EAU

JUNE 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 = 598

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1021-00-78		
1021-00-79		
1021-04-77		
1021-04-78		

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**



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)

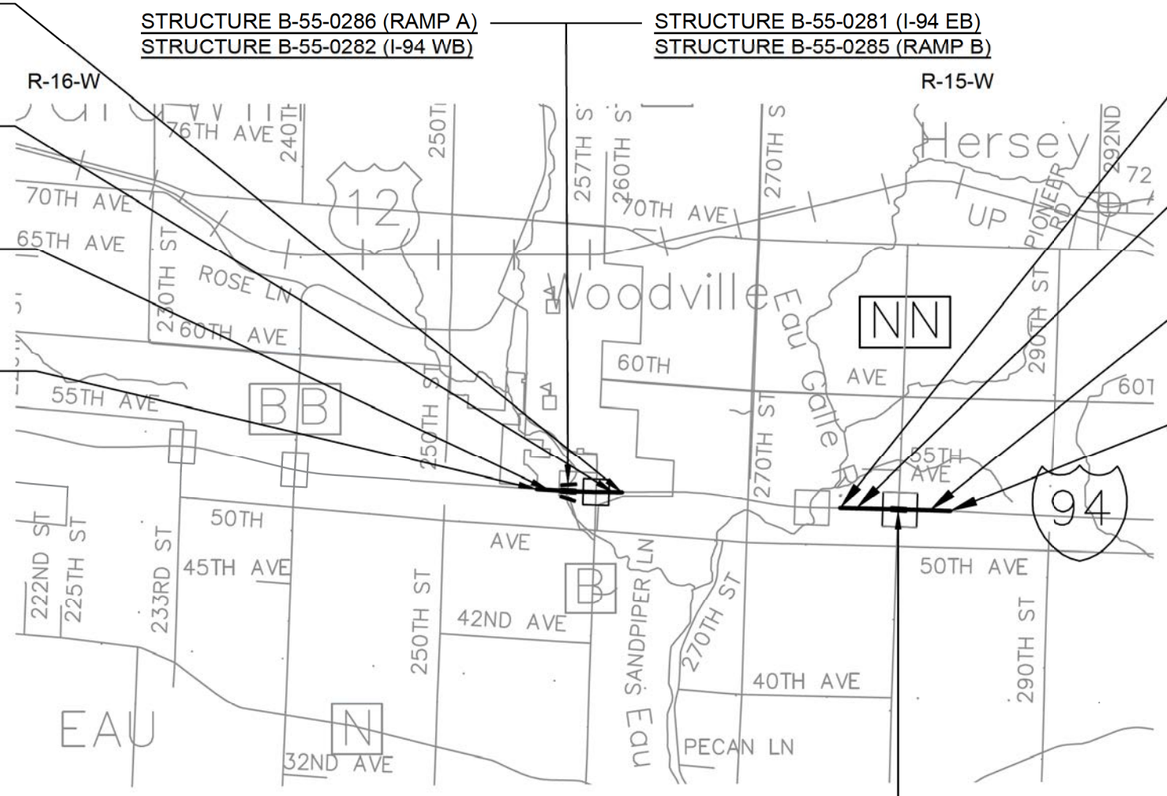
BEGIN PROJECT 1021-00-79
STA 137+08 'WB'
N = 327585.1845
E = 643381.3937

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 COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), 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. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

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: Nicole Passuello Digitally signed by Nicole Passuello Date: 2021.02.26 16:16:22 -06'00'

(Signature)

E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\010101-TI-IH94.DWG PLOT DATE : 2/9/2021 9:12 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
bk9173@att.com
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
BOB SAMPSON
1310 E. MARY STREET
OTTUMWA, IA 52501
642-684-4106 (OFFICE)
636-887-5367 (MOBILE)
relocations@lumen.com

LEVEL 3 COMMUNICATIONS
BRAD PETER
5480 FELTL RD
MINNETONKA, MN 55343
612-819-0264 (OFFICE)
brad.peter@centurylink.com
COPY ALL CORRESPONDENCE TO:
relocations@lumen.com

ELECTRICITY - DISTRIBUTION

ST. CROIX ELECTRIC COOPERATIVE
ROB DOOLEY
1925 RIDGEWAY ST.
P.O. BOX 160
HAMMOND, WI 54015-0160
715-796-7000
robdoo@scecnet.net

XCEL ENERGY
JAKE MILLER
801 KELLER AVE S
AMERY, WI 54001
715-268-3227 (OFFICE)
715-441-7120 (MOBILE)
Jake.i.miller@xcelenergy.com

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.

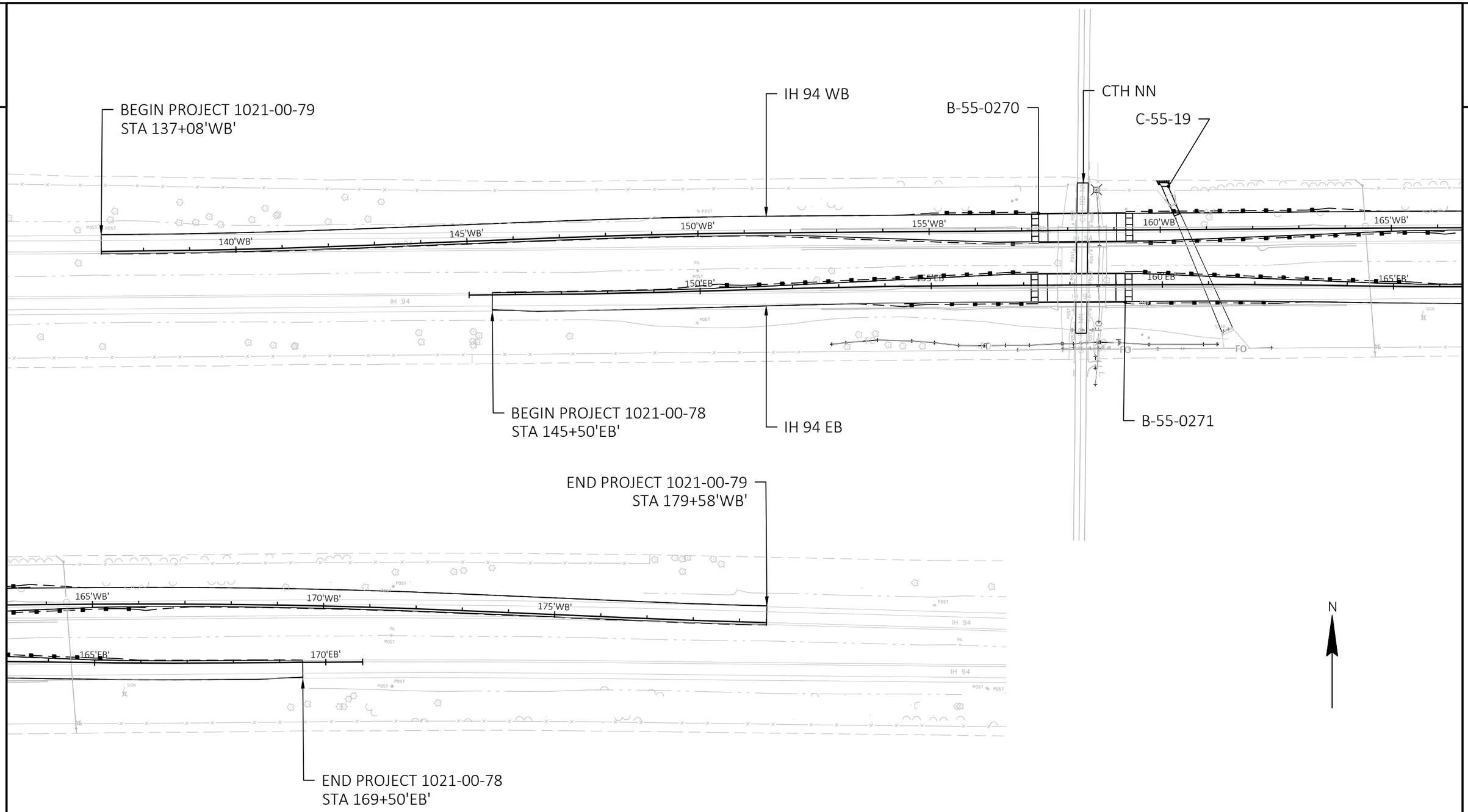
PIPE LENGTHS SHOWN ON THE STORM SEWER ARE TO CENTER OF STRUCTURE(S).

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

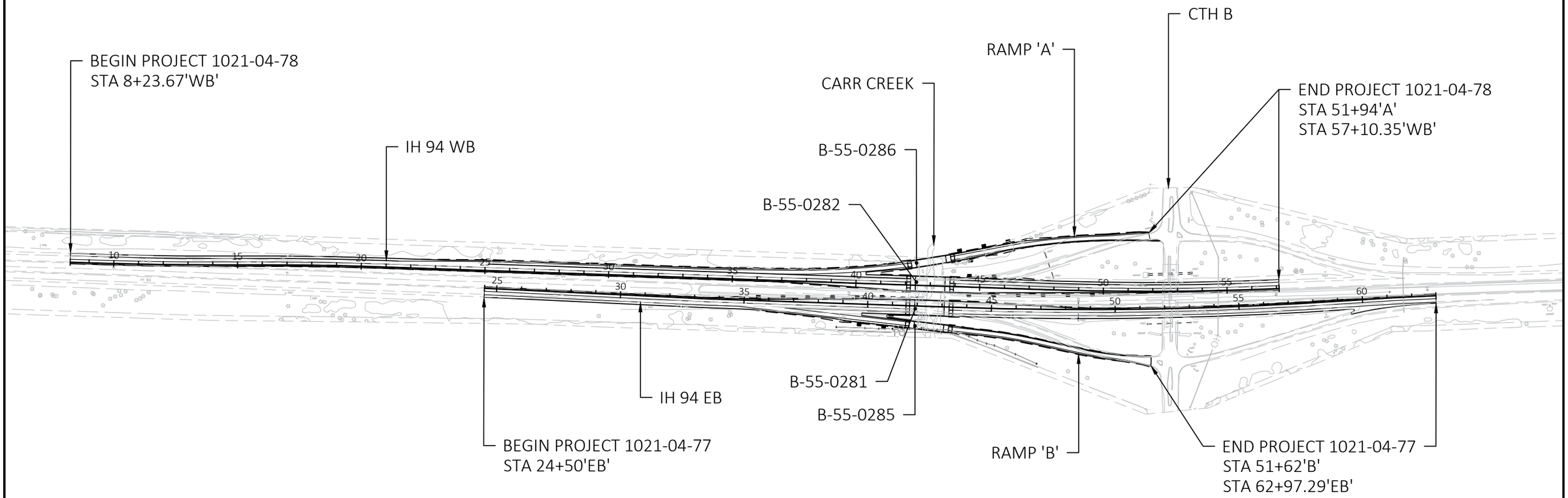
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PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PROJECT OVERVIEW	SHEET 3	E

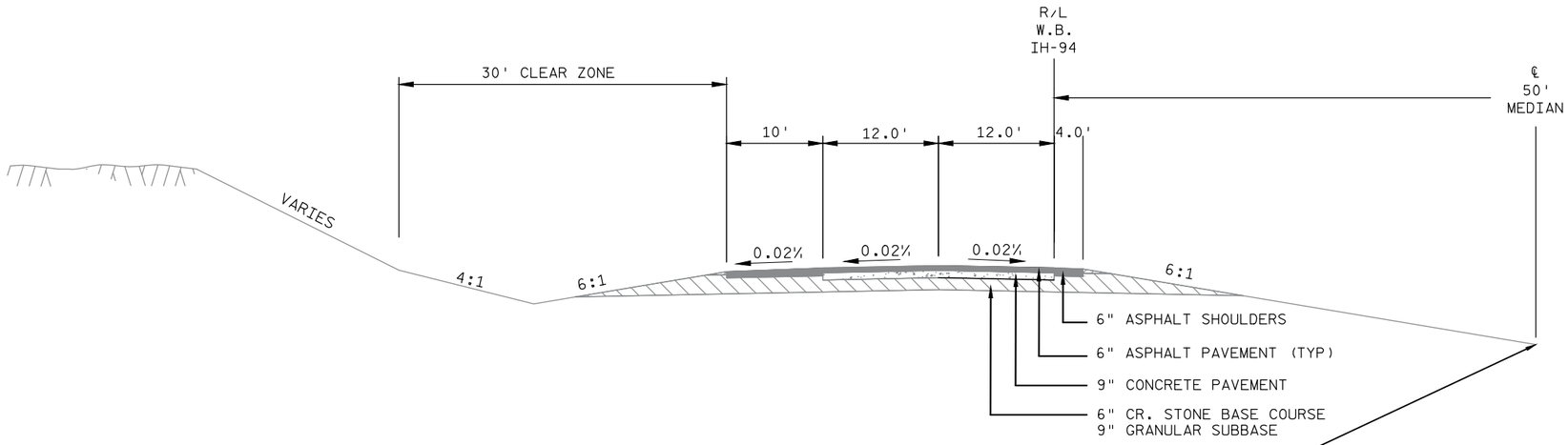
2

N



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

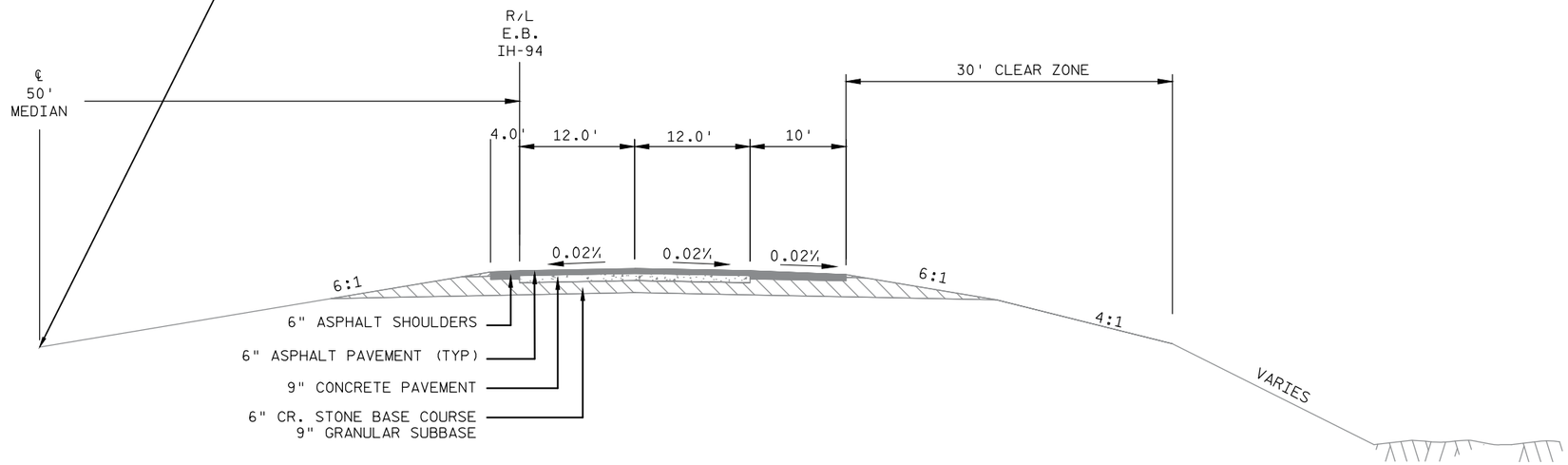
2



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

SAME POINT

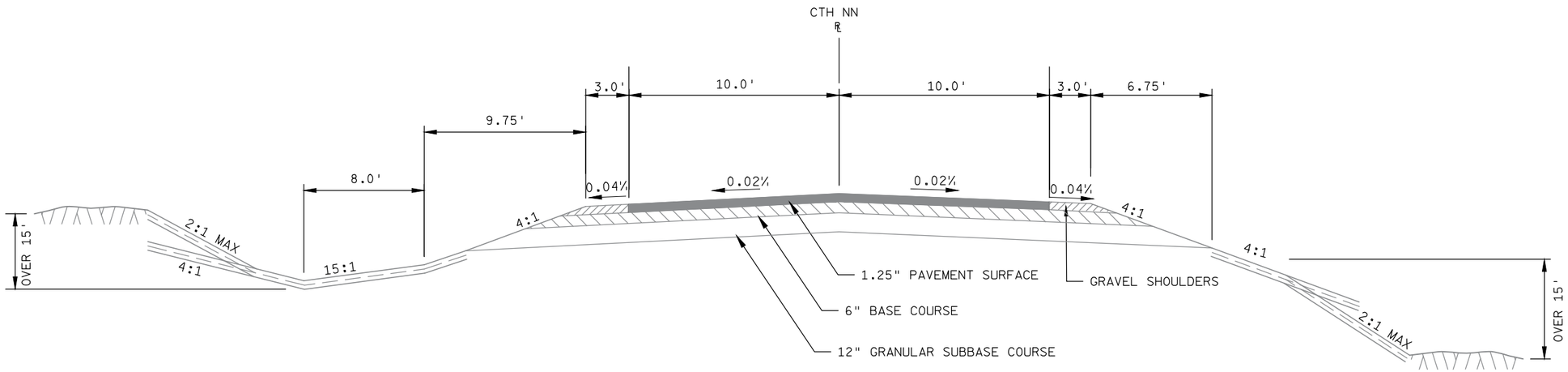
EXISTING TYPICAL SECTION
IH 94



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

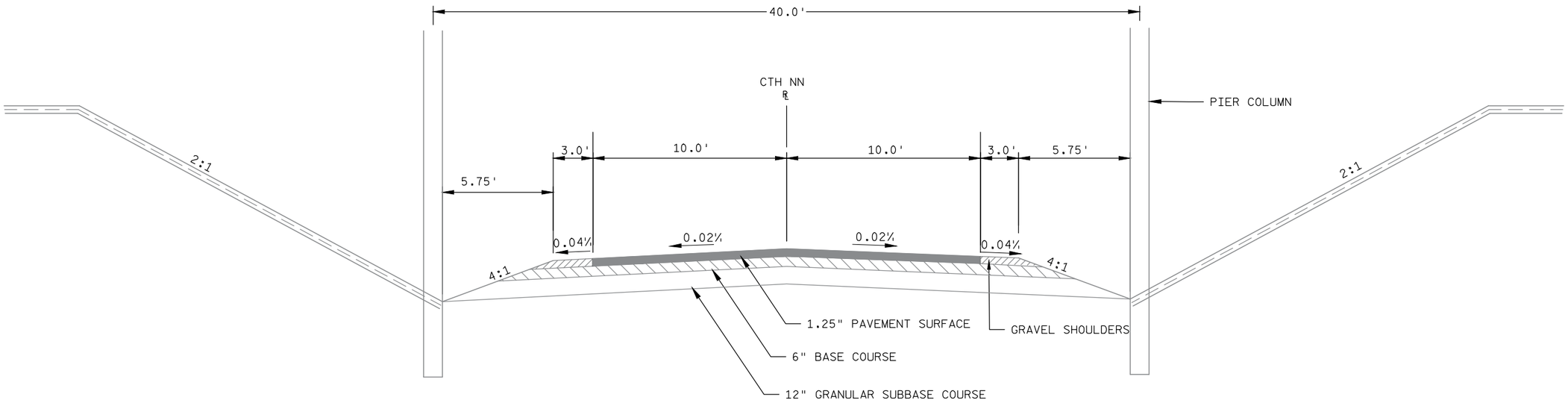
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EXISTING TYPICAL SECTIONS	SHEET 5	E

2



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

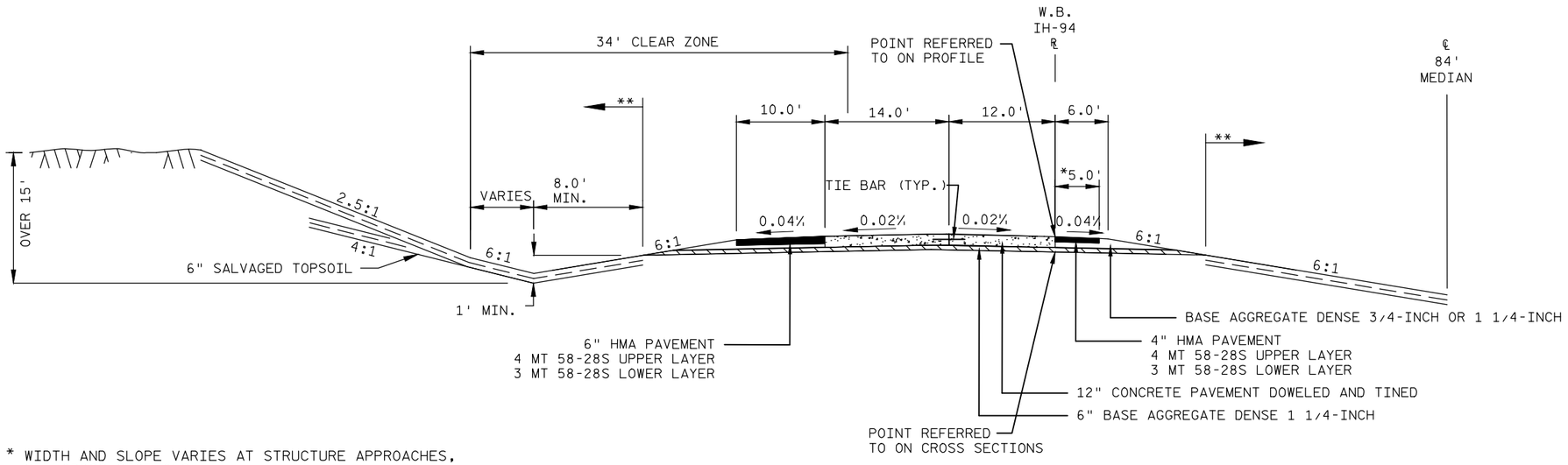
** 4-INCH TOPSOIL & SEEDING AREA



STA. SECTION UNDER BRIDGE

EXISTING TYPICAL SECTION
CTH NN

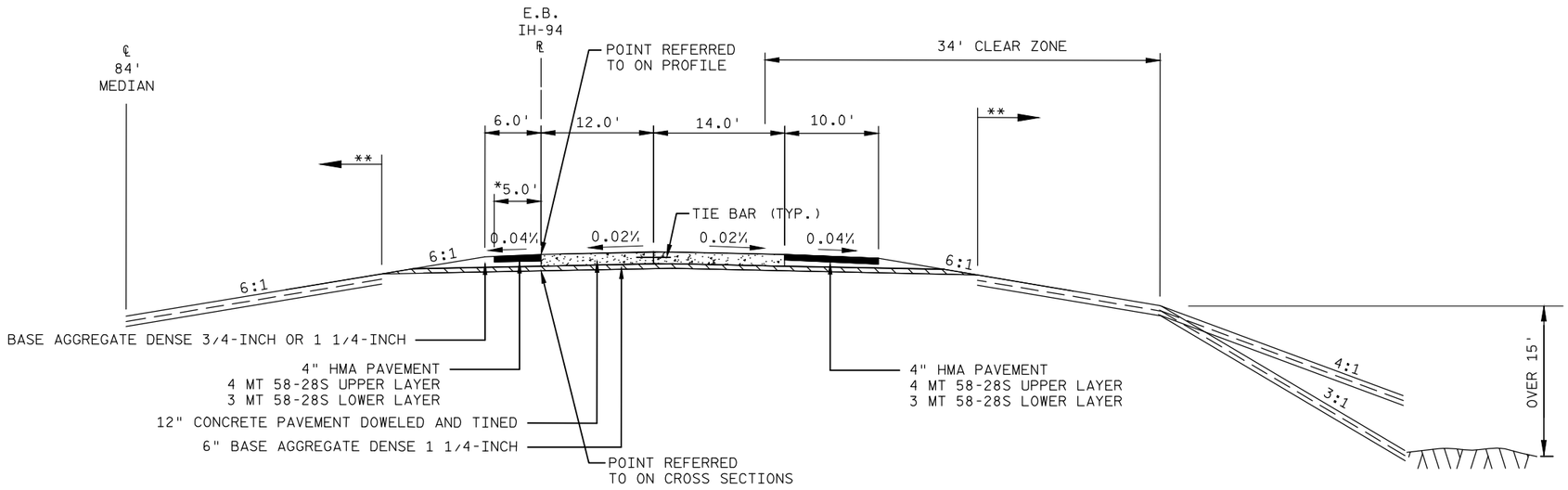
PROJECT NO: 1021-00-78,79	HWY: IH 94	COUNTY: ST. CROIX	EXISTING TYPICAL SECTIONS	SHEET 6	E



* 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'

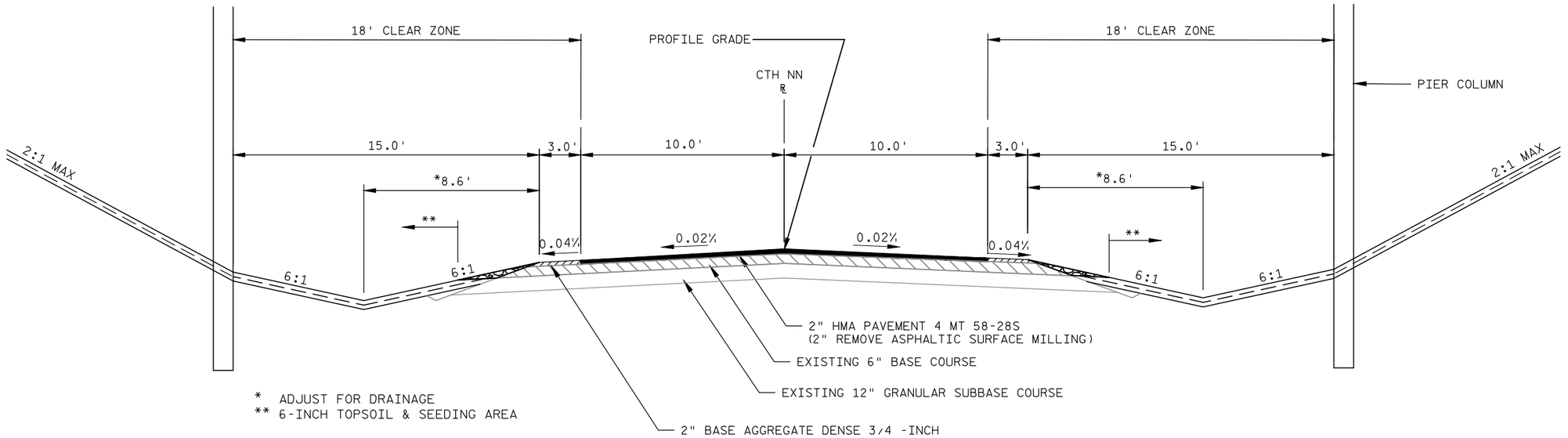


STA. 145+50'EB' - STA. 169+50'EB'

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



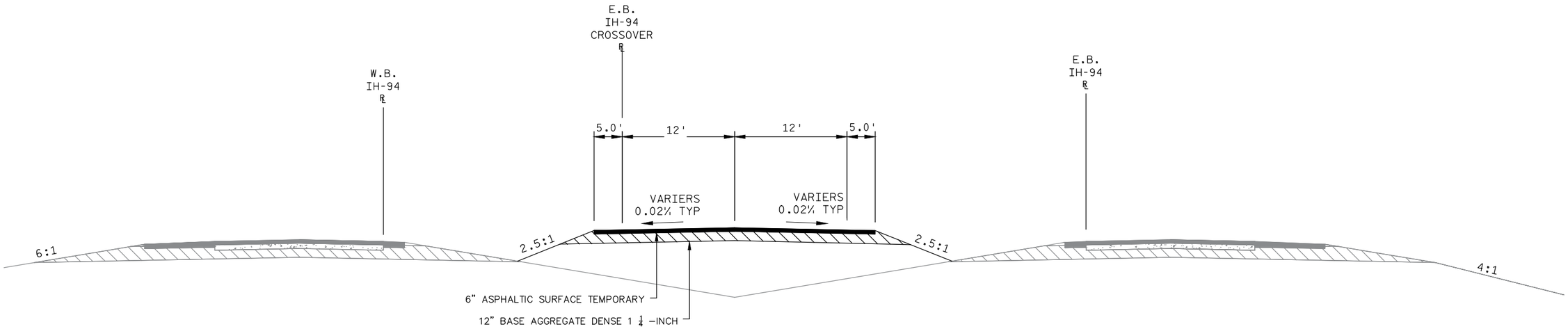
* ADJUST FOR DRAINAGE
** 6-INCH TOPSOIL & SEEDING AREA

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

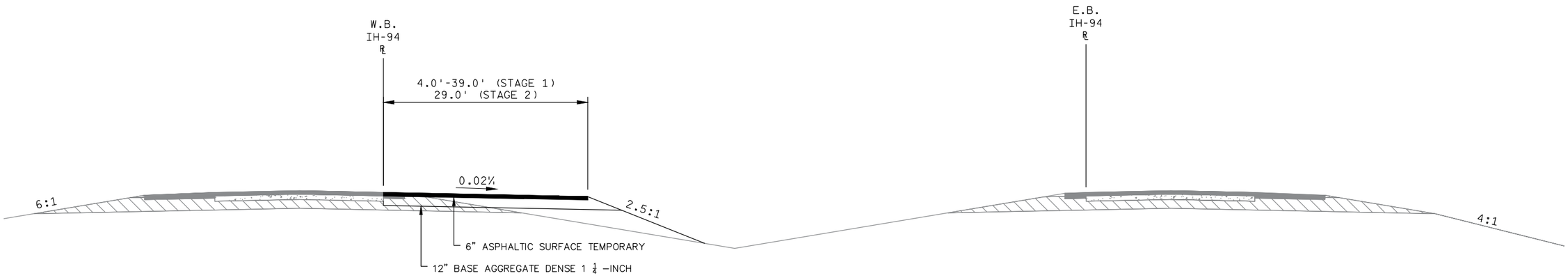
2



NOTE:

SEE TRFFIC CONTROL TYPICALS AND CROSS SECTIONS FOR ADDITIONAL DETAILS.

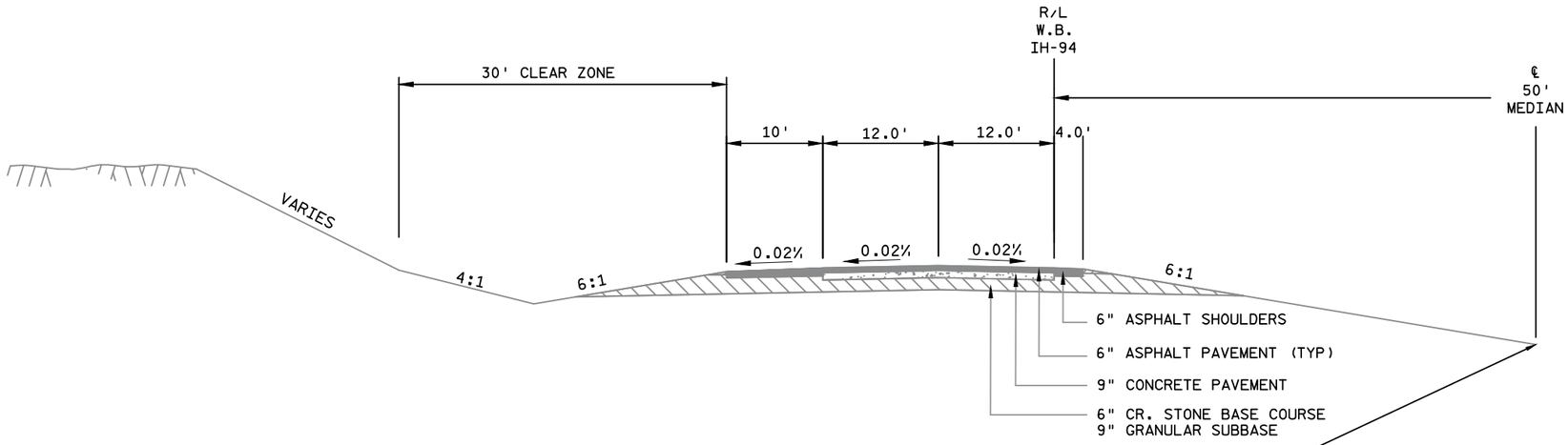
FINISHED TYPICAL CROSSOVER SECTION
IH 94



FINISHED TYPICAL WIDENING SECTION
IH 94

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	FINISHED TYPICAL SECTIONS	SHEET 9	E

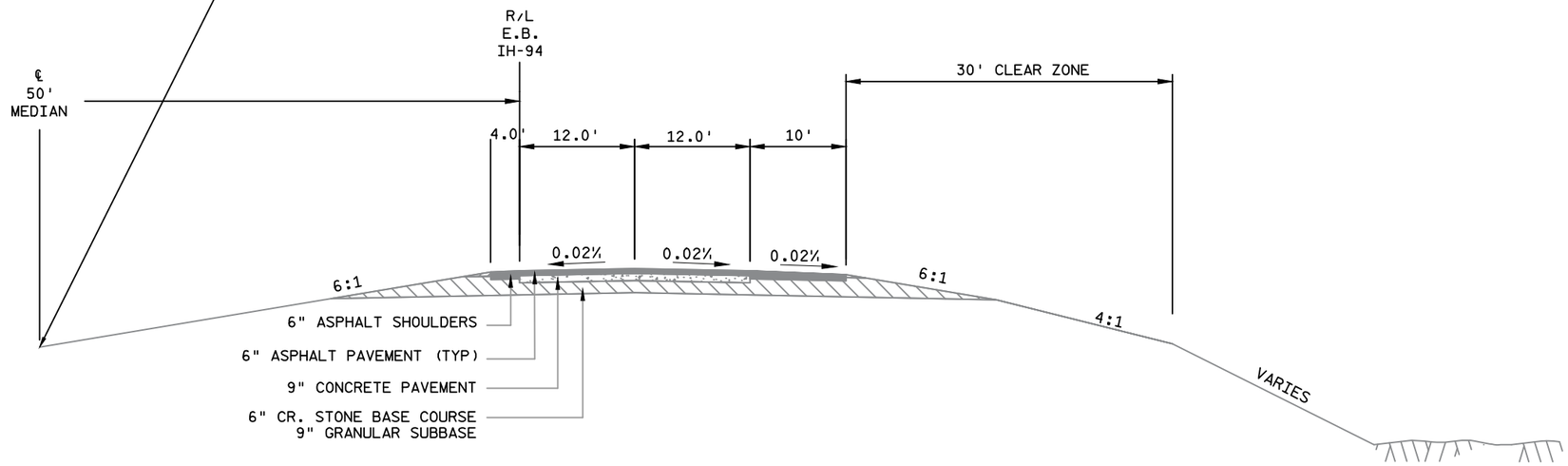
2



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

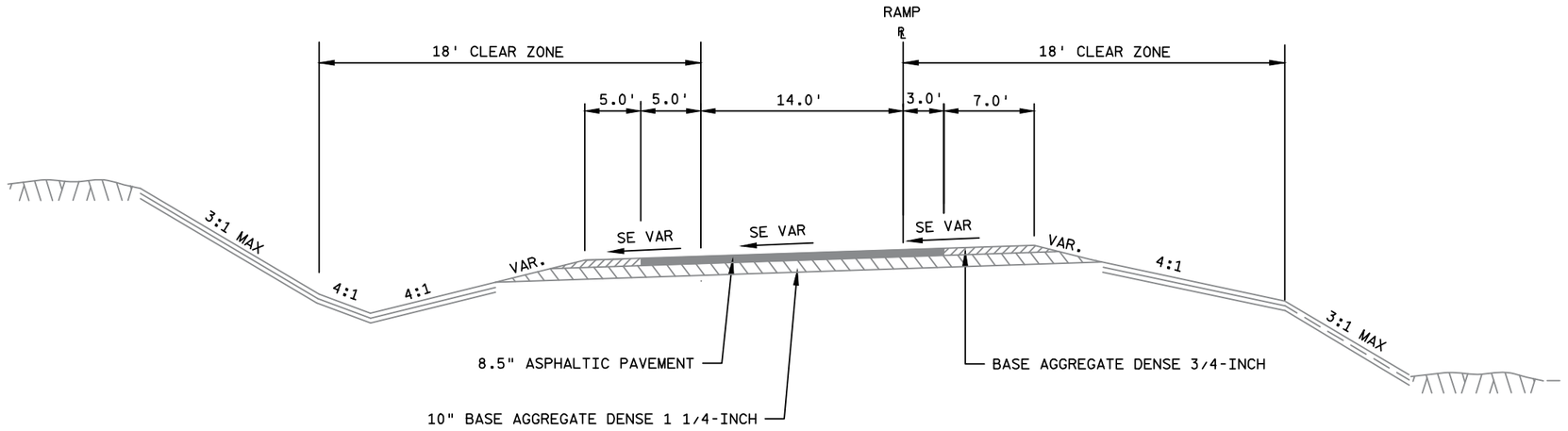
SAME POINT

EXISTING TYPICAL SECTION
IH 94

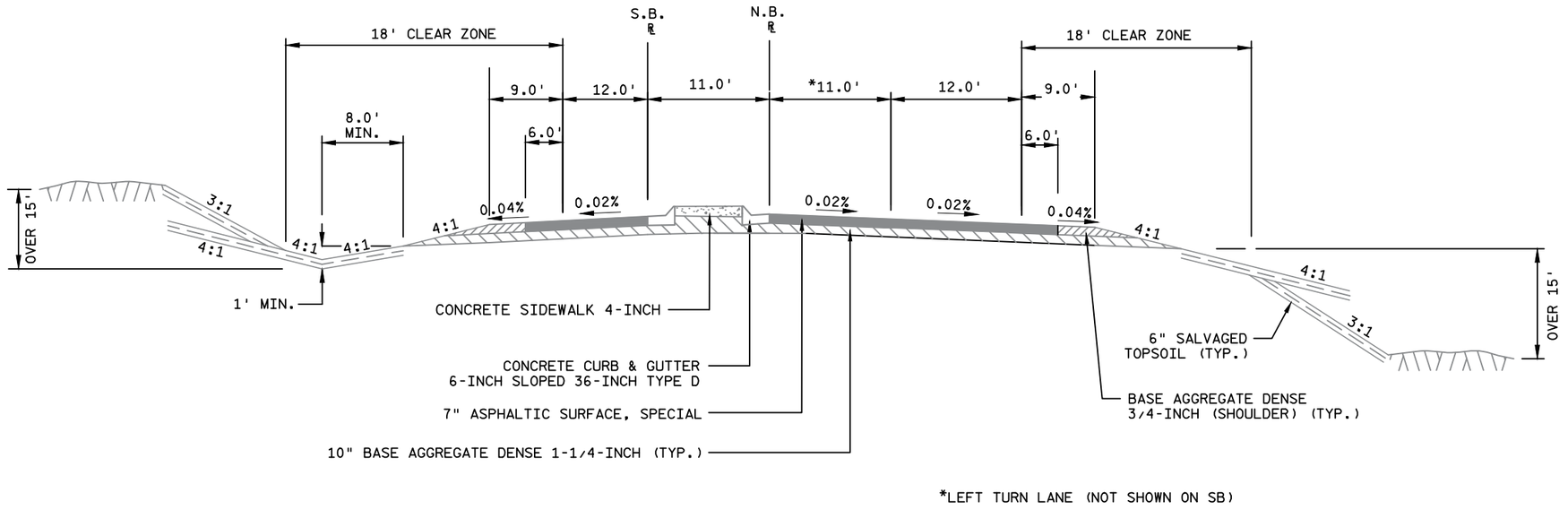


STA. 24+50'EB' - STA. 62+97'EB'

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



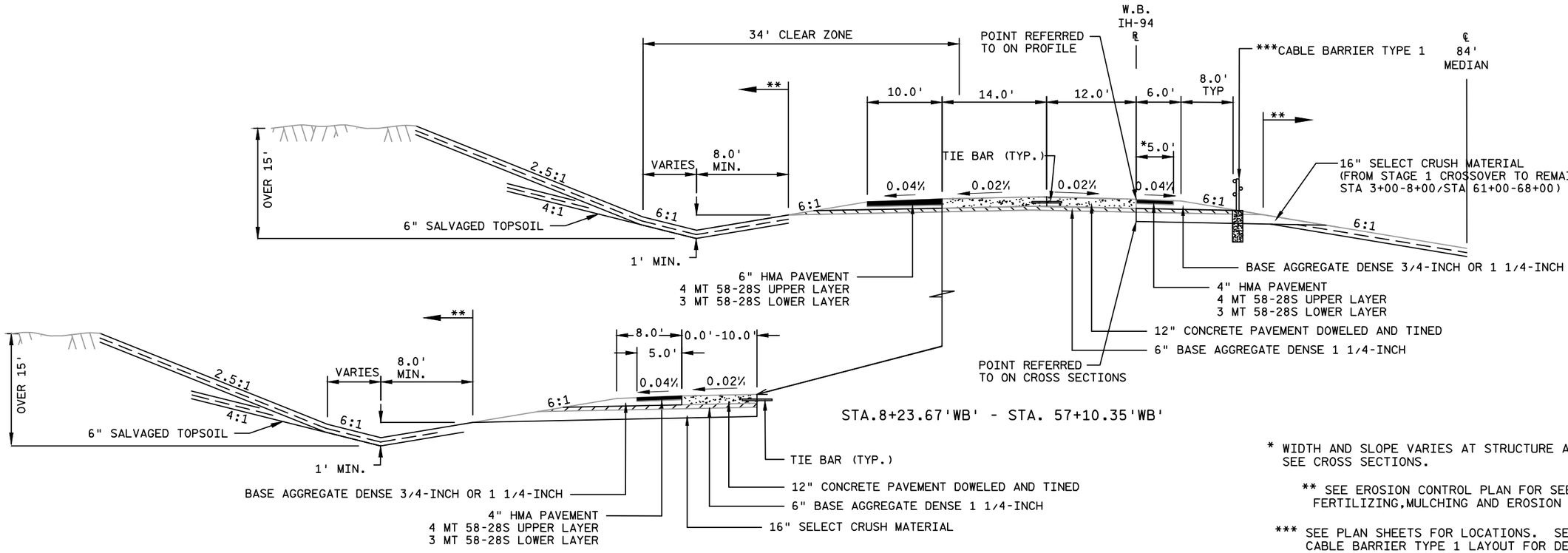
EXISTING TYPICAL SECTION
RAMP



*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 11	E



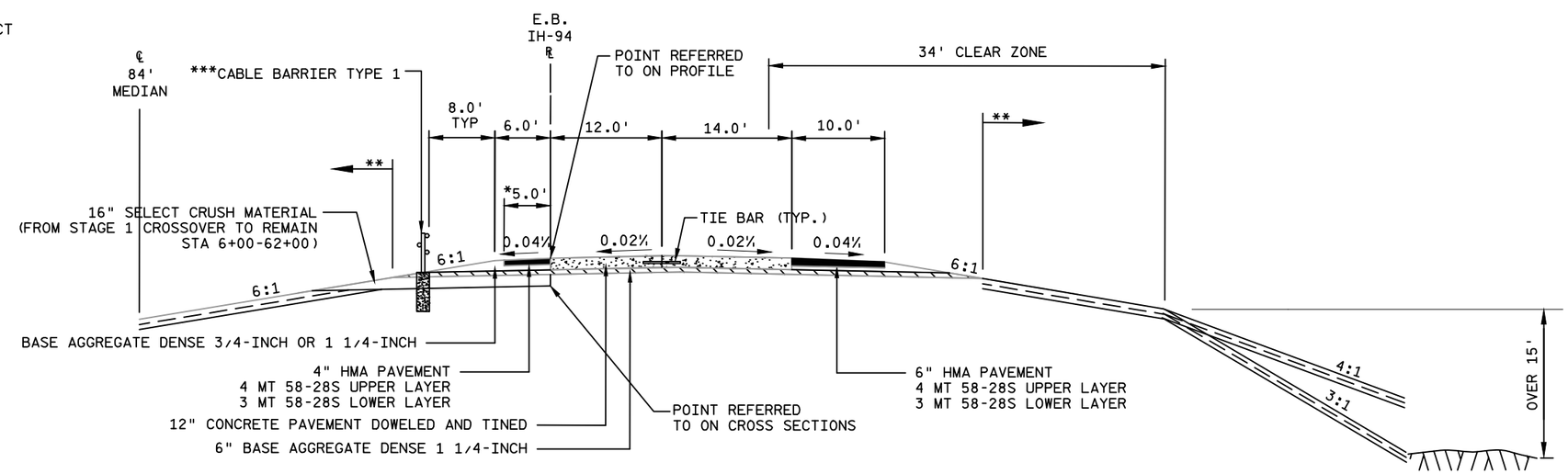
* WIDTH AND SLOPE VARIES AT STRUCTURE APPROACHES, SEE CROSS SECTIONS.

** 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.

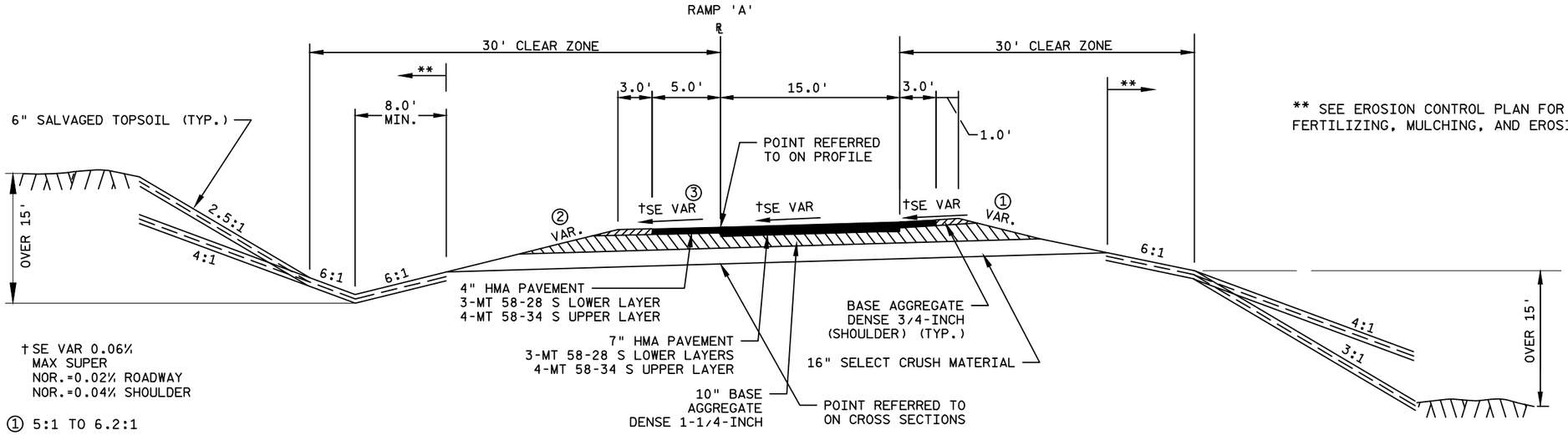
NOTE;

POINT REFERRED TO ON CROSS SECTIONS IS THE BOTTOM OF BASE LAYER OR SELECT CRUSH LAYER, WHICHEVER IS LOWER.



FINISHED TYPICAL SECTION
IH 94

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

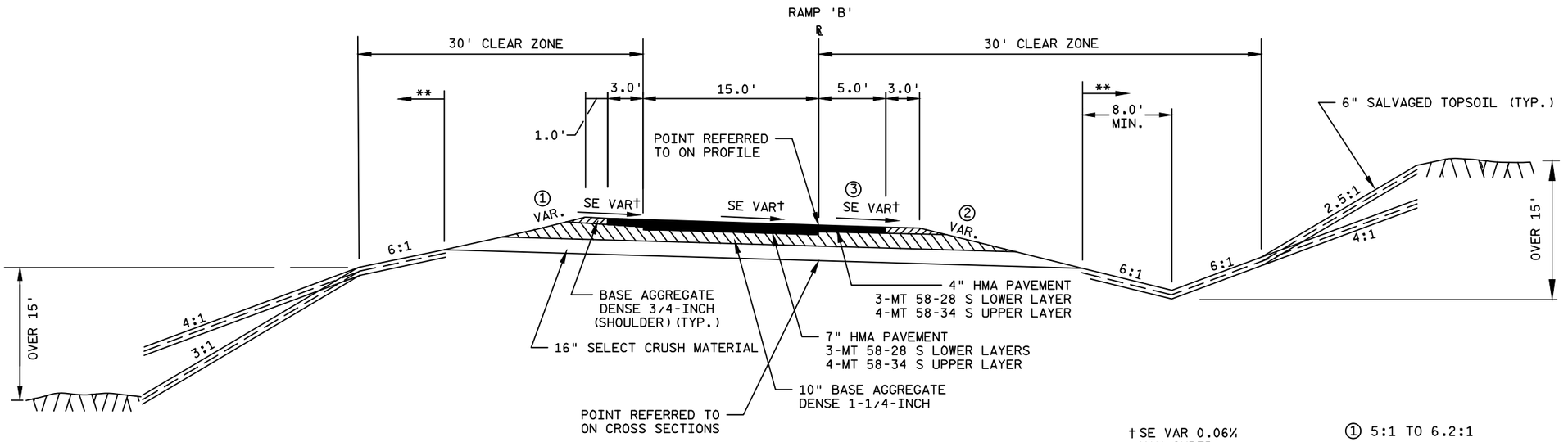
① 5:1 TO 6.2:1

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. 36+94'A' - STA. 52+18'A'



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

FINISHED TYPICAL SECTION
RAMP B (EB EXIT)

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

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

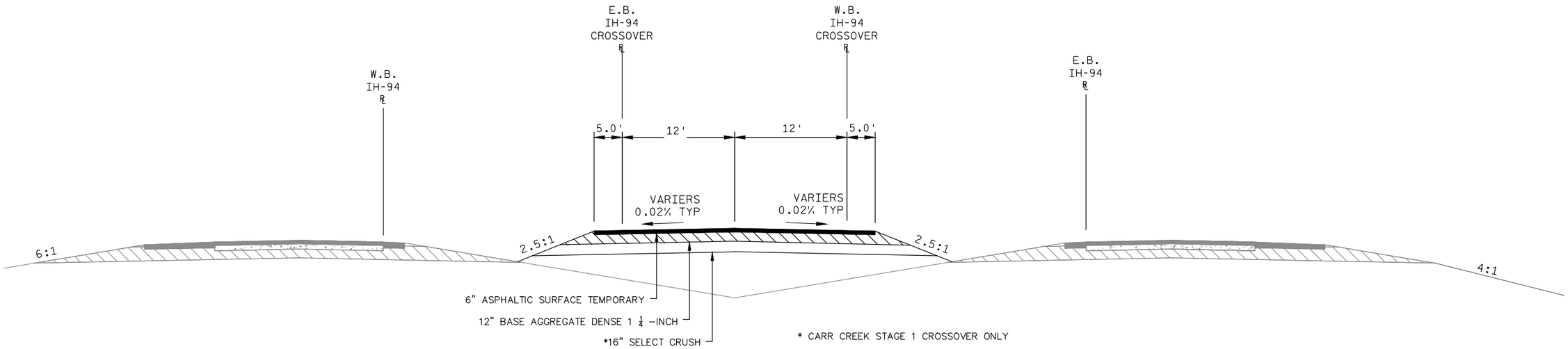
① 5:1 TO 6.2:1

② 4.5:1 TO 6:1

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

PROJECT NO: 1021-04-77,78	HWY: IH 94	COUNTY: ST. CROIX	FINISHED TYPICAL SECTIONS	SHEET 13	E

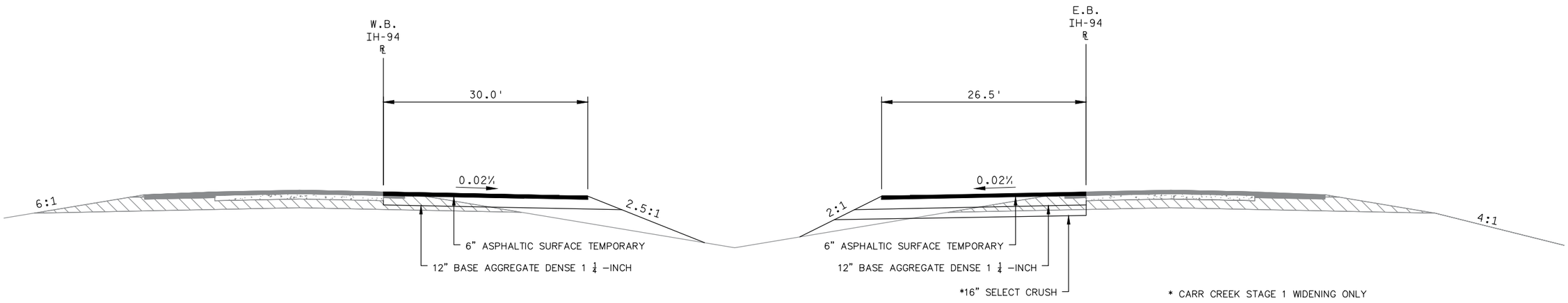
2



NOTE:

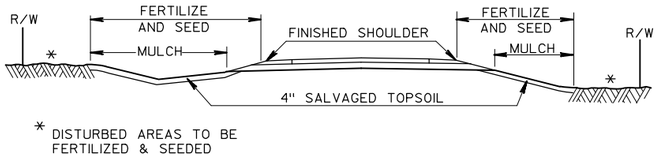
SEE TRFFIC CONTROL TYPICALS AND CROSS SECTIONS FOR ADDITIONAL DETAILS.

FINISHED TYPICAL CROSSOVER SECTION
IH 94



FINISHED TYPICAL WIDENING SECTION
IH 94

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	FINISHED TYPICAL SECTIONS	SHEET 14	E

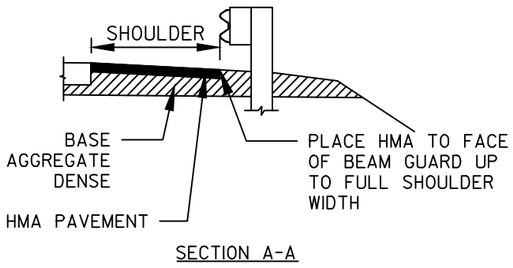


DETAIL FOR FINISHING ITEMS

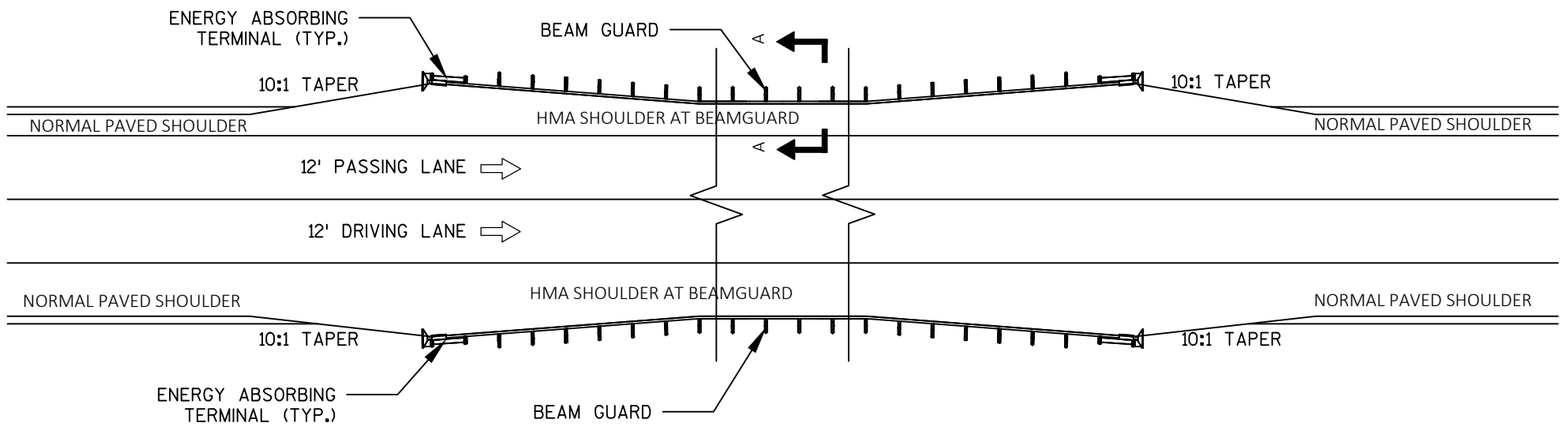
RUNOFF COEFFICIENT TABLE

	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

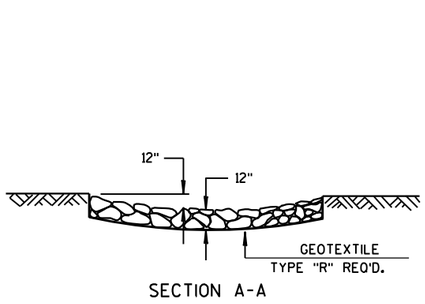


SECTION A-A

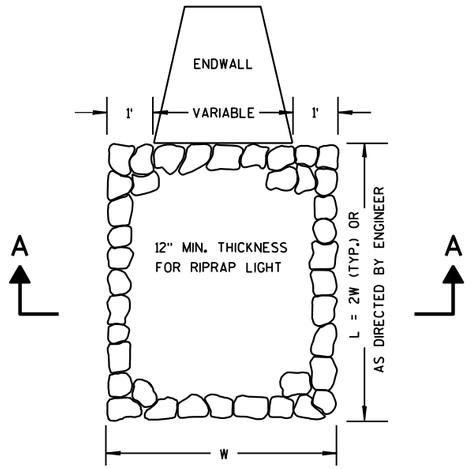


PLAN VIEW

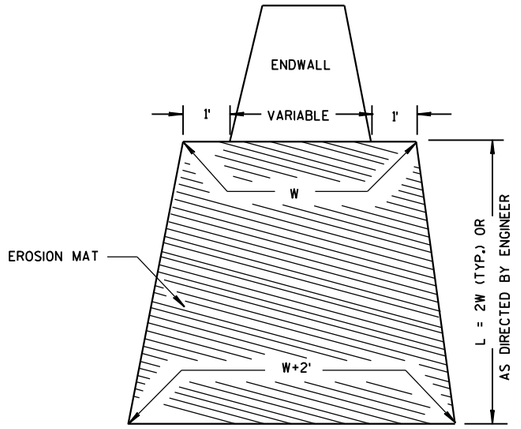
HMA SHOULDER AT BEAM GUARD DETAIL



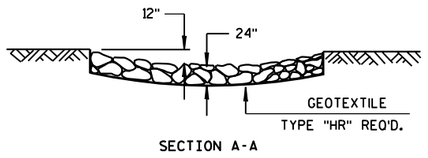
SECTION A-A



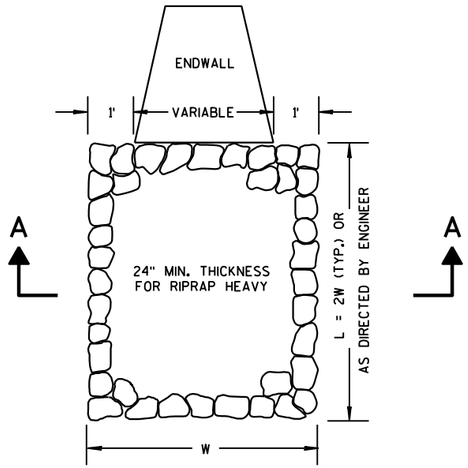
RIPRAP LIGHT TREATMENT AT CULVERTS



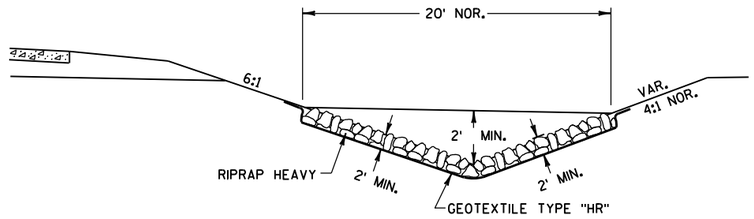
EROSION MAT TREATMENT AT CULVERTS



SECTION A-A



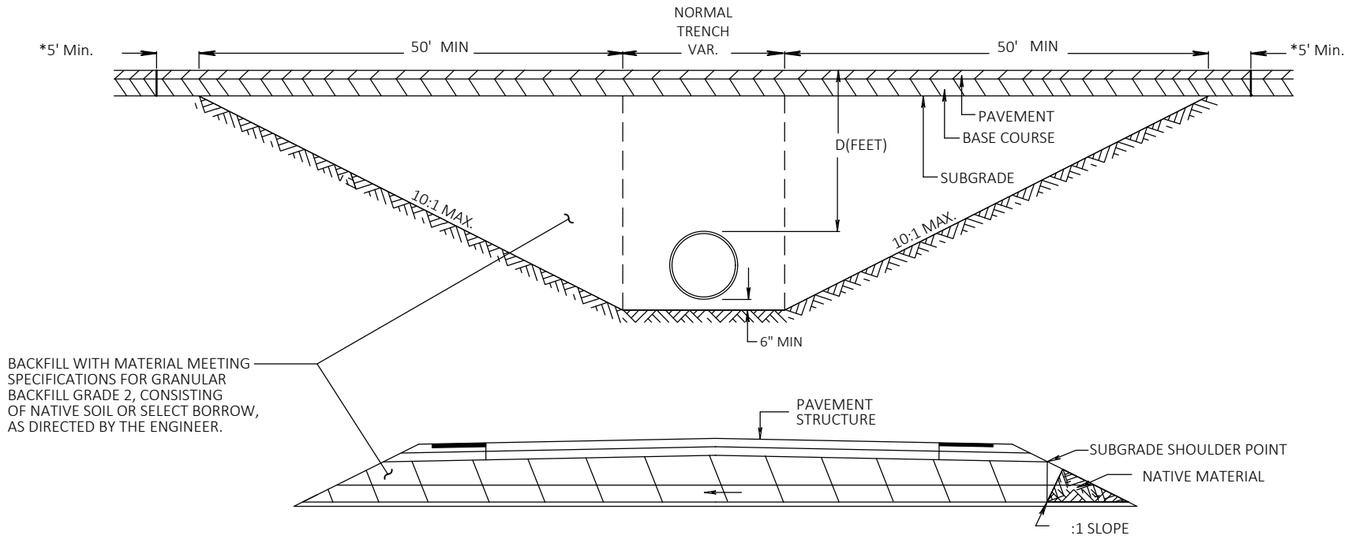
RIPRAP HEAVY TREATMENT AT CULVERTS



DETAIL OF RIPRAP HEAVY DITCH

PROJECT NO: 1021-00-78,79 & 1021-04-77,78	HWY: IH 94	COUNTY: ST. CROIX	CONSTRUCTION DETAILS	SHEET 16	E

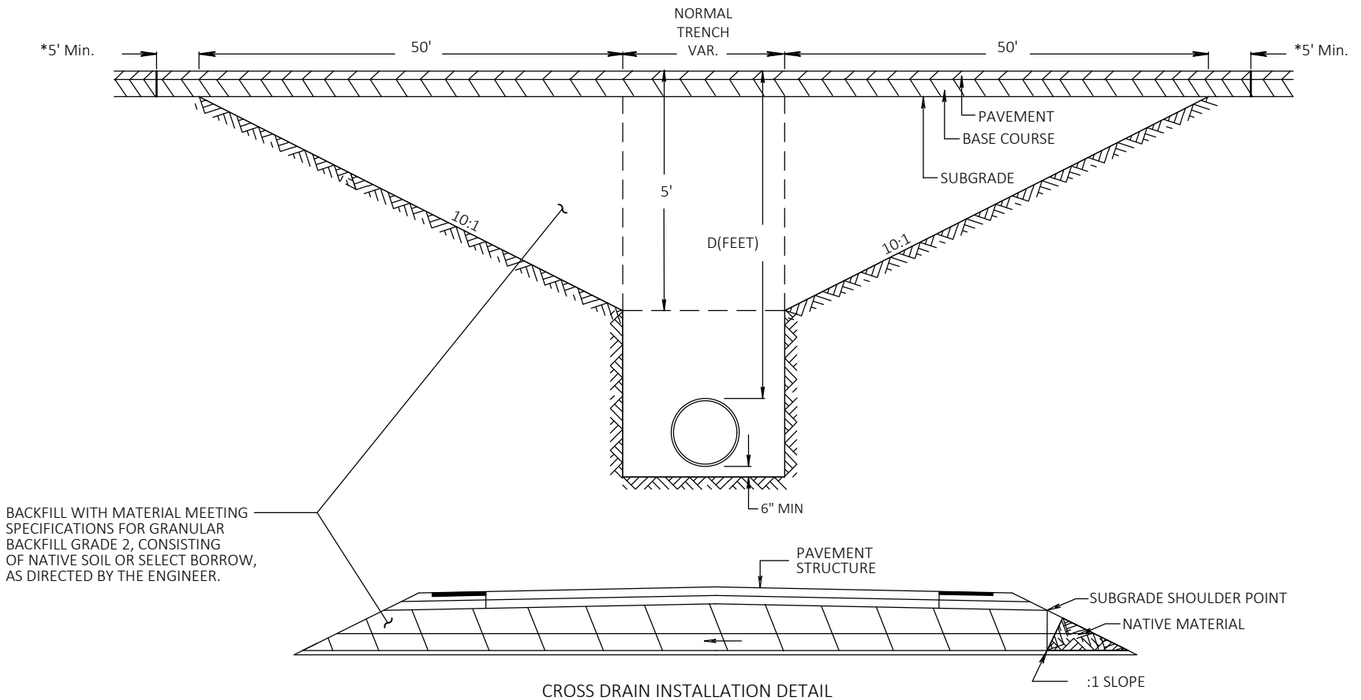
2



CROSS DRAIN INSTALLATION DETAIL

FOR D < 5'_

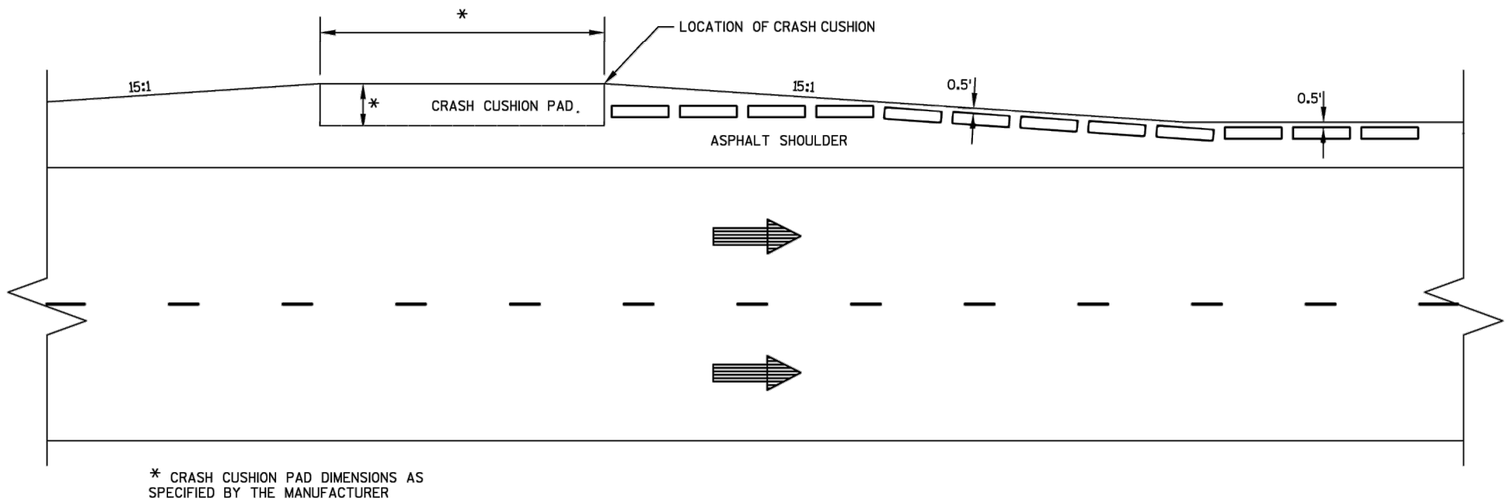
* PAVEMENT REMOVAL LIMITS (TYP.)



CROSS DRAIN INSTALLATION DETAIL

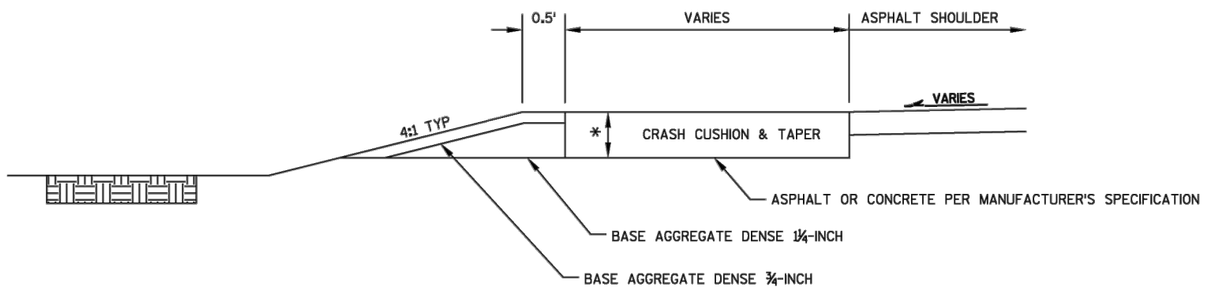
FOR D > 5'_

2



* CRASH CUSHION PAD DIMENSIONS AS SPECIFIED BY THE MANUFACTURER

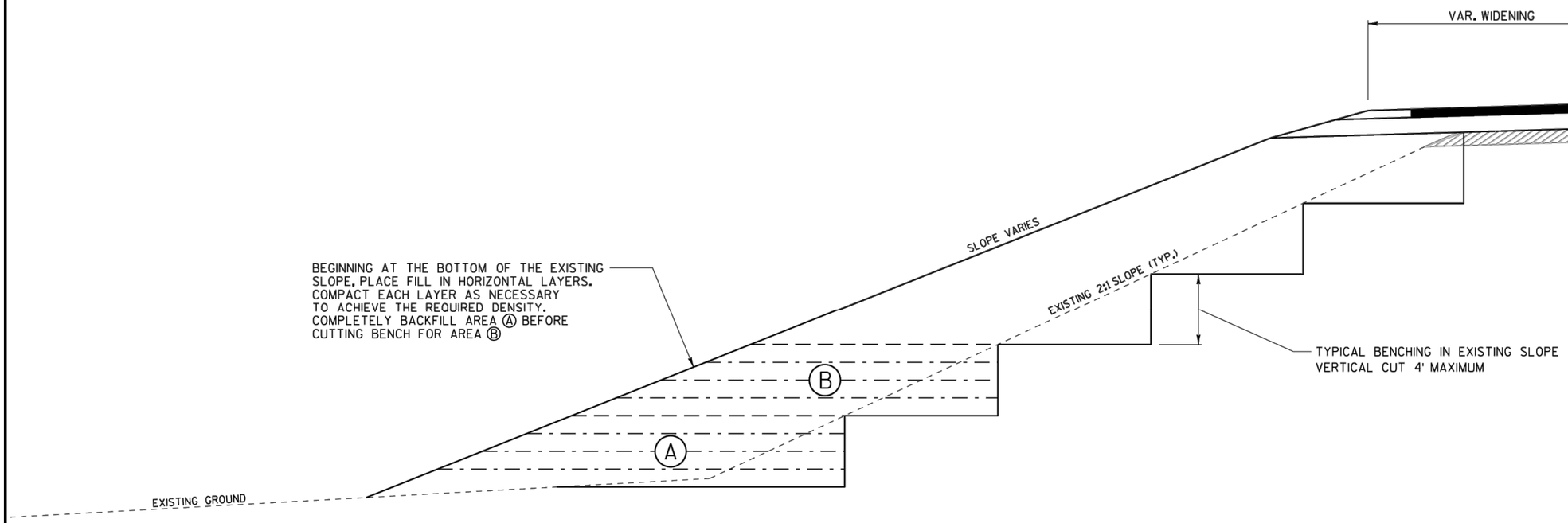
TEMPORARY CRASH CUSHION LAYOUT



* CRASH CUSHION PAD DIMENSIONS AS SPECIFIED BY THE MANUFACTURER

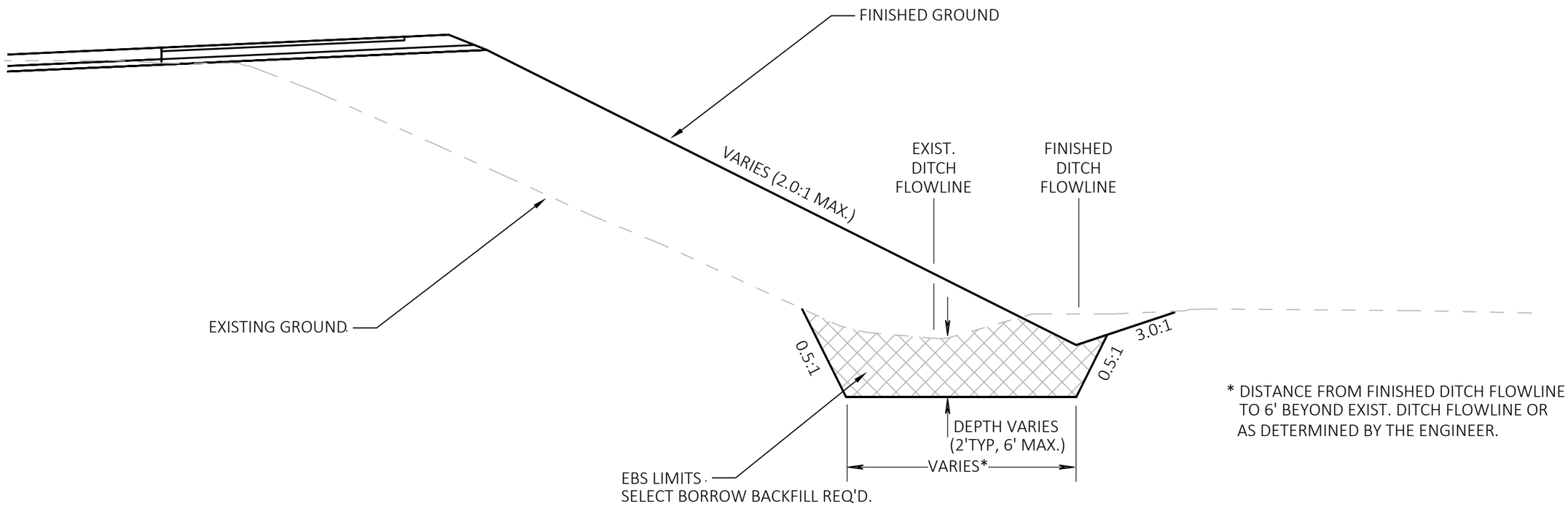
TEMPORARY CRASH CUSHION PAD DETAIL

2



DETAIL SHOWING METHOD FOR
BENCHING FILL INTO EXISTING EMBANKMENT

2

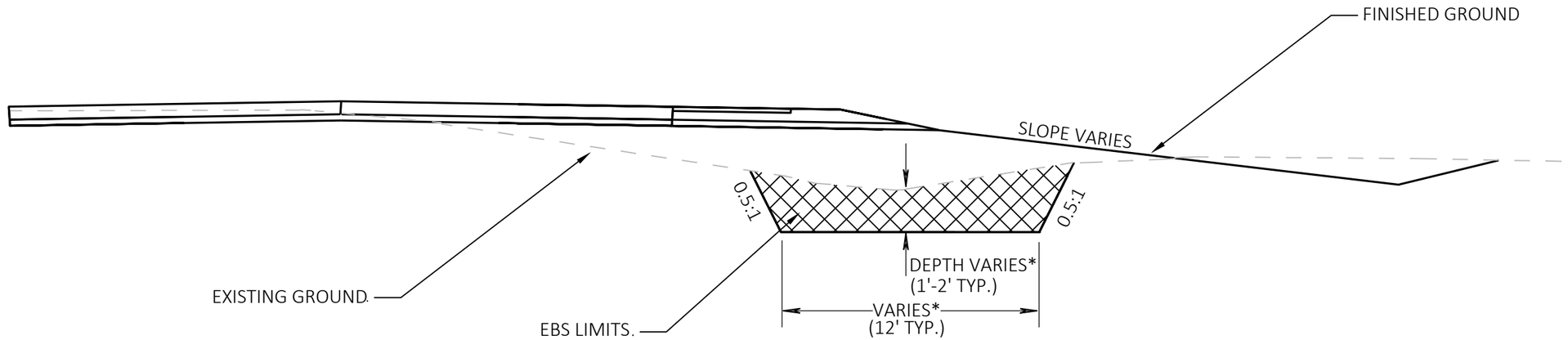


* DISTANCE FROM FINISHED DITCH FLOWLINE TO 6' BEYOND EXIST. DITCH FLOWLINE OR AS DETERMINED BY THE ENGINEER.

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

STA 31+00'EB' - 40+00'EB' (CARR CREEK PROJECTS - 94 EB OUTSIDE)
STA 47+00'EB' - 51+00'EB' (CARR CREEK PROJECTS - 94 EB OUTSIDE)
STA 53+50'EB' - 58+50'EB' (CARR CREEK PROJECTS - 94 EB OUTSIDE)

OTHER 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.

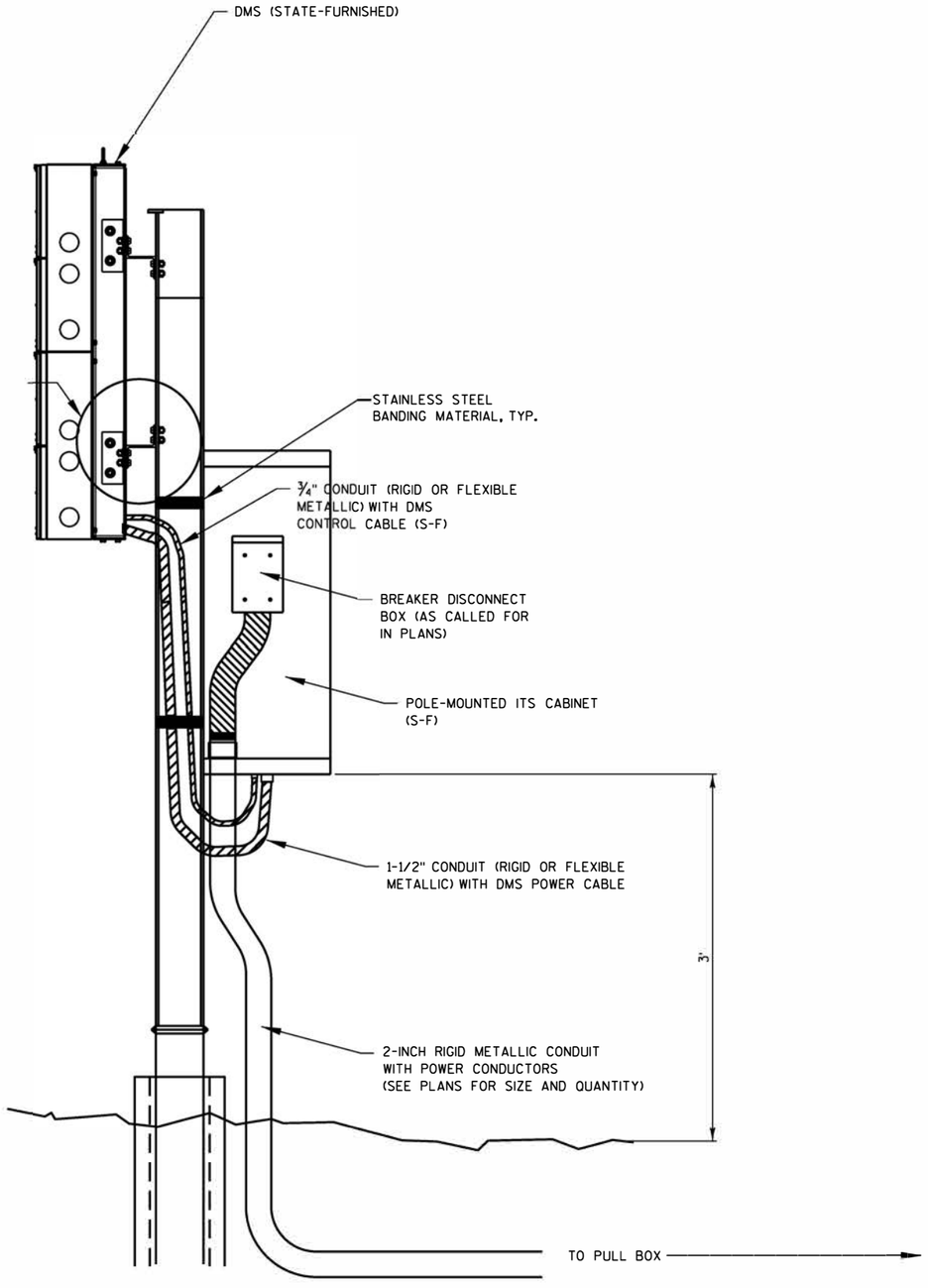
LEGEND	PROPOSED	EXISTING
FTMS CONVENTIONAL SYMBOLS		
POLE MOUNTED CABINET	⊠	⊠
METER BREAKER PEDESTAL	⊠	⊠
24X42-INCH CSCP PULL BOX	⊖	⊖
FTMS (ITS) CONDUIT	– –	– –
BREAKER DISCONNECT BOX	⊞	⊞
GROUND MOUNT DMS AND STRUCTURE		

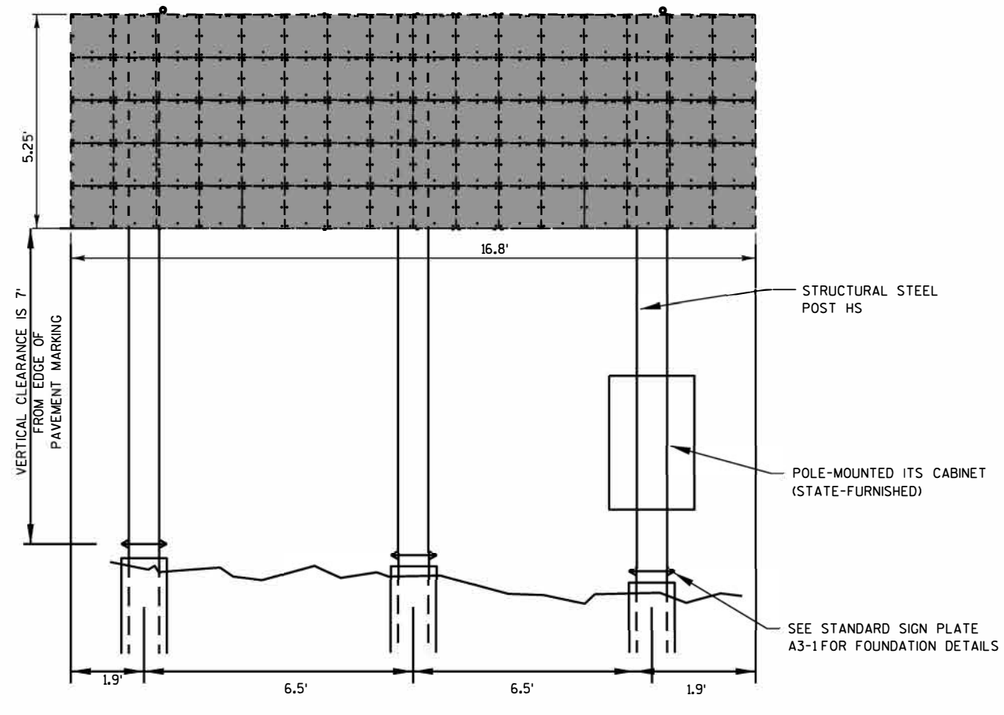
FTMS STANDARD ABBREVIATIONS

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

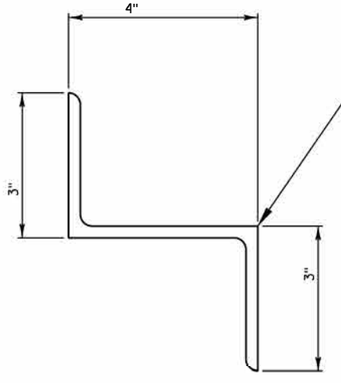
FTMS GENERAL NOTES

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

PROJECT NO: 1021-00-78	HWY: IH 94	COUNTY: ST. CROIX	FTMS CONSTRUCTION DETAILS	SHEET 23	E

2

2

N

160'WB'

165'WB'

170'WB'

165'EB'

170'EB'

INL

CTH NN

IH 94

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)

75°

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

PBNN01

PBNN02

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)

REMOVE EXISTING CABLES
AND ABANDON CONDUIT

SIGN

N

EXPB01
(1) REMOVE PULL BOX

REMOVE EXISTING CABLES
AND ABANDON CONDUIT

SLAB

POST

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

WISDOT/CADDS SHEET 42

2

LEGEND

EROSION MAT CLASS I, TYPE B

SILT FENCE

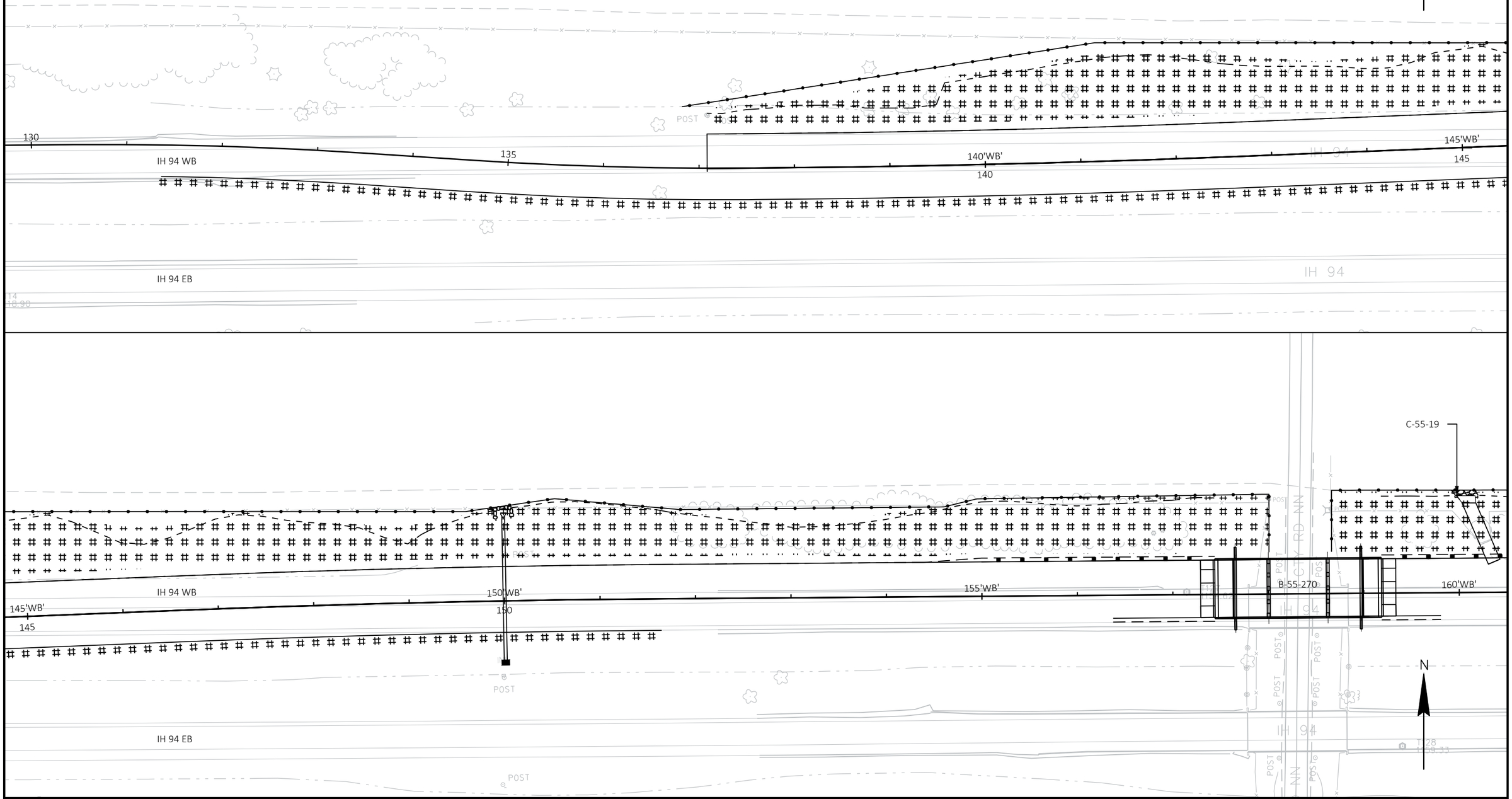
SLOPE INTERCEPT

SURFACE WATER FLOW

RIP RAP

*FERTILIZE AND SEED ALL DISTURB AREAS

N



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 1	SHEET 25	E

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

PLOT DATE : 2/15/2021 11:50 AM 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

N

160'WB'

165'WB'

170'WB'

170

IH 94 WB

175'WB'

175

POST

IH 94 EB

SIGN

SLAB

POST

POST

POST

175'WB'

175

180

IH 94 WB

185

190

IH 94

POST

POST

POST

IH 94 EB

IH 94

POST

POST

2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 1	SHEET 26	E

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

PLOT DATE : 2/15/2021 11:50 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 41

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

POST

135

140

145

C-55-19

B-55-270

B-55-271

155

155'EB'

160

160'EB'

CTY RD NN

SLAB

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 2	SHEET 27	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

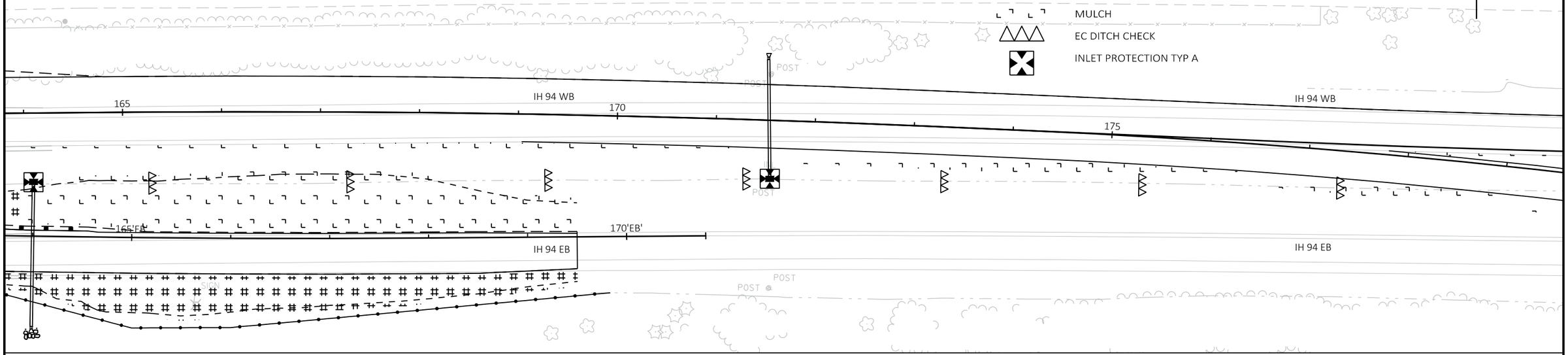
2

*FERTILIZE AND SEED ALL DISTURB AREAS

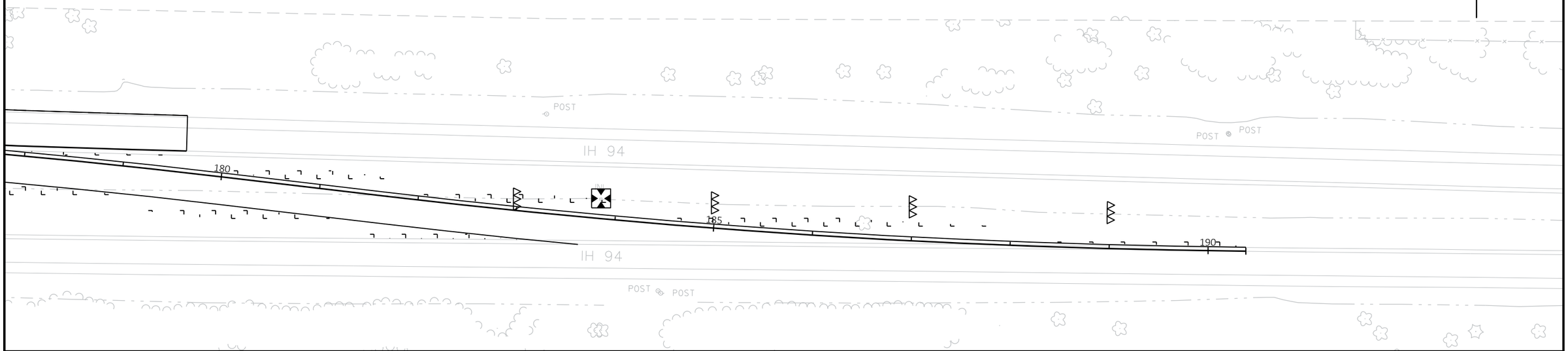
LEGEND

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

N



N



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 2	SHEET 28	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

IH 94 WB

IH 94 EB

135'WB EX'

145'WB

145'WB EX'

IH 94

POST

C-55-19

150'WB

150'WB EX'

155'WB

155'WB EX'

B-55-270

160'WB

160'WB EX'

B-55-271

CTY RD NN

2

2

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+06.30'WB EX'

IH 94 WB

170'WB

170'WB EX'

175'WB

175'WB EX'

POST

IH 94 EB

SIGN

SLAB

PT: 177+07.04'WB EX'

175'WB

175'WB EX'

IH 94 WB

180'WB EX'

IH 94

185'WB EX'

190'WB EX'

IH 94 EB

IH 94

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 3	SHEET 30	E

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

IH 94 WB
CROSSOVER

IH 94 WB

IH 94 EB

T103
1199.48

SIGN

5

10

15

10' WB'

IH 94

IH 94

SIGN

POST

15' WB'

20' WB'

25' WB'

20

25

30

IH 94

IH 94

POST

SIGN

N

2

PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 1 & 2	SHEET 31	E

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

PLOT DATE : 3/22/2021 6:52 AM

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

N

SEE STRUCTURE PLAN FOR RIPRAP PLACEMENT

RAMP A

B-55-286

IH 94 WB

30'WB'

35'WB'

40'WB'

IH 94 EB

35

40

45

IH 94

SIGN

POST

RIPRAP

50'A'

70'A'

45'WB'

50'WB'

55'WB'

60

50

55

CTH B

T121
1114.93

T122
1114.46

T123
1111.94

T124
1111.78

IH 94 EB
WIDENING

2

PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 1 & 2	SHEET 32	E

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

PLOT DATE : 3/22/2021 6:52 AM

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

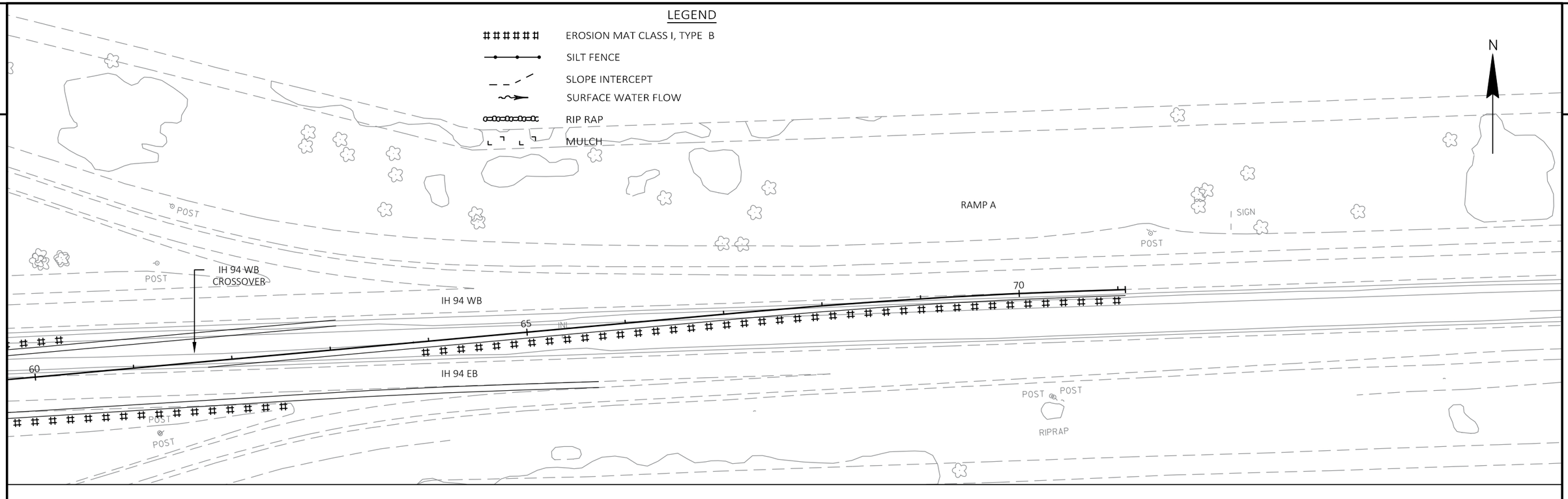
SLOPE INTERCEPT

SURFACE WATER FLOW

RIP RAP

MULCH

N



PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 1 & 2	SHEET 33	E

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

PLOT DATE : 3/22/2021 6:52 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

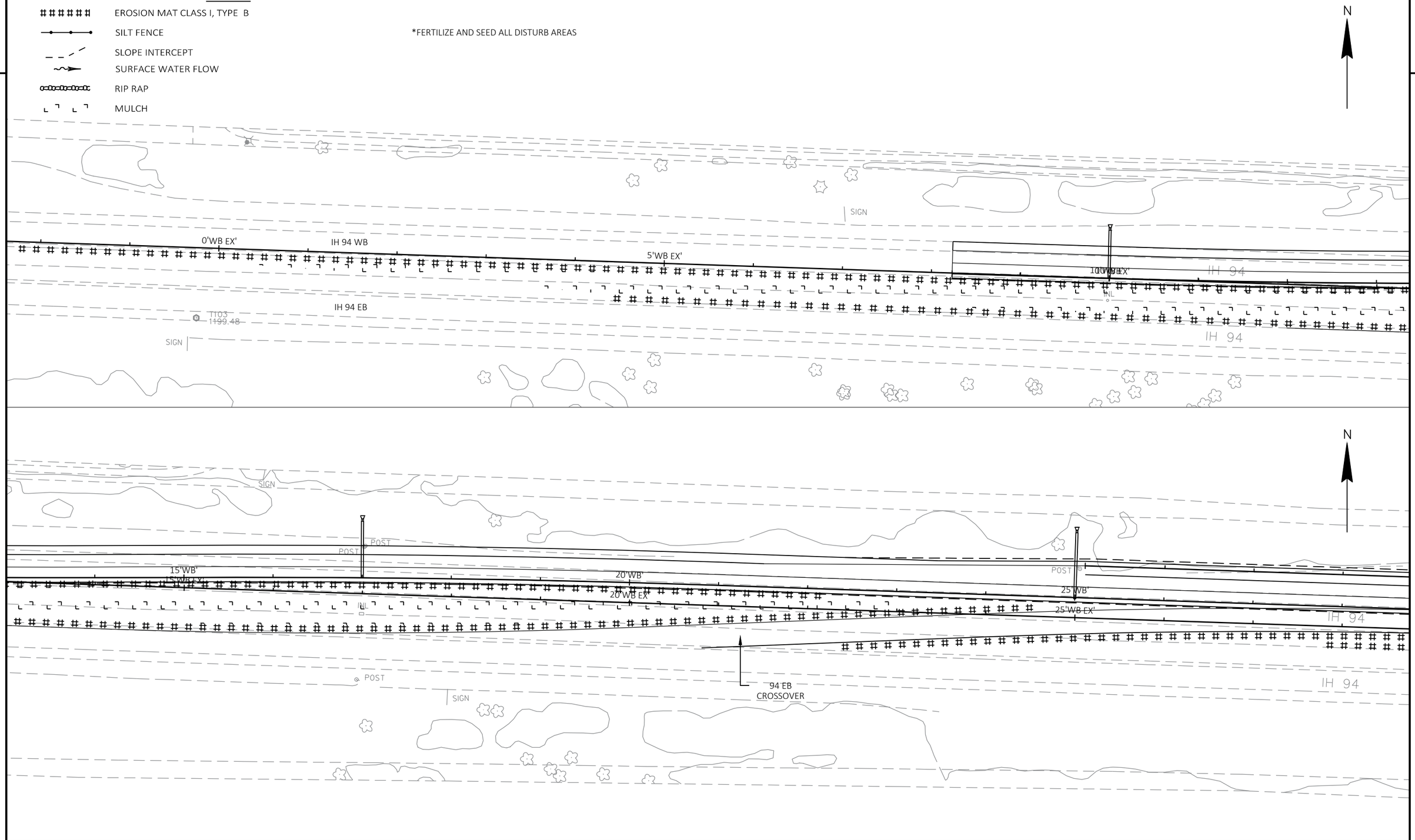
WISDOT/CADDS SHEET 42

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 3 & 4	SHEET 34	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\022002-EC2-IH94-CTHB.DWG
LAYOUT NAME - 01

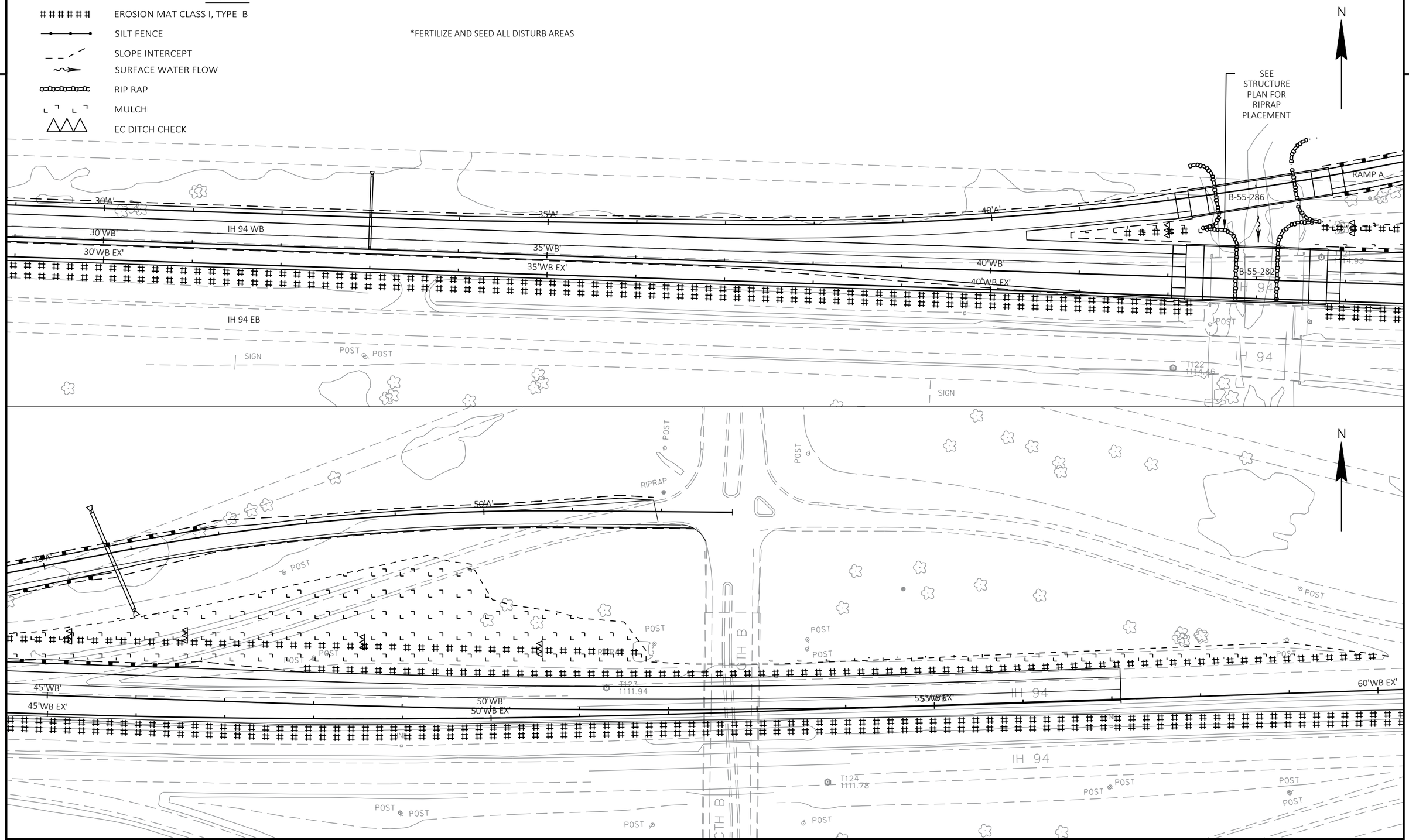
PLOT DATE : 3/25/2021 2:42 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

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 3 & 4	SHEET 35	E

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

PLOT DATE : 3/25/2021 2:43 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

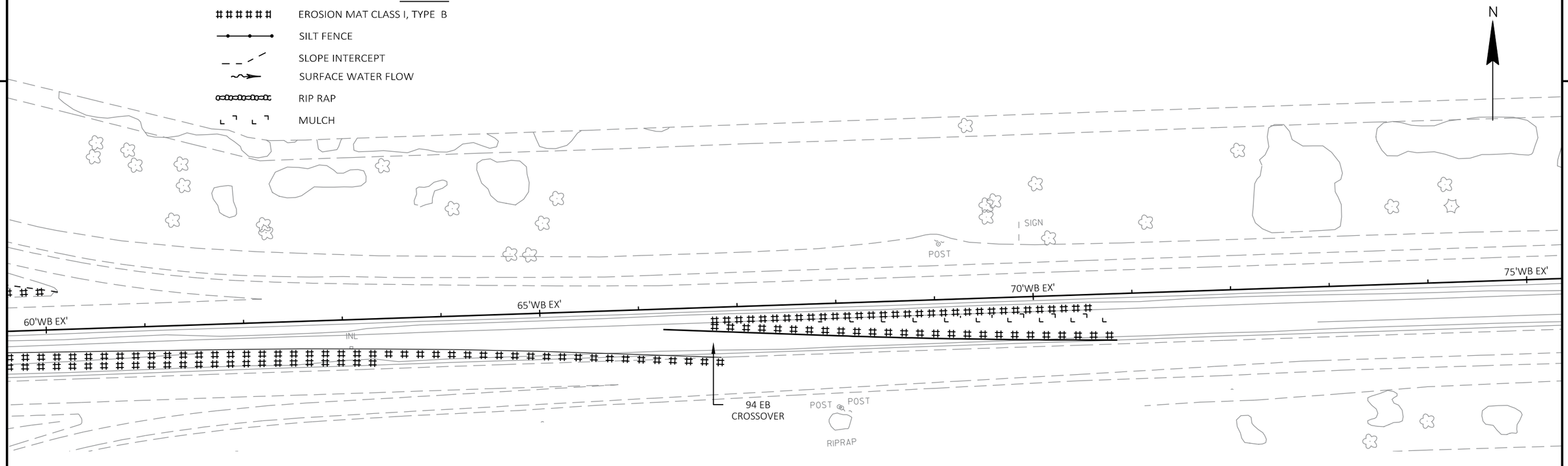
SILT FENCE

SLOPE INTERCEPT

SURFACE WATER FLOW

RIP RAP

MULCH



N

2

PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 3 & 4	SHEET 36	E

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

PLOT DATE : 3/25/2021 2:43 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

EC DITCH CHECK

*FERTILIZE AND SEED ALL DISTURB AREAS

N

IH 94 WB

IH 94 EB

IH 94

25'WB'

30'WB'

35'WB'

25'EB'

30'EB'

35'EB'

35'B'

40'WB'

45'WB'

50'WB'

40'EB'

45'EB'

50'EB'

40'B'

45'B'

50'B'

RAMP B

B-55-282

B-55-281

B-55-285

POST

INL

SIGN

RIPRAP

CTH 88

SEE STRUCTURE PLAN FOR RIPRAP PLACEMENT

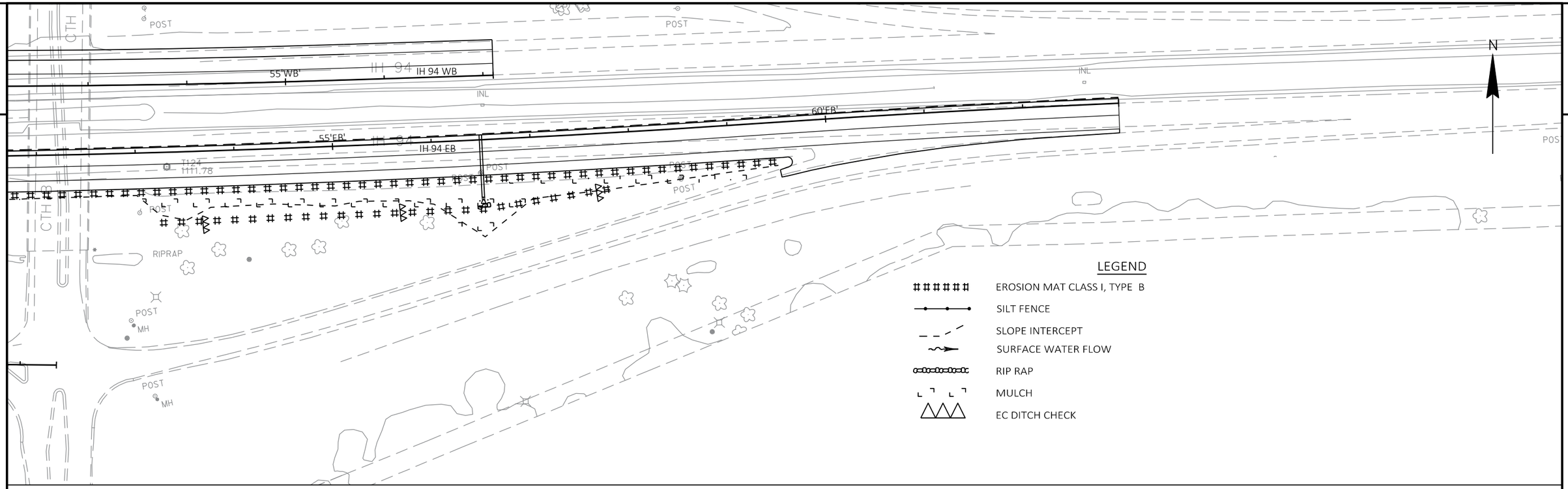
PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 5	SHEET 37	E

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

PLOT DATE : 3/22/2021 7:37 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



2

PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 5	SHEET 38	E

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

PLOT DATE : 3/22/2021 7:37 AM 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

SIGN
POST
15
15'WB EX'
20
20'WB EX'
25
25'WB EX'
30'A'
30
30'WB EX'
IH 94 WB
IH 94
IH 94 EB
30'A'
35'A'
40'A'
35
35'WB EX'
40
40'WB EX'
45
45'WB EX'
35'B'
40'B'
45'B'
B-55-286
B-55-282
B-55-281
B-55-285
INL
IH 94

2

2

2

RAMP A

POST

RIPRAP

CTH B

T123
1111.94

IH 94 WB

50'WB EX'

55'WB EX'

60'WB EX'

INL

45

50

55

60

IH 94 EB

T124
1111.78

MH

45'B'

RAMP B

50'B'

N

LEGEND

EROSION MAT CLASS I, TYPE B

SILT FENCE

SLOPE INTERCEPT

SURFACE WATER FLOW

RIP RAP

MULCH

EC DITCH CHECK

SIGN

0'WB EX'

65'WB EX'

70'WB EX'

75'WB EX'

PROJECT NO: 1021-04-77/78	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL STAGE 6	SHEET 40	E

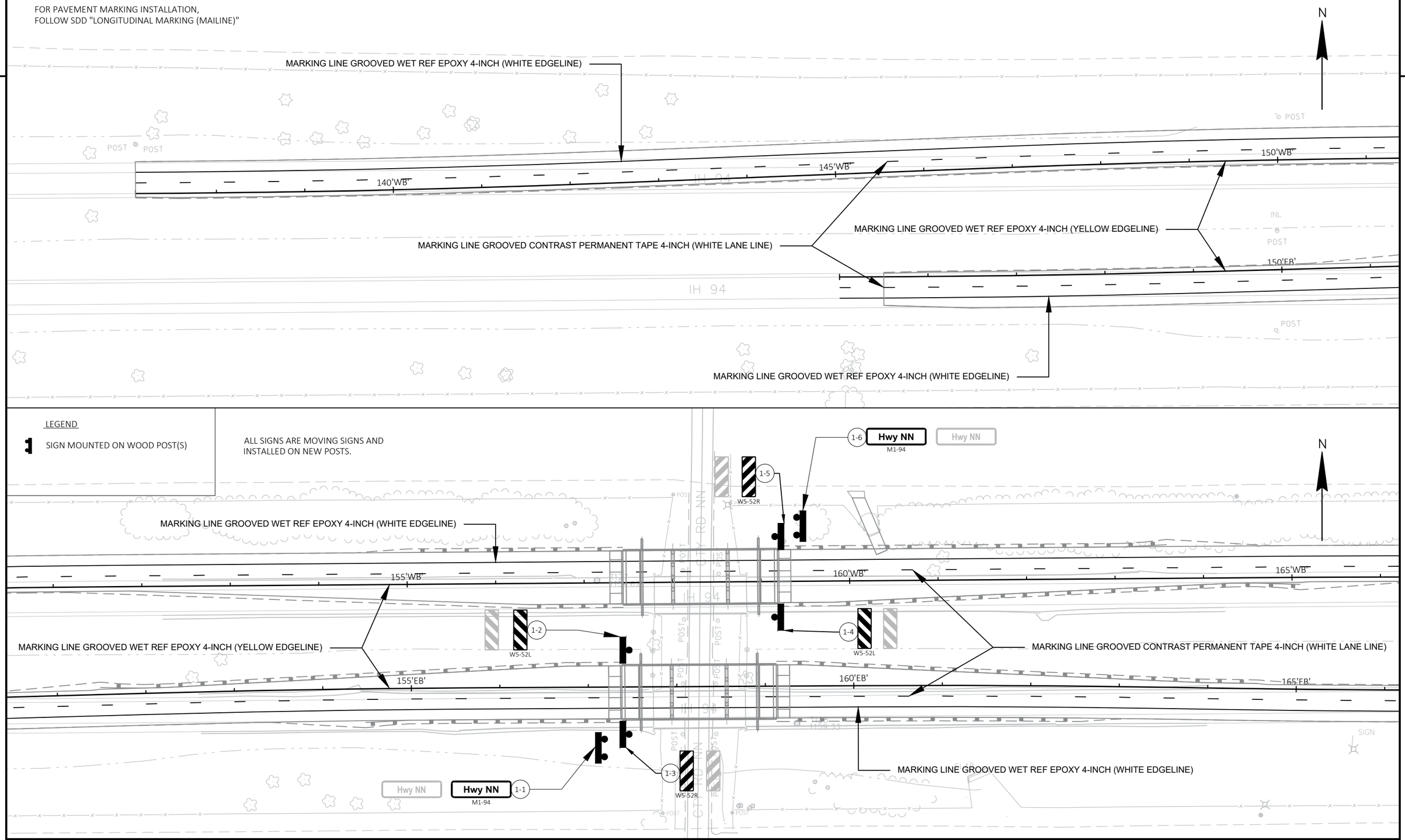
FILE NAME : C:\C3D\10210407\SHEETSPLAN\022004-EC4-IH94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 3/25/2021 2:47 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

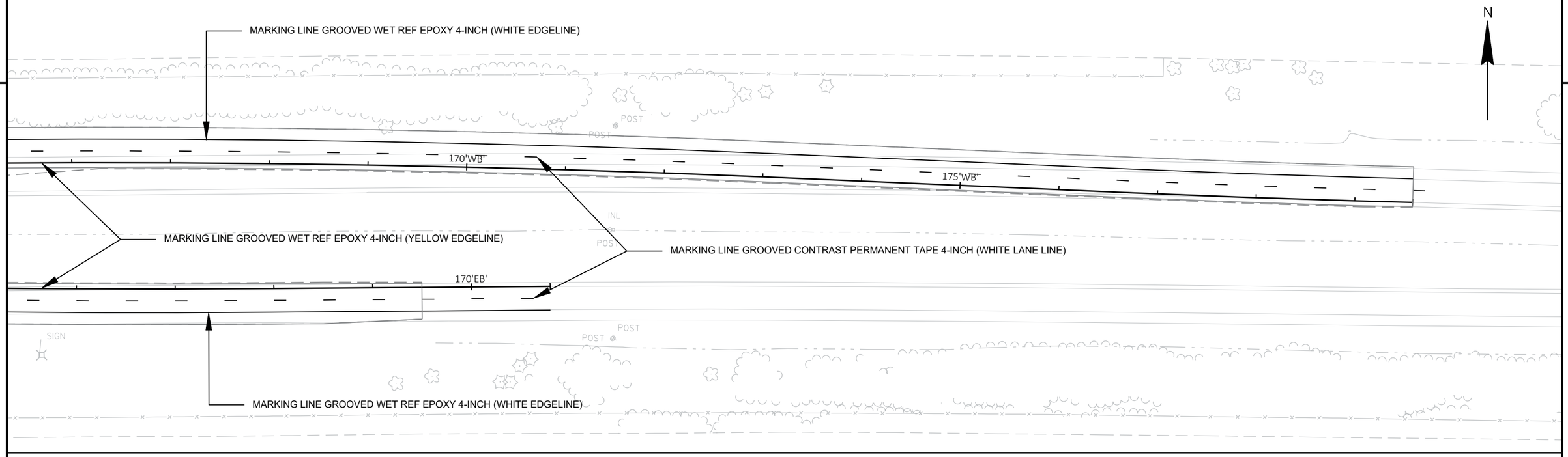
WISDOT/CADDS SHEET 42

2

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



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 41	E



2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PERMANENT SIGNING & PAVEMENT MARKING STAGE 1	SHEET 42	E

2

LEGEND

SIGN MOUNTED ON WOOD POST(S)

SIGN MOUNTED ON STEEL POST

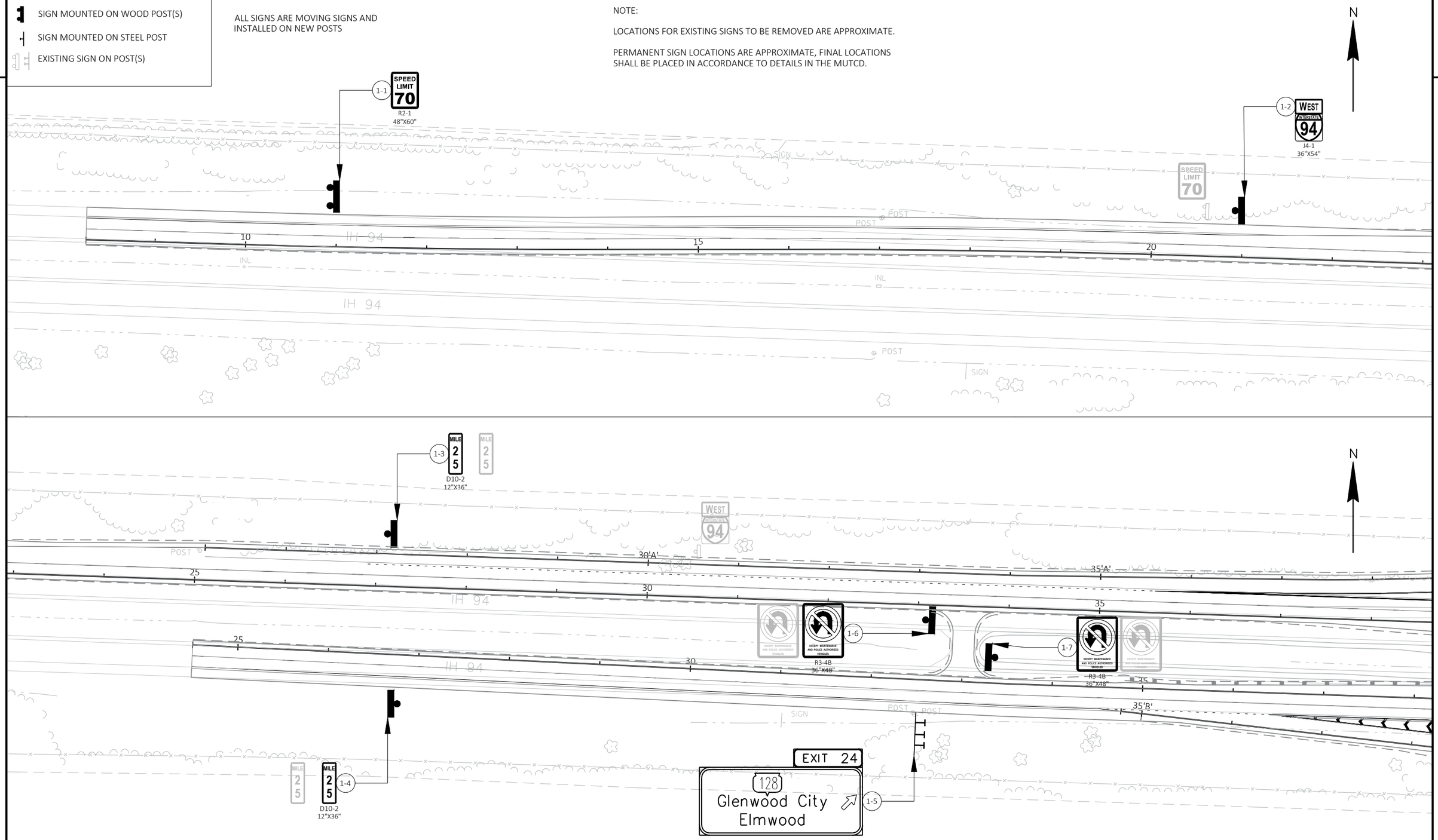
EXISTING SIGN ON POST(S)

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 43	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

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

2-7

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 E5-1A 72"X60"

2-21 W4-1R 36"X36"

IH 94

CTH B

40'A' 40'B' 45'A' 45'B' 50'A' 50'B'

40 45 50 55 60

N

RIPRAP POST MH INL T123 1111.94 T124 1111.78

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)

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

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PAVEMENT MARKING	SHEET 45	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\024001-PM-I94-CTHB.DWG
LAYOUT NAME - 01

PLOT DATE : 10/26/2020 10:44 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

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

40'A'

45'A'

50'A'

40'B'

45'B'

50'B'

40

45

50

55

60

IH 94

CTH B

N

POST

RIPRAP

INL

MH

T123
1111.94

T124
1111.78

T122
1111.46

2

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PAVEMENT MARKING	SHEET 46	E

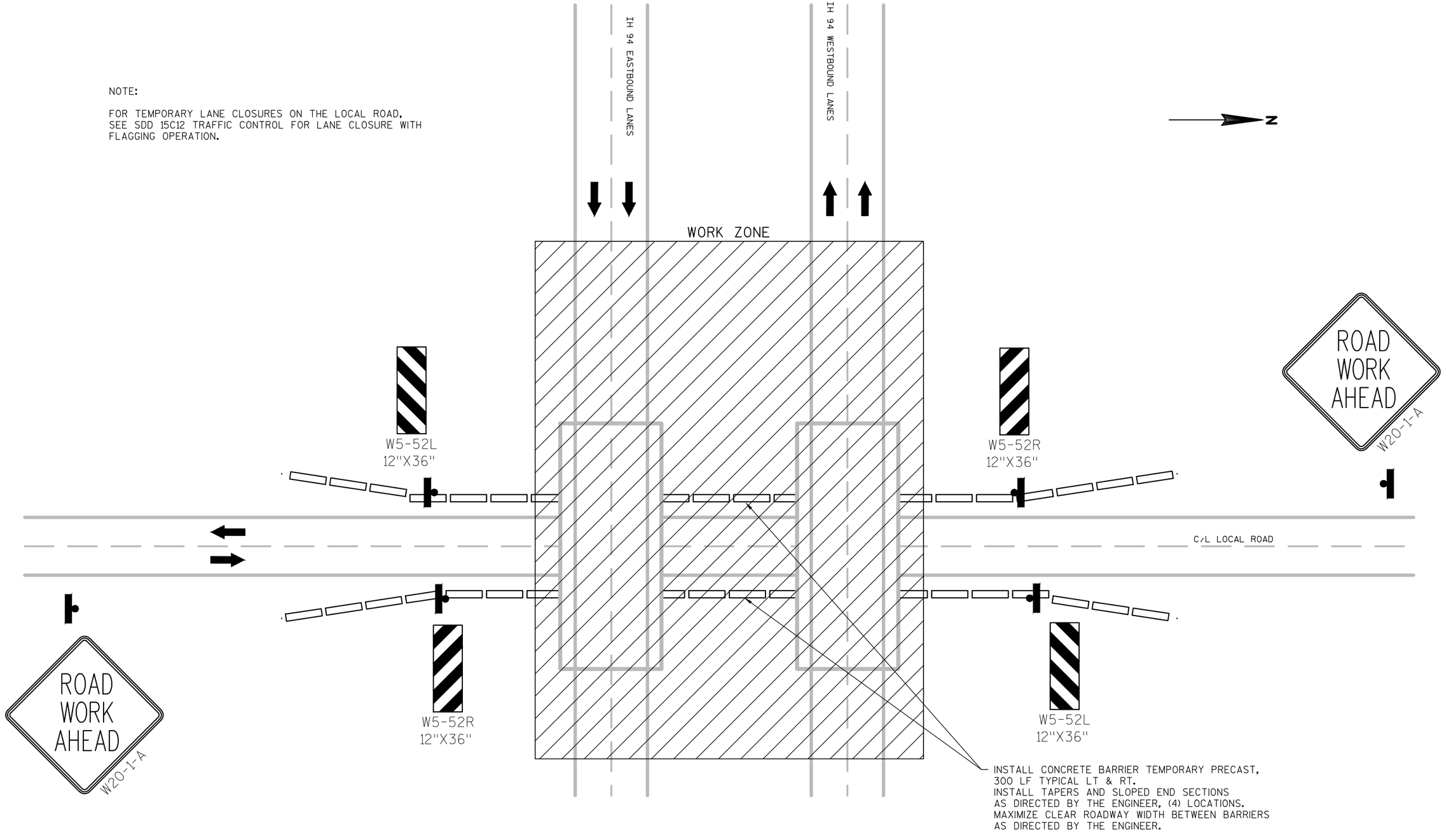
FILE NAME : C:\C3D\10210407\SHEETSPLAN\024001-PM-I94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 10/26/2020 10:44 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

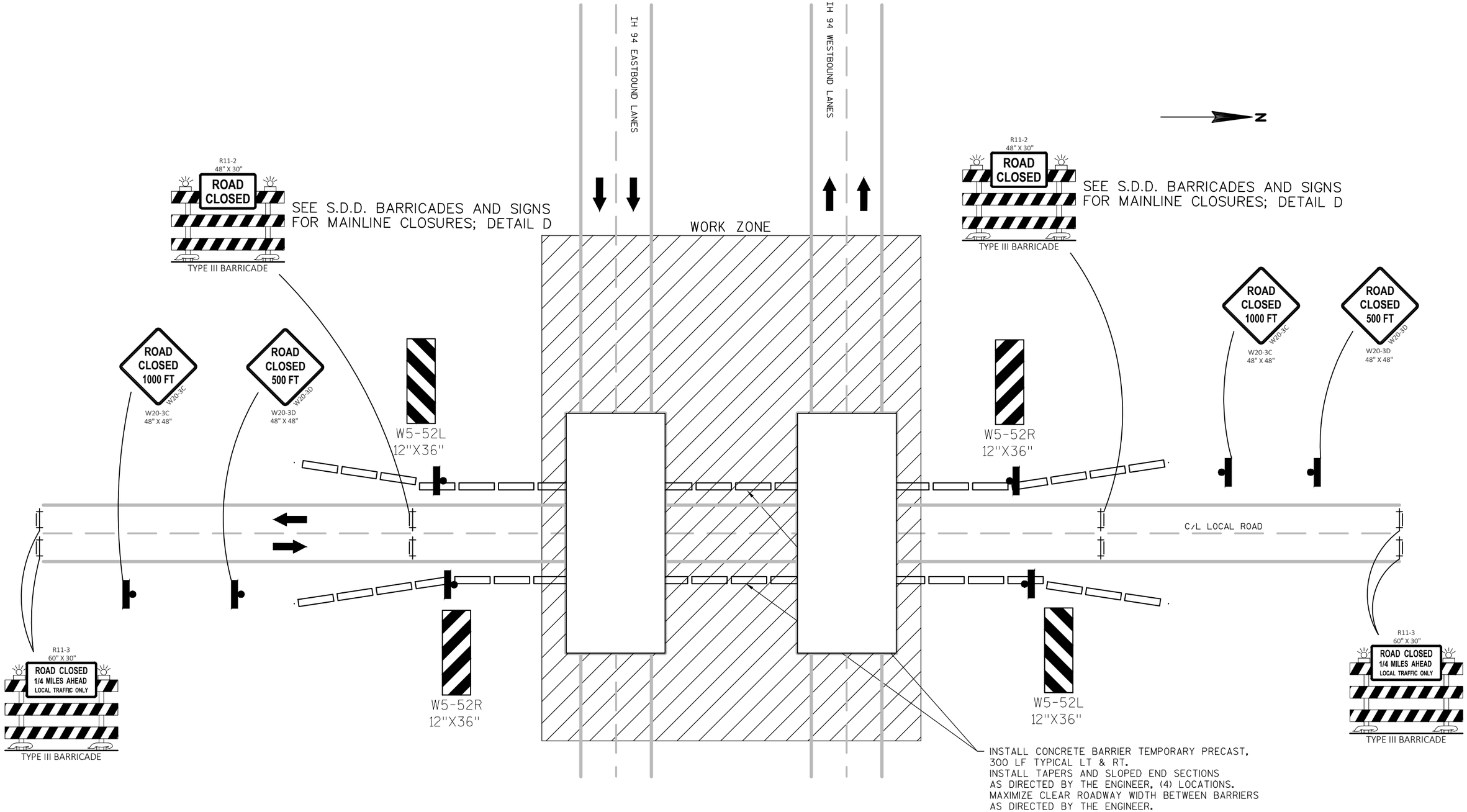
NOTE:

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 47	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 48	E

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.

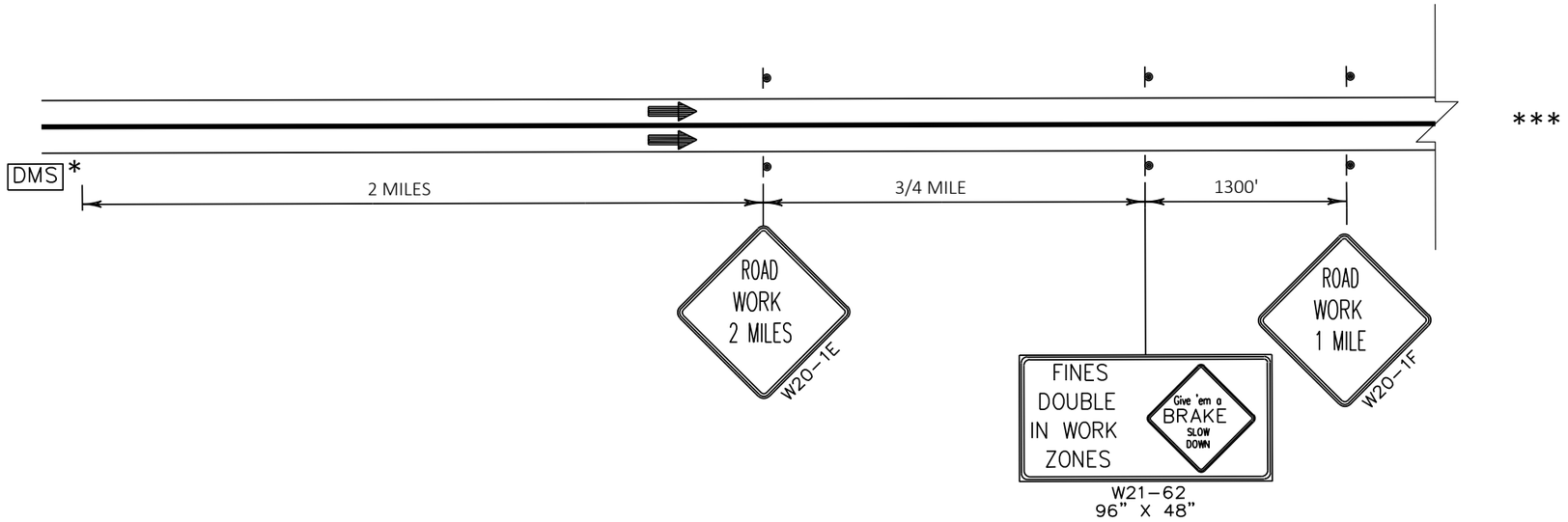
ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"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

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.

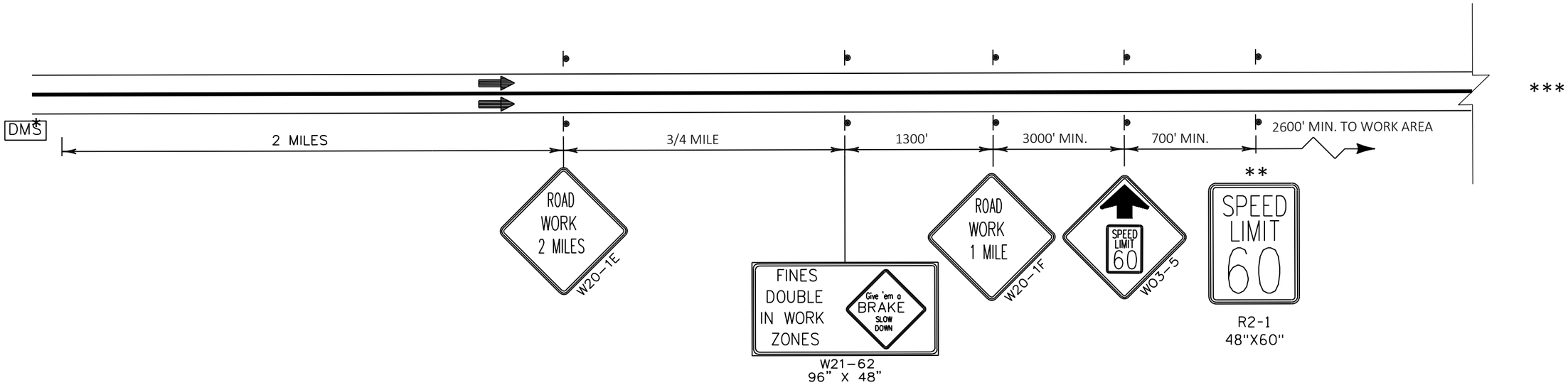
ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"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.



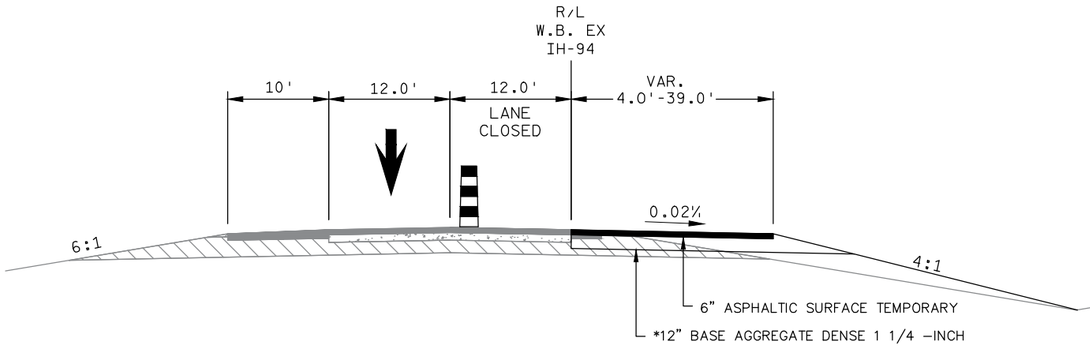
* EXIST DYNAMIC MESSAGE SIGN IS ON EB IH 94 ONLY. PCMS NEEDED FOR WB IH 94.

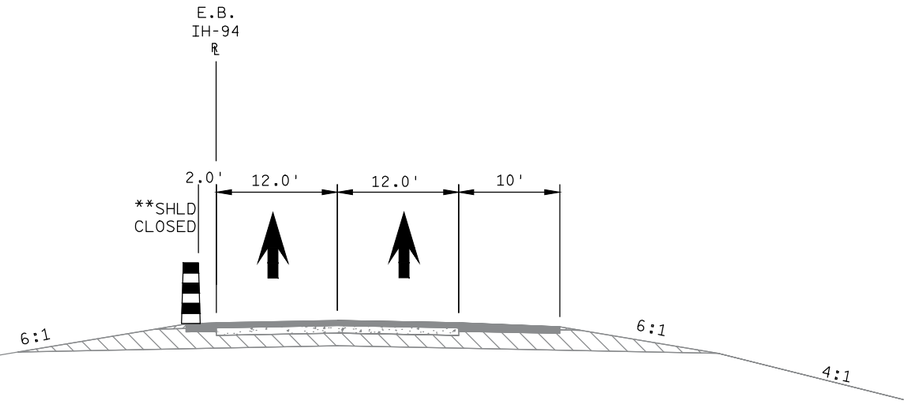
** A SPEED LIMIT SIGN SHALL ALSO BE LOCATED AT THE CTH B EASTBOUND AND WESTBOUND ENTRANCE RAMPS.
INCLUDE 70 MPH SPEED LIMIT SIGNS 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END ROAD WORK" SIGNS.

*** 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,

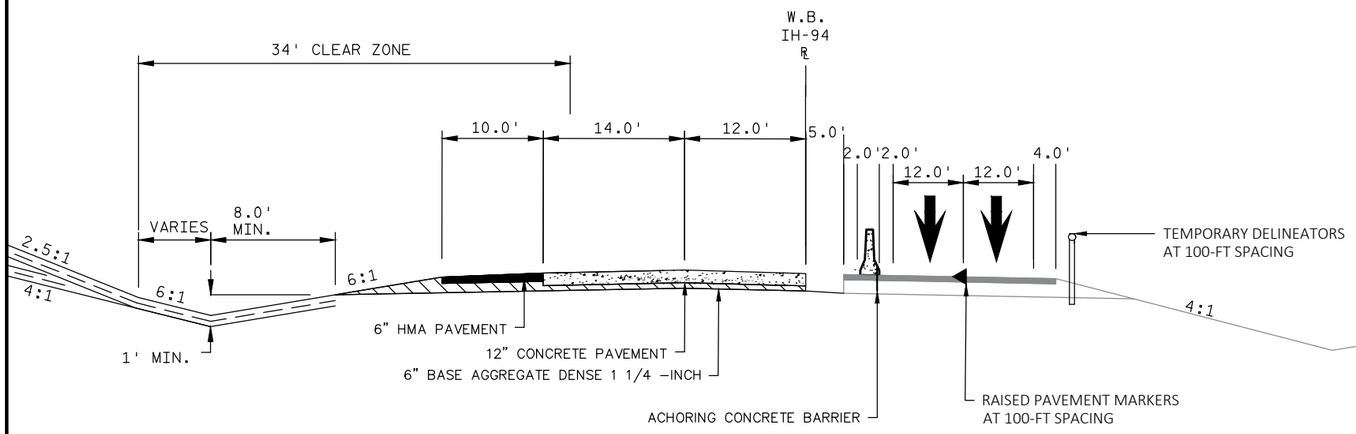


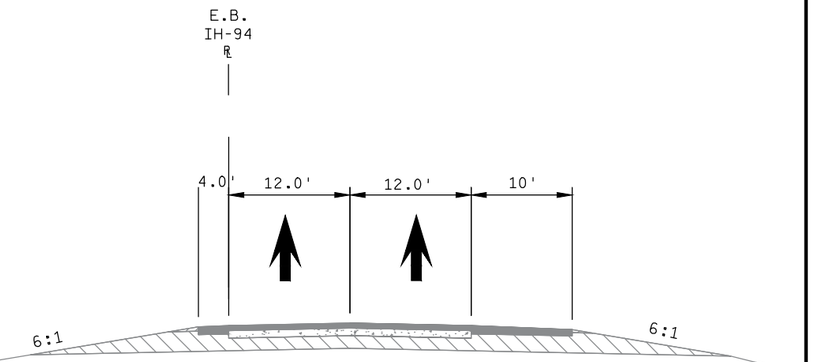


** SHOULDER CLOSURE WHEN NEEDED FOR MEDIUM WORK ON IH 94 WB INSIDE WIDENING..

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

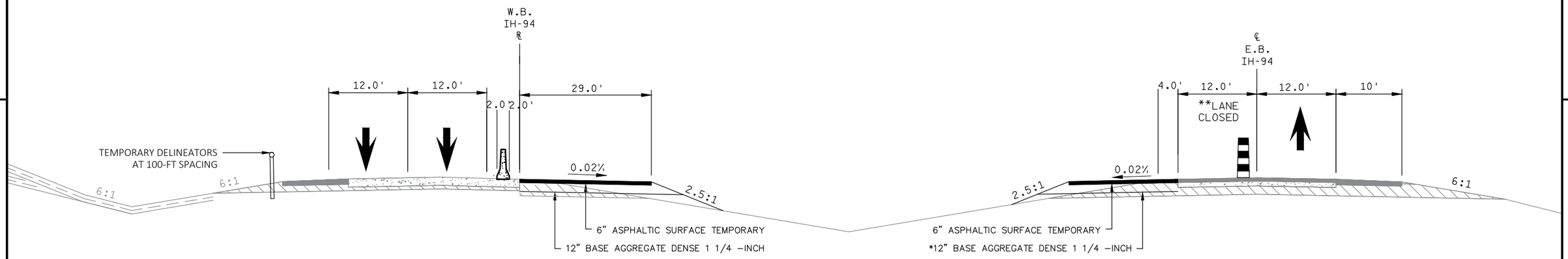
STAGE 1A
CONSTRUCT IH 94 WB INSIDE WIDENING





STAGE 1C
CONSTRUCT IH 94 WB LANES
CONSTRUCT STRUCTURE B–55–270 (NORTH HALF)
CONSTRUCT EXTENSION OF BOX CULVERT C–55–19

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

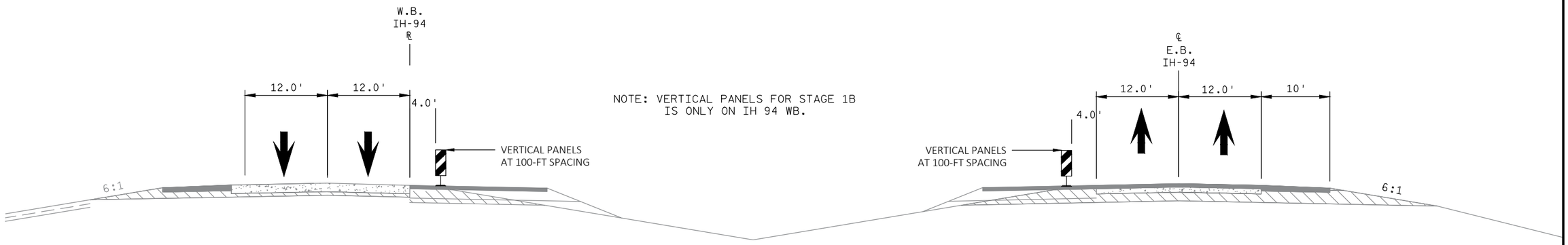


* BASE SHALL BE IN–PLACE PRIOR TO OPENING ADJACENT LANE WITH 3:1 SAFETY SLOPE AND 2' WIDE TOP

** DURING OFF PEAK HOURS ONLY FOR CROSSOVER CONSTRUCTION.

STAGE 2A

CONSTRUCT STRUCTURE B–55–270 (SOUTH HALF)
CONSTRUCT IH 94 WB STRUCTURE APPROACH
CONSTRUCT IH 94 WB WIDENING
CONSTRUCT IH 94 EB CROSS OVER

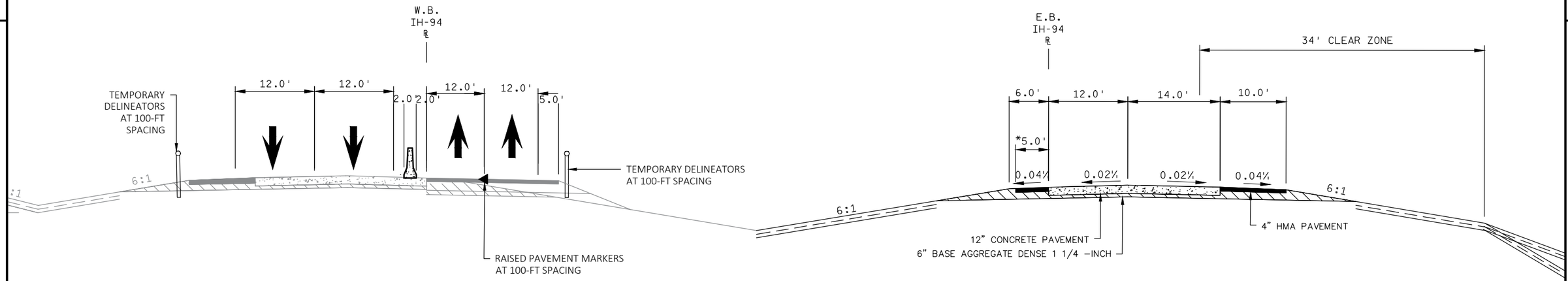


STAGE 1B & 2B

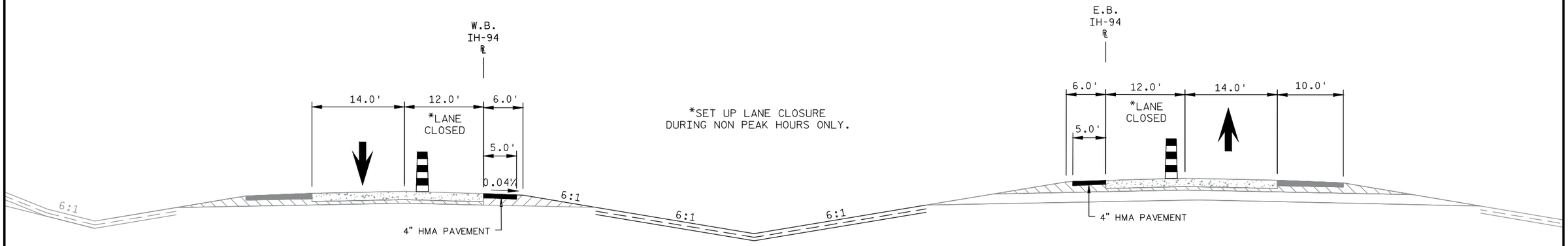
WINTER SHUTDOWN

PROJECT NO: 1021-00-78,79	HWY: IH 94	COUNTY: ST. CROIX	TYPICAL SECTIONS FOR TRAFFIC CONTROL STAGING	SHEET 52	E

2



STAGE 2C
CONSTRUCT IH 94 EB LANES
CONSTRUCT STRUCTURE B–55–271



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 53	E

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

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

TEMPORARY WIDENING

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

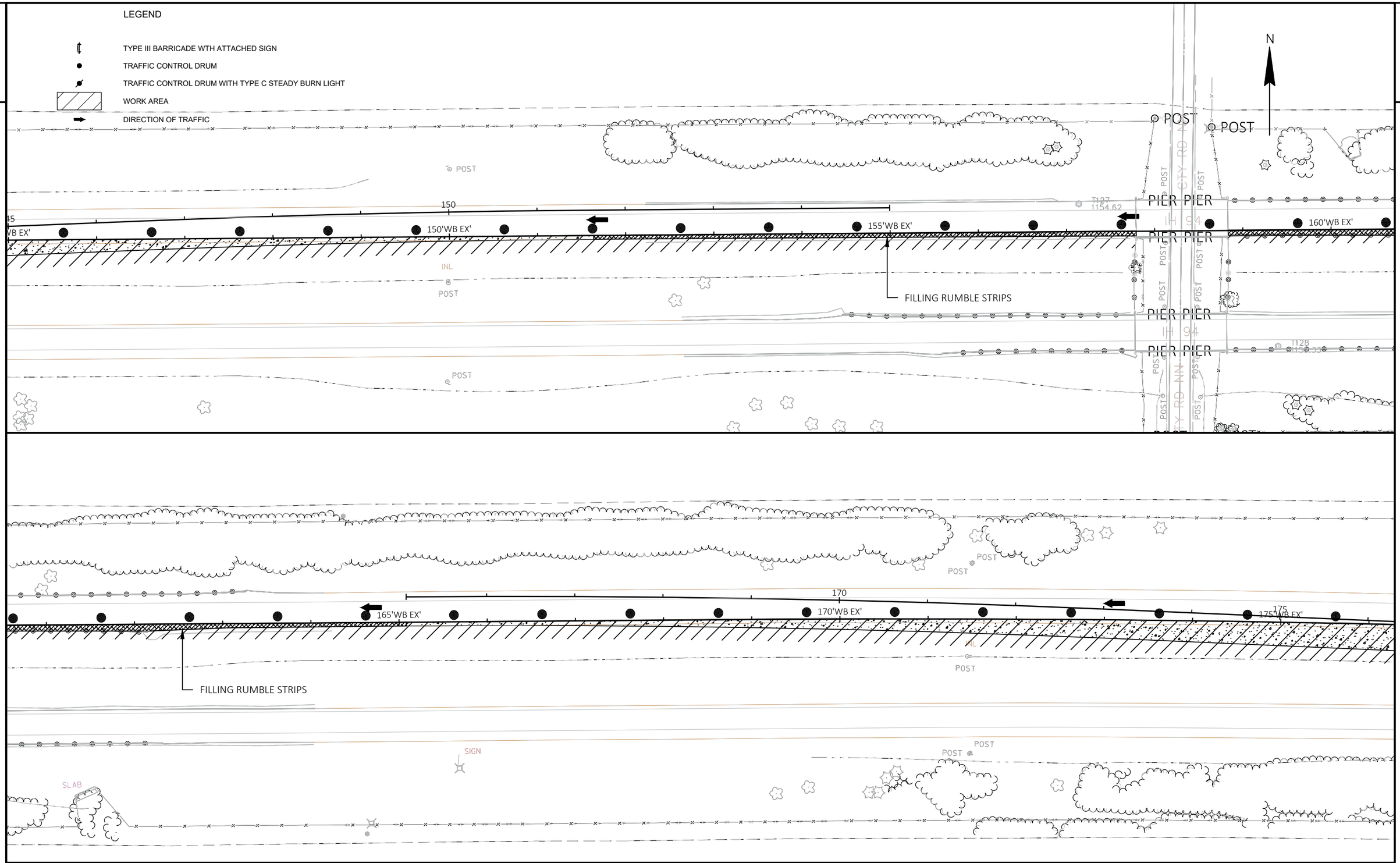
FILE NAME : C:\C3D\10210008\SHEETSPLAN\026001-S1A.DWG
LAYOUT NAME - 01

PLOT DATE : 3/25/2021 2:52 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



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

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

PLOT DATE : 3/25/2021 2:52 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

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

180'WB EX'

185

185'WB EX'

190

190'WB EX'

IH 94

TEMPORARY WIDENING

POST

195'WB EX'

200'WB EX'

205'WB EX'

INL

BUFFER SPACE

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

R11-2L
48" X 30"

LANE CLOSED

SIGN

TYPE III BARRICADE

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

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

PLOT DATE : 3/25/2021 2:53 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

LEGEND

DIRECTION OF TRAFFIC

VERTICAL PANEL

N

STAGE 2B:
TRAFFIC
I94 WB TRAFFIC ON WB LANES.
I94 EB TRAFFIC ON EB LANES.

CONSTRUCTION:
WINTER SHUTDOWN

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

INL
SIGN
POST
POST
POST
T108
1119.61
T114
1118.90
IH 94
IH 94
IH 94
RIPRAP

2

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

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

PLOT DATE : 3/25/2021 2:54 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

DIRECTION OF TRAFFIC

VERTICAL PANEL

N

POST

POST

PIER PIER

PIER PIER

PIER PIER

PIER PIER

T127
1154.62

T128

I-94

CTY RD NN

WB EX'

150'WB EX'

155'WB EX'

160'WB EX'

INL

POST

165'WB EX'

170'WB EX'

175'WB EX'

SIGN

SLAB

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1B - WINTER SHUTDOWN	SHEET 58	E

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

PLOT DATE : 3/25/2021 2:55 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

LEGEND

DIRECTION OF TRAFFIC

VERTICAL PANEL

N

POST

180'WB EX'

IH 94

185'WB EX'

190'WB EX'

INL

IH 94

POST POST

POST POST

POST

195'WB EX'

200'WB EX'

205'WB EX'

IH 94

INL

INL

IH 94

SIGN

POST

POST

POST POST

POST

POST POST

2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1B - WINTER SHUTDOWN	SHEET 59	E

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

PLOT DATE : 3/25/2021 2:55 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
- 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

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

CONSTRUCTION:
CONSTRUCT IH 94WB LANES.
CONSTRUCT NORTH HALF OF STRUCTURE B-55-270.
CONSTRUCT EXTENSION OF BOX CULVERT C-55-19.

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

INL
SIGN
POST
POST
POST
FILL RUMBLE STRIPS
RIPRAP
T106
1119.61
T114
1118.90
IH 94

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1C	SHEET 60	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026001-S1C.DWG
LAYOUT NAME - 01

PLOT DATE : 3/25/2021 2:57 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

POST

POST

POST

150

150'WB EX'

155'WB EX'

160'WB EX'

INL

POST

LEGEND

TYPE III BARRICADE WTH ATTACHED SIGN

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE G 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"

PIER

PIER

IH 94

PIER

PIER

T128

T128

POST

POST

POST

2

2

FILL RUMBLE STRIPS

N

POST

180'WB EX'

185

185'WB EX'

POST

190

POST

190'WB EX'

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

CC 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

POST

W01-4BL
48"X48"

POST

195'WB EX'

200'WB EX'

205'WB EX'

IH 94

INL

INL

IH 94

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

SIGN

POST

POST

POST

POST

POST

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1C	SHEET 62	E

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

SIGN
115'WB EX'
INL
120'WB EX'
125'WB EX'
T108
1119.61
IH 94
115'EB EX'
120'EB EX'
125'EB EX'
POST
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'
145'WB
STA 140+96 - 143+33
1-15" X 240' CULVERT PIPE TEMPORARY REQ'D
2-15" AEW REQ'D
130'EB EX'
135'EB EX'
140'EB EX'
145'EB E
IH 94
T114
1118.90

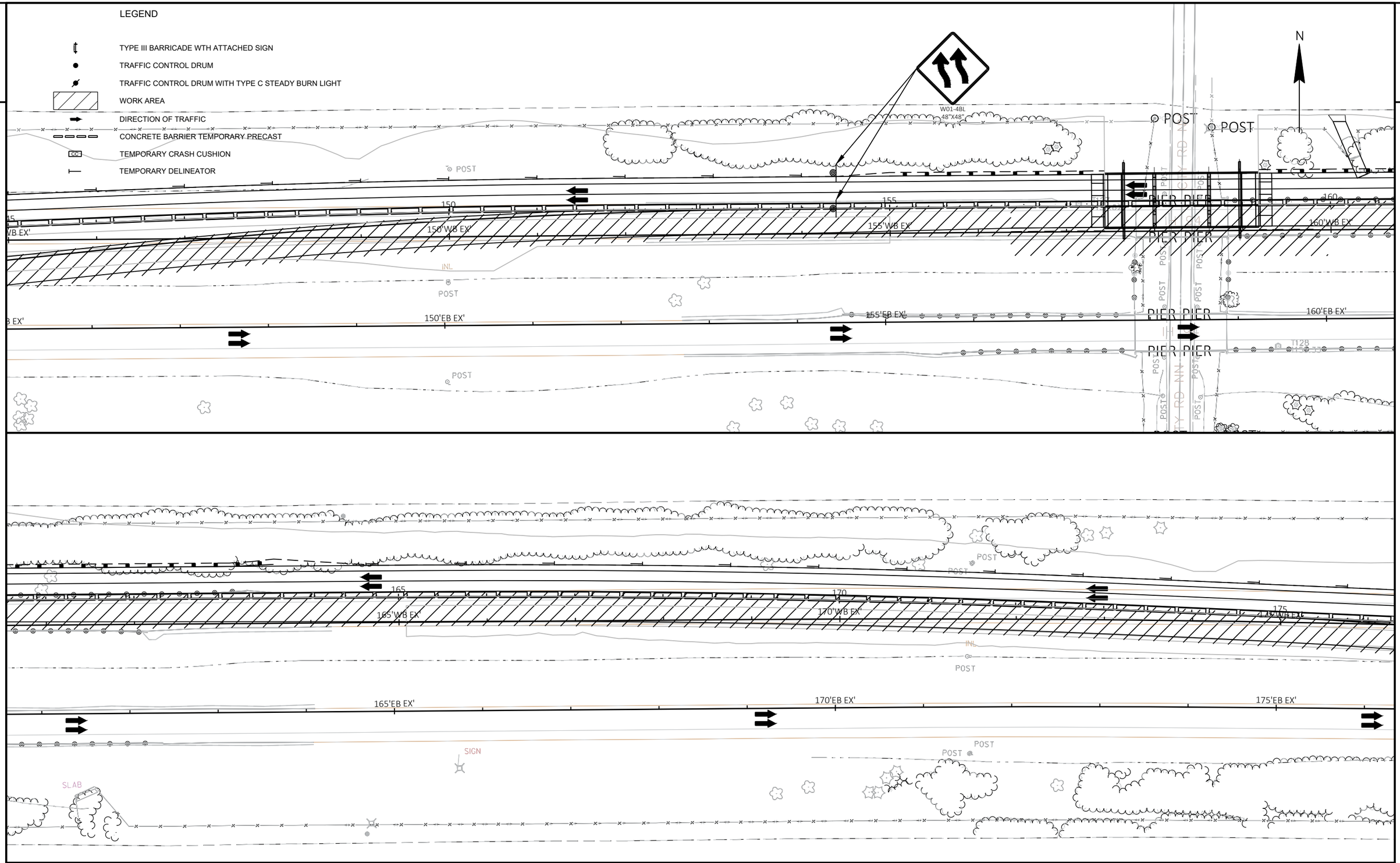
SINGLE LANE CLOSURE DURING OFF PEAK HOURS WHEN NEEDED.
SEE SDD 15D12B TRAFFIC CONTROL, LANE CLOSURE SPEED REDUCTION

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

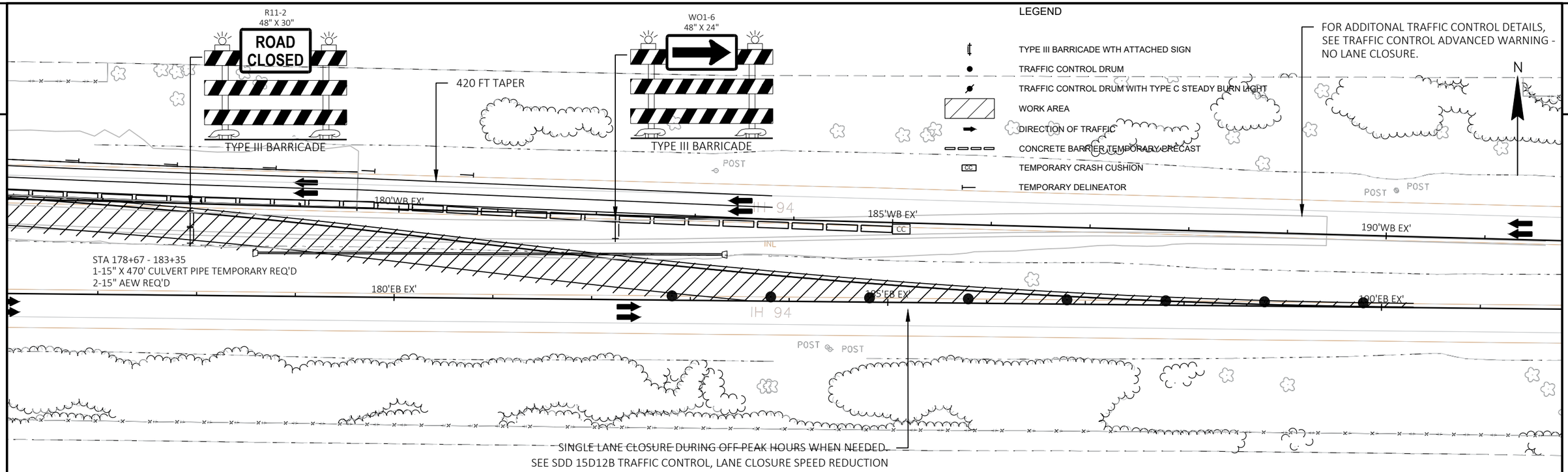
2

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



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


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
190'WB EX'
INL
STA 178+67 - 183+35
1-15" X 470' CULVERT PIPE TEMPORARY REQ'D
2-15" AEW REQ'D
180'EB EX'
185'EB EX'
190'EB EX'
IH 94
POST
POST
SINGLE LANE CLOSURE DURING OFF-PEAK HOURS WHEN NEEDED.
SEE SDD 15D12B TRAFFIC CONTROL, LANE CLOSURE SPEED REDUCTION
POST
W01-4BR
48"X48"
POST
195'WB EX'
200'WB EX'
205'WB EX'
IH 94
INL
195'EB EX'
200'EB EX'
205'EB EX'
IH 94
SIGN
POST
POST
POST
POST

STAGE 2B:
TRAFFIC
I94 WB TRAFFIC ON NEW CONSTRUCTED WB LANES.
I94 EB TRAFFIC ON 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
IH 94
RIPRAP
T106
1119.61

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

130'WB EX'
135'WB EX'
140'WB EX'
130'EB EX'
135'EB EX'
140'EB EX'
POST
POST
140
T114
1118.90

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

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026002-S2B.DWG
LAYOUT NAME - 01
PLOT DATE : 3/25/2021 3:02 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

LEGEND

DIRECTION OF TRAFFIC

VERTICAL PANEL

TYPE III BARRICADE WTH ATTACHED SIGN

N

POST

POST

150

150'WB EX'

155'WB EX'

160'WB EX'

INL

POST

150'EB EX'

155'EB EX'

160'EB EX'

PIER PIER

PIER PIER

PIER PIER

IH 94

CTY RD NN

165

165'WB EX'

170

170'WB EX'

175

175'WB EX'

165'EB EX'

170'EB EX'

175'EB EX'

SIGN

SLAB

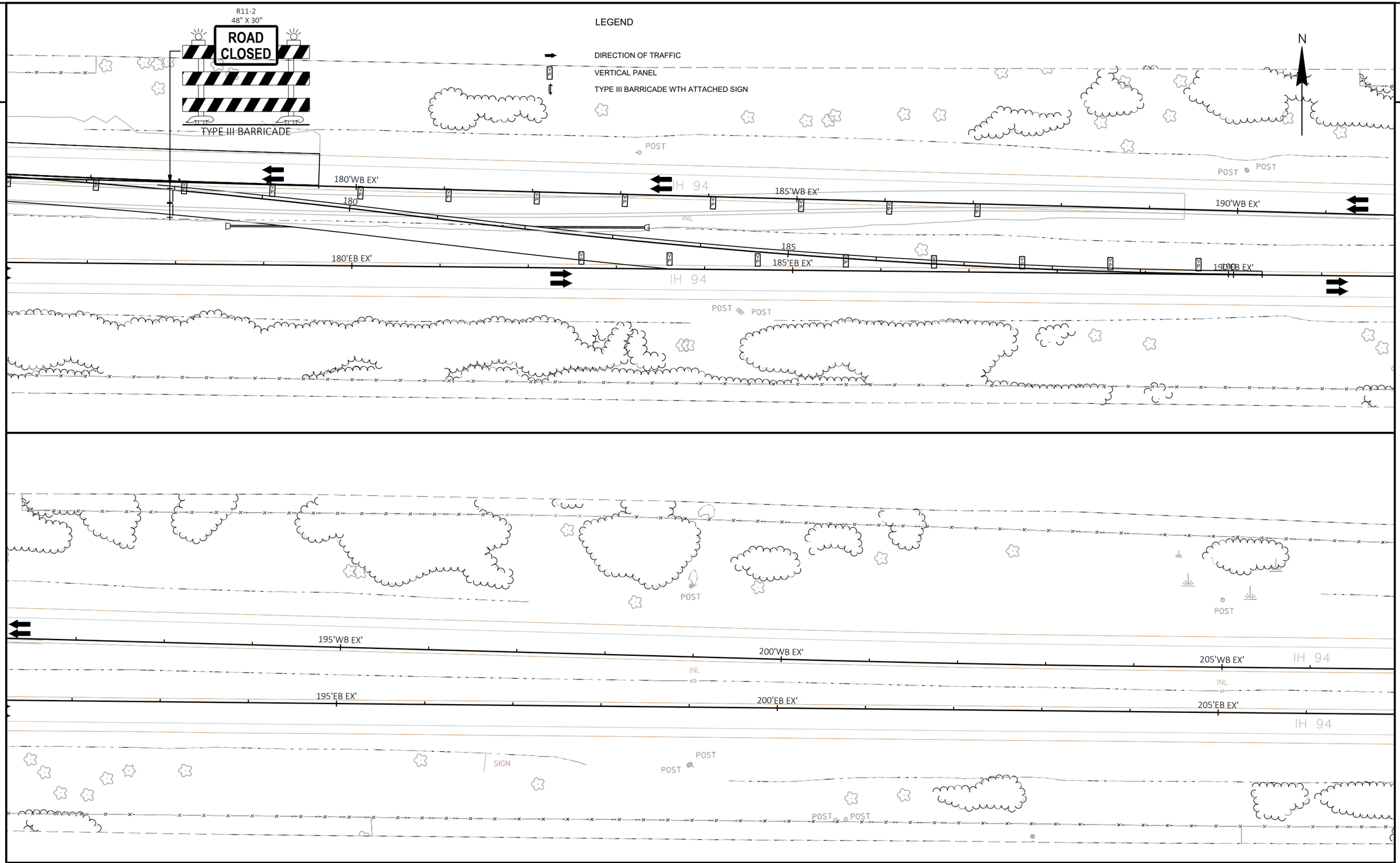
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2B - WINTER SHUTDOWN	SHEET 67	E

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

PLOT DATE : 3/25/2021 3:02 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2



2

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2B - WINTER SHUTDOWN	SHEET 68	E

STAGE 2C:
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

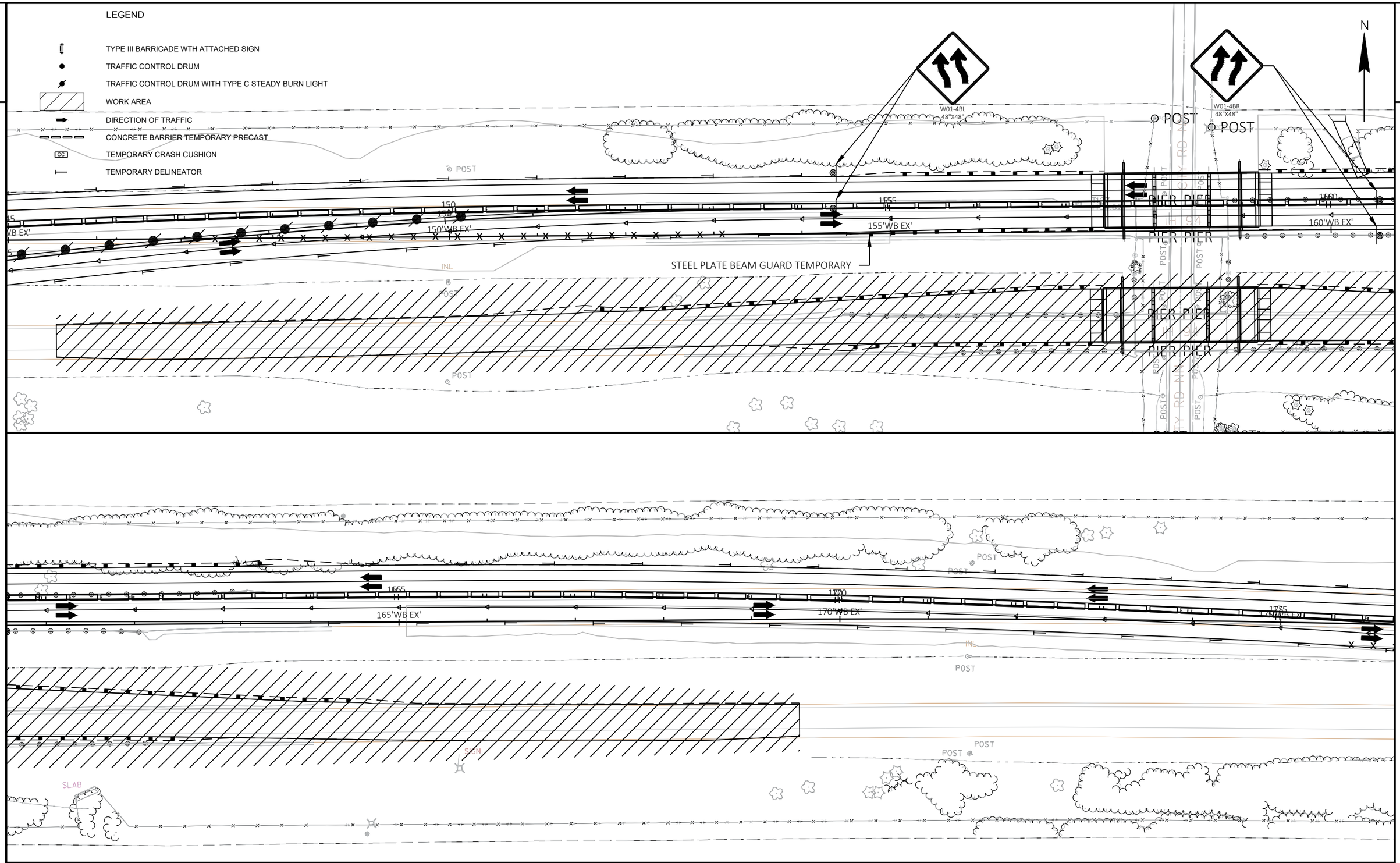
115'WB EX'
120'WB EX'
125'WB EX'
130'WB EX'
135'WB EX'
140'WB EX'
145'WB
SIGN
INL
POST
POST
POST
T106
1119.61
T114
1118.90
IH 94
IH 94
IH 94
RIPRAP
WO1-4BL
WO1-6
48" X 24"
R11-2
48" X 30"
ROAD
CLOSED
TYPE III BARRICADE
TYPE III BARRICADE

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2C	SHEET 69	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 2C	SHEET 70	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026002-S2C.DWG
LAYOUT NAME - 02

PLOT DATE : 3/25/2021 3:05 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

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 TEMPORARX PRECAST
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

N

180'WB EX'

180

185'WB EX'

CC

190'WB EX'

185

190

IH 94

INL

POST

WO1-6
48" X 24"

TYPE III BARRICADE

195'WB EX'

200'WB EX'

205'WB EX'

W01-4BR
48"X48"

SIGN

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2C	SHEET 71	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\026002-S2C.DWG
LAYOUT NAME - 03

PLOT DATE : 3/25/2021 3:05 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

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

BP: 137+08.63'WB'
PC: 137+58.63'WB'
PT: 142+58.63'WB'
130'WB EX'
135'WB EX'
140'WB EX'
145'WB EX'
130'EB EX'
135'EB EX'
140'EB EX'
145'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 3	SHEET 72	E

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'

PC: 165+08.63'WB'

PT: 173+08.63'WB'

POST

PIER PIER

IH 94

CTY RD NN

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'

INL

165'WB'

165'WB EX'

170'WB'

170'WB EX'

175'WB'

175'WB EX'

165'EB'

165'EB EX'

170'EB'

170'EB EX'

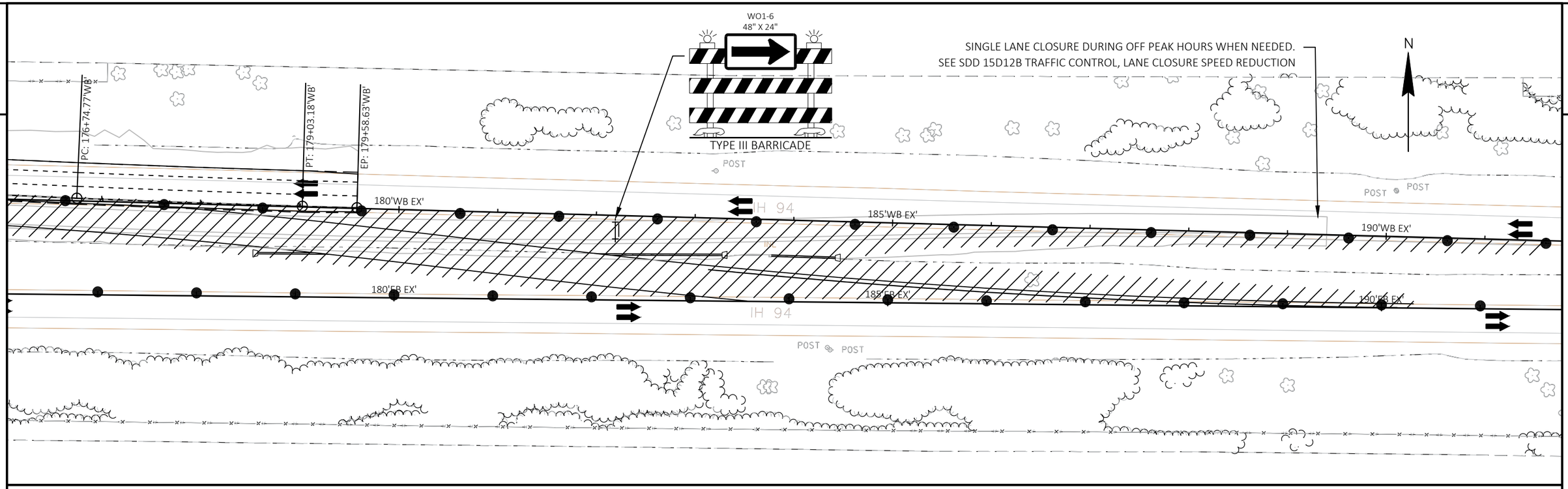
175'EB EX'

SIGN

SLAB

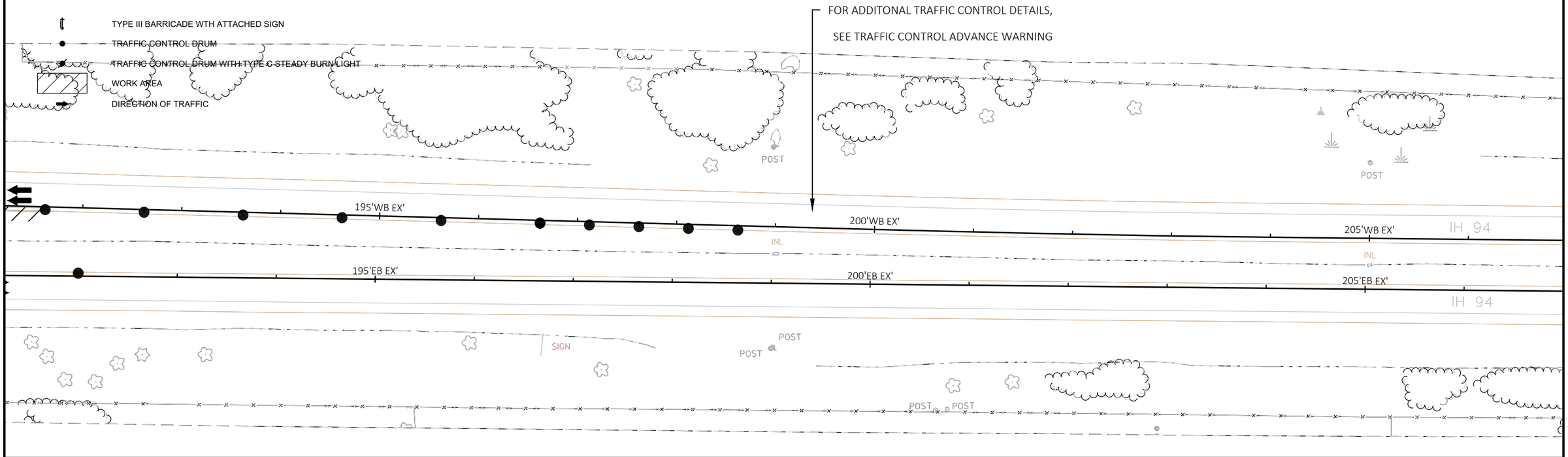
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 3	SHEET 73	E

2

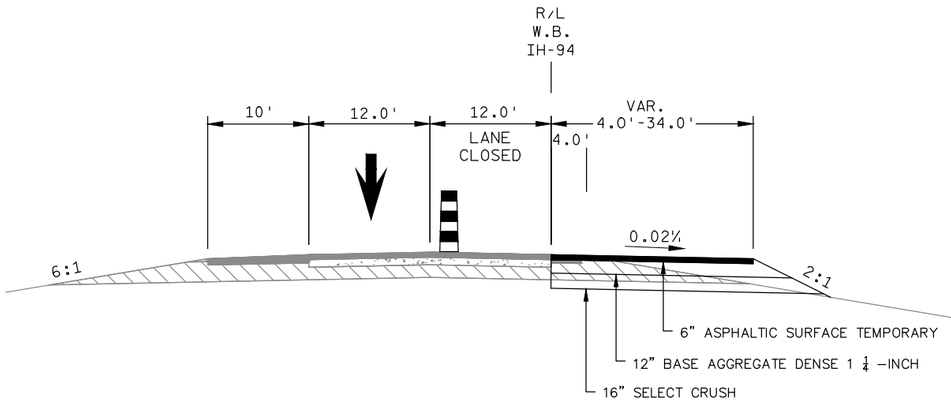


LEGEND

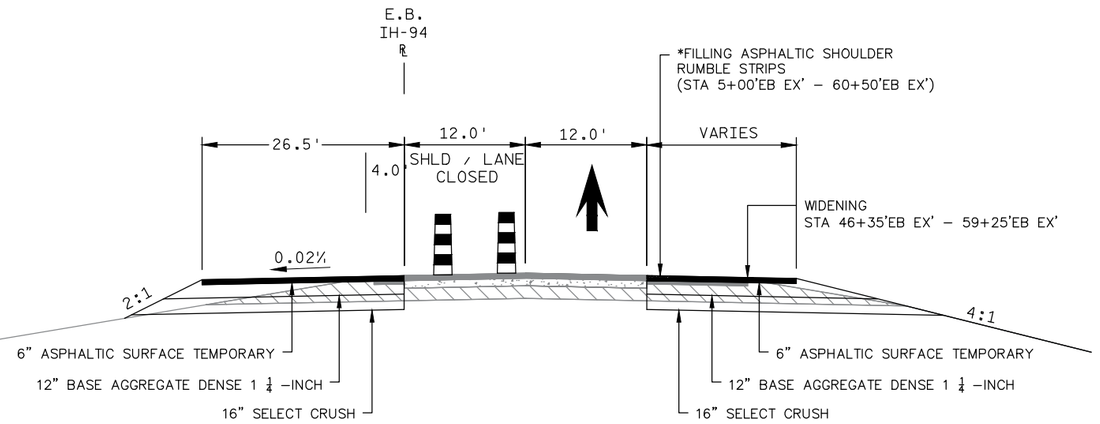
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 3	SHEET 74	E



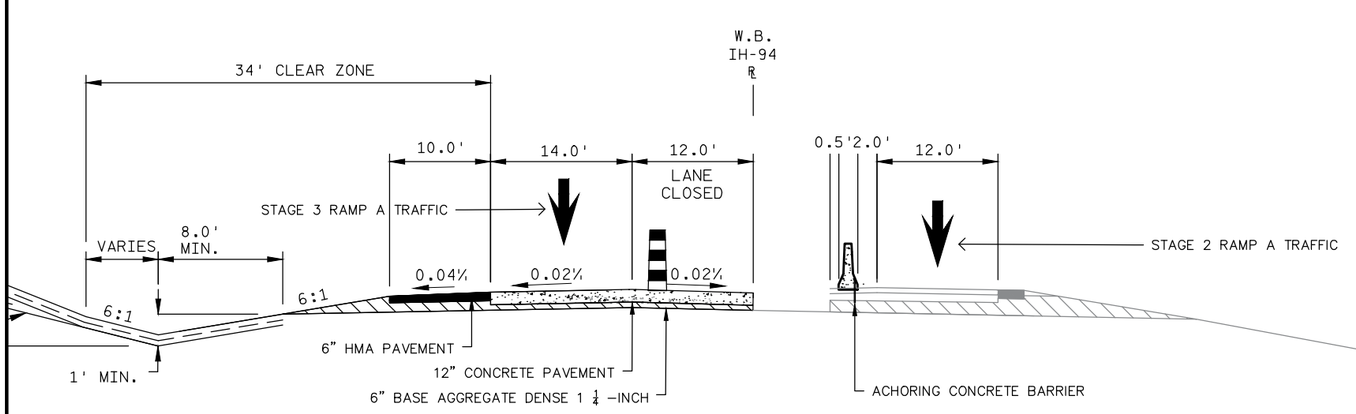
NOTE: BASE SHALL BE IN-PLACE PRIOR TO OPENING ADJACENT LANE WITH 3:1 SAFETY SLOPE AND 2' WIDE TOP.

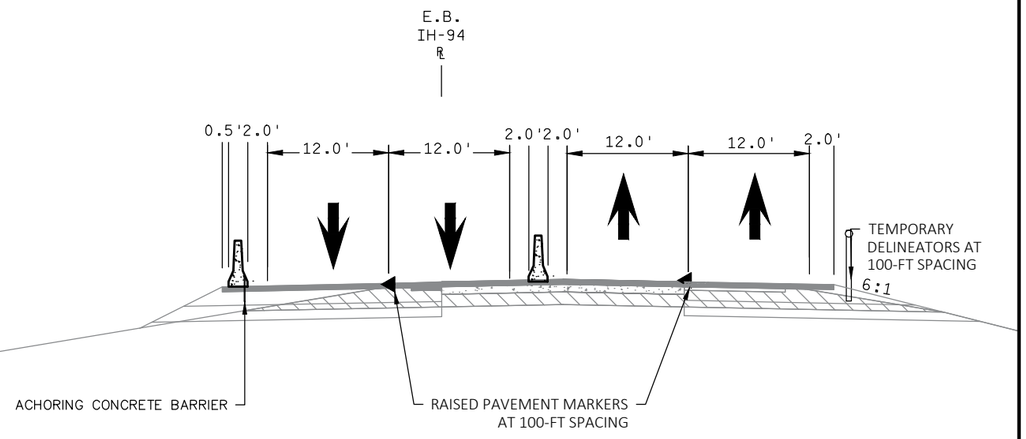


*FILL ASPHALTIC SHOULDERS PRIOR TO CLOSING INSIDE SHOULDERS

STAGE 1A

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

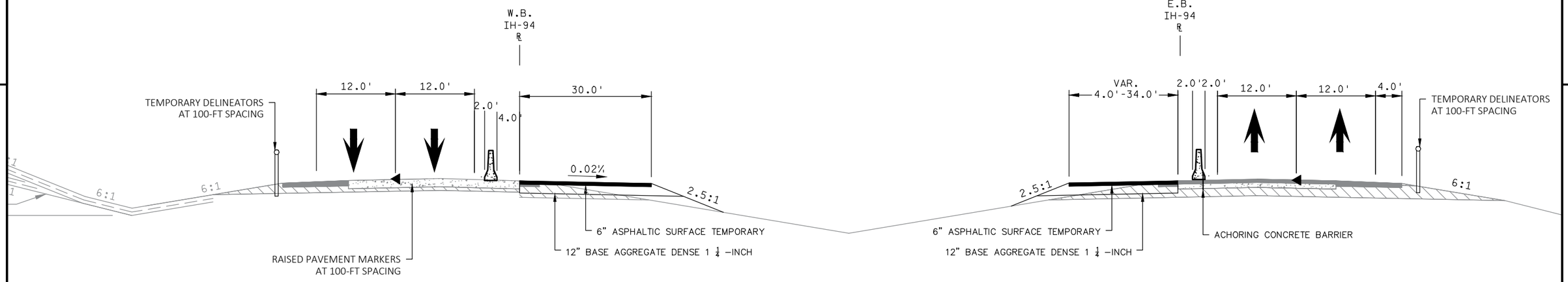




STAGE 2 & 3

CONSTRUCT RAMP 'A' AND STRUCTURE B-55-0286 (STAGE 2)
CONSTRUCT IH 94 WB DRIVING LANE AND OUTSIDE SHOULDER; STA 8+23'WB'-21+00'WB' (STAGE 2)
CONSTRUCT IH 94 WB LANES AND OUTSIDE SHOULDER; STA 21+00'WB'-36+93'WB' (STAGE 2)
CONSTRUCT IH 94 WB PASSING LANES; STA 8+23'WB'-21+00'WB' (STAGE 3)
CONSTRUCT IH 94 WB LANES, OUTSIDE SHOULDER, AND STRUCTURE B-55-0282; STA 36+93'WB'-57+10'WB' (STAGE 3)

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TYPICAL SECTIONS FOR TRAFFIC CONTROL STAGING	SHEET 75	E

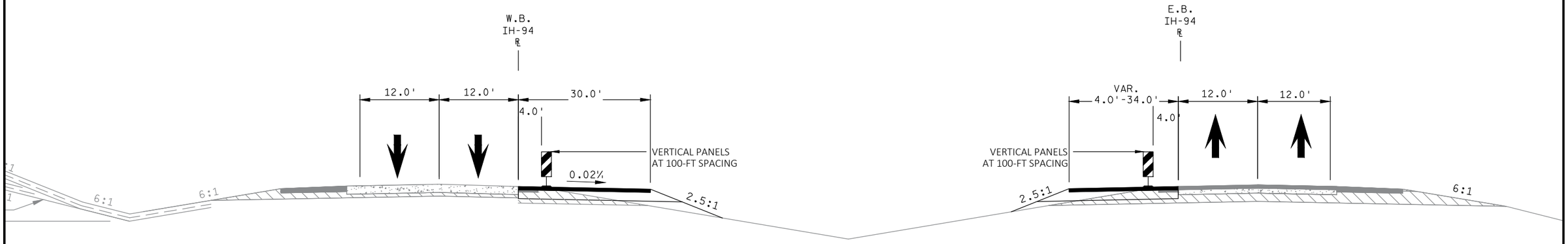


STAGE 4A

REMOVE IH 94 WB CROSS OVERS

CONSTRUCT IH 94 EB CROSS OVERS

CONSTRUCT IH 94 WB TEMPORARY WIDENING

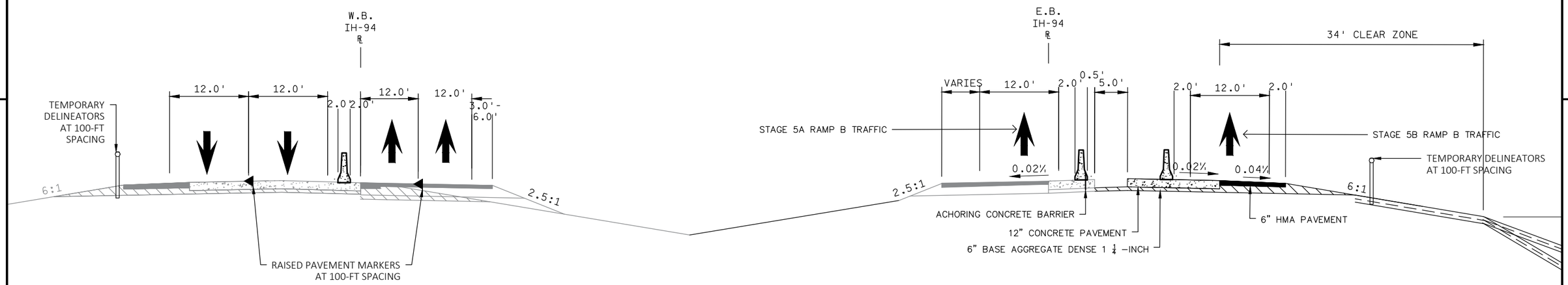


STAGE 1B & 4B

WINTER SHUTDOWN

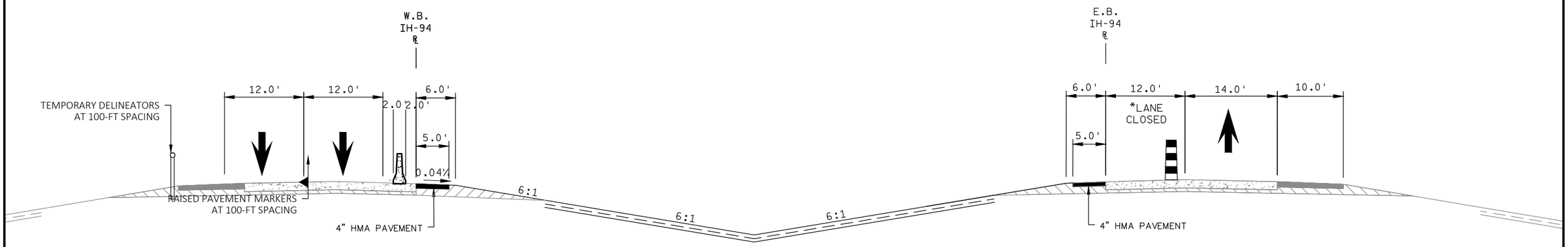
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TYPICAL SECTIONS FOR TRAFFIC CONTROL STAGING	SHEET 76	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026000-S-TS-I94-CTHB.DWG
LAYOUT NAME - 02
PLOT DATE : 3/25/2021 3:10 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 DRIVING LANE AND OUTSIDE SHOULDER; STA 24+50'EB'-STA 37+00'EB' (STAGE 5A)
CONSTRUCT STRUCTURE B-55-0281 (STAGE 5B)
CONSTRUCT IH 94 EB PASSING LANE AND SHOULDERS; STA 24+50'EB'-STA 37+00'EB' (STAGE 5B)
CONSTRUCT IH 94 EB LANES AND SHOULDERS; STA 37+00'EB'-62+97'EB' (STAGE 5B)



*WHEN NEEDED FOR CROSS OVER REMOVE/RESTORE

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 77	E

STAGE 1A:
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.
CONSTRCUT 94EB OUTSIDE WIDENING.
CONSTRUCT RAMP A TEMPORARY WIDENING.

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

N

BP: 0+00.00
PT: 3+50.00
IH 94 WB CROSSOVER
PC: 7+92.63
PT: 11+36.56

-5'WB EX'
0'WB EX'
5'WB EX'
-5'EB EX'
0'EB EX'
-1'EB EX'

SIGN
STA 11+75 - 12+22
1-15" AEW REQ'D
1-15" X 38' CULVERT PIPE TEMPORARY REQ'D
1-15" X 8' CULVERT PIPE TEMPORARY REQ'D

T103
1199.48

STA 5+50 - 8+96
1-15" X 320' CULVERT PIPE TEMPORARY REQ'D
2-15" AEW REQ'D

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

STA 12+10.6, 22.6' LT
1-MANHOLES SPECIAL 4-FT DIAMETER TEMPORARY
STA 12+22.3, 22.6' LT
1-RECONSTRUCTING INLETS

SIGN

STA 18+75 - 19+22
1-15" AEW REQ'D
1-15" X 36' CULVERT PIPE TEMPORARY REQ'D
1-15" X 10' CULVERT PIPE TEMPORARY REQ'D
STA 19+10, 24.9' LT
1-MANHOLES SPECIAL 4-FT DIAMETER TEMPORARY
STA 19+22.6, 25.4' LT
1-RECONSTRUCTING INLETS

POST

STA 26+80 - 27+26
1-15" AEW REQ'D
1-15" X 36' CULVERT PIPE TEMPORARY REQ'D
1-15" X 10' CULVERT PIPE TEMPORARY REQ'D
STA 27+15, 26.6' LT
1-MANHOLES SPECIAL 4-FT DIAMETER TEMPORARY
STA 27+26, 27.1' LT
1-RECONSTRUCTING INLETS

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

FILL RUMBLE STRIPS

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

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026001-S1A-I94-CTHB.DWG
LAYOUT NAME - 01
PLOT DATE : 3/25/2021 3:13 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

2

STA 34+75 - 35+22
1-15" AEW REQ'D
1-15" X 36' CULVERT PIPE TEMPORARY REQ'D
1-15" X 10' CULVERT PIPE TEMPORARY REQ'D
STA 35+11, 21.3' LT
1-MANHOLES SPECIAL 4-FT DIAMETER TEMPORARY
STA 35+22, 21.7' LT
1-RECONSTRUCTING INLETS

N

IH 94
30'WB EX'
30'EB EX'
35'WB EX'
35'EB EX'
40'WB EX'
40'EB EX'
SIGN
POST
SIGN
STA 41+96, 21.4' LT
1-ADJUSTING INLET COVERS

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

PI: 46+10.90

PC: 49+75.90

TEMPORARY WIDENING

STA 51+23 - 51+75
1-15" X 8' CULVERT PIPE TEMPORARY REQ'D
1-15" X 38' CULVERT PIPE TEMPORARY REQ'D
1-15" AEW REQ'D
STA 51+23.9, 27.3' LT
1-RECONSTRUCTING INLETS
STA 51+36.6, 27.5' LT
1-MANHOLES SPECIAL 4-FT DIAMETER TEMPORARY

RIPRAP
POST
CTH B
IH 94
45'WB EX'
45'EB EX'
50'WB EX'
50'EB EX'
55'WB EX'
55'EB EX'
INL

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

FILL RUMBLE STRIPS
AND TEMPORARY WIDENING

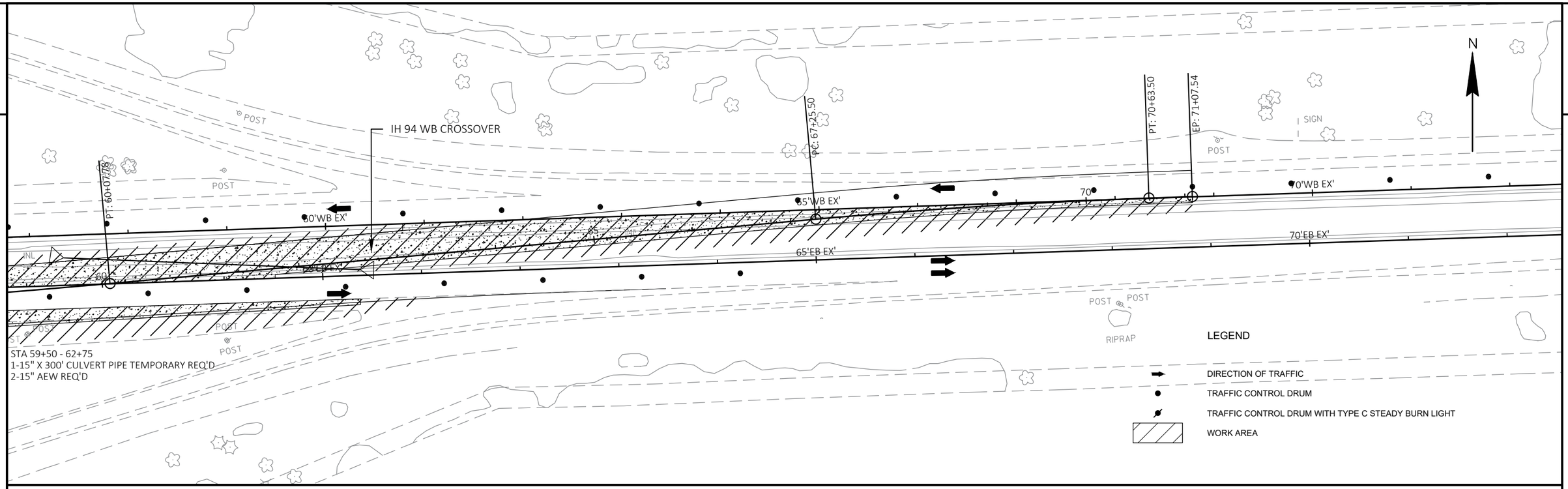
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1A	SHEET 79	E

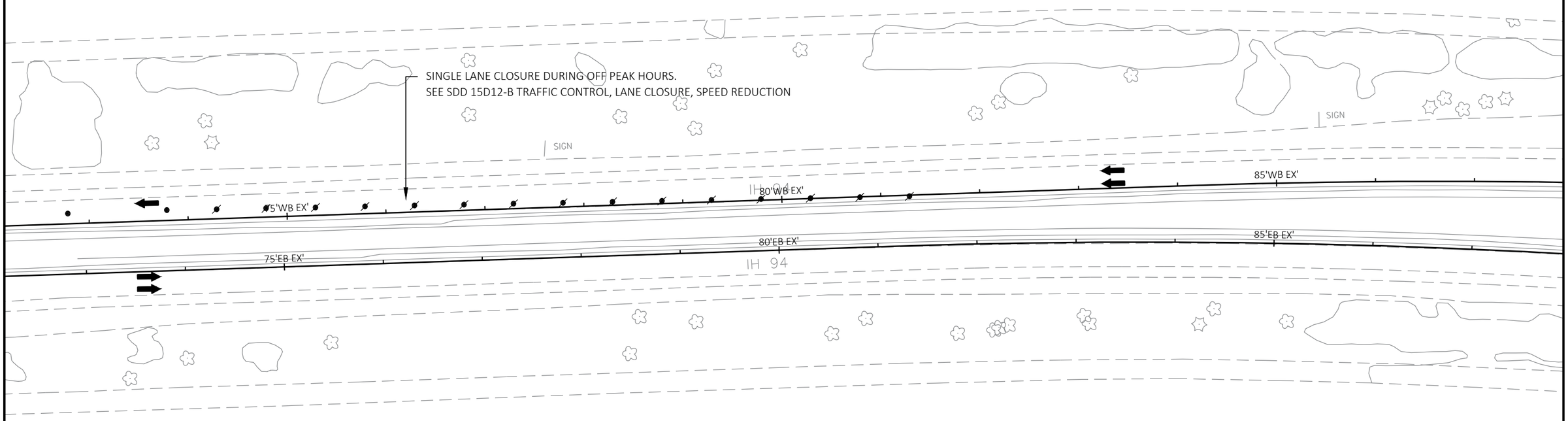
FILE NAME : C:\C3D\10210407\SHEETSPLAN\026001-S1A-I94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 3/25/2021 3:13 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 1A	SHEET 80	E

2

STAGE 1B:
WINTER SHUTDOWN

LEGEND

DIRECTION OF TRAFFIC

VERTICAL PANEL

TYPE III BARRICADE WTH ATTACHED SIGN

N

R11-2
48" X 30"
ROAD CLOSED

TYPE III BARRICADE

-5'WB EX'

-5'EB EX'

0'WB EX'

0'EB EX'

5'WB EX'

5'EB EX'

T103
1199.48

SIGN

SIGN

POST

POST

POST

POST

10'WB EX'

IH 94

INL

10'EB EX'

15'WB EX'

INL

15'EB EX'

IH 94

20'WB EX'

20'EB EX'

25'WB EX'

25'EB EX'

POST

SIGN

2

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1B	SHEET 81	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026001-S1B-I94-CTHB.DWG
LAYOUT NAME - 01

PLOT DATE : 3/25/2021 3:17 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

N

IH 94

30'WB EX'

35'EB EX'

35'WB EX'

40'WB EX'

40'EB EX'

INL

IH 94

SIGN

POST

POST

SIGN

LEGEND

DIRECTION OF TRAFFIC

VERTICAL PANEL

TYPE III BARRICADE WTH ATTACHED SIGN

RIPRAP

POST

POST

POST

POST

RIPRAP

CTH B

T121
1114.93

T123
1111.94

IH 94

45'WB EX'

50'WB EX'

55'WB EX'

IH 94

45'EB EX'

50'EB EX'

55'EB EX'

INL

INL

T122
1114.16

T124
1111.78

IH 94

POST

POST

POST

POST

POST

POST

POST

RIPRAP

RIPRAP

CTH B

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1B	SHEET 82	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026001-S1B-I94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 3/25/2021 3:17 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

LEGEND

DIRECTION OF TRAFFIC

VERTICAL PANEL

TYPE III BARRICADE WTH ATTACHED SIGN

N

POST

POST

SIGN

POST

70'WB EX'

65'WB EX'

60'WB EX'

70'EB EX'

65'EB EX'

INL

60'EB EX'

POST

POST

POST

POST

POST

RIPRAP

R11-2
48" X 30"

ROAD CLOSED

TYPE III BARRICADE

SIGN

SIGN

IH 94

85'WB EX'

80'WB EX'

75'WB EX'

85'EB EX'

80'EB EX'

75'EB EX'

IH 94

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 1B	SHEET 83	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026001-S1B-I94-CTHB.DWG
LAYOUT NAME - 03

PLOT DATE : 3/25/2021 3:17 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

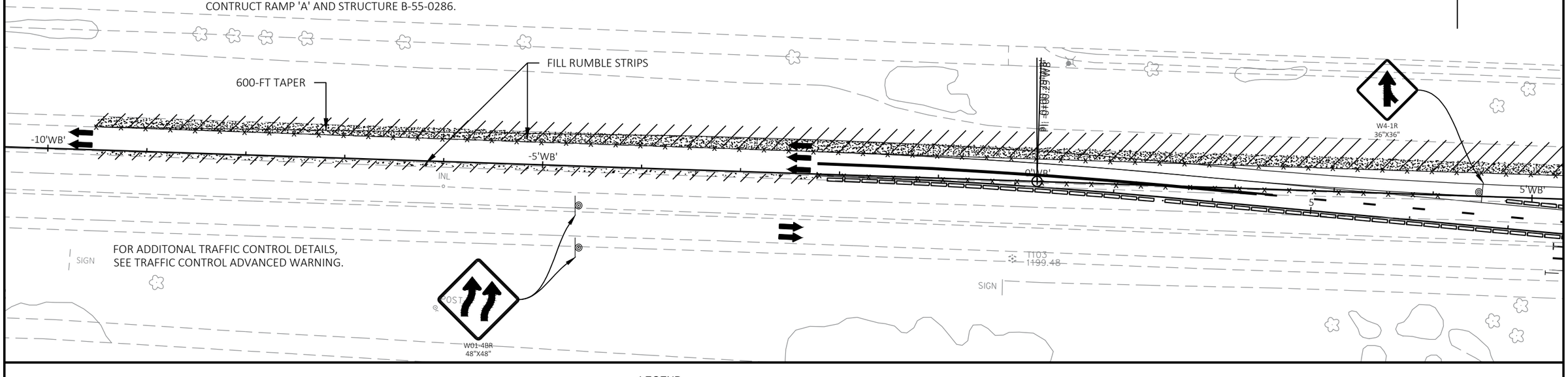
STAGE 2:
TRAFFIC
FOUR LANES OF IH 94 THRU TRAFFIC ON EXISTING EB ROADWAY AND TEMP WIDENING.
WB ENTRANCE RAMP ON EXISTING ALIGNMENT, TRANSITION TO EXISTING WB PASSING LANE.

CONSTRUCTION:
CONSTRUCT WB DRIVING LANE AND OUTSIDE SHOULDER; STA 8+23'WB' TO STA 21+00'WB'
CONSTRUCT WB PASSING LANE, DRIVING LANE AND OUTSIDE SHOULDER; STA 21+00'WB' TO STA 36+93'WB'
CONTRUCT RAMP 'A' AND STRUCTURE B-55-0286.

NOTE:

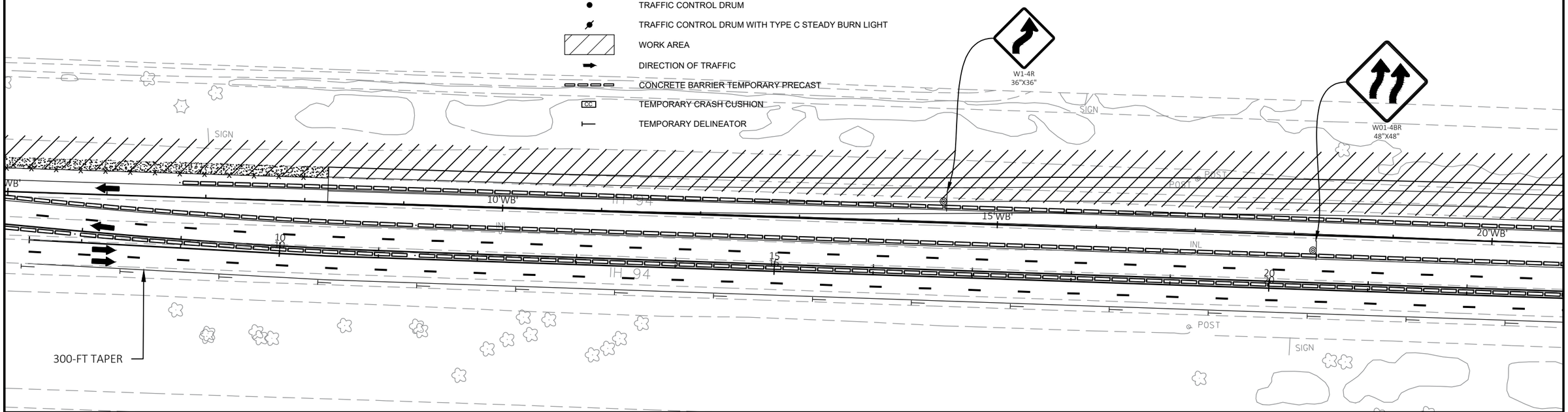
FILL RUMBLE STRIPS PRIOR TO SWITCHING TRAFFIC.

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



PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2	SHEET 84	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026002-S2-I94-CTHB.DWG
LAYOUT NAME - 01

PLOT DATE : 3/25/2021 3:25 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

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

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 2	SHEET 85	E

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

PLOT DATE : 3/25/2021 3:26 PM 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

W01-4BL
48"X48"

FILL RUMBLE STRIPS

FILL RUMBLE STRIPS

PT: 52+47.62 'WB'

66+35.20
-24.00'

65+43.50
+24.00'

T123
1111.94

T124
1111.78

IH 94

CTH B

RIPRAP

POST

SIGN

INL

52

55

60

65

70

55'WB'

60'WB'

65'WB'

70'WB'

75'WB'

80'WB'

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 86	E

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

PLOT DATE : 3/25/2021 3:26 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

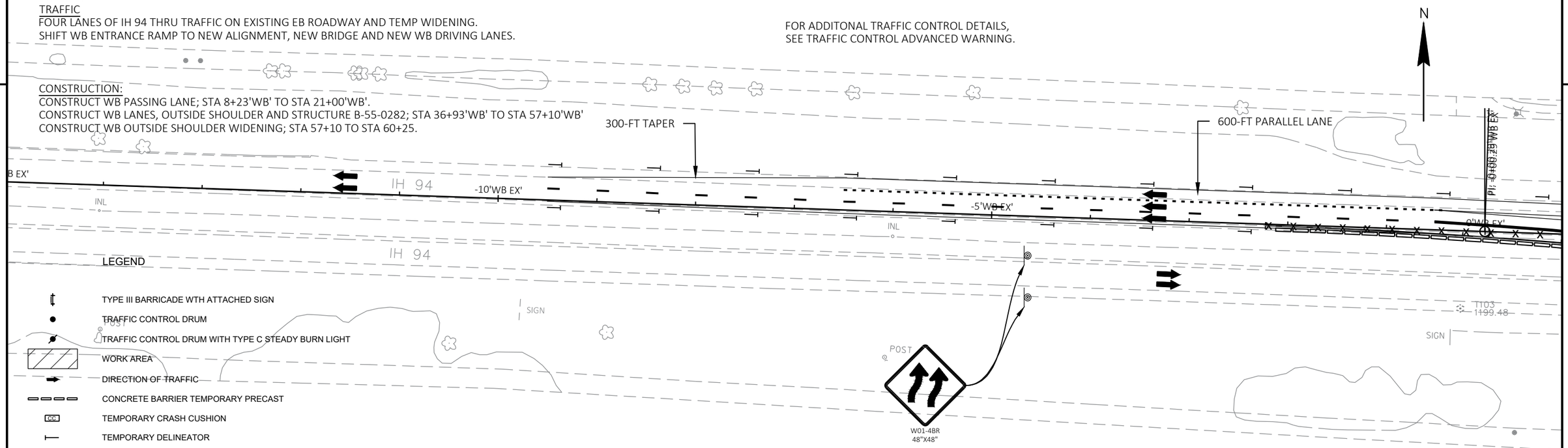
WISDOT/CADDS SHEET 44

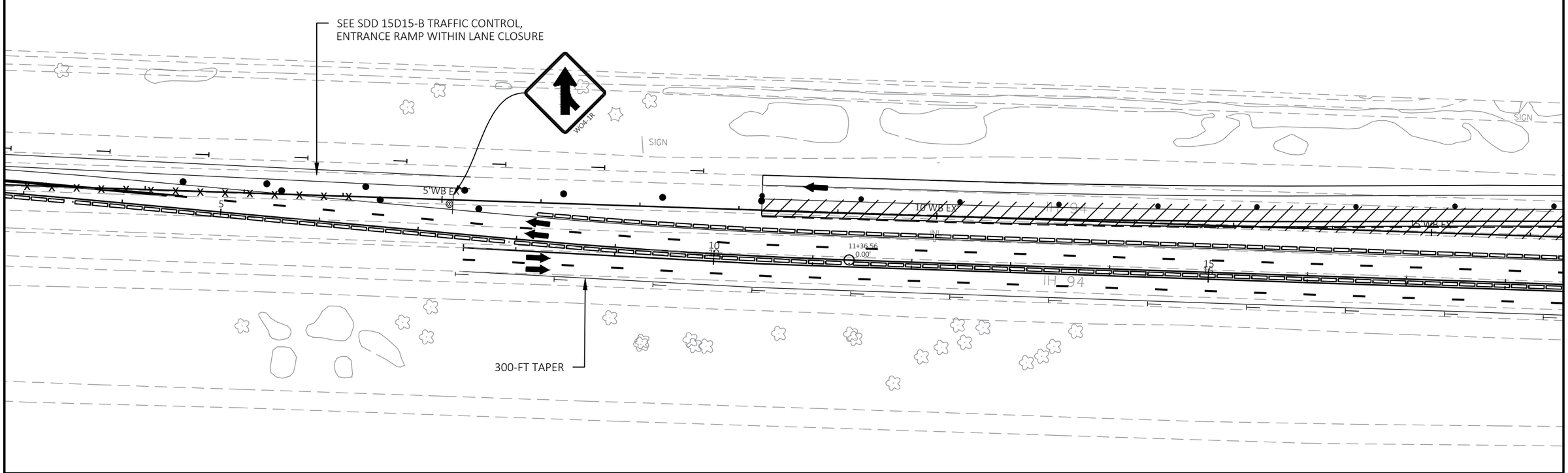
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STAGE 3:
TRAFFIC
FOUR LANES OF IH 94 THRU TRAFFIC ON EXISTING EB ROADWAY AND TEMP WIDENING.
SHIFT WB ENTRANCE RAMP TO NEW ALIGNMENT, NEW BRIDGE AND NEW WB DRIVING LANES.

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

CONSTRUCTION:
CONSTRUCT WB PASSING LANE; STA 8+23'WB' TO STA 21+00'WB'.
CONSTRUCT WB LANES, OUTSIDE SHOULDER AND STRUCTURE B-55-0282; STA 36+93'WB' TO STA 57+10'WB'
CONSTRUCT WB OUTSIDE SHOULDER WIDENING; STA 57+10 TO STA 60+25.





PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 3	SHEET 87	E

2

2

W1-4BR
48"X48"

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

N

POST
POST
POST
POST
INL
20'WB EX'
25'WB EX'
30'WB EX'
IH 94
20
25
30
SIGN
SIGN

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

TEMPORARY BEAMGUARD

35'WB EX'
40'WB EX'
45'WB EX'
BC:44+32.19'WB EX'
IH 94
35
40
45
POST
POST
POST
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

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 3	SHEET 88	E

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

PLOT DATE : 3/26/2021 11:11 AM 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

P: 52+47.62 WB EX

50

55

60

65

70

75

30'WB EX

55'WB EX'

60'WB EX'

65'WB EX'

70'WB EX'

75'WB EX'

INL

T124
1111.94

T124
1111.78

65+43.30
-24.00'

66+35.20
-24.00'

65+45.30
-24.00'

POST

RIPRAP

SIGN

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 3	SHEET 89	E

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

PLOT DATE : 3/26/2021 11:11 AM 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:
REMOVE I 94 WB CROSS OVERS AND RESTORE MEDIAN.
CONSTRUCT I 94 EB CROSS OVERS AND TEMPORARY WIDENING ON I 94 WB MEDIAN.

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

N

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

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

POST
W01-4BR
48"X48"

SIGN
SIGN
5'WB EX'
10'WB EX'
IH 94
INL
15'WB'
IH 94
10
15
300-FT TAPER

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 4A	SHEET 90	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026004-S4A-I94-CTHB.DWG
LAYOUT NAME - 01
PLOT DATE : 3/25/2021 3:31 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

2

N

STA 64+50 - 68+00
1-15" X 342' CULVERT PIPE TEMPORARY REQ'D
2-15" AEW REQ'D

STA 23+50 - 26+00
1-15" X 254' CULVERT PIPE TEMPORARY REQ'D
2-15" AEW REQ'D

MATCH PROPOSE INLET
(SEE X-SECTIONS)

MATCH PROPOSE INLET
(SEE X-SECTIONS)

20'WB'
20'WB EX'
25'WB'
25'WB EX'
30'WB'
30'WB EX'
35'WB'
35'WB EX'
40'WB'
40'WB EX'
45'WB'
45'WB EX'

IH 94

POST
SIGN
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

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 4A	SHEET 91	E

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

PLOT DATE : 3/25/2021 3:31 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
- TEMPORARY CRASH CUSHION
- TEMPORARY DELINEATOR

N

MATCH EXISTING INLET
(SEE X-SECTIONS)

MATCH EXISTING INLET
(SEE X-SECTIONS)

CTH B

TH 94

RIPRAP

RIPRAP

T123
1111.94

T124
1111.78

50'WB EX'

55'WB EX'

60'WB EX'

65'WB EX'

70'WB EX'

75'WB EX'

50

55

60

65

INL

POST

SIGN

STA 64+50 - 68+00
1-15" X 342' CULVERT PIPE TEMPORARY REQ'D
2-15" AEW REQ'D

300-FT TAPER

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

W01-4BR
48"X48"

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 4A	SHEET 92	E

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

PLOT DATE : 3/25/2021 3:31 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

STAGE 4B:
WINTER SHUTDOWN

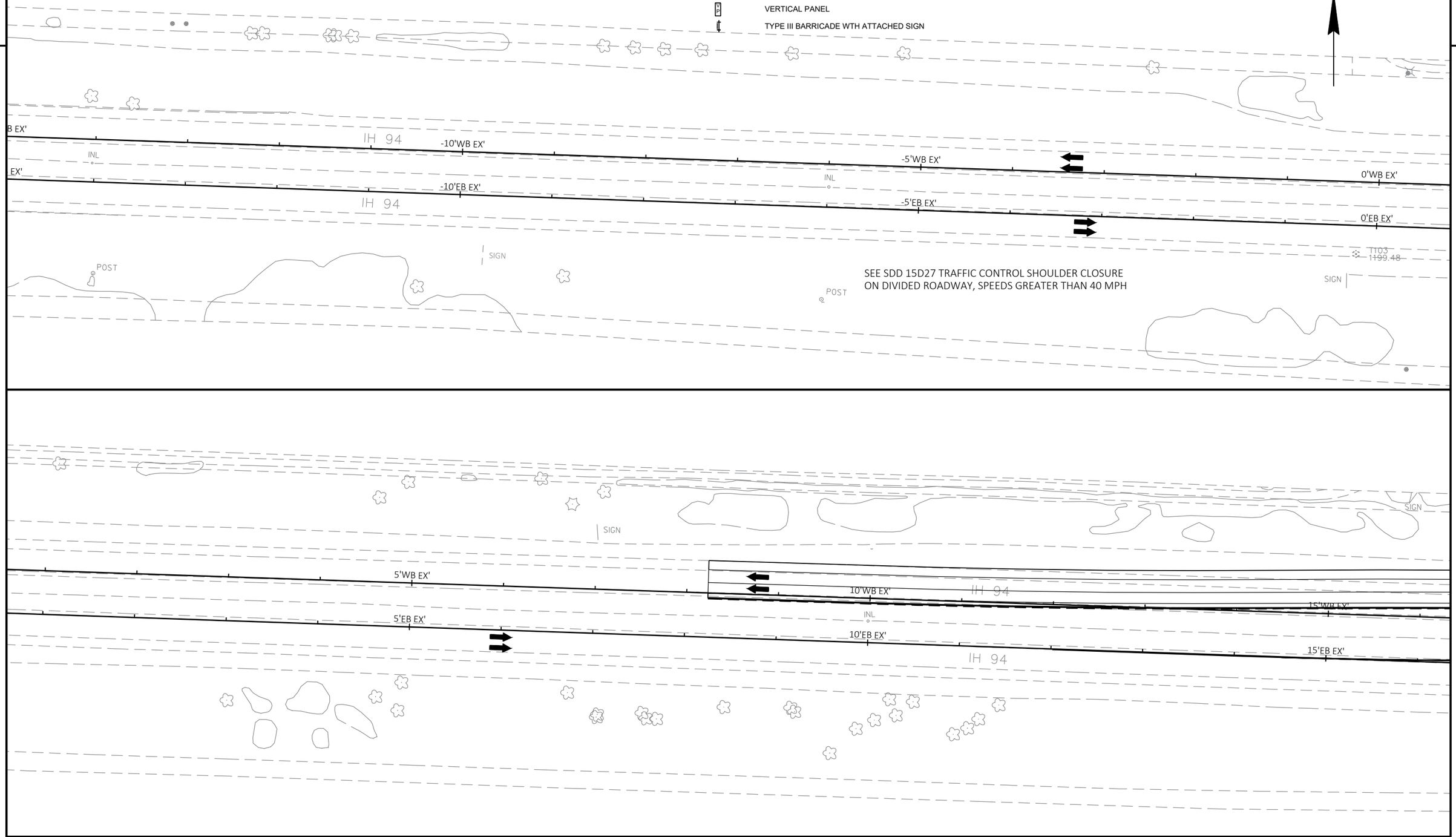
LEGEND

DIRECTION OF TRAFFIC

VERTICAL PANEL

TYPE III BARRICADE WTH ATTACHED SIGN

N



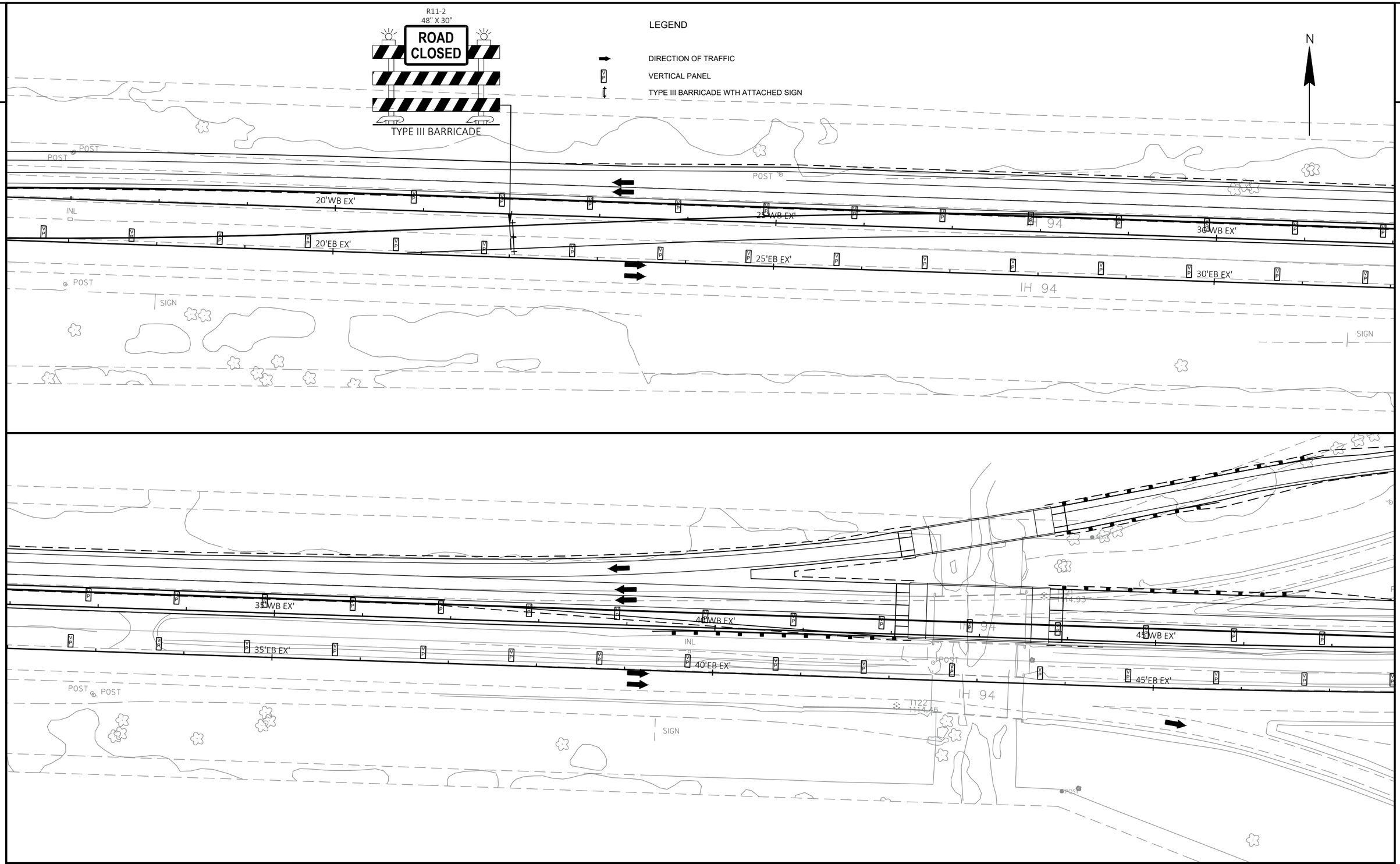
SEE SDD 15D27 TRAFFIC CONTROL SHOULDER CLOSURE
ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

2

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 4B	SHEET 93	E

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

PLOT DATE : 3/25/2021 3:35 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT



2

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

2

N

LEGEND

DIRECTION OF TRAFFIC

VERTICAL PANEL

TYPE III BARRICADE WTH ATTACHED SIGN

CTH B

IH 94

INL

50'EB EX'

55'EB EX'

60'EB EX'

55'WB EX'

60'WB EX'

T123
1111.94

T124
1111.78

RIPRAP

POST

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'

65'EB EX'

70'WB EX'

70'EB EX'

75'WB EX'

75'EB EX'

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 4B	SHEET 95	E

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

PLOT DATE : 3/25/2021 3:36 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

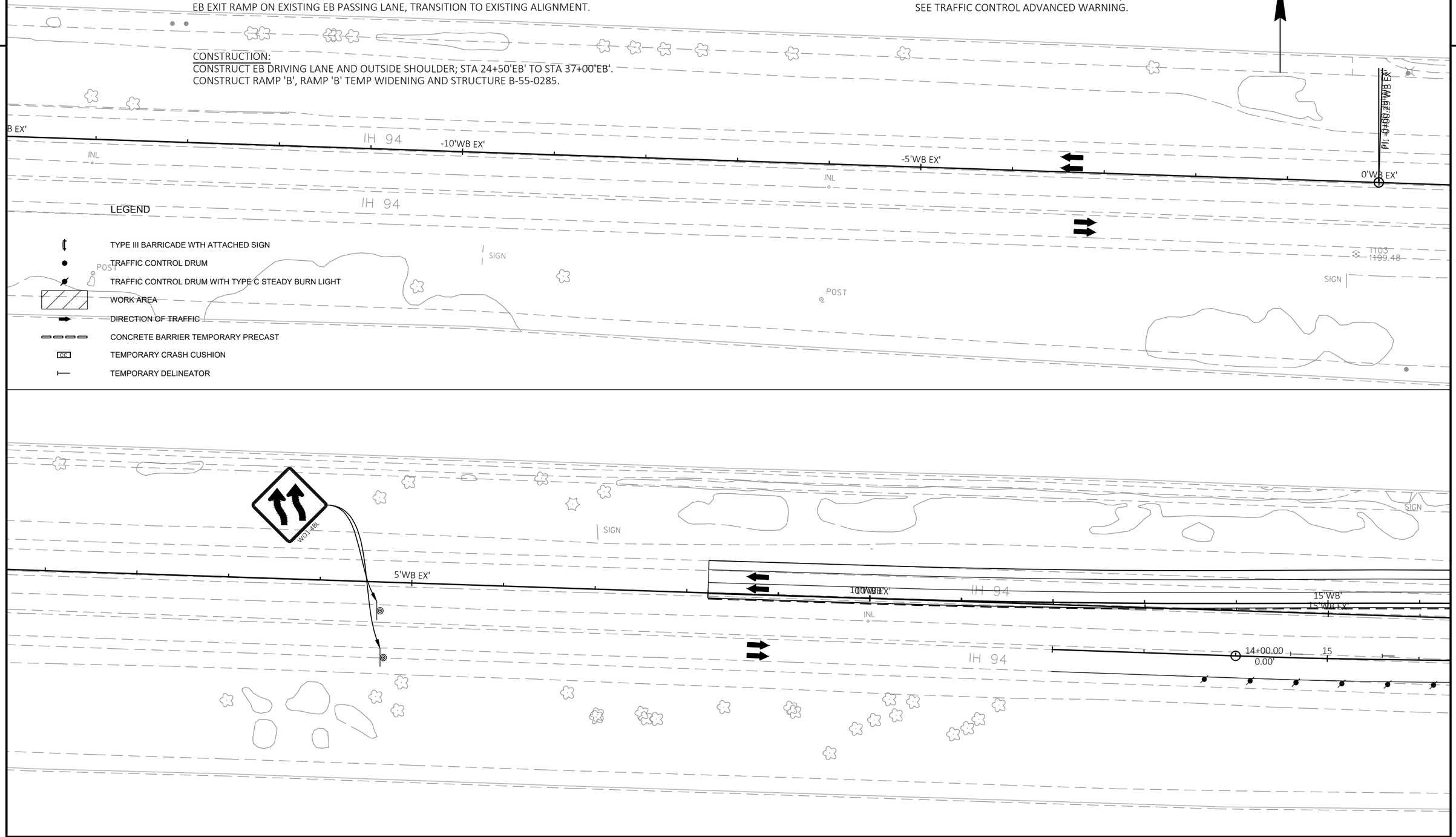
2

STAGE 5A:
TRAFFIC
FOUR LANES OF IH 94 THRU TRAFFIC ON NEW WB ROADWAY AND TEMP WIDENING.
EB EXIT RAMP ON EXISTING EB PASSING LANE, TRANSITION TO EXISTING ALIGNMENT.

CONSTRUCTION:
CONSTRUCT EB DRIVING LANE AND OUTSIDE SHOULDER; STA 24+50'EB' TO STA 37+00'EB'.
CONSTRUCT RAMP 'B', RAMP 'B' TEMP WIDENING AND STRUCTURE B-55-0285.

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

N



PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 5A	SHEET 96	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

N

EXIT 24
E5-1A
72"X60"

POST
20'WB'
20'WB EX'
INL
20
18+81.71
24.00'
SIGN
W01-6
48"X24"
21+35.69
24.00'
R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE
25'WB'
25'WB EX'
IH 94
30'WB'
30'WB EX'
30+00.00
26.00'
SIGN

353WB'
35'WB EX'
37+49.68
26.00'
40'WB'
40'WB EX'
INL
41+49.68
21.00'
IH 94
PC: 44+72.19'WB EX'
45'WB'
45'WB EX'
45+00.00
21.00'
R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE
SIGN
W01-6
48"X24"

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 5A	SHEET 97	E

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

PLOT DATE : 3/25/2021 3:41 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

N

POST

RIPRAP

CTH B

PT: 52+47.62 WB EX

IH 94

T124
1111.94

50
50'WB
50'WB EX'

55
55'WB

60
60'WB EX'

INL

41+78.42
26.00'

W01-4BR

TEMPORARY WIDENING

REMOVE MEDIAN ISLAND

MH

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

SIGN

W04-1R

65'WB EX'

70'WB EX'

75'WB EX'

70

65+77.93
24.00'

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

450-FT PARALEL LANE

300-FT TAPER

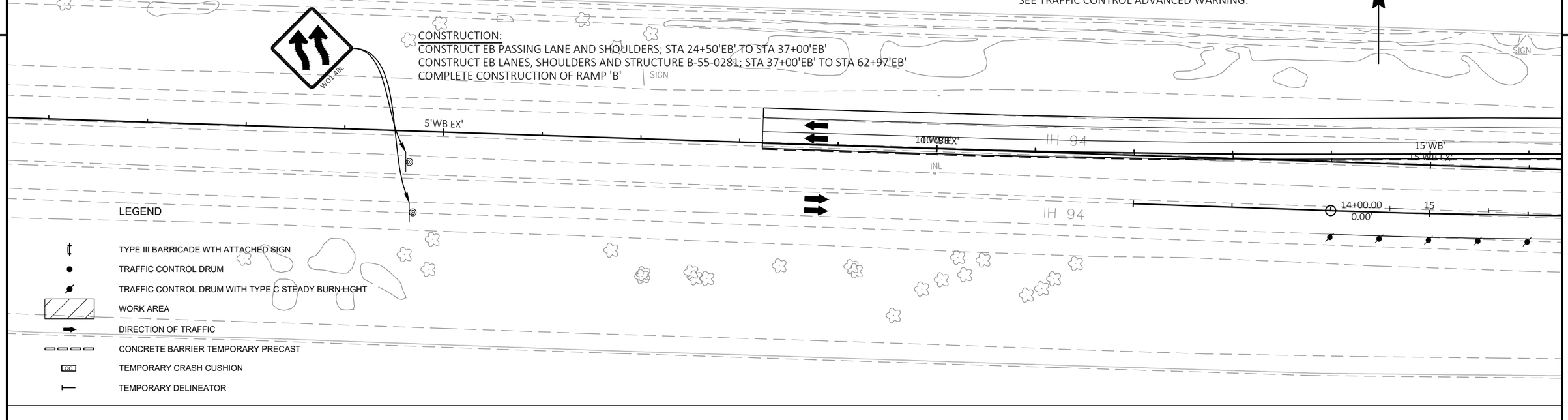
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 5A	SHEET 98	E

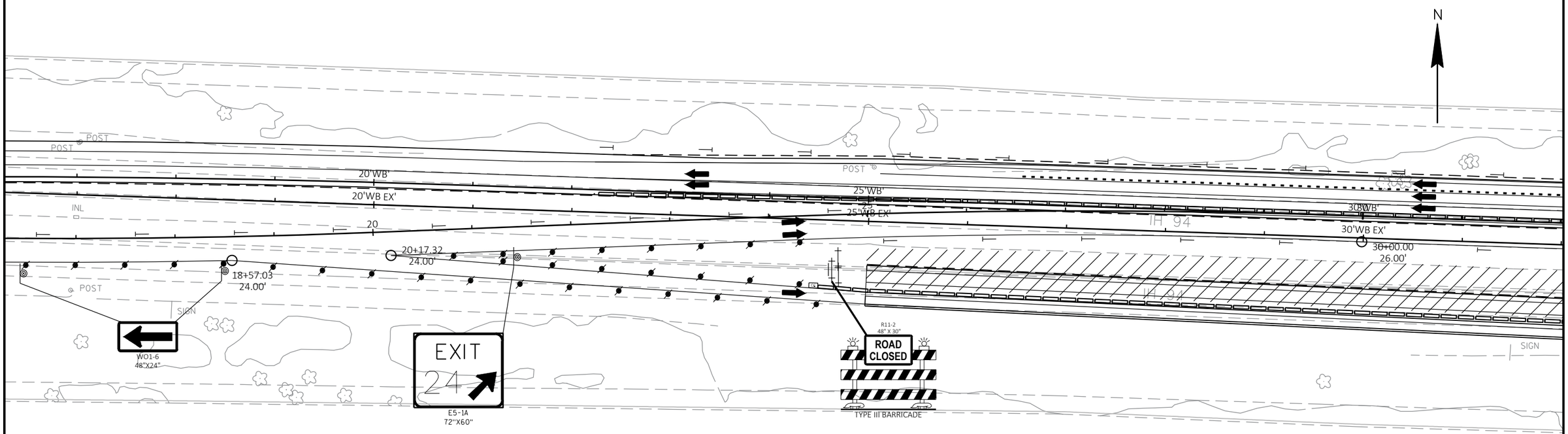
STAGE 5B:
TRAFFIC
FOUR LANES OF IH 94 THRU TRAFFIC ON NEW WB ROADWAY AND TEMP WIDENING
SHIFT EB EXIT RAMP TO NEW EB DRIVING LANE, NEW BRIDGE AND NEW ALIGNMENT

CONSTRUCTION:
CONSTRUCT EB PASSING LANE AND SHOULDERS; STA 24+50'EB' TO STA 37+00'EB'
CONSTRUCT EB LANES, SHOULDERS AND STRUCTURE B-55-0281; STA 37+00'EB' TO STA 62+97'EB'
COMPLETE CONSTRUCTION OF RAMP 'B'

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

N





PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 5B	SHEET 99	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026005-SSB-I94-CTHB.DWG
LAYOUT NAME - 01
PLOT DATE : 3/25/2021 3:48 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : ############

2

2

35'WB'
35'WB EX'
37+49.68
26.00'
40'WB'
40'WB EX'
41+49.68
21.00'
45'WB'
45'WB EX'
45+00.00
21.00'
IH 94
INL
POST
SIGN
WO1-6
48"X24"
WO1-48R
50
50 WB
50 WB EX'
41+78.42
26.00'
55
55'WB
60
60'WB EX'
RIPRAP
CTH B
MH
REMOVE MEDIAN ISLAND
TEMPORARY WIDENING

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

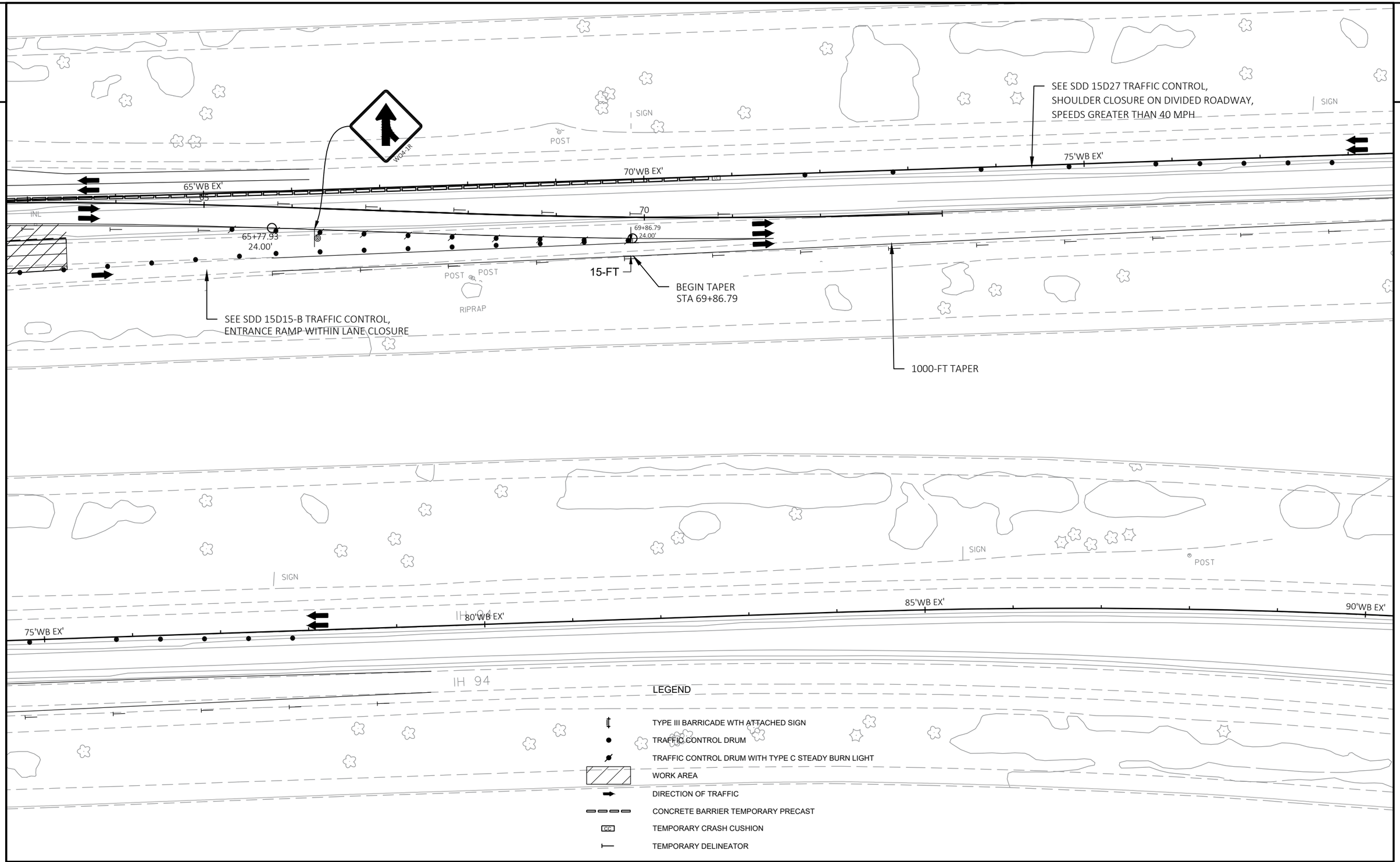
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 5B	SHEET 100	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026005-S5B-I94-CTHB.DWG
LAYOUT NAME - 02

PLOT DATE : 3/25/2021 3:48 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 5B	SHEET 101	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026005-S5B-I94-CTHB.DWG
LAYOUT NAME - 03
PLOT DATE : 3/25/2021 3:49 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

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 'B' WIDENING.

