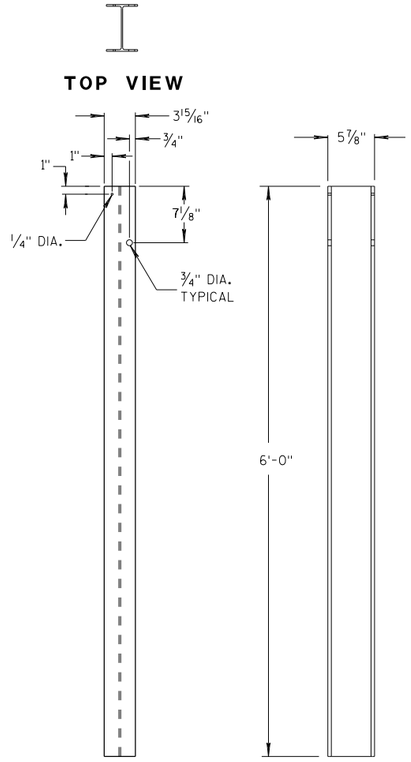


SIDE VIEW



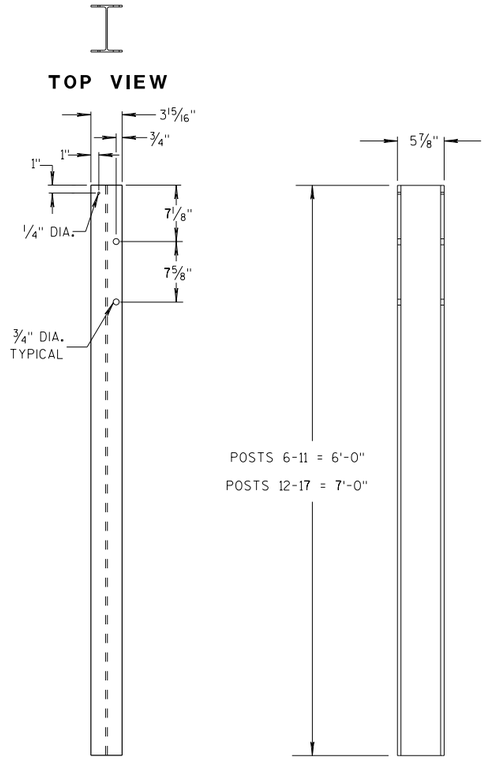
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



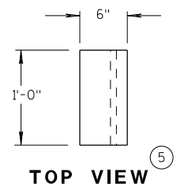
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

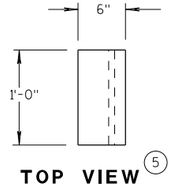


FRONT VIEW SIDE VIEW

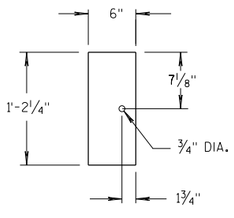
STEEL POSTS 6-17



TOP VIEW (5)

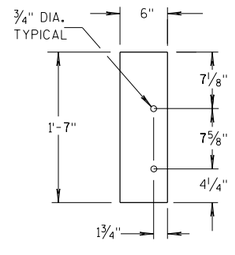


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 223

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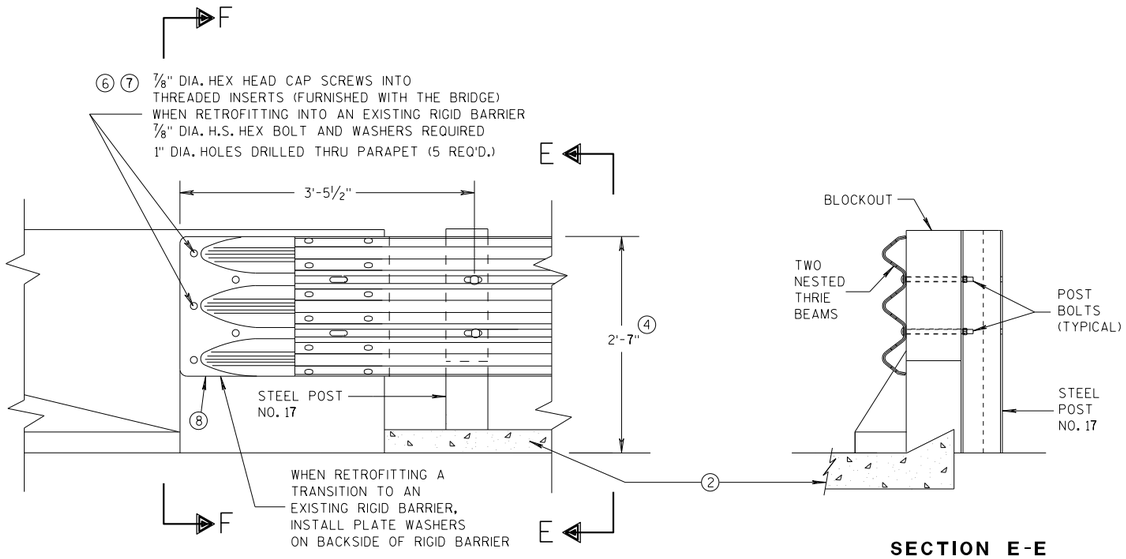
S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

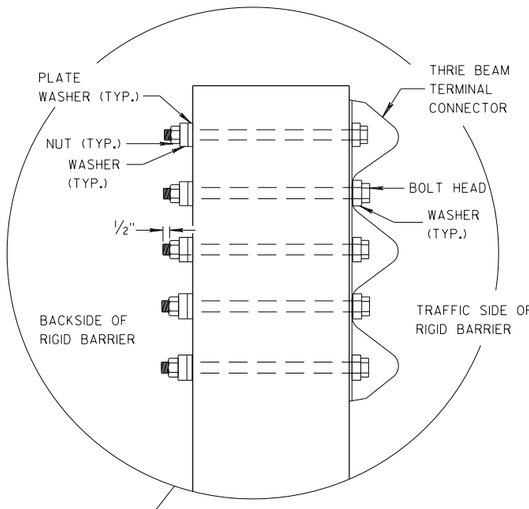
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

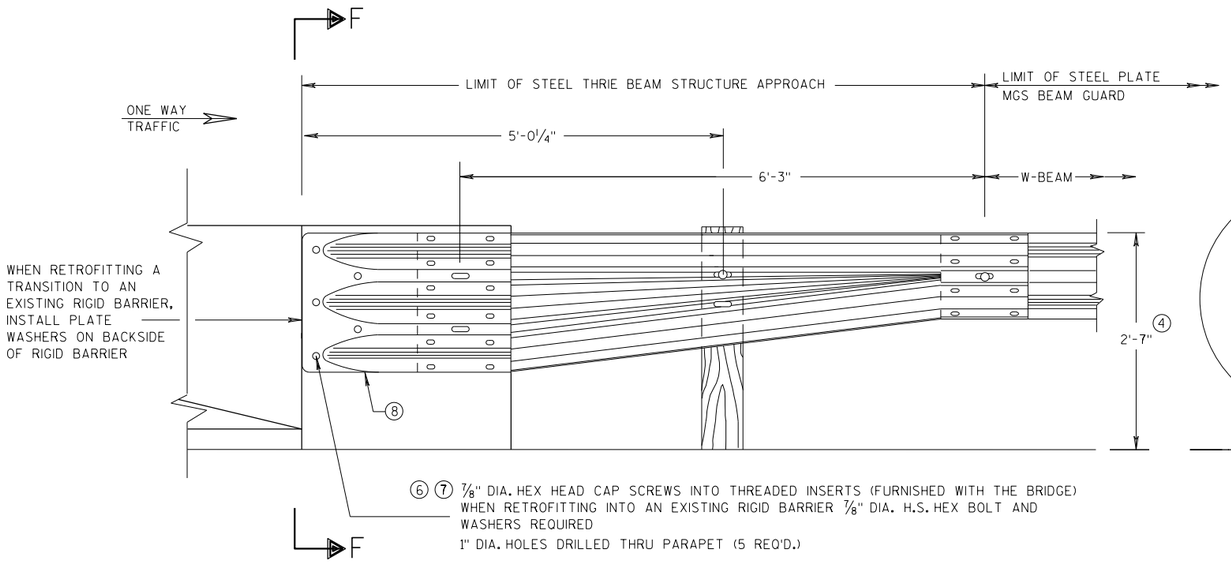
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

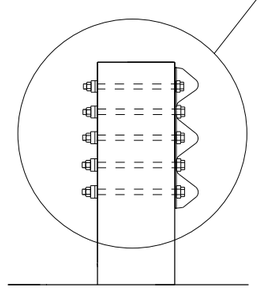
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

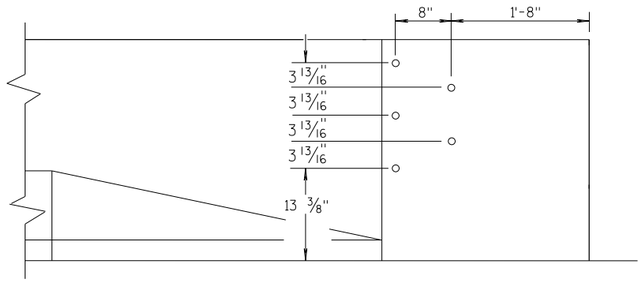




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D[illegible] UNIT SUPERVI[illegible]
FHWA

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

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

GENERAL NOTES

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

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

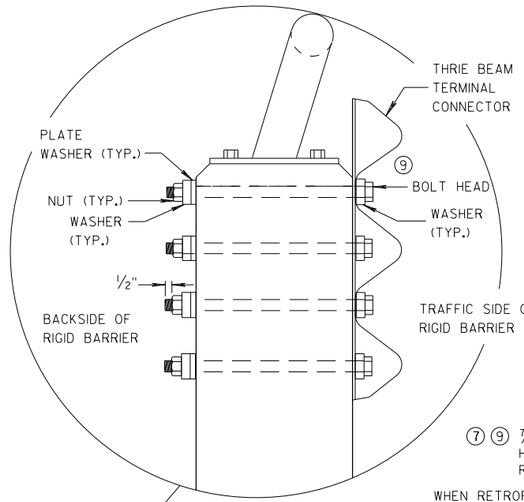
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

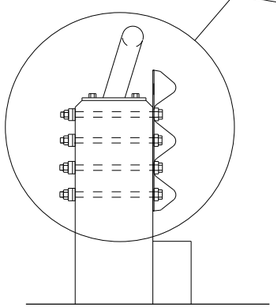
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

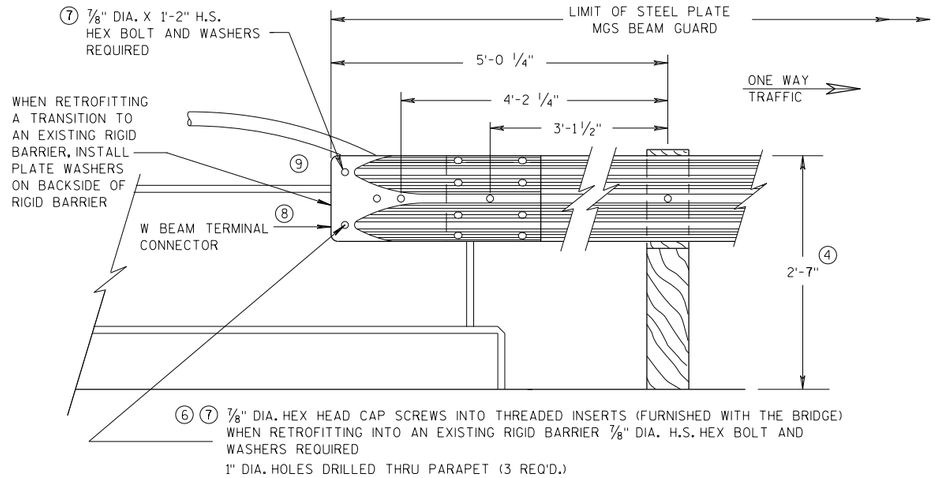
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(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.





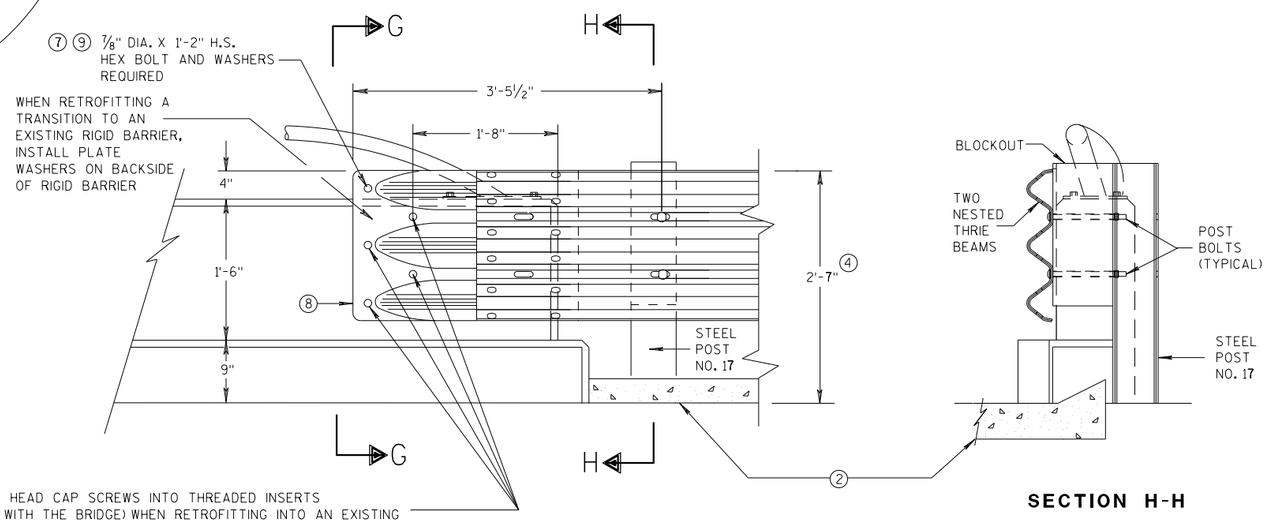
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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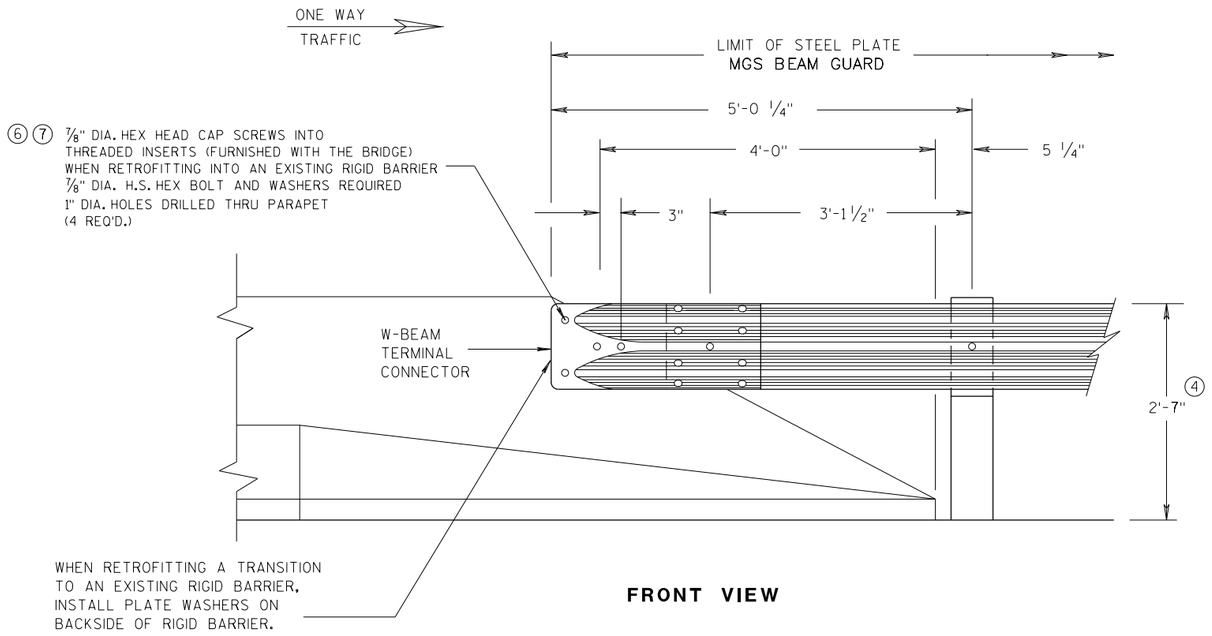


FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

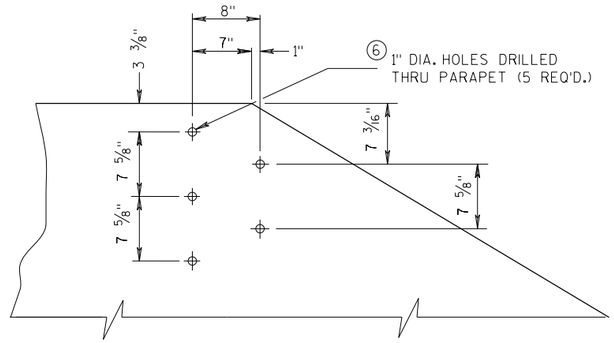
GENERAL NOTES

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

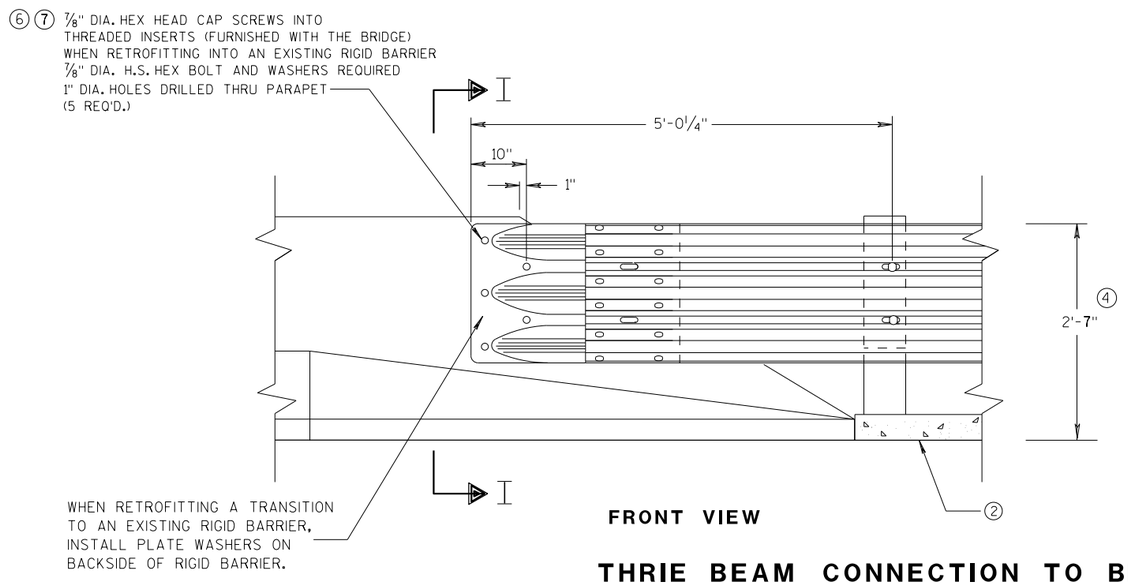
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

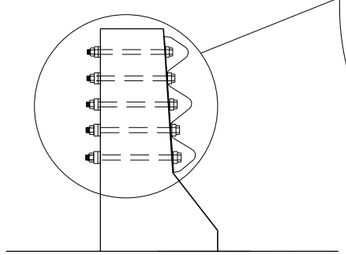
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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



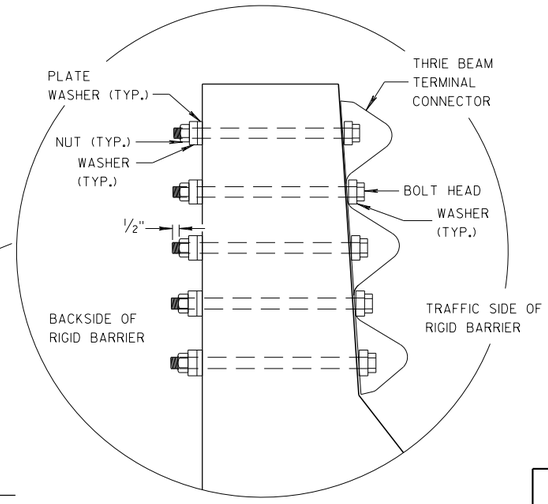
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



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 45-5f

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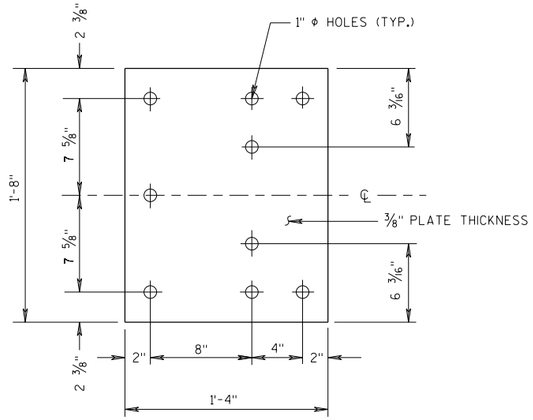
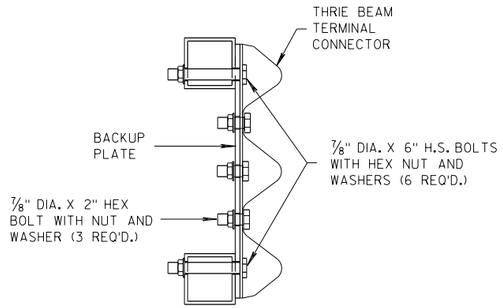
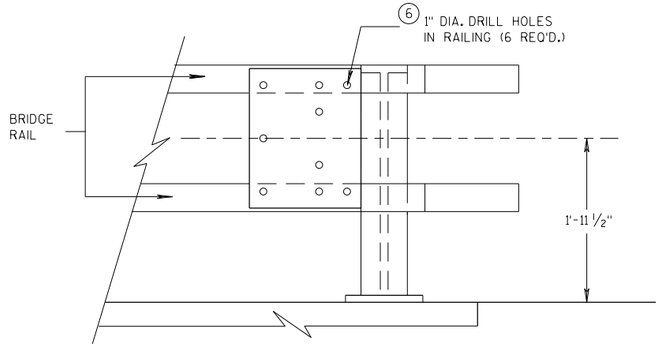
S.D.D. 14 B 45-5f



BACK-UP PLATE DETAIL



SECTION J-J

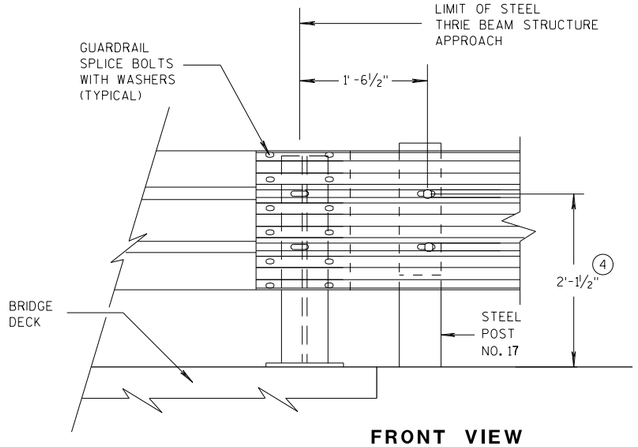


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

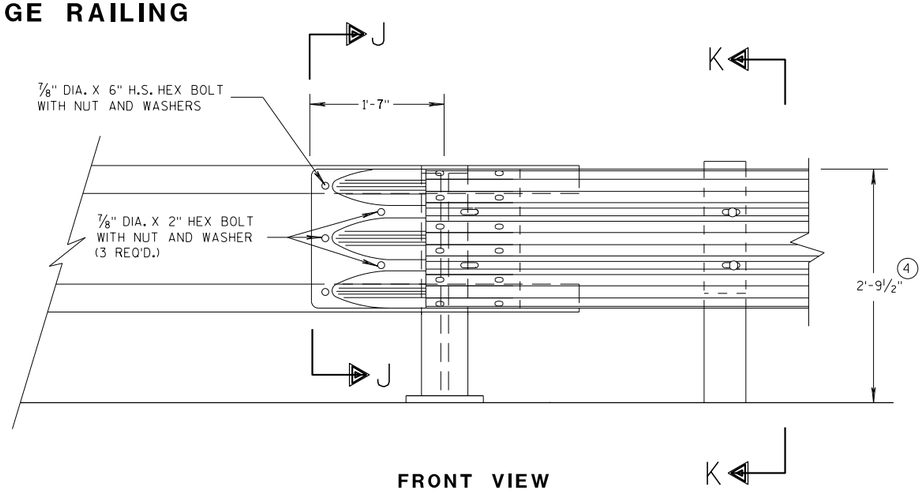
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

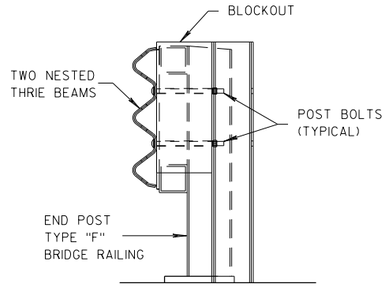


FRONT VIEW

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

APPROVED 07/2018 — DATE
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/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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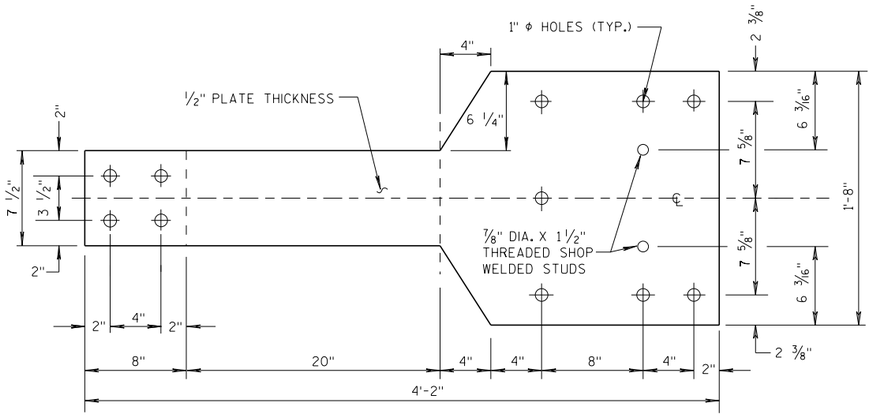
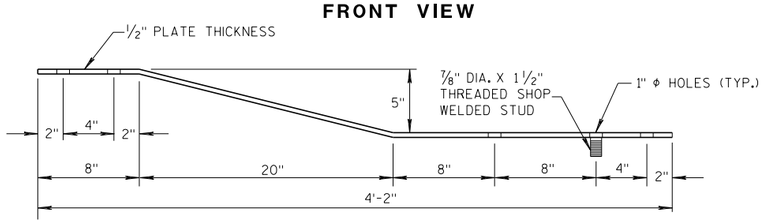
GENERAL NOTES

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

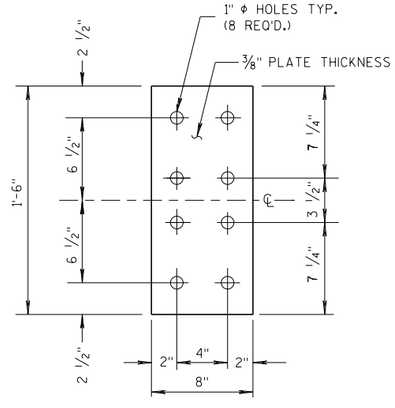


FRONT VIEW



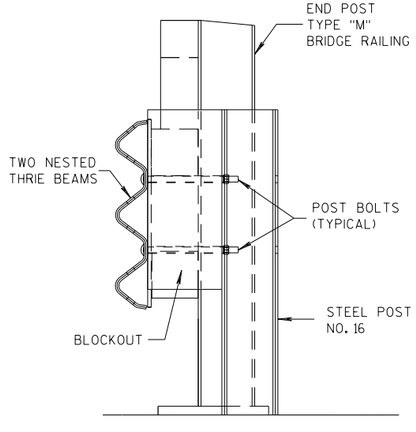
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

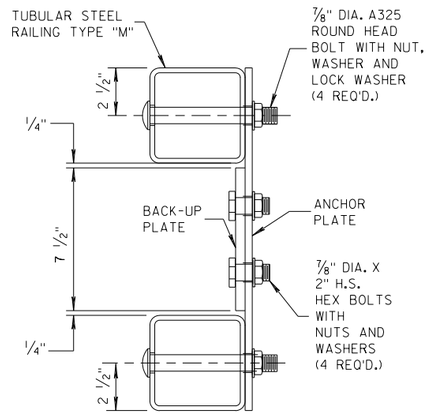


FRONT VIEW

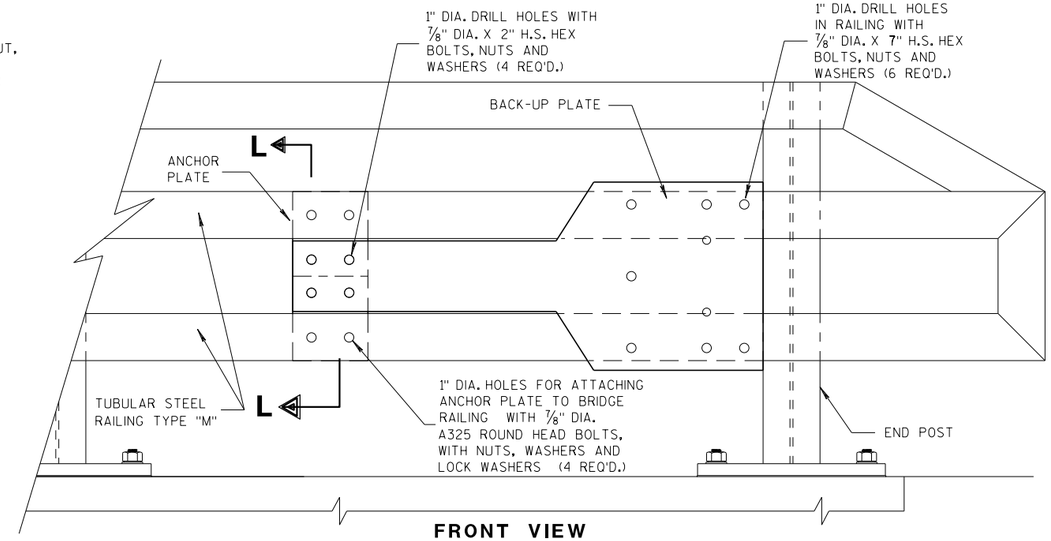
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

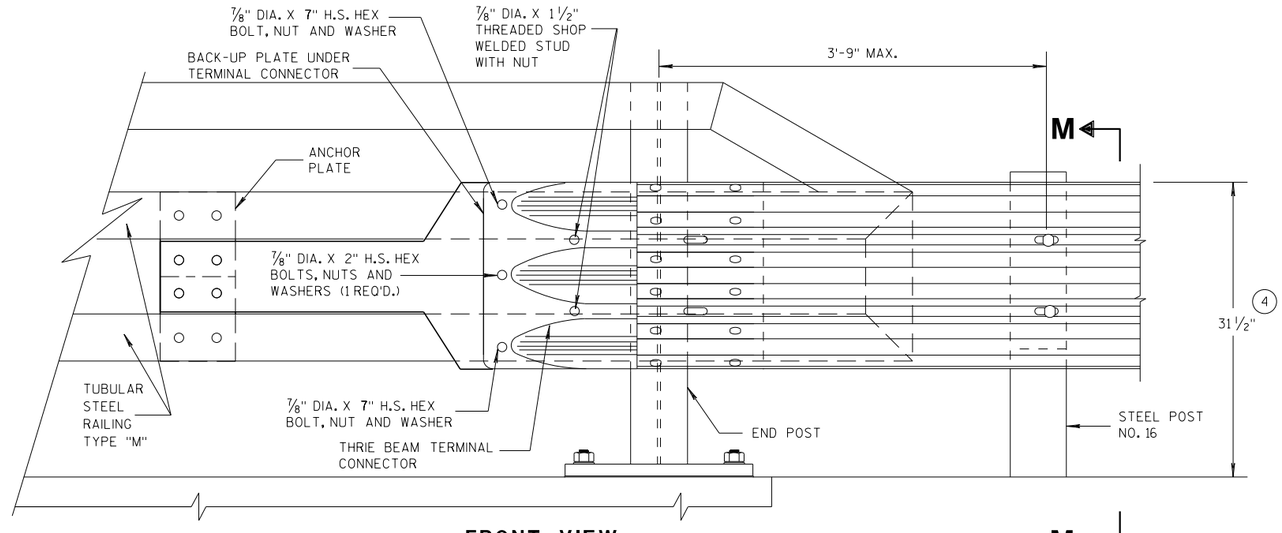


SECTION L-L

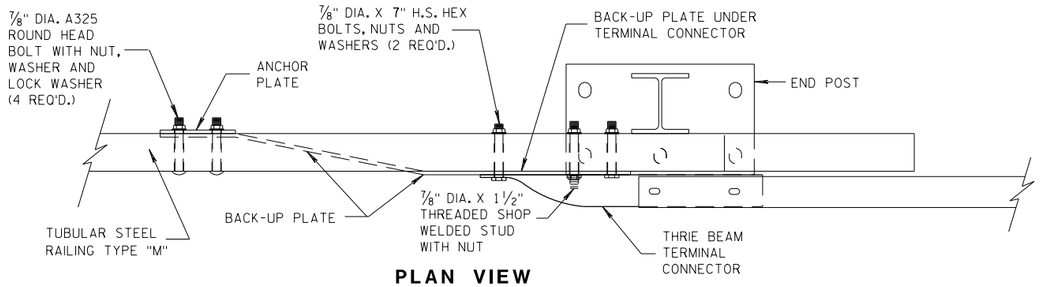


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "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

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

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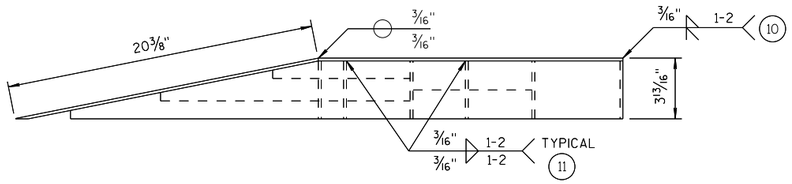
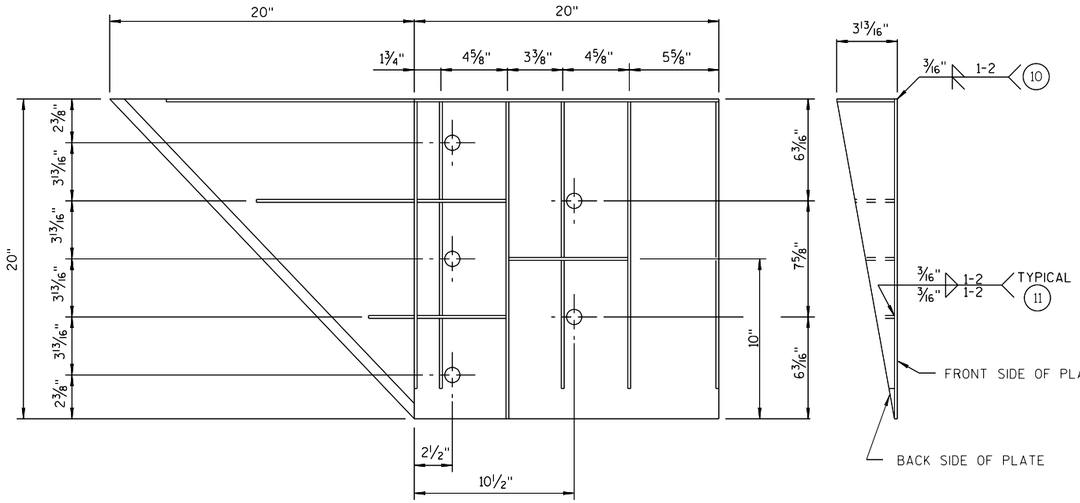
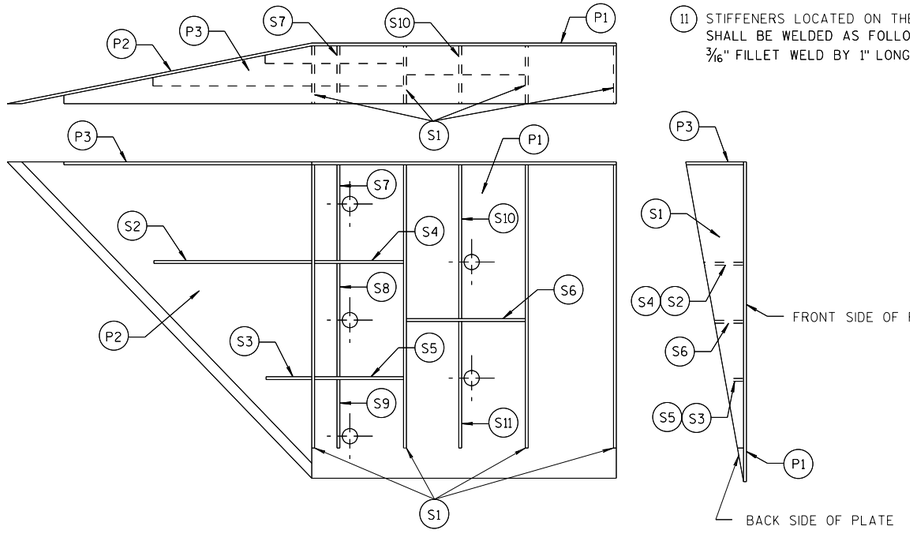




WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)



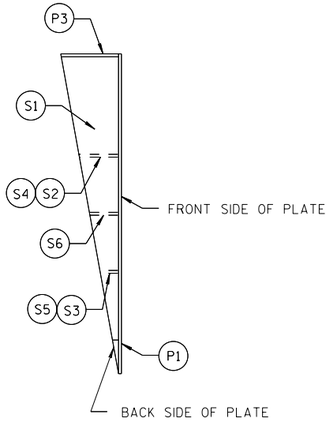


PLATE AND STIFFENER IDENTIFICATION

(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 5/8" 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 3/32"	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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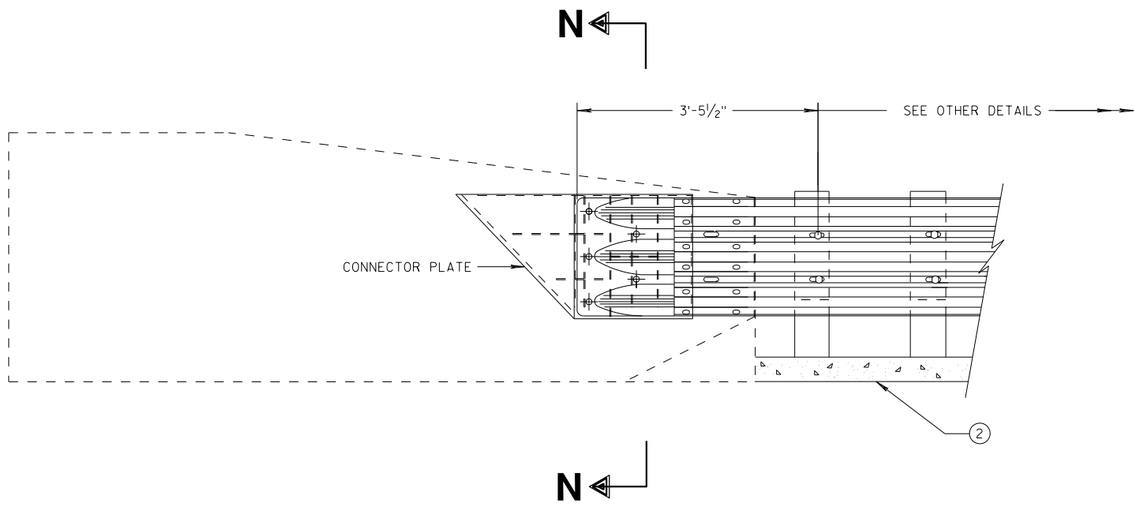
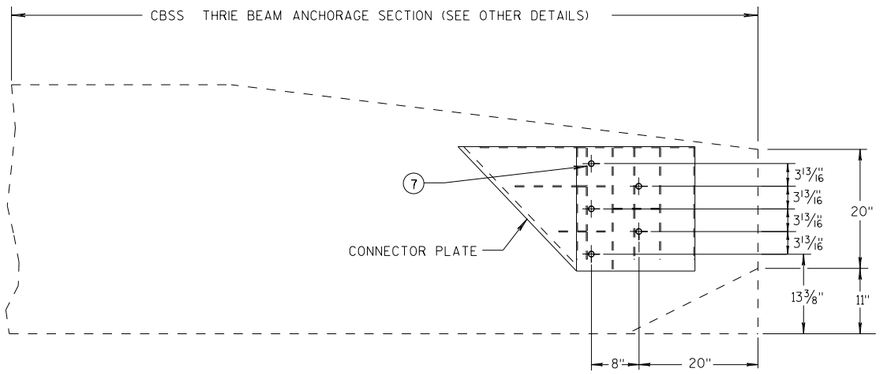


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



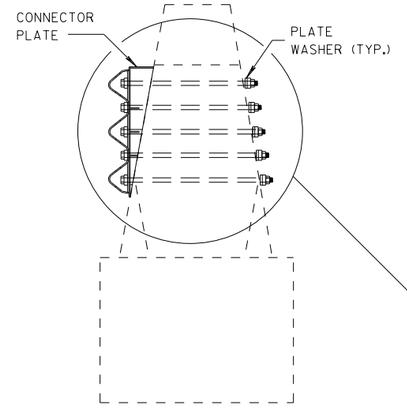
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

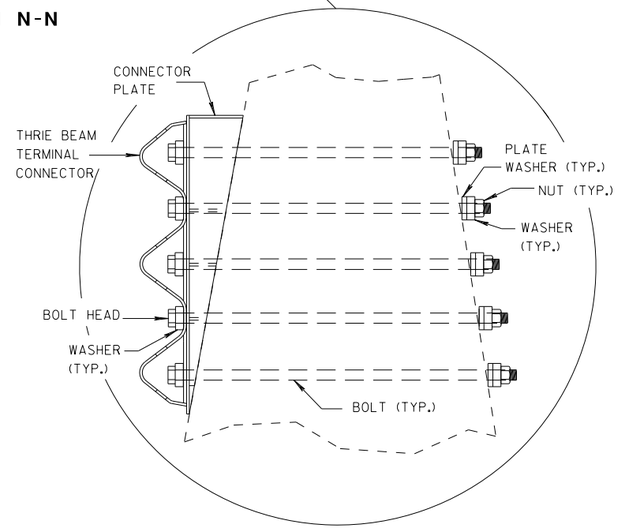
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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 5/32" 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
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ROADWAY STANDARDS DI
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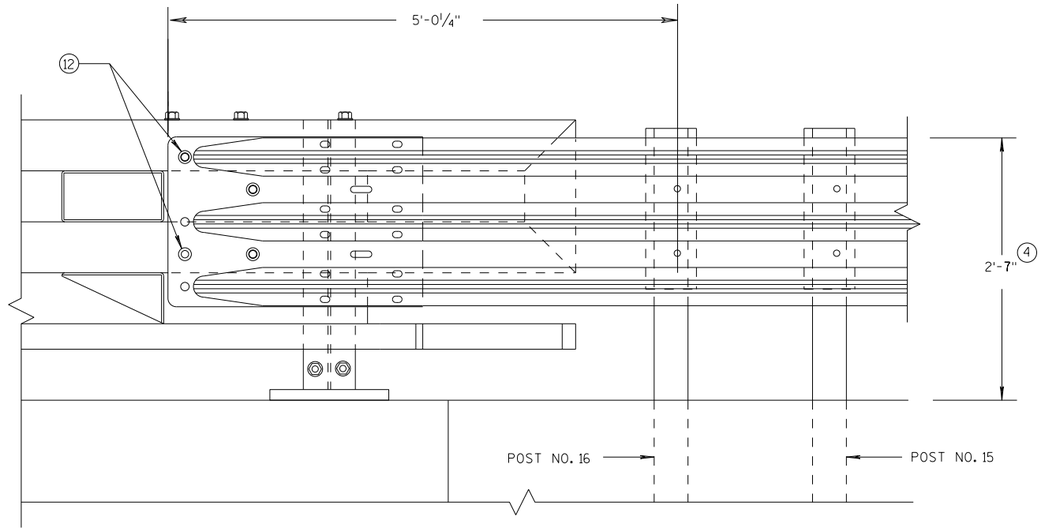
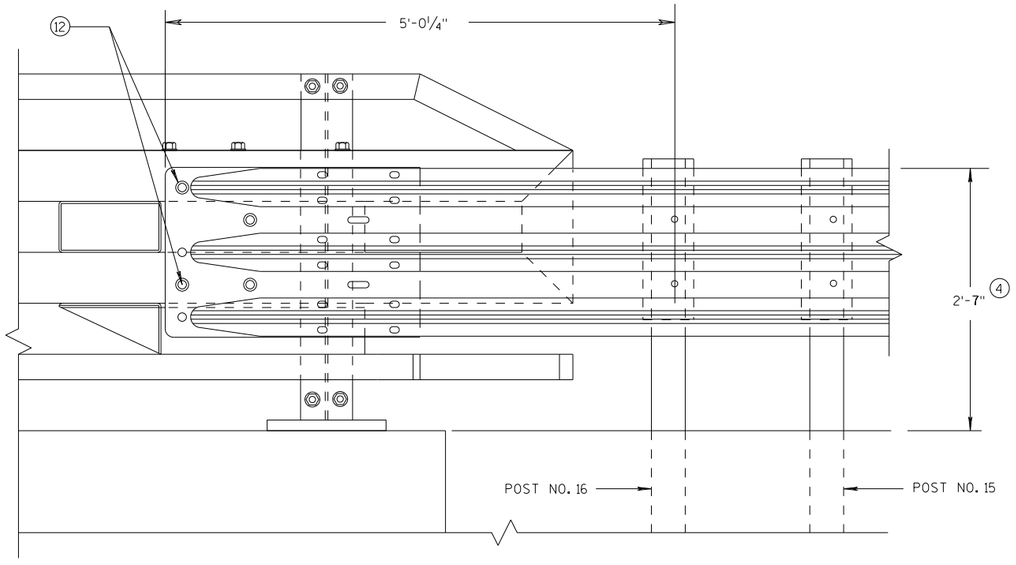


ELEVATION OF DETAIL AT NY3 END POST

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 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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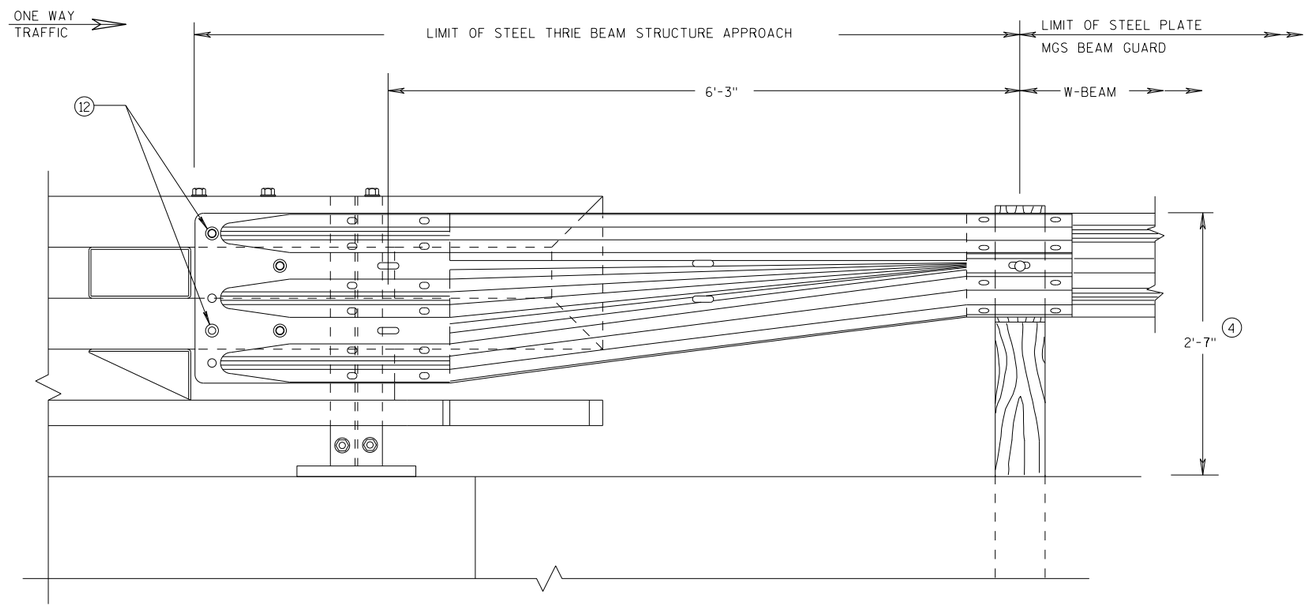


FRONT VIEW

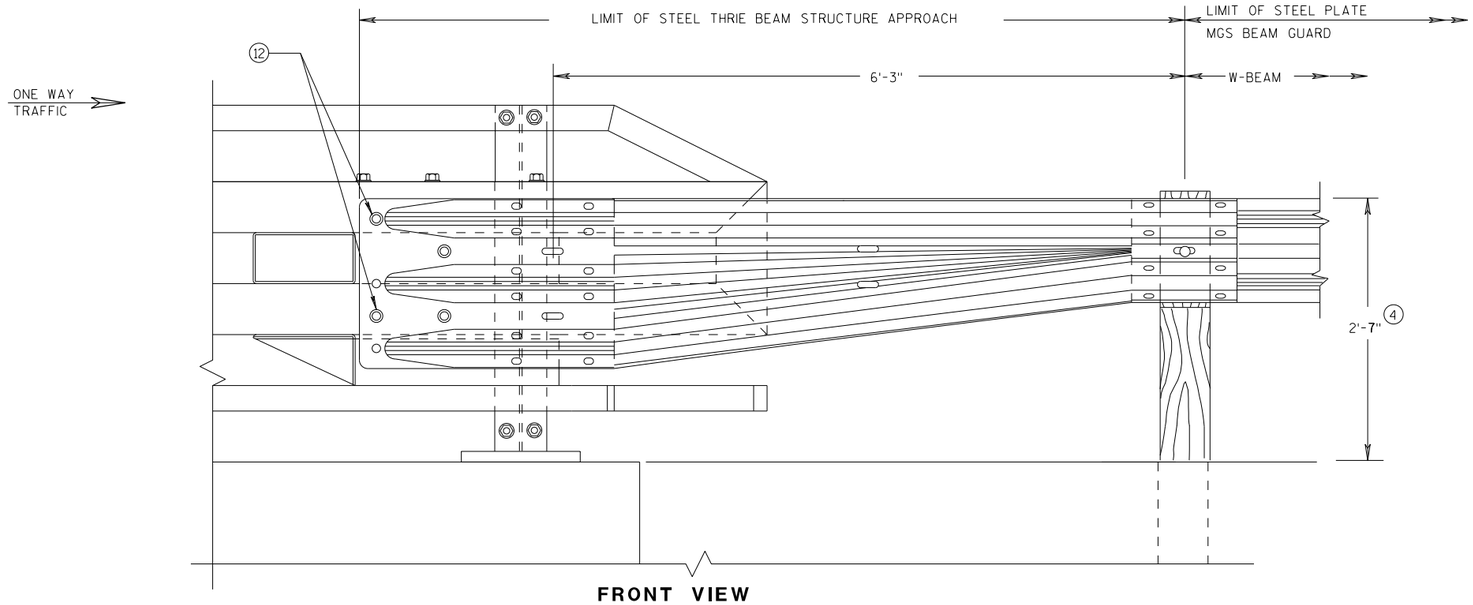
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

(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 1/2-INCH BEYOND NUT.



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
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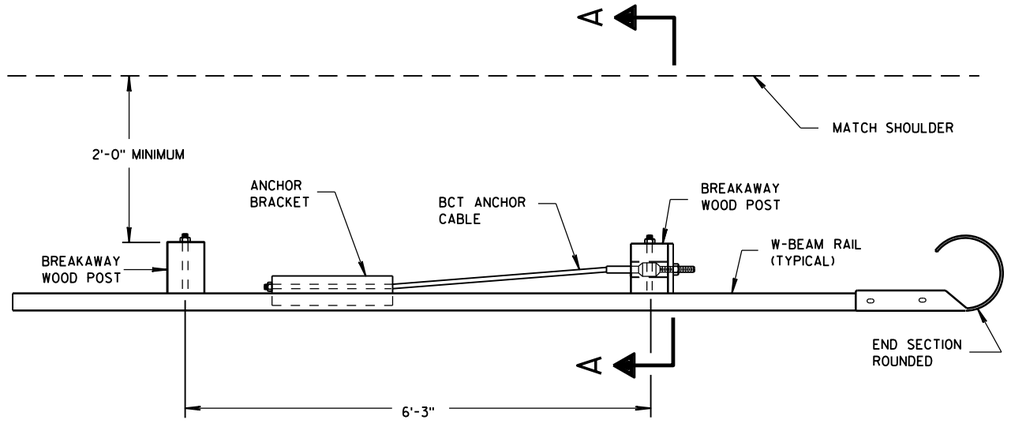
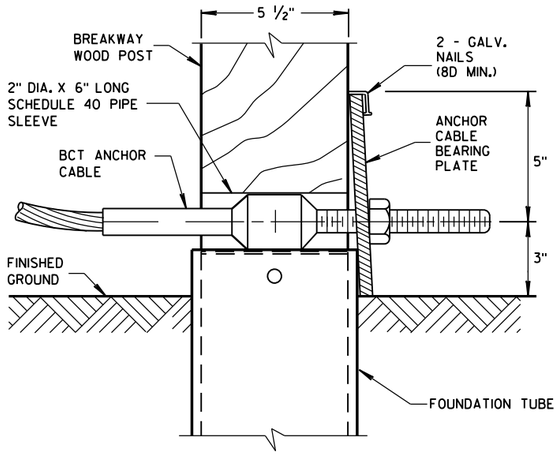


PLAN VIEW



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

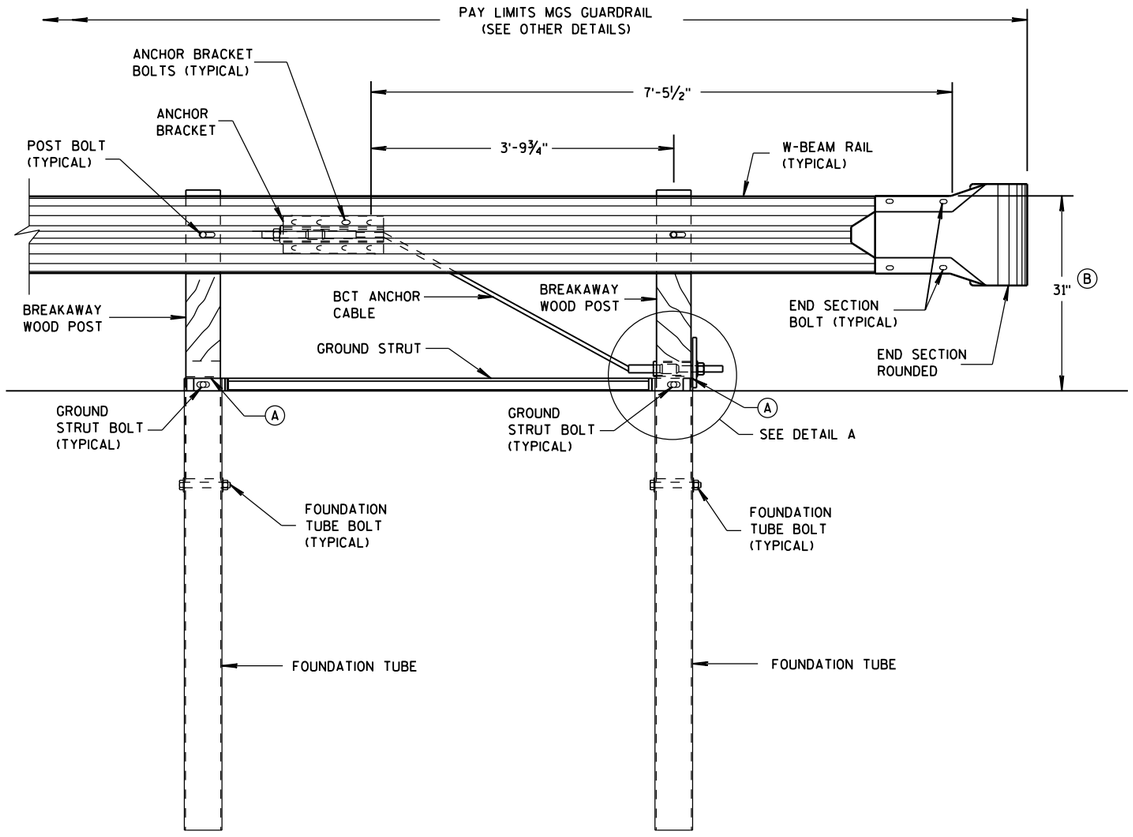
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

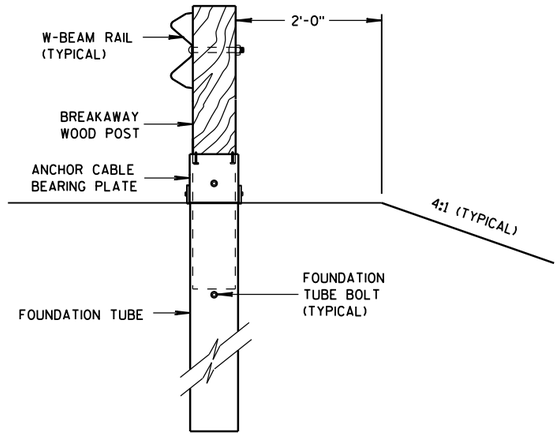
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

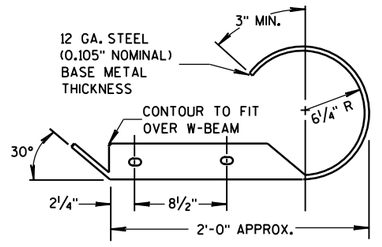


FRONT VIEW

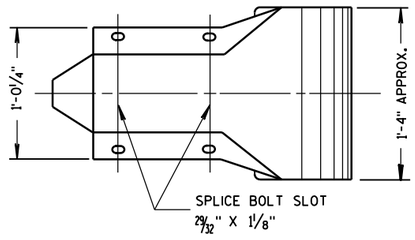
END RAIL DETAIL



SECTION A-A



PLAN VIEW



FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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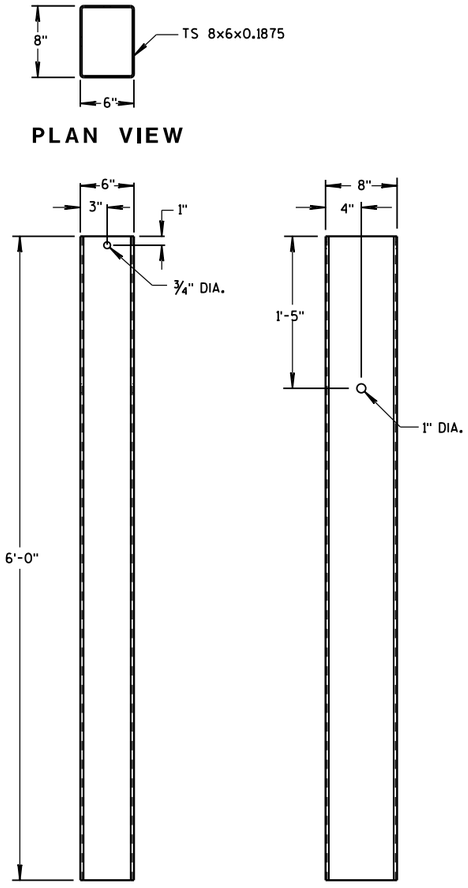
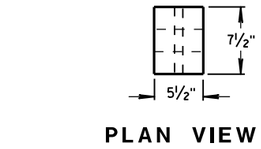
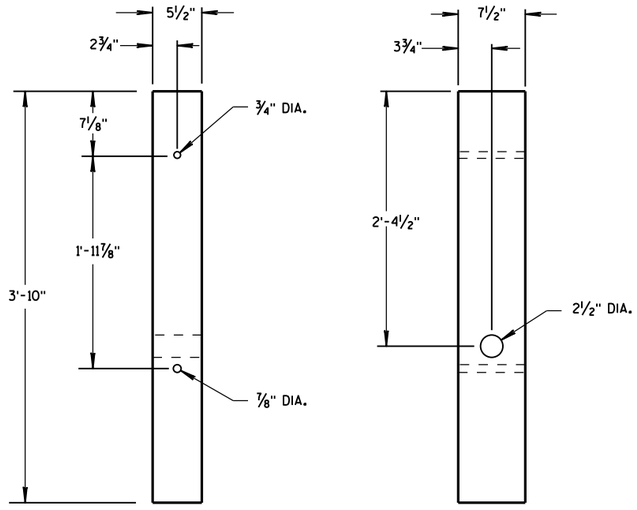


FOUNDATION TUBE



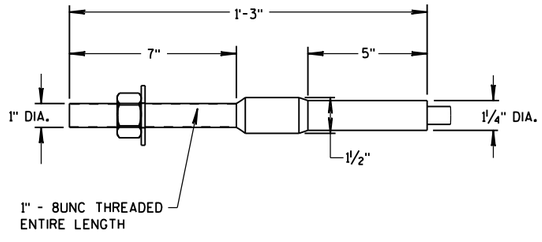


BREAKAWAY WOOD POST

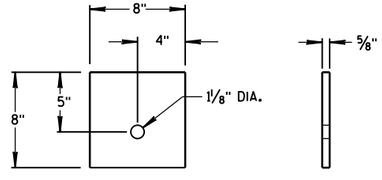
GENERAL NOTES

BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

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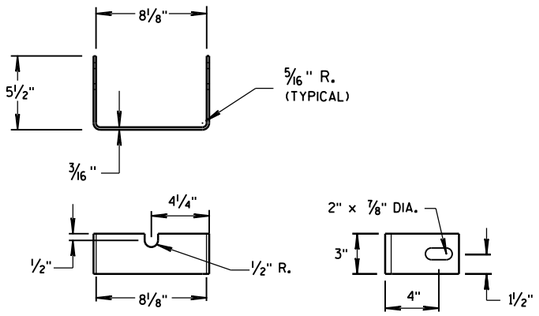
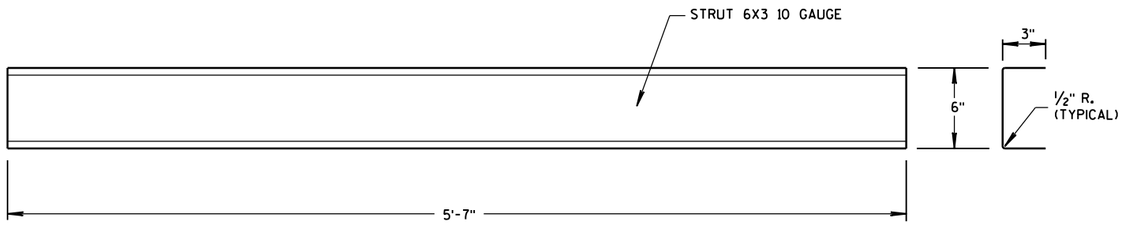
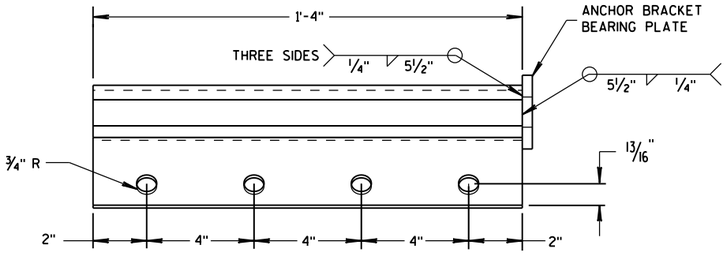
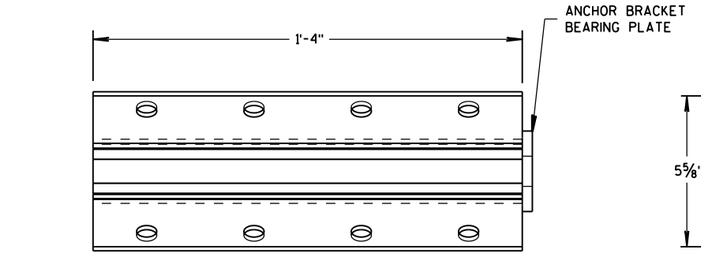


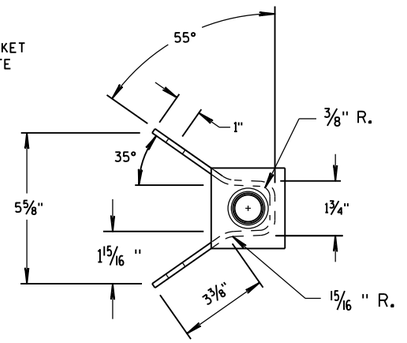
YOKE DETAIL



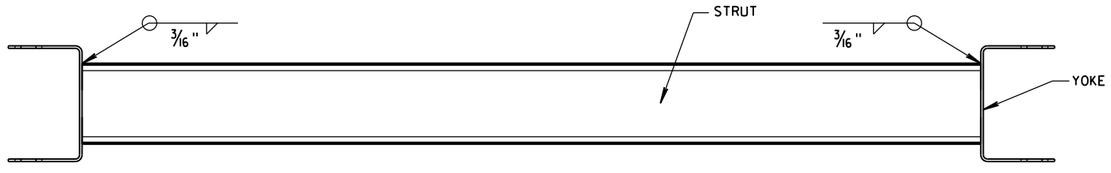
STRUT DETAIL



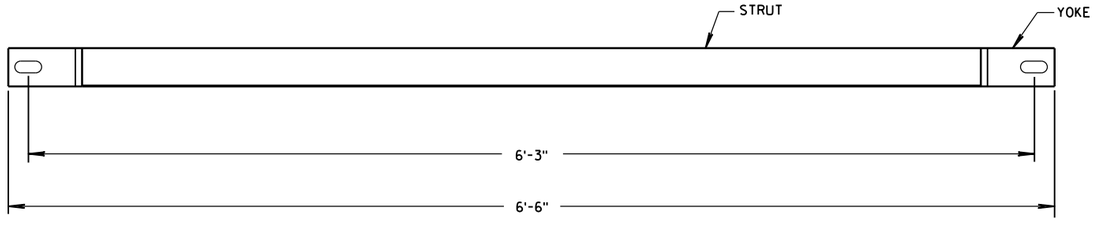




ANCHOR BRACKET

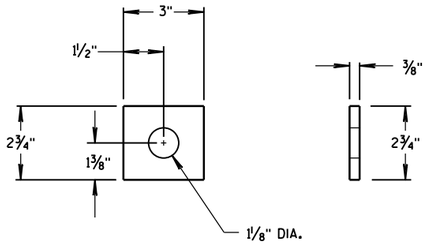


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

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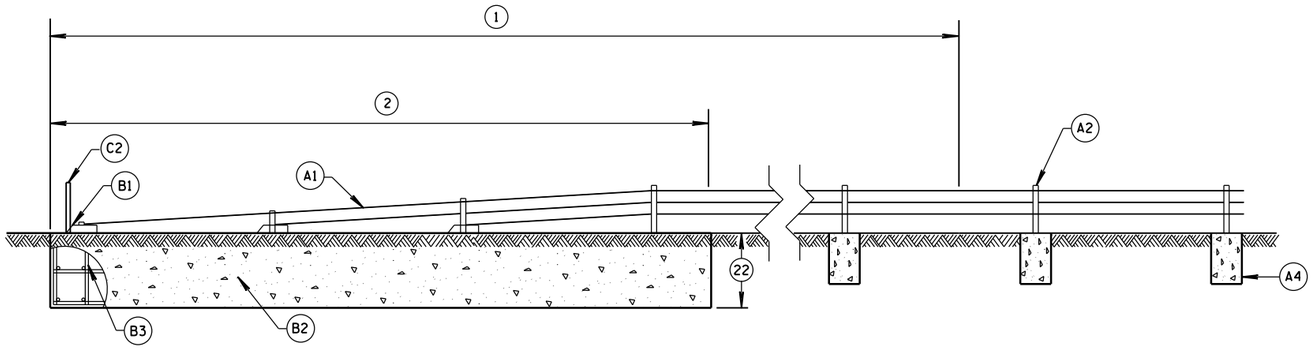
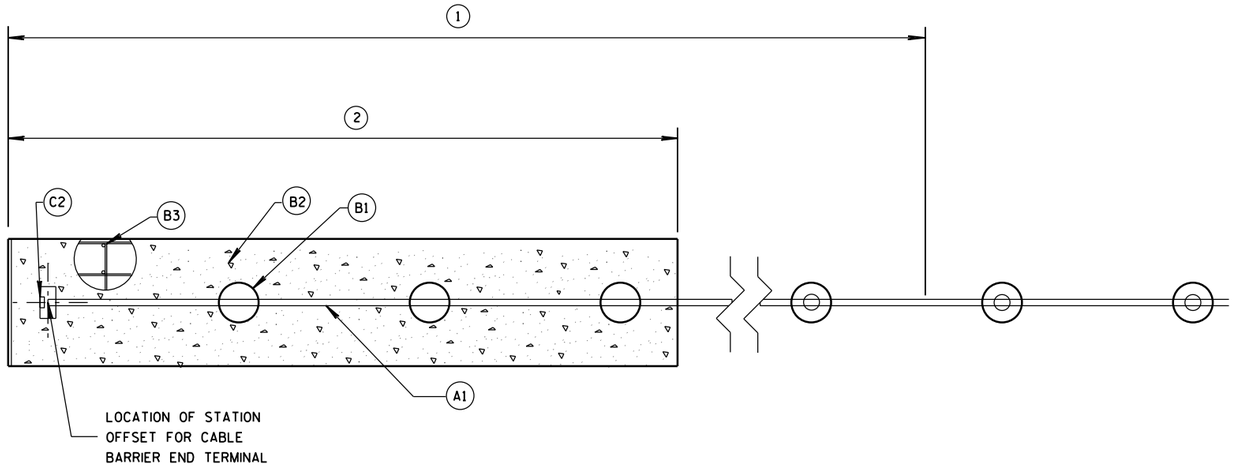
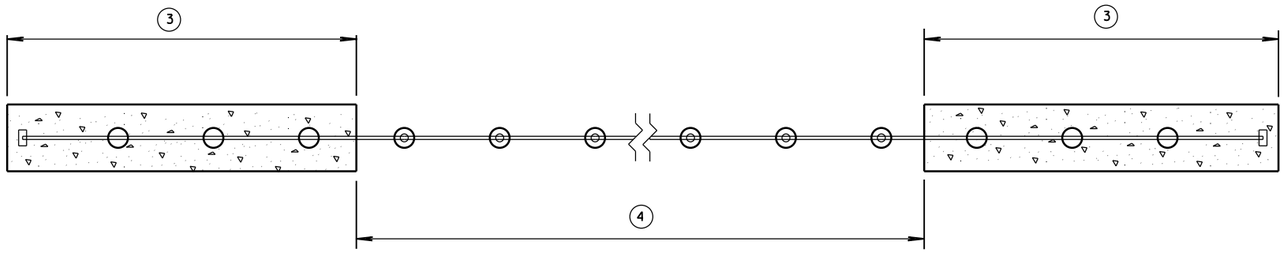


PROFILE VIEW



PLAN VIEW

TRANSITION FROM CABLE BARRIER TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW

GENERAL NOTES

DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.

PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.

INSTALL LINE POST PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.

PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.

PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICTED IN PLAN.

PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.

PROVIDE A WISCONSIN PROFESSIONAL ENGINEERS STAMPED ANALYSIS THAT THE LINE POST AND CABLE BARRIER END TERMINAL FOOTINGS ARE DESIGNED FOR THE SOIL CONDITIONS PRESENT. THE WISCONSIN P.E. STAMP ANALYSIS IS TO INCLUDE, BUT IS NOT LIMITED TO: DESIGN IMPACT LOADS, FOUNDATION DEISGN METHODOLOGY USED, FACTORS OF SAFETY, SOIL TYPE, SOIL CONDITIONS, AND TEMPERATURE RANGES.

DESIGN LINE POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A TL-3 SMALL CAR.

BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
(A1)	3 OR 4	3/4" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	ASTM A741 MIN. BREAKING STRENGTH 39,000 LBS.
			AASHTO M30 TYPE 1 CLASS A (GALVANIATION).
			MINIMUM WIRE ROPE MODULUS OF ELASTICITY OF 19,000 PSI ACCORDING TO ISO 12067-202 WIRE ROPE MODULUS OF ELASTICITY "INITIAL" (AS MANUFACTURED), WITH NO BEDDING OR PRESTRECHING OF THE ROPE PERMITTED DURING TESTING.
(A2)	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A3)	1 PER LINE POST	GALVANIZED METAL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A4)	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES.
			STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
			SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
(A5)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(A6)	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
			MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE.
			TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS.
(B1)	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
(B2)	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2.
			STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
(B3)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(C1)	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST YELLOW.
(C2)	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN.

(1) LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(2) PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(3) CABLE BARRIER END TERMINAL

(4) CABLE BARRIER AND LINE POSTS

CABLE BARRIER TYPE 1 LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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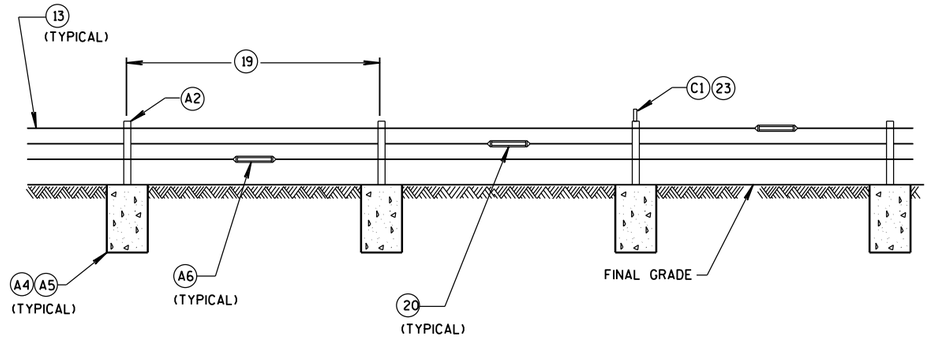
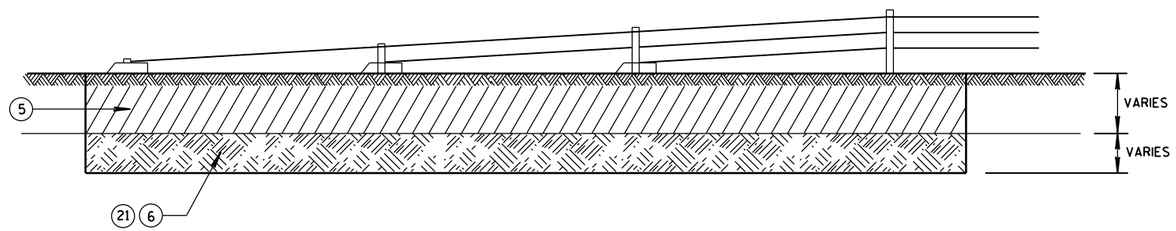
S.D.D. 14 B 52-1a



PROFILE VIEW

LINE POST INSTALLATION



CABLE BARRIER END TERMINAL ROCK EXCAVATION DETAIL

(5) SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).

(6) ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).

(7) SOIL TO BE EXCAVATED FOR LINE POST (VARIES).

(8) ROCK TO BE EXCAVATED FOR LINE POST (VARIES).

(9) EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.

(10) 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.

(11) DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURER'S INFORMATION.

(12) MINIMUM DEPTH OF LINE POST FOOTING IS 48 INCHES IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.

(13) NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURER'S INFORMATION.

(14) LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURER'S INFORMATION.

(15) LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.

(16) PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

(17) GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

(18) CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.

(19) MAXIMUM POST SPACING IS 15 FEET.

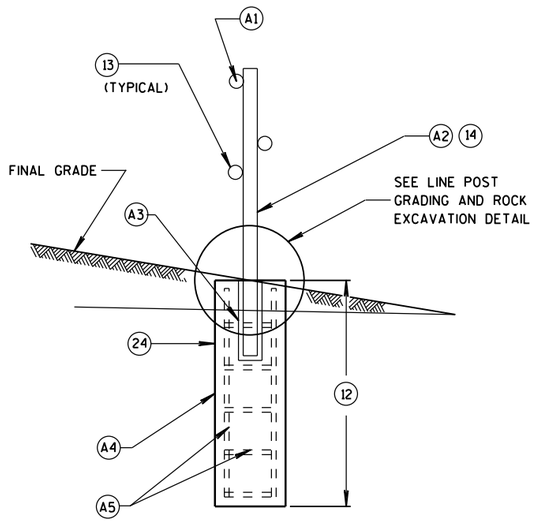
(20) STAGGER TURNBUCKLES (TYPICAL).

(21) SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.

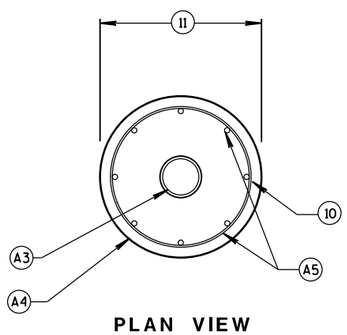
(22) IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENATION ARE ACCEPTABLE.

(23) LINE POST DELINEATOR SPACING IS 100 FEET.

(24) LINE POST FOOTINGS ARE REQUIRED TO HAVE LESS THAN 1 INCH OF MOVEMENT WHEN LINE POST IS IMPACTED BY A NCHRP 350 SMALL CAR UNDER TL-3 TEST CONDITIONS.

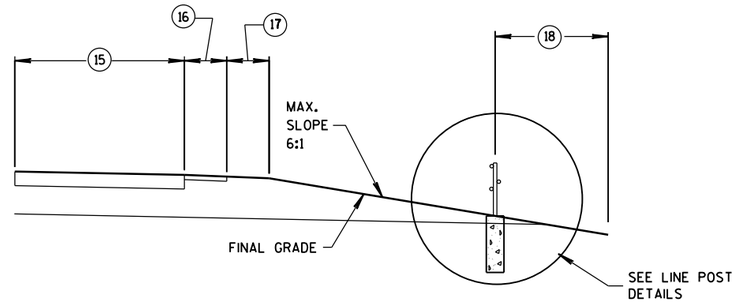


CROSS SECTION

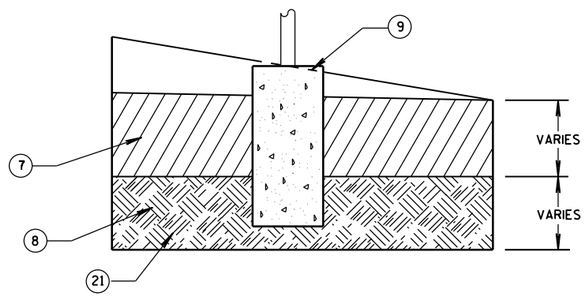


PLAN VIEW
(LINE POST AND CABLES NOT SHOWN)

LINE POST DETAILS



CABLE BARRIER OFFSET FROM DITCH LINE



LINE POST GRADING AND ROCK EXCAVATION DETAIL

CABLE BARRIER TYPE 1
LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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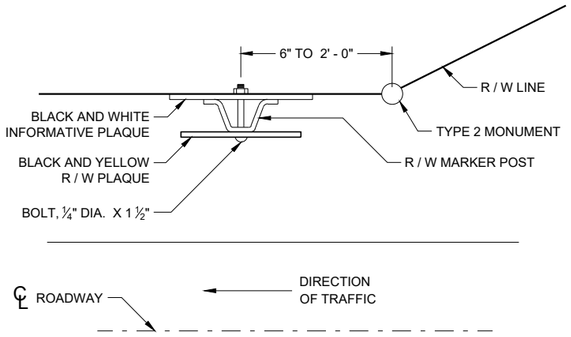
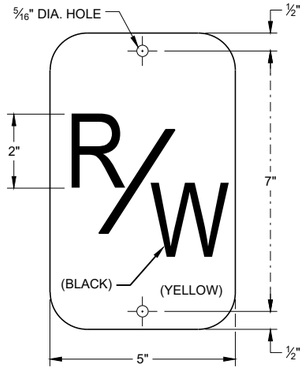
S.D.D. 14 B 52-1b



PLAN VIEW
STEEL MARKER POST



R / W PLAQUE

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

INFORMATIVE PLAQUE

GENERAL NOTES

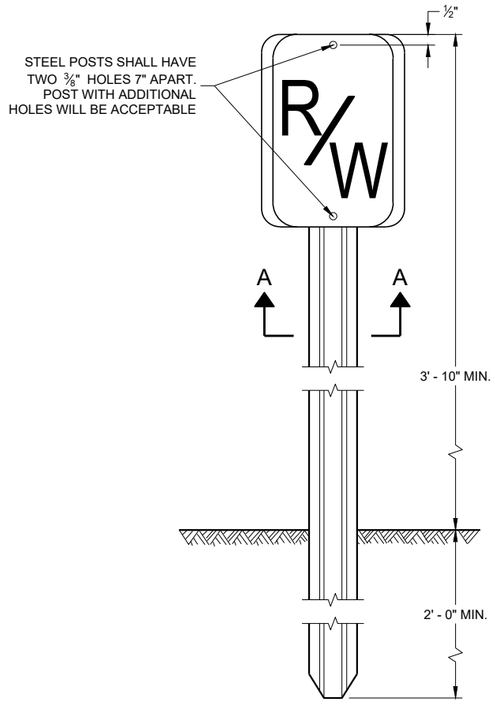
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

A STEEL MARKER POST FOR RIGHT -OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

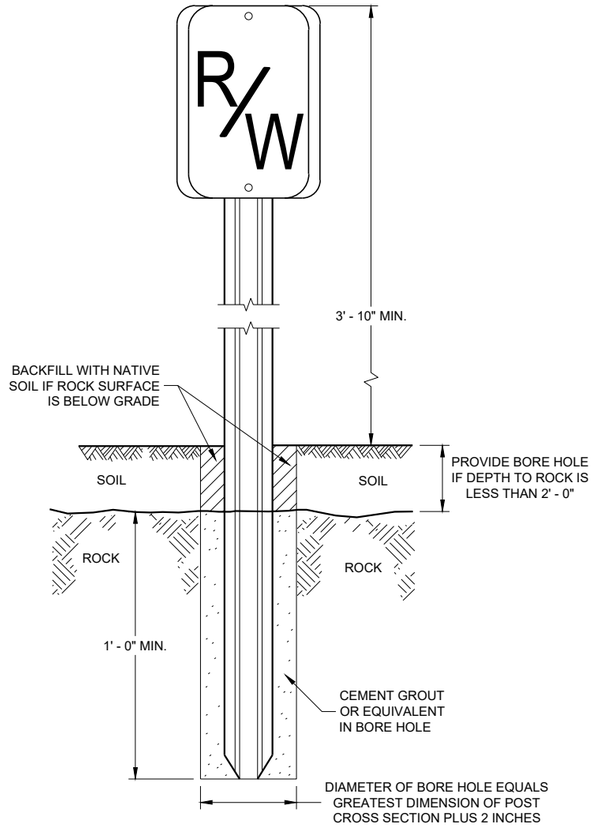
THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFROMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. "R/W" AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

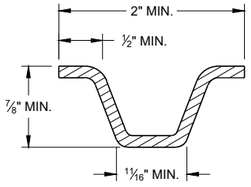
(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' - 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL THE BORE HOLE WITH CEMENT GROUT OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



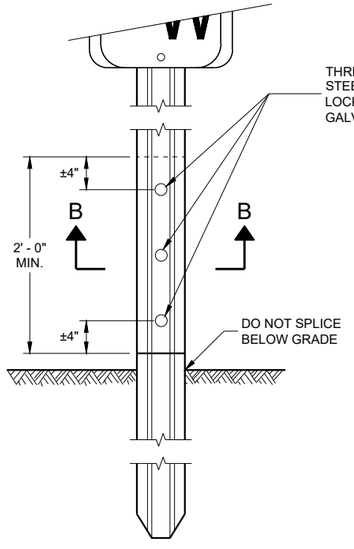
FRONT VIEW
STEEL MARKER POST



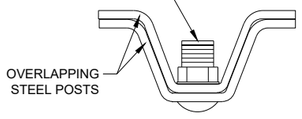
FRONT VIEW
ROCK INSTALLATION (1)



MIN. WEIGHT 1.12 LB./FT.
SECTION A - A



FRONT VIEW
SPLICE DETAIL



SECTION B - B

MARKER POST FOR RIGHT - OF - WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/18/2016
DATE
/S/ Ray Kumapayi
CHIEF SURVEYING AND MA
ENGINEER

FHWA

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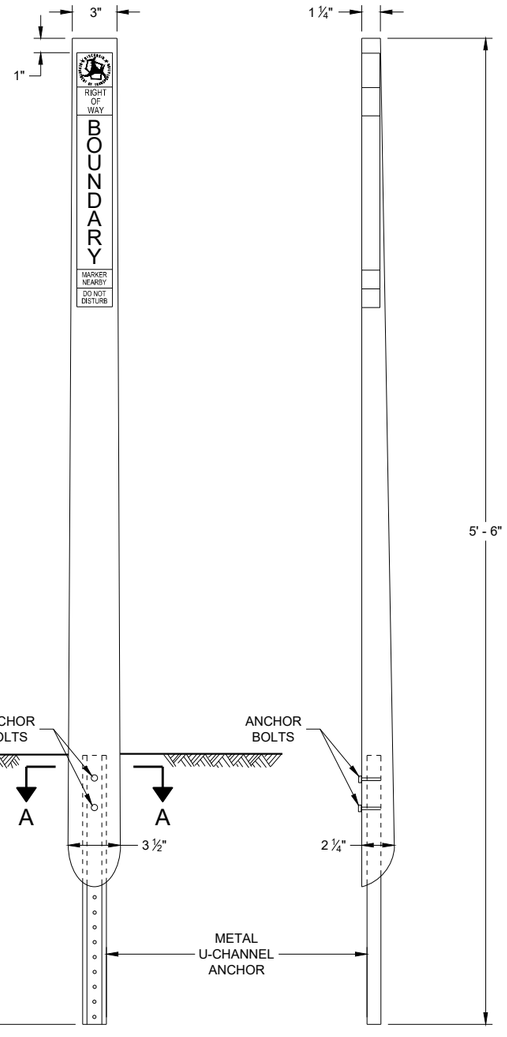
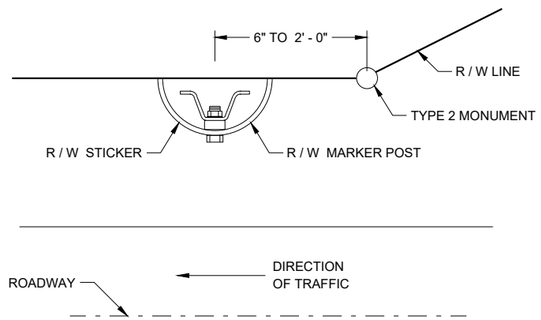
SDD 15A01 - 13a
SDD15A01 - 13a

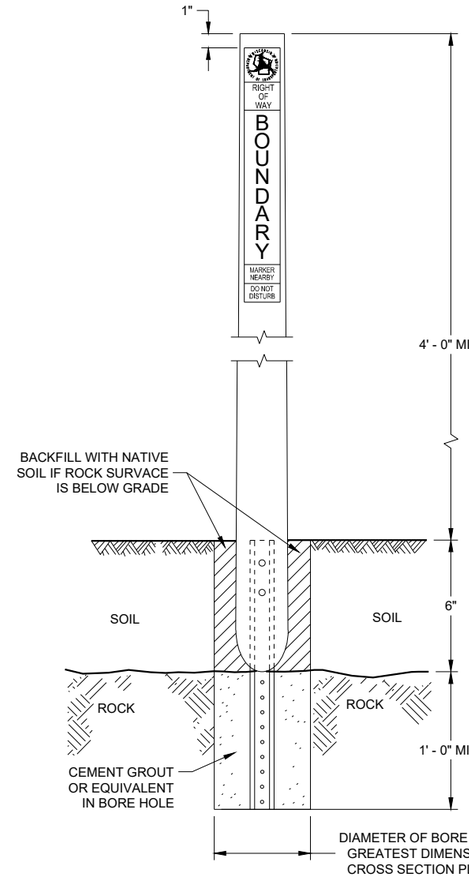


FRONT VIEW SIDE VIEW

FLEXIBLE MARKER POST FOR ① RIGHT-OF-WAY



PLAN VIEW



FRONT VIEW ①②

ROCK INSTALLATION

GENERAL NOTES

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

A FLEXIBLE MARKER POST FOR RIGHT -OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

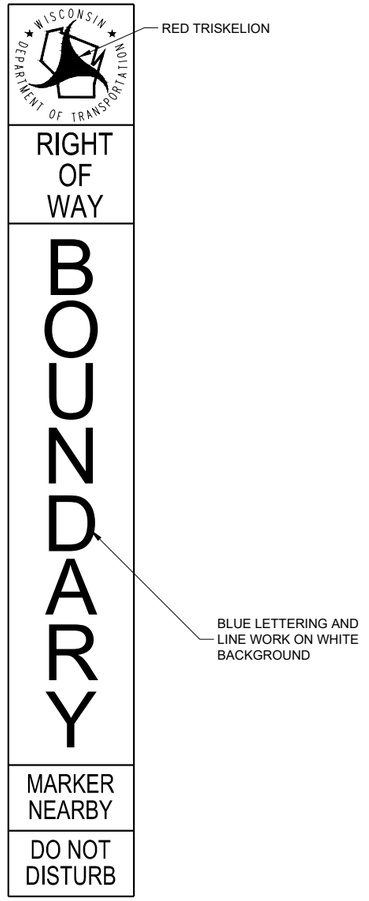
THE RIGHT-OF-WAY STICKER DIMENSIONS SHALL BE 2 ¼" X 17" AND THE STICKER SHALL BE MADE OF A NON-RELECTIVE VINYL MATERIAL. THE RIGHT-OF-WAY STICKER SHALL FACE THE ROADWAY.

INSTALL PER DEPTH OF MANUFACTURER'S RECOMMENDATION BUT NOT LESS THAN 18 INCHES BELOW GRADE FROM THE BOTTOM OF THE METAL U-CHANNEL ANCHOR.

① FLEXIBLE MARKER POSTS SHALL BE INCLUDED IN THE APPROVED PRODUCTS LIST FOR MARKER POSTS AND SHALL BE FEDERAL YELLOW IN COLOR.

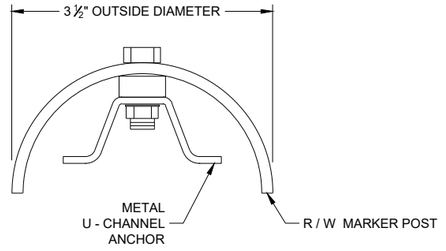
② IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 4' - 0" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR.

FILL THE BORE HOLE WITH CEMENT GROUT OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



RIGHT-OF-WAY STICKER

THE RIGHT-OF-WAY STICKER SHALL BE ATTACHED 1" FROM THE TOP OF THE RIGHT-OF-WAY POST PRIOR TO DELIVERY.



SECTION A - A

FLEXIBLE MARKER POST FOR RIGHT - OF -WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

00-00-00
DATE

/S/ <AUTHOR>
CHIEF SURVEYING AND MA
ENGINEER

FHWA

6

SDD15A01 - 13b

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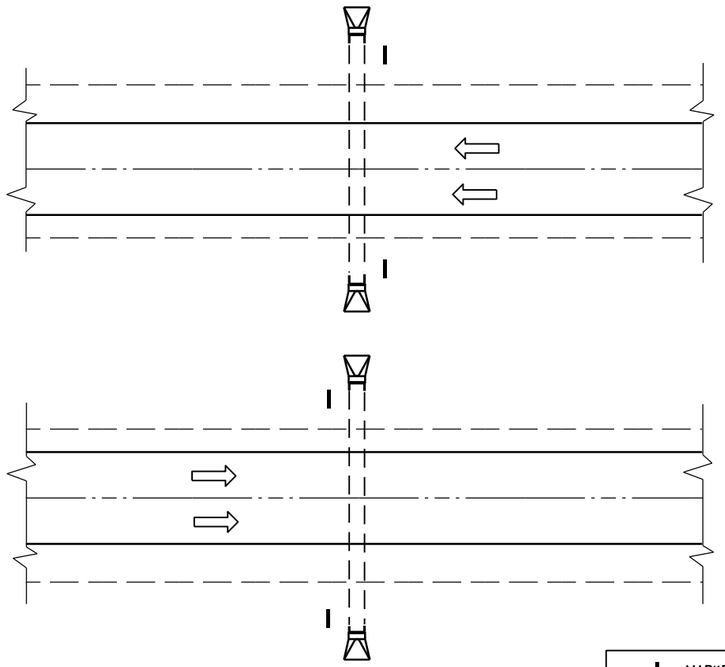
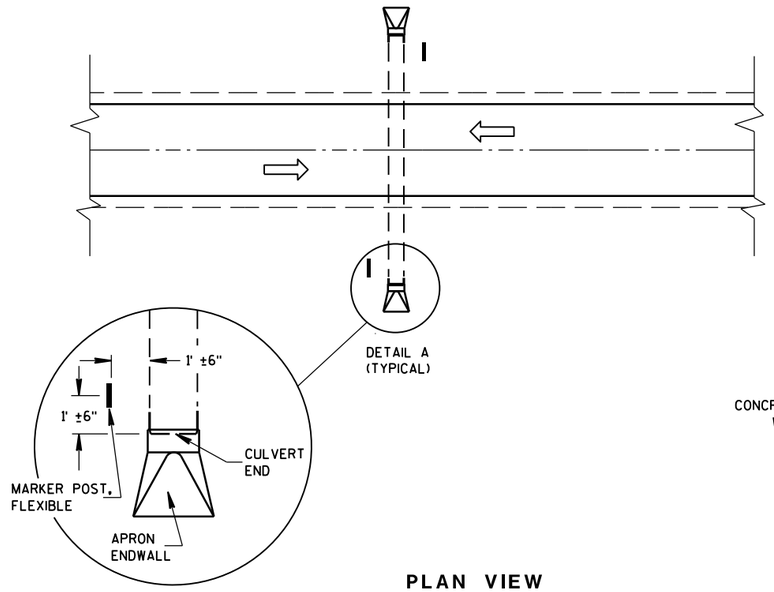
SDD15A01 - 13b



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

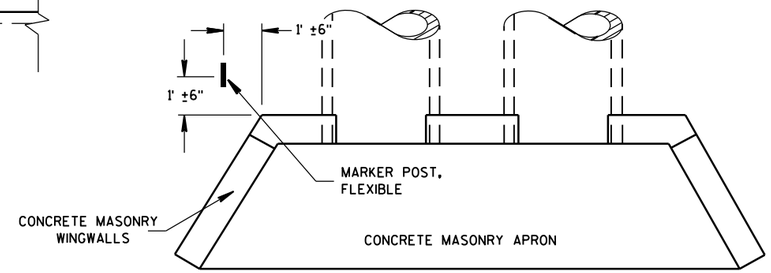
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

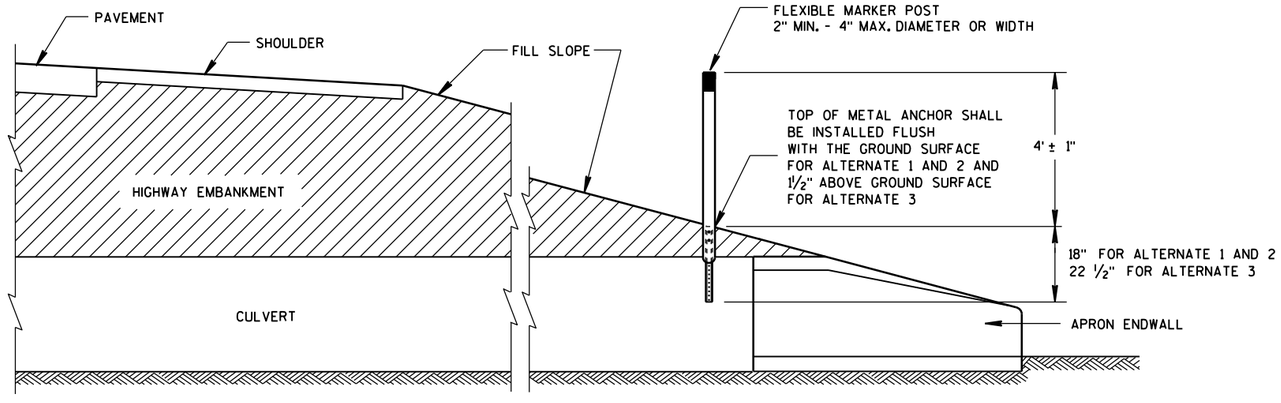
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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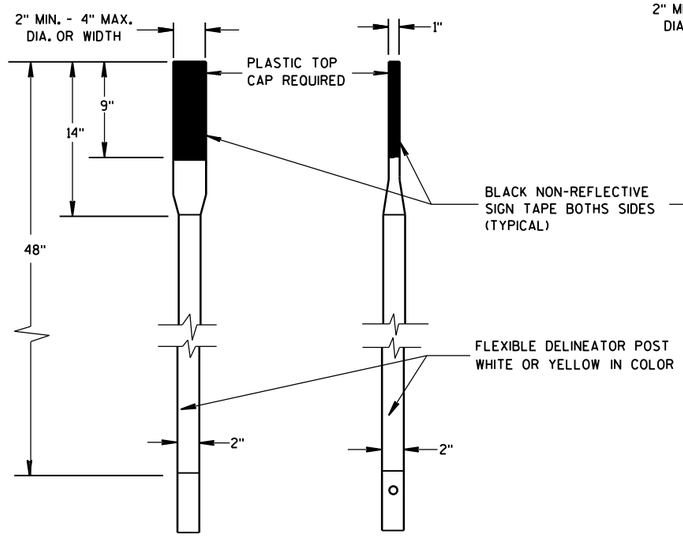
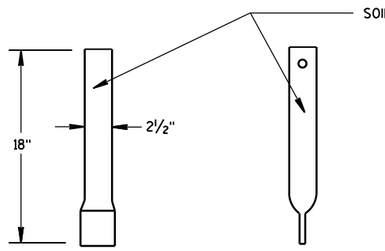
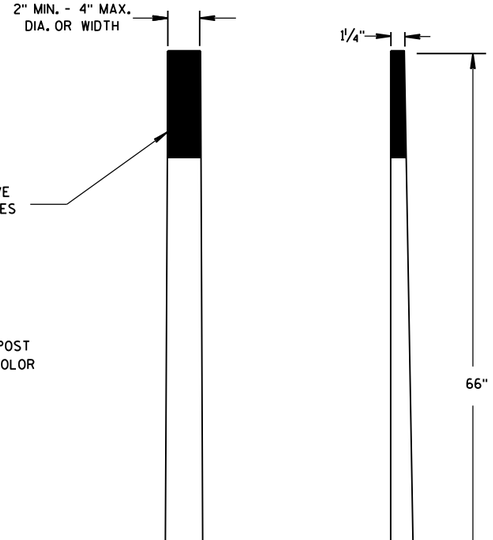
S.D.D. 15 A 3-2a





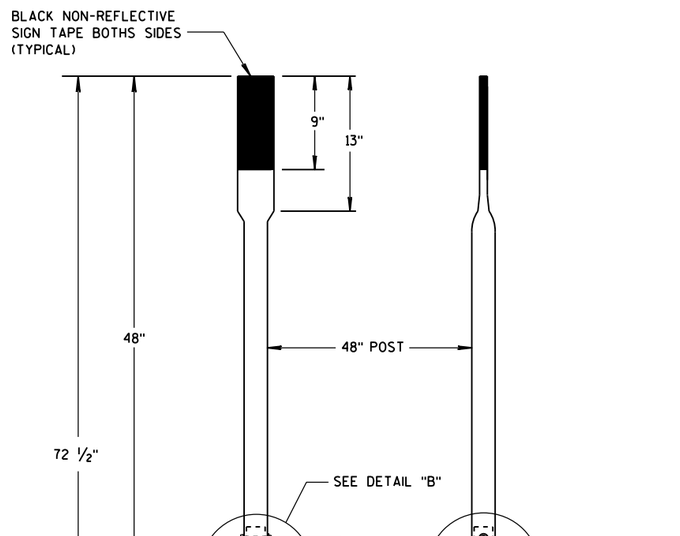
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

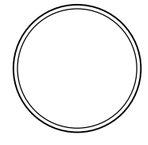
ALTERNATE 2



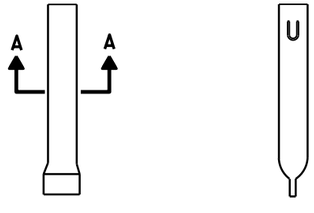
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

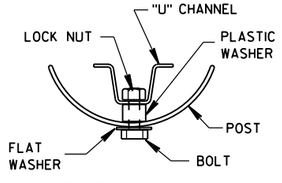


SECTION A-A

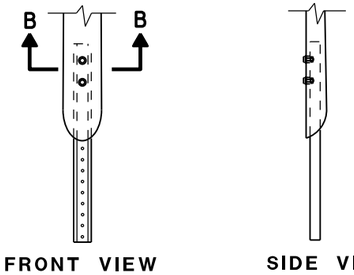


FRONT VIEW SIDE VIEW

ALTERNATE 1

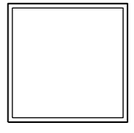


SECTION B-B

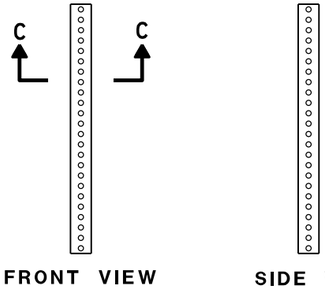


FRONT VIEW SIDE VIEW

ALTERNATE 2



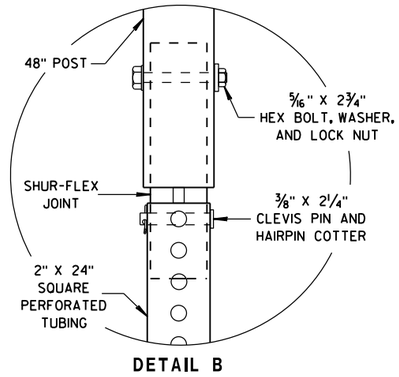
SECTION C-C



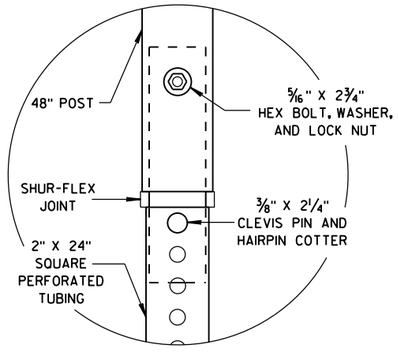
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

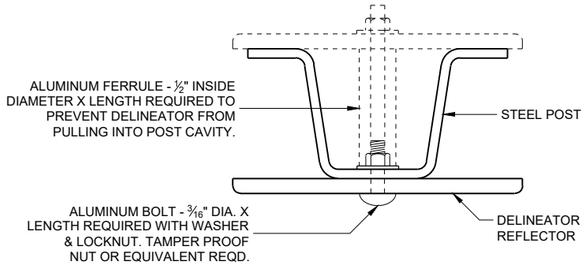
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

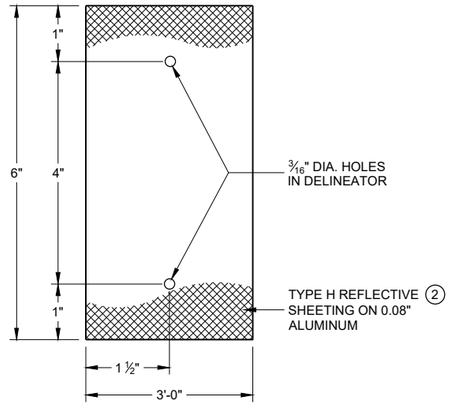
S.D.D. 15 A 3-2b

6

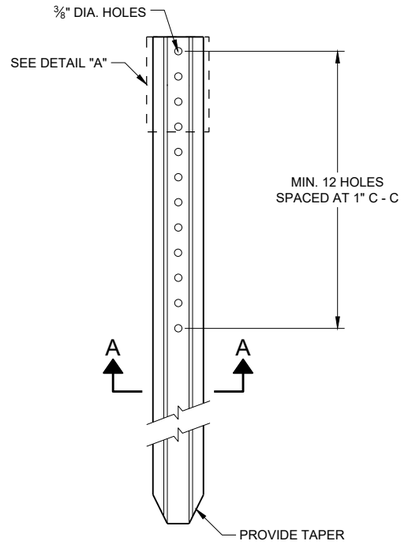
S.D.D. 15 A 3-2b



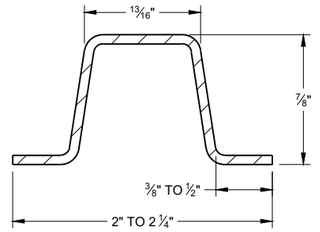
MOUNTING DETAIL FOR DELINEATOR REFLECTOR



DETAIL "A" 3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



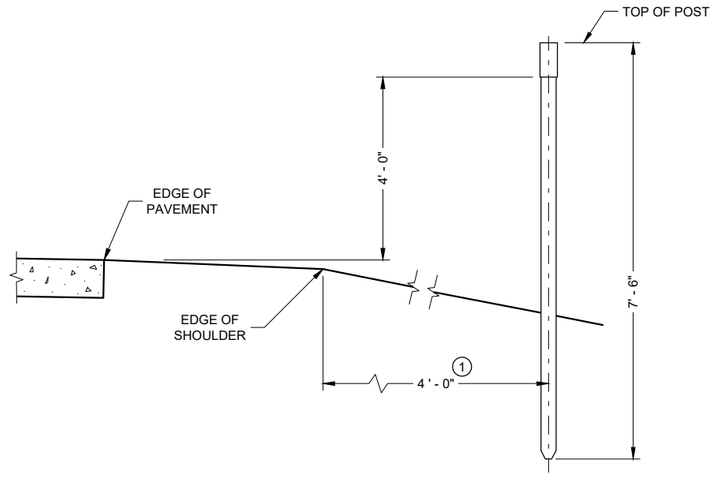
SECTION A - A

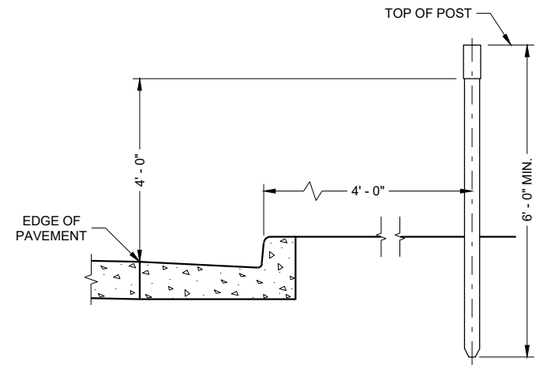
WEIGHT 1.12 LBS PER FT. \ 0.1 LB.

REFLECTOR SPACING TABLE

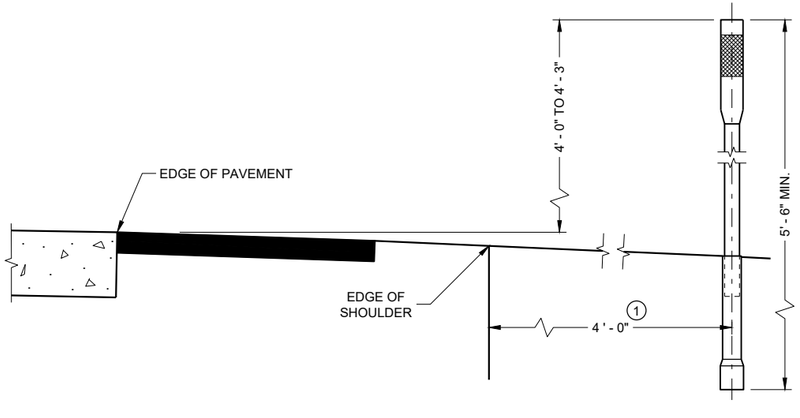
REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

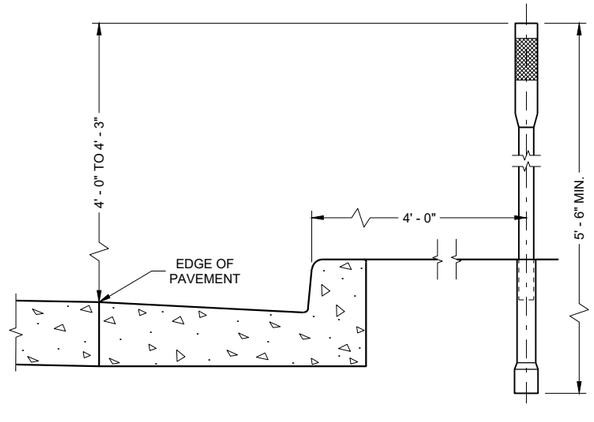
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER





TYPICAL INSTALLATIONS OF DELINEATOR POSTS





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF TEH STANDARD 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. FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.

DELINEATOR POST WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

6

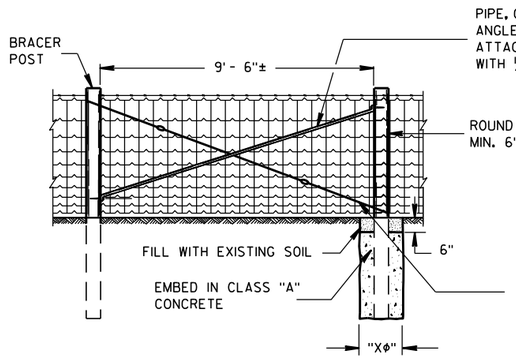
SDD 15A04 - 05c

6

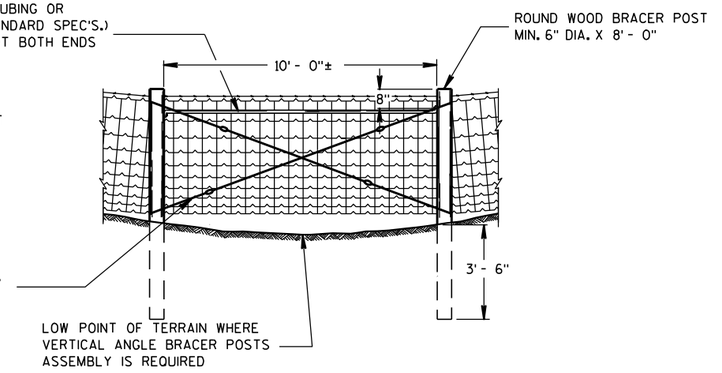
SDD 15A04 - 05c

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

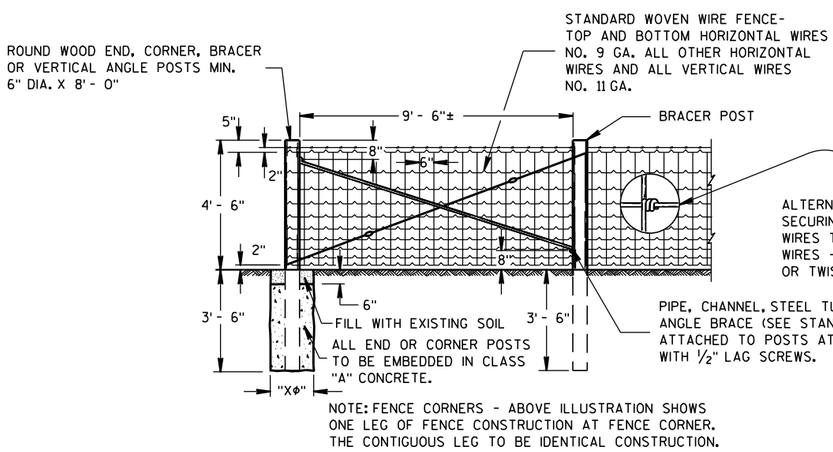
GENERAL NOTES

"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.

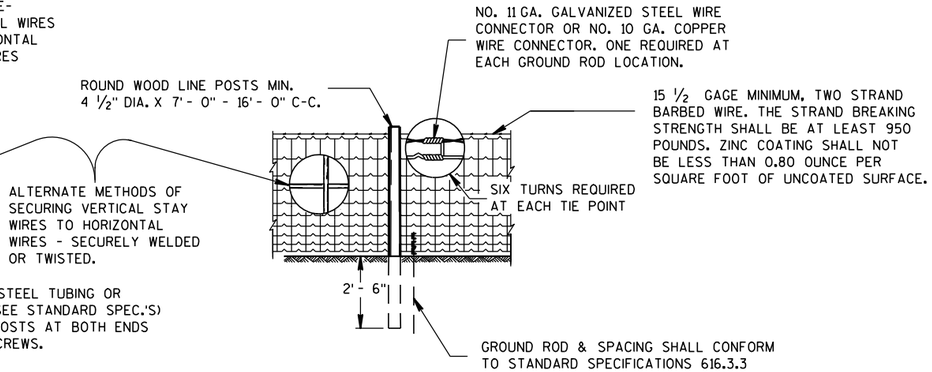
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED 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.



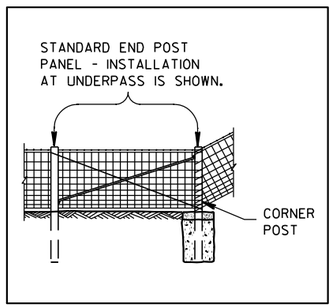
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

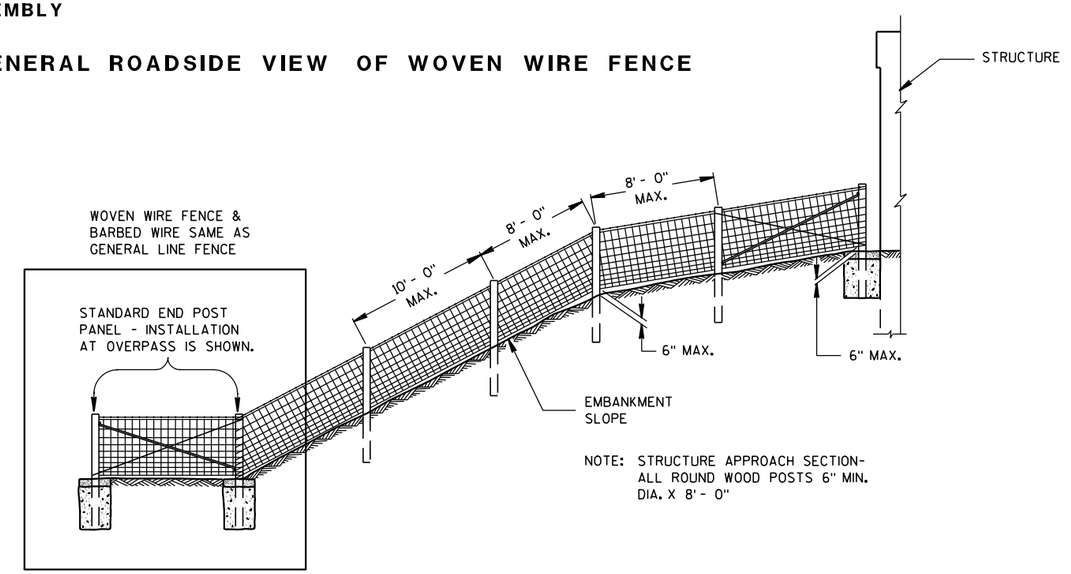


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 B 1-8a

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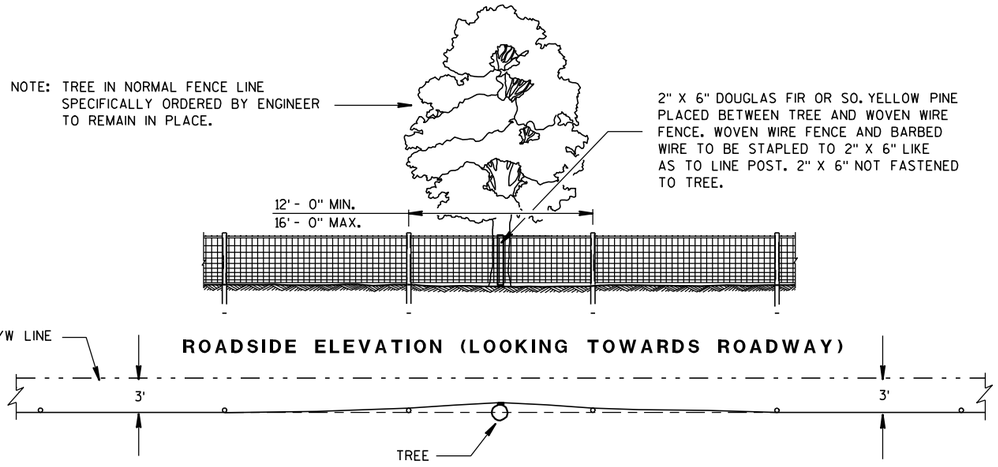
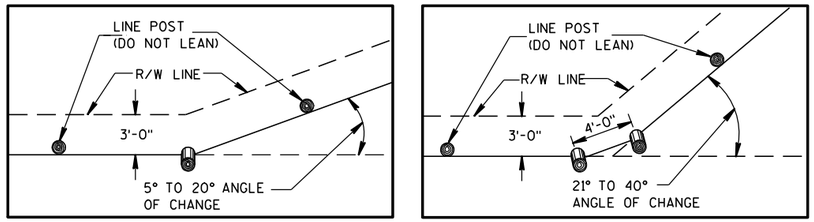
S.D.D. 15 B 1-8a



PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



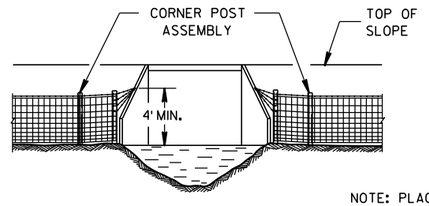
PLAN VIEW SINGLE POST CORNER

PLAN VIEW DOUBLE POST CORNER

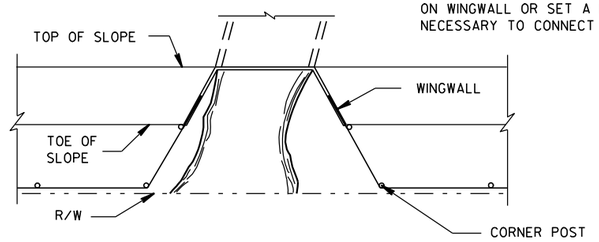
RIGHT OF WAY LINE CHANGE 40° AND LESS

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.

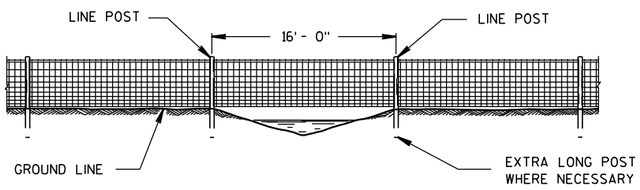
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



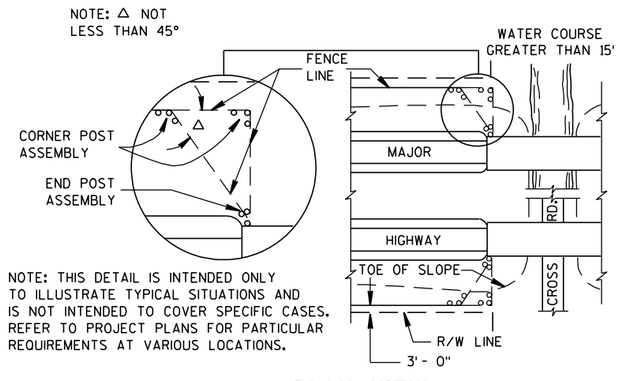
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

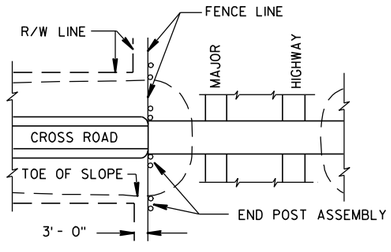


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



PLAN VIEW

MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH

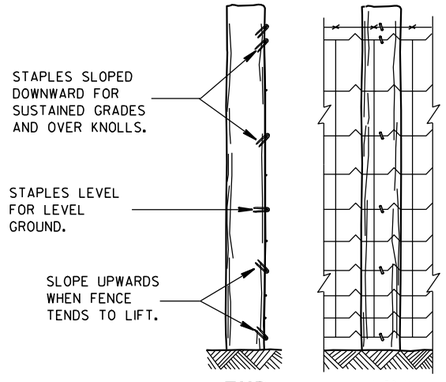


PLAN VIEW

MAJOR HIGHWAY UNDERPASS

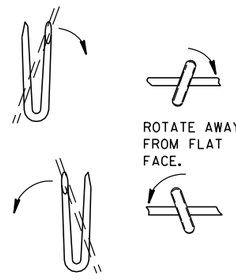
FENCE LOCATION AT STRUCTURES

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION **FARM SIDE ELEVATION**

FENCE MOUNTING DETAIL



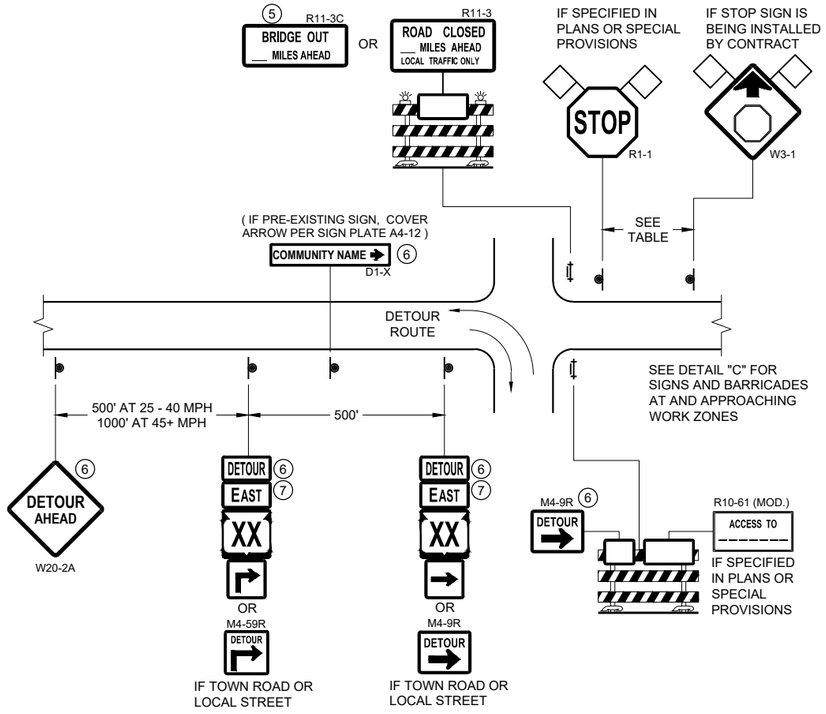
LINE POST

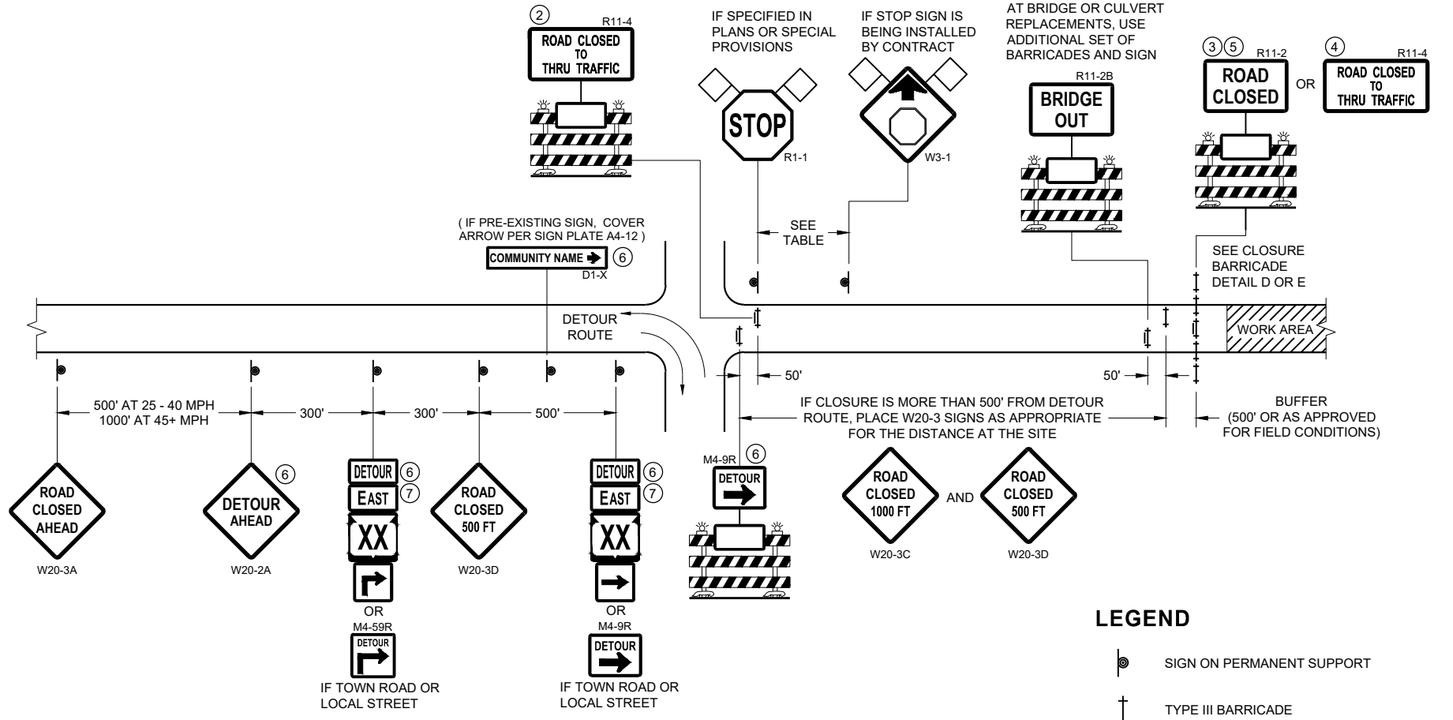
FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008 DATE
/S/ Jerry H. Zeier
ROADWAY STANDARDS [244] ENGINEER
FHWA

6
S.D.D. 15 B 1-8b





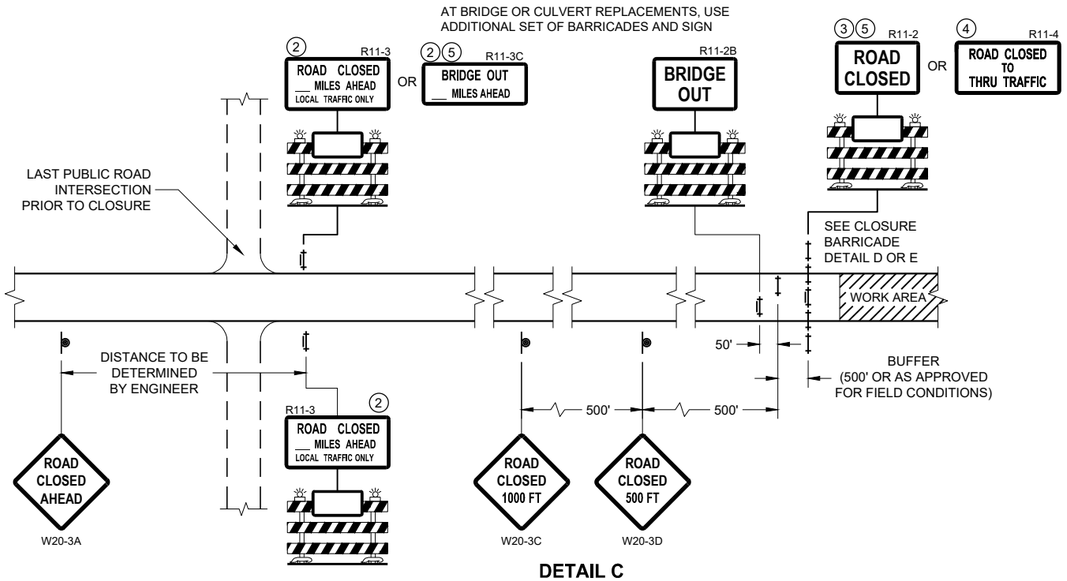
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1



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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

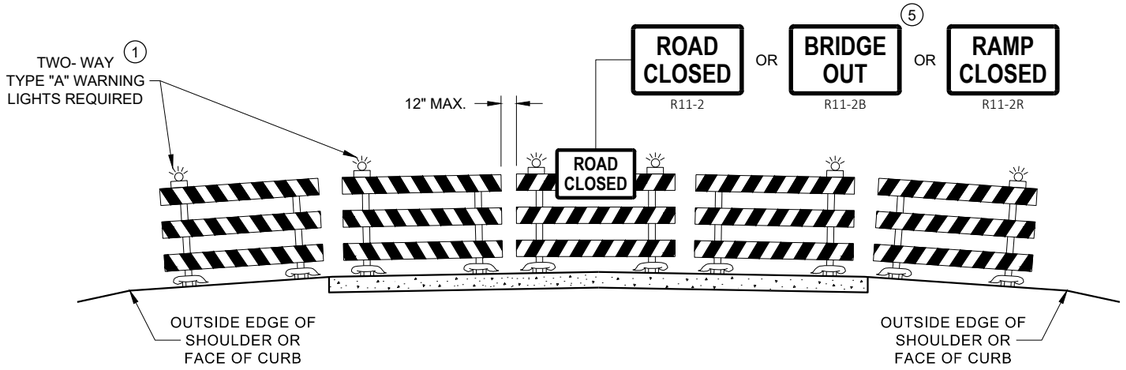
APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

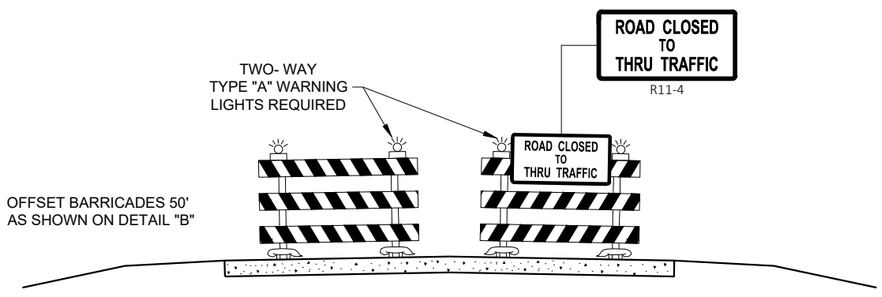
6

SDD 15C02 - 07a

SDD 15C02 - 07a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 07b

6

SDD 15C02 - 07b

GENERAL NOTES

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

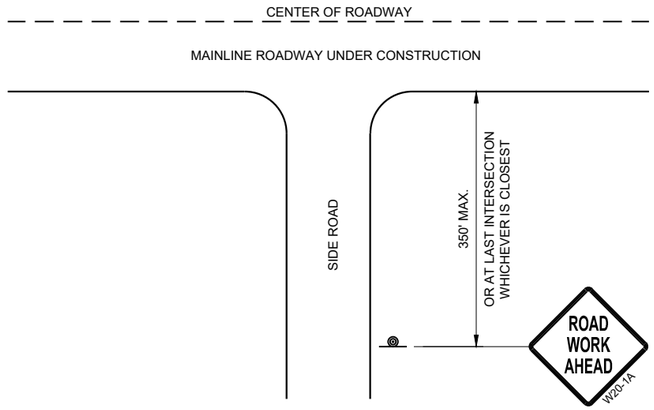
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

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



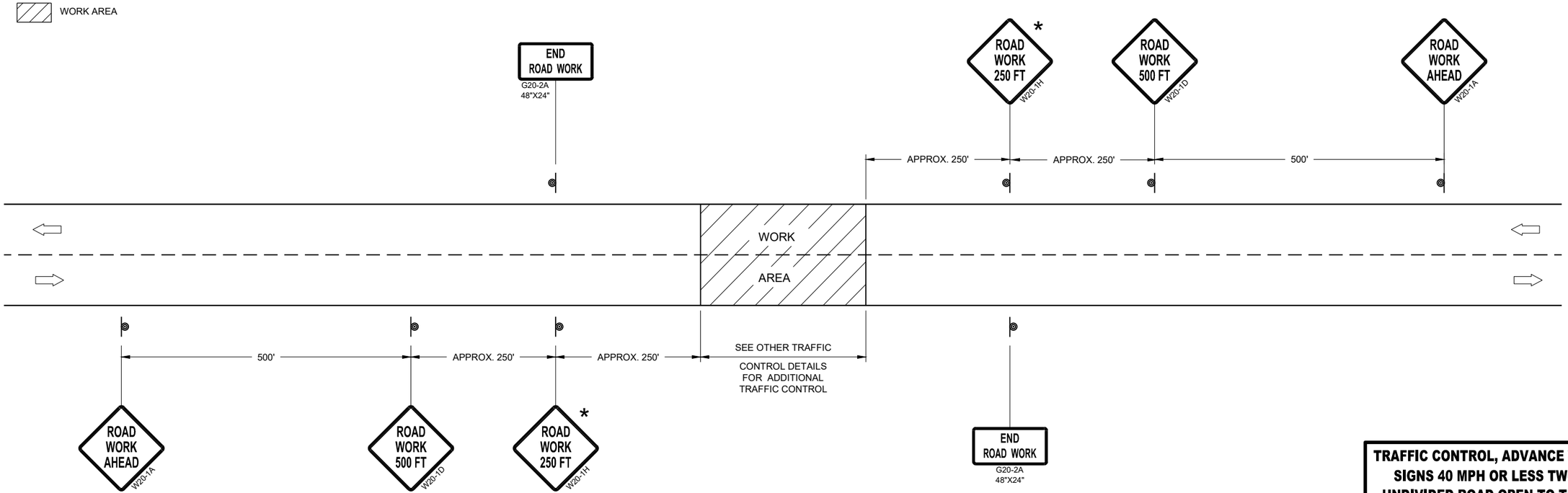
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

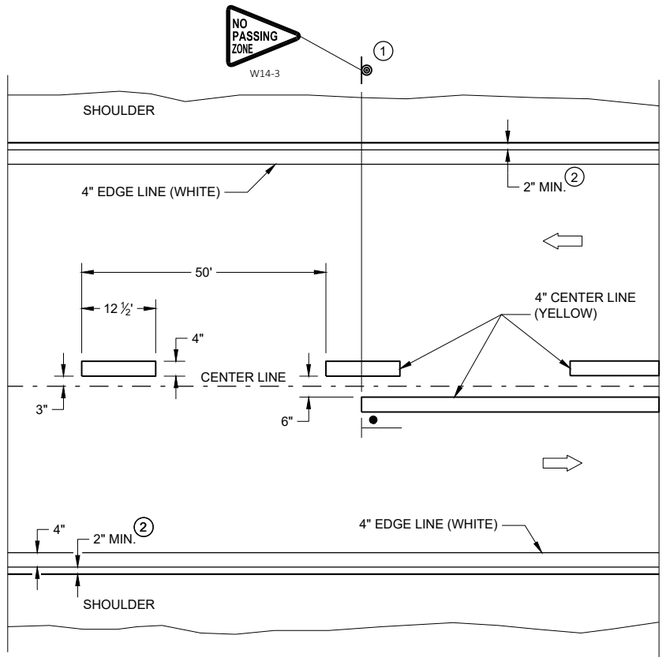
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

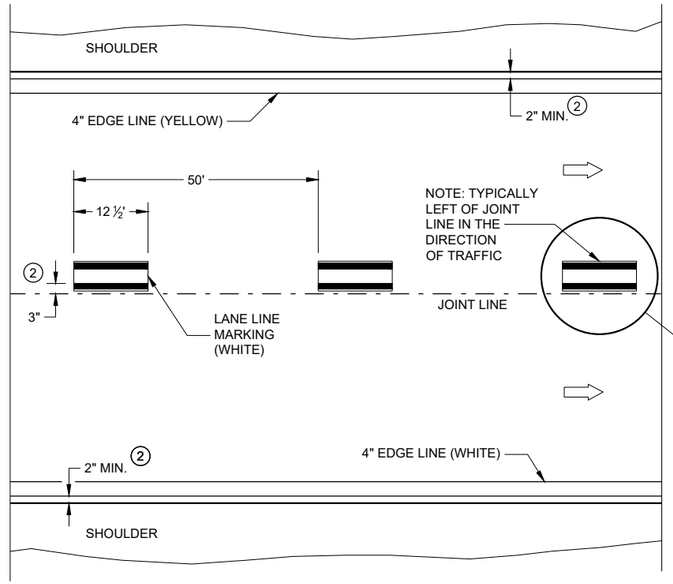
FHWA

6

SDD 15C05 - 05

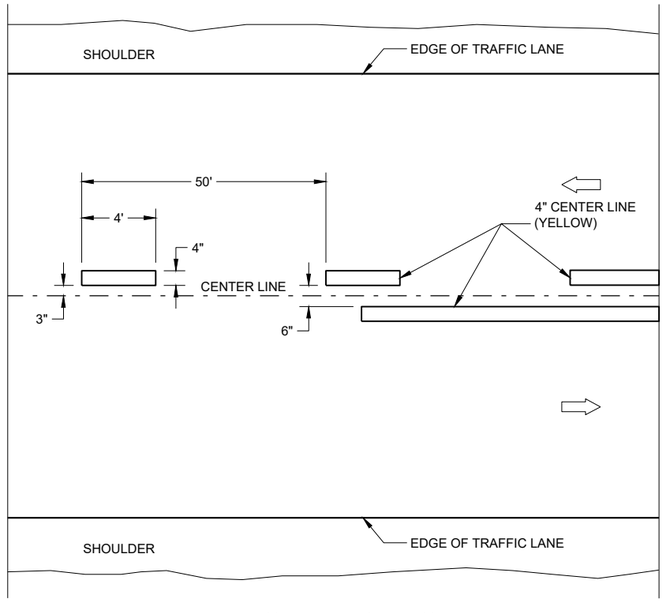


TWO WAY TRAFFIC

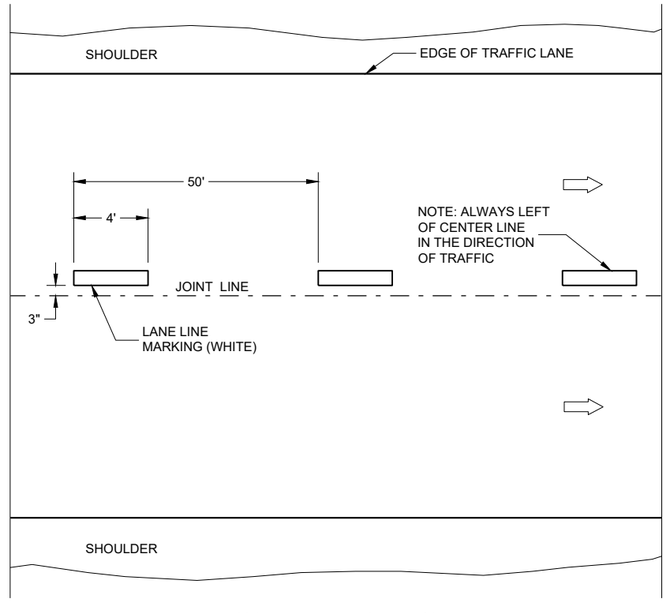


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

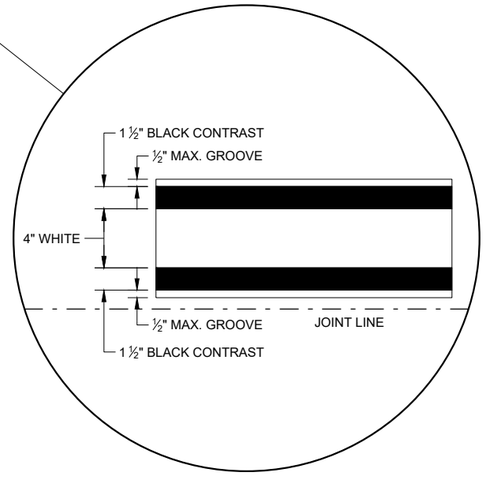
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Matthew Rauch
STATEWIDE SIGNING AND M ENGINEER

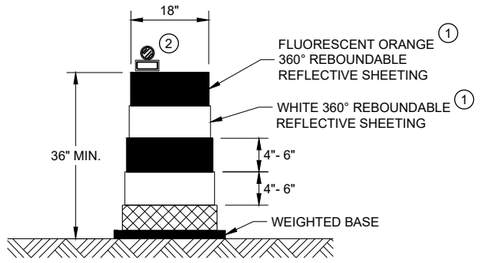
FHWA

SDD 15C08 - 20a

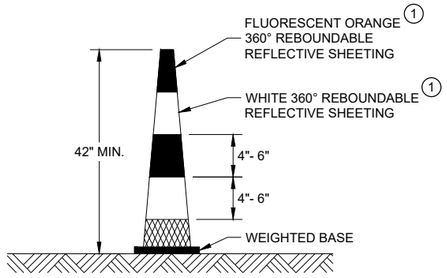
SDD 15C08 - 20a

GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

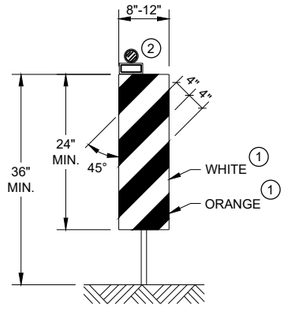


DRUM



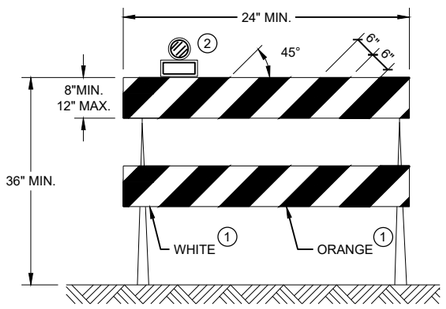
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



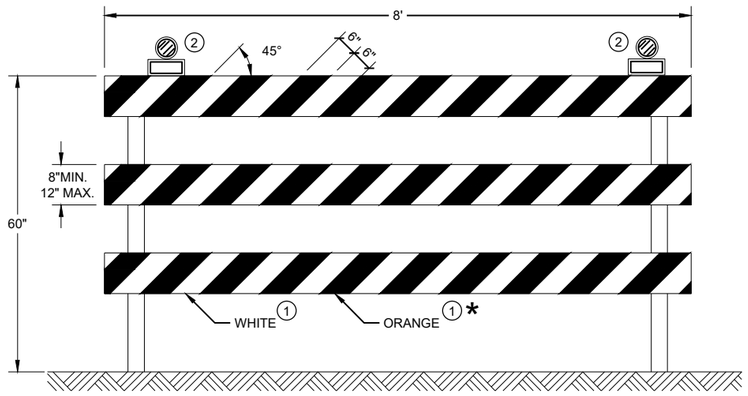
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 07b

6

SDD 15C11 - 07b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

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

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

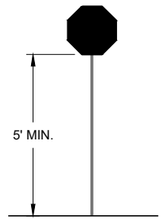
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



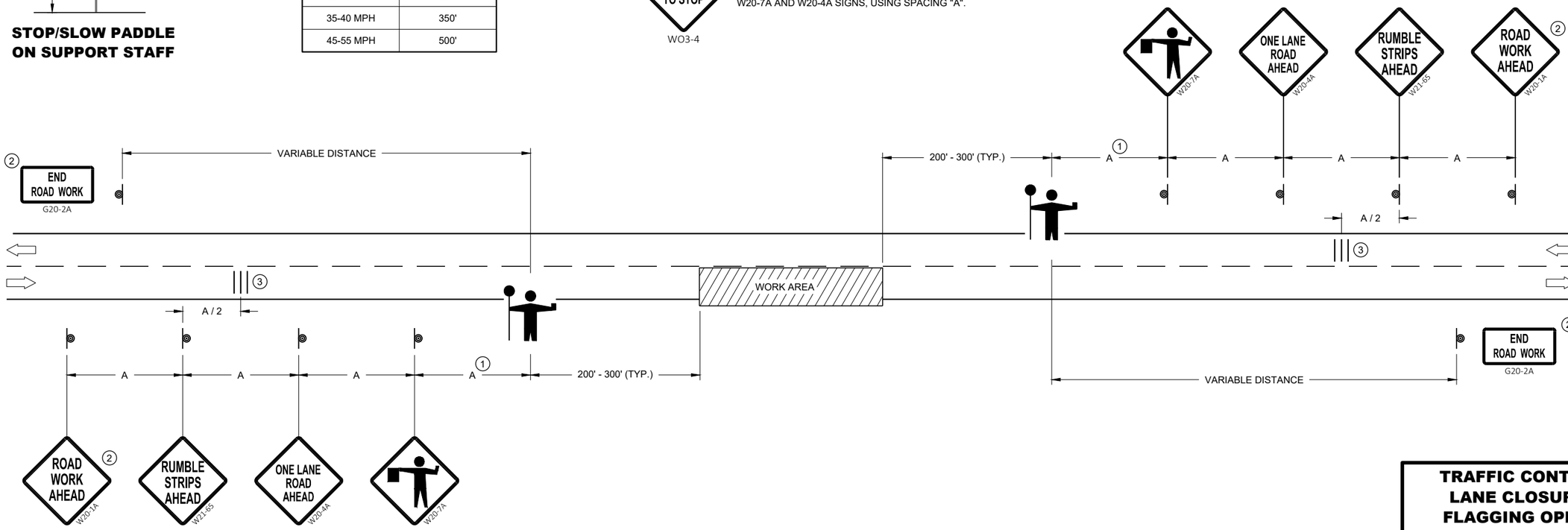
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

250

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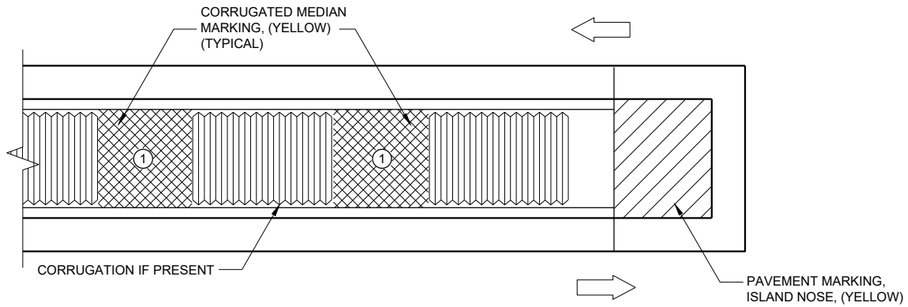
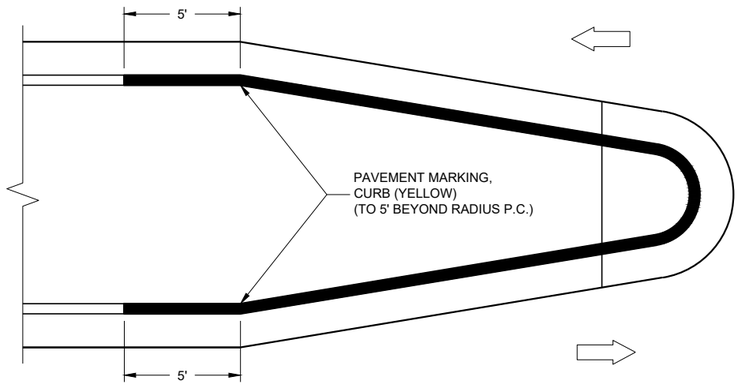
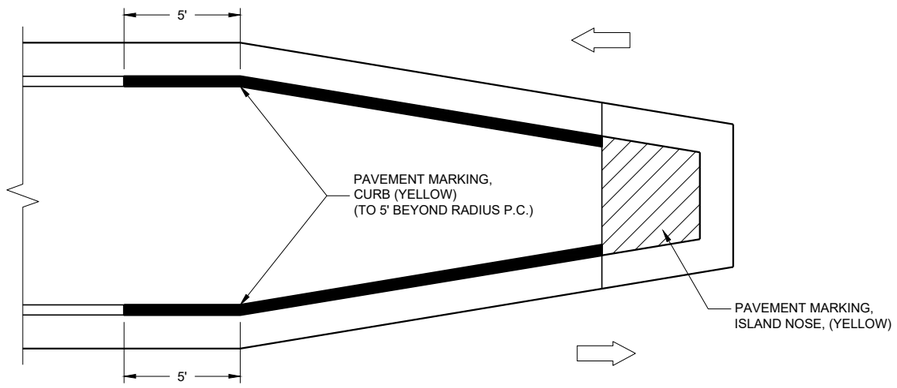
SDD 15C12 - 07



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

PAVEMENT MARKINGS (ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

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

FHWA

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SDD 15C27 - 03b

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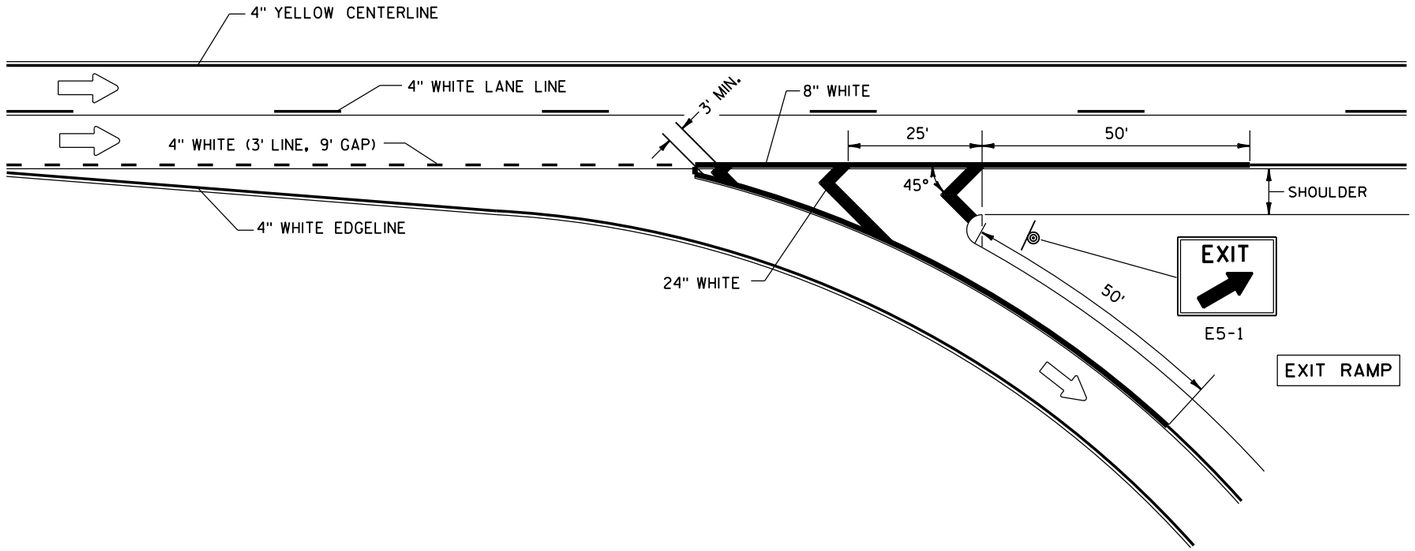
SDD15C27 - 03b



PAVEMENT MARKING FOR EXIT RAMP

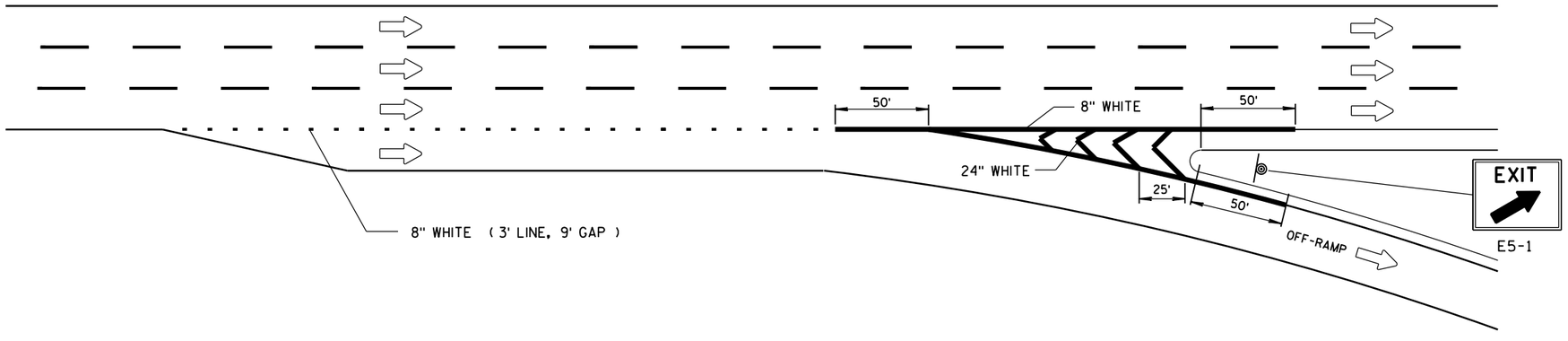
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

DIRECTION OF TRAVEL

SIGN ON PERMANENT SUPPORT



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

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S.D.D. 15 C 31-3a

S.D.D. 15 C 31-3a

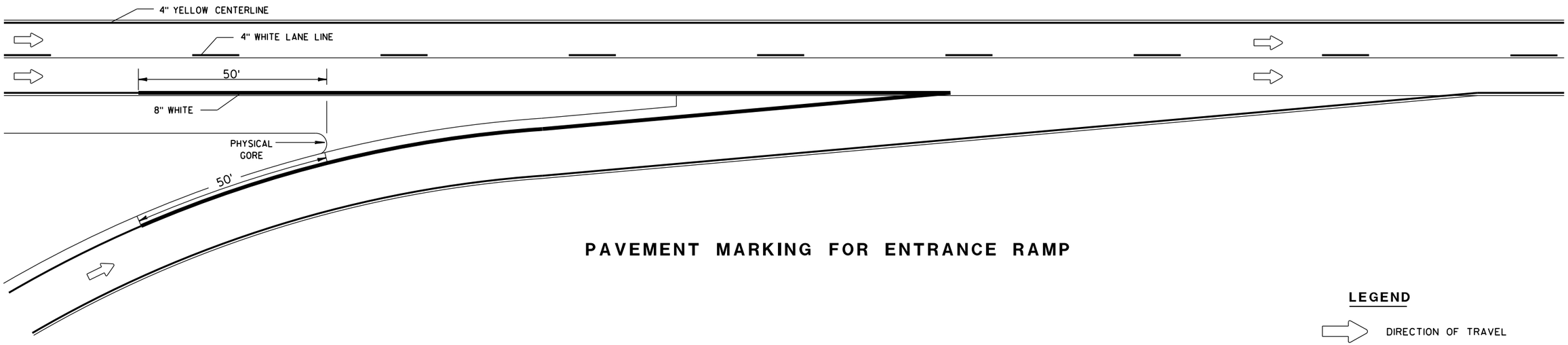
PAVEMENT MARKING (RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

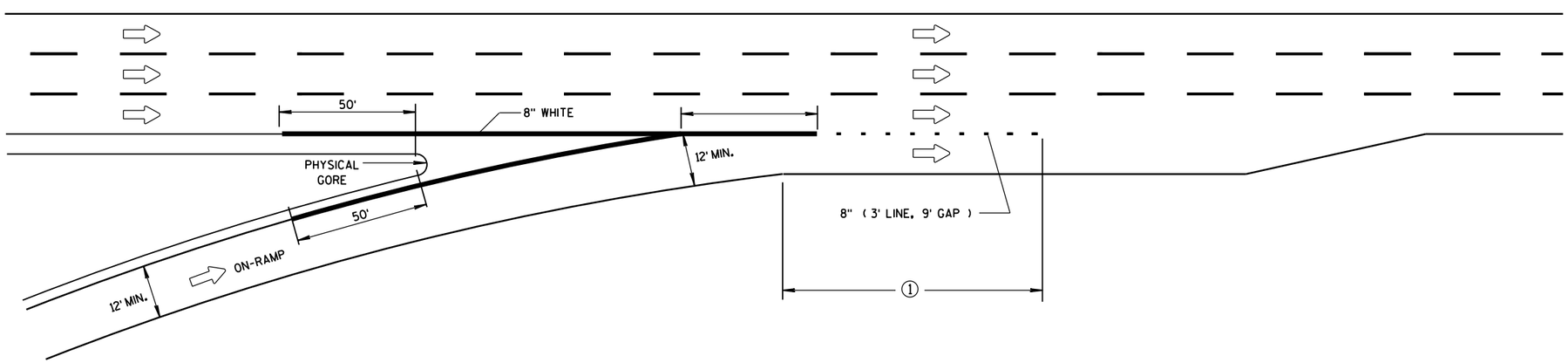
① ½ LENGTH OF FULL WIDTH ACCELERATION LANE.



PAVEMENT MARKING FOR ENTRANCE RAMP

LEGEND

DIRECTION OF TRAVEL



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2017
DATE

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

FHWA

6

S.D.D. 15 C 31-3c

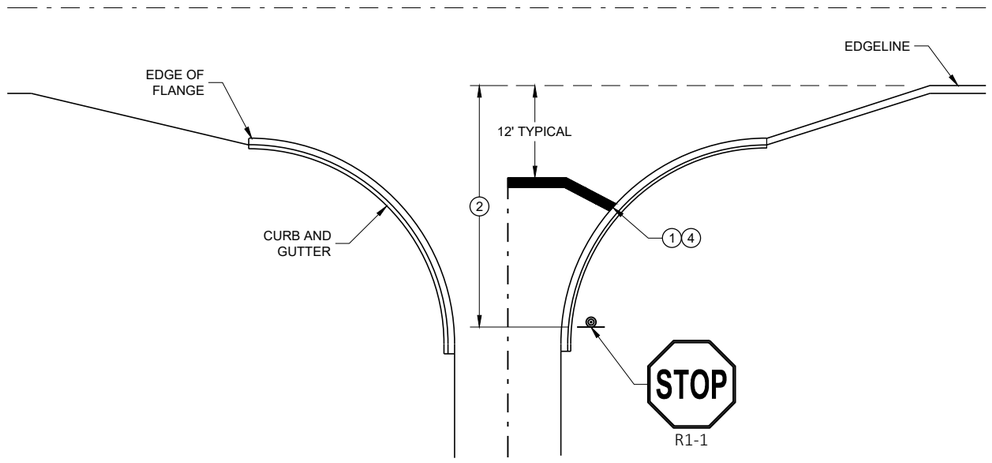
6

S.D.D. 15 C 31-3c

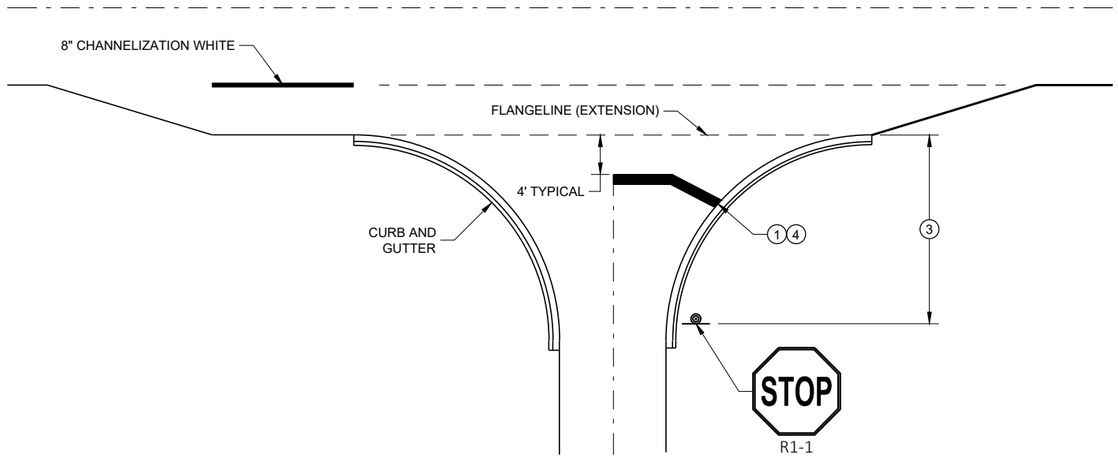
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

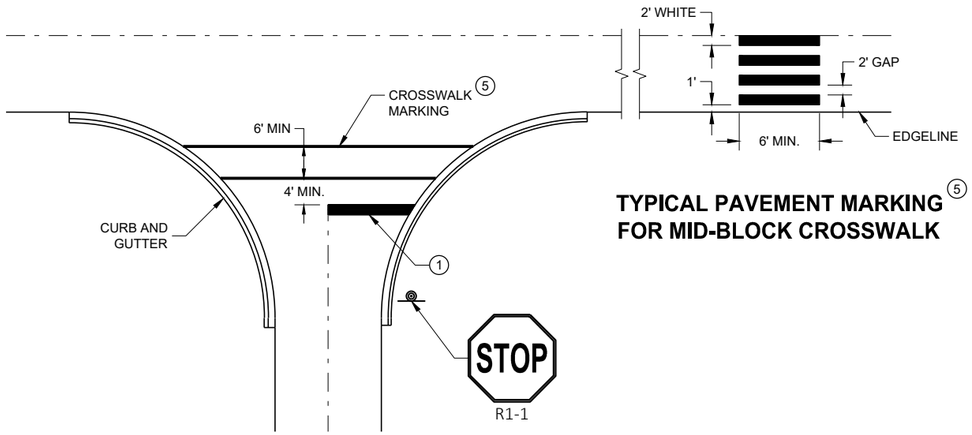
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

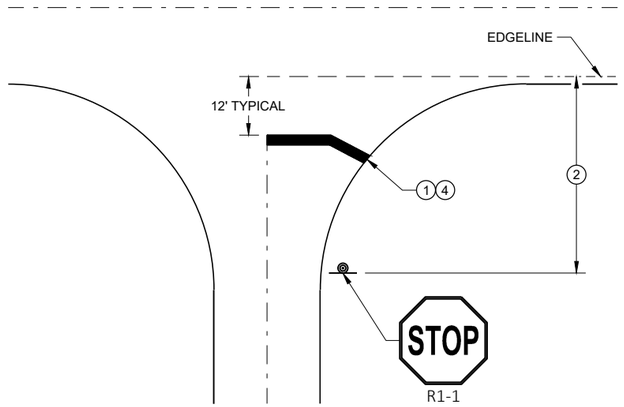


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

6
SDD 15C33 - 04

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE 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 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

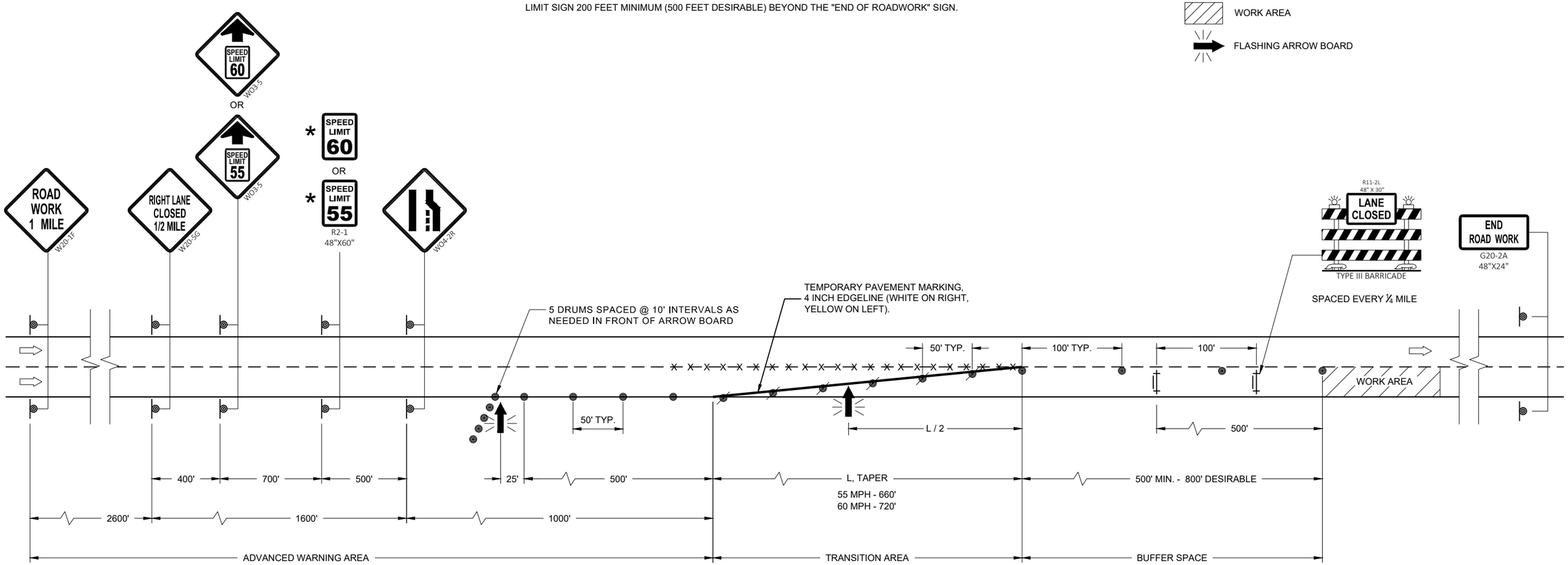
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15D12 - 08b

6
SDD 15D12 - 08b

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS /OR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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

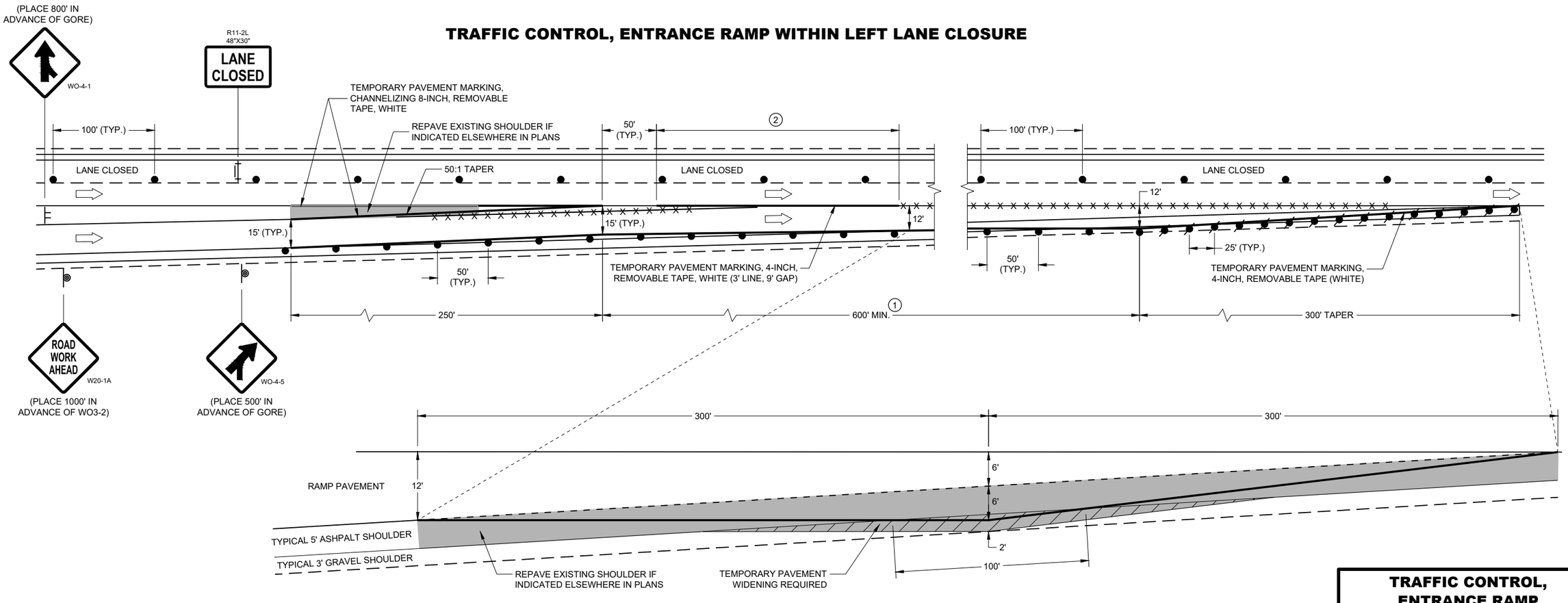
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

(1) EXTEND THE LENGTH OF THE MERGE AREA IF THE ENTERING (DESIGN) SPEED OF THE RAMP IS LESS THAN 50 MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.

(2) END TEMPORARY MARKING AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LEFT LANE CLOSURE



TEMPORARY PAVEMENT DETAIL

(EXISTING RAMP DIMENSIONS MAY VARY, ADJUST TEMPORARY PAVEMENT ACCORDINGLY)

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15D15 - 05b

SDD15D15 - 05b

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

TYPE III BARRICADE WITH ATTACHED SIGN

FLAGS, 16" X 16" MIN., ORANGE

DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

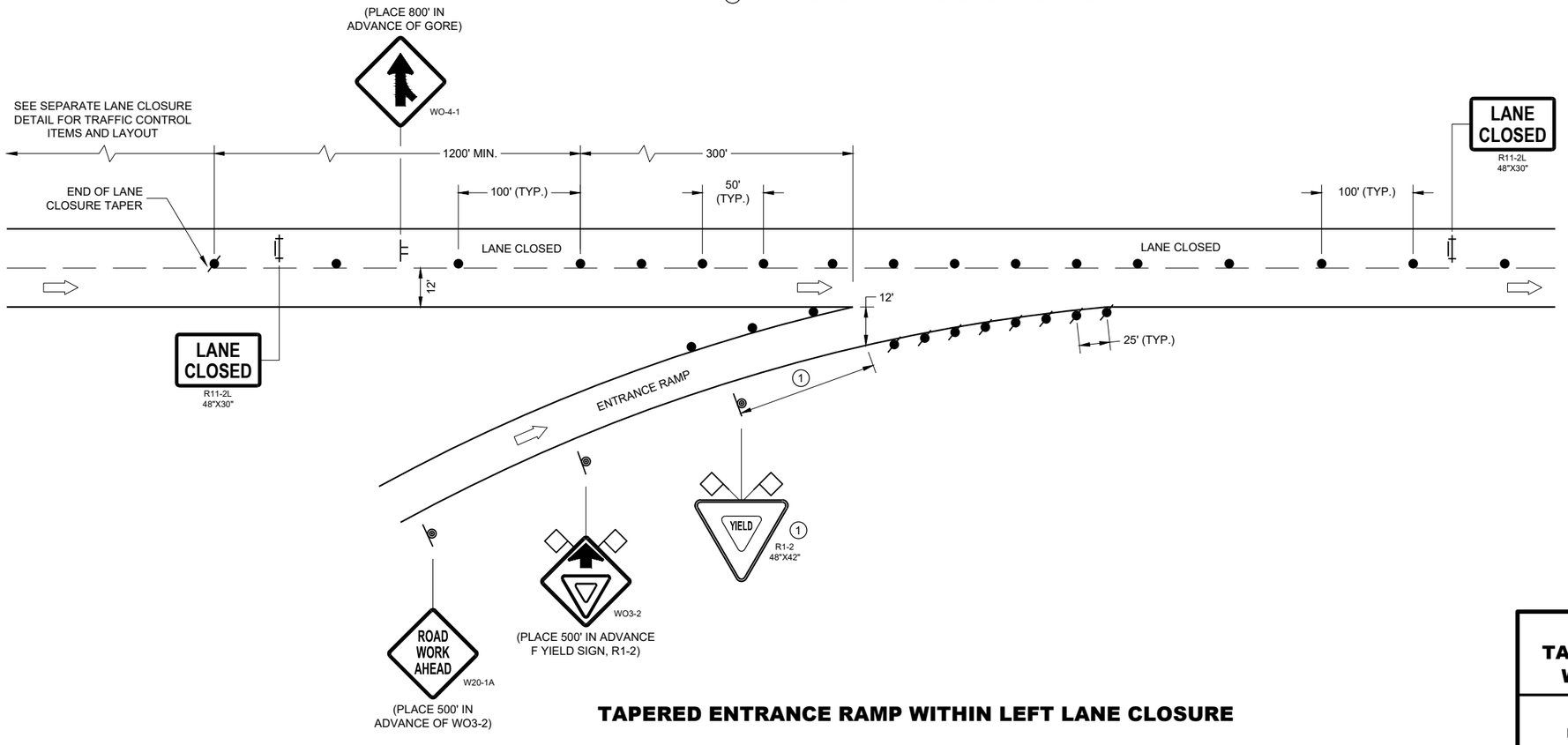
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

(1) PLACE YIELD SIGN TO PROVIDE ADEQUATE SIGHT DISTANCE AND ACCELERATION DISTANCE.



TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE

TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15D15 - 05d

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LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

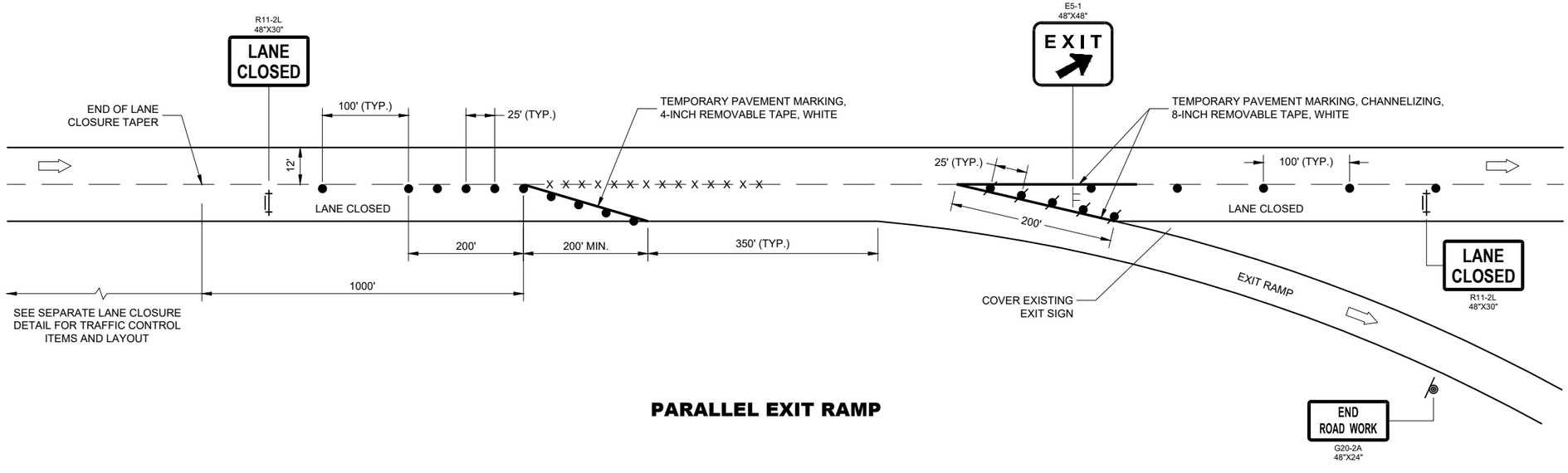
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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



PARALLEL EXIT RAMP

TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

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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.

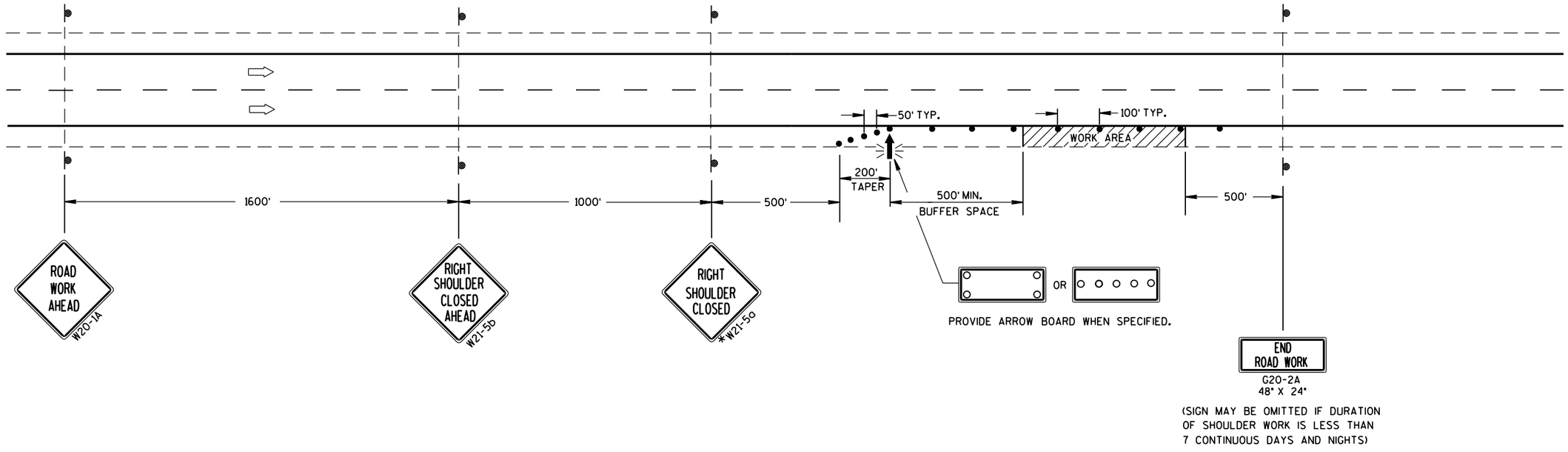
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

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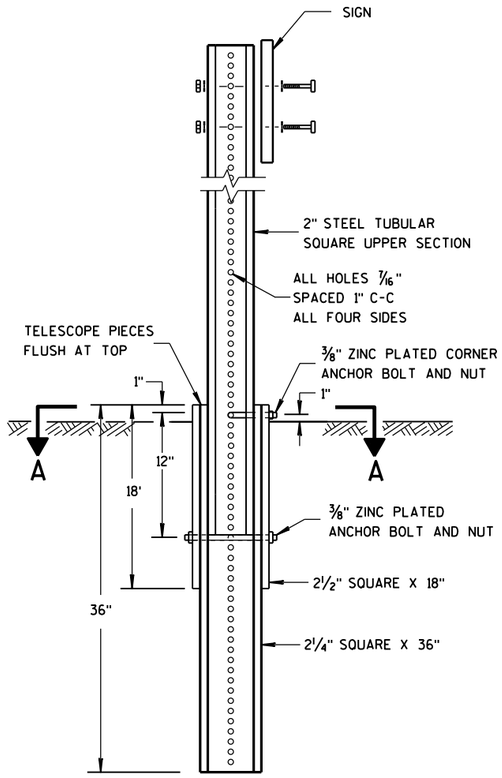
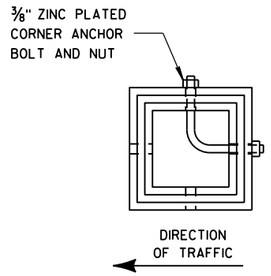
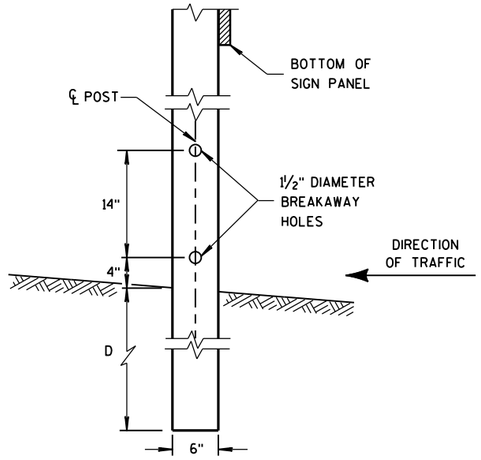
S.D.D. 15 D 27-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



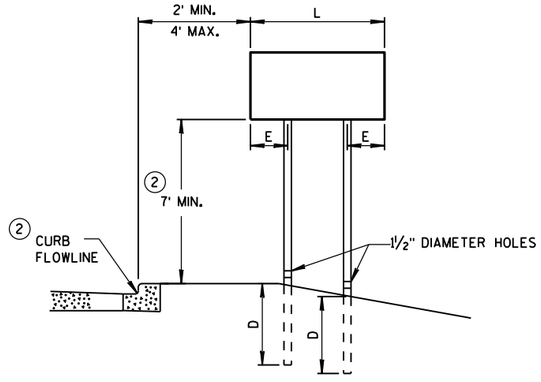
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

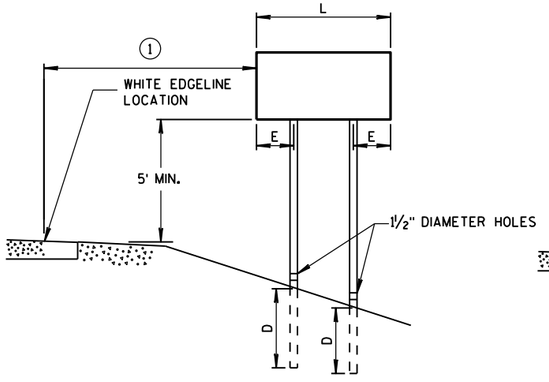
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

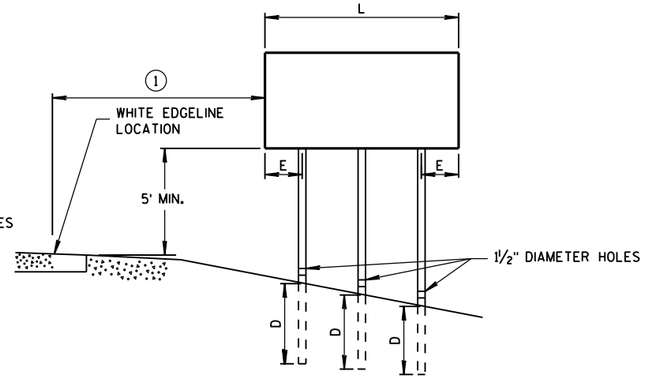
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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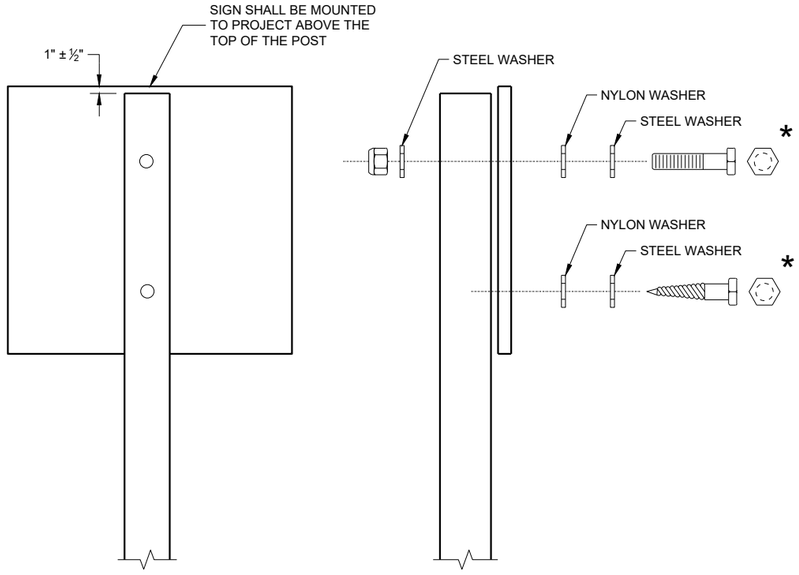
S.D.D. 15 D 38-2a



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

LEGEND

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

CONCRETE BARRIER TEMPORARY PRECAST

TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

L, TAPER LENGTH (MPH)							
SPEED (MPH)	W, LATERAL OFFSET (FT)						
	10	11	12	13	14	15	16
45	450	495	540	585	630	675	720
50	500	550	600	650	700	750	800
55	550	605	660	715	770	825	880
60	600	660	720	780	840	900	960
65	650	715	780	845	910	975	1040
70	700	770	840	910	980	1050	1120

OR

LOCATED 3000 FEET BEYOND THE "ROAD WORK 1 MILE" (W20-1F) SIGN

R2-1
48"X60"

OR

R2-1
48"X60"

(BLACK AND WHITE) LOCATED 700 FEET BEYOND THE W03-5 SIGN

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 3 MILES.

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 LANE SHIFT RIGHT - REVERSE FOR SHIFTING LEFT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

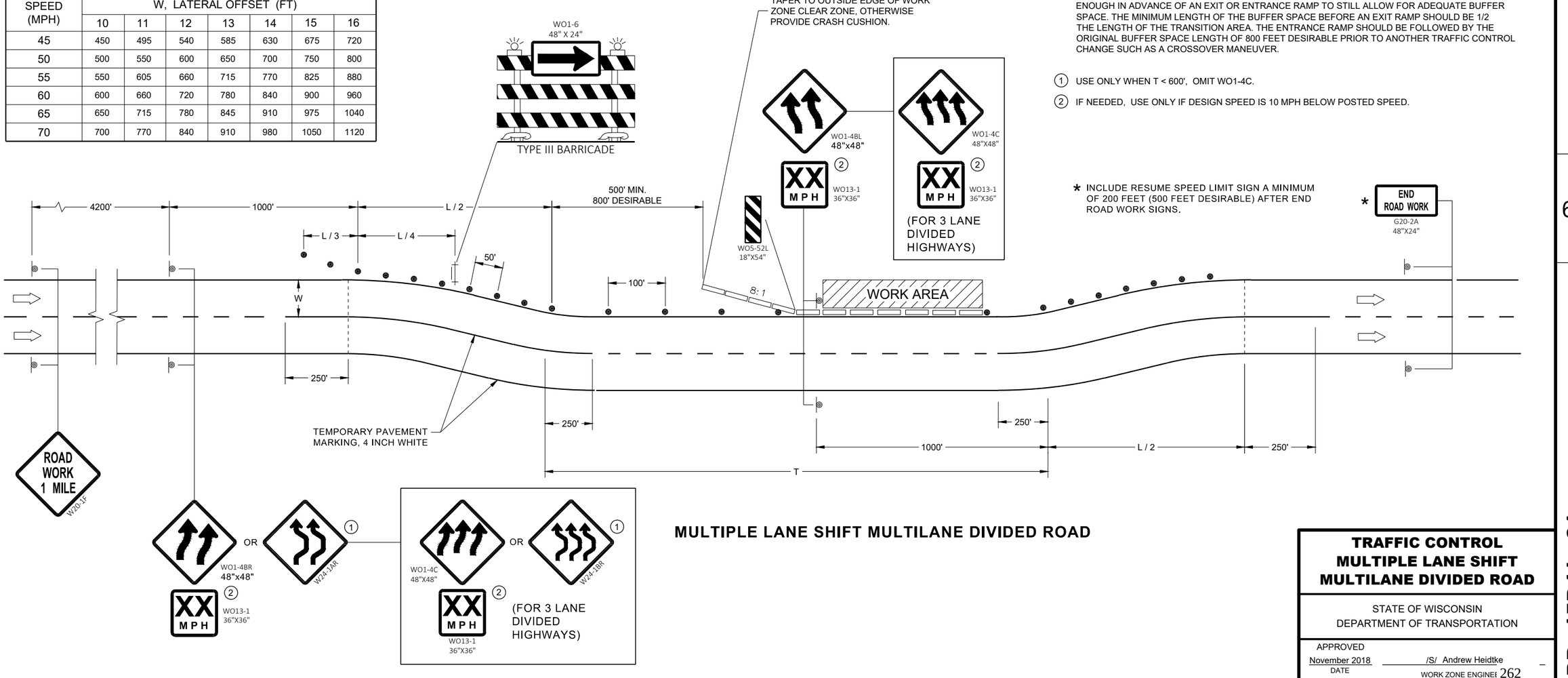
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT 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.

(1) USE ONLY WHEN T < 600', OMIT WO1-4C.

(2) IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.



MULTIPLE LANE SHIFT MULTILANE DIVIDED ROAD

TRAFFIC CONTROL
MULTIPLE LANE SHIFT
MULTILANE DIVIDED ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

SDD 15D41 - 01

SDD 15D41 - 01

LEGEND

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

GENERAL NOTES

RIGHT CLOSURE SHOWN (LEFT LANE CLOSURE SIMILAR)

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

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

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

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

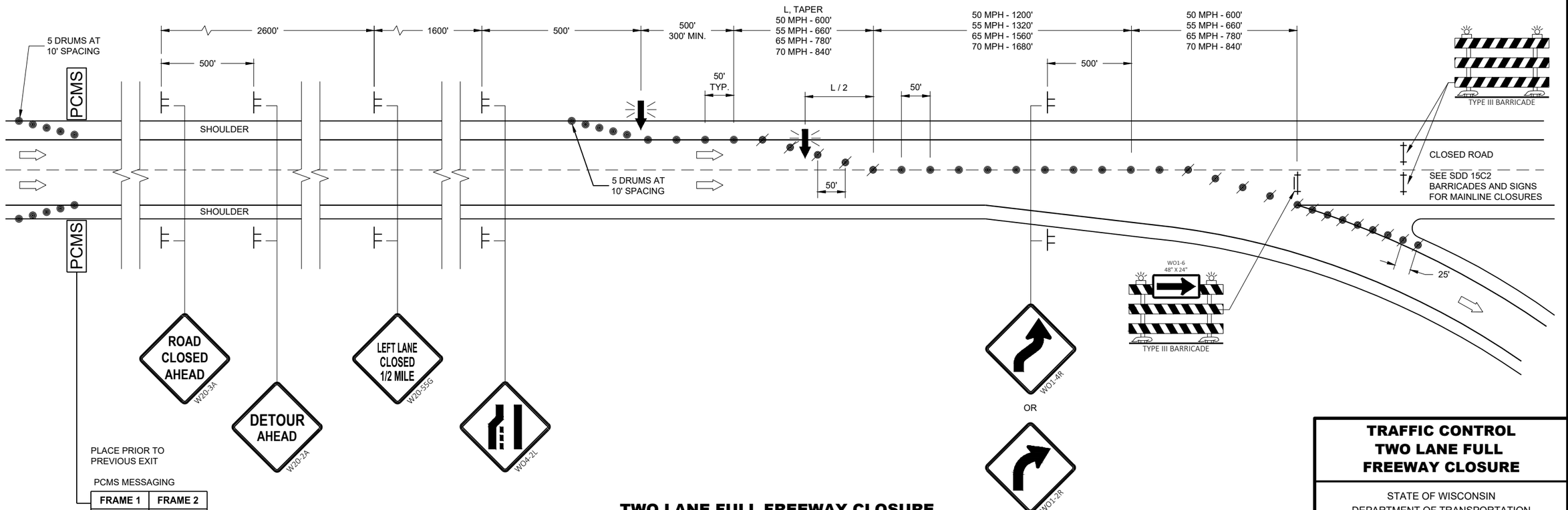
WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROL SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS EACH CLOSED LANE TO HELP REINFORCE THE DRUM LINE.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

REFER TO DETOUR ROUTES FOR TRAFFIC GUIDANCE SIGNING.

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



PLACE PRIOR TO PREVIOUS EXIT

PCMS MESSAGING

FRAME 1	FRAME 2
FREEWAY CLOSED	EXIT AHEAD

TWO LANE FULL FREEWAY CLOSURE

TRAFFIC CONTROL TWO LANE FULL FREEWAY CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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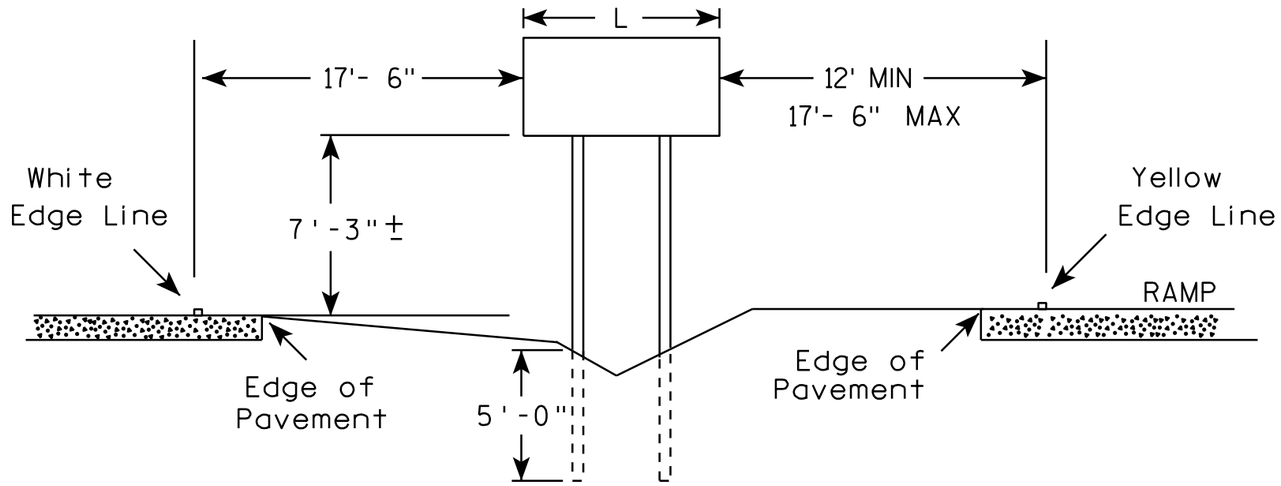
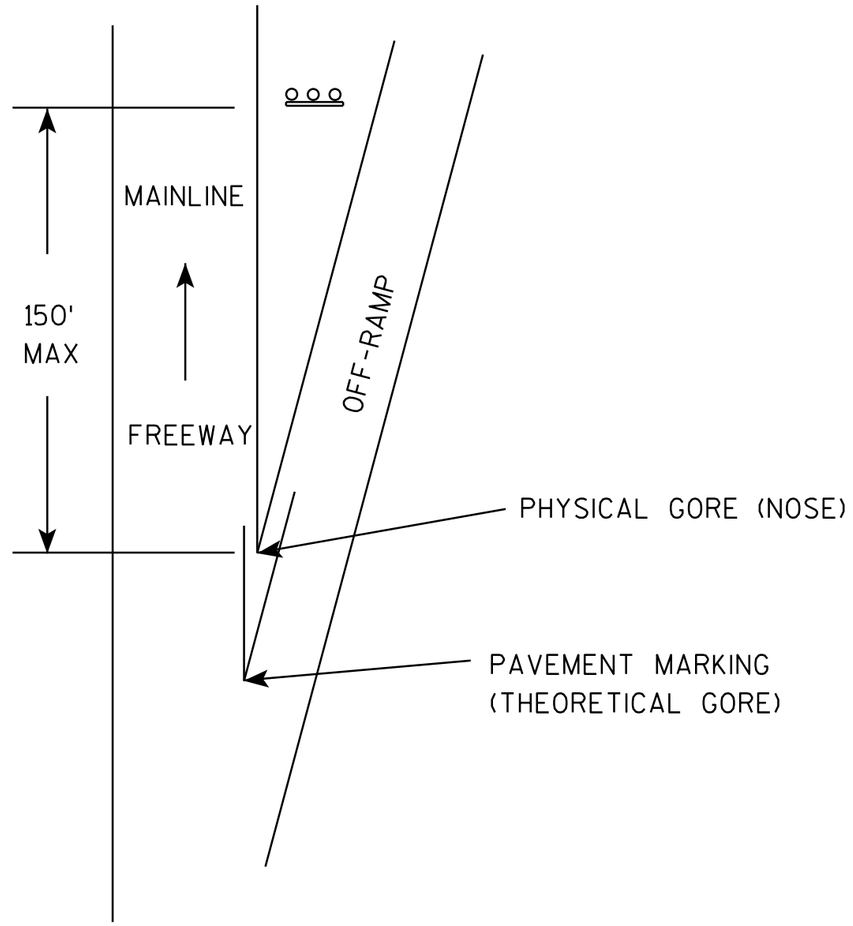
SDD 15D42 - 01





GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The (∓) tolerance for the mounting height is 3 inches.

TYPICAL INSTALLATION OF TYPE II SIGNS ON WOOD POSTS IN GORE

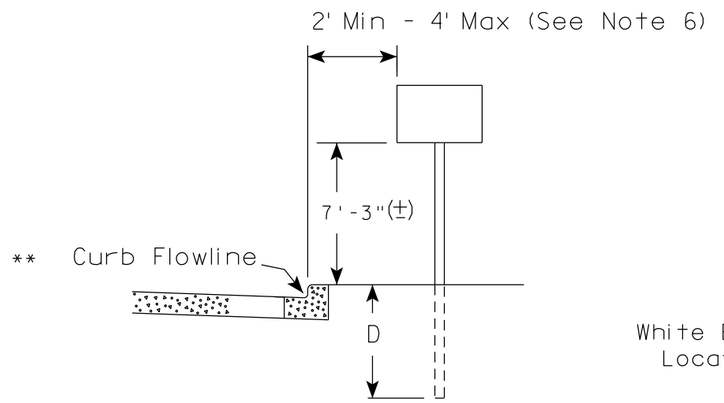
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

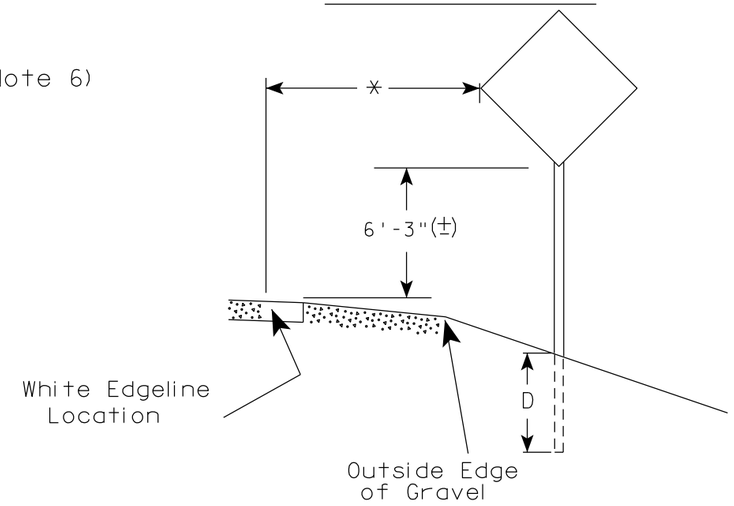
DATE 2/06/14 PLA... A4-2.3

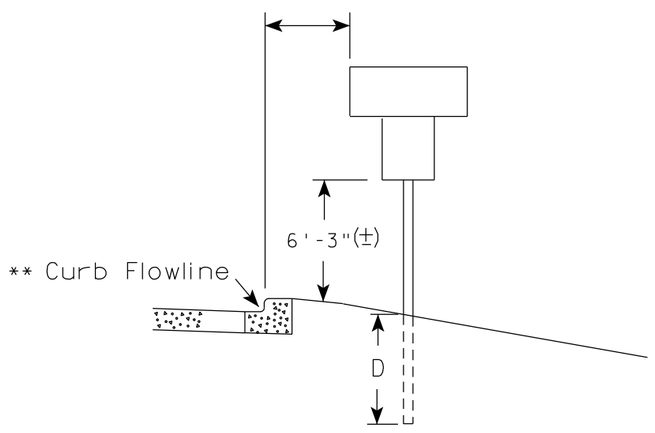
PROJECT NO: | SHEET NO: E

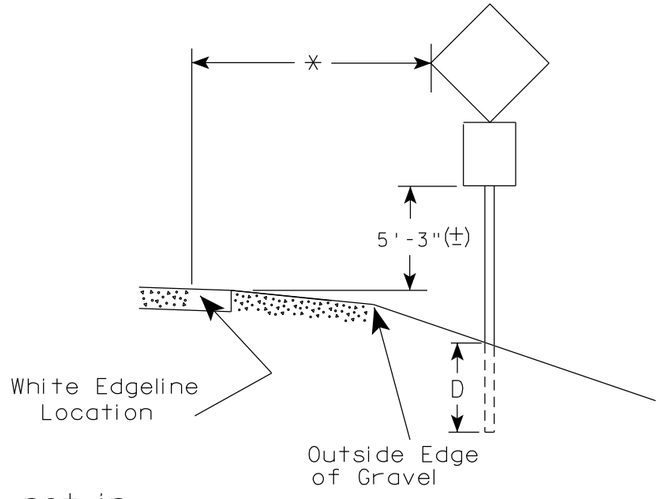
URBAN AREA



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 or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) 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" (±).
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 signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

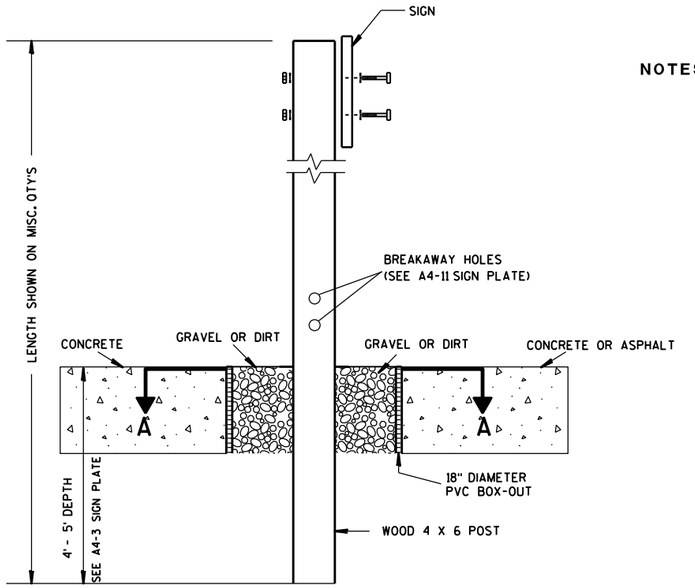
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

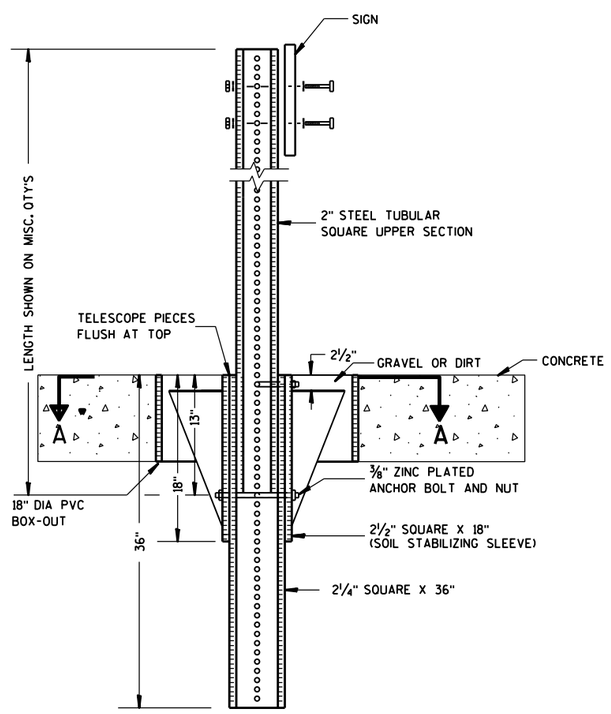
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 265	E



ELEVATION VIEW

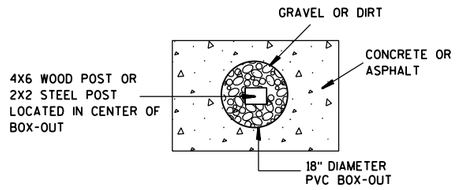
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

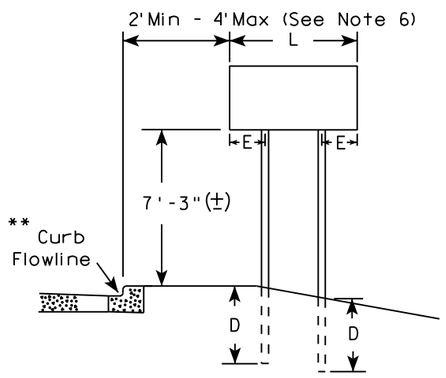
APPROVED Matthew R Rauch
for State Traffic Engineer

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

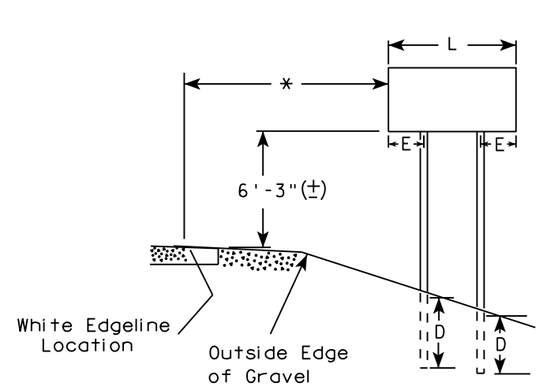
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

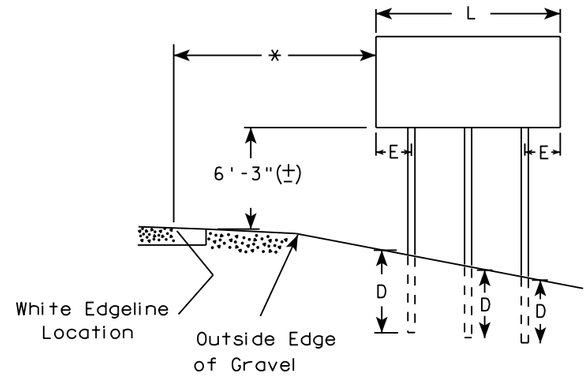
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

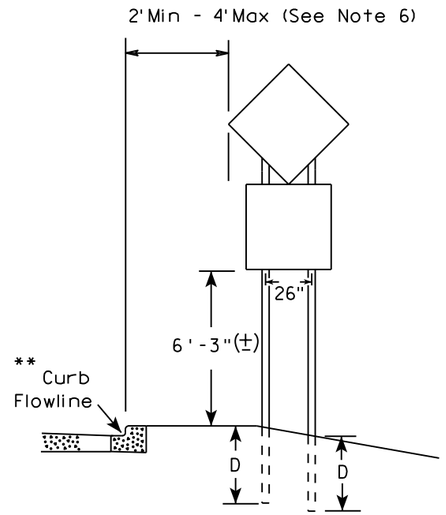
URBAN AREA



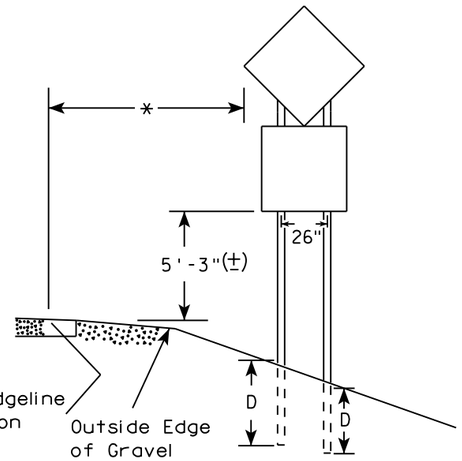
RURAL AREA (See Note 3)







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 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	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. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

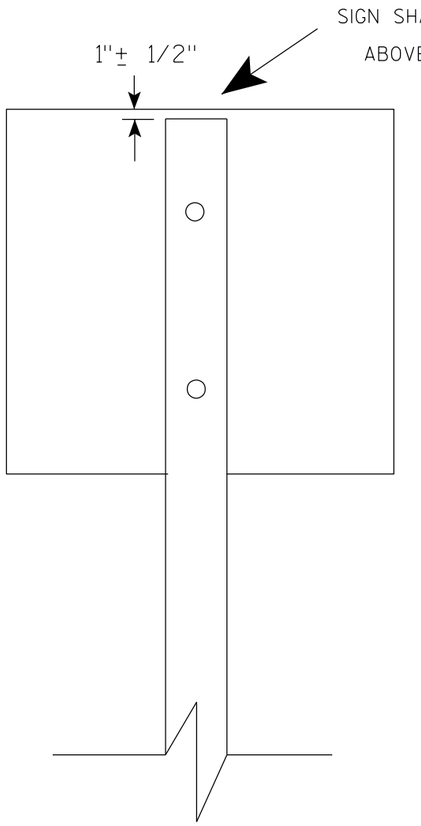
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

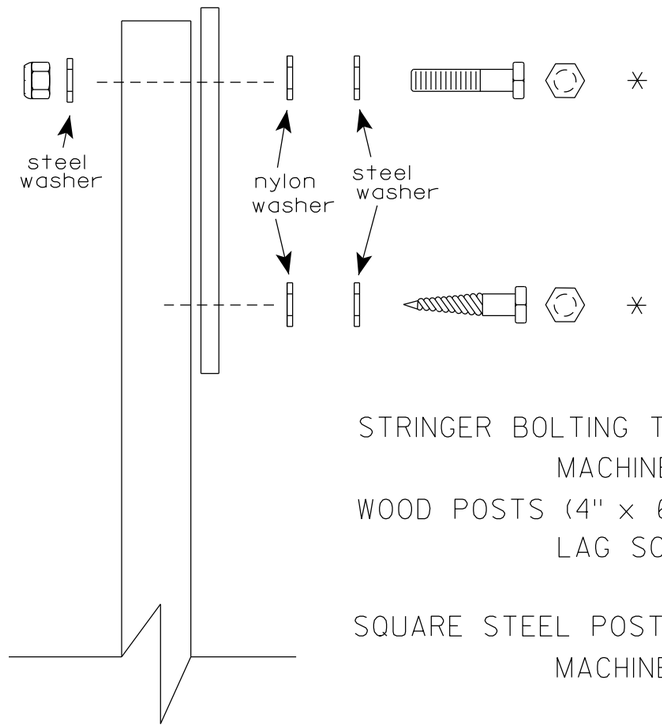
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 267	E





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 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

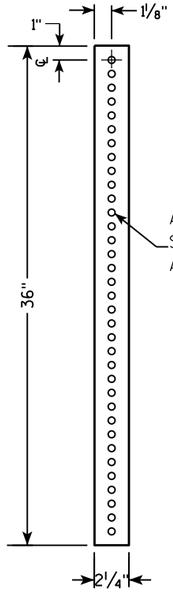
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

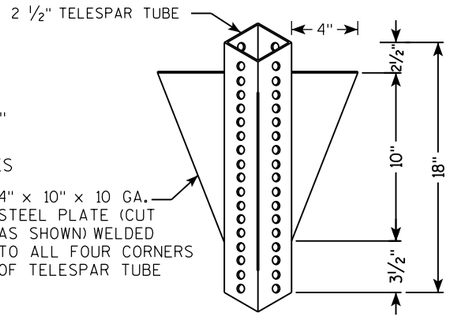
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

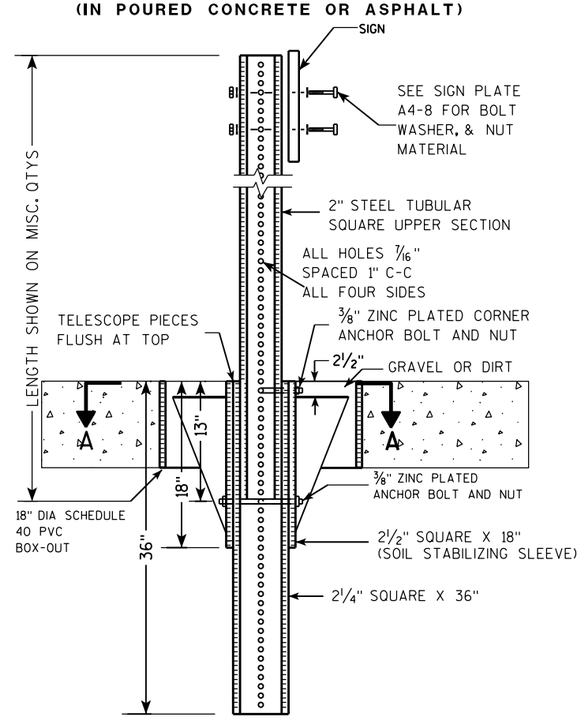
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



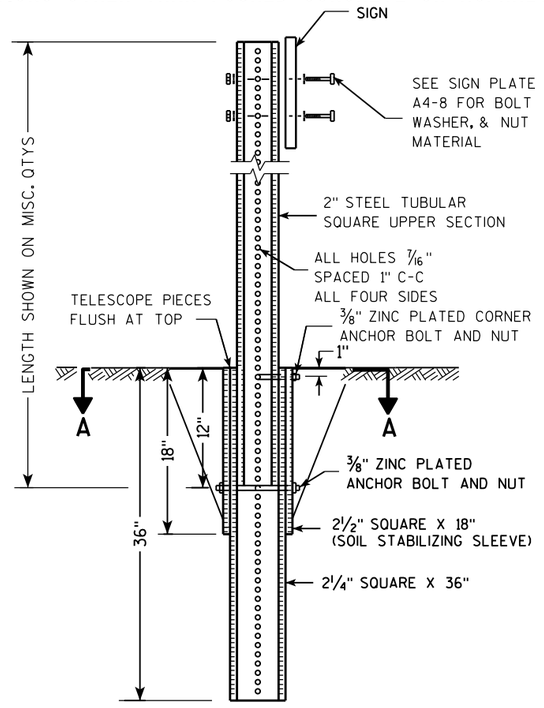
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

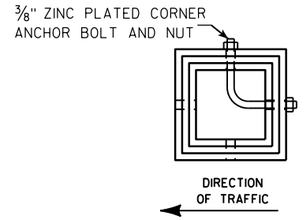


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

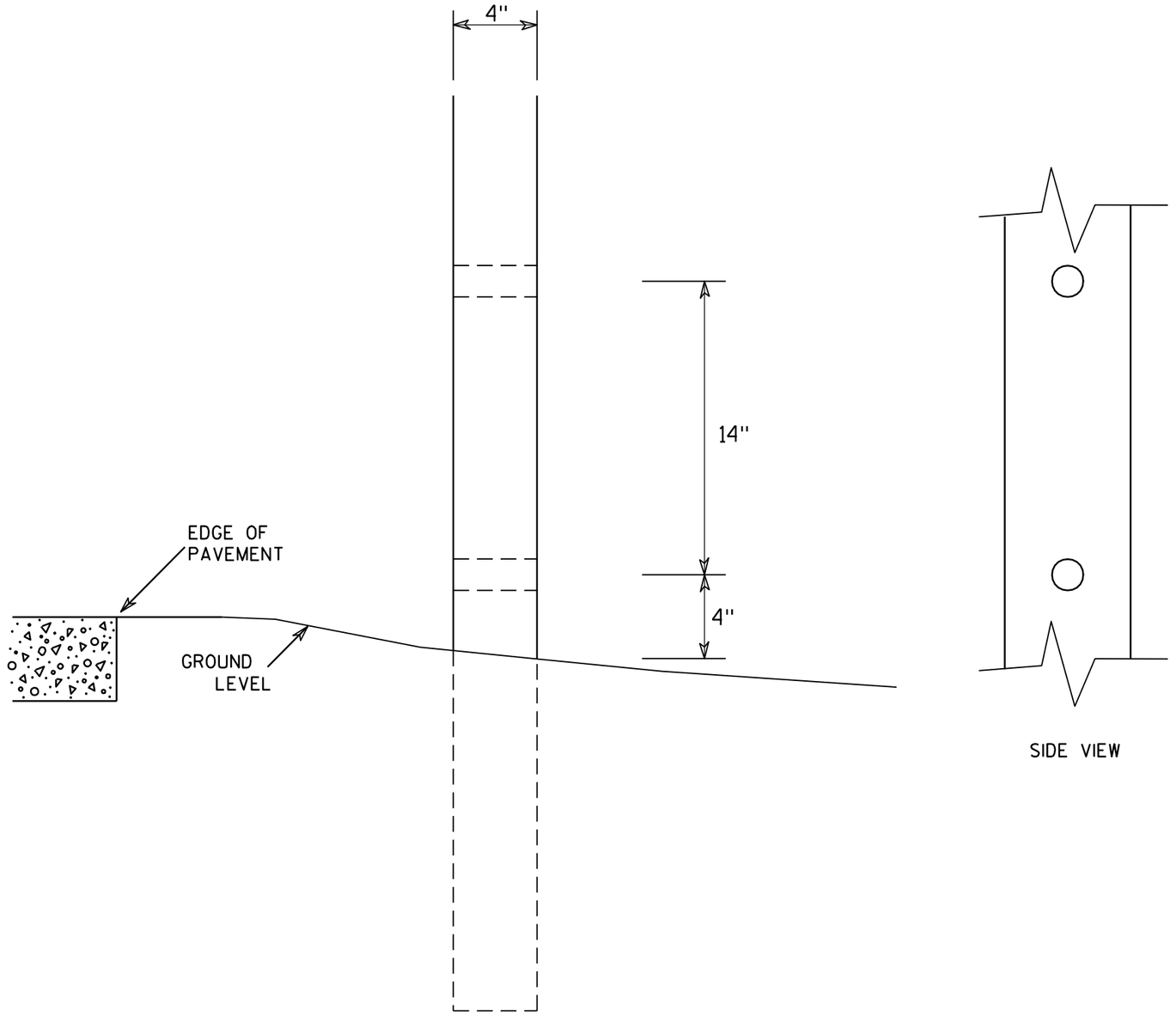
WISCONSIN DEPT OF TRANSPORTATION

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.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

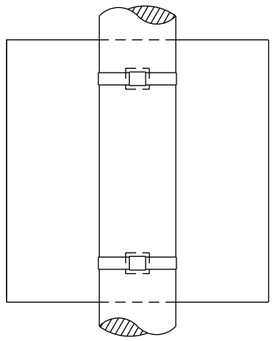
APPROVED Chester J Spang for State Traffic Engineer

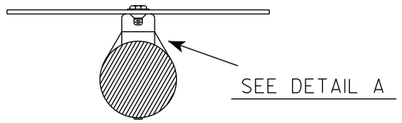
DATE 3/27/97 PLATE NO. A4-11.2

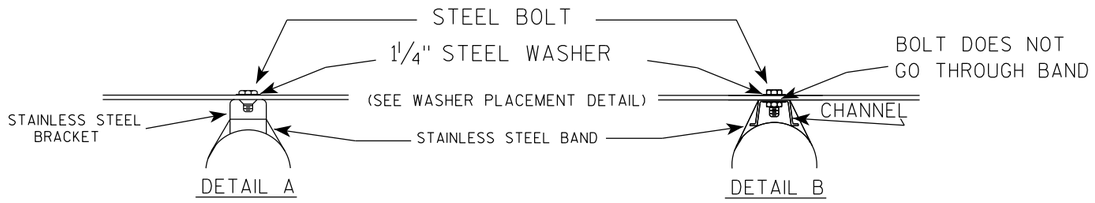
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 270	E

BANDING

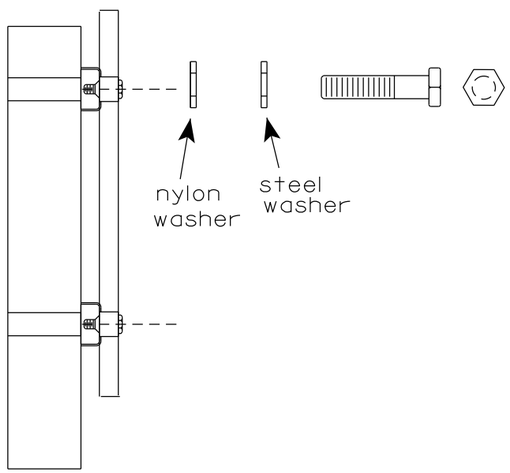
SINGLE SIGN







WASHER PLACEMENT

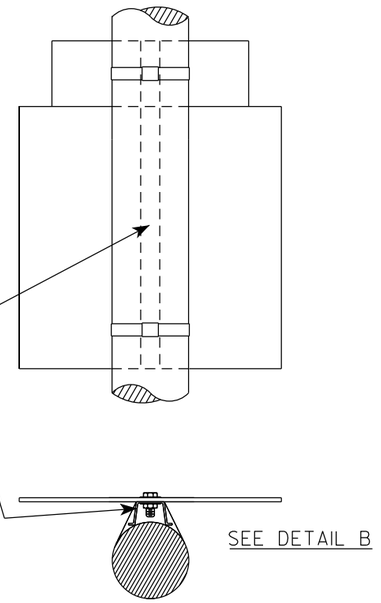


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

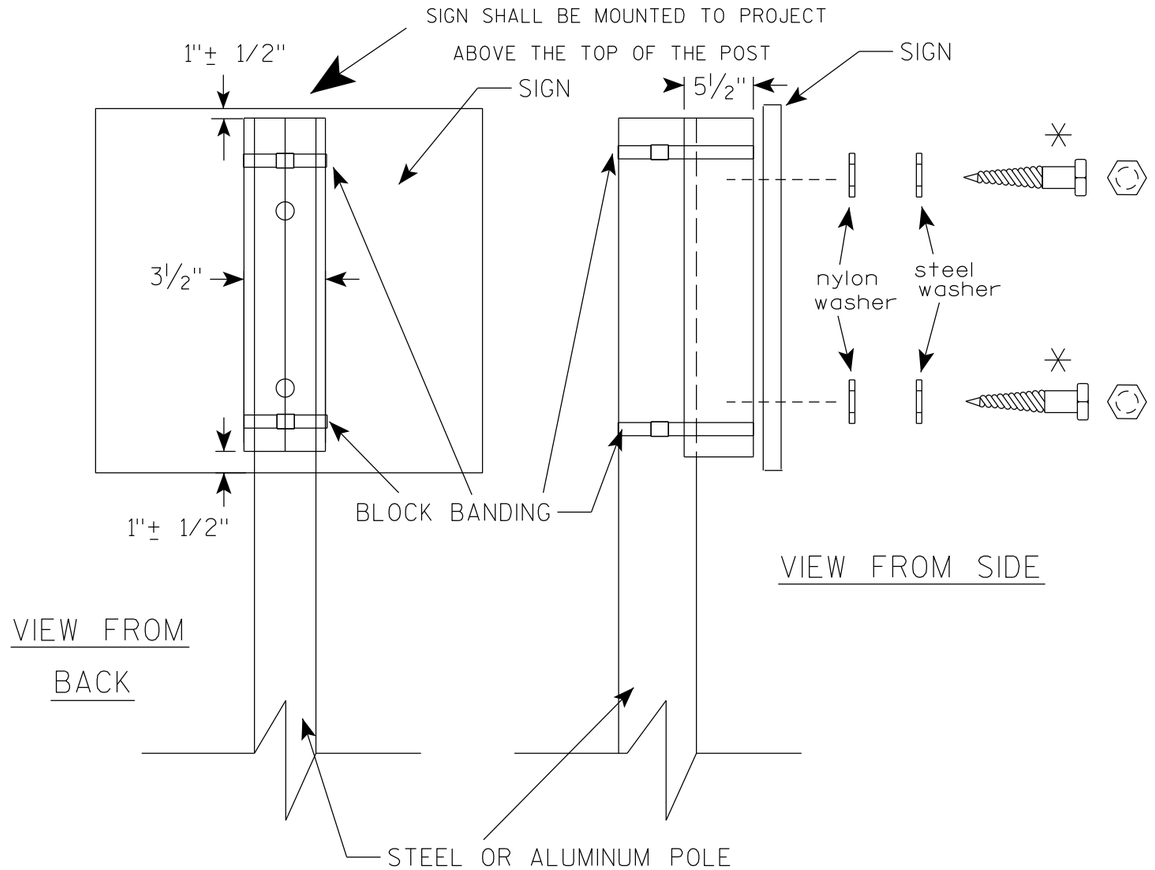
DATE 6/10/19 PLATE NO. A5-9.4

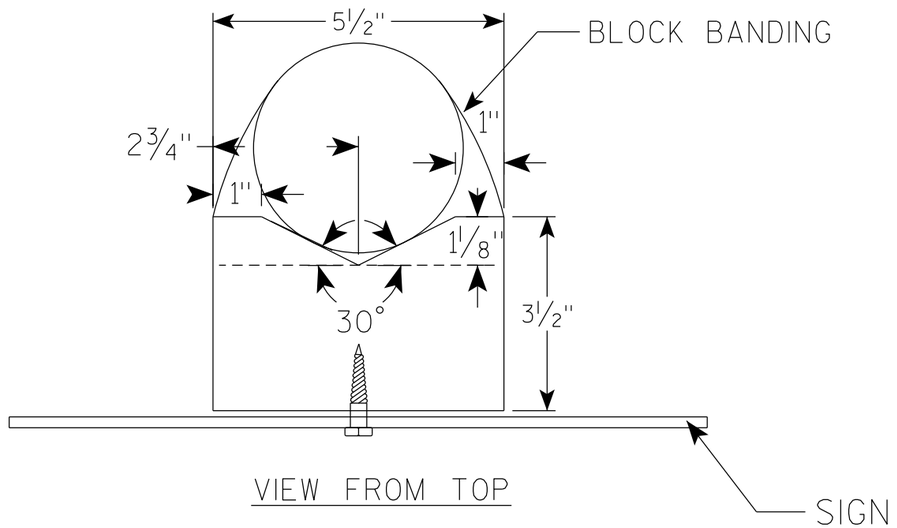
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 271	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

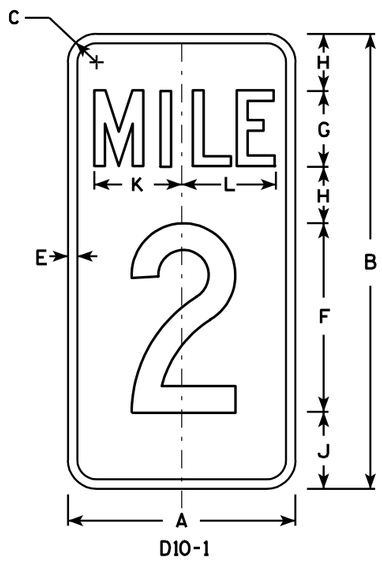
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

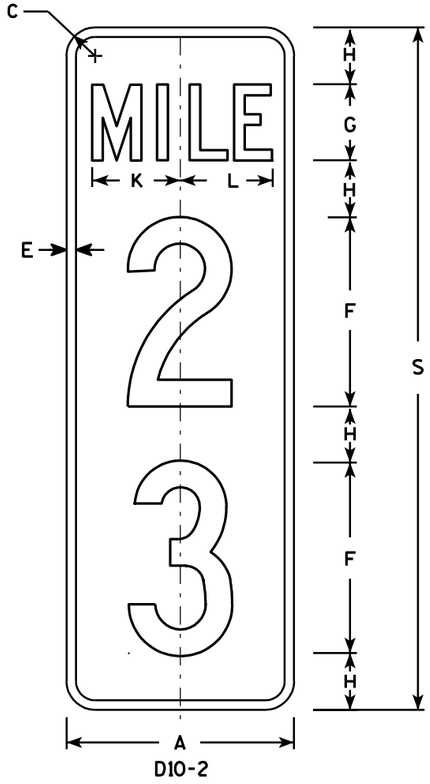
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

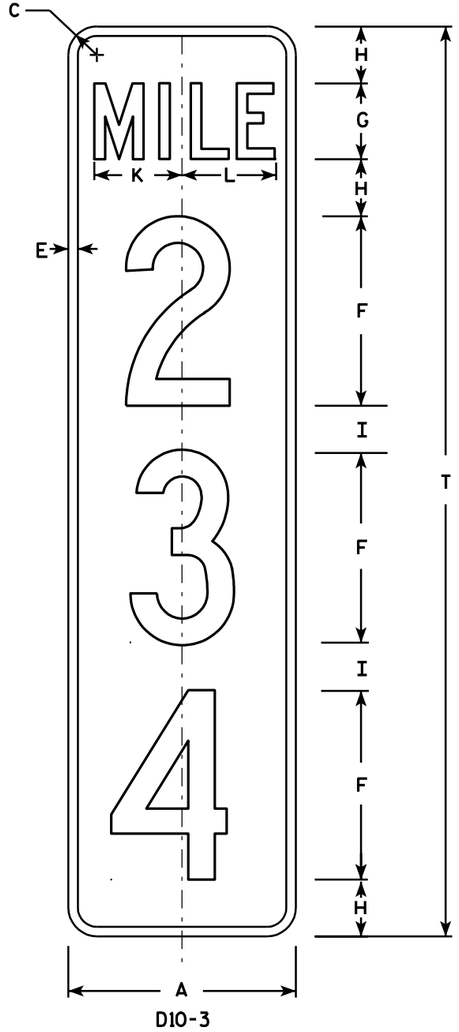
PROJECT NO: | SHEET NO: 272 | E



D10-1



D10-2



D10-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
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. Optically adjust numerals about the centerline of the sign to achieve proper balance.

Metric equivalent for this sign is:

PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 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
1																										
2																										
3																										
4	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						
5	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						

D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m2	Area m2	Area m2
.19	.28	.38

STANDARD SIGN
D10-1 , D10-2 & D10-3

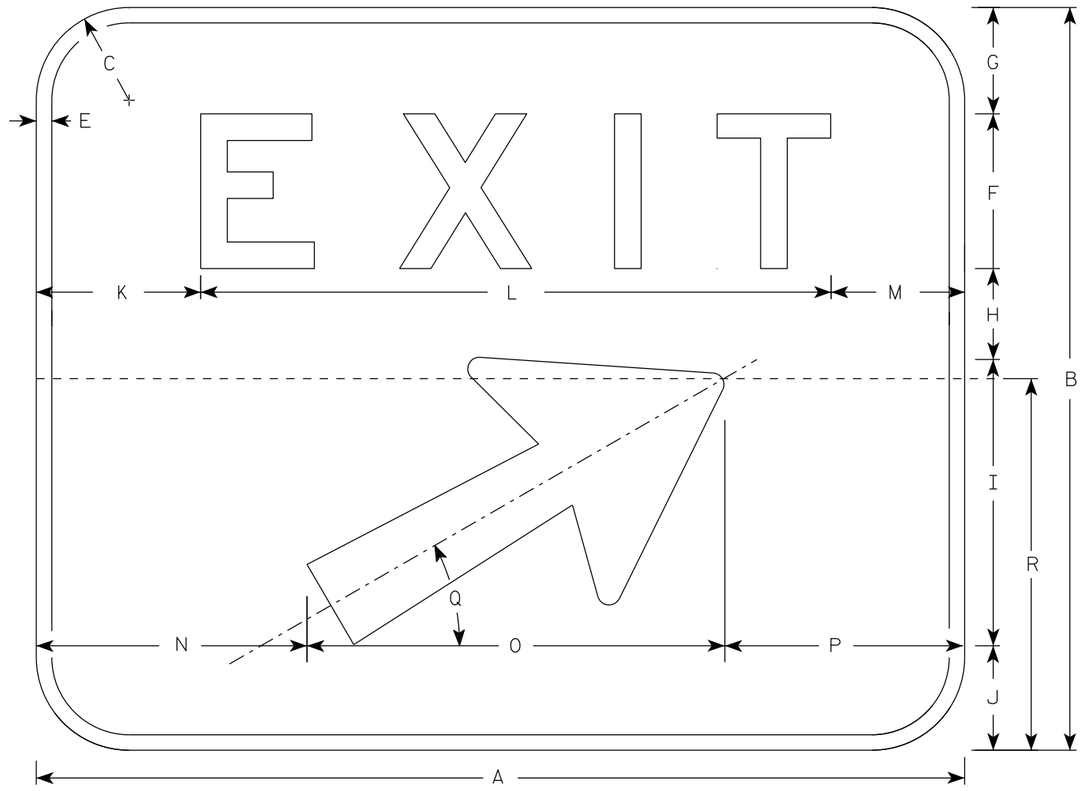
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for Director, Office of Traffic

DATE 1/16/02 PLATE NO. D10-3.2

PROJECT NO:

SHEET NO: 273 E



E5-1

NOTES

1. Sign is Type II - Type H reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. When Base material for this sign is plywood sign shall be split into two seperate pieces for the 72 x 60 size as shown on the detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. As per the Standard Spec's, this sign shall not have a vertical joint.
8. Size 3 E5-1 shall only be used in a Work Zone application with a Temporary Sign Support

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																											
3	48	48	6		1	10	6 7/8	5 7/8	18 1/2	6 3/4	8 1/2	31 1/8	8 3/8	11 1/2	27	9 1/2	30°	30									16.0
4	60	48	6		1	10	6 7/8	5 7/8	18 1/2	6 3/4	10 5/8	40 3/4	8 5/8	17 1/2	27	15 1/2	30°	30									20.0
5	72	60	6		1	12	9 3/4	10	18 1/2	9 3/4	13 1/4	48 1/2	10 1/4	23 1/2	27	21 1/2	30°	30									30.0

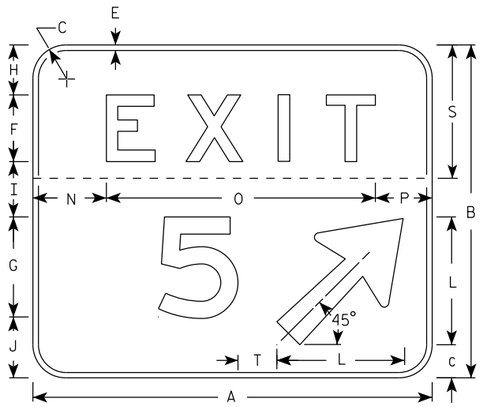
STANDARD SIGN
E5-1

WISCONSIN DEPT OF TRANSPORTATION

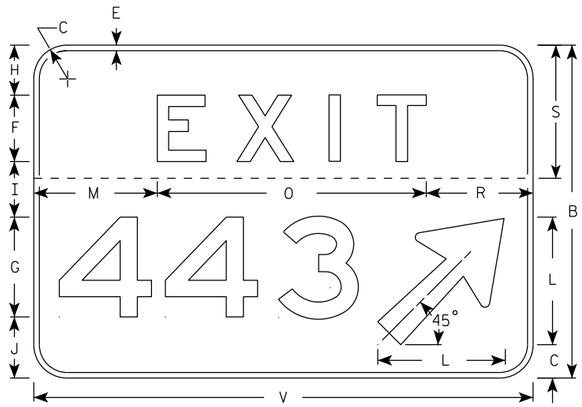
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/26/18 PLATE NO. E5-1.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 274 | E

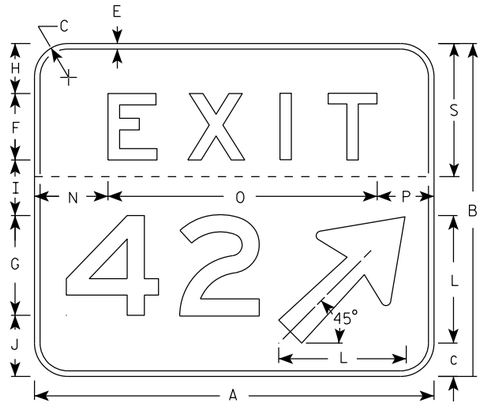


NOTE: T diminision shall be measured from the back of the number to the front of the arrow

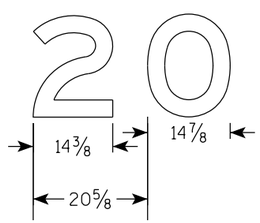


NOTES

1. Sign is Type II - Type H reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E
4. Corners may be square or rounded but the corners shall be rounded when base material is metal.
5. Sign shall be split into two seperate pieces as shown on each detail by the dashed line (_ _ _ _ _ _ _ _ _ _).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. As per the Standard Spec's, these signs shall not have a vertical joint.



EXAMPLE FOR USING SPACING CHART



SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8			
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14			
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8			
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4			
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8			
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8			
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8			
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4			
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8			
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4			
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2																										
3																										
4																										
5	72	60	6		1	12	18	9	10	11	8 7/8	23	22 1/4	13 1/4	48 1/2	10 1/4		19 1/4	24	7		90		96	7 1/2	

1-2 Digit Bid Area	3 Digit Bid Area
Sq. Ft.	
30	37.5

STANDARD SIGN E5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

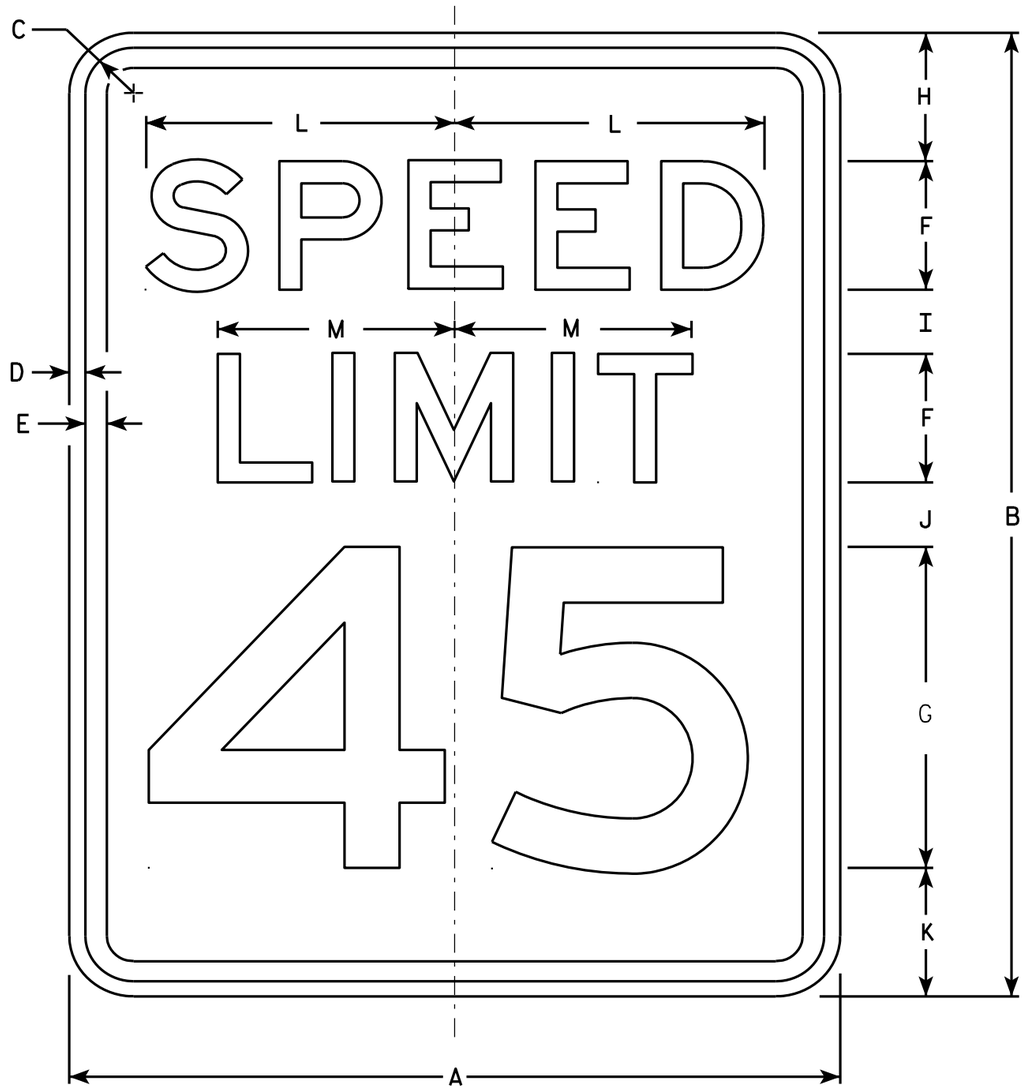
DATE 5/21/19 PLATE NO. E5-1A.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 275	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\E51A.dgn PLOT DATE : 21-MAY-2019 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7



R2-1

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 - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

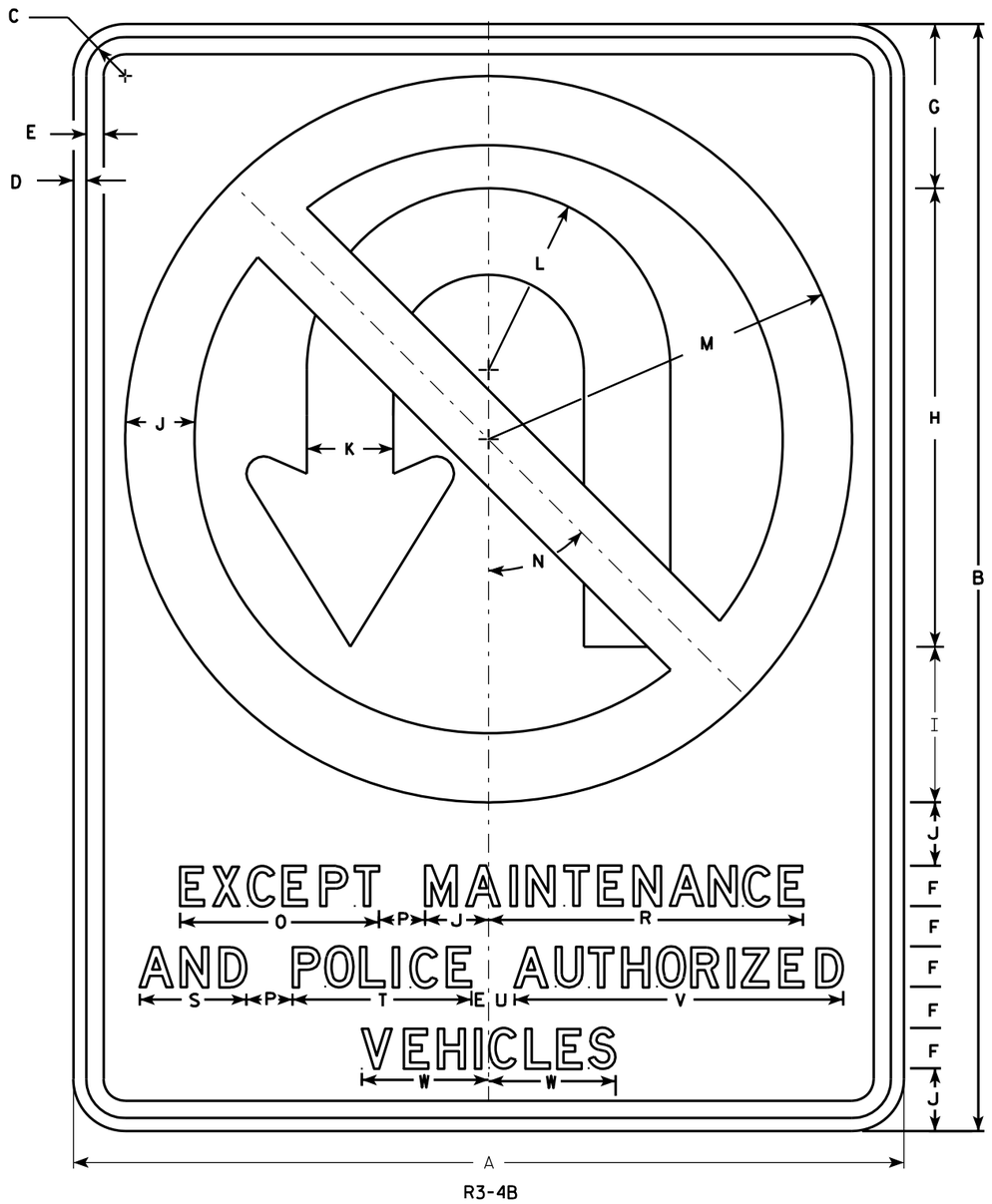
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

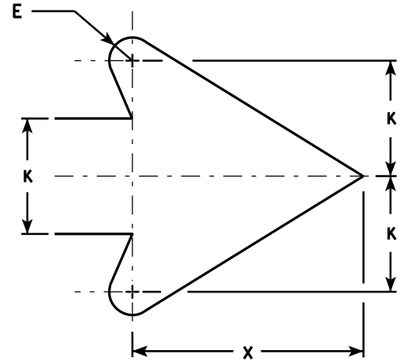
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 276 | E



R3-4B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0
5	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0

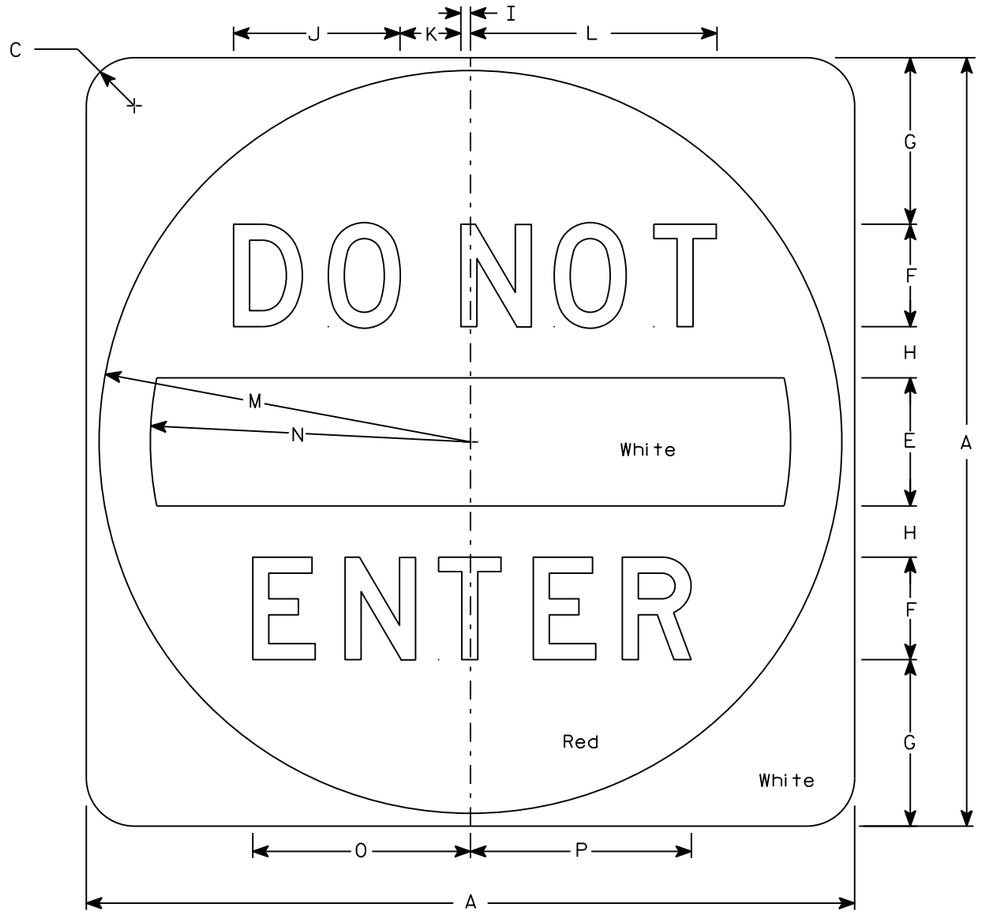
STANDARD SIGN
R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 277	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

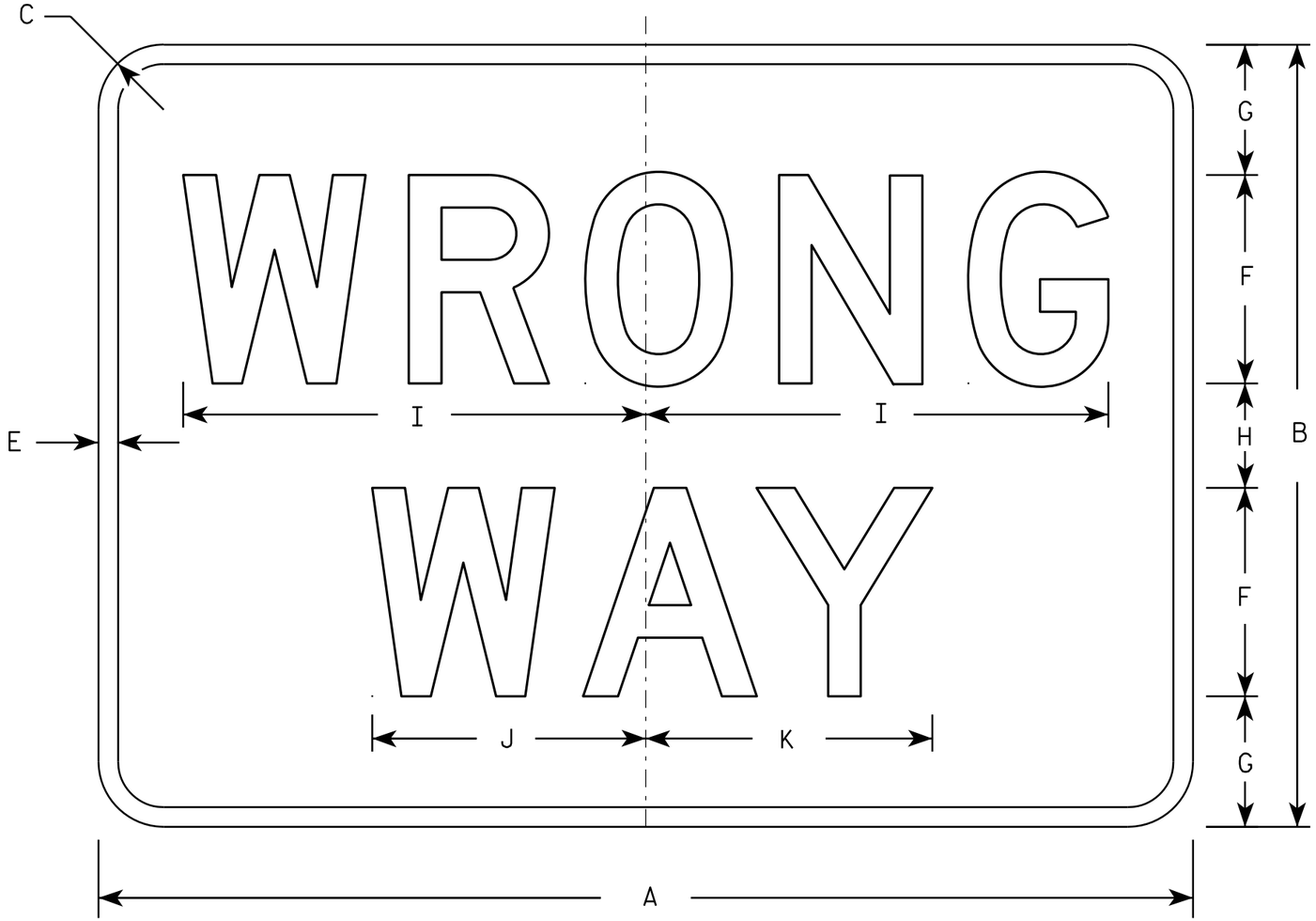
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 278 | E



R5-1A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 279 | E

R5-57

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 - Lines 1, 2, and 5 are Series C.
   Lines 3 and 4 are 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																											
2S																											
2M																											
3																											
4	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0
5	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0

STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

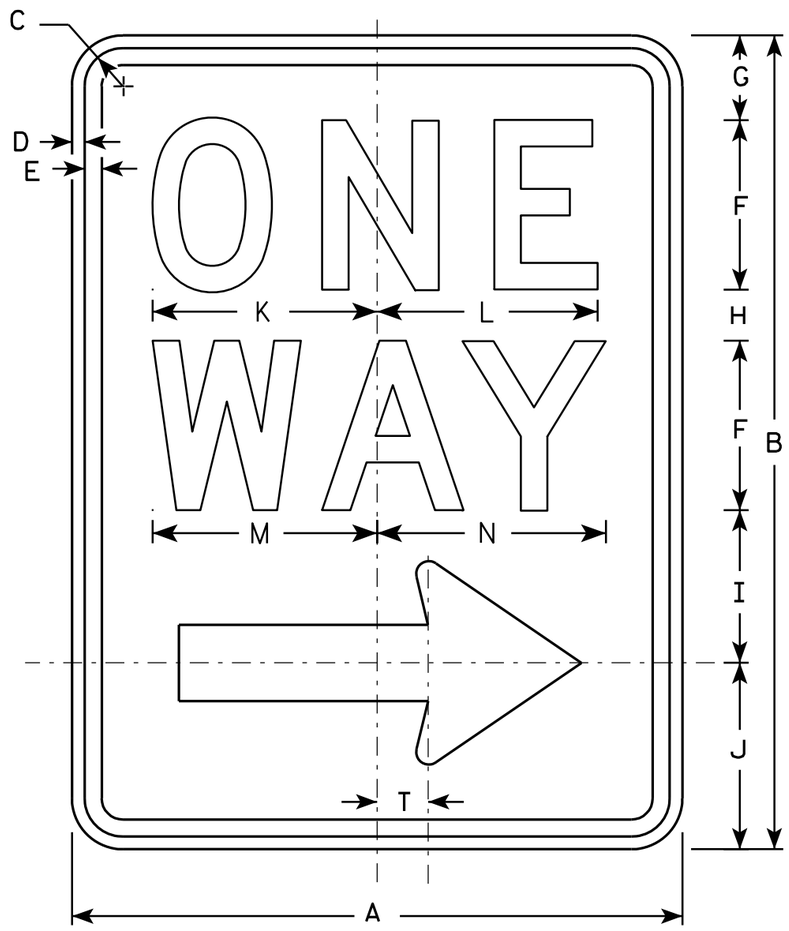
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 280 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R557.DGN PLOT DATE : 29-MAR-2011 14:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

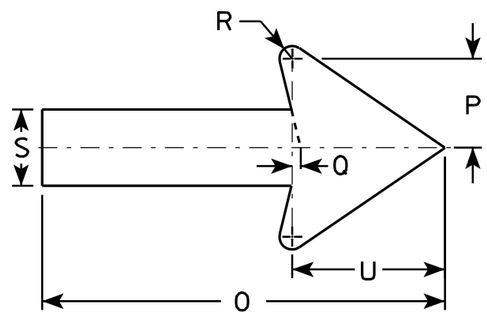
7



R6-2R

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. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

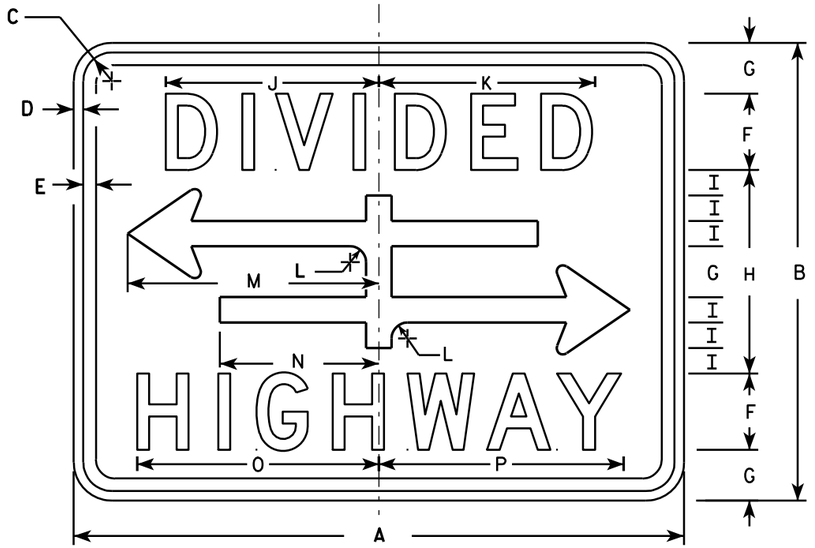
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

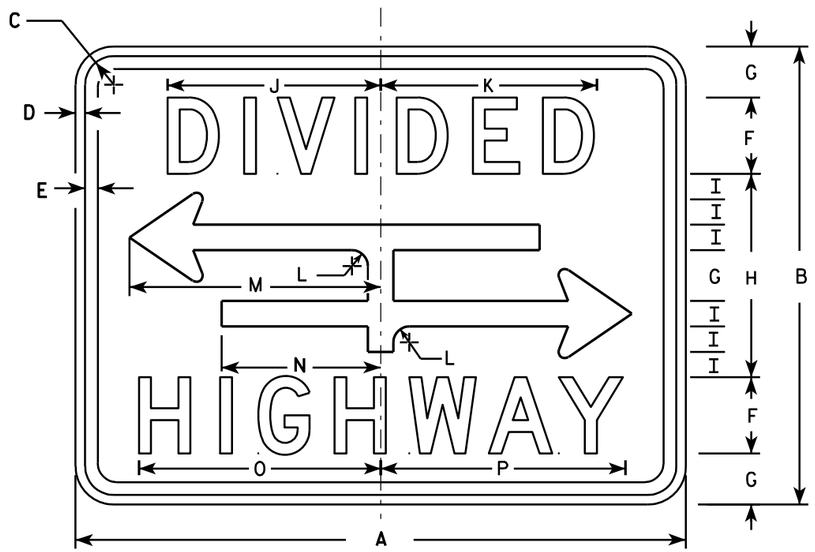
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 281	E



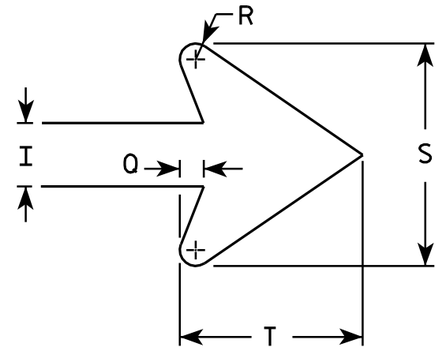
R6-3

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.



R6-3A



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	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

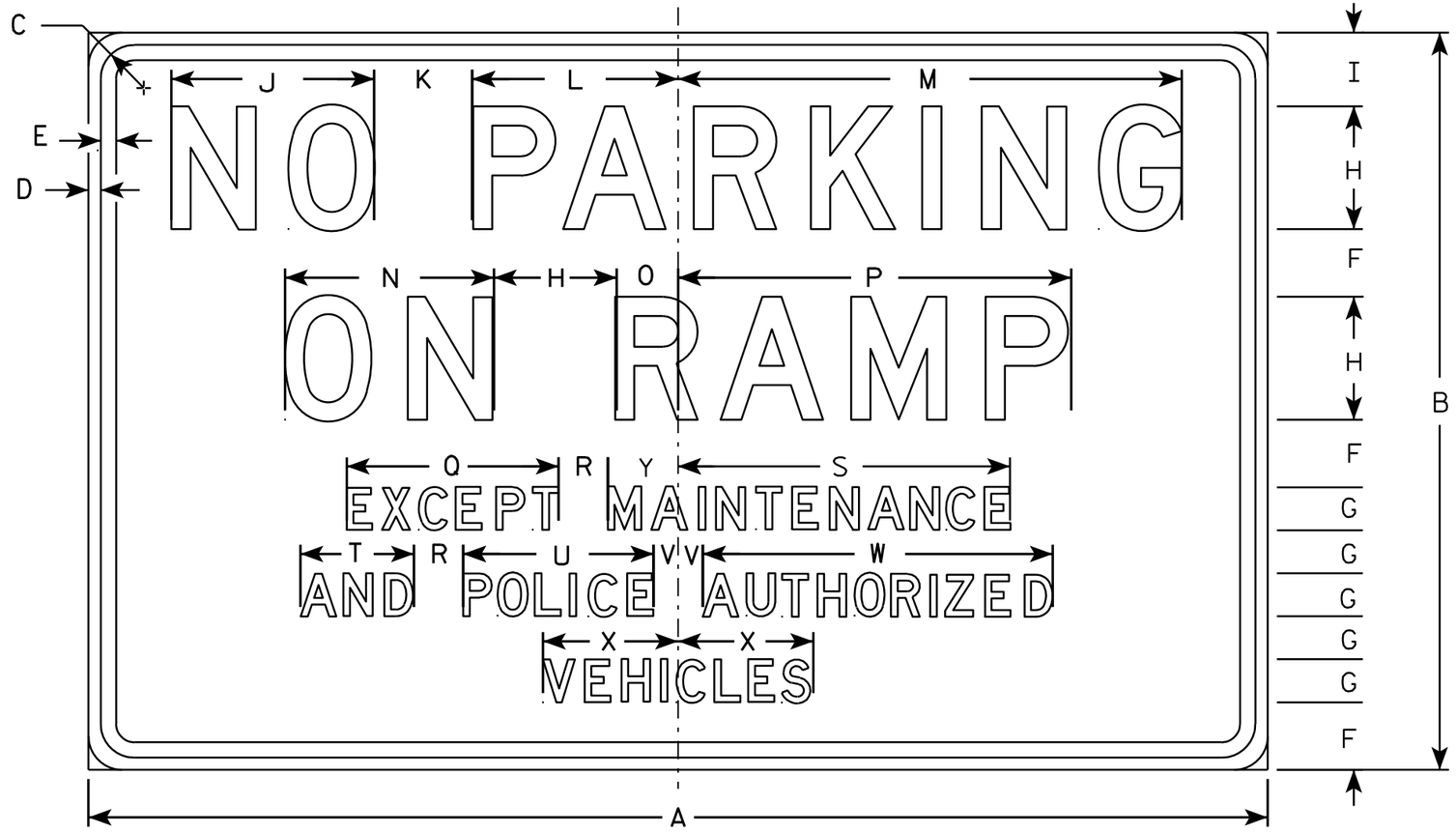
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

SHEET NO: 282 E



R7-64

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 - Lines 1& 2 and Border are RED
   Lines 3, 4, & 5 are 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																											
2M																											
3	48	30	1 3/8	1/2	5/8	2 3/4	1 3/4	5	3	8 1/4	4	8 3/8	20 1/2	8 1/2	2 1/2	16	8 5/8	2	13 5/8	4 5/8	7 3/4	1	14 1/4	5 1/2			10.0
4																											
5																											

STANDARD SIGN
R7-64

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-64.3

PROJECT NO:

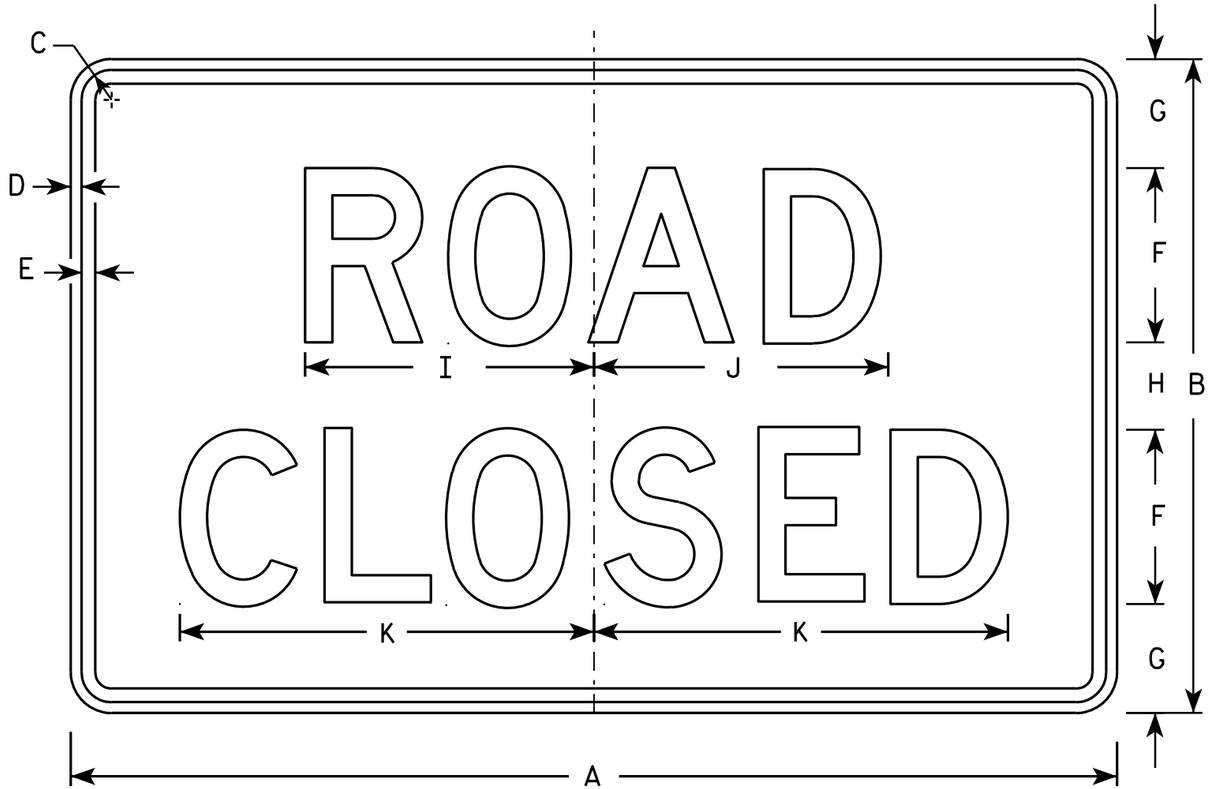
SHEET NO: 283 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R764.DGN PLOT DATE : 31-MAR-2011 13:47 PLOT BY : mscsja PLOT SCALE :

WISDOT/CADDS SHEET 42

7

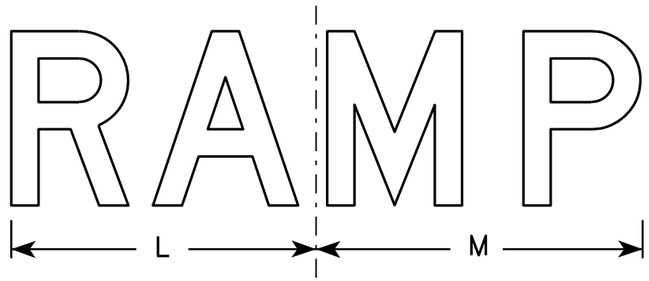
7



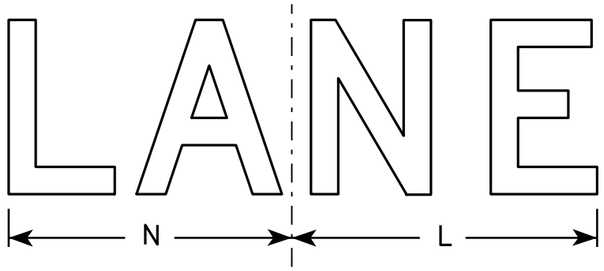
R11-2

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

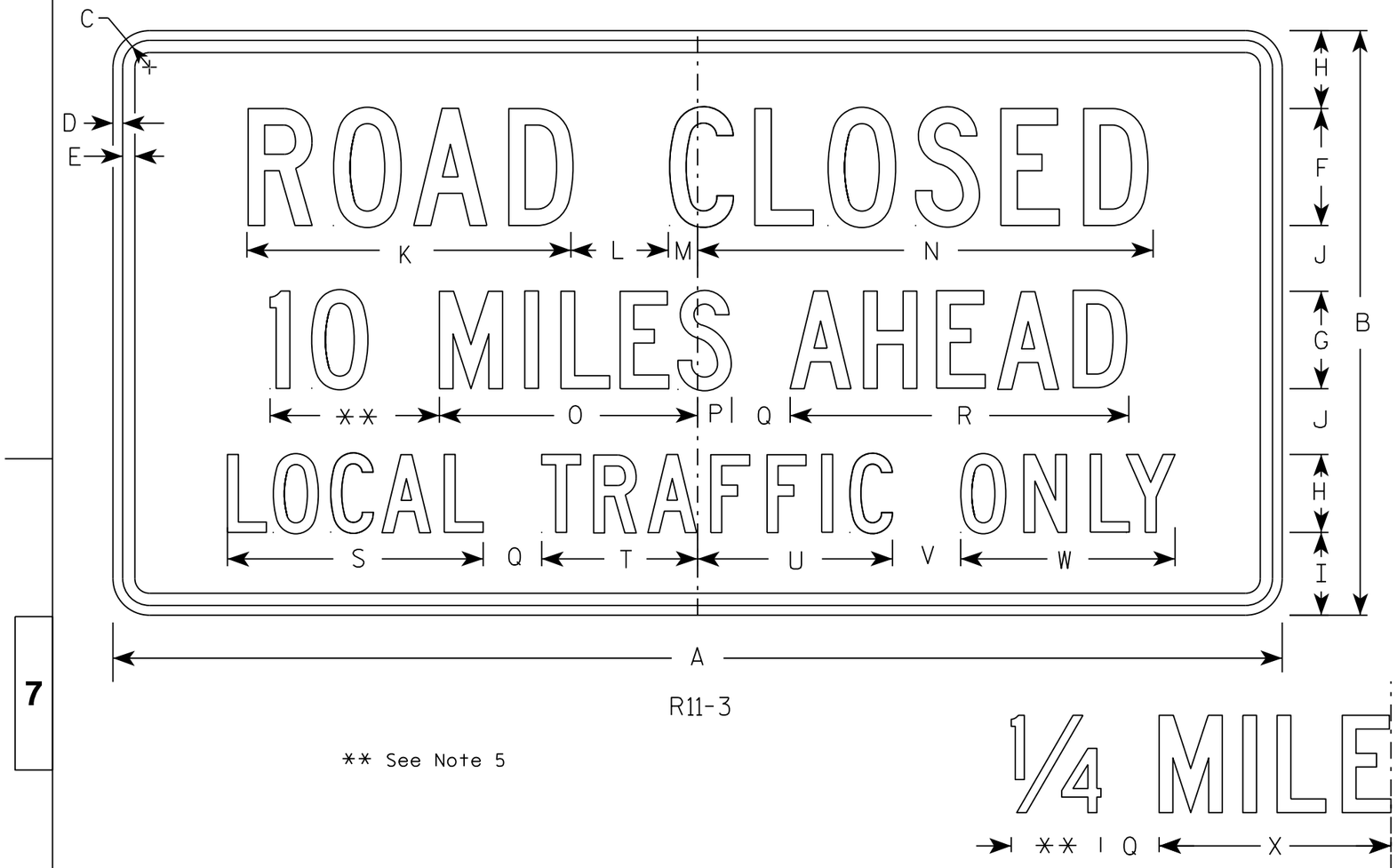
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

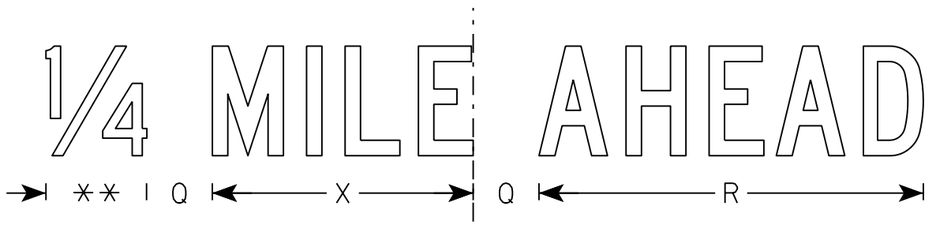
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 284	E



R11-3

** See Note 5



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.

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	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

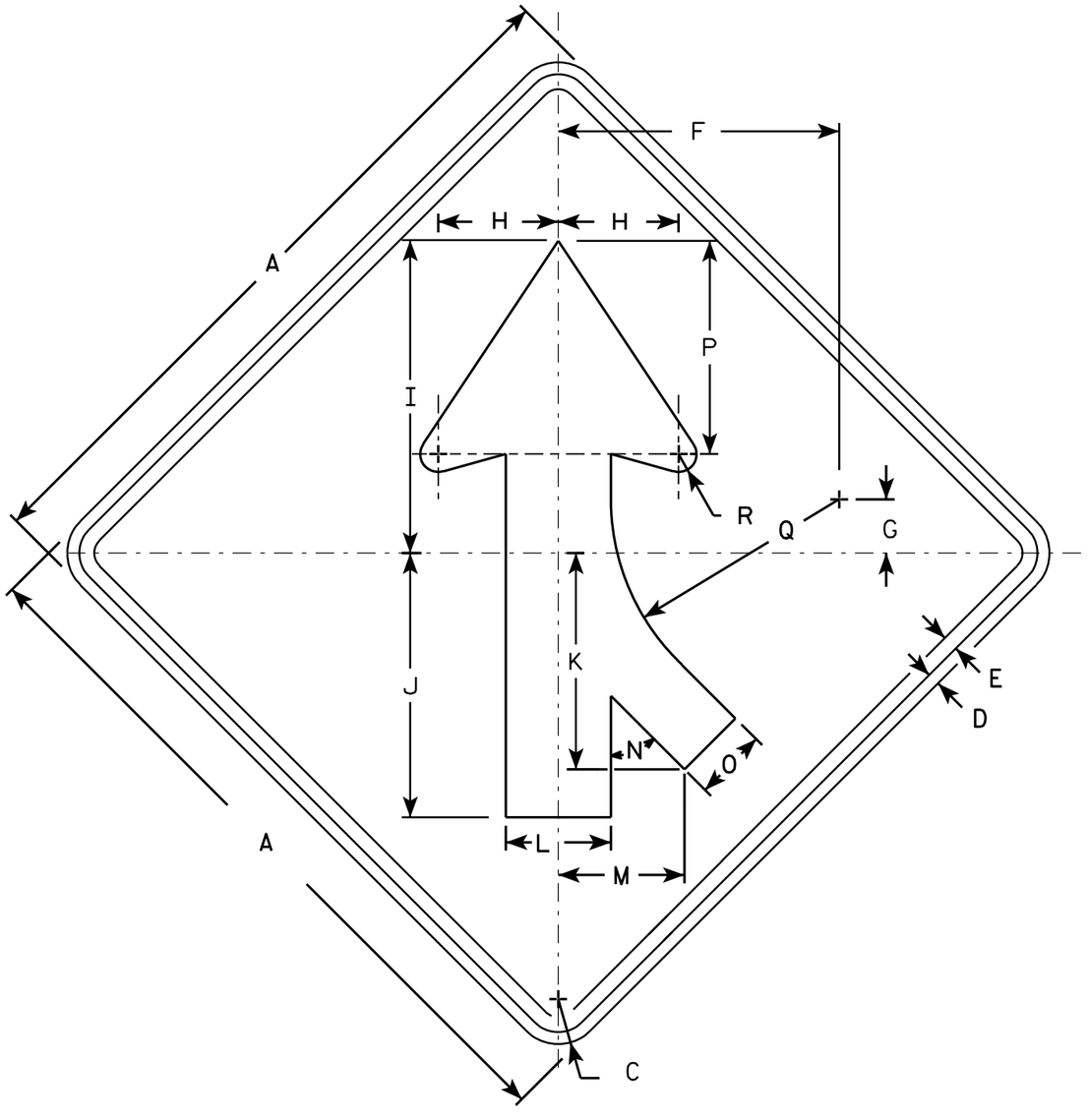
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/17 PLATE NO. R11-3.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 285 | E



W4-1 R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

STANDARD SIGN
W4-1

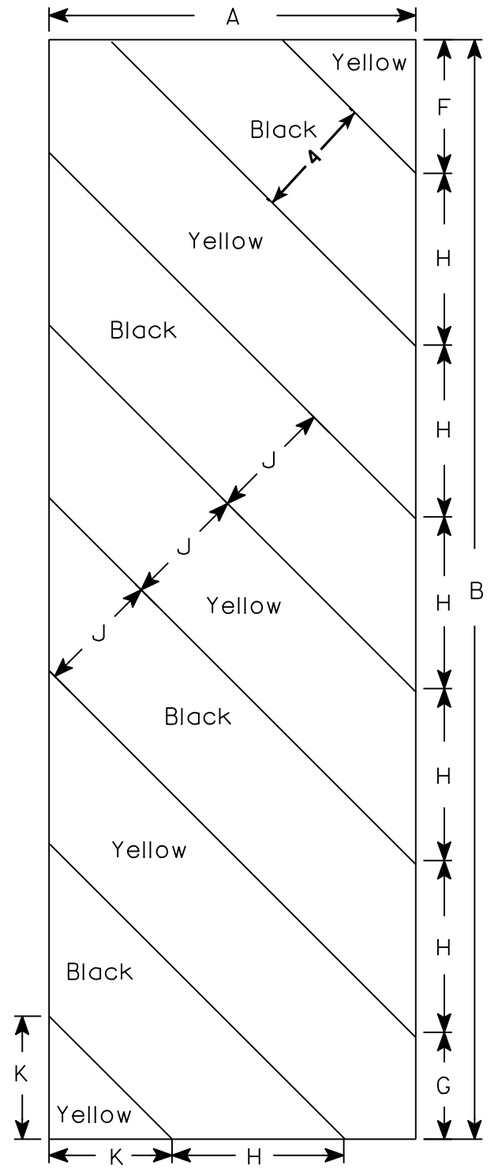
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rausch for State Traffic Engineer

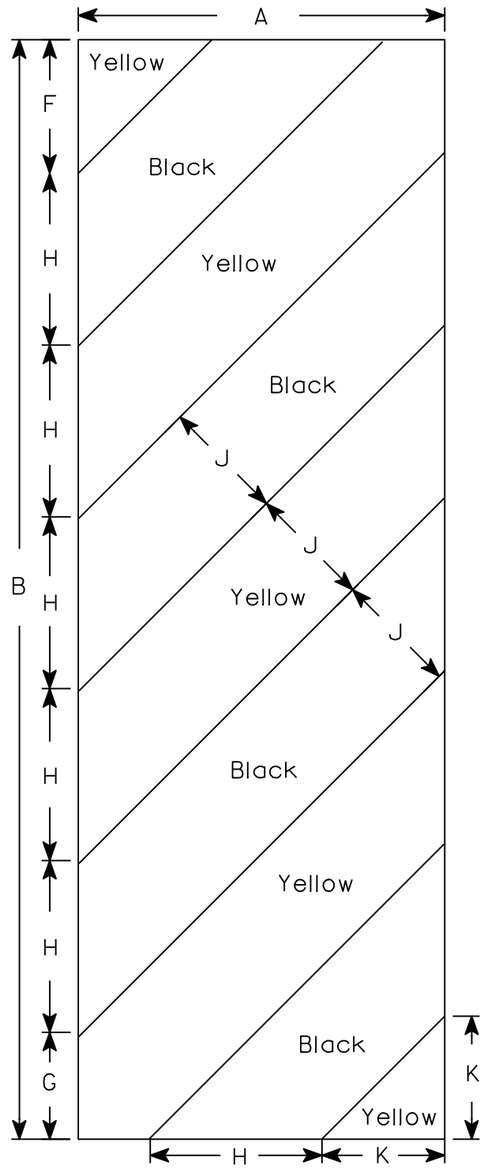
DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 286 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W41.DGN PLOT DATE : 12-MAR-2013 11:06 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.202372:1.000000
WISDOT/CADDS SHEET 42



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

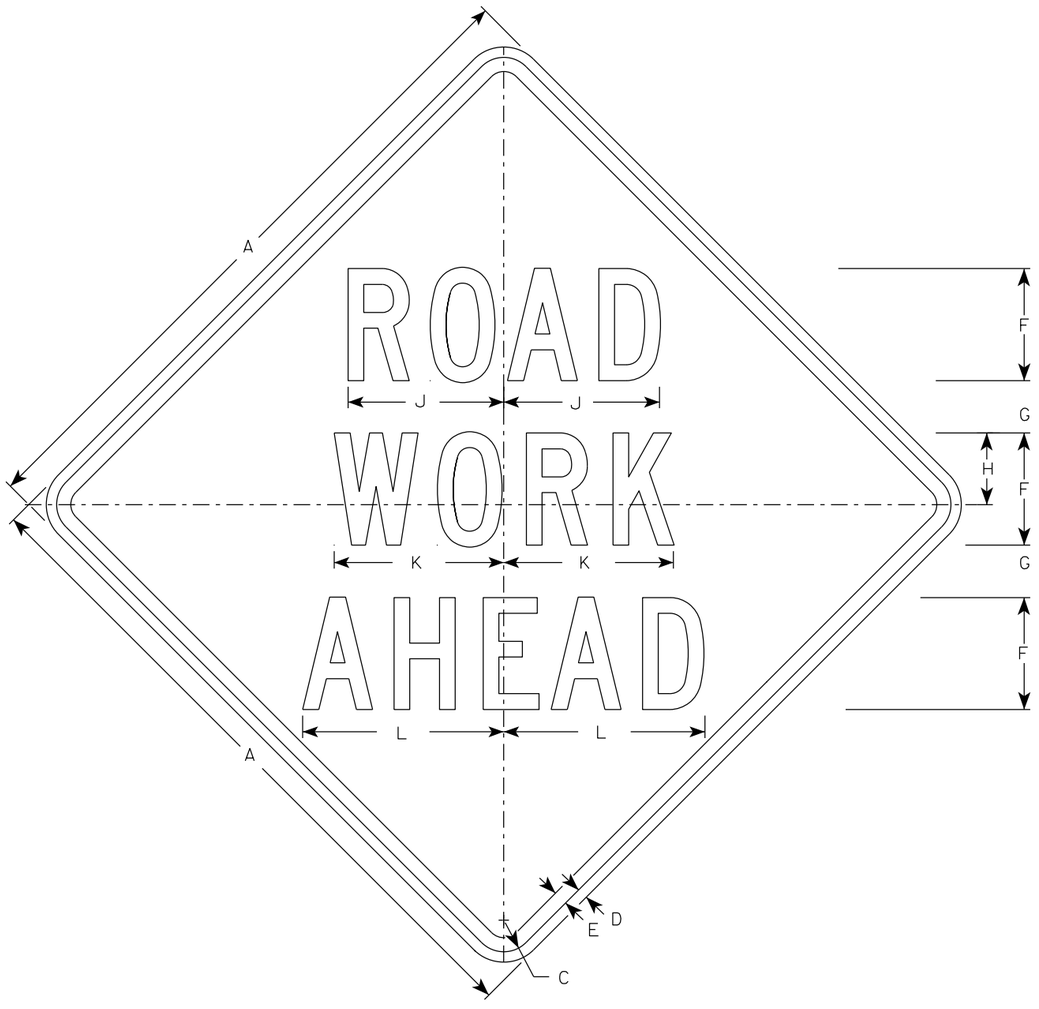
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

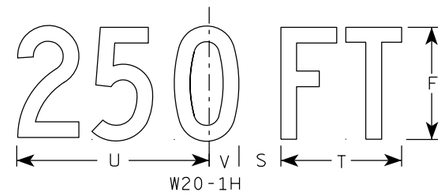
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

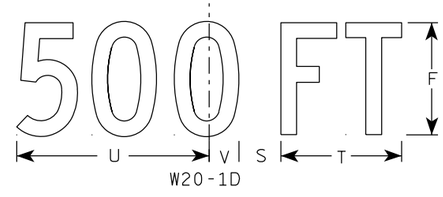
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 287 | E



W20-1A

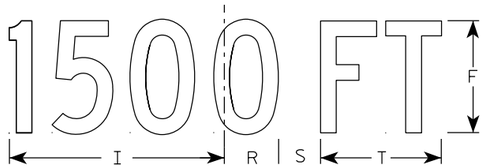


W20-1H



W20-1D

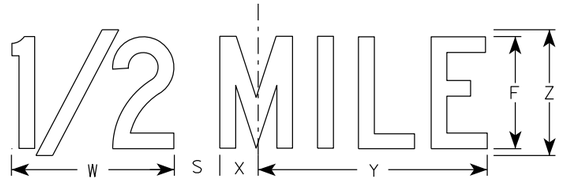
W20-1C



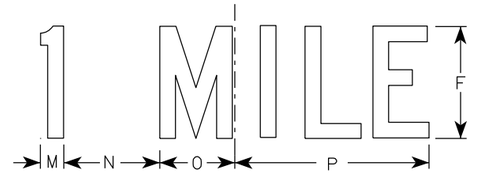
W20-1B

NOTES

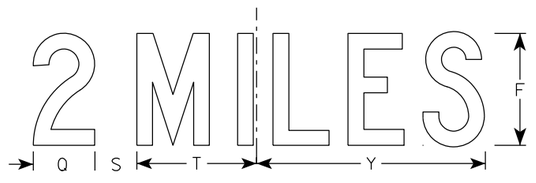
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		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, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11

PROJECT NO:

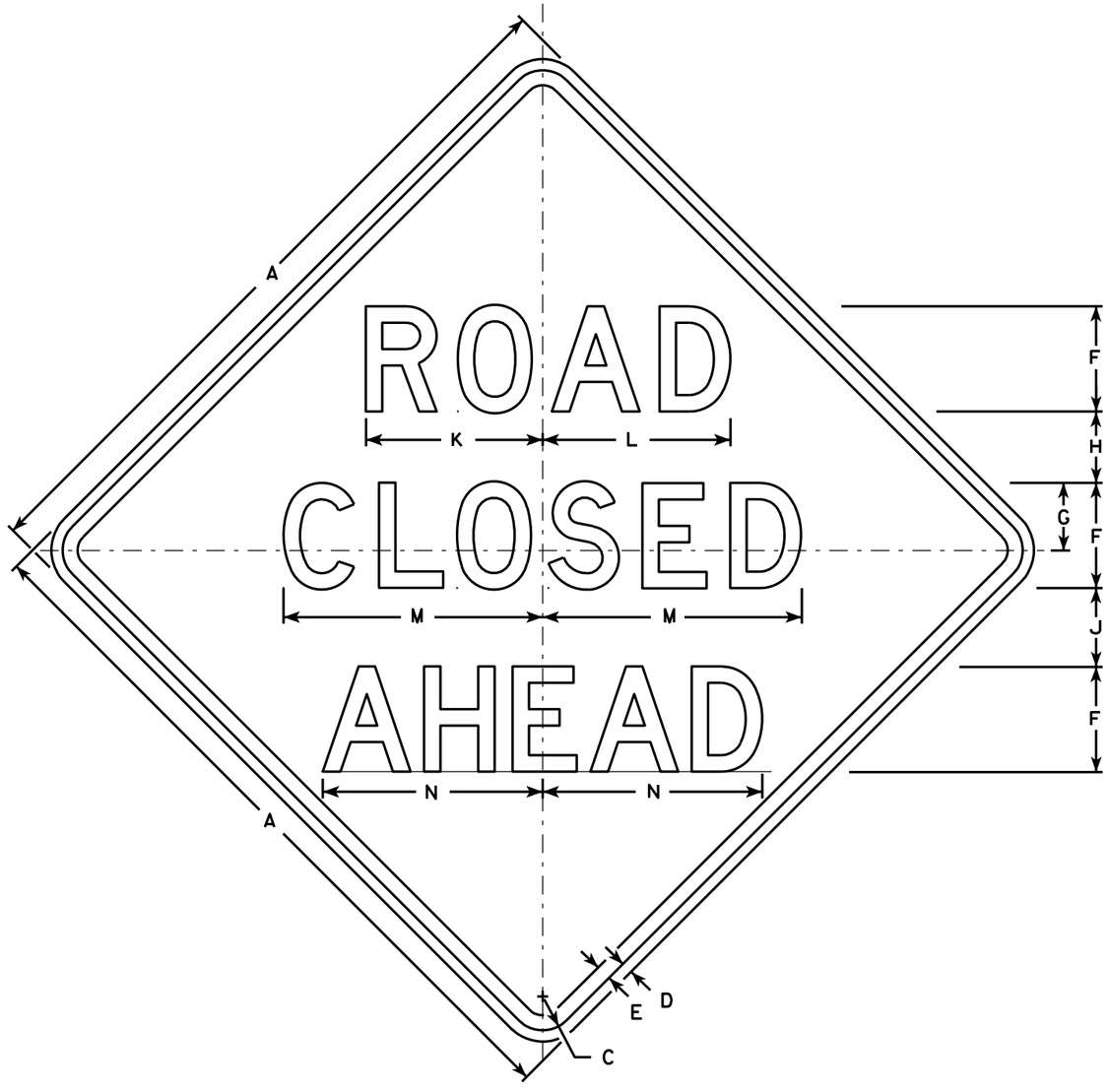
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

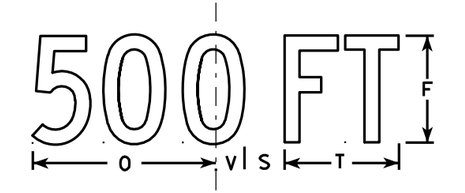
WISDOT/CADDS SHEET 42

7

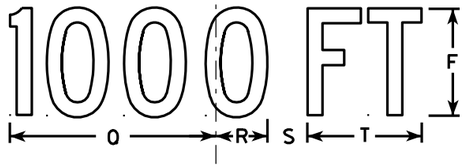
7



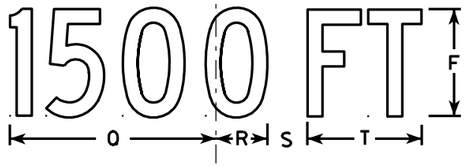
W20-3A



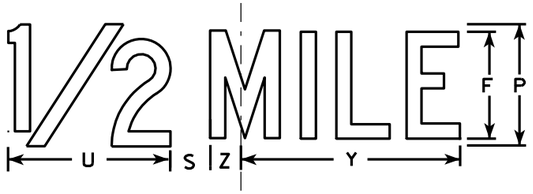
W20-3D



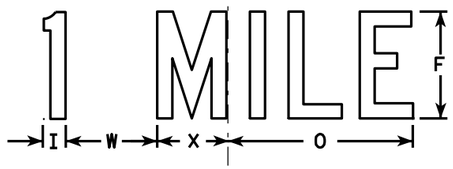
W20-3C



W20-3B



W20-3G



W20-3F

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

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.

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

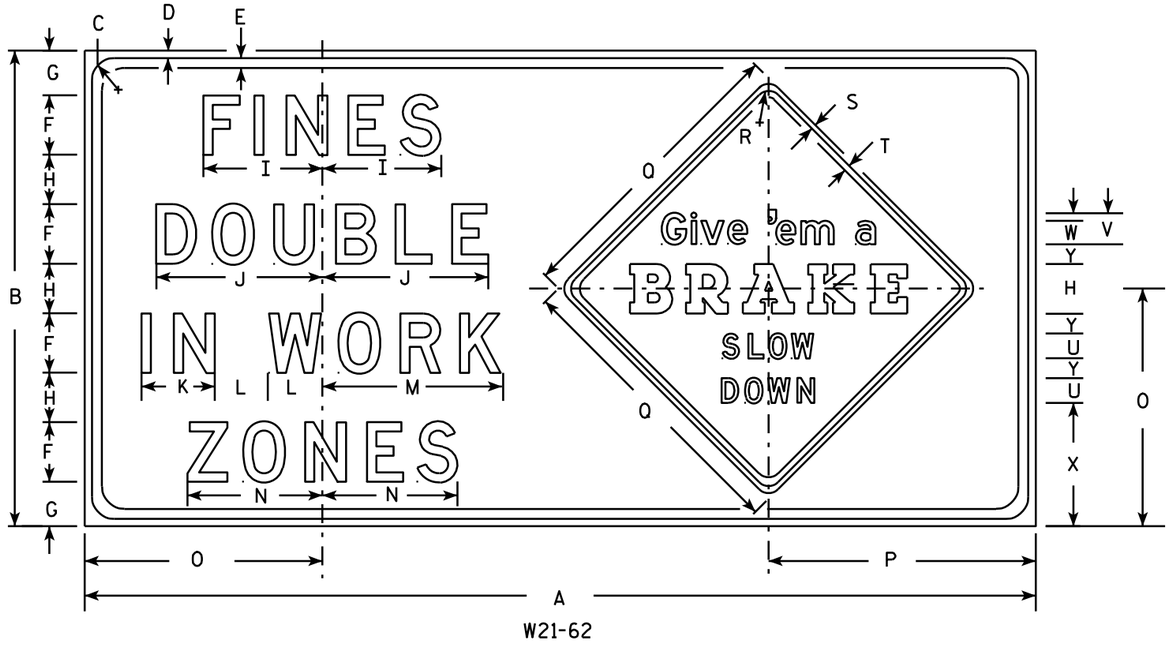
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 289 | E

7

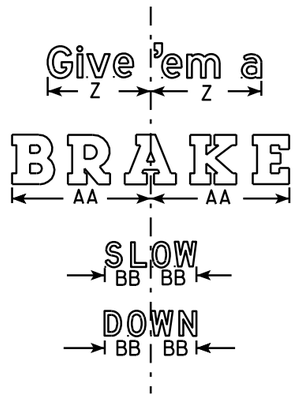
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



W21-62

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 - (See Note 5)
   Message - Black
3. Message Series -
   Fines Double Message - All lines are Series D
   Give 'em a Brake -
   Line one is Series E, line two is a Special Graphic Series and lines three and four are Series D.
4. The base material shall be plywood. Corners may be square or rounded, but borders shall be rounded as shown. The base material for Give 'em a Brake sign can be a seperate sheet of aluminum with the corners and borders rounded as shown. This seperate panel shall then be attached to the plywood with aluminum or stainless steel sheet metal screws.
5. Background for the Give 'em a Brake sign shall be Type F reflective orange.



W21-62P

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	AA	BB	CC	DD	Area sq. ft.
1																															
2S																															
2M																															
3	96	48	2 1/4	3/4	1	6	4 1/2	5	12	16 3/4	7 3/8	5 1/2	18 1/4	13 5/8	24	27	30	1 3/8	1/2	5/8	2 1/2	3 1/8	2 3/8	12 1/2	2	10 3/4	14	4 5/8	34 1/2	4	32.0
4																															
5																															

STANDARD SIGN
W21-62

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-62.5

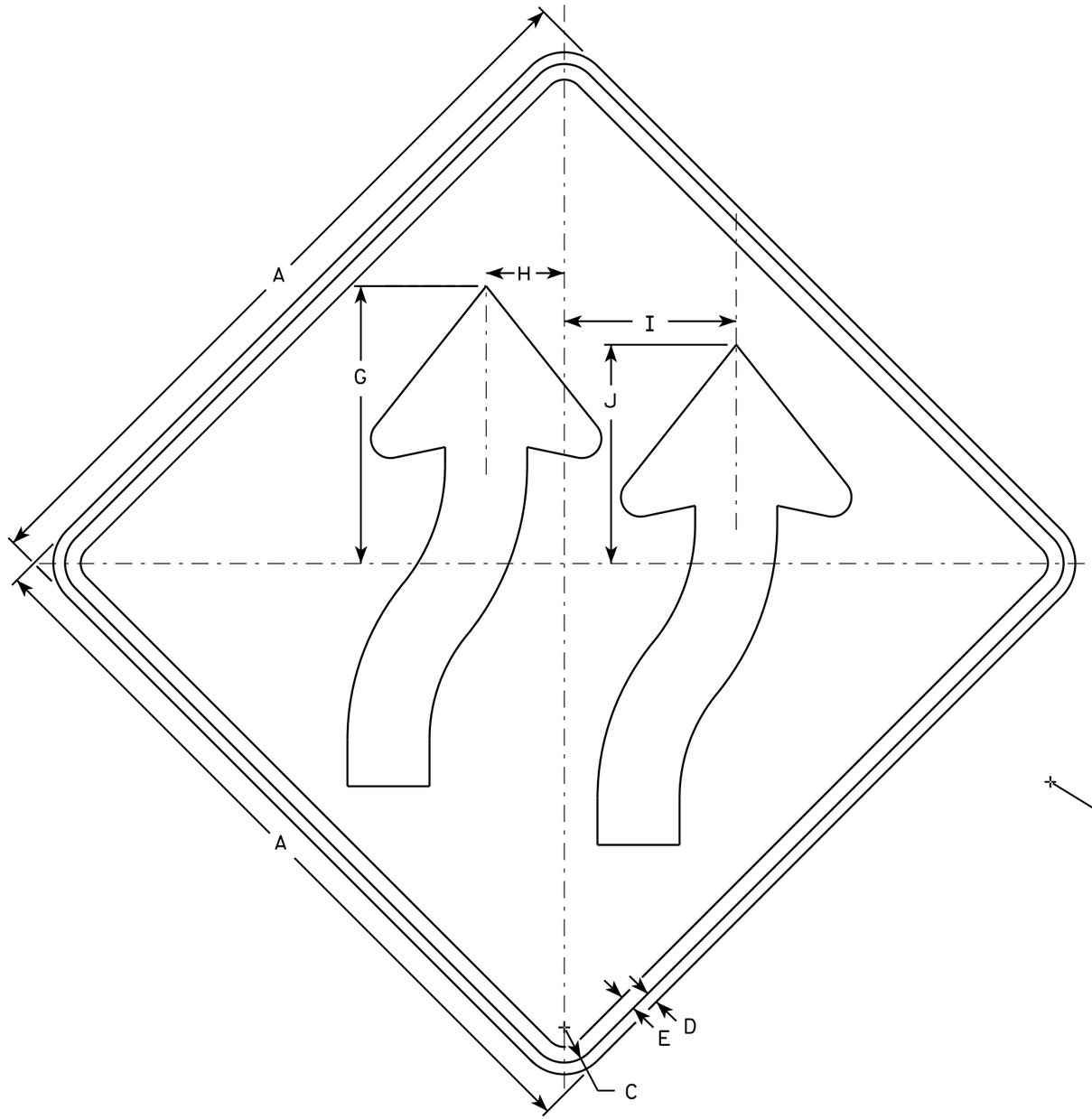
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 290	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W2162.DGN PLOT DATE : 21-MAR-2011 10:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 15.294877:1.000000

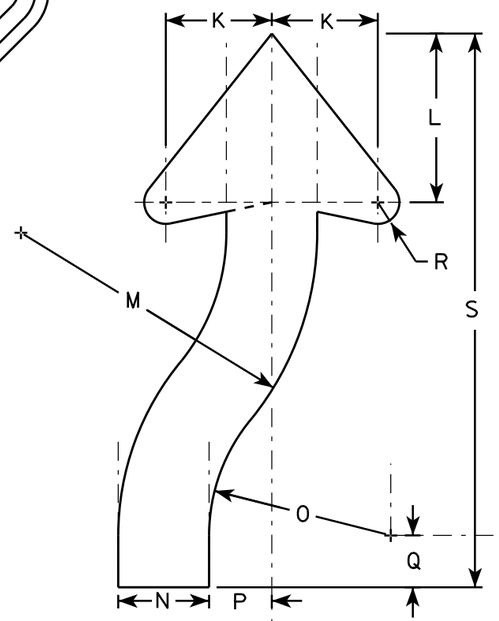
WISDOT/CADDS SHEET 42

7

7



W01-4bR



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. W01-4bL is the same as W014-bR exept arrows are 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		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

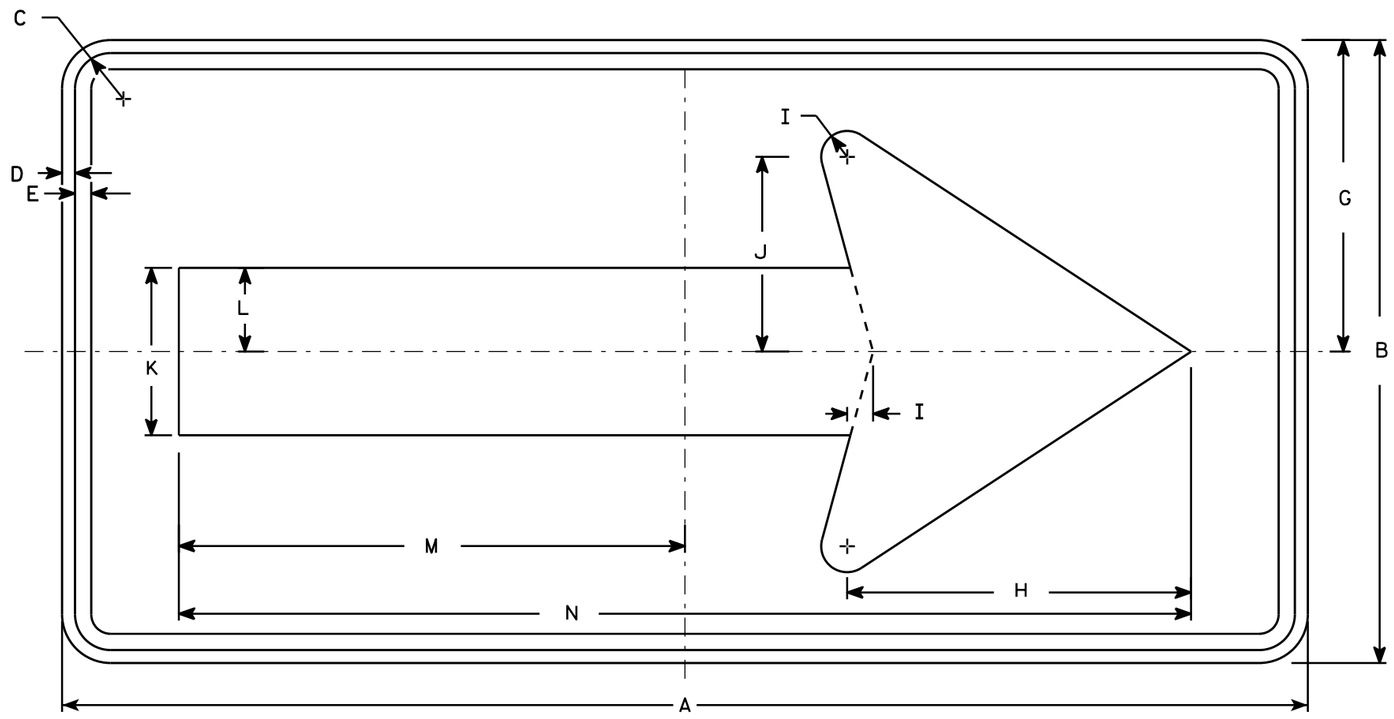
STANDARD SIGN
W01-4b

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

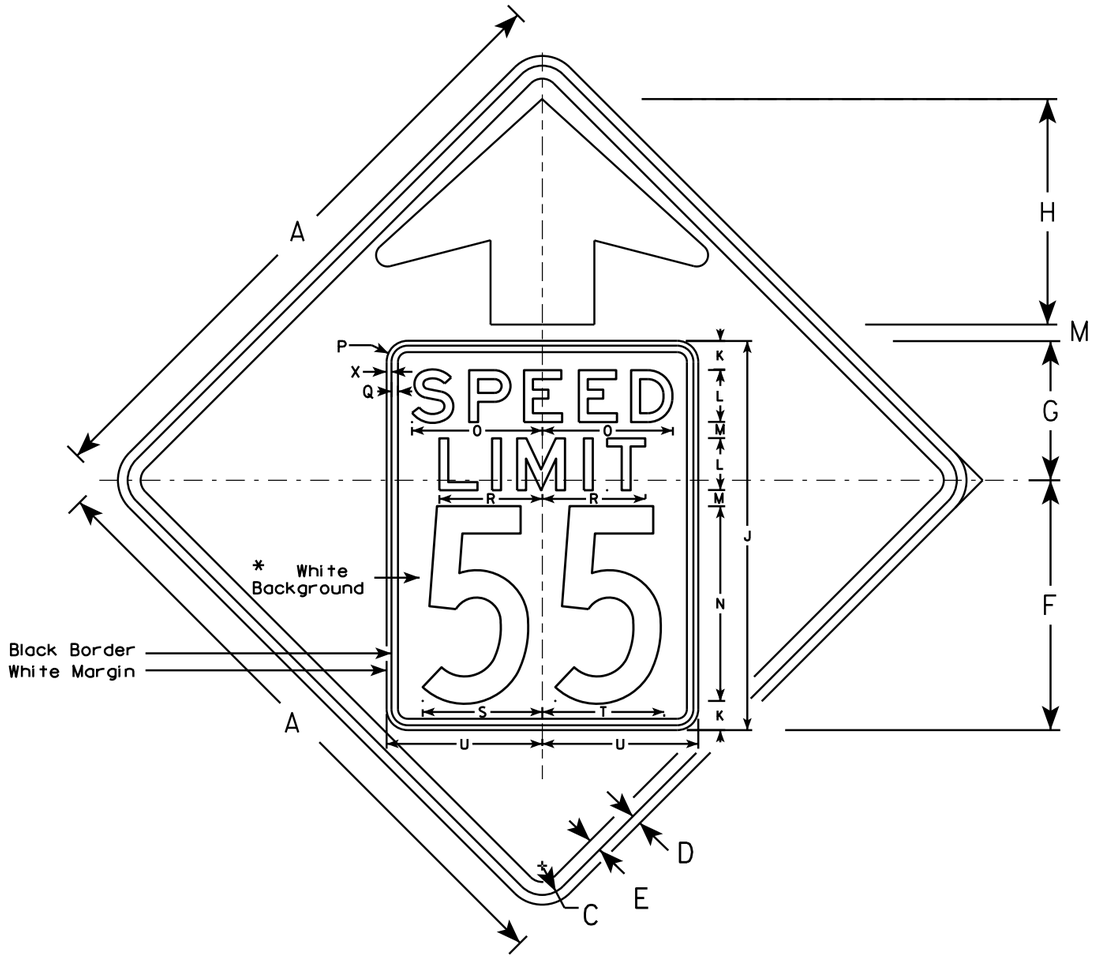
WISCONSIN DEPT OF TRANSPORTATION

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

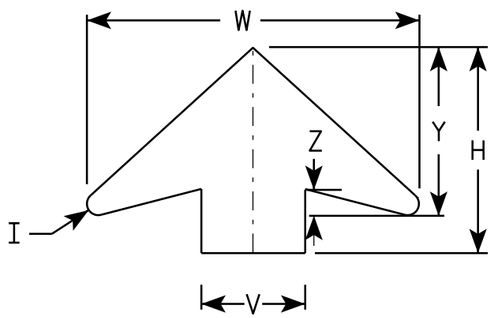


W03-5

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 for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White 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	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2S	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
2M	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
3	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W03-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W03-5.1

PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W035.DGN PLOT DATE : 20-NOV-2013 11:32 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

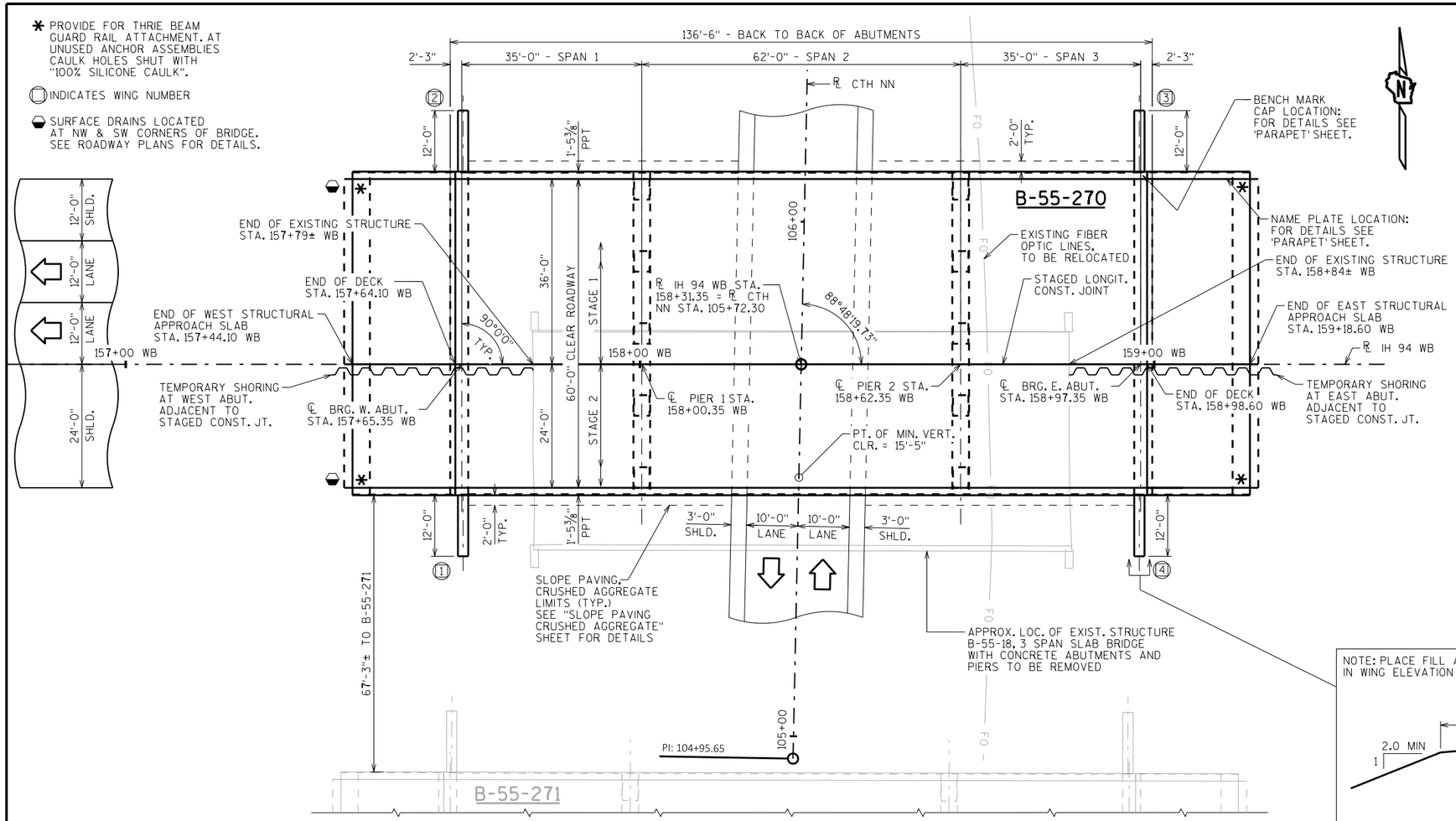
STATE PROJECT NUMBER

1021-00-79

✱ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

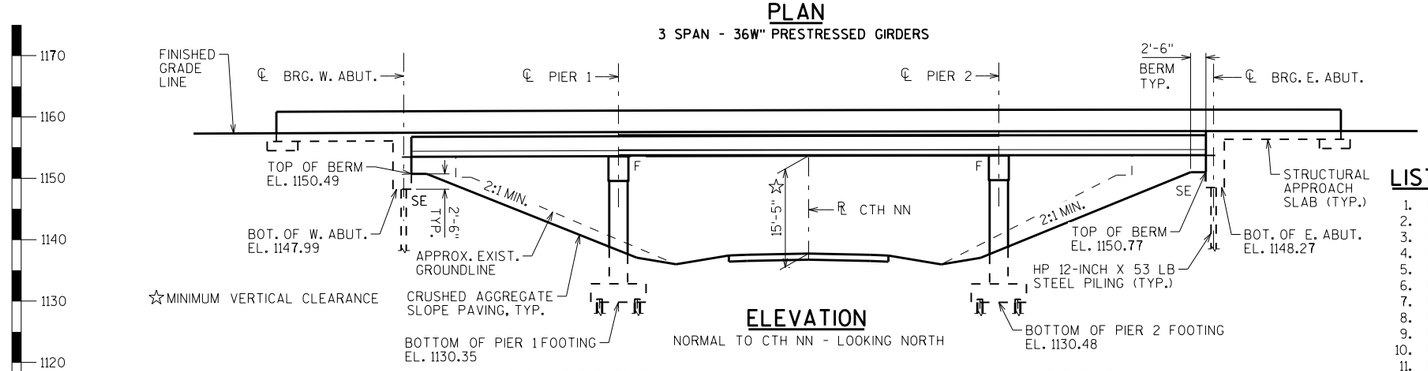
(2) INDICATES WING NUMBER

SURFACE DRAINS LOCATED AT NW & SW CORNERS OF BRIDGE. SEE ROADWAY PLANS FOR DETAILS.



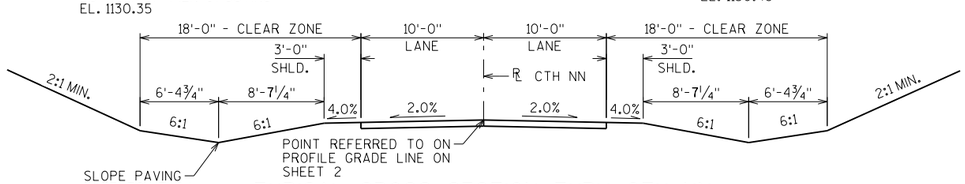
PLAN

3 SPAN - 36W" PRESTRESSED GIRDERS



ELEVATION

NORMAL TO CTH NN - LOOKING NORTH



TYPICAL CROSS SECTION THRU CTH NN

NORMAL TO CTH NN - LOOKING NORTH

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.21
OPERATING RATING FACTOR: RF = 1.57
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

36W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

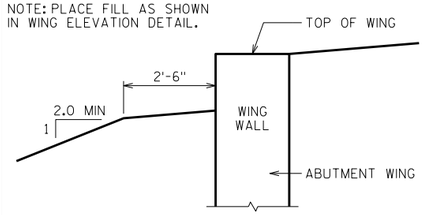
FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 12-INCH X 53 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS✱✱ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 55 FEET LONG AT WEST ABUT. PILE POINTS REQUIRED
ESTIMATED 65 FEET LONG AT EAST ABUT. PILE POINTS REQUIRED

PIERS TO BE SUPPORTED ON HP 12-INCH X 53 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS✱✱ PER PILE BY SEATING THE PILE IN LIMESTONE BEDROCK.
ESTIMATED 15 FEET LONG AT BOTH PIERS.
PRE-BORING INTO ROCK IS REQUIRED. A MINIMUM OF 10 FEET OF PRE-BORING IS ACCEPTABLE IF THE LAST 3 FEET ARE IN COMPETENT ROCK. IF 3 FEET OF COMPETENT ROCK IS NOT ENCOUNTERED WITHIN 10 FEET, PRE-BORING SHALL CONTINUE FOR A MINIMUM OF 12 FEET AND UNTIL A MINIMUM OF 1 FOOT EMBEDMENT INTO COMPETENT ROCK IS ACHIEVED. PILE SHALL BE FIRMLY SEATED IN THE BOTTOM OF THE PRE-BORED HOLE AND BACKFILLED FULL DEPTH WITH CEMENT GROUT.

✱✱ 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.

NOTE: PLACE FILL AS SHOWN IN WING ELEVATION DETAIL.



TYPICAL FILL SECTION AT WING

TRAFFIC VOLUME

IH 94 WB
ADT = 21150 (2042)
R.D.S. = 70 M.P.H.

CTH NN
ADT = 170 (2041)
R.D.S. = 55 M.P.H.

STRUCTURE DESIGN CONTACTS:

AIHAM ALSKIF (608) 261-6113
AARON BONK (608) 261-0261

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. CONSTRUCTION STAGING DETAILS
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT
6. WEST ABUTMENT DETAILS
7. EAST ABUTMENT
8. EAST ABUTMENT DETAILS
9. PIER 1
10. PIER 1 DETAILS
11. PIER 2
12. PIER 2 DETAILS
13. 36W" PRESTRESSED GIRDER DETAILS 1
14. 36W" PRESTRESSED GIRDER DETAILS 2
15. STEEL DIAPHRAGM
16. SUPERSTRUCTURE CROSS SECTIONS
17. SUPERSTRUCTURE DETAILS
18. SUPERSTRUCTURE PLAN
19. STRUCTURAL APPROACH SLAB
20. STRUCTURAL APPROACH SLAB CROSS SECTION
21. SINGLE SLOPE PARAPET 42SS
22. SUPERSTRUCTURE & APPROACH SLAB BAR DETAILS
23. SLOPE PAVING CRUSHED AGGREGATE

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED AMB 5/1/20
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-55-270

IH 94 WB OVER CTH NN

COUNTY	TOWN
ST. CROIX	CADY

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
AA	JJS	JPH	AA

GENERAL PLAN

SHEET 1 OF 23

294

I.D. 1021-00-09A

DATE: APRIL 2020

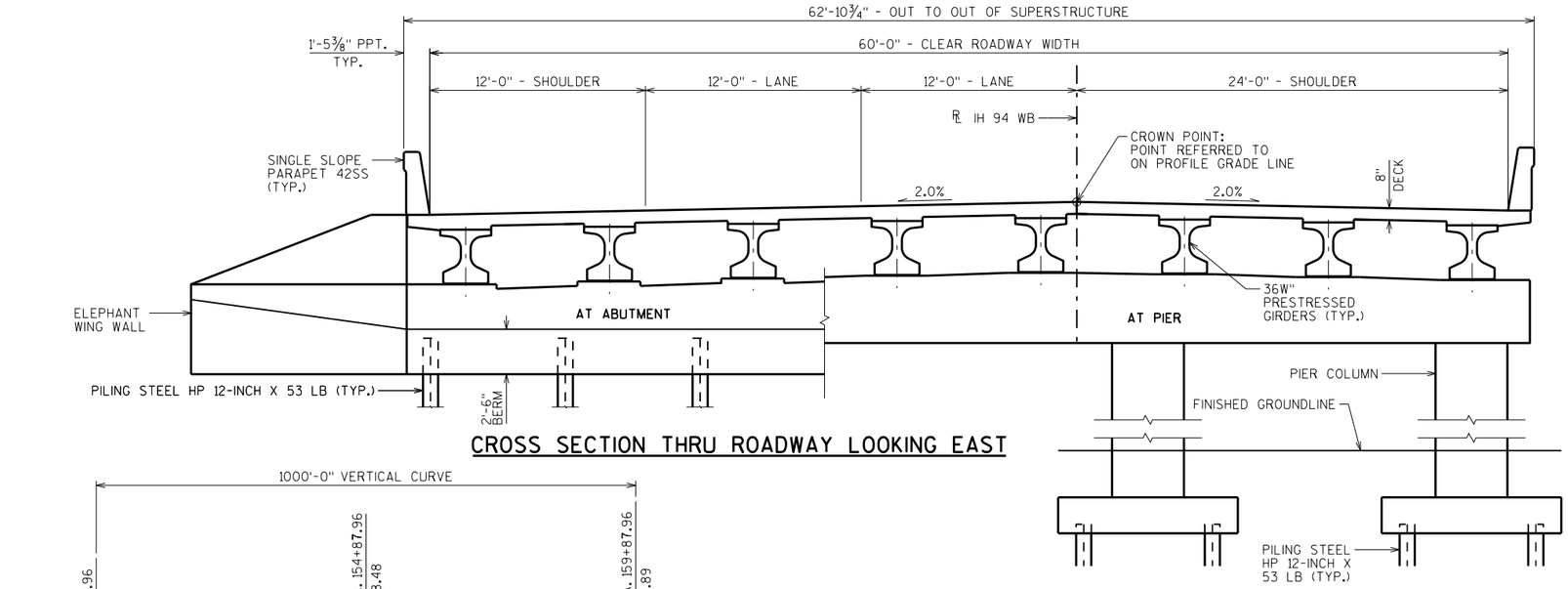
SCALE = 12.00

8

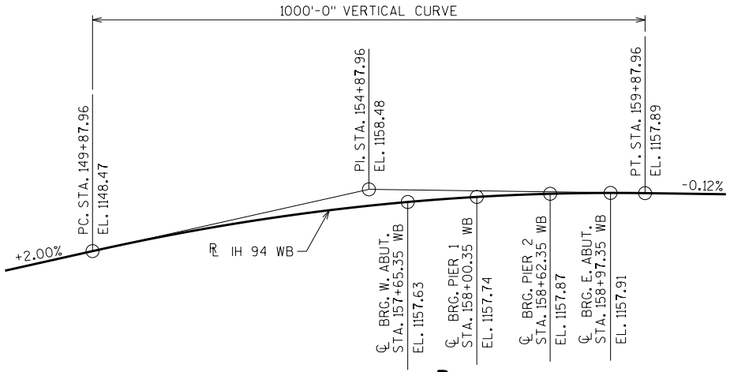
8

STATE PROJECT NUMBER

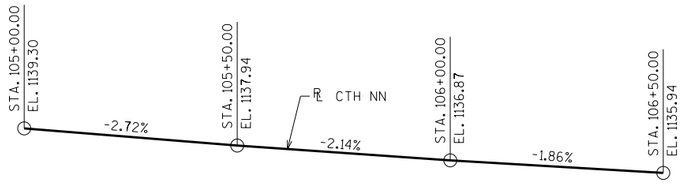
1021-00-79



CROSS SECTION THRU ROADWAY LOOKING EAST



PROFILE GRADE LINE - ℄ IH 94 WB



PROFILE GRADE LINE - ℄ CTH NN

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	W. STRUCT. APP. SLAB	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	E. STRUCT. APP. SLAB	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 158+31.35 WB	LS	———	———	———	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-55-270	LS	———	———	———	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	———	204	———	———	204	———	408
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	———	197	———	———	———	———	197	394
502.0100	CONCRETE MASONRY BRIDGES	CY	347	84	57	119	119	57	84	867
502.3200	PROTECTIVE SURFACE TREATMENT	SY	930	134	———	———	———	———	134	1198
502.3210	PIGMENTED SURFACE SEALER	SY	133	20	———	———	———	———	20	173
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	1060	———	———	———	———	———	———	1060
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	———	3610	3330	3330	3610	———	13,880
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	72,970	14,390	920	17,070	17,070	920	14,390	137,730
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	2110	———	———	———	———	———	———	2110
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	48	———	———	———	———	———	———	48
506.4000	STEEL DIAPHRAGMS B-55-270	EACH	21	———	———	———	———	———	———	21
511.1200	TEMPORARY SHORING B-55-270	SF	———	———	330	———	———	320	———	650
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	———	17	———	———	17	———	34
◐ 550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	———	———	———	375	375	———	———	750
550.0500	PILE POINTS	EACH	———	———	9	———	———	9	———	18
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	———	———	495	375	375	585	———	1830
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	———	———	345	———	———	345	———	690
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	———	130	———	———	130	———	260
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	———	———	———	———	———	———	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	———	———	60	———	———	60	———	120
	NON-BID ITEMS									
	FILLER	SIZE	———	———	———	———	———	———	———	½", ¾", 1½"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-55-270" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

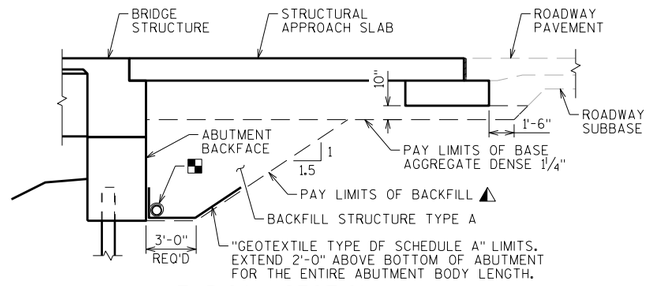
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "36W" PRESTRESSED GIRDER DETAILS 2" SHEET.

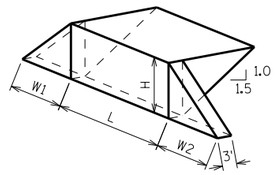


TYPICAL SECTION THRU ABUTMENT

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

◪ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

◐ PRE-BORING INTO ROCK IS REQUIRED. A MINIMUM OF 10 FEET OF PRE-BORING IS ACCEPTABLE IF THE LAST 3 FEET ARE IN COMPETENT ROCK. IF 3 FEET OF COMPETENT ROCK IS NOT ENCOUNTERED WITHIN 10 FEET, PRE-BORING SHALL CONTINUE FOR A MINIMUM OF 12 FEET AND UNTIL A MINIMUM OF 1 FOOT EMBEDMENT INTO COMPETENT ROCK IS ACHIEVED. PILE SHALL BE FIRMLY SEATED IN THE BOTTOM OF THE PRE-BORED HOLE AND BACKFILLED FULL DEPTH WITH CEMENT GROUT.



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ABUTMENT

L = OUT TO OUT OF ABUTMENT BODY (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
W1 = WING 1 LENGTH (FT)
W2 = WING 2 LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3.0')(0.5)(W1+W2)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

CROSS SECTION & QUANTITIES

SHEET 2

295

SCALE = 4.00

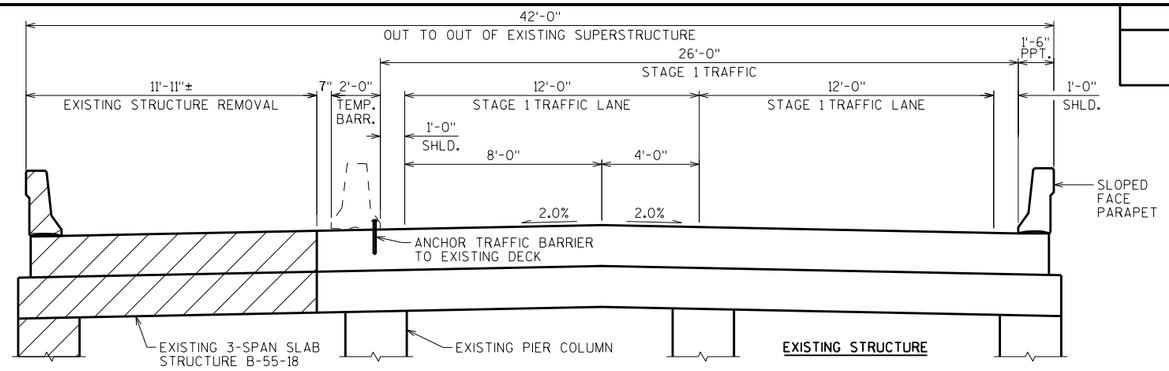
8

8

STATE PROJECT NUMBER

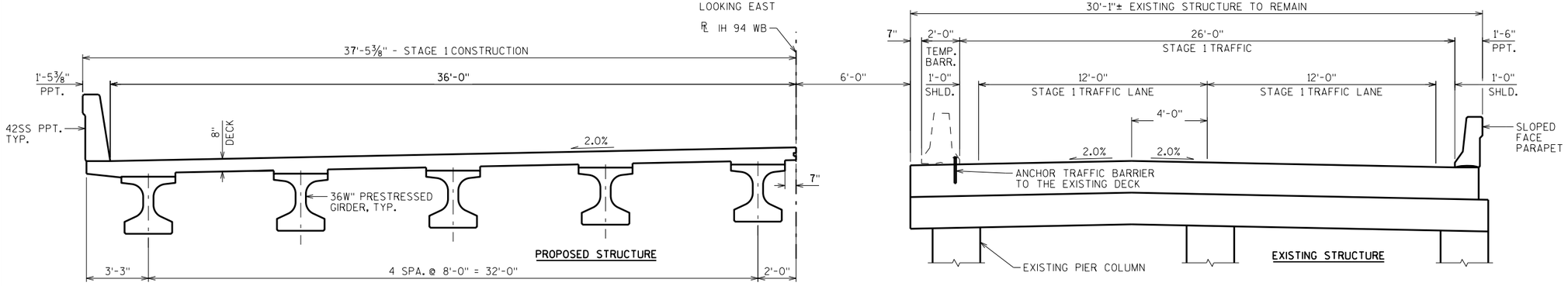
1021-00-79

INDICATES EXISTING STRUCTURE REMOVAL



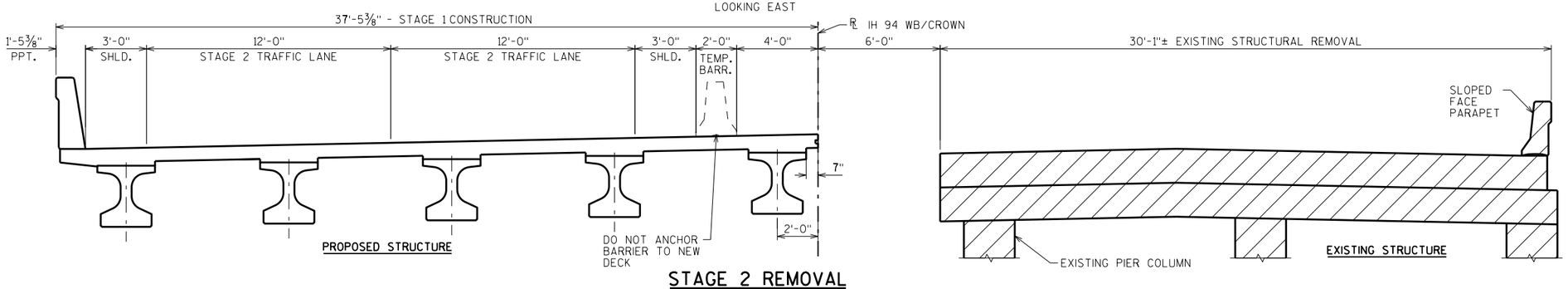
STAGE 1 REMOVAL

LOOKING EAST



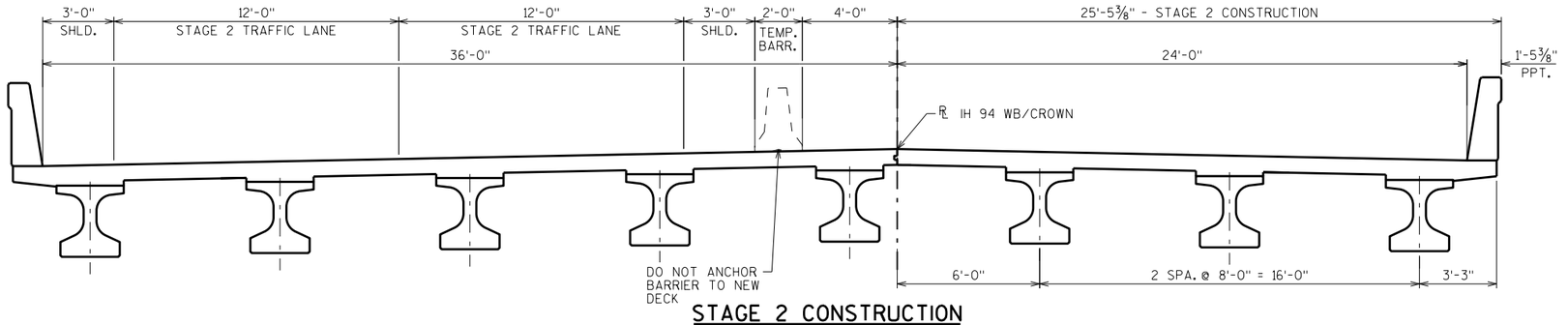
STAGE 1 CONSTRUCTION

LOOKING EAST



STAGE 2 REMOVAL

LOOKING EAST



STAGE 2 CONSTRUCTION

LOOKING EAST

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

CONSTRUCTION STAGING DETAILS

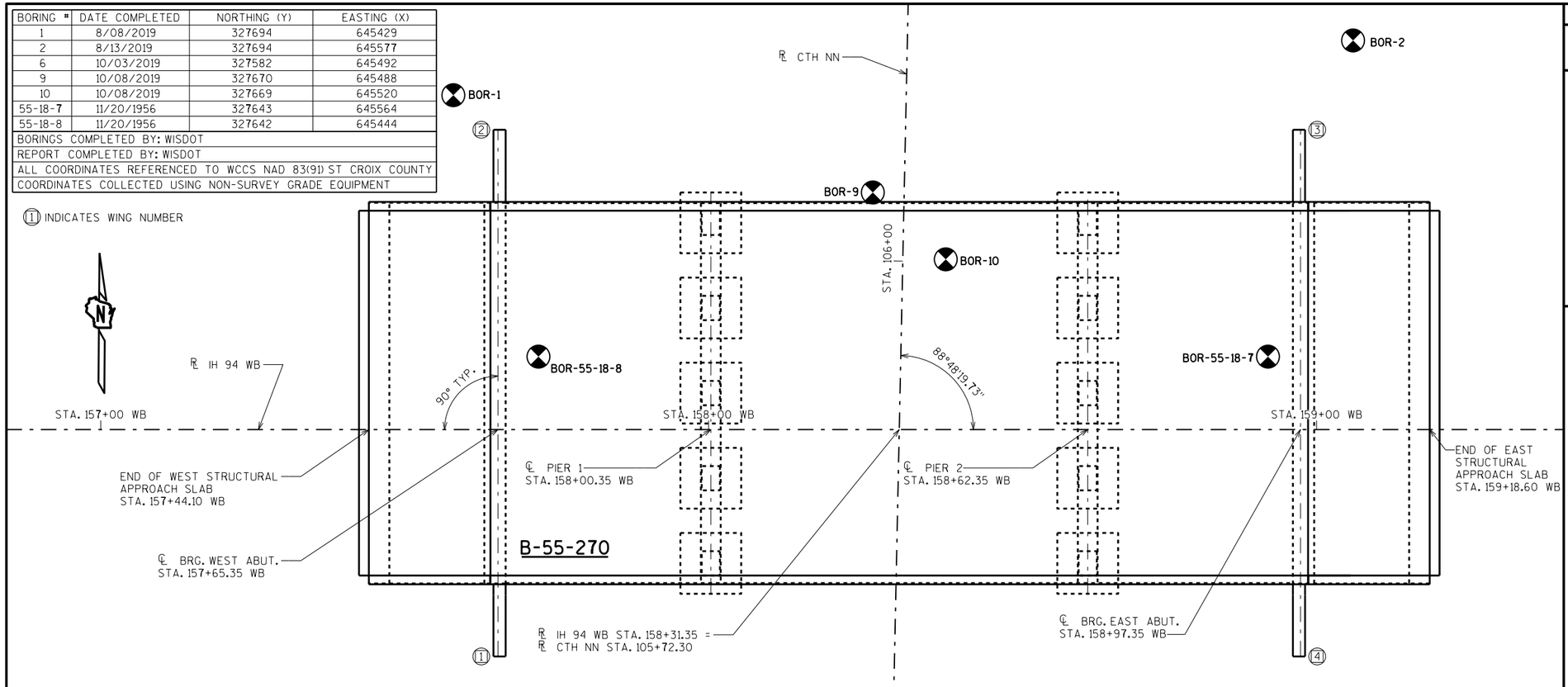
SHEET 3

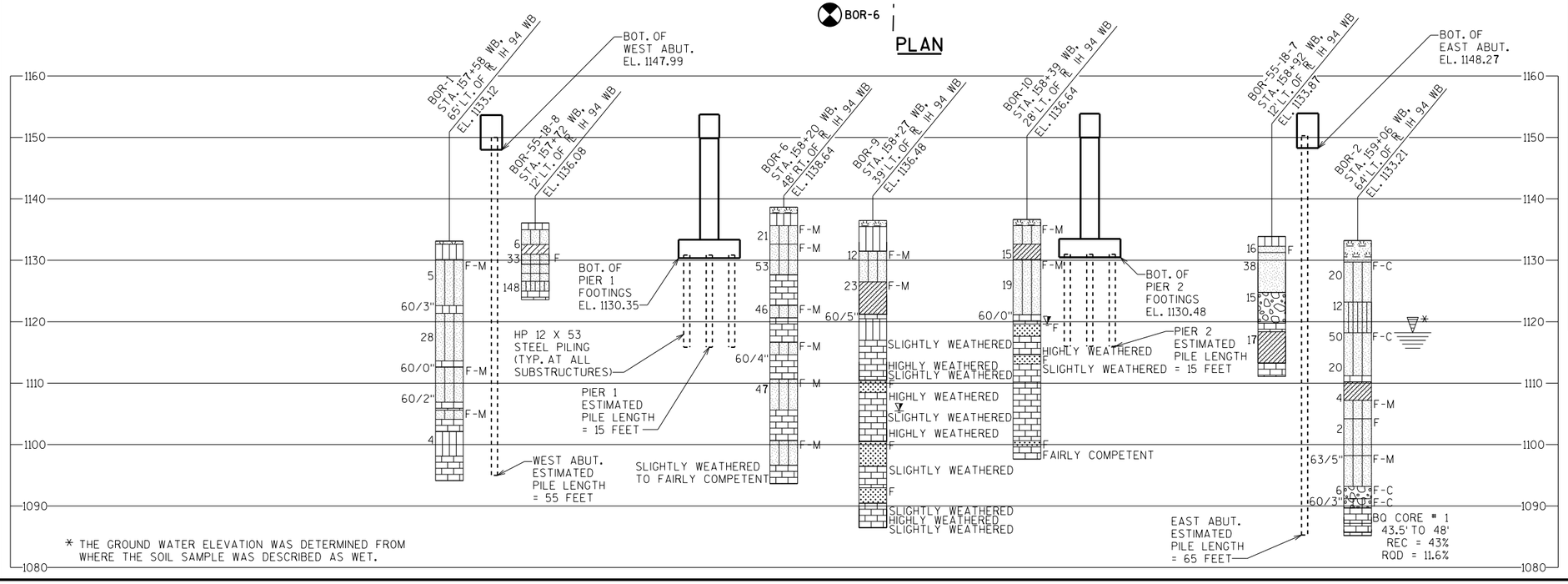
296

SCALE = 3.00

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	8/08/2019	327694	645429
2	8/13/2019	327694	645577
6	10/03/2019	327582	645492
9	10/08/2019	327670	645488
10	10/08/2019	327669	645520
55-18-7	11/20/1956	327643	645564
55-18-8	11/20/1956	327642	645444
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

(1) INDICATES WING NUMBER





* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

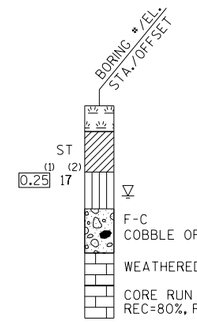
STATE PROJECT NUMBER

1021-00-79

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

SUBSURFACE EXPLORATION

SHEET 4

297

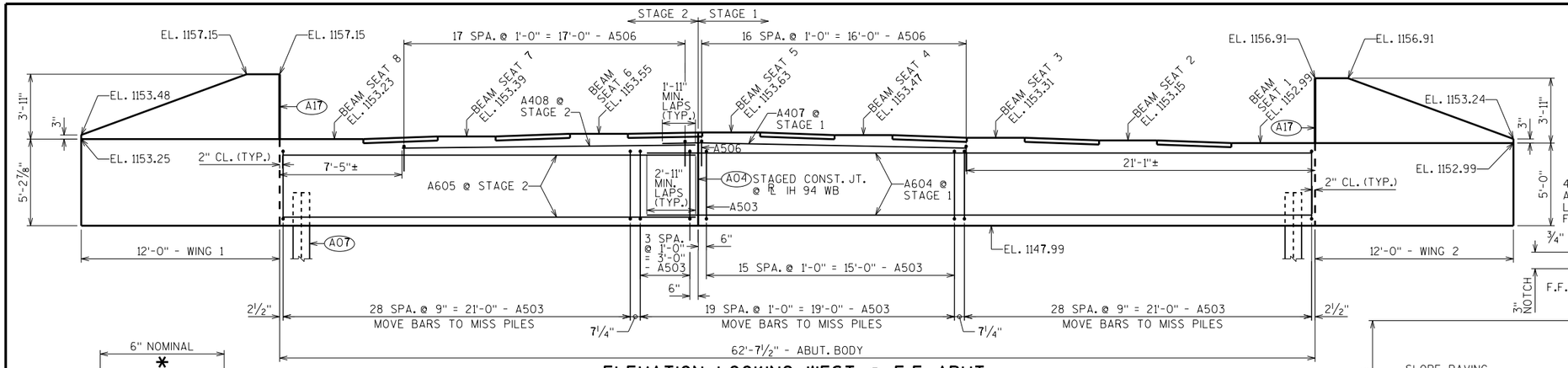
SCALE = 10.00

8

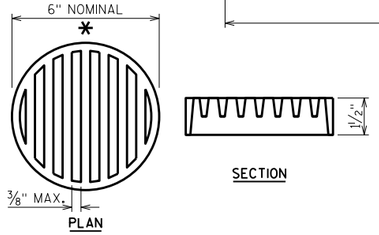
8

STATE PROJECT NUMBER

1021-00-79



ELEVATION LOOKING WEST @ F.F. ABUT.



SECTION

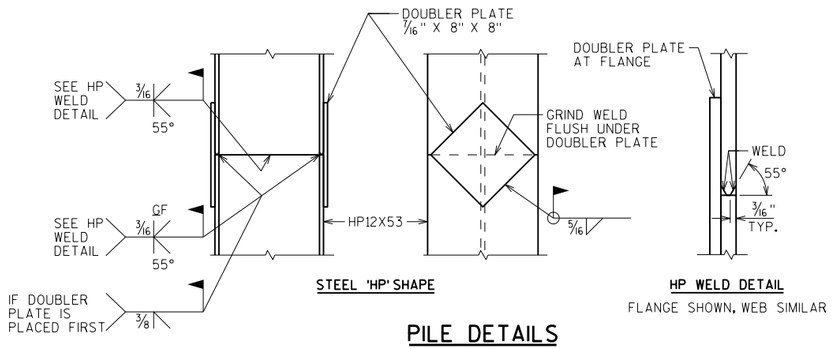
PLAN

RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A 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 SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

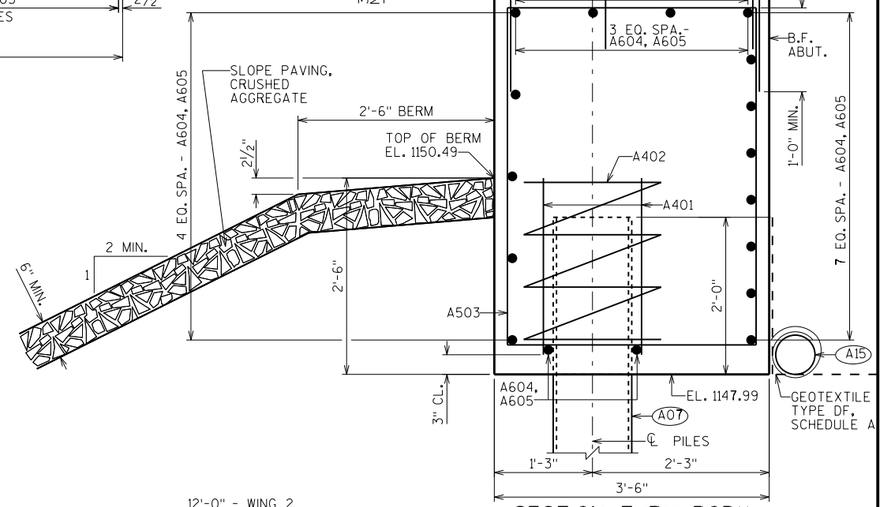


STEEL 'HP' SHAPE

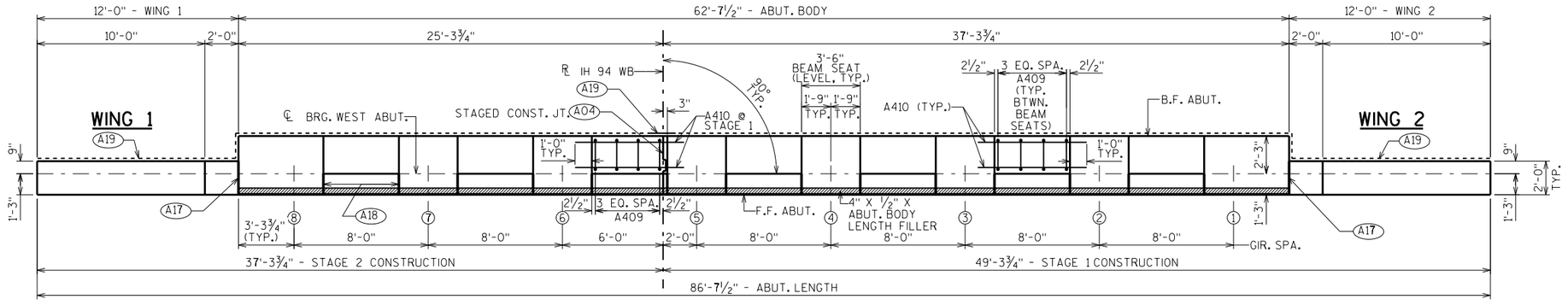
HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

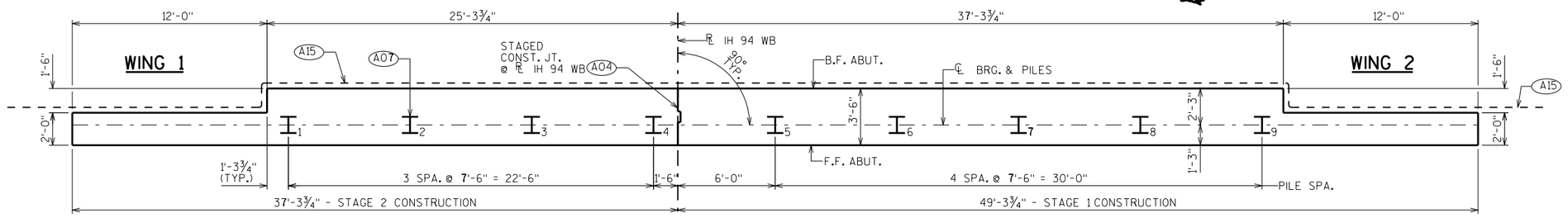
PILE DETAILS



SECTION THRU BODY



PLAN



PILE PLAN

○ INDICATES GIRDER NUMBER

(A04) VERTICAL CONSTRUCTION STAGED JOINT: KEYWAY FORMED BY A BEVELED 2" x 8". ¾" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE.

(A07) SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) ¾" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

WEST ABUTMENT

SHEET 5

298

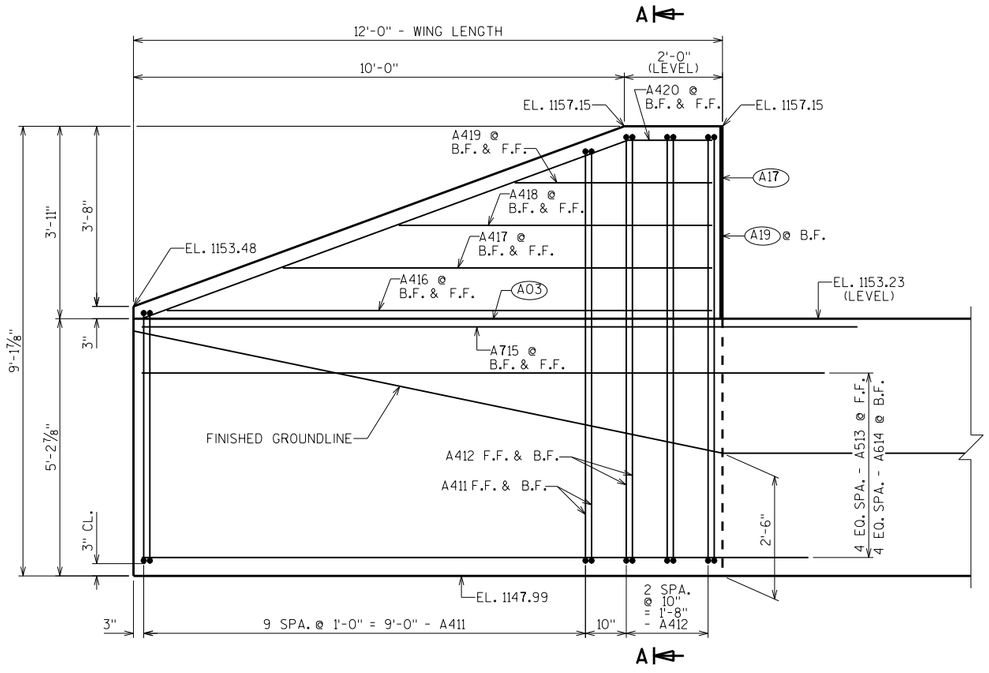
SCALE = 3.75

8

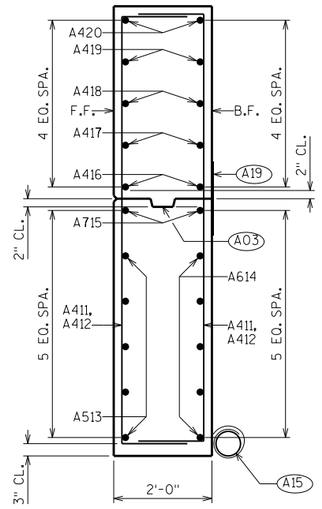
8

STATE PROJECT NUMBER

1021-00-79



WING 1 ELEVATION LOOKING AT F.F. WING



WING 1 SECTION A-A

BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

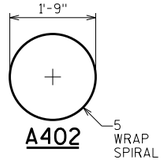
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		18	2'-3"			BODY-BOTTOM-2 PER PILE-VERTICAL
A402		9	28'-0"	X		BODY-BOT.-SPIRAL-1 PER PILE-VERT.
A503		78	15'-7"	X		BODY-STIRRUPS-VERT.
A604		17	40'-3"			BODY-HORIZONTAL-STAGE 1
A605		17	25'-0"			BODY-HORIZONTAL-STAGE 2
A506		35	6'-3"	X		BODY-TOP-VERT.-UNDER BEAM SEATS 4-7
A407		4	18'-5"			BODY-TOP-HORIZ.-STAGE 1
A408		4	17'-9"			BODY-TOP-HORIZ.-STAGE 2
A409		28	4'-11"	X		BODY-TOP-VERT.-BETWEEN BEAM SEATS
A410		14	6'-6"			BODY-TOP-HORIZ.-BETWEEN BEAM SEATS
A411	X	20	9'-4"	X	⚠	WING 1-VERT.-F.F. & B.F.
A412	X	6	11'-3"	X		WING 1-VERT.-F.F. & B.F.
A513	X	10	13'-7"			WINGS 1&2-HORIZONTAL-F.F.-LOWER WING
A614	X	10	13'-11"			WINGS 1&2-HORIZONTAL-B.F.-LOWER WING
A715	X	4	14'-7"			WINGS 1&2-HORIZONTAL-F.F. & B.F.-LOWER WING
A416	X	4	11'-2"			WINGS 1&2-HORIZONTAL-F.F. & B.F.-UPPER WING
A417	X	4	8'-9"			WINGS 1&2-HORIZONTAL-F.F. & B.F.-UPPER WING
A418	X	4	6'-5"			WINGS 1&2-HORIZONTAL-F.F. & B.F.-UPPER WING
A419	X	4	4'-0"			WINGS 1&2-HORIZONTAL-F.F. & B.F.-UPPER WING
A420	X	4	12'-3"	X		WINGS 1&2-TOP-VERTICAL-F.F. & B.F.-UPPER WING
A421	X	20	9'-1"	X	⚠	WING 2-VERT.-F.F. & B.F.
A422	X	6	11'-0"	X		WING 2-VERT.-F.F. & B.F.

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

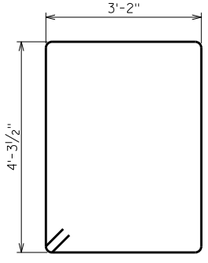
BAR SERIES TABLE

BAR MARK	NUMBER REQUIRED	LENGTH
A411	2 SERIES OF 10 BARS	7'-8" TO 11'-0"
A421	2 SERIES OF 10 BARS	7'-5" TO 10'-9"

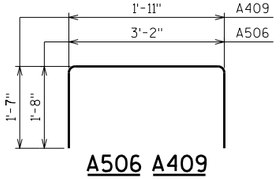
BUNDLE AND TAG EACH SERIES SEPARATELY.



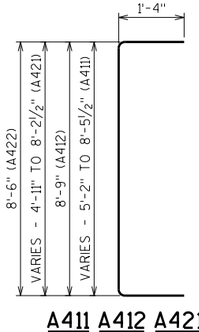
A402



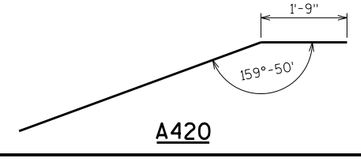
A503



A506 A409



A411 A412 A421 A422



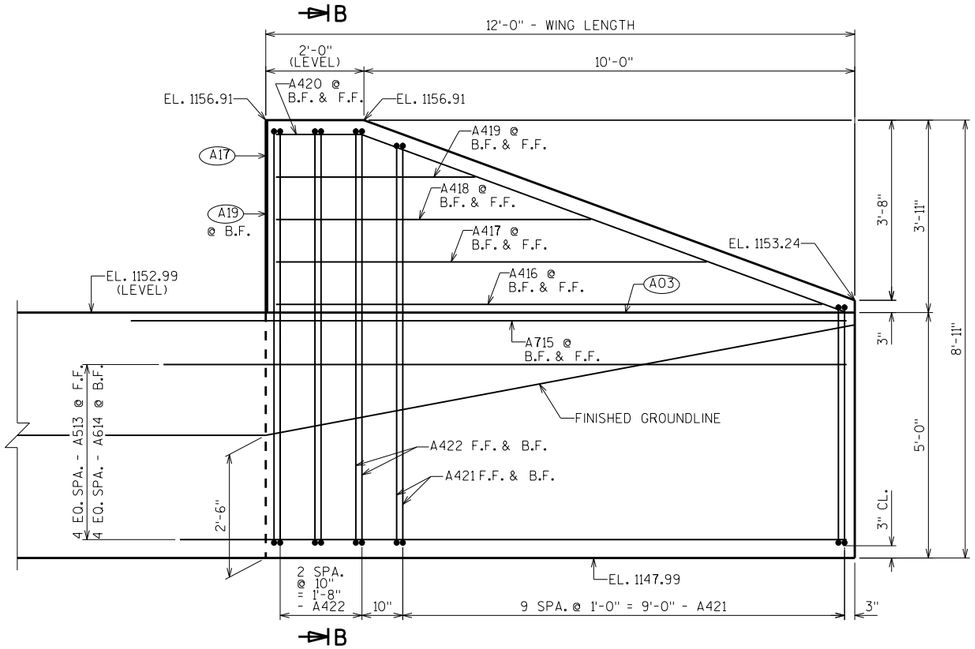
A420

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" × 6". (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

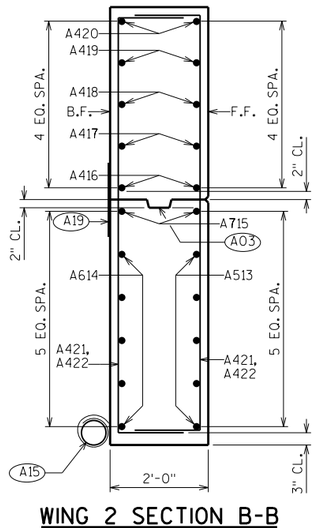
A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



WING 2 ELEVATION LOOKING AT F.F. WING



WING 2 SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

WEST ABUTMENT DETAILS

SHEET 6

299

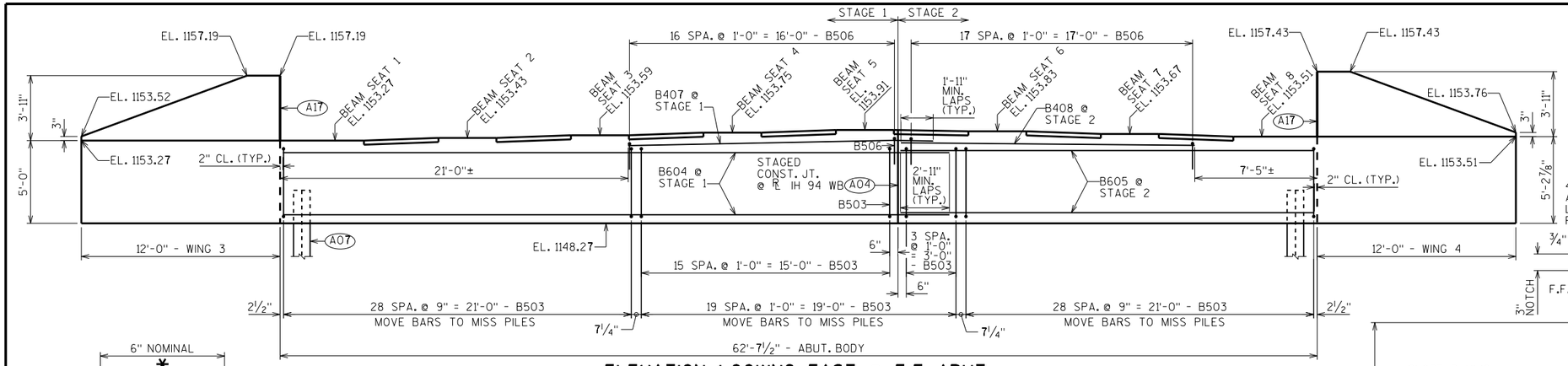
SCALE = 1.50

8

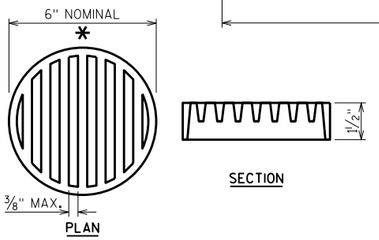
8

STATE PROJECT NUMBER

1021-00-79



ELEVATION LOOKING EAST @ F.F. ABUT.

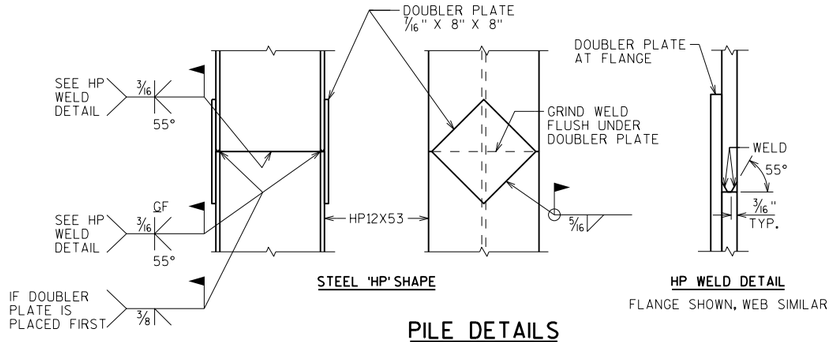


RODENT SHIELD DETAIL

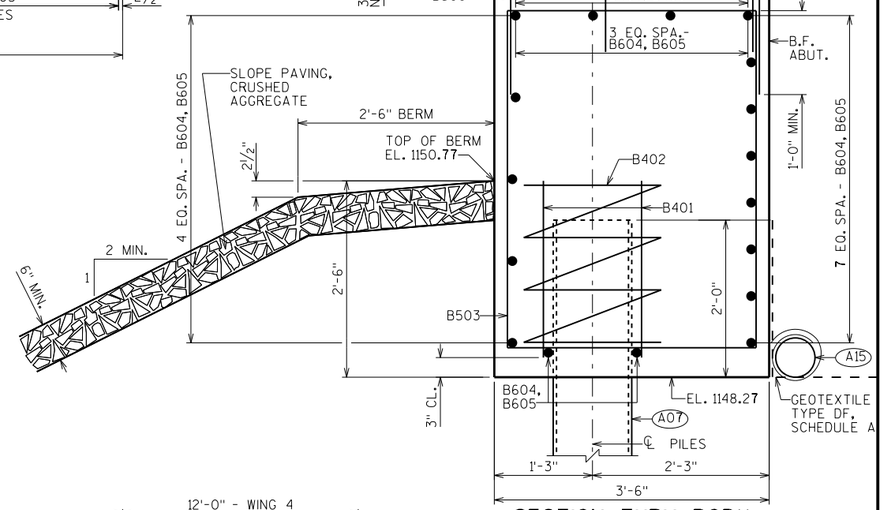
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

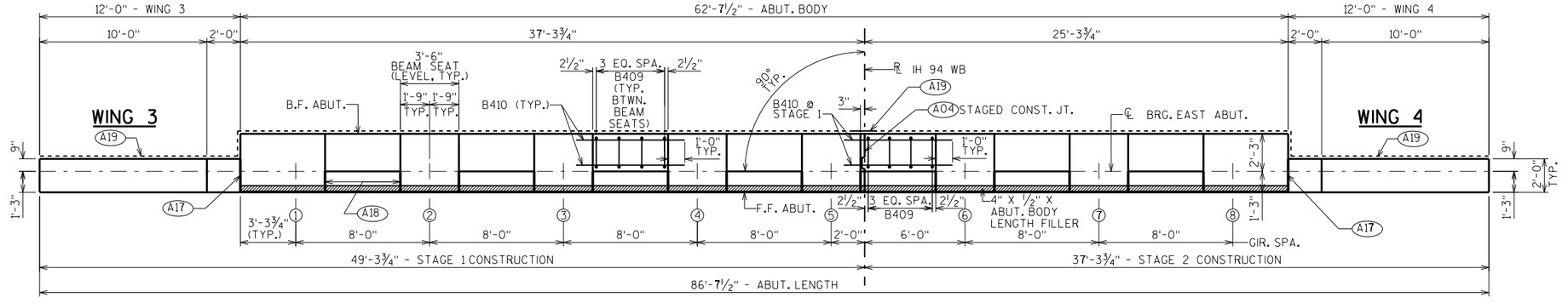
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



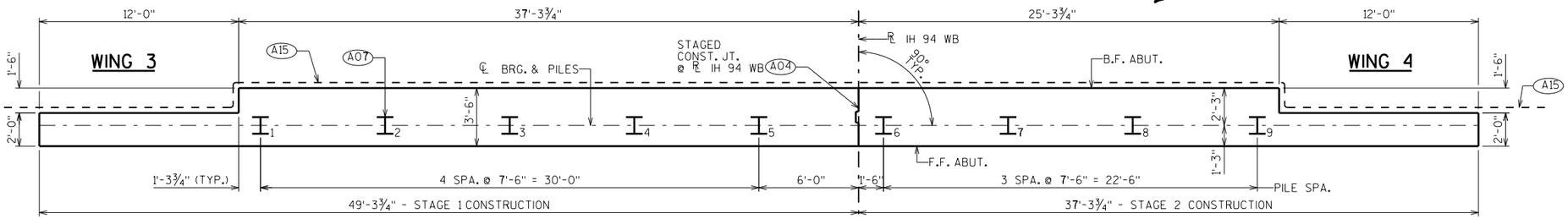
PILE DETAILS



SECTION THRU BODY



PLAN



PILE PLAN

○ INDICATES GIRDER NUMBER

(A04) VERTICAL CONSTRUCTION STAGED JOINT: KEYWAY FORMED BY A BEVELED 2" x 8". ¾" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE.

(A07) SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING, ESTIMATED 65'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) ¾" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

EAST ABUTMENT

SHEET 7

300

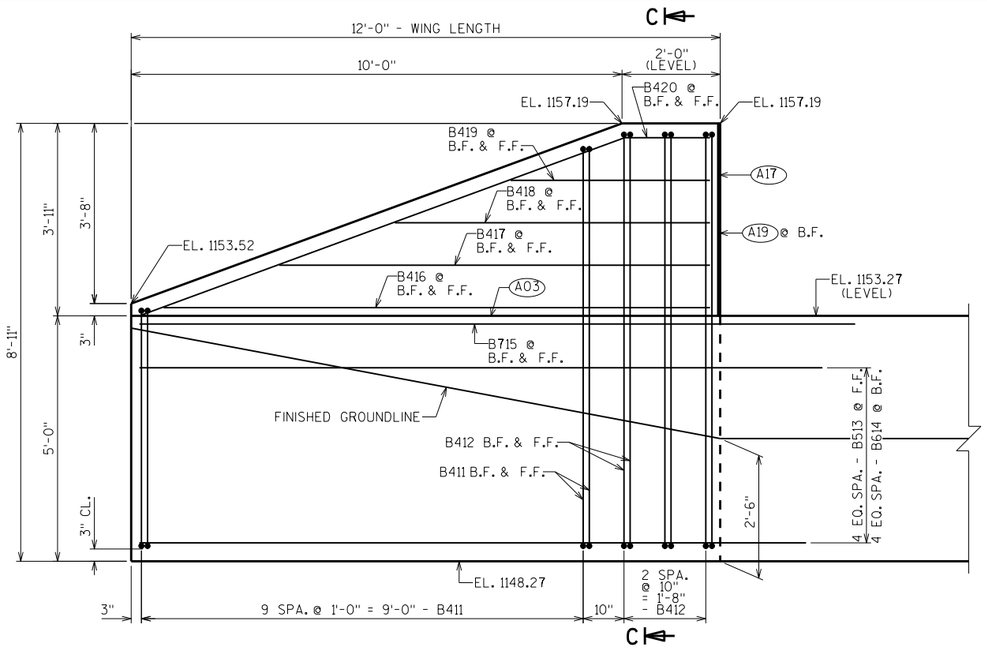
SCALE = 3.75

8

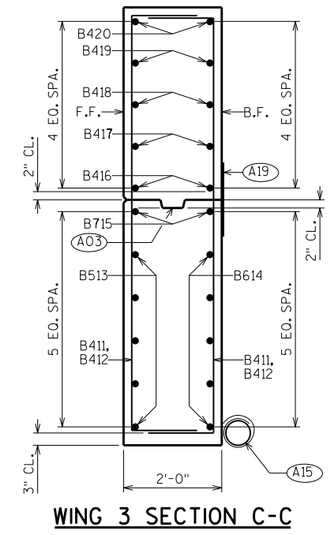
8

STATE PROJECT NUMBER

1021-00-79



WING 3 ELEVATION LOOKING AT F.F. WING



WING 3 SECTION C-C

BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

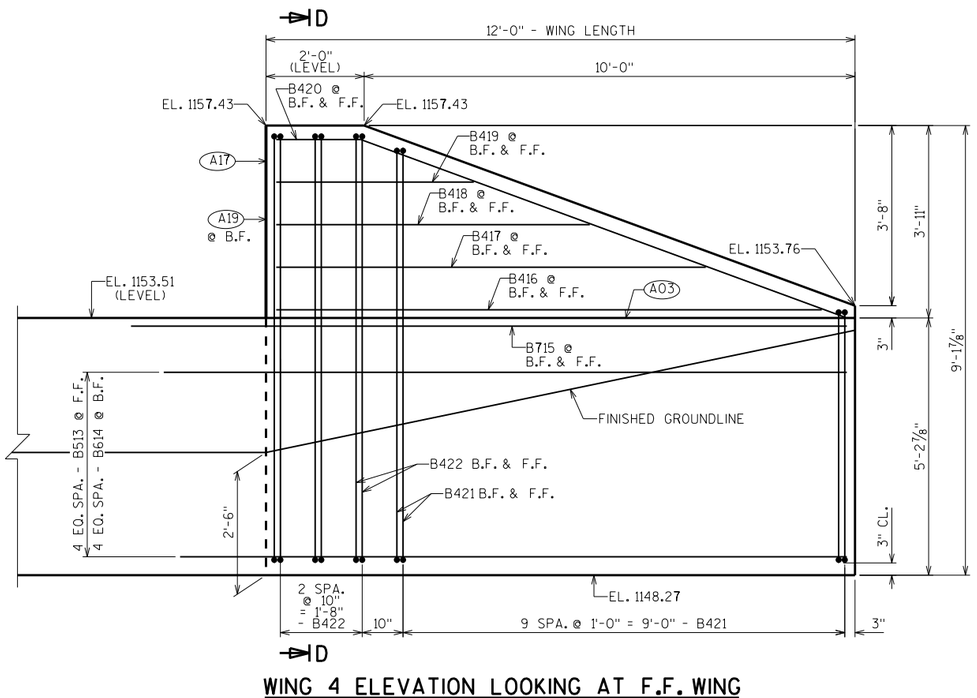
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		18	2'-3"			BODY-BOTTOM-2 PER PILE-VERTICAL
B402		9	28'-0"	X		BODY-BOT.-SPIRAL-1 PER PILE-VERT.
B503		78	15'-7"	X		BODY-STIRRUPS-VERT.
B604		17	40'-3"			BODY-HORIZONTAL-STAGE 1
B605		17	25'-0"			BODY-HORIZONTAL-STAGE 2
B506		35	6'-3"	X		BODY-TOP-VERT.-UNDER BEAM SEATS 4-7
B407		4	18'-5"			BODY-TOP-HORIZ.-STAGE 1
B408		4	17'-9"			BODY-TOP-HORIZ.-STAGE 2
B409		28	4'-11"	X		BODY-TOP-VERT.-BETWEEN BEAM SEATS
B410		14	6'-6"			BODY-TOP-HORIZ.-BETWEEN BEAM SEATS
B411	X	20	9'-1"	X	⚠	WING 3-VERT.-F.F.& B.F.
B412	X	6	11'-0"	X		WING 3-VERT.-F.F.& B.F.
B513	X	10	13'-7"			WINGS 3&4-HORIZONTAL-F.F.-LOWER WING
B614	X	10	13'-11"			WINGS 3&4-HORIZONTAL-B.F.-LOWER WING
B715	X	4	14'-7"			WINGS 3&4-HORIZONTAL-F.F.& B.F.-LOWER WING
B416	X	4	11'-2"			WINGS 3&4-HORIZONTAL-F.F.& B.F.-UPPER WING
B417	X	4	8'-9"			WINGS 3&4-HORIZONTAL-F.F.& B.F.-UPPER WING
B418	X	4	6'-5"			WINGS 3&4-HORIZONTAL-F.F.& B.F.-UPPER WING
B419	X	4	4'-0"			WINGS 3&4-HORIZONTAL-F.F.& B.F.-UPPER WING
B420	X	4	12'-3"	X		WINGS 3&4-TOP-VERTICAL-F.F.& B.F.-UPPER WING
B421	X	20	9'-4"	X	⚠	WING 4-VERT.-F.F.& B.F.
B422	X	6	11'-3"	X		WING 4-VERT.-F.F.& B.F.

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

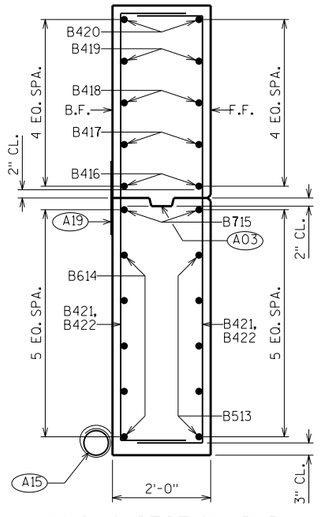
BAR SERIES TABLE

BAR MARK	NUMBER REQUIRED	LENGTH
B411	2 SERIES OF 10 BARS	7'-5" TO 10'-9"
B421	2 SERIES OF 10 BARS	7'-8" TO 11'-0"

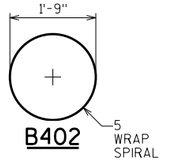
BUNDLE AND TAG EACH SERIES SEPARATELY.



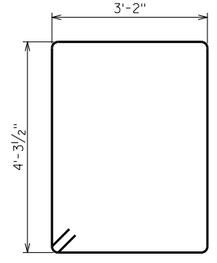
WING 4 ELEVATION LOOKING AT F.F. WING



WING 4 SECTION D-D



B402



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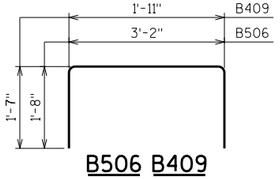
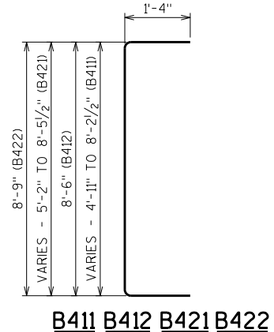
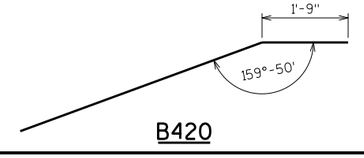


B506 B409



B411 B412 B421 B422



B420

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

EAST ABUTMENT DETAILS

SHEET 8

301

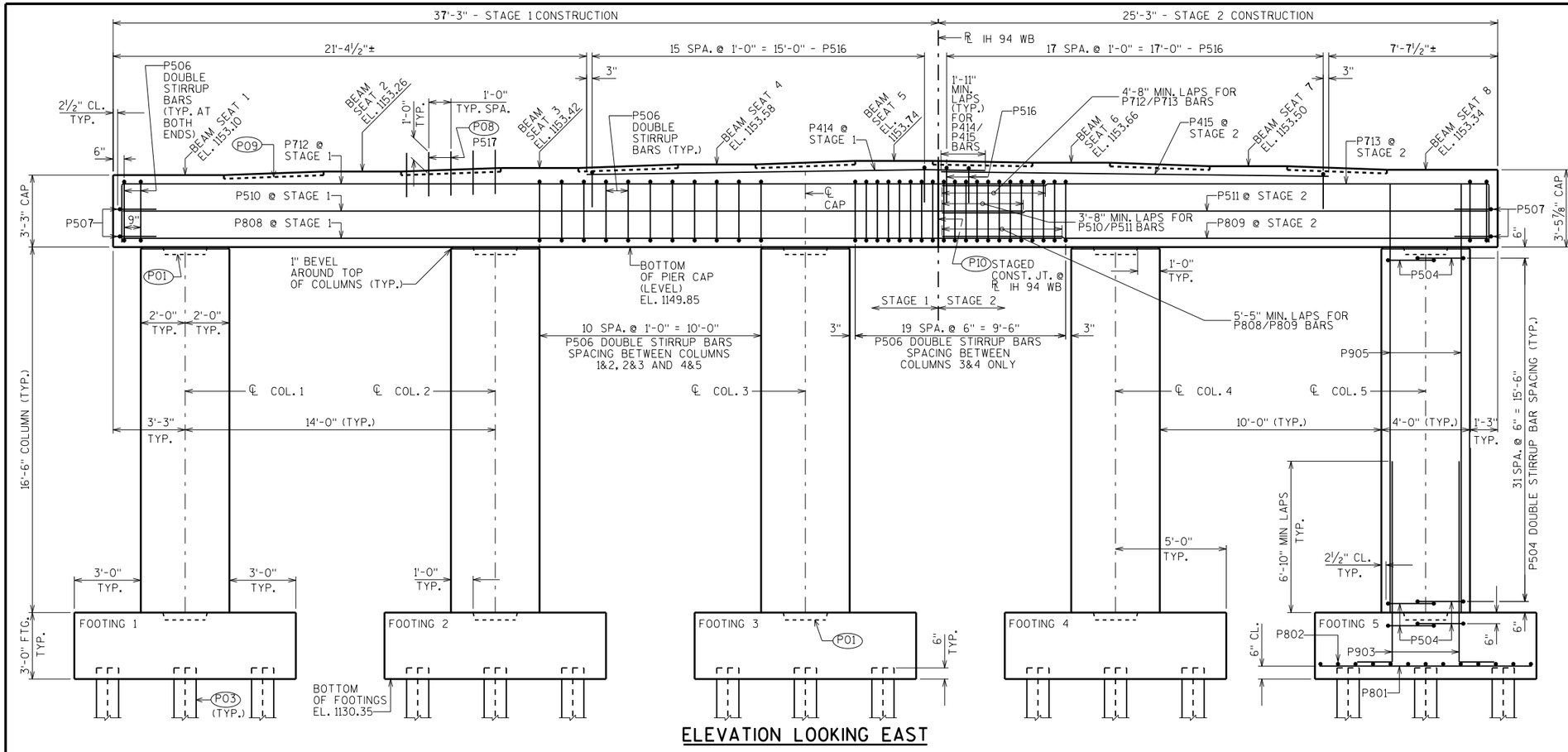
8

8

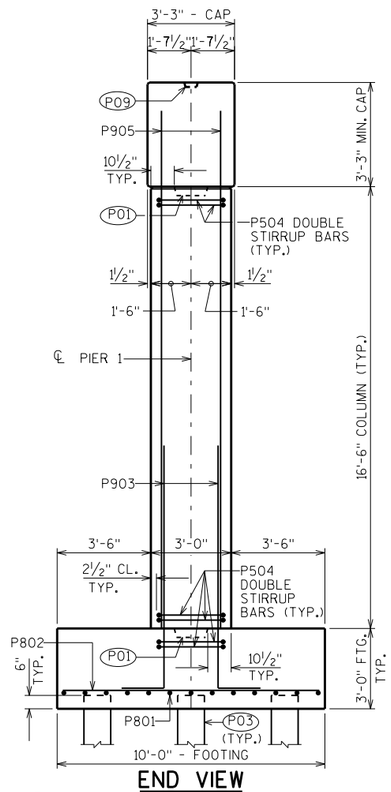
SCALE = 1.50

STATE PROJECT NUMBER

1021-00-79



ELEVATION LOOKING EAST



END VIEW

P01 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT JOINT FORMED BY BEVELED KEYWAY.

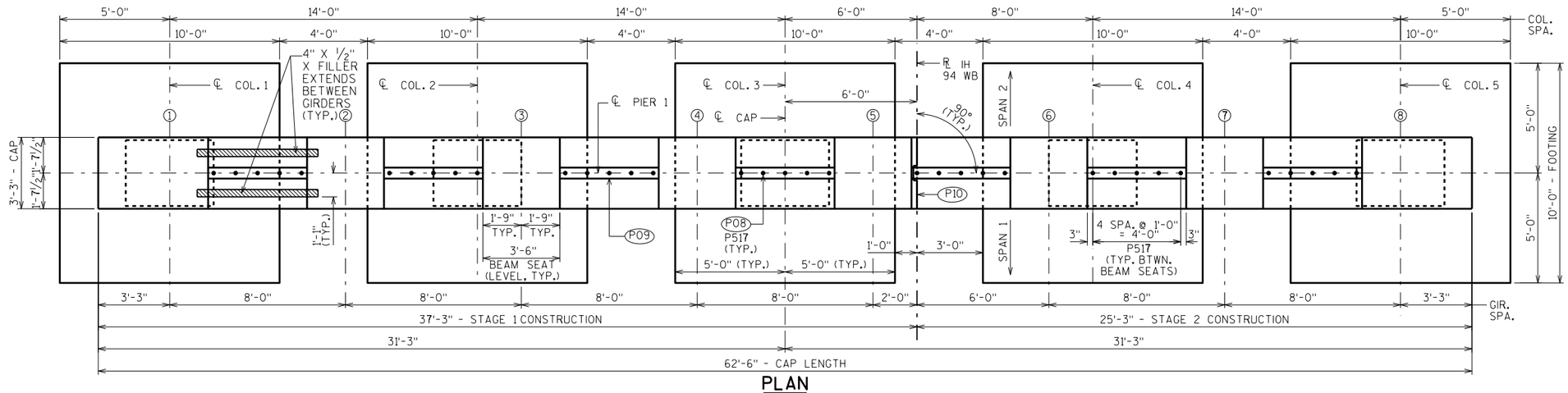
P03 SUPPORT PIER ON HP 12 X 53 STEEL PILING, ESTIMATED 15'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PRE-BORING INTO ROCK IS REQUIRED. A MINIMUM OF 10 FEET OF PRE-BORING IS ACCEPTABLE IF THE LAST 3 FEET ARE IN COMPETENT ROCK. IF 3 FEET OF COMPETENT ROCK IS NOT ENCOUNTERED WITHIN 10 FEET, PRE-BORING SHALL CONTINUE FOR A MINIMUM OF 12 FEET AND UNTIL A MINIMUM OF 1 FOOT EMBEDMENT INTO COMPETENT ROCK IS ACHIEVED. PILE SHALL BE FIRMLY SEATED IN THE BOTTOM OF THE PRE-BORED HOLE AND BACKFILLED FULL DEPTH WITH CEMENT GROUT.

P08 P517 BARS @ 1'-0" SPA. 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.

P10 VERTICAL CONSTRUCTION STAGED JOINT: KEYWAY FORMED BY A BEVELED 2" x 8". ¾" "V" GROOVE @ ALL FACES.

○ INDICATES GIRDER NUMBER



PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

PIER 1

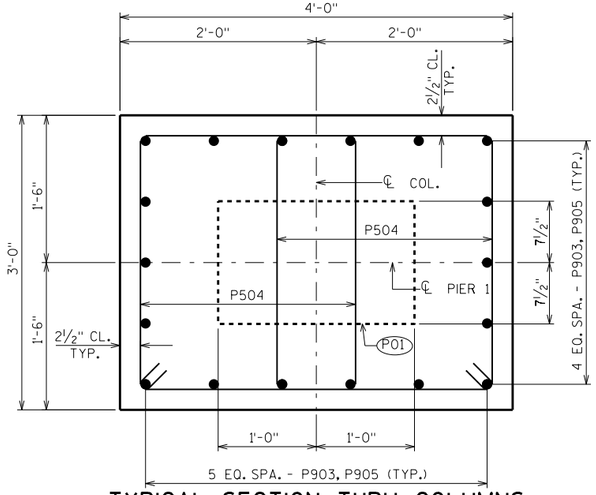
SHEET 9

302

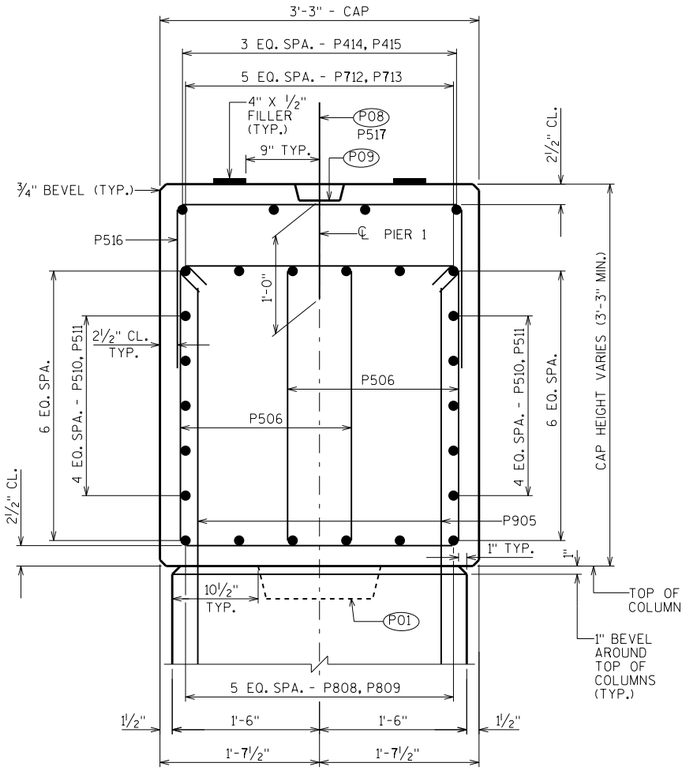
SCALE = 2.75

8

8



TYPICAL SECTION THRU COLUMNS
(SHOWING DOUBLE STIRRUPS)

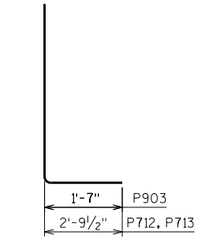


SECTION THRU CAP
(SHOWING DOUBLE STIRRUPS)

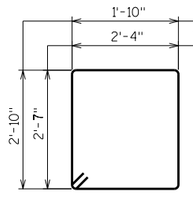
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

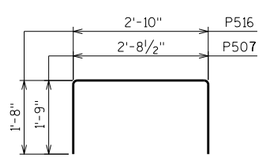
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
P801		65	9'-7"		FOOTINGS-BOTTOM-HORIZ.-LONGIT.-BOT. LAYER
P802		65	9'-7"		FOOTINGS-BOTTOM-HORIZ.-TRANS.-TOP LAYER
P903	X	90	10'-7"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
P504	X	330	10'-6"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
P905	X	90	19'-4"		COLUMNS/CAP-VERTICAL-ALL FACES
P506	X	114	10'-0"	X	CAP-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS
P507	X	12	6'-0"	X	CAP-HORIZ.-BOTH ENDS ONLY
P808	X	6	42'-8"		CAP-BOT.-HORIZ.-LONGIT.-AT STAGE 1
P809	X	6	24'-10"		CAP-BOT.-HORIZ.-LONGIT.-AT STAGE 2
P510	X	10	40'-9"		CAP-HORIZ.-LONGIT.-BOTH FACES-AT STAGE 1
P511	X	10	24'-9"		CAP-HORIZ.-LONGIT.-BOTH FACES-AT STAGE 2
P712	X	6	44'-10"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.-AT STAGE 1
P713	X	6	27'-6"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.-AT STAGE 2
P414	X	4	18'-0"		CAP-TOP-HORIZ.-LONGIT.-AT STAGE 1
P415	X	4	17'-6"		CAP-TOP-HORIZ.-LONGIT.-AT STAGE 2
P516	X	34	5'-11"	X	CAP-TOP-VERTICAL-TRANSVERSE-BETWEEN COLUMNS 2-5
P517	X	35	2'-0"		CAP-TOP-VERTICAL-CENTER



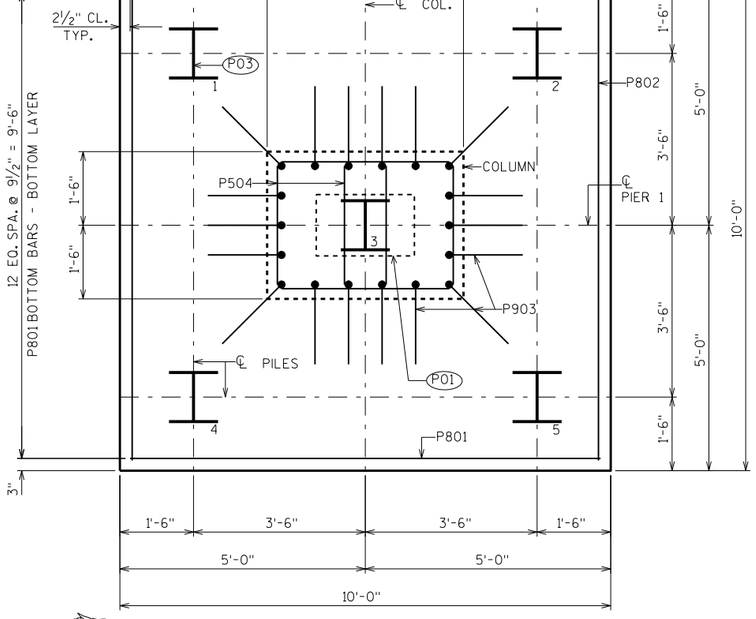
P903 P712 P713



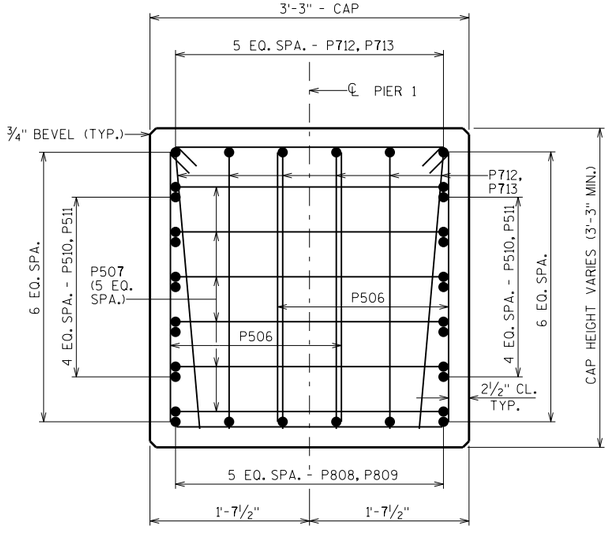
P504 P506



P507 P516



TYPICAL FOOTING/PILE PLAN



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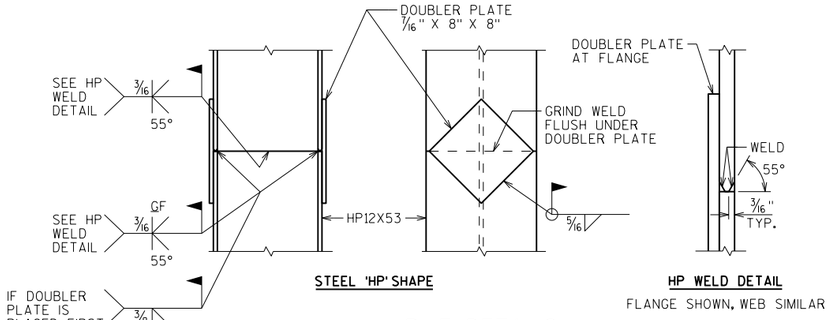


STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

(P01) 1'-3" X 2'-0" x 4" DEEP CONSTRUCTION JOINT JOINT FORMED BY BEVELED KEYWAY.

(P03) SUPPORT PIER ON HP 12 X 53 STEEL PILING, ESTIMATED 15'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PRE-BORING INTO ROCK IS REQUIRED. A MINIMUM OF 10 FEET OF PRE-BORING IS ACCEPTABLE IF THE LAST 3 FEET ARE IN COMPETENT ROCK. IF 3 FEET OF COMPETENT ROCK IS NOT ENCOUNTERED WITHIN 10 FEET, PRE-BORING SHALL CONTINUE FOR A MINIMUM OF 12 FEET AND UNTIL A MINIMUM OF 1 FOOT EMBEDMENT INTO COMPETENT ROCK IS ACHIEVED. PILE SHALL BE FIRMLY SEATED IN THE BOTTOM OF THE PRE-BORED HOLE AND BACKFILLED FULL DEPTH WITH CEMENT GROUT.

(P08) P517 BARS @ 1'-0" SPA. 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
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

PIER 1 DETAILS

SHEET 10

303

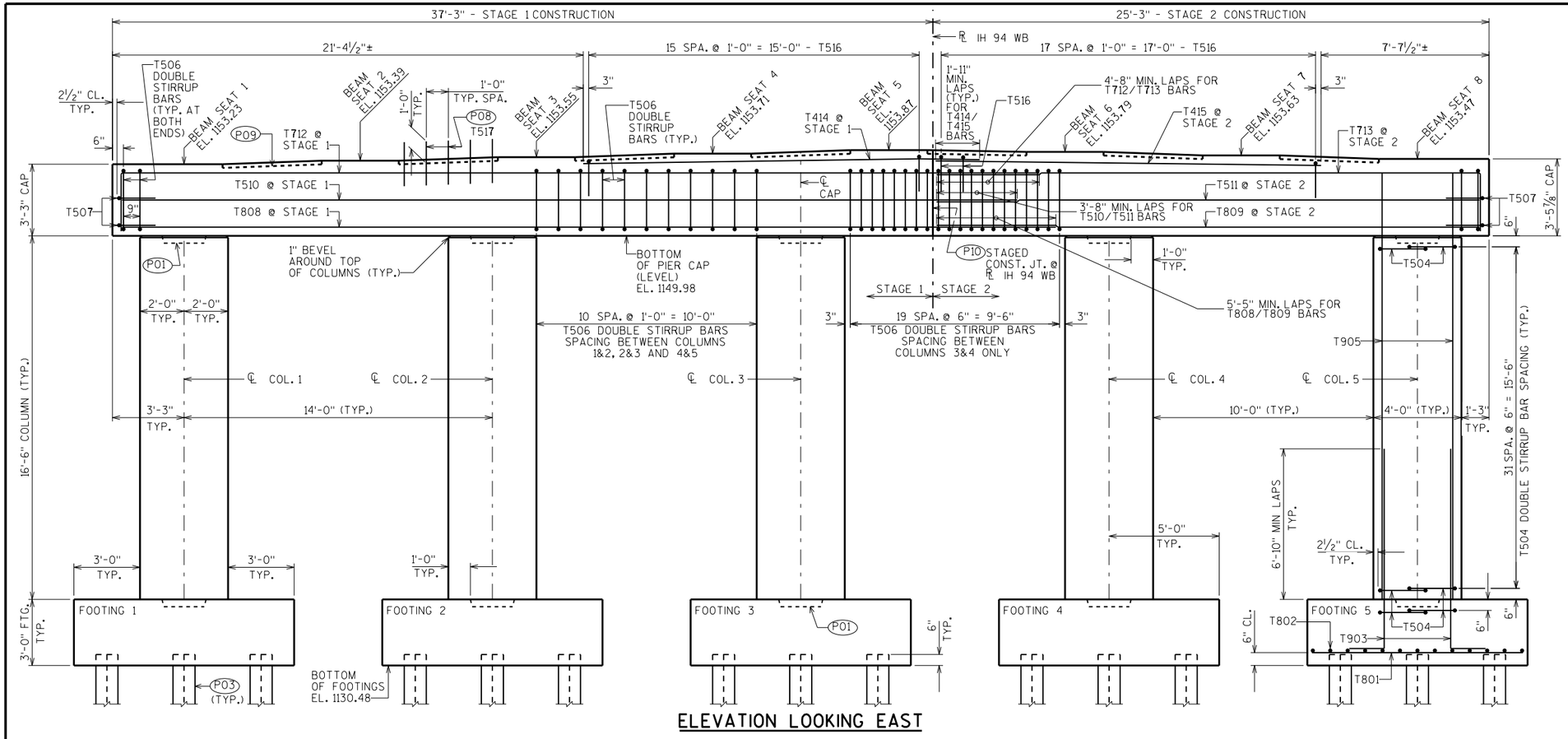
SCALE = 1.50

8

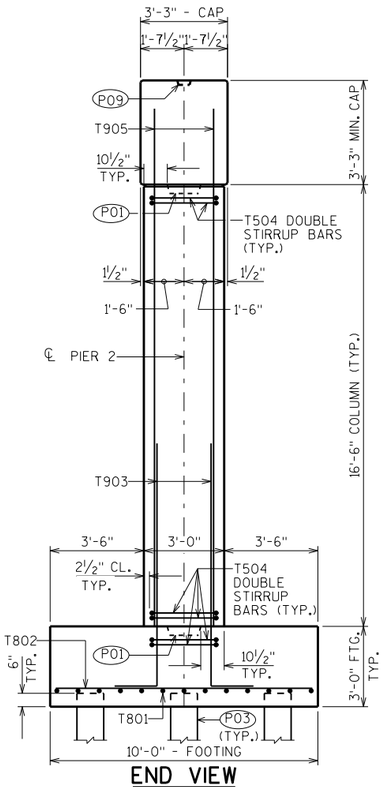
8

STATE PROJECT NUMBER

1021-00-79



ELEVATION LOOKING EAST



END VIEW

P01 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT JOINT FORMED BY BEVELED KEYWAY.

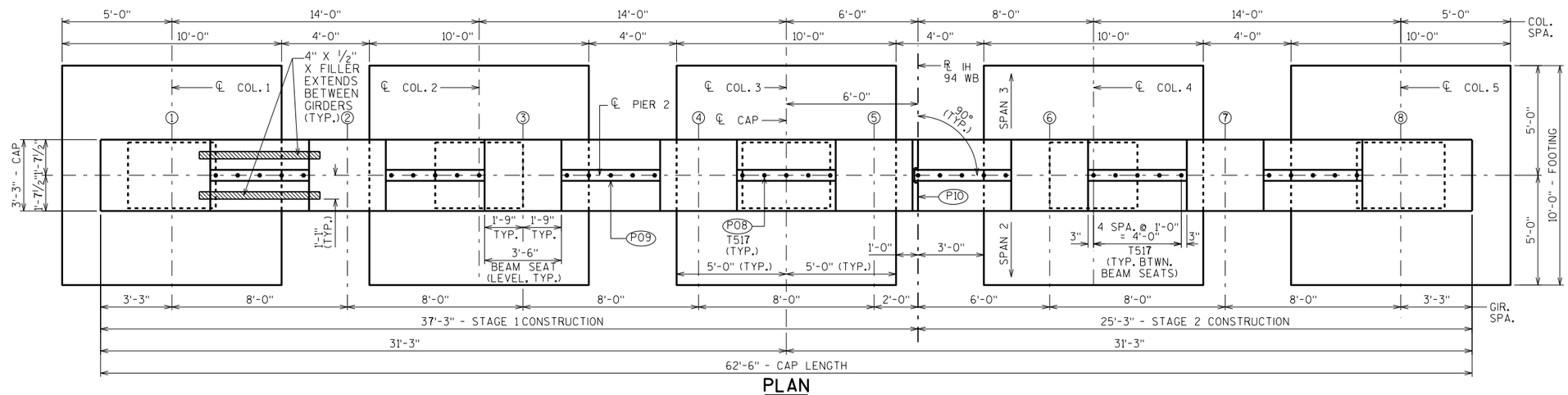
P03 SUPPORT PIER ON HP 12 X 53 STEEL PILING, ESTIMATED 15'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PRE-BORING INTO ROCK IS REQUIRED. A MINIMUM OF 10 FEET OF PRE-BORING IS ACCEPTABLE IF THE LAST 3 FEET ARE IN COMPETENT ROCK. IF 3 FEET OF COMPETENT ROCK IS NOT ENCOUNTERED WITHIN 10 FEET, PRE-BORING SHALL CONTINUE FOR A MINIMUM OF 12 FEET AND UNTIL A MINIMUM OF 1 FOOT EMBEDMENT INTO COMPETENT ROCK IS ACHIEVED. PILE SHALL BE FIRMLY SEATED IN THE BOTTOM OF THE PRE-BORED HOLE AND BACKFILLED FULL DEPTH WITH CEMENT GROUT.

P08 T517 BARS @ 1'-0" SPA. 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.

P10 VERTICAL CONSTRUCTION STAGED JOINT: KEYWAY FORMED BY A BEVELED 2" x 8". ¾" "V" GROOVE @ ALL FACES.

◯ INDICATES GIRDER NUMBER



PLAN

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

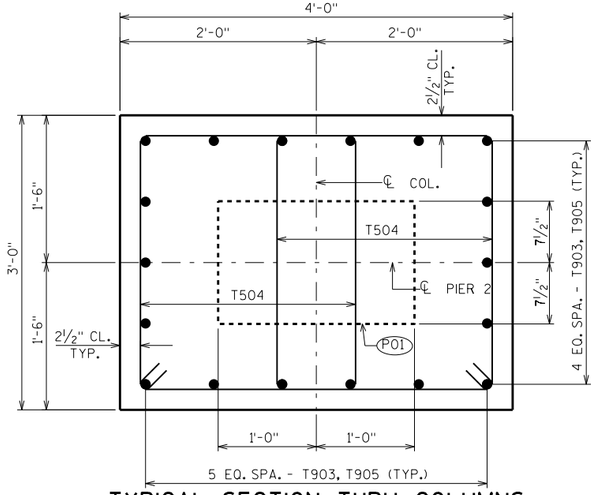
DRAWN BY JPH | PLANS CK'D. AA

PIER 2

SHEET 11

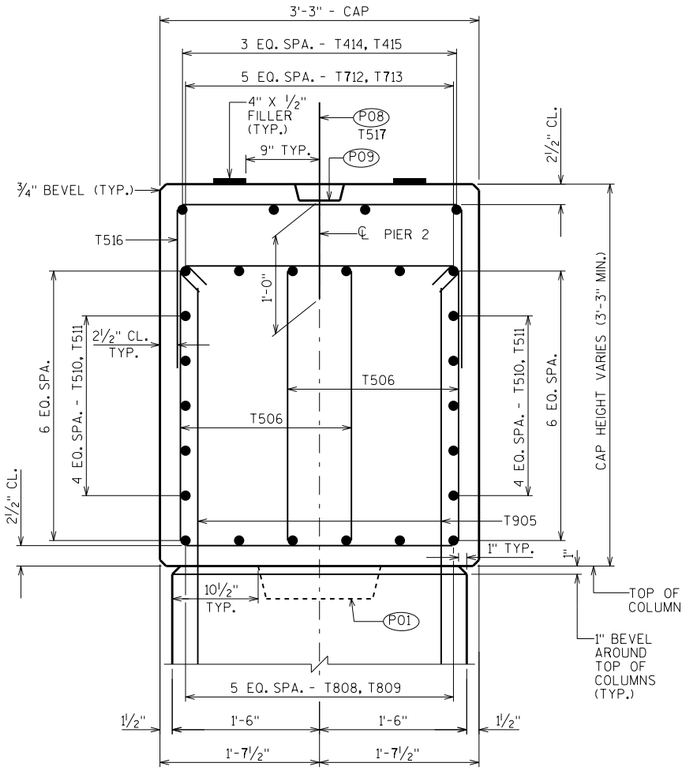
304

SCALE = 2.75



TYPICAL SECTION THRU COLUMNS

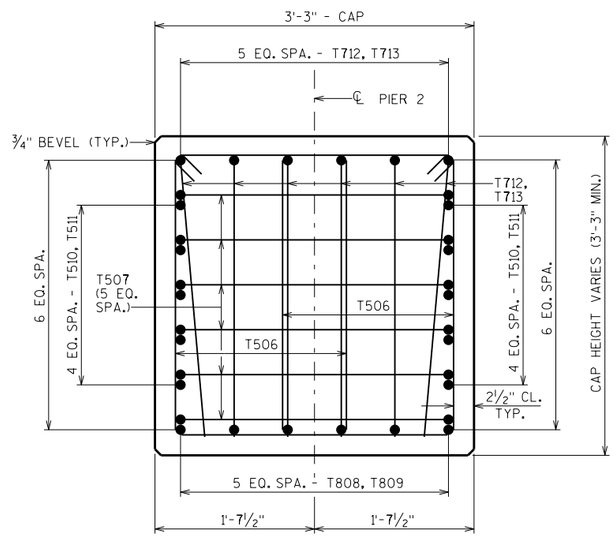
(SHOWING DOUBLE STIRRUPS)



SECTION THRU CAP

(SHOWING DOUBLE STIRRUPS)

TYPICAL FOOTING/PILE PLAN

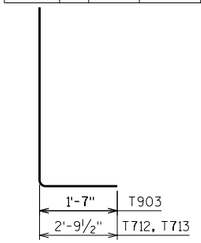


SECTION THRU CAP AT ENDS

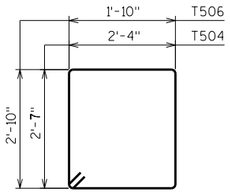
NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
T801		65	9'-7"		FOOTINGS-BOTTOM-HORIZ.-LONGIT.-BOT. LAYER
T802		65	9'-7"		FOOTINGS-BOTTOM-HORIZ.-TRANS.-TOP LAYER
T903	X	90	10'-7"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
T504	X	330	10'-6"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
T905	X	90	19'-4"		COLUMNS/CAP-VERTICAL-ALL FACES
T506	X	114	10'-0"	X	CAP-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS
T507	X	12	6'-0"	X	CAP-HORIZ.-BOTH ENDS ONLY
T808	X	6	42'-8"		CAP-BOT.-HORIZ.-LONGIT.-AT STAGE 1
T809	X	6	24'-10"		CAP-BOT.-HORIZ.-LONGIT.-AT STAGE 2
T510	X	10	40'-9"		CAP-HORIZ.-LONGIT.-BOTH FACES-AT STAGE 1
T511	X	10	24'-9"		CAP-HORIZ.-LONGIT.-BOTH FACES-AT STAGE 2
T712	X	6	44'-10"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.-AT STAGE 1
T713	X	6	27'-6"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.-AT STAGE 2
T414	X	4	18'-0"		CAP-TOP-HORIZ.-LONGIT.-AT STAGE 1
T415	X	4	17'-6"		CAP-TOP-HORIZ.-LONGIT.-AT STAGE 2
T516	X	34	5'-11"	X	CAP-TOP-VERTICAL-TRANSVERSE-BETWEEN COLUMNS 2-5
T517	X	35	2'-0"		CAP-TOP-VERTICAL-CENTER



T903 T712 T713



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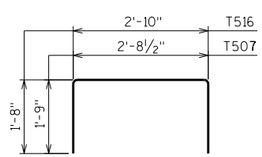
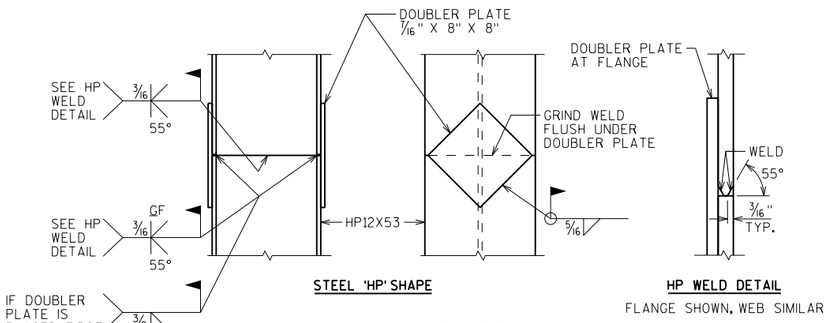


T507 T516



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

(P01) 1'-3" x 2'-0" x 4" DEEP CONSTRUCTION JOINT JOINT FORMED BY BEVELED KEYWAY.

(P03) SUPPORT PIER ON HP 12 X 53 STEEL PILING, ESTIMATED 15'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PRE-BORING INTO ROCK IS REQUIRED. A MINIMUM OF 10 FEET OF PRE-BORING IS ACCEPTABLE IF THE LAST 3 FEET ARE IN COMPETENT ROCK. IF 3 FEET OF COMPETENT ROCK IS NOT ENCOUNTERED WITHIN 10 FEET, PRE-BORING SHALL CONTINUE FOR A MINIMUM OF 12 FEET AND UNTIL A MINIMUM OF 1 FOOT EMBEDMENT INTO COMPETENT ROCK IS ACHIEVED. PILE SHALL BE FIRMLY SEATED IN THE BOTTOM OF THE PRE-BORED HOLE AND BACKFILLED FULL DEPTH WITH CEMENT GROUT.

(P08) T517 BARS @ 1'-0" SPA. 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.

STATE PROJECT NUMBER

1021-00-79

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

PIER 2 DETAILS

SHEET 12

305

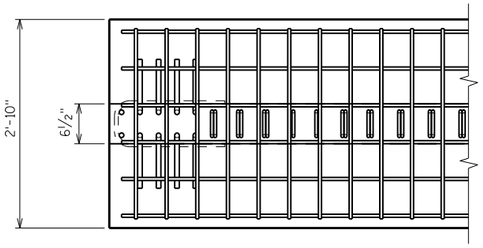
SCALE = 1.50

8

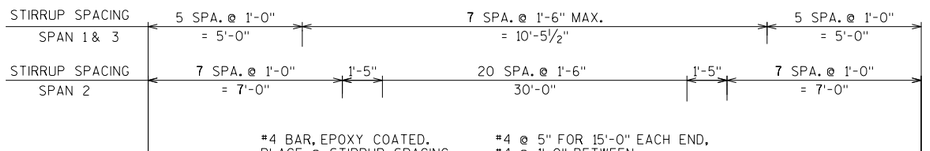
8

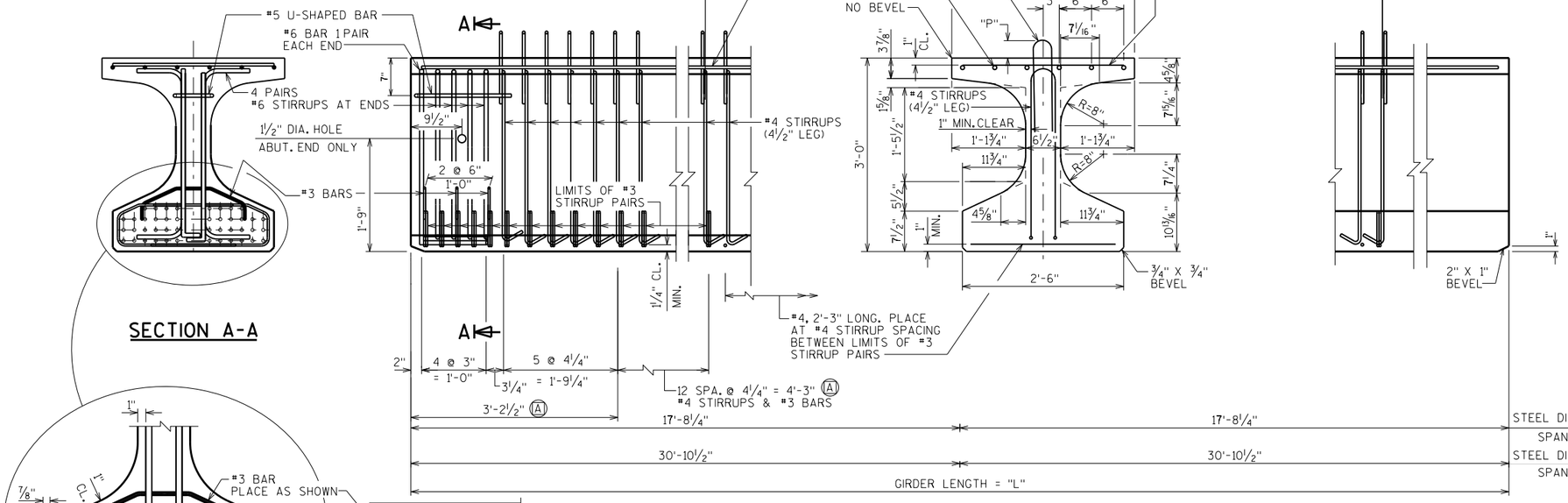
STATE PROJECT NUMBER

1021-00-79

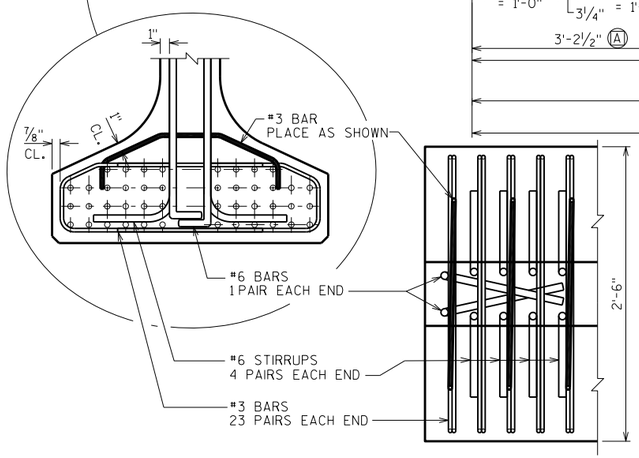


TOP FLANGE





SECTION A-A

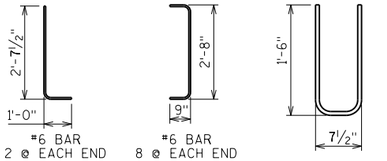


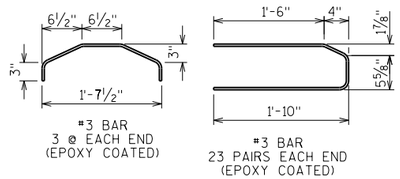
BOTTOM FLANGE

SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ SIX #5 BARS @ FULL LENGTH WITH 2'-7" MIN. LAPS





NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON ACCEPTANCE OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	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" (IN.) 1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	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.) ✳
1,3	ALL	35.375	0.01	0.03	0.04	0.04	0.05	0.04	0.04	0.03	0.01	8000	7	7	7	0.6							16	6.8
2	ALL	61.75	0.2	0.3	0.4	0.5	0.5	0.5	0.4	0.3	0.2	8000	7	7	7	0.6							16	6.8

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

36W" PRESTRESSED GIRDER DETAILS 1

SHEET 13

306

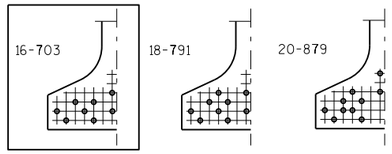
SCALE = 1.00

8

8

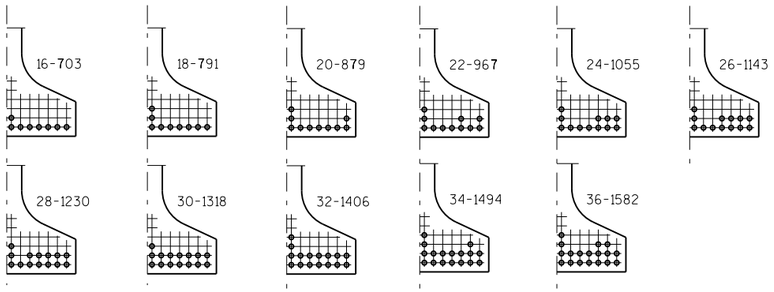
STATE PROJECT NUMBER

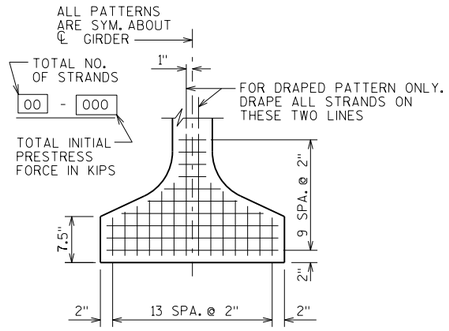
1021-00-79



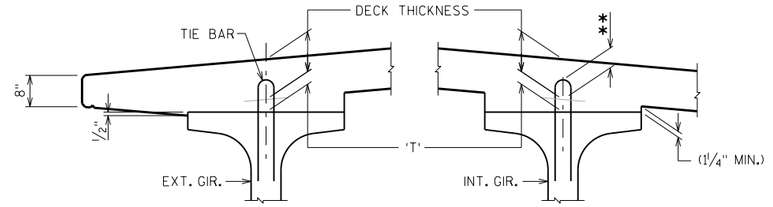
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS





TYP. STRAND PATTERN



DECK HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & 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 2.81" WAS USED FOR COMPUTING THE QUANTITY "CONCRETE MASONRY BRIDGES" FOR THE SUPERSTRUCTURE.

ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

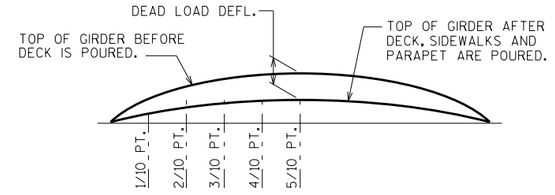
0.6" DIA. STRANDS

*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	0.45
2	0.97

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DEAD LOAD DEFLECTION DIAGRAM

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

36W" PRESTRESSED GIRDER DETAILS 2

SHEET 14

307

SCALE = 1.00

STATE PROJECT NUMBER

1021-00-79

NOTES

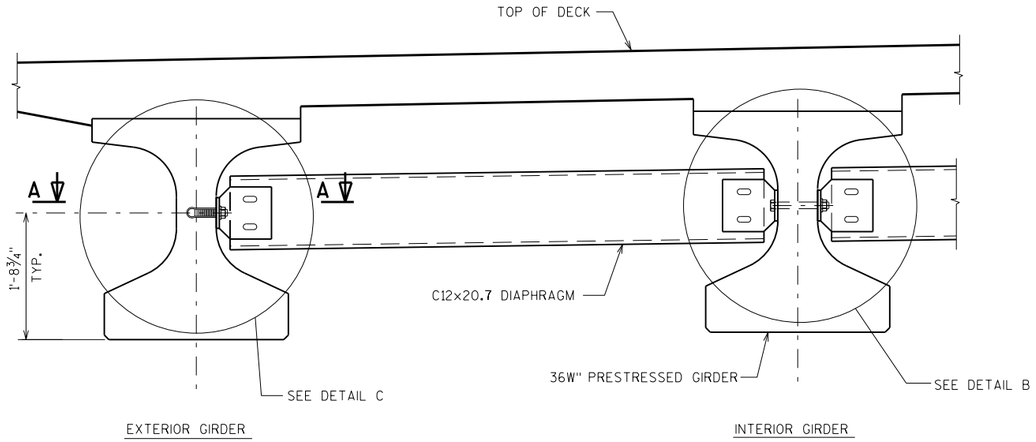
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-270", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

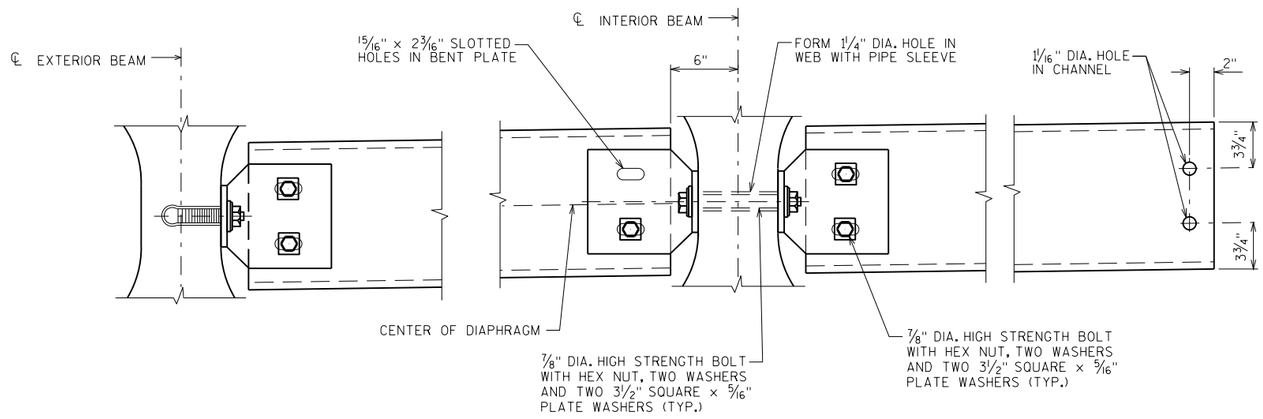
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

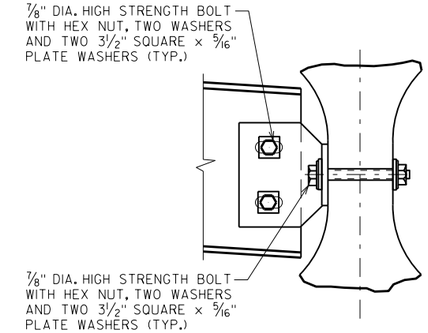


PART TRANSVERSE SECTION AT DIAPHRAGM

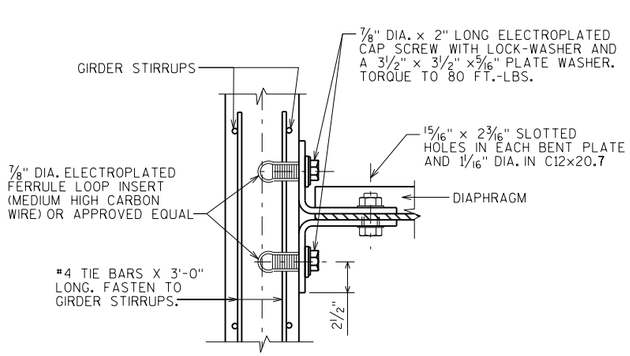


DETAIL C

DETAIL B

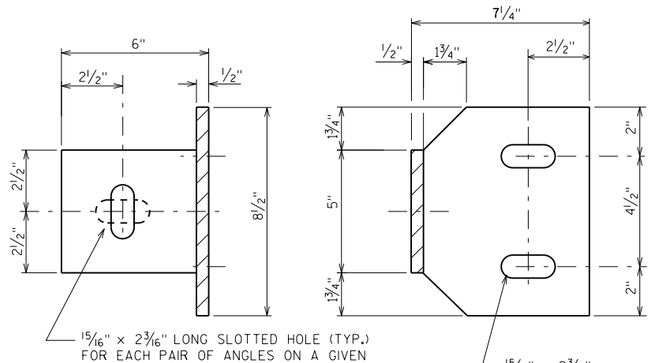


SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°



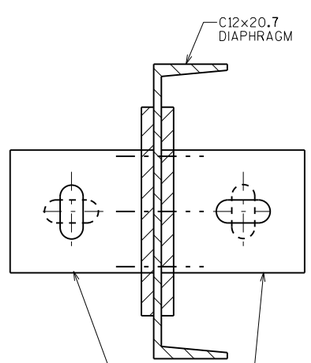
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



BEAM FACE

DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

STEEL DIAPHRAGM

SHEET 15

308

SCALE = 1.00

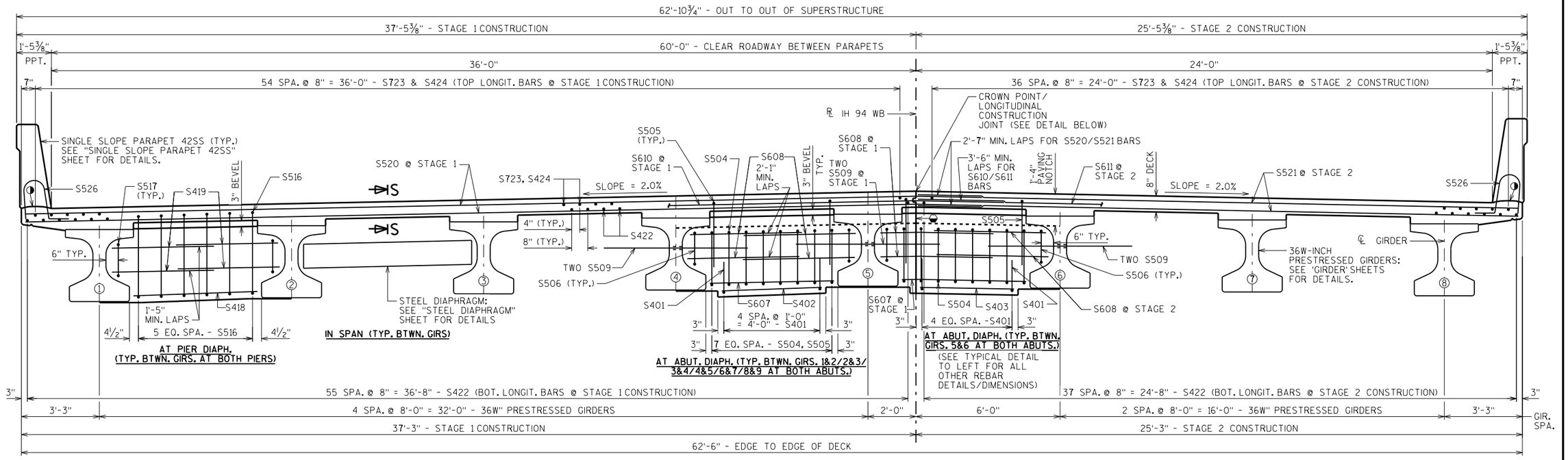
8

8

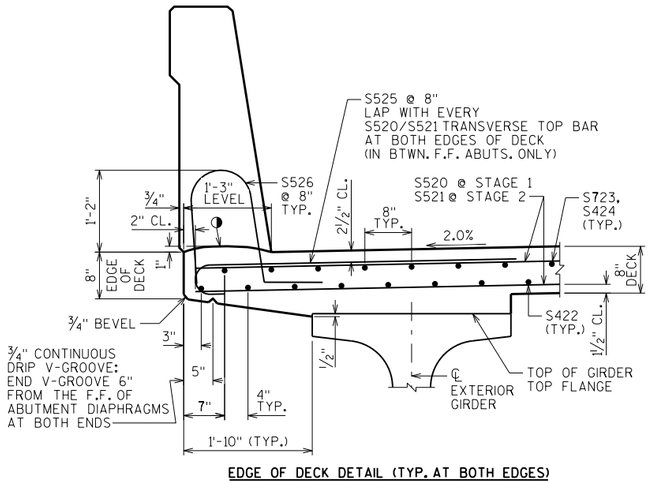
STATE PROJECT NUMBER

1021-00-79

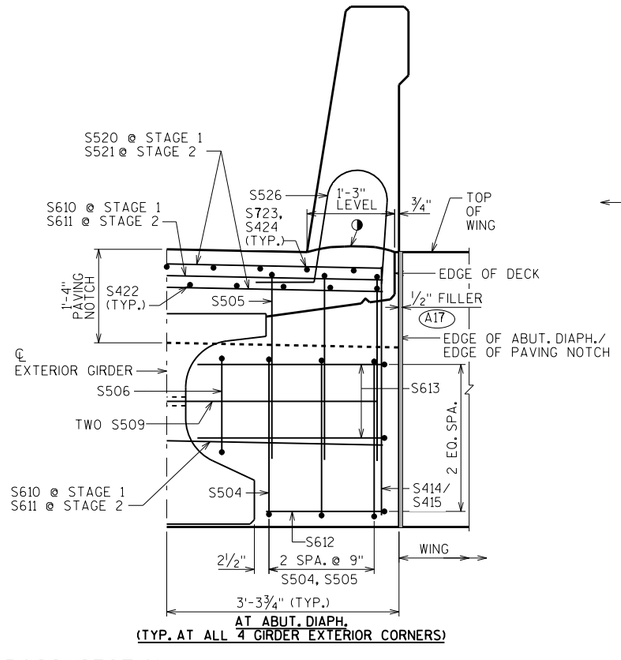
○ INDICATES GIRDER NUMBER



CROSS SECTION THRU BRIDGE LOOKING EAST - SHOWING STAGED CONSTRUCTION

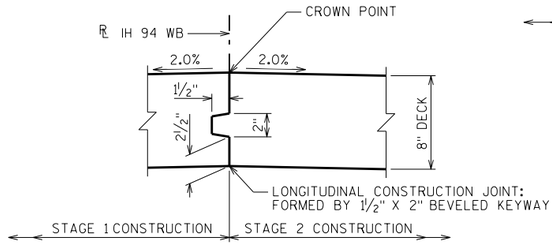


EDGE OF DECK DETAIL (TYP. AT BOTH EDGES)



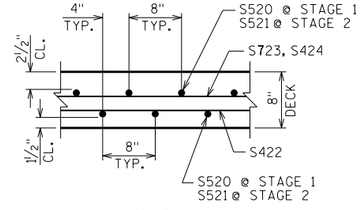
AT ABUT. DIAPH. (TYP. AT ALL 4 GIRDER EXTERIOR CORNERS)

PARTIAL CROSS SECTION

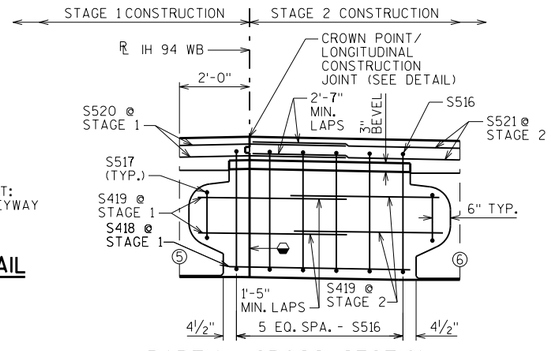


LONGITUDINAL CONSTRUCTION JOINT DETAIL

(LOOKING EAST)



SECTION S-S



PARTIAL CROSS SECTION THRU BRIDGE LOOKING EAST - SHOWING STAGED CONSTRUCTION

AT PIER DIAPH. (TYP. BTWN. GIRS. 5&6 AT BOTH PIERS)

◑ HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

◒ SMOOTH/VERTICAL STAGED CONSTRUCTION JOINT: SEAL BACKFACE OF JOINT WITH VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT ABUTMENTS ONLY.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

SUPERSTRUCTURE CROSS SECTIONS

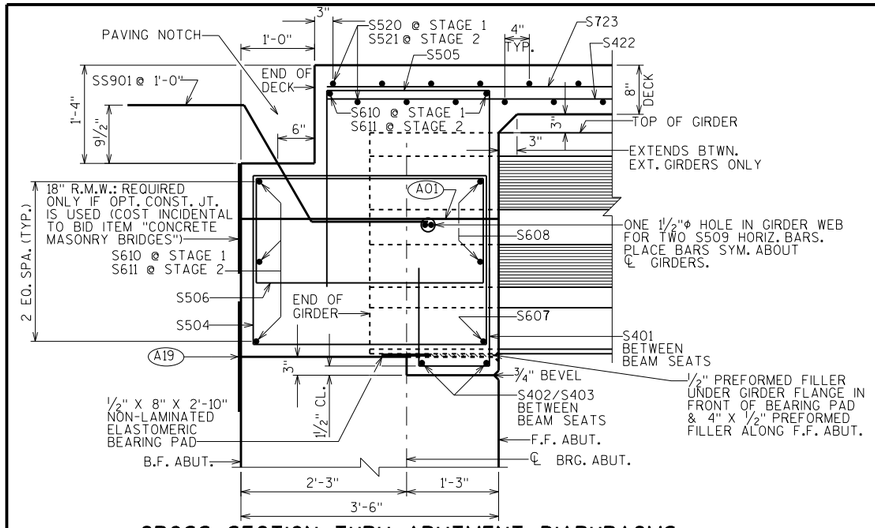
SHEET 16

309

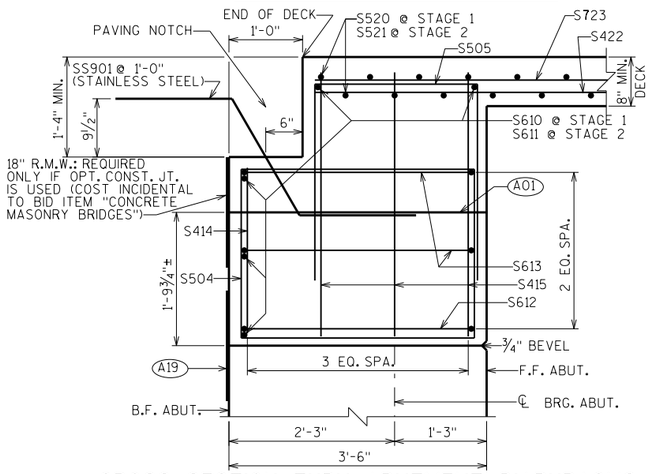
8

8

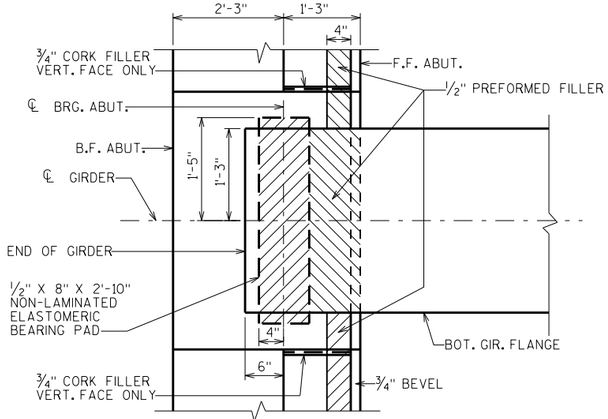
SCALE = 2.10



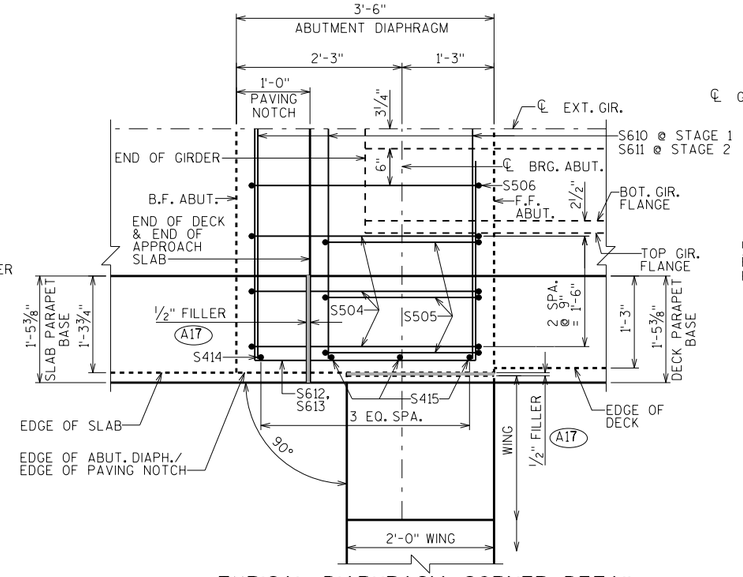
CROSS SECTION THRU ABUTMENT DIAPHRAGMS BETWEEN EXTERIOR GIRDERS



CROSS SECTION THRU ABUTMENT DIAPHRAGMS AT GIRDER EXTERIORS



PLAN VIEW AT ABUTMENTS



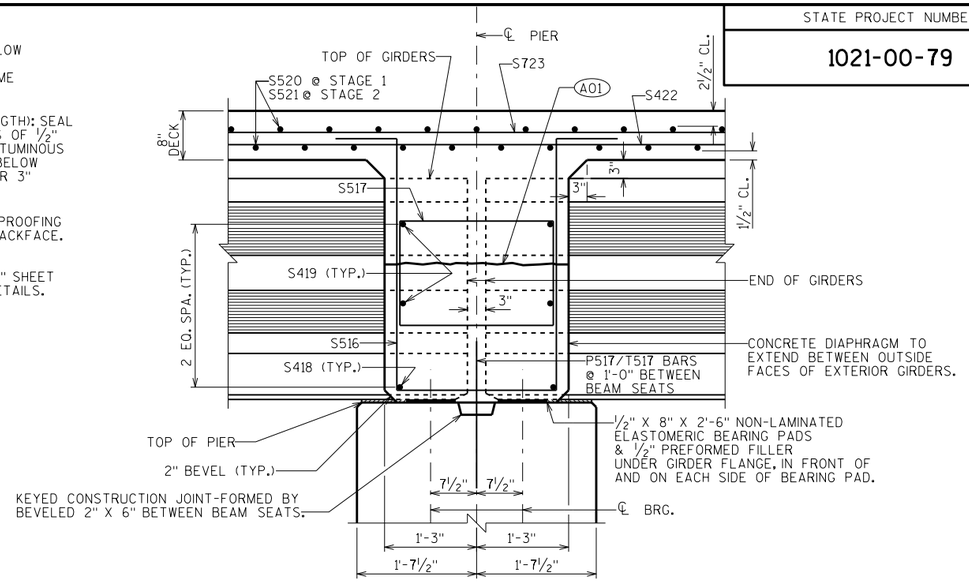
TYPICAL DIAPHRAGM CORNER DETAIL - PLAN VIEW AT ALL FOUR GIR. EXT. CORNERS

A01 OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

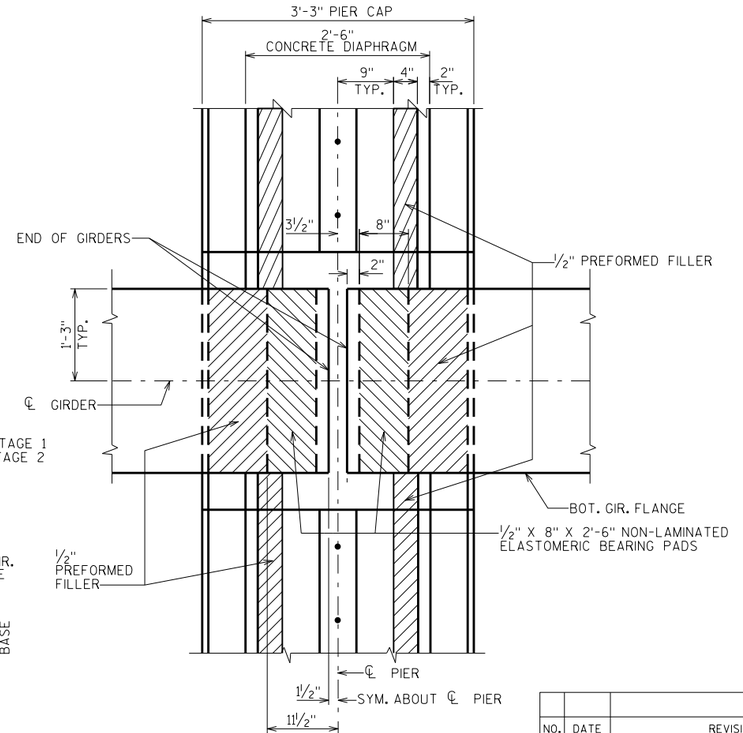
A17 ½" FILLER (INCLUDED IN WING/SLAB LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NOTE:
SEE "SUPERSTRUCTURE BAR DETAILS" SHEET FOR THE 'BILL OF BARS' AND BAR DETAILS.



CROSS SECTION THRU PIER DIAPHRAGM



PLAN VIEW AT PIER

STATE PROJECT NUMBER

1021-00-79

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

SUPERSTRUCTURE DETAILS

SHEET 17

310

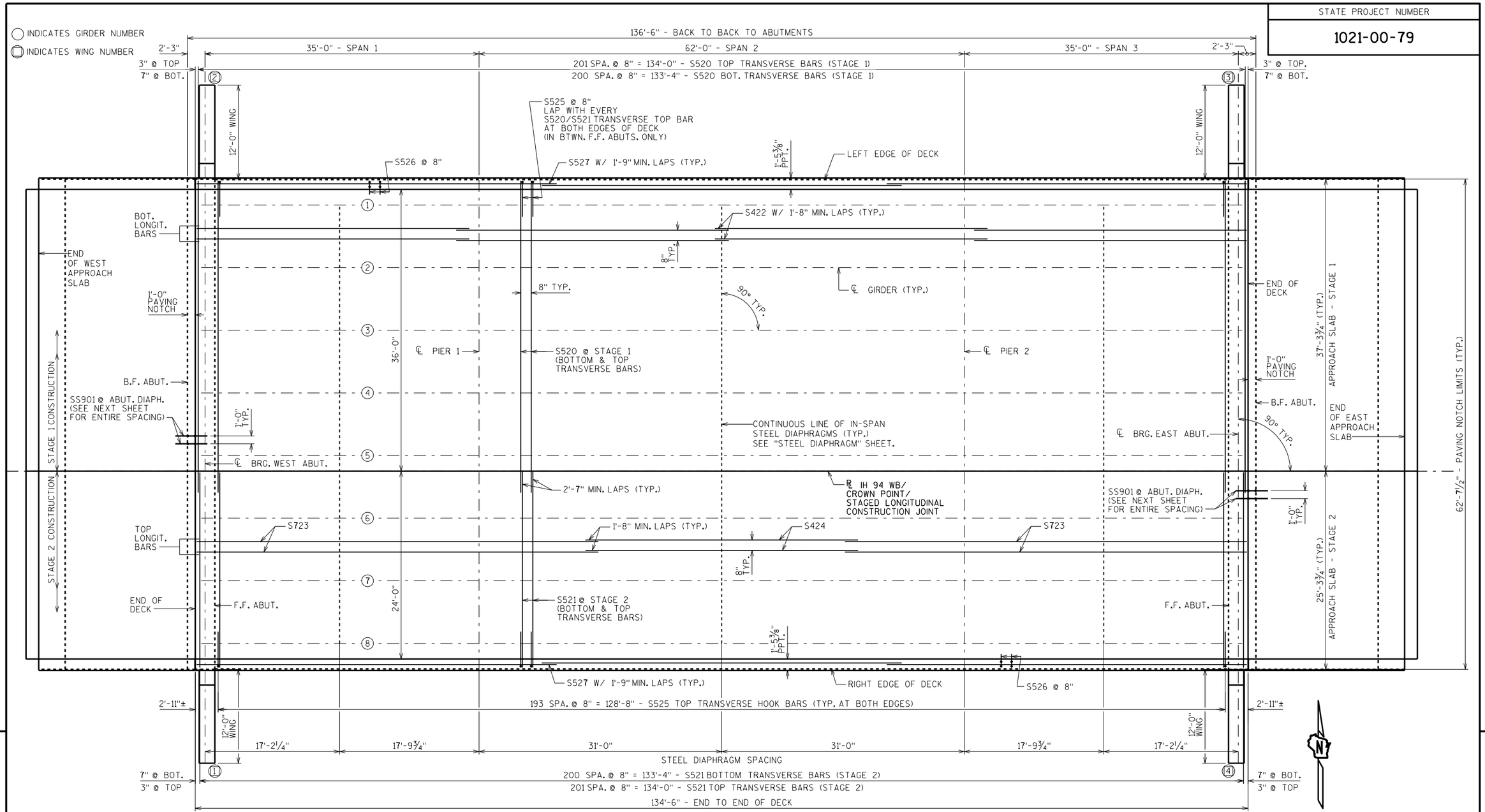
SCALE = 1.00

8

8

STATE PROJECT NUMBER

1021-00-79



PLAN

TOP OF DECK ELEVATIONS

EOD = EDGE OF DECK

	℄ BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. E. ABUT.	
LEFT EOD	1156.91	1156.92	1156.93	1156.94	1156.95	1156.97	1156.98	1156.99	1157.00	1157.01	1157.02	1157.04	1157.05	1157.07	1157.08	1157.09	1157.11	1157.12	1157.13	1157.14	1157.15	1157.16	1157.16	1157.17	1157.17	1157.17	1157.18	1157.18	1157.18	1157.19	1157.19	LEFT EOD
℄ GIRDER 1	1156.95	1156.96	1156.97	1156.98	1156.99	1157.01	1157.02	1157.03	1157.04	1157.05	1157.06	1157.08	1157.09	1157.11	1157.12	1157.13	1157.15	1157.16	1157.17	1157.18	1157.19	1157.20	1157.20	1157.21	1157.21	1157.21	1157.22	1157.22	1157.22	1157.23	1157.23	℄ GIRDER 1
℄ GIRDER 2	1157.11	1157.12	1157.13	1157.14	1157.15	1157.17	1157.18	1157.19	1157.20	1157.21	1157.22	1157.24	1157.25	1157.27	1157.28	1157.29	1157.31	1157.32	1157.33	1157.34	1157.35	1157.36	1157.36	1157.37	1157.37	1157.37	1157.38	1157.38	1157.38	1157.39	1157.39	℄ GIRDER 2
℄ GIRDER 3	1157.27	1157.28	1157.29	1157.30	1157.31	1157.33	1157.34	1157.35	1157.36	1157.37	1157.38	1157.40	1157.41	1157.43	1157.44	1157.45	1157.47	1157.48	1157.49	1157.50	1157.51	1157.52	1157.52	1157.53	1157.53	1157.53	1157.54	1157.54	1157.54	1157.55	1157.55	℄ GIRDER 3
℄ GIRDER 4	1157.43	1157.44	1157.45	1157.46	1157.47	1157.49	1157.50	1157.51	1157.52	1157.53	1157.54	1157.56	1157.57	1157.59	1157.60	1157.61	1157.63	1157.64	1157.65	1157.66	1157.67	1157.68	1157.68	1157.69	1157.69	1157.69	1157.70	1157.70	1157.70	1157.71	1157.71	℄ GIRDER 4
℄ GIRDER 5	1157.59	1157.60	1157.61	1157.62	1157.63	1157.65	1157.66	1157.67	1157.68	1157.69	1157.70	1157.72	1157.73	1157.75	1157.76	1157.77	1157.79	1157.80	1157.81	1157.82	1157.83	1157.84	1157.84	1157.85	1157.85	1157.85	1157.86	1157.86	1157.86	1157.87	1157.87	℄ GIRDER 5
℞ IH 94 WB	1157.63	1157.64	1157.65	1157.66	1157.67	1157.69	1157.70	1157.71	1157.72	1157.73	1157.74	1157.76	1157.77	1157.79	1157.80	1157.81	1157.83	1157.84	1157.85	1157.86	1157.87	1157.88	1157.88	1157.89	1157.89	1157.89	1157.90	1157.90	1157.90	1157.91	1157.91	℞ IH 94 WB
℄ GIRDER 6	1157.51	1157.52	1157.53	1157.54	1157.55	1157.57	1157.58	1157.59	1157.60	1157.61	1157.62	1157.64	1157.65	1157.67	1157.68	1157.69	1157.71	1157.72	1157.73	1157.74	1157.75	1157.76	1157.76	1157.77	1157.77	1157.77	1157.78	1157.78	1157.78	1157.79	1157.79	℄ GIRDER 6
℄ GIRDER 7	1157.35	1157.36	1157.37	1157.38	1157.39	1157.41	1157.42	1157.43	1157.44	1157.45	1157.46	1157.48	1157.49	1157.51	1157.52	1157.53	1157.55	1157.56	1157.57	1157.58	1157.59	1157.60	1157.60	1157.61	1157.61	1157.61	1157.62	1157.62	1157.62	1157.63	1157.63	℄ GIRDER 7
℄ GIRDER 8	1157.19	1157.20	1157.21	1157.22	1157.23	1157.25	1157.26	1157.27	1157.28	1157.29	1157.30	1157.32	1157.33	1157.35	1157.36	1157.37	1157.39	1157.40	1157.41	1157.42	1157.43	1157.44	1157.44	1157.45	1157.45	1157.45	1157.46	1157.46	1157.46	1157.47	1157.47	℄ GIRDER 8
RIGHT EOD	1157.15	1157.16	1157.17	1157.18	1157.19	1157.21	1157.22	1157.23	1157.24	1157.25	1157.26	1157.28	1157.29	1157.31	1157.32	1157.33	1157.35	1157.36	1157.37	1157.38	1157.39	1157.40	1157.40	1157.41	1157.41	1157.41	1157.42	1157.42	1157.42	1157.43	1157.43	RIGHT EOD

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

SUPERSTRUCTURE PLAN

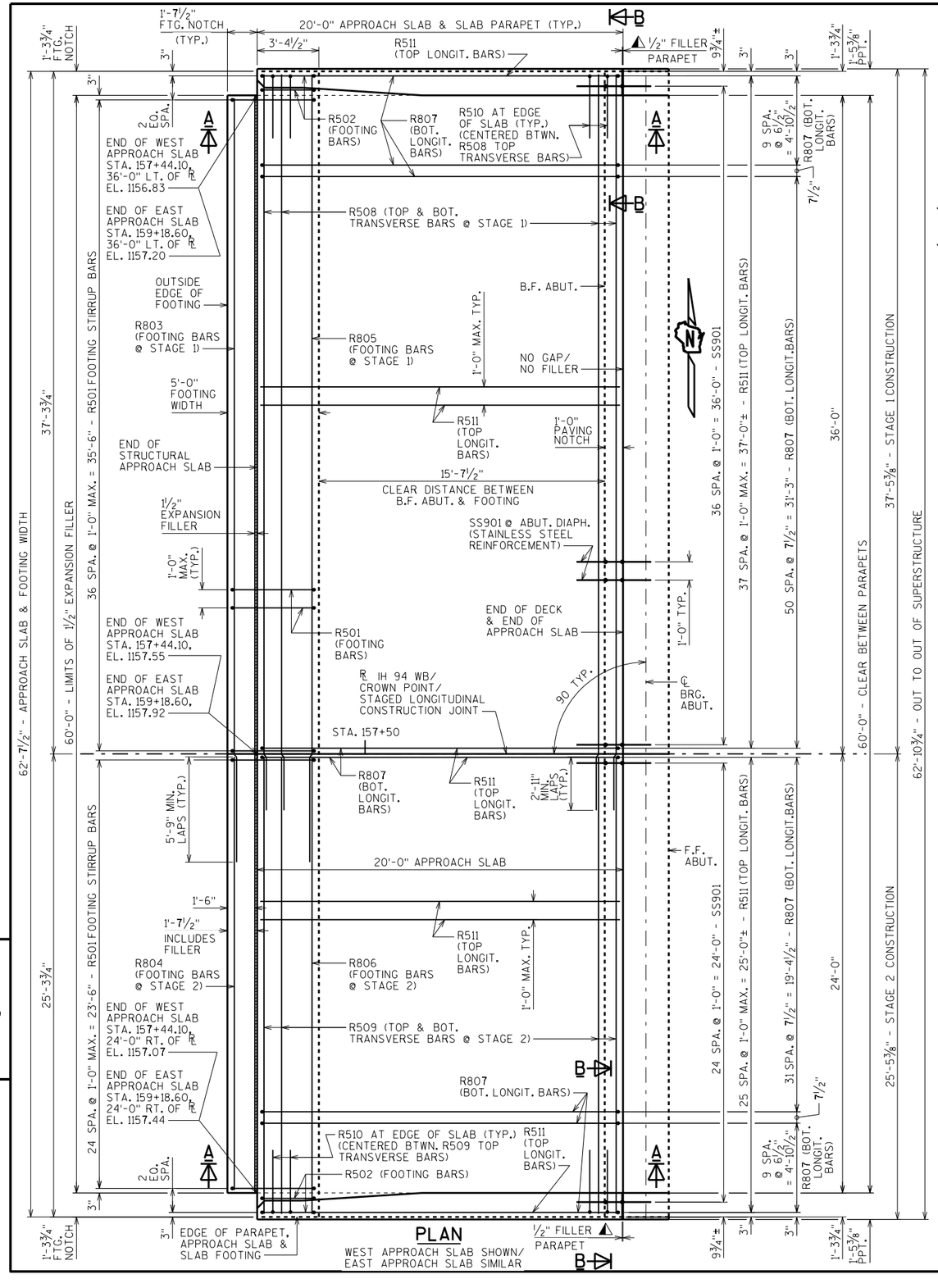
SHEET 18

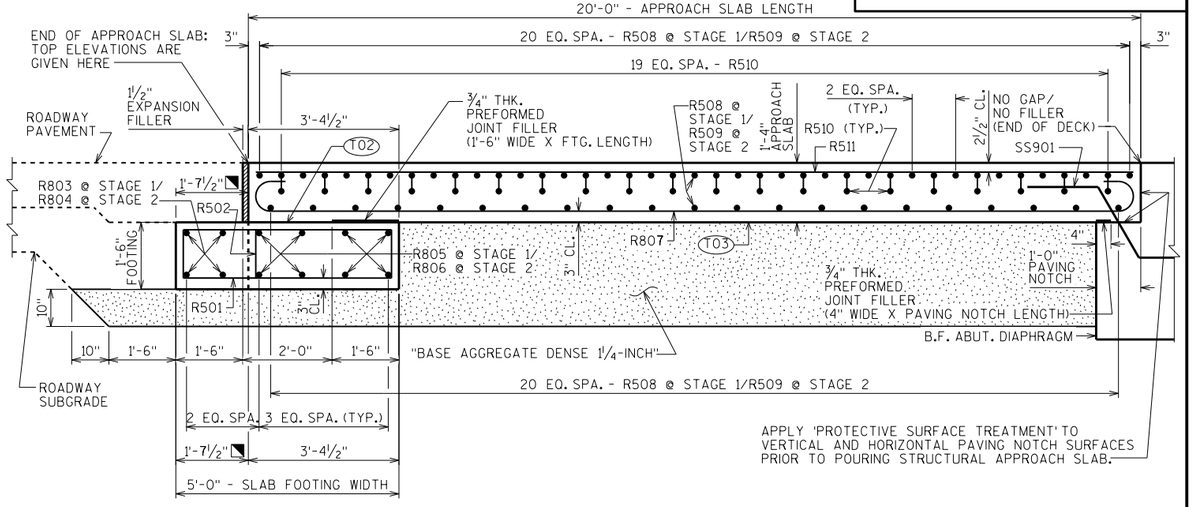
311

SCALE = 6.00

STATE PROJECT NUMBER

1021-00-79



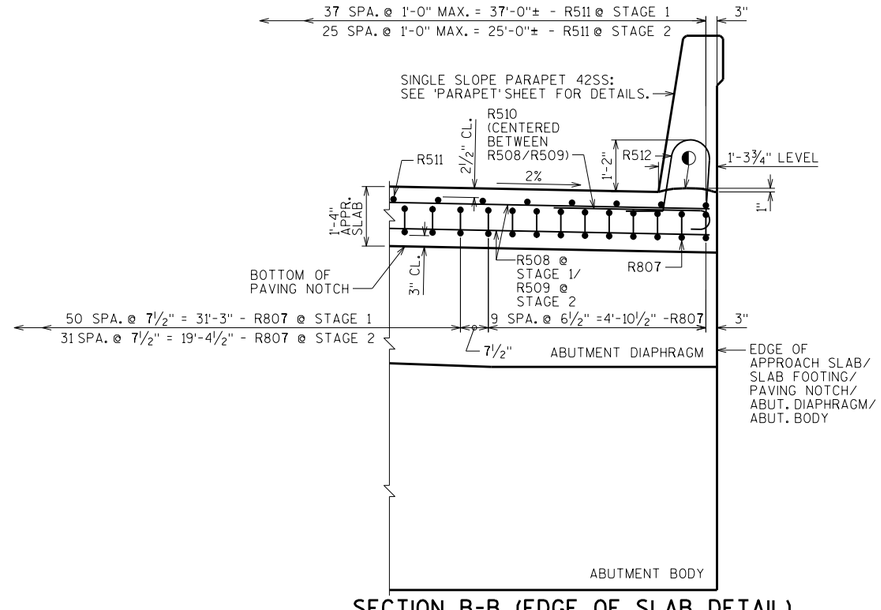


◥INCLUDES 1½" EXPANSION FILLER

APPLY 'PROTECTIVE SURFACE TREATMENT' TO VERTICAL AND HORIZONTAL PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

SECTION A-A THRU APPROACH SLAB

WEST APPROACH SLAB SHOWN/
EAST APPROACH SLAB SIMILAR



SECTION B-B (EDGE OF SLAB DETAIL)

◐HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

◭SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

STRUCTURAL APPROACH SLAB

SHEET 19

312

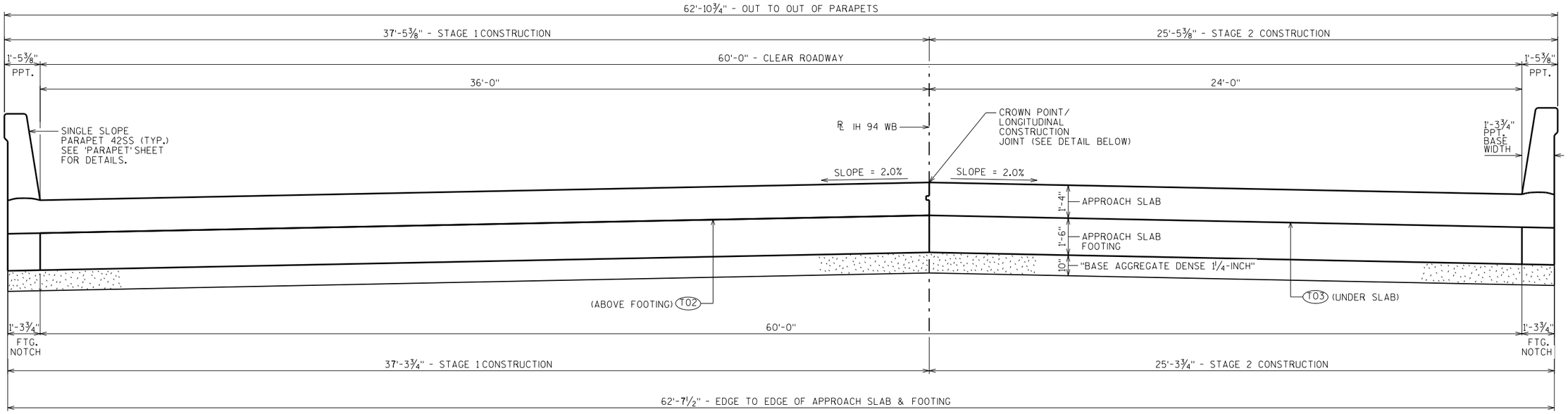
8

8

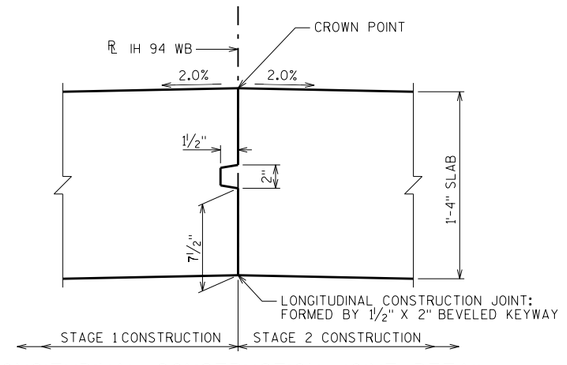
SCALE = 3.30

STATE PROJECT NUMBER

1021-00-79



CROSS SECTION THRU APPROACH SLAB LOOKING EAST - SHOWING STAGED CONSTRUCTION



LONGITUDINAL CONSTRUCTION JOINT DETAIL

T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

STRUCTURAL APPROACH SLAB CROSS SECTION

SHEET 20

313

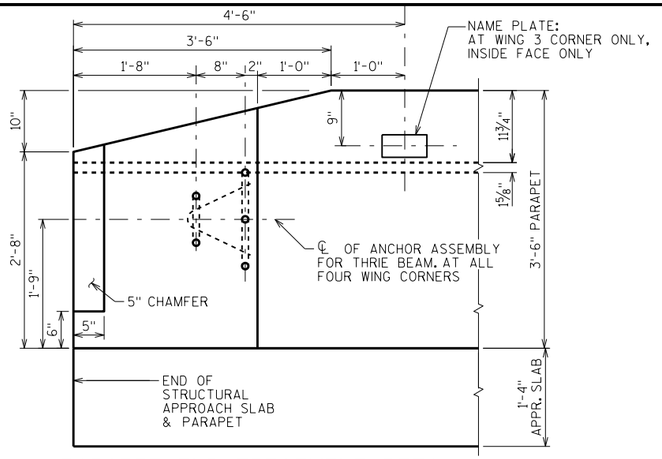
8

8

SCALE = 2.10

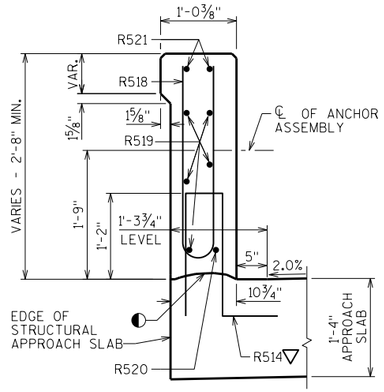
STATE PROJECT NUMBER

1021-00-79

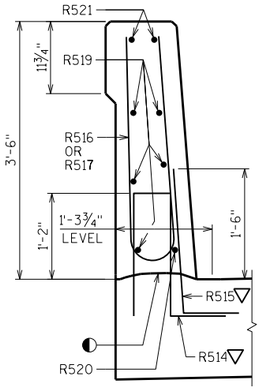


PARAPET END TREATMENT DETAIL

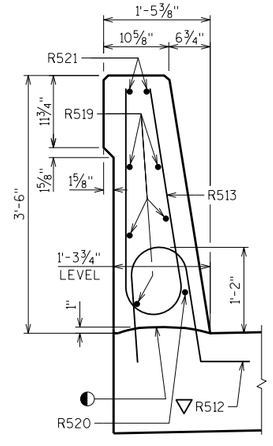
LOOKING AT INSIDE FACE OF PARAPET



SECTION A-A

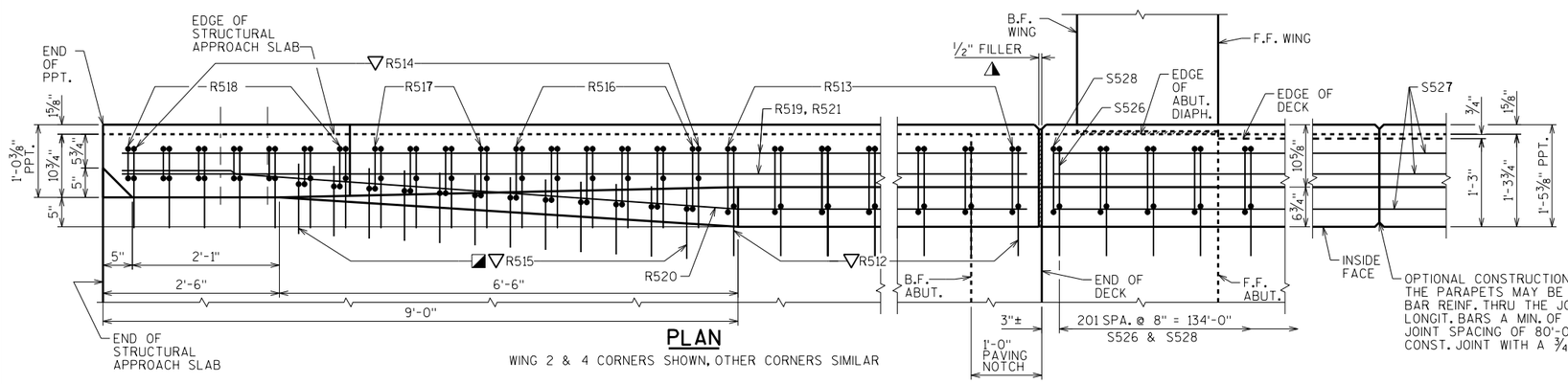


SECTION B-B



SECTION C-C

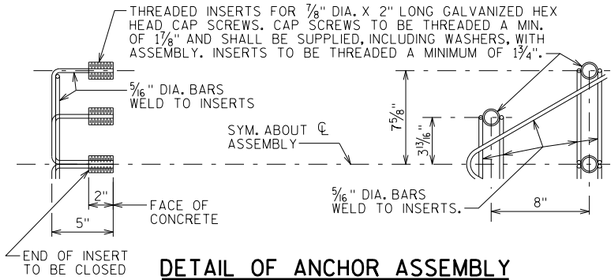
NOTE:
FOR THE PARAPET 'BILL OF BARS' & 'BAR DETAILS' SEE THE "SUPERSTRUCTURE & APPROACH SLAB BAR DETAILS" SHEET.



PLAN

WING 2 & 4 CORNERS SHOWN, OTHER CORNERS SIMILAR

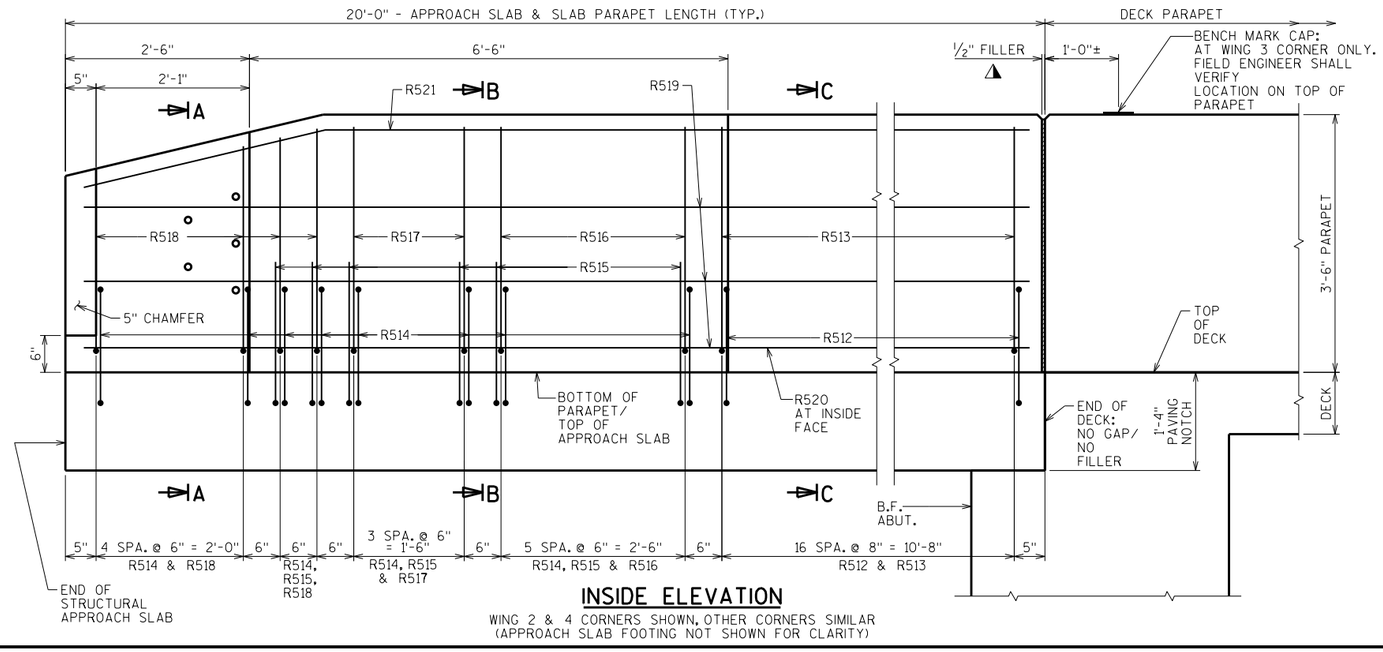
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



DETAIL OF ANCHOR ASSEMBLY

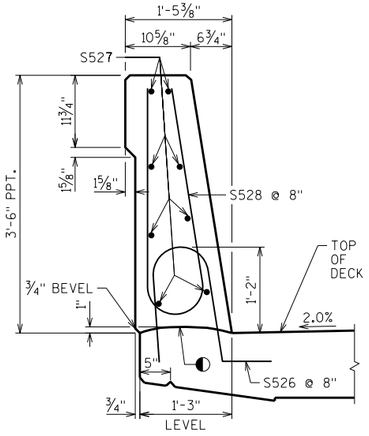
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

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



INSIDE ELEVATION

WING 2 & 4 CORNERS SHOWN, OTHER CORNERS SIMILAR
(APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY)



SECTION THRU PARAPET ON DECK

▲ ½" FILLER (INCLUDED IN APPROACH PARAPET LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

◐ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

◪ USE CARE TO PLACE R515 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R512, R514, AND R515 PARAPET BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

SINGLE SLOPE PARAPET 42SS

SHEET 21

314

SCALE = 1.00

8

8

STATE PROJECT NUMBER

1021-00-79

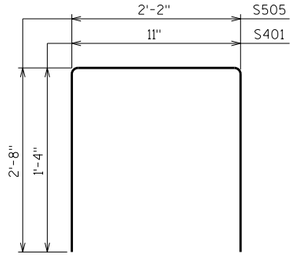
BILL OF BARS FOR SUPERSTRUCTURE

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

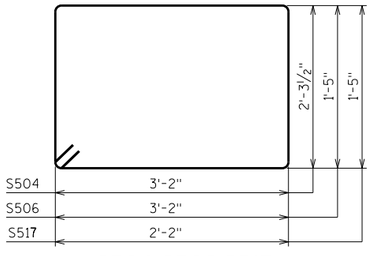
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S401	X	70	3'-5"	X	ABUT. DIAPHS.-F.F.-BOT.-VERT.-BTWN. BEAM SEATS
S402	X	24	4'-2"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. BEAM SEATS
S403	X	4	3'-11"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. BEAM SEATS 5&6 ONLY-AT STAGE 2
S504	X	124	11'-7"	X	ABUT. DIAPHS.-VERTICAL-UNDER PAVING NOTCHES
S505	X	124	7'-3"	X	ABUT. DIAPHS./DECK-VERT.-BETWEEN EDGES OF DECKS
S506	X	32	9'-10"	X	ABUT. DIAPHS.-VERT.-UNDER GIR. TOP FLANGES
S607	X	14	5'-2"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. GIRS ONLY
S608	X	56	4'-8"		ABUT. DIAPHS.-F.F.-HORIZ.-BTWN. GIRS ONLY
S509	X	32	6'-0"		ABUT. DIAPHS.-HORIZ.-THRU GIRDERS
S610	X	10	40'-10"		ABUT. DIAPHS. B.F. & DECK-HORIZ.-AT STAGE 1
S611	X	10	25'-0"		ABUT. DIAPHS. B.F. & DECK-HORIZ.-AT STAGE 2
S612	X	4	8'-0"	X	ABUT. DIAPHS.-BOT.-HORIZ.-AT ALL FOUR GIR. EXTERIORS
S613	X	8	9'-0"	X	ABUT. DIAPHS.-HORIZ.-AT ALL FOUR GIR. EXTERIORS
S414	X	4	2'-3"		ABUT. DIAPHS.-B.F.-VERT.-AT ALL FOUR GIR. EXTERIORS
S415	X	12	3'-7"		ABUT. DIAPHS.-VERT.-AT ALL FOUR GIR. EXTERIORS
S516	X	84	10'-2"	X	PIER DIAPHS./DECK-VERTICAL-BTWN. GIRS ONLY
S517	X	28	7'-10"	X	PIER DIAPHS.-VERT.-UNDER GIR. TOP FLANGES-BTWN. GIRS ONLY
S418	X	28	5'-2"		PIER. DIAPHS.-BOTH FACES-BOT.-HORIZ.-BTWN. GIRS ONLY
S419	X	112	4'-3"		PIER. DIAPHS.-BOTH FACES-HORIZ.-BTWN. GIRS ONLY
S520	X	403	39'-10"		DECK-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT STAGE 1
S521	X	403	25'-0"		DECK-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT STAGE 2
S422	X	376	34'-10"		DECK-BOTTOM-HORIZONTAL-LONGITUDINAL
S723	X	184	51'-4"		DECK-TOP-HORIZONTAL-LONGITUDINAL-AT BOTH ENDS
S424	X	92	34'-10		DECK-TOP-HORIZONTAL-LONGITUDINAL-AT SPAN 2
S525	X	388	5'-3"	X	DECK-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES OF DECK-BTWN. ABUTS. ONLY
S526	X	404	4'-5"	X	PARAPETS/DECK-VERTICAL-TRANSVERSE-AT BOTH SIDES
S527	X	48	46'-0"		PARAPETS-BOTH FACES-HORIZ.-LONGIT.-AT BOTH SIDES
S528	X	404	6'-8"	X	PARAPETS-VERTICAL-TRANSVERSE-AT BOTH SIDES

SS901		124	5'-0"	X	APPROACH SLAB/ABUT. DIAPH.-VERT.-AT PAVING NOTCHES

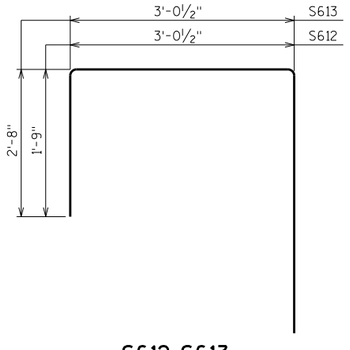
STAINLESS STEEL REINFORCEMENT



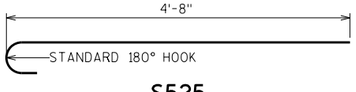
S401 S505



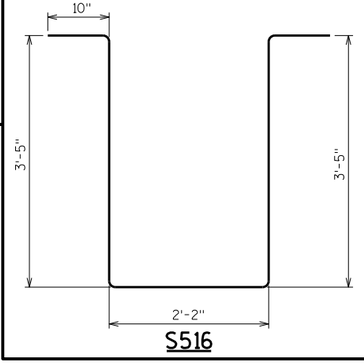
S504 S506 S517
(STIRRUP BARS)



S612 S613



S525



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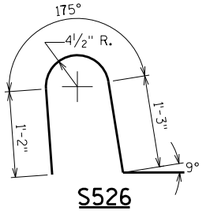
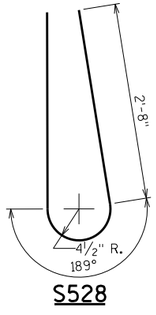
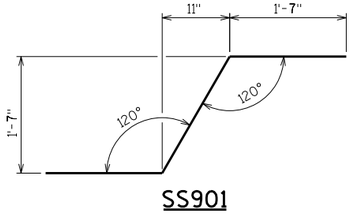


S526



S528



SS901

BILL OF BARS FOR STRUCTURAL APPROACH SLABS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

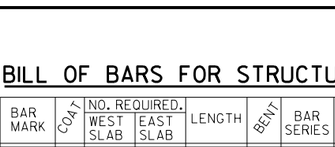
BAR MARK	COAT	NO. REQUIRED. WEST SLAB	NO. REQUIRED. EAST SLAB	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	62	62	12'-2"	X		FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-BETWEEN PARAPETS
R502	X	4	4	8'-11"	X		FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT ENDS ONLY
R803	X	4	4	41'-9"			FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT OUTSIDE FACE-STAGE 1
R804	X	4	4	23'-9"			FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT OUTSIDE FACE-STAGE 2
R805	X	8	8	43'-1"			FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT INSIDE FACE-STAGE 1
R806	X	8	8	25'-0"			FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT INSIDE FACE-STAGE 2
R807	X	103	103	21'-6"	X		SLAB-BOTTOM-VERTICAL-LONGITUDINAL
R508	X	42	42	40'-3"			SLAB-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-STAGE 1
R509	X	42	42	25'-0"			SLAB-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-STAGE 2
R510	X	40	40	4'-1"	X		SLAB-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES
R511	X	64	64	19'-8"			SLAB-TOP-HORIZONTAL-LONGITUDINAL
R512	X	34	34	4'-5"	X		PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R513	X	34	34	6'-8"	X		PARAPETS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R514	X	34	34	4'-4"	X		PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R515	X	24	24	2'-9"	X		PARAPETS/SLAB-INSIDE FACE-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R516	X	12	12	6'-6"	X		PARAPETS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R517	X	8	8	6'-5"	X		PARAPETS-END-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R518	X	14	14	5'-8"	X	⚠	PARAPETS-END TAPER-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R519	X	10	10	19'-6"			PARAPETS-BOTH FACES-HORIZONTAL-LONGITUDINAL-AT ALL FOUR PPT. ENDS
R520	X	2	2	19'-6"	X		PARAPETS-BOT.-INSIDE FACE-HORIZONTAL-LONGITUDINAL-AT ALL FOUR PPT. ENDS
R521	X	4	4	19'-6"	X		PARAPETS-TOP-BOTH FACES-VERTICAL-LONGITUDINAL-AT ALL FOUR PPT. ENDS

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

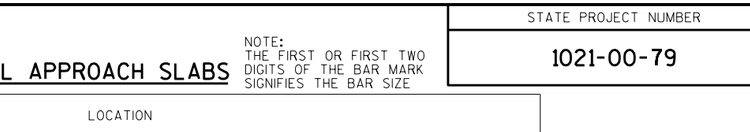
BAR SERIES TABLE

BAR MARK	NUMBER REQUIRED	TOTAL BAR LENGTH
R518	4 SERIES OF 7 BARS	4'-11" TO 6'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.

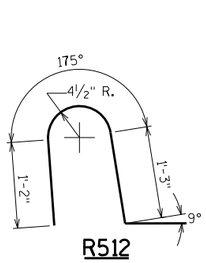


R501 R502
(STIRRUP BARS)

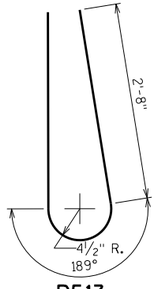


R807

R510



R512



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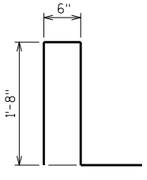
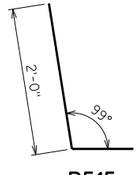


R514



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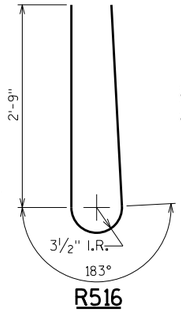
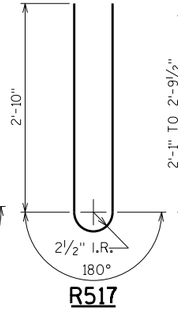


R516



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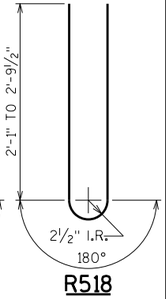

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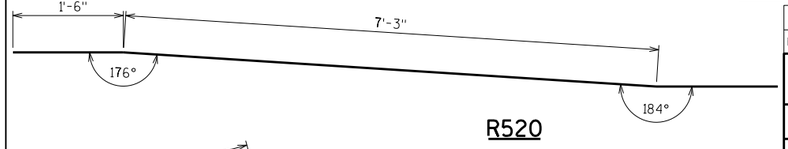

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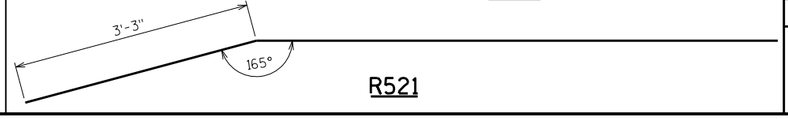


R521

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

SUPERSTRUCTURE & APPROACH SLAB BAR DETAILS

SHEET 22

315

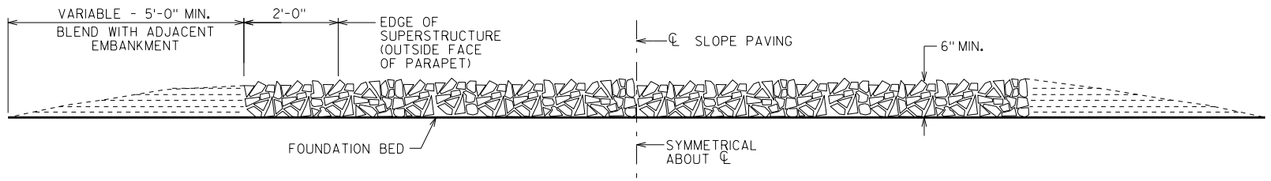
SCALE = 1.00

8

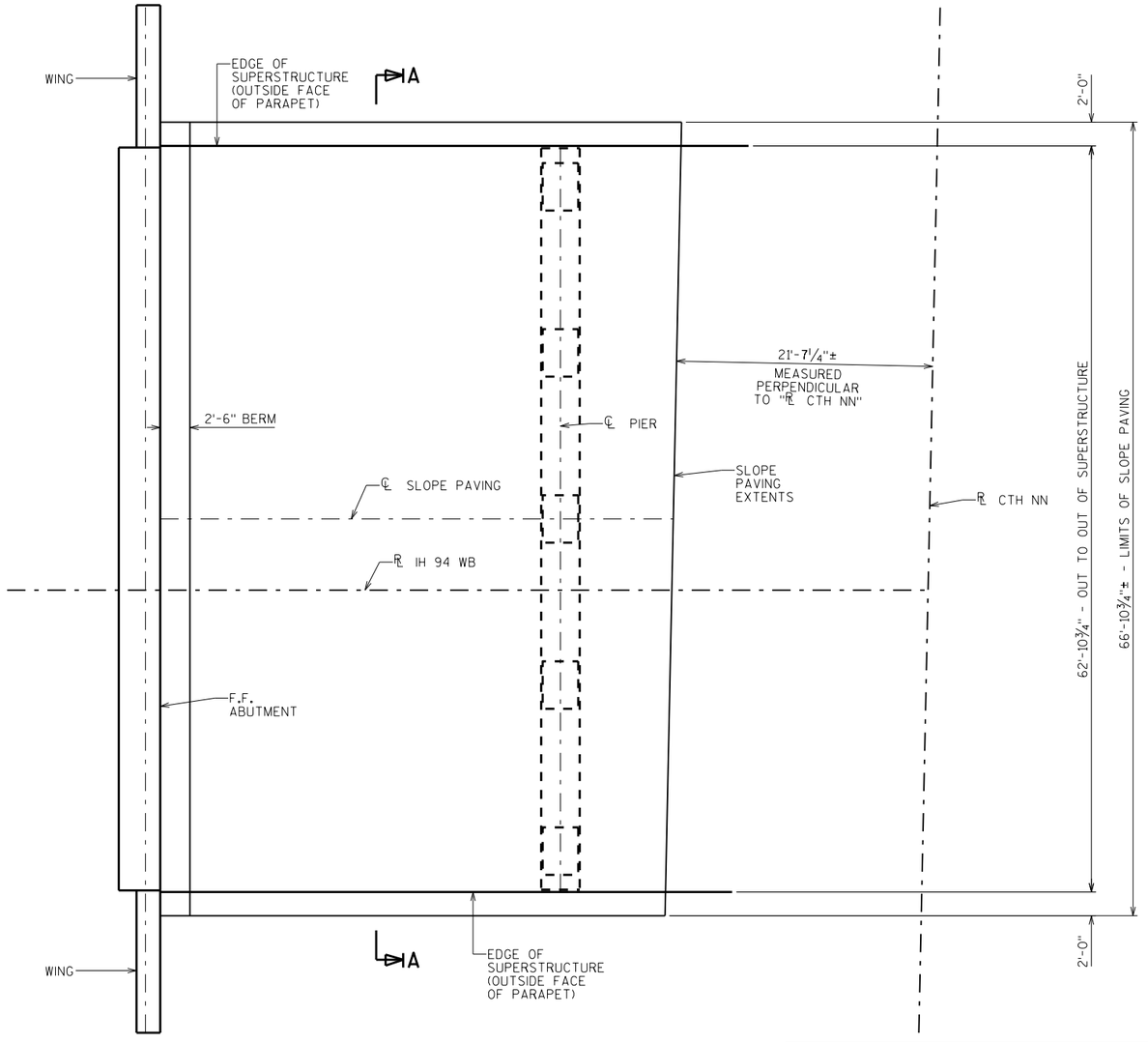
8

STATE PROJECT NUMBER

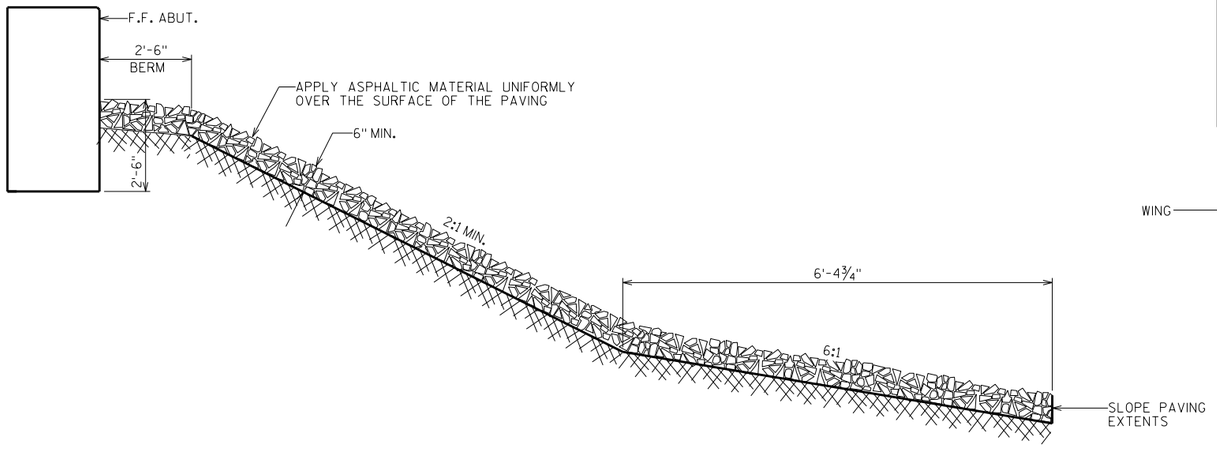
1021-00-79



SECTION A-A



PLAN AT BOTH ABUTMENTS



STANDARD CROSS SECTION THRU CRUSHED AGGREGATE AT ABUTMENTS

ROUND STONE WILL NOT BE ACCEPTED

GENERAL NOTES

BID ITEM SHALL BE "SLOPE PAVING CRUSHED AGGREGATE"

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

SLOPE PAVING CRUSHED AGGREGATE

SHEET 23

316

SCALE = 1.00

8

8

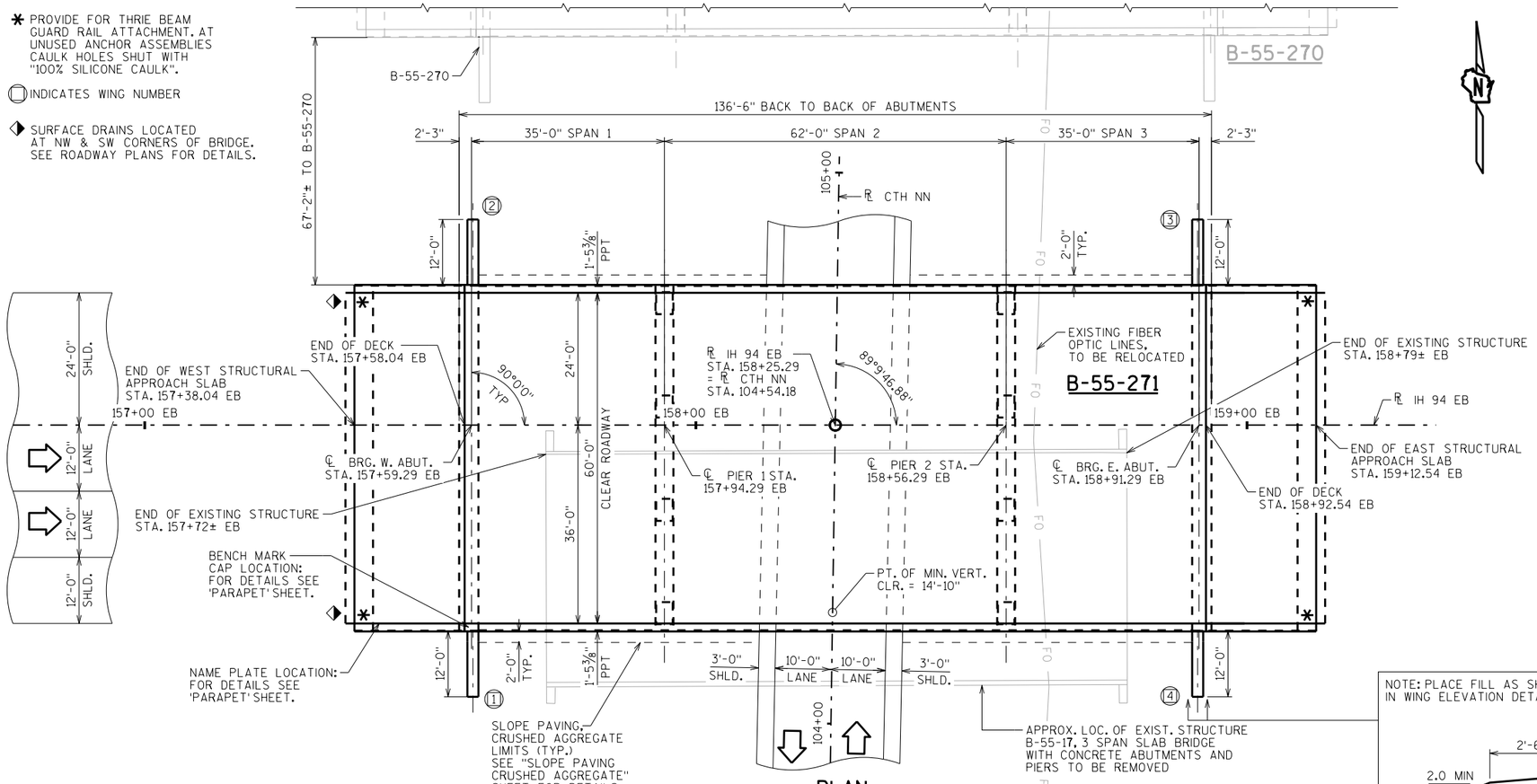
STATE PROJECT NUMBER

1021-00-78

✱ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

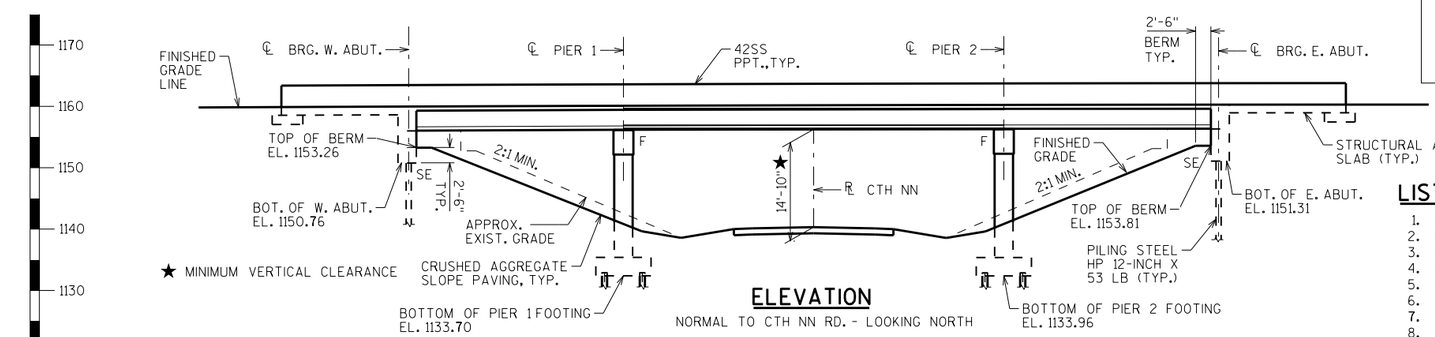
(1) INDICATES WING NUMBER

◆ SURFACE DRAINS LOCATED AT NW & SW CORNERS OF BRIDGE. SEE ROADWAY PLANS FOR DETAILS.



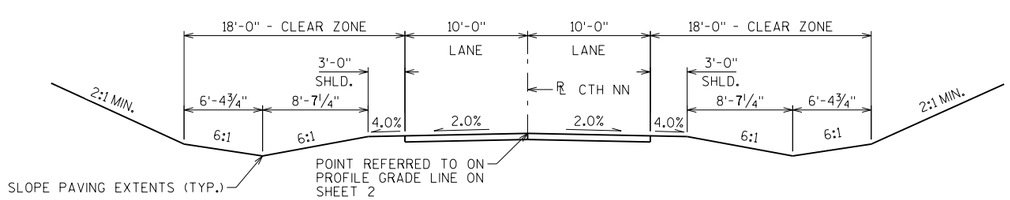
PLAN

3 SPAN - 36W" PRESTRESSED GIRDERS



ELEVATION

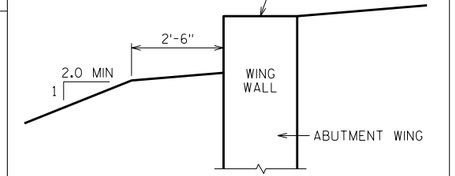
NORMAL TO CTH NN RD. - LOOKING NORTH



TYPICAL CROSS SECTION THRU CTH NN

NORMAL TO CTH NN - LOOKING NORTH

NOTE: PLACE FILL AS SHOWN IN WING ELEVATION DETAIL.



TYPICAL FILL SECTION AT WING

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.33
OPERATING RATING FACTOR: RF = 1.73
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

36W" PRESTRESSED GIRDERS:
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 TO BE SUPPORTED ON HP 12-INCH X 53 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS✱✱ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 30 FEET LONG AT WEST ABUT. PILE POINTS REQUIRED
ESTIMATED 55 FEET LONG AT EAST ABUT. PILE POINTS REQUIRED

PIERS TO BE SUPPORTED ON HP 12-INCH X 53 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS✱✱ PER PILE BY SEATING THE PILE IN LIMESTONE BEDROCK.
ESTIMATED 15 FEET LONG AT BOTH PIERS.
PRE-BORING INTO ROCK IS REQUIRED. A MINIMUM OF 10 FEET OF PRE-BORING IS ACCEPTABLE IF THE LAST 3 FEET ARE IN COMPETENT ROCK. IF 3 FEET OF COMPETENT ROCK IS NOT ENCOUNTERED WITHIN 10 FEET, PRE-BORING SHALL CONTINUE FOR A MINIMUM OF 12 FEET AND UNTIL A MINIMUM OF 1 FOOT EMBEDMENT INTO COMPETENT ROCK IS ACHIEVED. PILE SHALL BE FIRMLY SEATED IN THE BOTTOM OF THE PRE-BORED HOLE AND BACKFILLED FULL DEPTH WITH CEMENT GROUT.

✱✱ 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 VOLUME

IH 94 EB
ADT = 21150 (2042)
R.D.S. = 70 M.P.H.

CTH NN
ADT = 170 (2041)
R.D.S. = 55 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. PIER 1
9. PIER 1 DETAILS
10. PIER 2
11. PIER 2 DETAILS
12. 36W" PRESTRESSED GIRDER DETAILS 1
13. 36W" PRESTRESSED GIRDER DETAILS 2
14. STEEL DIAPHRAGM
15. SUPERSTRUCTURE CROSS SECTIONS
16. SUPERSTRUCTURE DETAILS
17. SUPERSTRUCTURE PLAN
18. STRUCTURAL APPROACH SLAB
19. STRUCTURAL APPROACH SLAB CROSS SECTION
20. SINGLE SLOPE PARAPET 42SS
21. SUPERSTRUCTURE & APPROACH SLAB BAR DETAILS
22. SLOPE PAVING CRUSHED AGGREGATE
23. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:
AIHAM ALSKIF (608) 261-6113
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED AMB 5/1/20
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-55-271

IH 94 EB OVER CTH NN

COUNTY	TOWN
ST. CROIX	CADY

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
AA	JJS	JPH	AA

GENERAL PLAN

SHEET 1 OF 23

317

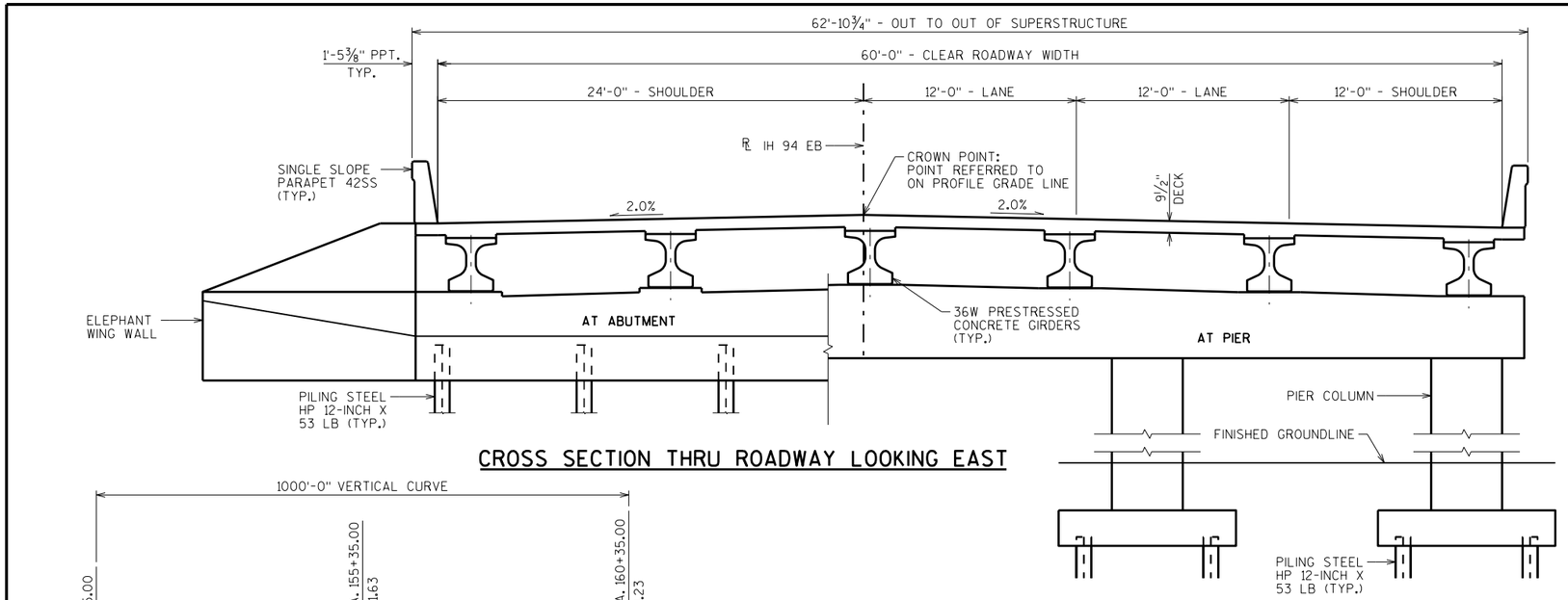
I.D. 1021-00-08A

DATE: APRIL 2020

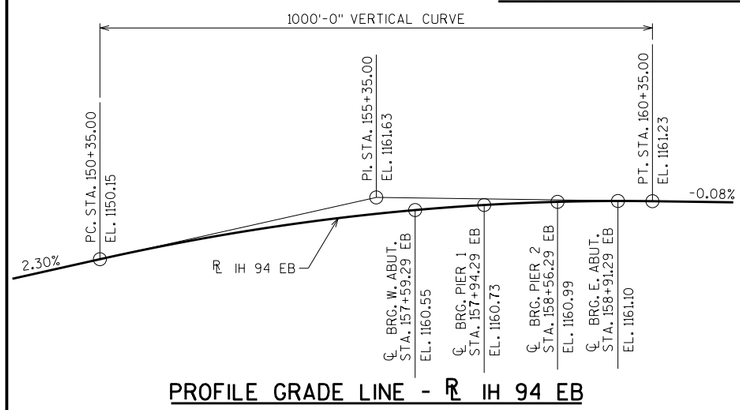
SCALE = 12.00

8

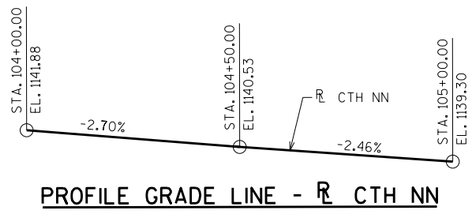
8



CROSS SECTION THRU ROADWAY LOOKING EAST



PROFILE GRADE LINE - ℄ IH 94 EB



PROFILE GRADE LINE - ℄ CTH NN

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	W. STRUCT. APP. SLAB	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	E. STRUCT. APP. SLAB	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 158+25.29 EB	LS	———	———	———	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-55-271	LS	———	———	———	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	———	212	———	———	212	———	424
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	———	197	———	———	———	———	197	394
502.0100	CONCRETE MASONRY BRIDGES	CY	384	84	57	99	99	57	84	864
502.3200	PROTECTIVE SURFACE TREATMENT	SY	930	134	———	———	———	———	134	1198
502.3210	PIGMENTED SURFACE SEALER	SY	133	20	———	———	———	———	20	173
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	795	———	———	———	———	———	———	795
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	———	3625	2660	2660	3625	———	12,570
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	74,070	14,300	925	15,230	15,230	925	14,300	134,980
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	2110	———	———	———	———	———	———	2110
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	36	———	———	———	———	———	———	36
506.4000	STEEL DIAPHRAGMS B-55-271	EACH	15	———	———	———	———	———	———	15
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	———	17	———	———	17	———	34
◐ 550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	———	———	———	360	360	———	———	720
550.0500	PILE POINTS	EACH	———	———	9	———	———	9	———	18
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	———	———	270	360	360	495	———	1485
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	———	———	345	———	———	345	———	690
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	———	130	———	———	130	———	260
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	———	———	———	———	———	———	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	———	———	60	———	———	60	———	120
	NON-BID ITEMS									
	FILLER	SIZE	———	———	———	———	———	———	———	½", ¾", 1½"

STATE PROJECT NUMBER

1021-00-78

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-55-271" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

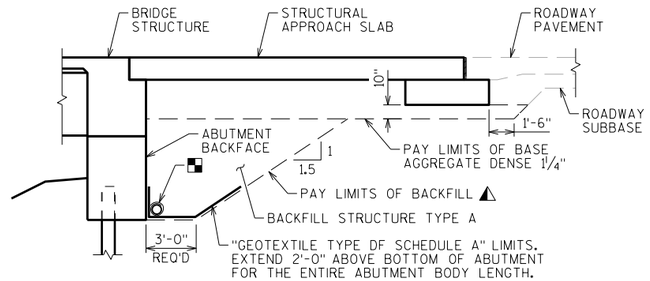
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

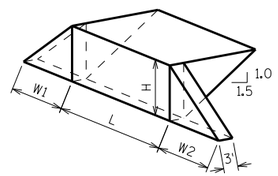
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "36W" PRESTRESSED GIRDER DETAILS 2" SHEET.



TYPICAL SECTION THRU ABUTMENT

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

◘ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ABUTMENT

L = OUT TO OUT OF ABUTMENT BODY (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
W1 = WING 1 LENGTH (FT)
W2 = WING 2 LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3.0')(0.5)(W1+W2)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)

◐ PRE-BORING INTO ROCK IS REQUIRED. A MINIMUM OF 10 FEET OF PRE-BORING IS ACCEPTABLE IF THE LAST 3 FEET ARE IN COMPETENT ROCK. IF 3 FEET OF COMPETENT ROCK IS NOT ENCOUNTERED WITHIN 10 FEET, PRE-BORING SHALL CONTINUE FOR A MINIMUM OF 12 FEET AND UNTIL A MINIMUM OF 1 FOOT EMBEDMENT INTO COMPETENT ROCK IS ACHIEVED. PILE SHALL BE FIRMLY SEATED IN THE BOTTOM OF THE PRE-BORED HOLE AND BACKFILLED FULL DEPTH WITH CEMENT GROUT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

CROSS SECTION & QUANTITIES

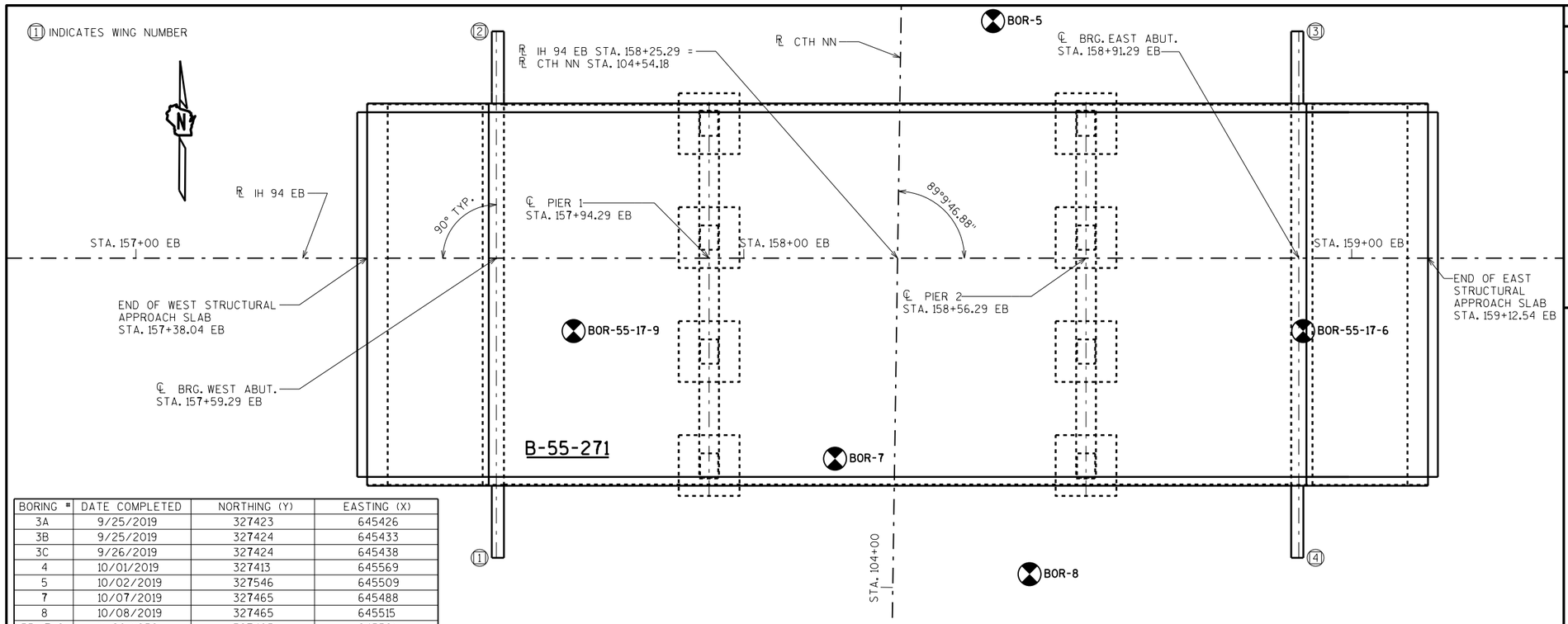
SHEET 2

318

8

8

SCALE = 4.00



PLAN

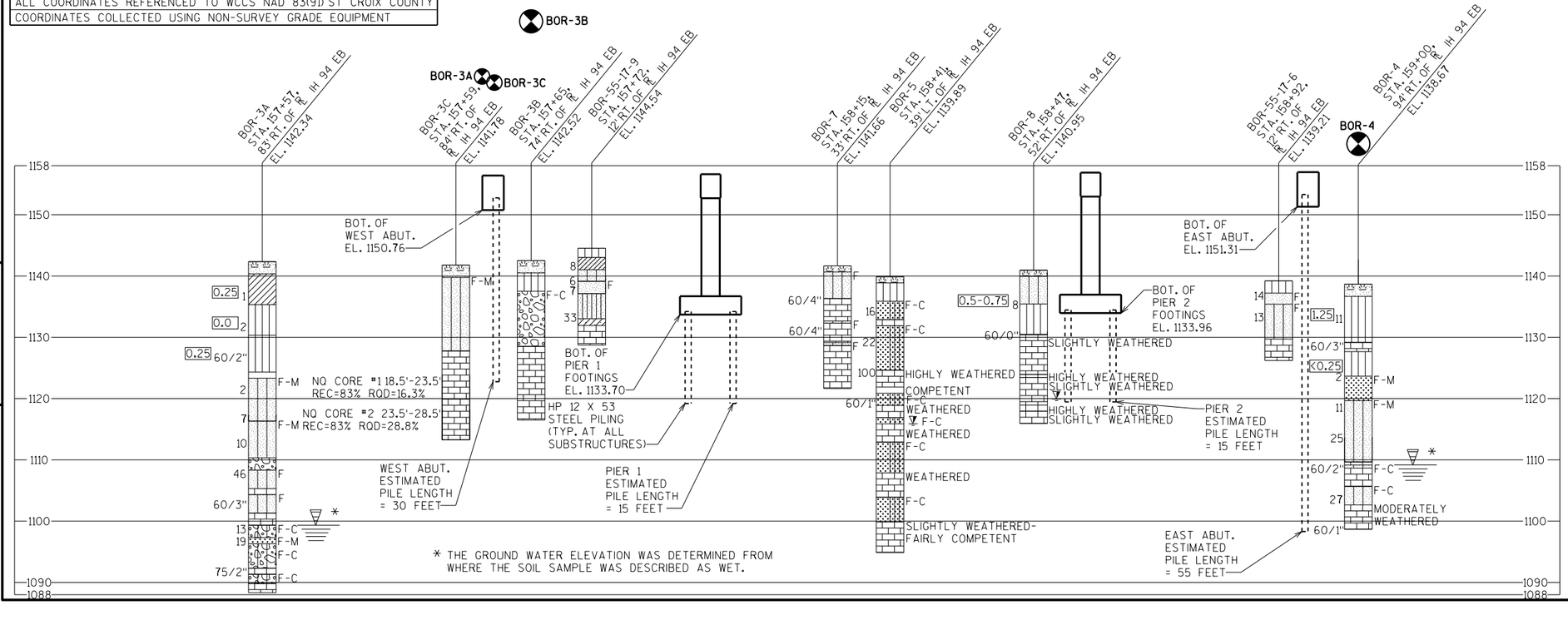
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
3A	9/25/2019	327423	645426
3B	9/25/2019	327424	645433
3C	9/26/2019	327424	645438
4	10/01/2019	327413	645569
5	10/02/2019	327546	645509
7	10/07/2019	327465	645488
8	10/08/2019	327465	645515
55-17-6	11/20/1956	327495	645561
55-17-9	11/20/1956	327494	645441

BORINGS COMPLETED BY: WISDOT

REPORT COMPLETED BY: WISDOT

ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY

COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT



* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

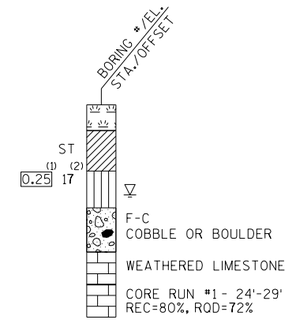
STATE PROJECT NUMBER

1021-00-78

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

SUBSURFACE EXPLORATION

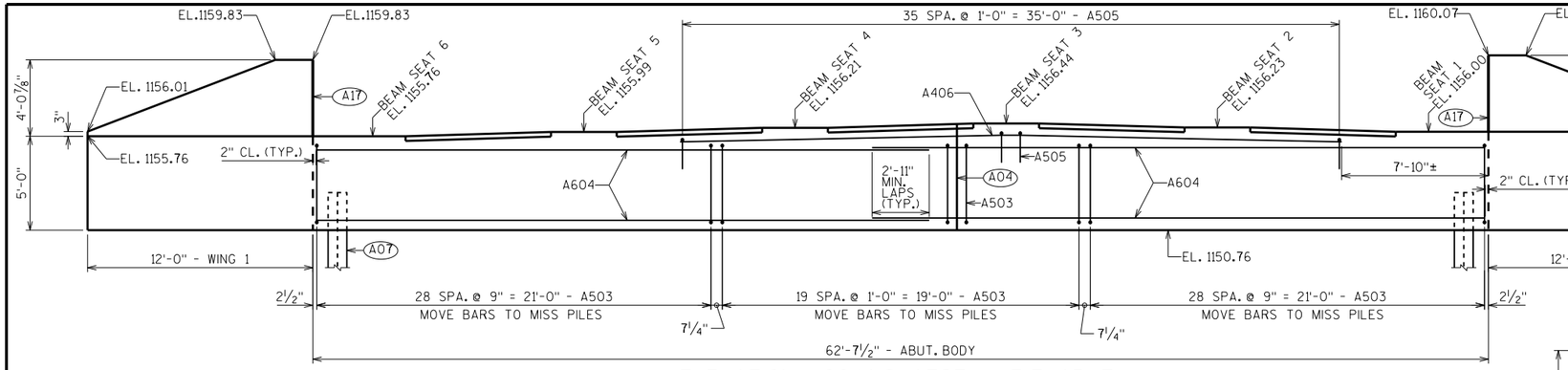
SHEET 3

319

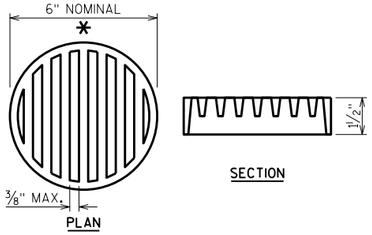
SCALE = 10.00

STATE PROJECT NUMBER

1021-00-78



ELEVATION LOOKING WEST @ F.F. ABUT.

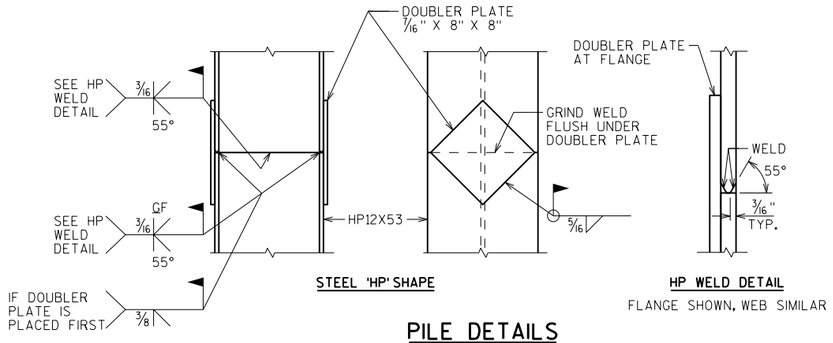


RODENT SHIELD DETAIL

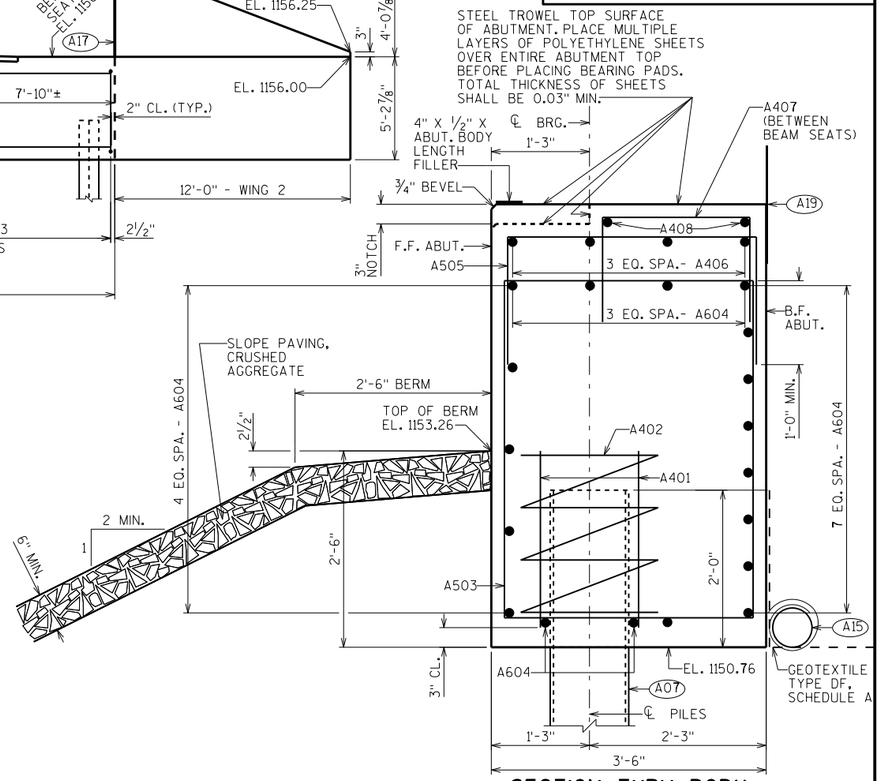
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

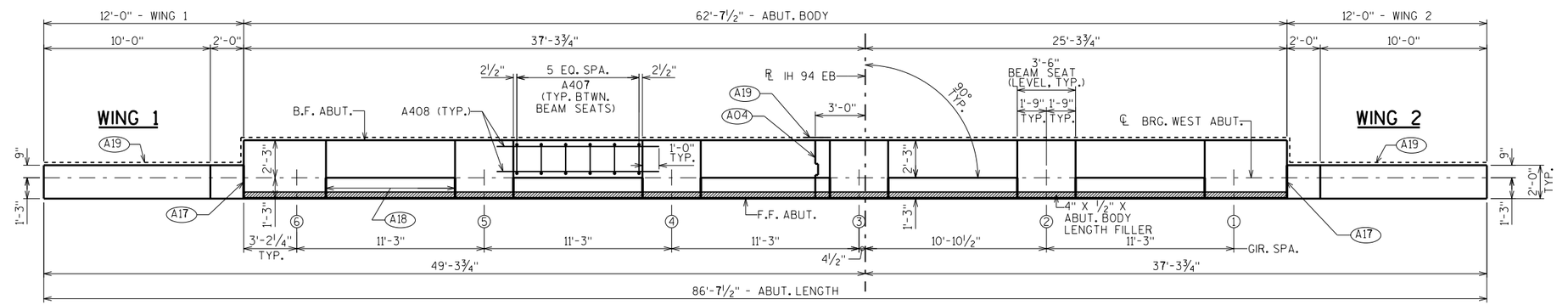
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



PILE DETAILS



SECTION THRU BODY



○ INDICATES GIRDER NUMBER

(A04) VERTICAL CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" × 8". ¾" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A07) SUPPORT ABUTMENT ON HP 12 × 53 STEEL PILING, ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) ¾" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

WEST ABUTMENT

SHEET 4

320

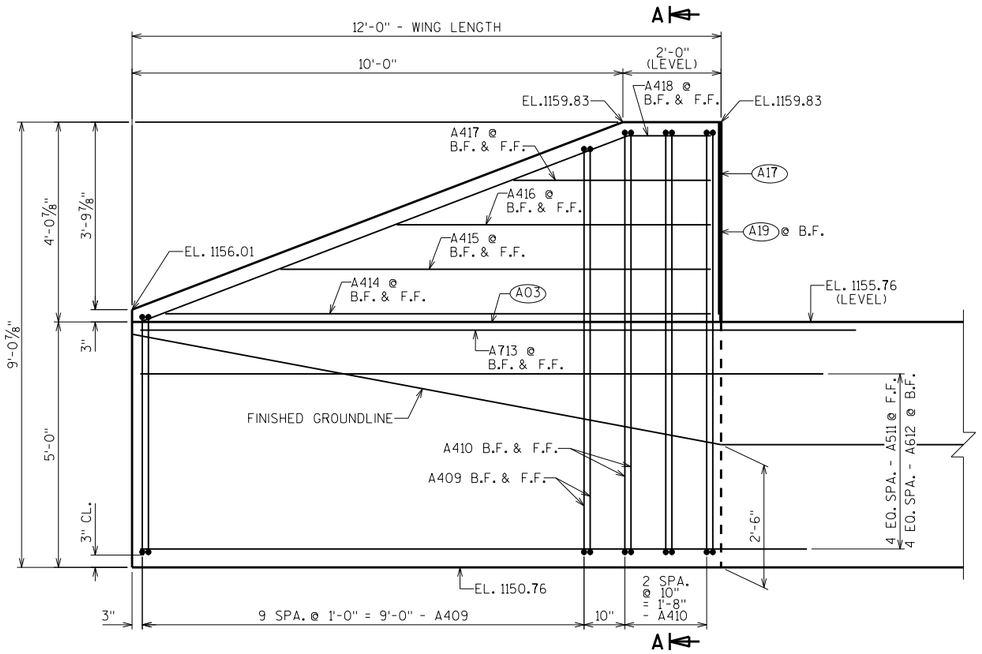
8

8

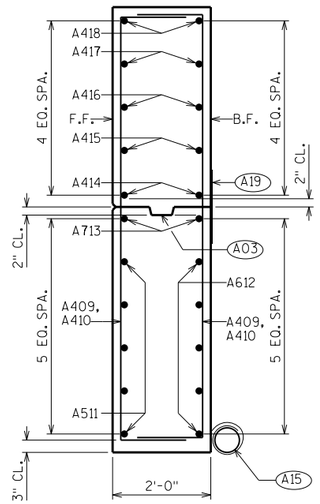
SCALE = 3.75

STATE PROJECT NUMBER

1021-00-78



WING 1 ELEVATION LOOKING AT F.F. WING



WING 1 SECTION A-A

BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

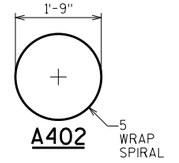
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		18	2'-3"			BODY-BOTTOM-2 PER PILE-VERTICAL
A402		9	28'-0"	X		BODY-BOT.-SPIRAL-1 PER PILE-VERT.
A503		78	15'-7"	X		BODY-STIRRUPS-VERT.
A604		34	32'-8"			BODY-HORIZONTAL-END TO END
A505		36	6'-3"	X		BODY-TOP-VERT.-UNDER BEAM SEATS 2-4
A406		4	35'-3"			BODY-TOP-HORIZ.-UNDER BEAM SEATS 2-4
A407		30	4'-11"	X		BODY-TOP-VERT.-BETWEEN BEAM SEATS
A408		10	9'-9"			BODY-TOP-HORIZ.-BETWEEN BEAM SEATS
A409	X	20	9'-2"	X	⚠	WING 1-VERT.-F.F. & B.F.
A410	X	6	11'-2"	X		WING 1-VERT.-F.F. & B.F.
A511	X	10	13'-7"			WINGS 1&2-HORIZONTAL-F.F.-LOWER WING
A612	X	10	13'-11"			WINGS 1&2-HORIZONTAL-B.F.-LOWER WING
A713	X	4	14'-7"			WINGS 1&2-HORIZONTAL-F.F. & B.F.-LOWER WING
A414	X	4	11'-2"			WINGS 1&2-HORIZONTAL-F.F. & B.F.-UPPER WING
A415	X	4	8'-9"			WINGS 1&2-HORIZONTAL-F.F. & B.F.-UPPER WING
A416	X	4	6'-4"			WINGS 1&2-HORIZONTAL-F.F. & B.F.-UPPER WING
A417	X	4	3'-11"			WINGS 1&2-HORIZONTAL-F.F. & B.F.-UPPER WING
A418	X	4	12'-4"	X		WINGS 1&2-TOP-VERTICAL-F.F. & B.F.-UPPER WING
A419	X	20	9'-5"	X	⚠	WING 2-VERT.-F.F. & B.F.
A420	X	6	11'-5"	X		WING 2-VERT.-F.F. & B.F.

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

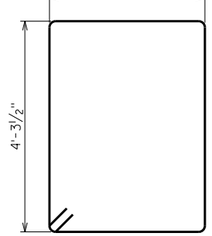
BAR SERIES TABLE

BAR MARK	NUMBER REQUIRED	LENGTH
A409	2 SERIES OF 10 BARS	7'-5" TO 10'-10"
A419	2 SERIES OF 10 BARS	7'-8" TO 11'-1"

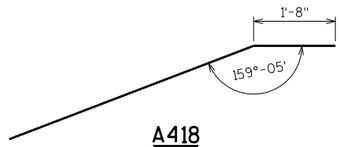
BUNDLE AND TAG EACH SERIES SEPARATELY.



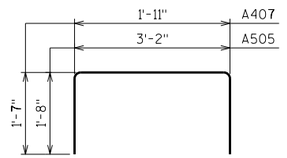
A402



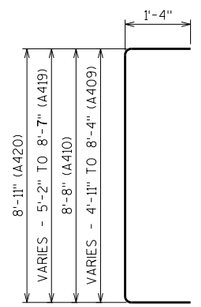
A503



A418



A505 A407



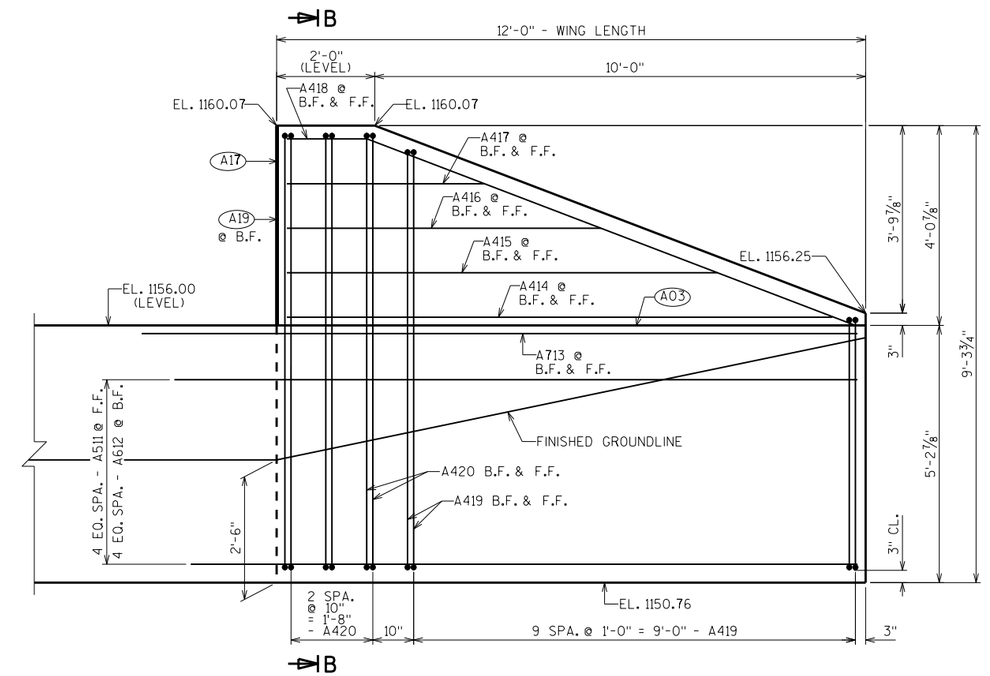
A409 A410 A419 A420

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

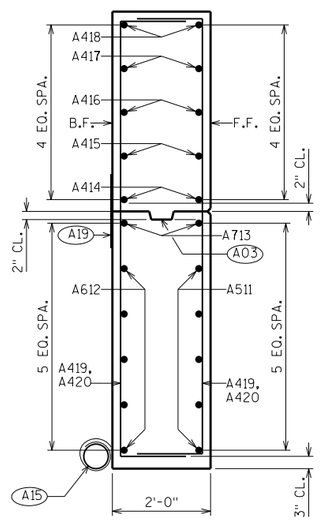
A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



WING 2 ELEVATION LOOKING AT F.F. WING



WING 2 SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

WEST ABUTMENT DETAILS

SHEET 5

321

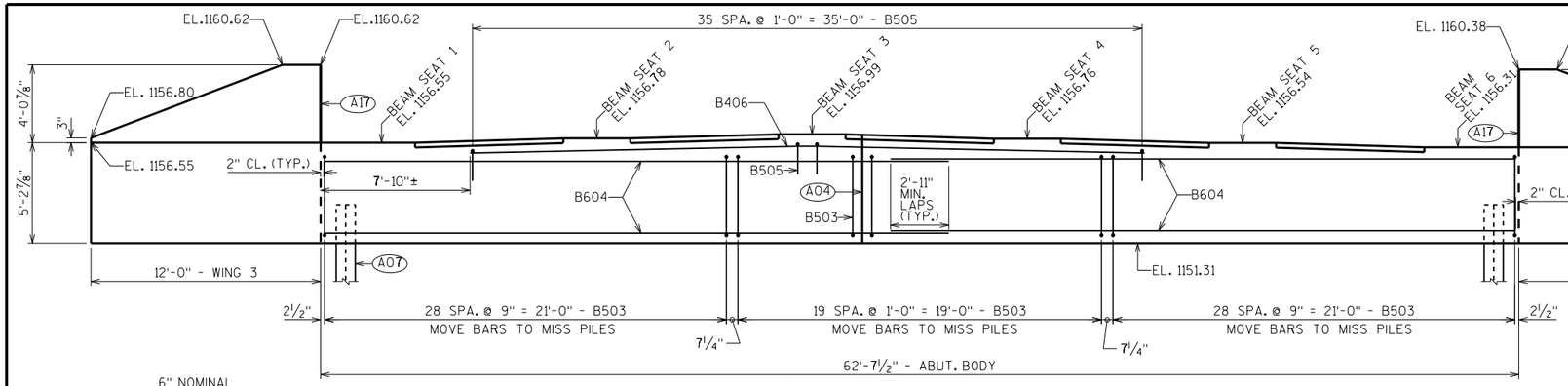
SCALE = 1.50

8

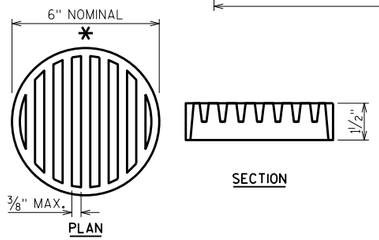
8

STATE PROJECT NUMBER

1021-00-78



ELEVATION LOOKING EAST @ F.F. ABUT.

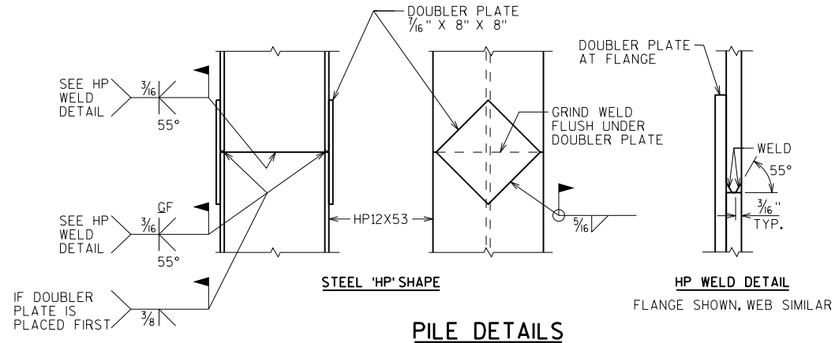


RODENT SHIELD DETAIL

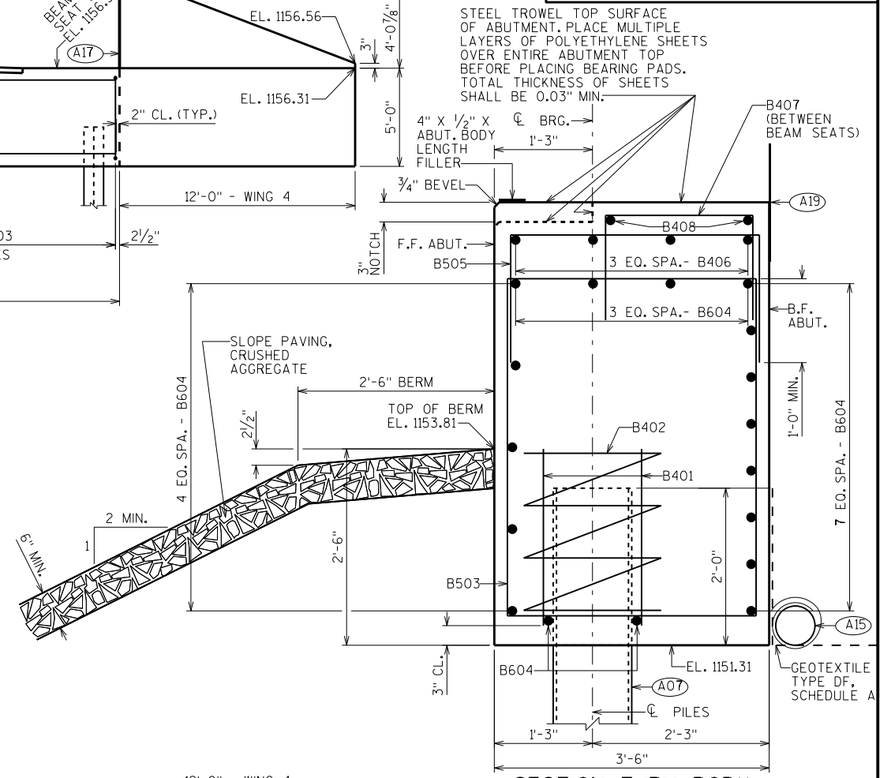
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

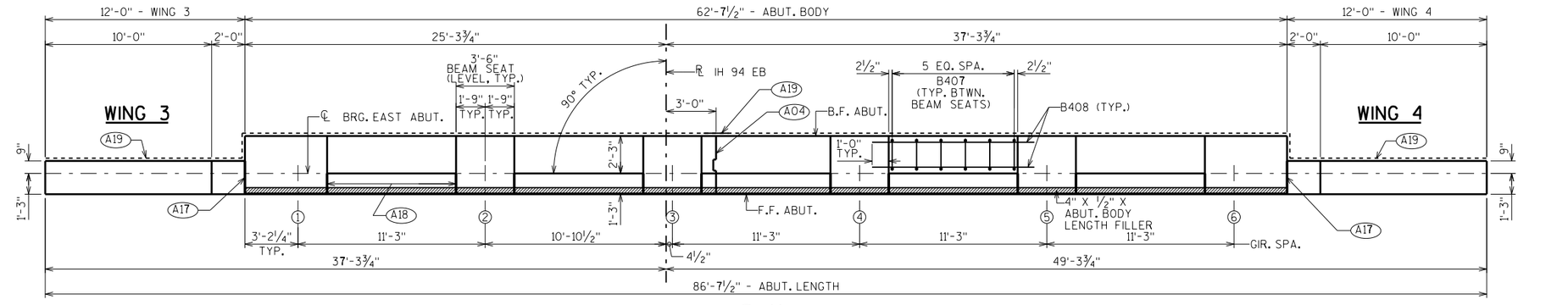
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



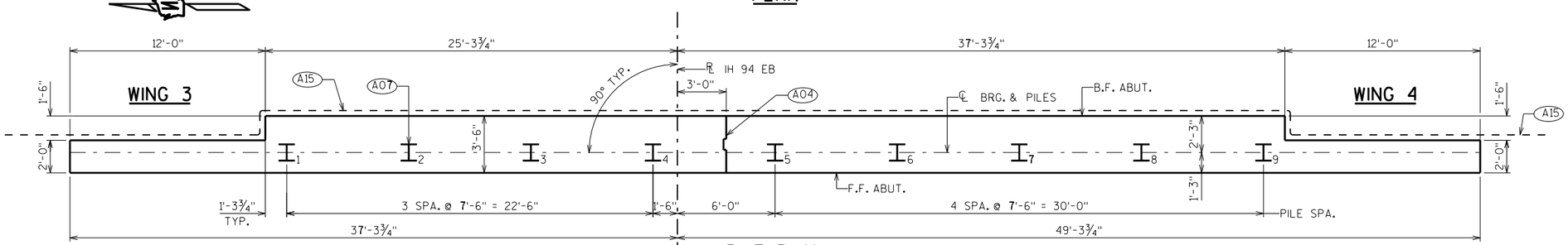
PILE DETAILS



SECTION THRU BODY



PLAN



PILE PLAN

○ INDICATES GIRDER NUMBER

(A04) VERTICAL CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" x 8". 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A07) SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING. ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

EAST ABUTMENT

SHEET 6

322

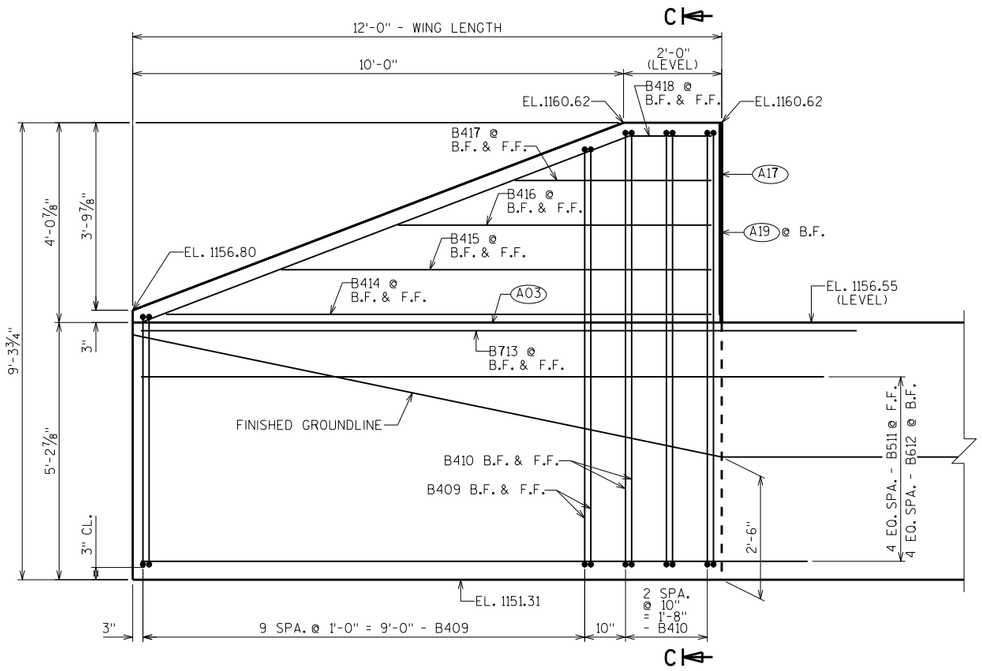
SCALE = 3.75

8

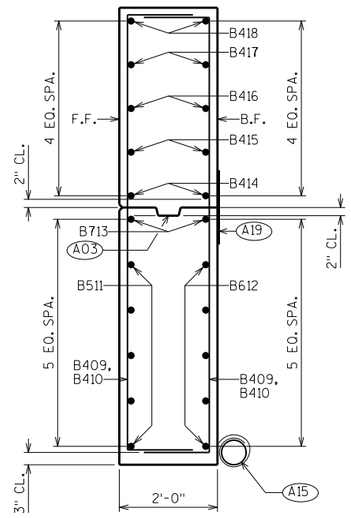
8

STATE PROJECT NUMBER

1021-00-78



WING 3 ELEVATION LOOKING AT F.F. WING



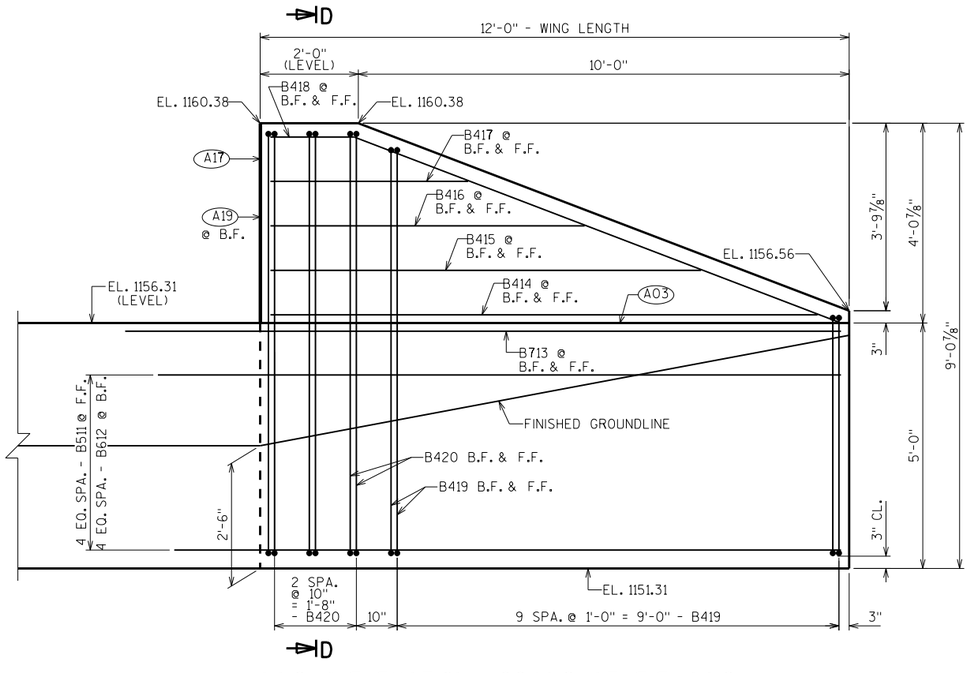
WING 3 SECTION C-C

BILL OF BARS

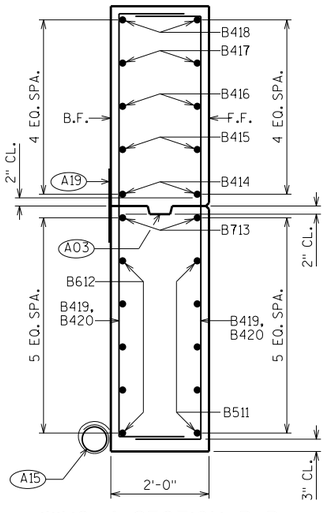
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		18	2'-3"			BODY-BOTTOM-2 PER PILE-VERTICAL
B402		9	28'-0"	X		BODY-BOT.-SPIRAL-1 PER PILE-VERT.
B503		78	15'-7"	X		BODY-STIRRUPS-VERT.
B604		34	32'-8"			BODY-HORIZONTAL-END TO END
B505		36	6'-3"	X		BODY-TOP-VERT.-UNDER BEAM SEATS 2-4
B406		4	35'-3"			BODY-TOP-HORIZ.-UNDER BEAM SEATS 2-4
B407		30	4'-11"	X		BODY-TOP-VERT.-BETWEEN BEAM SEATS
B408		10	9'-9"			BODY-TOP-HORIZ.-BETWEEN BEAM SEATS
B409	X	20	9'-5"	X	⚠	WING 3-VERT.-F.F. & B.F.
B410	X	6	11'-5"	X		WING 3-VERT.-F.F. & B.F.
B511	X	10	13'-7"			WINGS 3&4-HORIZONTAL-F.F.-LOWER WING
B612	X	10	13'-11"			WINGS 3&4-HORIZONTAL-B.F.-LOWER WING
B713	X	4	14'-7"			WINGS 3&4-HORIZONTAL-F.F. & B.F.-LOWER WING
B414	X	4	11'-2"			WINGS 3&4-HORIZONTAL-F.F. & B.F.-UPPER WING
B415	X	4	8'-9"			WINGS 3&4-HORIZONTAL-F.F. & B.F.-UPPER WING
B416	X	4	6'-4"			WINGS 3&4-HORIZONTAL-F.F. & B.F.-UPPER WING
B417	X	4	3'-11"			WINGS 3&4-HORIZONTAL-F.F. & B.F.-UPPER WING
B418	X	4	12'-4"	X		WINGS 3&4-TOP-VERTICAL-F.F. & B.F.-UPPER WING
B419	X	20	9'-2"	X	⚠	WING 4-VERT.-F.F. & B.F.
B420	X	6	11'-2"	X		WING 4-VERT.-F.F. & B.F.

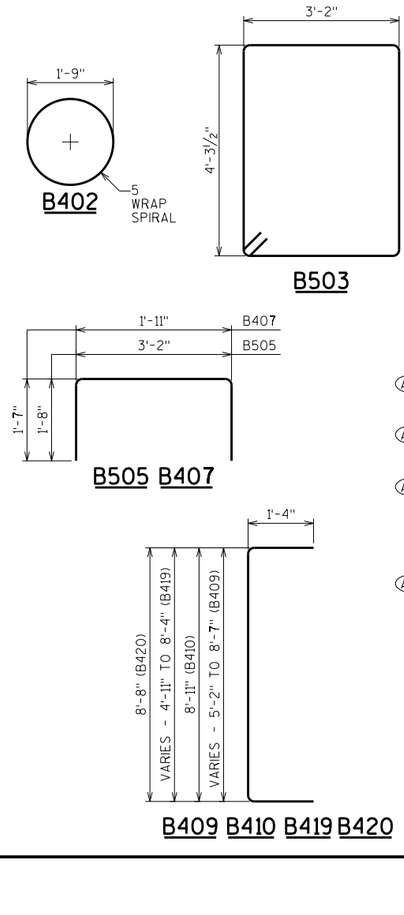
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



WING 4 ELEVATION LOOKING AT F.F. WING



WING 4 SECTION D-D



BAR SERIES TABLE

BAR MARK	NUMBER REQUIRED	LENGTH
B409	2 SERIES OF 10 BARS	7'-8" TO 11'-1"
B419	2 SERIES OF 10 BARS	7'-5" TO 10'-10"

BUNDLE AND TAG EACH SERIES SEPARATELY.

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

EAST ABUTMENT DETAILS

SHEET 7

323

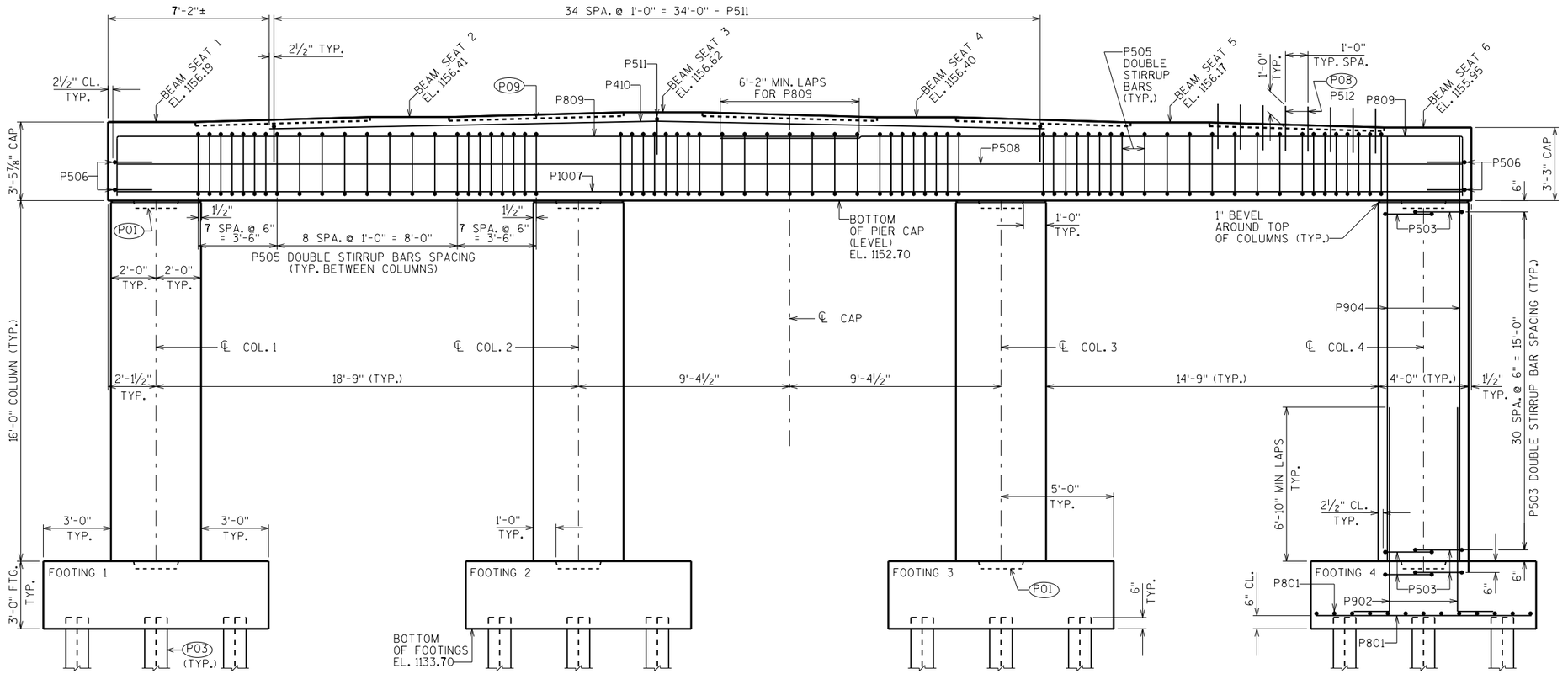
SCALE = 1.50

8

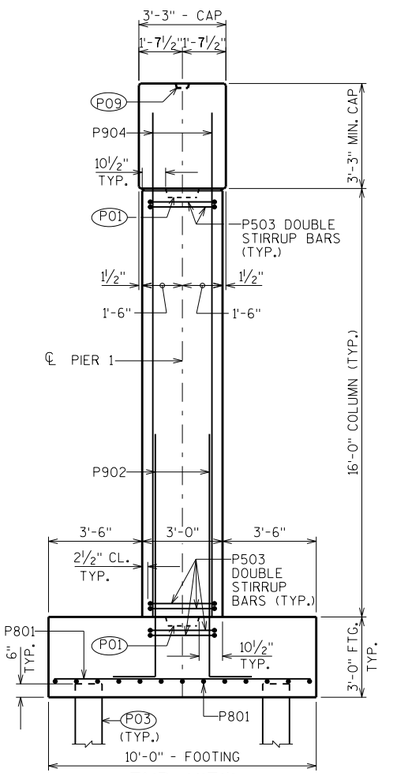
8

STATE PROJECT NUMBER

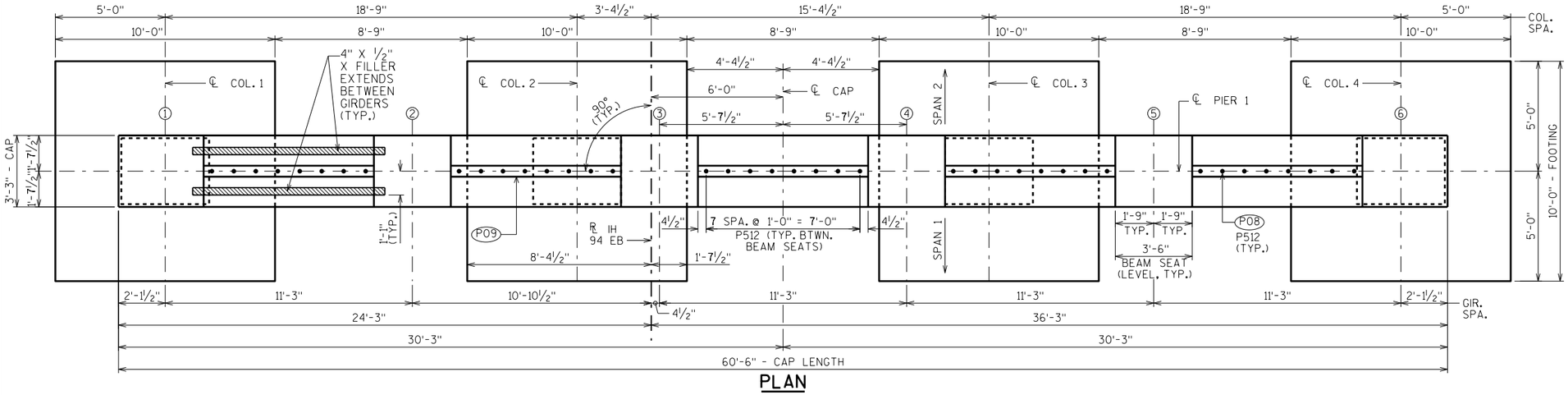
1021-00-78



ELEVATION LOOKING EAST



END VIEW



PLAN

○ INDICATES GIRDER NUMBER

(P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT JOINT FORMED BY BEVELED KEYWAY.

(P03) SUPPORT PIER ON HP 12 X 53 STEEL PILING, ESTIMATED 15'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PRE-BORING INTO ROCK IS REQUIRED. A MINIMUM OF 10 FEET OF PRE-BORING IS ACCEPTABLE IF THE LAST 3 FEET ARE IN COMPETENT ROCK. IF 3 FEET OF COMPETENT ROCK IS NOT ENCOUNTERED WITHIN 10 FEET, PRE-BORING SHALL CONTINUE FOR A MINIMUM OF 12 FEET AND UNTIL A MINIMUM OF 1 FOOT EMBEDMENT INTO COMPETENT ROCK IS ACHIEVED. PILE SHALL BE FIRMLY SEATED IN THE BOTTOM OF THE PRE-BORED HOLE AND BACKFILLED FULL DEPTH WITH CEMENT GROUT.

(P08) P512 BARS @ 1'-0" SPA. 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
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STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY	PLANS CK'D.
JPH	AA

PIER 1

SHEET 8

324

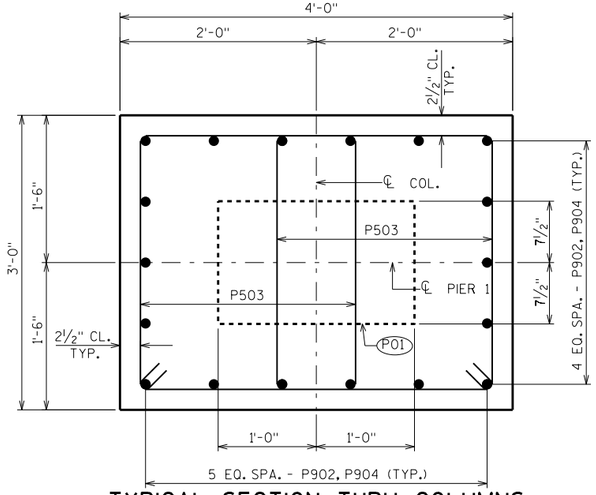
SCALE = 2.75

8

8

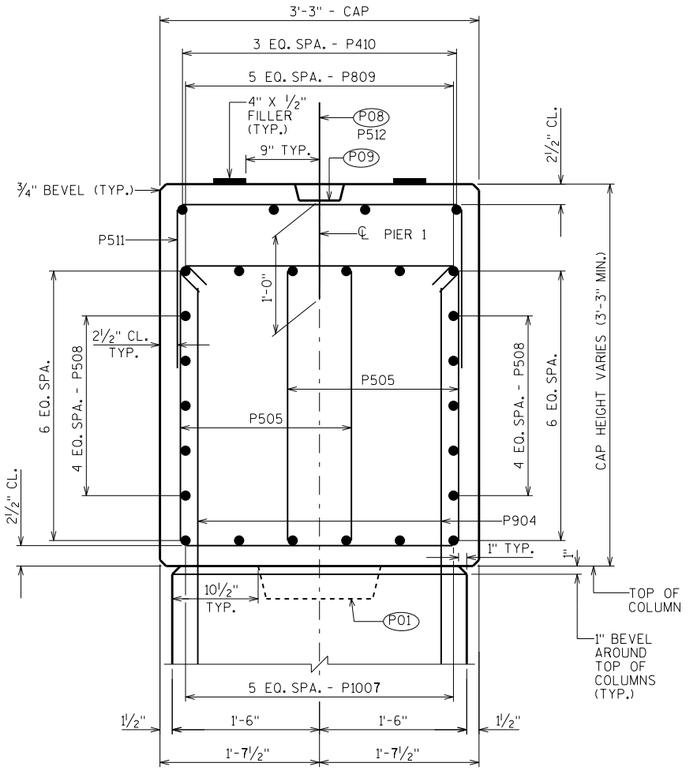
STATE PROJECT NUMBER

1021-00-78



TYPICAL SECTION THRU COLUMNS

(SHOWING DOUBLE STIRRUPS)



SECTION THRU CAP

(SHOWING DOUBLE STIRRUPS)

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	LOCATION
P801		104	9'-7"		FOOTINGS-BOTTOM-HORIZ.-LONGIT. & TRANS.
P902	X	72	10'-7"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
P503	X	256	10'-6"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
P904	X	72	18'-10"		COLUMNS/CAP-VERTICAL-ALL FACES
P505	X	138	10'-0"	X	CAP-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS
P506	X	12	6'-0"	X	CAP-HORIZ.-BOTH ENDS ONLY
P1007	X	6	60'-0"		CAP-BOT.-HORIZ.-LONGIT.
P508	X	10	60'-0"		CAP-HORIZ.-LONGIT.-BOTH FACES
P809	X	12	35'-9"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.
P410	X	4	34'-5"		CAP-TOP-HORIZ.-LONGIT.-UNDER BEAM SEATS 2-4
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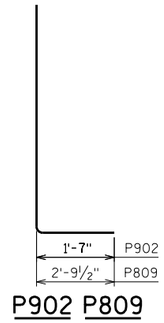
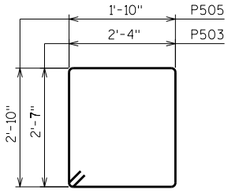
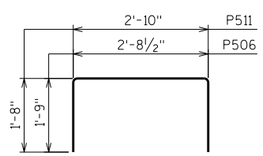
P512	X	40	2'-0"		CAP-TOP-VERTICAL-CENTER-BTWN. BEAM SEATS



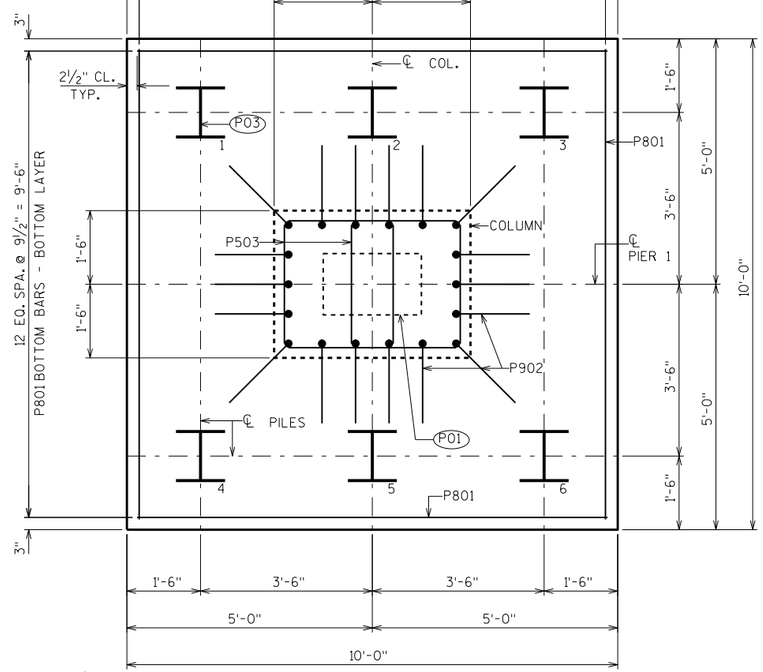
P902 P809



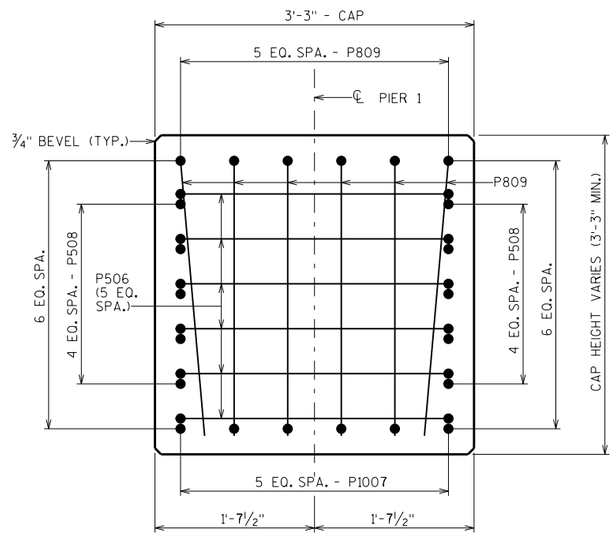
P503 P505



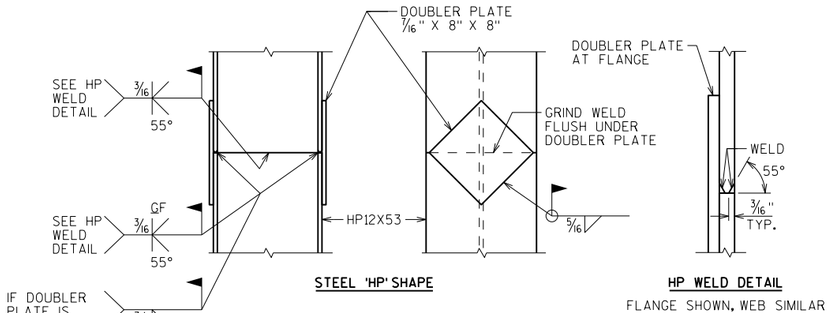
P506 P511



TYPICAL FOOTING/PILE PLAN



SECTION THRU CAP AT ENDS



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

(P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT JOINT FORMED BY BEVELED KEYWAY.

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(P08) P512 BARS @ 1'-0" SPA. 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
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STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

PIER 1 DETAILS

SHEET 9

325

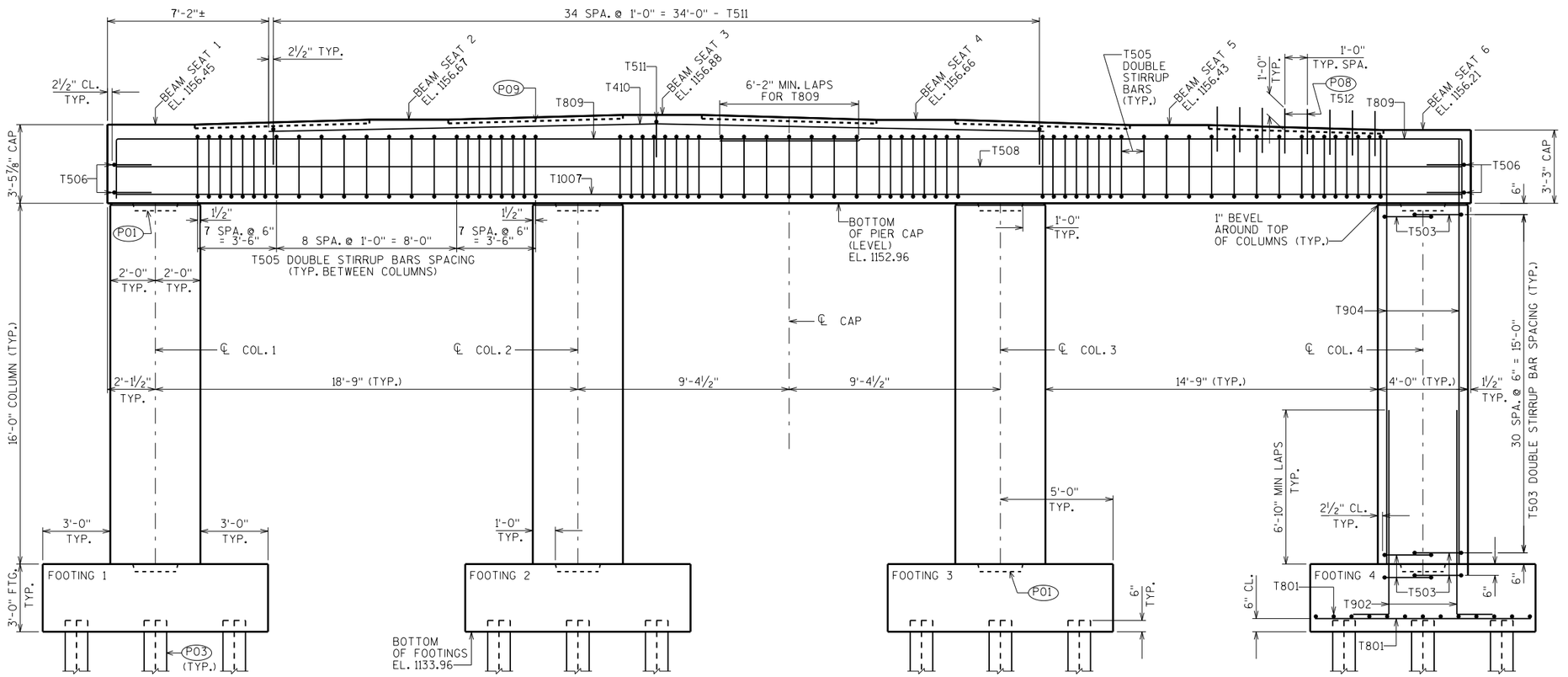
SCALE = 1.50

8

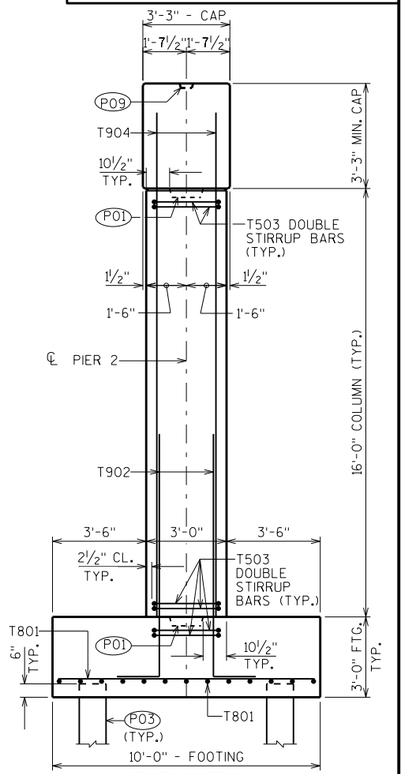
8

STATE PROJECT NUMBER

1021-00-78

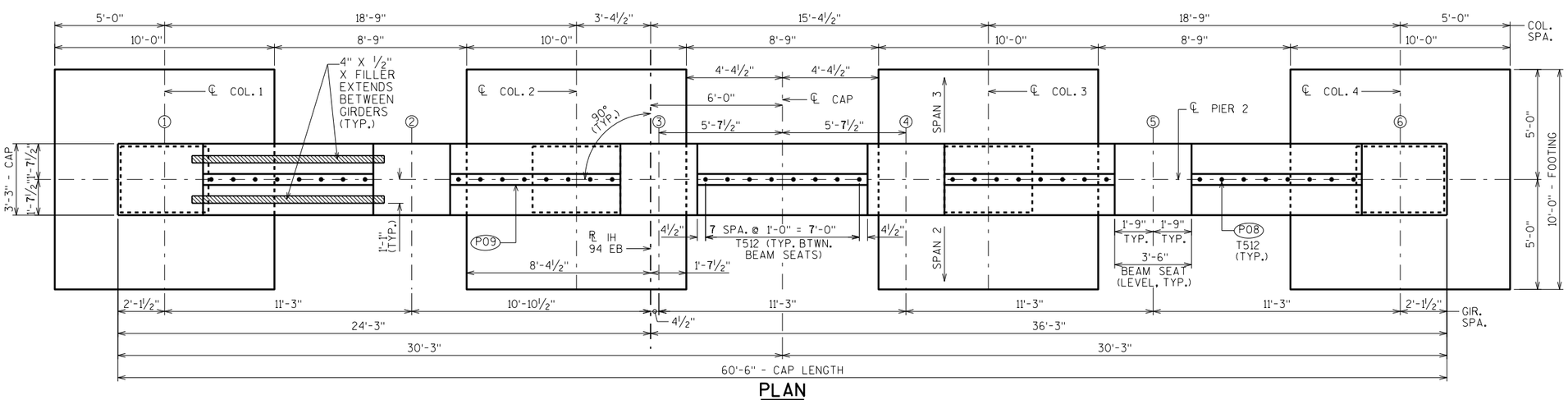


ELEVATION LOOKING EAST



END VIEW

○ INDICATES GIRDER NUMBER



PLAN

P01 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT JOINT FORMED BY BEVELED KEYWAY.

P03 SUPPORT PIER ON HP 12 X 53 STEEL PILING, ESTIMATED 15'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PRE-BORING INTO ROCK IS REQUIRED. A MINIMUM OF 10 FEET OF PRE-BORING IS ACCEPTABLE IF THE LAST 3 FEET ARE IN COMPETENT ROCK. IF 3 FEET OF COMPETENT ROCK IS NOT ENCOUNTERED WITHIN 10 FEET, PRE-BORING SHALL CONTINUE FOR A MINIMUM OF 12 FEET AND UNTIL A MINIMUM OF 1 FOOT EMBEDMENT INTO COMPETENT ROCK IS ACHIEVED. PILE SHALL BE FIRMLY SEATED IN THE BOTTOM OF THE PRE-BORED HOLE AND BACKFILLED FULL DEPTH WITH CEMENT GROUT.

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STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

PIER 2

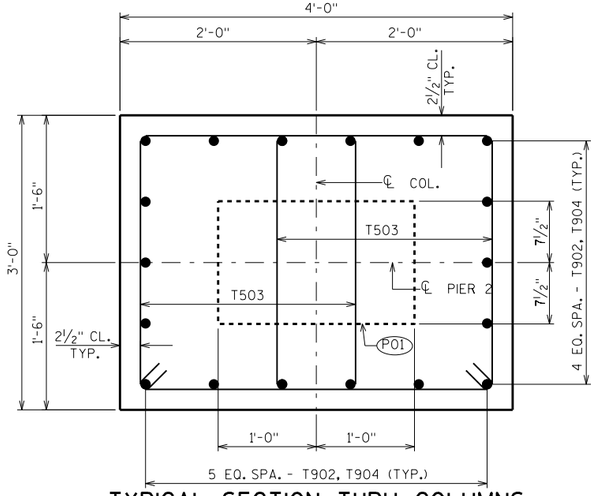
SHEET 10

326

SCALE = 2.75

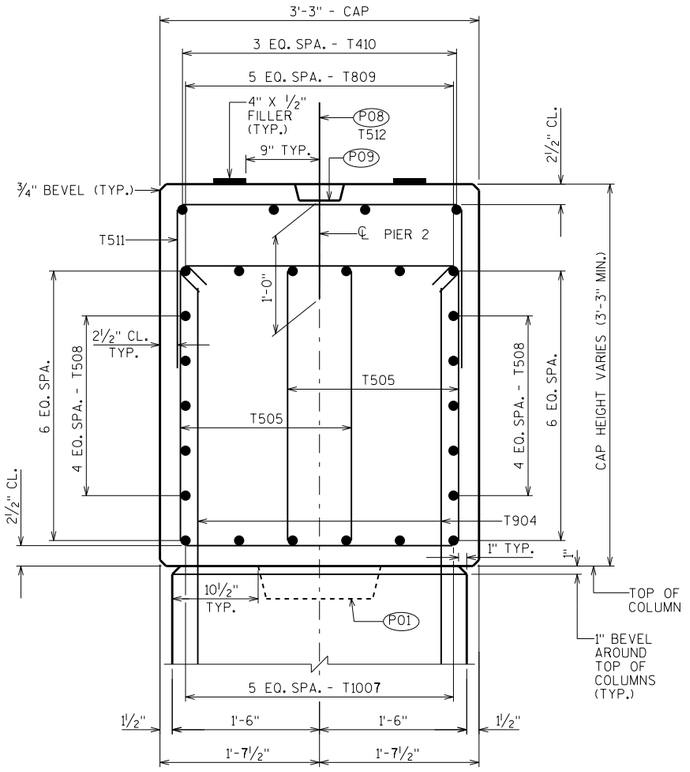
STATE PROJECT NUMBER

1021-00-78



TYPICAL SECTION THRU COLUMNS

(SHOWING DOUBLE STIRRUPS)



SECTION THRU CAP

(SHOWING DOUBLE STIRRUPS)

BILL OF BARS

NOTE:
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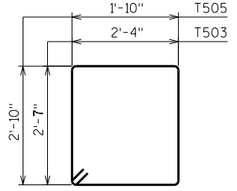
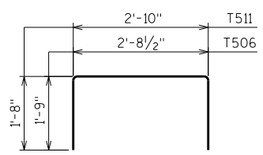
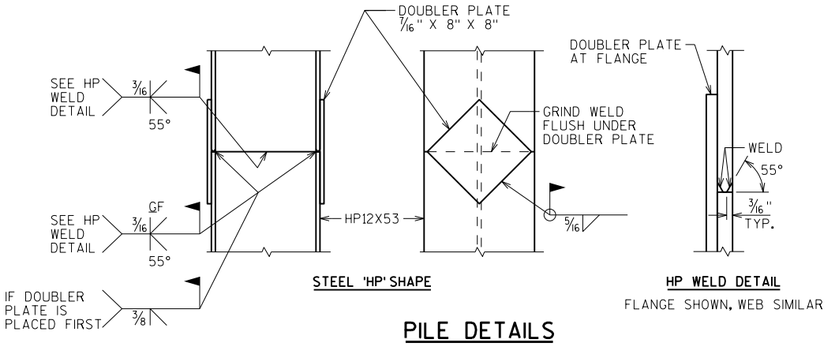
T902 T809



T503 T505



T506 T511



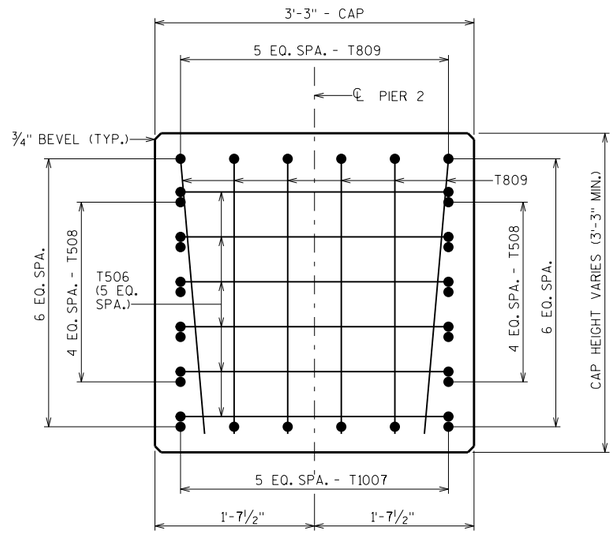
STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

TYPICAL FOOTING/PILE PLAN



SECTION THRU CAP AT ENDS

P01 2'-0" × 1'-3" × 4" DEEP CONSTRUCTION JOINT JOINT FORMED BY BEVELED KEYWAY.

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STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

PIER 2 DETAILS

SHEET 11

327

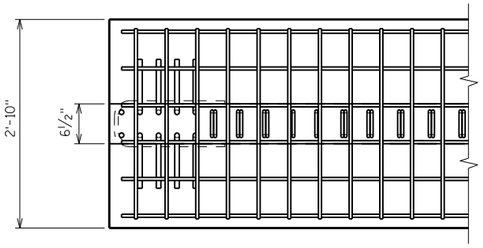
SCALE = 1.50

8

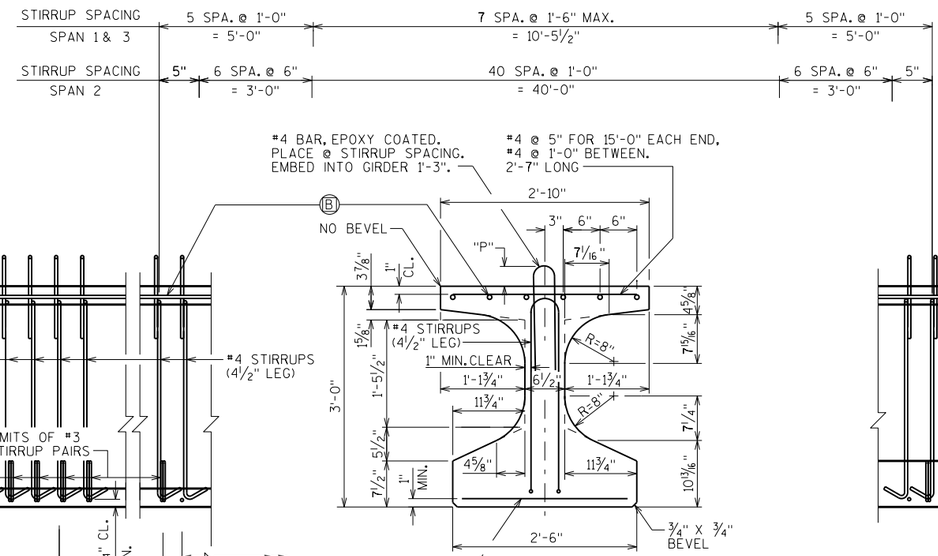
8

STATE PROJECT NUMBER

1021-00-78



TOP FLANGE

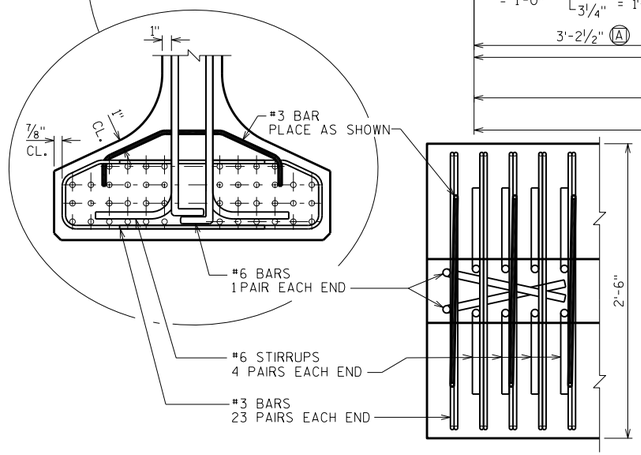


SECTION A-A

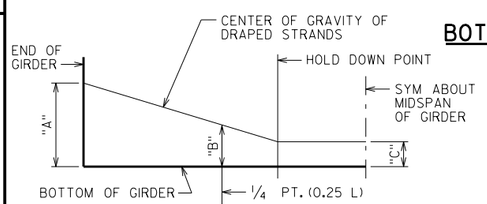
SIDE VIEW & TYPICAL SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

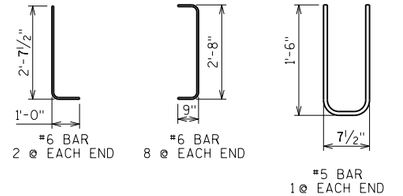
(B) SIX #5 BARS @ FULL LENGTH WITH 2'-7" MIN. LAPS

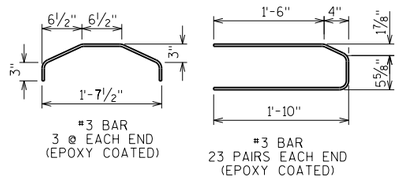


BOTTOM FLANGE



DRAPED STRAND PROFILE





NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON ACCEPTANCE OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	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" (IN.) 1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	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.) ✳
1,3	1-6	35.375	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	8000	7	7	7	0.6							16	6.8
2	1&6	61.75	0.2	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.2	8000	7	7	7	0.6	20	6.8	32	11	14	4		
2	2-5	61.75	0.2	0.5	0.6	0.7	0.8	0.7	0.6	0.5	0.2	8000	7	7	7	0.6	20	6.8	32	11	14	4		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

36W" PRESTRESSED GIRDER DETAILS 1

SHEET 12

328

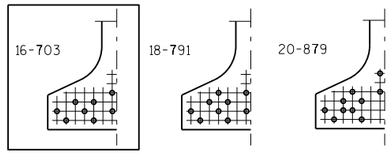
SCALE = 1.00

8

8

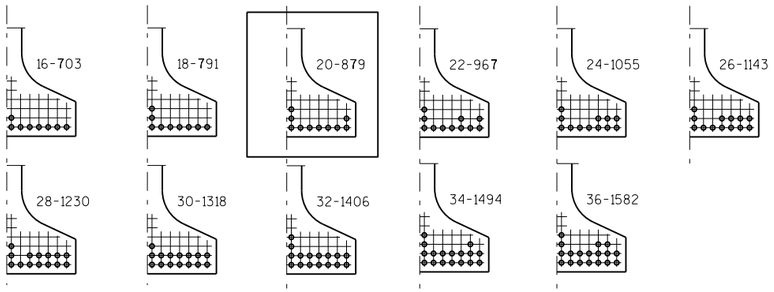
STATE PROJECT NUMBER

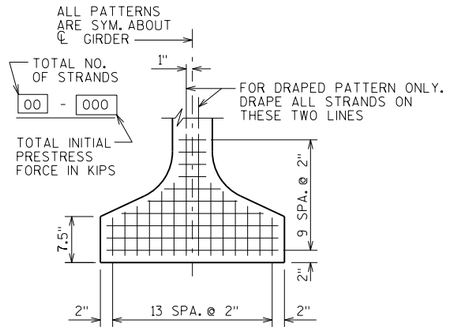
1021-00-78



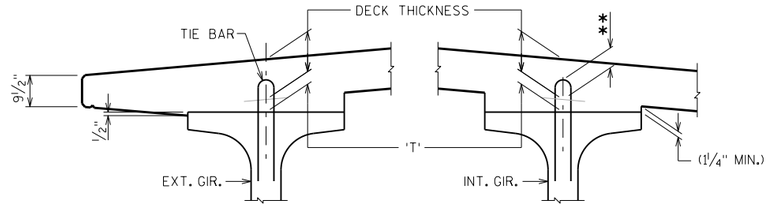
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS





TYP. STRAND PATTERN



DECK HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & 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 3.00" WAS USED FOR COMPUTING THE QUANTITY "CONCRETE MASONRY BRIDGES" FOR THE SUPERSTRUCTURE.

ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

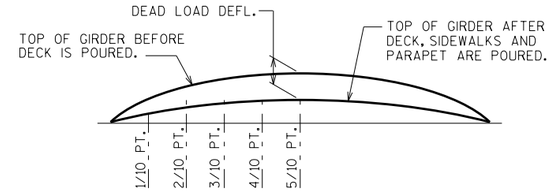
0.6" DIA. STRANDS

*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	0.45
2	1.40

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DEAD LOAD DEFLECTION DIAGRAM

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

36W" PRESTRESSED GIRDER DETAILS 2

SHEET 13

329

SCALE = 1.00

STATE PROJECT NUMBER

1021-00-78

NOTES

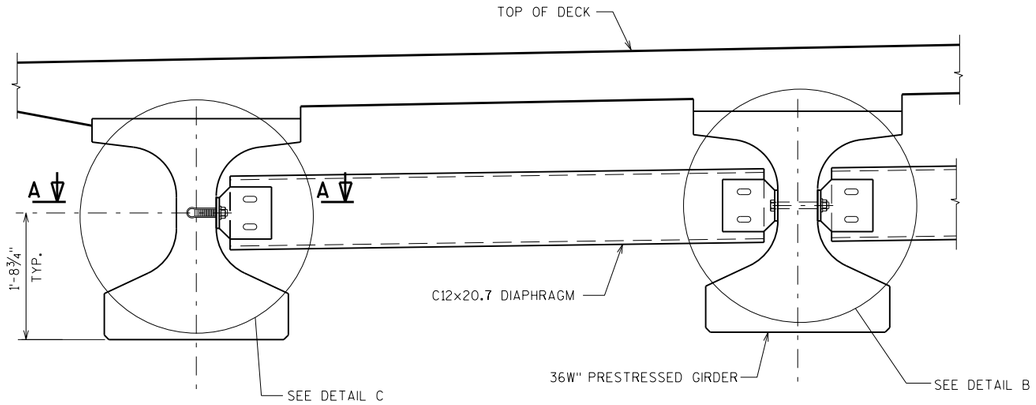
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-271", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

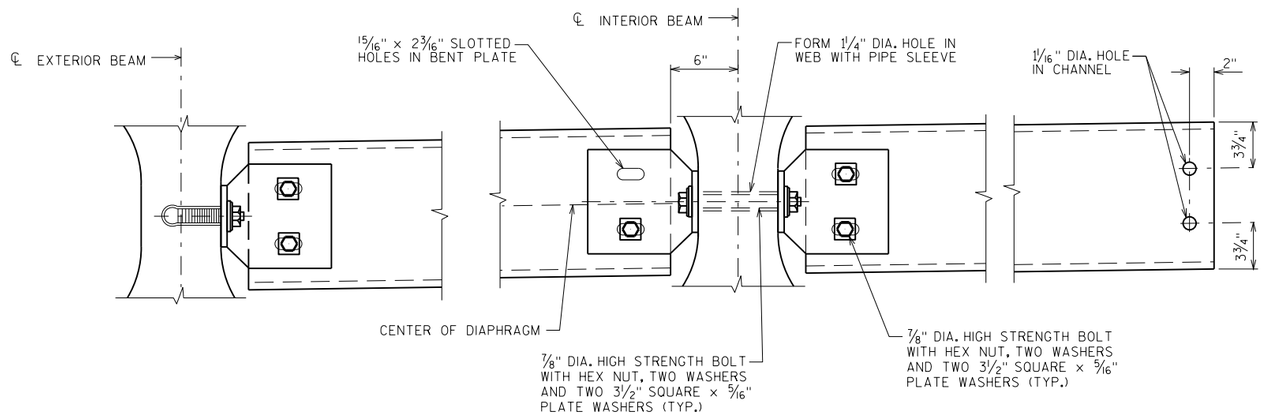
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

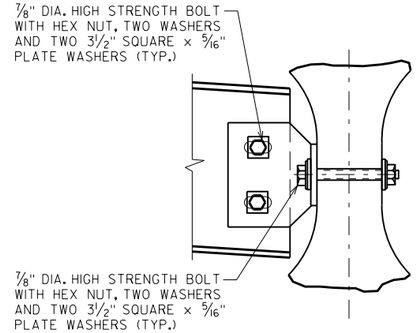


PART TRANSVERSE SECTION AT DIAPHRAGM

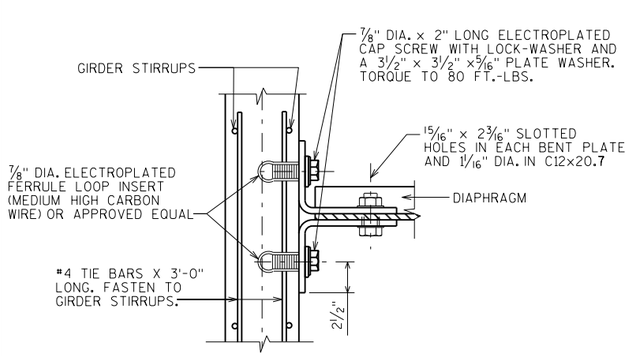


DETAIL C

DETAIL B

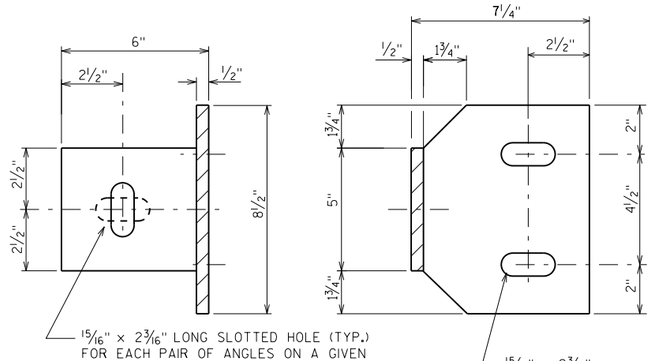


SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°



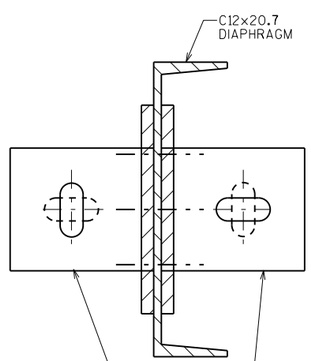
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



BEAM FACE

DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

STEEL DIAPHRAGM

SHEET 14

330

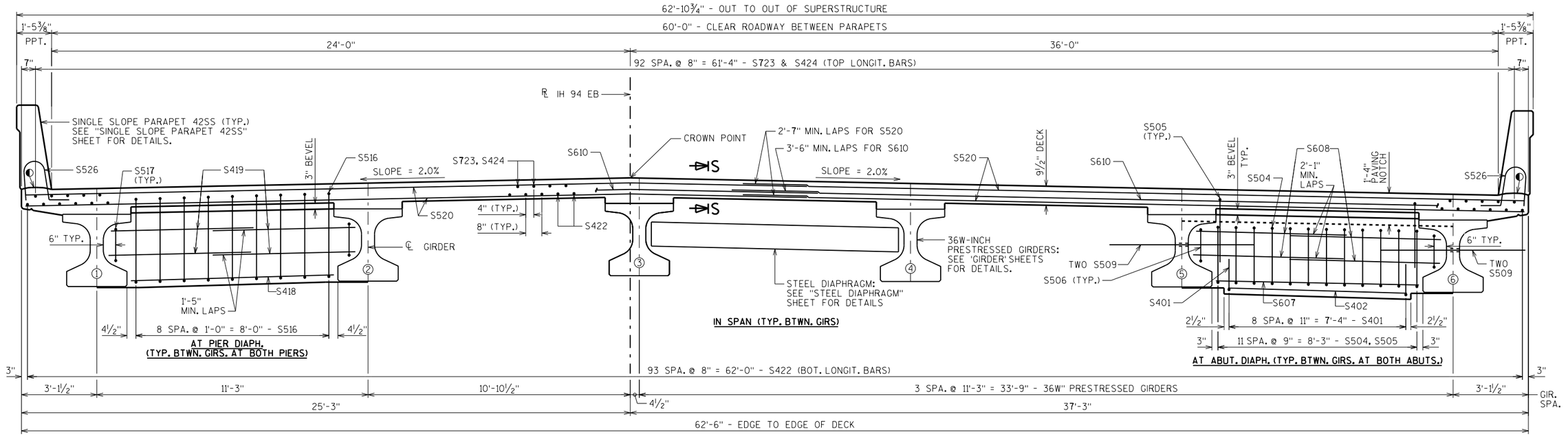
8

8

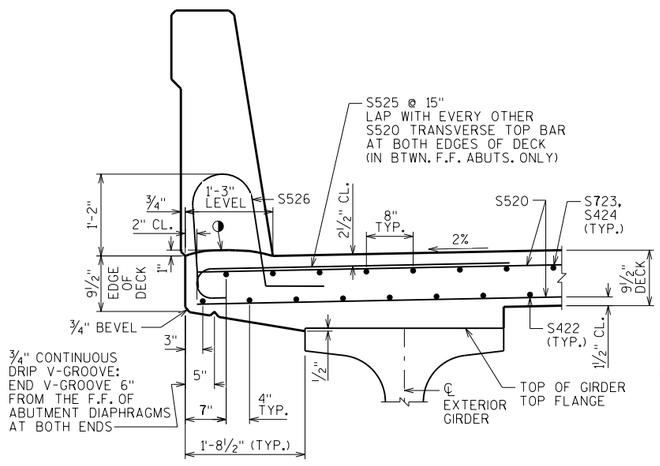
SCALE = 1.00

STATE PROJECT NUMBER

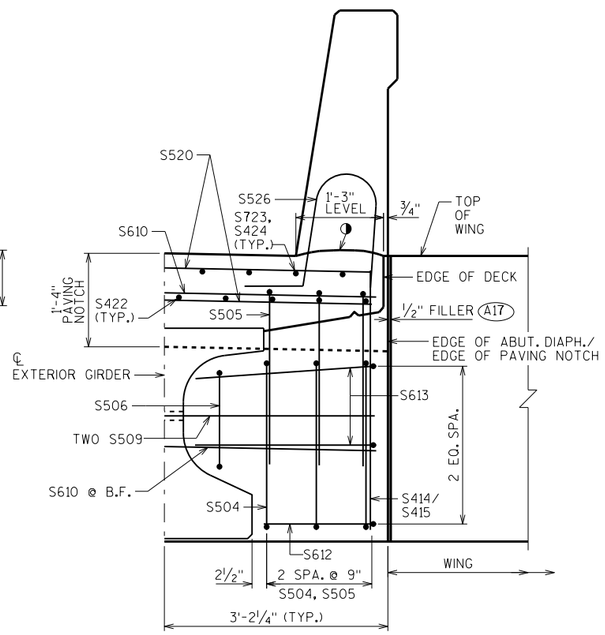
1021-00-78



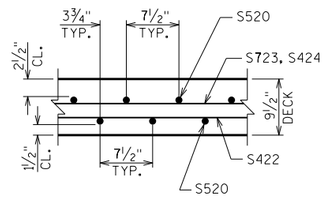
CROSS SECTION THRU BRIDGE LOOKING EAST



EDGE OF DECK DETAIL (TYP. AT BOTH EDGES)



AT ABUT. DIAPH. (TYP. AT ALL 4 GIRDER EXTERIOR CORNERS)



SECTION S-S

PARTIAL CROSS SECTION

○ INDICATES GIRDER NUMBER

◑ HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

SUPERSTRUCTURE CROSS SECTIONS

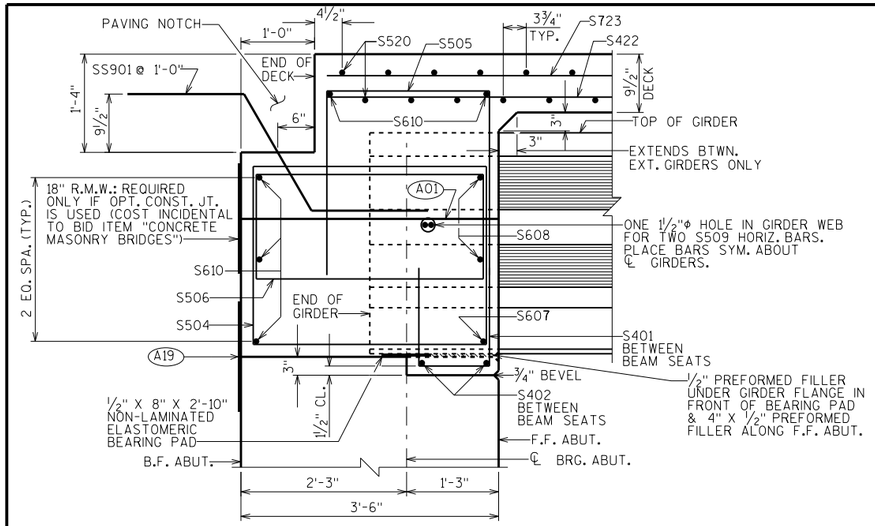
SHEET 15

331

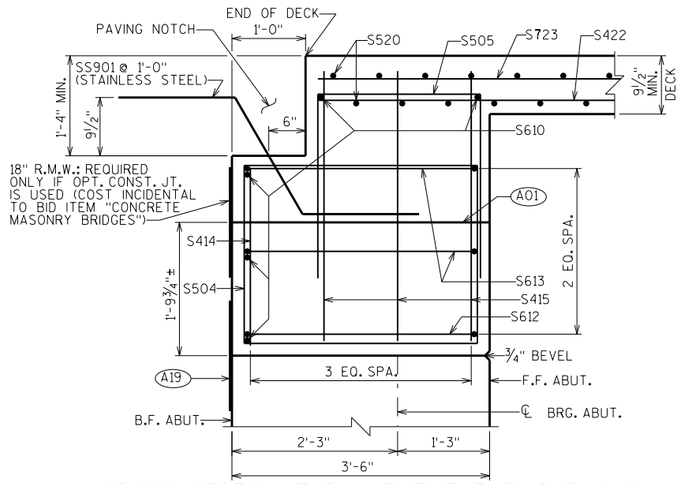
SCALE = 2.10

8

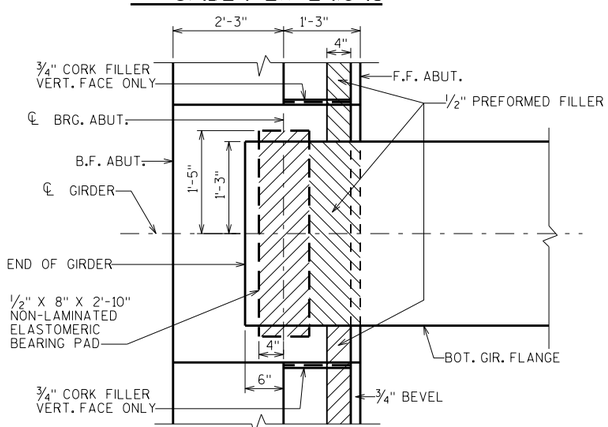
8



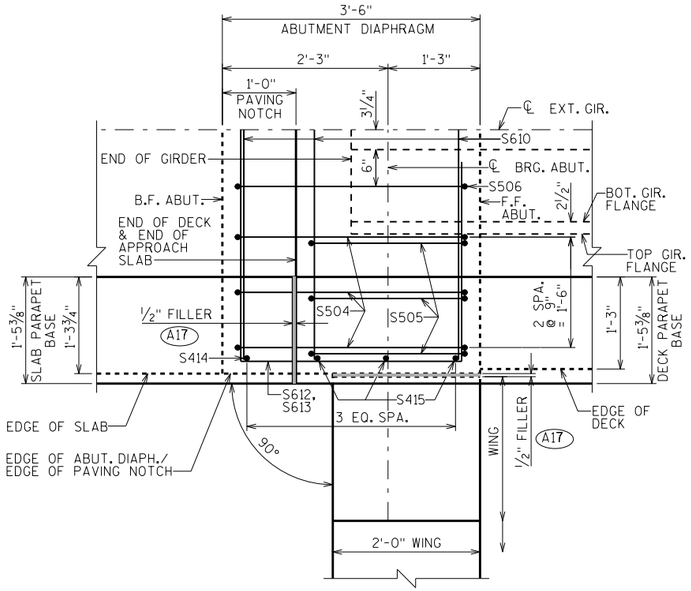
CROSS SECTION THRU ABUTMENT DIAPHRAGMS BETWEEN EXTERIOR GIRDERS



CROSS SECTION THRU ABUTMENT DIAPHRAGMS AT GIRDER EXTERIORS



PLAN VIEW AT ABUTMENTS



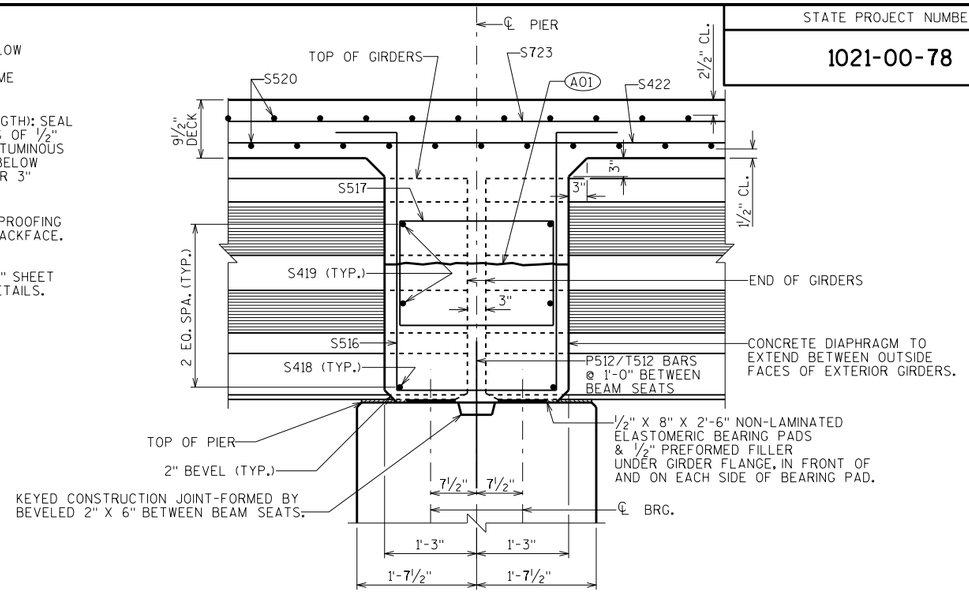
TYPICAL DIAPHRAGM CORNER DETAIL - PLAN VIEW AT ALL FOUR GIR. EXT. CORNERS

A01 OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

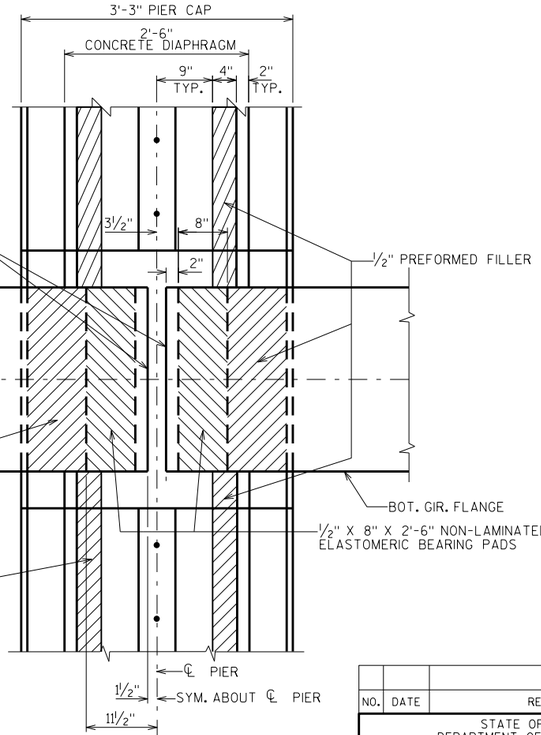
A17 ½" FILLER (INCLUDED IN WING/SLAB LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NOTE:
SEE "SUPERSTRUCTURE BAR DETAILS" SHEET FOR THE 'BILL OF BARS' AND BAR DETAILS.



CROSS SECTION THRU PIER DIAPHRAGM



PLAN VIEW AT PIER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

SUPERSTRUCTURE DETAILS

SHEET 16

332

STATE PROJECT NUMBER
1021-00-78

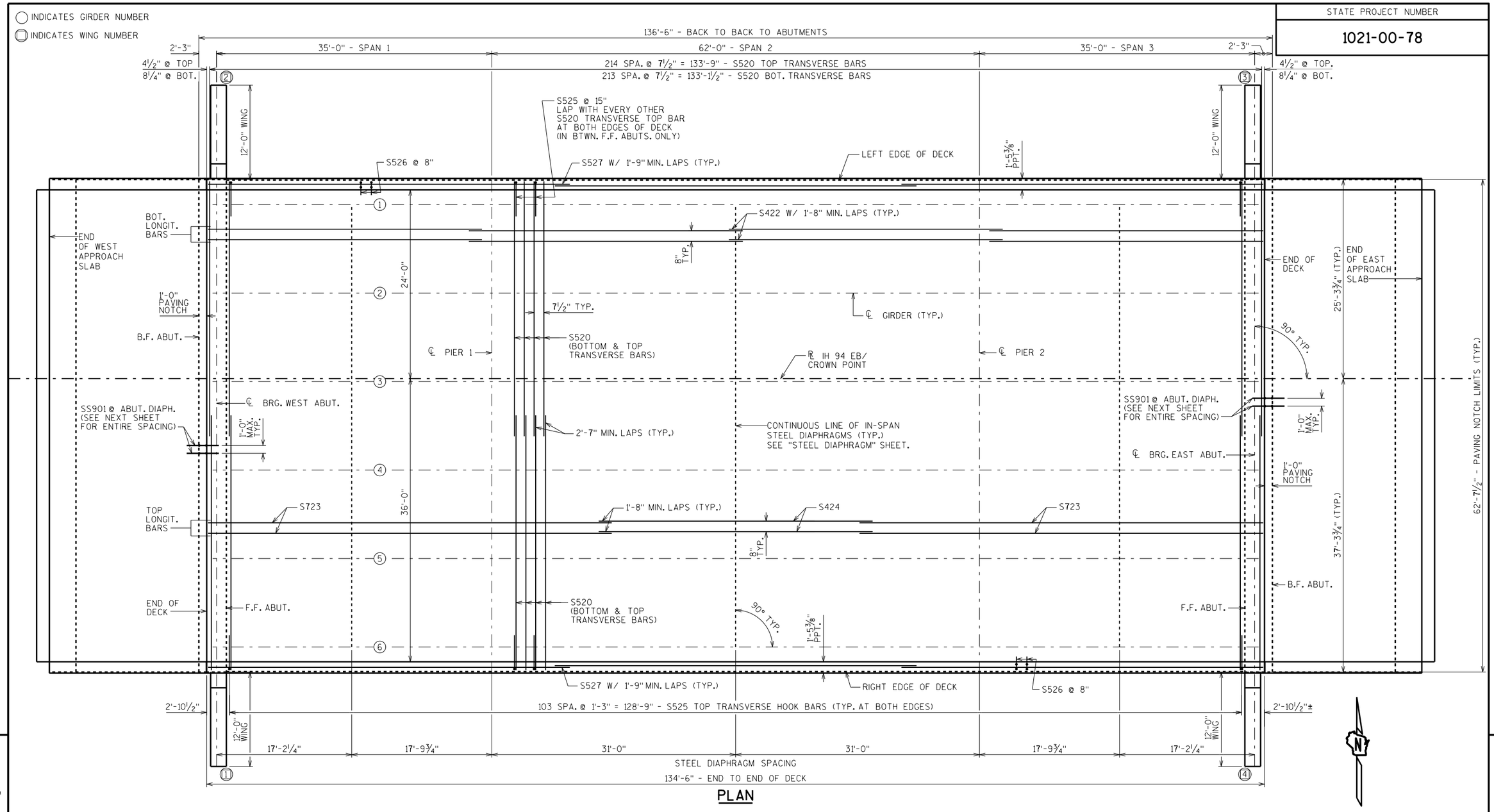
8

8

SCALE = 1.00

STATE PROJECT NUMBER

1021-00-78



PLAN

TOP OF DECK ELEVATIONS

EOD = EDGE OF DECK

	℄ BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. E. ABUT.
LEFT EOD	1160.07	1160.09	1160.11	1160.13	1160.15	1160.16	1160.18	1160.20	1160.22	1160.24	1160.25	1160.28	1160.31	1160.34	1160.37	1160.40	1160.42	1160.45	1160.47	1160.49	1160.51	1160.53	1160.54	1160.55	1160.56	1160.57	1160.58	1160.59	1160.60	1160.61	1160.62
℄ GIRDER 1	1160.10	1160.12	1160.14	1160.16	1160.18	1160.20	1160.22	1160.24	1160.26	1160.27	1160.29	1160.32	1160.35	1160.38	1160.41	1160.43	1160.46	1160.48	1160.51	1160.53	1160.55	1160.56	1160.57	1160.59	1160.60	1160.61	1160.62	1160.63	1160.64	1160.65	1160.66
℄ GIRDER 2	1160.33	1160.35	1160.37	1160.39	1160.41	1160.43	1160.45	1160.46	1160.48	1160.50	1160.52	1160.55	1160.58	1160.60	1160.63	1160.66	1160.68	1160.71	1160.73	1160.75	1160.78	1160.79	1160.80	1160.81	1160.82	1160.83	1160.84	1160.85	1160.86	1160.87	1160.88
℄ IH 94 EB	1160.55	1160.57	1160.59	1160.61	1160.63	1160.64	1160.66	1160.68	1160.70	1160.72	1160.73	1160.76	1160.79	1160.82	1160.85	1160.88	1160.90	1160.93	1160.95	1160.97	1160.99	1161.01	1161.02	1161.03	1161.04	1161.05	1161.06	1161.07	1161.08	1161.09	1161.10
℄ GIRDER 3	1160.54	1160.56	1160.58	1160.60	1160.62	1160.64	1160.66	1160.67	1160.69	1160.71	1160.73	1160.76	1160.79	1160.81	1160.84	1160.87	1160.89	1160.92	1160.94	1160.96	1160.99	1161.00	1161.01	1161.02	1161.03	1161.04	1161.05	1161.06	1161.07	1161.08	1161.09
℄ GIRDER 4	1160.31	1160.33	1160.35	1160.37	1160.39	1160.41	1160.43	1160.45	1160.47	1160.48	1160.50	1160.53	1160.56	1160.59	1160.62	1160.64	1160.67	1160.69	1160.72	1160.74	1160.76	1160.77	1160.78	1160.80	1160.81	1160.82	1160.83	1160.84	1160.85	1160.86	1160.87
℄ GIRDER 5	1160.09	1160.11	1160.13	1160.15	1160.17	1160.19	1160.21	1160.22	1160.24	1160.26	1160.28	1160.31	1160.34	1160.36	1160.39	1160.42	1160.44	1160.47	1160.49	1160.51	1160.54	1160.55	1160.56	1160.57	1160.58	1160.59	1160.60	1160.61	1160.62	1160.63	1160.64
℄ GIRDER 6	1159.86	1159.88	1159.90	1159.92	1159.94	1159.96	1159.98	1160.00	1160.02	1160.03	1160.05	1160.08	1160.11	1160.14	1160.17	1160.19	1160.22	1160.24	1160.27	1160.29	1160.31	1160.32	1160.33	1160.35	1160.36	1160.37	1160.38	1160.39	1160.40	1160.41	1160.42
RIGHT EOD	1159.83	1159.85	1159.87	1159.89	1159.91	1159.92	1159.94	1159.96	1159.98	1160.00	1160.01	1160.04	1160.07	1160.10	1160.13	1160.16	1160.18	1160.21	1160.23	1160.25	1160.27	1160.29	1160.30	1160.31	1160.32	1160.33	1160.34	1160.35	1160.36	1160.37	1160.38

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

SUPERSTRUCTURE PLAN

SHEET 17

333

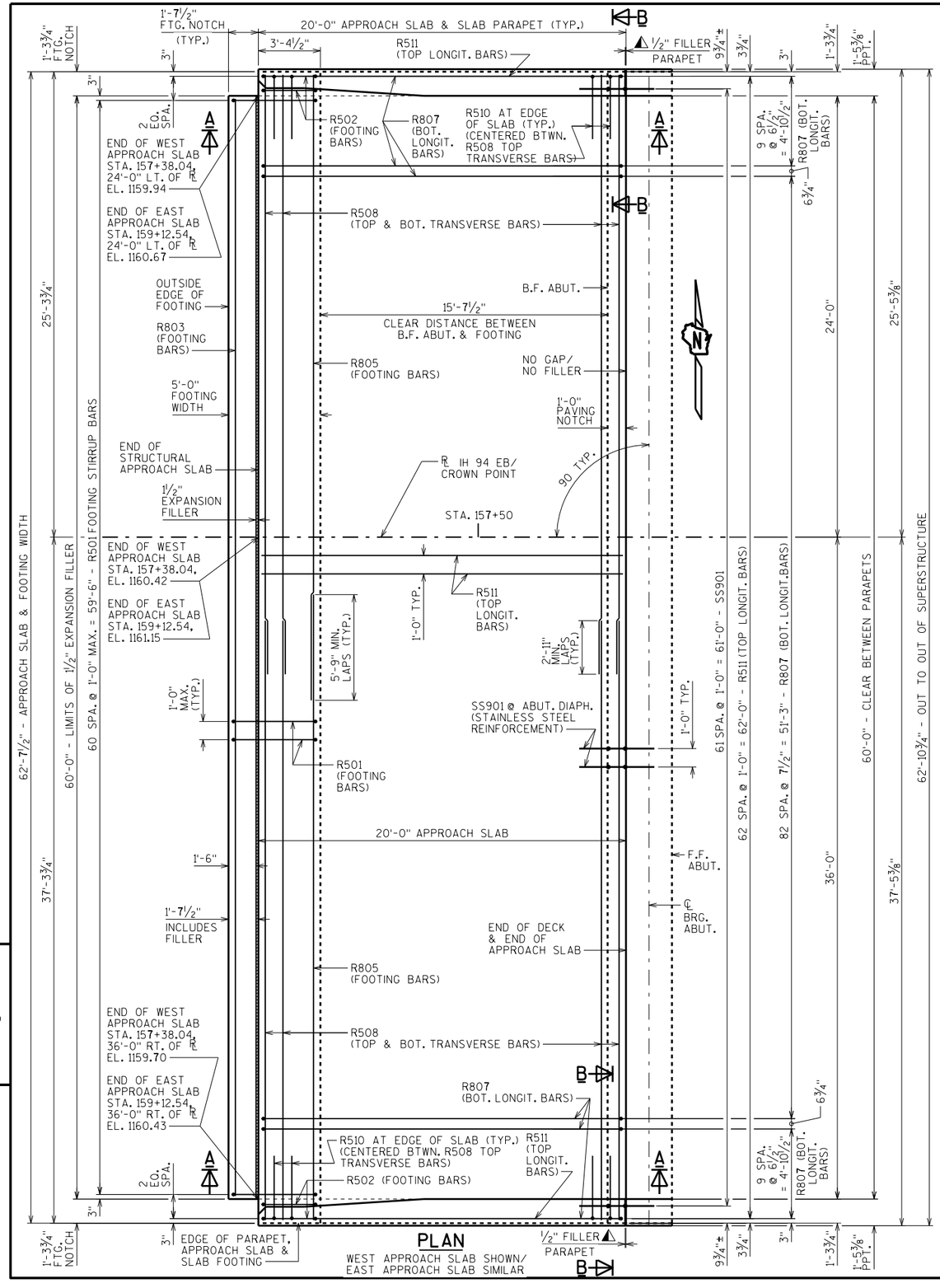
SCALE = 6.00

8

8

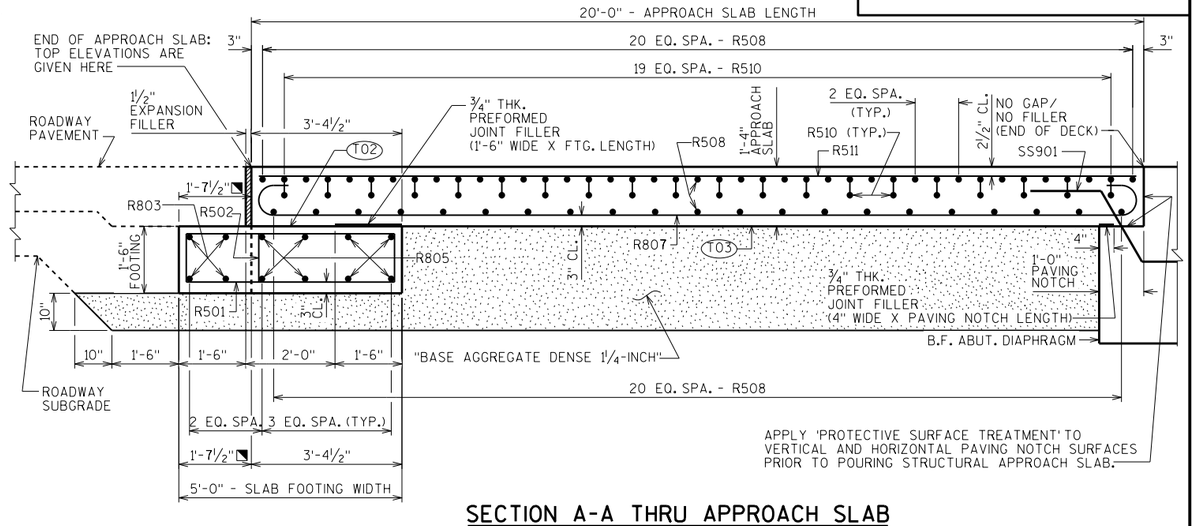
STATE PROJECT NUMBER

1021-00-78



PLAN

WEST APPROACH SLAB SHOWN/
EAST APPROACH SLAB SIMILAR

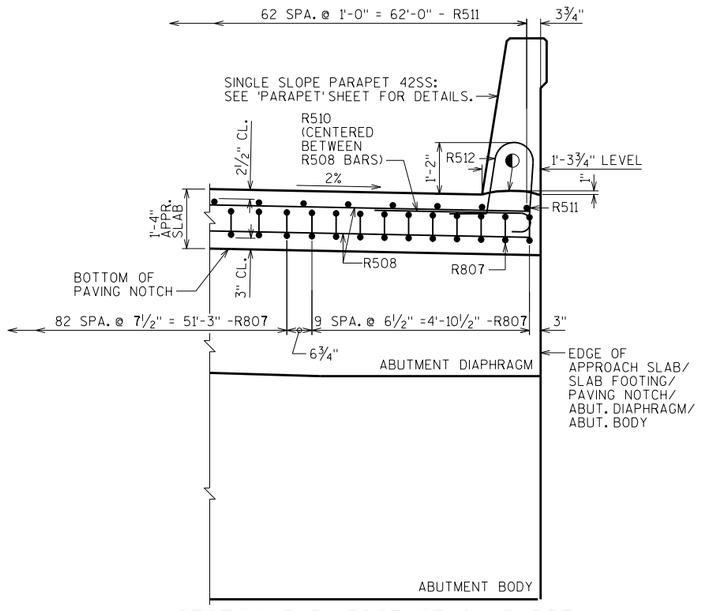


◥ INCLUDES 1½" EXPANSION FILLER

APPLY 'PROTECTIVE SURFACE TREATMENT' TO VERTICAL AND HORIZONTAL PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

SECTION A-A THRU APPROACH SLAB

WEST APPROACH SLAB SHOWN/
EAST APPROACH SLAB SIMILAR



SECTION B-B (EDGE OF SLAB DETAIL)

◐ HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

STRUCTURAL APPROACH SLAB

SHEET 18

334

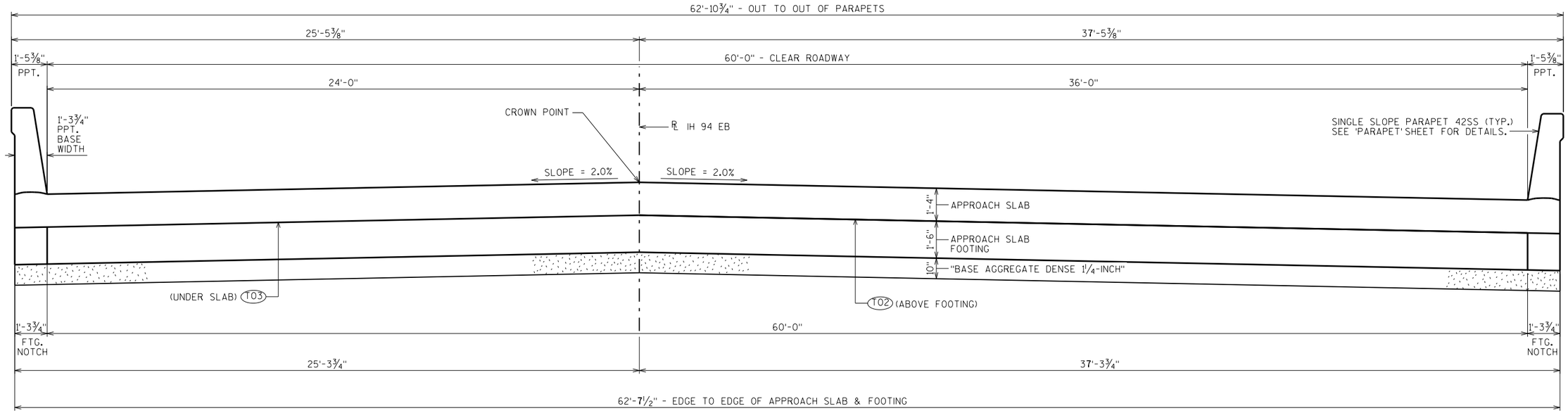
8

8

SCALE = 3.30

STATE PROJECT NUMBER

1021-00-78



CROSS SECTION THRU APPROACH SLAB LOOKING EAST

8

T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

STRUCTURAL APPROACH SLAB CROSS SECTION

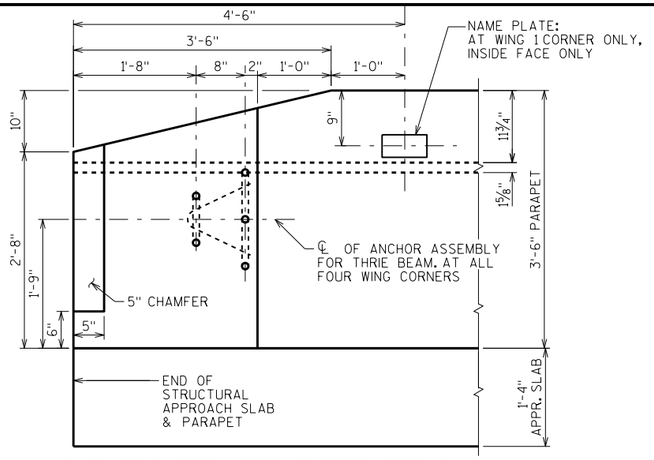
SHEET 19

335

SCALE = 2.10

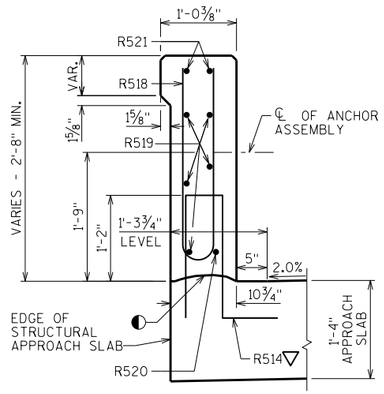
STATE PROJECT NUMBER

1021-00-78

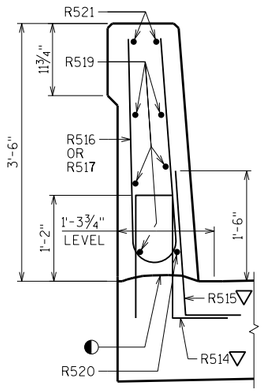


PARAPET END TREATMENT DETAIL

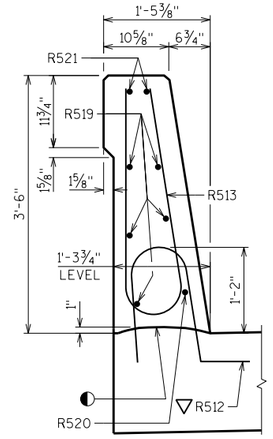
LOOKING AT INSIDE FACE OF PARAPET



SECTION A-A

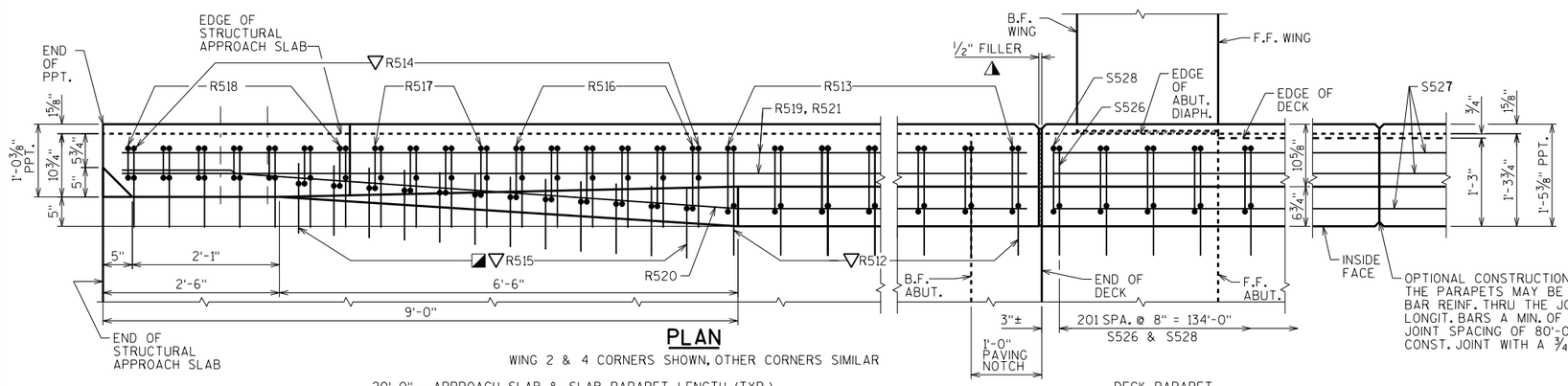


SECTION B-B



SECTION C-C

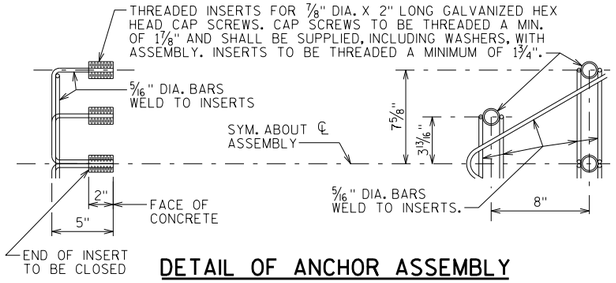
NOTE:
FOR THE PARAPET 'BILL OF BARS' &
'BAR DETAILS' SEE THE "SUPERSTRUCTURE
& APPROACH SLAB BAR DETAILS" SHEET.