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

N

2

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

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

2

2

N

W01-4BL

20'WB

20'WB EX'

20'EB EX'

25'WB

25'WB EX'

25'EB EX'

30'WB

30'WB EX'

30'EB EX'

IH 94

POST

SIGN

INL

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

35'WB

35'WB EX'

35'EB EX'

40'WB

40'WB EX'

40'EB EX'

45'WB

45'WB EX'

45'EB EX'

IT22
H10.16

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 6	SHEET 103	E

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

PLOT DATE : 3/25/2021 3:53 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

IH 94

CTH B

50'WB EX'

55'WB EX'

60'WB EX'

50'EB EX'

55'EB EX'

60'EB EX'

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

POST

RIPRAP

SIGN

MH

INL

T124
1111.94

T124
1111.78

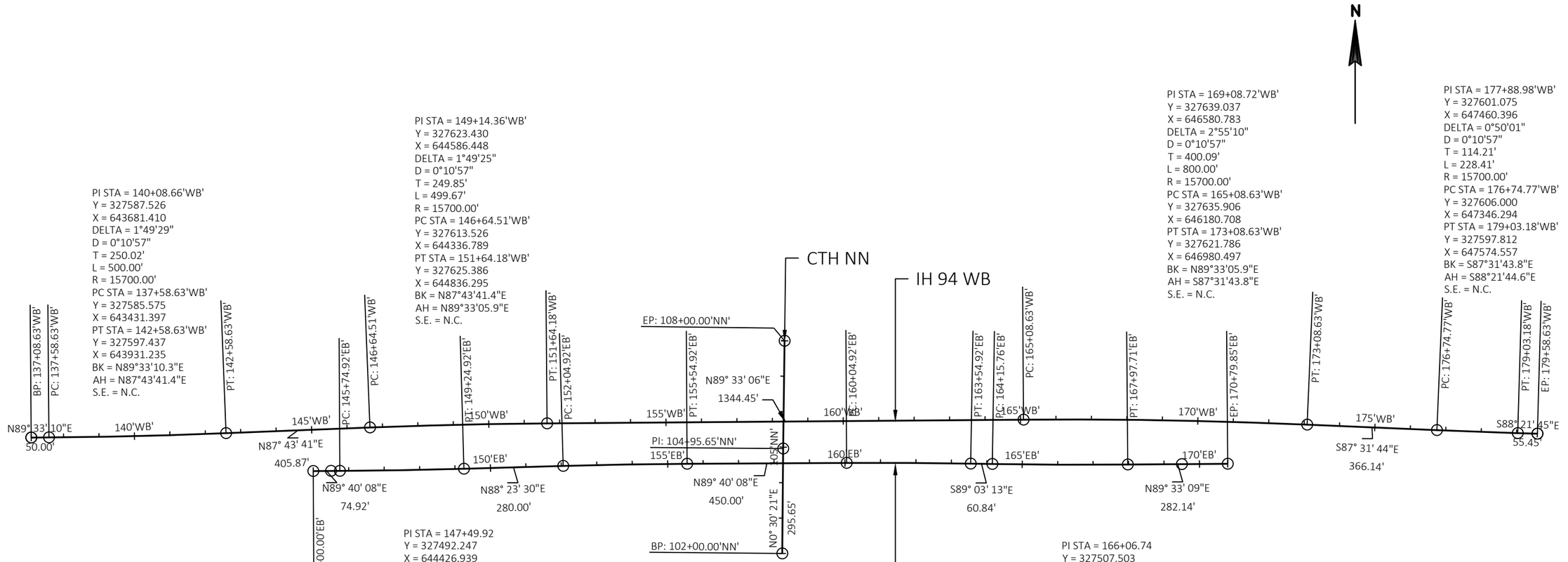
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL STAGE 6	SHEET 104	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\026006-S6-I94-CTHB.DWG
LAYOUT NAME - 03

PLOT DATE : 3/25/2021 3:53 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	ALIGNMENT DETAILS - PROPOSED	SHEET 105	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

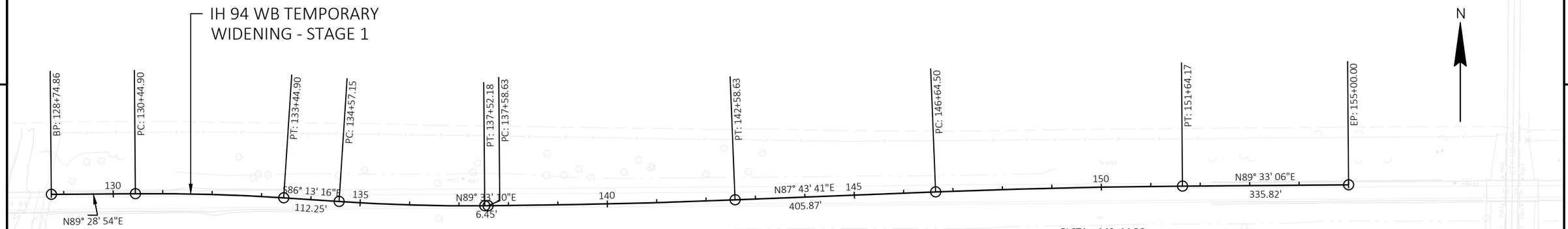
7043.34'

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 106	E

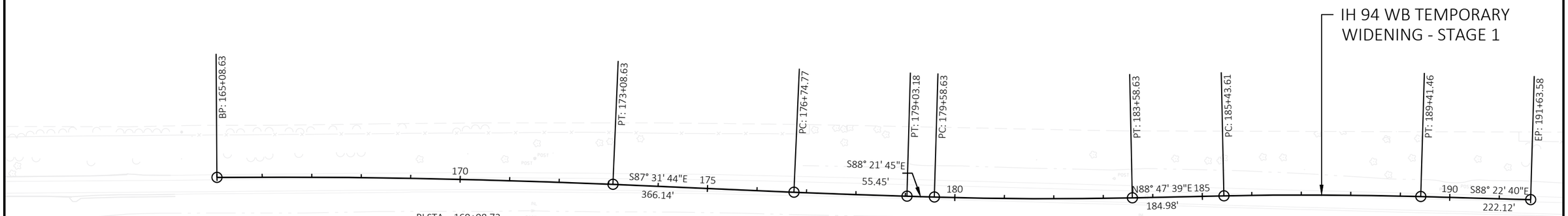


PI STA = 131+94.97
Y = 327611.388
X = 642868.362
DELTA = 4°17'50"
D = 1°25'57"
T = 150.07'
L = 300.00'
R = 4000.00'
PC STA = 130+44.90
Y = 327610.030
X = 642718.298
PT STA = 133+44.90
Y = 327601.497
X = 643018.106
BK = N89°28'54.1"E
AH = S86°13'16.1"E
S.E. = 3.6%

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.

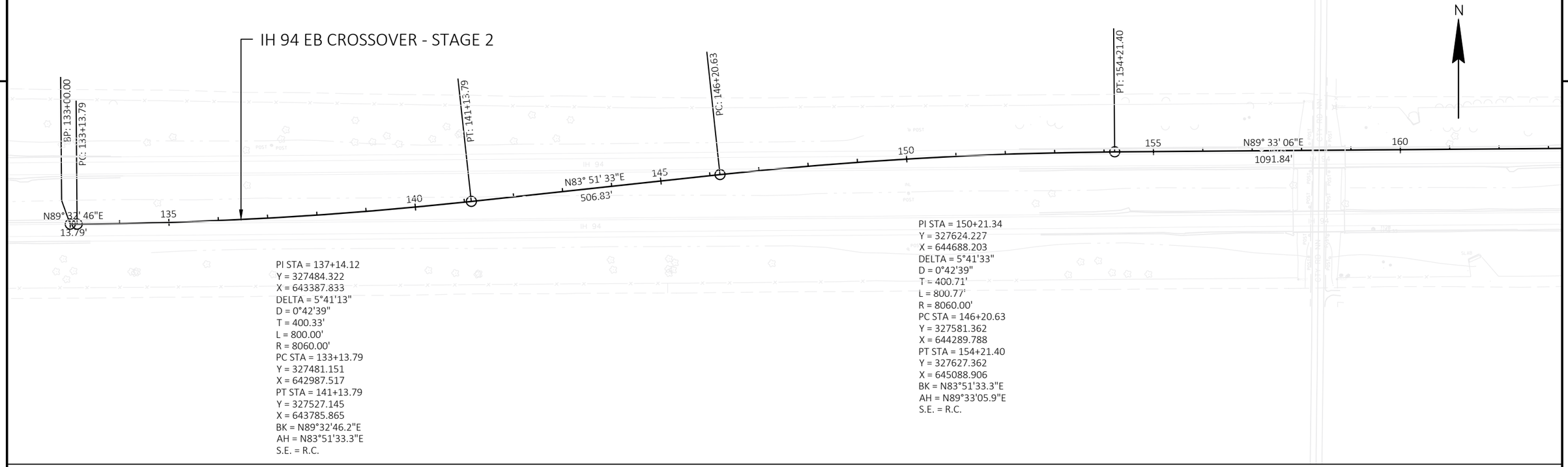
PI STA = 181+58.67
Y = 327590.510
X = 647829.948
DELTA = 2°50'36"
D = 0°42'39"
T = 200.04'
L = 400.00'
R = 8060.00'
PC STA = 179+58.63
Y = 327596.227
X = 647629.989
PT STA = 183+58.63
Y = 327594.720
X = 648029.945
BK = S88°21'44.6"E
AH = N88°47'38.9"E
S.E. = R.C.

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 107	E

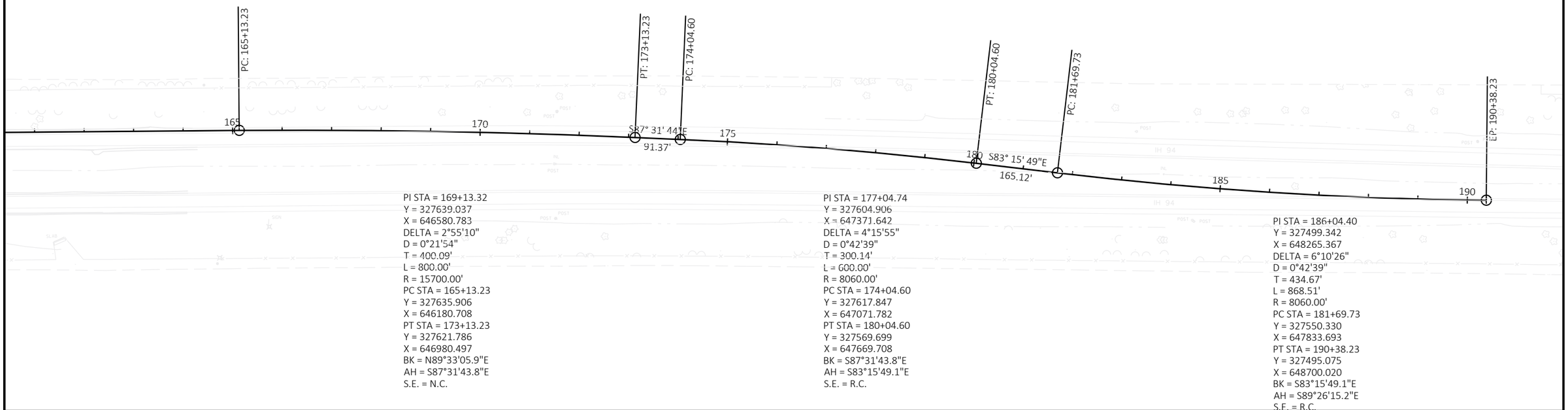
FILE NAME : C:\C3D\10210008\SHEETSPLAN\027003-AD-I94-TEMP.DWG
LAYOUT NAME - 01
PLOT DATE : 6/18/2020 11:46 AM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

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.



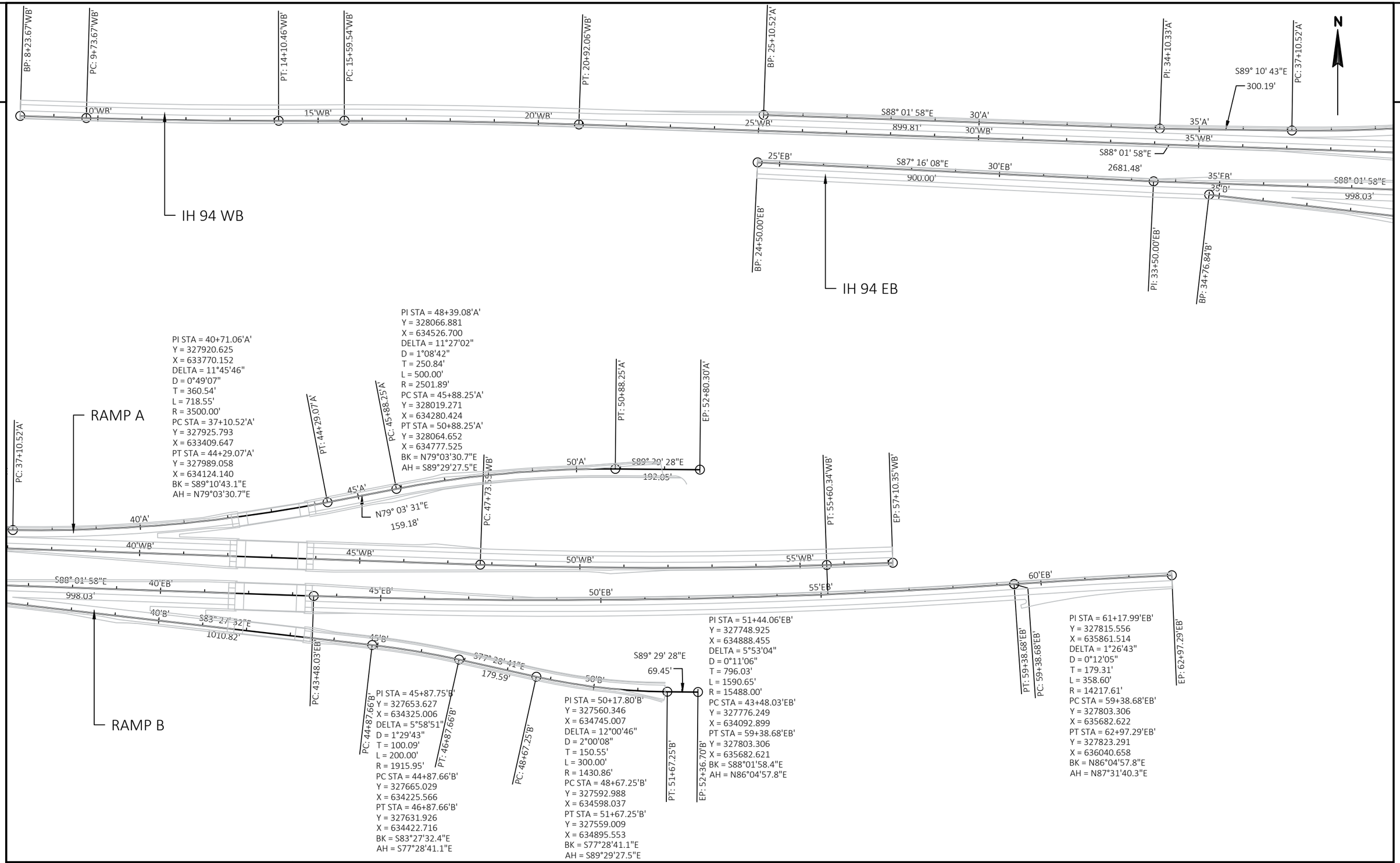
PI STA = 169+13.32
Y = 327639.037
X = 646580.783
DELTA = 2°55'10"
D = 0°21'54"
T = 400.09'
L = 800.00'
R = 15700.00'
PC STA = 165+13.23
Y = 327635.906
X = 646180.708
PT STA = 173+13.23
Y = 327621.786
X = 646980.497
BK = N89°33'05.9"E
AH = S87°31'43.8"E
S.E. = N.C.

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 108	E

2



PROJECT NO: 1021-04-77,78	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - PROPOSED	SHEET 109	E

2

IH 94 WB EX

IH 94 EB EX

PI: 0+00.51'EB EX'

PI: 0+00.29'WB EX'

PI: 0+00.29'WB EX'

0'WB EX'

0'EB EX'

5'WB EX'

5'EB EX'

10'WB EX'

10'EB EX'

15'WB EX'

15'EB EX'

20'WB EX'

20'EB EX'

S88° 04' 32"E

4472.48'

S88° 01' 58"E

4462.20'

25'WB EX'

25'EB EX'

N

PC: 44+62.71'EB EX'

PC: 44+72.19'WB EX'

PI STA = 48+60.05'WB EX'
Y = 327823.562
X = 634557.233
DELTA = 3°52'23"
D = 0°14'59"
T = 387.86'
L = 775.43'
R = 11470.98'
PC STA = 44+72.19'WB EX'
Y = 327836.586
X = 634169.591
PT STA = 52+47.62'WB EX'
Y = 327836.751
X = 634944.869
BK = S88°04'32.2"E
AH = N88°03'04.5"E

PI STA = 48+53.11'EB EX'
Y = 327772.663
X = 634547.539
DELTA = 3°54'24"
D = 0°15'01"
T = 390.41'
L = 780.51'
R = 11447.14'
PC STA = 44+62.71'EB EX'
Y = 327786.064
X = 634157.364
PT STA = 52+43.22'EB EX'
Y = 327785.876
X = 634937.721
BK = S88°01'58.4"E
AH = N88°03'37.7"E

PT: 52+43.22'EB EX'

PT: 52+47.62'WB EX'

PI: 52+54.89'EB EX'

30'WB EX'

30'EB EX'

35'WB EX'

35'EB EX'

40'WB EX'

40'EB EX'

45'WB EX'

45'EB EX'

50'WB EX'

50'EB EX'

55'WB EX'

55'EB EX'

N88° 03' 38"E

11.67'

PC: 81+09.32'EB EX'

PC: 84+08.58'WB EX'

60'WB EX'

60'EB EX'

65'WB EX'

65'EB EX'

N88° 03' 05"E

3160.96'

N88° 03' 32"E

2854.43'

70'WB EX'

70'EB EX'

75'WB EX'

75'EB EX'

80'WB EX'

80'EB EX'

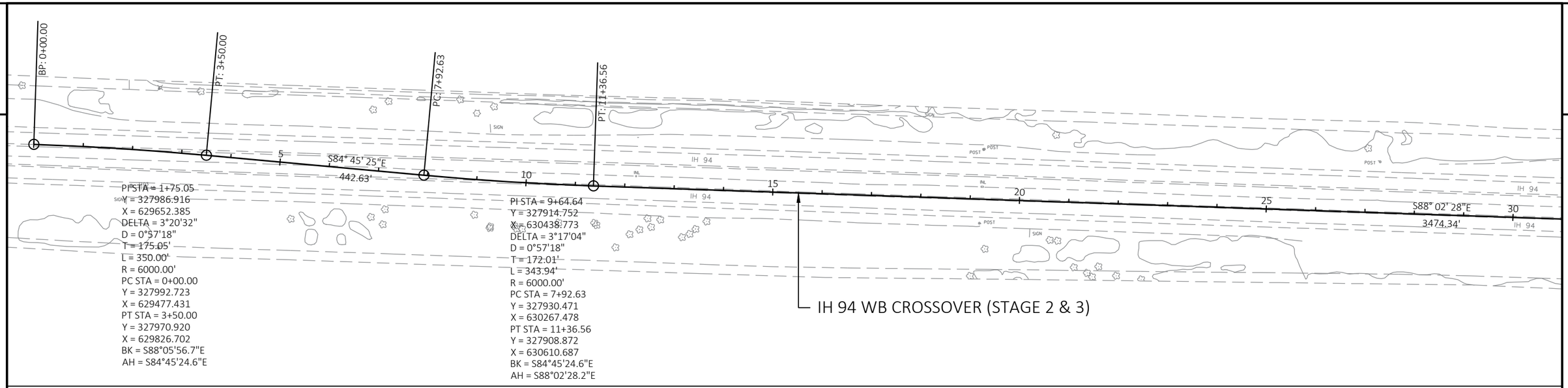
85'WB EX'

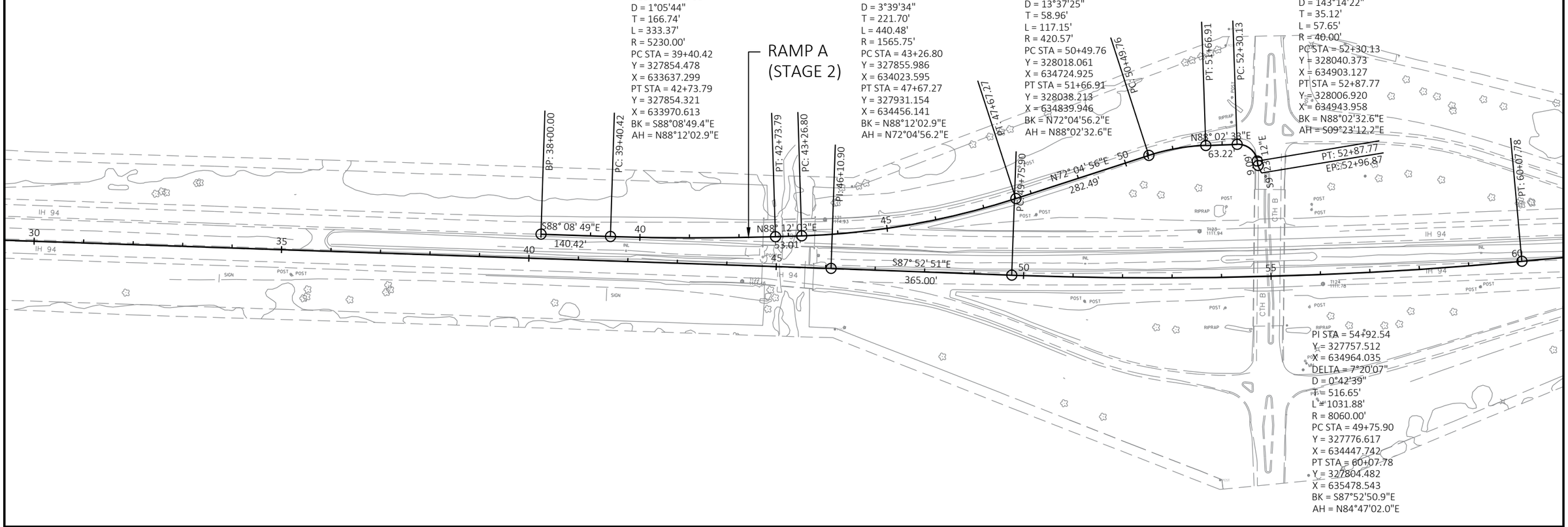
85'EB EX'

PI STA = 87+54.77'EB EX'
Y = 327904.812
X = 638447.258
DELTA = 9°38'37"
D = 0°22'28"
T = 645.45'
L = 1287.85'
R = 7651.46'
PC STA = 81+09.32'EB EX'
Y = 327882.951
X = 637802.179
PT STA = 93+97.17'EB EX'
Y = 327818.301
X = 639086.883
BK = N88°03'32.5"E
AH = S82°17'50.3"E

PROJECT NO: 1021-04-77,78	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - EXISTING	SHEET 110	E

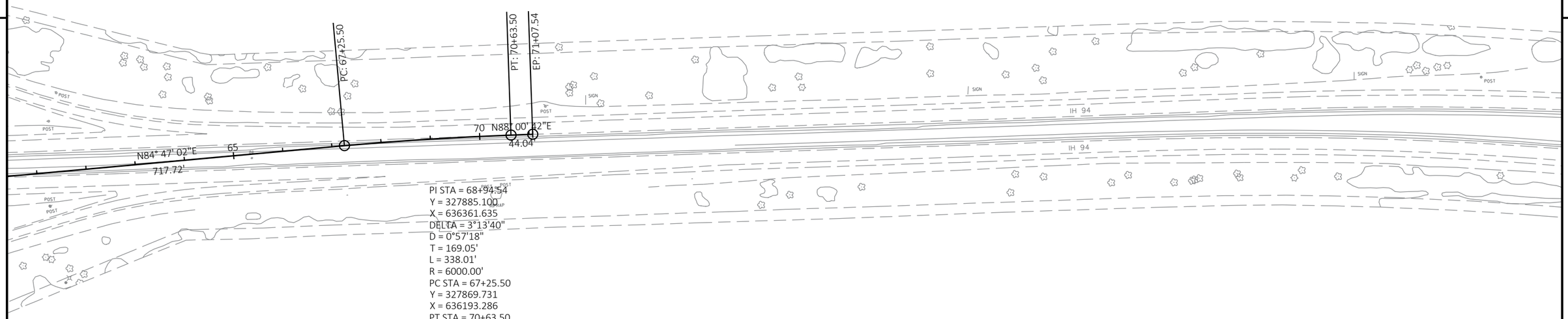
2





PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - TEMPORARY	SHEET 111	E

2

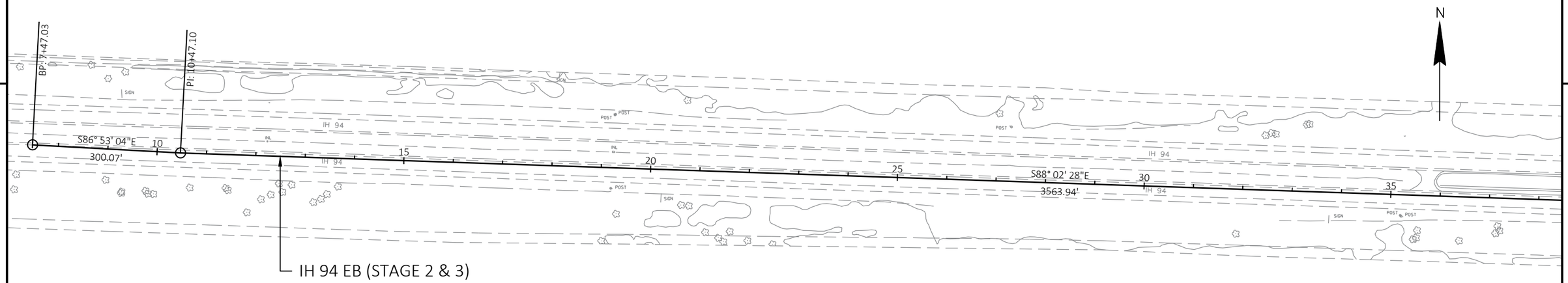


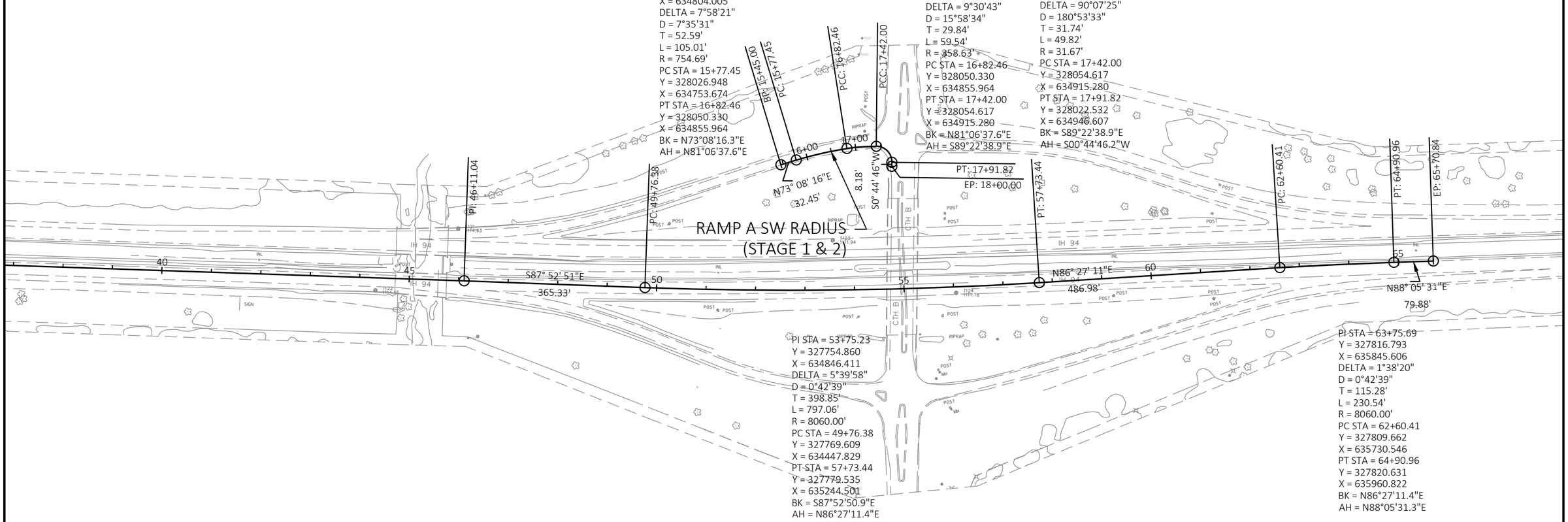
PI STA = 68+94.54
Y = 327885.100
X = 636361.635
DELTA = 3°13'40"
D = 0°57'18"
T = 169.05'
L = 338.01'
R = 6000.00'
PC STA = 67+25.50
Y = 327869.731
X = 636193.286
PT STA = 70+63.50
Y = 327890.965
X = 636530.582
BK = N84°47'02.0"E
AH = N88°00'41.9"E

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - TEMPORARY	SHEET 112	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\027003-AD-I94-CTHB-TEMP.DWG
LAYOUT NAME - 02
PLOT DATE : 3/23/2021 8:30 AM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2



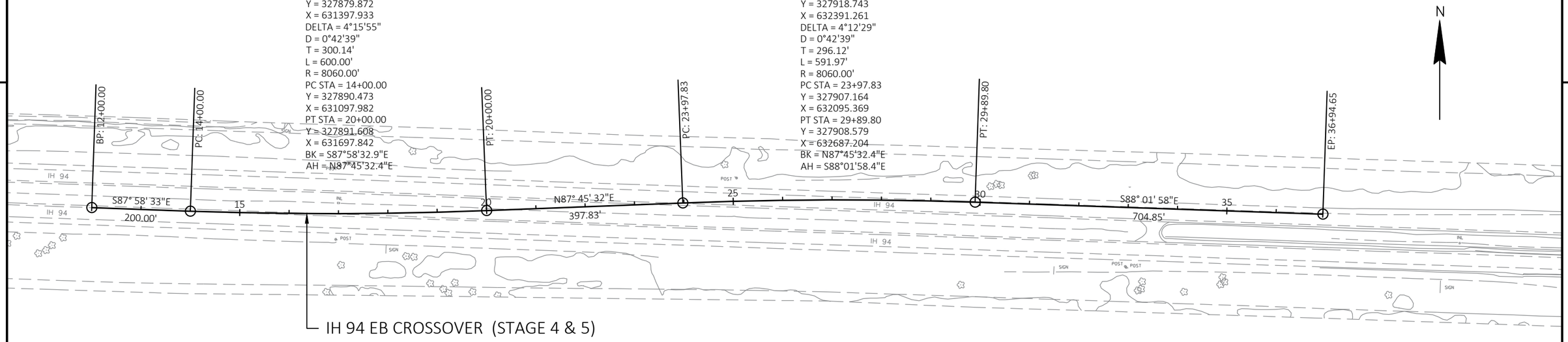


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - TEMPORARY	SHEET 113	E

2

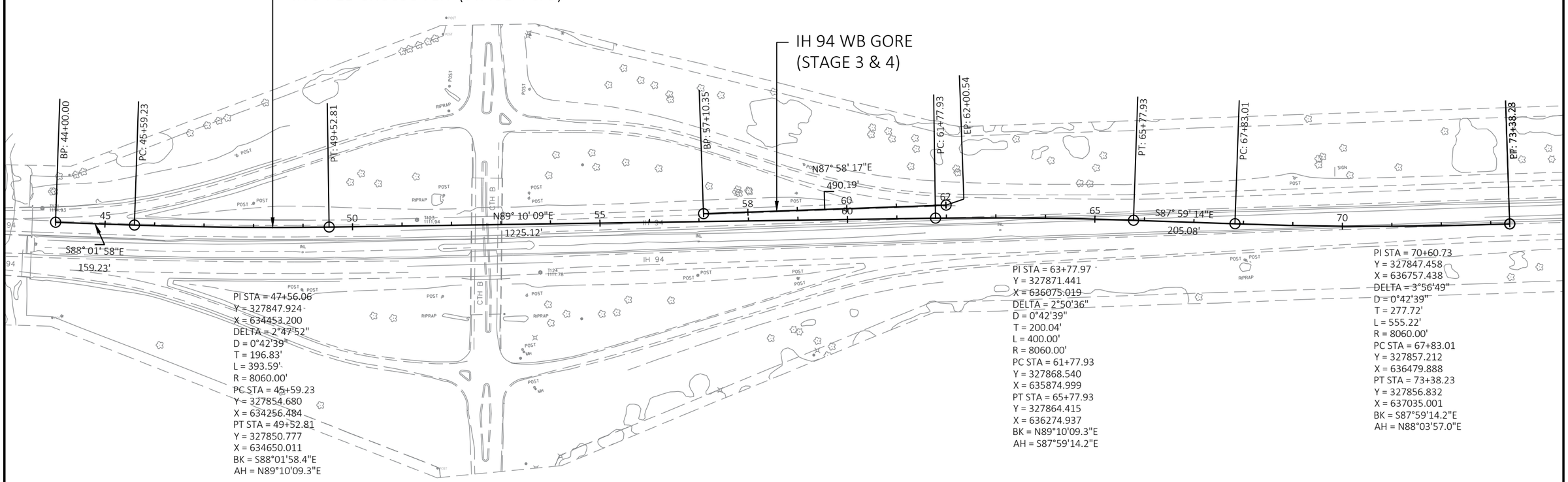
PI STA = 17+00.14
Y = 327879.872
X = 631397.933
DELTA = 4°15'55"
D = 0°42'39"
T = 300.14'
L = 600.00'
R = 8060.00'
PC STA = 14+00.00
Y = 327890.473
X = 631097.982
PT STA = 20+00.00
Y = 327891.608
X = 631697.842
BK = S87°58'32.9"E
AH = N87°45'32.4"E

PI STA = 26+93.95
Y = 327918.743
X = 632391.261
DELTA = 4°12'29"
D = 0°42'39"
T = 296.12'
L = 591.97'
R = 8060.00'
PC STA = 23+97.83
Y = 327907.164
X = 632095.369
PT STA = 29+89.80
Y = 327908.579
X = 632687.204
BK = N87°45'32.4"E
AH = S88°01'58.4"E



IH 94 EB CROSSOVER (STAGE 4 & 5)

IH 94 WB GORE
(STAGE 3 & 4)



PI STA = 47+56.06
Y = 327847.924
X = 634453.200
DELTA = 2°47'52"
D = 0°42'39"
T = 196.83'
L = 393.59'
R = 8060.00'
PC STA = 45+59.23
Y = 327854.680
X = 634256.484
PT STA = 49+52.81
Y = 327850.777
X = 634650.011
BK = S88°01'58.4"E
AH = N89°10'09.3"E

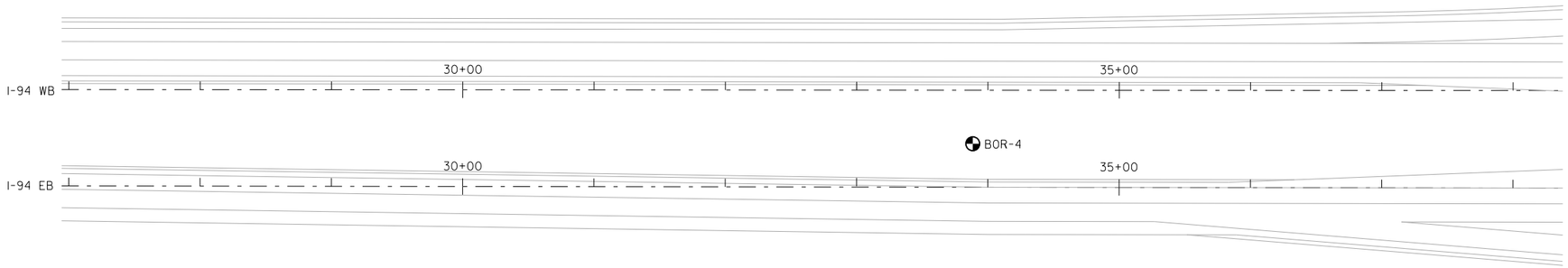
PI STA = 63+77.97
Y = 327871.441
X = 636075.019
DELTA = 2°50'36"
D = 0°42'39"
T = 200.04'
L = 400.00'
R = 8060.00'
PC STA = 61+77.93
Y = 327868.540
X = 635874.999
PT STA = 65+77.93
Y = 327864.415
X = 636274.937
BK = N89°10'09.3"E
AH = S87°59'14.2"E

PI STA = 70+60.73
Y = 327847.458
X = 636757.438
DELTA = 3°56'49"
D = 0°42'39"
T = 277.72'
L = 555.22'
R = 8060.00'
PC STA = 67+83.01
Y = 327857.212
X = 636479.888
PT STA = 73+38.23
Y = 327856.832
X = 637035.001
BK = S87°59'14.2"E
AH = N88°03'57.0"E

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DETAILS - TEMPORARY	SHEET 114	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

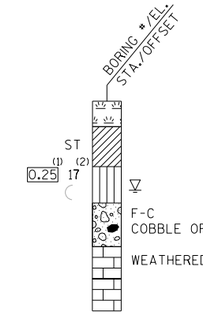
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	8/06/2019	327900	636696
2	8/05/2019	327833	634120
3	8/06/2019	327823	633873
4	8/06/2016	327844	633085
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



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

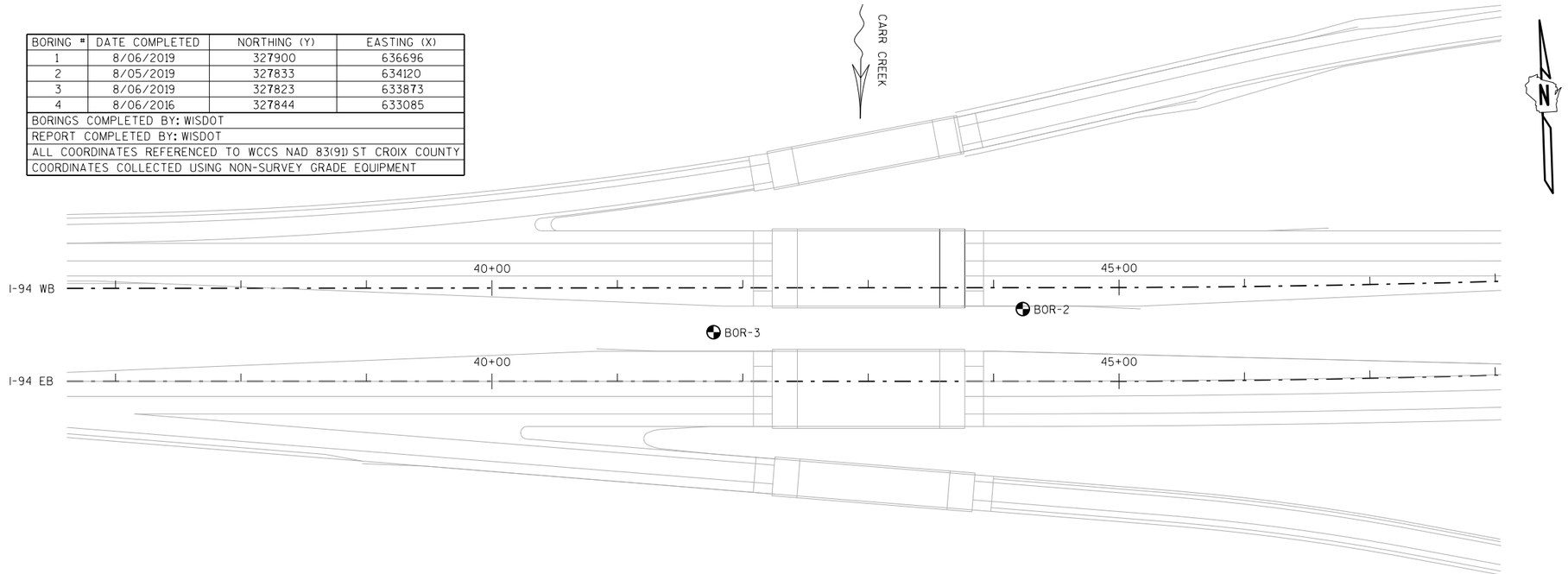
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

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.

PROJECT NO: 1021-04-07	HWY: I-94	COUNTY: ST CROIX	CABLE BARRIER BORINGS	SHEET	E

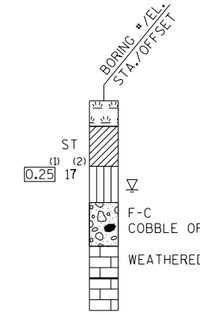
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	8/06/2019	327900	636696
2	8/05/2019	327833	634120
3	8/06/2019	327823	633873
4	8/06/2016	327844	633085
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



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

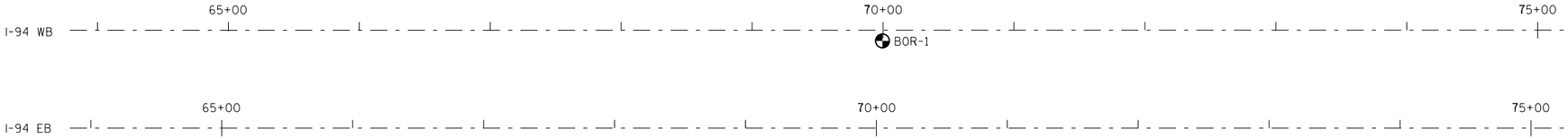
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

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.

PROJECT NO: 1021-04-07	HWY: I-94	COUNTY: ST CROIX	CABLE BARRIER BORINGS	SHEET	E

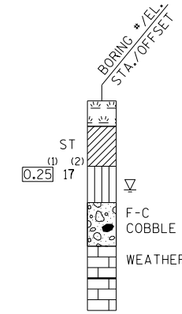
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	8/06/2019	327900	636696
2	8/05/2019	327833	634120
3	8/06/2019	327823	633873
4	8/06/2016	327844	633085
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



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.

PROJECT NO: 1021-04-07	HWY: I-94	COUNTY: ST CROIX	CABLE BARRIER BORINGS	SHEET	E

					1021-00-78	1021-00-79	1021-04-77	1021-04-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**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) 02. 158+31.35 WB	LS	1.000		1.000		
0010	203.0200	Removing Old Structure (station) 03. 160+50.91	LS	1.000		1.000		
0012	203.0200	Removing Old Structure (station) 04. 42+48	LS	1.000				1.000
0014	203.0200	Removing Old Structure (station) 05. 158+25.29 EB	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. 43+00	LS	1.000				1.000
0020	204.0100	Removing Concrete Pavement	SY	39,552.000	5,940.000	10,870.000	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	132,877.000	13,275.000	33,417.000	44,414.000	41,771.000
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	119,895.000	14,544.000	37,459.000	8,477.000	59,415.000
0056	208.1100	Select Borrow	CY	23,180.000	7,355.000	7,063.000	2,080.000	6,682.000
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	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1021-04-77	LS	1.000			1.000	
0064	213.0100	Finishing Roadway (project) 01. 1021-00-78	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) 02. 1021-00-79	EACH	1.000		1.000		
0068	213.0100	Finishing Roadway (project) 03. 1021-04-77	EACH	1.000			1.000	
0070	213.0100	Finishing Roadway (project) 04. 1021-04-78	EACH	1.000				1.000
0072	305.0110	Base Aggregate Dense 3/4-Inch	TON	27,685.000	3,260.000	7,145.000	14,270.000	3,010.000
0074	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	92,062.000	17,794.000	19,099.000	22,584.000	32,585.000
0076	311.0115	Breaker Run	CY	57.000		57.000		
0078	312.0110	Select Crushed Material	TON	40,115.000			7,580.000	32,535.000
0080	415.0120	Concrete Pavement 12-Inch	SY	43,635.000	6,350.000	11,690.000	10,490.000	15,105.000
0082	415.0410	Concrete Pavement Approach Slab	SY	900.000	200.000	200.000	200.000	300.000
0084	416.0620	Drilled Dowel Bars	EACH	128.000	32.000	32.000	32.000	32.000
0086	416.1010	Concrete Surface Drains	CY	24.000	4.000	4.000	8.000	8.000
0088	416.1110	Concrete Shoulder Rumble Strips	LF	13,555.000	2,200.000	4,045.000	3,150.000	4,160.000
0090	450.4000	HMA Cold Weather Paving	TON	1,860.000	1,080.000		780.000	
0092	455.0605	Tack Coat	GAL	5,945.000	1,420.000	515.000	1,625.000	2,385.000
0094	460.2000	Incentive Density HMA Pavement	DOL	7,480.000	690.000	1,830.000	2,680.000	2,280.000
0096	460.6223	HMA Pavement 3 MT 58-28 S	TON	6,938.000	540.000	1,655.000	2,528.000	2,215.000
0098	460.6224	HMA Pavement 4 MT 58-28 S	TON	3,865.000	540.000	1,200.000	1,210.000	915.000
0100	460.6244	HMA Pavement 4 MT 58-34 S	TON	880.000			455.000	425.000
0102	465.0110	Asphaltic Surface Patching	TON	1,155.000	220.000	180.000	180.000	575.000
0104	465.0125	Asphaltic Surface Temporary	TON	24,650.000	5,400.000	4,425.000	3,550.000	11,275.000
0106	465.0315	Asphaltic Flumes	SY	10.000			10.000	
0108	465.0400	Asphaltic Shoulder Rumble Strips	LF	16,900.000	2,200.000	4,885.000	3,650.000	6,165.000
0110	501.1000.S	Ice Hot Weather Concreting	LB	24,830.000	6,500.000	6,500.000	5,680.000	6,150.000
0112	502.0100	Concrete Masonry Bridges	CY	4,178.000	864.000	867.000	1,184.000	1,263.000
0114	502.3200	Protective Surface Treatment	SY	5,643.000	1,198.000	1,198.000	1,613.000	1,634.000
0116	502.3210	Pigmented Surface Sealer	SY	979.000	173.000	173.000	316.000	317.000
0118	502.4205	Adhesive Anchors No. 5 Bar	EACH	42.000		42.000		
0120	503.0128	Prestressed Girder Type I 28-Inch	LF	2,590.000			1,293.000	1,297.000
0122	503.0137	Prestressed Girder Type I 36W-Inch	LF	1,855.000	795.000	1,060.000		
0124	504.0100	Concrete Masonry Culverts	CY	101.000		101.000		
0126	505.0400	Bar Steel Reinforcement HS Structures	LB	89,475.000	12,570.000	24,595.000	24,360.000	27,950.000
0128	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	559,320.000	134,980.000	137,990.000	142,420.000	143,930.000
0130	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
0132	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	216.000	36.000	48.000	66.000	66.000
0134	506.4000	Steel Diaphragms (structure) 01. B-55-0271	EACH	15.000	15.000			
0136	506.4000	Steel Diaphragms (structure) 02. B-55-0270	EACH	21.000		21.000		
0138	506.4000	Steel Diaphragms (structure) 03. B-55-0281	EACH	18.000			18.000	
0140	506.4000	Steel Diaphragms (structure) 04. B-55-0285	EACH	9.000			9.000	
0142	506.4000	Steel Diaphragms (structure) 05. B-55-0282	EACH	18.000				18.000
0144	506.4000	Steel Diaphragms (structure) 06. B-55-0286	EACH	9.000				9.000

					1021-00-78	1021-00-79	1021-04-77	1021-04-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0146	511.1100	Temporary Shoring	SF	1,950.000		1,200.000	500.000	250.000
0148	511.1200	Temporary Shoring (structure) 01. C-55-19	SF	1,660.000		1,660.000		
0150	511.1200	Temporary Shoring (structure) 02. B-55-0270	SF	650.000		650.000		
0152	511.1200	Temporary Shoring (structure) 03. B-55-0285	SF	1,500.000			1,500.000	
0154	511.1200	Temporary Shoring (structure) 04. B-55-0282	SF	1,350.000				1,350.000
0156	511.1200	Temporary Shoring (structure) 05. B-55-0286	SF	300.000				300.000
0158	516.0500	Rubberized Membrane Waterproofing	SY	181.000	34.000	43.000	52.000	52.000
0160	520.1015	Apron Endwalls for Culvert Pipe 15-Inch	EACH	15.000	4.000		4.000	7.000
0162	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	1.000			1.000	
0164	520.1036	Apron Endwalls for Culvert Pipe 36-Inch	EACH	4.000			2.000	2.000
0166	520.2015	Culvert Pipe Temporary 15-Inch	LF	2,172.000	710.000		586.000	876.000
0168	520.3424	Culvert Pipe Class III-A Non-metal 24-Inch	LF	238.000			238.000	
0170	520.3636	Culvert Pipe Class III-B Non-metal 36-Inch	LF	220.000			102.000	118.000
0172	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	937.000	146.000	120.000	266.000	405.000
0174	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	278.000	126.000	152.000		
0176	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	9.000	1.000	1.000	3.000	4.000
0178	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	1.000	1.000		
0180	531.1100	Concrete Masonry Ancillary Structures Type NS	CY	7.000	3.000		4.000	
0182	531.1140	Steel Reinforcement HS Ancillary Structures Type NS	LB	870.000	330.000		540.000	
0184	550.0020	Pre-Boring Rock or Consolidated Materials	LF	1,470.000	720.000	750.000		
0186	550.0500	Pile Points	EACH	191.000	18.000	18.000	77.000	78.000
0188	550.1120	Piling Steel HP 12-Inch X 53 Lb	LF	3,315.000	1,485.000	1,830.000		
0190	550.2106	Piling CIP Concrete 10 3/4 X 0.365-Inch	LF	8,140.000			4,045.000	4,095.000
0192	601.0576	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type J	LF	50.000			50.000	
0194	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	560.000	120.000	80.000	160.000	200.000
0196	602.0405	Concrete Sidewalk 4-Inch	SF	160.000			160.000	
0198	603.8000	Concrete Barrier Temporary Precast Delivered	LF	41,750.000	4,800.000	4,950.000	14,600.000	17,400.000
0200	603.8125	Concrete Barrier Temporary Precast Installed	LF	57,950.000	4,800.000	4,950.000	30,800.000	17,400.000
0202	603.8500	Anchoring Concrete Barrier Temporary Precast	LF	25,325.000		4,850.000	10,175.000	10,300.000
0204	603.8505	Anchoring Concrete Barrier Temporary Precast on Bridge Decks	LF	205.000		100.000		105.000
0206	604.0500	Slope Paving Crushed Aggregate	SY	1,380.000	690.000	690.000		
0208	606.0100	Riprap Light	CY	70.000	10.000	14.000	30.000	16.000
0210	606.0300	Riprap Heavy	CY	2,068.000		11.000	931.000	1,126.000
0212	611.0430	Reconstructing Inlets	EACH	6.000	1.000			5.000
0214	611.0642	Inlet Covers Type MS	EACH	12.000	3.000	1.000	5.000	3.000
0216	611.3901	Inlets Median 1 Grate	EACH	8.000	1.000	1.000	3.000	3.000
0218	611.3902	Inlets Median 2 Grate	EACH	2.000	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**
0220	611.8115	Adjusting Inlet Covers	EACH	1.000				1.000
0222	611.8120.S	Cover Plates Temporary	EACH	7.000			4.000	3.000
0224	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	600.000	100.000	100.000	200.000	200.000
0226	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	1,220.000	260.000	260.000	350.000	350.000
0228	613.1100.S	Cable Barrier Type 1	LF	4,175.000			2,325.000	1,850.000
0230	613.1200.S	Cable Barrier End Terminal Type 1	EACH	4.000			2.000	2.000
0232	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	24.000	4.000	4.000	8.000	8.000
0234	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	3.000			3.000	
0236	614.0230	Steel Thrie Beam	LF	253.000			253.000	
0238	614.0360	Steel Plate Beam Guard Temporary	LF	240.000	240.000			
0240	614.0380	Steel Plate Beam Guard Energy Absorbing Terminal Temporary	EACH	1.000	1.000			
0242	614.0905	Crash Cushions Temporary	EACH	10.000	1.000	1.000	6.000	2.000
0244	614.0920	Salvaged Rail	LF	1,366.000			456.000	910.000
0246	614.2300	MGS Guardrail 3	LF	4,738.000	1,550.000	1,163.000	900.000	1,125.000
0248	614.2500	MGS Thrie Beam Transition	LF	576.000	96.000	96.000	192.000	192.000
0250	614.2610	MGS Guardrail Terminal EAT	EACH	10.000	2.000	2.000	2.000	4.000
0252	614.2620	MGS Guardrail Terminal Type 2	EACH	12.000	2.000	2.000	4.000	4.000
0254	616.0100	Fence Woven Wire (height) 01. 4-FT	LF	11,630.000	350.000	4,150.000	2,740.000	4,390.000
0256	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1021-00-78	EACH	1.000	1.000			
0258	618.0100	Maintenance And Repair of Haul Roads (project) 02. 1021-00-79	EACH	1.000		1.000		
0260	618.0100	Maintenance And Repair of Haul Roads (project) 03. 1021-04-77	EACH	1.000			1.000	
0262	618.0100	Maintenance And Repair of Haul Roads (project) 04. 1021-04-78	EACH	1.000				1.000
0264	619.1000	Mobilization	EACH	1.000	0.250	0.250	0.250	0.250
0266	620.0300	Concrete Median Sloped Nose	SF	14.000			14.000	
0268	624.0100	Water	MGAL	918.000	200.000	170.000	215.000	333.000
0270	625.0500	Salvaged Topsoil	SY	202,495.000	28,105.000	63,440.000	68,570.000	42,380.000
0272	627.0200	Mulching	SY	120,920.000	16,400.000	36,930.000	43,230.000	24,360.000
0274	628.1504	Silt Fence	LF	15,135.000	5,040.000	2,410.000	2,900.000	4,785.000
0276	628.1520	Silt Fence Maintenance	LF	15,135.000	5,040.000	2,410.000	2,900.000	4,785.000
0278	628.1905	Mobilizations Erosion Control	EACH	11.000	3.000	3.000	3.000	2.000
0280	628.1910	Mobilizations Emergency Erosion Control	EACH	9.000	2.000	2.000	3.000	2.000
0282	628.2002	Erosion Mat Class I Type A	SY	26,510.000		26,510.000		
0284	628.2004	Erosion Mat Class I Type B	SY	55,065.000	11,705.000		25,335.000	18,025.000
0286	628.7005	Inlet Protection Type A	EACH	11.000	2.000	2.000	4.000	3.000
0288	628.7504	Temporary Ditch Checks	LF	2,280.000	360.000	1,200.000	720.000	
0290	628.7560	Tracking Pads	EACH	12.000	2.000	2.000	4.000	4.000

					1021-00-78	1021-00-79	1021-04-77	1021-04-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0292	628.7570	Rock Bags	EACH	50.000	8.000	8.000	17.000	17.000
0294	629.0210	Fertilizer Type B	CWT	127.000	18.000	40.000	42.000	27.000
0296	630.0130	Seeding Mixture No. 30	LB	3,050.000	330.000	1,145.000	935.000	640.000
0298	630.0200	Seeding Temporary	LB	5,480.000	760.000	1,715.000	1,855.000	1,150.000
0300	630.0300	Seeding Borrow Pit	LB	2,360.000	345.000	720.000	560.000	735.000
0302	630.0500	Seed Water	MGAL	1,148.000	158.000	357.000	395.000	238.000
0304	633.0100	Delineator Posts Steel	EACH	65.000	6.000	6.000	21.000	32.000
0306	633.0500	Delineator Reflectors	EACH	65.000	6.000	6.000	21.000	32.000
0308	633.1100	Delineators Temporary	EACH	332.000	84.000	56.000	138.000	54.000
0310	633.5200	Markers Culvert End	EACH	12.000			6.000	6.000
0312	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	28.000	4.000	4.000	12.000	8.000
0314	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	6.000			4.000	2.000
0316	635.0200	Sign Supports Structural Steel HS	LB	3,535.000	1,402.000		2,133.000	
0318	637.2230	Signs Type II Reflective F	SF	12.000			6.000	6.000
0320	638.2101	Moving Signs Type I	EACH	1.000			1.000	
0322	638.2102	Moving Signs Type II	EACH	27.000	3.000	3.000	13.000	8.000
0324	638.3000	Removing Small Sign Supports	EACH	27.000	3.000	3.000	12.000	9.000
0326	638.3100	Removing Structural Steel Sign Supports	EACH	5.000	3.000		2.000	
0328	642.5201	Field Office Type C	EACH	1.000	0.250	0.250	0.250	0.250
0330	643.0300	Traffic Control Drums	DAY	58,975.000	11,760.000	15,135.000	15,560.000	16,520.000
0332	643.0420	Traffic Control Barricades Type III	DAY	5,710.000	1,120.000	1,240.000	870.000	2,480.000
0334	643.0705	Traffic Control Warning Lights Type A	DAY	8,150.000	1,680.000	2,170.000	940.000	3,360.000
0336	643.0715	Traffic Control Warning Lights Type C	DAY	20,280.000	9,240.000	4,750.000	3,600.000	2,690.000
0338	643.0800	Traffic Control Arrow Boards	DAY	1,830.000	560.000	450.000	560.000	260.000
0340	643.0900	Traffic Control Signs	DAY	28,360.000	7,280.000	9,930.000	5,320.000	5,830.000
0342	643.0920	Traffic Control Covering Signs Type II	EACH	9.000		3.000		6.000
0344	643.1051	Traffic Control Signs PCMS with Cellular Communications	DAY	1,820.000	280.000	450.000	560.000	530.000
0346	643.4100.S	Traffic Control Interim Lane Closure	EACH	215.000	35.000	80.000	75.000	25.000
0348	643.5000	Traffic Control	EACH	1.000	0.250	0.250	0.250	0.250
0350	645.0105	Geotextile Type C	SY	186.000		186.000		
0352	645.0111	Geotextile Type DF Schedule A	SY	622.000	120.000	120.000	190.000	192.000
0354	645.0120	Geotextile Type HR	SY	3,135.000		28.000	1,426.000	1,681.000
0356	645.0130	Geotextile Type R	SY	140.000	24.000	24.000	52.000	40.000
0358	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
0360	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	3,925.000	650.000	1,075.000	975.000	1,225.000
0362	646.3555	Marking Line Grooved Contrast Permanent Tape 8-Inch	LF	2,261.000			1,010.000	1,251.000
0364	646.6120	Marking Stop Line Epoxy 18-Inch	LF	40.000			40.000	
0366	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	10,720.000	5,830.000			4,890.000
0368	646.7220	Marking Chevron Epoxy 24-Inch	LF	180.000			180.000	

					1021-00-78	1021-00-79	1021-04-77	1021-04-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0370	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	41,750.000	17,000.000		24,750.000	
0372	649.0105	Temporary Marking Line Paint 4-Inch	LF	120,970.000	20,200.000	19,300.000	48,160.000	33,310.000
0374	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	41,750.000	17,000.000		24,750.000	
0376	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
0378	649.0760	Temporary Marking Raised Pavement Marker Type I	EACH	350.000	48.000	42.000	202.000	58.000
0380	650.4000	Construction Staking Storm Sewer	EACH	12.000		2.000	5.000	5.000
0382	650.4500	Construction Staking Subgrade	LF	30,459.000	7,960.000	8,869.000	5,220.000	8,410.000
0384	650.5000	Construction Staking Base	LF	38,284.000	5,740.000	4,789.000	12,780.000	14,975.000
0386	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	610.000	120.000	80.000	210.000	200.000
0388	650.6500	Construction Staking Structure Layout (structure) 01. B-55-0271	LS	1.000	1.000			
0390	650.6500	Construction Staking Structure Layout (structure) 02. B-55-0270	LS	1.000		1.000		
0392	650.6500	Construction Staking Structure Layout (structure) 03. C-55-19	LS	1.000		1.000		
0394	650.6500	Construction Staking Structure Layout (structure) 04. B-55-0281	LS	1.000			1.000	
0396	650.6500	Construction Staking Structure Layout (structure) 05. B-55-0285	LS	1.000			1.000	
0398	650.6500	Construction Staking Structure Layout (structure) 06. B-55-0282	LS	1.000				1.000
0400	650.6500	Construction Staking Structure Layout (structure) 07. B-55-0286	LS	1.000				1.000
0402	650.7000	Construction Staking Concrete Pavement	LF	14,755.000	2,220.000	4,080.000	3,690.000	4,765.000
0404	650.9910	Construction Staking Supplemental Control (project) 01. 1021-00-78	LS	1.000	1.000			
0406	650.9910	Construction Staking Supplemental Control (project) 02. 1021-00-79	LS	1.000		1.000		
0408	650.9910	Construction Staking Supplemental Control (project) 03. 1021-04-77	LS	1.000			1.000	
0410	650.9910	Construction Staking Supplemental Control (project) 04. 1021-04-78	LS	1.000				1.000
0412	650.9920	Construction Staking Slope Stakes	LF	37,024.000	7,960.000	8,869.000	5,220.000	14,975.000
0414	652.0125	Conduit Rigid Metallic 2-Inch	LF	10.000	10.000			
0416	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	265.000	265.000			
0418	653.0140	Pull Boxes Steel 24x42-Inch	EACH	2.000	2.000			
0420	653.0905	Removing Pull Boxes	EACH	1.000	1.000			
0422	655.0625	Electrical Wire Lighting 6 AWG	LF	870.000	870.000			
0424	670.0100	Field System Integrator	LS	1.000	1.000			
0426	670.0200	ITS Documentation	LS	1.000	1.000			
0428	674.0300	Remove Cable	LF	110.000	110.000			
0430	690.0150	Sawing Asphalt	LF	12,394.000	52.000	7,774.000	4,556.000	12.000

					1021-00-78	1021-00-79	1021-04-77	1021-04-78
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0432	690.0250	Sawing Concrete	LF	313.000	48.000	48.000	113.000	104.000
0434	715.0415	Incentive Strength Concrete Pavement	DOL	13,361.000	1,965.000	3,567.000	3,207.000	4,622.000
0436	715.0502	Incentive Strength Concrete Structures	DOL	25,710.000	5,190.000	5,820.000	7,120.000	7,580.000
0438	715.0710	Optimized Aggregate Gradation Incentive	DOL	60,130.000	8,850.000	16,050.000	14,430.000	20,800.000
0440	740.0440	Incentive IRI Ride	DOL	12,660.000	2,580.000	3,470.000	2,910.000	3,700.000
0442	999.2000.S	Installing and Maintaining Bird Deterrent System 01. Station 43+00 WB	EACH	1.000				1.000
0444	999.2000.S	Installing and Maintaining Bird Deterrent System 02. Station 158+31.35 WB	EACH	1.000		1.000		
0446	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,100.000	525.000	525.000	525.000	525.000
0448	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,400.000	600.000	600.000	600.000	600.000
0450	SPV.0060	Special 01. Relocate Ground Mount DMS	EACH	1.000	1.000			
0452	SPV.0060	Special 02. Traffic Control Vertical Panels	EACH	267.000	70.000	32.000	99.000	66.000
0454	SPV.0060	Special 03. Manholes Special 4-FT Diameter Temporary	EACH	5.000				5.000
0456	SPV.0105	Special 01. Project Concrete Crack Mitigation and Repair, 1021-00-78	LS	1.000	1.000			
0458	SPV.0105	Special 02. Project Concrete Crack Mitigation and Repair, 1021-00-79	LS	1.000		1.000		
0460	SPV.0105	Special 03. Project Concrete Crack Mitigation and Repair, 1021-04-77	LS	1.000			1.000	
0462	SPV.0105	Special 04. Project Concrete Crack Mitigation and Repair, 1021-04-78	LS	1.000				1.000
0464	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+38'EB'	IH 94 EB	3170	
0010	159+12'EB'	-	169+50'EB'	IH 94 EB	2770	
				TOTAL 0010	5940	

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	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	198	194	2127	16671	14544	0	2519	0	0	0
010	148+00'EB'	-	169+00'EB'	94 EB - PAVEMENT	2680	1390	1290	0	0	0	3484	2680	0	0	0
010	133+13	-	190+00	94 EB CROSSOVER	7098	587	602	5909	6165	0	1527	8076	0	978	978
010	150+00	-	164+00	95 EB CROSSOVER - PAVEMENT	1803	891	912	0	0	0	2344	1803	0	0	0
				STAGE 2 SUBTOTAL	12297	3066	2086	8036	22836	14544	7355	13275	0	978	978
				Total	12297	3066	2086	8036	22836	14544	7355	13275	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	

3

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	APRON ENDWALLS FOR CULVERT PIPE 15-INCH 520.1015 EACH	CULVERT PIPE TEMPORARY 15-INCH 520.2015 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 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	2	240	-	-	-	-	
0010	183+35, 16.1' LT	1162.66	178+67, 3845' RT	1156.59	1.3	IH 94 EB CROSSOVER	2	470	-	-	-	-	
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', 57.1' LT	1138.03	149+96.8'EB', 69.4' RT	1135.50	2.0	IH 94 EB	-	-	-	126	-	1	
						TOTAL 0010	4	710	146	126	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 2
				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	

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	1140.40	5.20	2	-	1	1	57.4'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 2C, 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	

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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 2C, 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	

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	

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	

SAWING CONCRETE

CATEGORY	STATION	LOCATION	690.0250 LF	REMARKS
0010	145+50'EB'	IH 94 EB	24	
0010	169+50'EB'	IH 94 EB	24	
		TOTAL 0010	48	

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	

02. SPECIAL TRAFFIC CONTROL VERTICAL PANELS

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0060 EACH	REMARKS
0010	133+00'WB EX'	-	187+00'WB EX'	IH 94 WB	55	STAGE 2B
0010	135+00'EB EX'	-	141+00'EB EX'	IH 94 EB	7	STAGE 2B
0010	182+50'EB EX'	-	189+50'EB EX'	IH 94 EB	8	STAGE 2B
				TOTAL 0010	70	

3

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+44'WB'	IH 94 WB	5430	
0010	159+18'WB'	-	179+58'WB'	IH 94 WB	5440	
				TOTAL 0010	10870	

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	208.1100 SELECT 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	1253	866	7501	44960	37459	0	9620	0	0	0
010	130+45	-	154+00	94 WB, WEST	950	198	0	752	4312	0	3560	950	0	0	0
010	165+08	-	189+42	95 WB, EAST	954	162	0	792	4295	0	3503	954	0	0	0
				STAGE 1 SUBTOTAL	11524	1613	866	9045	53567	37459	7063	11524	0	0	0
010	137+08'WB'	-	179+59'WB'	94 WB	13651	3149	337	10165	29	0	0	13651	10136	0	0
010	130+45	-	144+00	94 MEDIAN	3872	243	0	3629	89	0	0	3872	3540	0	0
010	179+58	-	189+91	94 MEDIAN	4370	722	0	3648	403	0	0	4370	3245	0	0
				STAGE 3 SUBTOTAL	21893	4114	337	17442	521	0	0	21893	16921	0	0
				Total	33417	5727	1203	26487	54088	37459	7063	33417	16921	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	4515	STAGE 1
0010	165+08	-	189+42	95 WB, EAST	5205	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	18705	

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	145	-	-	-	2015	STAGE 1, WIDENING
0010	165+08	-	189+41	IH 94 WB WIDENING	165	-	-	-	2300	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	515	1655	1200	180	4425	

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', 66.7' RT	1135.29	150+00'WB', 85.6' LT	1132.25	2.0	IH 94 WB	-	152	-	1	
						TOTAL 0010	120	152	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	

RIPRAP LIGHT

CATEGORY	STATION	LOCATION	606.0100 CY	REMARKS
0010	171+46.3'WB', 61.1' LT	IH 94 WB	3	AEW
0010	150+00'WB', 85.6' LT	IH 94 WB	3	AEW
0010	157+20'WB', LT	IH 94 WB	4	FLUME
0010	157+20'WB', RT	IH 94 WB	4	FLUME
		TOTAL 0010	14	

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	

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	131+36	-	151+64	IH 94 WB WIDENING	2200	-	2200	1.3	40	60		12	STAGE 1
0010	165+08	-	189+41	IH 94 WB WIDENING	2750	-	2750	1.7	50	75		15	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	63440	36930	26510	40	1145	1715	720	357	

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	

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	

TRACKING PADS

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

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	

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	

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	

3

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	

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	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	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	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	

TRAFFIC CONTROL COVERING SIGNS TYPE II

CATEGORY	# OF CYCLES	# OF SIGNS	LOCATION	643.0920 EACH	REMARKS
0010	3	1	IH 94 WB	3	SPEED LIMIT 70 - STAGE 1-3
			TOTAL 0010	3	

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, INSIDE SHLD AT 5-FT
0010	134+00'EB EX'	-	143+80'EB EX'	IH 94 EB	980	STAGE 3, INSIDE SHLD AT 5-FT
0010	159+18'WB EX'	-	189+32'WB EX'	IH 94 WB	3015	STAGE 3, INSIDE SHLD AT 5-FT
0010	179+57'EB EX'	-	189+91'EB EX'	IH 94 EB	1035	STAGE 3, INSIDE SHLD AT 5-FT
				TOTAL 0010	7774	

SAWING CONCRETE

CATEGORY	STATION	LOCATION	690.0250 LF	REMARKS
0010	137+08'WB'	IH 94 WB	24	2-LANE
0010	179+58'WB'	IH 94 WB	24	2-LANE
		TOTAL 0010	48	

02. SPECIAL TRAFFIC CONTROL VERTICAL PANELS

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0060 EACH	REMARKS
0010	131+50	-	146+50	IH 94 EB	14	STAGE 1A - WINTER SHUTDOWN
0010	170+00	-	187+00	IH 94 EB	18	STAGE 1A - WINTER SHUTDOWN
				TOTAL 0010	32	

3

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 CONCRETE SIDEWALK

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

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 (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	

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	208.1100 SELECT BORROW CY	205.0100 EXCAVATION COMMON CY	(3) SUITABLE WASTE CY	(4) UNSUITABLE WASTE CY	(5) EXCAVATION BELOW SUBGRADE CY
010	57+10	-	70+85	IH 94 EB CROSSOVER, EAST	1650	381	0	1269	141	0	0	1650	1128	0	0
010	36+94	-	57+10	IH 94 WB, MEDIAN DITCH	1655	0	0	1655	122	0	0	1655	1533	0	0
010	12+00	-	36+94	IH 94 EB CROSSOVER, WEST	6561	1068	640	4853	849	0	0	6561	4004	0	0
010	-2+22	-	12+00	IH 94 EB CROSSOVER, WEST	2295	579	0	1716	228	0	0	2295	1488	0	0
				STAGE 4 SUBTOTALS	12161	2028	640	9493	1340	0	0	12161	8153	0	0
010	24+50	-	63+00	IH 94 EB	12622	4144	2455	6023	6222	199	2080	14222	0	1600	1600
010	34+76	-	51+62	RAMP B	4769	518	0	4251	12324	8073	0	4769	0	0	0
				STAGE 5 SUBTOTALS	17391	4662	2455	10274	18546	8272	2080	18991	0	1600	1600
010	15+75	-	57+10	IH 94 MEDIAN, SHLD	10628	2186	277	8165	2046	0	0	10628	6119	0	0
010	57+10	-	70+84	IH 94 MEDIAN, SHLD	2310	656	0	1654	200	0	0	2310	1454	0	0
010	46+87	-	51+62	RAMP B	324	152	0	172	377	205	0	324	0	0	0
				STAGE 6 SUBTOTALS	13262	2994	277	9991	2623	205	0	13262	7573	0	0
				Total	42814	9684	3372	29758	22509	8477	2080	44414	15726	1600	1600

(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	

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	

SELECT CRUSHED MATERIAL

CATEGORY	STATION	TO	STATION	LOCATION	312.0110 TON	REMARKS
0010	34+76	-	51+62	RAMP B	7580	STAGE 5
				TOTAL 0010	7580	

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	

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	

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	

ASPHALTIC FLUMES

CATEGORY	STATION	LOCATION	465.0315 SY	REMARKS
0010	52+05'B', LT	CTH B	10	
		TOTAL 0010	10	

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	

ICE HOT WEATHER CONCRETING

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

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	HMA PAVEMENT 4 MT 58-34S 460.6244 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	408	205	-	-	-	4" 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	520	260	-	-	-	4" 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	2528	1210	455	180	3550	

TEMPORARY SHORING

CATEGORY	STATION	LOCATION	511.1100 SF	REMARKS
0010	32+50'EB'	IH 94 EB	250	STAGE 5 - CULVERT PIPE INSTALL
0010	47+00'B'	RAMP B	250	STAGE 5 - CULVERT PIPE INSTALL
		TOTAL 0010	500	

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 15-INCH 520.1015 LF	APRON ENDWALLS FOR CULVERT PIPE 24-INCH 520.1024 EACH	APRON ENDWALLS FOR CULVERT PIPE 36-INCH 520.1036 EACH	CULVERT PIPE TEMPORARY 15-INCH 520.2015 LF	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
0010	23+55.3, 9.3'LT	1162.30	25+94.6, 35.1'RT	1153.40	3.7	IH 94 EB XO	2			244	-	-	-	-
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	1104.73	48+50'EB', 60.3' RT	1104.50	0.25	IH 94 EB	-	-	-	-	-	-	92	1
0010	56+50'EB', 27.8' LT	1108.93	56+50'EB', 58.2' RT	1108.50	0.5	IH 94 EB	-	-	-	-	-	-	86	1
0010	64+55.3, 34.8'RT	1125.10	67+94.8, 8.5'LT	1129.10	1.2	IH 94 EB XO	2	-	-	342	-	-	-	-
0010	47+00'B', 57.1' LT	1104.40	48+40'B', 45.0' RT	1103.89	0.5	RAMP B	-	-	2	-	-	102	-	-
						TOTAL 0010	4	1	2	586	238	102	266	3

CONCRETE SIDEWALK 4-INCH

CATEGORY	STATION	LOCATION	602.0405 SF	REMARKS
0010	52+00'B'	RAMP B	160	RAMP B 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	
0010	52+05'B'	CTH B	4	FLUME
		TOTAL 0010	30	

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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	REMARKS
0010	-2+20	-	70+80	IH 94 WB	7300	7300	-	STAGE 4
0010	-2+20	-	70+80	IH 94 EB	7300	7300	7300	STAGE 4
0010	21+00	-	70+80	IH 94 WB	-	4850	-	STAGE 5A
0010	24+00	-	52+00	RAMP B	-	2875	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	10175	

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
0010	8+25'WB'	-	32+50'WB'	IH 94 MEDIAN	2325	-
0010			8+25'WB'	IH 94 MEDIAN	-	1
0010			32+50'WB'	IH 94 MEDIAN	-	1
				TOTAL 0010	2325	2

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	1111.90	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	
0010			52+05'B', LT	CTH B	70	
				TOTAL 0010	456	

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	34+08'EB'	-	41+32'EB'	IH 94 EB, LT	725	-	-	-	
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	33+55'EB'	-	34+08'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	900	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	

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	

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	-2+00'WB EX'	-	1+00'WB EX'	IH 94 MEDIAN	15700	7390	8310	9.9	-	420	-	90	STAGE 4
0010	24+50'EB'	-	42+00'EB'	IH 94 EB, RT & GORE	6030	4750	1280	3.8	110	165	-	35	STAGE 5
0010	43+11'EB'	-	59+50'EB'	IH 94 EB, RT & GORE	6780	4210	2570	4.3	120	180	-	40	STAGE 5
0010	43+11'B'	-	51+62'B'	RAMP B, RT	4710	-	4710	3.0	90	130	-	30	STAGE 5
0010	15+76	-	70+80	IH 94 EB MEDIAN	22950	22950	-	14.4	415	620	-	130	STAGE 6
0010	15+75	-	42+40	IH 94 WB, MEDIAN DITCH	3525	-	3525	1.2	65	95	-	20	STAGE 6
0010	43+60	-	63+40	IH 94 WB, MEDIAN DITCH	2640	-	2640	1.7	50	75	-	15	STAGE 6
0010			PROJECT	IH 94	6235	3930	2300	3.7	85	170	560	35	UNDISTRIBUTED
				TOTAL 0010	68570	43230	25335	42	935	1855	560	395	

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	3	3	
		TOTAL 0010	3	3	

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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	

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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 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	208.1100 SELECT BORROW 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	14697	576	0	14121	1055	0	1365	15747	13066	1050	1050
010	48+60	-	61+50	IH 94 EB WIDENING	1958	231	0	1727	6	0	4615	5508	1721	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	16753	832	0	15921	1067	0	5980	21353	14854	4600	4600
010	8+23	-	36+94	IH 94 WB	3546	1285	1035	1226	17494	16268	702	4086	0	540	540
010	36+94	-	51+91	RAMP A	778	131	0	647	43794	43147	0	778	0	0	0
				STAGE 2 SUBTOTALS	4324	1416	1035	1873	61288	59415	702	4864	0	540	540
010	36+94	-	57+10	IH 94 WB	15379	1800	1311	12268	966	0	0	15379	11302	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	15554	1854	1311	12389	1087	0	0	15554	11302	0	0
			Total		36631	4102	2346	30183	63442	59415	6682	41771	26156	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	13980	STAGE 1
0010	48+60	-	61+50	IH 94 EB WIDENING	1655	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	31955	

SELECT CRUSHED MATERIAL

CATEGORY	STATION	TO	STATION	LOCATION	312.0110 TON	REMARKS
0010	0+00	-	71+08	IH 94 WB CROSSOVER	18940	STAGE 1
0010	48+60	-	61+50	IH 94 EB WIDENING	2190	STAGE 1
0010	8+23	-	36+94	IH 94 WB	4610	STAGE 2
0010	36+94	-	51+91	RAMP A	6795	STAGE 2
				TOTAL 0010	32535	

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 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 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	HMA PAVEMENT 4 MT 58-34S 460.6244 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	975	-	-	-	-	6705	STAGE 1
0010	48+59	-	61+48	IH 94 EB WIDENING	110	-	-	-	-	765	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	2385	2215	915	425	575	11275	

CULVERT PIPE

CATEGORY	INLET STATION	INLET ELEVATION	OUTLET STATION	OUTLET ELEVATION	SLOPE %	LOCATION	APRON ENDWALLS FOR CULVERT PIPE 15-INCH 520.1015 LF	APRON ENDWALLS FOR CULVERT PIPE 36-INCH 520.1036 EACH	CULVERT PIPE TEMPORARY 15-INCH 520.2015 LF	CULVERT PIPE CLASS III-B NON-METAL 36-INCH 520.3636 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	5+63, 7.0'RT	1196.10	8+82, 31.3'LT	1194.70	0.4	IH 94 MEDIAN	2	-	348	-			
0010	11+77, 33.3' LT	1192.20	12+08.6, 22.7' LT	1189.67	7.0	IH 94 MEDIAN	1	-	36	-	-	-	
0010	12+12.6, 22.7' LT	1189.67	12+21.3, 22.6' LT	1189.07	6.3	IH 94 MEDIAN	-	-	10	-	-	-	
0010	18+77, 34.3' LT	1180.10	19+08, 24.9' LT	1177.00	8.6	IH 94 MEDIAN	1	-	36	-	-	-	
0010	19+12, 24.9' LT	1177.00	19+21.6, 25.4' LT	1176.50	6.3	IH 94 MEDIAN	-	-	10	-	-	-	
0010	26+82, 34.8' LT	1158.20	27+12.6, 26.6' LT	1154.10	12.1	IH 94 MEDIAN	-	-	34	-	-	-	
0010	27+12.6, 26.6' LT	1154.10	27+24, 27.1'LT	1153.60	6.3	IH 94 MEDIAN	-	-	10	-	-	-	
0010	34+76.8, 32.8'LT	1131.70	35+09, 21.3'LT	1127.00	13.1	IH 94 MEDIAN	-	-	36	-	-	-	
0010	35+09, 21.3'LT	1127.00	35+09, 21.3' LT	1126.50	6.3	IH 94 MEDIAN	-	-	10	-	-	-	
0010	51+25.9, 27.3'LT	1105.50	51+34.6, 27.5' LT	1106.00	6.3	IH 94 MEDIAN	-	-	10	-	-	-	
0010	51+38.6, 27.5' LT	1106.00	51+75, 32.8' LT	1107.00	2.8	IH 94 MEDIAN	1	-	36	-	-	-	
0010	59+63.1, 30.1' LT	1111.00	62+61.6, 9.1' RT	1117.60	2.0	IH 94 MEDIAN	2	-	300	-	-	-	
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	7	2	876	118	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	43+79'WB'	-	44+39'WB'	IH 94 WB, LT	60	
0010	43+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	7+00	-	64+00	IH 94 WB & ON RAMP	5750	5750	5750	105	STAGE 2
0010	9+00	-	54+00	IH 94 WB/ENTRANCE RAMP	4550	4550	4550	-	STAGE 2
0010	00+00	-	71+00	IH 94 WB CROSS OVER	7100	7100	-	-	STAGE 2
				TOTAL 0010	17400	17400	10300	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	50+50	-	70+00	IH 94 WB	1850	-	
0010			49+75	IH 94 WB	-	1	
0010			70+00	IH 94 WB	-	1	
				TOTAL 0010	1850	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	27+25, 27.1'LT	IH 94 MEDIAN	1156.25	2.65	1	
0010	35+10, 21.3' LT	IH 94 MEDIAN	1130.50	4.20	1	
0010	51+23.9, 27.3' LT	IH 94 MEDIAN	1107.92	2.50	1	
		TOTAL 0010			5	

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	

3

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	
0010			53+03'WB'	CTH B	70	110' LT, EXIT END
				TOTAL 0010	910	

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	

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							

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 2
0010	49+50'A'	-	52+40'A'	RAMP A, RT	1215	1215	-	0.8	25	35	-	7	STAGE 2
0010	43+64'A'	-	51+92'A'	RAMP A, LT	4855	-	4855	3.1	90	130	-	27	STAGE 2
0010	43+64'A'	-	49+50'A'	RAMP A, RT	3100	-	3100	2.0	55	85	-	17	STAGE 2
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	41+00'WB EX'	-	60+00'WB EX'	IH 94 WB	8410	6560	1850	5.3	150	230	-	47	STAGE 3
0010			PROJECT	IH 94	3850	2215	1640	2.6	60	105	735	22	UNDISTRIBUTED
				TOTAL 0010	42380	24360	18025	27	640	1150	735	238	

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	

3

MOBILIZATIONS

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

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	WINTER SHUTDOWN	IH 94 WB	-	480	960	-	-	-	-	-	STAGE 1B
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	-	-	-	-	-	5830	530	25	STAGE 1-3
		TOTAL 0010	16520	2480	3360	2690	260	5830	530	25	

TRAFFIC CONTROL COVERING SIGNS TYPE II

CATEGORY	#OF CYCLES	#OF SIGNS	LOCATION	643.0920 EACH	REMARKS
0010	3	2	IH 94	6	SPEED LIMIT 70-STAGE1-6
			TOTAL 0010	6	

3

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	

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	

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 02. TRAFFIC CONTROL VERTICAL PANNELS

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0060.02 EACH	REMARKS
0010	0+00	-	65+00	IH 94 CROSSOVER	66	STAGE 1B
				TOTAL 0010	66	

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	

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	27+14.6, 26.6' LT	IH 94 MEDIAN	1157.10	3.00	1	STAGE 1
0010	35+11, 21.3'LT	IH 94 MEDIAN	1131.20	4.20	1	STAGE 1
0010	51+36.6, 27.5' LT	IH 94 MEDIAN	1108.00	2.00	1	STAGE 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	

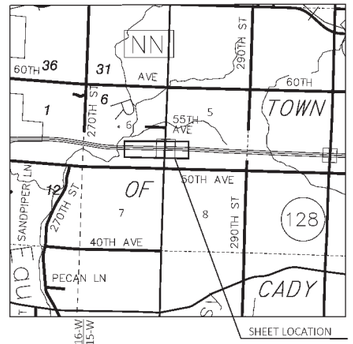
TRANSPORTATION PROJECT PLAT NO: 1021-00-20 - 4.01

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

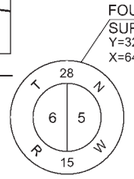
POINT#	Y	X
100	327750.031	645506.047
101	327757.722	645539.124
102	327758.736	645726.074
103	327722.437	645878.174
104	327372.408	645875.847
105	327369.751	645542.335
106	327369.432	645502.330
107	327369.114	645462.325
108	327362.489	644630.752
109	327722.420	644620.646
110	327732.771	644620.356
111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

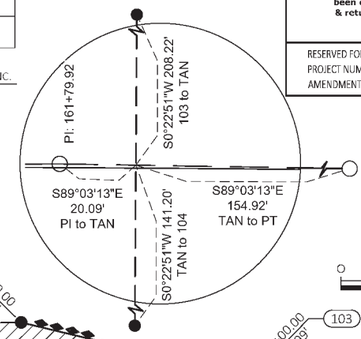


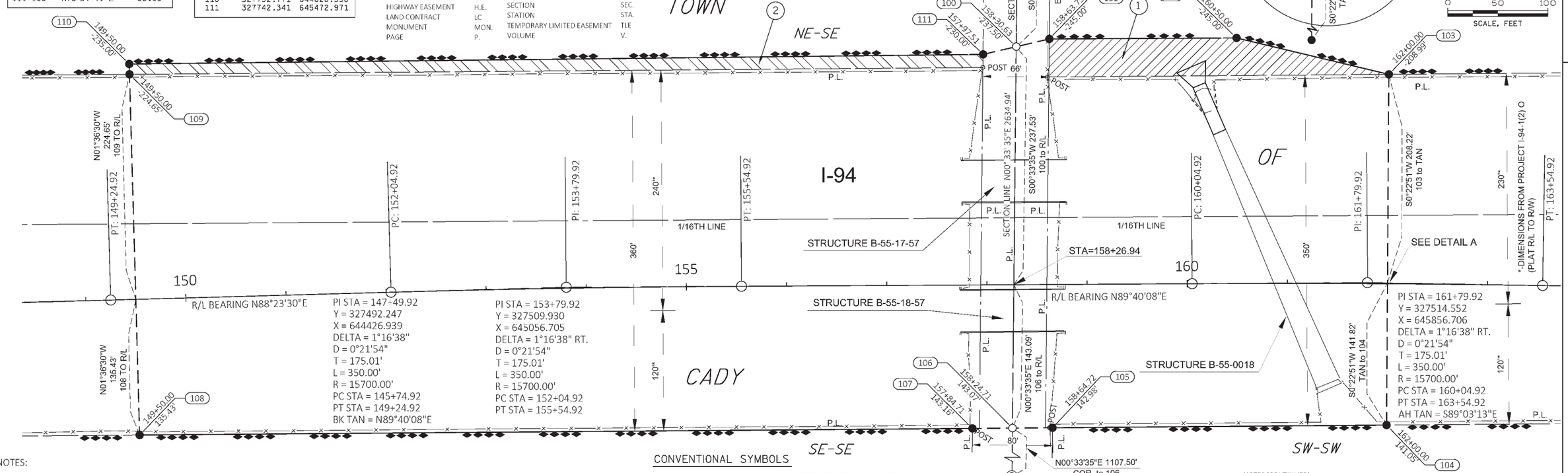
FOUND BERNTSEN SURVEY MARKER NAIL
Y=328896.798
X=645517.249

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
- R/W MONUMENT (TO BE SET)
- NON-MONUMENTED R/W POINT
- SECTION CORNER MONUMENT
- 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
- UTILITY NUMBER
- TLE POINT NUMBER T100
- PARALLEL OFFSETS

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

CONVENTIONAL UTILITY SYMBOLS

- GAS
- TELEPHONE
- OVERHEAD
- TRANSMISSION LINES ELECTRIC
- CABLE TELEVISION
- FIBER OPTIC

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
****The above recording information verifies that this document has been electronically recorded & returned to the submitter**

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER: 1021-04-27 - 4.01
AMENDMENT NO:___

R/W POINT COORDINATES

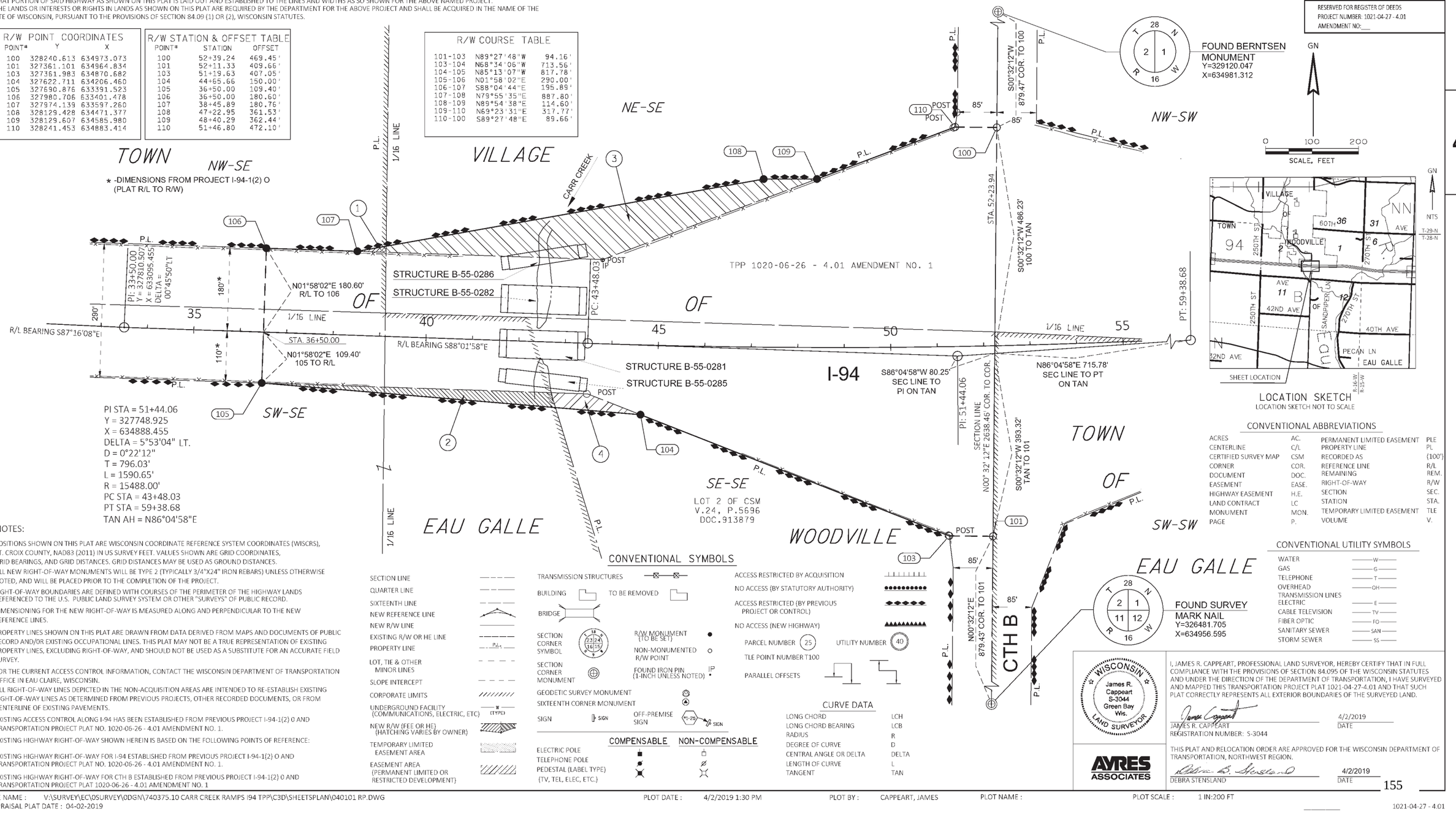
POINT#	Y	X
100	328240.613	634973.073
101	327361.101	634964.834
103	327361.983	634870.682
104	327622.711	634206.460
105	327630.876	633351.523
106	327980.706	633401.478
107	327974.139	633597.260
108	328129.428	634471.377
109	328129.607	634585.980
110	328241.453	634883.414

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'



PI STA = 51+44.06
Y = 327748.925
X = 634888.455
DELTA = 5°53'04" LT.
D = 0°22'12"
T = 796.03'
L = 1590.65'
R = 15488.00'
PC STA = 43+48.03
PT STA = 59+38.68
TAN AH = N86°04'58"E

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)
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)
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
UTILITY NUMBER
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

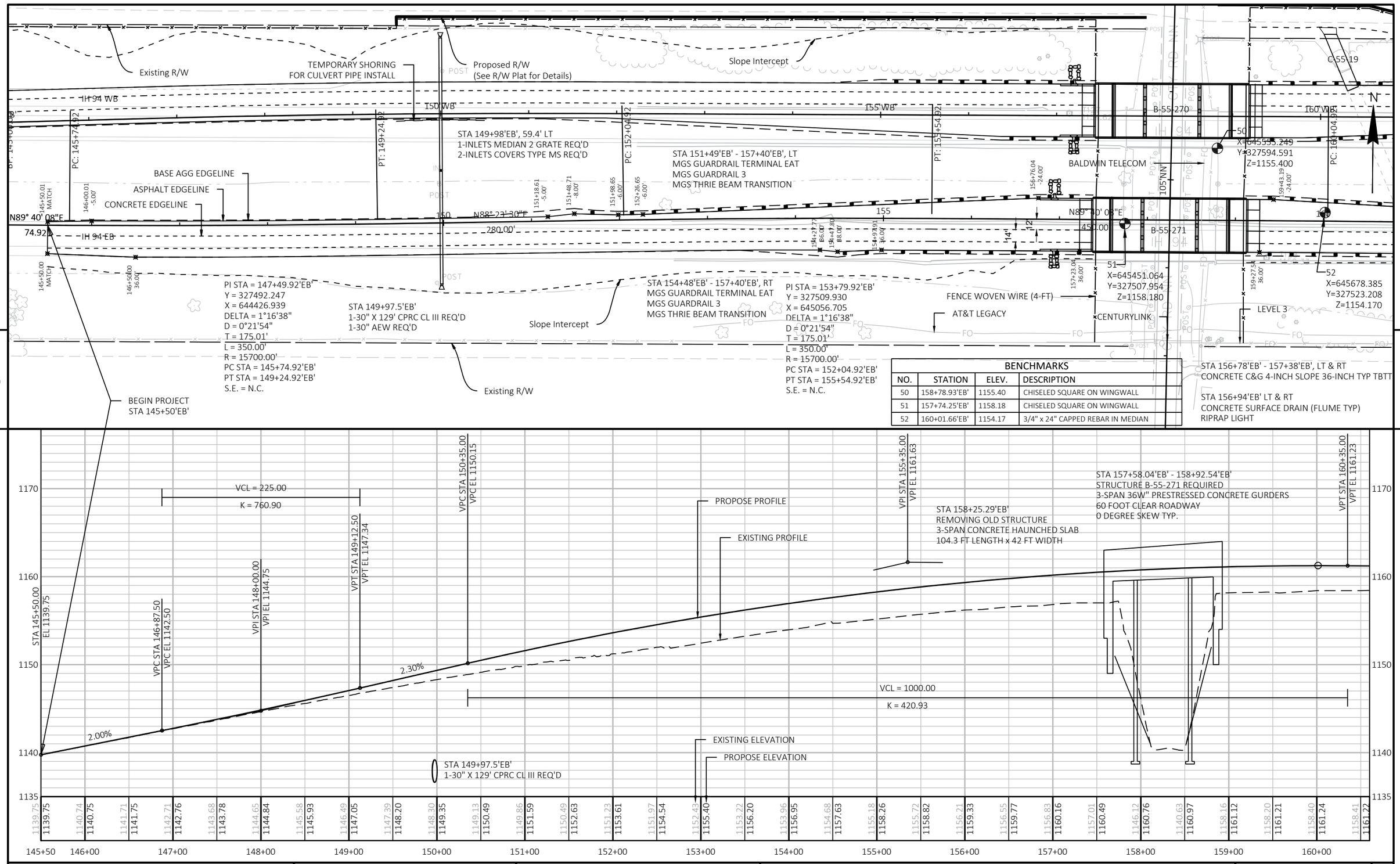
AYRES ASSOCIATES

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

DEBRA STENSLAND — 4/2/2019 DATE

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



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
50	158+78.93'EB'	1155.40	CHISELED SQUARE ON WINGWALL
51	157+74.25'EB'	1158.18	CHISELED SQUARE ON WINGWALL
52	160+01.66'EB'	1154.17	3/4" x 24" CAPPED REBAR IN MEDIAN

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB	SHEET 156	E

Proposed R/W

Slope Intercept

Existing R/W

165 WB

170 WB

175 WB

ST. CROIX ELECTRIC

PT: 163+54.92'EB'

PC: 164+15.76'EB'

PT: 167+97.71'EB'

EP: 170+79.85'EB'

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

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

BASE AGG EDGELINE

ASPHALT EDGELINE

CONCRETE EDGELINE

164+56.17 -6.01'

164+66.17 -5.00'

168+50.00 -5.00'

169+50.01 MATCH

168+50.00 36.00'

169+50.00 MATCH

S89° 02' 38"E

165

N89° 33' 09"E

170

60.84'

282.14'

14'

12

SIGN

POST

SLAB

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'
PT STA = 163+54.92'EB'
S.E. = N.C.

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'
PT STA = 167+97.71'EB'
S.E. = N.C.

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 157	E

Existing R/W

Slope Intercept

BP: 137+08.63'WB'

137+08.63 MATCH

PC: 137+58.63'WB'

137+58.63 50.00'

PT: 142+58.63'WB'

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'
PT STA = 142+58.63'WB'
S.E. = N.C.

N89° 33' 10"E
250.00

140'WB'

12'

14'

IH 94-WB

IH 94

N87° 43' 41"E 405.87'

145'WB'

BASE AGG EDGELINE
ASPHALT EDGELINE
CONCRETE EDGELINE

FENCE WOVEN WIRE (4-FT)

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'
PT STA = 151+64.18'WB'
S.E. = N.C.

STA 150+00'EB'
1-30" X 150' CPRC CL III REQ'D
1-30" AEW REQ'D

N

Proposed R/W
(See R/W Plat for Details)

PT: 151+64.18'WB'

150'WB'

TEMPORARY SHORING
FOR CULVERT PIPE INSTALL

151487.73

STA 150+00'EB', 64.7' RT
1-INLETS MEDIAN 2 GRATE REQ'D
2-INLETS COVERS TYPE MS REQ'D

IN @ POST

150'EB'

IH 94 IH 94 EB

Slope Intercept

Existing R/W

BEGIN PROJECT
STA 137+08.63'WB'

5

5

VCL = 225.00
K = 395.43

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

1.03%

2.00%

PROPOSE PROFILE

EXISTING PROFILE

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

1123.60	1124.21	1124.96	1125.78	1126.66	1127.59	1128.61	1129.63	1130.64	1131.70	1132.71	1133.75	1134.78	1135.78	1136.81	1137.79	1138.75	1139.72	1140.64	1141.55	1142.45	1143.39	1144.30	1145.19	1146.04	1146.84	1147.57	1148.33
1123.60	1124.20	1124.98	1125.82	1126.73	1127.70	1128.70	1129.70	1130.70	1131.70	1132.70	1133.70	1134.70	1135.70	1136.71	1137.71	1138.71	1139.71	1140.71	1141.71	1142.71	1143.71	1144.71	1145.71	1146.71	1147.71	1148.71	1149.67

137+09 138+00 139+00 140+00 141+00 142+00 143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 158	E

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

N

Proposed R/W (See R/W Plat for Details)

STA 157+04'WB' - 157+44'WB', LT & RT
CONCRETE C&G 4-INCH SLOPE 36-INCH TYP TBTT

STA 157+20'WB' LT & RT
CONCRETE SURFACE DRAIN (FLUME TYP)
RIPRAP LIGHT

Existing R/W

C-55-19 BOX CULVERT EXTENSION
(SEE STRUCTURE PLANS)

Proposed R/W

PT: 151+64.18'WB'

FENCE WOVEN WIRE (4-FT)

STA 155+00'WB' - 157+46'WB', LT
MGS GUARDRAIL TERMINAL TYPE 2
MGS GUARDRAIL 3
MGS THRIE BEAM TRANSITION

157+29.12
36.00'

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

PC: 165+08.63'WB'

B-55-270
N89° 33' 06"E
1344.45'

155'WB'

160'WB'

165'WB'

12"

14"

151+87.73
5.00'

BASE AGG EDGELINE
ASPHALT EDGELINE
CONCRETE EDGELINE

STA 156+37'WB' - 157+46'WB', RT
MGS GUARDRAIL TERMINAL TYPE 2
MGS GUARDRAIL 3
MGS THRIE BEAM TRANSITION

156+37.33
24.00'

157+29.12
24.00'

159+33.62
24.00'

159+80.60
24.00'

164+31.37
6.00'

165+09.37
8.12'

165+39.40
5.00'

STA 159+16'WB' - 165+09'WB', RT
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL EAT

BALDWIN TELECOM

50
X=645555.249
Y=327594.591
Z=1155.400

ST. CROIX ELECTRIC

155'EB'

B-55-271

160'EB'

52
X=645678.385
Y=327523.208
Z=1154.170

165'EB'

IH 94

51
X=645451.064
Y=327507.954
Z=1158.180

SIGN

Slope Intercept

AT&T LEGACY

CENTURYLINK

Slope Intercept

Existing R/W

LEVEL 3

5

5

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

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.

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

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
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
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
1137.33	1155.37	1157.91	1155.63	1157.92	1155.81	1157.88	1155.87	1157.82	1155.94	1157.76	1155.95	1157.70	1155.89	1157.64
1157.85														
1155.82	1155.87	1157.53	1155.93	1157.47	1155.88	1157.41	1155.84	1157.35	1155.87	1157.29	1155.85	1157.23		
1157.58														

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 159	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'
PT STA = 173+08.63'WB'
S.E. = N.C.

STA 171+48.9'WB'
1-24" X 120' CPRC CL III REQ'D
1-24" AEW REQ'D

Slope Intercept

Existing R/W

FENCE WOVEN WIRE (4-FT)

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

165'WB'

165+09.37 8.12'

165+39.40 5.00'

12"

14"

170'WB'

S87° 31' 44"E
366.14'

175'WB'

S88° 21' 45"E
55.45'

BASE AGG EDGELINE
ASPHALT EDGELINE
CONCRETE EDGELINE

STA 171+51.3'WB', 59.1' RT
1-INLETS MEDIAN 1 GRATE REQ'D
1-INLETS COVERS TYPE MS REQ'D

TEMPORARY SHORING
FOR CULVERT PIPE INSTALL

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'
PT STA = 179+03.18'WB'
S.E. = N.C.

165'EB'

170'EB'

SIGN

POST

Slope Intercept

Existing R/W

END PROJECT
STA 179+58.63'WB'

VCL = 800.00
K = 629.52

STA 179+58.63
EL 1161.97

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

1180
1170
1160
1150
1140

1155.83 1157.17 | 1155.88 1157.11 | 1155.91 1157.06 | 1155.99 1157.00 | 1156.04 1156.94 | 1156.08 1156.88 | 1156.12 1156.82 | 1156.12 1156.76 | 1156.14 1156.70 | 1156.16 1156.64 | 1156.24 1156.60 | 1156.34 1156.60 | 1156.47 1156.63 | 1156.70 1156.71 | 1156.89 1156.83 | 1157.06 1156.98 | 1157.24 1157.18 | 1157.48 1157.41 | 1157.71 1157.69 | 1157.97 1158.00 | 1158.29 1158.35 | 1158.74 1158.75 | 1159.14 1159.18 | 1159.63 1159.65 | 1160.14 1160.17 | 1160.71 1160.72 | 1161.29 1161.30 | 1161.86 1161.87

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

5 5

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 160 E

STA 103+50'NN' - 106+75'NN'
2-INCH REMOVING ASPHALTIC SURFACE
2-INCH HMA PAVEMENT 4 MT 58-28S

AT&T LEGACY

CENTURYLINK

BP: 102+00.00'NN'

N0° 30' 21"E
295.65'

CTY RD NN

LEVEL 3

BEGIN PROJECT
STA 103+50'NN'

BALDWIN TELECOM

T127
1154.62

158'LT

PI: 104+95.55'NN'

158'RT

END PROJECT
STA 106+75'NN'

EP: 108+00.00'NN'

POST

FO

N

EXISTING PROFILE TO REMAIN

1150
1140
1130

103+00	104+00	105+00	106+00	107+00
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

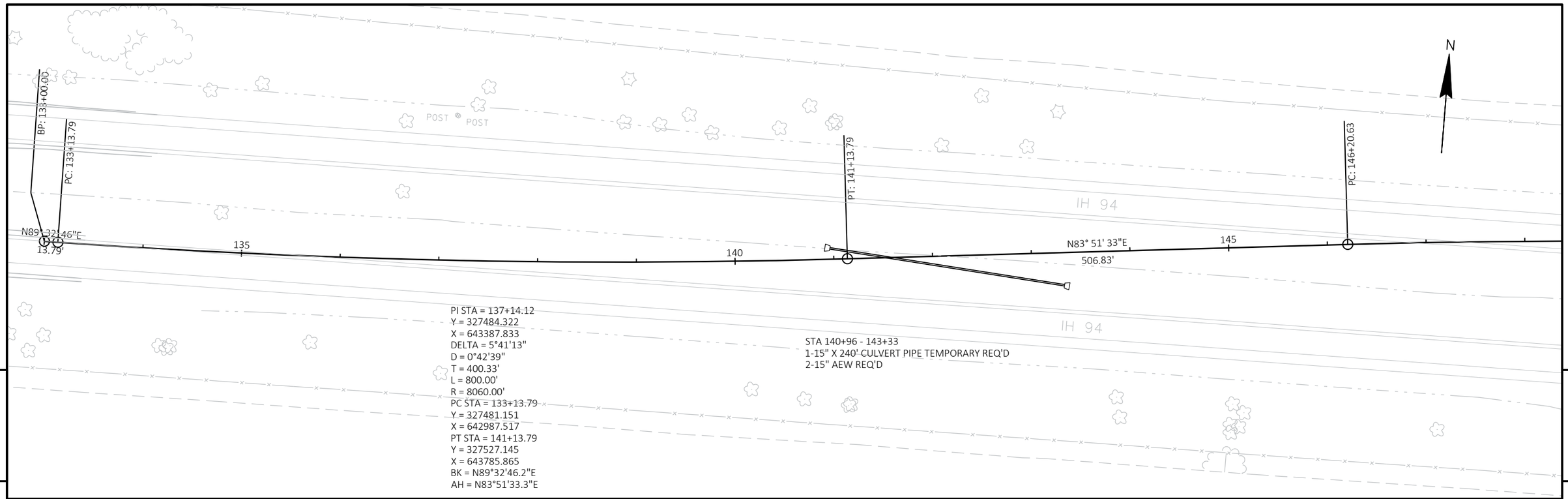
5

5

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: CTH NN (EXISTING)	SHEET 161	E

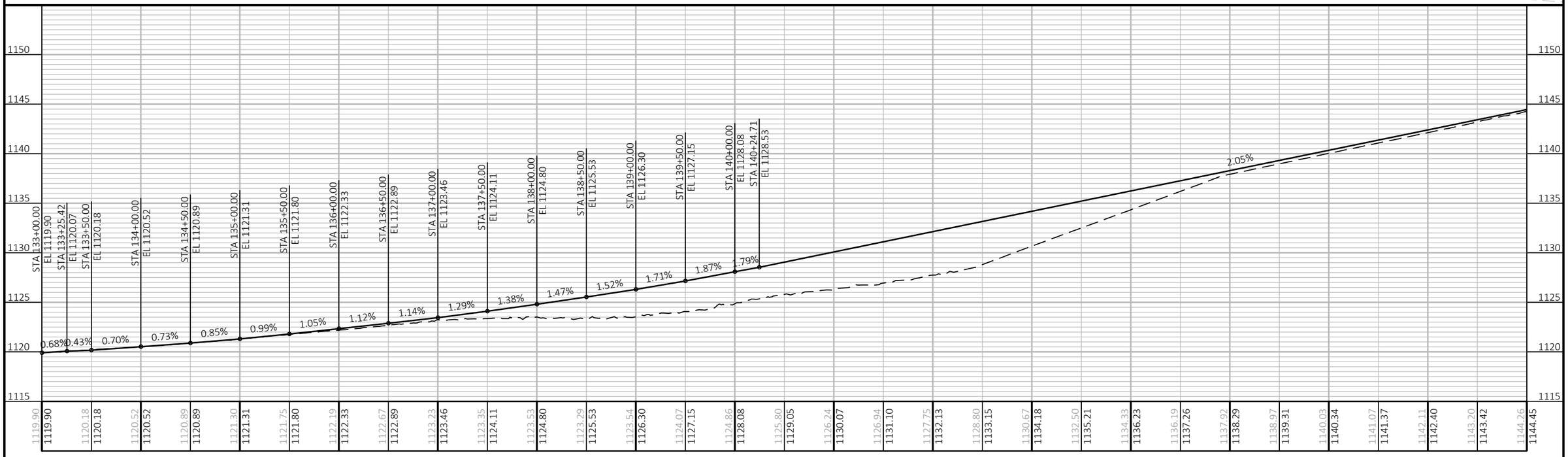
FILE NAME : C:\C3D\10210008\SHEETSPLAN\050101-PP-CTHNN.DWG
LAYOUT NAME - 3

PLOT DATE : 9/30/2020 1:03 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:50 FT

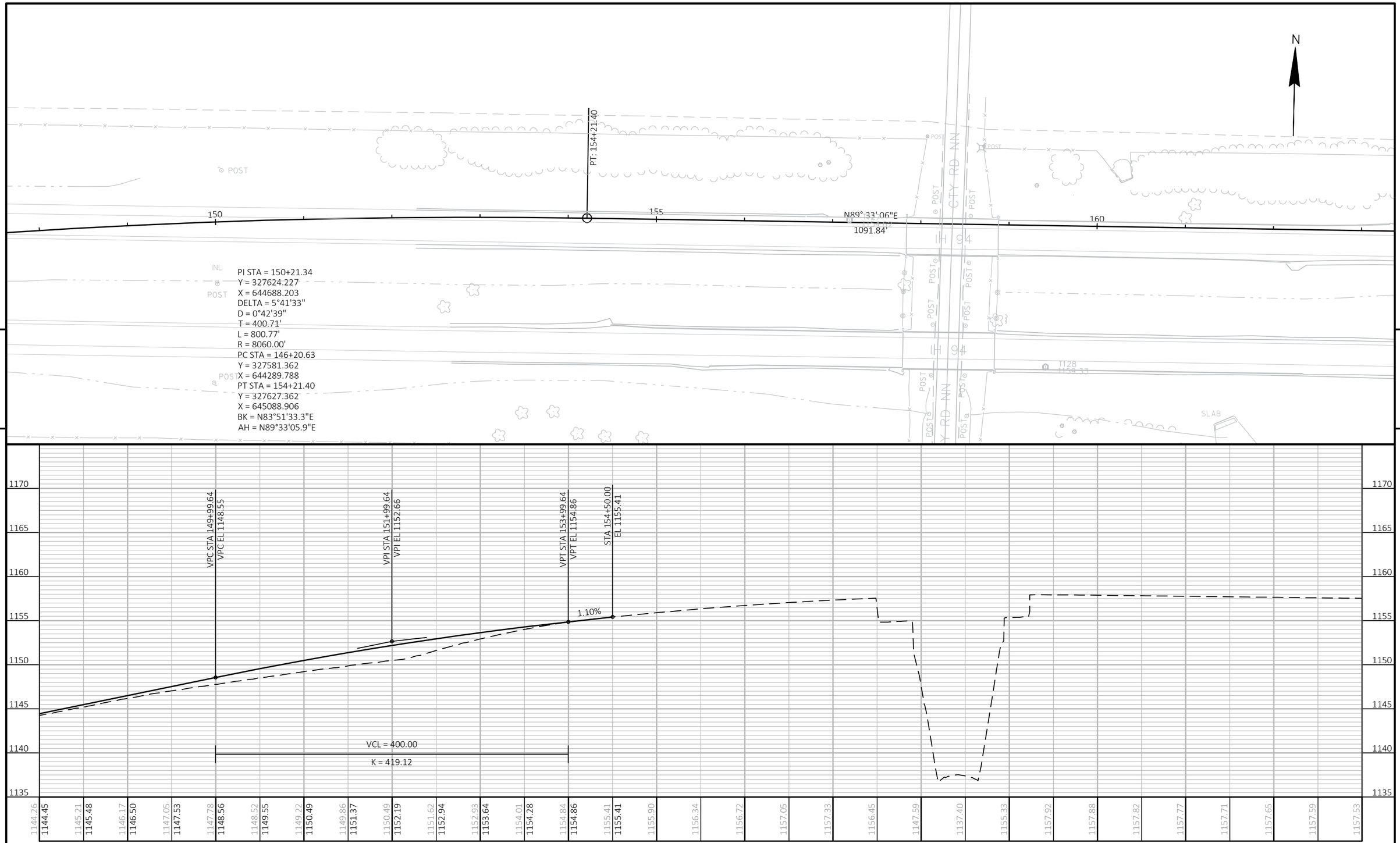


PI STA = 137+14.12
Y = 327484.322
X = 643387.833
DELTA = 5°41'13"
D = 0°42'39"
T = 400.33'
L = 800.00'
R = 8060.00'
PC STA = 133+13.79
Y = 327481.151
X = 642987.517
PT STA = 141+13.79
Y = 327527.145
X = 643785.865
BK = N89°32'46.2"E
AH = N83°51'33.3"E

STA 140+96 - 143+33
1-15" X 240' CULVERT PIPE TEMPORARY REQ'D
2-15" 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 162	E



5

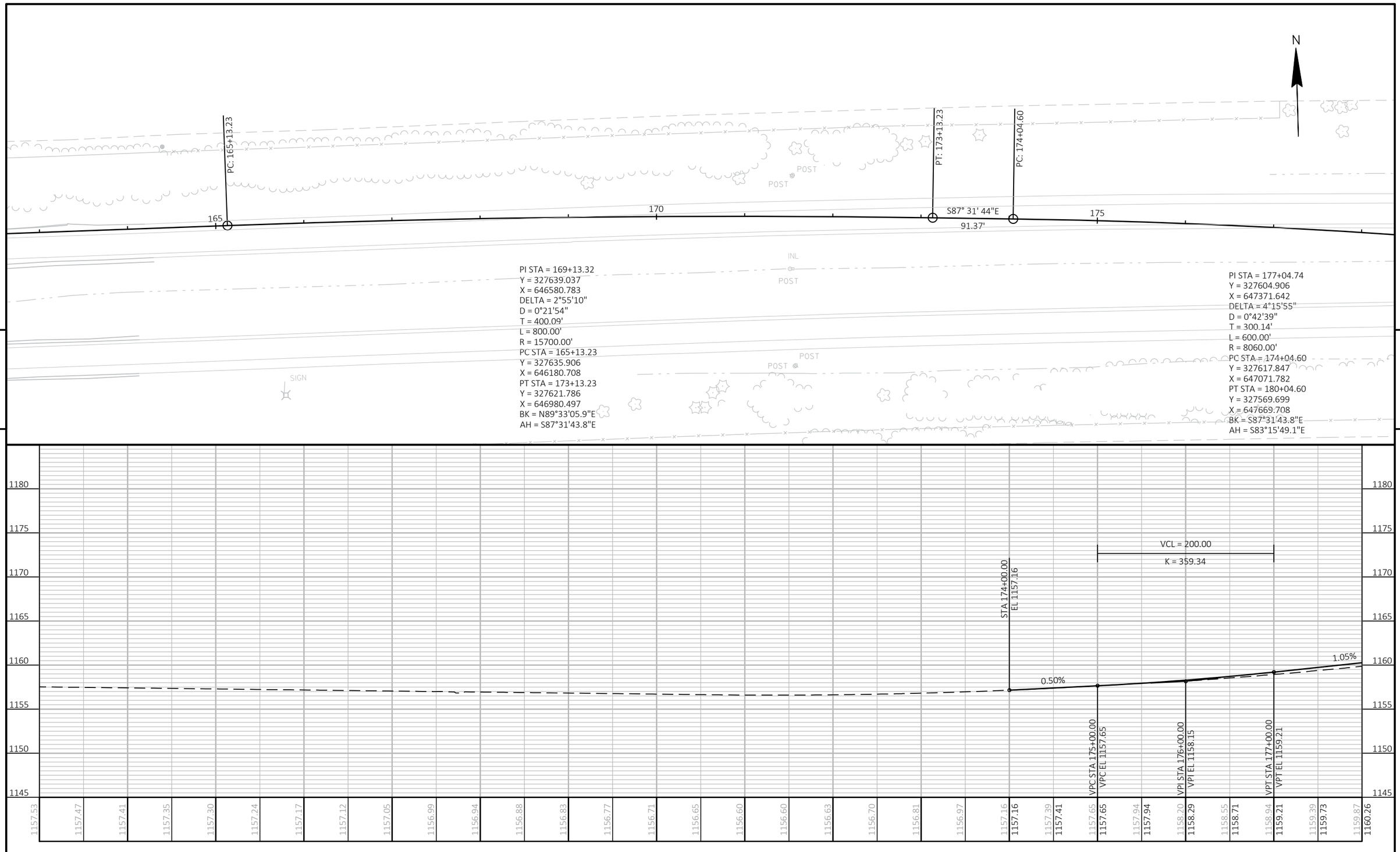
5

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB CROSSOVER - STAGE 2	SHEET 163	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\050101-PP-I94EB-CTHNN-CROSSOVER.DWG
LAYOUT NAME - 02

PLOT DATE : 3/25/2021 1:12 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

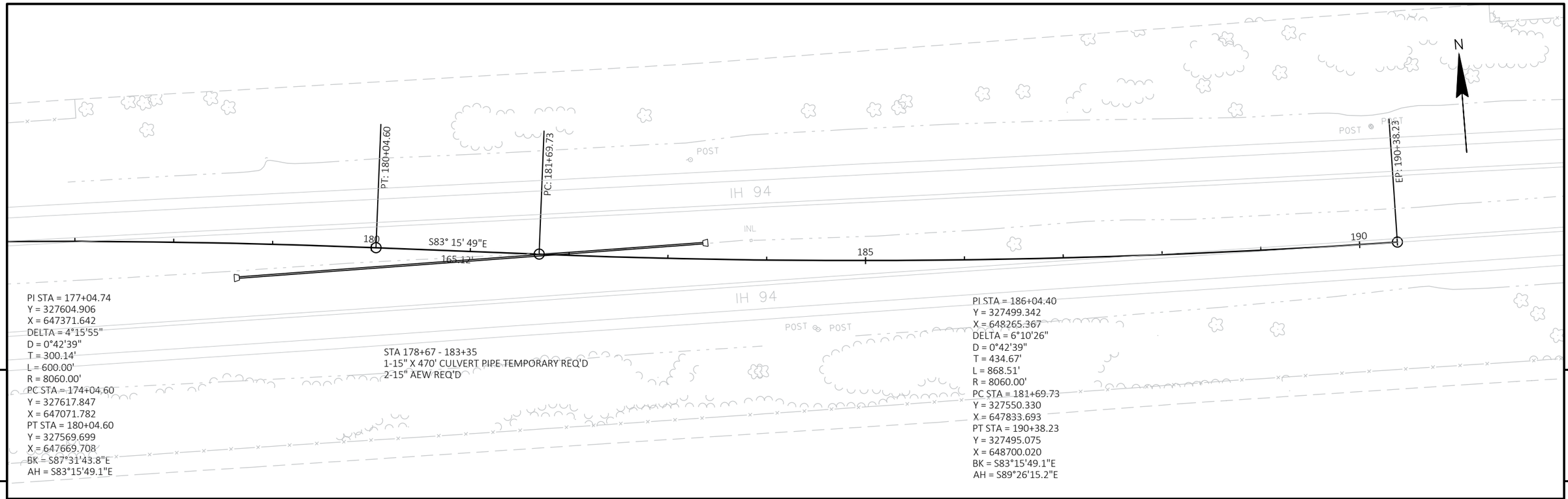


5

5

PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB CROSSOVER - STAGE 2	SHEET 164	E

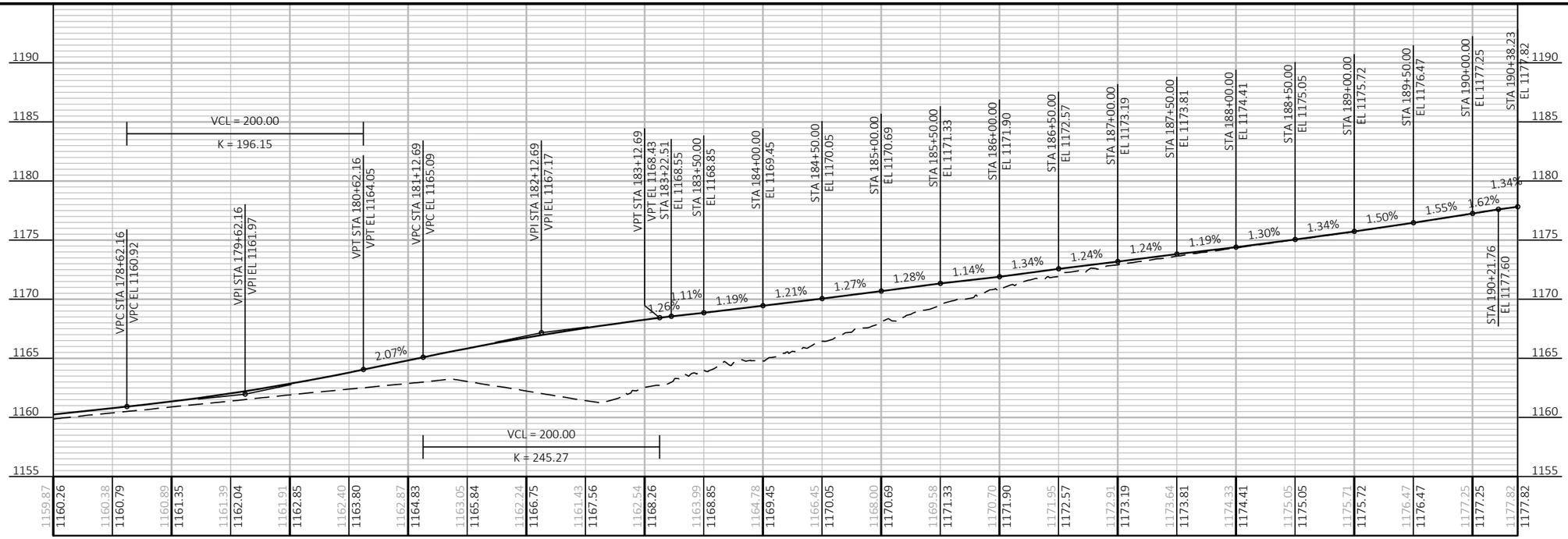
FILE NAME : C:\C3D\10210008\SHEETSPLAN\050101-PP-I94EB-CTHNN-CROSSOVER.DWG
LAYOUT NAME - 03
PLOT DATE : 3/25/2021 1:13 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



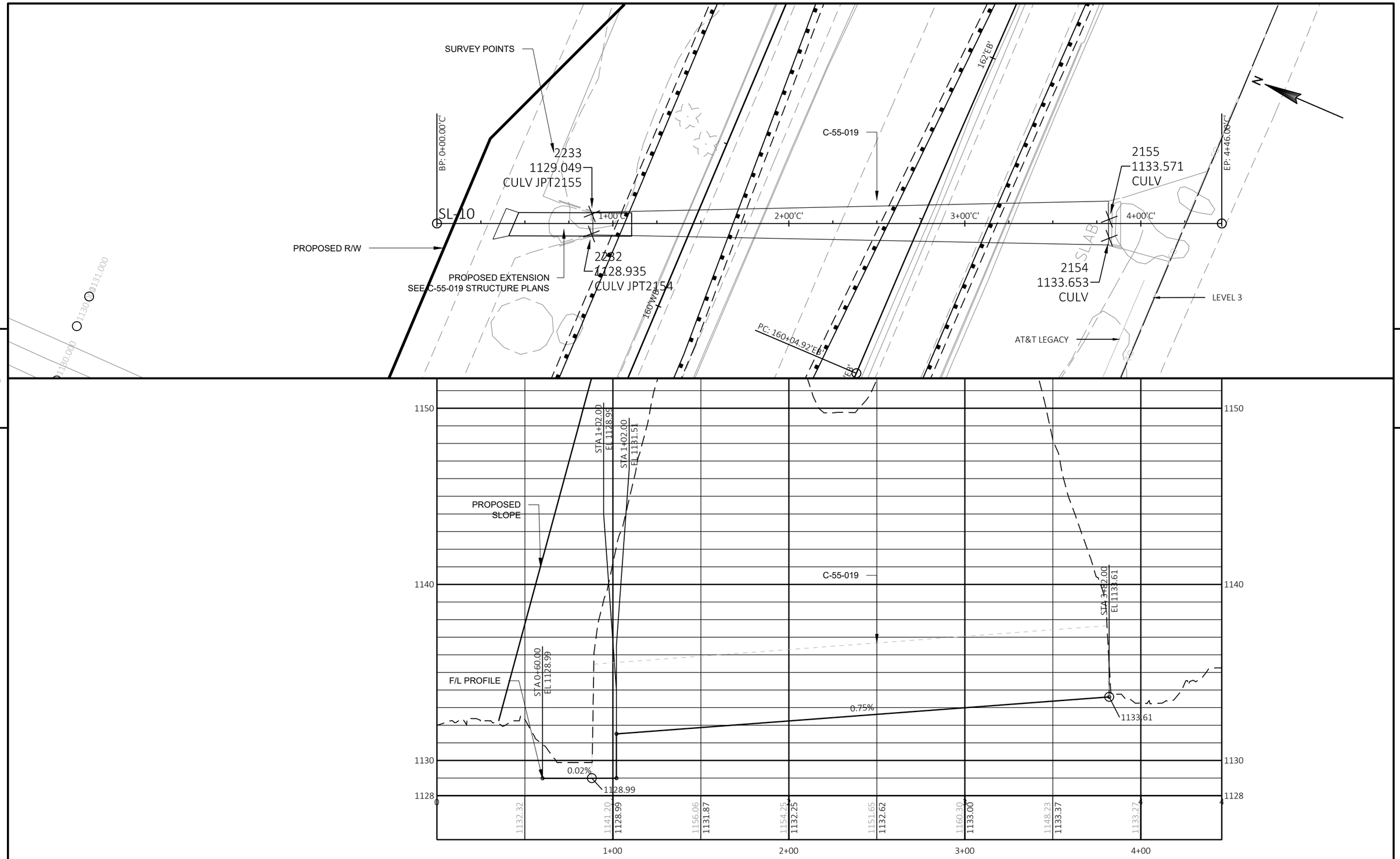
PI STA = 177+04.74
Y = 327604.906
X = 647371.642
DELTA = 4°15'55"
D = 0°42'39"
T = 300.14'
L = 600.00'
R = 8060.00'
PC STA = 174+04.60
Y = 327617.847
X = 647071.782
PT STA = 180+04.60
Y = 327569.699
X = 647669.708
BK = S87°31'43.8"E
AH = S83°15'49.1"E

STA 178+67 - 183+35
1-15" X 470' CULVERT PIPE TEMPORARY REQ'D
2-15" AEW REQ'D

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



PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB CROSSOVER - STAGE 2	SHEET 165	E

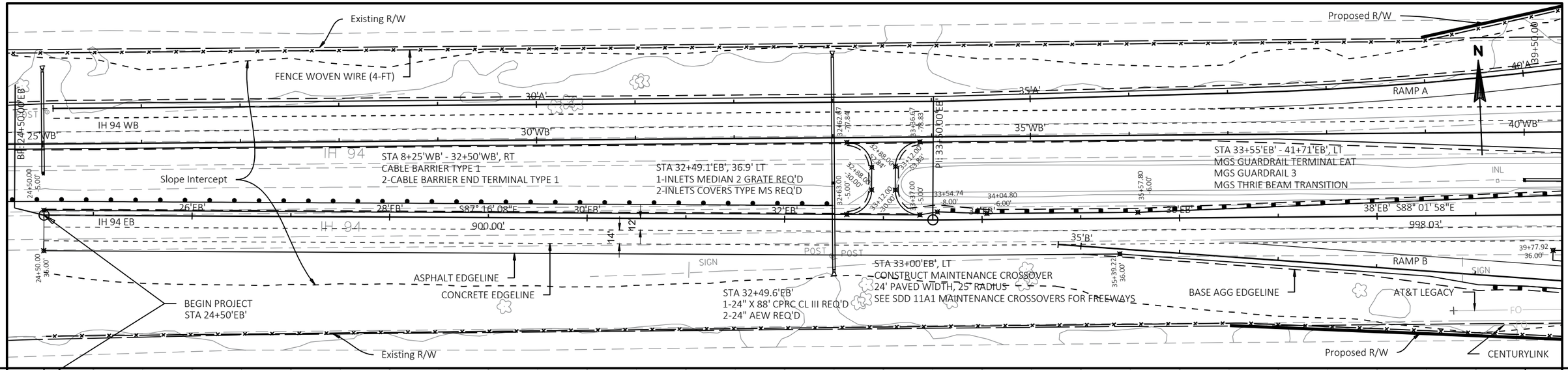


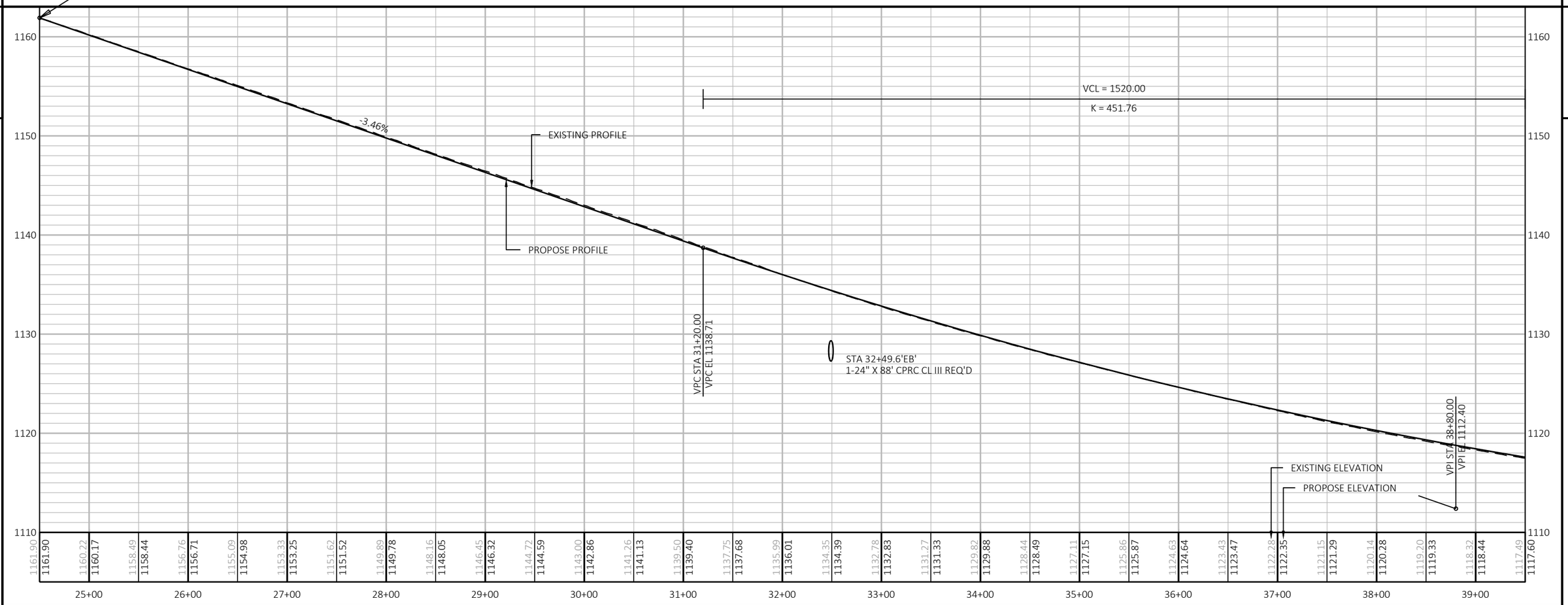
PROJECT NO: 1021-00-78 & 1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	C-55-019	SHEET 166	E

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 167 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

40'A'
B-55-286
70
X=633947.645
Y=327889.105
Z=1116.140
72
X=634299.893
Y=327876.705
Z=1113.900
40'WB'
B-55-282
71
X=633944.627
Y=327801.051
Z=1113.800
45'WB'
50'WB'
55'WB'
BASE AGG EDGELINE
ASPHALT EDGELINE
CONCRETE EDGELINE
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
40'EB'
42'EB'
44'EB'
46'EB'
48'EB'
50'EB'
52'EB'
54'EB'
B-55-281
40'B'
B-55-285
AT&T LEGACY
Slope Intercept
45'B'
CENTURYLINK
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
Proposed R/W
FENCE WOVEN WIRE (4-FT)
STA 43+29'EB' - 43+69'EB', LT & RT
CONCRETE C&G 4-INCH SLOPE 36-INCH TYP TBTT
STA 43+53'EB' LT & RT
CONCRETE SURFACE DRAIN (FLUME TYP)
RIPRAP LIGHT
STA 48+50'EB'
1-24" X 92' CPRC CL III REQ'D
1-24" AEW REQ'D
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'
PT STA = 59+38.68'EB'
S.E. = N.C.
STA 51+27'EB' - 53+21'EB', LT
STEEL THRIE BEAM BULL NOSE TERMINAL
STEEL THRIE BEAM
XCEL ENERGY
CTH B
IH 94
RIPRAP
POST
INL
FO
GUY
MH
N

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

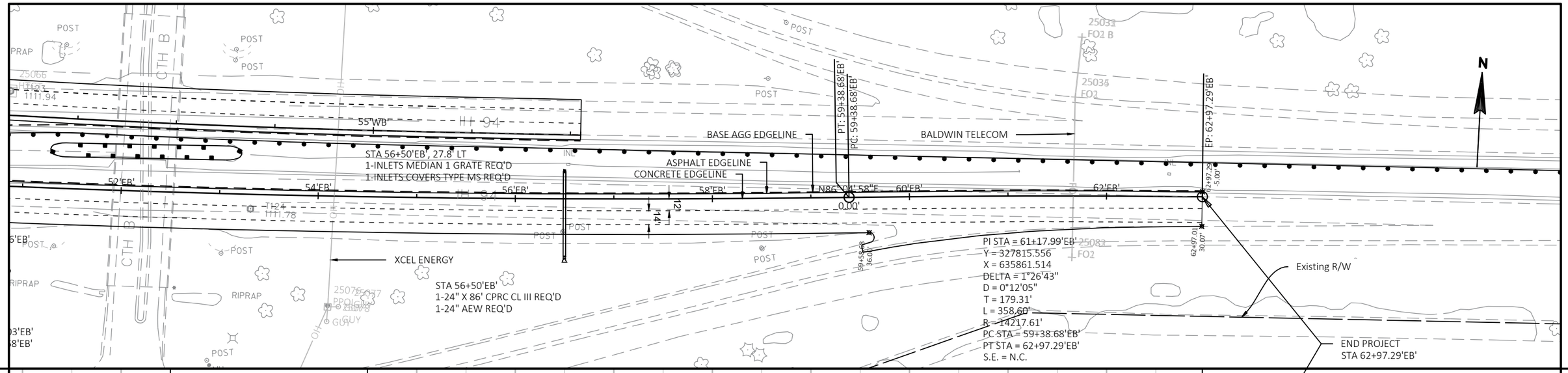
1140 1130 1120 1110 1100 1090

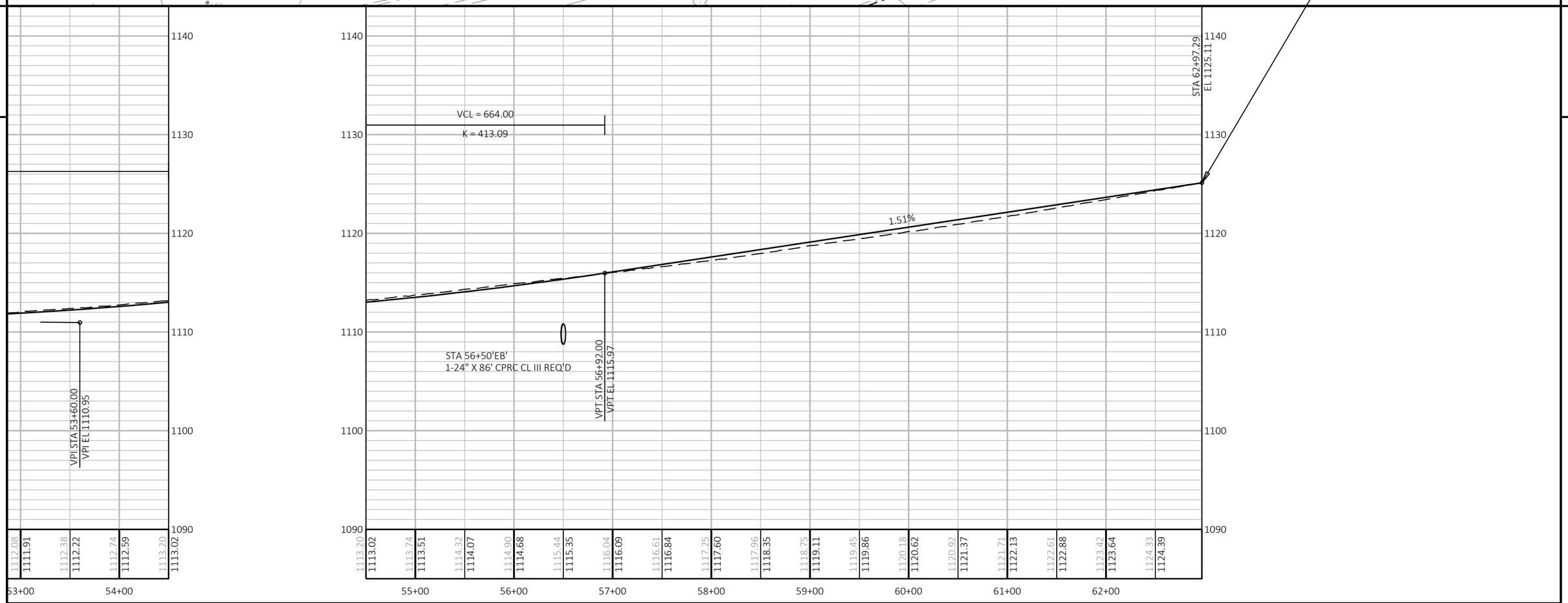
1117.49 1117.60 1116.71 1116.81 1116.00 1116.08 1115.37 1115.41 1114.74 1114.79 1114.24 1114.23 1097.55 1113.72 1108.46 1113.27 1113.05 1112.87 1112.88 1112.53 1112.62 1112.24 1112.35 1112.01 1112.19 1111.83 1112.03 1111.71 1111.84 1111.65 1111.68 1111.60 1111.57 1111.55 1111.47 1111.50 1111.41 1111.45 1111.32 1111.40 1111.28 1111.35 1111.21 1111.30 1111.20 1111.26 1111.31 1111.27 1111.48 1111.34 1111.56 1111.47 1111.74 1111.66 1112.08 1111.91 1112.38 1112.22 1112.74 1112.59 1113.20 1113.02

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

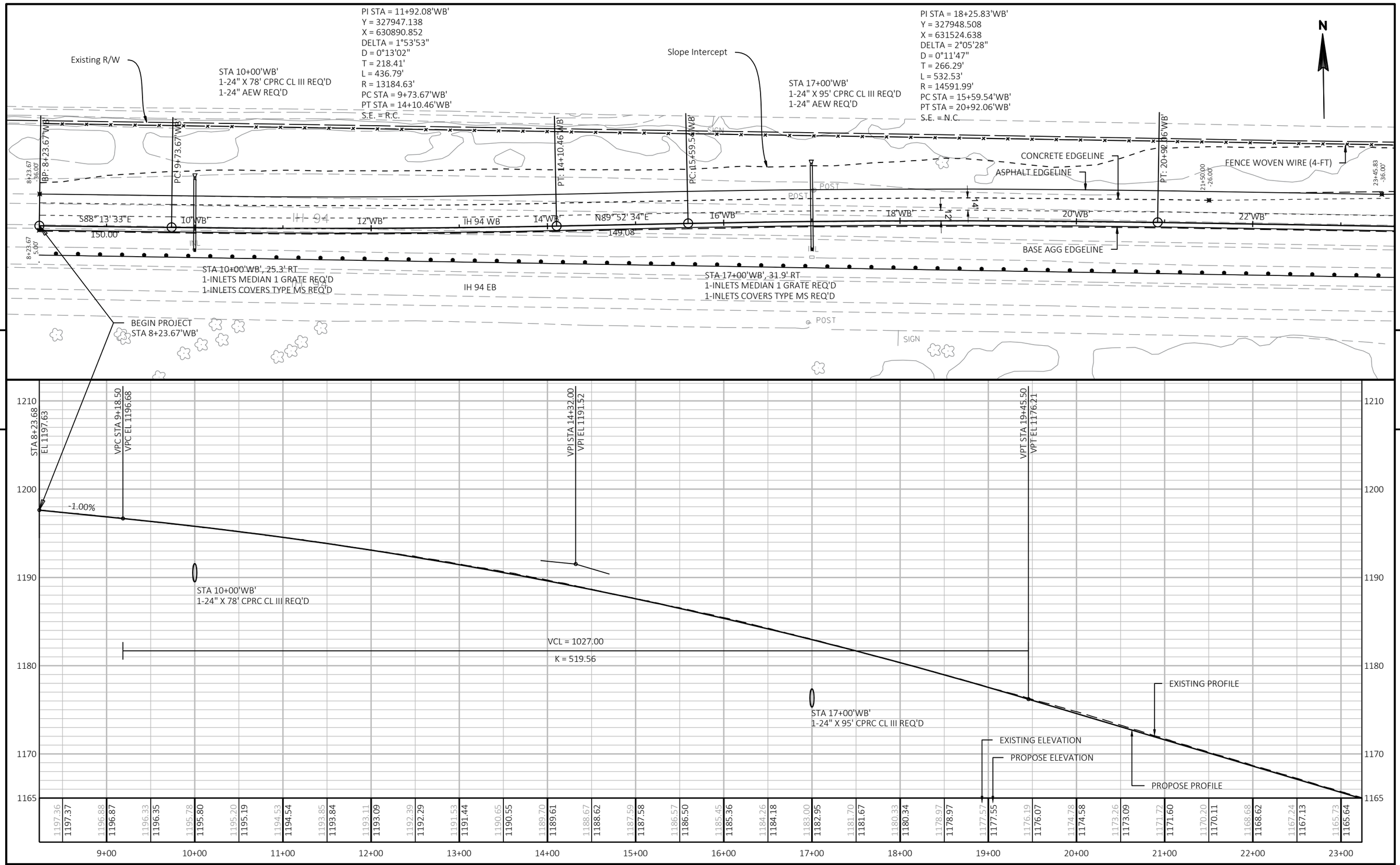
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB	SHEET 168 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-EB.DWG
LAYOUT NAME - 5
PLOT DATE : 3/22/2021 3:09 PM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT





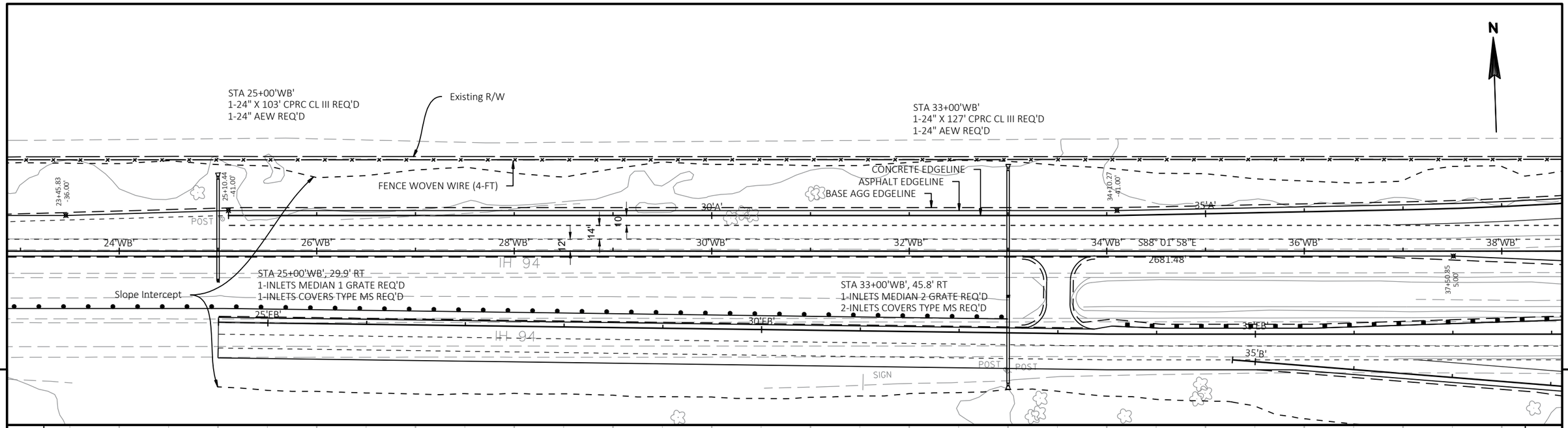
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB	SHEET 169 E



PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 170	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-WB.DWG
LAYOUT NAME - 5

PLOT DATE : 2/19/2021 11:05 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 171	E

STA 42+00'WB' - 42+22'WB', LT & RT
MGS GUARDRAIL TERMINAL TYPE 2
MGS THRIE BEAM TRANSITION

STA 43+79'WB' - 44+39'WB', LT & RT
CONCRETE C&G 4-INCH SLOPE 36-INCH TYP TBTT

STA 44+23'WB' LT & RT
CONCRETE SURFACE DRAIN (FLUME TYP)
RIPRAP LIGHT

Proposed R/W

Slope Intercept

Existing R/W

B-55-286

70
X=633947.645
Y=327889.105
Z=1116.140

B-55-282

71
X=633944.627
Y=327801.051
Z=1113.800

B-55-281

B-55-285

RAMP A

RAMP B

STA 43+77'WB' - 46+69'WB', LT
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL EAT

72
X=634299.893
Y=327876.705
Z=1113.900

CONCRETE EDGELINE
ASPHALT EDGELINE
BASE AGG EDGELINE

STA 43+77'WB' - 50+69'WB', RT
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL EAT

STA 50+50'WB' - 70+00'WB', RT
CABLE BARRIER TYPE 1
2-CABLE BARRIER END TERMINAL TYPE 1

PC: 47+73.55'WB'

PI STA = 51+67.09'WB'
Y = 327833.815
X = 634863.990
DELTA = 3°50'36"
D = 0°14'39"
T = 393.55'
L = 786.80'
R = 11729.35'
PC STA = 47+73.55'WB'
PT STA = 55+60.34'WB'
S.E. = R.C.

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

IH 94
CTH B
RIPRAP
POST
INL
SIGN
40'A'
45'A'
50'A'
40'WB'
42'WB'
44'WB'
46'WB'
48'WB'
50'WB'
52'WB'
40'EB'
45'EB'
50'EB'
40'B'

VCL = 1228.00
K = 554.97

VCL = 451.00
K = 606.15

VCL = 307.00
K = 215.47

-0.77%

-0.02%

STA 43+00'WB'
REMOVING OLD STRUCTURE
3-SPAN CONCRETE HAUNCHED SLAB
104 FT LENGTH x 48-55 FT WIDTH

STA 42+39.91'WB' - 43+59.41'WB'
STRUCTURE B-55-282 REQUIRED
3-SPAN 28W" PRESTRESSED CONCRETE GURDERS
60 FOOT CLEAR ROADWAY
0 DEGREE SKEW TYP.

VPI STA 38+50.00
VPI EL 1119.42

VPT STA 44+64.00
VPT EL 1114.70

VPC STA 44+99.45
VPC EL 1114.43

VPI STA 47+24.95
VPI EL 1112.70

VPT STA 49+50.45
VPT EL 1112.64

VPC STA 52+29.87
VPC EL 1112.57

1130 1120 1110 1100 1090

1123.08 1122.82 1122.20 1121.91 1121.33 1121.04 1120.49 1120.21 1119.66 1119.43 1118.88 1118.70 1118.13 1118.01 1117.37 1117.36 1116.69 1116.76 1096.29 1116.21 1108.65 1115.70 1115.23 1115.23 1114.93 1114.81 1114.69 1114.43 1114.41 1114.06 1114.09 1113.74 1113.85 1113.46 1113.64 1113.22 1113.47 1113.02 1113.31 1112.87 1113.18 1112.75 1113.04 1112.67 1112.87 1112.64 1112.80 1112.63 1112.71 1112.62 1112.59 1112.60 1112.59 1112.59 1112.62 1112.58 1112.64 1112.58 1112.71 1112.67

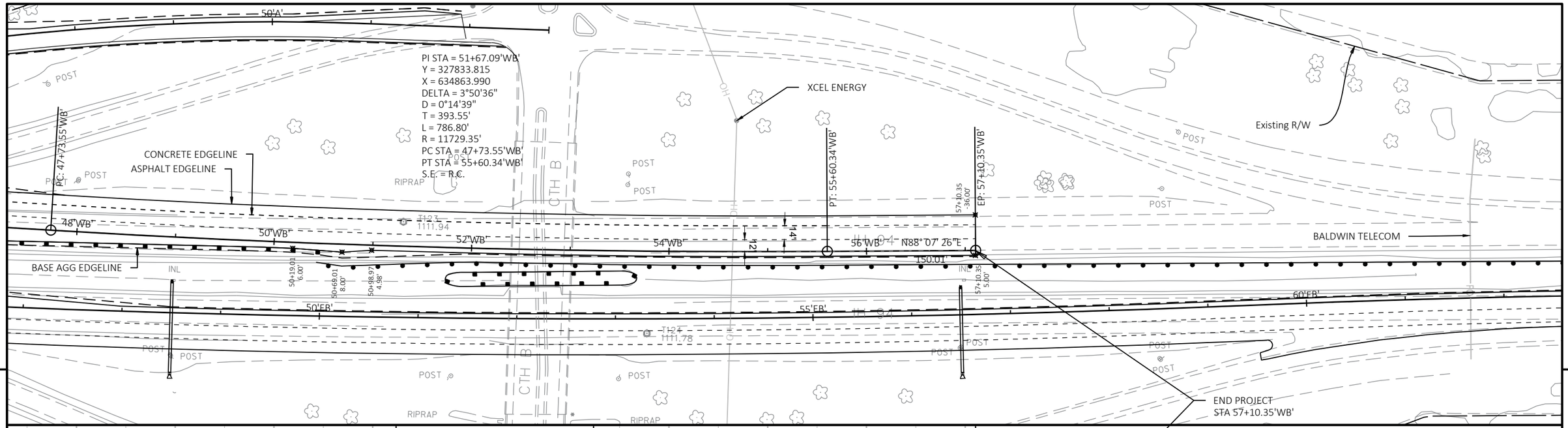
39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00 53+00

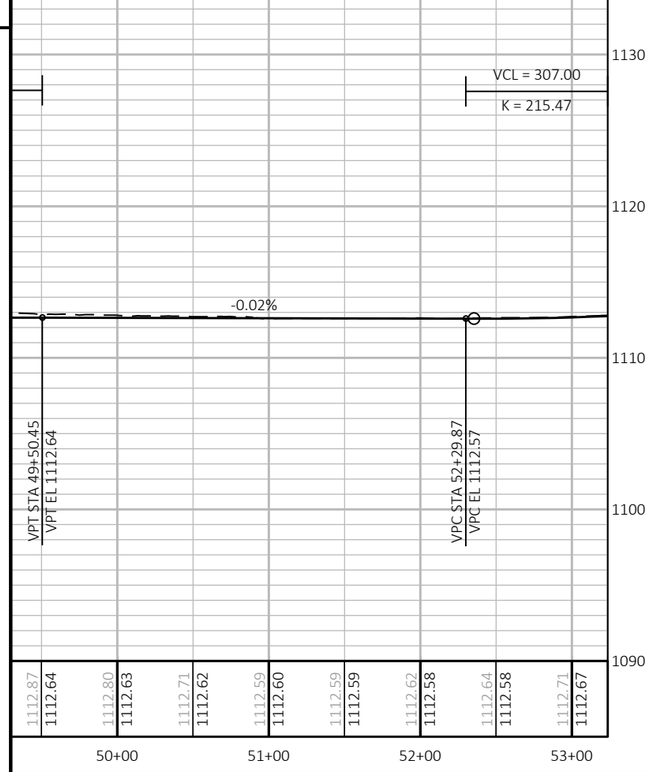
PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 172	E

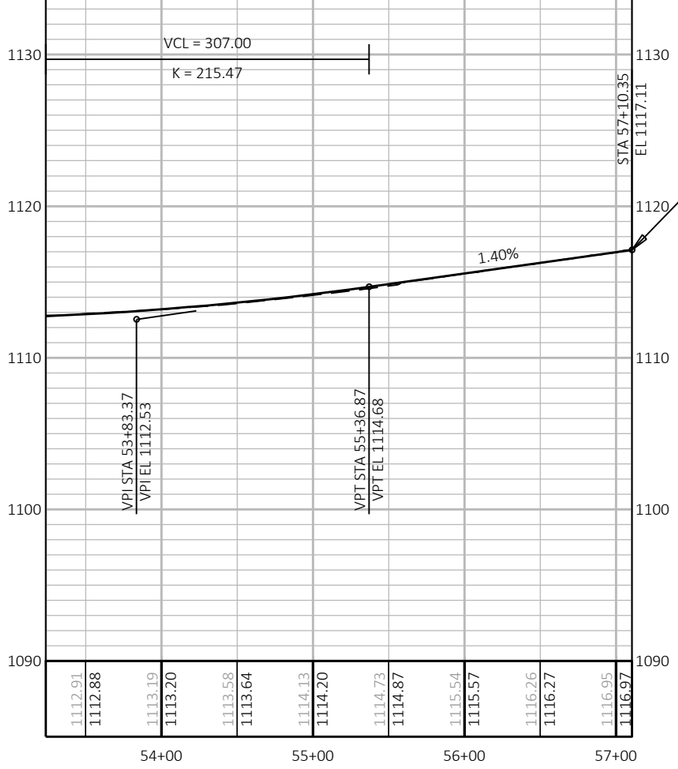
FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-WB.DWG
LAYOUT NAME - 7

PLOT DATE : 2/19/2021 11:06 AM 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: IH 94 WB	SHEET 173	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-WB.DWG
LAYOUT NAME - 8

PLOT DATE : 2/19/2021 11:06 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

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'
PT STA = 44+29.07'A'
S.E. = 3.9%

STA 42+03'A' - 42+26'A', LT & RT
MGS GUARDRAIL TERMINAL TYPE 2
MGS THRIE BEAM TRANSITION

STA 43+82'A' - 45+73'A', RT
STA 43+82'A' - 46+98'A', LT
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL EAT

STA 41+83'A' - 42+23'A', LT & RT
CONCRETE C&G 4-INCH SLOPE 36-INCH TYP TBTT

STA 42+00'A' LT & RT
CONCRETE SURFACE DRAIN (FLUME TYP)
RIPRAP LIGHT

STA 45+75'A'
1-36" X 118' CPRC CL III REQ'D
(12.5 DEGREES RHF SKEW)
2-36" AEW REQ'D

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'
PT STA = 50+88.25'A'
S.E. = 3.8%

PT: 34+10.33'A'
PC: 37+10.52'A'
PT: 44+29.07'A'
PC: 45+88.25'A'
Proposed R/W
FENCE WOVEN WIRE (4-FT)
Existing R/W
Slope Intercept
35'A'
IH 94 WB
35'WB'
40'A'
RAMP A
B-55-286
40'WB'
35'EB'
IH 94 EB
35'B'
AT&T LEGACY
40'EB'
B-55-282
45'WB'
CENTURYLINK
SIGN
40'B'
B-55-281
45'EB'
RAMP B
B-55-285
ASPHALT EDGELINE
BASE AGG EDGELINE
IH 94
POST
INL
FO
N

VCL = 700.00
K = 160.01
STA 36+76.52
EL 1126.00
-2.37%
2.00%
STA 42+43.49'A' - 43+63.99'A'
STRUCTURE B-55-286 REQUIRED
3-SPAN 28W" PRESTRESSED CONCRETE GURDERS
28.67 FOOT CLEAR ROADWAY
11 DEGREE SKEW TYP.
VPC STA 38+36.87
VPC EL 1122.19
VPI STA 41+86.87
VPI EL 1113.88
VPT STA 45+36.87
VPT EL 1120.88
STA 45+75'A'
1-36" X 118' CPRC CL III REQ'D
(12.5 DEGREES RHF SKEW)

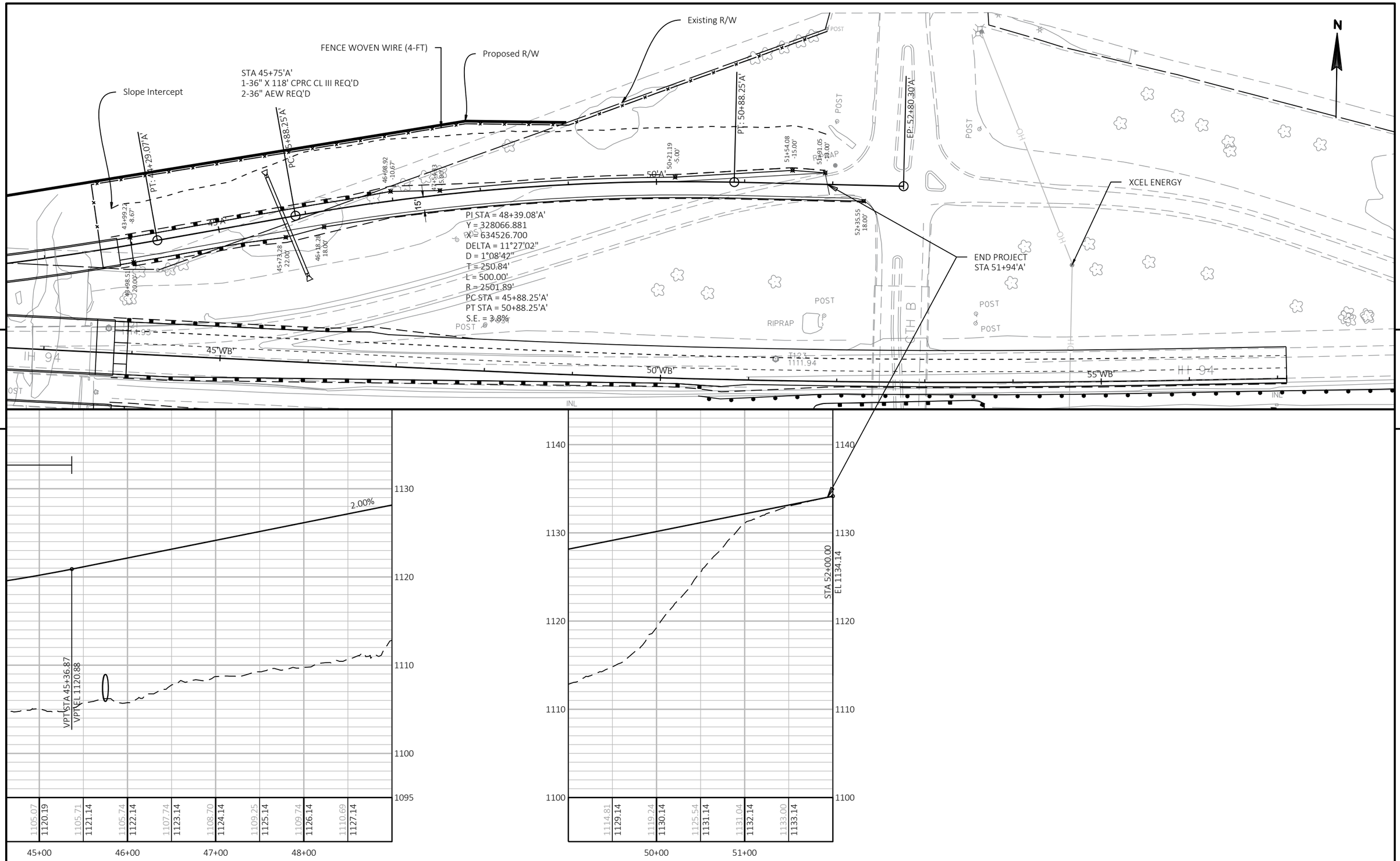
1130 1120 1110 1100 1095

1125.61 1125.27 1124.53 1123.99 1123.27 1122.58 1125.44 1121.42 1124.25 1120.04 1123.07 1118.63 1121.89 1116.48 1120.82 1114.59 1119.91 1112.07 1119.15 1110.75 1118.55 1109.39 1118.11 1108.18 1117.82 1107.40 1117.69 1107.34 1117.71 1096.96 1117.90 1104.22 1118.23 1104.03 1118.73 1104.37 1119.38 1105.07 1120.19 1105.71 1121.14 1105.74 1122.14 1107.74 1123.14 1108.70 1124.14 1109.25 1125.14 1109.74 1126.14 1110.69 1127.14

35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00

PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: RAMP A	SHEET 174	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-RAMPA.DWG
LAYOUT NAME - 3
PLOT DATE : 2/19/2021 10:29 AM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

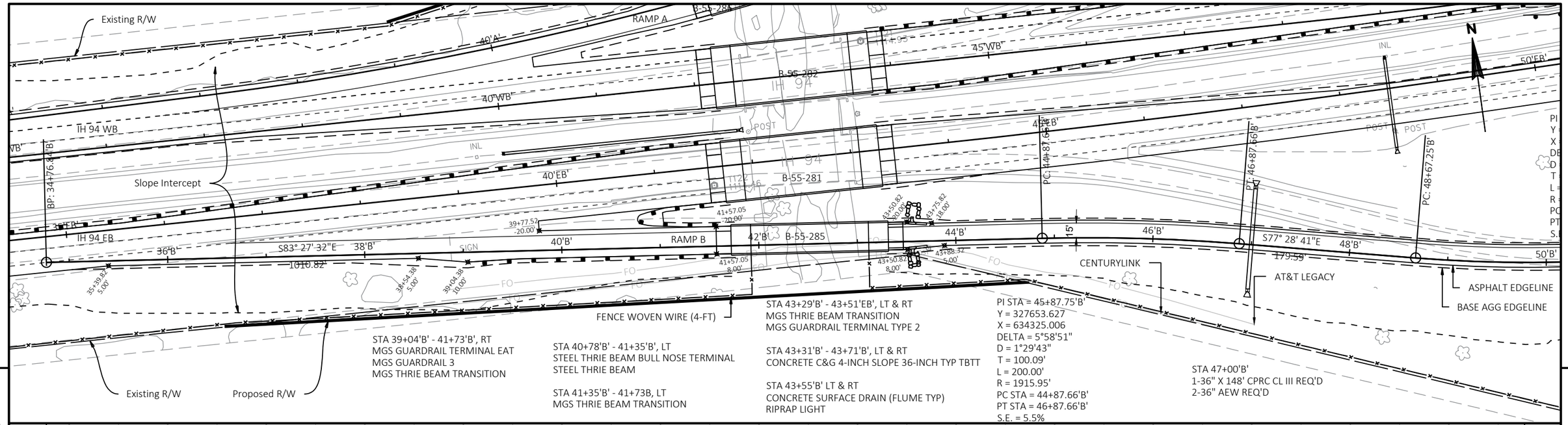


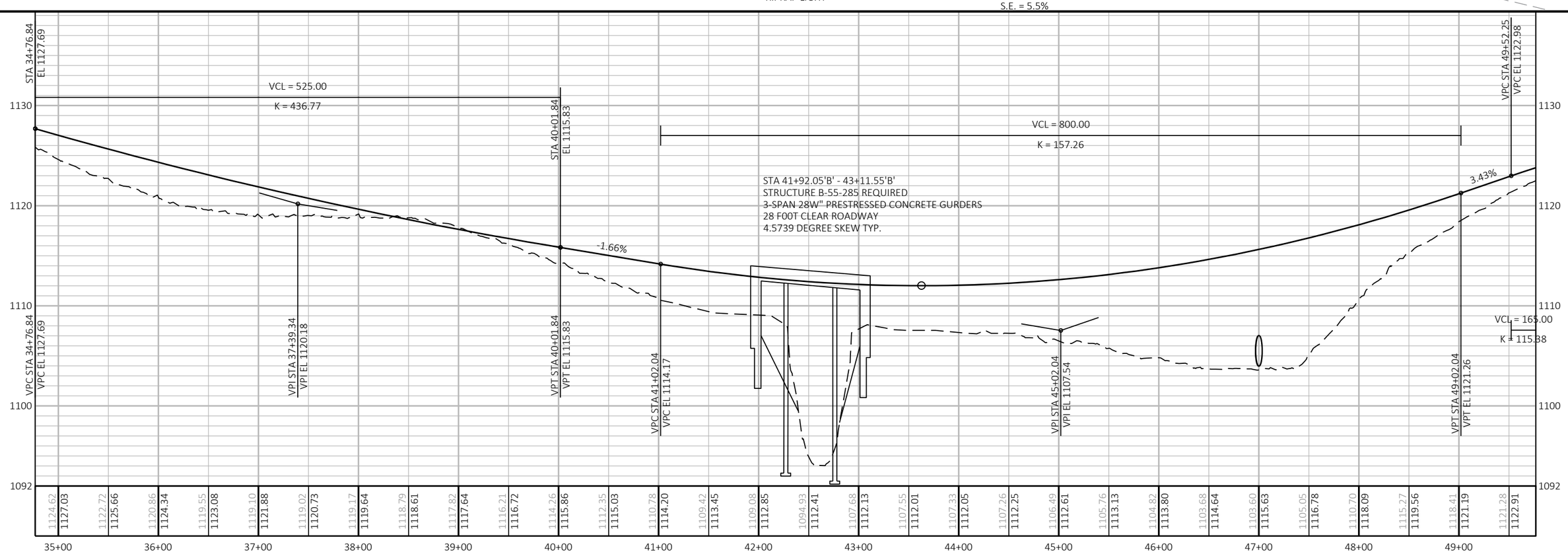
PROJECT NO: 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: RAMP A	SHEET 175 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-RAMPA.DWG
LAYOUT NAME - 4

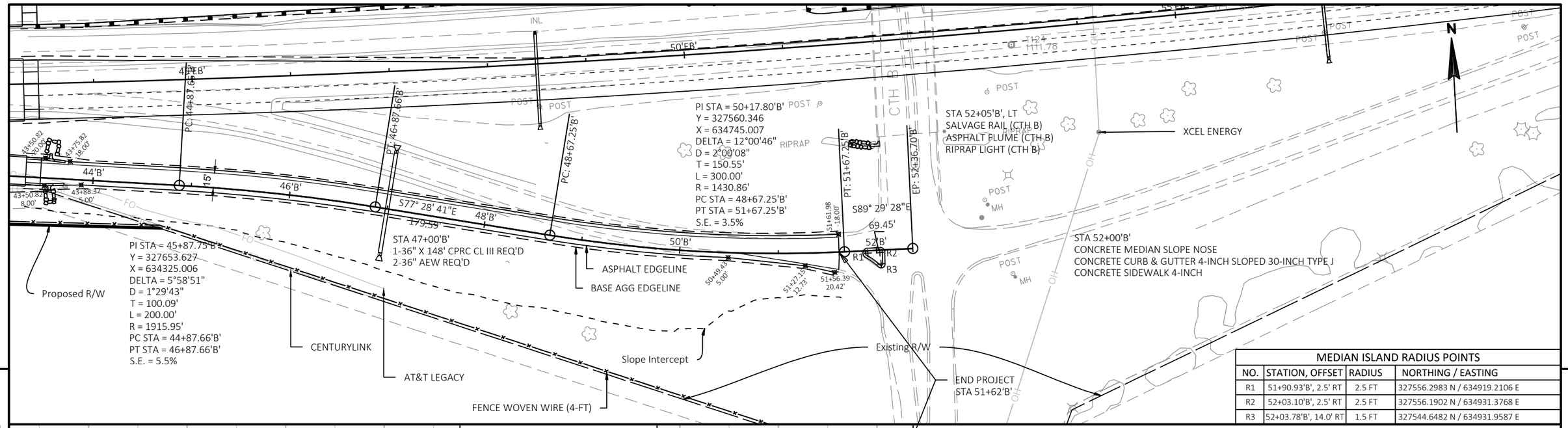
PLOT DATE : 2/19/2021 10:30 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

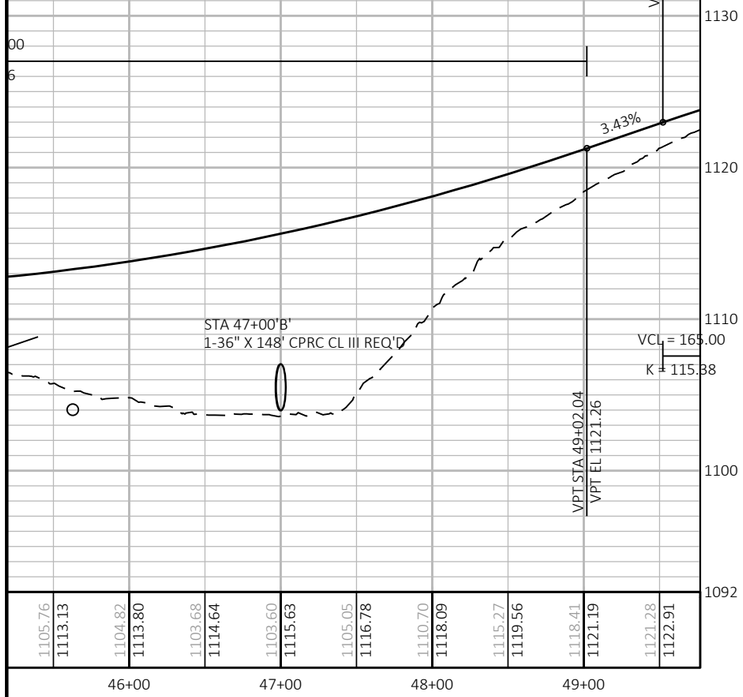


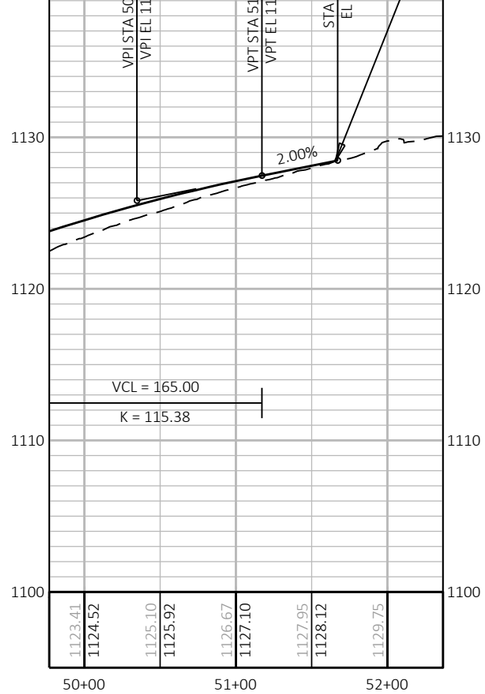


PROJECT NO: 1021-04-77	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: RAMP B	SHEET 176 E



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 177	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050101-PP-I94-CTHB-RAMPB.DWG
LAYOUT NAME - 2

PLOT DATE : 3/1/2021 11:14 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

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

BP: 0+00.00
PT: 3+50.00
PC: 7+92.63
PT: 11+36.56
S84° 45' 25"E
442.63'

STA 5+50 - 8+96
1-15" X 320' CULVERT PIPE TEMPORARY REQ'D
2-15" AEW REQ'D

STA 11+75 - 12+22
1-15" AEW REQ'D
1-15" X 38' CULVERT PIPE TEMPORARY REQ'D
1-15" X 8' CULVERT PIPE TEMPORARY REQ'D

STA 12+10.6, 22.6' LT
1-MANHOLES SPECIAL 4-FT DIAMETER,TEMPORARY
STA 12+22.3, 22.6' LT
1-RECONSTRUCTING INLETS

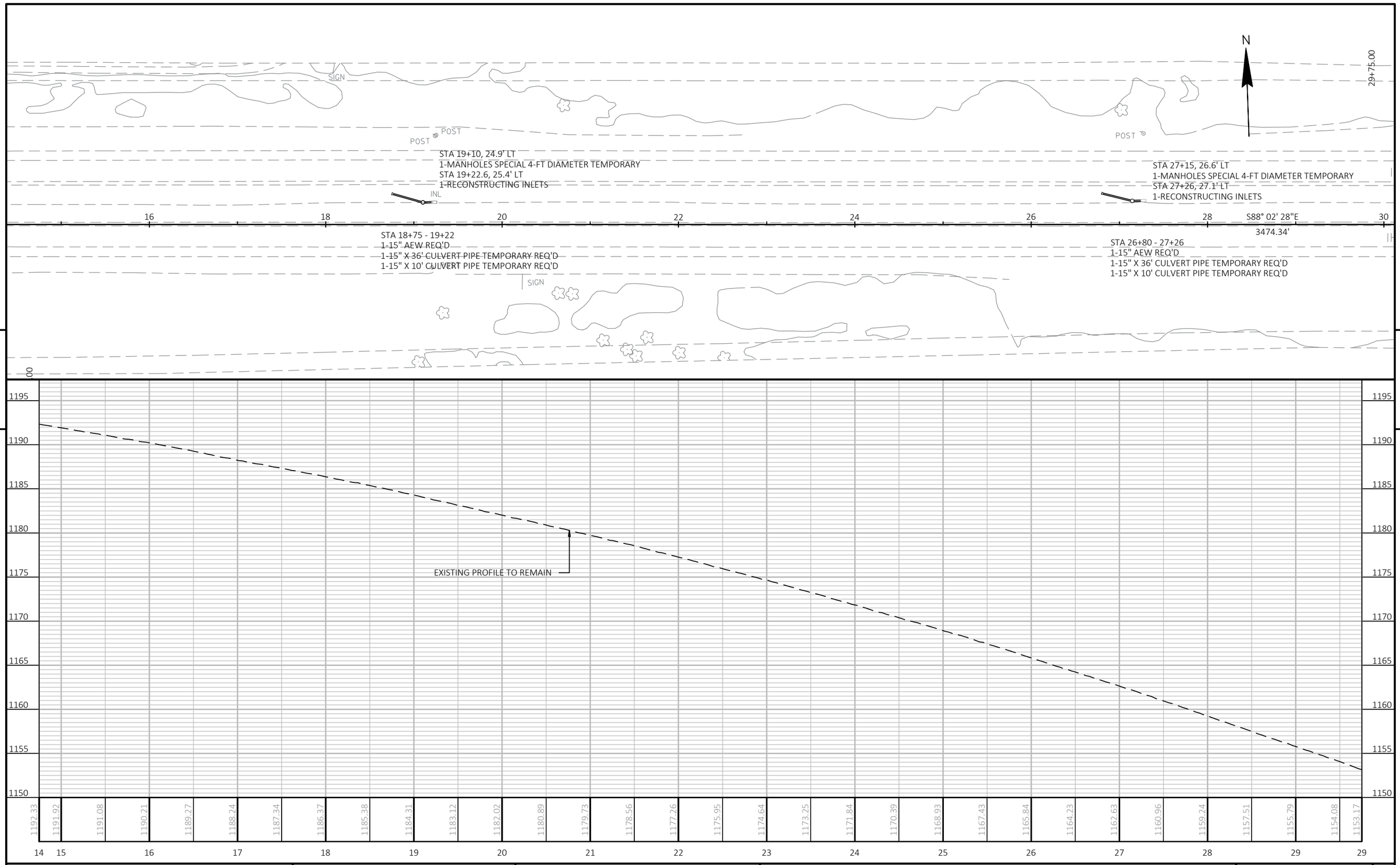
N
14+75.00
SIGN
INL
IH 94
1103
1199.48

STA 0+00.00
EL 1198.24
VPC STA 0+52.26
VPC EL 1198.62
VPI STA 2+34.76
VPI EL 1199.97
VPT STA 4+17.26
VPT EL 1199.94
VPC STA 6+38.06
VPC EL 1199.90
VPI STA 8+88.06
VPI EL 1199.86
VPT STA 11+38.06
VPT EL 1196.92
STA VPI 11+10.00
EL 1196.78

0.74%
-0.02%
-1.18%
VCL = 365.00
K = 483.26
VCL = 500.00
K = 431.43

1198.23	1198.24	1198.59	1198.61	1198.91	1198.95	1199.15	1199.24	1199.26	1199.49	1199.29	1199.68	1199.17	1199.82	1198.69	1199.90	1198.37	1199.94	1197.75	1199.93	1197.56	1199.93	1197.74	1199.92	1198.17	1199.91	1198.01	1199.90	1198.16	1199.85	1198.45	1199.74	1198.87	1199.57	1198.99	1199.35	1198.89	1199.06	1198.64	1198.72	1198.32	1198.32	1197.86	1197.87	1197.34	1197.35	1196.78	1196.78	1196.17	1195.56	1194.86	1194.12	1193.39	1192.65	1192.33
0			2		3		4		5		6		7		8		9		10		11		12		13		14		14																													

PROJECT NO:	1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE:	IH 94 WB CROSS OVER - STAGE 1	SHEET	178	E

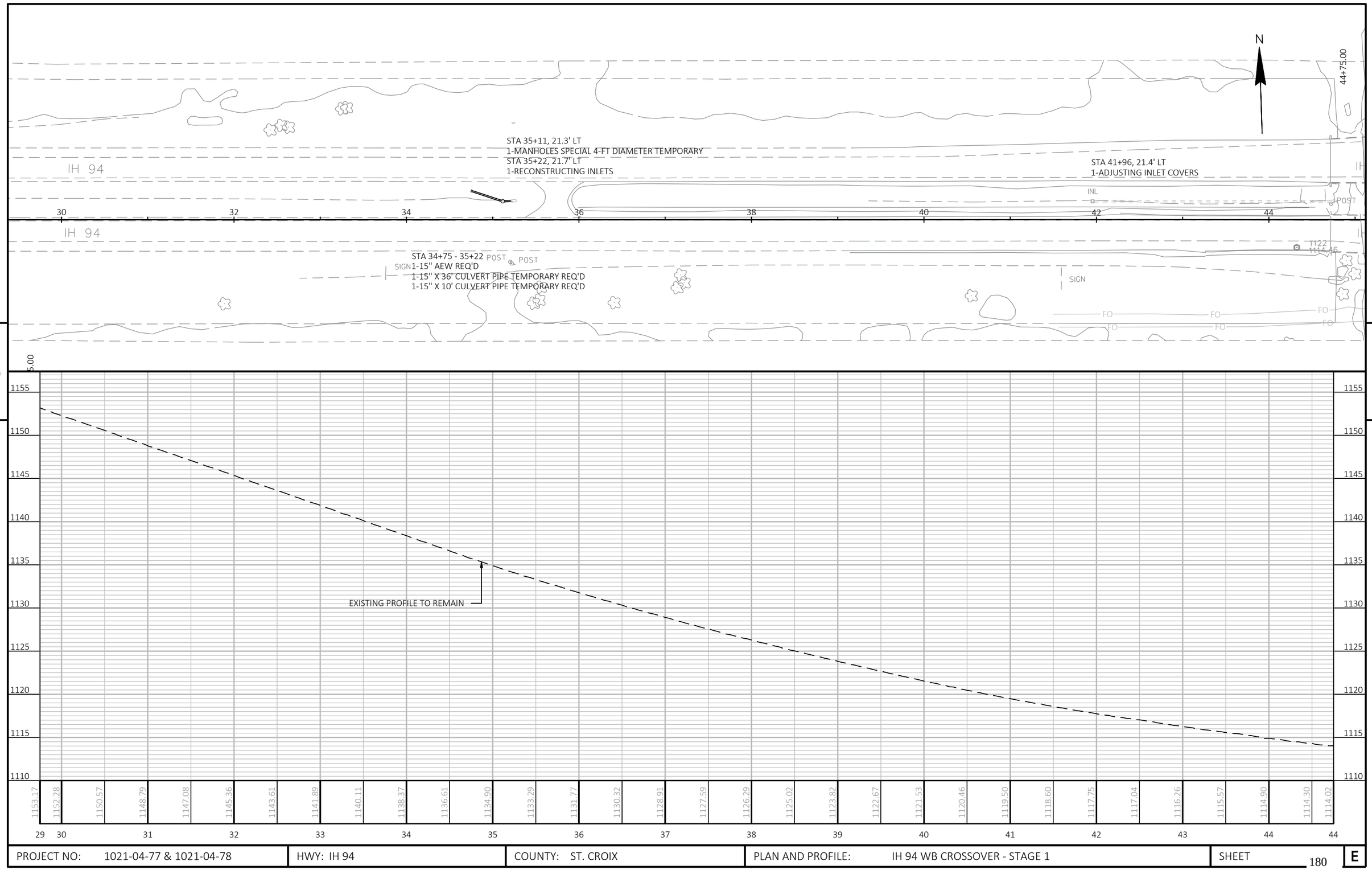


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB CROSSOVER - STAGE 1	SHEET 179	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050102-PP-I94-CTHB-WB-S1-XOVER.DWG
LAYOUT NAME - 02

PLOT DATE : 3/18/2021 12:54 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

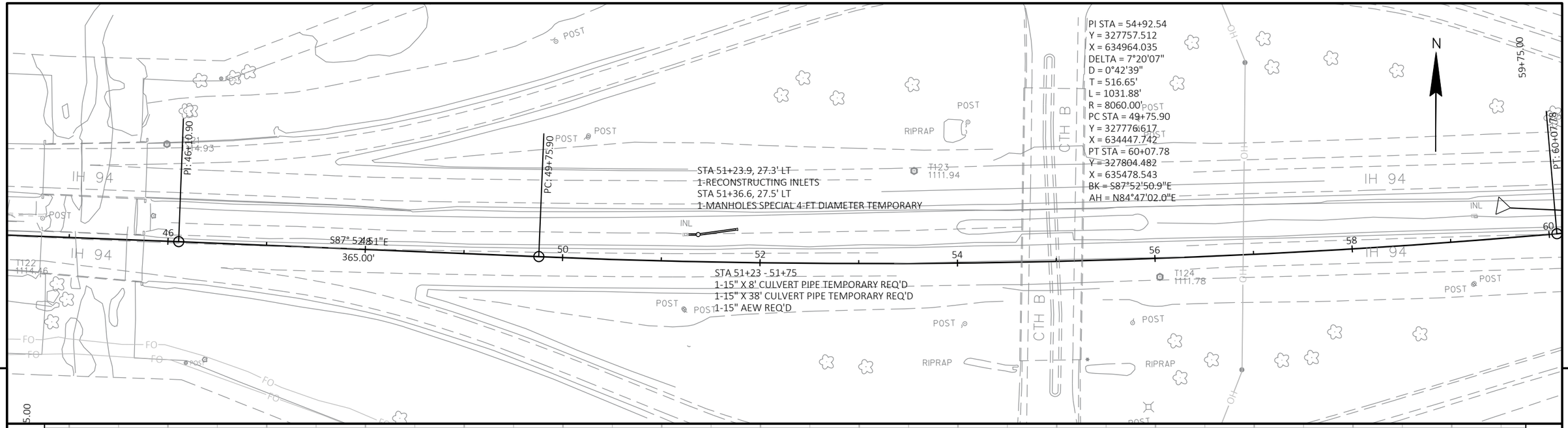


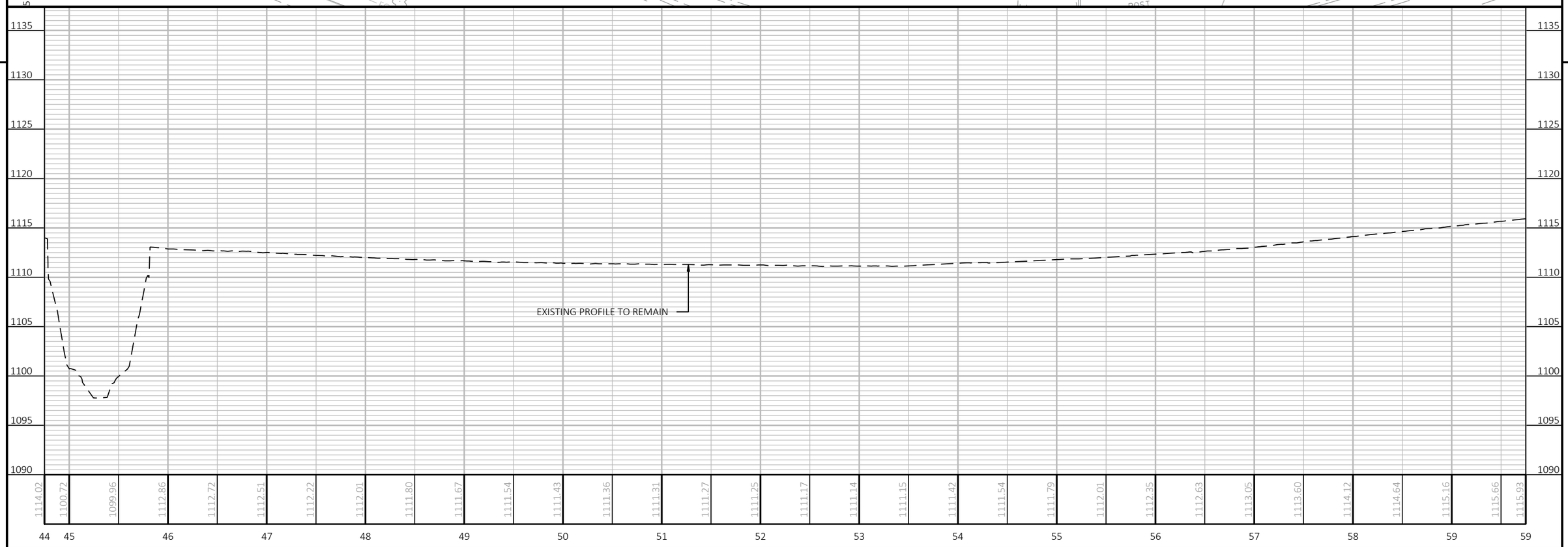
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB CROSSOVER - STAGE 1	SHEET 180	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050102-PP-I94-CTHB-WB-S1-XOVER.DWG
LAYOUT NAME - 03

PLOT DATE : 3/18/2021 12:54 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



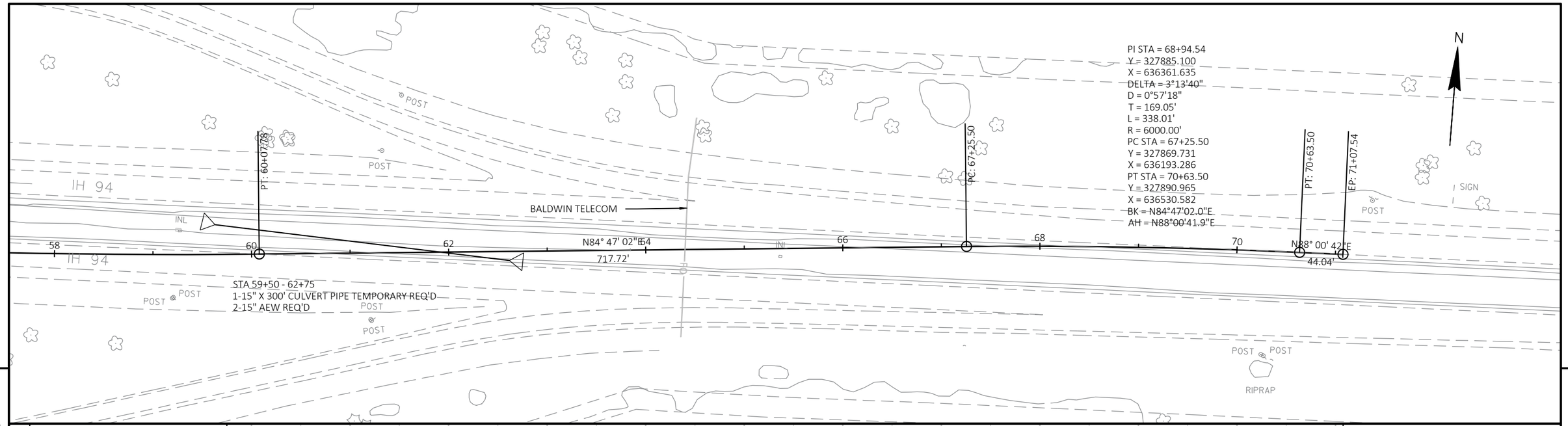


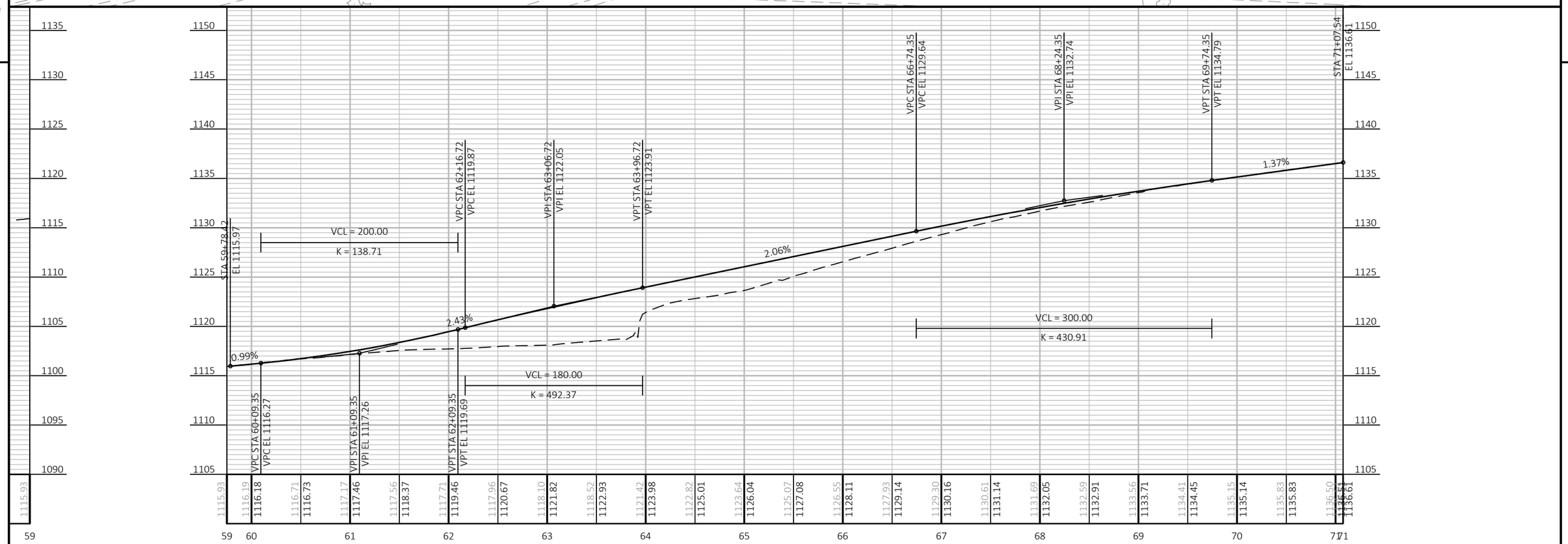
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PLOT: IH 94 WB CROSSOVER - STAGE 1	SHEET 181 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050102-PP-I94-CTHB-WB-S1-XOVER.DWG
LAYOUT NAME - 04

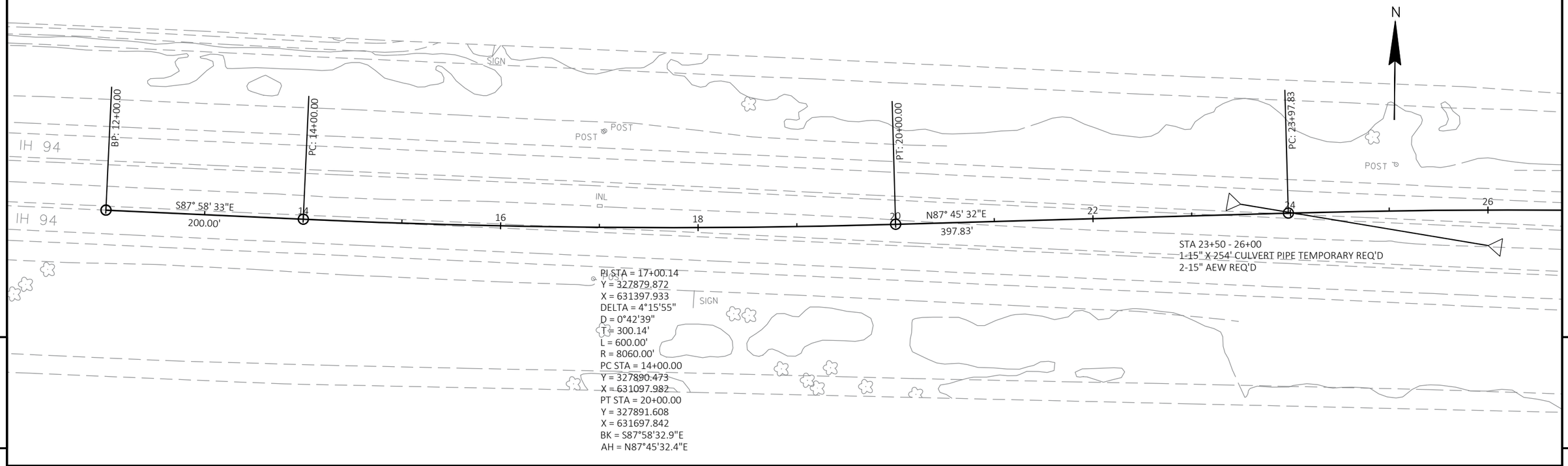
PLOT DATE : 3/18/2021 12:55 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



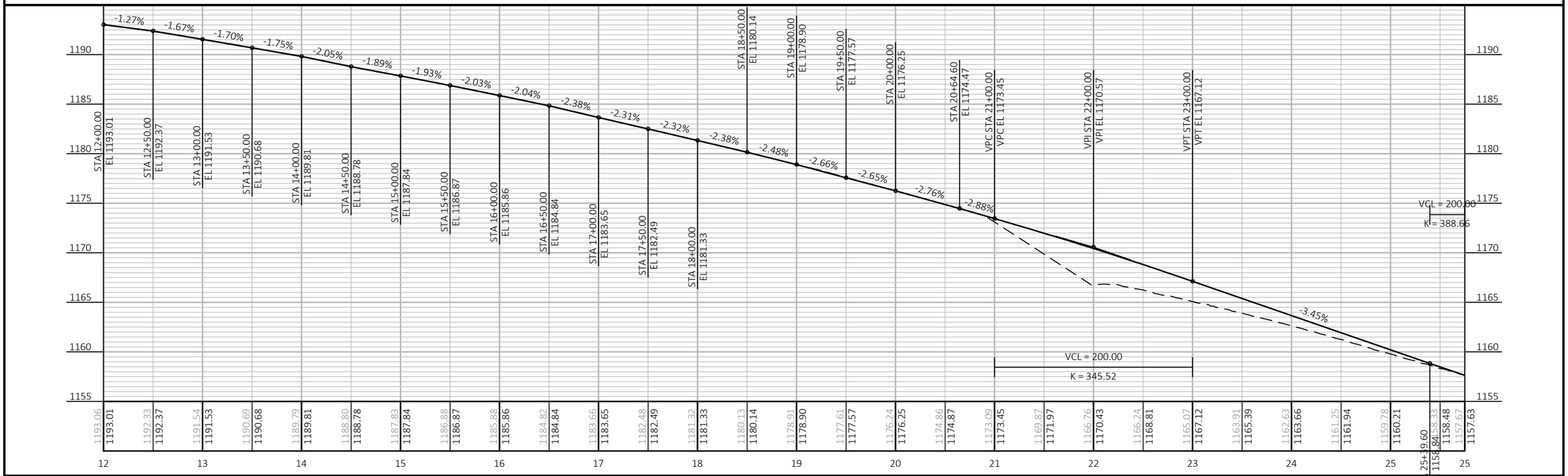


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB CROSSOVER - STAGE 1	SHEET 182	E



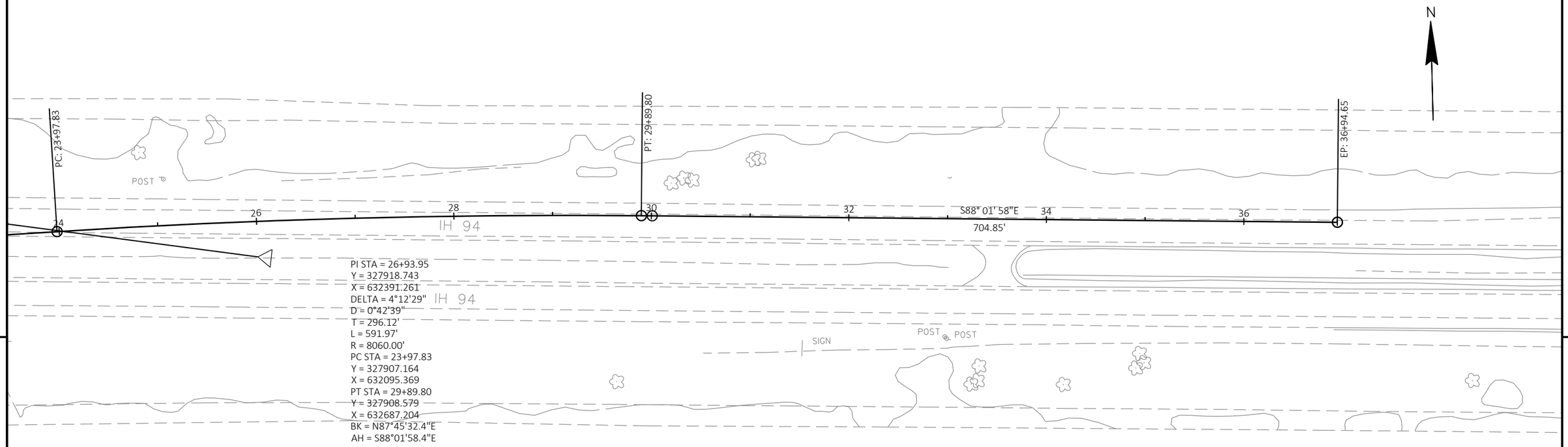
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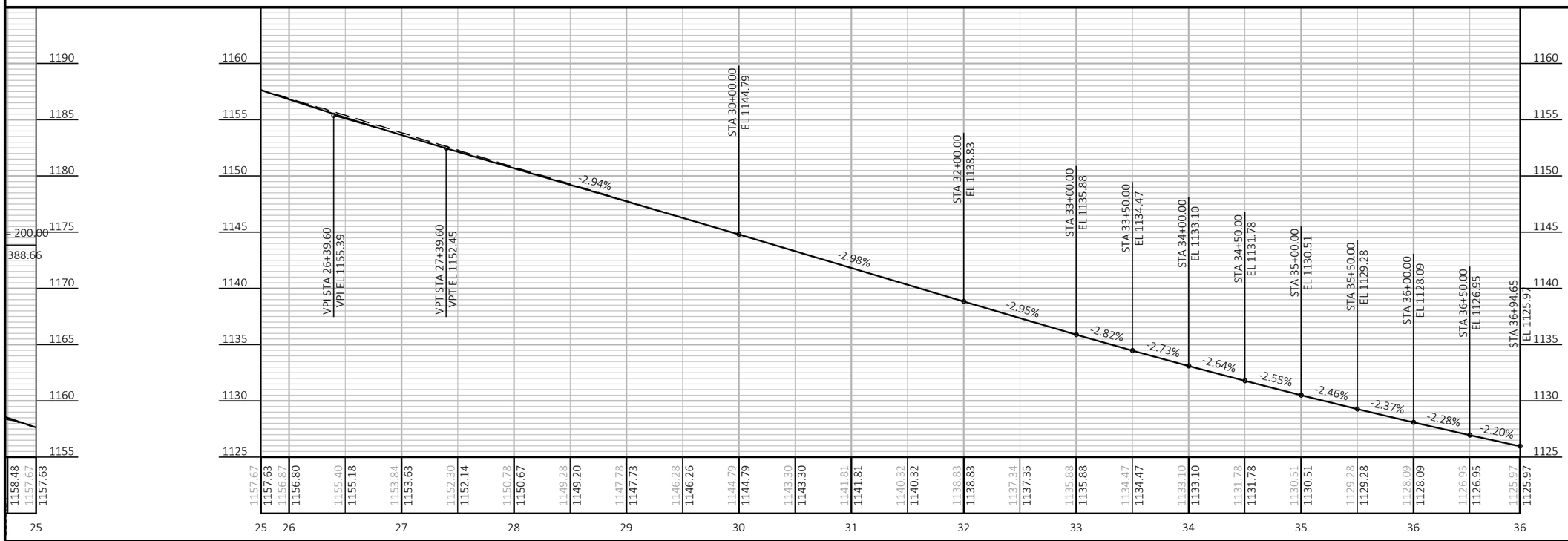
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB CROSSOVER - STAGE 4 & 5	SHEET 183	E

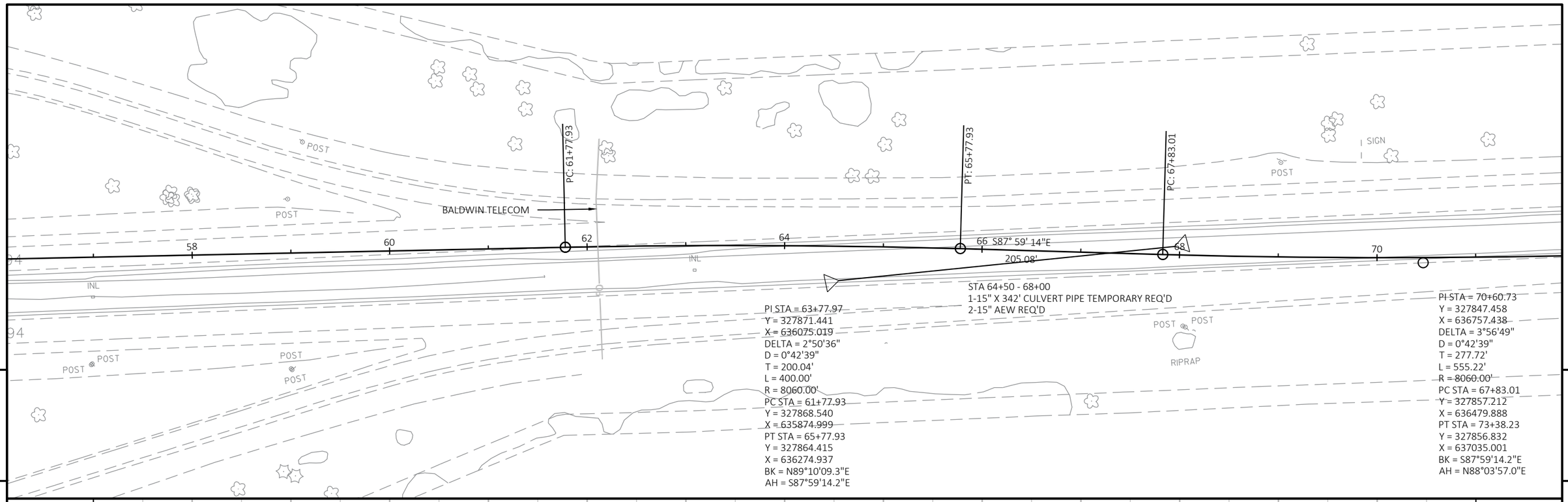
FILE NAME : C:\C3D\10210407\SHEETSPLAN\050103-PP-I94-CTHB-EB-S4-XOVER-WEST.DWG
LAYOUT NAME - 01
PLOT DATE : 3/19/2021 10:44 AM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

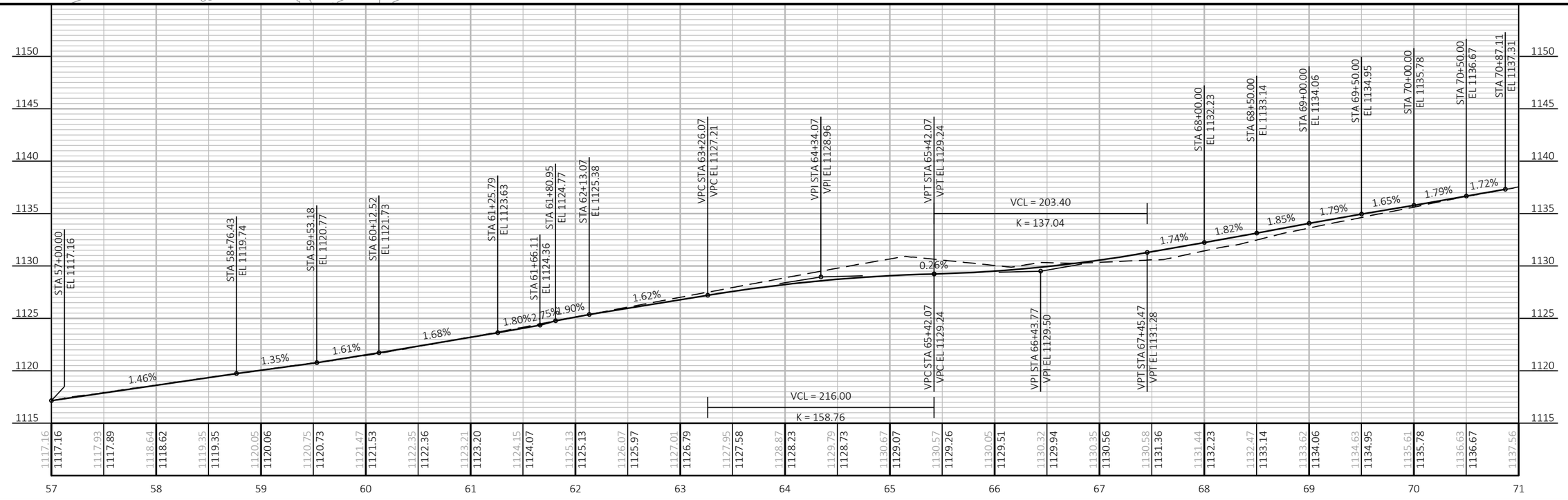




PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB CROSSOVER - STAGE 4 & 5	SHEET 184	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050103-PP-I94-CTHB-EB-S4-XOVER-WEST.DWG
LAYOUT NAME - 02
PLOT DATE : 3/19/2021 10:45 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 185 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\050103-PP-I94-CTHB-EB-S4-XOVER-EAST.DWG
LAYOUT NAME - 03

PLOT DATE : 3/18/2021 4:37 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

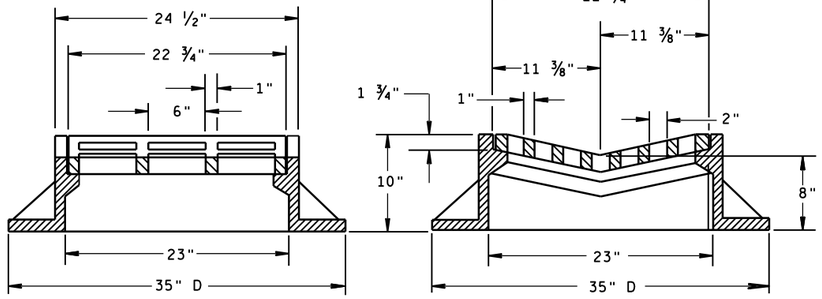
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-21A	CONCRETE CURB & GUTTER
08D02-07A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
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
11A01-06	MAINTENANCE CROSSOVER FOR FREEWAYS
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
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
13C18-07A	CONCRETE PAVEMENT JOINTING
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
14B26-04A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04F	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04G	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04H	STEEL THRIE BEAM BULLNOSE TERMINAL
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
14B43-04A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
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)

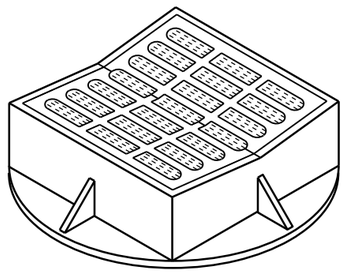
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Standard Detail Drawing List

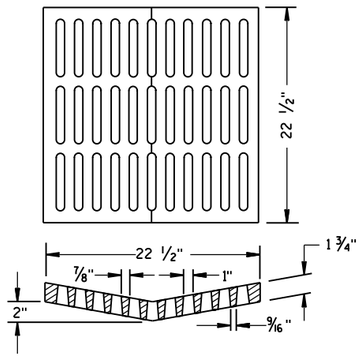
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
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
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-08B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
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
15D12-09B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-05A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-05B	TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-05C	TRAFFIC CONTROL, TAPERED 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



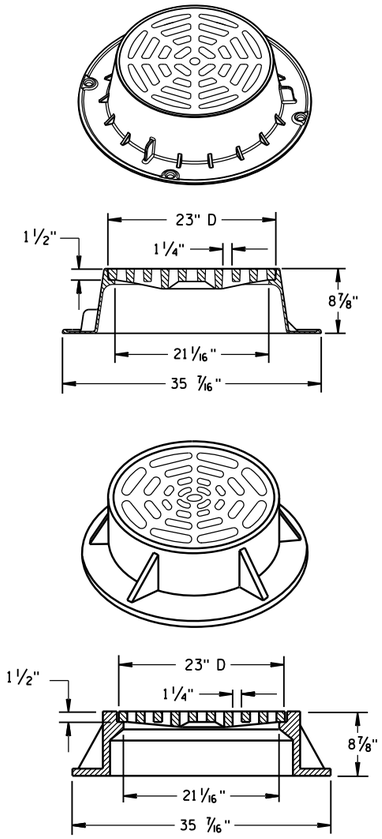


TYPE "B"



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"

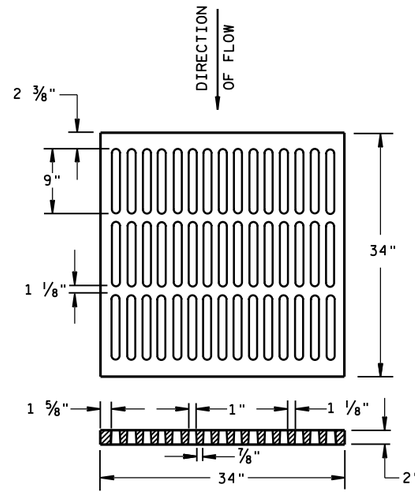
NOTE: EITHER CASTING IS ACCEPTABLE

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.

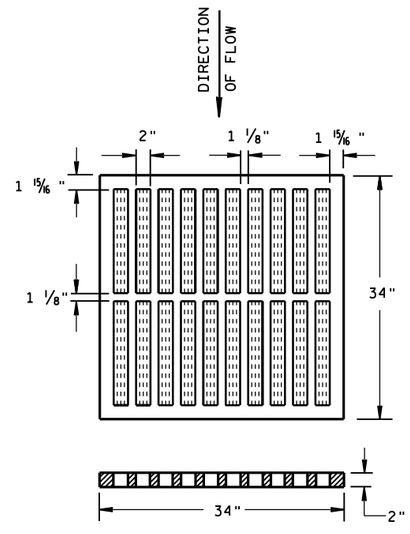
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



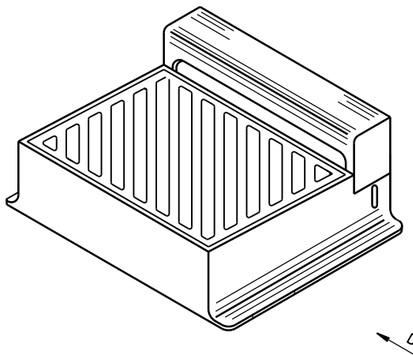
ALTERNATIVE TYPE "MS"

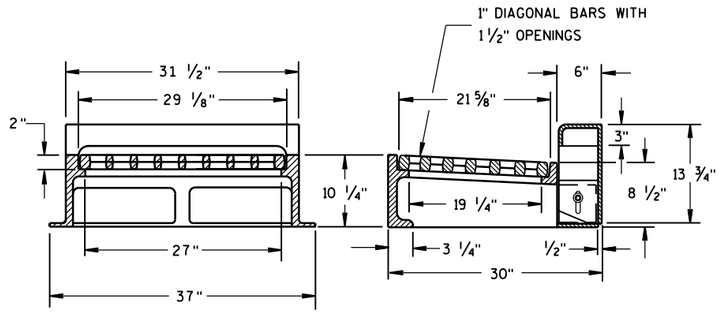
USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE





NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

DIRECTION OF FLOW

DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

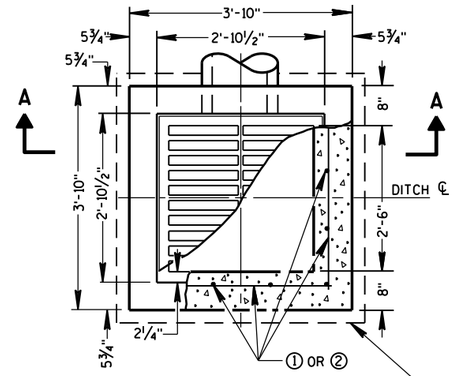
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

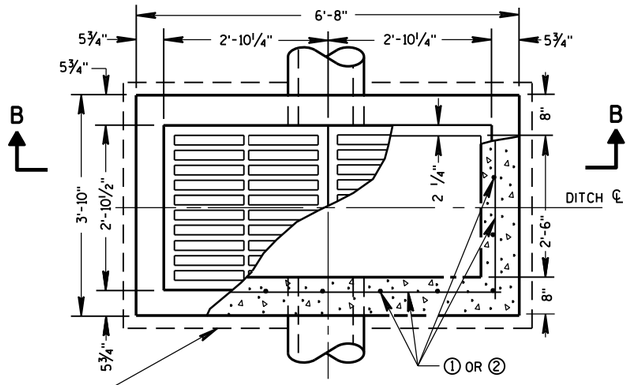
APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

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

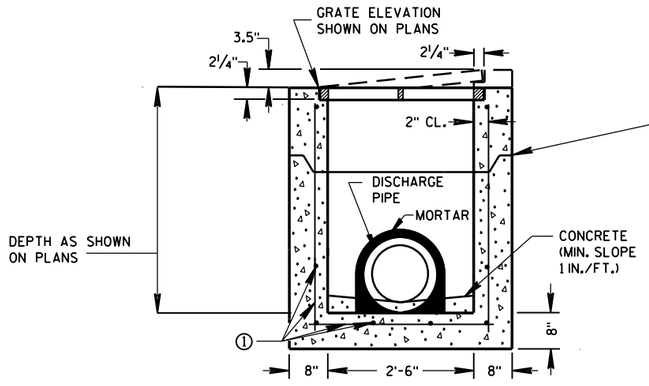


PLAN VIEW

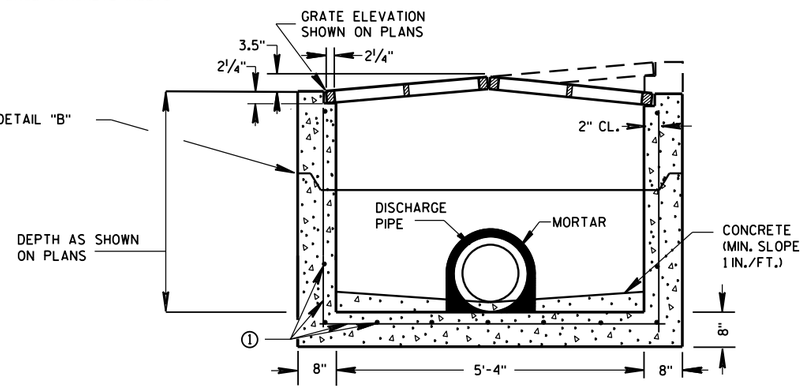


PLAN VIEW

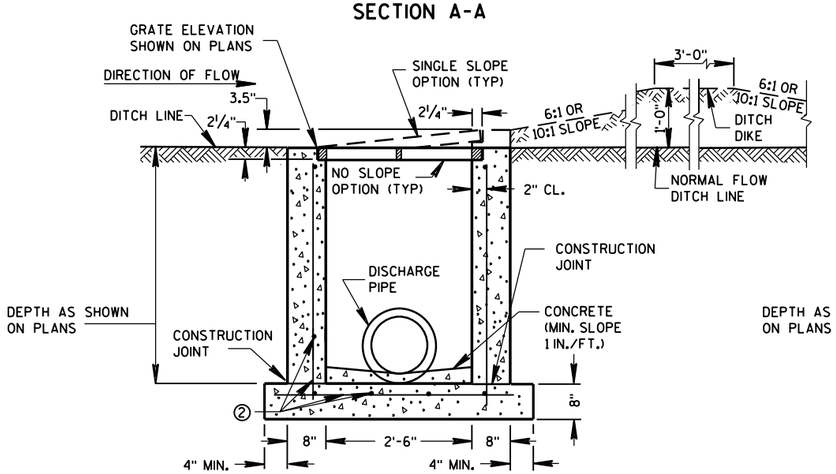
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



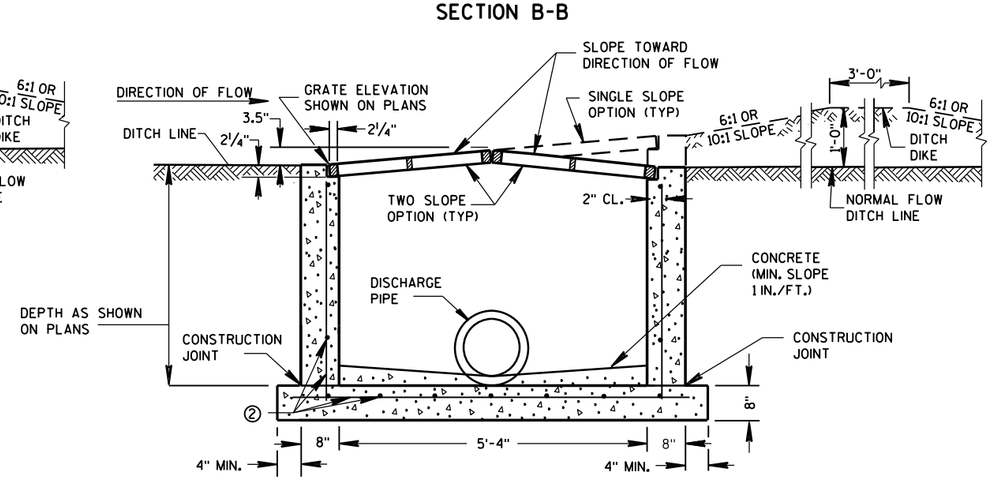
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR 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.

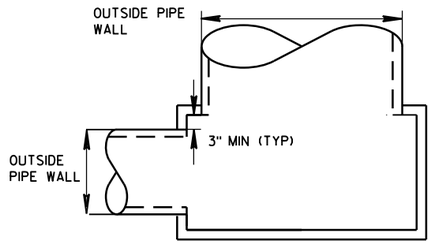
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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.

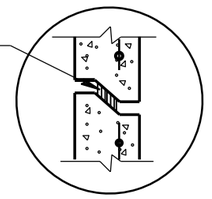
PIPE MATRIX

	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 GRATE

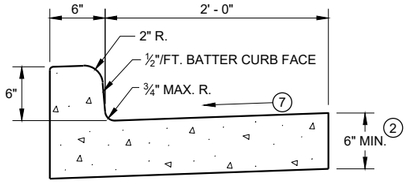
INLETS MEDIAN 2 GRATE

INLETS MEDIAN 1 AND 2 GRATE

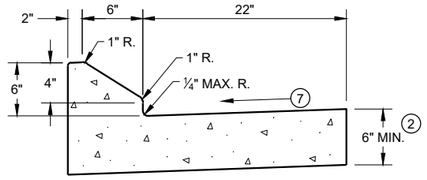
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVI ENT
FHWA

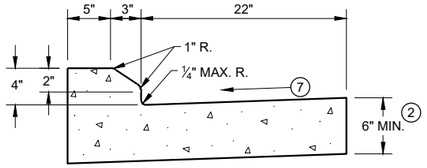
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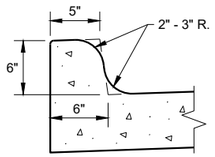
TYPES A[1] & D



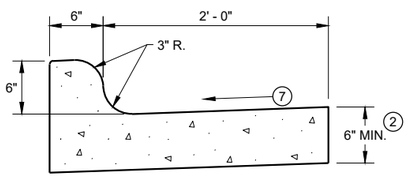
6" SLOPED CURB TYPES G[1] & J



4" SLOPED CURB TYPES G[1] & J

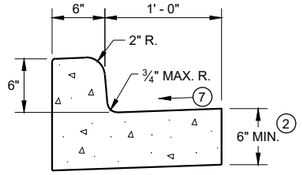


TYPES K[1] & L
(OPTIONAL CURB SHAPE)



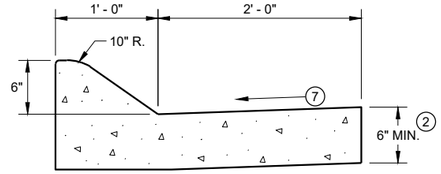
TYPES K[1] & L

CONCRETE CURB AND GUTTER 30"

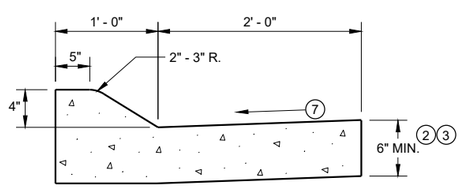


TYPES A[1] & D

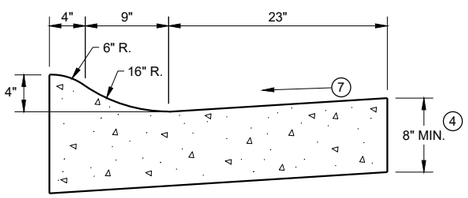
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A[1] & D



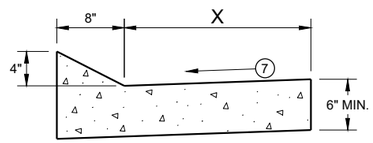
4" SLOPED CURB TYPES A[1] & D



4" SLOPED CURB TYPES R[1] & T[5]

CONCRETE CURB AND GUTTER 36"

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

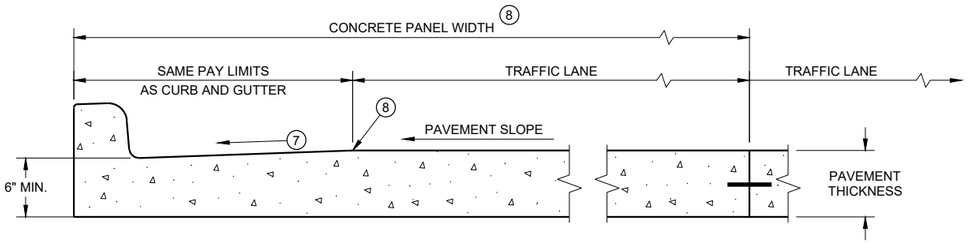


TYPES TBT & TBTT[1]

CONCRETE CURB AND GUTTER

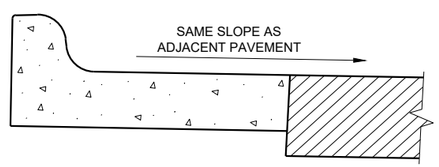
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 21a
SDD 08D01 - 21a

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)

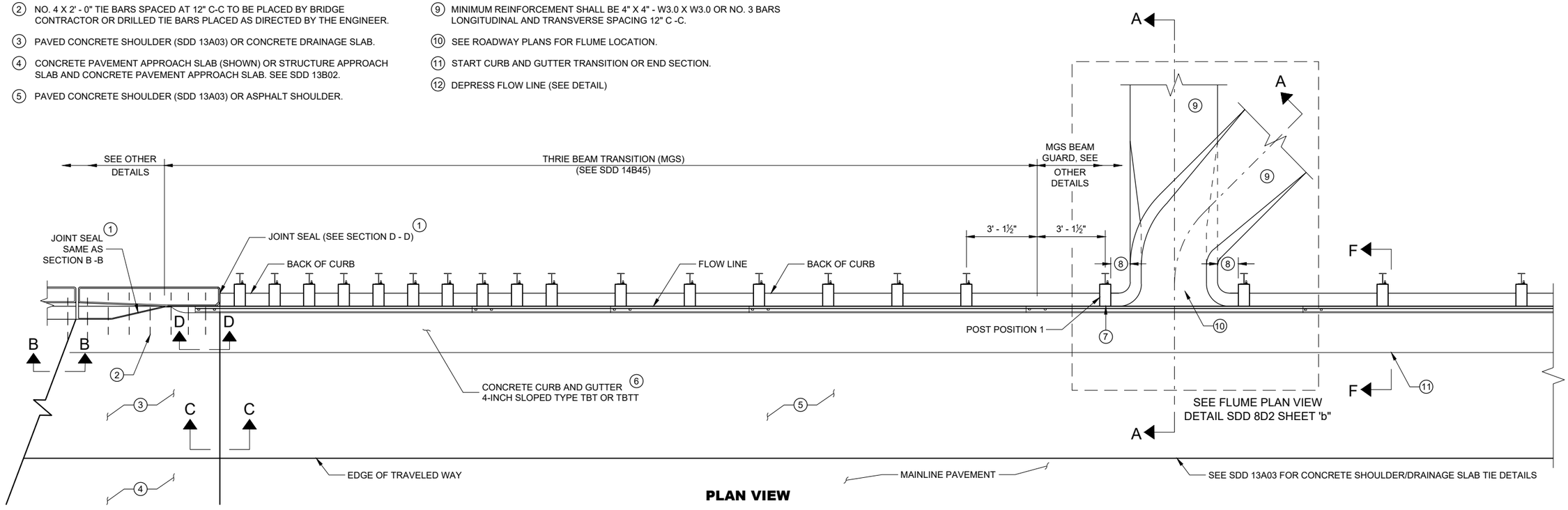
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

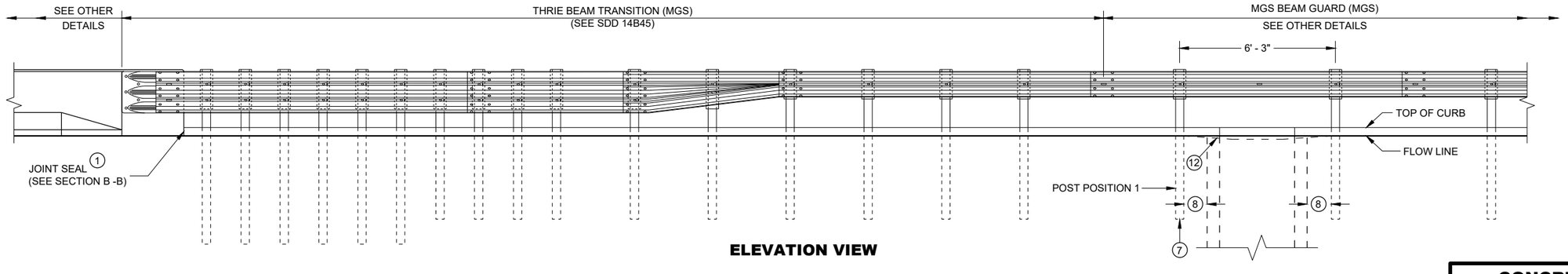
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



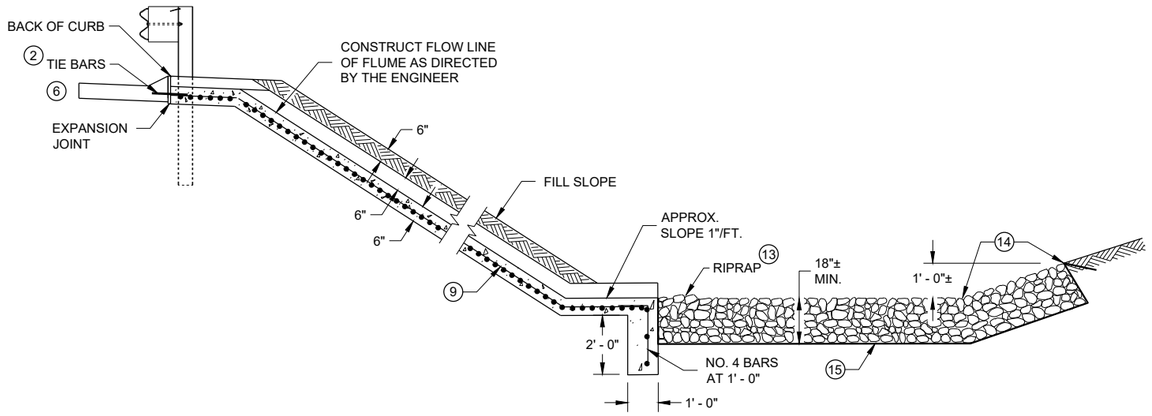
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

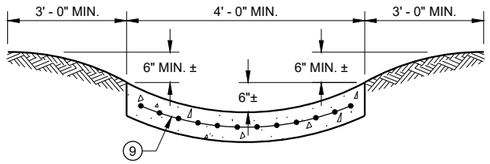
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D02 - 07a

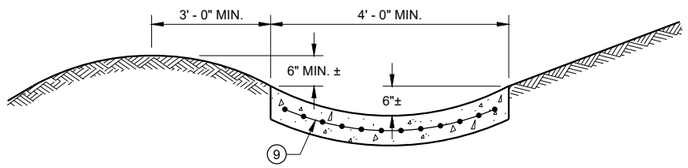
SDD 08D02 - 07a



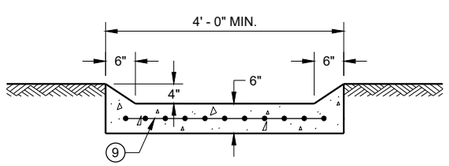
SECTION A - A



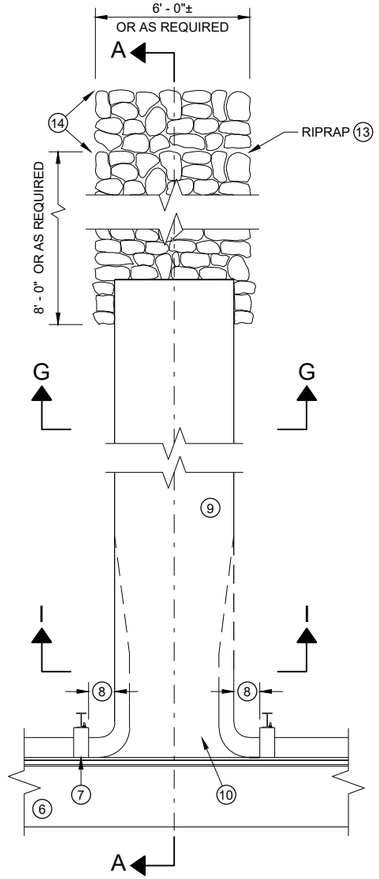
SECTION G - G



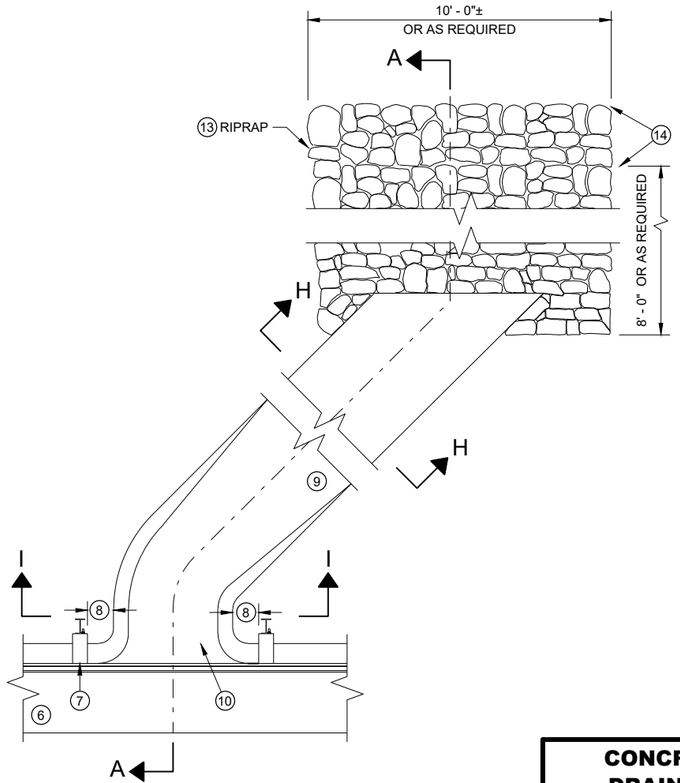
SECTION H - H



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.

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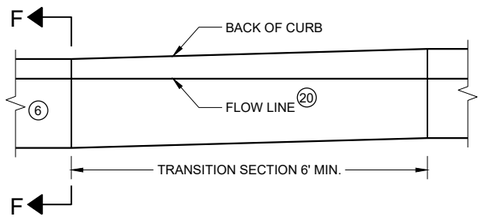
SDD 08D02 - 07b

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

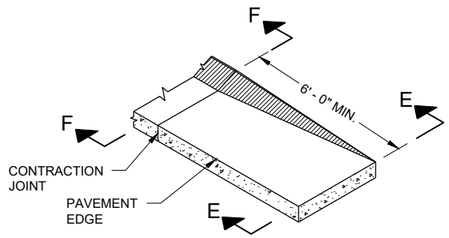
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTAT

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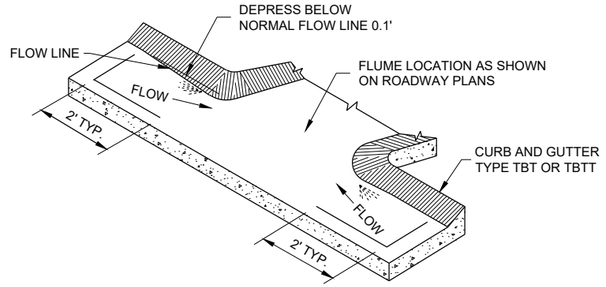
SDD 08D02 - 07b



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.

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(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.

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(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.