PLAN

WING 2 & 4 CORNERS SHOWN, OTHER CORNERS SIMILAR

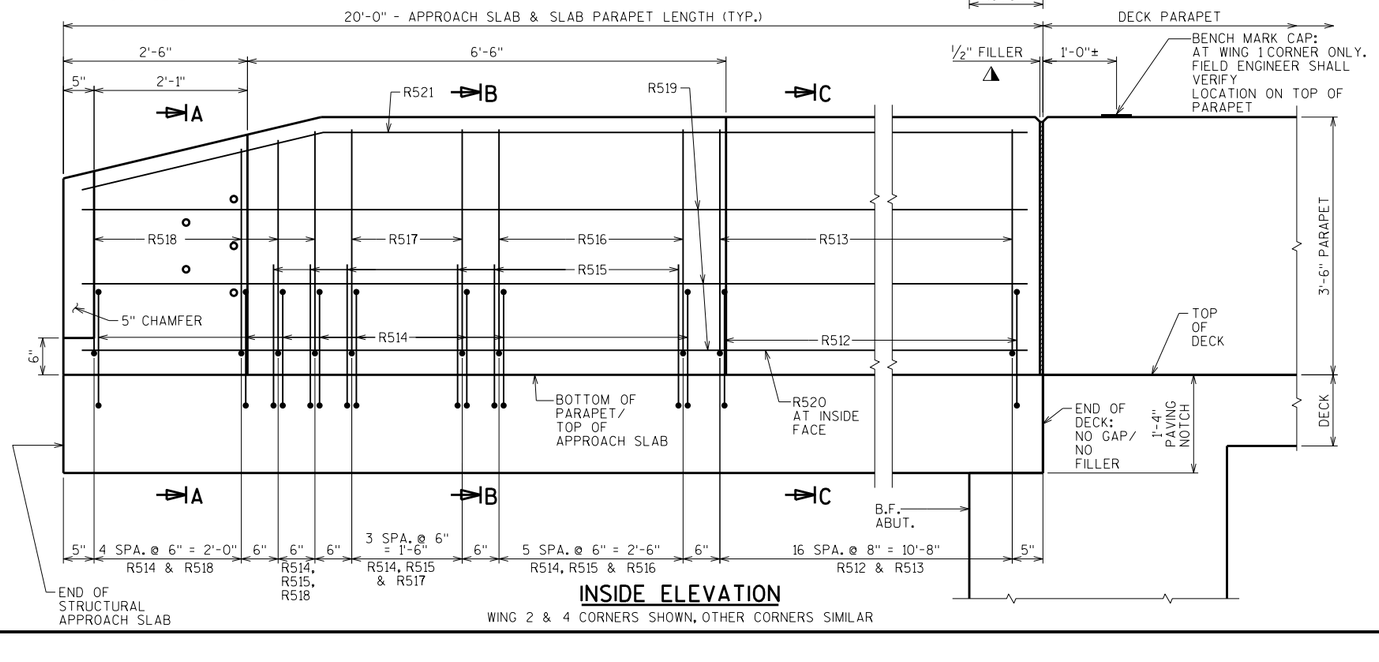
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



DETAIL OF ANCHOR ASSEMBLY

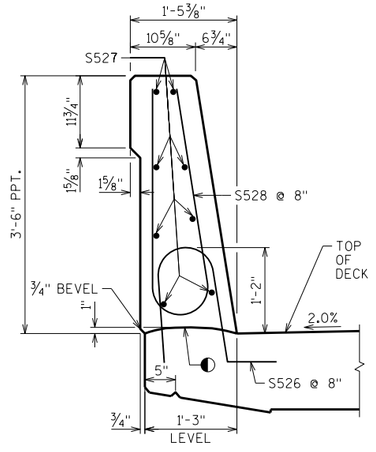
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

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



INSIDE ELEVATION

WING 2 & 4 CORNERS SHOWN, OTHER CORNERS SIMILAR



SECTION THRU PARAPET ON DECK

▲ ½" FILLER (INCLUDED IN APPROACH PARAPET LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

◐ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

◪ USE CARE TO PLACE R515 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R512, R514, AND R515 PARAPET BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

SINGLE SLOPE
PARAPET 42SS

SHEET 20

336

8

8

SCALE = 1.00

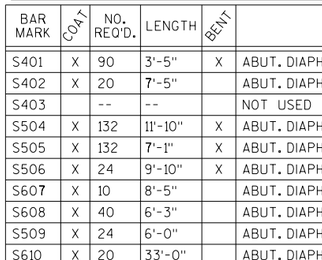
BILL OF BARS FOR SUPERSTRUCTURE

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

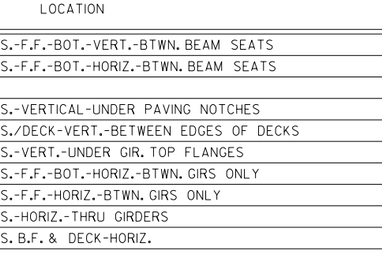
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S401	X	90	3'-5"	X	ABUT. DIAPHS.-F.F.-BOT.-VERT.-BTWN. BEAM SEATS
S402	X	20	7'-5"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. BEAM SEATS
S403		--	--		NOT USED
S504	X	132	11'-10"	X	ABUT. DIAPHS.-VERTICAL-UNDER PAVING NOTCHES
S505	X	132	7'-1"	X	ABUT. DIAPHS./DECK-VERT.-BETWEEN EDGES OF DECKS
S506	X	24	9'-10"	X	ABUT. DIAPHS.-VERT.-UNDER GIR. TOP FLANGES
S607	X	10	8'-5"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. GIRS ONLY
S608	X	40	6'-3"		ABUT. DIAPHS.-F.F.-HORIZ.-BTWN. GIRS ONLY
S509	X	24	6'-0"		ABUT. DIAPHS.-HORIZ.-THRU GIRDERS
S610	X	20	33'-0"		ABUT. DIAPHS. B.F. & DECK-HORIZ.
S611		--	--		NOT USED
S612	X	4	7'-11"	X	ABUT. DIAPHS.-BOT.-HORIZ.-AT ALL FOUR GIR. EXTERIORS
S613	X	8	8'-11"	X	ABUT. DIAPHS.-HORIZ.-AT ALL FOUR GIR. EXTERIORS
S414	X	4	2'-5"		ABUT. DIAPHS.-B.F.-VERT.-AT ALL FOUR GIR. EXTERIORS
S415	X	12	3'-8"		ABUT. DIAPHS.-VERT.-AT ALL FOUR GIR. EXTERIORS
S516	X	90	10'-4"	X	PIER DIAPHS./DECK-VERTICAL-BTWN. GIRS ONLY
S517	X	20	7'-10"	X	PIER DIAPHS.-VERT.-UNDER GIR. TOP FLANGES-BTWN. GIRS ONLY
S418	X	20	8'-5"		PIER. DIAPHS.-BOTH FACES-BOT.-HORIZ.-BTWN. GIRS ONLY
S419	X	80	5'-11"		PIER. DIAPHS.-BOTH FACES-HORIZ.-BTWN. GIRS ONLY
S520	X	858	32'-5"		DECK-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
S521		--	--		NOT USED
S422	X	376	34'-10"		DECK-BOTTOM-HORIZONTAL-LONGITUDINAL
S723	X	186	51'-4"		DECK-TOP-HORIZONTAL-LONGITUDINAL-AT BOTH ENDS
S424	X	93	34'-10		DECK-TOP-HORIZONTAL-LONGITUDINAL-AT SPAN 2
S525	X	208	5'-1"	X	DECK-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES OF DECK-BTWN. ABUTS. ONLY
S526	X	404	4'-5"	X	PARAPETS/DECK-VERTICAL-TRANSVERSE-AT BOTH SIDES
S527	X	48	46'-0"		PARAPETS-BOTH FACES-HORIZ.-LONGIT.-AT BOTH SIDES
S528	X	404	6'-8"	X	PARAPETS-VERTICAL-TRANSVERSE-AT BOTH SIDES

SS901		124	5'-0"	X	APPROACH SLAB/ABUT. DIAPH.-VERT.-AT PAVING NOTCHES

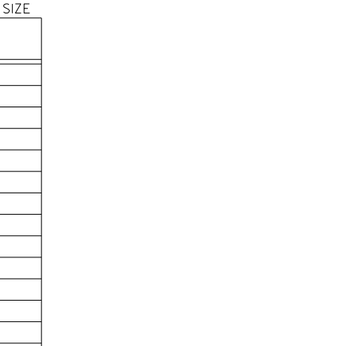
STAINLESS STEEL REINFORCEMENT



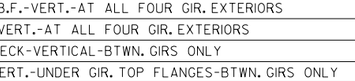
S401 S505



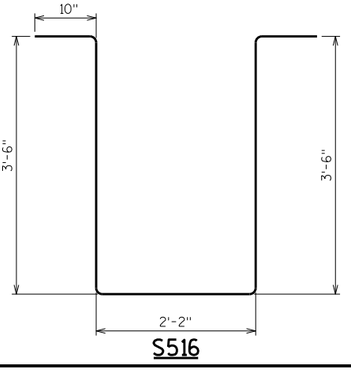
S504 S506 S517
(STIRRUP BARS)



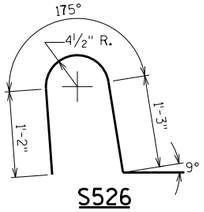
S612 S613



S525



S516



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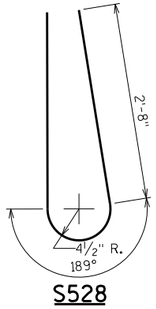

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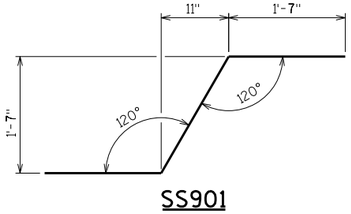


SS901

BILL OF BARS FOR STRUCTURAL APPROACH SLABS

NOTE:
THE FIRST OR FIRST TWO
DIGITS OF THE BAR MARK
SIGNIFIES THE BAR SIZE

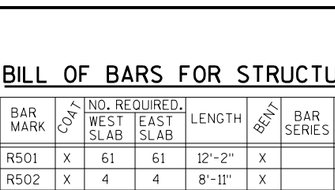
BAR MARK	COAT	NO. REQUIRED. WEST SLAB	NO. REQUIRED. EAST SLAB	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	61	61	12'-2"	X		FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-BETWEEN PARAPETS
R502	X	4	4	8'-11"	X		FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT ENDS ONLY
R803	X	4	4	59'-8"			FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT OUTSIDE FACE
R804		--	--	--			NOT USED
R805	X	16	16	34'-1"			FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT INSIDE FACE
R806		--	--	--			NOT USED
R807	X	103	103	21'-6"	X		SLAB-BOTTOM-VERTICAL-LONGITUDINAL
R508	X	84	84	32'-8"			SLAB-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
R509		--	--	--			NOT USED
R510	X	40	40	4'-1"	X		SLAB-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES
R511	X	63	63	19'-8"			SLAB-TOP-HORIZONTAL-LONGITUDINAL
R512	X	34	34	4'-5"	X		PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R513	X	34	34	6'-8"	X		PARAPETS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R514	X	34	34	4'-4"	X		PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R515	X	24	24	2'-9"	X		PARAPETS/SLAB-INSIDE FACE-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R516	X	12	12	6'-6"	X		PARAPETS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R517	X	8	8	6'-5"	X		PARAPETS-END-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R518	X	14	14	5'-8"	X	⚠	PARAPETS-END TAPER-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R519	X	10	10	19'-6"			PARAPETS-BOTH FACES-HORIZONTAL-LONGITUDINAL-AT ALL FOUR PPT. ENDS
R520	X	2	2	19'-6"	X		PARAPETS-BOT.-INSIDE FACE-HORIZONTAL-LONGITUDINAL-AT ALL FOUR PPT. ENDS
R521	X	4	4	19'-6"	X		PARAPETS-TOP-BOTH FACES-VERTICAL-LONGITUDINAL-AT ALL FOUR PPT. ENDS

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

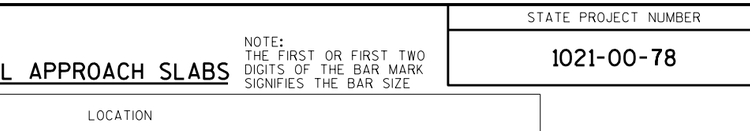
BAR SERIES TABLE

BAR MARK	NUMBER REQUIRED	TOTAL BAR LENGTH
R518	4 SERIES OF 7 BARS	4'-11" TO 6'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.

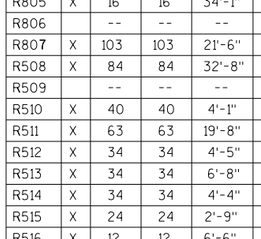


R501 R502
(STIRRUP BARS)

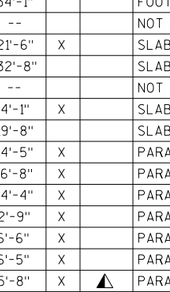


R807

R510



R512



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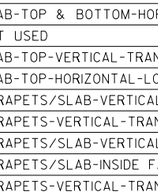

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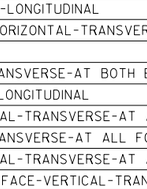

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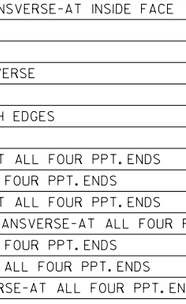

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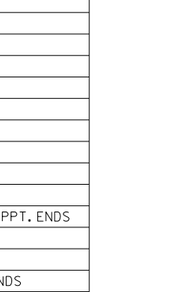
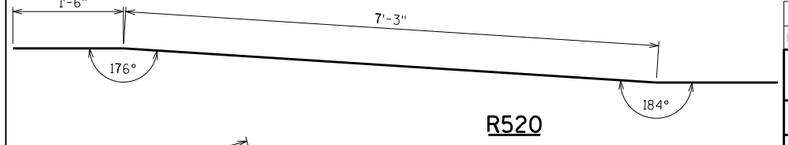
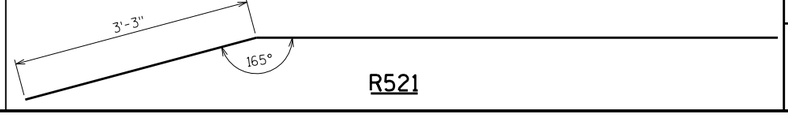


R517

R518



R520



R521

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

SUPERSTRUCTURE & APPROACH SLAB BAR DETAILS

SHEET 21

337

STATE PROJECT NUMBER

1021-00-78

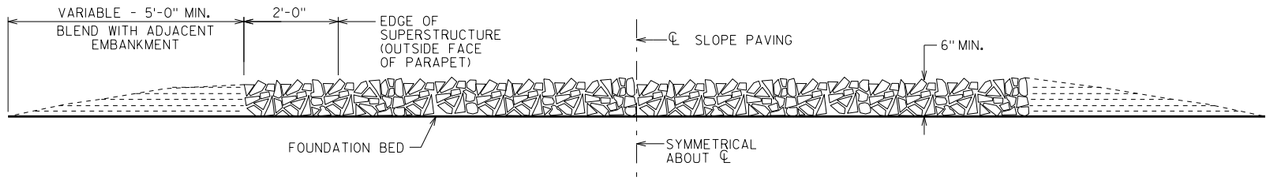
8

8

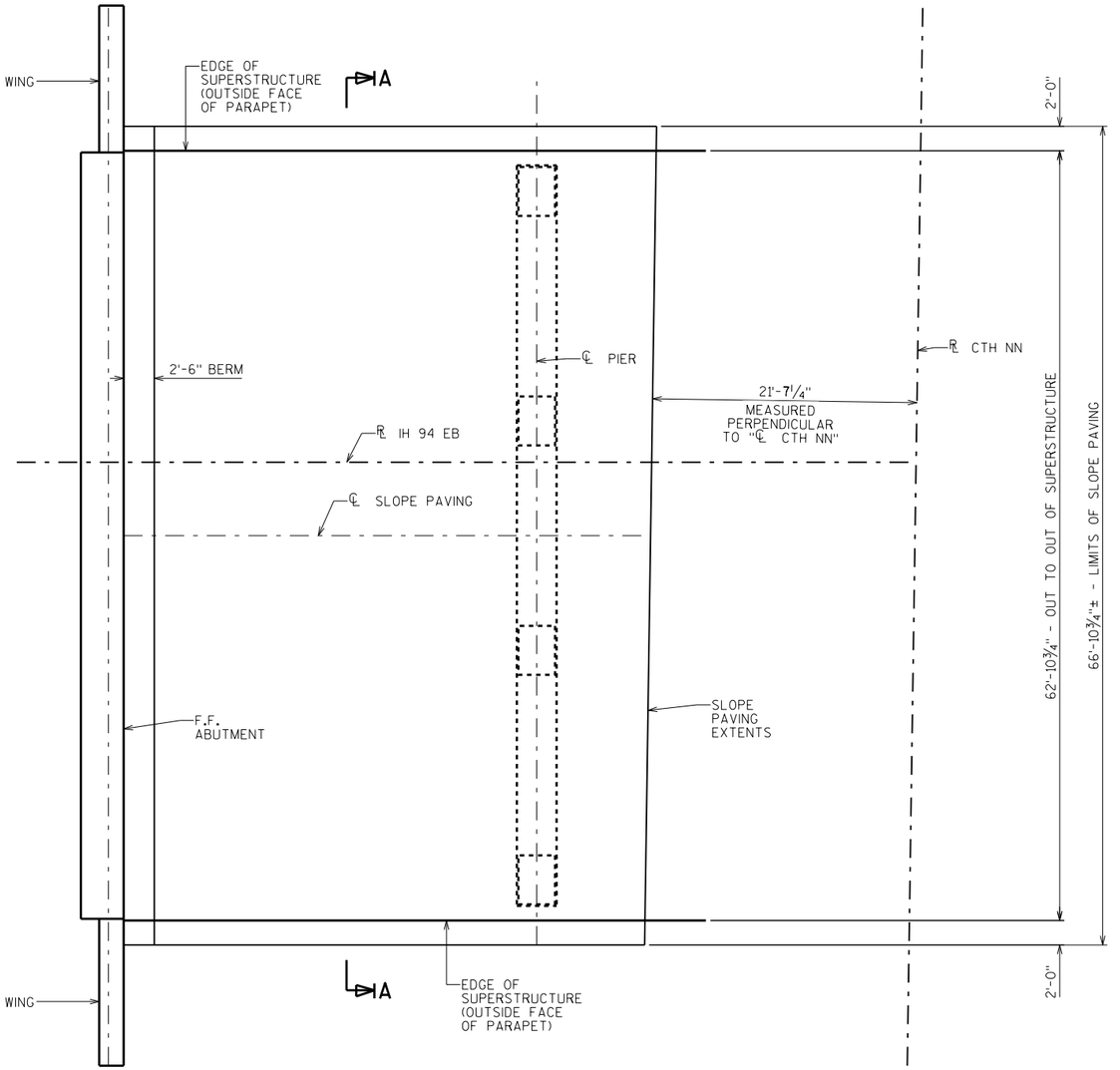
SCALE = 1.00

STATE PROJECT NUMBER

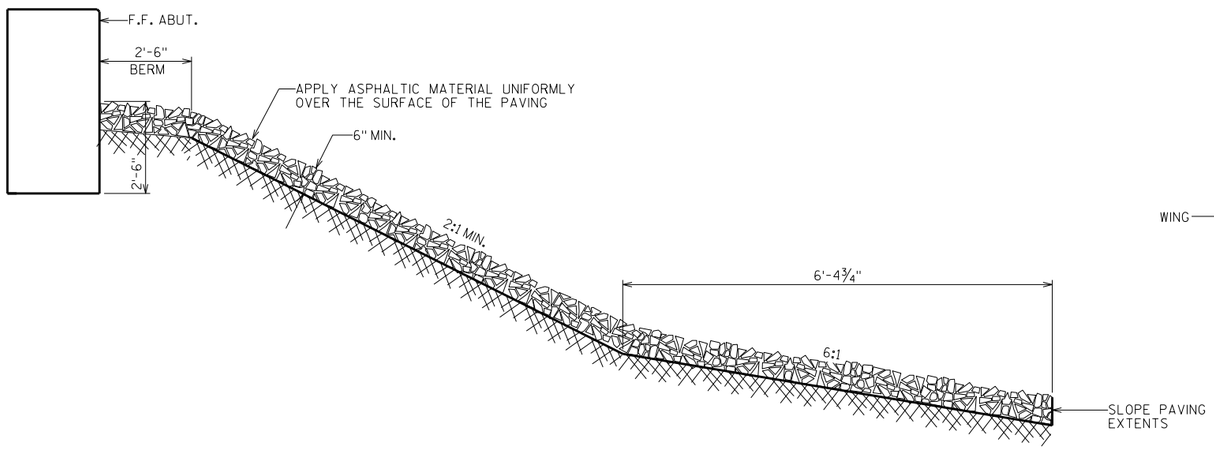
1021-00-78



SECTION A-A



PLAN AT BOTH ABUTMENTS



STANDARD CROSS SECTION THRU CRUSHED AGGREGATE AT ABUTMENTS

ROUND STONE WILL NOT BE ACCEPTED

GENERAL NOTES

BID ITEM SHALL BE "SLOPE PAVING CRUSHED AGGREGATE"

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY	JPH	PLANS CK'D.	AA

SLOPE PAVING CRUSHED AGGREGATE

SHEET 22

338

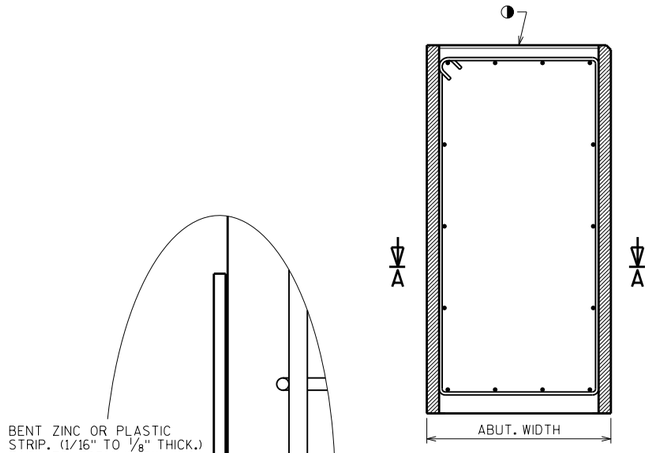
SCALE = 1.00

8

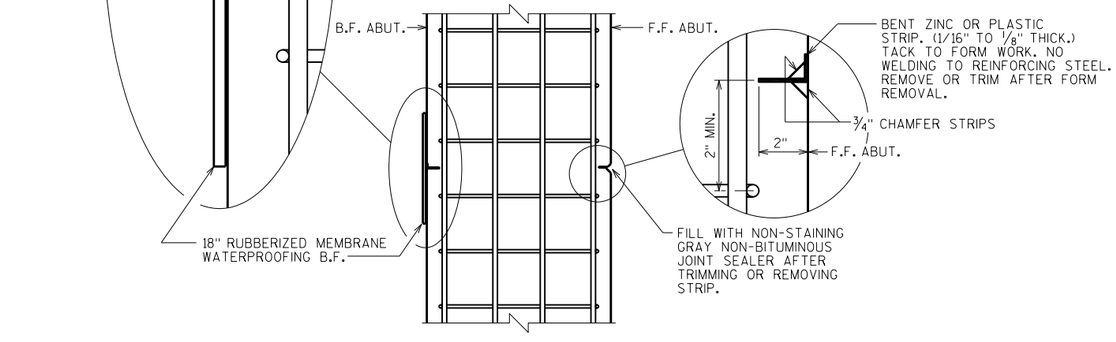
8

STATE PROJECT NUMBER

1021-00-78



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

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 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

ALTERNATE CONSTRUCTION JOINT

SHEET 23

339

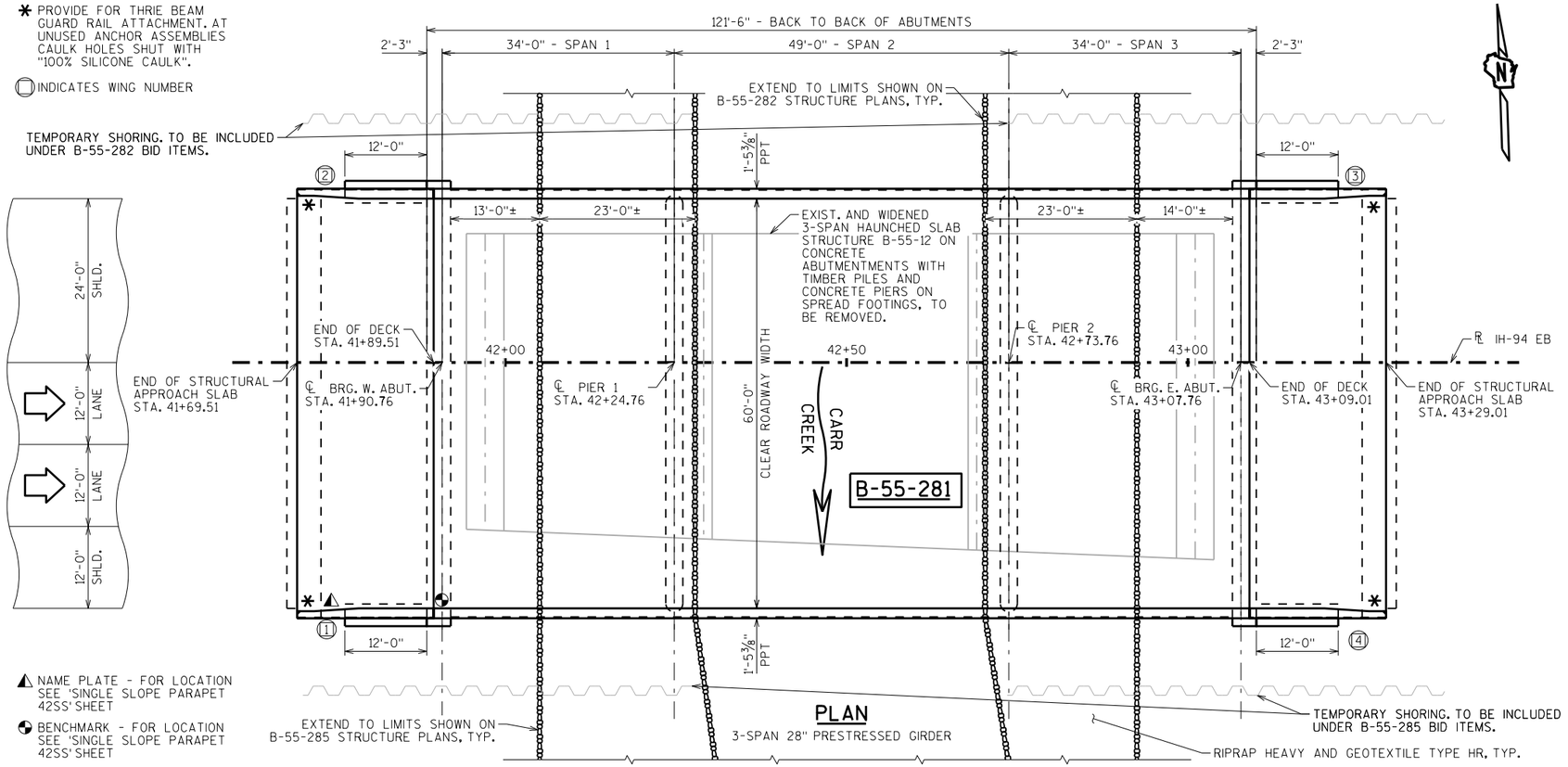
SCALE = 1.00

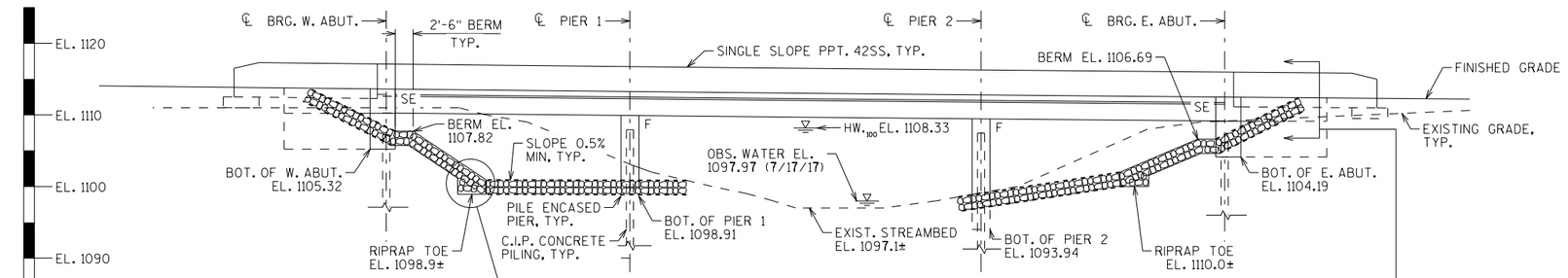
8

8

STATE PROJECT NUMBER

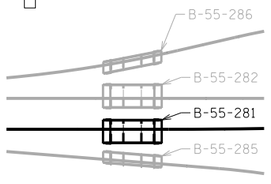
1021-04-77



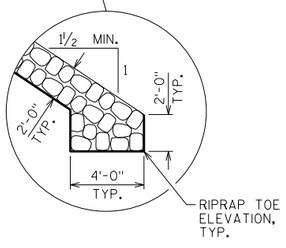


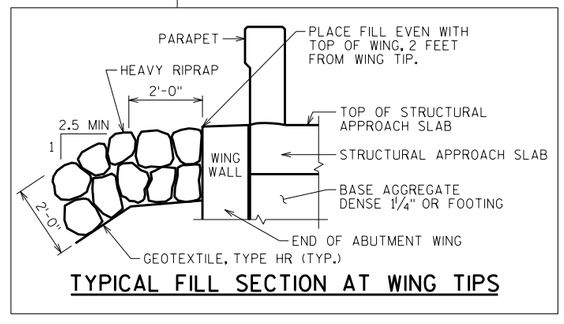
ELEVATION

NORMAL TO CARR CREEK (LOOKING NORTH)



LOCATION MAP





TYPICAL FILL SECTION AT WING TIPS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.06
OPERATING RATING FACTOR: RF = 1.37
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

28" PRESTRESSED GIRDERS:
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 TO BE SUPPORTED ON 10¾" DIA. X 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 50'-0" LONG AT THE WEST ABUTMENT AND ESTIMATED 55'-0" LONG AT THE EAST ABUTMENT. PILE POINTS REQUIRED.

PIERS TO BE SUPPORTED ON 10¾" DIA. X 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 50'-0" LONG AT PIER 1 AND ESTIMATED 55'-0" LONG AT PIER 2. PILE POINTS REQUIRED.

** 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.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 2770 C.F.S.
$VEL._{100}$ = 6.5 F.P.S.
$HW._{100}$ = EL. 1108.33
WATERWAY AREA = 430 SQ. FT.
DRAINAGE AREA = 12.9 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY

Q_2 = 400 C.F.S.
$VEL._2$ = 1.3 F.P.S.
$HW._2$ = EL. 1105.26

TRAFFIC VOLUME

IH-94 EB

ADT = 23,700. (2042)
R.D.S. = 70 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. PIER 1
9. PIER 2
10. 28" PRESTRESSED GIRDER DETAILS
11. STEEL DIAPHRAGM
12. SUPERSTRUCTURE CROSS SECTION
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE DETAILS
15. STRUCTURAL APPROACH SLAB
16. SINGLE SLOPE PARAPET 42SS
17. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

BRETT FOLLETT (608) 266-0214
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES

ACCEPTED AMB 5/1/20
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-55-281

IH-94 EB OVER CARR CREEK

COUNTY	VILLAGE
ST. CROIX	WOODVILLE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BAF	MJK	BAF	MJK

GENERAL PLAN

SHEET 1 OF 17

340

I.D. 1021-04-07A DATE: FEB. 2020

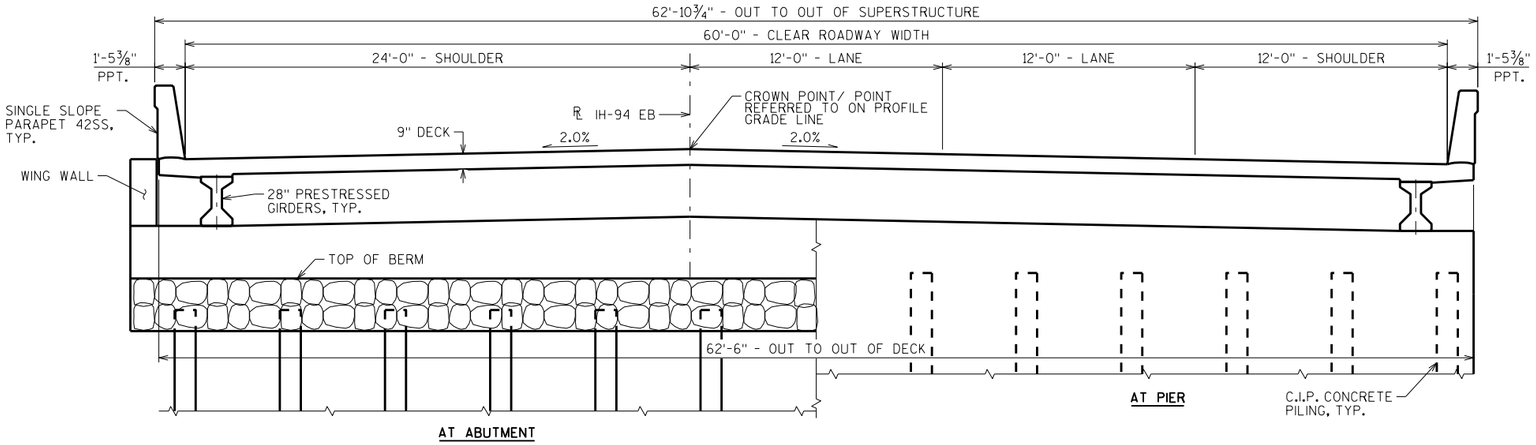
SCALE = 10.00

8

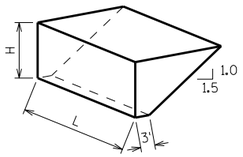
8

STATE PROJECT NUMBER

1021-04-77

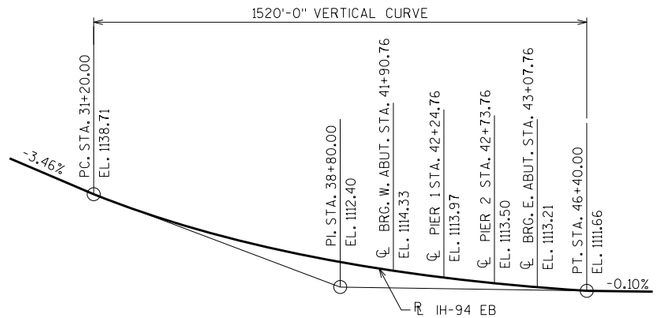


CROSS SECTION THRU ROADWAY LOOKING EAST



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)



PROFILE GRADE LINE IH-94 EB

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. STRUCT. APP. SLAB	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	E. STRUCT. APP. SLAB	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS 42+50	LS	---	---	---	---	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-55-281	LS	---	---	---	---	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	---	165	---	---	165	---	330
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	---	206	---	---	---	---	206	412
502.0100	CONCRETE MASONRY BRIDGES	CY	312	85	64	62	85	64	85	757
502.3200	PROTECTIVE SURFACE TREATMENT	SY	830	134	---	---	---	---	134	1,098
502.3210	PIGMENTED SURFACE SEALER	SY	118	20	---	---	---	---	20	158
503.0128	PRESTRESSED GIRDER TYPE I28-INCH	LF	823	---	---	---	---	---	---	823
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	---	4,155	3,015	4,110	4,155	---	15,435
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	59,830	14,340	1,620	---	---	1,590	14,340	91,720
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	2,145	---	---	---	---	---	---	2,145
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	42	---	---	---	---	---	---	42
506.4000	STEEL DIAPHRAGMS B-55-281	EACH	18	---	---	---	---	---	---	18
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	---	16	---	---	16	---	32
550.0500	PILE POINTS	EACH	---	---	9	14	15	9	---	47
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	---	---	450	700	825	495	---	2,470
606.0300	RIPRAP HEAVY	CY	---	---	305	---	---	283	---	588
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	---	105	---	---	105	---	210
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	---	---	---	---	---	---	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	---	63	---	---	63	---	126
645.0120	GEOTEXTILE TYPE HR	SY	---	---	474	---	---	443	---	917
	NON-BID ITEMS									
	FILLER	SIZE	---	---	---	---	---	---	---	½", ¾", 1½"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-55-281" SHALL BE THE EXISTING GROUNDLINE AT THE ABUTMENTS.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

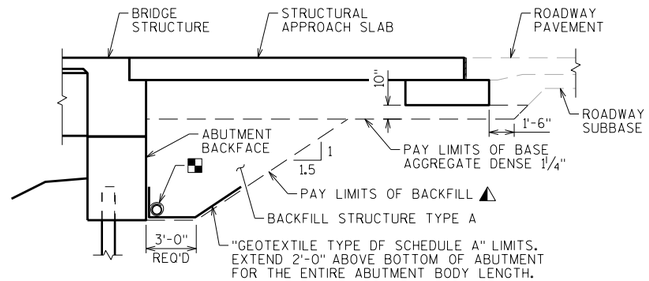
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "28" PRESTRESSED GIRDER DETAILS" SHEET.

THE EXISTING STREAM BED SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

AT ABUTMENTS AND PIER(S), CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.



TYPICAL SECTION THRU ABUTMENT

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

▪ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

CROSS SECTION & QUANTITIES

SHEET 2

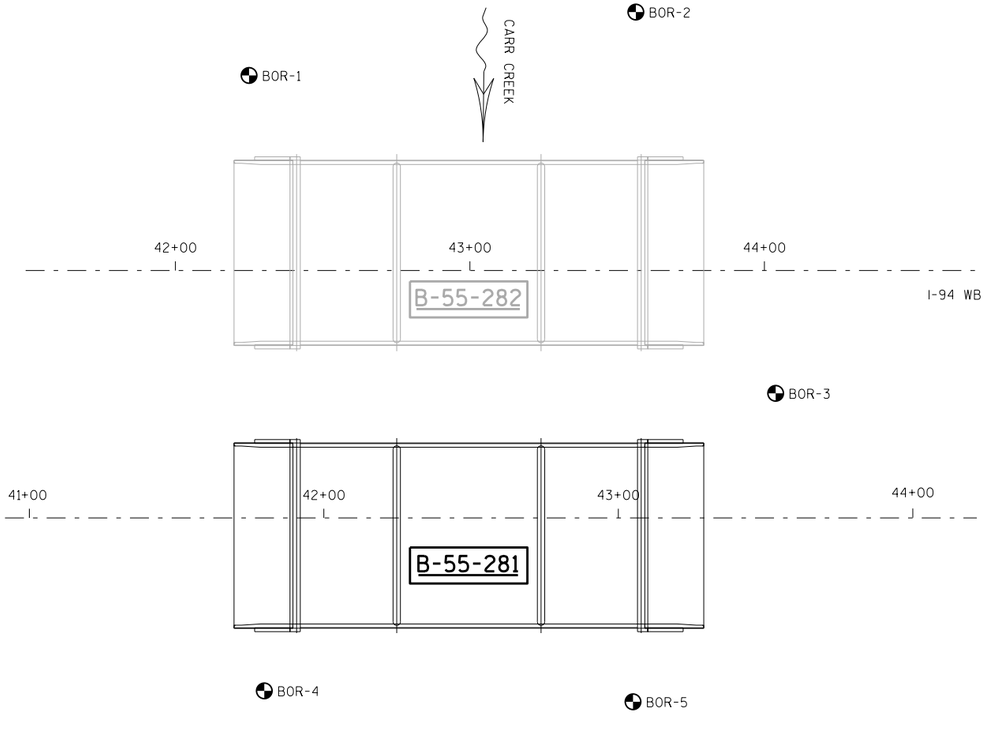
341

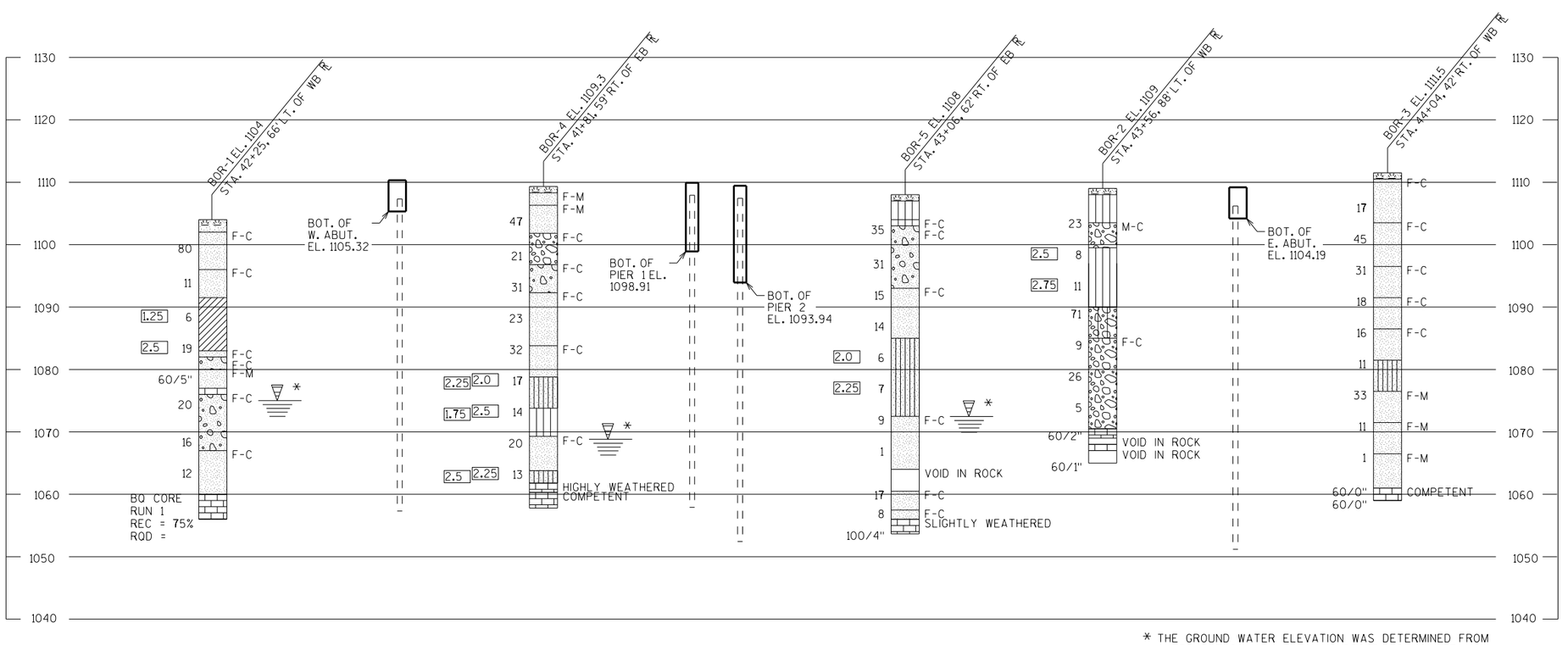
SCALE = 3.50

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	7/29/2019	327933	633926
2	7/09/2019	327950	634058
3	8/07/2019	327819	634101
4	7/30/2019	327724	633924
5	7/31/2019	327716	634049
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

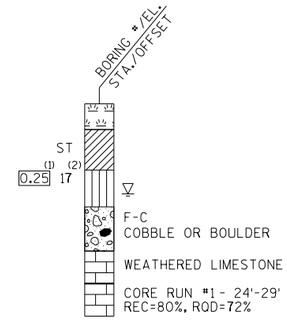
STATE PROJECT NUMBER

1021-04-77

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY TLP/BAF | PLANS CK'D. MJK

SUBSURFACE EXPLORATION

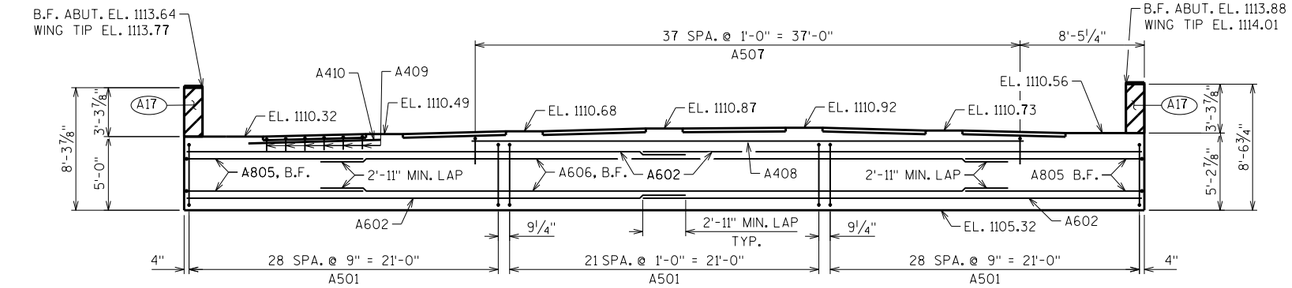
SHEET 3

342

SCALE = 25

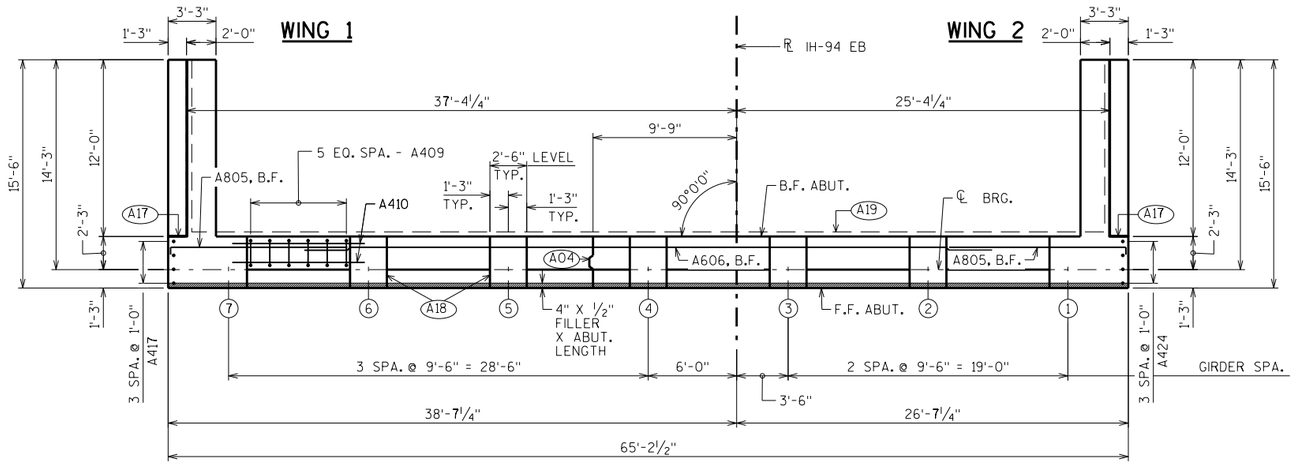
8

8



ELEVATION

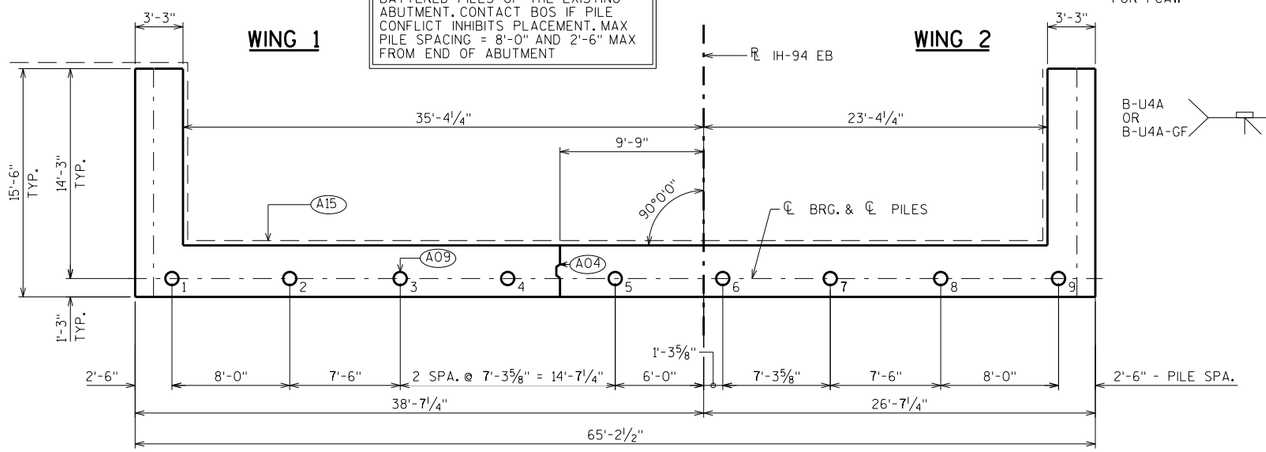
LOOKING WEST
ADJUST STIRRUP SPACING AS NEEDED TO MISS PILES



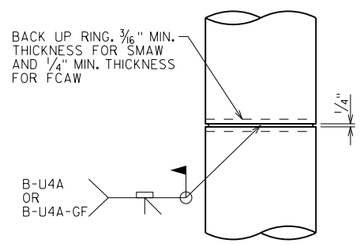
PLAN

○ INDICATES GIRDER NUMBER

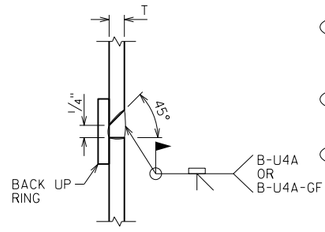
NOTE: PILES MAY CONFLICT WITH THE BATTERED PILES OF THE EXISTING ABUTMENT. CONTACT BOS IF PILE CONFLICT INHIBITS PLACEMENT. MAX PILE SPACING = 8'-0" AND 2'-6" MAX FROM END OF ABUTMENT



PILE PLAN

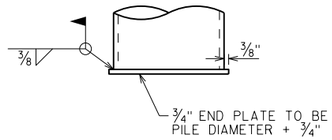


CAST-IN-PLACE 'PIPE PILE'

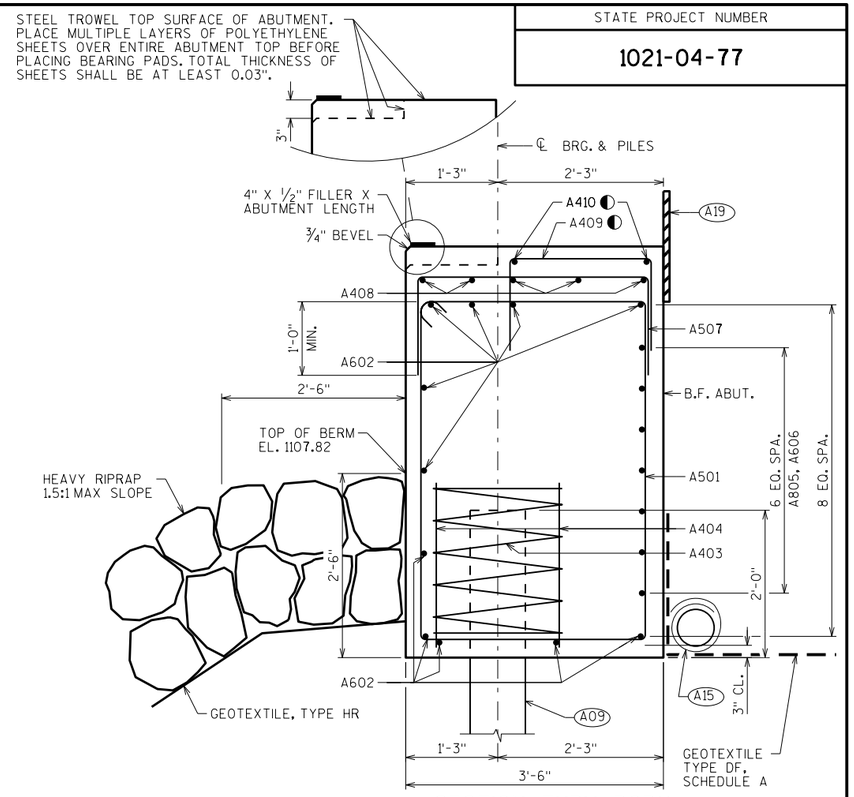


C.I.P. PILE WELD DETAIL

PILE DETAILS



END PLATE DETAIL



SECTION THRU BODY

◐ BETWEEN BEAM SEATS

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A09) SUPPORT ABUTMENT ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING. ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

STATE PROJECT NUMBER
1021-04-77

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

WEST ABUTMENT

SHEET 4

343

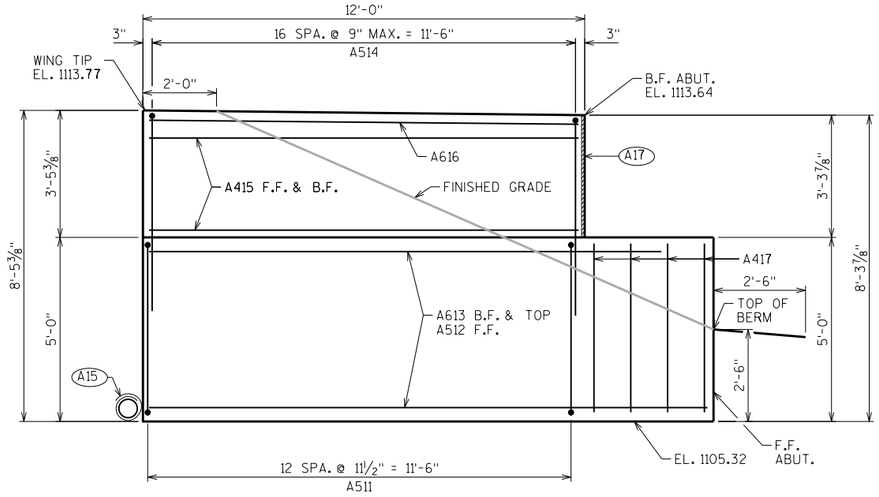
SCALE = 5.00

8

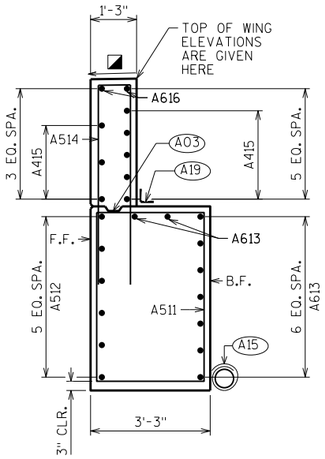
8

STATE PROJECT NUMBER

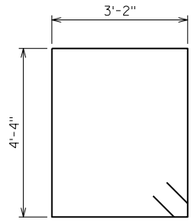
1021-04-77



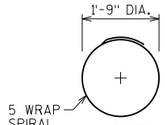
WING 1 ELEVATION



WING 1 SECTION



A501



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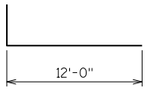

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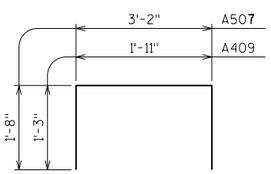
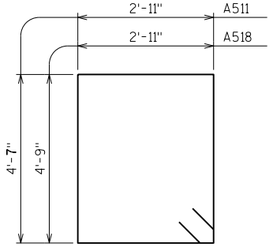
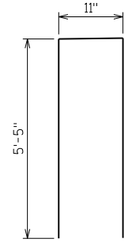


A507, A409



A511, A518



A514, A521

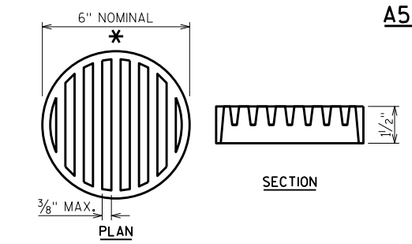
BILL OF BARS

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
A501		80	15'-8"	X		BODY-STIRRUPS-VERT.
A602		22	33'-11"			BODY-HORIZ.
A403		9	28'-0"	X		BODY-SPIRAL-1 PER BODY PILE-VERT.
A404		18	2'-3"			BODY-2 PER BODY PILE-VERT.
A805		14	13'-2"	X		BODY-HORIZ.-B.F.
A606		7	46'-9"			BODY-HORIZ.-B.F.
A507		38	6'-3"	X		BODY-VERT. U-BAR-TOP-OVER GIR. 2-5
A408		5	37'-6"			BODY-HORIZ.-TOP-OVER GIR. 2-5
A409		36	4'-3"	X		BODY-VERT.-BTWN. BEAM SEATS
A410		12	9'-0"			BODY-HORIZ.-BTWN BEAM SEATS
A511	X	13	15'-8"	X		WING 1 BODY-STIRRUPS-VERT.
A512	X	6	15'-2"			WING 1 BODY-HORIZ.-F.F.
A613	X	9	13'-11"			WING 1 BODY-HORIZ.-B.F. & TOP
A514	X	17	11'-6"	X		WING WALL 1-VERT.
A415	X	8	11'-8"			WING WALL 1-HORIZ.
A616	X	2	11'-8"			WING WALL 1-HORIZ.-TOP
A417	X	4	4'-8"			ABUT. BODY END-VERT.-WING 1
A518	X	13	16'-0"	X		WING 2 BODY-STIRRUPS-VERT.
A519	X	6	15'-2"			WING 2 BODY-HORIZ.-F.F.
A620	X	9	13'-11"			WING 2 BODY-HORIZ.-B.F. & TOP
A521	X	17	11'-6"	X		WING WALL 2-VERT.
A422	X	8	11'-8"			WING WALL 2-HORIZ.
A623	X	2	11'-8"			WING WALL 2-HORIZ.-TOP
A424	X	4	4'-10"			ABUT. BODY END-VERT.-WING 2

WING 2 ELEVATION

WING 2 SECTION



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A 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 SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

◪ SLOPE 1/8" PER FOOT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

WEST ABUTMENT DETAILS

SHEET 5

344

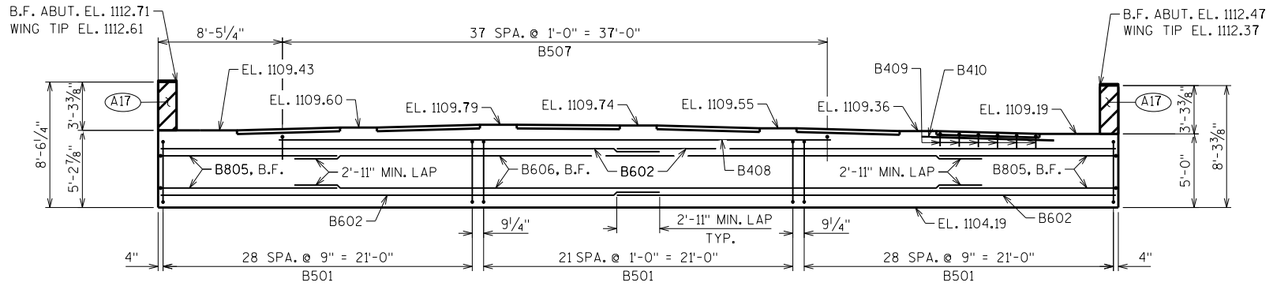
SCALE = 2.00

8

8

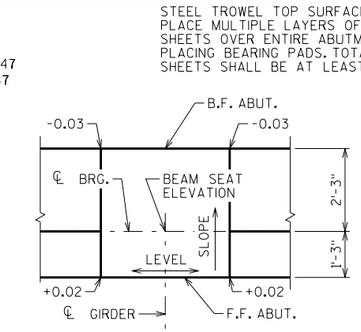
STATE PROJECT NUMBER

1021-04-77

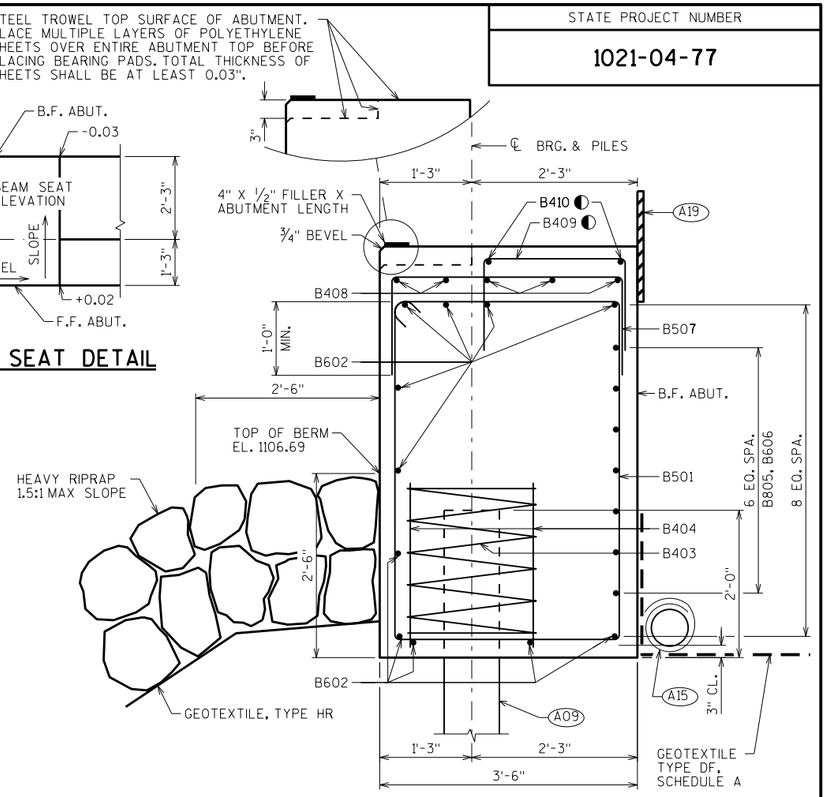


ELEVATION

LOOKING EAST
ADJUST STIRRUP SPACING AS NEEDED TO MISS PILES

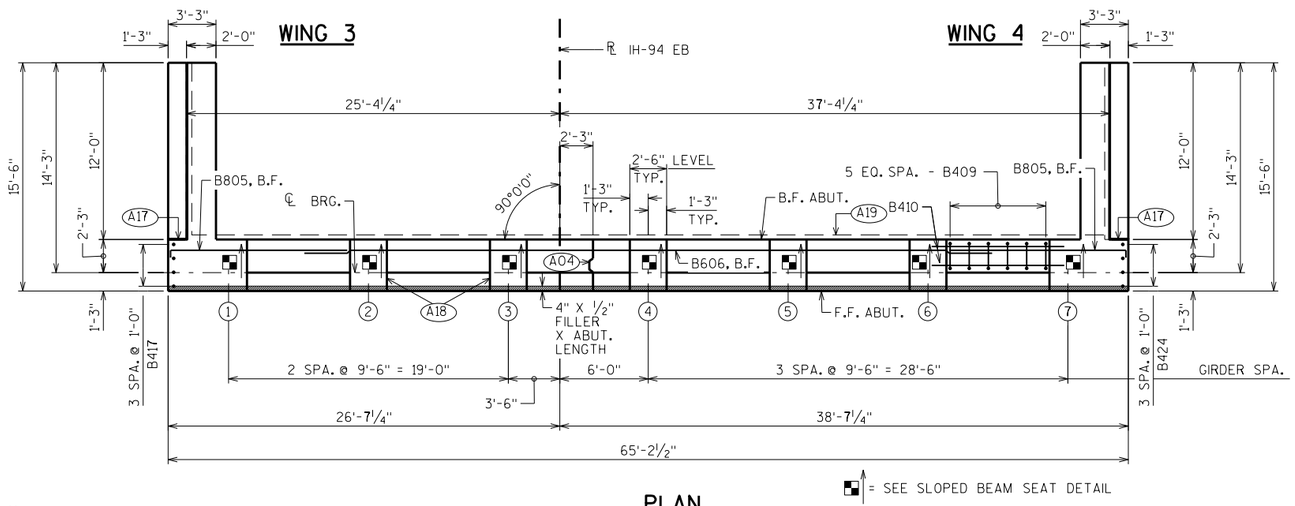


SLOPED BEAM SEAT DETAIL



SECTION THRU BODY

◐ BETWEEN BEAM SEATS

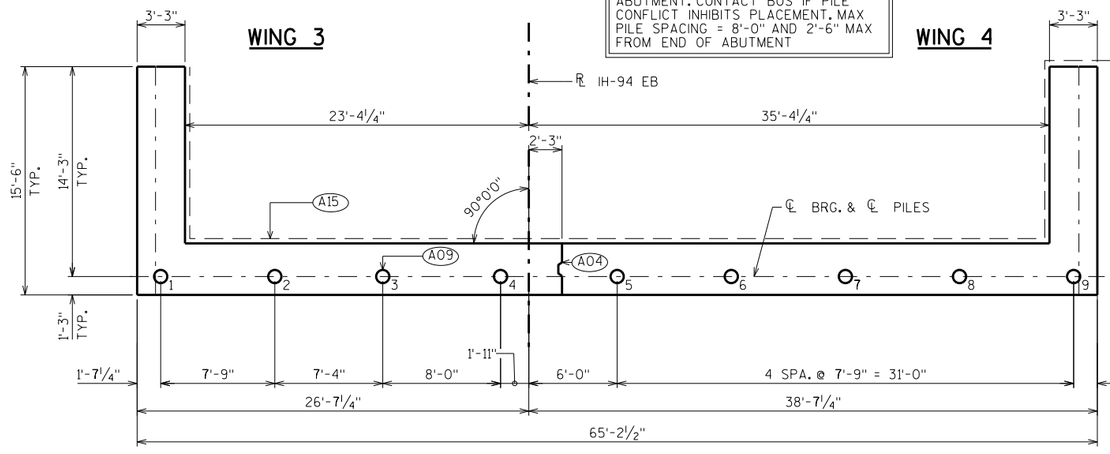


PLAN

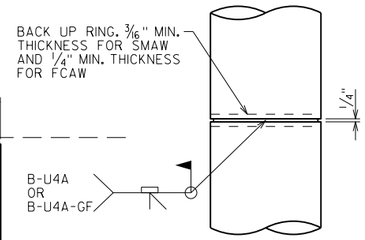
▪ = SEE SLOPED BEAM SEAT DETAIL

○ INDICATES GIRDER NUMBER

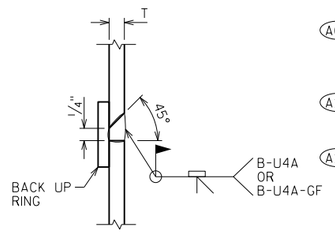
NOTE: PILES MAY CONFLICT WITH THE BATTERED PILES OF THE EXISTING ABUTMENT. CONTACT BOS IF PILE CONFLICT INHIBITS PLACEMENT. MAX PILE SPACING = 8'-0" AND 2'-6" MAX FROM END OF ABUTMENT



PILE PLAN

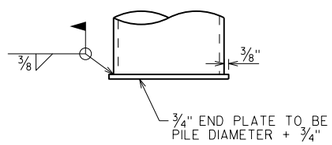


CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS



END PLATE DETAIL

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A09) SUPPORT ABUTMENT ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING. ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

EAST ABUTMENT

SHEET 6

345

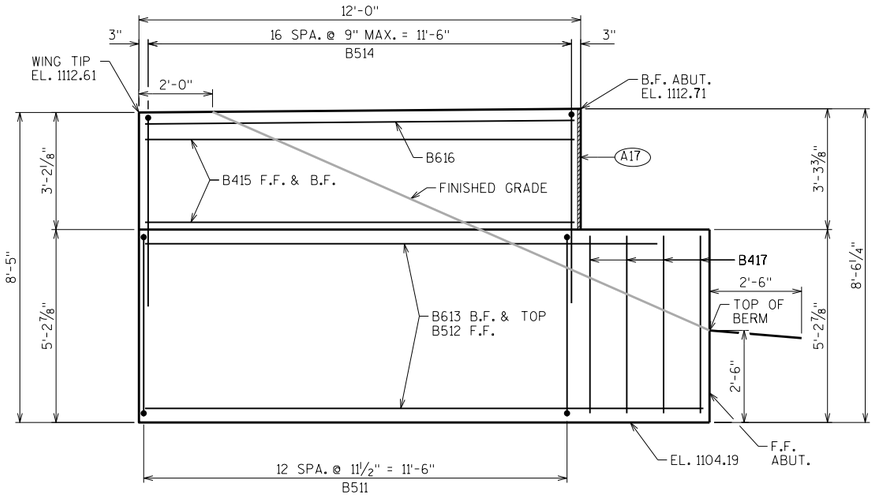
8

8

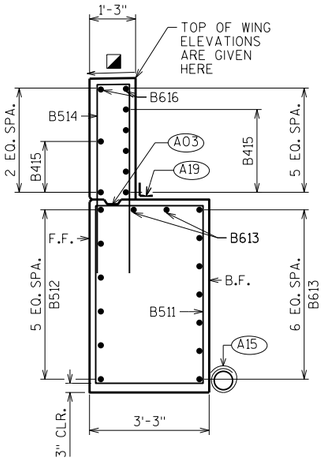
SCALE = 5.00

STATE PROJECT NUMBER

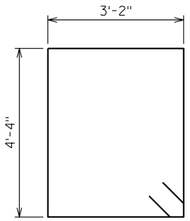
1021-04-77



WING 3 ELEVATION



WING 3 SECTION



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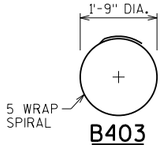

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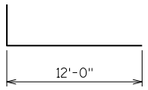
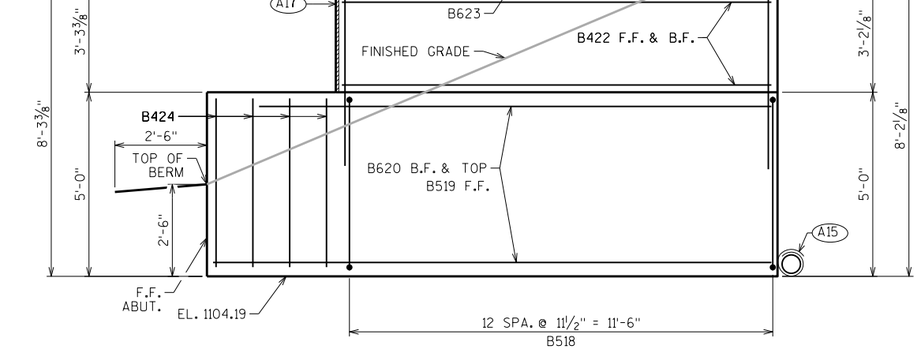


B805

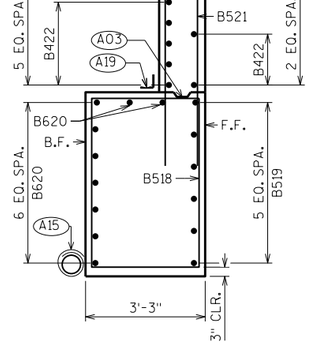
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

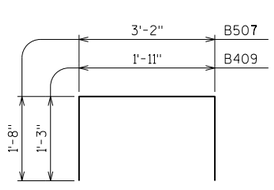
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501		80	15'-8"	X		BODY-STIRRUPS-VERT.
B602		22	33'-11"			BODY-HORIZ.
B403		9	28'-0"	X		BODY-SPIRAL-1 PER BODY PILE-VERT.
B404		18	2'-3"			BODY-2 PER BODY PILE-VERT.
B805		14	13'-2"	X		BODY-HORIZ.-B.F.
B606		7	46'-9"			BODY-HORIZ.-B.F.
B507		38	6'-3"	X		BODY-VERT. U-BAR-TOP-OVER GIR. 2-5
B408		5	37'-6"			BODY-HORIZ.-TOP-OVER GIR. 2-5
B409		36	4'-3"	X		BODY-VERT.-BTWN. BEAM SEATS
B410		12	9'-0"			BODY-HORIZ.-BTWN BEAM SEATS
B511	X	13	16'-0"	X		WING 3 BODY-STIRRUPS-VERT.
B512	X	6	15'-2"			WING 3 BODY-HORIZ.-F.F.
B613	X	9	13'-11"			WING 3 BODY-HORIZ.-B.F. & TOP
B514	X	17	11'-0"	X		WING WALL 3-VERT.
B415	X	7	11'-8"			WING WALL 3-HORIZ.
B616	X	2	11'-8"			WING WALL 3-HORIZ.-TOP
B417	X	4	4'-8"			ABUT. BODY END-VERT.-WING 3
B518	X	13	15'-8"	X		WING 4 BODY-STIRRUPS-VERT.
B519	X	6	15'-2"			WING 4 BODY-HORIZ.-F.F.
B620	X	9	13'-11"			WING 4 BODY-HORIZ.-B.F. & TOP
B521	X	17	11'-0"	X		WING WALL 4-VERT.
B422	X	7	11'-8"			WING WALL 4-HORIZ.
B623	X	2	11'-8"			WING WALL 4-HORIZ.-TOP
B424	X	4	4'-10"			ABUT. BODY END-VERT.-WING 4



WING 4 ELEVATION



WING 4 SECTION



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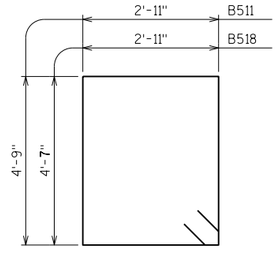

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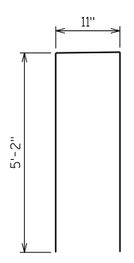

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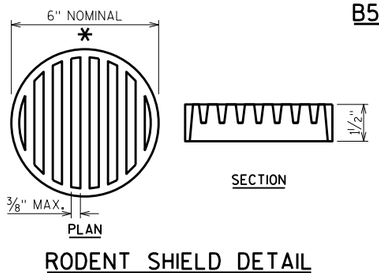


RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A 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 SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

◪ SLOPE 1/8" PER FOOT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

EAST ABUTMENT DETAILS

SHEET 7

346

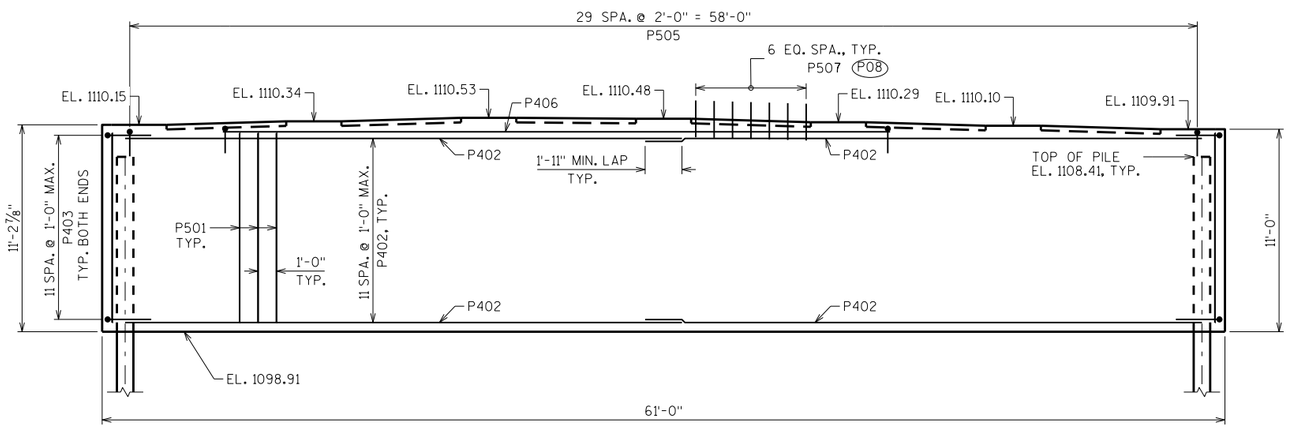
SCALE = 2.00

8

8

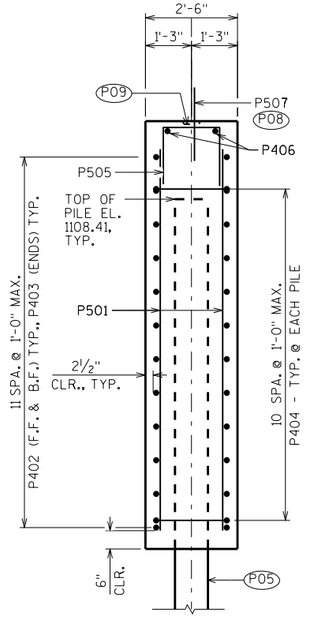
STATE PROJECT NUMBER

1021-04-77



ELEVATION

LOOKING EAST

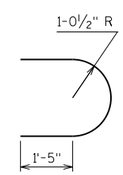


END VIEW

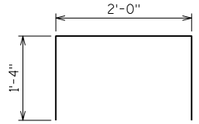
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
P501		128	10'-3"			PIER 1 - VERT.
P402		48	30'-3"			PIER 1 - HORIZ. - F.F. & B.F.
P403		24	6'-2"	X		PIER 1 - HORIZ. - ENDS
P404		154	2'-11"	X		PIER 1 - HORIZ. - PILES
P505		30	4'-5"	X		PIER 1 - VERT. - TOP
P406		2	36'-3"			PIER 1 - HORIZ. - TOP - GIR. 2-5
P507		42	2'-0"			PIER 1 - VERT. - DOWELS



P403



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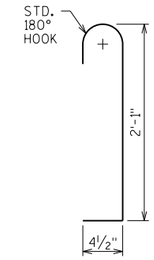
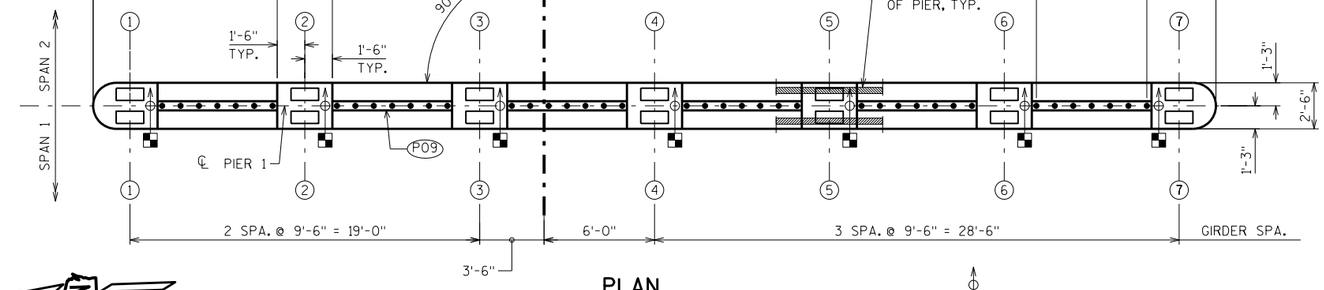


P404

(P05) SUPPORT PIER ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

(P08) BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

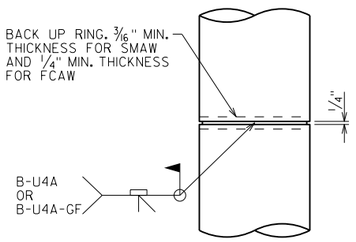
(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.



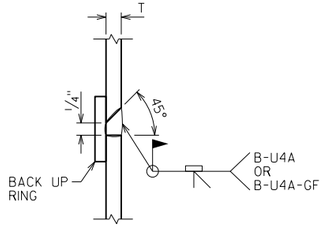
PLAN

= SEE SLOPED BEAM SEAT DETAIL

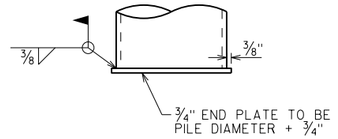
INDICATES GIRDER NUMBER



CAST-IN-PLACE 'PIPE PILE'

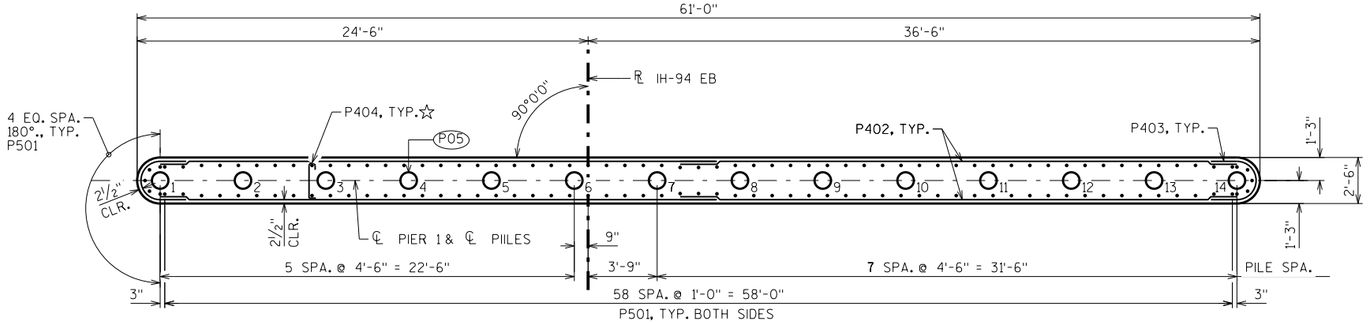


C.I.P. PILE WELD DETAIL



END PLATE DETAIL

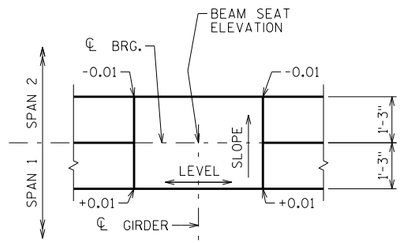
PILE DETAILS



PILE PLAN

SHOWING REINFORCEMENT

☆ PLACE P404 BARS ADJACENT TO EACH PILE WITH MAX. VERT. SPA. OF 1'-0". TIE TO NEAREST P501 BAR AND ALTERNATE POSITION OF 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.



SLOPED BEAM SEAT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

PIER 1

SHEET 8

347

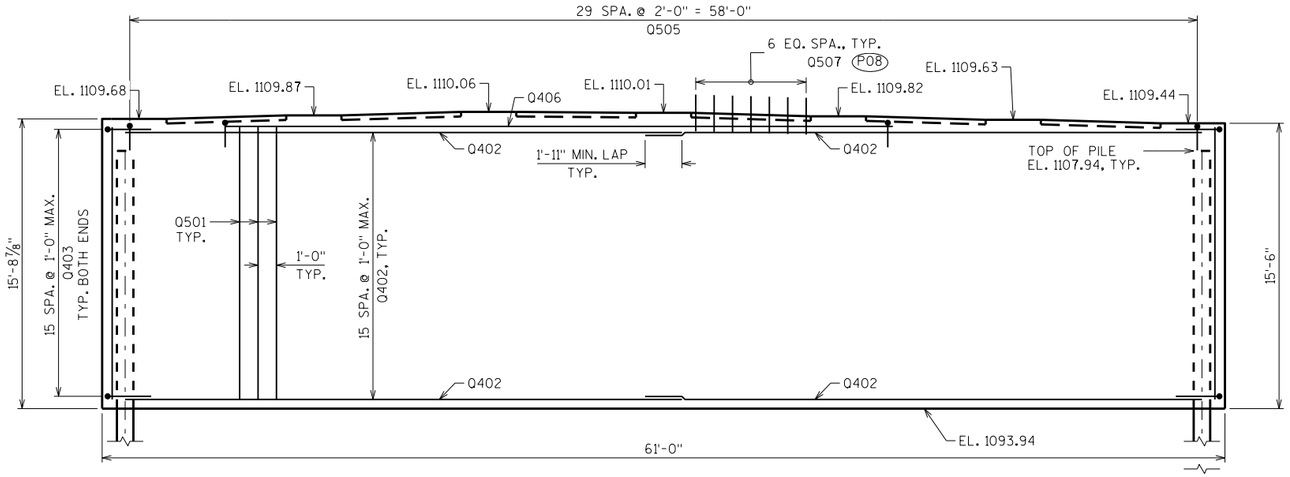
SCALE = 4.00

8

8

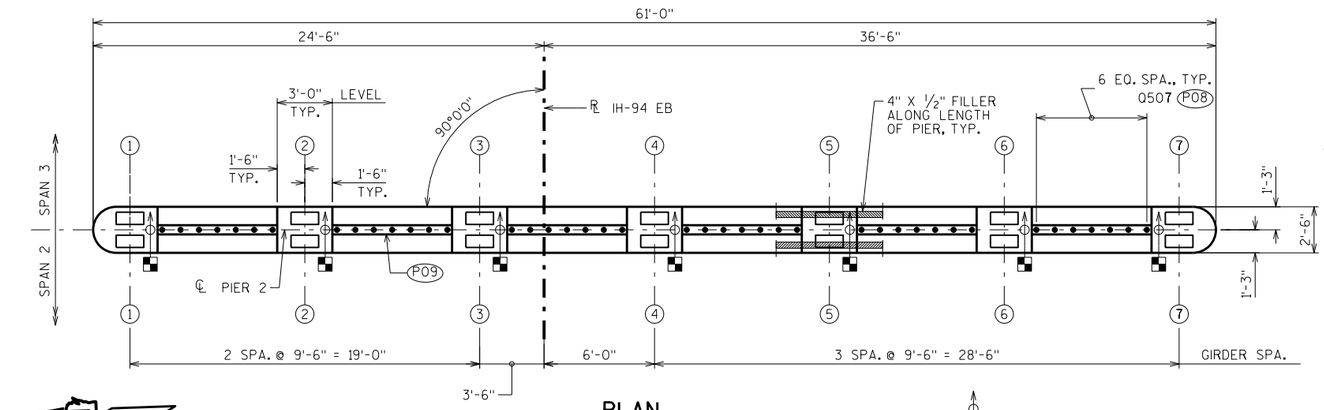
STATE PROJECT NUMBER

1021-04-77



ELEVATION

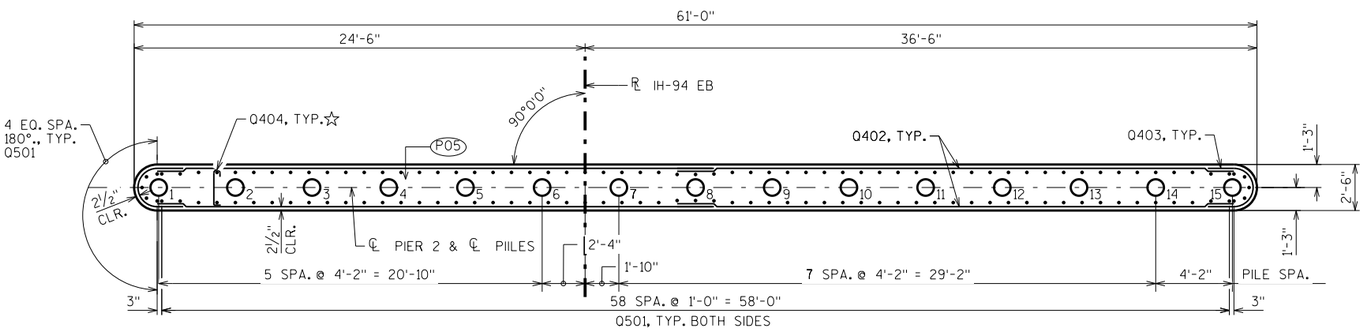
LOOKING EAST



PLAN

= SEE SLOPED BEAM SEAT DETAIL

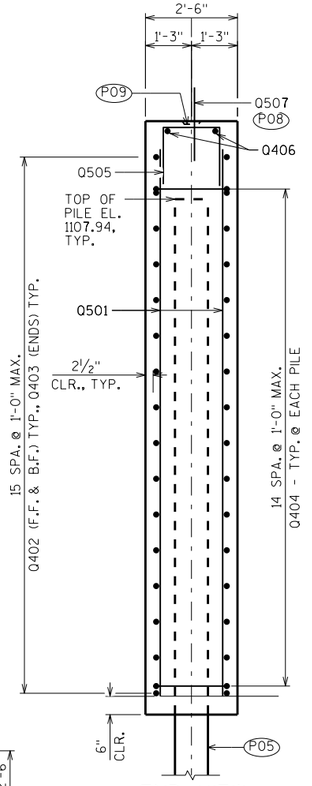
INDICATES GIRDER NUMBER



PILE PLAN

SHOWING REINFORCEMENT

☆ PLACE Q404 BARS ADJACENT TO EACH PILE WITH MAX. VERT. SPA. OF 1'-0". TIE TO NEAREST Q501 BAR AND ALTERNATE POSITION OF 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

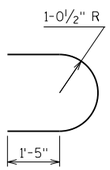


END VIEW

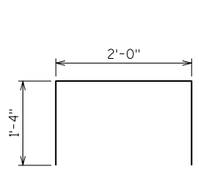
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

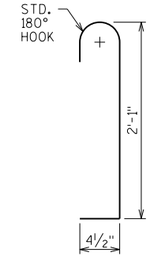
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
Q501		128	14'-9"			PIER 2 - VERT.
Q402		64	30'-3"			PIER 2 - HORIZ. - F.F. & B.F.
Q403		32	6'-2"	X		PIER 2 - HORIZ. - ENDS
Q404		225	2'-11"	X		PIER 2 - HORIZ. - PILES
Q505		30	4'-5"	X		PIER 2 - VERT. - TOP
Q406		2	36'-3"			PIER 2 - HORIZ. - TOP - GIR. 2-5
Q507		42	2'-0"			PIER 2 - VERT. - DOWELS



Q403



Q505

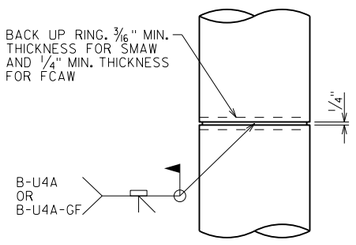


Q404

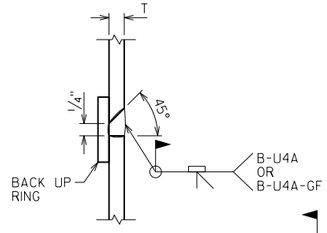
P05 SUPPORT PIER ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

P08 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

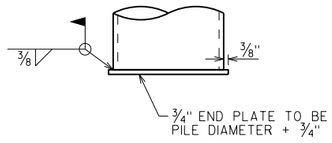
P09 KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.



CAST-IN-PLACE 'PIPE PILE'

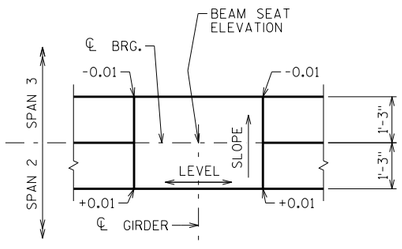


C.I.P. PILE WELD DETAIL



PILE DETAILS

END PLATE DETAIL



SLOPED BEAM SEAT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

PIER 2

SHEET 9

348

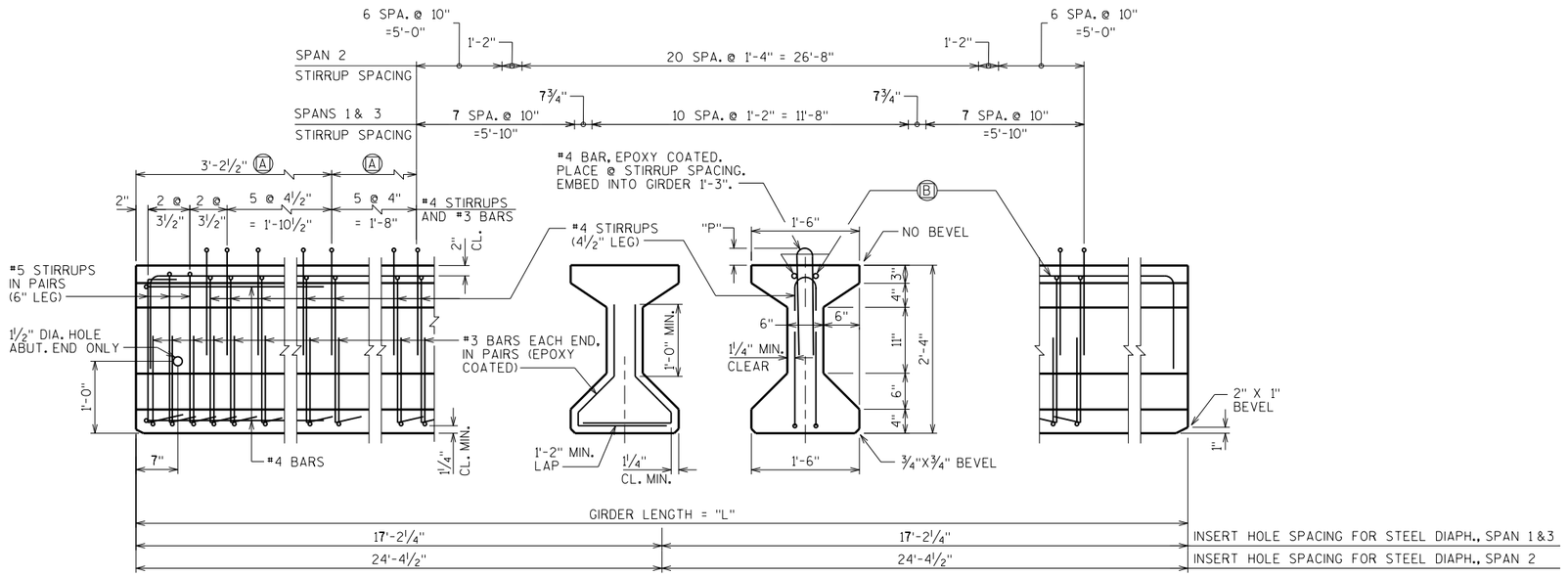
SCALE = 4.00

8

8

STATE PROJECT NUMBER

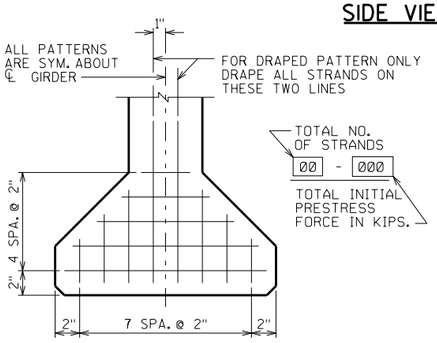
1021-04-77



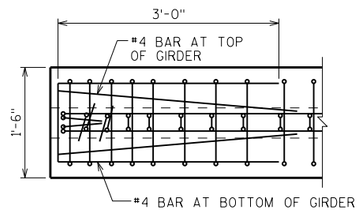
SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

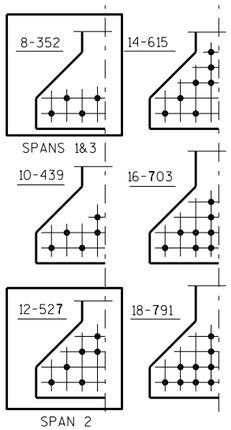
Ⓑ 2-BARS STD. 90° HOOK AT ENDS
SPAN 1&3 - #7 BARS, 3'-7" MIN. LAP
SPAN 2 - #5 BARS, 2'-5" MIN. LAP



TYP. STRAND PATTERN

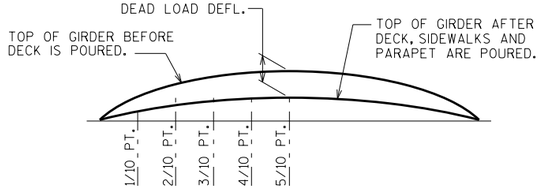


TOP VIEW OF GIRDER ENDS



UNDRAPED PATTERN

0.6"ϕ STRANDS



DEAD LOAD DEFLECTION DIAGRAM

* 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	0.63
2	1.41

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

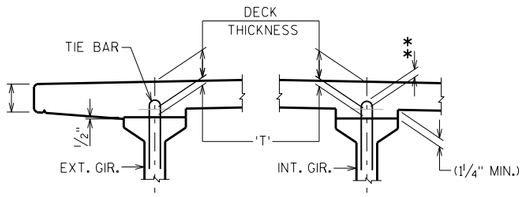
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 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.

BEND EACH END OF #4 STIRRUPS 4½" AND #5 STIRRUPS 6".

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



DECK HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & 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 2.60" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	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" (IN.) 1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	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&3	2-6	34'-4½"	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	8,000	7	7	7	0.6							8	6,400
2	2-6	48'-9"	0.3	0.5	0.7	0.8	0.8	0.8	0.7	0.5	0.3	8,000	7	7	7	0.6							12	6,400
1&3	1,7	34'-4½"	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	8,000	7	7	7	0.6							8	6,400
2	1,7	48'-9"	0.2	0.4	0.5	0.6	0.7	0.6	0.5	0.4	0.2	8,000	7	7	7	0.6							12	6,400

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

28" PRESTRESSED GIRDER DETAILS

SHEET 10

349

SCALE = 1

8

8

STATE PROJECT NUMBER

1021-04-77

NOTES

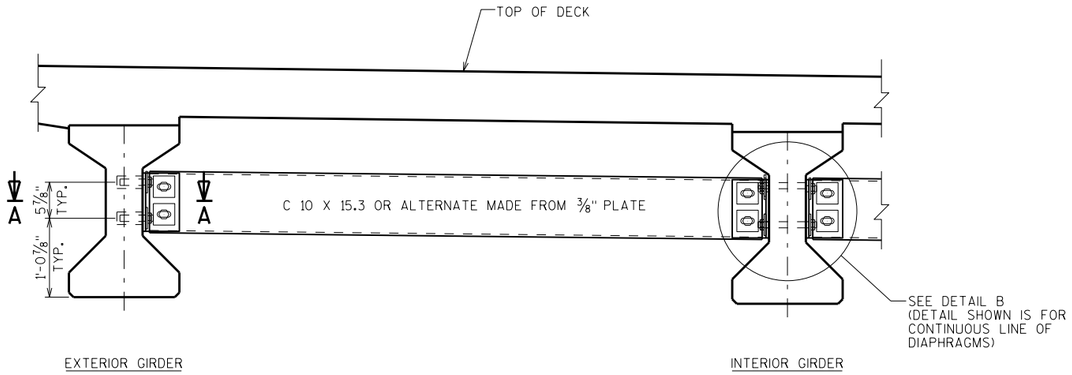
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-281", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

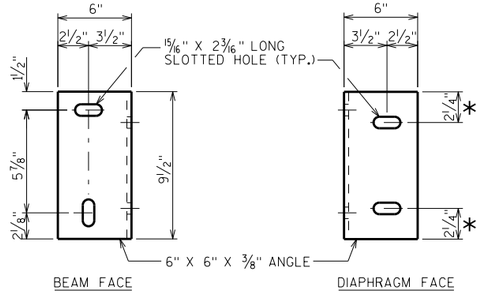
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

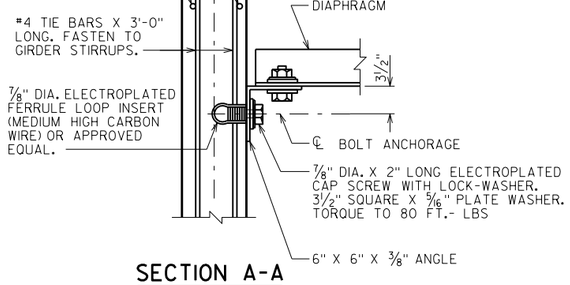


PART TRANSVERSE SECTION AT DIAPHRAGM



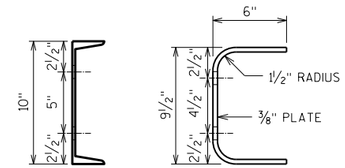
DIAPHRAGM SUPPORT

* 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM



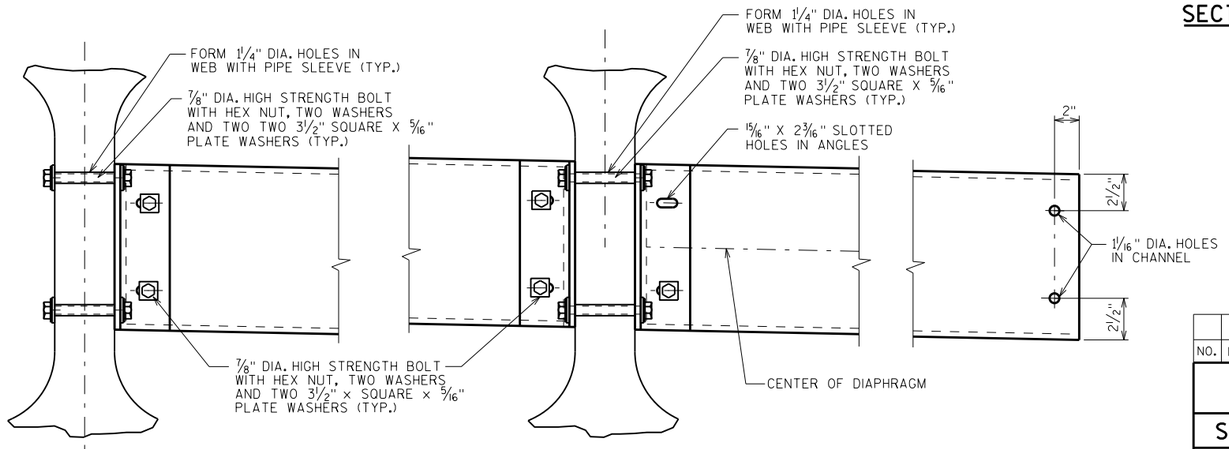
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



C10X15.3 ALTERNATE DIAPHRAGM

SECTION THRU DIAPHRAGM



(FOR STAGGERED DIAPHRAGM) (FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

STEEL DIAPHRAGM

SHEET 11

350

SCALE = 1

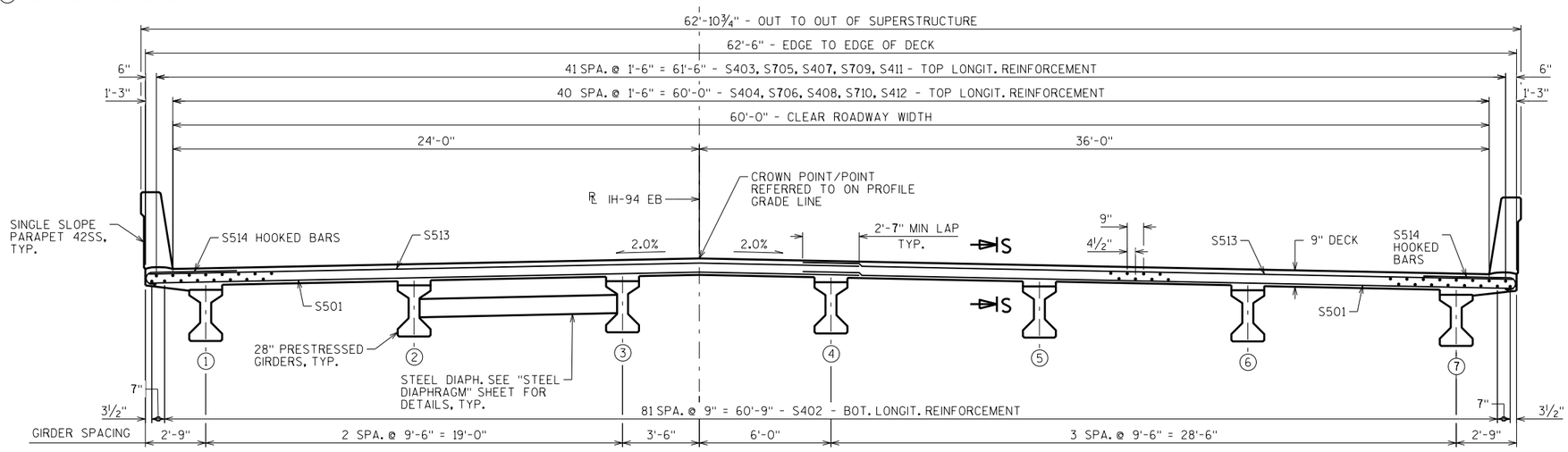
8

8

STATE PROJECT NUMBER

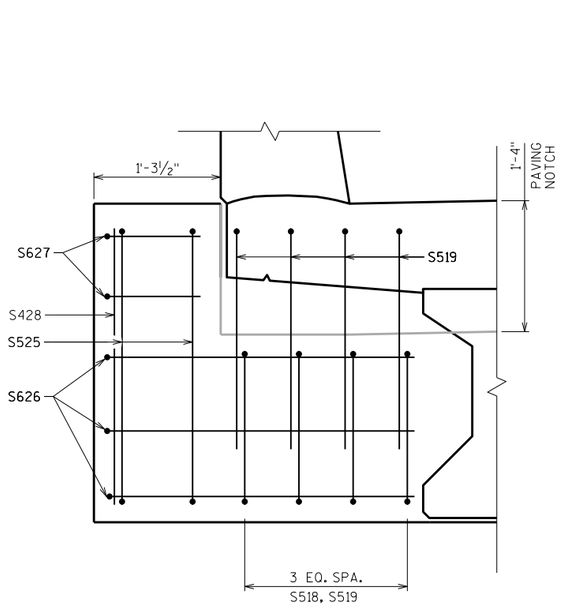
1021-04-77

◯ INDICATES GIRDER NUMBER



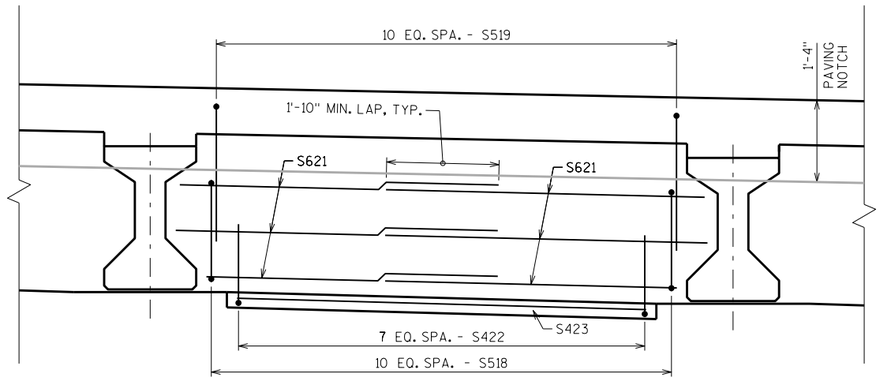
CROSS SECTION THRU ROADWAY

LOOKING EAST



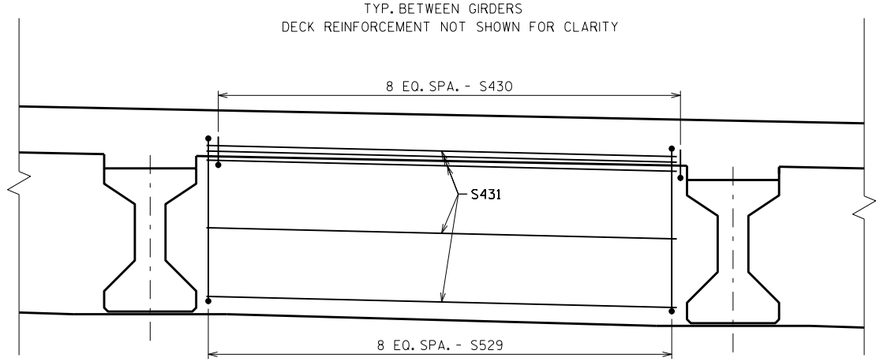
ABUTMENT DIAPHRAGM- EXTERIOR DETAIL

NORTHEAST CORNER SHOWN. OTHER CORNERS SIMILAR
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



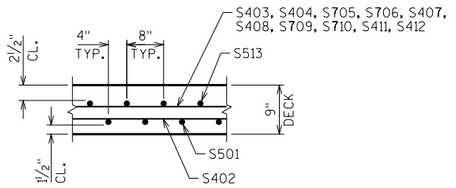
DIAPHRAGM AT ABUTMENTS

TYP. BETWEEN GIRDERS
DECK REINFORCEMENT NOT SHOWN FOR CLARITY

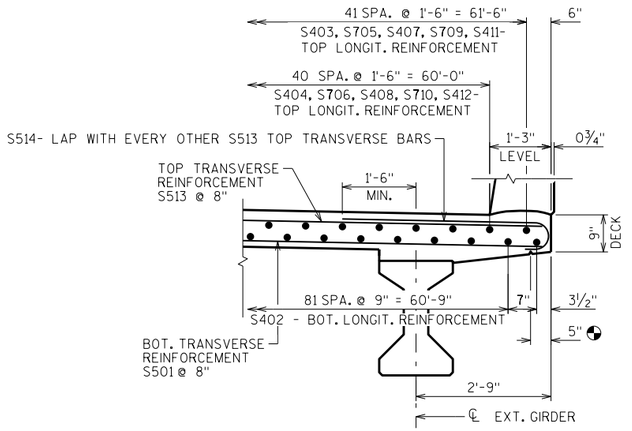


DIAPHRAGM AT PIERS

TYP. BETWEEN GIRDERS
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



SECTION S-S



EDGE OF DECK DETAIL

TYPICAL AT BOTH EDGES

◓ ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT. DIAPHRAGM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

SUPERSTRUCTURE CROSS SECTION

SHEET 12

351

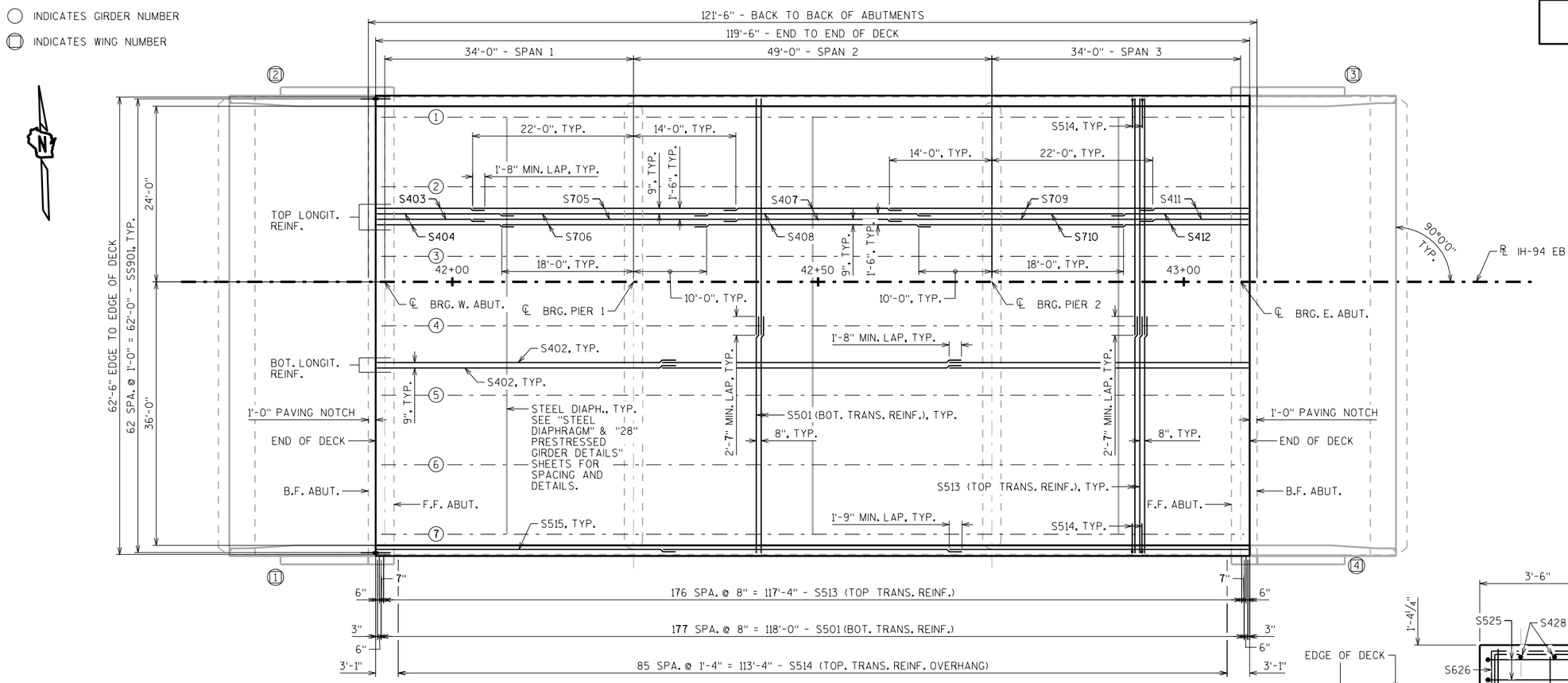
SCALE = 3.00

8

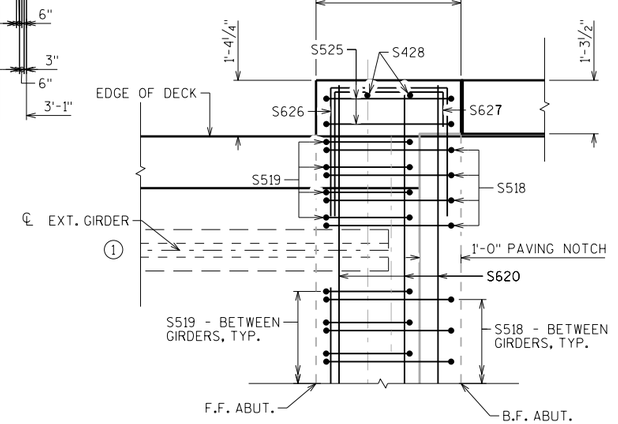
8

STATE PROJECT NUMBER

1021-04-77



PLAN



PLAN-DIAPHRAGM EXTERIOR

NORTHEAST CORNER SHOWN. OTHER CORNERS SIMILAR

TOP OF DECK ELEVATIONS

EOD=EDGE OF DECK

	C/L BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. PIER 1
NORTH EOD	1113.85	1113.81	1113.78	1113.74	1113.70	1113.67	1113.63	1113.60	1113.56	1113.53	1113.49
GIRDER 1	1113.88	1113.84	1113.81	1113.77	1113.73	1113.70	1113.66	1113.63	1113.59	1113.56	1113.52
GIRDER 2	1114.07	1114.03	1114.00	1113.96	1113.92	1113.89	1113.85	1113.82	1113.78	1113.75	1113.71
GIRDER 3	1114.26	1114.22	1114.19	1114.15	1114.11	1114.08	1114.04	1114.01	1113.97	1113.94	1113.90
CROWN PT./PGL	1114.33	1114.29	1114.26	1114.22	1114.18	1114.15	1114.11	1114.08	1114.04	1114.01	1113.97
GIRDER 4	1114.21	1114.17	1114.14	1114.10	1114.06	1114.03	1113.99	1113.96	1113.92	1113.89	1113.85
GIRDER 5	1114.02	1113.98	1113.95	1113.91	1113.87	1113.84	1113.80	1113.77	1113.73	1113.70	1113.66
GIRDER 6	1113.83	1113.79	1113.76	1113.72	1113.68	1113.65	1113.61	1113.58	1113.54	1113.51	1113.47
GIRDER 7	1113.64	1113.60	1113.57	1113.53	1113.49	1113.46	1113.42	1113.39	1113.35	1113.32	1113.28
SOUTH EOD	1113.61	1113.57	1113.54	1113.50	1113.46	1113.43	1113.39	1113.36	1113.32	1113.29	1113.25

	C/L BRG. PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. E. ABUT.
NORTH EOD	1113.49	1113.44	1113.39	1113.35	1113.30	1113.25	1113.20	1113.16	1113.11	1113.07	1113.02	1112.99	1112.96	1112.93	1112.90	1112.87	1112.84	1112.81	1112.78	1112.75	1112.73
GIRDER 1	1113.52	1113.47	1113.42	1113.38	1113.33	1113.28	1113.23	1113.19	1113.14	1113.10	1113.05	1113.02	1112.99	1112.96	1112.93	1112.90	1112.87	1112.84	1112.81	1112.78	1112.76
GIRDER 2	1113.71	1113.66	1113.61	1113.57	1113.52	1113.47	1113.42	1113.38	1113.33	1113.29	1113.24	1113.21	1113.18	1113.15	1113.12	1113.09	1113.06	1113.03	1113.00	1112.97	1112.95
GIRDER 3	1113.90	1113.85	1113.80	1113.76	1113.71	1113.66	1113.61	1113.57	1113.52	1113.48	1113.43	1113.40	1113.37	1113.34	1113.31	1113.28	1113.25	1113.22	1113.19	1113.16	1113.14
CROWN PT./PGL	1113.97	1113.92	1113.87	1113.83	1113.78	1113.73	1113.68	1113.64	1113.59	1113.55	1113.50	1113.47	1113.44	1113.41	1113.38	1113.35	1113.32	1113.29	1113.26	1113.23	1113.21
GIRDER 4	1113.85	1113.80	1113.75	1113.71	1113.66	1113.61	1113.56	1113.52	1113.47	1113.43	1113.38	1113.35	1113.32	1113.29	1113.26	1113.23	1113.20	1113.17	1113.14	1113.11	1113.09
GIRDER 5	1113.66	1113.61	1113.56	1113.52	1113.47	1113.42	1113.37	1113.33	1113.28	1113.24	1113.19	1113.16	1113.13	1113.10	1113.07	1113.04	1113.01	1112.98	1112.95	1112.92	1112.90
GIRDER 6	1113.47	1113.42	1113.37	1113.33	1113.28	1113.23	1113.18	1113.14	1113.09	1113.05	1113.00	1112.97	1112.94	1112.91	1112.88	1112.85	1112.82	1112.79	1112.76	1112.73	1112.71
GIRDER 7	1113.28	1113.23	1113.18	1113.14	1113.09	1113.04	1112.99	1112.95	1112.90	1112.86	1112.81	1112.78	1112.75	1112.72	1112.69	1112.66	1112.63	1112.60	1112.57	1112.54	1112.52
SOUTH EOD	1113.25	1113.20	1113.15	1113.11	1113.06	1113.01	1112.96	1112.92	1112.87	1112.83	1112.78	1112.75	1112.72	1112.69	1112.66	1112.63	1112.60	1112.57	1112.54	1112.51	1112.49

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

SUPERSTRUCTURE

SHEET 13

352

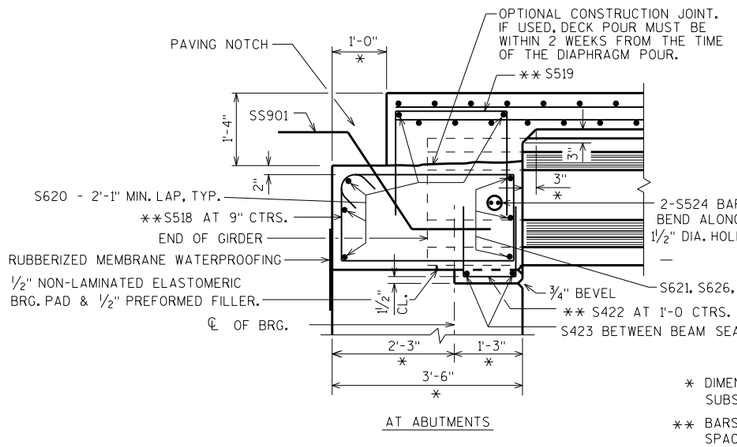
SCALE = 8.00

8

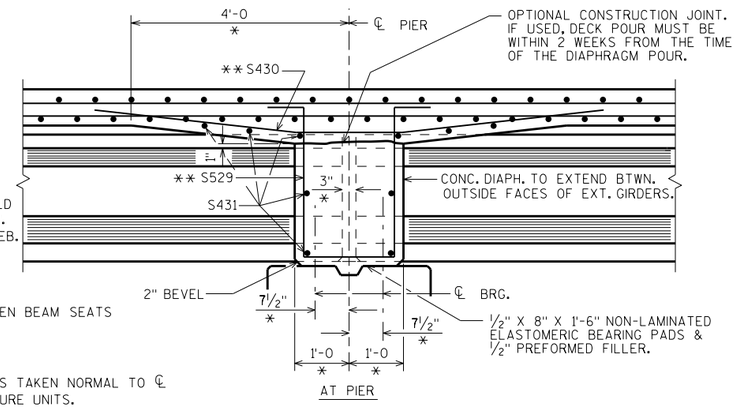
8

STATE PROJECT NUMBER

1021-04-77



AT ABUTMENTS



AT PIER

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

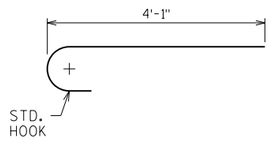
** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

PART. LONGIT. SECTION

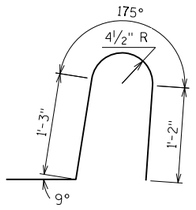
BILL OF BARS

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	360	32'-6"			TRANSVERSE - BOT.
S402	X	252	40'-11"			LONGIT. - BOT.
S403	X	42	14'-9"			LONGIT. - TOP. - SPAN 1
S404	X	41	18'-9"			LONGIT. - TOP. - SPAN 1
S705	X	42	36'-0"			LONGIT. - TOP. - CONTINUITY OVER PIER 1
S706	X	41	28'-0"			LONGIT. - TOP. - CONTINUITY OVER PIER 1
S407	X	42	24'-4"			LONGIT. - TOP. - SPAN 2
S408	X	41	32'-4"			LONGIT. - TOP. - SPAN 2
S709	X	42	36'-0"			LONGIT. - TOP. - CONTINUITY OVER PIER 2
S710	X	41	28'-0"			LONGIT. - TOP. - CONTINUITY OVER PIER 2
S411	X	42	14'-9"			LONGIT. - TOP. - SPAN 3
S412	X	41	18'-9"			LONGIT. - TOP. - SPAN 3
S513	X	358	32'-6"			TRANSVERSE - TOP
S514	X	172	4'-8"	X		TRANSVERSE - EDGE OF DECK
S515	X	48	41'-0"			PARAPET - HORIZ.
S516	X	360	4'-5"	X		PARAPET - VERT.
S517	X	360	6'-8"	X		PARAPET - VERT.
S518	X	148	10'-2"	X		ABUT. DIAPH. - VERT. - STIRRUPS - BTWN. GIR. & AT EXTERIORS
S519	X	148	6'-5"	X		ABUT. DIAPH. - VERT. - BTWN. GIR. & AT EXTERIORS
S620	X	20	33'-6"			ABUT. DIAPH. - HORIZ.
S621	X	72	5'-3"			ABUT. DIAPH. - HORIZ. - BETWEEN GIRDERS
S422	X	96	3'-5"	X		ABUT. DIAPH. - VERT. - BETWEEN BEAM SEATS
S423	X	24	6'-2"			ABUT. DIAPH. - HORIZ. - BETWEEN BEAM SEATS
S524	X	28	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIRDERS
S525	X	8	12'-10"	X		ABUT. DIAPH. - EXT. - VERT.
S626	X	12	8'-8"	X		ABUT. DIAPH. - EXT. - HORIZ.
S627	X	8	6'-7"	X		ABUT. DIAPH. - EXT. - HORIZ.
S428	X	8	2'-11"			ABUT. DIAPH. - EXT. - VERT.
S529	X	108	8'-4"	X		PIER DIAPH. - VERT.
S430	X	108	10'-0"	X		PIER DIAPH. - VERT. - HAUNCH
S431	X	120	7'-8"			PIER DIAPH. - HORIZ. - BETWEEN GIRDERS
STAINLESS STEEL → SS901		126	5'-0"	X		ABUT. DIAPHRAGM - APPROACH SLAB TIE



S514



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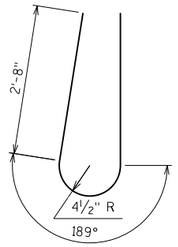
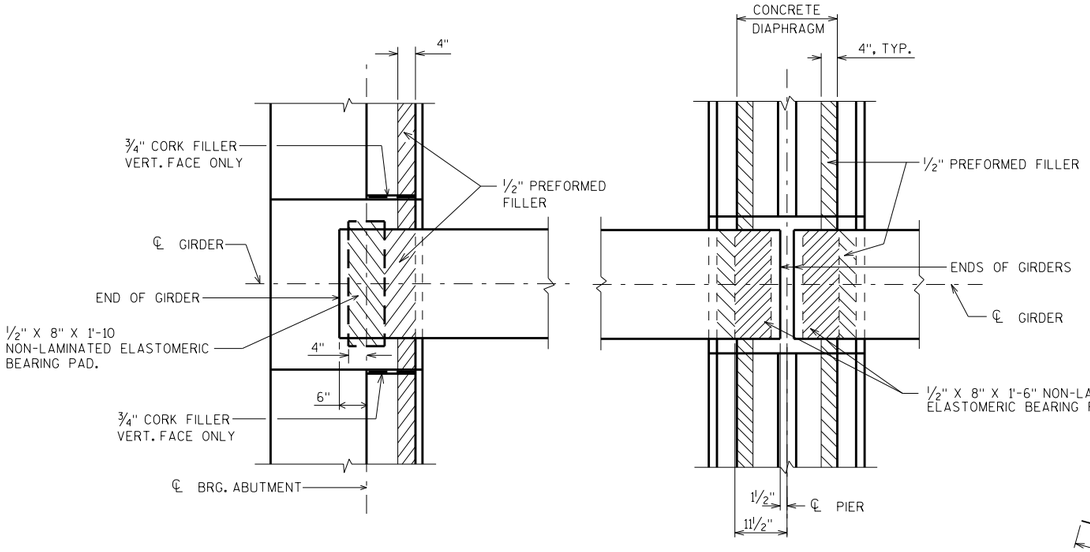
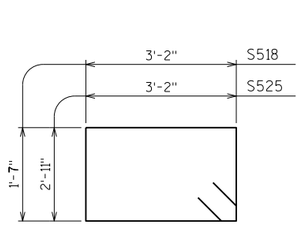


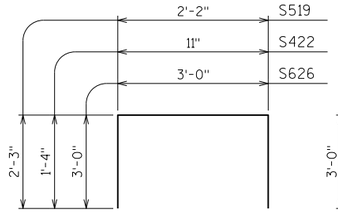
S517



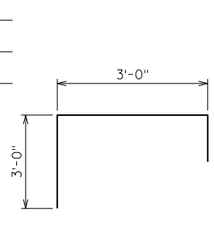
BEARING PAD DETAIL



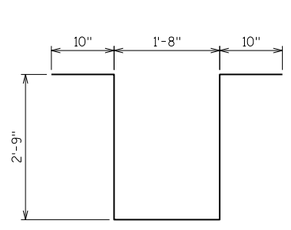
S518, S525



S519, S422, S626



S627



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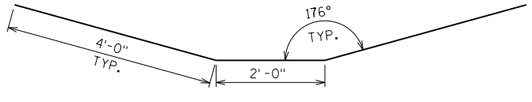
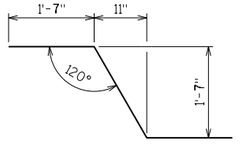


S430



SS901

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

SUPERSTRUCTURE DETAILS

SHEET 14

353

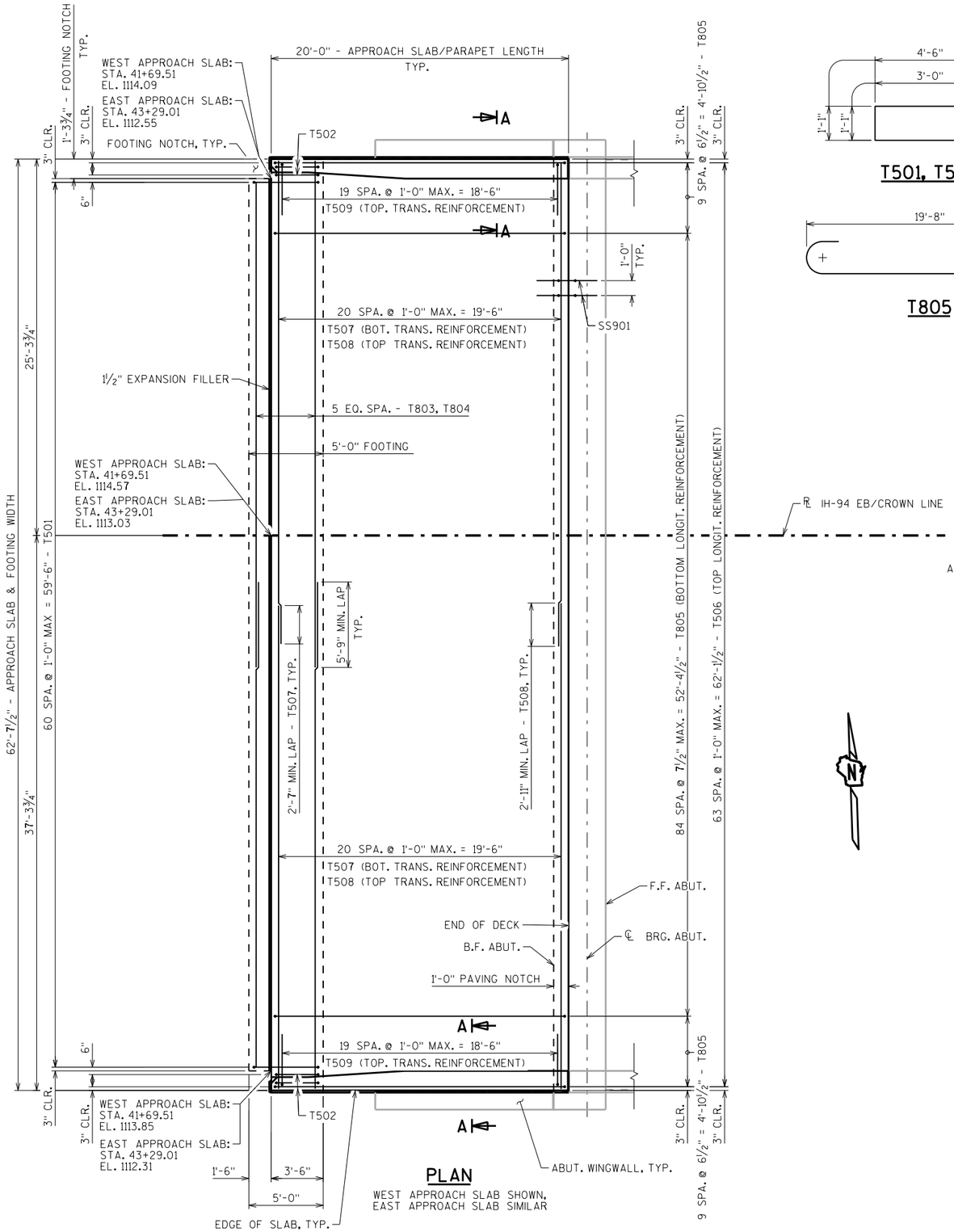
SCALE = 1.35

8

8

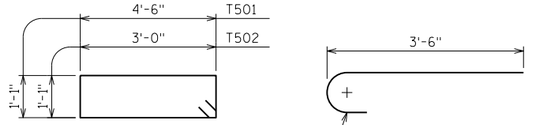
STATE PROJECT NUMBER

1021-04-77

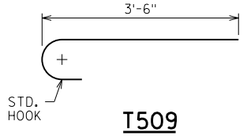


PLAN

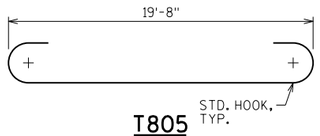
WEST APPROACH SLAB SHOWN,
EAST APPROACH SLAB SIMILAR



T501, T502



T509

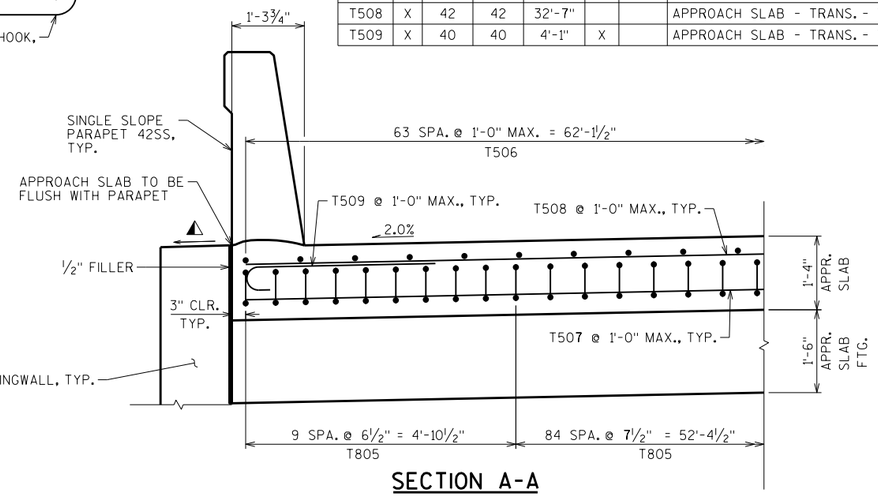


T805

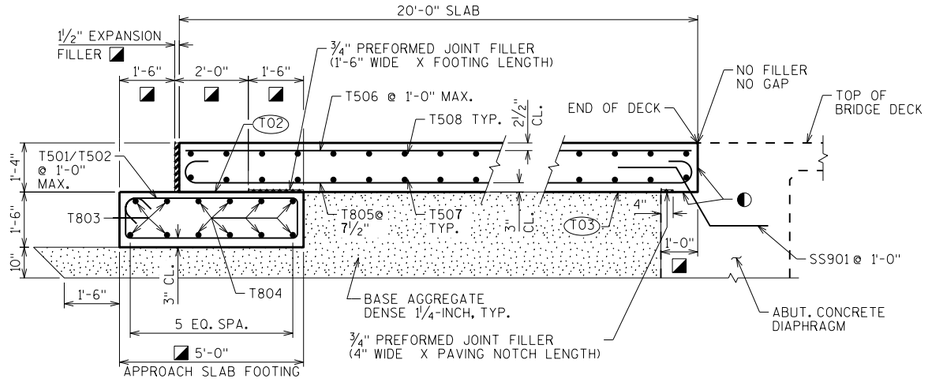
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	WEST APPR. SLAB	EAST APPR. SLAB	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	61	61	11'-10"	X		APPROACH SLAB FOOTING - STIRRUPS
T502	X	4	4	8'-10"	X		APPROACH SLAB FOOTING - STIRRUPS - NOTCHES
T803	X	8	8	32'-8"			APPROACH SLAB FOOTING - TRANS.
T804	X	16	16	34'-0"			APPROACH SLAB FOOTING - TRANS.
T805	X	103	103	21'-6"	X		APPROACH SLAB - LONGIT. - BOT.
T506	X	64	64	19'-8"			APPROACH SLAB - LONGIT. - TOP
T507	X	42	42	32'-5"			APPROACH SLAB - TRANS. - BOT.
T508	X	42	42	32'-7"			APPROACH SLAB - TRANS. - TOP
T509	X	40	40	4'-1"	X		APPROACH SLAB - TRANS. - TOP - EDGES



SECTION A-A



SECTION THRU APPROACH SLAB

- ▲ SLOPE TO DRAIN
- ◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.
- ◪ MEASURED NORMAL TO ABUTMENT
- (T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.
- (T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

STRUCTURAL APPROACH SLAB

SHEET 15

354

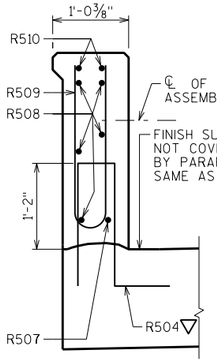
SCALE = 4.00

8

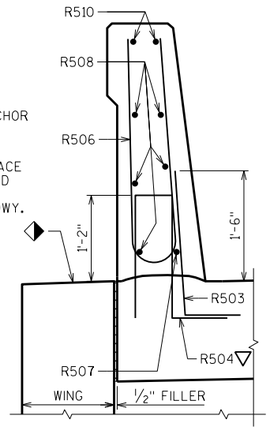
8

STATE PROJECT NUMBER

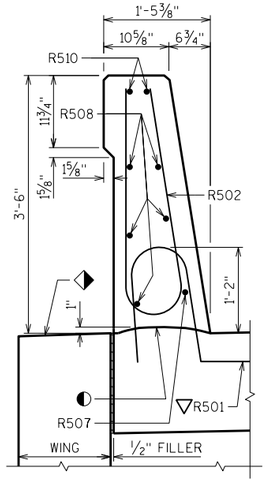
1021-04-77



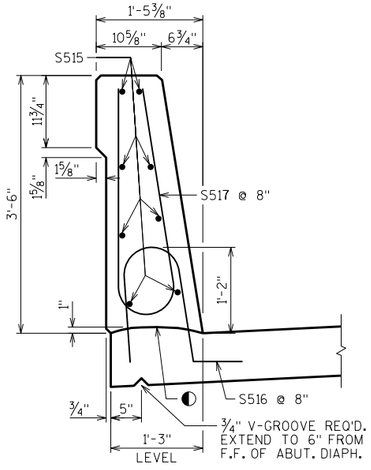
SECTION A-A



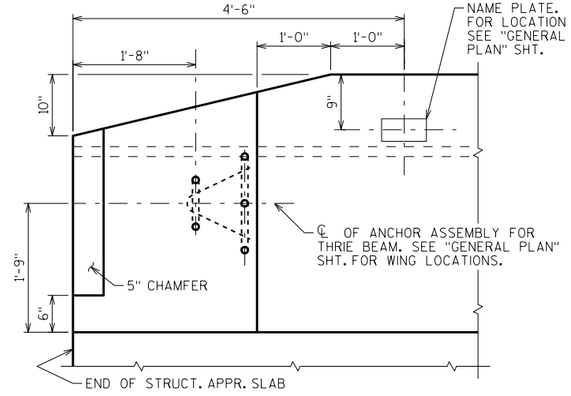
SECTION B-B



SECTION C-C



SECTION THRU PARAPET ON DECK



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

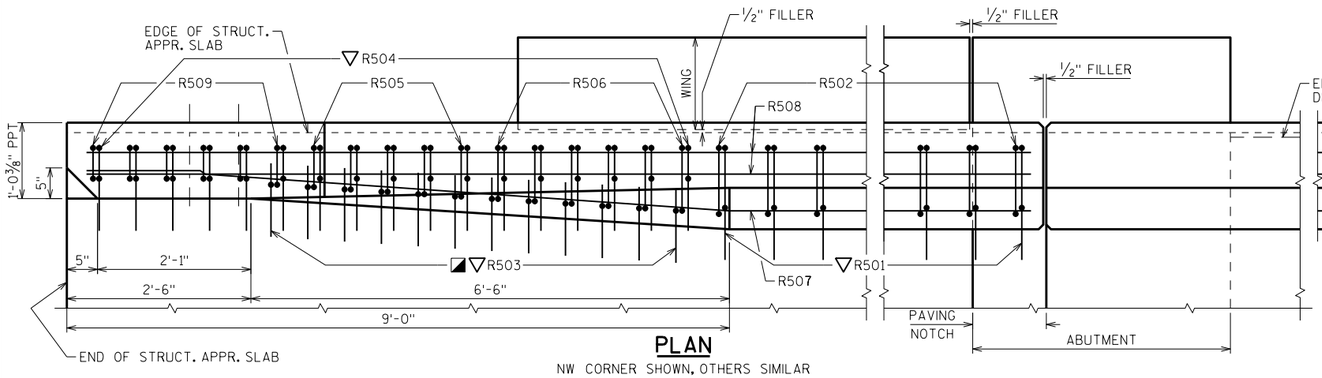
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	24	24	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-8"	X		PARAPET HORIZ.
R508	X	10	10	19'-6"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	19'-6"	X		PARAPET 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.

BAR SERIES TABLE

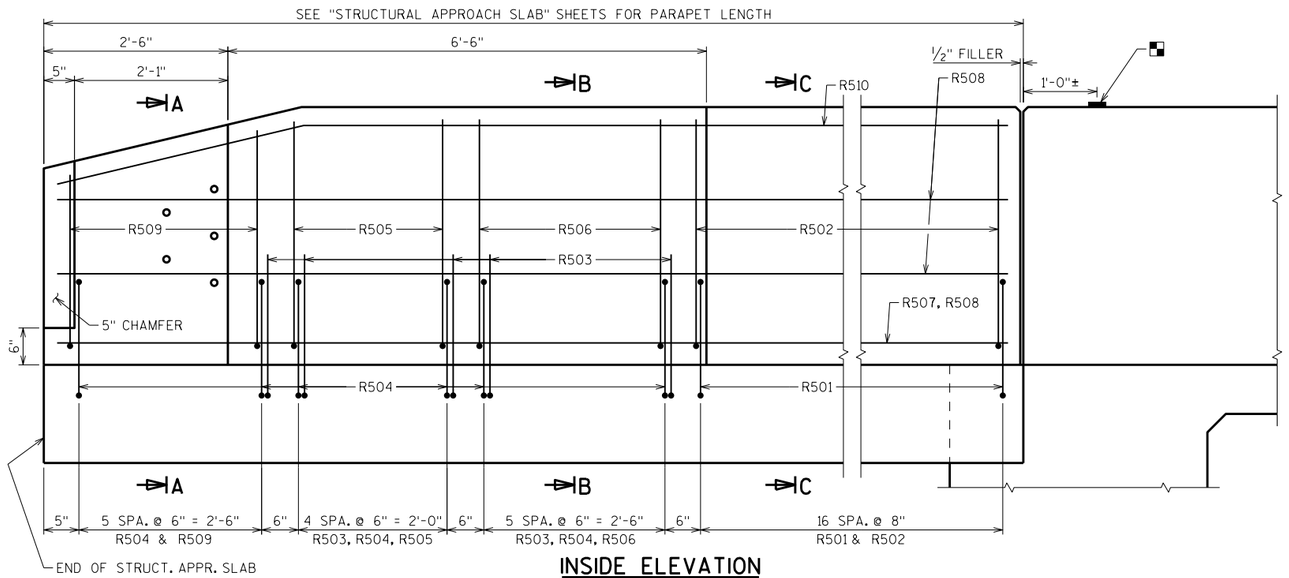
BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



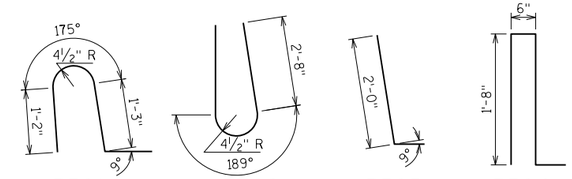
PLAN

NW CORNER SHOWN, OTHERS SIMILAR

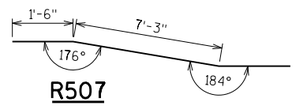


INSIDE ELEVATION

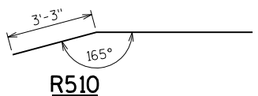
NW CORNER SHOWN, OTHERS SIMILAR
WING & STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY



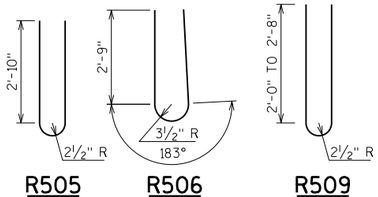
R501 R502 R503 R504



R507



R510



R505 R506 R509

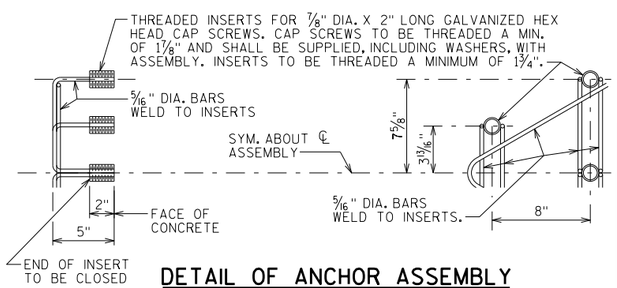
BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◆ SLOPE FOR DRAINAGE

◪ USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501, R503, AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.



DETAIL OF ANCHOR ASSEMBLY

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

SINGLE SLOPE PARAPET 42SS

SHEET 16

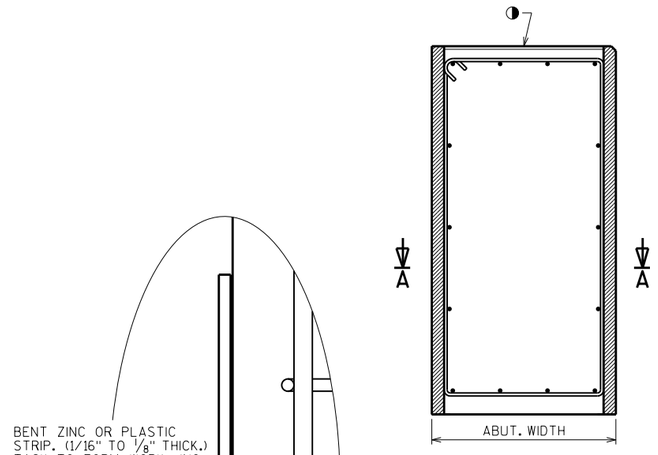
355

SCALE = 1.00

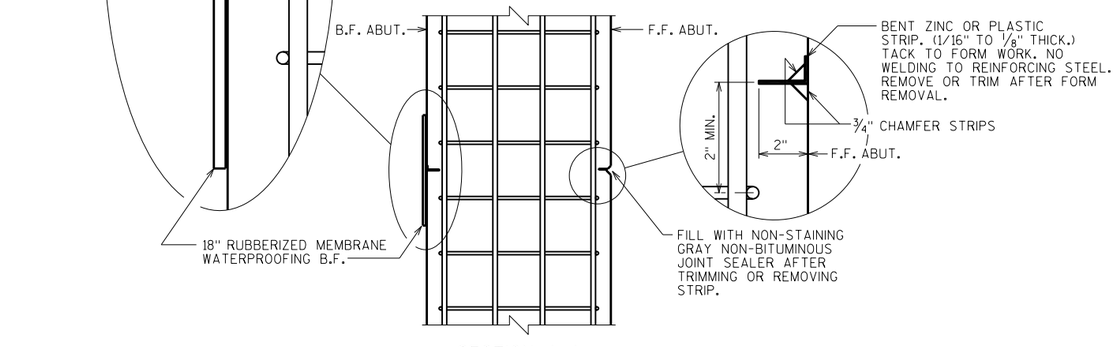
8

8

STATE PROJECT NUMBER
1021-04-77



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

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 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

DRAWN BY BAF | PLANS CK'D. MJK

ALTERNATE CONSTRUCTION JOINT

SHEET 17

356

SCALE = 1

8

8

STATE PROJECT NUMBER

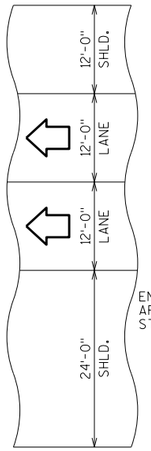
1021-04-78

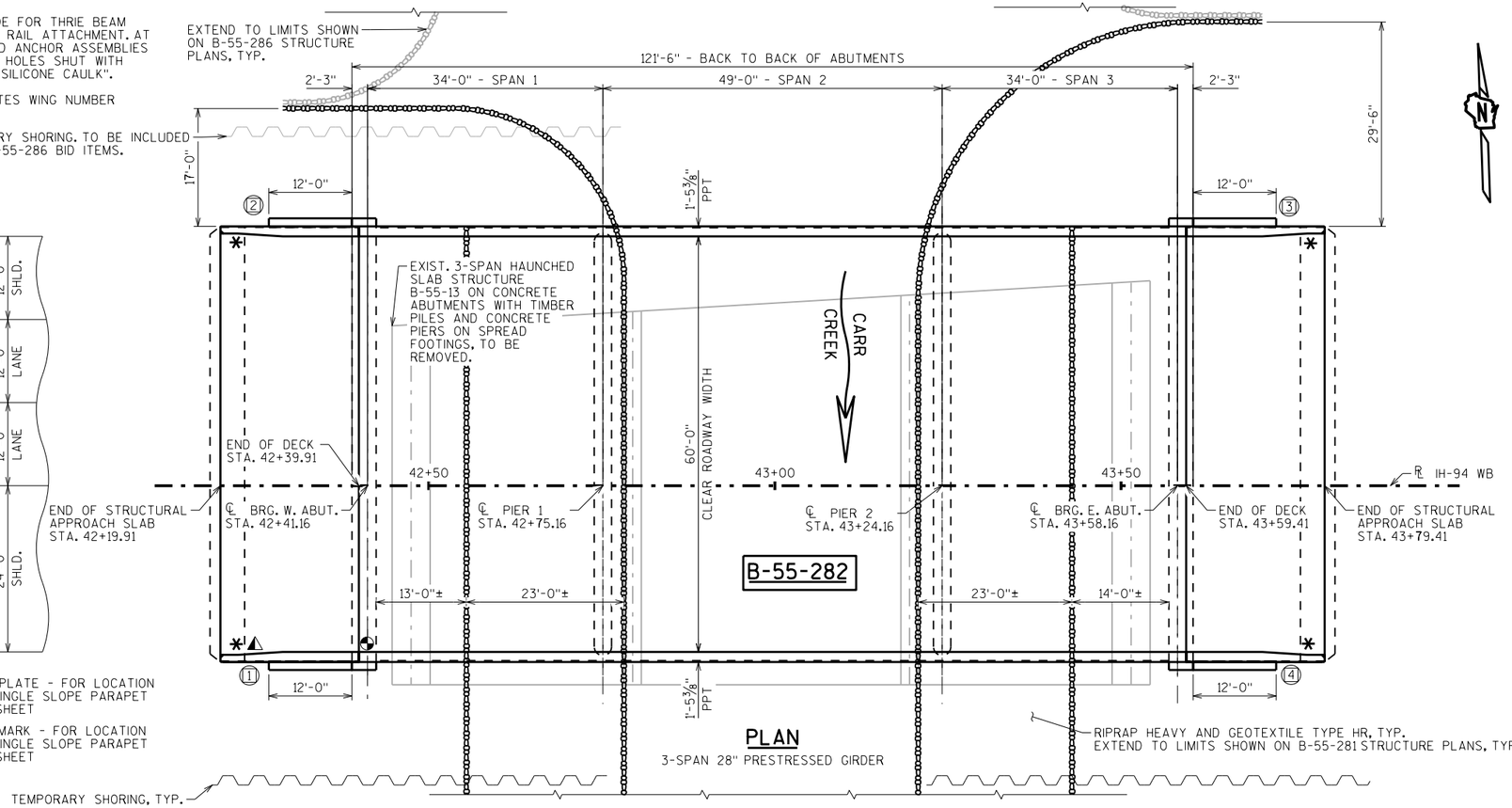
✱ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

(1) INDICATES WING NUMBER

TEMPORARY SHORING. TO BE INCLUDED UNDER B-55-286 BID ITEMS.

EXTEND TO LIMITS SHOWN ON B-55-286 STRUCTURE PLANS, TYP.



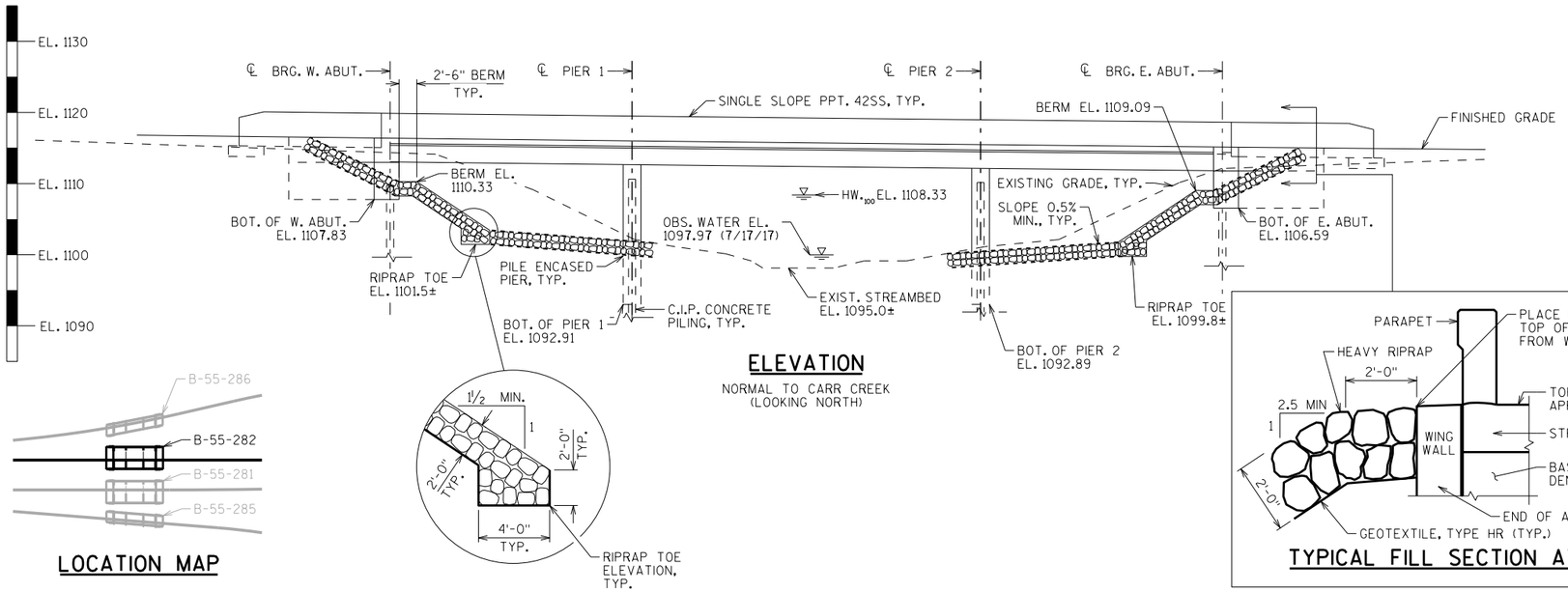


PLAN

3-SPAN 28" PRESTRESSED GIRDER

△ NAME PLATE - FOR LOCATION SEE 'SINGLE SLOPE PARAPET 42SS' SHEET

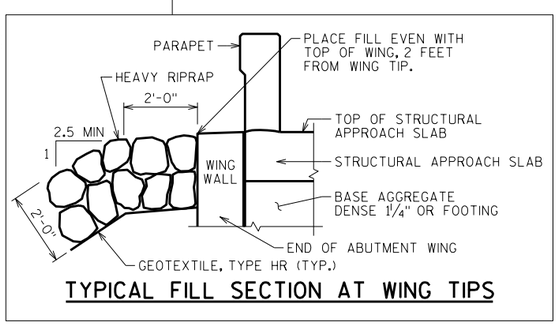
◔ BENCHMARK - FOR LOCATION SEE 'SINGLE SLOPE PARAPET 42SS' SHEET



ELEVATION

NORMAL TO CARR CREEK (LOOKING NORTH)

LOCATION MAP



TYPICAL FILL SECTION AT WING TIPS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.05
OPERATING RATING FACTOR: RF = 1.37
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

28" PRESTRESSED GIRDERS:
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 TO BE SUPPORTED ON 10¾" DIA. X 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ✱✱ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 55'-0" LONG AT THE WEST ABUTMENT AND ESTIMATED 50'-0" LONG AT THE EAST ABUTMENT. PILE POINTS REQUIRED.

PIERS TO BE SUPPORTED ON 10¾" DIA. X 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ✱✱ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 55'-0" LONG AT PIER 1 AND ESTIMATED 50'-0" LONG AT PIER 2. PILE POINTS REQUIRED.

✱✱ 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.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 2770 C.F.S.
$VEL._{100}$ = 6.5 F.P.S.
$HW._{100}$ = EL. 1108.33
WATERWAY AREA = 430 SQ. FT.
DRAINAGE AREA = 12.9 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY

Q_2 = 400 C.F.S.
$VEL._2$ = 1.3 F.P.S.
$HW._2$ = EL. 1105.26

TRAFFIC VOLUME

IH-94 WB

ADT = 23,700. (2042)
R.D.S. = 70 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. PIER 1
9. PIER 2
10. 28" PRESTRESSED GIRDER DETAILS
11. STEEL DIAPHRAGM
12. SUPERSTRUCTURE CROSS SECTION
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE DETAILS
15. STRUCTURAL APPROACH SLAB
16. SINGLE SLOPE PARAPET 42SS
17. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

BRETT FOLLETT (608) 266-0214
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION — BUREAU OF STRUCTURES

ACCEPTED AMB 5/1/20
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-55-282

IH-94 WB OVER CARR CREEK

COUNTY	VILLAGE
ST. CROIX	WOODVILLE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BAF	MJK	BAF	MJK

GENERAL PLAN

SHEET 1 OF 17

357

I.D. 1021-04-08A DATE: FEB. 2020

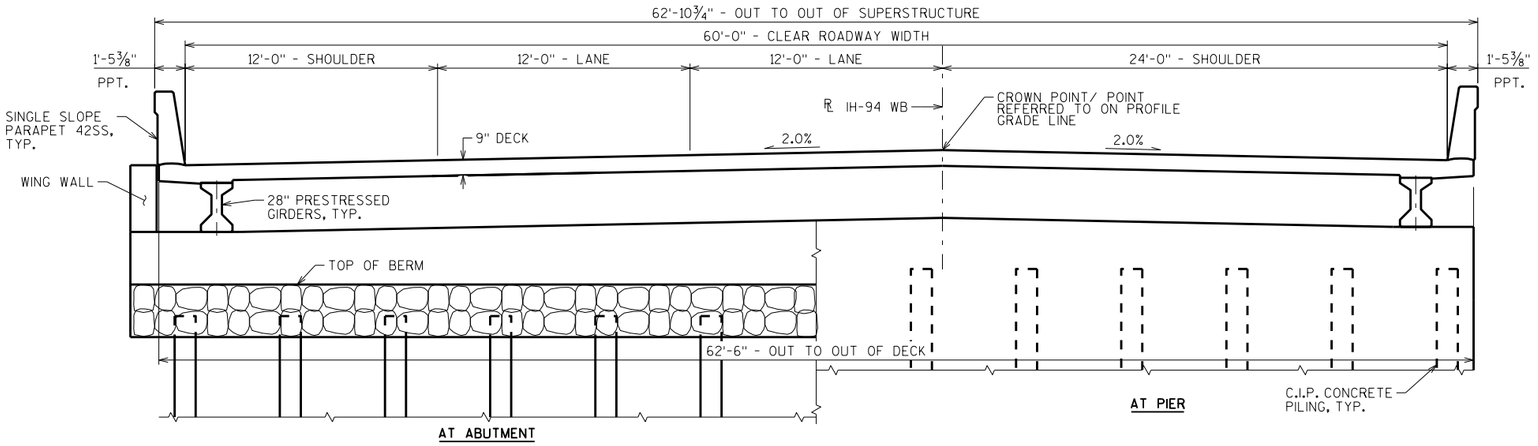
SCALE = 10.00

8

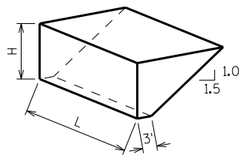
8

STATE PROJECT NUMBER

1021-04-78

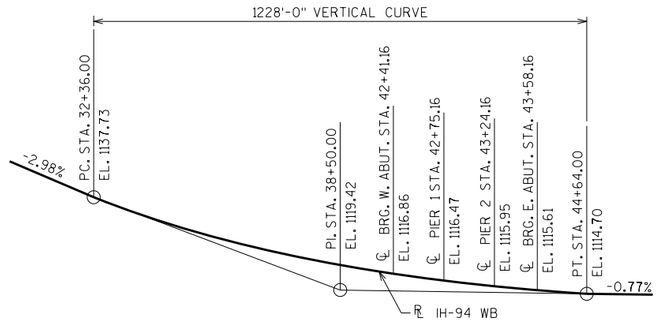


CROSS SECTION THRU ROADWAY LOOKING EAST



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

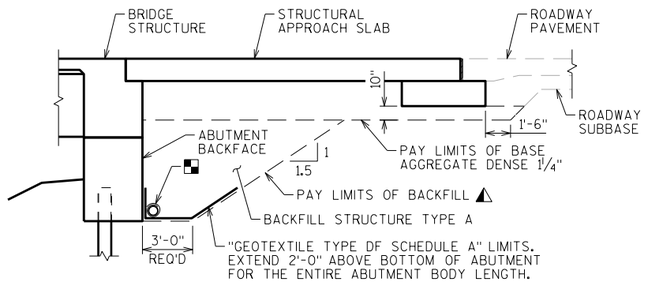
L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)



PROFILE GRADE LINE IH-94 WB

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. STRUCT. APP. SLAB	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	E. STRUCT. APP. SLAB	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS 43+00	LS	---	---	---	---	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-55-282	LS	---	---	---	---	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	---	165	---	---	165	---	330
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	---	206	---	---	---	---	206	412
502.0100	CONCRETE MASONRY BRIDGES	CY	312	85	64	106	104	64	85	820
502.3200	PROTECTIVE SURFACE TREATMENT	SY	830	134	---	---	---	---	134	1,098
502.3210	PIGMENTED SURFACE SEALER	SY	118	20	---	---	---	---	20	158
503.0128	PRESTRESSED GIRDER TYPE I28-INCH	LF	823	---	---	---	---	---	---	823
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	---	4,155	5,115	5,050	4,155	---	18,475
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	59,830	14,340	1,620	---	---	1,590	14,340	91,720
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	2,145	---	---	---	---	---	---	2,145
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	42	---	---	---	---	---	---	42
506.4000	STEEL DIAPHRAGMS B-55-282	EACH	18	---	---	---	---	---	---	18
511.1200	TEMPORARY SHORING B-55-282	SF	---	---	750	---	---	600	---	1,350
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	---	16	---	---	16	---	32
550.0500	PILE POINTS	EACH	---	---	9	15	15	9	---	48
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	---	---	495	825	750	450	---	2,520
606.0300	RIPRAP HEAVY	CY	---	---	287	---	---	329	---	616
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	---	105	---	---	105	---	210
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	---	---	---	---	---	---	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	---	63	---	---	63	---	126
645.0120	GEOTEXTILE TYPE HR	SY	---	---	536	---	---	647	---	1,183
	NON-BID ITEMS									
	FILLER	SIZE	---	---	---	---	---	---	---	½", ¾", 1½"



TYPICAL SECTION THRU ABUTMENT

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

◩ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-55-282" SHALL BE THE EXISTING GROUNDLINE AT THE ABUTMENTS.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "28" PRESTRESSED GIRDER DETAILS" SHEET.

THE EXISTING STREAM BED SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

AT ABUTMENTS AND PIER(S), CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

CROSS SECTION & QUANTITIES

SHEET 2

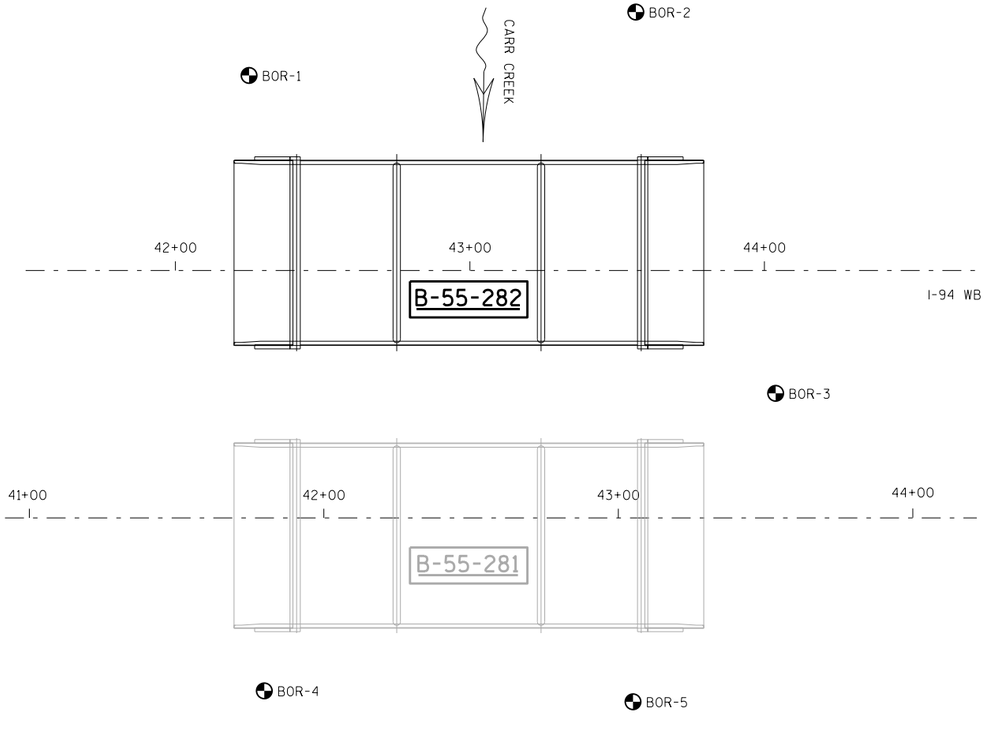
358

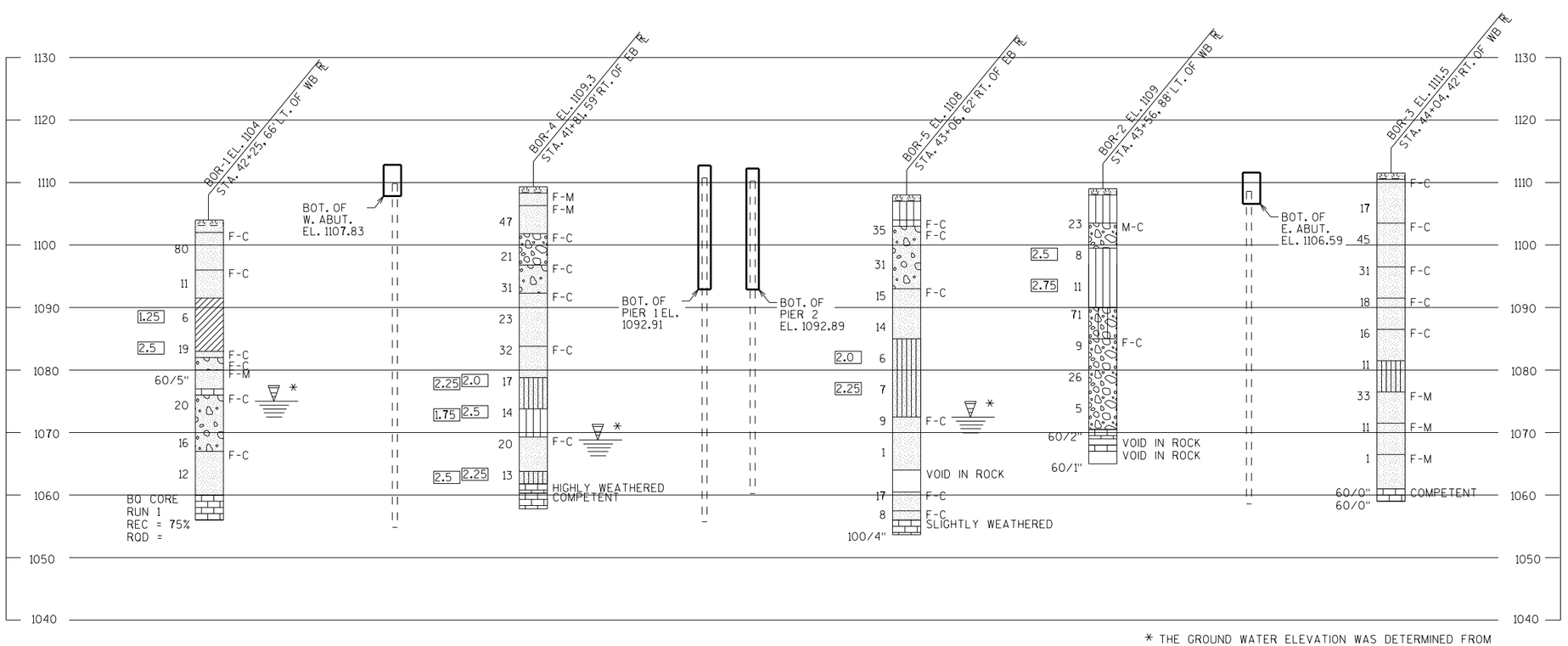
8

8

SCALE = 3.50

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	7/29/2019	327933	633926
2	7/09/2019	327950	634058
3	8/07/2019	327819	634101
4	7/30/2019	327724	633924
5	7/31/2019	327716	634049
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

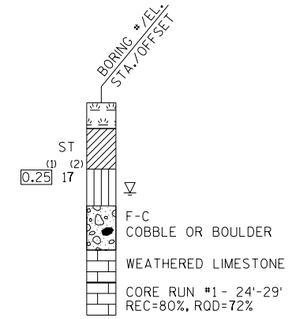
STATE PROJECT NUMBER

1021-04-78

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY TLP/BAF | PLANS CK'D. MJK

SUBSURFACE EXPLORATION

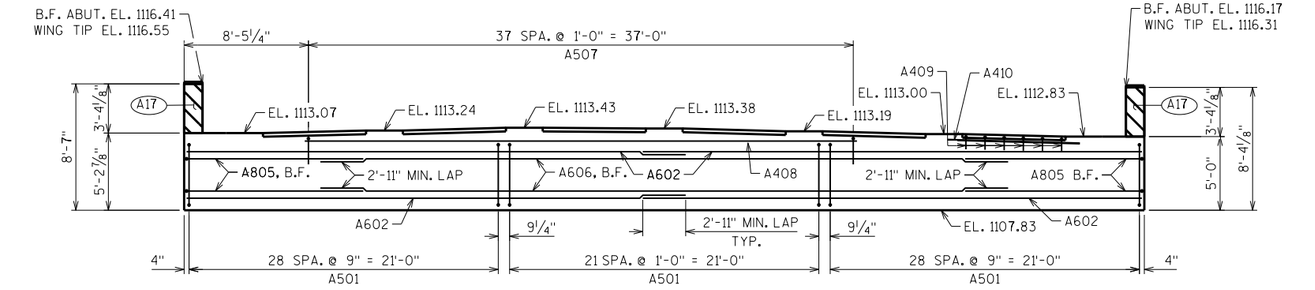
SHEET 3

359

SCALE = 25

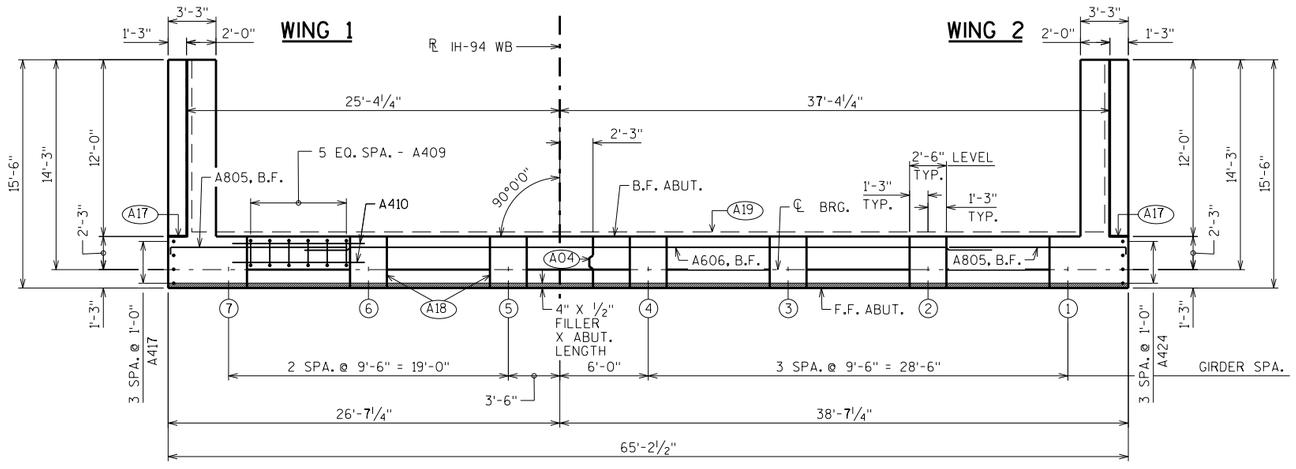
8

8



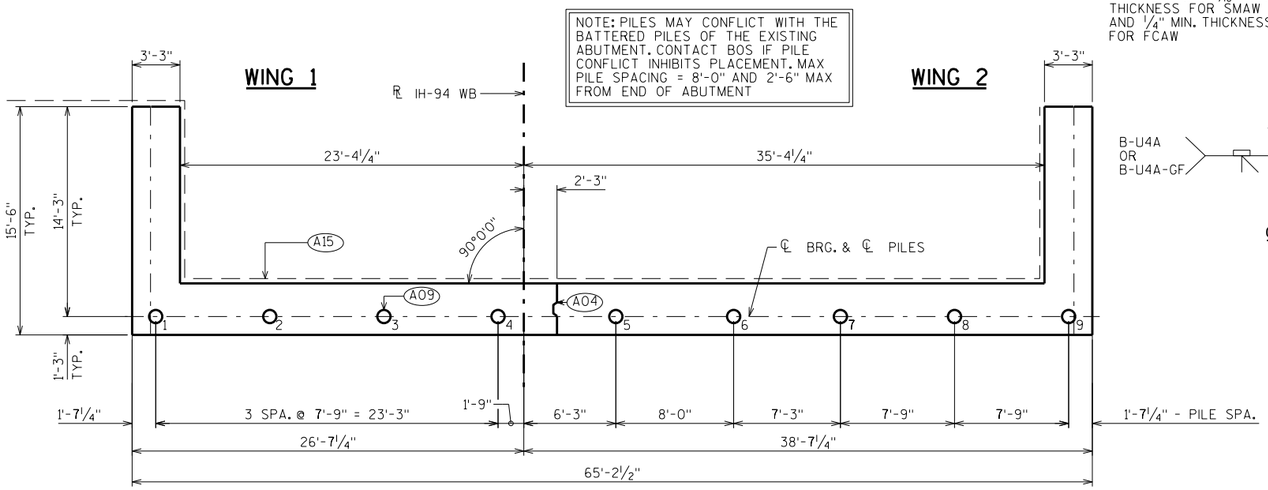
ELEVATION

LOOKING WEST
ADJUST STIRRUP SPACING AS NEEDED TO MISS PILES

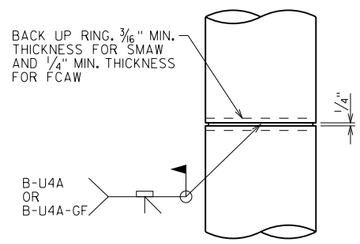


PLAN

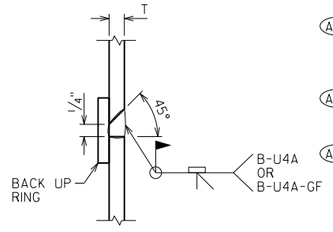
◯ INDICATES GIRDER NUMBER



PILE PLAN

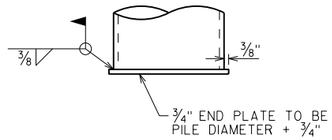


CAST-IN-PLACE 'PIPE PILE'

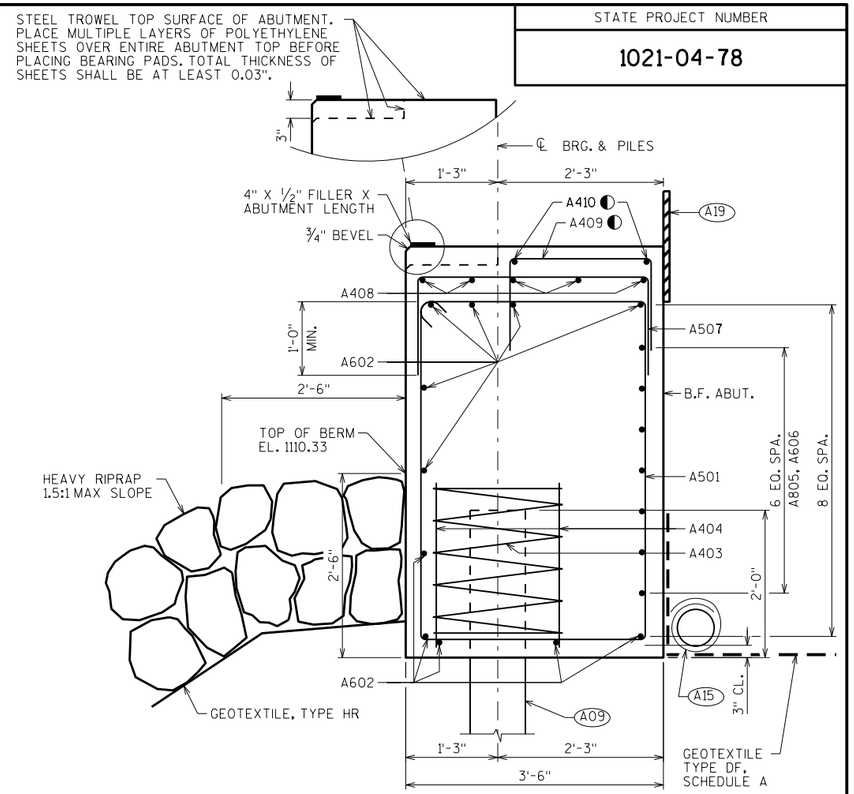


C.I.P. PILE WELD DETAIL

PILE DETAILS



END PLATE DETAIL



SECTION THRU BODY

◐ BETWEEN BEAM SEATS

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

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(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

WEST ABUTMENT

SHEET 4

360

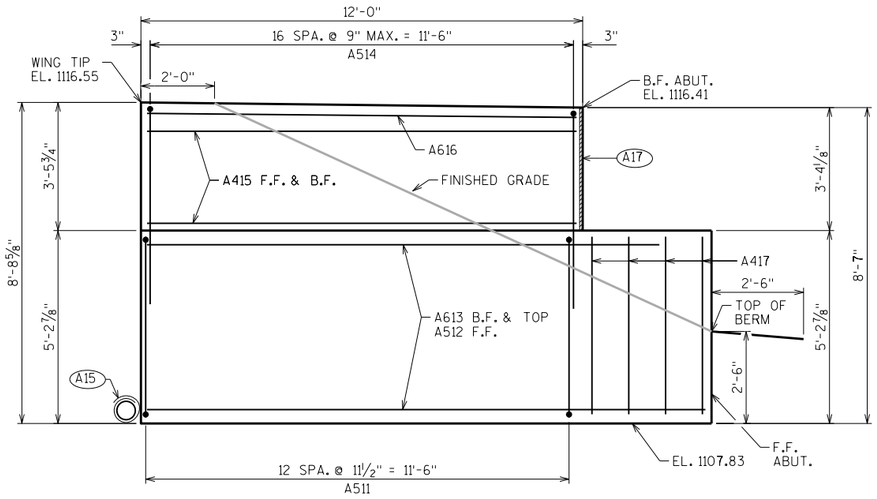
SCALE = 5.00

8

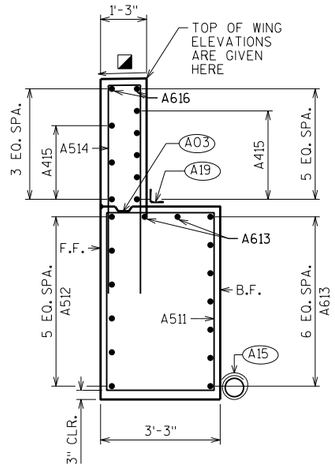
8

STATE PROJECT NUMBER

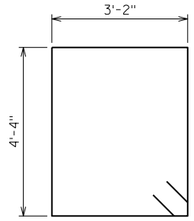
1021-04-78



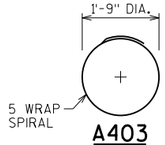
WING 1 ELEVATION



WING 1 SECTION



A501



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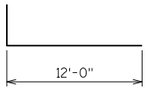
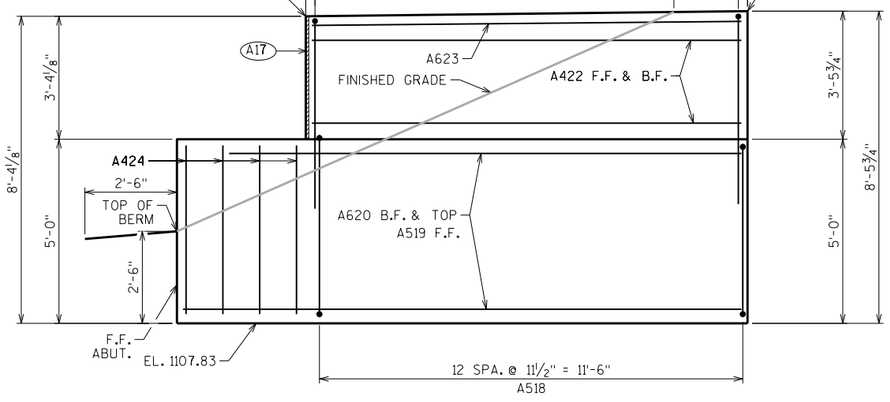


A805

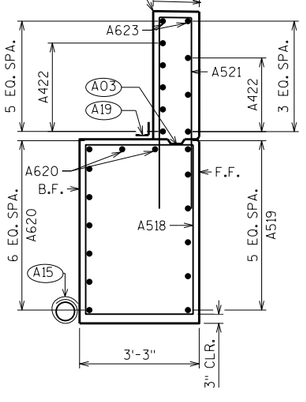
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

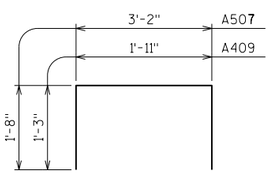
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501		80	15'-8"	X		BODY-STIRRUPS-VERT.
A602		22	33'-11"			BODY-HORIZ.
A403		9	28'-0"	X		BODY-SPIRAL-1 PER BODY PILE-VERT.
A404		18	2'-3"			BODY-2 PER BODY PILE-VERT.
A805		14	13'-2"	X		BODY-HORIZ.-B.F.
A606		7	46'-9"			BODY-HORIZ.-B.F.
A507		38	6'-3"	X		BODY-VERT. U-BAR-TOP-OVER GIR. 3-6
A408		5	37'-6"			BODY-HORIZ.-TOP-OVER GIR. 3-6
A409		36	4'-3"	X		BODY-VERT.-BTWN. BEAM SEATS
A410		12	9'-0"			BODY-HORIZ.-BTWN BEAM SEATS
A511	X	13	16'-0"	X		WING 1 BODY-STIRRUPS-VERT.
A512	X	6	15'-2"			WING 1 BODY-HORIZ.-F.F.
A613	X	9	13'-11"			WING 1 BODY-HORIZ.-B.F. & TOP
A514	X	17	11'-6"	X		WING WALL 1-VERT.
A415	X	8	11'-8"			WING WALL 1-HORIZ.
A616	X	2	11'-8"			WING WALL 1-HORIZ.-TOP
A417	X	4	4'-10"			ABUT. BODY END-VERT.-WING 1
A518	X	13	15'-8"	X		WING 2 BODY-STIRRUPS-VERT.
A519	X	6	15'-2"			WING 2 BODY-HORIZ.-F.F.
A620	X	9	13'-11"			WING 2 BODY-HORIZ.-B.F. & TOP
A521	X	17	11'-6"	X		WING WALL 2-VERT.
A422	X	8	11'-8"			WING WALL 2-HORIZ.
A623	X	2	11'-8"			WING WALL 2-HORIZ.-TOP
A424	X	4	4'-8"			ABUT. BODY END-VERT.-WING 2



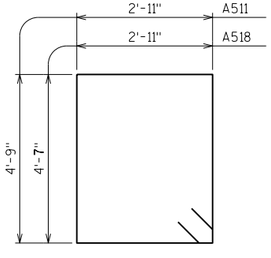
WING 2 ELEVATION



WING 2 SECTION



A507, A409



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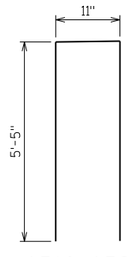
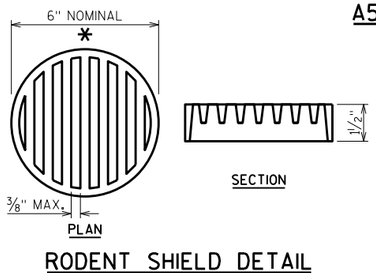


A514, A521



PLAN

SECTION

RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A 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 SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

◪ SLOPE 1/8" PER FOOT

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

WEST ABUTMENT DETAILS

SHEET 5

361

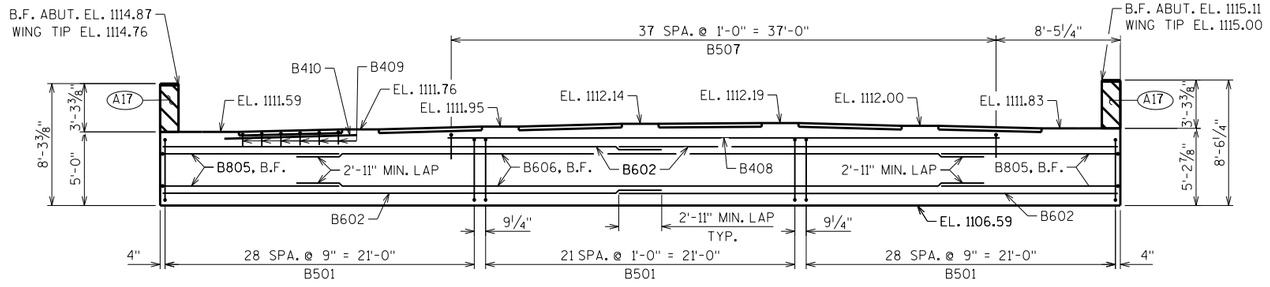
SCALE = 2.00

8

8

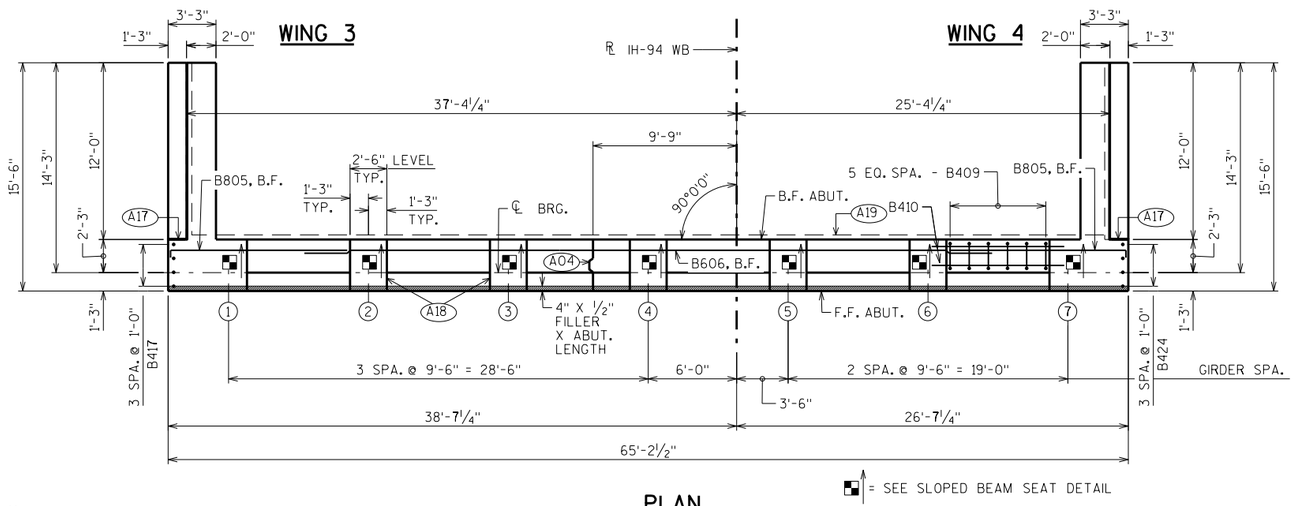
STATE PROJECT NUMBER

1021-04-78



ELEVATION

LOOKING EAST
ADJUST STIRRUP SPACING AS NEEDED TO MISS PILES

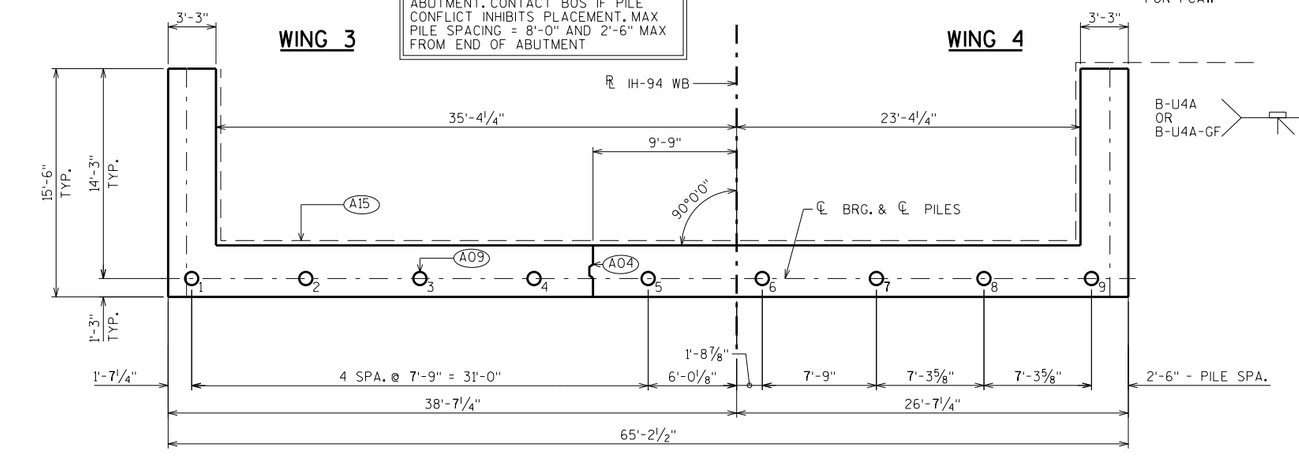


PLAN

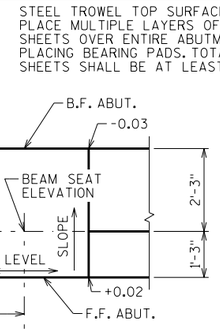
◇ = SEE SLOPED BEAM SEAT DETAIL

○ INDICATES GIRDER NUMBER

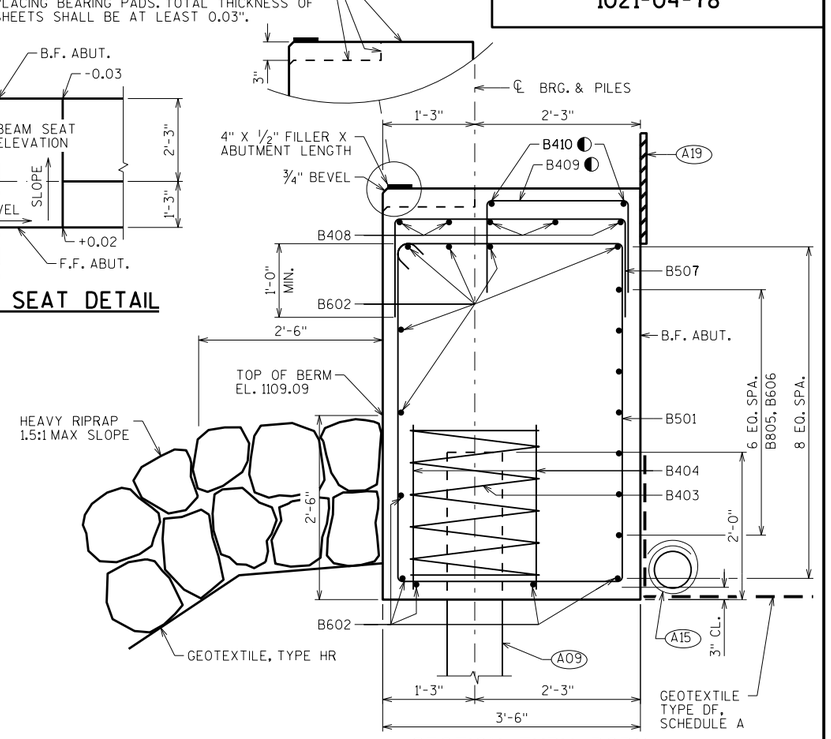
NOTE: PILES MAY CONFLICT WITH THE BATTERED PILES OF THE EXISTING ABUTMENT. CONTACT BOS IF PILE CONFLICT INHIBITS PLACEMENT. MAX PILE SPACING = 8'-0" AND 2'-6" MAX FROM END OF ABUTMENT



PILE PLAN

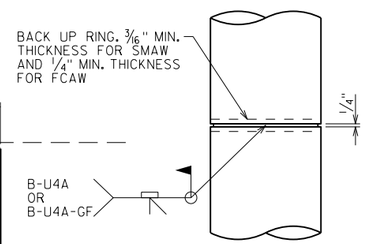


SLOPED BEAM SEAT DETAIL

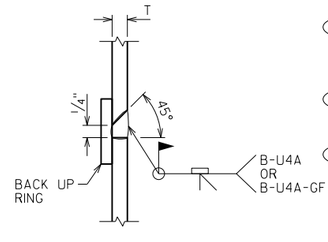


SECTION THRU BODY

◐ BETWEEN BEAM SEATS

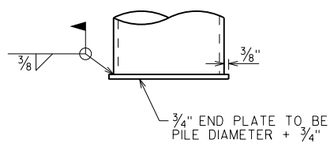


CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS



END PLATE DETAIL

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

EAST ABUTMENT

SHEET 6

362

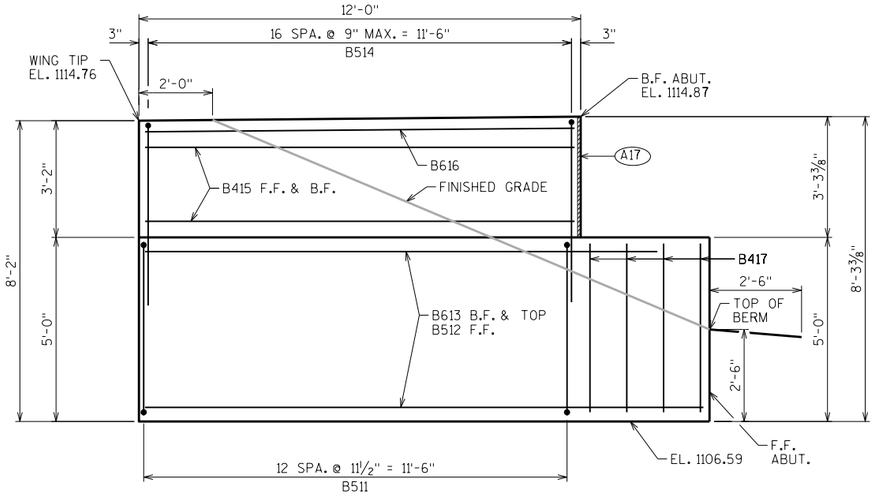
SCALE = 5.00

8

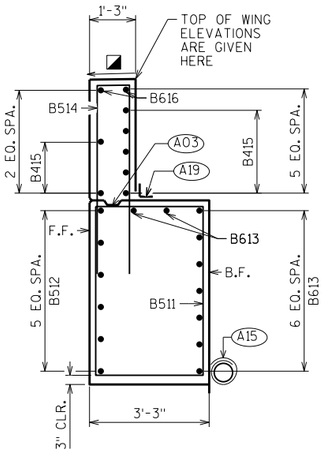
8

STATE PROJECT NUMBER

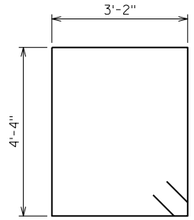
1021-04-78



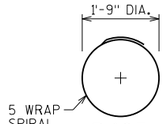
WING 3 ELEVATION



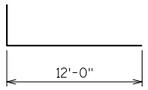
WING 3 SECTION



B501



B403

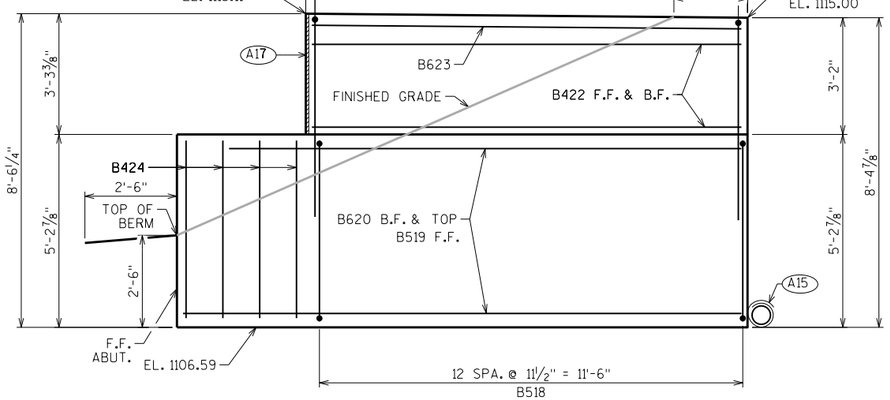


B805

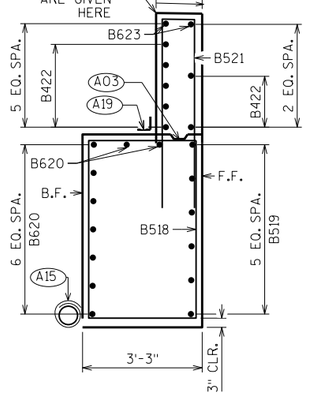
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

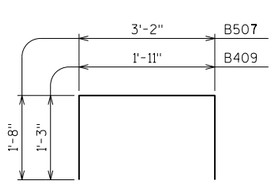
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501		80	15'-8"	X		BODY-STIRRUPS-VERT.
B602		22	33'-11"			BODY-HORIZ.
B403		9	28'-0"	X		BODY-SPIRAL-1 PER BODY PILE-VERT.
B404		18	2'-3"			BODY-2 PER BODY PILE-VERT.
B805		14	13'-2"	X		BODY-HORIZ.-B.F.
B606		7	46'-9"			BODY-HORIZ.-B.F.
B507		38	6'-3"	X		BODY-VERT. U-BAR-TOP-OVER GIR. 3-6
B408		5	37'-6"			BODY-HORIZ.-TOP-OVER GIR. 3-6
B409		36	4'-3"	X		BODY-VERT.-BTWN. BEAM SEATS
B410		12	9'-0"			BODY-HORIZ.-BTWN BEAM SEATS
B511	X	13	15'-8"	X		WING 3 BODY-STIRRUPS-VERT.
B512	X	6	15'-2"			WING 3 BODY-HORIZ.-F.F.
B613	X	9	13'-11"			WING 3 BODY-HORIZ.-B.F. & TOP
B514	X	17	11'-0"	X		WING WALL 3-VERT.
B415	X	7	11'-8"			WING WALL 3-HORIZ.
B616	X	2	11'-8"			WING WALL 3-HORIZ.-TOP
B417	X	4	4'-8"			ABUT. BODY END-VERT.-WING 3
B518	X	13	16'-0"	X		WING 4 BODY-STIRRUPS-VERT.
B519	X	6	15'-2"			WING 4 BODY-HORIZ.-F.F.
B620	X	9	13'-11"			WING 4 BODY-HORIZ.-B.F. & TOP
B521	X	17	11'-0"	X		WING WALL 4-VERT.
B422	X	7	11'-8"			WING WALL 4-HORIZ.
B623	X	2	11'-8"			WING WALL 4-HORIZ.-TOP
B424	X	4	4'-10"			ABUT. BODY END-VERT.-WING 4



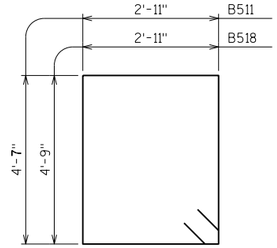
WING 4 ELEVATION



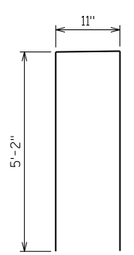
WING 4 SECTION



B507, B409



B511, B518



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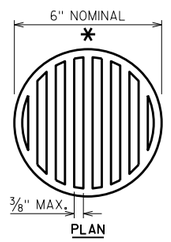
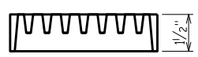


PLAN



SECTION

RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A 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 SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

◪ SLOPE 1/8" PER FOOT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

EAST ABUTMENT DETAILS

SHEET 7

363

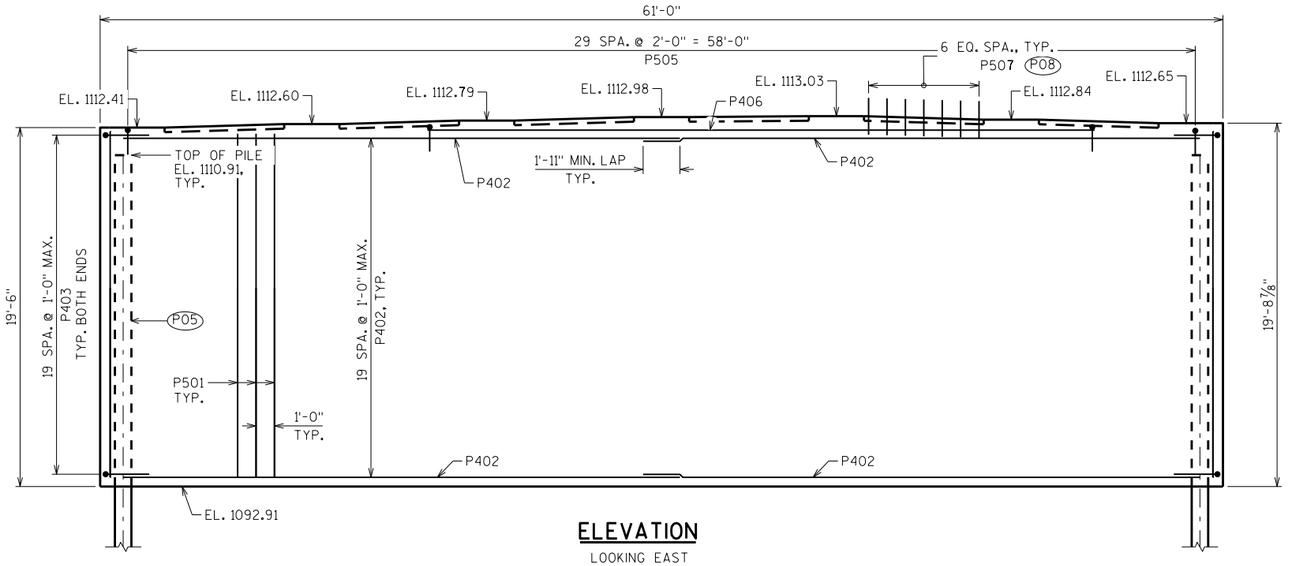
SCALE = 2.00

8

8

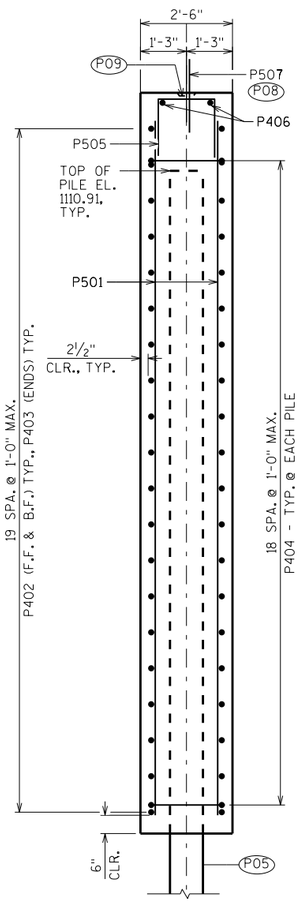
STATE PROJECT NUMBER

1021-04-78



ELEVATION

LOOKING EAST

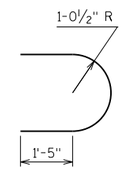


END VIEW

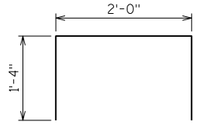
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
P501		128	18'-9"			PIER 1 - VERT.
P402		80	30'-3"			PIER 1 - HORIZ. - F.F. & B.F.
P403		40	6'-2"	X		PIER 1 - HORIZ. - ENDS
P404		285	2'-11"	X		PIER 1 - HORIZ. - PILES
P505		30	4'-5"	X		PIER 1 - VERT. - TOP
P406		2	36'-3"			PIER 1 - HORIZ. - TOP - GIR. 3-6
P507		42	2'-0"			PIER 1 - VERT. - DOWELS



P403



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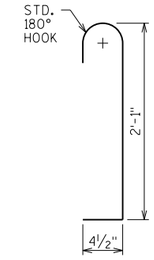
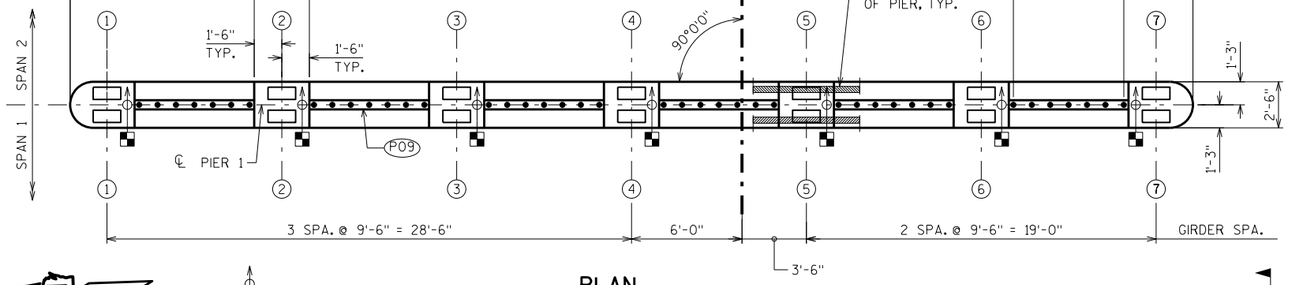


P404

(P05) SUPPORT PIER ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

(P08) BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

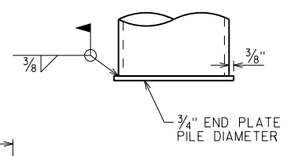
(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.



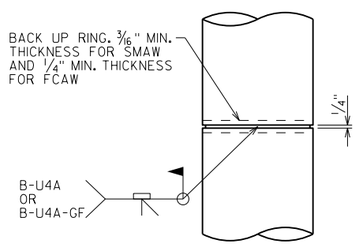
PLAN

= SEE SLOPED BEAM SEAT DETAIL

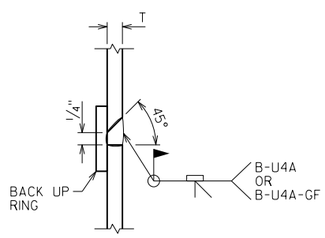
INDICATES GIRDER NUMBER



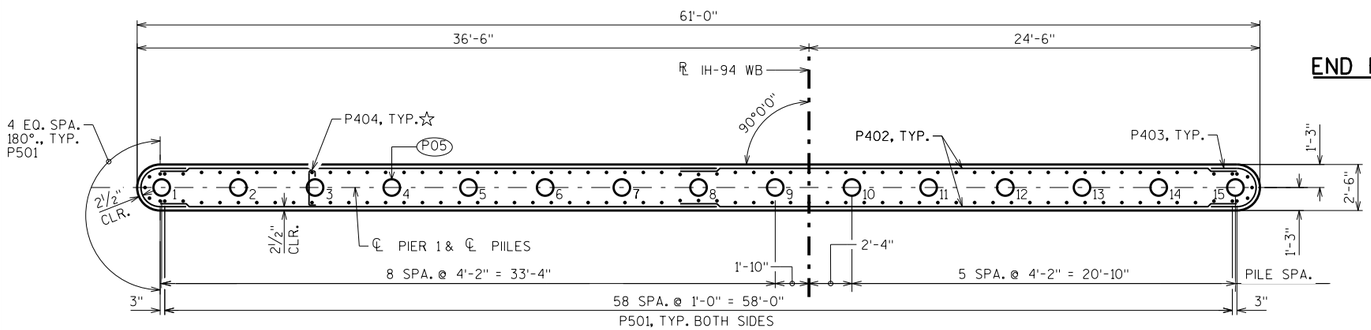
END PLATE DETAIL



CAST-IN-PLACE 'PIPE PILE'



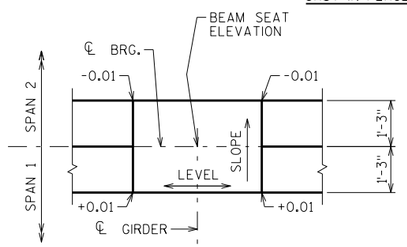
C.I.P. PILE WELD DETAIL



PILE PLAN

SHOWING REINFORCEMENT

☆ PLACE P404 BARS ADJACENT TO EACH PILE WITH MAX. VERT. SPA. OF 1'-0". TIE TO NEAREST P501 BAR AND ALTERNATE POSITION OF 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.



SLOPED BEAM SEAT DETAIL

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

PIER 1

SHEET 8

364

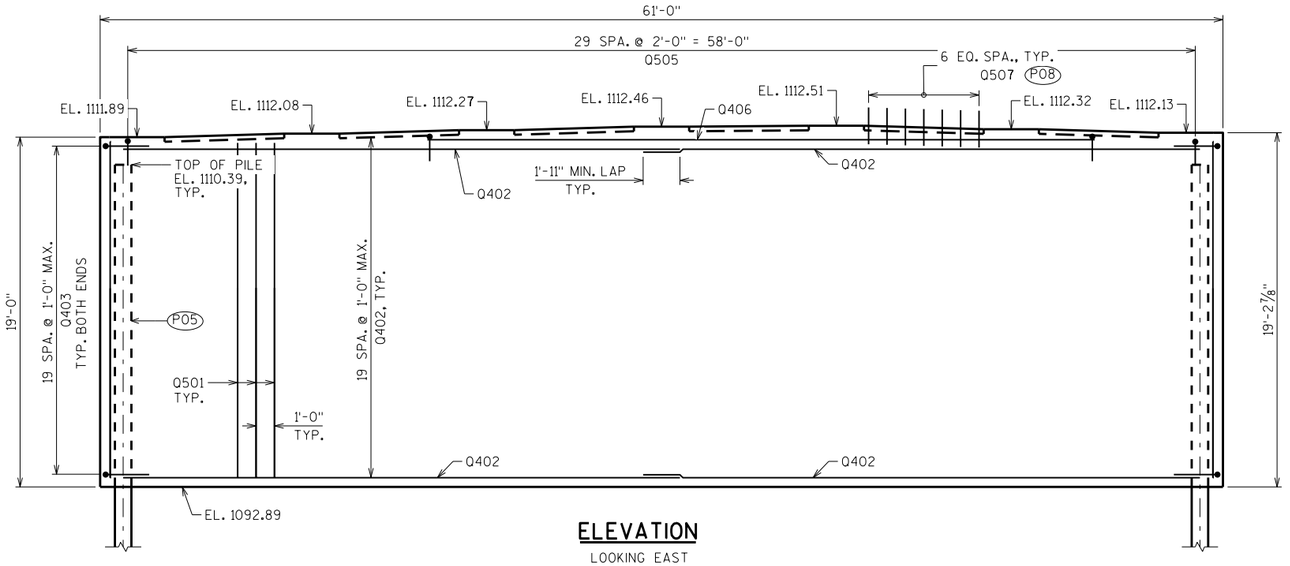
SCALE = 4.00

8

8

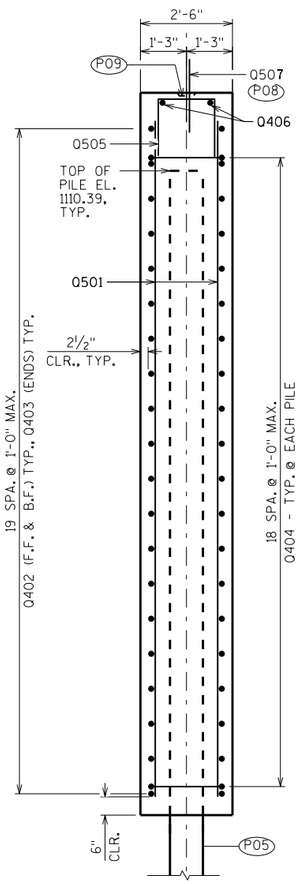
STATE PROJECT NUMBER

1021-04-78



ELEVATION

LOOKING EAST

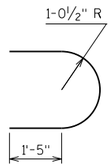


END VIEW

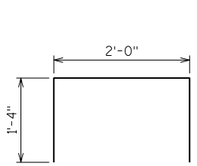
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

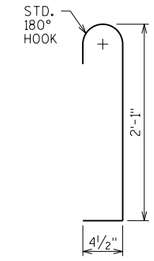
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
Q501		128	18'-3"			PIER 2 - VERT.
Q402		80	30'-3"			PIER 2 - HORIZ. - F.F. & B.F.
Q403		40	6'-2"	X		PIER 2 - HORIZ. - ENDS
Q404		285	2'-11"	X		PIER 2 - HORIZ. - PILES
Q505		30	4'-5"	X		PIER 2 - VERT. - TOP
Q406		2	36'-3"			PIER 2 - HORIZ. - TOP - GIR. 3-6
Q507		42	2'-0"			PIER 2 - VERT. - DOWELS



Q403



Q505

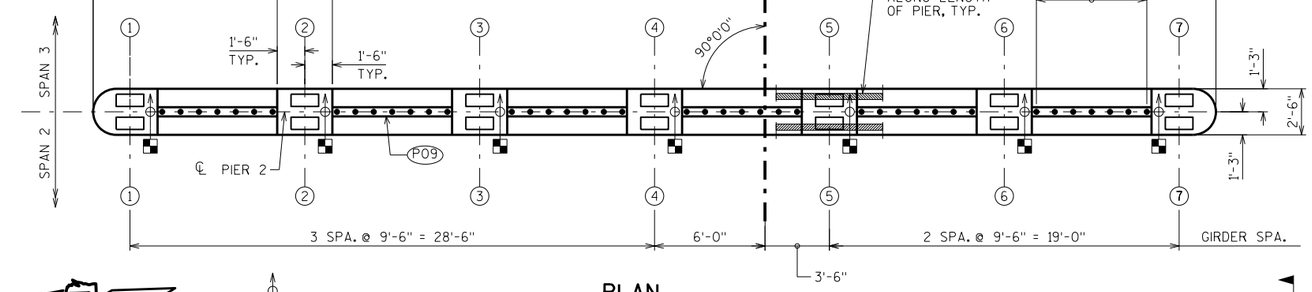


Q404

(P05) SUPPORT PIER ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

(P08) BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

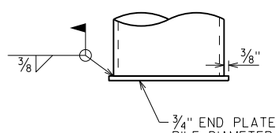
(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.



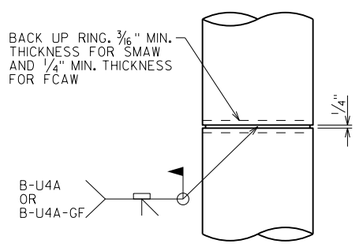
PLAN

= SEE SLOPED BEAM SEAT DETAIL

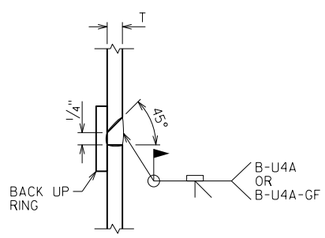
INDICATES GIRDER NUMBER



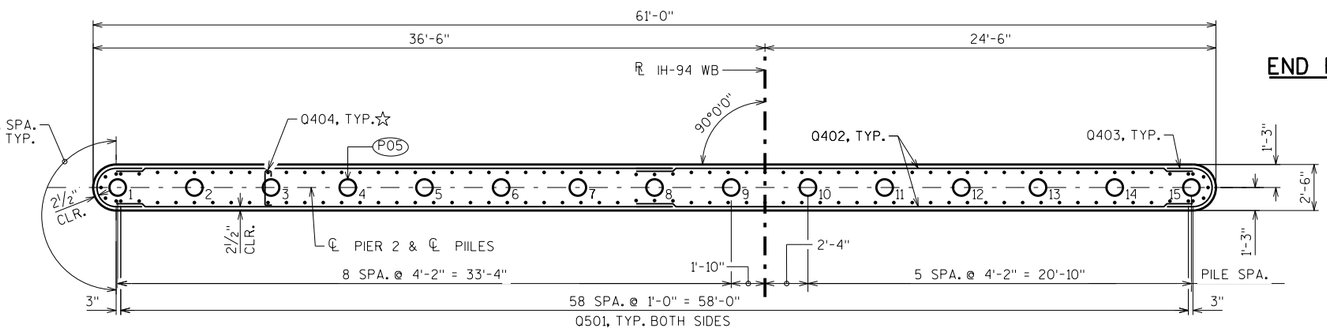
END PLATE DETAIL



CAST-IN-PLACE 'PIPE PILE'



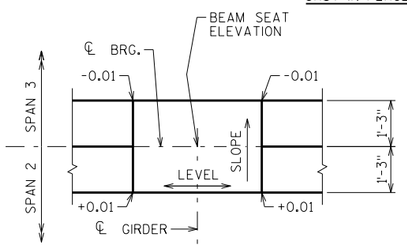
C.I.P. PILE WELD DETAIL



PILE PLAN

SHOWING REINFORCEMENT

☆ PLACE Q404 BARS ADJACENT TO EACH PILE WITH MAX. VERT. SPA. OF 1'-0". TIE TO NEAREST P501 BAR AND ALTERNATE POSITION OF 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.



SLOPED BEAM SEAT DETAIL

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

PIER 2

SHEET 9

365

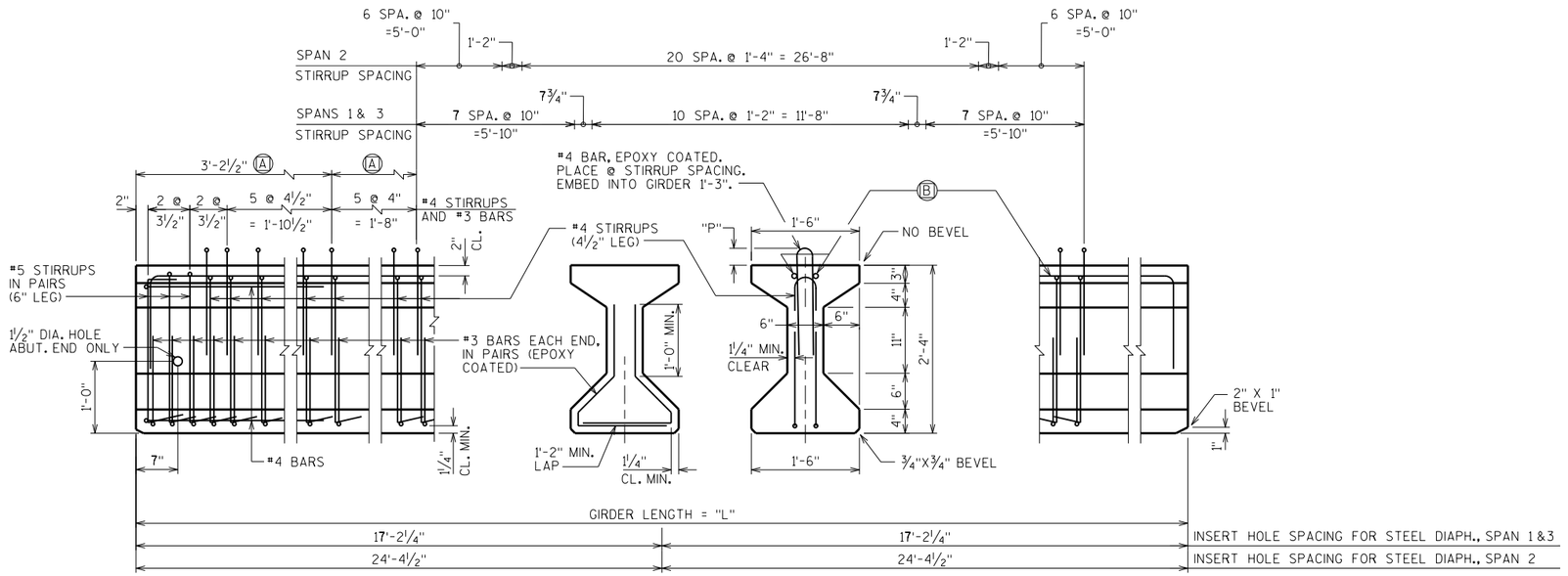
SCALE = 4.00

8

8

STATE PROJECT NUMBER

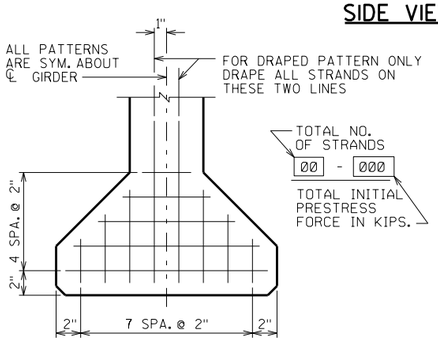
1021-04-78



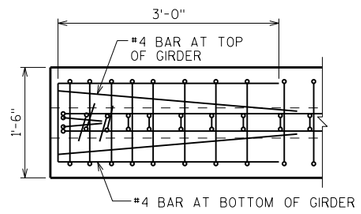
SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

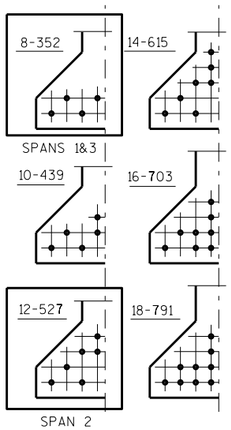
Ⓑ 2-BARS STD. 90° HOOK AT ENDS
SPAN 1&3 - #7 BARS, 3'-7" MIN. LAP
SPAN 2 - #5 BARS, 2'-5" MIN. LAP



TYP. STRAND PATTERN

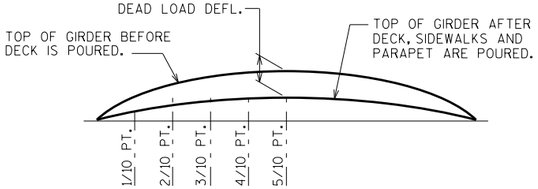


TOP VIEW OF GIRDER ENDS



UNDRAPED PATTERN

0.6"ϕ STRANDS



DEAD LOAD DEFLECTION DIAGRAM

* 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	0.63
2	1.41

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

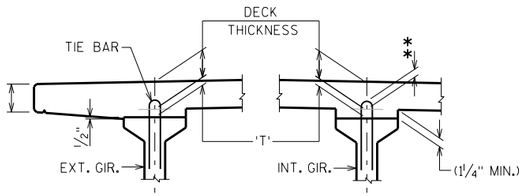
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 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.

BEND EACH END OF #4 STIRRUPS 4½" AND #5 STIRRUPS 6".

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



DECK HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & 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 2.67" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	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" (IN.) 1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	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&3	2-6	34'-4½"	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	8,000	7	7	7	0.6							8	6,400
2	2-6	48'-9"	0.3	0.5	0.7	0.8	0.8	0.8	0.7	0.5	0.3	8,000	7	7	7	0.6							12	6,400
1&3	1,7	34'-4½"	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	8,000	7	7	7	0.6							8	6,400
2	1,7	48'-9"	0.2	0.4	0.5	0.6	0.7	0.6	0.5	0.4	0.2	8,000	7	7	7	0.6							12	6,400

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

28" PRESTRESSED GIRDER DETAILS

SHEET 10

366

SCALE = 1

8

8

STATE PROJECT NUMBER

1021-04-78

NOTES

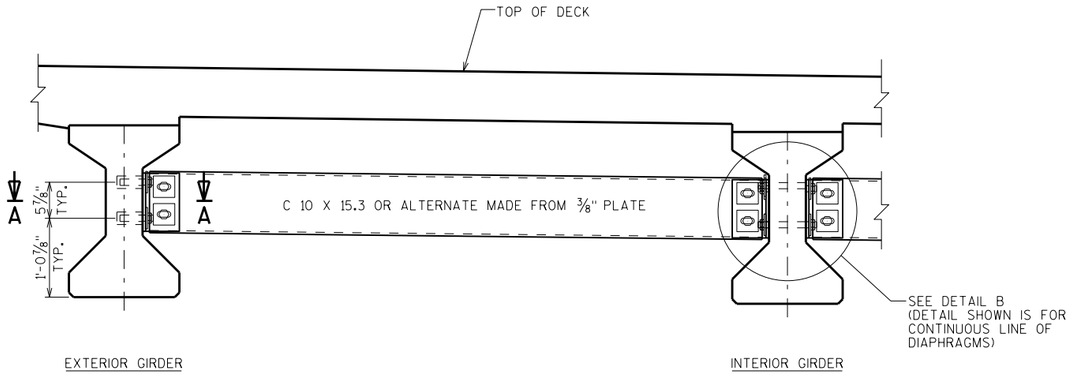
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-282", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

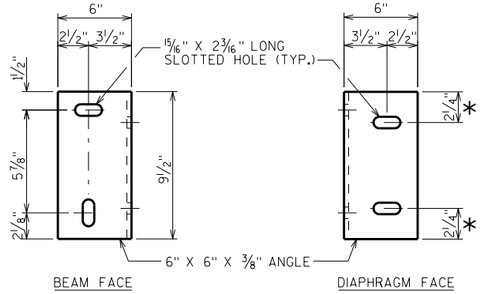
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



PART TRANSVERSE SECTION AT DIAPHRAGM

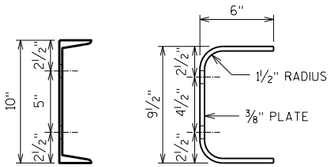


DIAPHRAGM SUPPORT

* 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM

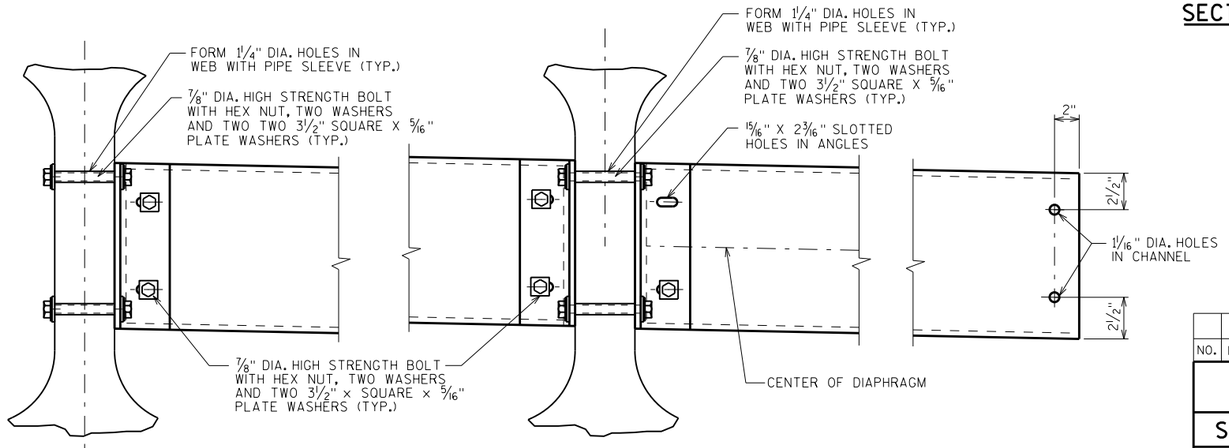
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



C10X15.3 ALTERNATE DIAPHRAGM

SECTION THRU DIAPHRAGM



(FOR STAGGERED DIAPHRAGM) (FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

STEEL DIAPHRAGM

SHEET 11

367

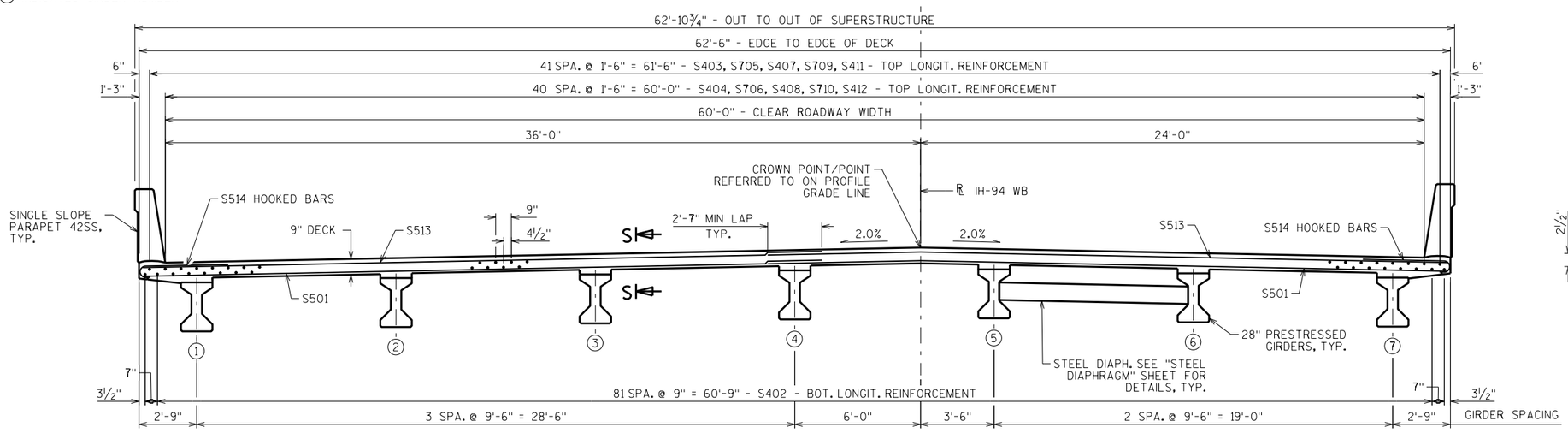
SCALE = 1

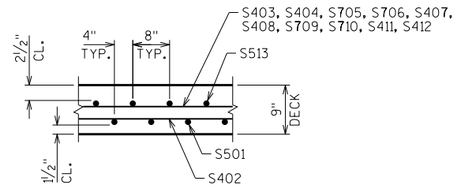
8

8

STATE PROJECT NUMBER
1021-04-78

◯ INDICATES GIRDER NUMBER

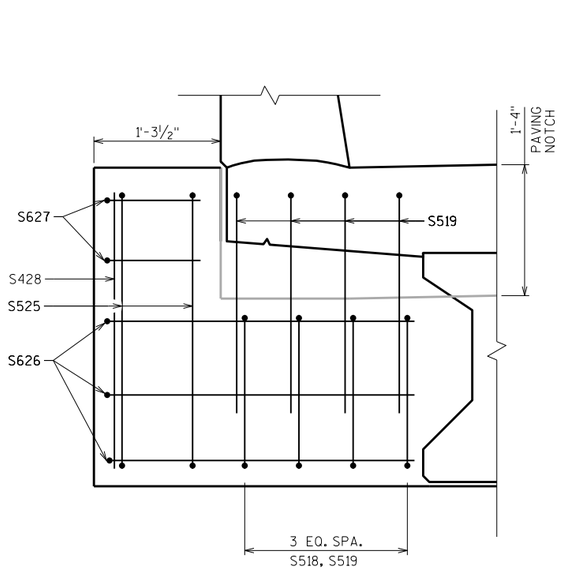




SECTION S-S

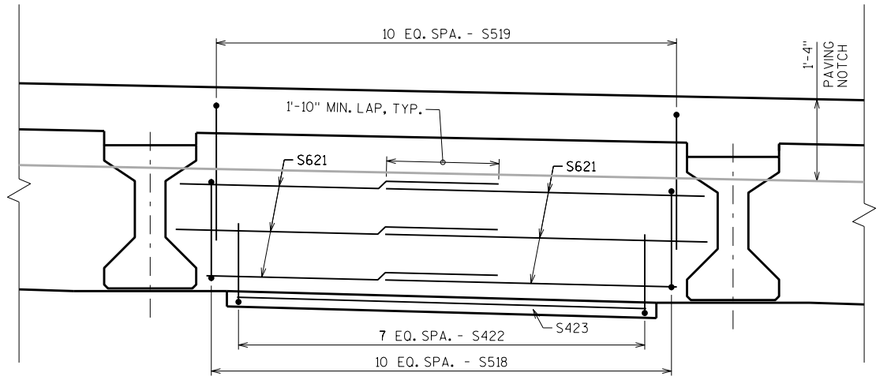
CROSS SECTION THRU ROADWAY

LOOKING EAST



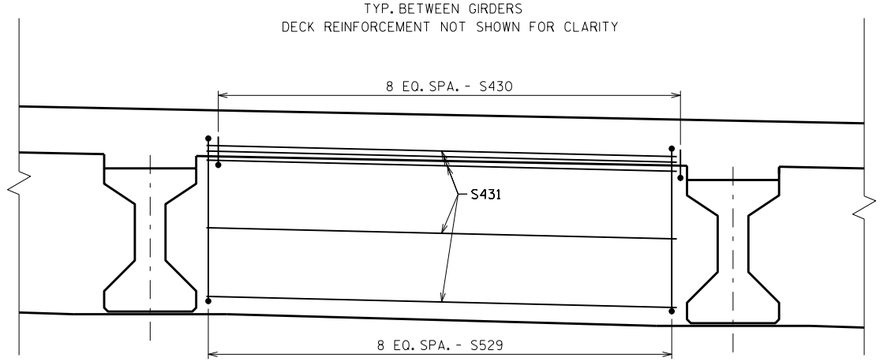
ABUTMENT DIAPHRAGM- EXTERIOR DETAIL

NORTHEAST CORNER SHOWN. OTHER CORNERS SIMILAR
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



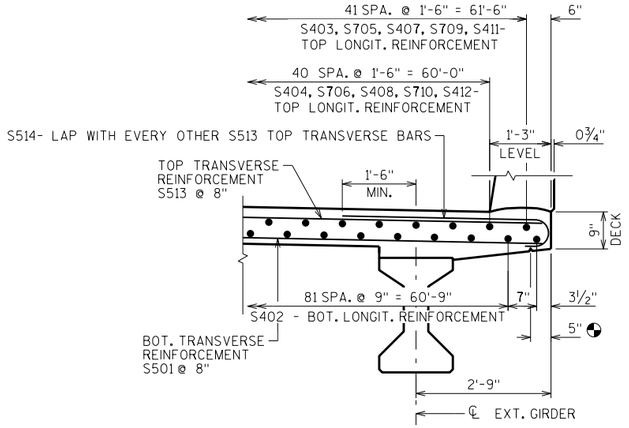
DIAPHRAGM AT ABUTMENTS

TYP. BETWEEN GIRDERS
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



DIAPHRAGM AT PIERS

TYP. BETWEEN GIRDERS
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



EDGE OF DECK DETAIL

TYPICAL AT BOTH EDGES

¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT. DIAPHRAGM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

SUPERSTRUCTURE CROSS SECTION

SHEET 12

368

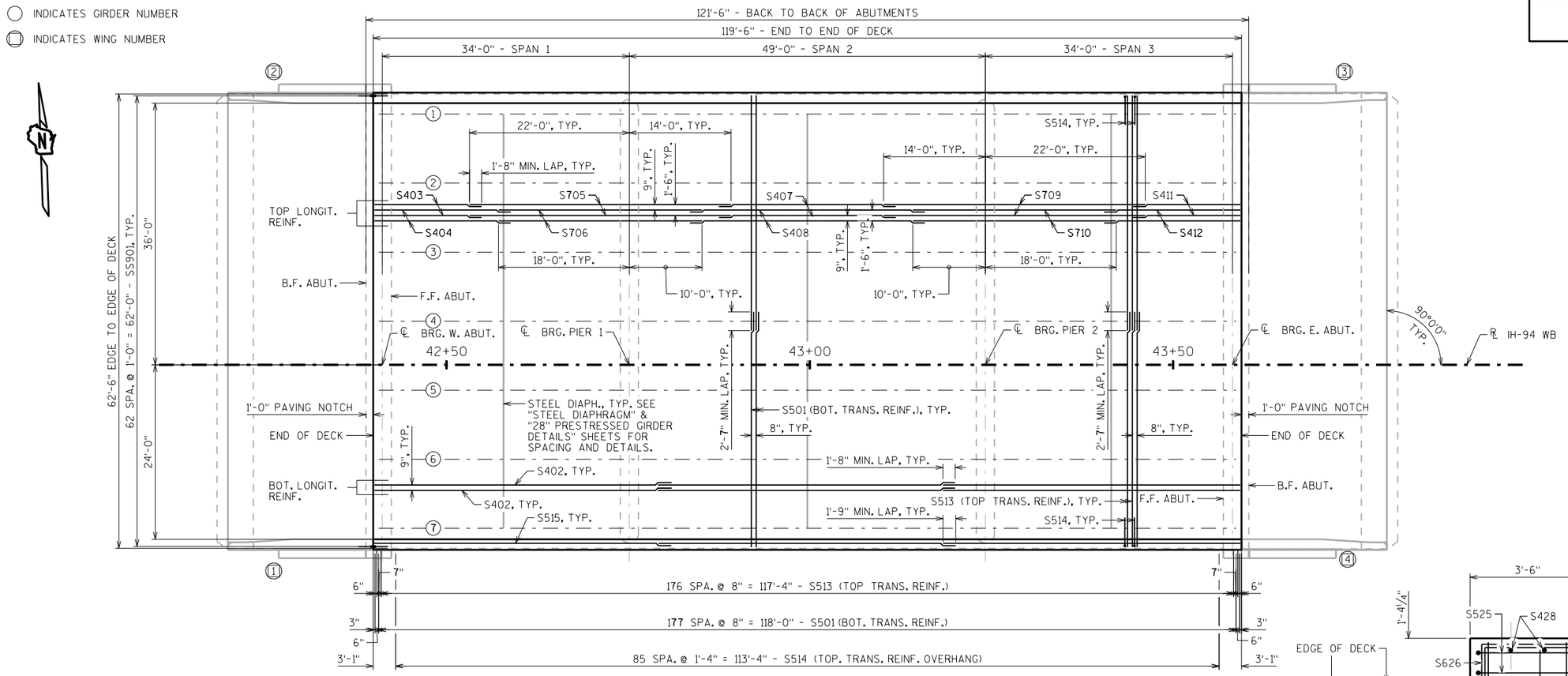
SCALE = 3.00

8

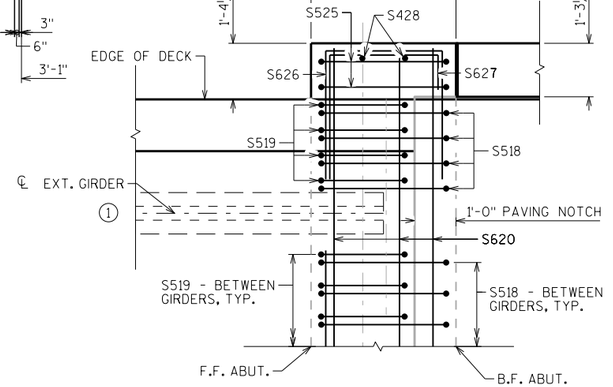
8

STATE PROJECT NUMBER

1021-04-78



PLAN



PLAN-DIAPHRAGM EXTERIOR

NORTHEAST CORNER SHOWN. OTHER CORNERS SIMILAR

TOP OF DECK ELEVATIONS

EOD=EDGE OF DECK

	C/L BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. PIER 1
NORTH EOD	1116.14	1116.10	1116.06	1116.02	1115.98	1115.94	1115.91	1115.87	1115.83	1115.79	1115.75
GIRDER 1	1116.17	1116.13	1116.09	1116.05	1116.01	1115.97	1115.94	1115.90	1115.86	1115.82	1115.78
GIRDER 2	1116.36	1116.32	1116.28	1116.24	1116.20	1116.16	1116.13	1116.09	1116.05	1116.01	1115.97
GIRDER 3	1116.55	1116.51	1116.47	1116.43	1116.39	1116.35	1116.32	1116.28	1116.24	1116.20	1116.16
GIRDER 4	1116.74	1116.70	1116.66	1116.62	1116.58	1116.54	1116.51	1116.47	1116.43	1116.39	1116.35
CROWN PT./PGL	1116.86	1116.82	1116.78	1116.74	1116.70	1116.66	1116.63	1116.59	1116.55	1116.51	1116.47
GIRDER 5	1116.79	1116.75	1116.71	1116.67	1116.63	1116.59	1116.56	1116.52	1116.48	1116.44	1116.40
GIRDER 6	1116.60	1116.56	1116.52	1116.48	1116.44	1116.40	1116.37	1116.33	1116.29	1116.25	1116.21
GIRDER 7	1116.41	1116.37	1116.33	1116.29	1116.25	1116.21	1116.18	1116.14	1116.10	1116.06	1116.02
SOUTH EOD	1116.38	1116.34	1116.30	1116.26	1116.22	1116.18	1116.15	1116.11	1116.07	1116.03	1115.99

	C/L BRG. PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. E. ABUT.
NORTH EOD	1115.75	1115.70	1115.65	1115.59	1115.54	1115.49	1115.43	1115.38	1115.33	1115.28	1115.23	1115.20	1115.16	1115.13	1115.09	1115.06	1115.03	1114.99	1114.96	1114.93	1114.89
GIRDER 1	1115.78	1115.73	1115.68	1115.62	1115.57	1115.52	1115.46	1115.41	1115.36	1115.31	1115.26	1115.23	1115.19	1115.16	1115.12	1115.09	1115.06	1115.02	1114.99	1114.96	1114.92
GIRDER 2	1115.97	1115.92	1115.87	1115.81	1115.76	1115.71	1115.65	1115.60	1115.55	1115.50	1115.45	1115.42	1115.38	1115.35	1115.31	1115.28	1115.25	1115.21	1115.18	1115.15	1115.11
GIRDER 3	1116.16	1116.11	1116.06	1116.00	1115.95	1115.90	1115.84	1115.79	1115.74	1115.69	1115.64	1115.61	1115.57	1115.54	1115.50	1115.47	1115.44	1115.40	1115.37	1115.34	1115.30
GIRDER 4	1116.35	1116.30	1116.25	1116.19	1116.14	1116.09	1116.03	1115.98	1115.93	1115.88	1115.83	1115.80	1115.76	1115.73	1115.69	1115.66	1115.63	1115.59	1115.56	1115.53	1115.49
CROWN PT./PGL	1116.47	1116.42	1116.37	1116.31	1116.26	1116.21	1116.15	1116.10	1116.05	1116.00	1115.95	1115.92	1115.88	1115.85	1115.81	1115.78	1115.75	1115.71	1115.68	1115.65	1115.61
GIRDER 5	1116.40	1116.35	1116.30	1116.24	1116.19	1116.14	1116.08	1116.03	1115.98	1115.93	1115.88	1115.85	1115.81	1115.78	1115.74	1115.71	1115.68	1115.64	1115.61	1115.58	1115.54
GIRDER 6	1116.21	1116.16	1116.11	1116.05	1116.00	1115.95	1115.89	1115.84	1115.79	1115.74	1115.69	1115.66	1115.62	1115.59	1115.55	1115.52	1115.49	1115.45	1115.42	1115.39	1115.35
GIRDER 7	1116.02	1115.97	1115.92	1115.86	1115.81	1115.76	1115.70	1115.65	1115.60	1115.55	1115.50	1115.47	1115.43	1115.40	1115.36	1115.33	1115.30	1115.26	1115.23	1115.20	1115.16
SOUTH EOD	1115.99	1115.94	1115.89	1115.83	1115.78	1115.73	1115.67	1115.62	1115.57	1115.52	1115.47	1115.44	1115.40	1115.37	1115.33	1115.30	1115.27	1115.23	1115.20	1115.17	1115.13

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

SUPERSTRUCTURE

SHEET 13

369

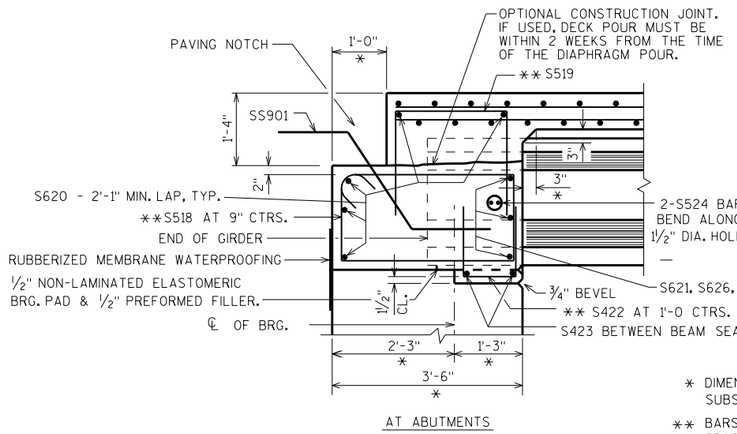
SCALE = 8.00

8

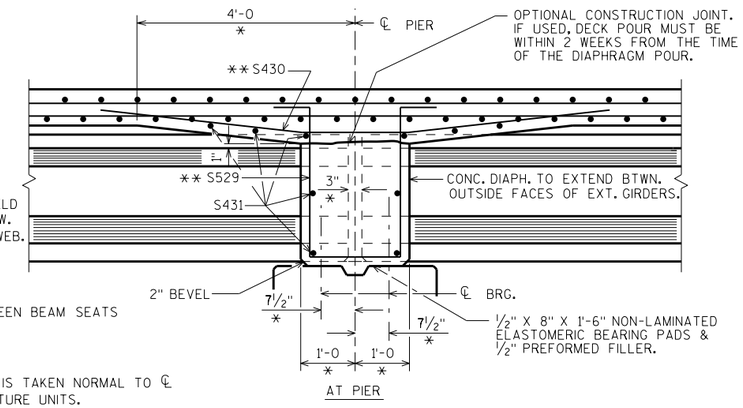
8

STATE PROJECT NUMBER

1021-04-78



AT ABUTMENTS



AT PIER

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

PART. LONGIT. SECTION

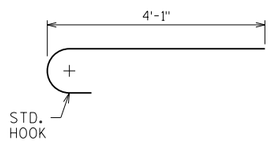
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

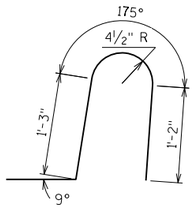
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	360	32'-6"			TRANSVERSE - BOT.
S402	X	252	40'-11"			LONGIT. - BOT.
S403	X	42	14'-9"			LONGIT. - TOP. - SPAN 1
S404	X	41	18'-9"			LONGIT. - TOP. - SPAN 1
S705	X	42	36'-0"			LONGIT. - TOP. - CONTINUITY OVER PIER 1
S706	X	41	28'-0"			LONGIT. - TOP. - CONTINUITY OVER PIER 1
S407	X	42	24'-4"			LONGIT. - TOP. - SPAN 2
S408	X	41	32'-4"			LONGIT. - TOP. - SPAN 2
S709	X	42	36'-0"			LONGIT. - TOP. - CONTINUITY OVER PIER 2
S710	X	41	28'-0"			LONGIT. - TOP. - CONTINUITY OVER PIER 2
S411	X	42	14'-9"			LONGIT. - TOP. - SPAN 3
S412	X	41	18'-9"			LONGIT. - TOP. - SPAN 3
S513	X	358	32'-6"			TRANSVERSE - TOP
S514	X	172	4'-8"	X		TRANSVERSE - EDGE OF DECK
S515	X	48	41'-0"			PARAPET - HORIZ.
S516	X	360	4'-5"	X		PARAPET - VERT.
S517	X	360	6'-8"	X		PARAPET - VERT.
S518	X	148	10'-2"	X		ABUT. DIAPH. - VERT. - STIRRUPS - BTWN. GIR. & AT EXTERIORS
S519	X	148	6'-5"	X		ABUT. DIAPH. - VERT. - BTWN. GIR. & AT EXTERIORS
S620	X	20	33'-6"			ABUT. DIAPH. - HORIZ.
S621	X	72	5'-3"			ABUT. DIAPH. - HORIZ. - BETWEEN GIRDERS
S422	X	96	3'-5"	X		ABUT. DIAPH. - VERT. - BETWEEN BEAM SEATS
S423	X	24	6'-2"			ABUT. DIAPH. - HORIZ. - BETWEEN BEAM SEATS
S524	X	28	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIRDERS
S525	X	8	12'-10"	X		ABUT. DIAPH. - EXT. - VERT.
S626	X	12	8'-8"	X		ABUT. DIAPH. - EXT. - HORIZ.
S627	X	8	6'-7"	X		ABUT. DIAPH. - EXT. - HORIZ.
S428	X	8	2'-11"			ABUT. DIAPH. - EXT. - VERT.
S529	X	108	8'-4"	X		PIER DIAPH. - VERT.
S430	X	108	10'-0"	X		PIER DIAPH. - VERT. - HAUNCH
S431	X	120	7'-8"			PIER DIAPH. - HORIZ. - BETWEEN GIRDERS

STAINLESS STEEL

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
SS901		126	5'-0"	X		ABUT. DIAPHRAGM - APPROACH SLAB TIE



S514



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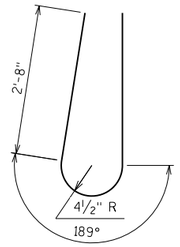

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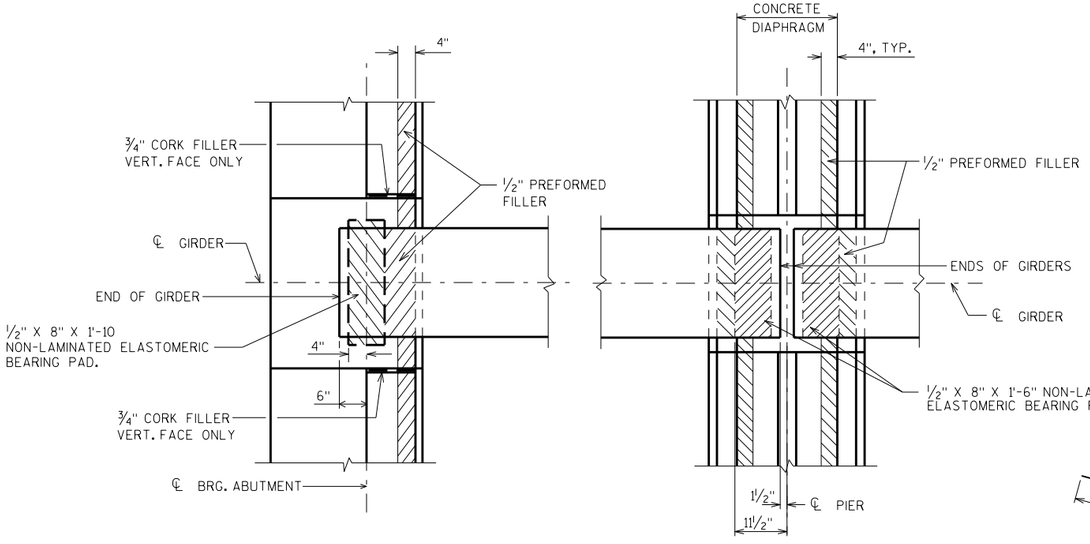
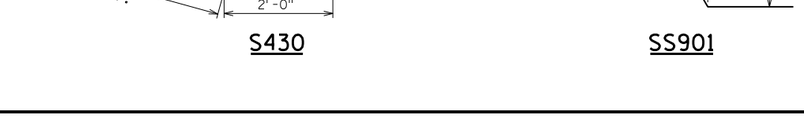
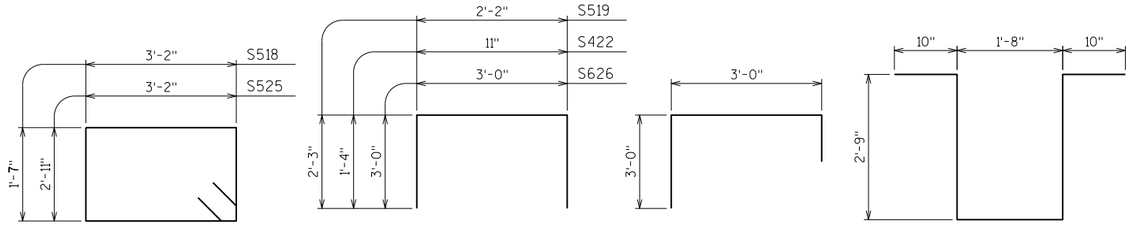


BEARING PAD DETAIL



S430 SS901



S518, S525 S519, S422, S626 S627 S529

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

SUPERSTRUCTURE DETAILS

SHEET 14

370

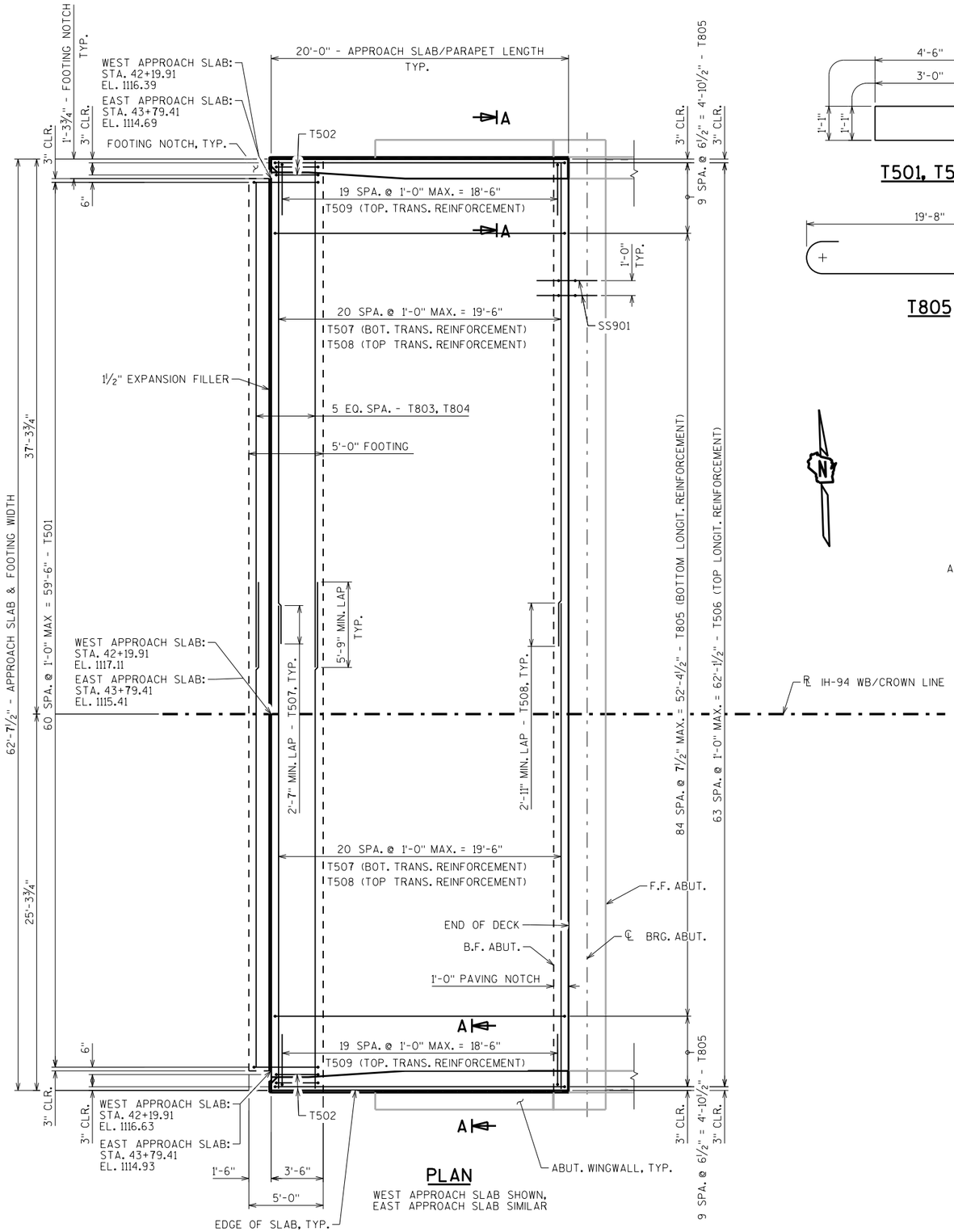
SCALE = 1.35

8

8

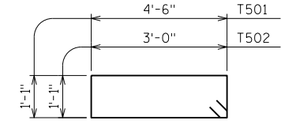
STATE PROJECT NUMBER

1021-04-78

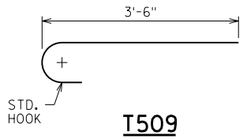


PLAN

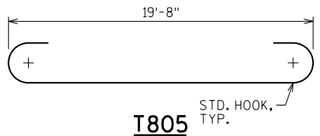
WEST APPROACH SLAB SHOWN,
EAST APPROACH SLAB SIMILAR



T501, T502



T509

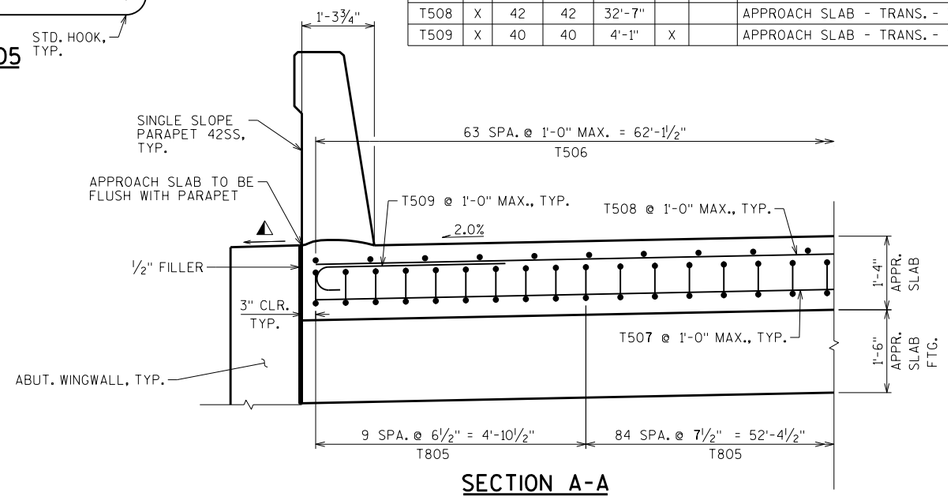


T805

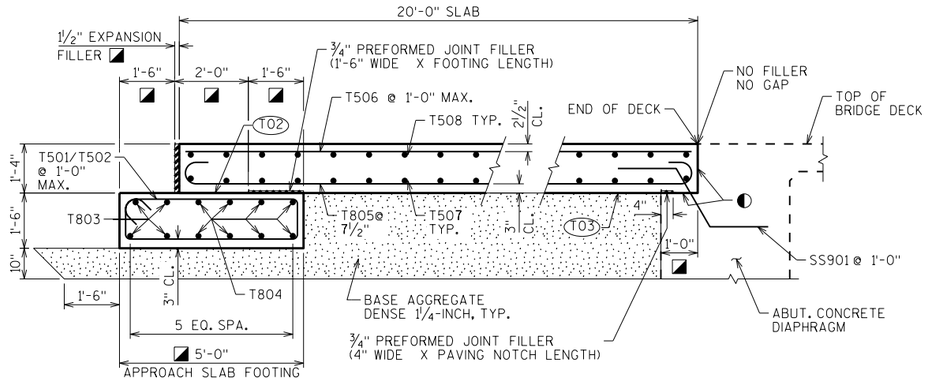
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	WEST APPR. SLAB	EAST APPR. SLAB	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	61	61	11'-10"	X		APPROACH SLAB FOOTING - STIRRUPS
T502	X	4	4	8'-10"	X		APPROACH SLAB FOOTING - STIRRUPS - NOTCHES
T803	X	8	8	32'-8"			APPROACH SLAB FOOTING - TRANS.
T804	X	16	16	34'-0"			APPROACH SLAB FOOTING - TRANS.
T805	X	103	103	21'-6"	X		APPROACH SLAB - LONGIT. - BOT.
T506	X	64	64	19'-8"			APPROACH SLAB - LONGIT. - TOP
T507	X	42	42	32'-5"			APPROACH SLAB - TRANS. - BOT.
T508	X	42	42	32'-7"			APPROACH SLAB - TRANS. - TOP
T509	X	40	40	4'-1"	X		APPROACH SLAB - TRANS. - TOP - EDGES



SECTION A-A



SECTION THRU APPROACH SLAB

- ▲ SLOPE TO DRAIN
- ◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.
- ◪ MEASURED NORMAL TO ABUTMENT
- (T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.
- (T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

STRUCTURAL APPROACH SLAB

SHEET 15

371

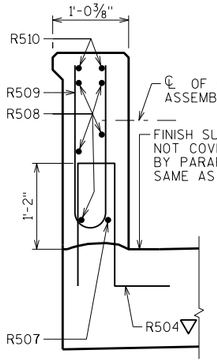
SCALE = 4.00

8

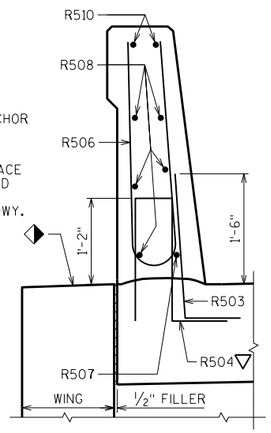
8

STATE PROJECT NUMBER

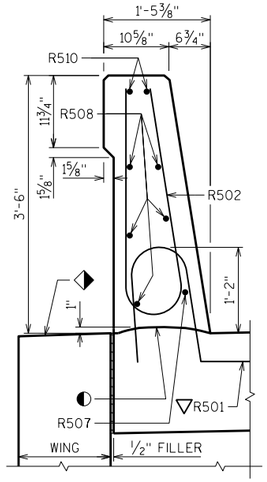
1021-04-78



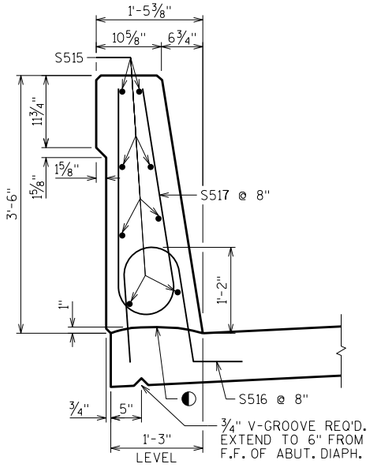
SECTION A-A



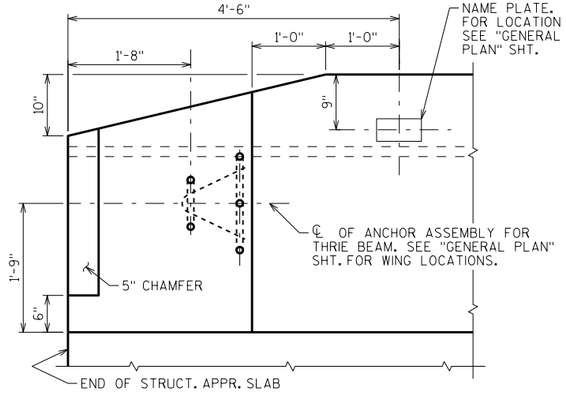
SECTION B-B



SECTION C-C



SECTION THRU PARAPET ON DECK



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

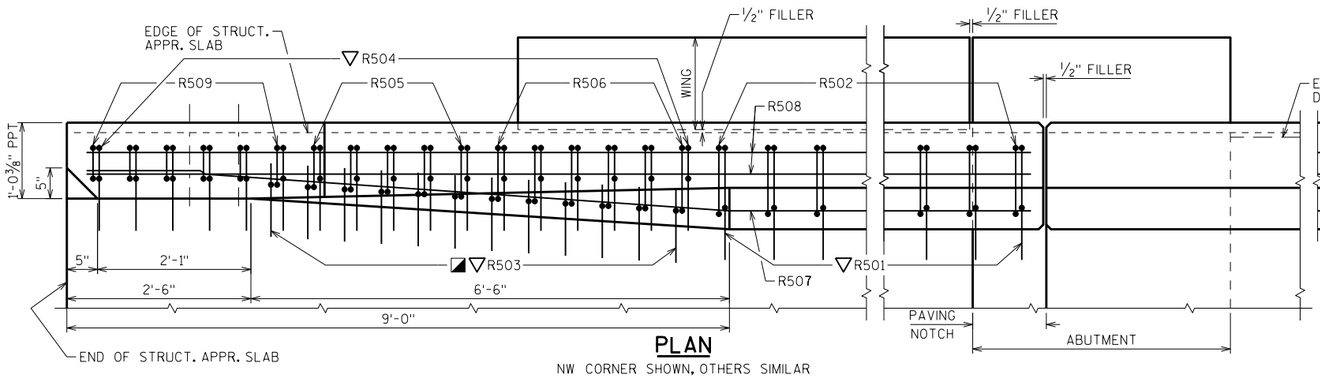
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	24	24	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-8"	X		PARAPET HORIZ.
R508	X	10	10	19'-6"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	19'-6"	X		PARAPET 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.

BAR SERIES TABLE

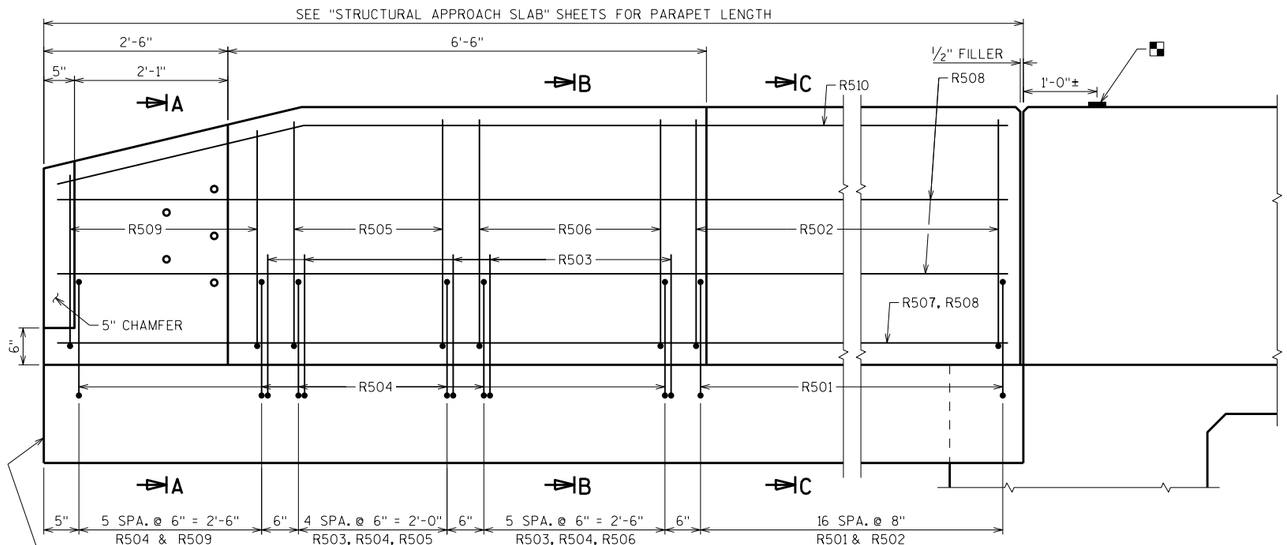
BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



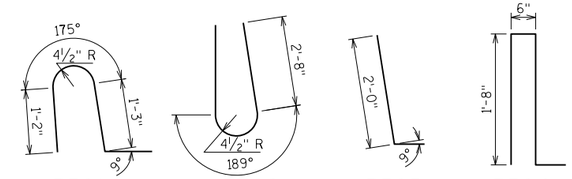
PLAN

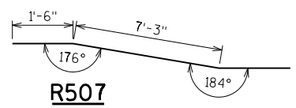
NW CORNER SHOWN, OTHERS SIMILAR

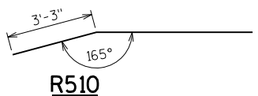


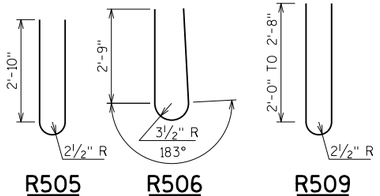
INSIDE ELEVATION

NW CORNER SHOWN, OTHERS SIMILAR
WING & STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY









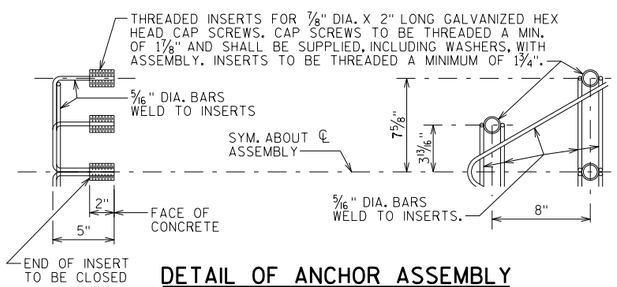
BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◆ SLOPE FOR DRAINAGE

◪ USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501, R503, AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.



DETAIL OF ANCHOR ASSEMBLY

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

SINGLE SLOPE PARAPET 42SS

SHEET 16

372

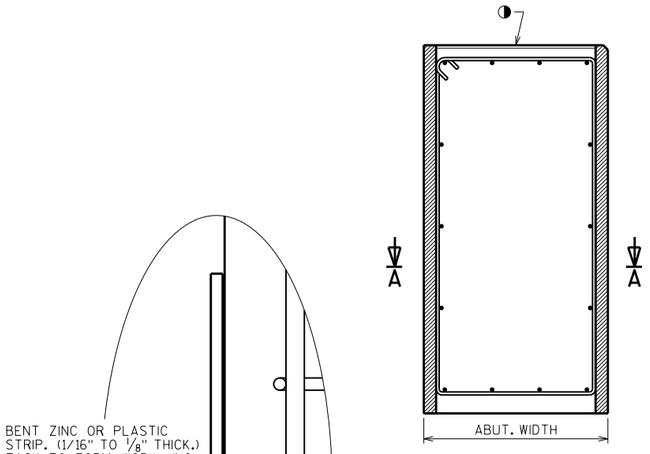
SCALE = 1.00

8

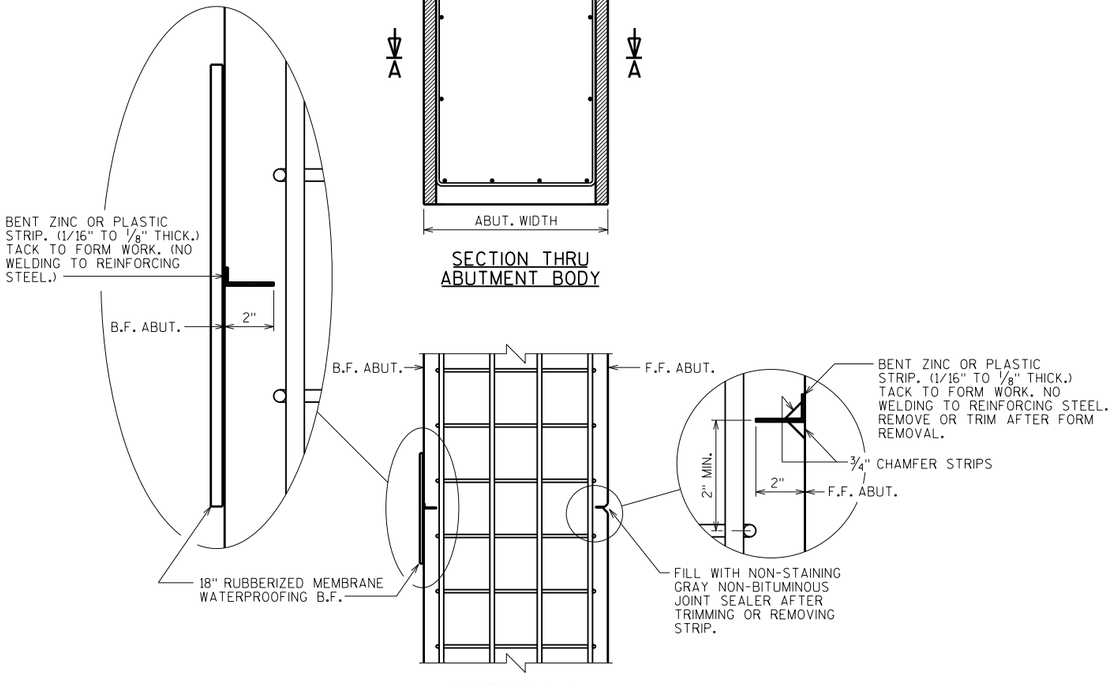
8

STATE PROJECT NUMBER

1021-04-78



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

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 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY BAF | PLANS CK'D. MJK

ALTERNATE CONSTRUCTION JOINT

SHEET 17

373

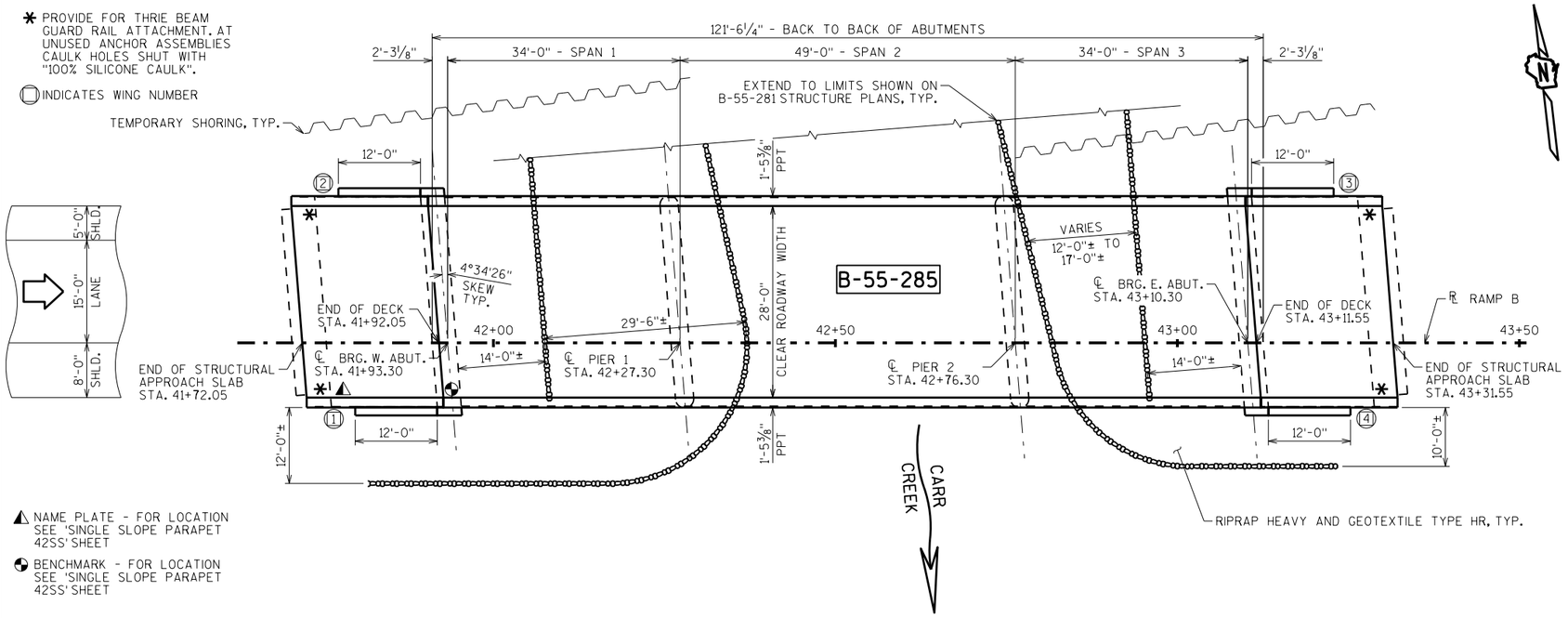
SCALE = 1

8

8

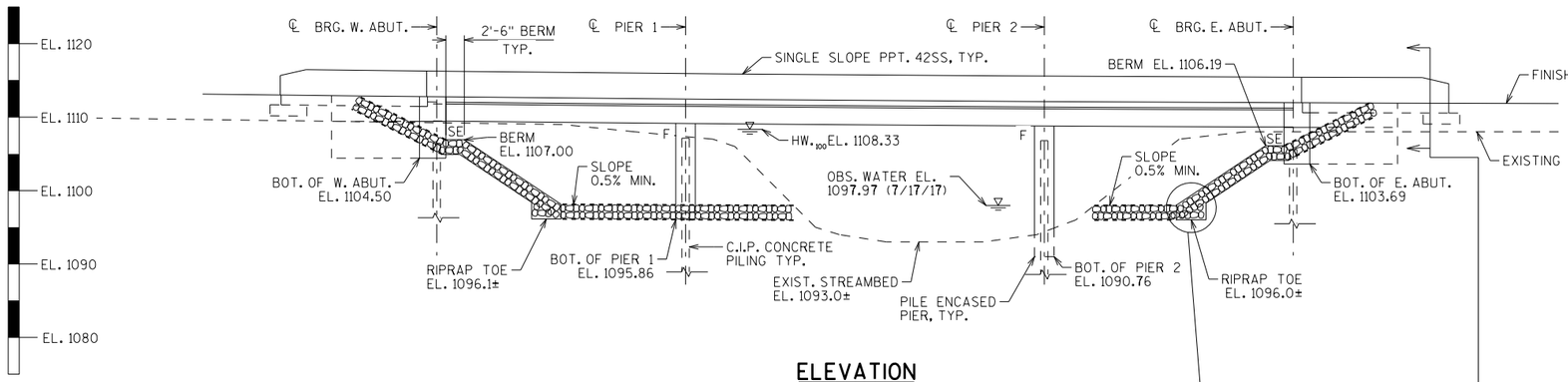
STATE PROJECT NUMBER

1021-04-77



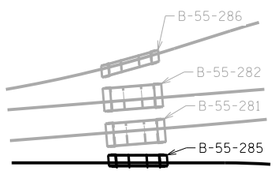
PLAN

3-SPAN 28" PRESTRESSED GIRDER

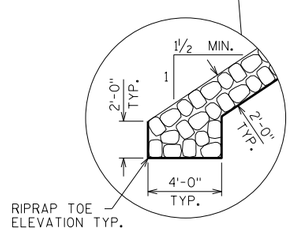


ELEVATION

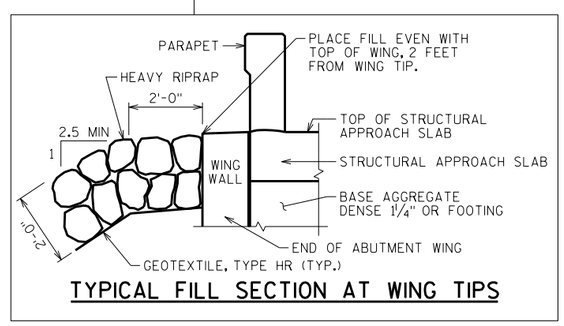
NORMAL TO CARR CREEK (LOOKING NORTH)



LOCATION MAP



RIPRAP TOE ELEVATION TYP.



TYPICAL FILL SECTION AT WING TIPS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.08
OPERATING RATING FACTOR: RF = 1.40
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

28" PRESTRESSED GIRDERS:
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 TO BE SUPPORTED ON 10 3/4" DIA. X 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 50'-0" LONG AT THE WEST ABUTMENT AND ESTIMATED 55'-0" LONG AT THE EAST ABUTMENT. PILE POINTS REQUIRED.

PIERS TO BE SUPPORTED ON 10 3/4" DIA. X 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 50'-0" LONG AT PIER 1 AND ESTIMATED 55'-0" LONG AT PIER 2. PILE POINTS REQUIRED.

** 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.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. PIER 1
9. PIER 2
10. 28" PRESTRESSED GIRDER DETAILS
11. STEEL DIAPHRAGM
12. SUPERSTRUCTURE CROSS SECTION
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE DETAILS
15. STRUCTURAL APPROACH SLAB
16. SINGLE SLOPE PARAPET 42SS

TRAFFIC VOLUME

RAMP B

ADT = 1,800 (2042)
R.D.S. = 60 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 2770 C.F.S.
$VEL._{100}$ = 6.5 F.P.S.
$HW._{100}$ = EL. 1108.33
WATERWAY AREA = 430 SQ. FT.
DRAINAGE AREA = 12.9 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY

Q_2 = 400 C.F.S.
$VEL._2$ = 1.3 F.P.S.
$HW._2$ = EL. 1105.26

STRUCTURE DESIGN CONTACTS:

BRETT FOLLETT (608) 266-0214
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION — BUREAU OF STRUCTURES

ACCEPTED AMB 5/1/20
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-55-285

IH-94 EB OFF RAMP OVER CARR CREEK

COUNTY	VILLAGE
ST. CROIX	WOODVILLE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BAF	AA	BAF/MJH	BAF

GENERAL PLAN

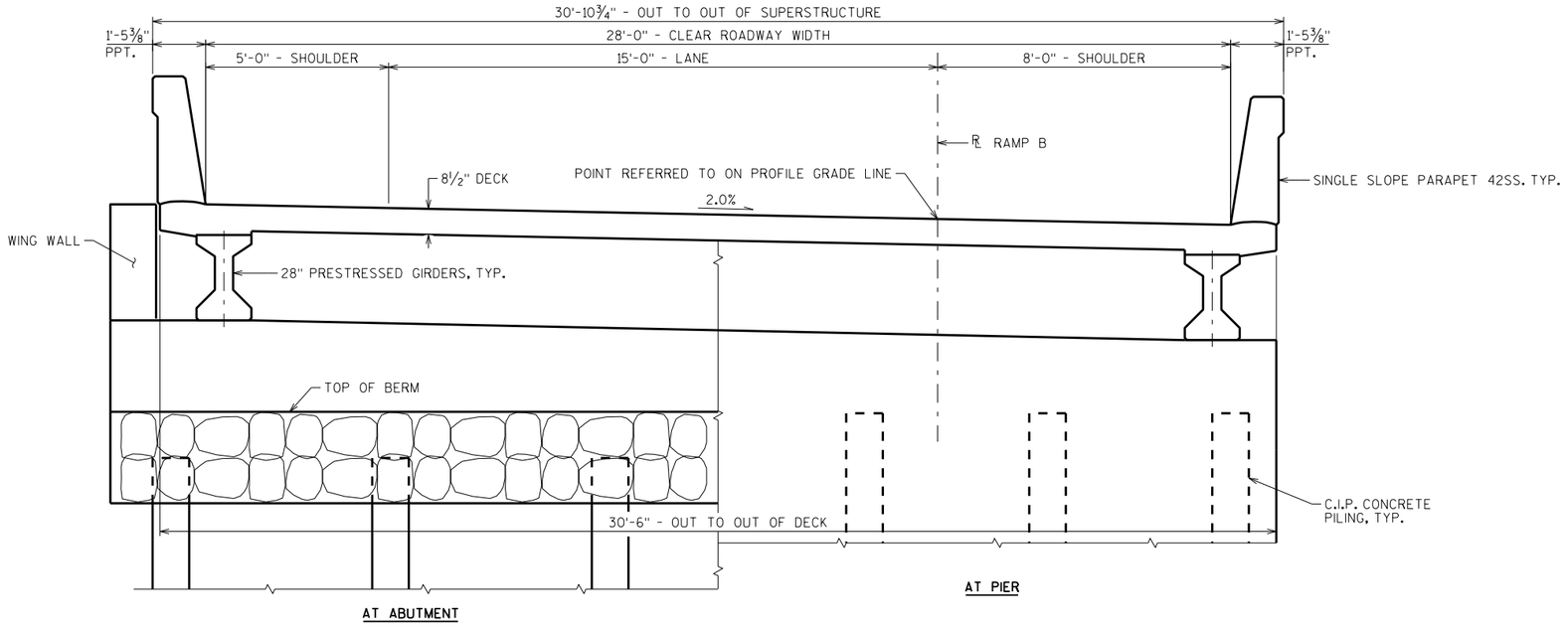
SHEET 1 OF 16

374

I.D. 1021-04-07B

DATE: MAR 2020

SCALE = 10.00



CROSS SECTION THRU ROADWAY LOOKING EAST

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. STRUCT. APP. SLAB	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	E. STRUCT. APP. SLAB	TOTALS
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-55-285	LS	——	——	——	——	——	——	——	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	——	——	81	——	——	81	——	162
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	——	106	——	——	——	——	106	212
502.0100	CONCRETE MASONRY BRIDGES	CY	160	45	42	40	53	42	45	427
502.3200	PROTECTIVE SURFACE TREATMENT	SY	389	63	——	——	——	——	63	515
502.3210	PIGMENTED SURFACE SEALER	SY	118	20	——	——	——	——	20	158
503.0128	PRESTRESSED GIRDER TYPE I 28-INCH	LF	470	——	——	——	——	——	——	470
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	——	——	2,225	1,895	2,550	2,225	——	8,925
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	32,180	7,630	1,630	——	——	1,630	7,630	50,700
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,055	——	——	——	——	——	——	1,055
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	24	——	——	——	——	——	——	24
506.4000	STEEL DIAPHRAGMS B-55-285	EACH	9	——	——	——	——	——	——	9
511.1200	TEMPORARY SHORING B-55-285	SF	——	——	900	——	——	600	——	1,500
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	——	——	10	——	——	10	——	20
550.0500	PILE POINTS	EACH	——	——	6	9	9	6	——	30
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	——	——	300	450	495	330	——	1,575
606.0300	RIPRAP HEAVY	CY	——	——	192	——	——	151	——	343
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	——	——	70	——	——	70	——	140
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	——	——	——	——	——	——	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	——	——	32	——	——	32	——	64
645.0120	GEOTEXTILE TYPE HR	SY	——	——	289	——	——	220	——	509
	NON-BID ITEMS									
	FILLER	SIZE	——	——	——	——	——	——	——	½", ¾", 1½"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-55-285" SHALL BE THE EXISTING GROUNDLINE AT THE ABUTMENTS.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

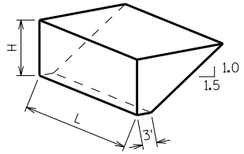
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "28" PRESTRESSED GIRDER DETAILS" SHEET.

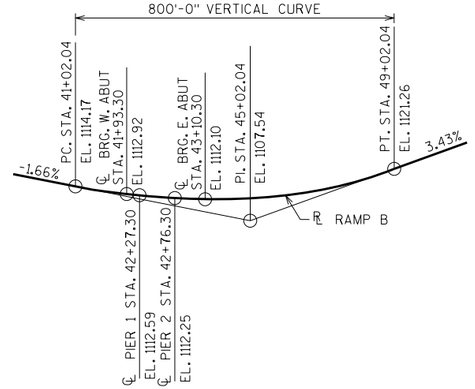
THE EXISTING STREAM BED SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

AT ABUTMENTS AND PIER(S), CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

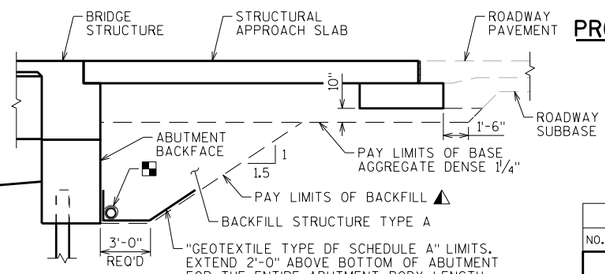


ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)



PROFILE GRADE LINE - RAMP B



TYPICAL SECTION THRU ABUTMENT

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

▪ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

STATE PROJECT NUMBER

1021-04-77

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY BAF/MJH | PLANS CK'D. BAF

CROSS SECTION & QUANTITIES

SHEET 2

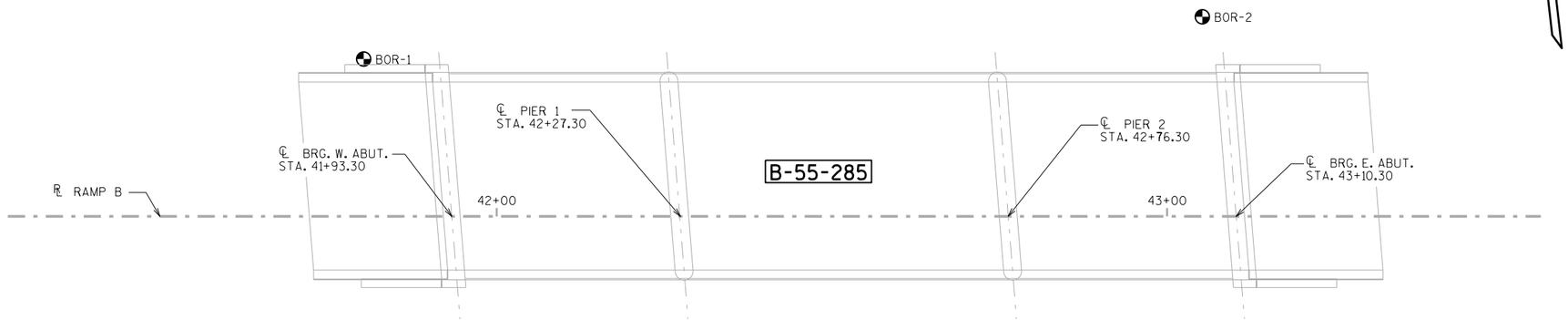
375

8

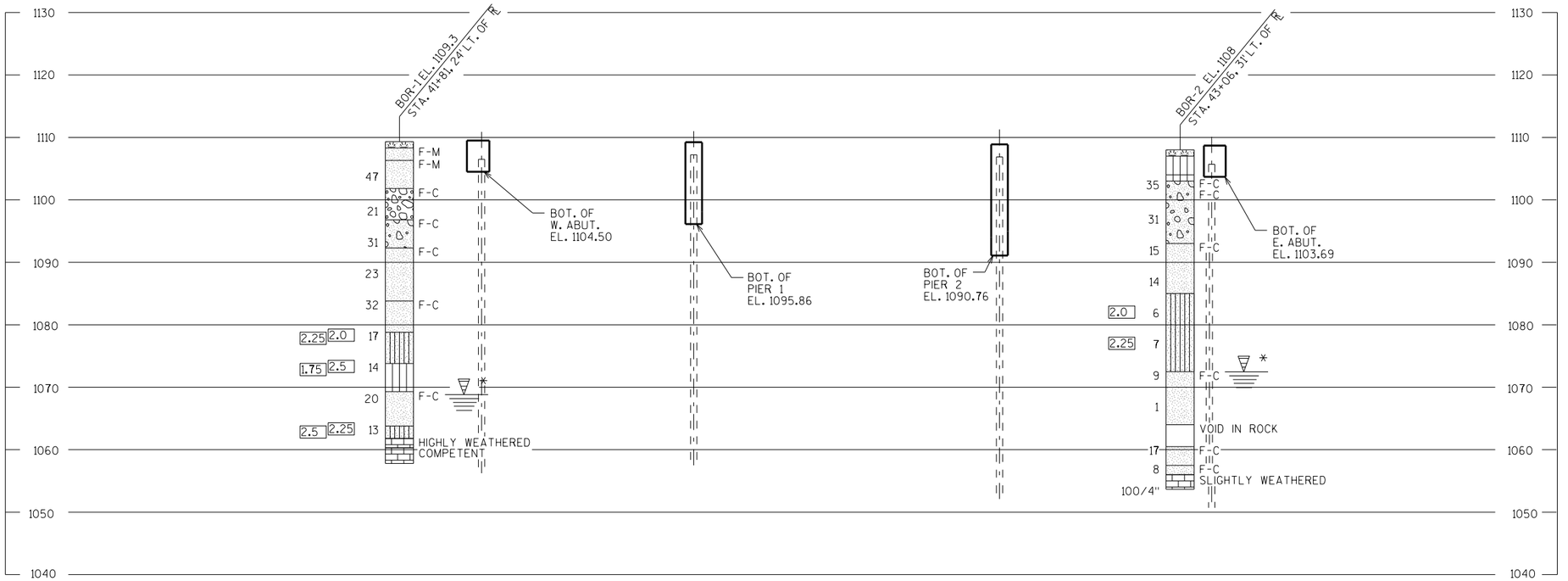
8

SCALE = 2.00

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	7/30/2019	327724	633924
2	7/31/2019	327716	634049
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



PLAN



* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

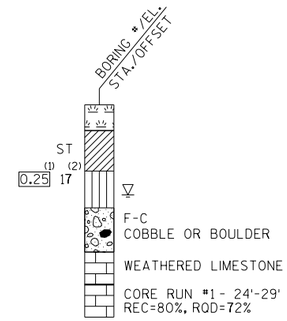
STATE PROJECT NUMBER

1021-04-77

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY TLP/MJH | PLANS CK'D. BAF

SUBSURFACE EXPLORATION

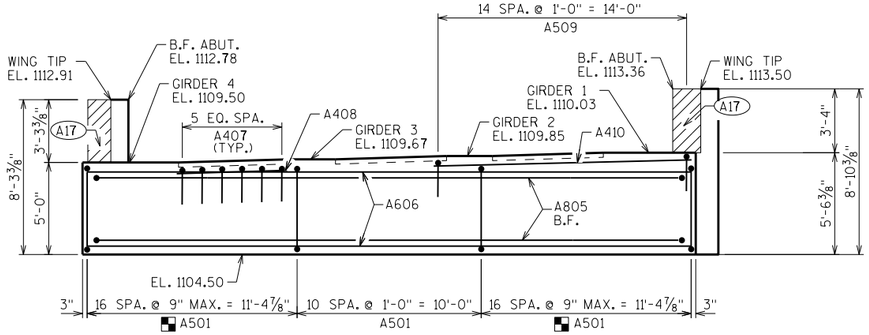
SHEET 3

376

8

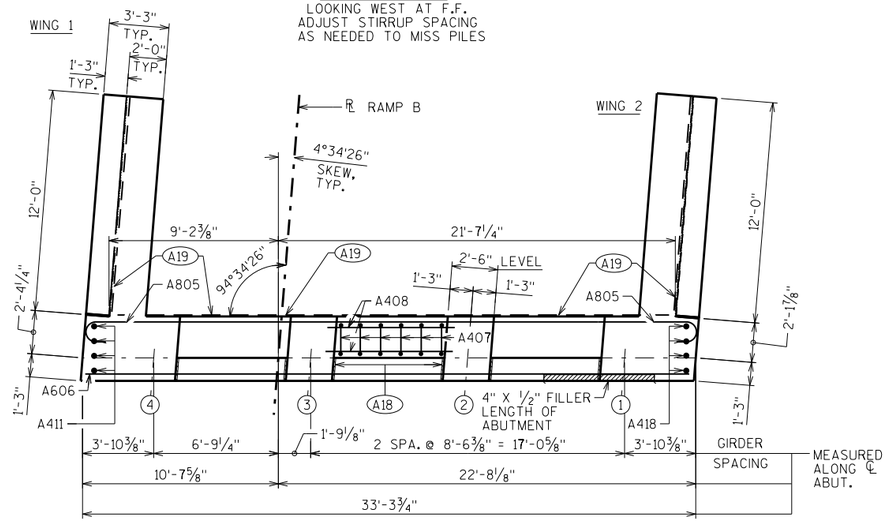
8

SCALE = 10

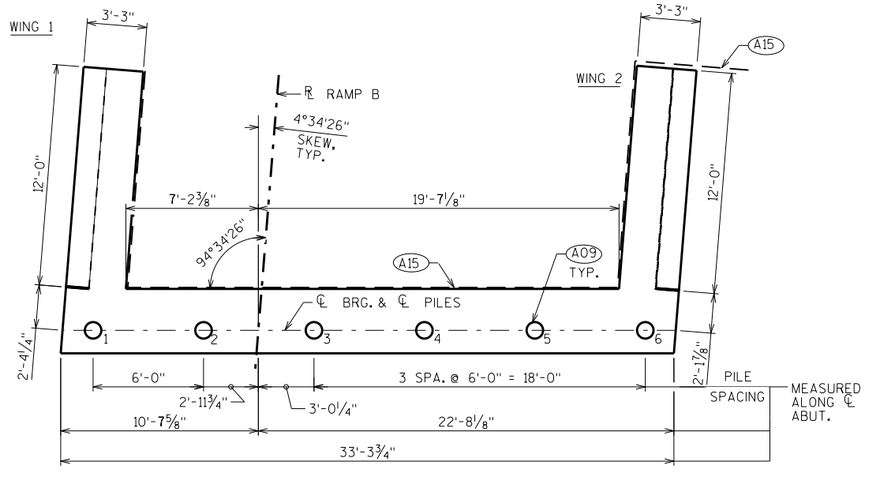


ELEVATION

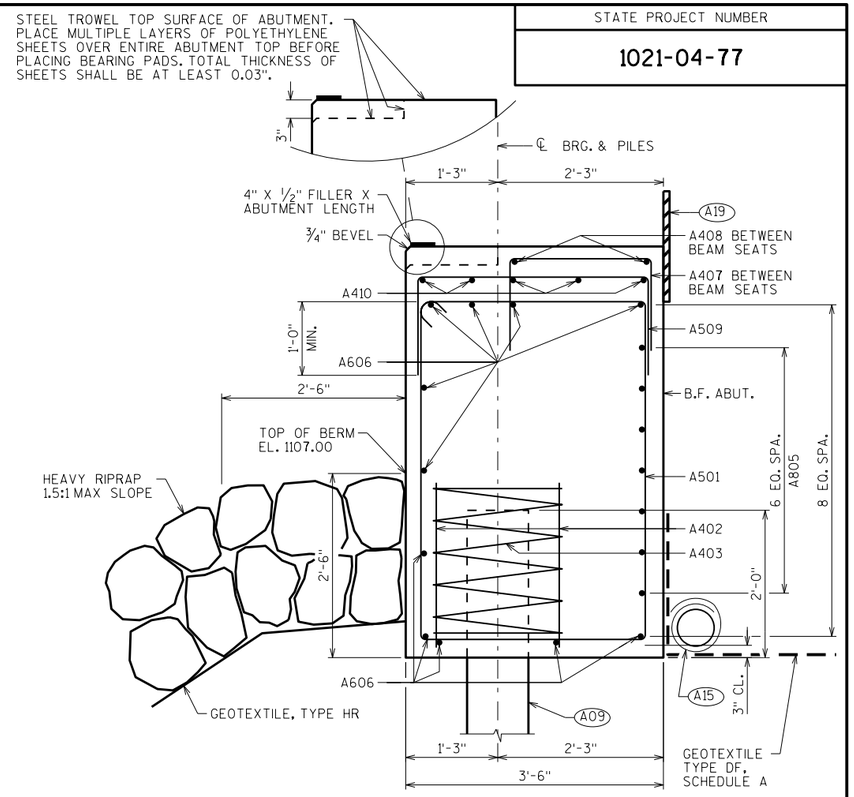
LOOKING WEST AT F.F.
ADJUST STIRRUP SPACING
AS NEEDED TO MISS PILES



PLAN

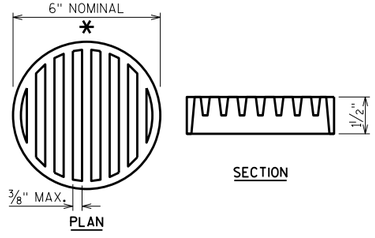


PILE PLAN



SECTION THRU BODY

- FLARE BARS AT ABUT. ENDS AS NECESSARY WHILE MAINTAINING 9" MAX. SPACING
- ○ INDICATES GIRDER NUMBER
- (A09) SUPPORT ABUTMENT ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A 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 SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

STATE PROJECT NUMBER

1021-04-77

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

WEST ABUTMENT

SHEET 4

377

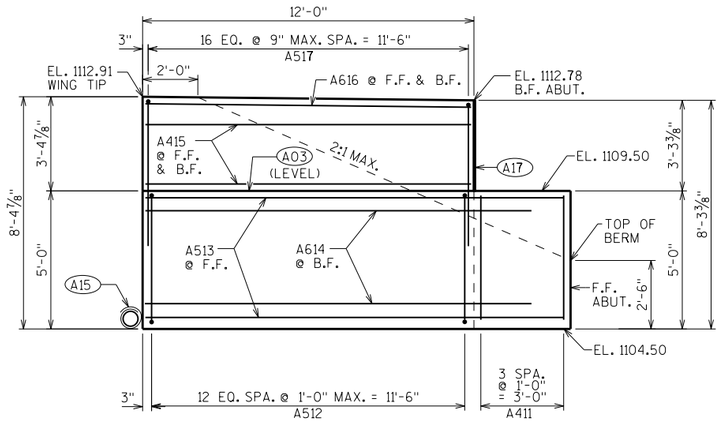
SCALE = 4.00

8

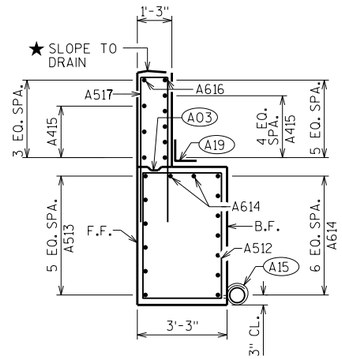
8

STATE PROJECT NUMBER

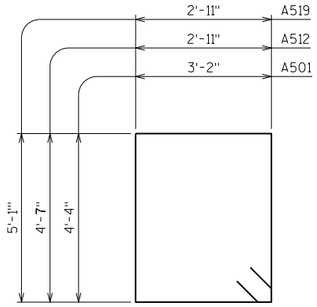
1021-04-77



WING 1 ELEVATION



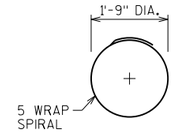
WING 1 SECTION



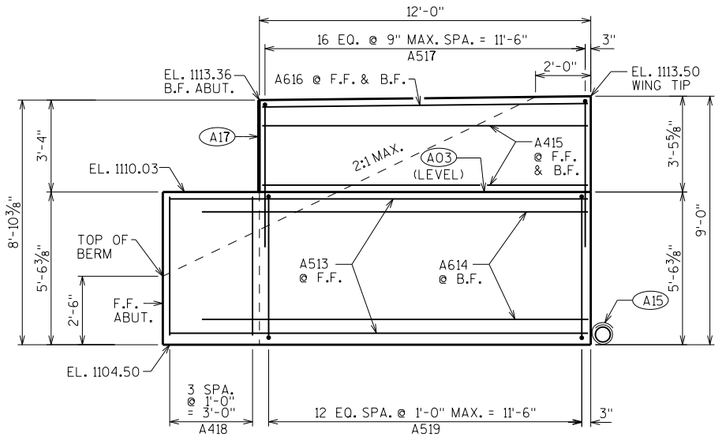
A501, A512, A519

BILL OF BARS

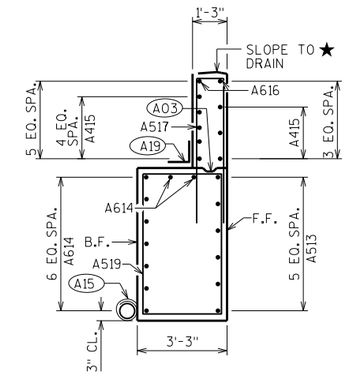
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		43	15'-8"	X		BODY - STIRRUPS - VERTICAL
A402		12	2'-3"			PILES - 2 PER BODY PILE - VERTICAL
A403		6	28'-0"	X		PILES - 1 PER BODY PILE - SPIRAL
A604		NOT	USED			
A805		7	34'-8"	X		BODY - HORIZONTAL - B.F.
A606		11	32'-11"			BODY - HORIZONTAL
A407		18	4'-3"	X		BODY - VERTICAL - TOP - BTWN. BEAM SEATS
A408		6	8'-1"			BODY - HORIZONTAL - TOP - BTWN. BEAM SEATS
A509		15	6'-3"	X		BODY - VERTICAL - U-BAR - TOP - OVER GIR. 1-2
A410		5	14'-3"			BODY - HORIZONTAL - TOP - OVER GIR. 1-2
A411	X	4	4'-8"			WING 1 - VERTICAL - END OF ABUTMENTS
A512	X	13	15'-8"	X		WING 1 - VERTICAL - LOWER WING - BODY - STIRRUPS
A513	X	12	15'-2"			WINGS 1 & 2 - HORIZONTAL - F.F. - LOWER WING
A614	X	18	13'-11"			WINGS 1 & 2 - HORIZONTAL - B.F. & TOP - LOWER WING
A415	X	16	11'-8"			WINGS 1 & 2 - HORIZONTAL - UPPER WING
A616	X	4	11'-8"			WINGS 1 & 2 - HORIZONTAL - TOP
A517	X	34	11'-6"	X		WINGS 1 & 2 - VERTICAL - TOP
A418	X	4	5'-2"			WING 2 - VERTICAL - END OF ABUTMENTS
A519	X	13	16'-8"	X		WING 2 - VERTICAL - LOWER WING - BODY - STIRRUPS



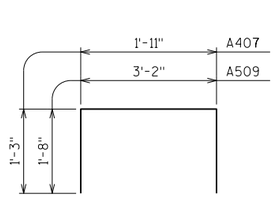
A403



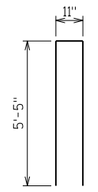
WING 2 ELEVATION



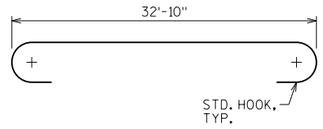
WING 2 SECTION



A407, A509



A517



A805

★ SLOPE ⅛" PER FOOT

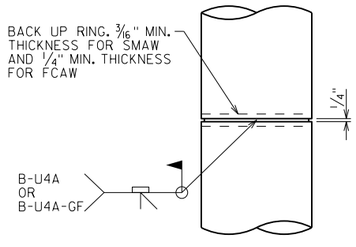
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 × 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A09) SUPPORT ABUTMENT ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

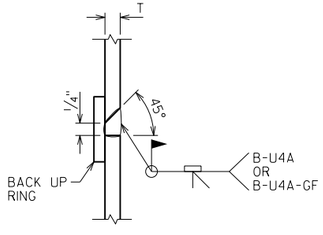
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

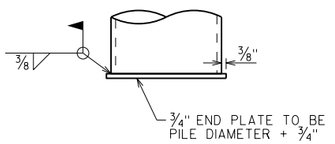


CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS



END PLATE DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

WEST ABUTMENT DETAILS

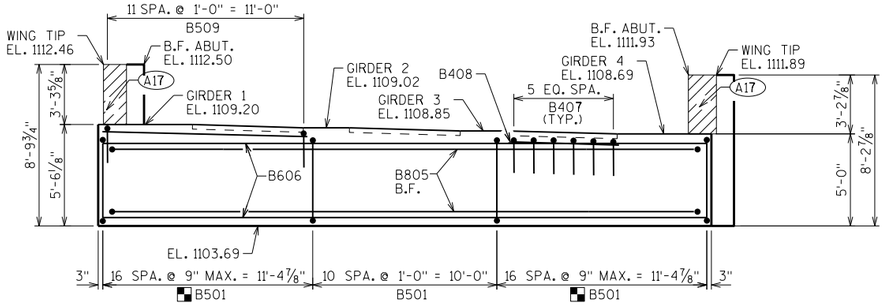
SHEET 5

378

SCALE = 2.67

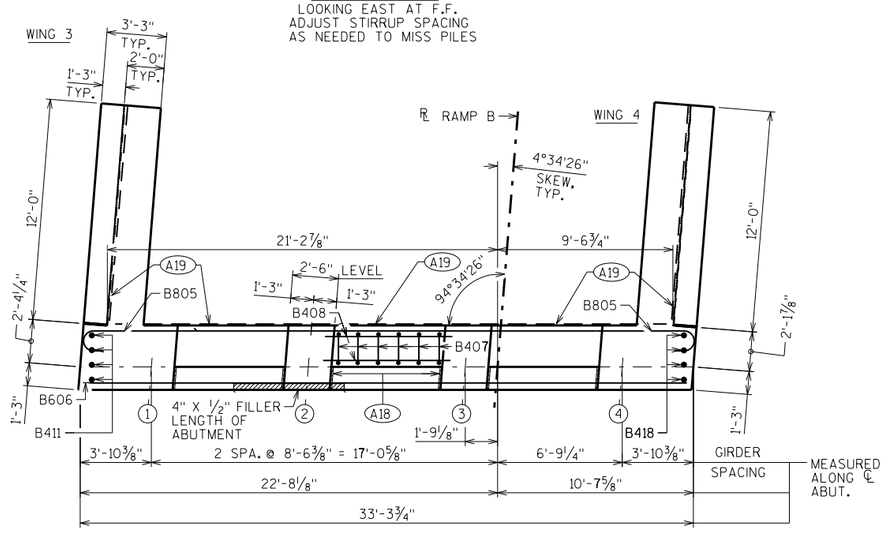
8

8

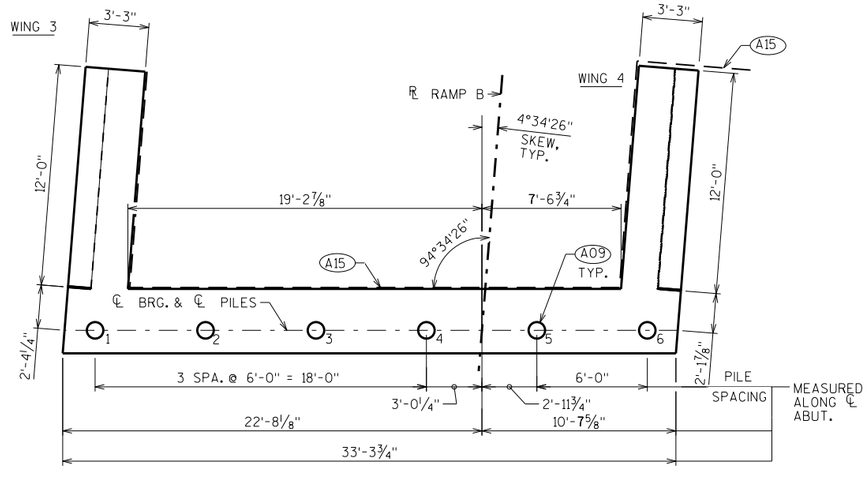


ELEVATION

LOOKING EAST AT F.F.
ADJUST STIRRUP SPACING
AS NEEDED TO MISS PILES

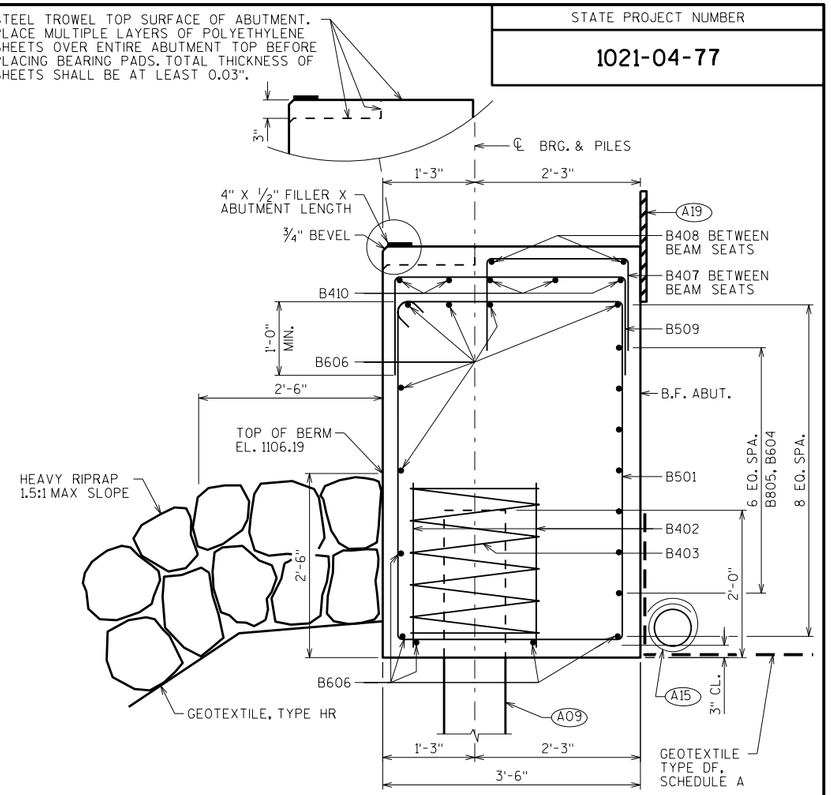


PLAN



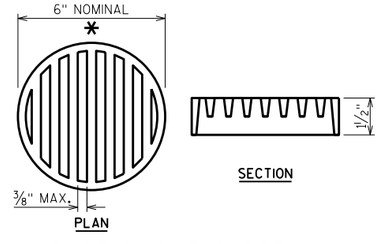
PILE PLAN

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

- ■ FLARE BARS AT ABUT. ENDS AS NECESSARY WHILE MAINTAINING 9" MAX. SPACING
- ◯ INDICATES GIRDER NUMBER
- (A09) SUPPORT ABUTMENT ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A 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 SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

STATE PROJECT NUMBER

1021-04-77

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

EAST ABUTMENT

SHEET 6

379

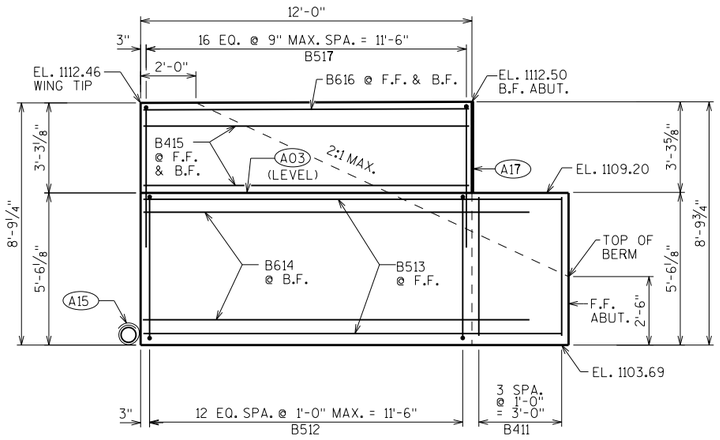
8

8

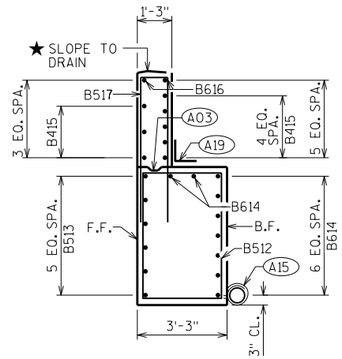
SCALE = 4.00

STATE PROJECT NUMBER

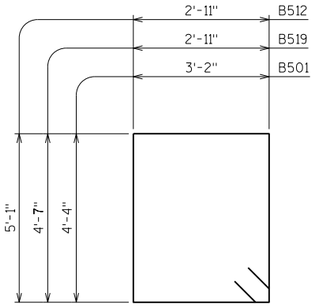
1021-04-77



WING 3 ELEVATION



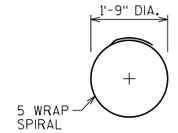
WING 3 SECTION



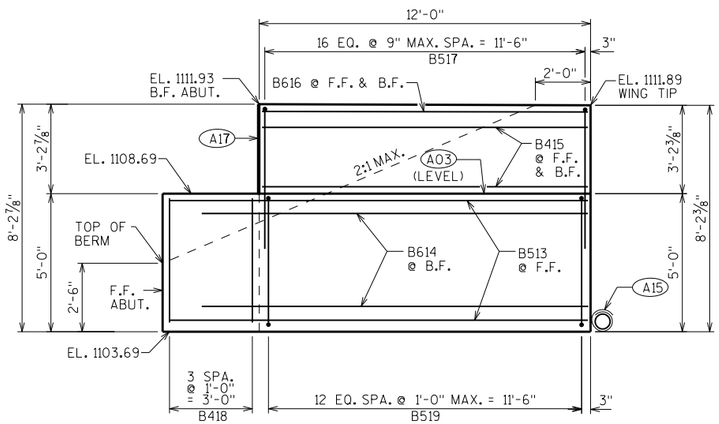
B501. B512, B519

BILL OF BARS

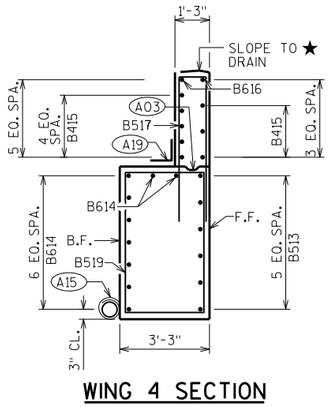
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		43	15'-8"	X		BODY - STIRRUPS - VERTICAL
B402		12	2'-3"			PILES - 2 PER BODY PILE - VERTICAL
B403		6	28'-0"	X		PILES - 1 PER BODY PILE - SPIRAL
B604		NOT	USED			
B805		7	34'-8"	X		BODY - HORIZONTAL - B.F.
B606		11	32'-11"			BODY - HORIZONTAL
B407		18	4'-3"	X		BODY - VERTICAL - TOP - BTWN. BEAM SEATS
B408		6	8'-1"			BODY - HORIZONTAL - TOP - BTWN. BEAM SEATS
B509		12	6'-3"	X		BODY - VERTICAL - U-BAR - TOP - OVER GIR. 1-2
B410		5	11'-3"			BODY - HORIZONTAL - TOP - OVER GIR. 1-2
B411	X	4	5'-2"			WING 3 - VERTICAL - END OF ABUTMENTS
B512	X	13	16'-8"	X		WING 3 - VERTICAL - LOWER WING - BODY - STIRRUPS
B513	X	12	15'-2"			WINGS 3 & 4 - HORIZONTAL - F.F. - LOWER WING
B614	X	18	13'-11"			WINGS 3 & 4 - HORIZONTAL - B.F. & TOP - LOWER WING
B415	X	16	11'-8"			WINGS 3 & 4 - HORIZONTAL - UPPER WING
B616	X	4	11'-8"			WINGS 3 & 4 - HORIZONTAL - TOP
B517	X	34	11'-6"	X		WINGS 3 & 4 - VERTICAL - TOP
B418	X	4	4'-8"			WING 4 - VERTICAL - END OF ABUTMENTS
B519	X	13	15'-8"	X		WING 4 - VERTICAL - LOWER WING - BODY - STIRRUPS



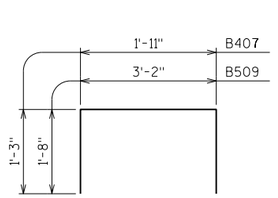
B403



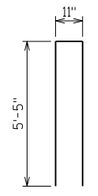
WING 4 ELEVATION



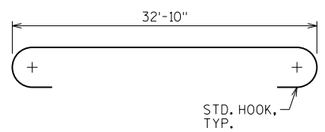
WING 4 SECTION



B407, B509



B517



B805

★ SLOPE ⅛" PER FOOT

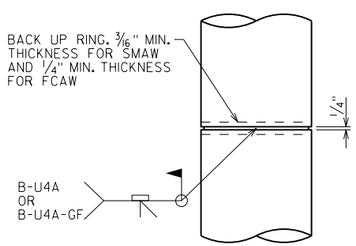
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A09) SUPPORT ABUTMENT ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

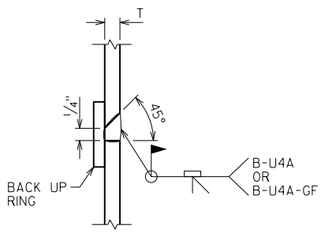
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

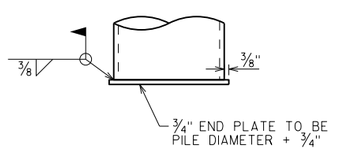


CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS



END PLATE DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

EAST ABUTMENT DETAILS

SHEET 7

380

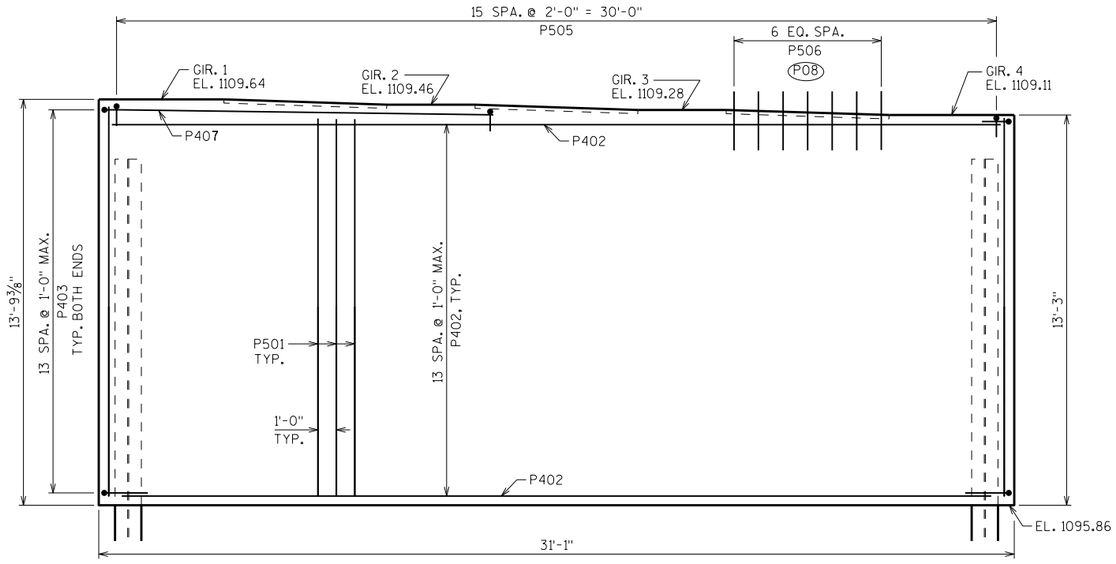
8

8

SCALE = 2.67

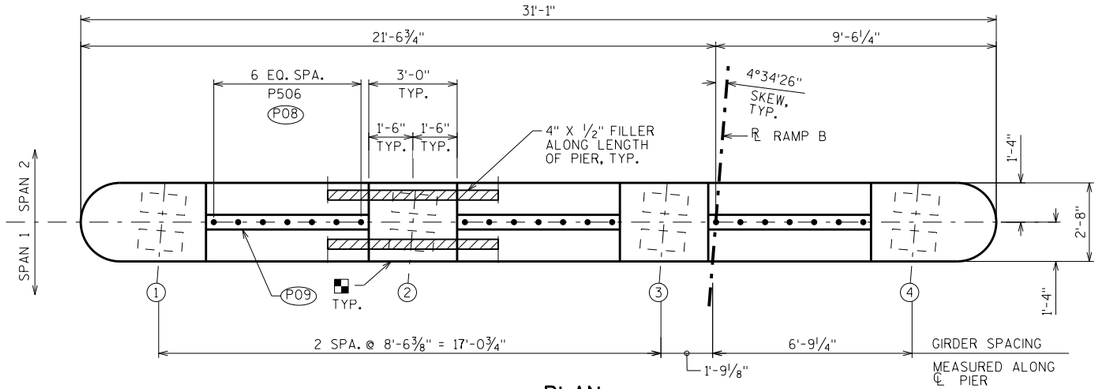
STATE PROJECT NUMBER

1021-04-77

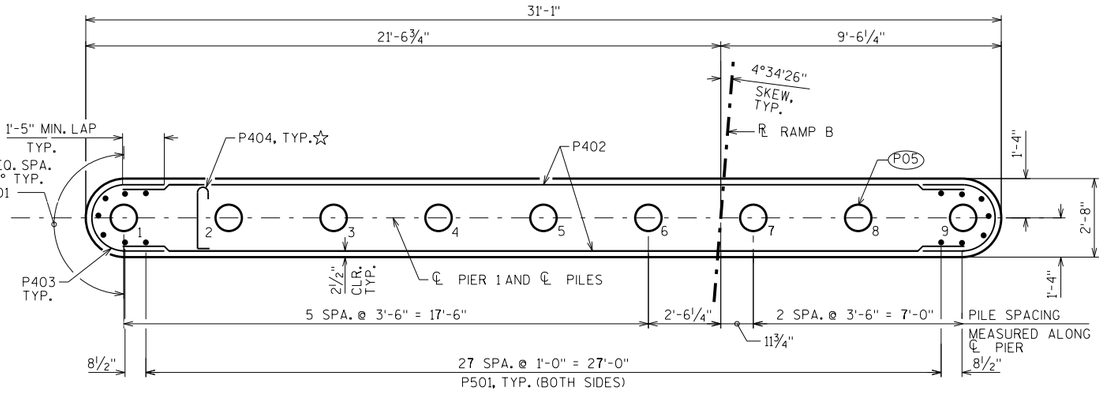


ELEVATION

LOOKING EAST

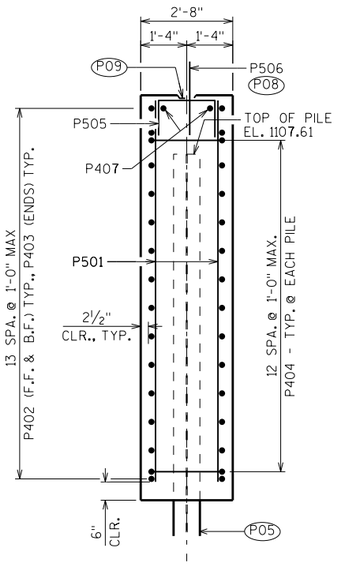


PLAN



PILE PLAN

SHOWING REINFORCEMENT

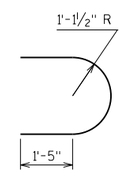


END VIEW

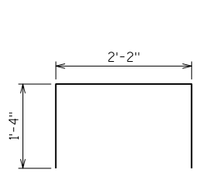
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

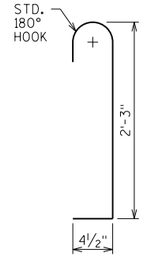
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
P501		66	12'-6"			PIER 1 - VERT.
P402		28	28'-7"			PIER 1 - HORIZ. - F.F. & B.F.
P403		28	6'-4"	X		PIER 1 - HORIZ. - ENDS
P404		117	3'-1"	X		PIER 1 - HORIZ. - PILES
P505		16	4'-7"	X		PIER 1 - VERT. - TOP
P506		21	2'-0"			PIER 1 - VERT. - DOWELS
P407		2	13'-0"			PIER 1 - HORIZ. - TOP. - GIR.



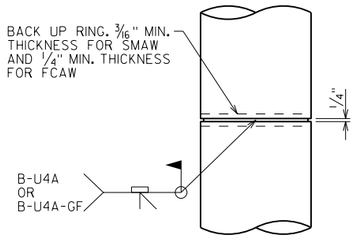
P403



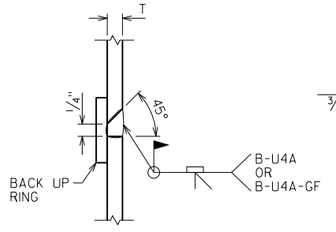
P505



P404

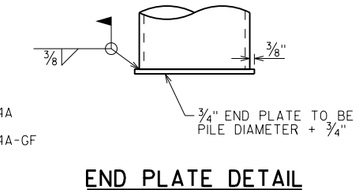


CAST-IN-PLACE 'PIPE PILE'

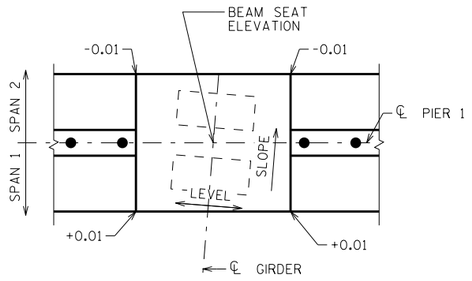


C.I.P. PILE WELD DETAIL

PILE DETAILS



END PLATE DETAIL



SLOPED BEAM SEAT DETAIL

☆ PLACE P404 BARS ADJACENT TO EACH PILE WITH MAX. VERT. SPA. OF 1'-0". TIE TO NEAREST P501 BAR AND ALTERNATE POSITION OF 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

■ SEE SLOPED BEAM SEAT DETAIL

○ INDICATES GIRDER NUMBER

(P05) SUPPORT PIER ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

(P08) BARS @ 1'-0" 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 CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY BAF/MJH | PLANS CK'D. BAF

PIER 1

SHEET 8

381

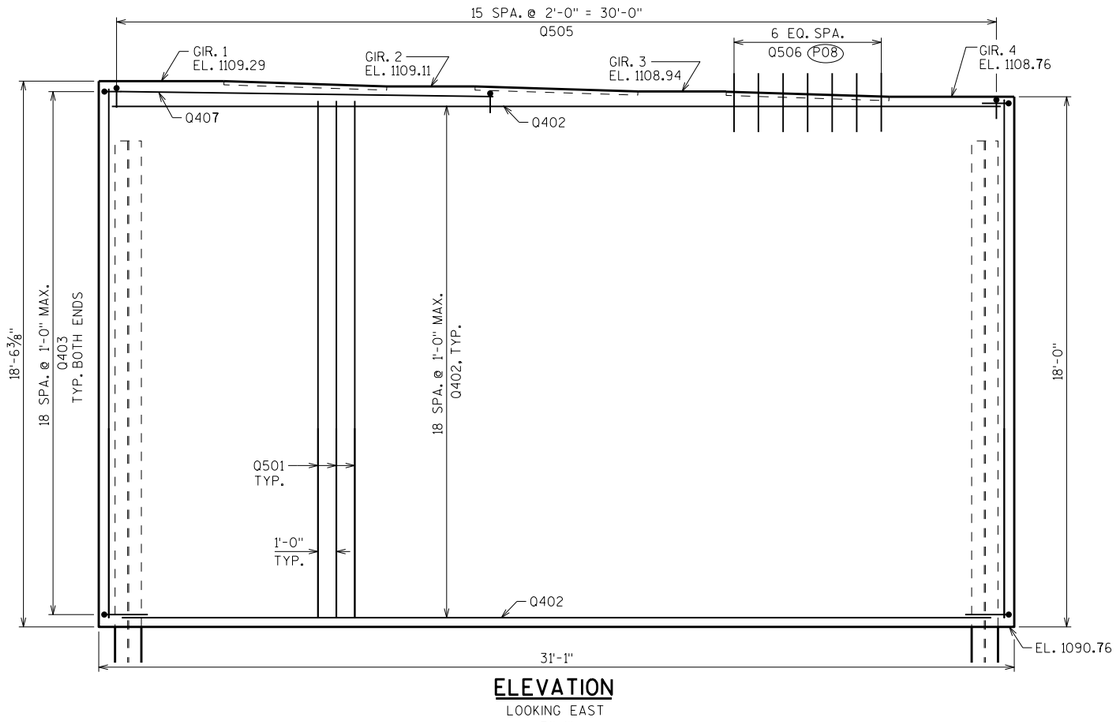
8

8

SCALE = 2.50

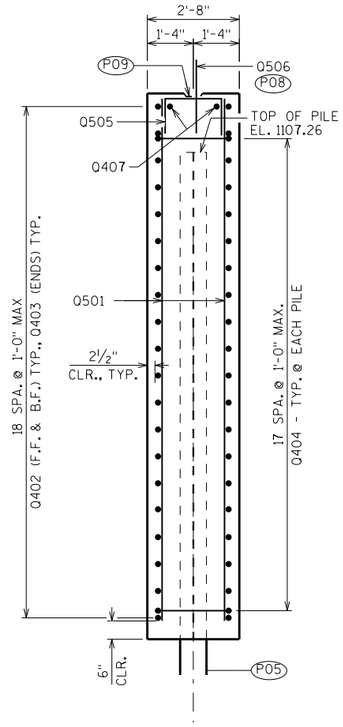
STATE PROJECT NUMBER

1021-04-77

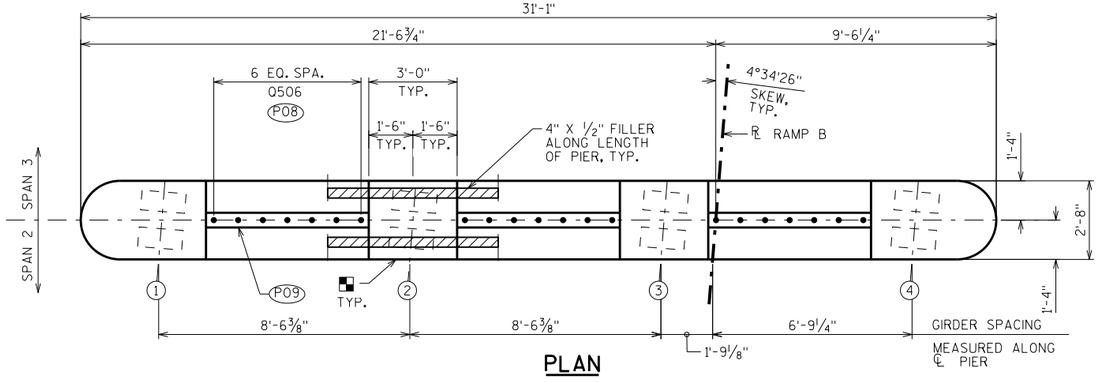


ELEVATION

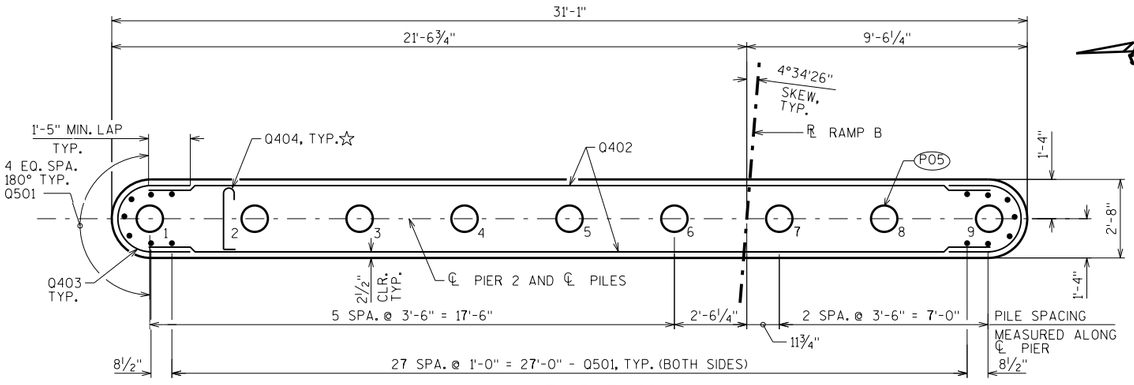
LOOKING EAST



END VIEW



PLAN



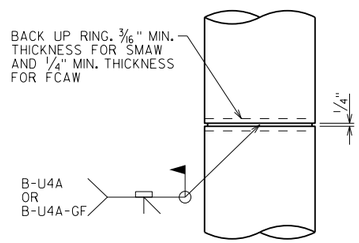
PILE PLAN

SHOWING REINFORCEMENT

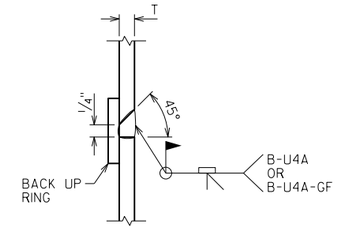
BILL OF BARS

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
Q501		66	17'-3"			PIER 2 - VERT.
Q402		38	28'-7"			PIER 2 - HORIZ. - F.F. & B.F.
Q403		38	6'-4"	X		PIER 2 - HORIZ. - ENDS
Q404		162	3'-1"	X		PIER 2 - HORIZ. - PILES
Q505		16	4'-7"	X		PIER 2 - VERT. - TOP
Q506		21	2'-0"			PIER 2 - VERT. - DOWELS
Q407		2	13'-0"			PIER 2 - HORIZ. - TOP. - GIR.

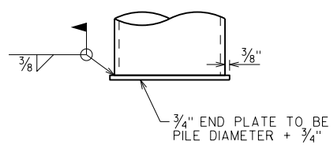


CAST-IN-PLACE 'PIPE PILE'

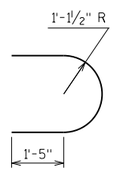


C.I.P. PILE WELD DETAIL

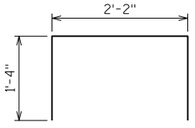
PILE DETAILS



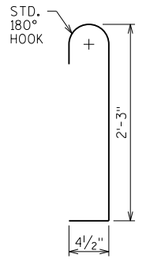
END PLATE DETAIL



Q403



Q505



Q404

☆ PLACE Q404 BARS ADJACENT TO EACH PILE WITH MAX. VERT. SPA. OF 1'-0". TIE TO NEAREST Q501 BAR AND ALTERNATE POSITION OF 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

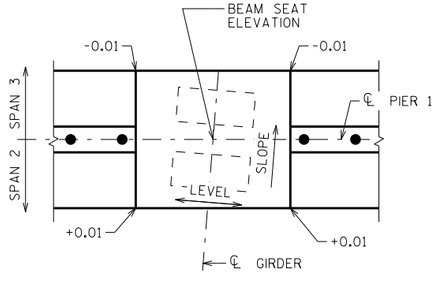
■ SEE SLOPED BEAM SEAT DETAIL

◯ INDICATES GIRDER NUMBER

(P05) SUPPORT PIER ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

(P08) BARS @ 1'-0" 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 CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.



SLOPED BEAM SEAT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY BAF/MJH | PLANS CK'D. BAF

PIER 2

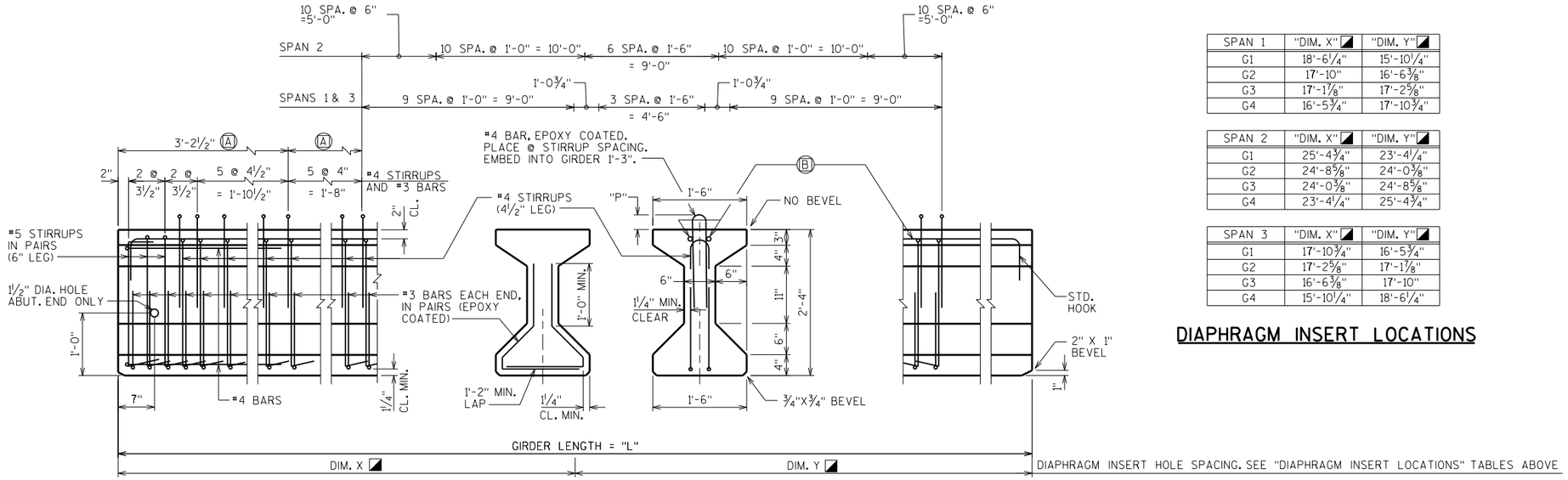
SHEET 9

382

SCALE = 2.50

8

8



SIDE VIEW & TYPICAL SECTION IN SPAN

SPAN 1	"DIM. X" ◪	"DIM. Y" ◪
G1	18'-6¼"	15'-10¼"
G2	17'-10"	16'-6⅜"
G3	17'-1⅛"	17'-2⅝"
G4	16'-5¾"	17'-10¾"

SPAN 2	"DIM. X" ◪	"DIM. Y" ◪
G1	25'-4¾"	23'-4¼"
G2	24'-8⅝"	24'-0⅛"
G3	24'-0⅜"	24'-8⅝"
G4	23'-4¼"	25'-4¾"

SPAN 3	"DIM. X" ◪	"DIM. Y" ◪
G1	17'-10¾"	16'-5¾"
G2	17'-2⅝"	17'-1⅛"
G3	16'-6⅜"	17'-10"
G4	15'-10¼"	18'-6¼"

DIAPHRAGM INSERT LOCATIONS

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 2 #7 BARS, FULL LENGTH, MIN. LAP = 3'-7", STD. HOOK AT ENDS, SPAN 1&3
2 #6 BARS, FULL LENGTH, MIN. LAP = 2'-11", STD. HOOK AT ENDS, SPAN 2

◪ DIMENSION TAKEN WHILE LOOKING NORTH. SEE "SUPERSTRUCTURE" SHEET FOR DETAILS

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

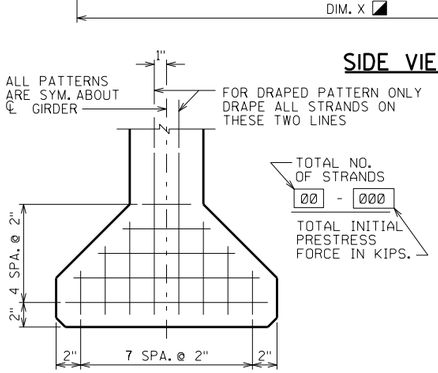
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

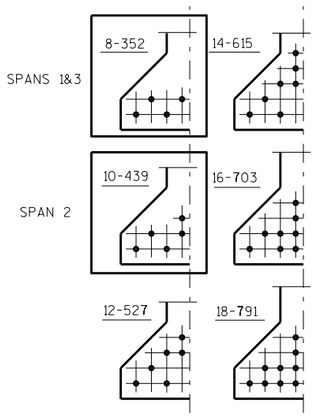
PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

BEND EACH END OF #4 STIRRUPS 4½" AND #5 STIRRUPS 6".

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

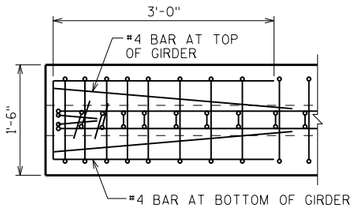


TYP. STRAND PATTERN

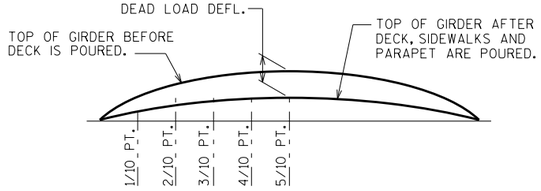


UNDRAPED PATTERN

0.6" DIA. STRANDS



TOP VIEW OF GIRDER ENDS



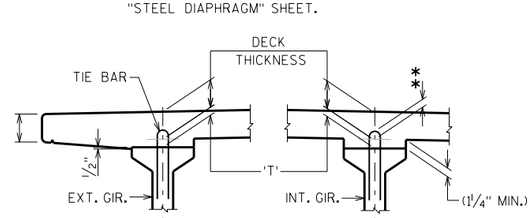
DEAD LOAD DEFLECTION DIAGRAM

* 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	0.63
2	1.32

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DECK HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & 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 2.51" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	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" (IN.) 1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	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&3	~~2~~3	34'-4½"	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	8000	7	7	7	0.6							8	6,400
2	~~2~~3	48'-9"	0.2	0.4	0.6	0.7	0.7	0.7	0.6	0.4	0.2	8000	7	6	7	0.6							10	6,400
1&3	1,4	34'-4½"	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8000	7	7	7	0.6							8	6,400
2	1,4	48'-9"	0.2	0.3	0.5	0.5	0.6	0.5	0.5	0.3	0.2	8000	7	6	7	0.6							10	6,400

DIAPHRAGM INSERT HOLE SPACING. SEE "DIAPHRAGM INSERT LOCATIONS" TABLES ABOVE

STATE PROJECT NUMBER

1021-04-77

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

28" PRESTRESSED GIRDER DETAILS

SHEET 10

383

8

8

SCALE = 1

STATE PROJECT NUMBER

1021-04-77

NOTES

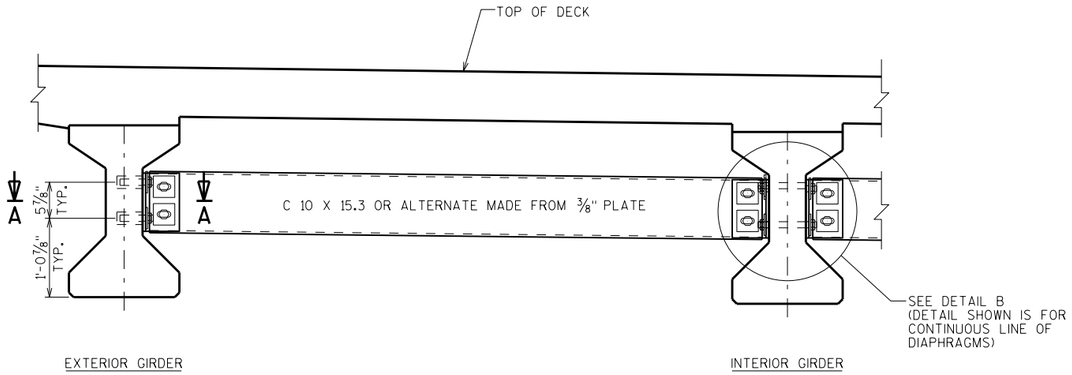
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-285", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

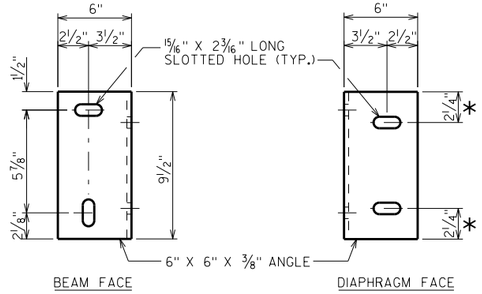
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



PART TRANSVERSE SECTION AT DIAPHRAGM

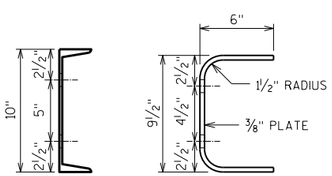


DIAPHRAGM SUPPORT

* 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM

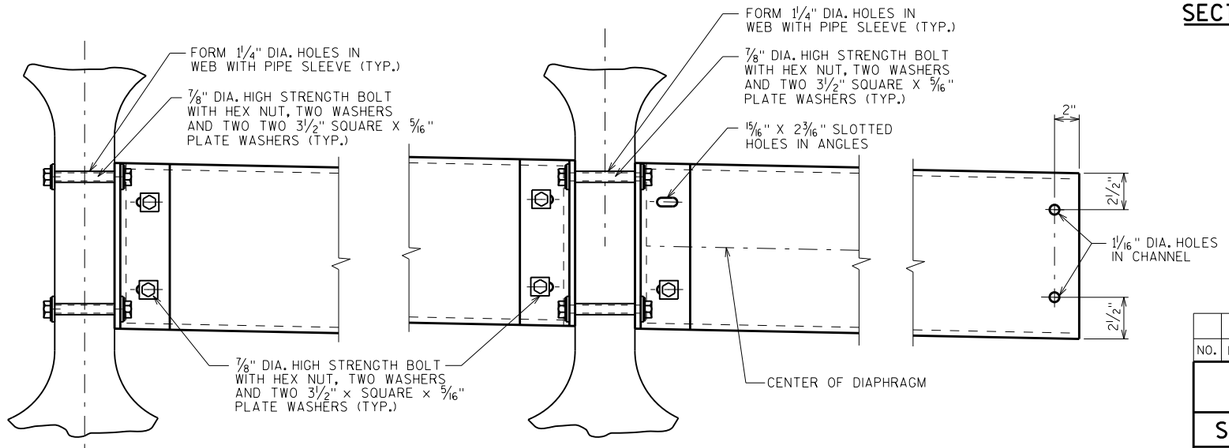
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



C10X15.3 ALTERNATE DIAPHRAGM

SECTION THRU DIAPHRAGM



(FOR STAGGERED DIAPHRAGM) (FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

STEEL DIAPHRAGM

SHEET 11

384

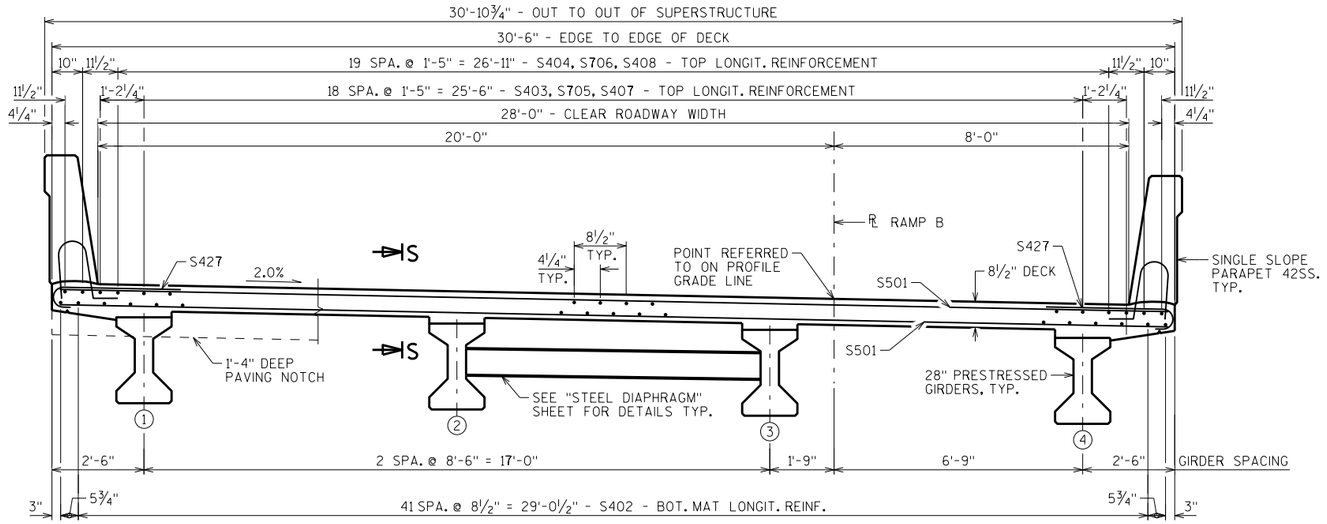
SCALE = 1

8

8

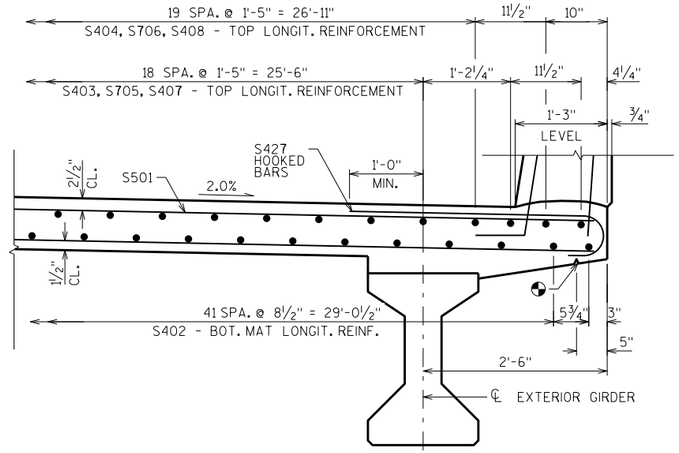
STATE PROJECT NUMBER

1021-04-77



CROSS SECTION THRU ROADWAY

LOOKING EAST

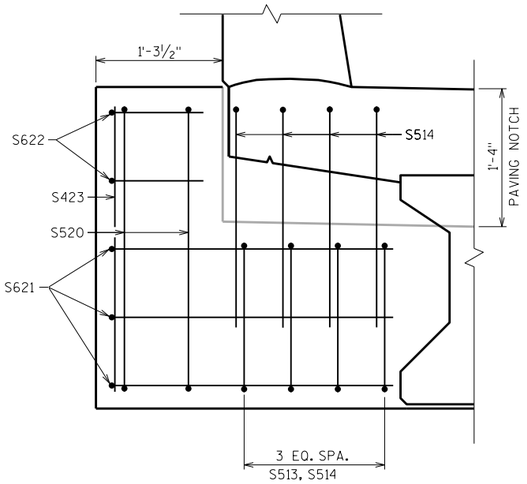


EDGE OF DECK DETAIL

TYPICAL AT BOTH EDGES

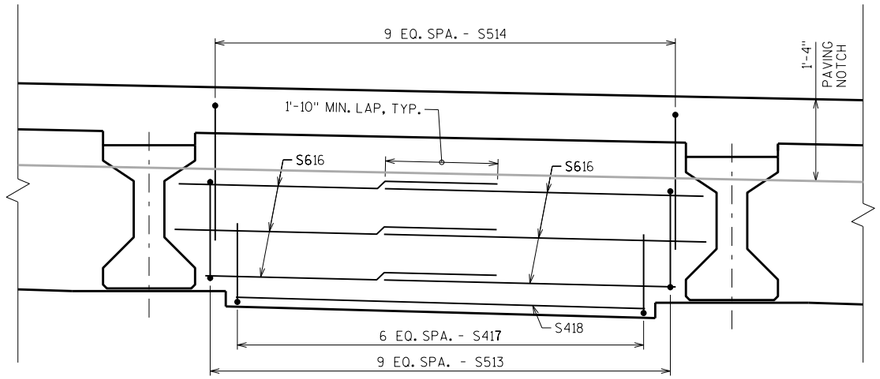
◔ ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT. DIAPHRAGM

◯ INDICATES GIRDER NUMBER



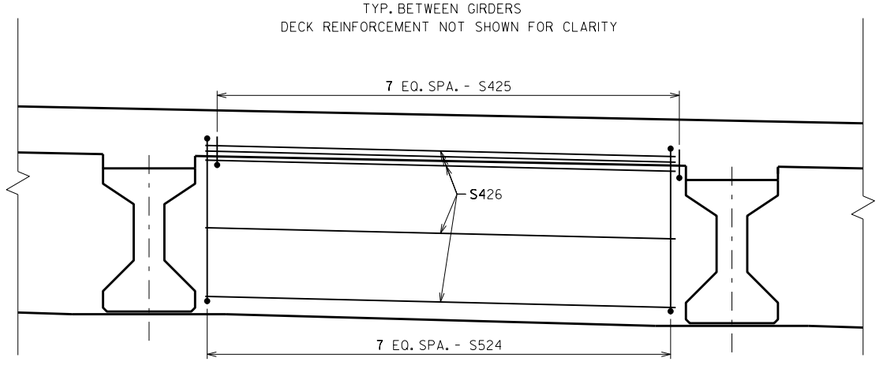
ABUTMENT DIAPHRAGM- EXTERIOR DETAIL

NORTHEAST CORNER SHOWN. OTHER CORNERS SIMILAR
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



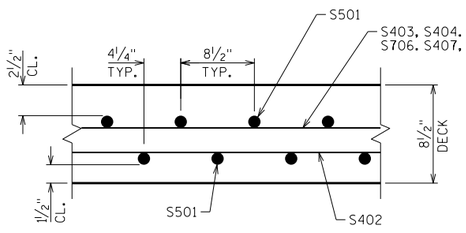
DIAPHRAGM AT ABUTMENTS

TYP. BETWEEN GIRDERS
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



DIAPHRAGM AT PIERS

TYP. BETWEEN GIRDERS
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



SECTION S-S

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

SUPERSTRUCTURE CROSS SECTION

SHEET 12

385

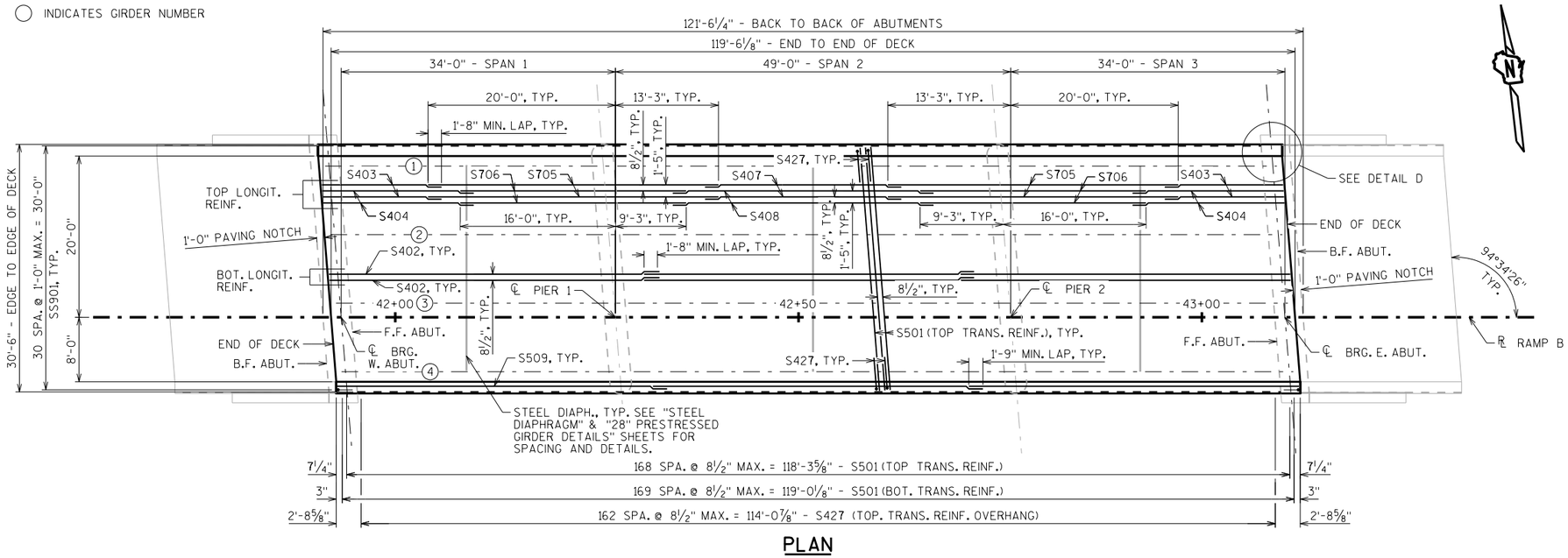
SCALE = 2.00

8

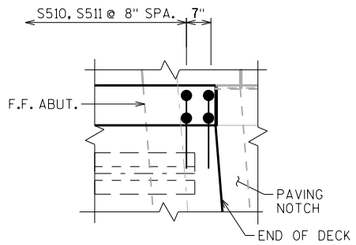
8

STATE PROJECT NUMBER

1021-04-77



PLAN



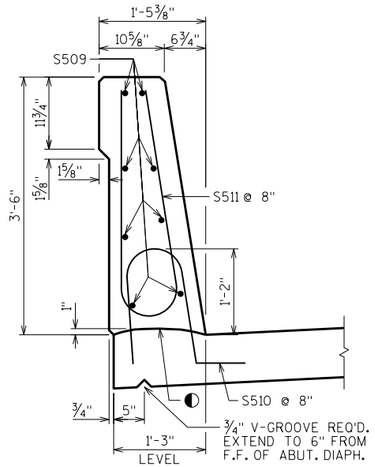
DETAIL D

NORTHEAST CORNER SHOWN
OTHER CORNERS SIMILAR

TOP OF DECK ELEVATIONS

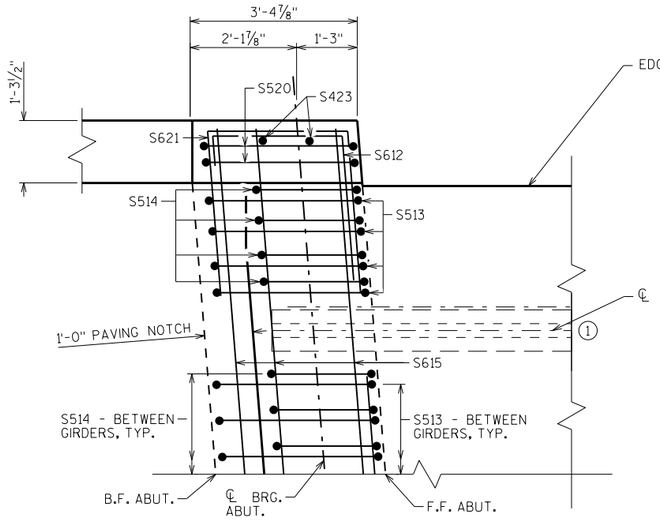
	℄ BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. E. ABUT.
NORTH EOD	1113.34	1113.30	1113.27	1113.23	1113.20	1113.16	1113.13	1113.10	1113.07	1113.04	1113.01	1112.96	1112.92	1112.89	1112.85	1112.81	1112.78	1112.75	1112.71	1112.68	1112.66	1112.64	1112.62	1112.60	1112.59	1112.57	1112.56	1112.54	1112.53	1112.51	1112.50
GIRDER 1	1113.32	1113.28	1113.25	1113.21	1113.18	1113.14	1113.11	1113.08	1113.05	1113.02	1112.99	1112.94	1112.90	1112.86	1112.83	1112.79	1112.76	1112.72	1112.69	1112.66	1112.64	1112.62	1112.60	1112.58	1112.57	1112.55	1112.53	1112.52	1112.51	1112.49	1112.48
GIRDER 2	1113.14	1113.10	1113.07	1113.03	1113.00	1112.97	1112.93	1112.90	1112.87	1112.84	1112.81	1112.77	1112.73	1112.69	1112.65	1112.62	1112.58	1112.55	1112.52	1112.49	1112.46	1112.44	1112.43	1112.41	1112.39	1112.38	1112.36	1112.35	1112.33	1112.32	1112.31
GIRDER 3	1112.96	1112.93	1112.89	1112.86	1112.82	1112.79	1112.76	1112.73	1112.69	1112.66	1112.63	1112.59	1112.55	1112.51	1112.48	1112.44	1112.41	1112.38	1112.34	1112.32	1112.29	1112.27	1112.25	1112.24	1112.22	1112.20	1112.19	1112.18	1112.16	1112.15	1112.14
PGL	1112.92	1112.89	1112.85	1112.82	1112.78	1112.75	1112.72	1112.68	1112.65	1112.62	1112.59	1112.55	1112.51	1112.47	1112.44	1112.40	1112.37	1112.33	1112.30	1112.27	1112.25	1112.23	1112.21	1112.19	1112.18	1112.16	1112.15	1112.13	1112.12	1112.11	1112.10
GIRDER 4	1112.79	1112.75	1112.71	1112.68	1112.65	1112.61	1112.58	1112.55	1112.52	1112.49	1112.46	1112.42	1112.38	1112.34	1112.30	1112.27	1112.23	1112.20	1112.17	1112.14	1112.11	1112.10	1112.08	1112.06	1112.05	1112.03	1112.02	1112.00	1111.99	1111.98	1111.97
SOUTH EOD	1112.76	1112.72	1112.68	1112.65	1112.62	1112.58	1112.55	1112.52	1112.49	1112.46	1112.43	1112.39	1112.35	1112.31	1112.27	1112.24	1112.20	1112.17	1112.14	1112.11	1112.08	1112.07	1112.05	1112.03	1112.02	1112.00	1111.99	1111.97	1111.96	1111.95	1111.94

EOD = EDGE OF DECK



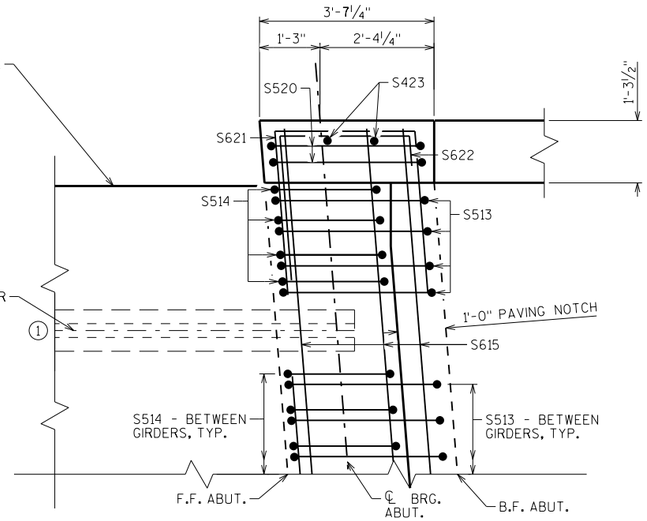
SECTION THRU PARAPET ON DECK

◐ CONST. JOINT - STRIKE OFF AS SHOWN



PLAN-DIAPHRAGM EXTERIOR

NORTHWEST CORNER SHOWN. SOUTHEAST CORNER SIMILAR



PLAN-DIAPHRAGM EXTERIOR

NORTHEAST CORNER SHOWN. SOUTHWEST CORNER SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

SUPERSTRUCTURE

SHEET 13

386

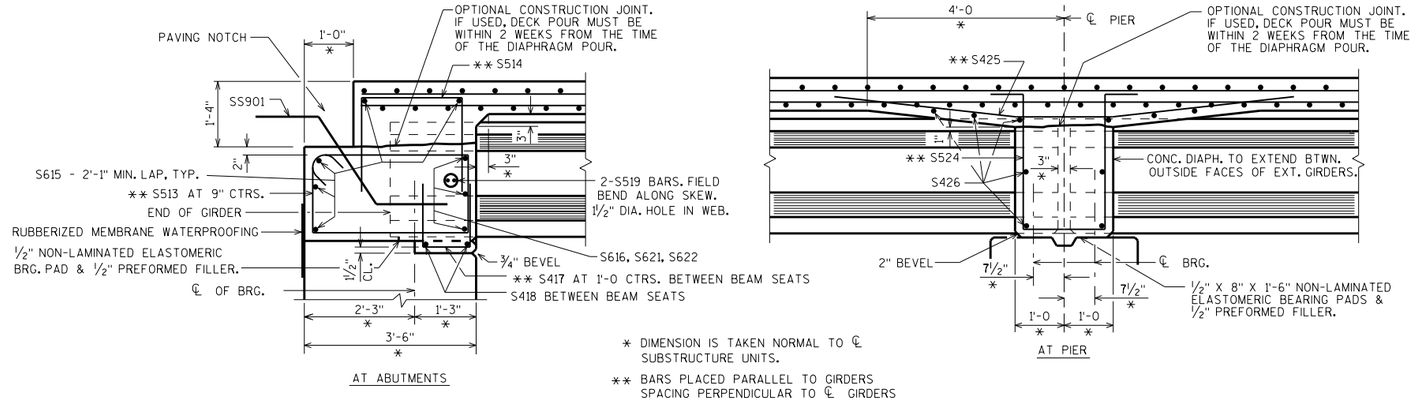
8

8

SCALE = 8.00

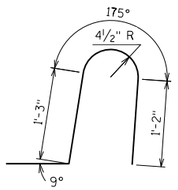
STATE PROJECT NUMBER

1021-04-77



PART. LONGIT. SECTION

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	339	30'-3"			TRANSVERSE - BOT. & TOP
S402	X	135	40'-11"			LONGIT. - BOT.
S403	X	46	16'-9"			LONGIT. - TOP. - SPAN 1& 3
S404	X	44	20'-9"			LONGIT. - TOP. - SPAN 1& 3
S705	X	46	33'-3"			LONGIT. - TOP. - CONTINUITY OVER PIER 1& 2
S706	X	44	25'-3"			LONGIT. - TOP. - CONTINUITY OVER PIER 1& 2
S407	X	23	25'-10"			LONGIT. - TOP. - SPAN 2
S408	X	22	33'-10"			LONGIT. - TOP. - SPAN 2
S509	X	48	41'-0"			PARAPET - HORIZ.
S510	X	360	4'-5"	X		PARAPET - VERT.
S511	X	360	6'-8"	X		PARAPET - VERT.
S612	X	4	6'-4"	X		ABUT. DIAPH. - EXT. - HORIZ. - WINGS 2 & 4
S513	X	76	10'-2"	X		ABUT. DIAPH. - VERT. - STIRRUPS - BTWN. GIR. & AT EXTERIORS
S514	X	76	6'-5"	X		ABUT. DIAPH. - VERT. - BTWN. GIR. & AT EXTERIORS
S615	X	10	17'-6"			ABUT. DIAPH. - HORIZ.
S616	X	36	4'-9"			ABUT. DIAPH. - HORIZ. - BETWEEN GIRDERS
S417	X	42	3'-5"	X		ABUT. DIAPH. - VERT. - BETWEEN BEAM SEATS
S418	X	12	5'-5"			ABUT. DIAPH. - HORIZ. - BETWEEN BEAM SEATS
S519	X	16	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIRDERS
S520	X	8	12'-10"	X		ABUT. DIAPH. - EXT. - VERT.
S621	X	12	8'-2"	X		ABUT. DIAPH. - EXT. - HORIZ.
S622	X	4	6'-4"	X		ABUT. DIAPH. - EXT. - HORIZ. - WINGS 1& 3
S423	X	8	2'-11"			ABUT. DIAPH. - EXT. - VERT.
S524	X	48	8'-4"	X		PIER DIAPH. - VERT.
S425	X	48	10'-0"	X		PIER DIAPH. - VERT. - HAUNCH
S426	X	60	6'-8"			PIER DIAPH. - HORIZ. - BETWEEN GIRDERS
S427	X	326	3'-10"	X		TRANSVERSE - EDGE OF DECK
STAINLESS STEEL → SS901		62	5'-0"	X		ABUT. DIAPHRAGM - APPROACH SLAB TIE



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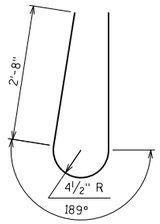

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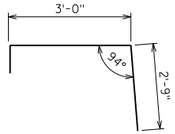

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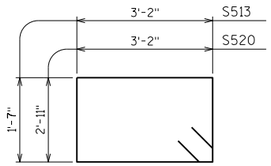
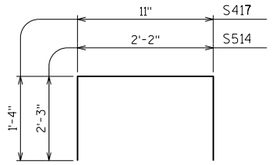
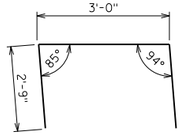


S513, S520



S514, S417



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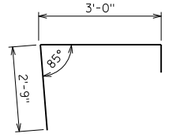

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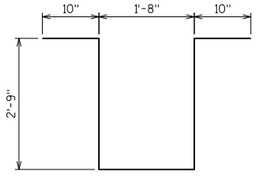

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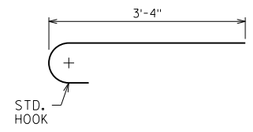

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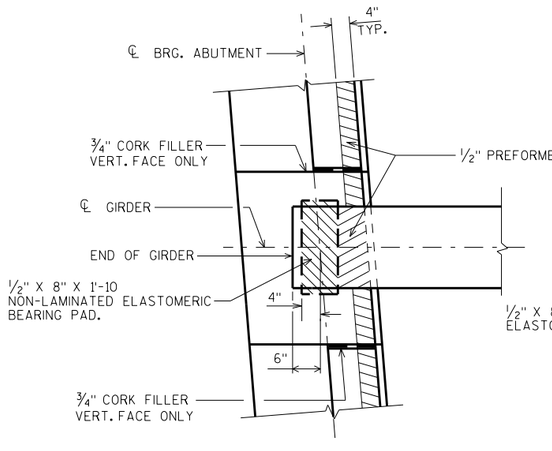
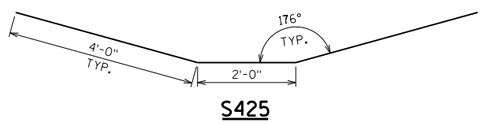


BEARING PAD DETAIL



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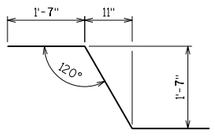


SS901

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

SUPERSTRUCTURE DETAILS

SHEET 14

387

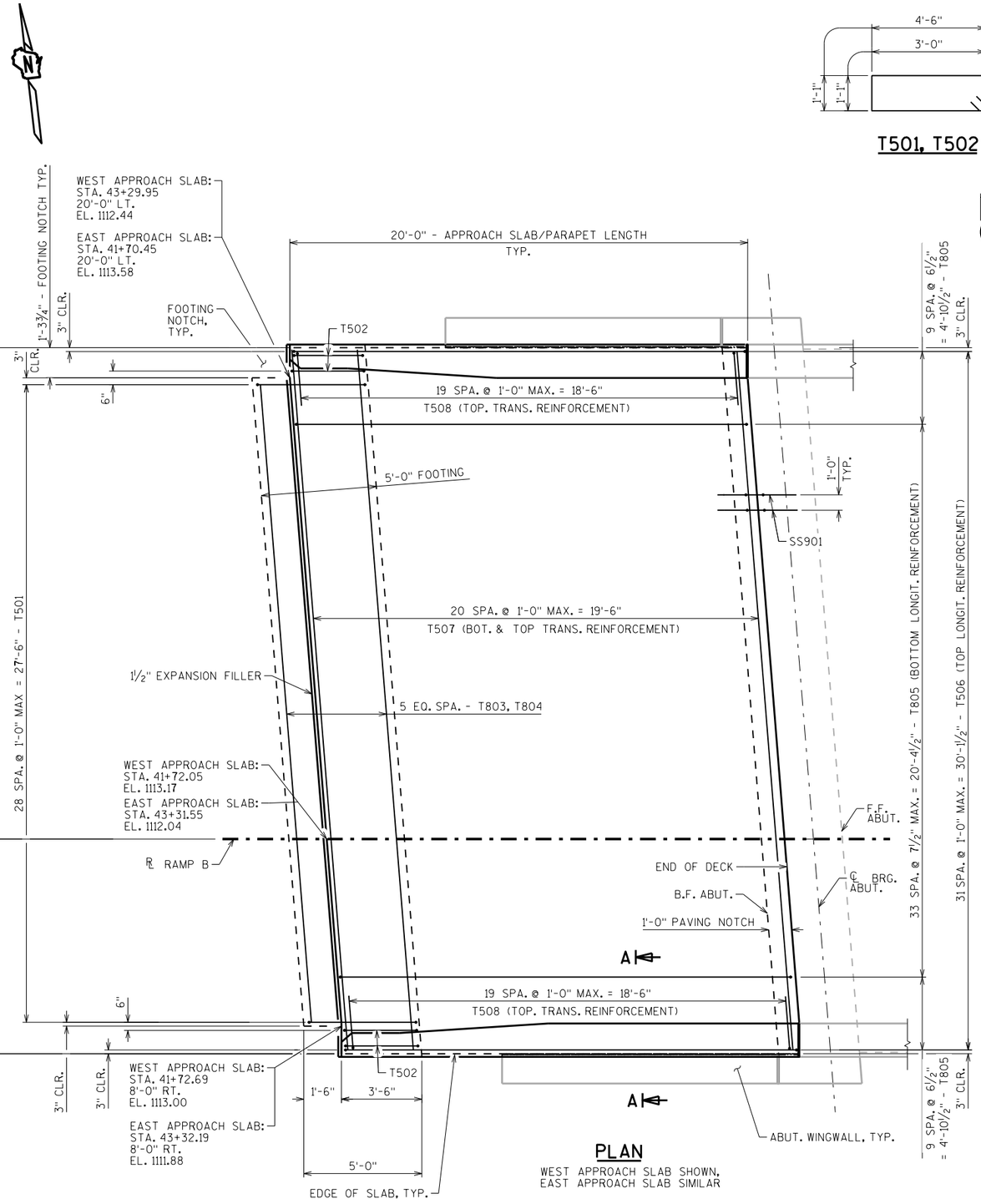
SCALE = 1.50

8

8

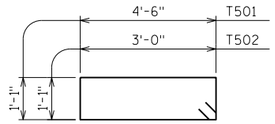
STATE PROJECT NUMBER

1021-04-77

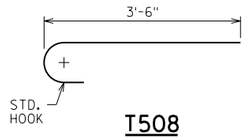


PLAN

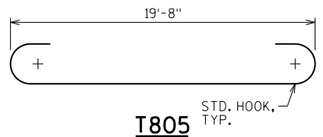
WEST APPROACH SLAB SHOWN,
EAST APPROACH SLAB SIMILAR



T501, T502



T508

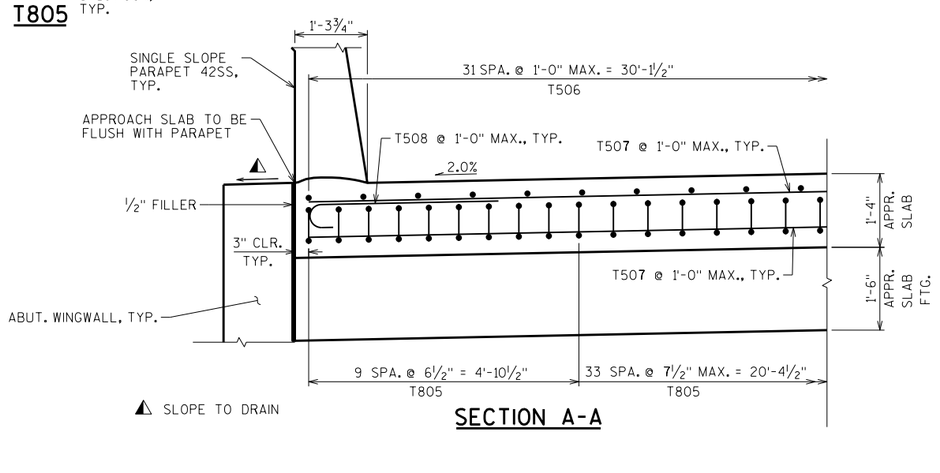


T805

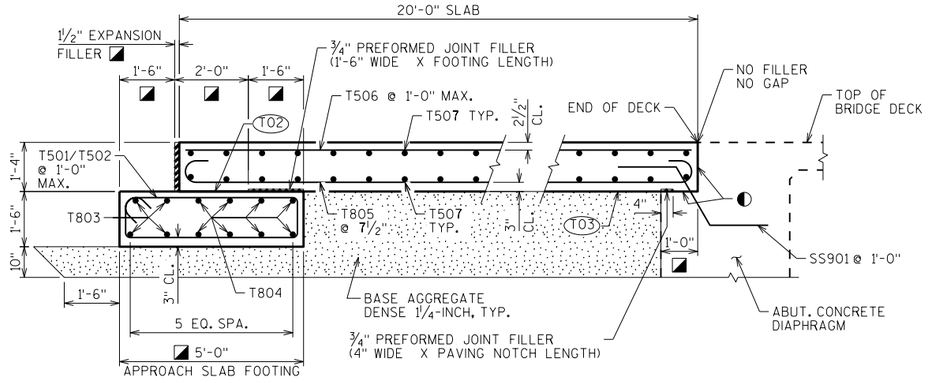
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	WEST APPR. SLAB	EAST APPR. SLAB	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	29	29	11'-10"	X		APPROACH SLAB FOOTING - STIRRUPS
T502	X	4	4	8'-10"	X		APPROACH SLAB FOOTING - STIRRUPS - NOTCHES
T803	X	4	4	27'-7"			APPROACH SLAB FOOTING - TRANS.
T804	X	8	8	30'-2"			APPROACH SLAB FOOTING - TRANS.
T805	X	52	52	21'-6"	X		APPROACH SLAB - LONGIT. - BOT.
T506	X	32	32	19'-8"			APPROACH SLAB - LONGIT. - TOP
T507	X	42	42	30'-2"			APPROACH SLAB - TRANS. - BOT. AND TOP
T508	X	40	40	4'-1"	X		APPROACH SLAB - TRANS. - TOP - EDGES



SECTION A-A



SECTION THRU APPROACH SLAB

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

STRUCTURAL APPROACH SLAB

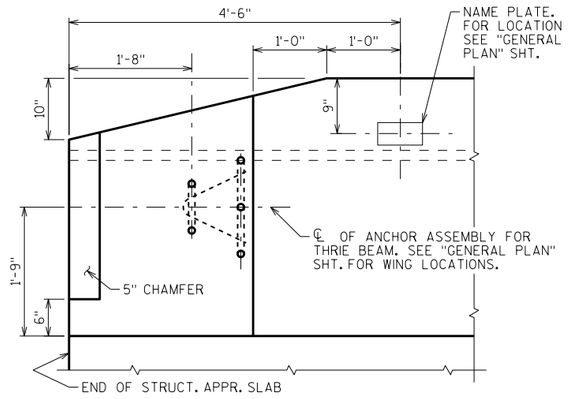
SHEET 15

388

SCALE = 2.00

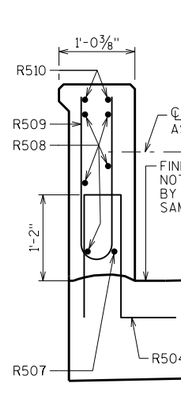
8

8

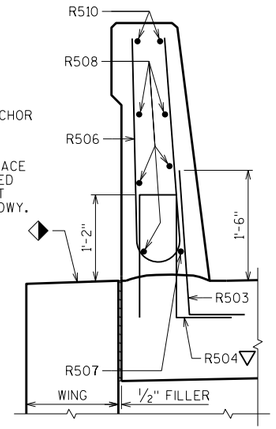


PARAPET END TREATMENT DETAIL

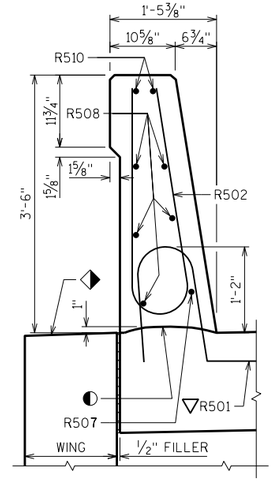
LOOKING AT INSIDE FACE OF PARAPET



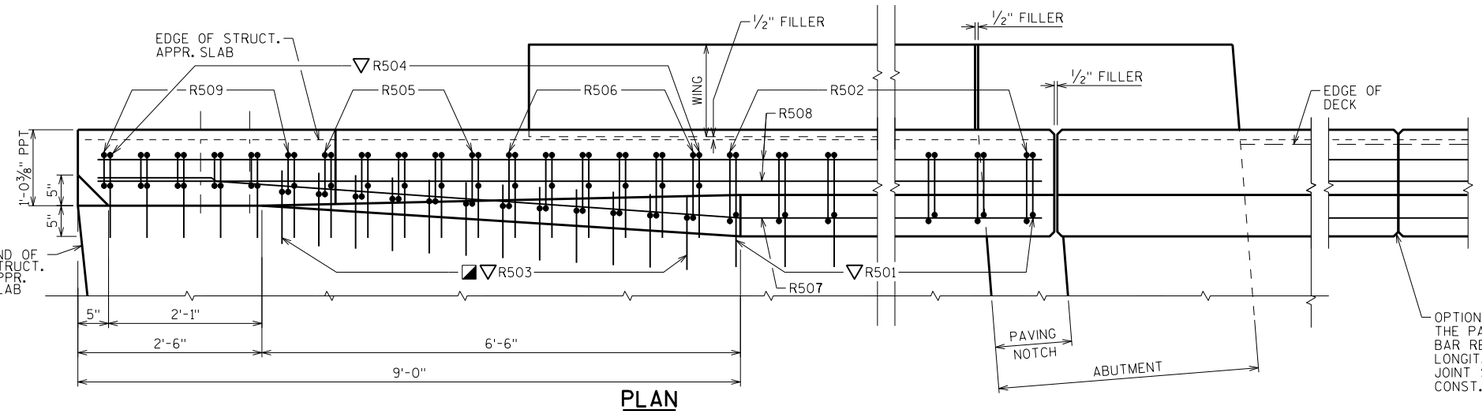
SECTION A-A



SECTION B-B

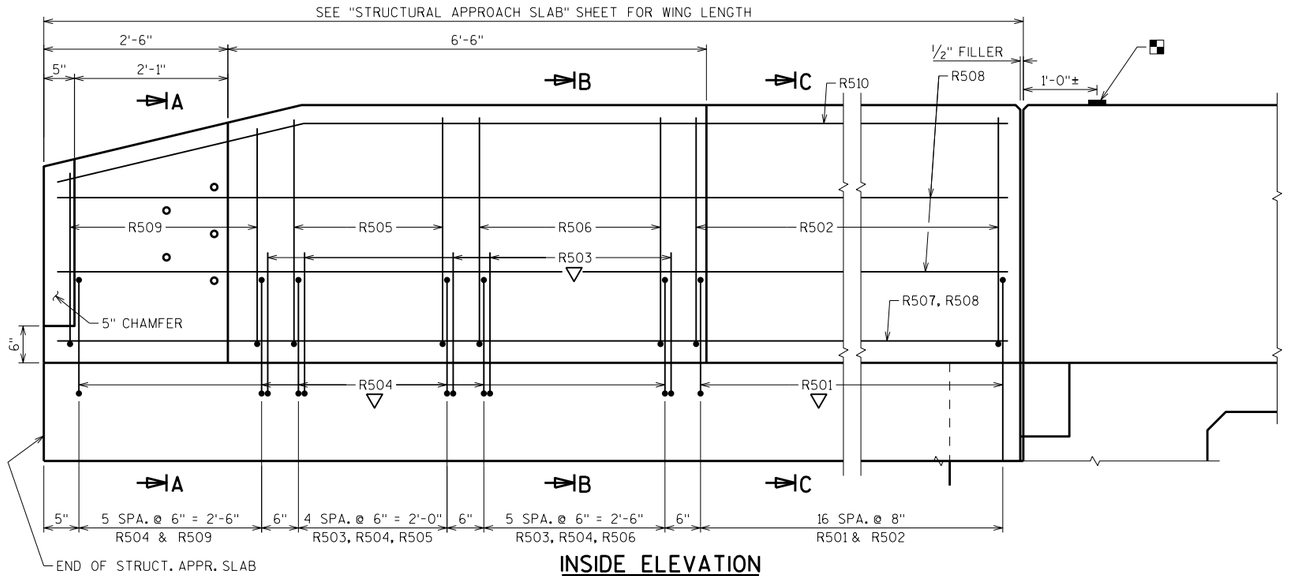


SECTION C-C



PLAN

NW CORNER SHOWN, OTHERS SIMILAR



INSIDE ELEVATION

NW CORNER SHOWN, OTHERS SIMILAR
WING & STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY

STATE PROJECT NUMBER

1021-04-77

BILL OF BARS

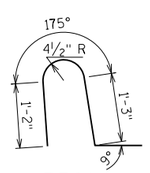
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	24	24	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-8"	X		PARAPET HORIZ.
R508	X	10	10	19'-6"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	19'-6"	X		PARAPET 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.

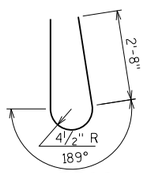
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

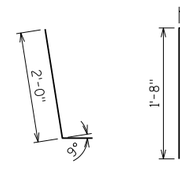
BUNDLE AND TAG EACH SERIES SEPARATELY.



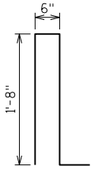
R501



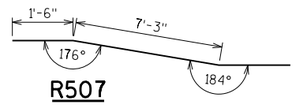
R502



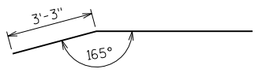
R503



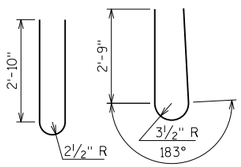
R504



R507



R510



R505 R506 R509

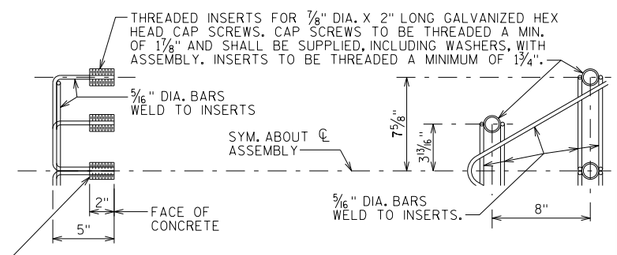
BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◆ SLOPE FOR DRAINAGE

◪ USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501, R503, AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.



DETAIL OF ANCHOR ASSEMBLY

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY: MJH | PLANS CK'D.: BAF

SINGLE SLOPE PARAPET 42SS

SHEET 16

389

SCALE = 1.00

8

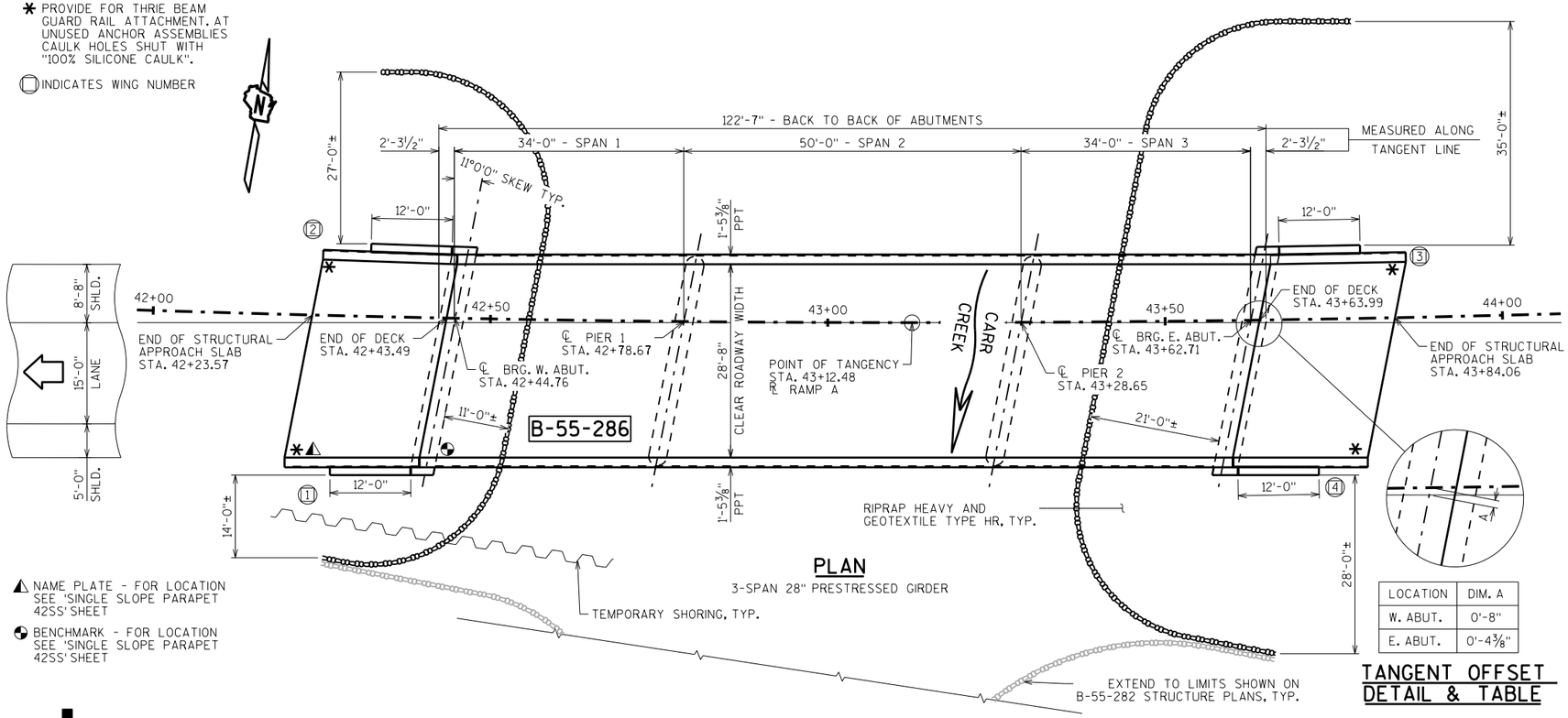
8

STATE PROJECT NUMBER

1021-04-78

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

(2) INDICATES WING NUMBER



PLAN

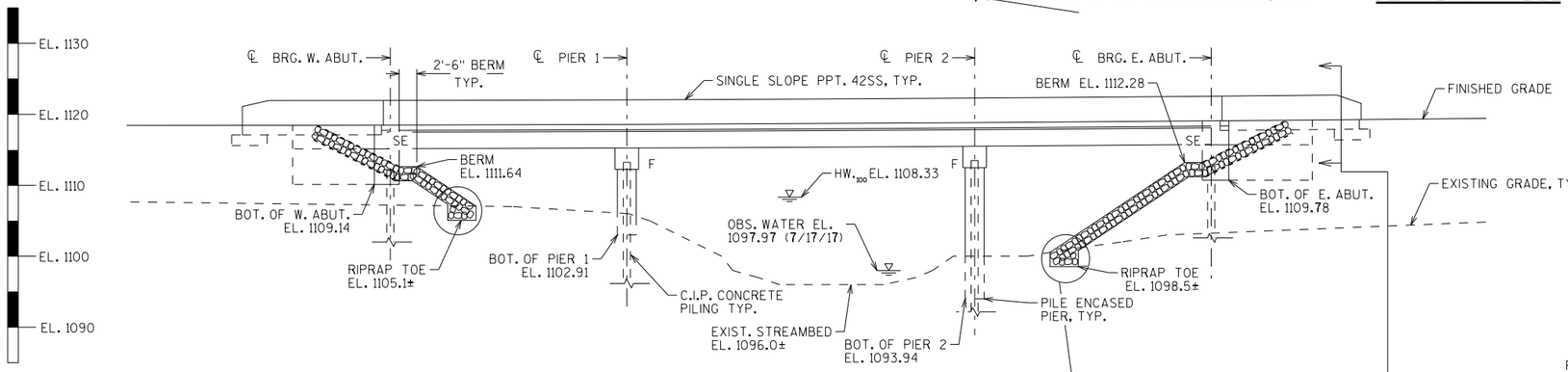
3-SPAN 28" PRESTRESSED GIRDER

LOCATION	DIM. A
W. ABUT.	0'-8"
E. ABUT.	0'-4⅜"

TANGENT OFFSET DETAIL & TABLE

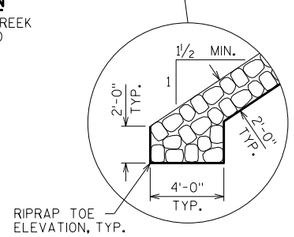
△ NAME PLATE - FOR LOCATION SEE 'SINGLE SLOPE PARAPET 42SS' SHEET

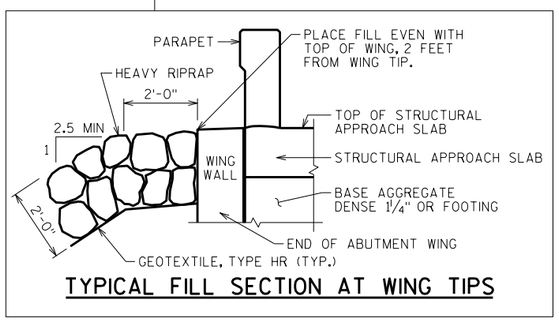
BENCHMARK - FOR LOCATION SEE 'SINGLE SLOPE PARAPET 42SS' SHEET



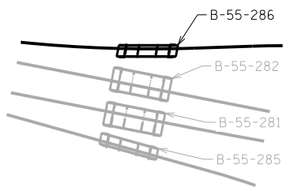
ELEVATION

NORMAL TO CARR CREEK (LOOKING NORTH)





TYPICAL FILL SECTION AT WING TIPS



LOCATION MAP

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.08
OPERATING RATING FACTOR: RF = 1.40
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

28" PRESTRESSED GIRDERS:
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 TO BE SUPPORTED ON 10 3/4" DIA. X 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 55'-0" LONG AT THE WEST ABUTMENT AND ESTIMATED 50'-0" LONG AT THE EAST ABUTMENT. PILE POINTS REQUIRED.

PIERS TO BE SUPPORTED ON 10 3/4" DIA. X 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 55'-0" LONG AT PIER 1 AND ESTIMATED 50'-0" LONG AT PIER 2. PILE POINTS REQUIRED.

** 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.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. PIER 1
9. PIER 2
10. 28" PRESTRESSED GIRDER DETAILS
11. STEEL DIAPHRAGM
12. SUPERSTRUCTURE CROSS SECTION
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE DETAILS
15. WEST STRUCTURAL APPROACH SLAB
16. EAST STRUCTURAL APPROACH SLAB
17. SINGLE SLOPE PARAPET 42SS

TRAFFIC VOLUME

RAMP A

ADT = 1,900 (2042)
R.D.S. = 60 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 2770 C.F.S.
$VEL._{100}$ = 6.5 F.P.S.
$HW._{100}$ = EL. 1108.33
WATERWAY AREA = 430 SQ. FT.
DRAINAGE AREA = 12.9 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY

Q_2 = 400 C.F.S.
$VEL._2$ = 1.3 F.P.S.
$HW._2$ = EL. 1105.26

CURVE DATA

RAMP A

P.I. STA. = 40+71.06
Δ = 11°45'46"
D = 0°49'07"
T = 360.54'
L = 718.55'
R = 3,500.00'
S.E. = 3.9%
P.C. STA. = 37+10.52
P.T. STA. = 44+29.07

STRUCTURE DESIGN CONTACTS:

BRETT FOLLETT (608) 266-0214
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED AMB 5/1/20
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-55-286

IH-94 WB ON RAMP OVER CARR CREEK

COUNTY	VILLAGE
ST. CROIX	WOODVILLE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BAF	AA	BAF/MJH	BAF

GENERAL PLAN

SHEET 1 OF 17

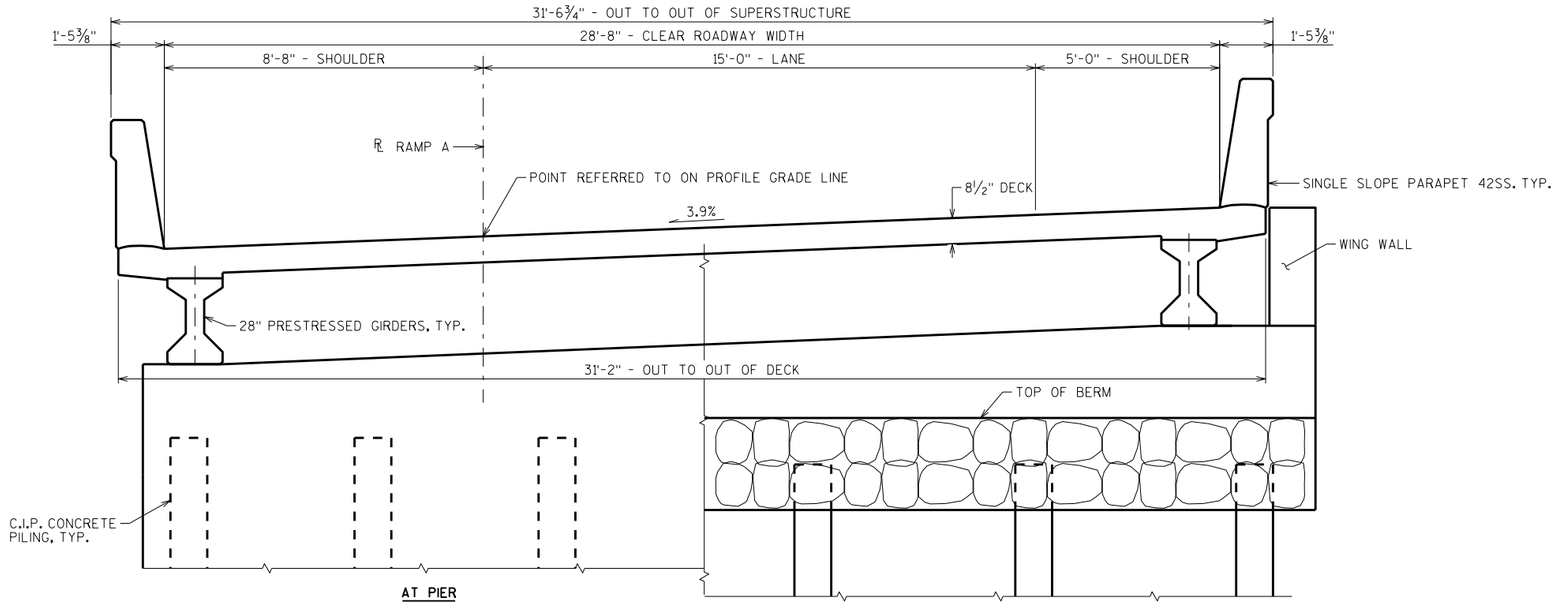
390

I.D. 1021-04-08B DATE: MAR 2020

SCALE = 10.00

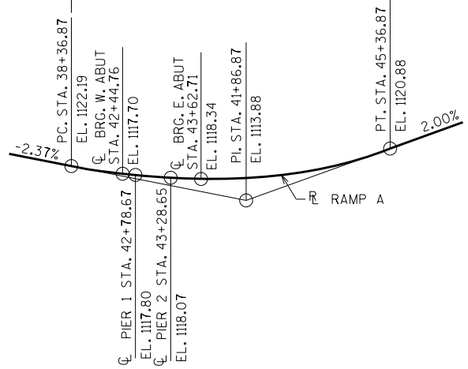
STATE PROJECT NUMBER

1021-04-78



CROSS SECTION THRU ROADWAY LOOKING EAST

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. STRUCT. APP. SLAB	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	E. STRUCT. APP. SLAB	TOTALS
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-55-286	LS	____	____	____	____	____	____	____	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	____	____	88	____	____	90	____	178
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	____	109	____	____	____	____	109	218
502.0100	CONCRETE MASONRY BRIDGES	CY	165	46	44	35	62	45	46	443
502.3200	PROTECTIVE SURFACE TREATMENT	SY	406	65	____	____	____	____	65	536
502.3210	PIGMENTED SURFACE SEALER	SY	119	20	____	____	____	____	20	159
503.0128	PRESTRESSED GIRDER TYPE I28-INCH	LF	474	____	____	____	____	____	____	474
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	____	____	2,400	1,695	2,960	2,420	____	9,475
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	33,190	7,880	1,650	____	____	1,650	7,840	52,210
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,090	____	____	____	____	____	____	1,090
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	24	____	____	____	____	____	____	24
506.4000	STEEL DIAPHRAGMS B-55-286	EACH	9	____	____	____	____	____	____	9
511.1200	TEMPORARY SHORING B-55-286	SF	____	____	100	____	____	200	____	300
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	____	____	10	____	____	10	____	20
550.0500	PILE POINTS	EACH	____	____	6	9	9	6	____	30
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	____	____	330	495	450	300	____	1,575
606.0300	RIPRAP HEAVY	CY	____	____	152	____	____	358	____	510
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	____	____	70	____	____	70	____	140
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	____	____	____	____	____	____	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	____	____	33	____	____	33	____	66
645.0120	GEOTEXTILE TYPE HR	SY	____	____	168	____	____	330	____	498
	NON-BID ITEMS									
	FILLER	SIZE	____	____	____	____	____	____	____	½", ¾", 1½"



PROFILE GRADE LINE - RAMP A

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-55-286" SHALL BE THE EXISTING GROUNDLINE AT THE ABUTMENTS.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

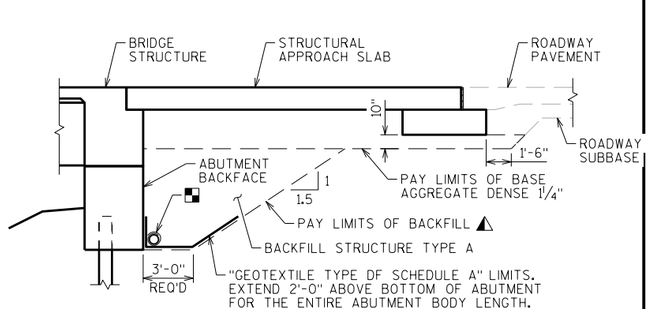
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "28" PRESTRESSED GIRDER DETAILS" SHEET.

THE EXISTING STREAM BED SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

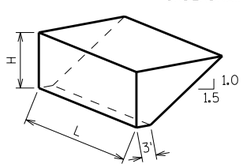
AT ABUTMENTS AND PIER(S), CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.