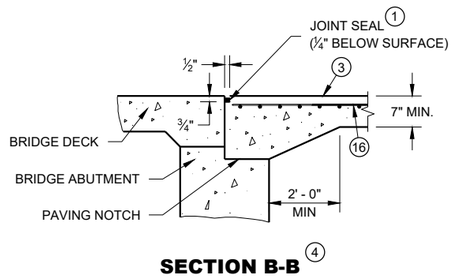
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

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

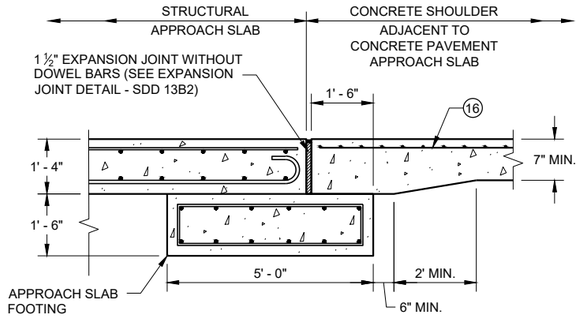
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

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

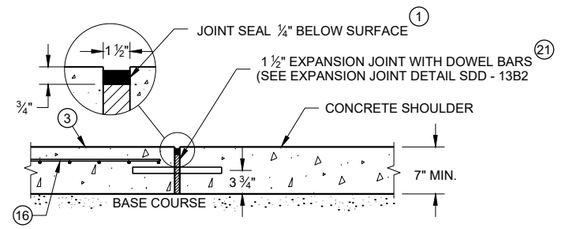
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



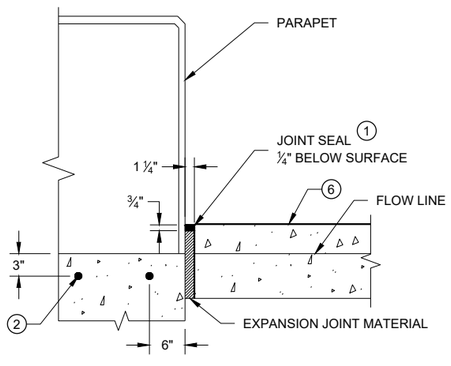
SECTION B-B



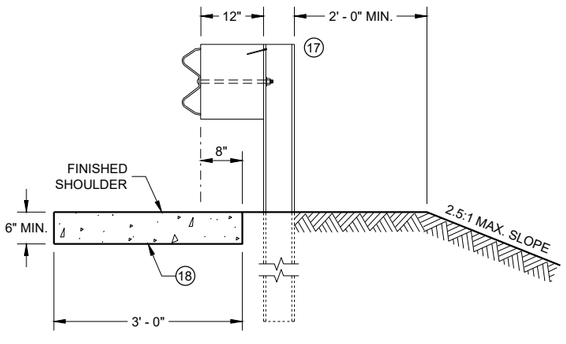
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



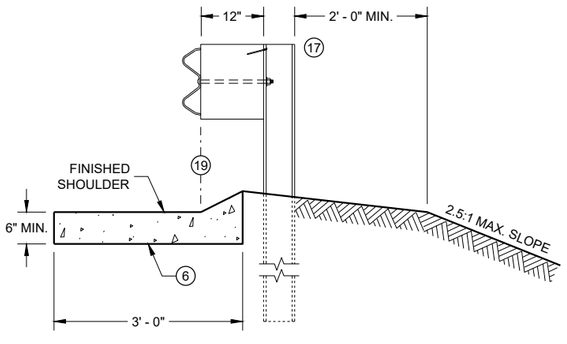
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



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

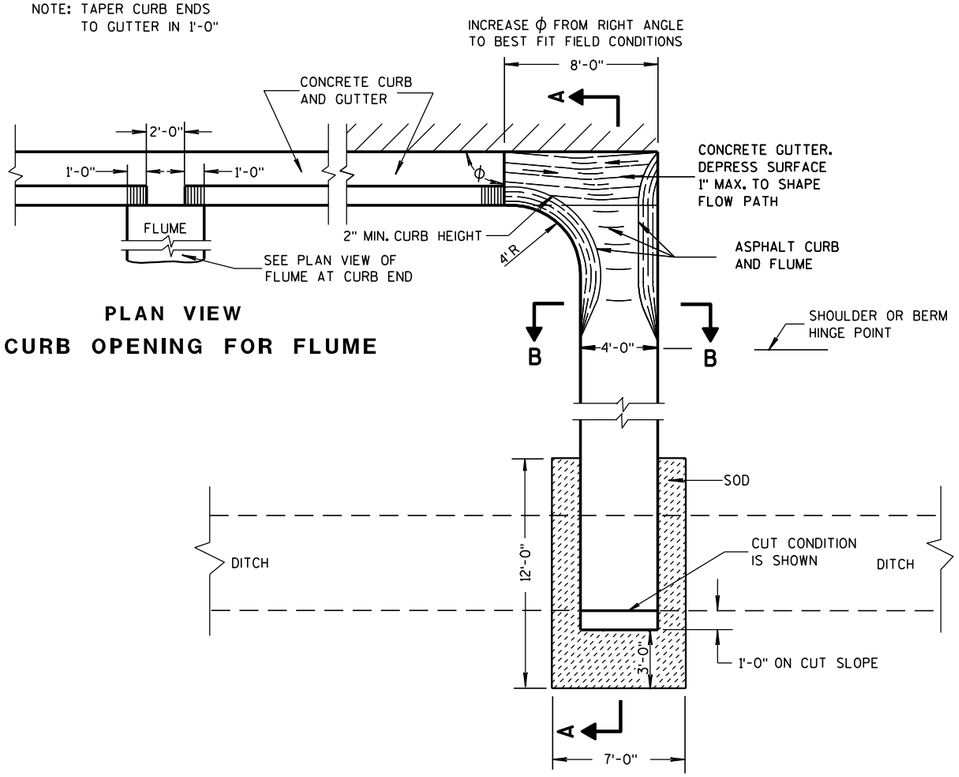
SDD 08D02 - 07c

SDD 08D02 - 07c

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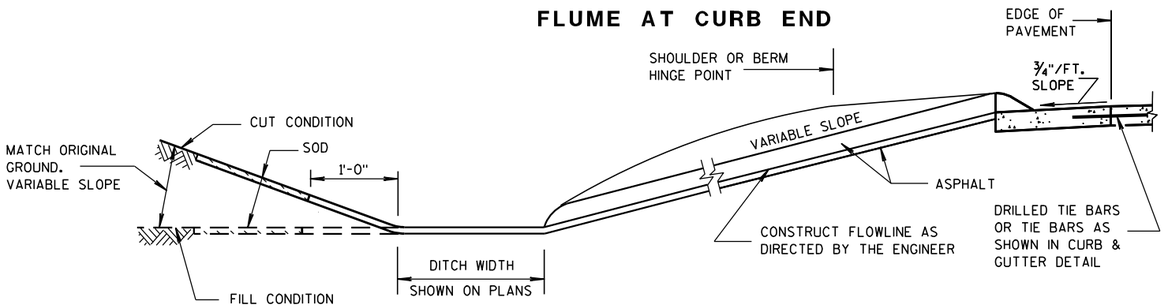
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ASPHALTIC FLUME

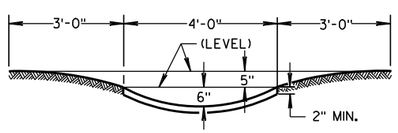


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

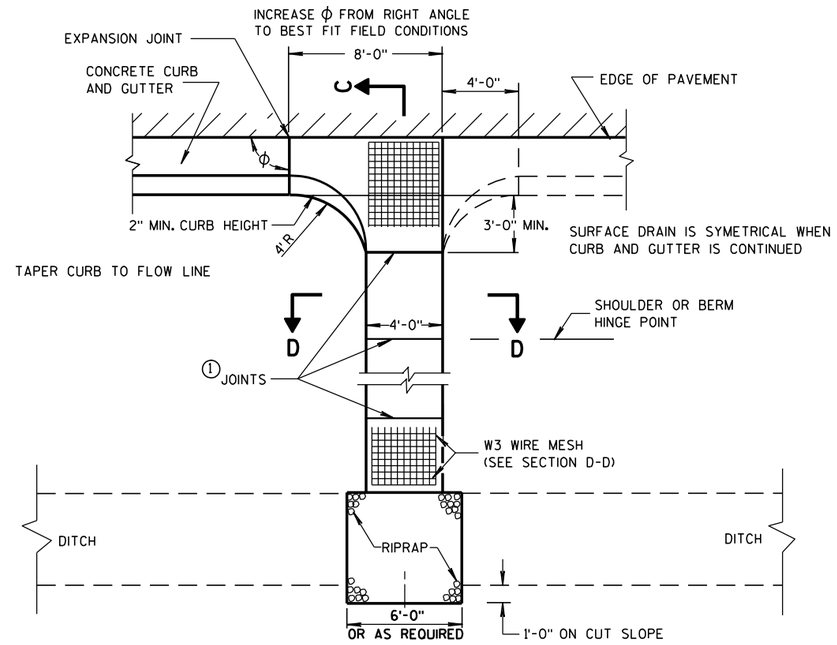
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

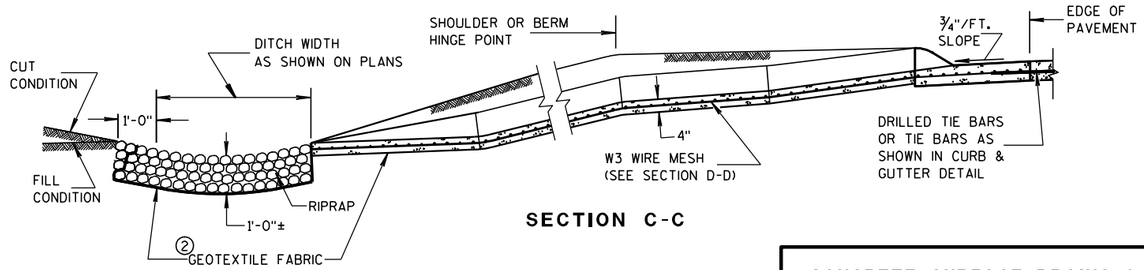
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

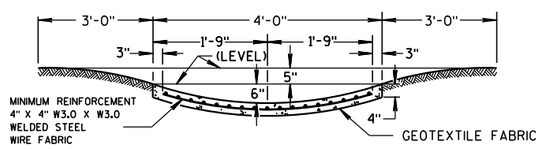
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

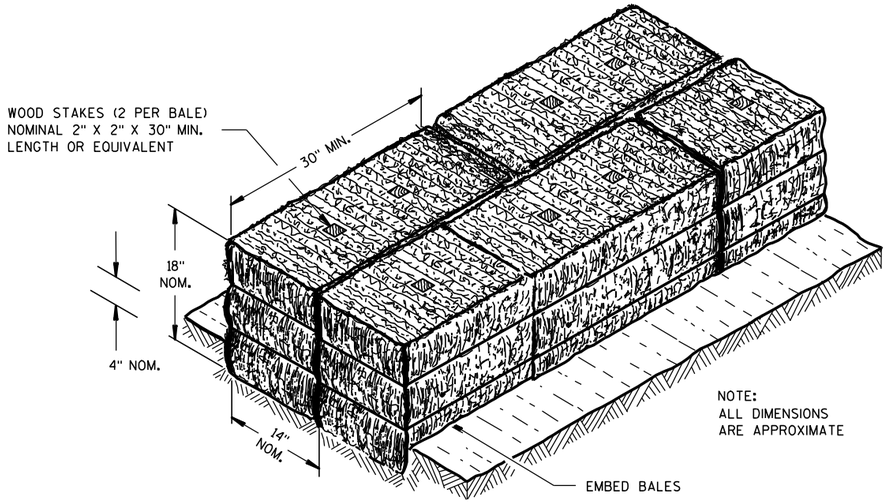
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
194
MENT
FHWA

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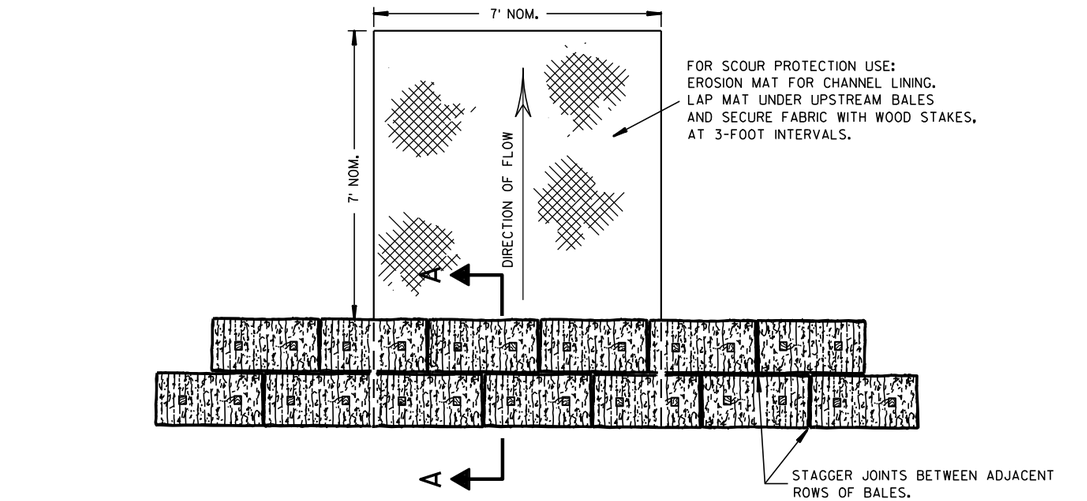
S.D.D. 8 D 4-5

6

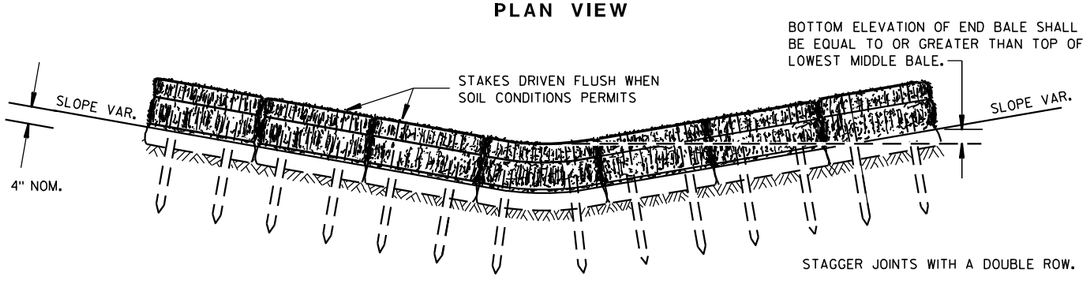
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



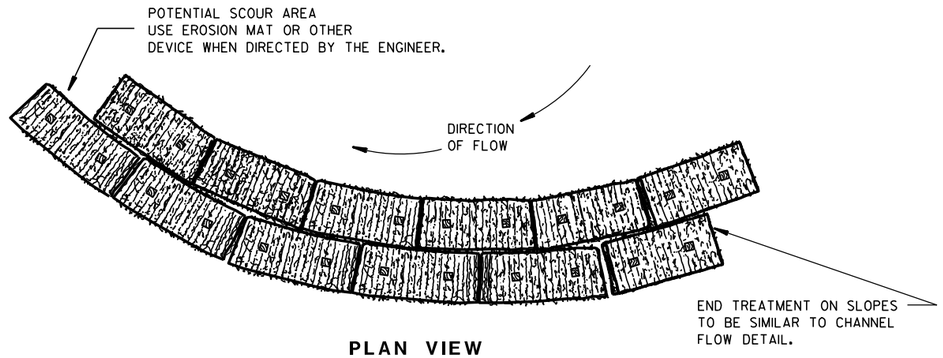
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

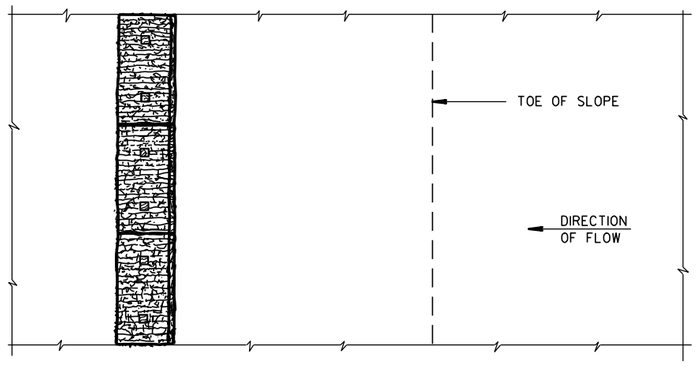
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

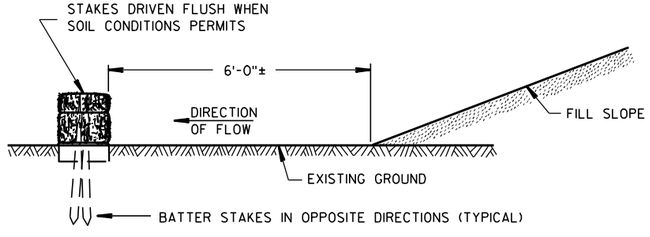


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

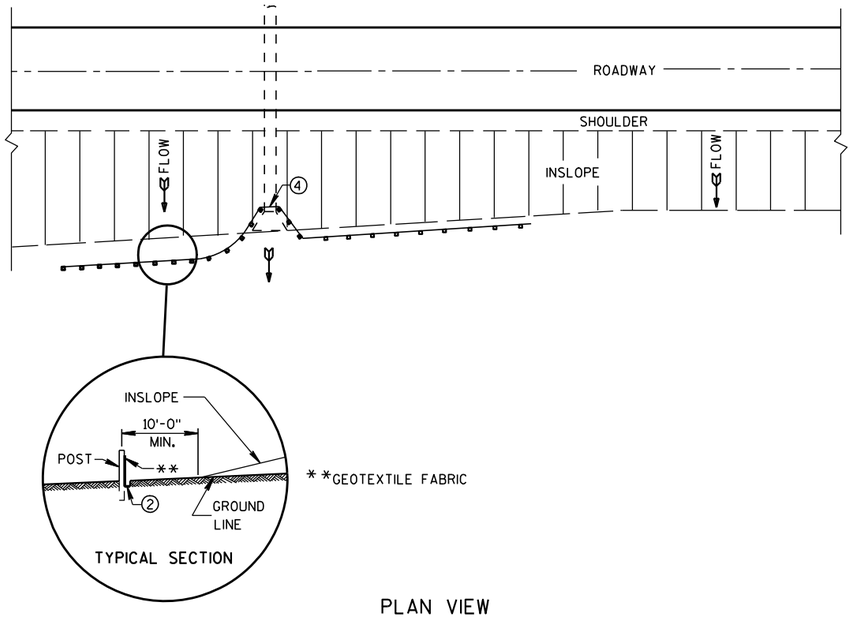
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

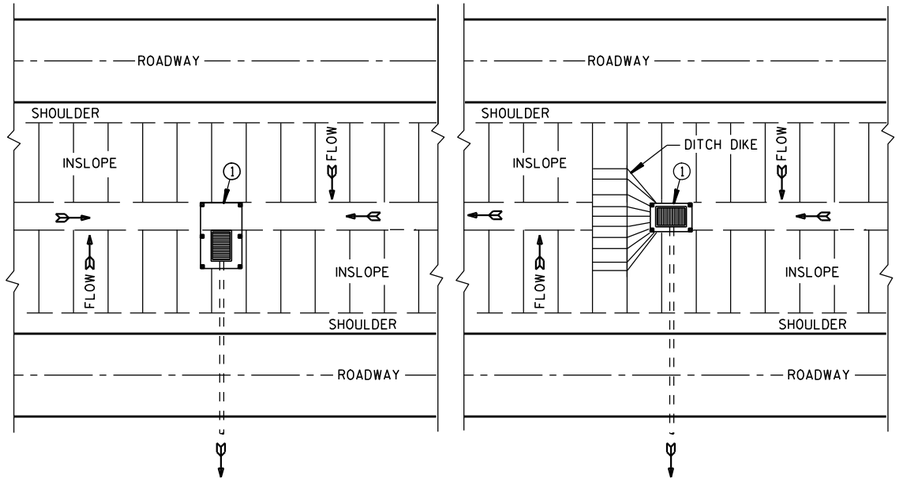
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



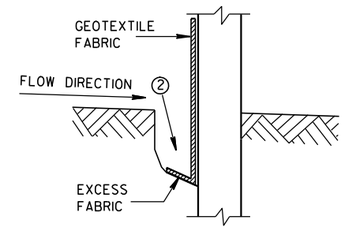
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

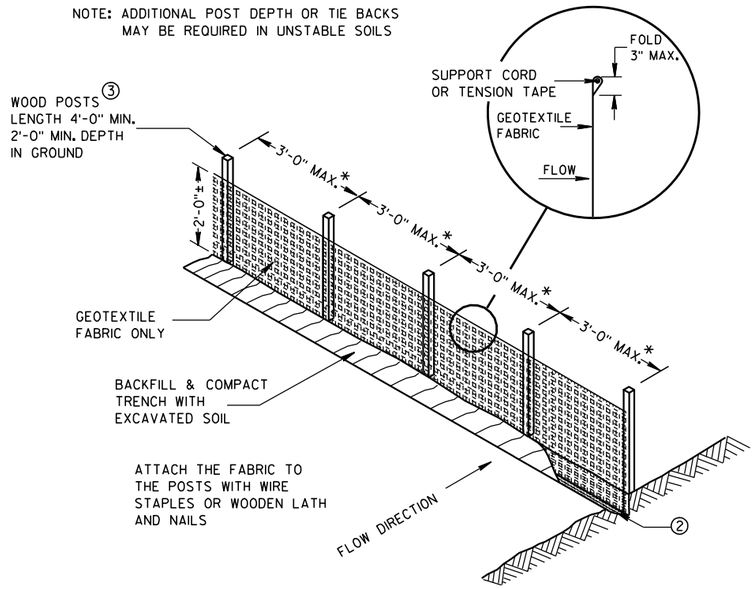
GENERAL NOTES

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.

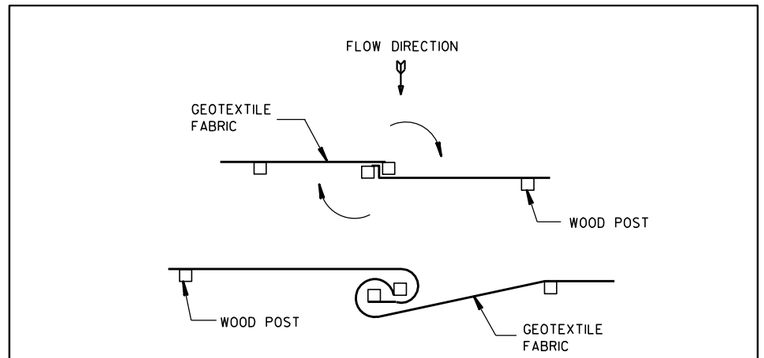


TRENCH DETAIL

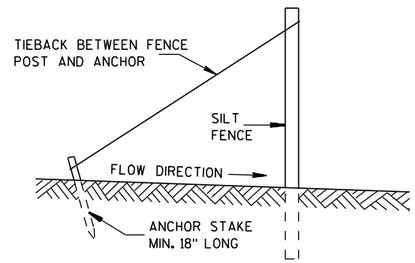


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

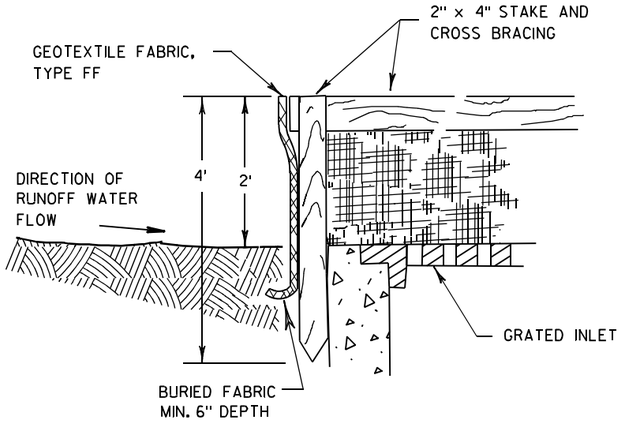
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

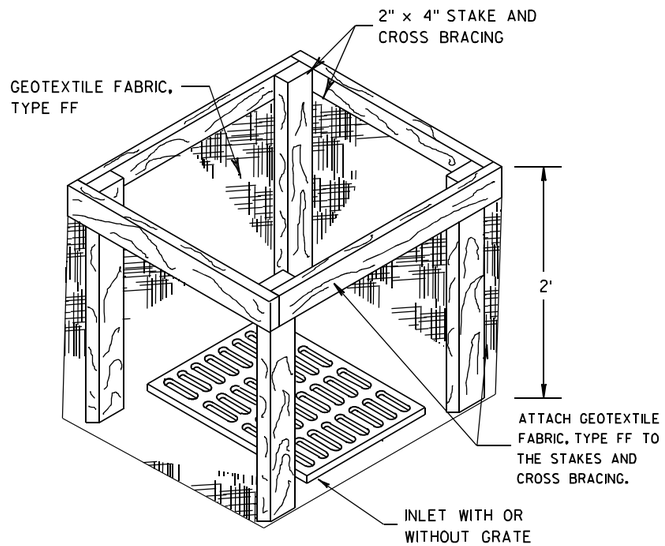
6

S.D.D. 8 E 9-6

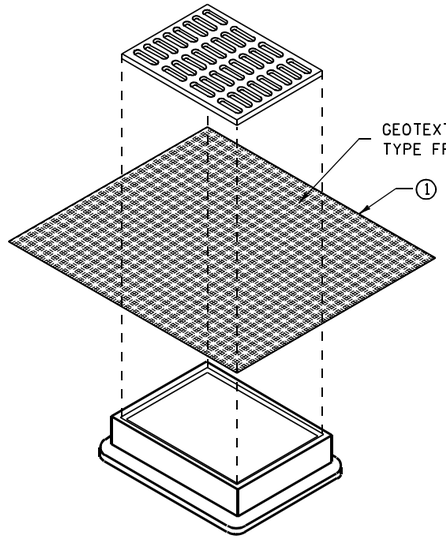
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S.D.D. 8 E 9-6



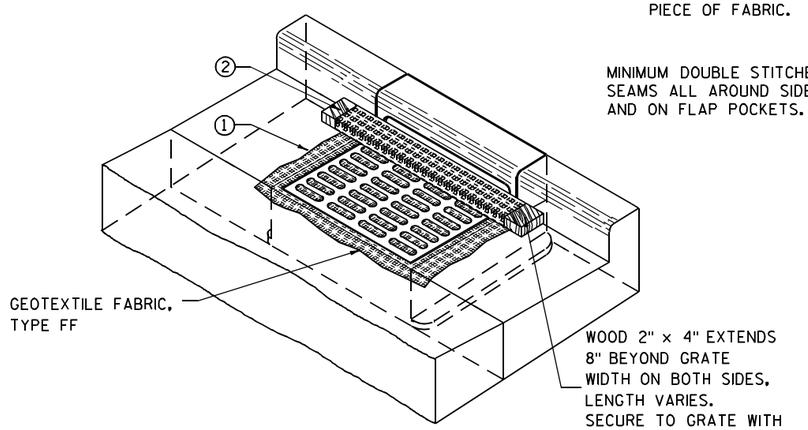


INLET PROTECTION, TYPE A

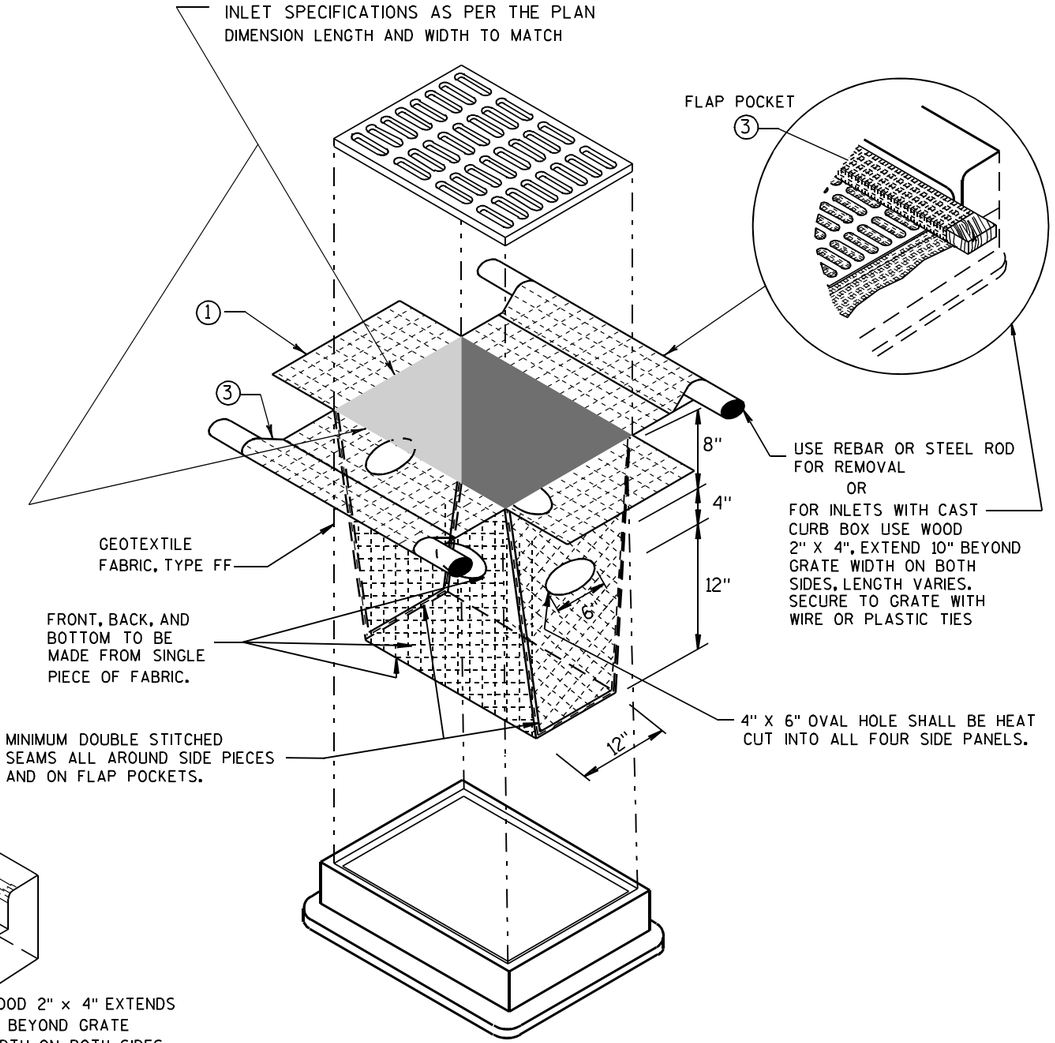


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

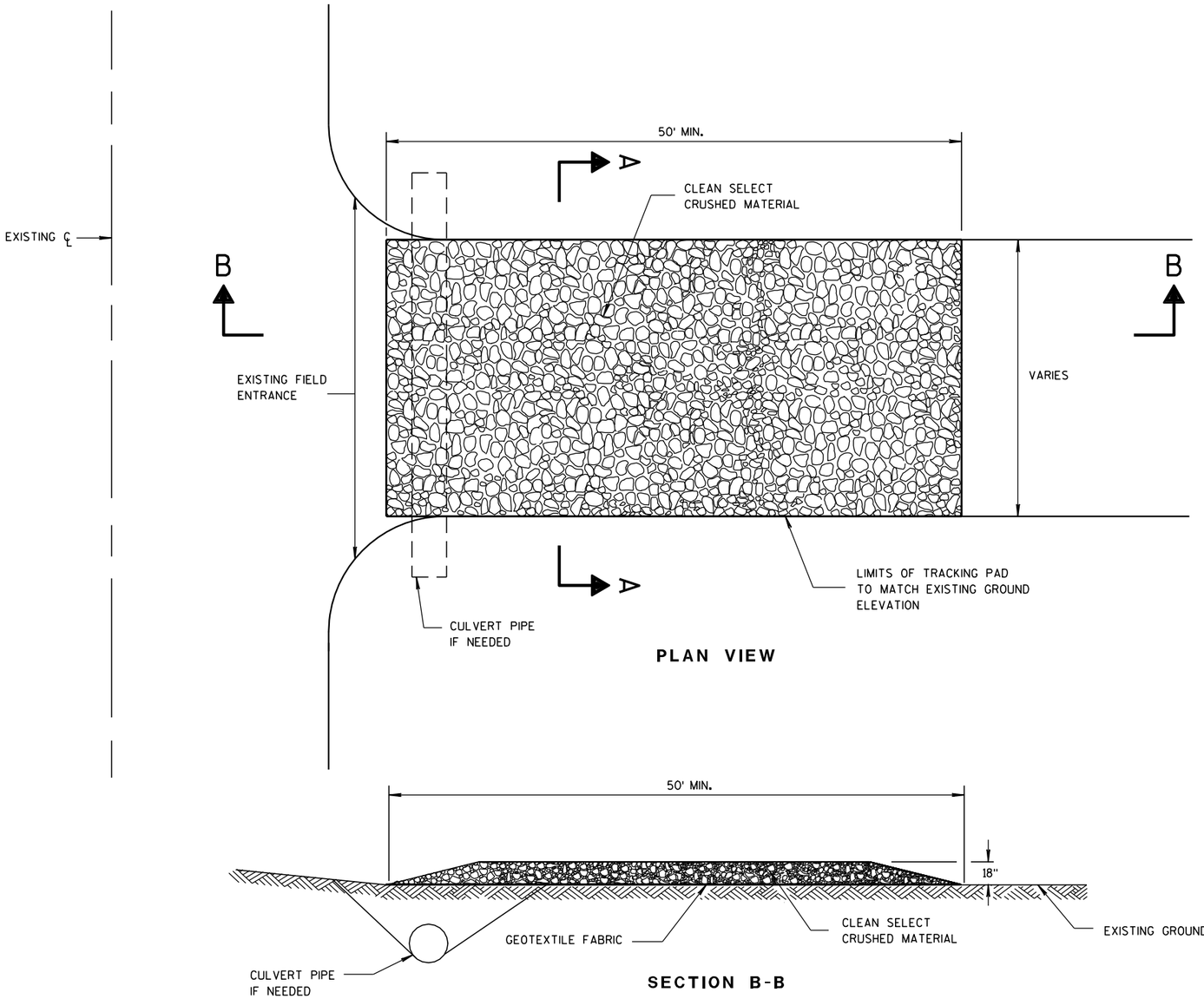
APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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



PLAN VIEW

SECTION B-B

GENERAL NOTES

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

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

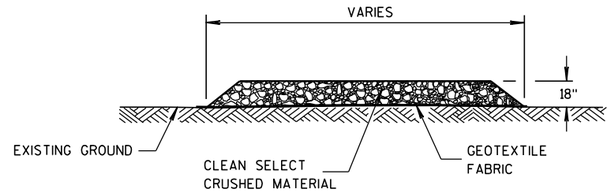
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A-A

TRACKING PAD

6

S.D.D. 8 E 14-1

TRACKING PAD

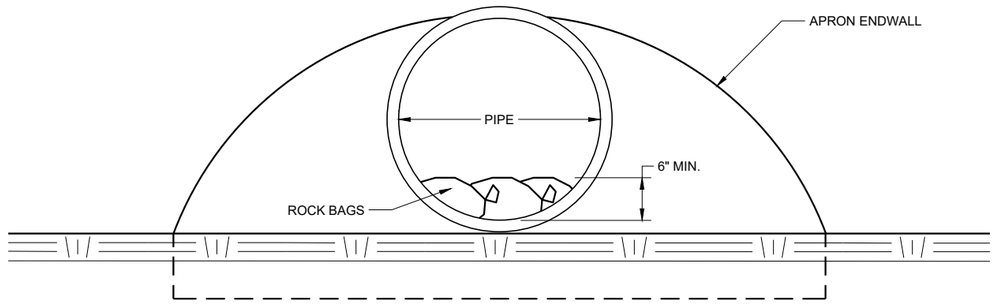
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

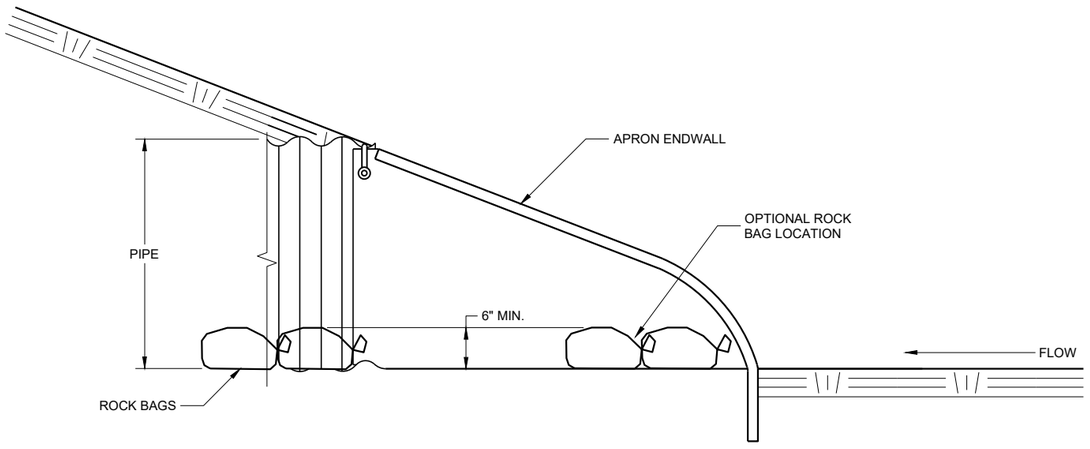
ENT

6

S.D.D. 8 E 14-1



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

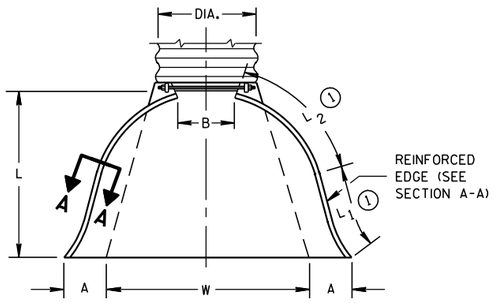
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 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

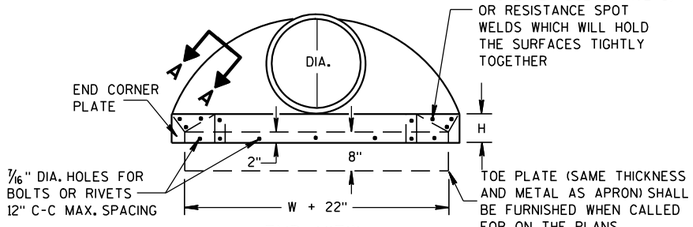
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
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

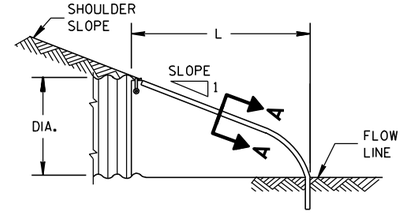
* MINIMUM
** MAXIMUM



PLAN VIEW

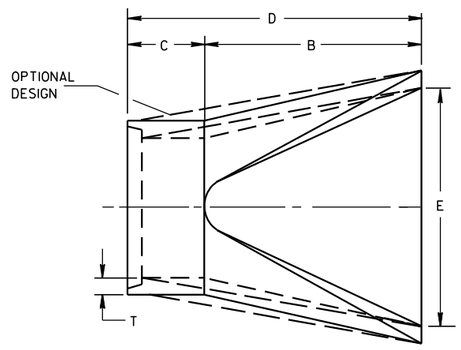


END VIEW

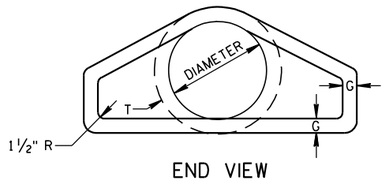


SIDE ELEVATION

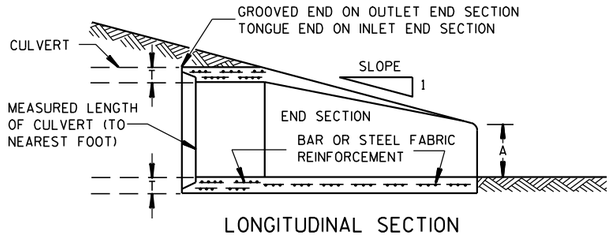
METAL ENDWALLS



PLAN

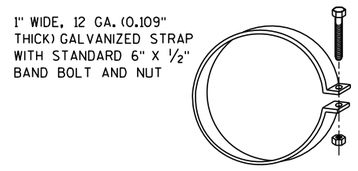


END VIEW



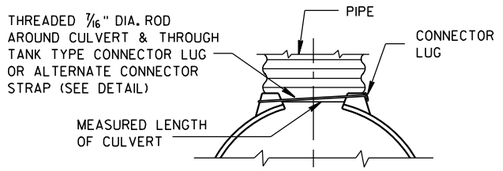
LONGITUDINAL SECTION

CONCRETE ENDWALLS

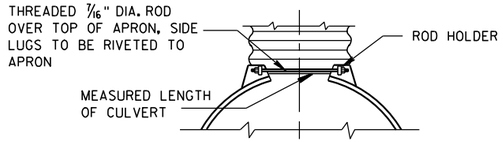


ALTERNATE FOR TYPE 1 CONNECTION

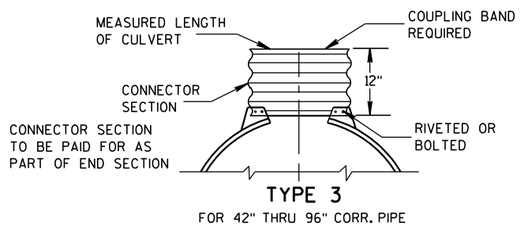
END SECTION CONNECTOR STRAP



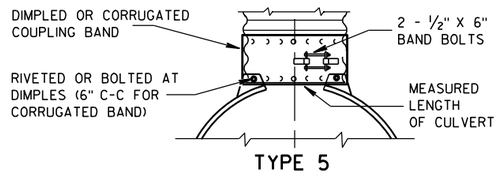
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

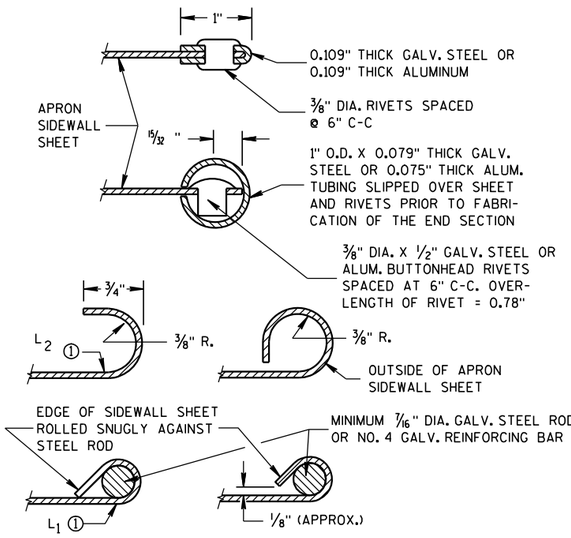
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

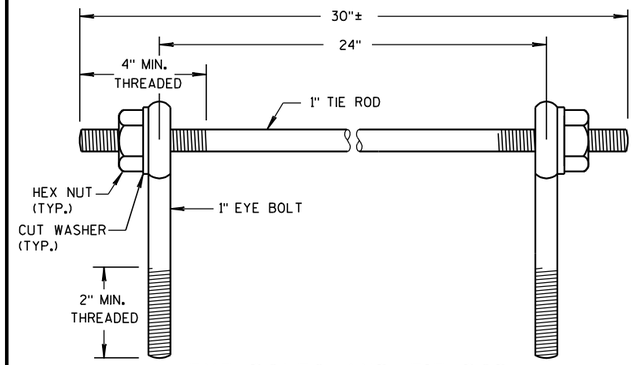
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

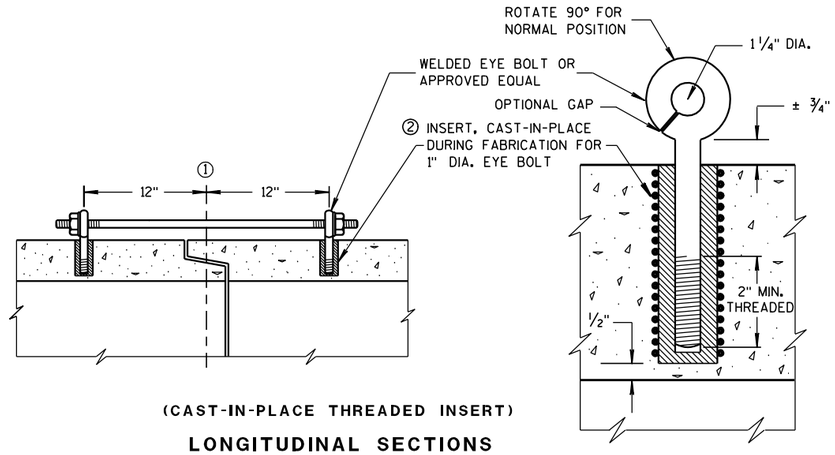
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

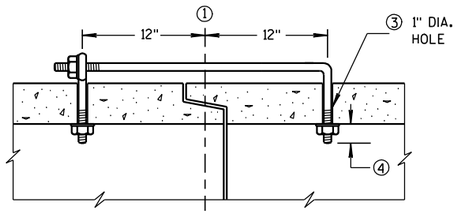
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

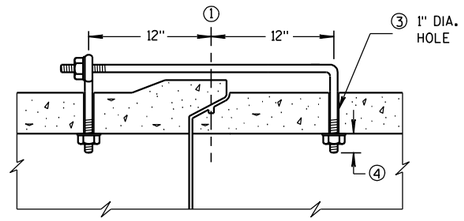
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

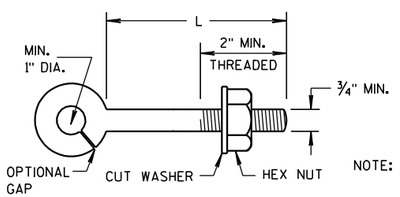


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

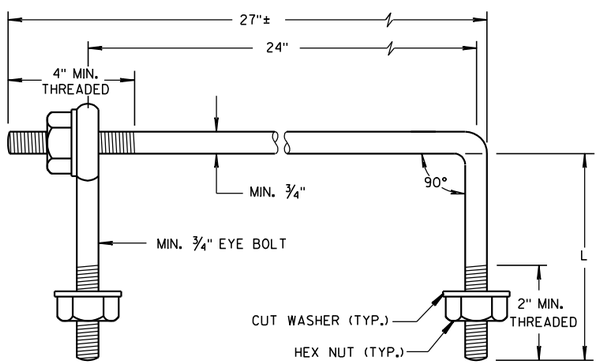
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

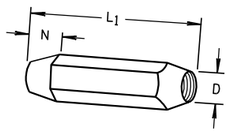
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

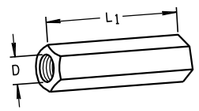
ADJUSTABLE TIE ROD TABLE

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 1/16

DIMENSIONS SHOWN ARE IN INCHES



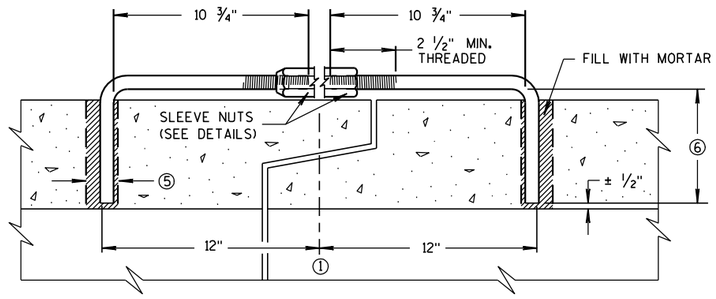
TAPERED



PLAIN

RIGHT AND LEFT THREADS

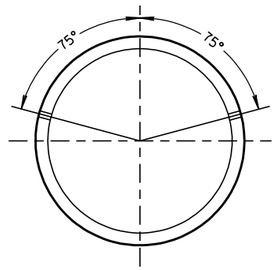
SLEEVE NUTS



LONGITUDINAL SECTION

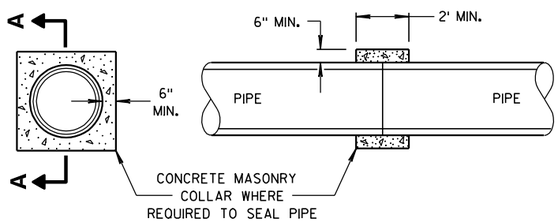
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

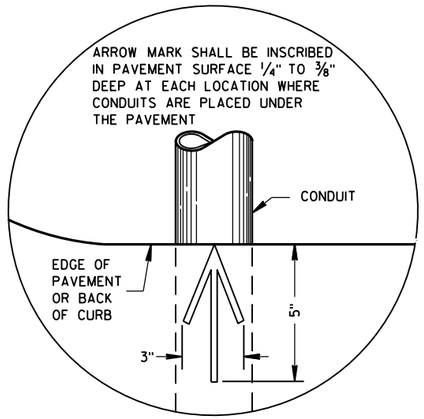
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 8 F 4-7

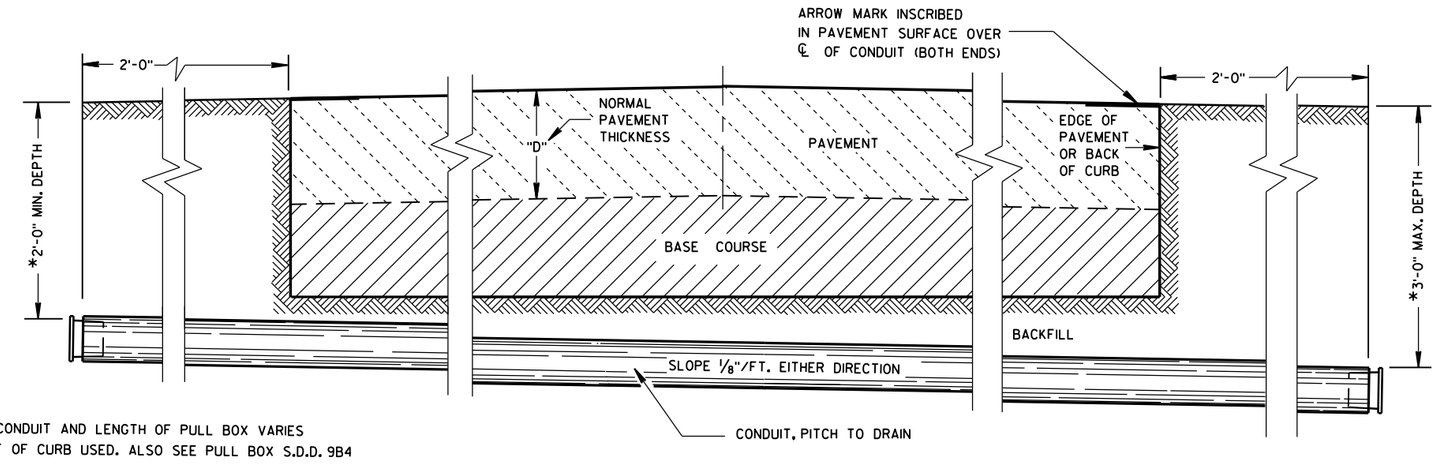
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S.D.D. 8 F 4-7



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

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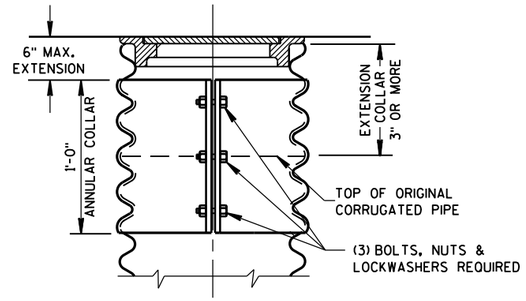
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

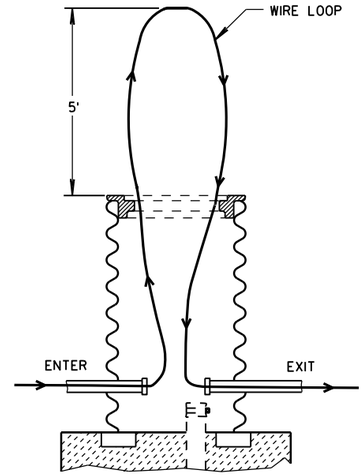
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	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.

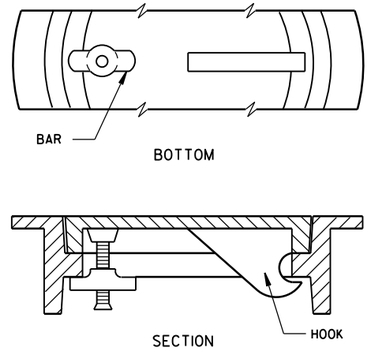
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

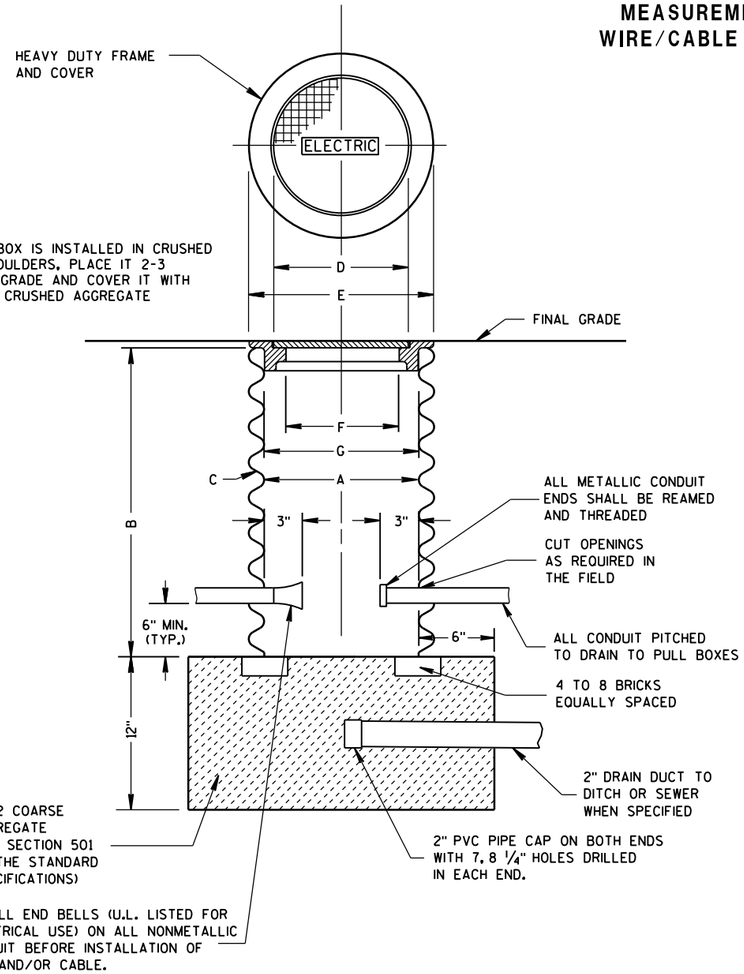


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



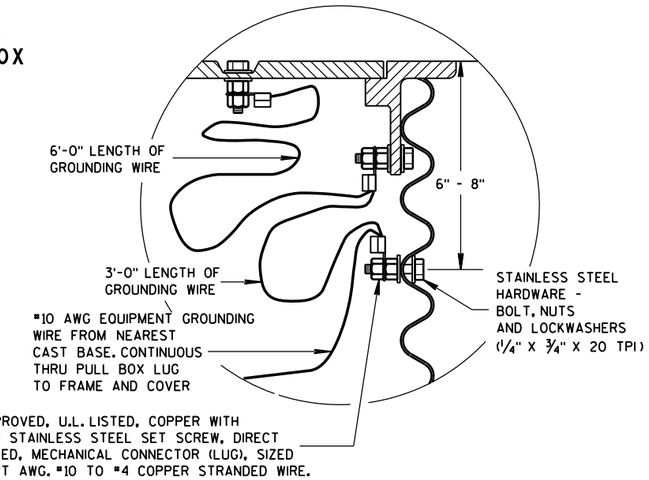
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

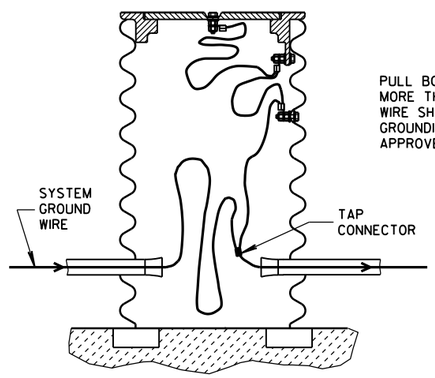


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

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.

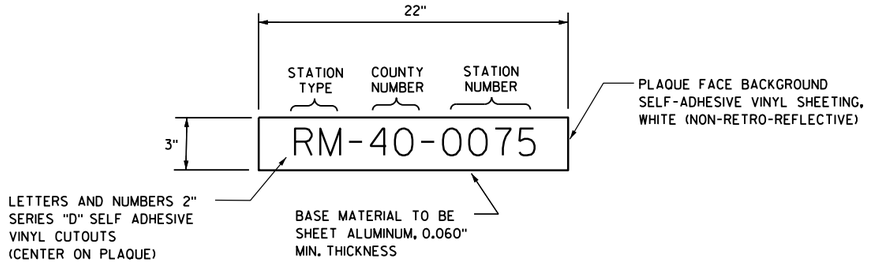
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

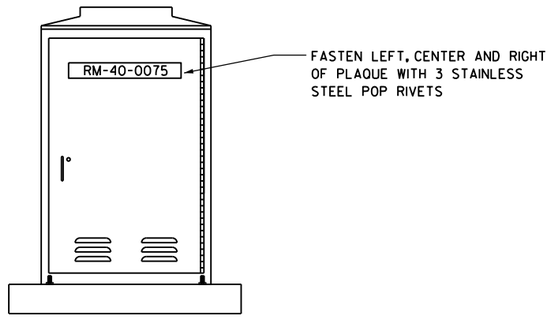
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 B 4-11

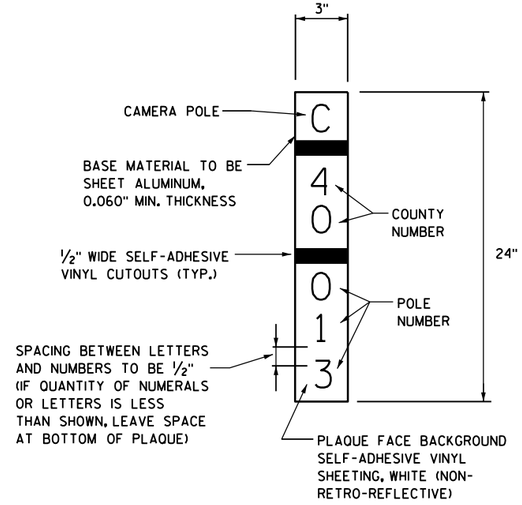


CONTROL CABINET IDENTIFICATION PLAQUE DETAIL

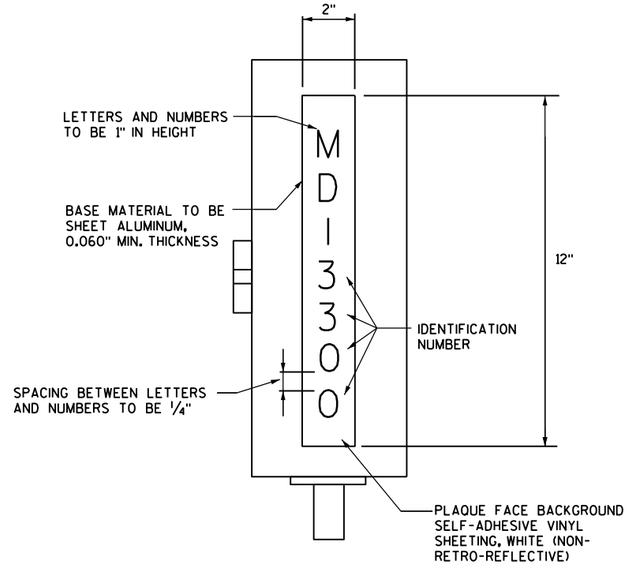


CONTROL CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)



POLE IDENTIFICATION PLAQUE DETAIL



MICROWAVE DETECTOR FIELD CABINET 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.

LEGEND STATION TYPE

RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR

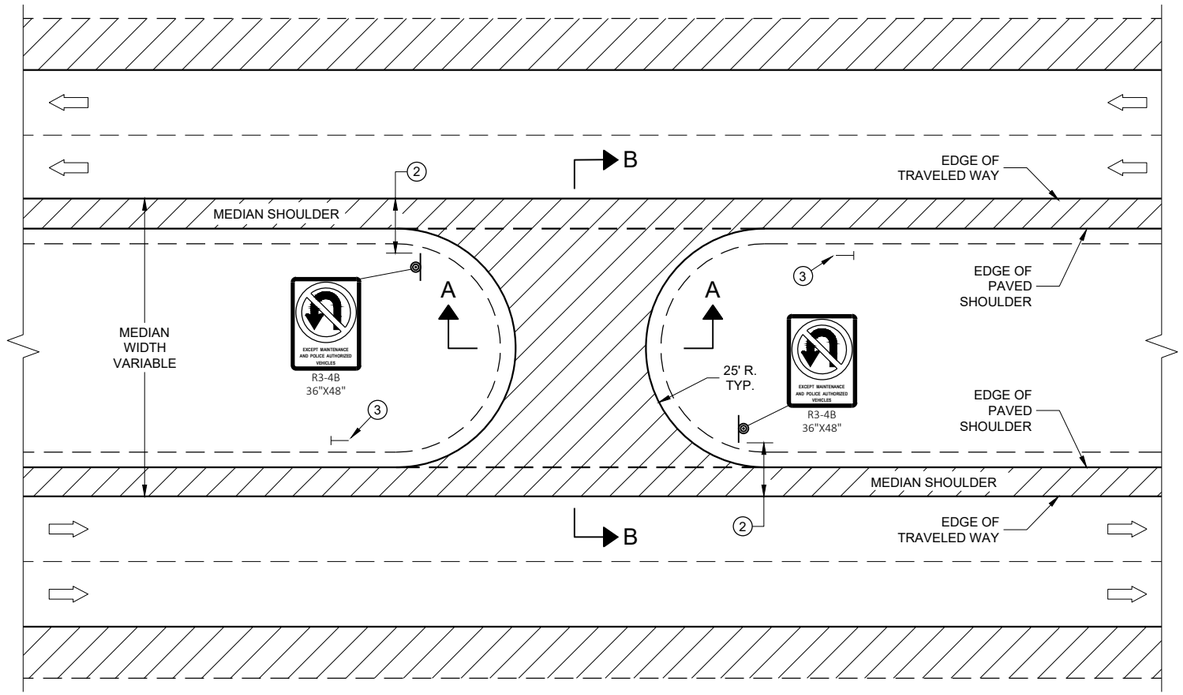
IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

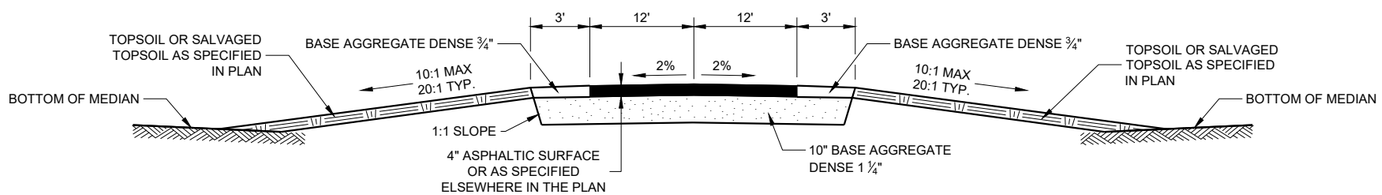
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demribilek — STATE ELECTRICAL
FHWA

6

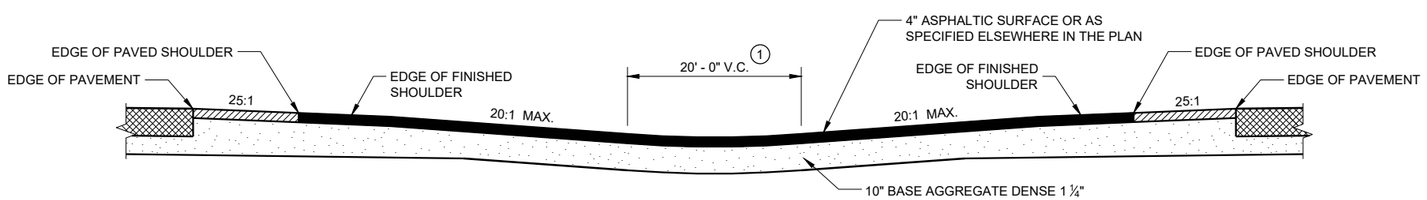
S.D.D. 9 H 11-1



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

1. ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.
2. SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.
3. INSTALL DELINEATOR. SEE STANDARD DETAIL DRAWING 15A4.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DELINEATOR
- DIRECTION OF TRAFFIC

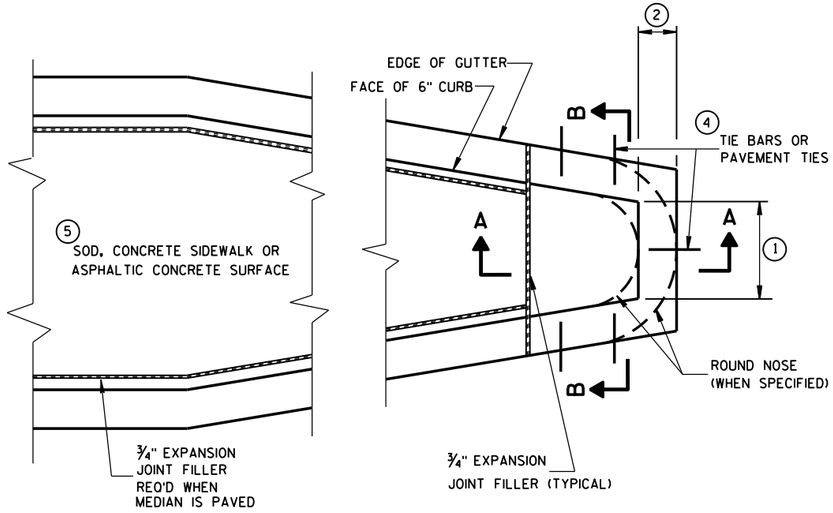
MAINTENANCE CROSSOVER FOR FREEWAYS

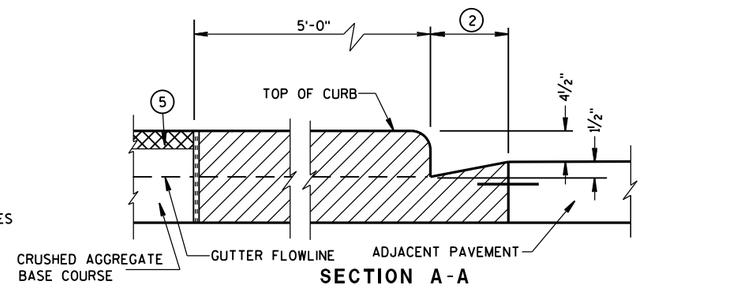
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6
SDD 11A01 - 06





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.

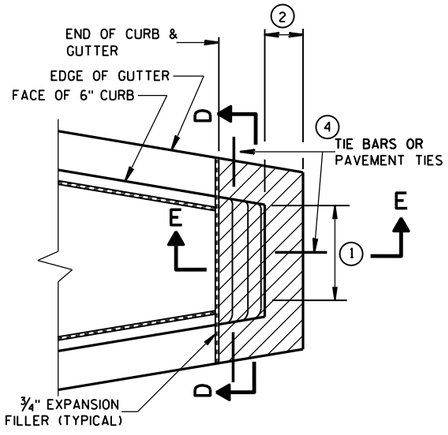
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

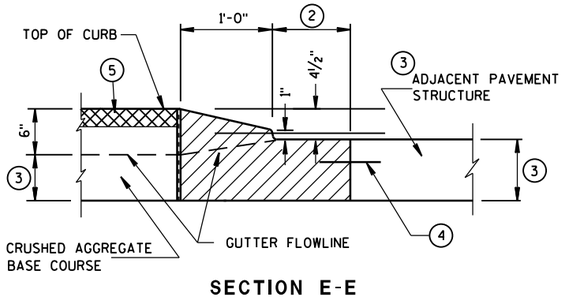
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(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.

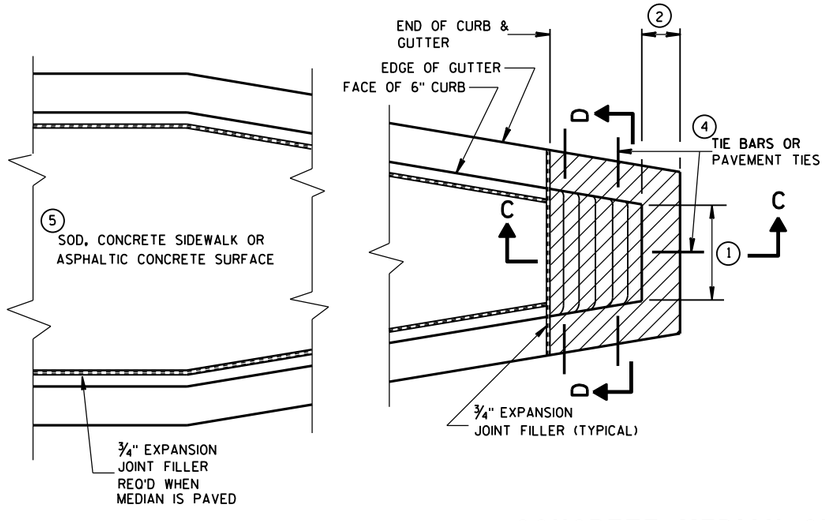
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

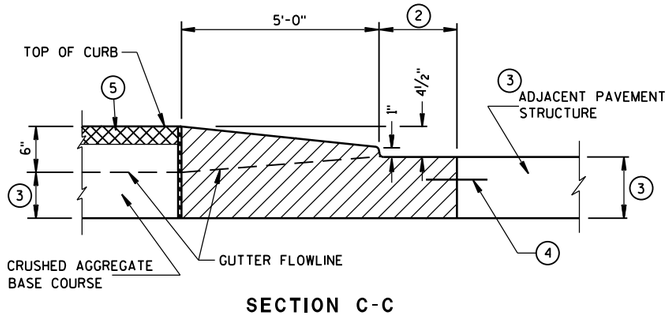




SECTION E-E

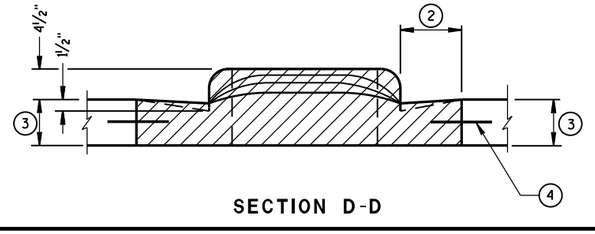
CONCRETE MEDIAN SLOPED NOSE TYPE 2





SECTION C-C

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

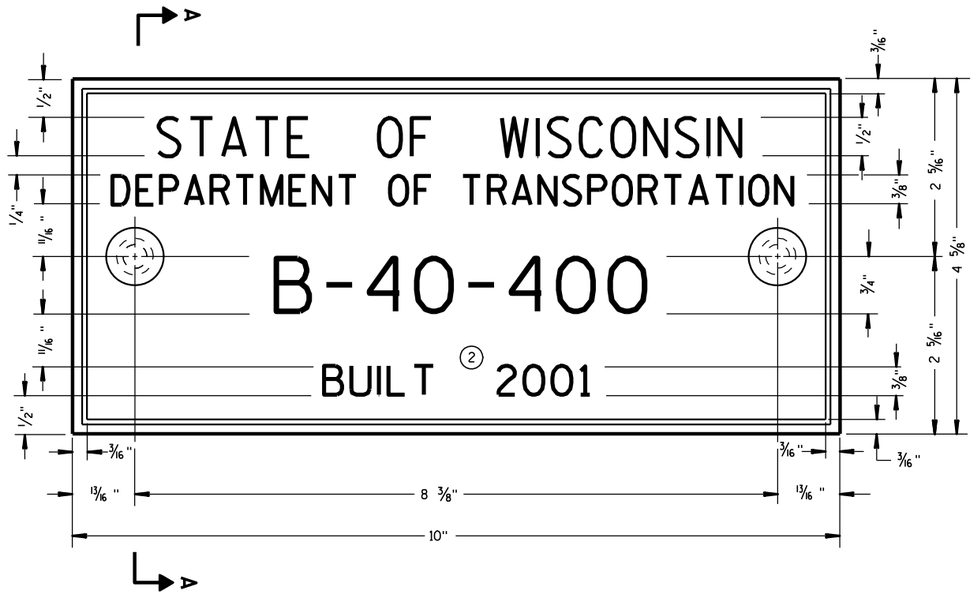
APPROVED
6/8/2006
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER
FHWA

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S.D.D. 11 B 2-2

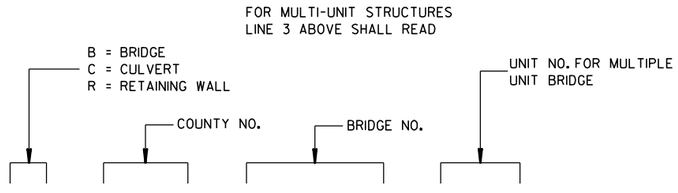
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S.D.D. 11 B 2-2



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

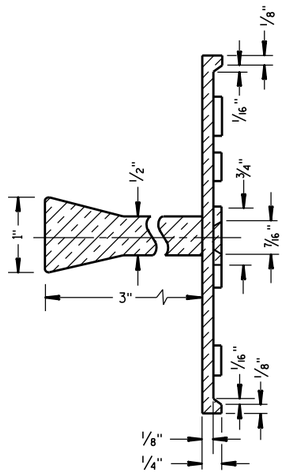
GENERAL NOTES

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

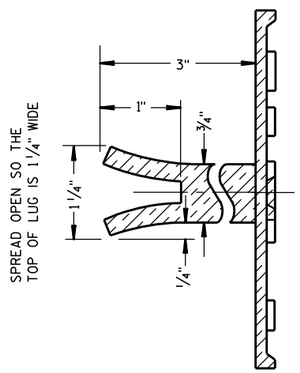
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

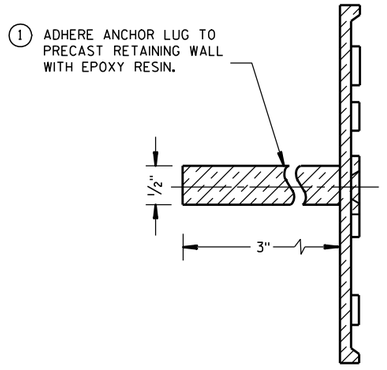
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

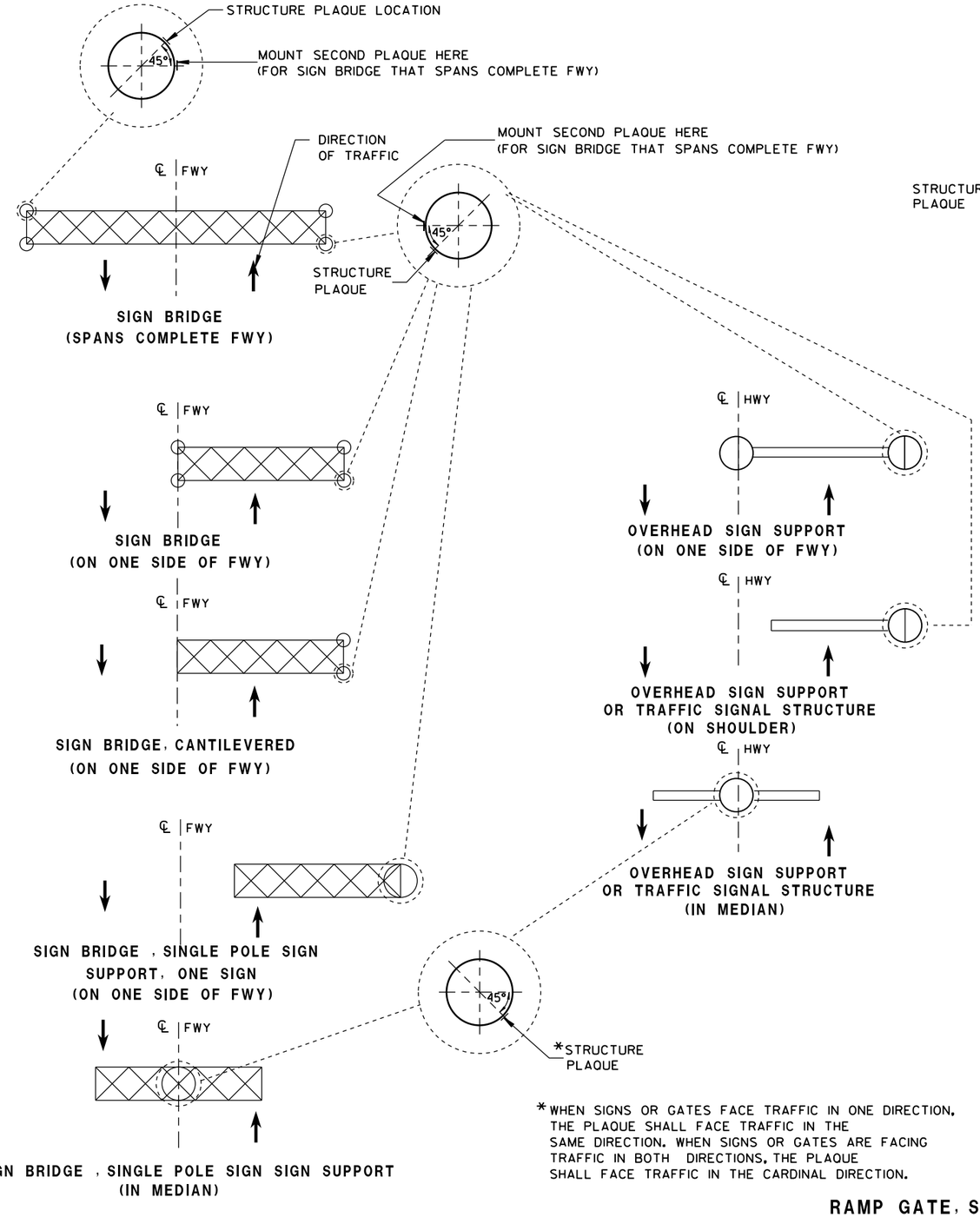
NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER
FHWA	

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S.D.D. 12 A 3-10

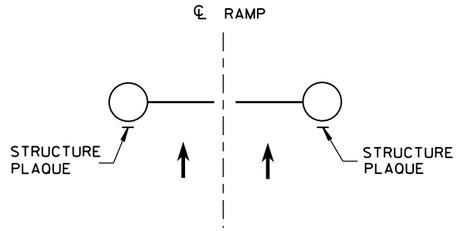
6

S.D.D. 12 A 3-10

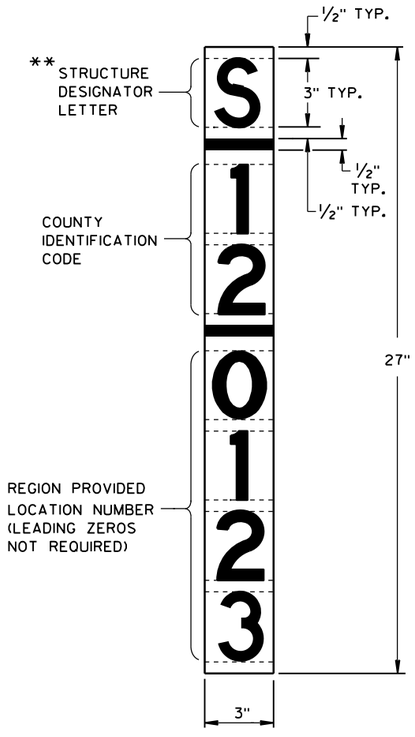


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



**RAMP GATE
(ACROSS FWY ON-RAMP)**



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

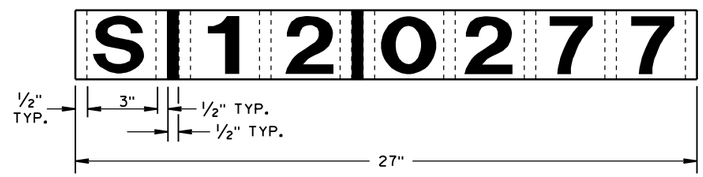
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

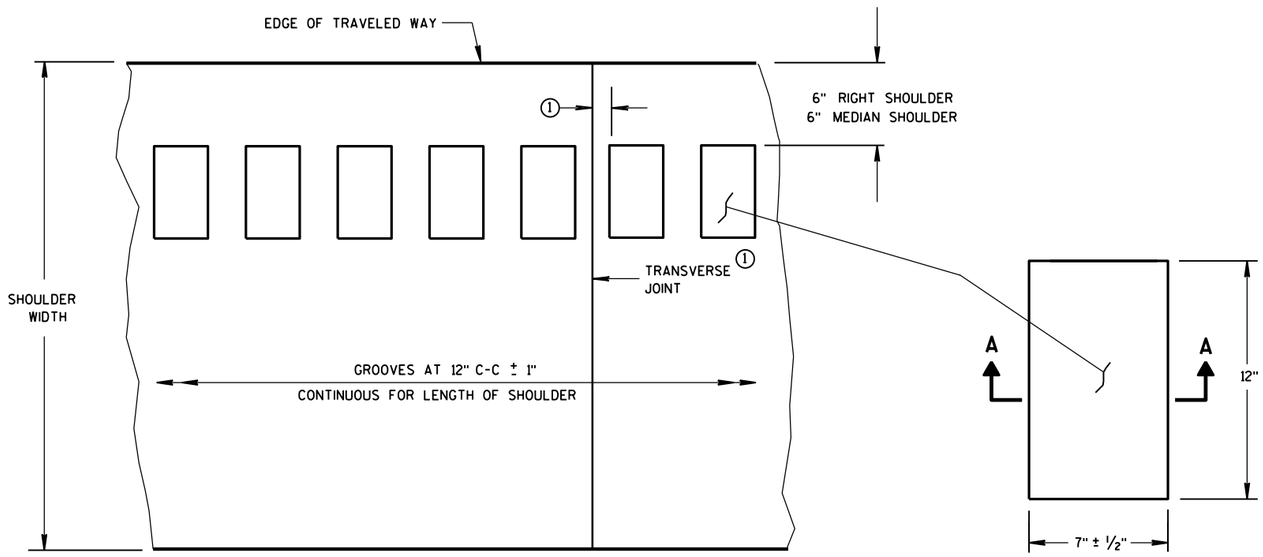
FHWA

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S.D.D. 12 A 4-3

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S.D.D. 12 A 4-3



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

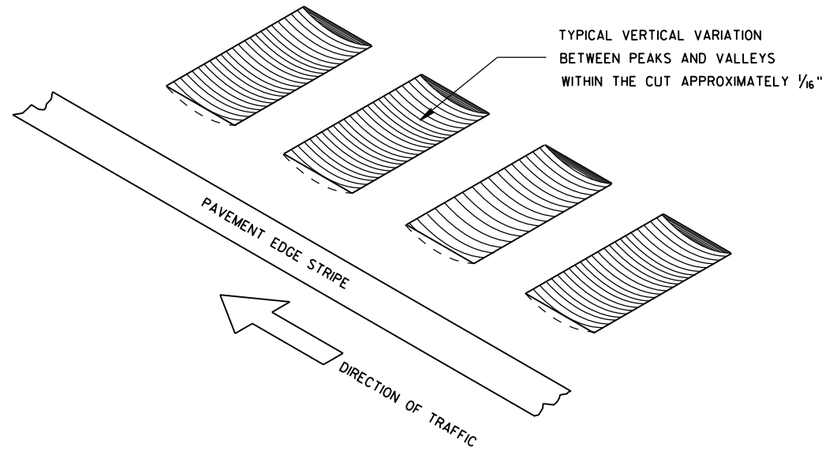
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

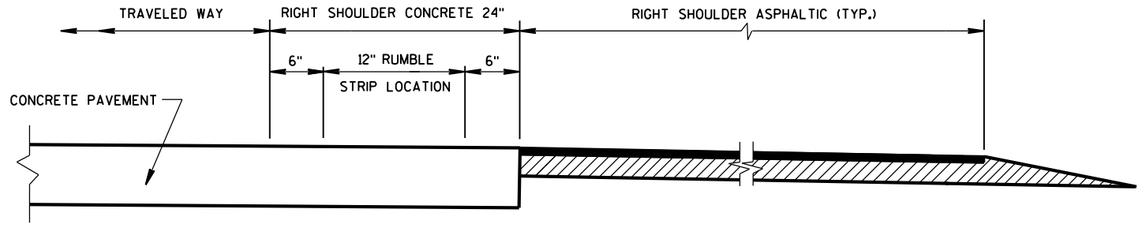
RUMBLE STRIPS ON EXPRESSWAYS

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.

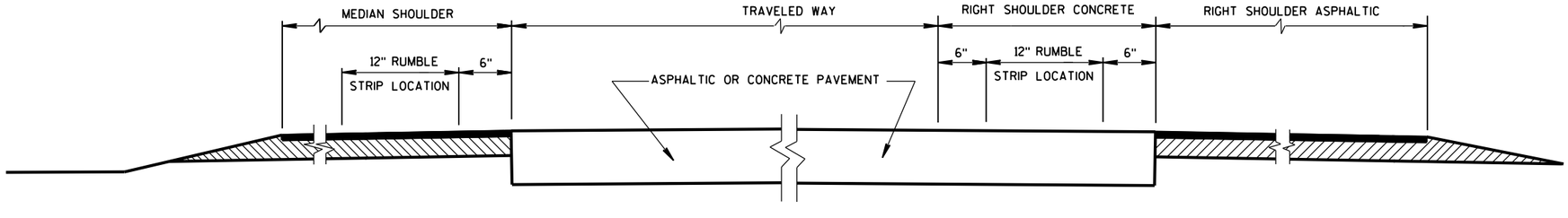
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



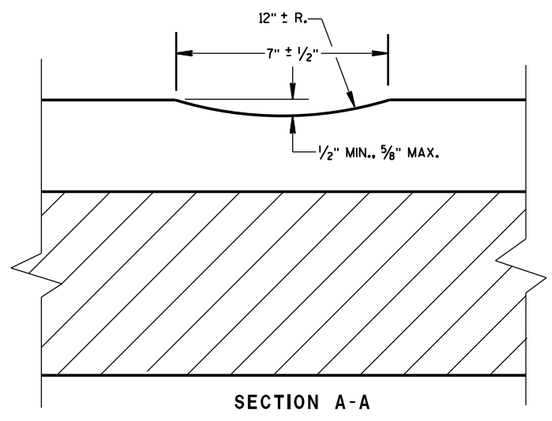
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

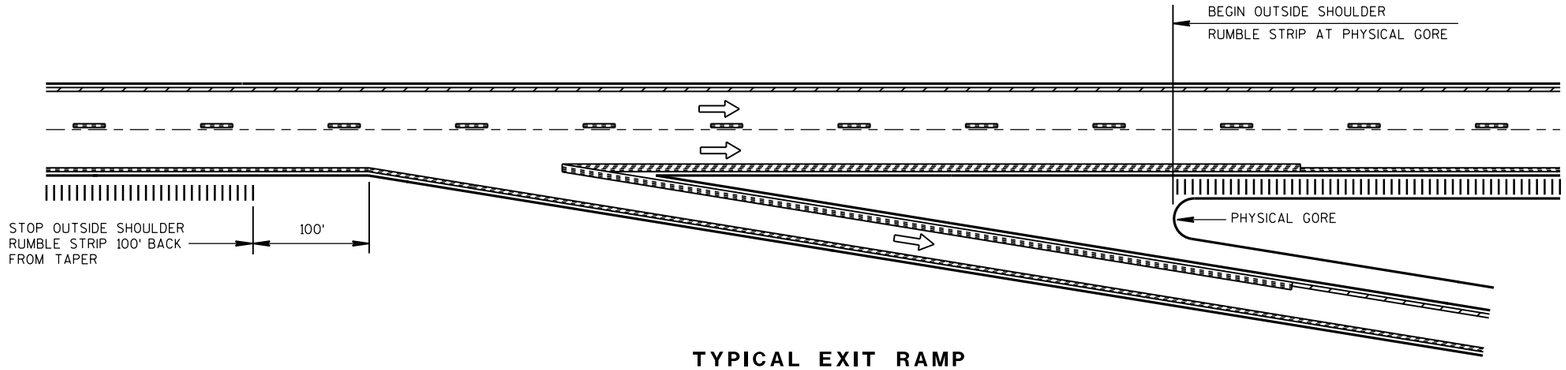
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 A 5-5a

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S.D.D. 13 A 5-5a



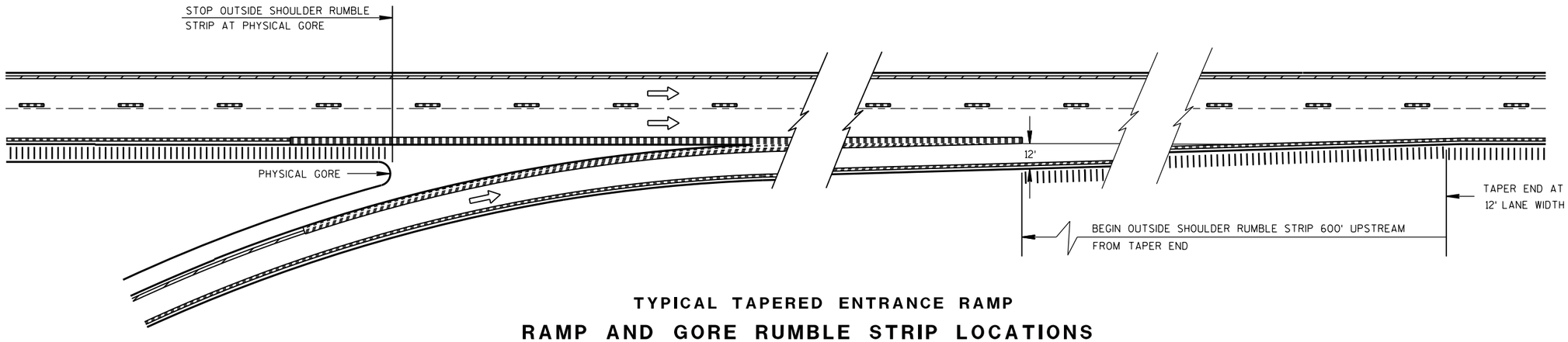
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

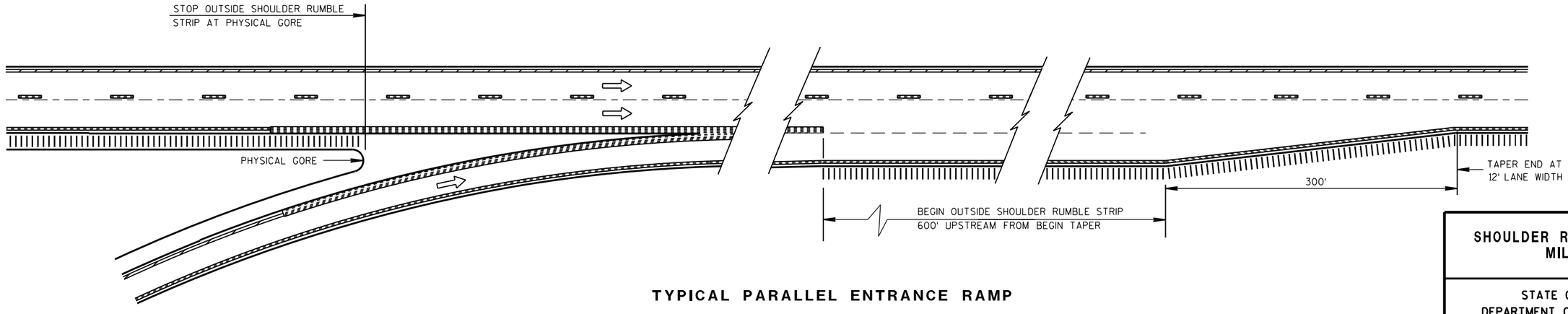
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

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

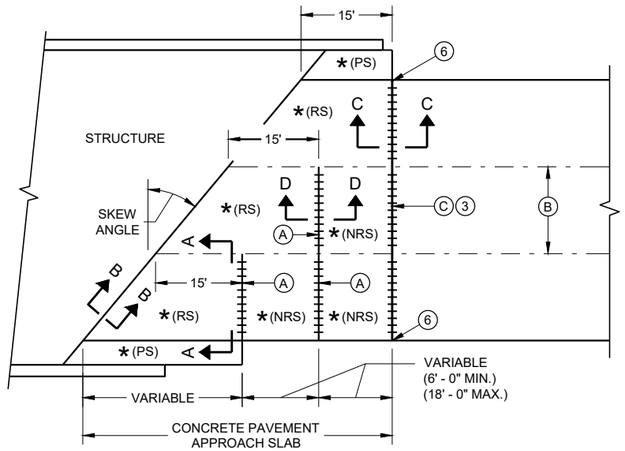
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

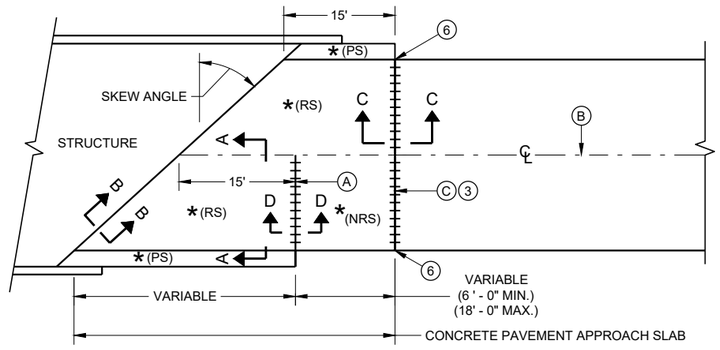
APPROVED
12/17/2012 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS ENGINEER
FHWA

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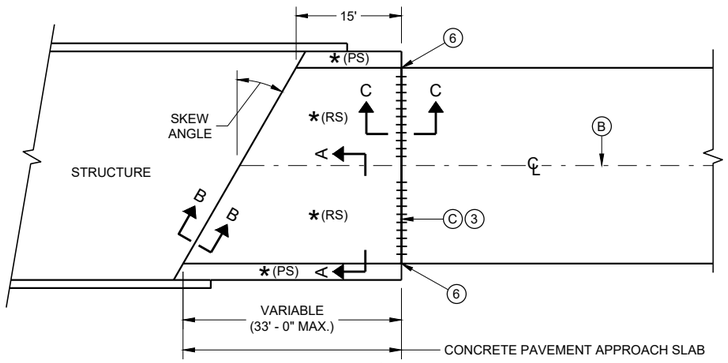
S.D.D. 13 A 5-5b



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

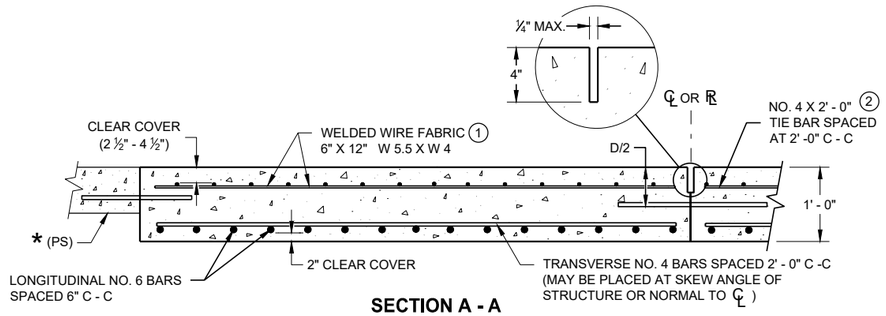
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

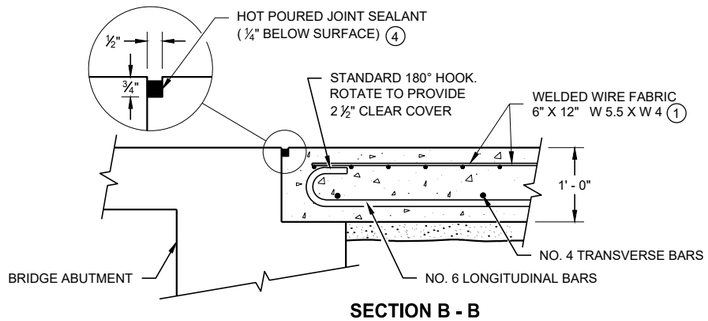
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

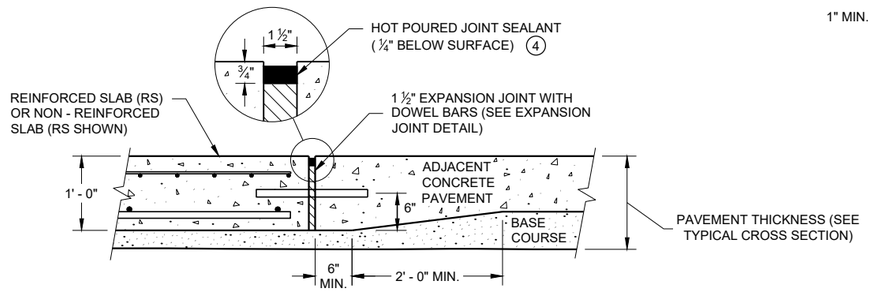
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

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

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

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

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

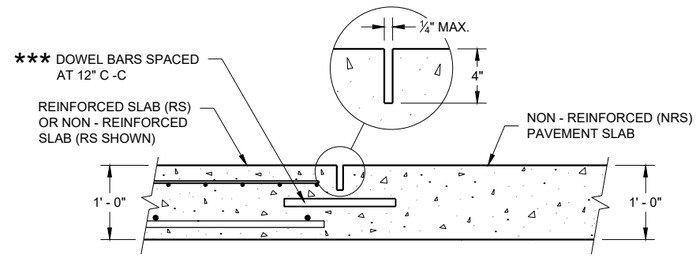
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

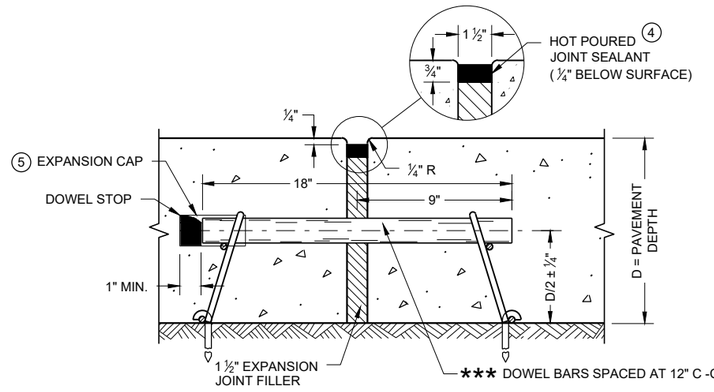
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

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



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

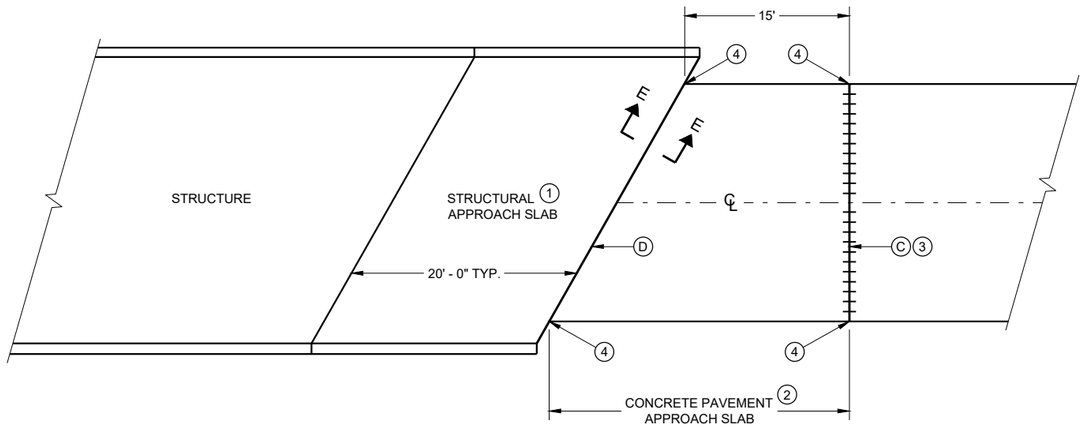
APPROVED
November 2018
DATE

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

FHWA

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SDD 13B02 - 09a



BRIDGE APPROACHES

GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

(1) SEE BRIDGE PLAN.

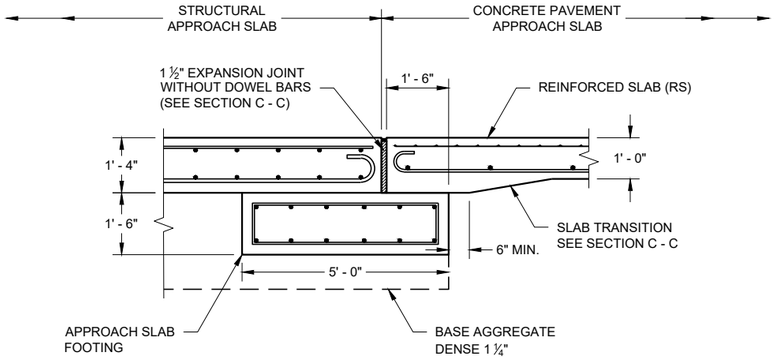
(2) CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS

(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

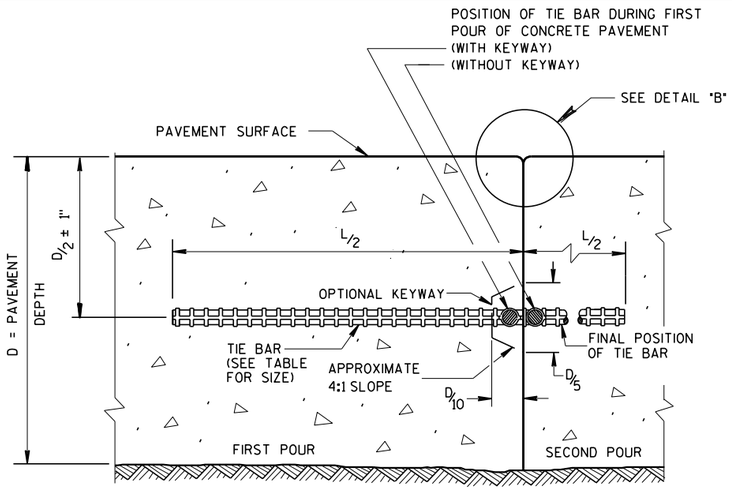
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

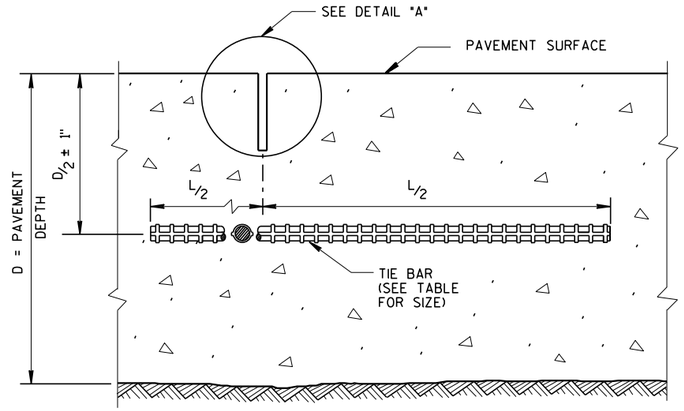
FHWA

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SDD 13B02 - 09b



CONSTRUCTION JOINT



SAWED JOINT

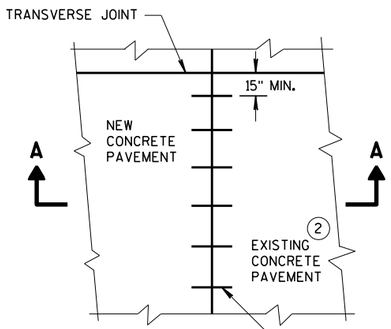
GENERAL NOTES

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

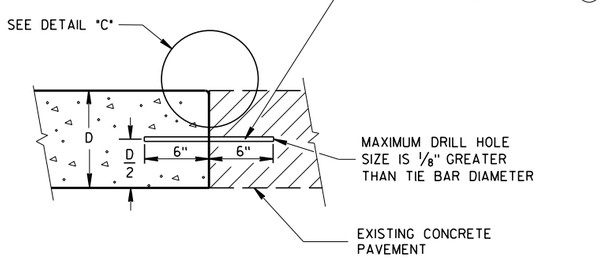
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

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

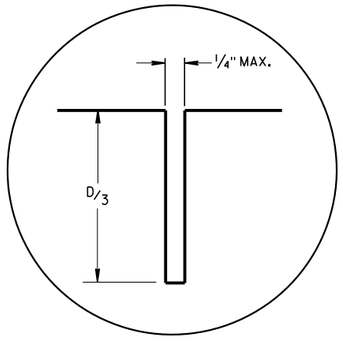


PLAN VIEW

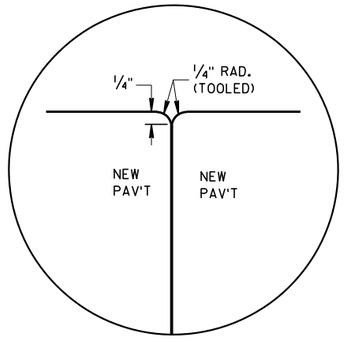


SECTION A-A

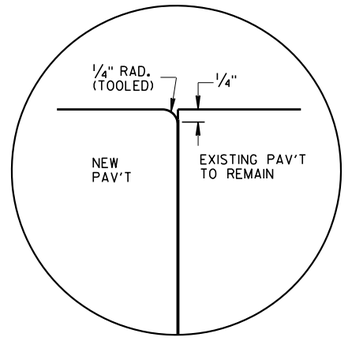
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



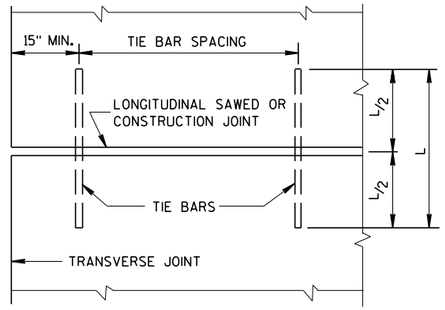
DETAIL "C"

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

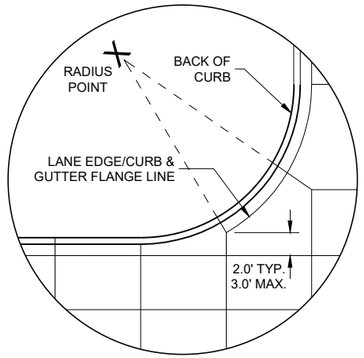
APPROVED
March 2018 — DATE
/S/ Peter Kemp P.E. — PAVEMENT SUPE
FHWA

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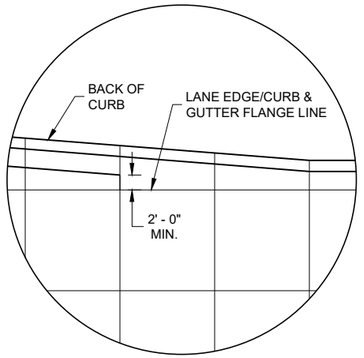
S.D.D. 13 C 1-19

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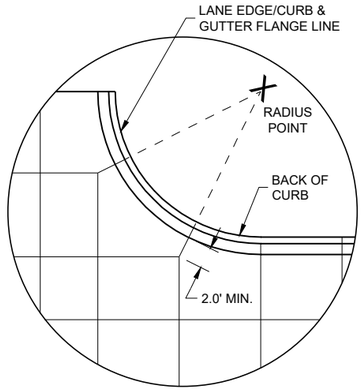
S.D.D. 13 C 1-19



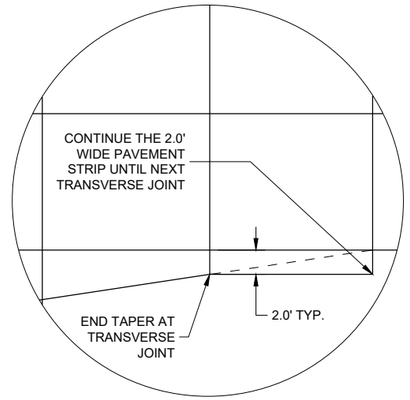
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

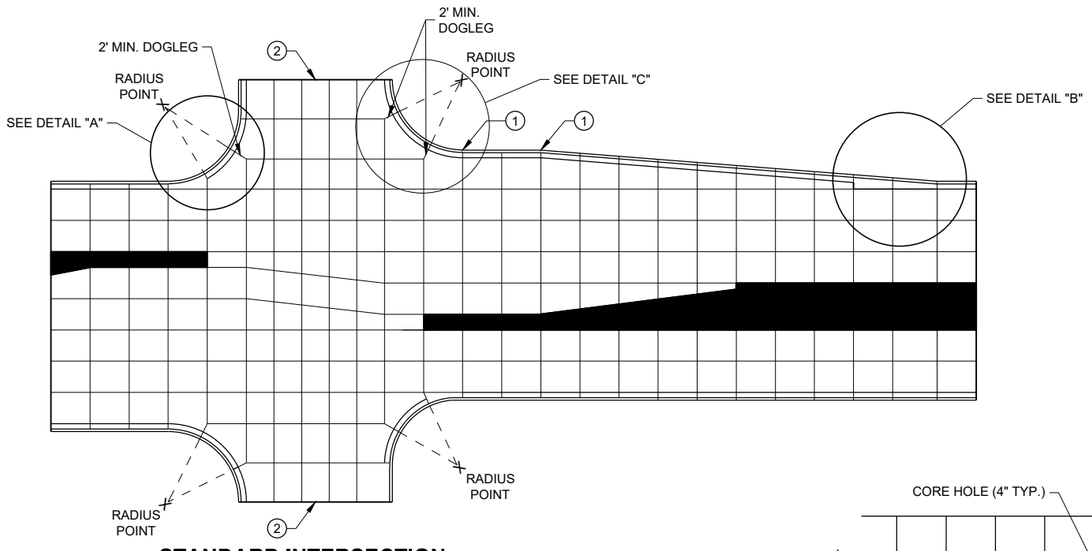
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITHEDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.

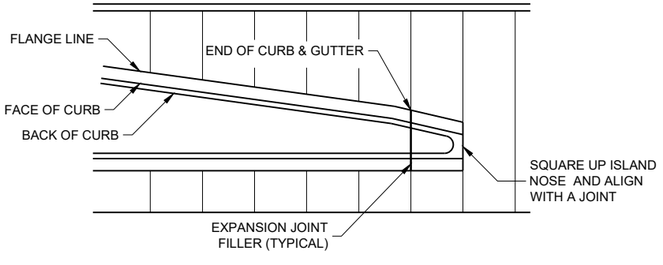


STANDARD INTERSECTION

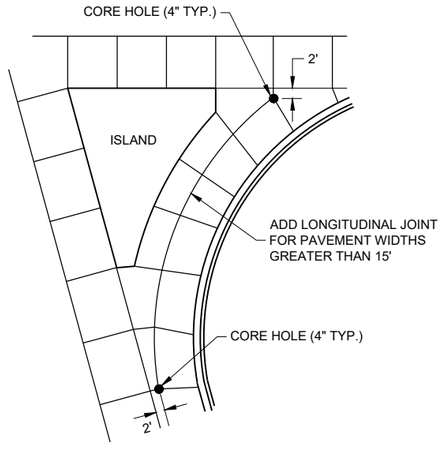
PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'

SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

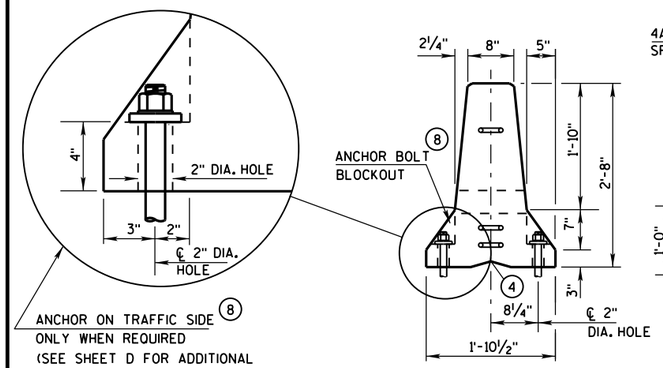
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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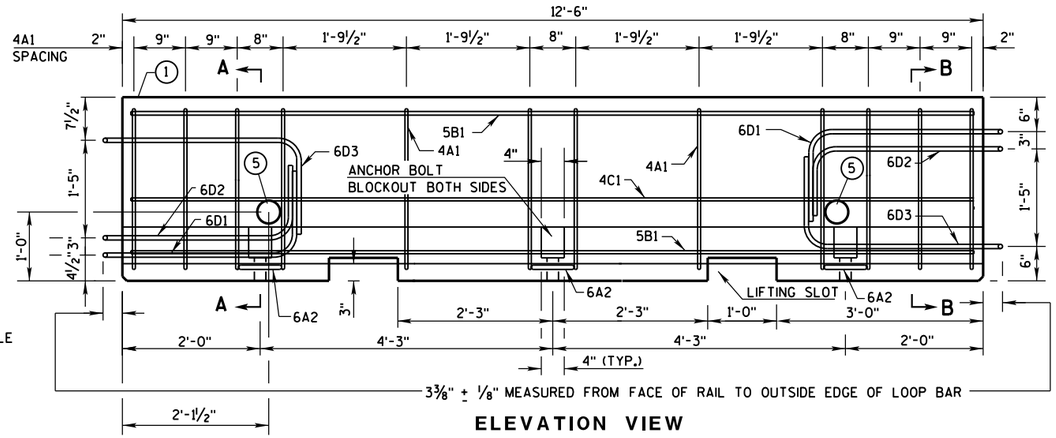
SDD 13C18 - 07a

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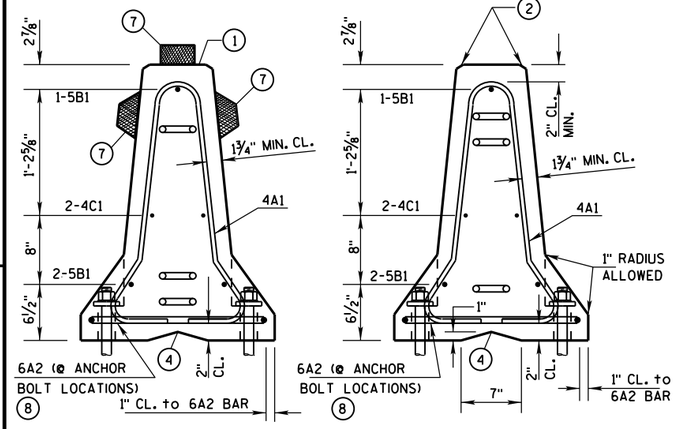
SDD 13C18 - 07a



END VIEW

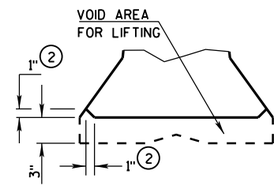


ELEVATION VIEW

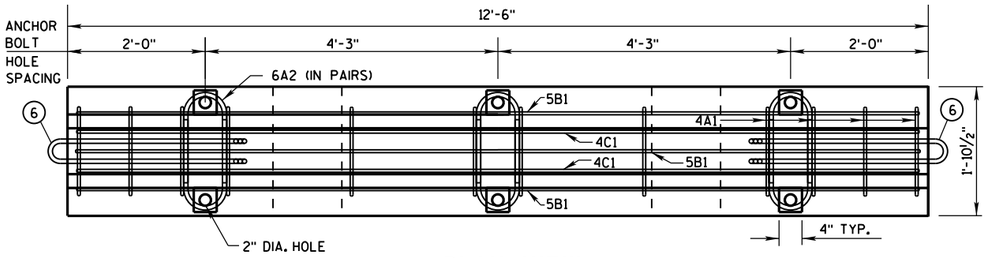


SECTION A-A
(STIRRUP PLACEMENT)

SECTION B-B
(STIRRUP PLACEMENT)

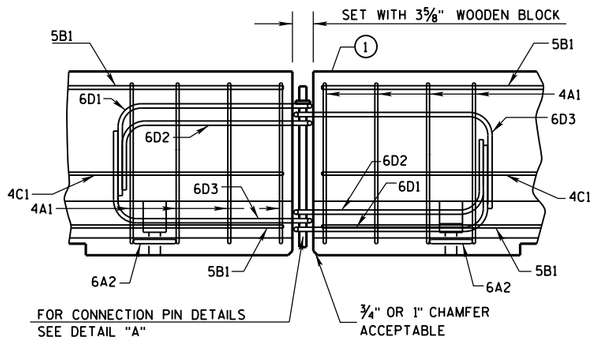


DETAIL "B"
LIFTING SLOT DETAIL

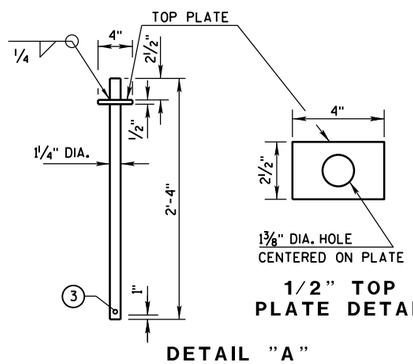


PLAN VIEW

DETAILS OF BARRIER SECTION

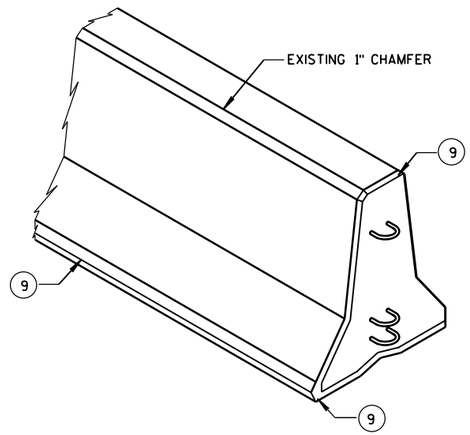


DETAILS OF BARRIER CONNECTION



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.

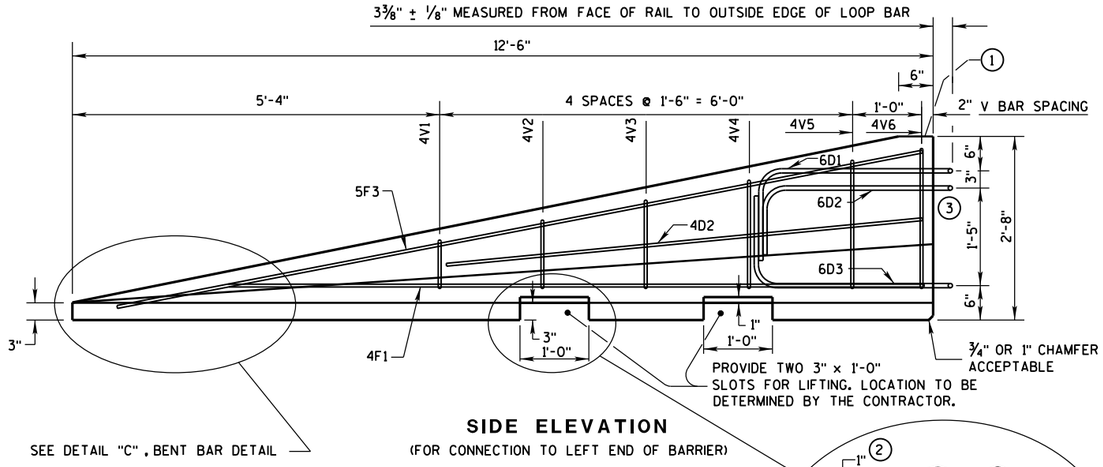
f'c = 4,000 psi

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

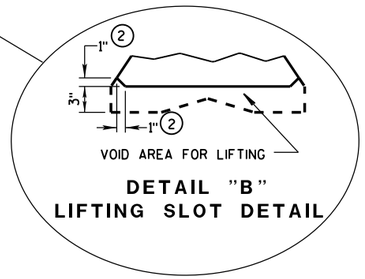
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

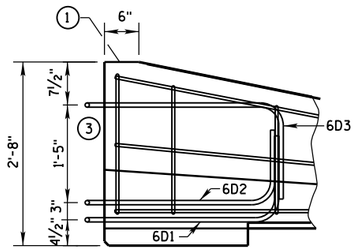
S.D.D. 14 B 7-15a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



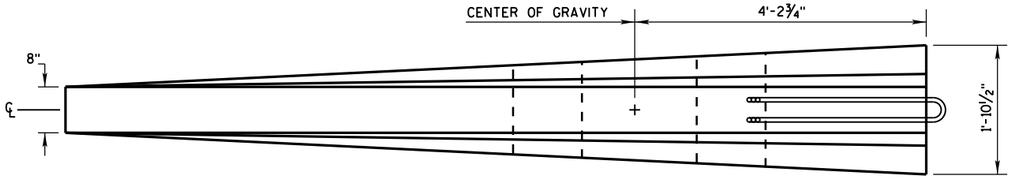
DETAIL "B"
LIFTING SLOT DETAIL



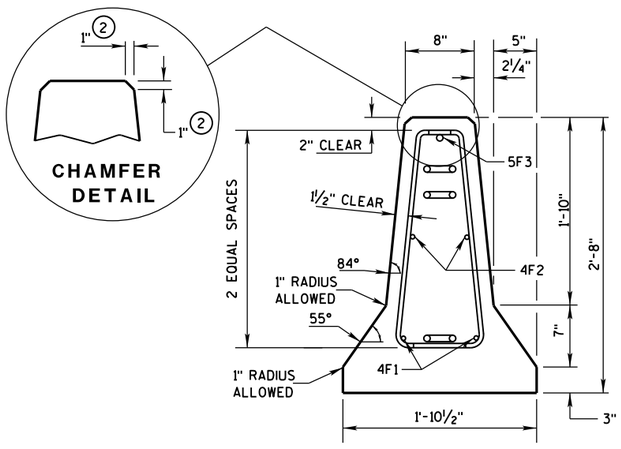
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

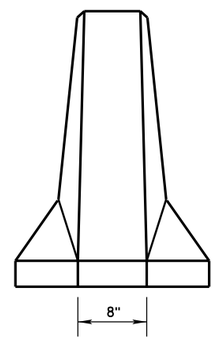
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



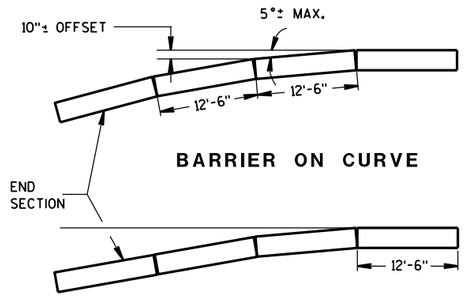
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

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

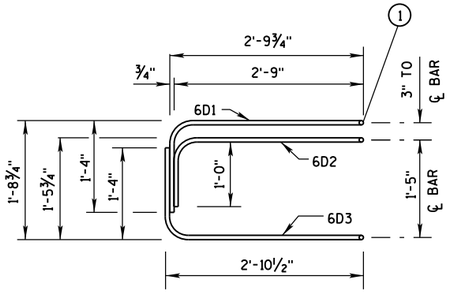
6

S.D.D. 14 B 7-15b

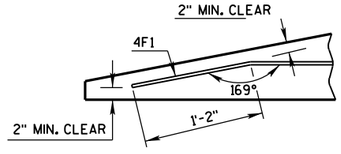
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

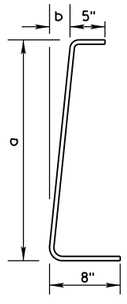
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

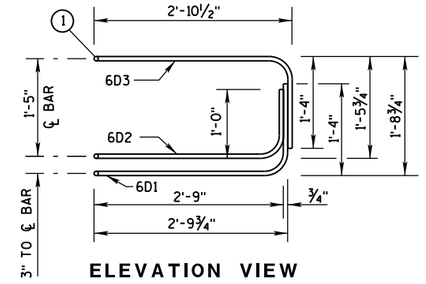
GENERAL NOTES

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

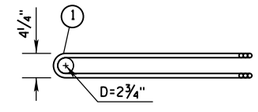
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

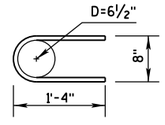
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



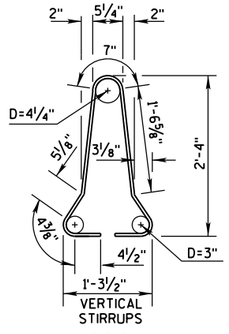
ELEVATION VIEW



PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



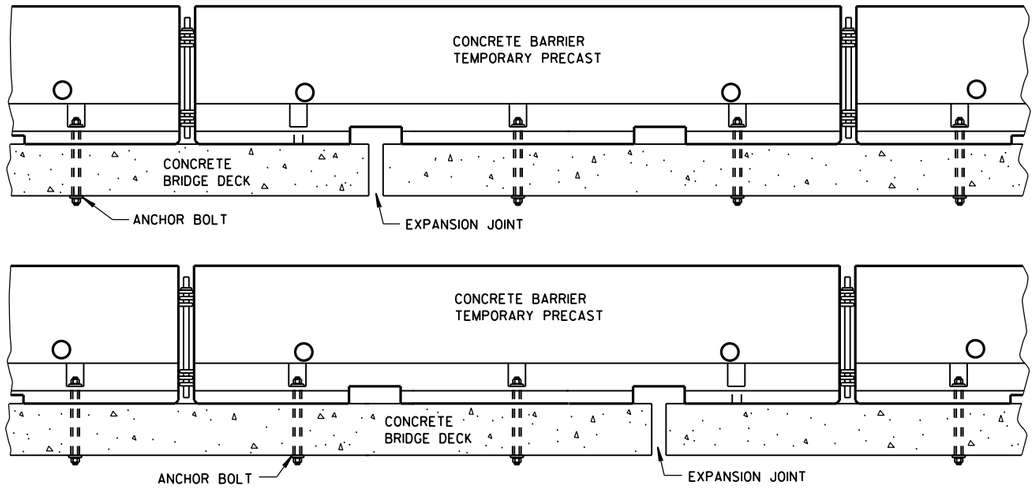
4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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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

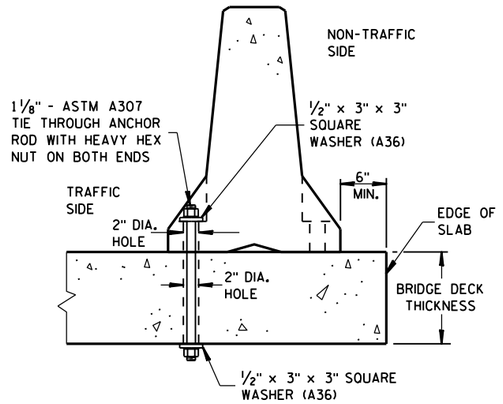
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

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.

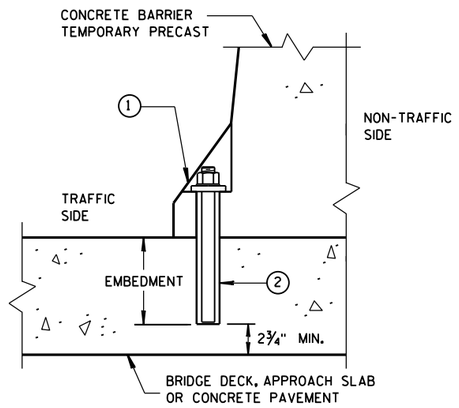
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

(3) ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



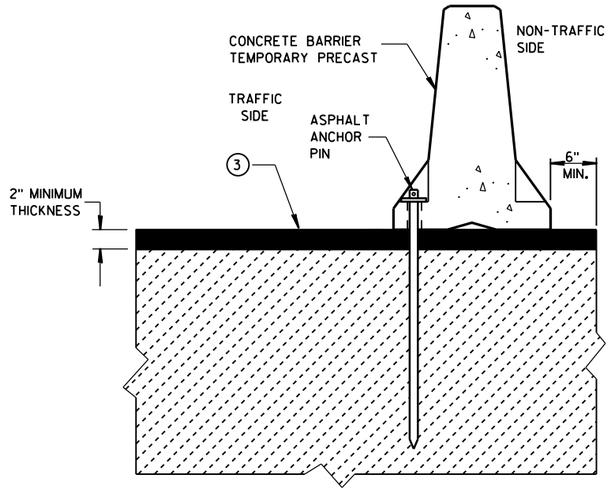
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

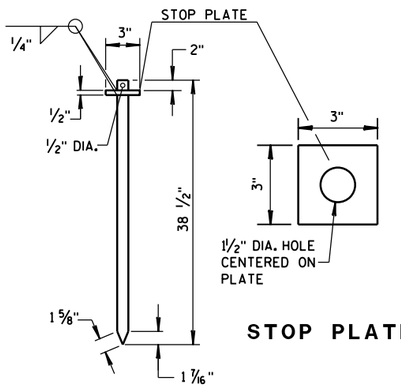


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



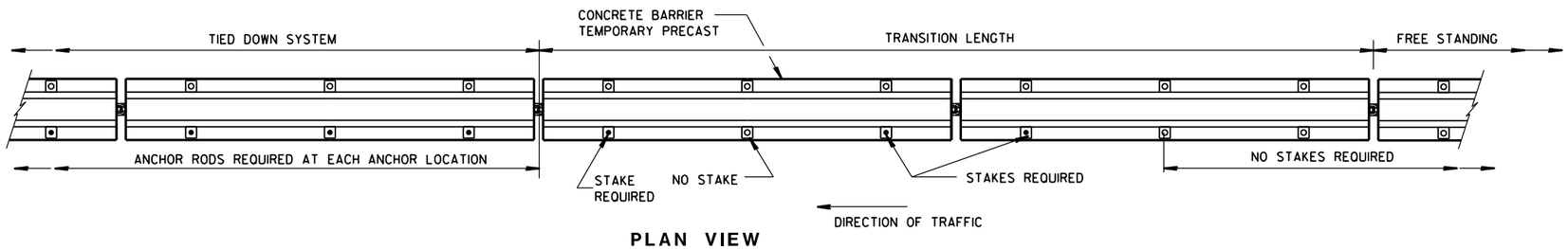
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

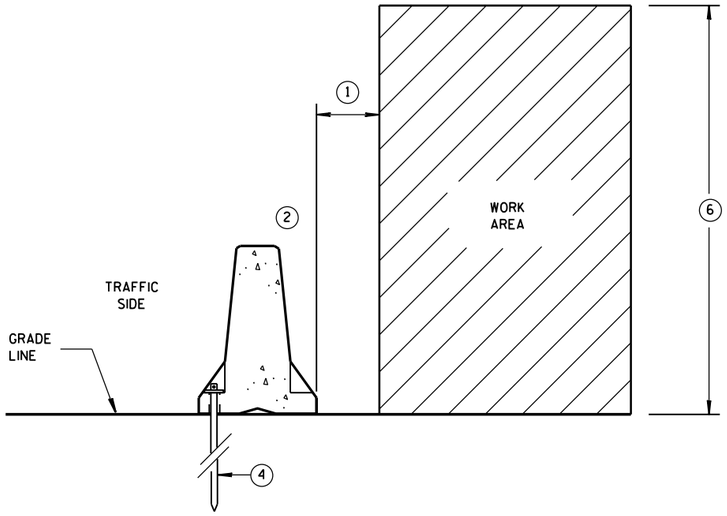
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

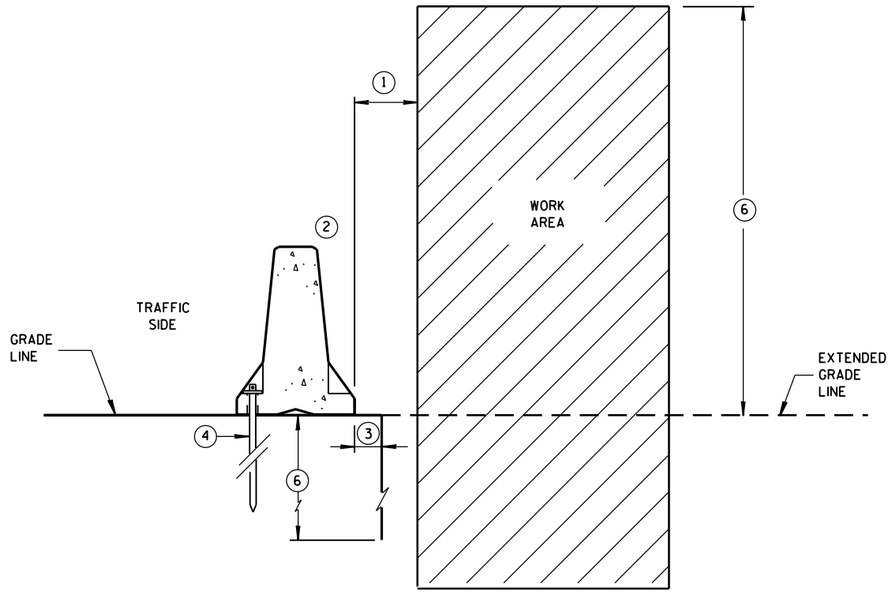
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

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

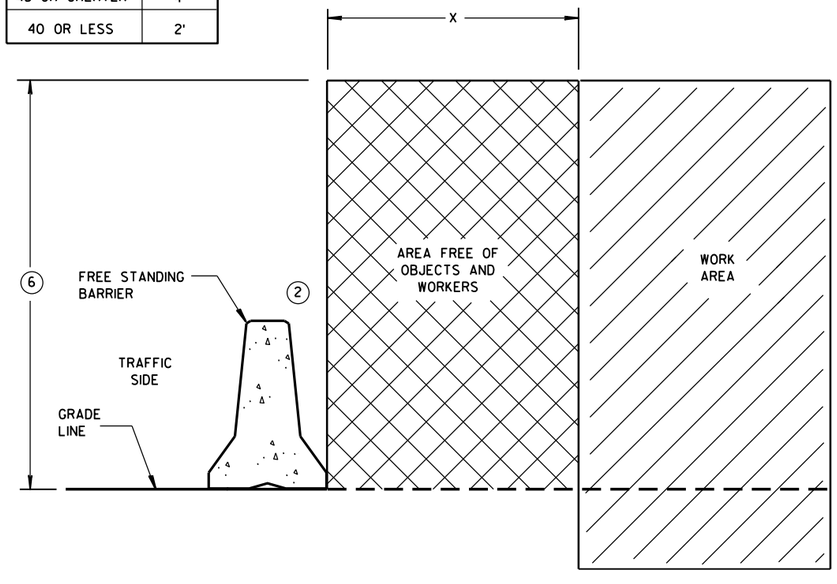


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

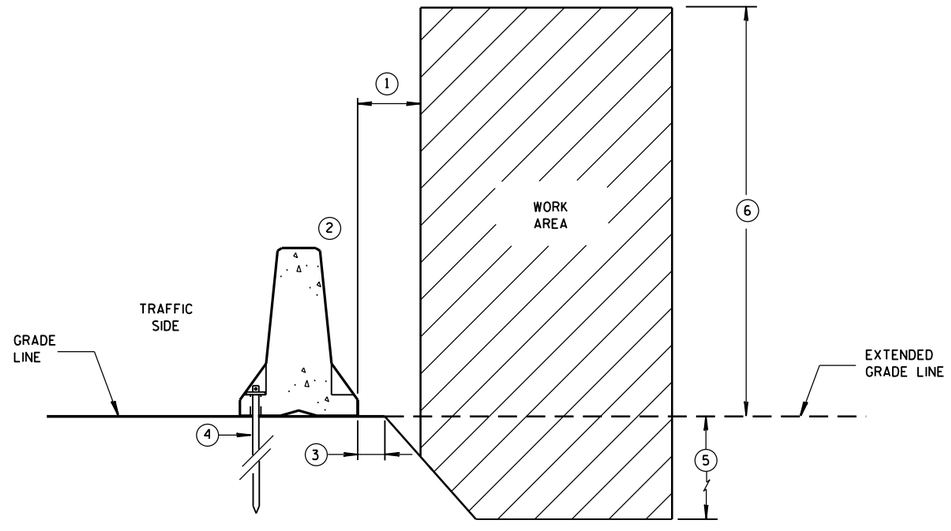
GENERAL NOTES

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



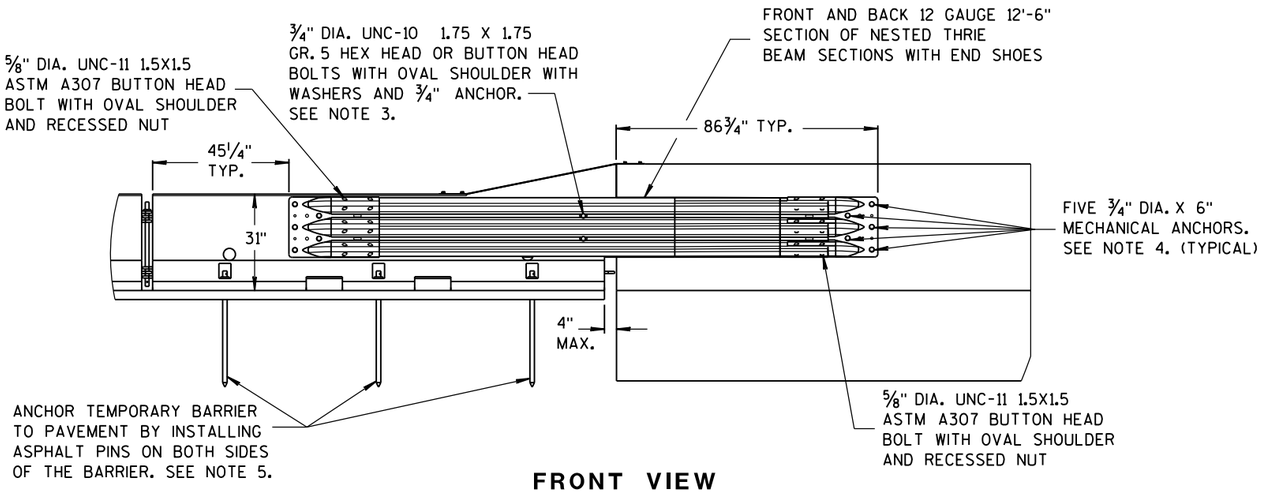
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

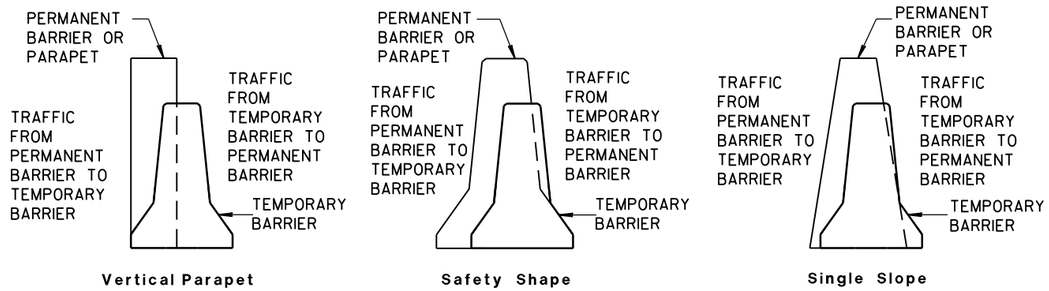
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15e



FRONT VIEW

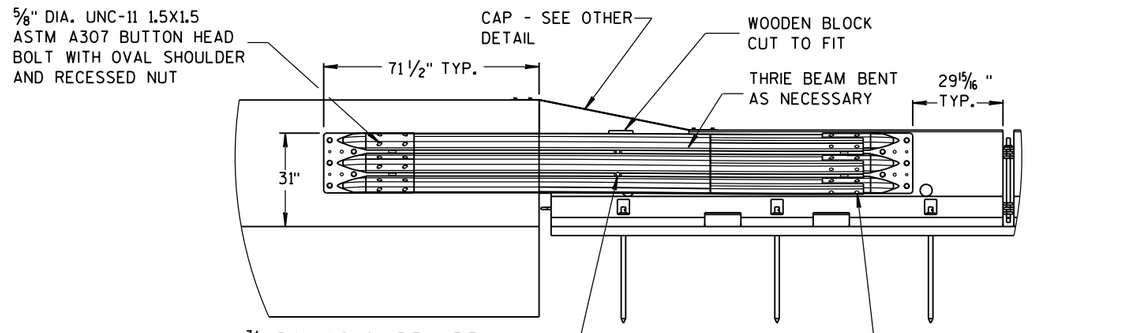


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

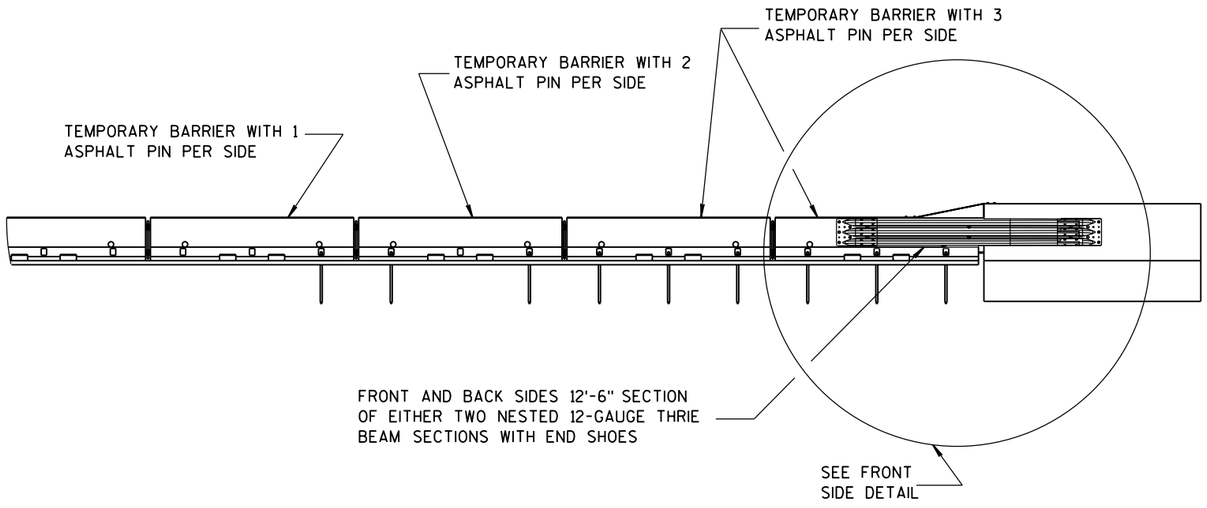
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS REGARDLESS OF TRAFFIC.

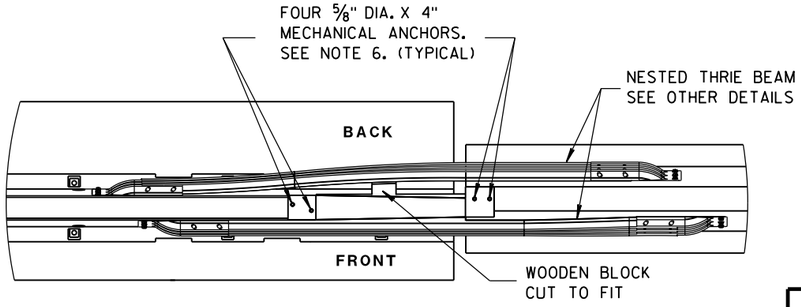
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 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

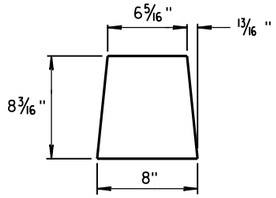
BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

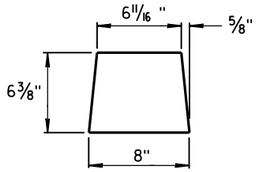
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

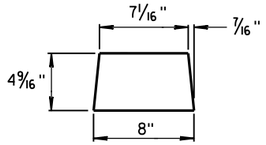
S.D.D. 14 B 7-15f



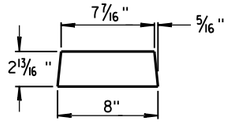
GUSSET 1



GUSSET 2

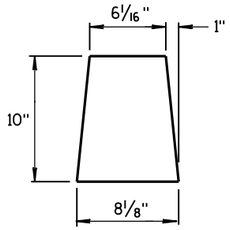


GUSSET 3

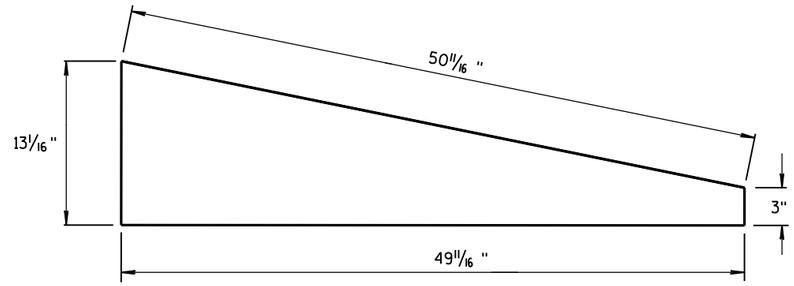


GUSSET 4

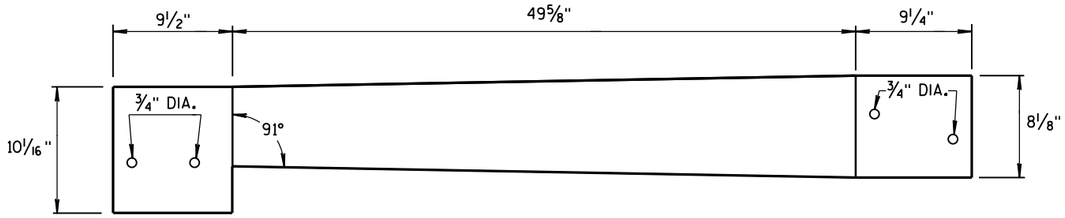
GUSSETS

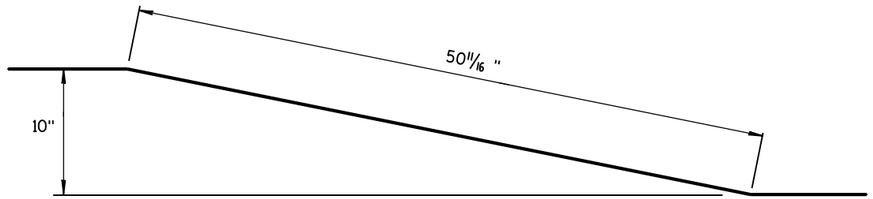


END PLATE



SIDE PLATE

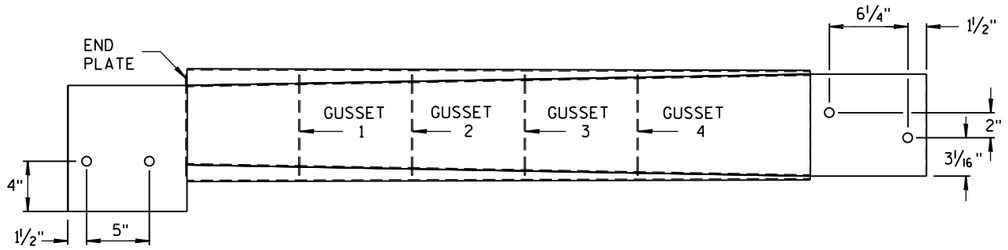


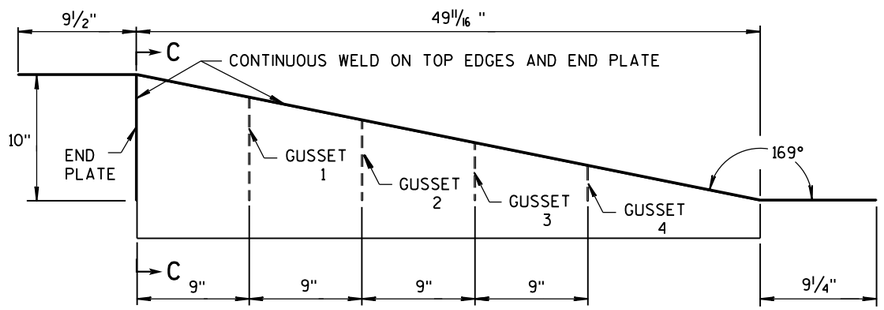


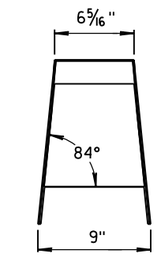
TOP PLATE

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

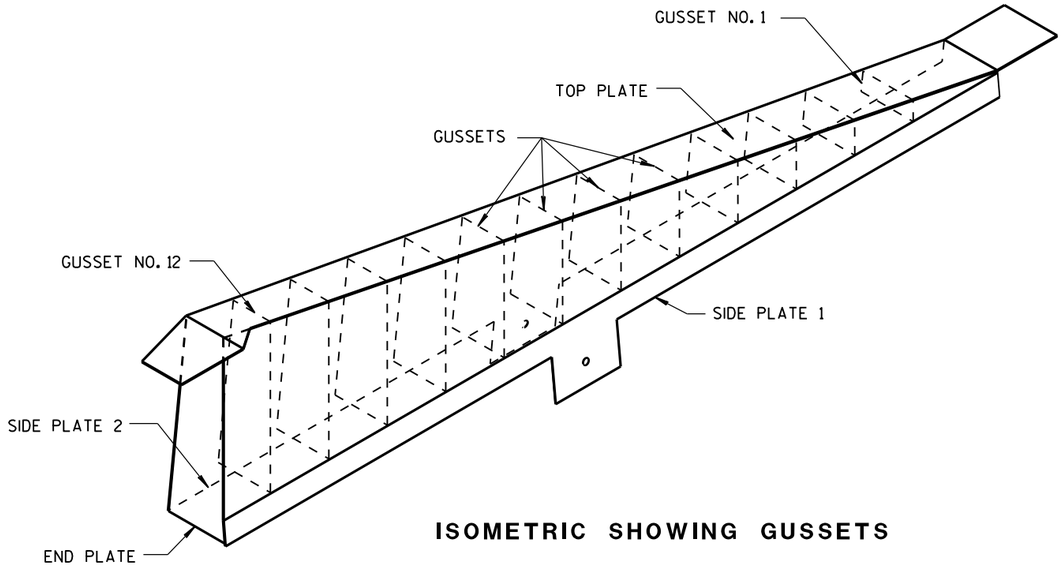
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

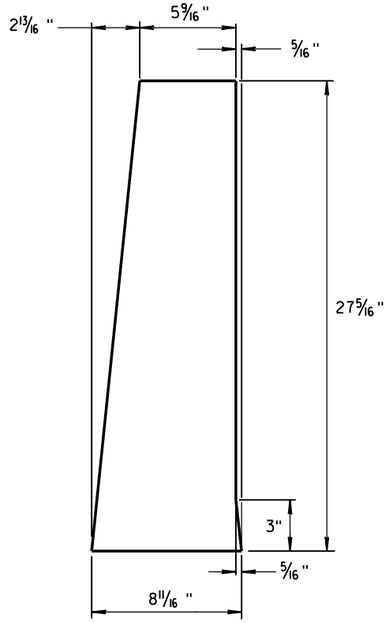
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15g

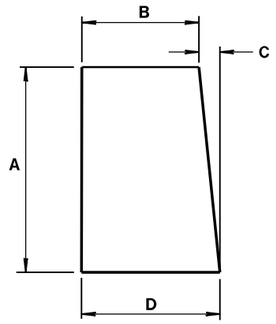


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



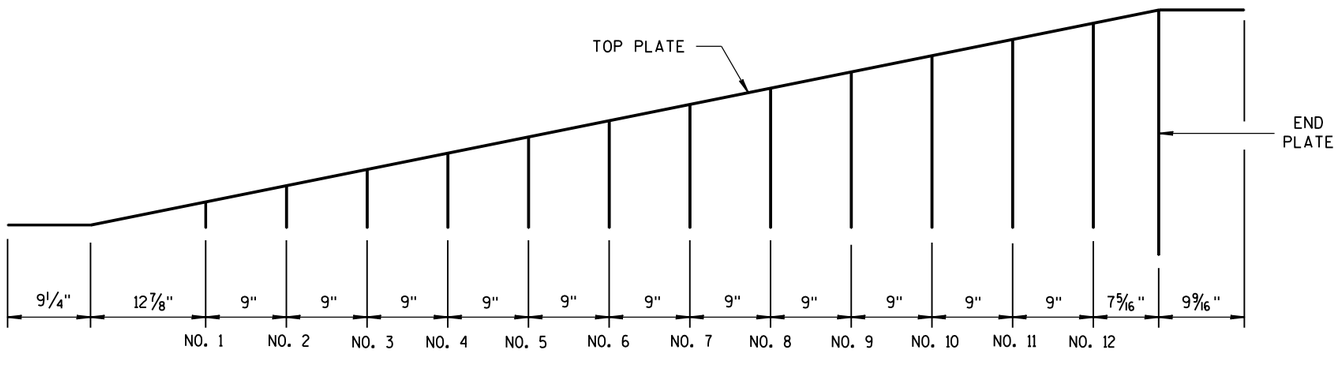
GUSSETS 1 - 12

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

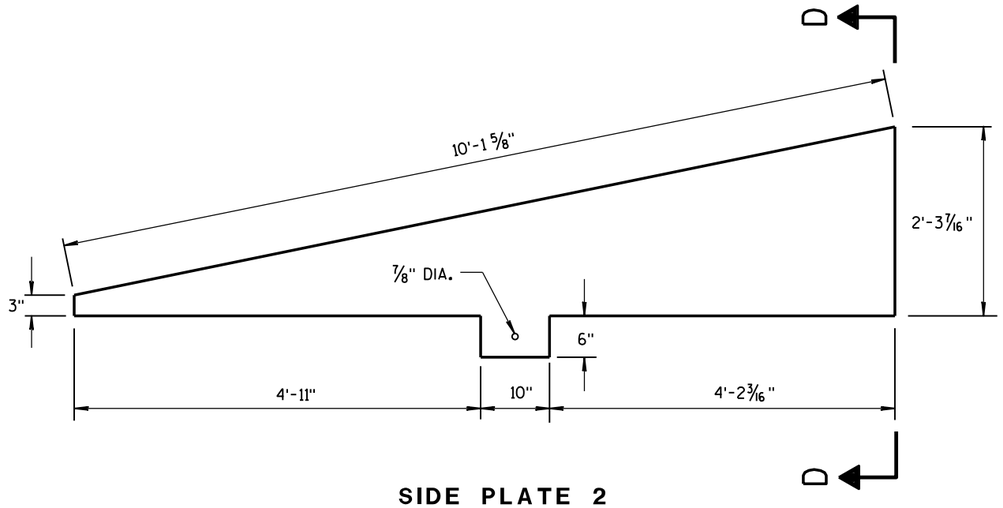
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

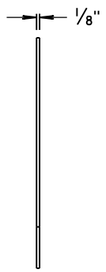
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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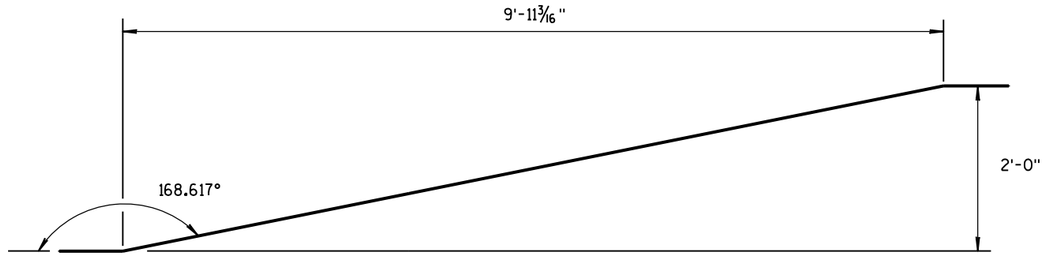
S.D.D. 14 B 7-15h



SIDE PLATE 2

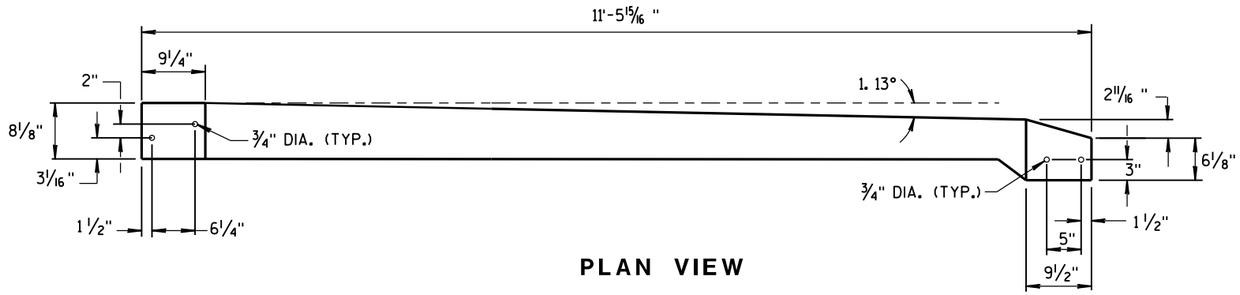


END VIEW



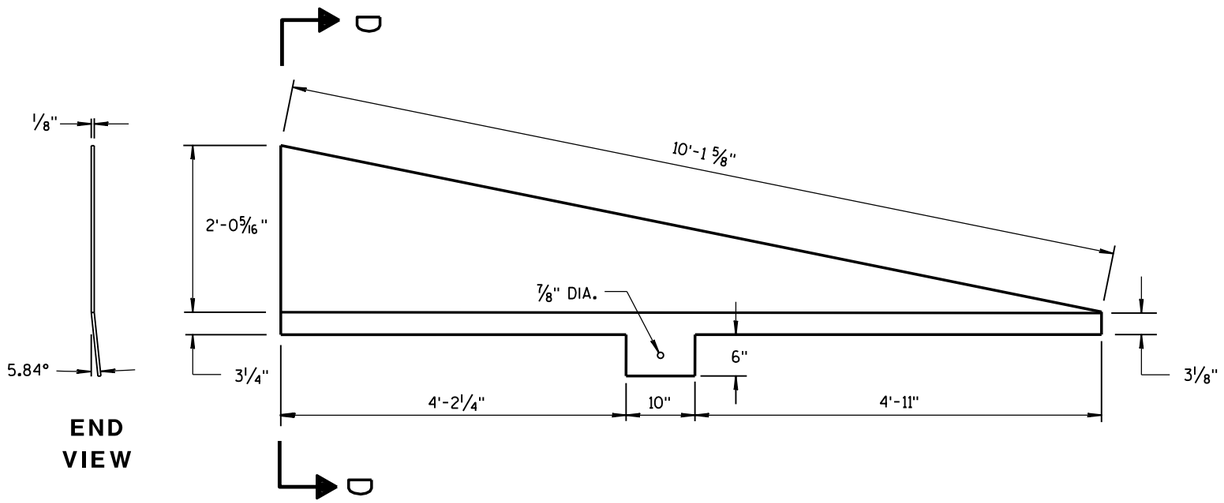
SIDE VIEW

TOP PLATE



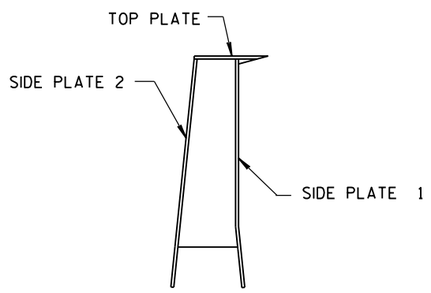
PLAN VIEW

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

223

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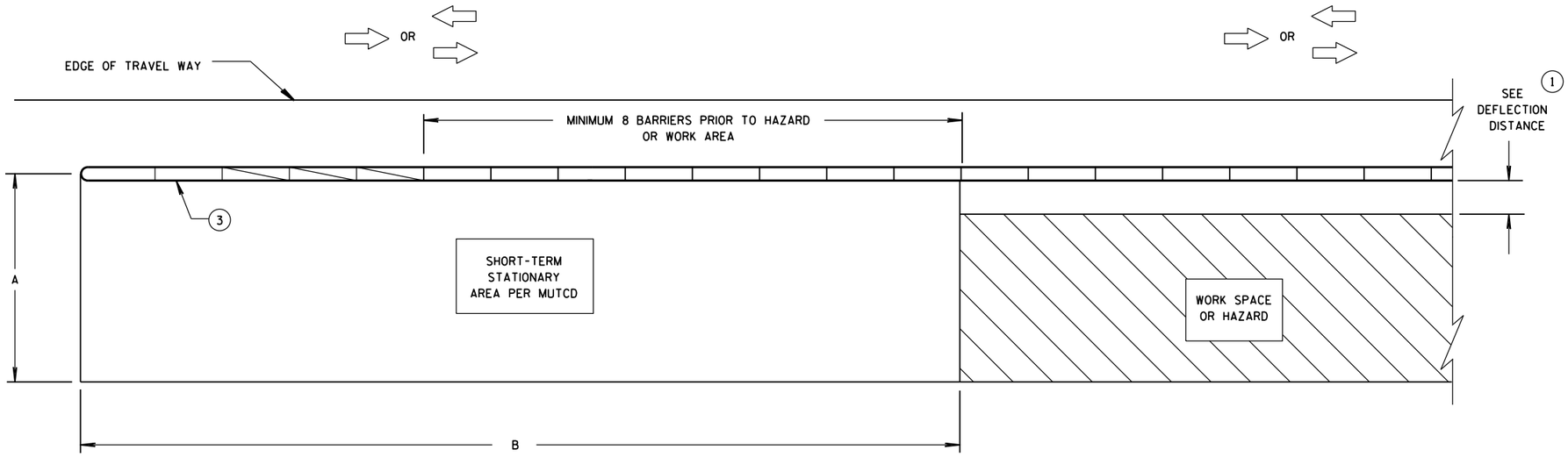
FHWA

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S.D.D. 14 B 7-15i

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S.D.D. 14 B 7-15i



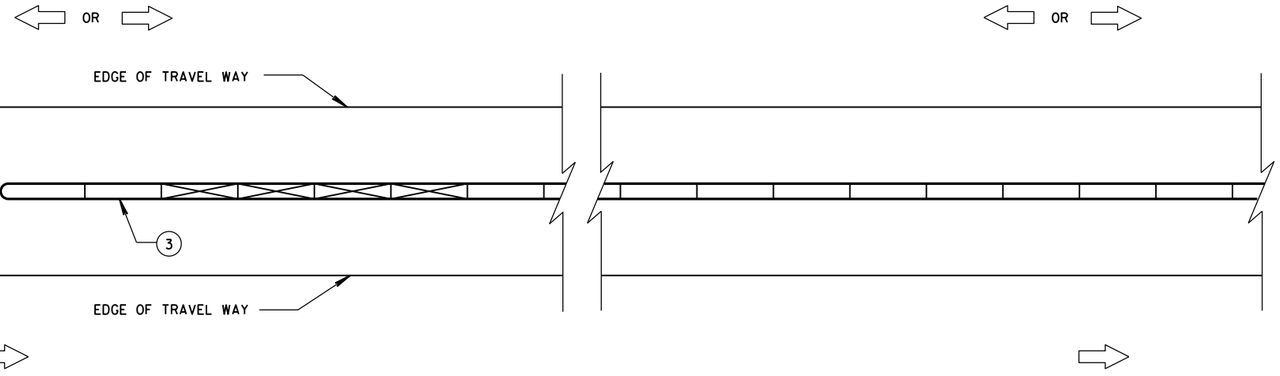
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

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.

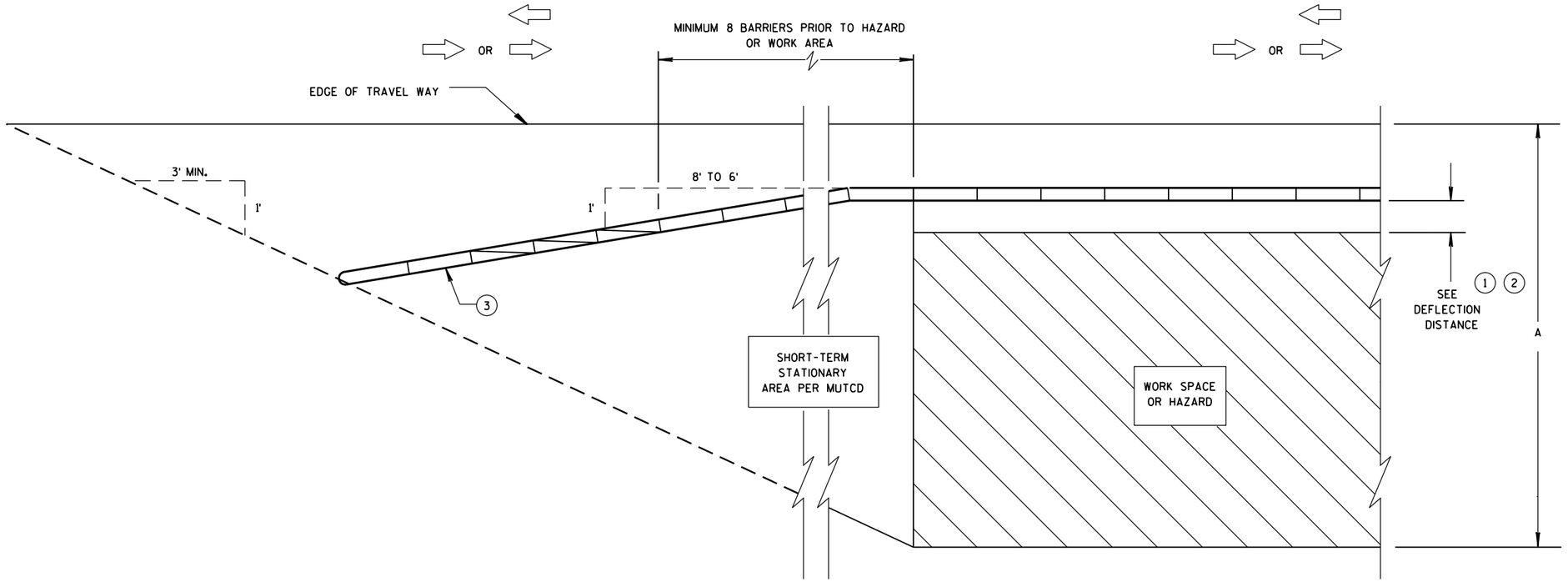
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

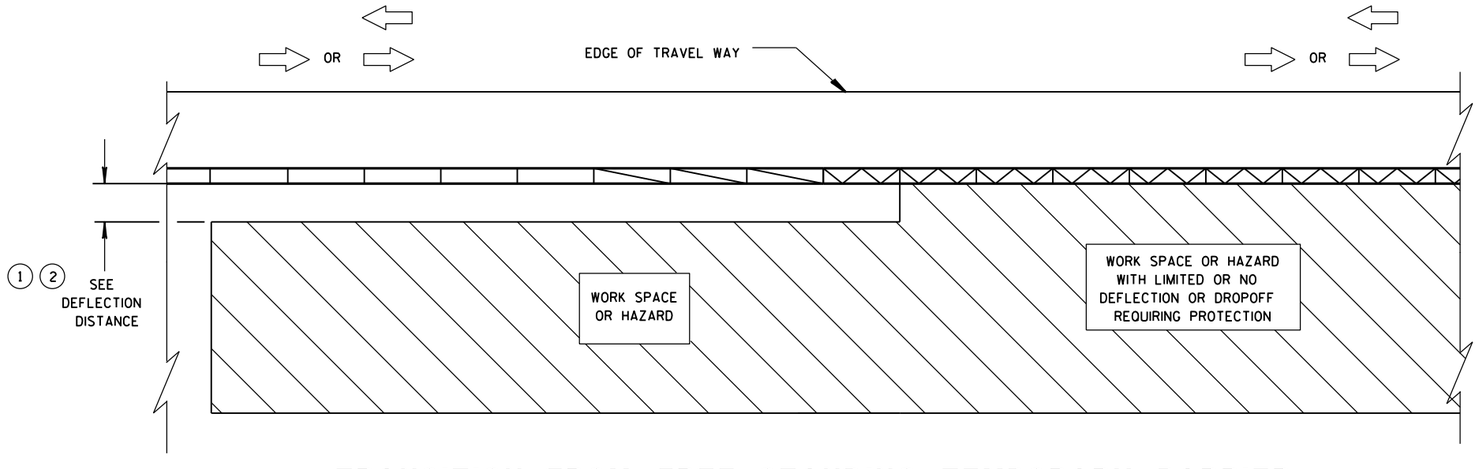
STATE OF WISCONSIN
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S.D.D. 14 B 8-2a
S.D.D. 14 B 8-2a



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

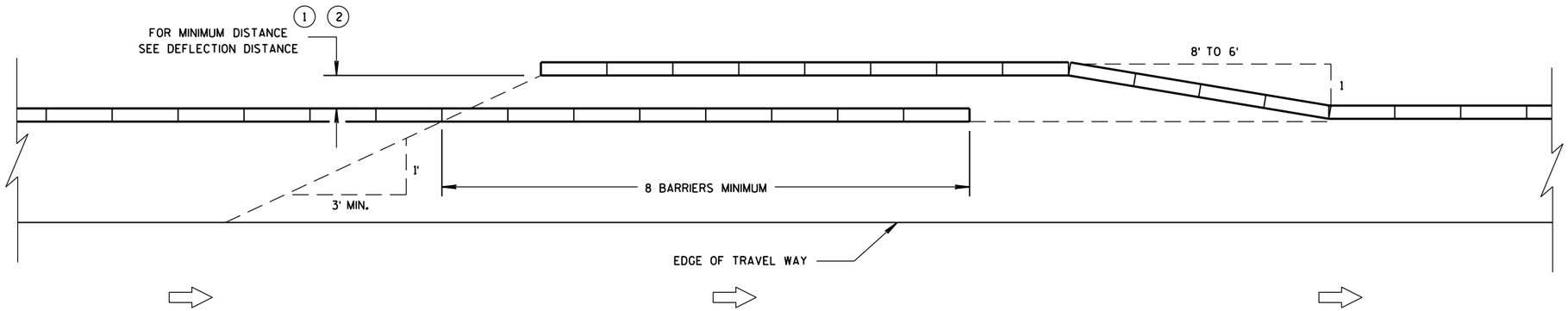
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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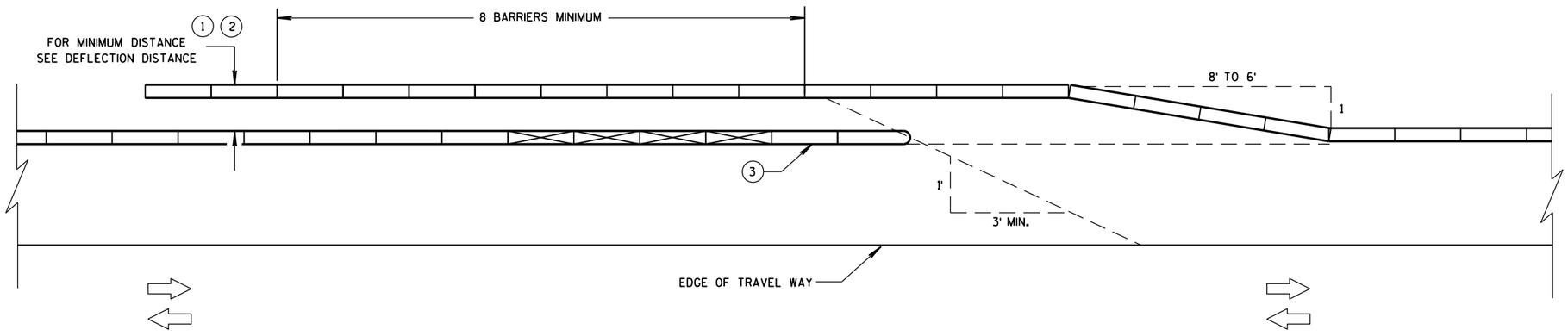
S.D.D. 14 B 8-2b

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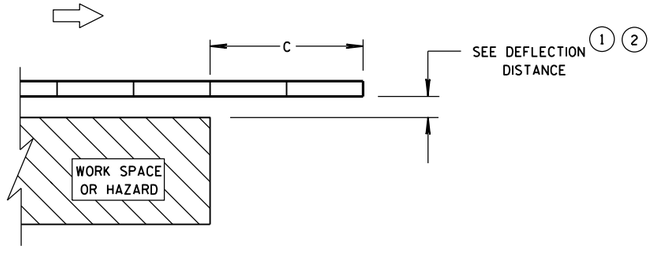
S.D.D. 14 B 8-2b



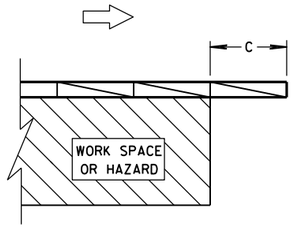
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

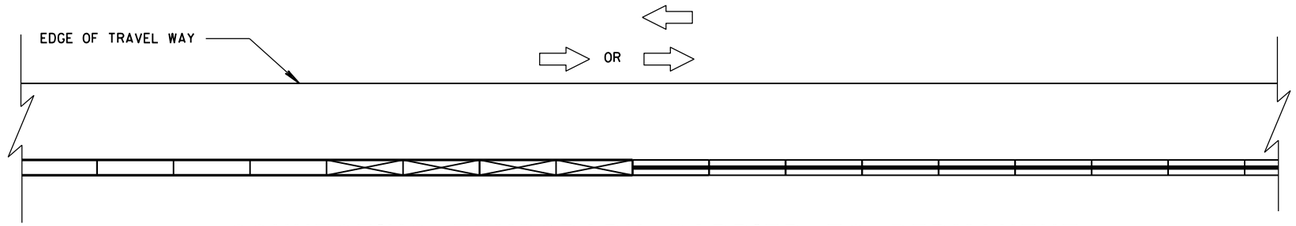
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

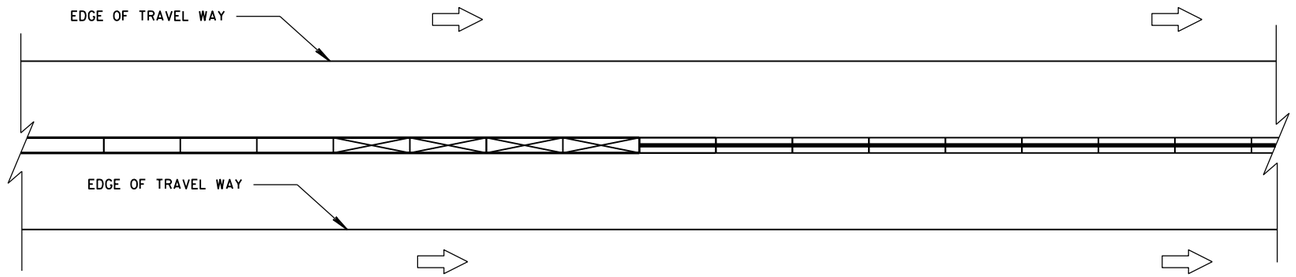
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

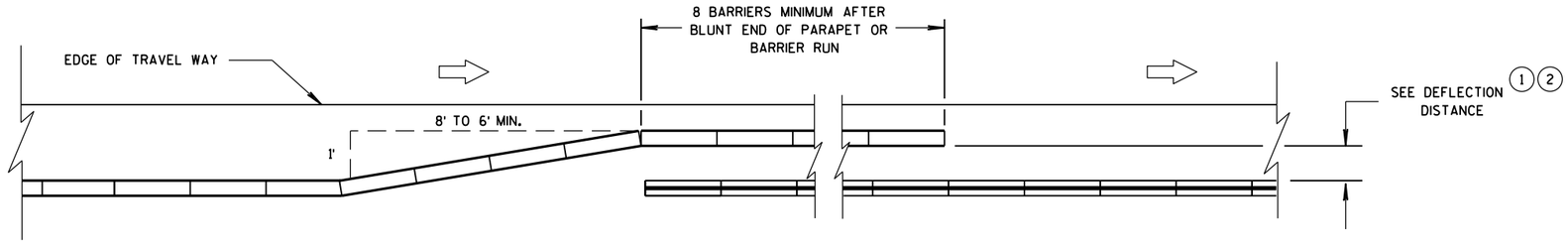
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

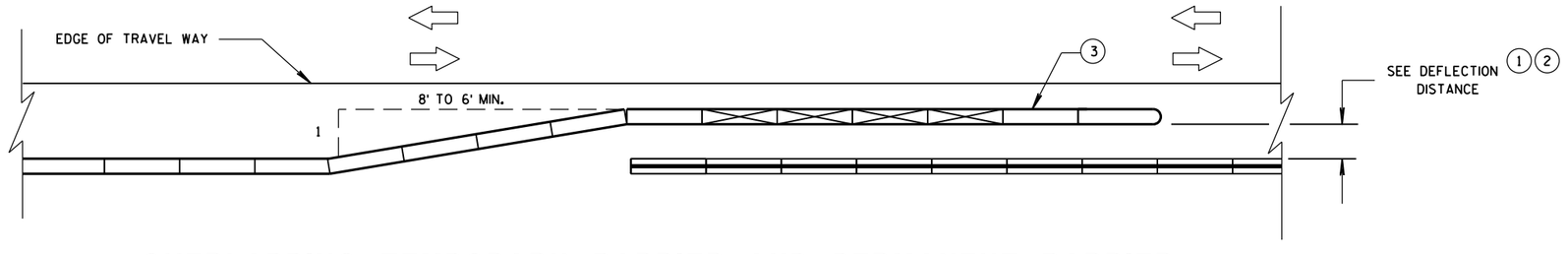
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

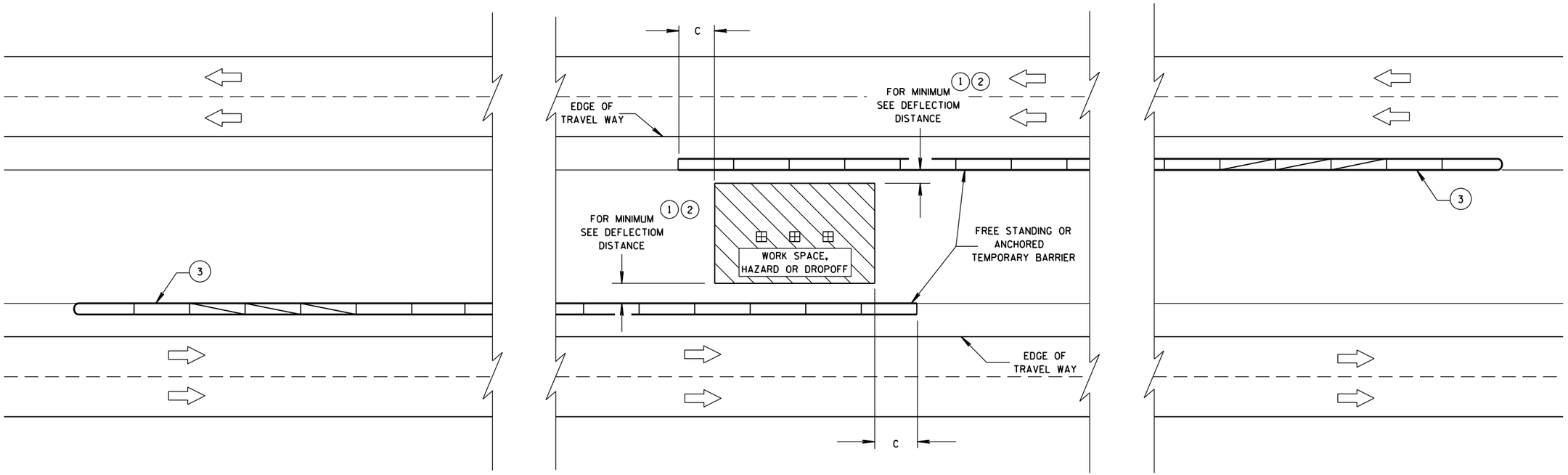
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



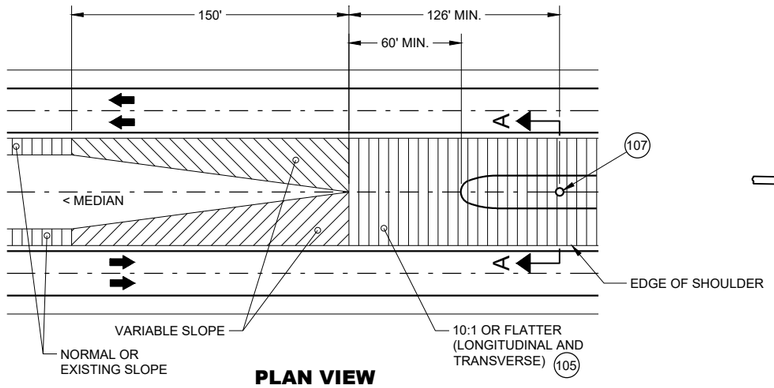
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

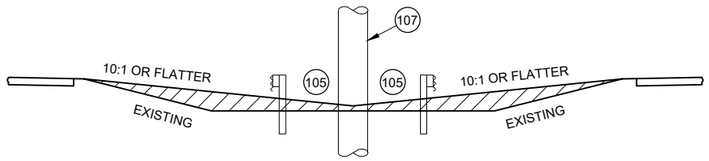
APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINNER
FHWA

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S.D.D. 14 B 8-2e



PLAN VIEW
GRADING AT BULLNOSE
(ALL INSTALLATIONS)



SECTION A -A
MEDIAN GRADING
(ALL INSTALLATIONS)

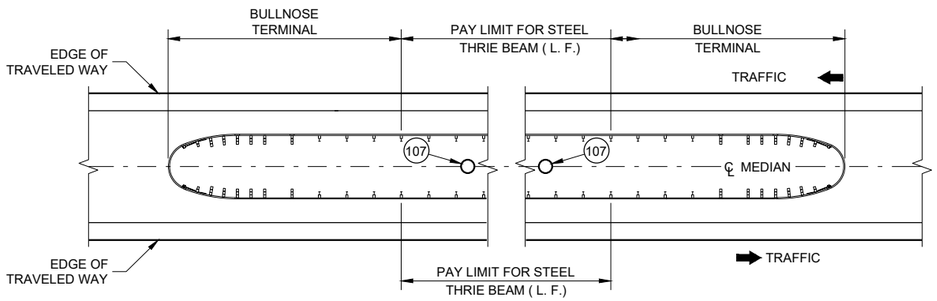
GENERAL NOTES

THRIE BEAM RAILS MAY NEED TO BE FIELD BENT TO FIT THE LOCATION.

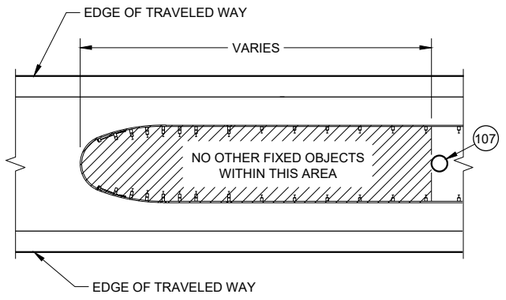
SEE STANDARD DETAIL DRAWINGS 14B26 SHEETS a-h.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 ½". MINIMUM DIAMETER OF THE ROCK REMOVAL IS 12" DIAMETER

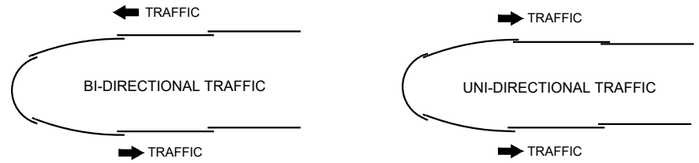
- E1 UNBENT STANDARD THRIE BEAM RAIL B1 (POST 8 TO POST 10 AND POST 10 TO POST 12)
- E2 SLOTTED THRIE BEAM RAIL E1 (POST 1 TO POST 1)
- E3 SLOTTED THRIE BEAM RAIL B3 (POST 5 TO POST 8)
- E4 SLOTTED THRIE BEAM RAIL E4 (POST 1 TO POST 5)
- 5 BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.
- (100) DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.
- (101) U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.
- (102) NOSE CABLE WITH SWAGGED END BUTTONS.
- (103) NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).
- (104) THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.
- (105) MINIMUM WORKING WIDTH 4' - 2".
- (106) MAX. WIDTH OF SYSTEM IS 14' - 2 ½" MEASURED FROM THE BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.
- (107) FIXED OBJECT OR OTHER HAZARD.
- (108) PLAN IS TO PROVIDE STATION OFFSET TO CENTER OF POST 5 IN PLANS.



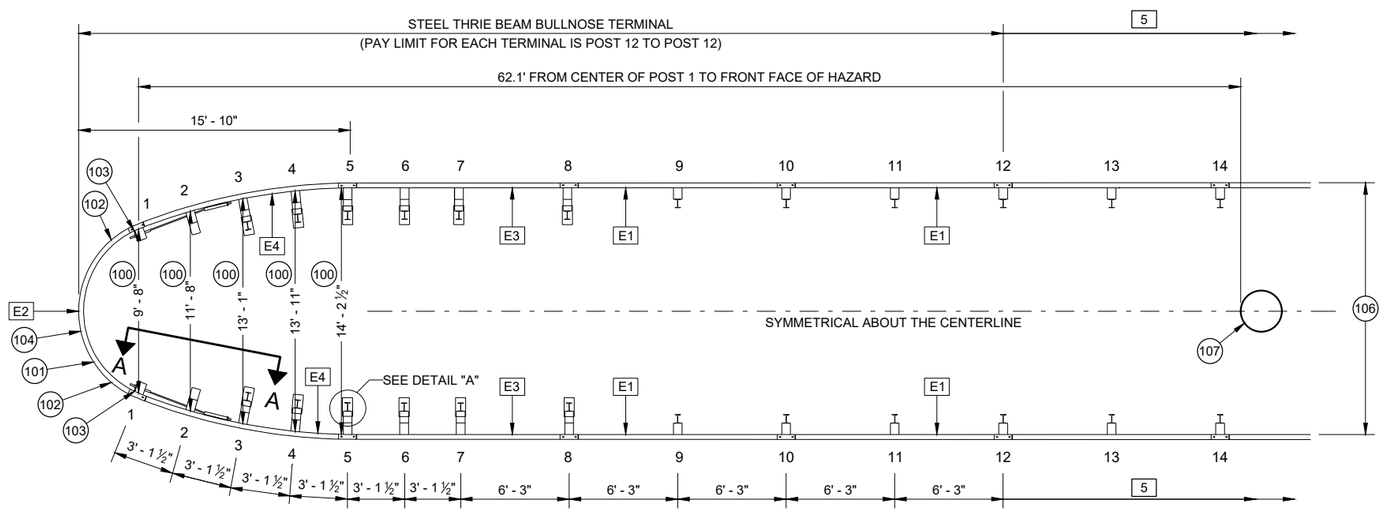
MEDIAN HAZARD PROTECTION PAY LIMITS



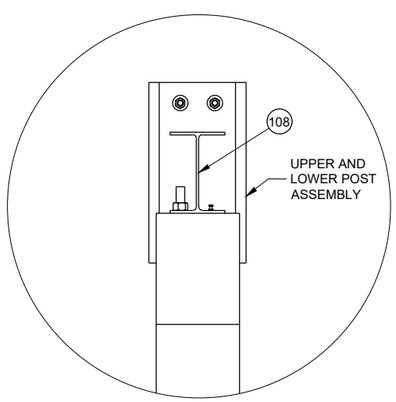
HAZARD FREE AREA
INSIDE BULLNOSE



LAPPING DETAIL



PLAN VIEW
TYPICAL BULLNOSE LAYOUT



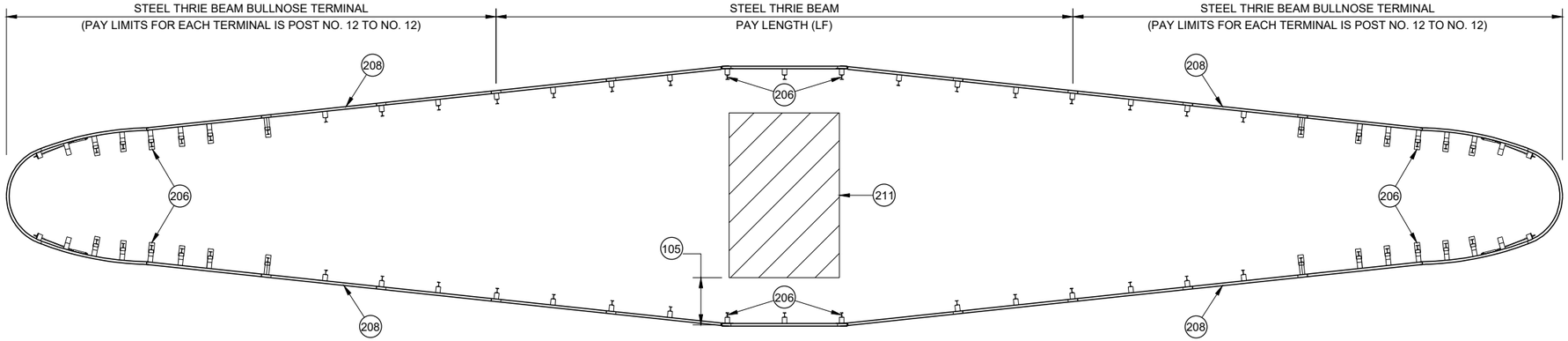
DETAIL "A"

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B26 - 04a

SDD 14B26 - 04a



VARIABLE WIDTH BULLNOSE

GENERAL NOTES

200 6' - 3" ASYMMETRICAL 10-GAUGE W-BEAM TO THRIE BEAM GUARD TRANSITION. SEE SDD 14B45 FOR MORE INFORMATION.

201 W-BEAM RAIL. SEE SDD 14B42 FOR MORE INFORMATION.

202 SEE POST NO. 9 AND ALL STEEL THRIE BEAM POST BEYOND DETAIL.

203 SEE SDD 14B42 FOR INSTALLATION INFORMATION.

204 SEE SDD 14B45 FOR INSTALLATION DETAILS. REPLACE ASYMMETRICAL W-BEAM TO THRIE BEAM TRANSITION AND W-BEAM RAIL WITH E1. PAY FOR MODIFIED THRIE BEAM TRANSITION.

205 CONCRETE BARRIER OR BRIDGE RAIL.

206 SEE PLAN FOR STATION AND OFFSET TO CENTER OF POST.

207 SEE PLAN FOR STATION AND OFFSET TO CENTER OF SPLICE.

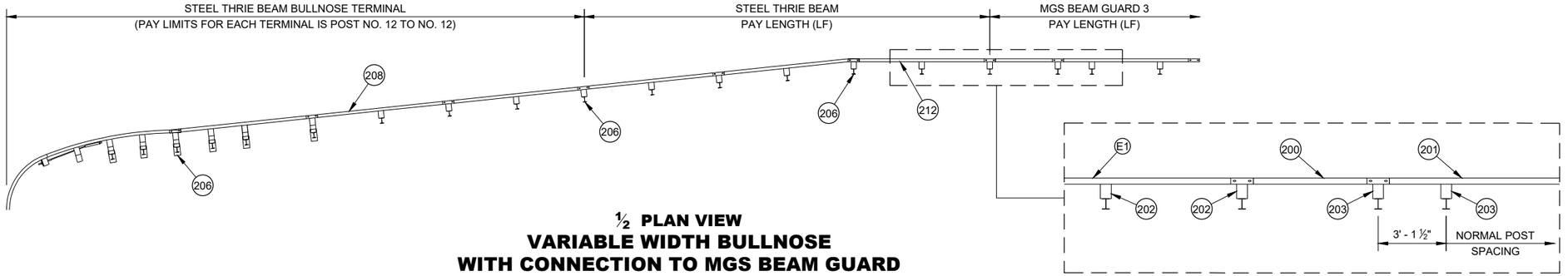
208 SEE PLAN FOR FLARE RATE.

209 A MINIMUM OF 25 FT OF THRIE BEAM TANGENT BEFORE TRANSITIONING TO BEAM GUARD OR THRIE BEAM TRANSITION.

210 NOT ALL BULLNOSE HARDWARE SHOWN. SEE OTHER SHEETS IN 14B26.

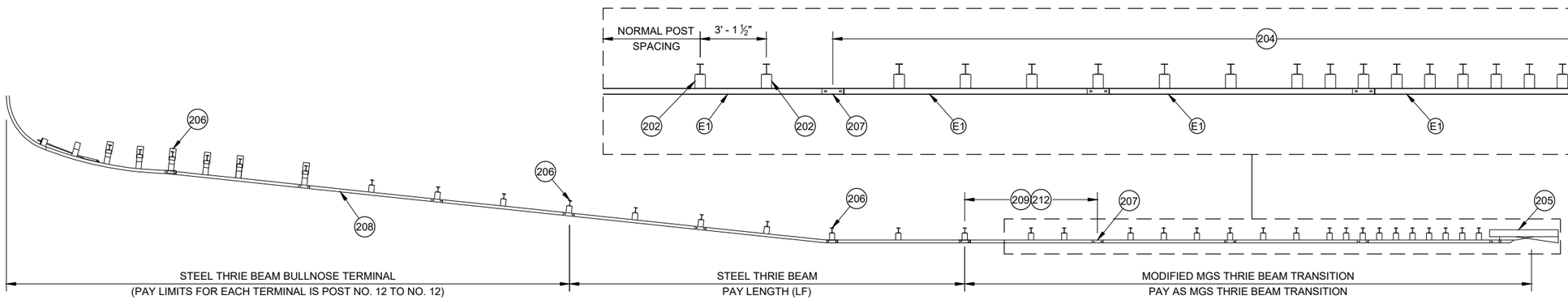
211 WIDER HAZARD TO BE SHIELDED.

212 TRANSITION RAIL HEIGHT TO 31" OVER THE LENGTH OF A 12' - 6" BEAM SECTION.



½ PLAN VIEW

VARIABLE WIDTH BULLNOSE WITH CONNECTION TO MGS BEAM GUARD



½ PLAN VIEW

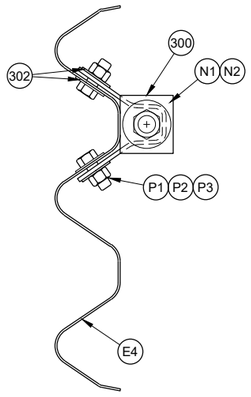
VARIABLE WIDTH BULLNOSE WITH CONNECTION TO RIGID BARRIER

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

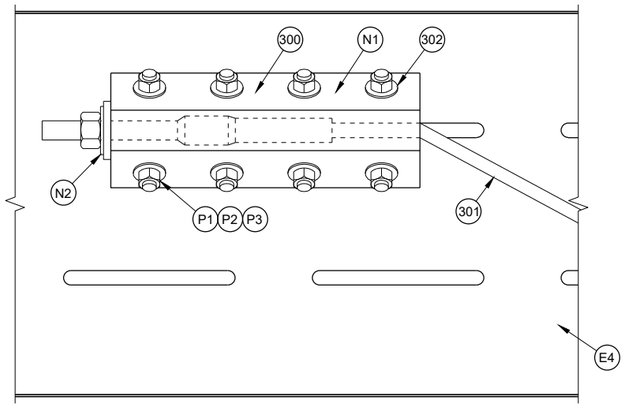
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SDD 14B26 - 04b

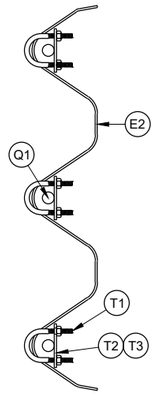


PROFILE VIEW

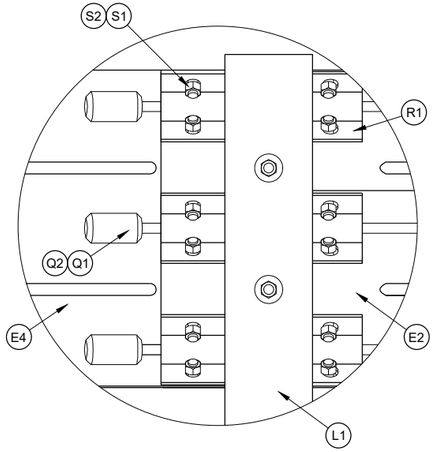
CABLE ANCHOR ASSEMBLY CONNECTION



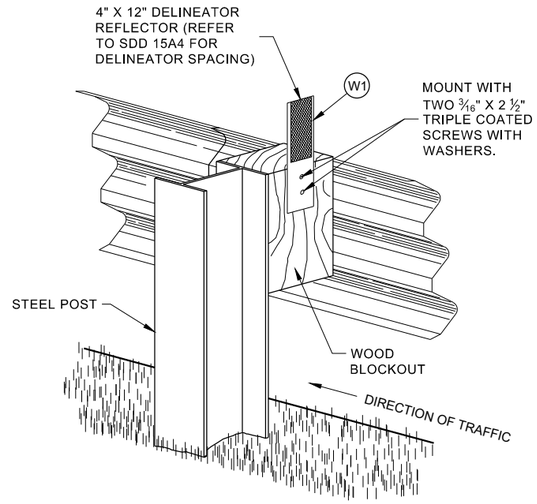
CABLE ANCHOR ASSEMBLY



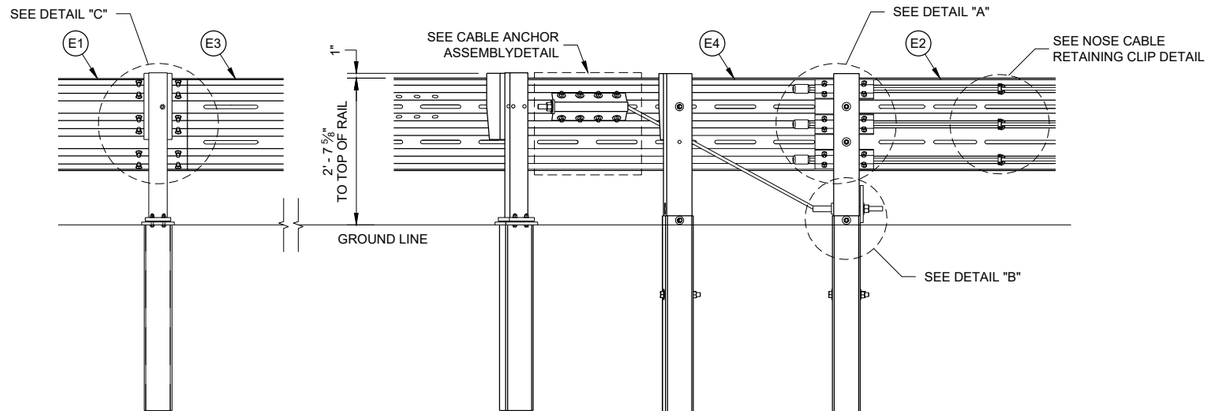
NOSE CABLE RETAINING CLIP



DETAIL "A"

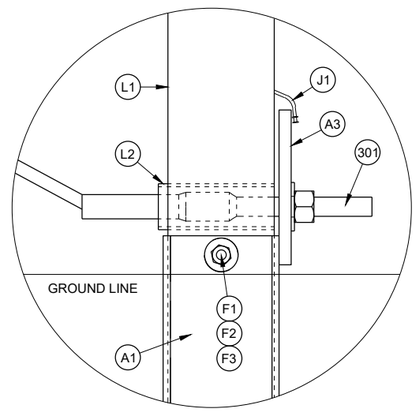


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

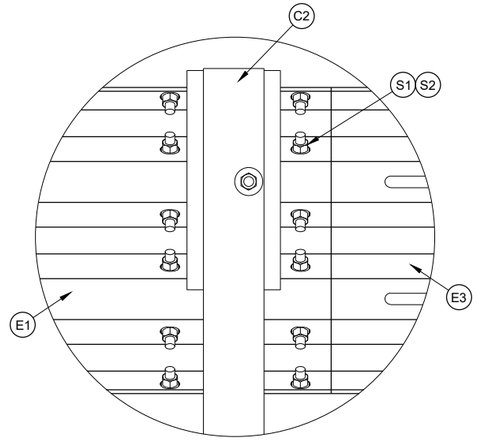


POST 8 **POST 3** **POST 2** **POST 1**

CROSS SECTION A - A



DETAIL "B"



DETAIL "C" THRIE BEAM SPLICE

GENERAL NOTES

(300) SEE ANCHOR BRACKET ASSEMBLY DETAIL.

(301) SEE ANCHOR CABLE ASSEMBLY DETAIL

(302) ONE WASHER BETWEEN BOLT HEAD AND RAIL AND BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

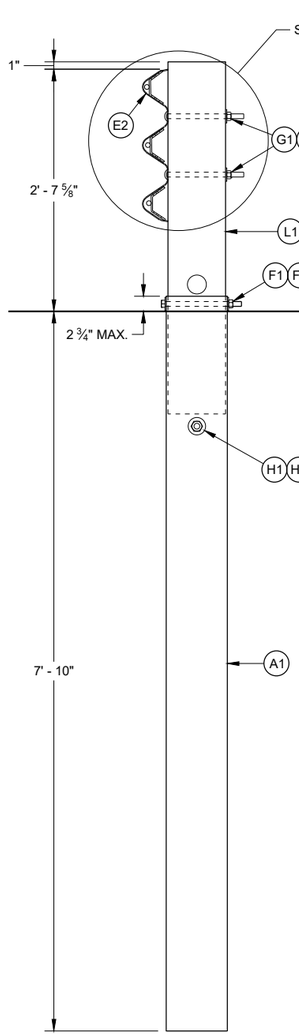
(303) ONE WASHER BETWEEN BOLD HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

STEEL THRIE BEAM BULLNOSE TERMINAL

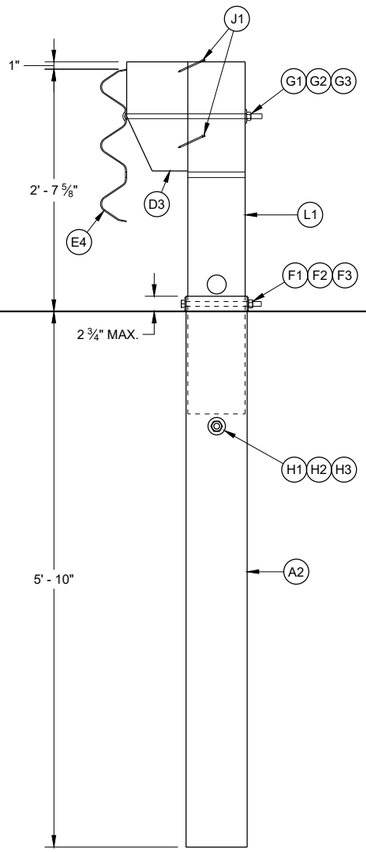
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

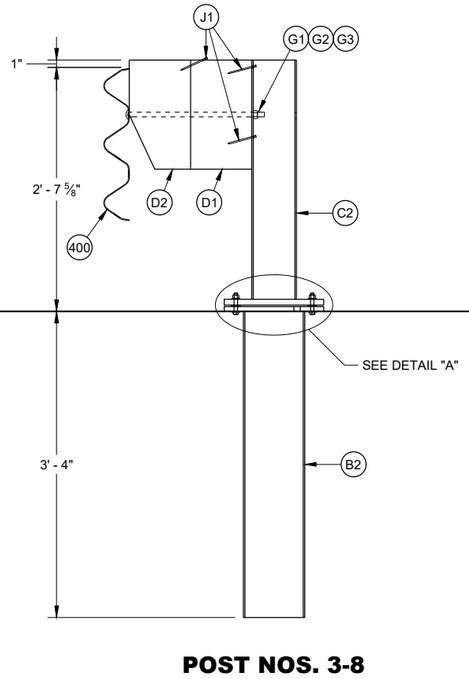
SDD 14B26 - 04c



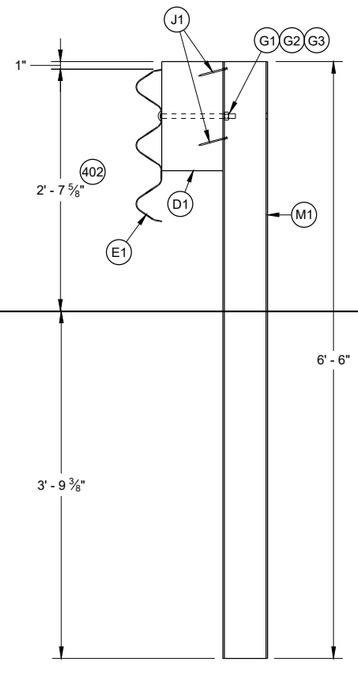
POST NO. 1



POST NO. 2



POST NOS. 3-8



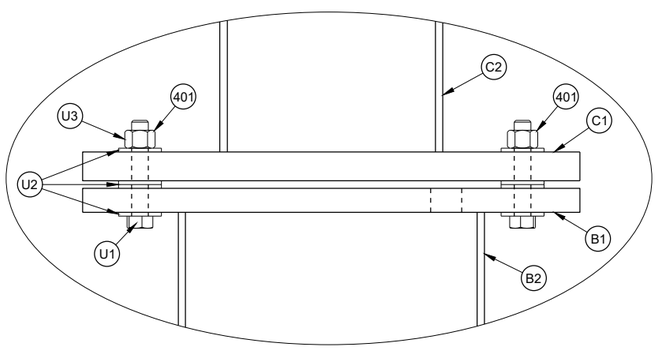
POST NOS. 9 AND ALL STEEL THRIE BEAM POSTS BEYOND

GENERAL NOTES

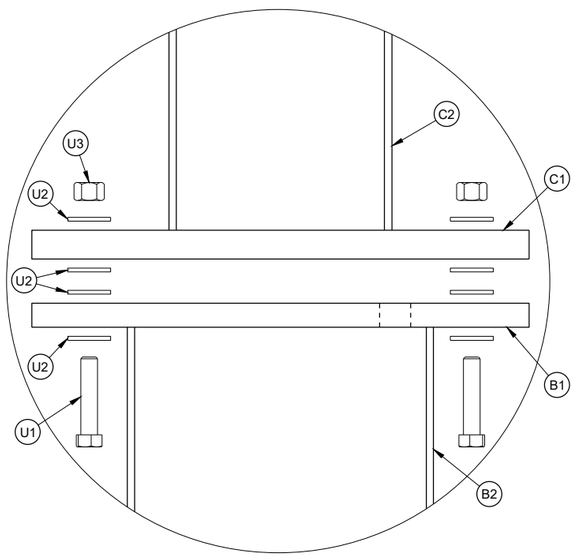
400 RAIL CAN BE E3 OR E4 DEPENDING ON POST LOCATION.

401 TORQUE BOLD BETWEEN 60-75 FT-LB

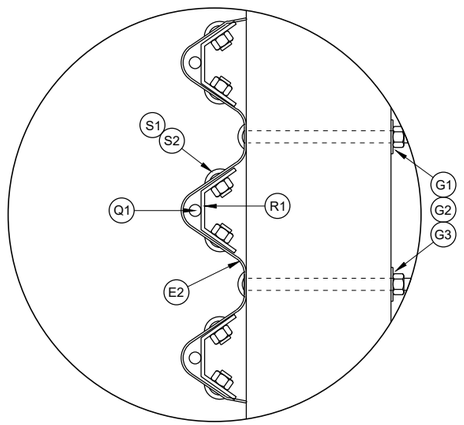
402 HEIGHT WILL VARY WITHIN HEIGHT TRANSITION TO OTHER HARDWARE. SEE NOTE 213, SHEET "b".



DETAIL "A"



EXPLODED VIEW
DETAIL "A"



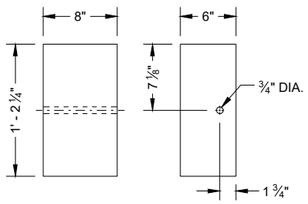
DETAIL "B"

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

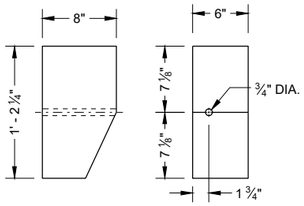
6

SDD 14B26 - 04d



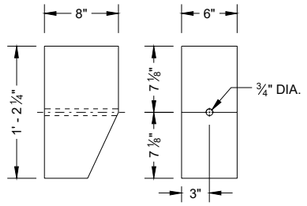
ELEVATION PROFILE

BLOCKOUT (D1)



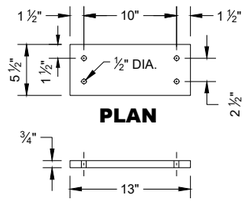
ELEVATION PROFILE

BLOCKOUT (D2)



ELEVATION PROFILE

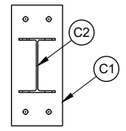
BLOCKOUT (D3)



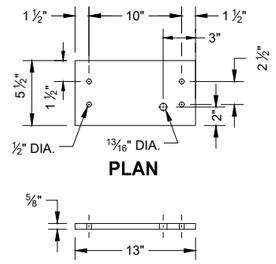
PLAN

PROFILE

UPPER SHEAR PLATE (C1)



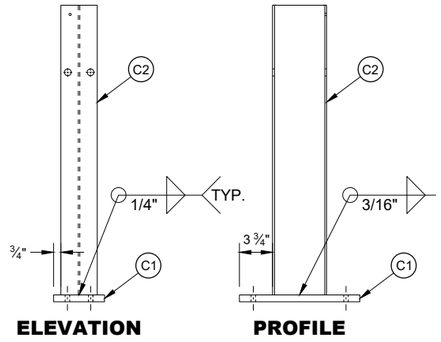
PLAN



PLAN

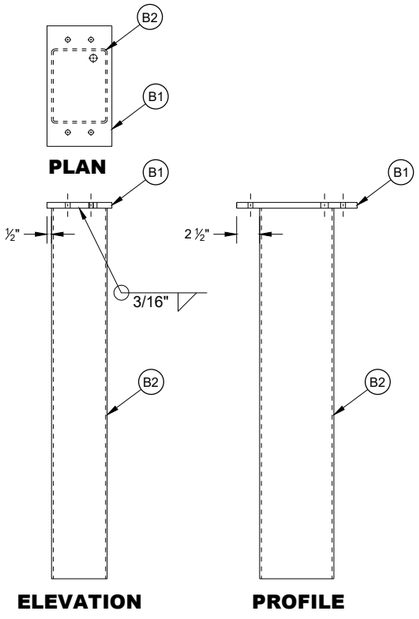
PROFILE

LOWER SHEAR PLATE (B1)



ELEVATION PROFILE

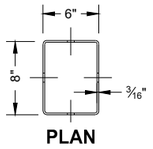
UPPER POST ASSEMBLY



PLAN

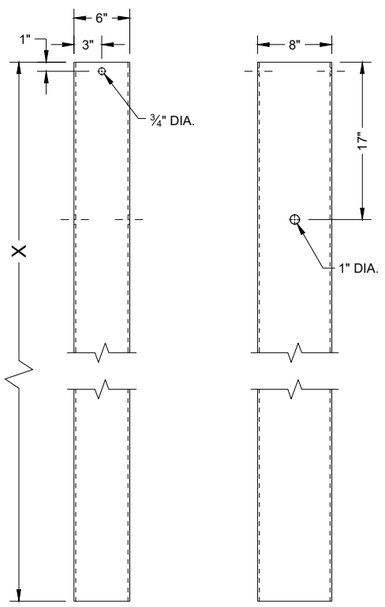
ELEVATION PROFILE

LOWER POST ASSEMBLY



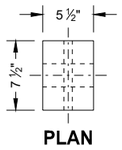
PLAN

PART	LENGTH "X"
A1	8' - 0"
A2	6' - 0"
B2	3' - 6"

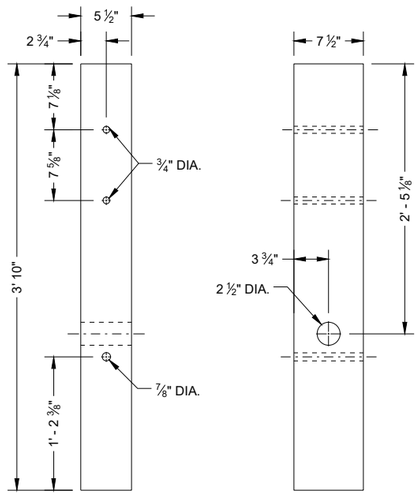


ELEVATION PROFILE

FOUNDATION TUBE

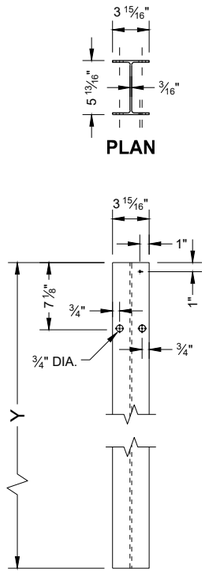


PLAN



ELEVATION PROFILE

BCT POST (L1)



PLAN

ELEVATION

POST

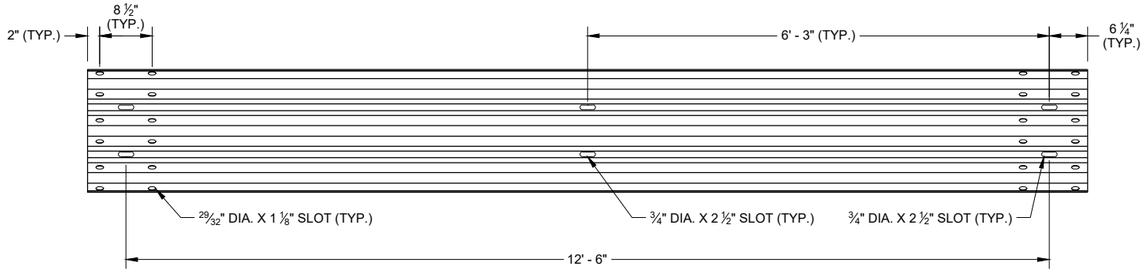
PART	LENGTH "Y"
M1	6' - 6"
M2	5' - 8 5/8"
C2	2' - 8 5/8"

STEEL THRIE BEAM BULLNOSE TERMINAL

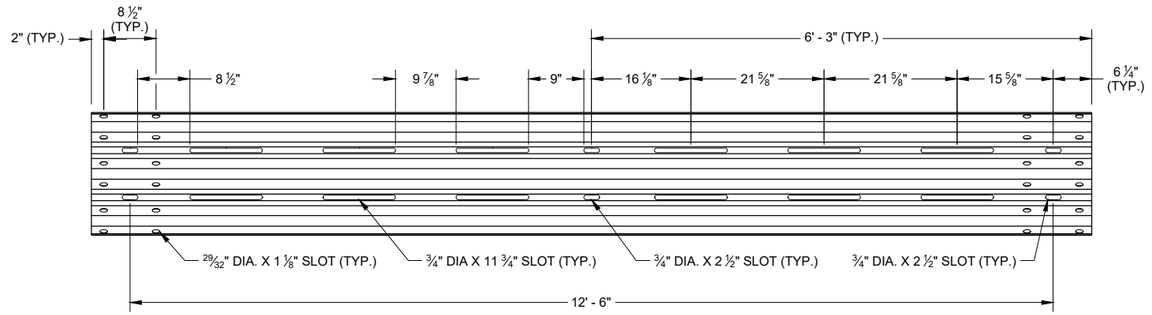
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B26 - 04e

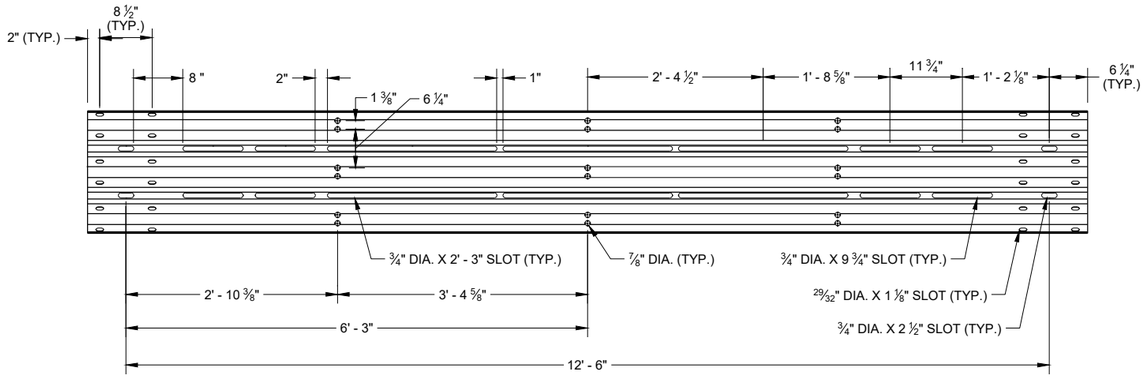
SDD 14B26 - 04e



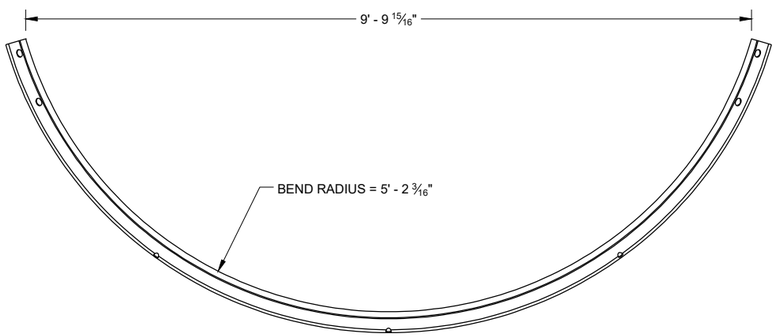
SLOTTED THRIE BEAM RAIL E1



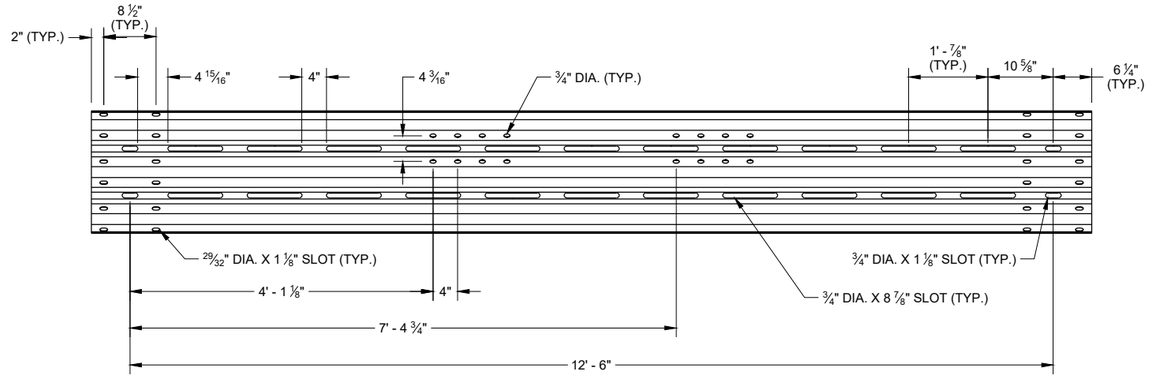
SLOTTED THRIE BEAM RAIL E3



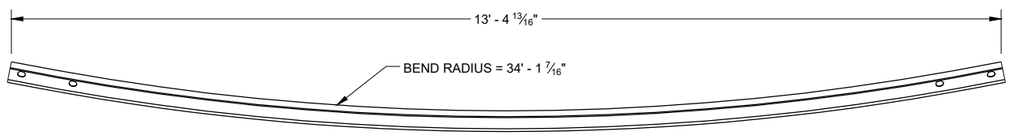
ELEVATION VIEW NON - RADIUSED
SLOTTED THRIE BEAM RAIL E2



PLAN VIEW
SLOTTED THRIE BEAM RAIL E2



ELEVATION VIEW NON - RADIUSED
SLOTTED THRIE BEAM RAIL E4



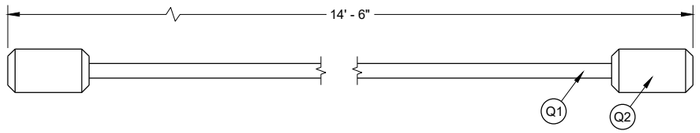
PLAN VIEW
SLOTTED THRIE BEAM RAIL E4

STEEL THRIE BEAM BULLNOSE TERMINAL

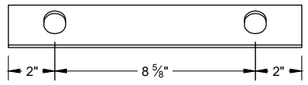
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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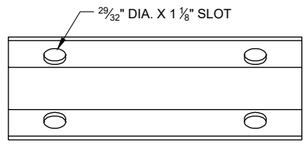
SDD 14B26 - 04f



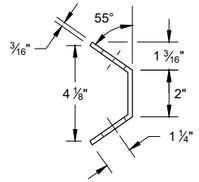
NOSE CABLE AND SWAGE BUTTON



PLAN VIEW

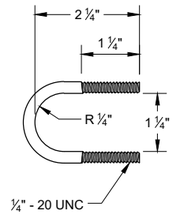


ELEVATION VIEW

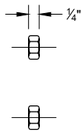


PROFILE VIEW

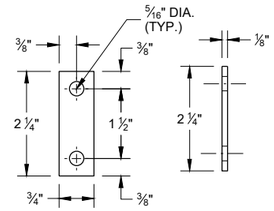
NOSE CABLE ANCHOR (R1)



U - BOLT (T1)

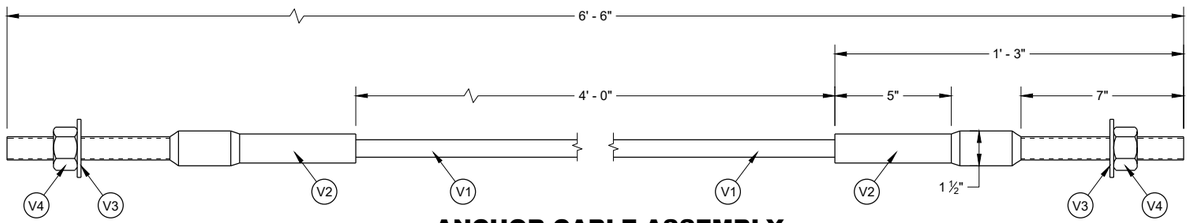


U - BOLT NUT (T3)

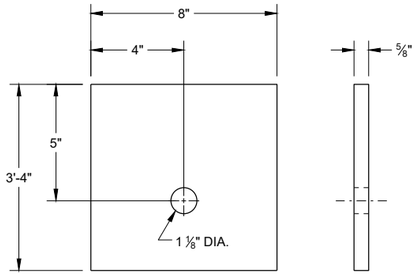


ELEVATION VIEW **PROFILE VIEW**

U - BOLT PLATE WASHER (T2)

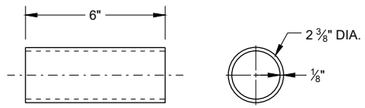


ANCHOR CABLE ASSEMBLY



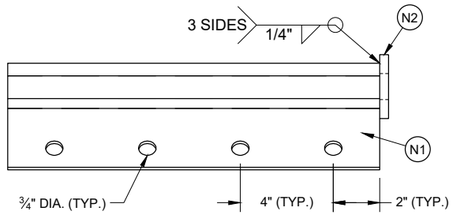
ELEVATION VIEW **PROFILE VIEW**

BCT BEARING PLATE (A3)

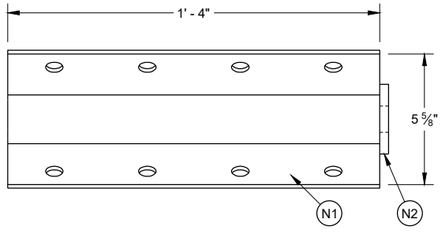


ELEVATION VIEW **PROFILE VIEW**

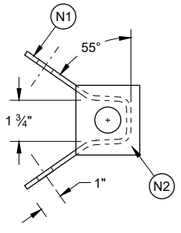
BCT POST SLEEVE (L2)



PLAN VIEW

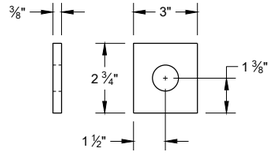


ELEVATION VIEW



PROFILE VIEW

ANCHOR BRACKET ASSEMBLY (N1)



ANCHOR BRACKET END PLATE (N2)

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B26 - 04g

BILL OF MATERIALS LIST

PART NUMBER	DESCRIPTION	MATERIAL SPECIFICATION
A1	LONG FOUNDATION TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
A2	FOUNDATION TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
A3	BEARING PLATE AT POST	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
B1	LOWER SLIP POST ASSEMBLY - PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
B2	LOWER SLIP POST ASSEMBLY - TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
C1	UPPER SLIP POST ASSEMBLY - PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
C2	UPPER SLIP POST ASSEMBLY - POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
D1	BLOCK FOR STEEL POST - WOOD	WISDOT SPEC. 614
D2	TAPERED BLOCK FOR STEEL POST - WOOD	WISDOT SPEC. 614
D3	TAPERED BLOCK FOR BCT POST - WOOD	WISDOT SPEC. 614
E1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER
E2	THRIE BEAM RAIL - SHOP BENT AND PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS.
E3	THRIE BEAM RAIL - PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER
E4	THRIE BEAM RAIL - SHOP BENT AND PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS.
F1	5/8" DIA. HEX HEAD GROUND STRUT AND YOKE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
F2	5/8" DIA. GROUND STRUT AND YOKE BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
F3	GROUND STRUT AND YOKE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
G1	5/8 " DIA. POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD)
G2	POST BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD)
G3	POST BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
H1	7/8" DIA. SOIL TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD 7/8" ASTM A563DH OR SAE J995 GRADE 5
H2	SOIL TUBE BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 7/8" ASTM F844 TYPE 1 (HARDEN WASHER ONLY)
H3	SOIL TUBE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD 7/8" ASTM A563DH OR SAE J995 GRADE 5
J1	16D DOUBLE HEAD NAIL	ASTM A153 HOT DIPPED CLASS D DOUBLE HEAD ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)
L1	BCT TIMBER POST	WISDOT SPEC. 614 S4S FINISH ON 4 SIDE
L2	BCT POST SLEEVE	AASHTO M111/ASTM A123 2 3/8" OD ASTM 53 GRADE B
M1	W6X8.5 OR W6X9 STEEL POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
M2	W6X8.5 OR W6X9 STEEL POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
N1	ANCHOR BRACKET	AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
N2	ANCHOR BRACKET - BEARING PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI

PART NUMBER	DESCRIPTION	MATERIAL SPECIFICATION
P1	5/8" DIA. ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
P2	ANCHOR BRACKET BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
P3	SOIL TUBE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
Q1	5/8" DIA. NOSE CABLE	6X19 AASTHO M30 / ASTM A741 XIPS INDEPENDENT WIRE CORE (IWRC) PR 6X25 XIPS, IWRC NOMINAL BREAKING STRENGTH OF 41.2 KIPS.
Q2	NOSE CABLE-SWAGE BUTTON	COLD TUFF BUTTON, S-409 SIZE NO. 12 STOCK NUMBER 1040395 OR ANY OTHER SIMILAR SIZED WAGED-GRIP-BUTTON FERRULES. ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FIELD SWAGED PER MANUFACTURERS RECOMMENDATION. NOMINAL BREAKING STRENGTH OF 41.2 KIPS.
R1	NOSE CABLE ANCHOR BRACKET	AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
S1	5/8" DIA. SPLICE BOLT - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
S2	SPLICE - BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD 5/8" ASTM A563DH OR SAE J995 GRADE 5
T1	1/4" DIA. NOSE CABLE - U BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
T2	U-BOLT - PLATE WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
T3	U-BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
U1	7/16" DIA. SLIP POST ASSEMBLY - BREAKAWAY BOLT	ASTM A153 OR B695 CLASS 55 OR F2329 UNC FULLY THREADED HEX HEAD TAP BOLT ASTM A449 OR SAE J429 GRADE 5
U2	7/16" DIA. SLIP POST ASSEBLY - BREAKAWAY BOLT - WASHER	ASTM F436 TYPE I (HARDEN TYPICALLY USED WITH STEEL) GALV. AASHTO M111/ASTM A 123 OR GALV. HOT DIP. TO POST BOLT CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 55, F2329
U3	SLIP POST ASSEBLY - BREAKAWAY BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / STM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
V1	U-BOLT - PLATE WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
V2	ANCHOR CABLE-SWAGE FITTING	UNC ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FACTORY SWAGED. MIN. BREAKING STRENGTH OF 42.7 KIPS. ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."
V3	1" DIA. ANCHOR CABLE-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
V4	1" DIA. ANCHOR CABLE-NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
W1	REFLECTOR	SEE SDD 15A4

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SDD 14B26 - 04h

SDD 14B26 - 04h

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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

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

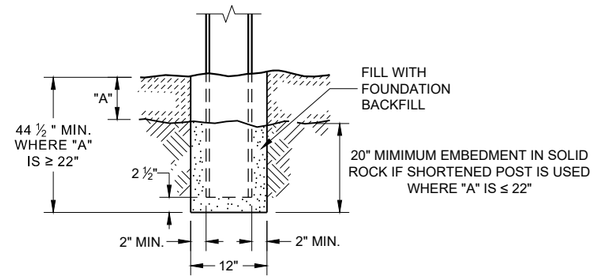
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

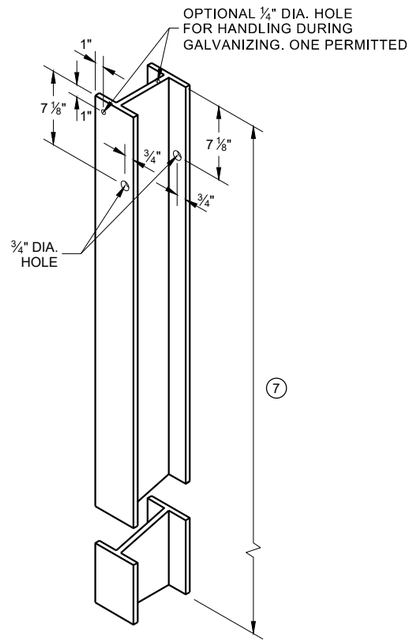
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

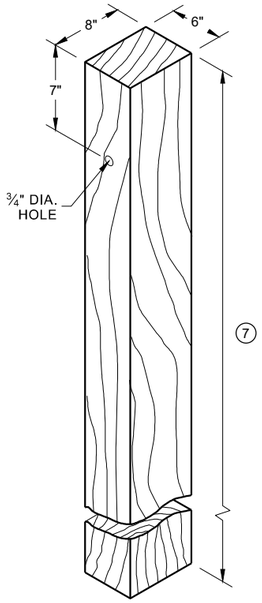
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



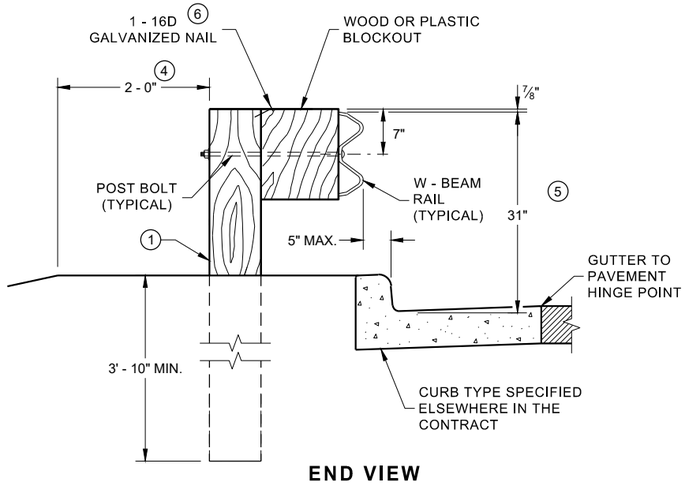
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



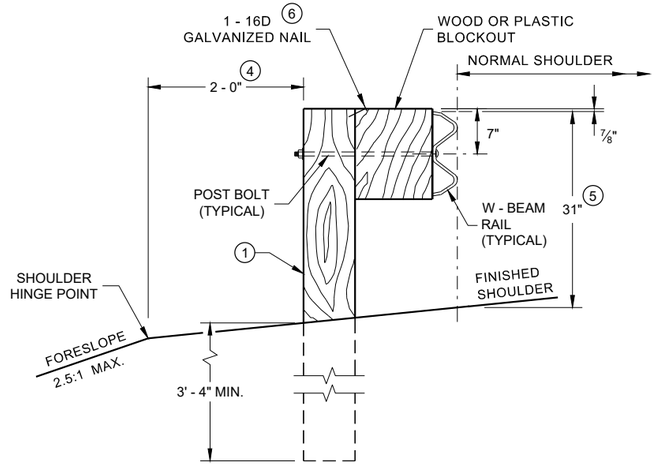
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



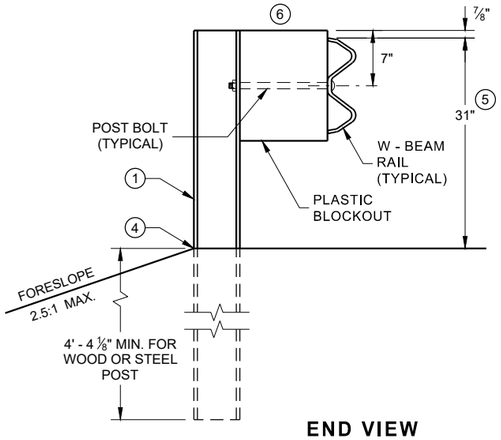
WOOD POST (6" X 8") NOMINAL (1)



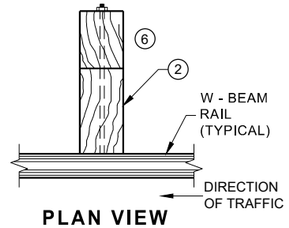
END VIEW
LOCATED ALONG A CURBED ROADWAY



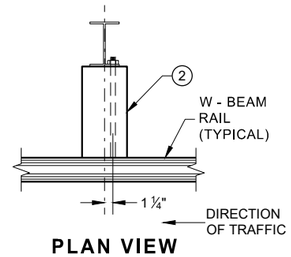
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



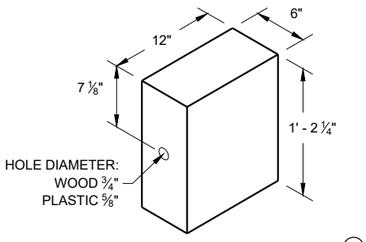
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

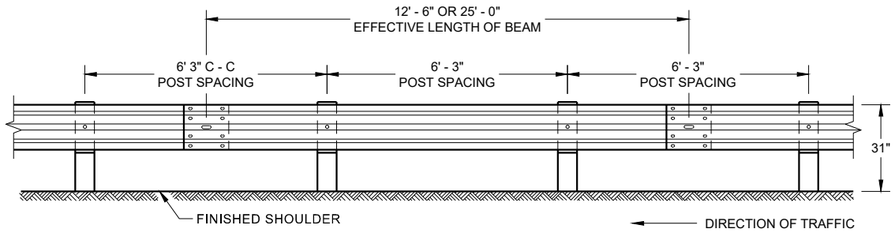
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

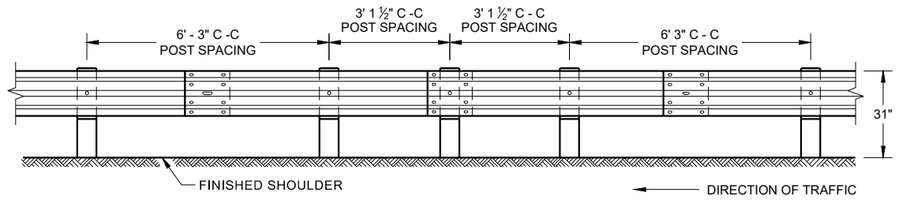
SDD 14B42 - 06a

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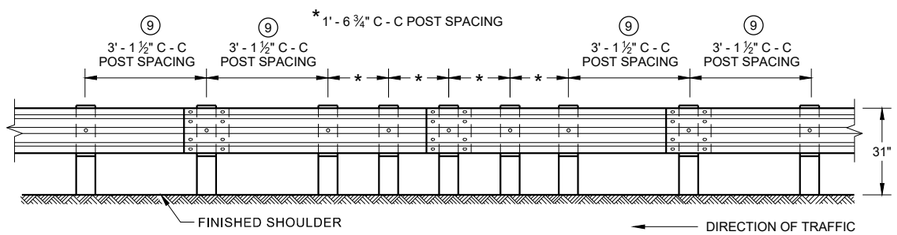
SDD 14B42 - 06a



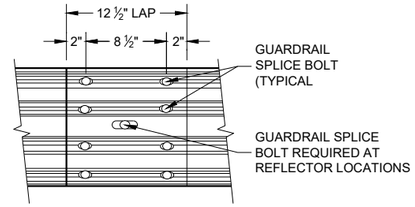
FRONT VIEW
POST SPACING STANDARD INSTALLATION



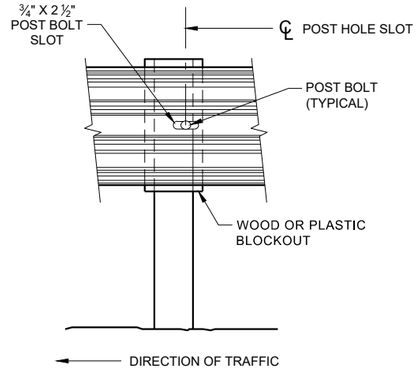
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



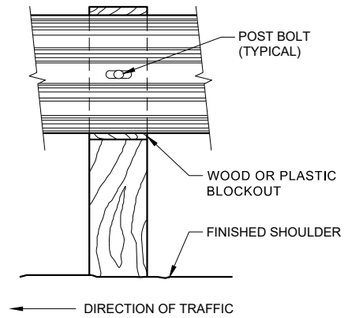
FRONT VIEW
QUARTER POST SPACING (QS)



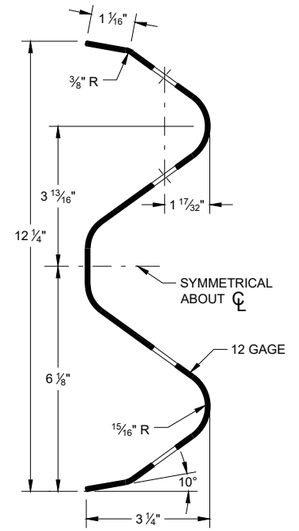
FRONT VIEW
MID-SPAN BEAM SPLICE



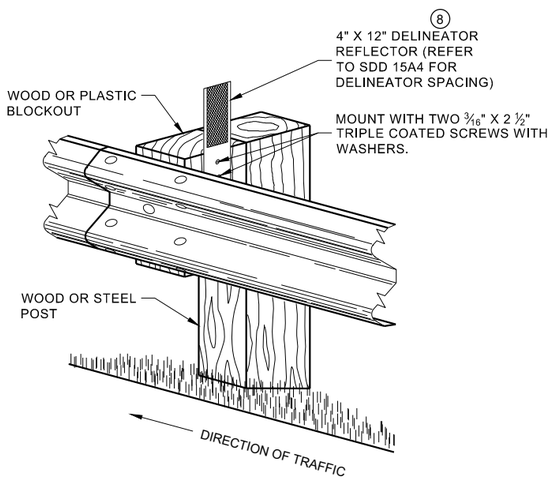
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

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

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

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

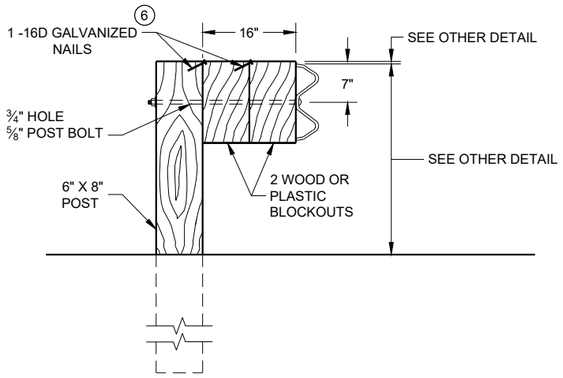
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

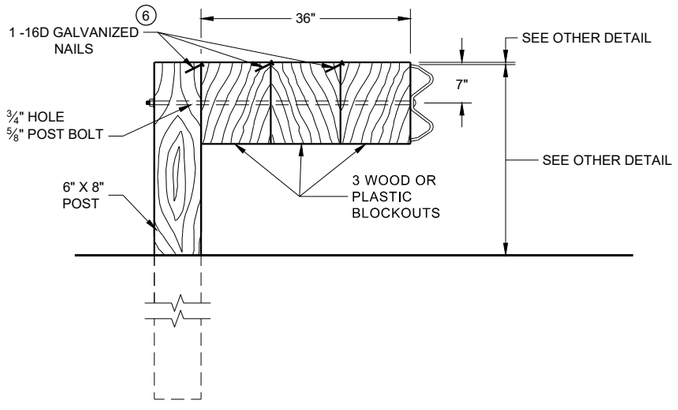
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SDD 14B42 - 06b
SDD 14B42 - 06b



DETAIL FOR 16" BLOCKOUT DEPTH

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



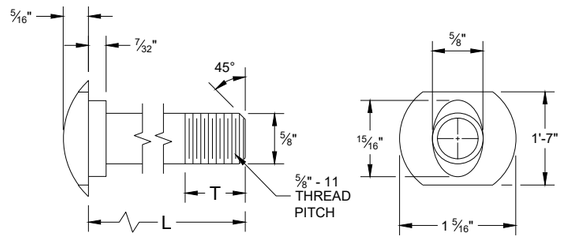
DETAIL FOR 36" BLOCKOUT DEPTH

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

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

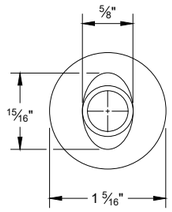
NOTE:

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

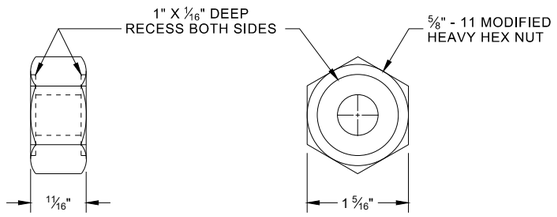


POST BOLT TABLE

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

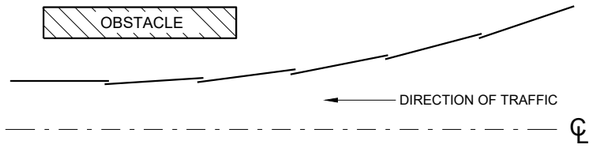


ALTERNATE BOLT HEAD

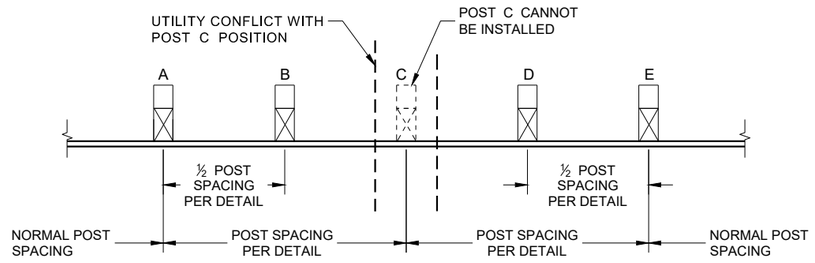


POST BOLT, SPLICE BOLT AND RECESS NUT

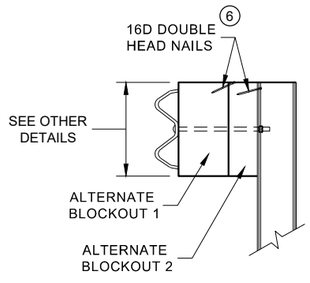
(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



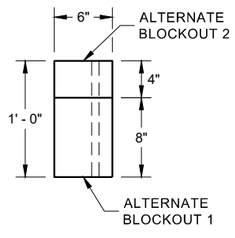
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



PLAN VIEW

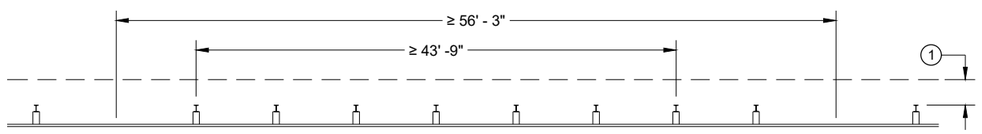
ALTERNATE WOOD BLOCKOUT DETAIL

6

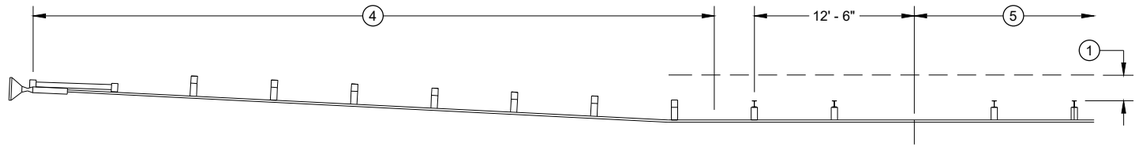
SDD 14B42 - 06c

6

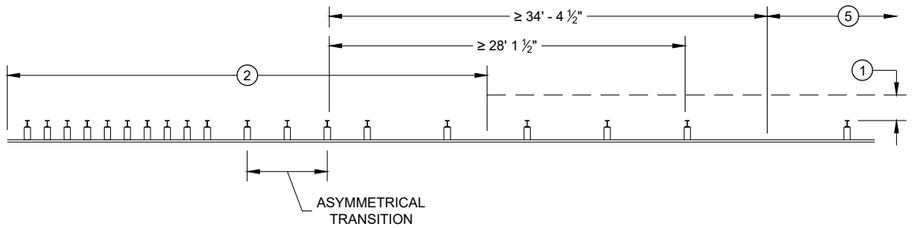
SDD 14B42 - 06c



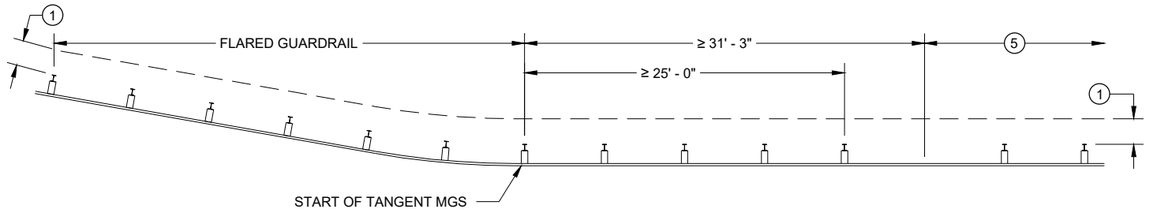
MISSING POST IN NORMAL BEAM GUARD RUN



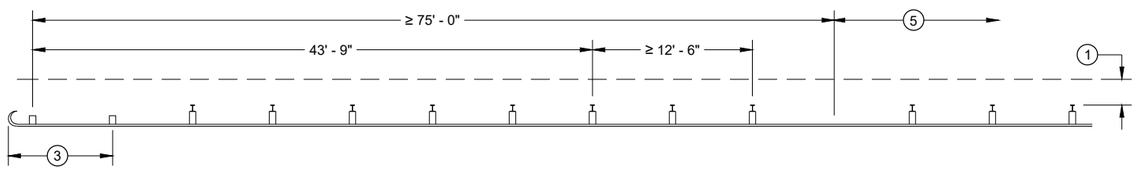
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



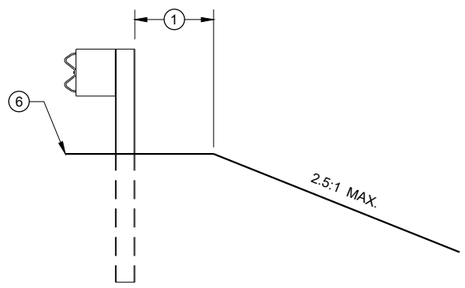
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



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

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SDD 14B42 - 06d

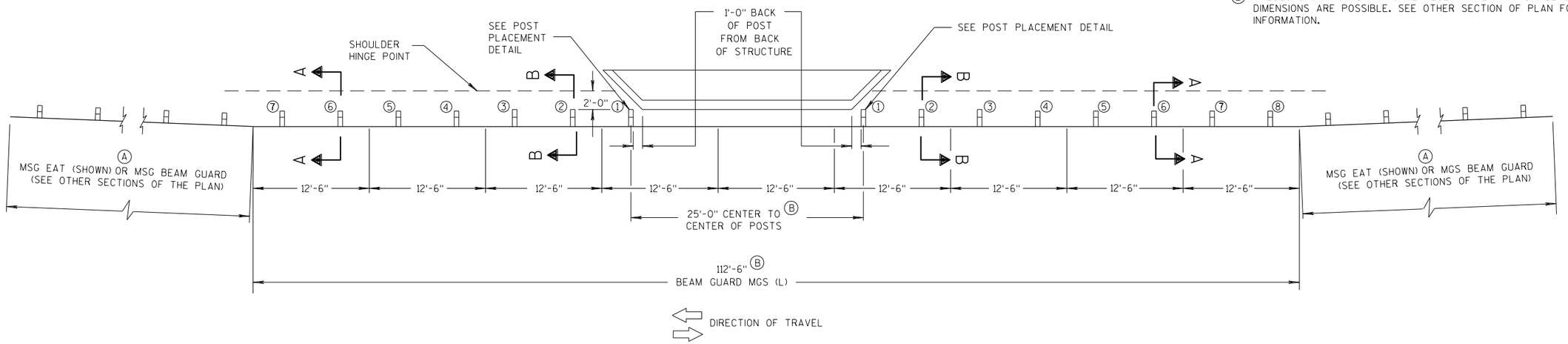
GENERAL NOTES

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

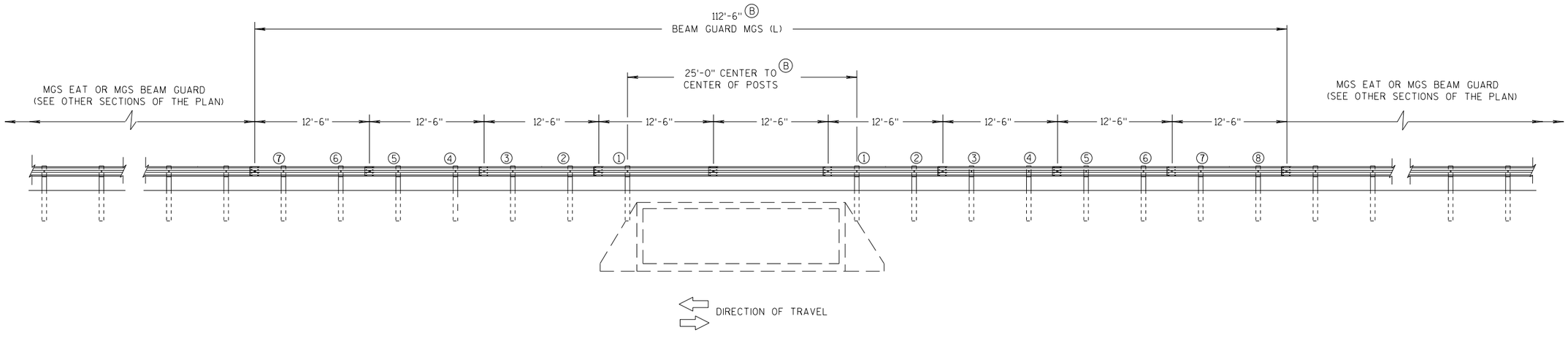
SEE SDD 14 B 42 FOR MORE DETAILS.

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

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



PLAN VIEW



ELEVATION VIEW

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

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

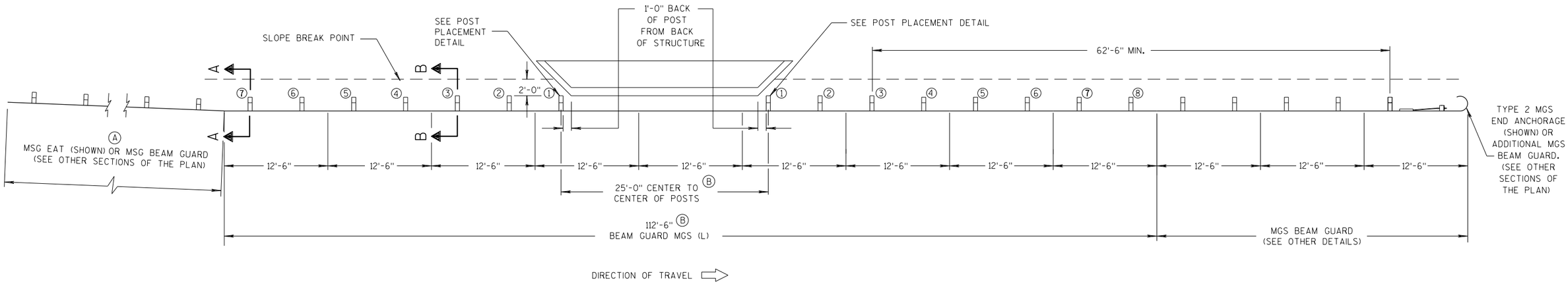
GENERAL NOTES

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

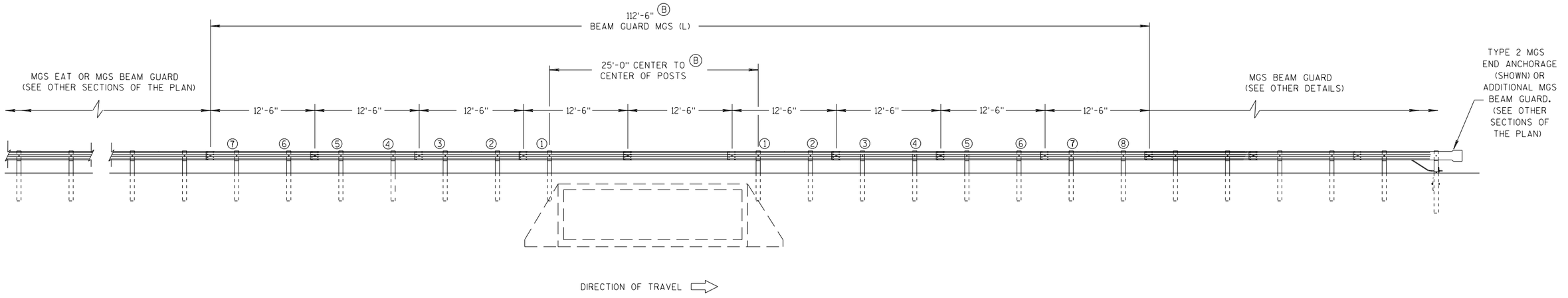
SEE SDD 14 B 42 FOR MORE DETAILS.

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

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



PLAN VIEW



ELEVATION VIEW

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

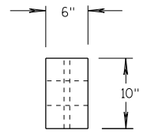
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	242

6

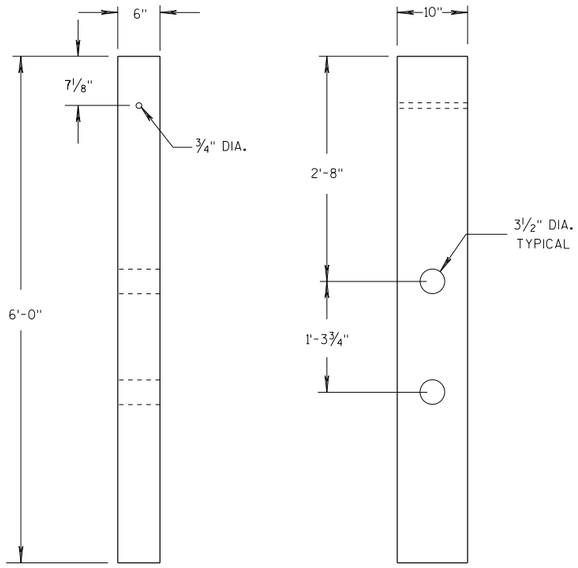
S.D.D. 14 B 43-4b

6

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

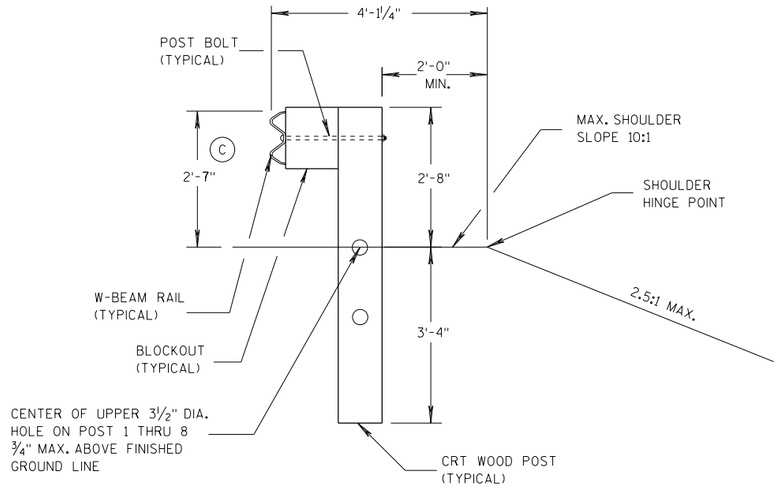


PLAN VIEW



FRONT VIEW SIDE VIEW

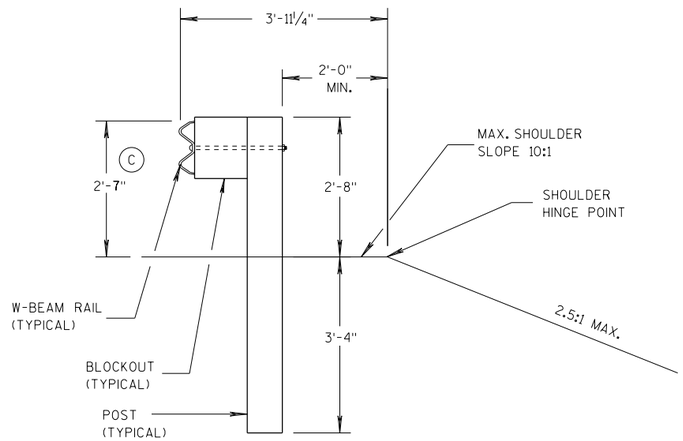
CRT WOOD POST



SECTION B-B

POSTS NO. 1-3

SEE OTHER DETAILS



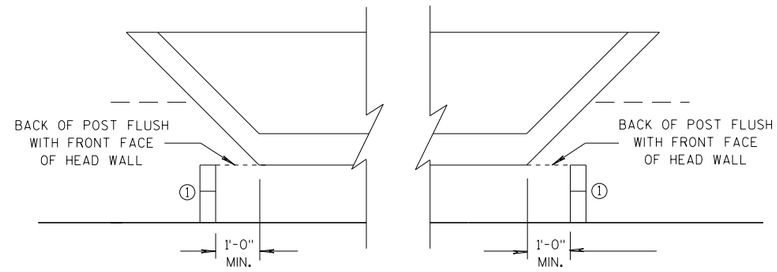
SECTION A-A

POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

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



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D 243 NT
ENGINEER

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

6

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

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.

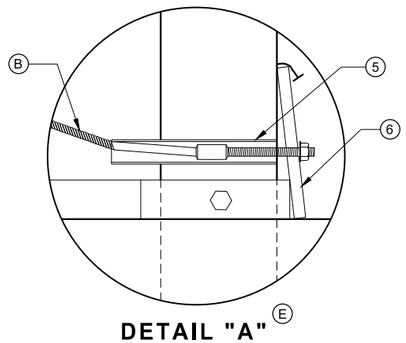
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

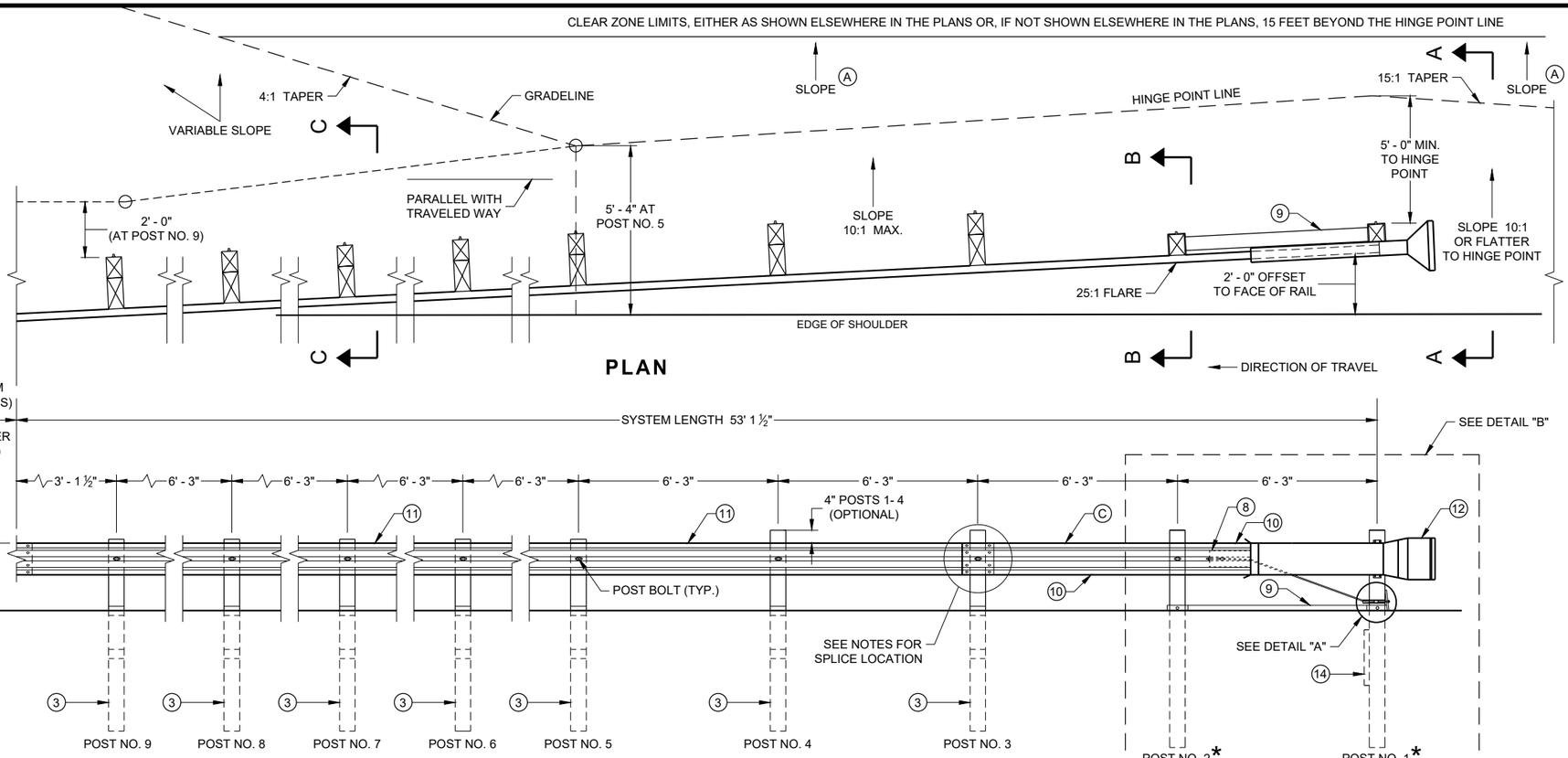
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

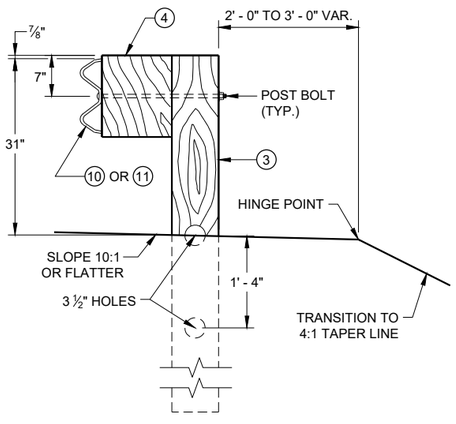
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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.

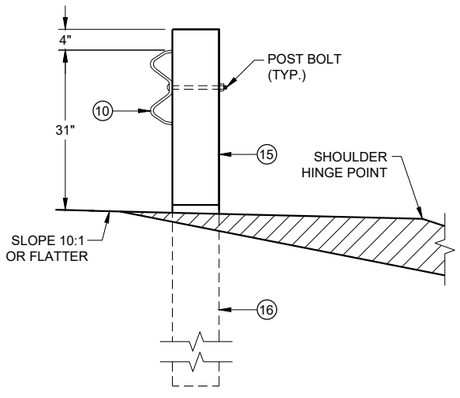


DETAIL "A" (E)

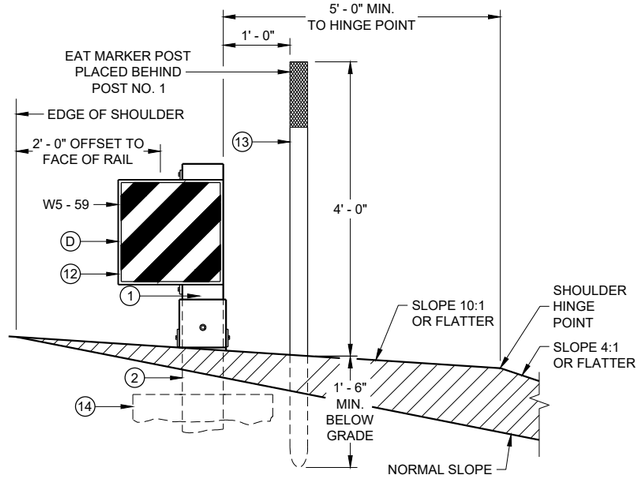




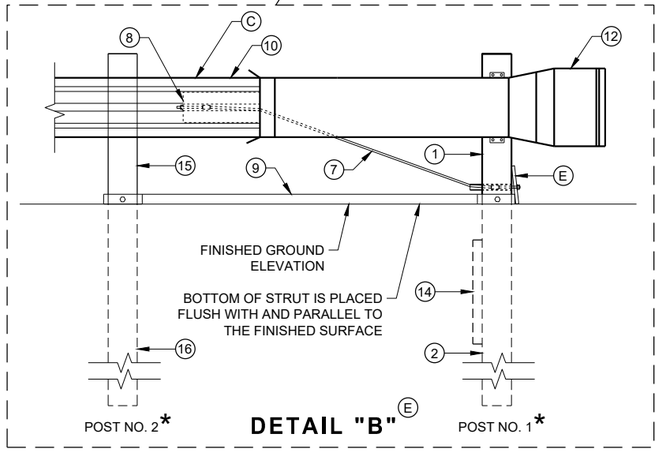
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



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)

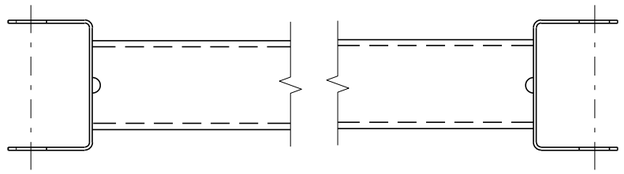
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

SDD 14B44 - 04a

6

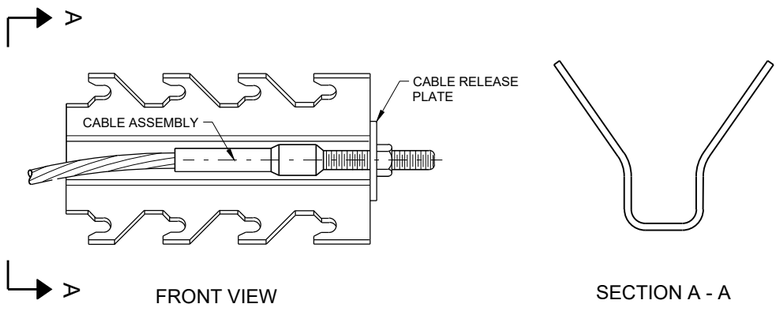
6



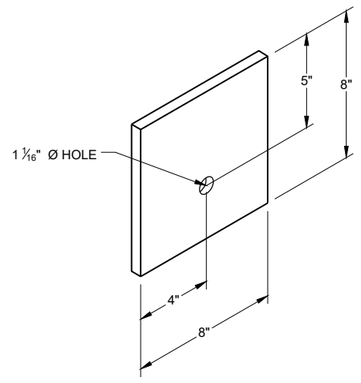
GENERIC GROUND STRUT (9) (E)

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) (E)



BEARING PLATE (6) (E)

6

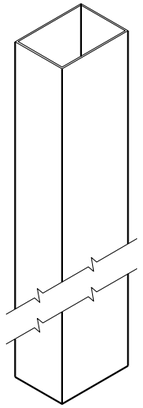
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SDD 14B44 - 04b

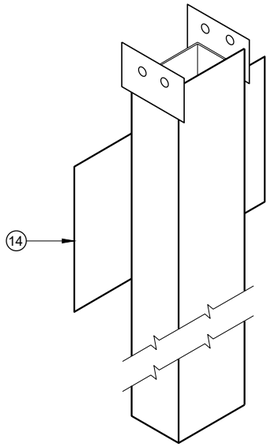
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

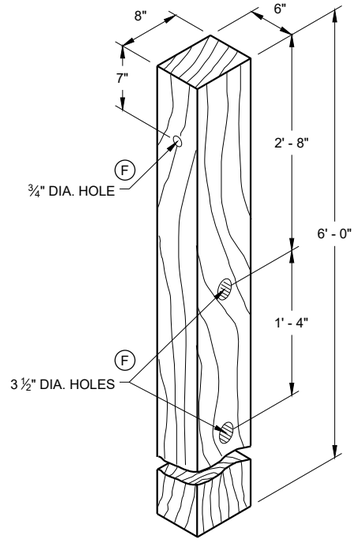
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



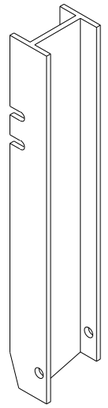
UPPER POST NO. 1 (1) (E)



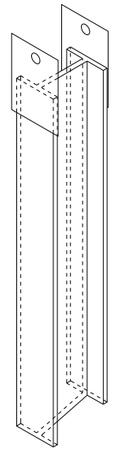
LOWER POST NO. 1 (2) (E)



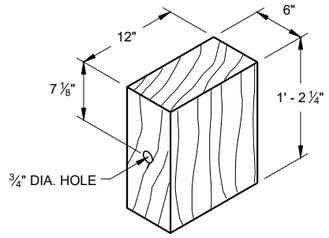
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



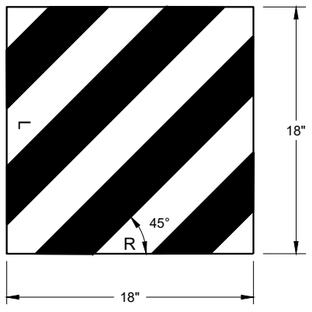
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

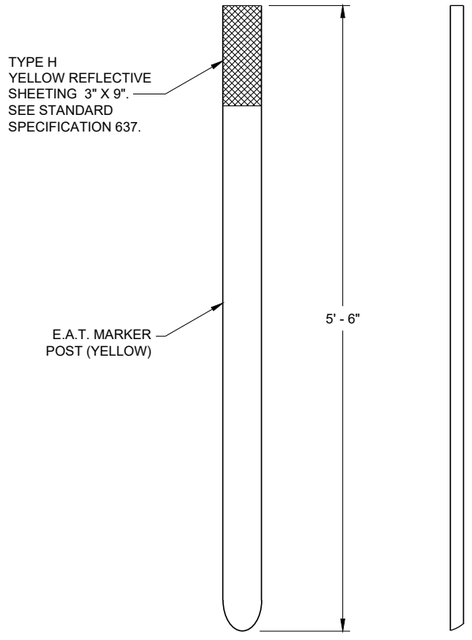


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



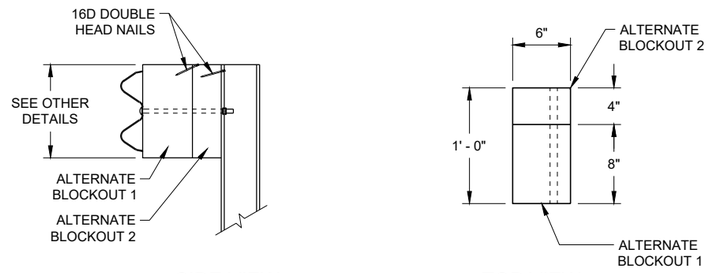
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



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)

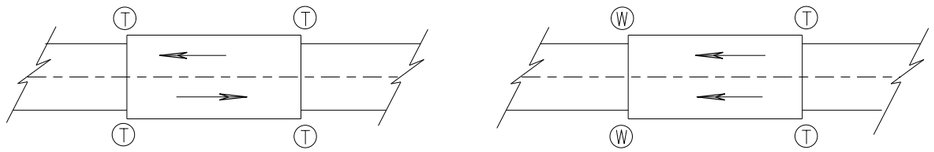
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

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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.

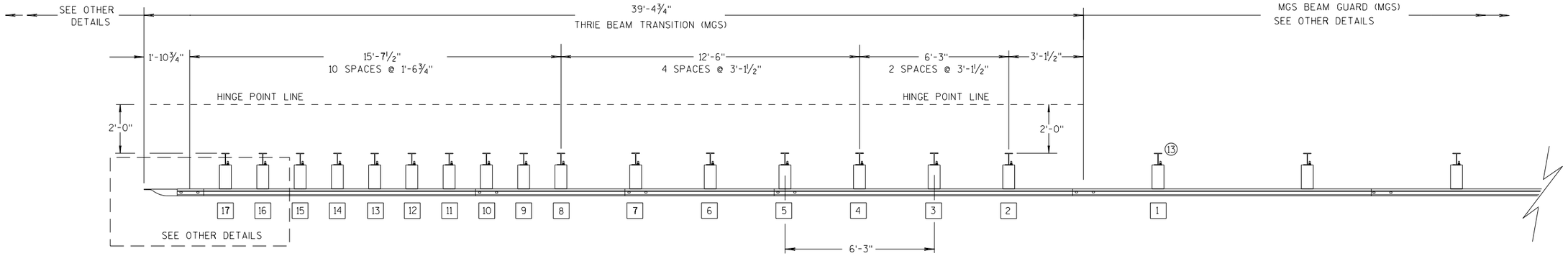
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

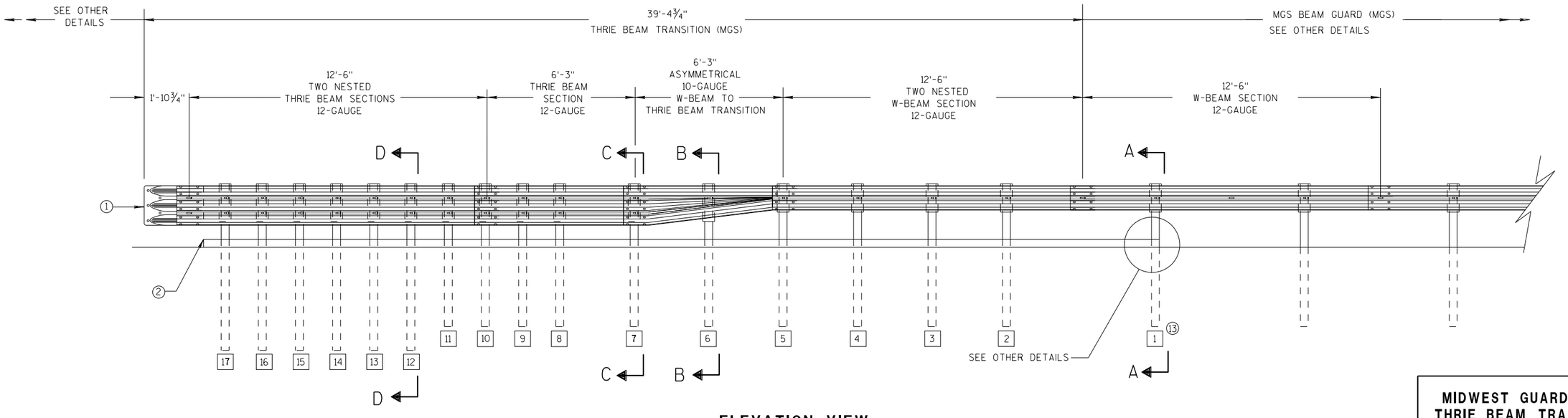
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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

6

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

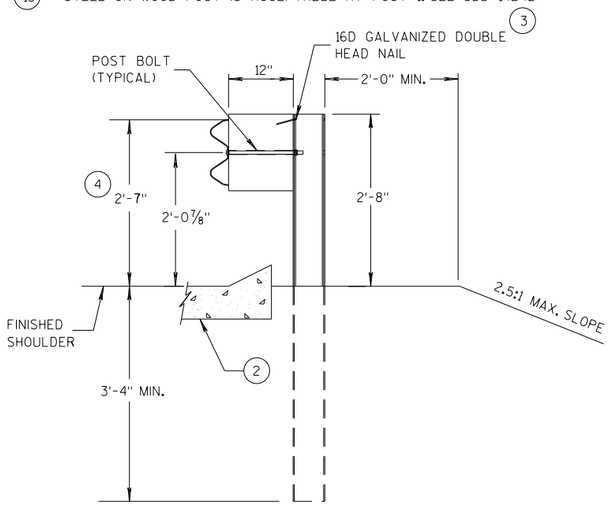
GENERAL NOTES

(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.

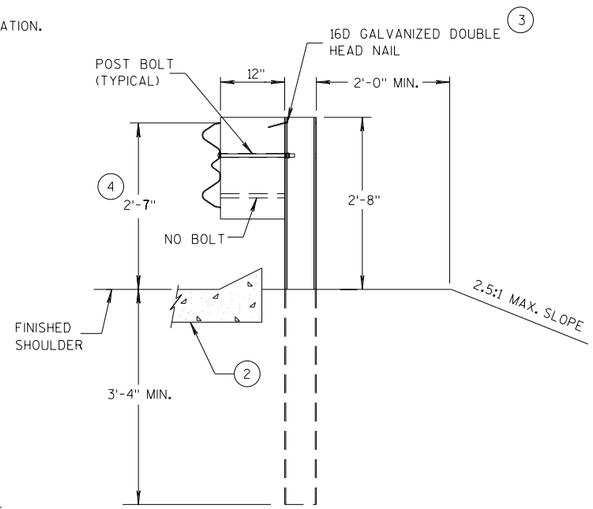
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



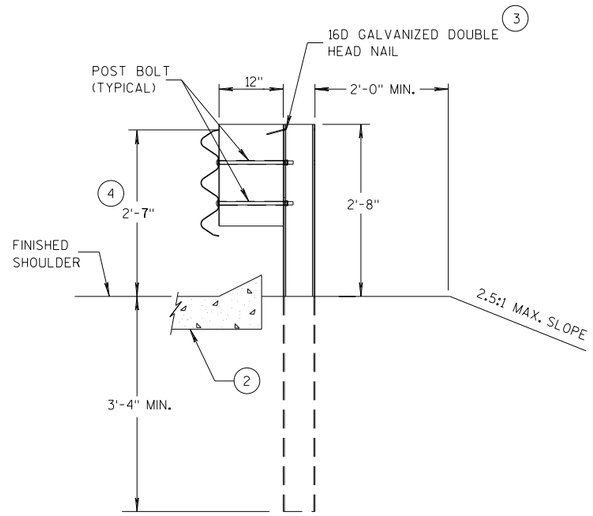
SECTION A-A (13)

POSTS 1-5



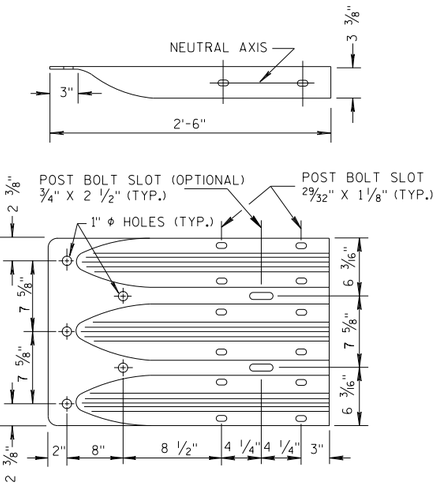
SECTION B-B

POST 6

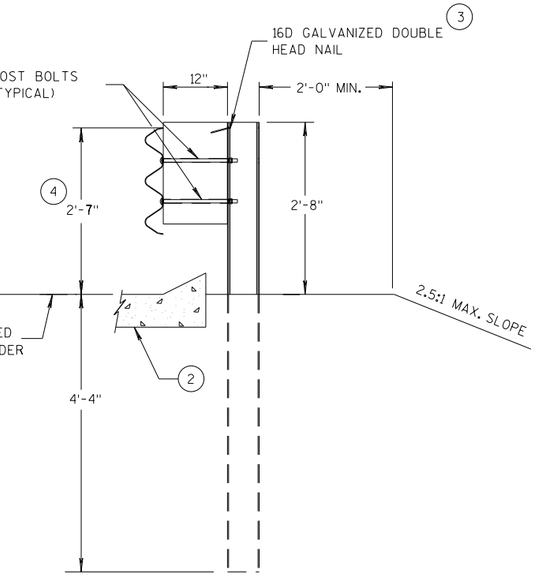


SECTION C-C

POSTS 7-11

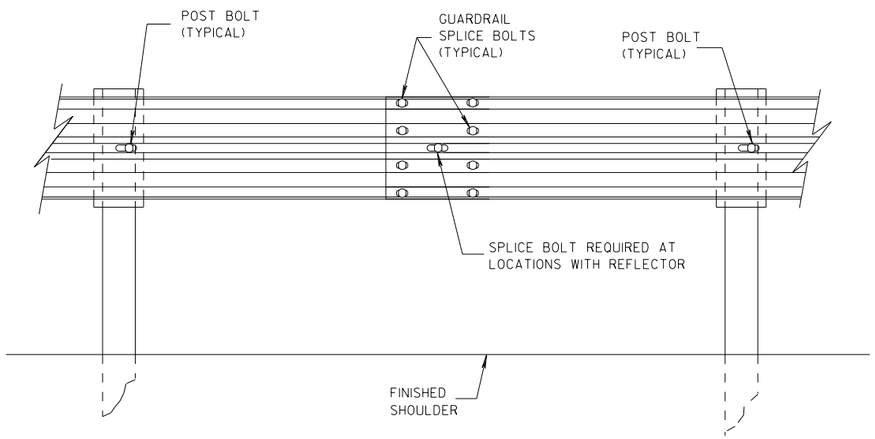


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

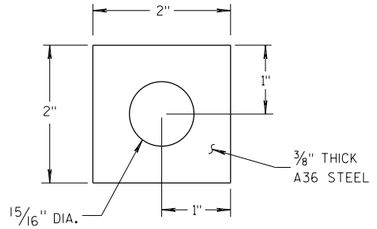
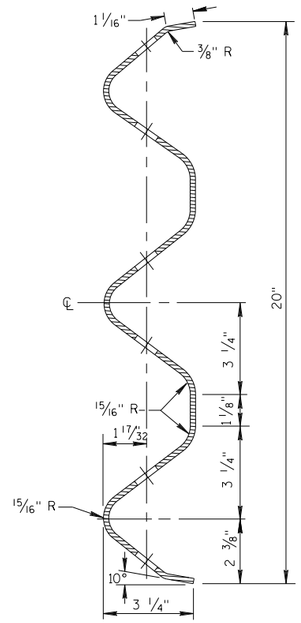


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

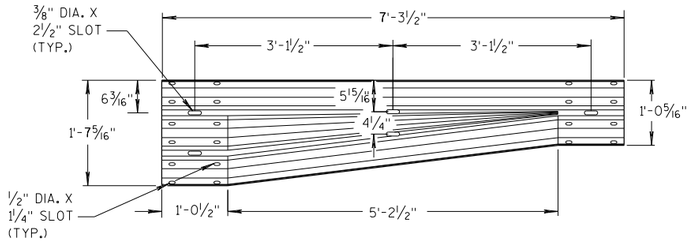
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 248

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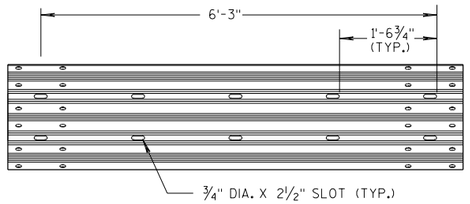
S.D.D. 14 B 45-5b

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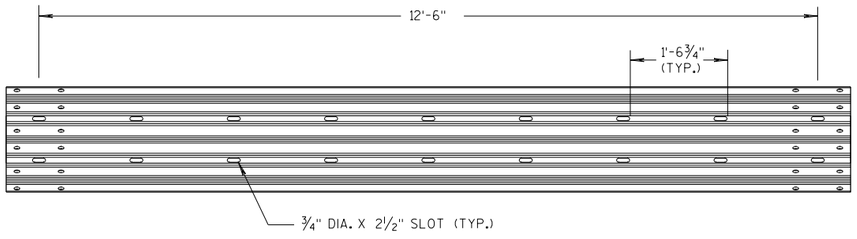
S.D.D. 14 B 45-5b



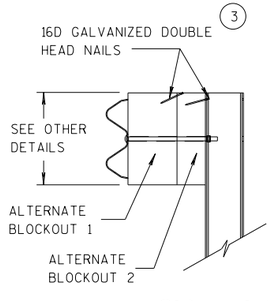
W-BEAM TO THRIE BEAM TRANSITION SECTION



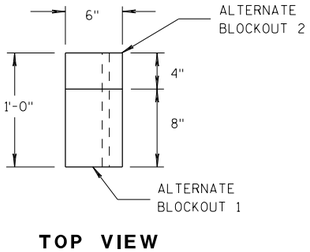
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

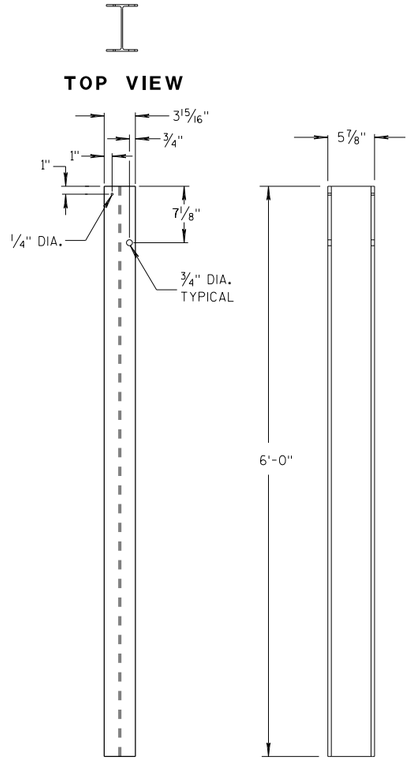


SIDE VIEW



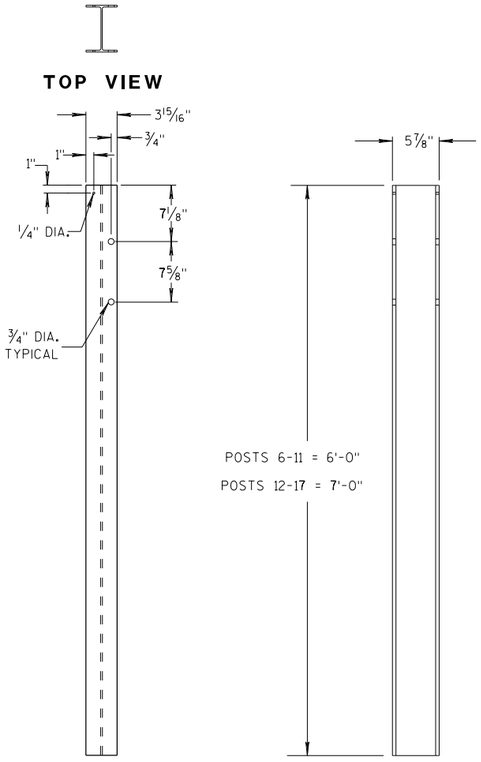
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



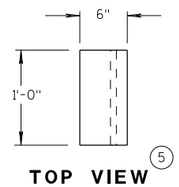
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

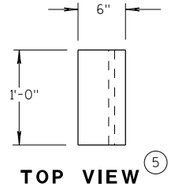


FRONT VIEW SIDE VIEW

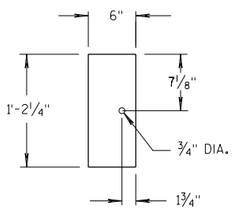
STEEL POSTS 6-17



TOP VIEW (5)

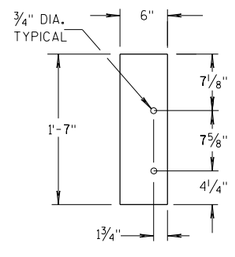


TOP VIEW (5)



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)

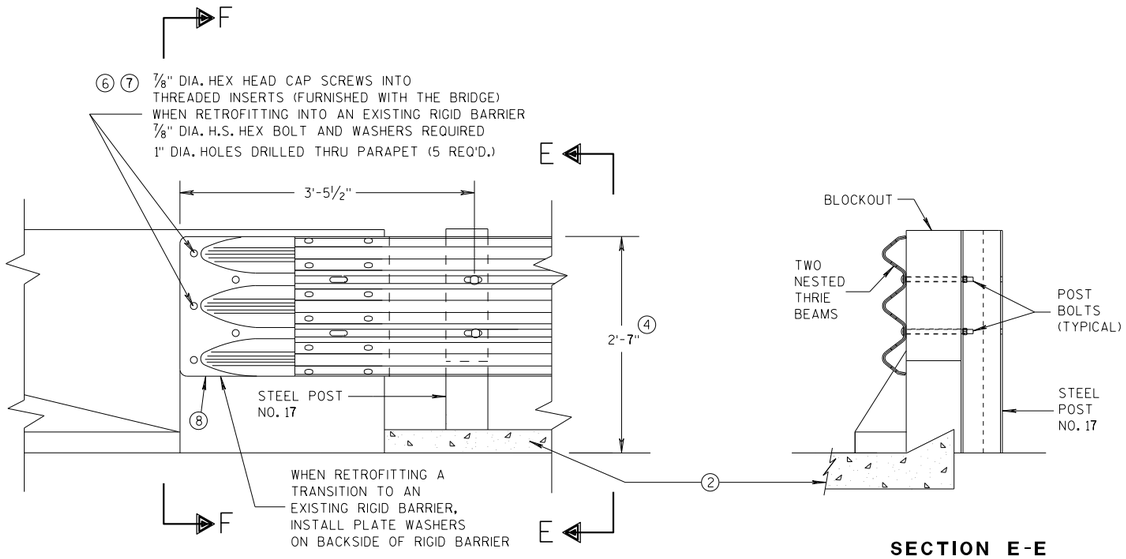
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 249

6

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

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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.

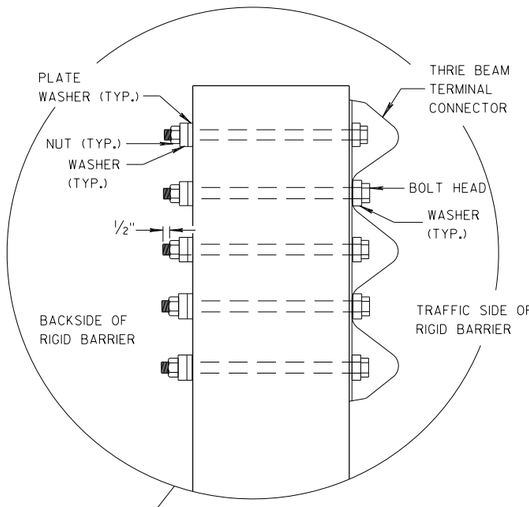
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

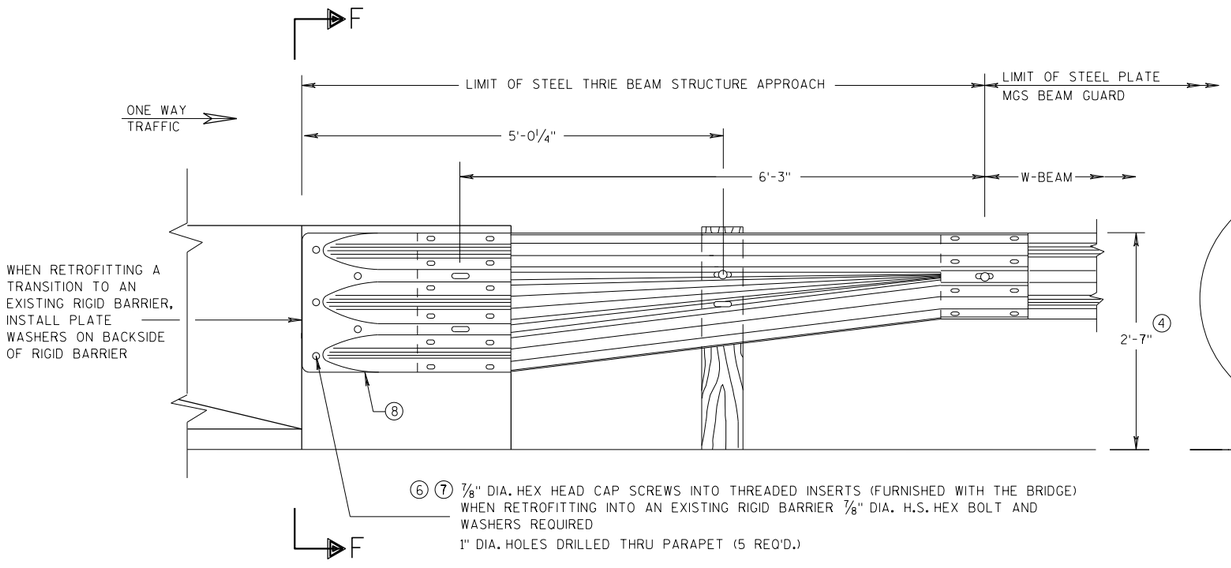
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

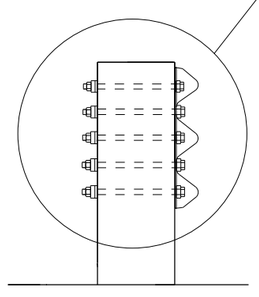
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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".

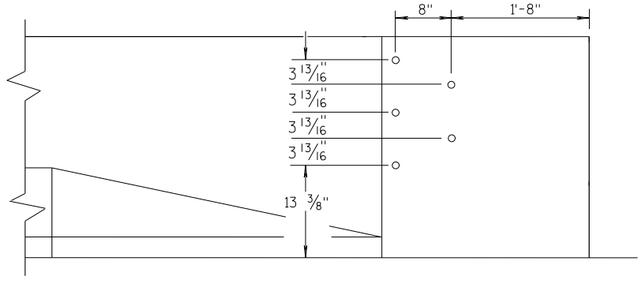




FRONT VIEW



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 UNIT SUPERVIS ...NT
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.

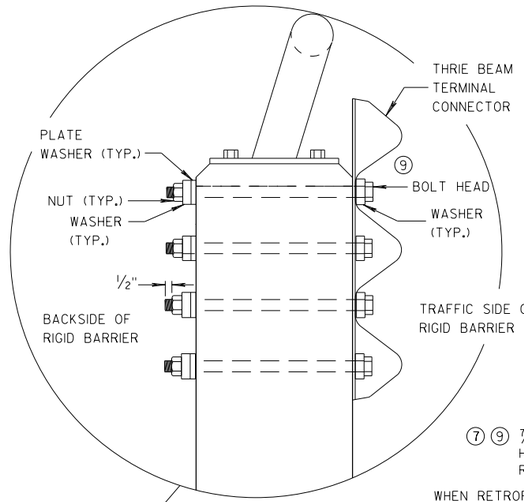
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

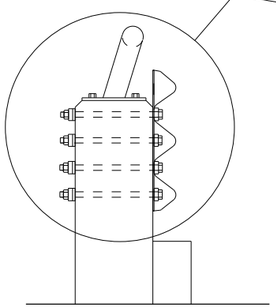
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

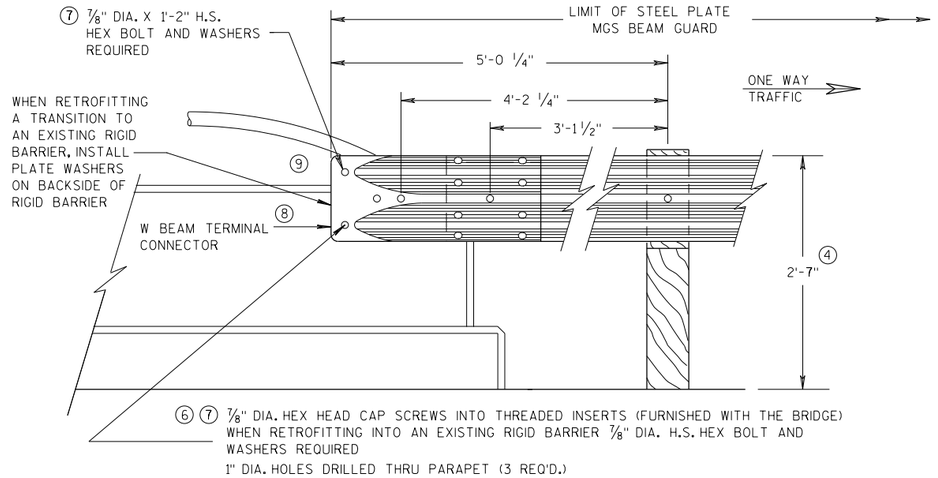
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(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.





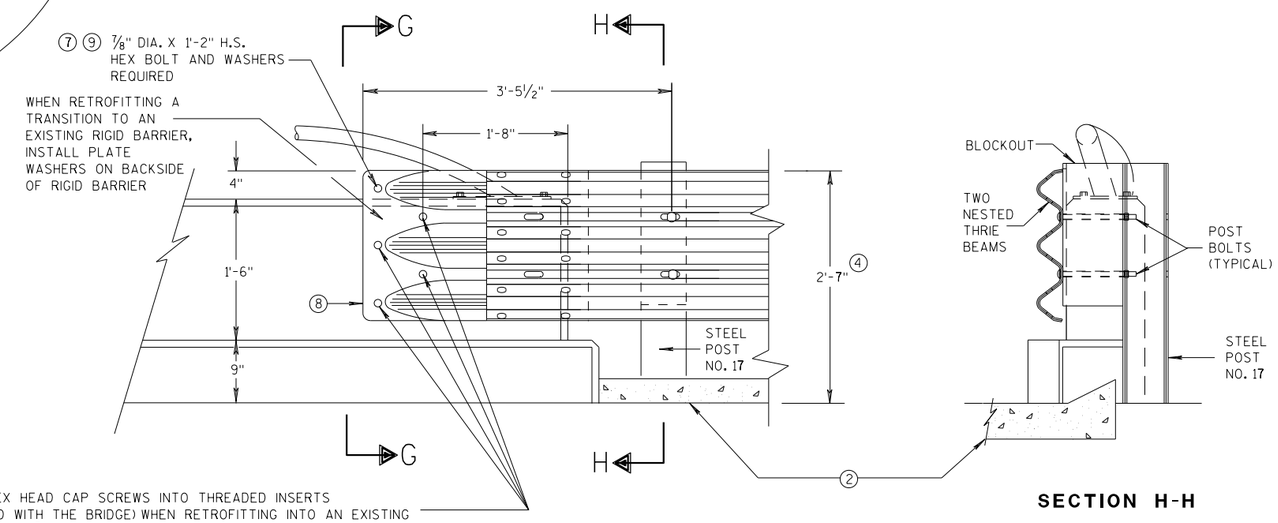
SECTION G-G



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

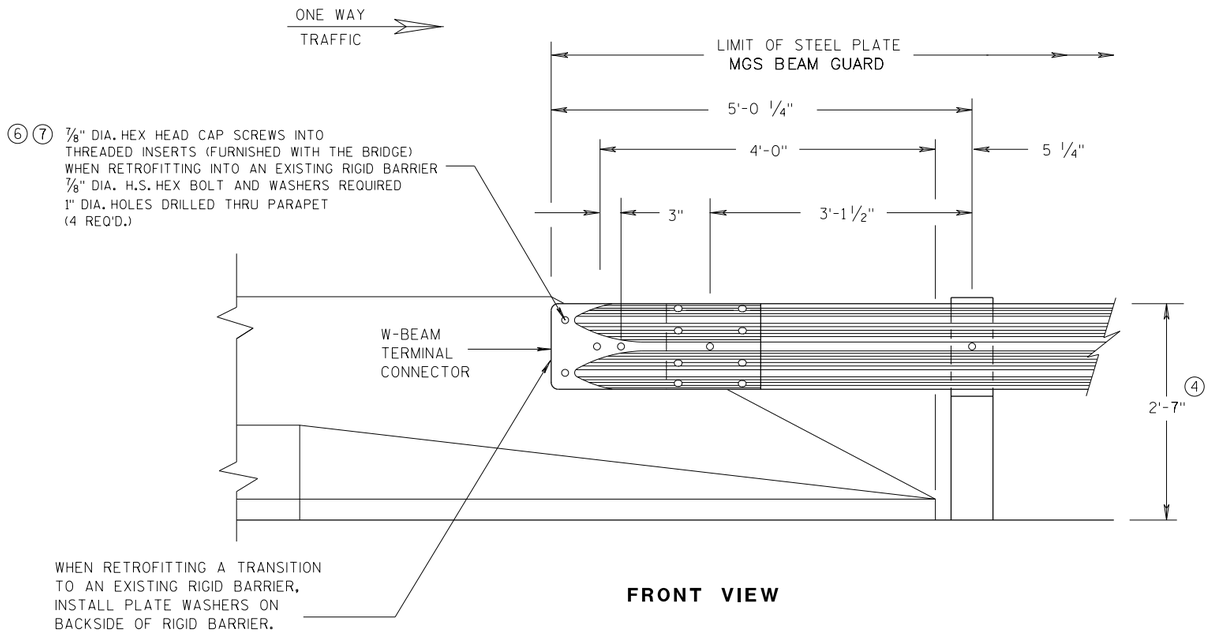
APPROVED
07/2018 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI
FHWA

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

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

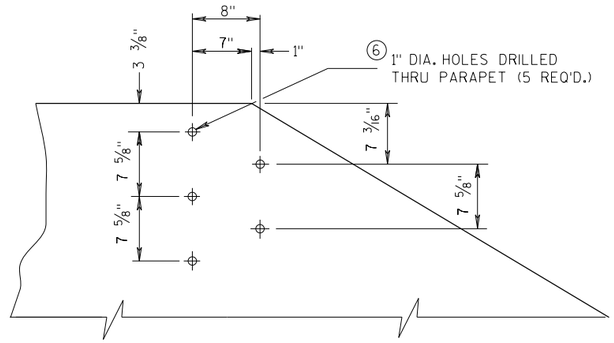
GENERAL NOTES

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

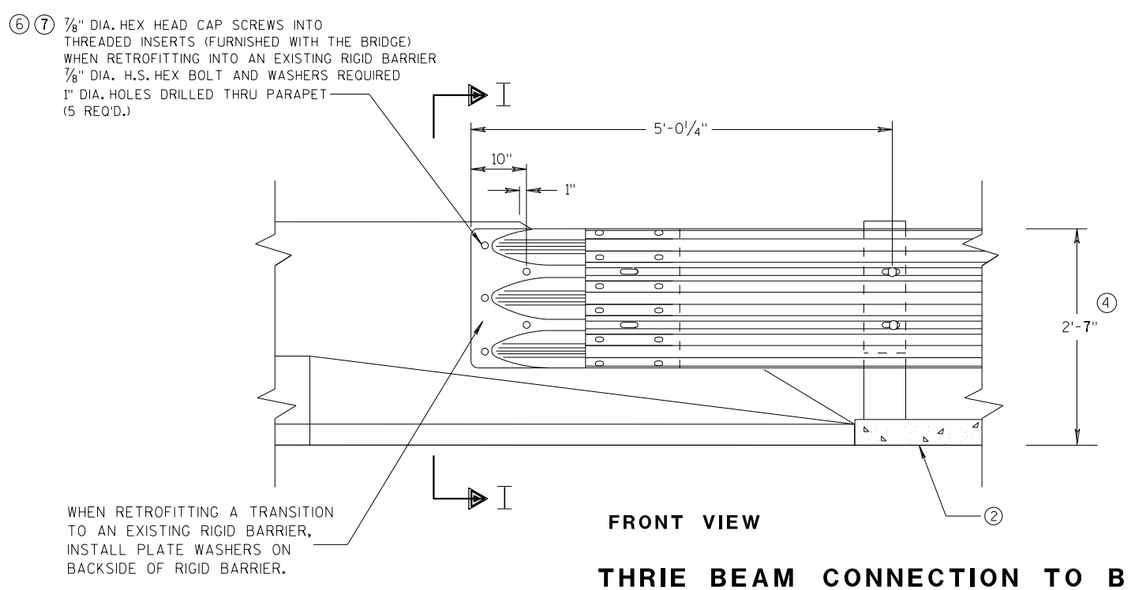
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

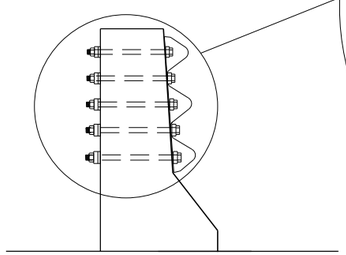
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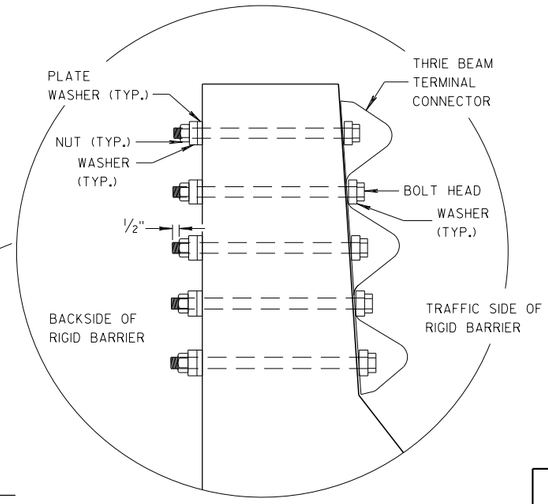
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



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

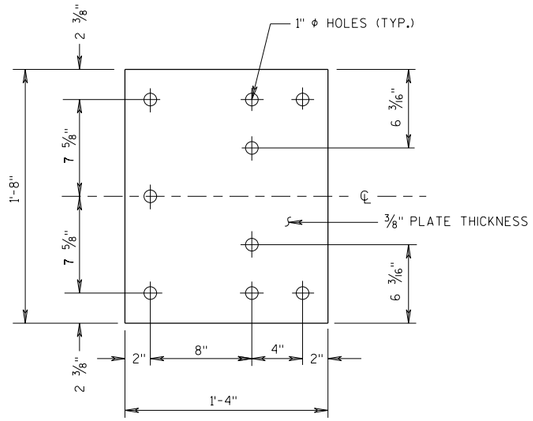
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
FHWA

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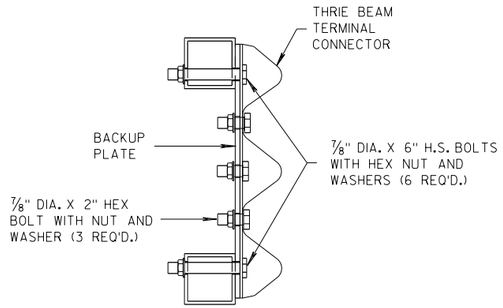
S.D.D. 14 B 45-5f

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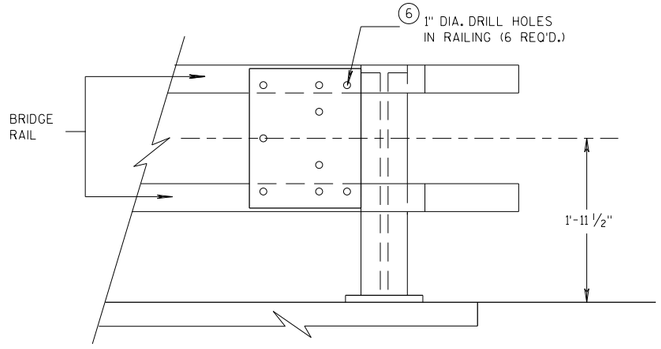
S.D.D. 14 B 45-5f



BACK-UP PLATE DETAIL



SECTION J-J

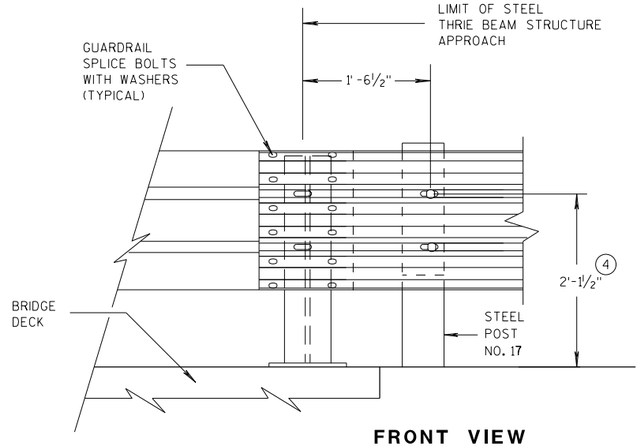


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

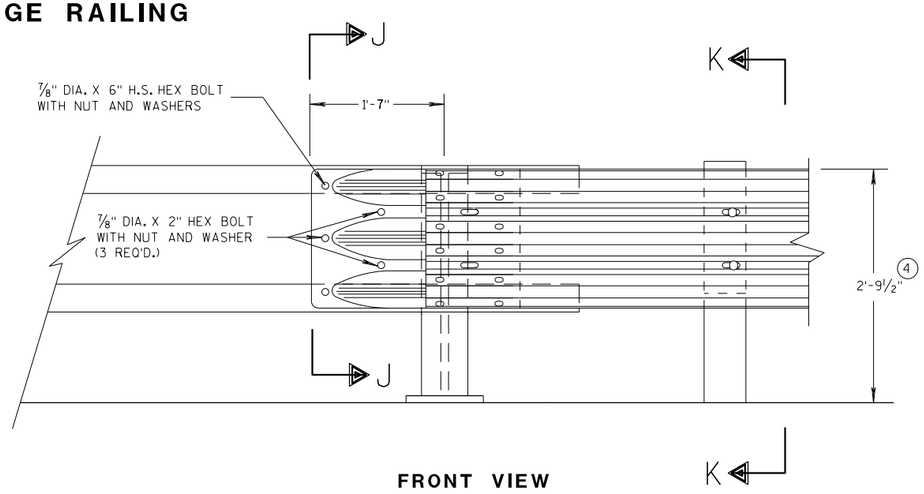
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

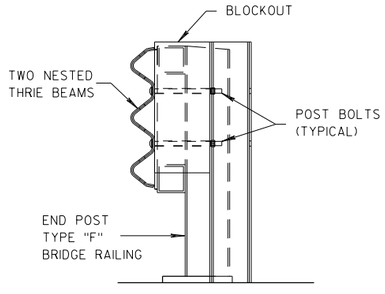


FRONT VIEW

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

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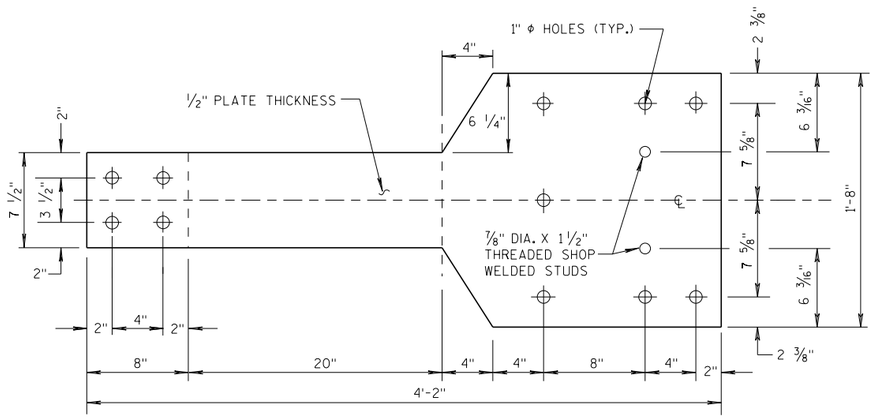
S.D.D. 14 B 45-5g

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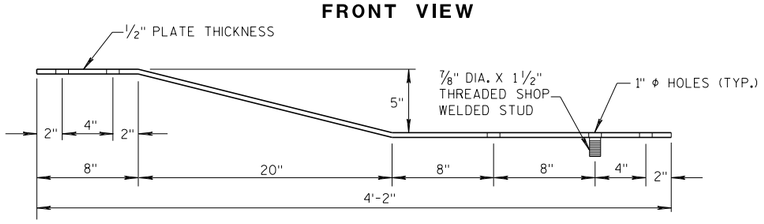
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GENERAL NOTES

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

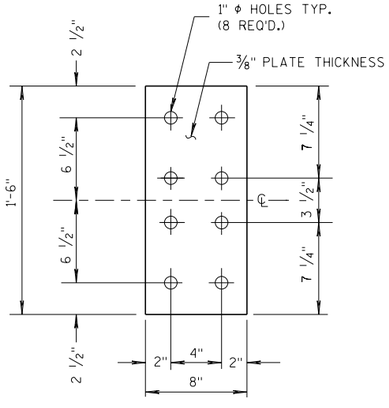


FRONT VIEW



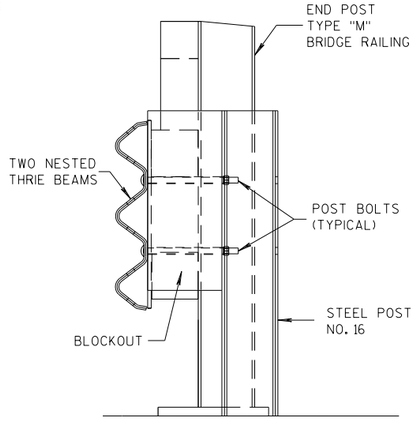
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

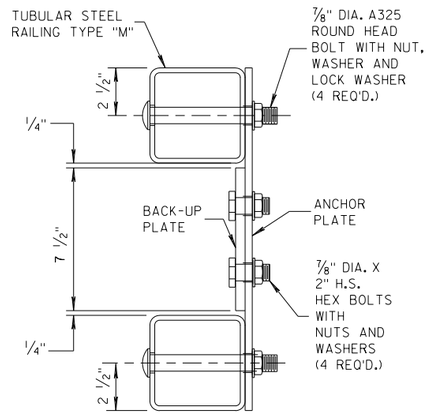


FRONT VIEW

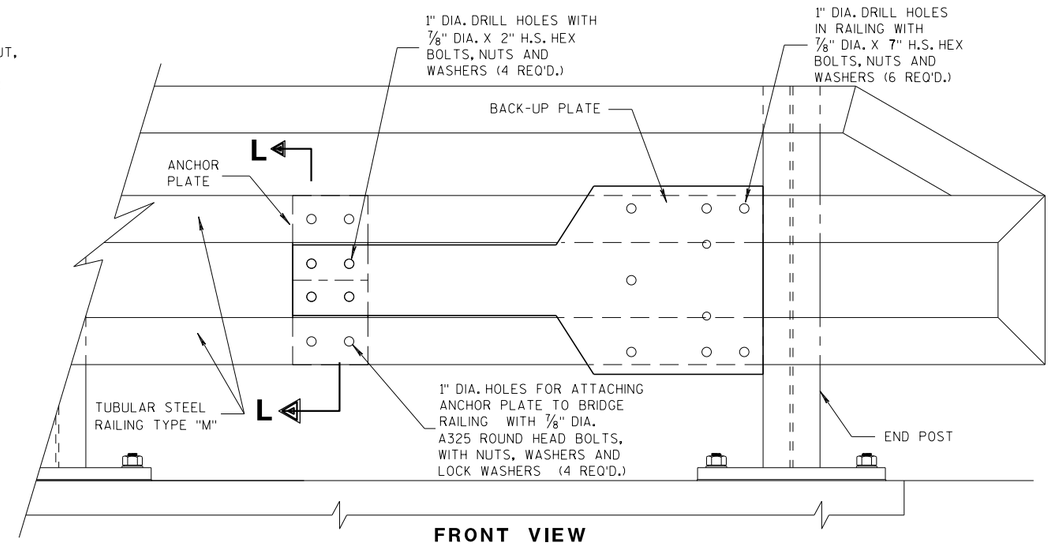
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

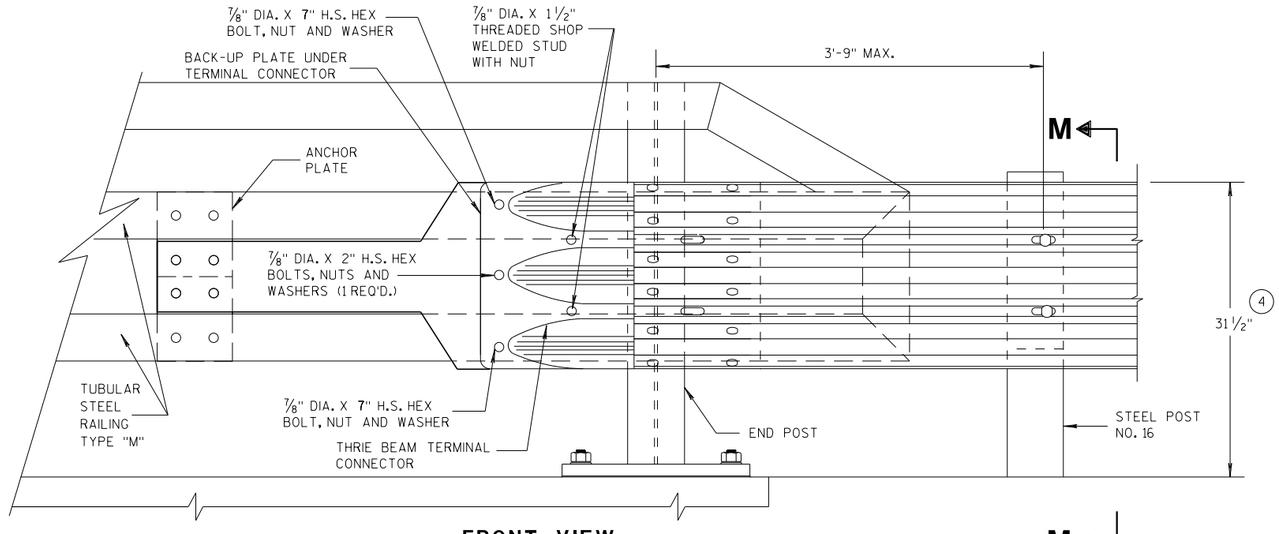


SECTION L-L

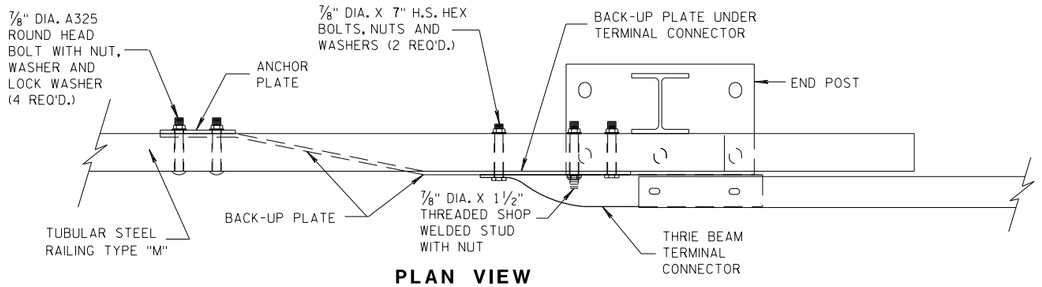


FRONT VIEW

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

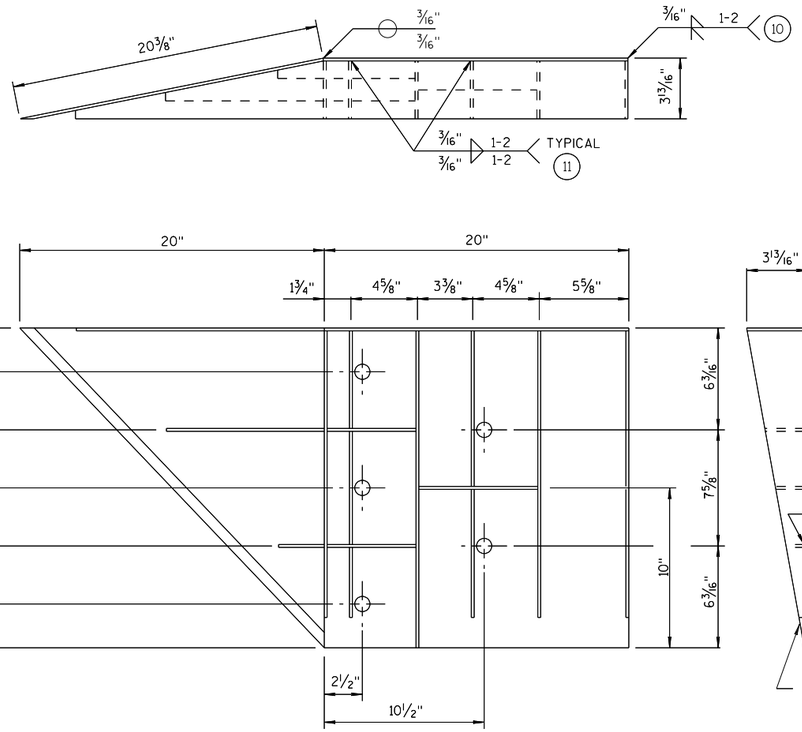
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WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

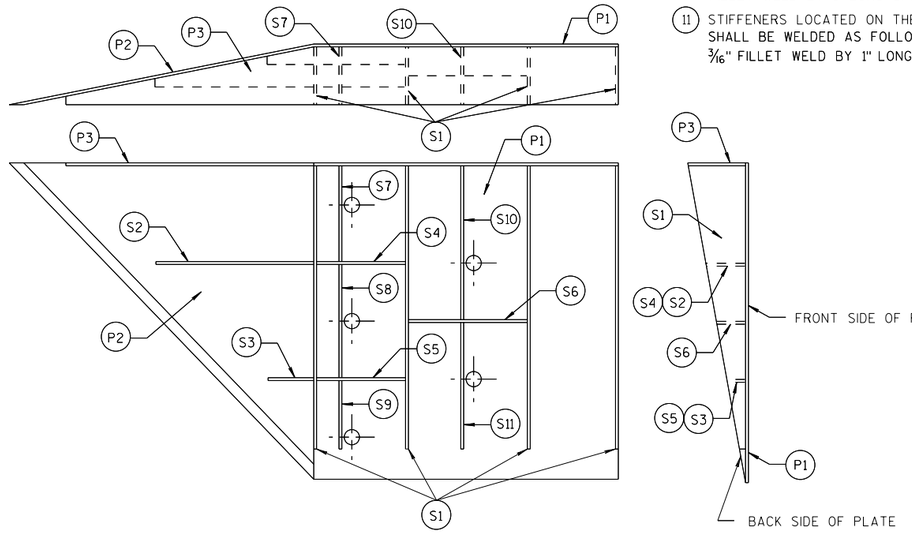


PLATE AND STIFFENER IDENTIFICATION

(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
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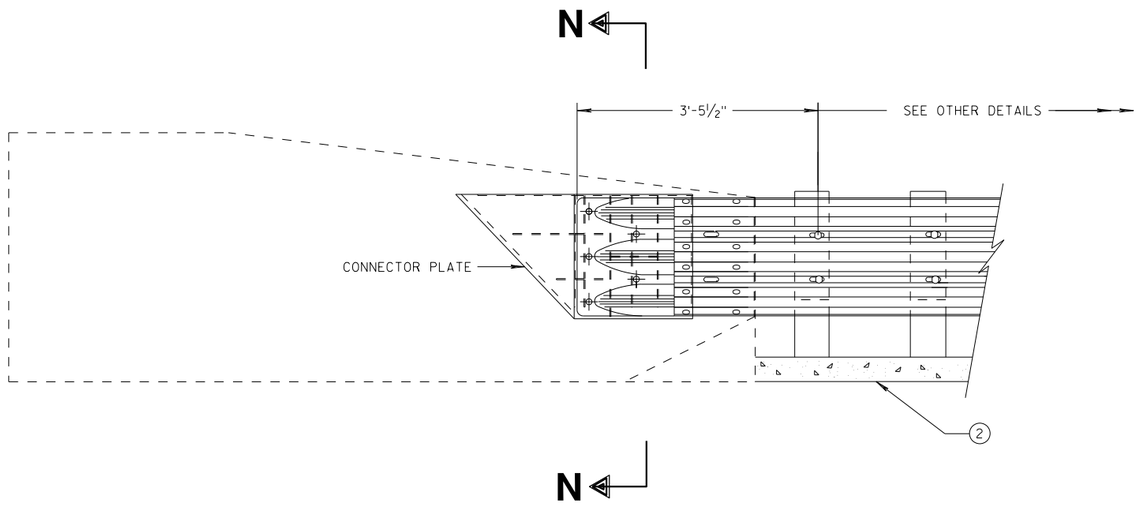
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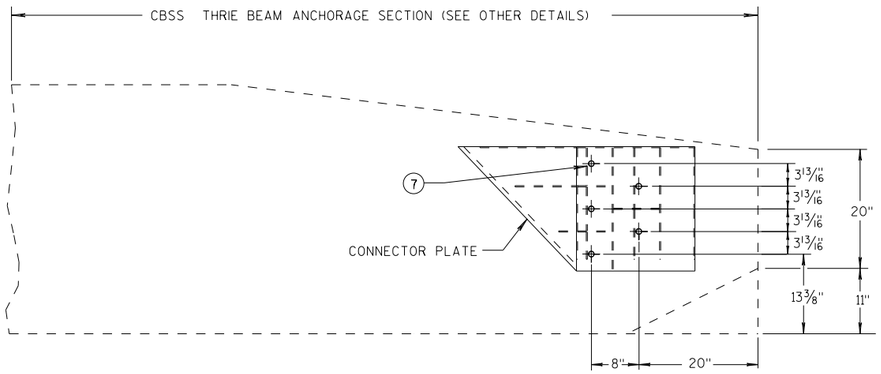
S.D.D. 14 B 45-5i

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



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



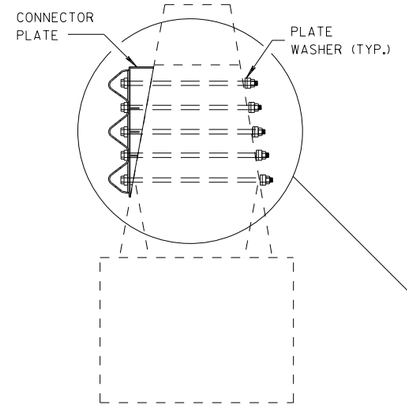
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

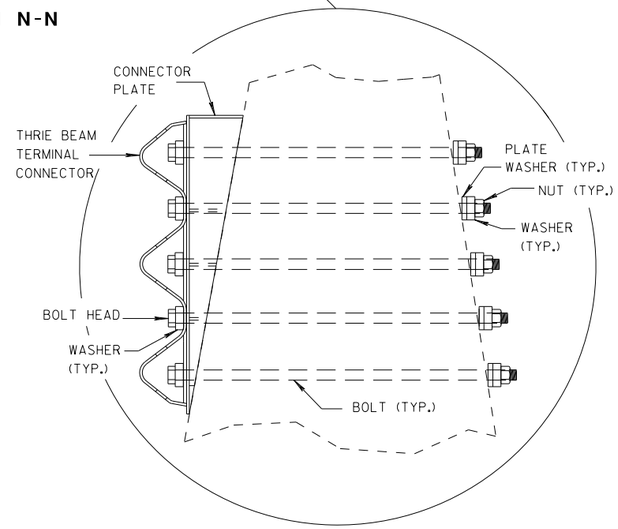
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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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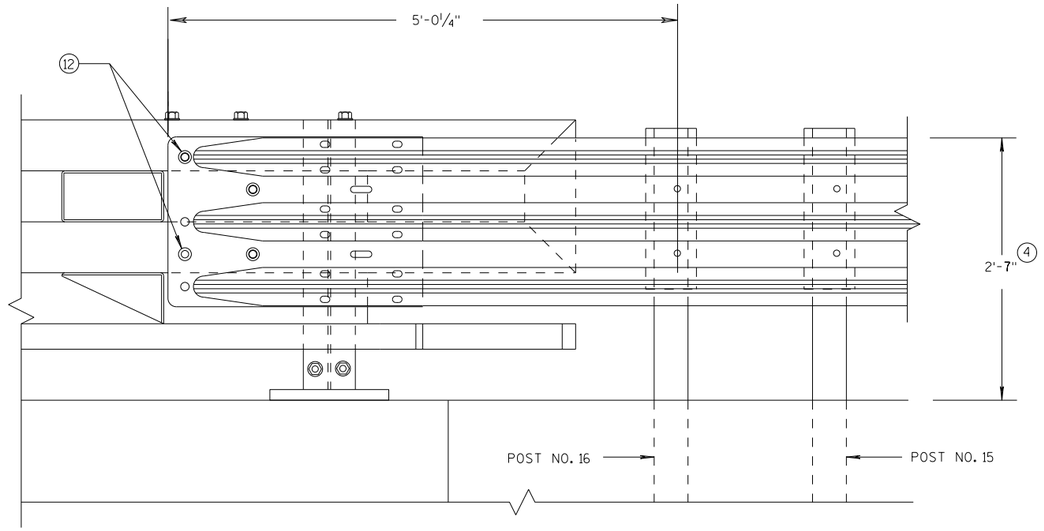
/S/ Rodney Taylor
ROADWAY STANDARDS DI UNIT SUPERVIS NT

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

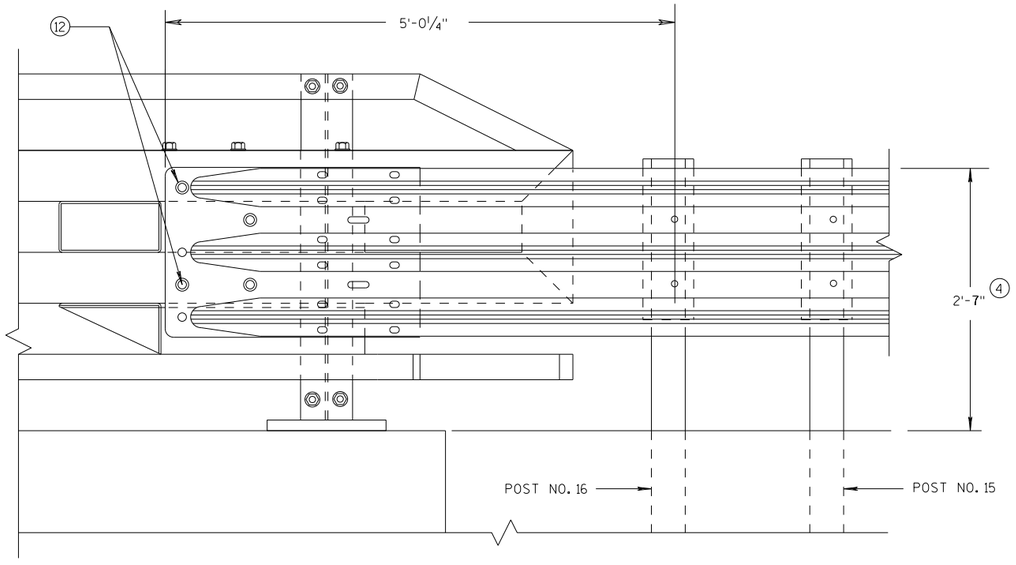
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S.D.D. 14 B 45-5j



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
DEPARTMENT OF TRANSPORTATION

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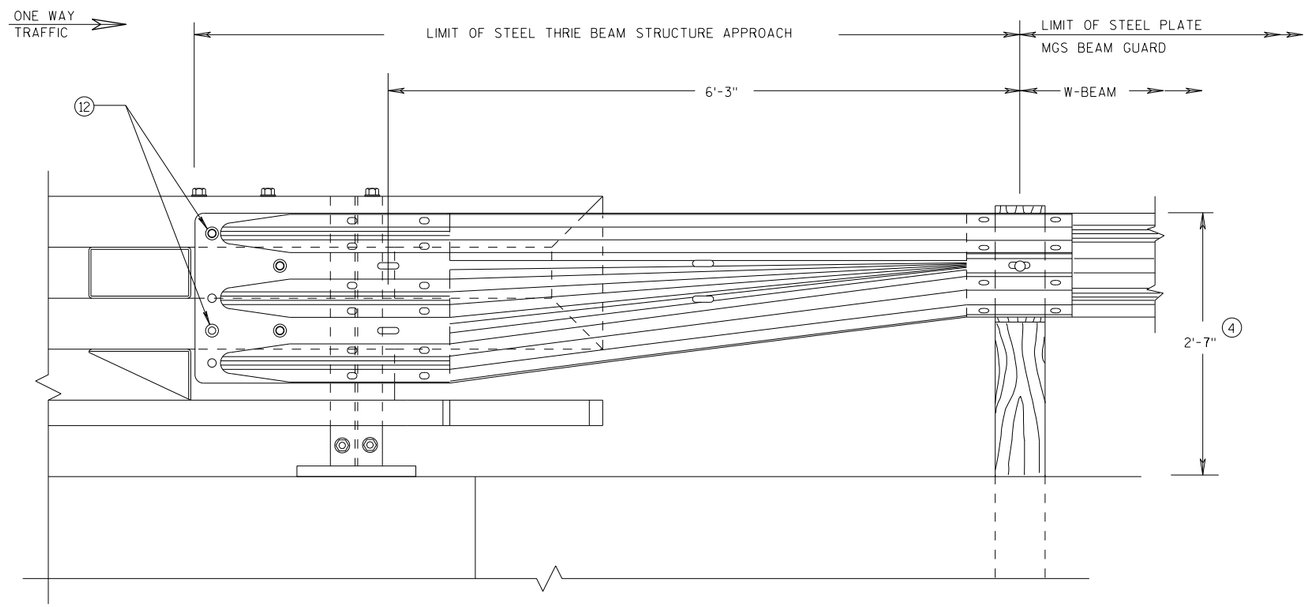
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S.D.D. 14 B 45-5k

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



FRONT VIEW

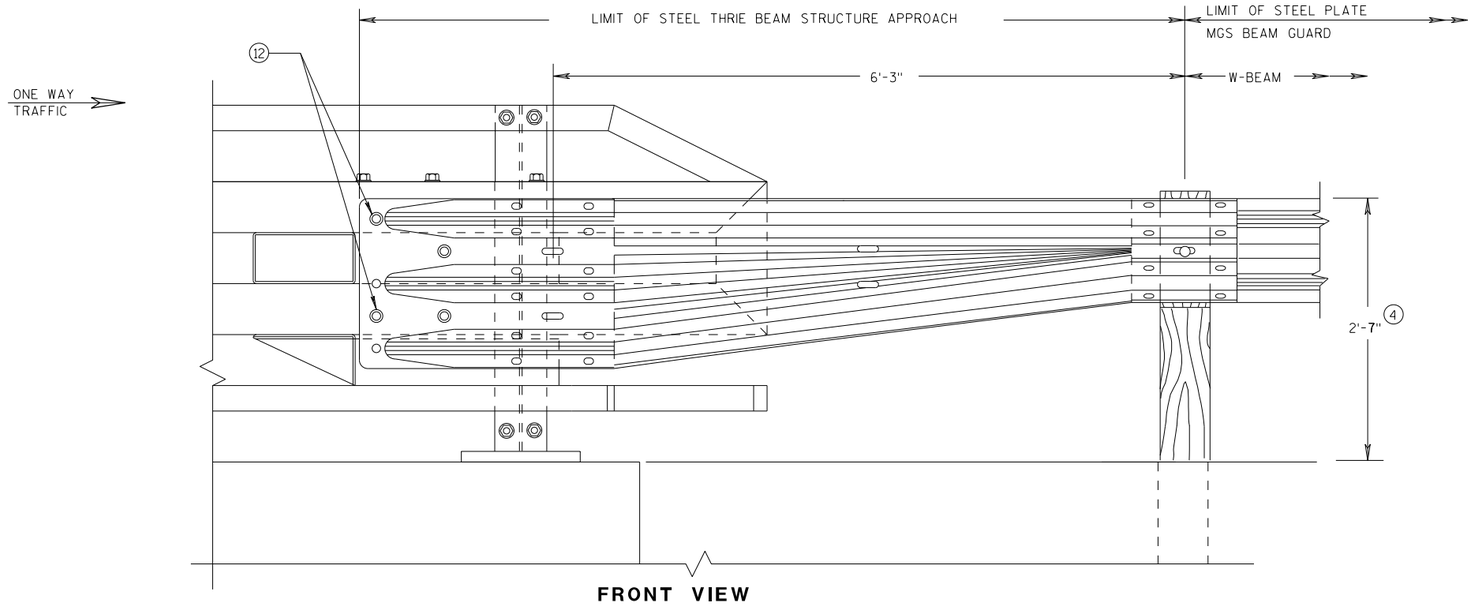
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(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)

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UNIT SUPERVIS

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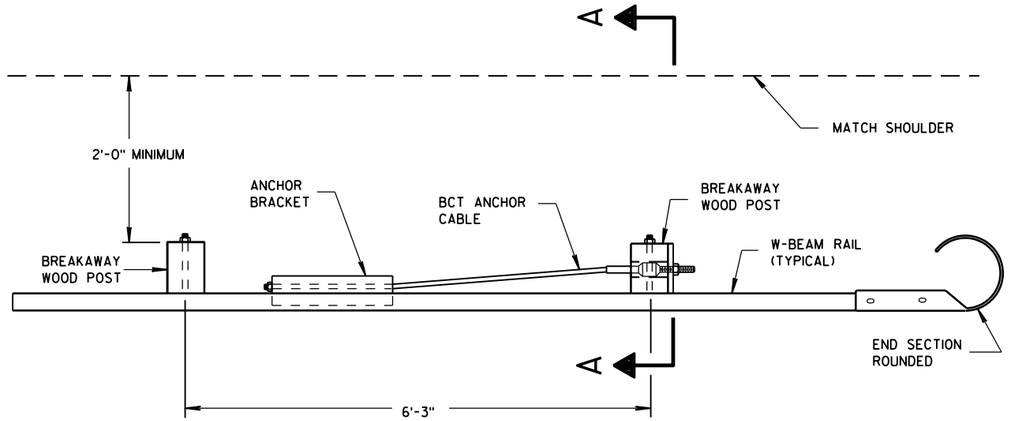
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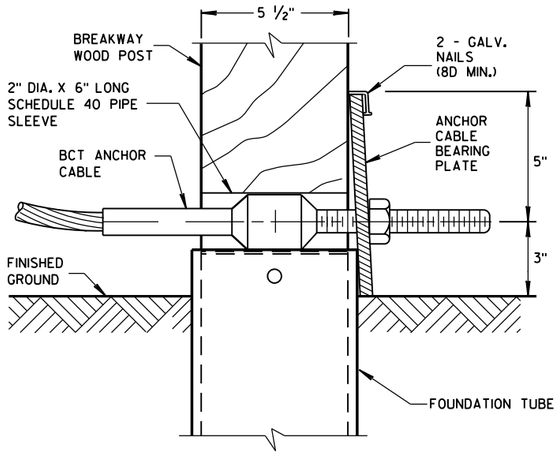
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S.D.D. 14 B 45-5L

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



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.

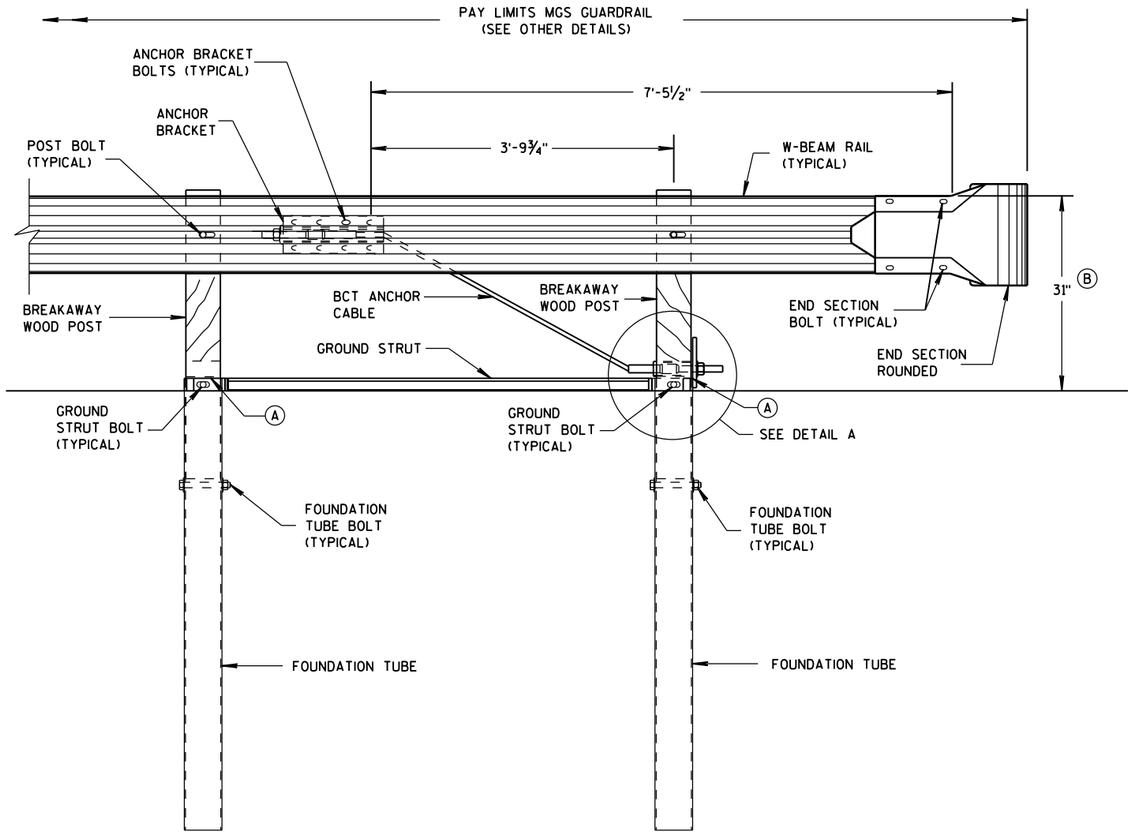
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

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.

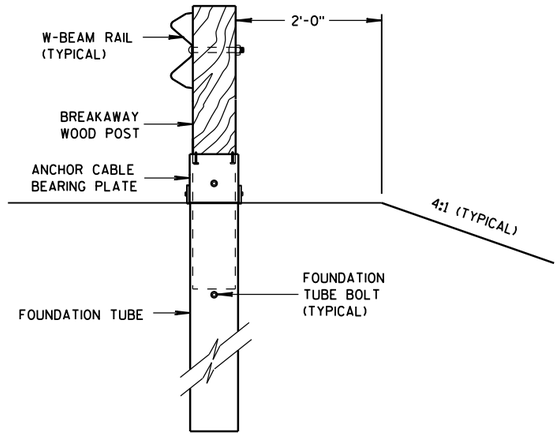
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

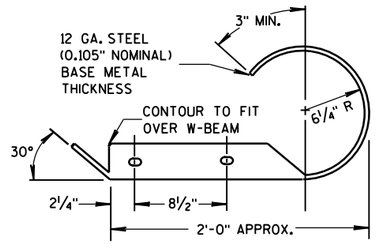


FRONT VIEW

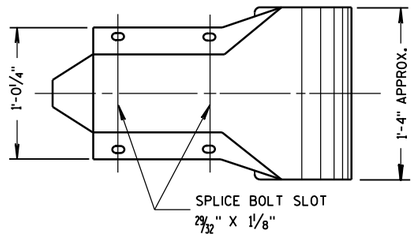
END RAIL DETAIL



SECTION A-A



PLAN VIEW



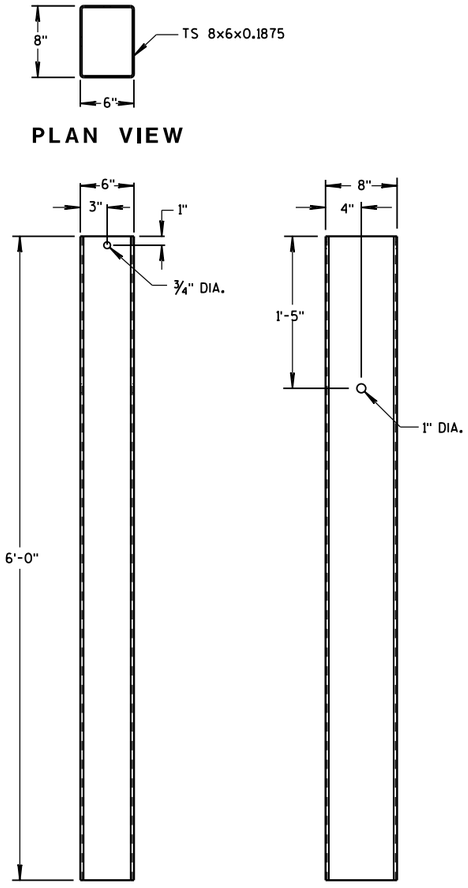
FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

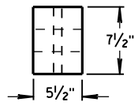
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S.D.D. 14 B 47-2a



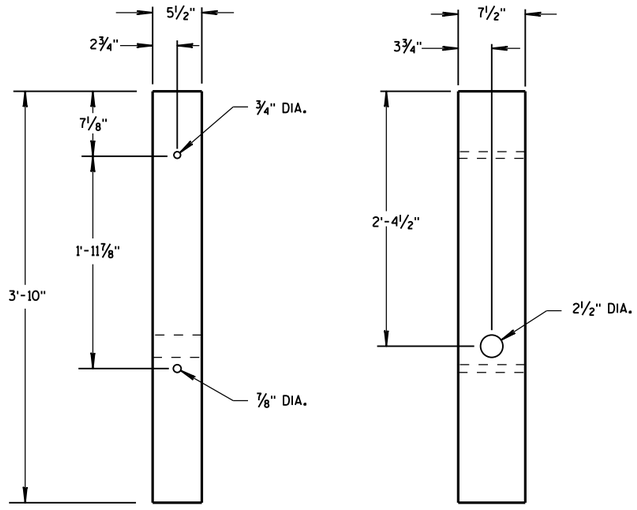
PLAN VIEW

FRONT VIEW SIDE VIEW

FOUNDATION TUBE



PLAN VIEW



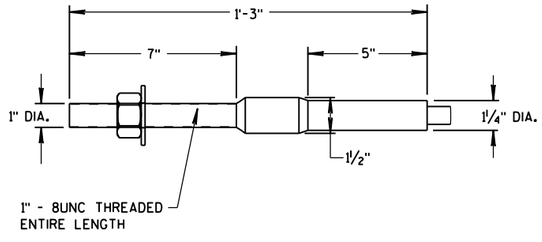
FRONT VIEW SIDE VIEW

BREAKAWAY WOOD POST

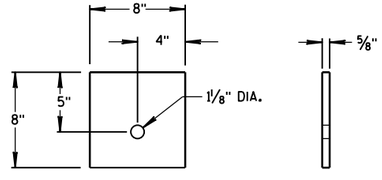
GENERAL NOTES

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



SIDE VIEW FRONT VIEW

ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

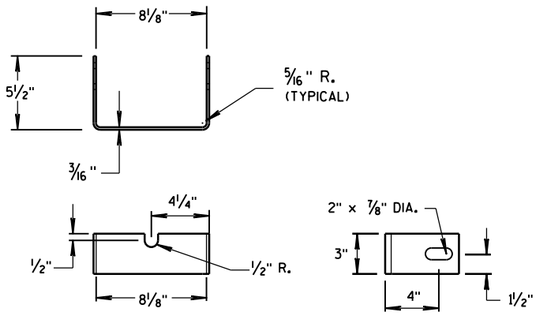
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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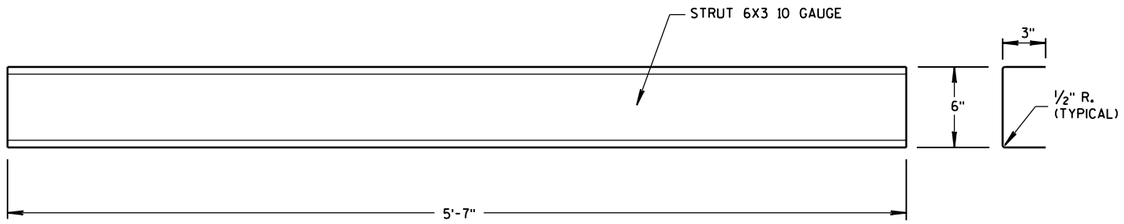
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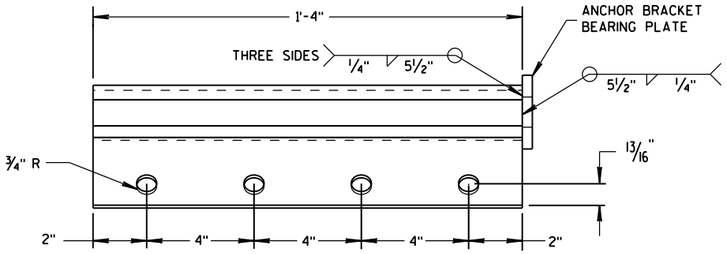
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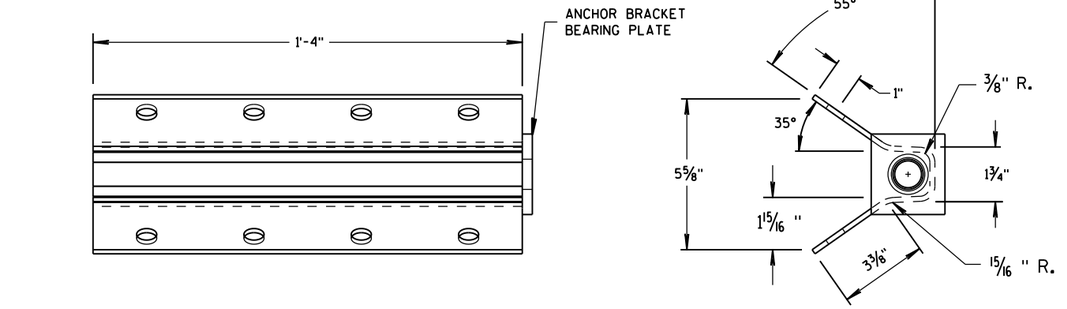


YOKE DETAIL

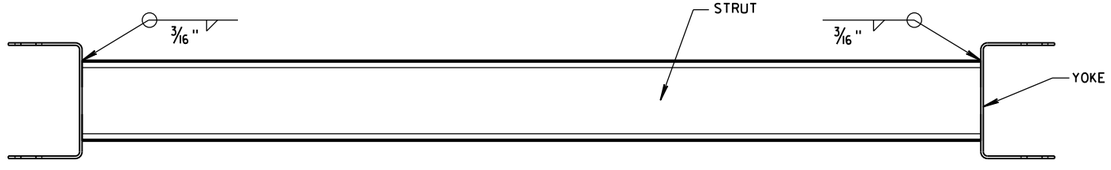


STRUT DETAIL

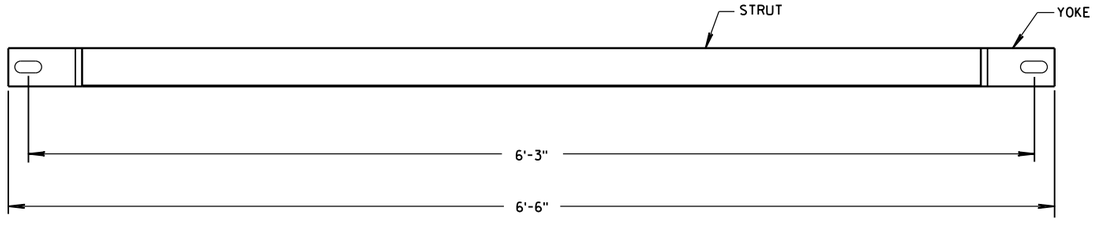




ANCHOR BRACKET

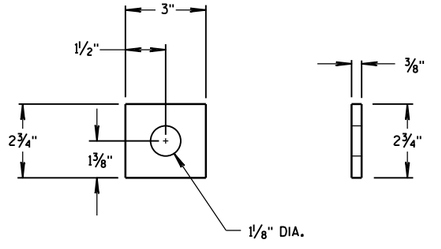


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

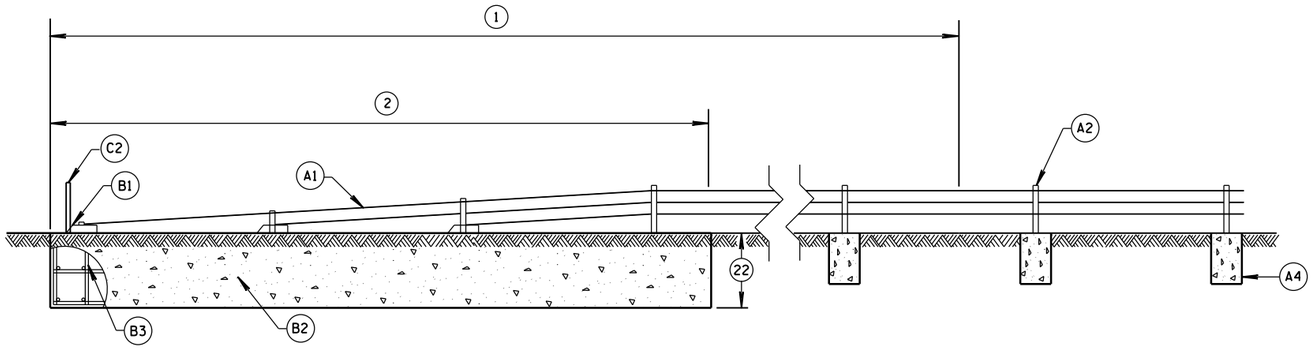
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

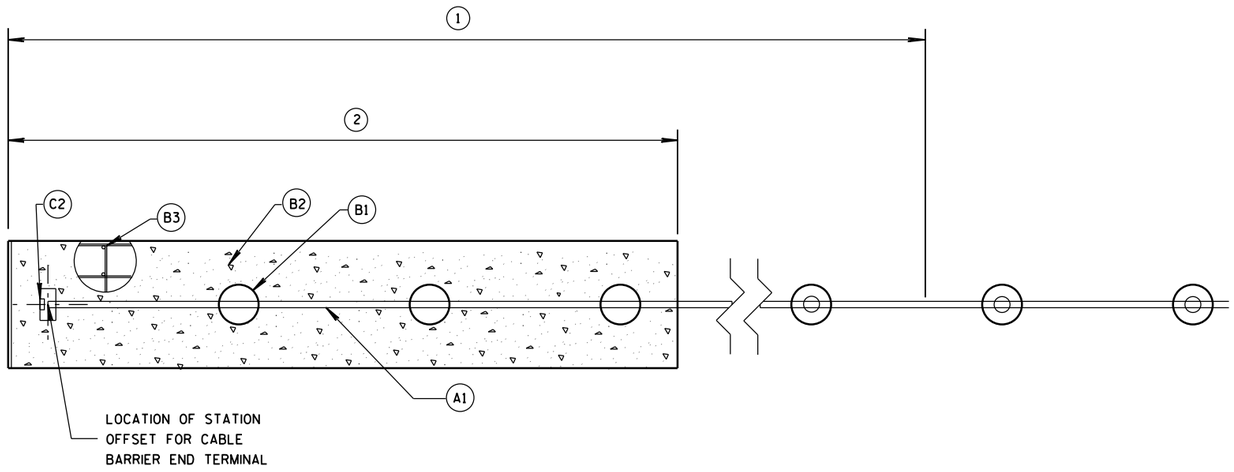
APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 47-2c

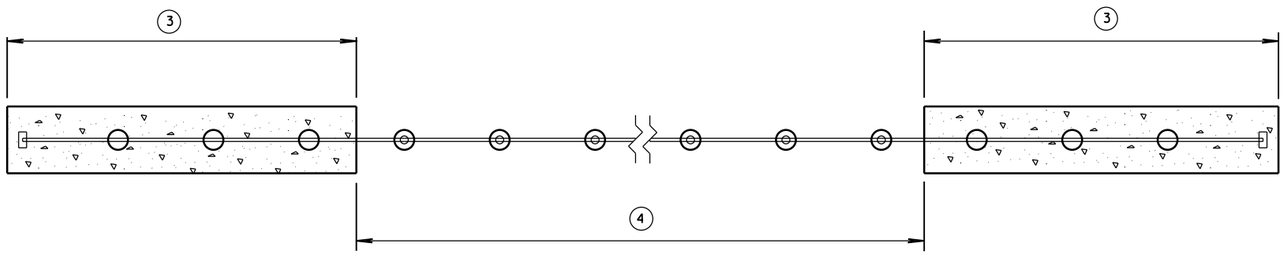


PROFILE VIEW



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

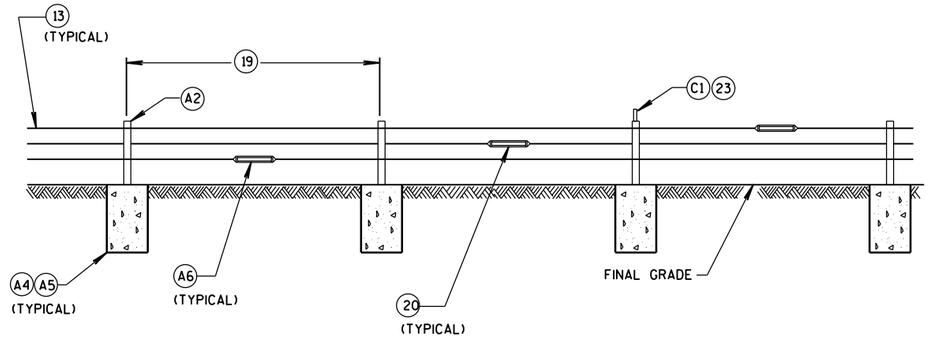
(4) CABLE BARRIER AND LINE POSTS

CABLE BARRIER TYPE 1 LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

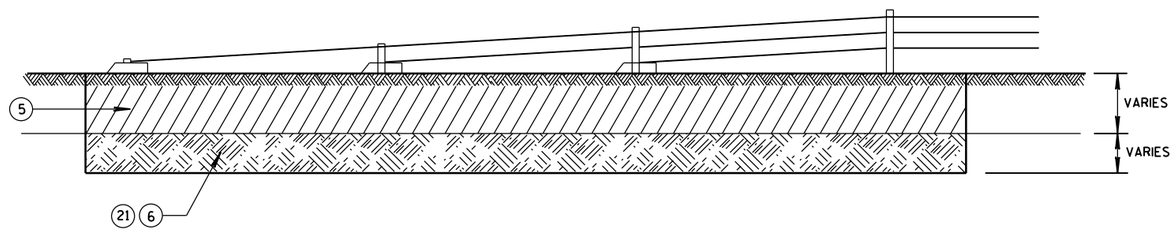
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S.D.D. 14 B 52-1a



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.

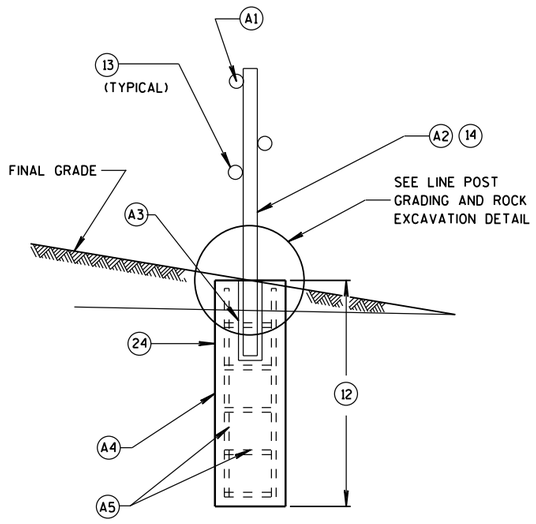
(20) STAGGER TURNBUCKLES (TYPICAL).

(21) SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.

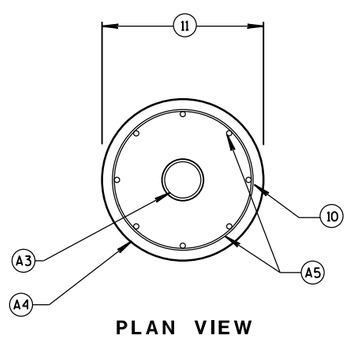
(22) IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENATION ARE ACCEPTABLE.

(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.

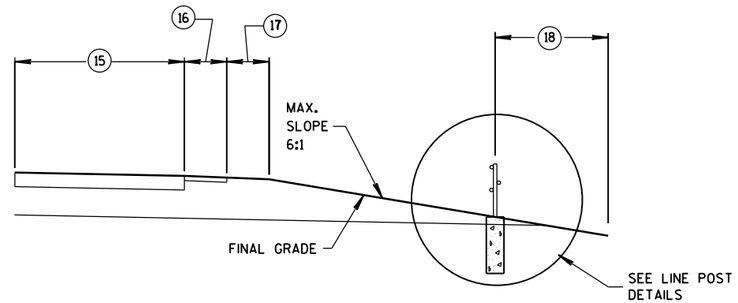


CROSS SECTION

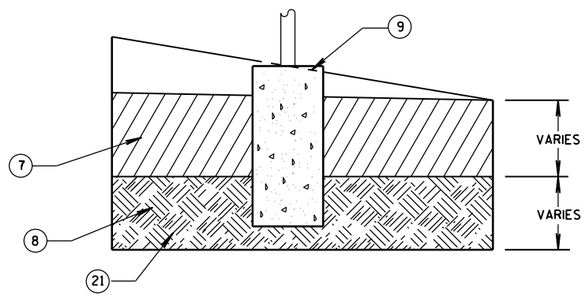


PLAN VIEW
(LINE POST AND CABLES NOT SHOWN)

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

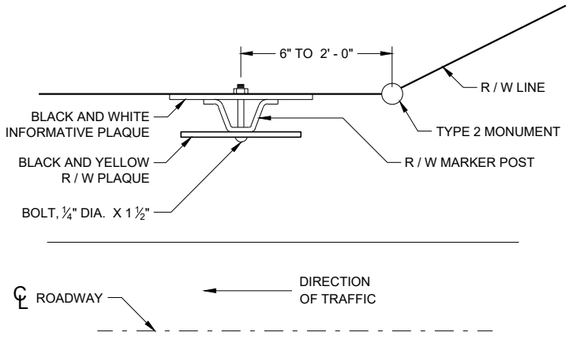
APPROVED
June. 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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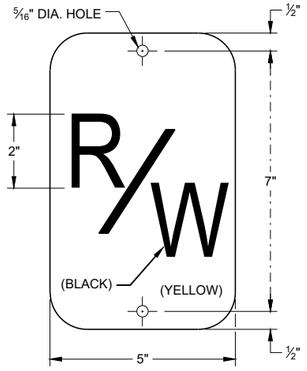
S.D.D. 14 B 52-1b

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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

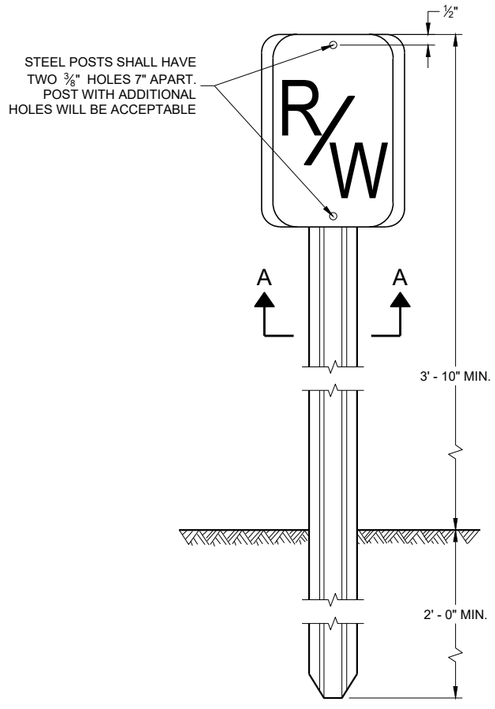
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

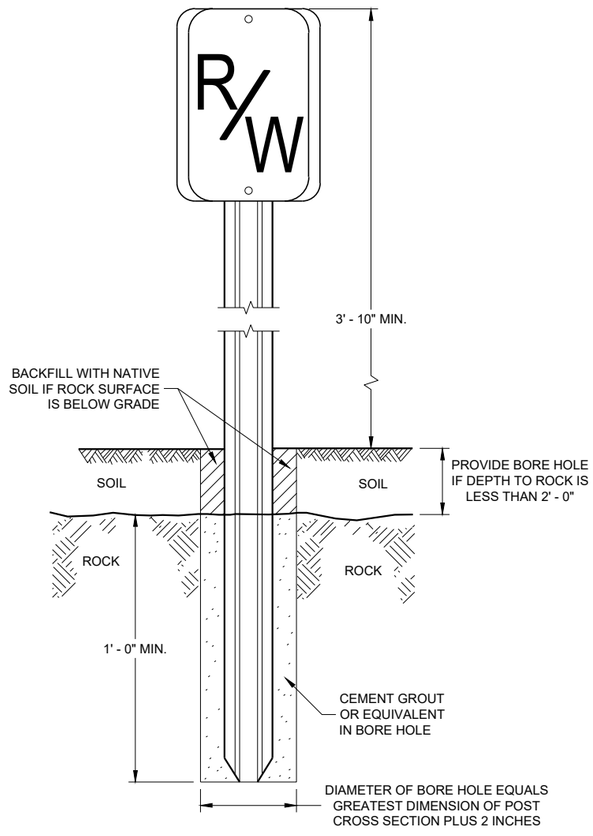
THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFROMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. "R/W" AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

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.

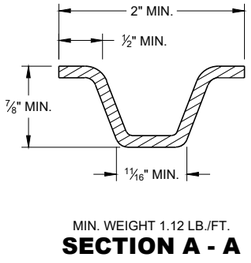
(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' - 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL THE BORE HOLE WITH CEMENT GROUT OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



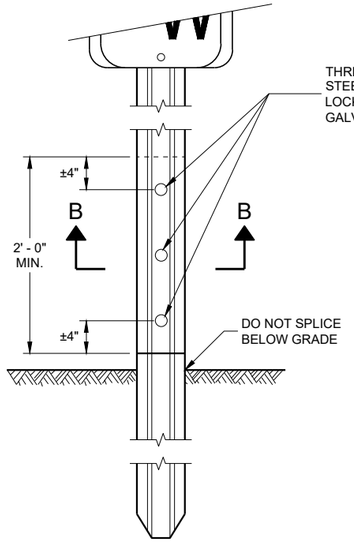
FRONT VIEW
STEEL MARKER POST



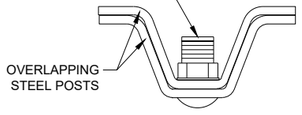
FRONT VIEW
ROCK INSTALLATION (1)



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

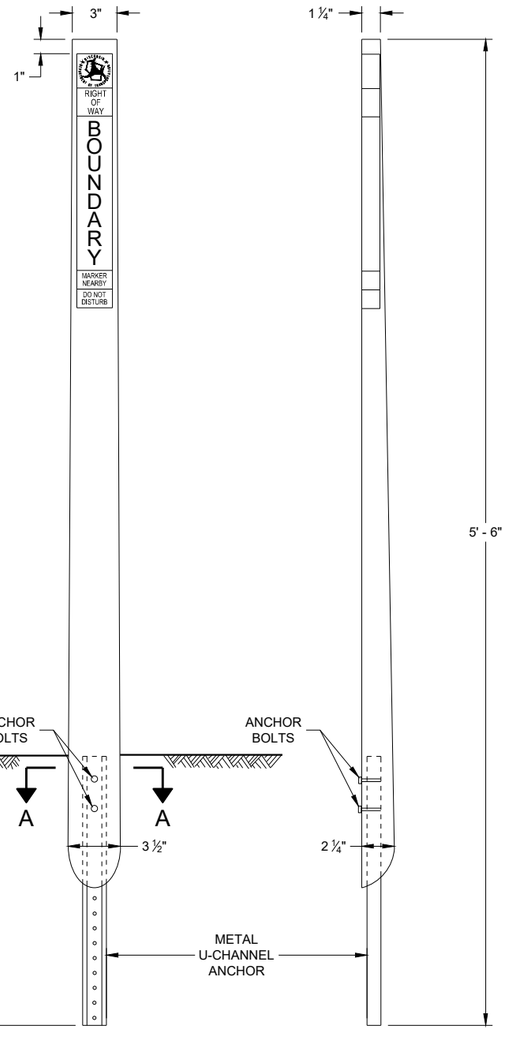
FHWA

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SDD 15A01 - 13a

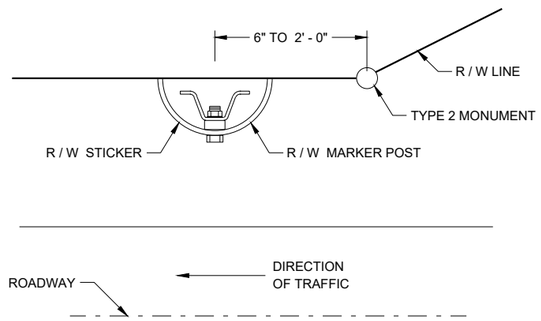
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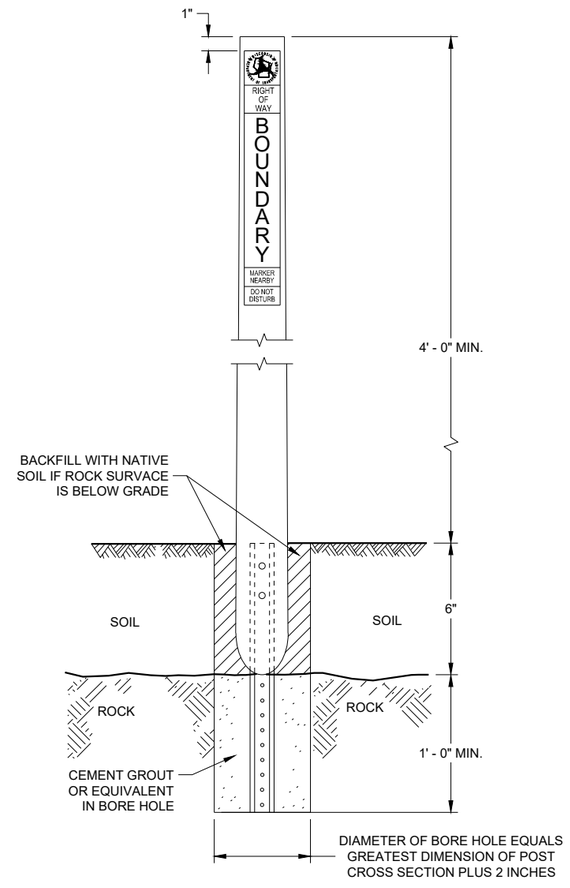


FRONT VIEW **SIDE VIEW**

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.

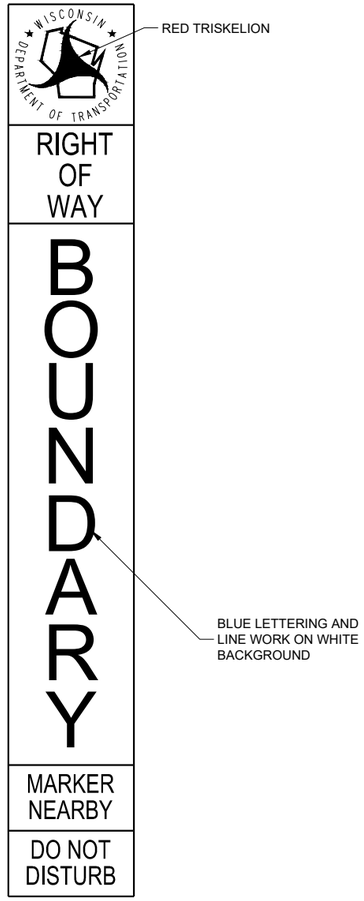
THE RIGHT-OF-WAY STICKER DIMENSIONS SHALL BE 2 ¼" X 17" AND THE STICKER SHALL BE MADE OF A NON-RELECTIVE VINYL MATERIAL. THE RIGHT-OF-WAY STICKER SHALL FACE THE ROADWAY.

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.

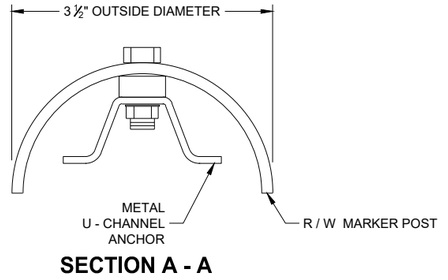
② IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 4' - 0" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR.

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

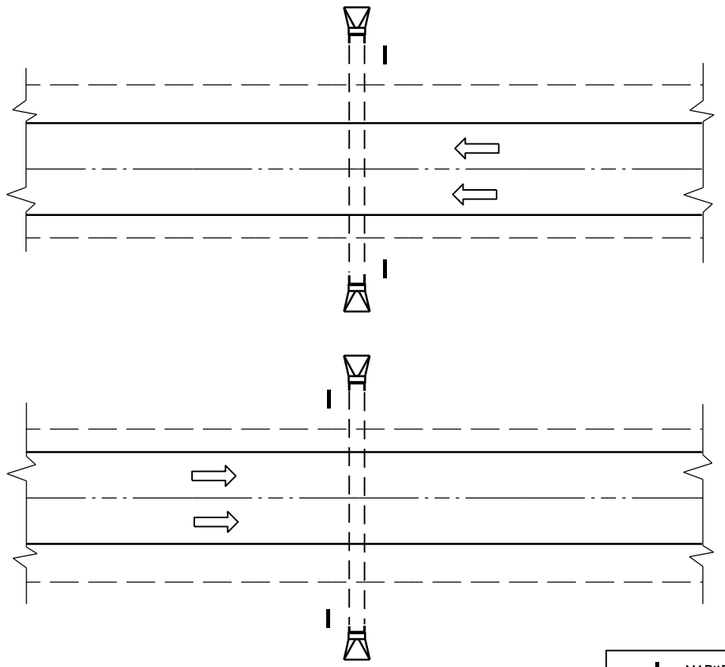
FHWA

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SDD15A01 - 13b

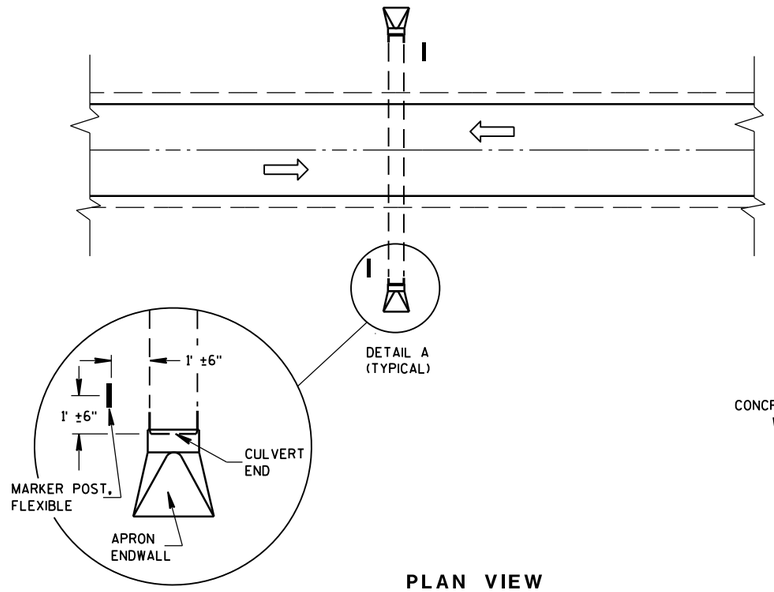
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SDD15A01 - 13b



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

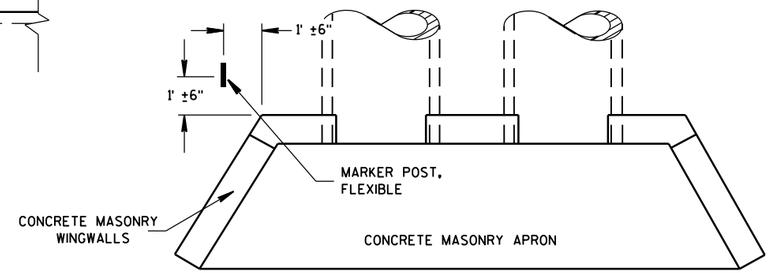
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

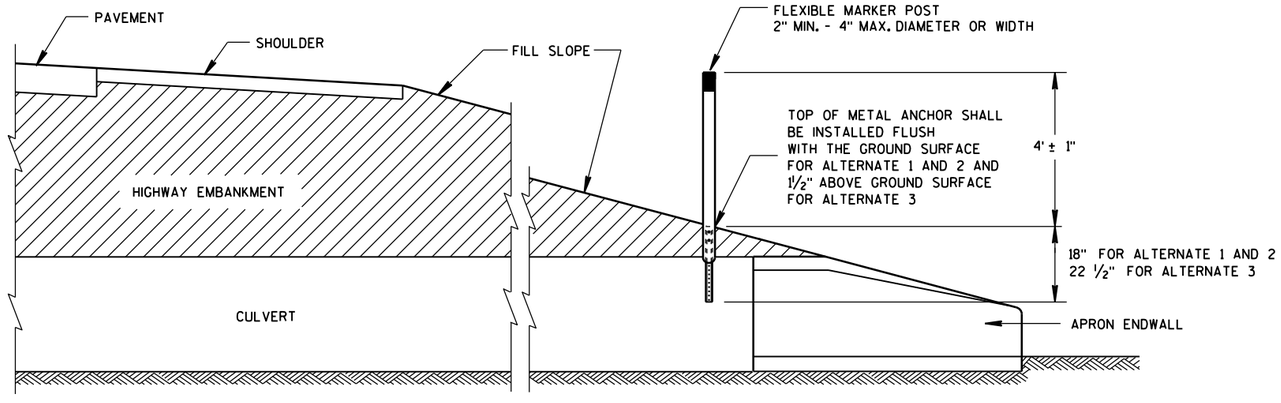
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

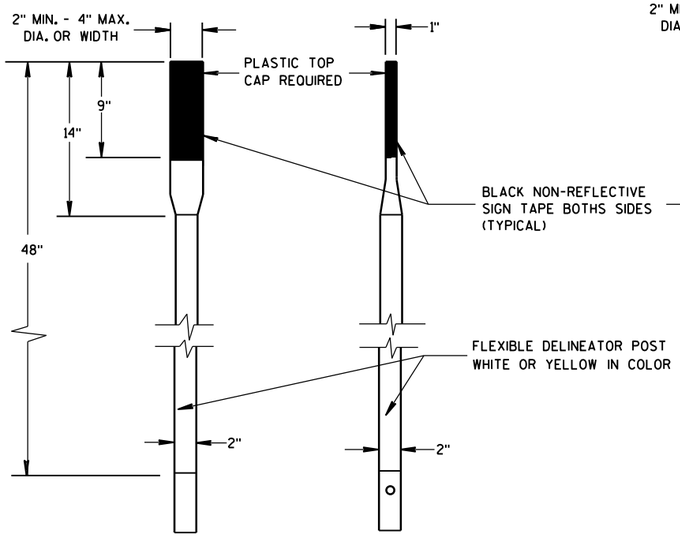
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

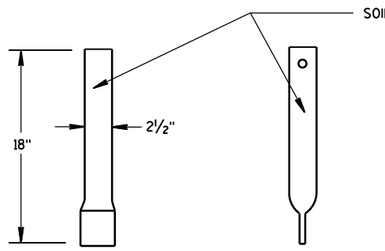
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S.D.D. 15 A 3-2a

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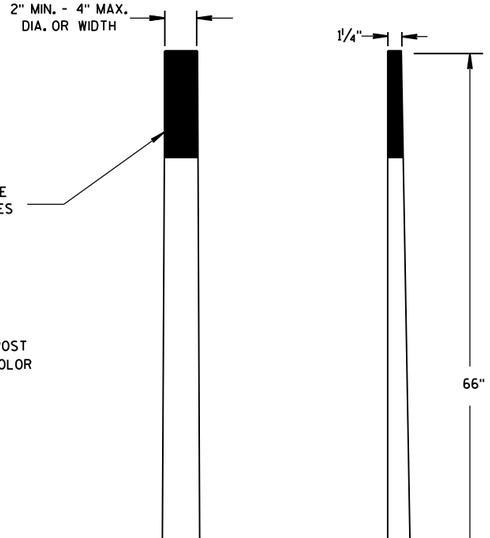
S.D.D. 15 A 3-2a





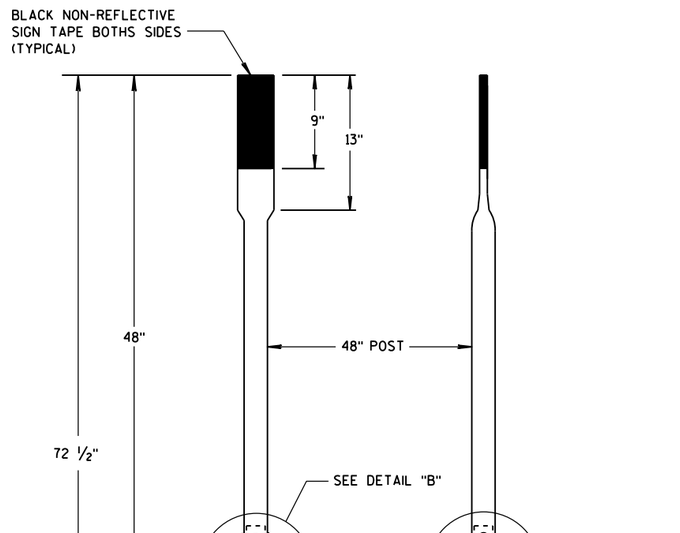
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

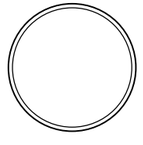
ALTERNATE 2



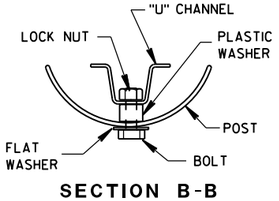
FRONT VIEW SIDE VIEW

ALTERNATE 3

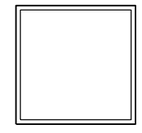
FLEXIBLE MARKER POSTS



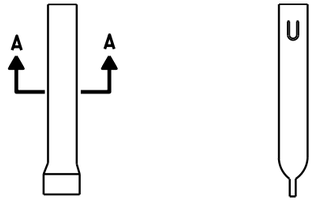
SECTION A-A



SECTION B-B

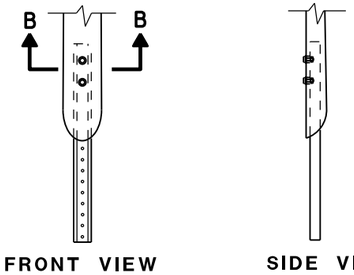


SECTION C-C



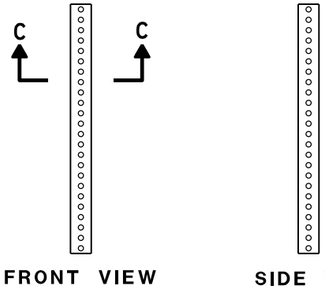
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

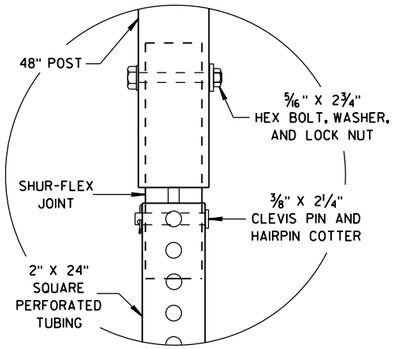
ALTERNATE 2



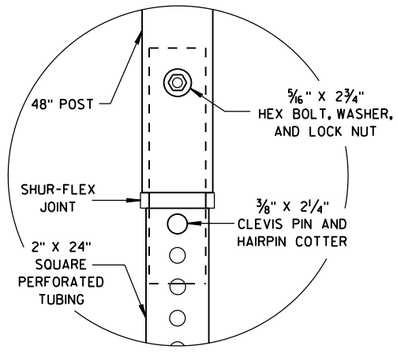
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

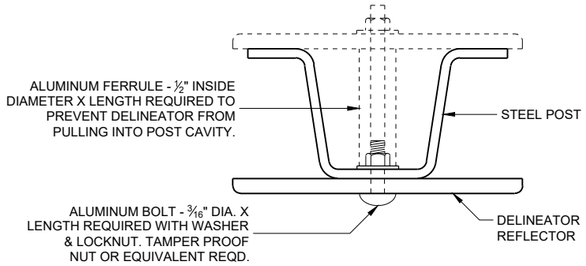
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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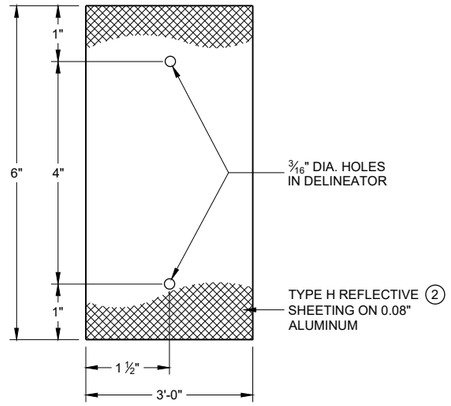
S.D.D. 15 A 3-2b

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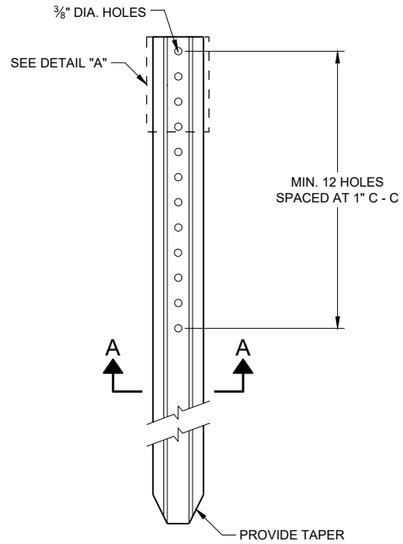
S.D.D. 15 A 3-2b



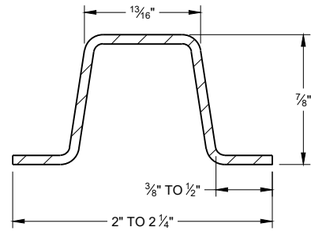
MOUNTING DETAIL FOR DELINEATOR REFLECTOR



DETAIL "A" 3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



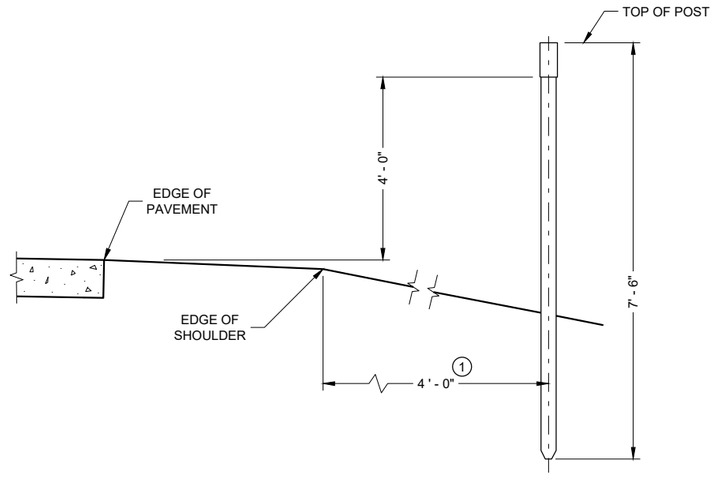
SECTION A - A

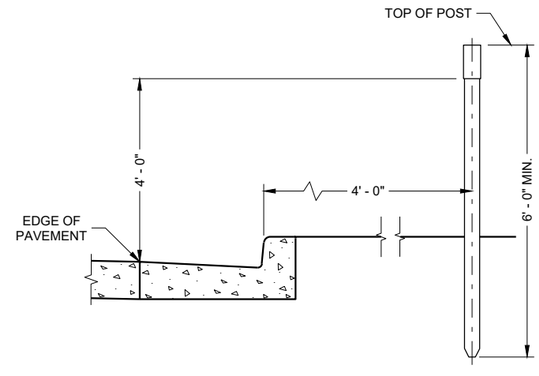
WEIGHT 1.12 LBS PER FT. \ 0.1 LB.

REFLECTOR SPACING TABLE

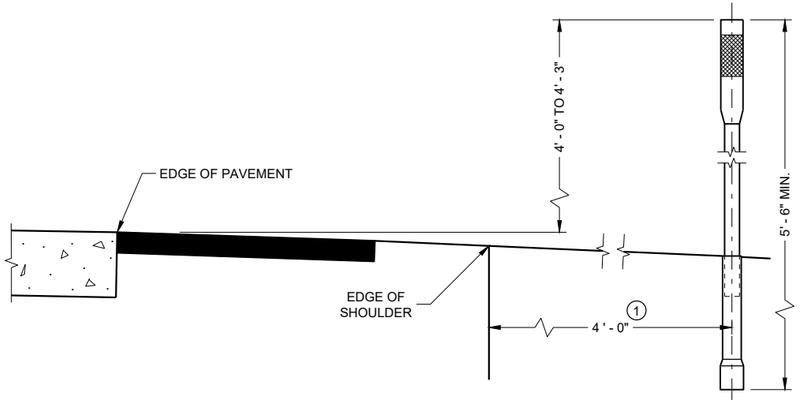
REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

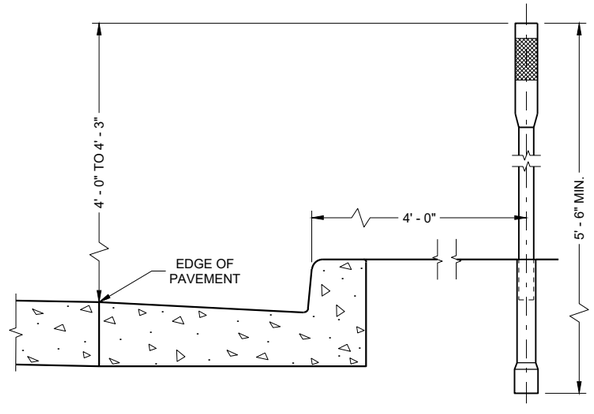
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER





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

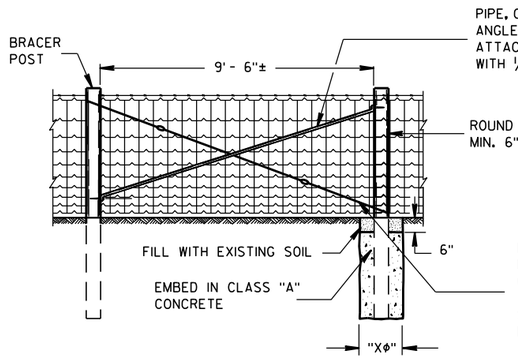
SDD 15A04 - 05c

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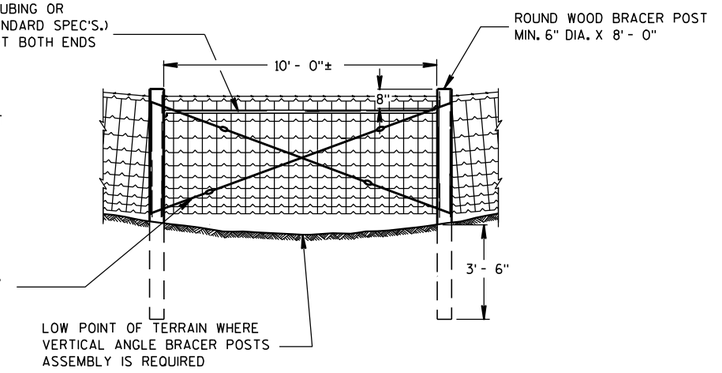
SDD 15A04 - 05c

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

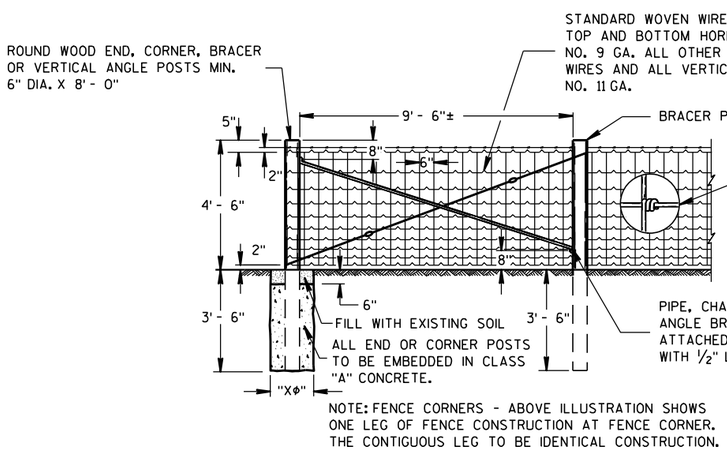
GENERAL NOTES

"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.

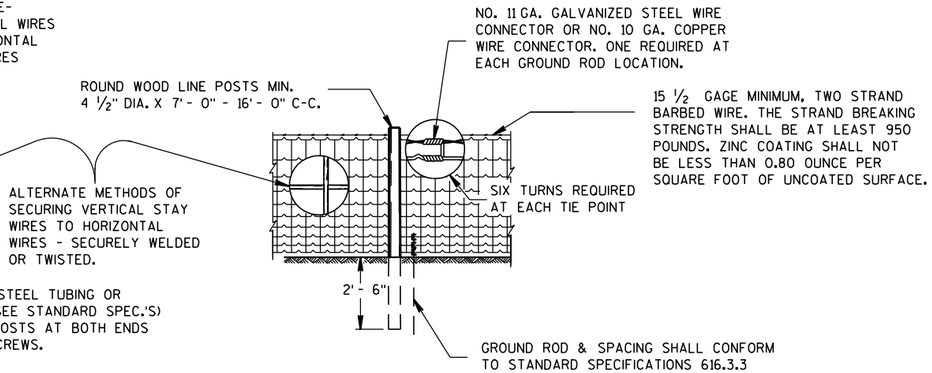
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED 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.



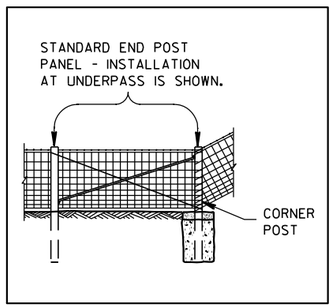
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

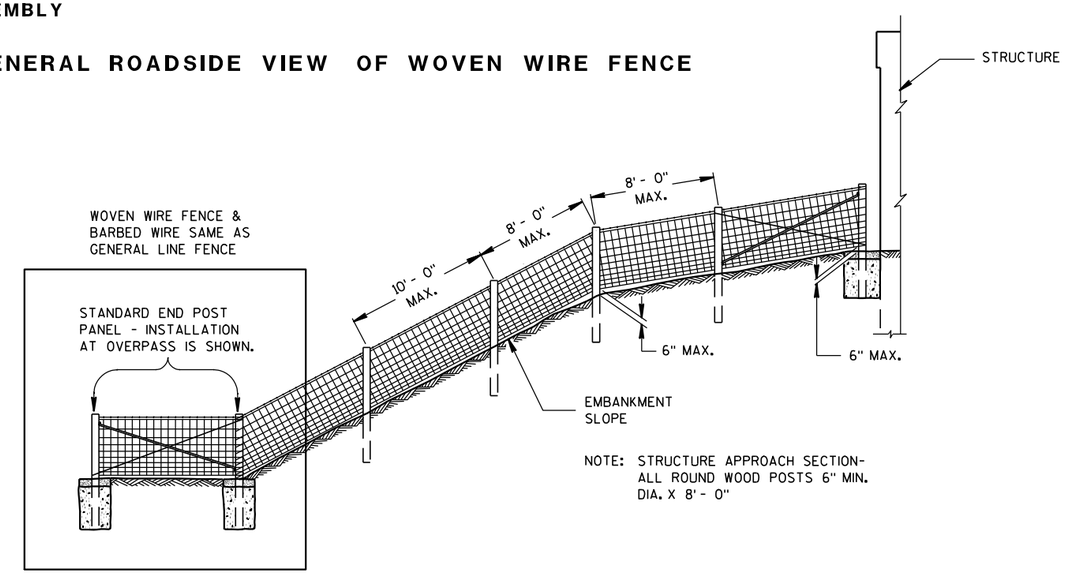


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

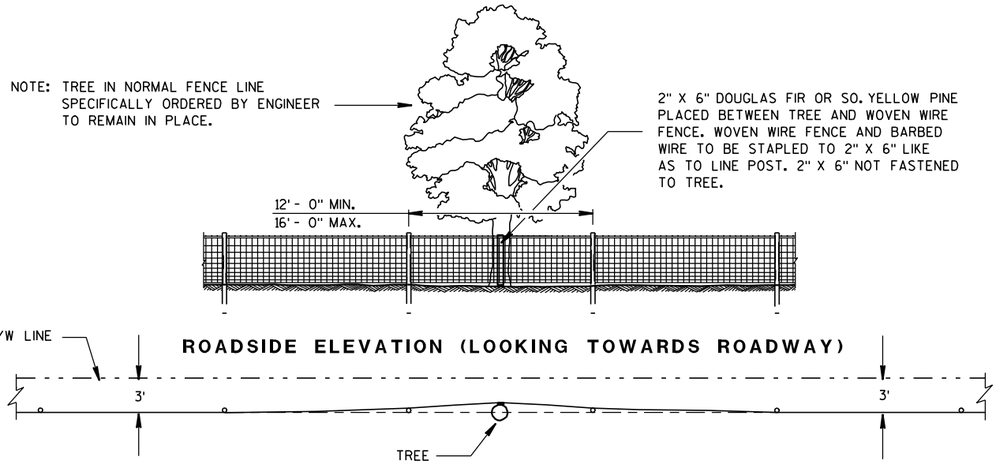
FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

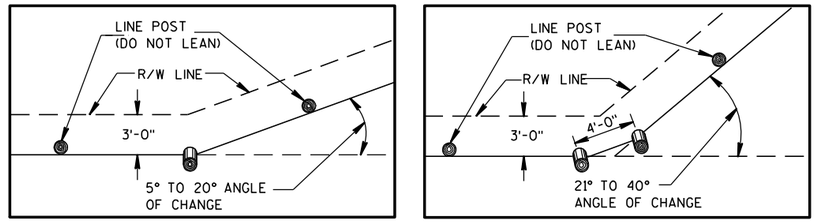
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S.D.D. 15 B 1-8a



PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



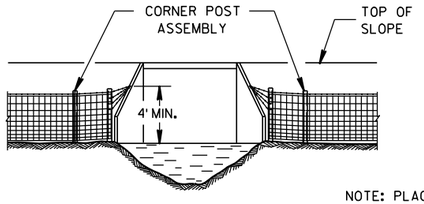
PLAN VIEW
SINGLE POST CORNER

PLAN VIEW
DOUBLE POST CORNER

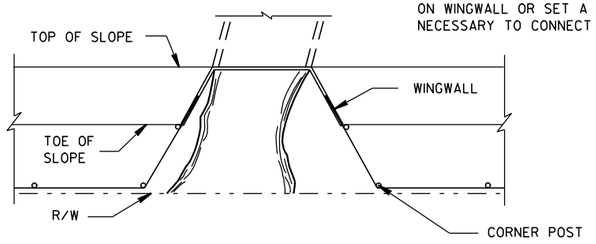
RIGHT OF WAY LINE CHANGE 40° AND LESS

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.

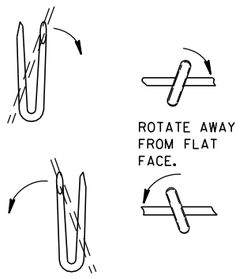
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



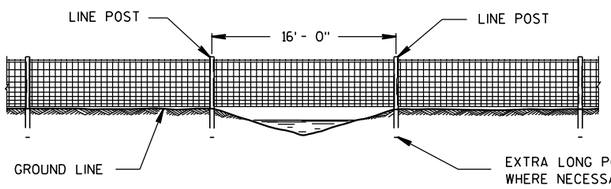
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



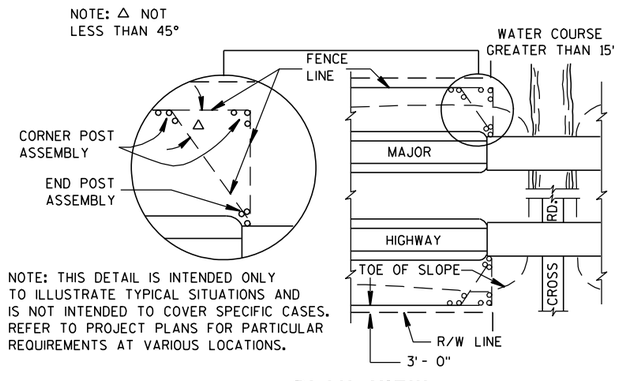
FENCE INSTALLATION TO WINGWALLS



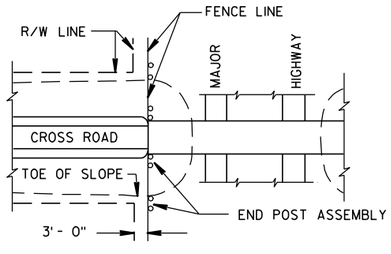
LINE POST



FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH

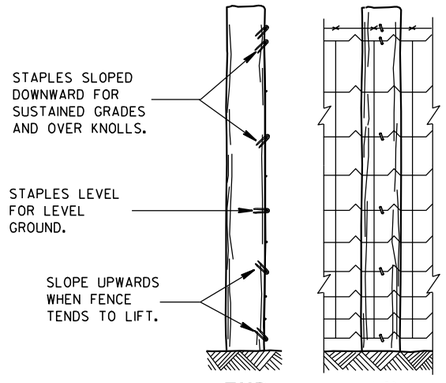


PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION **FARM SIDE ELEVATION**

FENCE MOUNTING DETAIL

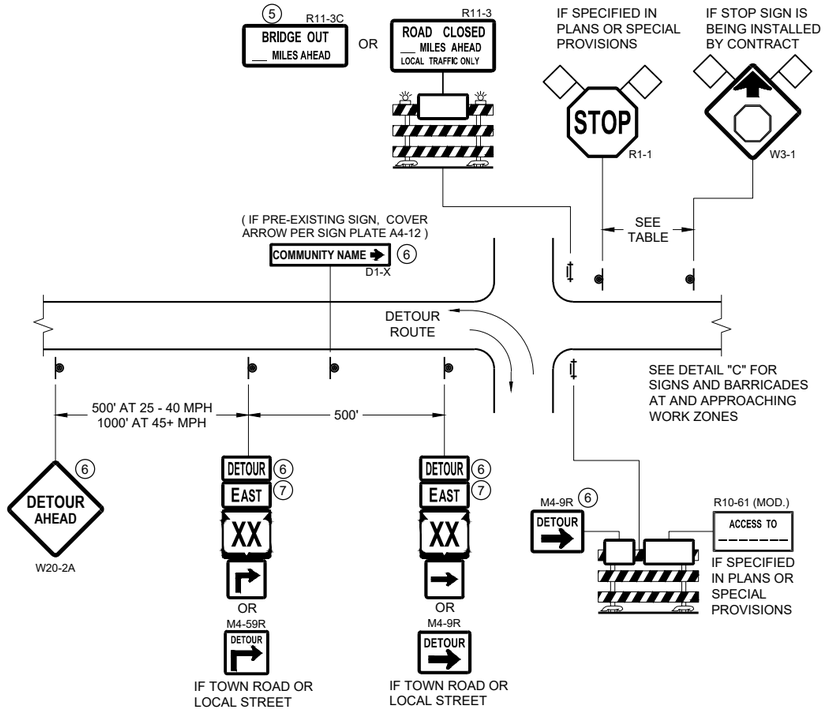
FENCE LOCATION AT STRUCTURES

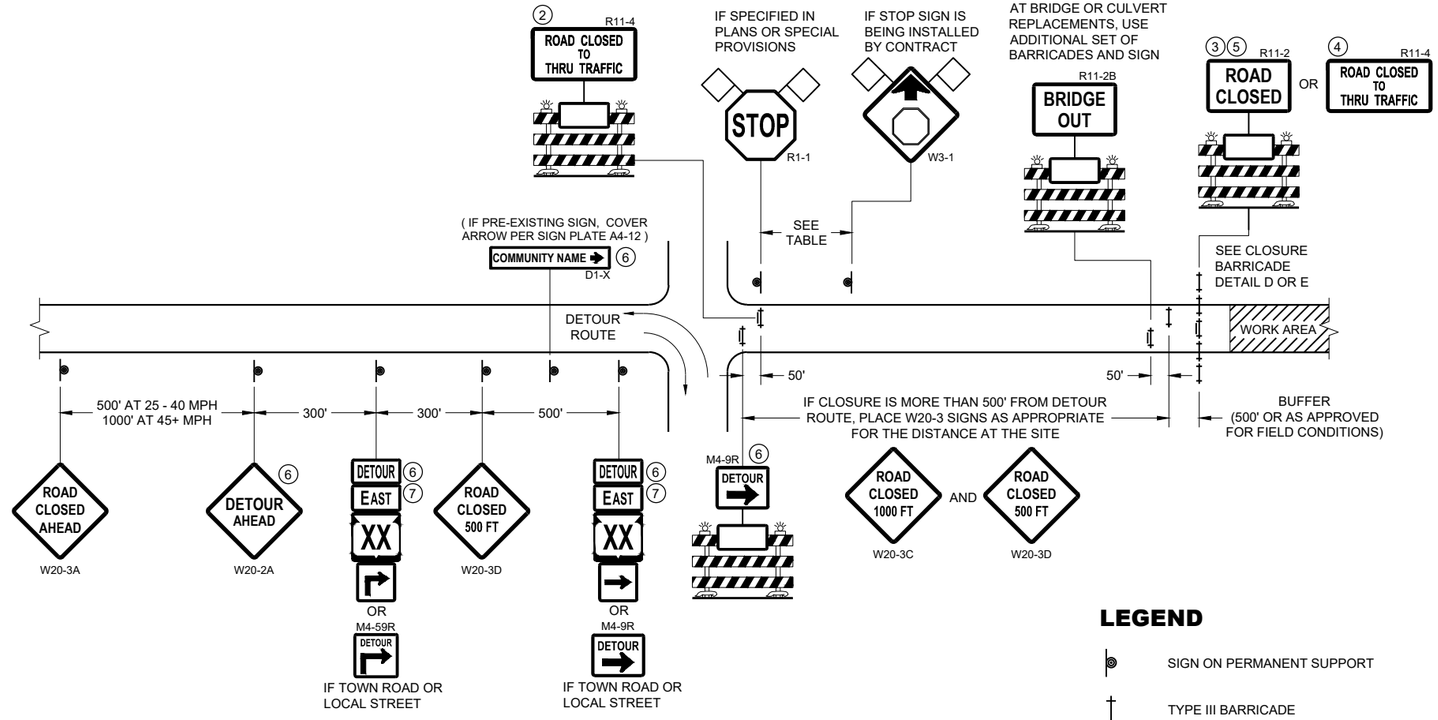
FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008 DATE
/S/ Jerry H. Z---
ROADWAY STANDARDS [270 ENGINEER
FHWA

6
S.D.D. 15 B 1-8b



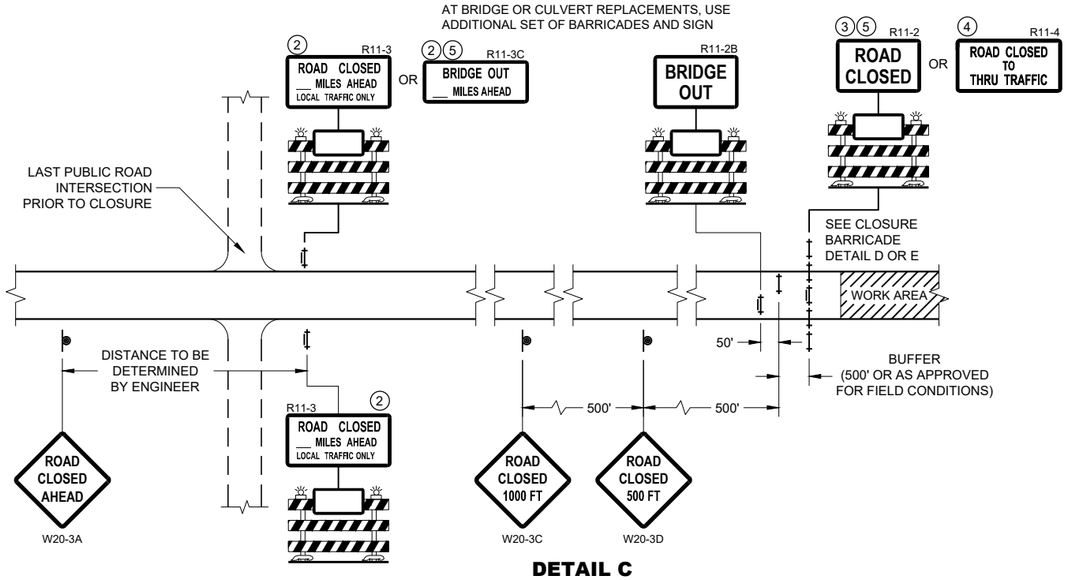


DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

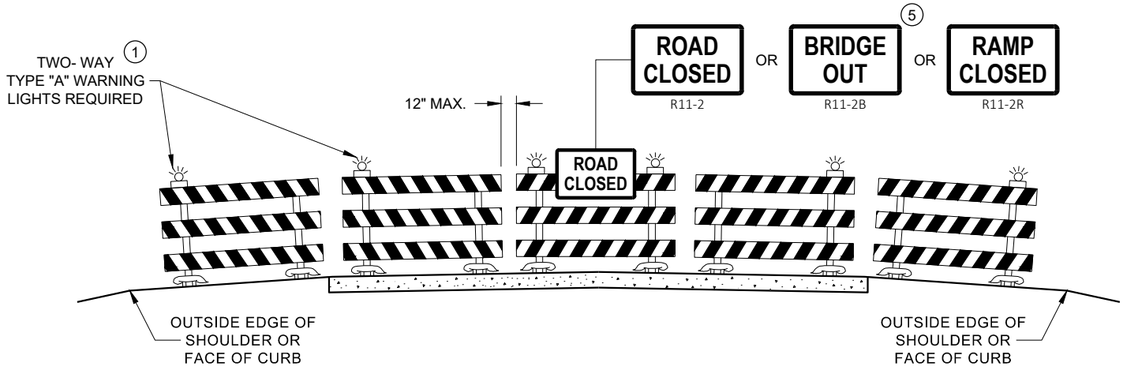
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

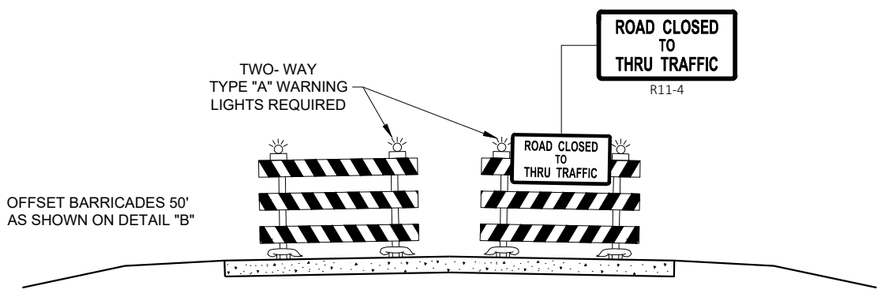
6

SDD 15C02 - 08a

SDD 15C02 - 08a



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
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C02 - 08b

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.

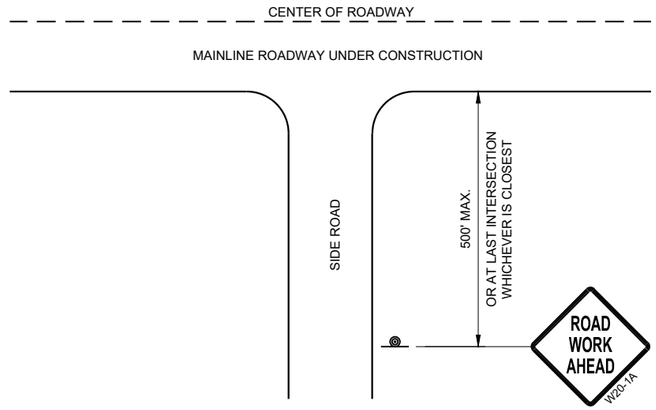
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS

** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



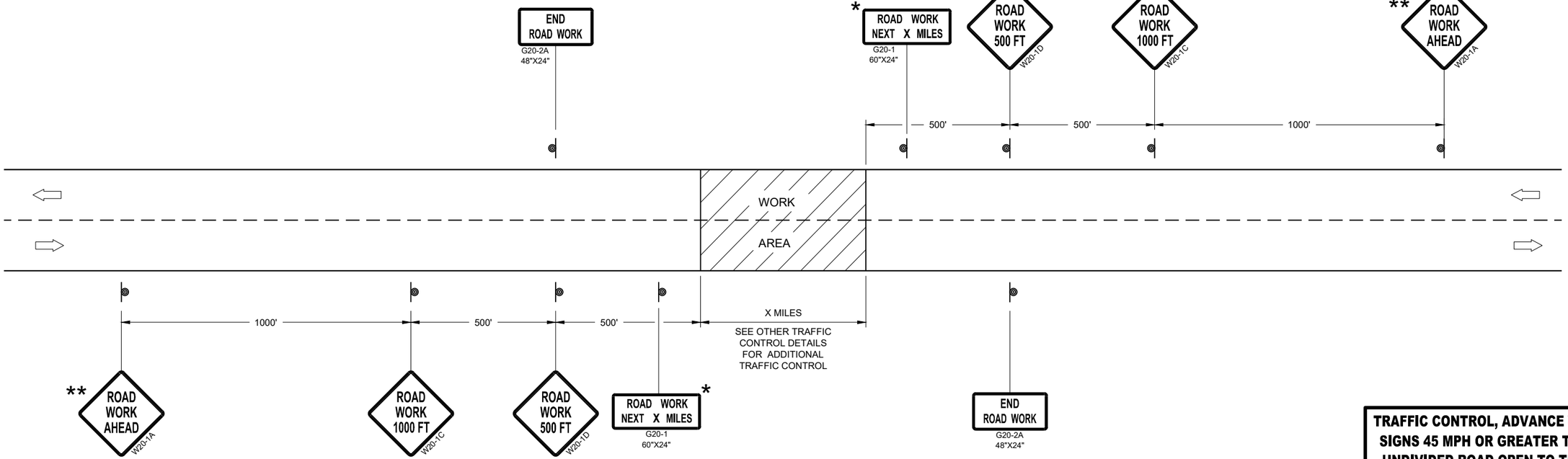
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

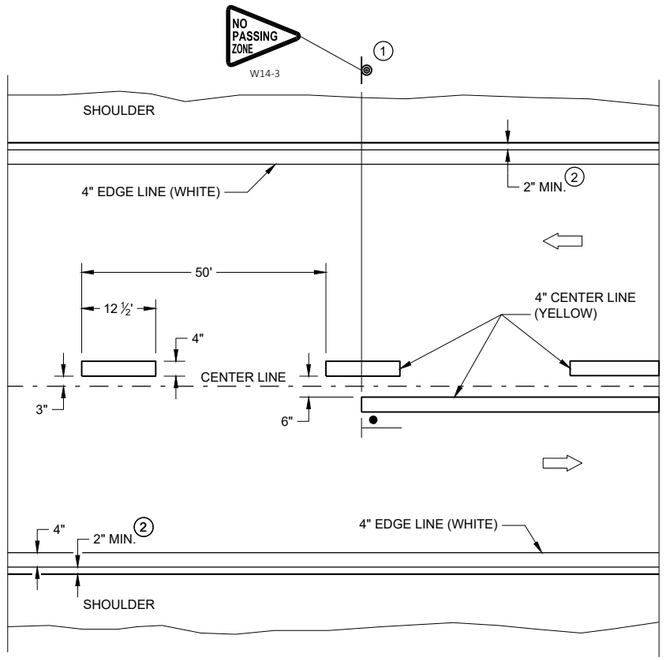
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

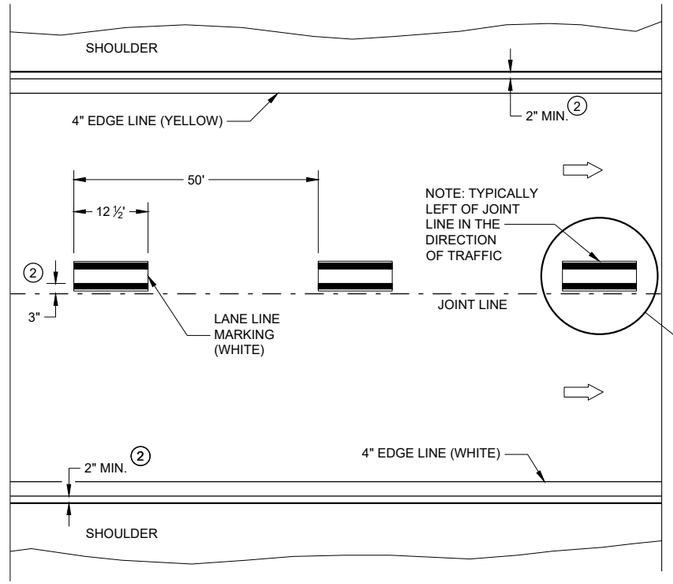
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SDD 15C04 - 05

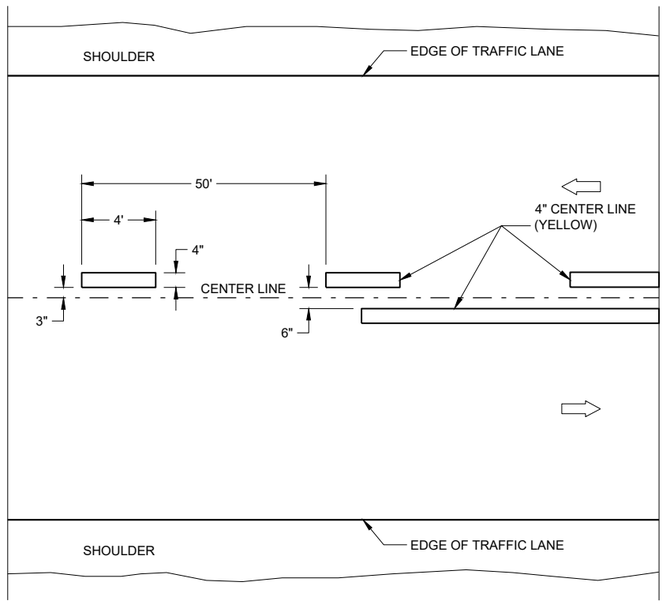


TWO WAY TRAFFIC

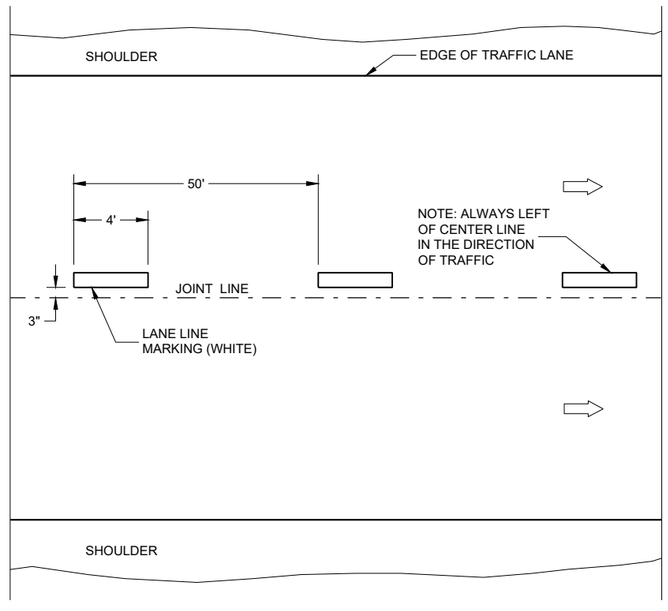


ONE WAY TRAFFIC

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.

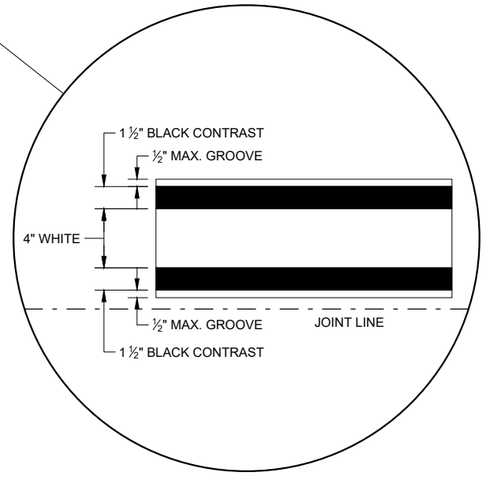
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

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

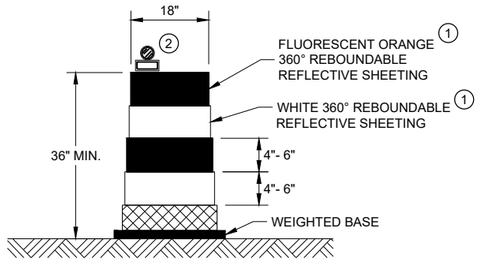
SDD 15C08 - 20a

SDD 15C08 - 20a

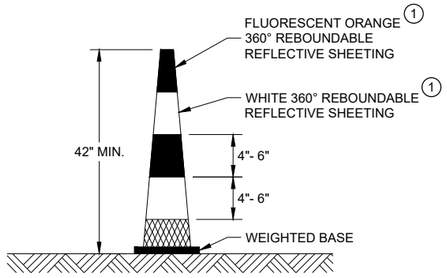
GENERAL NOTES

(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.

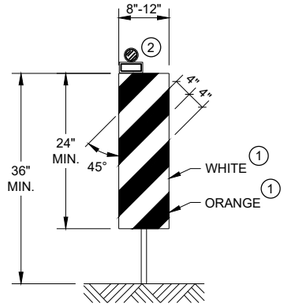


DRUM



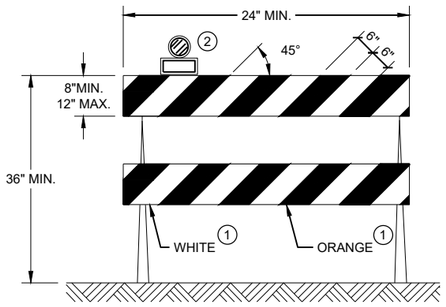
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



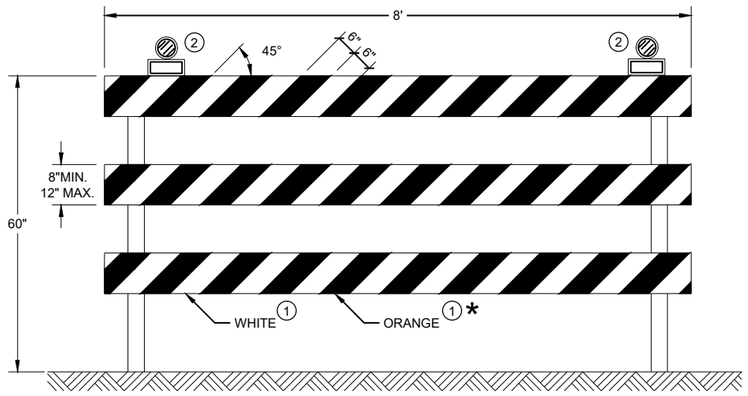
VERTICAL PANEL

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

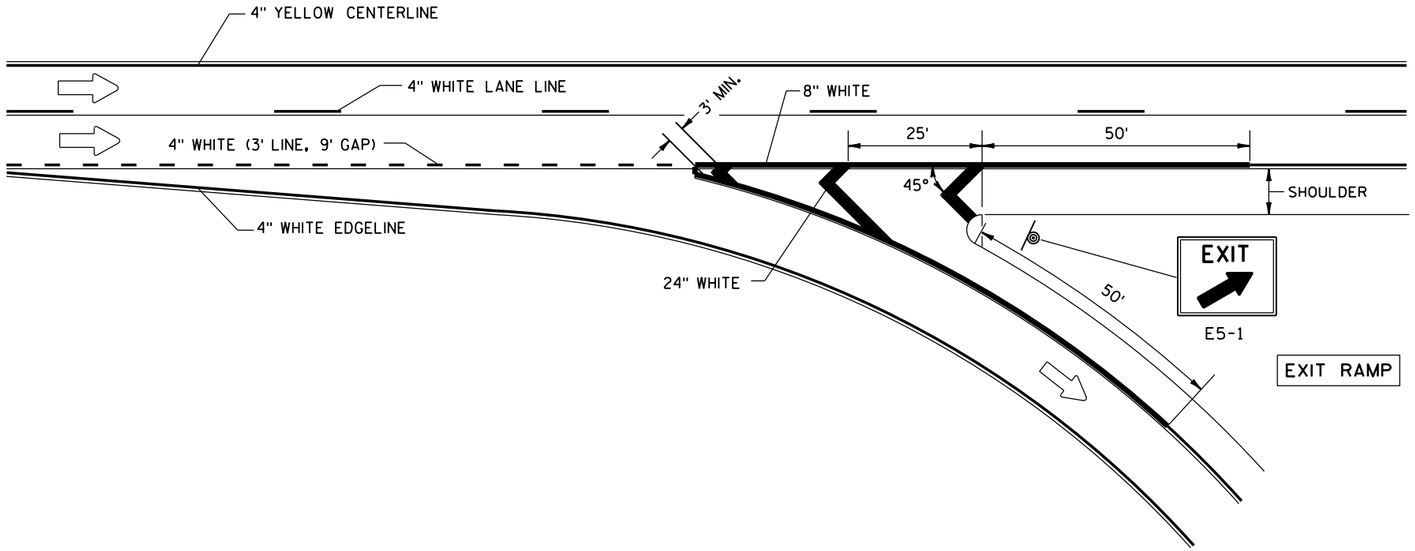
APPROVED
November 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C11 - 08b
SDD 15C11 - 08b



PAVEMENT MARKING FOR EXIT RAMP

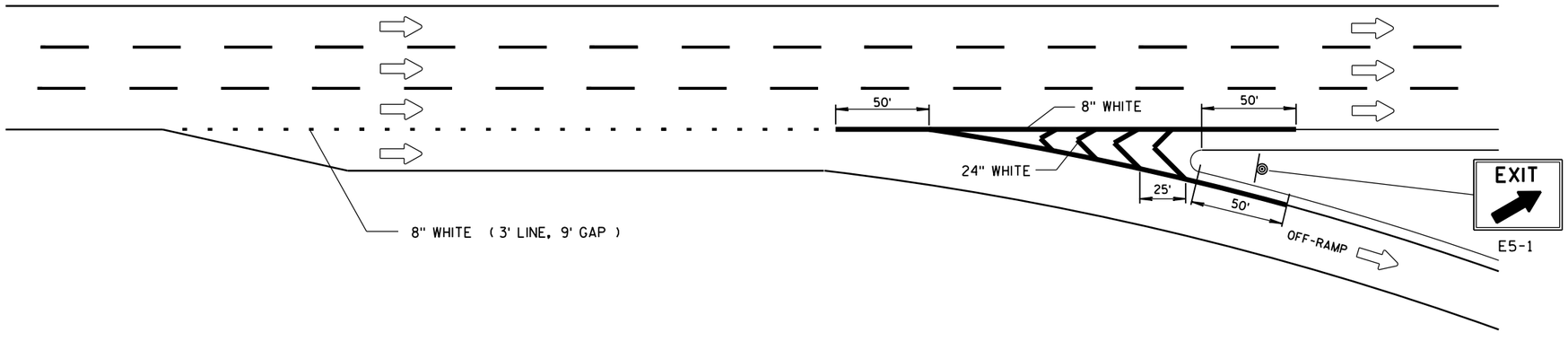
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

DIRECTION OF TRAVEL

SIGN ON PERMANENT SUPPORT



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

6

S.D.D. 15 C 31-3a

PAVEMENT MARKING (RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

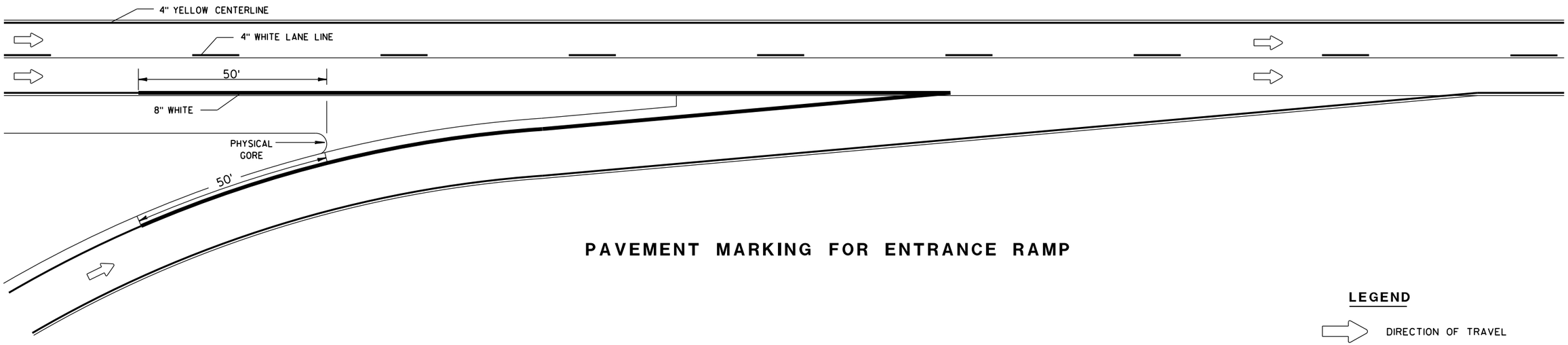
6

S.D.D. 15 C 31-3a

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

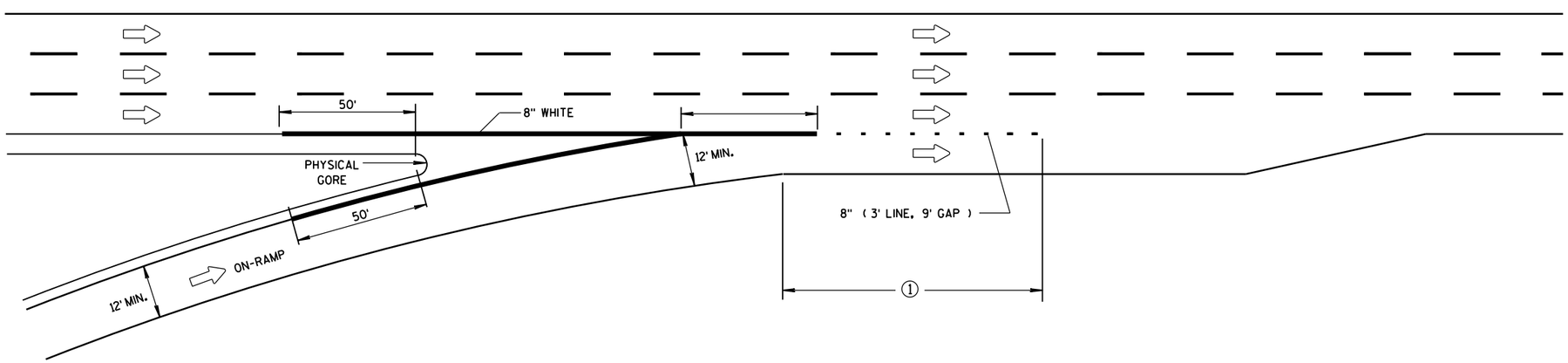
① ½ LENGTH OF FULL WIDTH ACCELERATION LANE.



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

277

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S.D.D. 15 C 31-3c

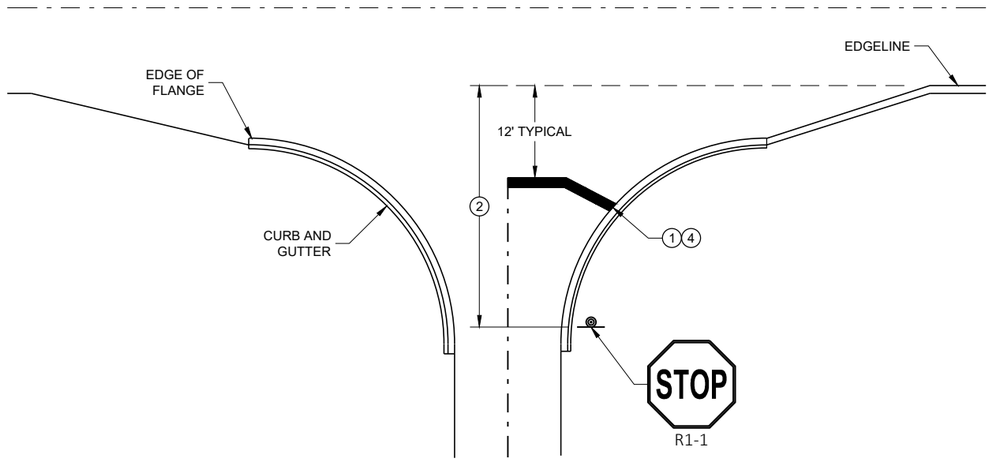
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S.D.D. 15 C 31-3c

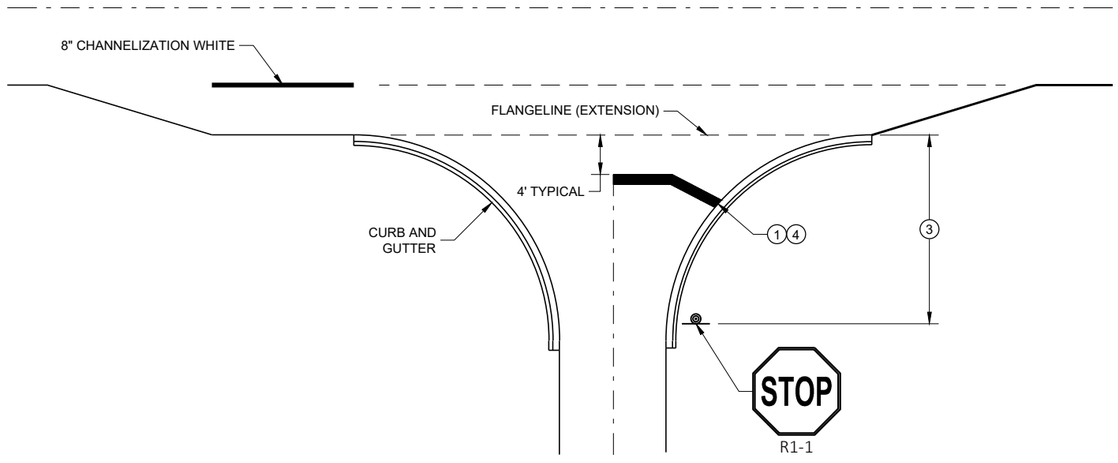
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

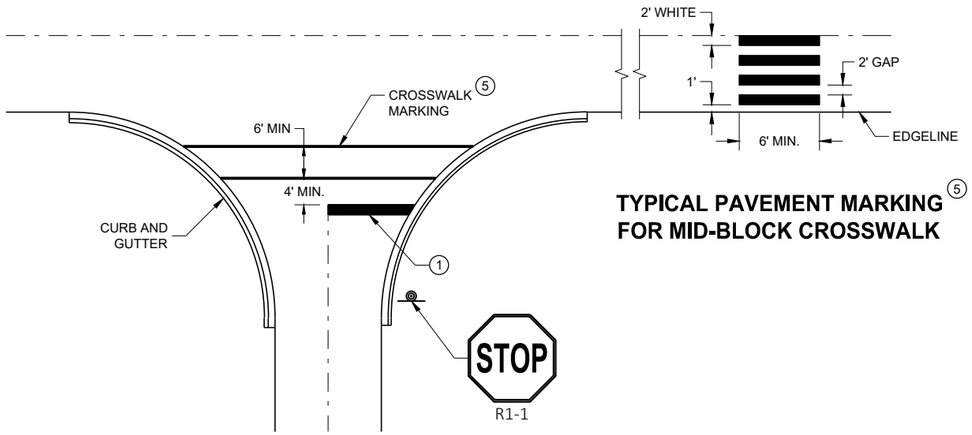
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE 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

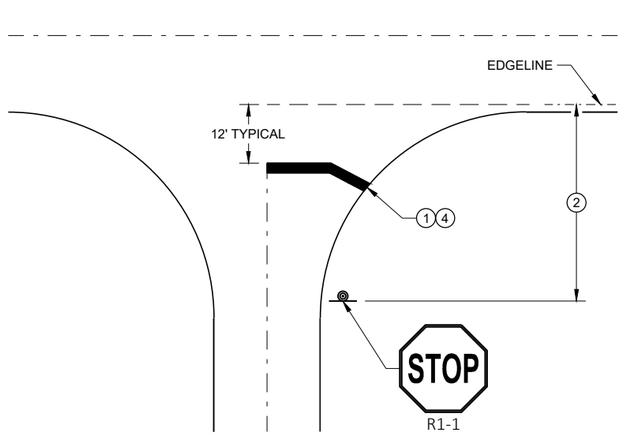


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5



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.

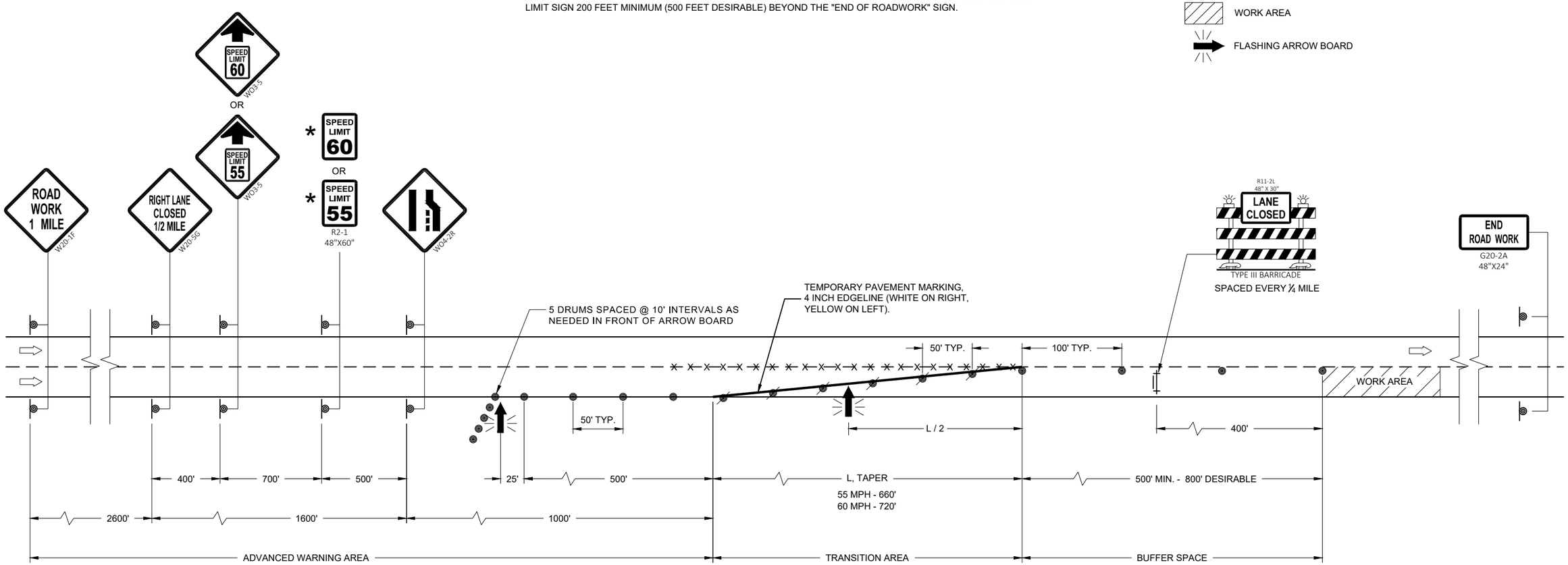
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15D12 - 09b

6
SDD 15D12 - 09b

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

TYPE III BARRICADE WITH ATTACHED SIGN

DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

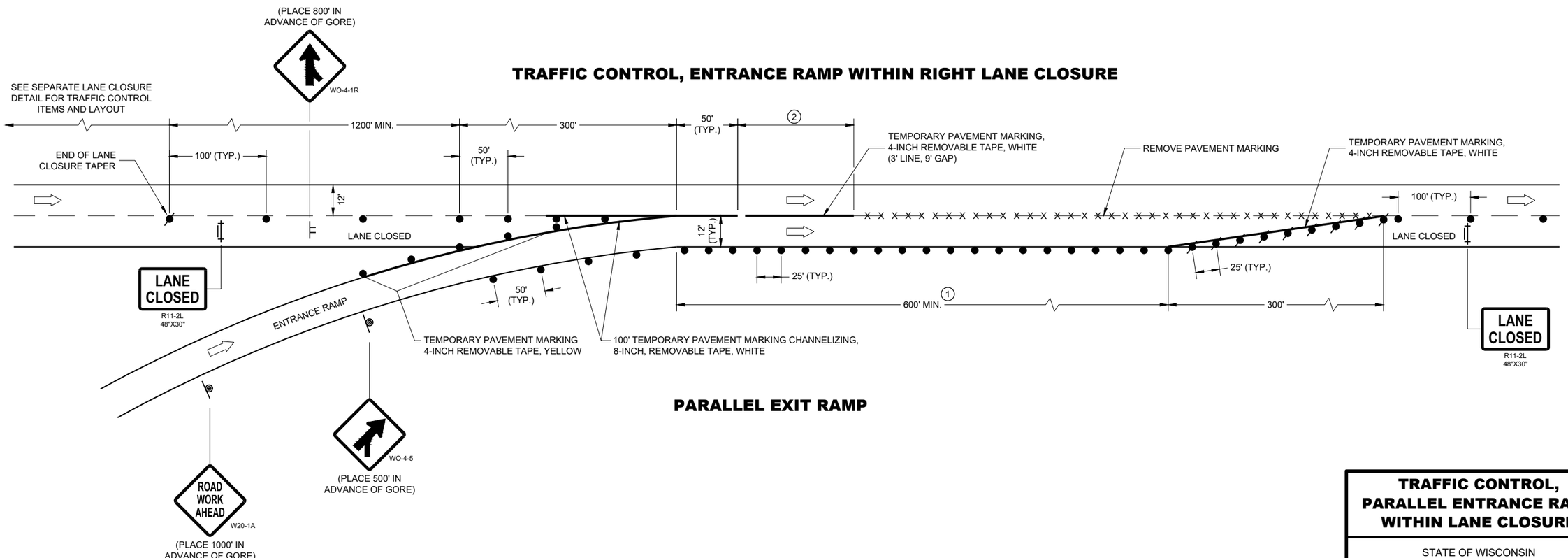
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

(1) EXTEND THE LENGTH OF THE MERGE ARE IF THE ENTERING (DESIGN) SPEED IS LESS THAN 50MPH 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 RIGHT LANE CLOSURE



PARALLEL EXIT RAMP

TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D15 - 05a

6

SDD 15D15 - 05a

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.

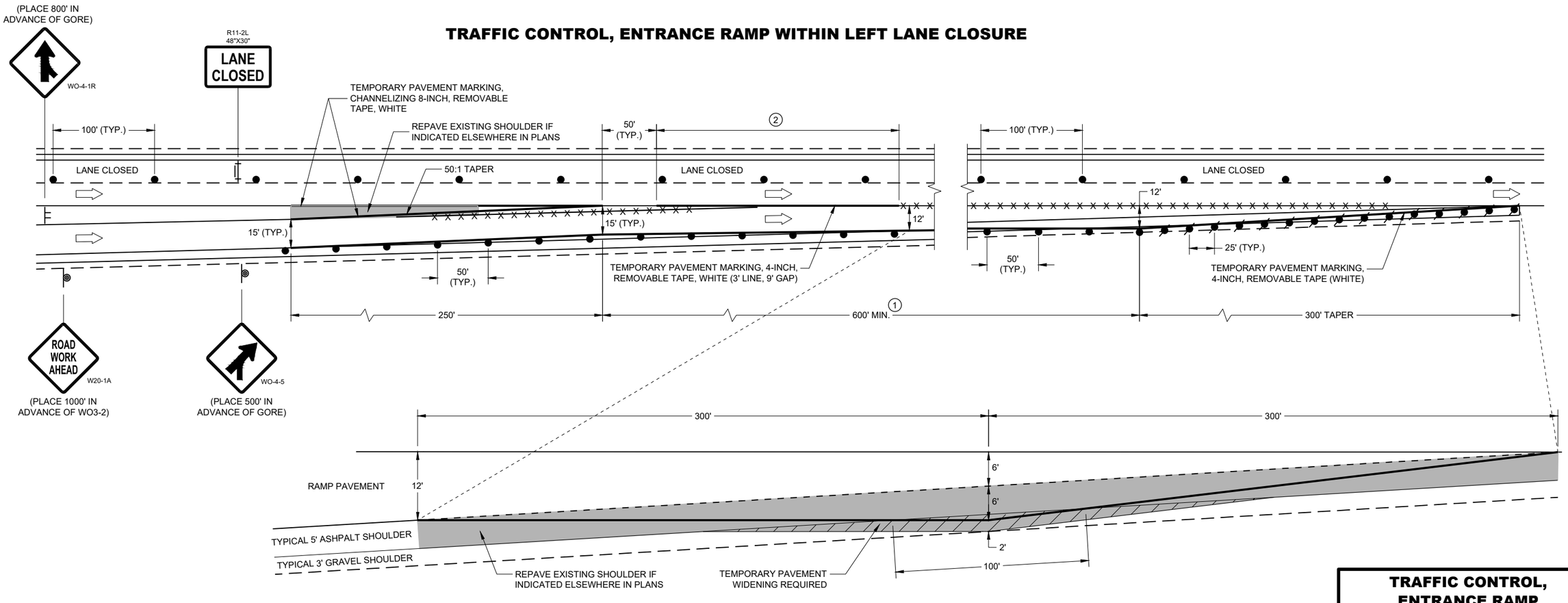
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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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

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.

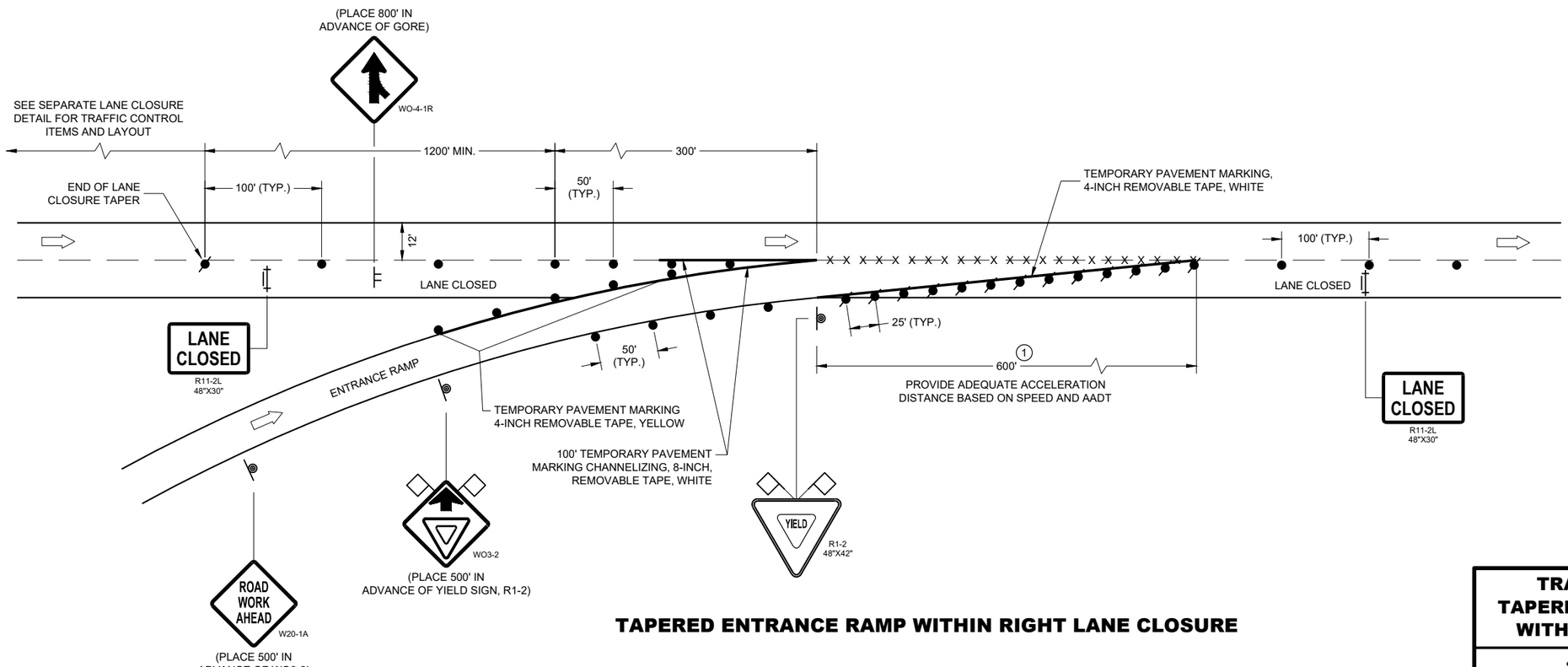
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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) CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.



TAPERED ENTRANCE RAMP WITHIN RIGHT 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

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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

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.

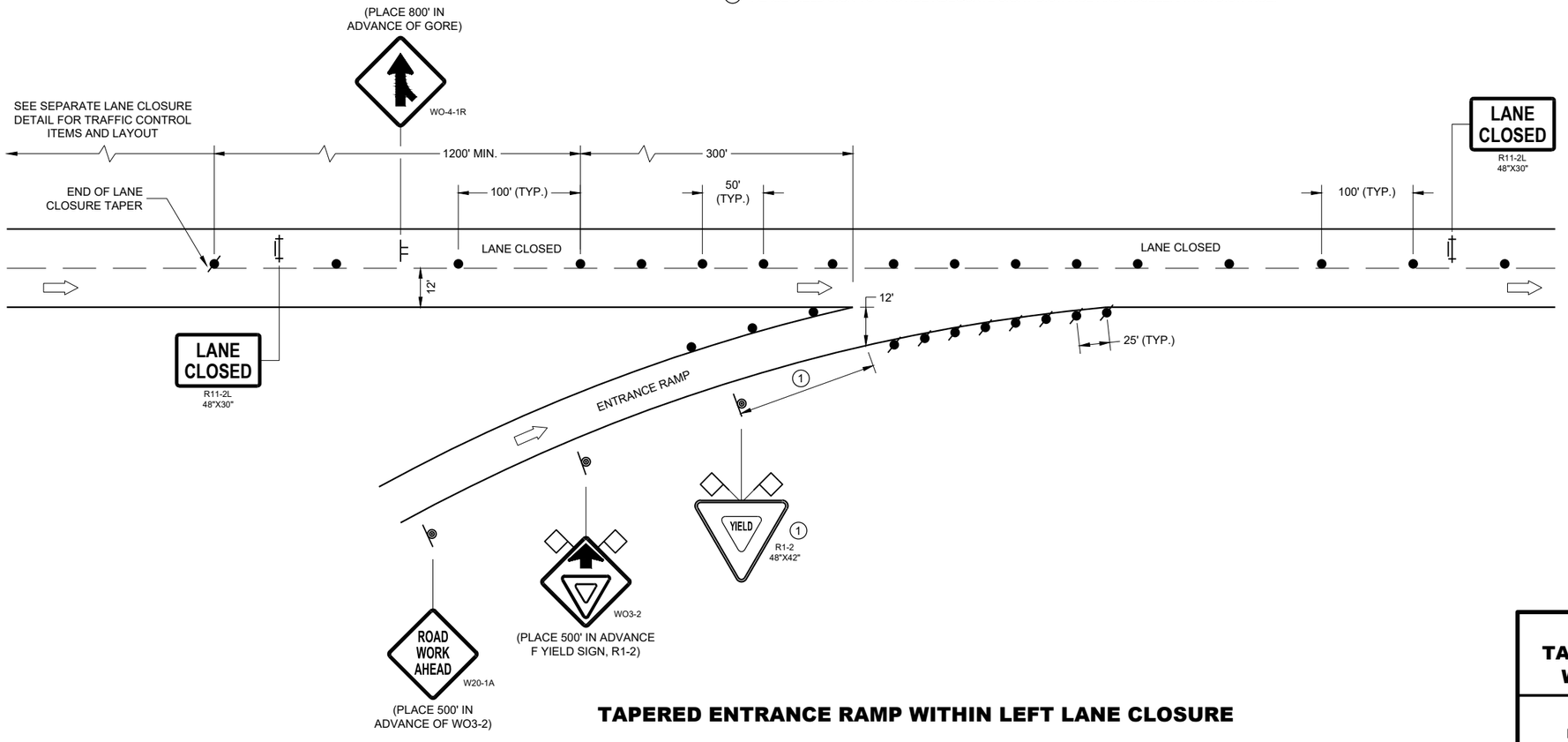
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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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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.

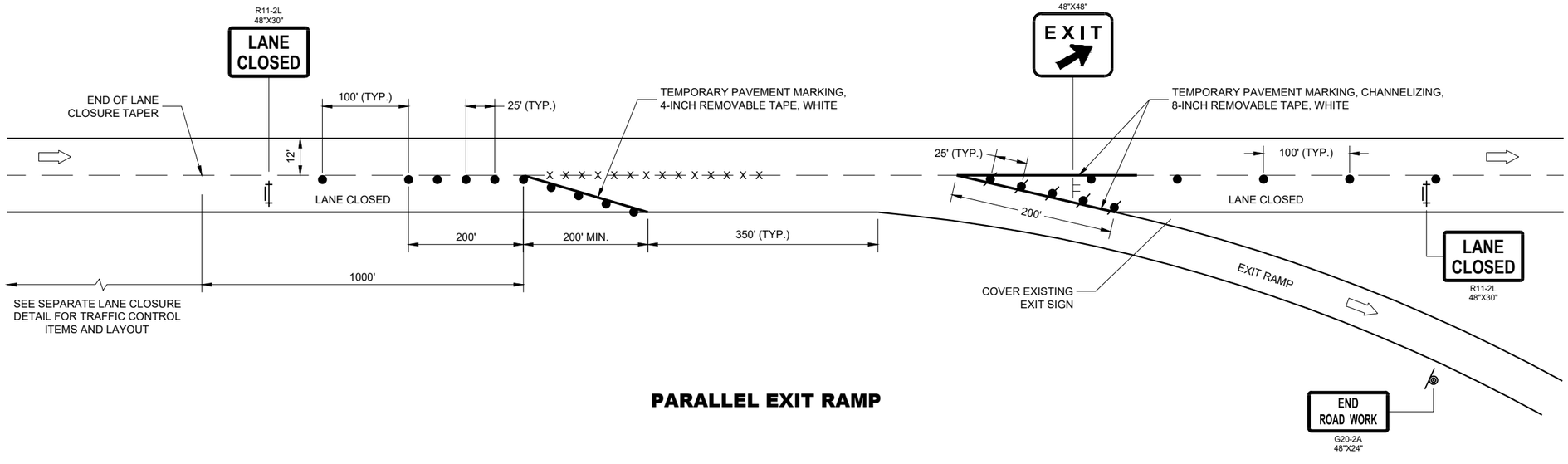
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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
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DATE

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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.

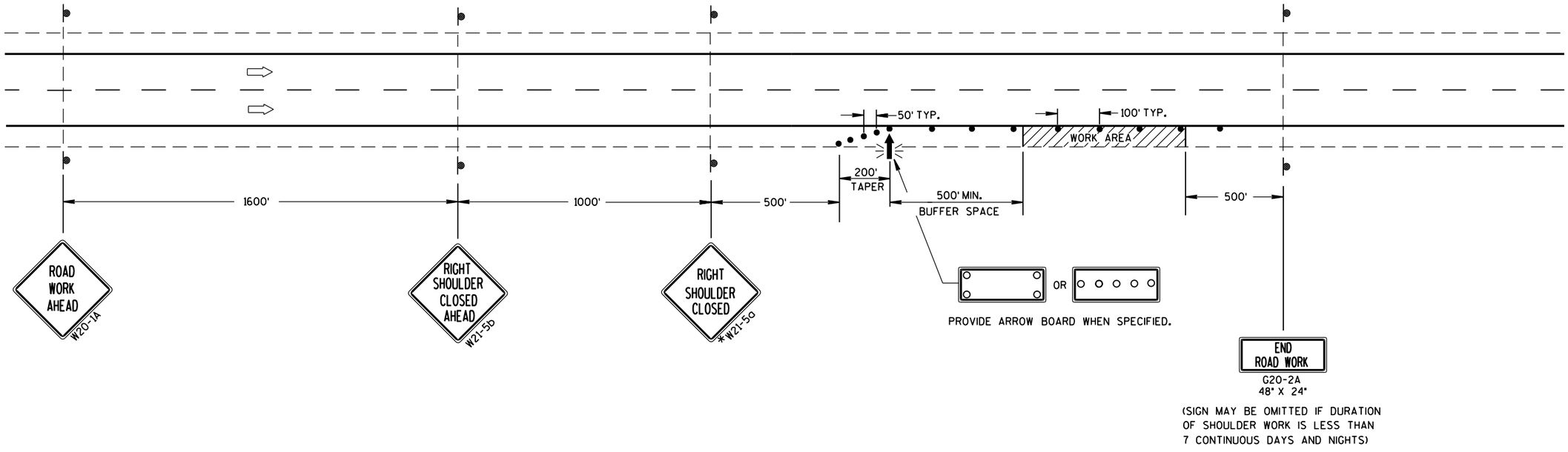
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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
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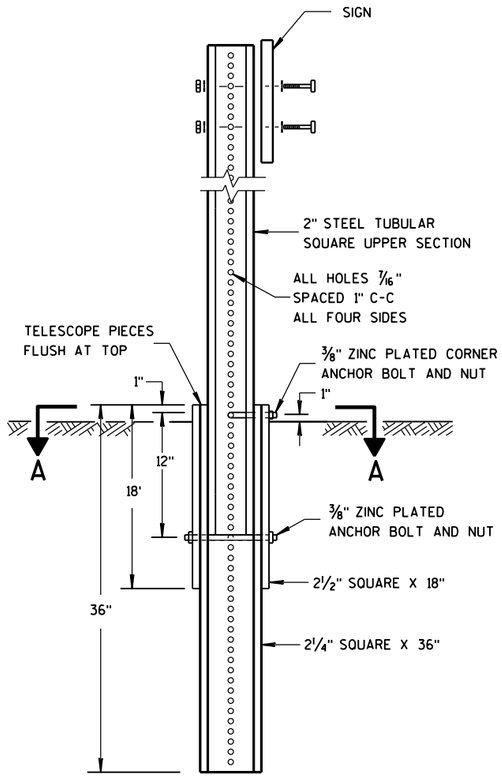
June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

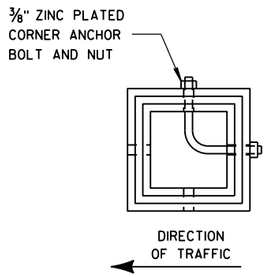
FHWA

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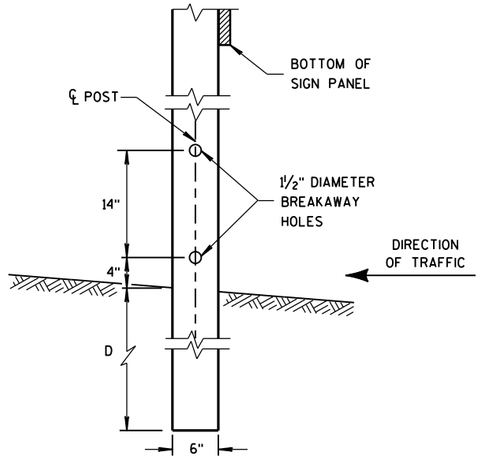
S.D.D. 15 D 27-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



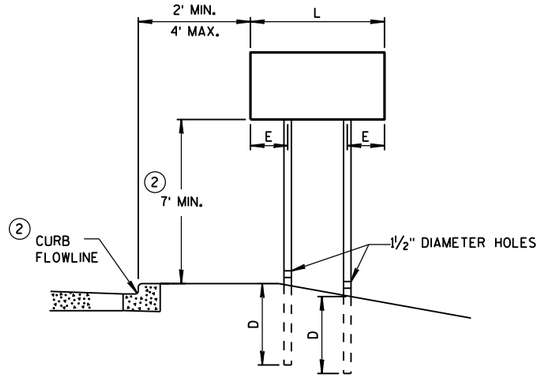
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

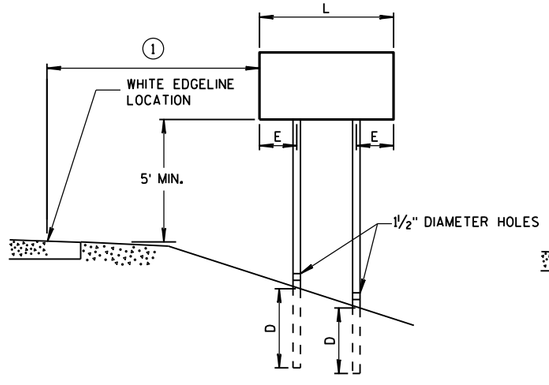
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

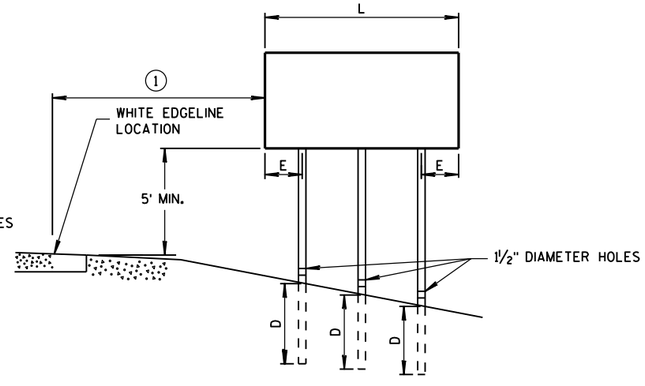
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK 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

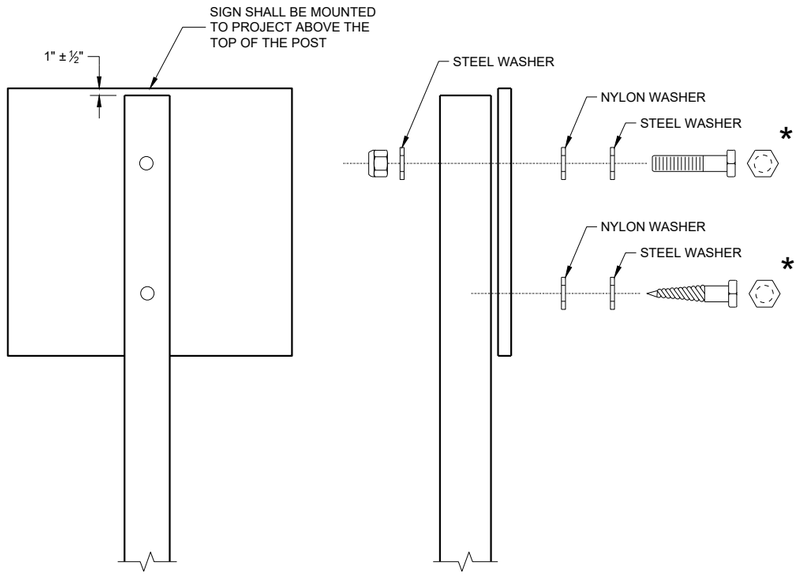
SEE NOTE (3)

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
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/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.

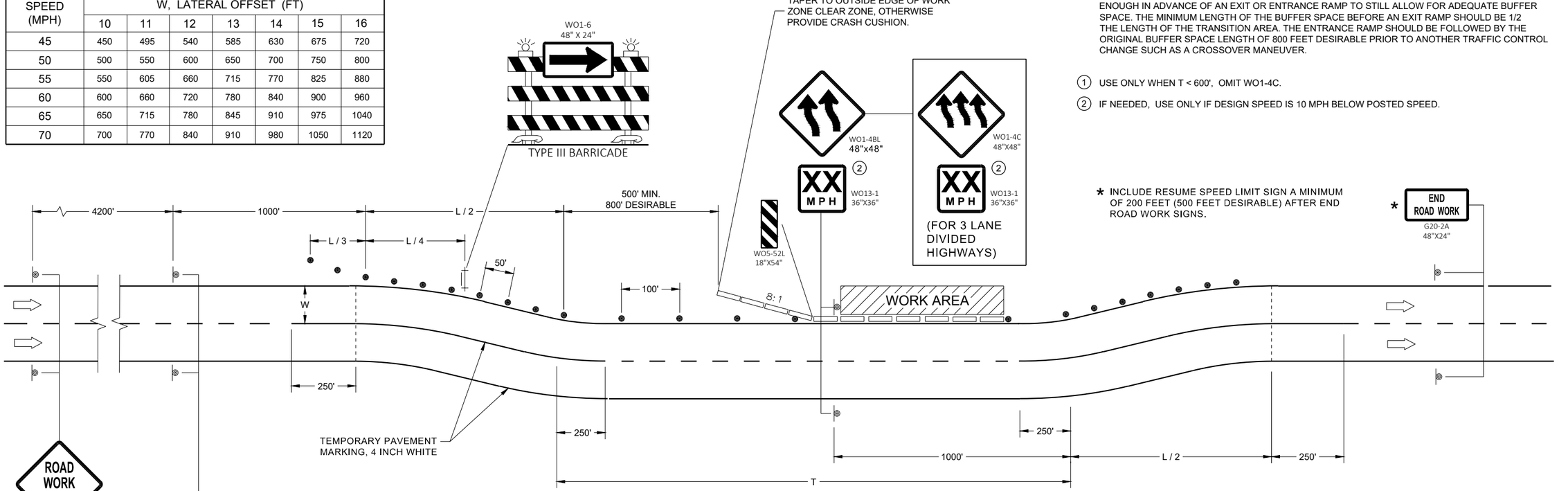
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

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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.

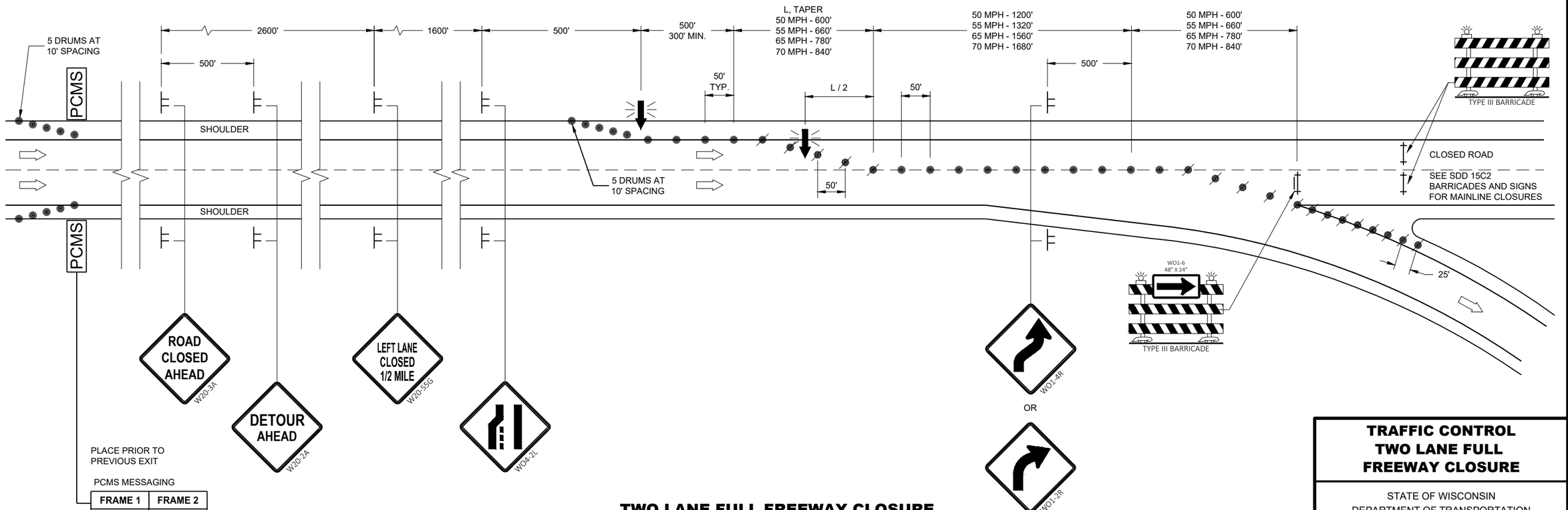
WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROL SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

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.



TWO LANE FULL FREEWAY CLOSURE

TRAFFIC CONTROL
TWO LANE FULL
FREEWAY CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

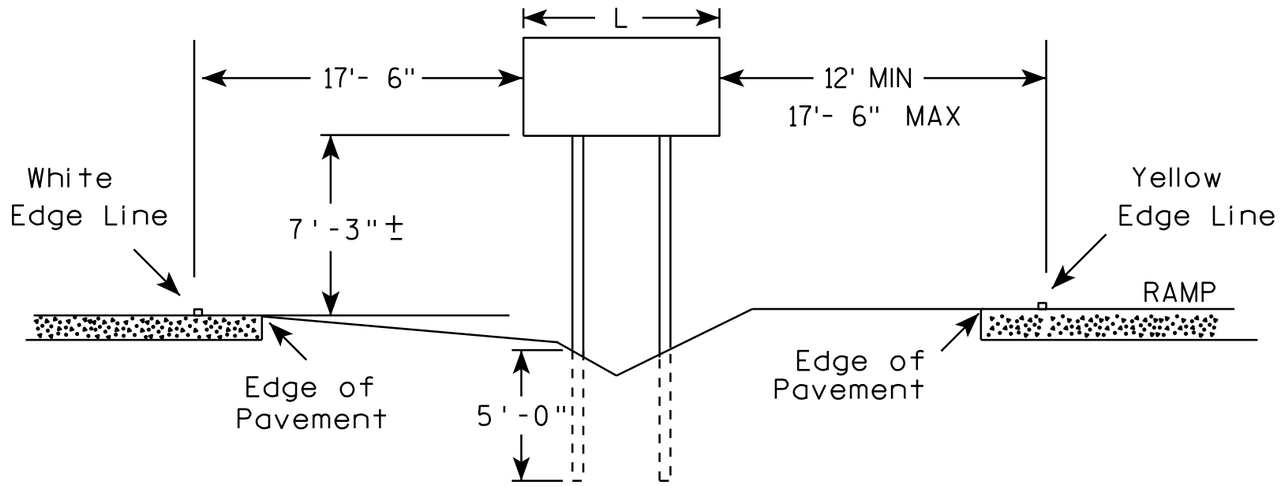
APPROVED
August 2019
DATE

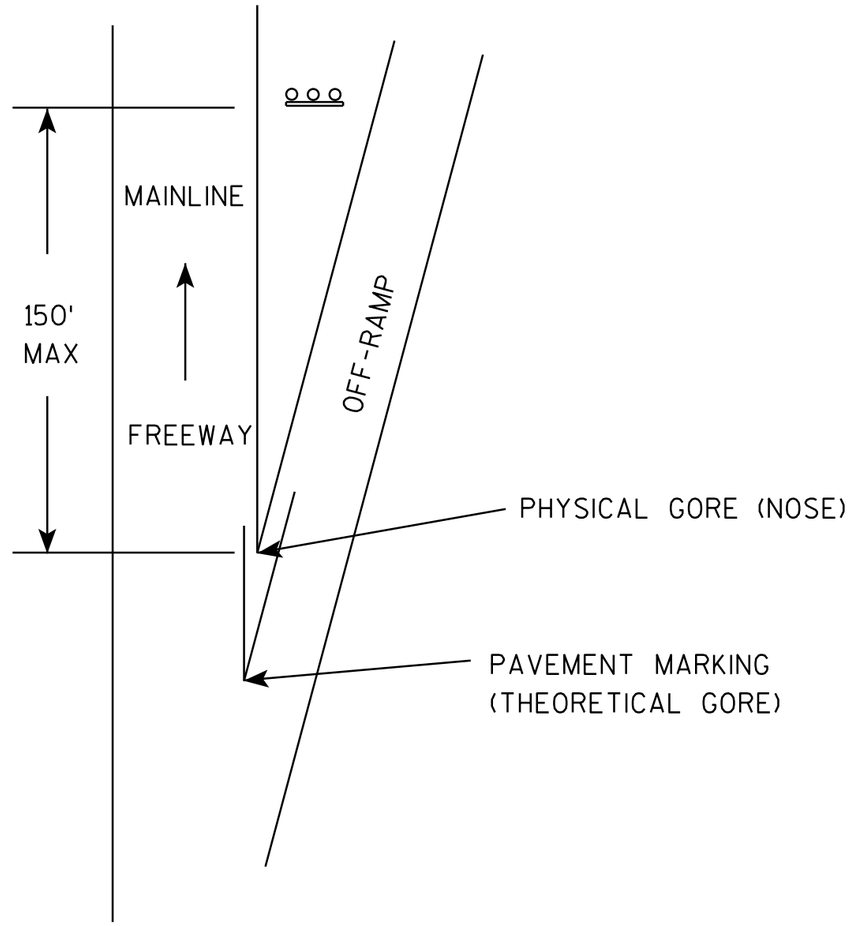
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15D42 - 01

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.

7

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TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

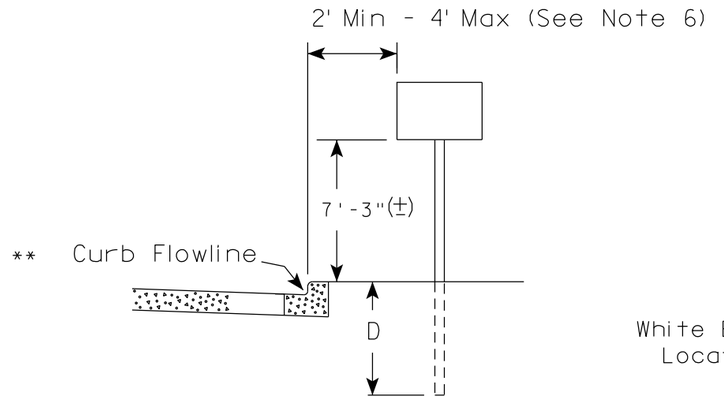
DATE 2/06/14 PLA 290 A4-2.3

PROJECT NO: | SHEET NO: E

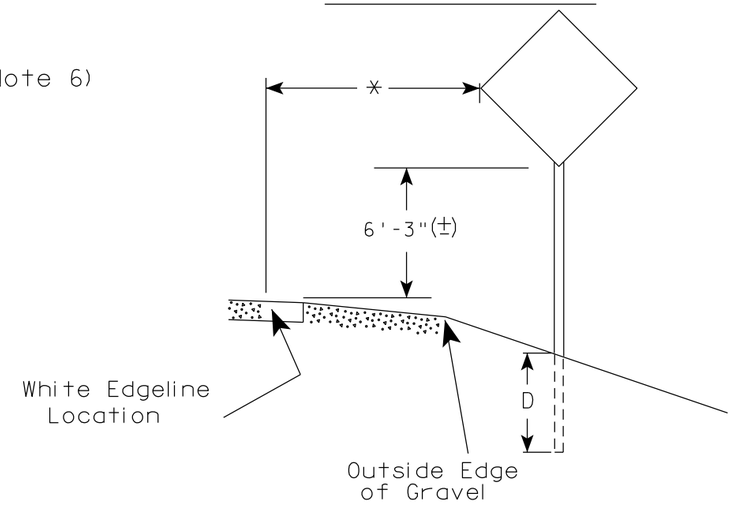
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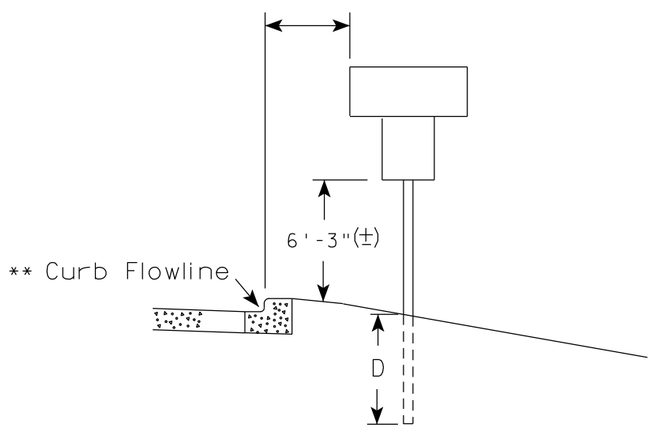
WISDOT/CADDS SHEET 42

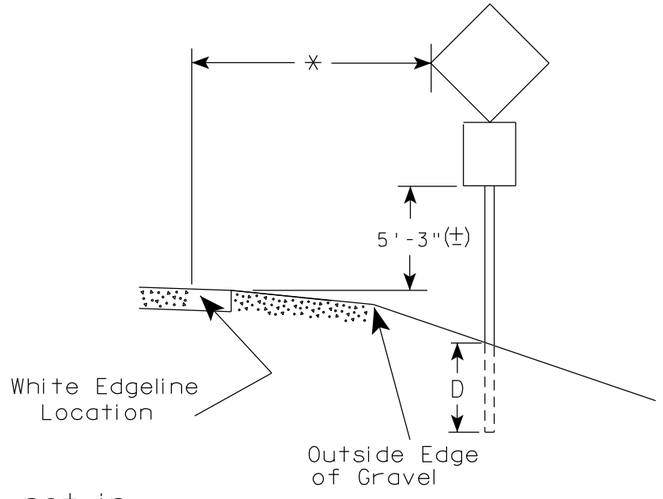
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on 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.