TYPICAL SECTION THRU ABUTMENT

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

▪ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY BAF/MJH | PLANS CK'D. BAF

CROSS SECTION & QUANTITIES

SHEET 2

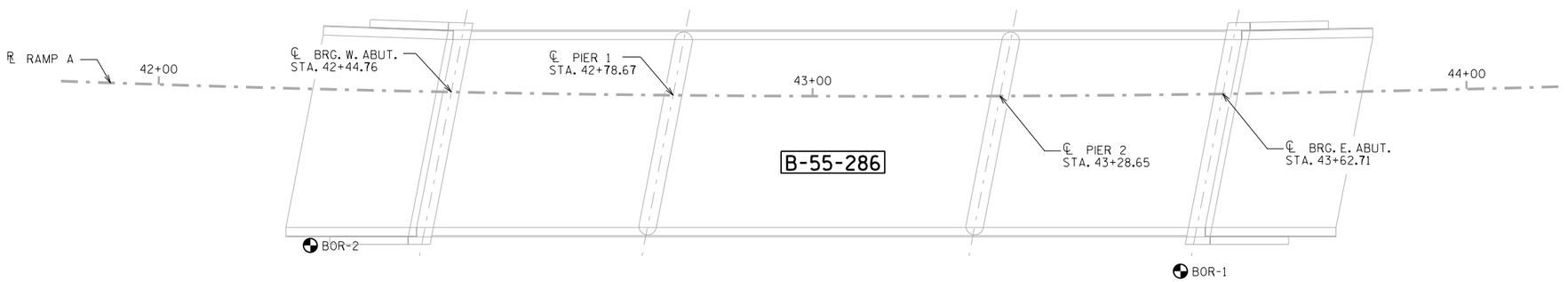
391

8

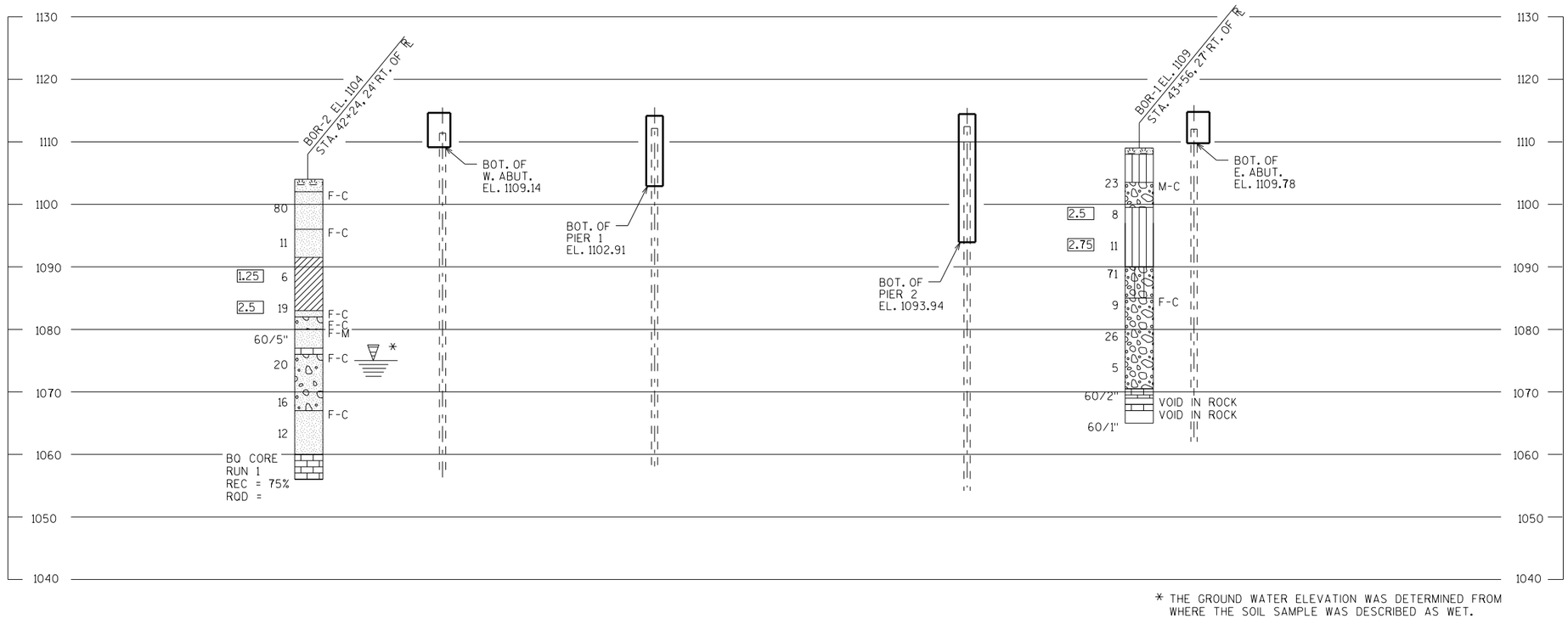
8

SCALE = 2.00

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	7/09/2019	327950	634058
2	7/29/2019	327933	633926
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



PLAN



* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

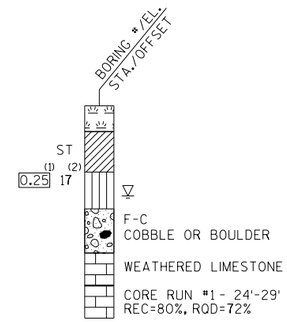
STATE PROJECT NUMBER

1021-04-78

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY TLP/MJH | PLANS CK'D. BAF

SUBSURFACE EXPLORATION

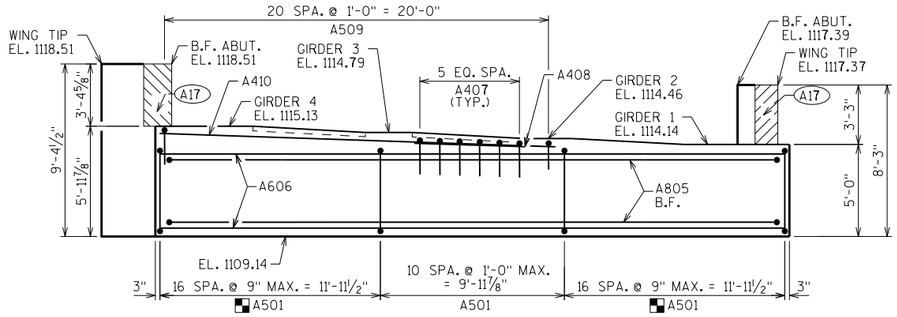
SHEET 3

392

8

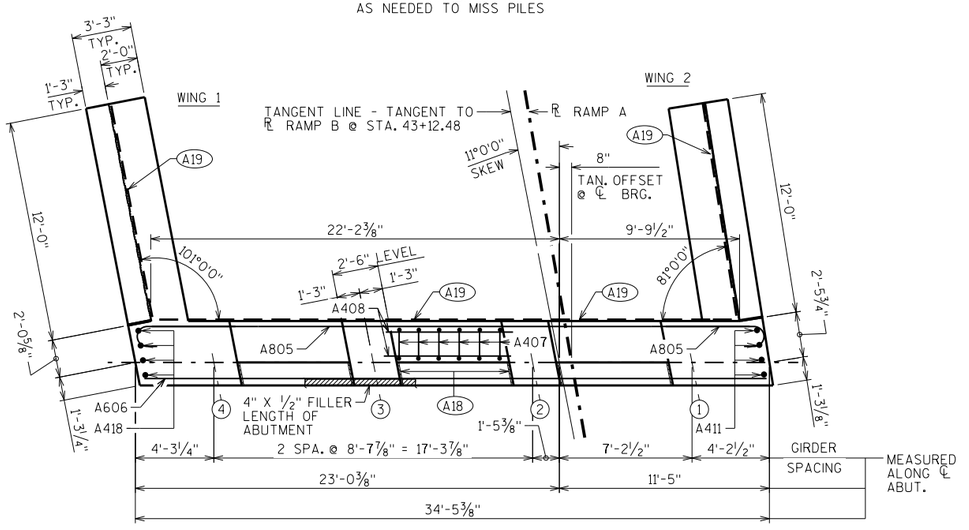
8

SCALE = 10

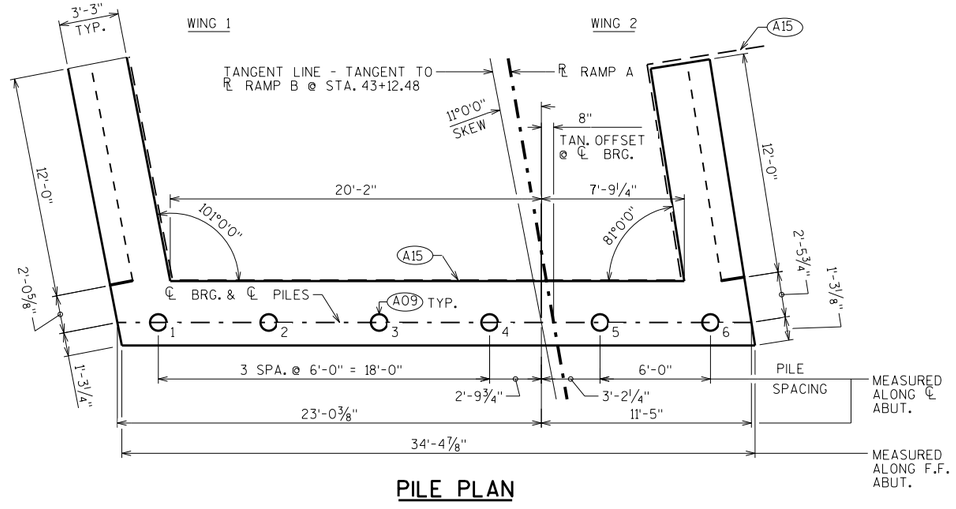


ELEVATION

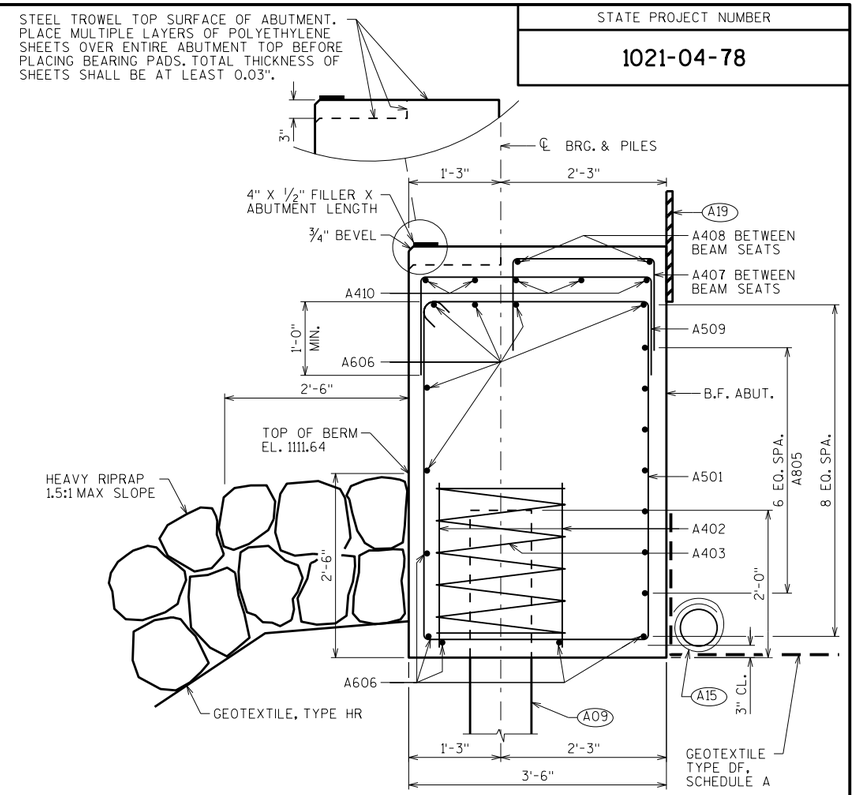
LOOKING WEST AT F.F.
ADJUST STIRRUP SPACING
AS NEEDED TO MISS PILES



PLAN

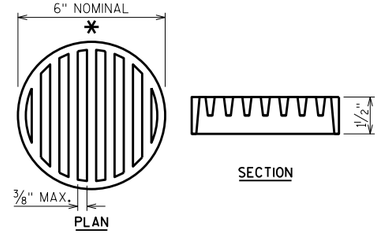


PILE PLAN



SECTION THRU BODY

- ■ FLARE BARS AT ABUT. ENDS AS NECESSARY WHILE MAINTAINING 9" MAX. SPACING
- ○ INDICATES GIRDER NUMBER
- (A09) SUPPORT ABUTMENT ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A 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 SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

STATE PROJECT NUMBER

1021-04-78

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY BAF/MJH | PLANS CK'D. BAF

WEST ABUTMENT

SHEET 4

393

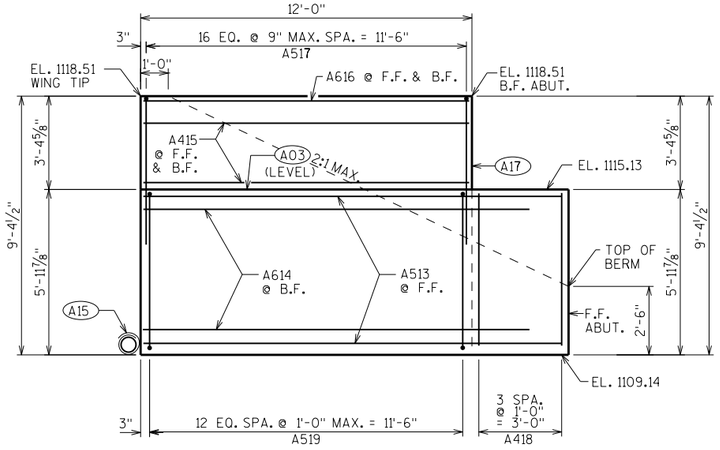
SCALE = 4.00

8

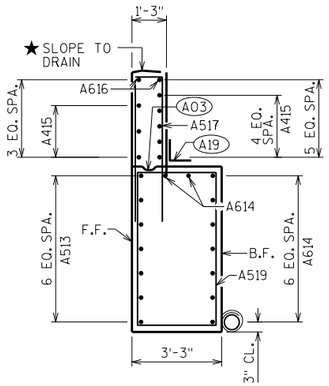
8

STATE PROJECT NUMBER

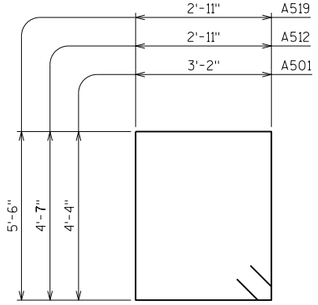
1021-04-78



WING 1 ELEVATION



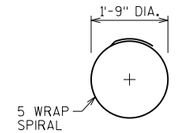
WING 1 SECTION



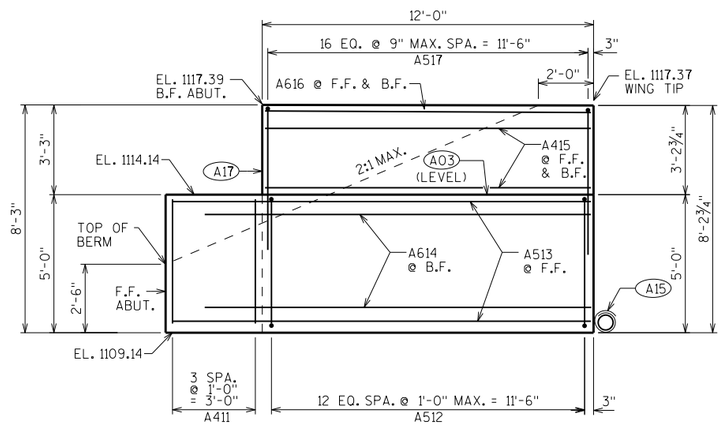
A501, A512, A519

BILL OF BARS

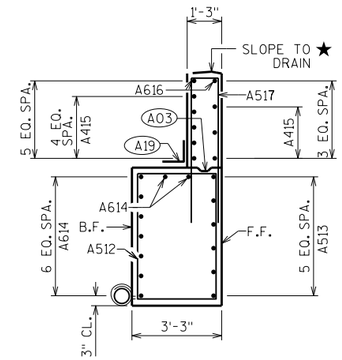
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		43	15'-8"	X		BODY - STIRRUPS - VERTICAL
A402		12	2'-3"			PILES - 2 PER BODY PILE - VERTICAL
A403		6	28'-0"	X		PILES - 1 PER BODY PILE - SPIRAL
A604		NOT	USED			
A805		7	35'-10"	X		BODY - HORIZONTAL - B.F.
A606		11	33'-10"			BODY - HORIZONTAL
A407		18	6'-3"	X		BODY - VERTICAL - TOP - BTWN. BEAM SEATS
A408		6	8'-1"			BODY - HORIZONTAL - TOP - BTWN. BEAM SEATS
A509		21	7'-5"	X		BODY - VERTICAL - U-BAR - TOP - OVER GIR. 2-4
A410		5	20'-3"			BODY - HORIZONTAL - TOP - OVER GIR. 2-4
A411	X	4	4'-8"			WING 2 - VERTICAL - END OF ABUTMENTS
A512	X	13	15'-8"	X		WING 2 - VERTICAL - LOWER WING - BODY - STIRRUPS
A513	X	13	15'-2"			WINGS 1 & 2 - HORIZONTAL - F.F. - LOWER WING
A614	X	18	13'-11"			WINGS 1 & 2 - HORIZONTAL - B.F. & TOP - LOWER WING
A415	X	16	11'-8"			WINGS 1 & 2 - HORIZONTAL - UPPER WING
A616	X	4	11'-8"			WINGS 1 & 2 - HORIZONTAL - TOP
A517	X	34	11'-2"	X		WINGS 1 & 2 - VERTICAL - TOP
A418	X	4	5'-7"			WING 1 - VERTICAL - END OF ABUTMENTS
A519	X	13	17'-6"	X		WING 1 - VERTICAL - LOWER WING - BODY - STIRRUPS



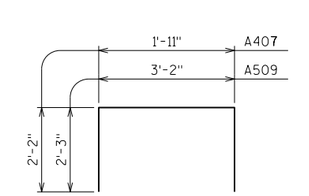
A403



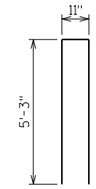
WING 2 ELEVATION



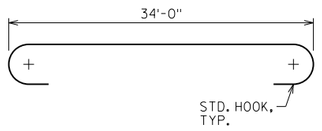
WING 2 SECTION



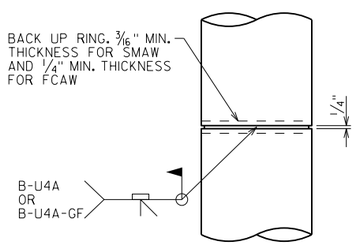
A407, A509



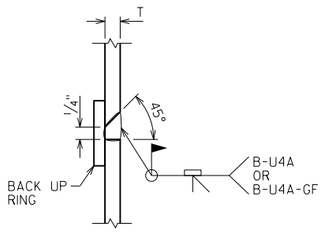
A517



A805

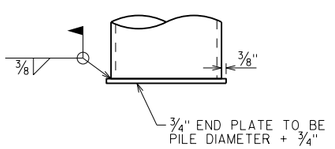


CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS



END PLATE DETAIL

★ SLOPE 1/8" PER FOOT

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 × 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

A09 SUPPORT ABUTMENT ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY MJH | PLANS CK'D. BAF

WEST ABUTMENT DETAILS

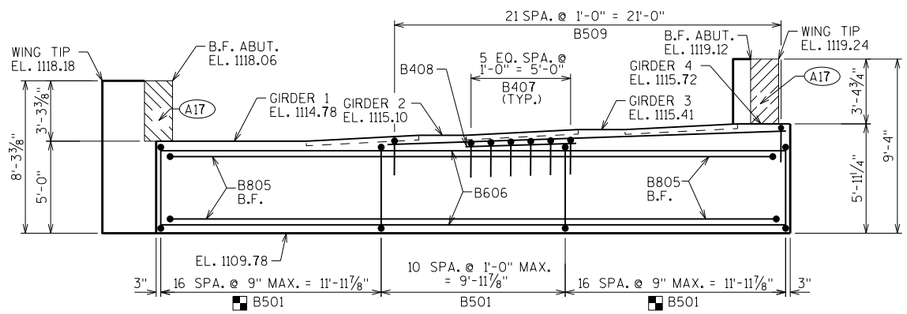
SHEET 5

394

SCALE = 2.67

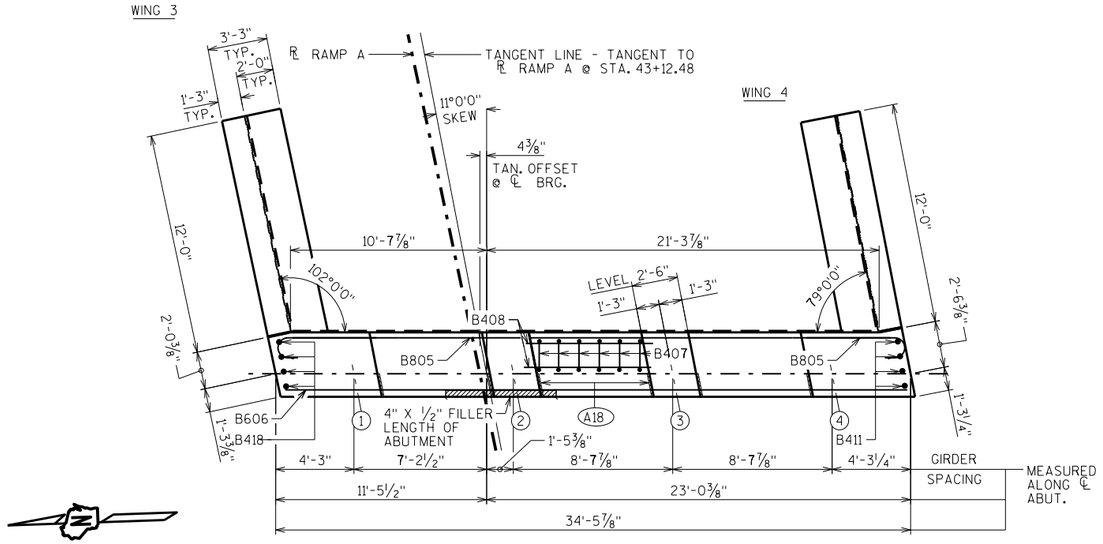
8

8

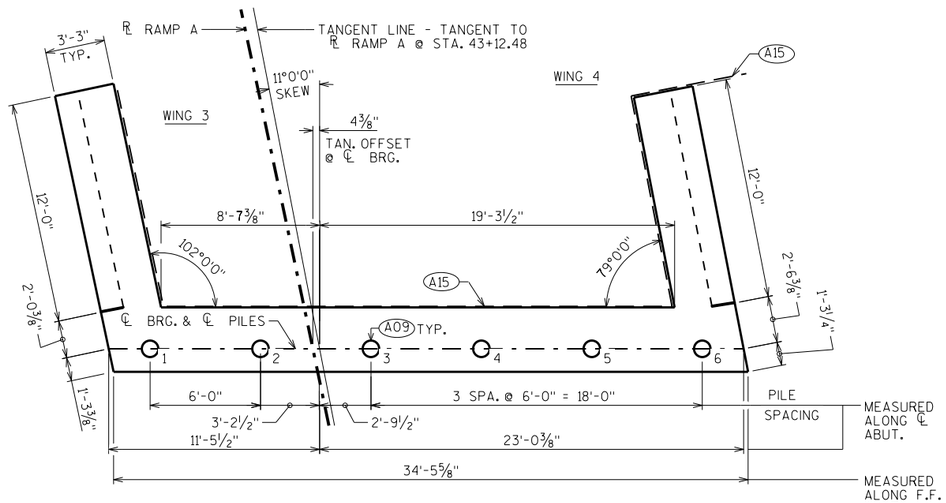


ELEVATION

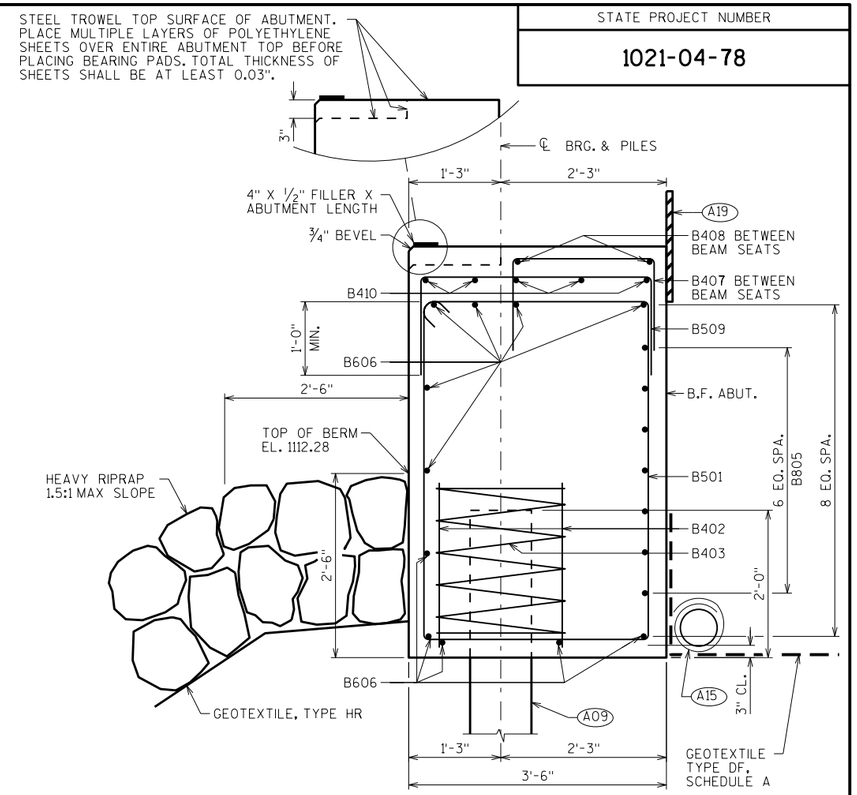
LOOKING EAST AT F.F.
ADJUST STIRRUP SPACING AS NEEDED TO MISS PILES



PLAN



PILE PLAN



SECTION THRU BODY

■ FLARE BARS AT ABUT. ENDS AS NECESSARY WHILE MAINTAINING 9" MAX. SPACING

◯ INDICATES GIRDER NUMBER

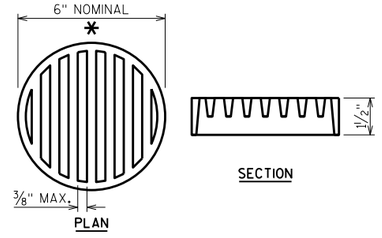
(A09) SUPPORT ABUTMENT ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A 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 SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

STATE PROJECT NUMBER

1021-04-78

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY BAF/MJH | PLANS CK'D. BAF

EAST ABUTMENT

SHEET 6

395

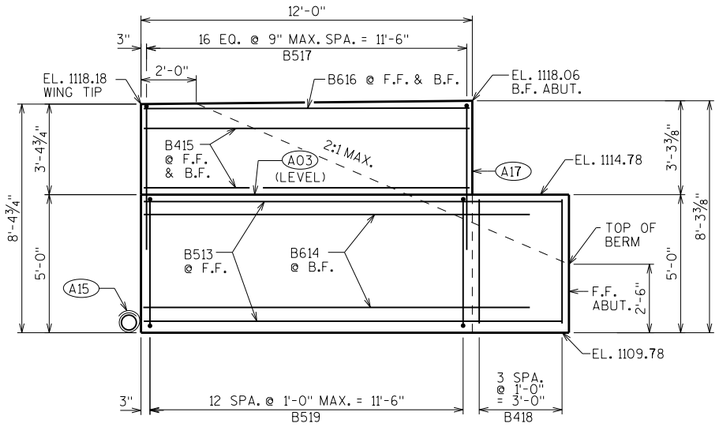
8

8

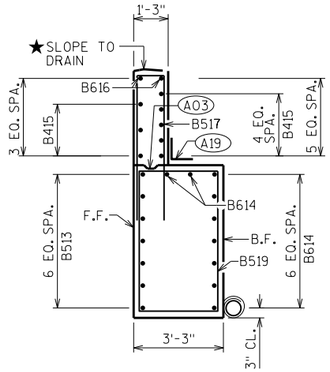
SCALE = 4.00

STATE PROJECT NUMBER

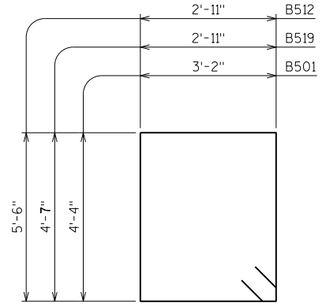
1021-04-78



WING 3 ELEVATION



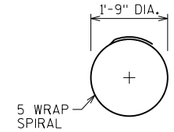
WING 3 SECTION



B501. B512, B519

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		43	15'-8"	X		BODY - STIRRUPS - VERTICAL
B402		12	2'-3"			PILES - 2 PER BODY PILE - VERTICAL
B403		6	28'-0"	X		PILES - 1 PER BODY PILE - SPIRAL
B604		NOT	USED			
B805		7	35'-10"	X		BODY - HORIZONTAL - B.F.
B606		11	34-2"			BODY - HORIZONTAL
B407		18	6'-3"	X		BODY - VERTICAL - TOP - BTWN. BEAM SEATS
B408		6	8'-1"			BODY - HORIZONTAL - TOP - BTWN. BEAM SEATS
B509		22	7'-5"	X		BODY - VERTICAL - U-BAR - TOP - OVER GIR. 3-4
B410		5	21'-4"			BODY - HORIZONTAL - TOP - OVER GIR. 3-4
B411	X	4	5'-7"			WING 4 - VERTICAL - END OF ABUTMENTS
B512	X	13	17'-6"	X		WING 4 - VERTICAL - LOWER WING - BODY - STIRRUPS
B513	X	13	15'-2"			WINGS 3 & 4 - HORIZONTAL - F.F. - LOWER WING
B614	X	18	13'-11"			WINGS 3 & 4 - HORIZONTAL - B.F. & TOP - LOWER WING
B415	X	16	11'-8"			WINGS 3 & 4 - HORIZONTAL - UPPER WING
B616	X	4	11'-8"			WINGS 3 & 4 - HORIZONTAL - TOP
B517	X	34	11'-2"	X		WINGS 3 & 4 - VERTICAL - TOP
B418	X	4	4'-8"			WING 3 - VERTICAL - END OF ABUTMENTS
B519	X	13	15'-8"	X		WING 3 - VERTICAL - LOWER WING - BODY - STIRRUPS



B403

WING 4 ELEVATION

WING 4 SECTION

B407, B509

B517

★ SLOPE ⅛" PER FOOT

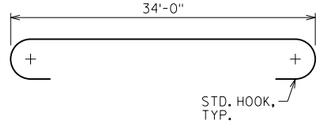
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 × 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A09) SUPPORT ABUTMENT ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

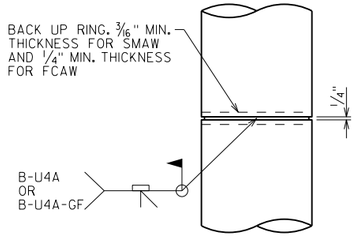
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

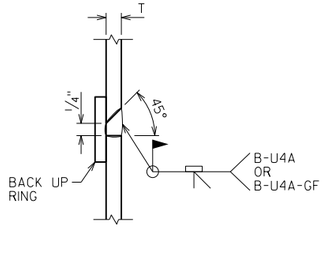
(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



B805

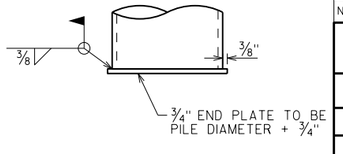


CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS



END PLATE DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY MJH | PLANS CK'D. BAF

EAST ABUTMENT DETAILS

SHEET 7

396

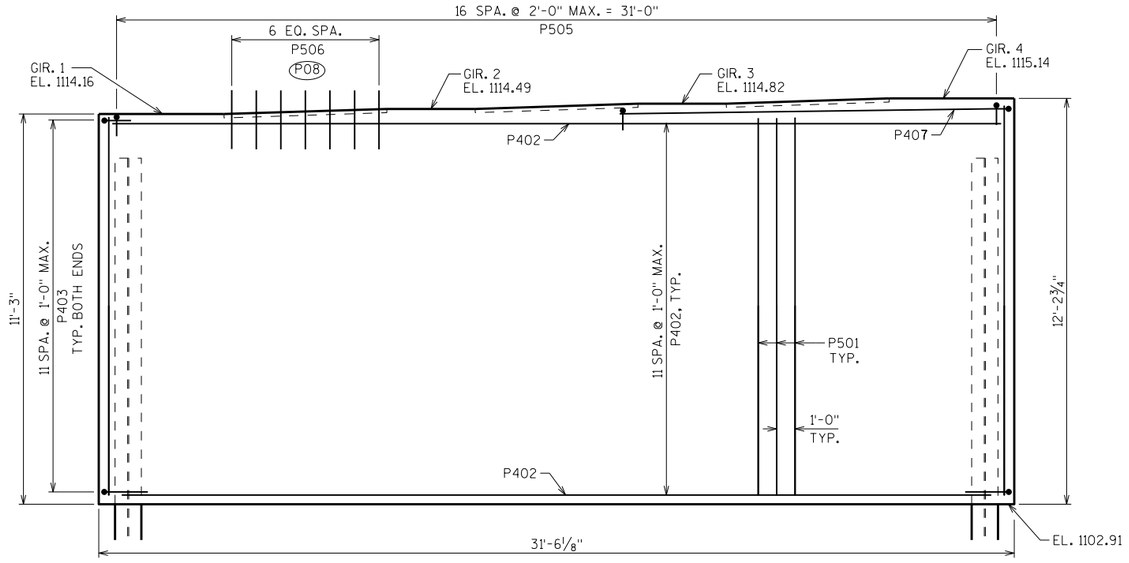
SCALE = 2.67

8

8

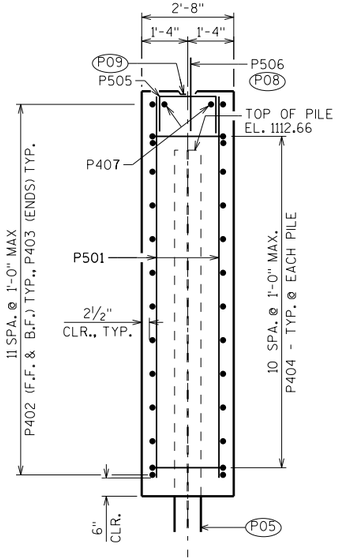
STATE PROJECT NUMBER

1021-04-78



ELEVATION

LOOKING EAST



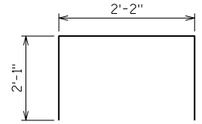
END VIEW

BILL OF BARS

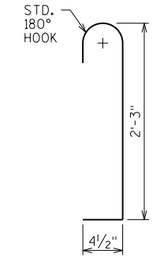
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
P501		68	10'-6"			PIER 1 - VERT.
P402		24	28'-11"			PIER 1 - HORIZ. - F.F. & B.F.
P403		24	6'-4"	X		PIER 1 - HORIZ. - ENDS
P404		99	3'-1"	X		PIER 1 - HORIZ. - PILES
P505		17	6'-1"	X		PIER 1 - VERT. - TOP
P506		21	2'-0"			PIER 1 - VERT. - DOWELS
P407		2	18'-6"			PIER 1 - HORIZ. - TOP. - GIR.

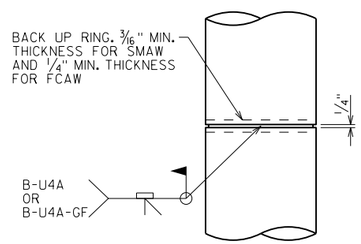
P403



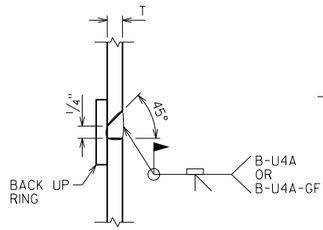
P505



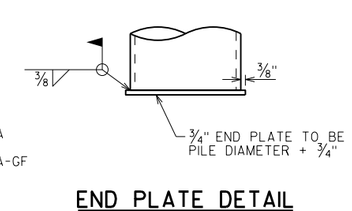
P404



CAST-IN-PLACE 'PIPE PILE'

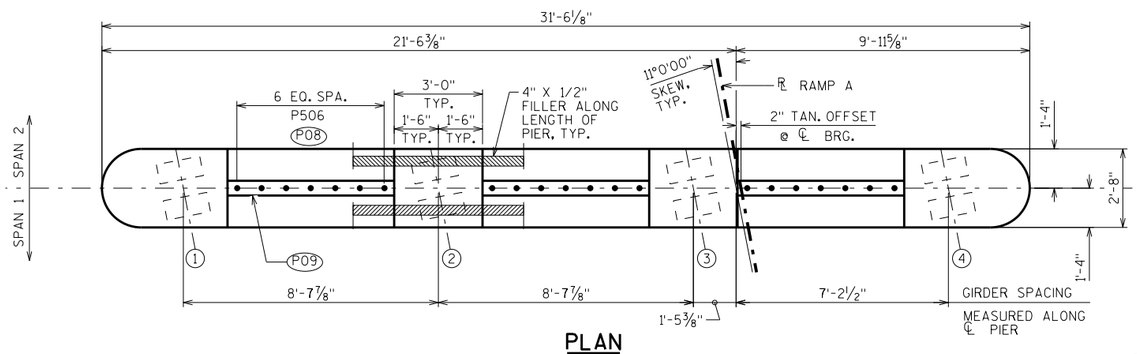


C.I.P. PILE WELD DETAIL

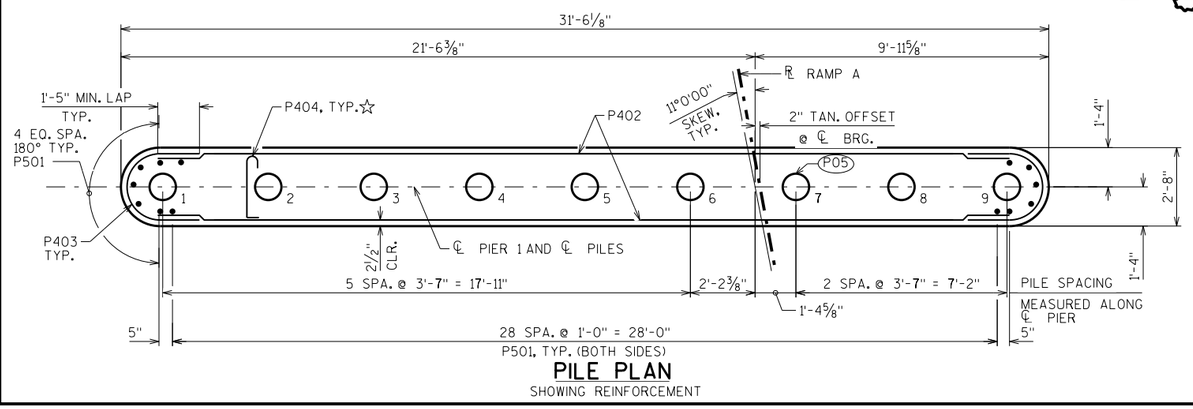


END PLATE DETAIL

PILE DETAILS



PLAN



PILE PLAN

SHOWING REINFORCEMENT

☆ PLACE P404 BARS ADJACENT TO EACH PILE WITH MAX. VERT. SPA. OF 1'-0". TIE TO NEAREST P501 BAR AND ALTERNATE POSITION OF 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

◯ INDICATES GIRDER NUMBER

(P05) SUPPORT PIER ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

(P08) BARS @ 1'-0" 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 CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY BAF/MJH | PLANS CK'D. BAF

PIER 1

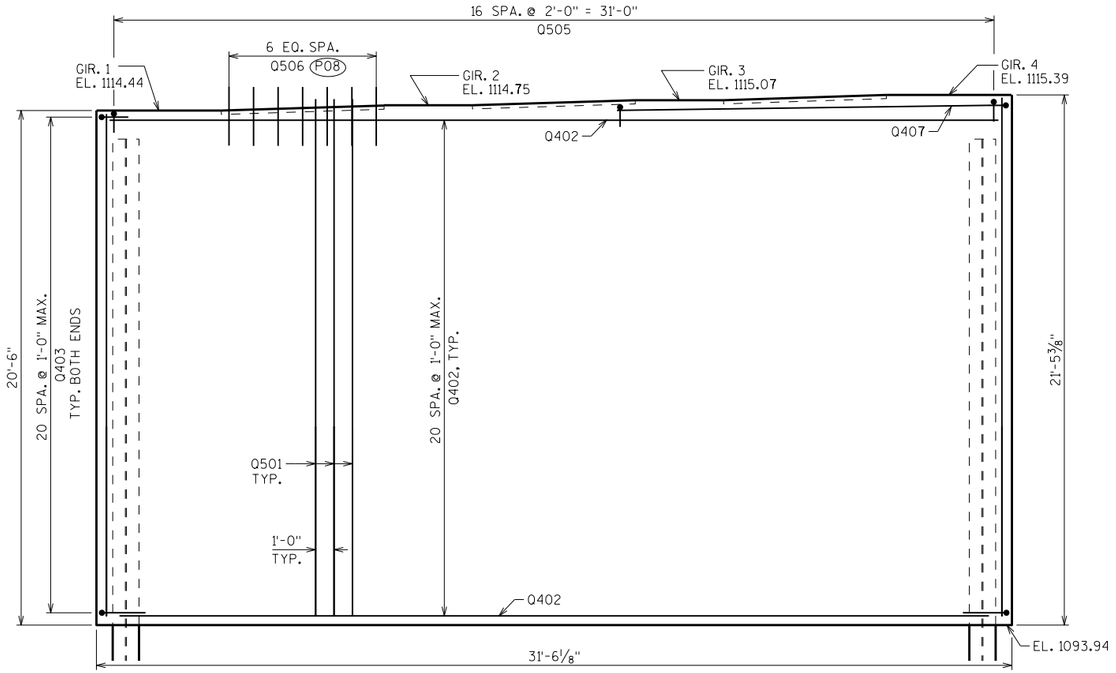
SHEET 8

397

SCALE = 2.50

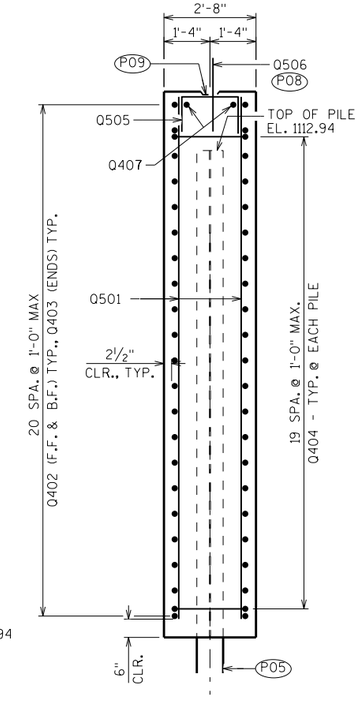
STATE PROJECT NUMBER

1021-04-78

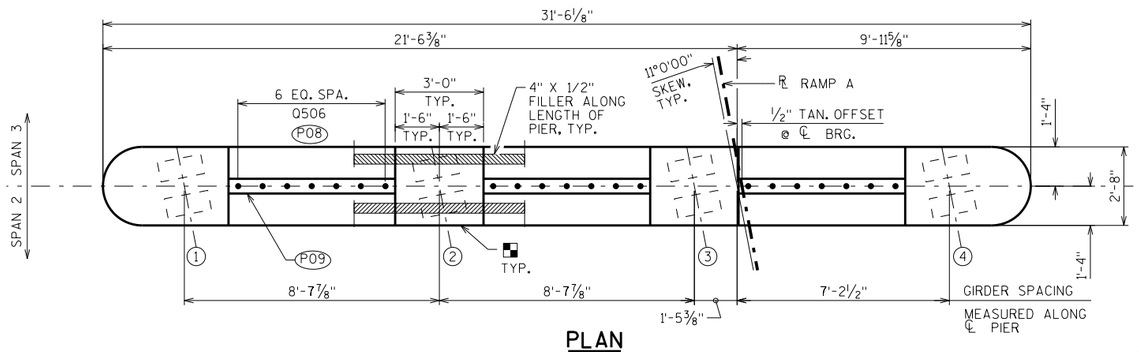


ELEVATION

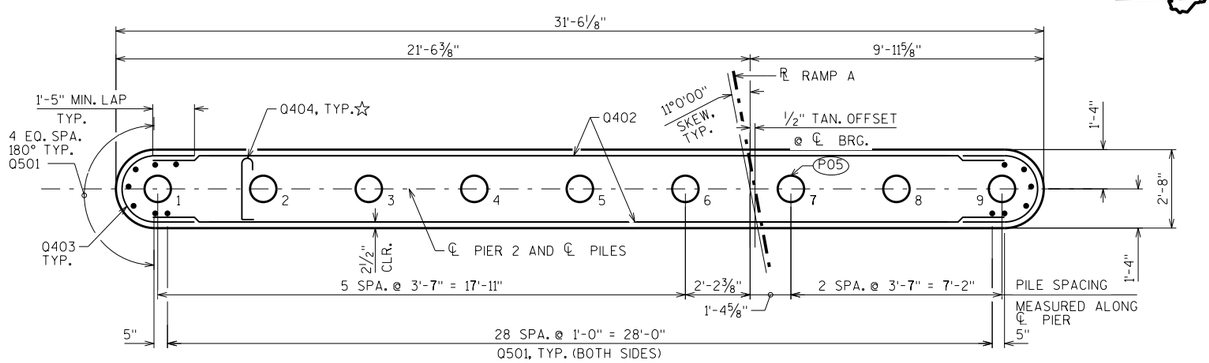
LOOKING EAST



END VIEW



PLAN



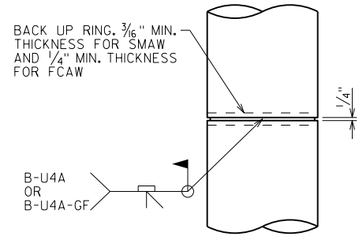
PILE PLAN

SHOWING REINFORCEMENT

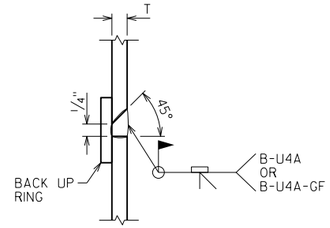
BILL OF BARS

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
0501		68	19'-9"			PIER 2 - VERT.
0402		42	28'-11"			PIER 2 - HORIZ. - F.F. & B.F.
0403		42	6'-4"	X		PIER 2 - HORIZ. - ENDS
0404		189	3'-1"	X		PIER 2 - HORIZ. - PILES
0505		17	6'-1"	X		PIER 2 - VERT. - TOP
0506		21	2'-0"			PIER 2 - VERT. - DOWELS
0407		2	18'-6"			PIER 2 - HORIZ. - TOP. - GIR.

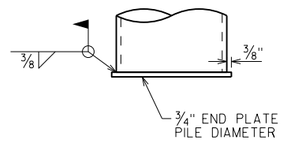


CAST-IN-PLACE 'PIPE PILE'

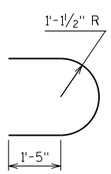


C.I.P. PILE WELD DETAIL

PILE DETAILS



END PLATE DETAIL



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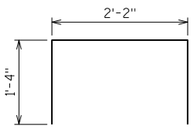

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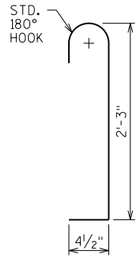

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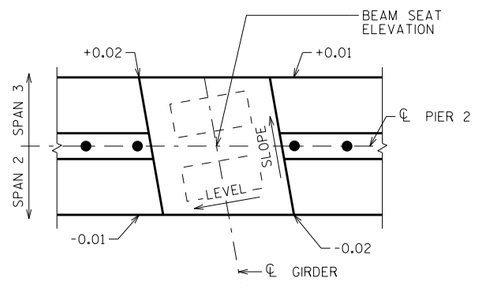


SLOPED BEAM SEAT DETAIL

☆ PLACE Q404 BARS ADJACENT TO EACH PILE WITH MAX. VERT. SPA. OF 1'-0". TIE TO NEAREST P501 BAR AND ALTERNATE POSITION OF 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

■ SEE SLOPED BEAM SEAT DETAIL

○ INDICATES GIRDER NUMBER

(P05) SUPPORT PIER ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

(P08) BARS @ 1'-0" 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 CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY MJH | PLANS CK'D. BAF

PIER 2

SHEET 9

398

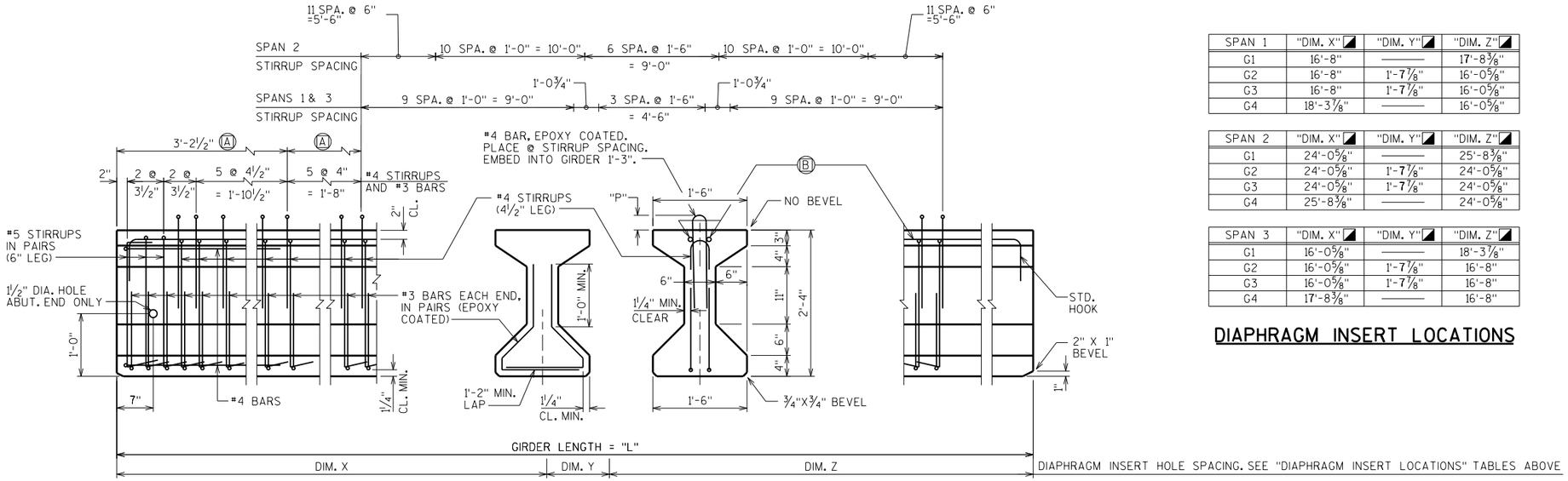
SCALE = 2.50

8

8

STATE PROJECT NUMBER

1021-04-78



SIDE VIEW & TYPICAL SECTION IN SPAN

SPAN 1	"DIM. X" ◪	"DIM. Y" ◪	"DIM. Z" ◪
G1	16'-8"	———	17'-8⅜"
G2	16'-8"	1'-7⅞"	16'-0⅝"
G3	16'-8"	1'-7⅞"	16'-0⅝"
G4	18'-3⅞"	———	16'-0⅝"

SPAN 2	"DIM. X" ◪	"DIM. Y" ◪	"DIM. Z" ◪
G1	24'-0⅝"	———	25'-8⅜"
G2	24'-0⅝"	1'-7⅞"	24'-0⅝"
G3	24'-0⅝"	1'-7⅞"	24'-0⅝"
G4	25'-8⅜"	———	24'-0⅝"

SPAN 3	"DIM. X" ◪	"DIM. Y" ◪	"DIM. Z" ◪
G1	16'-0⅝"	———	18'-3⅞"
G2	16'-0⅝"	1'-7⅞"	16'-8"
G3	16'-0⅝"	1'-7⅞"	16'-8"
G4	17'-8⅜"	———	16'-8"

DIAPHRAGM INSERT LOCATIONS

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 2 #7 BARS, FULL LENGTH, MIN. LAP = 3'-7", STD. HOOK AT ENDS, SPAN 1&3
2 #5 BARS, FULL LENGTH, MIN. LAP = 2'-5", STD. HOOK AT ENDS, SPAN 2

◪ DIMENSION TAKEN WHILE LOOKING NORTH. SEE "SUPERSTRUCTURE" SHEET FOR DETAILS

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

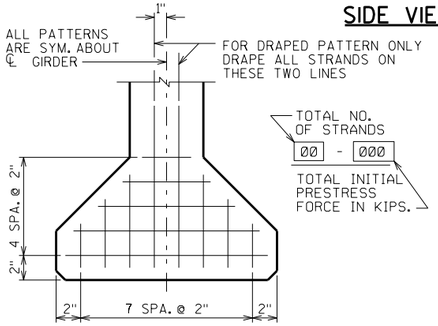
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

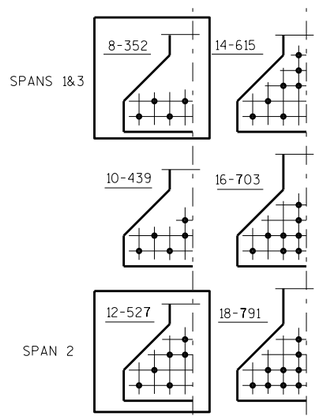
PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

BEND EACH END OF #4 STIRRUPS 4½" AND #5 STIRRUPS 6".

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

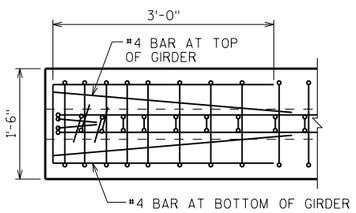


TYP. STRAND PATTERN

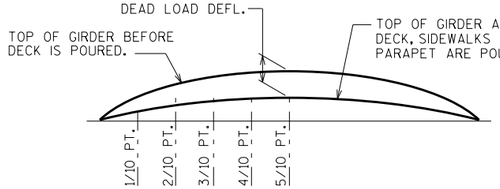


UNDRAPED PATTERN

0.6" DIA. STRANDS



TOP VIEW OF GIRDER ENDS



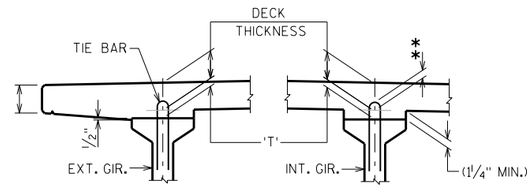
DEAD LOAD DEFLECTION DIAGRAM

* 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	0.63
2	1.46

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DECK HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & 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 2.90" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	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" (IN.) 1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	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&3	2,3	34'-4½"	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	8,000	7	7	7	0.6							8	6,400
2	2,3	49'-9"	0.2	0.4	0.6	0.7	0.8	0.7	0.6	0.4	0.2	8,000	7	7	7	0.6							12	6,400
1&3	1,4	34'-4½"	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8,000	7	7	7	0.6							8	6,400
2	1,4	49'-9"	0.2	0.4	0.5	0.6	0.7	0.6	0.5	0.4	0.2	8,000	7	7	7	0.6							12	6,400

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY BAF/MJH | PLANS CK'D. BAF

28" PRESTRESSED GIRDER DETAILS

SHEET 10

399

8

8

SCALE = 1

STATE PROJECT NUMBER

1021-04-78

NOTES

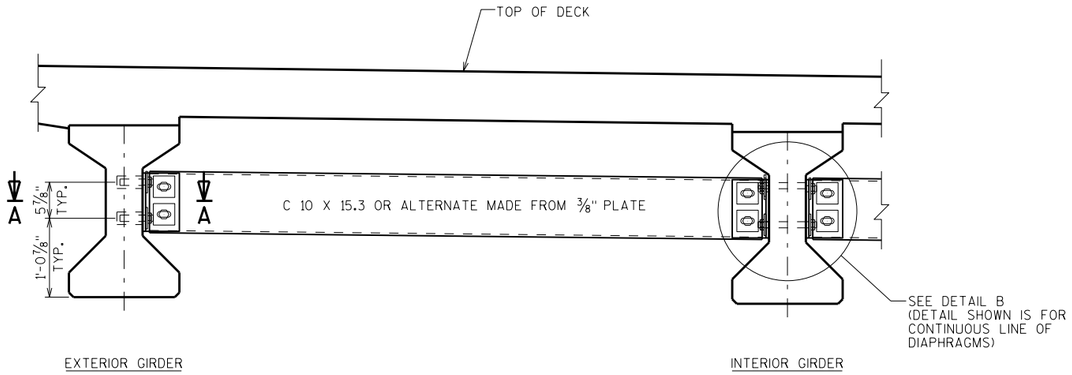
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-286", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

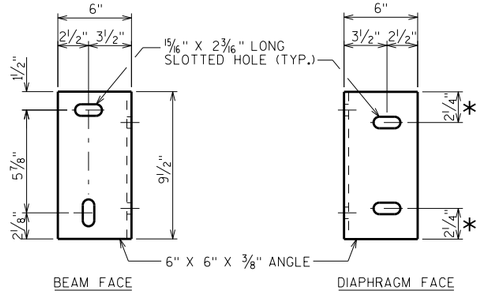
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

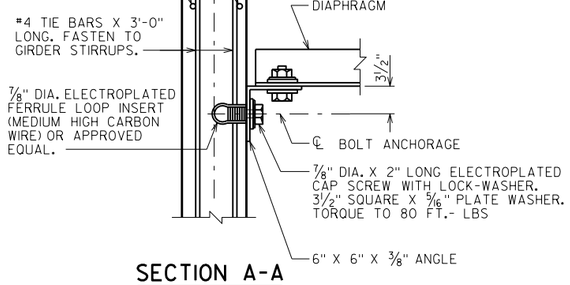


PART TRANSVERSE SECTION AT DIAPHRAGM



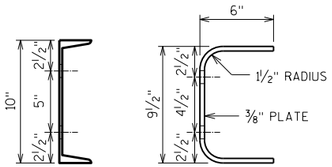
DIAPHRAGM SUPPORT

* 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM

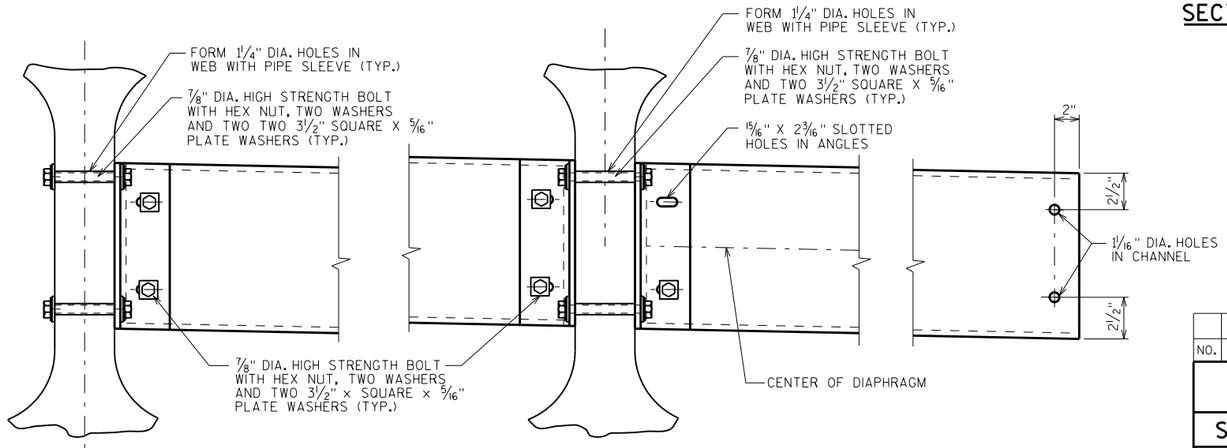


SECTION A-A

(FOR EXTERIOR ATTACHMENT)



SECTION THRU DIAPHRAGM



(FOR STAGGERED DIAPHRAGM)

DETAIL B

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY MJH | PLANS CK'D. BAF

STEEL DIAPHRAGM

SHEET 11

400

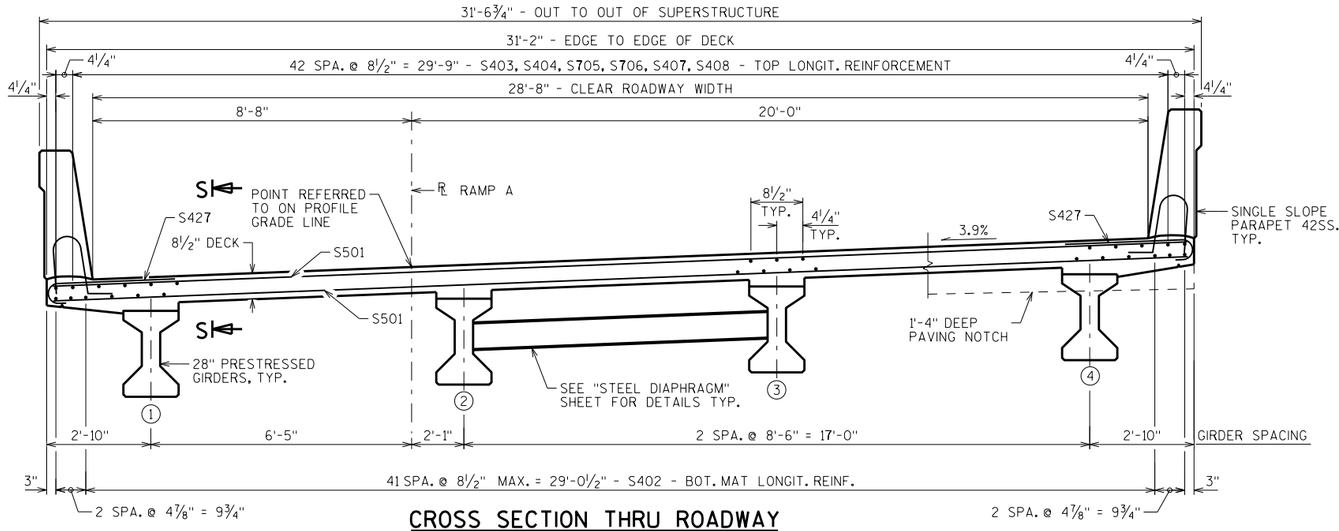
SCALE = 1

8

8

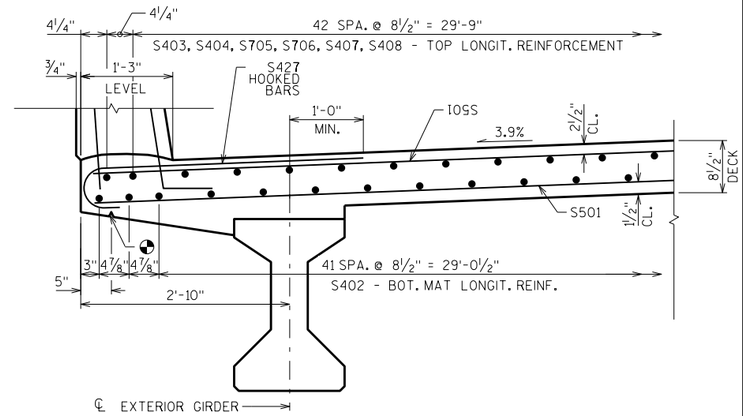
STATE PROJECT NUMBER

1021-04-78



CROSS SECTION THRU ROADWAY

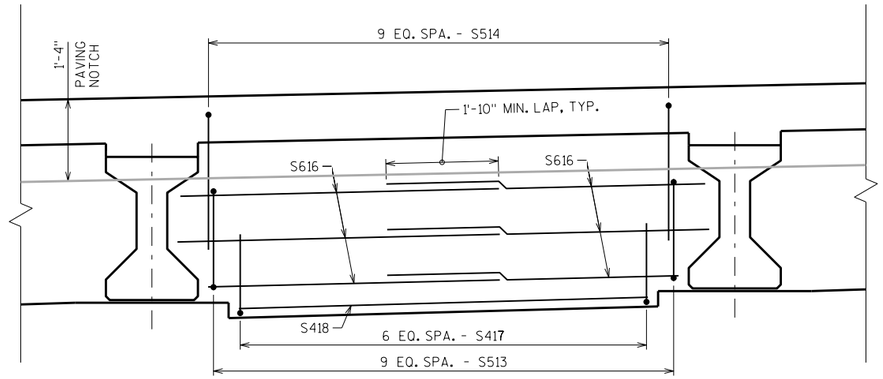
LOOKING EAST



EDGE OF DECK DETAIL

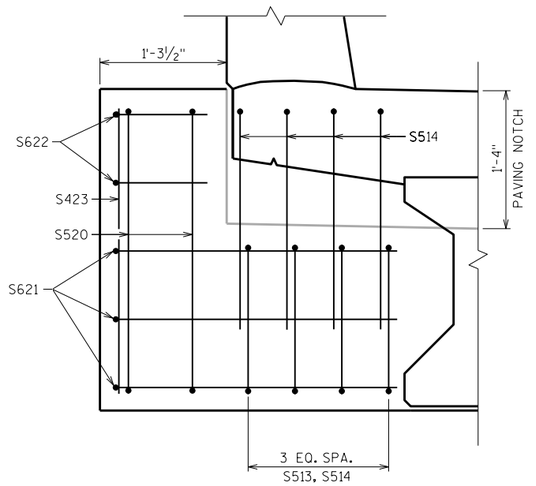
TYPICAL AT BOTH EDGES

- ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT. DIAPHRAGM
- ◯ INDICATES GIRDER NUMBER



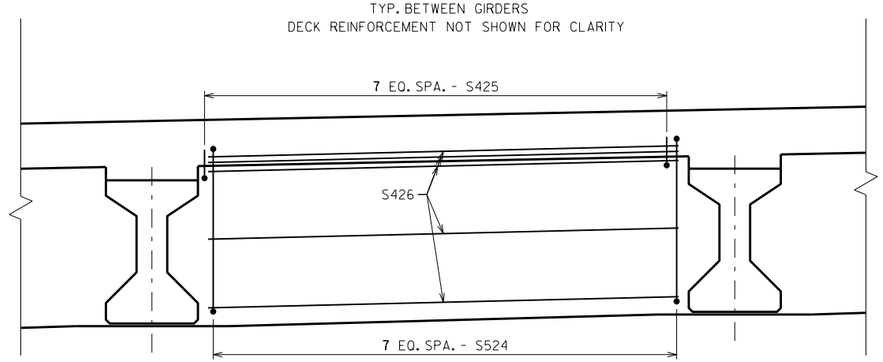
DIAPHRAGM AT ABUTMENTS

TYP. BETWEEN GIRDERS
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



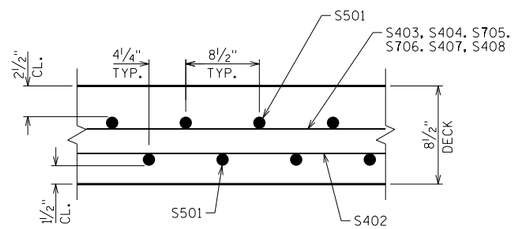
ABUTMENT DIAPHRAGM- EXTERIOR DETAIL

NORTHEAST CORNER SHOWN. OTHER CORNERS SIMILAR
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



DIAPHRAGM AT PIERS

TYP. BETWEEN GIRDERS
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



SECTION S-S

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY MJH | PLANS CK'D. BAF

SUPERSTRUCTURE CROSS SECTION

SHEET 12

401

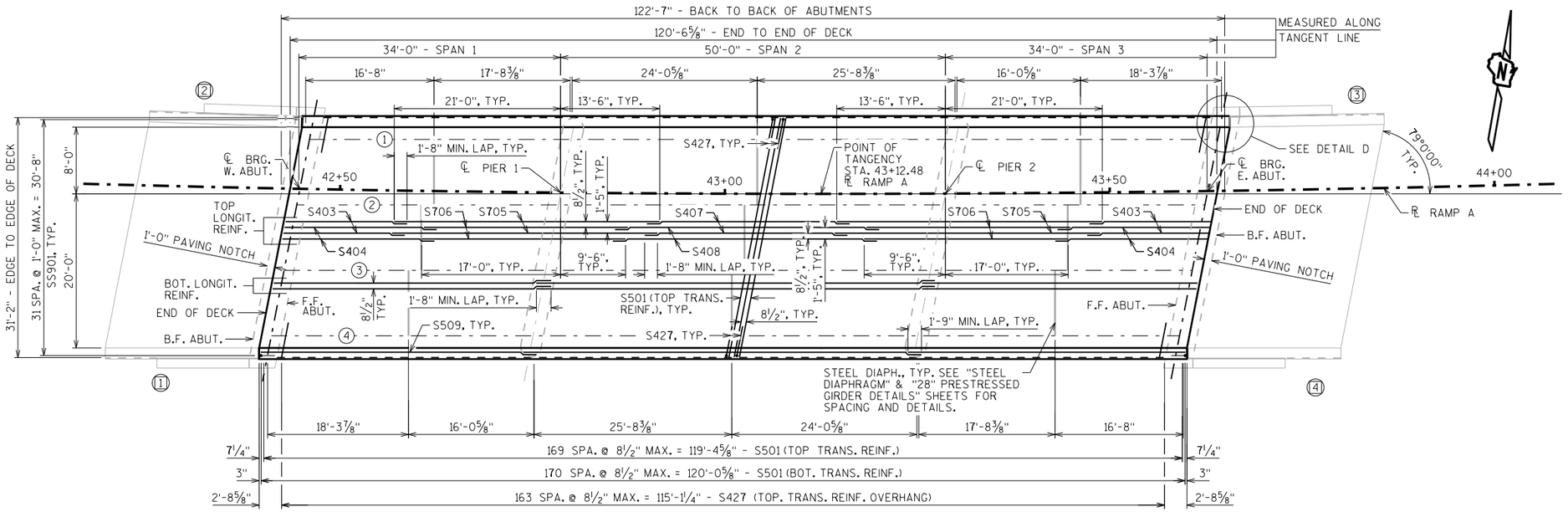
SCALE = 2.00

8

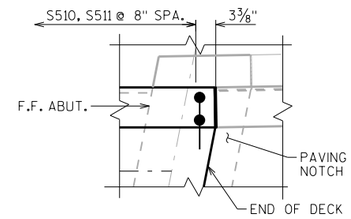
8

STATE PROJECT NUMBER

1021-04-78



PLAN



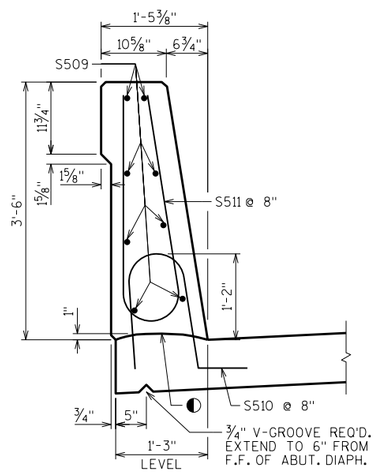
DETAIL D

NORTHEAST CORNER SHOWN
OTHER CORNERS SIMILAR

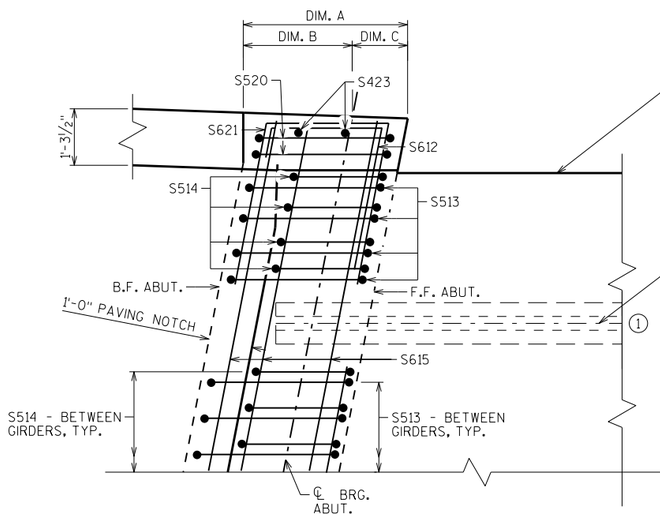
TOP OF DECK ELEVATIONS

	℄ BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. E. ABUT.
NORTH EOD	1117.39	1117.40	1117.40	1117.41	1117.41	1117.42	1117.43	1117.44	1117.45	1117.46	1117.47	1117.49	1117.51	1117.54	1117.56	1117.59	1117.61	1117.64	1117.68	1117.71	1117.75	1117.77	1117.80	1117.82	1117.85	1117.88	1117.91	1117.94	1117.97	1118.00	1118.04
GIRDER 1	1117.45	1117.46	1117.46	1117.47	1117.48	1117.48	1117.49	1117.50	1117.51	1117.52	1117.53	1117.55	1117.57	1117.60	1117.62	1117.65	1117.67	1117.70	1117.74	1117.77	1117.81	1117.83	1117.86	1117.88	1117.91	1117.94	1117.97	1118.00	1118.03	1118.06	1118.10
R/L RAMP A	1117.70	1117.71	1117.72	1117.72	1117.73	1117.74	1117.75	1117.76	1117.77	1117.79	1117.80	1117.82	1117.84	1117.86	1117.89	1117.91	1117.94	1117.97	1118.00	1118.04	1118.07	1118.09	1118.12	1118.14	1118.17	1118.20	1118.23	1118.25	1118.28	1118.31	1118.34
TANGENT	1117.73	1117.73	1117.74	1117.74	1117.75	1117.76	1117.76	1117.77	1117.78	1117.79	1117.81	1117.82	1117.84	1117.87	1117.89	1117.92	1117.94	1117.97	1118.00	1118.04	1118.07	1118.10	1118.12	1118.15	1118.18	1118.20	1118.23	1118.26	1118.29	1118.33	1118.36
GIRDER 2	1117.78	1117.79	1117.79	1117.80	1117.80	1117.81	1117.82	1117.83	1117.84	1117.85	1117.86	1117.88	1117.90	1117.92	1117.94	1117.97	1118.00	1118.03	1118.06	1118.09	1118.12	1118.15	1118.18	1118.20	1118.23	1118.26	1118.29	1118.32	1118.35	1118.38	1118.41
GIRDER 3	1118.11	1118.12	1118.12	1118.13	1118.13	1118.14	1118.15	1118.16	1118.16	1118.17	1118.19	1118.20	1118.22	1118.24	1118.27	1118.29	1118.32	1118.35	1118.38	1118.41	1118.44	1118.47	1118.49	1118.52	1118.55	1118.57	1118.60	1118.63	1118.66	1118.69	1118.72
GIRDER 4	1118.44	1118.45	1118.45	1118.46	1118.46	1118.47	1118.47	1118.48	1118.49	1118.50	1118.51	1118.53	1118.55	1118.57	1118.59	1118.62	1118.64	1118.67	1118.70	1118.73	1118.76	1118.79	1118.81	1118.84	1118.86	1118.89	1118.92	1118.95	1118.98	1119.01	1119.04
SOUTH EOD	1118.51	1118.51	1118.51	1118.52	1118.52	1118.53	1118.54	1118.54	1118.55	1118.56	1118.57	1118.59	1118.61	1118.63	1118.65	1118.68	1118.70	1118.73	1118.76	1118.79	1118.82	1118.85	1118.87	1118.90	1118.92	1118.95	1118.98	1119.01	1119.04	1119.07	1119.10

EOD = EDGE OF DECK



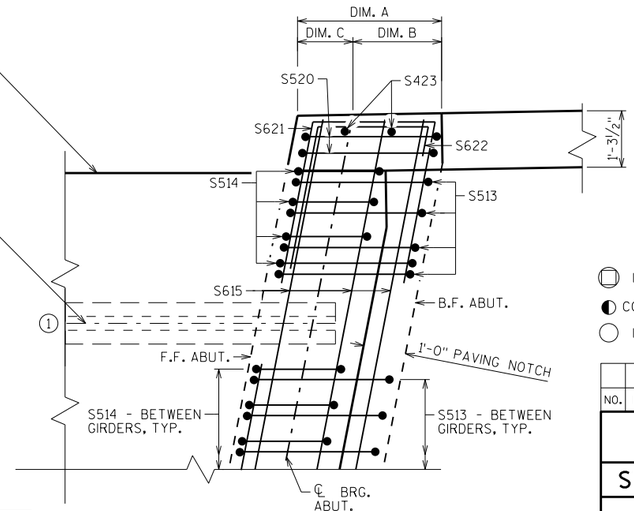
SECTION THRU PARAPET ON DECK



PLAN-DIAPHRAGM EXTERIOR

NORTHWEST CORNER SHOWN. SOUTHEAST CORNER SIMILAR

WING	"DIM. A"	"DIM. B"	"DIM. C"
1	3'-3⅞"	2'-0⅝"	1'-3¼"
2	3'-8⅞"	2'-5¾"	1'-3⅛"
3	3'-3¾"	2'-0⅜"	1'-3⅜"
4	3'-9¾"	2'-6⅜"	1'-3¼"



PLAN-DIAPHRAGM EXTERIOR

NORTHEAST CORNER SHOWN. SOUTHWEST CORNER SIMILAR

INDICATES WING NUMBER

CONST. JOINT - STRIKE OFF AS SHOWN

INDICATES GIRDER NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY MJH | PLANS CK'D. BAF

SUPERSTRUCTURE

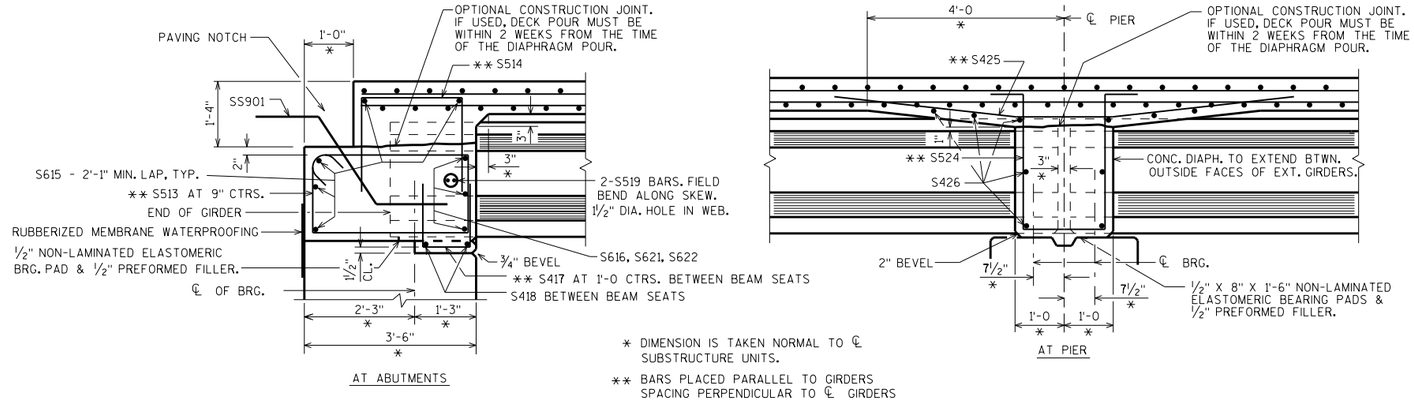
SHEET 13

402

SCALE = 8.00

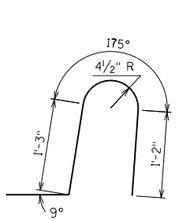
STATE PROJECT NUMBER

1021-04-78

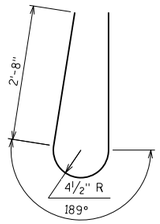


PART. LONGIT. SECTION

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	341	31'-4"			TRANSVERSE - BOT. & TOP
S402	X	138	41'-1"			LONGIT. - BOT.
S403	X	46	15'-10"			LONGIT. - TOP. - SPAN 1& 3
S404	X	44	19'-10"			LONGIT. - TOP. - SPAN 1& 3
S705	X	46	34'-6"			LONGIT. - TOP. - CONTINUITY OVER PIER 1& 2
S706	X	44	26'-6"			LONGIT. - TOP. - CONTINUITY OVER PIER 1& 2
S407	X	23	26'-4"			LONGIT. - TOP. - SPAN 2
S408	X	22	34'-4"			LONGIT. - TOP. - SPAN 2
S509	X	48	41'-4"			PARAPET - HORIZ.
S510	X	362	4'-5"	X		PARAPET - VERT.
S511	X	362	6'-8"	X		PARAPET - VERT.
S612	X	4	6'-6"	X		ABUT. DIAPH. - EXT. - HORIZ. - WINGS 2 & 4
S513	X	76	10'-2"	X		ABUT. DIAPH. - VERT. - STIRRUPS - BTWN. GIR. & AT EXTERIORS
S514	X	76	6'-5"	X		ABUT. DIAPH. - VERT. - BTWN. GIR. & AT EXTERIORS
S615	X	10	18'-2"			ABUT. DIAPH. - HORIZ.
S616	X	36	4'-10"			ABUT. DIAPH. - HORIZ. - BETWEEN GIRDERS
S417	X	42	3'-5"	X		ABUT. DIAPH. - VERT. - BETWEEN BEAM SEATS
S418	X	12	5'-5"			ABUT. DIAPH. - HORIZ. - BETWEEN BEAM SEATS
S519	X	16	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIRDERS
S520	X	8	12'-10"	X		ABUT. DIAPH. - EXT. - VERT.
S621	X	12	8'-7"	X		ABUT. DIAPH. - EXT. - HORIZ.
S622	X	4	6'-6"	X		ABUT. DIAPH. - EXT. - HORIZ. - WINGS 1& 3
S423	X	8	2'-11"			ABUT. DIAPH. - EXT. - VERT.
S524	X	48	8'-4"	X		PIER DIAPH. - VERT.
S425	X	48	10'-0"	X		PIER DIAPH. - VERT. - HAUNCH
S426	X	60	6'-9"			PIER DIAPH. - HORIZ. - BETWEEN GIRDERS
S427	X	328	4'-4"	X		TRANSVERSE - EDGE OF DECK
STAINLESS STEEL → SS901		64	5'-0"	X		ABUT. DIAPHRAGM - APPROACH SLAB TIE



S510



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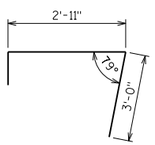

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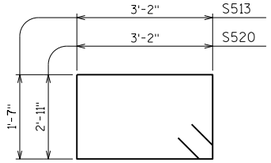
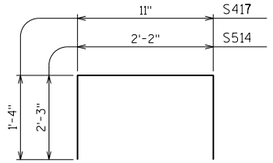
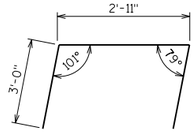


S513, S520



S514, S417



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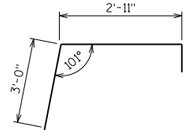

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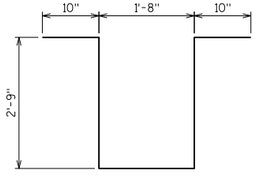

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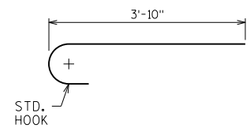
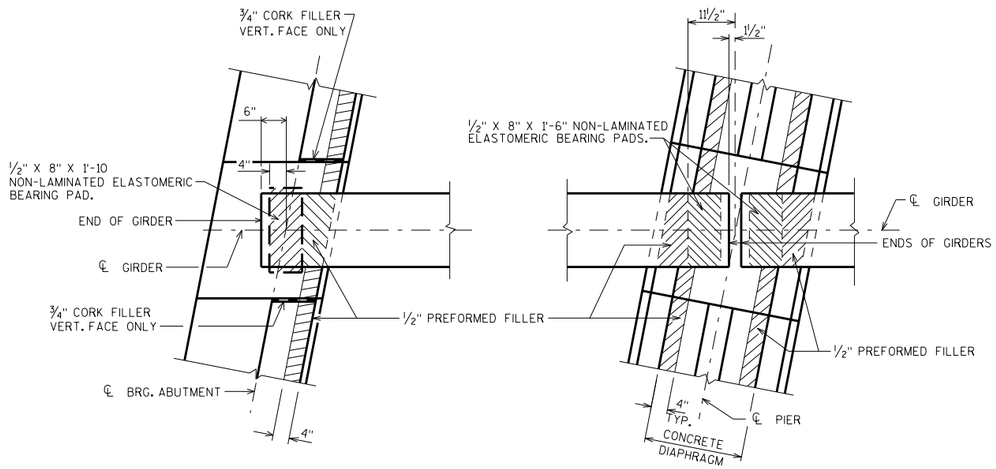
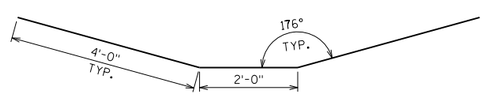


S427



BEARING PAD DETAIL



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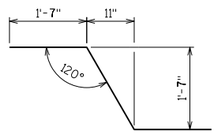


SS901

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY MJH | PLANS CK'D. BAF

SUPERSTRUCTURE DETAILS

SHEET 14

403

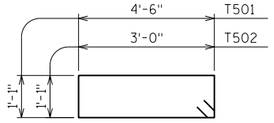
SCALE = 1.50

8

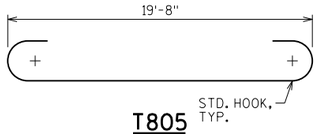
8

STATE PROJECT NUMBER

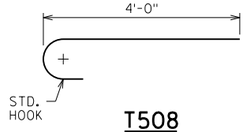
1021-04-78



T501, T502



T805

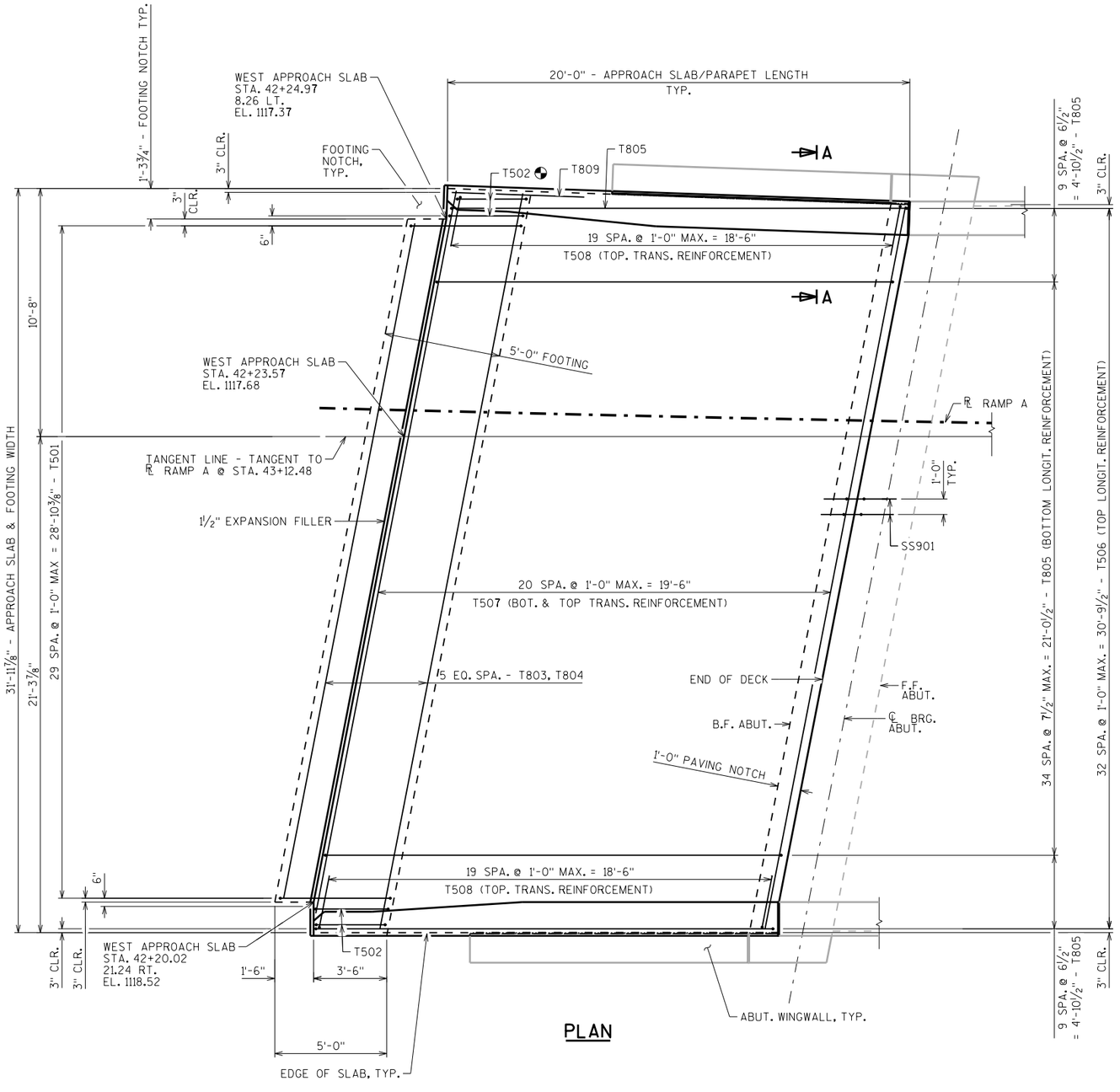


T508

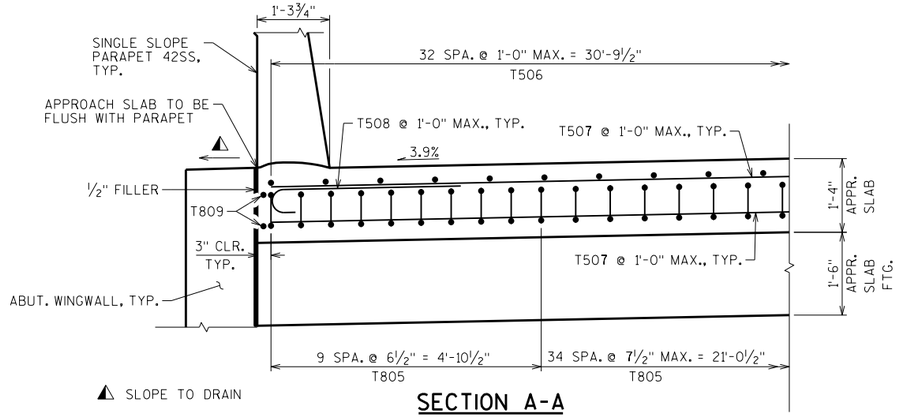
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

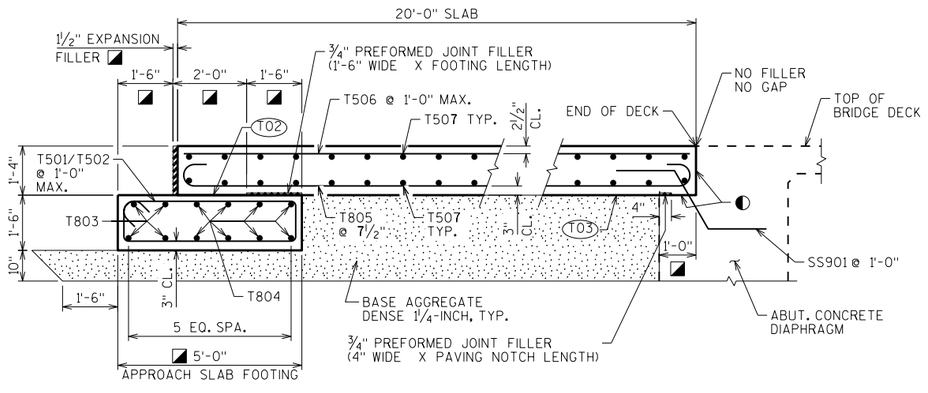
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	30	11'-10"	X		APPROACH WEST SLAB FOOTING - STIRRUPS
T502	X	4	8'-10"	X		APPROACH WEST SLAB FOOTING - STIRRUPS - NOTCHES
T803	X	4	29'-4"			APPROACH WEST SLAB FOOTING - TRANS.
T804	X	8	31'-11"			APPROACH WEST SLAB FOOTING - TRANS.
T805	X	53	21'-6"	X		APPROACH WEST SLAB - LONGIT. - BOT.
T506	X	33	19'-8"			APPROACH WEST SLAB - LONGIT. - TOP
T507	X	42	31'-4"			APPROACH WEST SLAB - TRANS. - BOT. AND TOP
T508	X	40	4'-7"	X		APPROACH WEST SLAB - TRANS. - TOP - EDGES
T809	X	2	6'-0"			APPROACH WEST SLAB - LONGIT. - BOT. AND TOP - WING 2



PLAN



SECTION A-A



SECTION THRU APPROACH SLAB

◔ FLARE BARS AT APPROACH SLAB ENDS AS NECESSARY WHILE MAINTAINING MAX. SPACING AND 3" CLEAR COVER.

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY MJH | PLANS CK'D. BAF

WEST STRUCTURAL APPROACH SLAB

SHEET 15

404

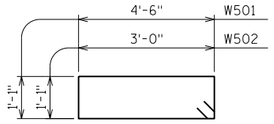
8

8

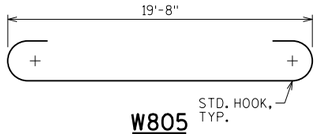
SCALE = 2.00

STATE PROJECT NUMBER

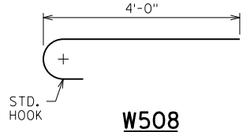
1021-04-78



W501, W502



W805

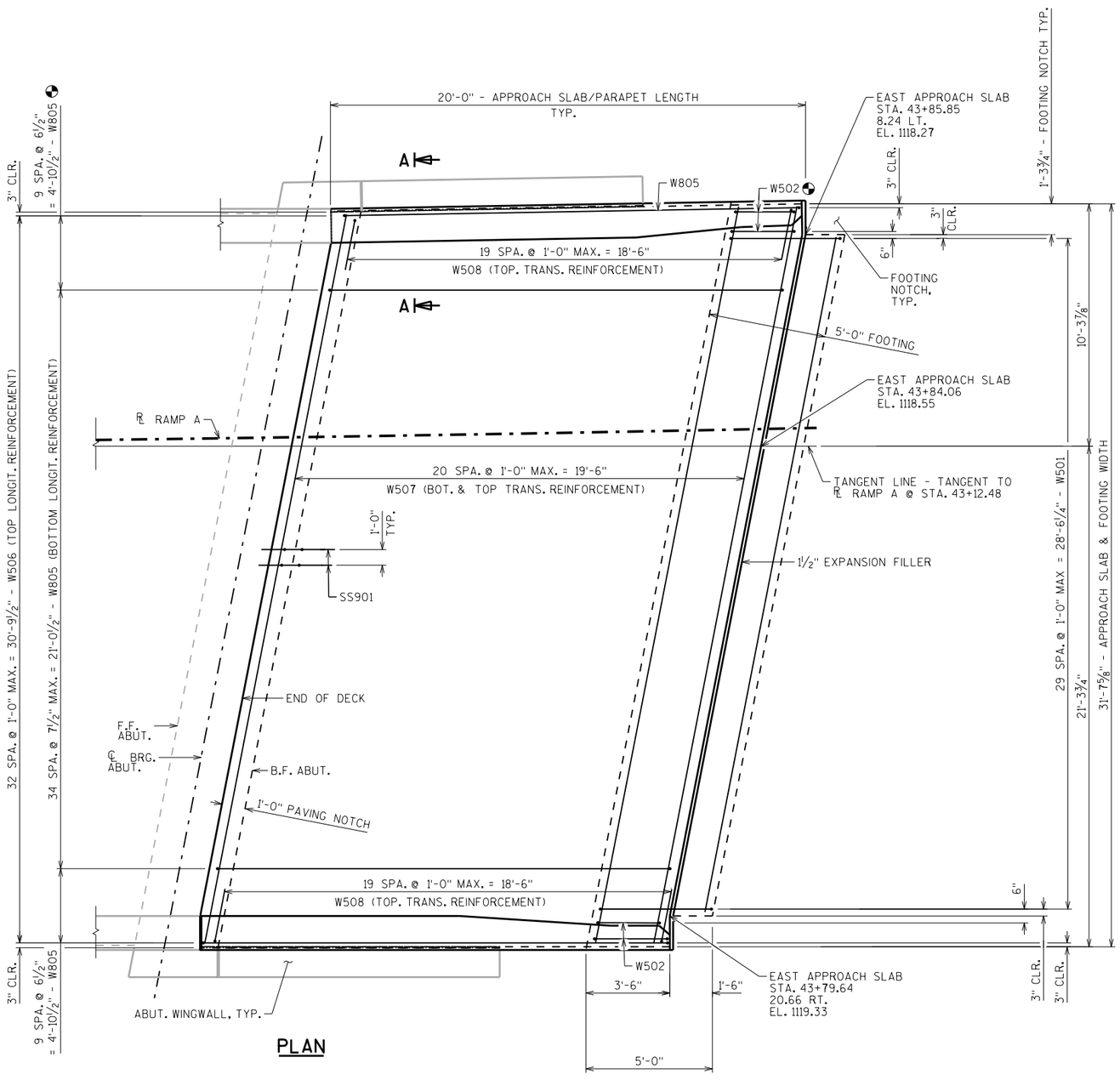


W508

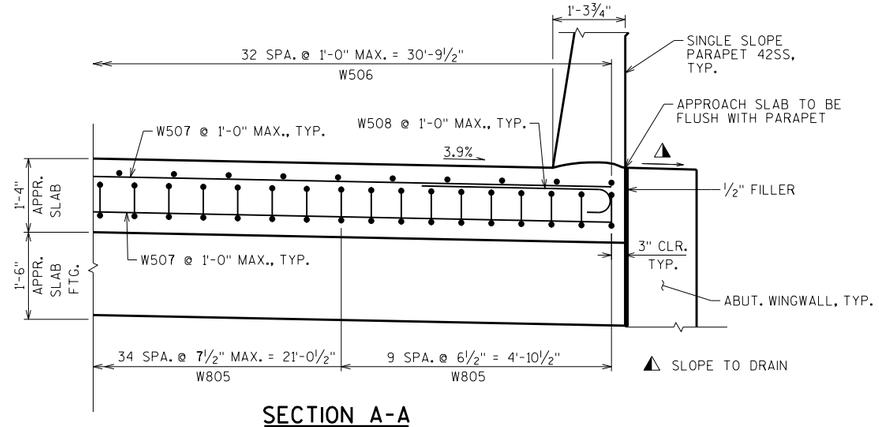
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

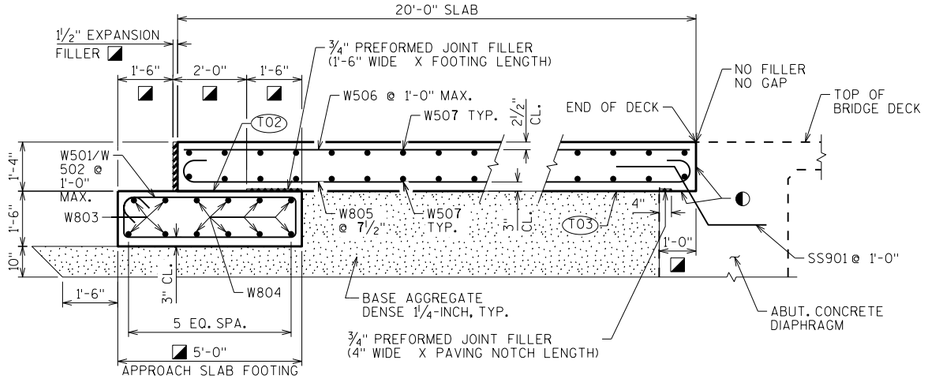
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
W501	X	30	11'-10"	X		APPROACH EAST SLAB FOOTING - STIRRUPS
W502	X	4	8'-10"	X		APPROACH EAST SLAB FOOTING - STIRRUPS - NOTCHES
W803	X	4	29'-0"			APPROACH EAST SLAB FOOTING - TRANS.
W804	X	8	31'-8"			APPROACH EAST SLAB FOOTING - TRANS.
W805	X	53	21'-6"	X		APPROACH EAST SLAB - LONGIT. - BOT.
W506	X	33	19'-8"			APPROACH EAST SLAB - LONGIT. - TOP
W507	X	42	31'-4"			APPROACH EAST SLAB - TRANS. - BOT. AND TOP
W508	X	40	4'-7"	X		APPROACH EAST SLAB - TRANS. - TOP - EDGES



PLAN



SECTION A-A



SECTION THRU APPROACH SLAB

- FLARE BARS AT APPROACH SLAB ENDS AS NECESSARY WHILE MAINTAINING MAX. SPACING AND 3" CLEAR COVER.
- APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.
- MEASURED NORMAL TO ABUTMENT
- (T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.
- (T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY MJH | PLANS CK'D. BAF

EAST STRUCTURAL APPROACH SLAB

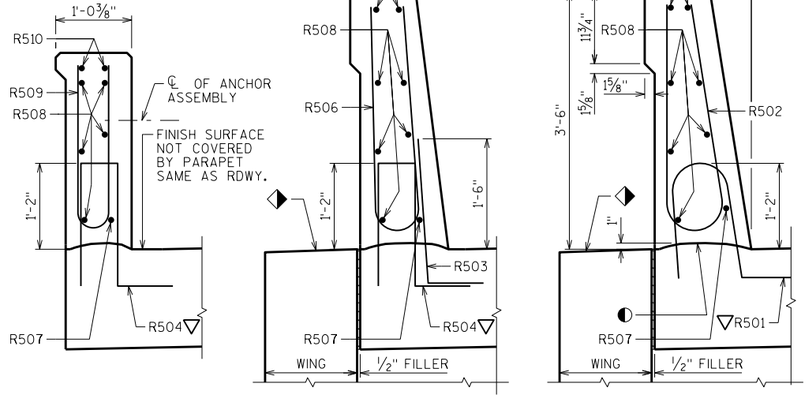
SHEET 16

405

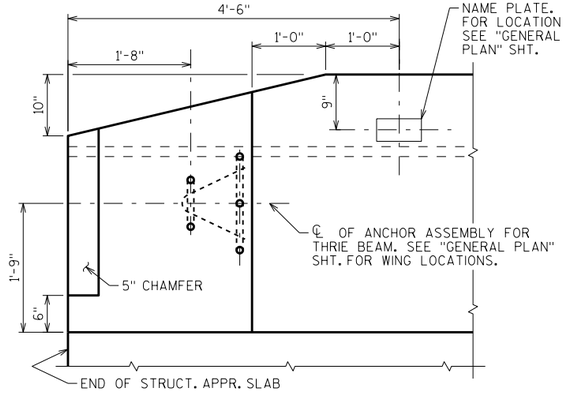
8

8

SCALE = 2.00



SECTION A-A SECTION B-B SECTION C-C



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

STATE PROJECT NUMBER

1021-04-78

BILL OF BARS

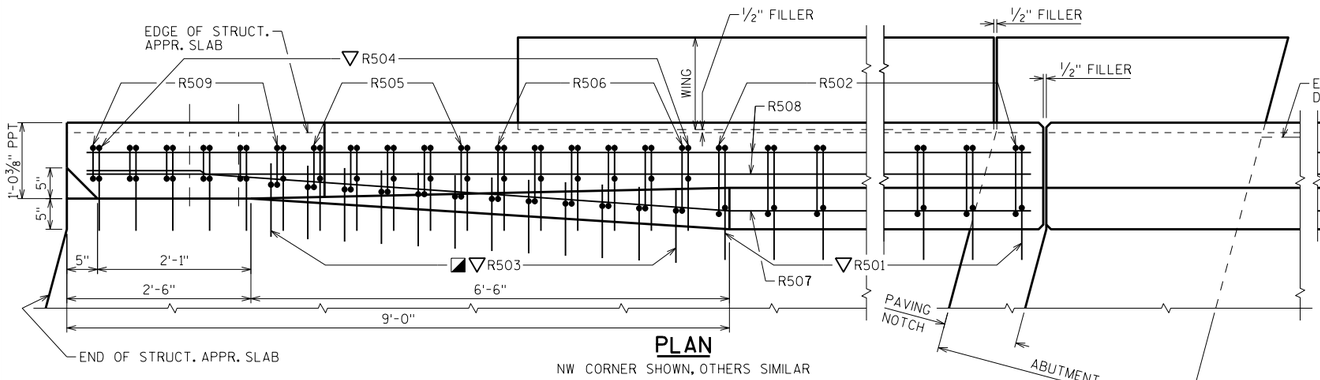
BAR MARK	COAT	ABUT.	ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	24	24	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-8"	X		PARAPET HORIZ.
R508	X	10	10	19'-6"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	19'-6"	X		PARAPET 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.

BAR SERIES TABLE

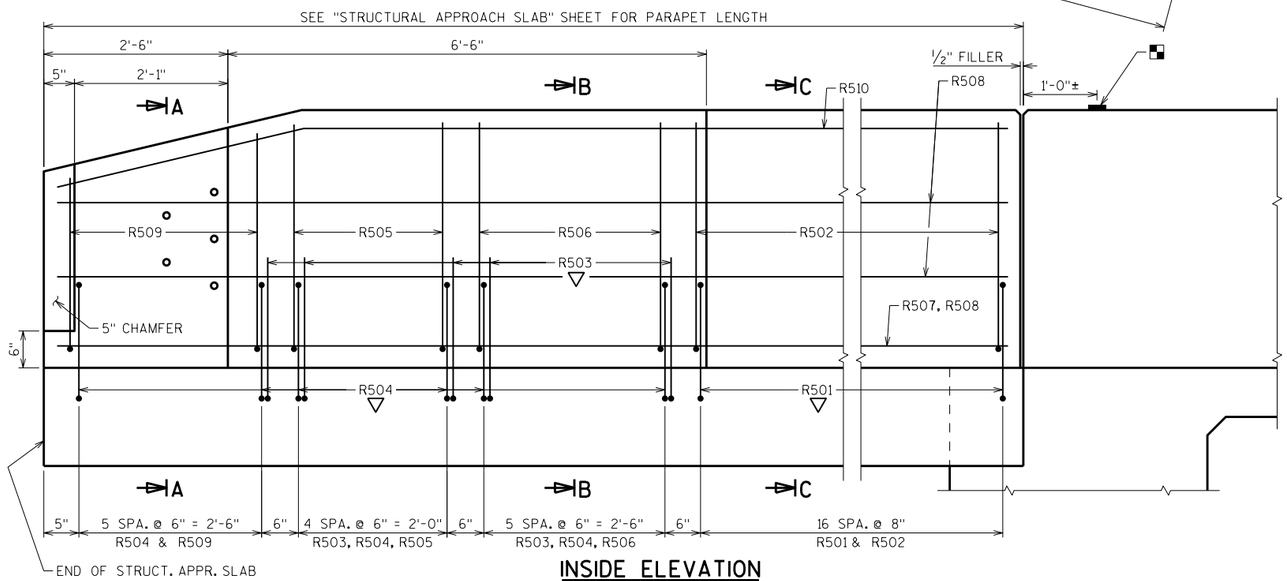
BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



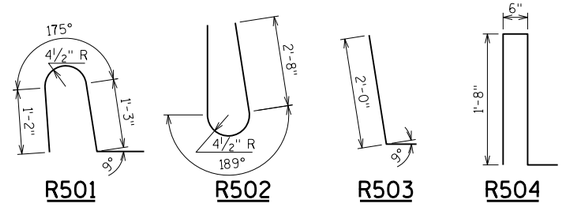
PLAN

NW CORNER SHOWN, OTHERS SIMILAR

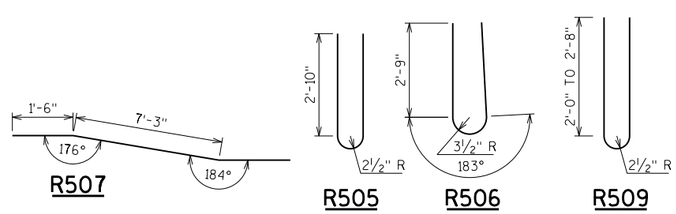


INSIDE ELEVATION

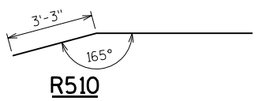
NW CORNER SHOWN, OTHERS SIMILAR
WING & STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY



R501 R502 R503 R504



R507 R505 R506 R509



R510

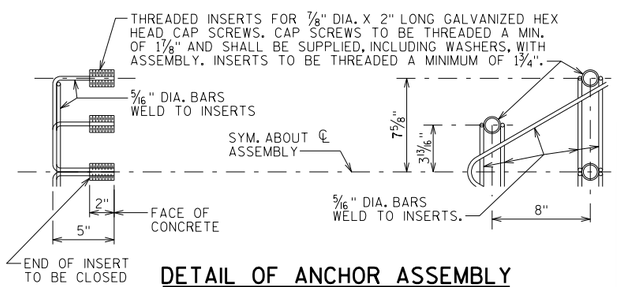
BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◆ SLOPE FOR DRAINAGE

◪ USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501, R503, AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.



DETAIL OF ANCHOR ASSEMBLY

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-286

DRAWN BY MJH | PLANS CK'D. BAF

SINGLE SLOPE PARAPET 42SS

SHEET 17

406

SCALE = 1.00

8

8

Alignment: AliProf-IH94WB-CTHNN
Start Sta: 137+08.630
End Sta: 179+58.634

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
137+08.630	61	0	0	3	0	0	0	0	0
138+00.000	58	203	203	17	44	203	203	44	158.5
139+00.000	56	212	212	20	88	414	414	133	281.72
140+00.000	110	307	307	16	86	721	721	219	501.89
141+00.000	184	545	545	18	82	1266	1266	301	964.61
142+00.000	297	891	891	23	99	2157	2157	400	1756.74
143+00.000	240	994	994	27	120	3150	3150	519	2630.73
144+00.000	179	775	775	35	148	3925	3925	668	3257.21
145+00.000	401	1073	1073	31	159	4998	4998	827	4170.75
146+00.000	101	930	930	33	154	5928	5928	981	4946.34
147+00.000	277	700	700	43	182	6628	6628	1163	5464.3
148+00.000	200	883	883	56	237	7511	7511	1401	6110.56
149+00.000	4	378	378	140	473	7890	7890	1873	6016.39
150+00.000	1	9	9	523	1597	7899	7899	3470	4428.45
151+00.000	0	2	2	573	2639	7900	7900	6109	1791.23
151+64.176	0	0	0	510	1673	7900	7900	7782	118.33
152+00.000	0	0	0	460	836	7900	7900	8618	-718.01
153+00.000	0	0	0	296	1819	7900	7900	10437	-2537.25
154+00.000	0	0	0	389	1648	7900	7900	12085	-4185.28
154+39.792	0	0	0	470	823	7900	7900	12909	-5008.6
155+00.000	0	0	0	623	1585	7900	7900	14494	-6593.54
156+00.000	0	0	0	590	2919	7900	7900	17413	-9512.54
157+00.000	0	0	0	772	3277	7900	7900	20690	-12789.5
157+44.117	0	0	0	865	1739	7900	7900	22428	-14528.11
157+44.150	0	0	0	0	1	7900	7900	22429	-14528.8
158+31.181	0	0	0	0	0	7900	7900	22429	-14528.8
159+18.590	0	0	0	0	0	7900	7900	22429	-14528.8
159+18.600	0	0	0	958	0	7900	7900	22429	-14529.03
160+00.000	0	0	0	878	3598	7900	7900	26027	-18127.18
161+00.000	0	0	0	795	4028	7900	7900	30055	-22155.18
162+00.000	0	0	0	600	3360	7900	7900	33416	-25515.57
163+00.000	0	0	0	409	2429	7900	7900	35845	-27944.86
163+08.600	0	0	0	393	166	7900	7900	36011	-28110.88
163+33.602	0	0	0	362	454	7900	7900	36465	-28565.26
163+58.616	0	0	0	357	433	7900	7900	36898	-28998.07
164+00.000	0	0	0	321	676	7900	7900	37574	-29673.94
164+50.000	0	0	0	298	746	7900	7900	38320	-30419.46
164+77.044	0	0	0	293	385	7900	7900	38704	-30804.02
165+00.000	0	0	0	294	324	7900	7900	39028	-31128.25
165+08.630	0	0	0	293	122	7900	7900	39150	-31250.11
166+00.000	0	0	0	262	1219	7900	7900	40370	-32469.03
167+00.000	1	2	2	196	1102	7902	7902	41471	-33569.18
168+00.000	2	6	6	186	920	7908	7908	42391	-34483.1
169+00.000	5	14	14	149	808	7923	7923	43199	-35276.34
170+00.000	10	28	28	133	681	7951	7951	43880	-35928.9
171+00.000	16	48	48	92	544	7999	7999	44423	-36424.64
172+00.000	27	79	79	48	339	8078	8078	44762	-36684.53
173+00.000	36	116	116	9	139	8194	8194	44901	-36707.35
174+00.000	45	151	151	0	23	8345	8345	44924	-36579.26
175+00.000	67	208	208	0	0	8553	8553	44924	-36371.75
176+00.000	75	263	263	0	0	8816	8816	44924	-36108.67
177+00.000	76	281	281	0	0	9096	9096	44924	-35827.88

Continue

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
178+00.000	57	248	248	2	5	9344	9344	44929	-35585.02
179+00.000	58	213	213	7	21	9557	9557	44951	-35393.4
179+58.634	0	63	63	0	10	9620	9620	44960	-35340.58

Alignment: 94WB-widening-stage1-west
Start Sta: 130+44.904
End Sta: 137+06.930

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
130+44.904	0	0	0	0	0	0	0	0	0
131+00.000	0	0	0	0	0	0	0	0	0
132+00.000	16.48	30.34	30.34	0	0	30.34	30.34	0	30.34
133+00.000	14.26	56.63	56.63	0.4	0.95	86.98	86.98	0.95	86.02
134+00.000	17.52	58.85	58.85	19.21	47.21	145.83	145.83	48.17	97.66
135+00.000	14.07	58.49	58.49	31.55	122.21	204.32	204.32	170.37	33.95
136+00.000	9.98	44.69	44.69	41.98	178.62	249.01	249.01	348.99	-99.98
137+00.000	7.89	33.2	33.2	28.8	171.87	282.21	282.21	520.86	-238.65
137+06.930	8.22	2.07	2.07	21.31	8.36	284.28	284.28	529.22	-244.94

Alignment: AliProf-IH94WB-CTHNN
Start Sta: 137+08.630
End Sta: 155+00

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
137+08.630	8	0	0	21.04	0	0	0	0	0
138+00.000	3.87	20.09	20.09	11.66	71.94	20.09	20.09	71.94	-51.85
139+00.000	4.01	14.6	14.6	12.82	58.94	34.7	34.7	130.88	-96.18
140+00.000	4.47	15.7	15.7	17.23	72.35	50.4	50.4	203.23	-152.83
141+00.000	5.42	18.31	18.31	25.72	103.4	68.7	68.7	306.63	-237.92
142+00.000	6.54	22.14	22.14	42.71	164.73	90.84	90.84	471.36	-380.51
143+00.000	9.09	28.94	28.94	46.36	214.43	119.78	119.78	685.78	-566
144+00.000	11.93	38.94	38.94	40.56	209.25	158.72	158.72	895.03	-736.31
145+00.000	17.69	54.87	54.87	32.85	176.74	213.59	213.59	1071.77	-858.18
146+00.000	23.76	76.76	76.76	17.92	122.24	290.35	290.35	1194	-903.66
147+00.000	29.68	98.95	98.95	6.11	57.86	389.3	389.3	1251.86	-862.56
148+00.000	33.85	117.63	117.63	5.46	27.85	506.93	506.93	1279.71	-772.78
149+00.000	37.43	131.99	131.99	6.23	28.13	638.92	638.92	1307.85	-668.92
150+00.000	40.92	145.09	145.09	10.23	39.61	784.02	784.02	1347.46	-563.44
151+00.000	42.75	154.95	154.95	0	24.62	938.96	938.96	1372.08	-433.11
151+64.176	44.51	103.7	103.7	0.02	0.03	1042.66	1042.66	1372.11	-329.44
152+00.000	44.63	59.13	59.13	0	0.02	1101.79	1101.79	1372.12	-270.33
153+00.000	43.19	162.63	162.63	0	0	1264.43	1264.43	1372.12	-107.7
154+00.000	42.81	159.26	159.26	0	0	1423.69	1423.69	1372.12	51.56
154+39.792	44.1	64.04	64.04	0	0	1487.72	1487.72	1372.12	115.6
155+00.000	42.4	96.44	96.44	0	0	1584.16	1584.16	1372.12	212.04
					TOTAL =	1868.44		1901.34	

Alignment: AliProf-IH94WB-CTHNN
Sample Line Group: SLG-2
Start Sta: 165+08.630
End Sta: 179+58.634

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
165+08.630	51	8	8	0	0	8	8	0	8
166+00.000	50	170	170	0	0	178	178	0	178
167+00.000	41	168	168	0	1	346	346	1	346
168+00.000	36	142	142	6	14	489	489	15	474
169+00.000	32	125	125	9	36	614	614	51	563
170+00.000	26	107	107	12	50	721	721	101	620
171+00.000	21	88	88	17	69	810	810	170	639
172+00.000	18	72	72	16	79	882	882	250	632
173+00.000	11	54	54	31	112	936	936	362	574
174+00.000	9	37	37	31	149	973	973	511	462
175+00.000	7	29	29	24	132	1002	1002	642	359
176+00.000	6	25	25	22	111	1027	1027	754	273
177+00.000	5	21	21	16	93	1048	1048	846	201
178+00.000	5	19	19	22	92	1066	1066	938	128
179+00.000	6	21	21	22	105	1087	1087	1044	43
179+58.634	5	11	11	24	65	1098	1098	1108	-10

Alignment: 94WB-widening-stage1-east
Sample Line Group: SLG-5
Start Sta: 179+58.634
End Sta: 189+41.457

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
179+58.634	5	0	0	24	0	0	0	0	0
180+00.000	5	7	7	31	55	7	7	55	-48
181+00.000	5	18	18	40	171	25	25	226	-201
182+00.000	6	21	21	44	201	45	45	428	-382
183+00.000	8	26	26	48	221	71	71	649	-578
184+00.000	13	38	38	37	204	109	109	853	-744
185+00.000	19	60	60	29	158	169	169	1011	-842
186+00.000	28	88	88	7	87	257	257	1098	-842
187+00.000	34	114	114	1	18	371	371	1117	-746
188+00.000	40	137	137	0	2	508	508	1118	-611
189+00.000	42	152	152	0	0	660	660	1118	-459
189+41.457	42	64	64	0	0	724	724	1118	-394
					TOTAL =	1822		2227	

Alignment: AliProf-IH94WB-CTHNN
Start Sta: 137+08.630
End Sta: 179+58.634

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
137+08.630	77	0	0	0	0	0	0	0	0
138+00.000	47	211	211	0	1	211	211	1	210
139+00.000	56	191	191	0	1	402	402	2	400
140+00.000	61	216	216	0	0	618	618	3	615
141+00.000	72	245	245	1	1	863	863	4	859
142+00.000	117	349	349	0	1	1212	1212	6	1206
143+00.000	149	492	492	0	0	1704	1704	6	1698
144+00.000	234	710	710	0	0	2414	2414	6	2408
145+00.000	220	841	841	0	0	3255	3255	6	3249
146+00.000	198	773	773	0	0	4028	4028	6	4022
147+00.000	173	687	687	0	0	4715	4715	6	4709
148+00.000	151	601	601	0	0	5315	5315	6	5310
149+00.000	129	519	519	0	0	5834	5834	6	5829
150+00.000	115	453	453	0	0	6287	6287	6	6281
151+00.000	95	389	389	0	0	6675	6675	6	6670
152+00.000	81	325	325	0	0	7000	7000	6	6994
153+00.000	62	265	265	0	0	7264	7264	6	7259
154+00.000	48	204	204	0	0	7468	7468	6	7463
155+00.000	43	168	168	0	0	7636	7636	6	7631
156+00.000	41	156	156	0	0	7792	7792	6	7786
156+37.325	41	57	57	0	0	7849	7849	6	7843
157+00.000	30	83	83	0	0	7931	7931	6	7926
157+44.100	30	50	50	0	0	7981	7981	6	7975
157+44.120	0	0	0	0	0	7981	7981	6	7975
158+31.181	0	0	0	0	0	7981	7981	6	7975
159+18.580	0	0	0	0	0	7981	7981	6	7975
159+18.600	30	0	0	2	0	7981	7981	6	7975
160+00.000	40	106	106	4	12	8087	8087	17	8070
161+00.000	62	189	189	0	10	8276	8276	27	8249
162+00.000	75	253	253	0	0	8529	8529	27	8501
163+00.000	79	284	284	0	0	8813	8813	27	8785
164+00.000	75	285	285	0	0	9098	9098	27	9070
164+59.370	73	162	162	0	0	9260	9260	27	9232
164+87.362	70	74	74	0	0	9334	9334	27	9306
165+00.000	65	32	32	0	0	9365	9365	27	9338
165+09.320	62	22	22	0	0	9387	9387	27	9360
166+00.000	77	234	234	0	0	9621	9621	27	9594
166+27.869	80	81	81	0	0	9702	9702	27	9675
167+00.000	77	210	210	0	0	9912	9912	27	9885
168+00.000	75	281	281	0	0	10193	10193	27	10165
169+00.000	76	279	279	0	0	10471	10471	27	10444
170+00.000	76	281	281	0	0	10752	10752	27	10725
171+00.000	73	276	276	0	0	11029	11029	27	11001
172+00.000	59	245	245	0	0	11274	11274	27	11246
173+00.000	67	233	233	0	0	11507	11507	27	11479
174+00.000	71	256	256	0	0	11762	11762	27	11735
175+00.000	81	282	282	0	0	12045	12045	27	12017
176+00.000	80	298	298	0	0	12343	12343	27	12315
177+00.000	94	323	323	0	0	12666	12666	28	12639
178+00.000	115	389	389	0	0	13055	13055	28	13027
179+00.000	130	455	455	0	1	13509	13509	29	13481
179+58.634	0	141	141	0	0	13651	13651	29	13622

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PROJECT NO: 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS: STAGE 3	SHEET 410	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090101-EW-IH94.DWG
LAYOUT NAME - 04

PLOT DATE : 6/19/2020 12:01 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1" = 1'

Alignment: 94WB-EXIST
Start Sta: 130+45.743
End Sta: 137+08.559

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
130+45.743	26	0	0	0	0	0	0	0	0
131+00.000	38	64	64	0	0	64	64	0	64
132+00.000	44	151	151	2	4	216	216	4	212
133+00.000	40	155	155	0	4	371	371	8	362
133+13.848	39	20	20	0	0	391	391	8	383
134+00.000	47	137	137	0	0	528	528	8	520
135+00.000	65	208	208	0	0	736	736	8	728
136+00.000	84	276	276	0	0	1012	1012	8	1004
137+00.000	99	338	338	0	0	1350	1350	8	1342
137+08.559	99	31	31	0	0	1382	1382	8	1374

Alignment: 94WB-EXIST
Start Sta: 130+45.743
End Sta: 137+08.559

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
130+45.743	0	0	0	0	0	0	0	0	0
131+00.000	0	0	0	0	0	0	0	0	0
132+00.000	0	0	0	0	0	0	0	0	0
133+00.000	0	0	0	0	0	0	0	0	0
133+13.848	0	0	0	0	0	0	0	0	0
134+00.000	11	17	17	11	23	17	17	23	-6
135+00.000	15	48	48	1	30	65	65	53	12
136+00.000	21	68	68	0	3	133	133	56	78
137+00.000	30	95	95	0	0	228	228	56	172
137+08.559	47	12	12	0	0	241	241	56	185

Alignment: AliProf-IH94WB-CTHNN
Start Sta: 137+08.630
End Sta: 179+58.634

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
137+08.630	47	0	0	0	0	0	0	0	0
138+00.000	49	164	164	0	0	164	164	0	164
139+00.000	69	219	219	0	0	383	383	0	383
140+00.000	94	301	301	0	0	684	684	0	684
141+00.000	133	419	419	0	0	1103	1103	0	1103
142+00.000	133	493	493	0	0	1596	1596	0	1596
143+00.000	110	450	450	5	13	2046	2046	13	2033
144+00.000	0	203	203	0	13	2249	2249	25	2224
					Total =	3872		89	

Alignment: 94WB-EXIST
Start Sta: 179+58.047
End Sta: 189+91.028

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
179+58.047	110.36	0	0	0	0	0	0	0	0
180+00.000	99.81	163.28	163.28	0	0	163.28	163.28	0	163.28
181+00.000	93.37	357.74	357.74	0	0	521.02	521.02	0	521.02
182+00.000	74.55	310.96	310.96	0	0	831.99	831.99	0	831.99
183+00.000	68.73	265.33	265.33	0	0	1097.32	1097.32	0	1097.32
184+00.000	59.41	237.3	237.3	0	0	1334.62	1334.62	0	1334.62
185+00.000	43.45	190.48	190.48	1.31	3.15	1525.1	1525.1	3.15	1521.95
186+00.000	28.78	133.76	133.76	0	3.15	1658.86	1658.86	6.3	1652.56
187+00.000	22.05	94.13	94.13	0.26	0.64	1752.99	1752.99	6.94	1746.05
188+00.000	22.14	81.85	81.85	0.33	1.43	1834.84	1834.84	8.37	1826.46
189+00.000	18.99	76.18	76.18	0.28	1.47	1911.02	1911.02	9.85	1901.18
189+32.713	18.78	22.89	22.89	0	0.22	1933.91	1933.91	10.07	1923.84
189+91.028	0	20.29	20.29	0	0	1954.19	1954.19	10.07	1944.13

Alignment: 94WB-EXIST
Start Sta: 179+58.047
End Sta: 189+91.028

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
179+58.047	51.72	0	0	17.3	0	0	0	0	0
180+00.000	61.31	87.81	87.81	15.12	32.74	87.81	87.81	32.74	55.07
181+00.000	100.96	300.49	300.49	4.23	46.58	388.3	388.3	79.33	308.98
182+00.000	139.99	446.21	446.21	0	10.17	834.51	834.51	89.5	745.01
183+00.000	124.14	489.13	489.13	0	0.02	1323.64	1323.64	89.52	1234.13
184+00.000	86.9	390.81	390.81	0.1	0.25	1714.45	1714.45	89.76	1624.69
185+00.000	51.27	255.87	255.87	10.71	26	1970.32	1970.32	115.77	1854.55
186+00.000	31.1	152.53	152.53	14.25	60.07	2122.85	2122.85	175.84	1947.01
187+00.000	21.3	97.04	97.04	13.43	66.63	2219.89	2219.89	242.47	1977.42
188+00.000	18.56	73.83	73.83	10.4	57.38	2293.72	2293.72	299.85	1993.87
189+00.000	17.41	66.63	66.63	9.98	49.05	2360.35	2360.35	348.9	2011.44
189+32.713	16.64	20.63	20.63	10.3	15.96	2380.98	2380.98	364.87	2016.11
189+91.028	15.95	35.2	35.2	9.64	27.98	2416.18	2416.18	392.85	2023.33
					Total =	4370		403	

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PROJECT NO: 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS: STAGE 3	SHEET 412	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090101-EW-IH94.DWG
LAYOUT NAME - 06

PLOT DATE : 6/19/2020 12:01 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1" = 1'

Alignment: AliProf-IH94EB-CTHNN
Sample Line Group: SLG-1
Start Sta: 145+50.000
End Sta: 169+50.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
145+50.000	65	0	0	4	0	0	0	0	0
146+00.000	64	120	120	15	22	120	120	22	98
147+00.000	65	239	239	16	73	359	359	95	264
148+00.000	58	227	227	32	114	586	586	208	378
149+00.000	42	186	186	113	347	772	772	556	217
150+00.000	27	129	129	243	856	902	902	1412	-510
150+30.424	22	28	28	236	351	929	929	1762	-833
151+00.000	9	39	39	253	818	969	969	2580	-1612
151+48.879	3	11	11	258	601	980	980	3181	-2202
151+73.865	2	2	2	239	299	982	982	3481	-2499
151+98.656	1	1	1	226	277	983	983	3758	-2775
152+00.000	1	0	0	225	15	983	983	3773	-2790
153+00.000	0	1	1	194	1010	984	984	4783	-3799
153+37.056	0	0	0	183	336	984	984	5119	-4135
154+00.000	0	0	0	168	532	984	984	5651	-4667
154+47.787	0	0	0	180	401	984	984	6052	-5068
154+72.857	0	0	0	213	237	984	984	6289	-5305
154+97.913	0	0	0	248	278	984	984	6567	-5583
155+00.000	0	0	0	252	25	984	984	6592	-5608
156+00.000	0	0	0	319	1375	985	985	7968	-6983
157+00.000	0	0	0	342	1592	985	985	9560	-8575
157+38.040	0	0	0	337	622	985	985	10182	-9198
157+38.060	0	0	0	0	0	985	985	10182	-9198
158+25.168	0	0	0	0	0	985	985	10182	-9198
159+12.530	0	0	0	0	0	985	985	10182	-9198
159+12.550	3	0	0	265	0	985	985	10183	-9198
160+00.000	13	27	27	263	1111	1011	1011	11293	-10282
161+00.000	18	57	57	214	1148	1068	1068	12442	-11374
162+00.000	29	87	87	131	832	1155	1155	13274	-12119
162+57.403	33	67	67	107	330	1222	1222	13604	-12382
163+17.545	36	77	77	84	277	1299	1299	13881	-12582
164+00.000	37	111	111	76	319	1410	1410	14200	-12790
164+56.173	44	85	85	102	242	1494	1494	14442	-12947
165+00.000	47	74	74	93	206	1568	1568	14647	-13079
165+25.000	50	45	45	112	123	1613	1613	14771	-13158
166+00.000	53	142	142	132	442	1755	1755	15212	-13458
167+00.000	55	199	199	135	643	1954	1954	15856	-13902
168+00.000	61	215	215	82	523	2169	2169	16379	-14209
169+00.000	63	231	231	22	251	2400	2400	16630	-14230
169+50.000	66	119	119	13	42	2519	2519	16671	-14152

Alignment: 94EB-xover-stage2
Start Sta: 133+13.794
End Sta: 155+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
133+13.794	15	0	0	0	0	0	0	0	0
134+00.000	14	46	46	0	0	46	46	0	46
135+00.000	19	62	62	0	0	108	108	0	108
136+00.000	21	74	74	0	0	182	182	0	182
137+00.000	21	77	77	0	0	259	259	0	259
138+00.000	16	68	68	9	23	326	326	23	303
139+00.000	15	57	57	22	75	383	383	98	286
140+00.000	15	57	57	39	146	440	440	243	197
141+00.000	8	44	44	71	265	484	484	508	-24
142+00.000	1	17	17	116	451	501	501	959	-459
143+00.000	0	1	1	92	501	502	502	1461	-958
144+00.000	0	0	0	84	423	502	502	1883	-1381
145+00.000	5	9	9	70	371	511	511	2254	-1744
146+00.000	13	33	33	49	287	544	544	2542	-1998
147+00.000	22	65	65	31	193	608	608	2735	-2127
148+00.000	28	92	92	25	135	700	700	2870	-2170
149+00.000	29	105	105	21	111	805	805	2981	-2177
150+00.000	25	99	99	10	75	904	904	3057	-2153
151+00.000	13	70	70	4	32	973	973	3089	-2116
152+00.000	3	30	30	1	12	1004	1004	3101	-2097
153+00.000	1	9	9	5	16	1013	1013	3117	-2104
154+00.000	1	5	5	10	37	1018	1018	3154	-2136
155+00.000	0	2	2	0	25	1021	1021	3178	-2158

Alignment: 94EB-xover-stage2
Start Sta: 155+00.000
End Sta: 190+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
155+00.000	34	63	63	0	0	63	63	0	63
156+00.000	36	129	129	0	0	192	192	0	192
157+00.000	30	122	122	0	0	314	314	0	314
157+48.719	0	27	27	0	0	341	341	0	341
157+48.750	0	0	0	0	0	341	341	0	341
158+35.108	0	0	0	0	0	341	341	0	341
159+23.200	0	0	0	0	0	341	341	0	341
159+23.219	32	0	0	0	0	341	341	0	341
160+00.000	54	122	122	0	0	462	462	0	462
161+00.000	73	234	234	0	0	697	697	1	696
162+00.000	79	282	282	0	0	978	978	1	977
163+00.000	79	293	293	0	0	1271	1271	1	1270
164+00.000	75	286	286	0	0	1557	1557	1	1556
165+00.000	84	295	295	0	0	1852	1852	1	1851
166+00.000	76	297	297	0	0	2149	2149	1	2148
167+00.000	81	291	291	0	0	2440	2440	1	2439
168+00.000	93	323	323	0	0	2763	2763	1	2762
169+00.000	101	360	360	0	0	3123	3123	1	3122

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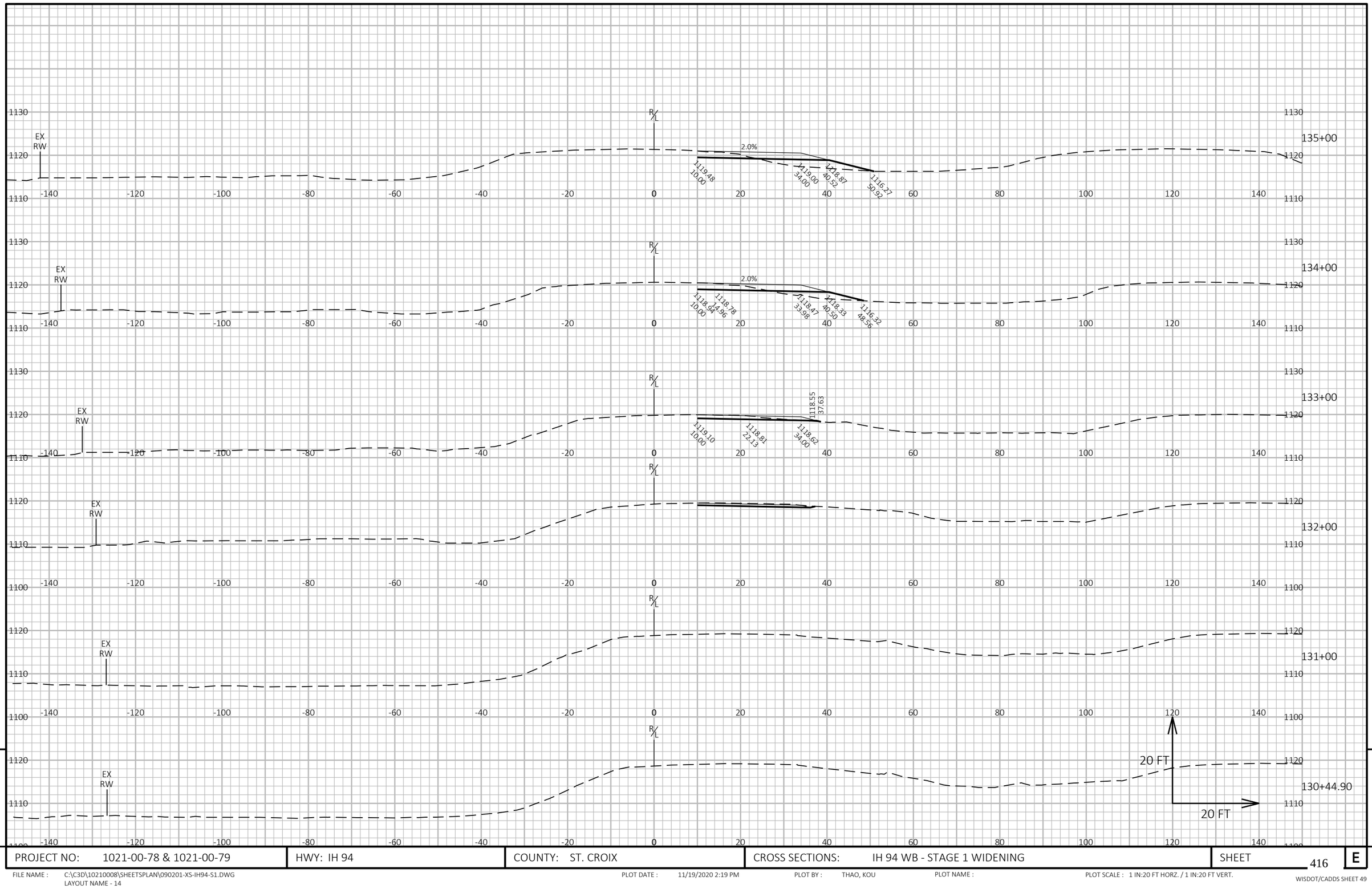
PROJECT NO: 1021-00-78	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS: STAGE 2	SHEET 414	E

Continue

170+00.000	103	378	378	0	0	3501	3501	1	3500
171+00.000	106	387	387	0	0	3888	3888	1	3887
172+00.000	111	403	403	0	0	4291	4291	1	4290
173+00.000	115	419	419	0	0	4710	4710	1	4709
174+00.000	113	422	422	0	0	5133	5133	1	5132
175+00.000	0	209	209	0	0	5342	5342	1	5341

Alignment: 94EB-xover-stage2
Start Sta: 133+13.794
End Sta: 190+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
175+00.000	44	82	82	0	0	82	82	0	82
176+00.000	28	134	134	0	0	217	217	0	217
177+00.000	15	80	80	3	8	296	296	8	289
178+00.000	5	37	37	15	43	333	333	51	283
179+00.000	0	10	10	34	117	343	343	168	175
180+00.000	0	0	0	63	233	343	343	400	-57
181+00.000	0	0	0	106	407	343	343	807	-464
182+00.000	4	7	7	130	570	350	350	1377	-1027
183+00.000	11	28	28	114	589	378	378	1967	-1589
184+00.000	14	46	46	87	486	424	424	2453	-2029
185+00.000	15	53	53	48	326	476	476	2779	-2302
186+00.000	14	54	54	18	158	531	531	2937	-2406
187+00.000	16	56	56	1	45	586	586	2982	-2396
188+00.000	15	57	57	0	3	643	643	2985	-2342
189+00.000	16	57	57	0	0	700	700	2985	-2285
190+00.000	3	36	36	0	0	736	736	2985	-2250
					TOTAL =	7098		6165	



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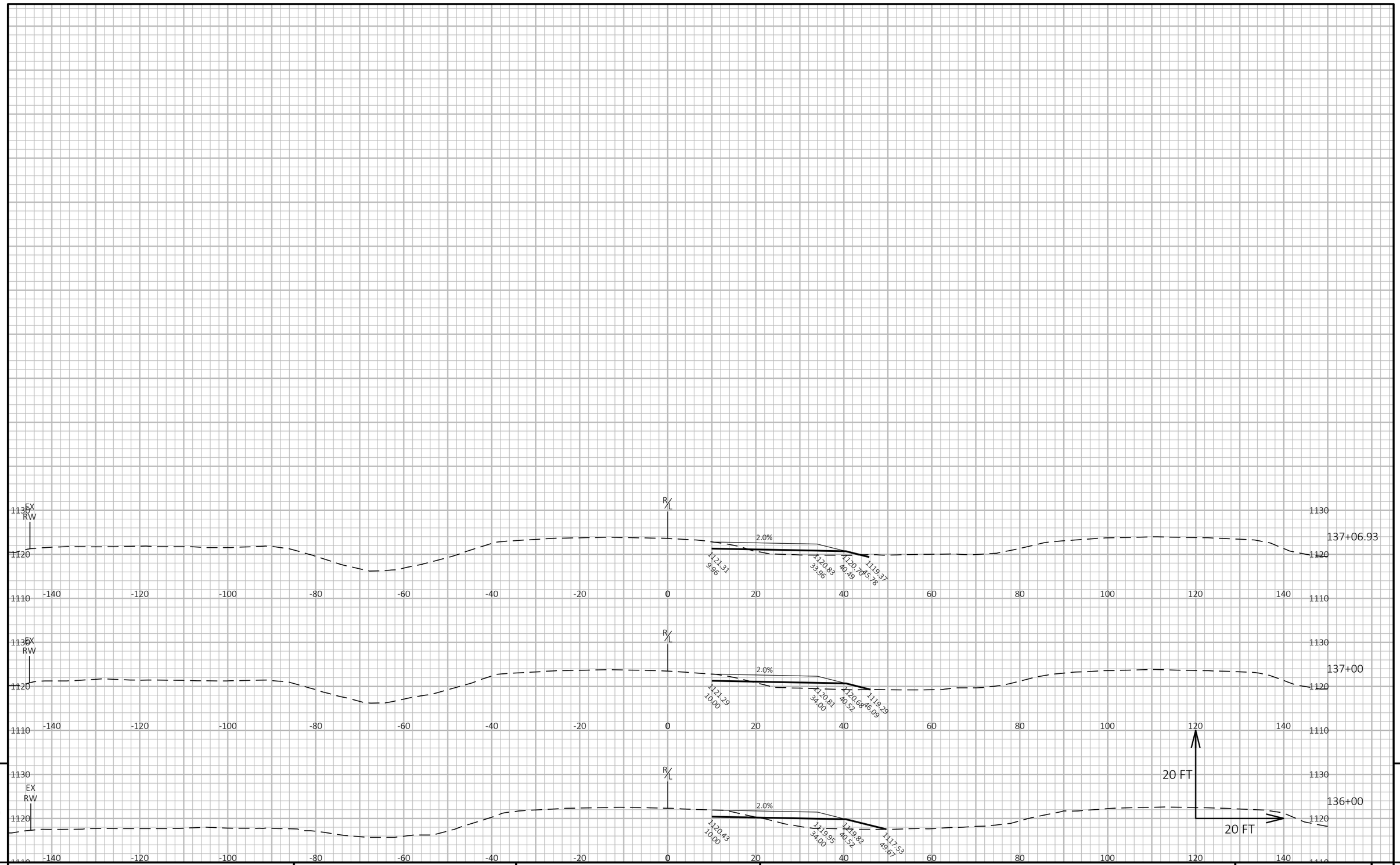
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1 WIDENING	SHEET 416	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 14

PLOT DATE : 11/19/2020 2:19 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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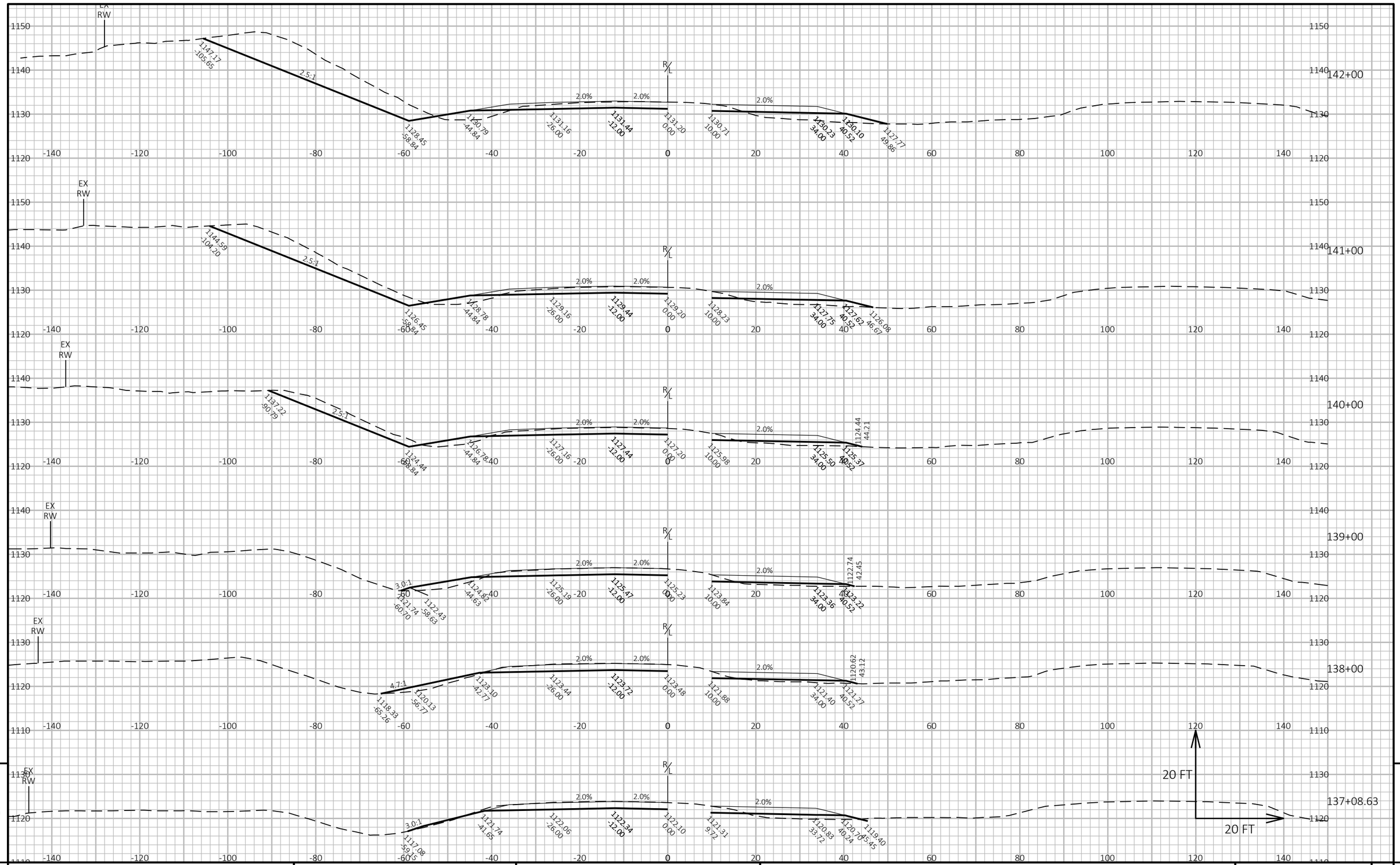
9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1 WIDENING	SHEET 417	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 15

PLOT DATE : 11/19/2020 2:19 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 418	E

9

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 3

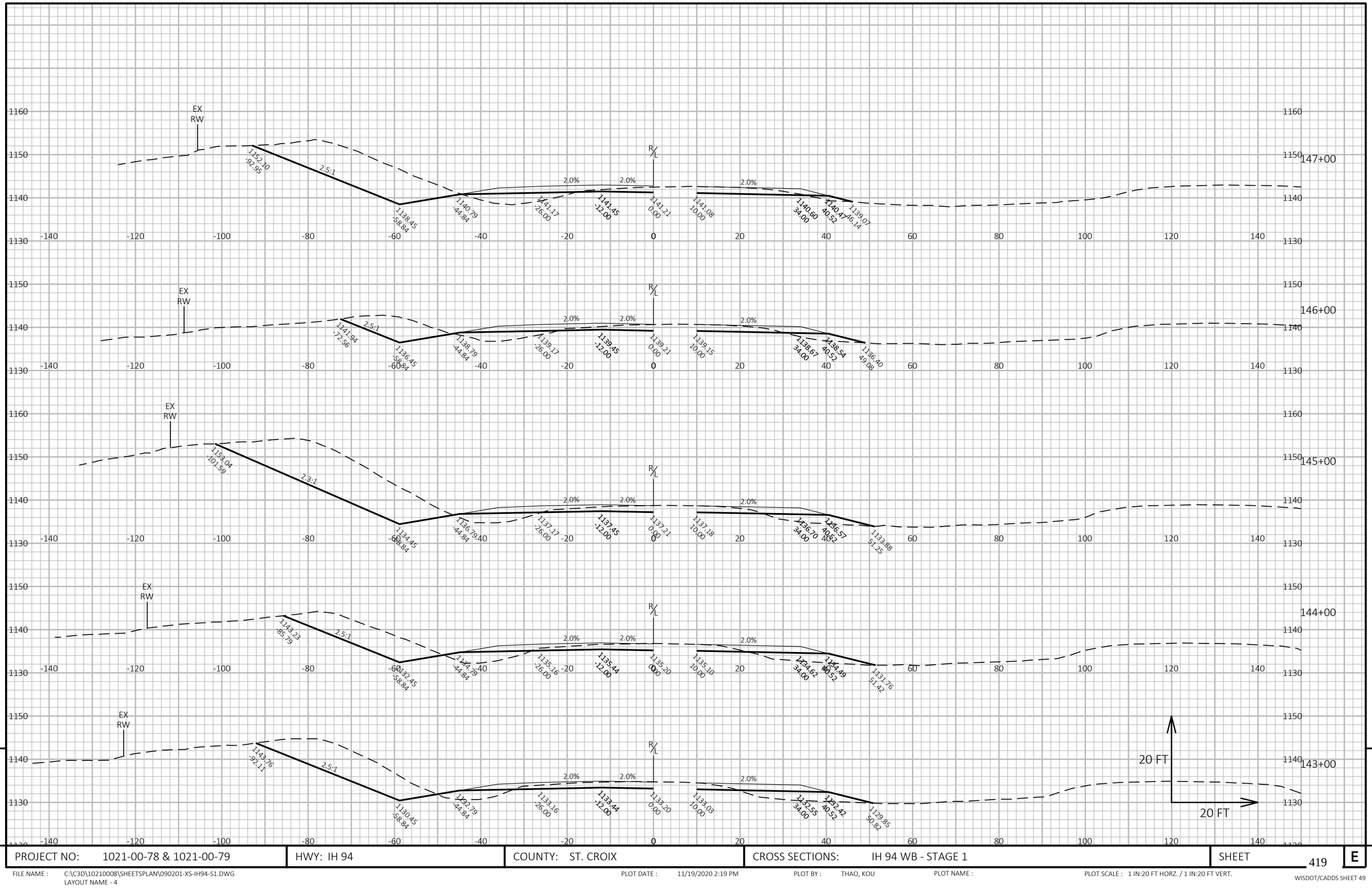
PLOT DATE : 11/19/2020 2:19 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

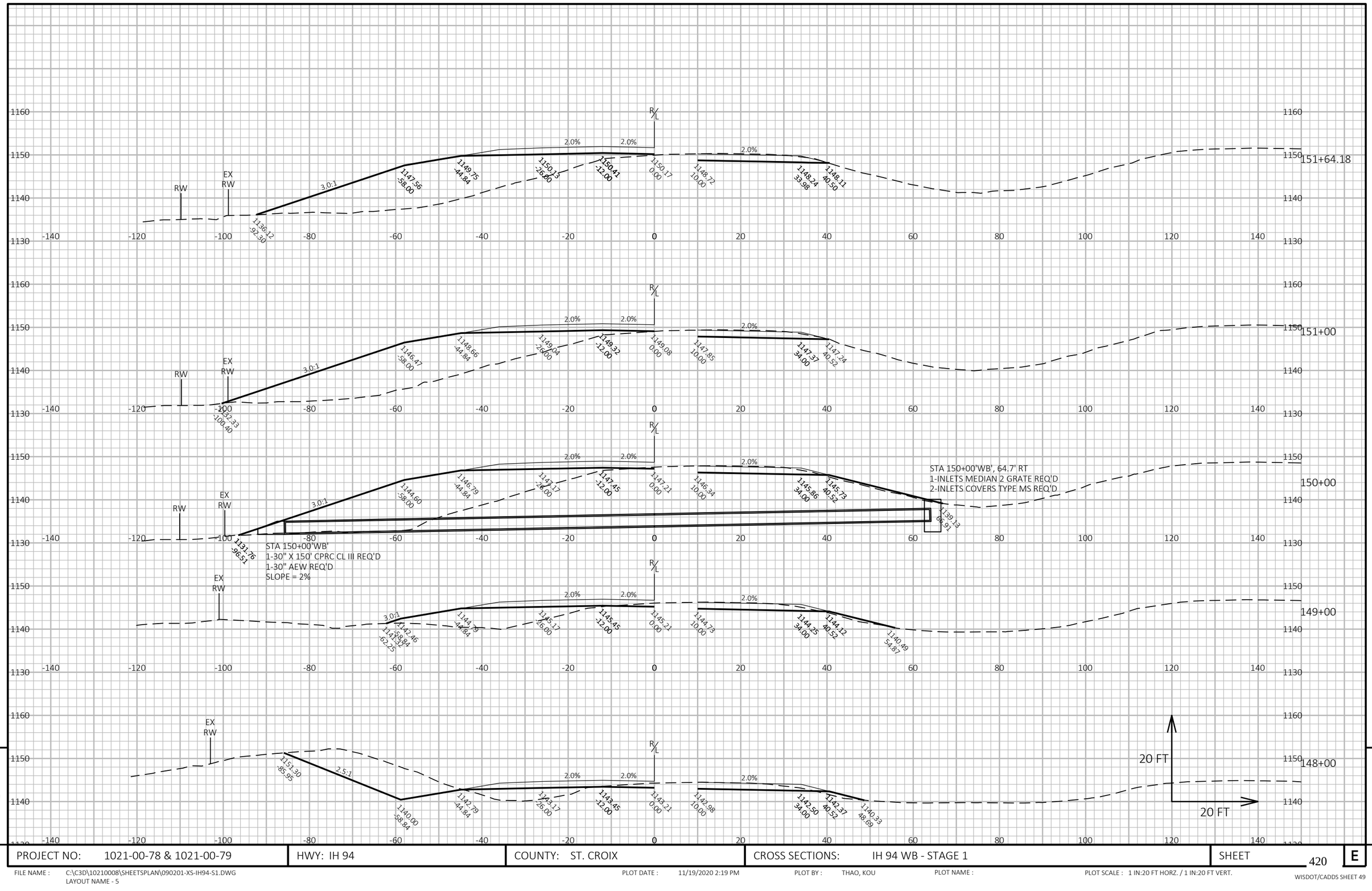


PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 419 E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 4

PLOT DATE : 11/19/2020 2:19 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 420	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 5

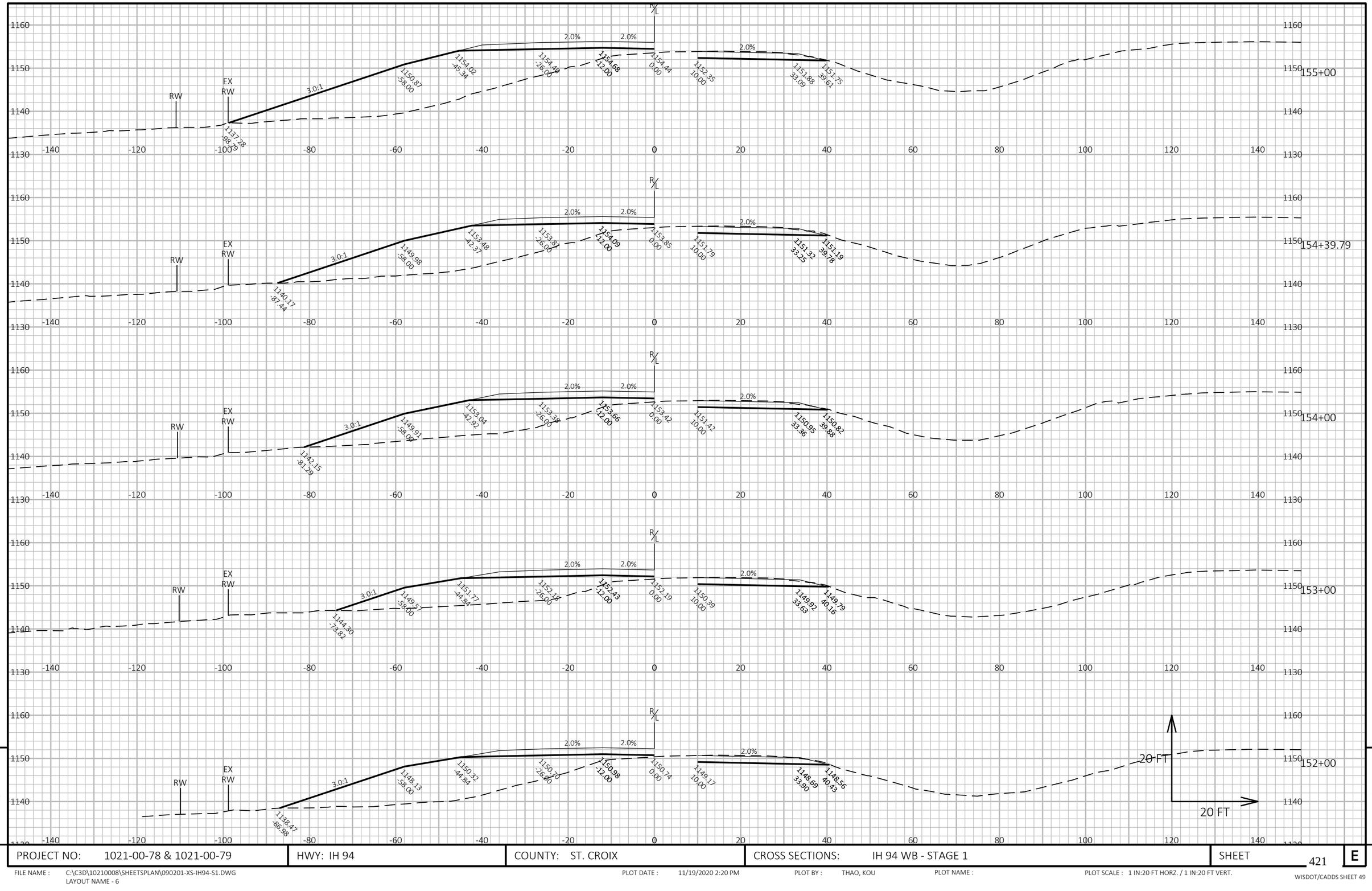
PLOT DATE : 11/19/2020 2:19 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

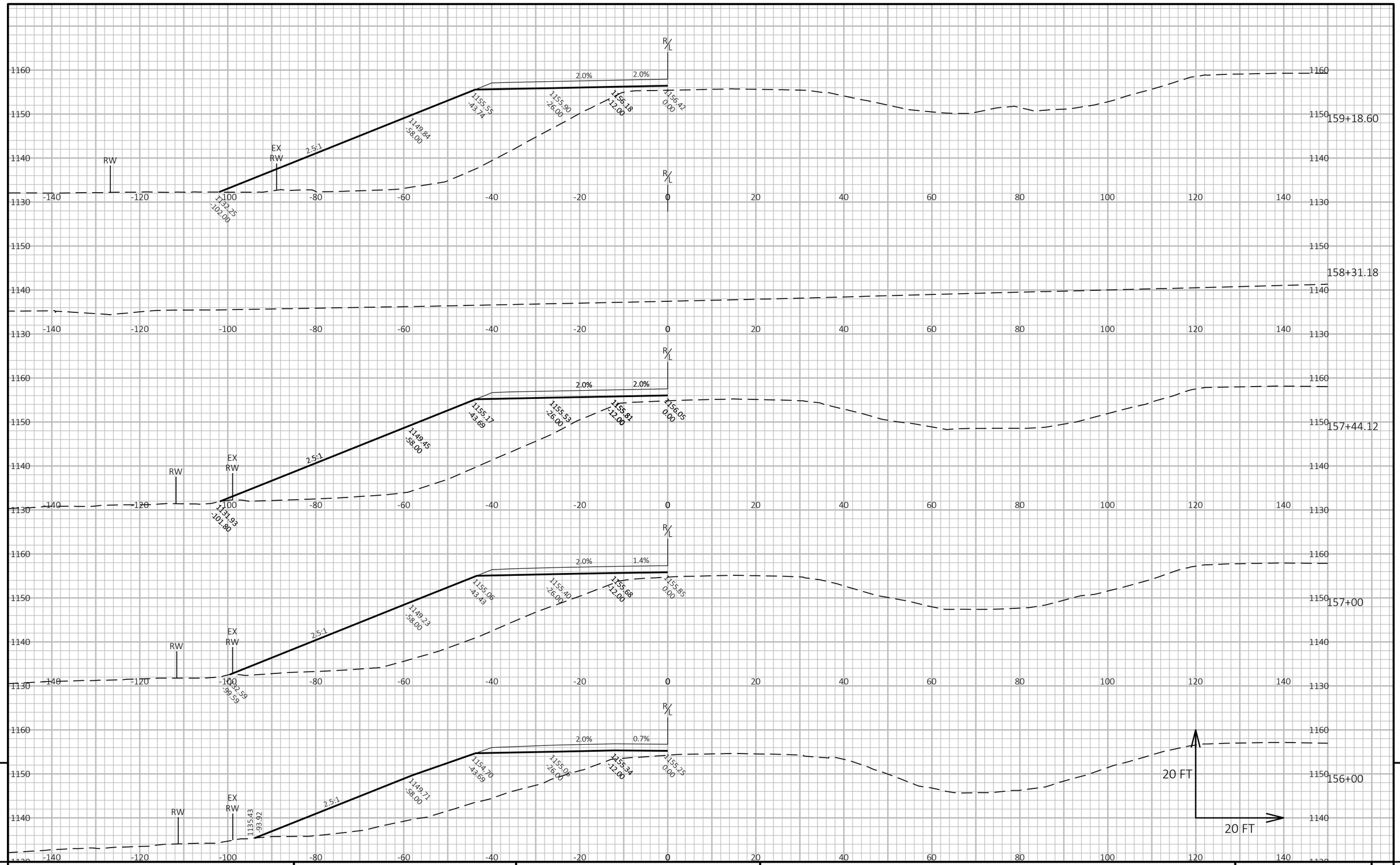


PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 421	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 6

PLOT DATE : 11/19/2020 2:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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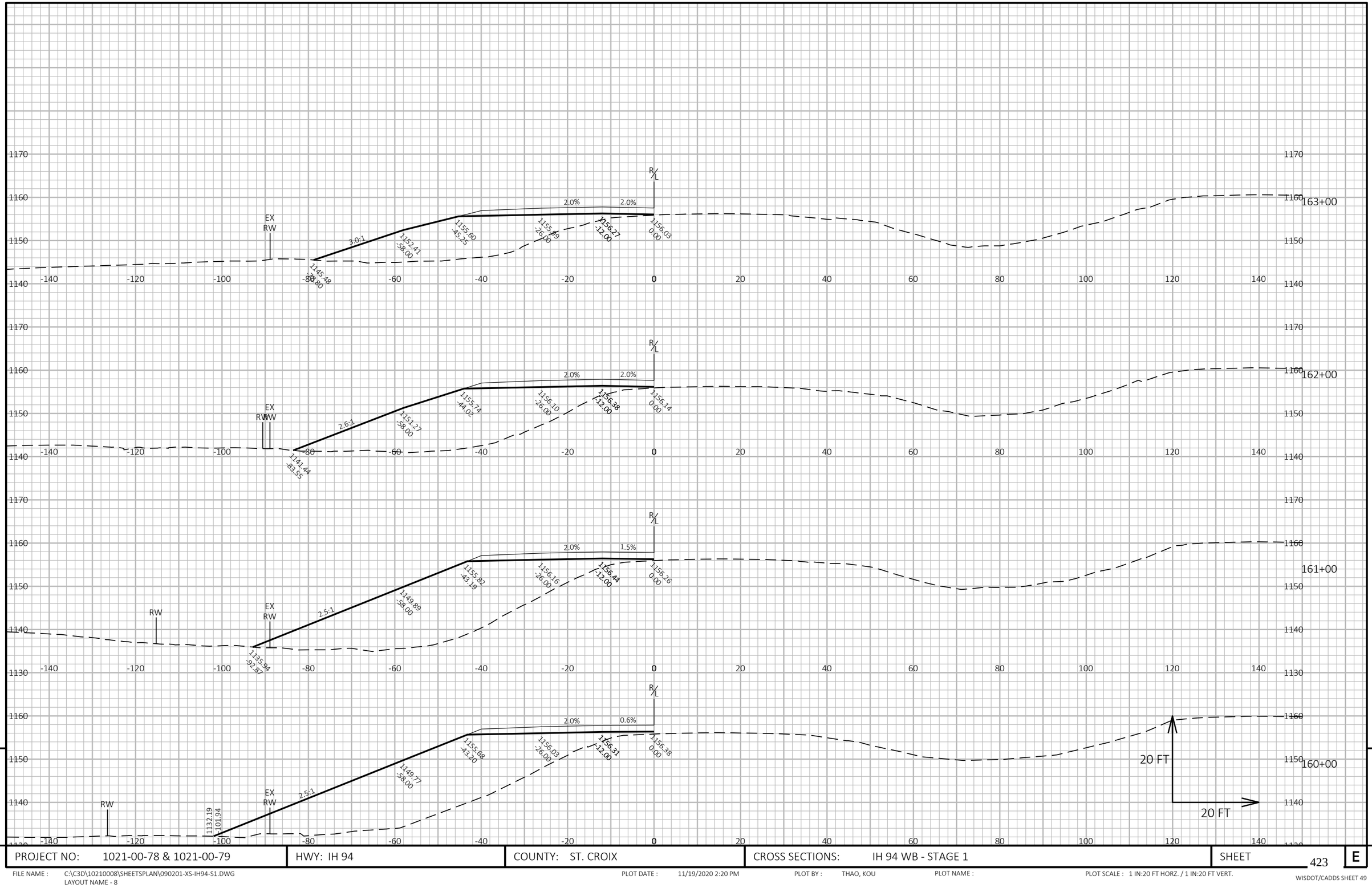
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 422	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 7

PLOT DATE : 11/19/2020 2:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

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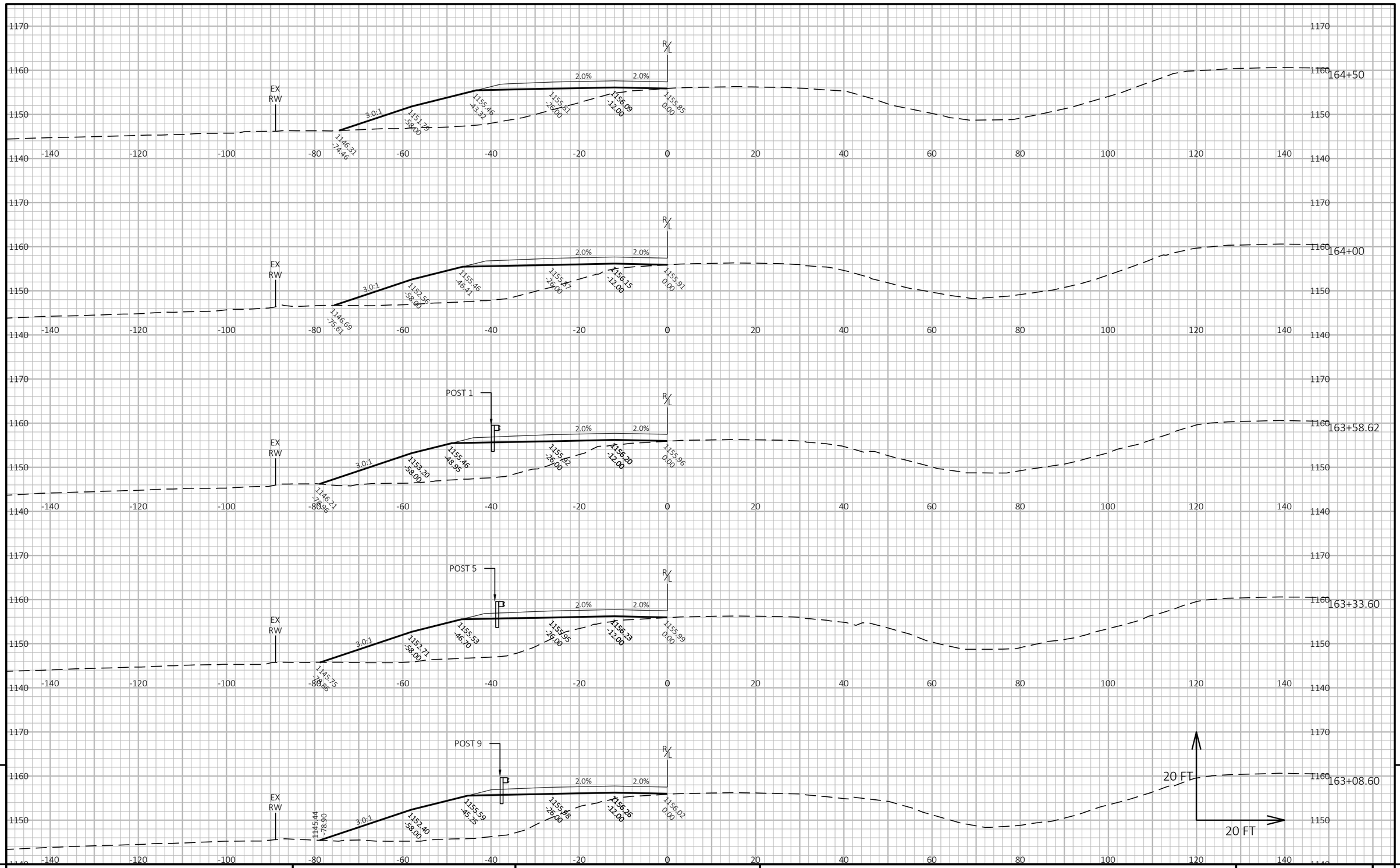
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 423	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 8

PLOT DATE : 11/19/2020 2:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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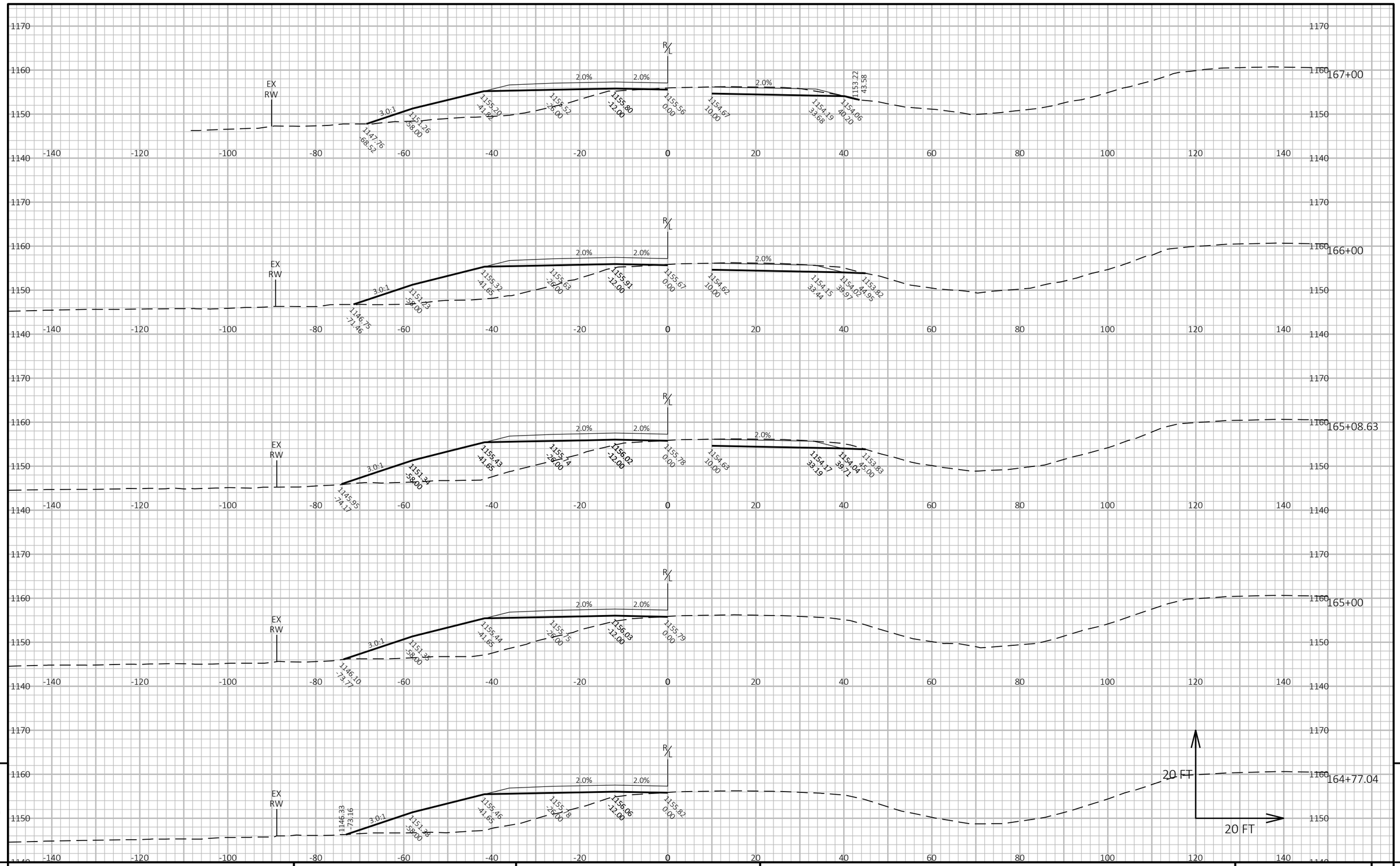
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 424	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 9

PLOT DATE : 11/19/2020 2:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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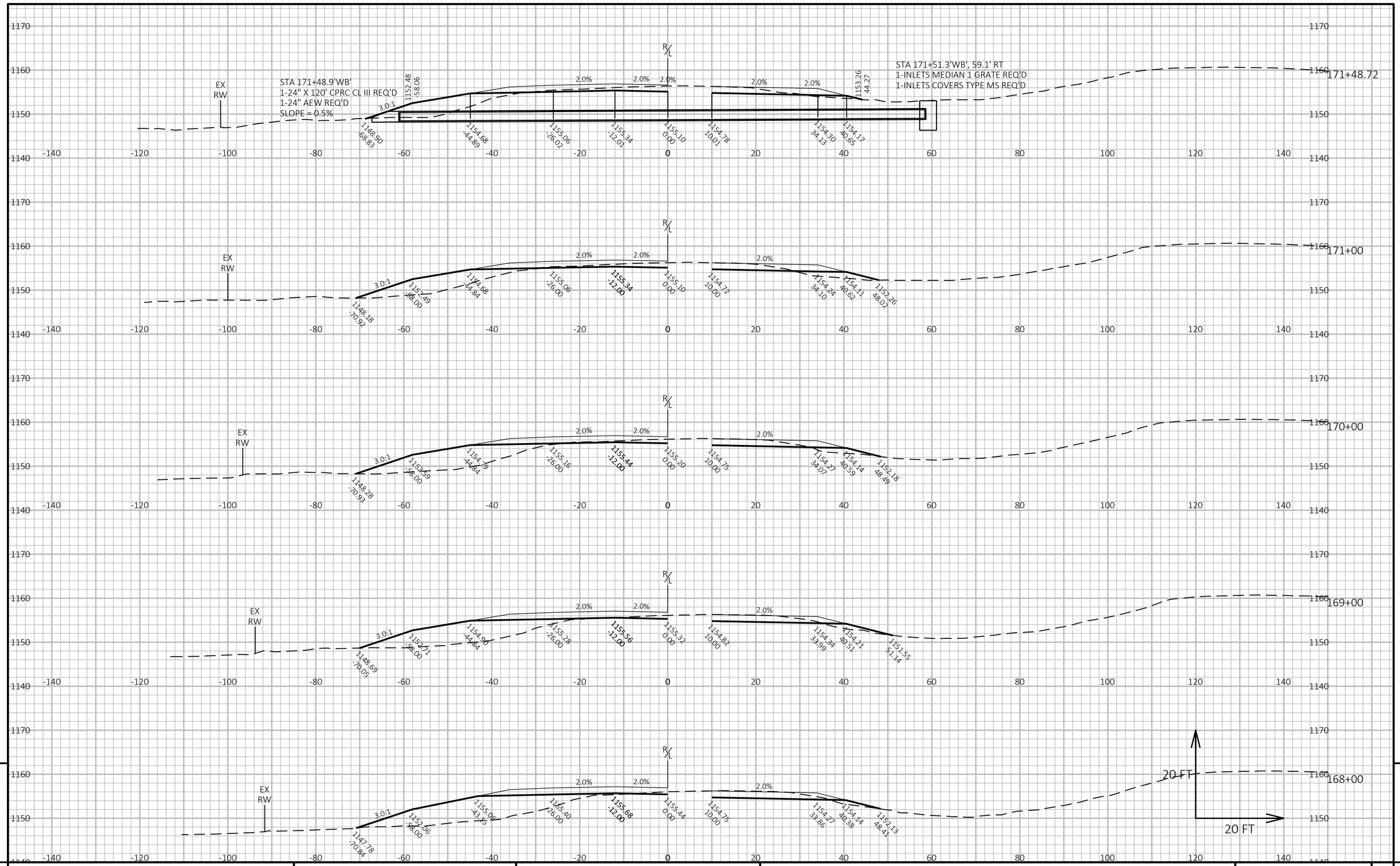
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 425	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 10

PLOT DATE : 11/19/2020 2:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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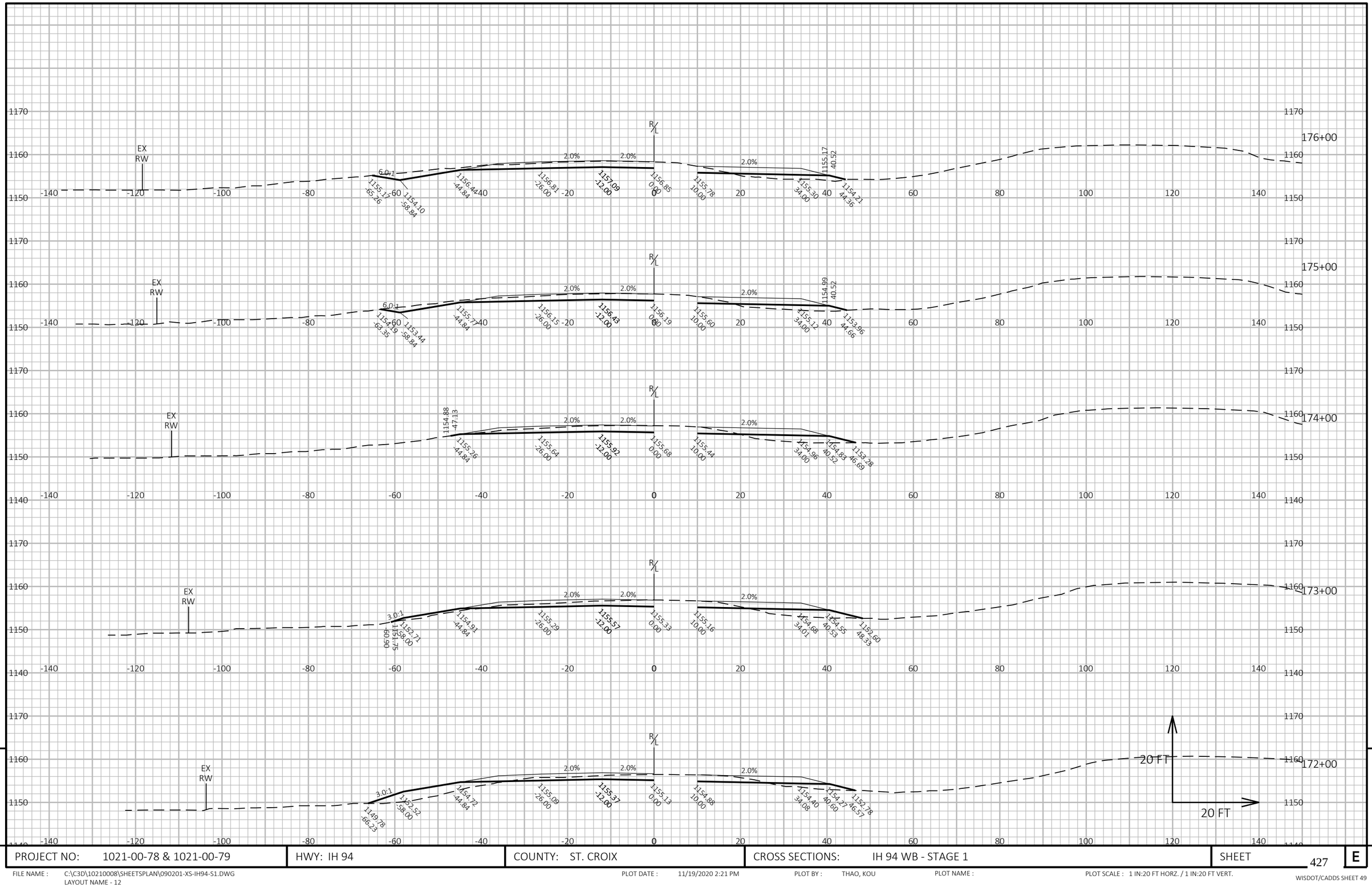
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 426	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 11

PLOT DATE : 11/19/2020 2:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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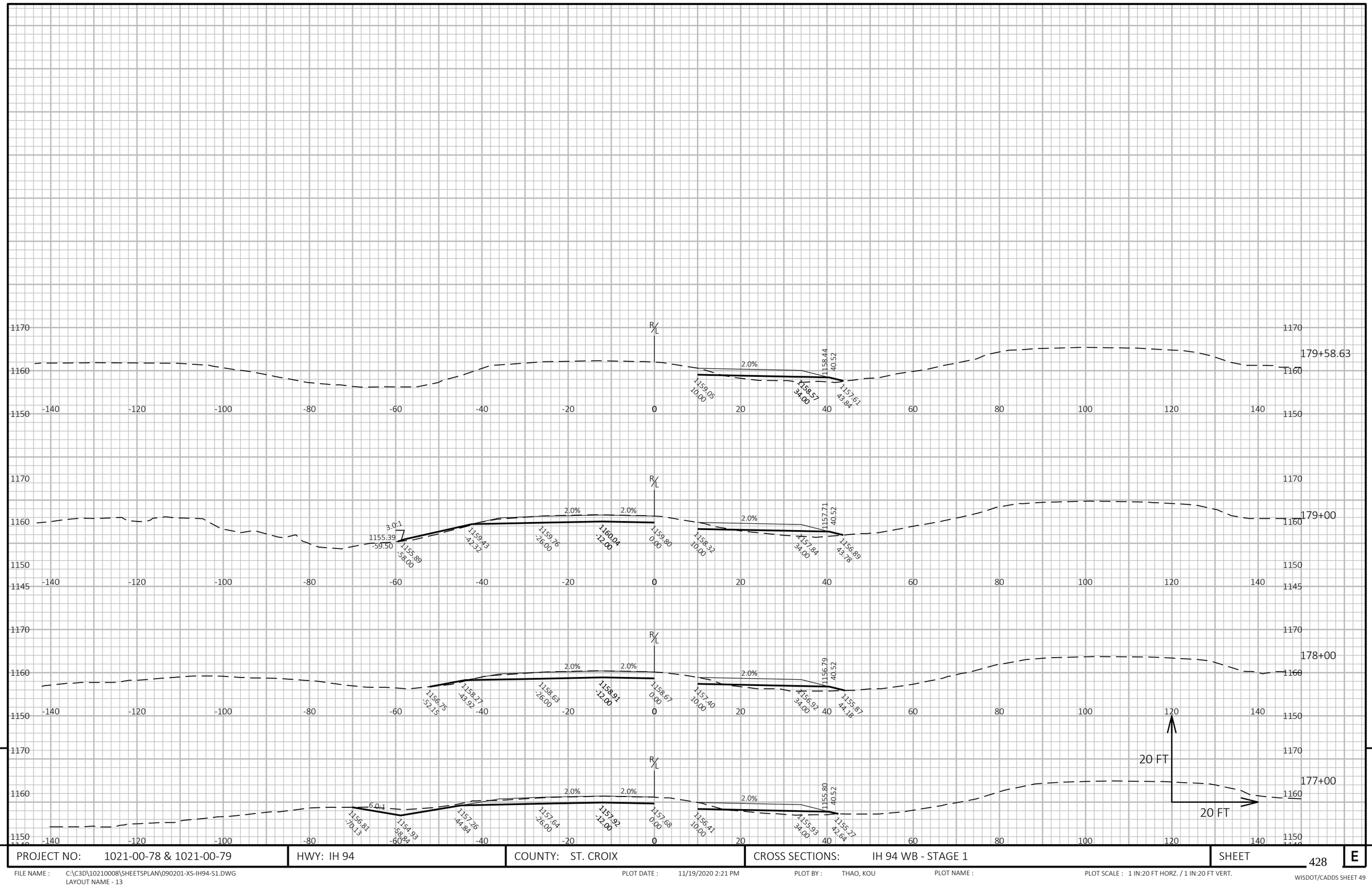
9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 427	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 12

PLOT DATE : 11/19/2020 2:21 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 428 E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 13

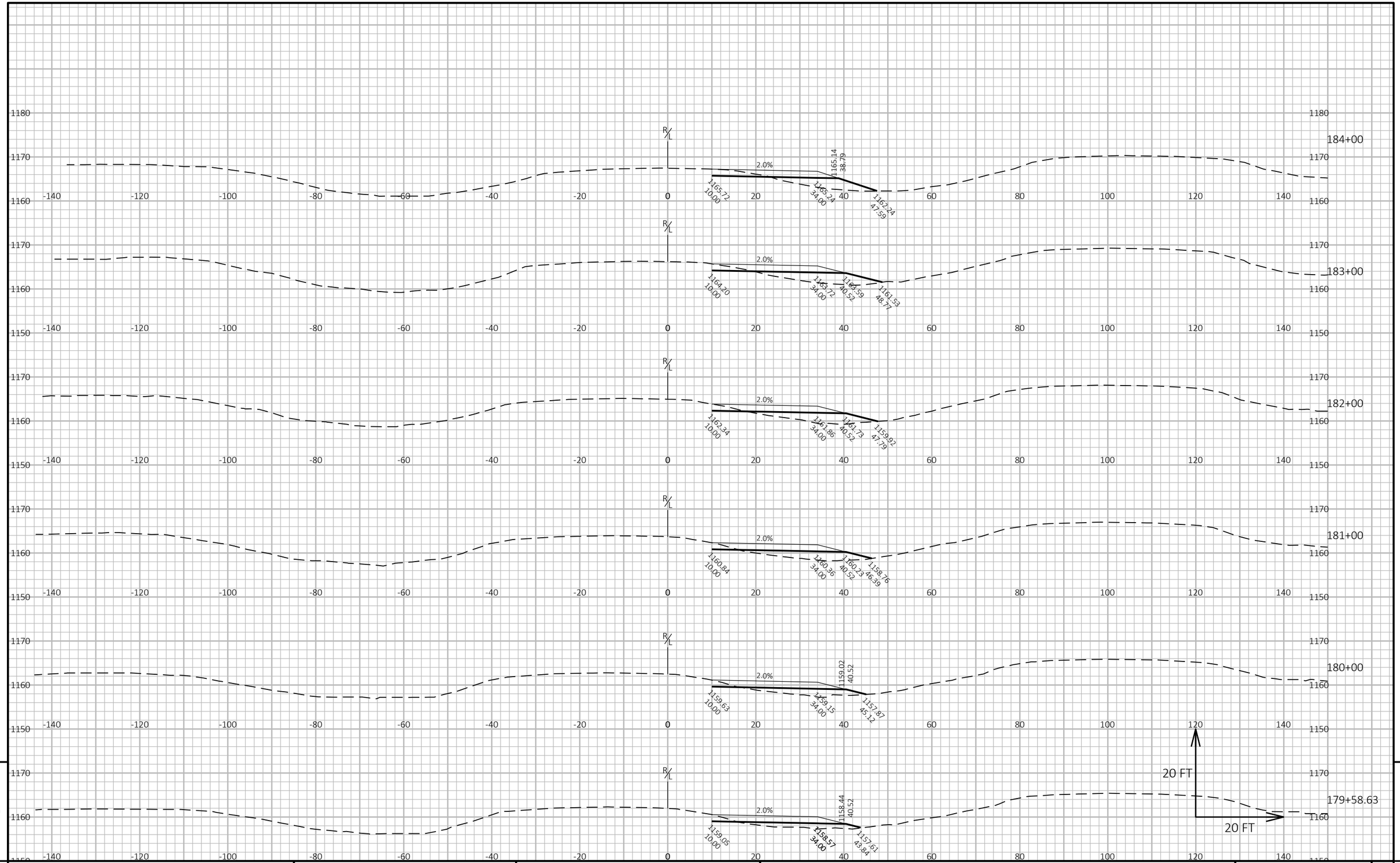
PLOT DATE : 11/19/2020 2:21 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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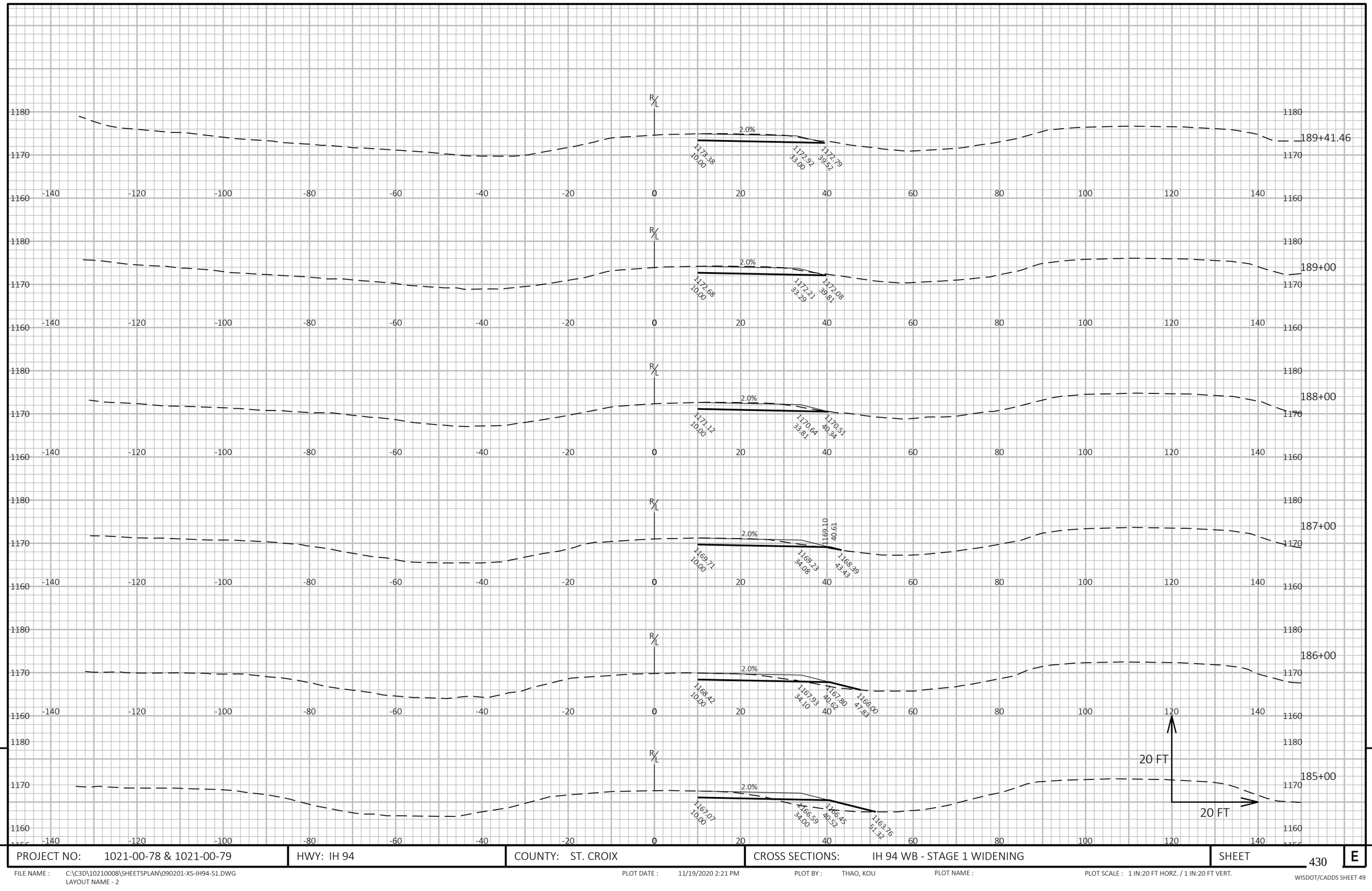
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1 WIDENING	SHEET 429	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 1

PLOT DATE : 11/19/2020 2:21 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1 WIDENING	SHEET 430	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 2

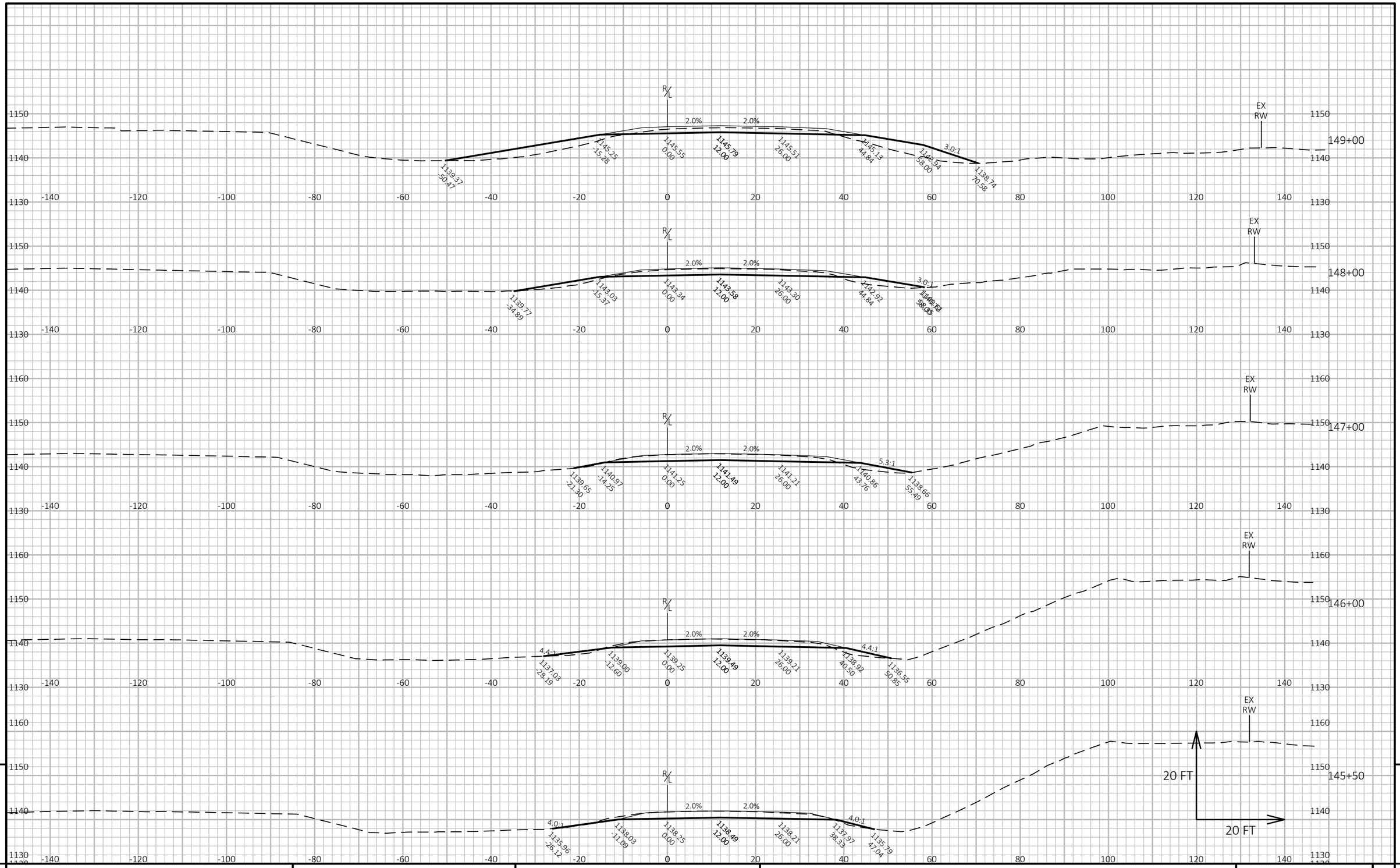
PLOT DATE : 11/19/2020 2:21 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2	SHEET 431	E

9

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 1

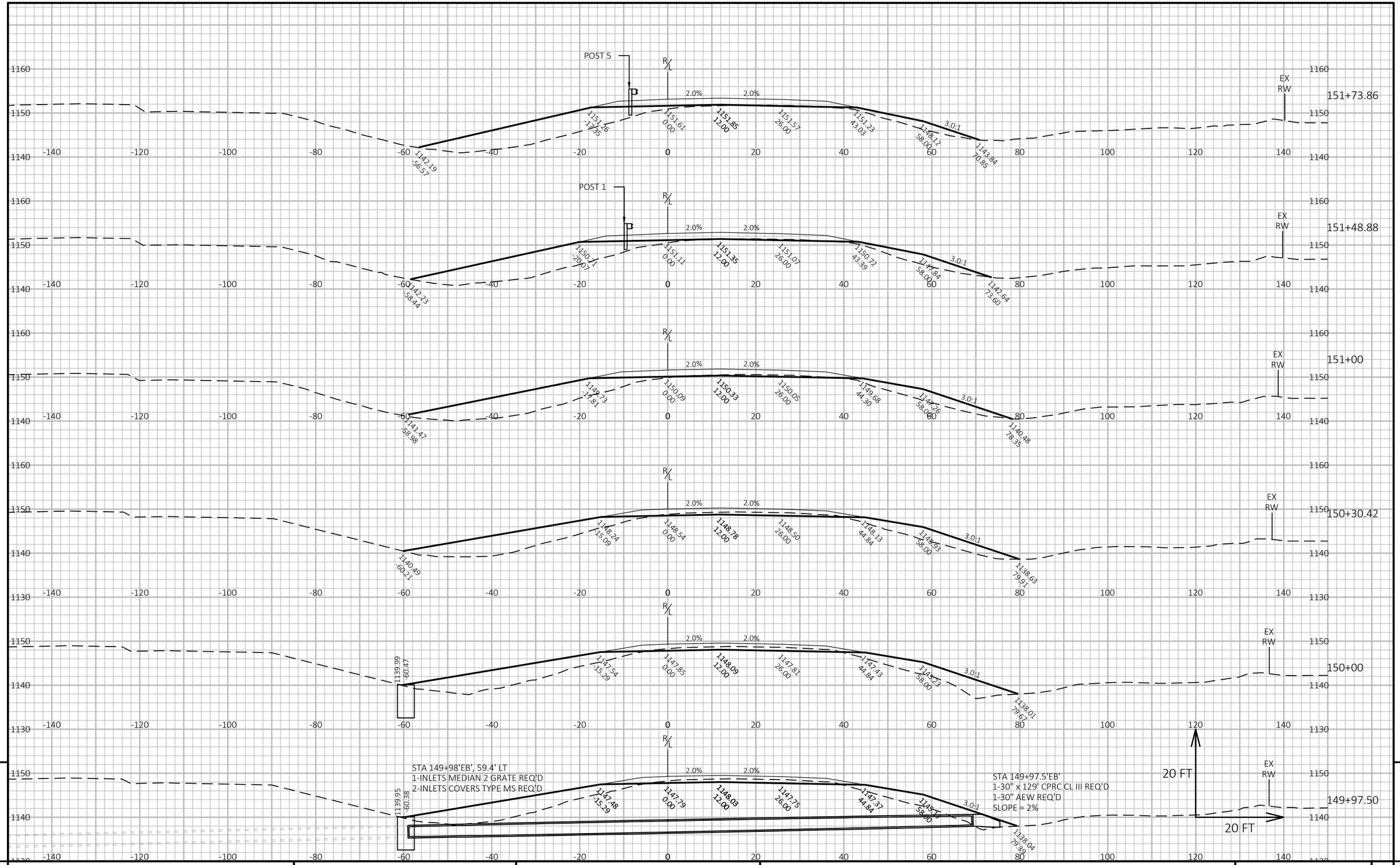
PLOT DATE : 11/19/2020 2:52 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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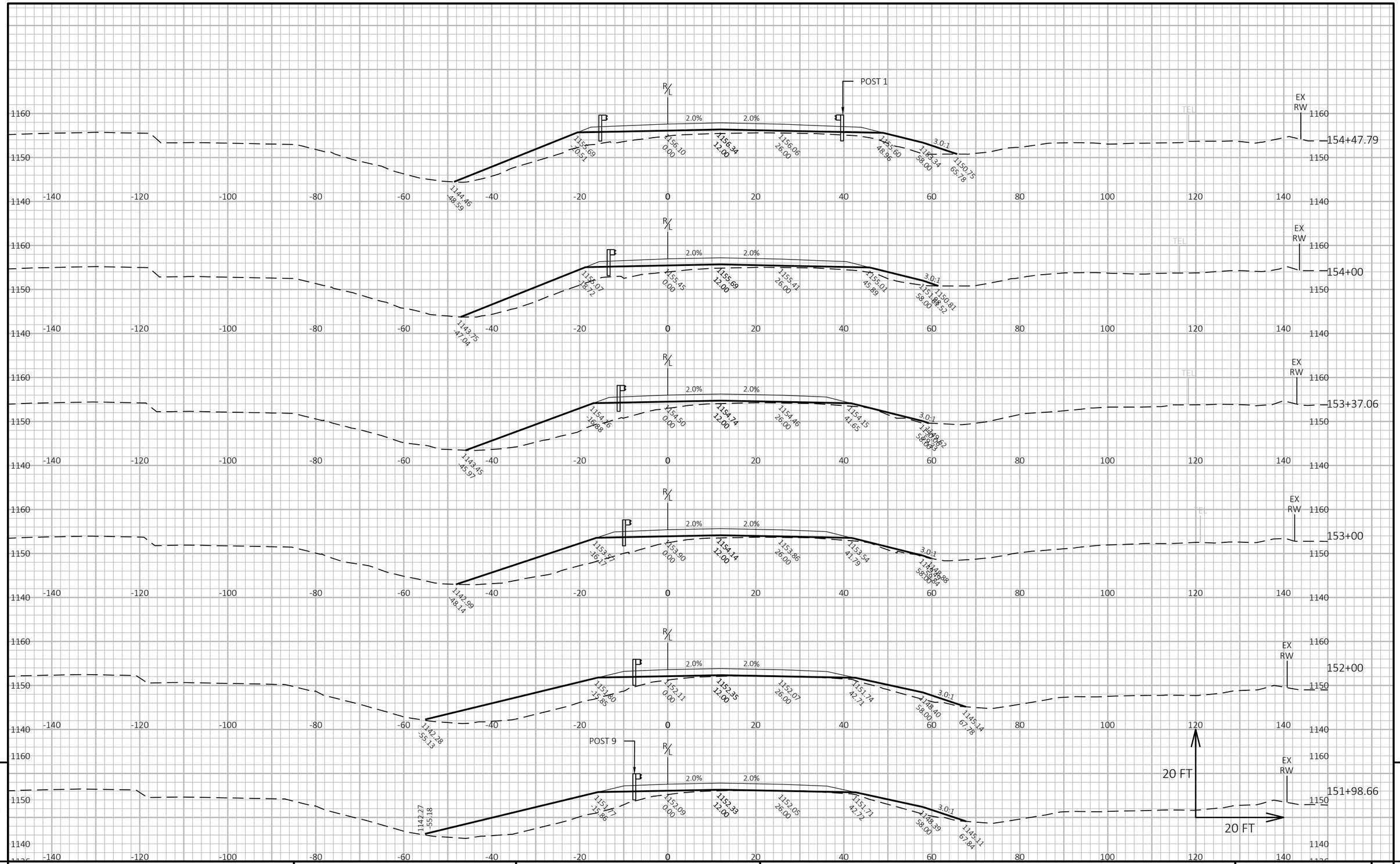
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2	SHEET 432	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 2

PLOT DATE : 11/19/2020 2:52 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

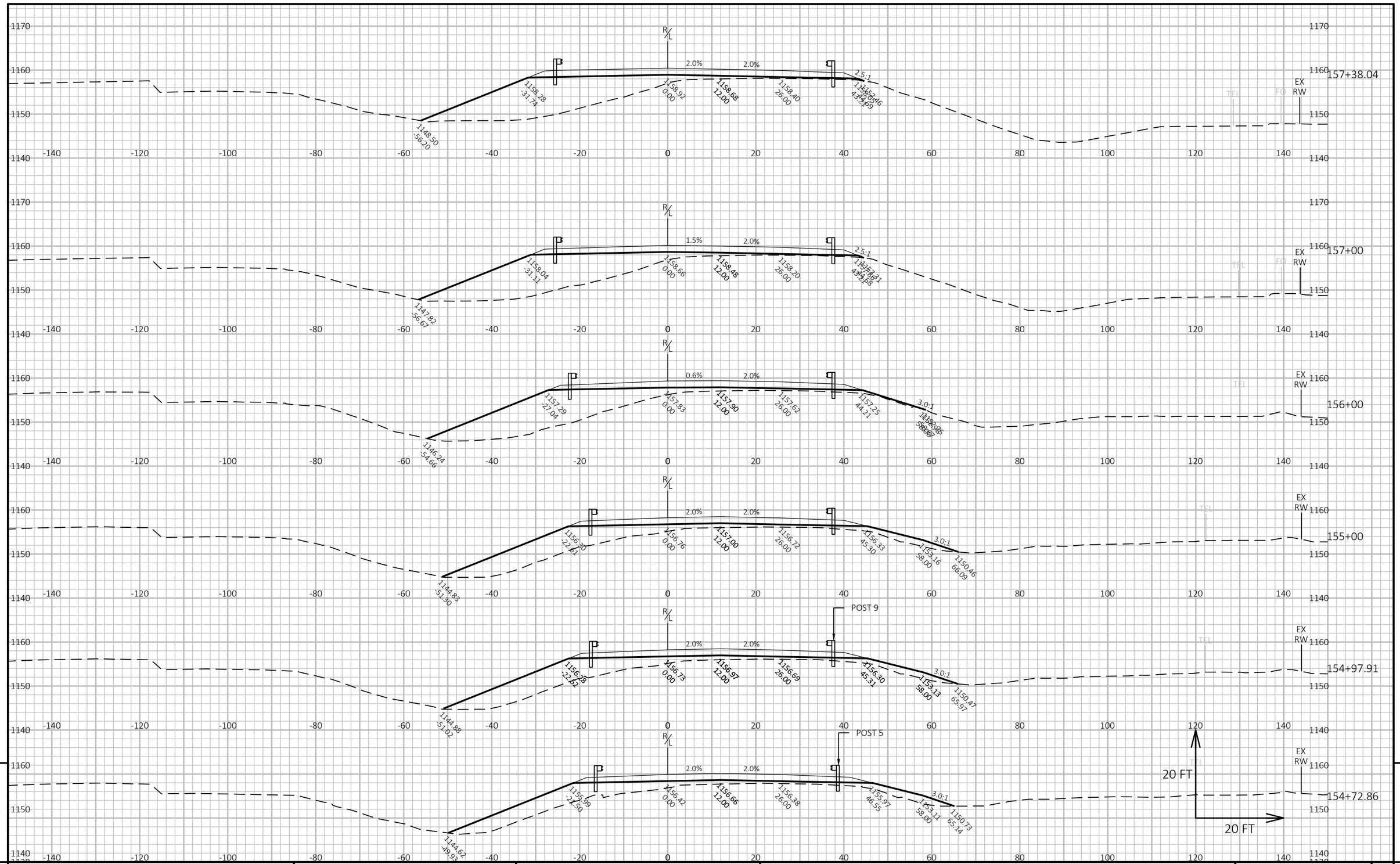


PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2	SHEET 433	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 3