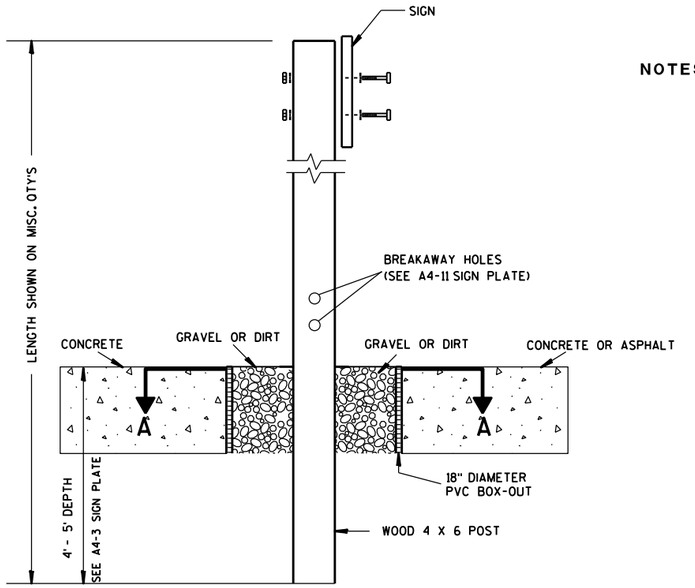
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

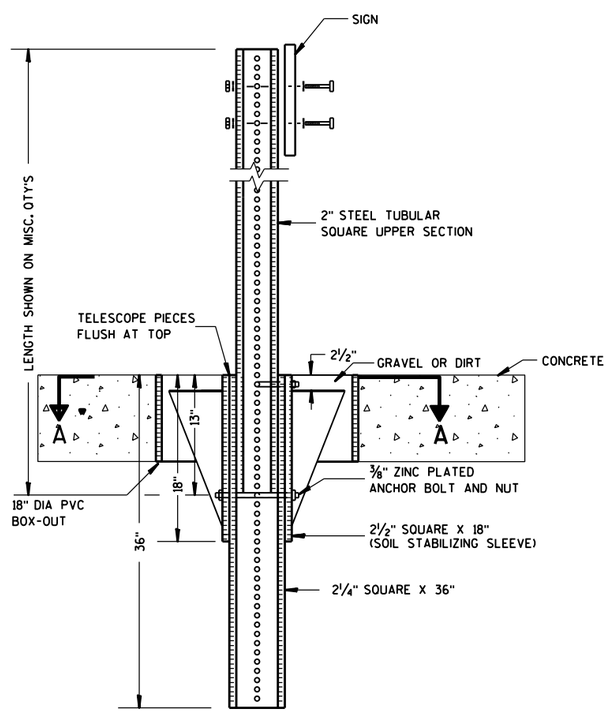
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 291	E



ELEVATION VIEW

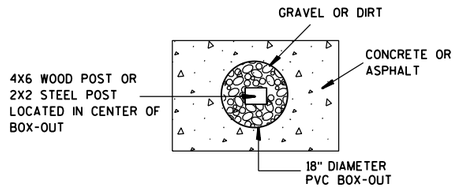
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

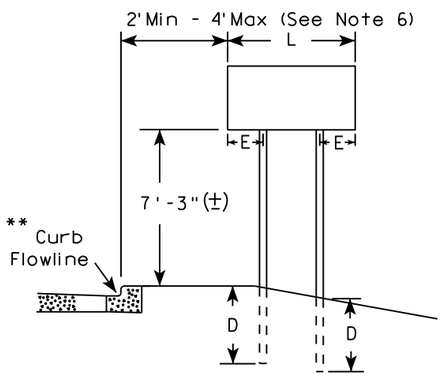
APPROVED Matthew R Rauch
for State Traffic Engineer

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

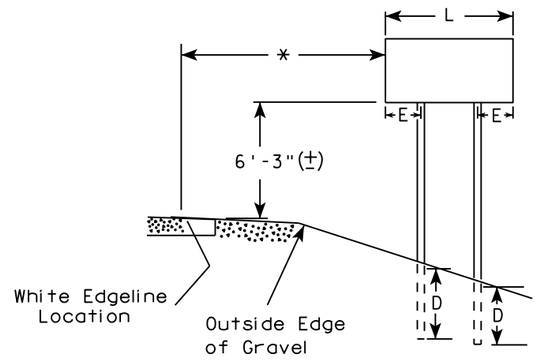
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

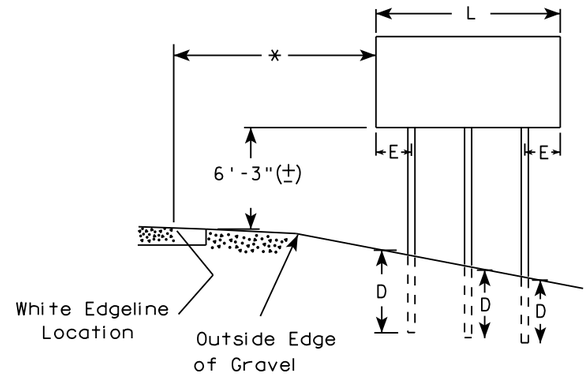
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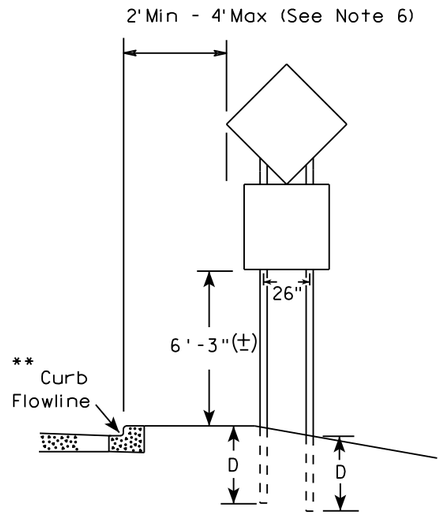
URBAN AREA



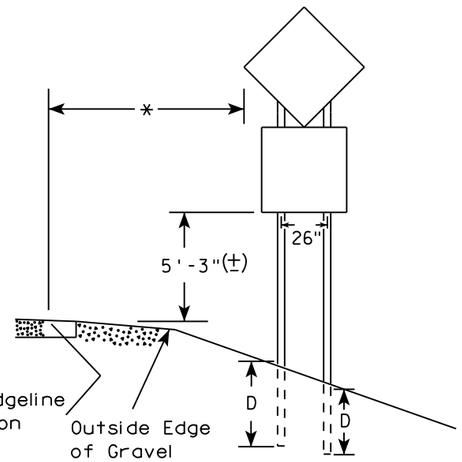
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

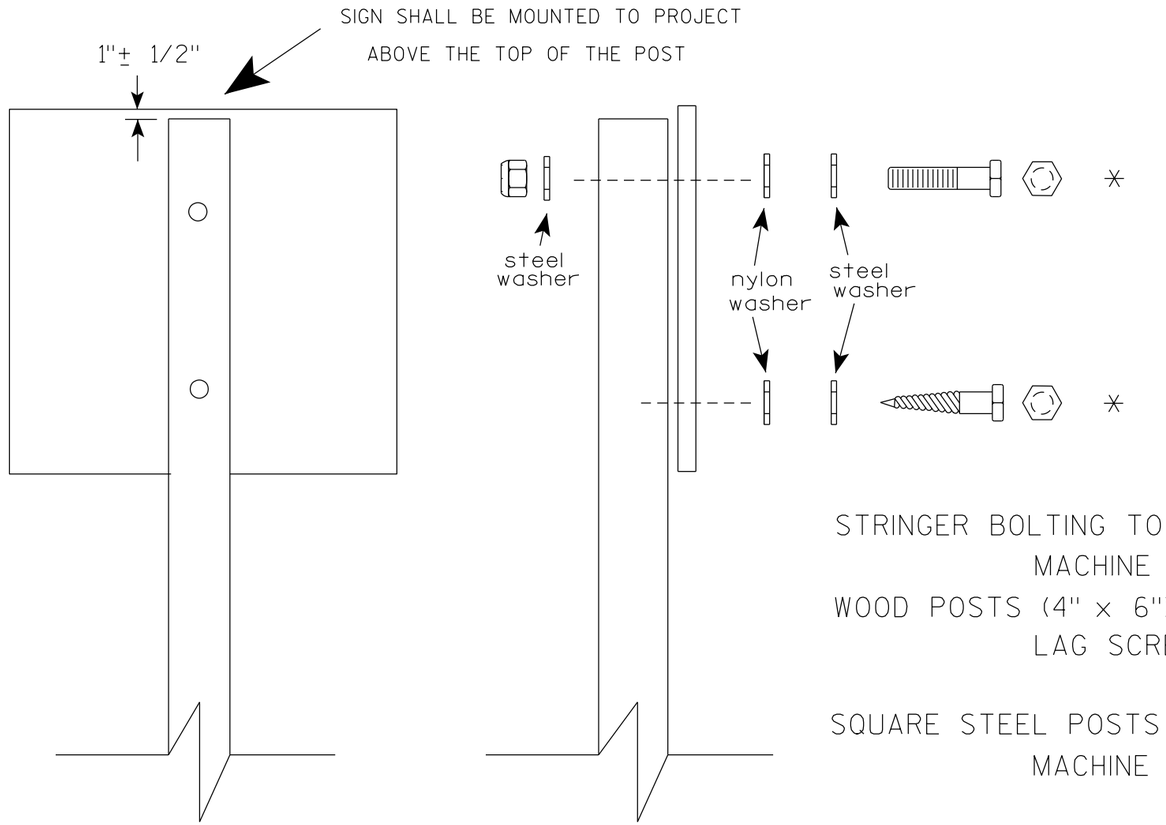
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 293	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

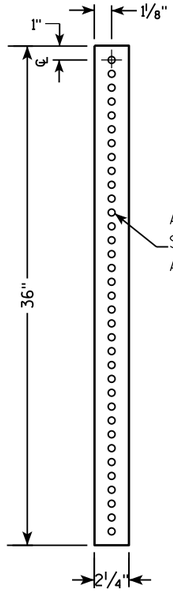
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

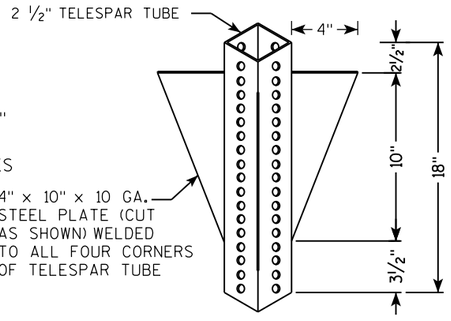
SHEET NO: 294 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

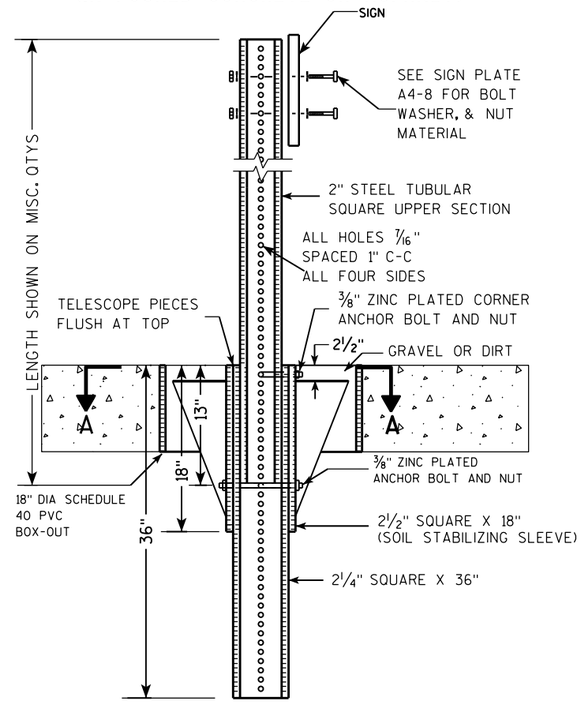
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



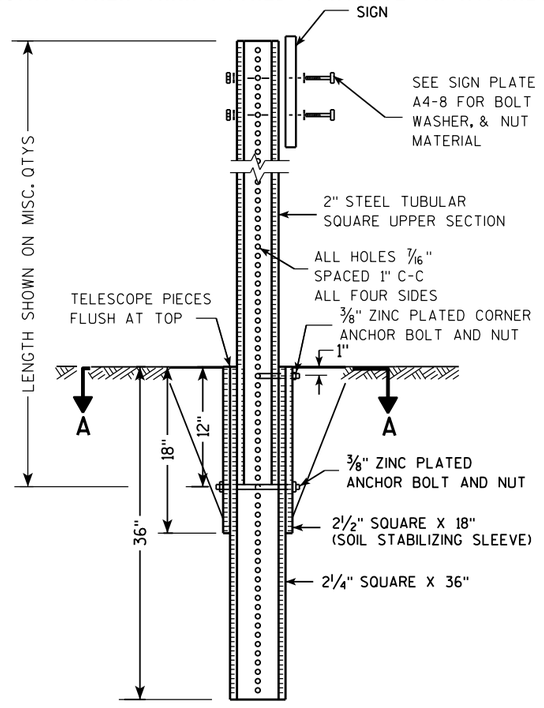
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

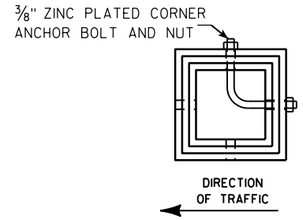


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

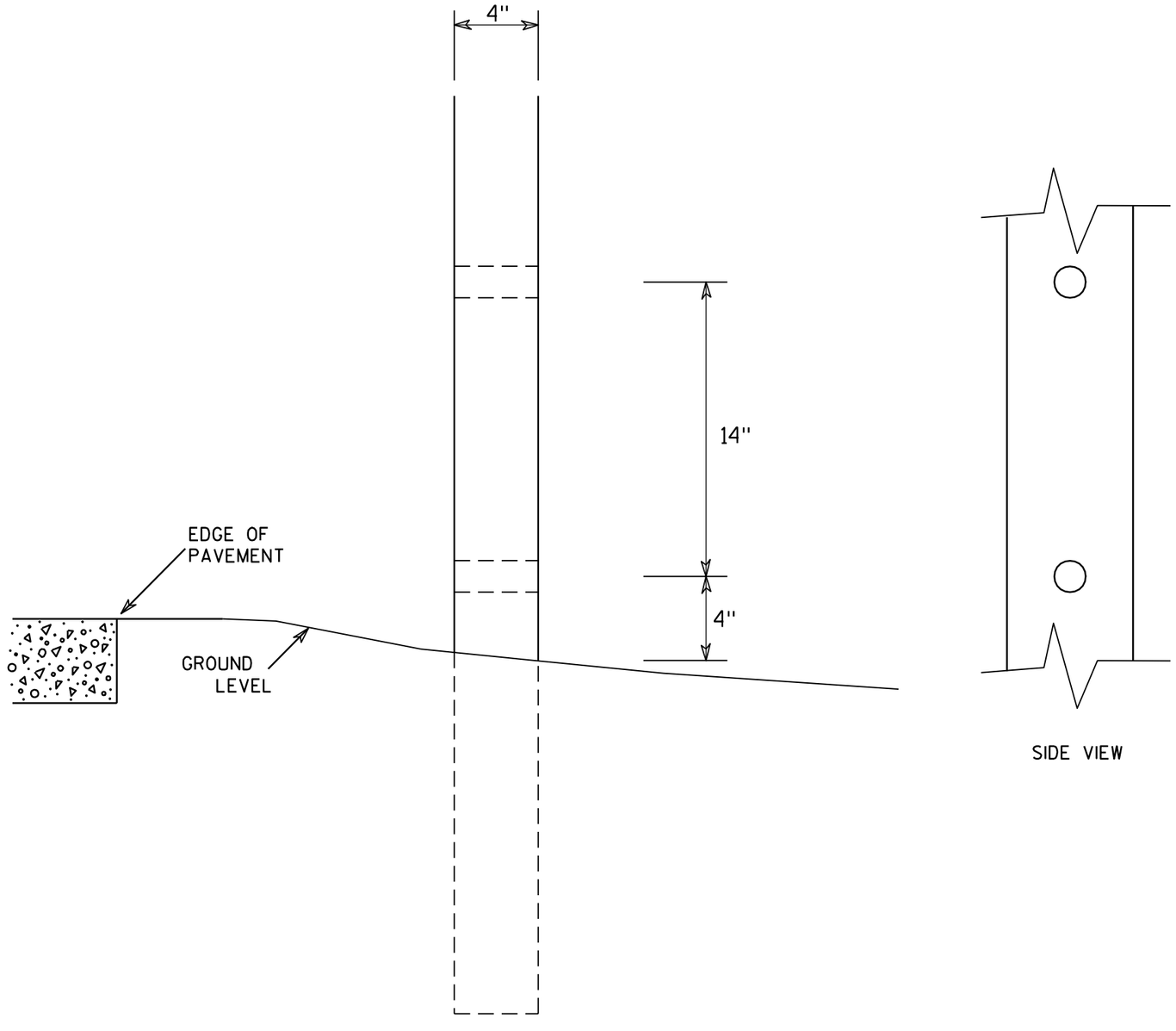
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 295 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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.

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4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

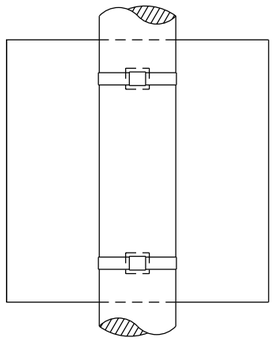
APPROVED Chester J Spang for State Traffic Engineer

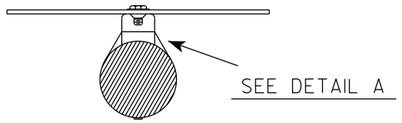
DATE 3/27/97 PLATE NO. A4-11.2

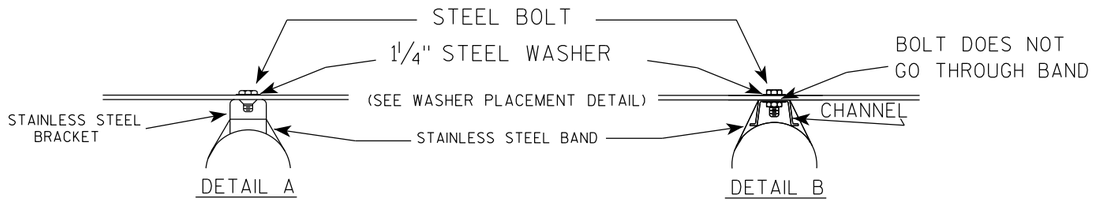
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 296	E

BANDING

SINGLE SIGN



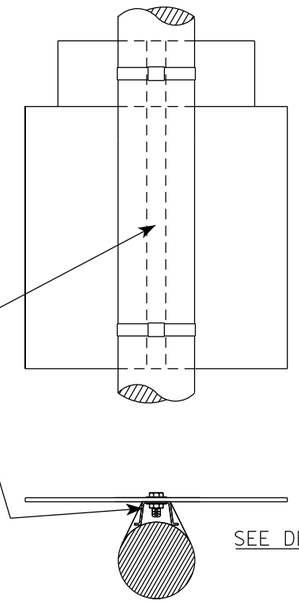




GENERAL NOTES

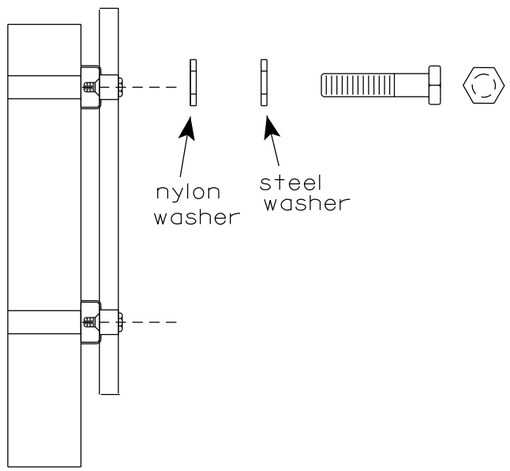
1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. 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



CHANNEL
SEE TYPICAL PANEL INSTALLATION SHEET

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

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

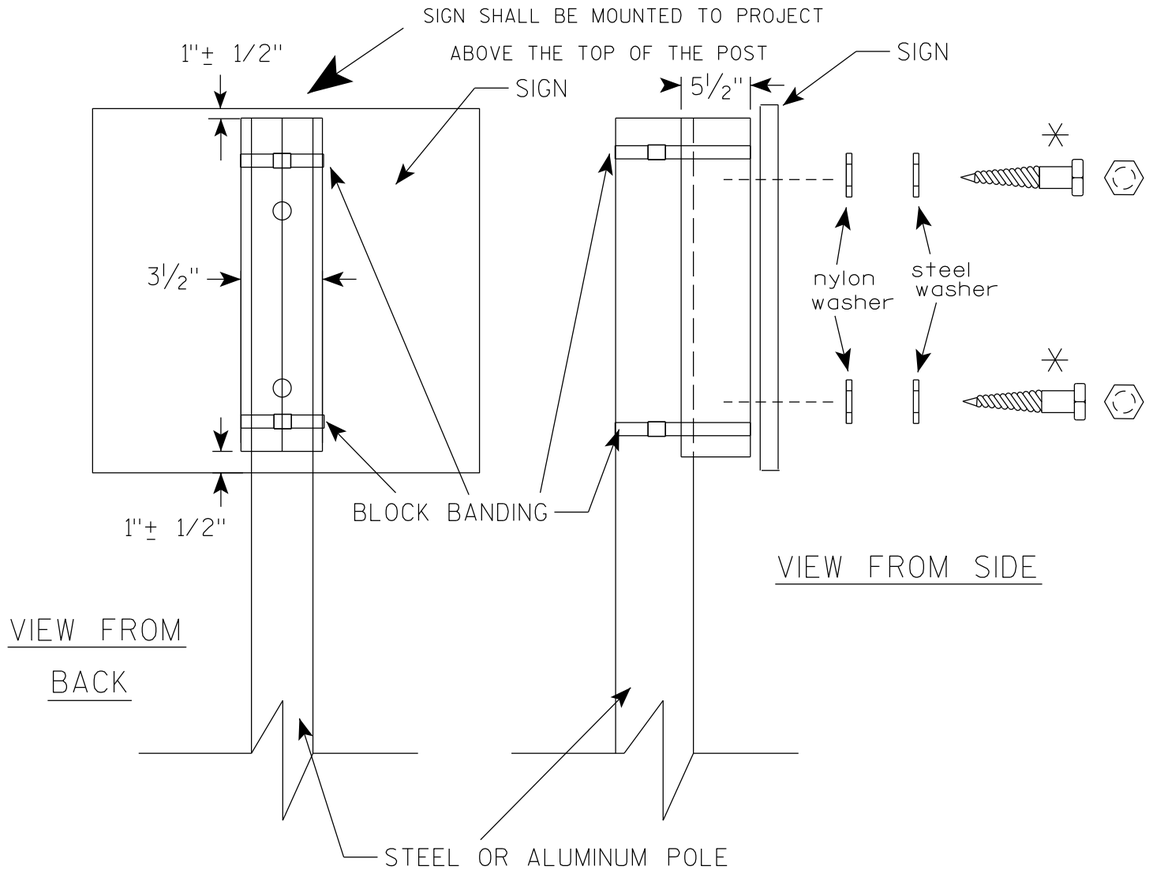
DATE 6/10/19 PLATE NO. A5-9.4

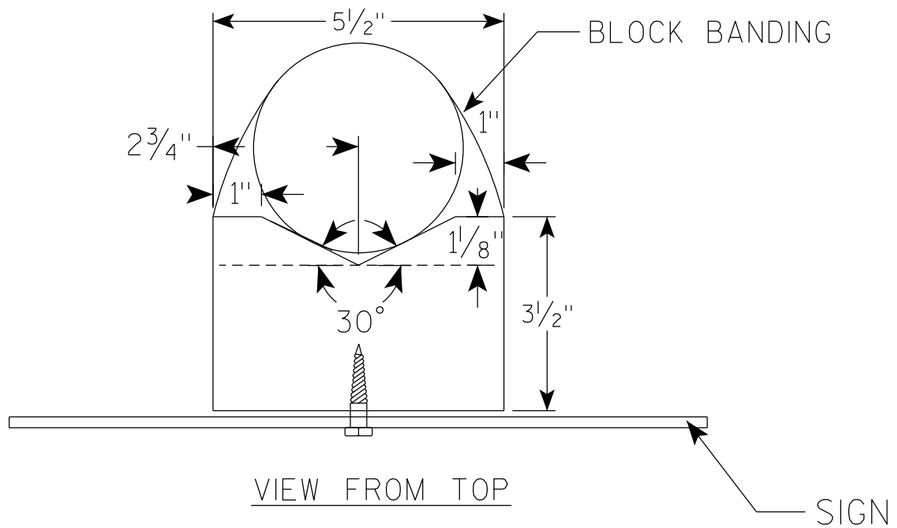
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 297	E

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

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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"

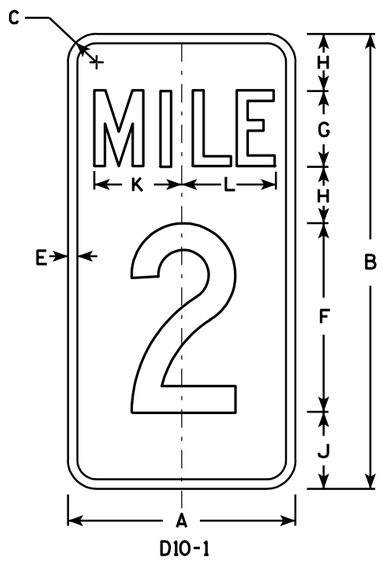
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

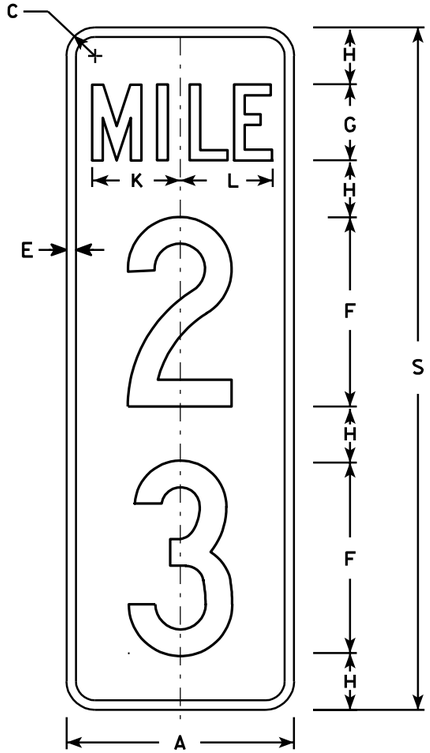
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

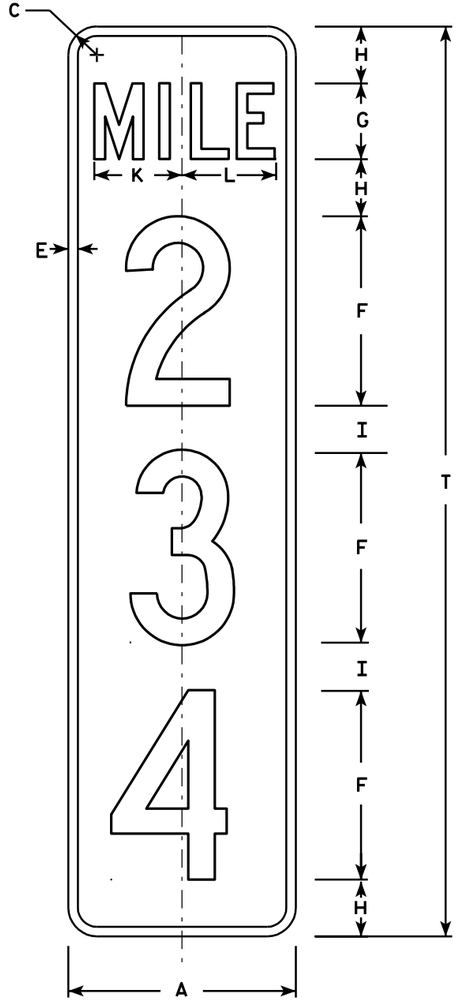
PROJECT NO:				SHEET NO: 298	E



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

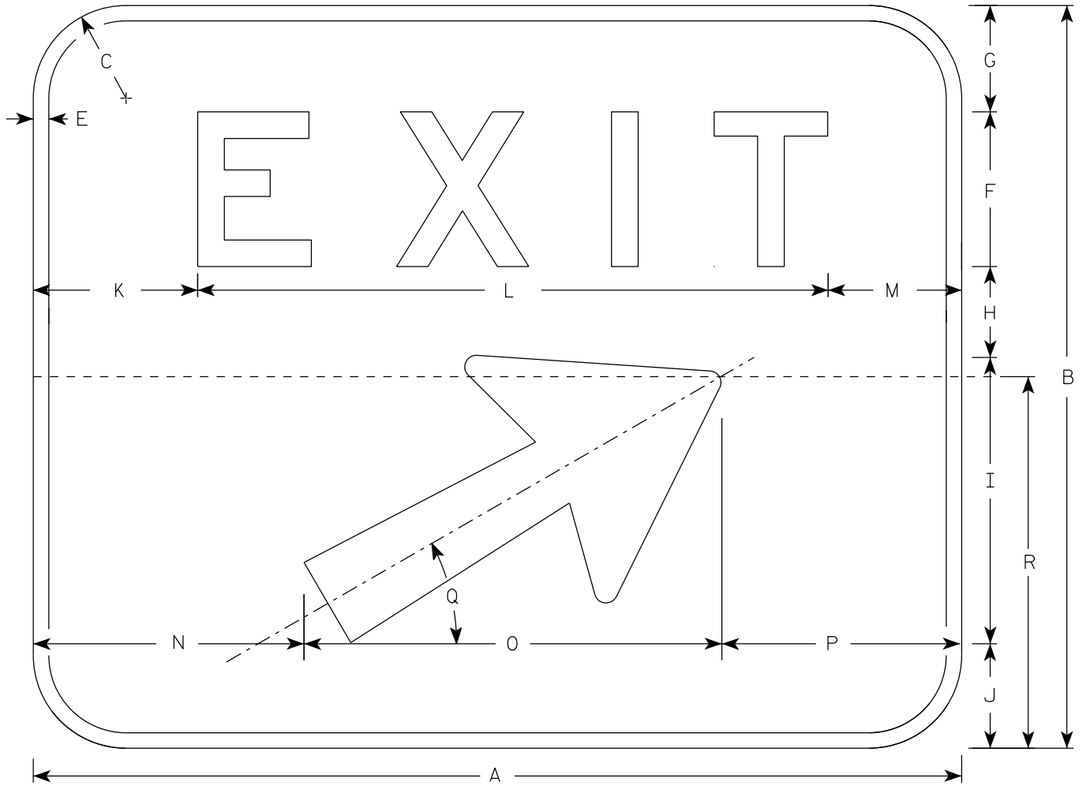
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for Director, Office of Traffic

DATE 1/16/02 PLATE NO. D10-3.2

PROJECT NO:

SHEET NO: 299 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

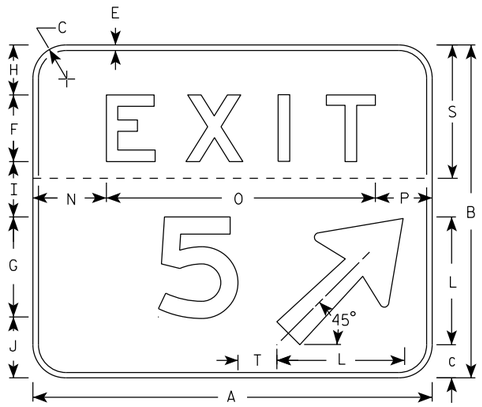
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

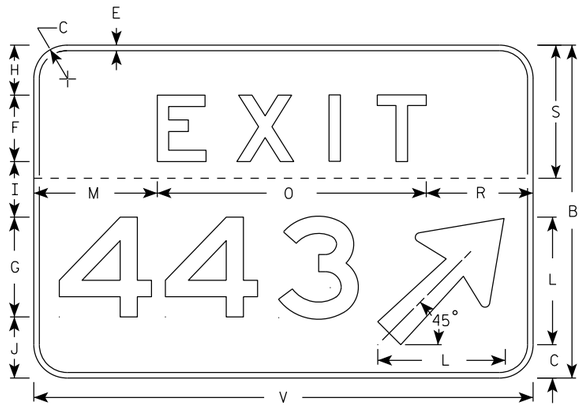
DATE 7/26/18 PLATE NO. E5-1.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 300 | E

7

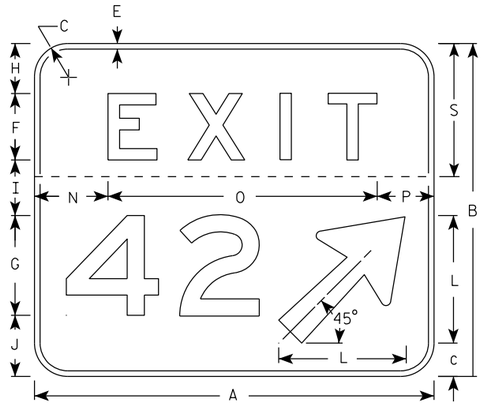


NOTE: T diminision shall be measured from the back of the number to the front of the arrow

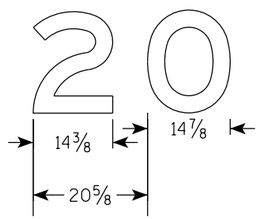


NOTES

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

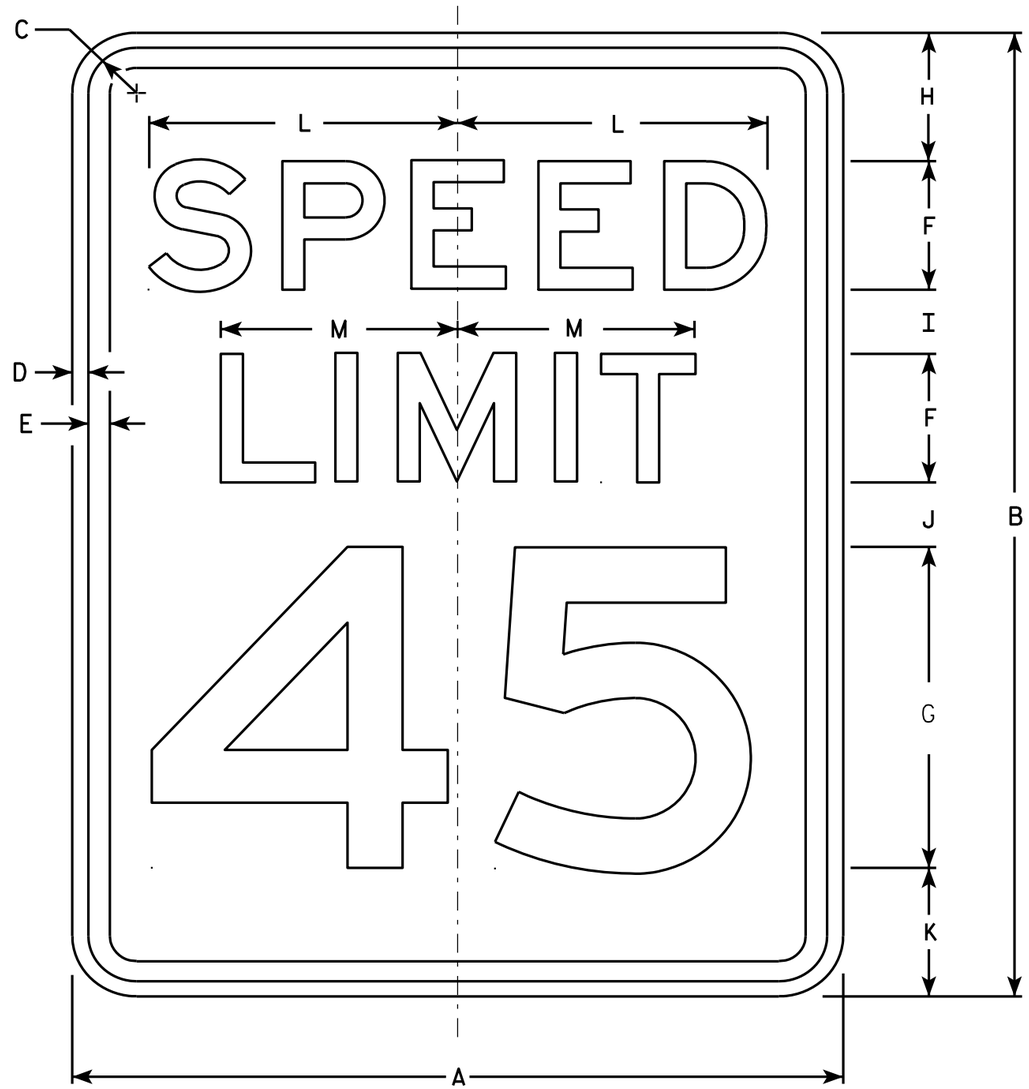
STANDARD SIGN
E5-1A

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: 301	E



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

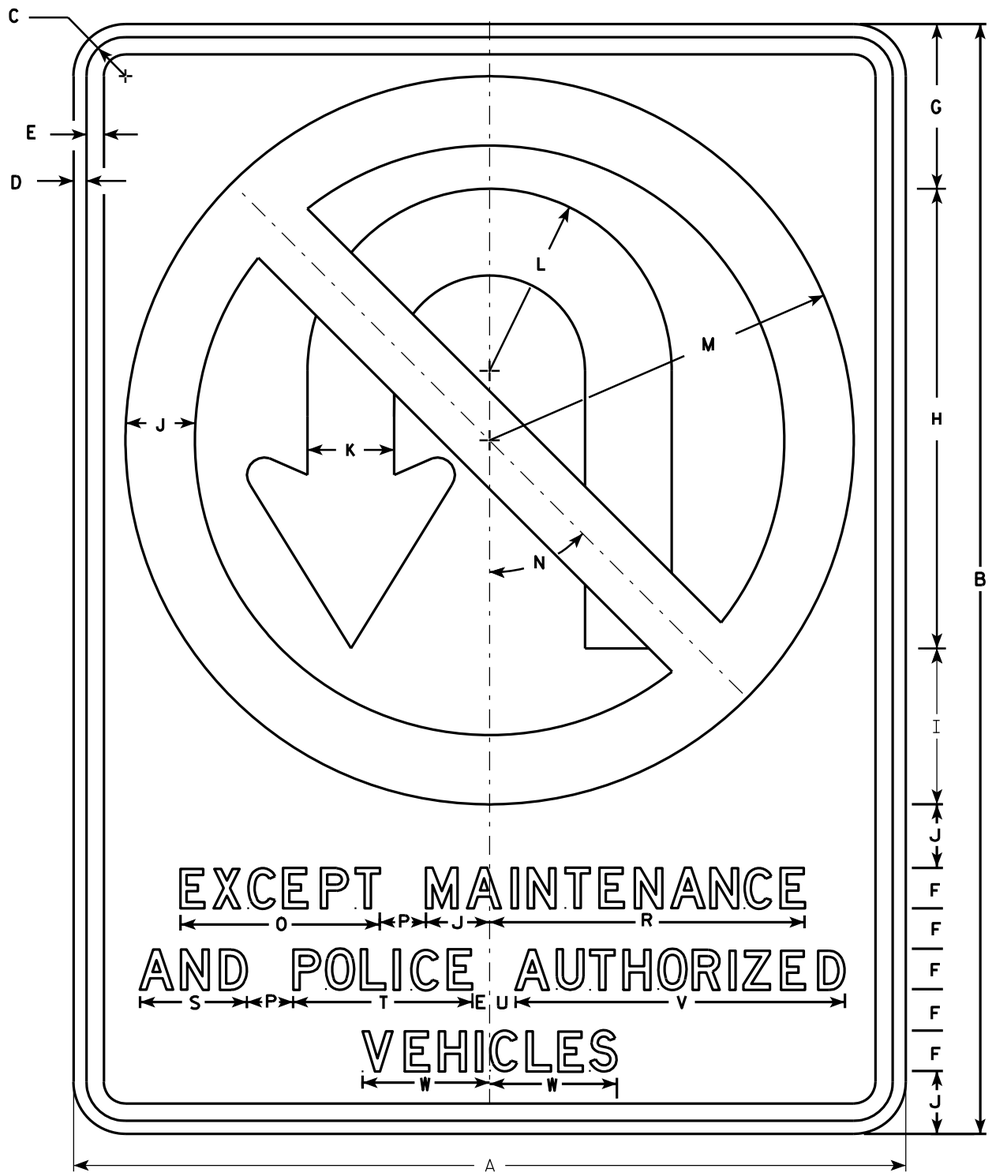
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

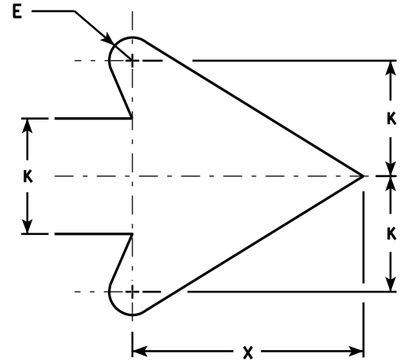
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 302	E



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

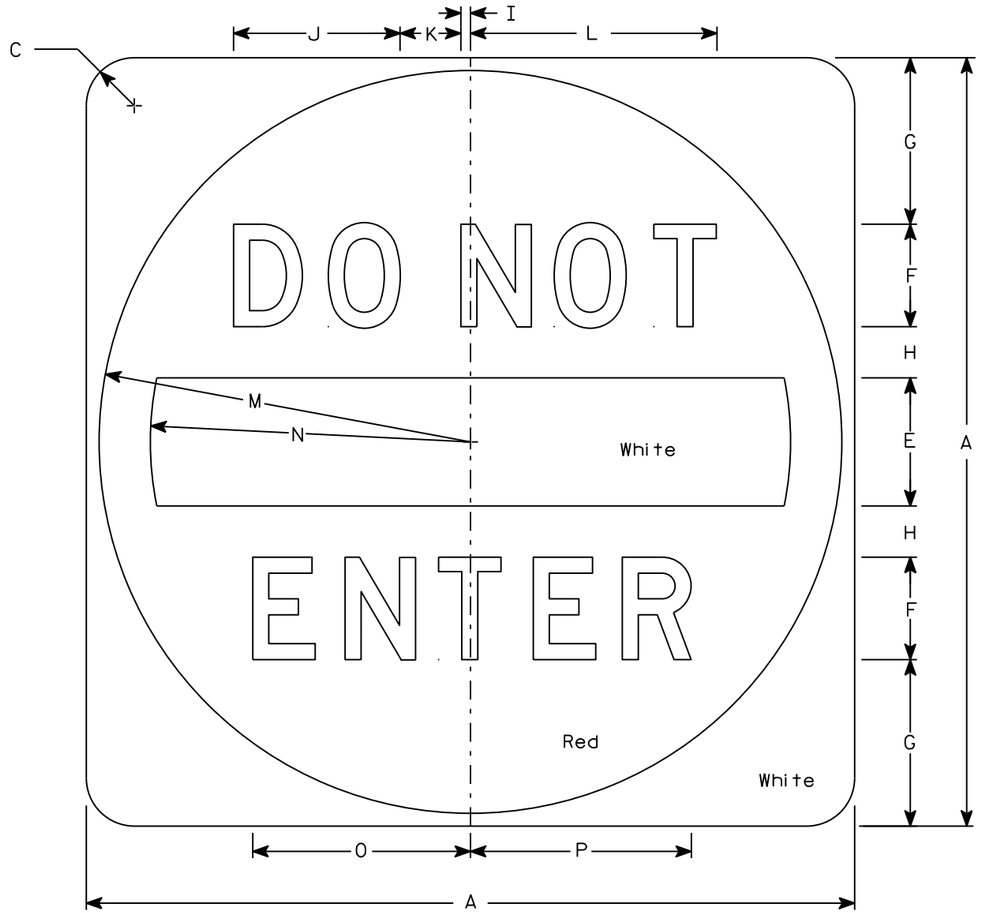
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 303	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R34B.DGN PLOT DATE : 17-MAR-2011 14:27 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.554949:1.000000

WISDOT/CADDS SHEET 42

7

7



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

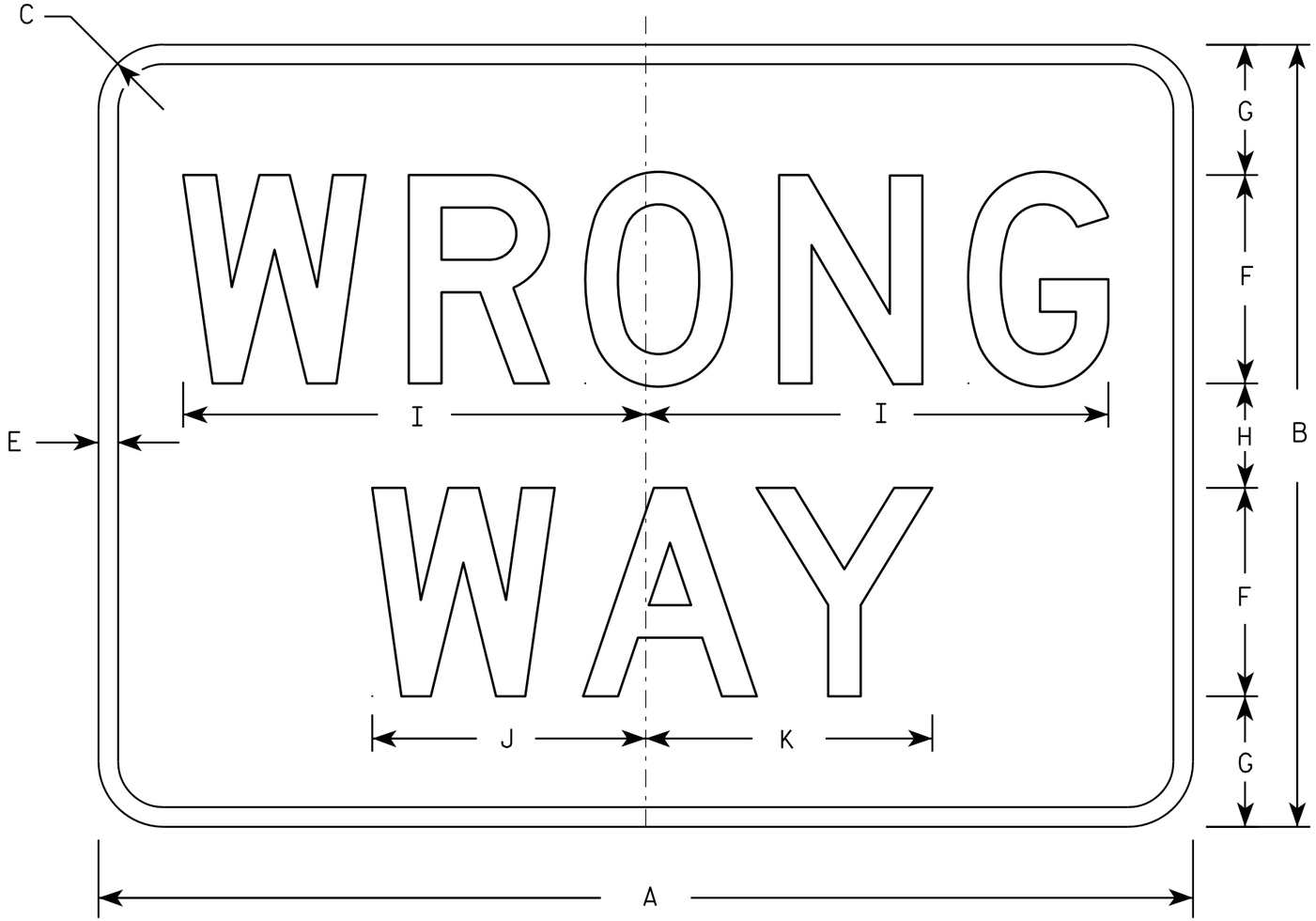
STANDARD SIGN
R5-1

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: 304 | 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: 305 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R51A.DGN PLOT DATE : 17-DEC-2010 12:42 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.462457:1.000000

WISDOT/CADDS SHEET 42

7

7



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

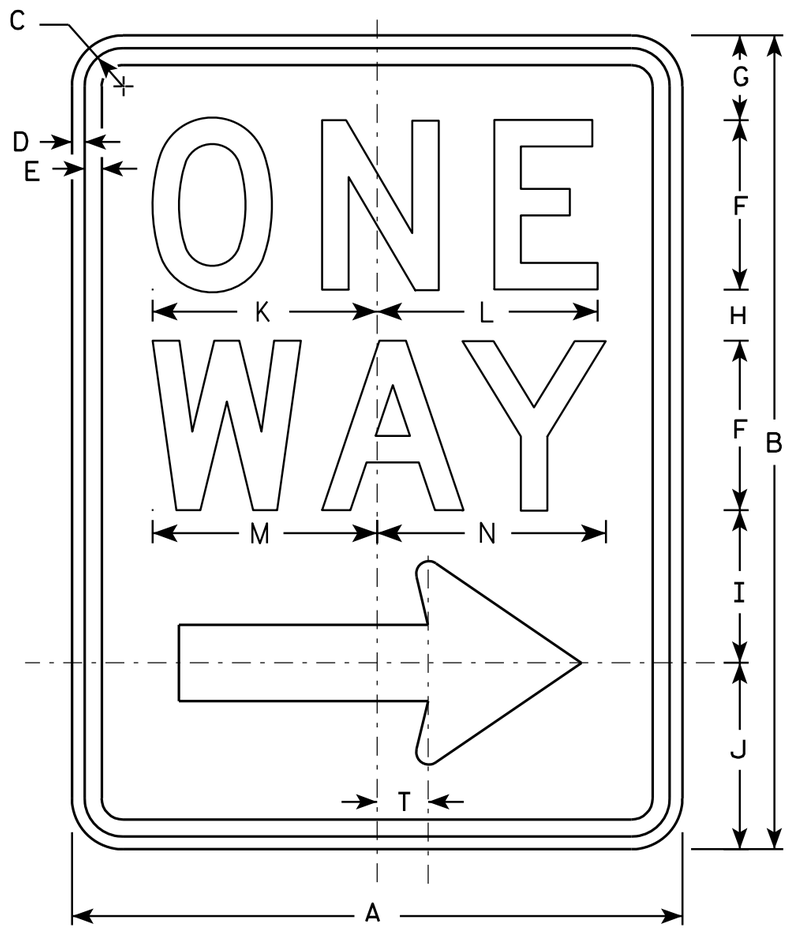
STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

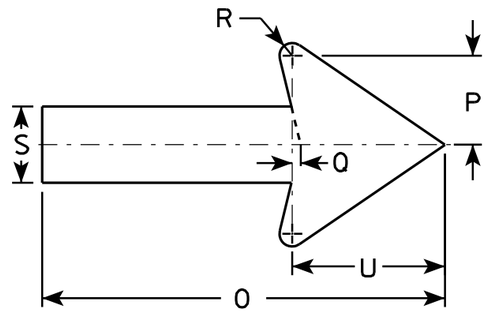
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 306 | E



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																										

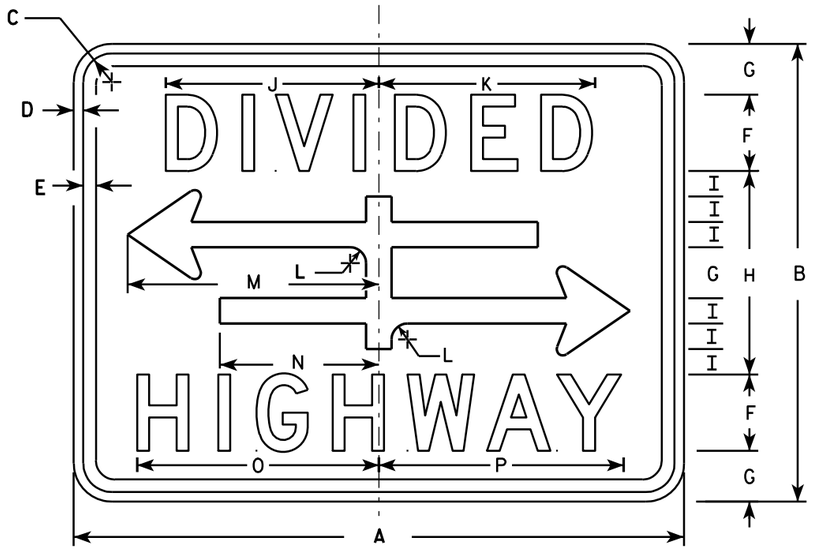
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

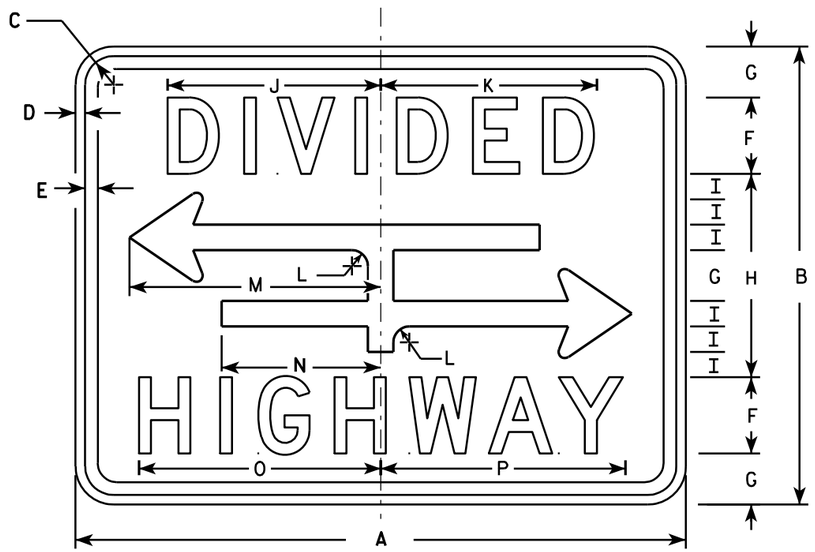
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 307	E



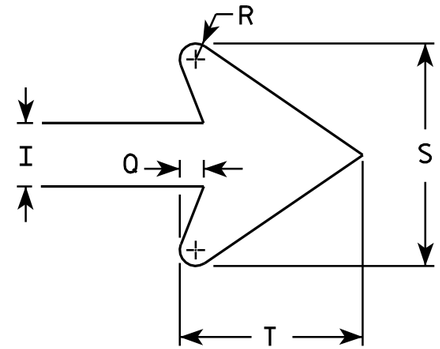
R6-3

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

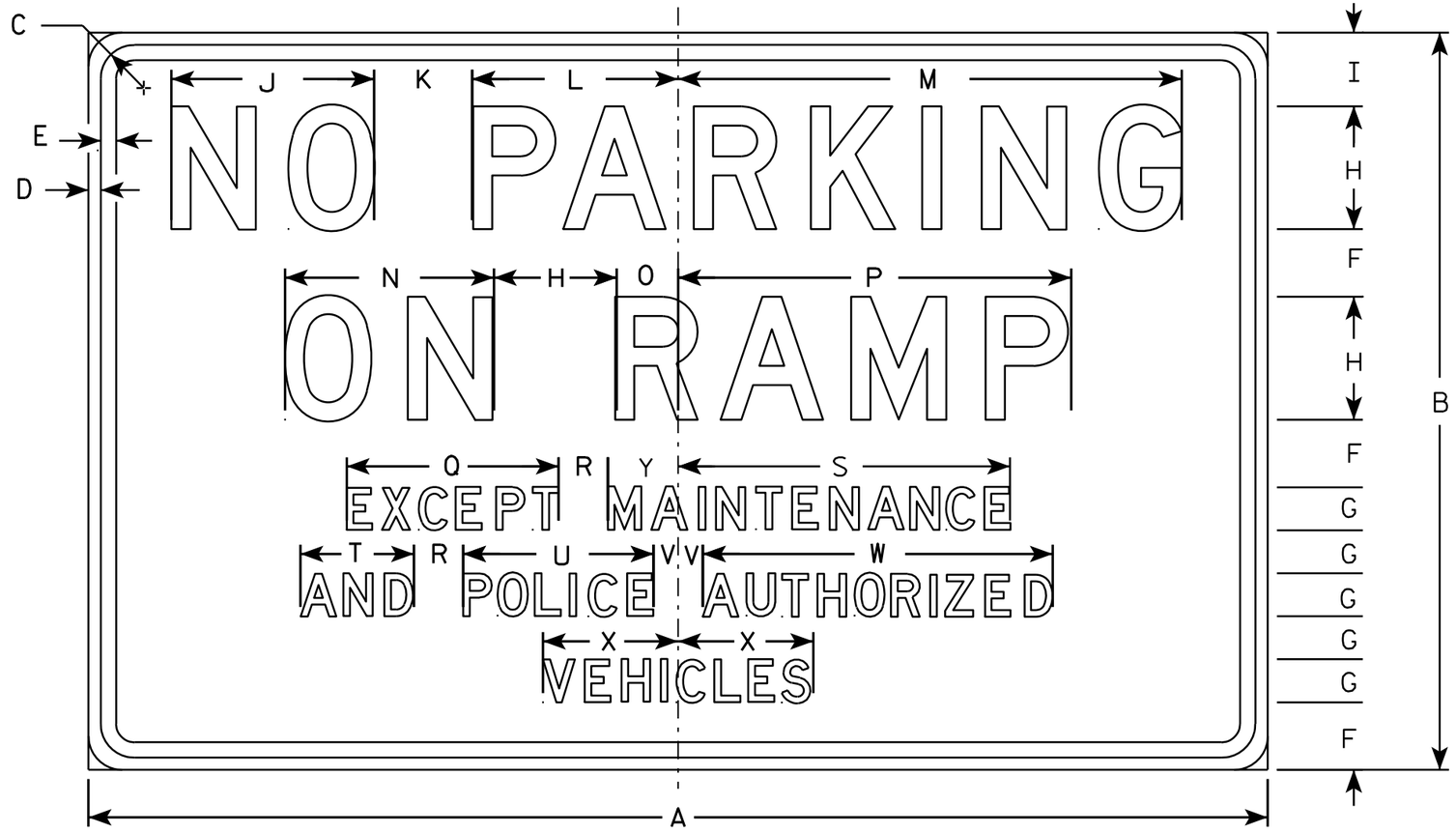
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

SHEET NO: 308 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

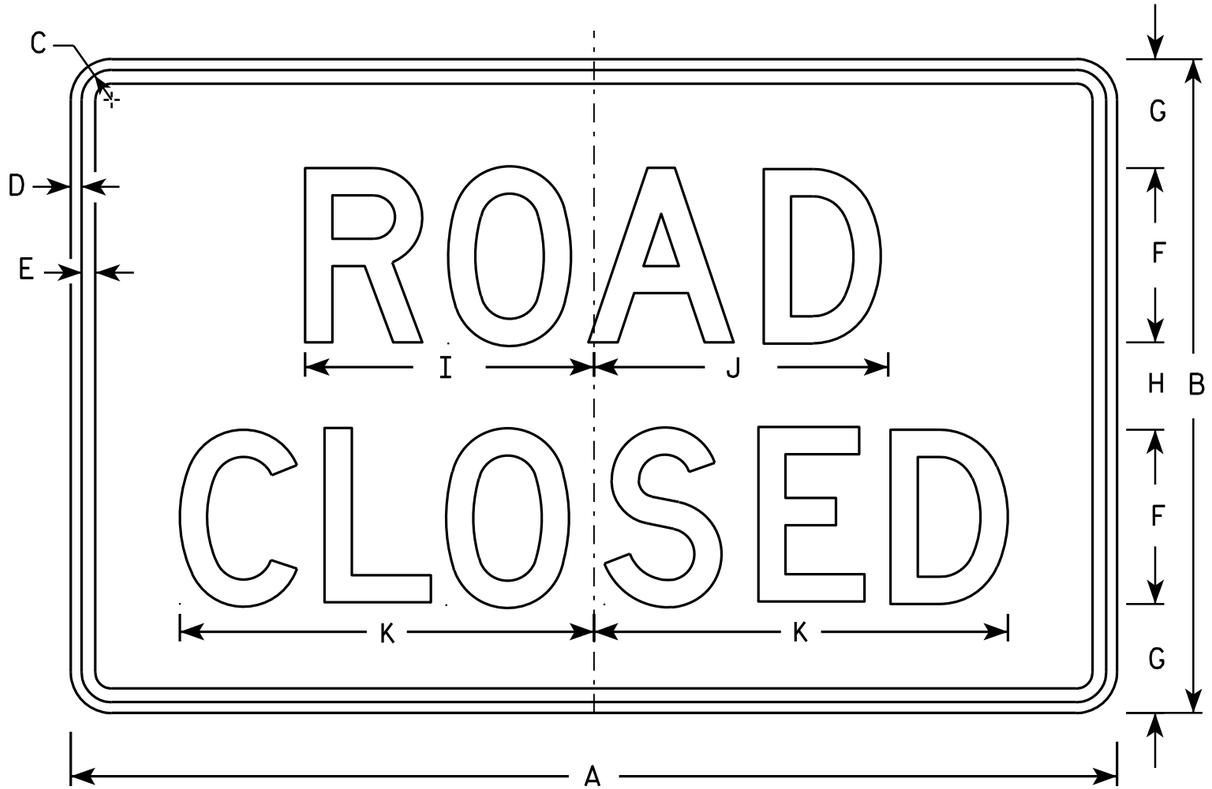
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-64.3

PROJECT NO:

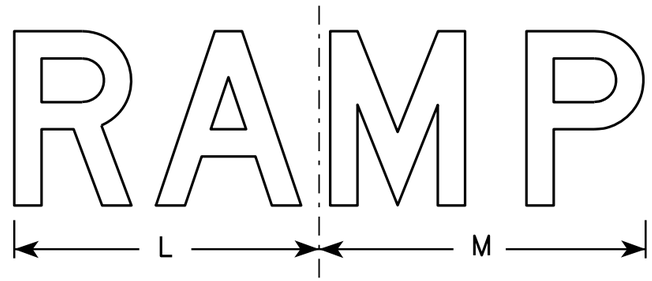
SHEET NO: 309 E



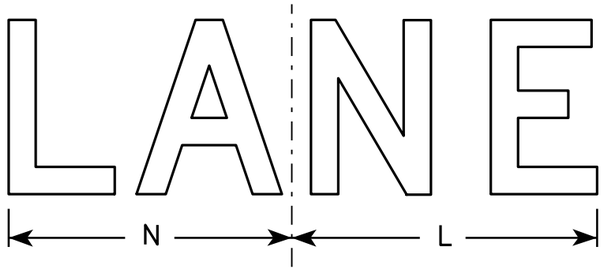
R11-2

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

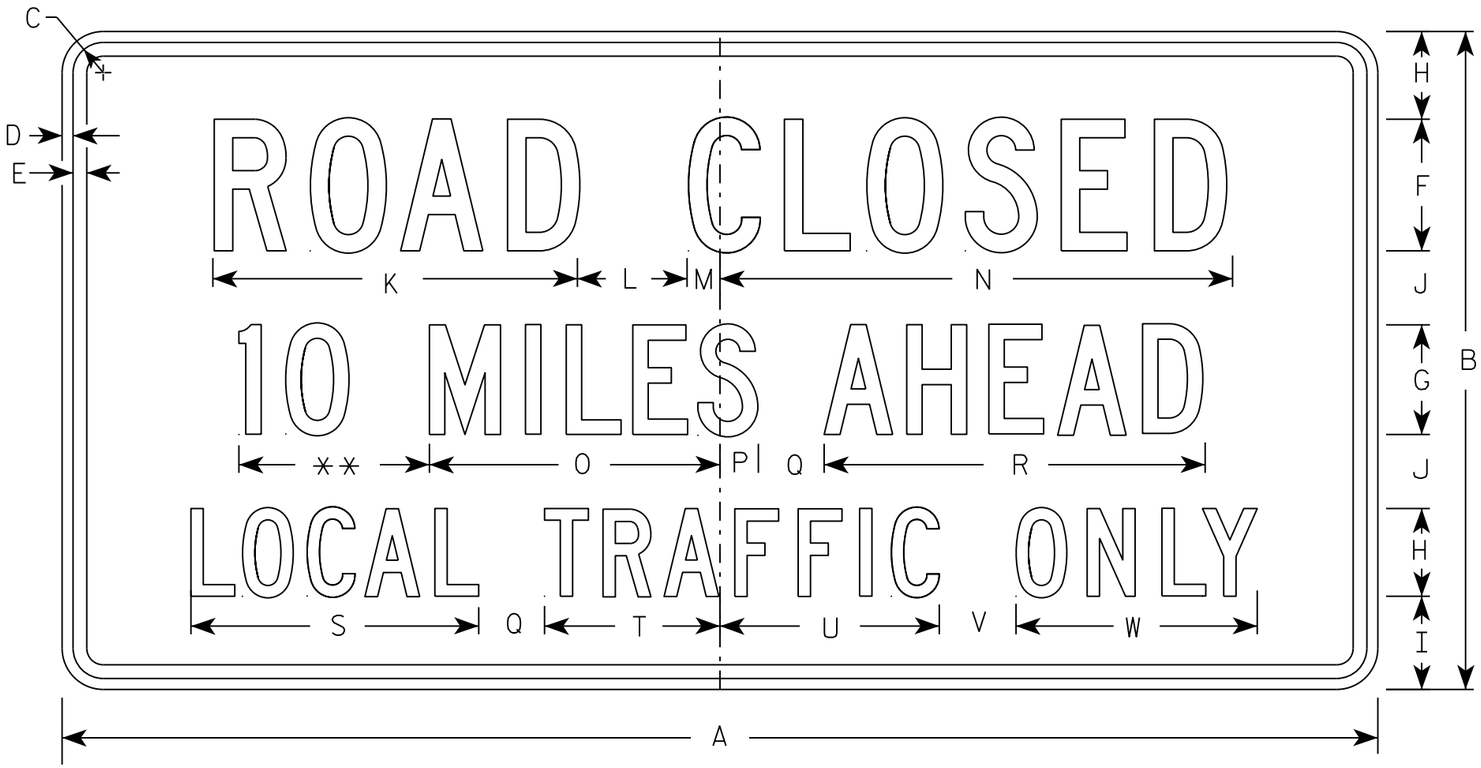
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 310	E

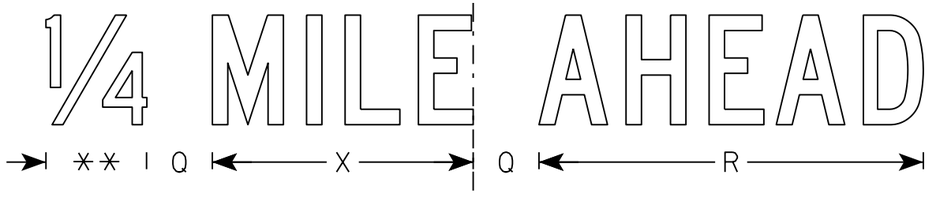
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	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																											

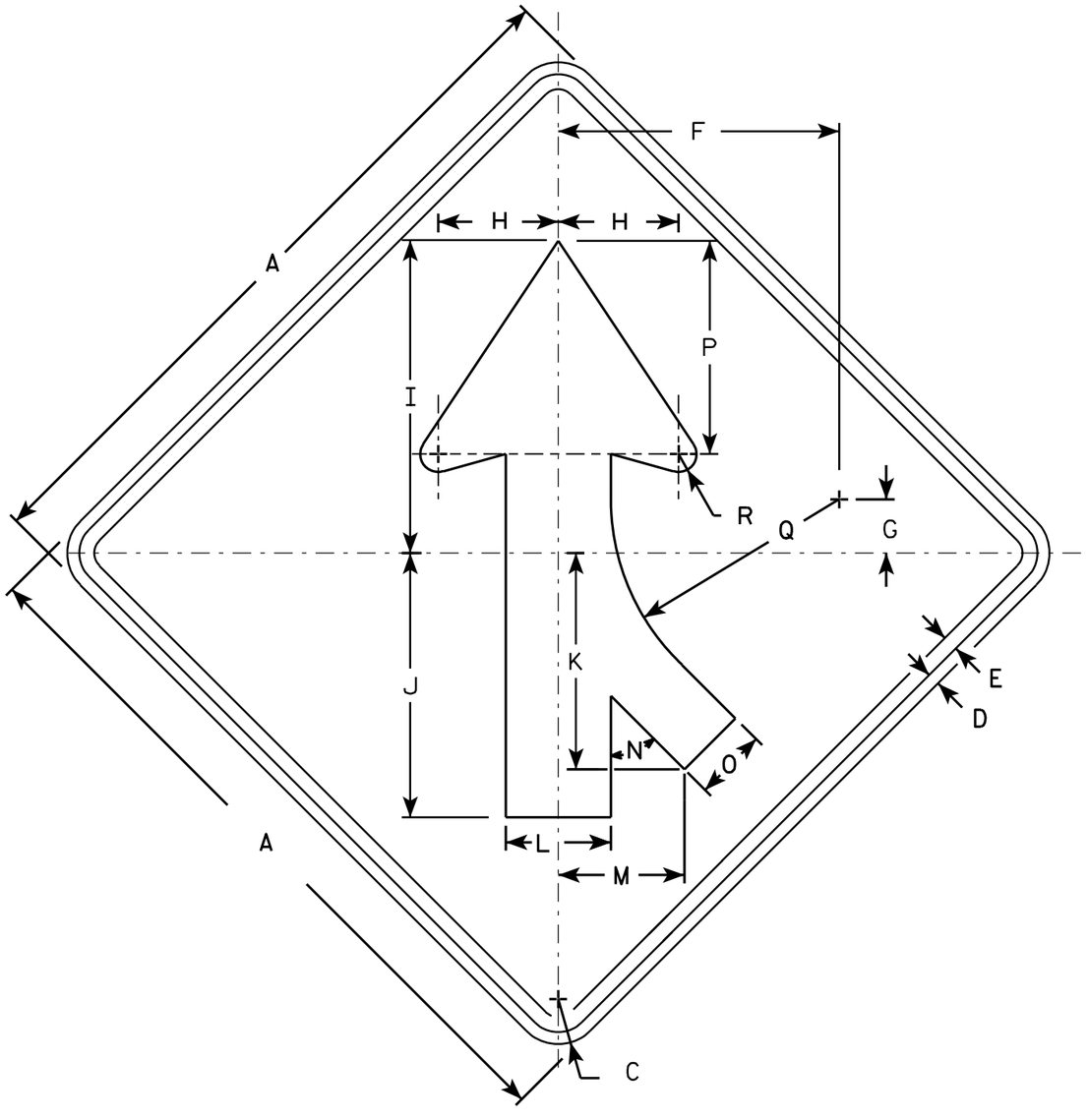
STANDARD SIGN
R11-3

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: 311	E



W4-1 R

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.

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

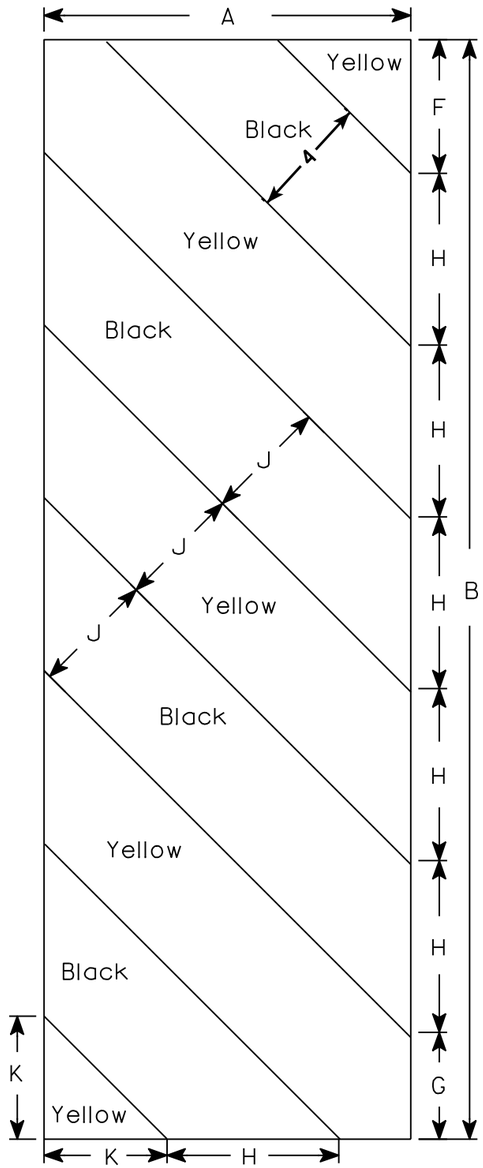
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

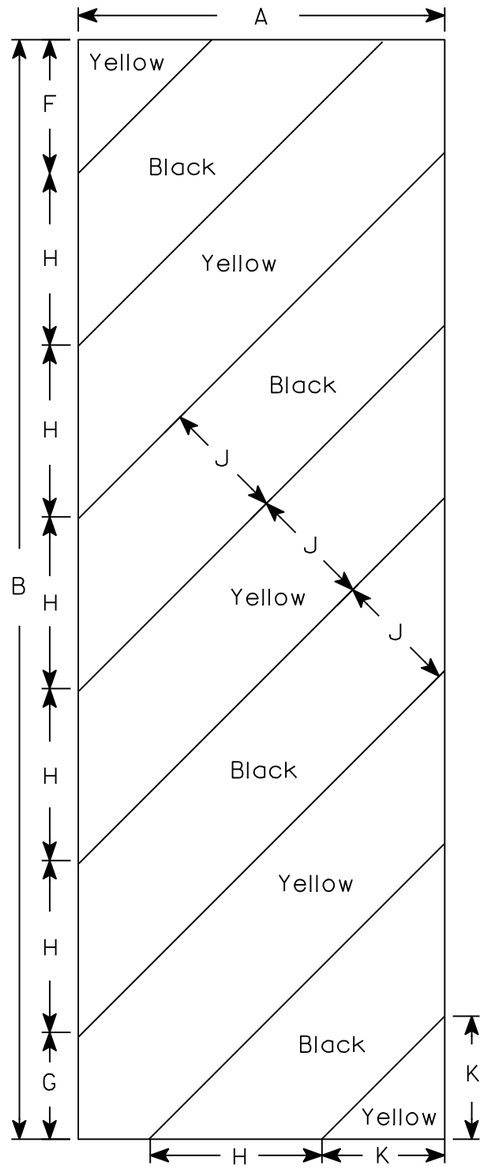
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 312	E



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

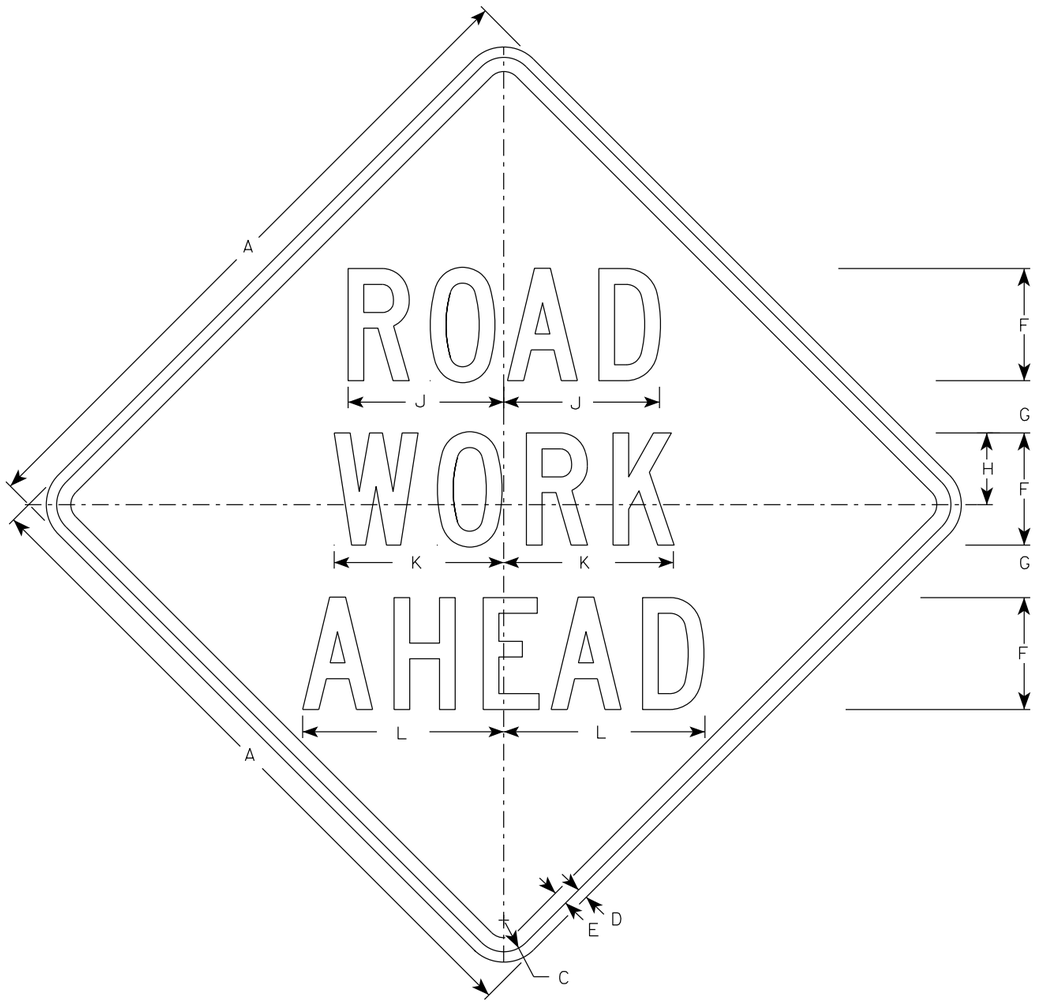
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

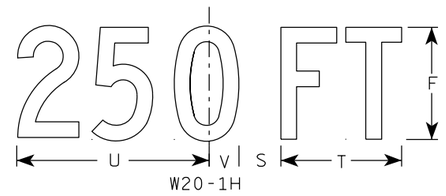
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 313 | E

NOTES

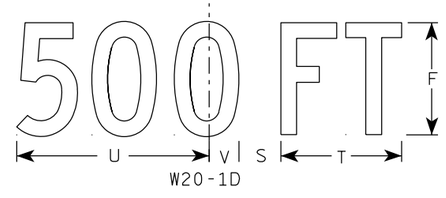
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A



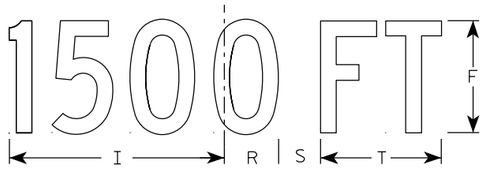
W20-1H



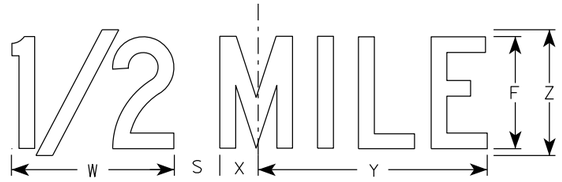
W20-1D



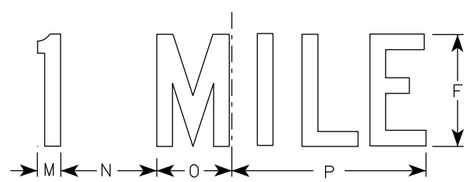
W20-1C



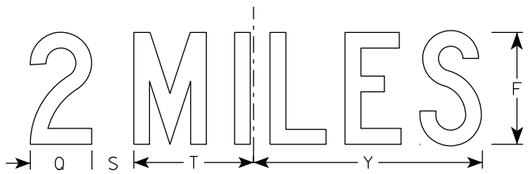
W20-1B



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:

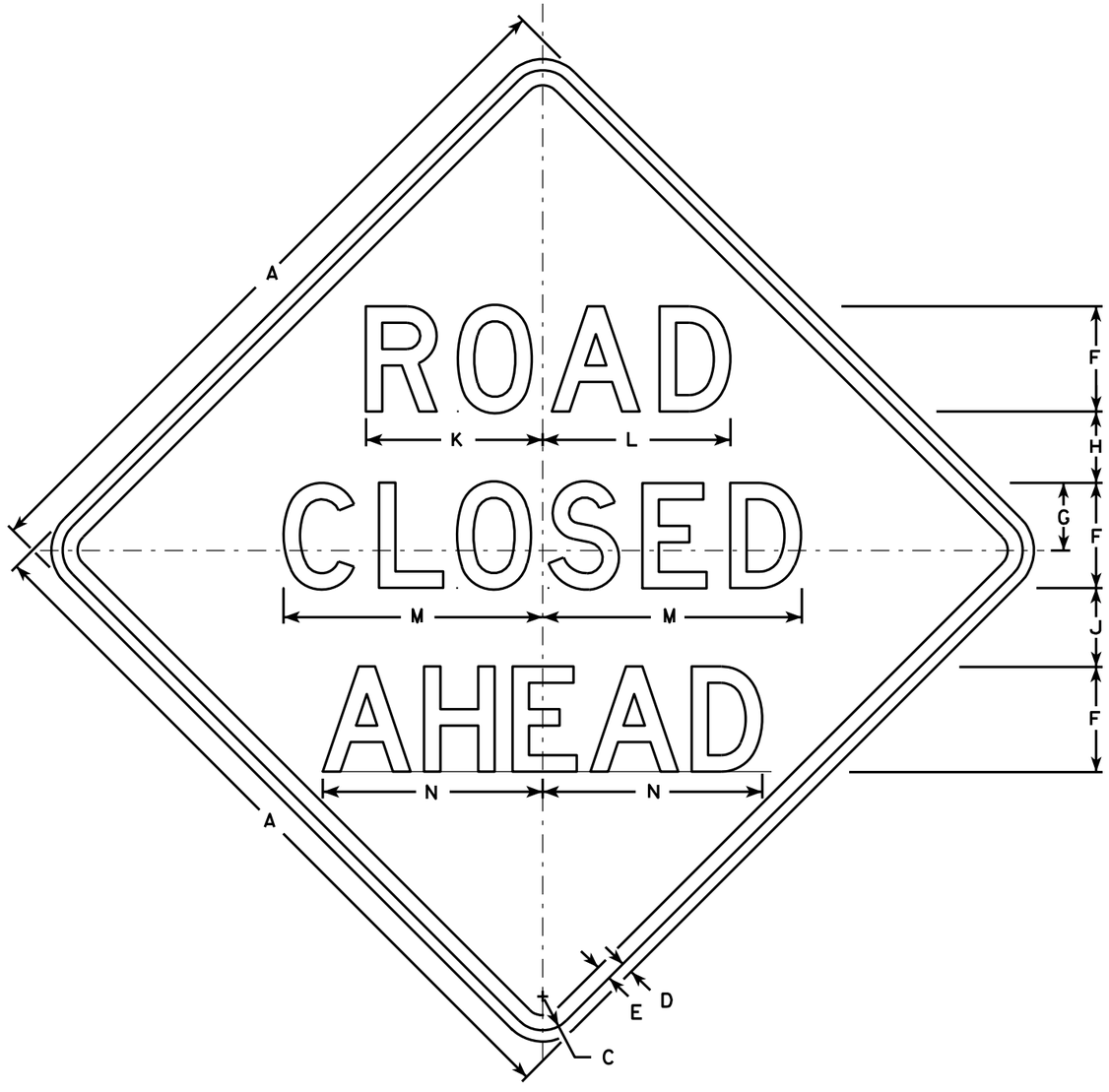
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

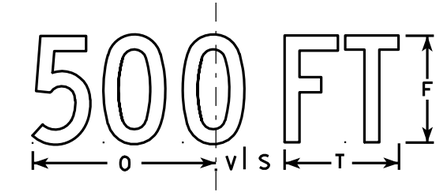
WISDOT/CADDS SHEET 42

7

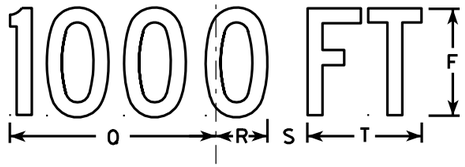
7



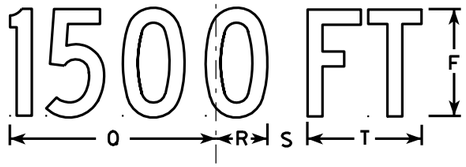
W20-3A



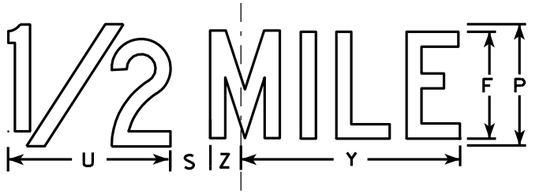
W20-3D



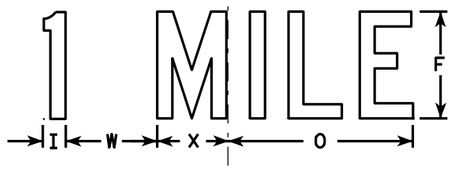
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

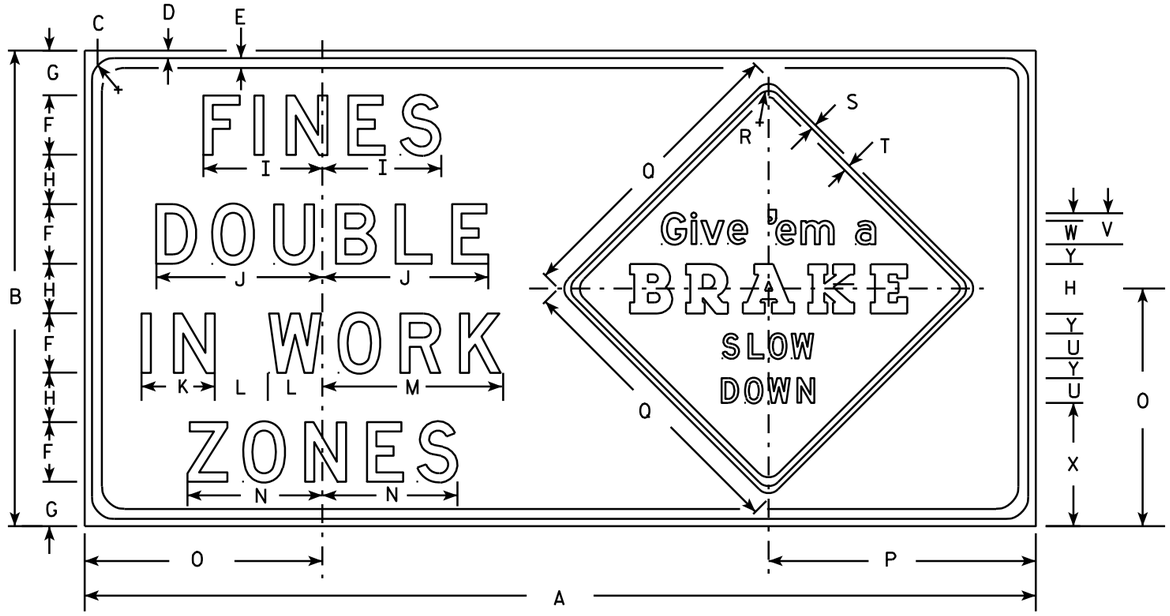
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

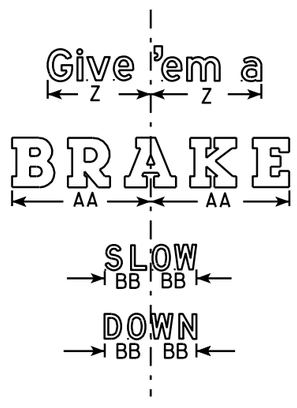
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 315 | E

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





W21-62P

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.

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																															

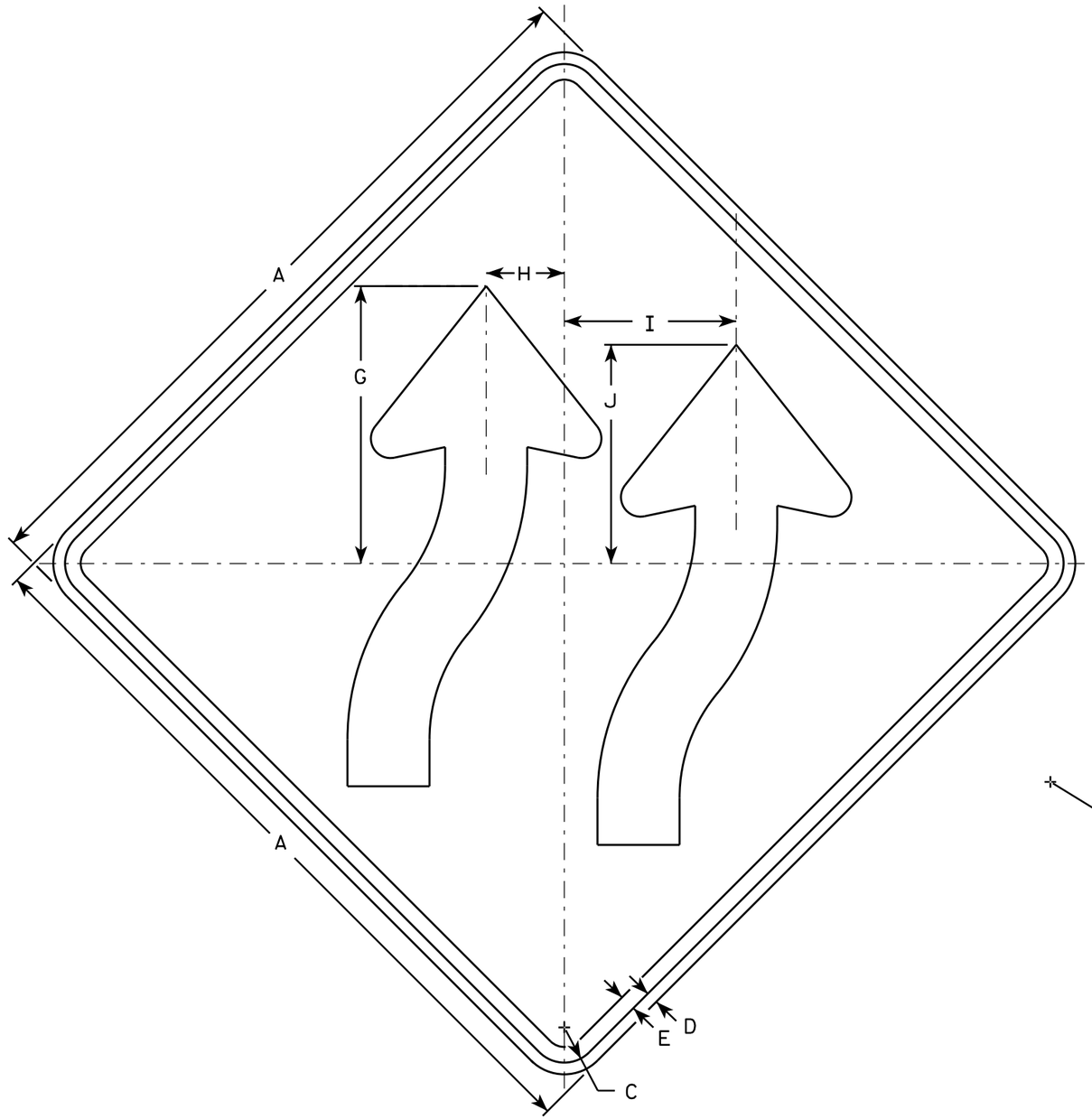
STANDARD SIGN
W21-62

WISCONSIN DEPT OF TRANSPORTATION

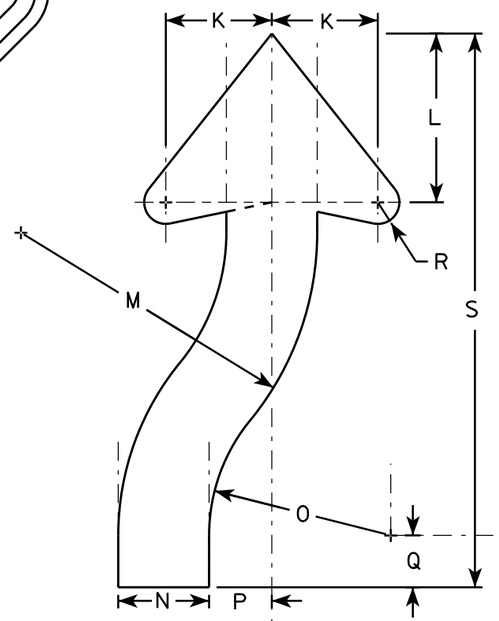
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-62.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 316	E



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

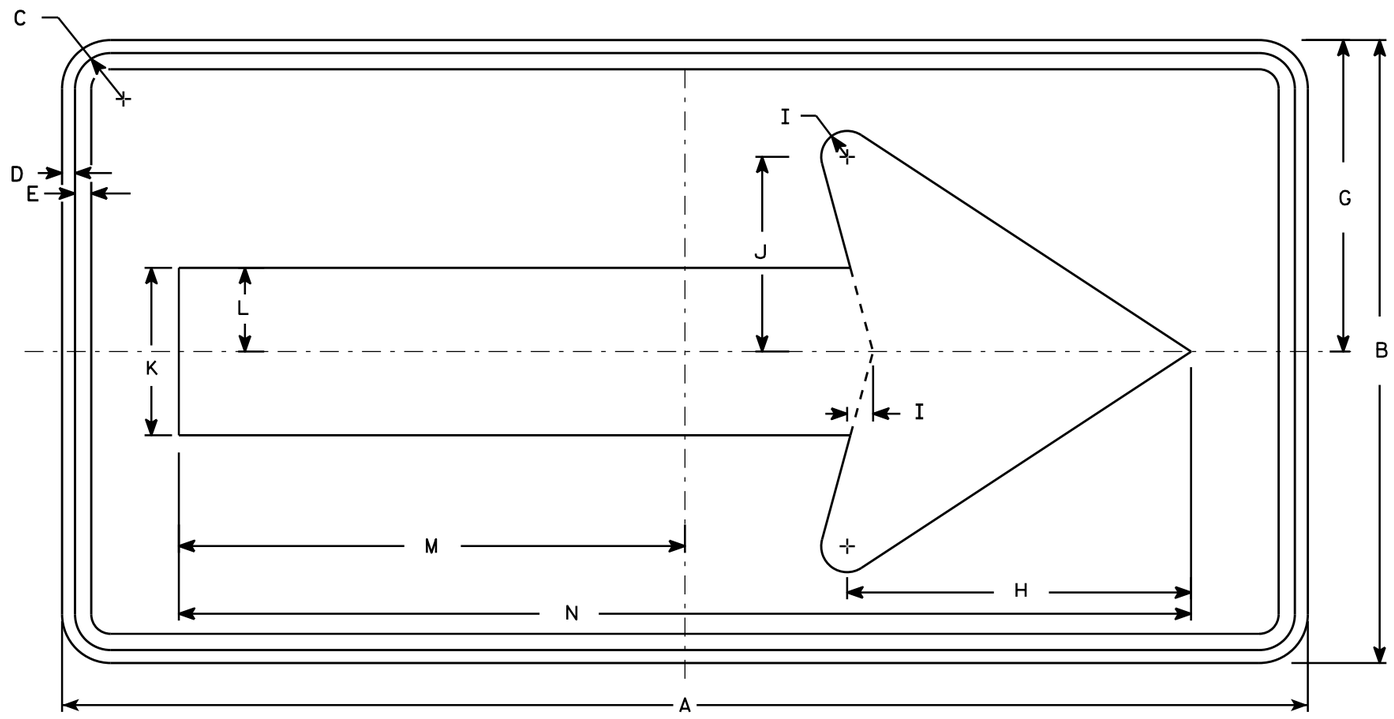
STANDARD SIGN
W01-4b

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

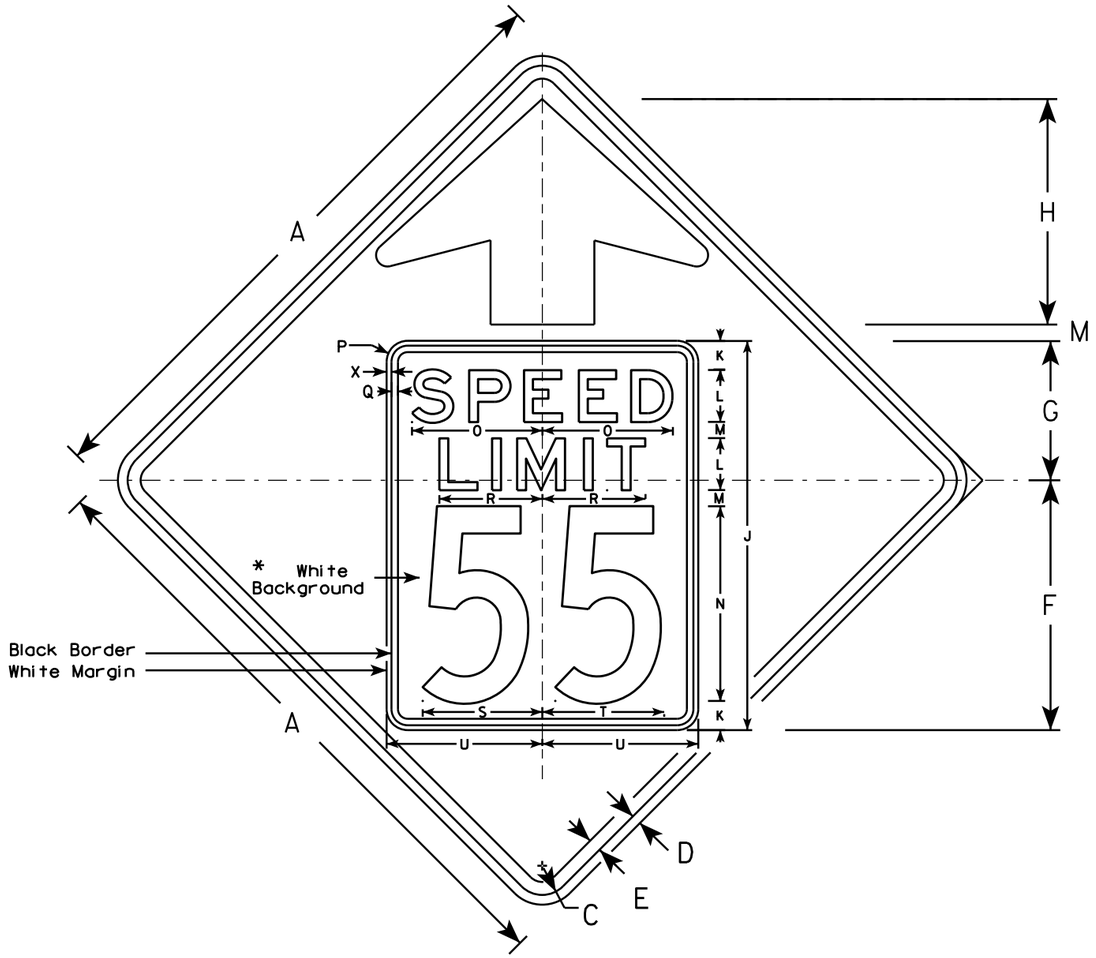
WISCONSIN DEPT OF TRANSPORTATION

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

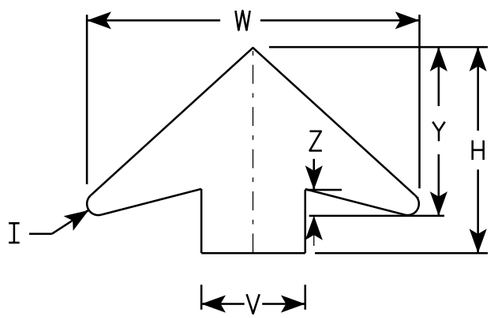


W03-5

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

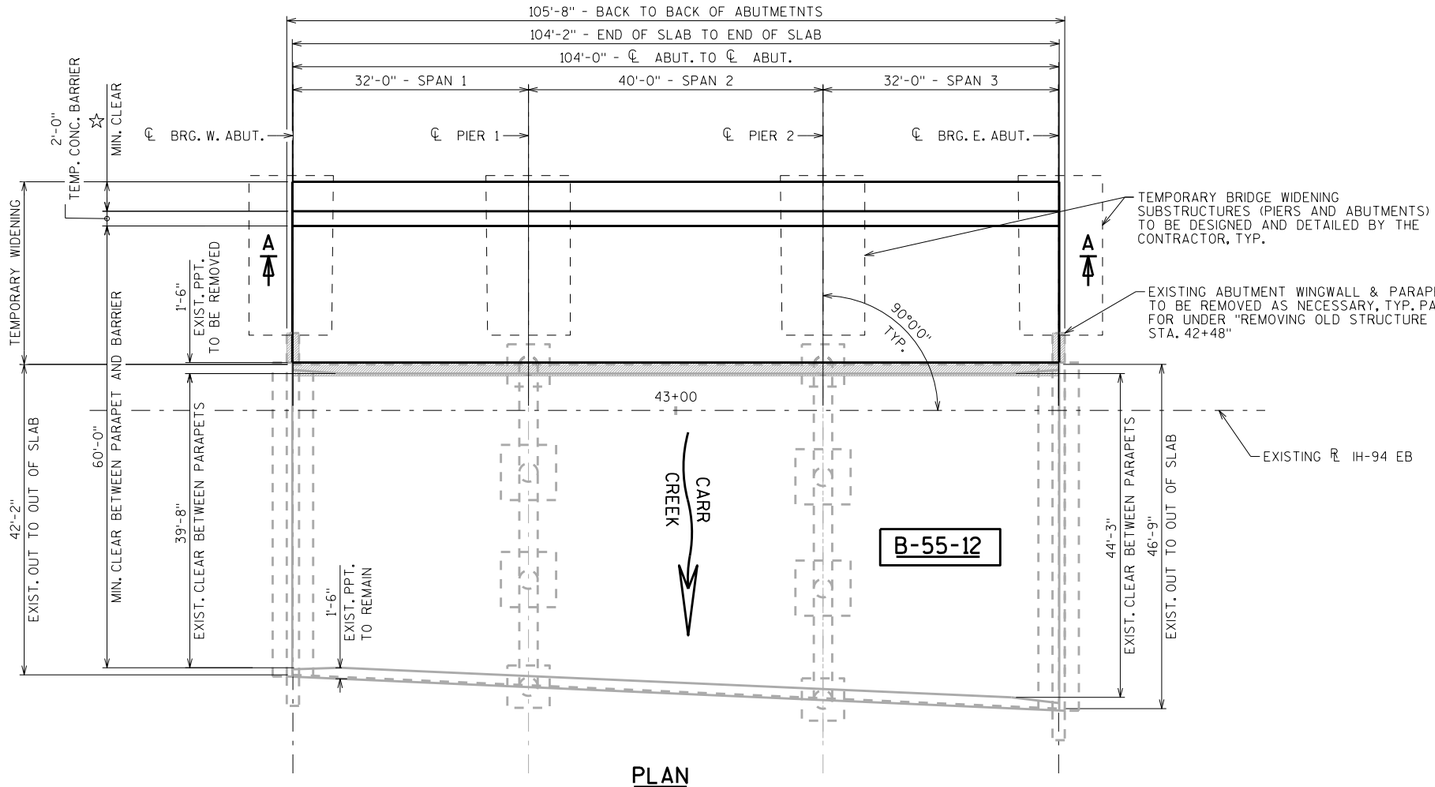
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W035.DGN PLOT DATE : 20-NOV-2013 11:32 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER

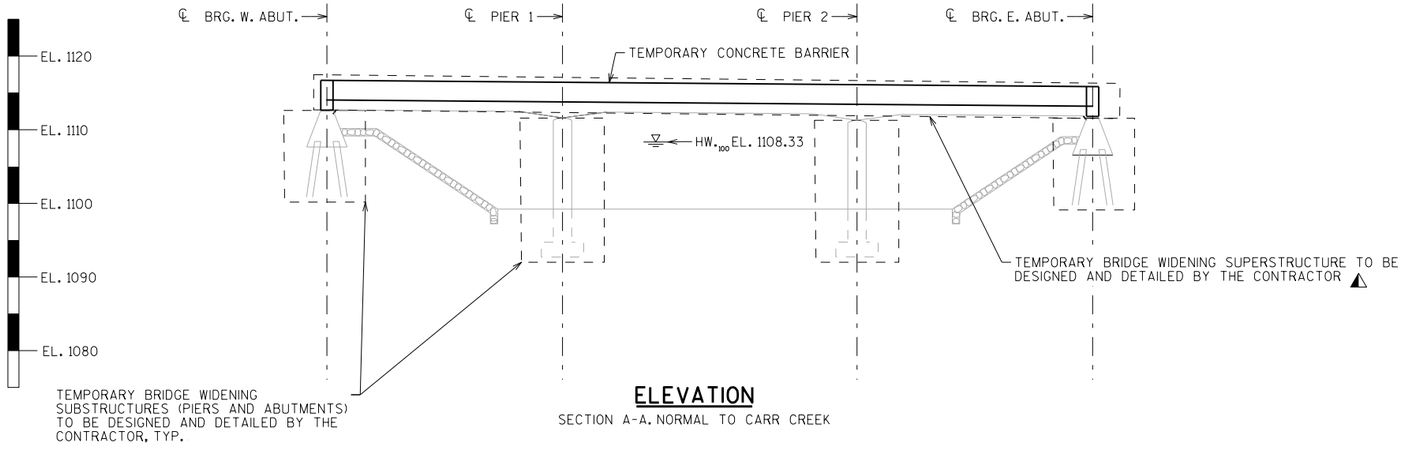
1021-04-78





PLAN

EXISTING 3 SPAN HAUNCHED SLAB - TEMPORARY WIDENING



ELEVATION

SECTION A-A. NORMAL TO CARR CREEK

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 42+48	LS	1
SPV.0105	TEMPORARY BRIDGE WIDENING B-55-12	LS	1

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & ALL OTHER ——— f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 ——— fy = 60,000 P.S.I.

TRAFFIC VOLUME

IH-94 EB

ADT = 23,700. (2042)
R.D.S. = 70 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

THE CONTRACTOR SHALL PROVIDE PLANS, SHOP DRAWINGS, AND DESIGN COMPUTATIONS FOR THE TEMPORARY STRUCTURE.

TEMPORARY CONCRETE BARRIERS SHALL CONFORM TO SECTION 603.3.2 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL DETERMINE THE TEMPORARY CONCRETE BARRIER CONNECTION AND SHALL MEET THE MINIMUM DEFLECTION CLEARANCE BEHIND THE BARRIER AS SHOWN IN THESE PLANS AND FDM SDD 14B7.

TEMPORARY CONCRETE BARRIER AND ANCHORED CONNECTIONS ARE INCIDENTAL TO THE BID ITEM "TEMPORARY BRIDGE WIDENING B-55-12".

THE CONCRETE BARRIER WIDTH IS BASED ON THE ACTUAL BARRIER WIDTH OF 1'-10½" AND A 1½" INSTALLATION TOLERANCE.

BARRIER ANCHORAGE SHALL CONFORM TO FDM SDD 14B7 IF ANCHORED BARRIERS ARE SELECTED BY THE CONTRACTOR.

⚠ ELEVATION AT LOW POINT OF NEW SUPERSTRUCTURE SHALL BE A MINIMUM OF 1110.33 TO PROVIDE 2' MINIMUM FREEBOARD FROM 100 YEAR HIGH WATER ELEVATION.

☆ TEMPORARY CONCRETE BARRIER MINIMUM DEFLECTION CLEARANCE

DRIVING SURFACE	BARRIER CONNECTION	CONSTRUCTION POSTED SPEED	
		40 MPH OR LESS	40 MPH OR GREATER
ASPHALTIC OVERLAY	UNANCHORED	2'-0"	4'-0"
REINFORCED CONCRETE	UNANCHORED	2'-0"	4'-0"
	ANCHORED	6"	

LIST OF DRAWINGS

1. TEMPORARY WIDENING
2. WIDENING DETAILS

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-55-12

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	AMB	BAF	AMB

TEMPORARY WIDENING

SHEET 1 OF 2

320

I.D. 1021-04-07C

DATE: FEB. 2020

SCALE = 10.00

8

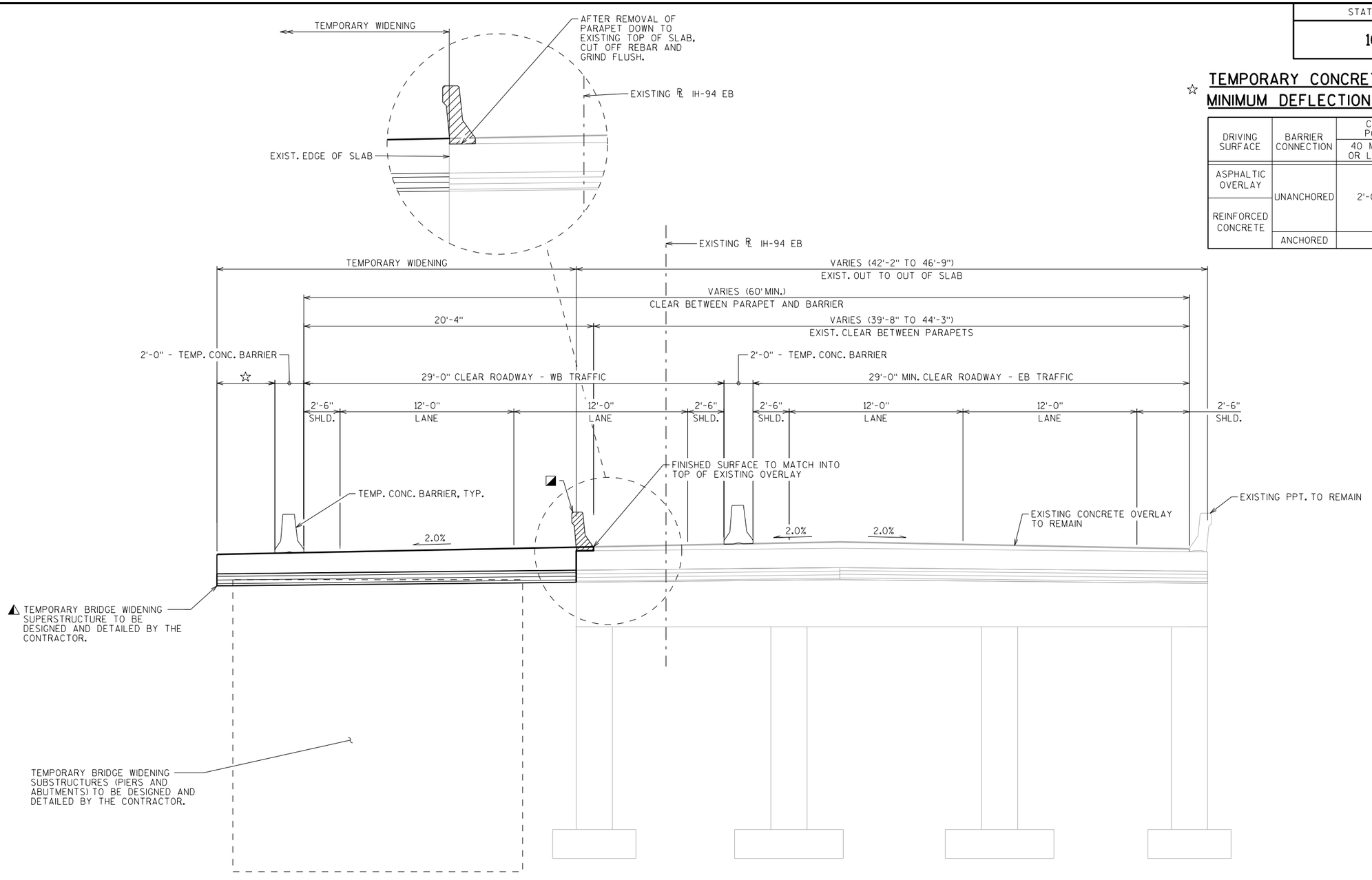
8

STATE PROJECT NUMBER

1021-04-78

☆ TEMPORARY CONCRETE BARRIER MINIMUM DEFLECTION CLEARANCE

DRIVING SURFACE	BARRIER CONNECTION	CONSTRUCTION POSTED SPEED	
		40 MPH OR LESS	40 MPH OR GREATER
ASPHALTIC OVERLAY	UNANCHORED	2'-0"	4'-0"
REINFORCED CONCRETE			
	ANCHORED	6"	



CROSS SECTION THRU ROADWAY

NORMAL TO ℄ IH 94 EB AT PIER LOOKING EAST

◪ EXISTING PARAPET TO BE REMOVED. TO BE PAID FOR UNDER "REMOVING OLD STRUCTURE STA. 42+48"

◭ ELEVATION AT LOW POINT OF NEW SUPERSTRUCTURE IS TO BE A MINIMUM OF 1110.33 TO PROVIDE 2' MINIMUM FREEBOARD FROM 100 YEAR HIGH WATER ELEVATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-12

DRAWN BY BAF | PLANS CK'D. AMB

WIDENING DETAILS

SHEET 2

321

SCALE = 3.50

8

8

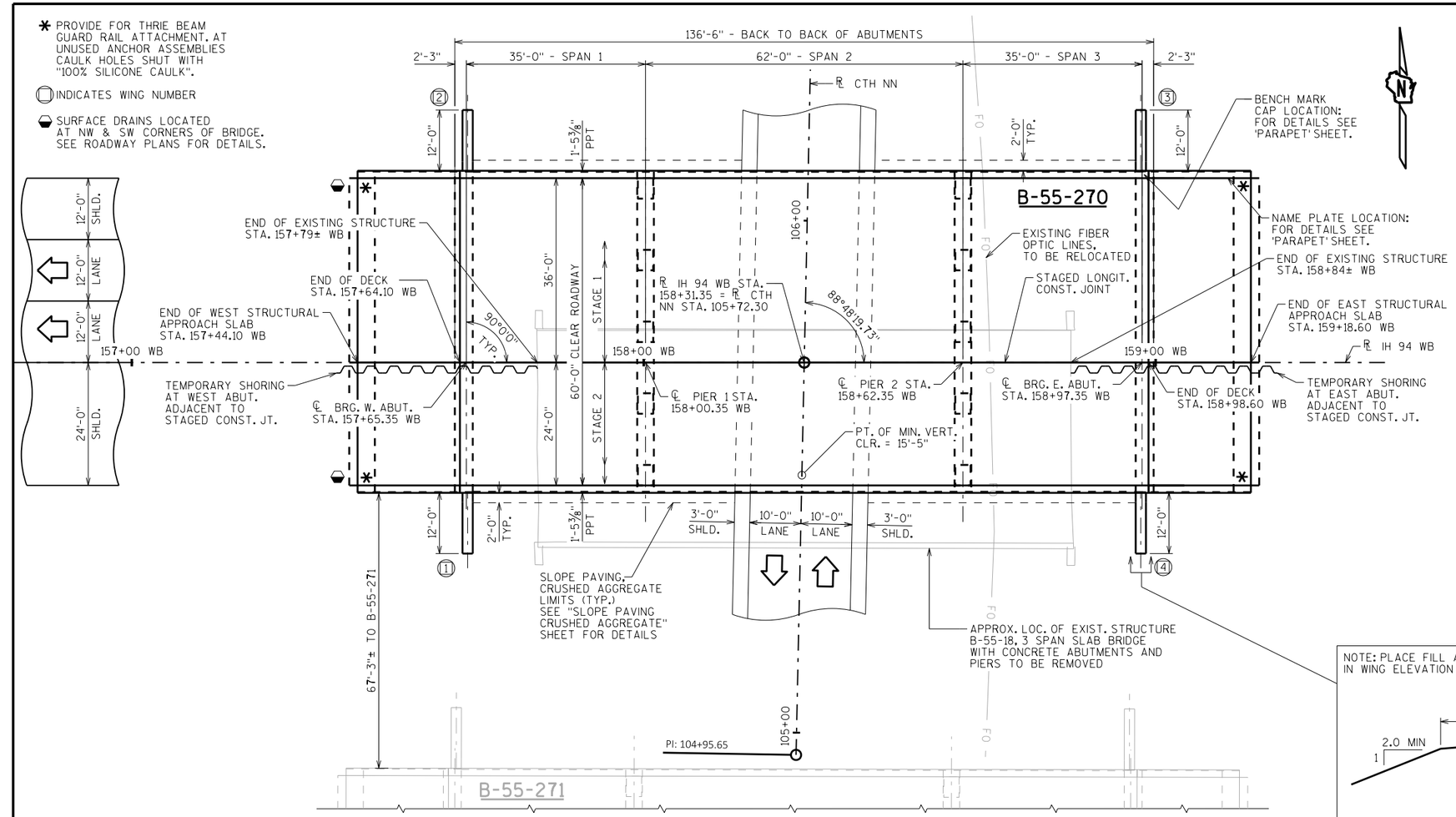
STATE PROJECT NUMBER

1021-00-79

✱ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

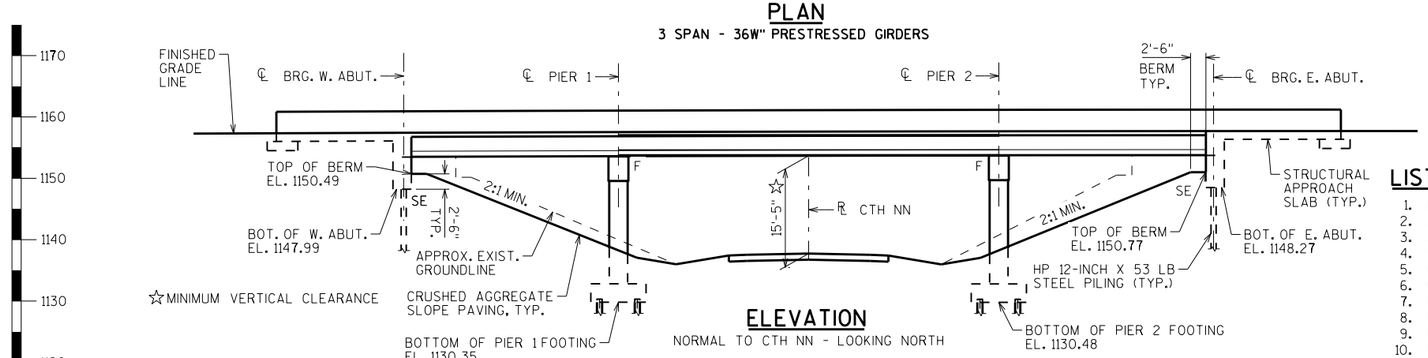
(2) INDICATES WING NUMBER

SURFACE DRAINS LOCATED AT NW & SW CORNERS OF BRIDGE. SEE ROADWAY PLANS FOR DETAILS.



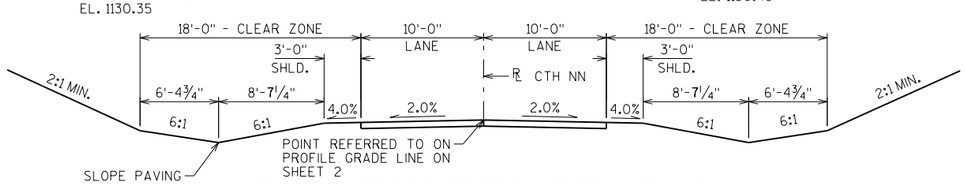
PLAN

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.

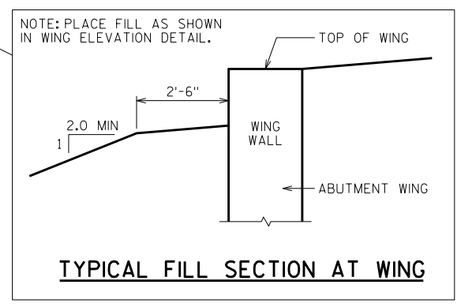
36W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

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.



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.

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

STRUCTURE DESIGN CONTACTS:
AIHAM ALSKIF (608) 261-6113
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-55-270

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

322

I.D. 1021-00-09A

DATE: APRIL 2020

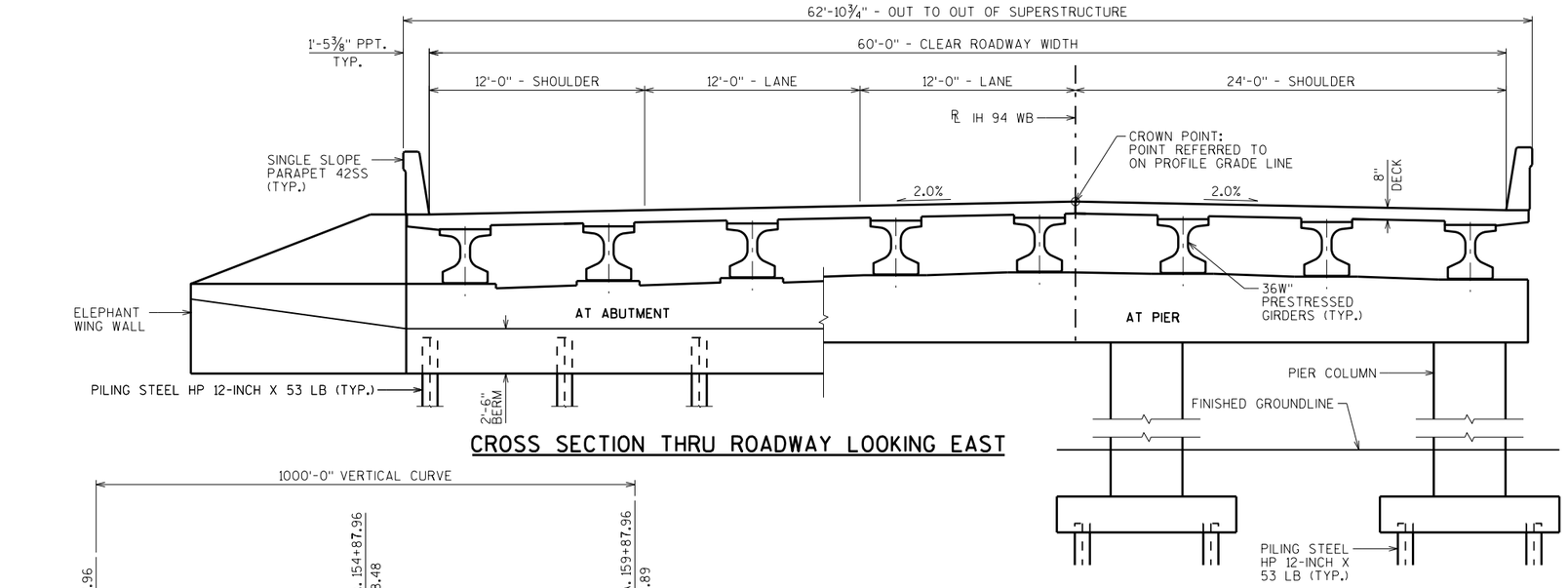
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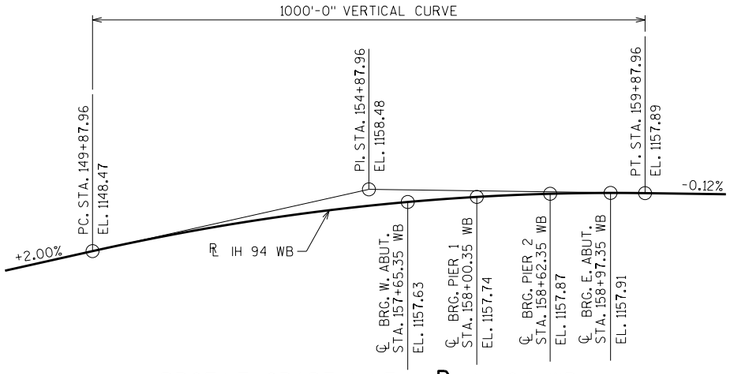
8

STATE PROJECT NUMBER

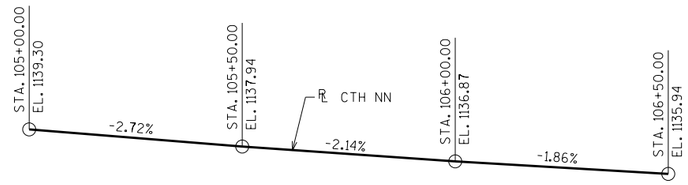
1021-00-79



CROSS SECTION THRU ROADWAY LOOKING EAST



PROFILE GRADE LINE - ℄ IH 94 WB



PROFILE GRADE LINE - ℄ CTH NN

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.

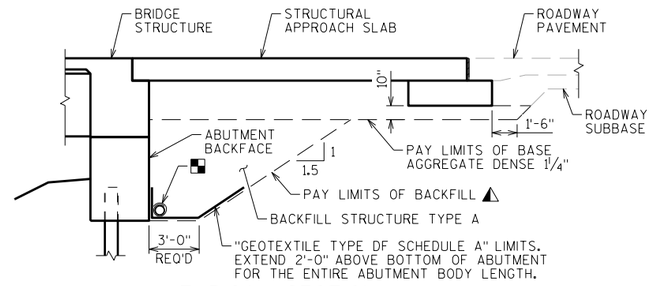
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

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

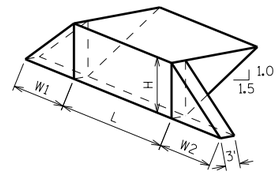
◭ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

◪ 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.

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"



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

323

SCALE = 4.00

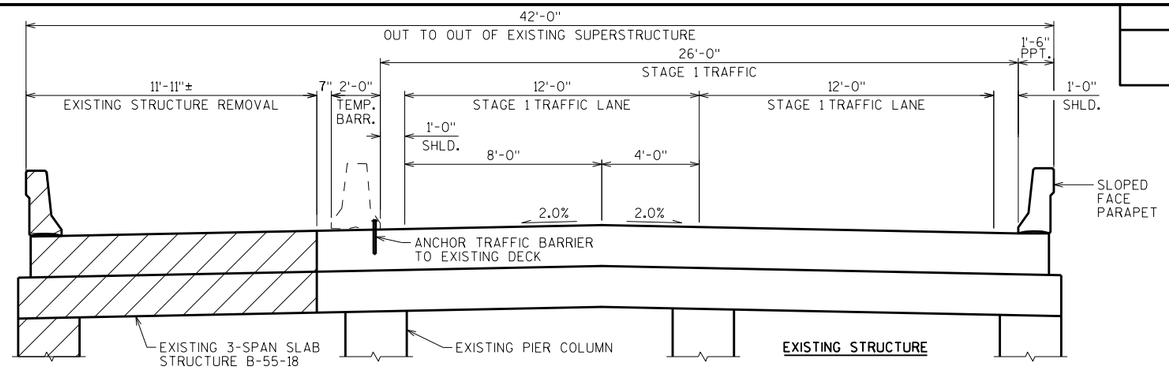
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STATE PROJECT NUMBER

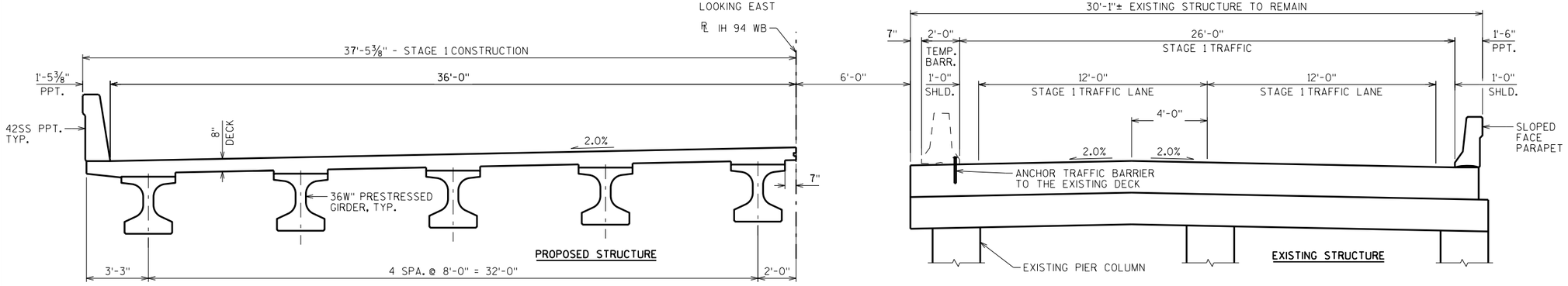
1021-00-79

INDICATES EXISTING STRUCTURE REMOVAL



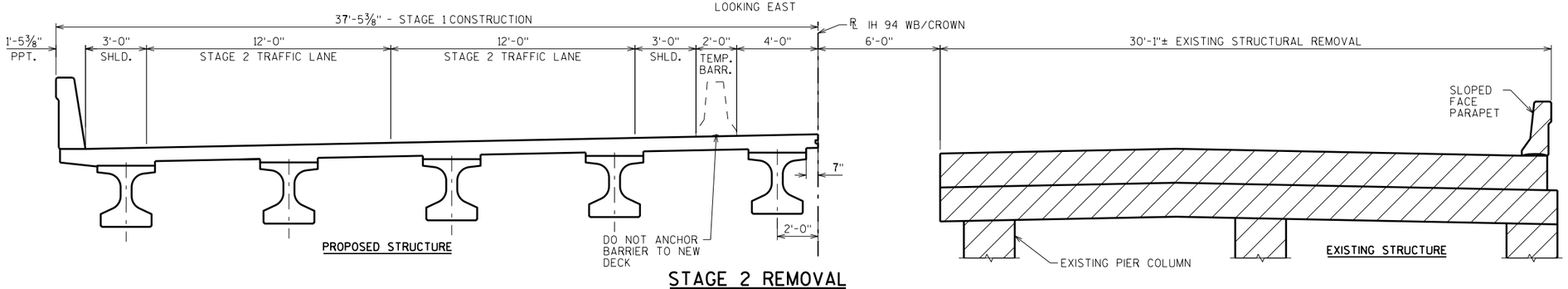
STAGE 1 REMOVAL

LOOKING EAST



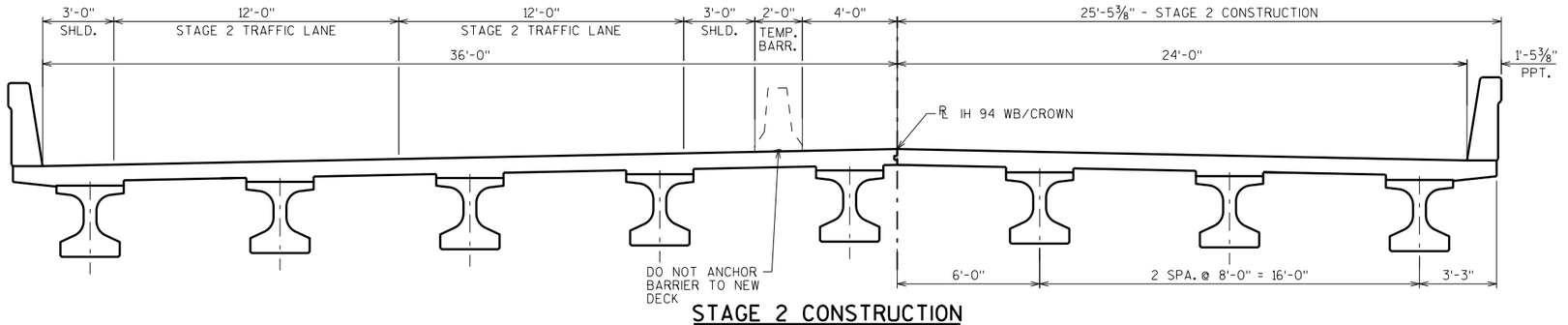
STAGE 1 CONSTRUCTION

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

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CONSTRUCTION STAGING DETAILS

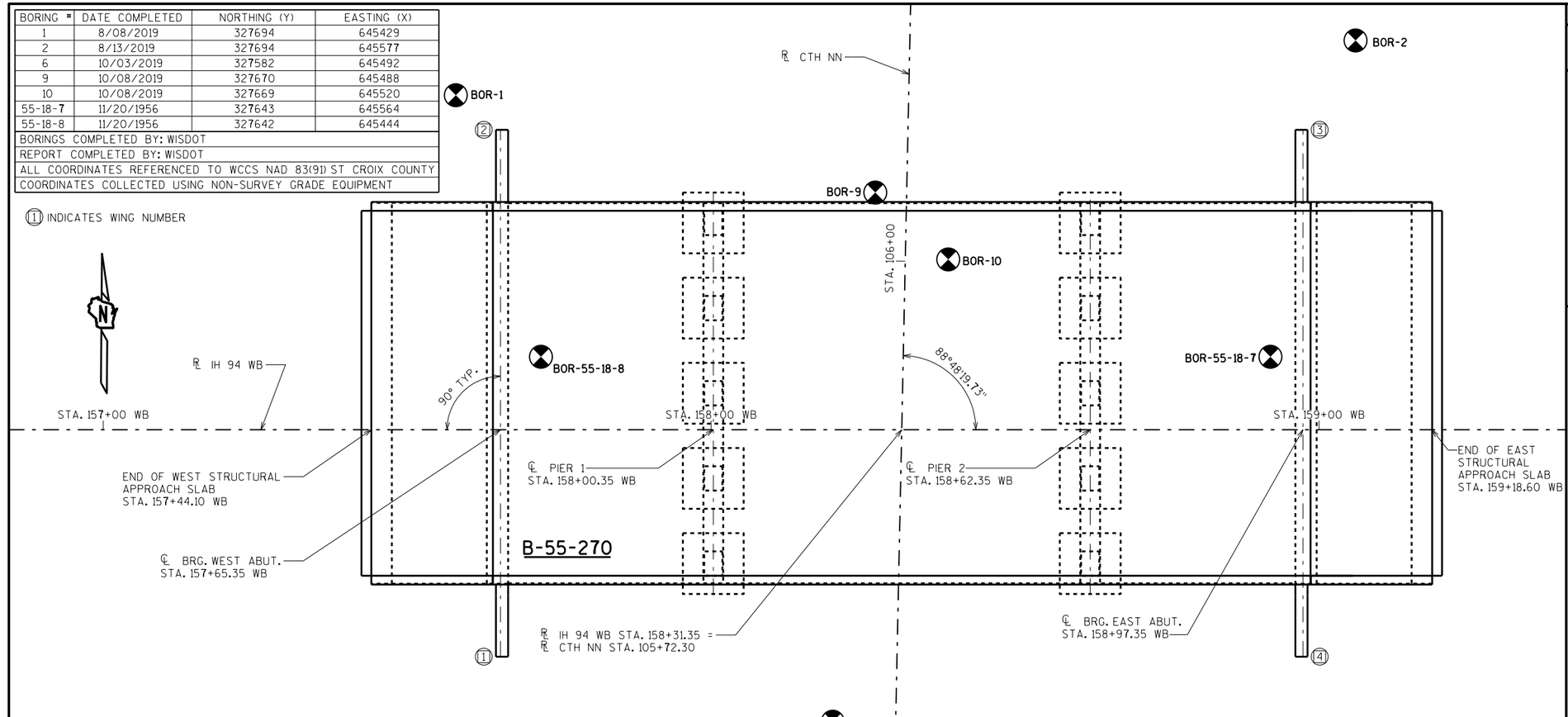
SHEET 3

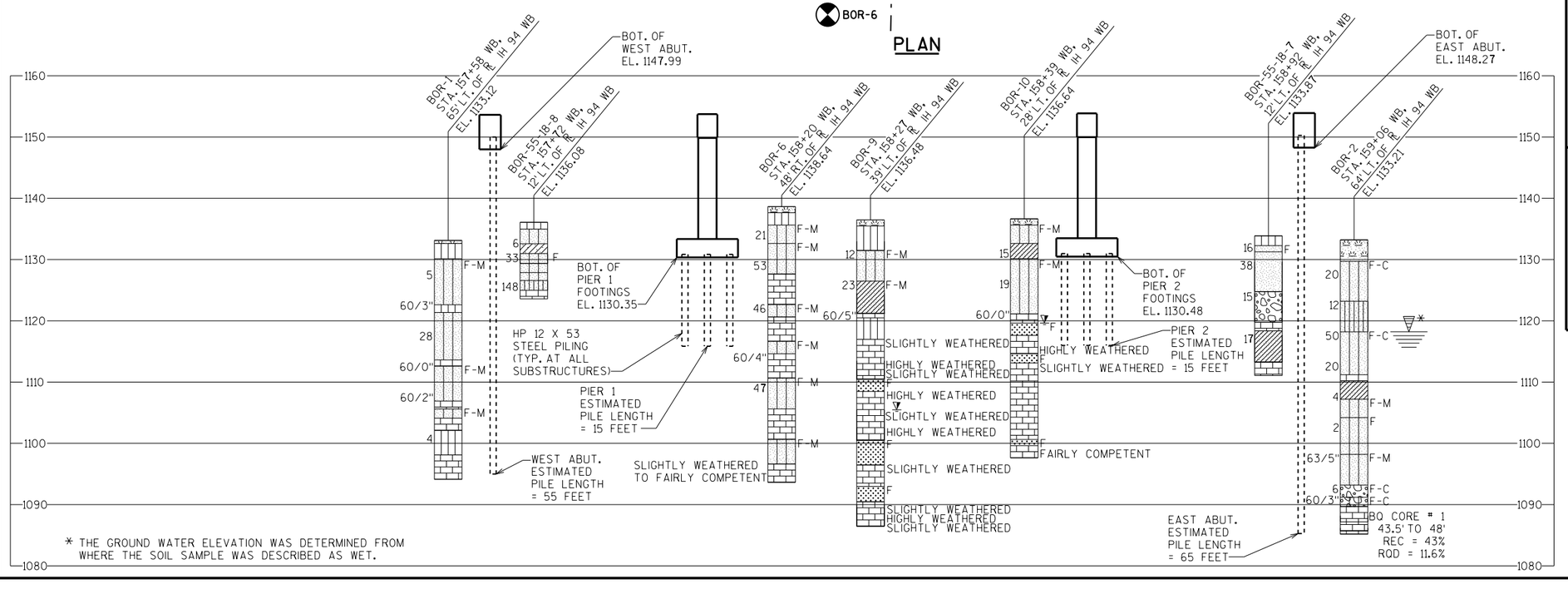
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	8/08/2019	327694	645429
2	8/13/2019	327694	645577
6	10/03/2019	327582	645492
9	10/08/2019	327670	645488
10	10/08/2019	327669	645520
55-18-7	11/20/1956	327643	645564
55-18-8	11/20/1956	327642	645444
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.

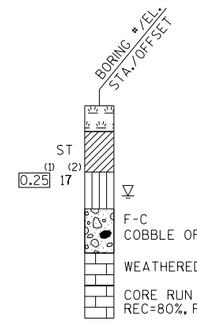
STATE PROJECT NUMBER

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

325

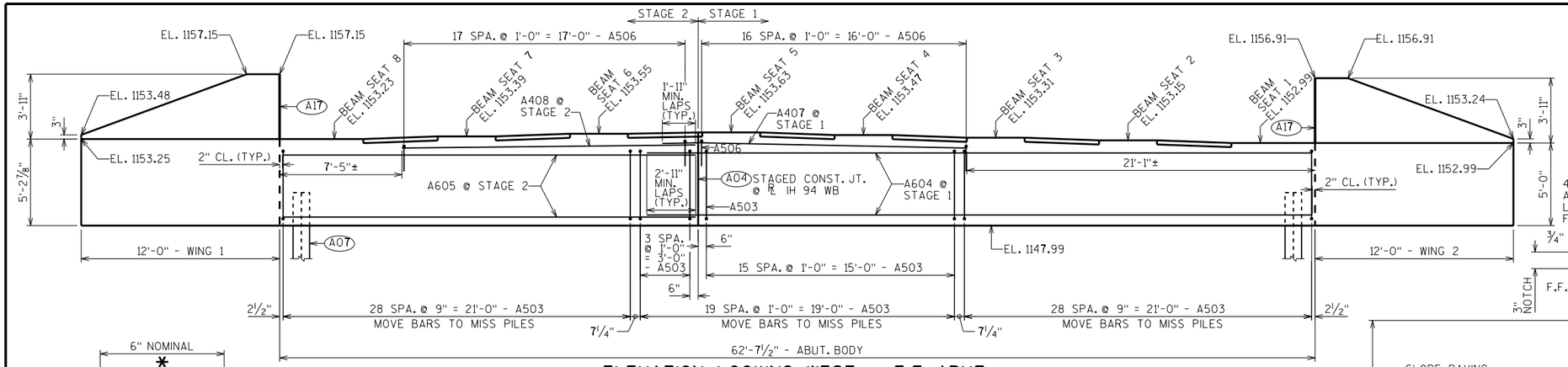
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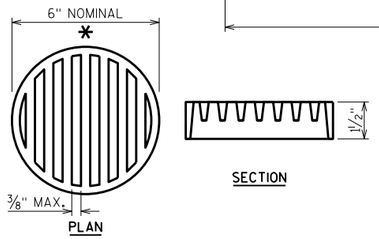
8

STATE PROJECT NUMBER

1021-00-79



ELEVATION LOOKING WEST @ F.F. ABUT.



SECTION

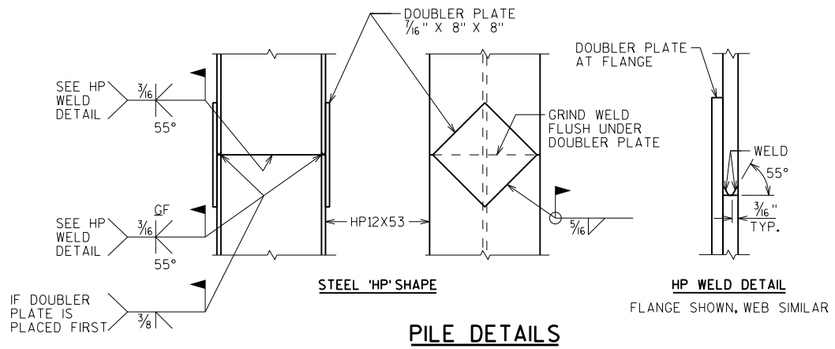
PLAN

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.

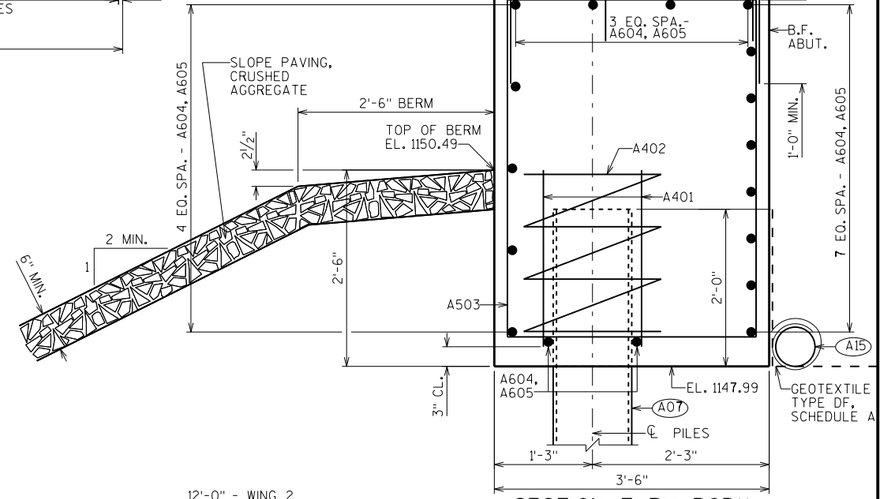


STEEL 'HP' SHAPE

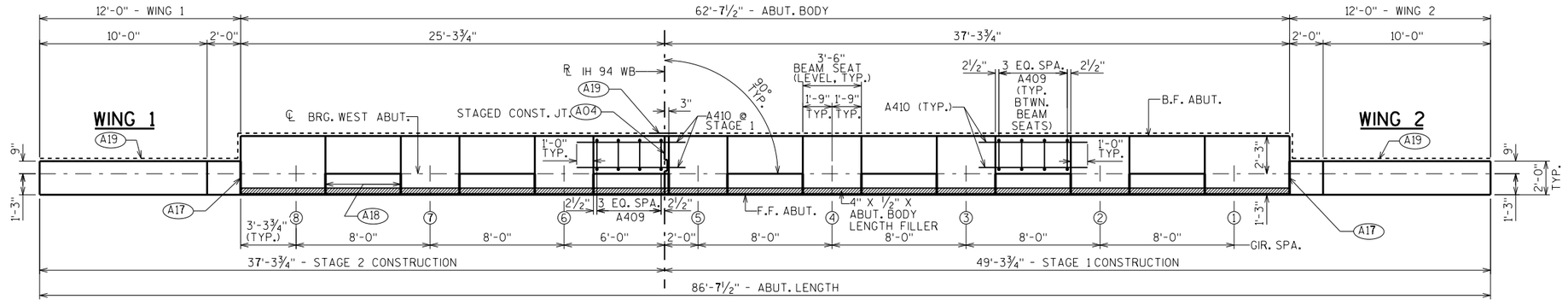
HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

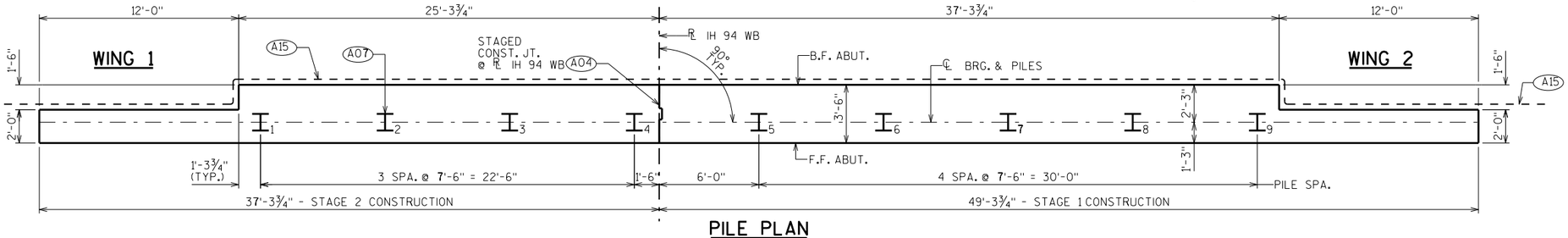
PILE DETAILS



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

326

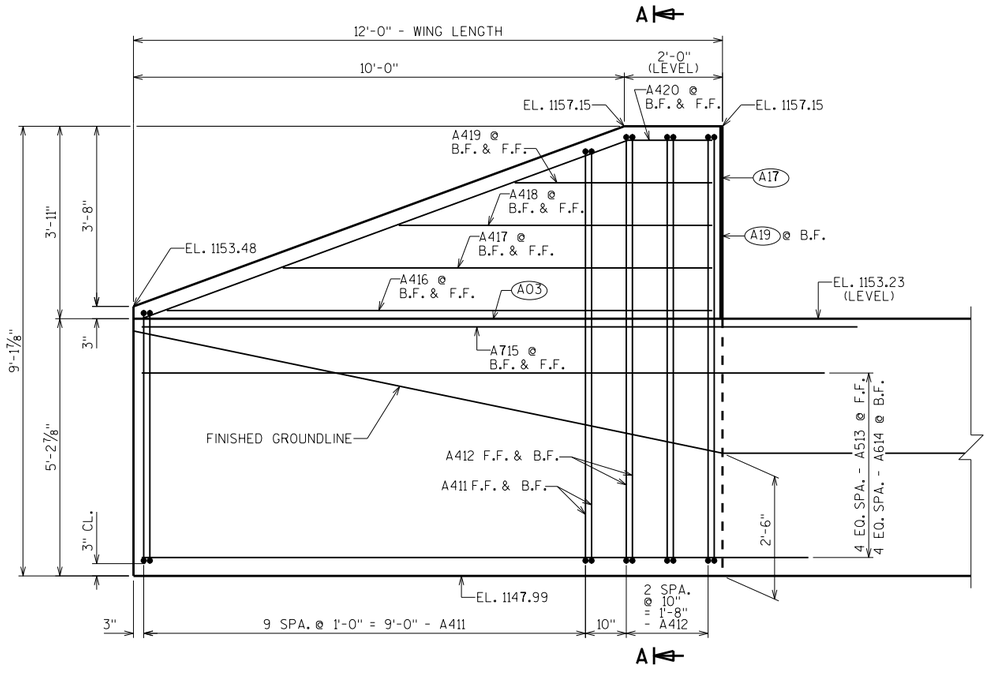
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8

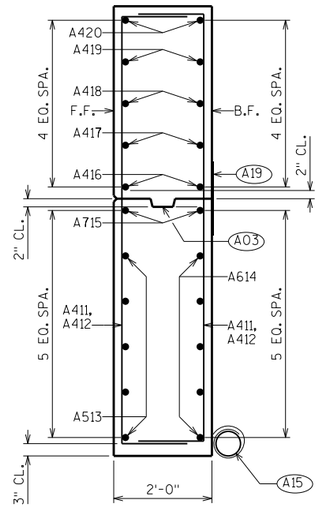
SCALE = 3.75

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

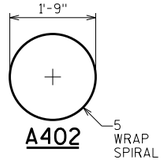
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		18	2'-3"			BODY-BOTTOM-2 PER PILE-VERTICAL
A402		9	28'-0"	X		BODY-BOT.-SPIRAL-1 PER PILE-VERT.
A503		78	15'-7"	X		BODY-STIRRUPS-VERT.
A604		17	40'-3"			BODY-HORIZONTAL-STAGE 1
A605		17	25'-0"			BODY-HORIZONTAL-STAGE 2
A506		35	6'-3"	X		BODY-TOP-VERT.-UNDER 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.

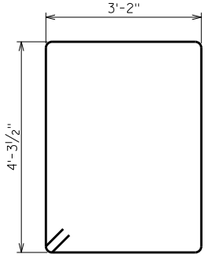
BAR SERIES TABLE

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"

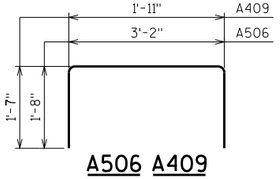
BUNDLE AND TAG EACH SERIES SEPARATELY.



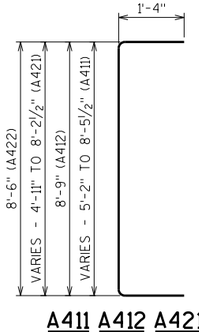
A402



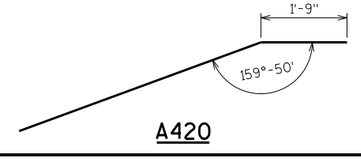
A503



A506 A409



A411 A412 A421 A422



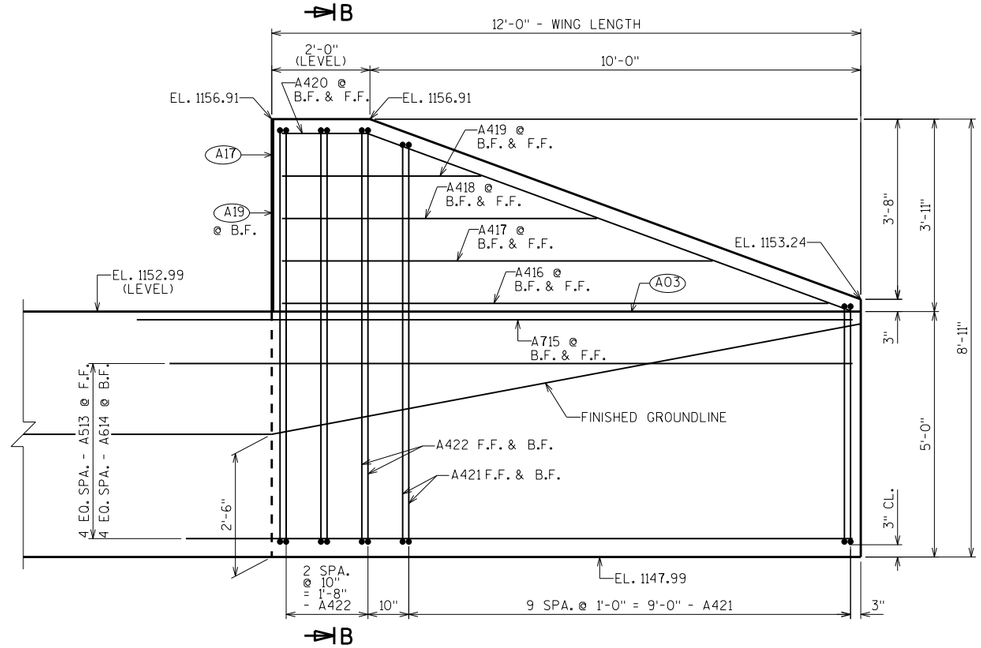
A420

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

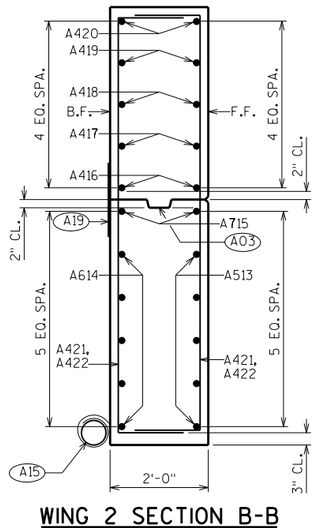
A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

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-55-270

DRAWN BY JPH | PLANS CK'D. AA

WEST ABUTMENT DETAILS

SHEET 6

327

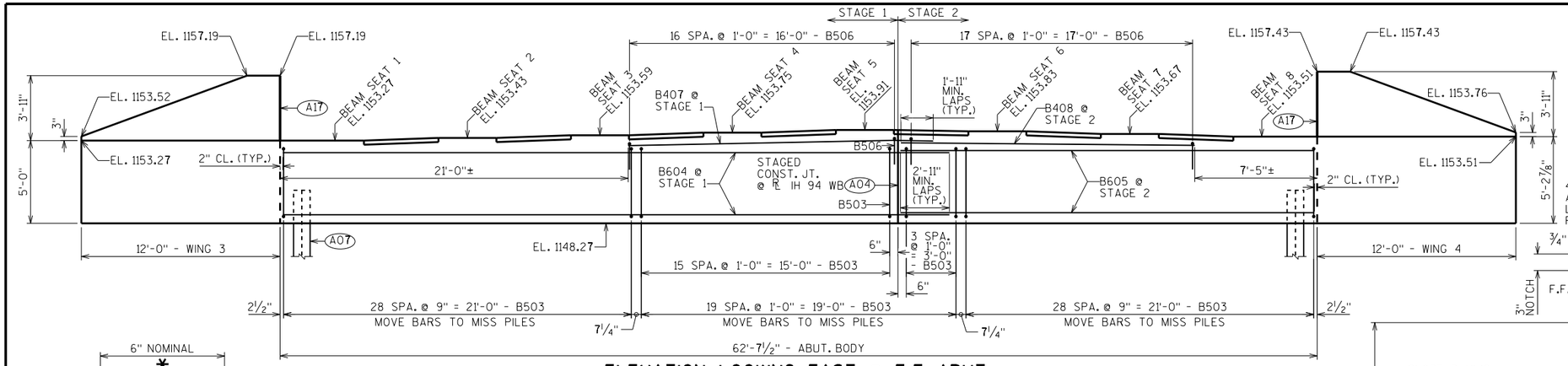
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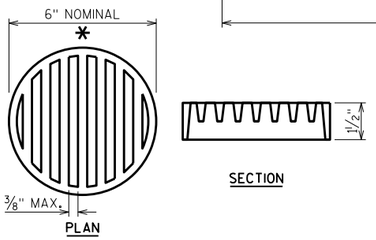
8

STATE PROJECT NUMBER

1021-00-79



ELEVATION LOOKING EAST @ F.F. ABUT.

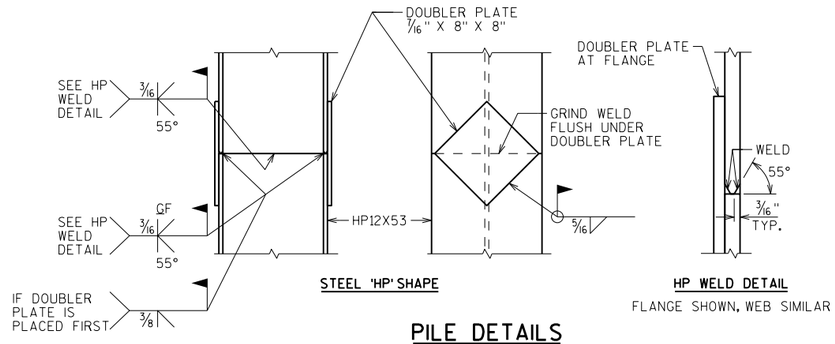


RODENT SHIELD DETAIL

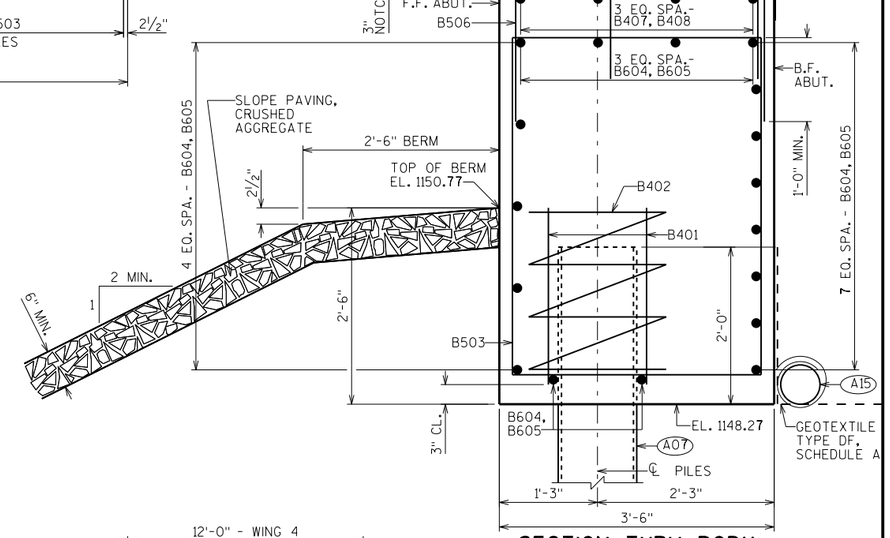
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

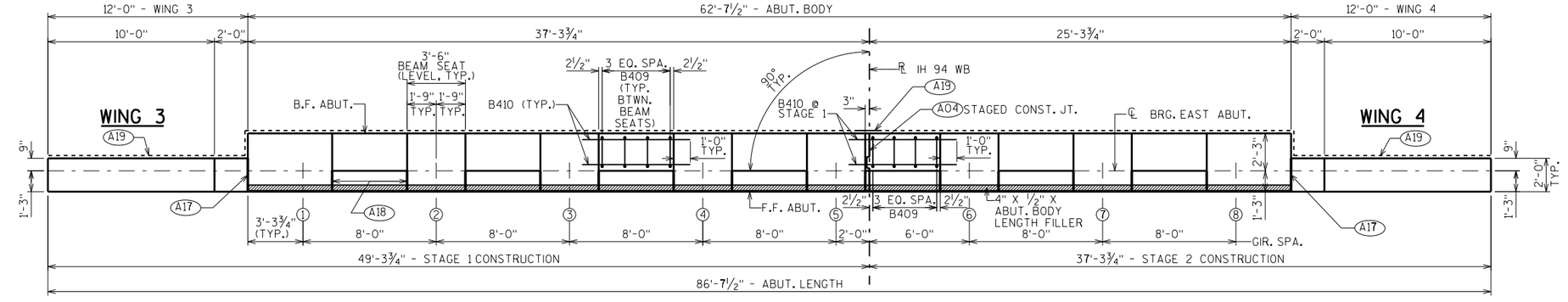
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



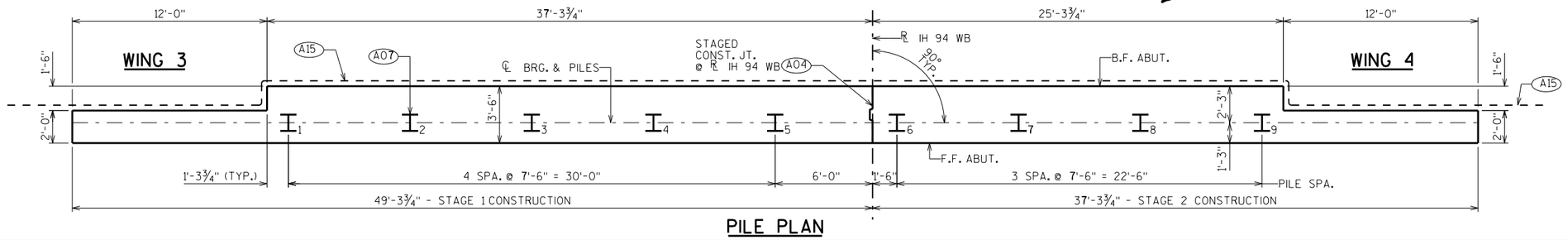
PILE DETAILS



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

328

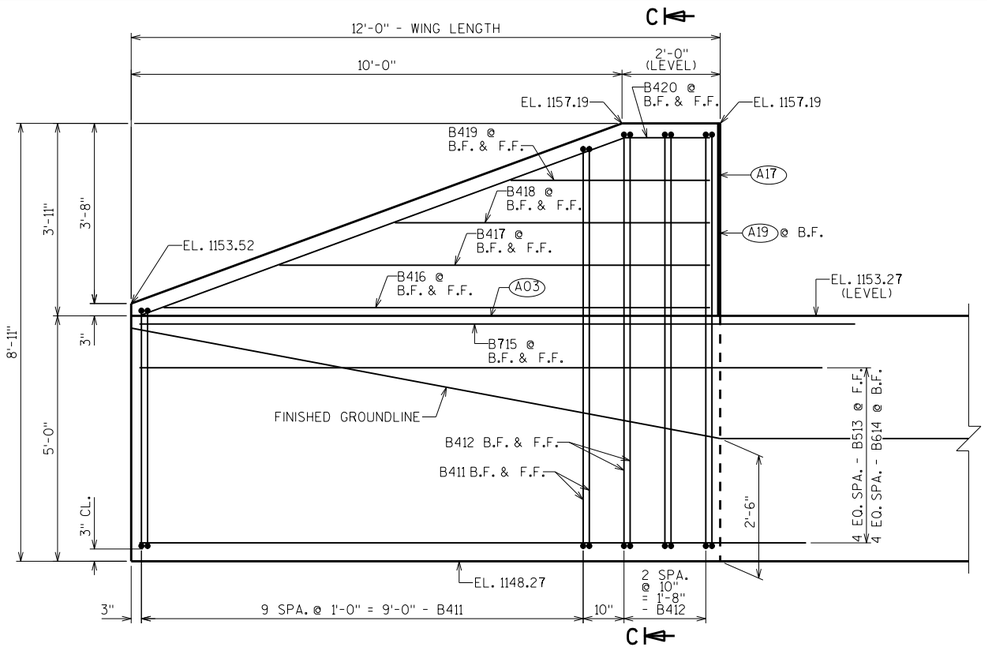
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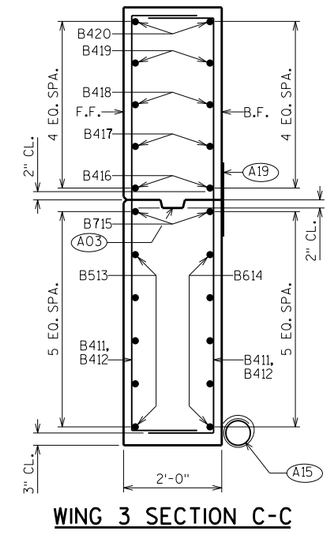
8

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

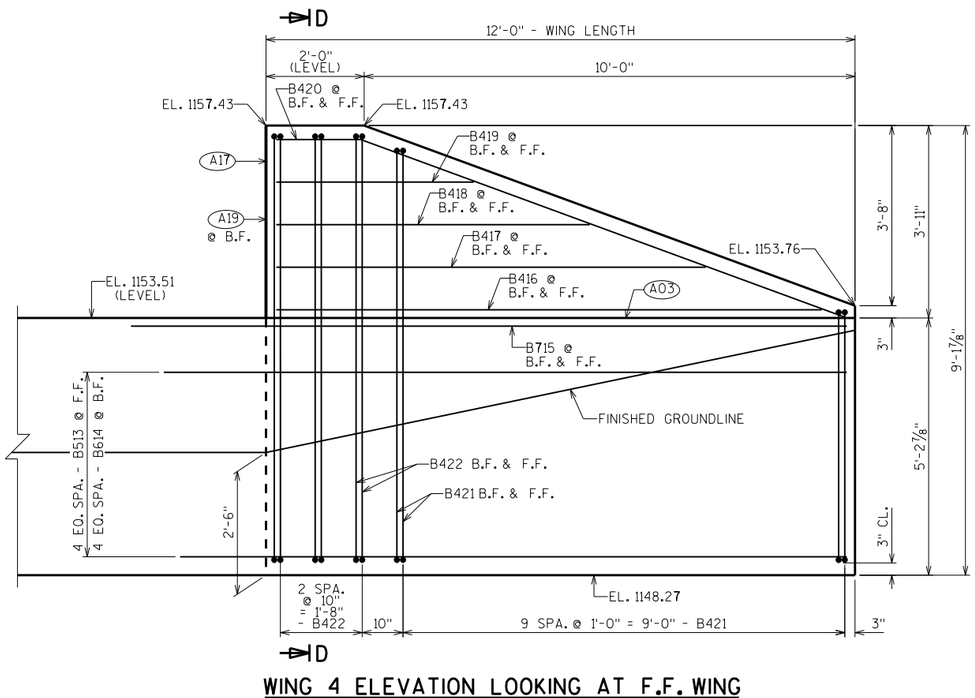
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		18	2'-3"			BODY-BOTTOM-2 PER PILE-VERTICAL
B402		9	28'-0"	X		BODY-BOT.-SPIRAL-1 PER PILE-VERT.
B503		78	15'-7"	X		BODY-STIRRUPS-VERT.
B604		17	40'-3"			BODY-HORIZONTAL-STAGE 1
B605		17	25'-0"			BODY-HORIZONTAL-STAGE 2
B506		35	6'-3"	X		BODY-TOP-VERT.-UNDER 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.

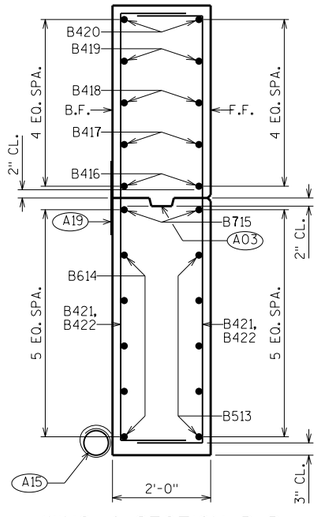
BAR SERIES TABLE

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"

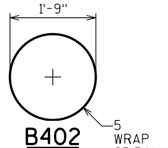
BUNDLE AND TAG EACH SERIES SEPARATELY.



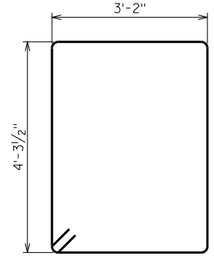
WING 4 ELEVATION LOOKING AT F.F. WING



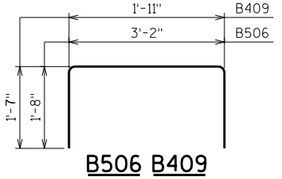
WING 4 SECTION D-D



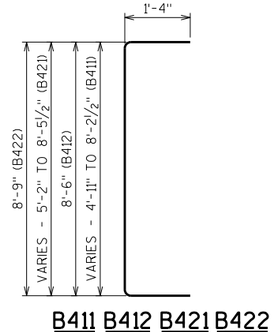
B402



B503



B506 B409



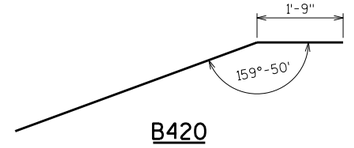
B411 B412 B421 B422

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.



B420

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

329

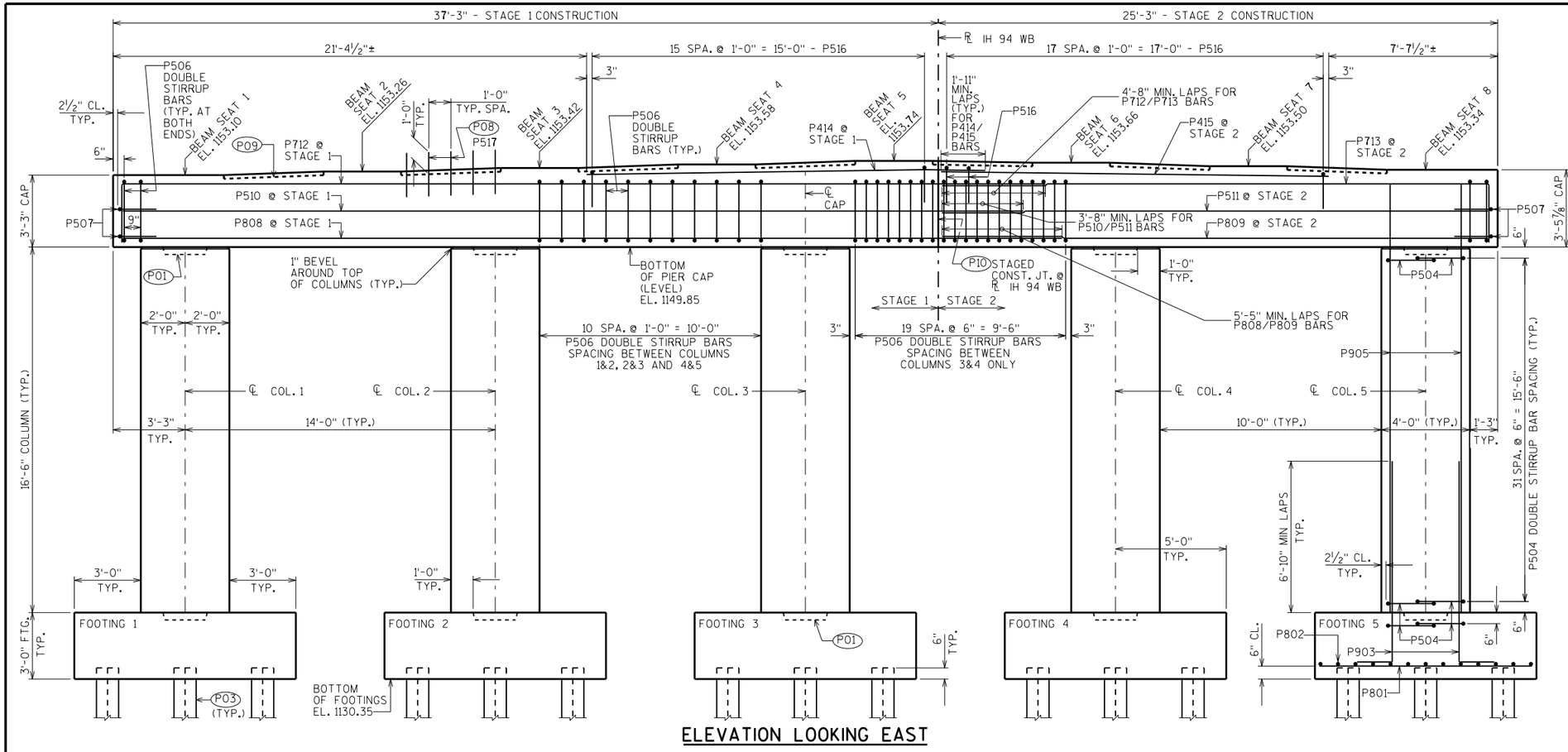
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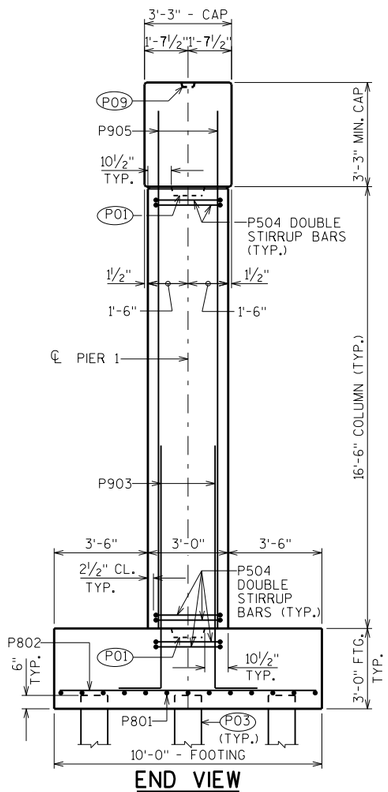
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8

STATE PROJECT NUMBER

1021-00-79





(P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT JOINT FORMED BY BEVELED KEYWAY.

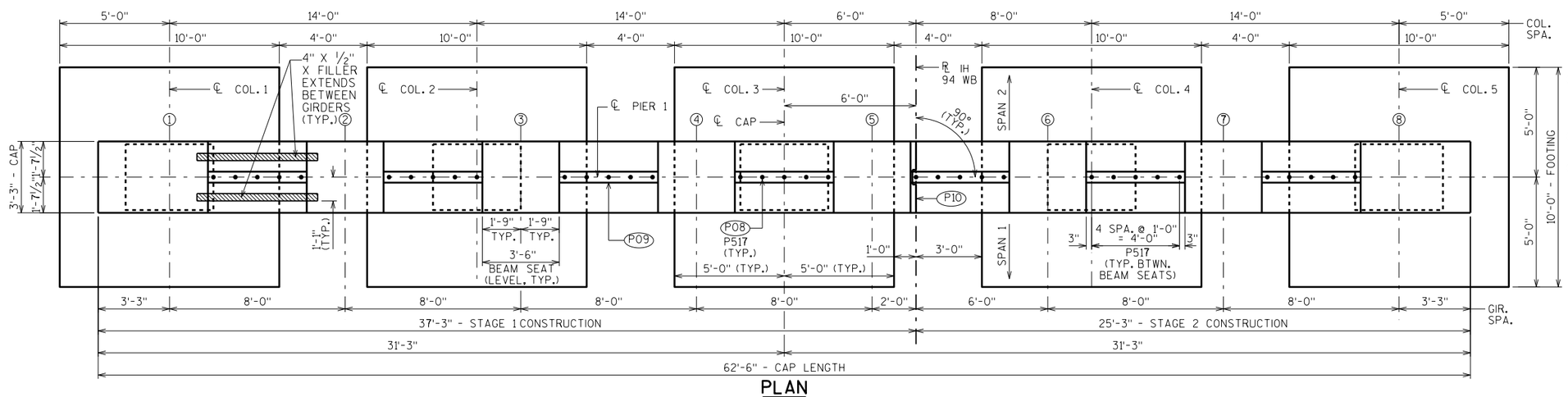
(P03) SUPPORT PIER ON HP 12 X 53 STEEL PILING, ESTIMATED 15'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PRE-BORING INTO ROCK IS REQUIRED. A MINIMUM OF 10 FEET OF PRE-BORING IS ACCEPTABLE IF THE LAST 3 FEET ARE IN COMPETENT ROCK. IF 3 FEET OF COMPETENT ROCK IS NOT ENCOUNTERED WITHIN 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

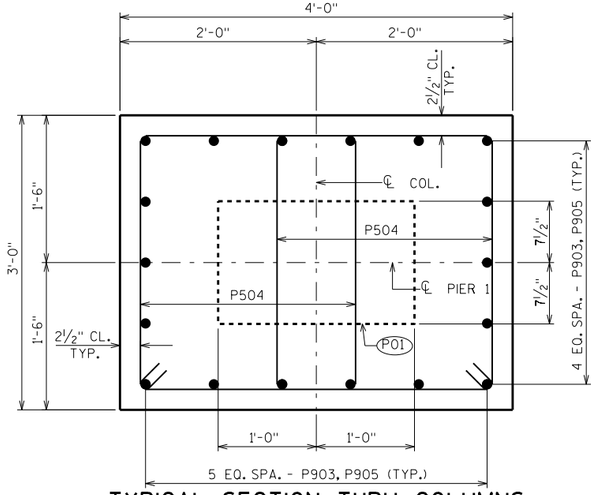
SHEET 9

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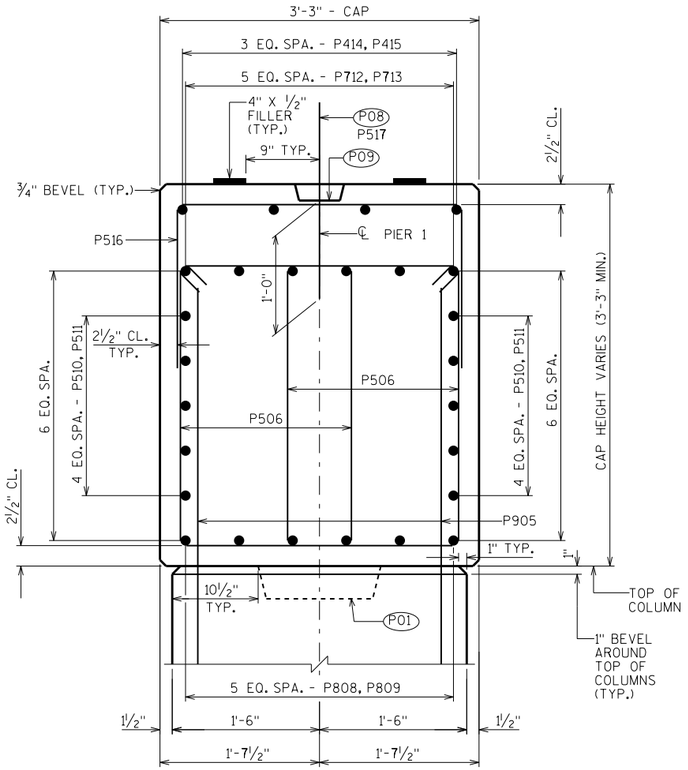
STATE PROJECT NUMBER

1021-00-79



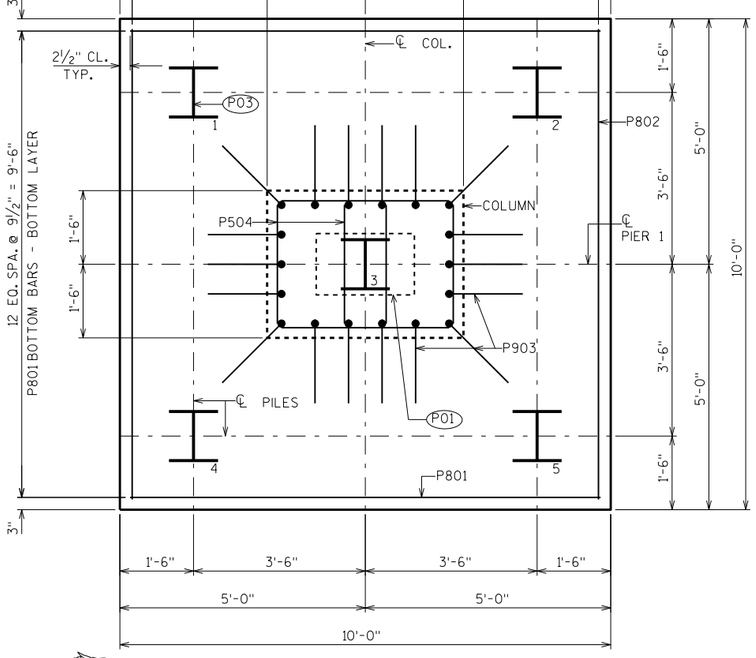
TYPICAL SECTION THRU COLUMNS

(SHOWING DOUBLE STIRRUPS)

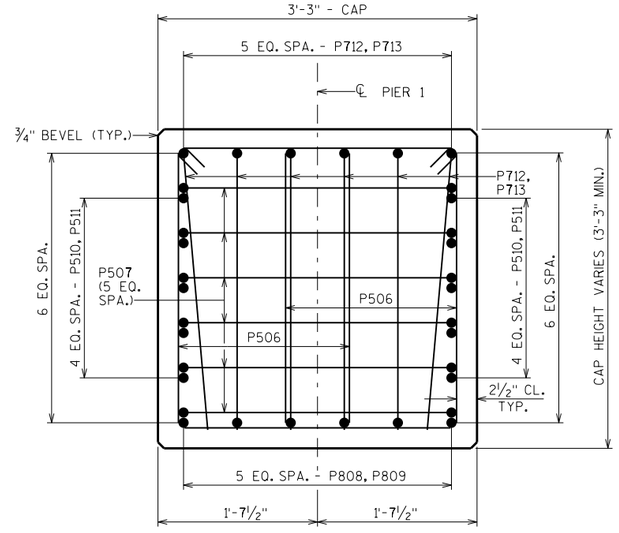


SECTION THRU CAP

(SHOWING DOUBLE STIRRUPS)



TYPICAL FOOTING/PILE PLAN

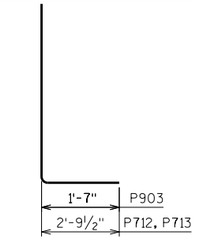


SECTION THRU CAP AT ENDS

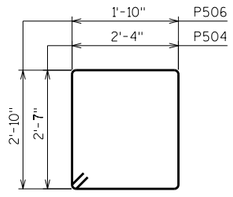
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

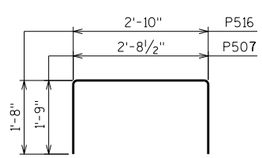
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
P801		65	9'-7"		FOOTINGS-BOTTOM-HORIZ.-LONGIT.-BOT. LAYER
P802		65	9'-7"		FOOTINGS-BOTTOM-HORIZ.-TRANS.-TOP LAYER
P903	X	90	10'-7"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
P504	X	330	10'-6"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
P905	X	90	19'-4"		COLUMNS/CAP-VERTICAL-ALL 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



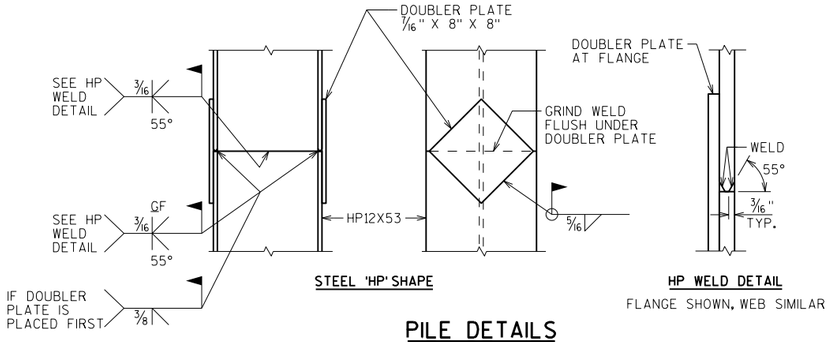
P903 P712 P713



P504 P506



P507 P516



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

331

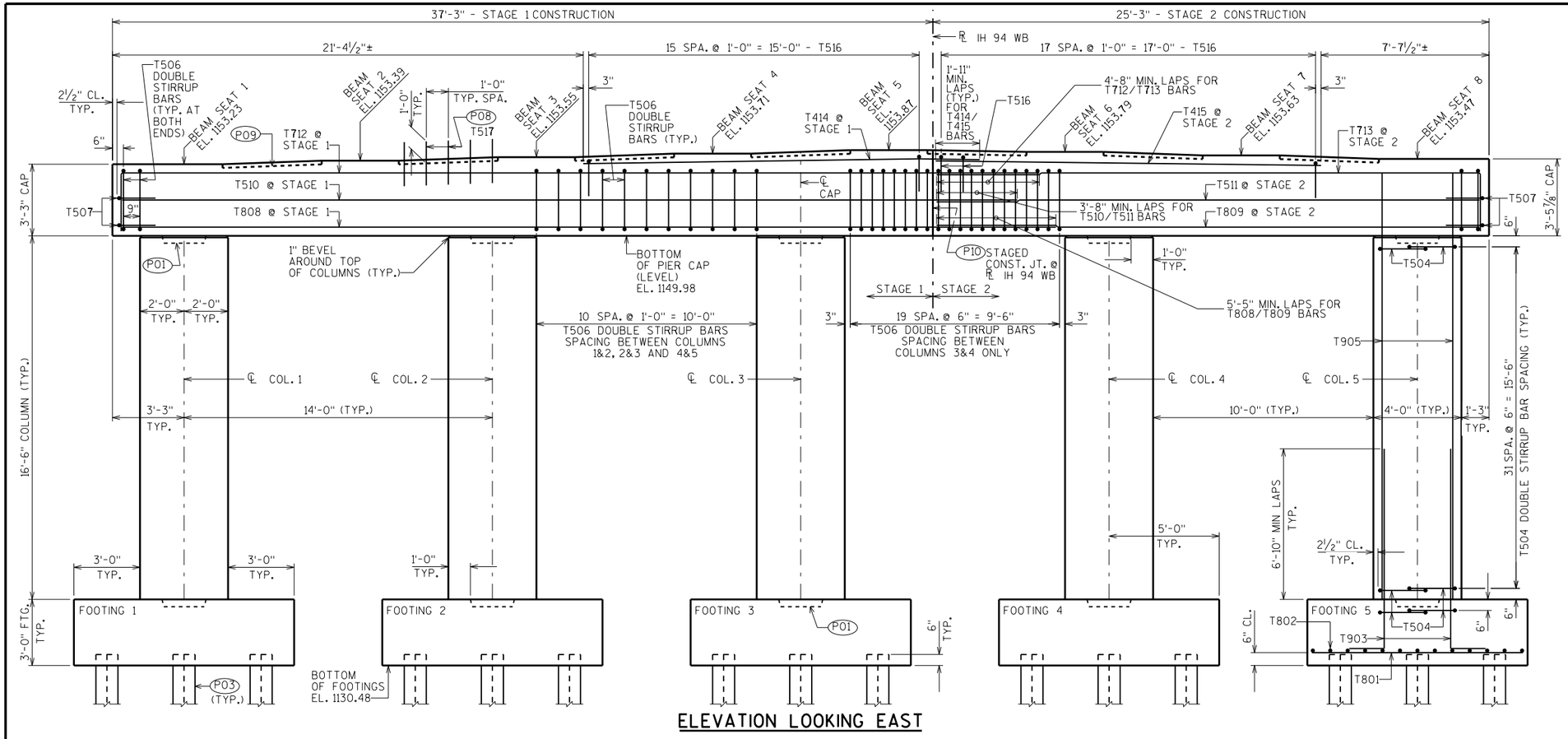
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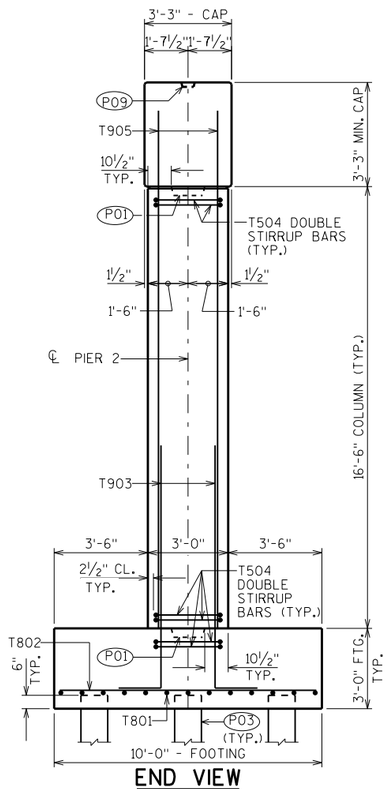
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STATE PROJECT NUMBER

1021-00-79



ELEVATION LOOKING EAST



END VIEW

(P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT JOINT FORMED BY BEVELED KEYWAY.

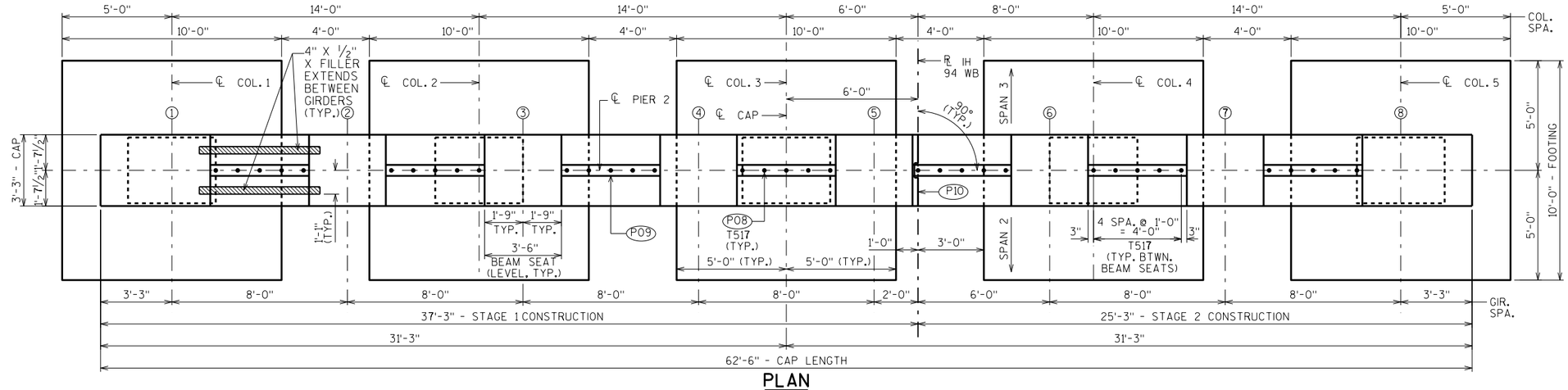
(P03) SUPPORT PIER ON HP 12 X 53 STEEL PILING, ESTIMATED 15'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PRE-BORING INTO ROCK IS REQUIRED. A MINIMUM OF 10 FEET OF PRE-BORING IS ACCEPTABLE IF THE LAST 3 FEET ARE IN COMPETENT ROCK. IF 3 FEET OF COMPETENT ROCK IS NOT ENCOUNTERED WITHIN 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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

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PIER 2

SHEET 11

332

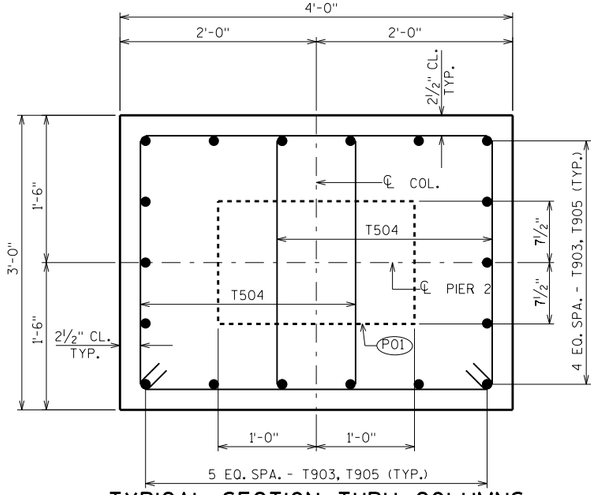
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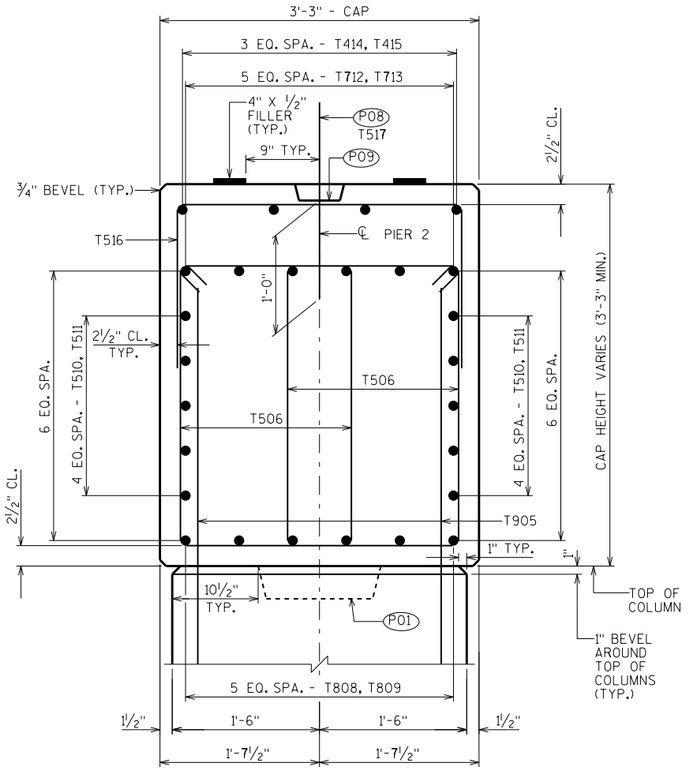
STATE PROJECT NUMBER

1021-00-79



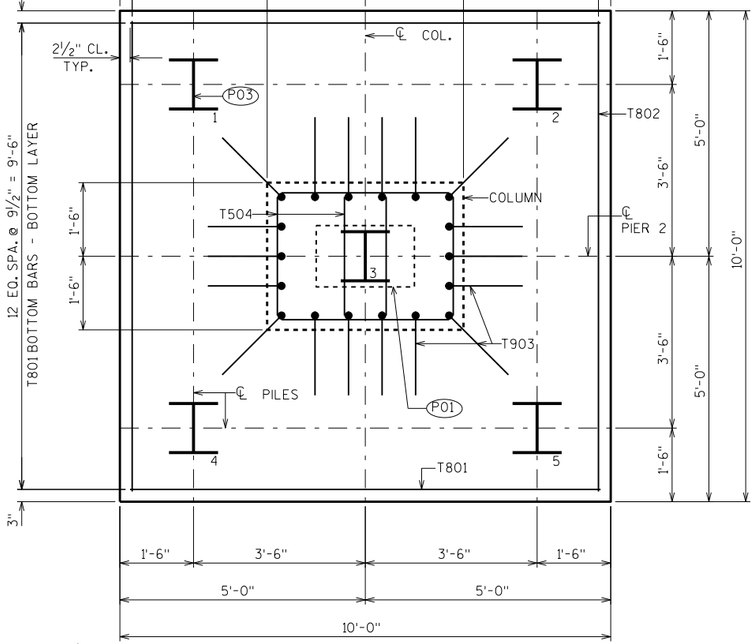
TYPICAL SECTION THRU COLUMNS

(SHOWING DOUBLE STIRRUPS)

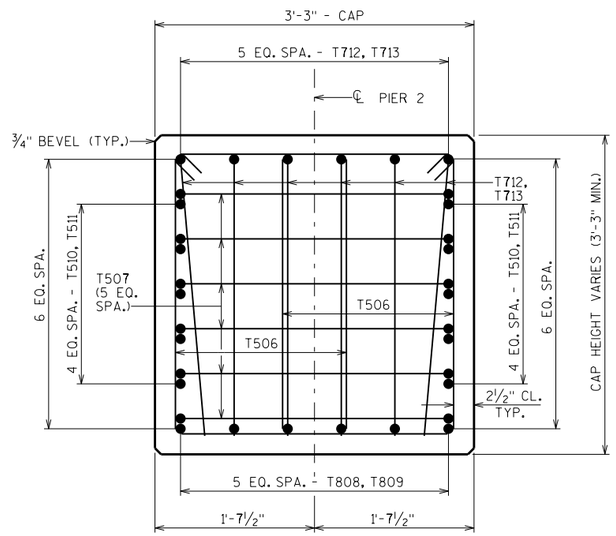


SECTION THRU CAP

(SHOWING DOUBLE STIRRUPS)



TYPICAL FOOTING/PILE PLAN

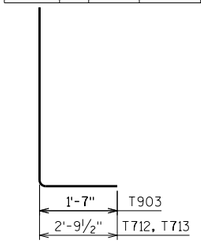


SECTION THRU CAP AT ENDS

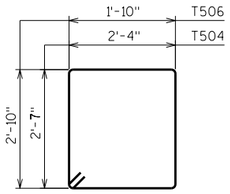
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

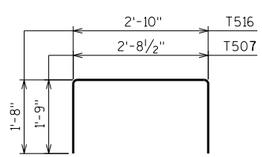
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
T801		65	9'-7"		FOOTINGS-BOTTOM-HORIZ.-LONGIT.-BOT. LAYER
T802		65	9'-7"		FOOTINGS-BOTTOM-HORIZ.-TRANS.-TOP LAYER
T903	X	90	10'-7"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
T504	X	330	10'-6"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
T905	X	90	19'-4"		COLUMNS/CAP-VERTICAL-ALL 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



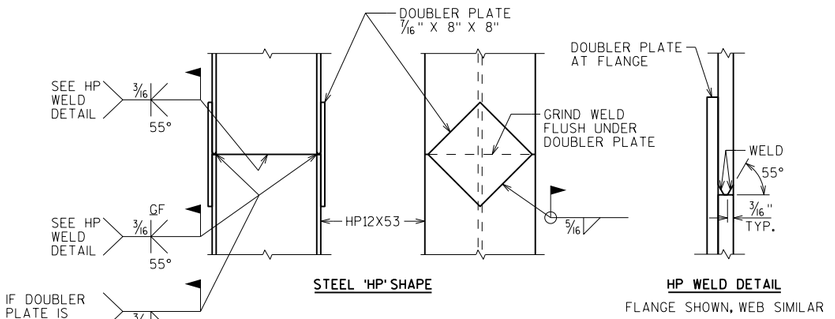
T903 T712 T713



T504 T506



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.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

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PIER 2 DETAILS

SHEET 12

333

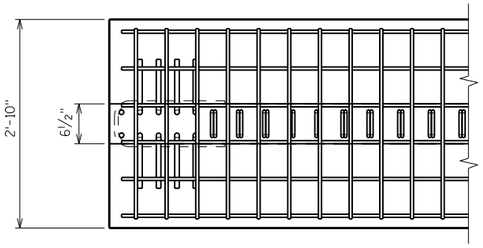
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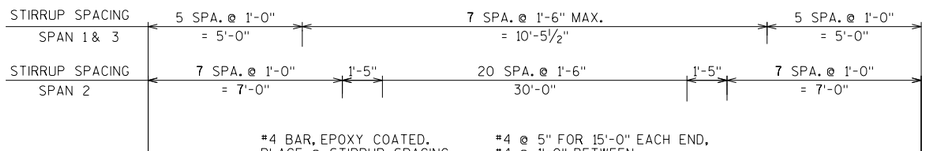
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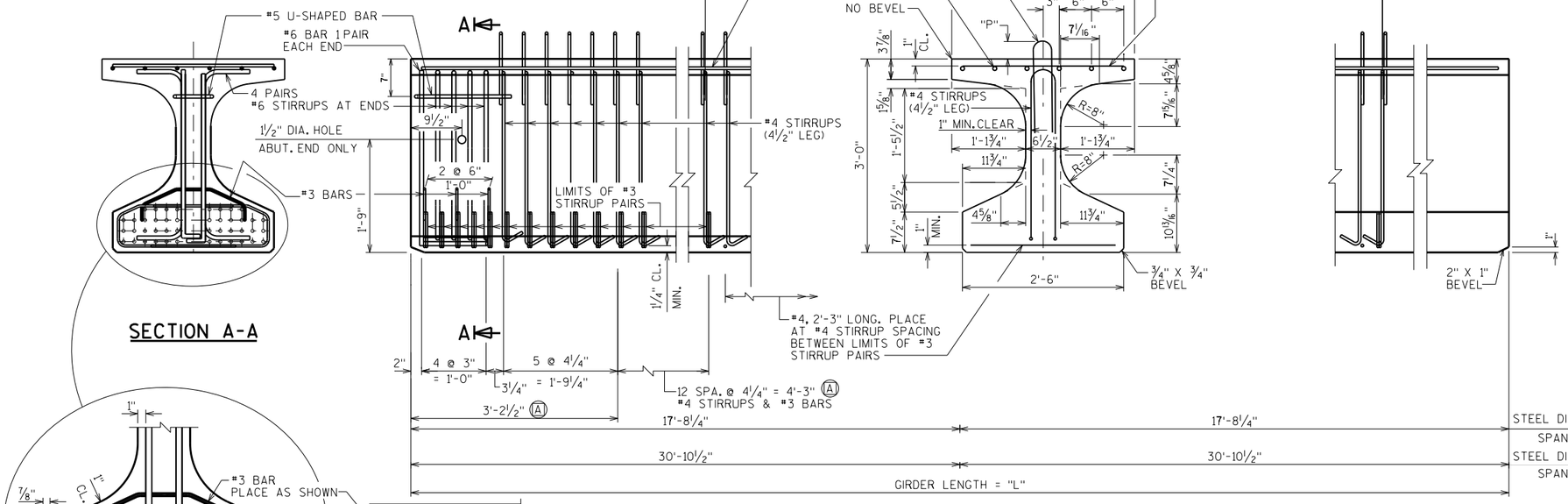
STATE PROJECT NUMBER

1021-00-79

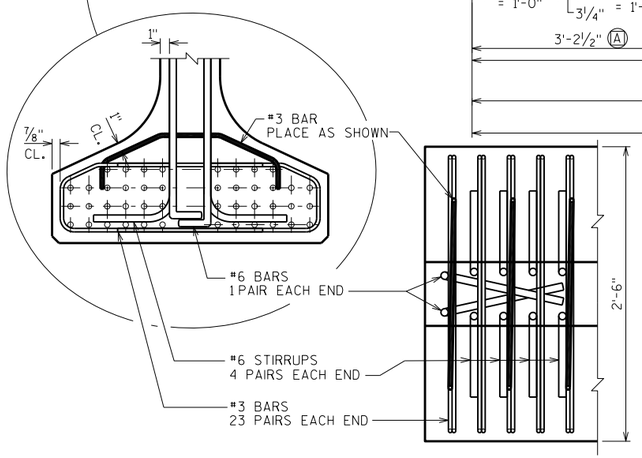


TOP FLANGE





SECTION A-A

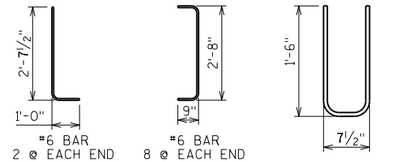


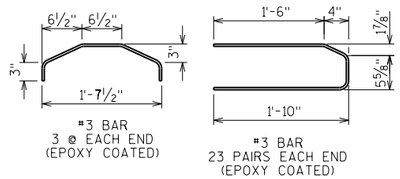
BOTTOM FLANGE

SIDE VIEW & TYPICAL SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 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
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STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

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36W" PRESTRESSED GIRDER DETAILS 1

SHEET 13

334

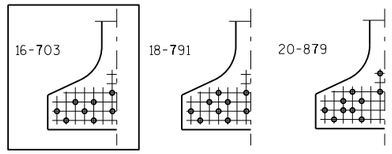
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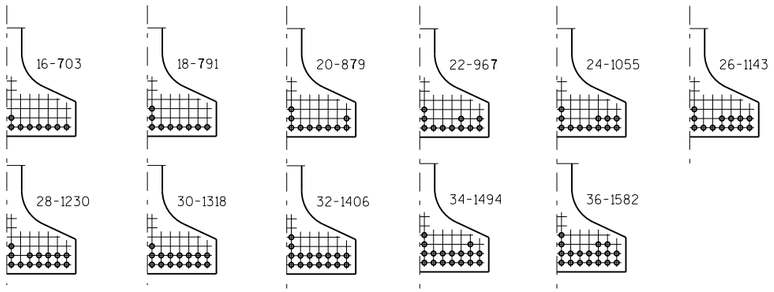
STATE PROJECT NUMBER

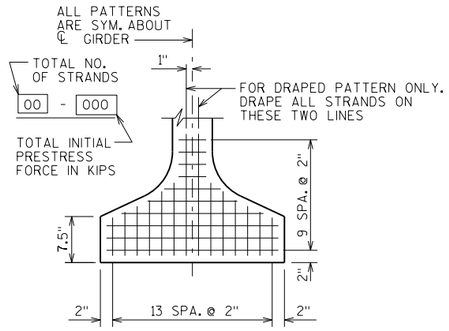
1021-00-79



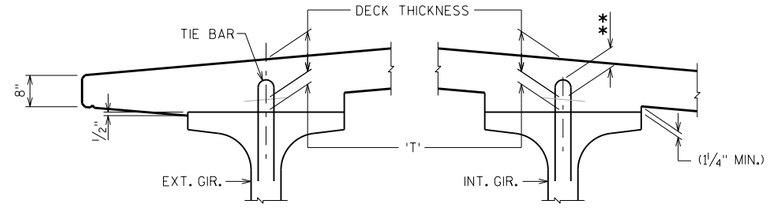
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

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

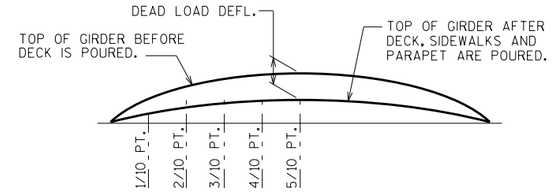
0.6" DIA. STRANDS

*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

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36W" PRESTRESSED GIRDER DETAILS 2

SHEET 14

335

SCALE = 1.00

STATE PROJECT NUMBER

1021-00-79

NOTES

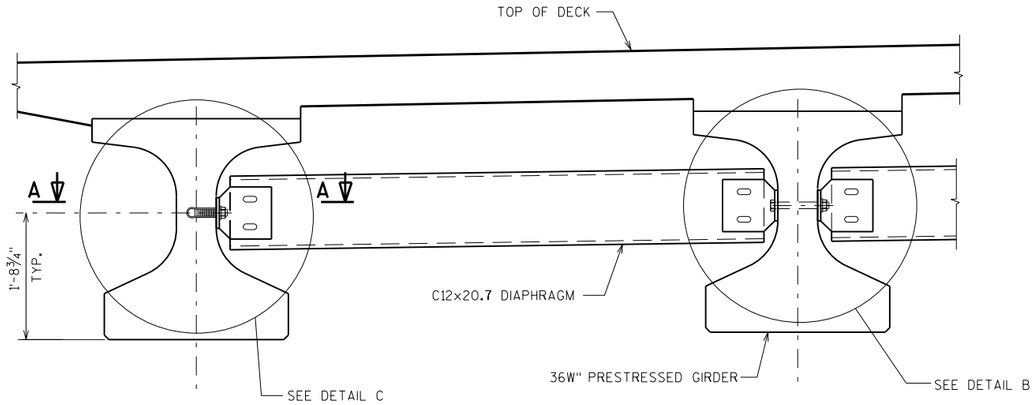
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-270", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

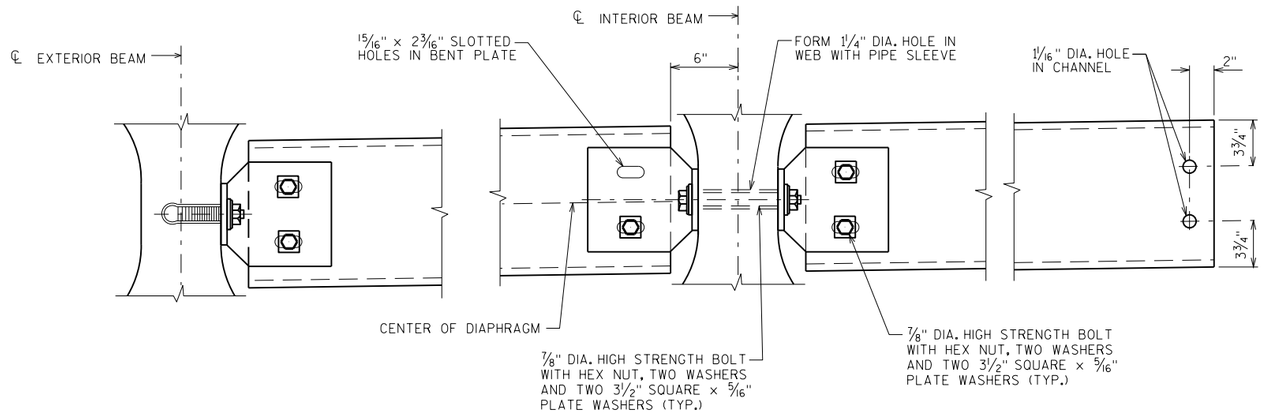
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

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.

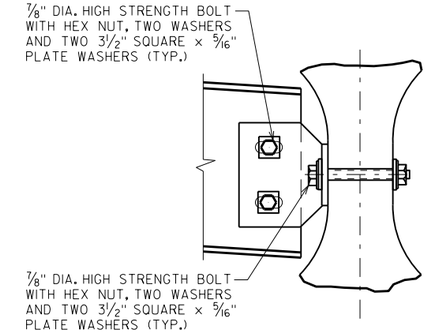


PART TRANSVERSE SECTION AT DIAPHRAGM

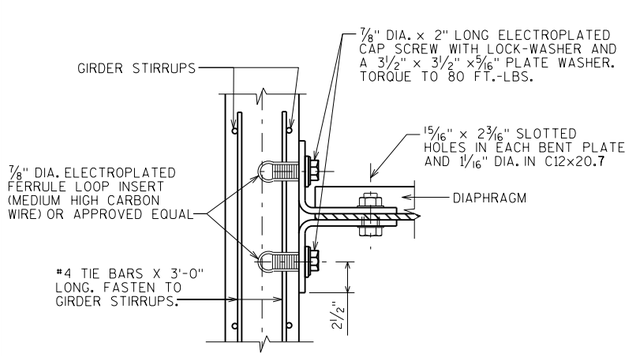


DETAIL C

DETAIL B

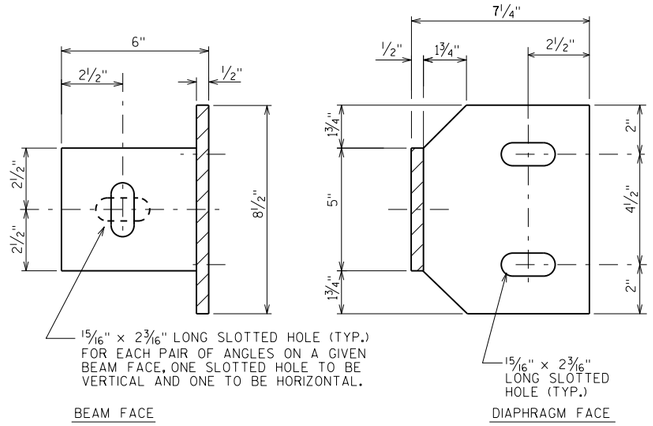


SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°



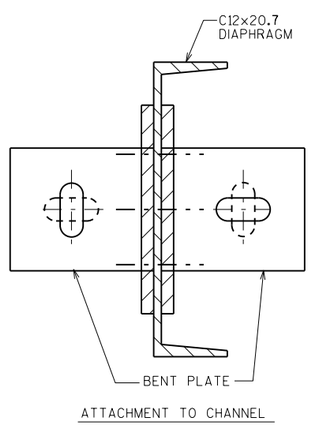
SECTION A-A

(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

336

SCALE = 1.00

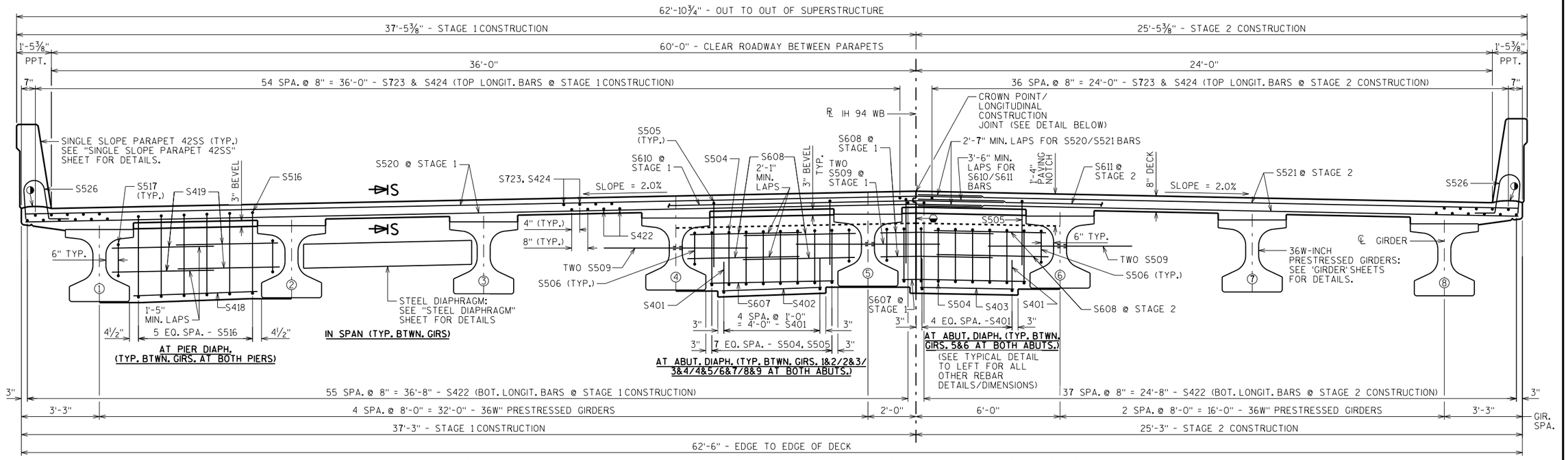
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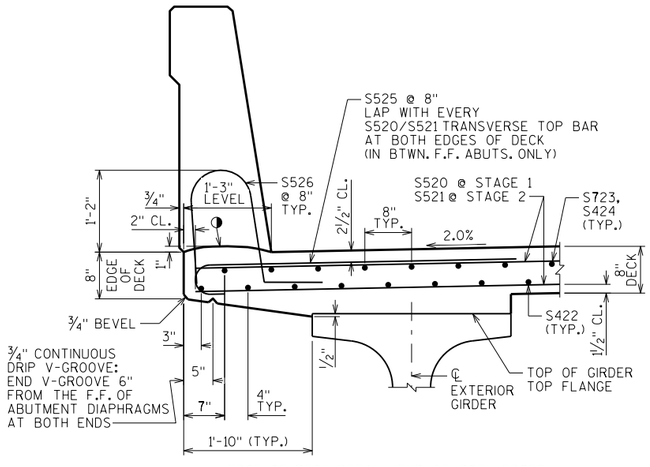
STATE PROJECT NUMBER

1021-00-79

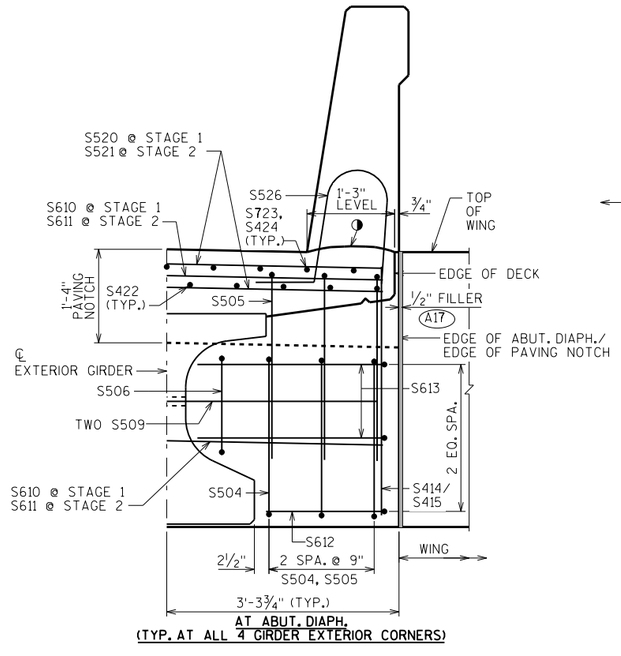
○ INDICATES GIRDER NUMBER



CROSS SECTION THRU BRIDGE LOOKING EAST - SHOWING STAGED CONSTRUCTION

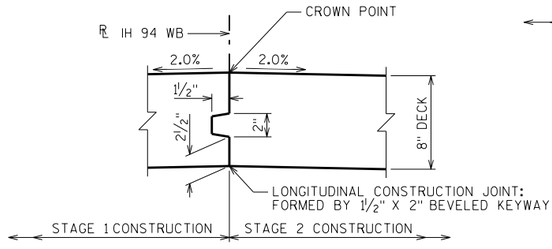


EDGE OF DECK DETAIL (TYP. AT BOTH EDGES)



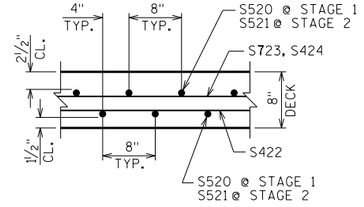
AT ABUT. DIAPH. (TYP. AT ALL 4 GIRDER EXTERIOR CORNERS)

PARTIAL CROSS SECTION

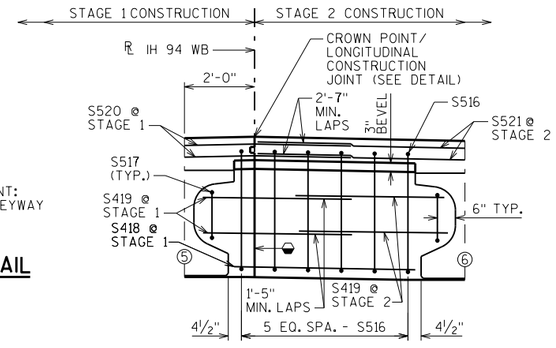


LONGITUDINAL CONSTRUCTION JOINT DETAIL

(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

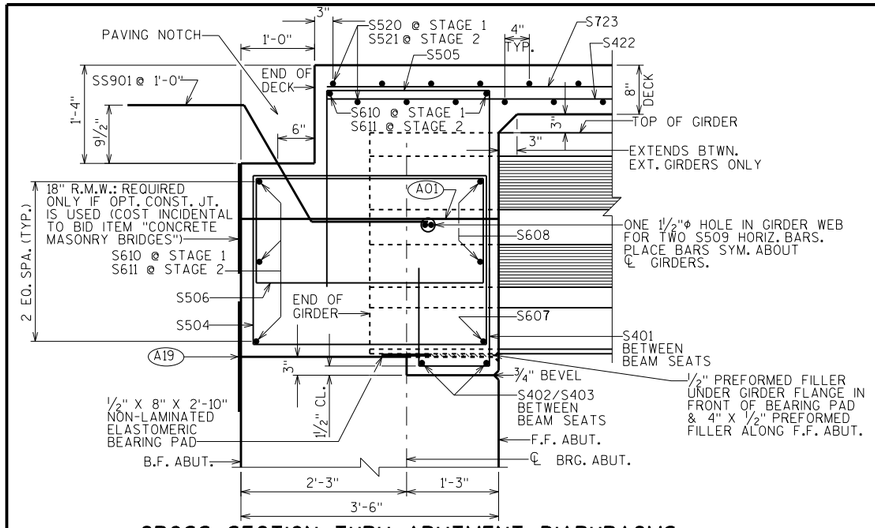
SHEET 16

337

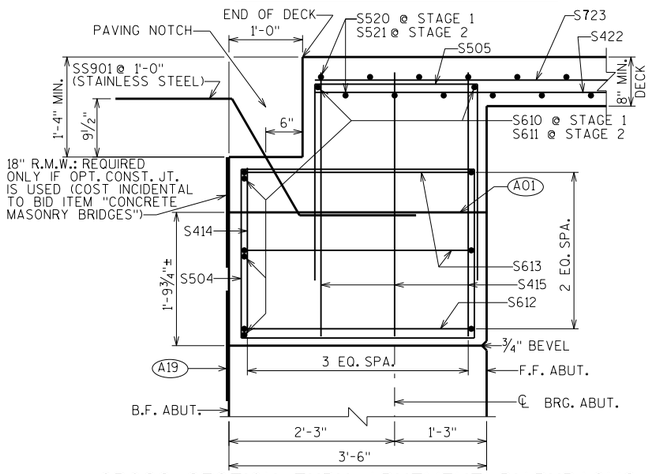
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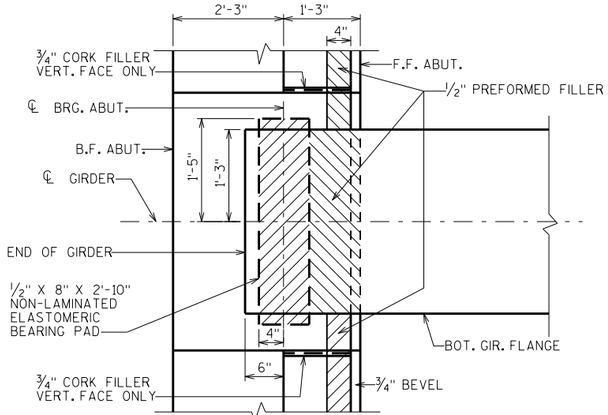
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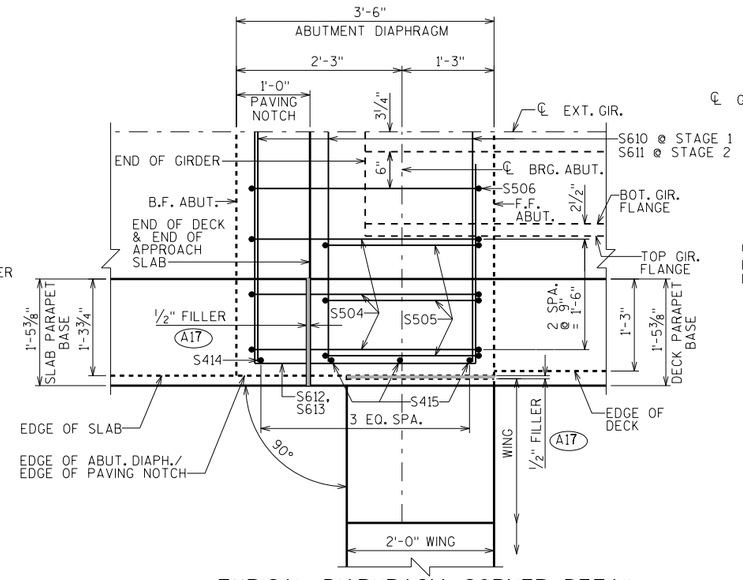
CROSS SECTION THRU ABUTMENT DIAPHRAGMS BETWEEN EXTERIOR GIRDERS



CROSS SECTION THRU ABUTMENT DIAPHRAGMS AT GIRDER EXTERIORS



PLAN VIEW AT ABUTMENTS



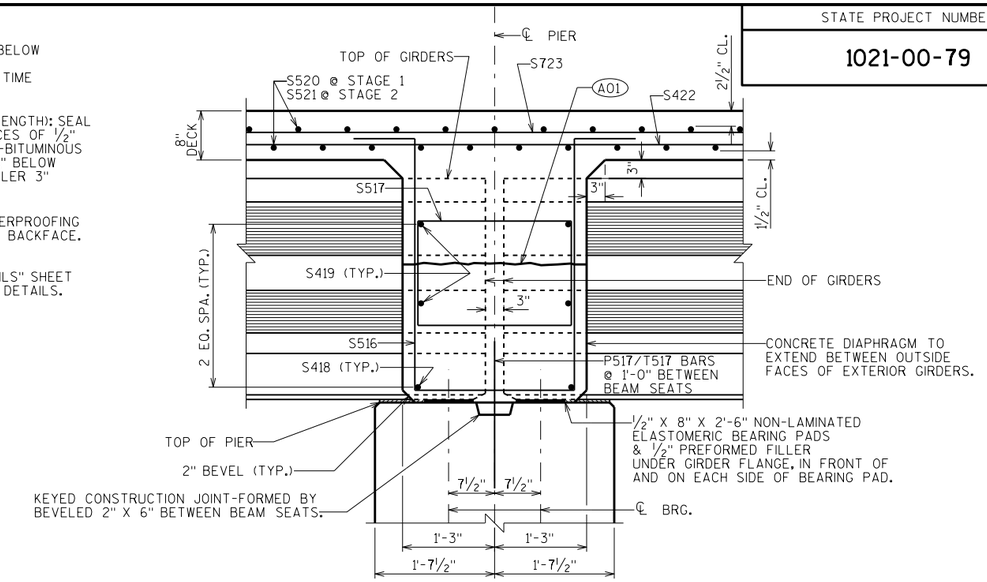
TYPICAL DIAPHRAGM CORNER DETAIL - PLAN VIEW AT ALL FOUR GIR. EXT. CORNERS

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.

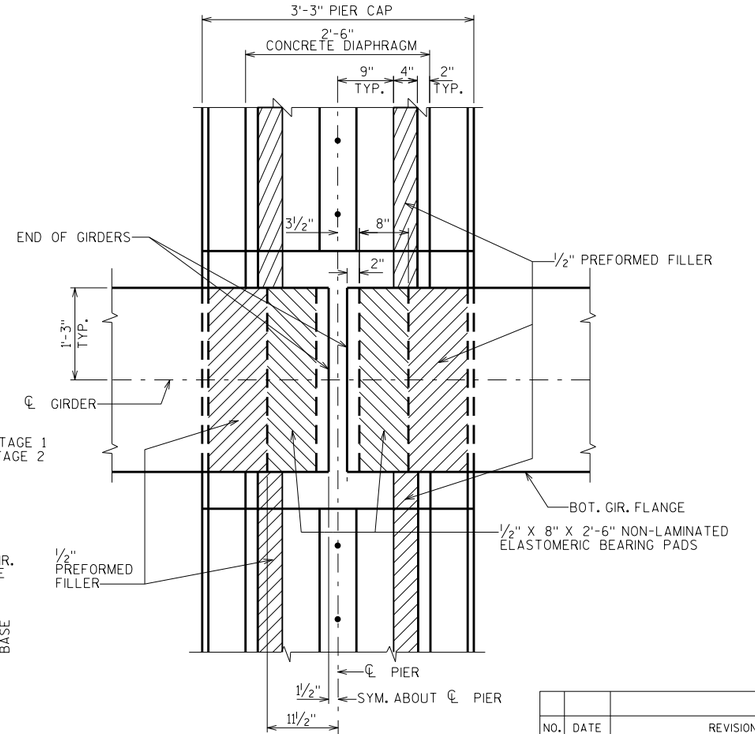
A17 ½" FILLER (INCLUDED IN WING/SLAB LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

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-55-270

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SUPERSTRUCTURE DETAILS

SHEET 17

338

STATE PROJECT NUMBER

1021-00-79

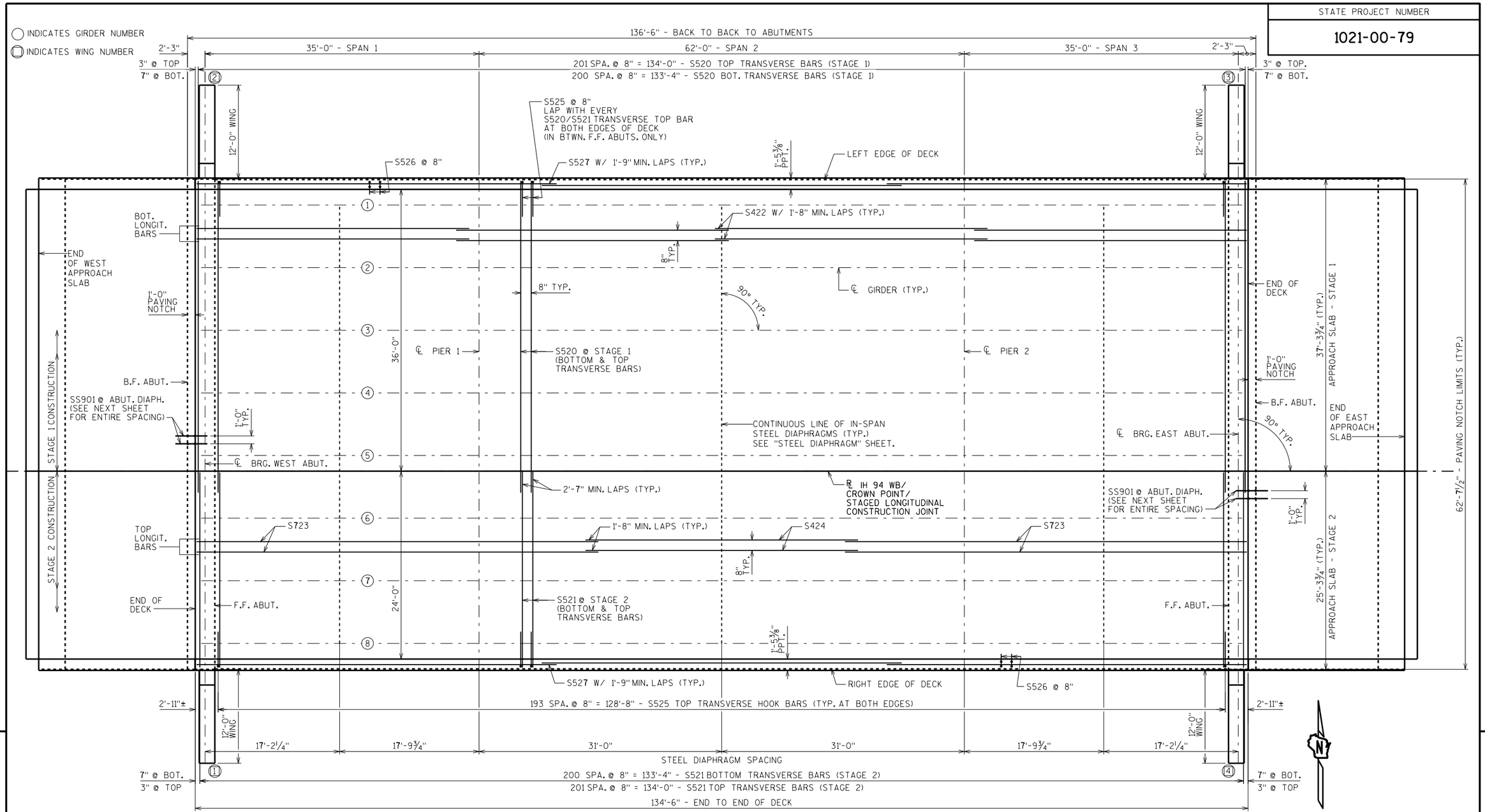
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8

SCALE = 1.00

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

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

DRAWN BY JPH | PLANS CK'D. AA

SUPERSTRUCTURE PLAN

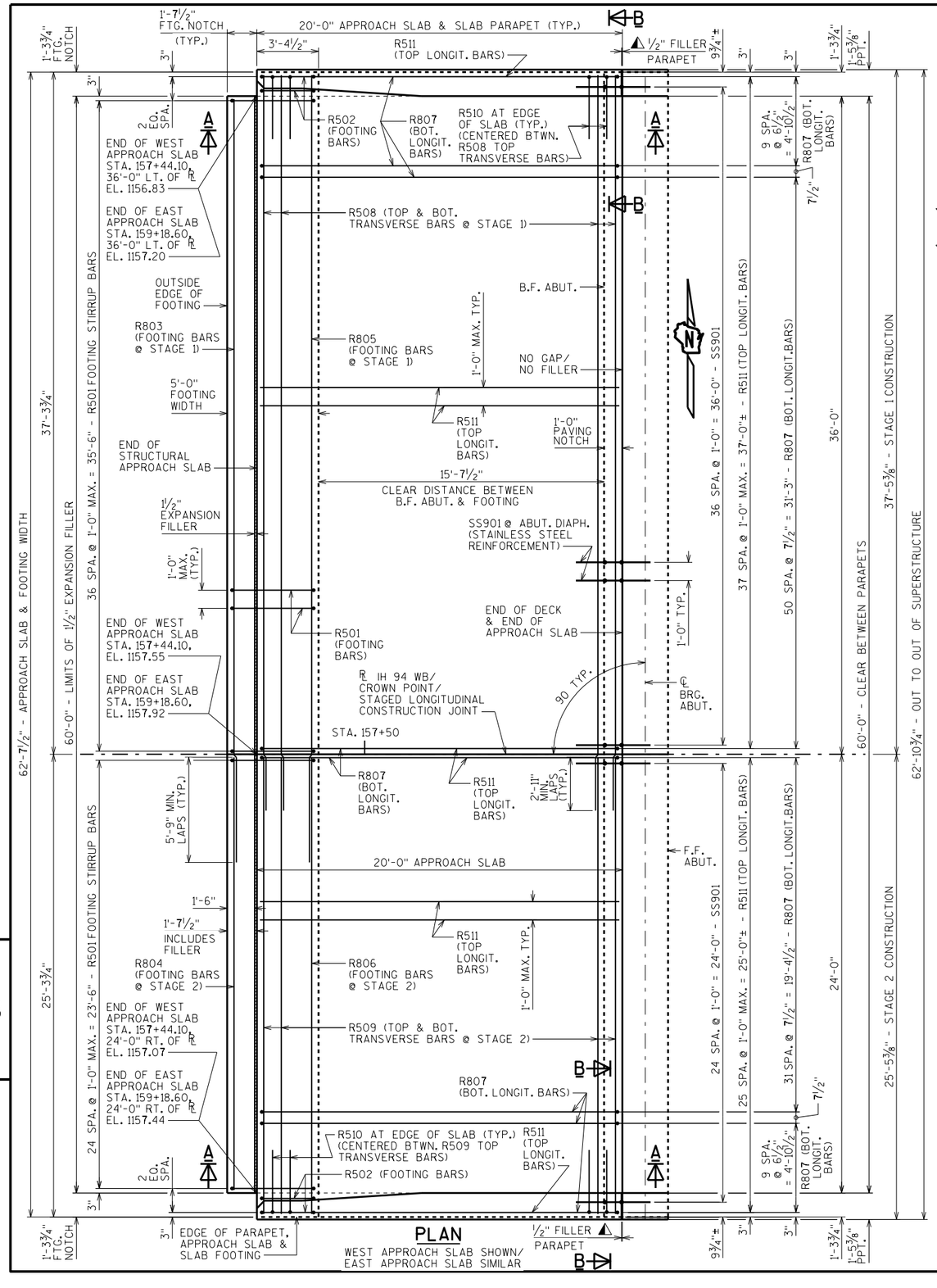
SHEET 18

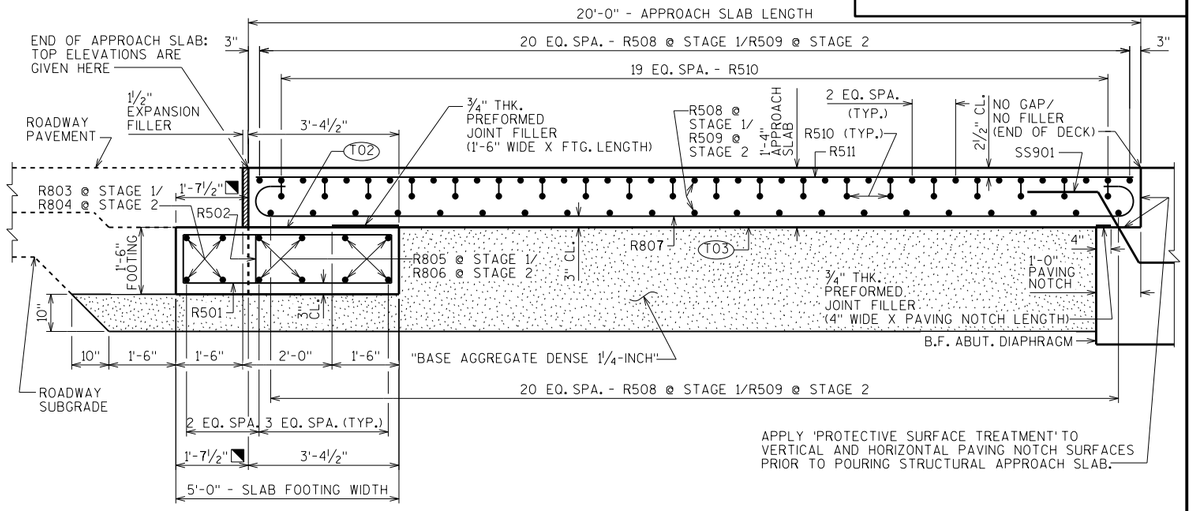
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SCALE = 6.00

STATE PROJECT NUMBER

1021-00-79



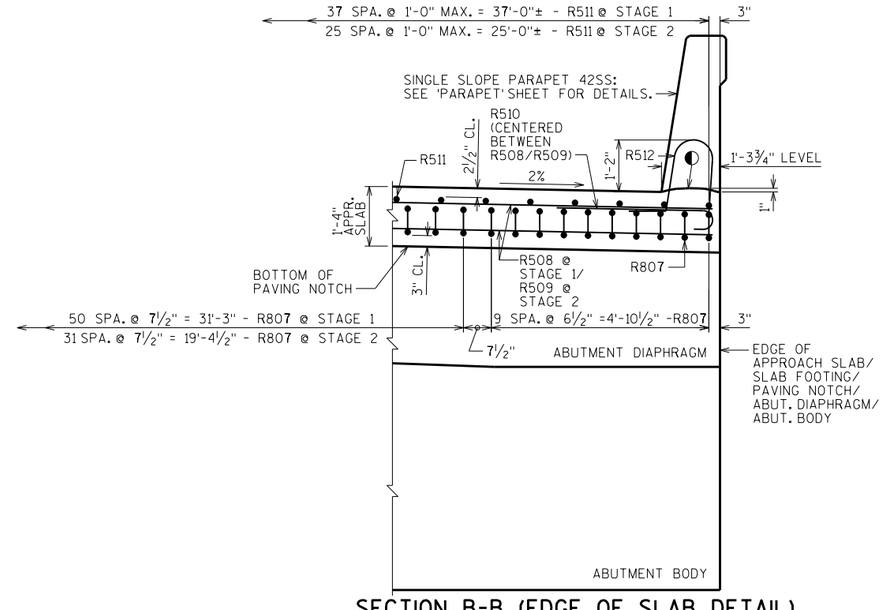


INCLUDES 1½" EXPANSION FILLER

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.

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STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

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STRUCTURAL APPROACH SLAB

SHEET 19

340

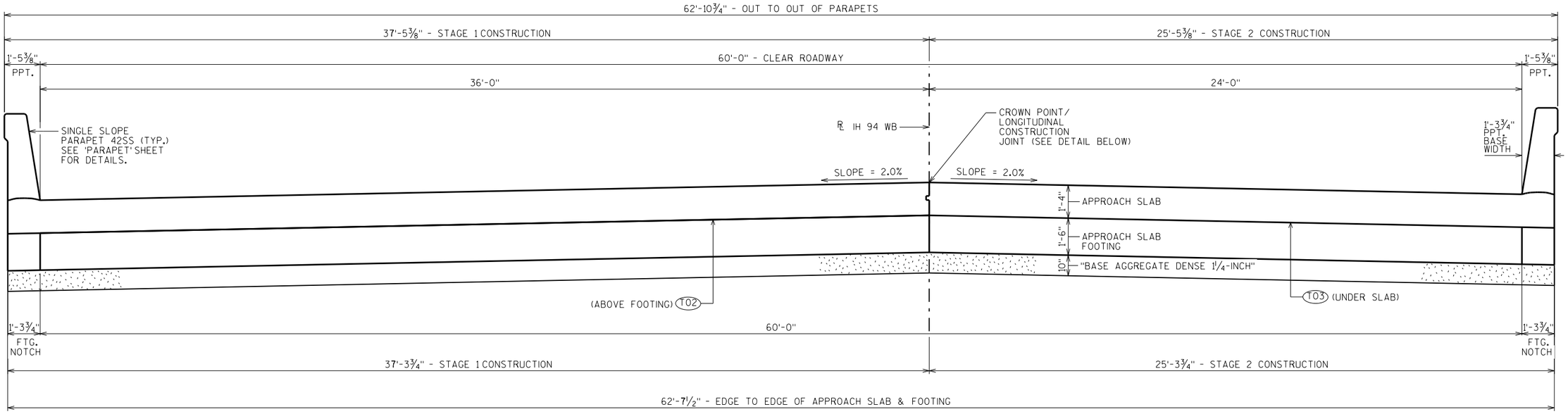
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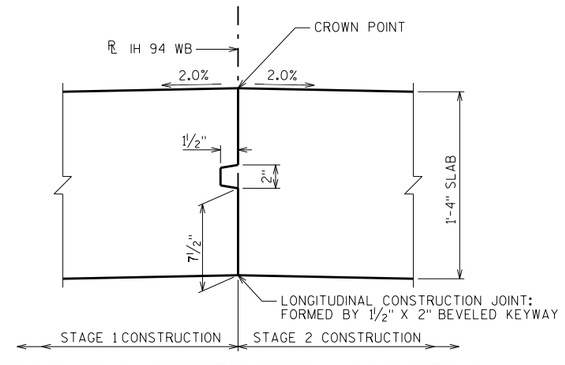
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STATE PROJECT NUMBER

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.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-270

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STRUCTURAL APPROACH SLAB CROSS SECTION

SHEET 20

341

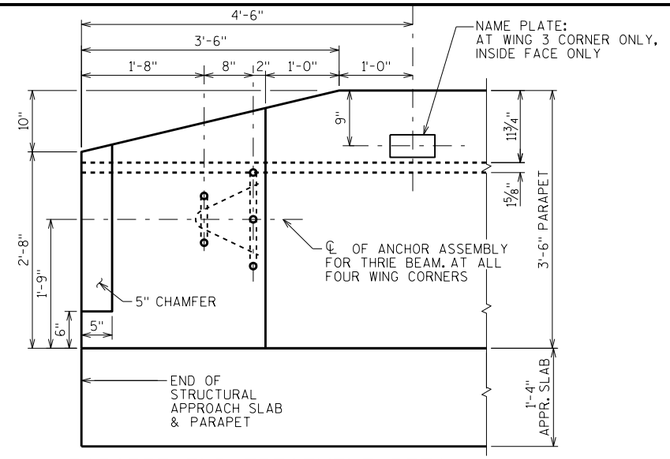
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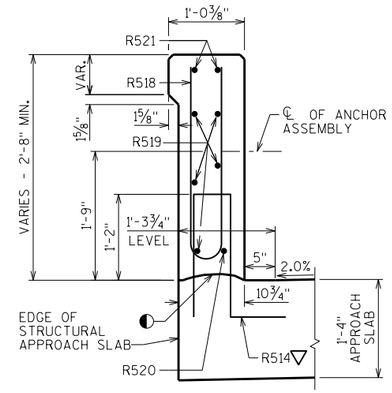
STATE PROJECT NUMBER

1021-00-79

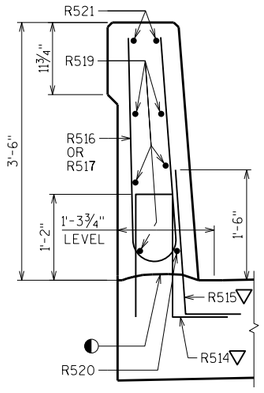


PARAPET END TREATMENT DETAIL

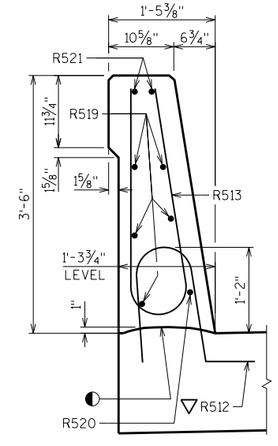
LOOKING AT INSIDE FACE OF PARAPET



SECTION A-A

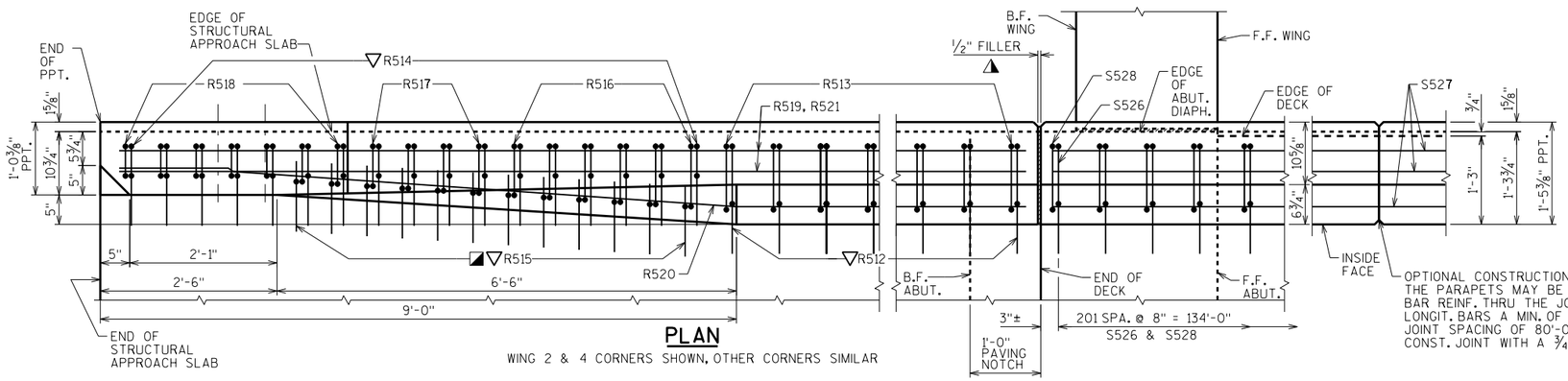


SECTION B-B



SECTION C-C

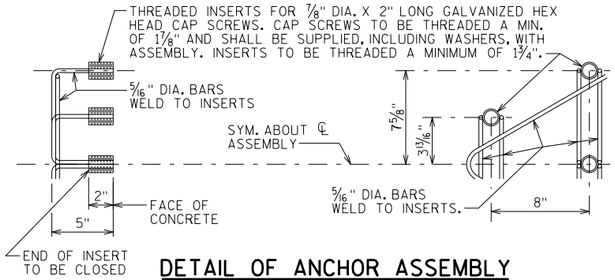
NOTE:
FOR THE PARAPET 'BILL OF BARS' & 'BAR DETAILS' SEE THE "SUPERSTRUCTURE & APPROACH SLAB BAR DETAILS" SHEET.



PLAN

WING 2 & 4 CORNERS SHOWN, OTHER CORNERS SIMILAR

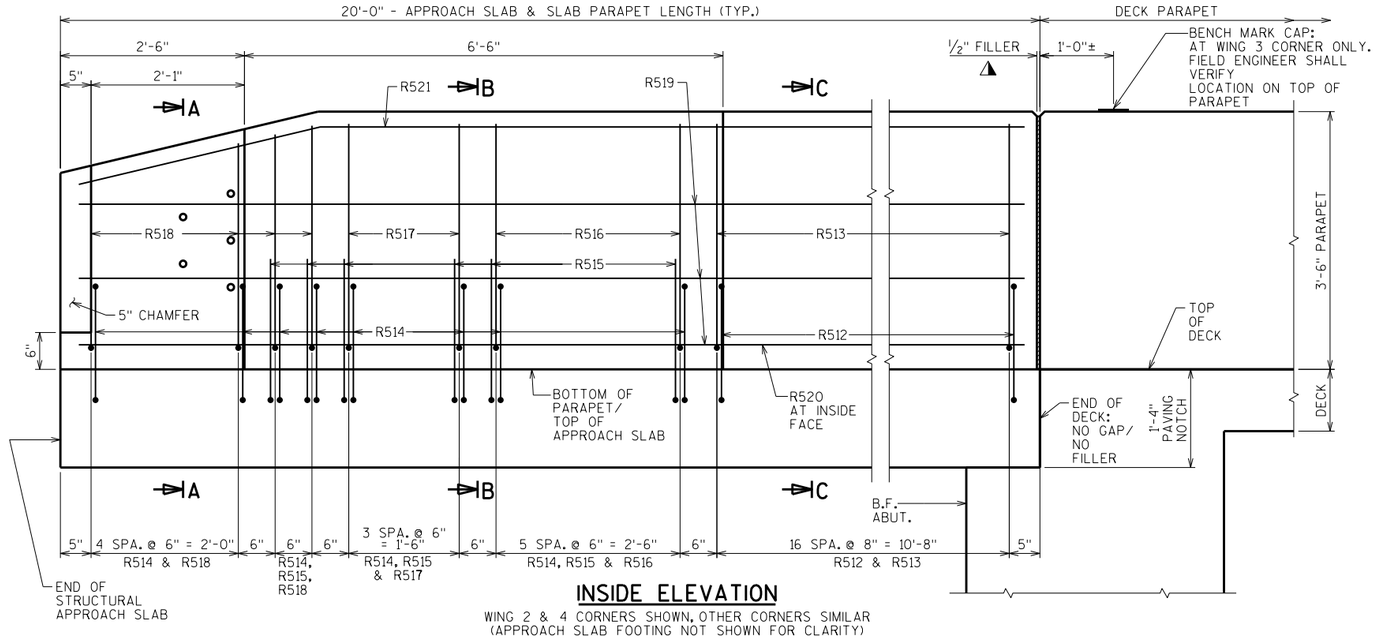
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



DETAIL OF ANCHOR ASSEMBLY

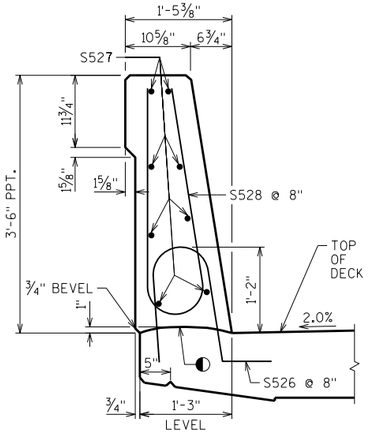
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

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

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SINGLE SLOPE PARAPET 42SS

SHEET 21

342

SCALE = 1.00

8

8

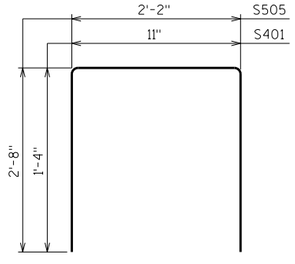
BILL OF BARS FOR SUPERSTRUCTURE

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

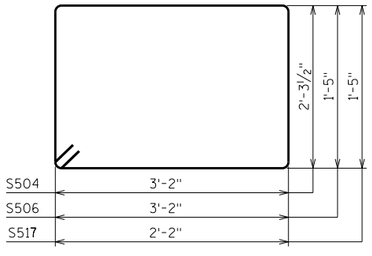
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S401	X	70	3'-5"	X	ABUT. DIAPHS.-F.F.-BOT.-VERT.-BTWN. BEAM SEATS
S402	X	24	4'-2"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. BEAM SEATS
S403	X	4	3'-11"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. BEAM SEATS 5&6 ONLY-AT STAGE 2
S504	X	124	11'-7"	X	ABUT. DIAPHS.-VERTICAL-UNDER 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

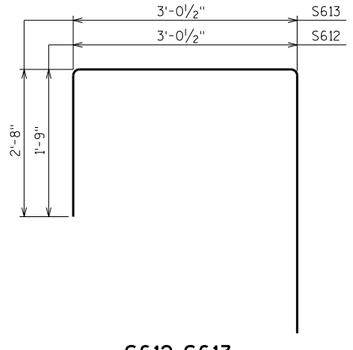
STAINLESS STEEL REINFORCEMENT



S401 S505



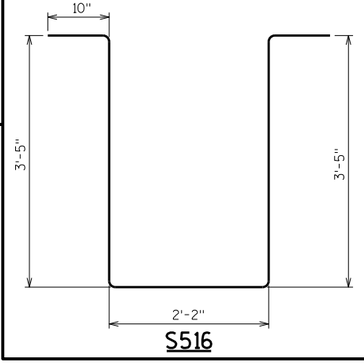
S504 S506 S517
(STIRRUP BARS)



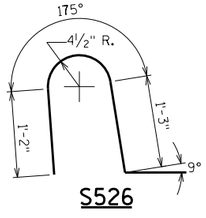
S612 S613



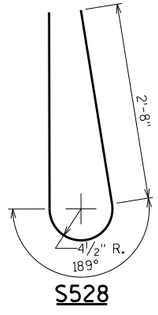
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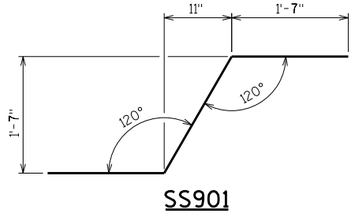
S516



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

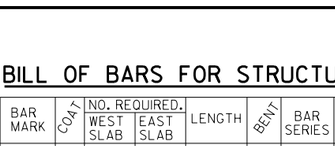
BAR MARK	COAT	NO. REQUIRED. WEST SLAB	NO. REQUIRED. EAST SLAB	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	62	62	12'-2"	X		FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-BETWEEN PARAPETS
R502	X	4	4	8'-11"	X		FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT ENDS ONLY
R803	X	4	4	41'-9"			FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT 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.

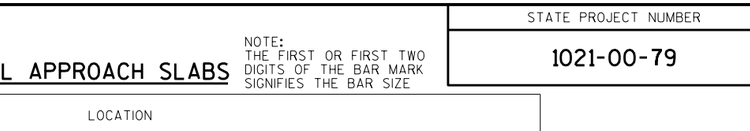
BAR SERIES TABLE

BAR MARK	NUMBER REQUIRED	TOTAL BAR LENGTH
R518	4 SERIES OF 7 BARS	4'-11" TO 6'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.



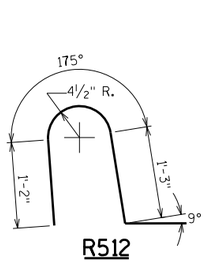
R501 R502
(STIRRUP BARS)



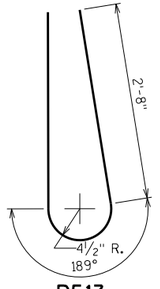
R807



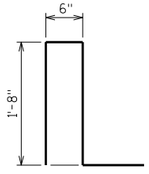
R510



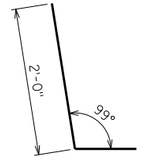
R512



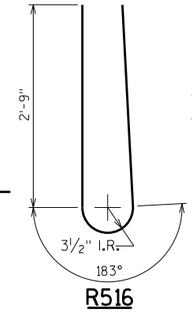
R513



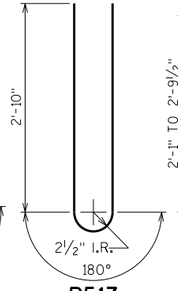
R514



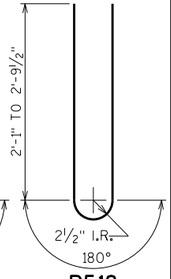
R515



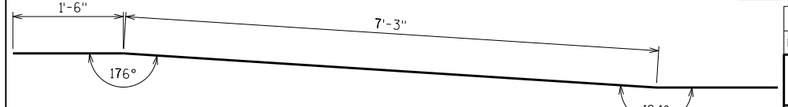
R516



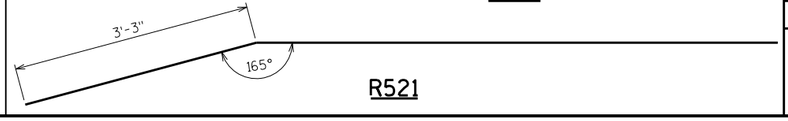
R517



R518



R520



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

343

STATE PROJECT NUMBER

1021-00-79

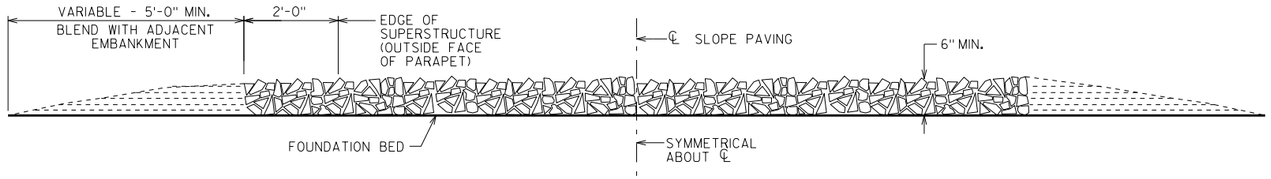
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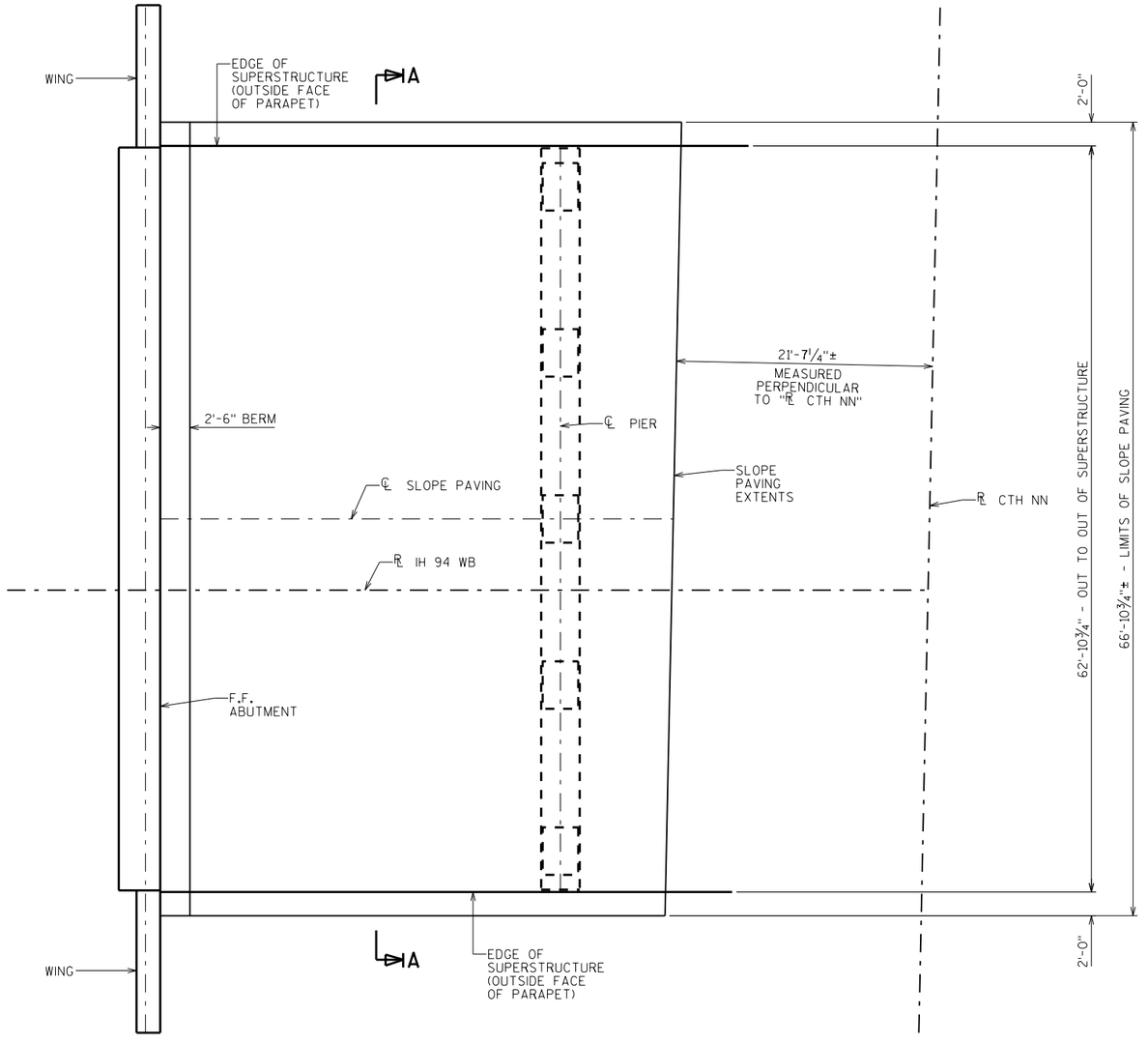
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STATE PROJECT NUMBER

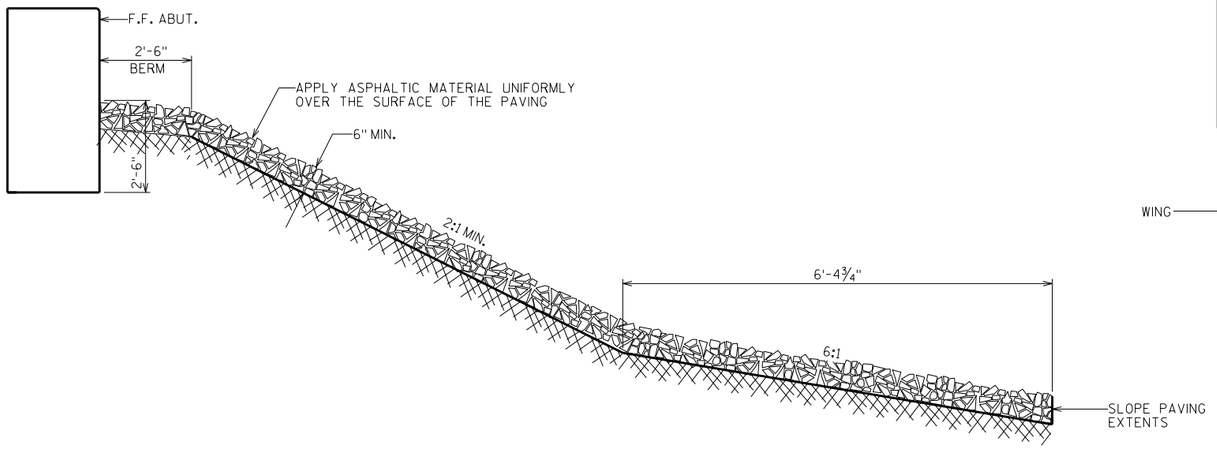
1021-00-79



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

344

SCALE = 1.00

8

8

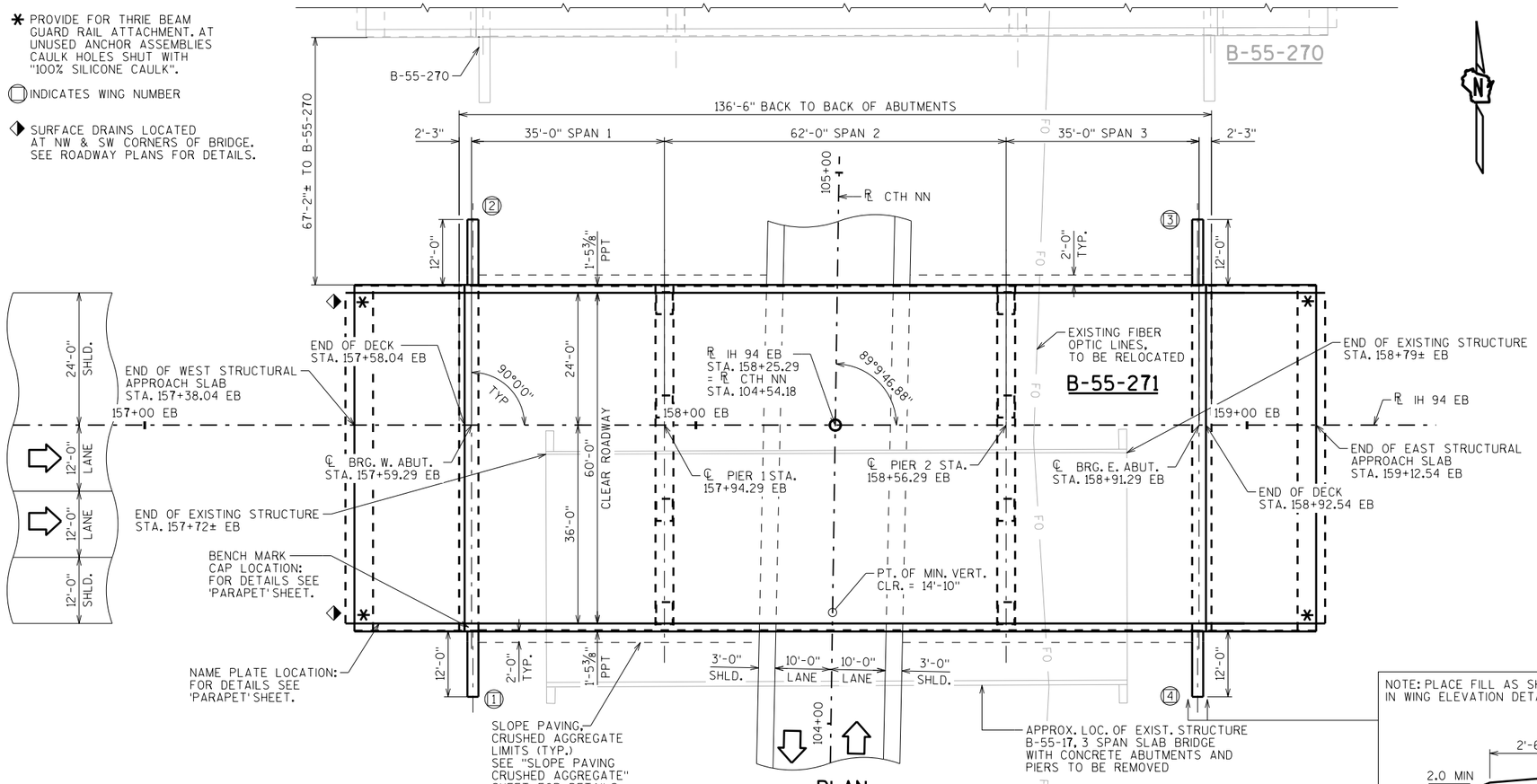
STATE PROJECT NUMBER

1021-00-78

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

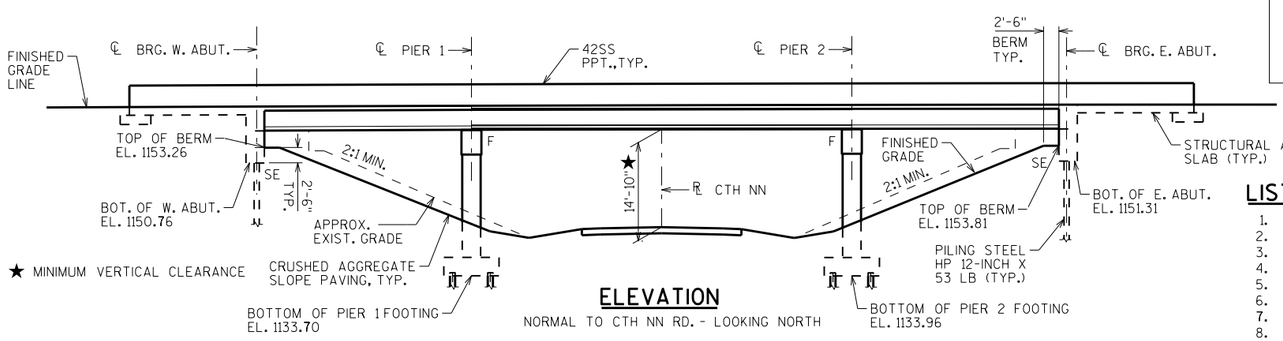
(1) INDICATES WING NUMBER

◆ SURFACE DRAINS LOCATED AT NW & SW CORNERS OF BRIDGE. SEE ROADWAY PLANS FOR DETAILS.



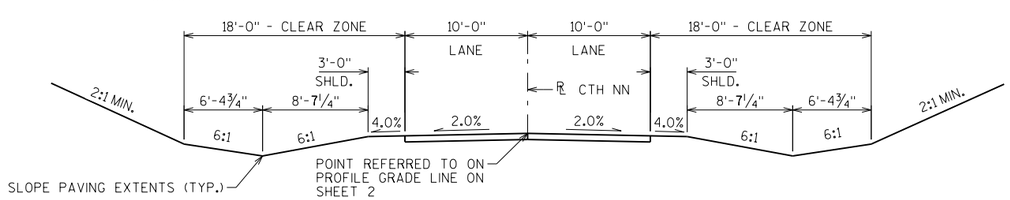
PLAN

3 SPAN - 36W" PRESTRESSED GIRDERS



ELEVATION

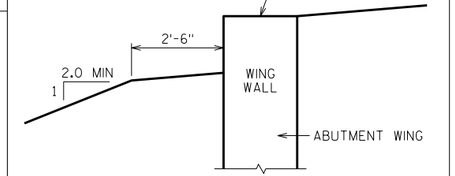
NORMAL TO CTH NN RD. - LOOKING NORTH



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

345

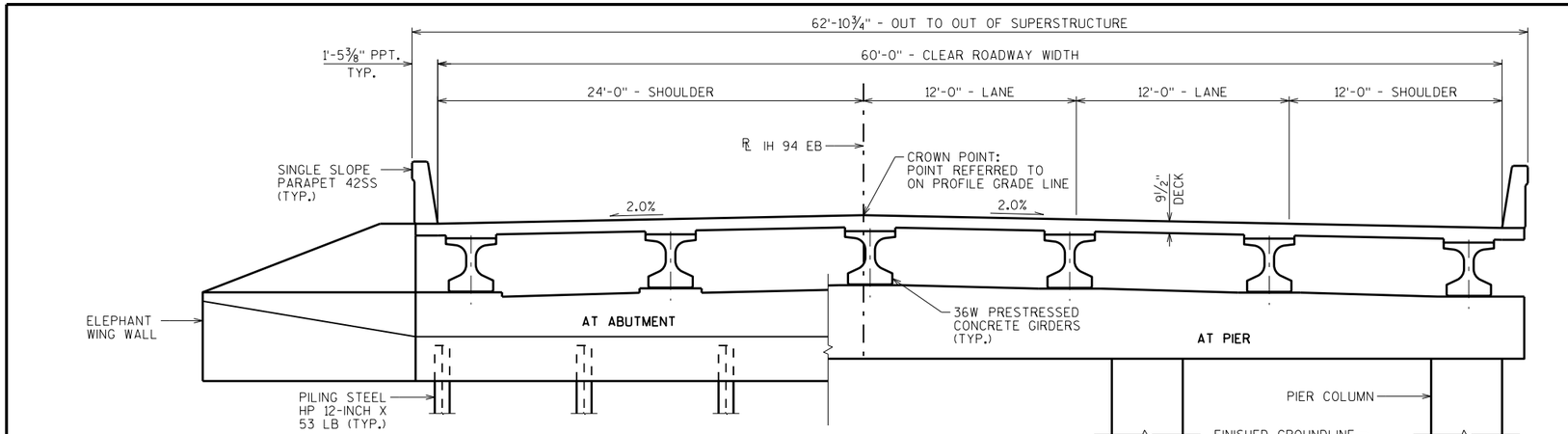
I.D. 1021-00-08A

DATE: APRIL 2020

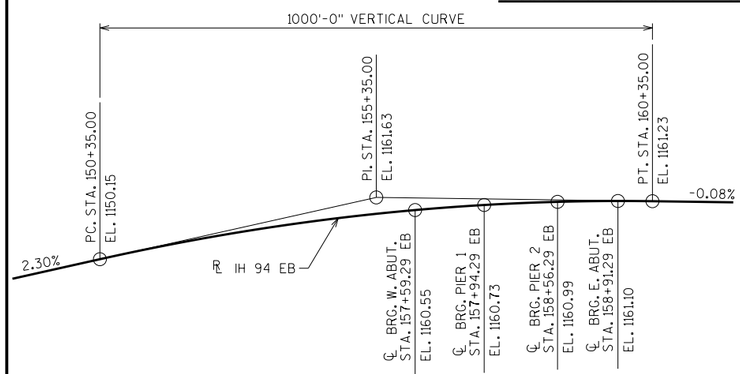
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STATE PROJECT NUMBER

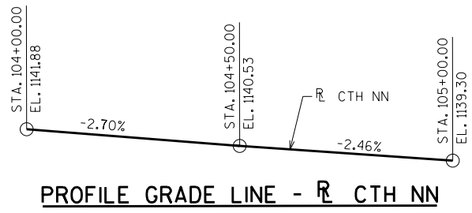
1021-00-78



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"

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.

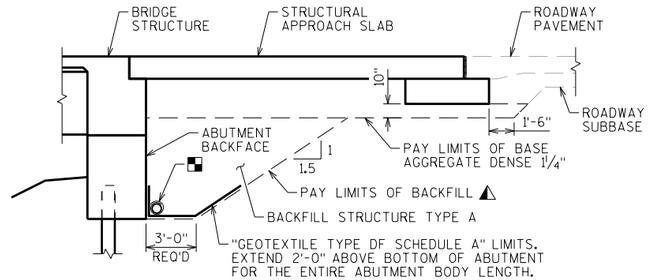
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

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.

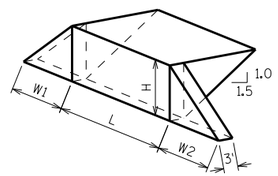
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "36W" PRESTRESSED GIRDER DETAILS 2" SHEET.



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

346

8

8

SCALE = 4.00

(1) INDICATES WING NUMBER

℄ IH 94 EB

STA. 157+00 EB

END OF WEST STRUCTURAL APPROACH SLAB
STA. 157+38.04 EB

℄ BRG. WEST ABUT.
STA. 157+59.29 EB

90° TYP.

℄ PIER 1
STA. 157+94.29 EB

STA. 158+00 EB

℄ IH 94 EB STA. 158+25.29 =
℄ CTH NN STA. 104+54.18

℄ CTH NN

89°9'46.88"

℄ PIER 2
STA. 158+56.29 EB

℄ BRG. EAST ABUT.
STA. 158+91.29 EB

STA. 159+00 EB

END OF EAST STRUCTURAL APPROACH SLAB
STA. 159+12.54 EB

STA. 104+00

BOR-5
BOR-55-17-9
BOR-55-17-6
BOR-7
BOR-8

B-55-271

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

BOR-3A STA. 157+57; 83'RT. OF ℄ IH 94 EB EL. 1142.34
BOR-3C STA. 157+59; 86'RT. OF ℄ IH 94 EB EL. 1141.78
BOR-3B STA. 157+65; 74'RT. OF ℄ IH 94 EB EL. 1142.52
BOR-55-17-9 STA. 157+72; 12'RT. OF ℄ IH 94 EB EL. 1144.54
BOR-7 STA. 158+15; 33'RT. OF ℄ IH 94 EB EL. 1141.66
BOR-5 STA. 158+41; 39'LT. OF ℄ IH 94 EB EL. 1139.89
BOR-8 STA. 158+47; 52'RT. OF ℄ IH 94 EB EL. 1140.95
BOR-55-17-6 STA. 158+92; 12'RT. OF ℄ IH 94 EB EL. 1139.21
BOR-4 STA. 159+00; 94'RT. OF ℄ IH 94 EB EL. 1138.67

BOT. OF WEST ABUT. EL. 1150.76
BOT. OF PIER 1 FOOTINGS EL. 1133.70
BOT. OF PIER 2 FOOTINGS EL. 1133.96
BOT. OF EAST ABUT. EL. 1151.31

NQ CORE #1 18.5'-23.5' REC=83% RQD=16.3%
NQ CORE #2 23.5'-28.5' REC=83% RQD=28.8%
HP 12 X 53 STEEL PILING (TYP. AT ALL SUBSTRUCTURES)
SLIGHTLY WEATHERED
HIGHLY WEATHERED
COMPETENT
WEATHERED
SLIGHTLY WEATHERED-FAIRLY COMPETENT
MODERATELY WEATHERED

WEST ABUT. ESTIMATED PILE LENGTH = 30 FEET
PIER 1 ESTIMATED PILE LENGTH = 15 FEET
PIER 2 ESTIMATED PILE LENGTH = 15 FEET
EAST ABUT. ESTIMATED PILE LENGTH = 55 FEET

* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

1158 1150 1140 1130 1120 1110 1100 1090 1088

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

BORING #/EL.
STA./OFFSET
ST
0.25 (1) 17 (2)
F-C
COBBLE OR BOULDER
WEATHERED LIMESTONE
CORE RUN #1 - 24'-29'
REC=80%, RQD=72%

(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

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SUBSURFACE EXPLORATION

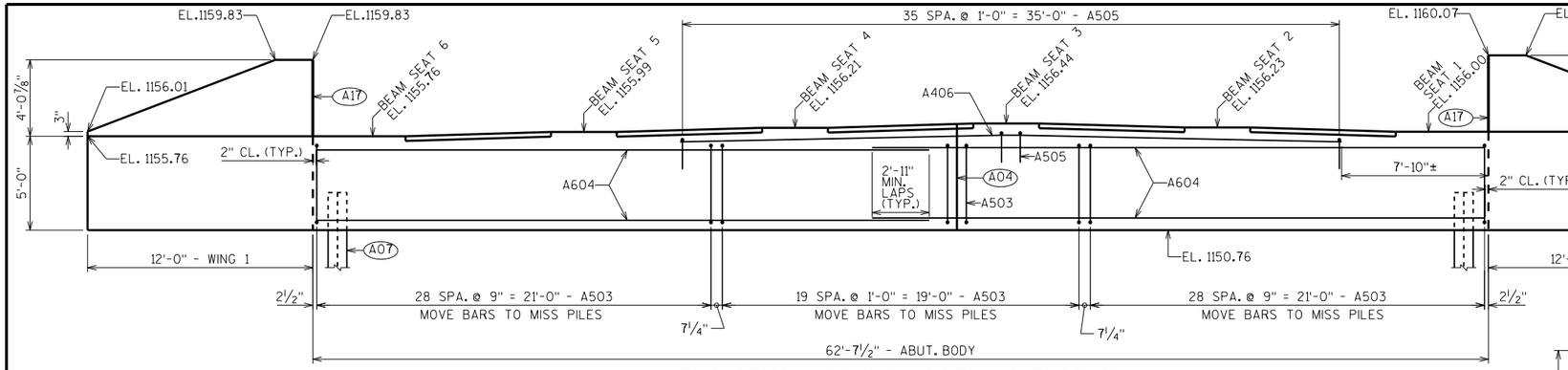
SHEET 3

347

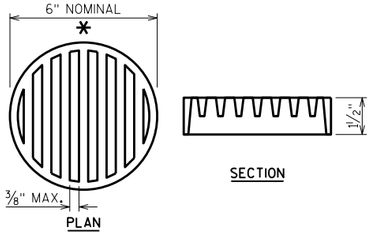
SCALE = 10.00

STATE PROJECT NUMBER

1021-00-78



ELEVATION LOOKING WEST @ F.F. ABUT.

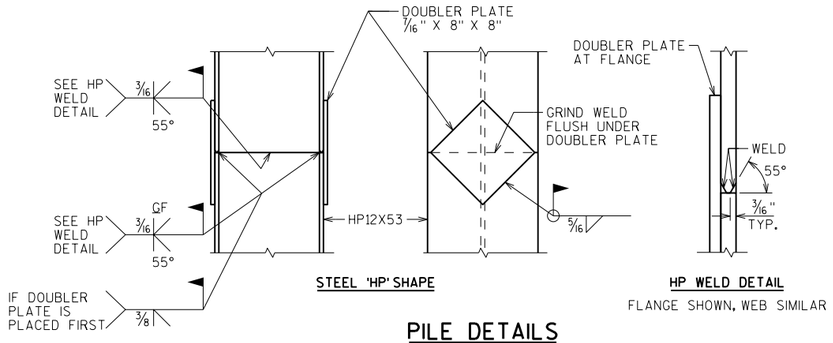


RODENT SHIELD DETAIL

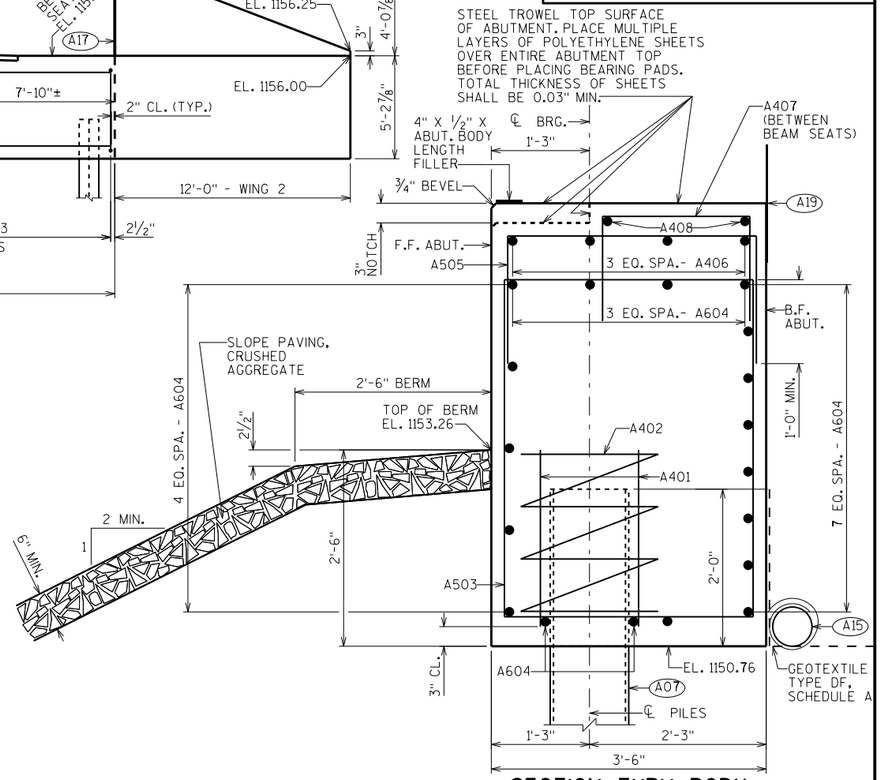
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

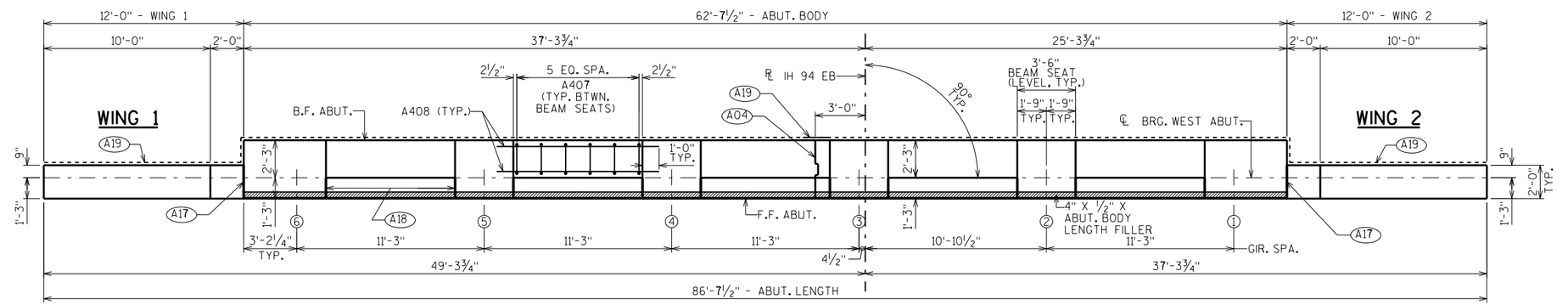
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



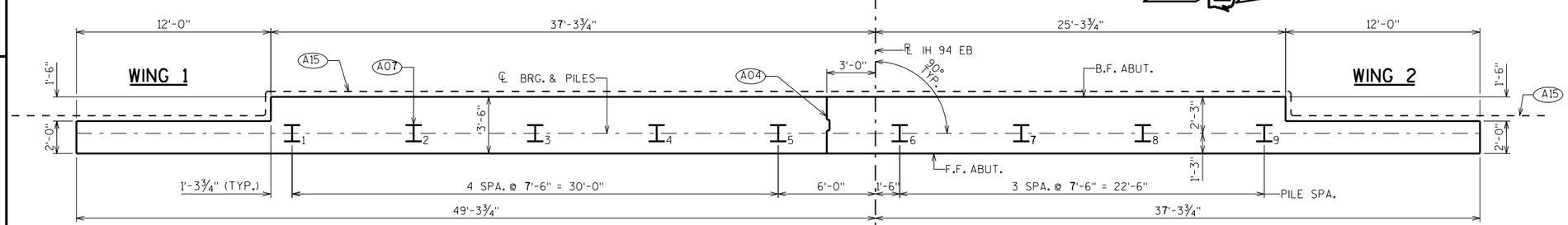
PILE DETAILS



SECTION THRU BODY



PLAN



PILE PLAN

○ INDICATES GIRDER NUMBER

(A04) VERTICAL CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" × 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 × 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) 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

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WEST ABUTMENT

SHEET 4

348

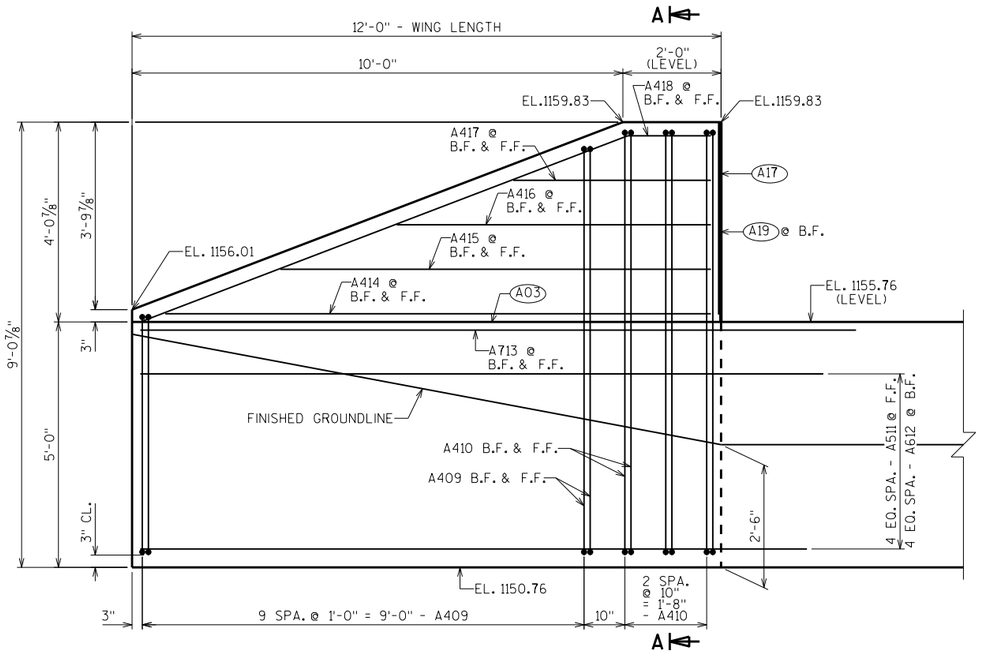
8

8

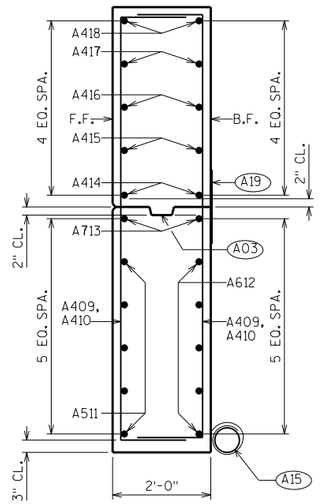
SCALE = 3.75

STATE PROJECT NUMBER

1021-00-78



WING 1 ELEVATION LOOKING AT F.F. WING



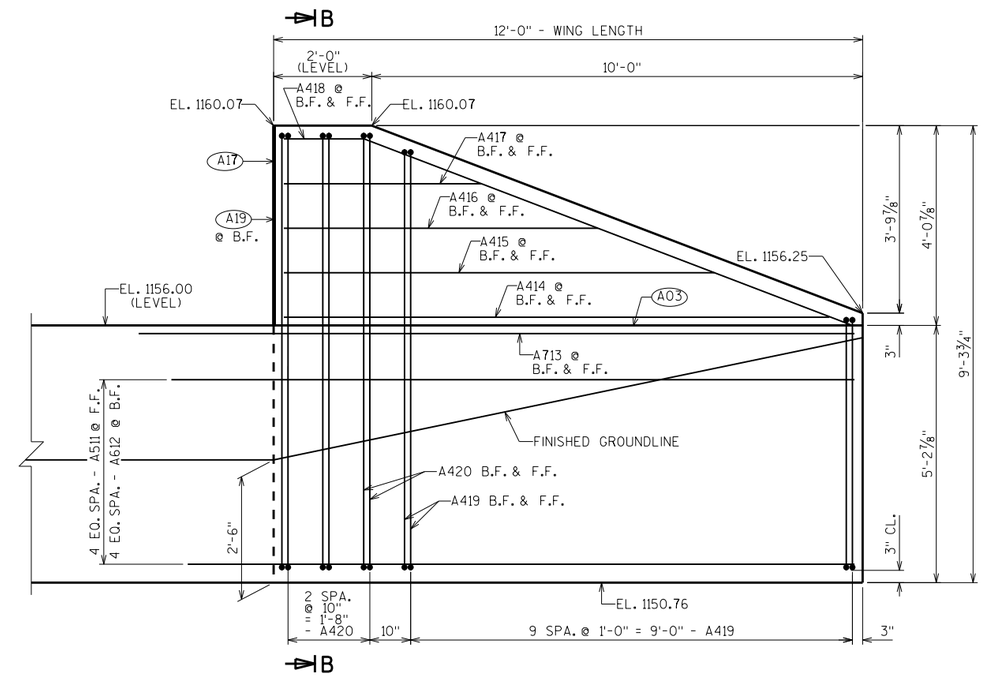
WING 1 SECTION A-A

BILL OF BARS

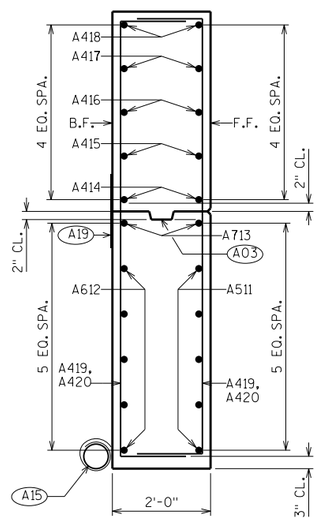
NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

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.

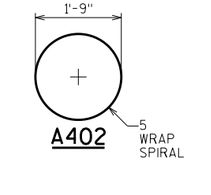
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



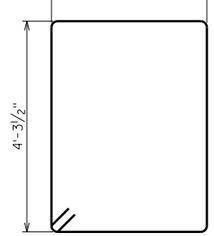
WING 2 ELEVATION LOOKING AT F.F. WING



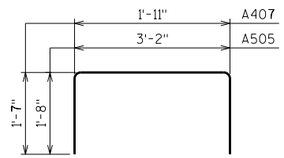
WING 2 SECTION B-B



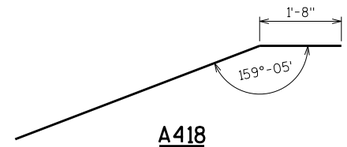
A402



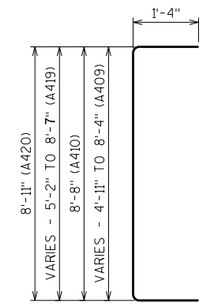
A503



A505 A407



A418



A409 A410 A419 A420

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.

(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-55-271

DRAWN BY JPH | PLANS CK'D. AA

WEST ABUTMENT DETAILS

SHEET 5

349

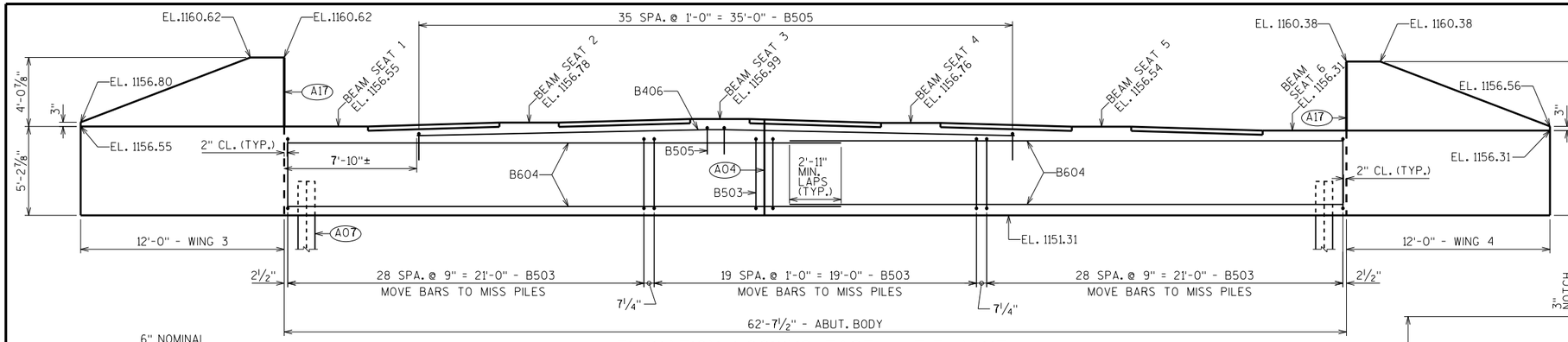
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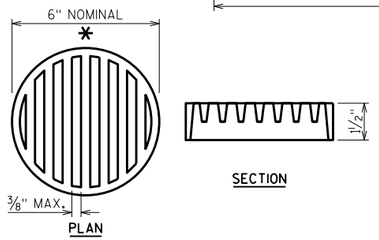
8

STATE PROJECT NUMBER

1021-00-78



ELEVATION LOOKING EAST @ F.F. ABUT.

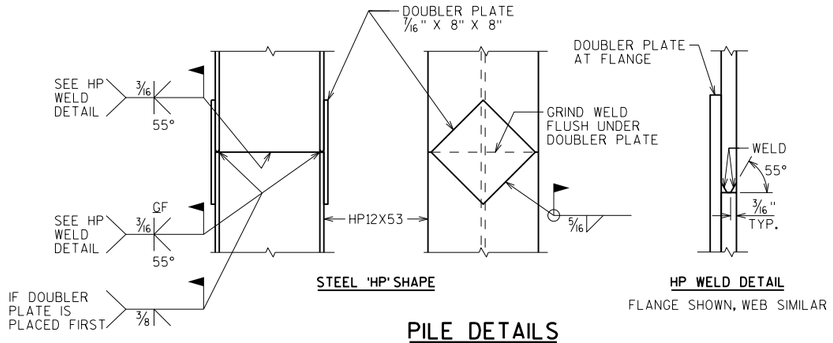


RODENT SHIELD DETAIL

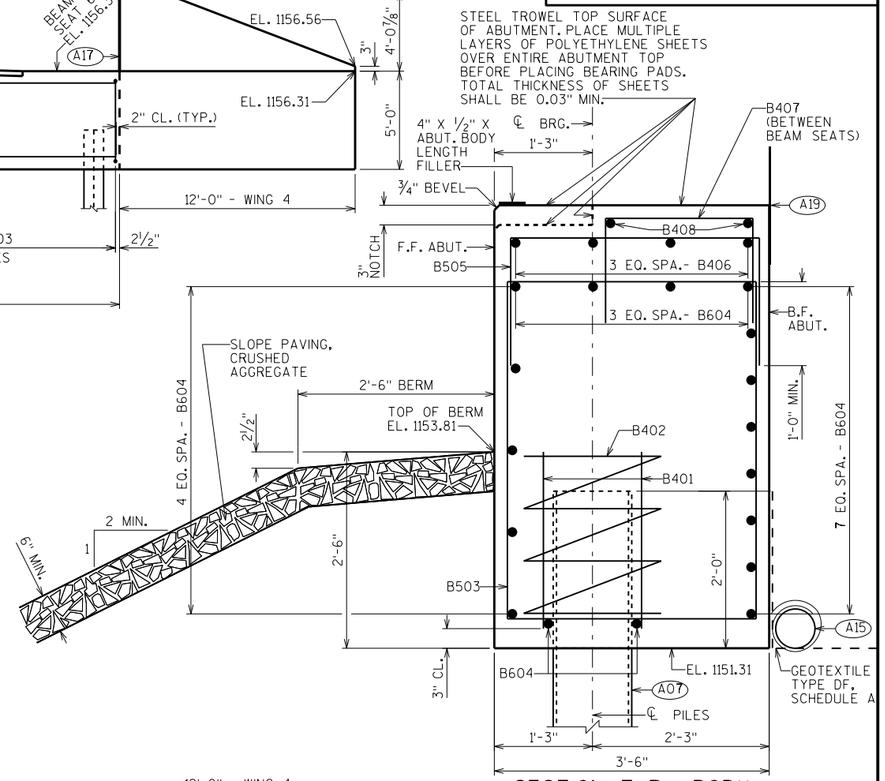
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

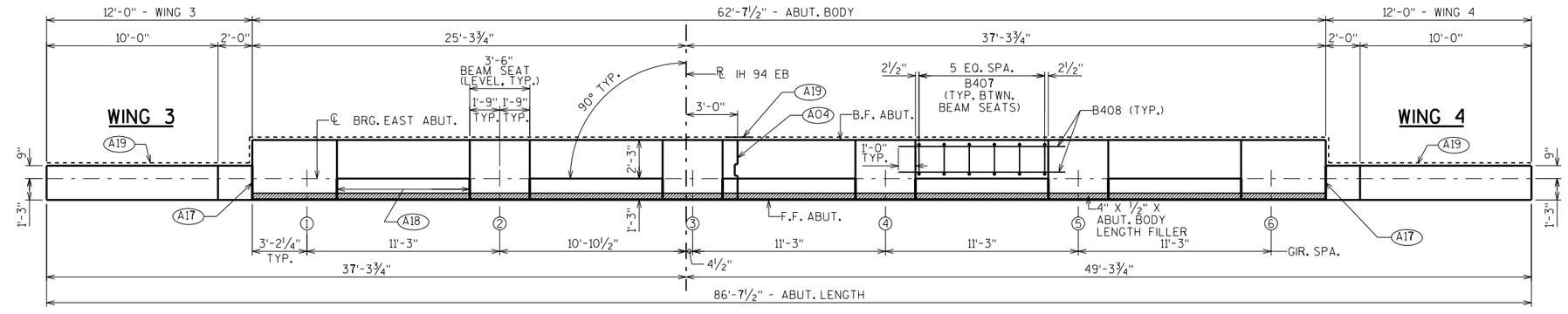
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 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" × 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 × 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

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EAST ABUTMENT

SHEET 6

350

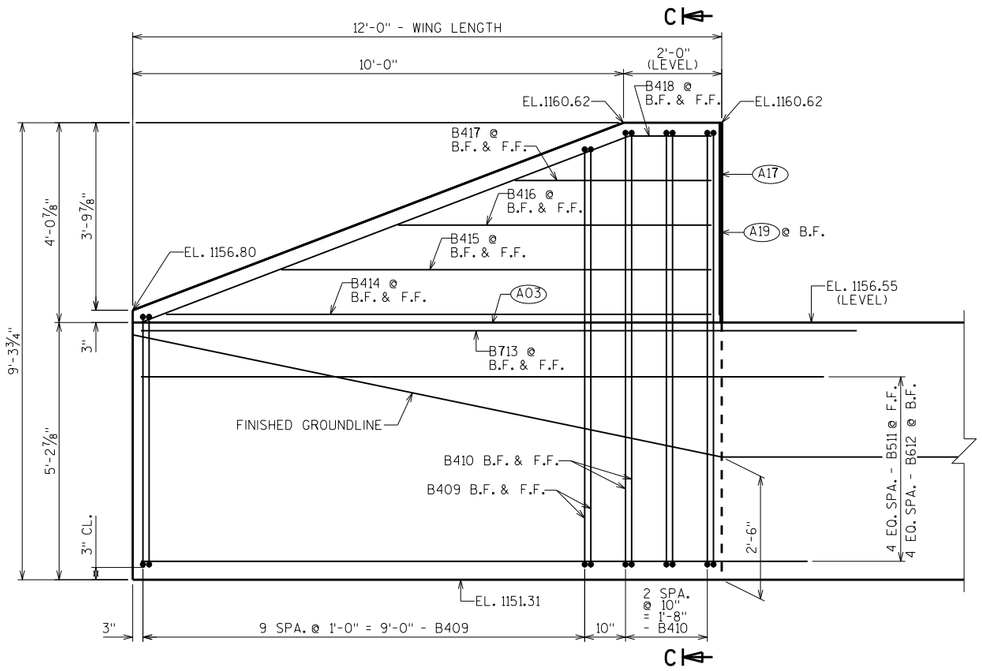
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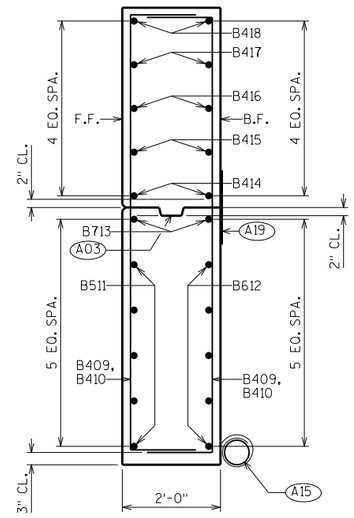
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WING 3 ELEVATION LOOKING AT F.F. WING



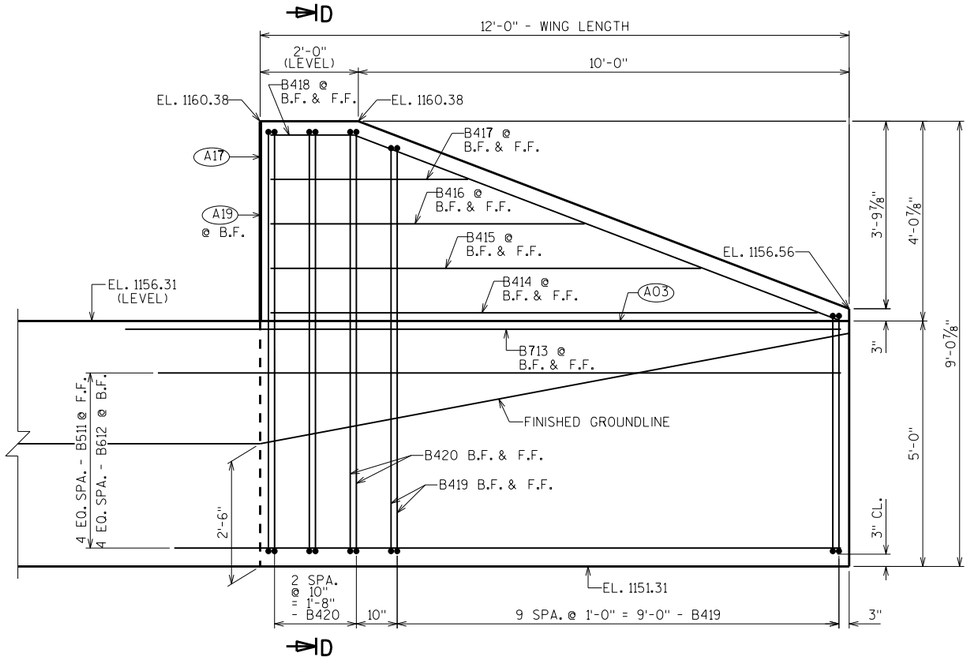
WING 3 SECTION C-C

BILL OF BARS

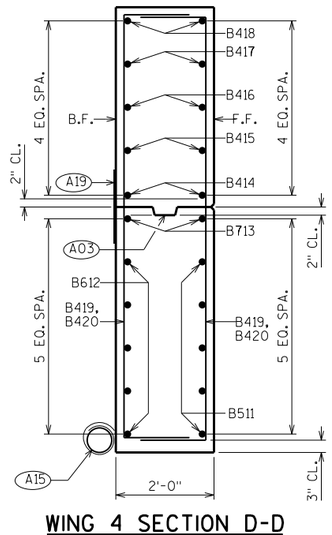
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

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.

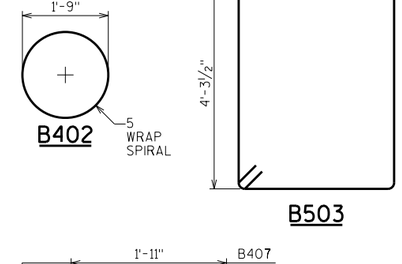
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



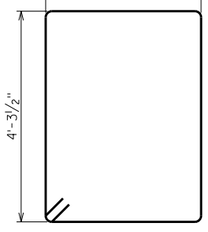
WING 4 ELEVATION LOOKING AT F.F. WING



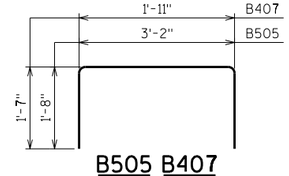
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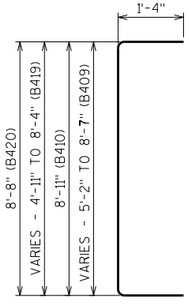
B402



B503



B505 B407

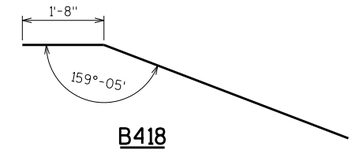


B409 B410 B419 B420

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.



B418

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.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

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EAST ABUTMENT DETAILS

SHEET 7

351

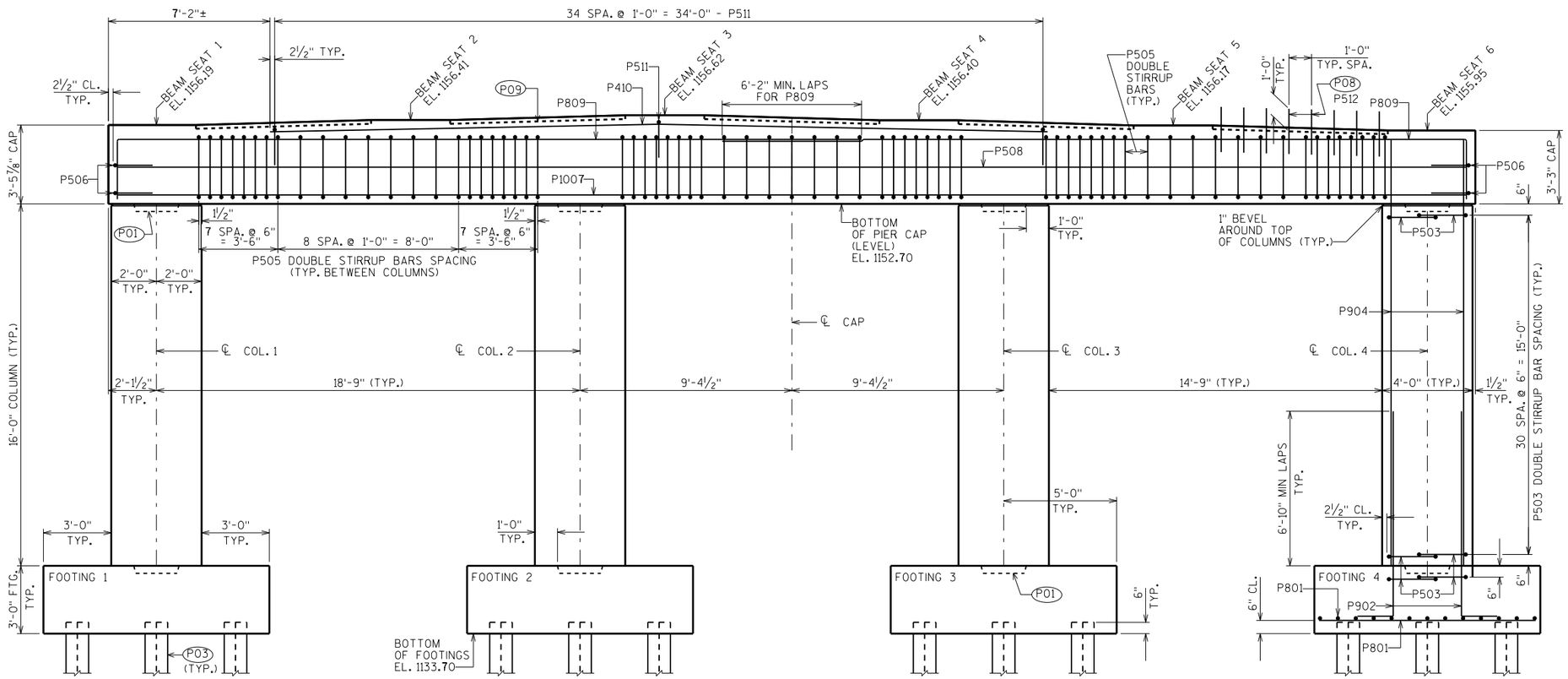
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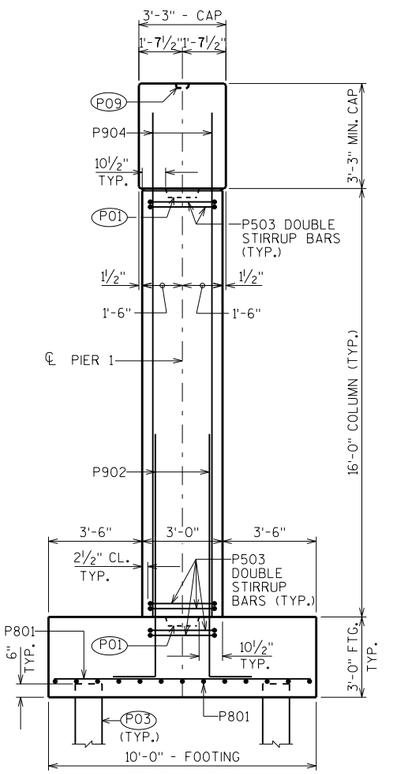
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ELEVATION LOOKING EAST



END VIEW

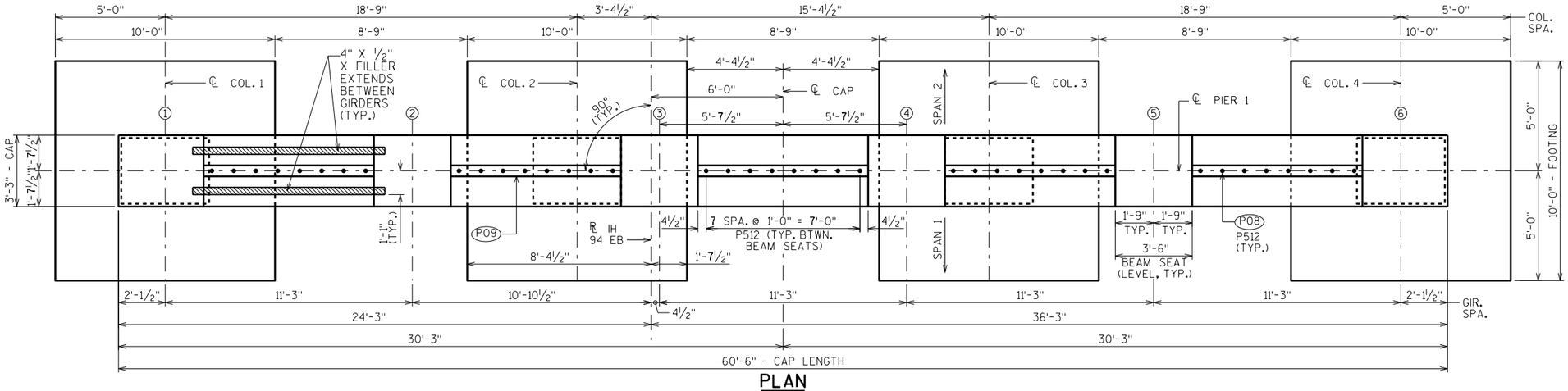
○ INDICATES GIRDER NUMBER

(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.



PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

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PIER 1

SHEET 8

352

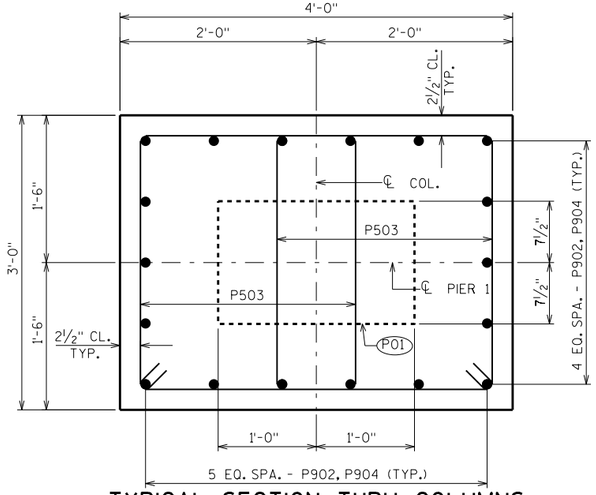
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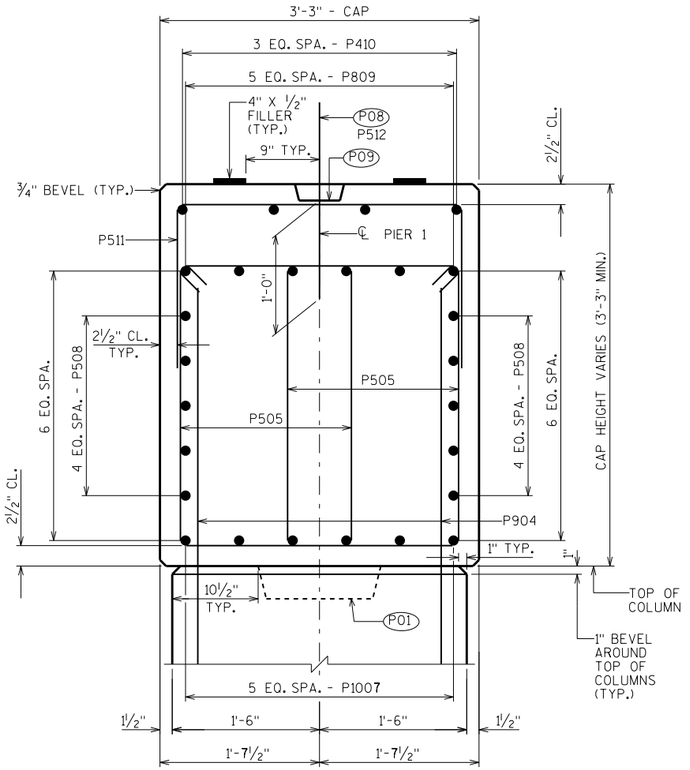
STATE PROJECT NUMBER

1021-00-78



TYPICAL SECTION THRU COLUMNS

(SHOWING DOUBLE STIRRUPS)



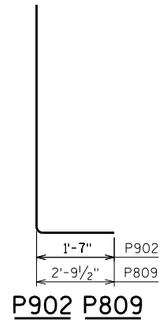
SECTION THRU CAP

(SHOWING DOUBLE STIRRUPS)

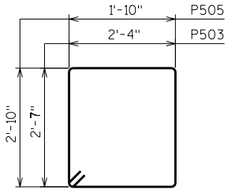
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

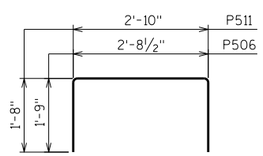
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
P801		104	9'-7"		FOOTINGS-BOTTOM-HORIZ.-LONGIT. & TRANS.
P902	X	72	10'-7"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
P503	X	256	10'-6"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
P904	X	72	18'-10"		COLUMNS/CAP-VERTICAL-ALL FACES
P505	X	138	10'-0"	X	CAP-VERTICAL-TRANSVERSE-DOUBLE 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
P511	X	35	5'-11"	X	CAP-TOP-VERTICAL-TRANSVERSE-UNDER BEAM SEATS 2-4
P512	X	40	2'-0"		CAP-TOP-VERTICAL-CENTER-BTWN. BEAM SEATS



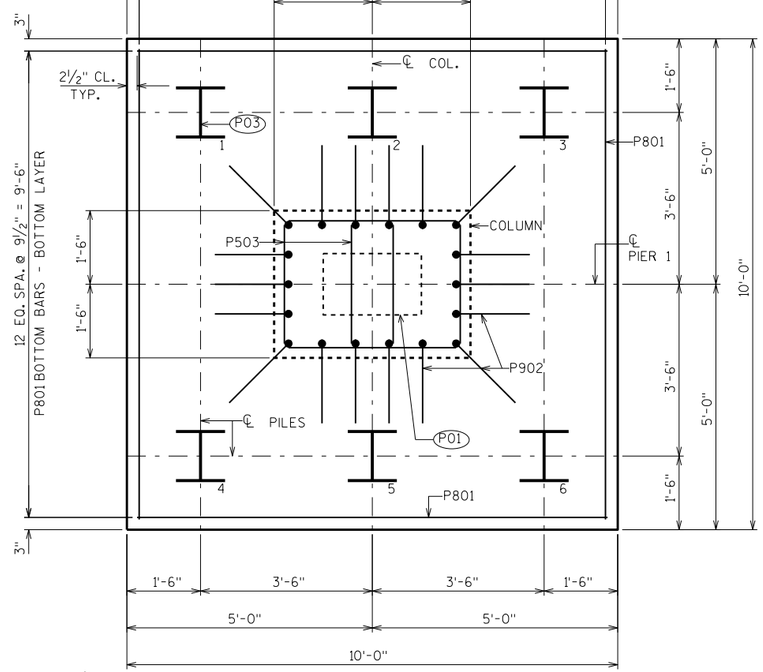
P902 P809



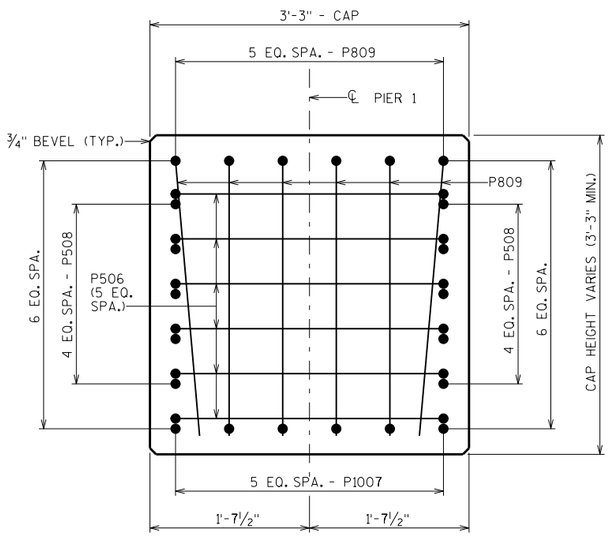
P503 P505



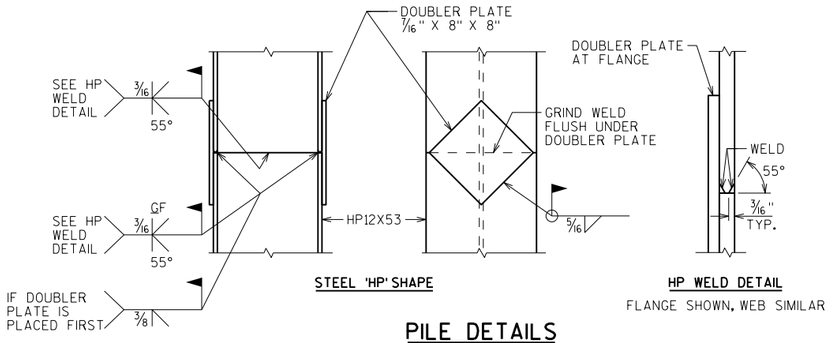
P506 P511



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.

(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
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

DRAWN BY JPH | PLANS CK'D. AA

PIER 1 DETAILS

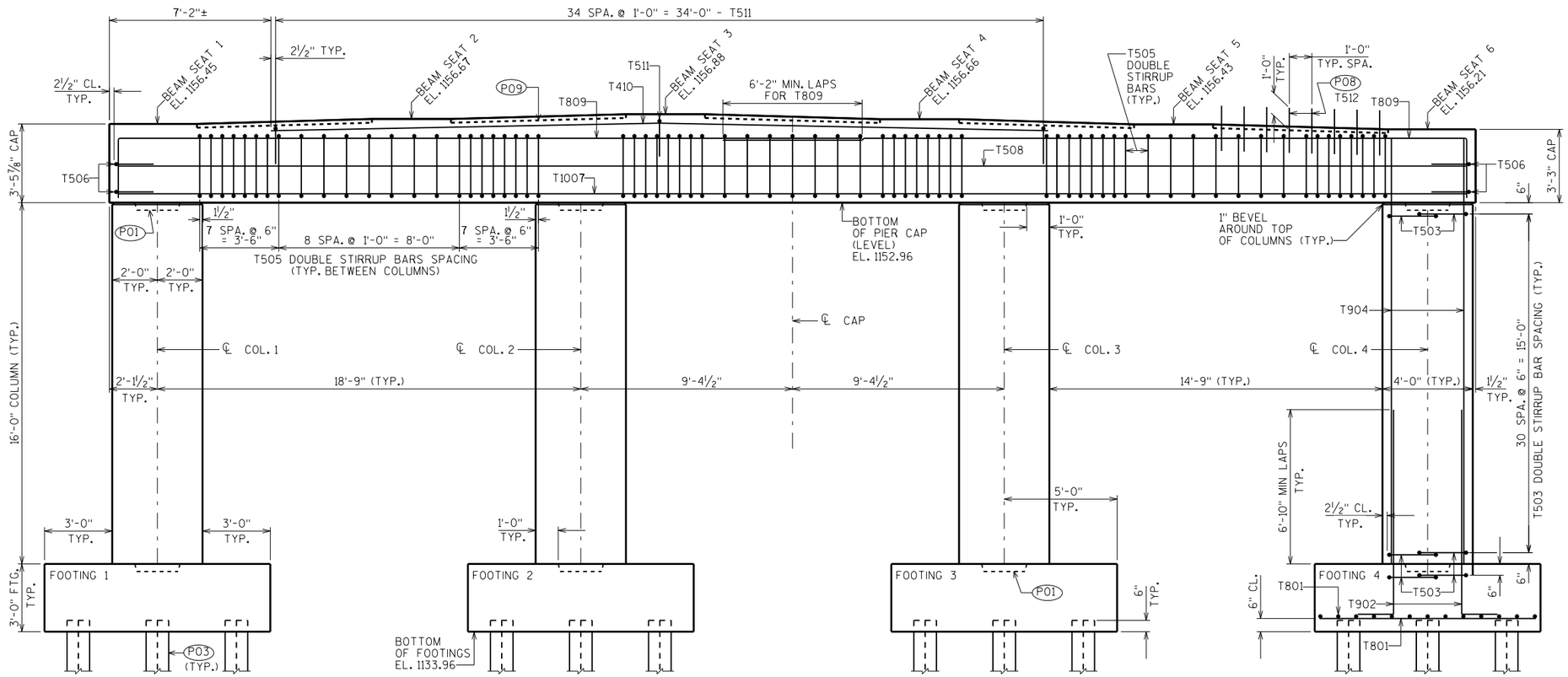
SHEET 9

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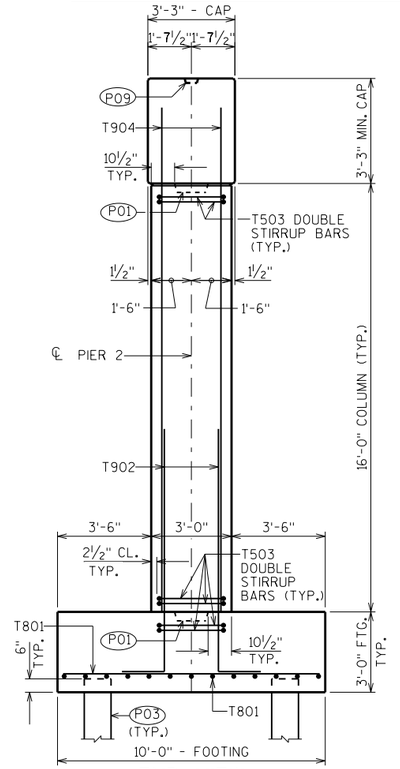
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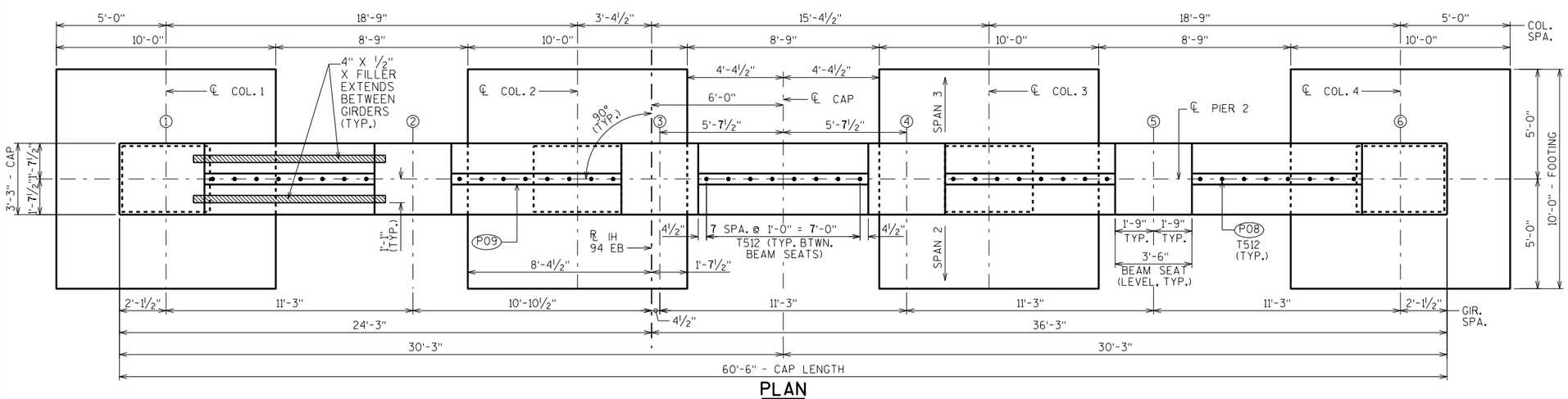


ELEVATION LOOKING EAST



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.

P08 T512 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-55-271

DRAWN BY	JPH	PLANS CK'D.	AA

PIER 2

SHEET 10

354

STATE PROJECT NUMBER

1021-00-78

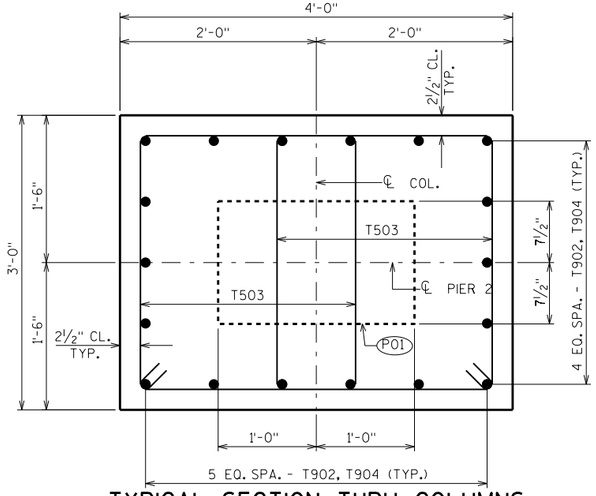
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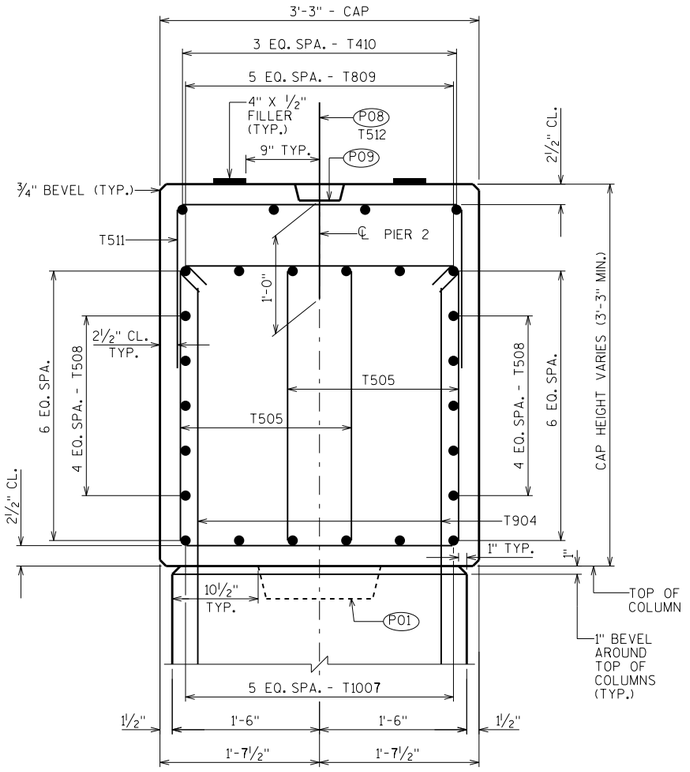
STATE PROJECT NUMBER

1021-00-78



TYPICAL SECTION THRU COLUMNS

(SHOWING DOUBLE STIRRUPS)



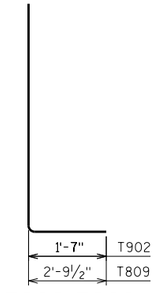
SECTION THRU CAP

(SHOWING DOUBLE STIRRUPS)

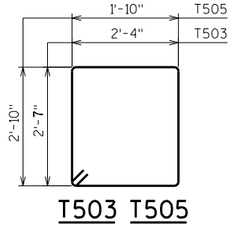
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

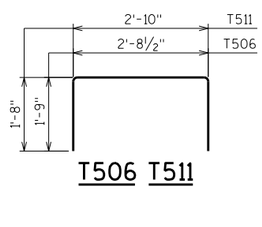
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
T801		104	9'-7"		FOOTINGS-BOTTOM-HORIZ.-LONGIT. & TRANS.
T902	X	72	10'-7"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
T503	X	256	10'-6"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
T904	X	72	18'-10"		COLUMNS/CAP-VERTICAL-ALL FACES
T505	X	138	10'-0"	X	CAP-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS
T506	X	12	6'-0"	X	CAP-HORIZ.-BOTH ENDS ONLY
T1007	X	6	60'-0"		CAP-BOT.-HORIZ.-LONGIT.
T508	X	10	60'-0"		CAP-HORIZ.-LONGIT.-BOTH FACES
T809	X	12	35'-9"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.
T410	X	4	34'-5"		CAP-TOP-HORIZ.-LONGIT.-UNDER BEAM SEATS 2-4
T511	X	35	5'-11"	X	CAP-TOP-VERTICAL-TRANSVERSE-UNDER BEAM SEATS 2-4
T512	X	40	2'-0"		CAP-TOP-VERTICAL-CENTER-BTWN. BEAM SEATS



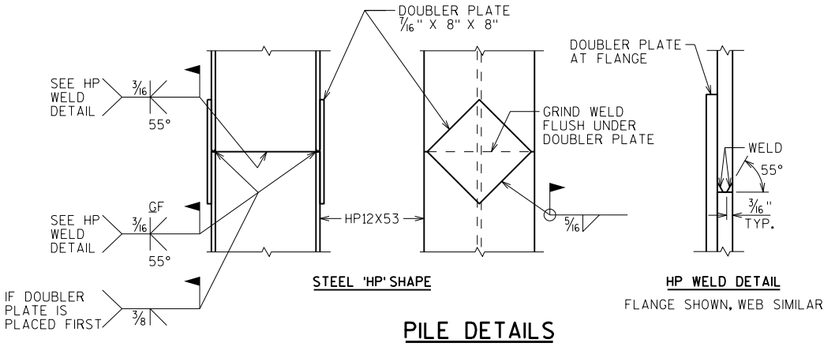
T902 T809



T503 T505



T506 T511



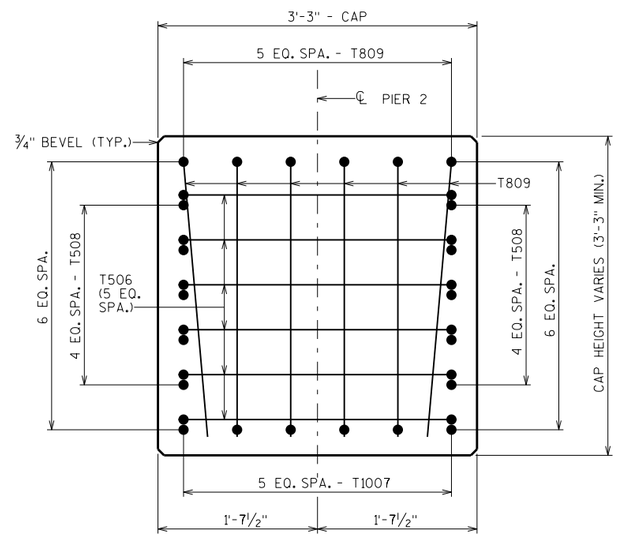
STEEL 'HP' SHAPE

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.

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 T512 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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STRUCTURE B-55-271

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PIER 2 DETAILS

SHEET 11

355

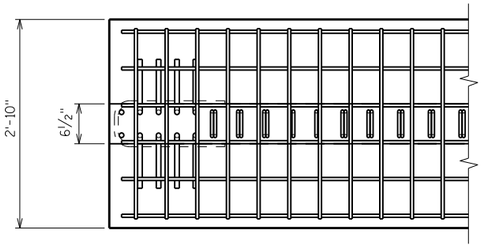
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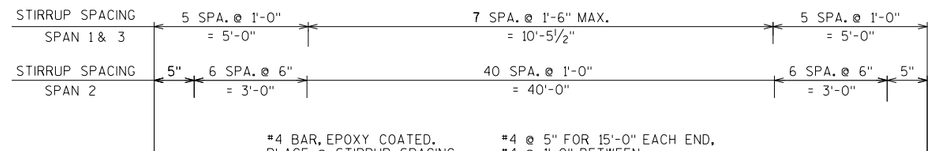
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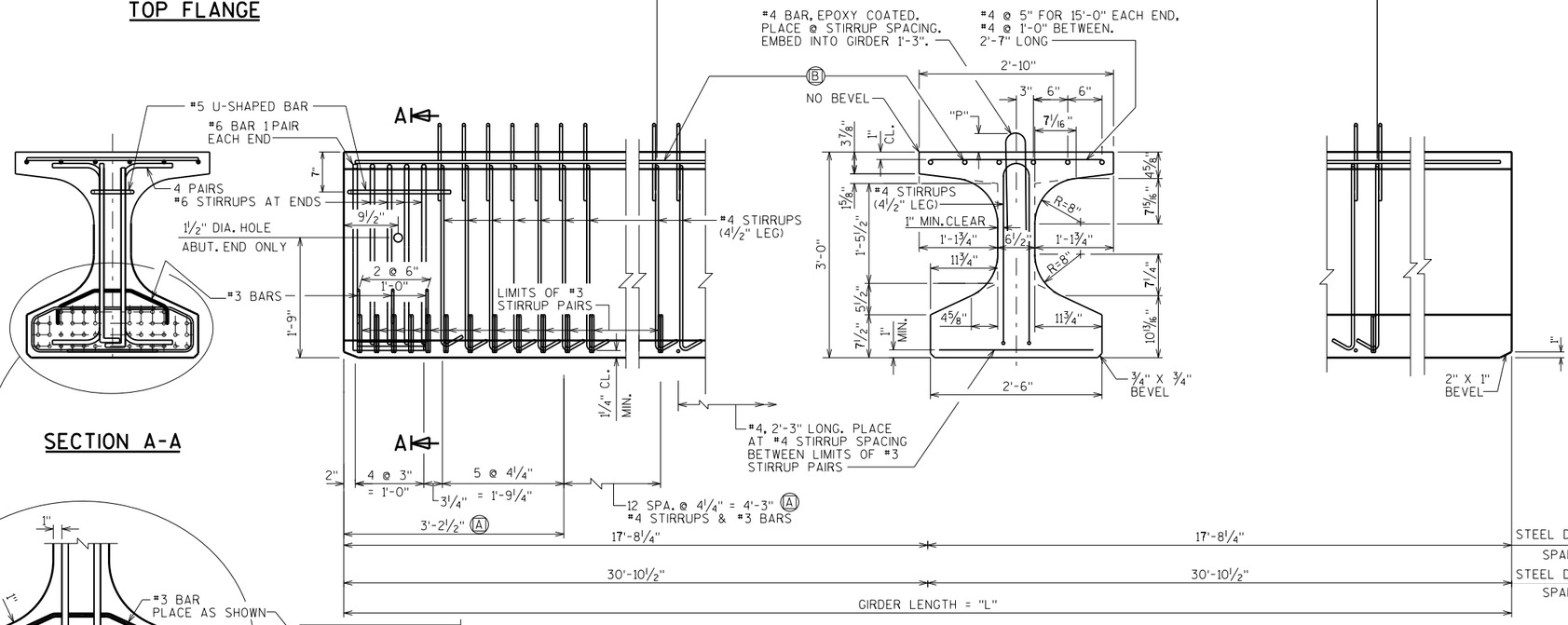
STATE PROJECT NUMBER

1021-00-78



TOP FLANGE



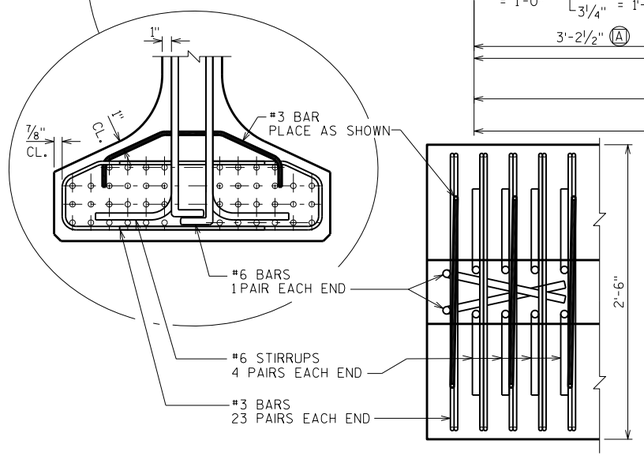


SECTION A-A

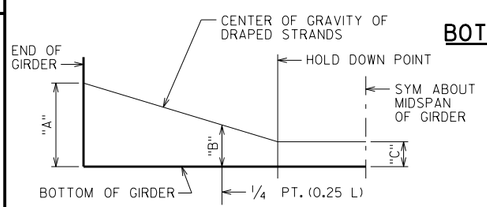
SIDE VIEW & TYPICAL SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

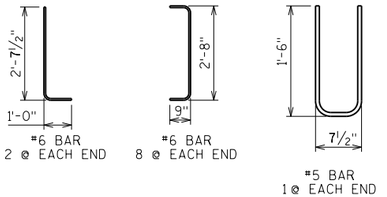
(B) SIX #5 BARS @ FULL LENGTH WITH 2'-7" MIN. LAPS

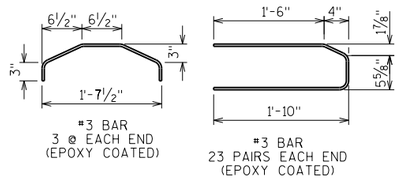


BOTTOM FLANGE



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		

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STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-55-271

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36W" PRESTRESSED GIRDER DETAILS 1

SHEET 12

356

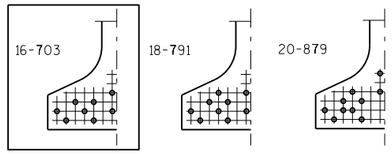
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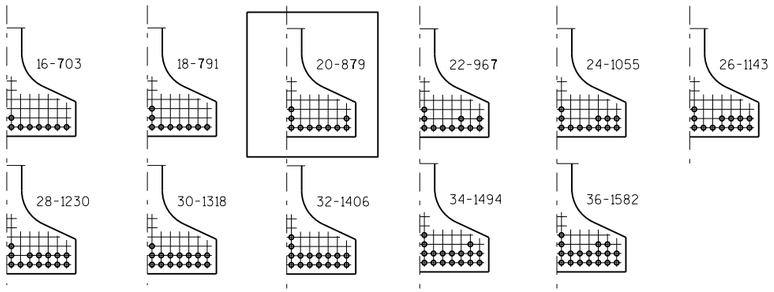
STATE PROJECT NUMBER

1021-00-78



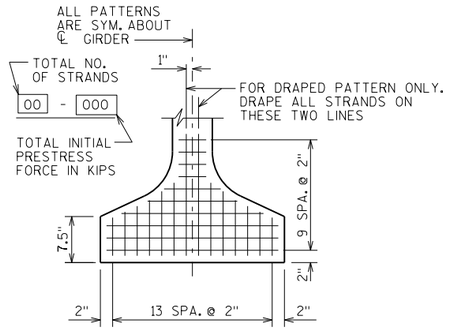
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS

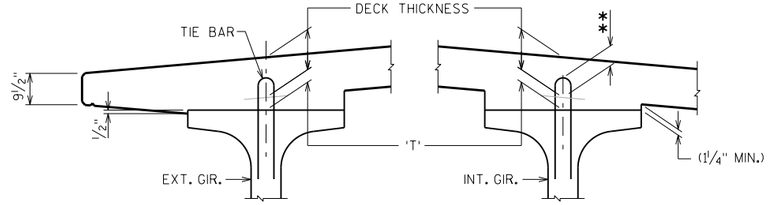


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

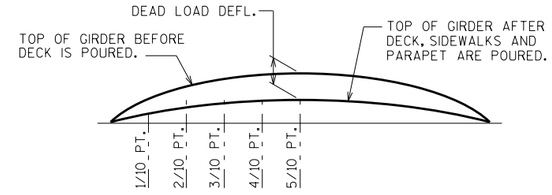
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** 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.



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	0.45
2	1.40

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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STRUCTURE B-55-271

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36W" PRESTRESSED GIRDER DETAILS 2

SHEET 13

357

SCALE = 1.00

8

8

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NOTES

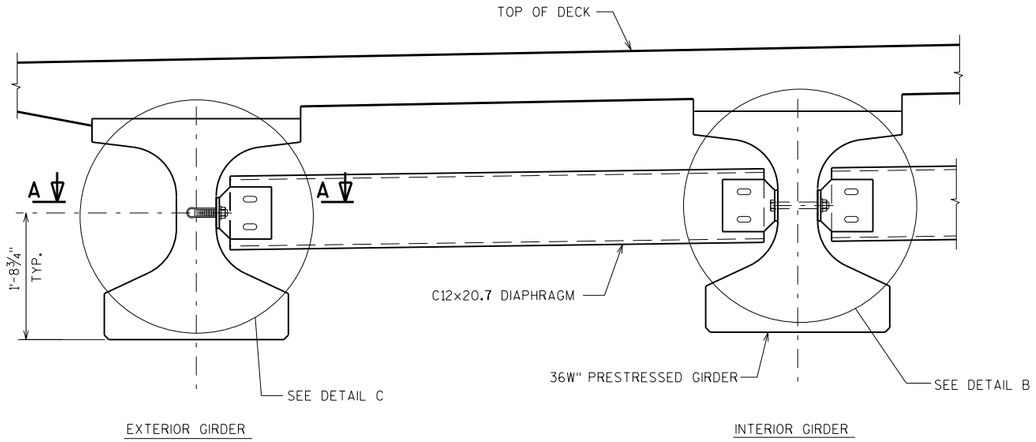
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-271", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

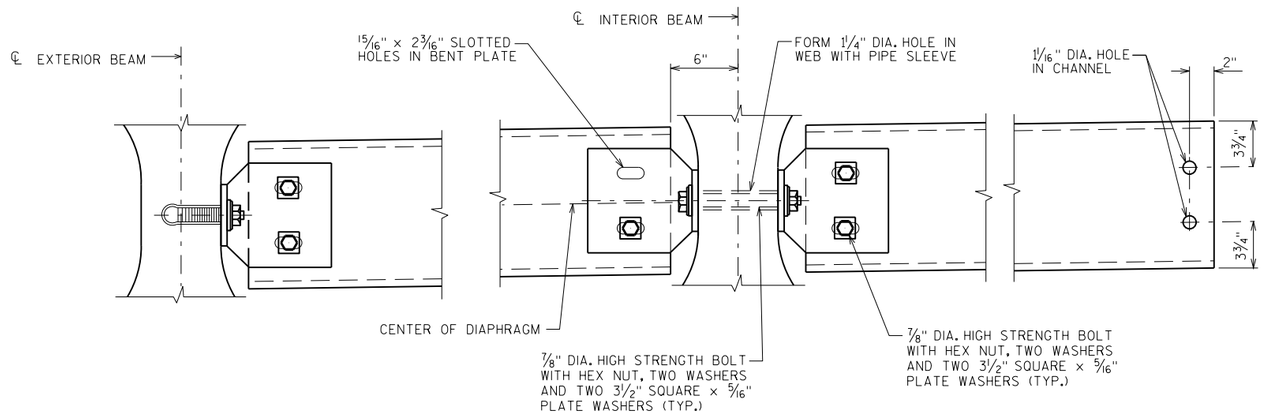
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

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.

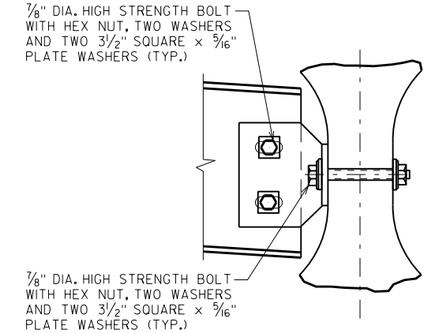


PART TRANSVERSE SECTION AT DIAPHRAGM

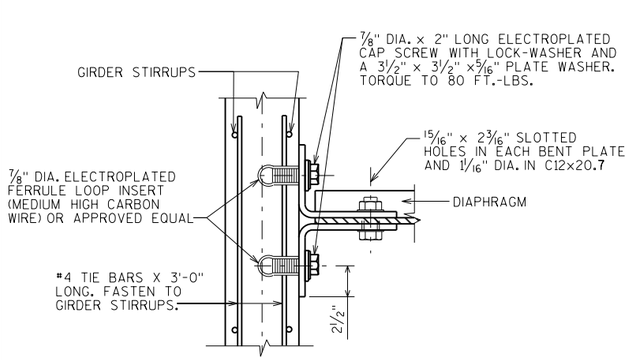


DETAIL C

DETAIL B

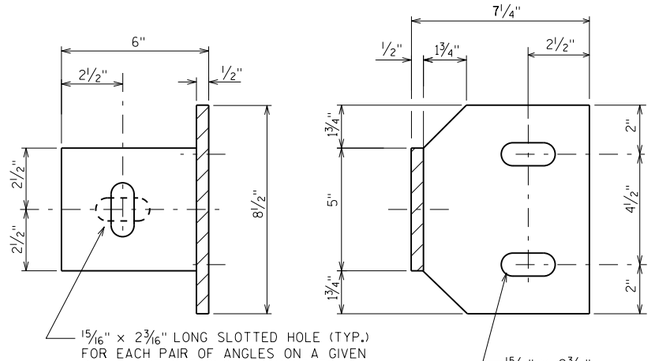


SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°



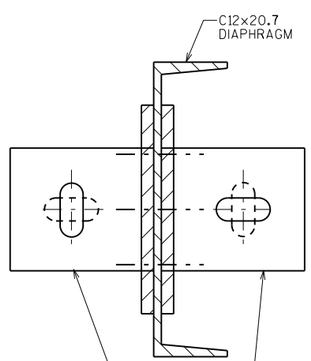
SECTION A-A

(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

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STEEL DIAPHRAGM

SHEET 14

358

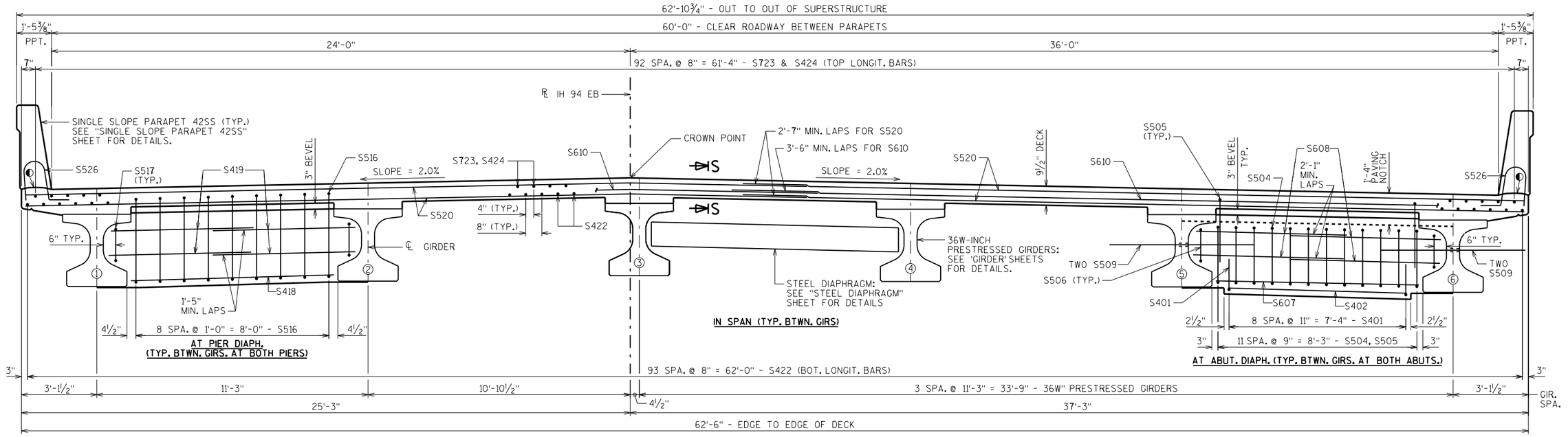
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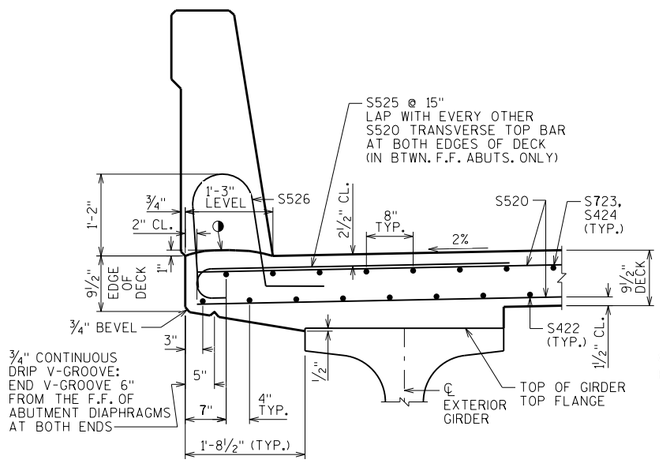
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STATE PROJECT NUMBER

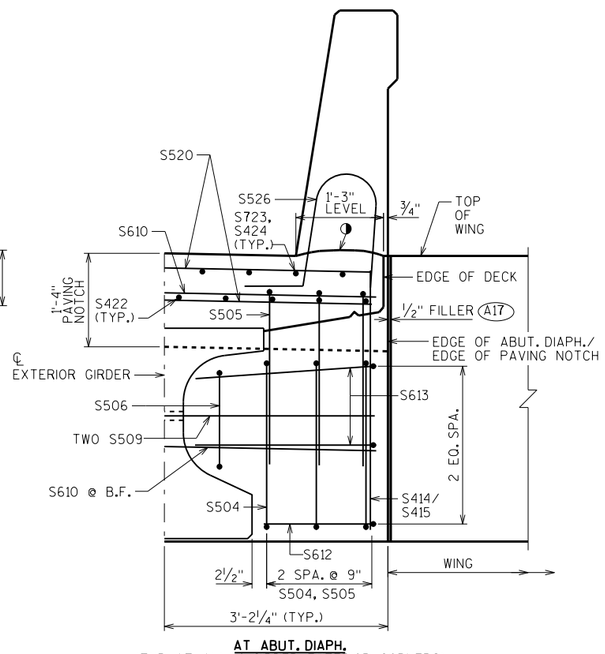
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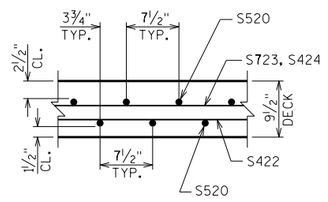
CROSS SECTION THRU BRIDGE LOOKING EAST



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.

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STRUCTURE B-55-271

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SUPERSTRUCTURE CROSS SECTIONS

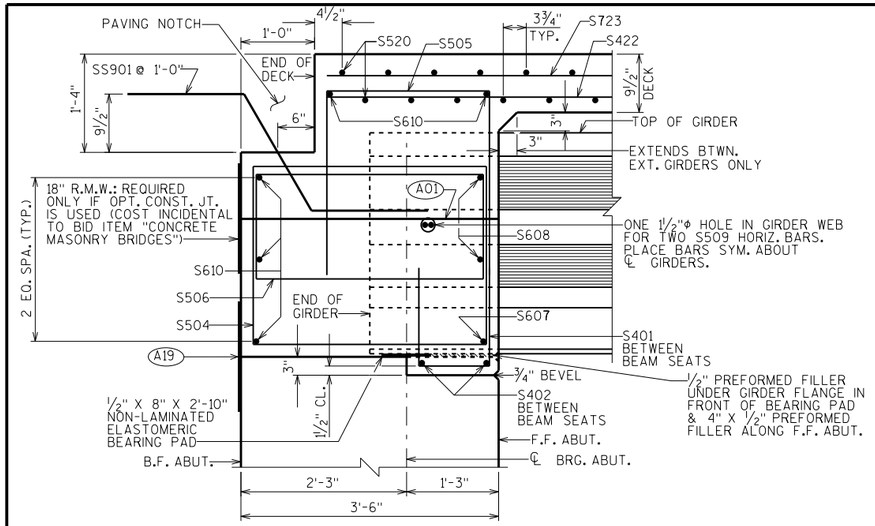
SHEET 15

359

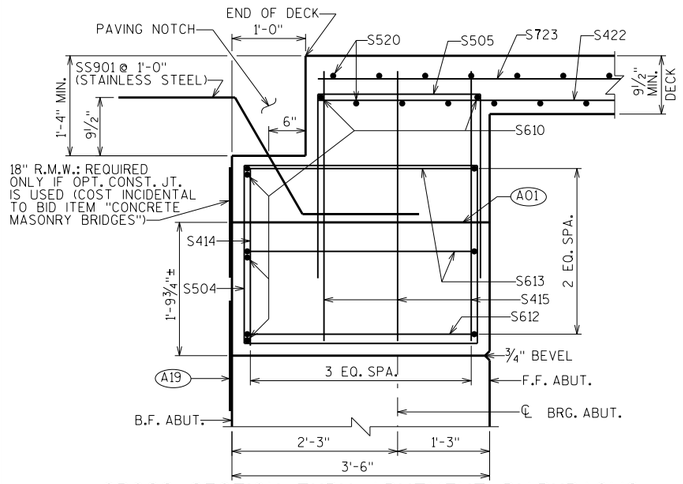
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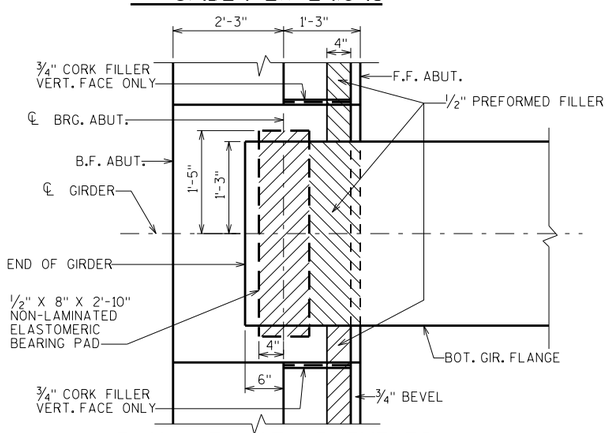
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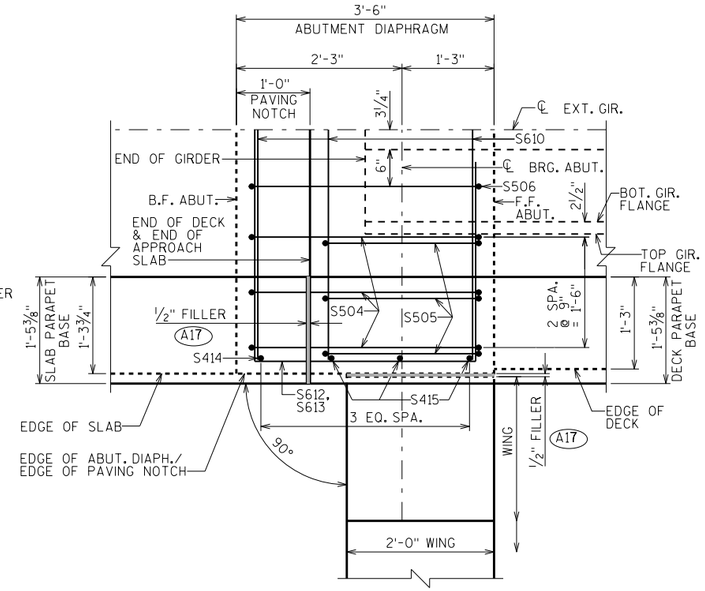
CROSS SECTION THRU ABUTMENT DIAPHRAGMS BETWEEN EXTERIOR GIRDERS



CROSS SECTION THRU ABUTMENT DIAPHRAGMS AT GIRDER EXTERIORS



PLAN VIEW AT ABUTMENTS



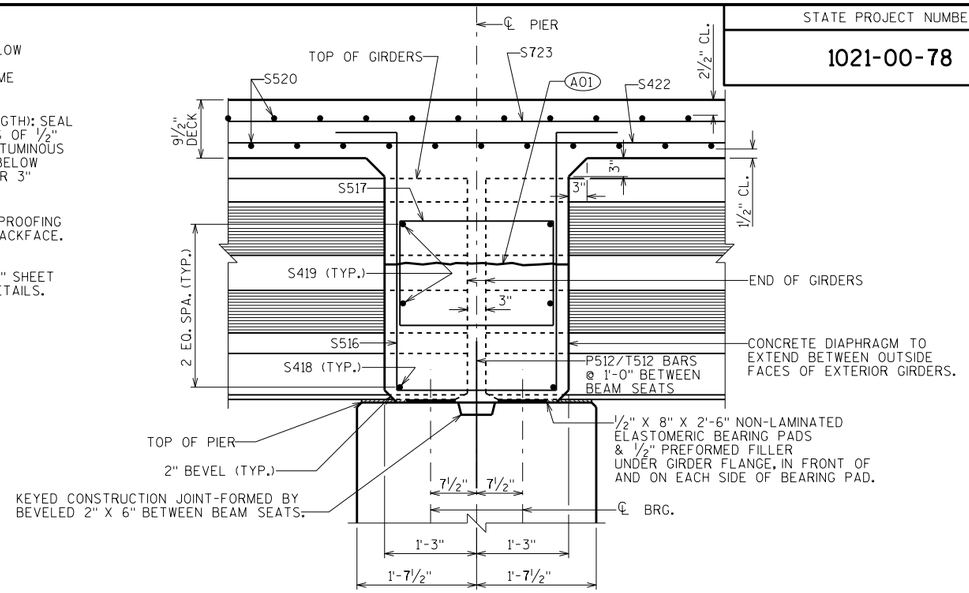
TYPICAL DIAPHRAGM CORNER DETAIL - PLAN VIEW AT ALL FOUR GIR. EXT. CORNERS

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.

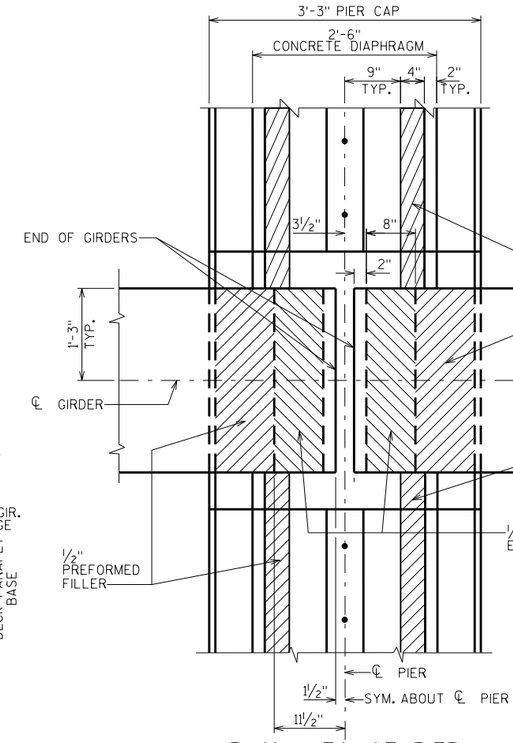
A17 ½" FILLER (INCLUDED IN WING/SLAB LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

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

360

STATE PROJECT NUMBER

1021-00-78

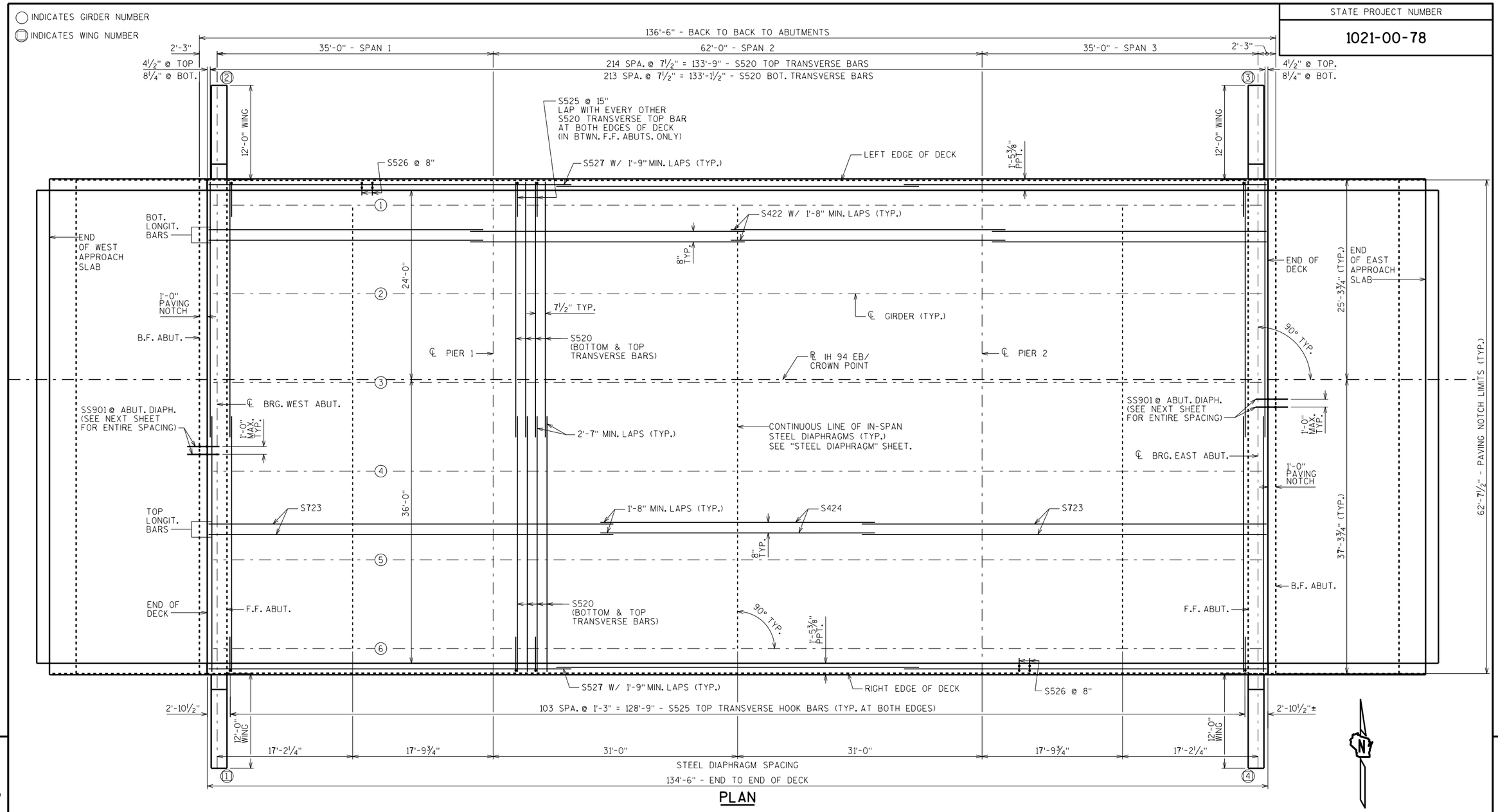
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8

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

361

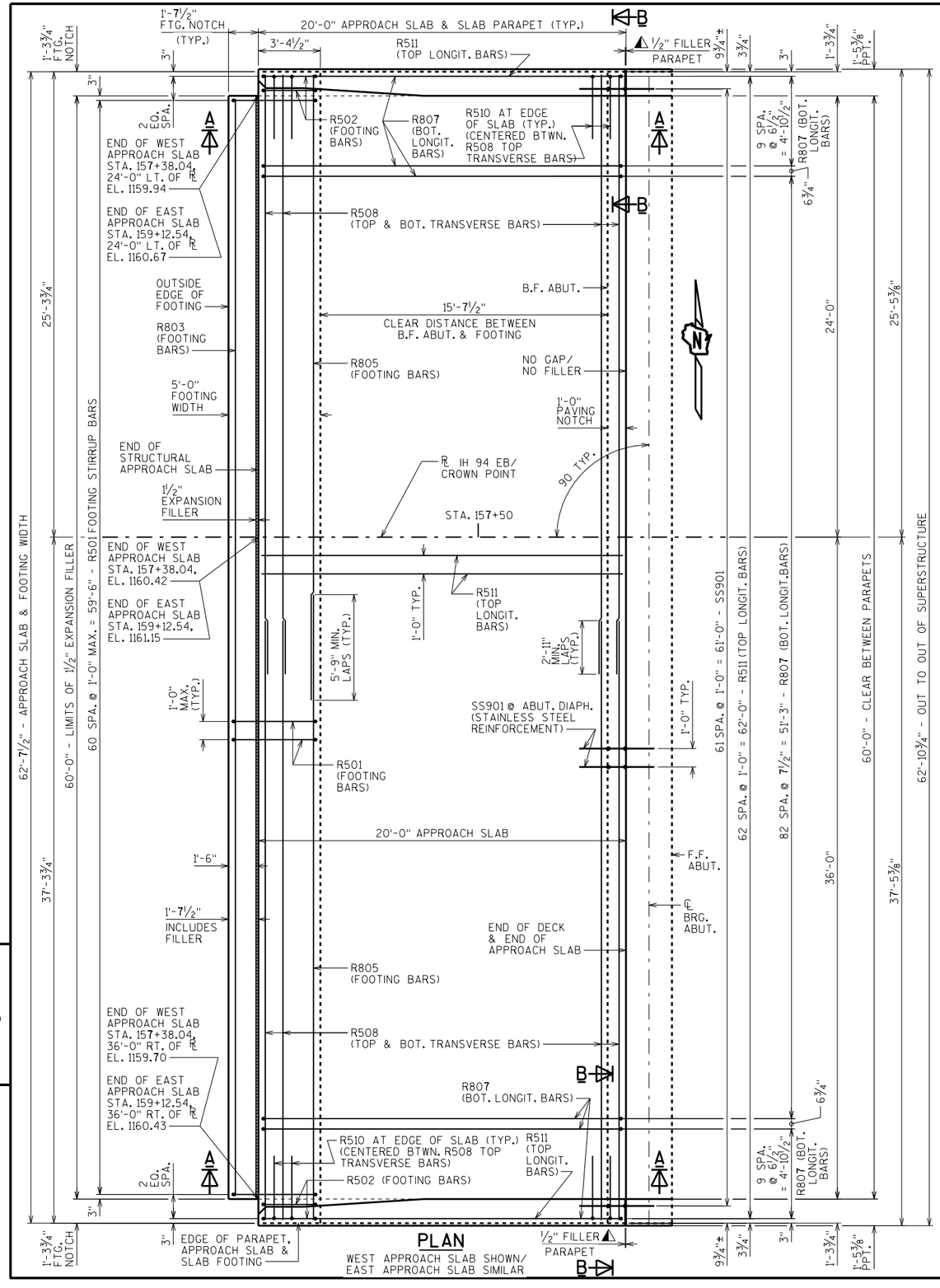
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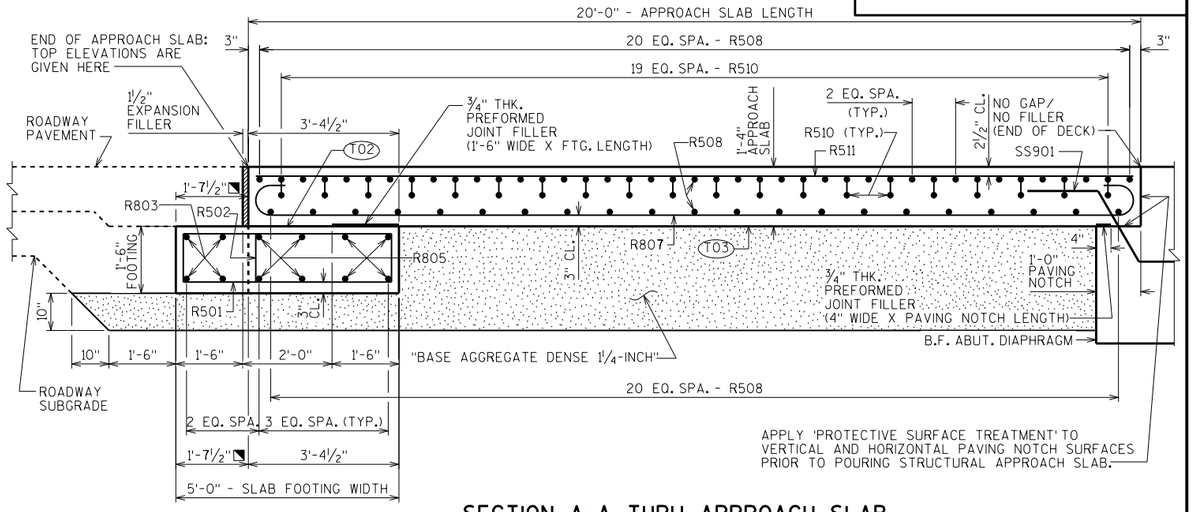
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8

STATE PROJECT NUMBER

1021-00-78



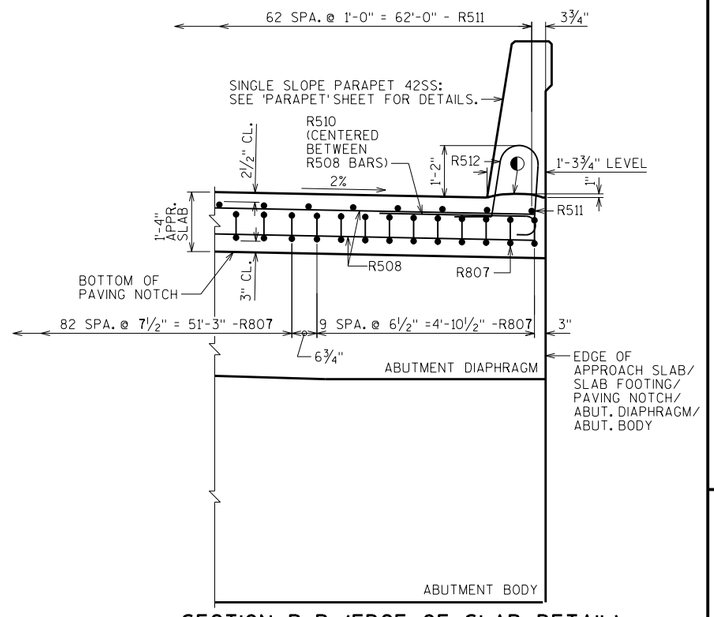


INCLUDES 1½" EXPANSION FILLER

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

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STRUCTURAL APPROACH SLAB

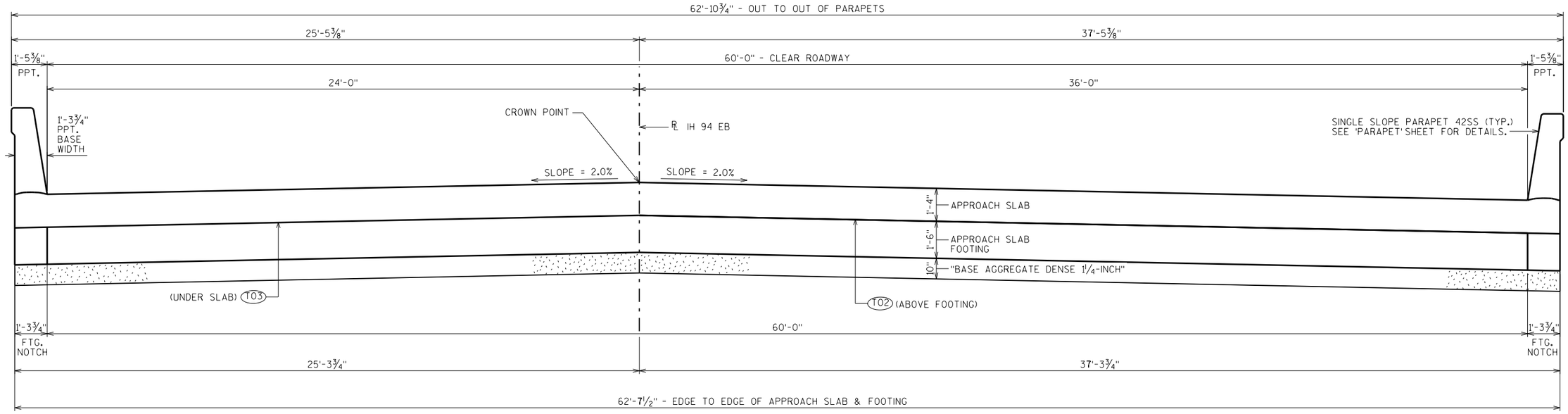
SHEET 18

362

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

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STRUCTURAL APPROACH SLAB CROSS SECTION

SHEET 19

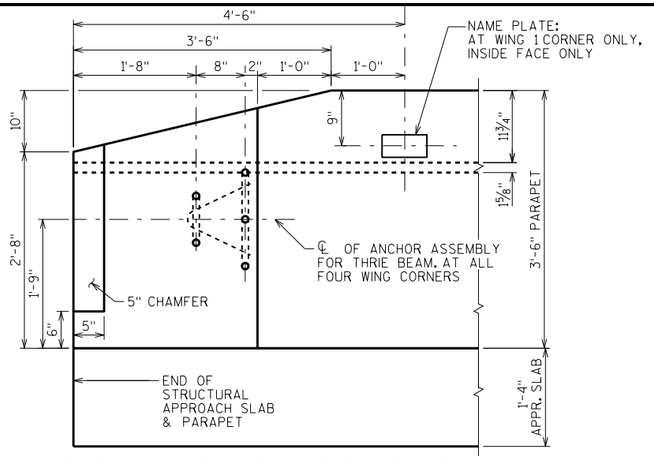
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8

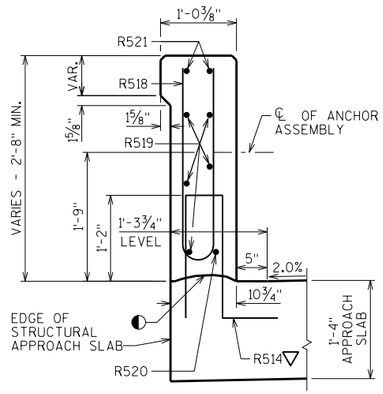
STATE PROJECT NUMBER

1021-00-78

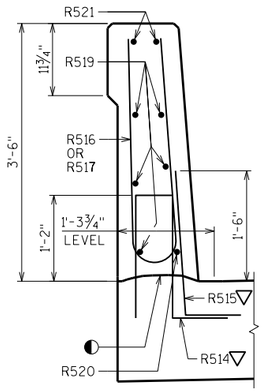


PARAPET END TREATMENT DETAIL

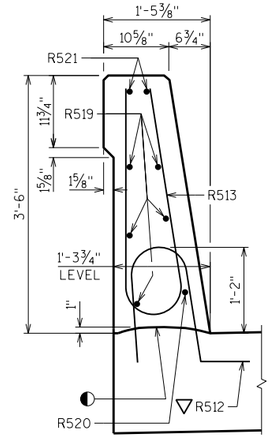
LOOKING AT INSIDE FACE OF PARAPET



SECTION A-A

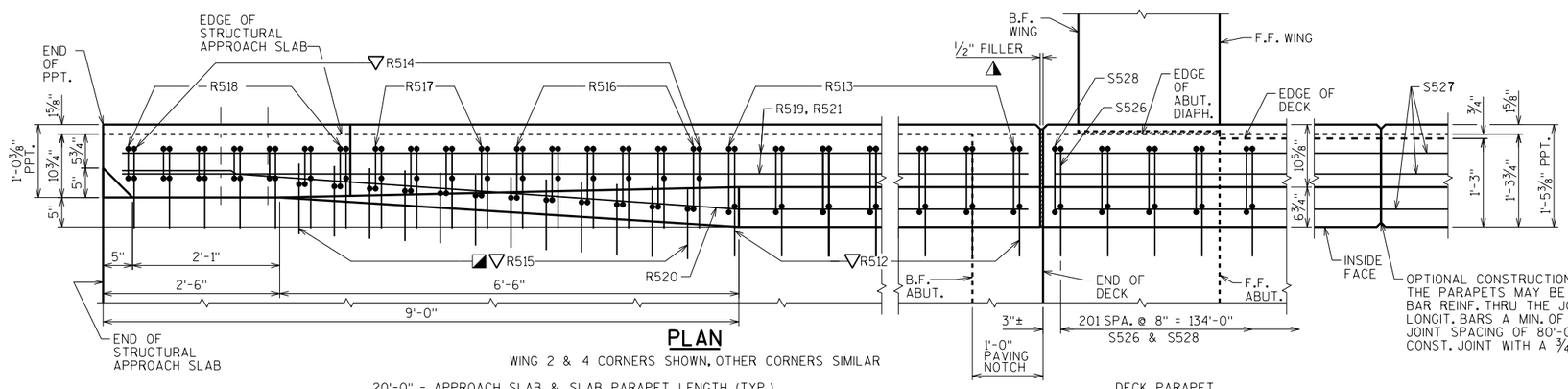


SECTION B-B



SECTION C-C

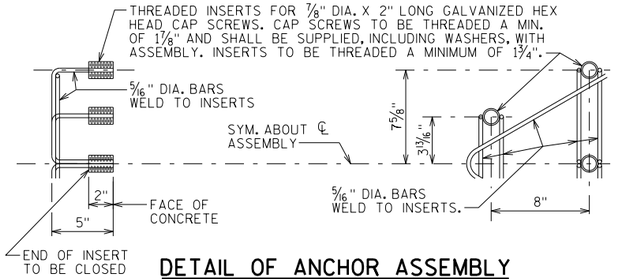
NOTE:
FOR THE PARAPET 'BILL OF BARS' &
'BAR DETAILS' SEE THE "SUPERSTRUCTURE
& APPROACH SLAB BAR DETAILS" SHEET.



PLAN

WING 2 & 4 CORNERS SHOWN, OTHER CORNERS SIMILAR

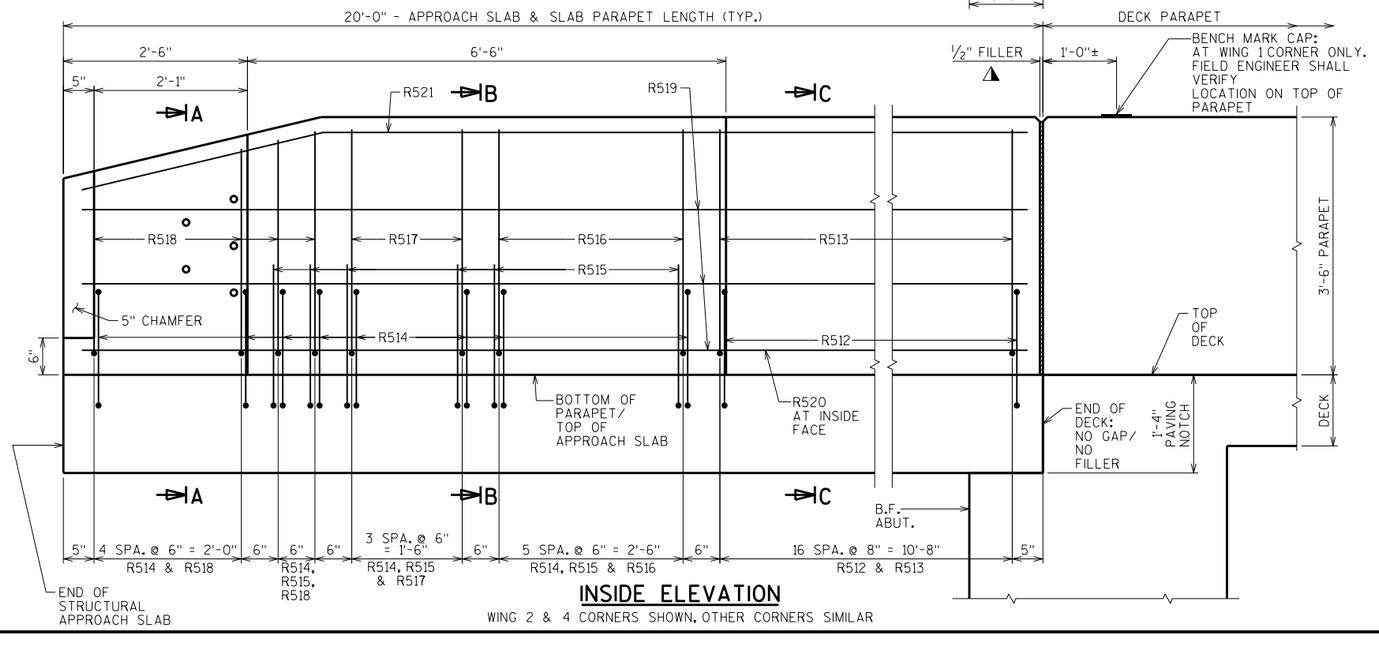
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



DETAIL OF ANCHOR ASSEMBLY

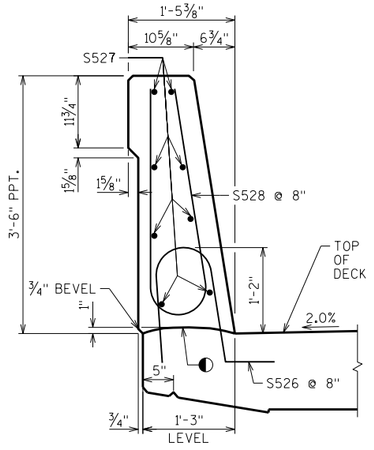
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

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

364

8

8

SCALE = 1.00

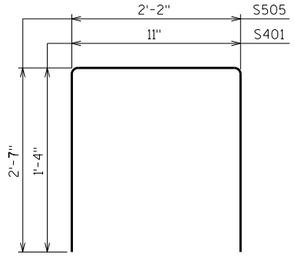
BILL OF BARS FOR SUPERSTRUCTURE

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

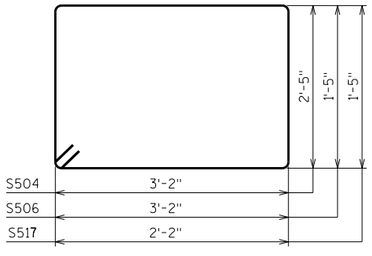
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S401	X	90	3'-5"	X	ABUT. DIAPHS.-F.F.-BOT.-VERT.-BTWN. BEAM SEATS
S402	X	20	7'-5"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. BEAM SEATS
S403		--	--		NOT USED
S504	X	132	11'-10"	X	ABUT. DIAPHS.-VERTICAL-UNDER PAVING NOTCHES
S505	X	132	7'-1"	X	ABUT. DIAPHS./DECK-VERT.-BETWEEN 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

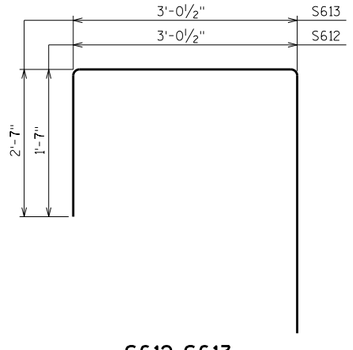
STAINLESS STEEL REINFORCEMENT



S401 S505



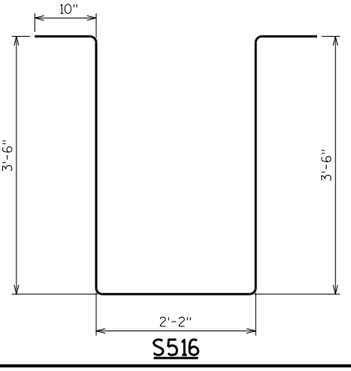
S504 S506 S517
(STIRRUP BARS)



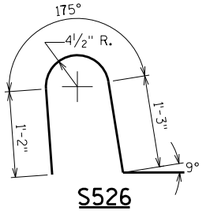
S612 S613



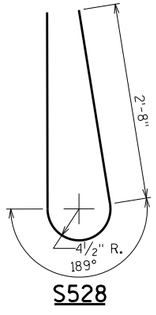
S525



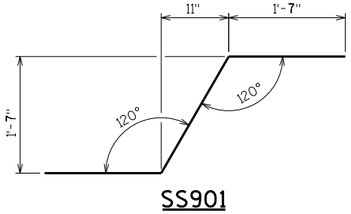
S516



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

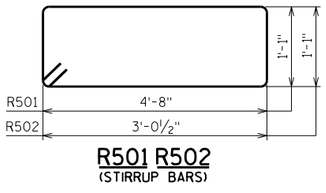
BAR MARK	COAT	NO. REQUIRED. WEST SLAB	NO. REQUIRED. EAST SLAB	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	61	61	12'-2"	X		FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-BETWEEN PARAPETS
R502	X	4	4	8'-11"	X		FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT ENDS ONLY
R803	X	4	4	59'-8"			FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT 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.

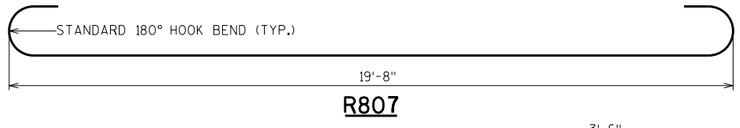
BAR SERIES TABLE

BAR MARK	NUMBER REQUIRED	TOTAL BAR LENGTH
R518	4 SERIES OF 7 BARS	4'-11" TO 6'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.



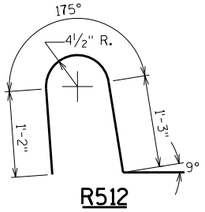
R501 R502
(STIRRUP BARS)



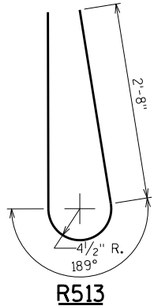
R807



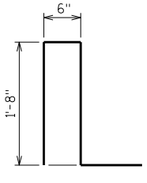
R510



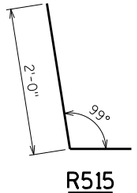
R512



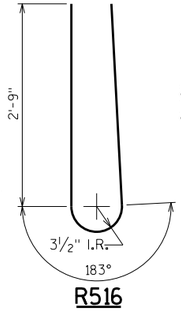
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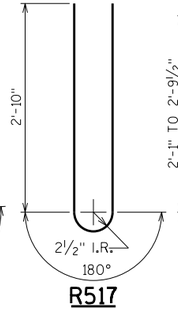
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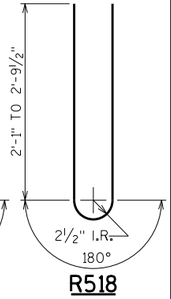
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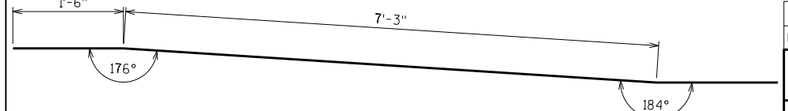
R516



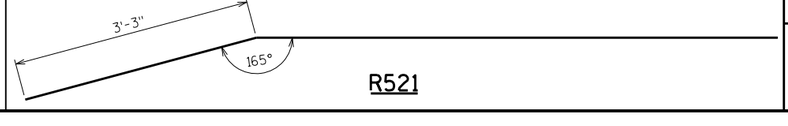
R517



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

365

STATE PROJECT NUMBER

1021-00-78

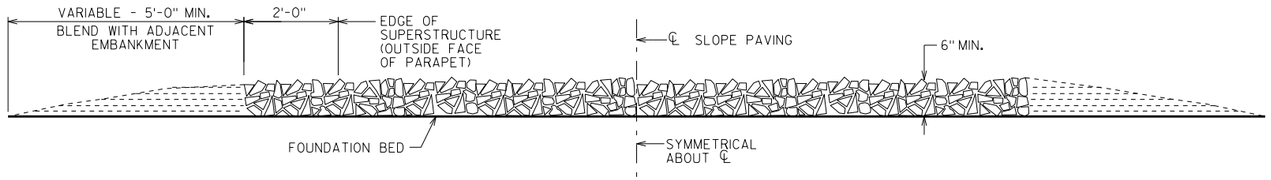
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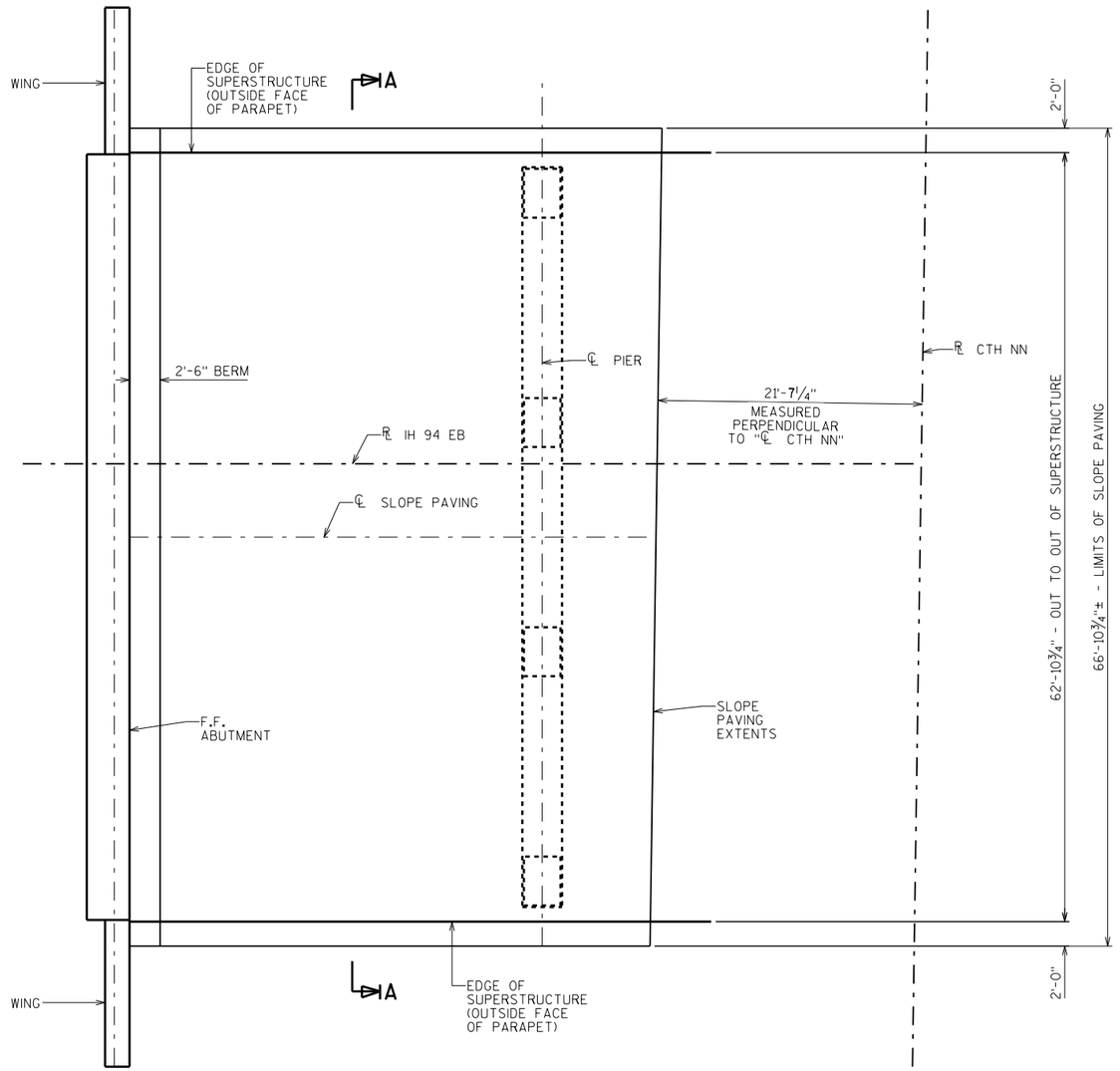
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STATE PROJECT NUMBER

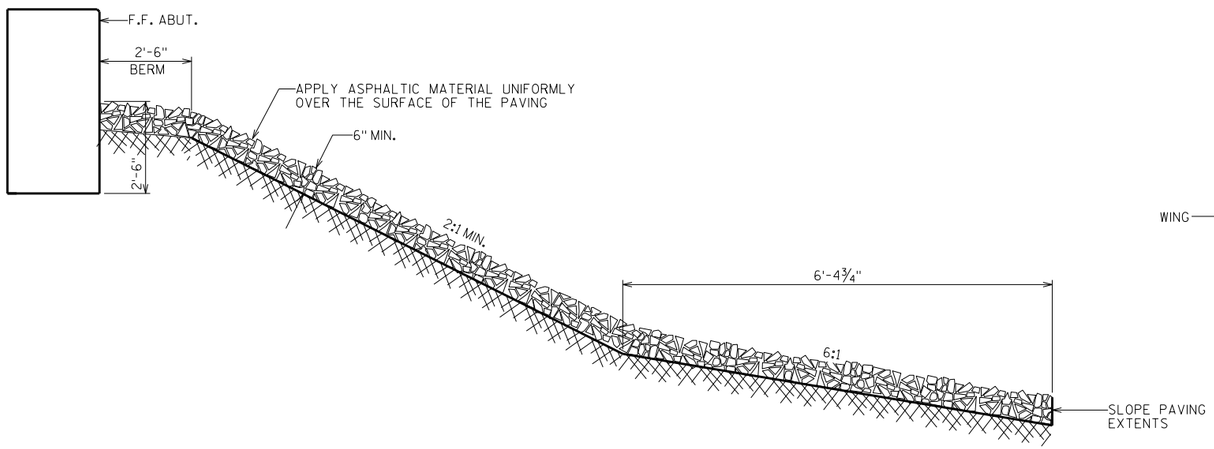
1021-00-78



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

366

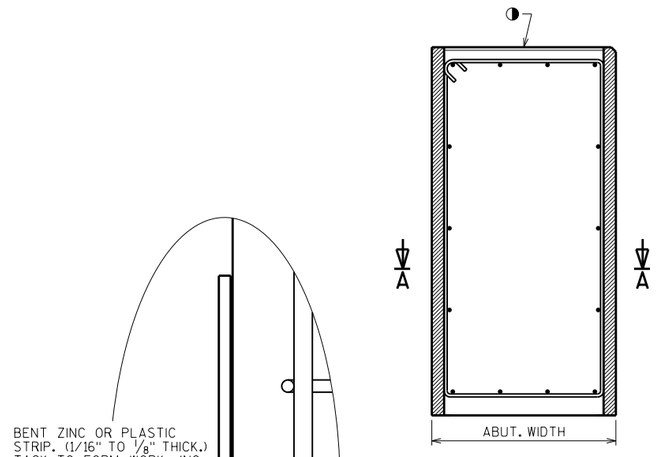
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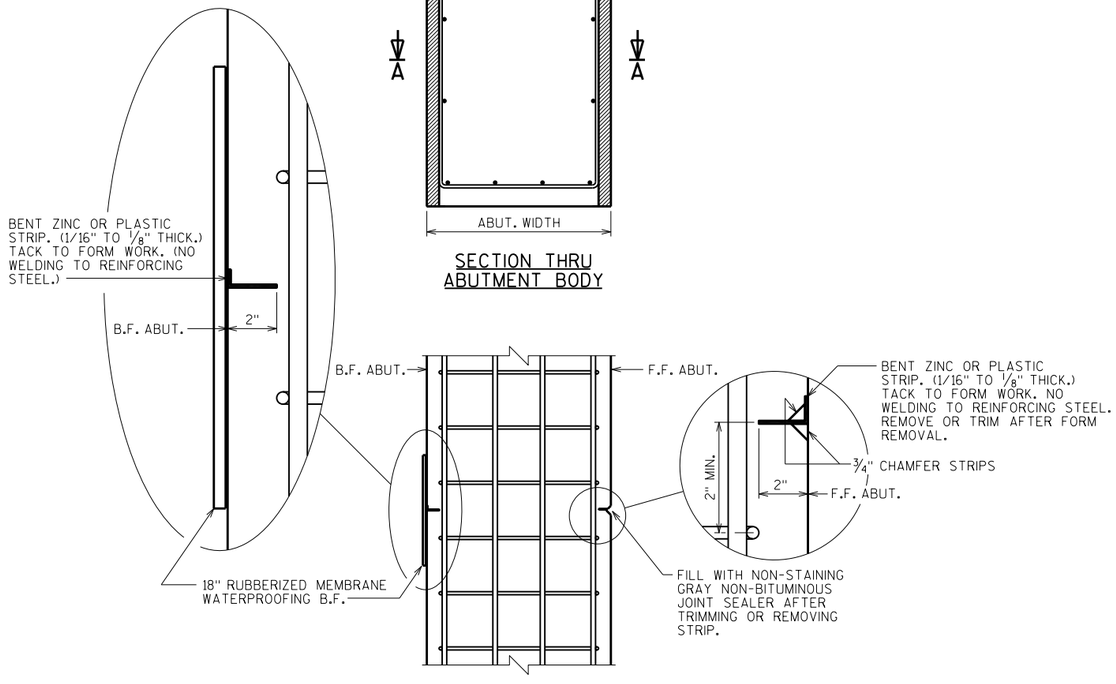
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STATE PROJECT NUMBER

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

367

SCALE = 1.00

8

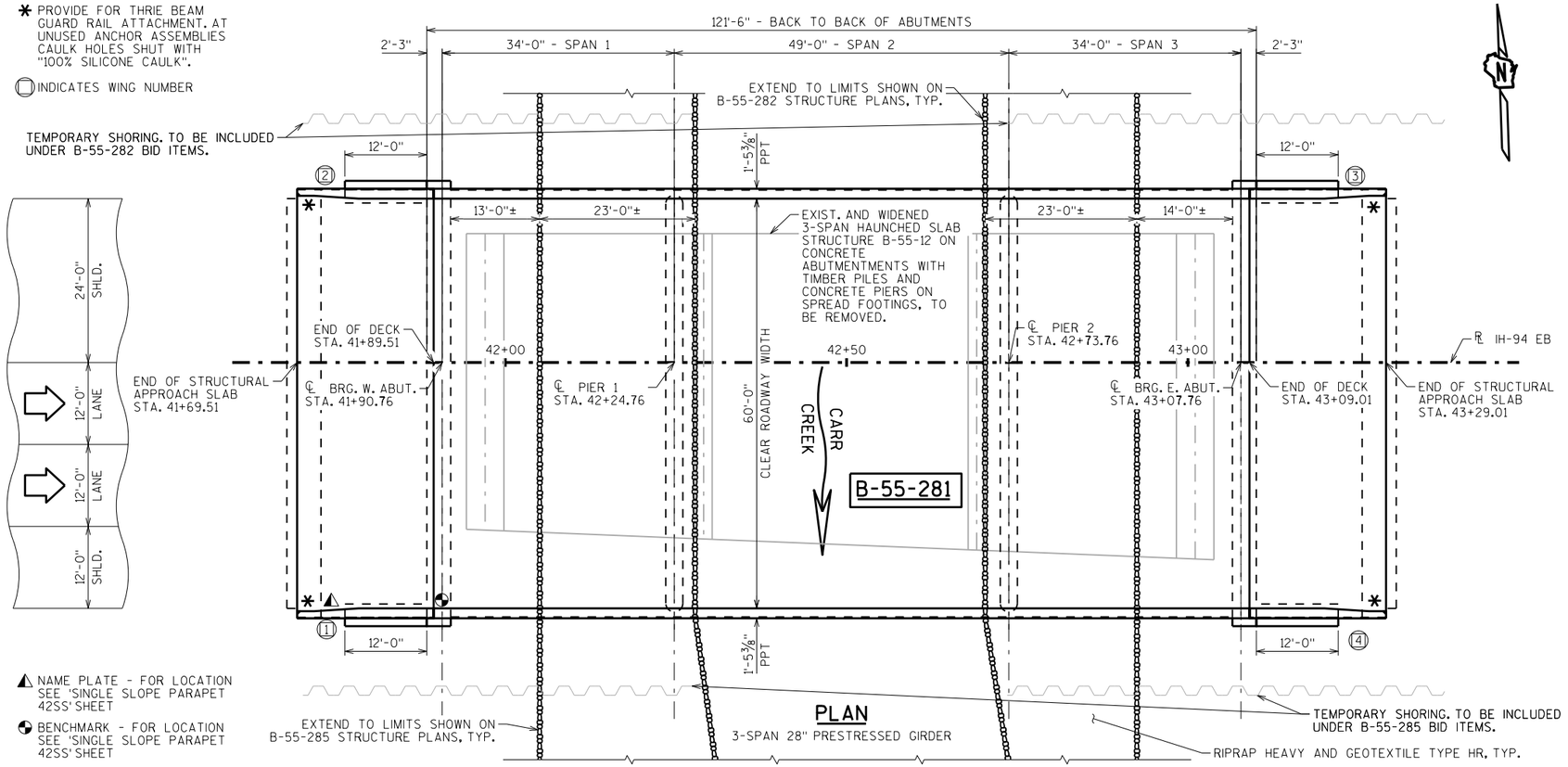
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STATE PROJECT NUMBER

1021-04-77

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

(n) INDICATES WING NUMBER

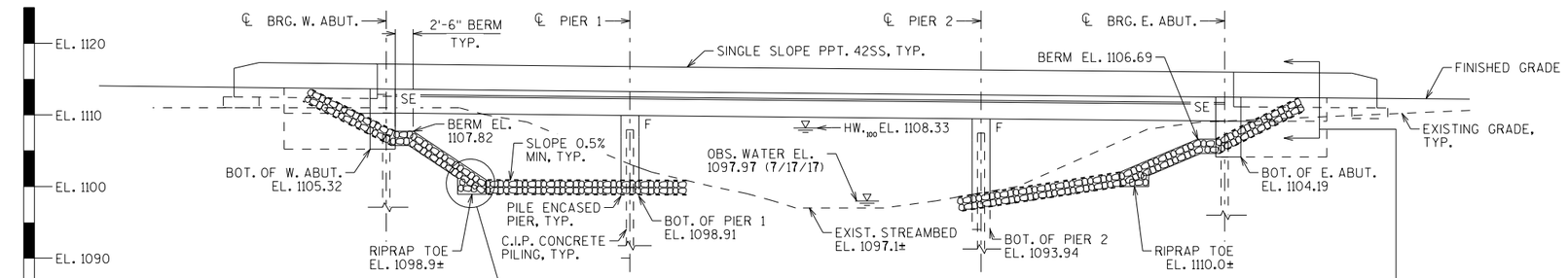


PLAN

3-SPAN 28" PRESTRESSED GIRDER

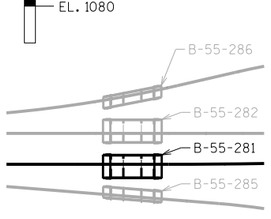
△ NAME PLATE - FOR LOCATION SEE 'SINGLE SLOPE PARAPET 42SS' SHEET

⊕ BENCHMARK - FOR LOCATION SEE 'SINGLE SLOPE PARAPET 42SS' SHEET

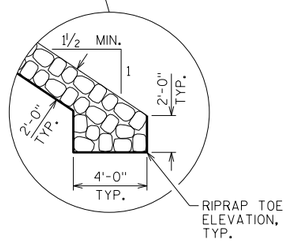


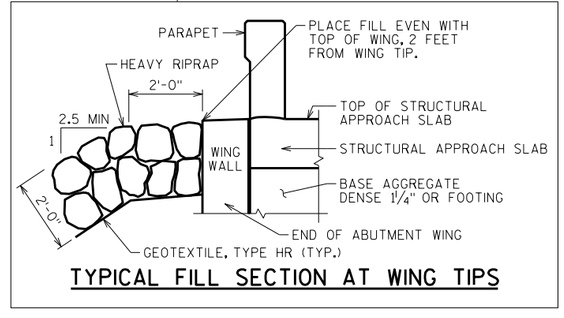
ELEVATION

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 = 1.06
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

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

368

I.D. 1021-04-07A DATE: FEB. 2020

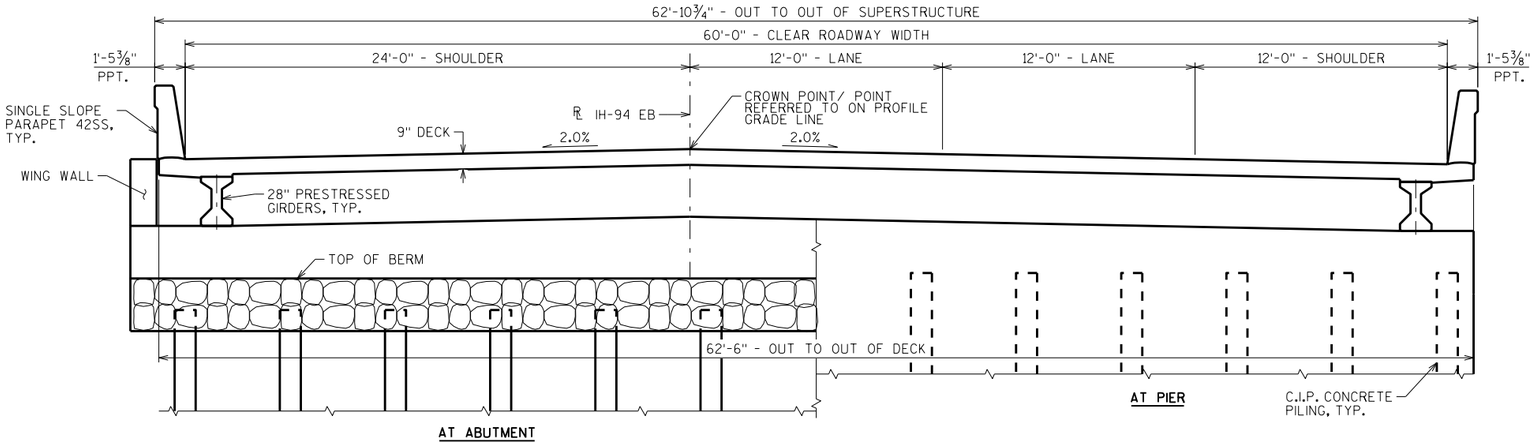
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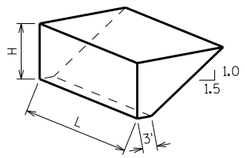
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STATE PROJECT NUMBER

1021-04-77

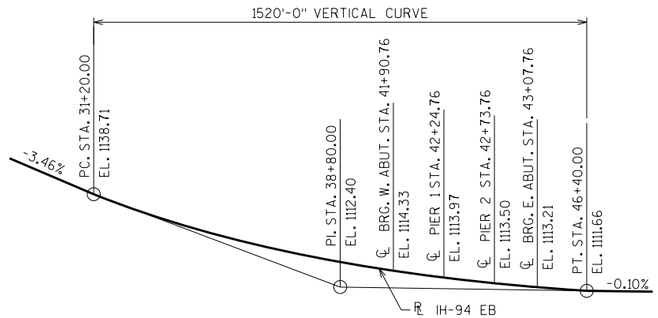


CROSS SECTION THRU ROADWAY LOOKING EAST



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.

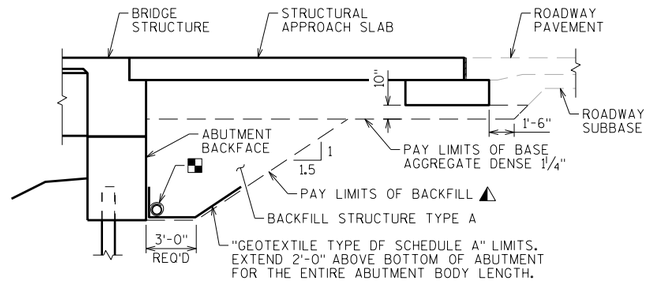
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

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

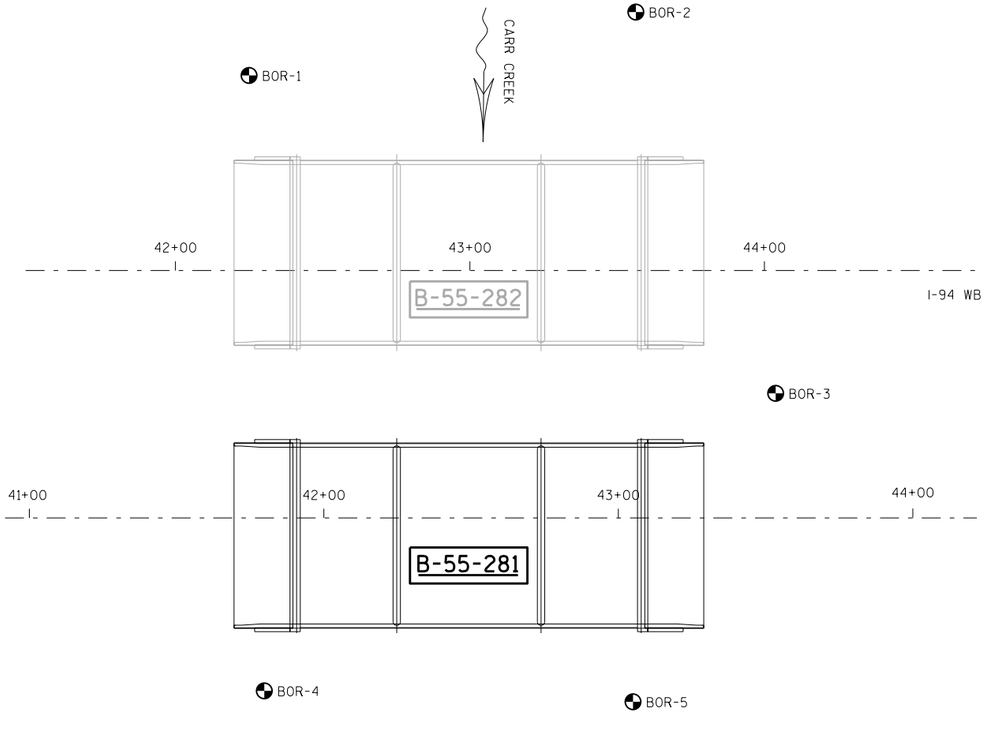
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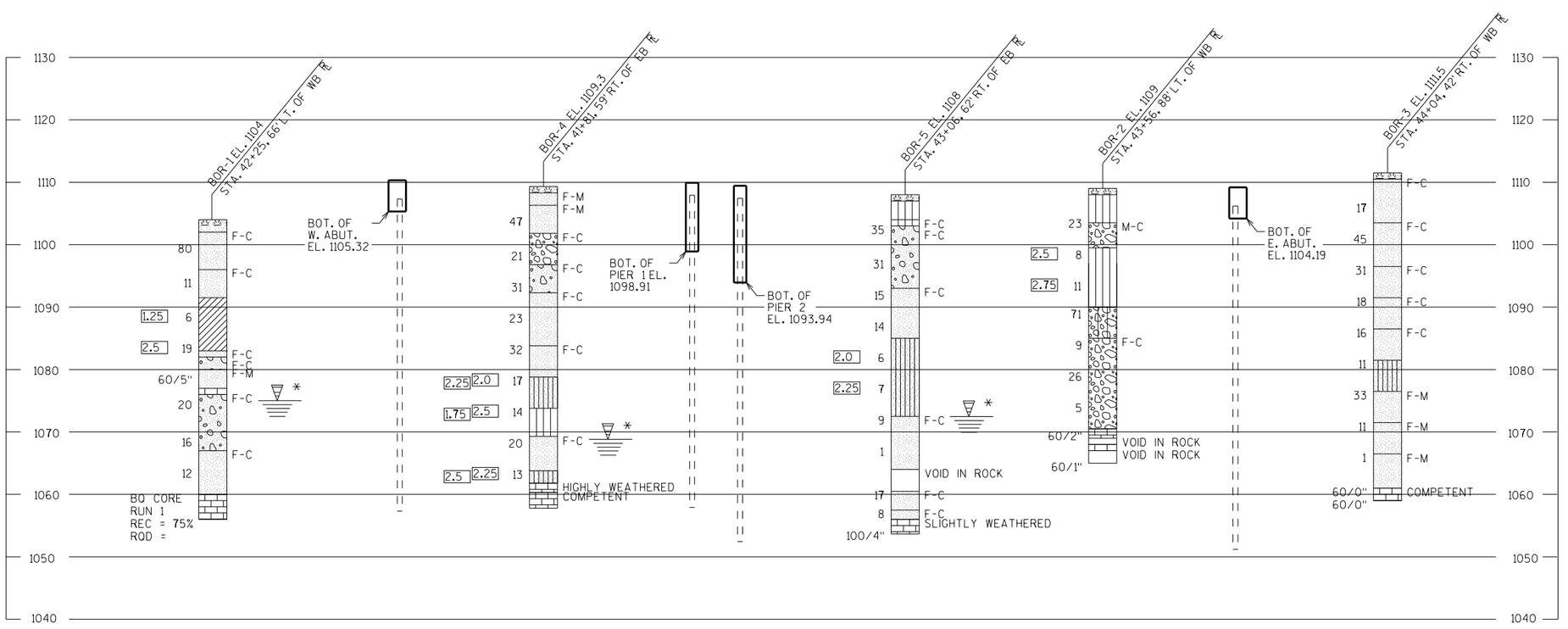
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8

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.

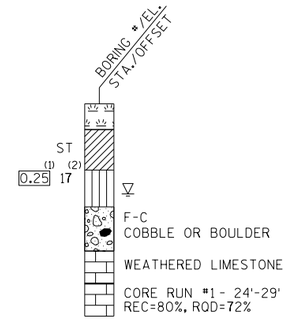
STATE PROJECT NUMBER

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
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STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

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SUBSURFACE EXPLORATION

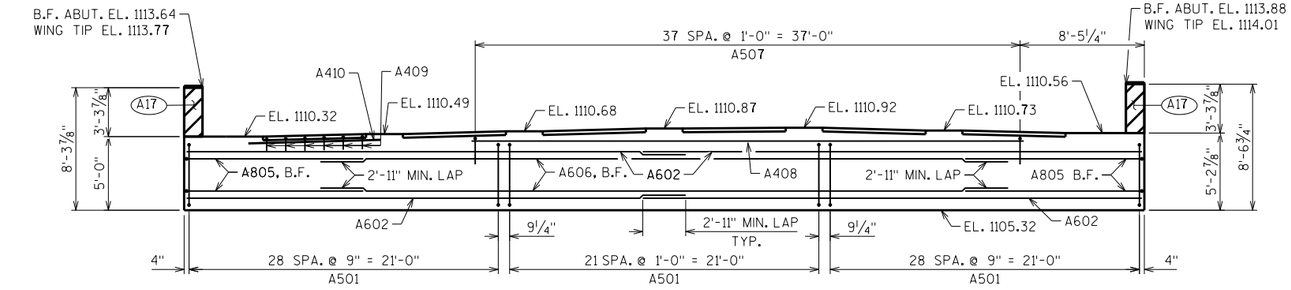
SHEET 3

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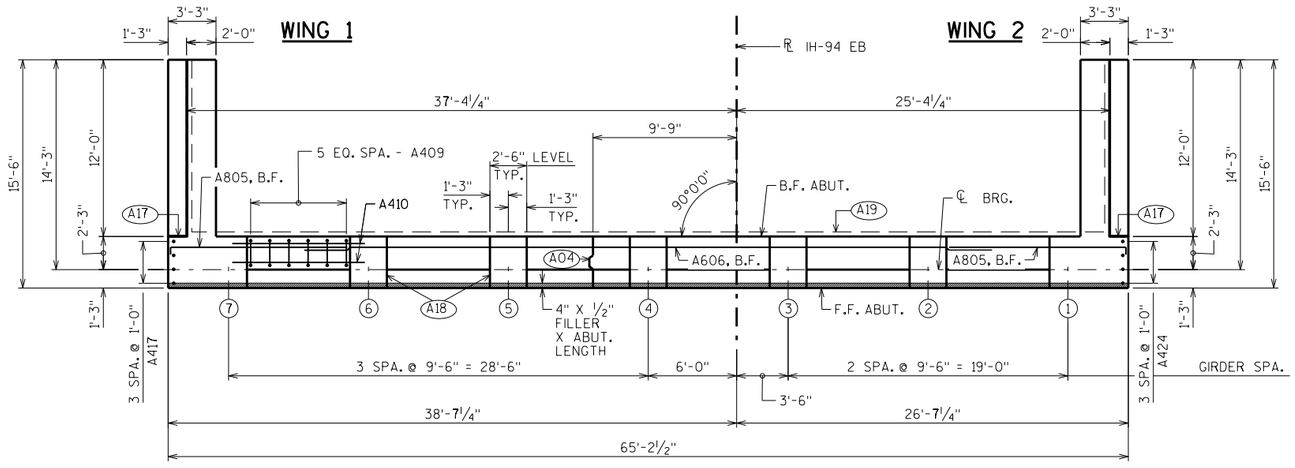
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ELEVATION

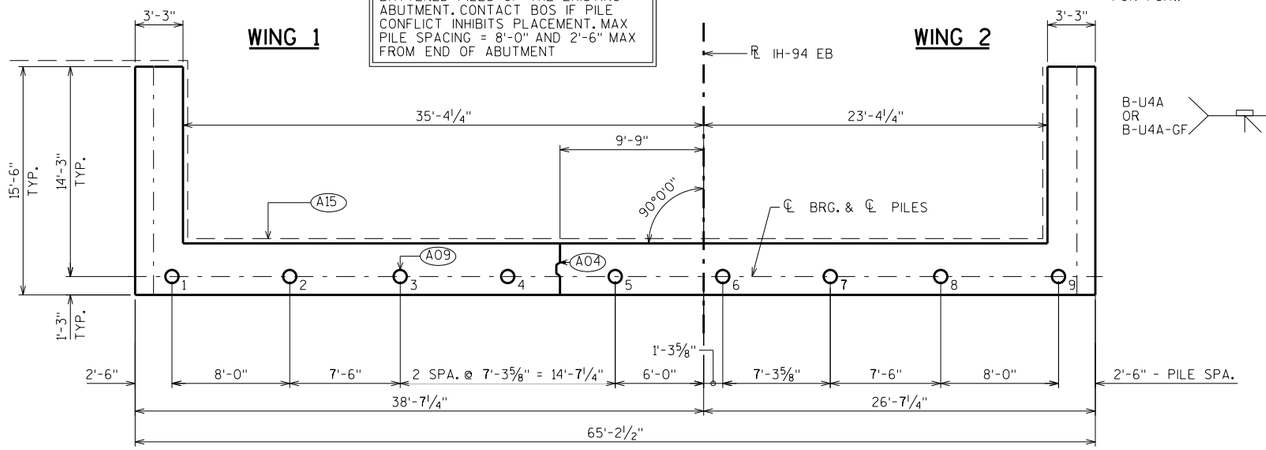
LOOKING WEST
ADJUST STIRRUP SPACING AS NEEDED TO MISS PILES



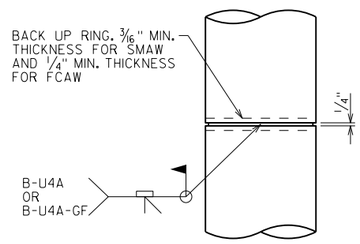
PLAN

○ INDICATES GIRDER NUMBER

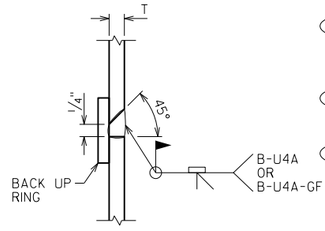
NOTE: PILES MAY CONFLICT WITH THE BATTERED PILES OF THE EXISTING ABUTMENT. CONTACT BOS IF PILE CONFLICT INHIBITS PLACEMENT. MAX PILE SPACING = 8'-0" AND 2'-6" MAX FROM END OF ABUTMENT



PILE PLAN

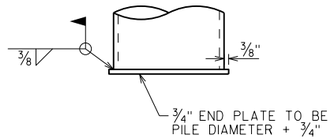


CAST-IN-PLACE 'PIPE PILE'

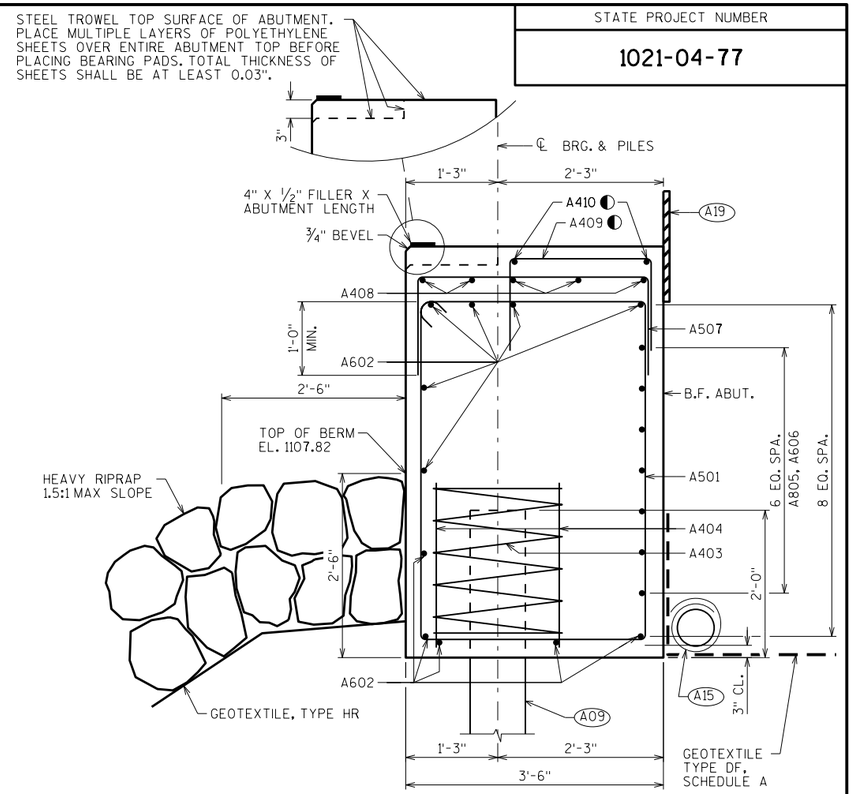


C.I.P. PILE WELD DETAIL

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.

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WEST ABUTMENT

SHEET 4

371

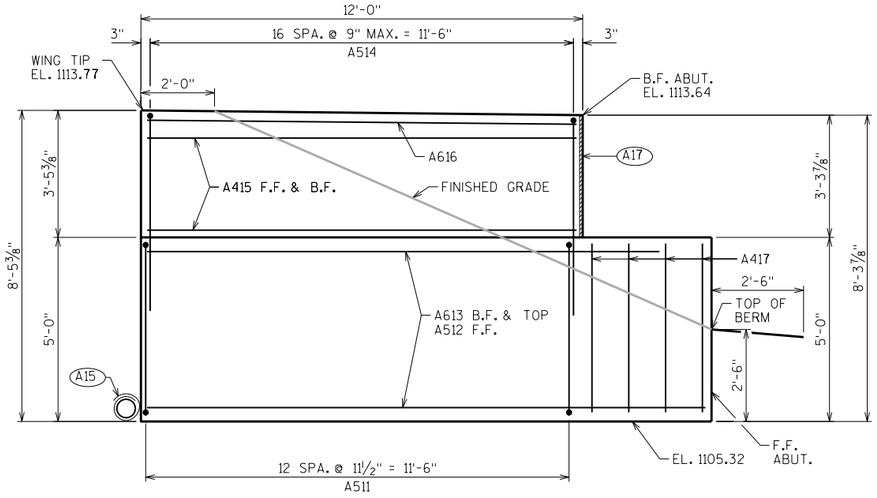
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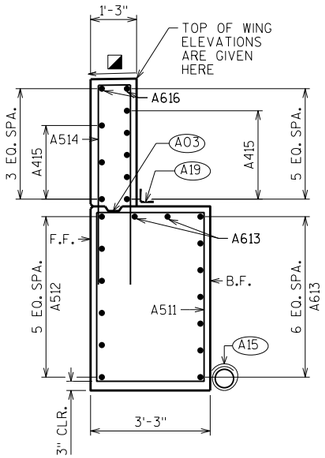
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STATE PROJECT NUMBER

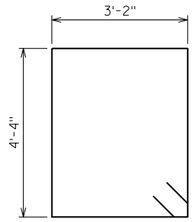
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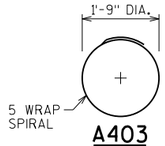
WING 1 ELEVATION



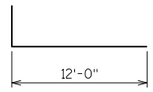
WING 1 SECTION



A501



A403

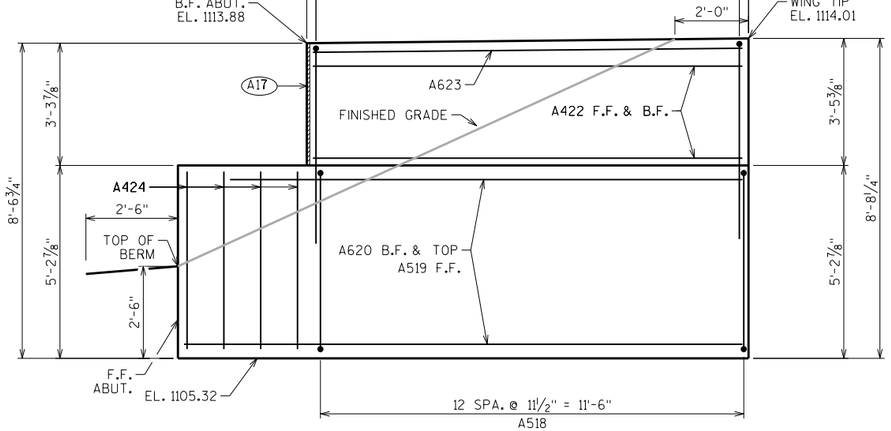


A805

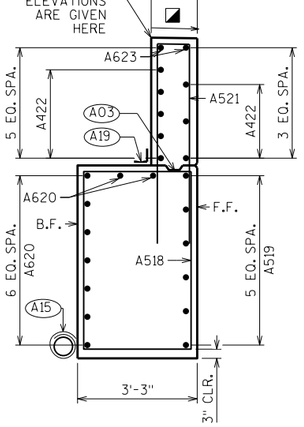
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

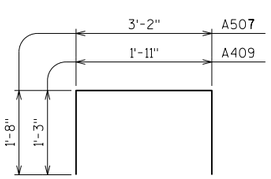
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501		80	15'-8"	X		BODY-STIRRUPS-VERT.
A602		22	33'-11"			BODY-HORIZ.
A403		9	28'-0"	X		BODY-SPIRAL-1 PER BODY PILE-VERT.
A404		18	2'-3"			BODY-2 PER BODY PILE-VERT.
A805		14	13'-2"	X		BODY-HORIZ.-B.F.
A606		7	46'-9"			BODY-HORIZ.-B.F.
A507		38	6'-3"	X		BODY-VERT. U-BAR-TOP-OVER GIR. 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



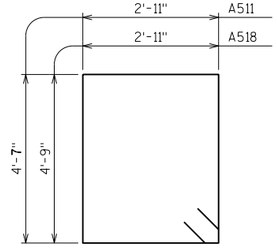
WING 2 ELEVATION



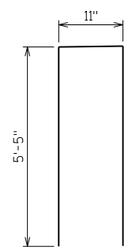
WING 2 SECTION



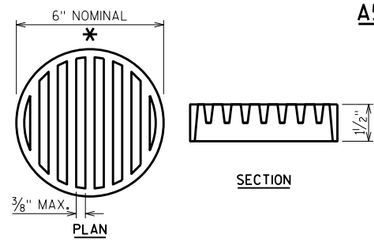
A507, A409



A511, A518



A514, A521



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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STRUCTURES DESIGN SECTION

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WEST ABUTMENT DETAILS

SHEET 5

372

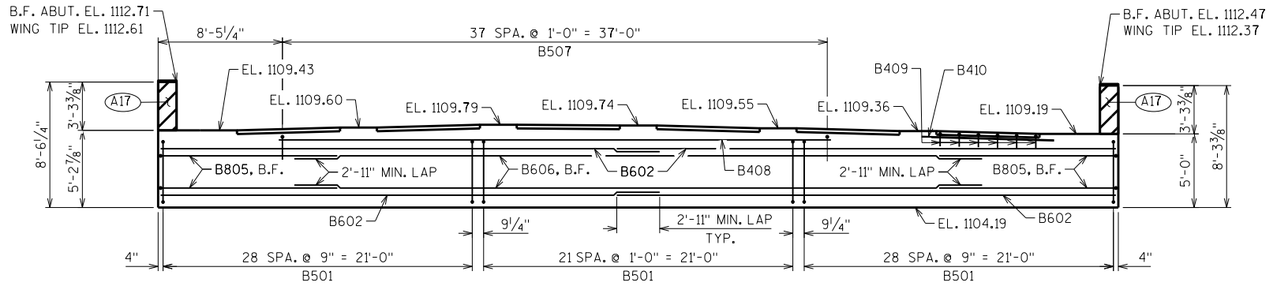
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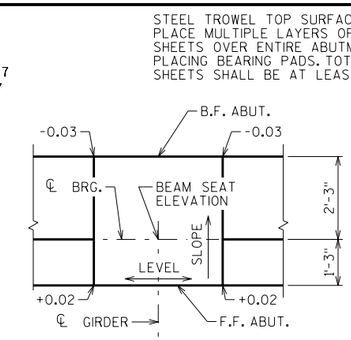
STATE PROJECT NUMBER

1021-04-77

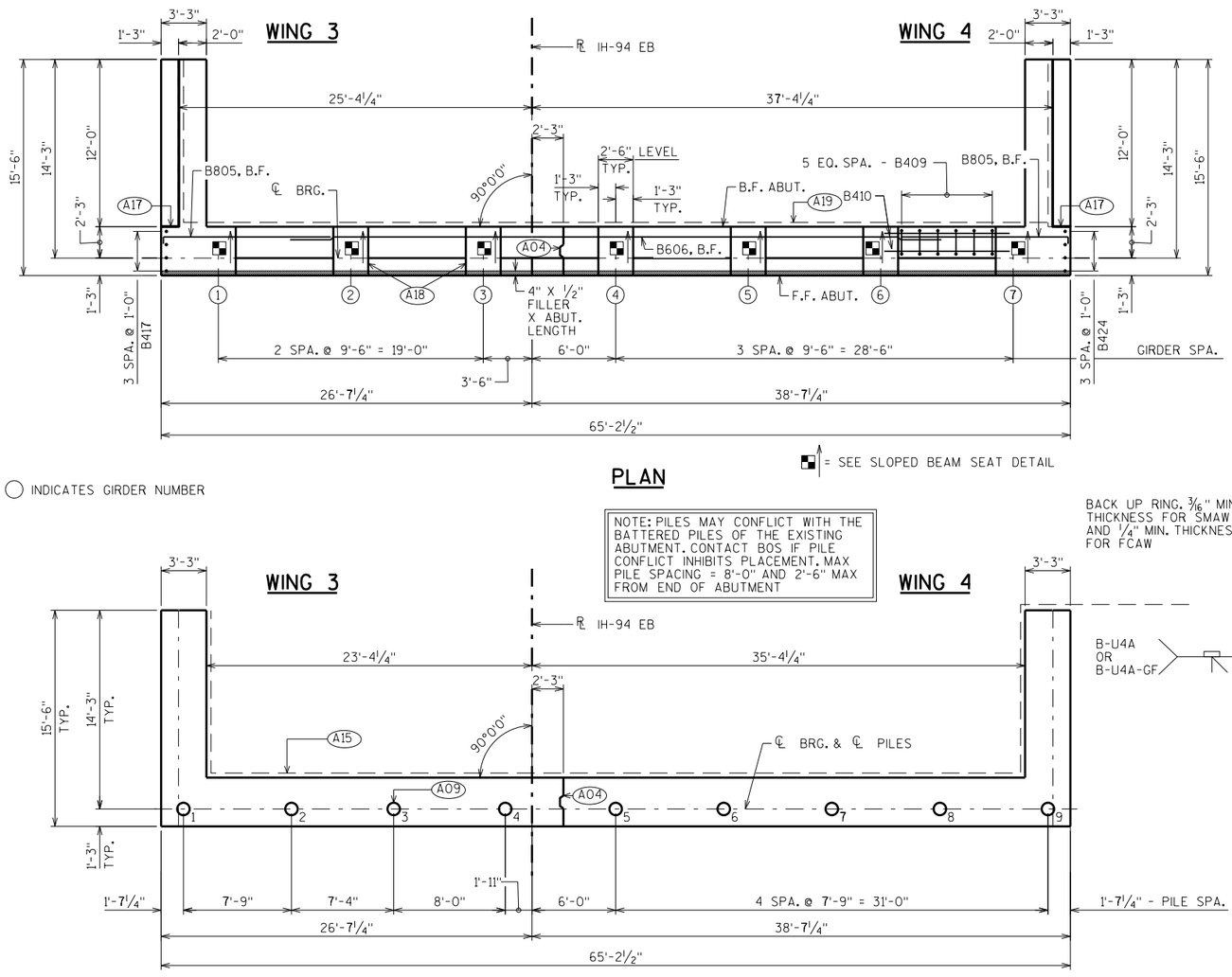


ELEVATION

LOOKING EAST
ADJUST STIRRUP SPACING AS NEEDED TO MISS PILES



SLOPED BEAM SEAT DETAIL

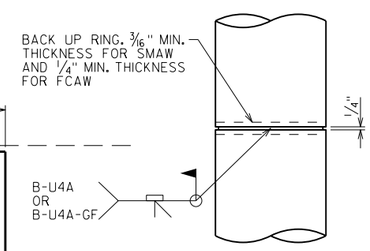


PLAN

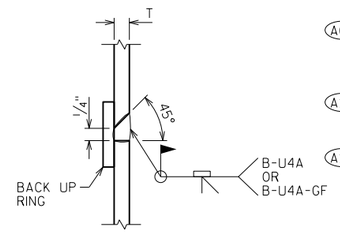
◯ INDICATES GIRDER NUMBER

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

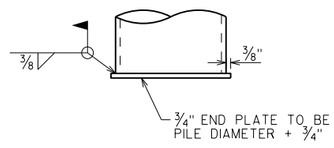


CAST-IN-PLACE 'PIPE PILE'

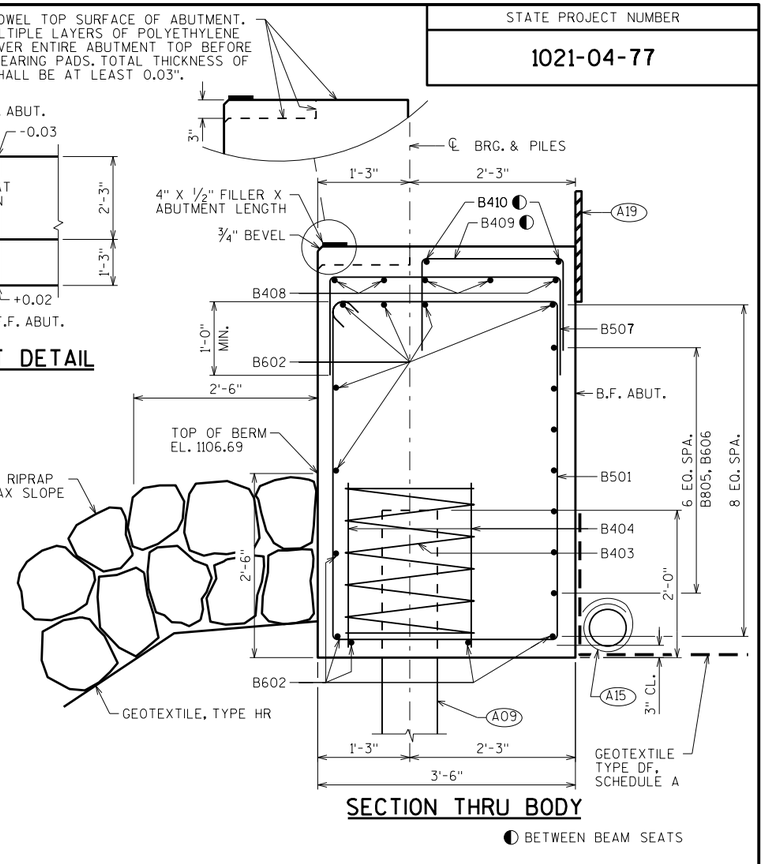


C.I.P. PILE WELD DETAIL

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 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.

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STRUCTURES DESIGN SECTION

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EAST ABUTMENT

SHEET 6

373

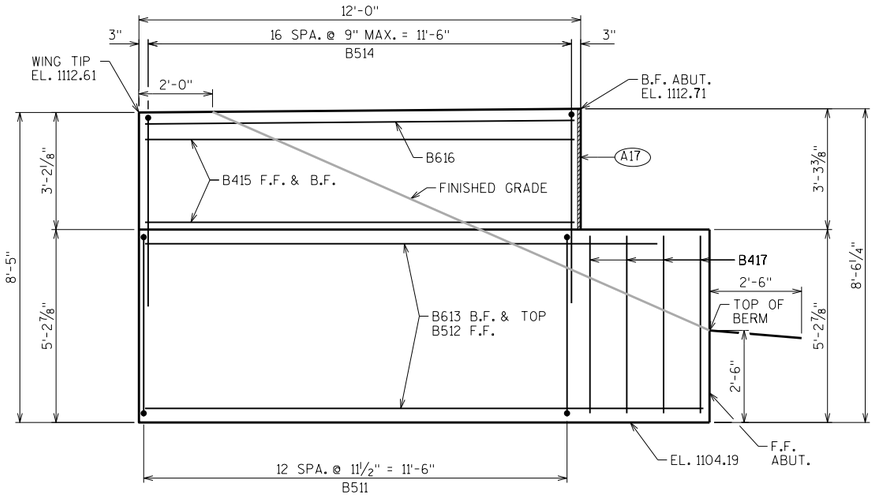
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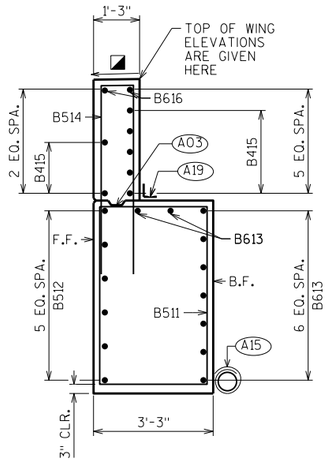
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STATE PROJECT NUMBER

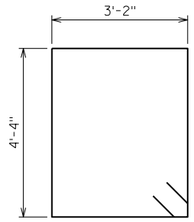
1021-04-77



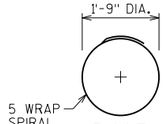
WING 3 ELEVATION



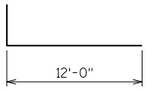
WING 3 SECTION



B501



B403

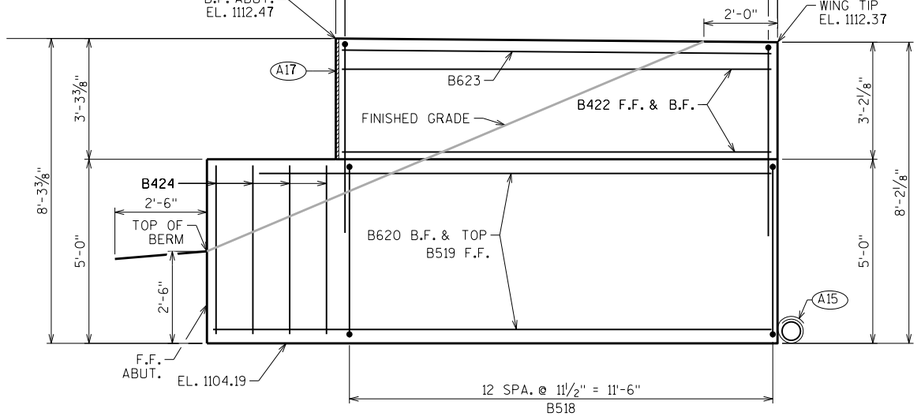


B805

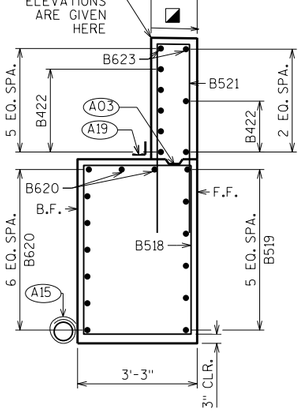
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

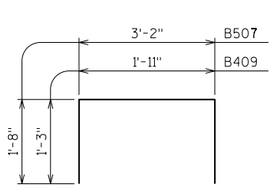
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501		80	15'-8"	X		BODY-STIRRUPS-VERT.
B602		22	33'-11"			BODY-HORIZ.
B403		9	28'-0"	X		BODY-SPIRAL-1 PER BODY PILE-VERT.
B404		18	2'-3"			BODY-2 PER BODY PILE-VERT.
B805		14	13'-2"	X		BODY-HORIZ.-B.F.
B606		7	46'-9"			BODY-HORIZ.-B.F.
B507		38	6'-3"	X		BODY-VERT. U-BAR-TOP-OVER GIR. 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



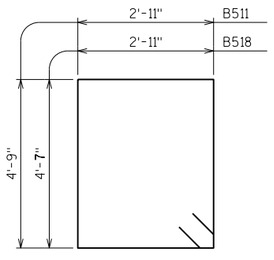
WING 4 ELEVATION



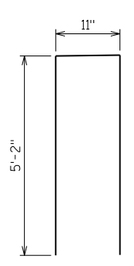
WING 4 SECTION



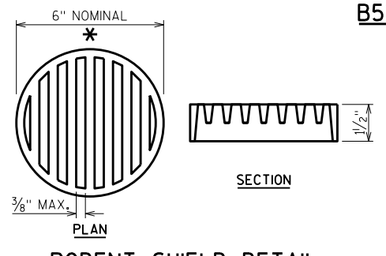
B507, B409



B511, B518



B514, B521



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.

(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

374

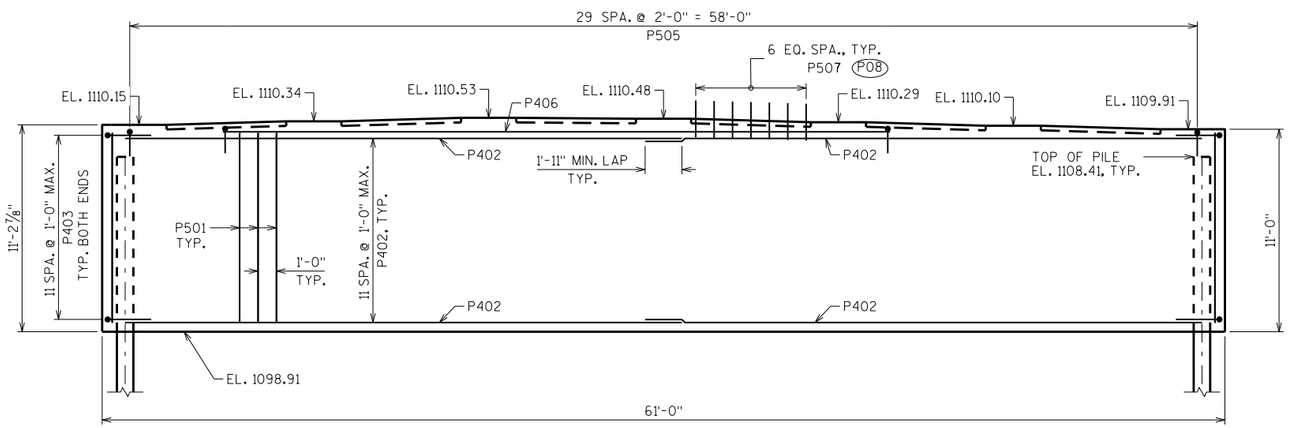
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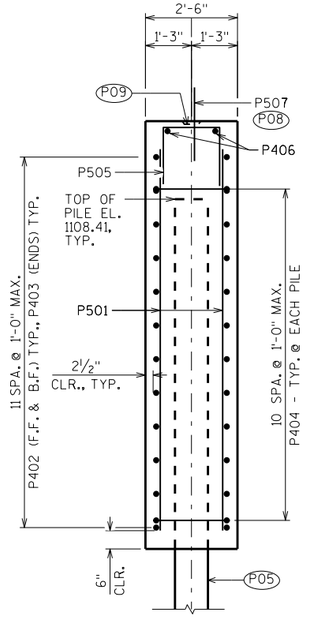
STATE PROJECT NUMBER

1021-04-77



ELEVATION

LOOKING EAST

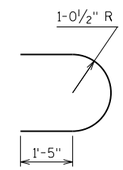


END VIEW

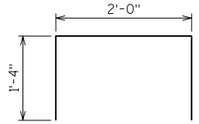
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

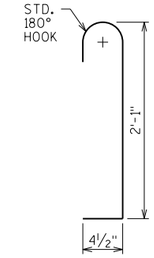
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
P501		128	10'-3"			PIER 1 - VERT.
P402		48	30'-3"			PIER 1 - HORIZ. - F.F. & B.F.
P403		24	6'-2"	X		PIER 1 - HORIZ. - ENDS
P404		154	2'-11"	X		PIER 1 - HORIZ. - PILES
P505		30	4'-5"	X		PIER 1 - VERT. - TOP
P406		2	36'-3"			PIER 1 - HORIZ. - TOP - GIR. 2-5
P507		42	2'-0"			PIER 1 - VERT. - DOWELS



P403



P505

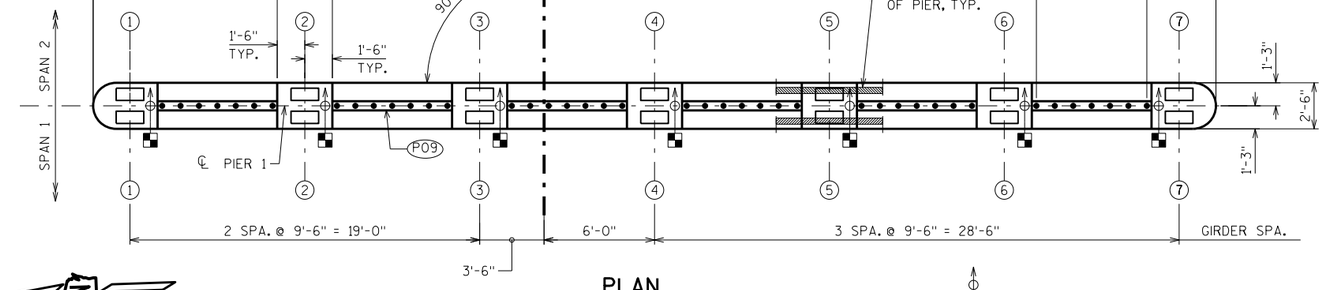


P404

(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.)

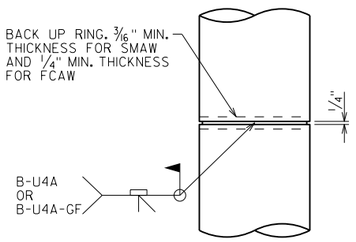
(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.



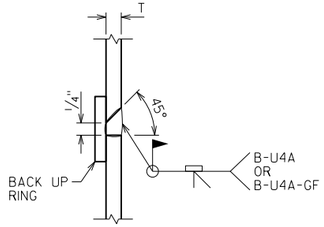
PLAN

= SEE SLOPED BEAM SEAT DETAIL

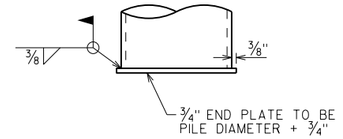
INDICATES GIRDER NUMBER



CAST-IN-PLACE 'PIPE PILE'

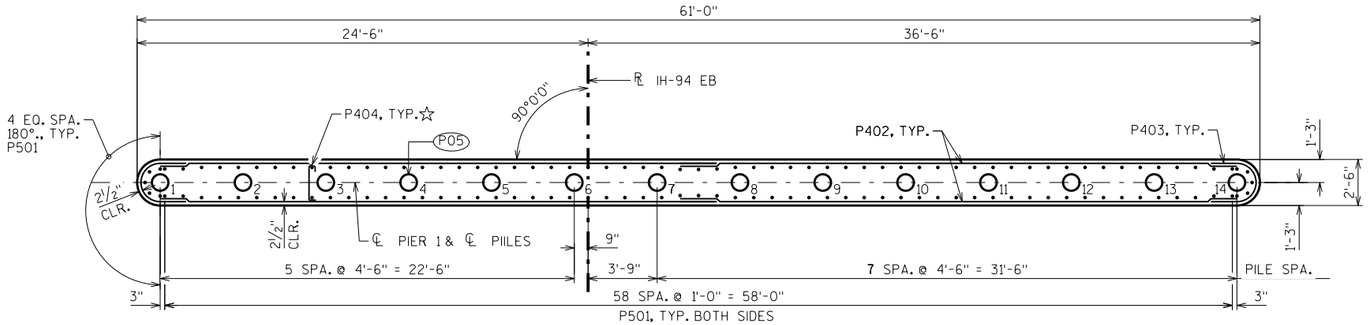


C.I.P. PILE WELD DETAIL



PILE DETAILS

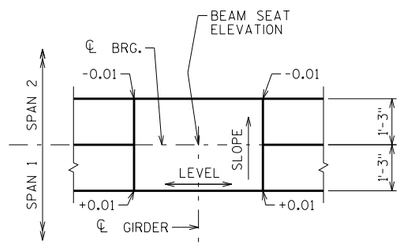
END PLATE DETAIL



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

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

375

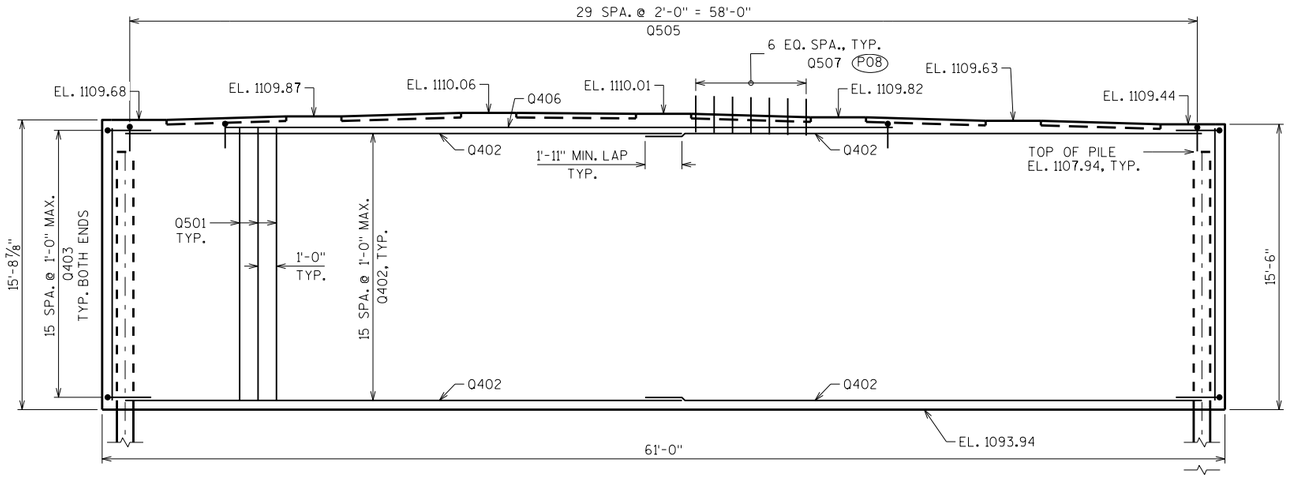
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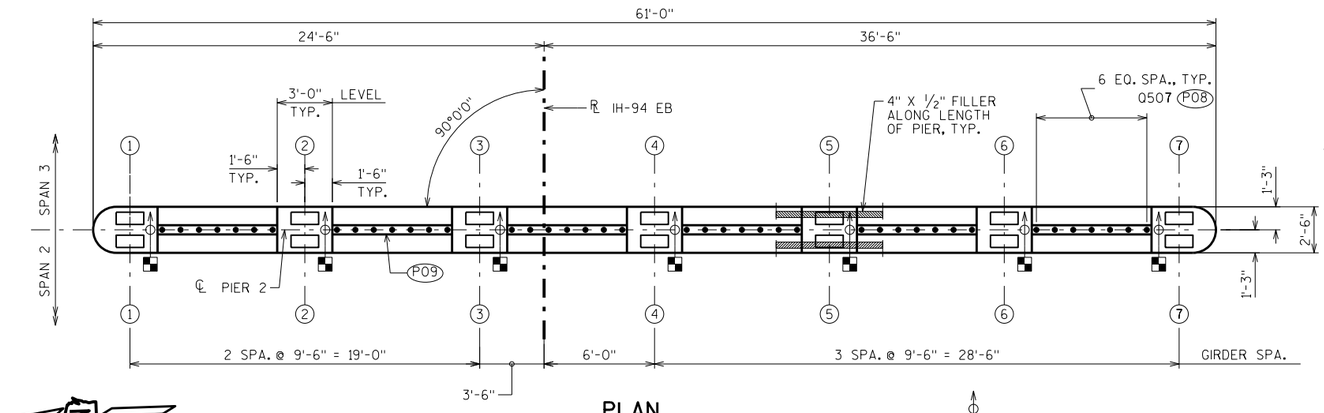
STATE PROJECT NUMBER

1021-04-77



ELEVATION

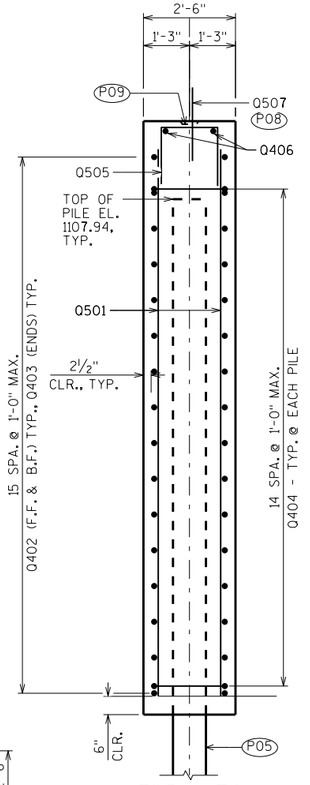
LOOKING EAST



PLAN

= SEE SLOPED BEAM SEAT DETAIL

INDICATES GIRDER NUMBER

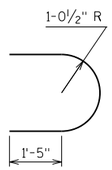


END VIEW

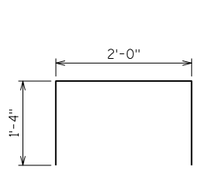
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

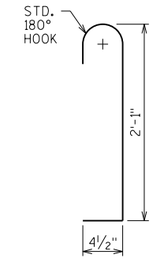
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
Q501		128	14'-9"			PIER 2 - VERT.
Q402		64	30'-3"			PIER 2 - HORIZ. - F.F. & B.F.
Q403		32	6'-2"	X		PIER 2 - HORIZ. - ENDS
Q404		225	2'-11"	X		PIER 2 - HORIZ. - PILES
Q505		30	4'-5"	X		PIER 2 - VERT. - TOP
Q406		2	36'-3"			PIER 2 - HORIZ. - TOP - GIR. 2-5
Q507		42	2'-0"			PIER 2 - VERT. - DOWELS



Q403



Q505

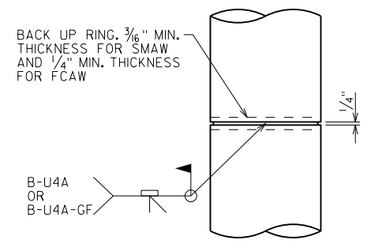


Q404

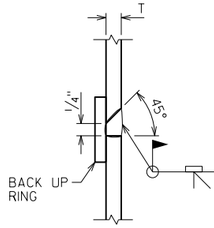
(P05) SUPPORT PIER ON 10 3/4" DIA. X 0.365" CIP CONCRETE PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. PILE POINTS REQUIRED.

(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.)

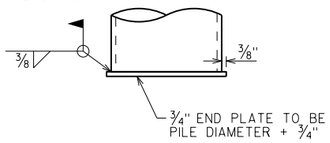
(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.



CAST-IN-PLACE 'PIPE PILE'

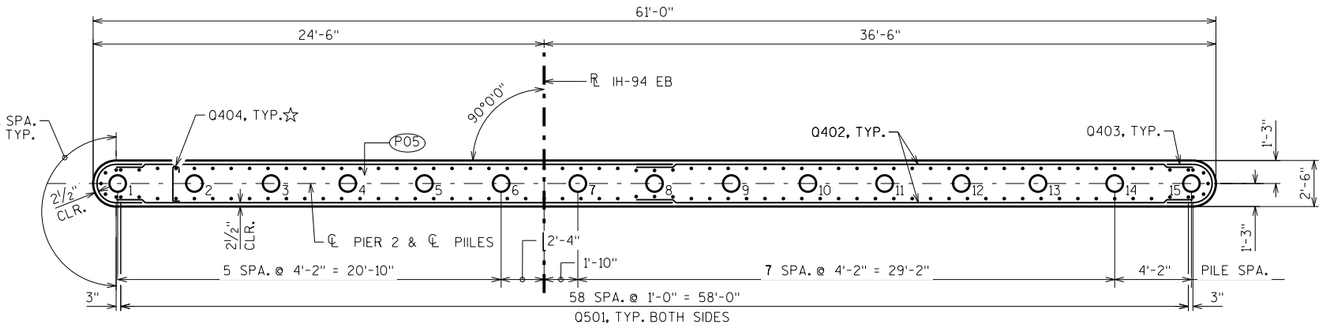


C.I.P. PILE WELD DETAIL



PILE DETAILS

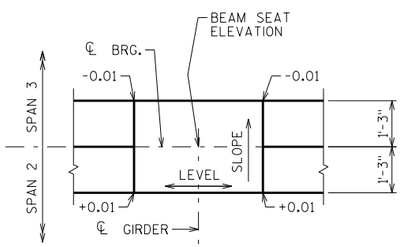
END PLATE DETAIL



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.



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

376

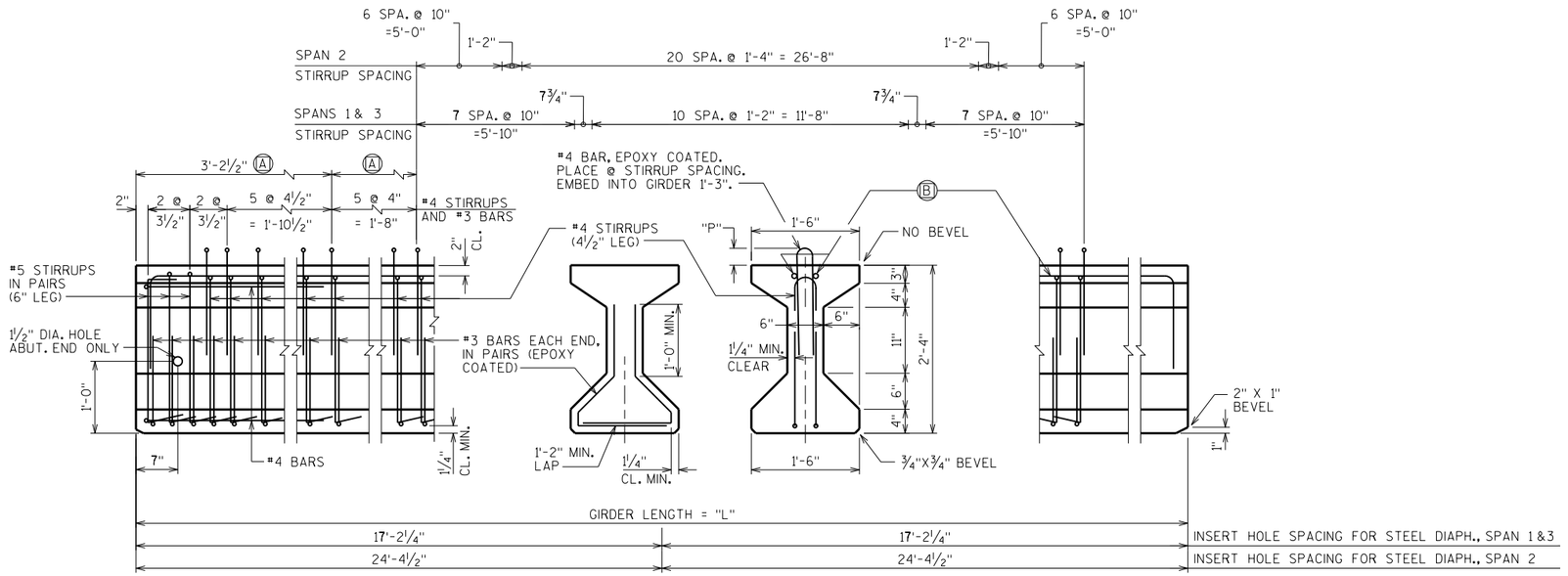
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STATE PROJECT NUMBER

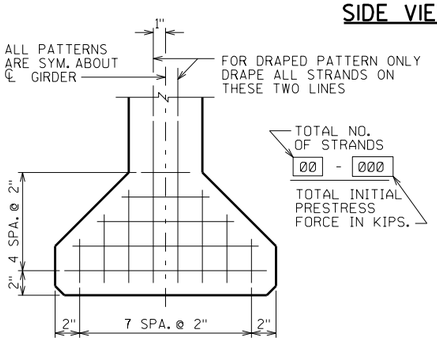
1021-04-77



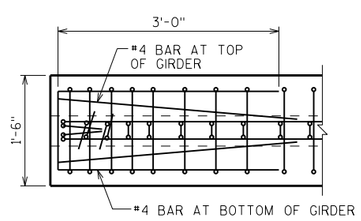
SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

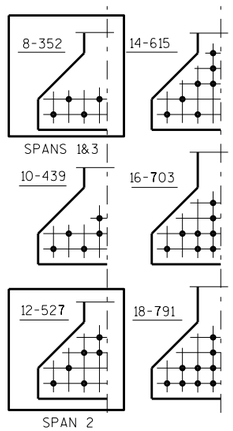
Ⓑ 2-BARS STD. 90° HOOK AT ENDS
SPAN 1&3 - #7 BARS, 3'-7" MIN. LAP
SPAN 2 - #5 BARS, 2'-5" MIN. LAP



TYP. STRAND PATTERN

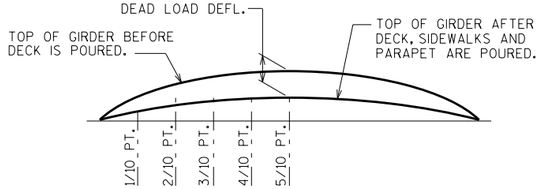


TOP VIEW OF GIRDER ENDS



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.