PLOT DATE : 11/19/2020 2:52 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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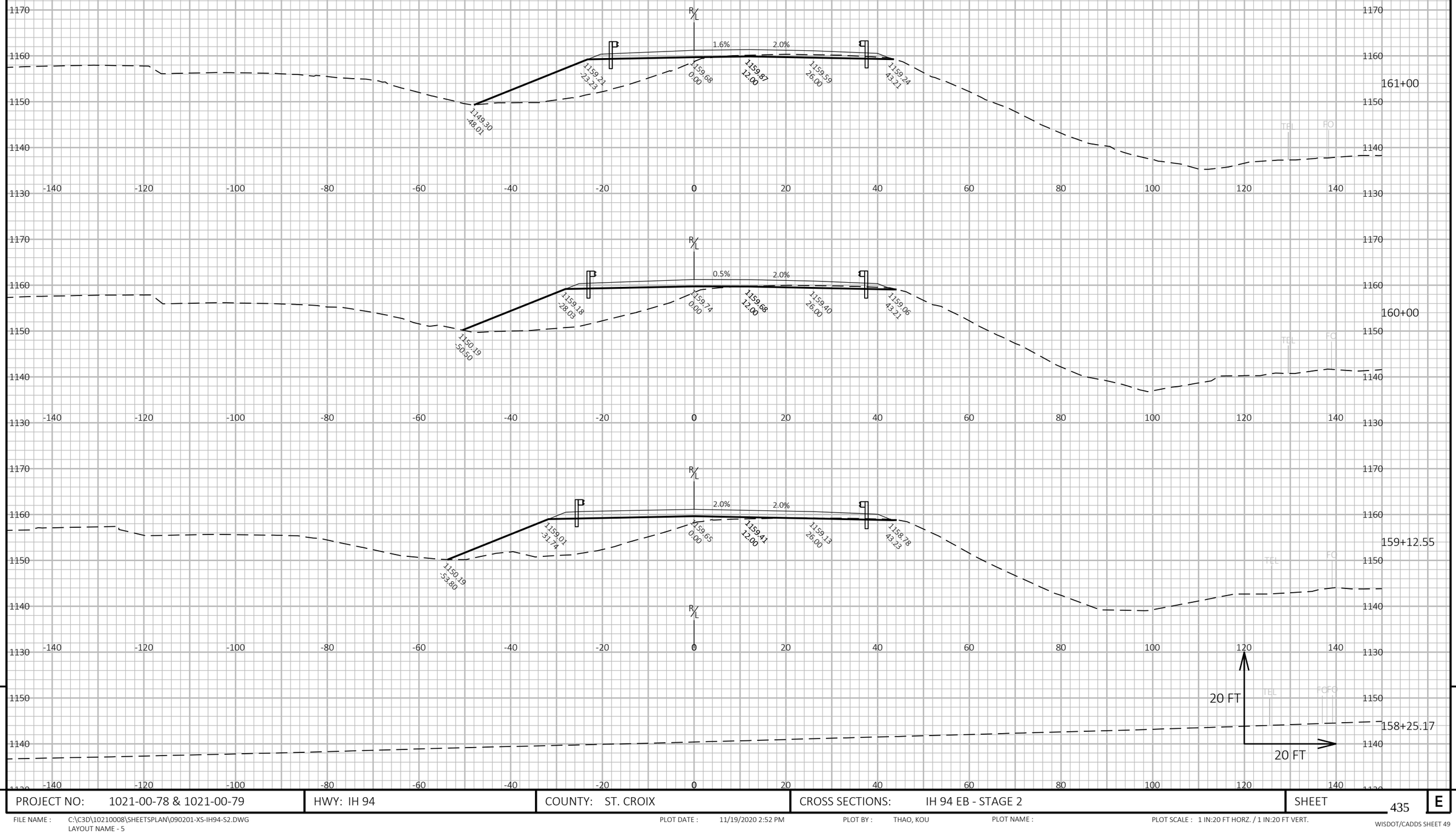
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2	SHEET 434	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 4

PLOT DATE : 11/19/2020 2:52 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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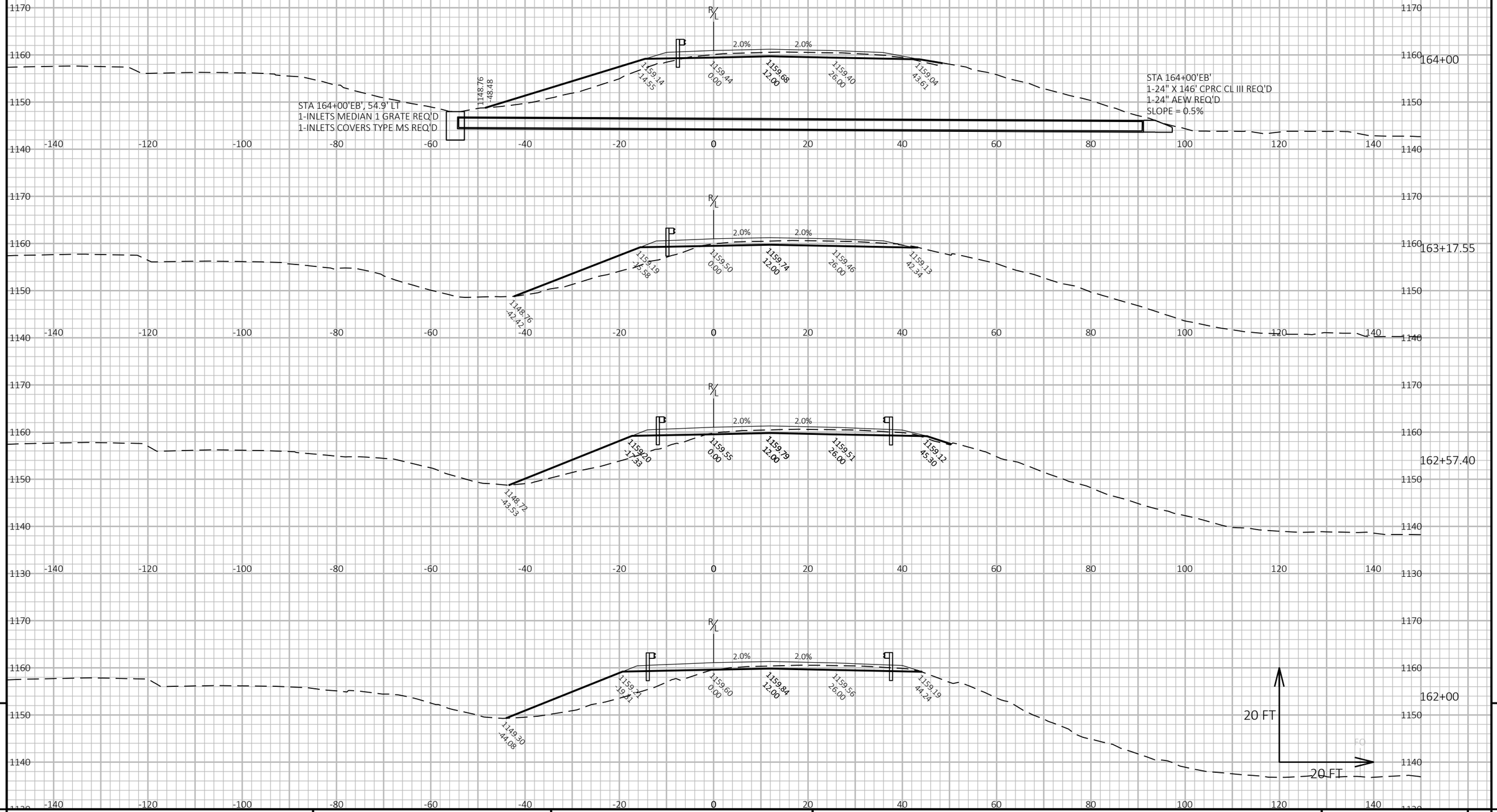
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2	SHEET 435	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 5

PLOT DATE : 11/19/2020 2:52 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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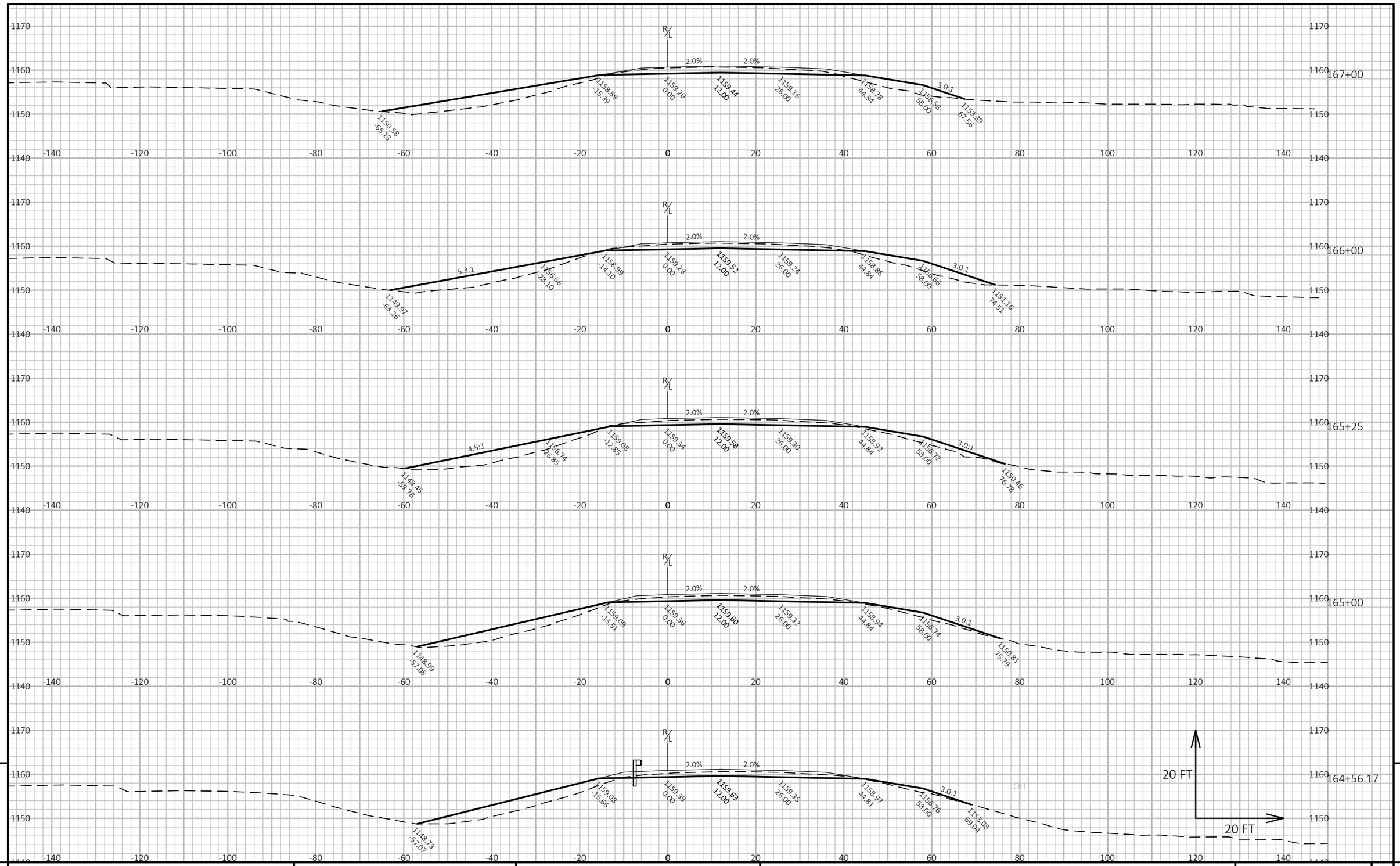
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2	SHEET 436	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 6

PLOT DATE : 11/19/2020 2:53 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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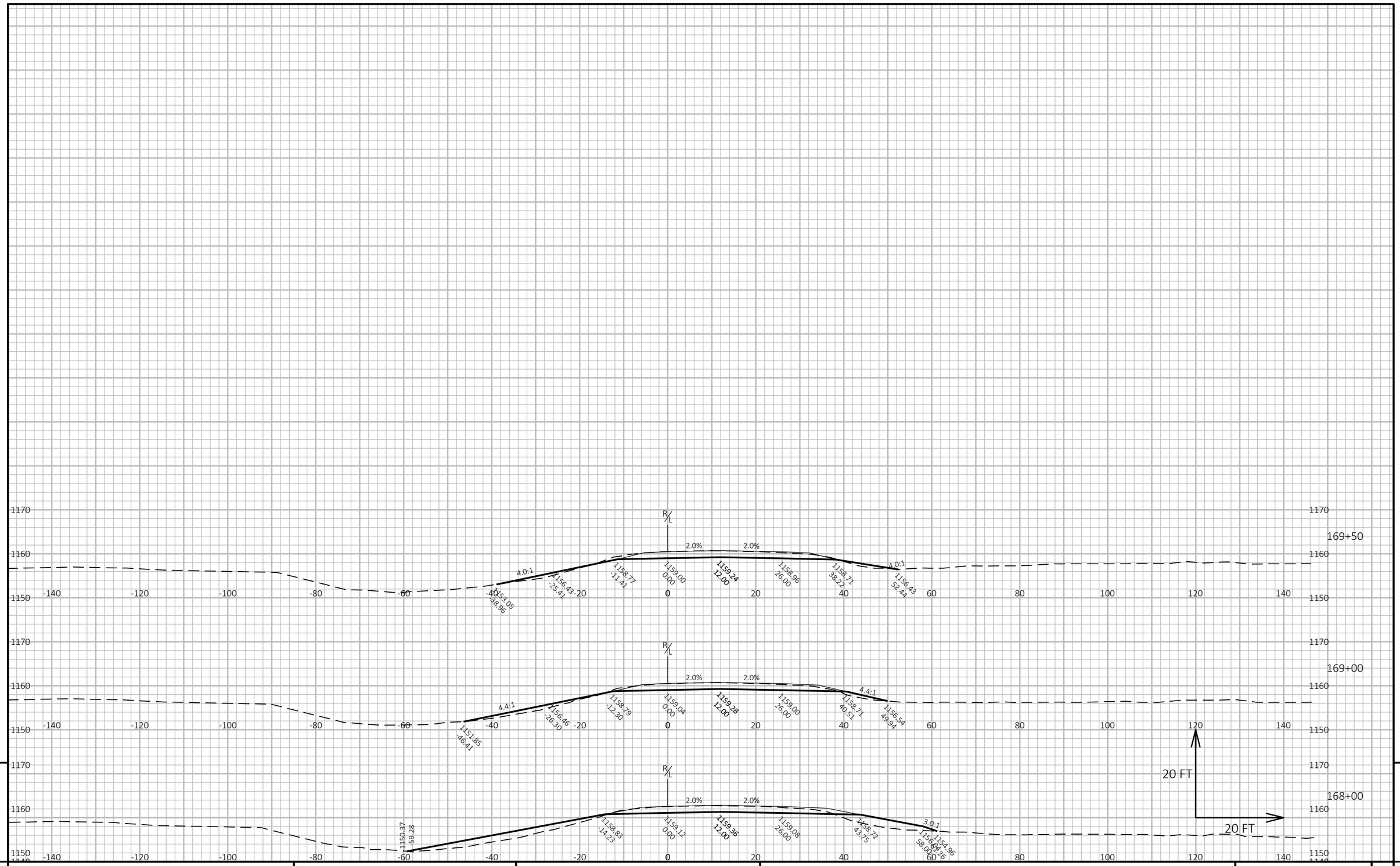
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2	SHEET 437	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 7

PLOT DATE : 11/19/2020 2:53 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2	SHEET 438	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 8

PLOT DATE : 11/19/2020 2:53 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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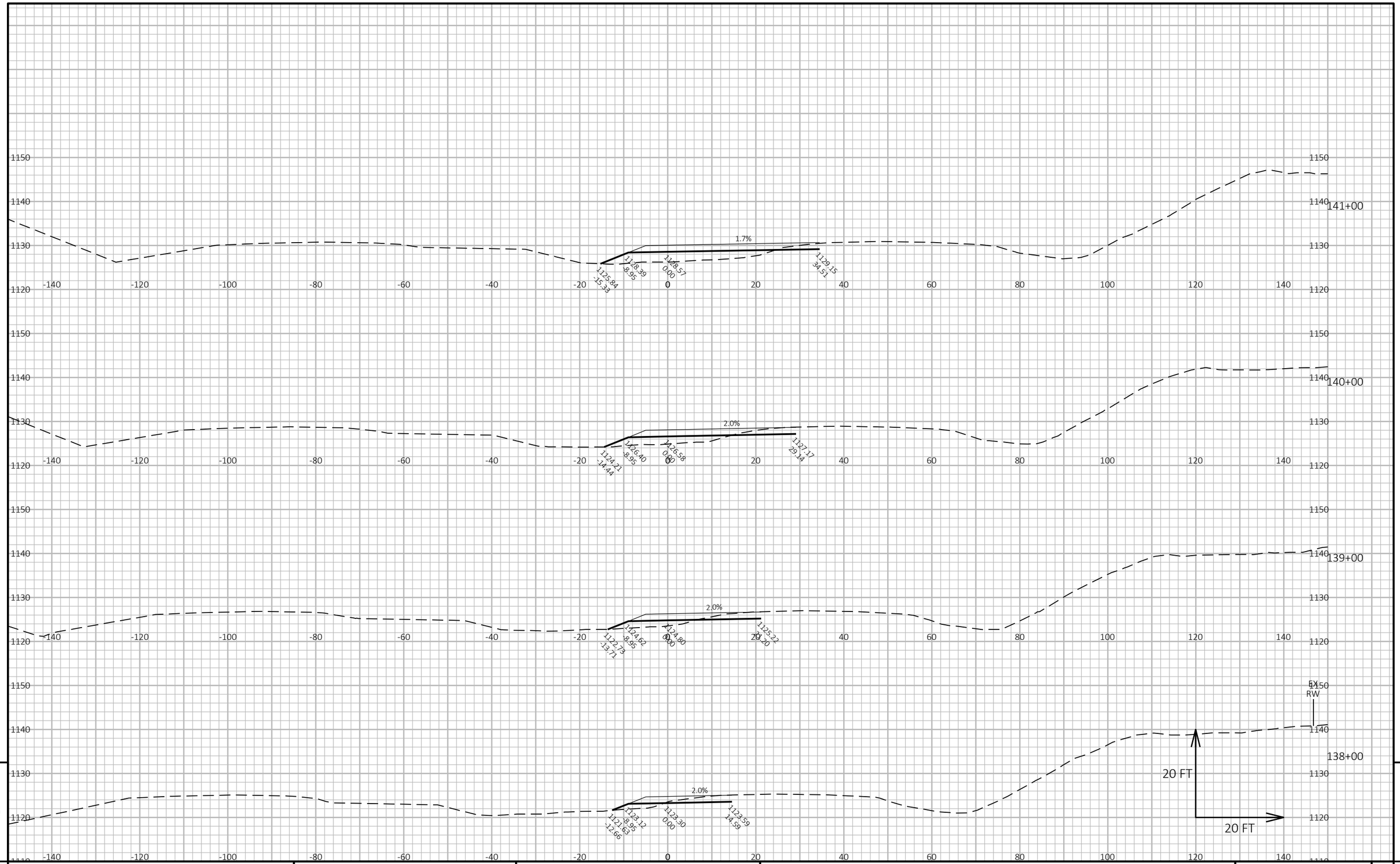
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 439	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 9

PLOT DATE : 11/19/2020 2:53 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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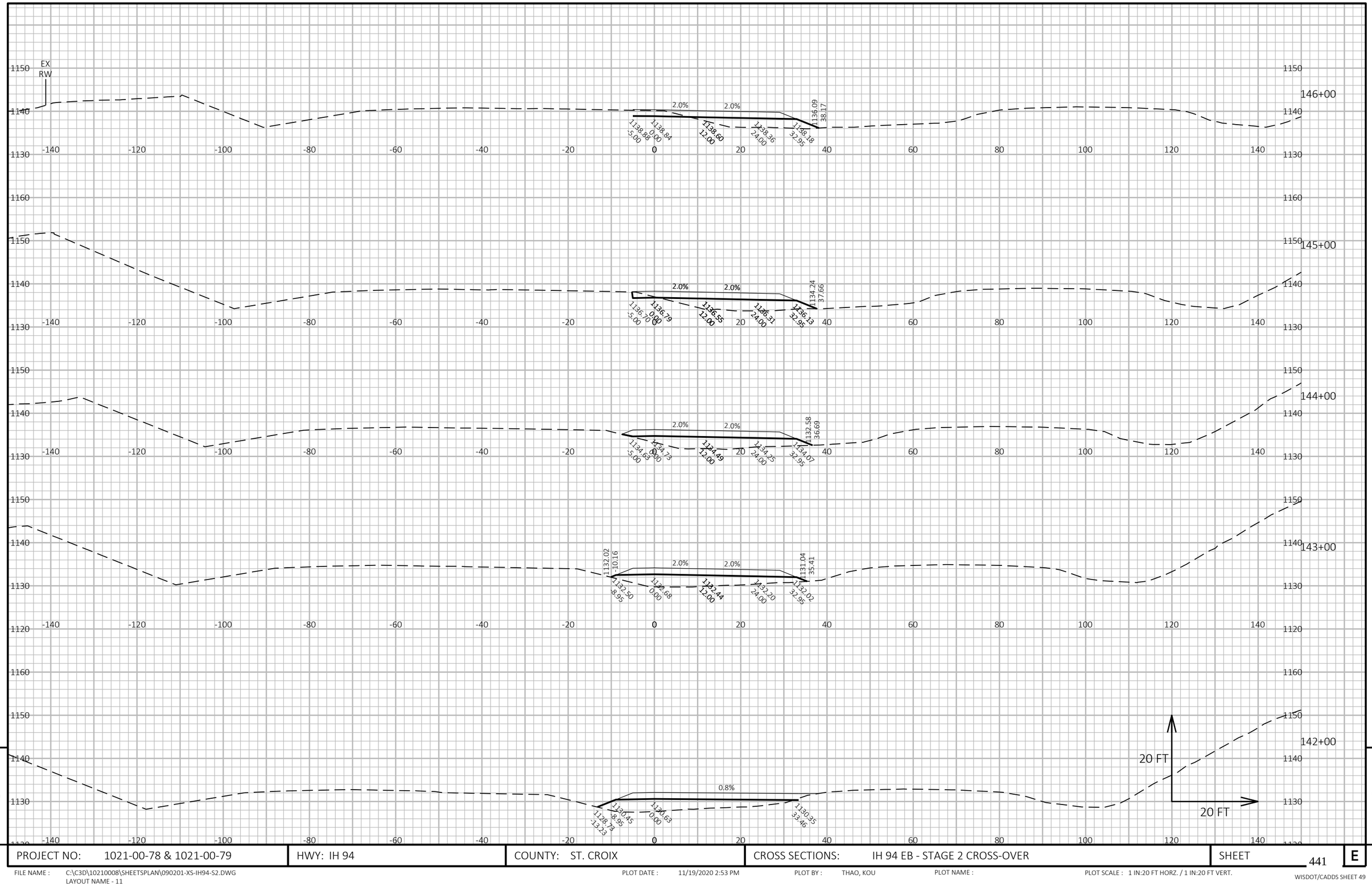
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 440	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 10

PLOT DATE : 11/19/2020 2:53 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

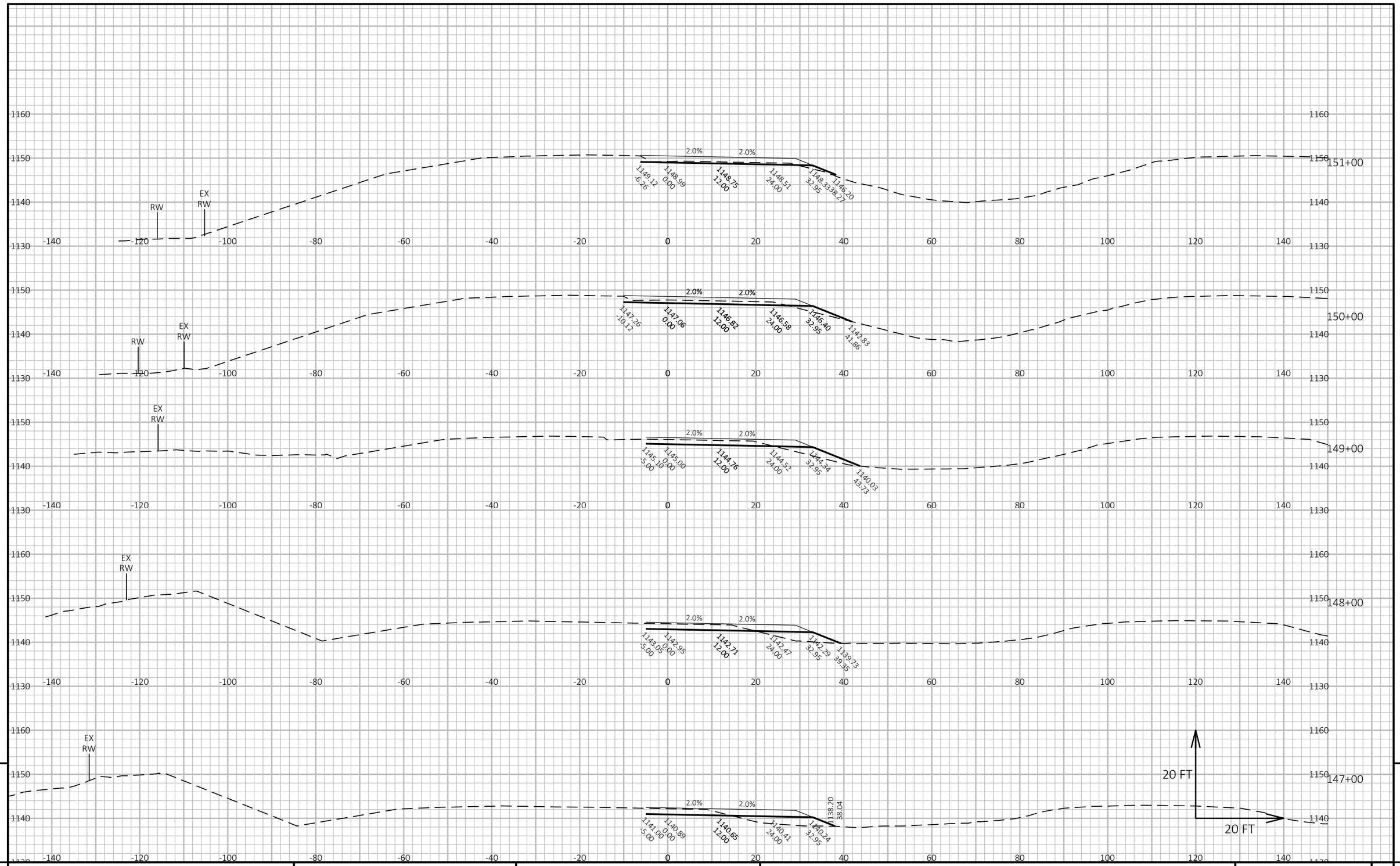


PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 441 E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 11

PLOT DATE : 11/19/2020 2:53 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

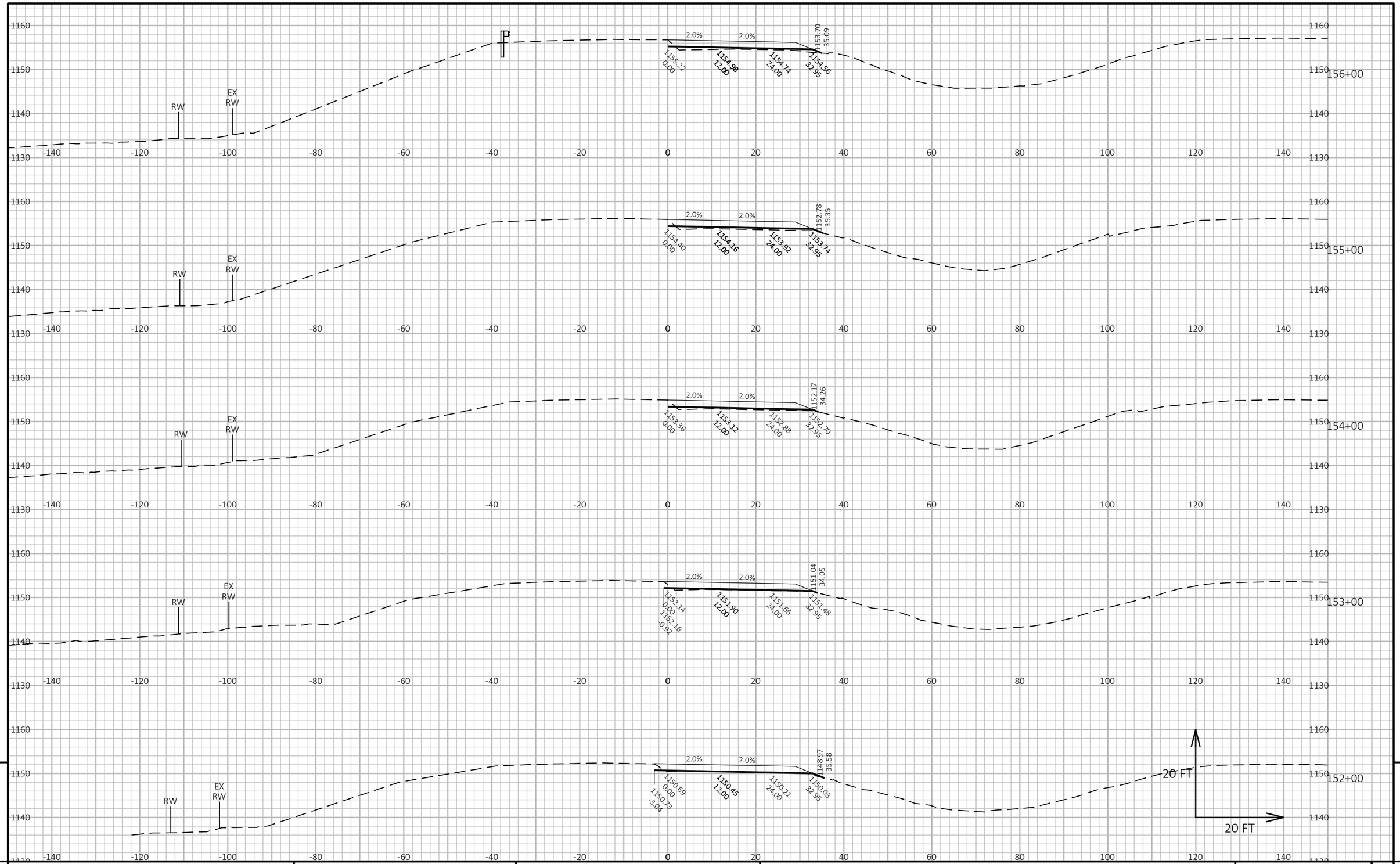


PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 442	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 12

PLOT DATE : 11/19/2020 2:54 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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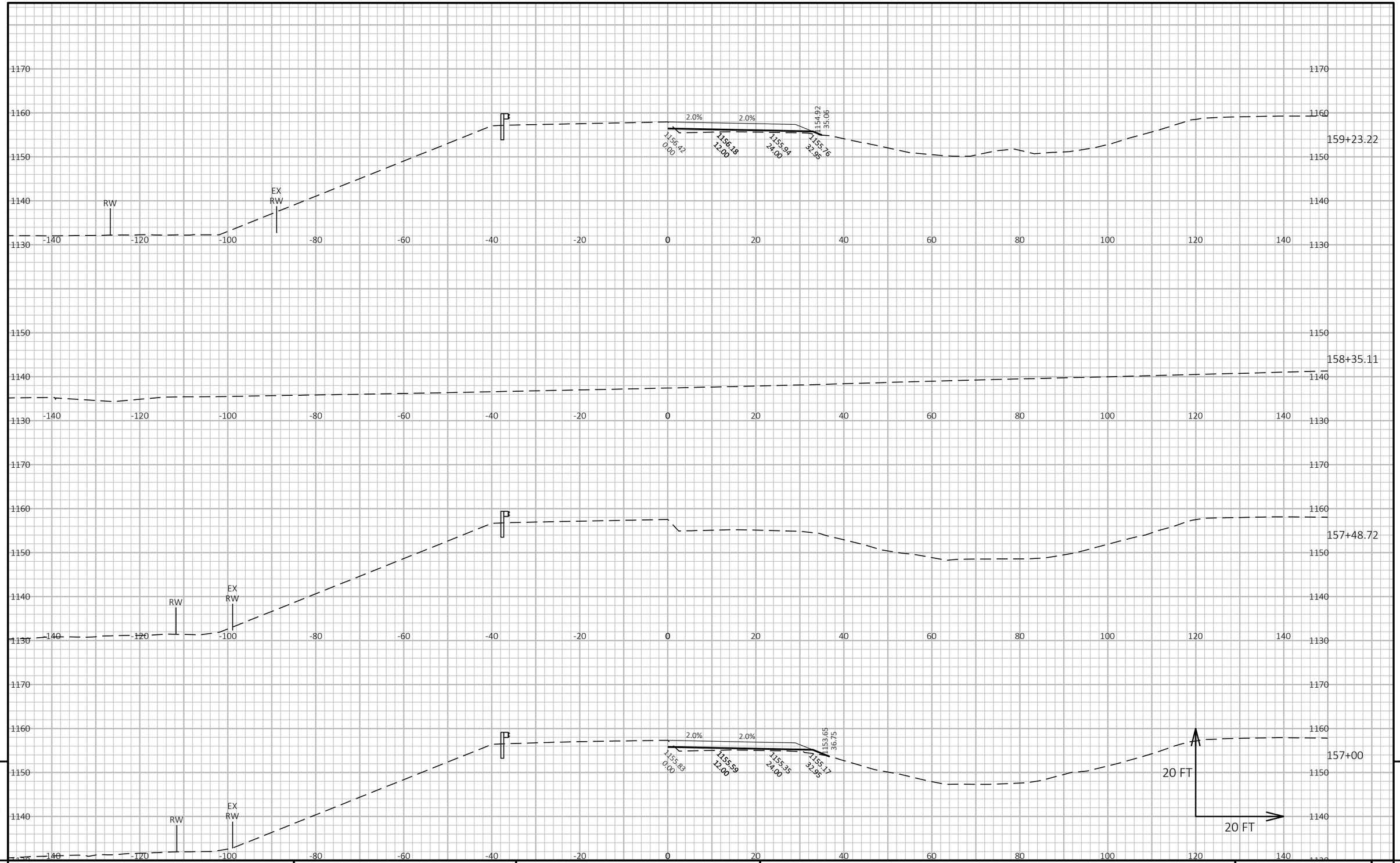
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 443	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 13

PLOT DATE : 11/19/2020 2:54 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

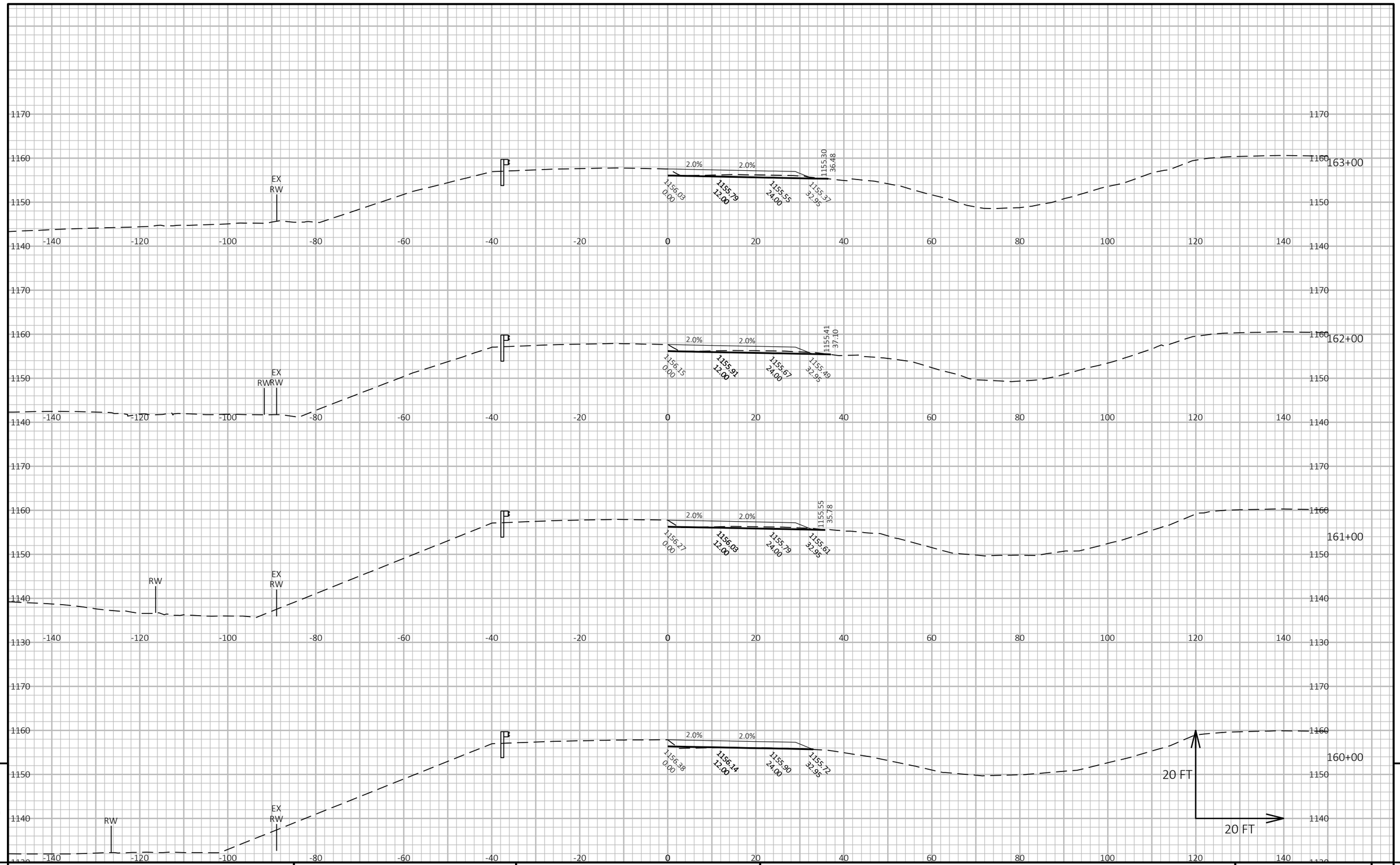


PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 444	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 14

PLOT DATE : 11/19/2020 2:54 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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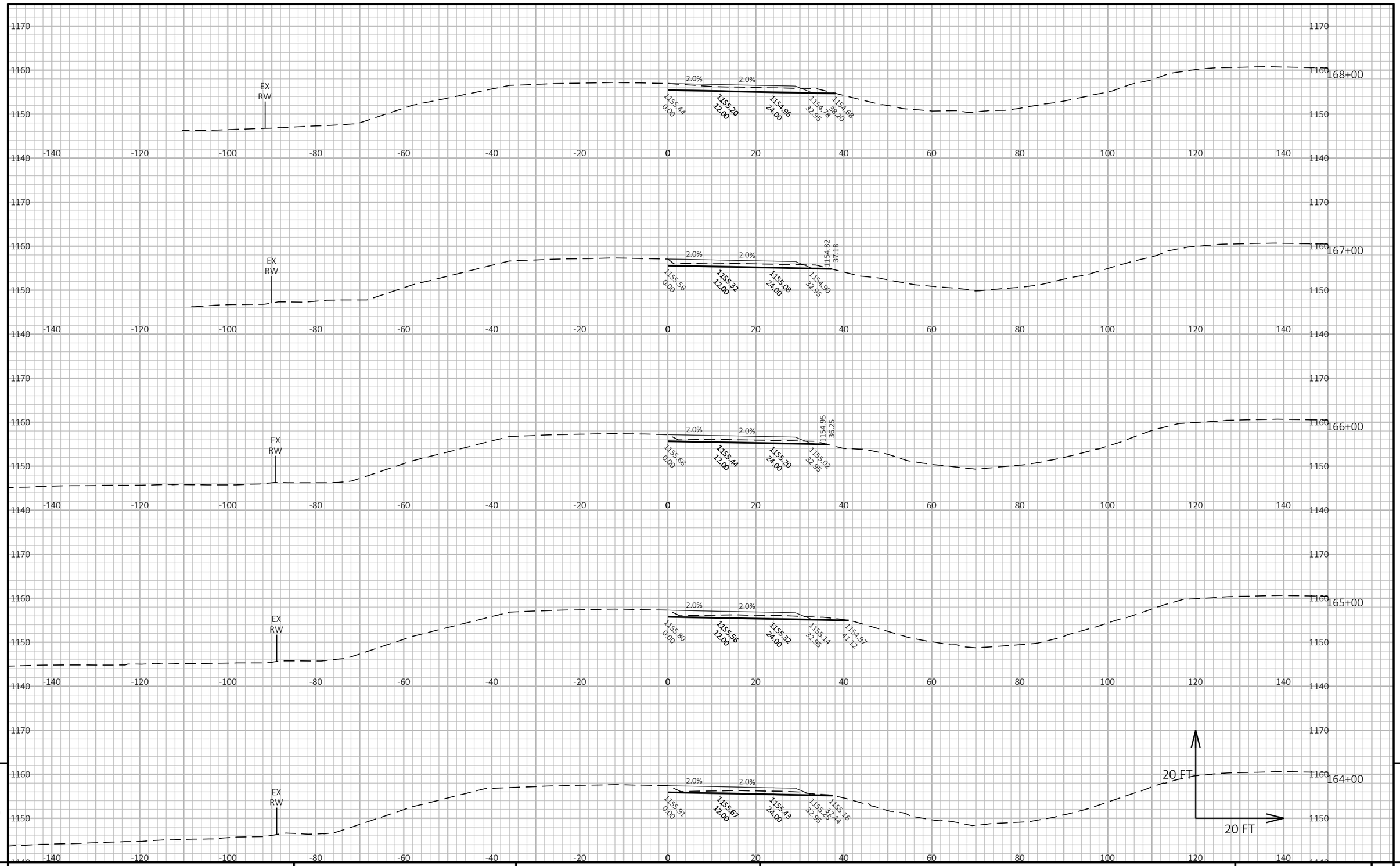
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 445	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 15

PLOT DATE : 11/19/2020 2:54 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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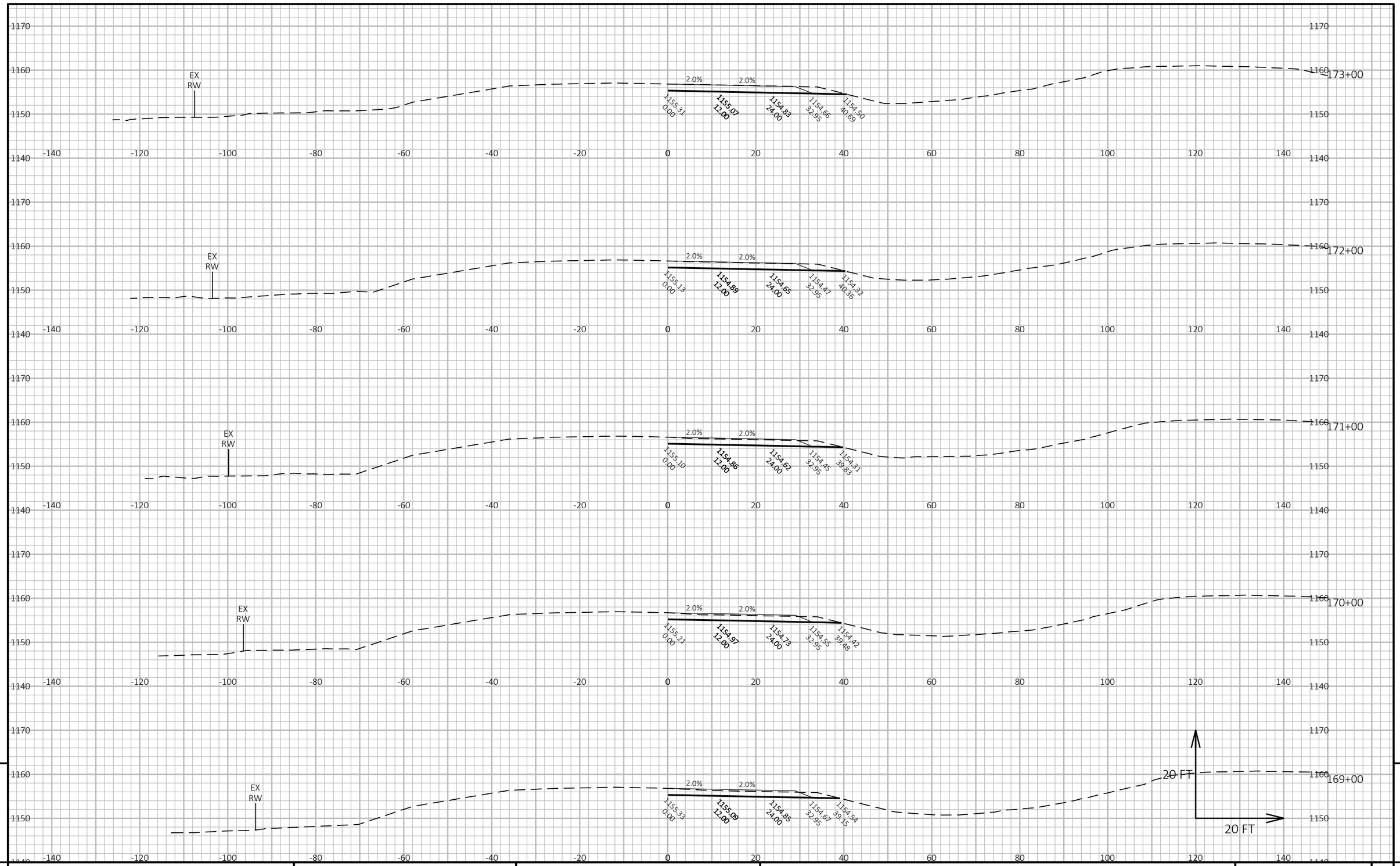
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 446	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 16

PLOT DATE : 11/19/2020 2:54 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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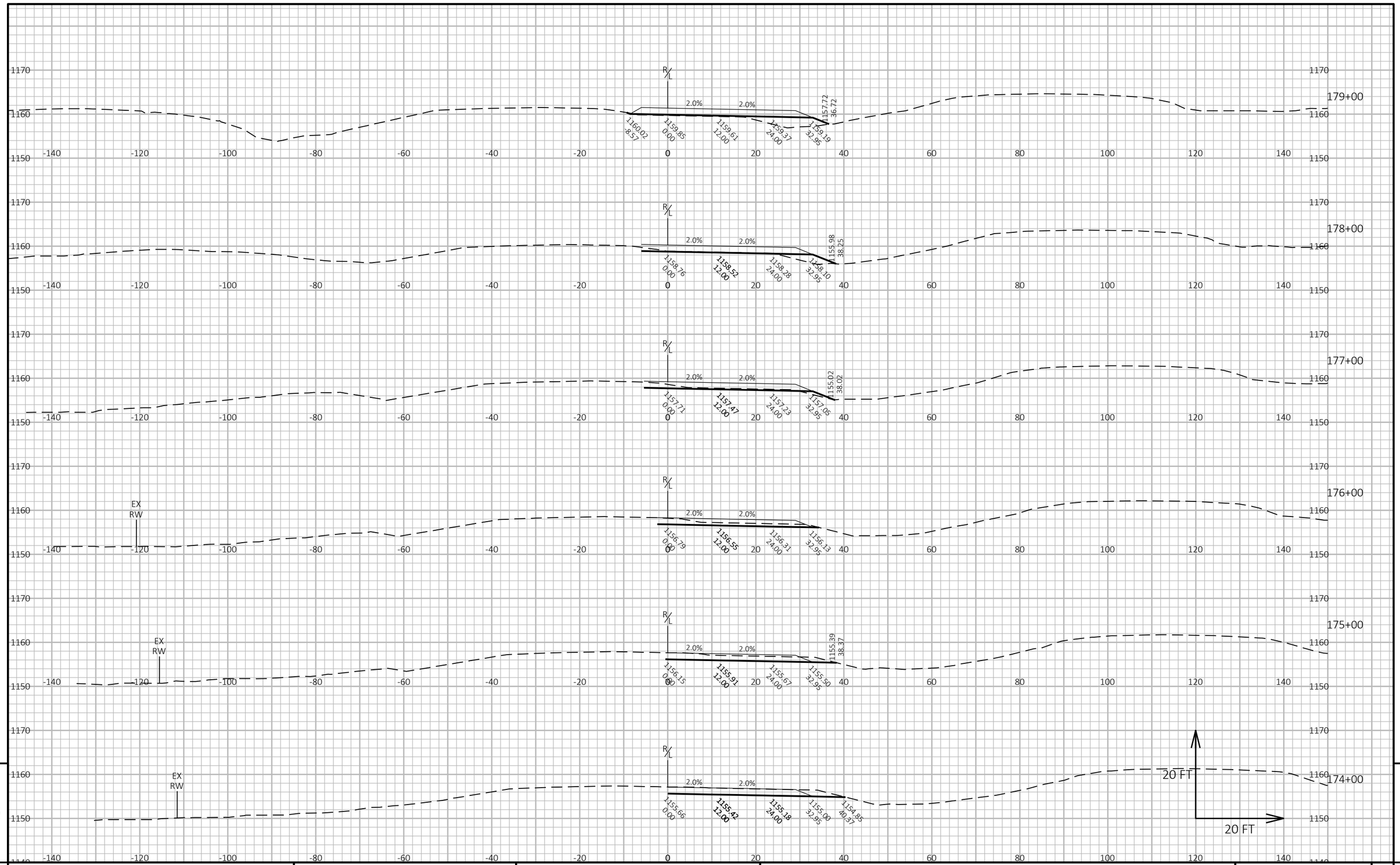
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 447	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 17

PLOT DATE : 11/19/2020 2:54 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

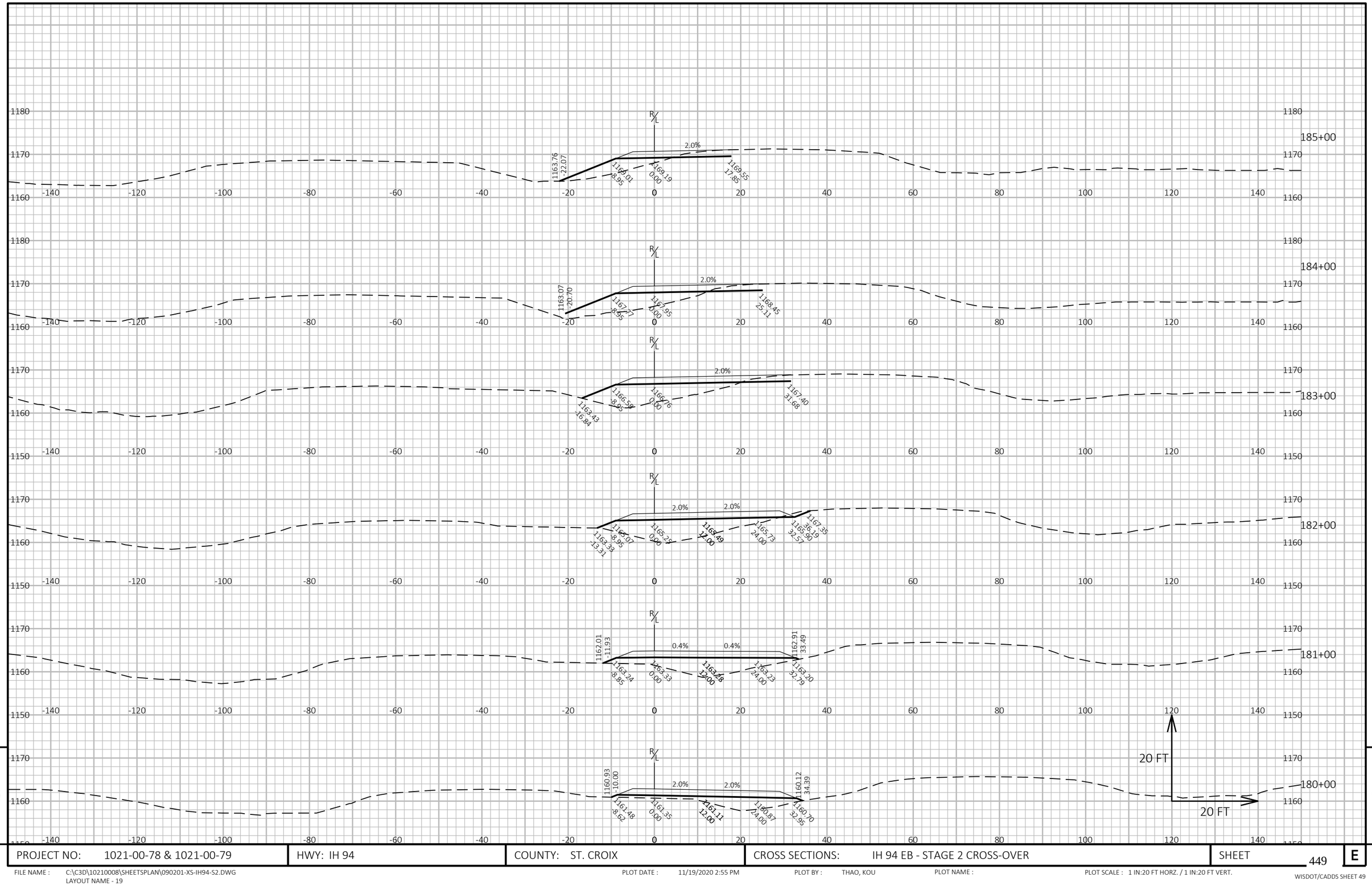


PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 448	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 18

PLOT DATE : 11/19/2020 2:55 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

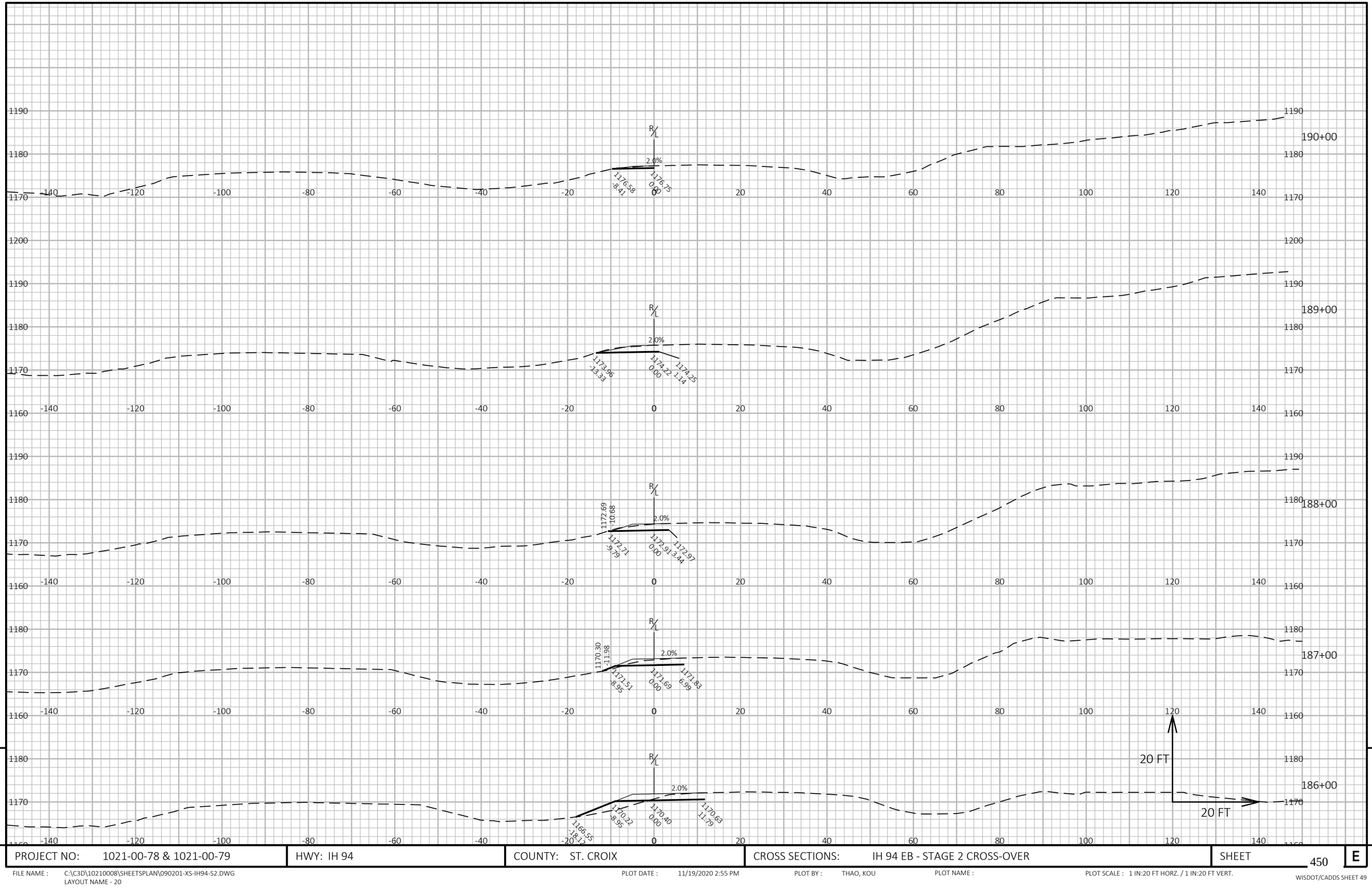


PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 449 E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 19

PLOT DATE : 11/19/2020 2:55 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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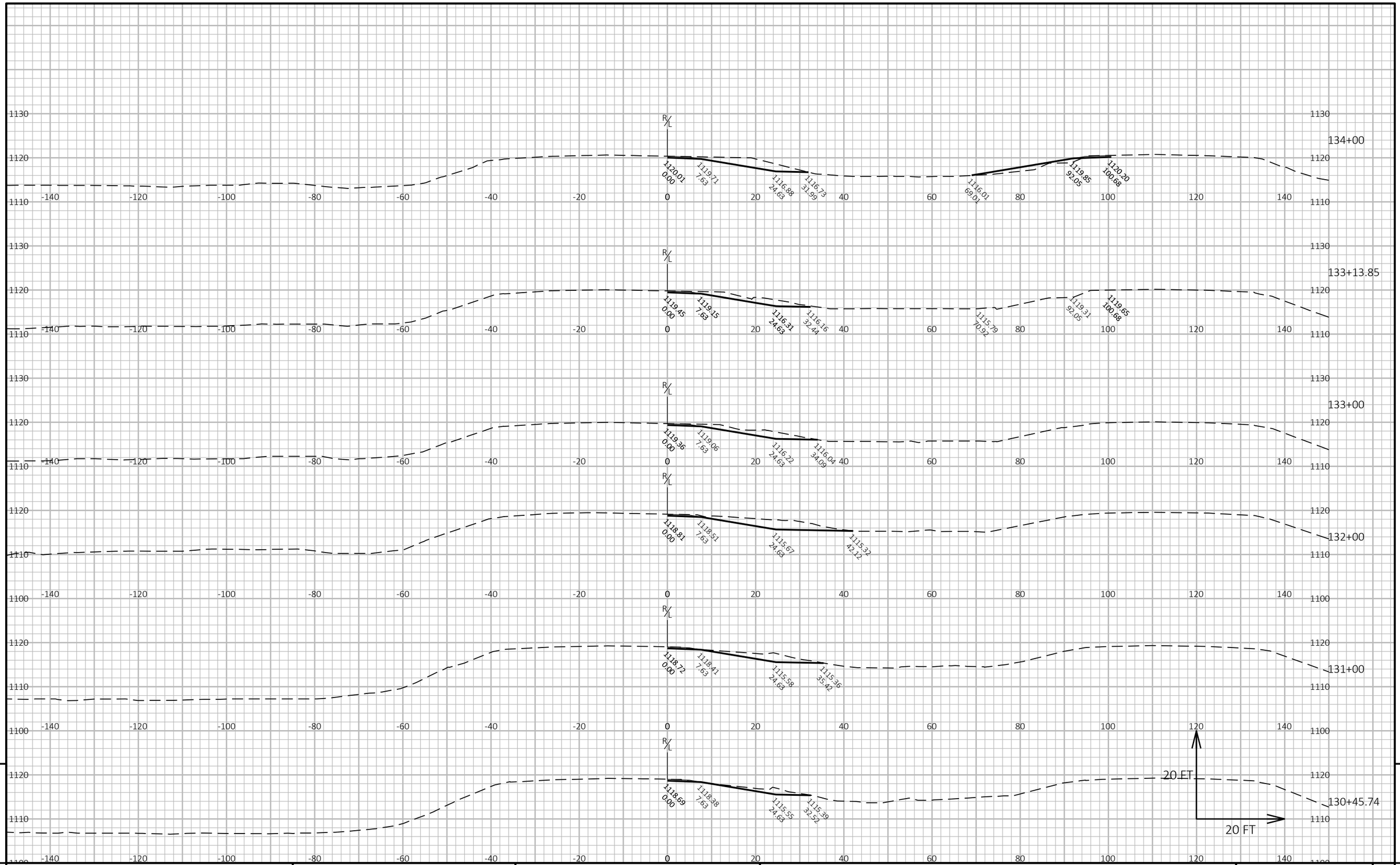
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 450	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 20

PLOT DATE : 11/19/2020 2:55 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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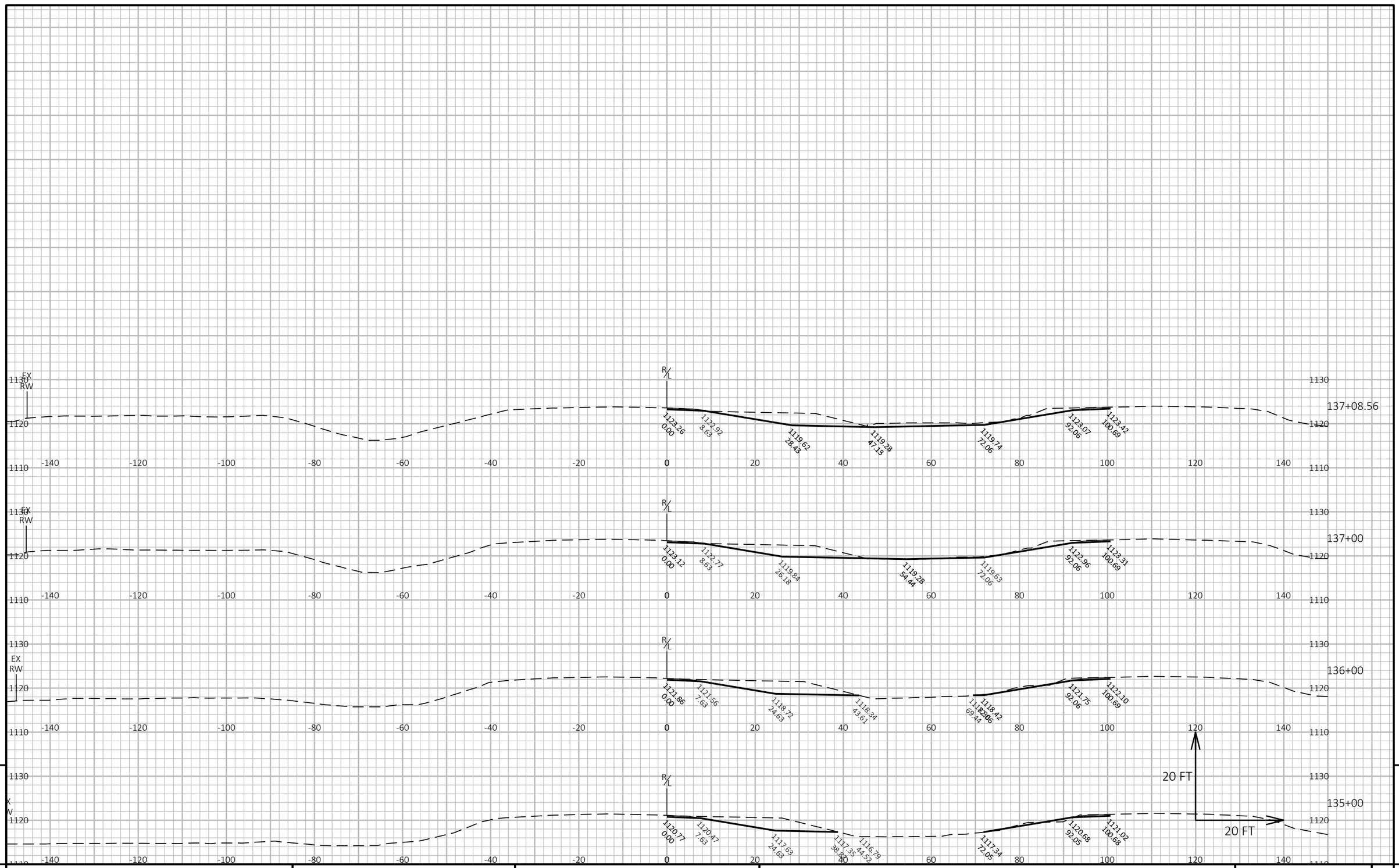
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB -STAGE 3	SHEET 451	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 1

PLOT DATE : 11/19/2020 3:05 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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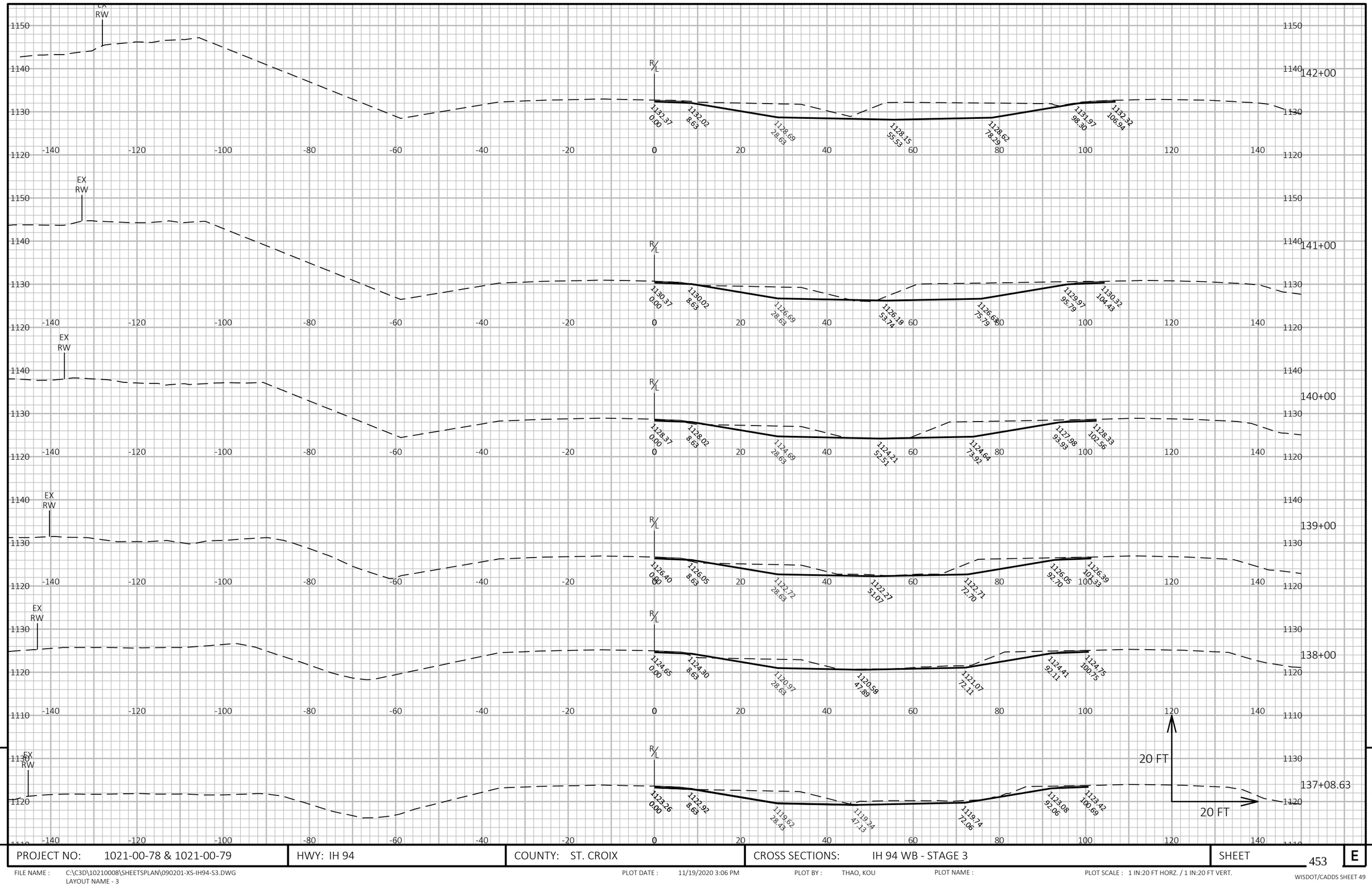
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB -STAGE 3	SHEET 452	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 2

PLOT DATE : 11/19/2020 3:06 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

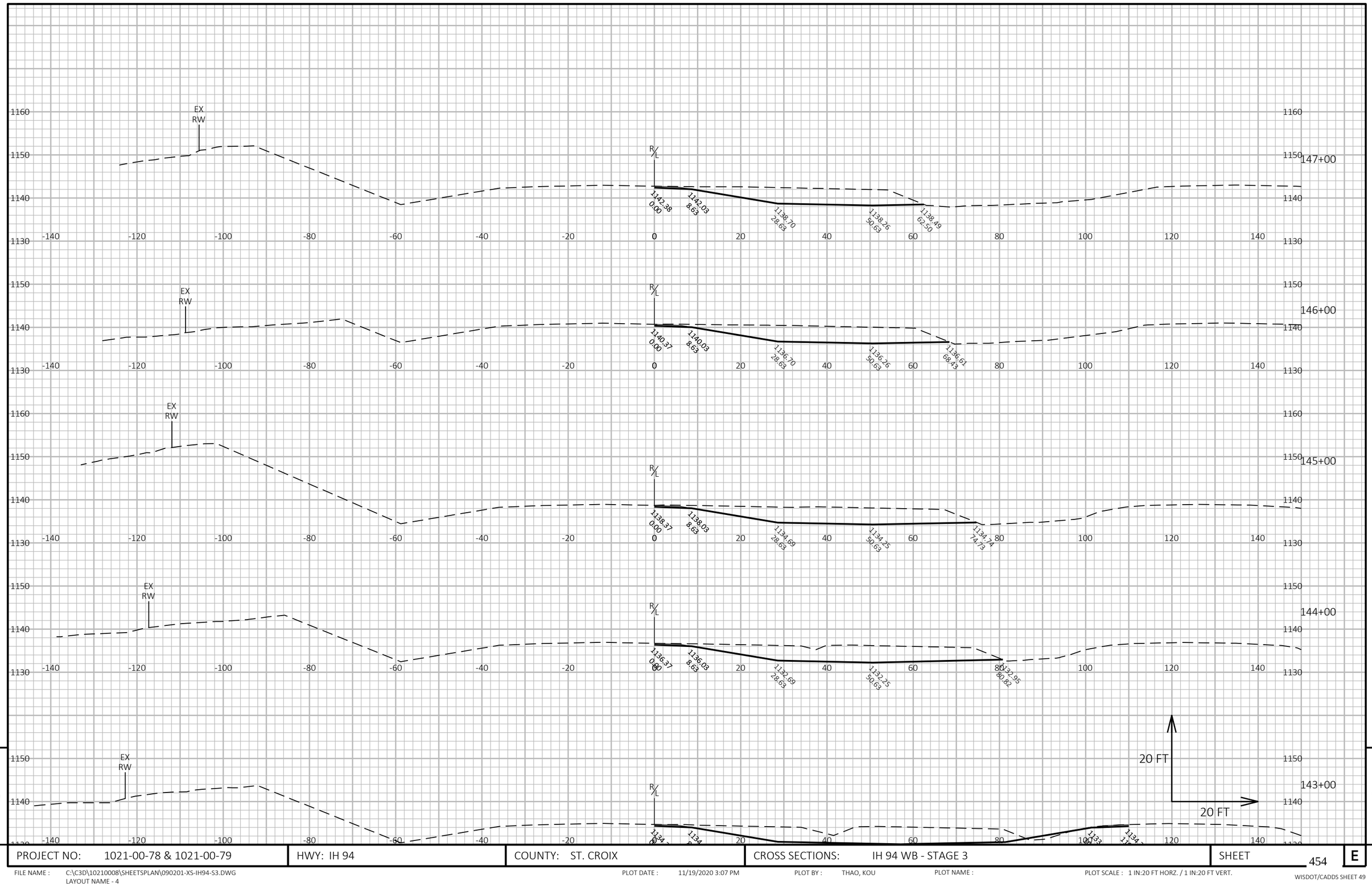
WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 453	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 3
PLOT DATE : 11/19/2020 3:06 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



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PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 454	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 4

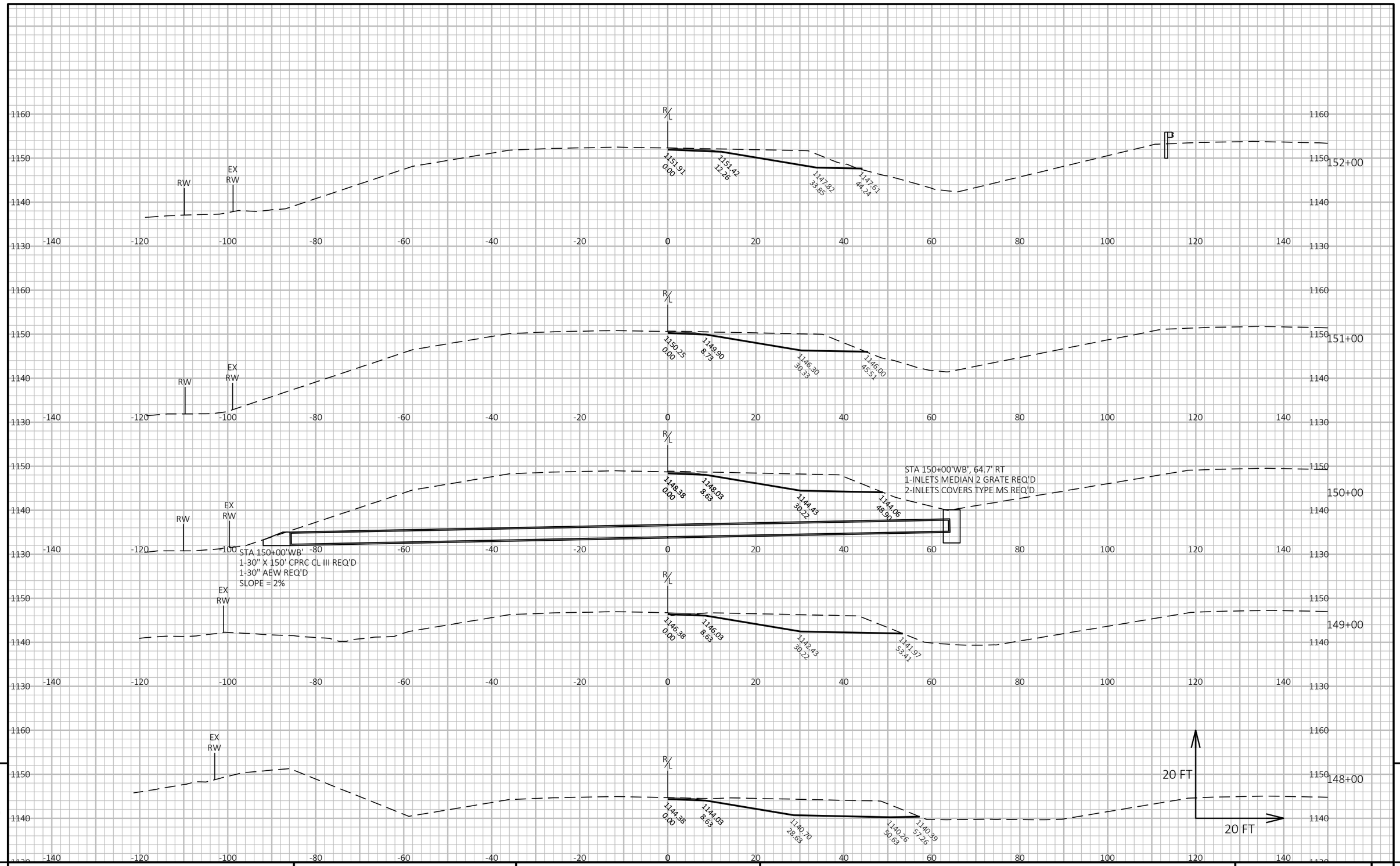
PLOT DATE : 11/19/2020 3:07 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

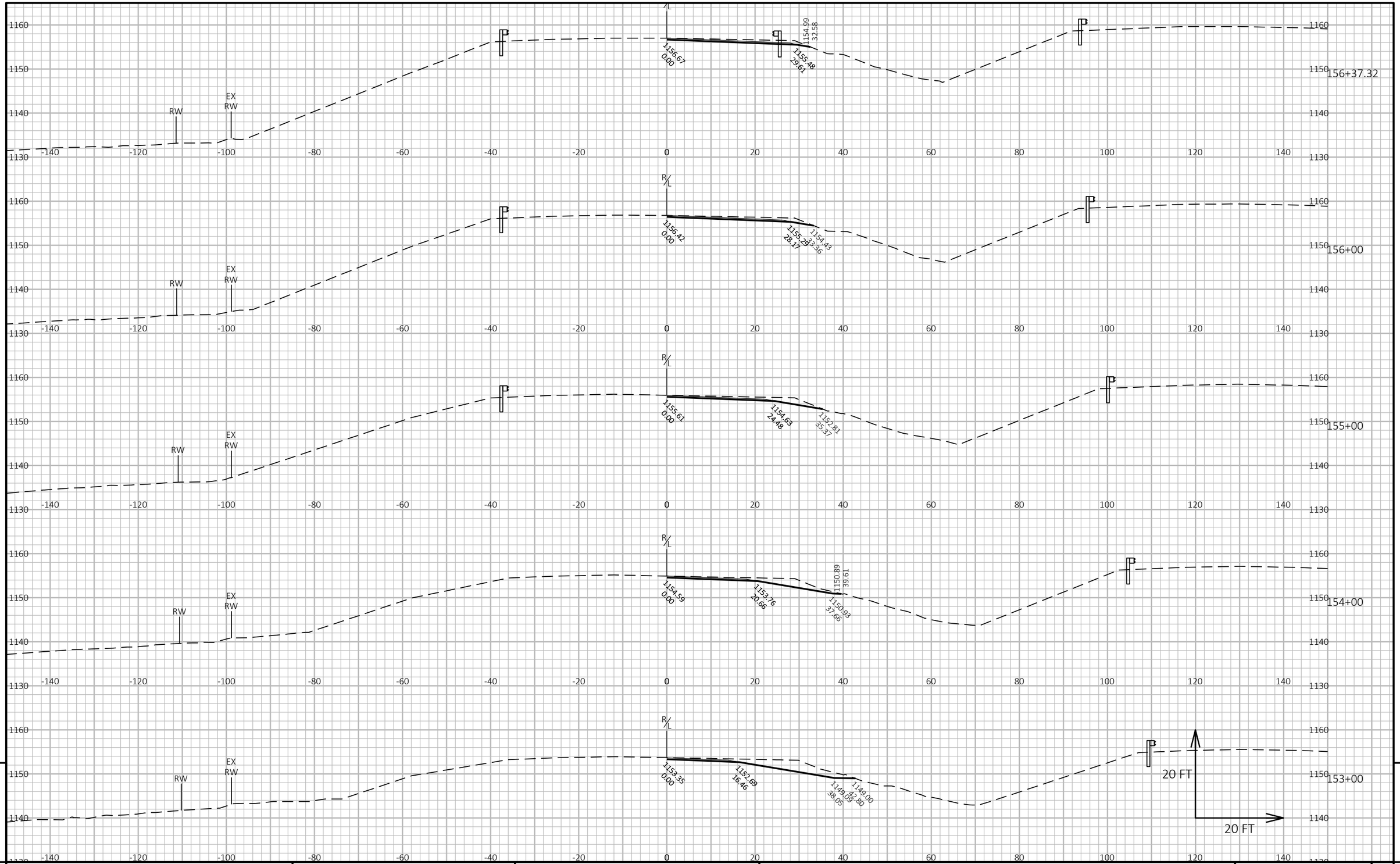
9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 455	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 5

PLOT DATE : 11/19/2020 3:07 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

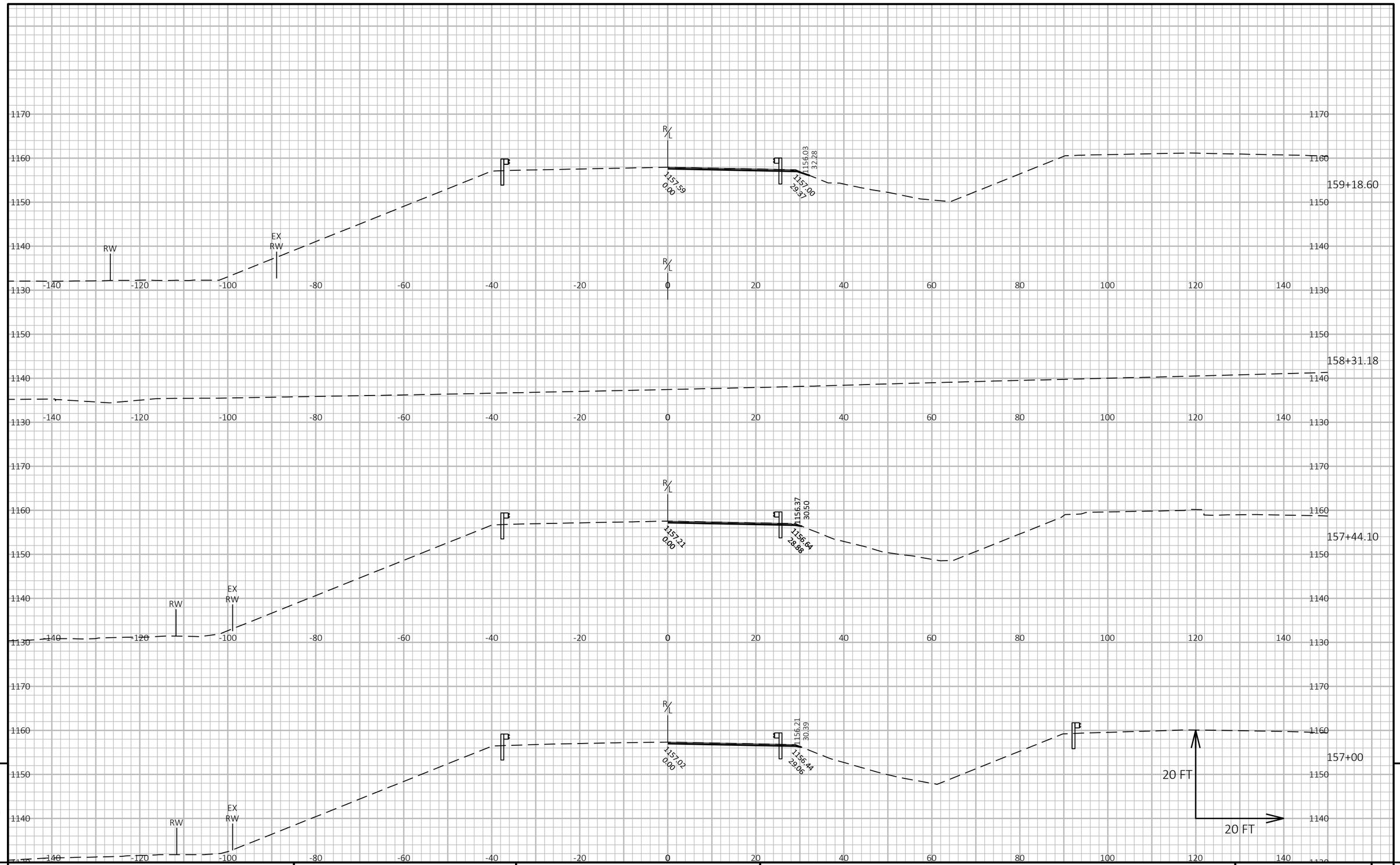
9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 456	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 6

PLOT DATE : 11/19/2020 3:08 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

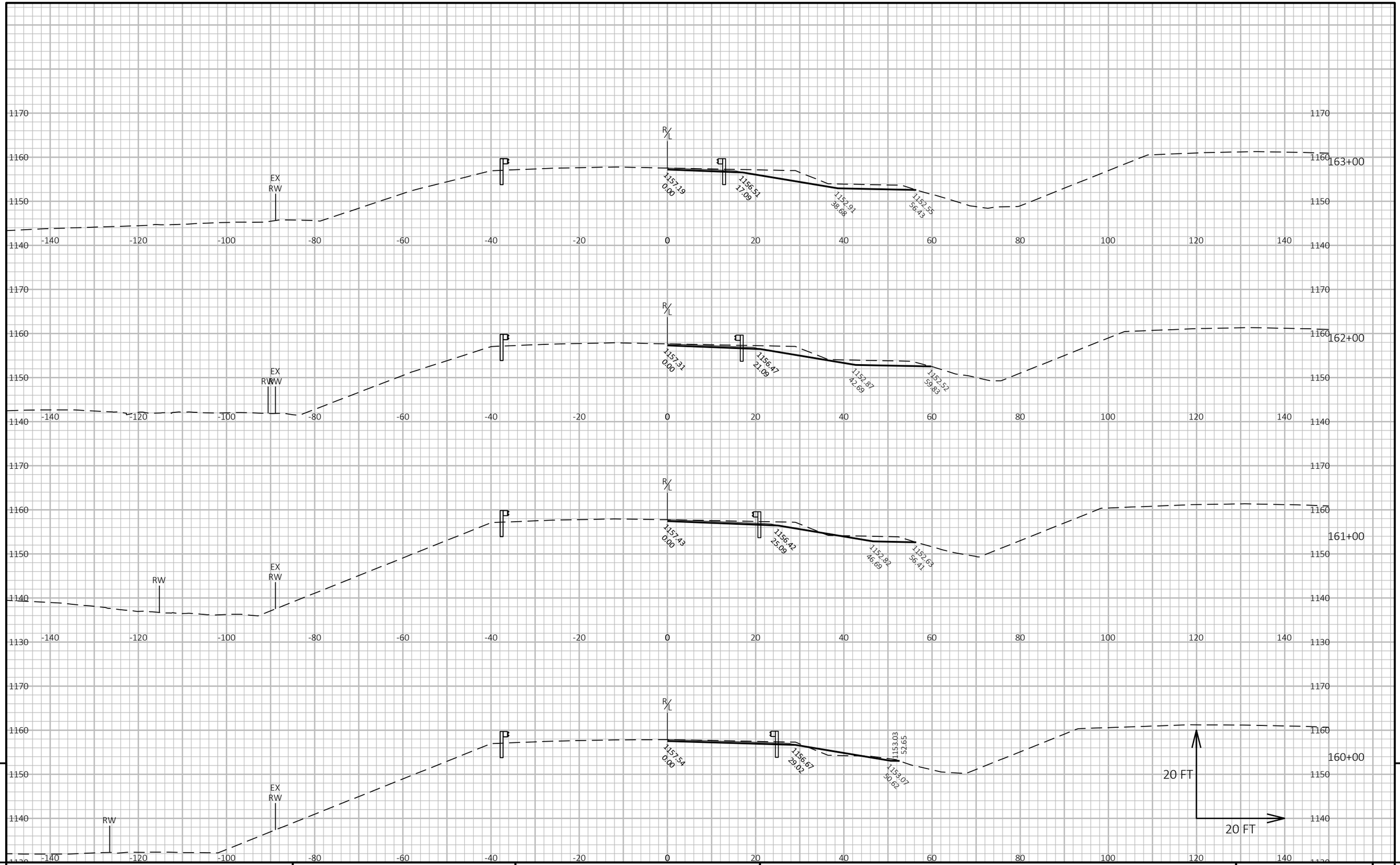
9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 457	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 7

PLOT DATE : 11/19/2020 3:08 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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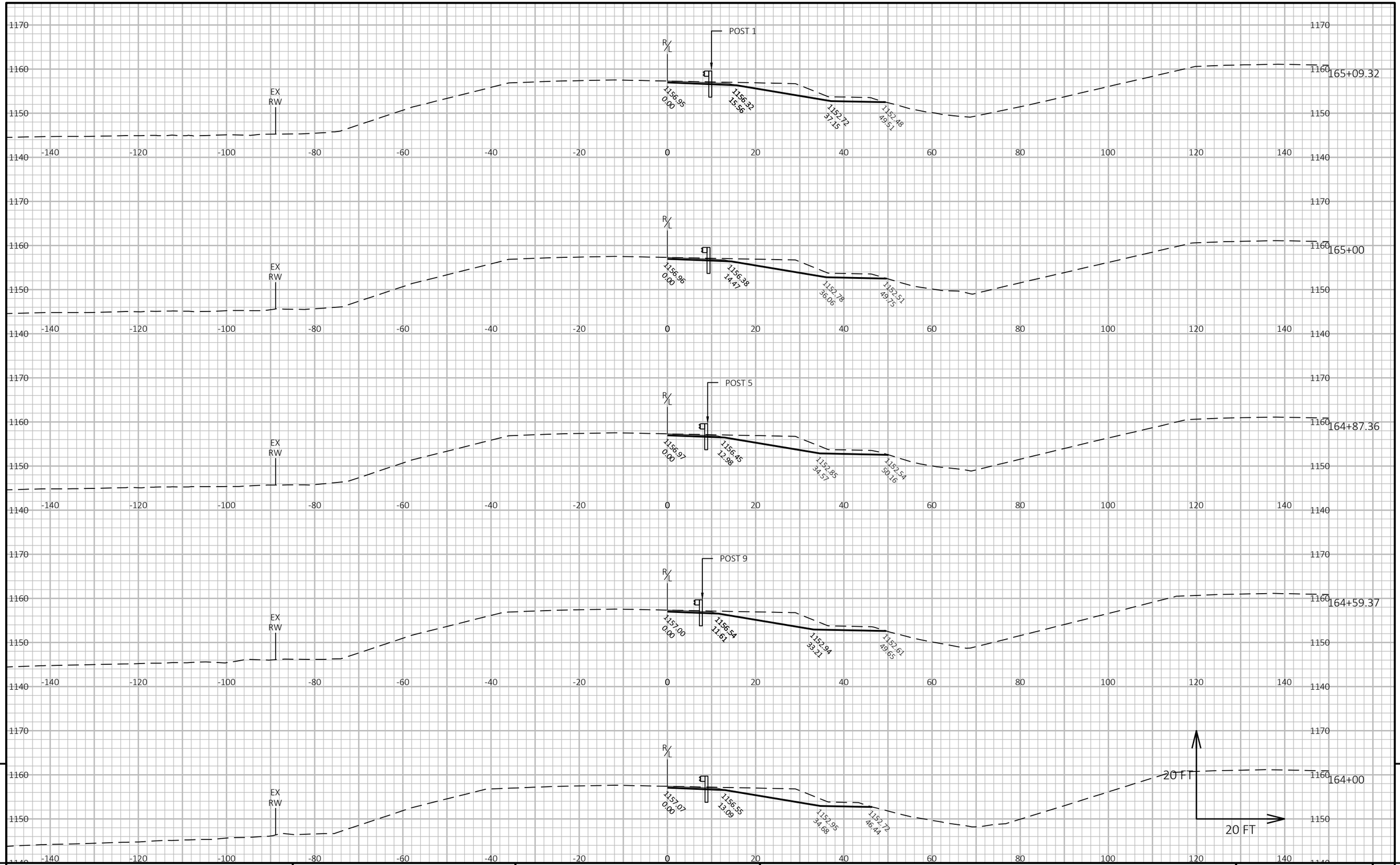
9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 458	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 8

PLOT DATE : 11/19/2020 3:09 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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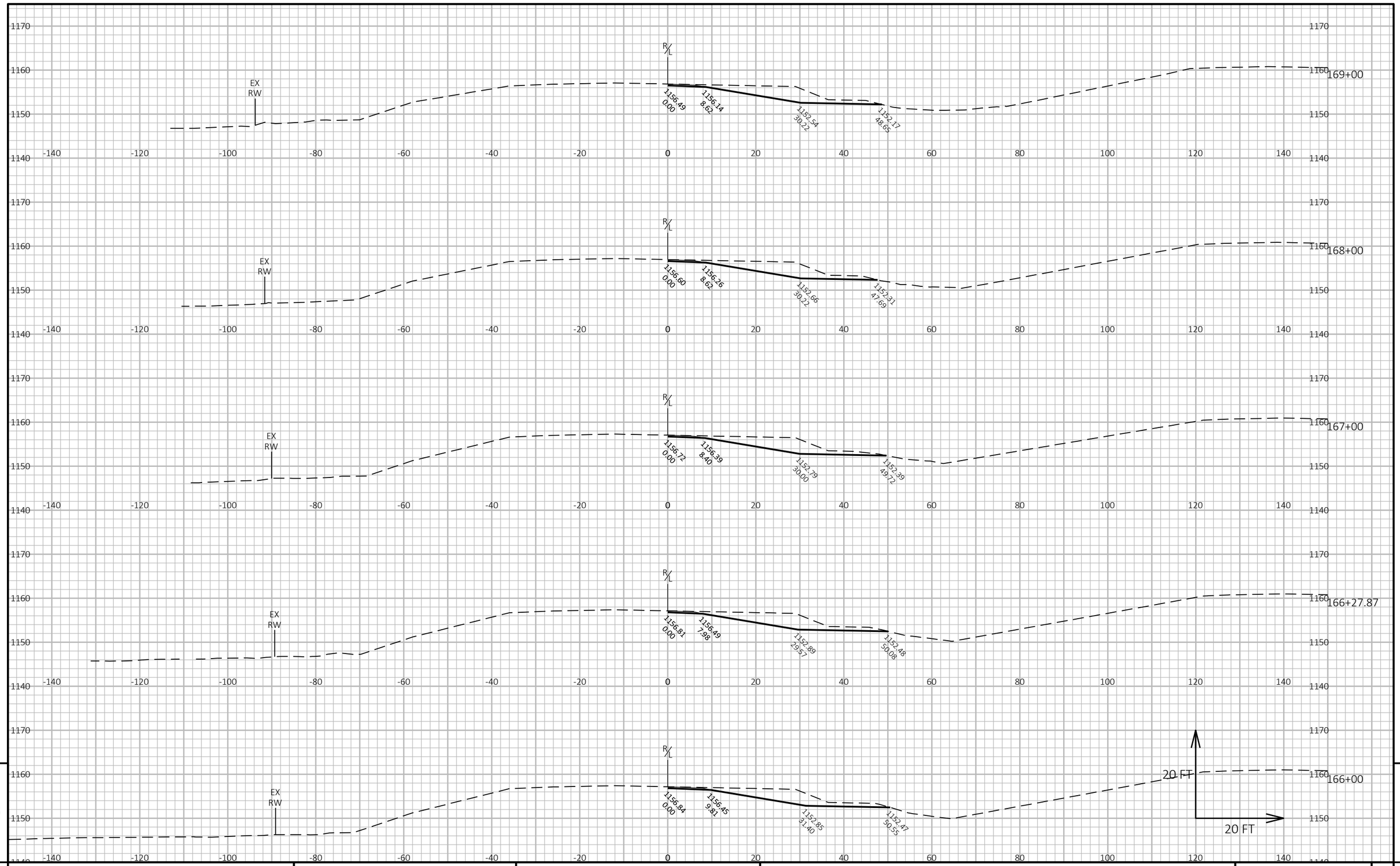
9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 459	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 9

PLOT DATE : 11/19/2020 3:09 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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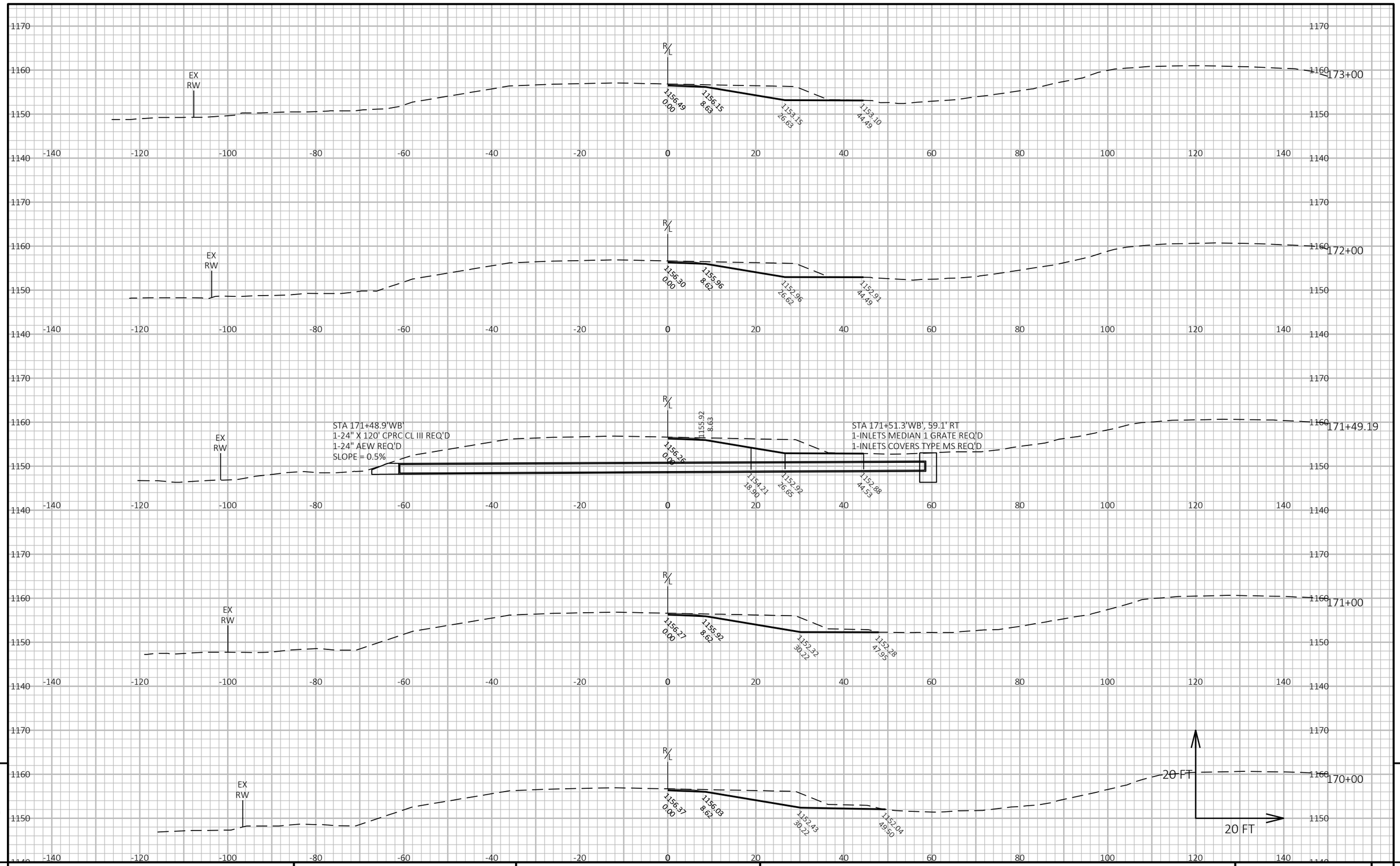
9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 460	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 10

PLOT DATE : 11/19/2020 3:10 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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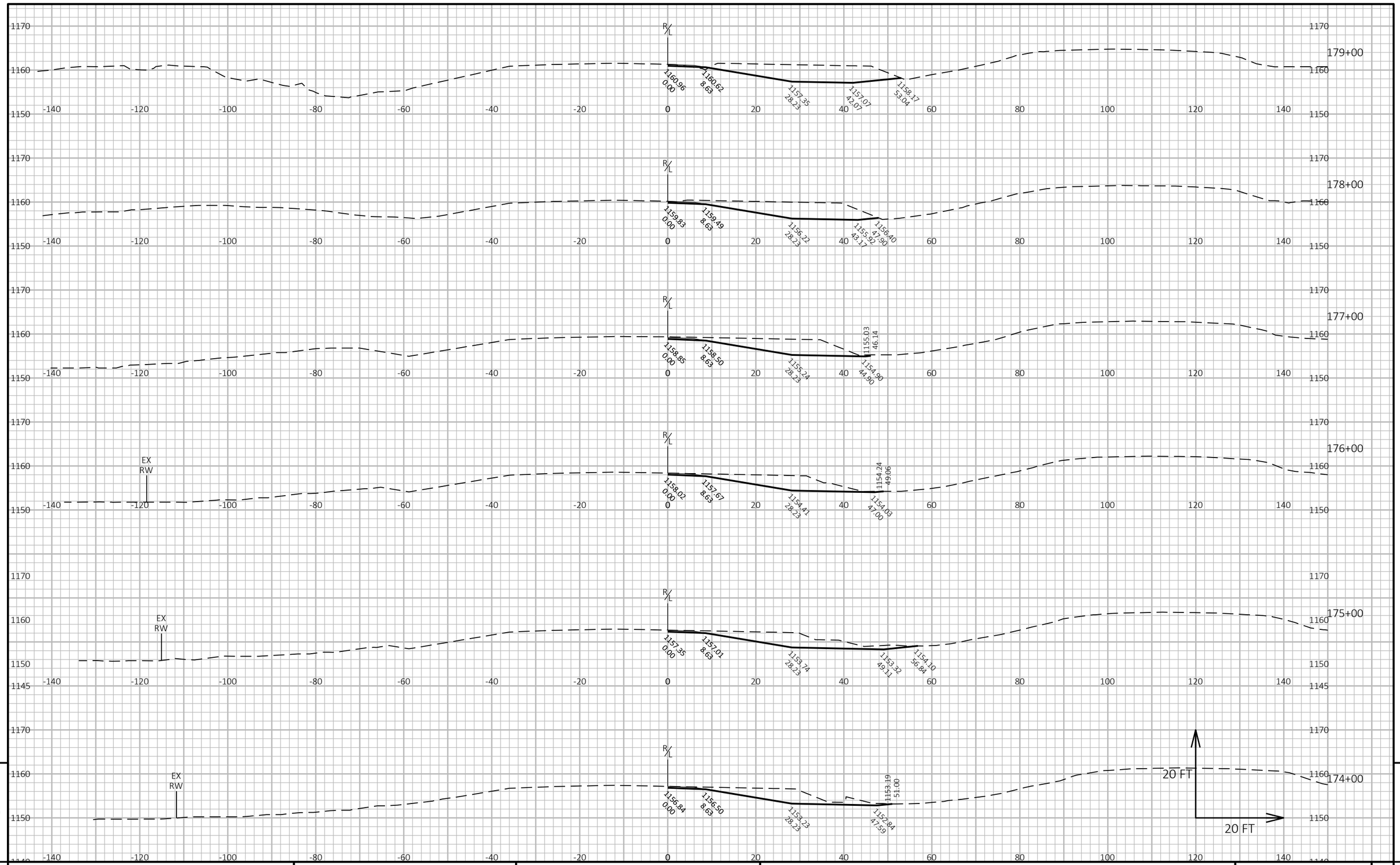
9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 461	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 11

PLOT DATE : 11/19/2020 3:10 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

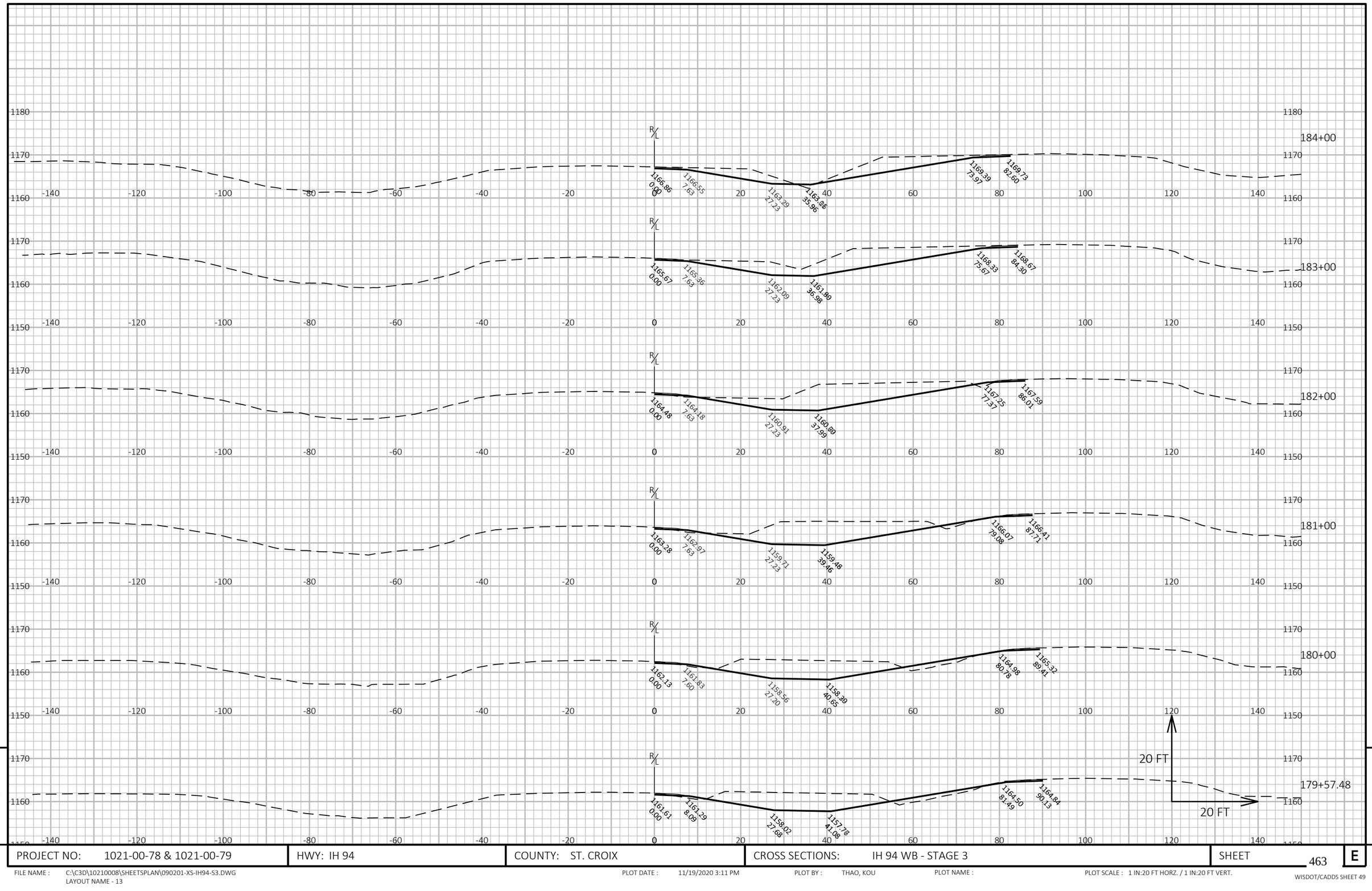


PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 462	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 12

PLOT DATE : 11/19/2020 3:11 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

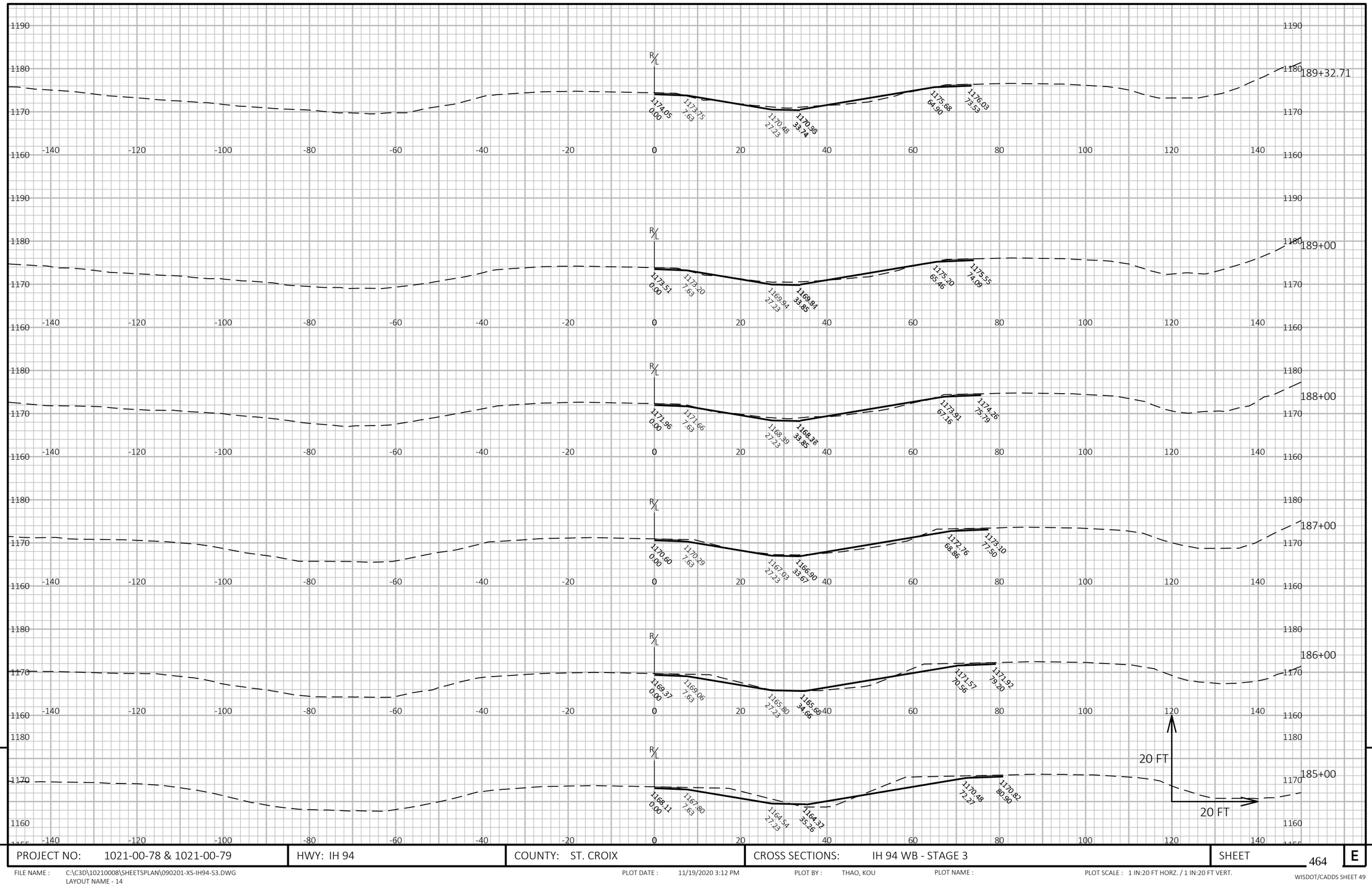


9 9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 463	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 13

PLOT DATE : 11/19/2020 3:11 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

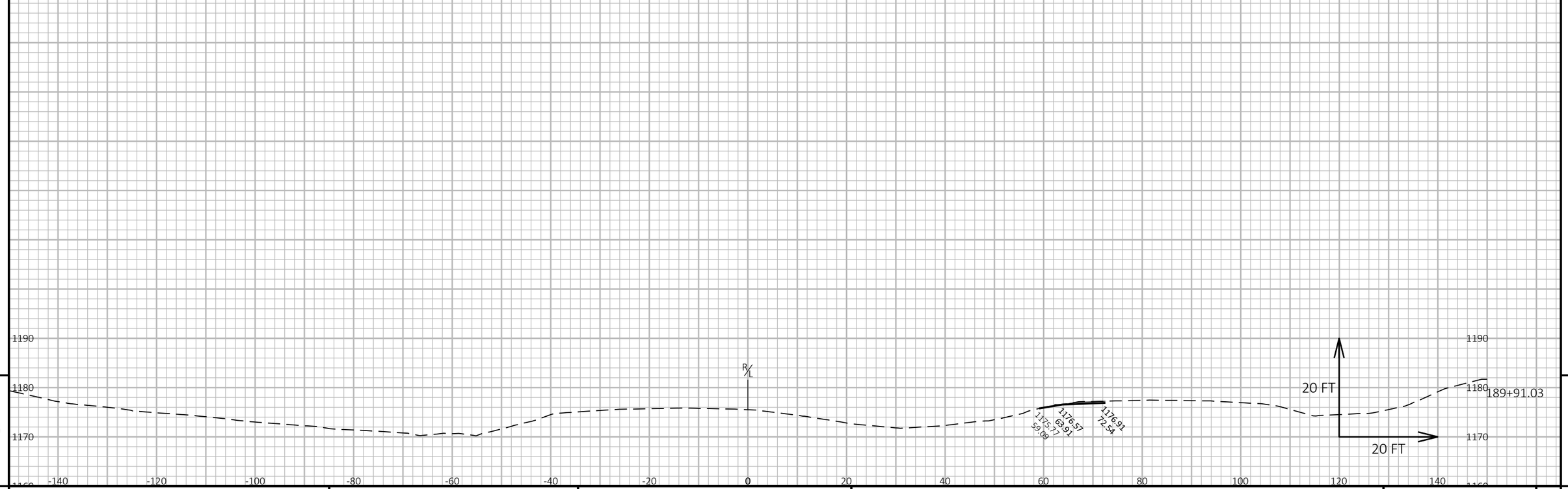
9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 464	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 14

PLOT DATE : 11/19/2020 3:12 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 465	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 15

PLOT DATE : 11/19/2020 3:12 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

Alignment: Stage1-94WB
Start Sta: 0+00.000
End Sta: 71+07.544

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
0+00.000	9	0	0	0	0	0	0	0	0
1+00.000	10	35	35	0	0	35	35	0	35
2+00.000	20	55	55	0	0	90	90	0	90
3+00.000	29	91	91	0	0	181	181	0	181
4+00.000	31	111	111	0	0	292	292	0	292
5+00.000	29	112	112	0	0	404	404	0	404
6+00.000	32	113	113	0	0	517	517	0	517
7+00.000	33	121	121	3	8	639	639	8	631
8+00.000	34	125	125	2	14	764	764	22	742
9+00.000	31	120	120	6	20	884	884	42	842
10+00.000	31	113	113	9	37	997	997	79	918
11+00.000	29	111	111	11	50	1108	1108	129	978
12+00.000	32	114	114	6	42	1222	1222	172	1050
13+00.000	35	124	124	7	32	1346	1346	203	1142
14+00.000	33	126	126	4	26	1471	1471	230	1242
15+00.000	35	127	127	5	21	1598	1598	250	1348
16+00.000	42	143	143	1	14	1742	1742	265	1477
17+00.000	38	149	149	2	7	1890	1890	272	1618
18+00.000	32	130	130	12	34	2020	2020	306	1715
19+00.000	33	121	121	16	68	2141	2141	373	1768
20+00.000	33	122	122	16	76	2263	2263	449	1814
21+00.000	33	122	122	26	101	2386	2386	550	1835
22+00.000	34	124	124	24	122	2510	2510	672	1838
23+00.000	33	123	123	26	121	2633	2633	793	1840
24+00.000	31	119	119	24	120	2751	2751	913	1838
25+00.000	34	121	121	22	111	2873	2873	1024	1849
26+00.000	31	122	122	26	115	2994	2994	1139	1855
27+00.000	32	117	117	26	126	3111	3111	1265	1846
28+00.000	32	119	119	21	114	3230	3230	1379	1850
29+00.000	31	117	117	13	82	3347	3347	1461	1886
30+00.000	33	119	119	9	54	3465	3465	1515	1950
31+00.000	34	126	126	6	36	3591	3591	1552	2039
32+00.000	35	129	129	7	30	3720	3720	1582	2138
33+00.000	31	122	122	7	34	3842	3842	1616	2226
34+00.000	32	116	116	8	35	3957	3957	1651	2306
35+00.000	37	127	127	3	26	4084	4084	1677	2407
36+00.000	99	252	252	0	7	4336	4336	1684	2652
37+00.000	85	341	341	0	0	4677	4677	1684	2993
38+00.000	105	351	351	0	0	5028	5028	1684	3344
39+00.000	125	425	425	0	0	5453	5453	1684	3769
40+00.000	153	515	515	0	0	5968	5968	1684	4284
41+00.000	174	606	606	0	0	6574	6574	1684	4890
42+00.000	158	614	614	0	0	7188	7188	1684	5504
43+00.000	142	554	554	0	0	7742	7742	1684	6058
43+74.078	123	363	363	0	0	8105	8105	1684	6421
44+00.000	87	101	101	0	0	8205	8205	1684	6521
44+71.879	60	195	195	0	0	8400	8400	1684	6716
44+71.900	0	0	0	0	0	8400	8400	1684	6716
45+29.840	0	0	0	0	0	8400	8400	1684	6716
45+75.790	0	0	0	0	0	8400	8400	1684	6716

~CONTINUE~									
45+75.807	83	0	0	0	0	8400	8400	1684	6716
46+00.000	63	66	66	0	0	8466	8466	1684	6782
47+00.000	60	229	229	0	0	8695	8695	1684	7011
48+00.000	56	216	216	0	0	8911	8911	1684	7227
48+59.193	62	130	130	0	0	9041	9041	1684	7357
49+00.000	58	91	91	0	0	9131	9131	1684	7448
50+00.000	48	195	195	0	0	9326	9326	1684	7642
51+00.000	37	156	156	0	0	9483	9483	1684	7799
52+00.000	33	128	128	0	0	9611	9611	1684	7927
53+00.000	35	126	126	0	0	9737	9737	1684	8053
54+00.000	40	140	140	0	0	9878	9878	1684	8194
55+00.000	40	148	148	0	0	10026	10026	1684	8342
56+00.000	40	148	148	0	0	10174	10174	1684	8490
57+00.000	36	141	141	0	0	10315	10315	1684	8631
58+00.000	33	127	127	0	0	10442	10442	1684	8758
59+00.000	35	126	126	0	0	10568	10568	1684	8884
60+00.000	39	136	136	0	0	10704	10704	1684	9020
61+00.000	38	141	141	2	4	10845	10845	1688	9157
61+47.948	31	61	61	3	5	10906	10906	1693	9212
62+00.000	23	52	52	7	13	10958	10958	1706	9252
63+00.000	23	85	85	18	60	11042	11042	1766	9277
64+00.000	32	102	102	1	44	11144	11144	1810	9334
64+40.189	39	53	53	0	1	11197	11197	1810	9386
65+00.000	35	81	81	0	0	11278	11278	1810	9468
66+00.000	35	128	128	2	5	11407	11407	1815	9591
67+00.000	33	126	126	0	5	11532	11532	1820	9712
68+00.000	31	119	119	0	0	11652	11652	1820	9831
69+00.000	20	95	95	0	0	11747	11747	1820	9926
70+00.000	13	61	61	0	0	11808	11808	1820	9988
71+00.000	12	45	45	0	0	11853	11853	1820	10033
71+07.544	12	3	3	0	0	11857	11857	1820	10036

Alignment: Stage1-94WB
Start Sta: 48+59.193
End Sta: 62+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
48+59.193	6	7	7	0	0	7	7	0	7
49+00.000	19	19	19	0	0	26	26	0	26
50+00.000	35	100	100	0	0	126	126	0	126
51+00.000	36	132	132	2	5	259	259	5	254
52+00.000	40	142	142	3	11	400	400	16	384
53+00.000	46	160	160	2	11	560	560	26	534
54+00.000	48	174	174	0	4	734	734	31	703
55+00.000	50	182	182	0	0	915	915	31	885
56+00.000	43	172	172	0	0	1087	1087	31	1056
57+00.000	41	155	155	4	9	1242	1242	40	1202
58+00.000	32	136	136	2	15	1378	1378	56	1322
59+00.000	30	114	114	4	15	1492	1492	71	1421
60+00.000	31	112	112	2	13	1604	1604	84	1520
61+00.000	30	113	113	0	4	1717	1717	89	1628
61+47.948	3	30	30	0	0	1747	1747	89	1658
62+00.000	0	3	3	0	0	1750	1750	89	1661

Alignment: stage1-rampA-temp
Start Sta: 16+15.000
End Sta: 17+95.948

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
16+15.000	3	0	0	0	0	0	0	0	0
16+20.000	8	1	1	0	0	1	1	0	1
16+30.000	15	4	4	0	0	5	5	0	5
16+40.000	15	6	6	0	0	11	11	0	11
16+50.000	14	5	5	0	0	16	16	0	16
16+60.000	15	5	5	2	0	21	21	0	21
16+70.000	15	6	6	1	1	27	27	1	26
16+80.000	17	6	6	2	1	33	33	2	31
16+90.000	17	6	6	2	1	39	39	3	36
17+00.000	19	7	7	1	1	46	46	4	42
17+10.000	20	7	7	0	0	53	53	4	49
17+20.000	19	7	7	0	0	60	60	4	56
17+30.000	19	7	7	0	0	66	66	4	62
17+40.000	20	7	7	0	0	73	73	4	69
17+50.000	21	6	6	0	0	79	79	4	75
17+60.000	17	5	5	1	0	84	84	4	80
17+70.000	12	4	4	2	0	89	89	4	84
17+80.000	11	4	4	4	1	92	92	5	88
17+90.000	11	4	4	4	1	96	96	5	90
17+95.948	12	2	2	0	0	98	98	6	92

Alignment: AliProf-IH94WB-Carr
Start Sta: 8+23.680
End Sta: 36+93.873

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
8+23.680	324	0	0	0	0	0	0	0	0
9+00.000	139	654	654	0	0	654	654	0	653
10+00.000	147	529	529	15	36	1183	1183	36	1147
11+00.000	146	542	542	0	35	1725	1725	72	1653
12+00.000	133	517	517	17	42	2242	2242	114	2128
13+00.000	123	475	475	27	107	2717	2717	221	2496
14+00.000	108	428	428	37	154	3145	3145	375	2770
15+00.000	81	351	351	47	201	3495	3495	576	2919
16+00.000	68	277	277	62	262	3773	3773	838	2934
17+00.000	89	291	291	69	316	4064	4064	1154	2909
18+00.000	52	261	261	72	339	4325	4325	1494	2831
19+00.000	49	188	188	42	273	4513	4513	1767	2746
20+00.000	52	188	188	12	128	4701	4701	1895	2806
21+00.000	49	188	188	165	426	4888	4888	2321	2568
22+00.000	48	180	180	217	919	5068	5068	3240	1828
23+00.000	48	178	178	252	1129	5246	5246	4369	877
24+00.000	46	175	175	236	1175	5421	5421	5544	-124
25+00.000	45	170	170	212	1079	5590	5590	6623	-1033
26+00.000	45	168	168	78	698	5758	5758	7322	-1563
27+00.000	105	278	278	23	244	6037	6037	7565	-1529
28+00.000	50	288	288	90	272	6325	6325	7837	-1512
29+00.000	43	174	174	230	770	6498	6498	8607	-2109
30+00.000	44	161	161	259	1178	6659	6659	9786	-3126
31+00.000	44	163	163	232	1183	6823	6823	10968	-4146
32+00.000	43	163	163	250	1160	6985	6985	12128	-5143
33+00.000	44	163	163	256	1217	7148	7148	13346	-6198
34+00.000	45	165	165	196	1088	7313	7313	14434	-7121
35+00.000	46	168	168	116	752	7481	7481	15185	-7704
36+00.000	51	180	180	43	384	7661	7661	15569	-7908
36+93.873	60	193	193	7	114	7854	7854	15683	-7829

Alignment: AliProf-RmpA
Start Sta: 36+94.514
End Sta: 51+91.049

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
36+94.514	1	0	0	9	0	0	0	0	0
37+00.000	1	0	0	8	2	0	0	2	-2
38+00.000	12	24	24	9	39	24	24	41	-17
39+00.000	4	30	30	70	188	54	54	229	-175
40+00.000	6	19	19	238	738	73	73	967	-894
41+00.000	0	11	11	408	1552	85	85	2519	-2434
42+00.000	0	0	0	596	2415	85	85	4934	-4850
42+23.280	0	0	0	636	690	85	85	5624	-5540
42+23.300	0	0	0	0	0	85	85	5625	-5540
43+00.000	0	0	0	0	0	85	85	5625	-5540
43+83.530	0	0	0	0	0	85	85	5625	-5540
43+83.548	0	0	0	941	0	85	85	5625	-5540
44+00.000	0	0	0	991	765	85	85	6390	-6305
45+00.000	0	0	0	1176	5217	85	85	11607	-11522
45+23.232	0	0	0	1214	1337	85	85	12944	-12859
45+48.361	0	0	0	1273	1505	85	85	14448	-14364
45+73.279	0	0	0	1370	1585	85	85	16034	-15949
46+00.000	0	0	0	1456	1818	85	85	17851	-17767
46+49.077	0	0	0	1426	3396	85	85	21247	-21163
46+73.988	0	0	0	1428	1711	85	85	22959	-22874
46+98.916	0	0	0	1454	1730	85	85	24688	-24604
47+00.000	0	0	0	1456	76	85	85	24764	-24680
48+00.000	0	0	0	1376	6808	85	85	31572	-31487
49+00.000	0	0	0	1021	5770	85	85	37342	-37257
50+00.000	38	69	69	621	3968	154	154	41310	-41156
51+00.000	83	222	222	208	2012	375	375	43322	-42947
51+91.049	156	403	403	7	472	778	778	43794	-43015

Alignment: AliProf-IH94WB-Carr
Start Sta: 36+93.870
End Sta: 57+10.353

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
36+93.870	167	0	0	0	0	0	0	0	0
37+00.000	157	37	37	0	0	37	37	0	37
38+00.000	146	562	562	0	0	598	598	0	598
39+00.000	156	559	559	0	0	1157	1157	0	1157
40+00.000	174	611	611	0	0	1769	1769	0	1769
40+36.390	186	243	243	0	0	2011	2011	0	2011
41+00.000	191	444	444	0	0	2455	2455	0	2455
42+00.000	186	699	699	1	3	3154	3154	3	3151
42+19.910	184	137	137	1	1	3290	3290	4	3286
43+00.000	0	273	273	0	3	3563	3563	7	3557
43+79.410	196	288	288	15	29	3852	3852	36	3815
44+00.000	208	154	154	0	8	4006	4006	44	3962
45+00.000	255	857	857	0	1	4863	4863	45	4818
46+00.000	454	1312	1312	0	0	6175	6175	46	6129
46+19.410	499	342	342	0	0	6517	6517	46	6472
46+44.409	552	486	486	0	0	7004	7004	46	6958
46+69.408	609	538	538	0	0	7541	7541	46	7496
47+00.000	687	734	734	0	0	8275	8275	46	8230
48+00.000	889	2917	2917	7	17	11192	11192	62	11130
49+00.000	922	3353	3353	3	23	14545	14545	86	14459

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PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS	SHEET 469	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090101-EW-I94-CTHB.DWG
LAYOUT NAME - 04

PLOT DATE : 7/23/2020 2:36 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1" = 1'

~CONTINUE~

50+00.000	409	2465	2465	0	7	17010	17010	93	16918
51+00.000	326	1362	1362	0	0	18372	18372	93	18280
51+50.000	282	563	563	0	0	18935	18935	93	18842
52+00.000	182	429	429	0	0	19364	19364	93	19272
53+00.000	195	699	699	0	0	20063	20063	93	19970
54+00.000	193	720	720	0	0	20783	20783	93	20691
55+00.000	186	702	702	0	0	21485	21485	93	21393
56+00.000	171	661	661	0	1	22146	22146	93	22053
57+00.000	76	458	458	16	40	22604	22604	133	22471
57+10.353	73	29	29	18	8	22633	22633	142	22491

Alignment: ali-stage3-NEGore-Widening
Start Sta: 57+10.350
End Sta: 60+25.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
57+10.350	20	0	0	11	0	0	0	0	0
58+00.000	18	64	64	10	45	64	64	45	19
59+00.000	17	66	66	11	51	129	129	95	34
60+00.000	6	43	43	0	26	172	172	121	51
60+25.000	0	3	3	0	0	175	175	121	54

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PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS	SHEET 470	E

Alignment: 94wb-stage4-Xover-East
Start Sta: 57+10.472
End Sta: 70+84.906

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
57+10.472	24	0	0	2	0	0	0	0	0
58+00.000	13	60	60	2	9	60	60	9	52
59+00.000	27	73	73	0	5	133	133	14	119
60+00.000	50	143	143	0	0	276	276	14	262
61+00.000	64	211	211	0	0	487	487	14	473
62+00.000	51	213	213	0	0	700	700	14	686
63+00.000	42	173	173	4	10	873	873	24	849
63+50.000	39	76	76	9	15	949	949	39	910
64+00.000	38	71	71	10	23	1020	1020	62	958
65+00.000	30	126	126	4	35	1146	1146	97	1049
66+00.000	37	124	124	0	10	1270	1270	107	1163
66+26.516	34	35	35	0	0	1305	1305	107	1198
67+00.000	27	84	84	0	0	1389	1389	107	1282
68+00.000	18	84	84	0	0	1473	1473	107	1366
69+00.000	14	60	60	0	0	1533	1533	107	1426
70+00.000	9	43	43	0	0	1576	1576	107	1470
70+84.906	2	17	17	0	0	1594	1594	107	1487

Alignment: 94wb-stage4-Xover-West
Start Sta: 12+00.000
End Sta: 36+94.647

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
12+00.000	32	0	0	0	0	0	0	0	0
13+00.000	36	125	125	0	0	125	125	0	125
14+00.000	45	150	150	0	0	275	275	0	275
15+00.000	50	175	175	0	0	450	450	0	450
16+00.000	81	241	241	0	0	692	692	0	692
17+00.000	59	259	259	0	0	951	951	0	951
18+00.000	48	199	199	0	0	1150	1150	0	1150
19+00.000	30	146	146	0	0	1296	1296	0	1296
20+00.000	8	72	72	1	2	1367	1367	2	1366
21+00.000	6	26	26	8	20	1393	1393	22	1371
21+24.180	41	21	21	9	10	1414	1414	32	1383
22+00.000	33	104	104	11	35	1518	1518	67	1451
22+25.010	38	33	33	10	13	1551	1551	79	1472
23+00.000	38	106	106	7	32	1657	1657	111	1546
24+00.000	56	173	173	2	23	1830	1830	135	1696
24+50.000	62	108	108	1	4	1939	1939	139	1800
25+00.000	56	109	109	0	1	2047	2047	140	1908
26+00.000	57	210	210	0	0	2257	2257	140	2117
26+78.783	46	151	151	0	0	2408	2408	140	2268
27+00.000	50	38	38	0	0	2446	2446	140	2306
28+00.000	51	187	187	0	0	2633	2633	140	2493
29+00.000	50	188	188	0	1	2821	2821	141	2680
30+00.000	50	185	185	1	3	3006	3006	143	2863
31+00.000	49	183	183	2	7	3190	3190	150	3040
32+00.000	47	178	178	3	12	3368	3368	162	3206
33+00.000	49	177	177	0	9	3545	3545	171	3375
33+50.000	68	108	108	0	0	3653	3653	171	3482
34+00.000	59	118	118	0	0	3771	3771	171	3600
34+50.777	57	110	110	0	0	3881	3881	171	3710
35+00.000	53	100	100	0	0	3981	3981	171	3810
36+00.000	48	187	187	2	4	4169	4169	175	3993
36+50.000	48	90	90	2	5	4258	4258	180	4078
36+94.647	48	80	80	0	2	4338	4338	182	4156

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PROJECT NO: 1021-04-77	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS	SHEET 471	E

Alignment: AliProf-IH94WB-Ref
Start Sta: 5+00.000
End Sta: 12+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
5+00.000	0	0	0	0	0	0	0	0	0
5+01.042	28	1	1	0	0	1	1	0	1
6+00.000	30	108	108	0	0	108	108	0	108
7+00.000	32	115	115	0	0	223	223	0	223
8+00.000	32	118	118	0	0	341	341	0	341
9+00.000	30	115	115	0	0	456	456	0	456
10+00.000	28	108	108	0	0	564	564	0	564
11+00.000	29	105	105	0	0	669	669	0	669
12+00.000	32	112	112	0	0	781	781	0	781

Alignment: AliProf-IH94WB-Ref
Start Sta: -2+22.052
End Sta: 12+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
-2+22.052	11	0	0	2	0	0	0	0	0
-2+00.000	11	9	9	4	3	9	9	3	5
-1+00.000	13	43	43	6	24	52	52	28	24
0+00.000	17	55	55	1	17	107	107	45	63
1+00.000	26	78	78	0	4	186	186	49	137
2+00.000	39	119	119	0	1	305	305	50	255
3+00.000	49	163	163	0	0	468	468	50	418
4+00.000	56	195	195	0	0	663	663	50	613
5+00.000	72	237	237	0	0	899	899	50	849
5+01.042	72	3	3	0	0	902	902	50	852
6+00.000	31	189	189	0	0	1091	1091	50	1041
7+00.000	27	109	109	0	0	1200	1200	50	1150
8+00.000	23	94	94	2	4	1294	1294	55	1240
9+00.000	0	43	43	0	4	1338	1338	59	1279

Alignment: AliProf-IH94WB-Ref
Start Sta: 9+00.00
End Sta: 12+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
9+00.000	38	71	71	0	0	71	71	0	71
10+00.000	36	136	136	0	0	207	207	0	207
11+00.000	34	129	129	1	2	336	336	2	334
12+00.000	34	126	126	1	5	462	462	7	455
					TOTALS =	2581		66	

Alignment: AliProf-IH94EB-Carr
Start Sta: 24+50.000
End Sta: 62+96.867

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
24+50.000	178	0	0	27	0	0	0	0	0
25+00.000	191	342	342	37	78	342	342	78	264
26+00.000	199	723	723	49	207	1065	1065	285	780
27+00.000	209	756	756	54	248	1821	1821	533	1287
28+00.000	208	771	771	54	260	2592	2592	793	1799
29+00.000	206	766	766	62	278	3358	3358	1071	2288

~CONTINUE~

30+00.000	204	760	760	73	325	4119	4119	1395	2723
31+00.000	198	745	745	67	339	4864	4864	1734	3130
32+00.000	191	720	720	40	258	5584	5584	1992	3592
33+00.000	217	755	755	18	139	6339	6339	2131	4208
34+00.000	263	889	889	15	79	7228	7228	2210	5018
34+73.483	265	718	718	11	46	7946	7946	2257	5689
34+73.500	198	0	0	0	0	7946	7946	2257	5689
35+00.000	195	193	193	0	0	8139	8139	2257	5882
36+00.000	197	726	726	0	0	8865	8865	2257	6608
37+00.000	186	708	708	0	0	9573	9573	2257	7316
38+00.000	179	676	676	0	0	10248	10248	2257	7992
39+00.000	182	669	669	0	0	10918	10918	2257	8661
40+00.000	192	694	694	0	0	11612	11612	2257	9355
41+00.000	205	735	735	0	0	12347	12347	2257	10090
41+69.510	208	531	531	0	0	12878	12878	2257	10621
42+00.000	0	117	117	0	0	12995	12995	2257	10739

Alignment: AliProf-IH94EB-Carr
Start Sta: 24+50.000
End Sta: 62+96.867

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
43+29.010	231	124	124	28	19	124	124	19	105
44+00.000	261	647	647	14	71	771	771	90	681
45+00.000	282	1006	1006	0	34	1777	1777	124	1654
46+00.000	367	1202	1202	0	1	2979	2979	125	2854
47+00.000	347	1323	1323	0	0	4302	4302	125	4177
47+25.000	313	306	306	7	4	4608	4608	130	4478
47+50.000	279	274	274	14	13	4882	4882	142	4740
47+75.000	165	206	206	29	26	5088	5088	168	4919
48+00.000	159	150	150	39	41	5238	5238	210	5028
48+25.000	153	145	145	43	49	5383	5383	259	5124
48+50.000	191	159	159	62	63	5542	5542	322	5220
48+75.000	149	157	157	57	72	5699	5699	394	5306
49+00.000	148	137	137	33	54	5837	5837	448	5389
50+00.000	195	636	636	10	103	6473	6473	551	5922
51+00.000	276	872	872	5	35	7345	7345	585	6759
51+23.553	202	208	208	0	3	7553	7553	588	6965
52+00.000	189	553	553	3	6	8106	8106	594	7512
53+00.000	188	698	698	8	27	8805	8805	621	8184
53+25.000	340	245	245	0	5	9049	9049	626	8423
54+00.000	235	800	800	10	18	9849	9849	644	9205
54+11.750	230	101	101	10	6	9950	9950	650	9300
55+00.000	215	726	726	16	56	10676	10676	705	9971
56+00.000	214	794	794	28	107	11470	11470	813	10657
56+50.000	263	441	441	39	81	11911	11911	894	11018
57+00.000	198	427	427	36	90	12338	12338	983	11355
58+00.000	127	603	603	31	161	12941	12941	1144	11797
59+00.000	143	501	501	3	84	13442	13442	1228	12214
60+00.000	55	368	368	0	8	13810	13810	1236	12574
61+00.000	46	188	188	0	0	13998	13998	1236	12762
61+66.000	51	119	119	0	0	14117	14117	1236	12881
62+00.000	56	67	67	0	0	14184	14184	1236	12948
62+96.867	72	230	230	0	0	14414	14414	1236	13178
				TOTALS =		27409		3493	

Alignment: AliProf-RmpB
Start Sta: 34+76.920
End Sta: 51+61.917

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
34+76.920	67	0	0	11	0	0	0	0	0
35+00.000	67	58	58	9	12	58	58	12	46
36+00.000	161	422	422	6	36	480	480	47	433
37+00.000	204	675	675	10	37	1155	1155	84	1071
38+00.000	211	769	769	9	46	1924	1924	130	1793
39+00.000	237	831	831	4	32	2754	2754	163	2592
40+00.000	111	645	645	3	18	3400	3400	180	3220
41+00.000	6	217	217	44	114	3617	3617	295	3323
41+72.050	0	8	8	51	165	3625	3625	460	3166
41+72.070	0	0	0	0	0	3625	3625	460	3166
42+00.000	0	0	0	0	0	3625	3625	460	3166
43+00.000	0	0	0	0	0	3625	3625	460	3166
43+31.530	0	0	0	0	0	3625	3625	460	3166
43+31.550	0	0	0	111	0	3625	3625	460	3166
44+00.000	0	0	0	146	424	3625	3625	884	2741
45+00.000	0	0	0	269	999	3625	3625	1882	1743
46+00.000	28	54	54	509	1880	3680	3680	3762	-83
47+00.000	0	54	54	596	2660	3734	3734	6422	-2689
48+00.000	11	21	21	543	2742	3754	3754	9165	-5410
49+00.000	55	122	122	337	2135	3876	3876	11300	-7424
50+00.000	77	241	241	163	1237	4117	4117	12537	-8421
51+00.000	125	371	371	41	499	4488	4488	13036	-8549
51+61.917	179	347	347	0	60	4834	4834	13096	-8262

Alignment: AliProf-IH94WB-Carr
Start Sta: 15+75.000
End Sta: 57+10.353

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
15+75.000	16	0	0	0	0	0	0	0	0
16+00.000	10	12	12	0	0	12	12	0	12
17+00.000	47	105	105	0	0	117	117	0	117
18+00.000	53	184	184	0	0	301	301	0	301
19+00.000	58	205	205	0	0	506	506	0	506
20+00.000	61	220	220	0	0	725	725	0	725
21+00.000	58	220	220	0	0	945	945	0	945
22+00.000	59	217	217	0	0	1163	1163	0	1163
23+00.000	65	230	230	0	0	1392	1392	0	1392
24+00.000	67	244	244	0	0	1636	1636	0	1636
25+00.000	68	250	250	0	0	1886	1886	0	1886
26+00.000	65	246	246	0	0	2132	2132	0	2132
27+00.000	66	242	242	0	0	2374	2374	0	2374
28+00.000	71	253	253	0	0	2627	2627	0	2627
29+00.000	73	267	267	0	0	2894	2894	0	2894
30+00.000	78	279	279	0	0	3174	3174	0	3174
31+00.000	81	294	294	0	0	3468	3468	0	3468
32+00.000	84	306	306	0	0	3774	3774	0	3774
33+00.000	87	317	317	0	0	4091	4091	0	4091
34+00.000	90	327	327	0	0	4418	4418	0	4418
35+00.000	80	313	313	0	0	4732	4732	0	4732
36+00.000	85	304	304	0	0	5036	5036	0	5036
37+00.000	76	297	297	0	0	5332	5332	0	5332
38+00.000	59	250	250	2	4	5582	5582	5	5577
39+00.000	46	195	195	5	15	5777	5777	20	5757
40+00.000	37	153	153	12	40	5930	5930	60	5870
41+00.000	32	127	127	26	91	6057	6057	151	5906

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PROJECT NO: 1021-04-77	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS	SHEET 474	E

~CONTINUE~

42+00.000	31	116	116	36	149	6173	6173	300	5873
42+19.910	31	23	23	36	34	6196	6196	334	5862
42+19.930	0	0	0	0	0	6196	6196	334	5862
43+00.000	0	0	0	0	0	6196	6196	334	5862
43+79.390	0	0	0	0	0	6196	6196	334	5862
43+79.411	25	0	0	45	0	6196	6196	334	5862
44+00.000	25	19	19	45	44	6216	6216	379	5837
45+00.000	25	94	94	37	195	6309	6309	574	5736
46+00.000	27	97	97	15	124	6407	6407	698	5708
47+00.000	24	95	95	4	47	6502	6502	745	5756
47+87.895	31	89	89	4	17	6591	6591	762	5829
48+00.000	32	14	14	4	2	6605	6605	764	5841
49+00.000	33	120	120	4	19	6724	6724	783	5941
49+50.392	31	60	60	5	11	6784	6784	794	5990
50+00.000	25	52	52	7	14	6836	6836	808	6028
51+00.000	10	66	66	47	131	6902	6902	939	5963
52+00.000	9	36	36	41	213	6938	6938	1152	5787
53+00.000	9	34	34	39	192	6973	6973	1344	5629
54+00.000	9	34	34	31	167	7006	7006	1510	5496
55+00.000	18	50	50	8	92	7056	7056	1602	5454
56+00.000	38	103	103	4	28	7159	7159	1630	5529
57+00.000	43	150	150	0	9	7308	7308	1639	5669
57+10.353	44	17	17	0	0	7325	7325	1639	5686

Alignment: AliProf-IH94WB-Carr
Start Sta: 15+75.000
End Sta: 26+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
15+75.000	13	0	0	0	0	0	0	0	0
16+00.000	14	13	13	0	0	13	13	0	13
17+00.000	19	61	61	6	14	74	74	14	60
18+00.000	29	88	88	1	16	162	162	30	132
19+00.000	51	148	148	0	1	311	311	31	279
20+00.000	78	239	239	0	0	549	549	31	518
21+00.000	101	330	330	0	0	879	879	31	848
22+00.000	114	396	396	0	0	1276	1276	31	1244
23+00.000	107	408	408	0	0	1684	1684	31	1652
24+00.000	86	358	358	0	0	2041	2041	31	2010
25+00.000	55	262	262	0	0	2303	2303	31	2272
26+00.000	0	102	102	0	0	2405	2405	31	2374

Alignment: AliProf-IH94WB-Carr
Start Sta: 26+00.000
End Sta: 37+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
26+00.000	31	58	58	0	0	58	58	0	58
27+00.000	22	99	99	0	0	157	157	0	157
28+00.000	11	62	62	0	0	219	219	0	219
29+00.000	9	37	37	0	0	256	256	0	256
30+00.000	7	29	29	0	0	285	285	0	285
31+00.000	5	22	22	0	0	307	307	0	307
32+00.000	4	16	16	0	0	323	323	0	323
33+00.000	3	12	12	0	0	336	336	0	336
34+00.000	3	11	11	0	0	347	347	0	347
35+00.000	0	5	5	0	0	352	352	0	352
36+00.000	0	0	0	0	0	352	352	0	352
37+00.000	0	0	0	0	0	352	352	0	352

Alignment: AliProf-IH94WB-Carr
Start Sta: 47+87.895
End Sta: 57+10.353

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
47+87.895	6	9	9	0	0	9	9	0	9
48+00.000	6	3	3	0	0	12	12	0	12
49+00.000	9	27	27	5	11	39	39	11	28
49+50.392	13	21	21	0	6	60	60	17	44
50+00.000	17	28	28	0	0	88	88	17	72
51+00.000	23	73	73	0	0	161	161	17	145
52+00.000	17	74	74	0	0	235	235	17	218
53+00.000	14	58	58	0	0	292	292	17	276
54+00.000	18	59	59	0	0	351	351	17	335
55+00.000	17	65	65	0	0	416	416	17	399
56+00.000	21	70	70	0	0	486	486	17	469
57+00.000	20	75	75	0	0	561	561	17	544
57+10.353	21	8	8	0	0	569	569	17	552
					Total =	10651		1687	

Alignment: IH94WB-ref-12ft-rt
Start Sta: 57+10.353
End Sta: 69+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
57+10.353	46	0	0	0	0	0	0	0	0
58+00.000	49	157	157	0	0	157	157	0	157
59+00.000	48	179	179	0	0	337	337	0	337
59+65.618	50	119	119	0	0	456	456	0	456
60+00.000	52	65	65	0	0	521	521	0	521
61+00.000	55	198	198	0	0	719	719	0	719
62+00.000	61	215	215	0	0	934	934	0	934
62+11.074	61	25	25	0	0	959	959	0	959
63+00.000	58	196	196	0	0	1155	1155	0	1155
63+42.394	57	90	90	0	0	1244	1244	0	1244
64+00.000	50	113	113	0	0	1358	1358	0	1358
65+00.000	32	151	151	4	11	1508	1508	11	1498
66+00.000	19	94	94	11	37	1602	1602	47	1555
67+00.000	14	62	62	6	40	1664	1664	87	1577
68+00.000	12	49	49	6	28	1713	1713	115	1599
68+78.409	7	28	28	4	19	1741	1741	133	1608
69+00.000	0	3	3	0	2	1744	1744	135	1609

Alignment: IH94WB-ref-12ft-rt
Start Sta: 57+10.353
End Sta: 64+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
57+10.353	1.59	0	0	0	0	0	0	0	0
58+00.000	1.08	4.43	4.43	0	0	4.43	4.43	0	4.43
59+00.000	0.28	2.52	2.52	0	0	6.95	6.95	0	6.95
59+65.618	0.03	0.38	0.38	0	0	7.33	7.33	0	7.33
60+00.000	1.79	1.16	1.16	0	0	8.49	8.49	0	8.49
61+00.000	4.16	11.03	11.03	0	0.01	19.53	19.53	0.02	19.51
62+00.000	6.82	20.34	20.34	0	0	39.86	39.86	0.02	39.84
62+11.074	6.9	2.81	2.81	0	0	42.67	42.67	0.02	42.65
63+00.000	5.25	20	20	0	0	62.68	62.68	0.02	62.65
63+42.394	0	4.12	4.12	0	0	66.8	66.8	0.02	66.78
64+00.000	0	0	0	0	0	66.8	66.8	0.02	66.78

Alignment: IH94WB-ref-12ft-rt
Start Sta: 64+00.000
End Sta: 70+84.055

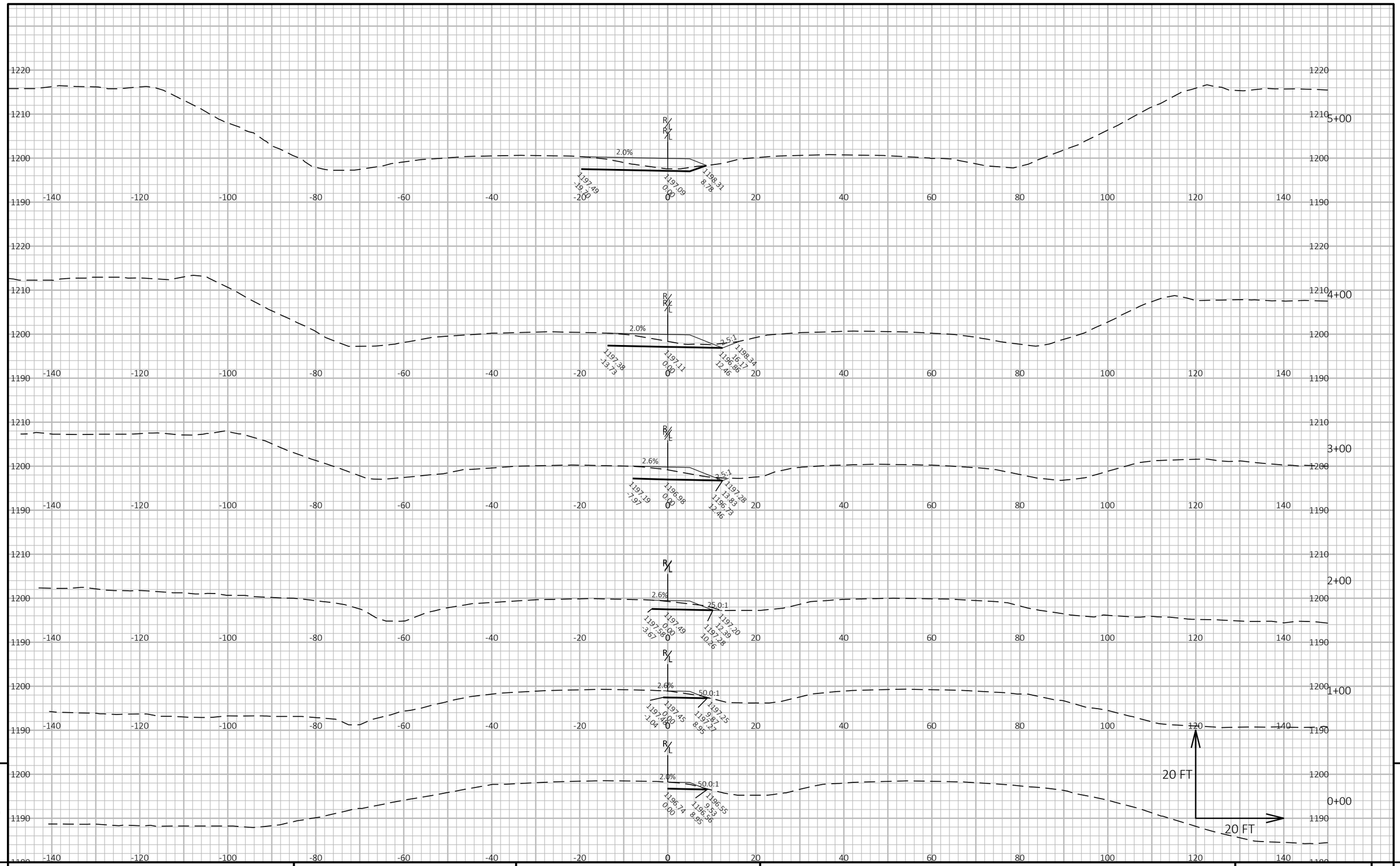
Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
64+00.000	21.01	22.42	22.42	0	0	22.42	22.42	0	22.42
65+00.000	19.35	74.75	74.75	0	0	97.17	97.17	0	97.17
66+00.000	13.41	60.67	60.67	0	0	157.83	157.83	0	157.83
67+00.000	12.52	48.01	48.01	0	0	205.85	205.85	0	205.85
68+00.000	14.4	49.85	49.85	0	0	255.7	255.7	0	255.7
68+78.409	16.49	44.85	44.85	0	0	300.54	300.54	0	300.54
69+00.000	15.51	12.79	12.79	0	0	313.34	313.34	0	313.34
69+95.109	10.2	45.28	45.28	0	0	358.62	358.62	0	358.62
70+00.000	9.94	1.82	1.82	0	0	360.44	360.44	0	360.44
70+84.055	0.81	16.73	16.73	0	0	377.17	377.17	0	377.17

Alignment: IH94WB-ref-12ft-rt
Start Sta: 57+10.353
End Sta: 60+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
57+10.353	21.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58+00.000	14.0	58.5	58.5	1.0	1.7	58.5	58.5	1.7	56.9
59+00.000	9.6	43.7	43.7	4.2	9.6	102.2	102.2	11.3	90.9
59+65.618	7.0	20.2	20.2	1.6	7.0	122.4	122.4	18.4	104.0
60+00.000	0.0	4.4	4.4	0.0	1.0	126.8	126.8	19.4	107.5
					Total =	2315		155	

Alignment: AliProf-RmpB
Start Sta: 46+87.657
End Sta: 51+61.917

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
46+87.657	6	0	0	0	0	0	0	0	0
47+00.000	5	3	3	71	21	3	3	21	-18
47+25.000	5	5	5	76	88	8	8	110	-102
47+50.000	7	6	6	58	81	13	13	190	-177
47+75.000	10	8	8	38	58	21	21	249	-228
48+00.000	14	11	11	34	44	32	32	293	-261
48+25.000	20	16	16	14	29	47	47	322	-274
48+50.000	28	22	22	0	8	69	69	330	-260
48+75.000	35	29	29	0	0	99	99	330	-231
49+00.000	37	34	34	0	0	133	133	330	-197
49+25.000	37	35	35	0	0	167	167	330	-162
49+50.000	37	35	35	0	0	202	202	330	-128
49+75.000	37	35	35	0	0	237	237	330	-93
50+00.000	37	35	35	0	0	271	271	330	-58
50+25.000	37	35	35	0	0	306	306	330	-24
50+50.000	36	34	34	0	0	340	340	330	10
50+75.000	28	30	30	0	0	370	370	330	41
51+00.000	20	23	23	9	6	393	393	335	58
51+25.000	14	16	16	9	11	409	409	347	63
51+50.000	13	13	13	23	20	422	422	366	56
51+61.917	15	6	6	20	12	429	429	379	50



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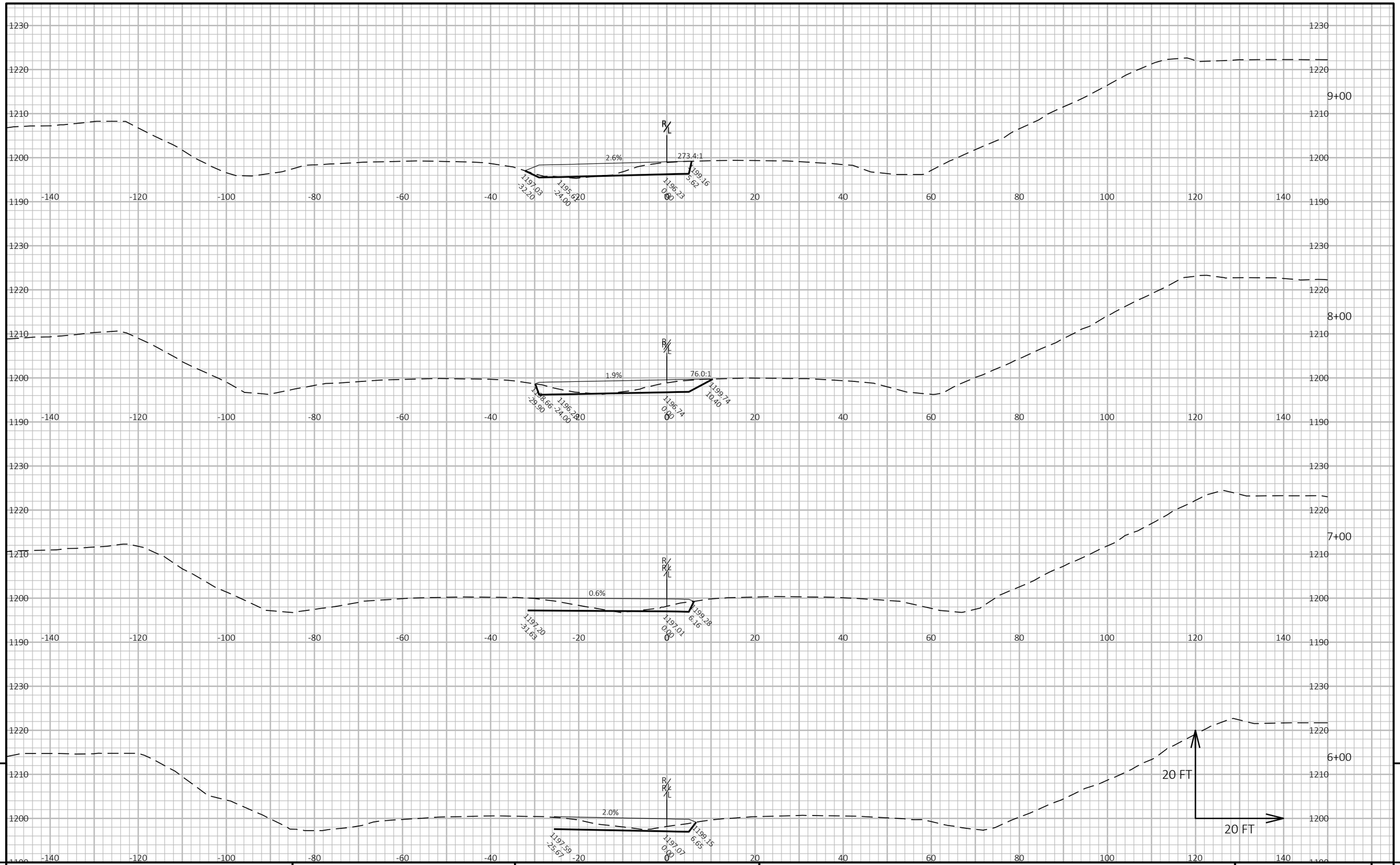
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 478 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 1

PLOT DATE : 9/24/2020 9:14 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

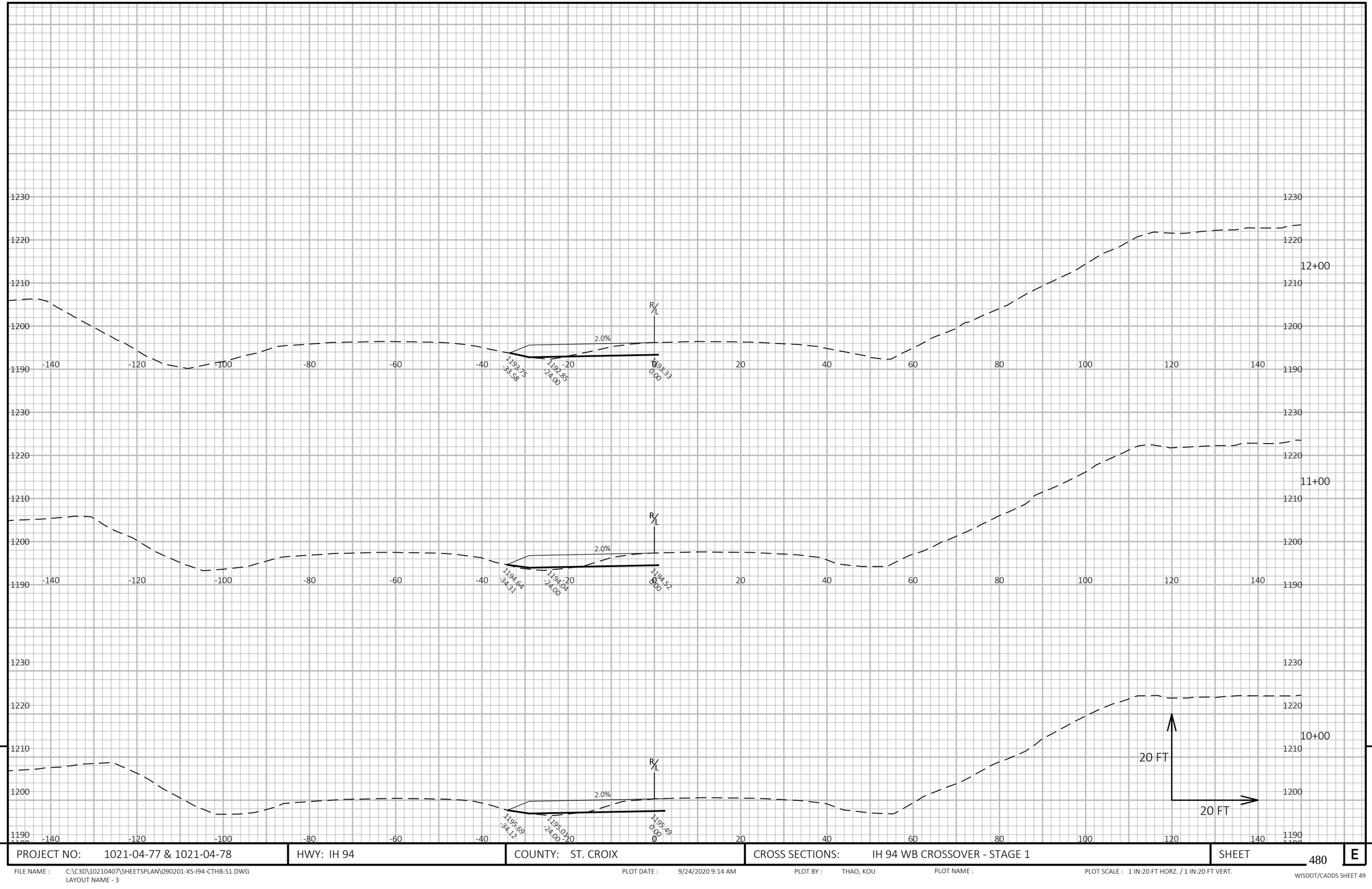


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 479 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 2

PLOT DATE : 9/24/2020 9:14 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 480	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 3

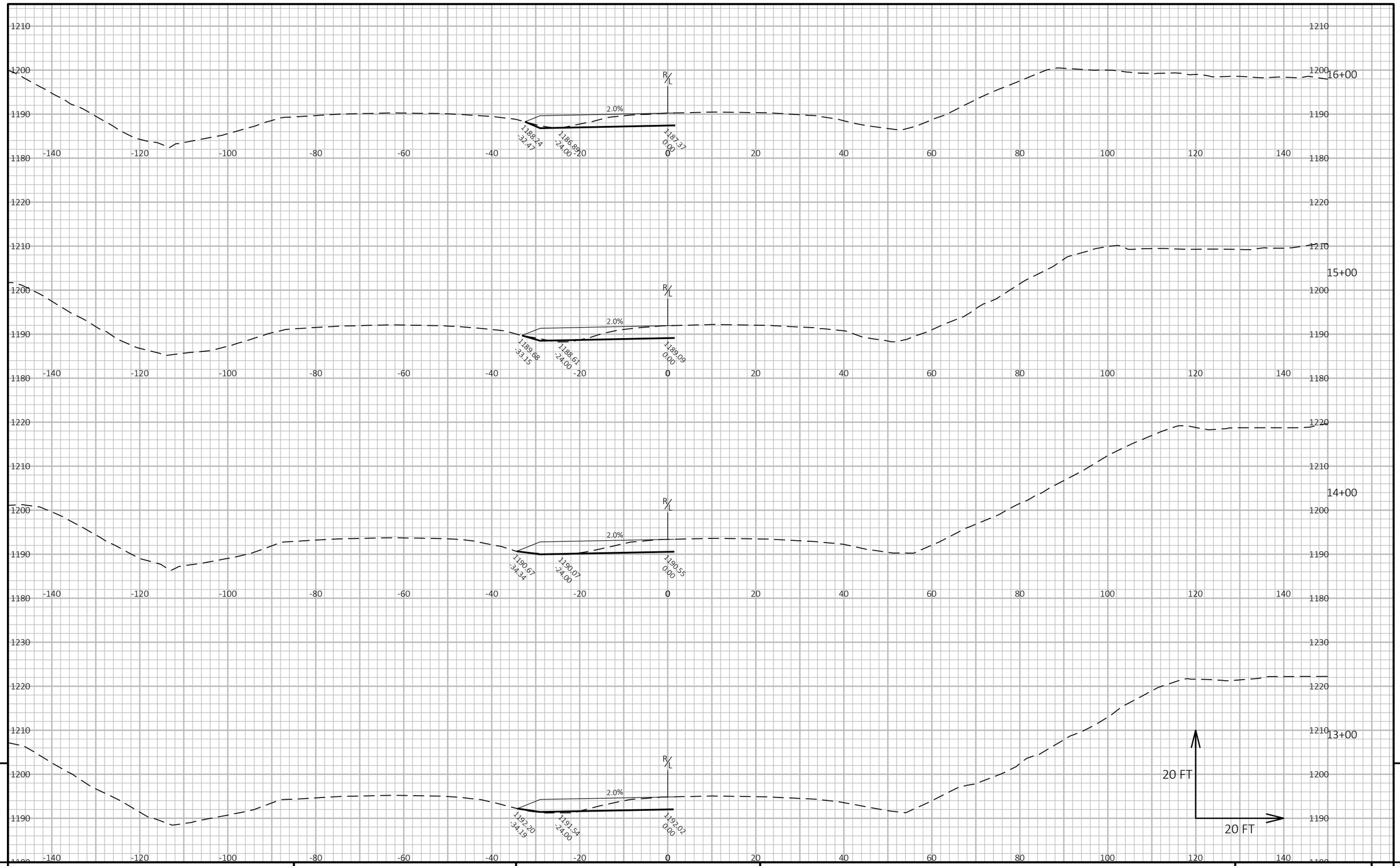
PLOT DATE : 9/24/2020 9:14 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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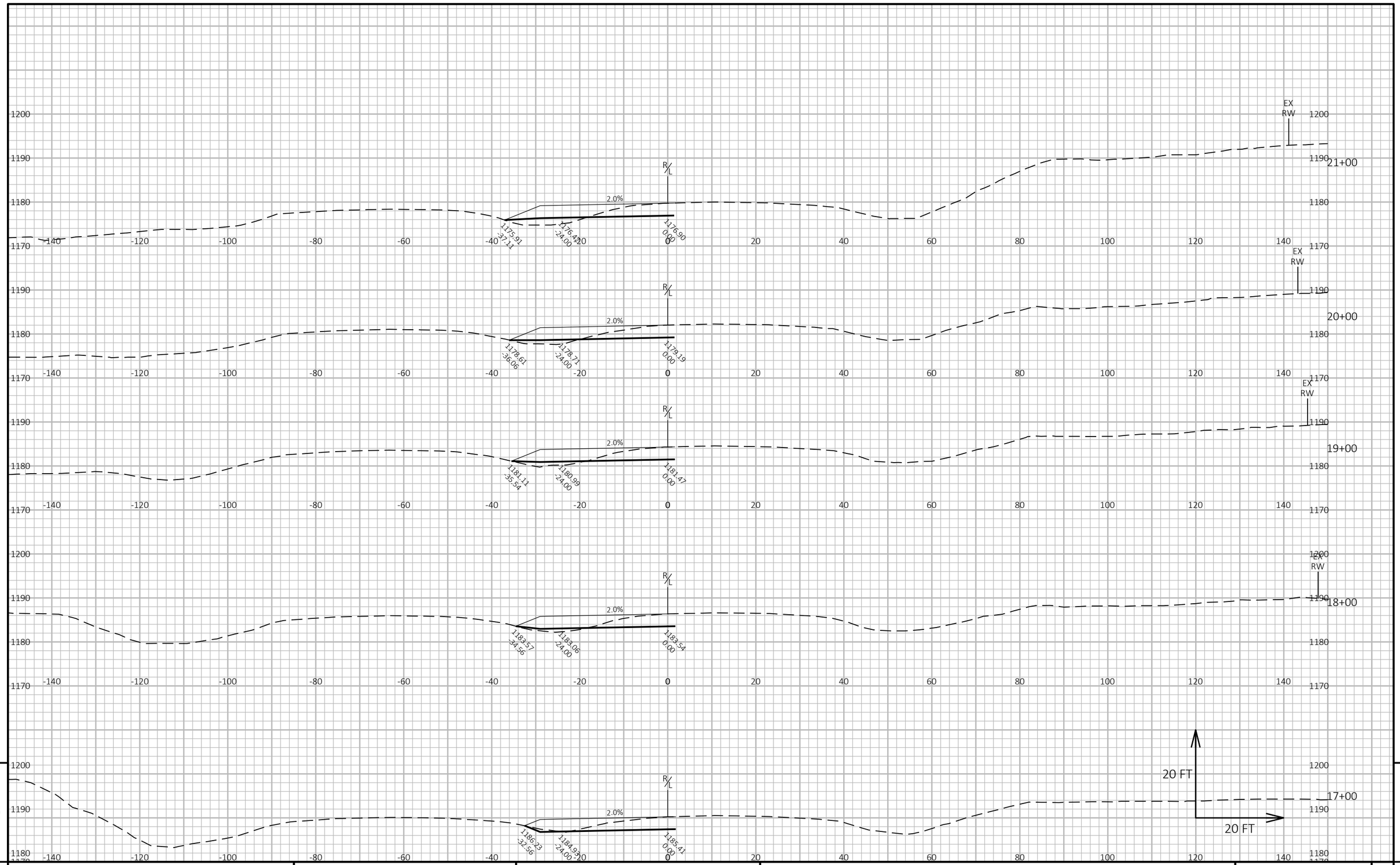
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 481	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 4

PLOT DATE : 9/24/2020 9:15 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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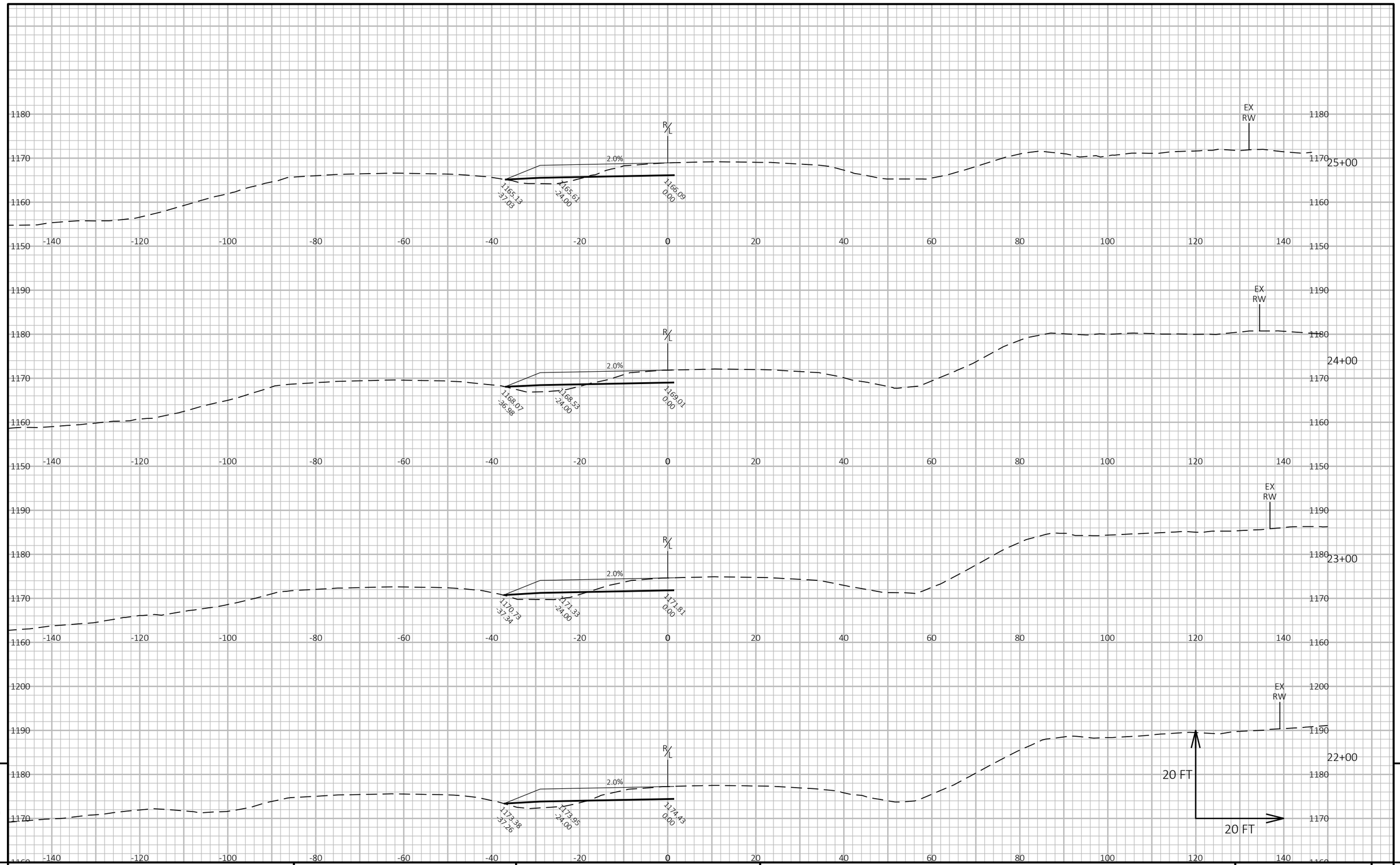
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 482	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 5

PLOT DATE : 9/24/2020 9:15 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

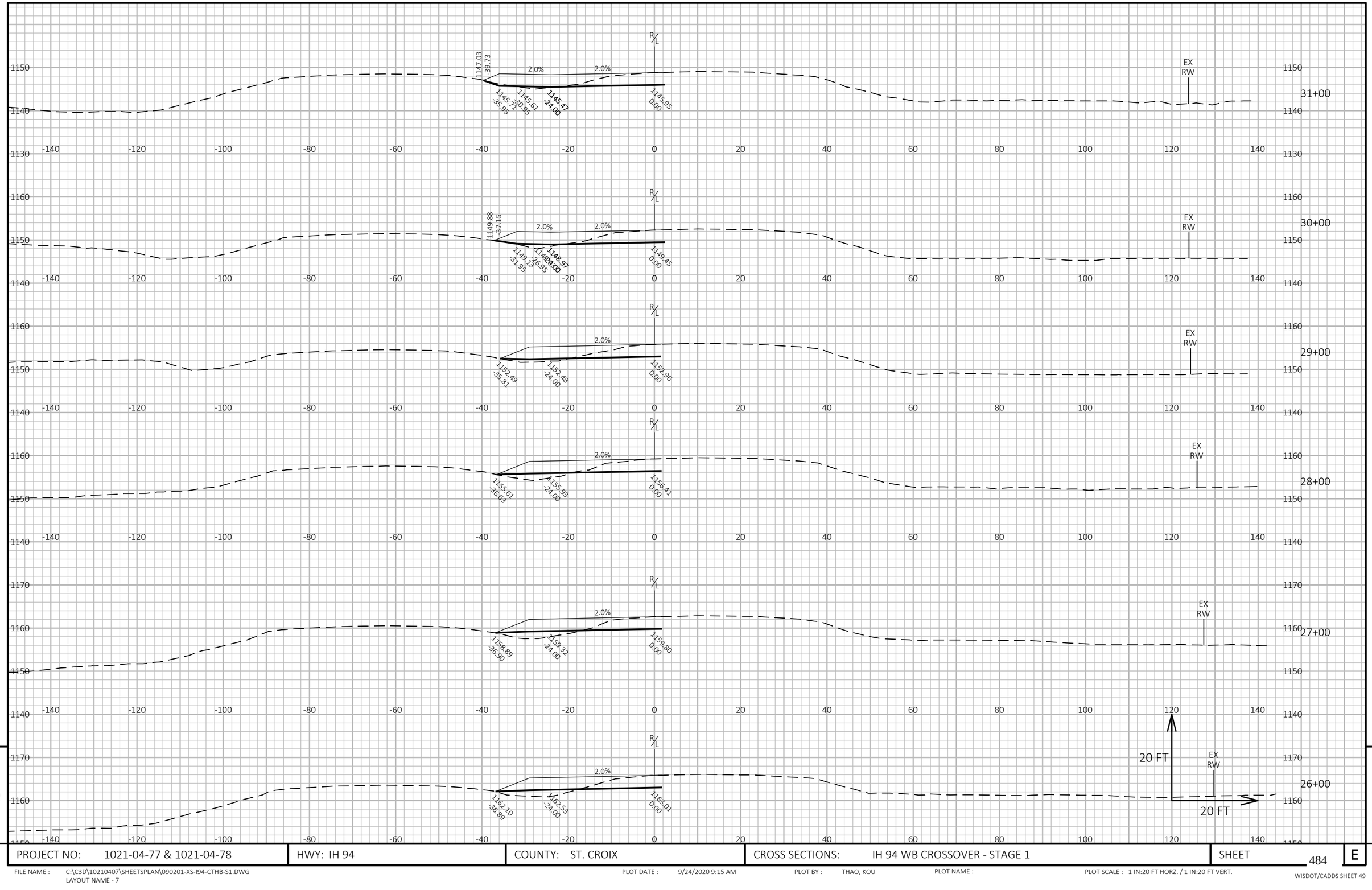


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 483	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 6

PLOT DATE : 9/24/2020 9:15 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 484	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 7

PLOT DATE : 9/24/2020 9:15 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

38+00

37+00

36+00

35+00

34+00

33+00

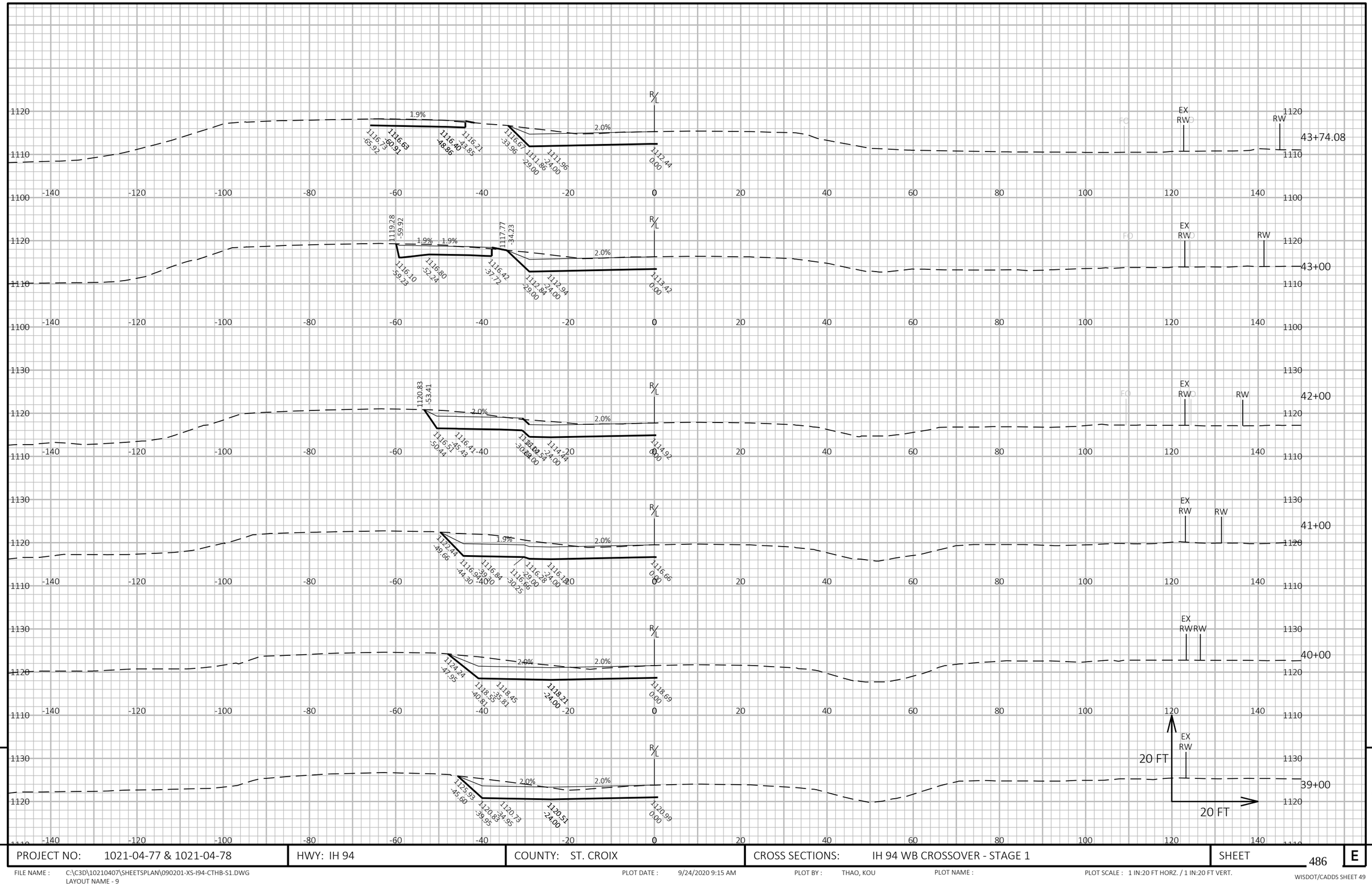
32+00

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 485	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 8

PLOT DATE : 9/24/2020 9:15 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 486	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 9

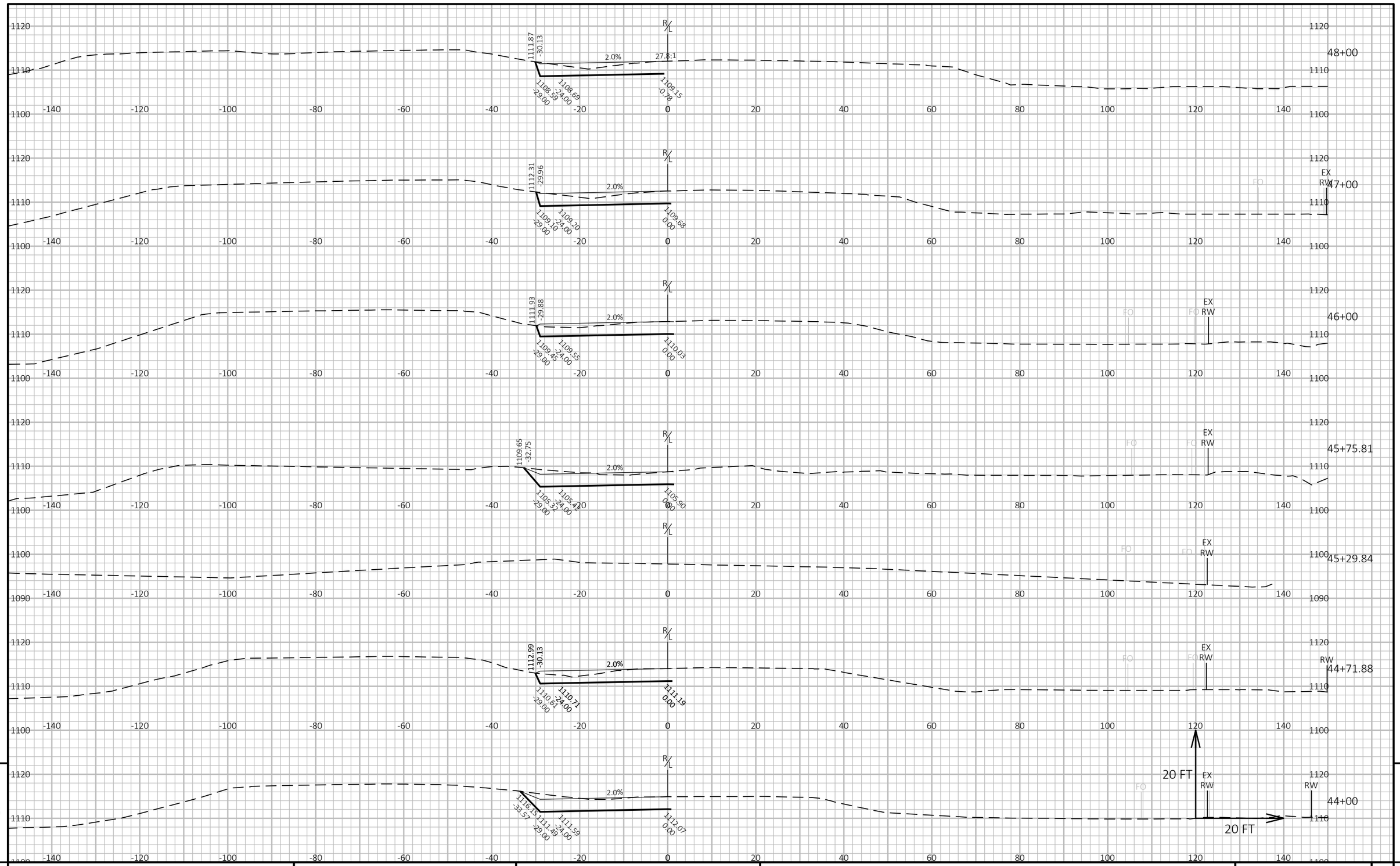
PLOT DATE : 9/24/2020 9:15 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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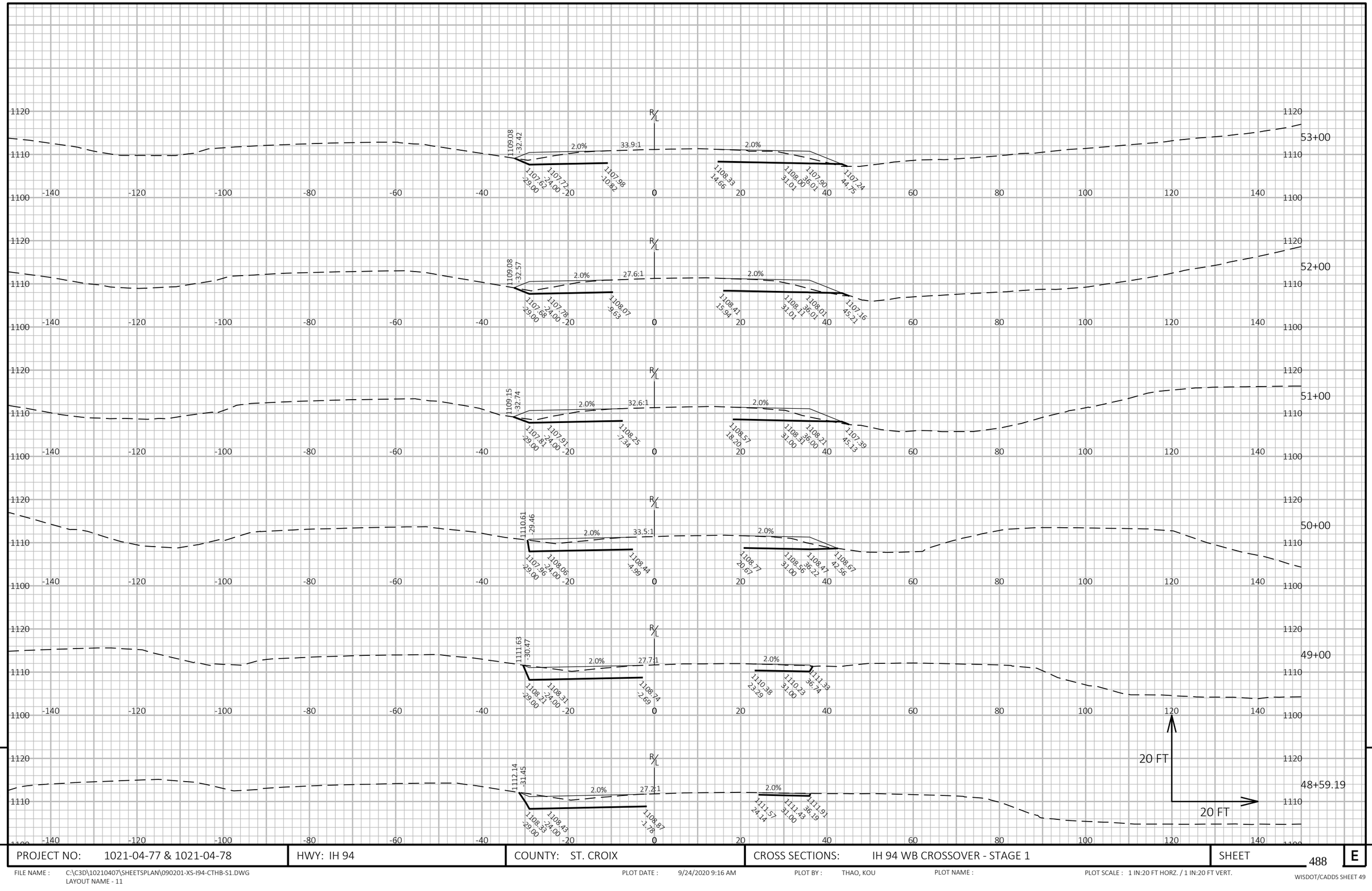
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 487	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 10

PLOT DATE : 9/24/2020 9:16 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

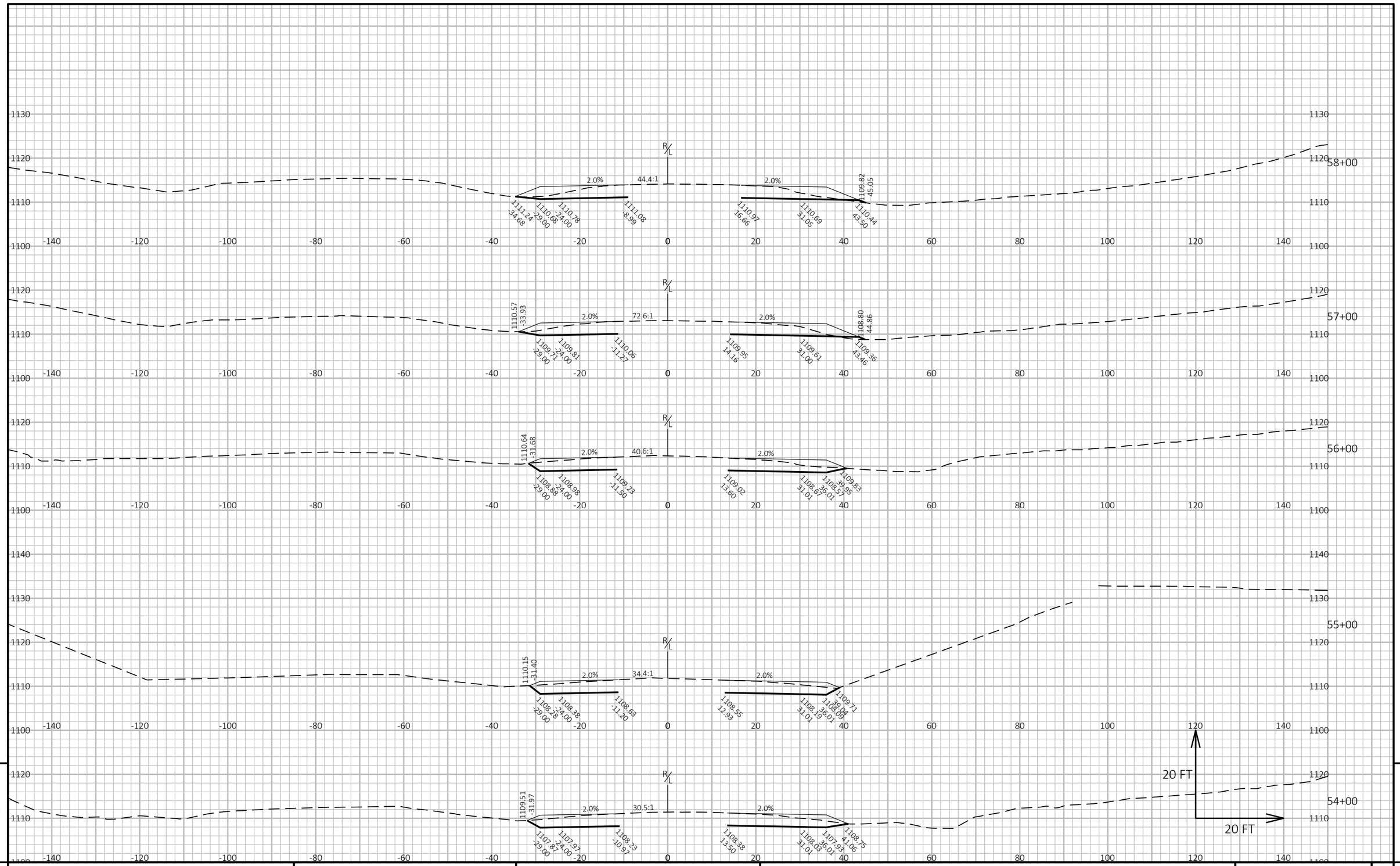


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 488	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 11

PLOT DATE : 9/24/2020 9:16 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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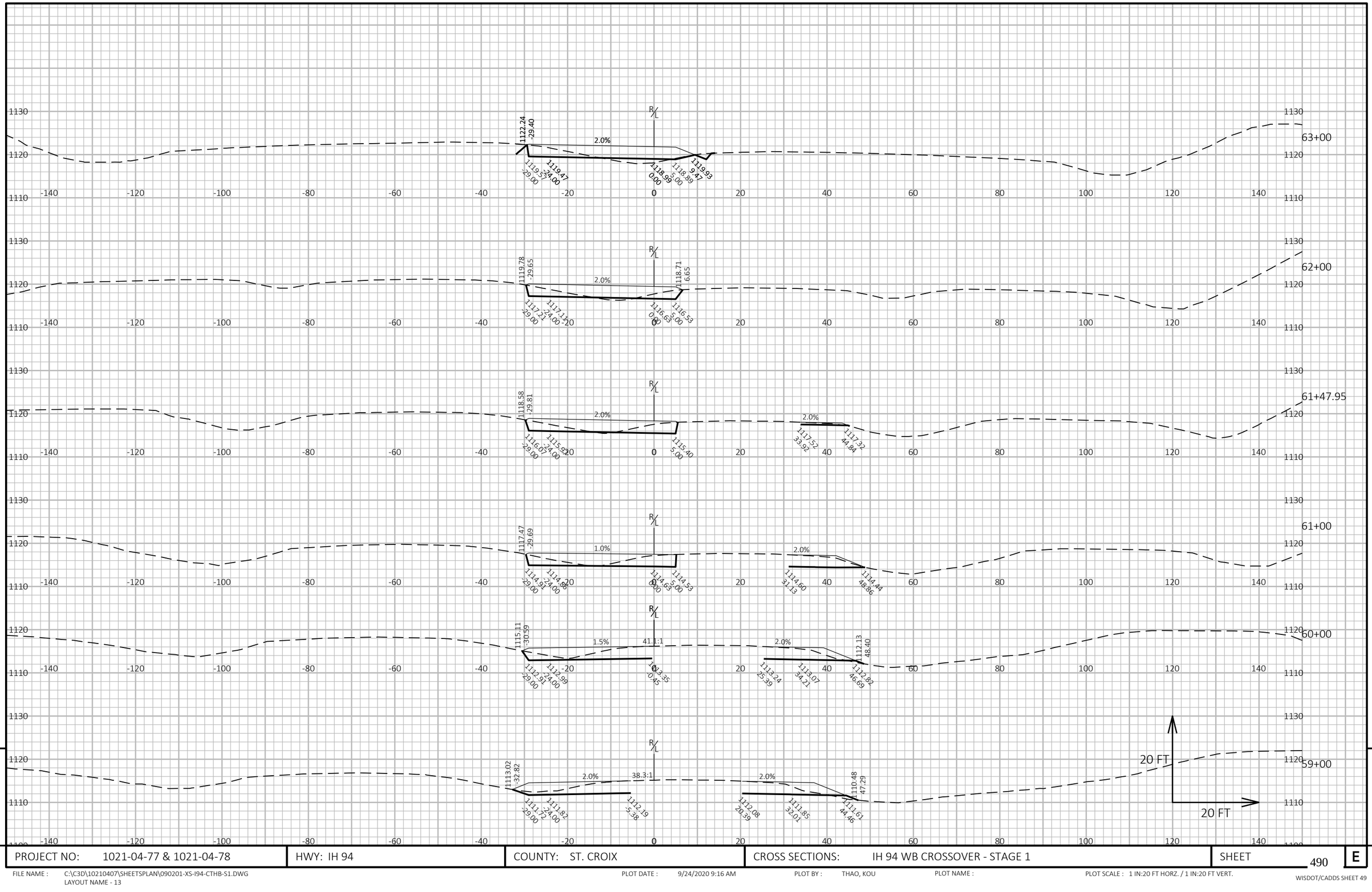
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 489	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 12

PLOT DATE : 9/24/2020 9:16 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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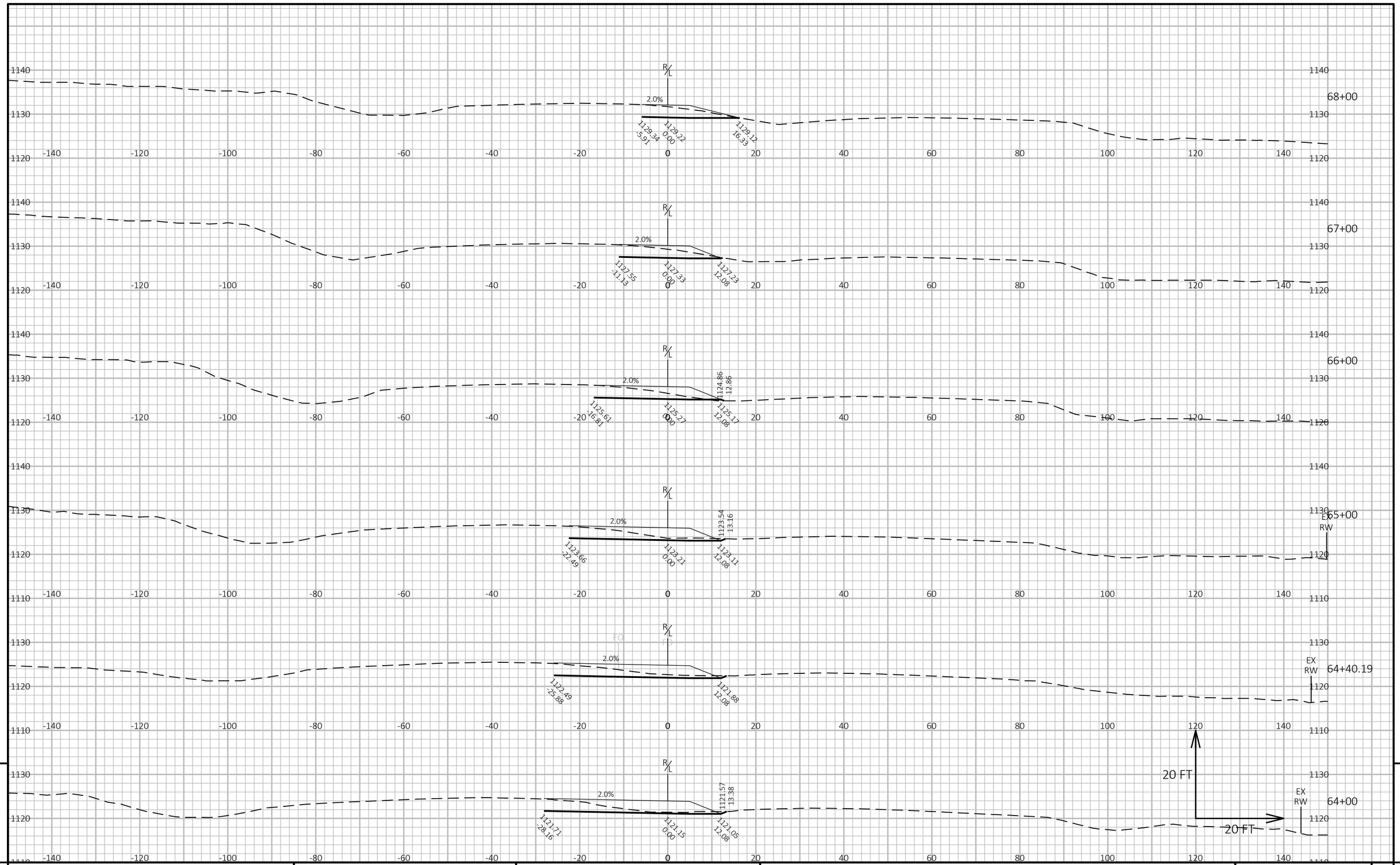
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 490	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 13

PLOT DATE : 9/24/2020 9:16 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 491	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 14

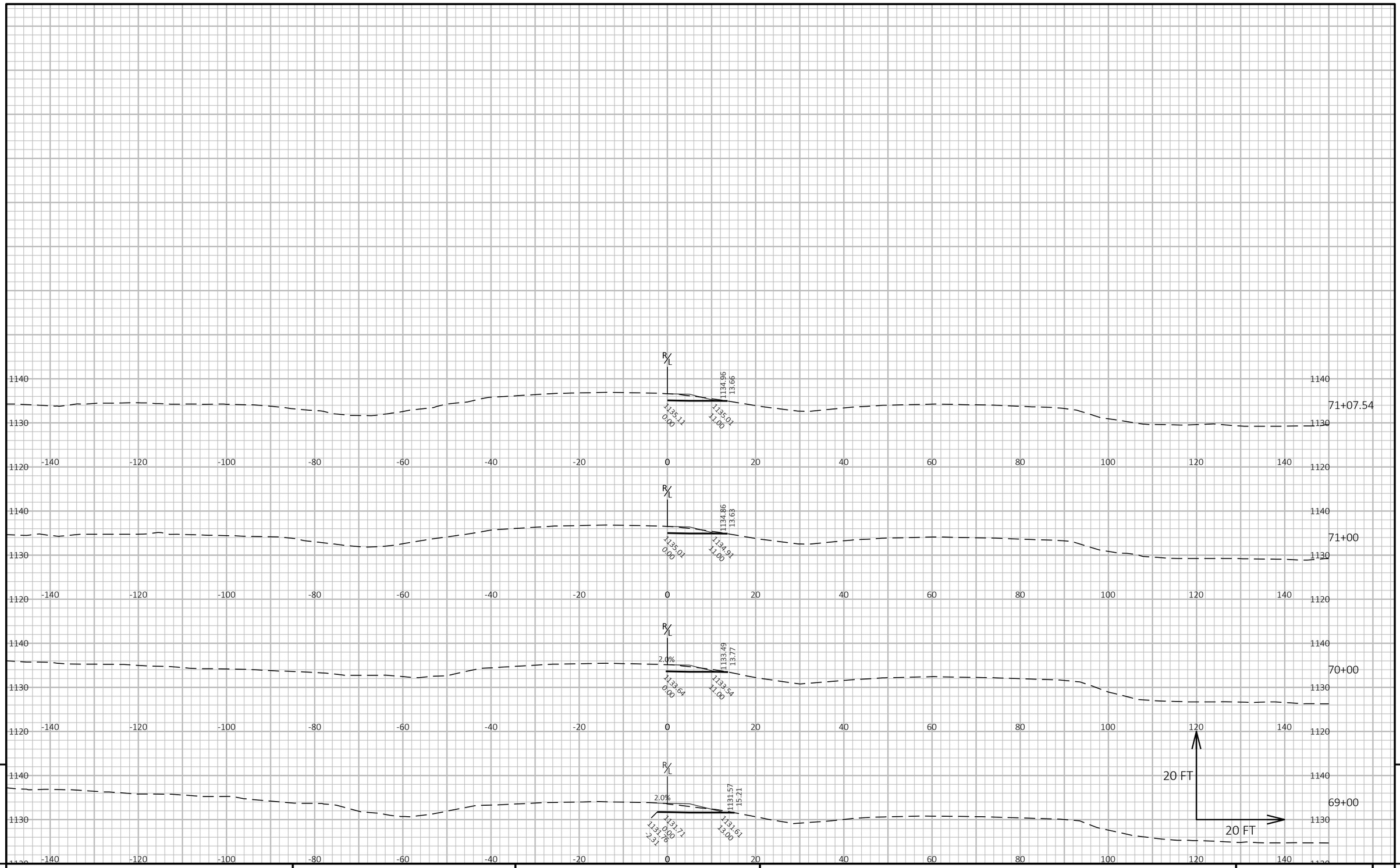
PLOT DATE : 9/24/2020 9:16 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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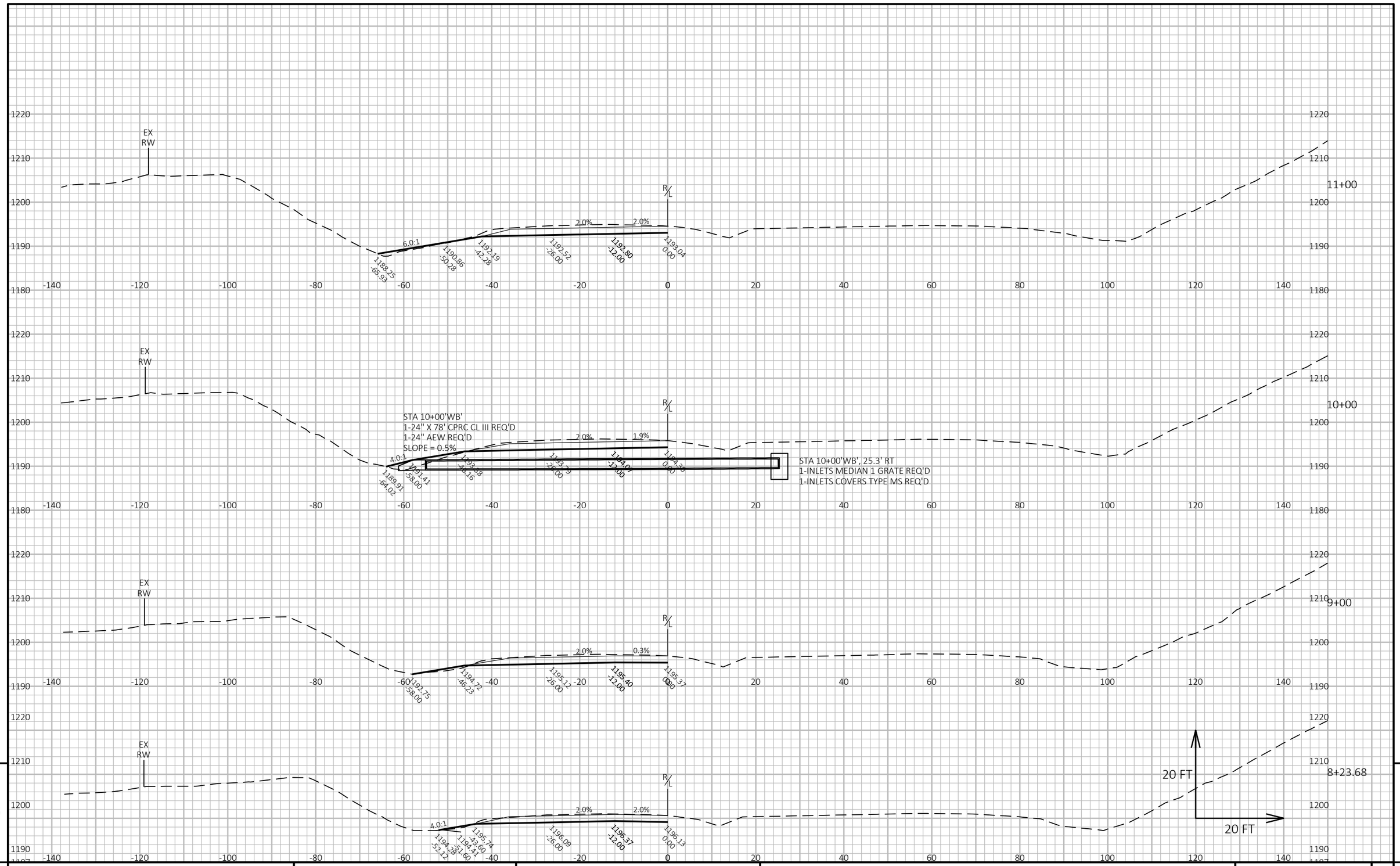
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 492	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 15