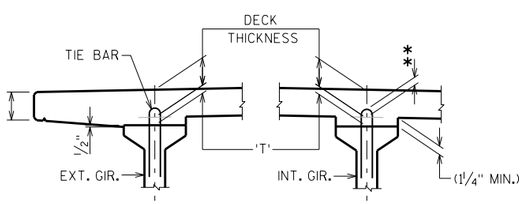
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

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

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STRUCTURE B-55-281

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28" PRESTRESSED GIRDER DETAILS

SHEET 10

377

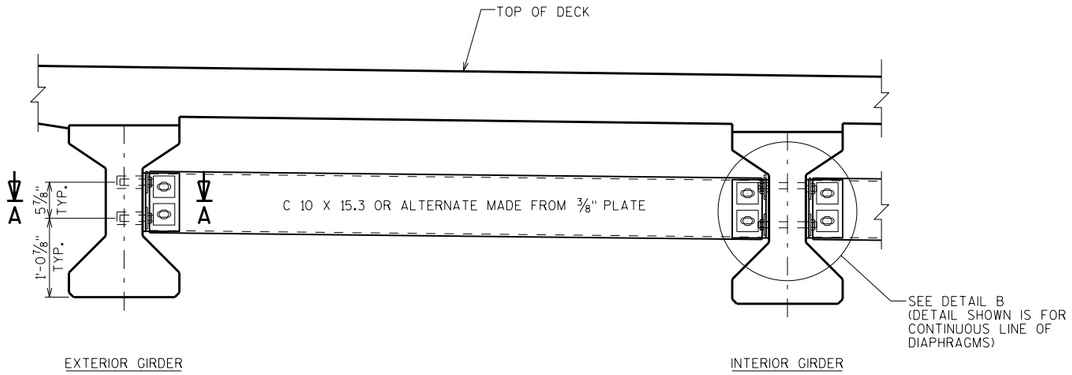
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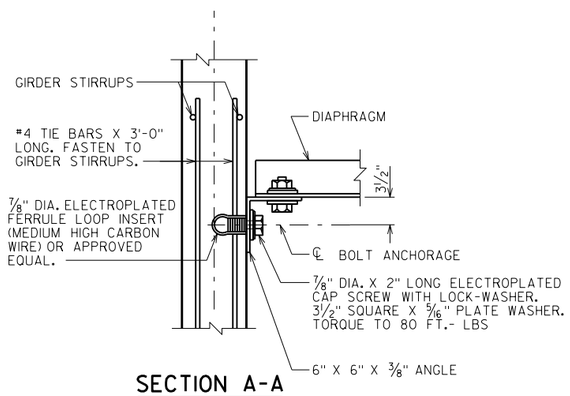
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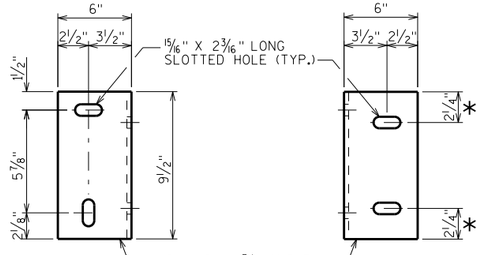


PART TRANSVERSE SECTION AT DIAPHRAGM



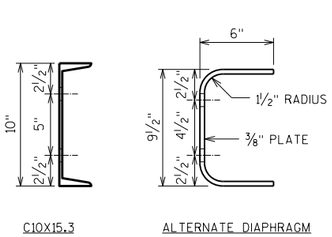
SECTION A-A

(FOR EXTERIOR ATTACHMENT)

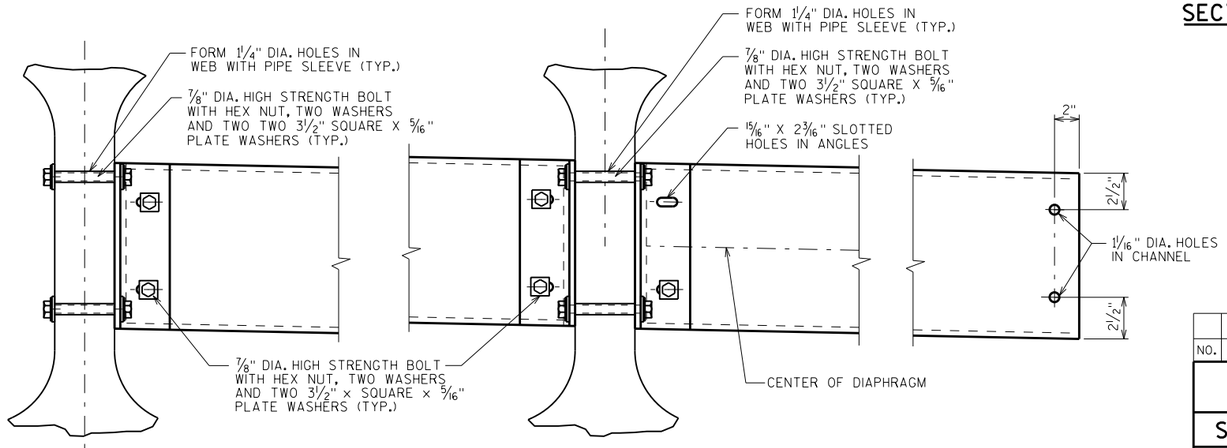


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM



SECTION THRU DIAPHRAGM



(FOR STAGGERED DIAPHRAGM)

DETAIL B

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

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 ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

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STEEL DIAPHRAGM

SHEET 11

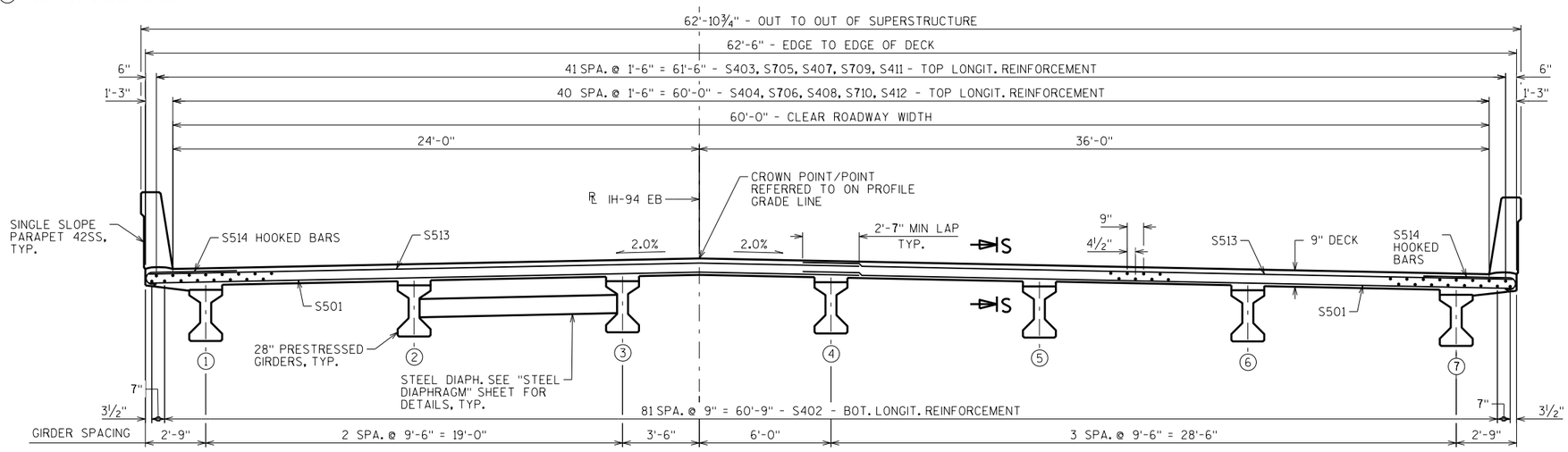
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STATE PROJECT NUMBER

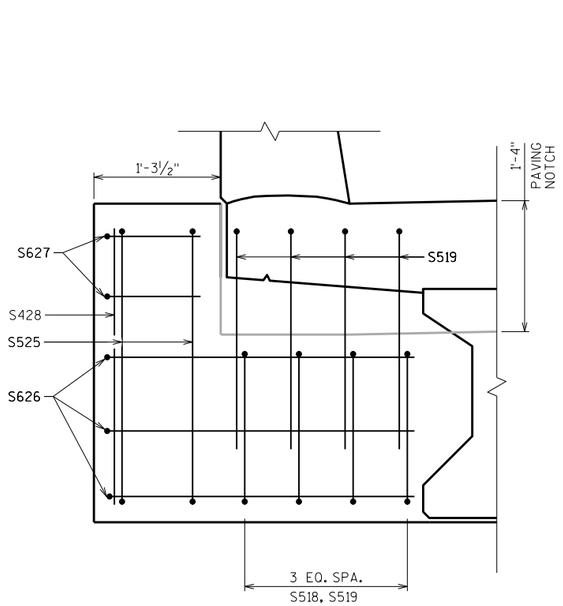
1021-04-77

◯ INDICATES GIRDER NUMBER



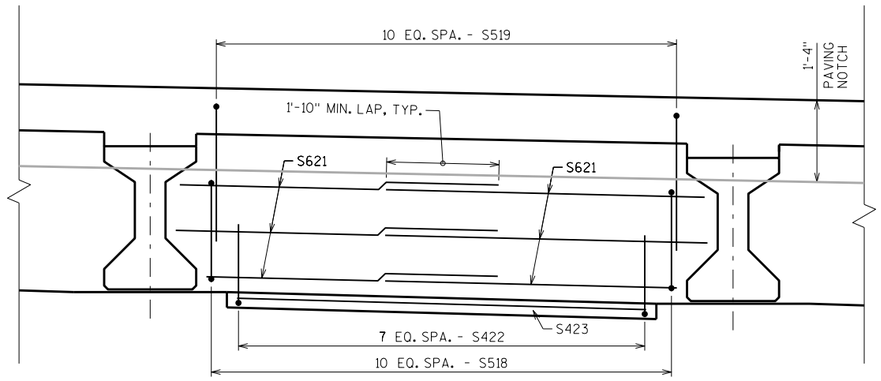
CROSS SECTION THRU ROADWAY

LOOKING EAST



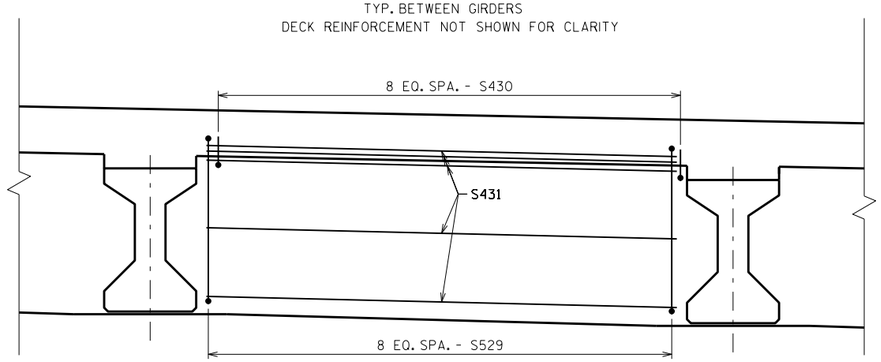
ABUTMENT DIAPHRAGM- EXTERIOR DETAIL

NORTHEAST CORNER SHOWN. OTHER CORNERS SIMILAR
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



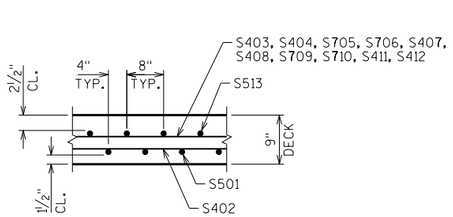
DIAPHRAGM AT ABUTMENTS

TYP. BETWEEN GIRDERS
DECK REINFORCEMENT NOT SHOWN FOR CLARITY

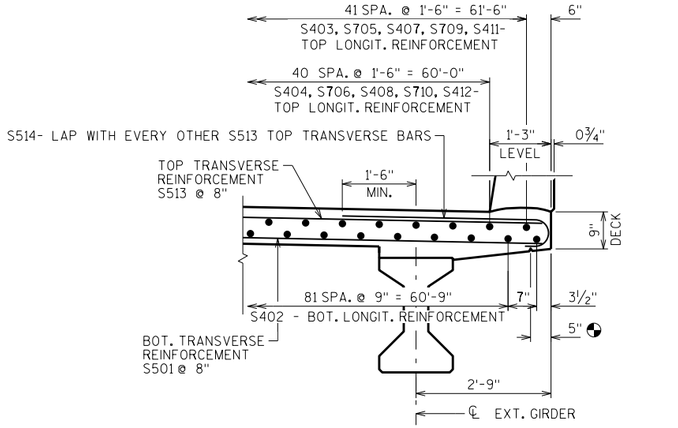


DIAPHRAGM AT PIERS

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

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STRUCTURE B-55-281

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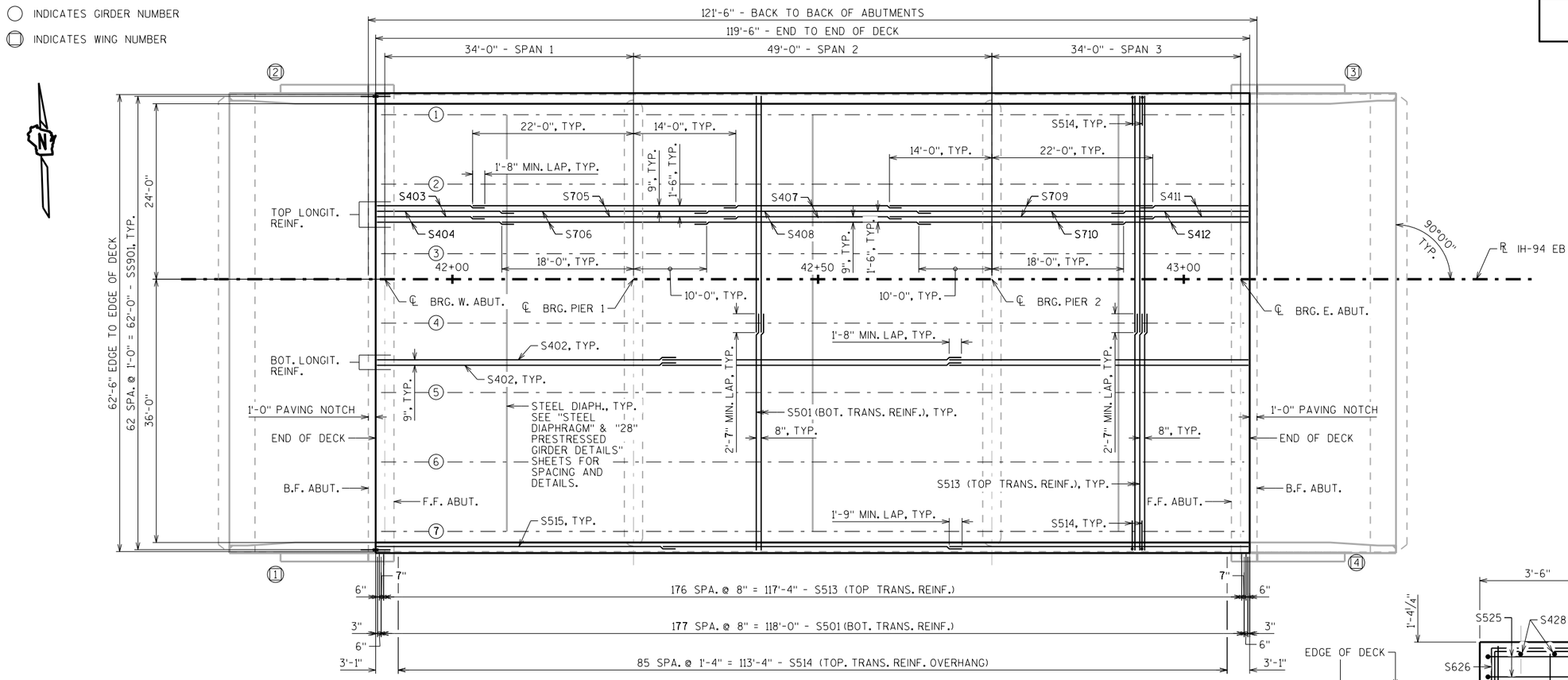
SUPERSTRUCTURE CROSS SECTION

SHEET 12

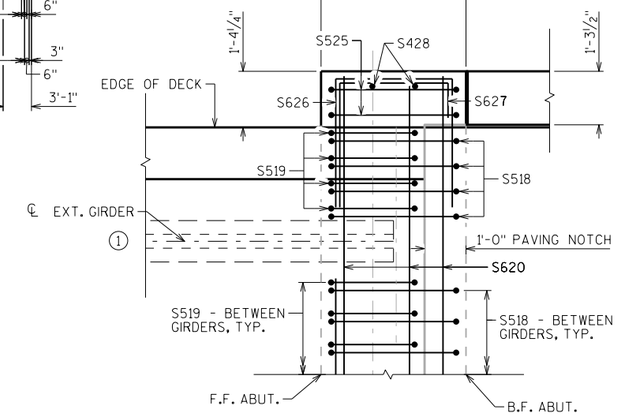
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SCALE = 3.00

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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

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STRUCTURES DESIGN SECTION

STRUCTURE B-55-281

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SUPERSTRUCTURE

SHEET 13

380

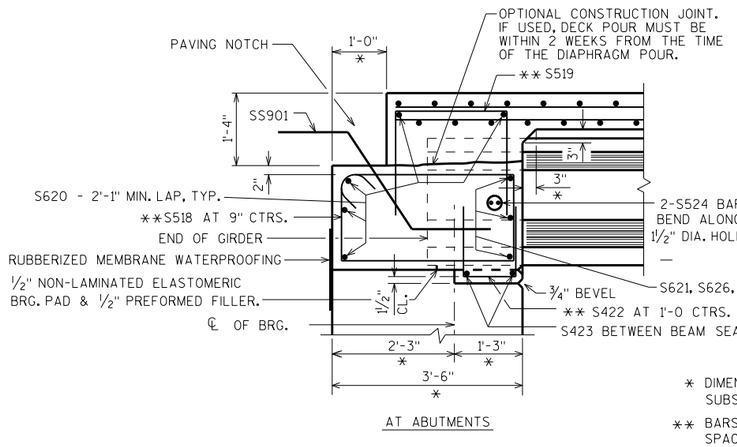
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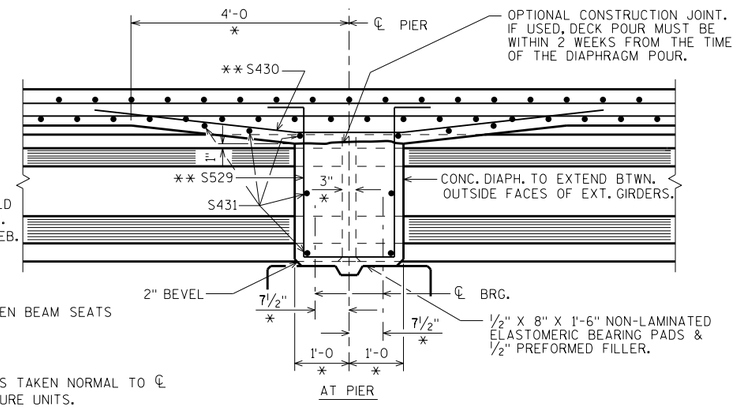
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AT ABUTMENTS



AT PIER

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

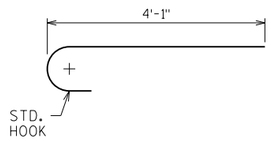
** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

PART. LONGIT. SECTION

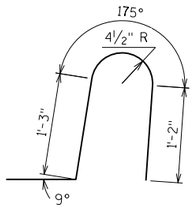
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

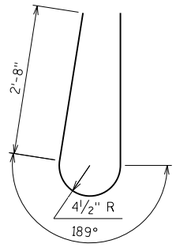
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	360	32'-6"			TRANSVERSE - BOT.
S402	X	252	40'-11"			LONGIT. - BOT.
S403	X	42	14'-9"			LONGIT. - TOP. - SPAN 1
S404	X	41	18'-9"			LONGIT. - TOP. - SPAN 1
S705	X	42	36'-0"			LONGIT. - TOP. - CONTINUITY OVER PIER 1
S706	X	41	28'-0"			LONGIT. - 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



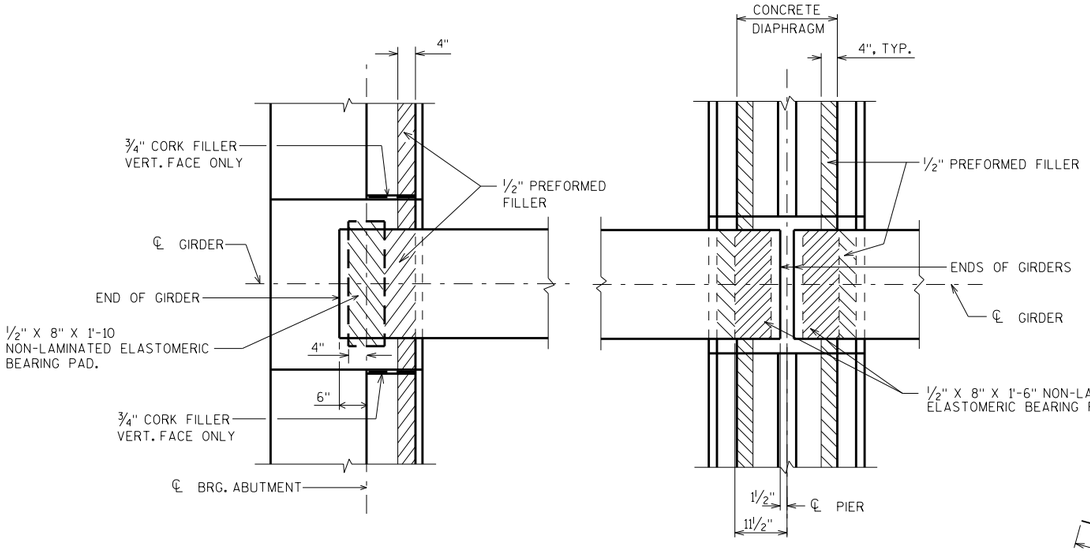
S514



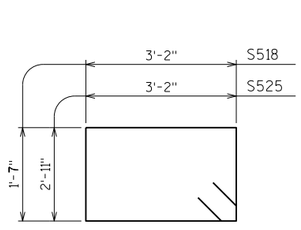
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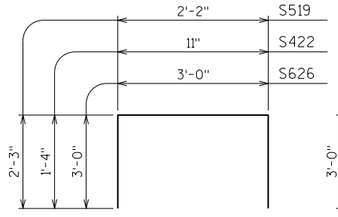
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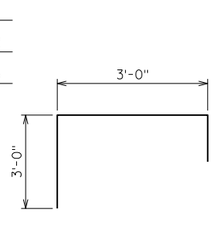
BEARING PAD DETAIL



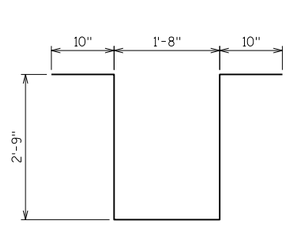
S518, S525



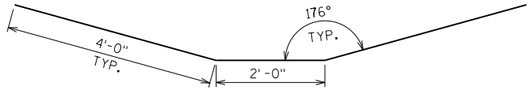
S519, S422, S626



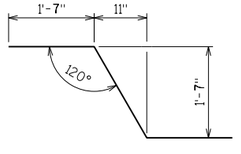
S627



S529



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

381

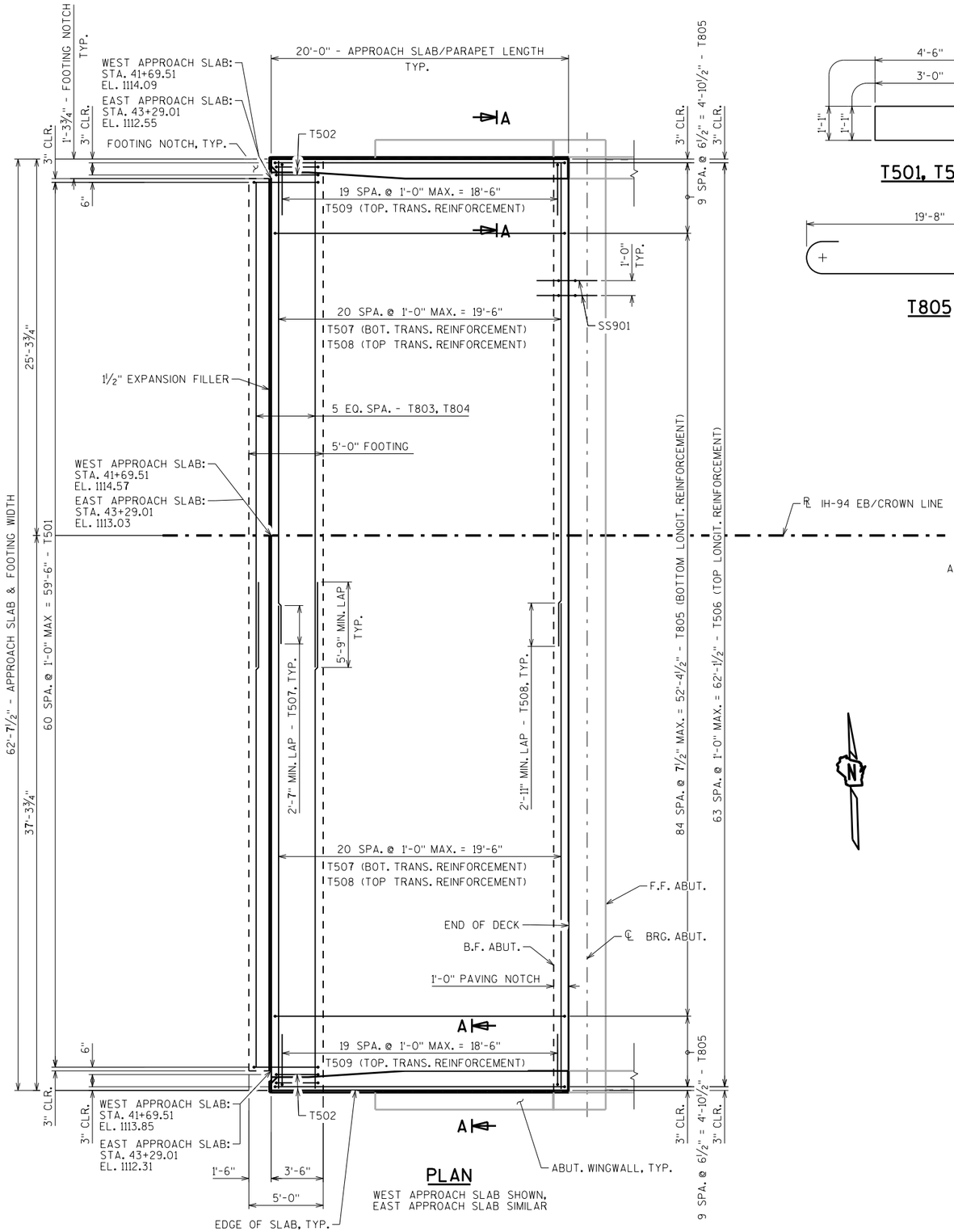
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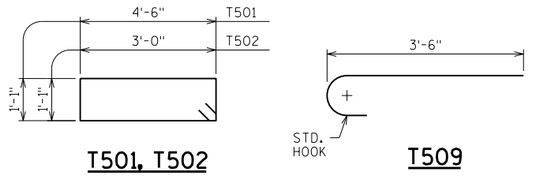
STATE PROJECT NUMBER

1021-04-77



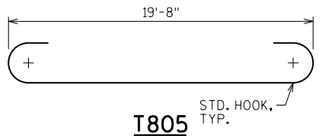
PLAN

WEST APPROACH SLAB SHOWN,
EAST APPROACH SLAB SIMILAR



T501, T502

T509

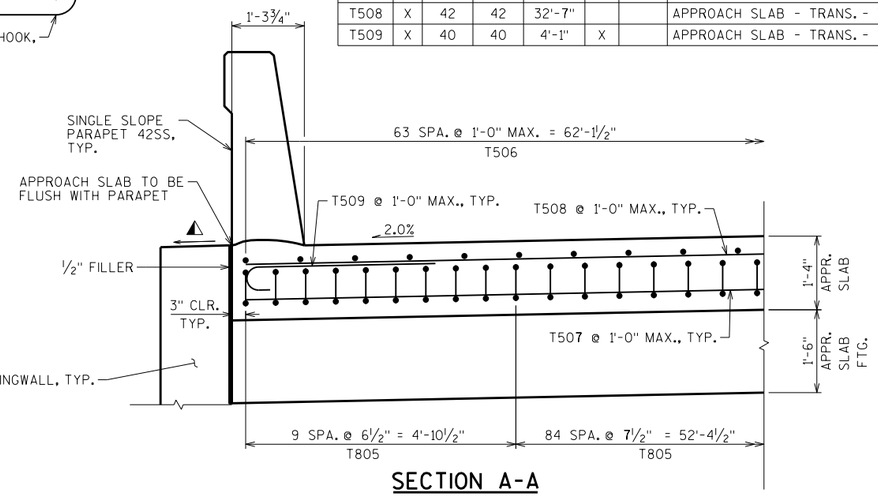


T805

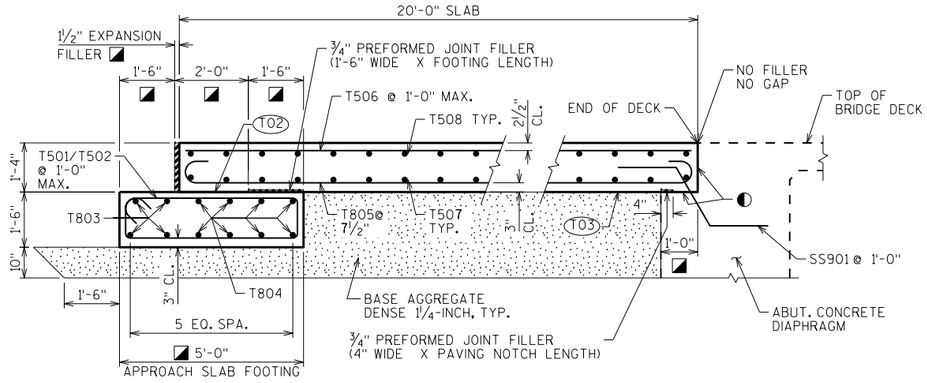
BILL OF BARS

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

382

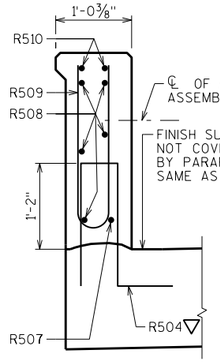
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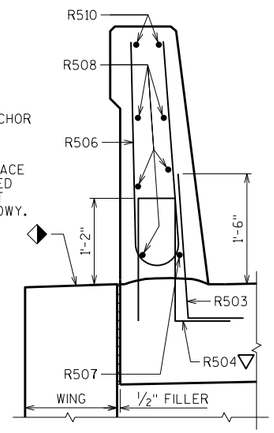
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STATE PROJECT NUMBER

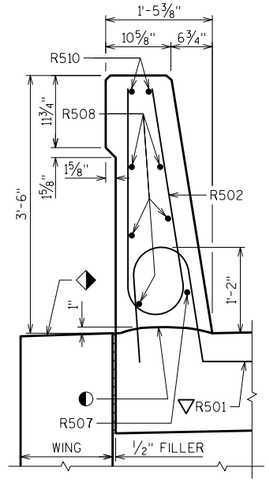
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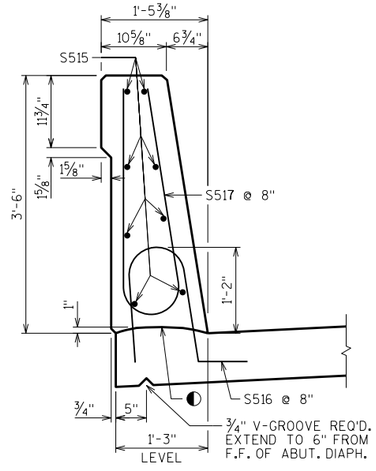
SECTION A-A



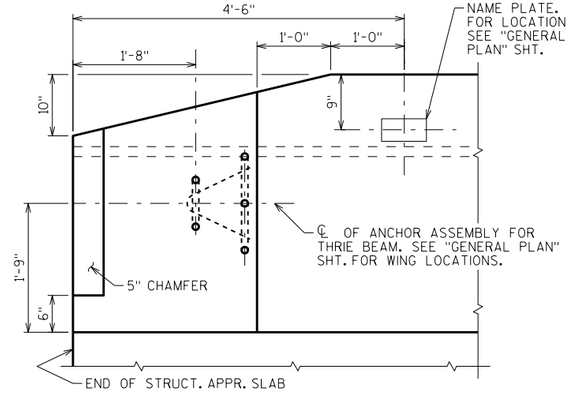
SECTION B-B



SECTION C-C



SECTION THRU PARAPET ON DECK



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

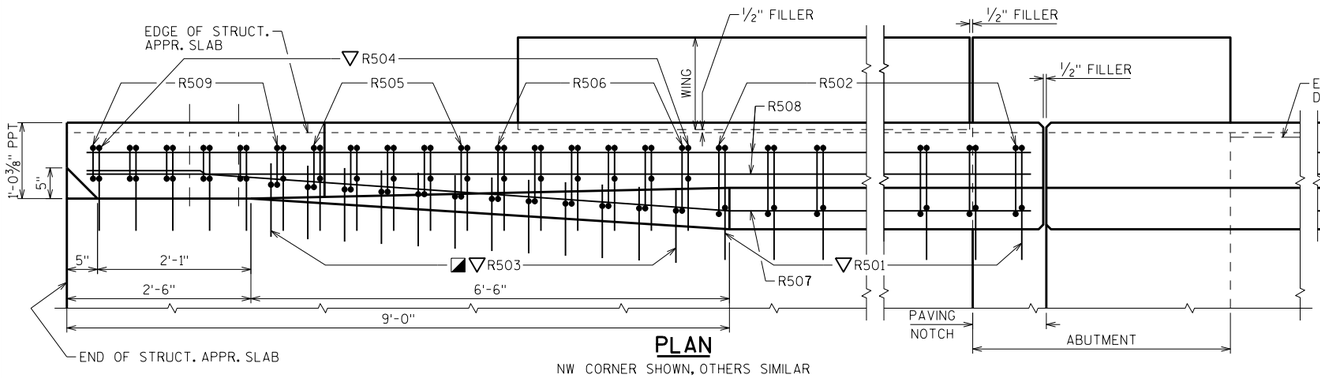
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	24	24	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-8"	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

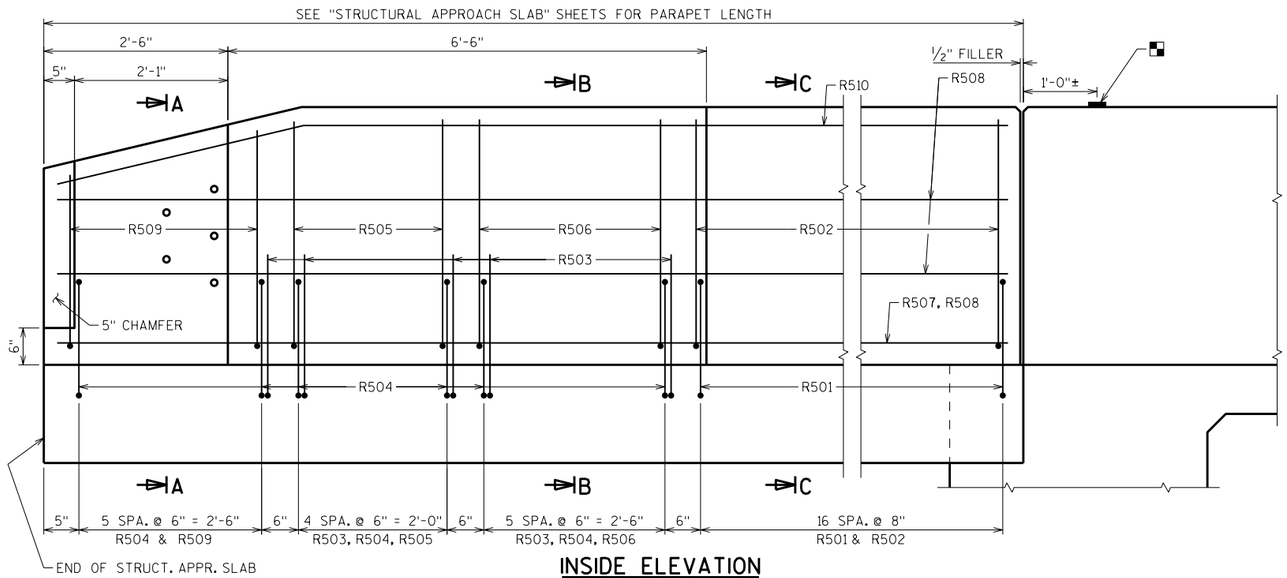
BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



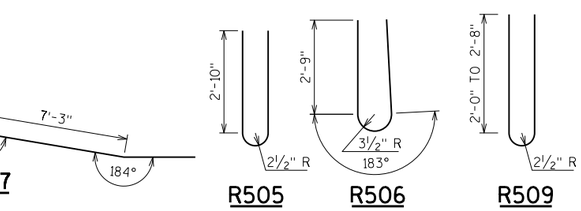
PLAN

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

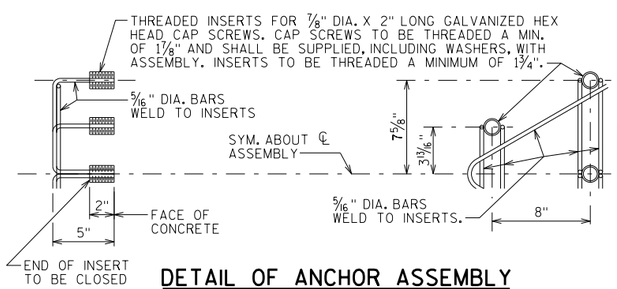
BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

◐ 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

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SINGLE SLOPE PARAPET 42SS

SHEET 16

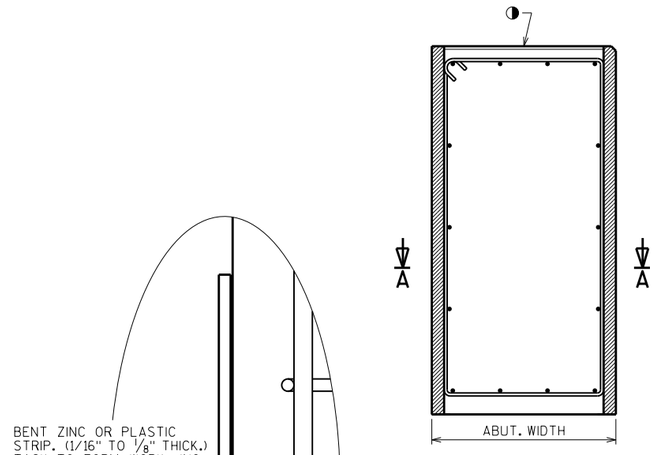
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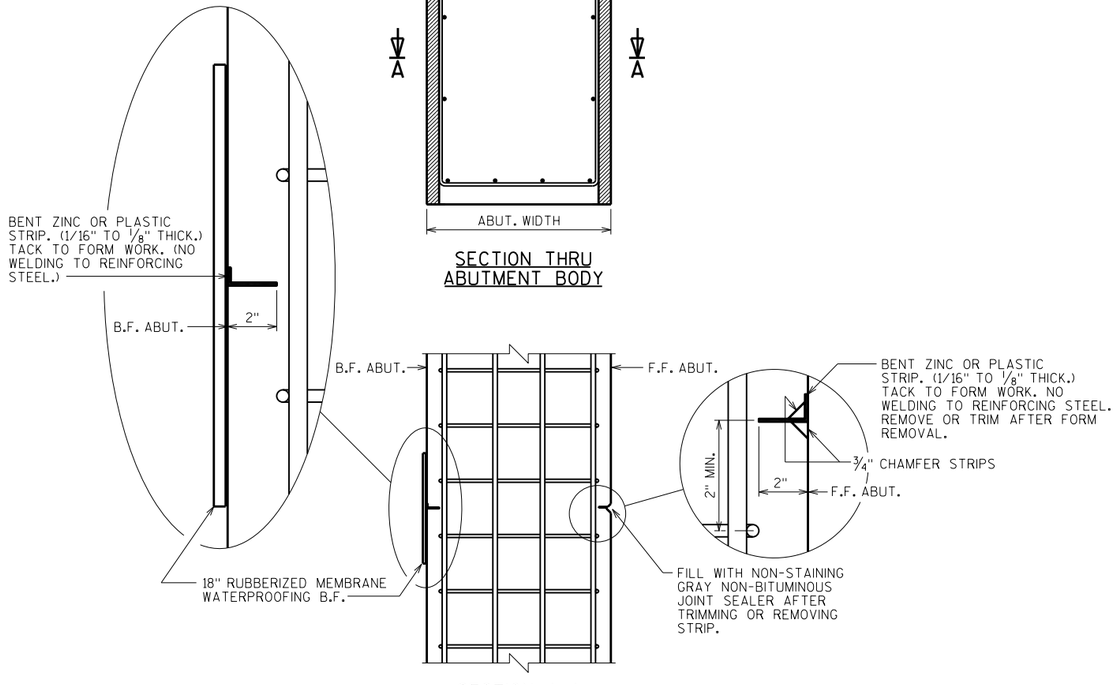
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8

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

384

8

8

SCALE = 1

STATE PROJECT NUMBER

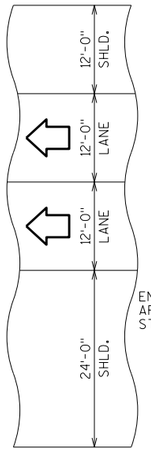
1021-04-78

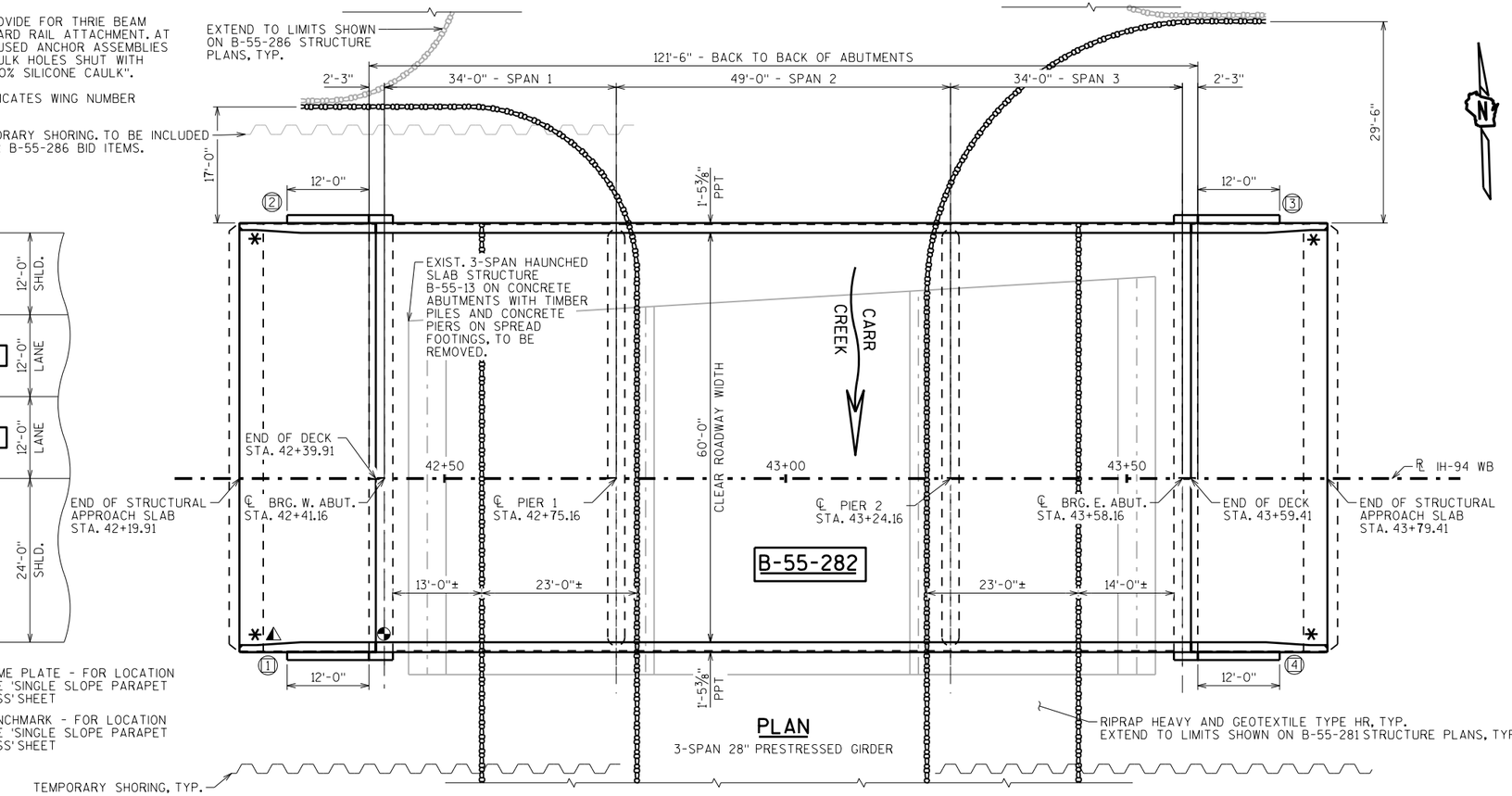
* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

(2) INDICATES WING NUMBER

TEMPORARY SHORING. TO BE INCLUDED UNDER B-55-286 BID ITEMS.

EXTEND TO LIMITS SHOWN ON B-55-286 STRUCTURE PLANS, TYP.



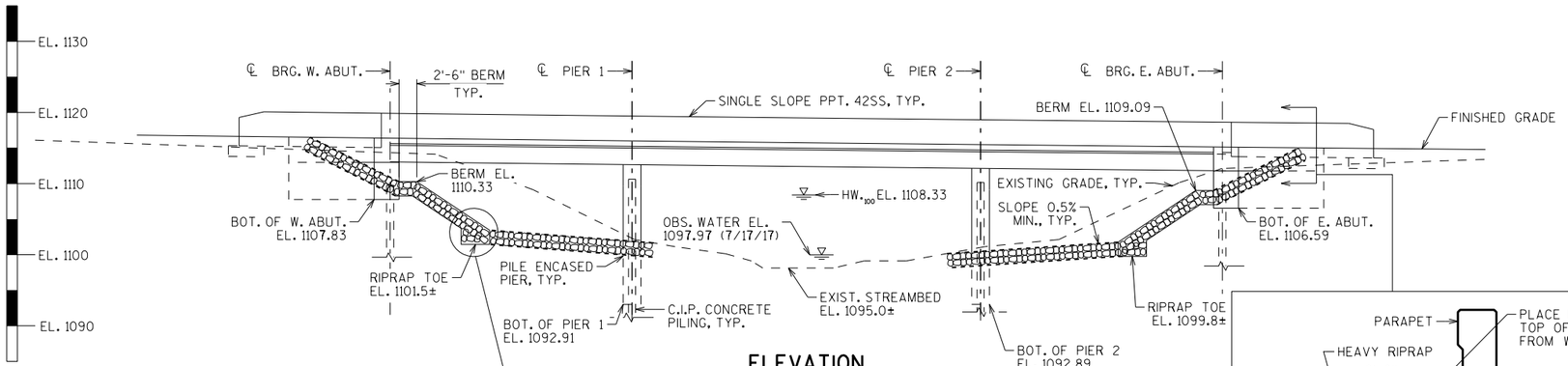


PLAN

3-SPAN 28" PRESTRESSED GIRDER

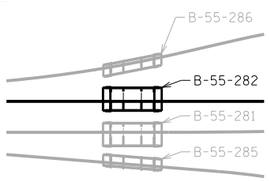
△ NAME PLATE - FOR LOCATION SEE 'SINGLE SLOPE PARAPET 42SS' SHEET

⊕ BENCHMARK - FOR LOCATION SEE 'SINGLE SLOPE PARAPET 42SS' SHEET

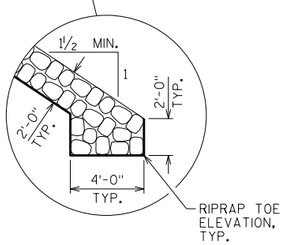


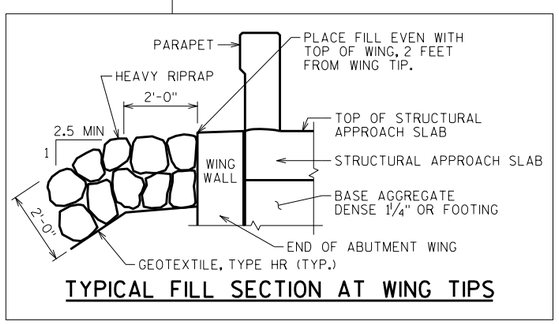
ELEVATION

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

385

I.D. 1021-04-08A DATE: FEB. 2020

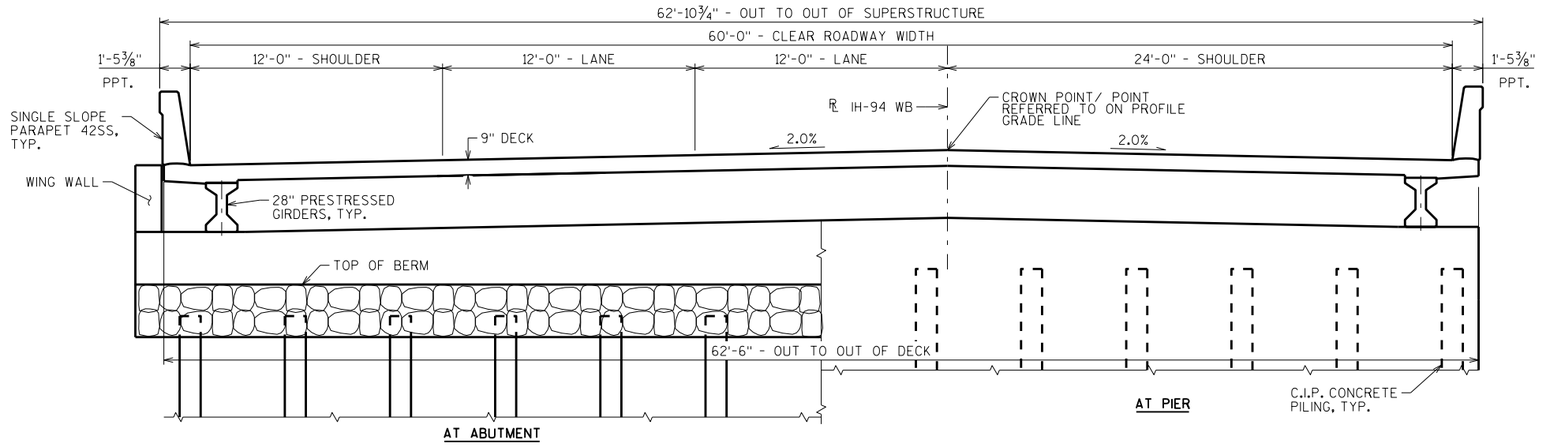
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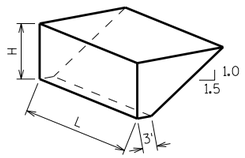
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STATE PROJECT NUMBER

1021-04-78

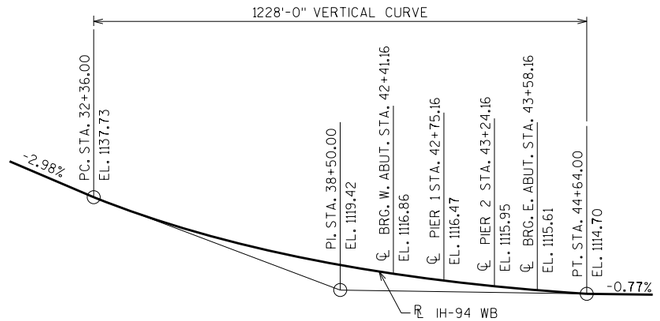


CROSS SECTION THRU ROADWAY LOOKING EAST



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

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.

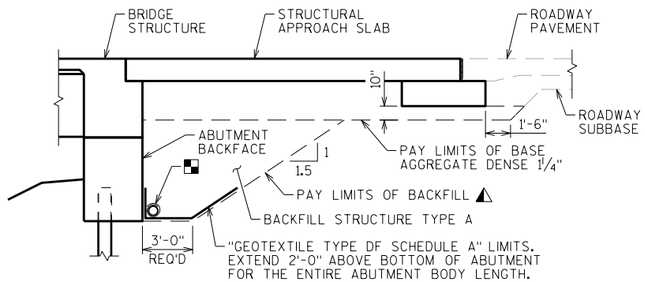
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "28" PRESTRESSED GIRDER DETAILS" SHEET.

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.

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.

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

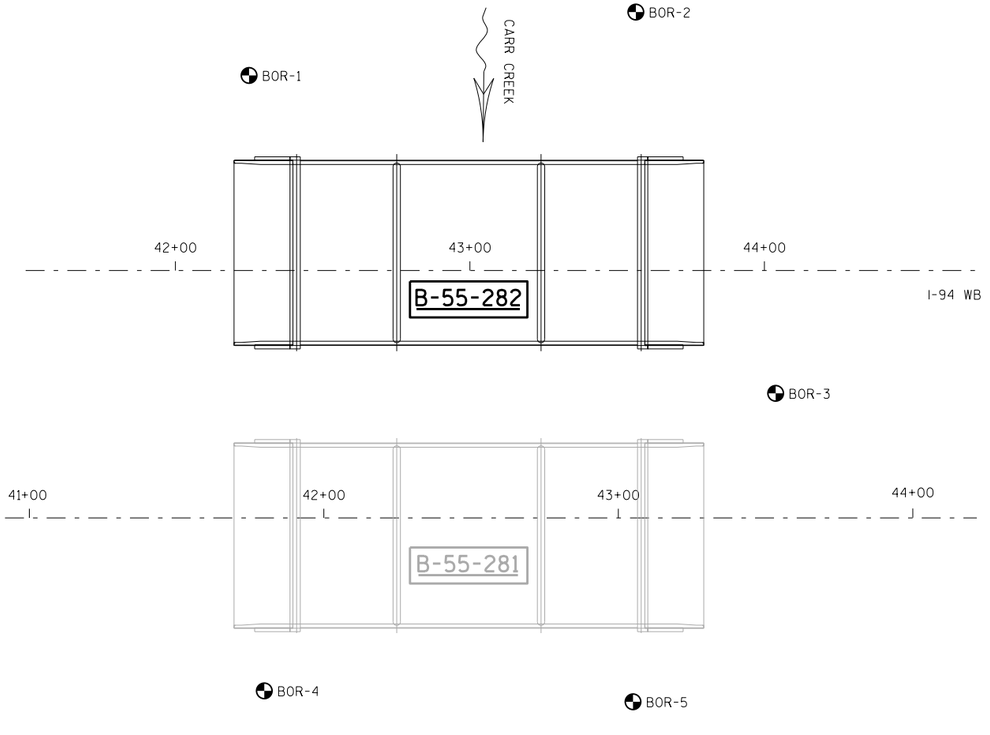
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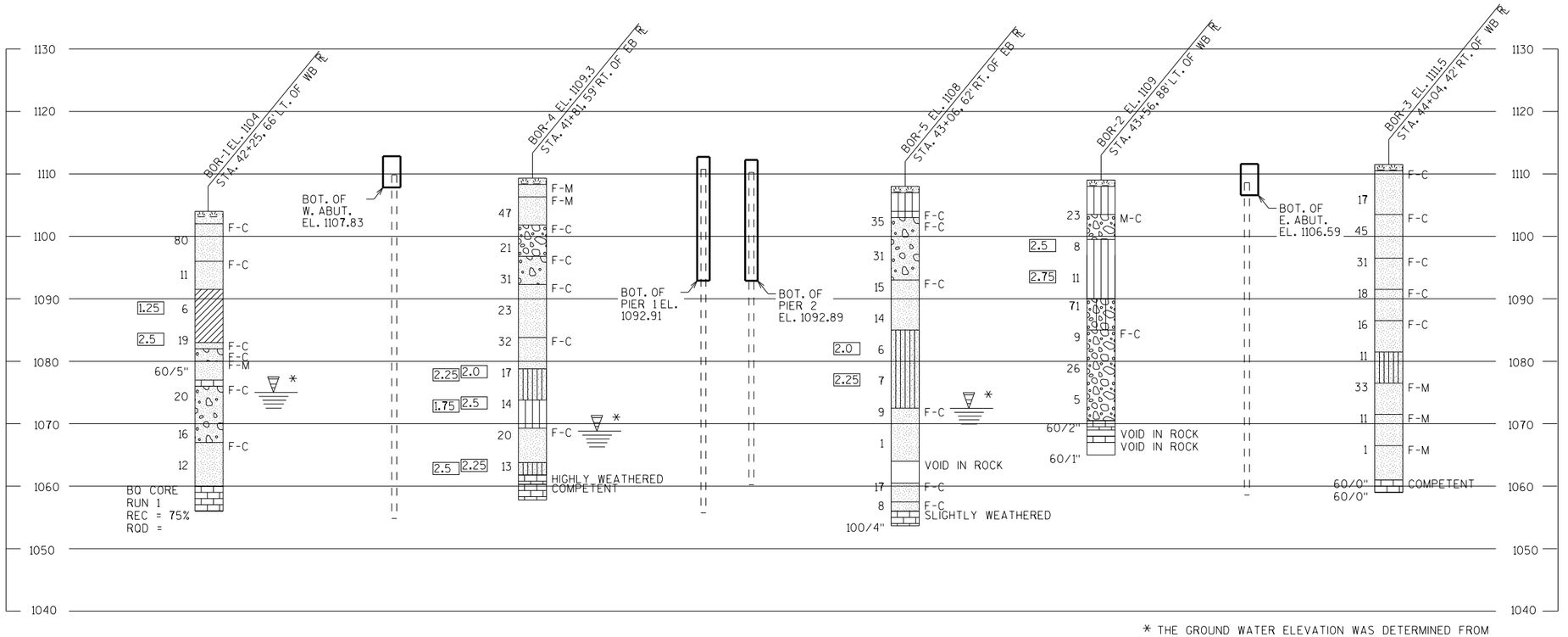
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8

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.

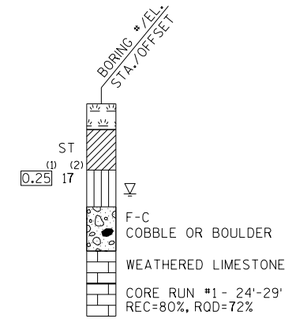
STATE PROJECT NUMBER

1021-04-78

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

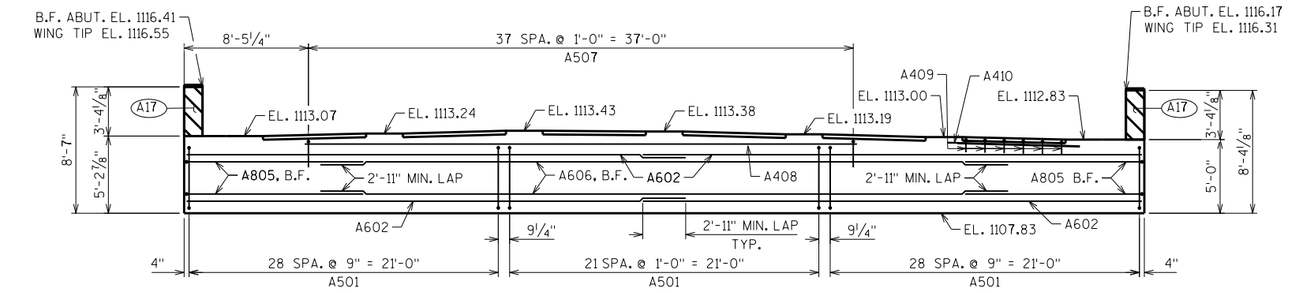
SHEET 3

387

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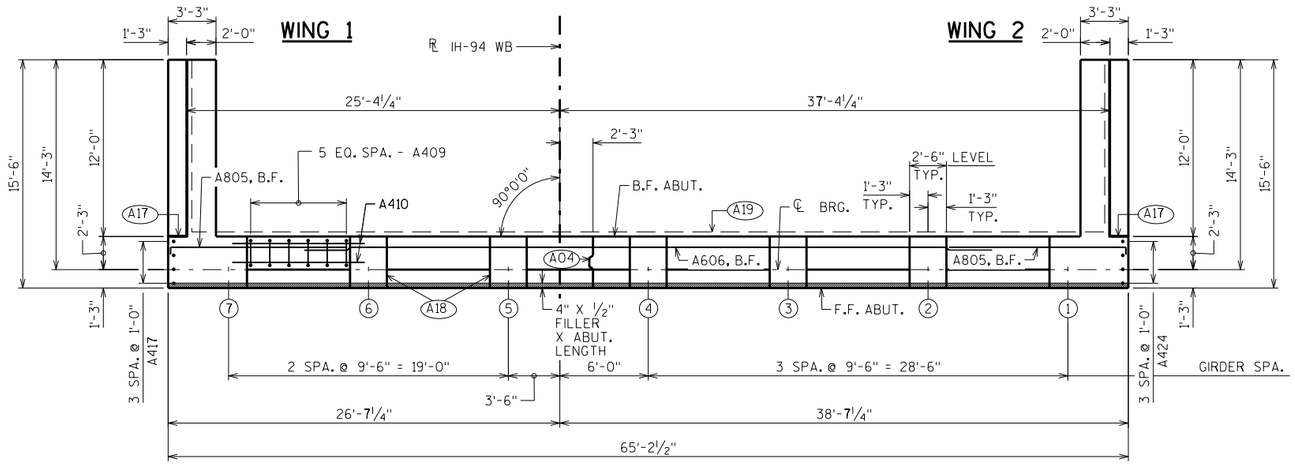
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ELEVATION

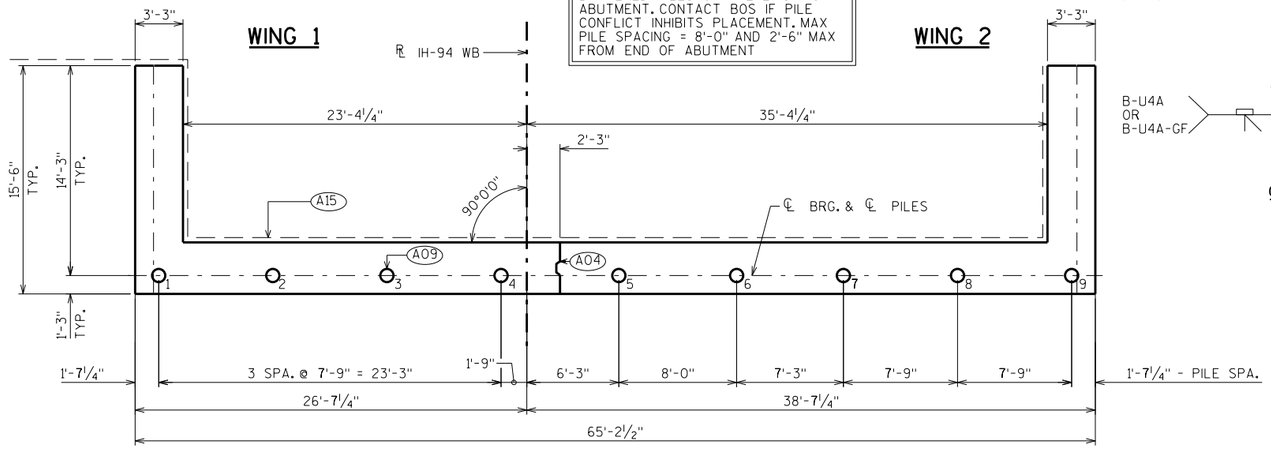
LOOKING WEST
ADJUST STIRRUP SPACING AS NEEDED TO MISS PILES



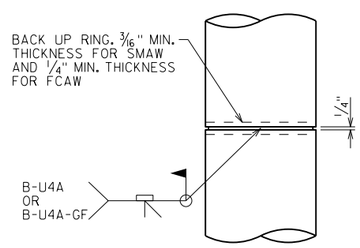
PLAN

○ INDICATES GIRDER NUMBER

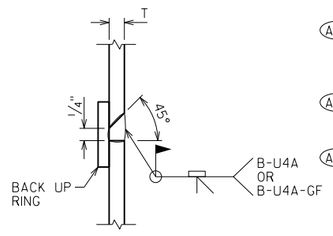
NOTE: PILES MAY CONFLICT WITH THE BATTERED PILES OF THE EXISTING ABUTMENT. CONTACT BOS IF PILE CONFLICT INHIBITS PLACEMENT. MAX PILE SPACING = 8'-0" AND 2'-6" MAX FROM END OF ABUTMENT



PILE PLAN

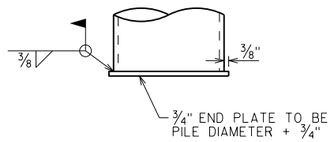


CAST-IN-PLACE 'PIPE PILE'



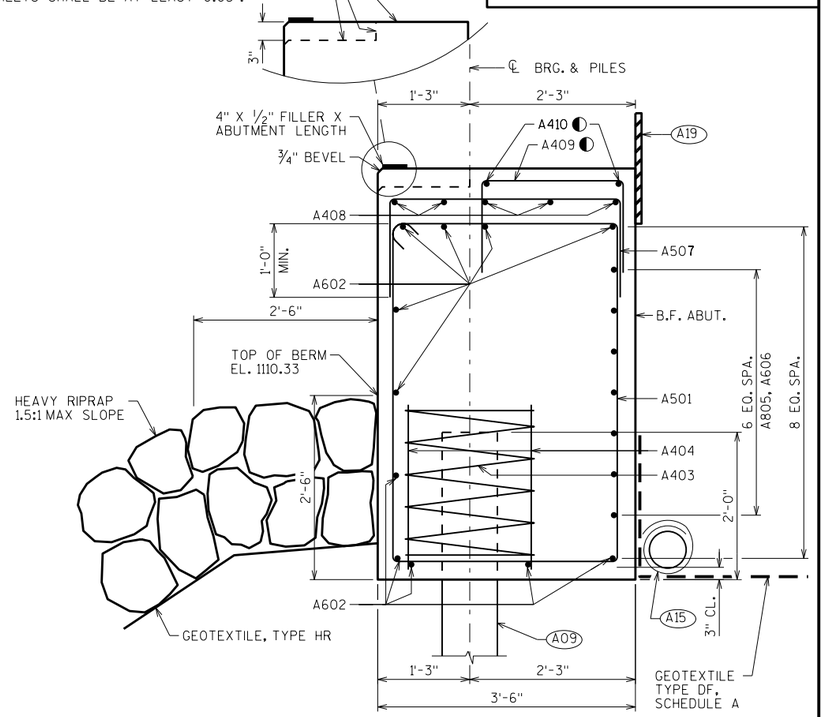
C.I.P. PILE WELD DETAIL

PILE DETAILS



END PLATE DETAIL

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

◐ 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 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.

STATE PROJECT NUMBER

1021-04-78

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

DRAWN BY: BAF | PLANS CK'D.: MJK

WEST ABUTMENT

SHEET 4

388

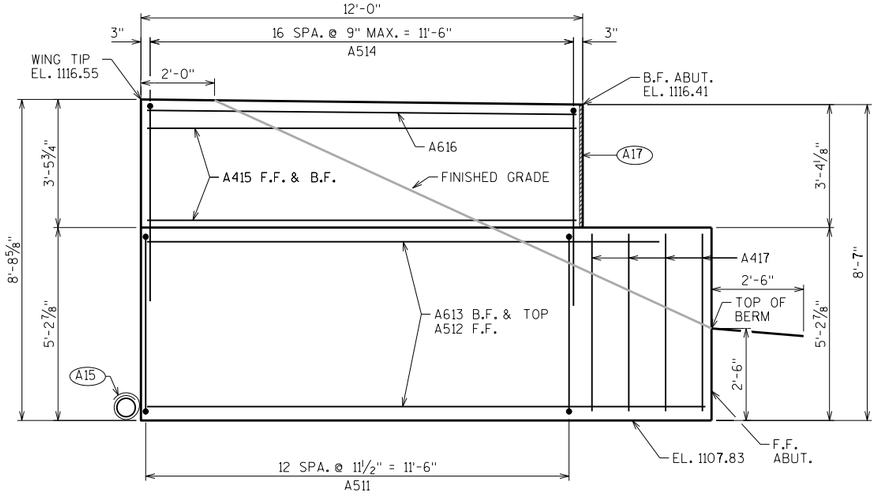
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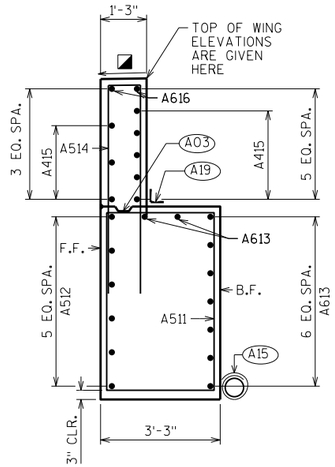
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STATE PROJECT NUMBER

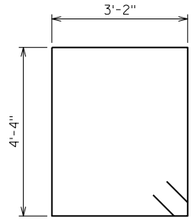
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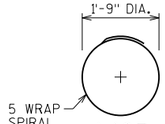
WING 1 ELEVATION



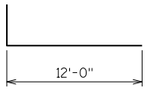
WING 1 SECTION



A501



A403

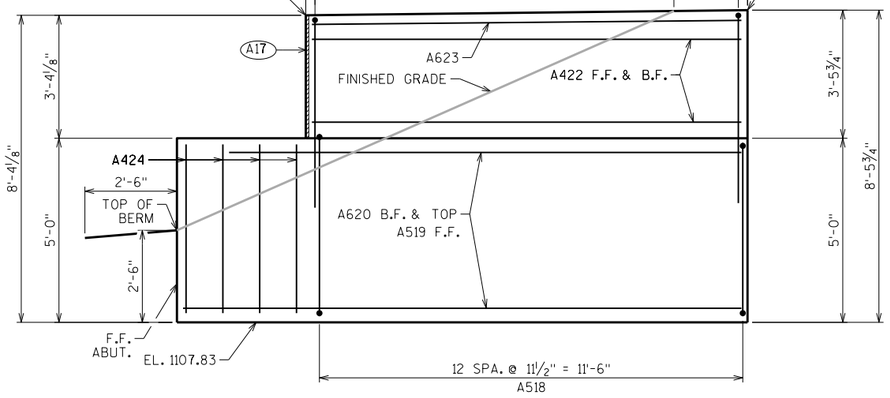


A805

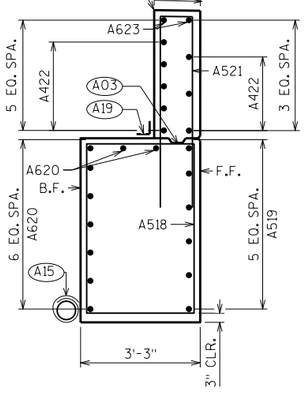
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

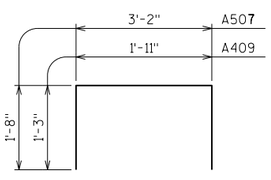
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501		80	15'-8"	X		BODY-STIRRUPS-VERT.
A602		22	33'-11"			BODY-HORIZ.
A403		9	28'-0"	X		BODY-SPIRAL-1 PER BODY PILE-VERT.
A404		18	2'-3"			BODY-2 PER BODY PILE-VERT.
A805		14	13'-2"	X		BODY-HORIZ.-B.F.
A606		7	46'-9"			BODY-HORIZ.-B.F.
A507		38	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



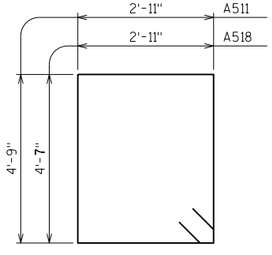
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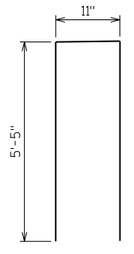
WING 2 SECTION



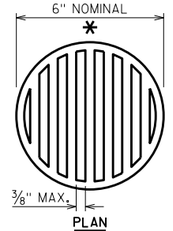
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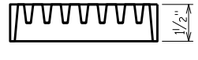
A511, A518



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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

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WEST ABUTMENT DETAILS

SHEET 5

389

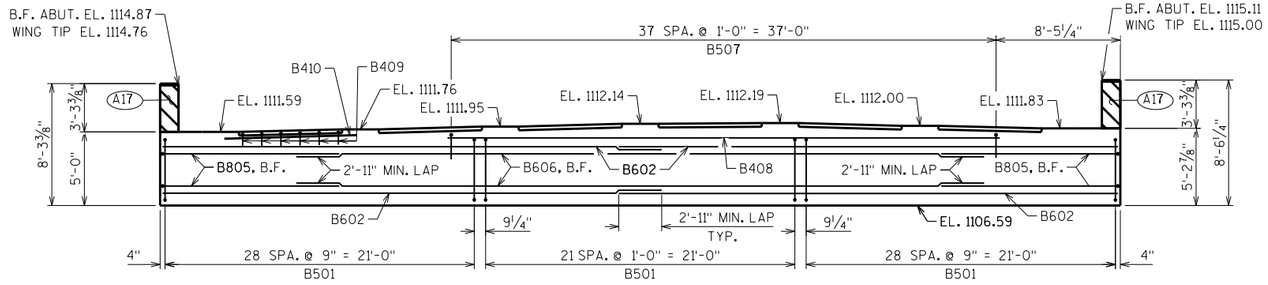
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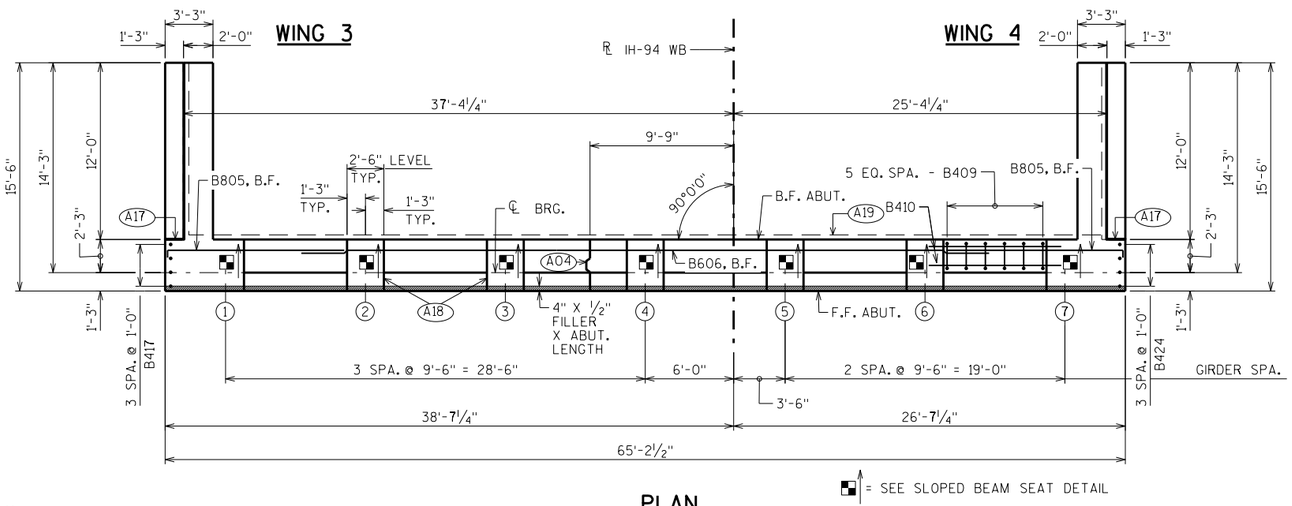
STATE PROJECT NUMBER

1021-04-78



ELEVATION

LOOKING EAST
ADJUST STIRRUP SPACING AS NEEDED TO MISS PILES

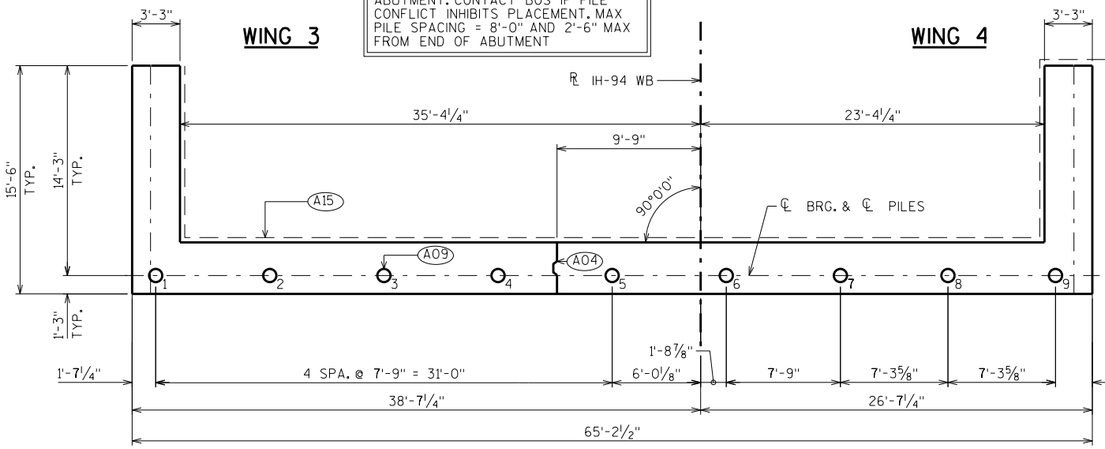


PLAN

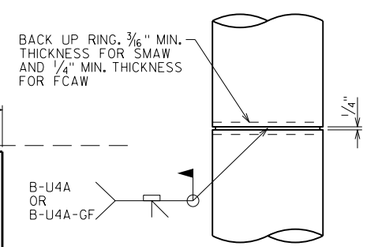
◇ = SEE SLOPED BEAM SEAT DETAIL

○ INDICATES GIRDER NUMBER

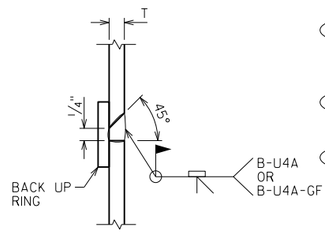
NOTE: PILES MAY CONFLICT WITH THE BATTERED PILES OF THE EXISTING ABUTMENT. CONTACT BOS IF PILE CONFLICT INHIBITS PLACEMENT. MAX PILE SPACING = 8'-0" AND 2'-6" MAX FROM END OF ABUTMENT



PILE PLAN

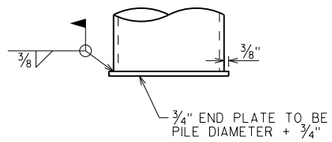


CAST-IN-PLACE 'PIPE PILE'

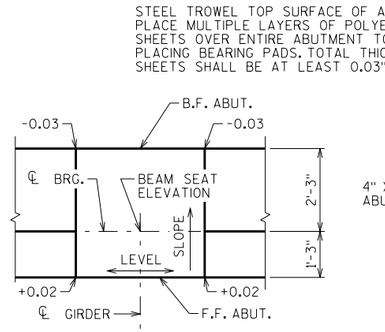


C.I.P. PILE WELD DETAIL

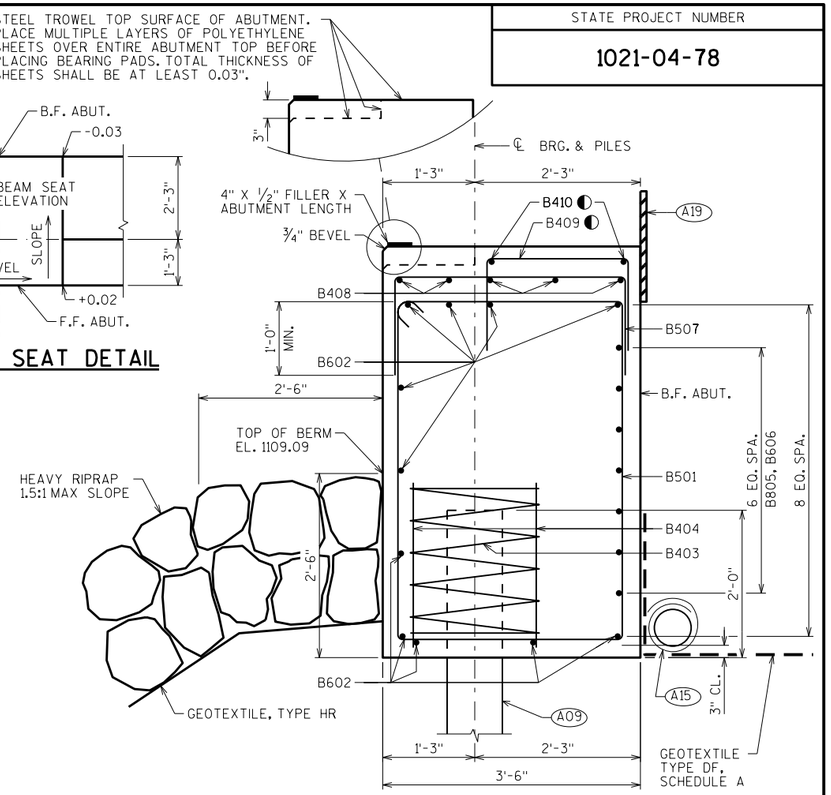
PILE DETAILS



END PLATE DETAIL



SLOPED BEAM SEAT 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.

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

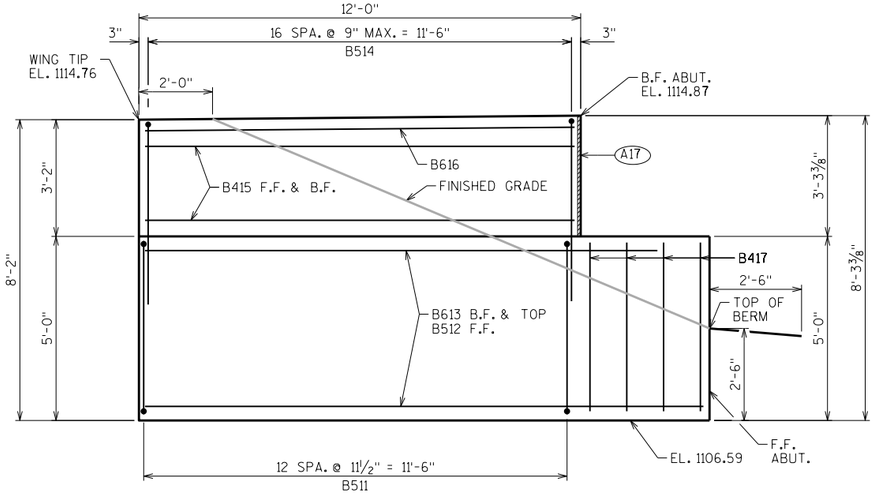
SHEET 6

390

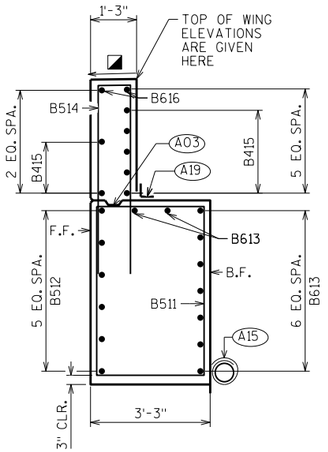
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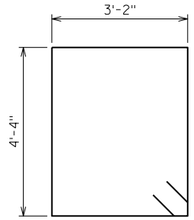
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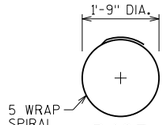
WING 3 ELEVATION



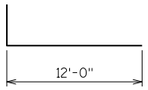
WING 3 SECTION



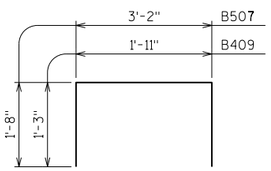
B501



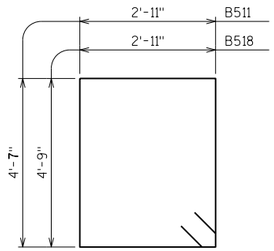
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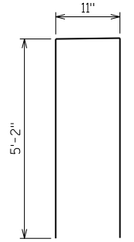
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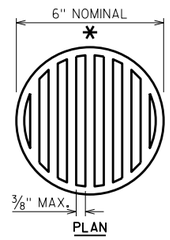
B507, B409



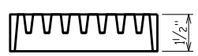
B511, B518



B514, B521



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.

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

(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

STATE PROJECT NUMBER

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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

391

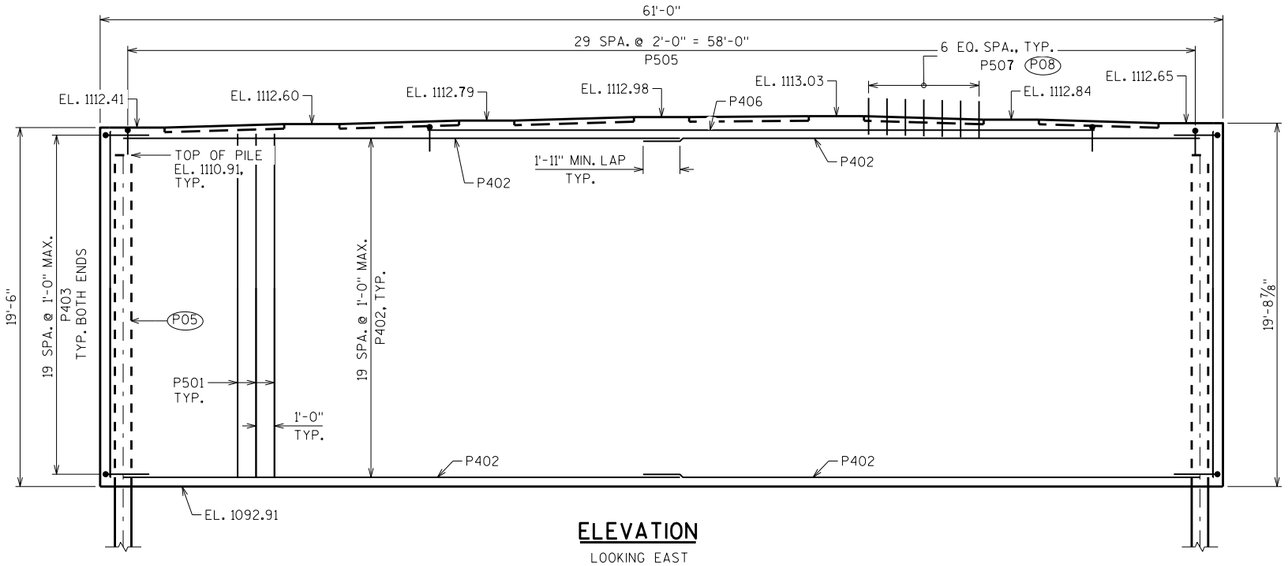
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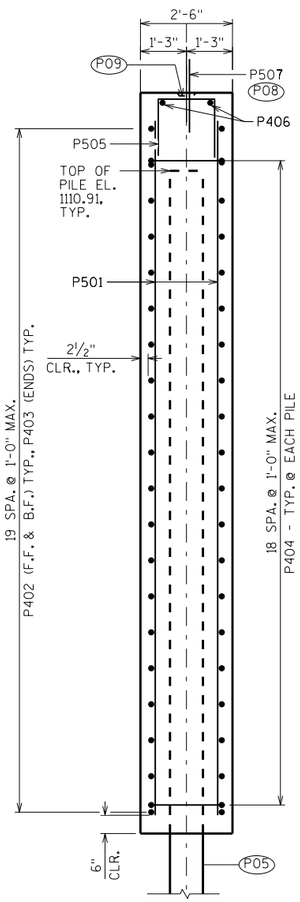
STATE PROJECT NUMBER

1021-04-78



ELEVATION

LOOKING EAST

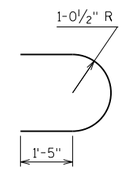


END VIEW

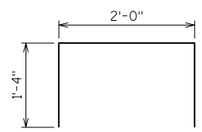
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

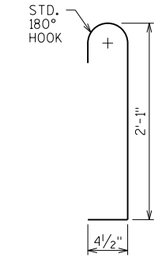
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
P501		128	18'-9"			PIER 1 - VERT.
P402		80	30'-3"			PIER 1 - HORIZ. - F.F. & B.F.
P403		40	6'-2"	X		PIER 1 - HORIZ. - ENDS
P404		285	2'-11"	X		PIER 1 - HORIZ. - PILES
P505		30	4'-5"	X		PIER 1 - VERT. - TOP
P406		2	36'-3"			PIER 1 - HORIZ. - TOP - GIR. 3-6
P507		42	2'-0"			PIER 1 - VERT. - DOWELS



P403



P505

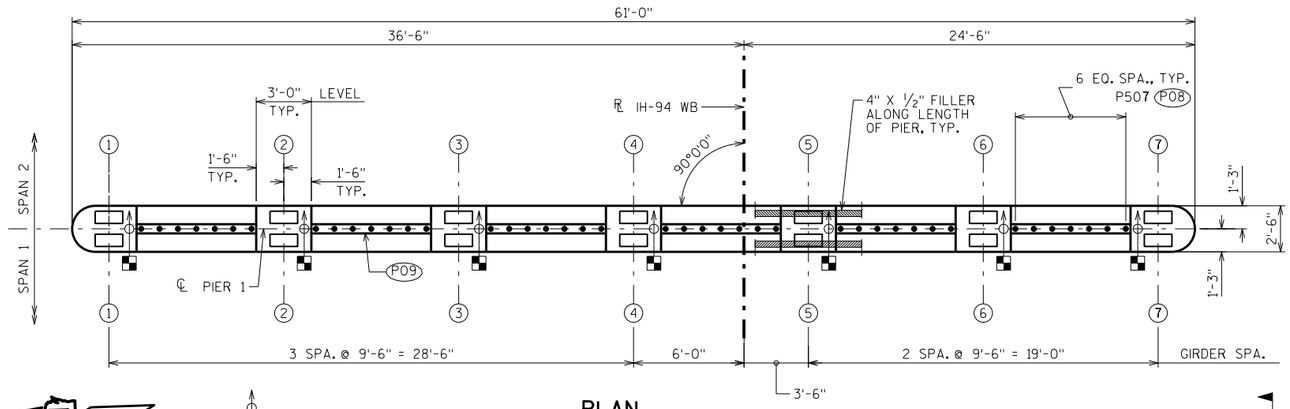


P404

(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.)

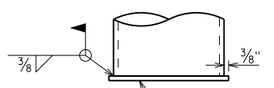
(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.



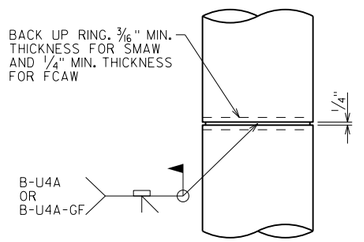
PLAN

= SEE SLOPED BEAM SEAT DETAIL

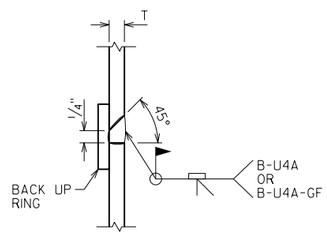
INDICATES GIRDER NUMBER



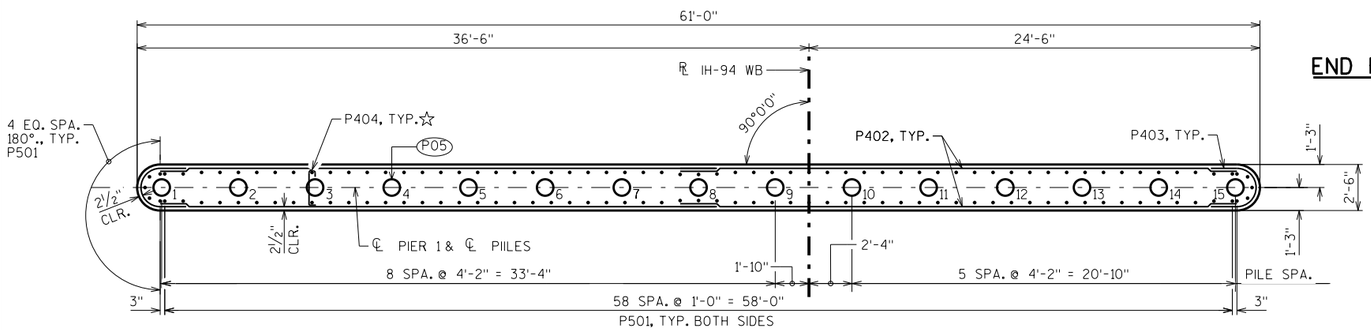
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CAST-IN-PLACE 'PIPE PILE'



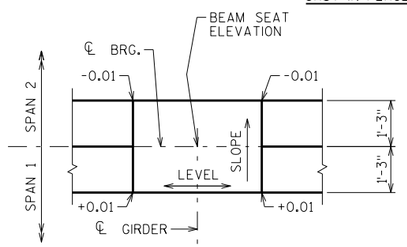
C.I.P. PILE WELD DETAIL



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

392

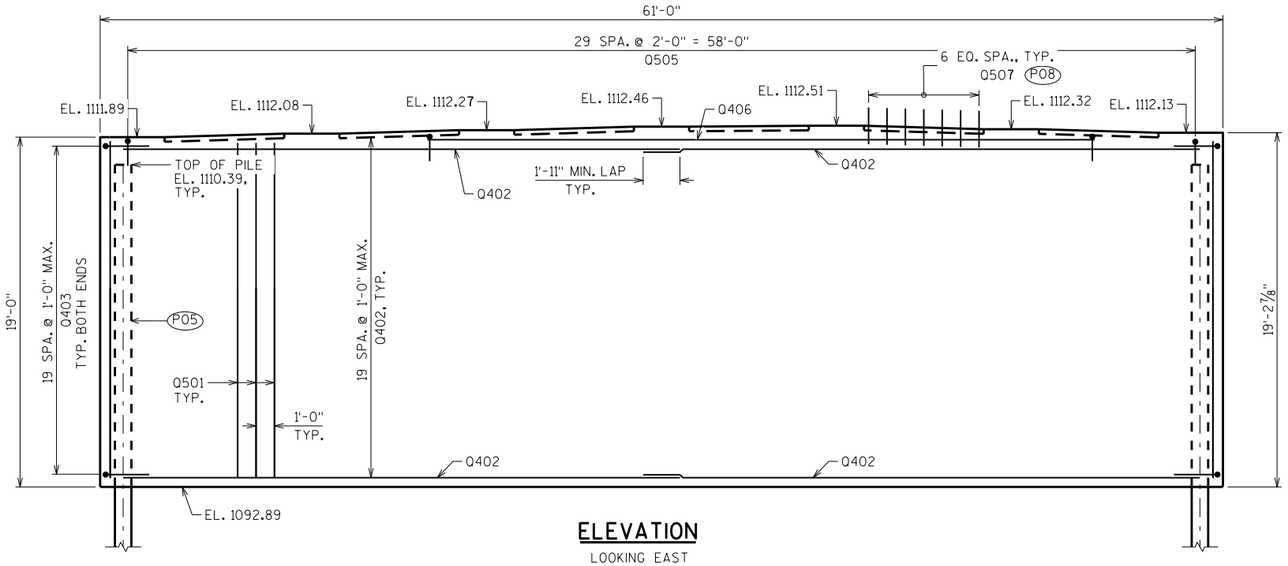
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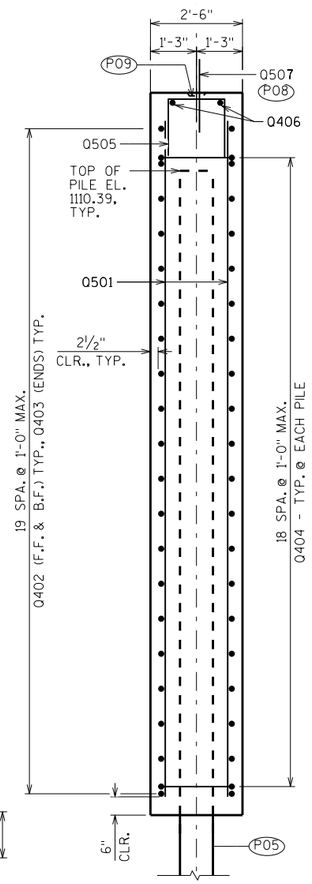
STATE PROJECT NUMBER

1021-04-78

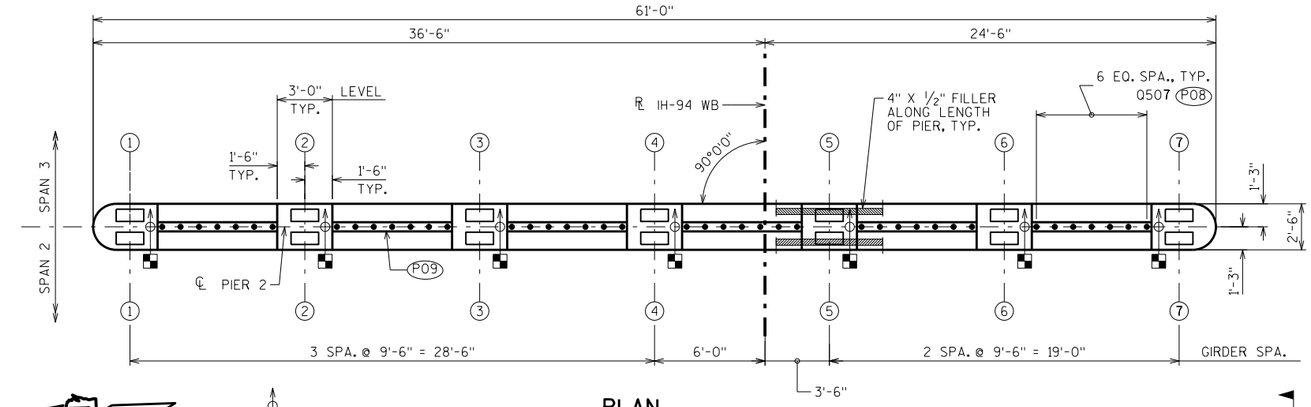


ELEVATION

LOOKING EAST



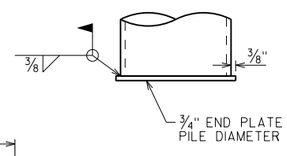
END VIEW



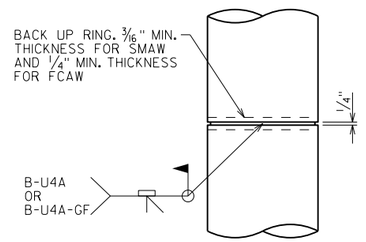
PLAN

= SEE SLOPED BEAM SEAT DETAIL

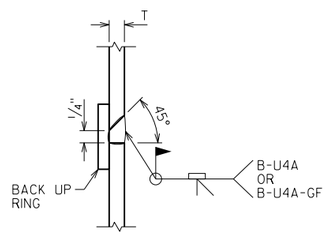
INDICATES GIRDER NUMBER



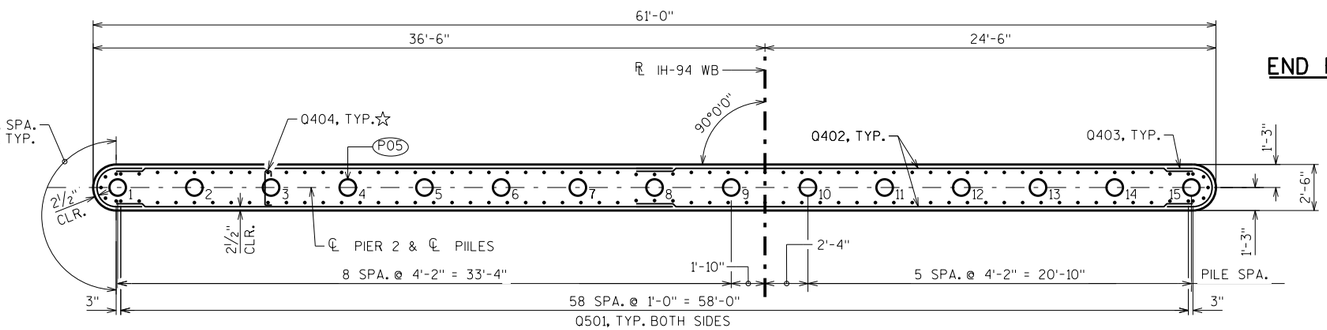
END PLATE DETAIL



CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL



PILE PLAN

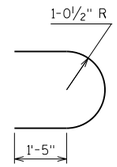
SHOWING REINFORCEMENT

☆ 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.

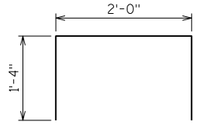
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

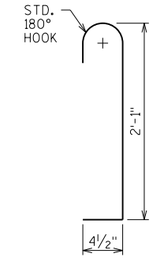
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
Q501		128	18'-3"			PIER 2 - VERT.
Q402		80	30'-3"			PIER 2 - HORIZ. - F.F. & B.F.
Q403		40	6'-2"	X		PIER 2 - HORIZ. - ENDS
Q404		285	2'-11"	X		PIER 2 - HORIZ. - PILES
Q505		30	4'-5"	X		PIER 2 - VERT. - TOP
Q406		2	36'-3"			PIER 2 - HORIZ. - TOP - GIR. 3-6
Q507		42	2'-0"			PIER 2 - VERT. - DOWELS



Q403



Q505

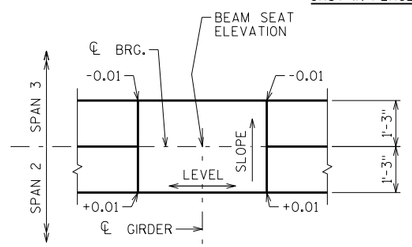


Q404

(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.



SLOPED BEAM SEAT DETAIL

PILE DETAILS

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PIER 2

SHEET 9

393

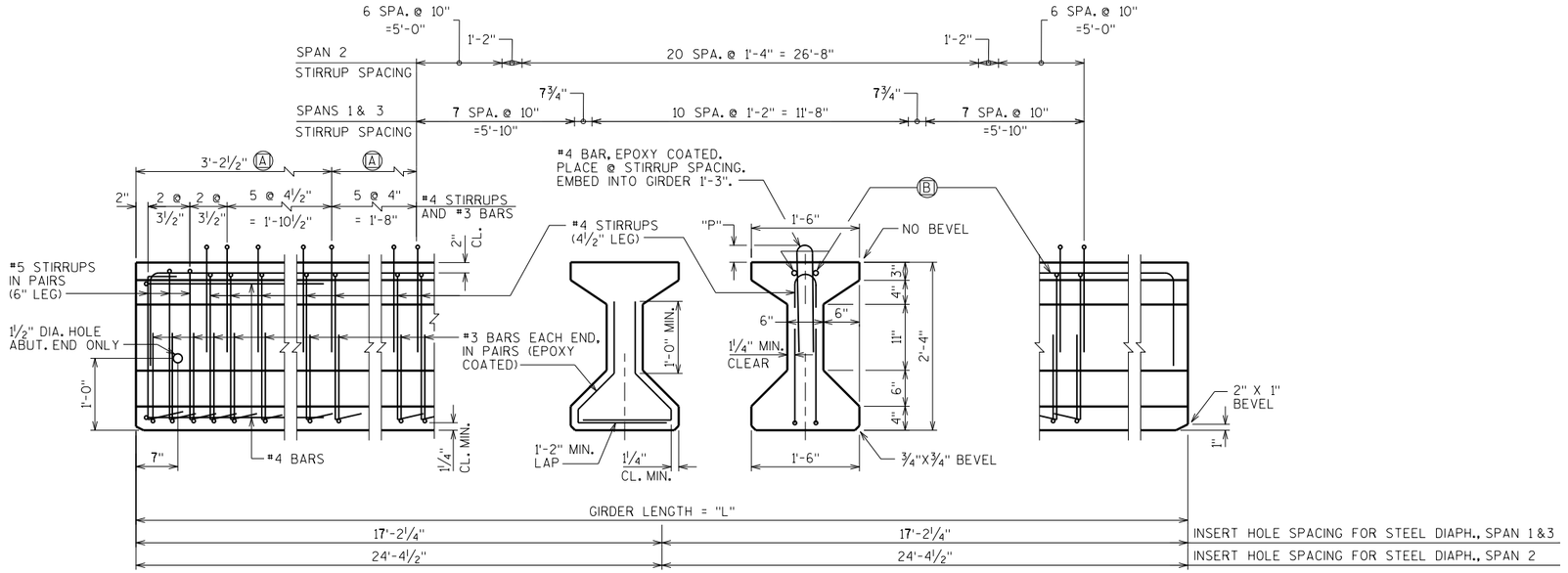
SCALE = 4.00

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STATE PROJECT NUMBER

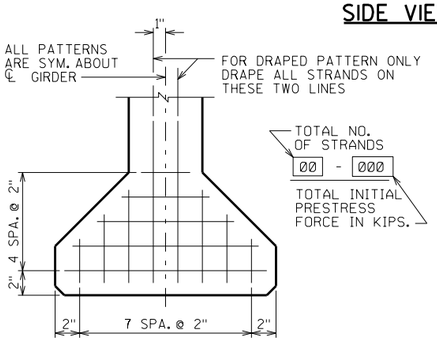
1021-04-78



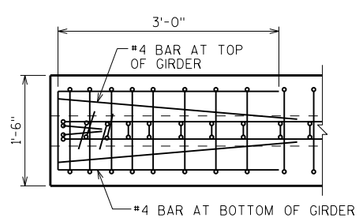
SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

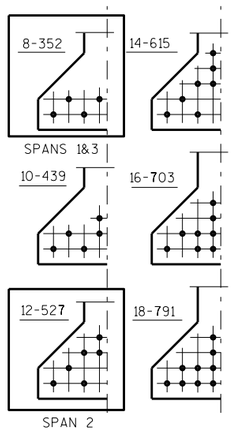
Ⓑ 2-BARS STD. 90° HOOK AT ENDS
SPAN 1&3 - #7 BARS, 3'-7" MIN. LAP
SPAN 2 - #5 BARS, 2'-5" MIN. LAP



TYP. STRAND PATTERN

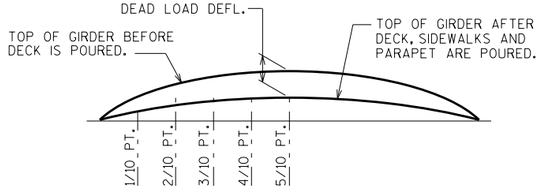


TOP VIEW OF GIRDER ENDS



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.

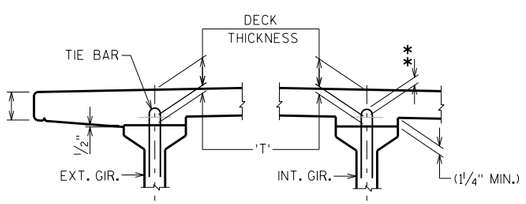
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

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

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28" PRESTRESSED GIRDER DETAILS

SHEET 10

394

SCALE = 1

8

8

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NOTES

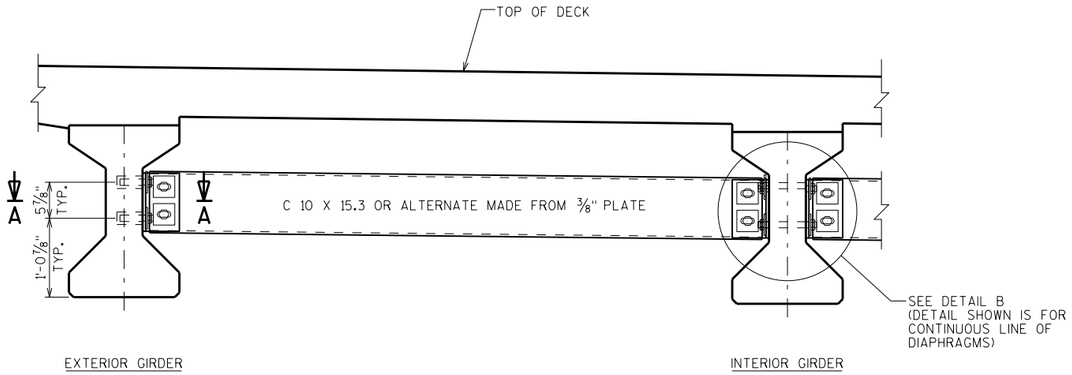
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-282", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

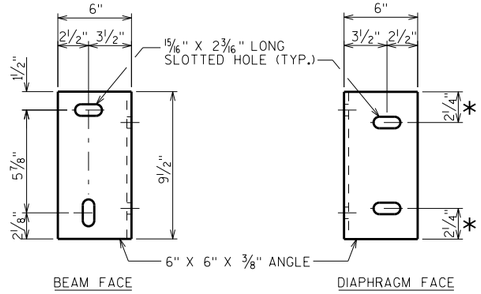
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

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.

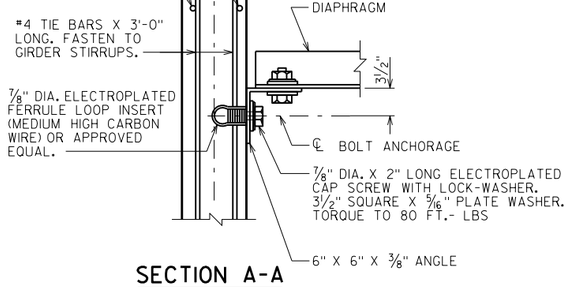


PART TRANSVERSE SECTION AT DIAPHRAGM



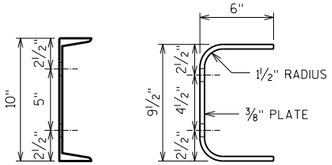
DIAPHRAGM SUPPORT

* 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM



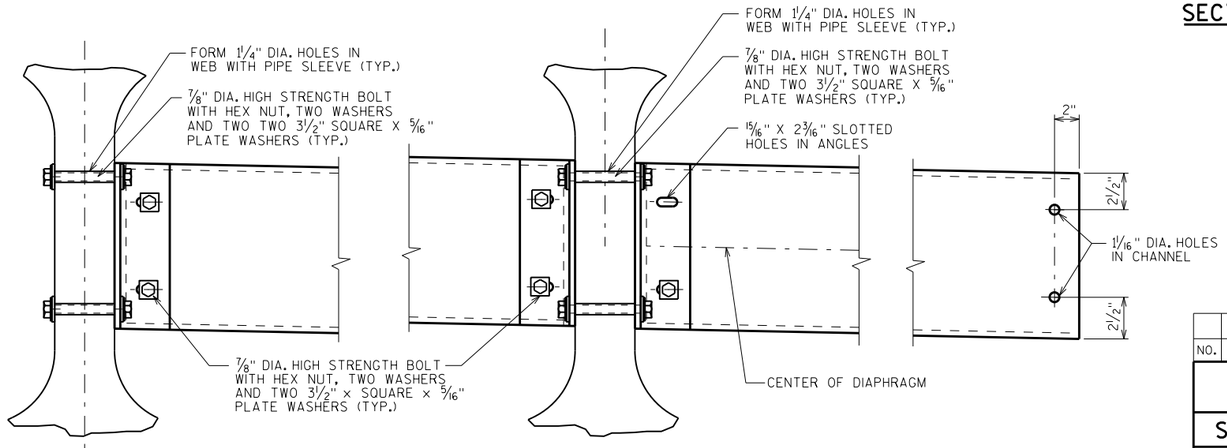
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



C10X15.3 ALTERNATE DIAPHRAGM

SECTION THRU DIAPHRAGM



(FOR STAGGERED DIAPHRAGM) (FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

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STEEL DIAPHRAGM

SHEET 11

395

SCALE = 1

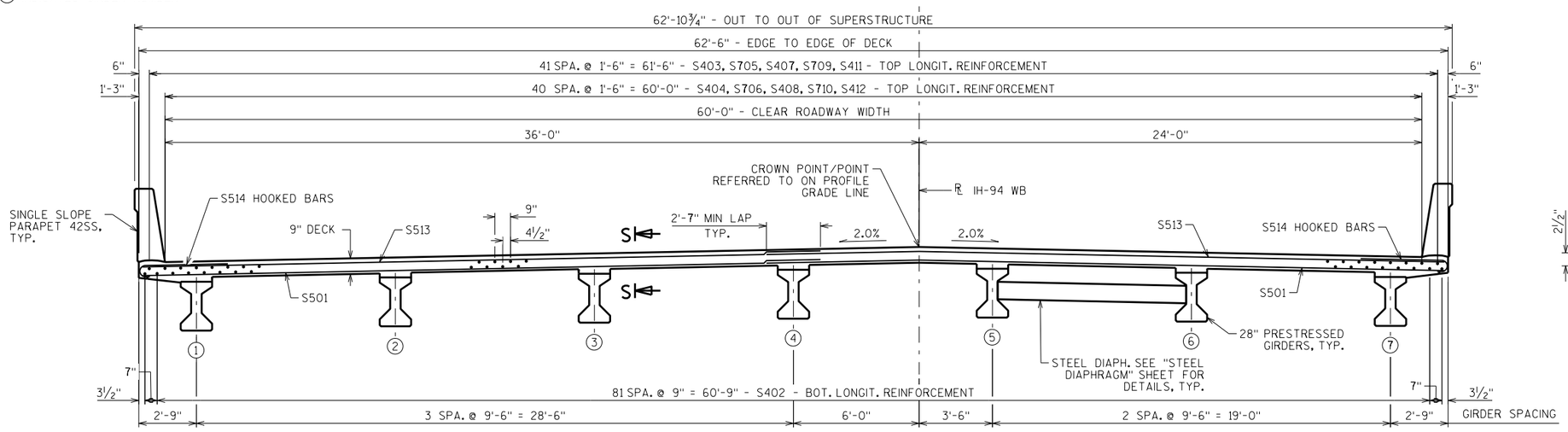
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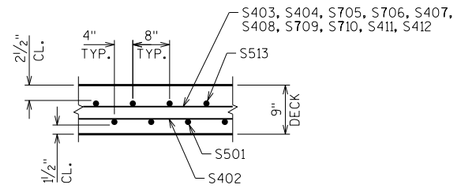
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STATE PROJECT NUMBER

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◯ INDICATES GIRDER NUMBER

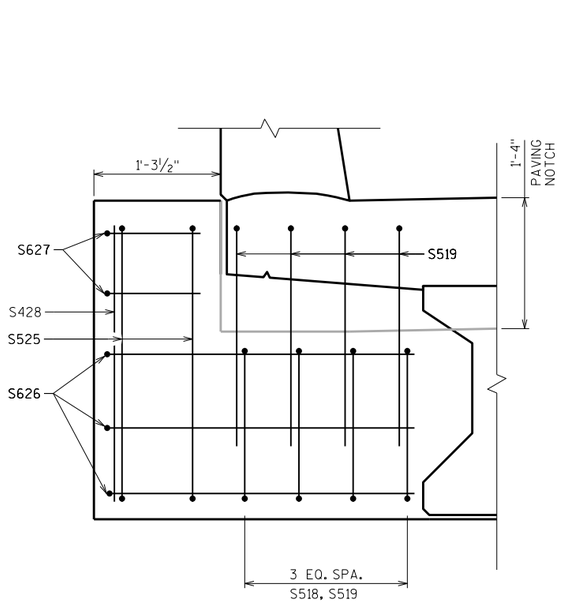




SECTION S-S

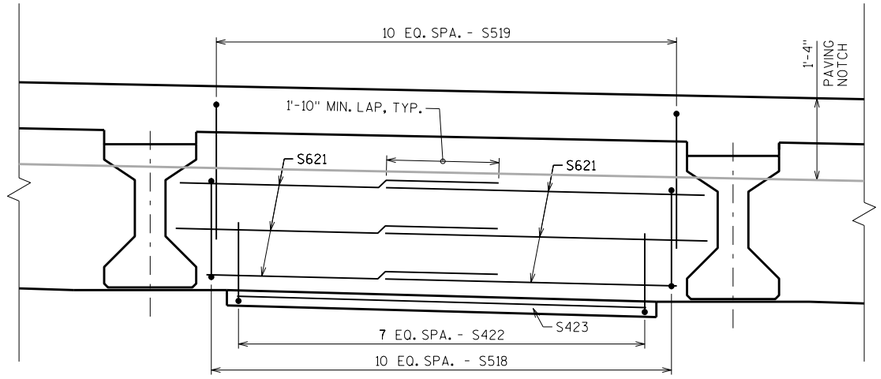
CROSS SECTION THRU ROADWAY

LOOKING EAST



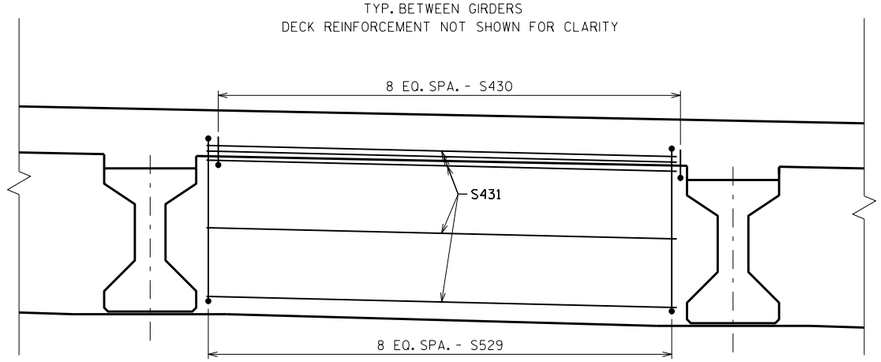
ABUTMENT DIAPHRAGM- EXTERIOR DETAIL

NORTHEAST CORNER SHOWN. OTHER CORNERS SIMILAR
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



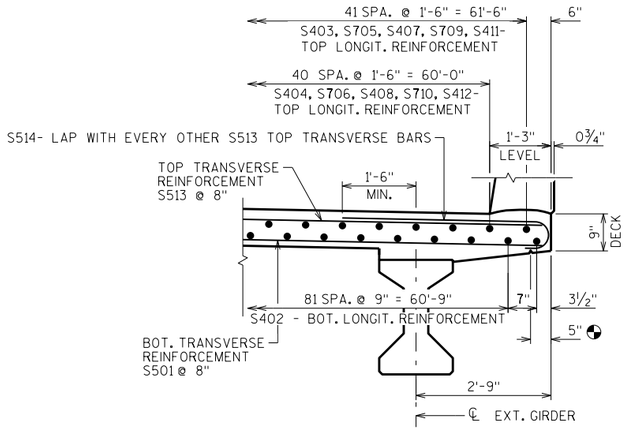
DIAPHRAGM AT ABUTMENTS

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

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SUPERSTRUCTURE CROSS SECTION

SHEET 12

396

SCALE = 3.00

8

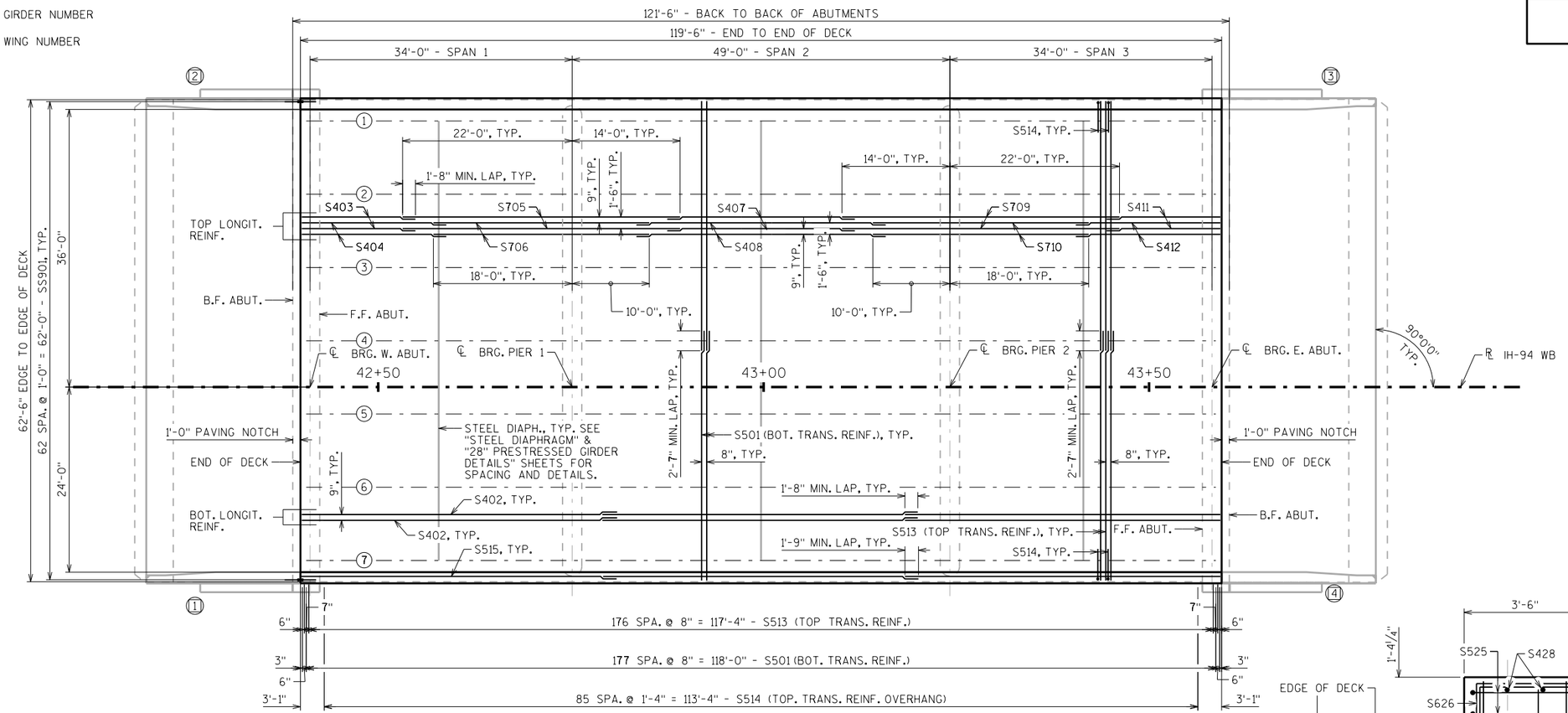
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STATE PROJECT NUMBER

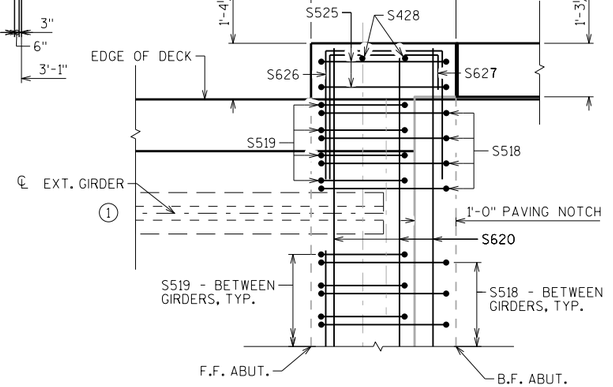
1021-04-78

◯ INDICATES GIRDER NUMBER

▢ INDICATES WING NUMBER



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

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STRUCTURE B-55-282

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SUPERSTRUCTURE

SHEET 13

397

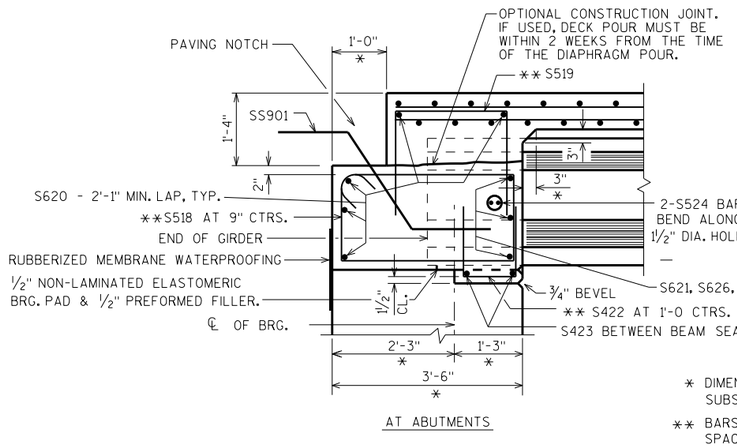
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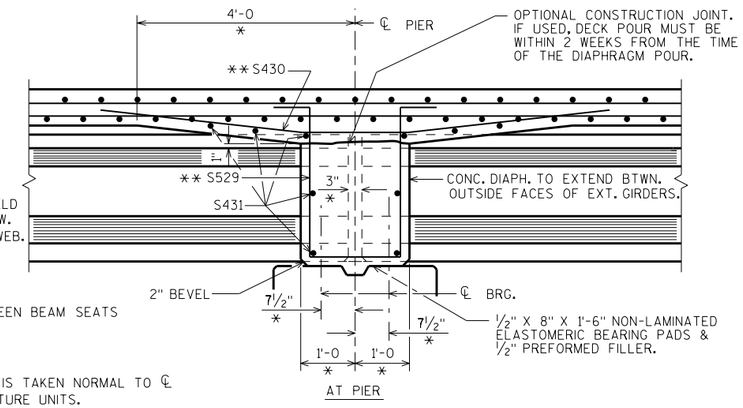
8

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

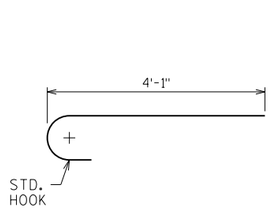
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

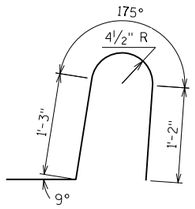
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	360	32'-6"			TRANSVERSE - BOT.
S402	X	252	40'-11"			LONGIT. - BOT.
S403	X	42	14'-9"			LONGIT. - TOP. - SPAN 1
S404	X	41	18'-9"			LONGIT. - TOP. - SPAN 1
S705	X	42	36'-0"			LONGIT. - TOP. - CONTINUITY OVER PIER 1
S706	X	41	28'-0"			LONGIT. - 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

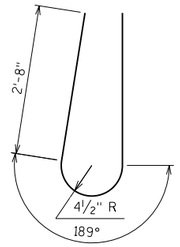
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
SS901		126	5'-0"	X		ABUT. DIAPHRAGM - APPROACH SLAB TIE



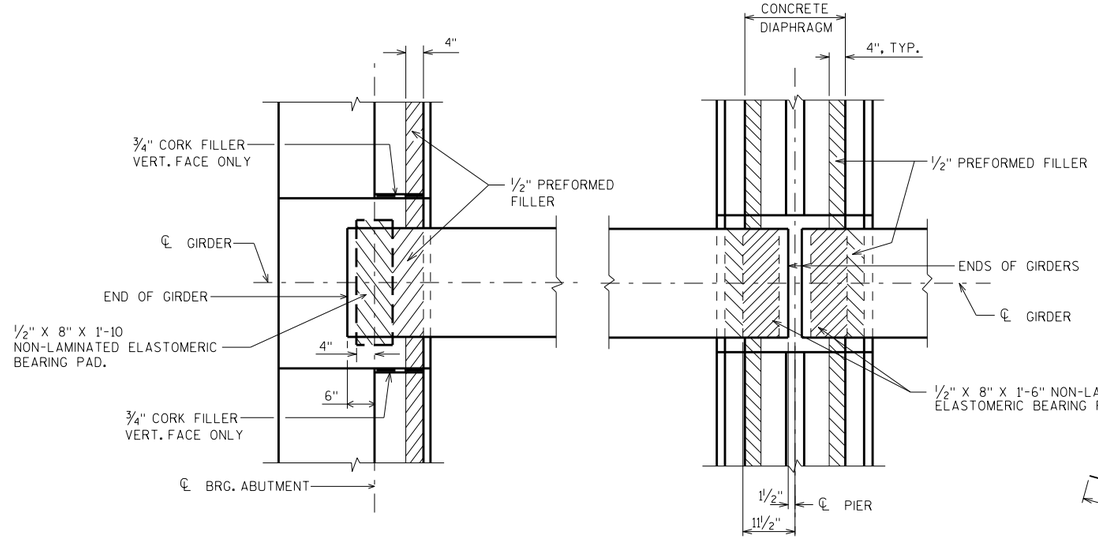
S514



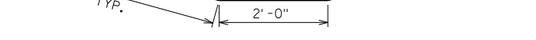
S516



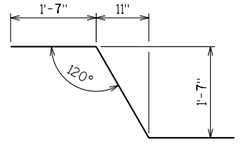
S517



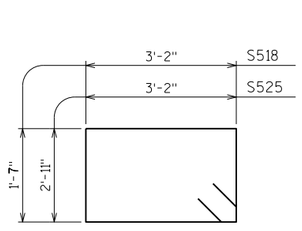
BEARING PAD DETAIL



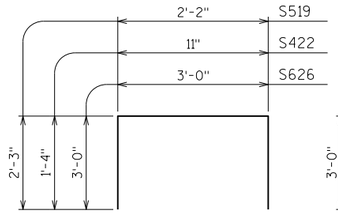
S430



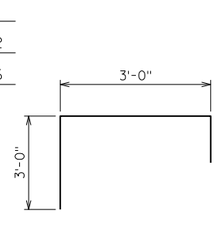
SS901



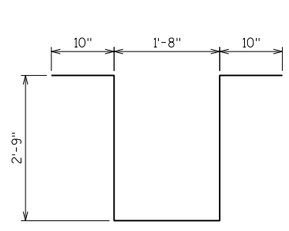
S518, S525



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

398

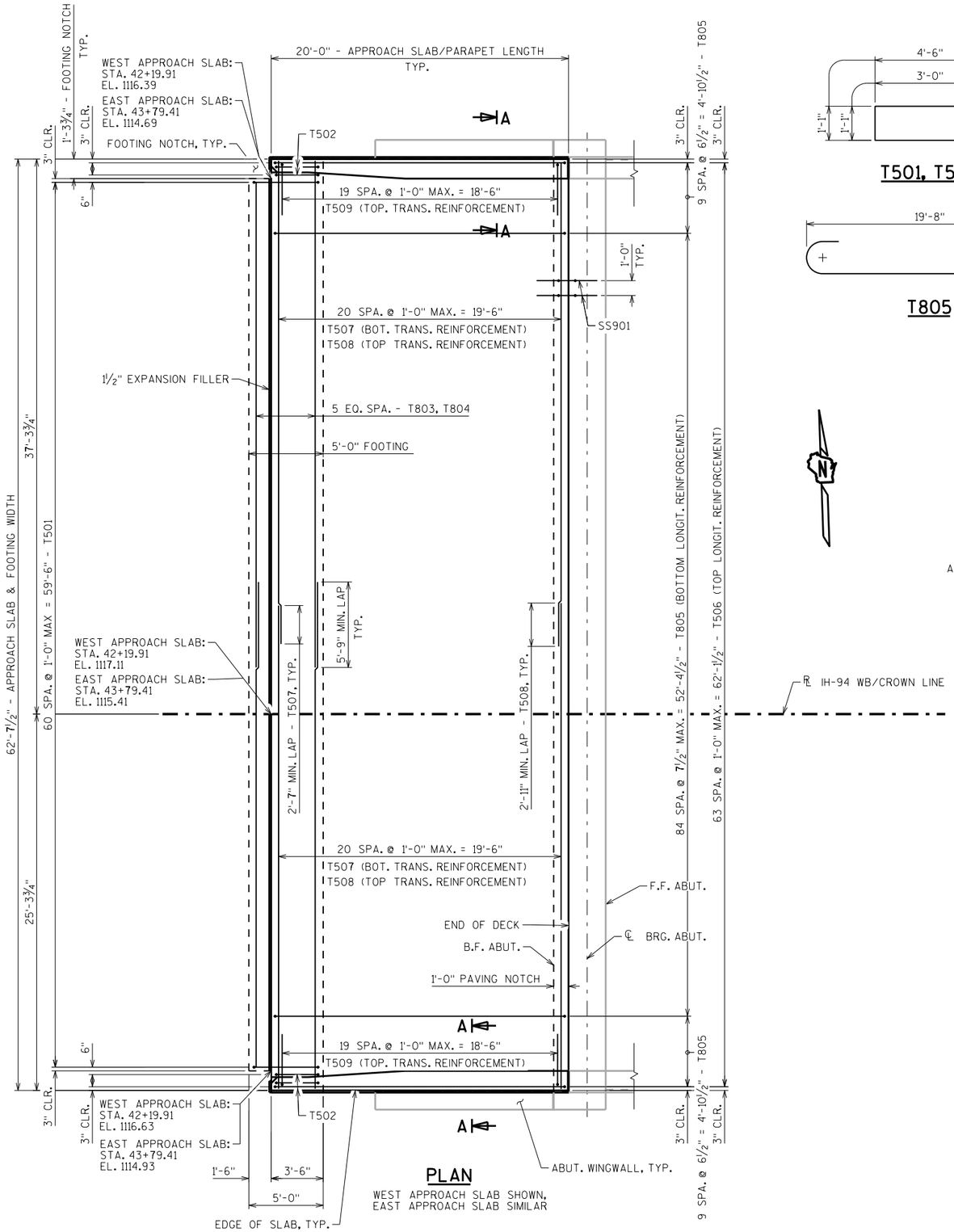
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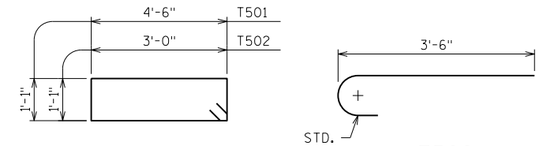
STATE PROJECT NUMBER

1021-04-78

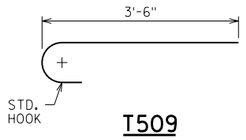


PLAN

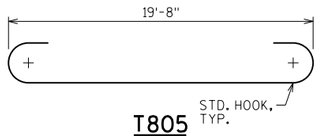
WEST APPROACH SLAB SHOWN,
EAST APPROACH SLAB SIMILAR



T501, T502



T509

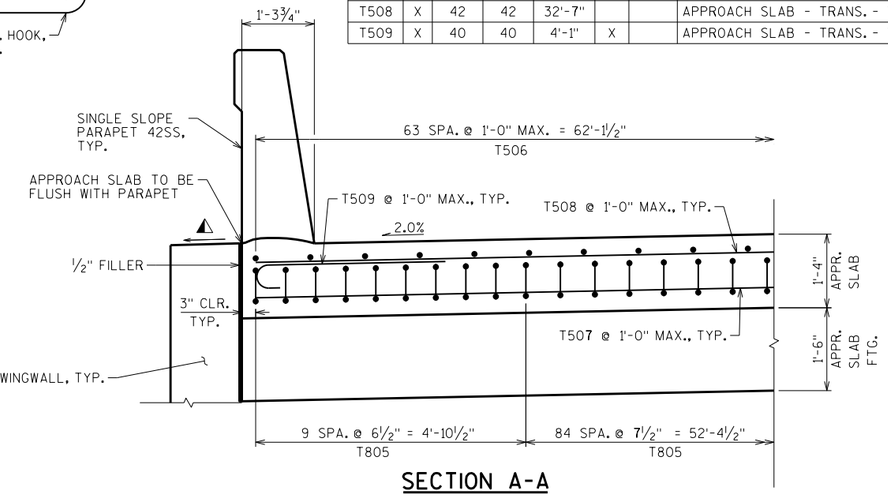


T805

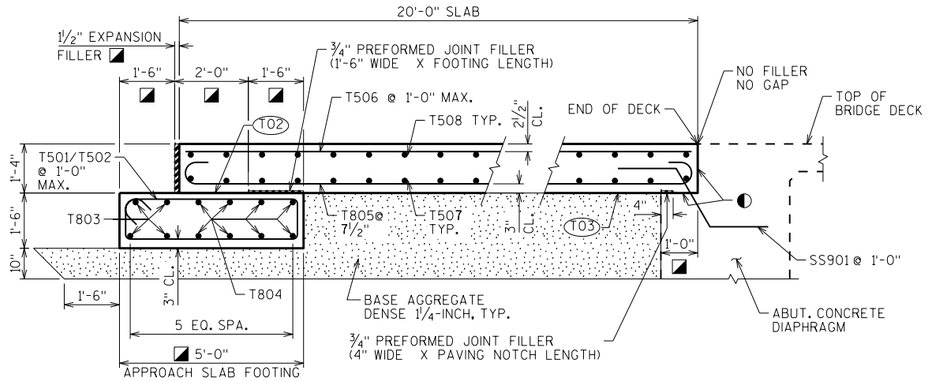
BILL OF BARS

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.

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-282

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STRUCTURAL APPROACH SLAB

SHEET 15

399

SCALE = 4.00

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8

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BILL OF BARS

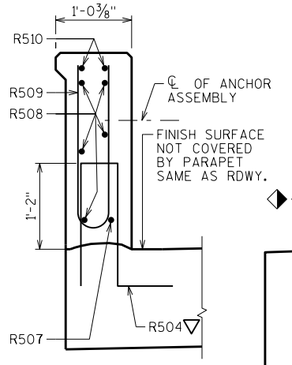
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	24	24	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-8"	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.

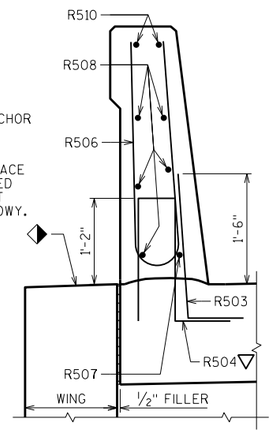
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

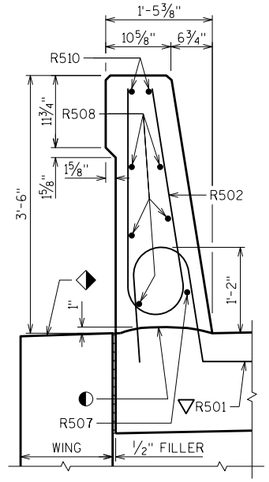
BUNDLE AND TAG EACH SERIES SEPARATELY.



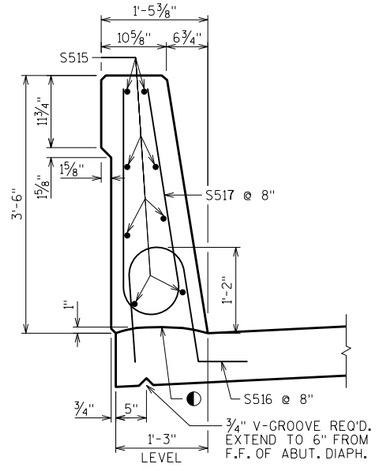
SECTION A-A



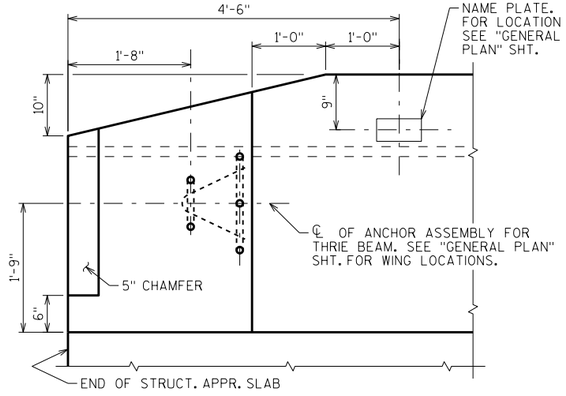
SECTION B-B



SECTION C-C

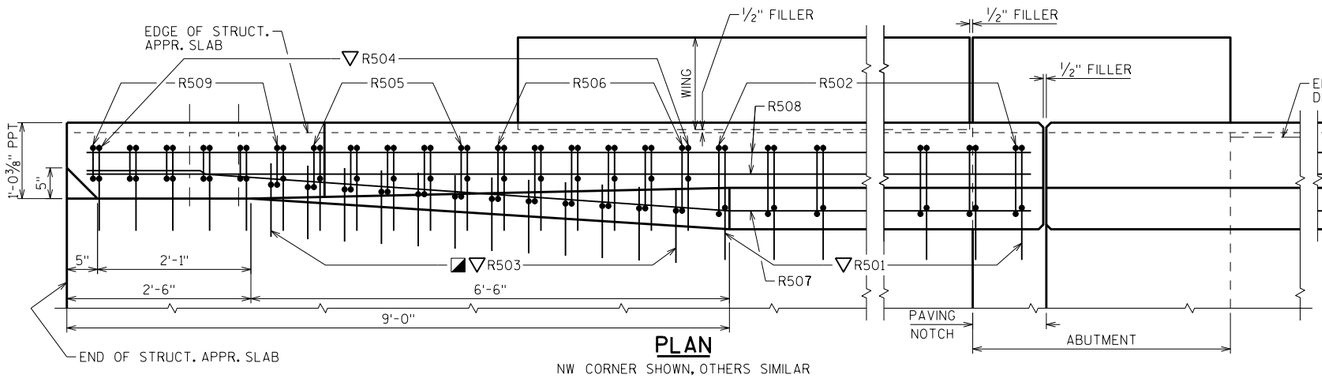


SECTION THRU PARAPET ON DECK



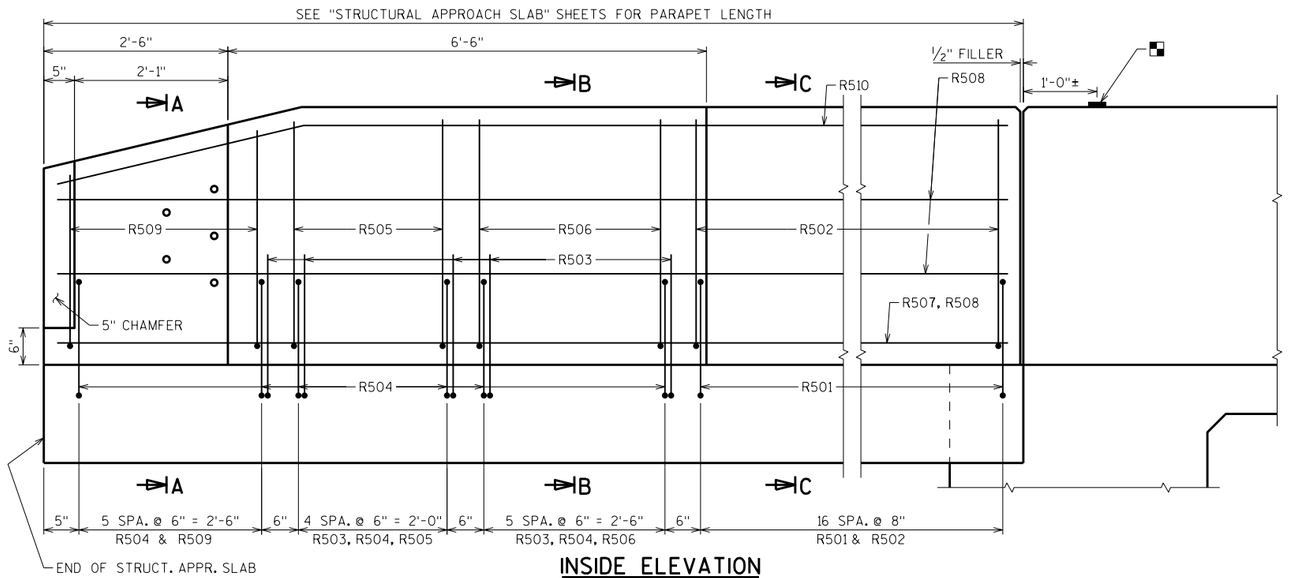
PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET



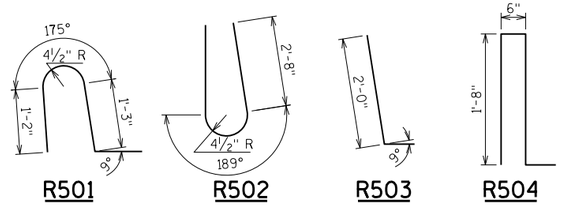
PLAN

NW CORNER SHOWN, OTHERS SIMILAR

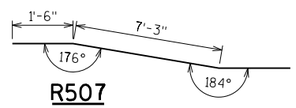


INSIDE ELEVATION

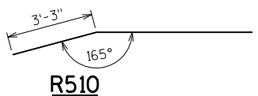
NW CORNER SHOWN, OTHERS SIMILAR
WING & STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY



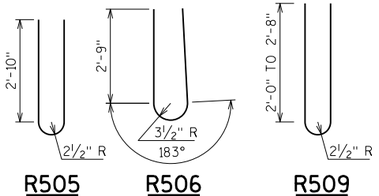
R501 R502 R503 R504



R507



R510



R505 R506 R509

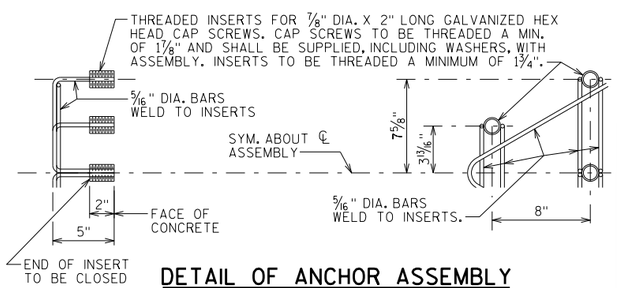
BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

◐ 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-55-282

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SINGLE SLOPE PARAPET 42SS

SHEET 16

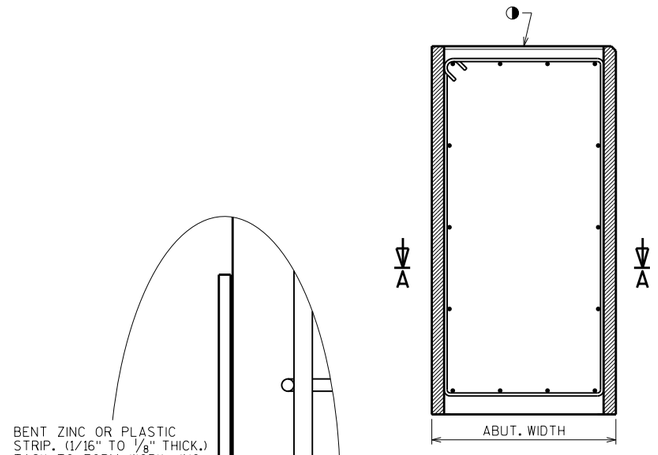
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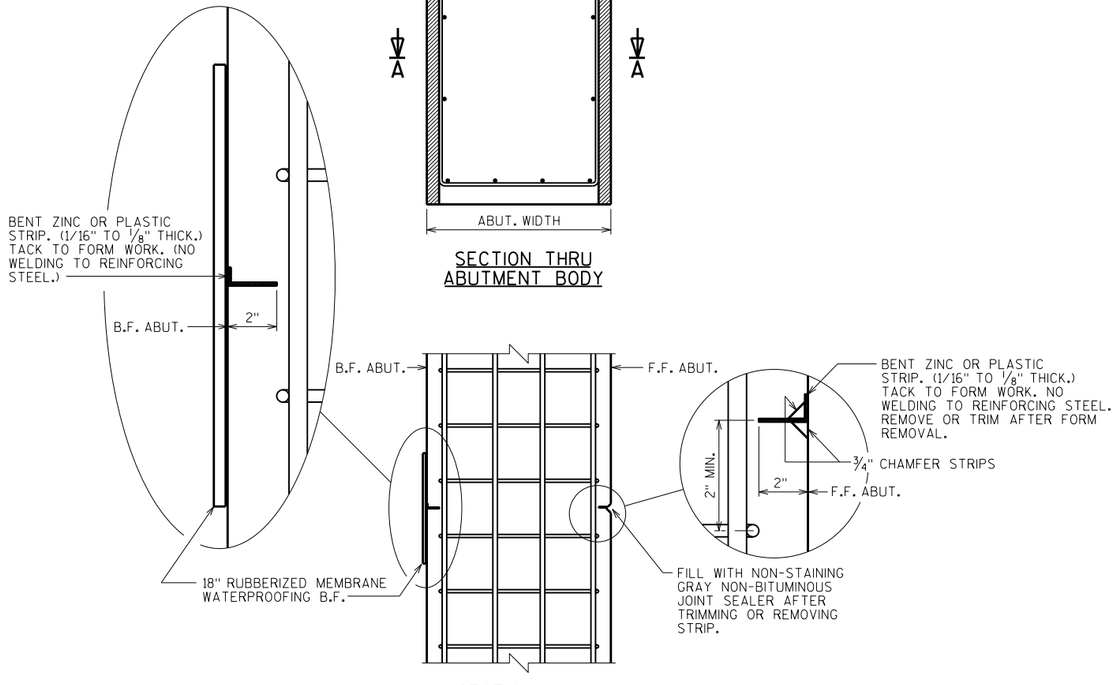
8

8

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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

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ALTERNATE CONSTRUCTION JOINT

SHEET 17

401

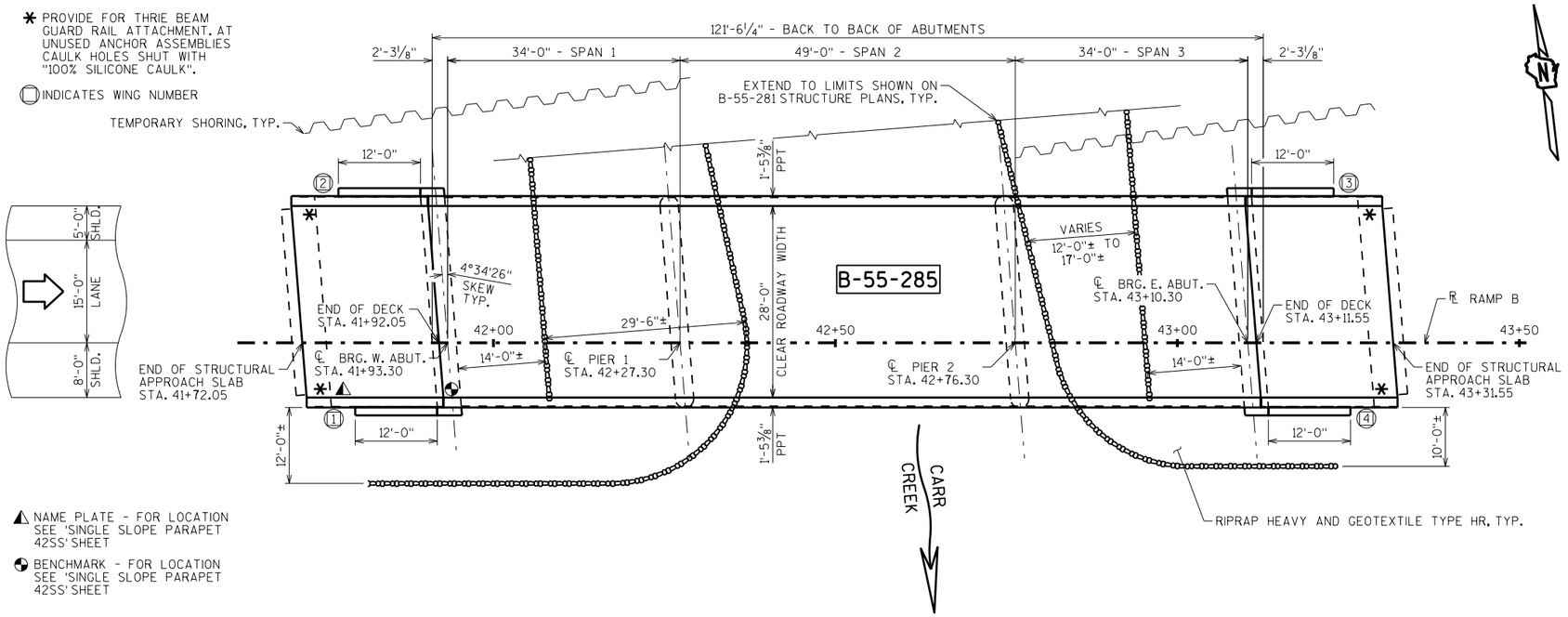
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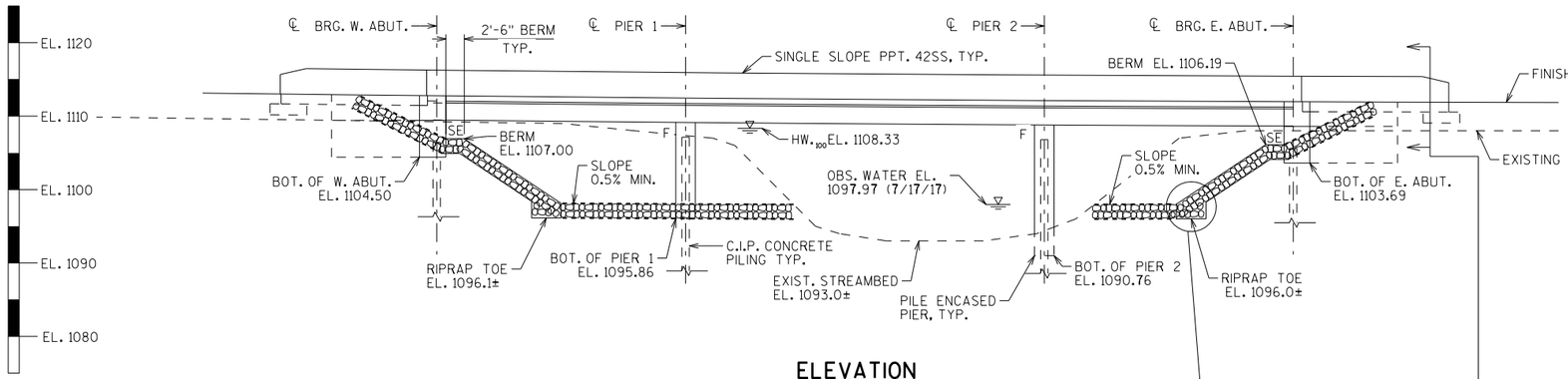
STATE PROJECT NUMBER

1021-04-77



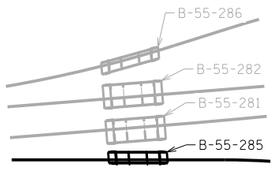
PLAN

3-SPAN 28" PRESTRESSED GIRDER

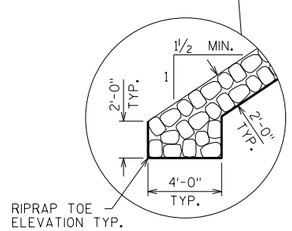


ELEVATION

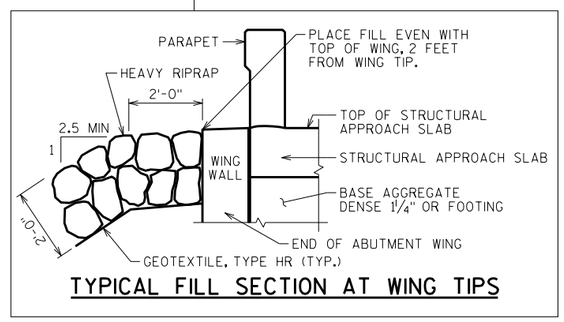
NORMAL TO CARR CREEK (LOOKING NORTH)



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

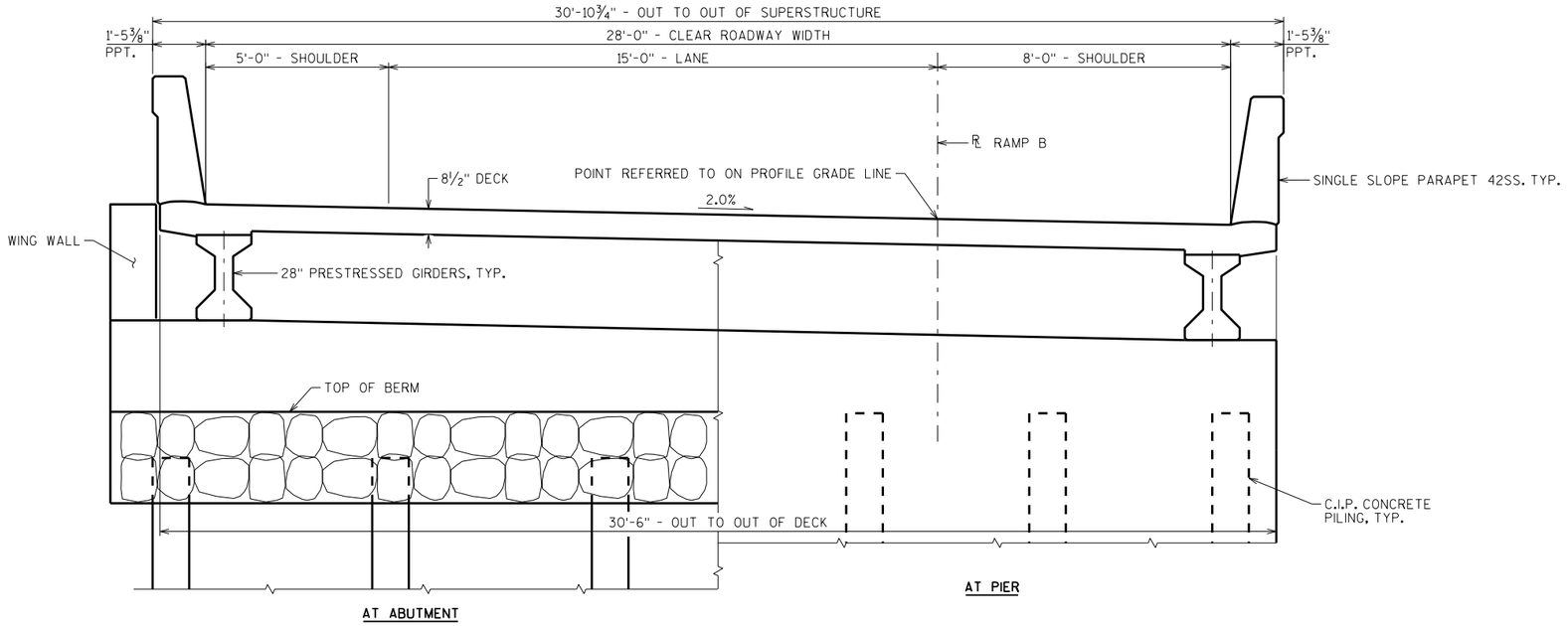
GENERAL PLAN

SHEET 1 OF 16

402

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.

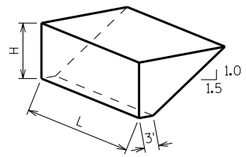
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

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.

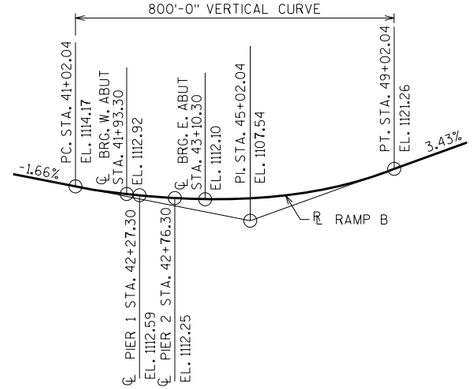
THE EXISTING STREAM BED SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

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.

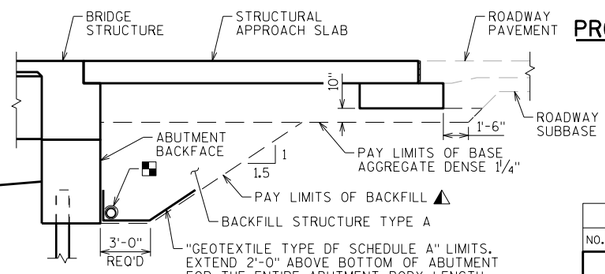


ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

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

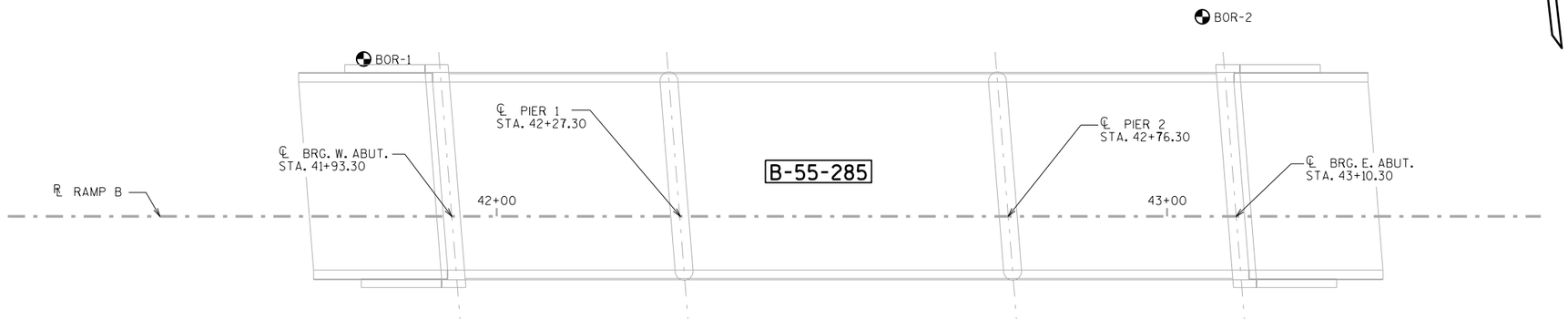
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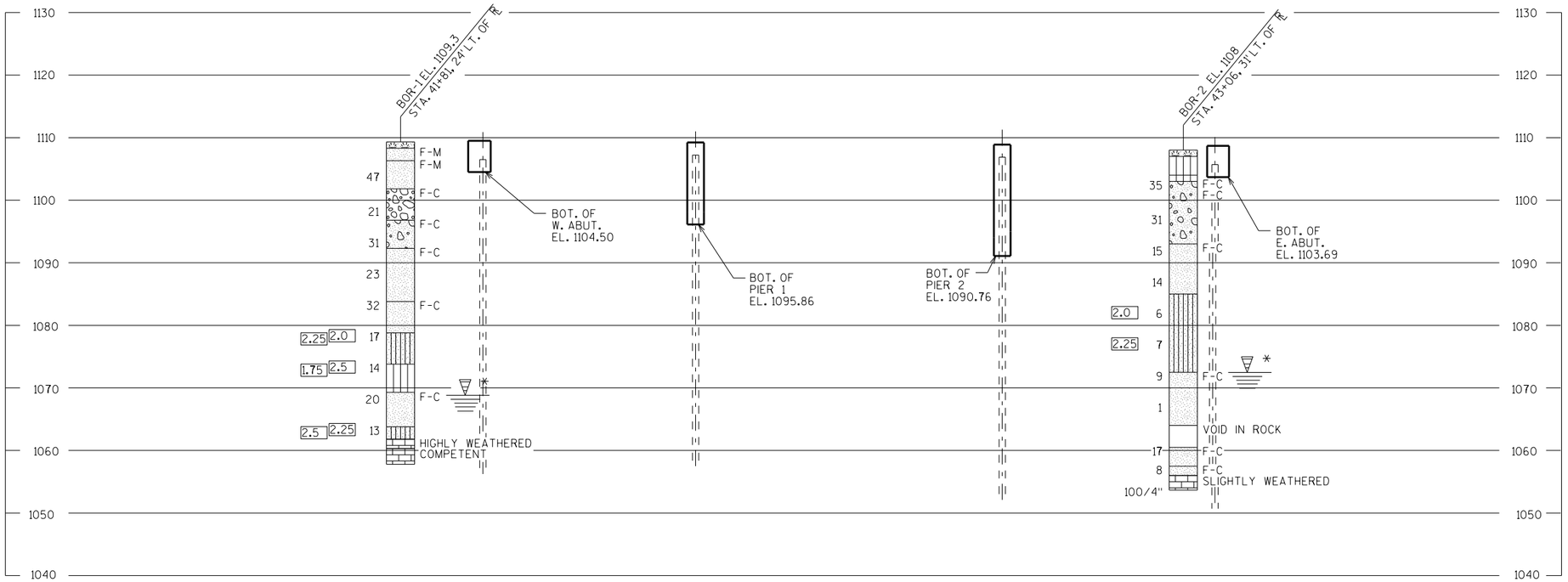
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SCALE = 2.00

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.

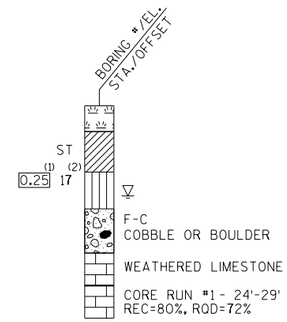
STATE PROJECT NUMBER

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

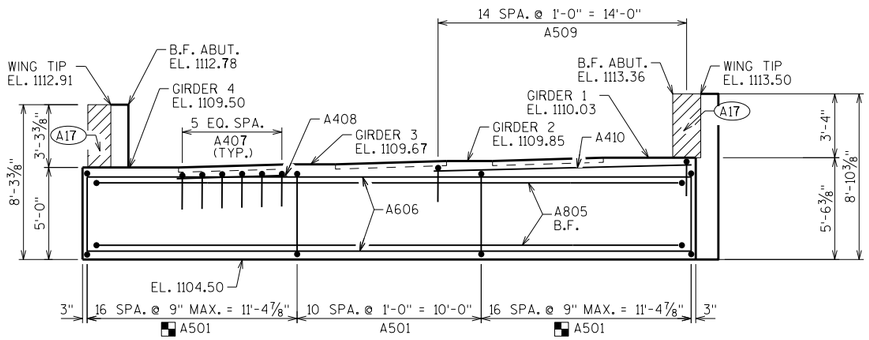
SHEET 3

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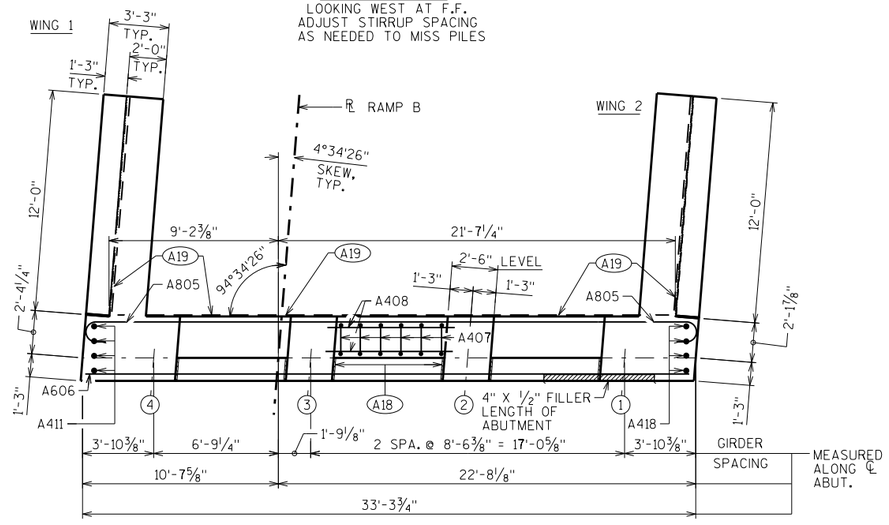
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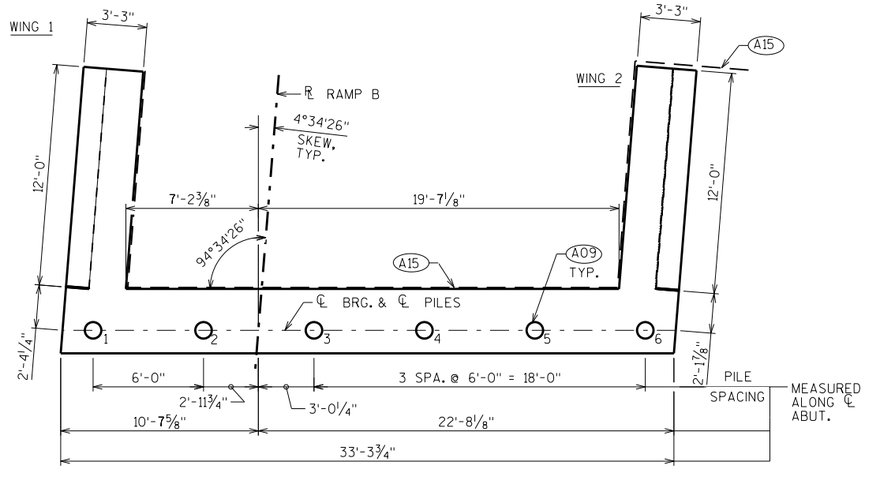


ELEVATION

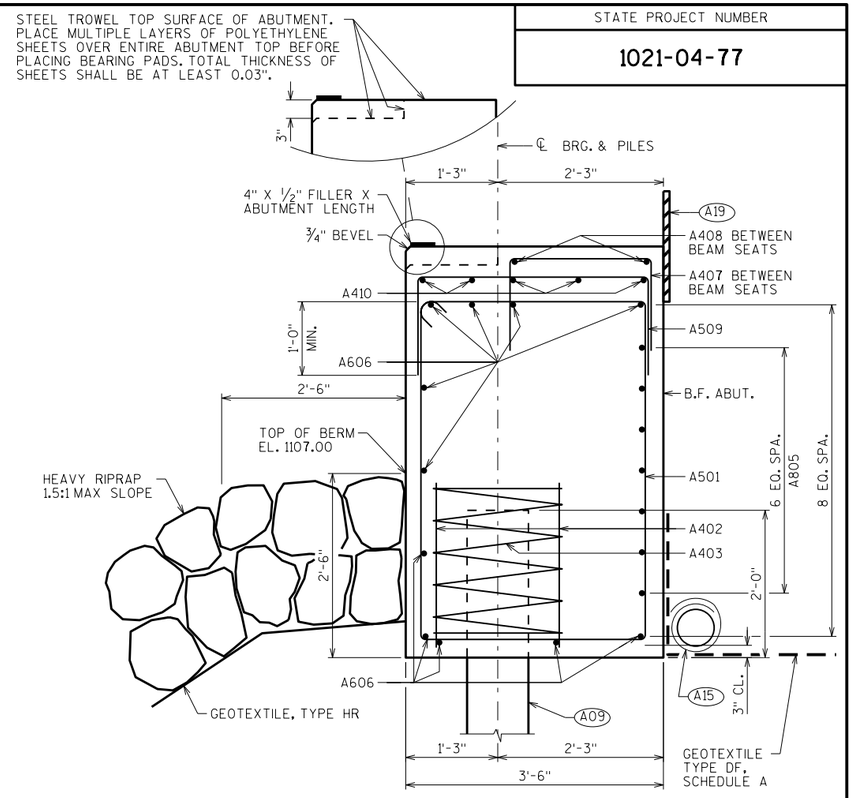
LOOKING WEST AT F.F.
ADJUST STIRRUP SPACING AS NEEDED TO MISS PILES



PLAN

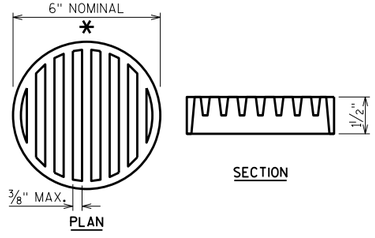


PILE PLAN



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

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

WEST ABUTMENT

SHEET 4

405

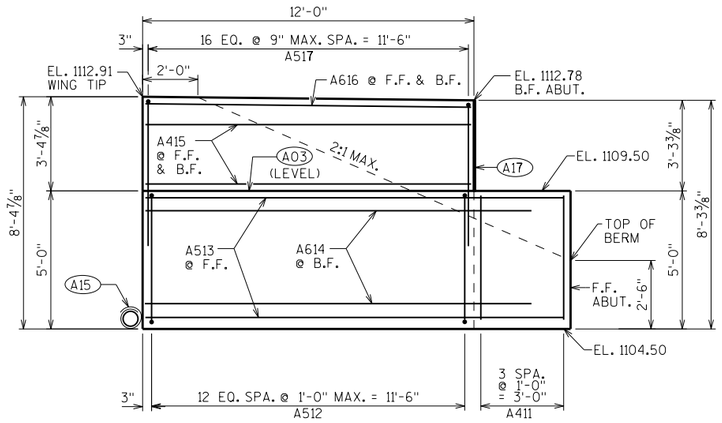
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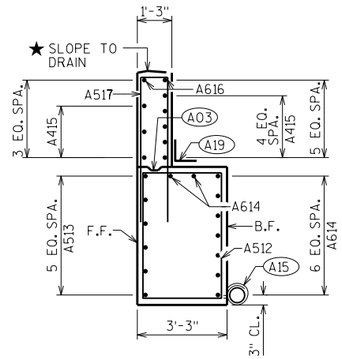
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STATE PROJECT NUMBER

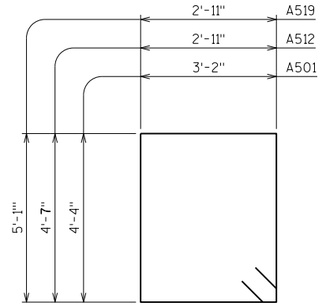
1021-04-77



WING 1 ELEVATION



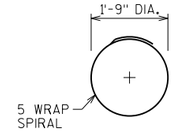
WING 1 SECTION



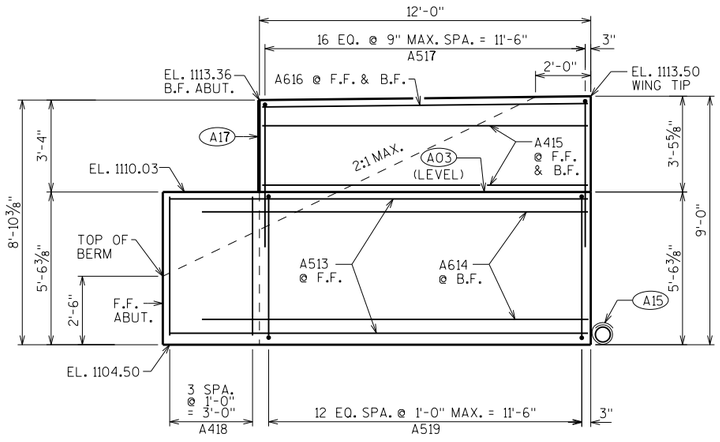
A501, A512, A519

BILL OF BARS

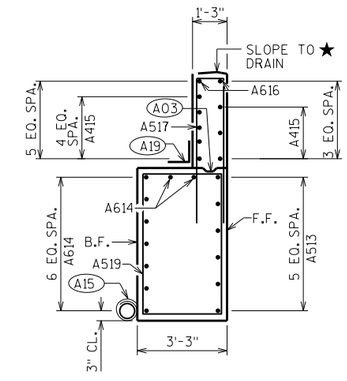
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		43	15'-8"	X		BODY - STIRRUPS - VERTICAL
A402		12	2'-3"			PILES - 2 PER BODY PILE - VERTICAL
A403		6	28'-0"	X		PILES - 1 PER BODY PILE - SPIRAL
A604		NOT	USED			
A805		7	34'-8"	X		BODY - HORIZONTAL - B.F.
A606		11	32'-11"			BODY - HORIZONTAL
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



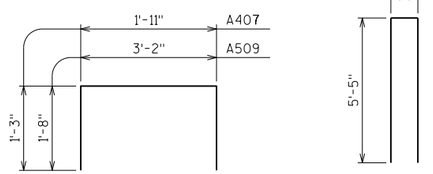
A403



WING 2 ELEVATION

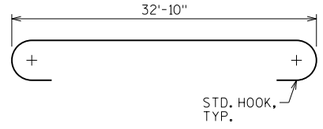


WING 2 SECTION



A407, A509

A517



A805

★ SLOPE ⅛" PER FOOT

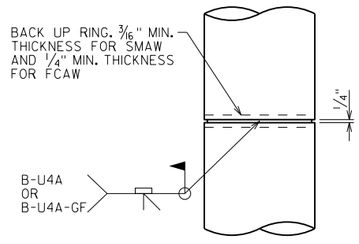
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 × 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(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.

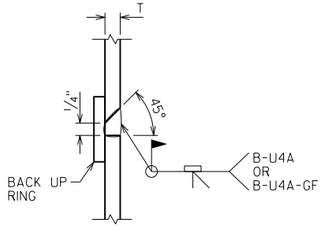
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(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.

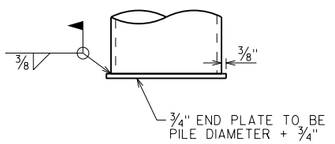


CAST-IN-PLACE 'PIPE PILE'



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

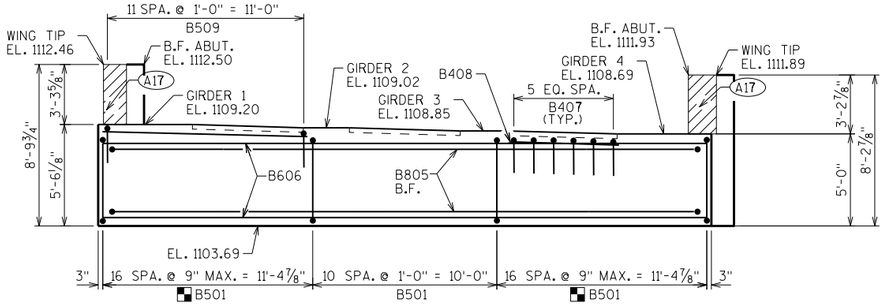
SHEET 5

406

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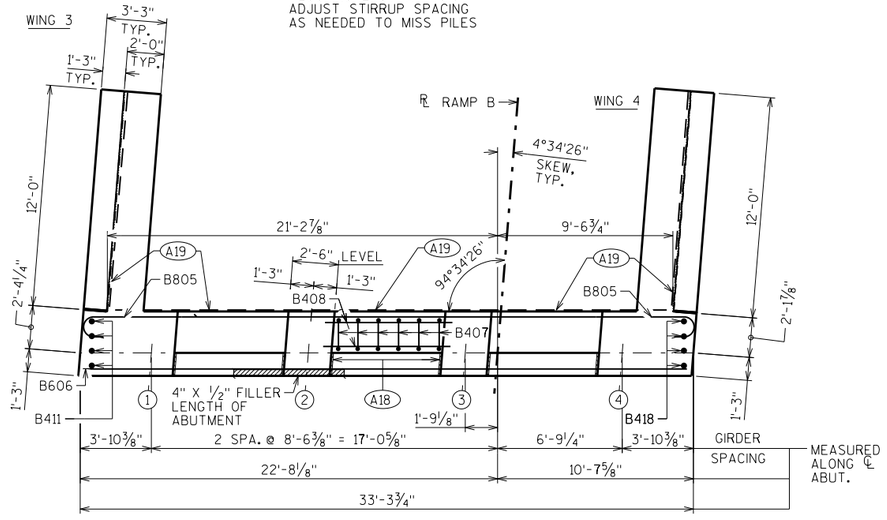
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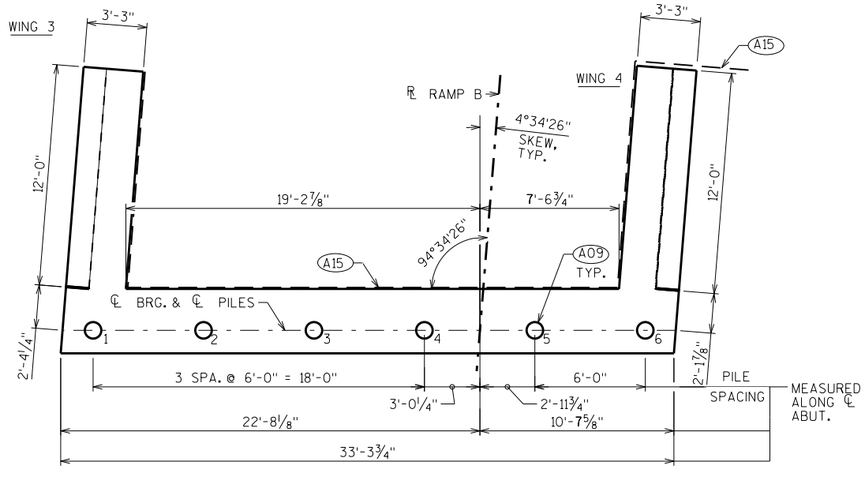


ELEVATION

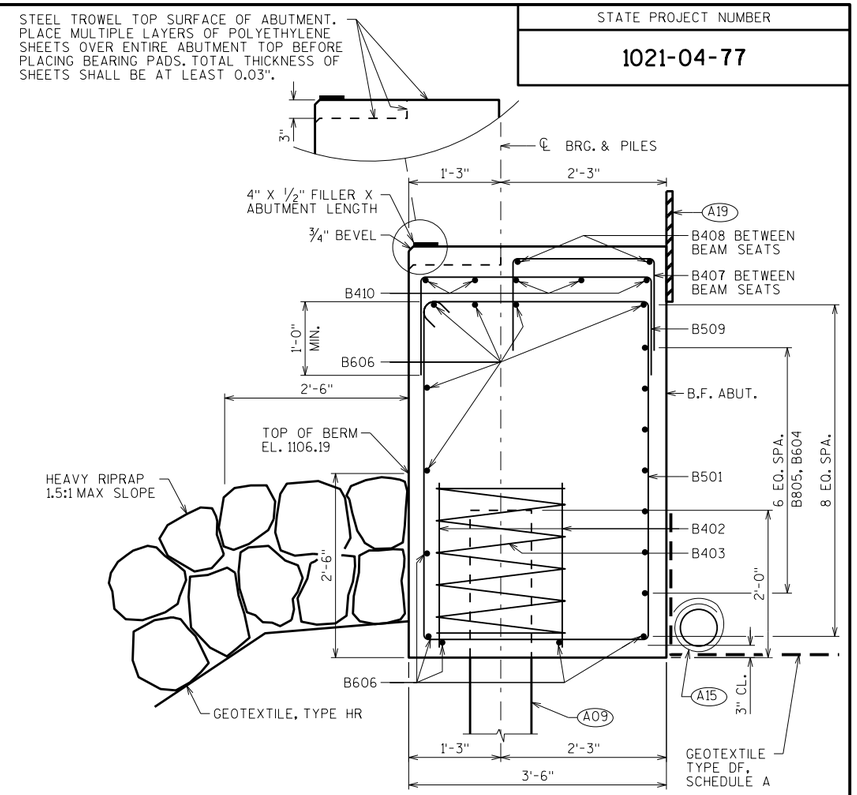
LOOKING EAST AT F.F.
ADJUST STIRRUP SPACING
AS NEEDED TO MISS PILES



PLAN

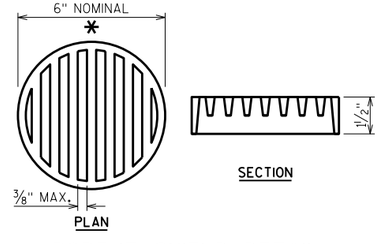


PILE PLAN



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 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

407

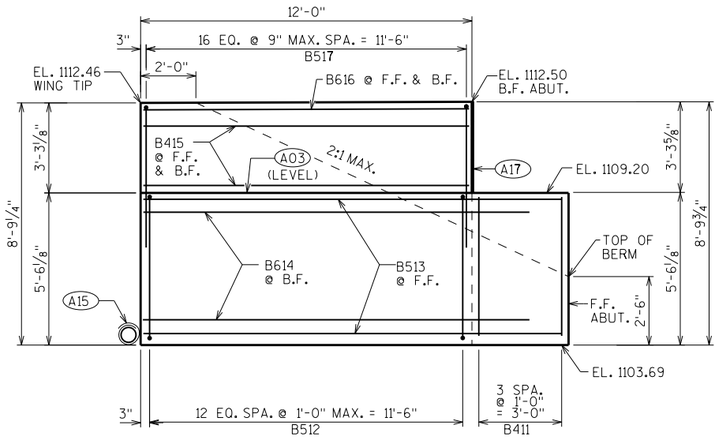
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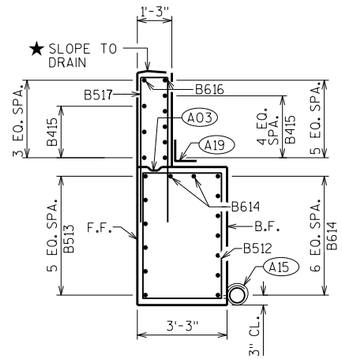
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STATE PROJECT NUMBER

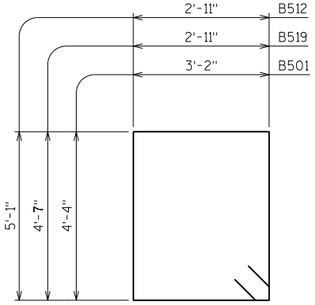
1021-04-77



WING 3 ELEVATION



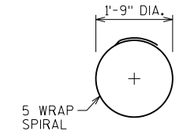
WING 3 SECTION



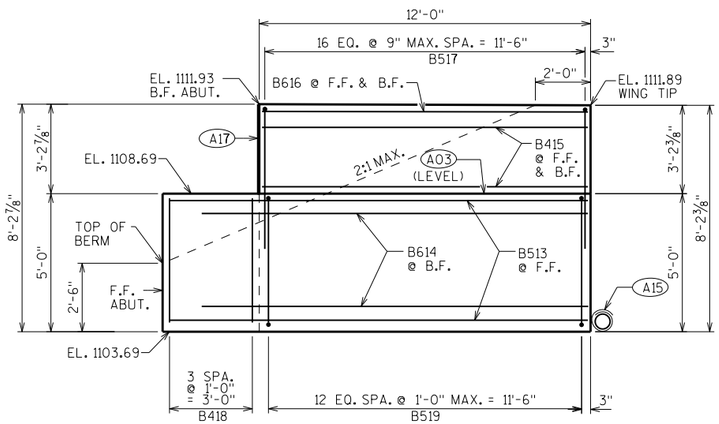
B501. B512, B519

BILL OF BARS

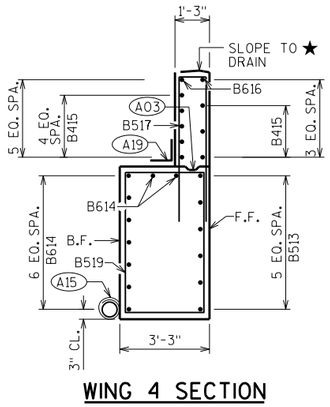
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		43	15'-8"	X		BODY - STIRRUPS - VERTICAL
B402		12	2'-3"			PILES - 2 PER BODY PILE - VERTICAL
B403		6	28'-0"	X		PILES - 1 PER BODY PILE - SPIRAL
B604		NOT	USED			
B805		7	34'-8"	X		BODY - HORIZONTAL - B.F.
B606		11	32'-11"			BODY - HORIZONTAL
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



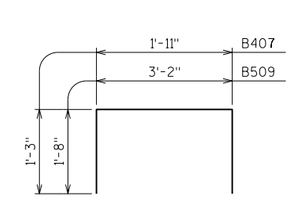
B403



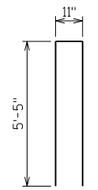
WING 4 ELEVATION



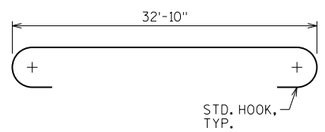
WING 4 SECTION



B407, B509



B517



B805

★ SLOPE ⅛" PER FOOT

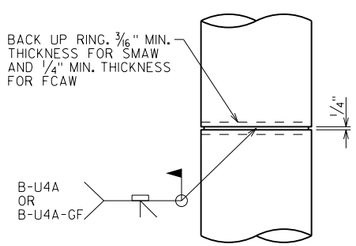
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(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.

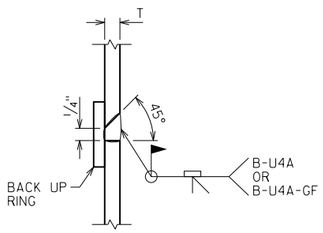
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(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.

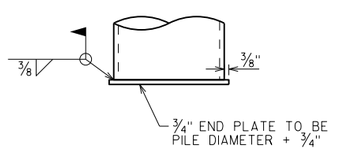


CAST-IN-PLACE 'PIPE PILE'



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

408

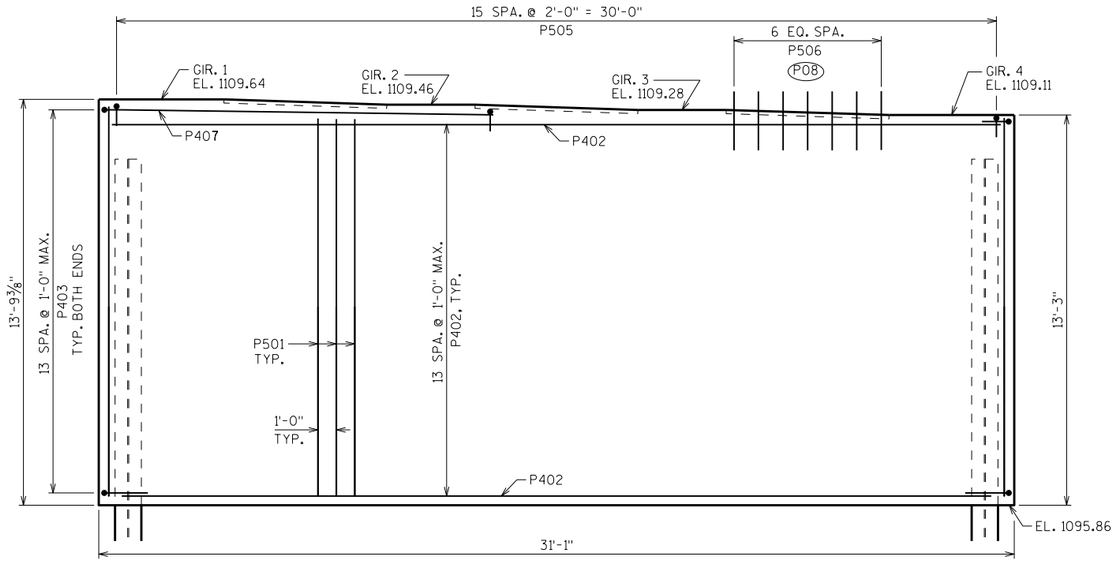
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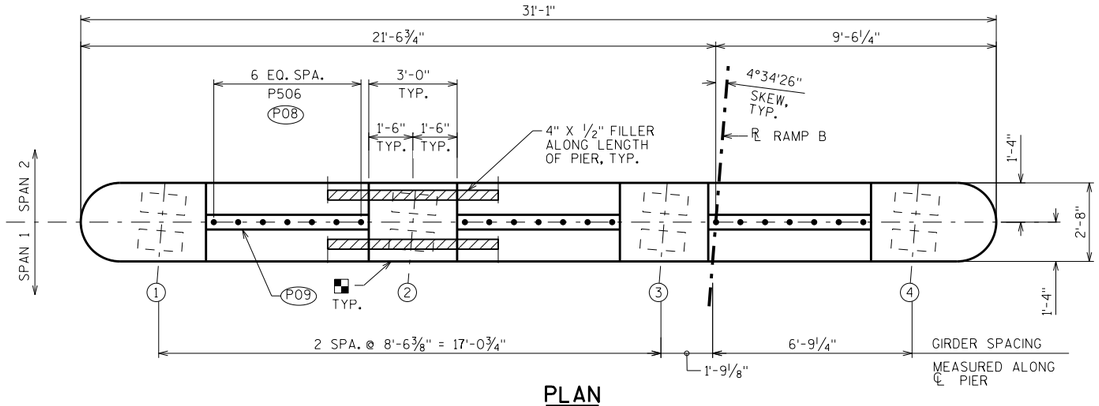
STATE PROJECT NUMBER

1021-04-77

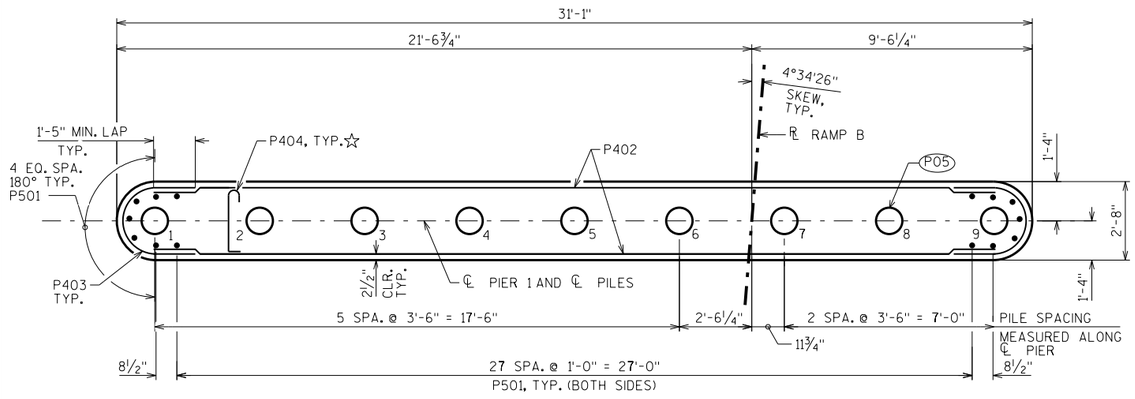


ELEVATION

LOOKING EAST

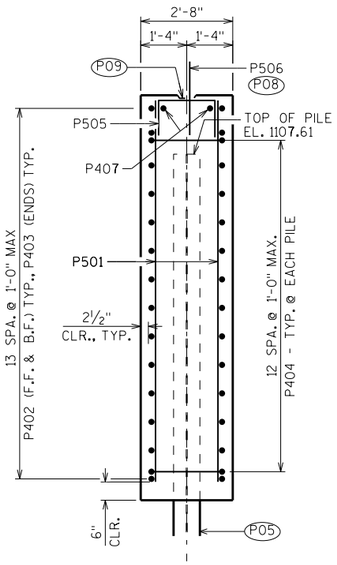


PLAN



PILE PLAN

SHOWING REINFORCEMENT

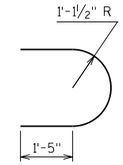


END VIEW

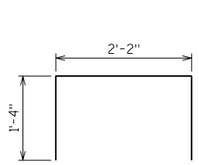
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

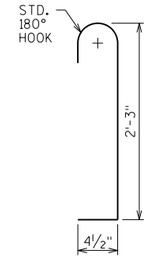
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
P501		66	12'-6"			PIER 1 - VERT.
P402		28	28'-7"			PIER 1 - HORIZ. - F.F. & B.F.
P403		28	6'-4"	X		PIER 1 - HORIZ. - ENDS
P404		117	3'-1"	X		PIER 1 - HORIZ. - PILES
P505		16	4'-7"	X		PIER 1 - VERT. - TOP
P506		21	2'-0"			PIER 1 - VERT. - DOWELS
P407		2	13'-0"			PIER 1 - HORIZ. - TOP. - GIR.



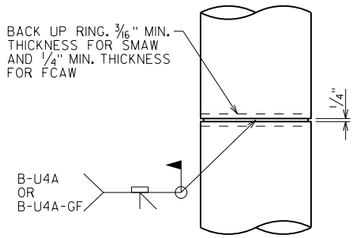
P403



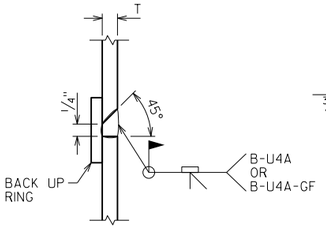
P505



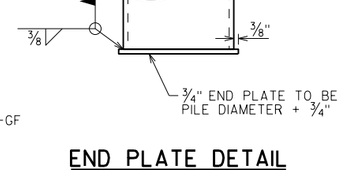
P404



CAST-IN-PLACE 'PIPE PILE'

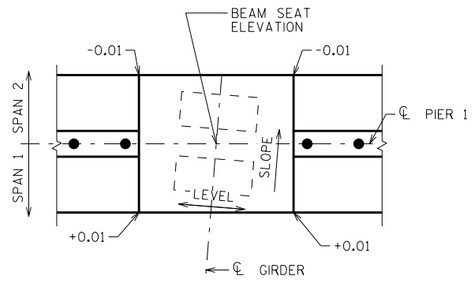


C.I.P. PILE WELD DETAIL



END PLATE DETAIL

PILE DETAILS



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

409

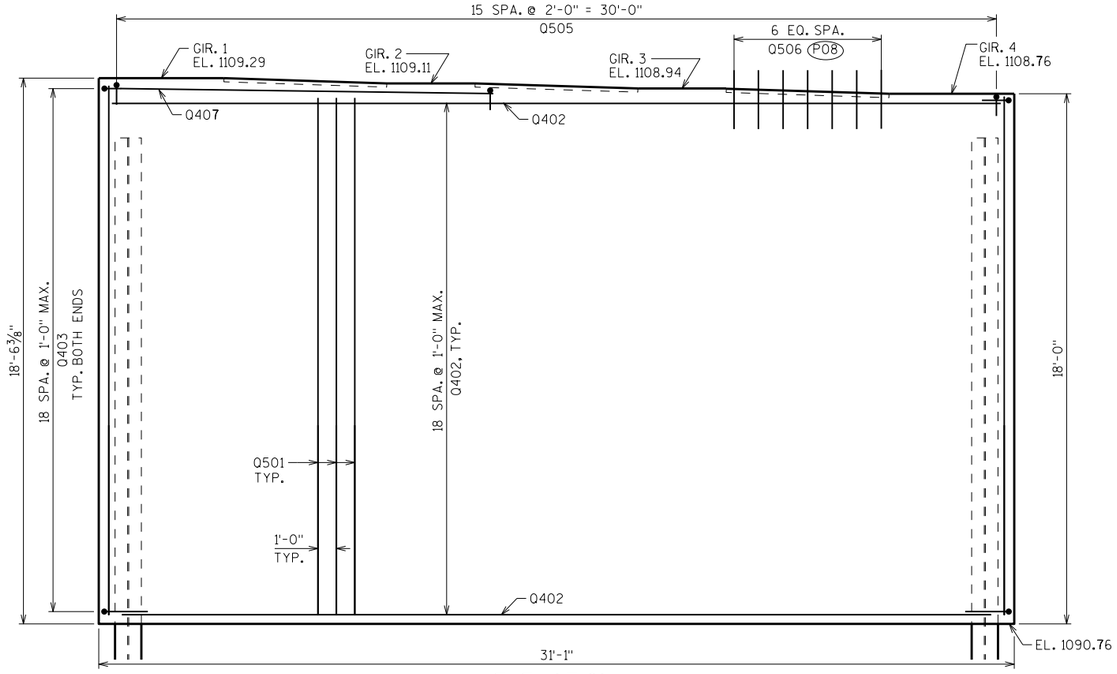
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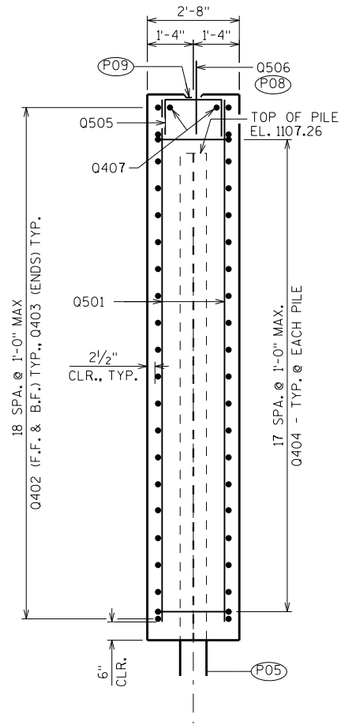
STATE PROJECT NUMBER

1021-04-77

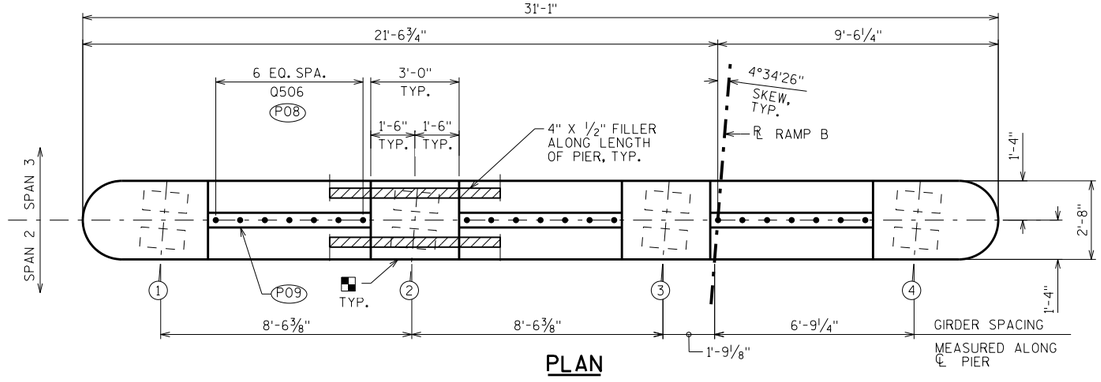


ELEVATION

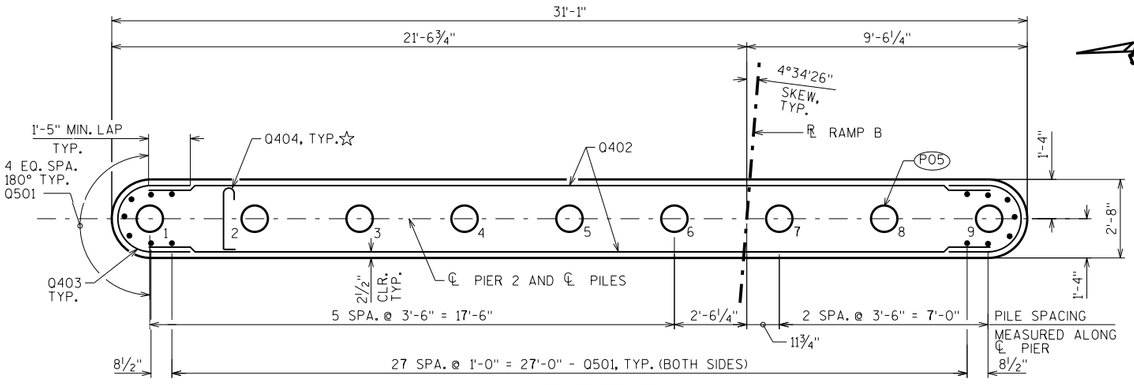
LOOKING EAST



END VIEW



PLAN



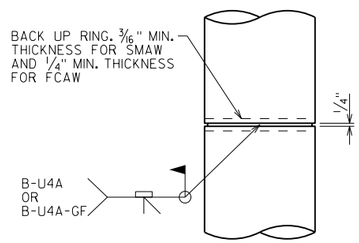
PILE PLAN

SHOWING REINFORCEMENT

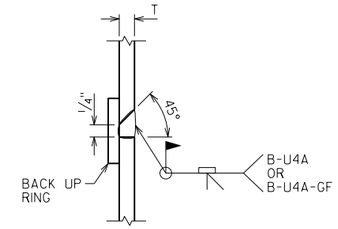
BILL OF BARS

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.

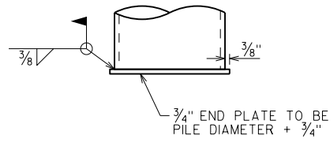


CAST-IN-PLACE 'PIPE PILE'

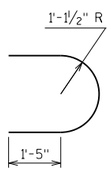


C.I.P. PILE WELD DETAIL

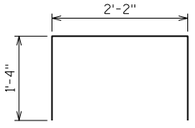
PILE DETAILS



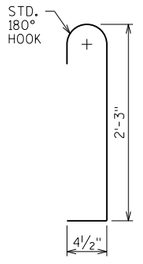
END PLATE DETAIL



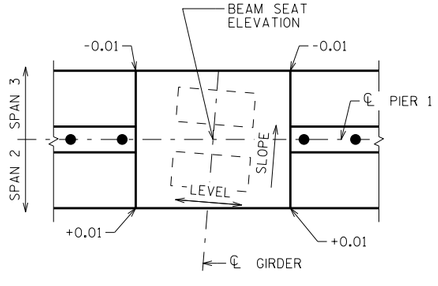
Q403



Q505



Q404



SLOPED BEAM SEAT DETAIL

☆ 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.

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

410

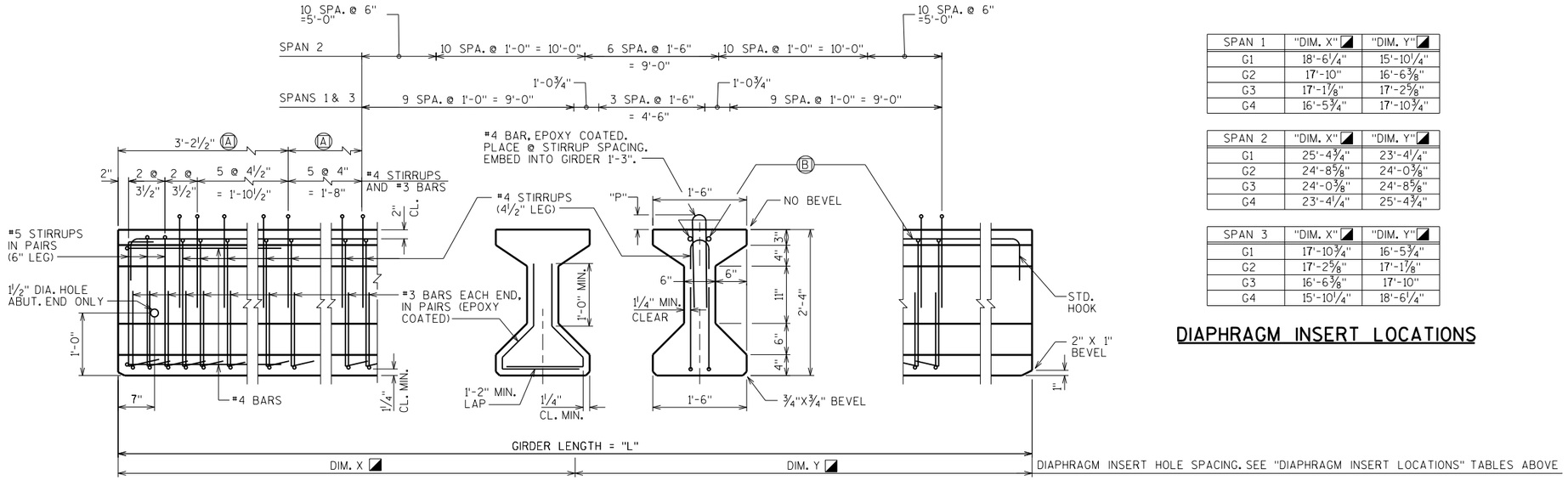
SCALE = 2.50

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8

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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'-8⅜"
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.

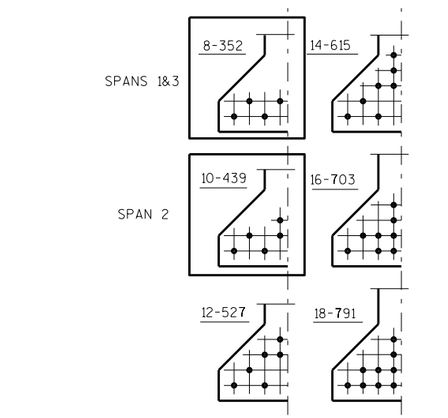
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

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".

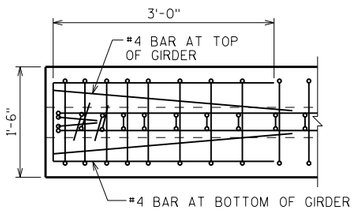
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



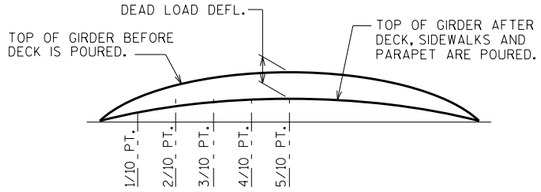
TYP. STRAND PATTERN

UNDRAPED PATTERN

0.6" DIA. STRANDS



TOP VIEW OF GIRDER ENDS



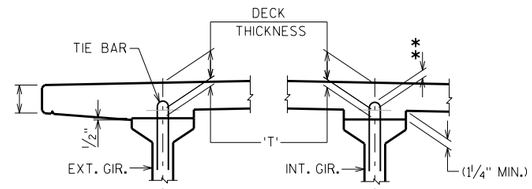
DEAD LOAD DEFLECTION DIAGRAM

* 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	[illegible]	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	[illegible]	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

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STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

28" PRESTRESSED GIRDER DETAILS

SHEET 10

411

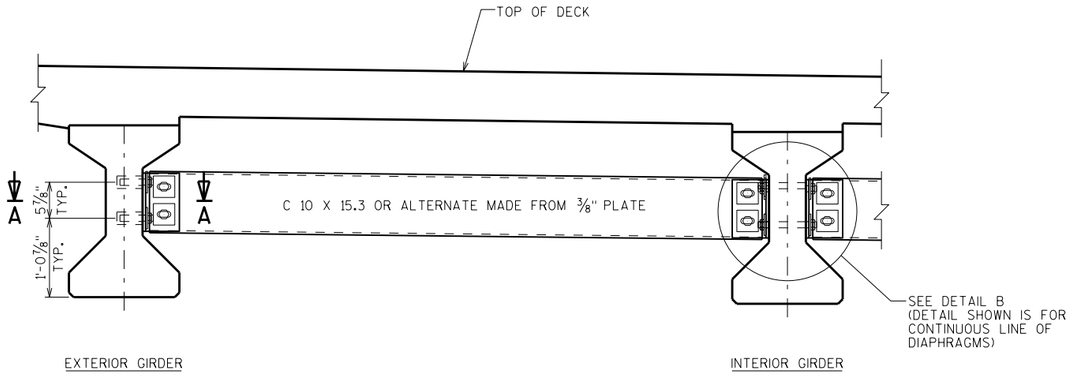
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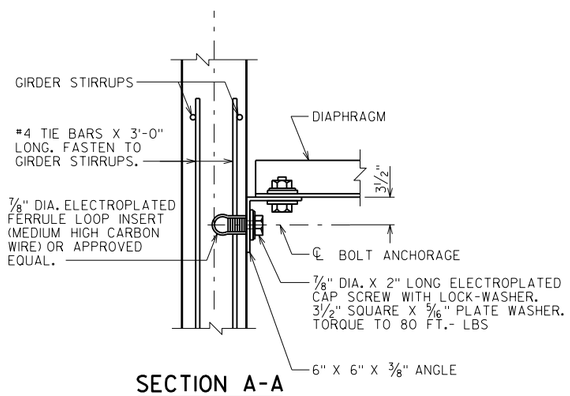
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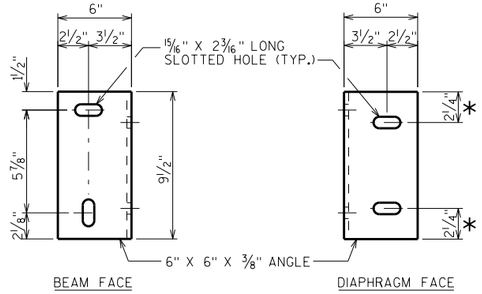


PART TRANSVERSE SECTION AT DIAPHRAGM



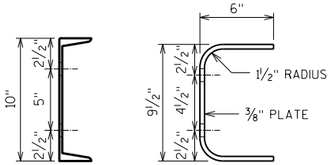
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



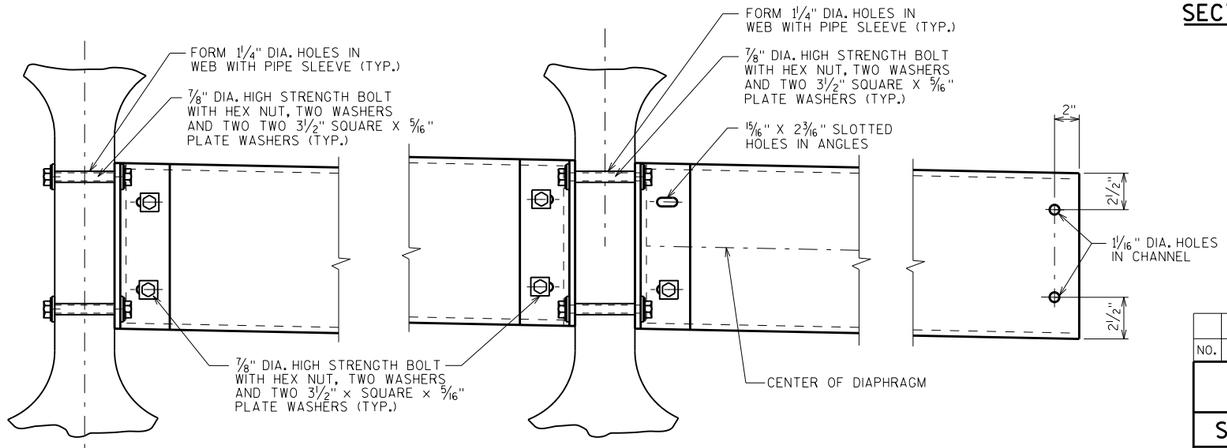
DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM



C10X15.3 ALTERNATE DIAPHRAGM

SECTION THRU DIAPHRAGM



(FOR STAGGERED DIAPHRAGM) (FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

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 ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

8

8

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

DRAWN BY MJH | PLANS CK'D. BAF

STEEL DIAPHRAGM

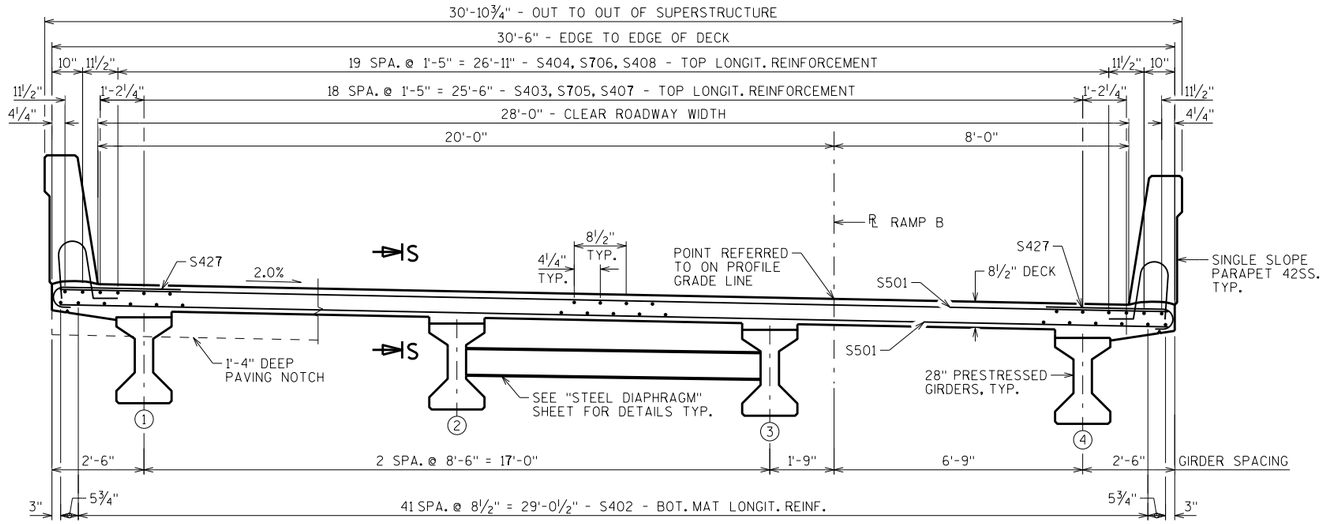
SHEET 11

412

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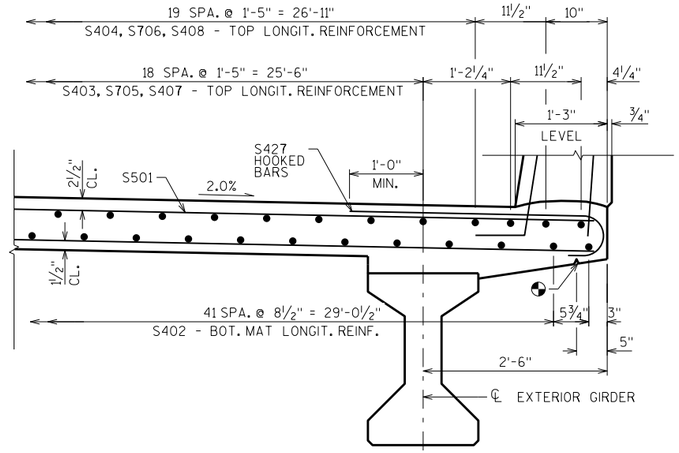
STATE PROJECT NUMBER

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CROSS SECTION THRU ROADWAY

LOOKING EAST

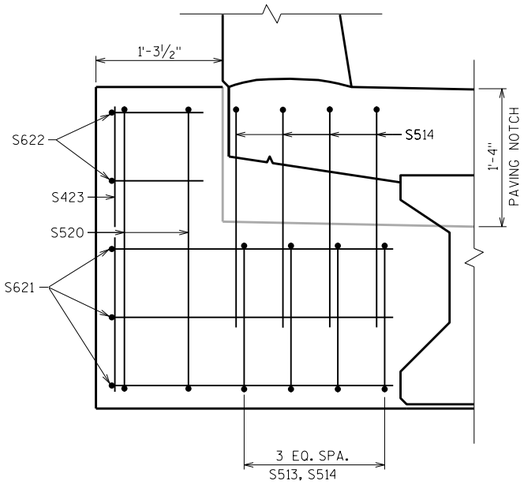


EDGE OF DECK DETAIL

TYPICAL AT BOTH EDGES

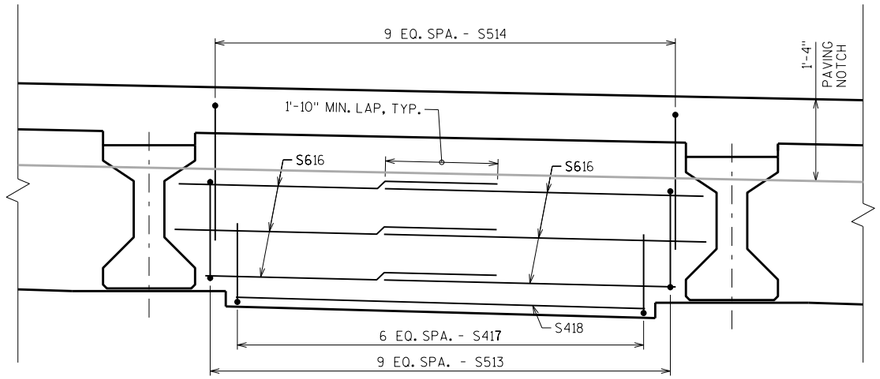
◔ ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT. DIAPHRAGM

◯ INDICATES GIRDER NUMBER



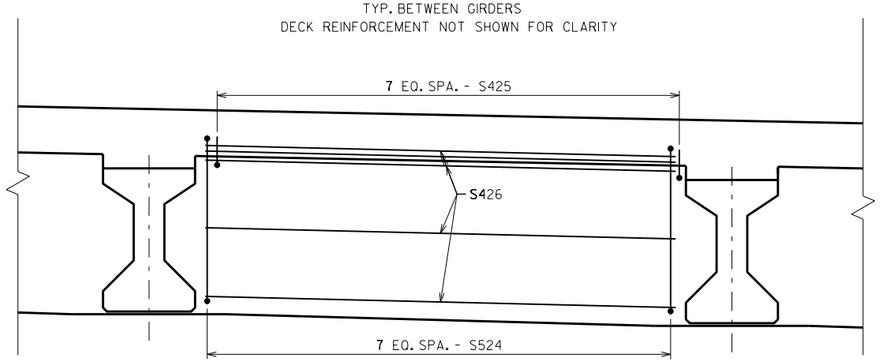
ABUTMENT DIAPHRAGM- EXTERIOR DETAIL

NORTHEAST CORNER SHOWN. OTHER CORNERS SIMILAR
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



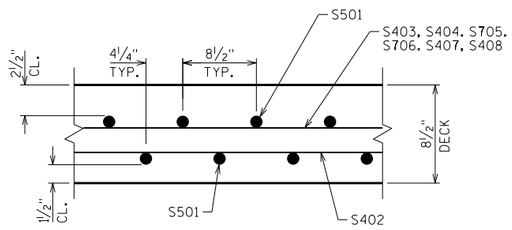
DIAPHRAGM AT ABUTMENTS

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

413

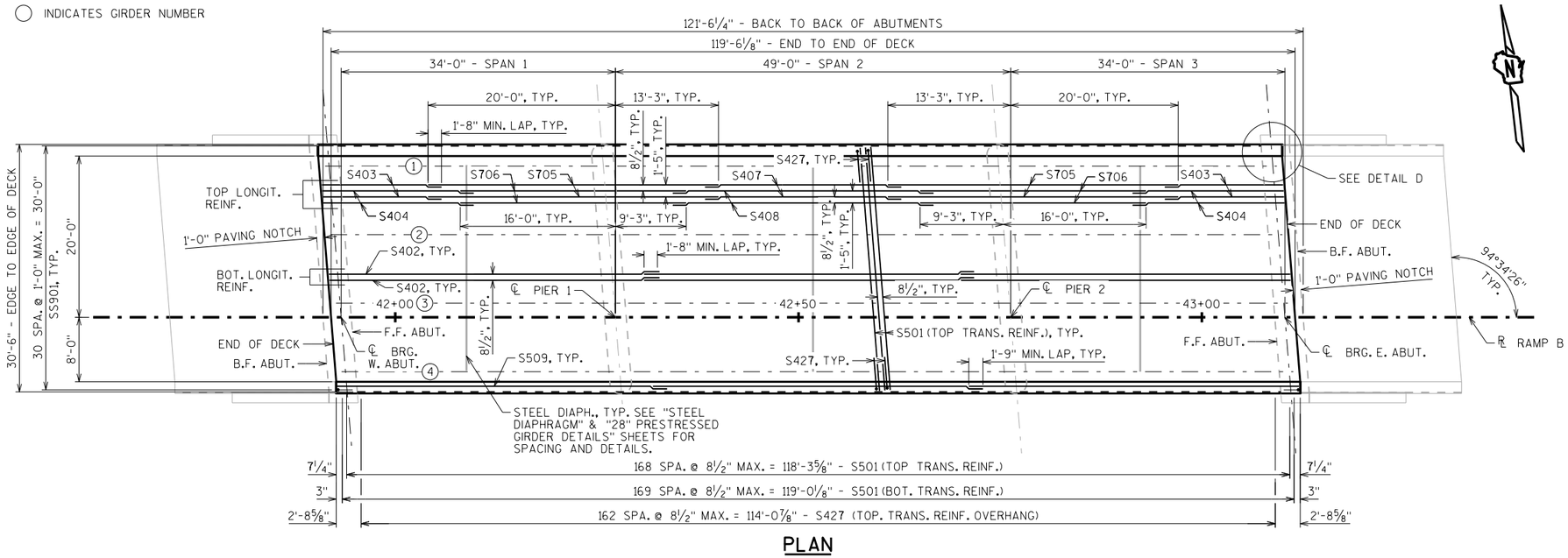
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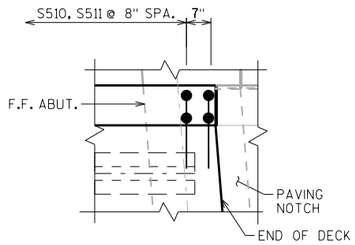
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PLAN



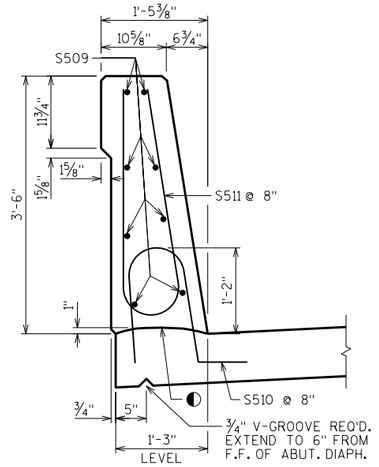
DETAIL D

NORTHEAST CORNER SHOWN
OTHER CORNERS SIMILAR

TOP OF DECK ELEVATIONS

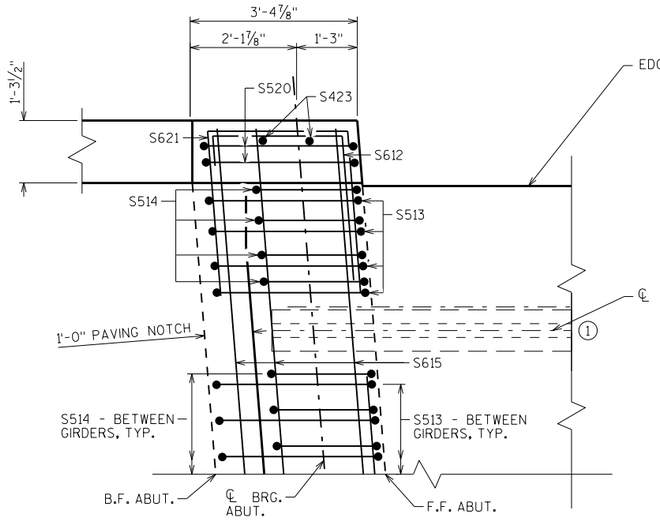
	℄ BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ E. ABUT.
NORTH EOD	1113.34	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



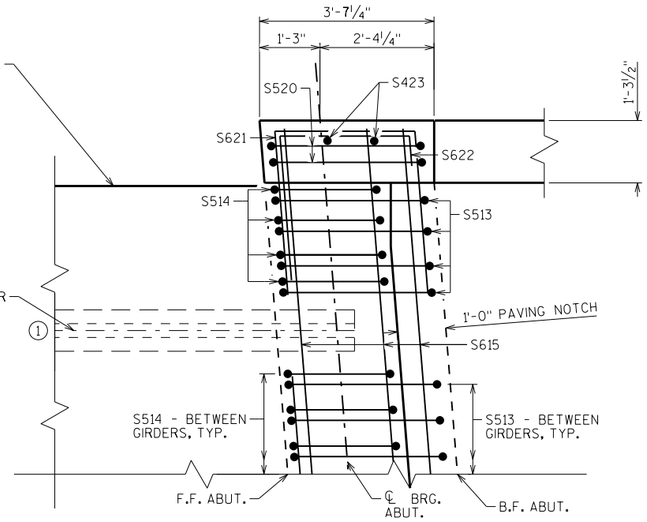
SECTION THRU PARAPET ON DECK

◐ 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

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SUPERSTRUCTURE

SHEET 13

414

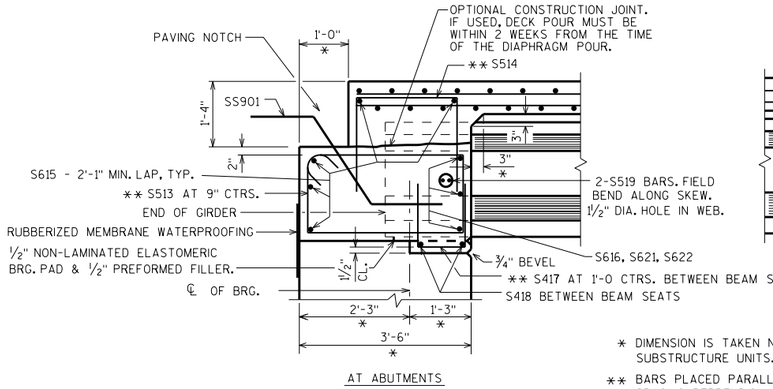
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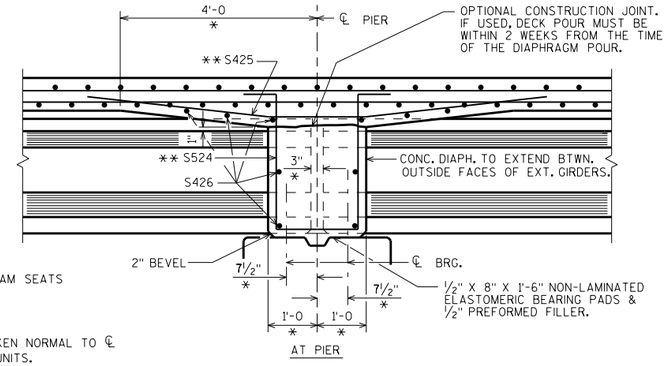
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8

STATE PROJECT NUMBER

1021-04-77



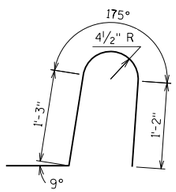


* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

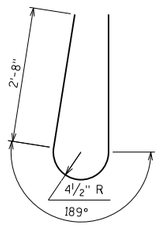
** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

PART. LONGIT. SECTION

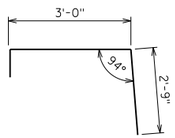
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	339	30'-3"			TRANSVERSE - BOT. & TOP
S402	X	135	40'-11"			LONGIT. - BOT.
S403	X	46	16'-9"			LONGIT. - TOP. - SPAN 1& 3
S404	X	44	20'-9"			LONGIT. - TOP. - SPAN 1& 3
S705	X	46	33'-3"			LONGIT. - TOP. - CONTINUITY OVER PIER 1& 2
S706	X	44	25'-3"			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



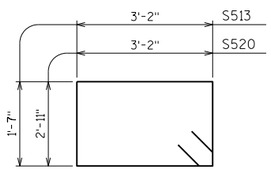
S510



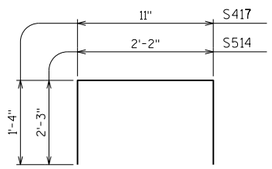
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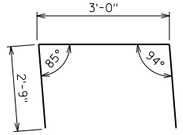
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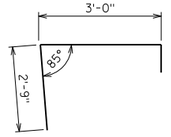
S513, S520



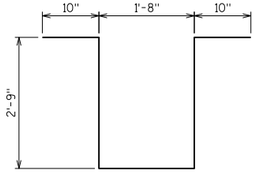
S514, S417



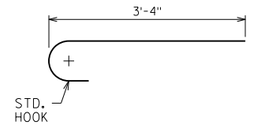
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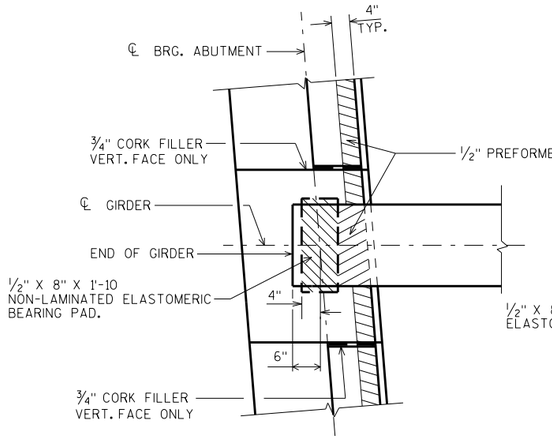
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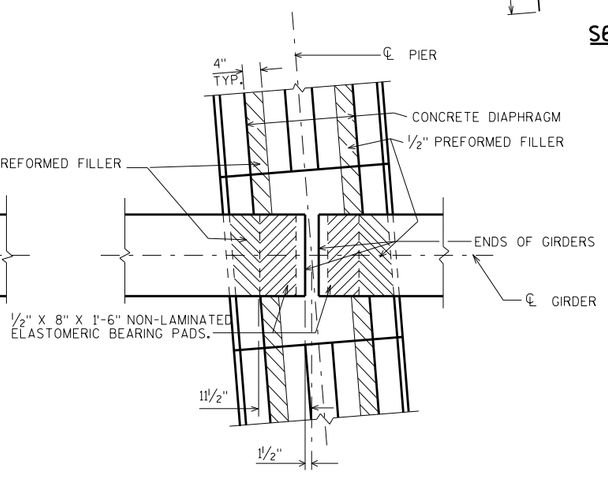


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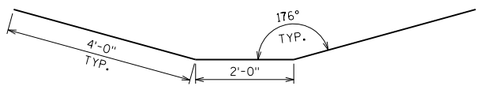


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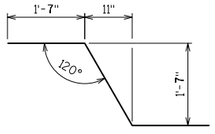




BEARING PAD DETAIL



S425



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

415

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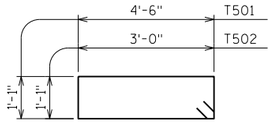
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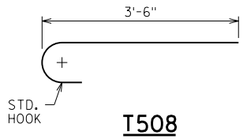
STATE PROJECT NUMBER

1021-04-77

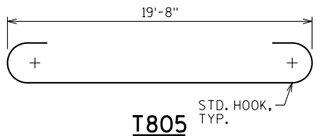




T501, T502



T508

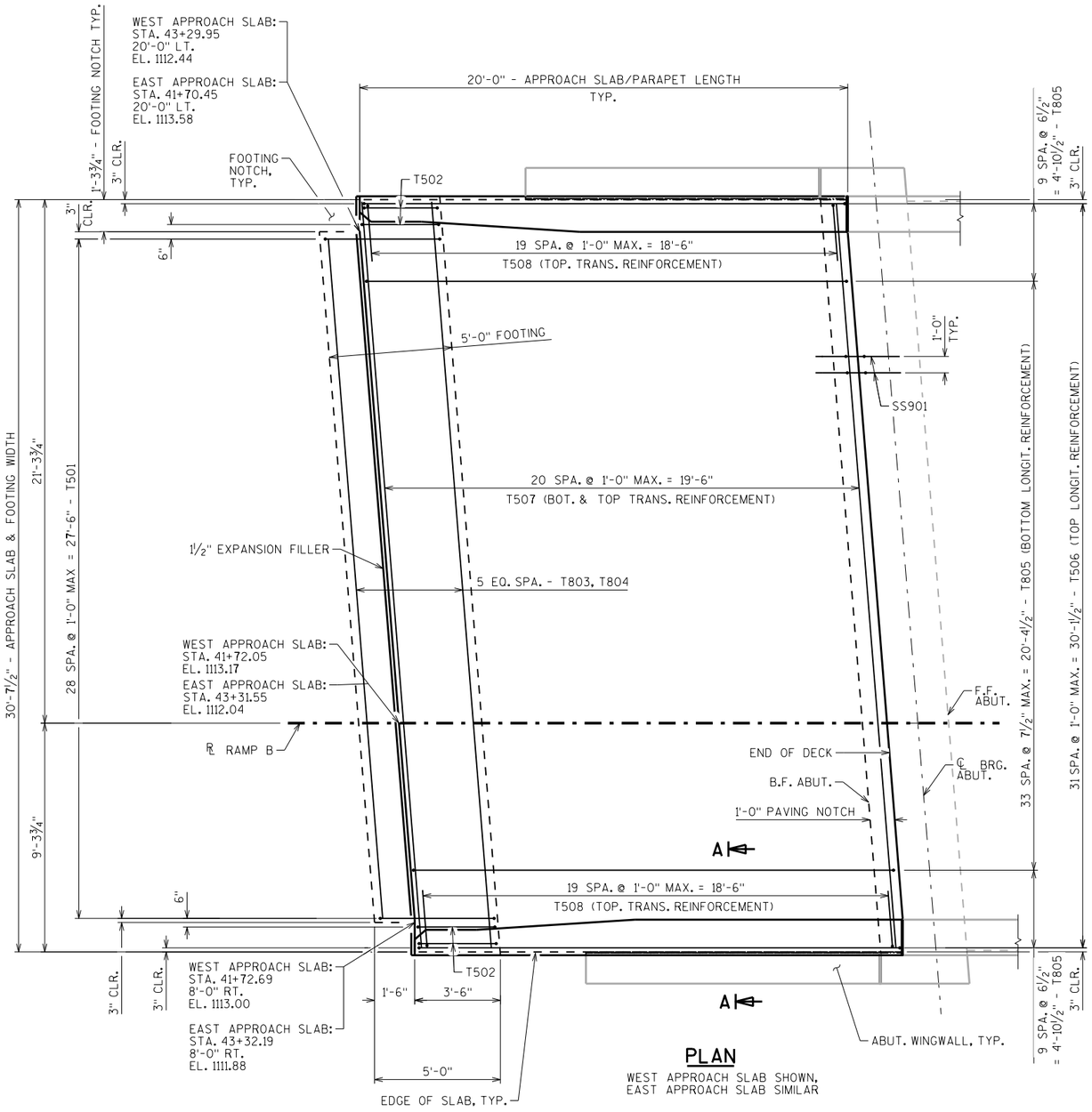


T805

BILL OF BARS

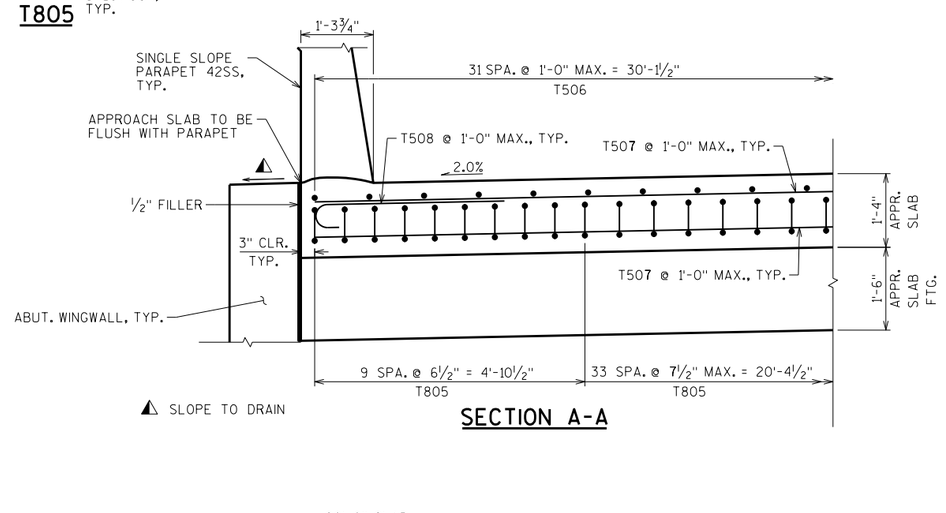
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

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

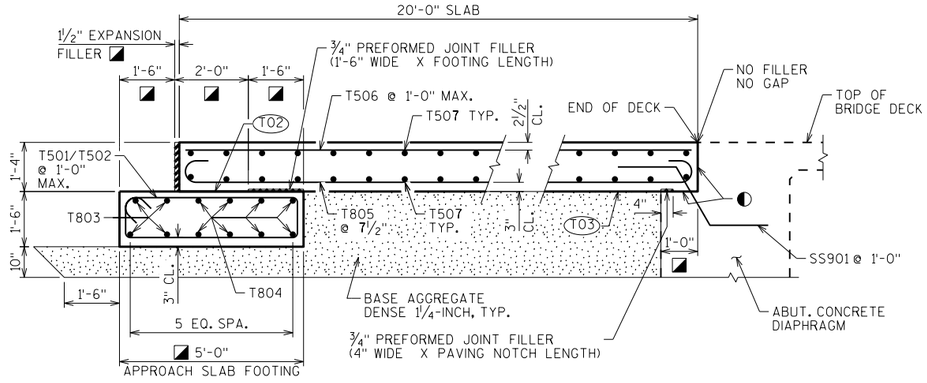


PLAN

WEST APPROACH SLAB SHOWN,
EAST APPROACH SLAB SIMILAR



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.

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STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-55-285

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STRUCTURAL APPROACH SLAB

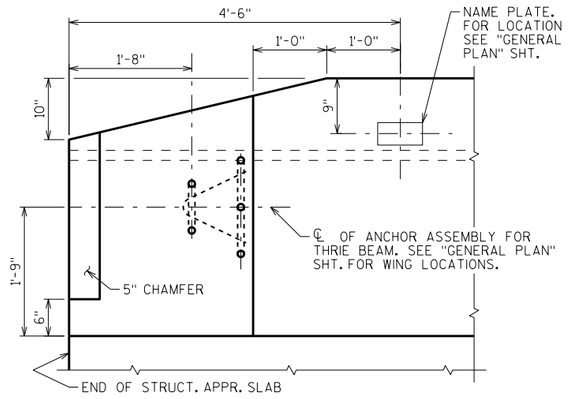
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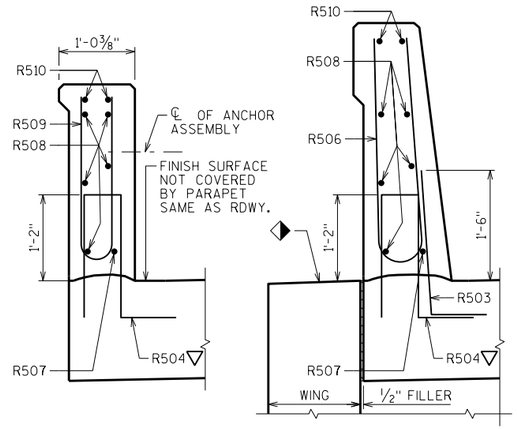
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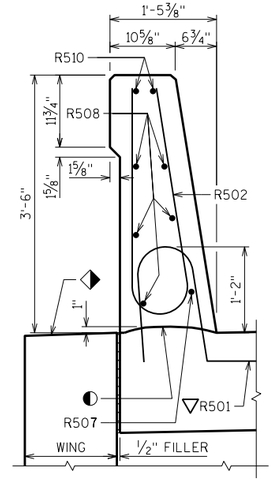
PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

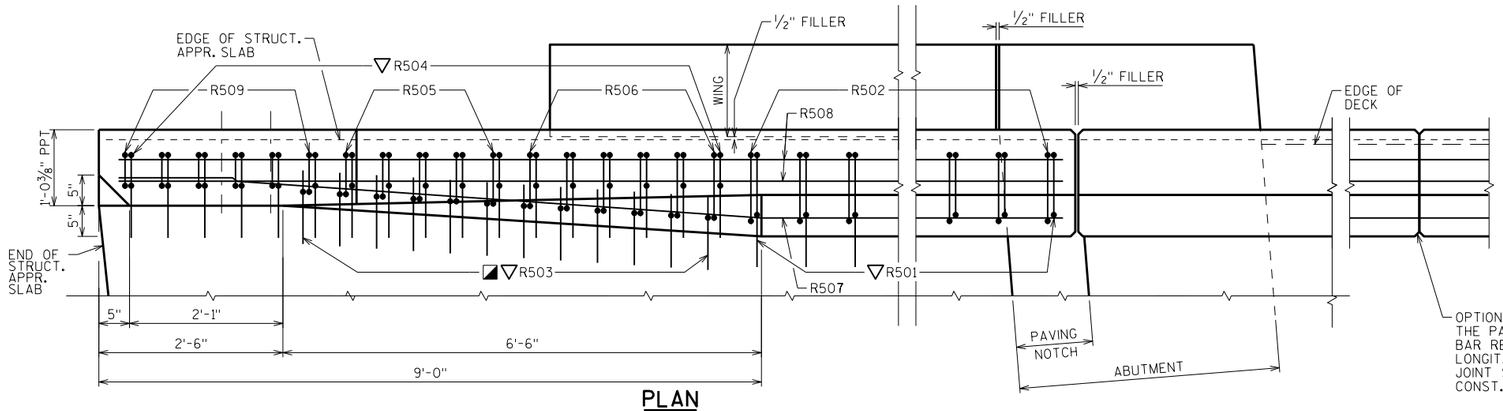


SECTION A-A

SECTION B-B

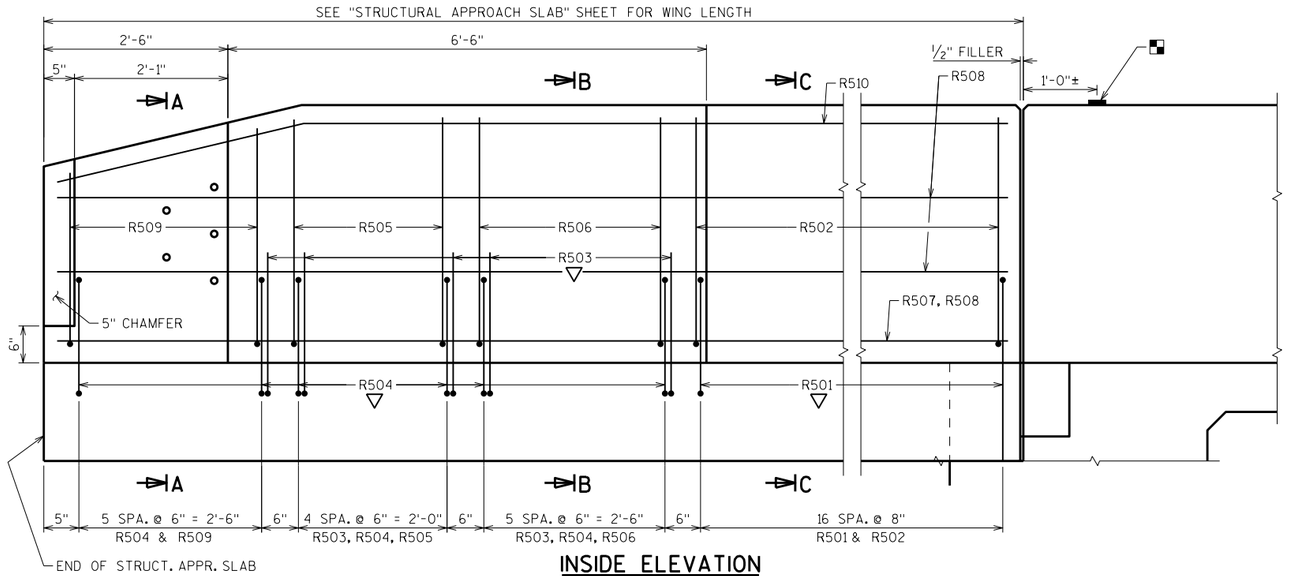


SECTION C-C



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

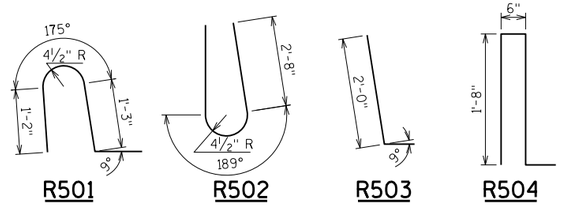
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	24	24	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-8"	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.

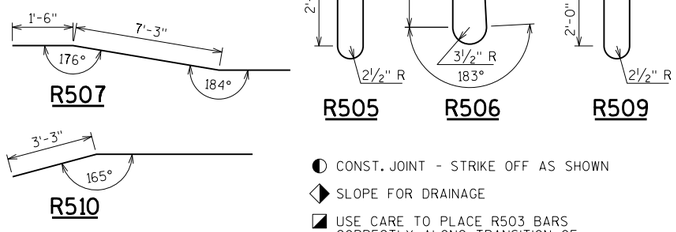
BAR SERIES TABLE

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



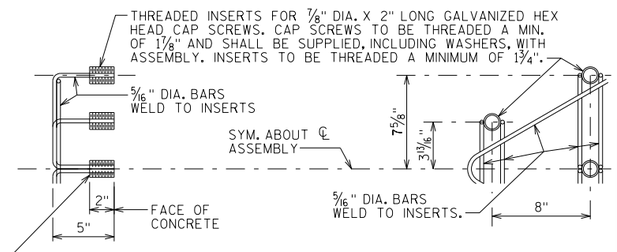
R507 R505 R506 R509

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.

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.



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.

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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

417

SCALE = 1.00

8

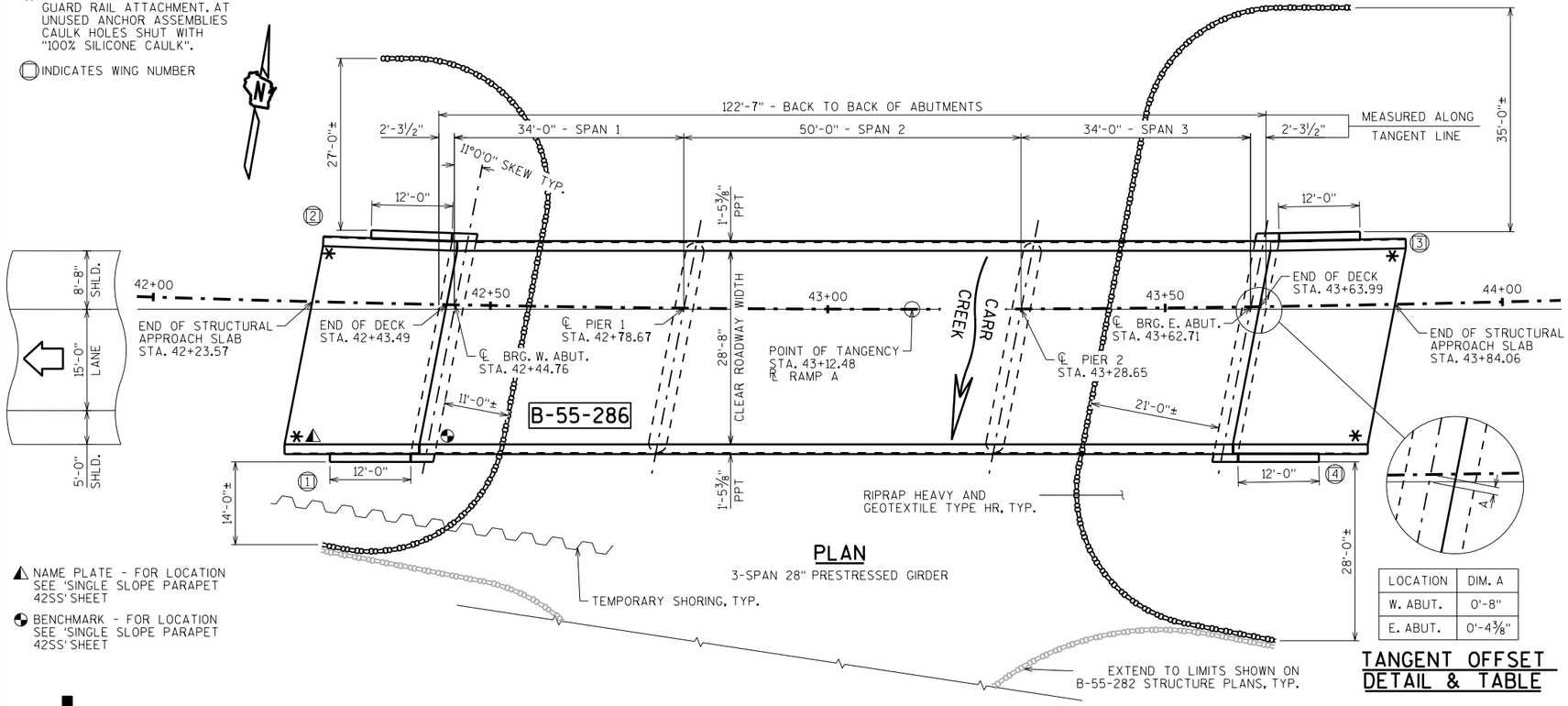
8

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

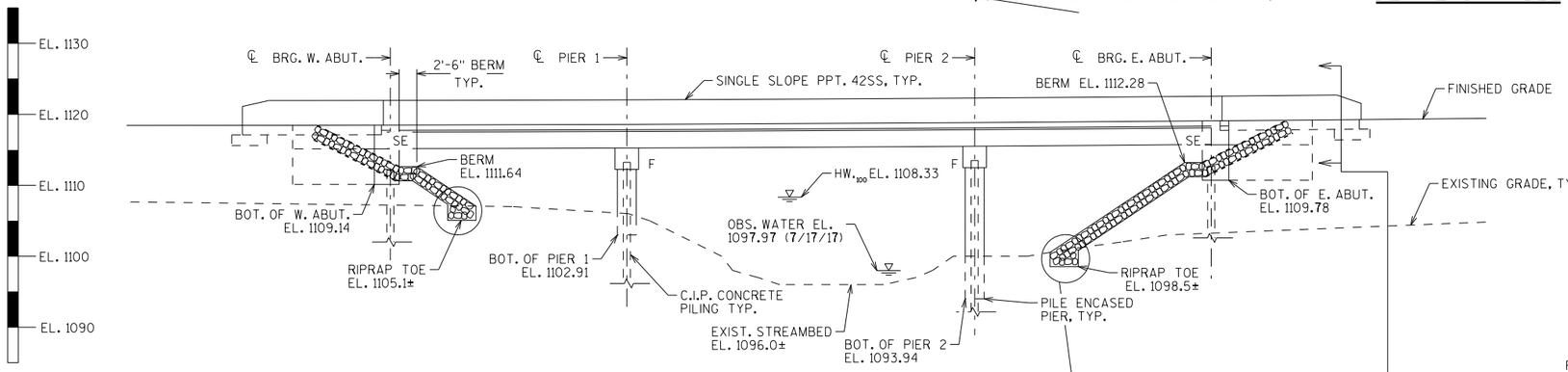
3-SPAN 28" PRESTRESSED GIRDER

LOCATION	DIM. A
W. ABUT.	0'-8"
E. ABUT.	0'-4⅜"

TANGENT OFFSET DETAIL & TABLE

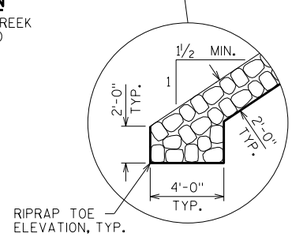
▲ NAME PLATE - FOR LOCATION SEE 'SINGLE SLOPE PARAPET 42SS' SHEET

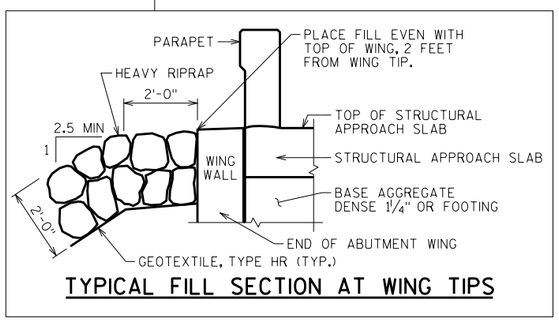
◓ BENCHMARK - FOR LOCATION SEE 'SINGLE SLOPE PARAPET 42SS' SHEET



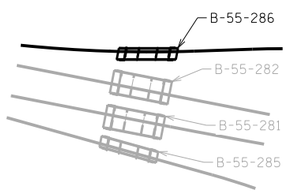
ELEVATION

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

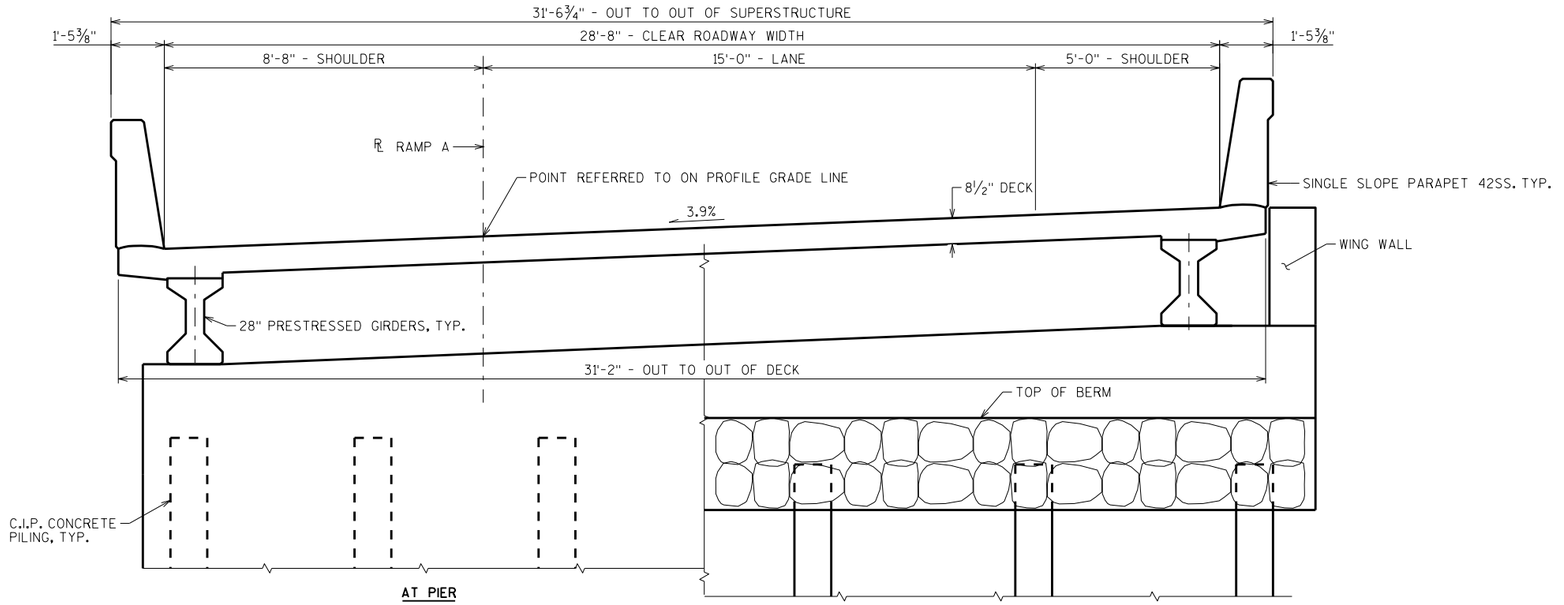
GENERAL PLAN

SHEET 1 OF 17

418

I.D. 1021-04-08B DATE: MAR 2020

SCALE = 10.00

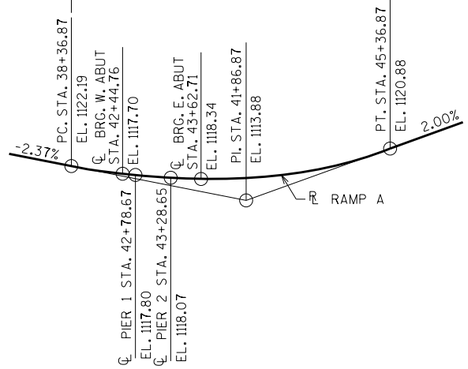


AT PIER

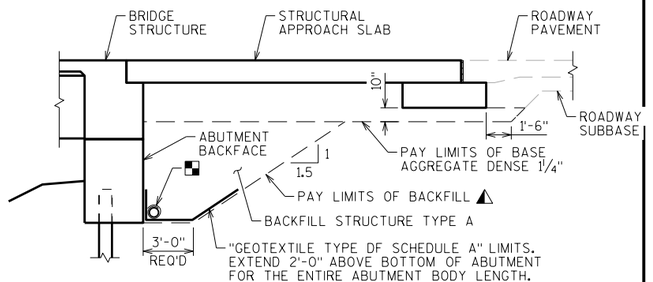
AT ABUTMENT

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"



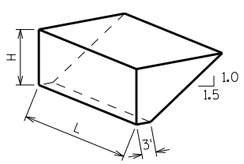
PROFILE GRADE LINE - RAMP A



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)

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.