PLOT DATE : 9/24/2020 9:16 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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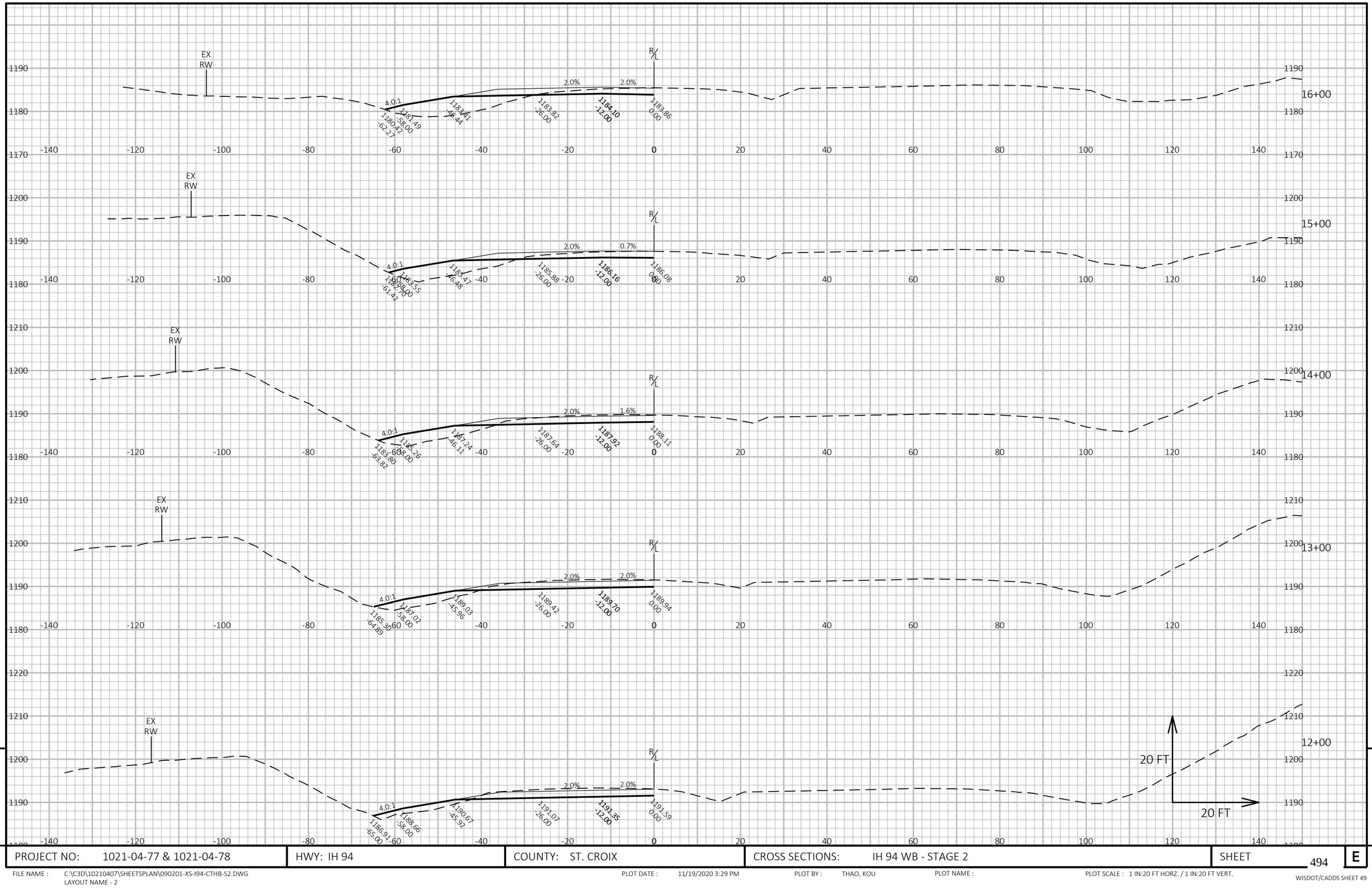
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 2	SHEET 493	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 1

PLOT DATE : 11/19/2020 3:29 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 2	SHEET 494	E

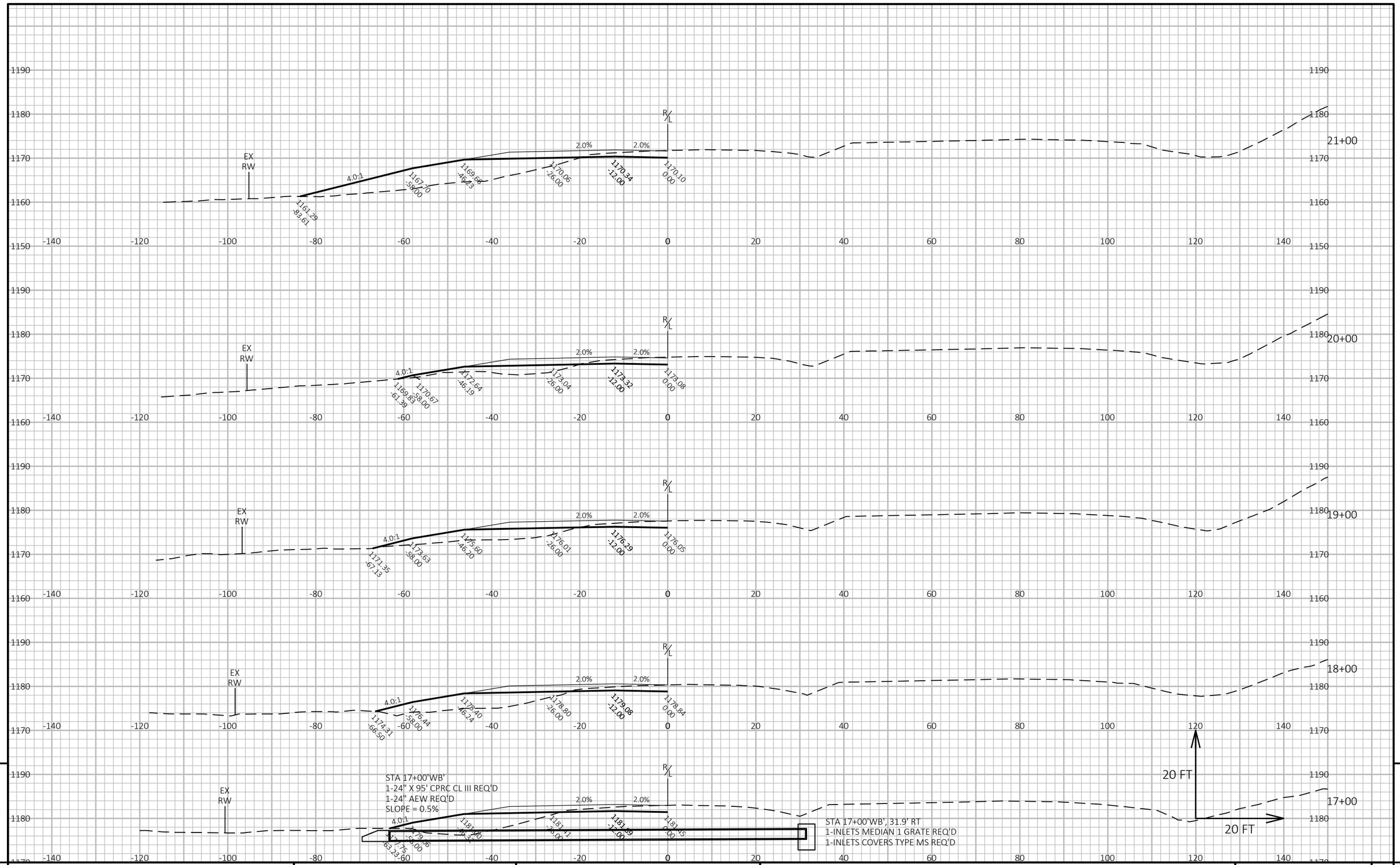
FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 2

PLOT DATE : 11/19/2020 3:29 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

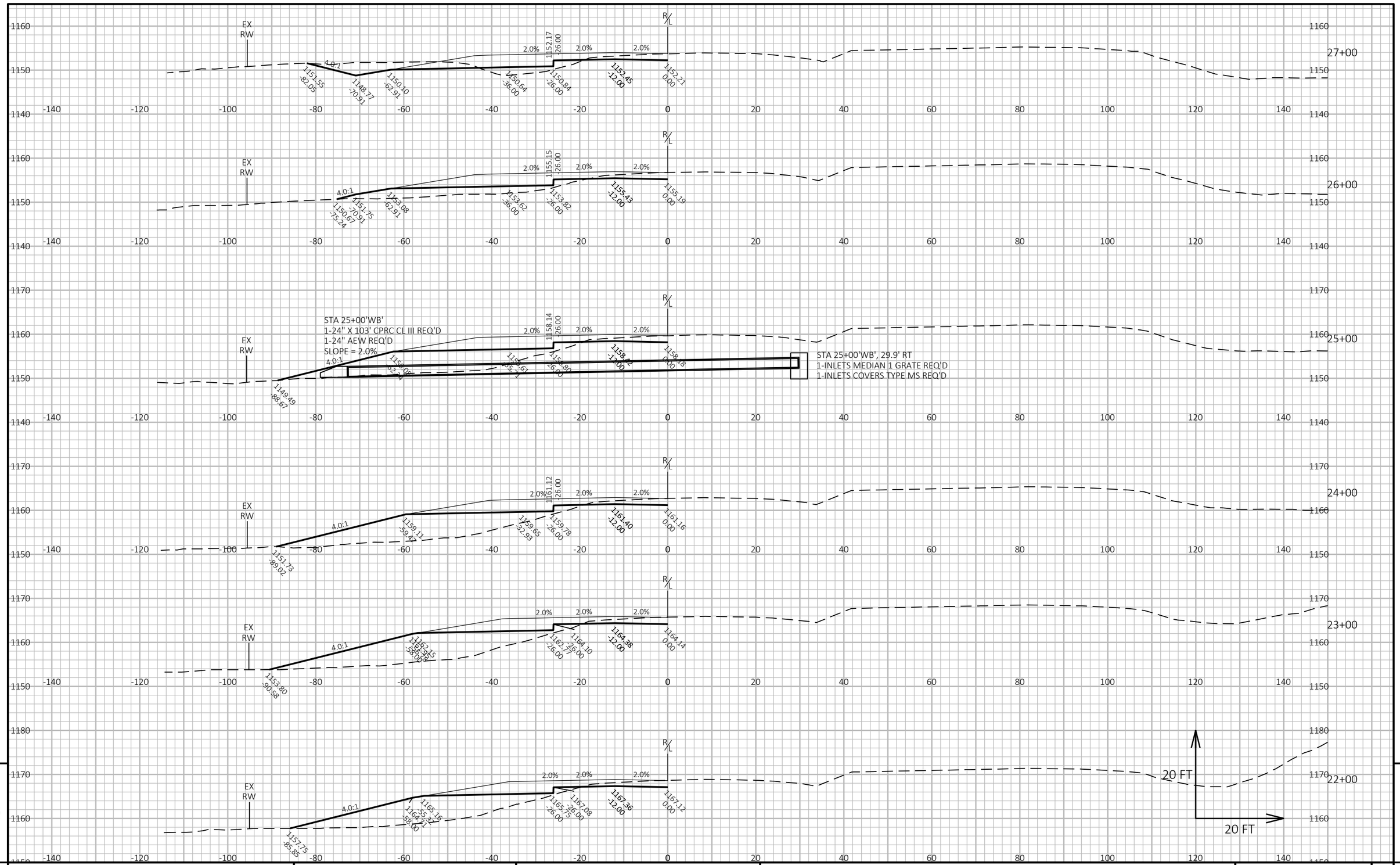


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 2	SHEET 495	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 3

PLOT DATE : 11/19/2020 3:29 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 2	SHEET 496	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 4

PLOT DATE : 11/19/2020 3:29 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

STA 33+00'WB'
1-24" X 127' CPRC CL III REQ'D
1-24" AEW REQ'D
SLOPE = 1.0%

STA 33+00'WB', 45.8' RT
1-INLETS MEDIAN 2 GRATE REQ'D
2-INLETS COVERS TYPE MS REQ'D

33+00
32+00
31+00
30+00
29+00
28+00

20 FT
20 FT

9

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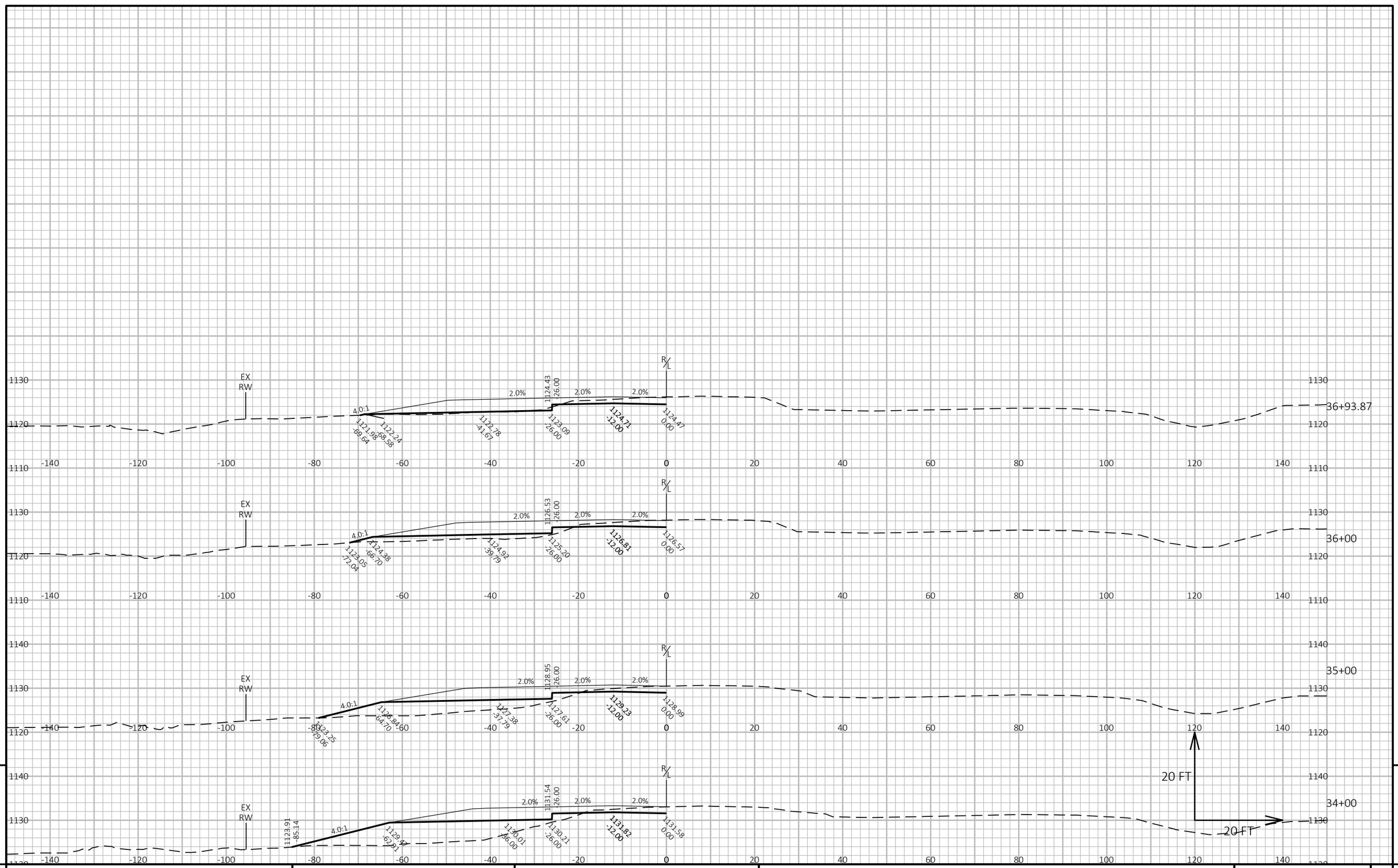
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 2	SHEET 497	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 5

PLOT DATE : 11/19/2020 3:29 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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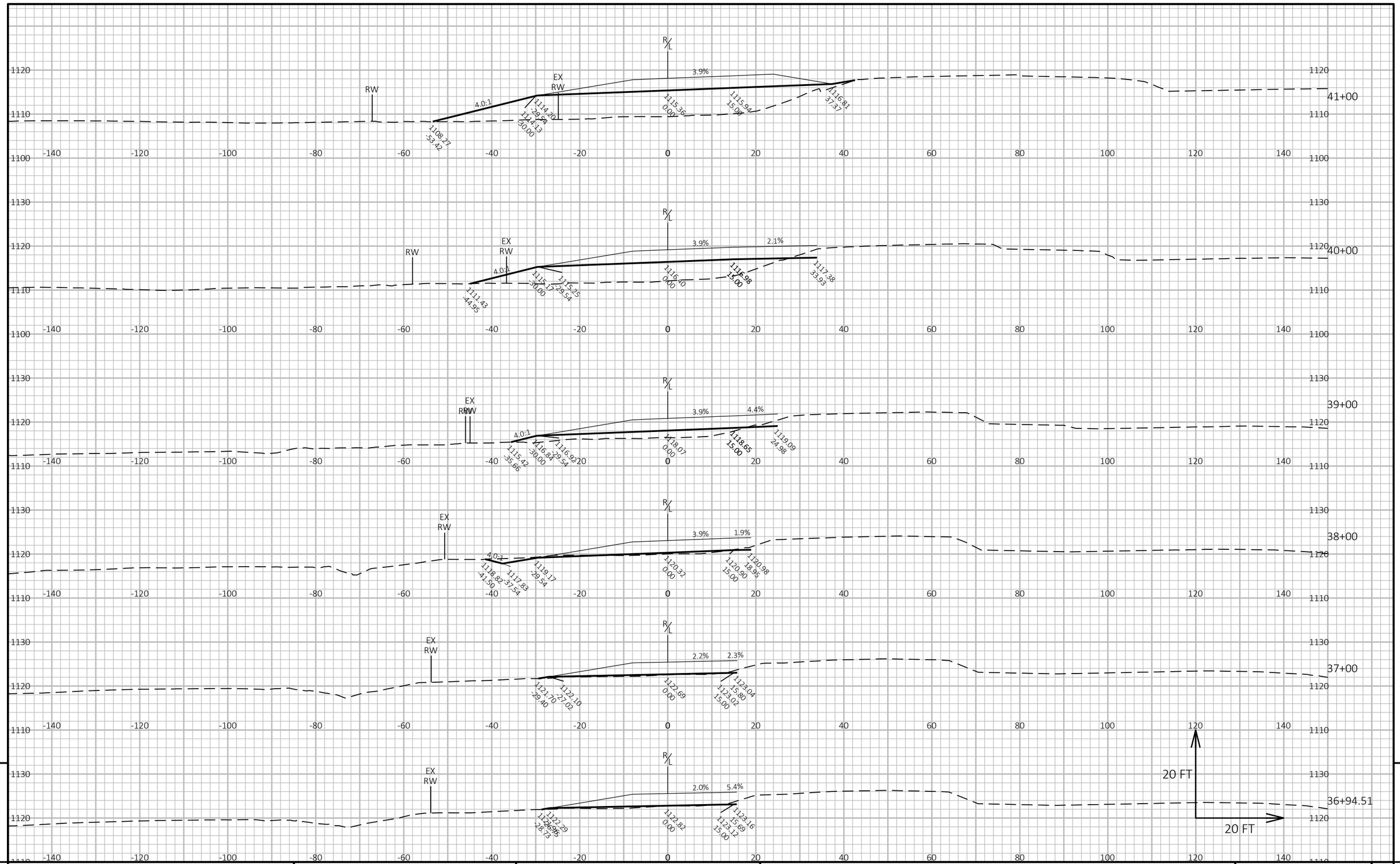
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 2	SHEET 498	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 6

PLOT DATE : 11/19/2020 3:29 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

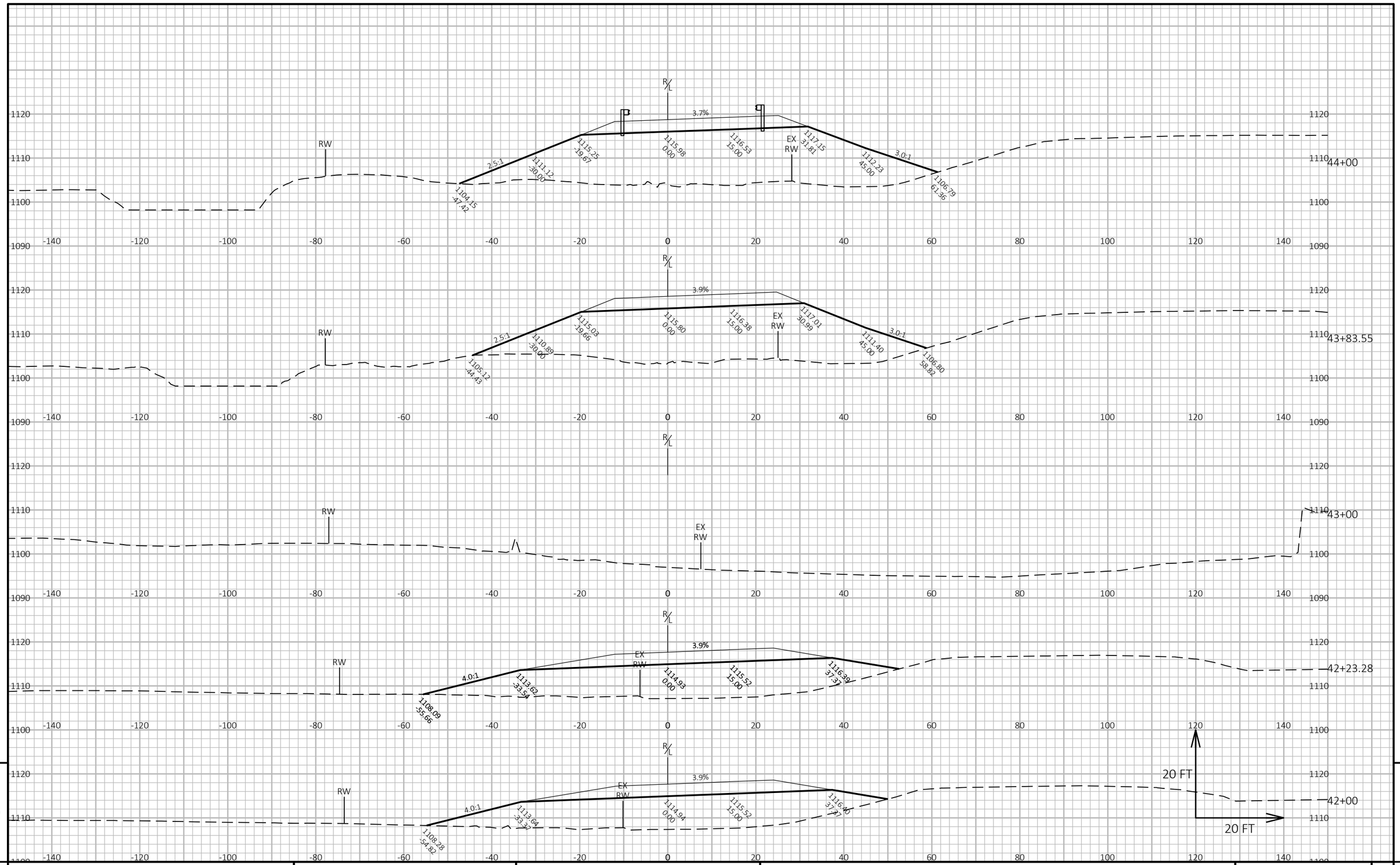


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP A - STAGE 2	SHEET 499	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 7

PLOT DATE : 11/19/2020 3:30 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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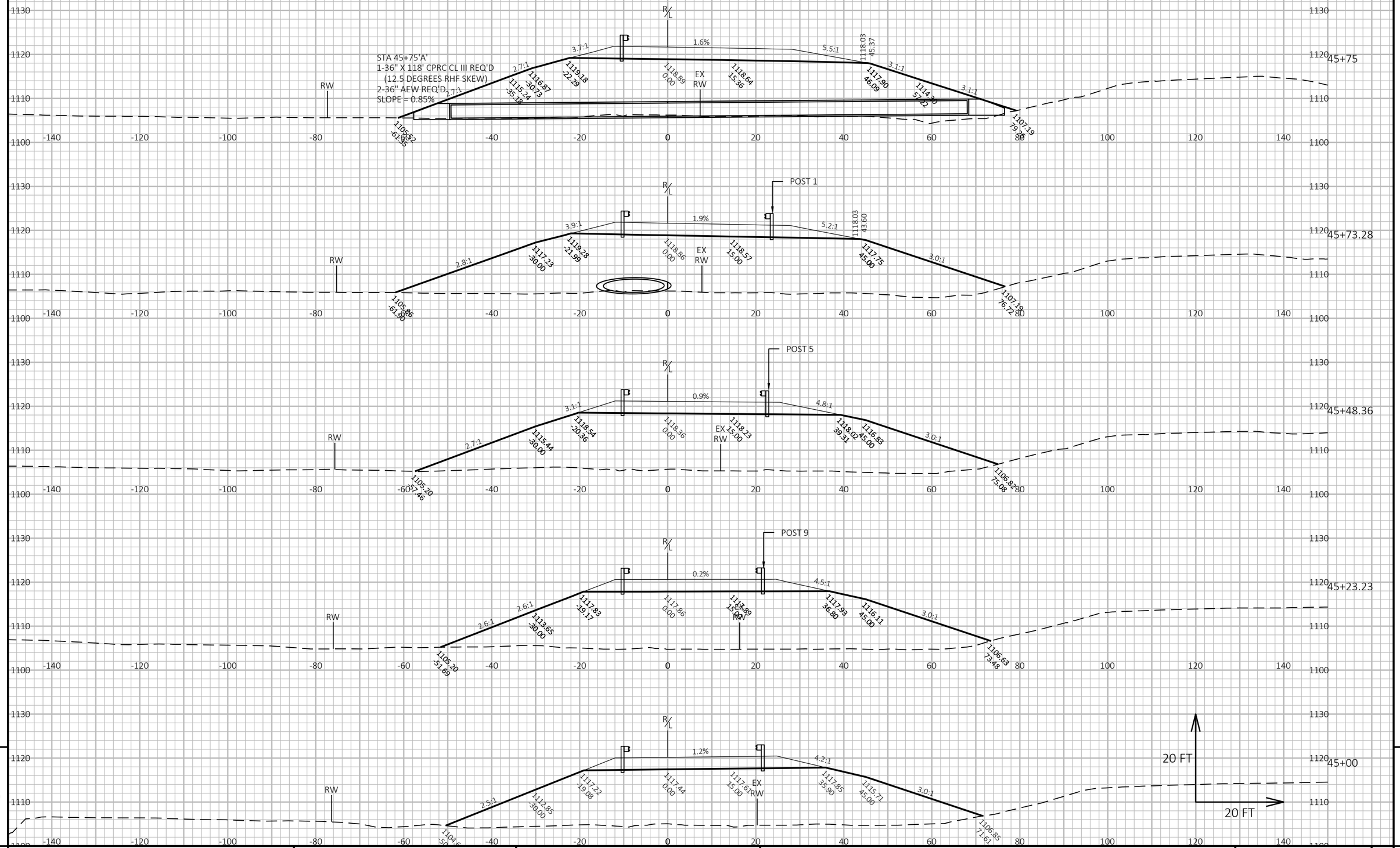
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP A - STAGE 2	SHEET 500	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 8

PLOT DATE : 11/19/2020 3:30 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

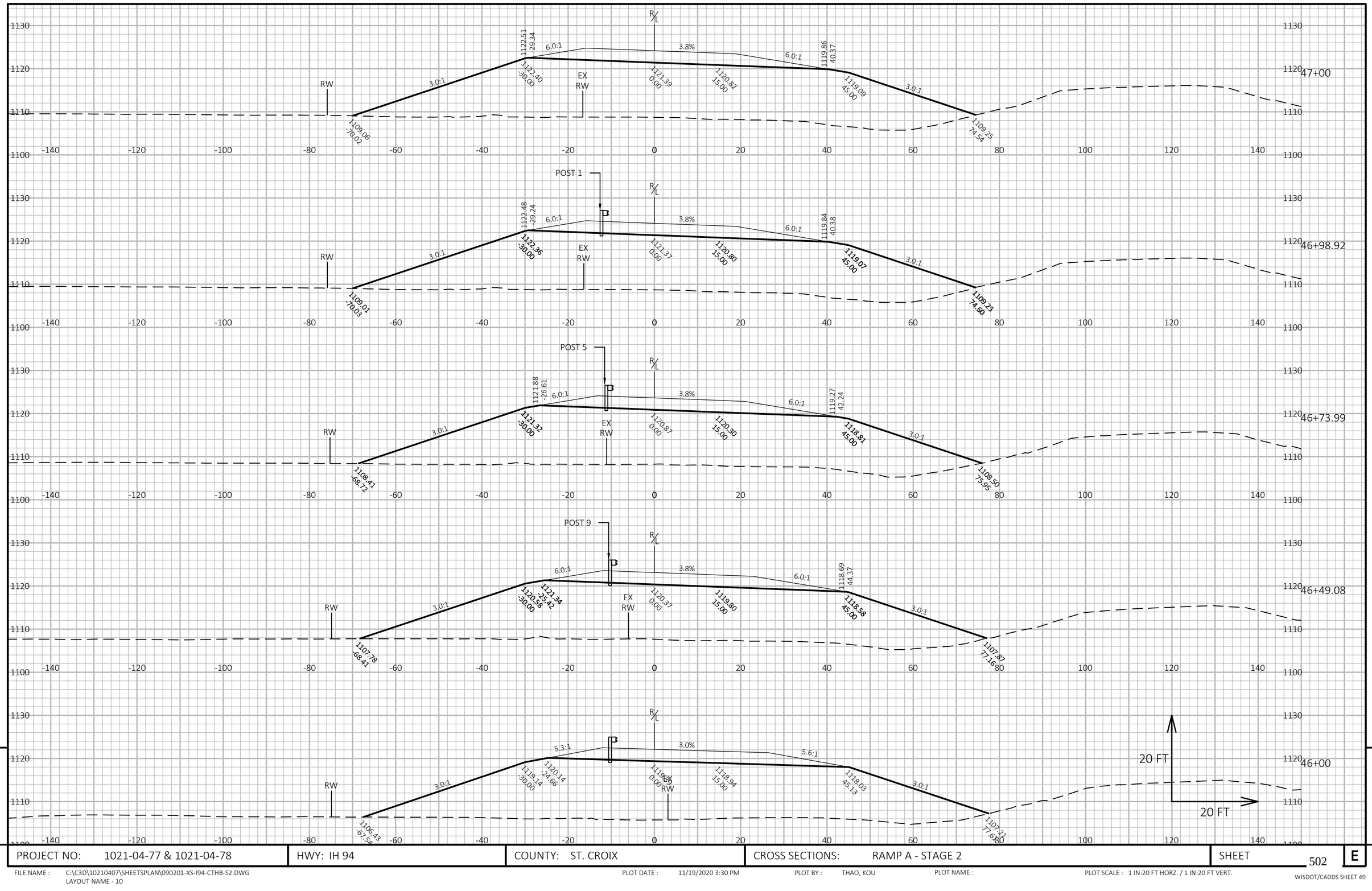


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP A - STAGE 2	SHEET 501 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 9

PLOT DATE : 11/19/2020 3:30 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

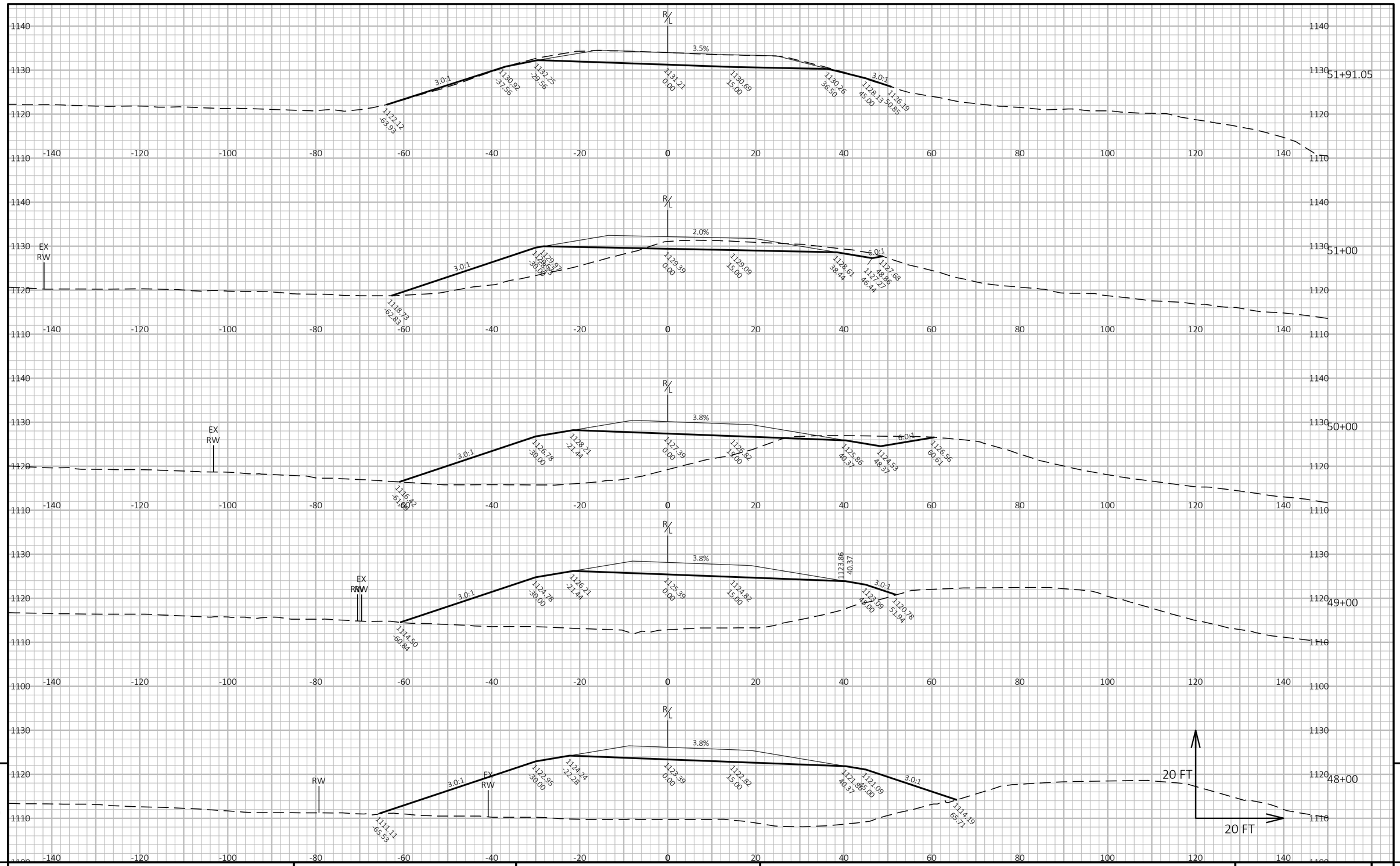


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP A - STAGE 2	SHEET 502	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 10

PLOT DATE : 11/19/2020 3:30 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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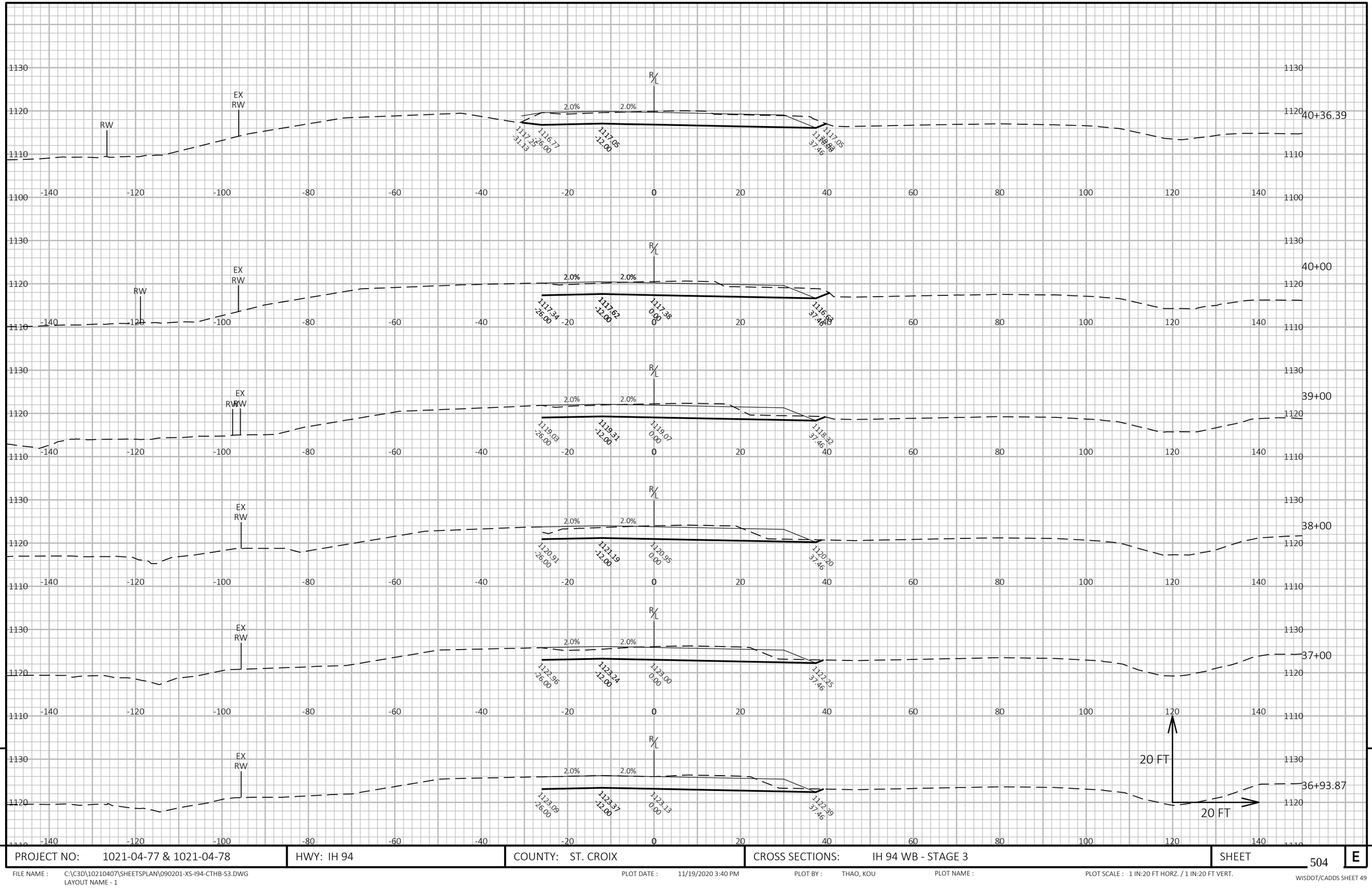
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP A - STAGE 2	SHEET 503	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 11

PLOT DATE : 11/19/2020 3:30 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 504	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 1

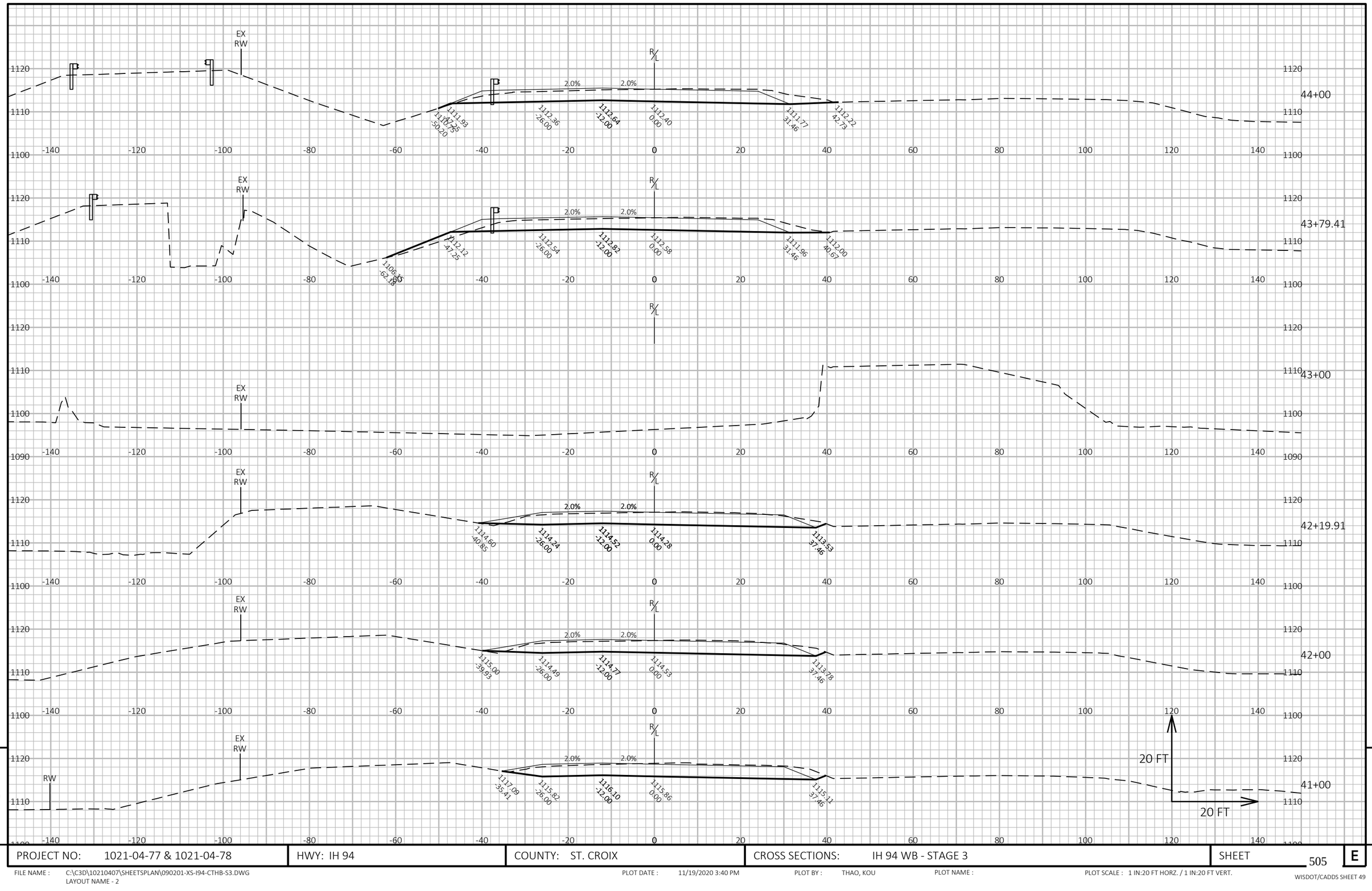
PLOT DATE : 11/19/2020 3:40 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

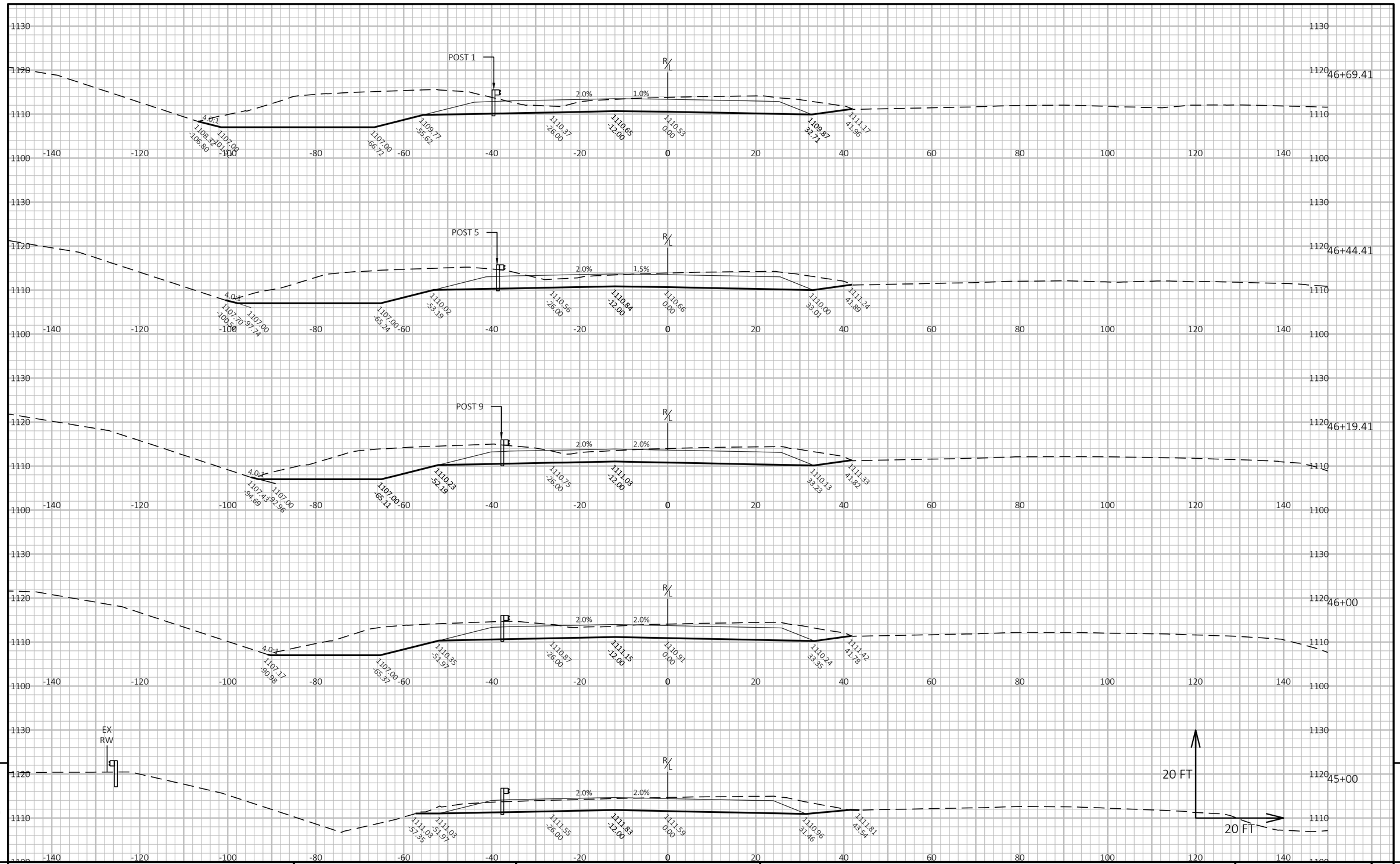


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 505	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 2

PLOT DATE : 11/19/2020 3:40 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 506	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 3

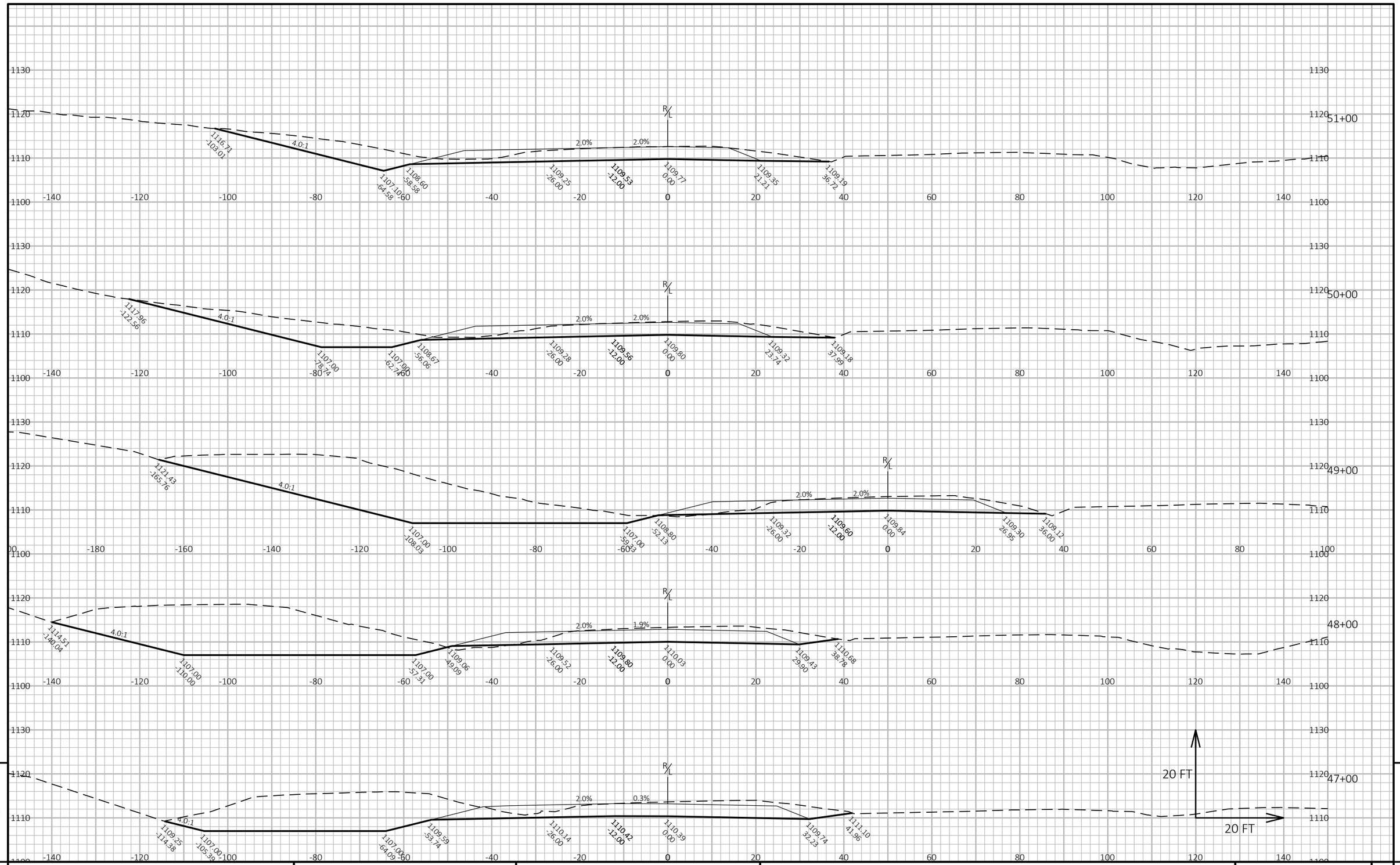
PLOT DATE : 11/19/2020 3:40 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 507 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 4

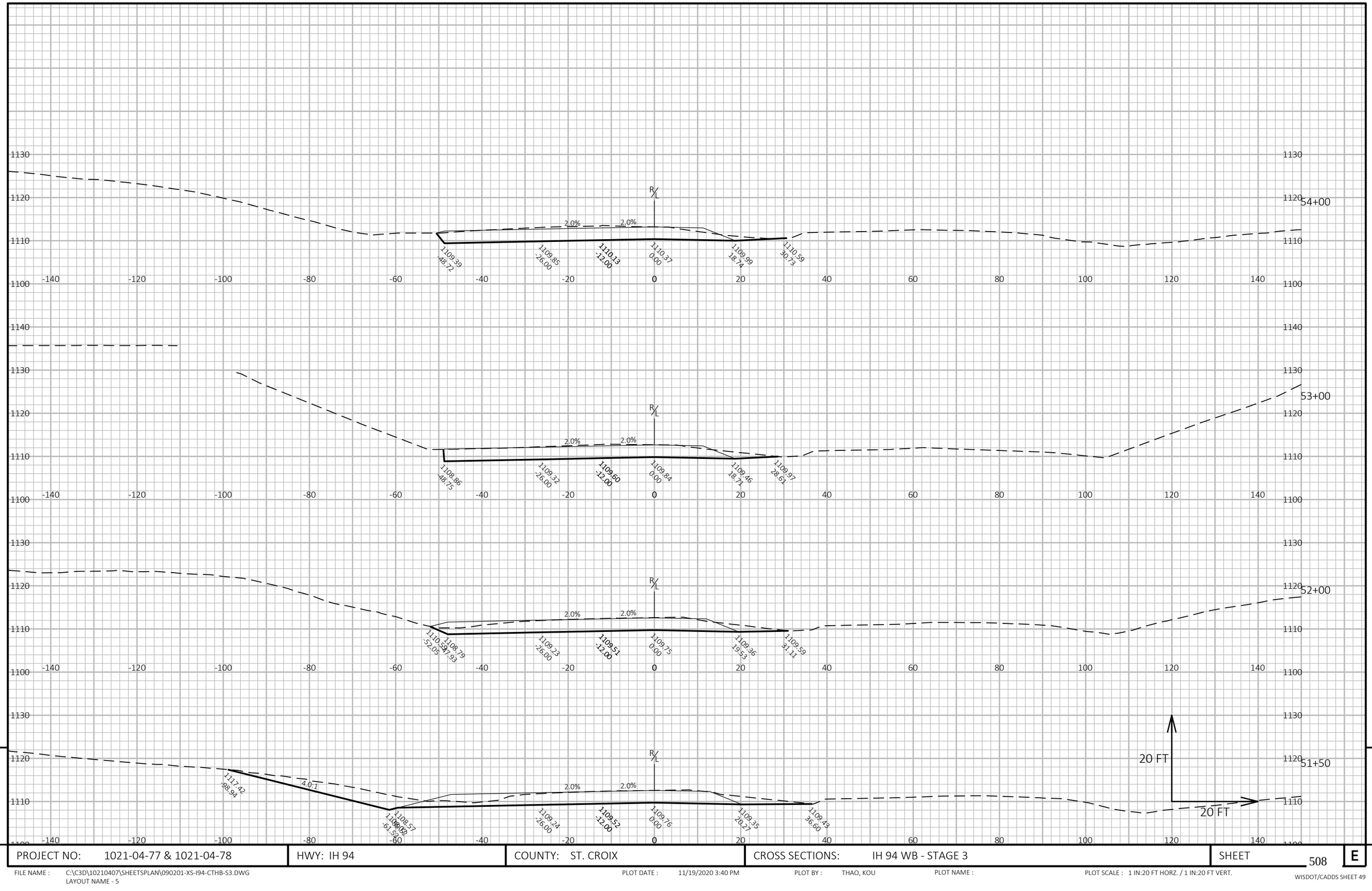
PLOT DATE : 11/19/2020 3:40 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

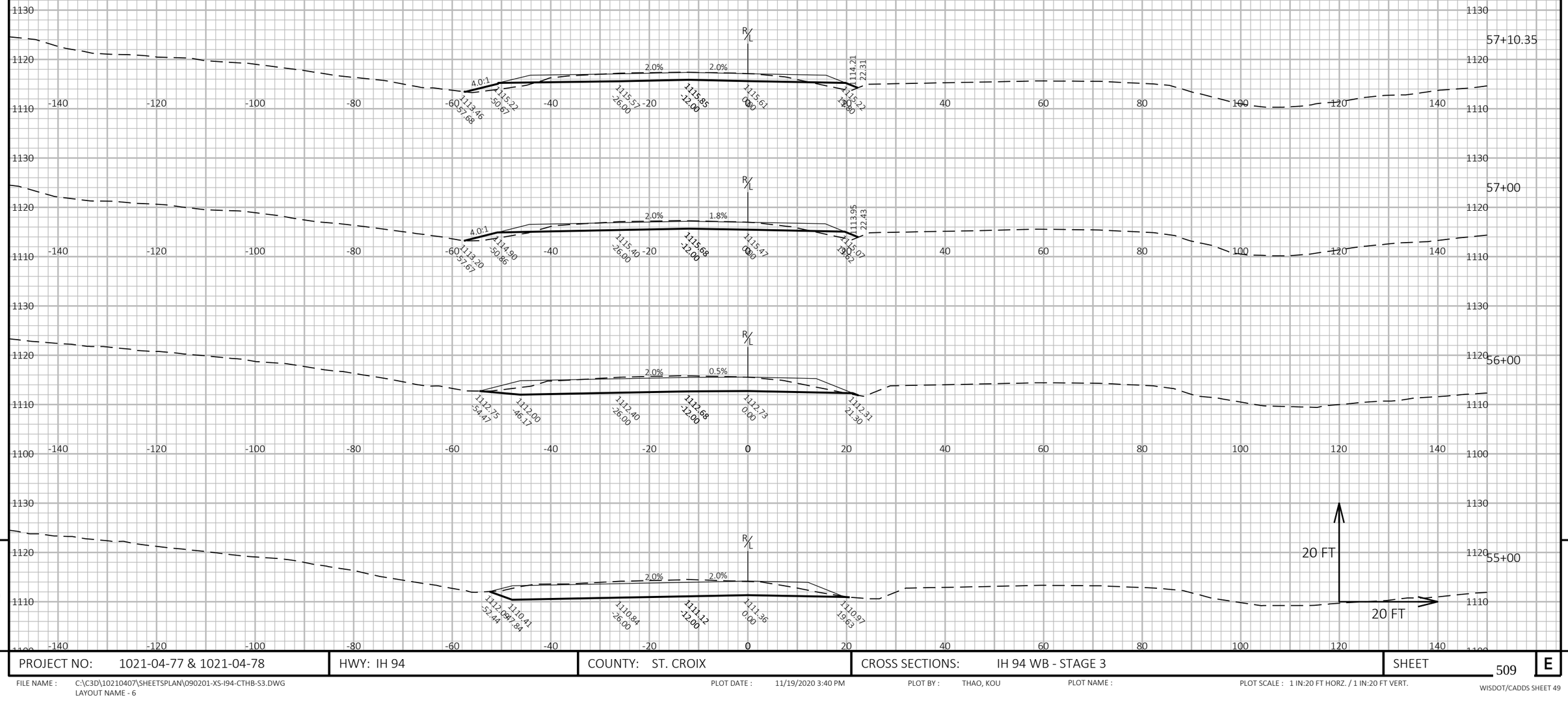


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 508 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 5

PLOT DATE : 11/19/2020 3:40 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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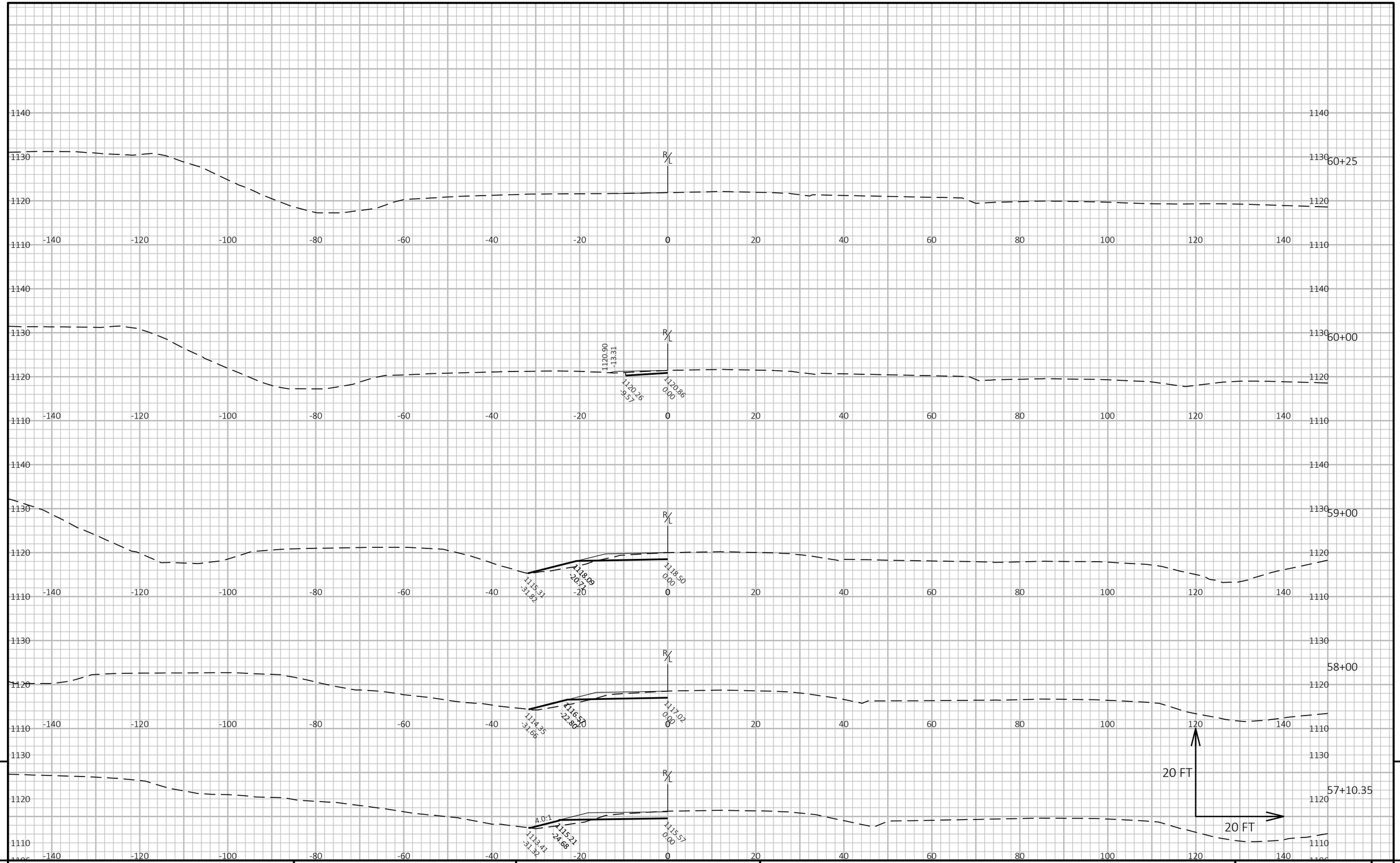
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 509	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 6

PLOT DATE : 11/19/2020 3:40 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

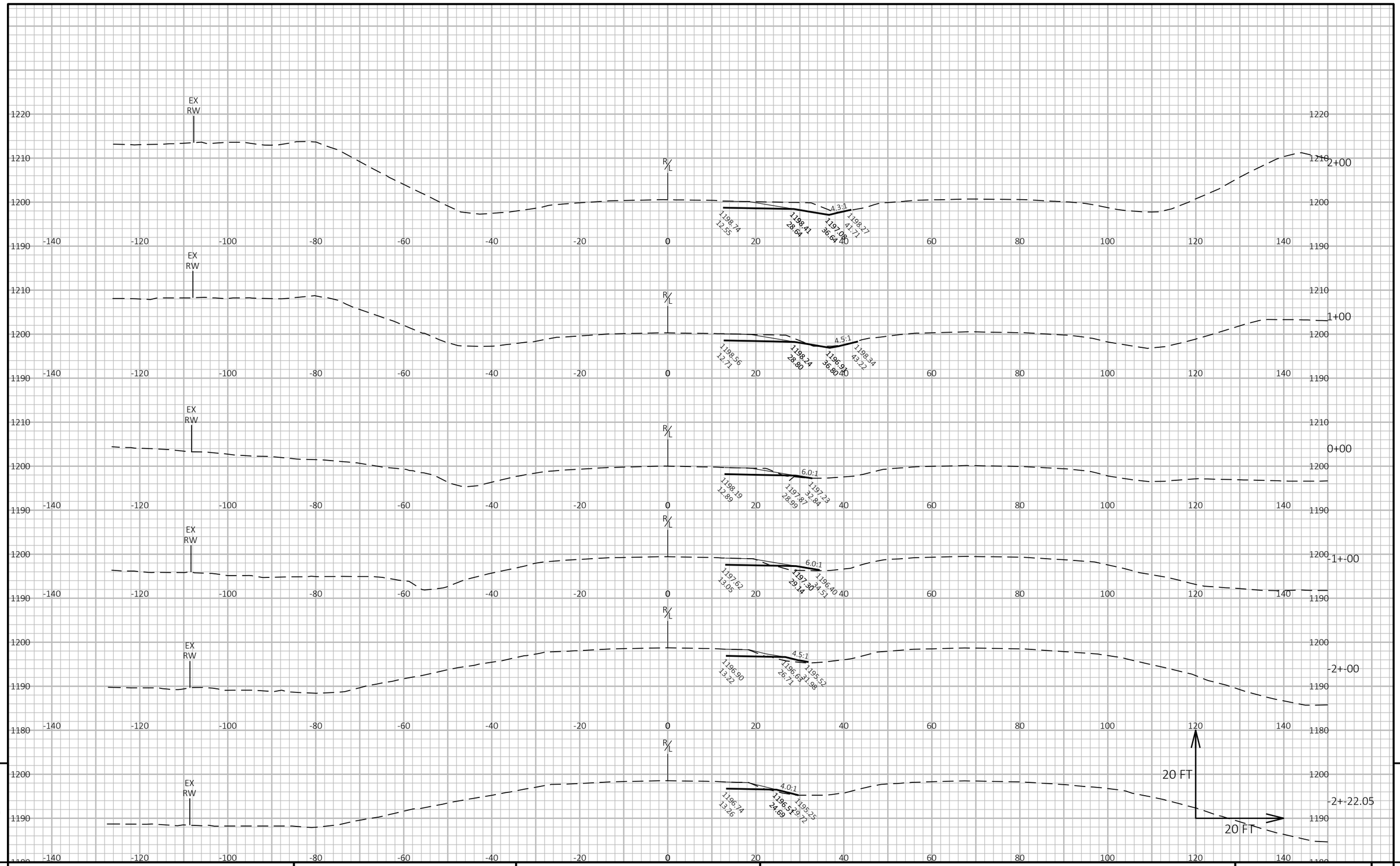


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3 (SHLD WIDENING)	SHEET 510	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 8

PLOT DATE : 11/19/2020 3:41 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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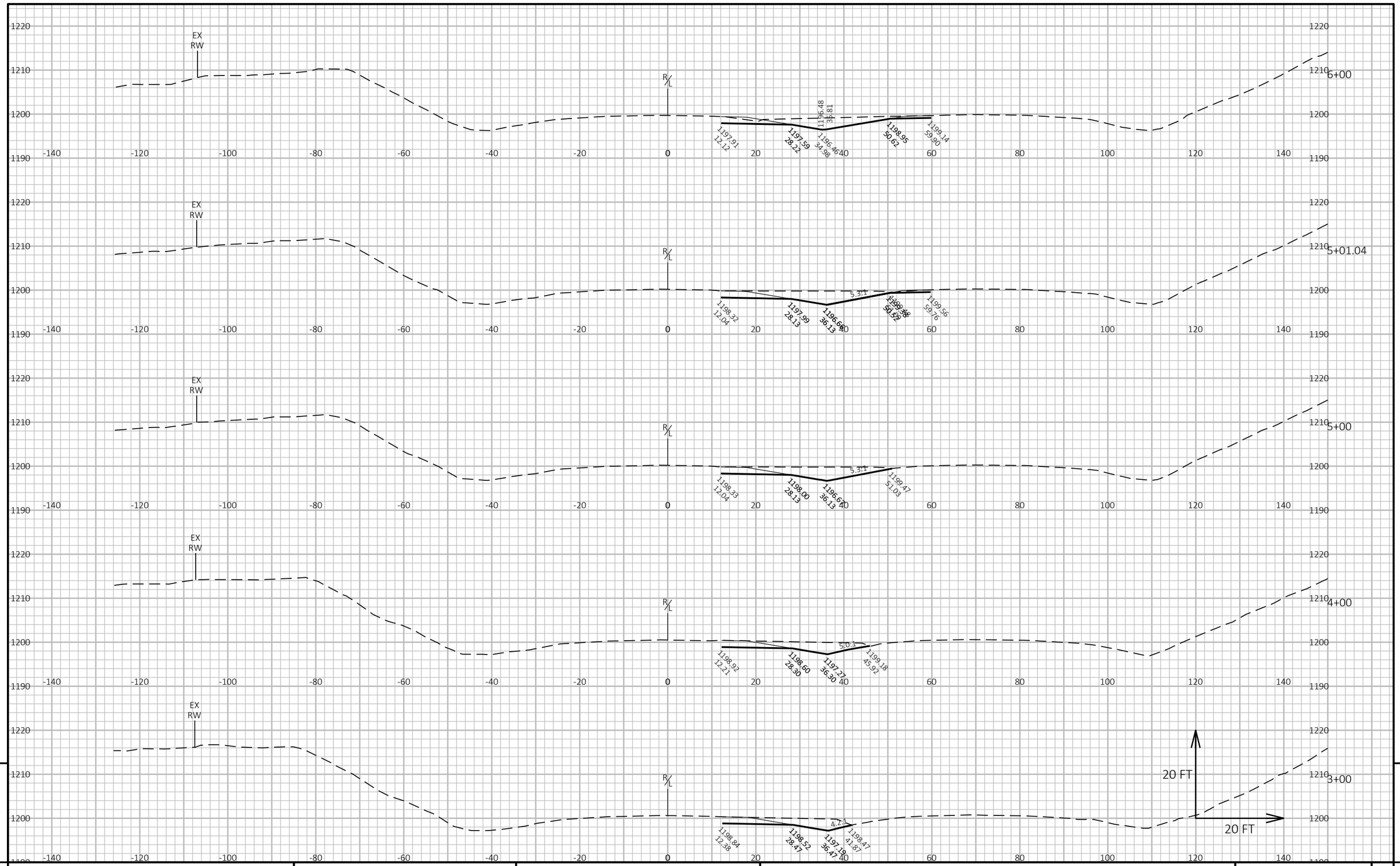
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 511	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 1

PLOT DATE : 9/24/2020 12:25 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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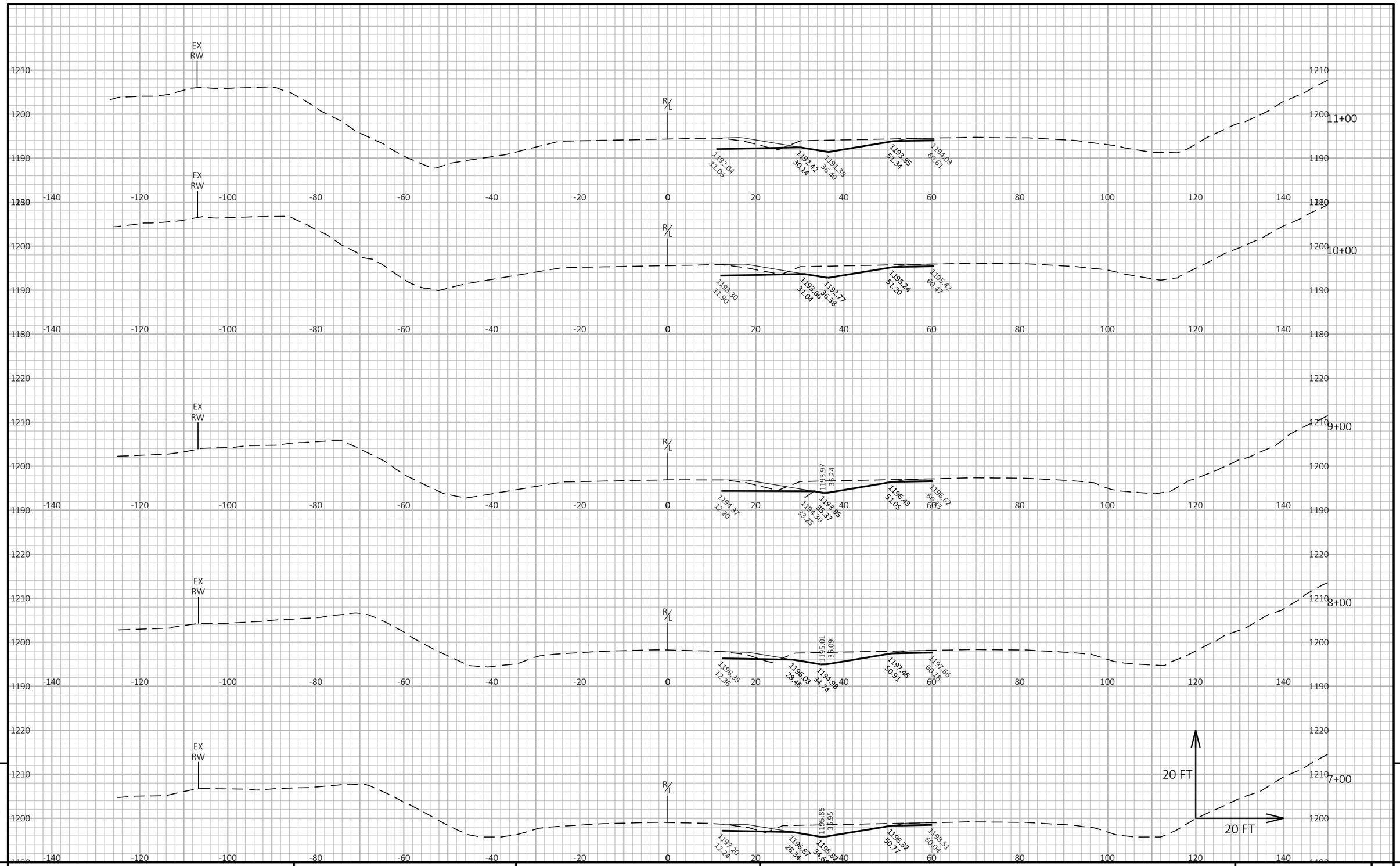
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 512	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 2

PLOT DATE : 9/24/2020 12:26 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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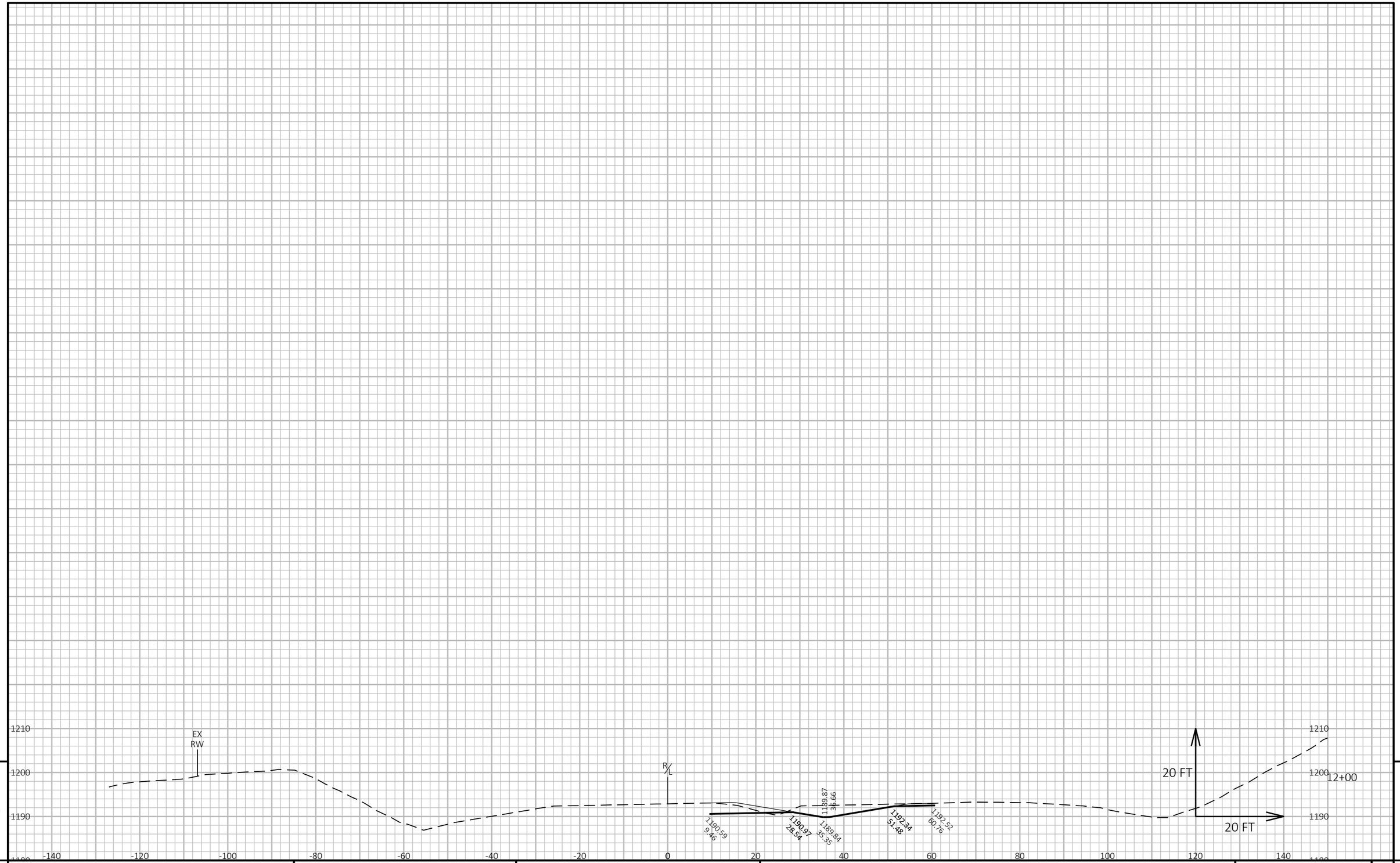
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 513	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 3

PLOT DATE : 9/24/2020 12:26 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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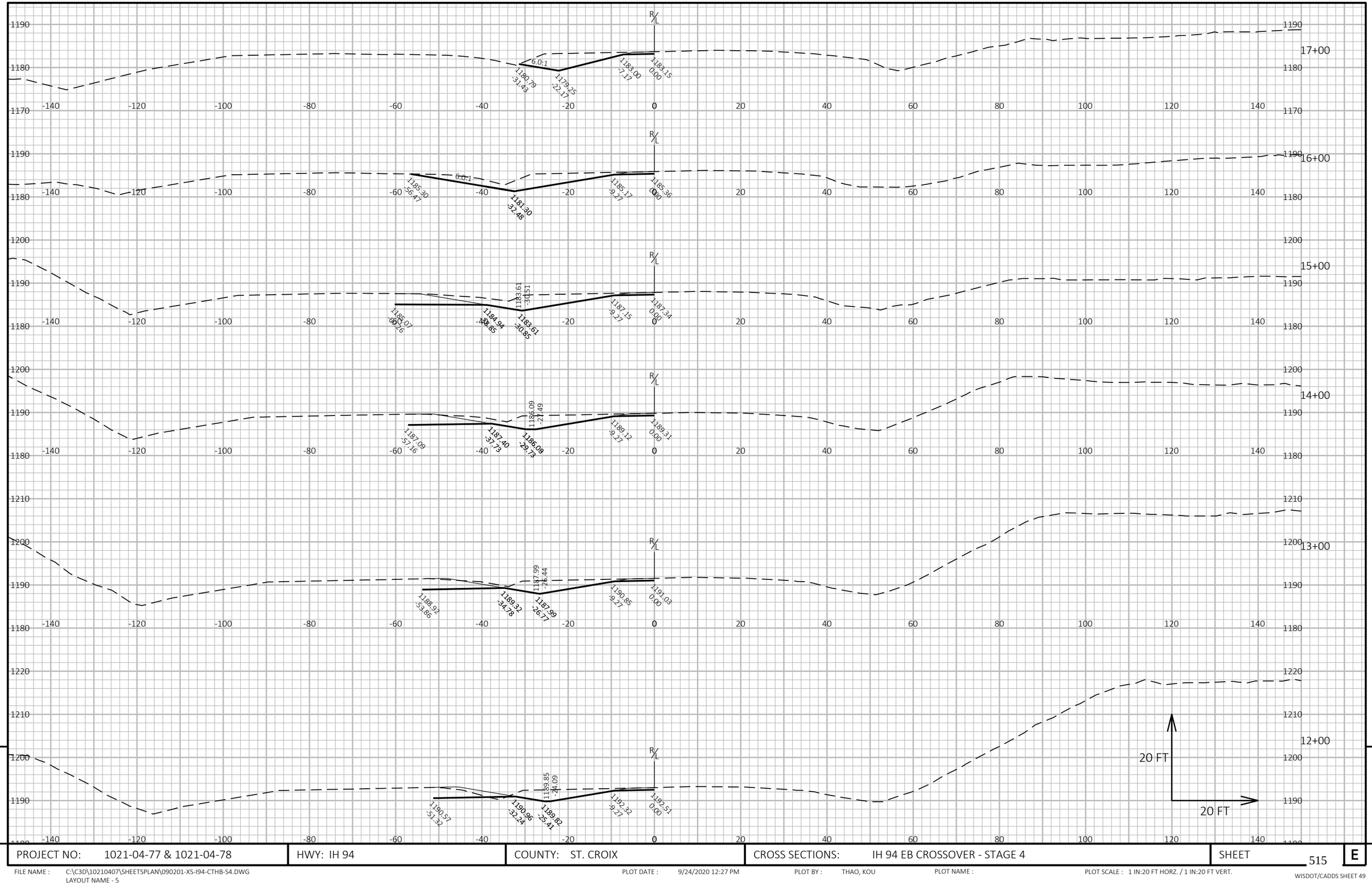
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 514	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 4

PLOT DATE : 9/24/2020 12:26 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

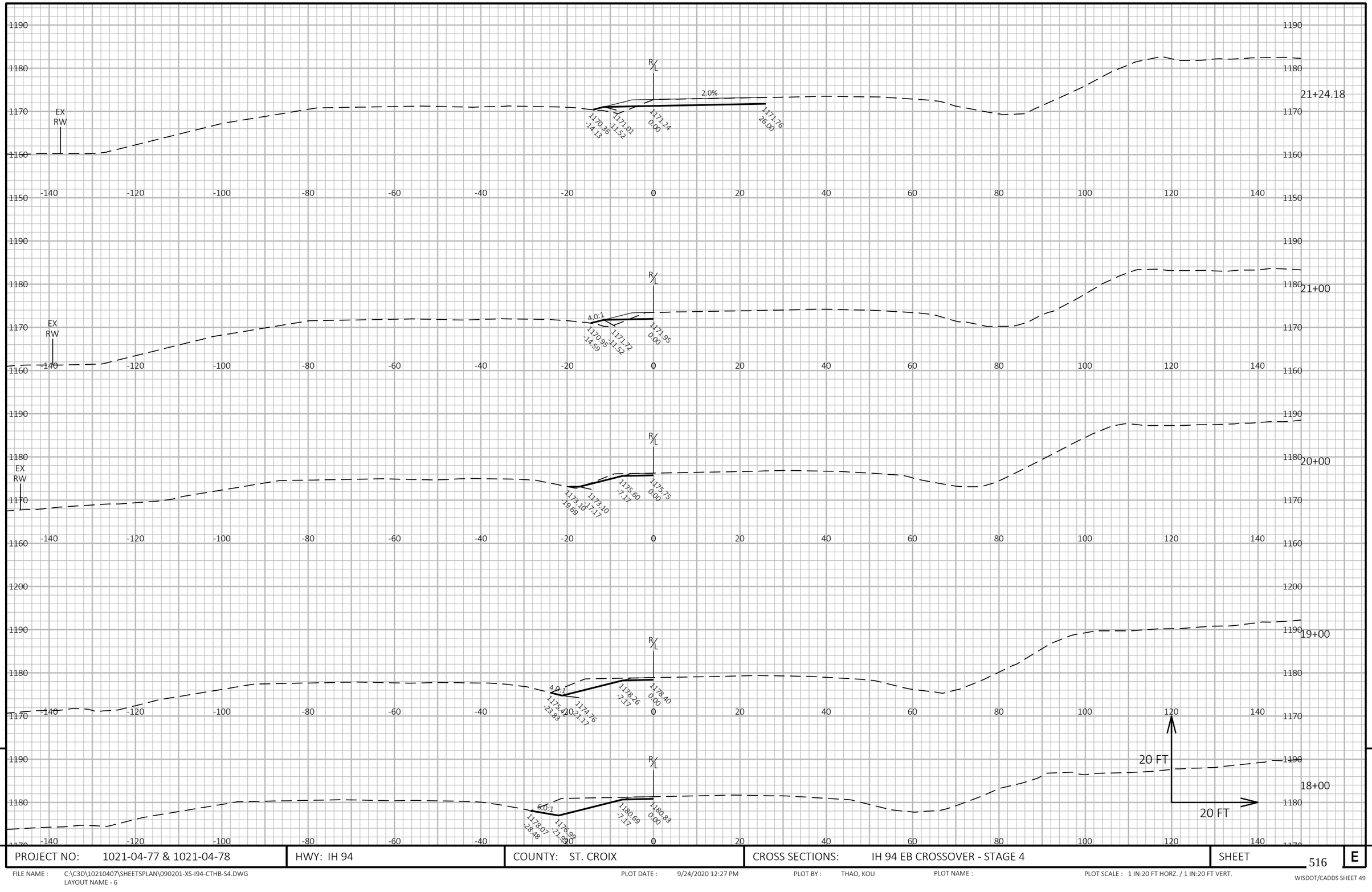


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 515	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 5

PLOT DATE : 9/24/2020 12:27 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

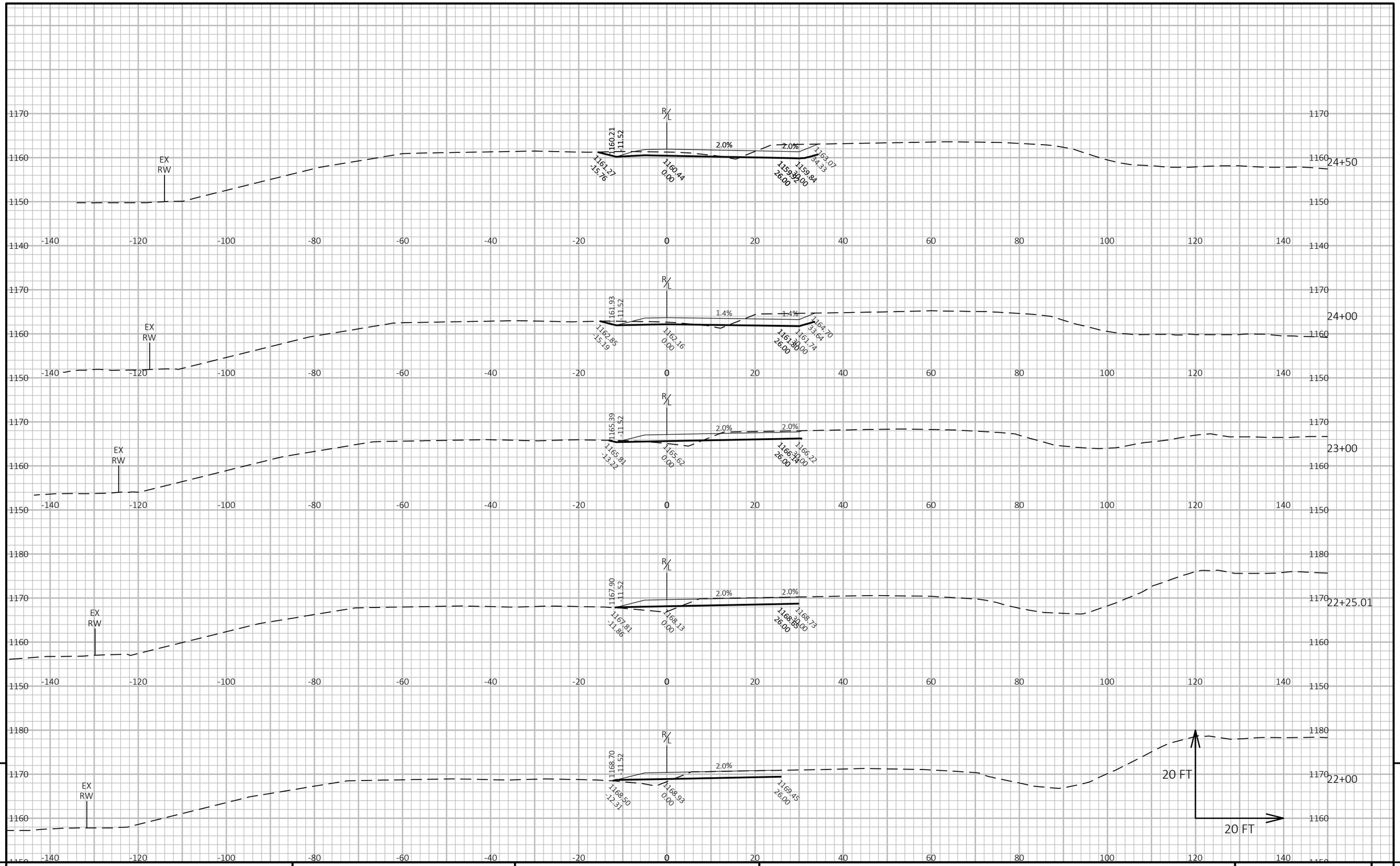


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 516	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 6

PLOT DATE : 9/24/2020 12:27 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

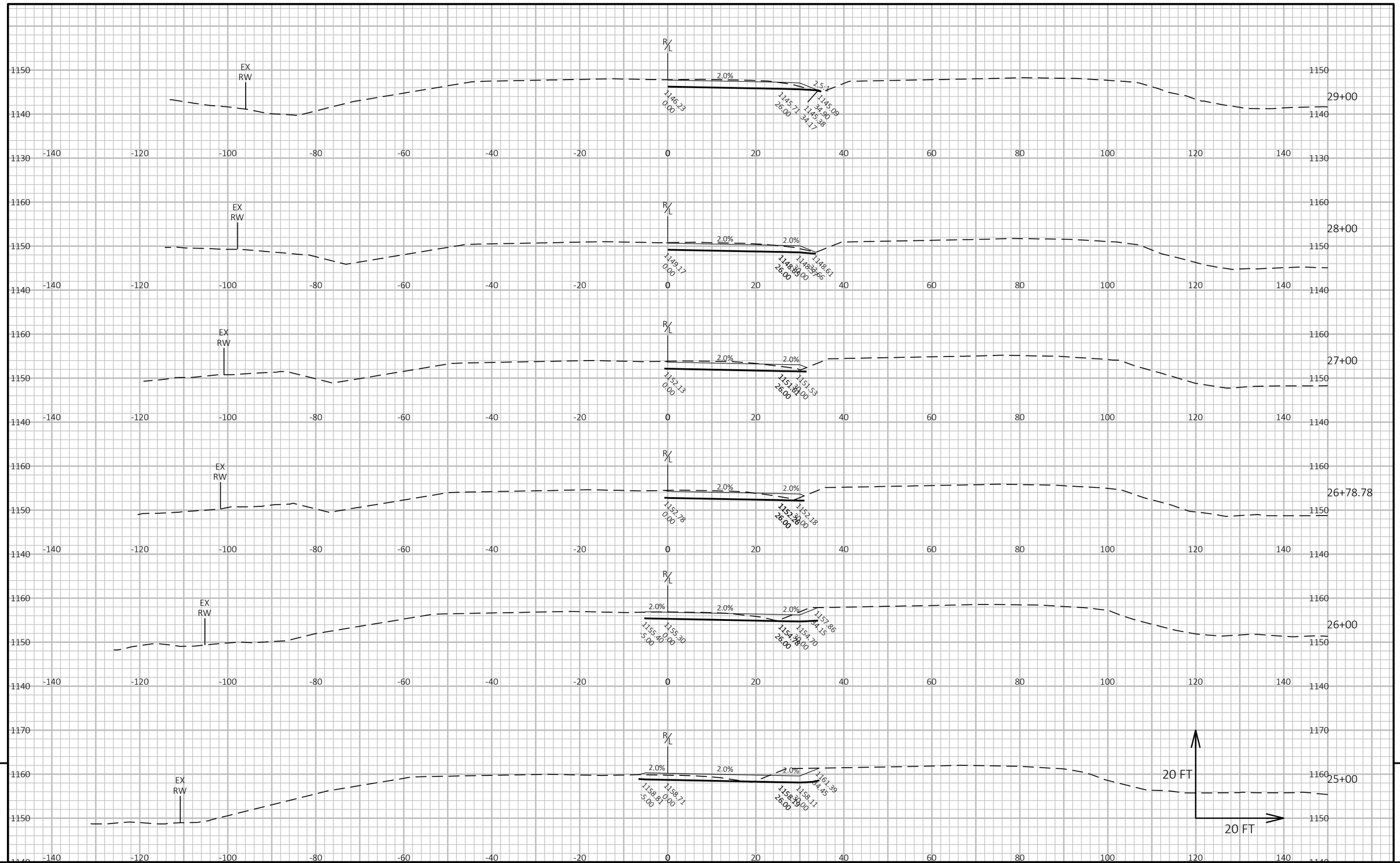


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 517	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 7

PLOT DATE : 9/24/2020 12:27 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

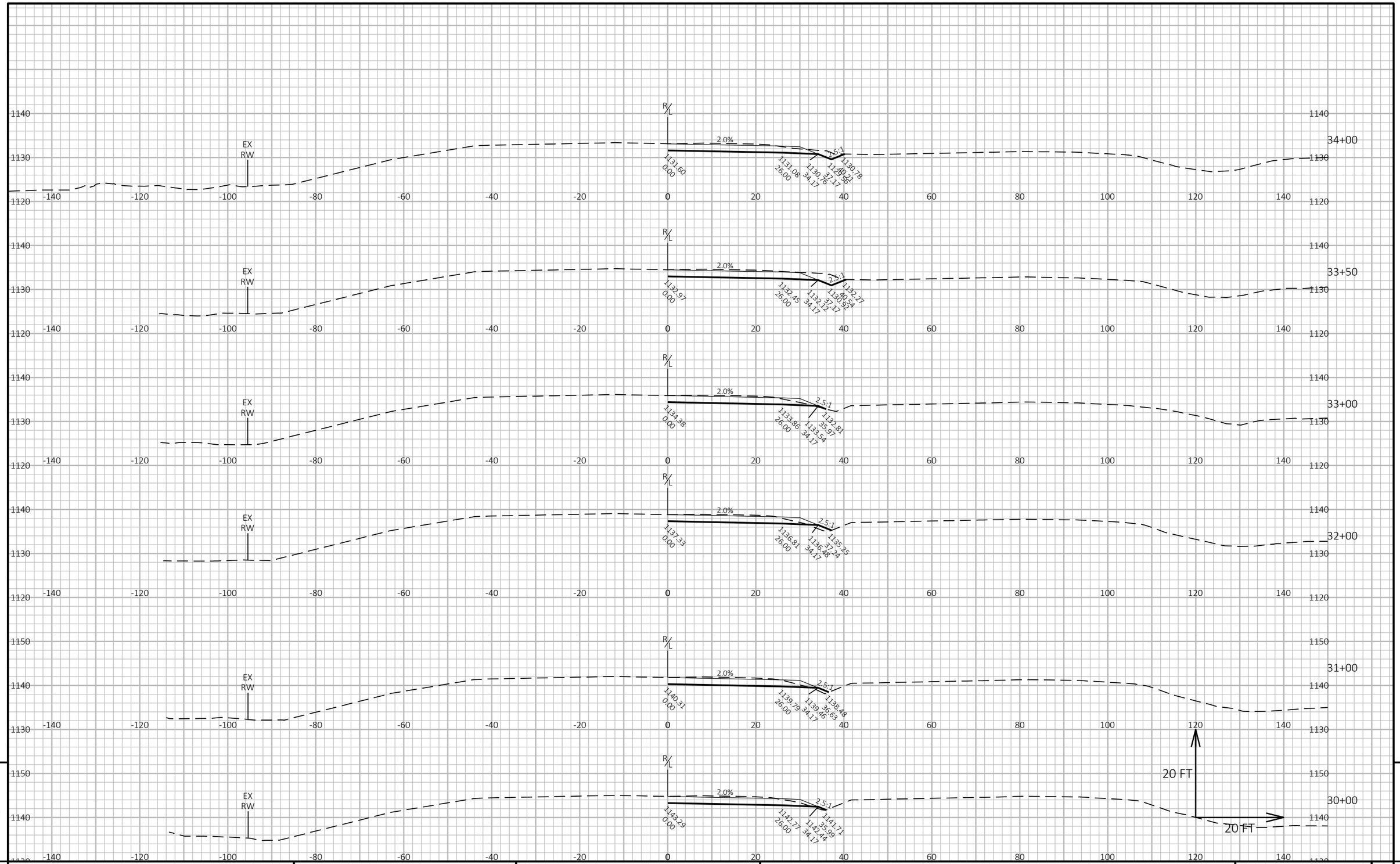
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 518	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 8

PLOT DATE : 9/24/2020 12:27 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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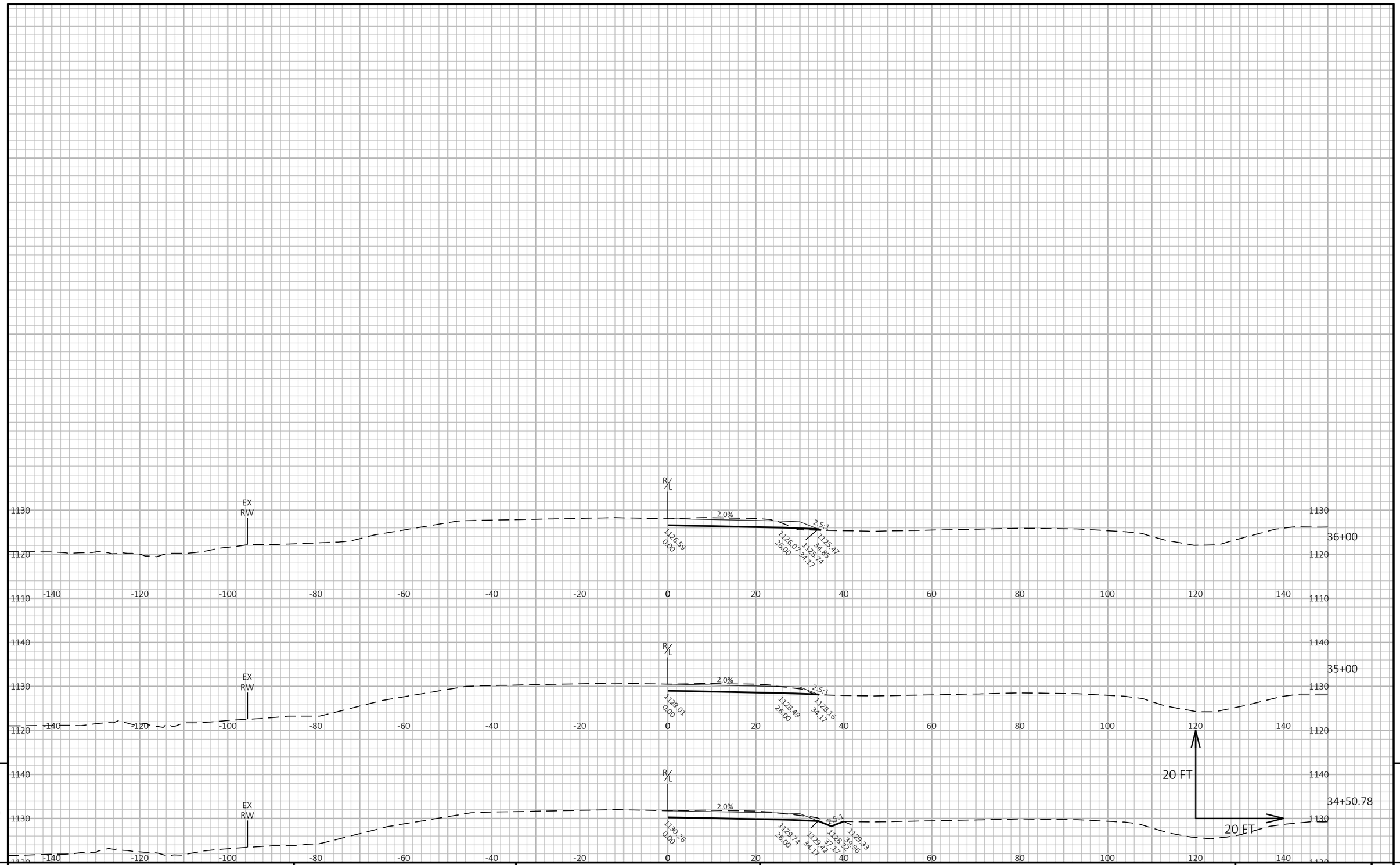
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 519	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 9

PLOT DATE : 9/24/2020 12:28 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

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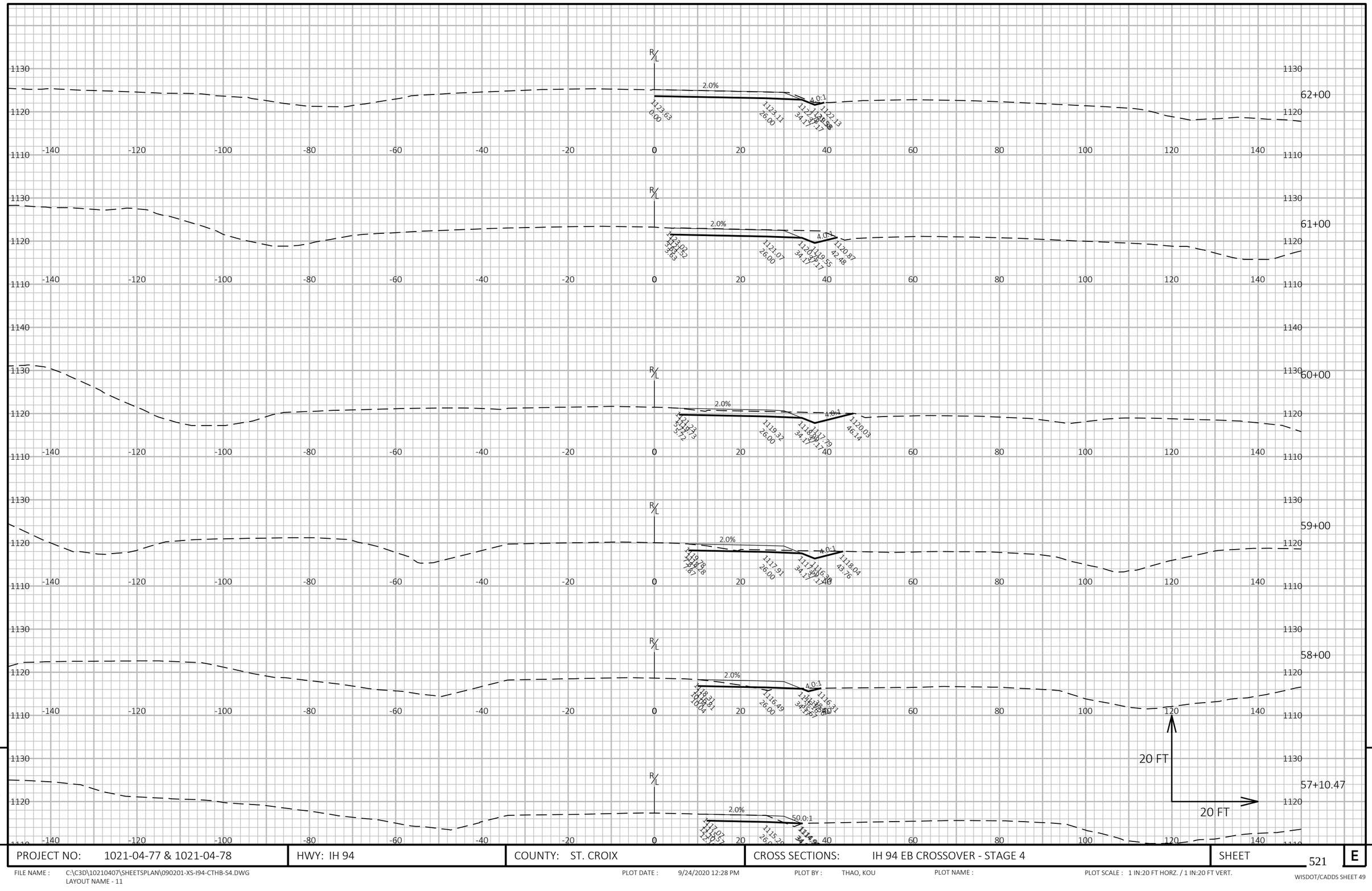
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 520	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 10

PLOT DATE : 9/24/2020 12:28 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

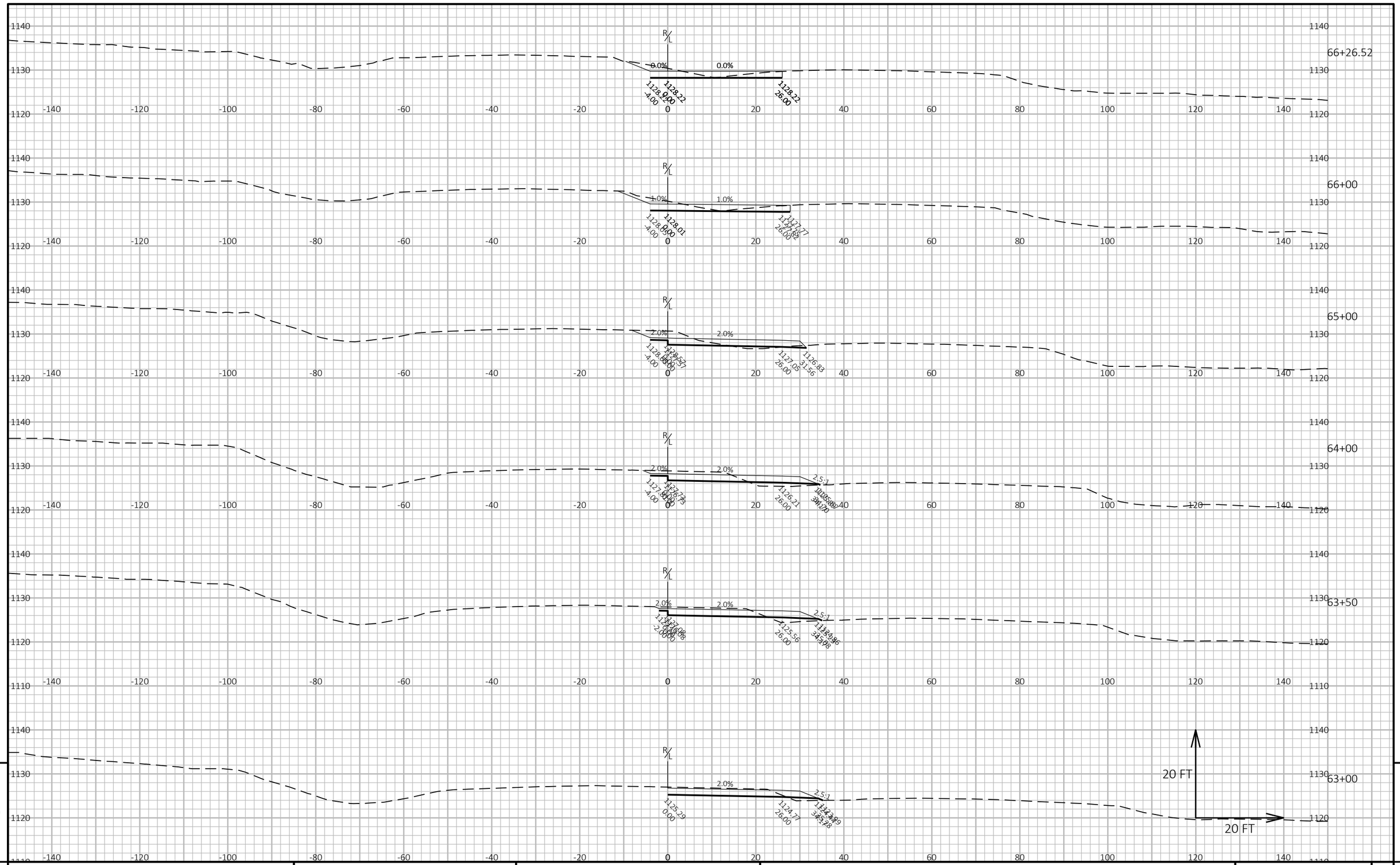


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 521	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 11

PLOT DATE : 9/24/2020 12:28 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

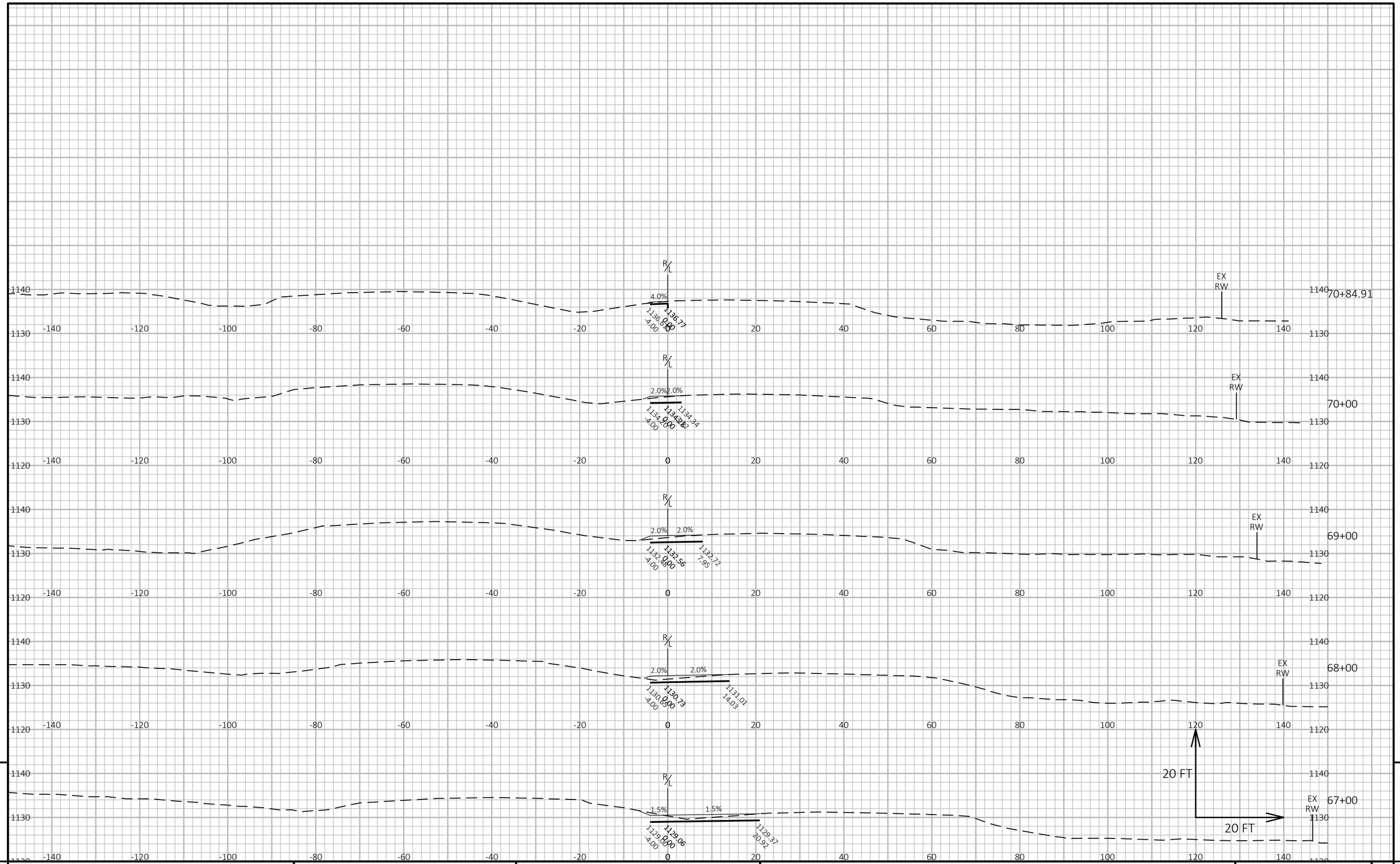


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 522	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 12

PLOT DATE : 9/24/2020 12:29 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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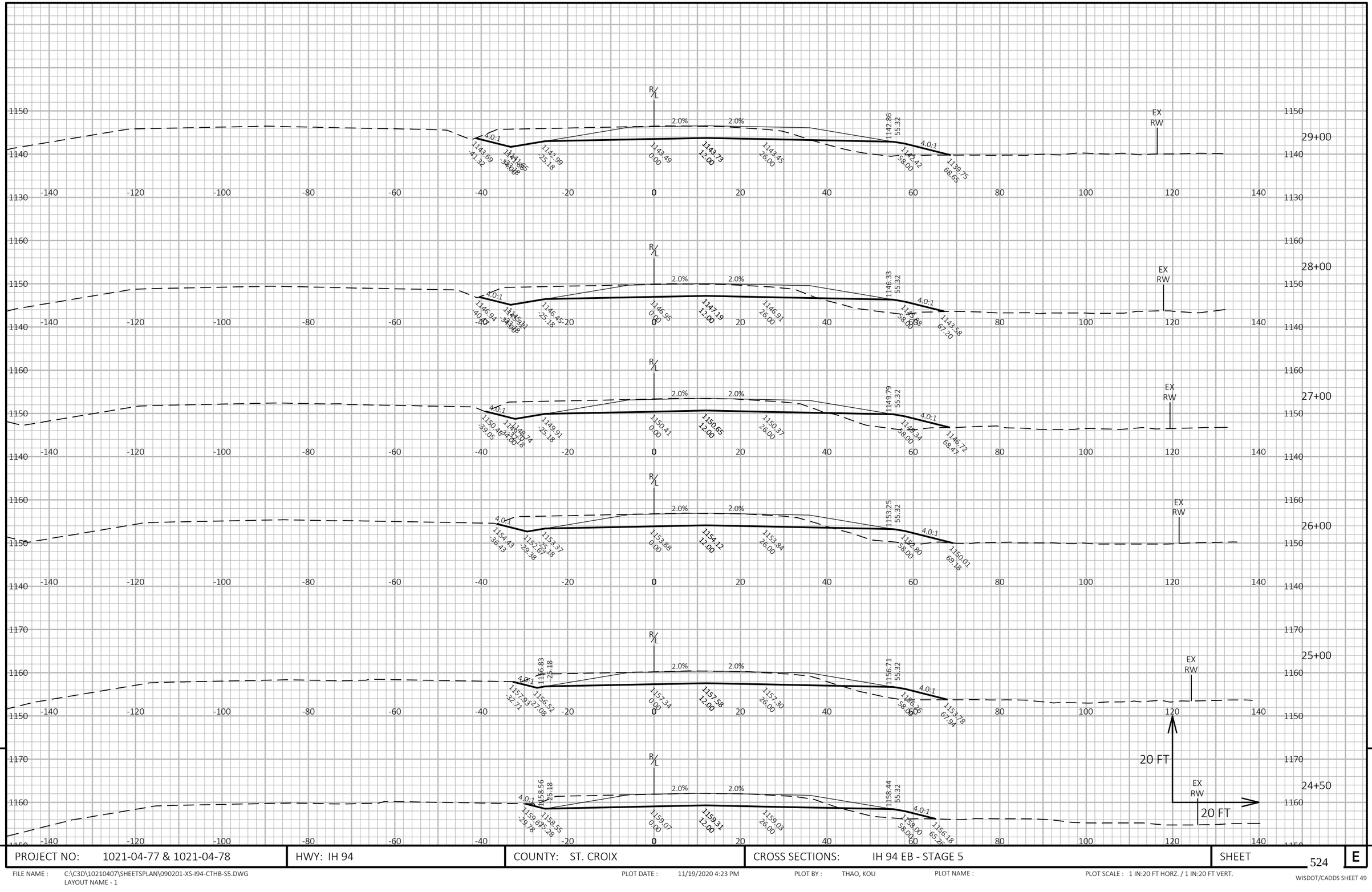
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 523	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 13

PLOT DATE : 9/24/2020 12:29 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

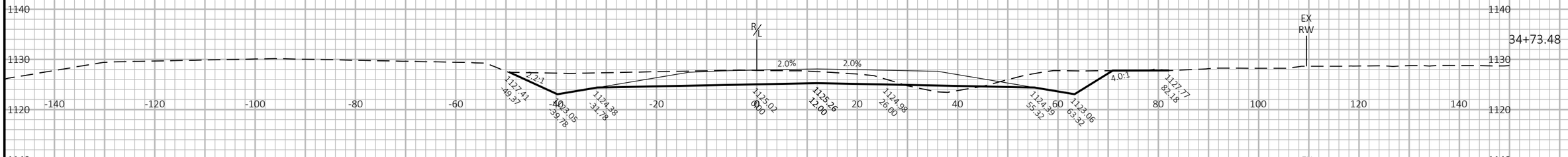
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 524	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 1

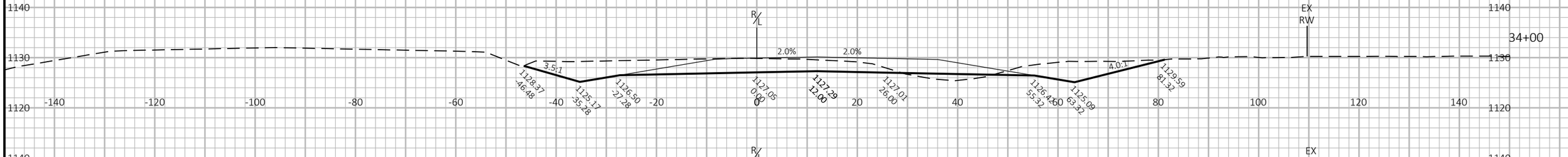
PLOT DATE : 11/19/2020 4:23 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

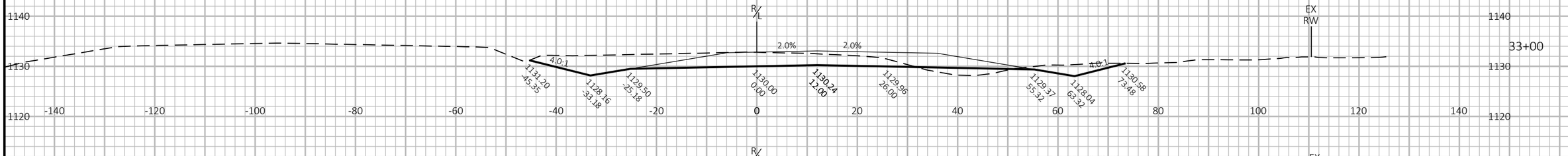
34+73.48



34+00



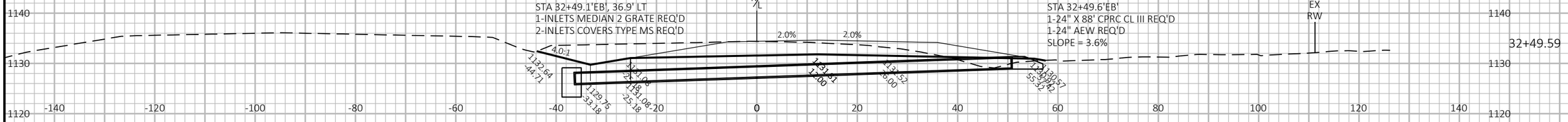
33+00



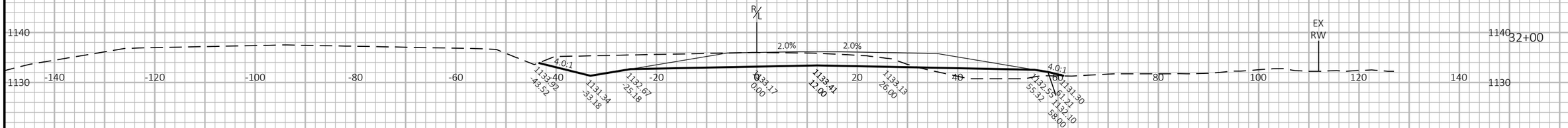
32+49.59

STA 32+49.1'EB', 36.9' LT
1-INLETS MEDIAN 2 GRATE REQ'D
2-INLETS COVERS TYPE MS REQ'D

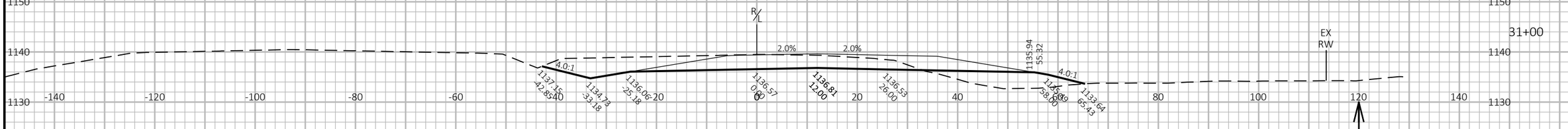
STA 32+49.6'EB'
1-24" X 88' CPRC CL III REQ'D
1-24" AEW REQ'D
SLOPE = 3.6%



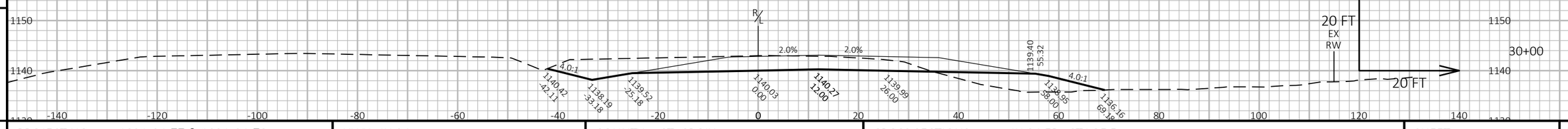
32+00



31+00



30+00



9

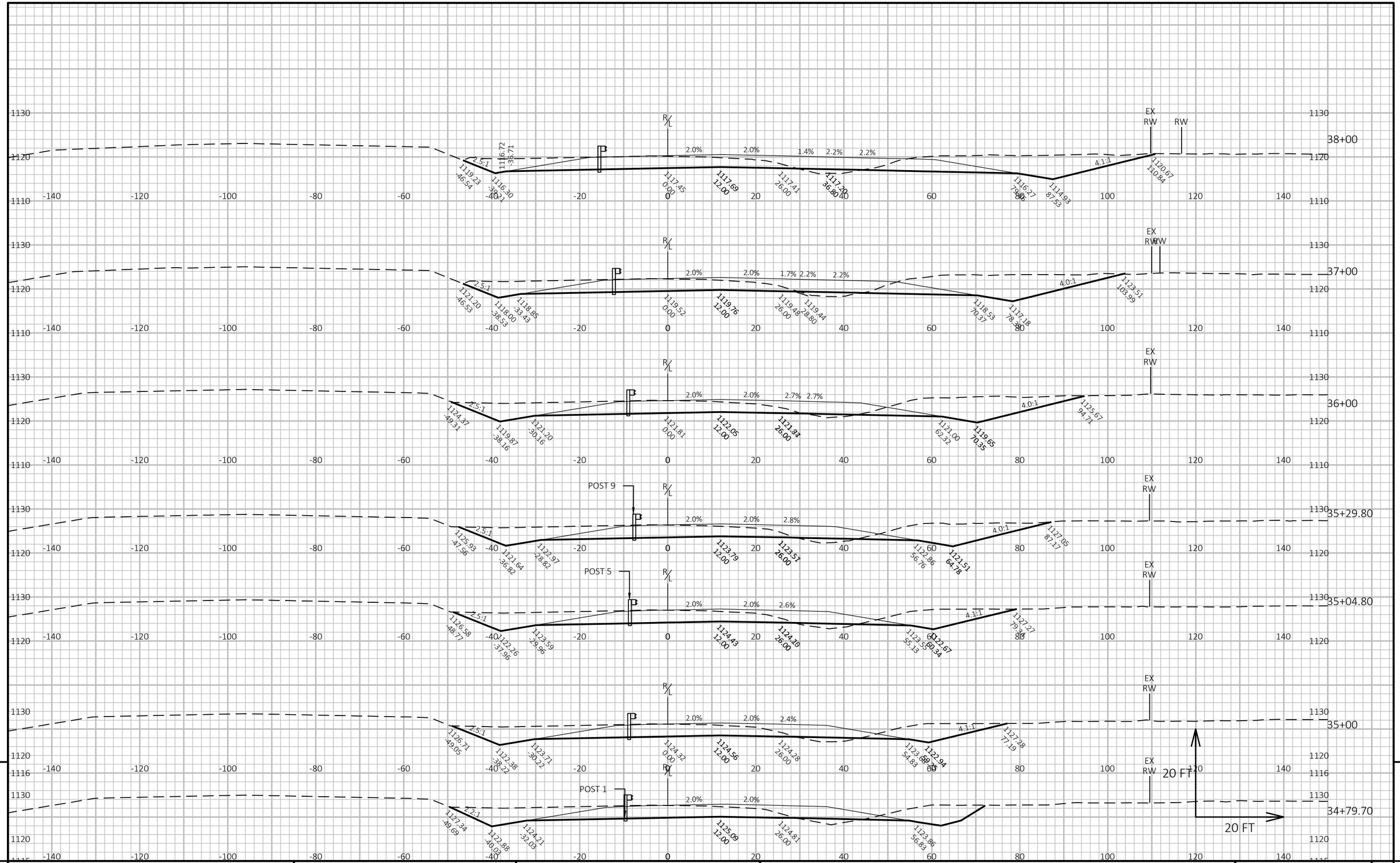
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 525	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 2

PLOT DATE : 11/19/2020 4:23 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

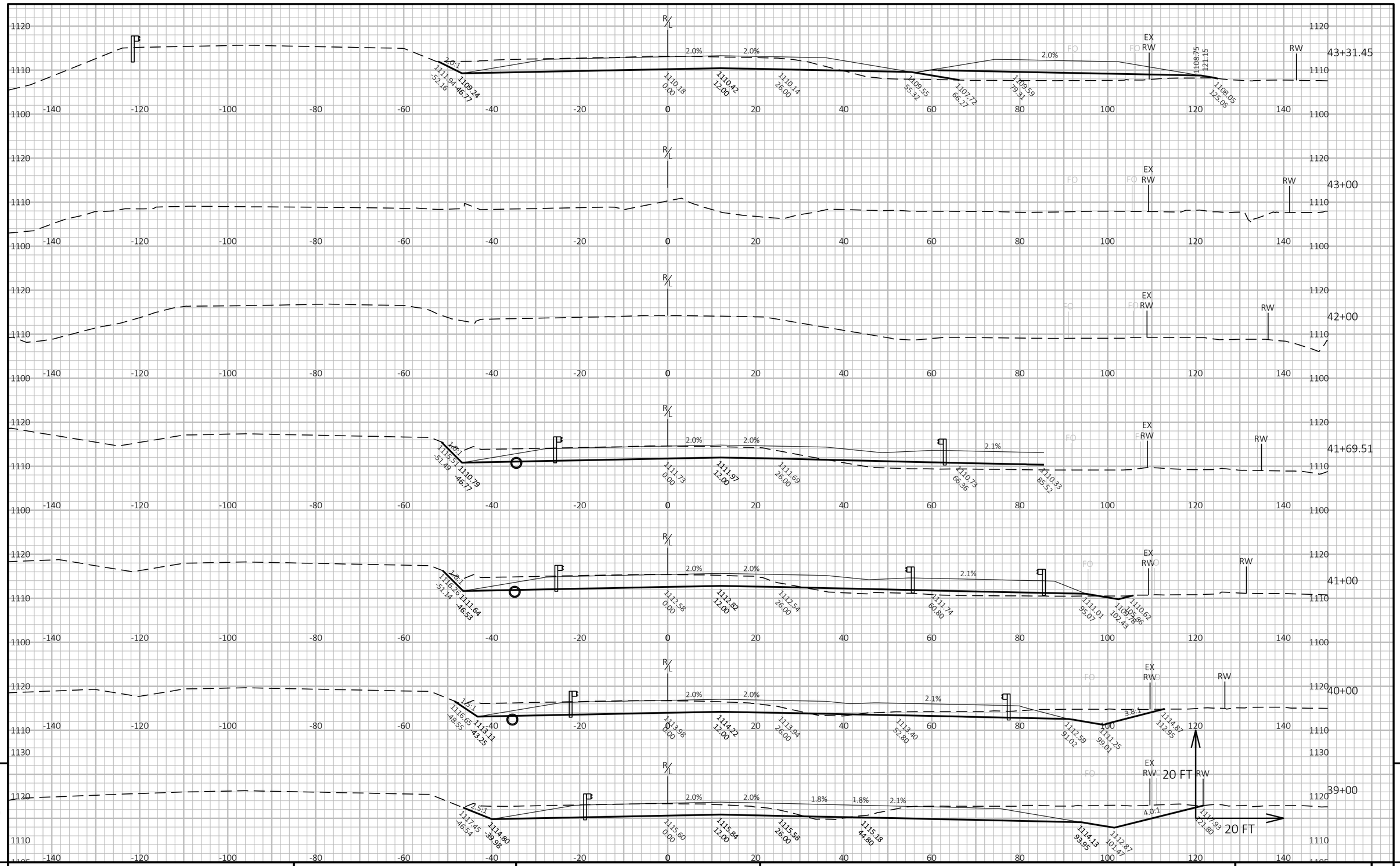


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 526 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 3

PLOT DATE : 11/19/2020 4:23 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9	PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 527	E

9

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 4
PLOT DATE : 11/19/2020 4:23 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49

STA 48+50.1'EB', 31.7' LT
1-INLETS MEDIAN 1 GRATE REQ'D
1-INLETS COVERS TYPE MS REQ'D

STA 48+50'EB'
1-24" X 92' CPRC CL III REQ'D
1-24" AEW REQ'D
SLOPE = 0.5%

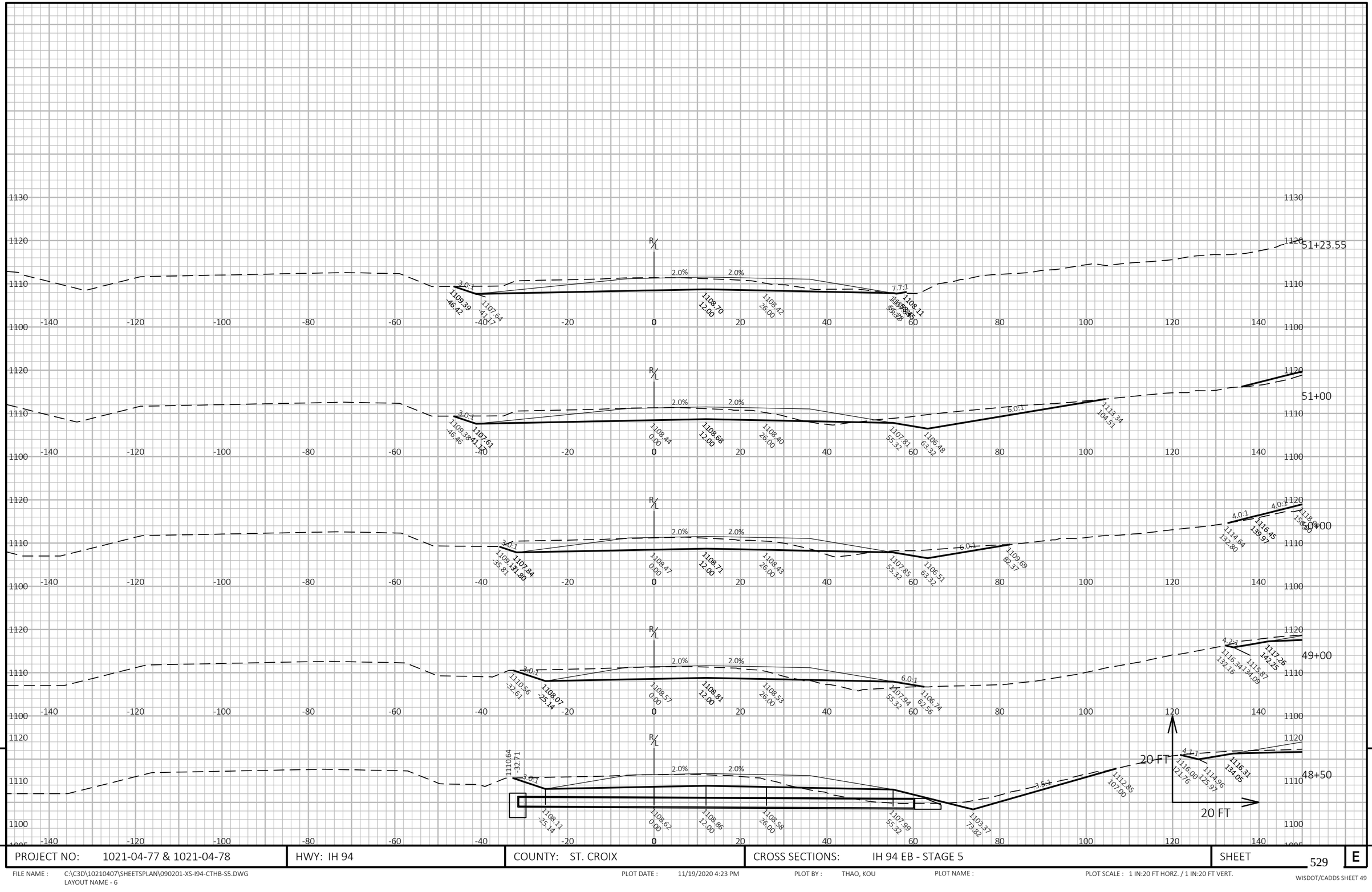
20 FT
EX RW
RW
20 FT

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 528 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 5

PLOT DATE : 11/19/2020 4:23 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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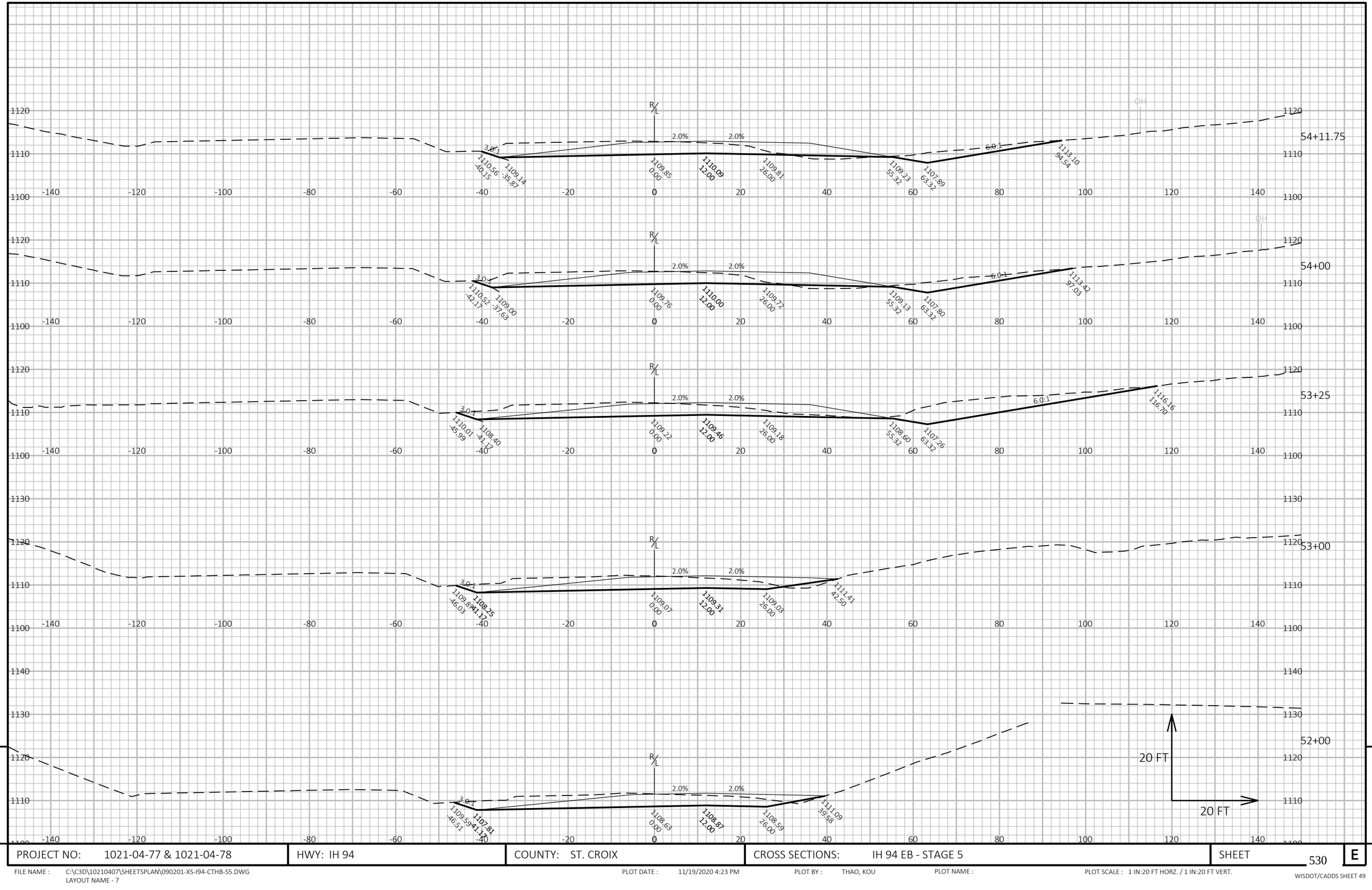
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 529	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 6

PLOT DATE : 11/19/2020 4:23 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 530	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 7

PLOT DATE : 11/19/2020 4:23 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

58+00

R/L

3.0:1 | 2.0% | 2.0% | 6.0:1

1116.10 -30.69 | 1114.26 -25.18 | 1114.77 0.00 | 1115.01 12.00 | 1114.73 26.00 | 1114.00 55.32 | 1114.14 55.16

57+00

R/L

3.0:1 | 2.0% | 2.0% | 4.0:1

1115.49 -39.40 | 1112.75 -25.18 | 1113.26 0.00 | 1113.50 12.00 | 1113.22 26.00 | 1112.63 55.32 | 1110.63 67.32 | 1120.01 104.85

56+50

R/L

3.0:1 | 2.0% | 2.0% | 4.0:1

1114.90 -33.84 | 1112.02 -25.18 | 1112.52 0.00 | 1112.76 12.00 | 1112.48 26.00 | 1111.90 55.32 | 1108.40 69.32 | 1121.21 120.58

56+00

R/L

3.0:1 | 2.0% | 2.0% | 4.0:1

1114.39 -34.28 | 1111.34 -25.14 | 1111.85 0.00 | 1112.09 12.00 | 1111.81 26.00 | 1111.22 55.32 | 1108.42 69.32 | 1114.39 93.18

55+00

STA 56+50'EB', 27.8' LT
1-INLETS MEDIAN 1 GRATE REQ'D
1-INLETS COVERS TYPE MS REQ'D

STA 56+50'EB'
1-24" X 86' CPRC CL III REQ'D
1-24" AEW REQ'D
SLOPE = 0.5%

20 FT
20 FT

R/L

3.0:1 | 2.0% | 2.0% | 6.0:1

1113.19 -36.19 | 1110.14 -27.06 | 1110.68 0.00 | 1110.92 12.00 | 1110.64 26.00 | 1110.05 55.32 | 1108.22 66.32 | 1113.79 99.73

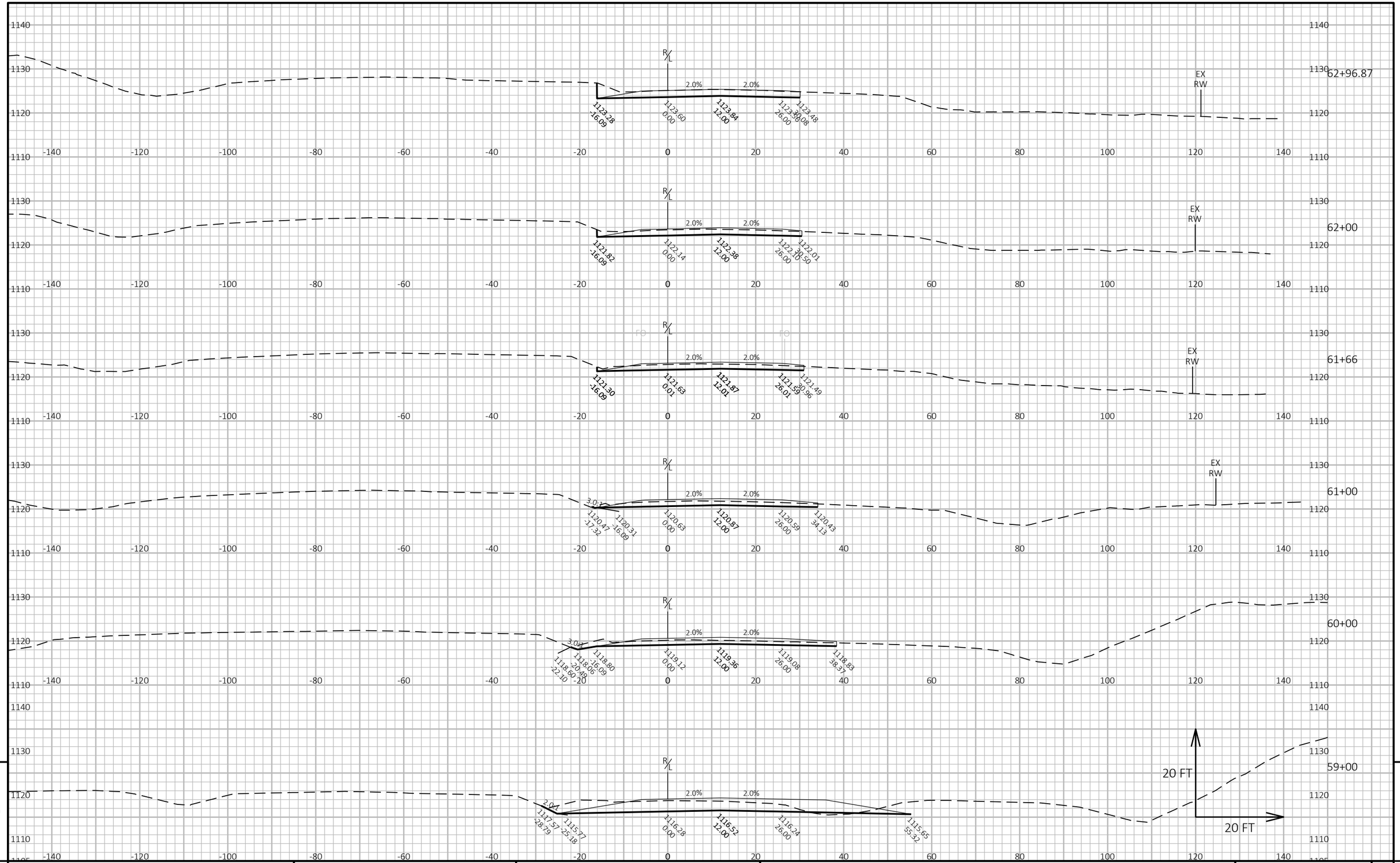
9 | 9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 531	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 8

PLOT DATE : 11/19/2020 4:24 PM | PLOT BY : THAO, KOU | PLOT NAME : | PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

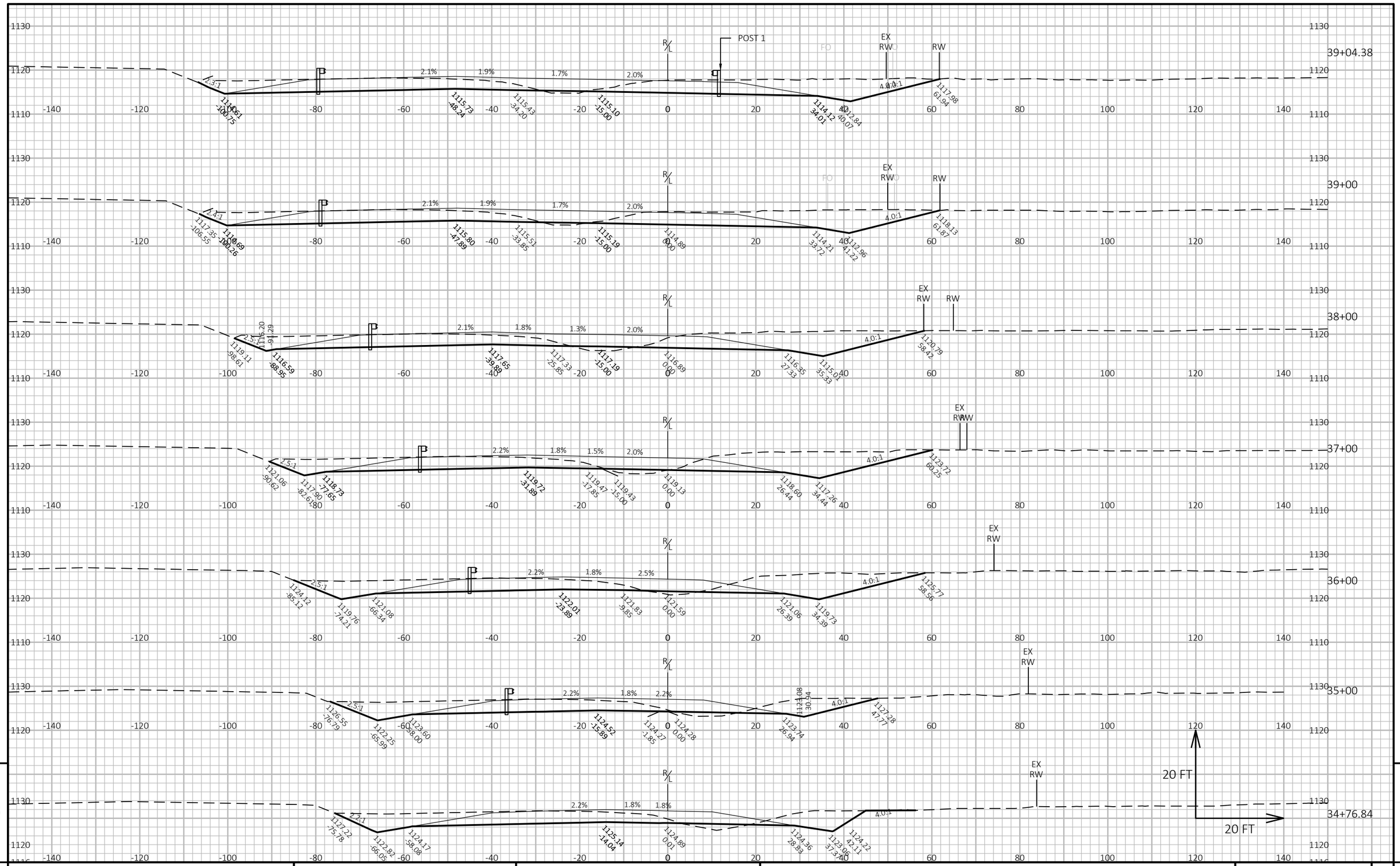


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 532	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 8 (2)

PLOT DATE : 11/19/2020 4:24 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP B - STAGE 5	SHEET 533	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 9

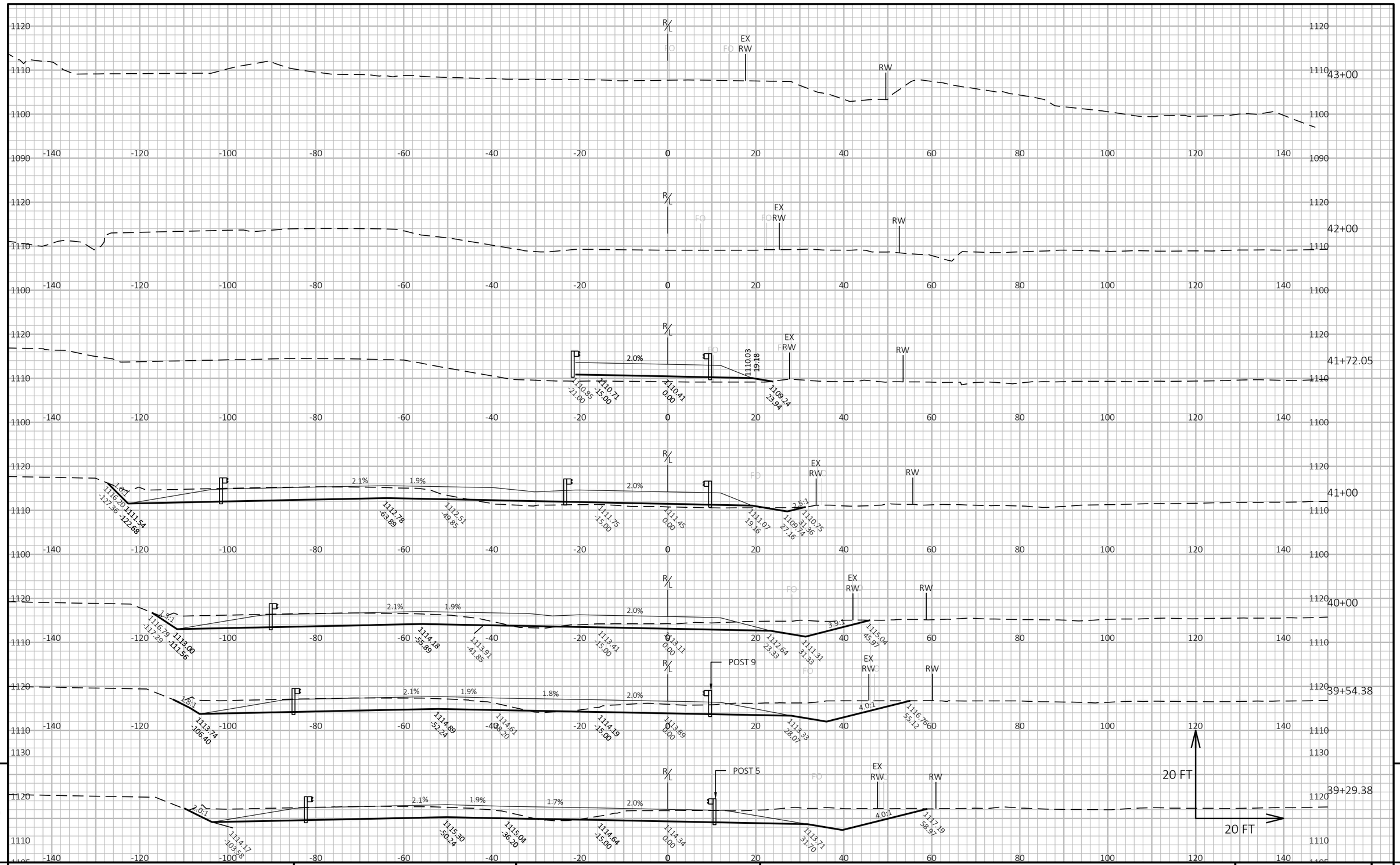
PLOT DATE : 11/19/2020 4:24 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

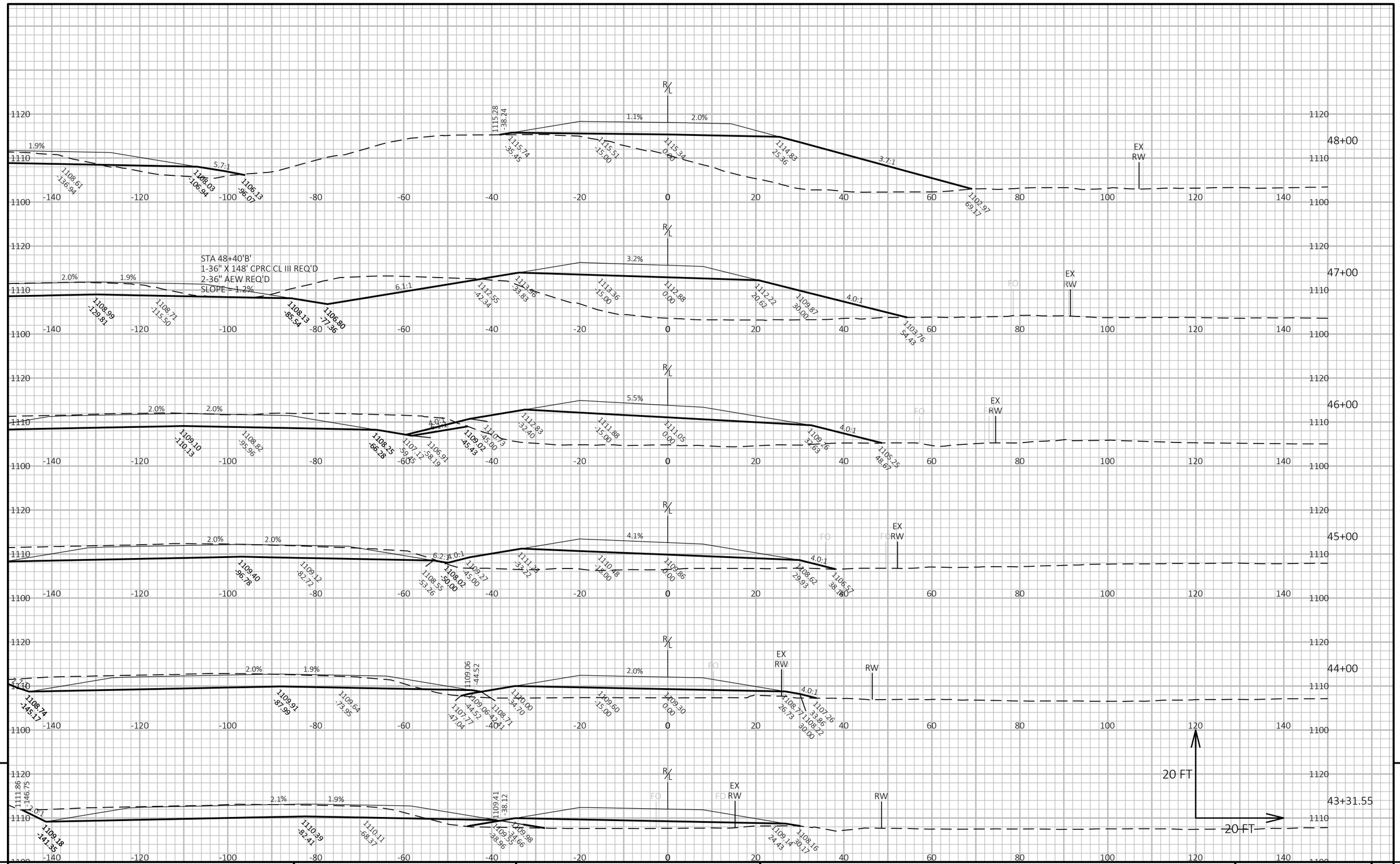


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP B - STAGE 5	SHEET 534 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 10

PLOT DATE : 11/19/2020 4:24 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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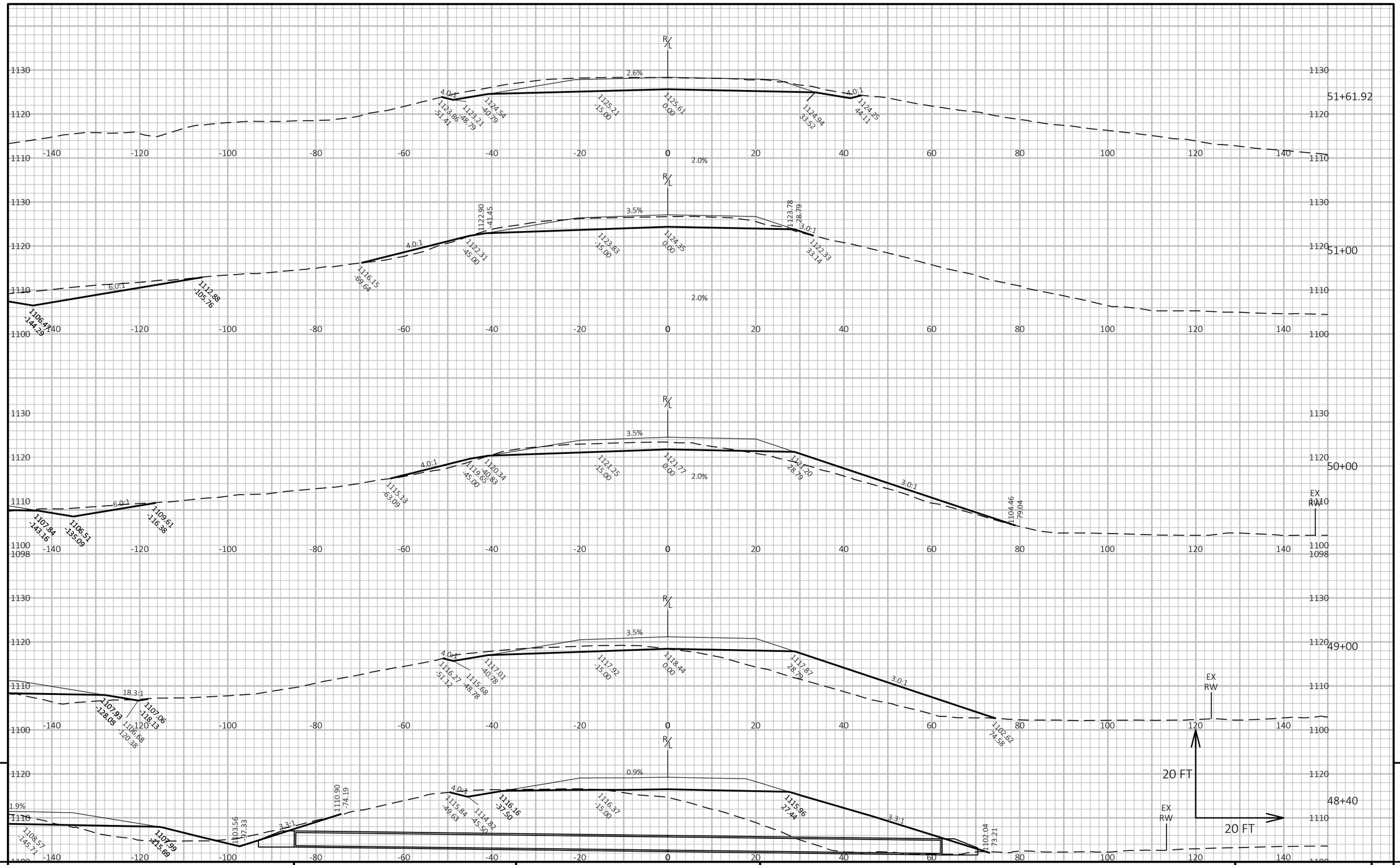
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP B - STAGE 5	SHEET 535	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 11

PLOT DATE : 11/19/2020 4:24 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



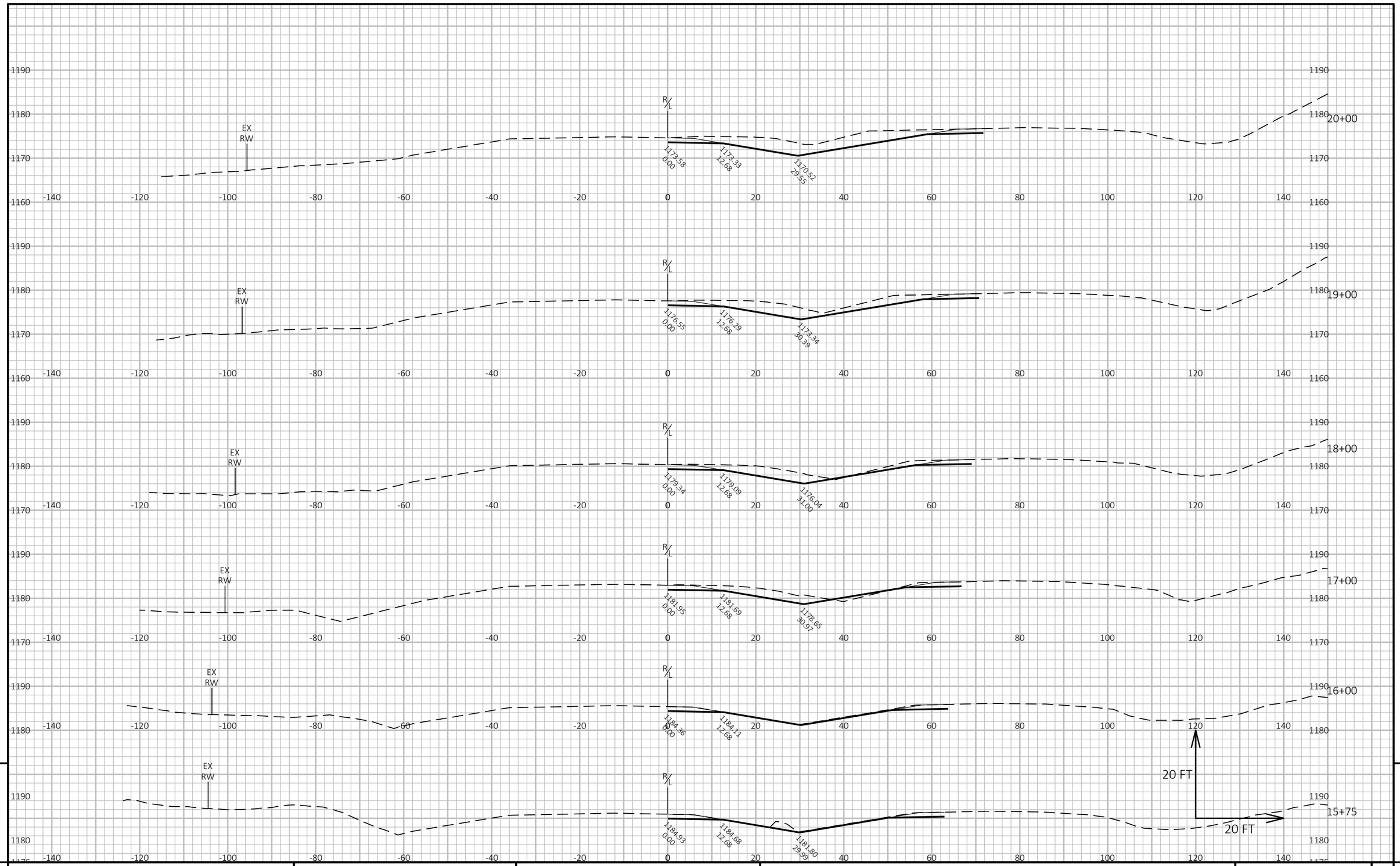
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP B - STAGE 5	SHEET 536	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 12

PLOT DATE : 11/19/2020 4:24 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

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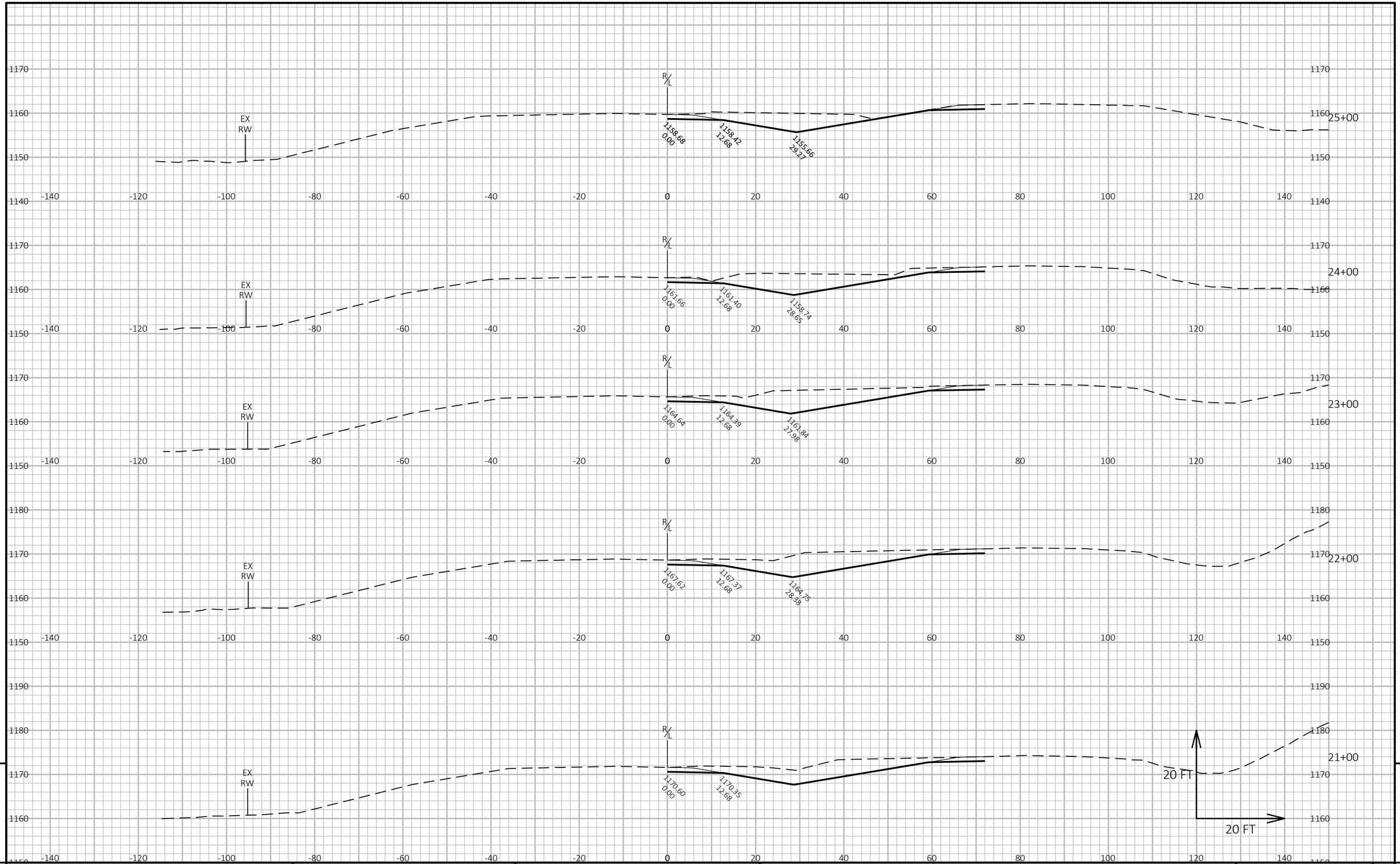
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 537	E



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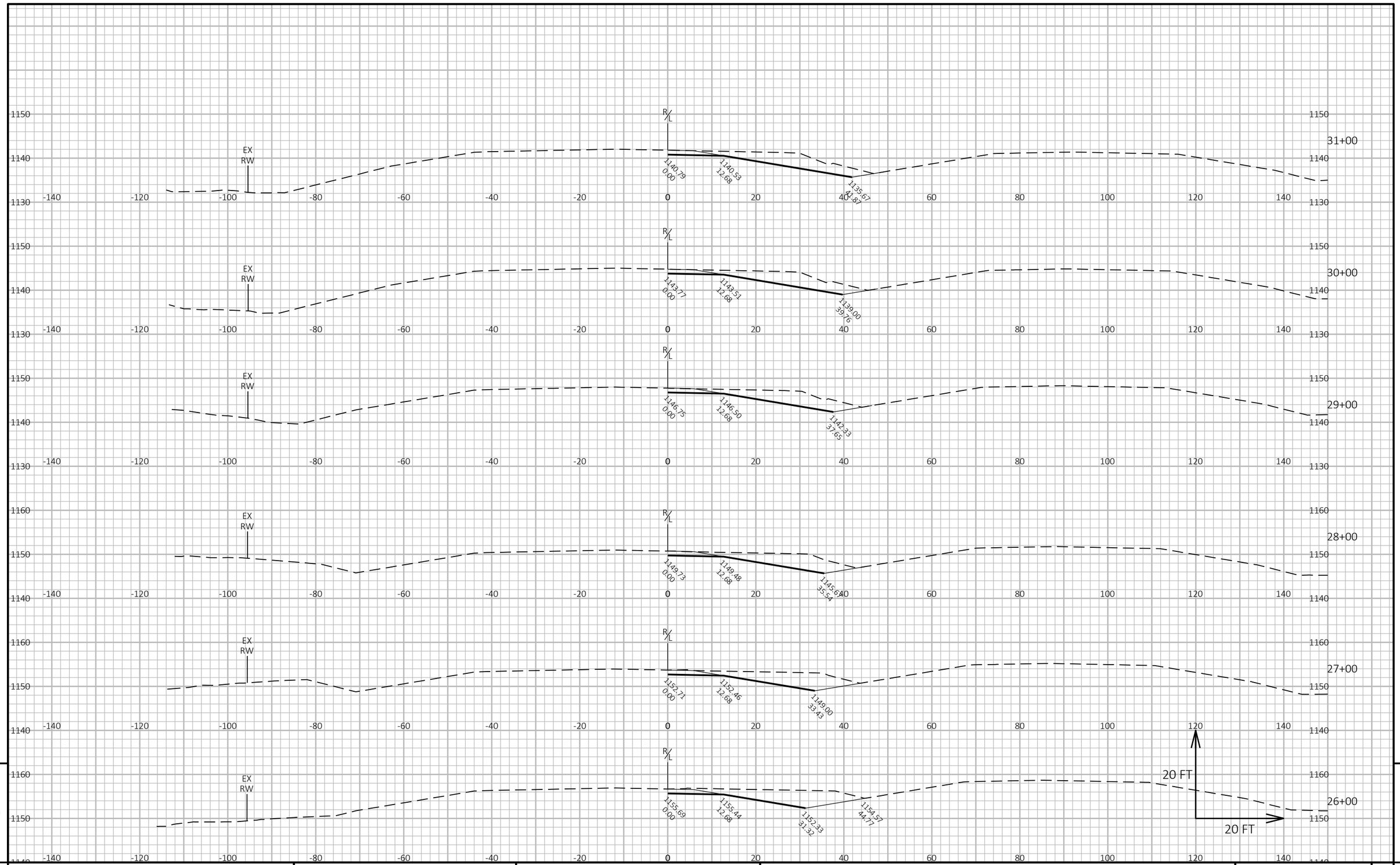
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 538	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 2

PLOT DATE : 11/19/2020 4:35 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

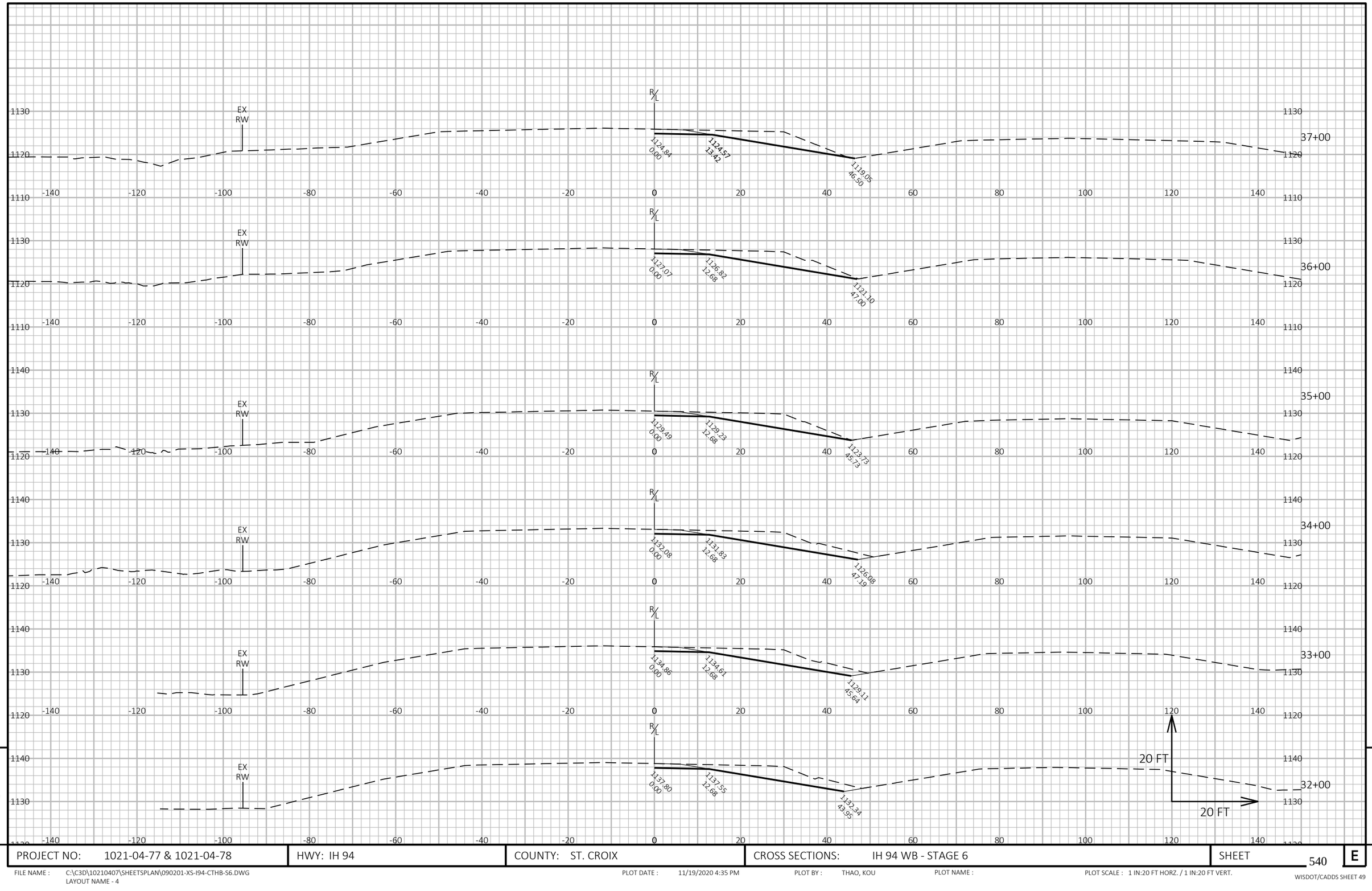


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 539	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 3

PLOT DATE : 11/19/2020 4:35 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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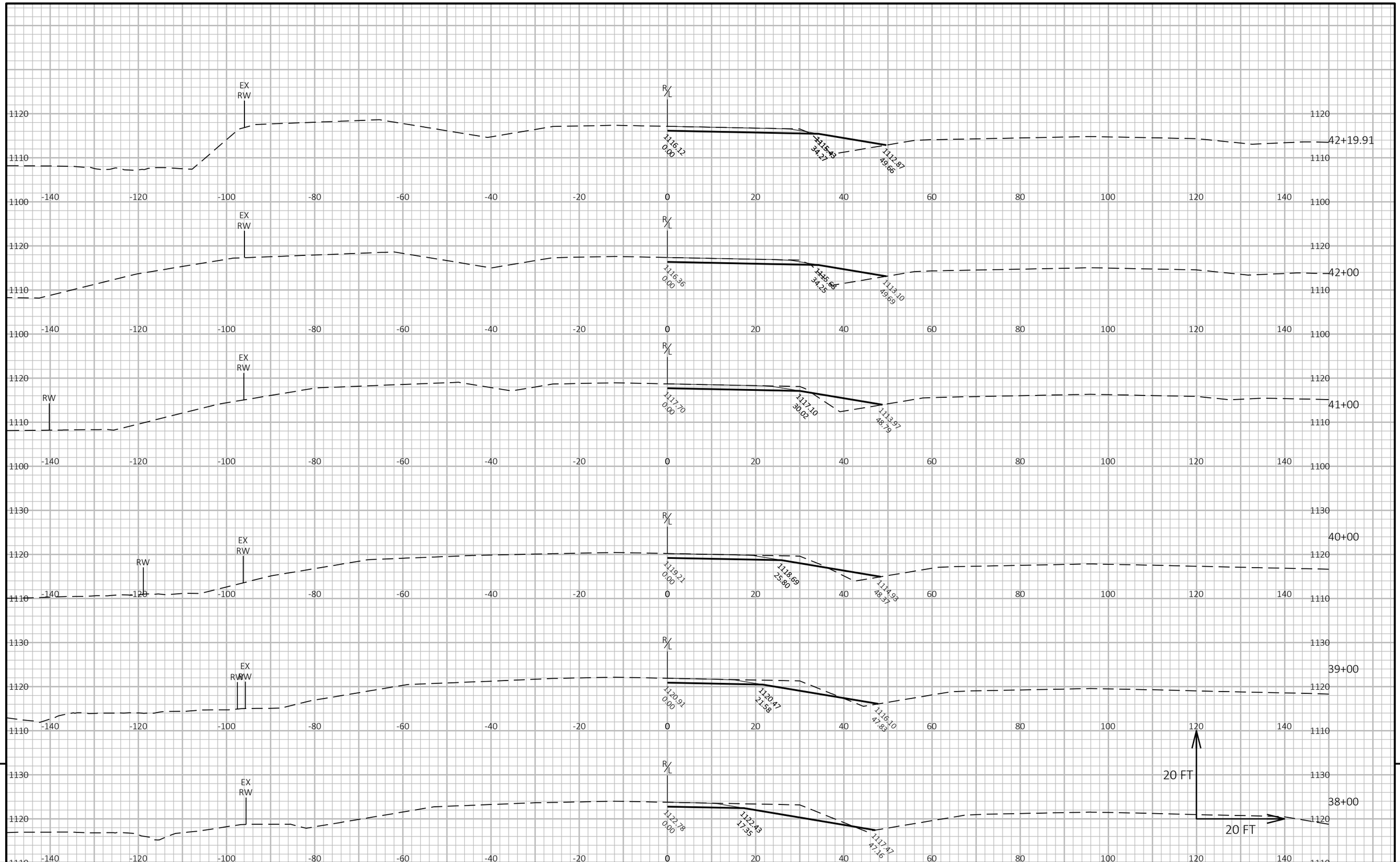
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 540	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 4

PLOT DATE : 11/19/2020 4:35 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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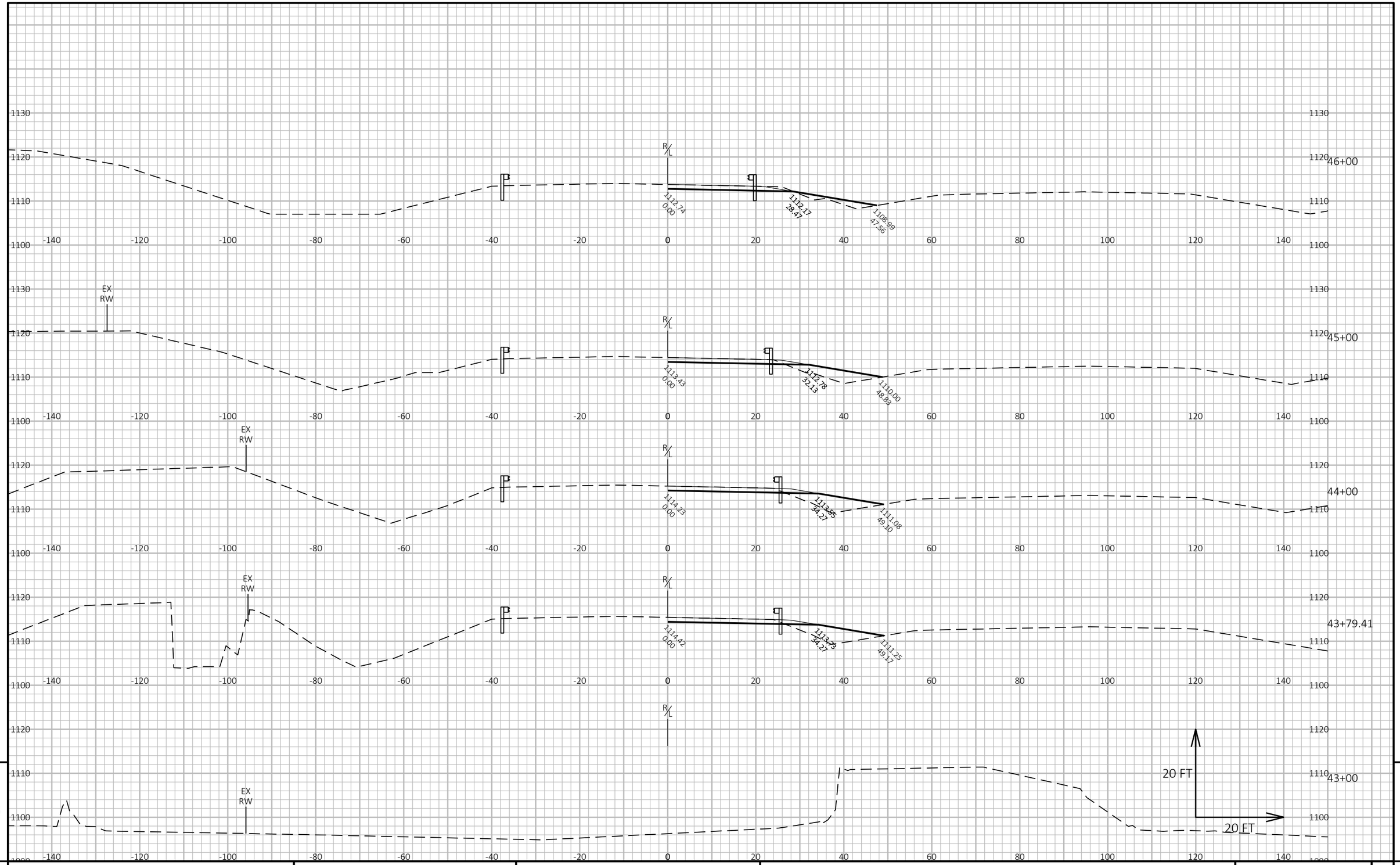
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 541	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 5

PLOT DATE : 11/19/2020 4:35 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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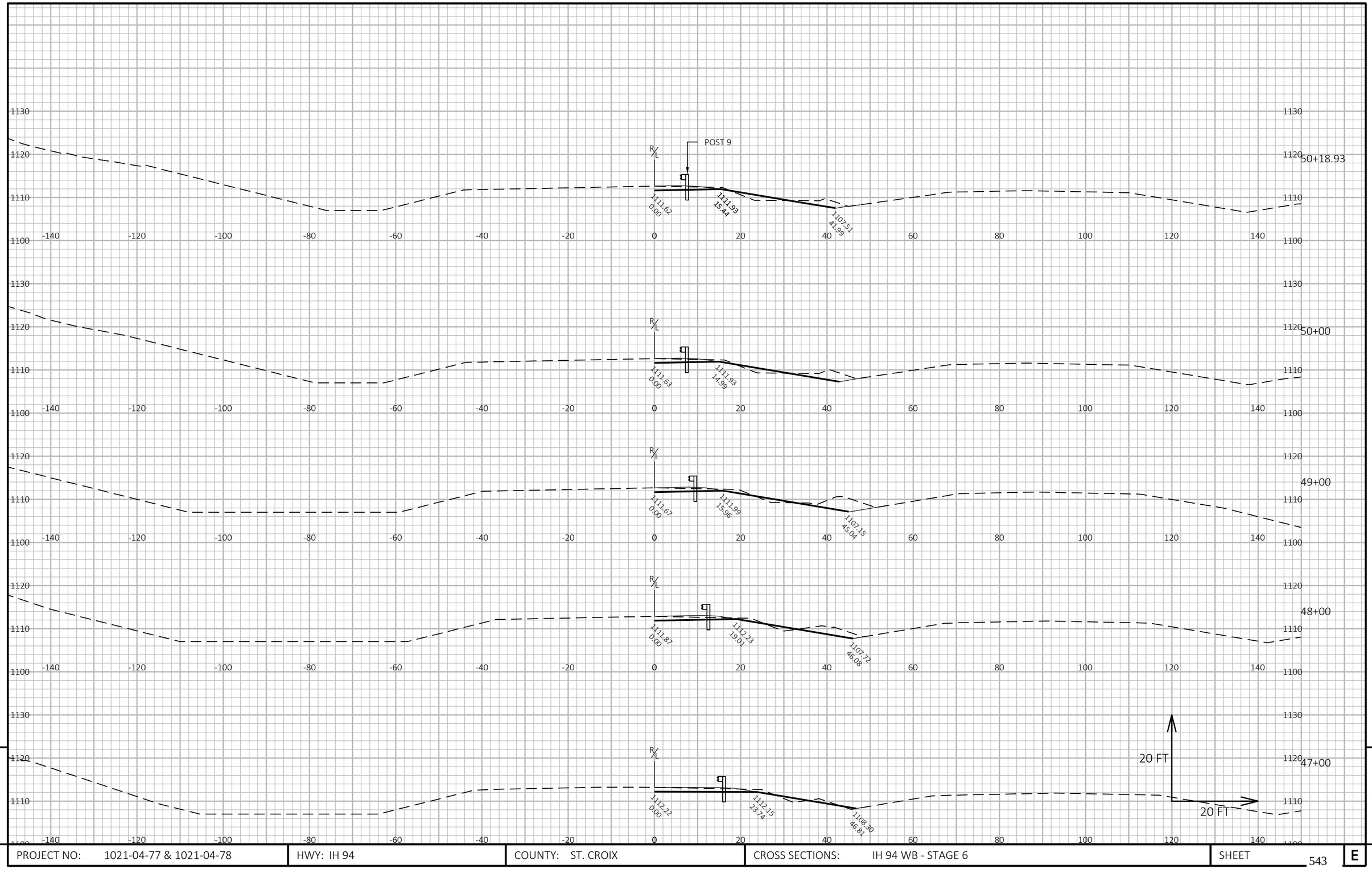
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 542	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 6

PLOT DATE : 11/19/2020 4:35 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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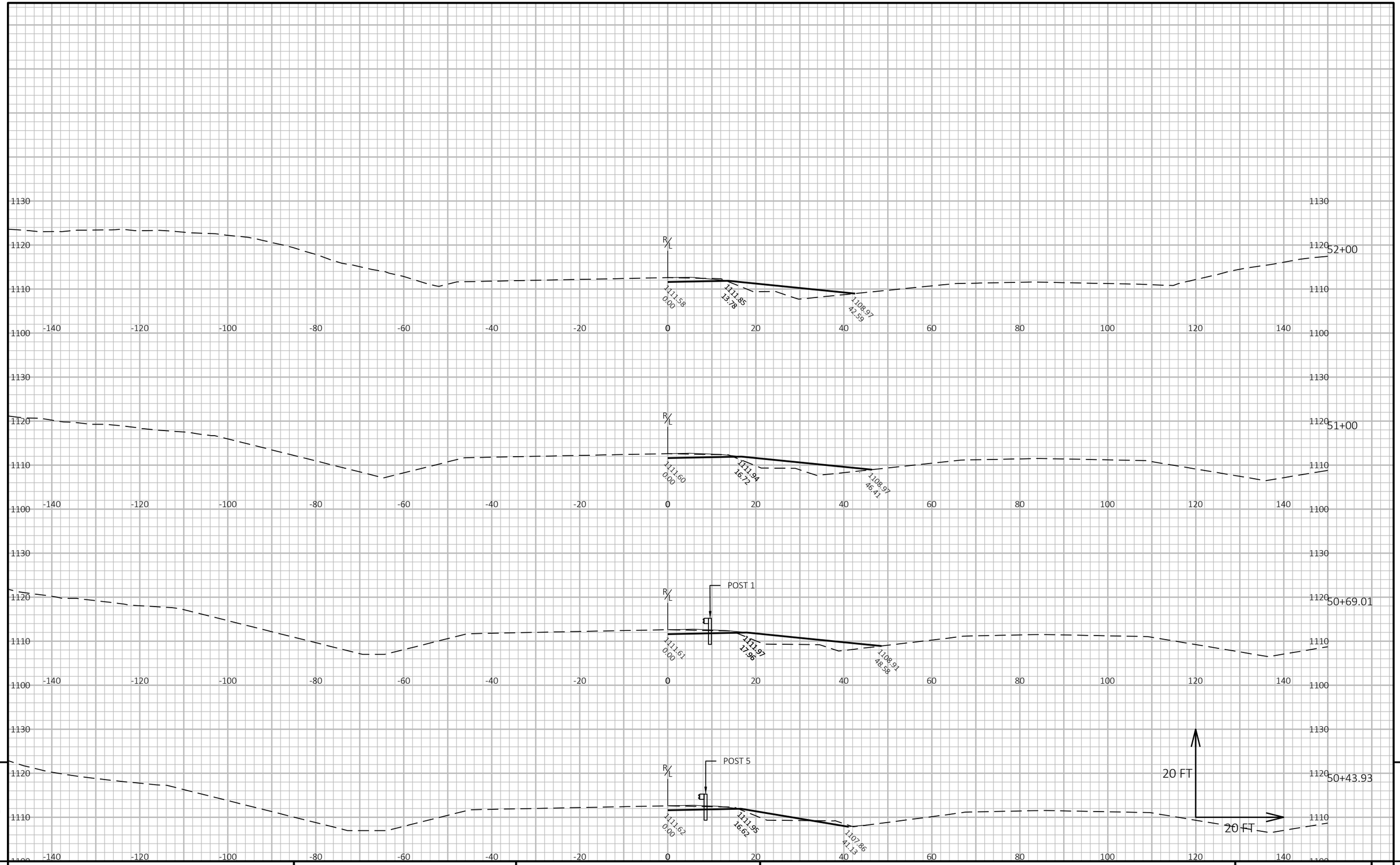
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 543	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 7

PLOT DATE : 11/19/2020 4:35 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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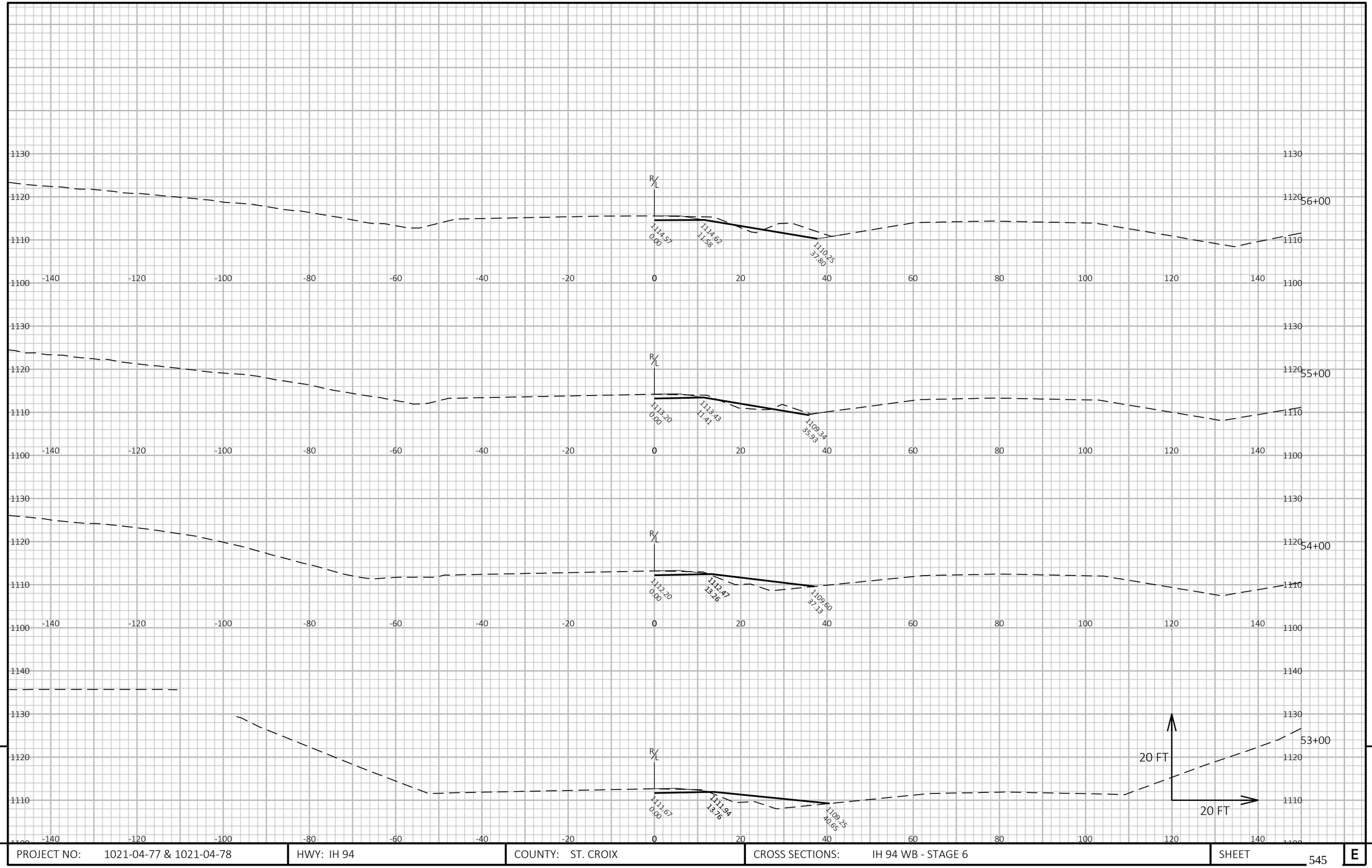
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 544	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 8

PLOT DATE : 11/19/2020 4:36 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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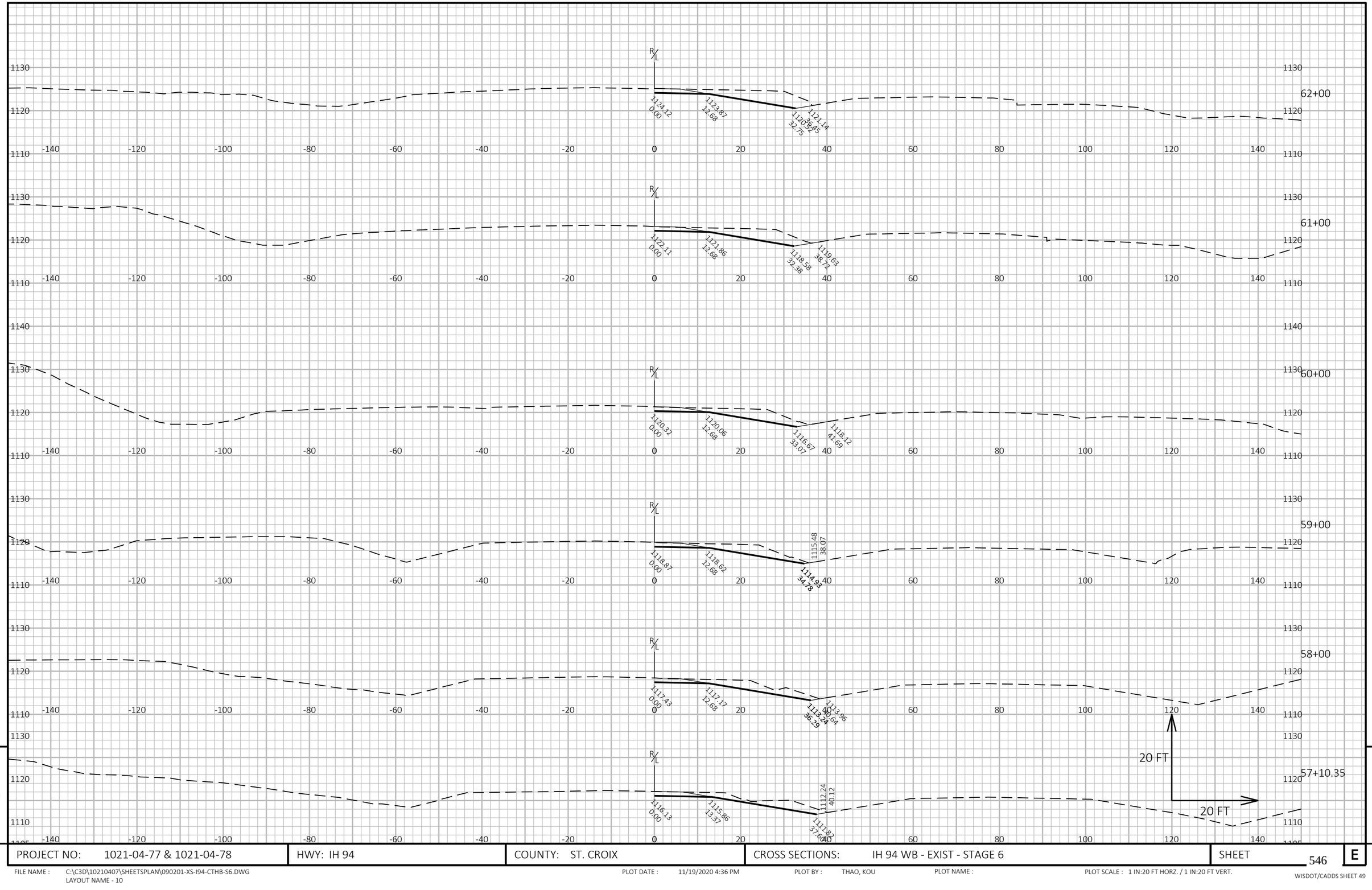
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 545	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 9

PLOT DATE : 11/19/2020 4:36 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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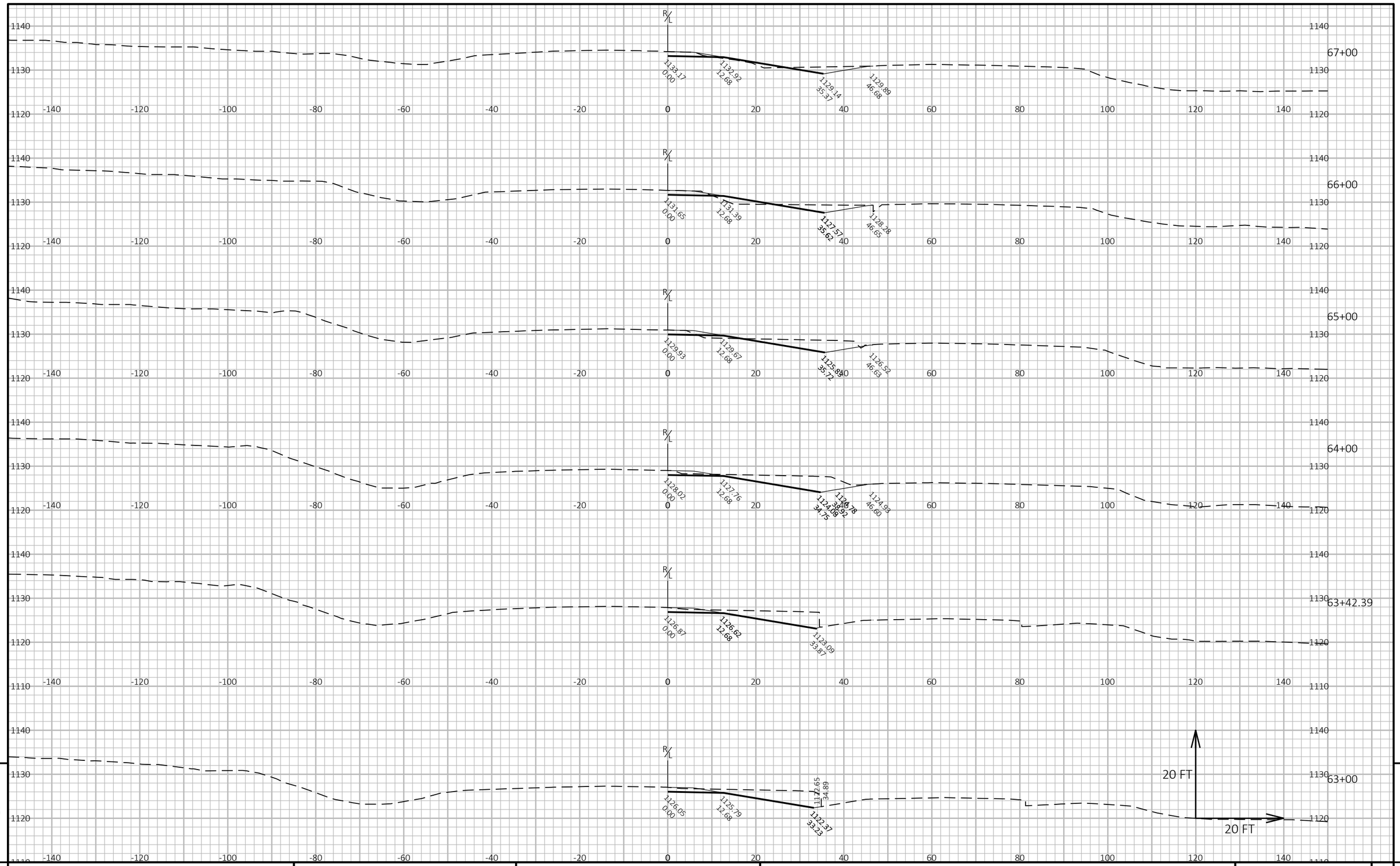
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - EXIST - STAGE 6	SHEET 546	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 10

PLOT DATE : 11/19/2020 4:36 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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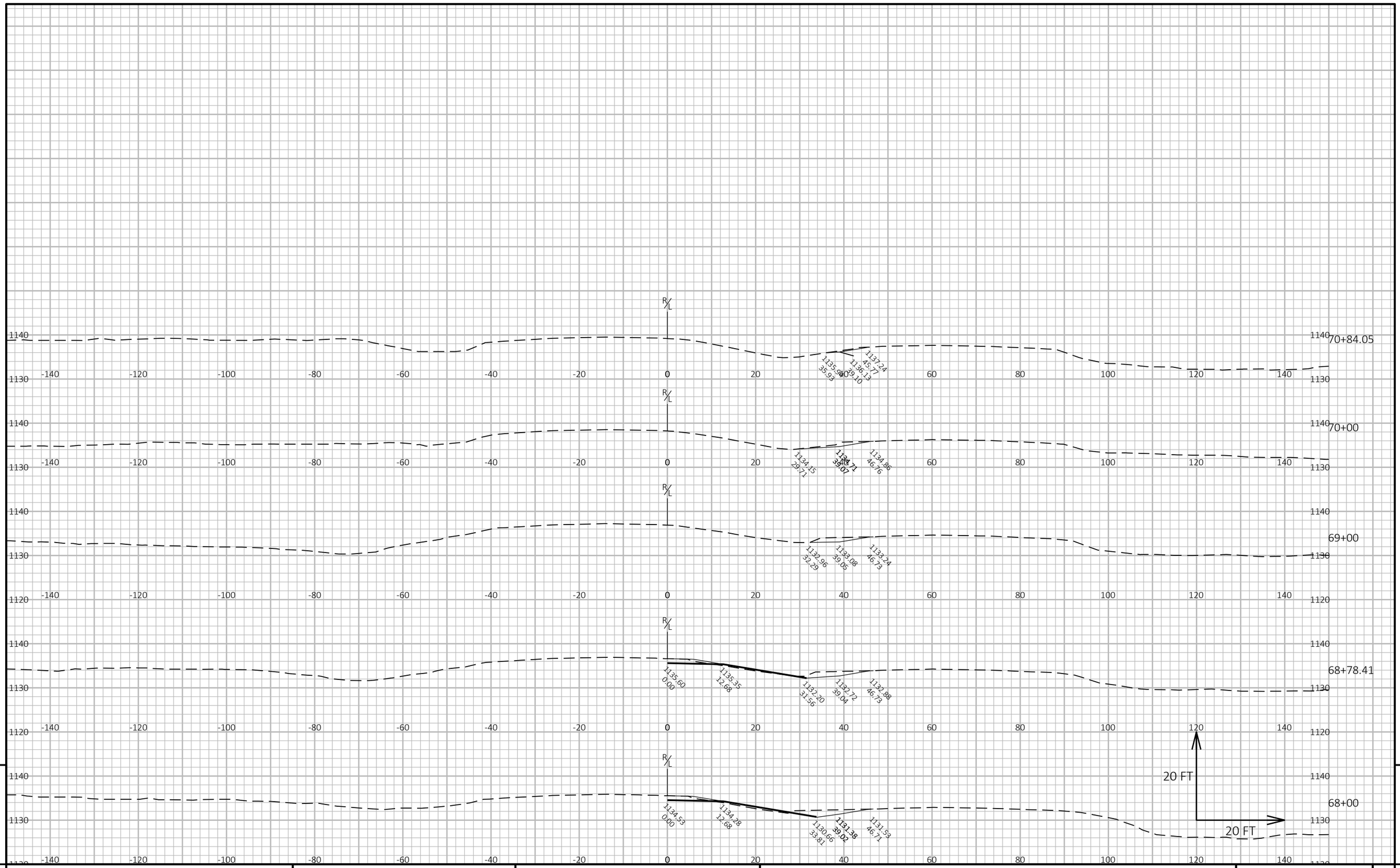
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - EXIST - STAGE 6	SHEET 547	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 11

PLOT DATE : 11/19/2020 4:36 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - EXIST - STAGE 6	SHEET 548	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 12

PLOT DATE : 11/19/2020 4:36 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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