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

CROSS SECTION & QUANTITIES

SHEET 2

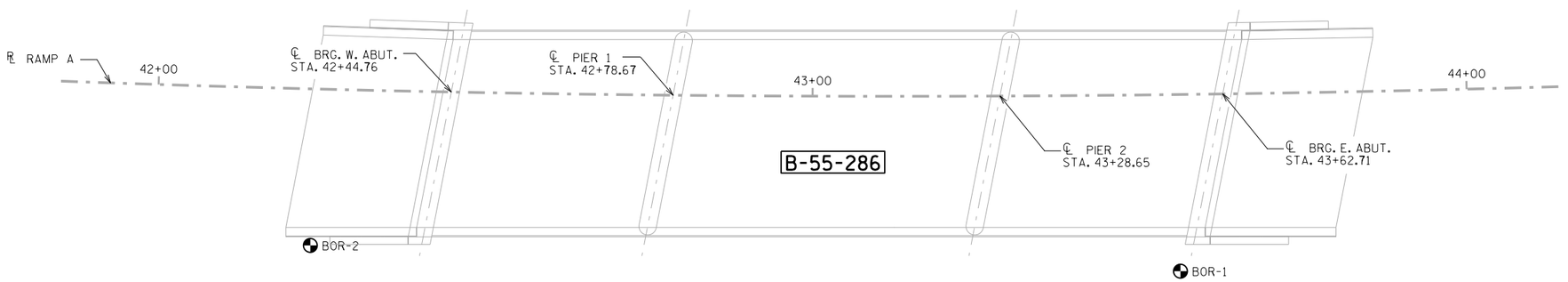
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8

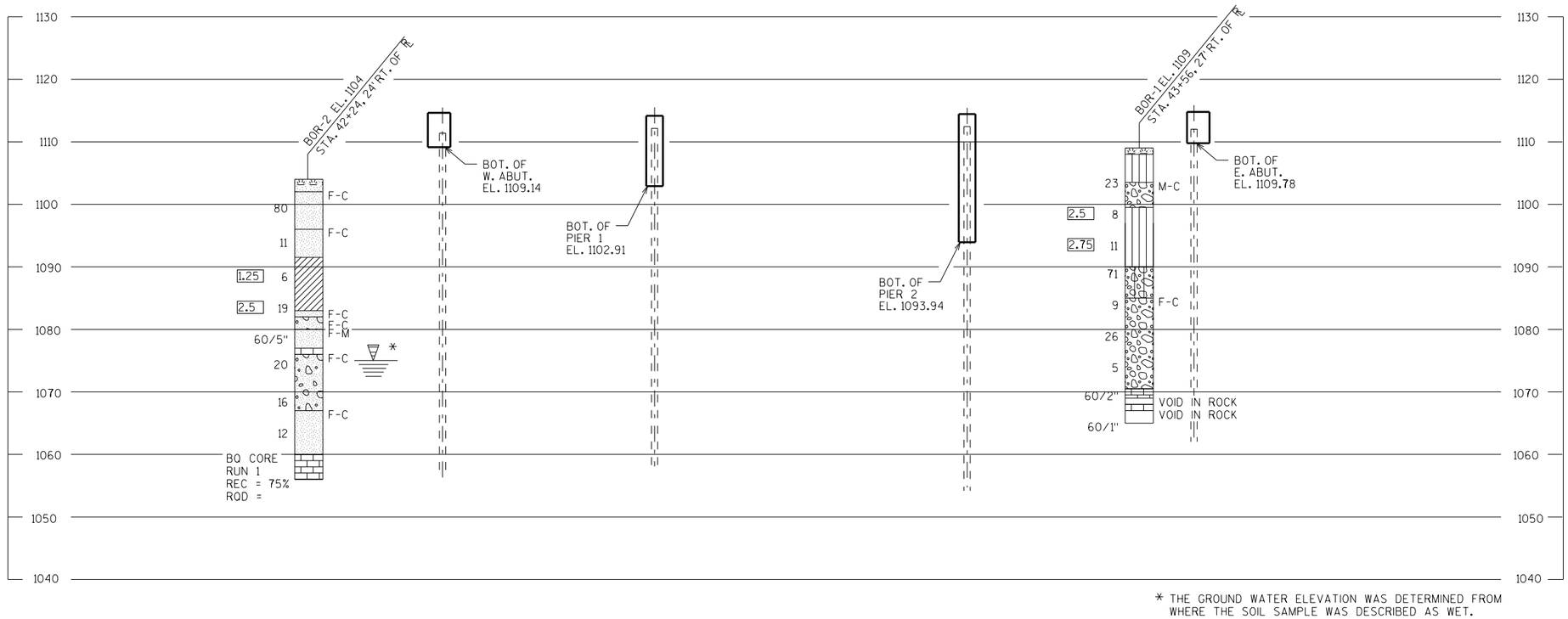
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SCALE = 2.00

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.

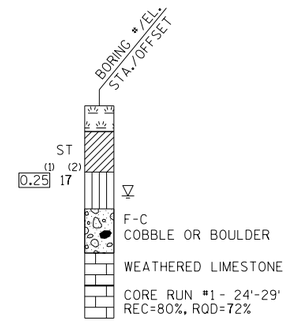
STATE PROJECT NUMBER

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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

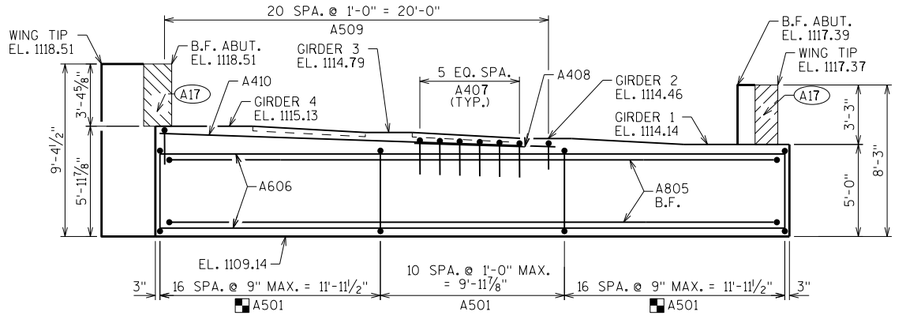
SHEET 3

420

8

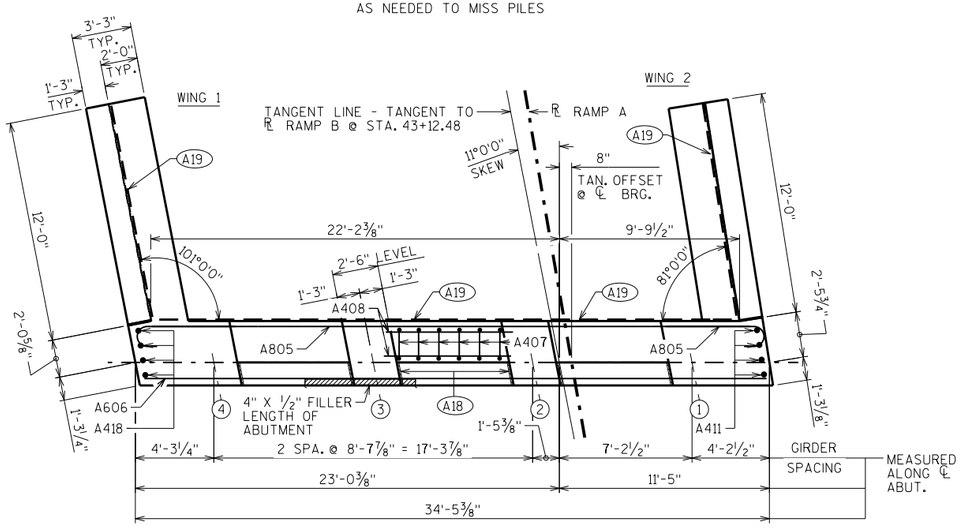
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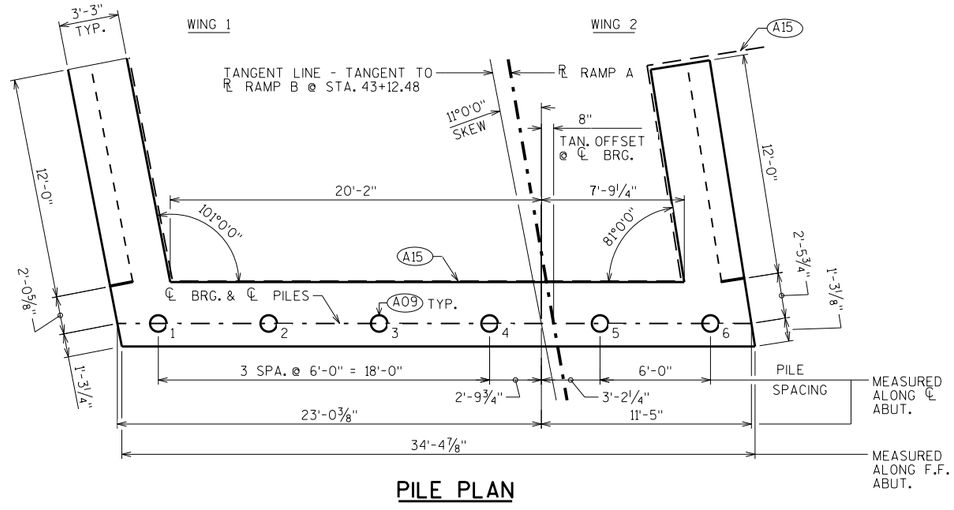


ELEVATION

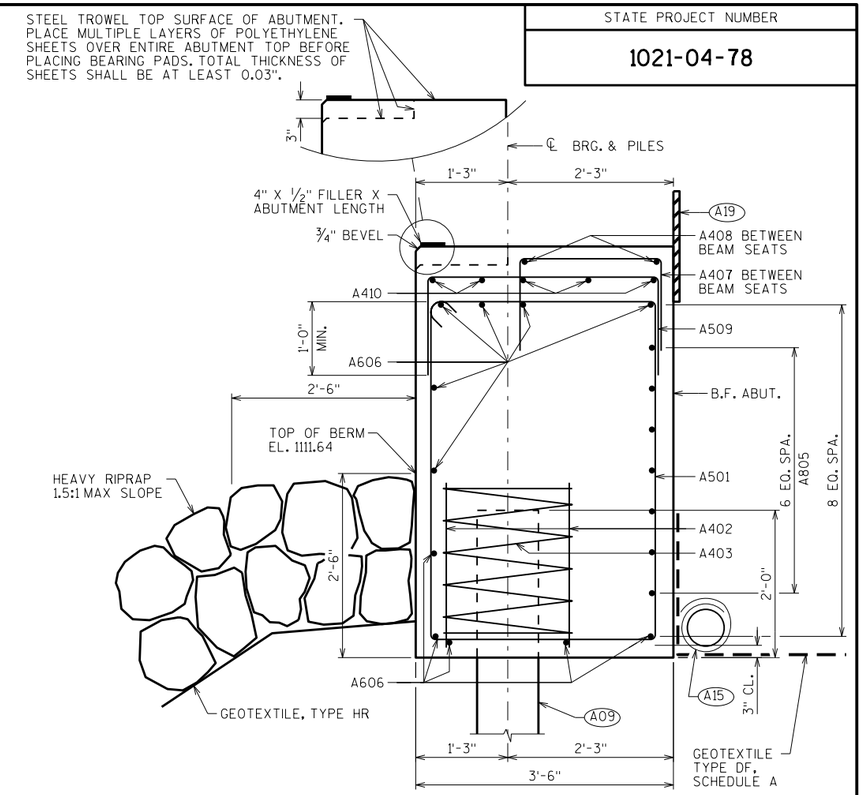
LOOKING WEST AT F.F.
ADJUST STIRRUP SPACING
AS NEEDED TO MISS PILES



PLAN

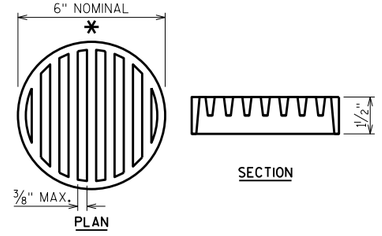


PILE PLAN



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

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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

421

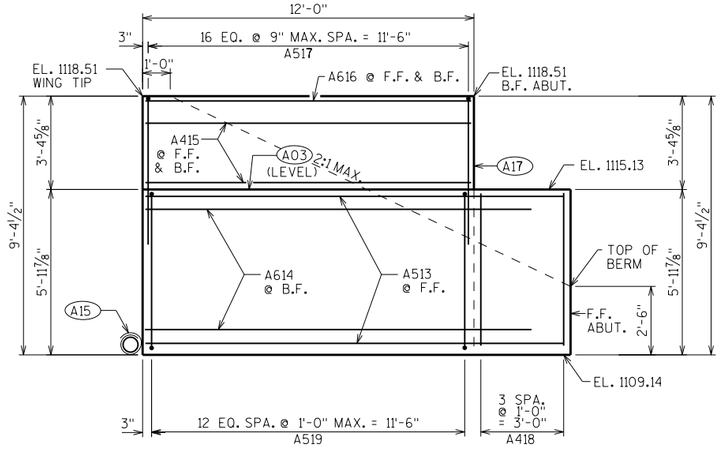
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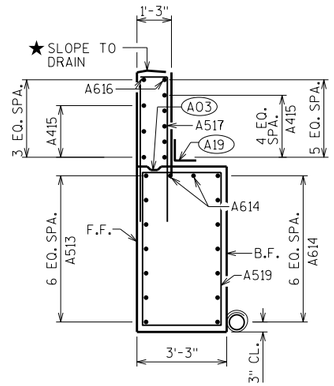
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STATE PROJECT NUMBER

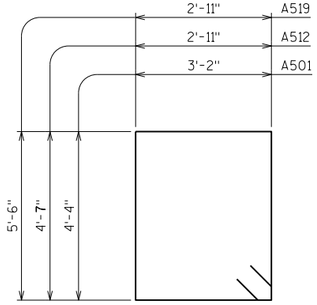
1021-04-78



WING 1 ELEVATION



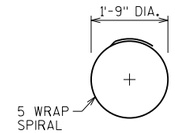
WING 1 SECTION



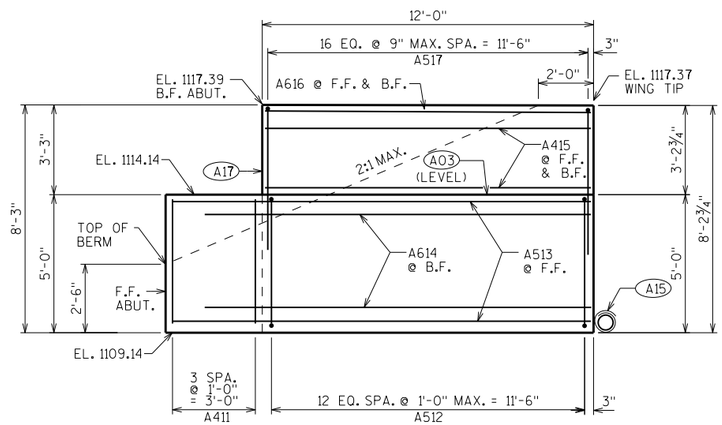
A501, A512, A519

BILL OF BARS

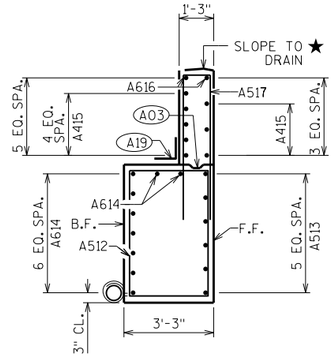
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		43	15'-8"	X		BODY - STIRRUPS - VERTICAL
A402		12	2'-3"			PILES - 2 PER BODY PILE - VERTICAL
A403		6	28'-0"	X		PILES - 1 PER BODY PILE - SPIRAL
A604		NOT	USED			
A805		7	35'-10"	X		BODY - HORIZONTAL - B.F.
A606		11	33'-10"			BODY - HORIZONTAL
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



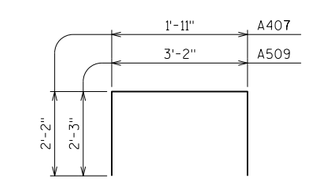
A403



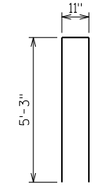
WING 2 ELEVATION



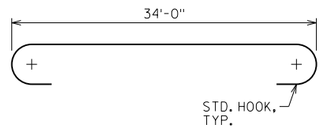
WING 2 SECTION



A407, A509



A517



A805

★ SLOPE 1/8" PER FOOT

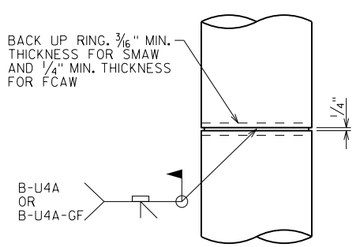
A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

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.

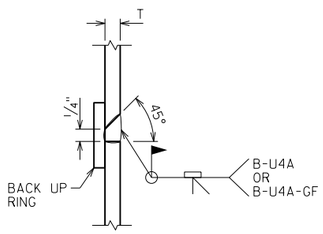
A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

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.

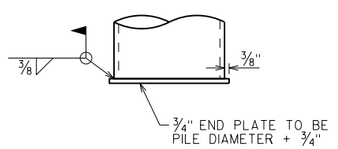


CAST-IN-PLACE 'PIPE PILE'



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-55-286

DRAWN BY MJH | PLANS CK'D. BAF

WEST ABUTMENT DETAILS

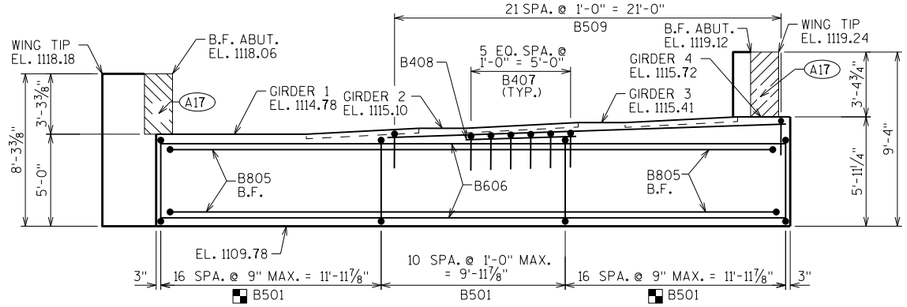
SHEET 5

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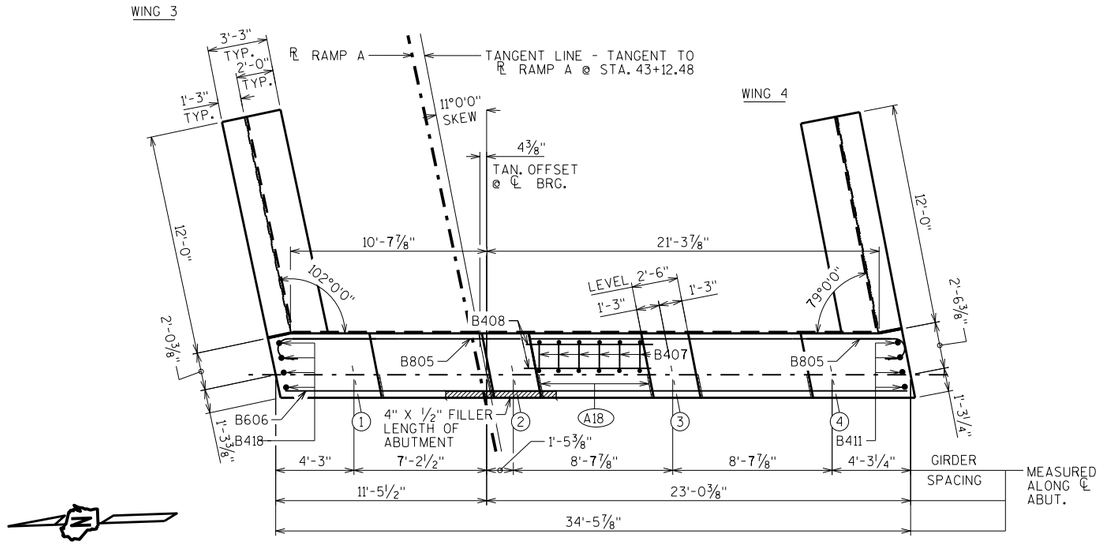
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8

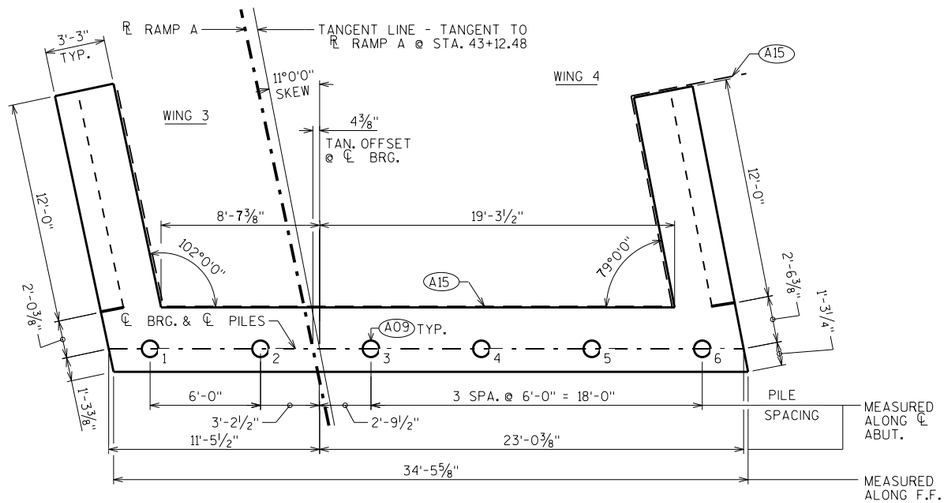


ELEVATION

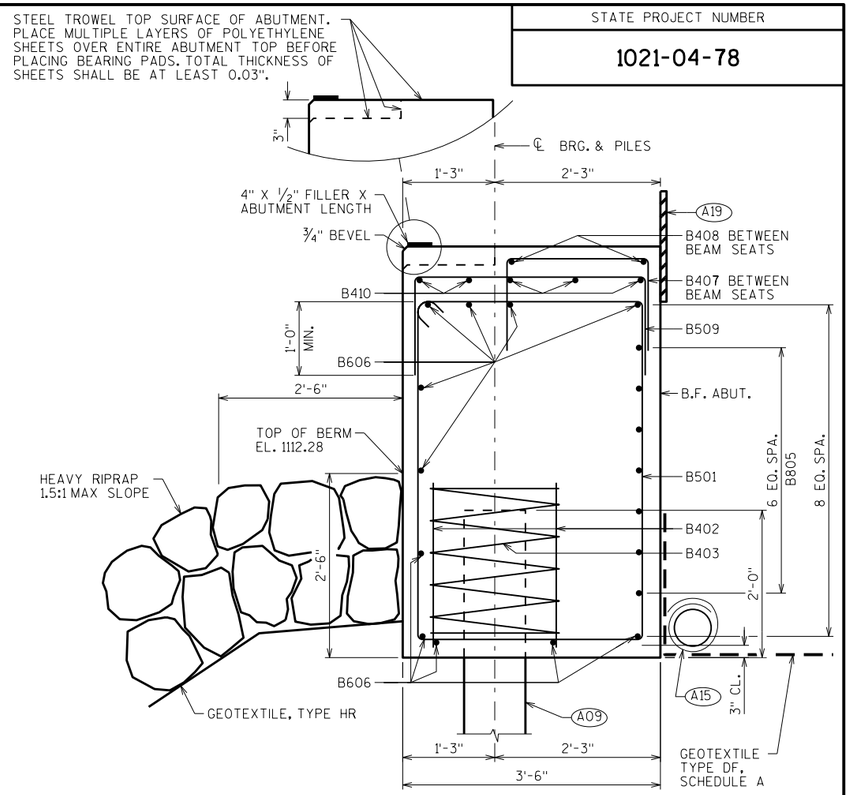
LOOKING EAST AT F.F.
ADJUST STIRRUP SPACING AS NEEDED TO MISS PILES



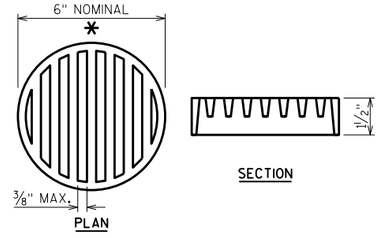
PLAN



PILE PLAN



SECTION THRU BODY



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.

■ 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.

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

423

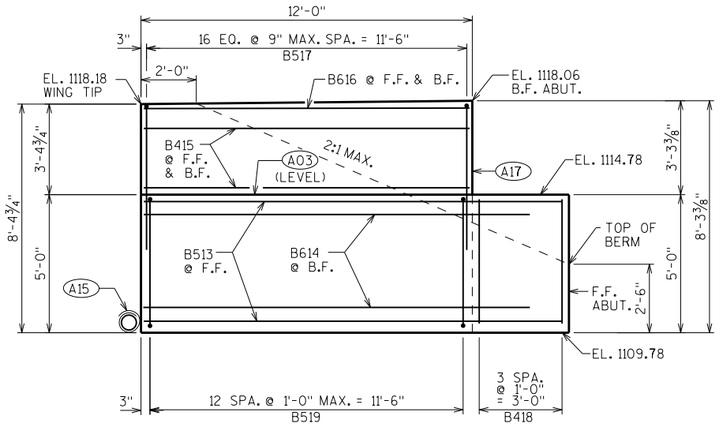
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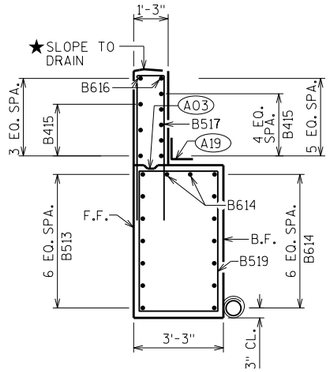
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STATE PROJECT NUMBER

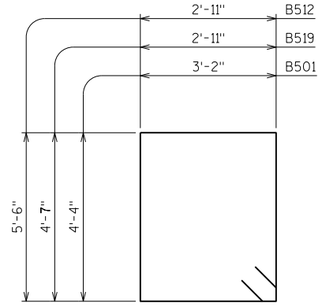
1021-04-78



WING 3 ELEVATION



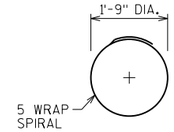
WING 3 SECTION



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

B805

★ SLOPE ⅛" PER FOOT

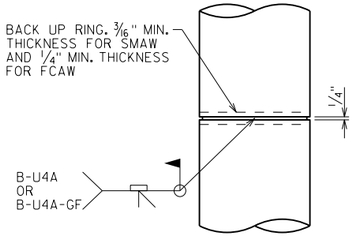
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 × 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(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.

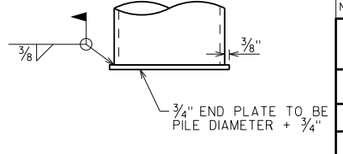
(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



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-55-286

DRAWN BY MJH | PLANS CK'D. BAF

EAST ABUTMENT DETAILS

SHEET 7

424

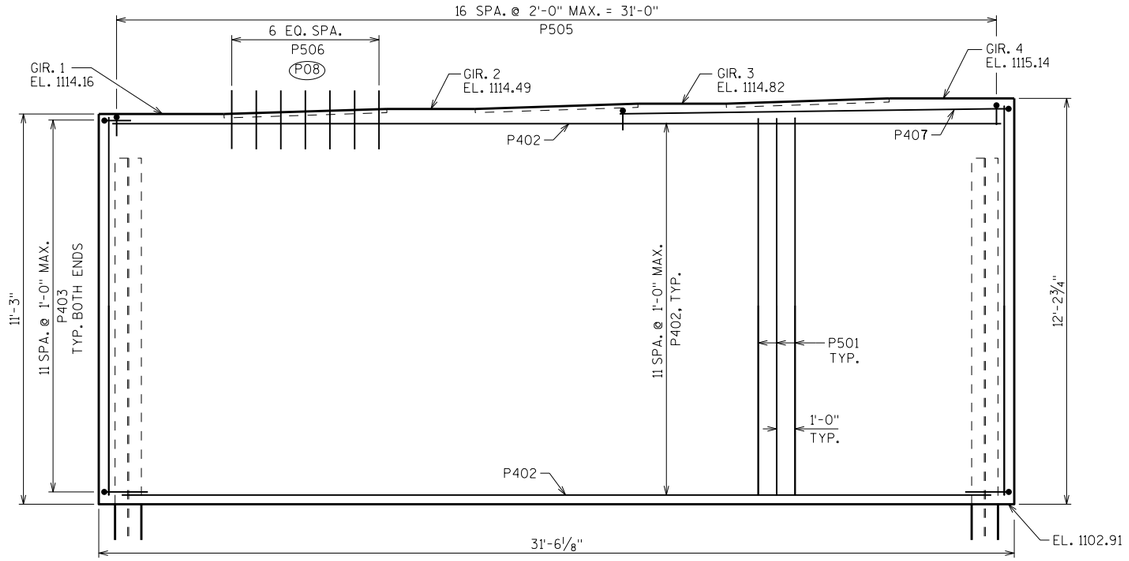
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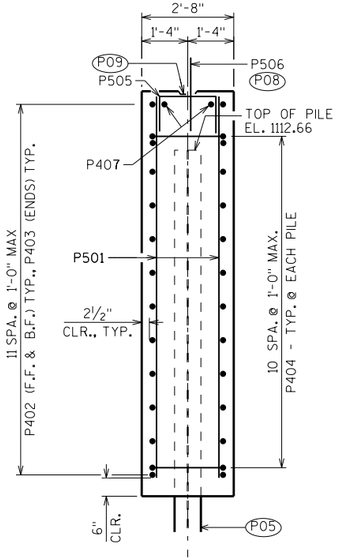
STATE PROJECT NUMBER

1021-04-78



ELEVATION

LOOKING EAST



END VIEW

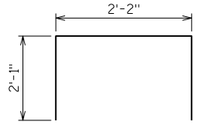
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

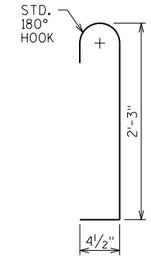
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
P501		68	10'-6"			PIER 1 - VERT.
P402		24	28'-11"			PIER 1 - HORIZ. - F.F. & B.F.
P403		24	6'-4"	X		PIER 1 - HORIZ. - ENDS
P404		99	3'-1"	X		PIER 1 - HORIZ. - PILES
P505		17	6'-1"	X		PIER 1 - VERT. - TOP
P506		21	2'-0"			PIER 1 - VERT. - DOWELS
P407		2	18'-6"			PIER 1 - HORIZ. - TOP. - GIR.



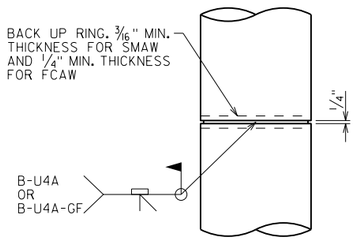
P403



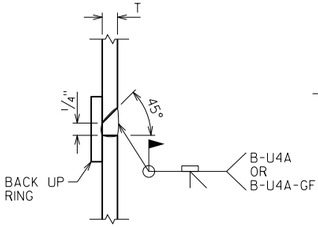
P505



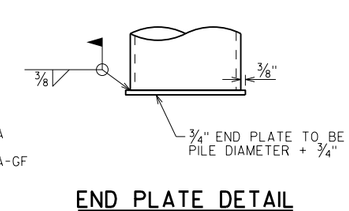
P404



CAST-IN-PLACE 'PIPE PILE'

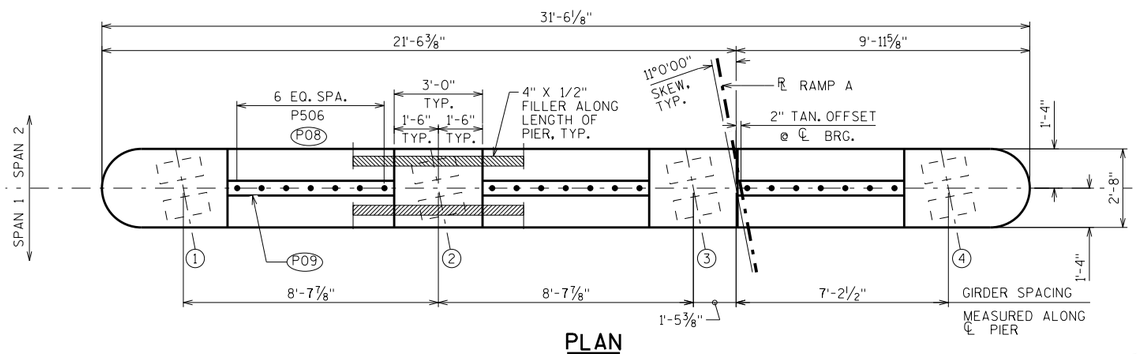


C.I.P. PILE WELD DETAIL

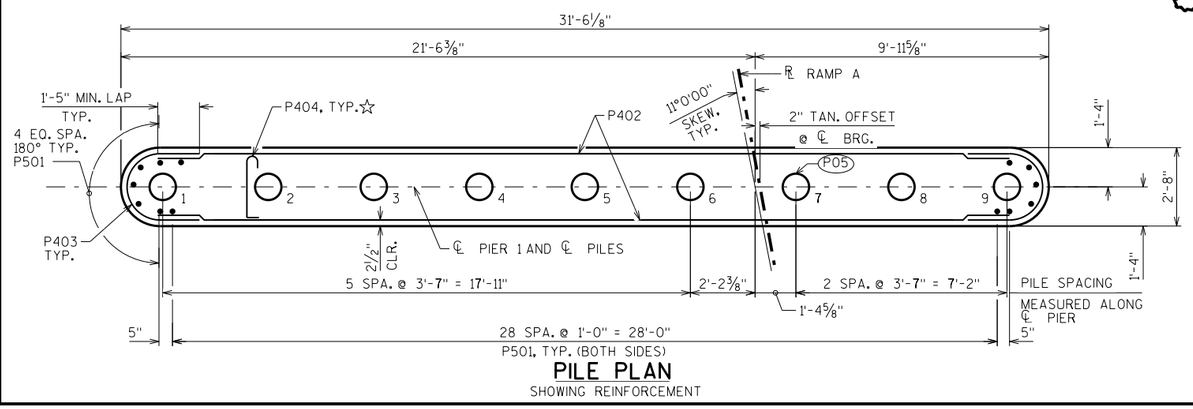


END PLATE DETAIL

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

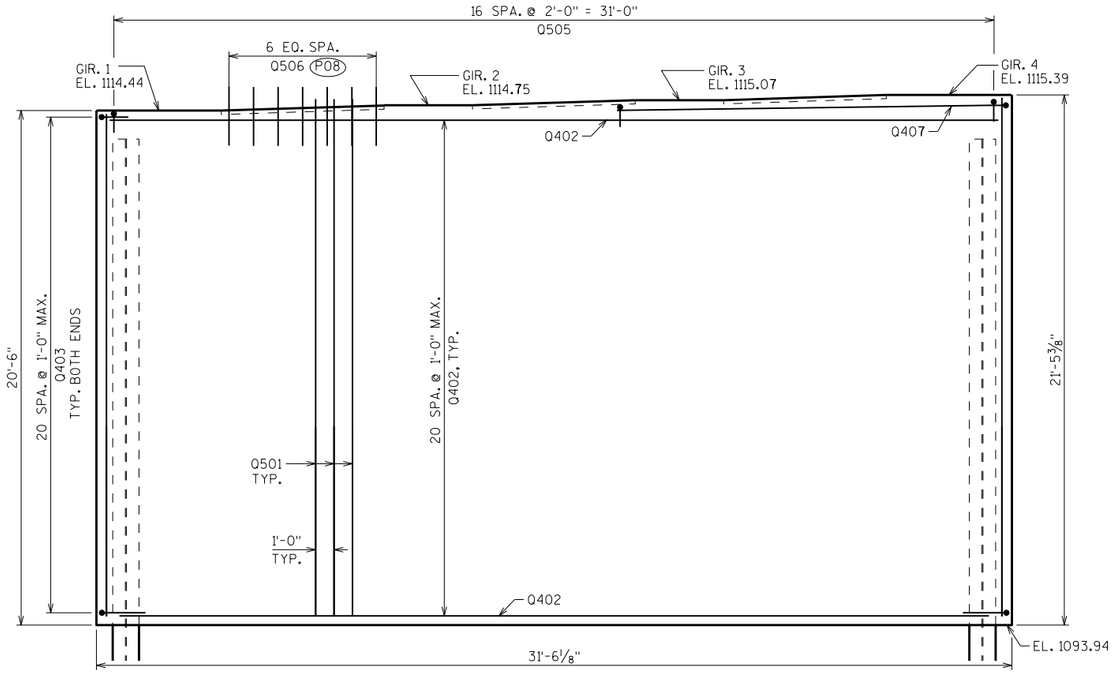
SHEET 8

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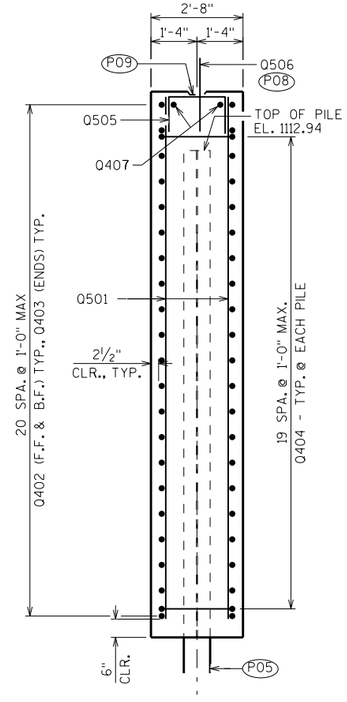
STATE PROJECT NUMBER

1021-04-78

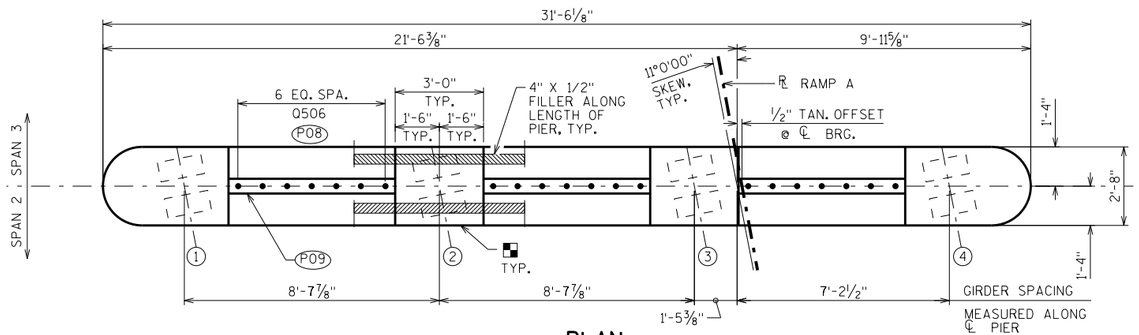


ELEVATION

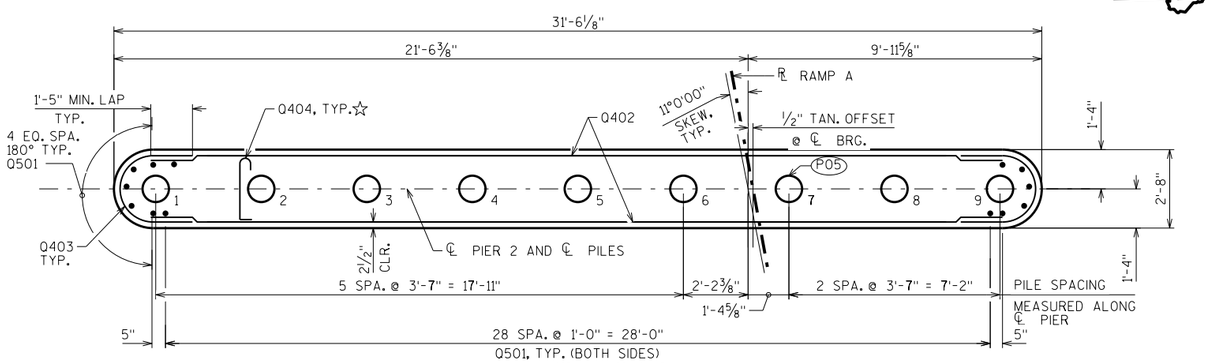
LOOKING EAST



END VIEW



PLAN



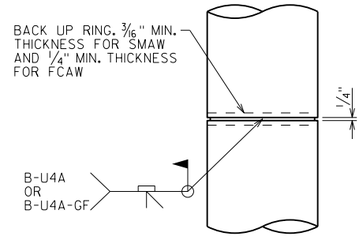
PILE PLAN

SHOWING REINFORCEMENT

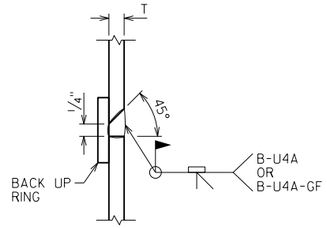
BILL OF BARS

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.

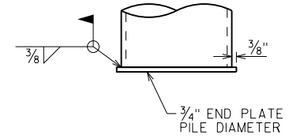


CAST-IN-PLACE 'PIPE PILE'

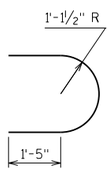


C.I.P. PILE WELD DETAIL

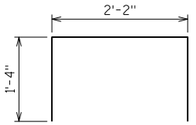
PILE DETAILS



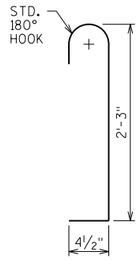
END PLATE DETAIL



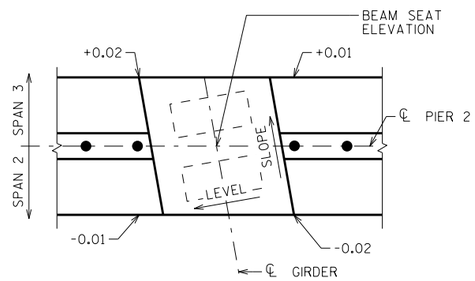
Q403



Q505



Q404



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

426

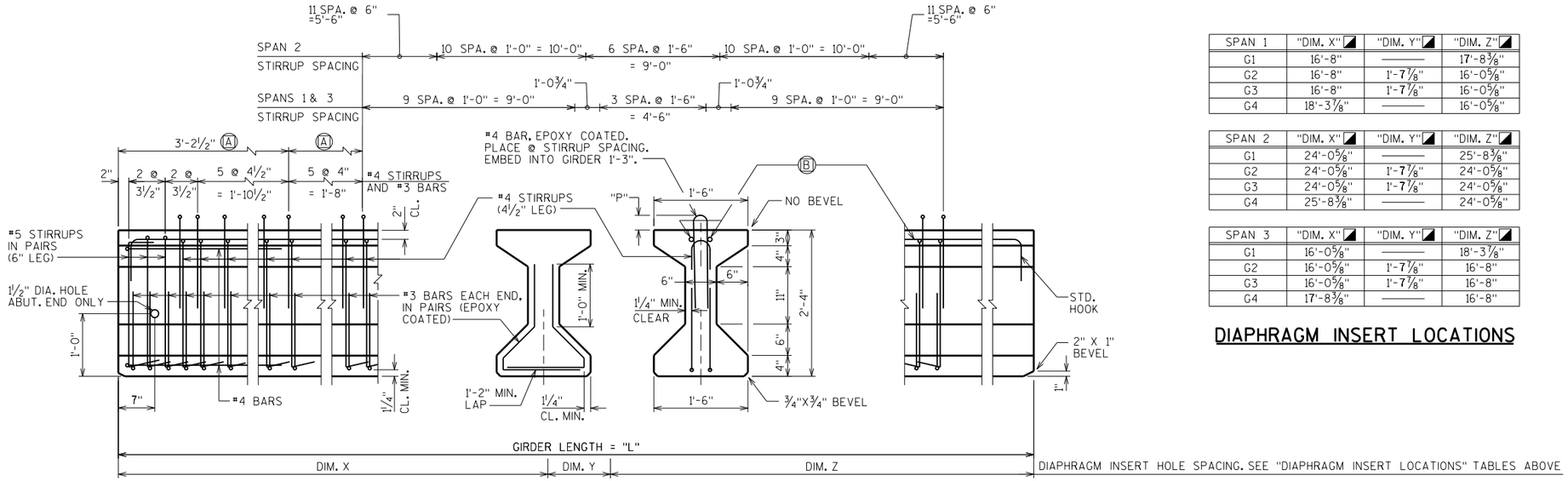
8

8

SCALE = 2.50

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.

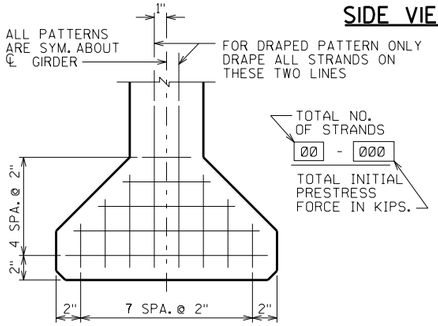
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

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.

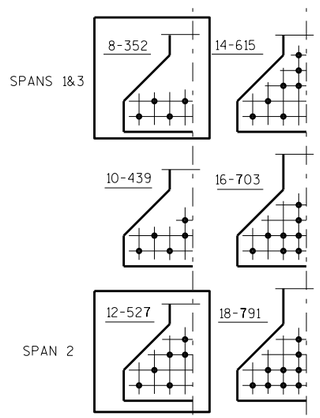
PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

BEND EACH END OF #4 STIRRUPS 4½" AND #5 STIRRUPS 6".

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

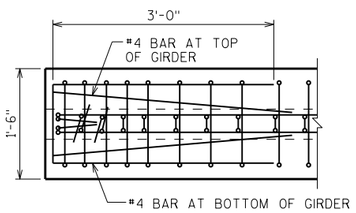


TYP. STRAND PATTERN

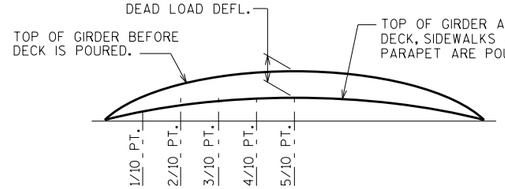


UNDRAPED PATTERN

0.6" DIA. STRANDS



TOP VIEW OF GIRDER ENDS



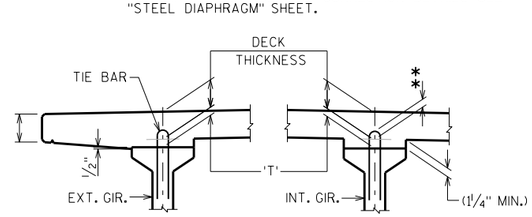
DEAD LOAD DEFLECTION DIAGRAM

* 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

427

SCALE = 1

8

8

STATE PROJECT NUMBER

1021-04-78

NOTES

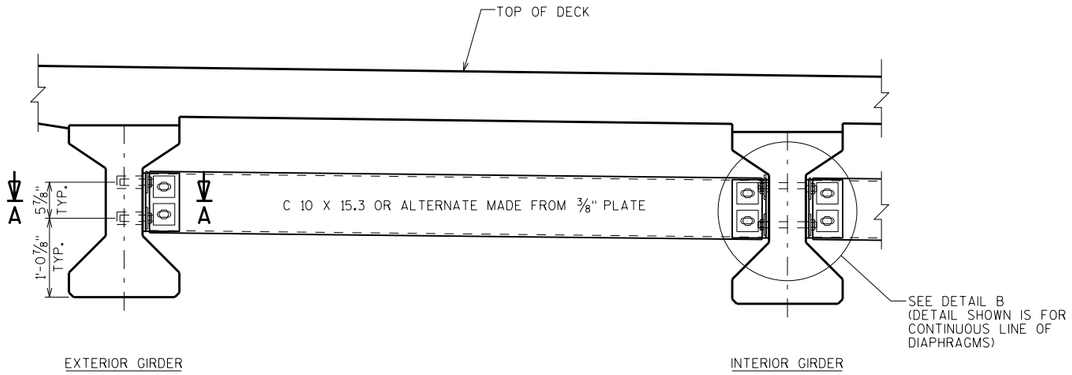
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-286", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

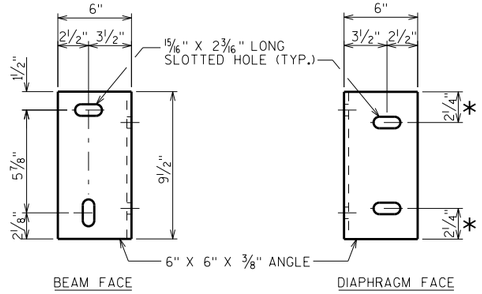
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

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

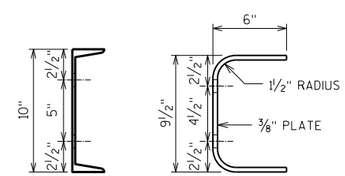


DIAPHRAGM SUPPORT

* 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM

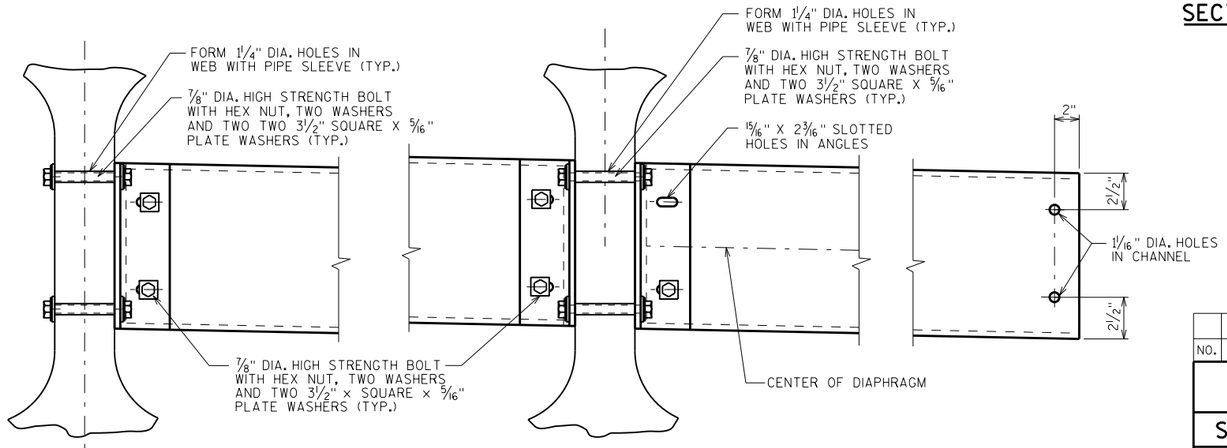
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



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-55-286

DRAWN BY MJH | PLANS CK'D. BAF

STEEL DIAPHRAGM

SHEET 11

428

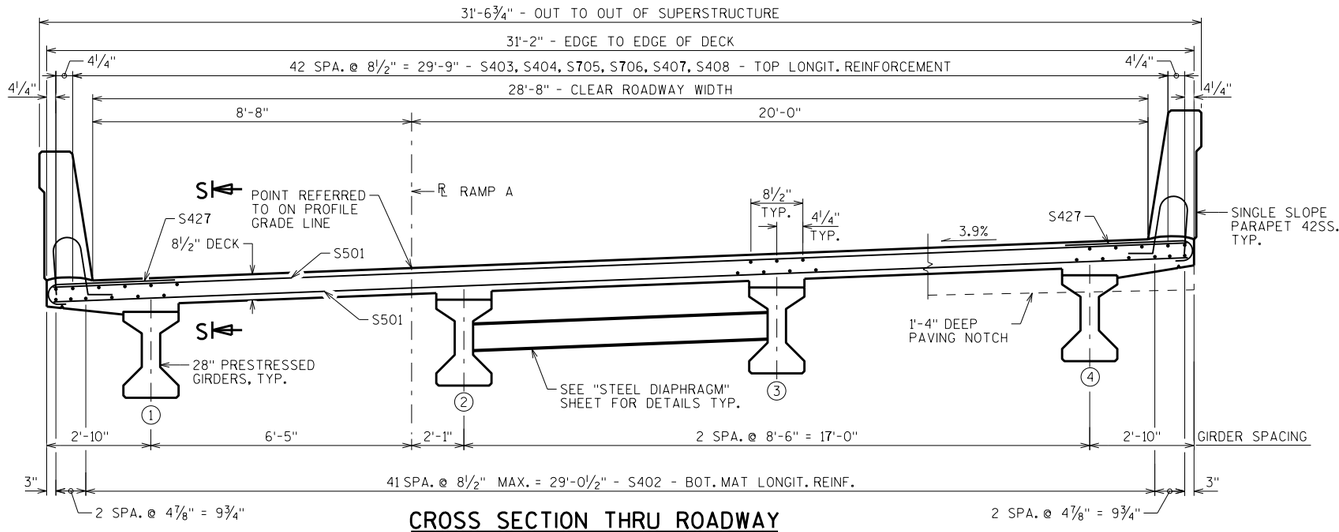
SCALE = 1

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8

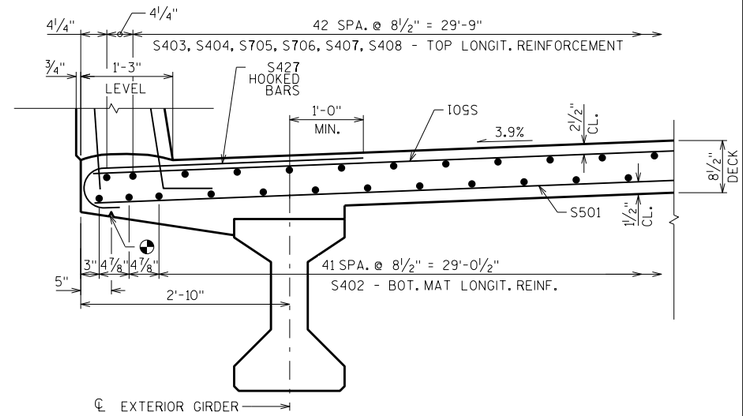
STATE PROJECT NUMBER

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CROSS SECTION THRU ROADWAY

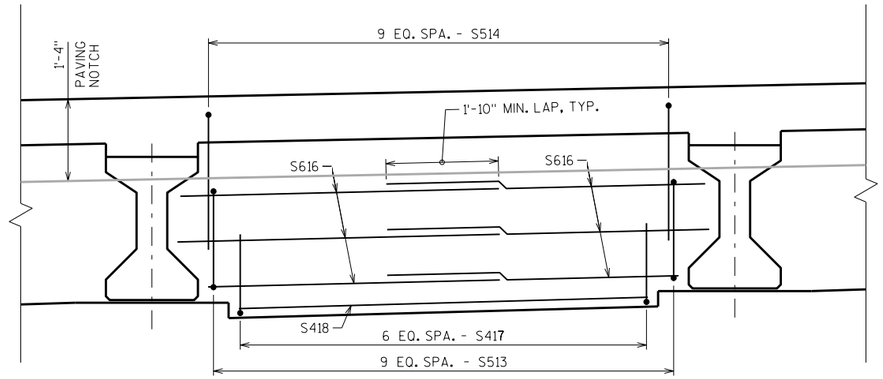
LOOKING EAST



EDGE OF DECK DETAIL

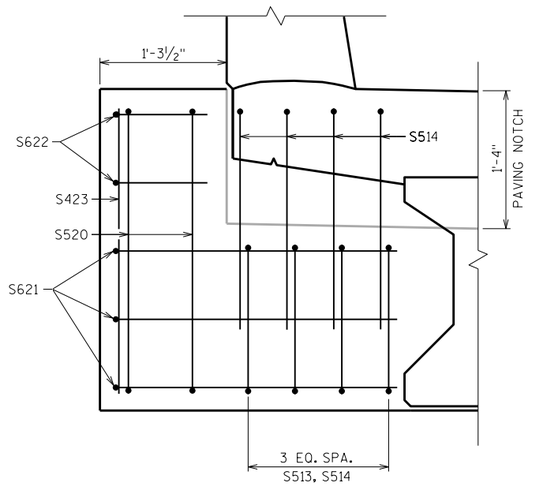
TYPICAL AT BOTH EDGES

- ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT. DIAPHRAGM
- ◯ INDICATES GIRDER NUMBER



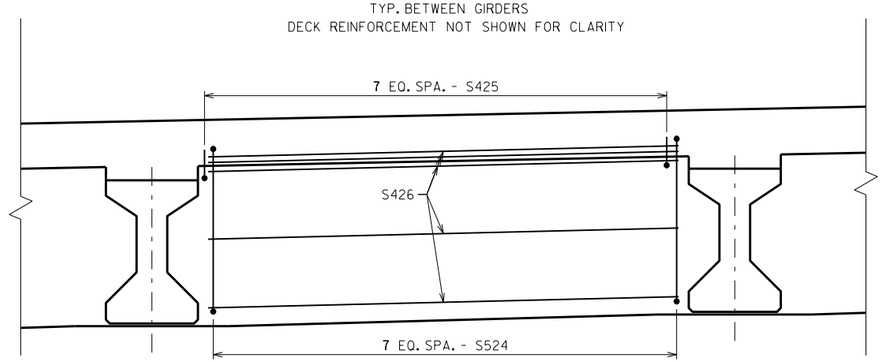
DIAPHRAGM AT ABUTMENTS

TYP. BETWEEN GIRDERS
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



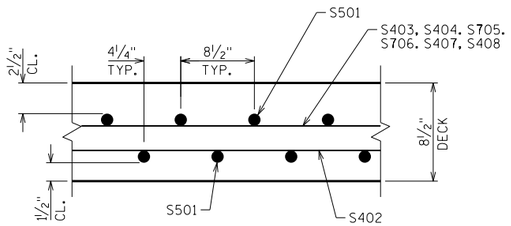
ABUTMENT DIAPHRAGM- EXTERIOR DETAIL

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

429

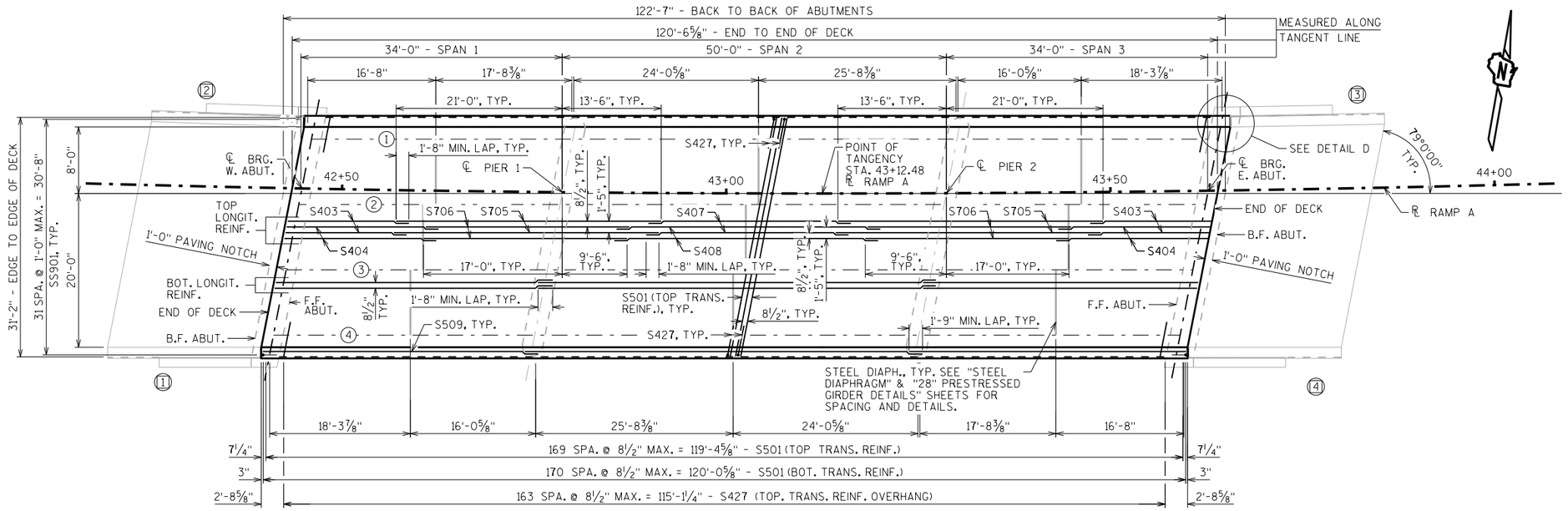
SCALE = 2.00

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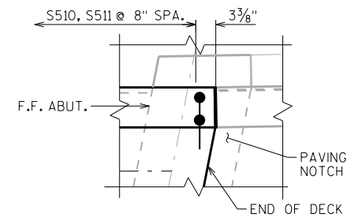
8

STATE PROJECT NUMBER

1021-04-78



PLAN



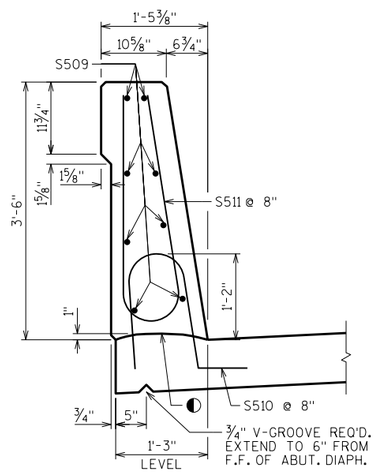
DETAIL D

NORTHEAST CORNER SHOWN
OTHER CORNERS SIMILAR

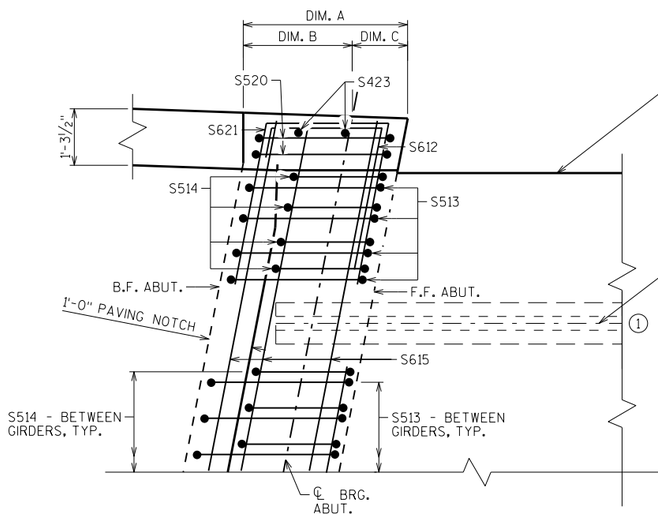
TOP OF DECK ELEVATIONS

	℄ 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



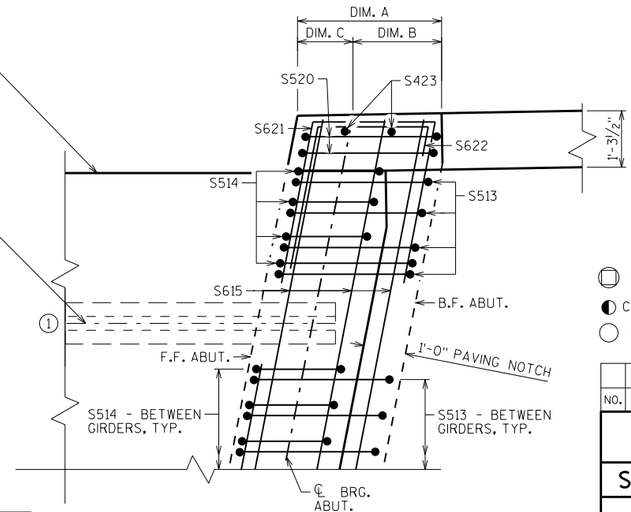
SECTION THRU PARAPET ON DECK



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

430

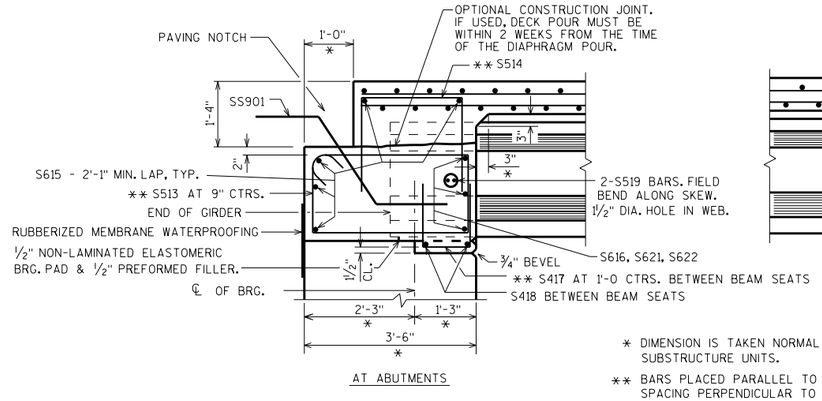
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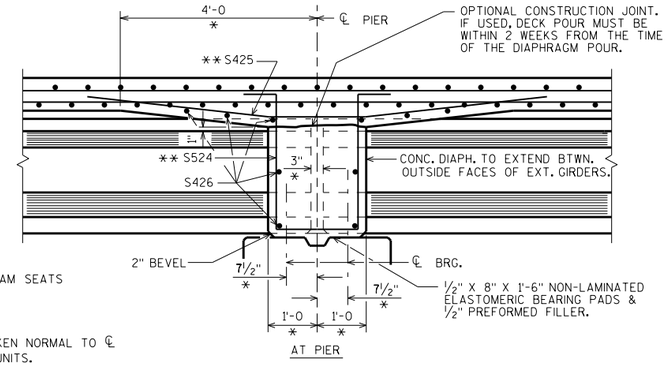
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8

STATE PROJECT NUMBER

1021-04-78



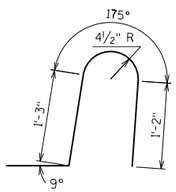


* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

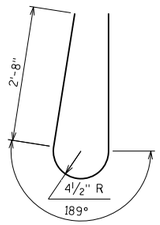
** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

PART. LONGIT. SECTION

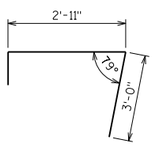
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	341	31'-4"			TRANSVERSE - BOT. & TOP
S402	X	138	41'-1"			LONGIT. - BOT.
S403	X	46	15'-10"			LONGIT. - TOP. - SPAN 1& 3
S404	X	44	19'-10"			LONGIT. - TOP. - SPAN 1& 3
S705	X	46	34'-6"			LONGIT. - TOP. - CONTINUITY OVER PIER 1& 2
S706	X	44	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



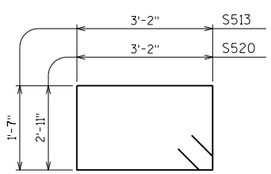
S510



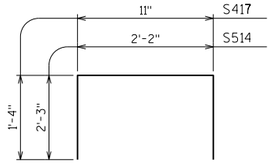
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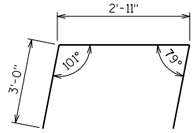
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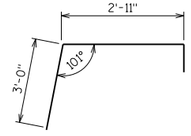
S513, S520



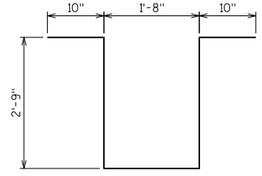
S514, S417



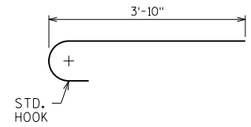
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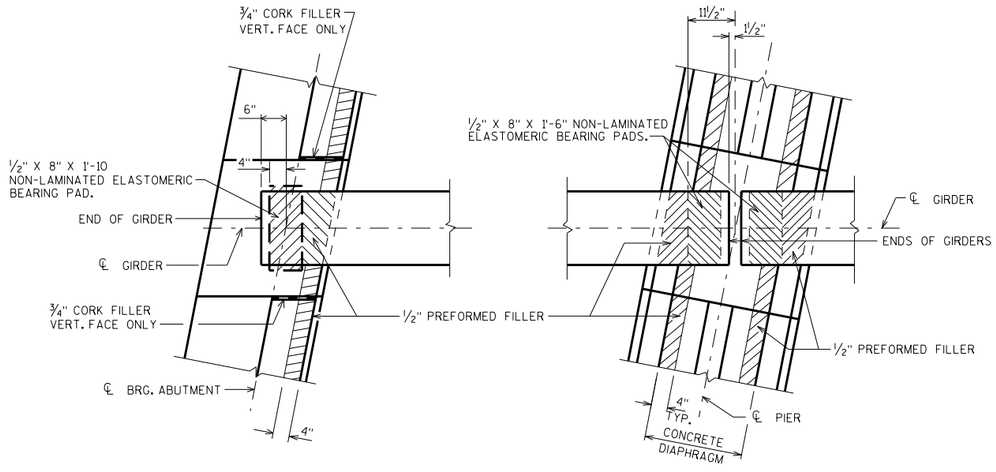
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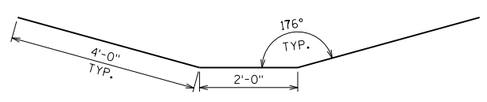
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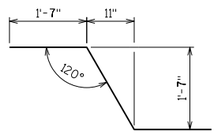
S427



BEARING PAD DETAIL



S425



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

431

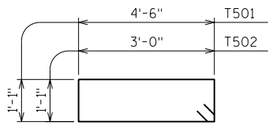
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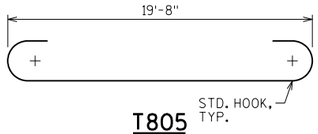
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STATE PROJECT NUMBER

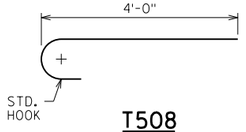
1021-04-78



T501, T502



T805

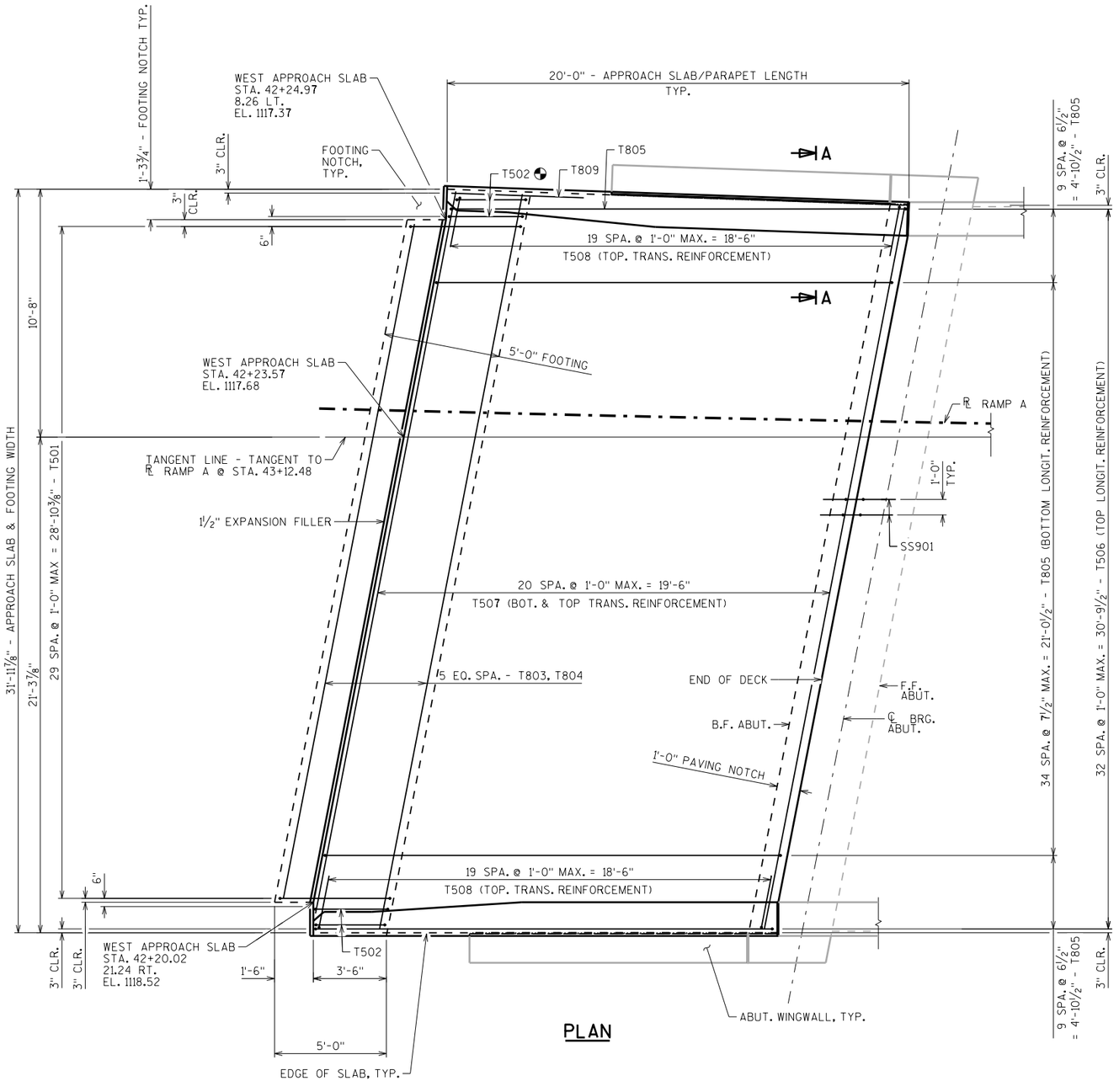


T508

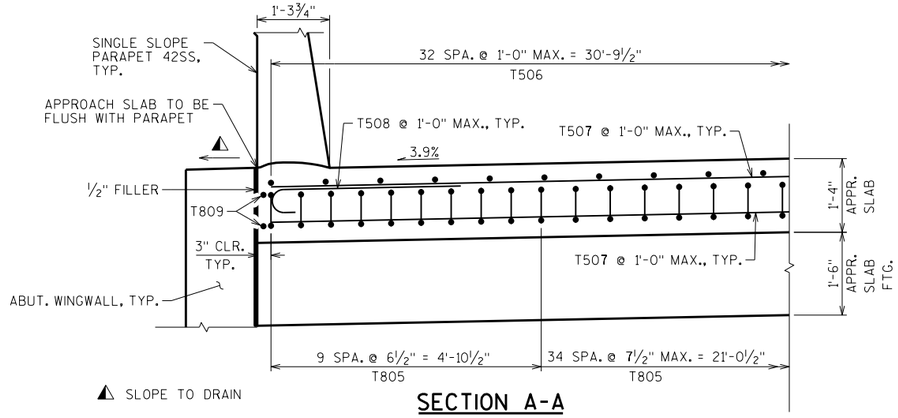
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

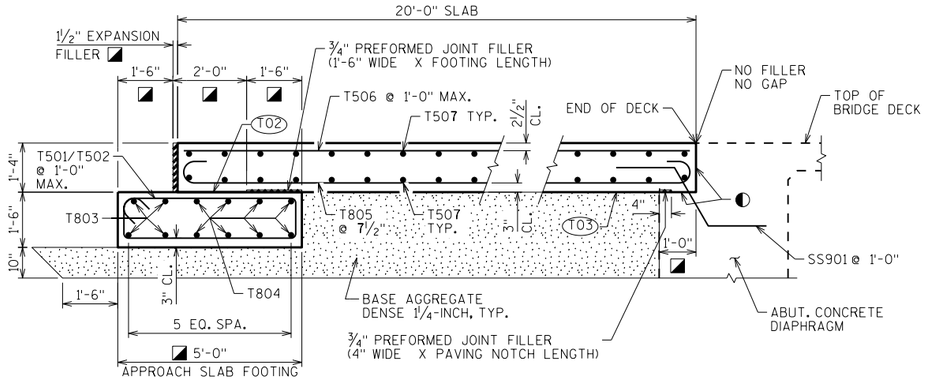
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	30	11'-10"	X		APPROACH WEST SLAB FOOTING - STIRRUPS
T502	X	4	8'-10"	X		APPROACH WEST SLAB FOOTING - STIRRUPS - NOTCHES
T803	X	4	29'-4"			APPROACH WEST SLAB FOOTING - TRANS.
T804	X	8	31'-11"			APPROACH WEST SLAB FOOTING - TRANS.
T805	X	53	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

432

8

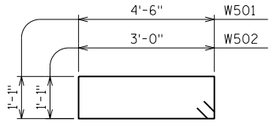
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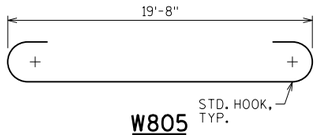
STATE PROJECT NUMBER

1021-04-78

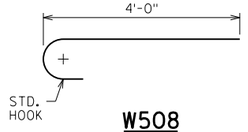




W501, W502



W805

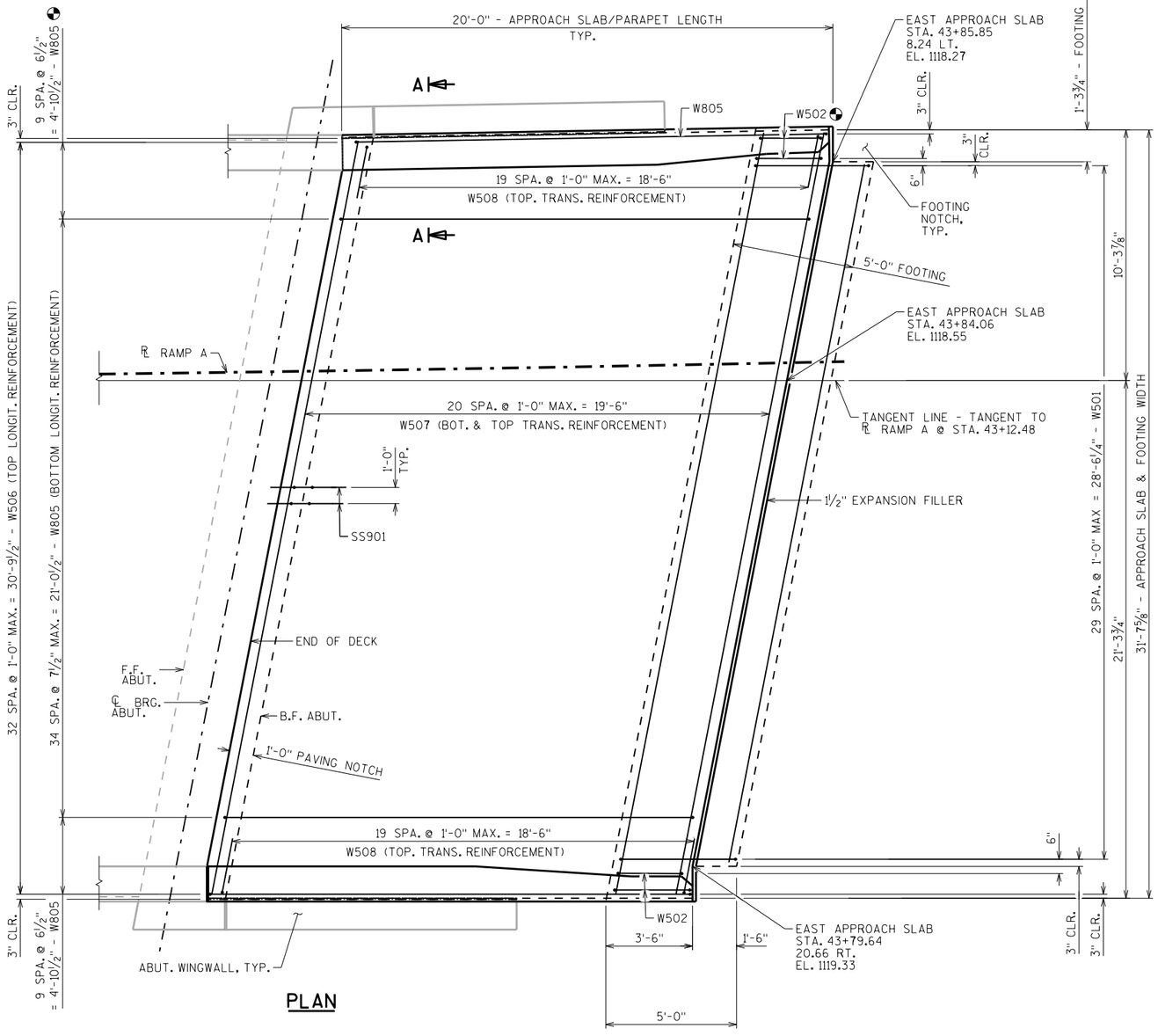


W508

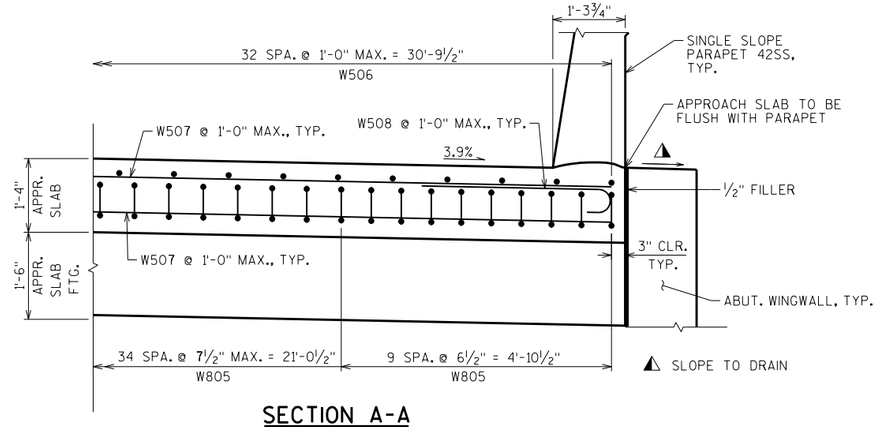
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

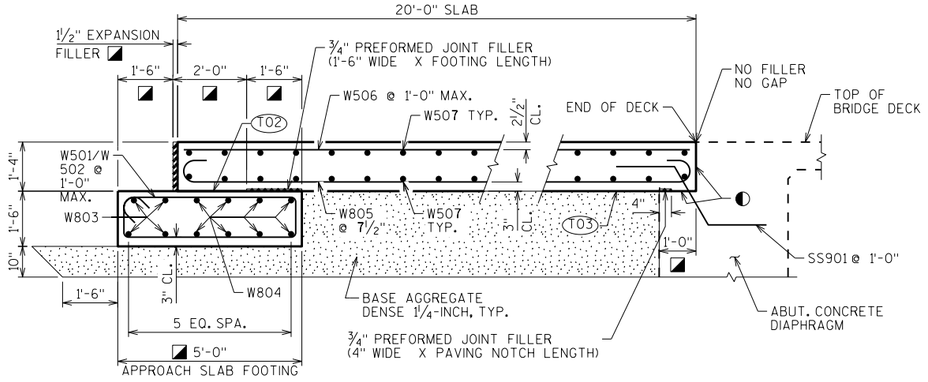
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
W501	X	30	11'-10"	X		APPROACH EAST SLAB FOOTING - STIRRUPS
W502	X	4	8'-10"	X		APPROACH EAST SLAB FOOTING - STIRRUPS - NOTCHES
W803	X	4	29'-0"			APPROACH EAST SLAB FOOTING - TRANS.
W804	X	8	31'-8"			APPROACH EAST SLAB FOOTING - TRANS.
W805	X	53	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

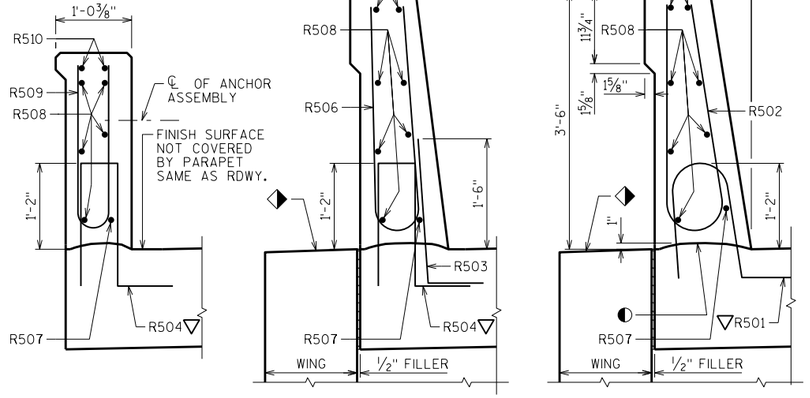
SHEET 16

433

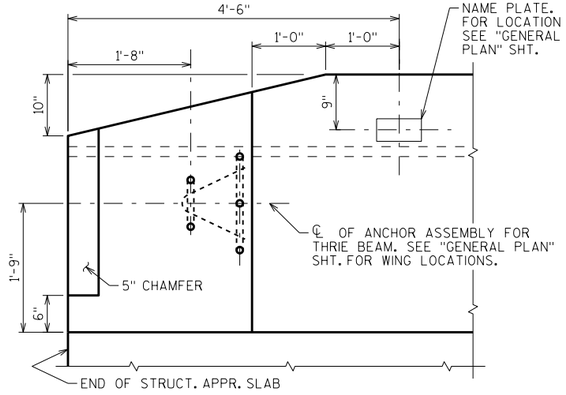
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8



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

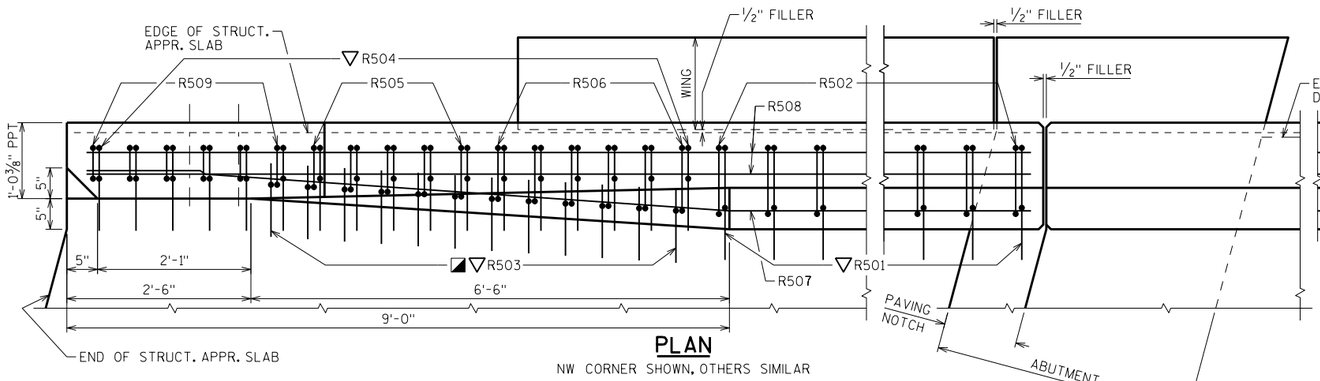
BAR MARK	COAT	ABUT.	ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	24	24	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-8"	X		PARAPET 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

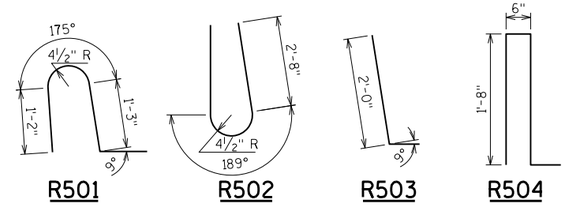
BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

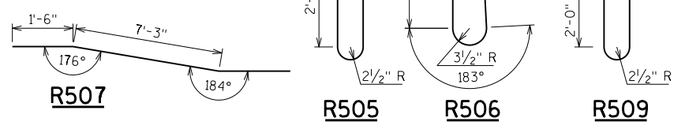


PLAN

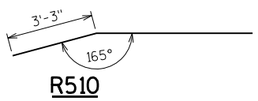
NW CORNER SHOWN, OTHERS SIMILAR



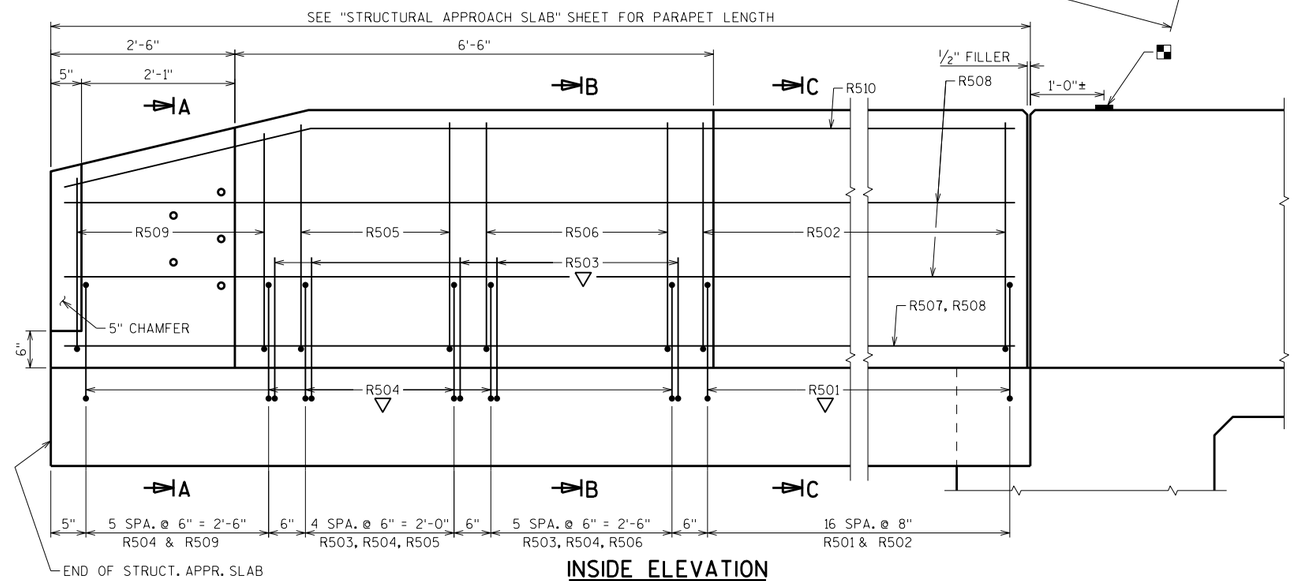
R501 R502 R503 R504



R507 R505 R506 R509



R510



INSIDE ELEVATION

NW CORNER SHOWN, OTHERS SIMILAR
WING & STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY

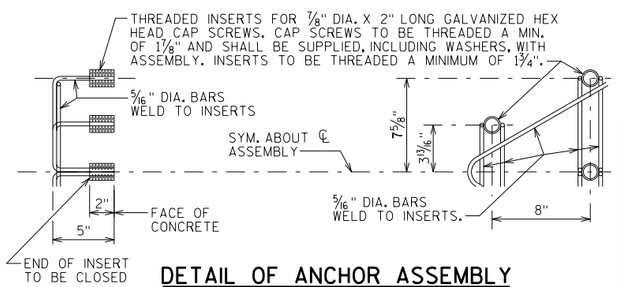
■ BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

◐ 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-55-286

DRAWN BY MJH | PLANS CK'D. BAF

SINGLE SLOPE PARAPET 42SS

SHEET 17

434

SCALE = 1.00

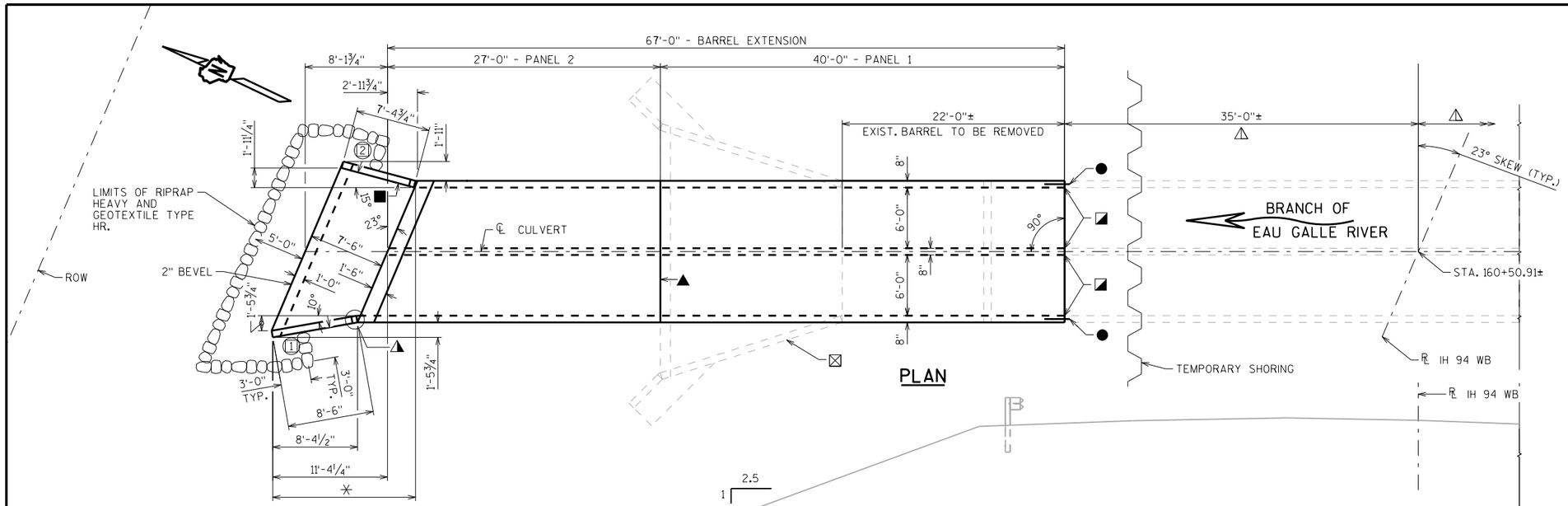
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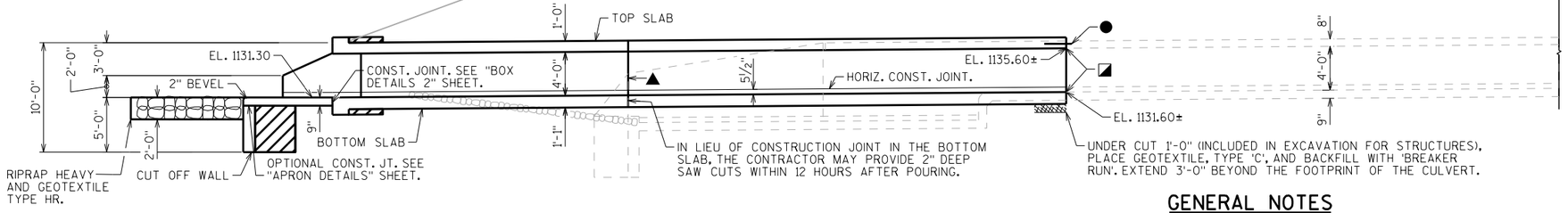
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STATE PROJECT NUMBER

1021-00-79

- SEE CORNER DETAILS ON "APRON DETAILS" SHEET
- NAME PLATE LOCATION (SEE "APRON DETAILS" SHEET)
- BUILD APRON AND END OF BOX LEVEL
- INDICATES WING NUMBER
- VERT. CONST. JOINT
- EXIST. BARREL TO REMAIN IN PLACE
- INSIDE WALLS TO MATCH EXISTING (TYP.)
- REMOVE EXISTING APRON AND WINGS.
- ADHESIVE ANCHORS NO. 5 BARS, EMBED 6" INTO SOUND CONCRETE AND SPACE AT 1'-0" CENTERS. (TYP. IN ALL WALLS AND SLABS)





OUTLET

ELEVATION

LIST OF DRAWINGS

1. LAYOUT
2. BOX DETAILS 1
3. BOX DETAILS 2
4. APRON
5. APRON DETAILS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.05
OPERATING RATING FACTOR: RF = 1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 255(KIPS)

EARTHLOAD:

DESIGNED FOR 22 FT. OF FILL.

MATERIAL PROPERTIES:

CONCRETE MASONRY: ——— f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT: ——— fy = 60,000 P.S.I.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 150 C.F.S.
$VEL._{100}$ = 5.3 F.P.S.
$HW._{100}$ = EL. 1136.44
WATERWAY AREA = 48 SQ. FT.
DRAINAGE AREA = 0.55 SQ. MI.
ROADWAY OVERTOPPING = N/A

TRAFFIC VOLUME

IH 94

ADT = 44200 (2040)
R.D.S. = 70 M.P.H.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 160+50.91	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-55-19	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	685
311.0115	BREAKER RUN	CY	57
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	42
504.0100	CONCRETE MASONRY CULVERTS	CY	101
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	10,715
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	260
511.1200	TEMPORARY SHORING C-55-19	SF	1,660
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9
606.0300	RIPRAP HEAVY	CY	11
645.0105	GEOTEXTILE TYPE C	SY	186
645.0120	GEOTEXTILE TYPE HR	SY	28
	NON-BID ITEMS		
	FILLER	EACH	¾"

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 CULVERTS C-55-19" SHALL BE THE EXISTING GROUNDLINE.

ALL VOLUME WHICH CANNOT BE PLACED BEFORE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL WITHIN THE LENGTH OF THE CULVERT INCLUDING THE APRON WING WALLS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

THE CONCRETE IN THE CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

PLACE 18" (MIN.) WIDE SHEET OF "RUBBERIZED MEMBRANE WATERPROOFING" ON TOP SLAB OVER ALL CONSTRUCTION JOINTS AND EXTEND DOWN TO 6" MIN. BELOW THE TOP OF BOTTOM SLAB.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS ON CHAPTER 36 STANDARDS OF THE CURRENT WISC. DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE FIELD ENGINEER, IN LIEU OF THE BREAKER RUN, TO BE UTILIZED AS A CONSTRUCTION PLATFORM FOR THE BOX. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL.

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 C-55-19

IH 94 OVER BRANCH OF EAU GALLE RIVER

COUNTY	TOWN
ST. CROIX	CADY

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BAF	MJK	BAF	MJK

LAYOUT

SHEET 1 OF 5

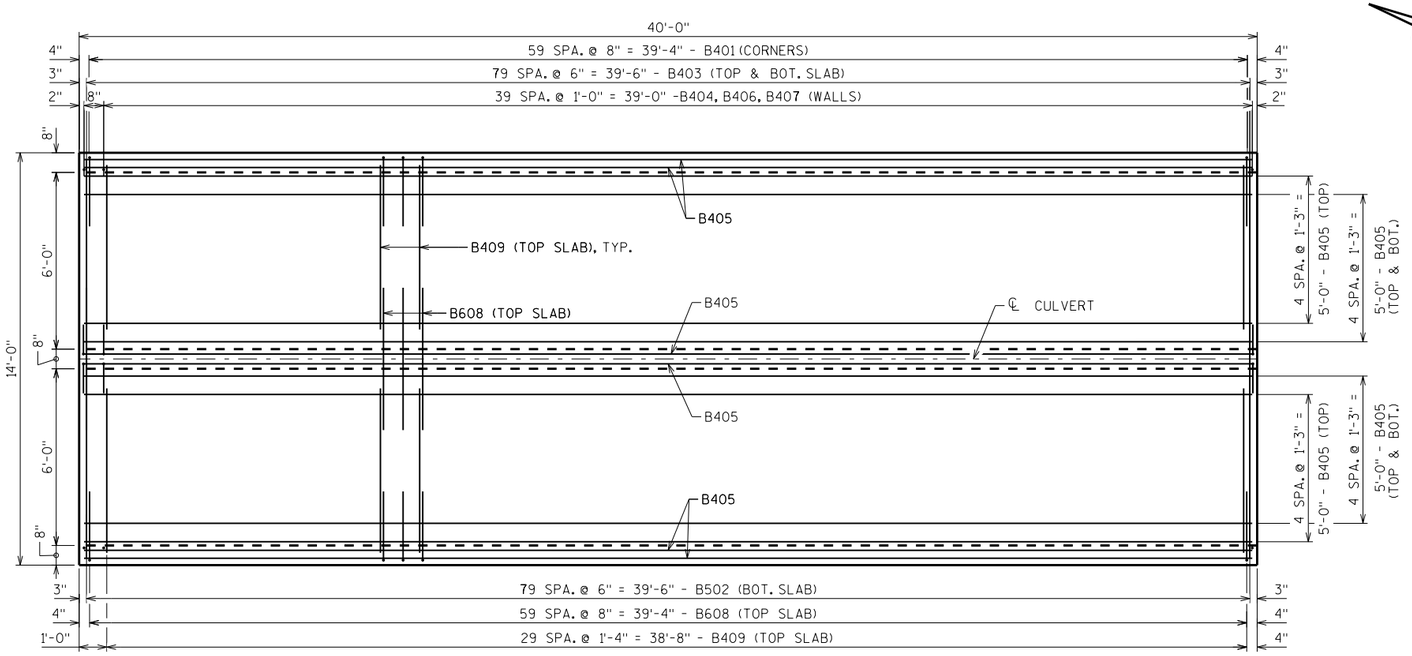
435

I.D. 1021-00-09B DATE: FEB. 2020

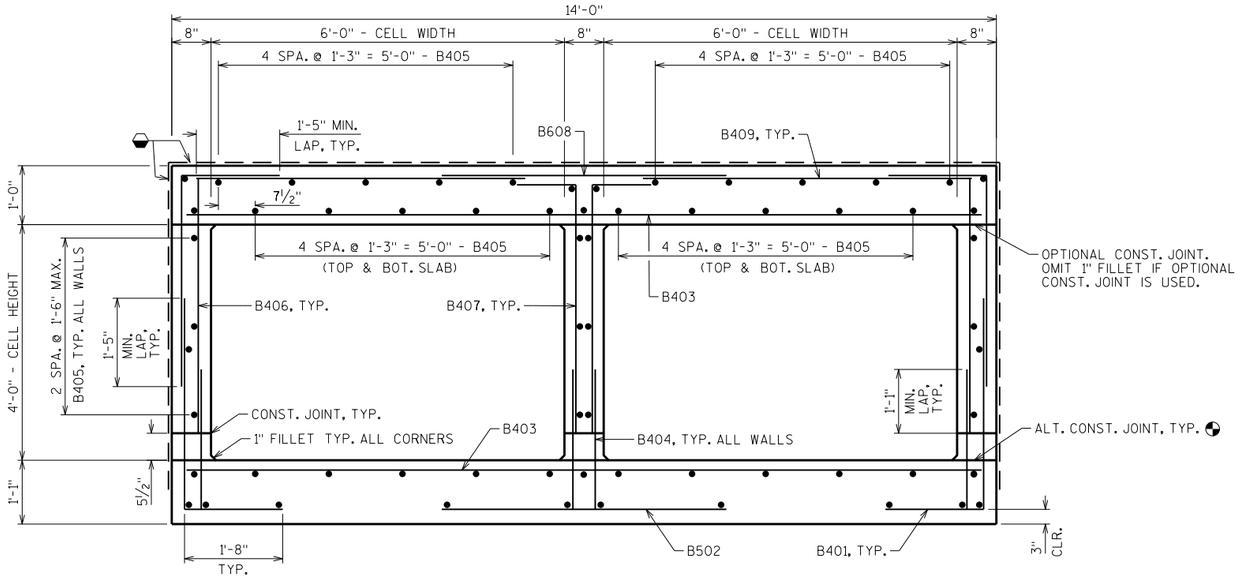
SCALE = 6.00

STATE PROJECT NUMBER

1021-00-79



PLAN VIEW OF PANEL 1



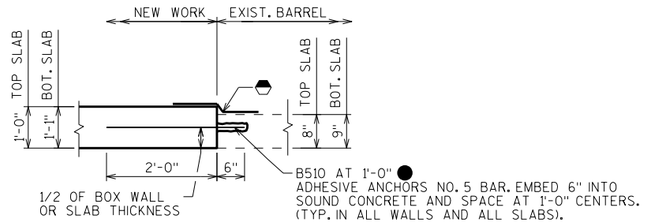
TYPICAL SECTION THRU BOX - PANEL 1

ALL LONGITUDINAL BARS NOT LABELED ARE B405 AS SHOWN

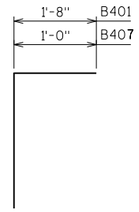
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

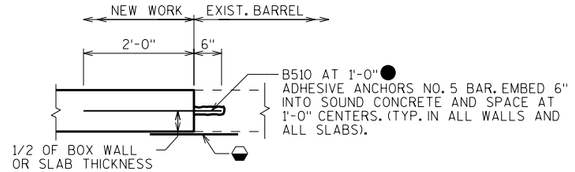
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		240	5'-2"	X		CORNERS
B502		80	4'-10"			BOT. SLAB - TRANSVERSE
B403		160	13'-6"			TOP AND BOT. SLAB - TRANSVERSE
B404		164	2'-5"			WALLS - DOWELS - VERT.
B405		64	39'-8"			TOP AND BOT. SLAB AND WALLS - LONGIT.
B406		82	4'-4"			EXTERIOR WALLS - VERT.
B407		82	5'-3"	X		INTERIOR WALL - VERT.
B608		60	4'-10"			TOP SLAB - TRANSVERSE
B409		30	5'-7"			TOP SLAB - TRANSVERSE
● B510		42	2'-6"			VERT. CONST. JOINT
B511		42	4'-0"			VERT. CONST. JOINT



TYPICAL SECTION AT SLABS

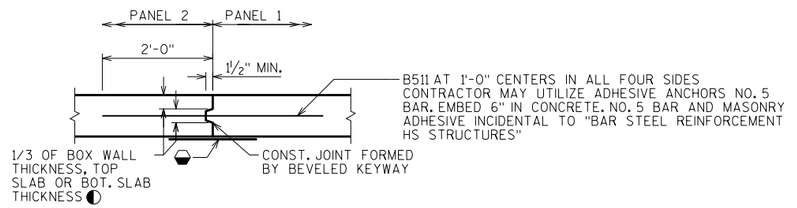


B401, B407



VERTICAL CONSTRUCTION JOINT

TYP. WALLS



VERTICAL CONSTRUCTION JOINT

2" DEEP SAW CUT WITHIN 12 HOURS AFTER POURING MAY BE USED IN LIEU OF CONST. JT. IN BOTTOM SLAB.

◓ 18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING UP WALLS & ACROSS TOP SLAB AT VERTICAL CONST. JOINTS. EXTEND 6" MIN. BELOW TOP OF BOTTOM SLAB.

◔ OMIT 1" FILLET IF ALT. CONST. JOINT IS USED

● ADHESIVE ANCHORS NO. 5 BARS, EMBED 6" INTO SOUND CONCRETE AND SPACE AT 1'-0" CENTERS. (TYP. IN ALL WALLS AND SLABS)

◐ IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-55-19

DRAWN BY BAF | PLANS CK'D. MJK

BOX DETAILS 1

SHEET 2

436

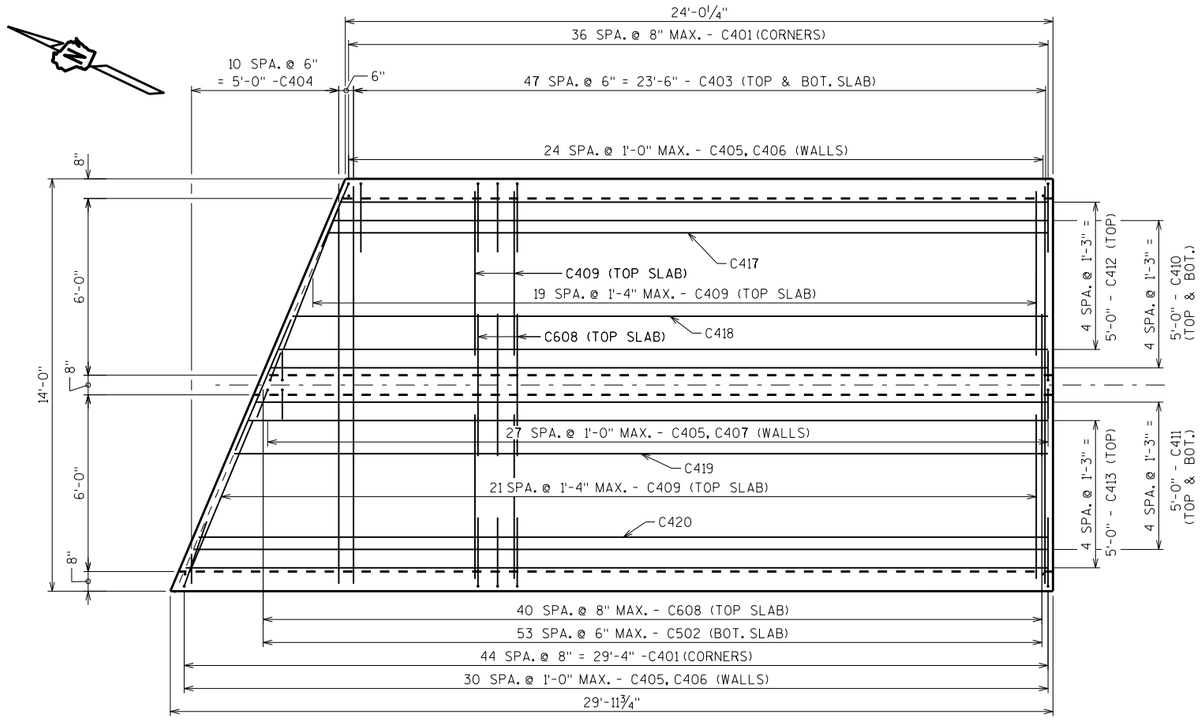
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8

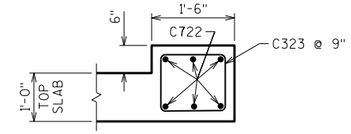
STATE PROJECT NUMBER

1021-00-79

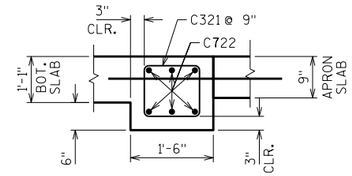


PLAN VIEW OF PANEL 2

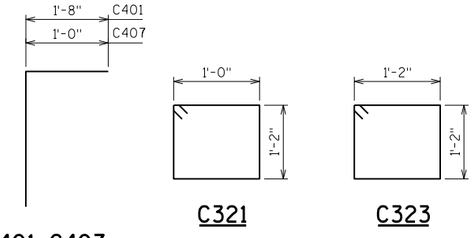
APRON AND HEADERS ARE NOT SHOWN



SECTION THRU TOP SLAB HEADER



SECTION THRU BOTTOM SLAB HEADER



C401, C407

C321

C323

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

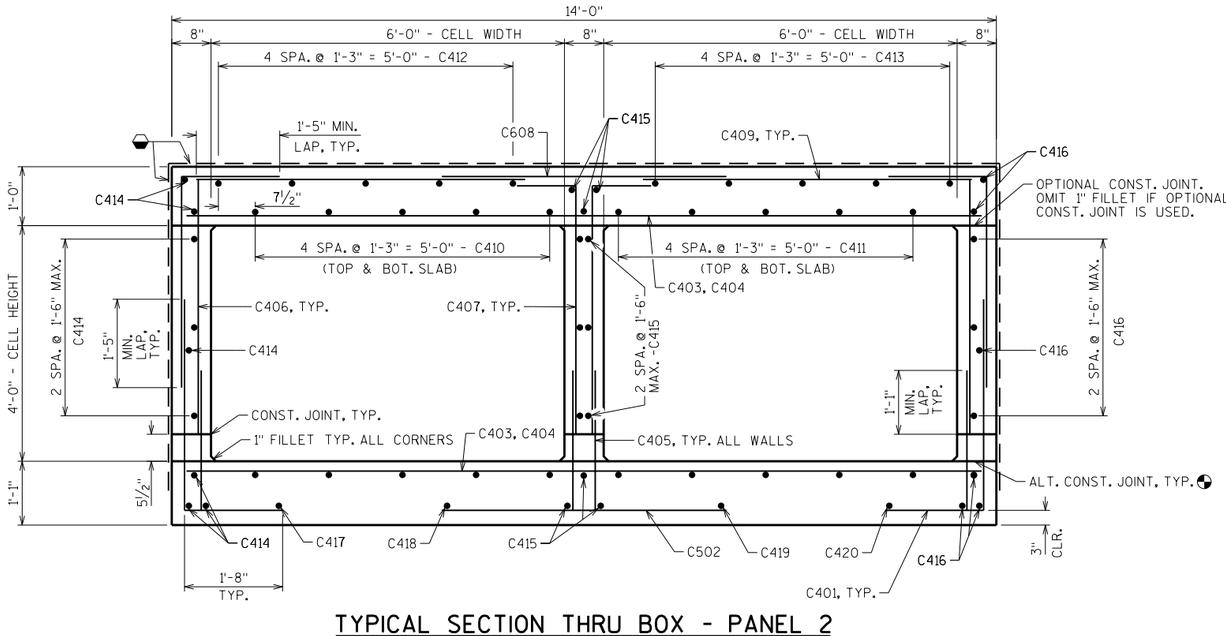
	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
*	C401		164	5'-2"	X		CORNERS
*	C502		54	4'-10"			BOT. SLAB - TRANSVERSE
	C403		96	13'-6"			TOP AND BOT. SLAB - TRANSVERSE
	C404		22	6'-11"		⚠	TOP AND BOT. SLAB - TRANSVERSE
	C405		112	2'-5"			WALLS - DOWELS - VERT.
	C406		56	4'-4"			EXTERIOR WALLS - VERT.
	C407		56	5'-3"	X		INTERIOR WALL - VERT.
*	C608		41	4'-10"			TOP SLAB - TRANSVERSE
*	C409		42	5'-7"			TOP SLAB - TRANSVERSE
	C410		10	25'-4"		⚠	TOP AND BOT. SLAB - LONGIT.
	C411		10	27'-11"		⚠	TOP AND BOT. SLAB - LONGIT.
	C412		5	25'-1"		⚠	TOP SLAB - LONGIT.
	C413		5	28'-3"		⚠	TOP SLAB - LONGIT.
	C414		9	23'-9"			EXTERIOR WALL - LONGIT.
	C415		12	26'-7"			INTERIOR WALL - LONGIT.
	C416		9	29'-5"			EXTERIOR WALL - LONGIT.
	C417		1	24'-4"			BOT. SLAB - LONGIT.
	C418		1	25'-7"			BOT. SLAB - LONGIT.
	C419		1	27'-7"			BOT. SLAB - LONGIT.
	C420		1	28'-10"			BOT. SLAB - LONGIT.
	C321		19	4'-9"	X		BOT. HEADER - STIRRUP - VERT.
	C722		12	14'-9"			HEADER - HORIZ.
	C323		19	5'-1"	X		TOP HEADER - STIRRUP - VERT.
	C524		14	4'-0"			APRON CONNECTION JOINT TIE

⚠ 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

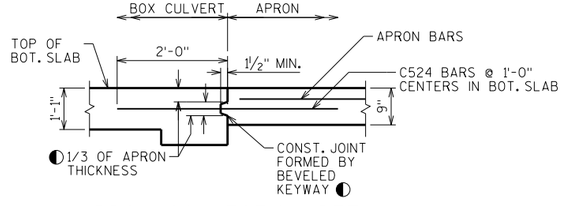
BAR MARK	NO. REQ'D.	LENGTH
C404	2 SERIES OF 11	1'-0" TO 12'-9"
C410	2 SERIES OF 5	24'-3" TO 26'-4"
C411	2 SERIES OF 5	26'-10" TO 29'-0"
C412	1 SERIES OF 5	24'-0" TO 26'-1"
C413	1 SERIES OF 5	27'-2" TO 29'-3"

BUNDLE AND TAG EACH SERIES SEPARATELY.



TYPICAL SECTION THRU BOX - PANEL 2

NOTE: SEE "BOX DETAILS 1" SHEET FOR VERTICAL CONSTRUCTION JOINT DETAIL



APRON CONNECTION DETAIL

* FLARE BARS AS NECESSARY TO FIT AT SKEWED END

18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING UP WALLS & ACROSS TOP SLAB AT VERTICAL CONST. JOINTS. EXTEND 6" MIN. BELOW TOP OF BOTTOM SLAB.

OMIT 1" FILLET IF ALT. CONST. JOINT IS USED

IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-55-19

DRAWN BY BAF | PLANS CK'D. MJK

BOX DETAILS 2

SHEET 3

437

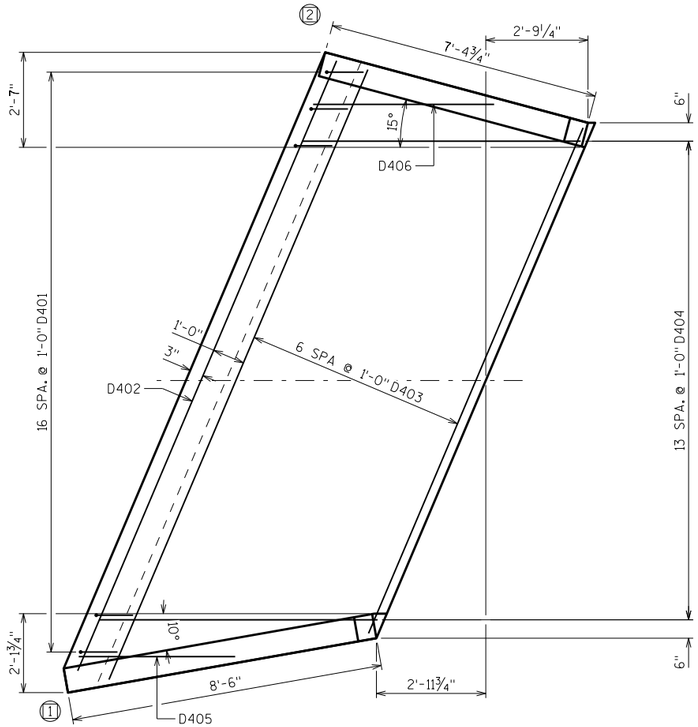
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8

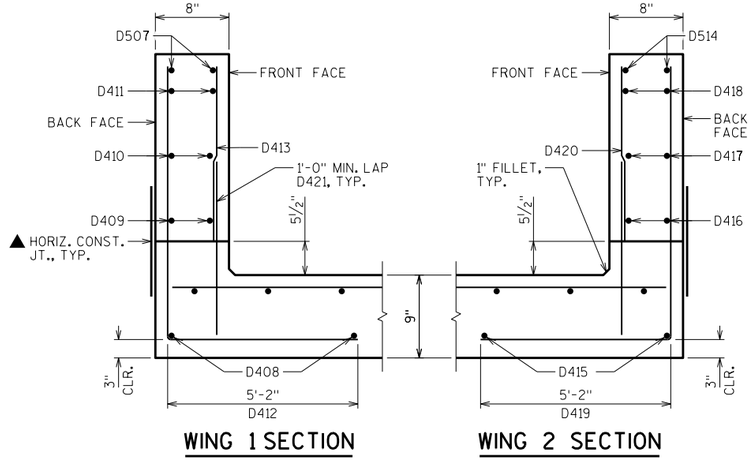
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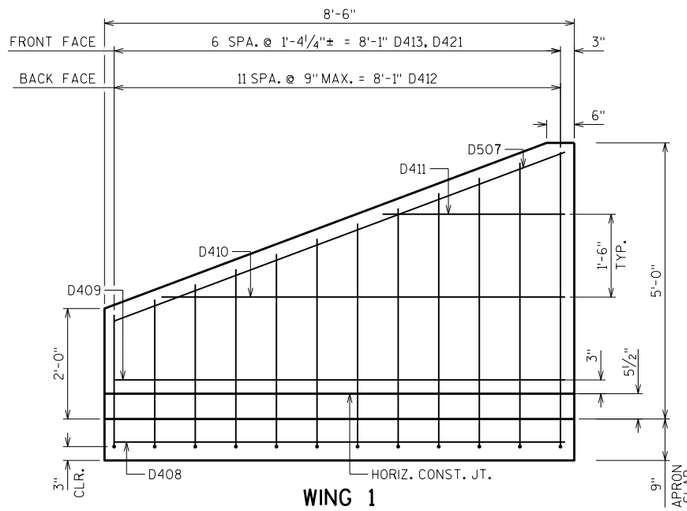
STATE PROJECT NUMBER

1021-00-79



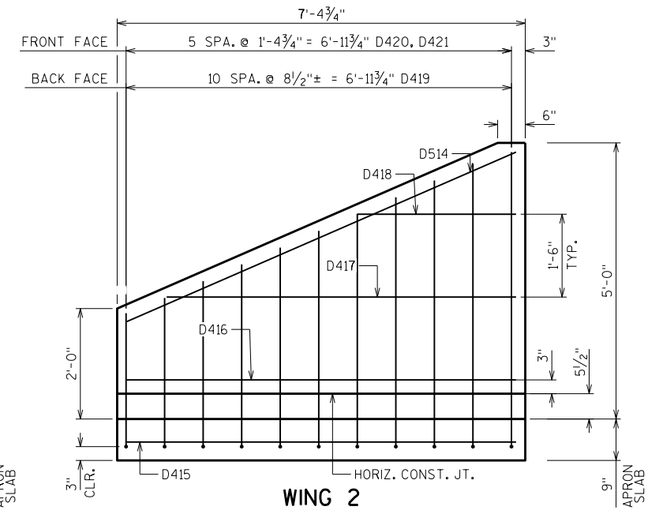
OUTLET APRON PLAN





WING 1

SHOWING BACK FACE REINFORCEMENT



WING 2

SHOWING BACK FACE REINFORCEMENT

INDICATES WING NUMBER

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING, PLACE ALONG HORIZ. CONST. JT. FOR ENTIRE WING LENGTH, TYP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-55-19

DRAWN BY BAF | PLANS CK'D. MJK

APRON

SHEET 4

438

SCALE = 2.00

8

8

STATE PROJECT NUMBER

1021-00-79

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

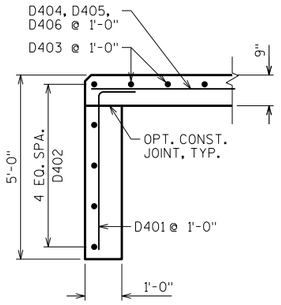
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
D401		17	5'-6"	X		OUTLET APRON AND CUTOFF WALL VERT.
D402		5	17'-11"			OUTLET APRON AND CUTOFF WALL HORIZ.
D403		7	16'-5"		⚠	OUTLET APRON SLAB HORIZ.
D404		14	7'-8"			OUTLET APRON SLAB HORIZ.
D405		1	4'-4"			OUTLET APRON SLAB HORIZ.
D406		1	4'-11"			OUTLET APRON SLAB HORIZ.
D507	X	2	8'-7"			WING 1 HORIZ. TOP BOTH FACES
D408		2	8'-1"			WING 1 HORIZ. APRON SLAB
D409	X	2	8'-1"			WING 1 HORIZ. BOTTOM BOTH FACES
D410	X	2	7'-2"			WING 1 HORIZ.
D411	X	2	3'-2"			WING 1 HORIZ.
D412	X	12	8'-11"	X	⚠	WING 1 VERT. BACK FACE
D413	X	7	2'-11"		⚠	WING 1 VERT. FRONT FACE
D514	X	2	7'-7"			WING 2 HORIZ. TOP BOTH FACES
D415		2	6'-11"			WING 2 HORIZ. APRON SLAB
D416	X	2	6'-11"			WING 2 HORIZ. BOTTOM BOTH FACES
D417	X	2	6'-2"			WING 2 HORIZ.
D418	X	2	2'-9"			WING 2 HORIZ.
D419	X	11	8'-11"	X	⚠	WING 2 VERT. BACK FACE
D420	X	6	2'-11"		⚠	WING 2 VERT. FRONT FACE
D421	X	13	2'-0"			WINGS 1 & 2 DOWELS FRONT FACE

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

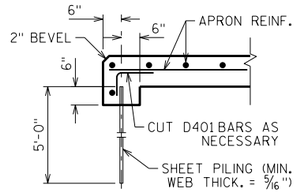
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
D403	1 SERIES OF 7	14'-11" TO 17'-11"
D412	1 SERIES OF 12	7'-5" TO 10'-5"
D413	1 SERIES OF 7	1'-5" TO 4'-4"
D419	1 SERIES OF 11	7'-5" TO 10'-5"
D420	1 SERIES OF 6	1'-5" TO 4'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.

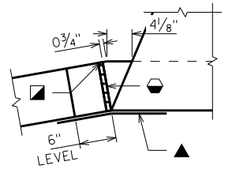


CUT-OFF WALL

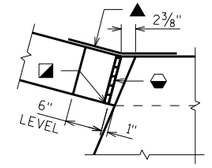


ALTERNATE CUT-OFF WALL

THE ABOVE ALTERNATIVE MAY BE USED IN LIEU OF CAST-IN-PLACE CONCRETE CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONCRETE CUT-OFF WALLS.

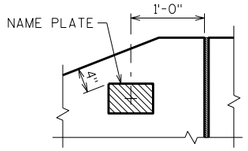


CORNER 1

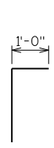


CORNER 2

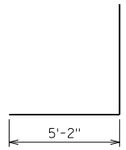
CORNER DETAILS



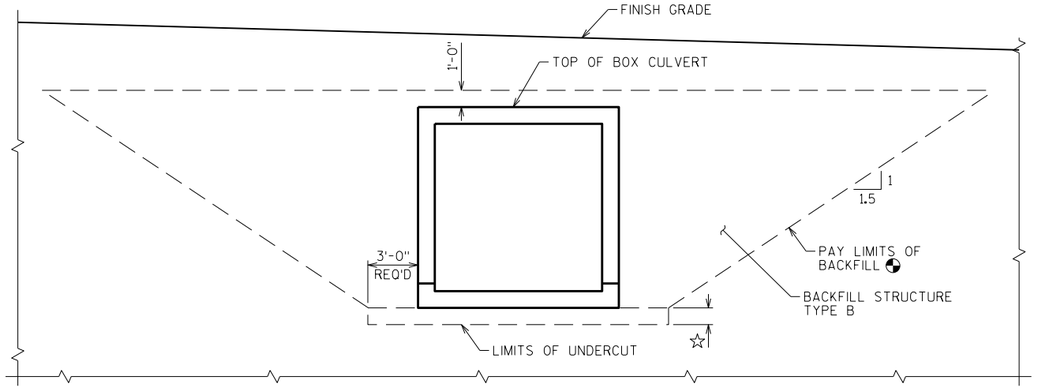
NAME PLATE LOCATION
WING 2



D401



D412,D419



TYPICAL SECTION
THRU BOX CULVERT

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

☆ UNDERCUT 1'-0". EXCAVATION FOR UNDERCUT TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE "GEOTEXTILE TYPE C" AND BACKFILL WITH "BREAKER RUN".

◒ 3/4" FILLER, TYP. EXTEND FILLER FROM HORIZ. CONST. JT. TO TOP OF WING.

◪ 1" BEVEL, TYP.

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM HORIZ. CONST. JT. TO TOP OF WALL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-55-19

DRAWN BY BAF | PLANS CK'D. MJK

APRON DETAILS

SHEET 5

439

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

9

9

PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS: STAGE 1	SHEET 440	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090101-EW-IH94.DWG
LAYOUT NAME - 01

PLOT DATE : 3/17/2021 2:19 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 42

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	4	8	8	0	0	8	8	0	8
133+00.000	5	16	16	1	3	24	24	3	21
134+00.000	11	29	29	27	69	52	52	72	-19
135+00.000	16	50	50	46	177	102	102	249	-146
136+00.000	19	65	65	56	249	168	168	498	-330
137+00.000	17	66	66	51	259	234	234	757	-524
137+06.930	17	4	4	43	16	238	238	773	-535

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	17	0	0	42	0	0	0	0	0
138+00.000	11	47	47	65	237	47	47	237	-190
139+00.000	11	40	40	55	289	87	87	526	-439
140+00.000	10	39	39	55	264	126	126	790	-664
141+00.000	10	37	37	58	272	163	163	1062	-899
142+00.000	10	37	37	63	291	200	200	1352	-1152
143+00.000	10	37	37	59	293	237	237	1646	-1409
144+00.000	9	34	34	50	264	272	272	1910	-1638
145+00.000	10	35	35	41	220	306	306	2130	-1823
146+00.000	12	40	40	26	161	347	347	2291	-1944
147+00.000	13	45	45	12	92	391	391	2382	-1991
148+00.000	12	45	45	15	66	436	436	2449	-2013
149+00.000	11	42	42	26	100	478	478	2548	-2071
150+00.000	10	38	38	48	178	516	516	2726	-2210
151+00.000	10	37	37	52	239	553	553	2965	-2412
151+64.176	12	26	26	39	140	580	580	3105	-2525
152+00.000	12	16	16	42	70	595	595	3174	-2579
153+00.000	10	41	41	25	161	636	636	3336	-2699
154+00.000	10	37	37	23	115	674	674	3451	-2777
154+39.792	11	15	15	17	38	689	689	3489	-2800
155+00.000	10	23	23	17	50	712	712	3539	-2827
					TOTAL =	950		4312	

9 9

PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS: STAGE 1	SHEET 441	E

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	16	3	3	0	0	3	3	0	3
166+00.000	16	55	55	5	11	58	58	11	46
167+00.000	11	50	50	10	36	107	107	47	60
168+00.000	10	39	39	19	70	146	146	116	29
169+00.000	11	40	40	22	99	185	185	215	-30
170+00.000	11	40	40	20	101	226	226	316	-91
171+00.000	10	38	38	23	105	264	264	421	-157
172+00.000	11	38	38	21	107	302	302	528	-226
173+00.000	9	36	36	38	141	338	338	669	-331
174+00.000	10	36	36	40	186	374	374	855	-481
175+00.000	10	38	38	38	187	412	412	1042	-630
176+00.000	10	37	37	52	217	449	449	1259	-810
177+00.000	10	36	36	53	253	485	485	1512	-1027
178+00.000	11	39	39	62	276	524	524	1788	-1264
179+00.000	10	39	39	69	314	562	562	2102	-1540
179+58.634	10	21	21	70	196	584	584	2298	-1714

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	10	0	0	70	0	0	0	0	0
180+00.000	11	16	16	77	147	16	16	147	-131
181+00.000	9	37	37	86	393	53	53	539	-486
182+00.000	9	34	34	82	403	87	87	943	-855
183+00.000	10	35	35	65	353	122	122	1296	-1174
184+00.000	11	38	38	48	273	160	160	1569	-1409
185+00.000	10	39	39	40	213	199	199	1781	-1583
186+00.000	12	40	40	16	135	239	239	1916	-1677
187+00.000	11	42	42	7	55	281	281	1971	-1690
188+00.000	11	40	40	2	21	321	321	1993	-1671
189+00.000	11	39	39	0	4	360	360	1997	-1637
189+41.457	2	10	10	0	0	370	370	1997	-1627
					TOTAL =	954		4295	

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

9

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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 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS: STAGE 2	SHEET 444	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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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

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: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS: STAGE 3	SHEET 448	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090101-EW-IH94.DWG
LAYOUT NAME - 06

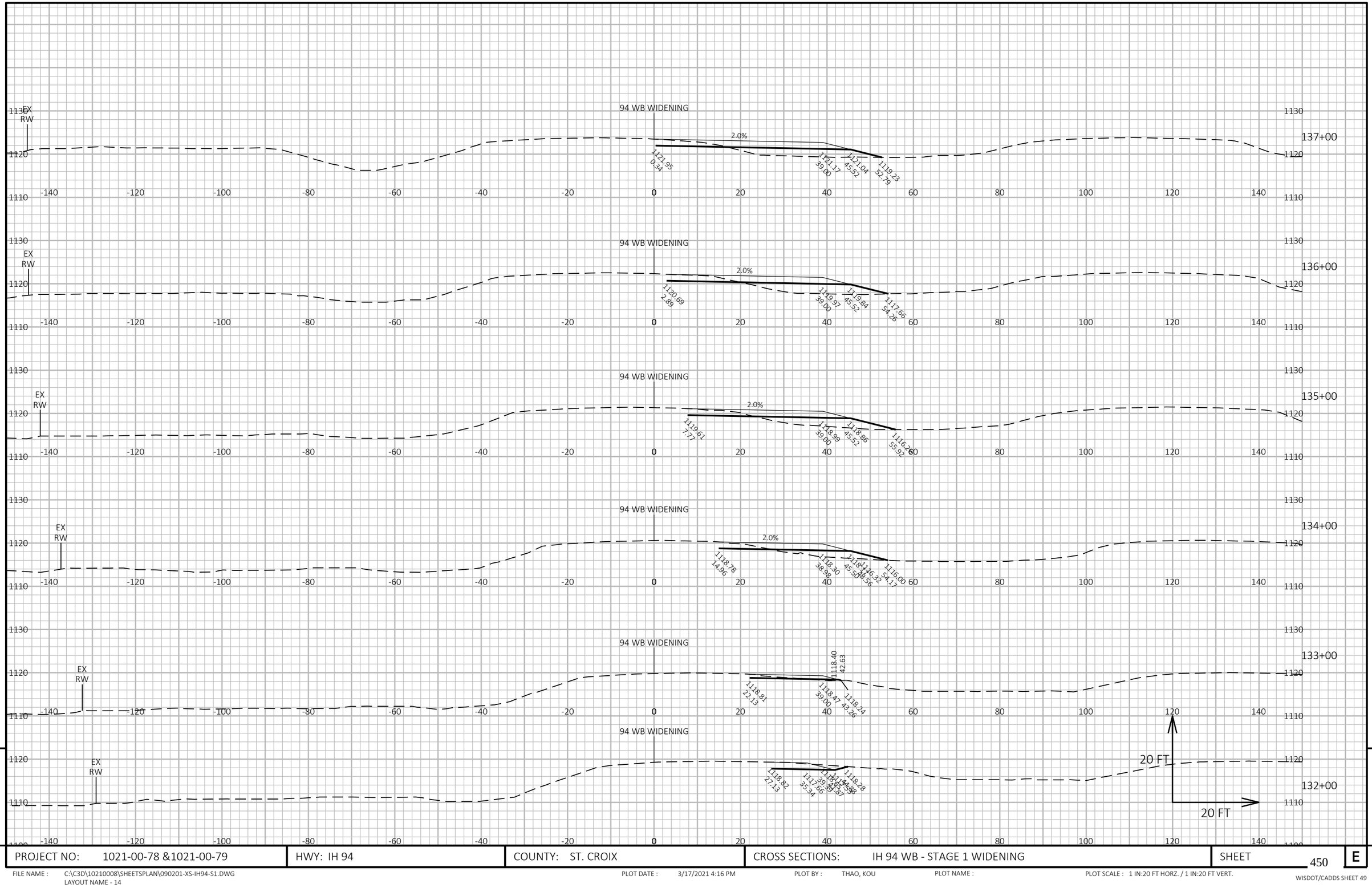
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WISDOT/CADDS SHEET 42

~CONTINUE~									
22+00.000	166	601	601	0	0	2539	2539	49	2490
23+00.000	166	614	614	0	0	3153	3153	49	3104
24+00.000	145	577	577	7	16	3730	3730	65	3665
25+00.893	123	501	501	0	16	4231	4231	81	4150
26+00.000	98	405	405	2	4	4635	4635	85	4551
27+00.000	85	339	339	2	8	4974	4974	93	4881
28+00.000	80	306	306	3	11	5280	5280	104	5177
29+00.000	81	298	298	1	9	5578	5578	112	5466
30+00.000	80	296	296	2	7	5874	5874	119	5755
31+00.000	79	294	294	6	19	6168	6168	138	6030
32+00.000	84	301	301	1	15	6469	6469	153	6317
33+00.000	82	307	307	1	5	6777	6777	157	6619
34+00.000	79	300	300	1	5	7076	7076	162	6914
35+00.000	89	311	311	0	2	7387	7387	165	7223
36+00.000	90	331	331	0	0	7719	7719	165	7554
37+00.000	81	316	316	0	0	8035	8035	165	7870
38+00.000	60	260	260	1	2	8295	8295	167	8128
39+00.000	46	196	196	4	11	8490	8490	178	8313
40+00.000	37	153	153	9	31	8643	8643	208	8435
41+00.000	32	128	128	15	58	8771	8771	266	8505
42+00.000	31	117	117	22	89	8889	8889	356	8533
42+19.910	31	23	23	22	21	8912	8912	377	8535
42+19.930	0	0	0	0	0	8912	8912	377	8535
43+00.000	0	0	0	0	0	8912	8912	377	8535
43+79.390	0	0	0	0	0	8912	8912	377	8535
43+79.411	25	0	0	44	0	8912	8912	377	8535
44+00.000	25	19	19	44	44	8931	8931	420	8511
45+00.000	25	94	94	41	204	9025	9025	624	8401
46+00.000	27	97	97	23	152	9122	9122	777	8346
47+00.000	21	89	89	23	111	9211	9211	887	8324
47+87.895	23	72	72	24	100	9283	9283	988	8295
48+00.000	23	10	10	24	14	9293	9293	1002	8292
49+00.000	31	101	101	26	121	9394	9394	1123	8271
49+50.392	41	67	67	22	59	9461	9461	1182	8279
50+00.000	44	78	78	33	66	9539	9539	1247	8292
51+00.000	33	142	142	54	209	9681	9681	1456	8225
52+00.000	32	119	119	32	207	9801	9801	1663	8138
53+00.000	30	114	114	30	149	9914	9914	1811	8103
54+00.000	27	105	105	27	137	10019	10019	1948	8071
55+00.000	55	153	153	3	71	10172	10172	2020	8152
56+00.000	64	221	221	0	8	10393	10393	2027	8365
57+00.000	52	215	215	6	16	10608	10608	2043	8564
57+10.353	55	21	21	4	2	10628	10628	2046	8582

Alignment: IH94WB-ref-12ft-rt
Start Sta: 57+10.353
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.)
57+10.353	57	0	0	4	0	0	0	0	0
58+00.000	59	192	192	1	10	192	192	10	182
59+00.000	61	222	222	4	13	414	414	23	391
59+65.618	59	145	145	2	9	560	560	32	528
60+00.000	55	72	72	0	1	632	632	33	599
61+00.000	60	212	212	0	0	844	844	33	811
62+00.000	64	229	229	0	0	1073	1073	33	1040
62+11.074	66	27	27	0	0	1100	1100	33	1067
63+00.000	63	213	213	0	0	1313	1313	33	1279
63+42.394	57	94	94	0	0	1407	1407	33	1374
64+00.000	72	137	137	0	0	1544	1544	33	1511



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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 450	E

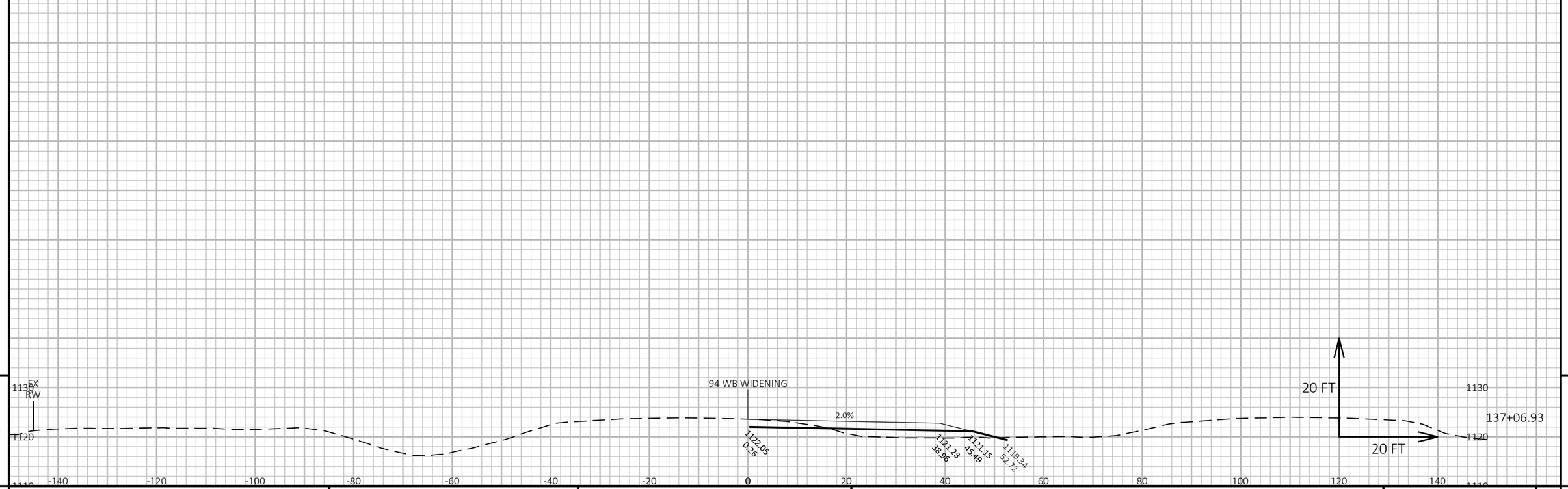
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LAYOUT NAME - 14

PLOT DATE : 3/17/2021 4:16 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

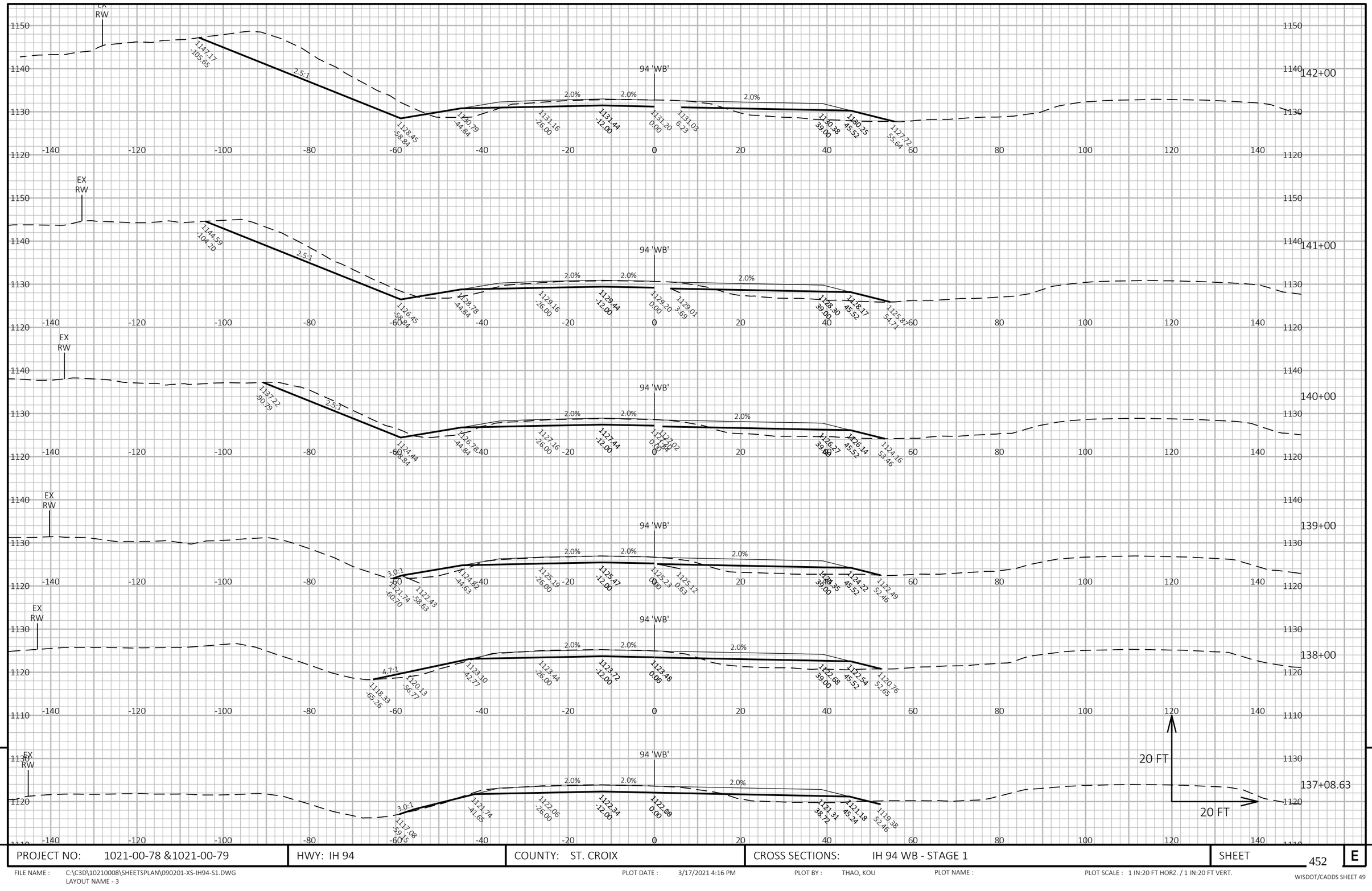


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PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1 WIDENING	SHEET 451	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 15

PLOT DATE : 3/17/2021 4:16 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 WB - STAGE 1	SHEET 452	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 3

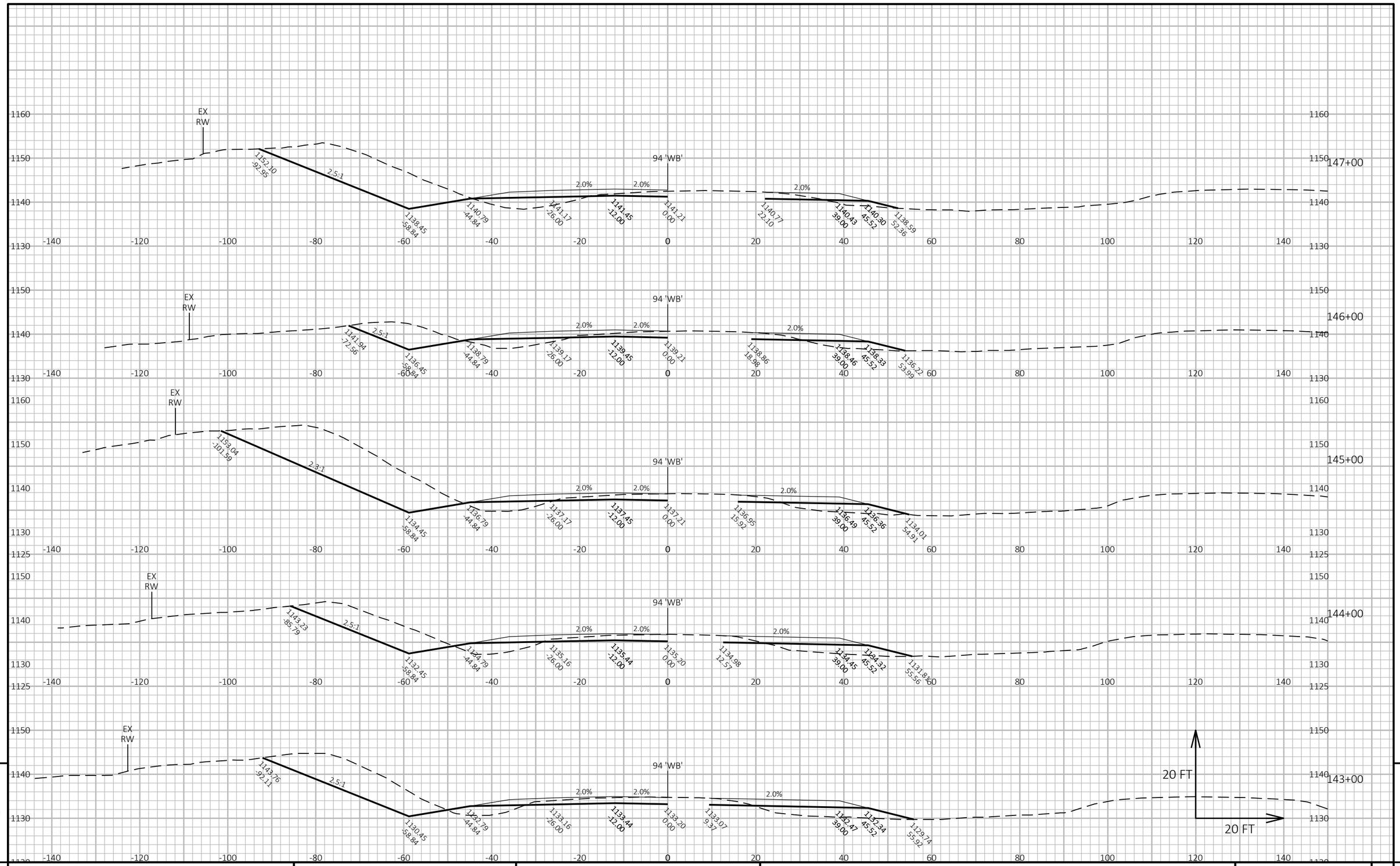
PLOT DATE : 3/17/2021 4:16 PM

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 453	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 4

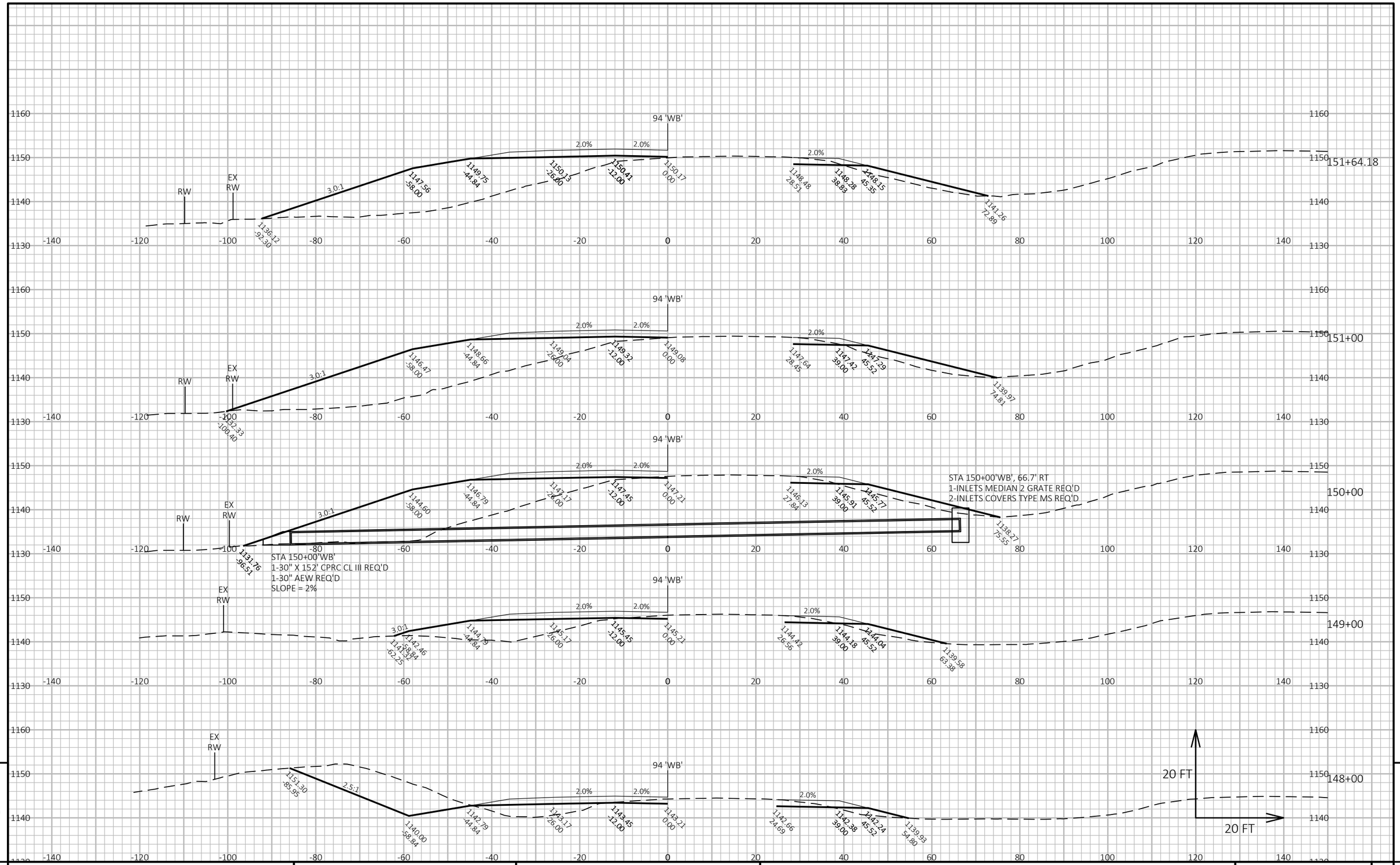
PLOT DATE : 3/17/2021 4:17 PM

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 454	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 5

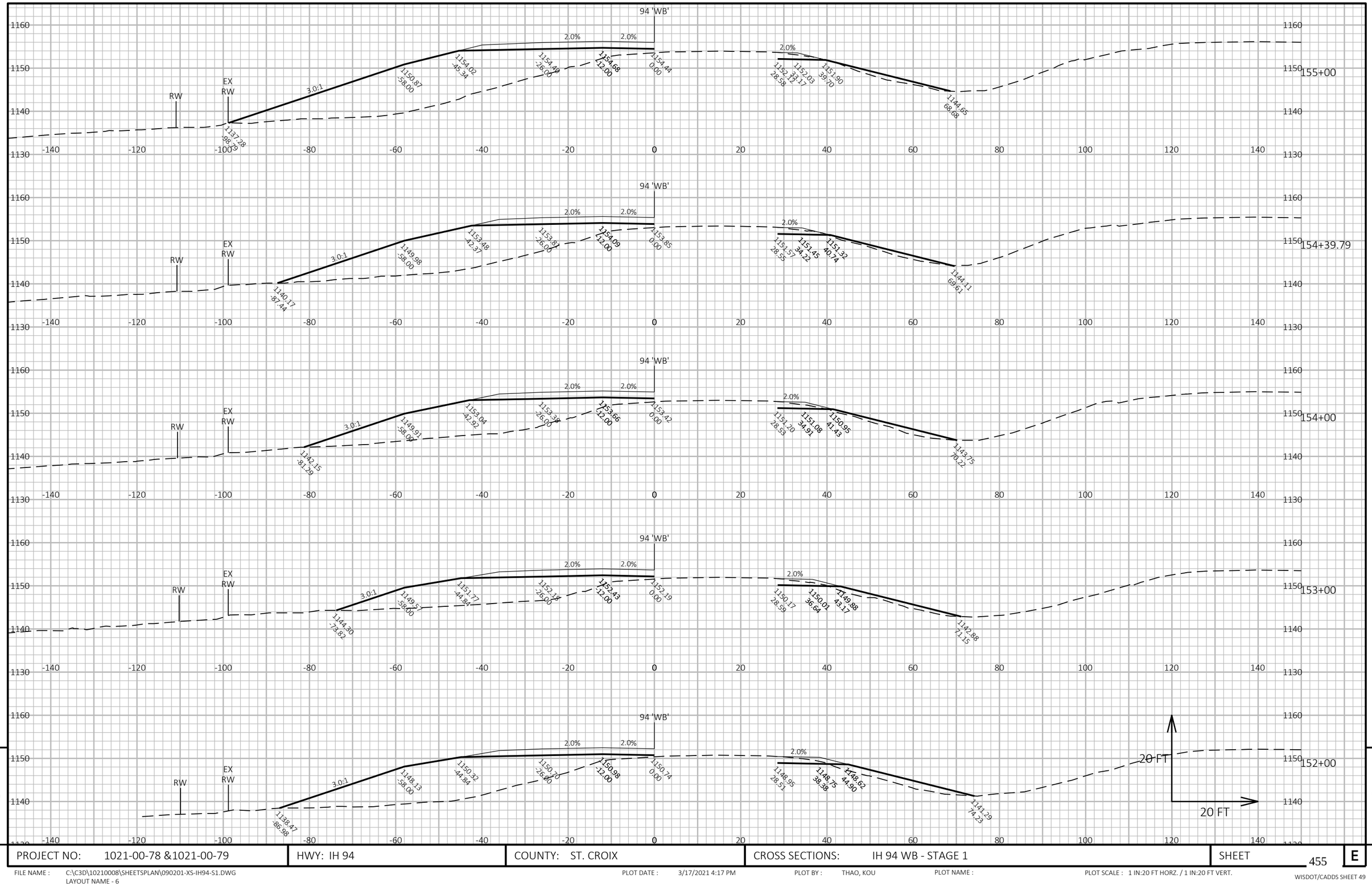
PLOT DATE : 3/17/2021 4:17 PM

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 455	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 6

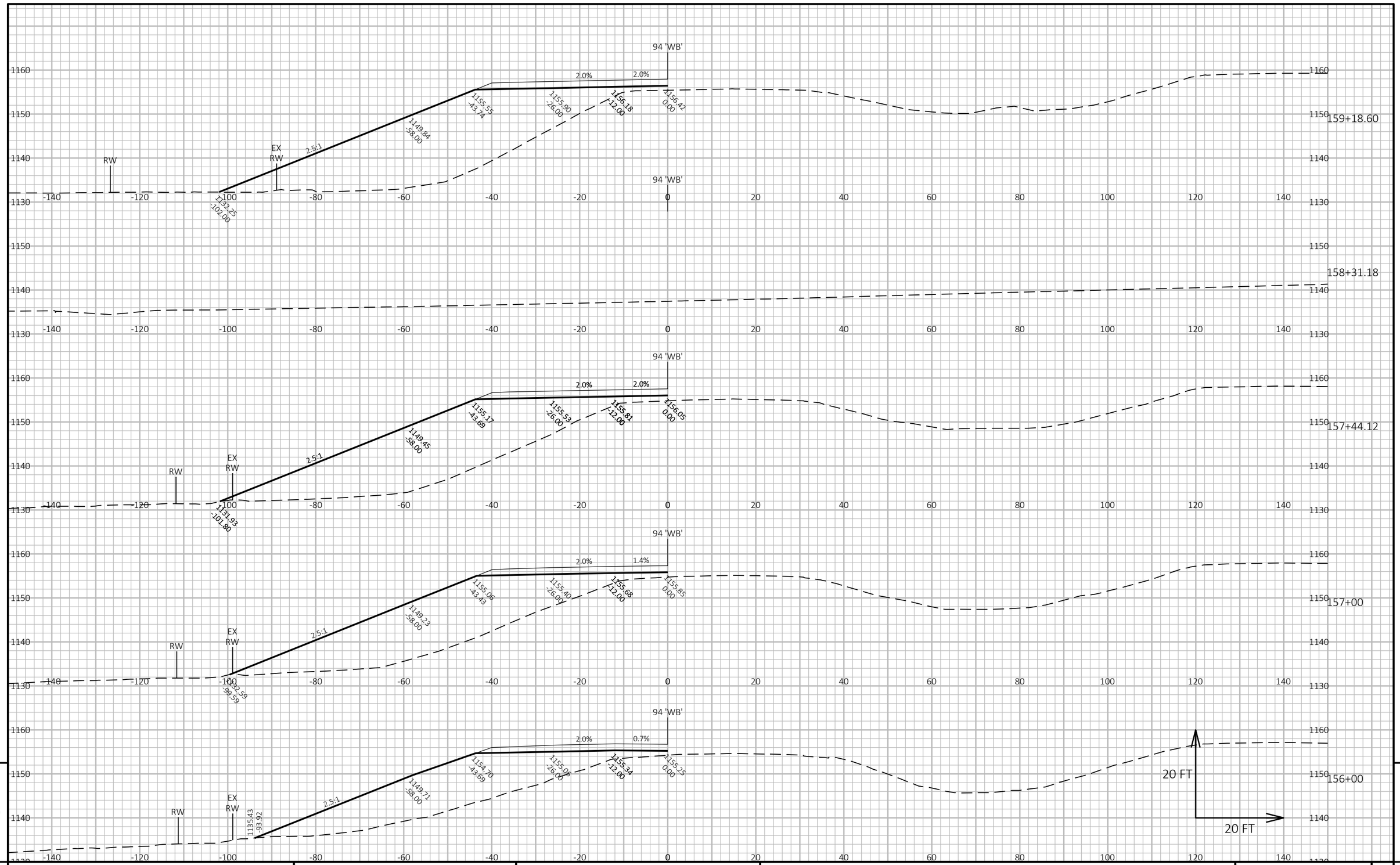
PLOT DATE : 3/17/2021 4:17 PM

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 456	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 7

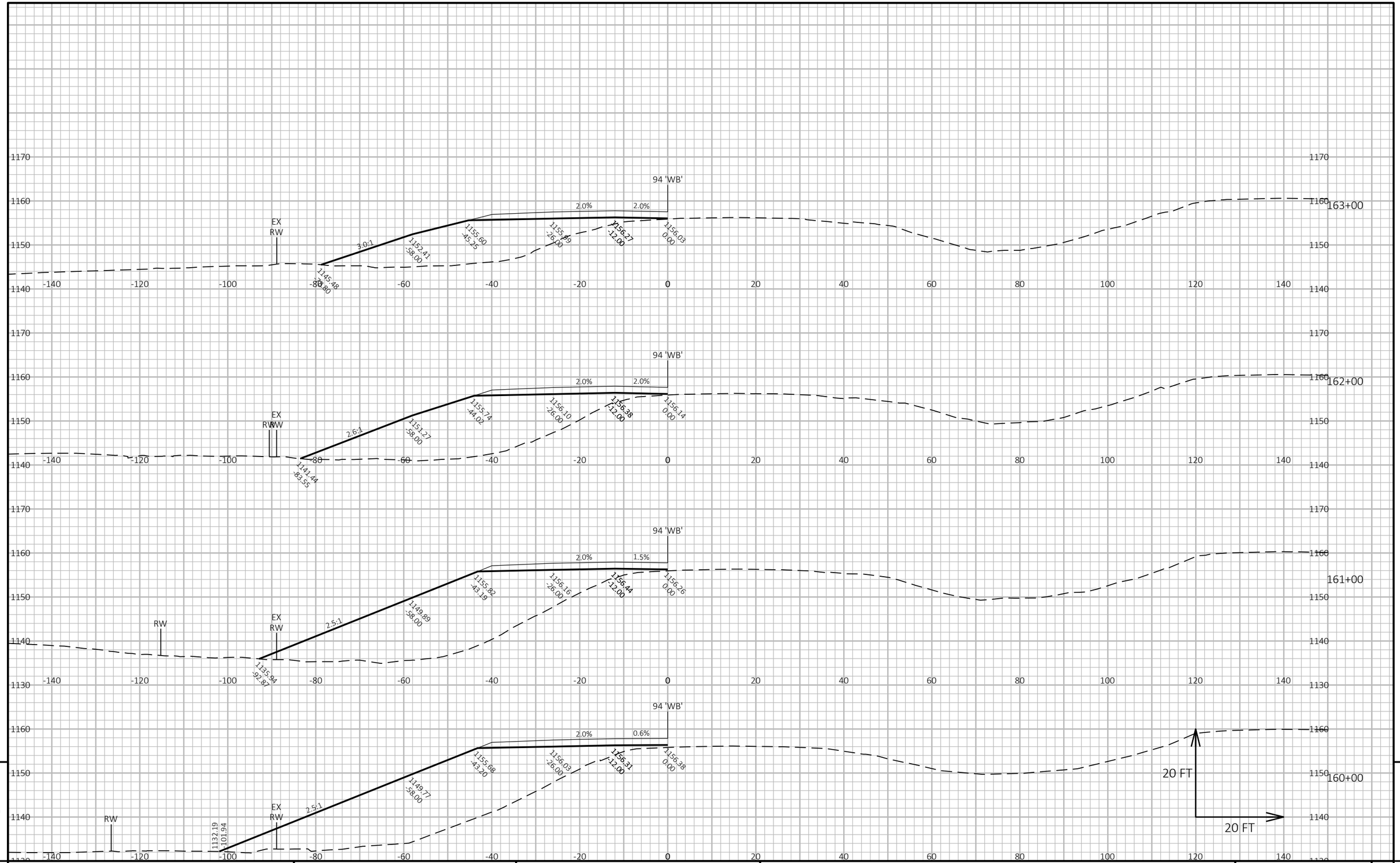
PLOT DATE : 3/17/2021 4:17 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

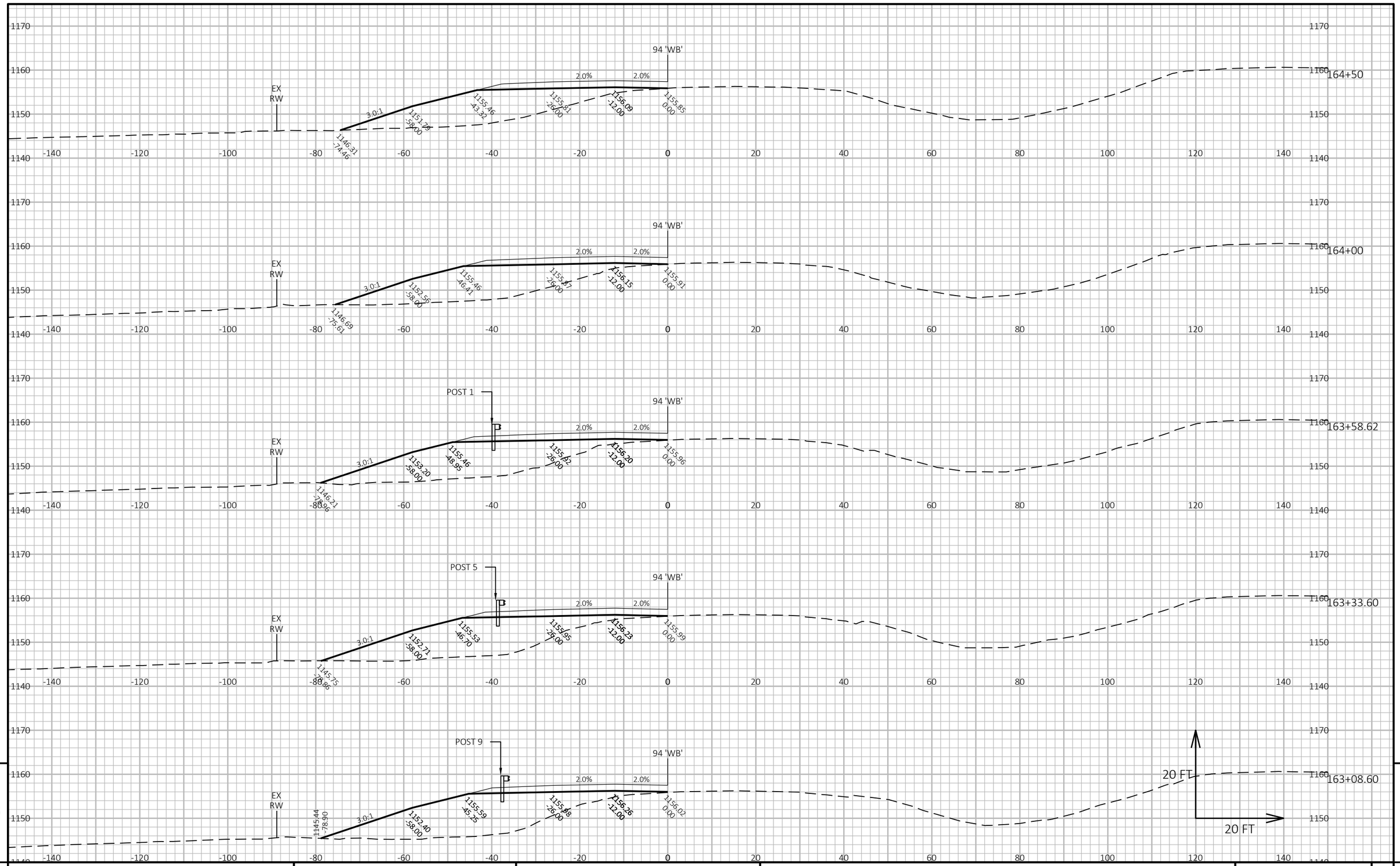


PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 457	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 8

PLOT DATE : 3/17/2021 4:17 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

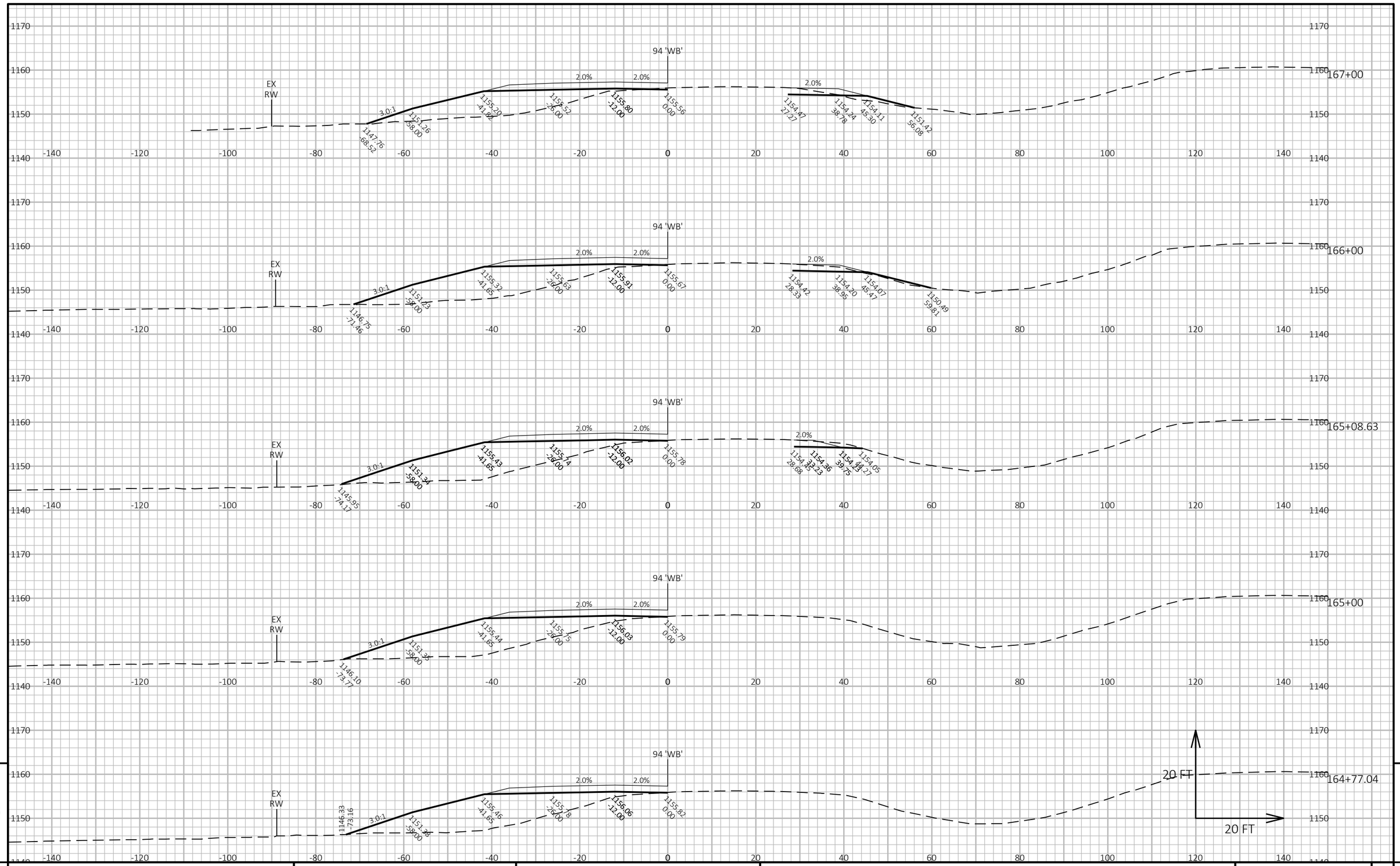


PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 458	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 9

PLOT DATE : 3/17/2021 4:17 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

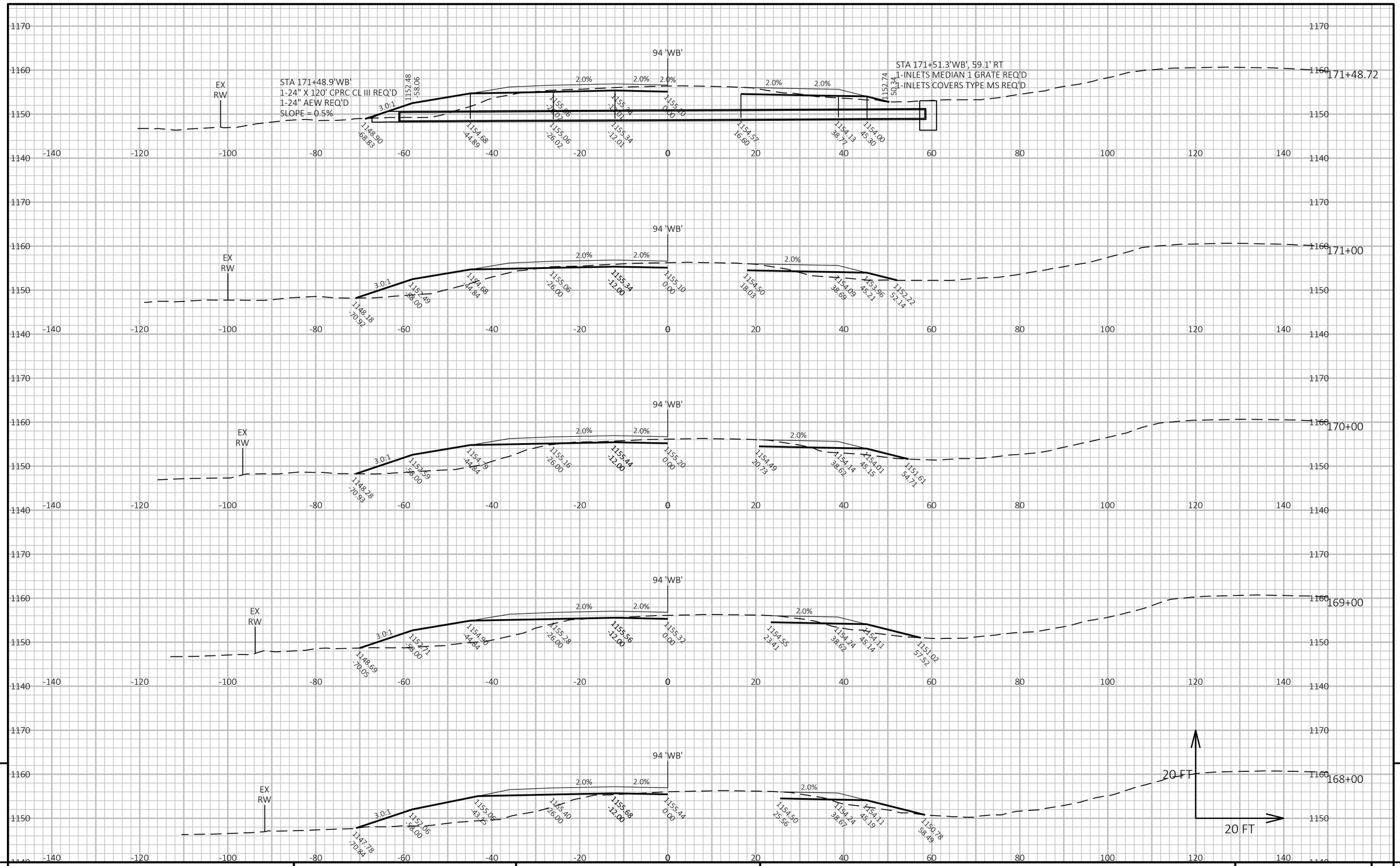
WISDOT/CADDS SHEET 49



PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 459	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 10

PLOT DATE : 3/17/2021 4:18 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 460	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 11

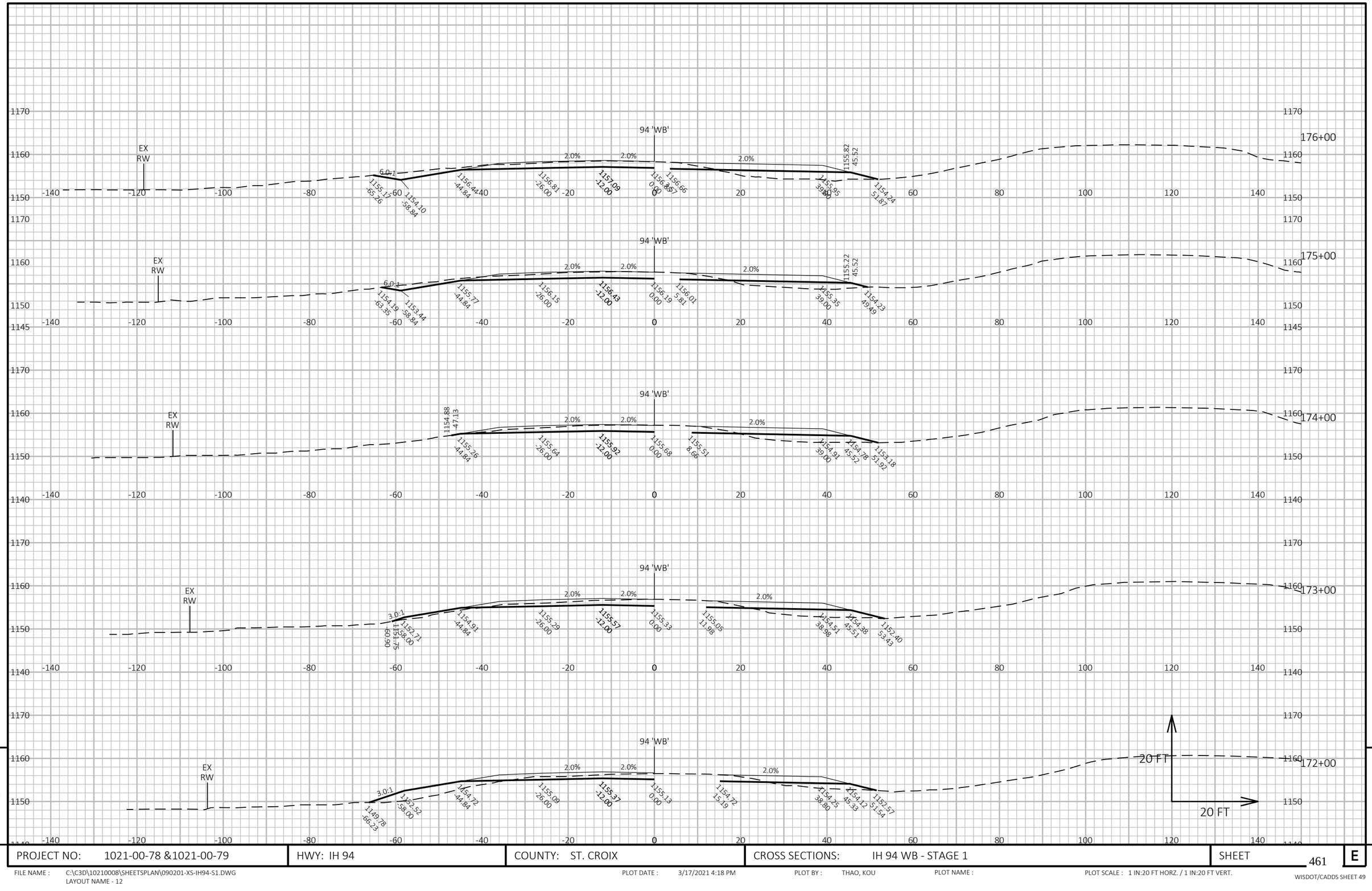
PLOT DATE : 3/17/2021 4:18 PM

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 461	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 12

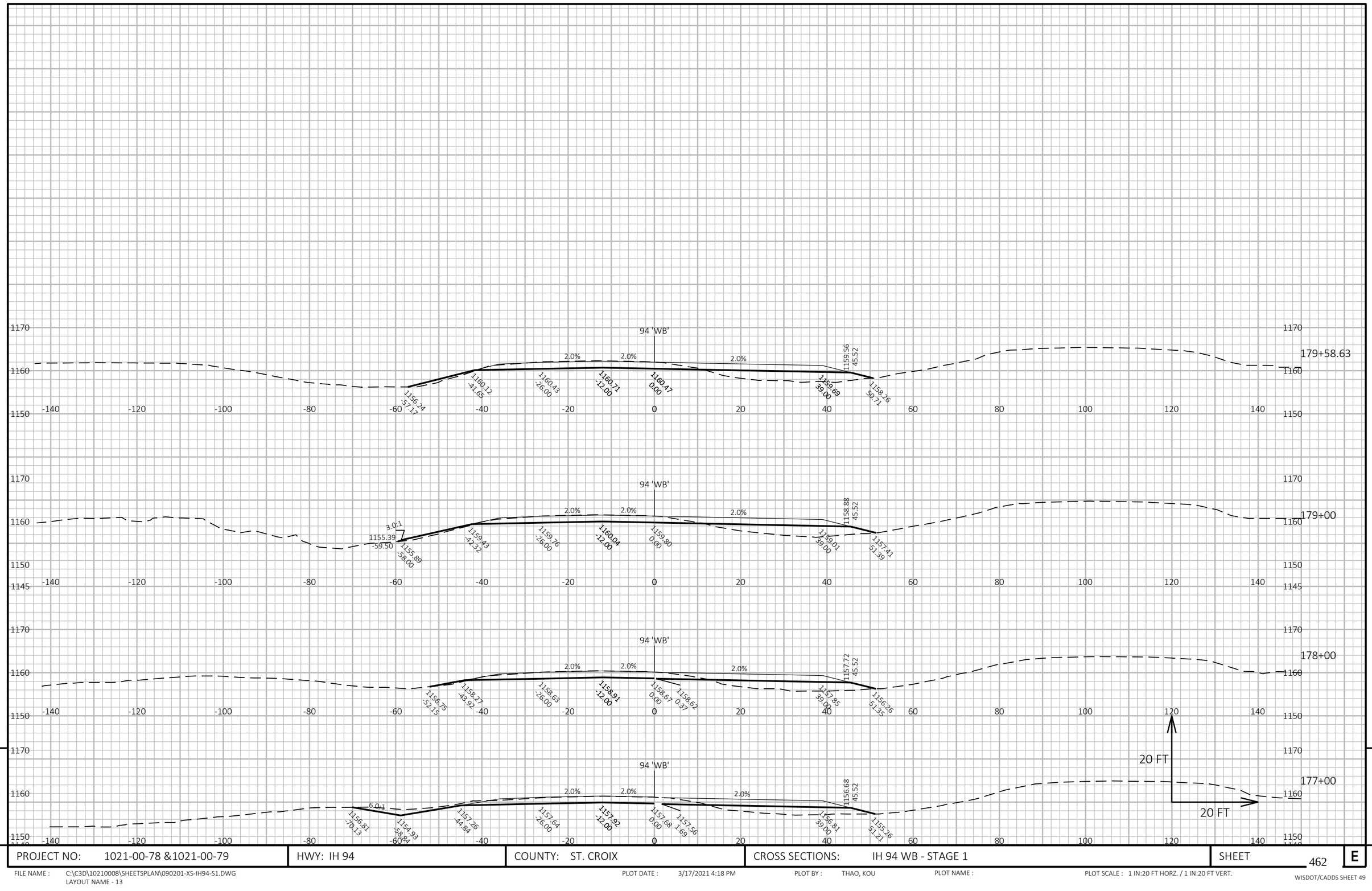
PLOT DATE : 3/17/2021 4:18 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

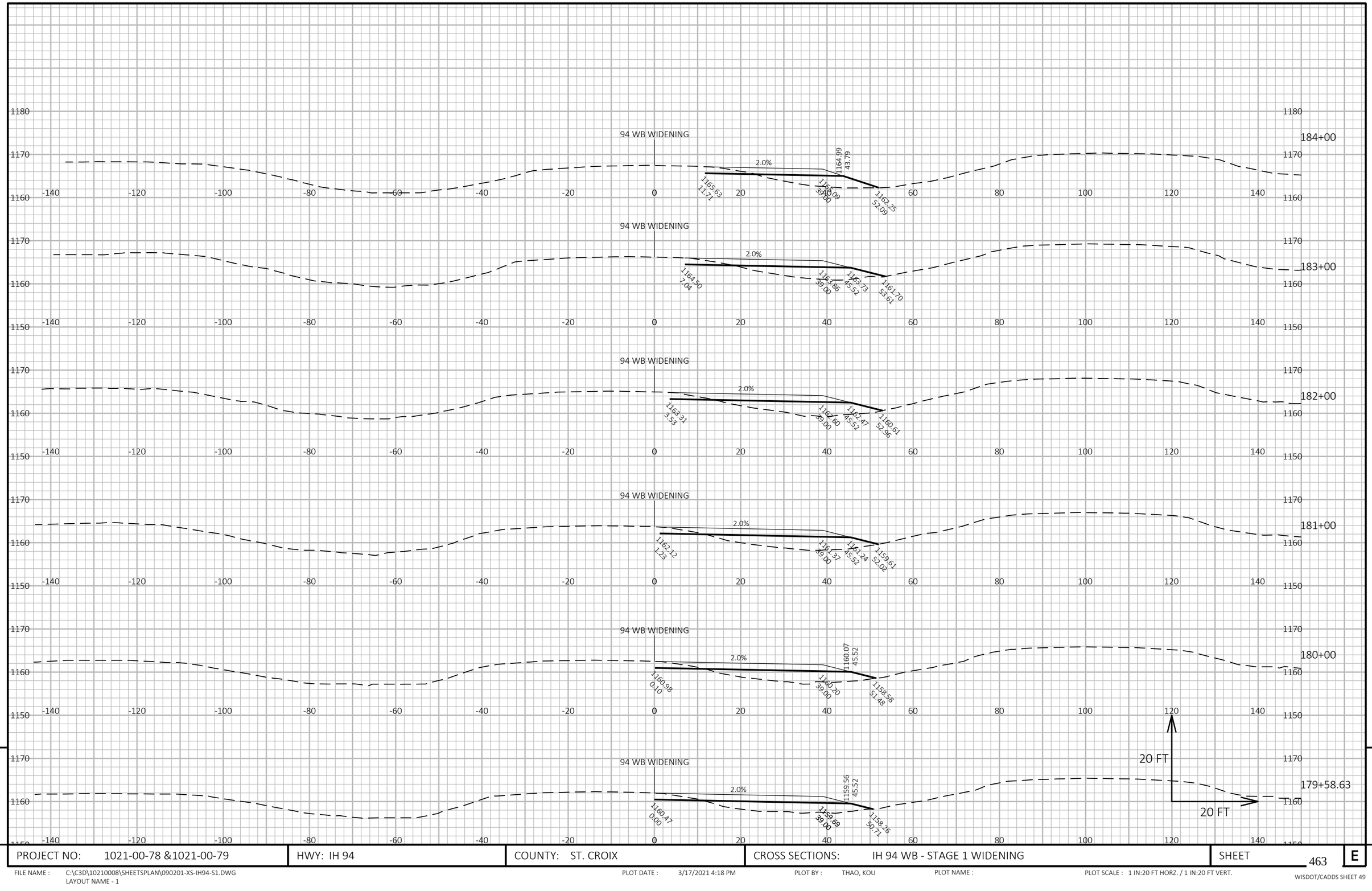


PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 1	SHEET 462 E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 13

PLOT DATE : 3/17/2021 4:18 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 463	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 1

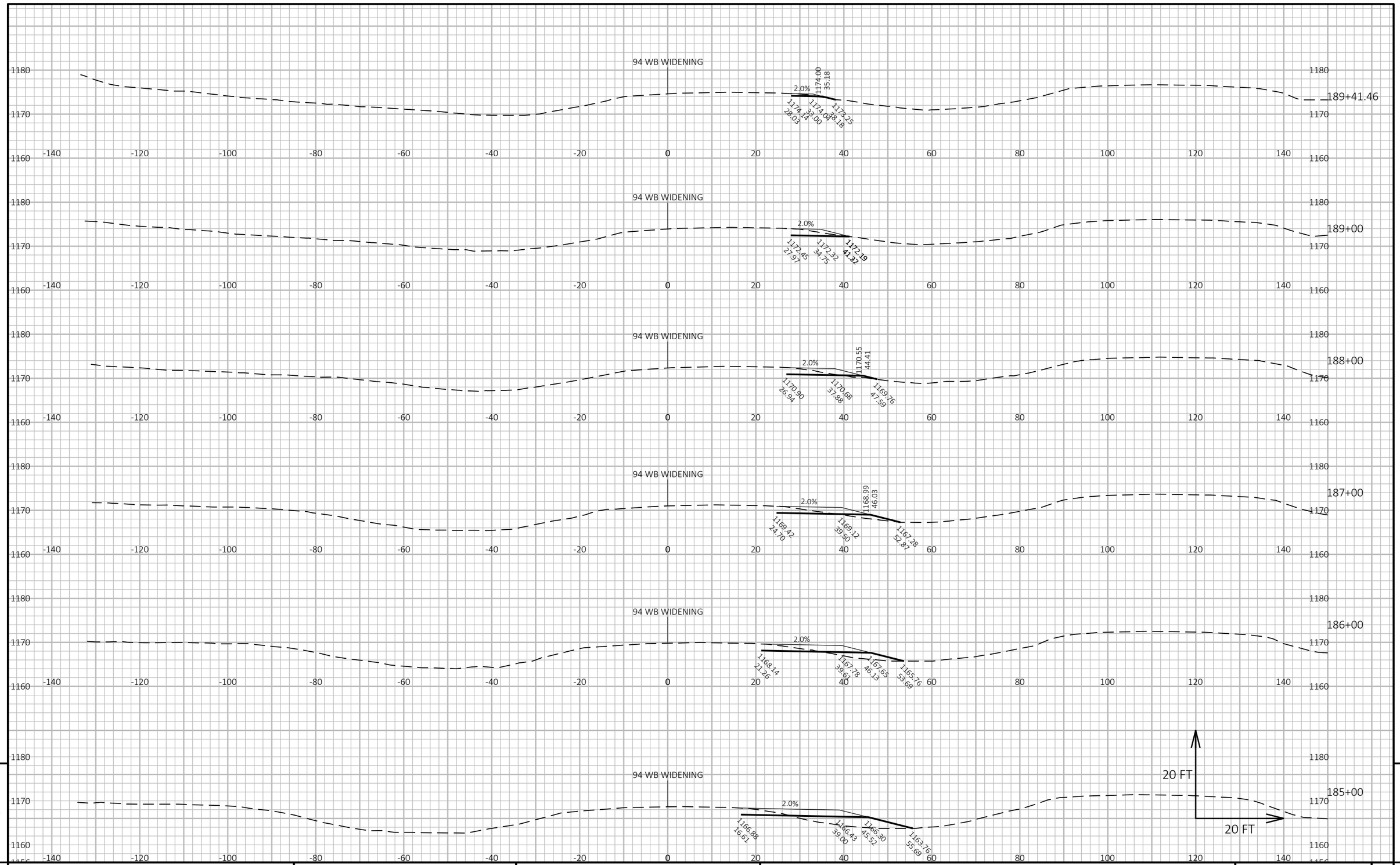
PLOT DATE : 3/17/2021 4:18 PM

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 WIDENING	SHEET 464 E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S1.DWG
LAYOUT NAME - 2

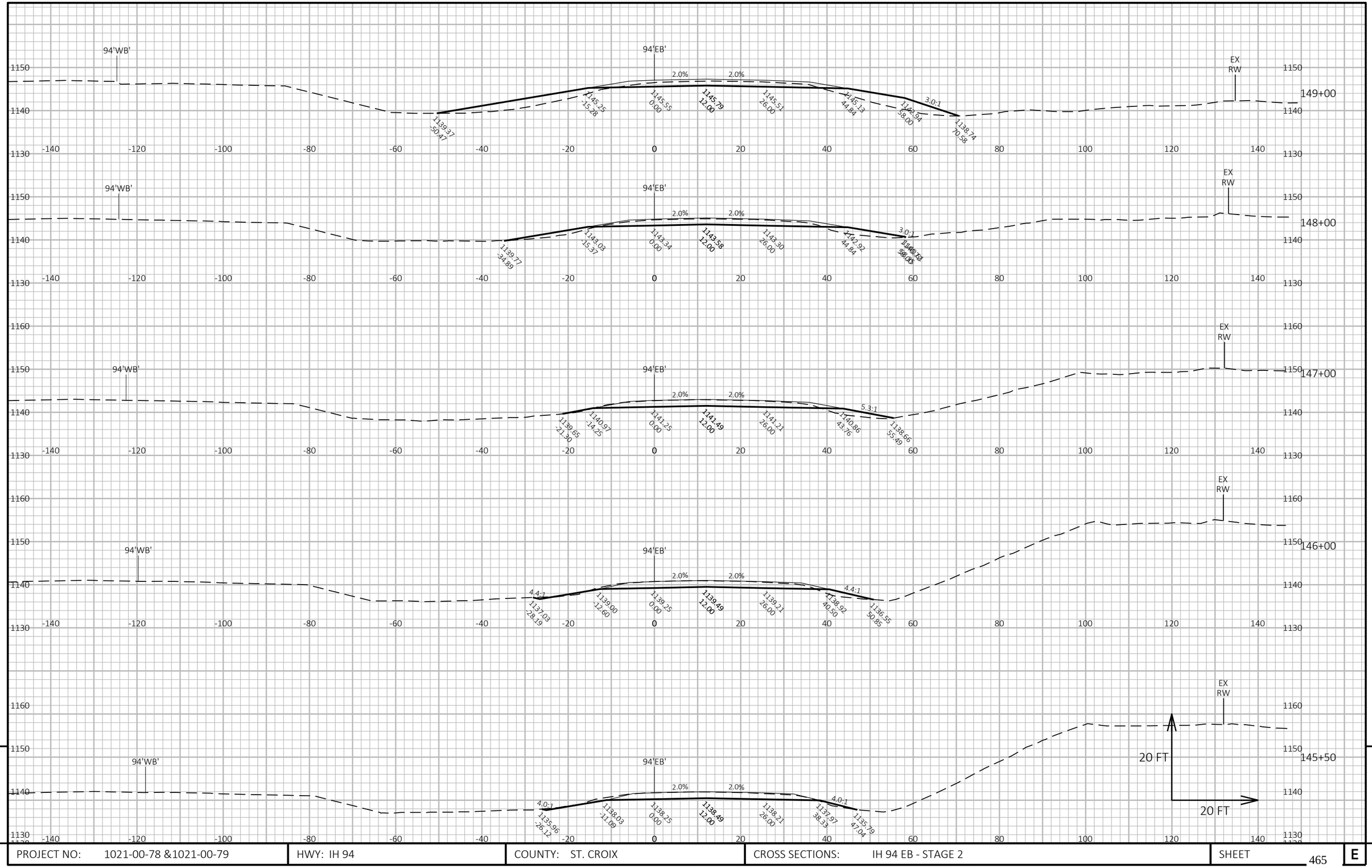
PLOT DATE : 3/17/2021 4:19 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

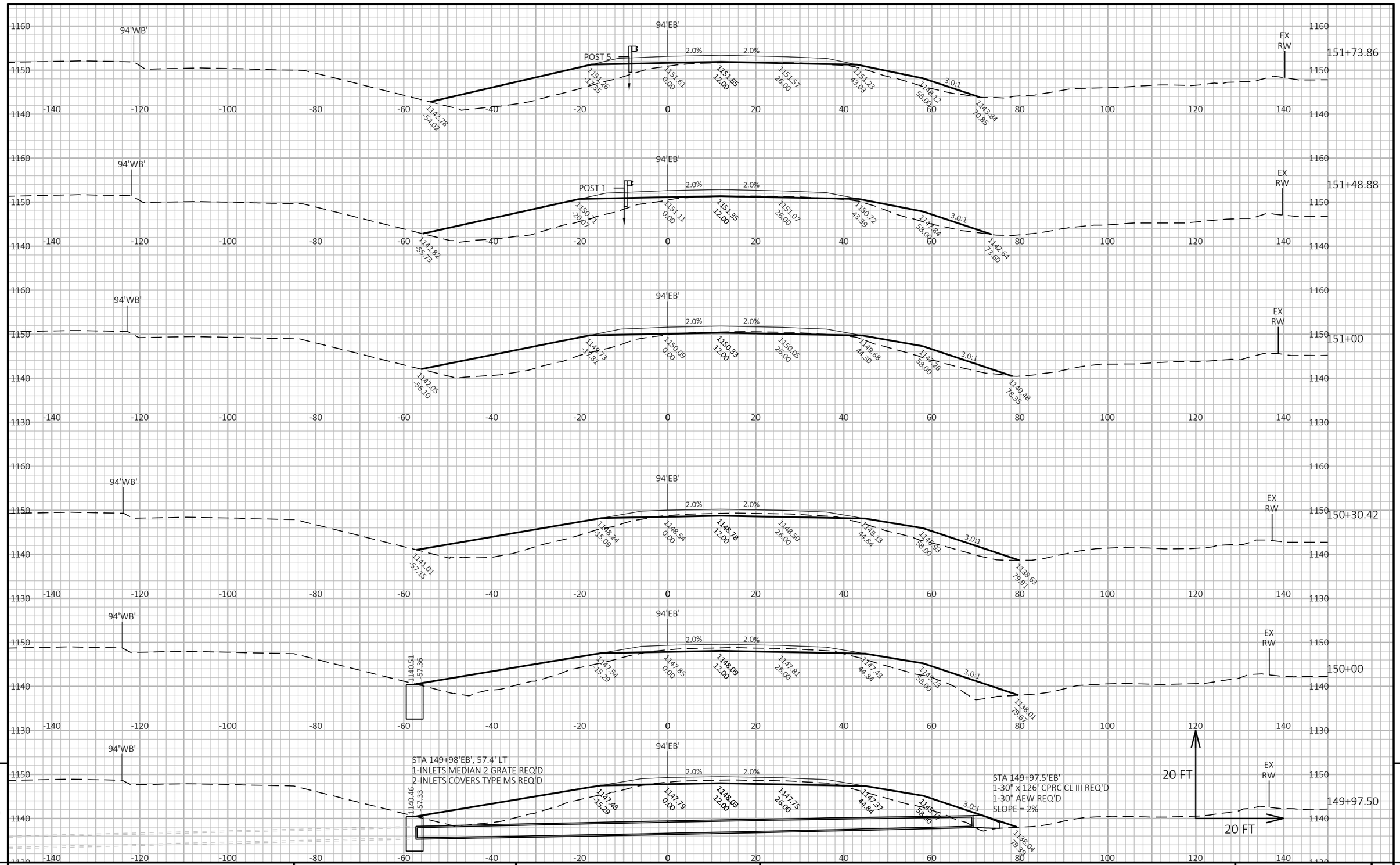


PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2	SHEET 465	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 1

PLOT DATE : 3/17/2021 5:18 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 466	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 2

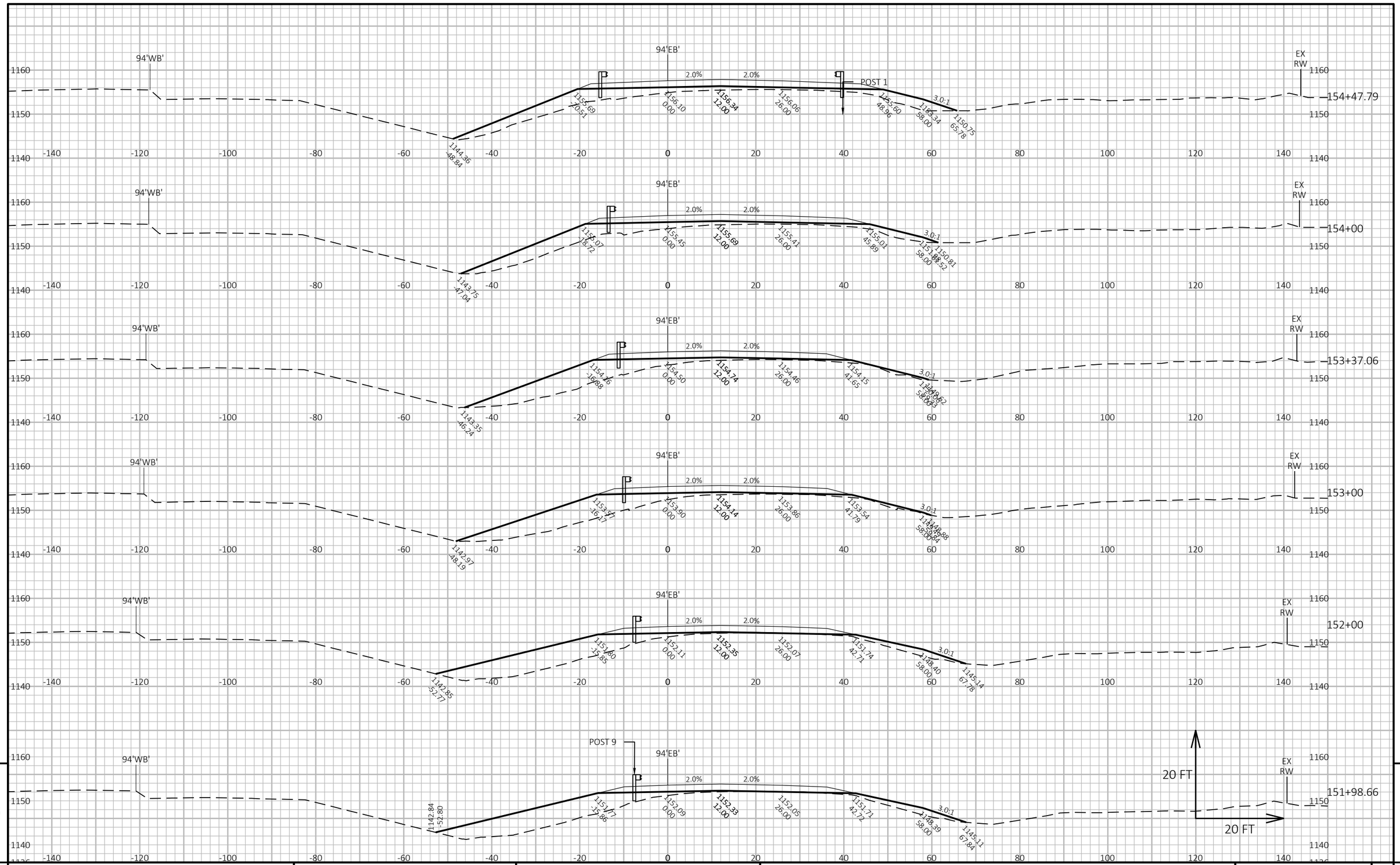
PLOT DATE : 3/17/2021 5:19 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



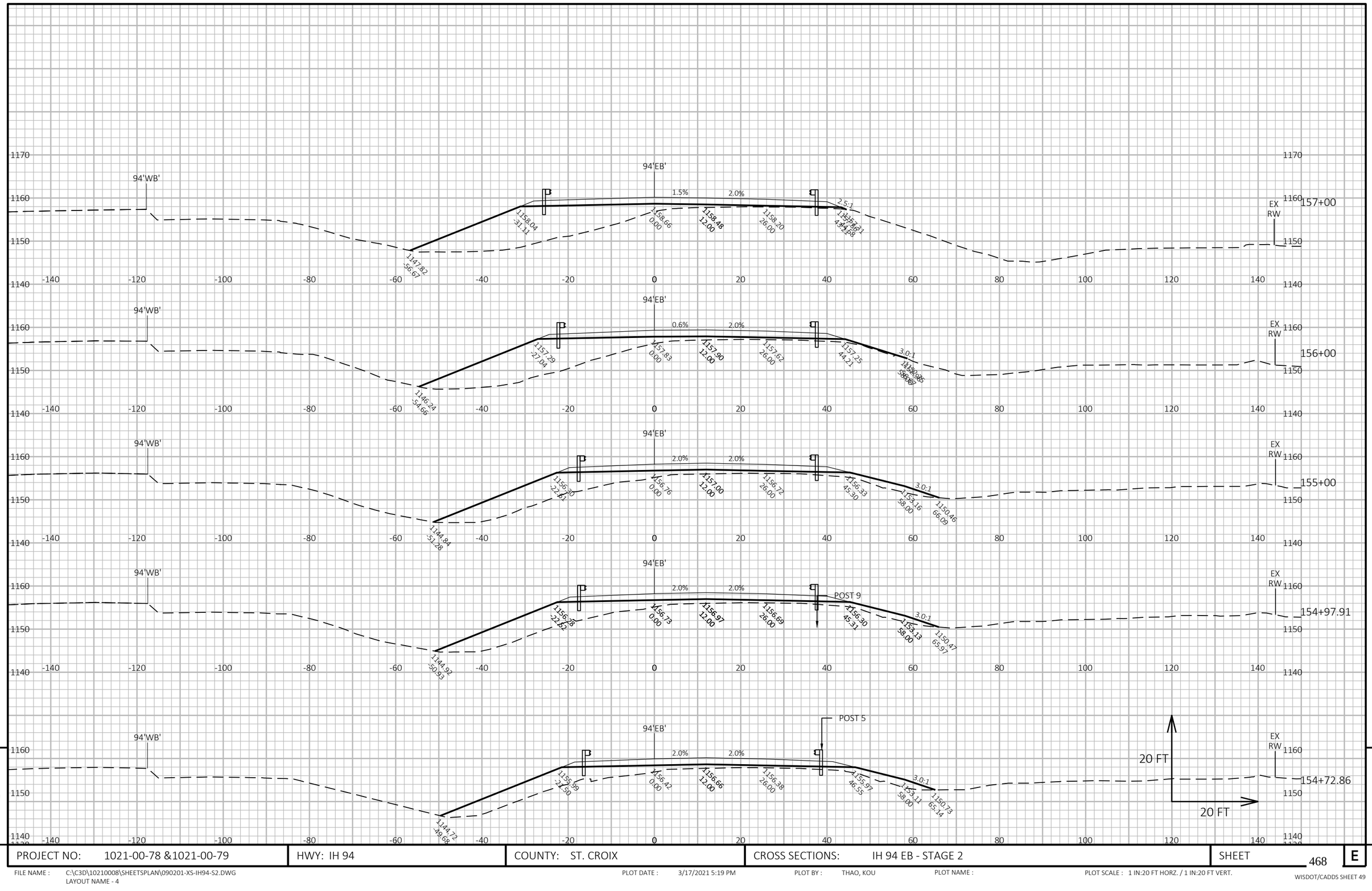
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PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2	SHEET 467	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 3

PLOT DATE : 3/17/2021 5:19 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 EB - STAGE 2	SHEET 468	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 4

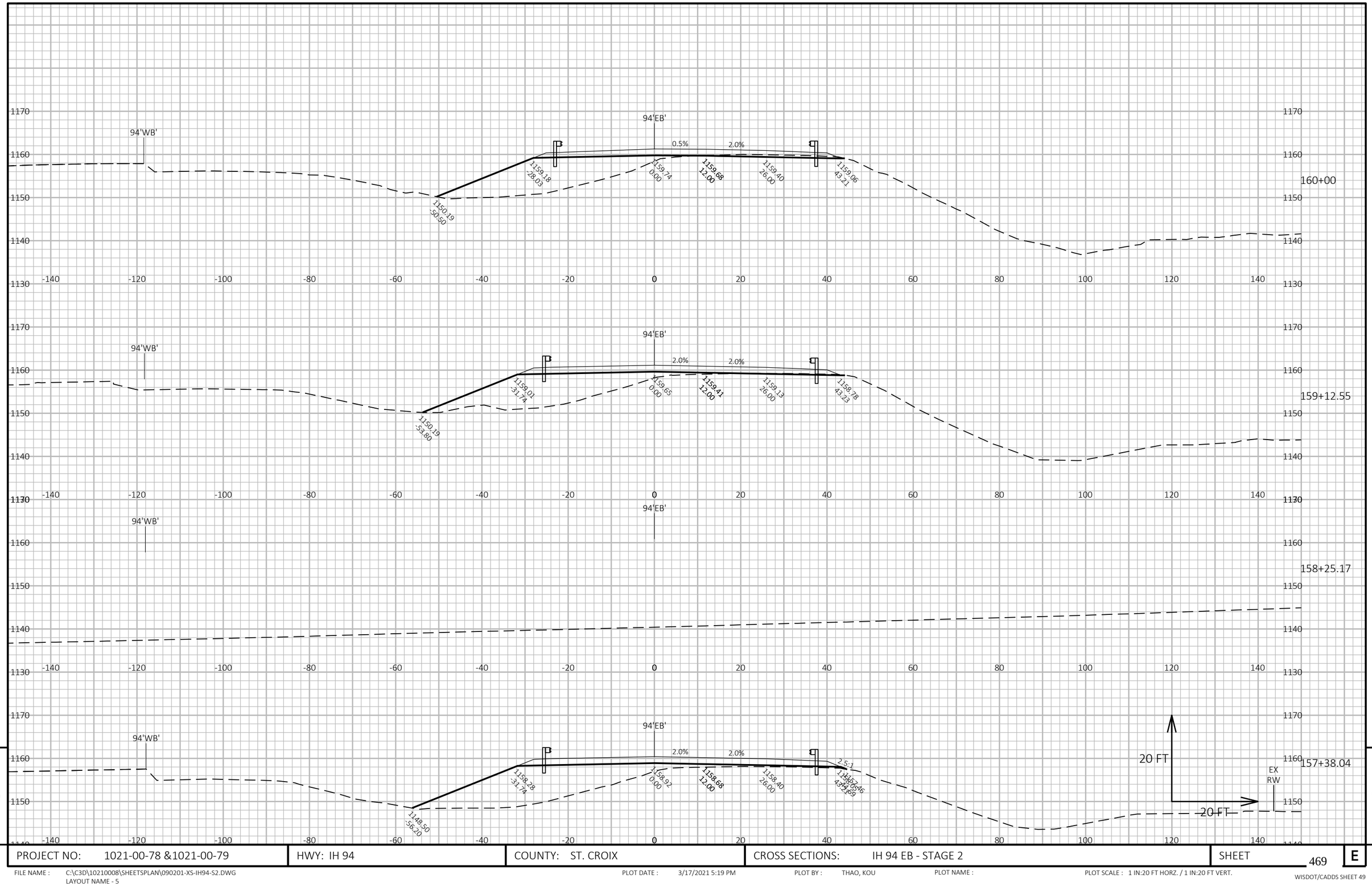
PLOT DATE : 3/17/2021 5:19 PM

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 EB - STAGE 2	SHEET 469	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 5

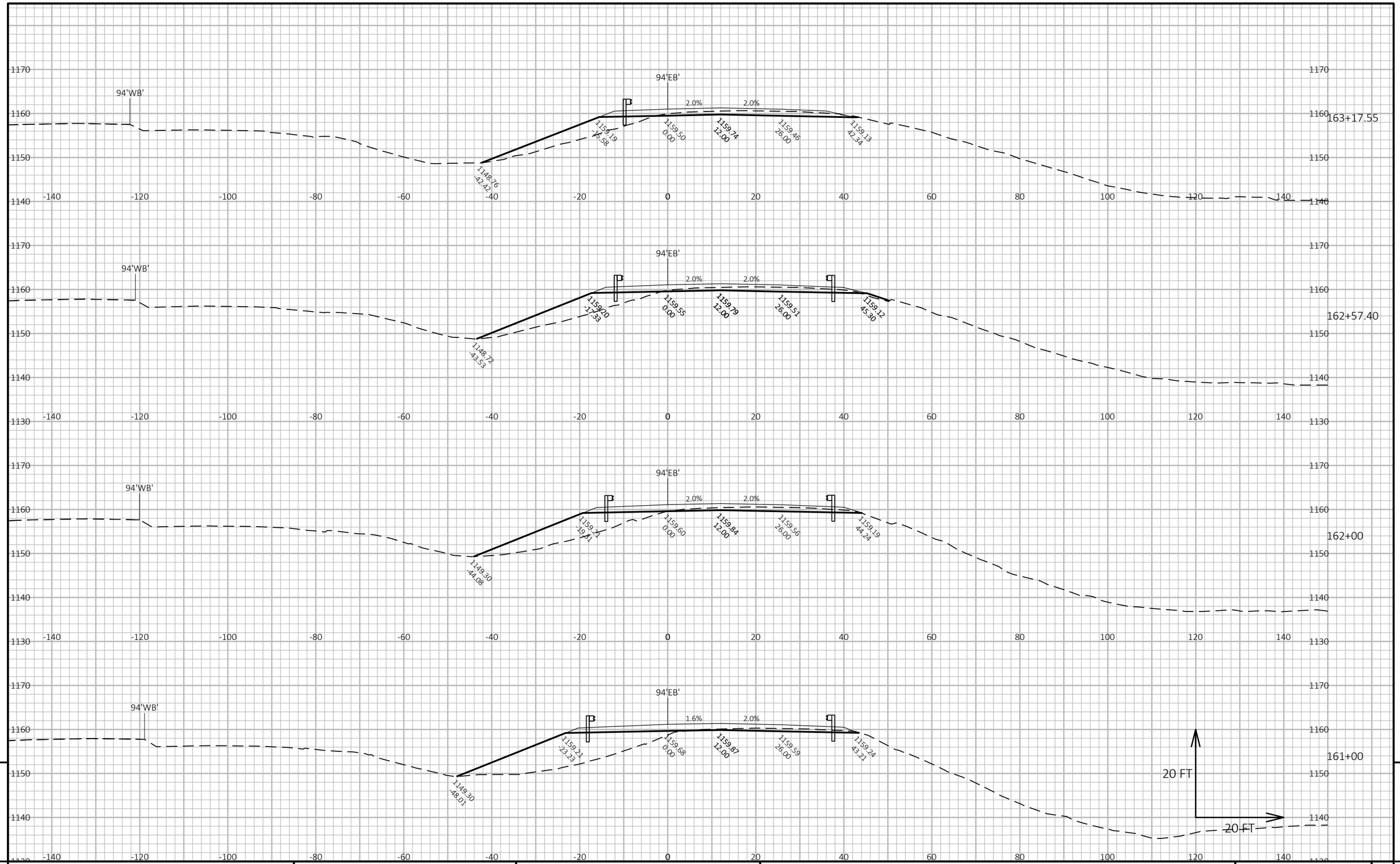
PLOT DATE : 3/17/2021 5:19 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

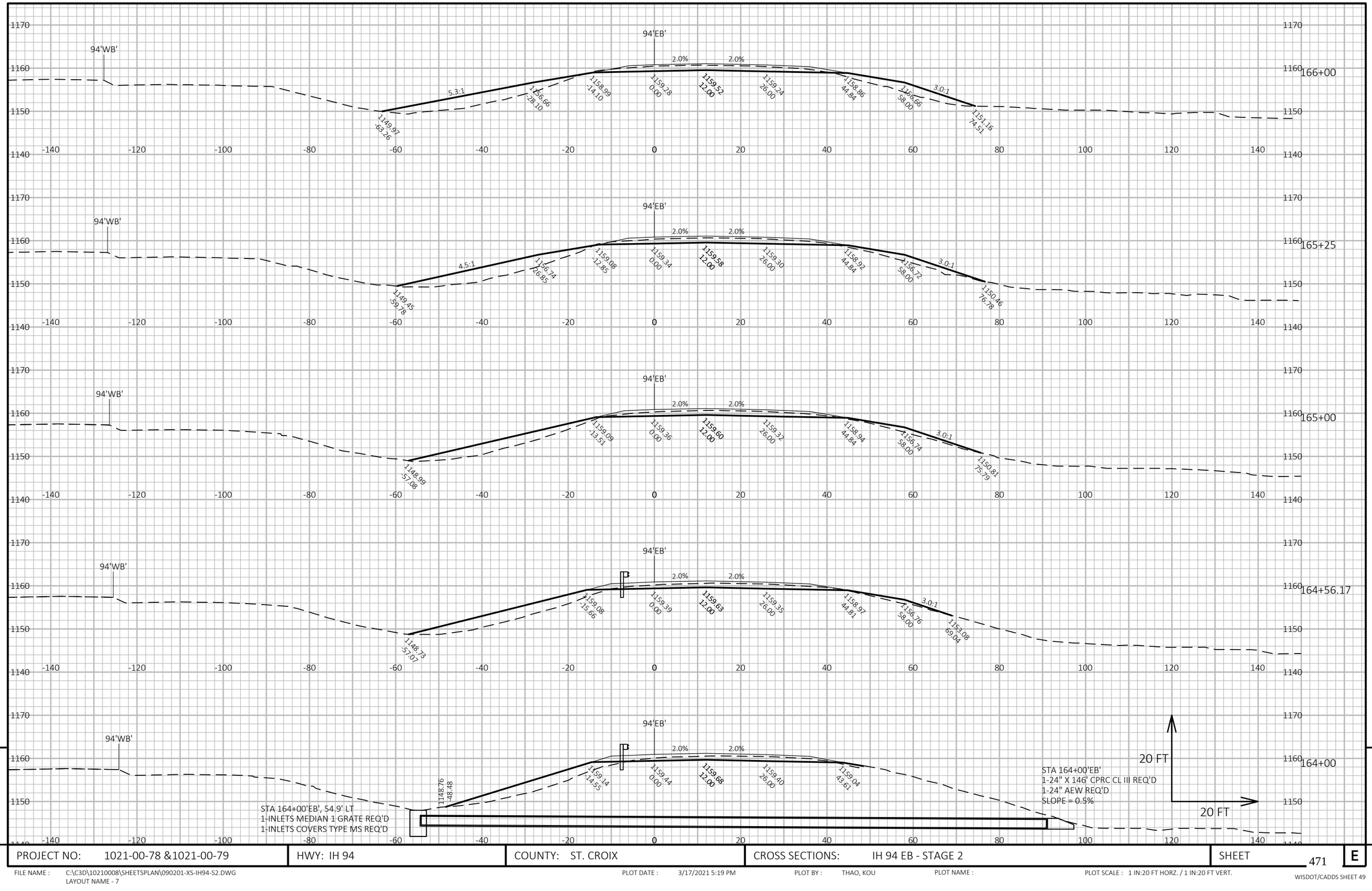
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PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2	SHEET 470	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 6

PLOT DATE : 3/17/2021 5:19 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 EB - STAGE 2	SHEET 471 E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 7

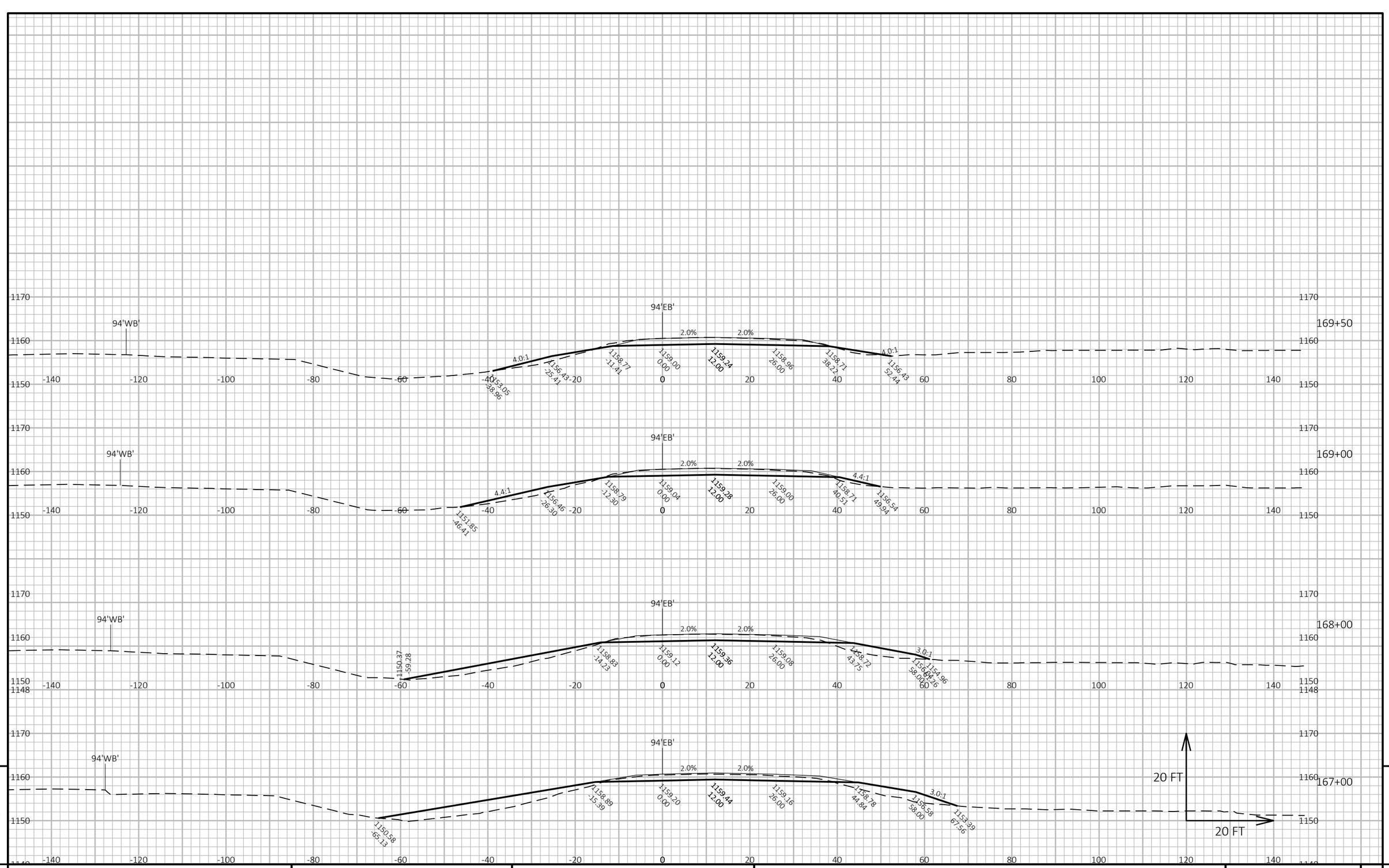
PLOT DATE : 3/17/2021 5:19 PM

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 EB - STAGE 2	SHEET 472	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 8

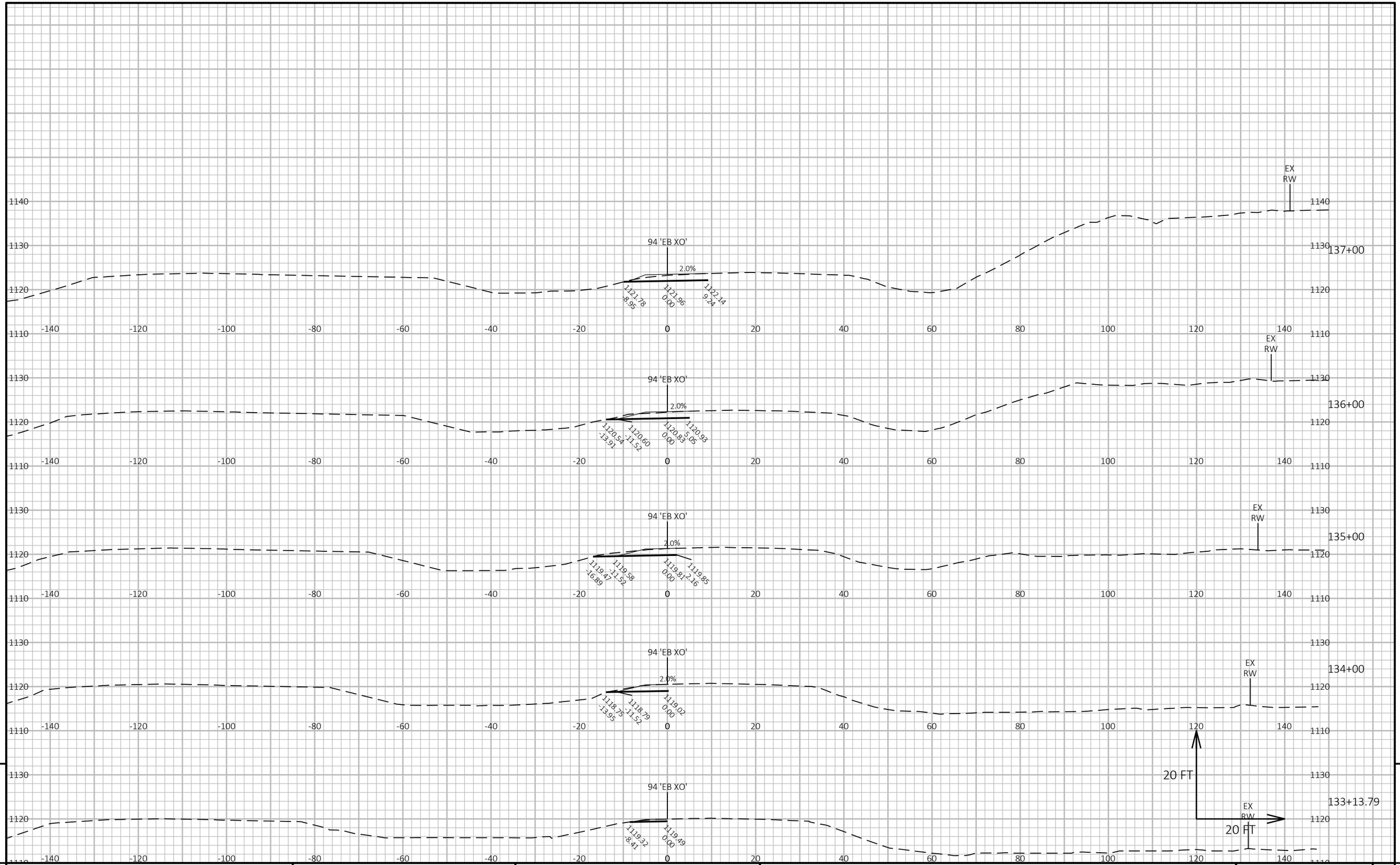
PLOT DATE : 3/17/2021 5:19 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

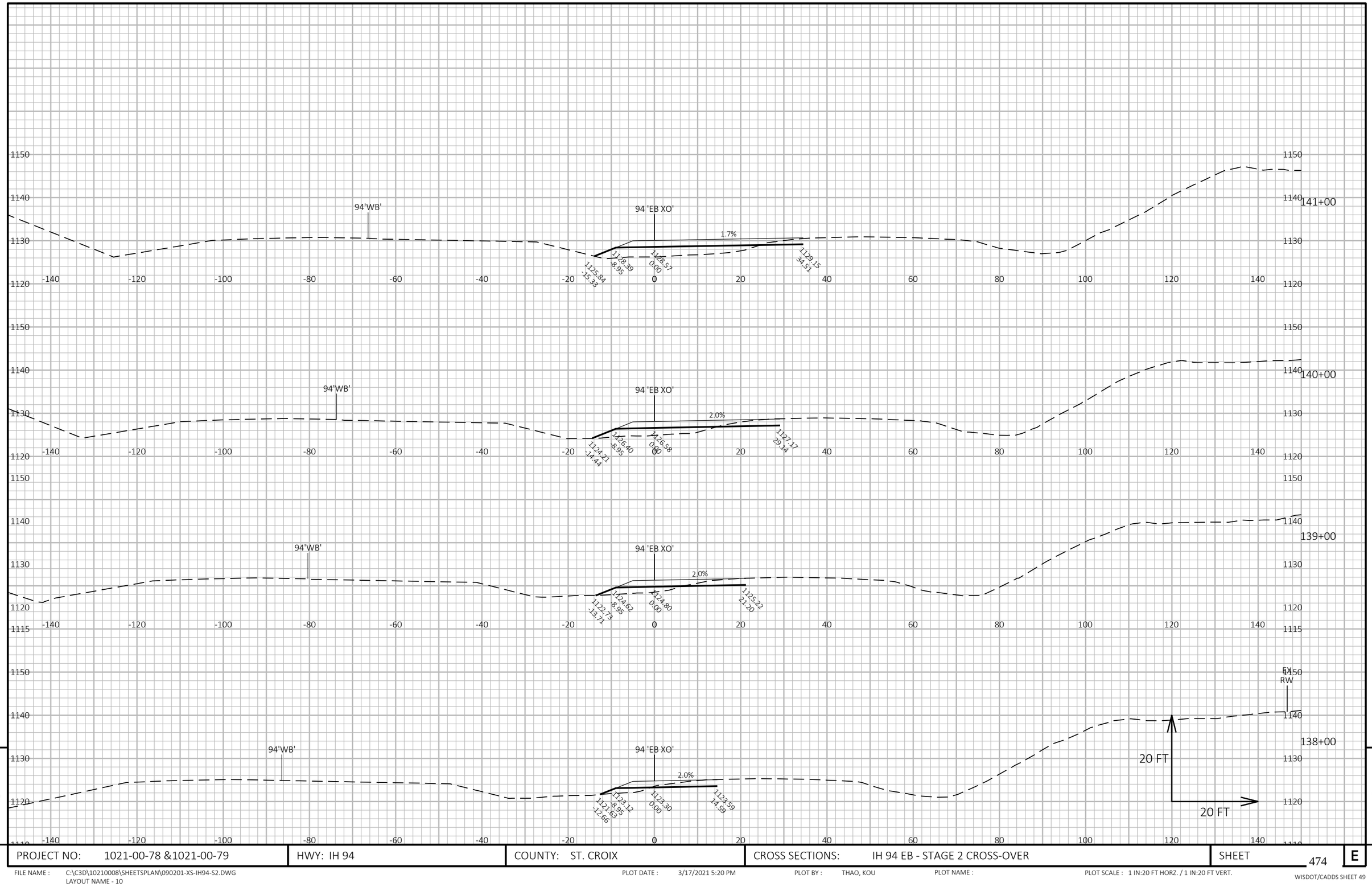
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PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 473	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 9

PLOT DATE : 3/17/2021 5:19 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 EB - STAGE 2 CROSS-OVER	SHEET 474	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 10

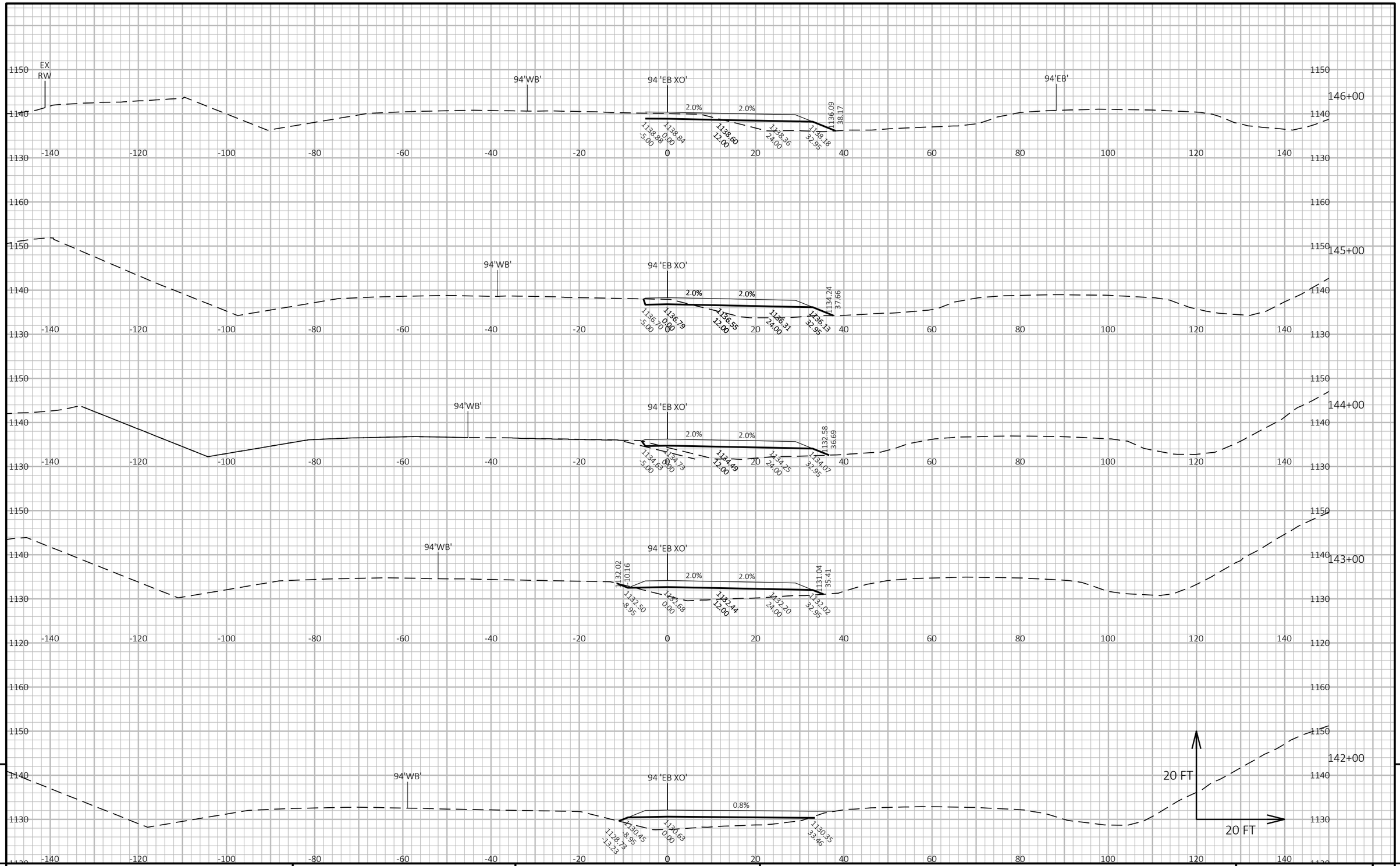
PLOT DATE : 3/17/2021 5:20 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

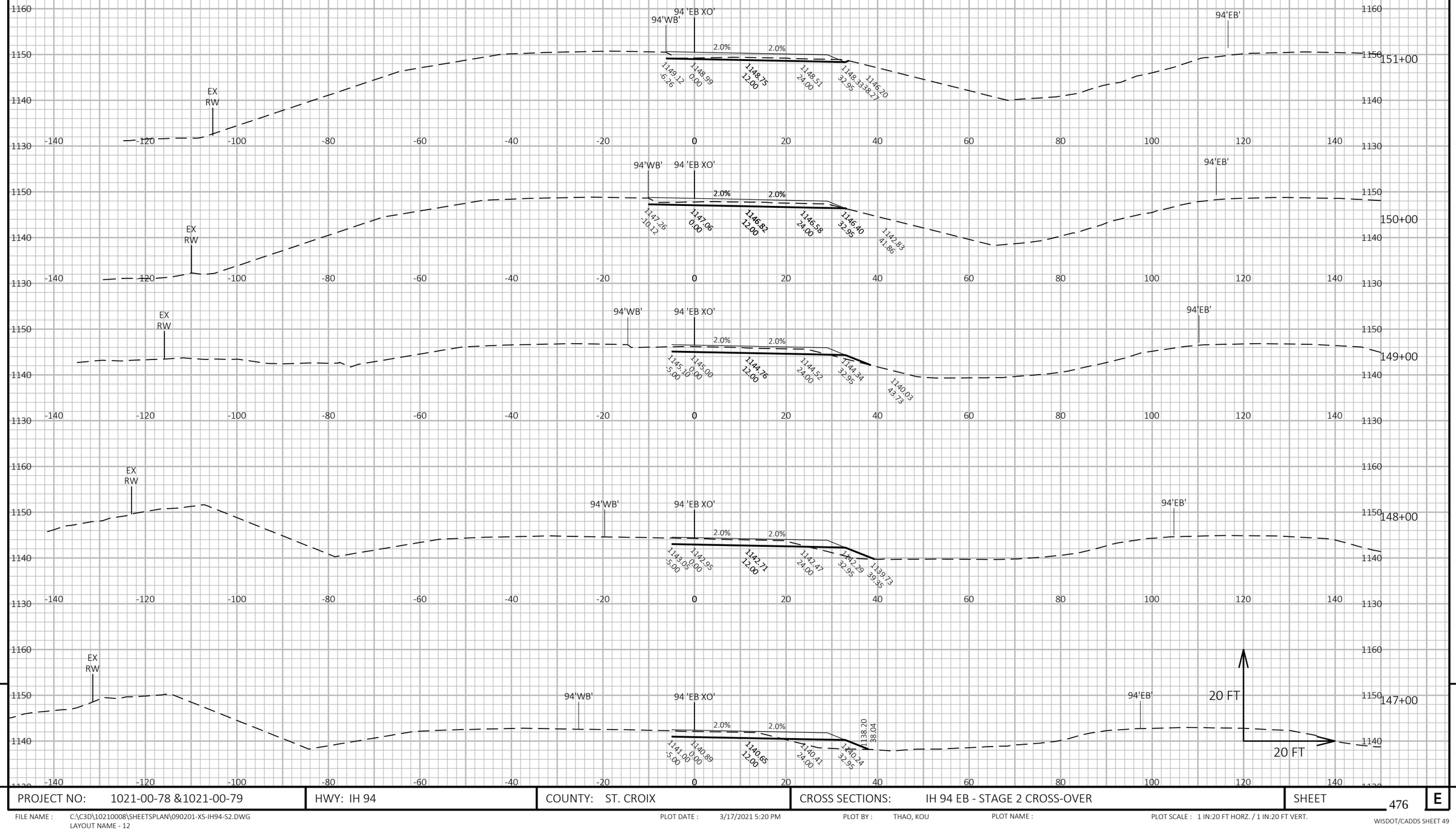
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PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 475	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 11

PLOT DATE : 3/17/2021 5:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

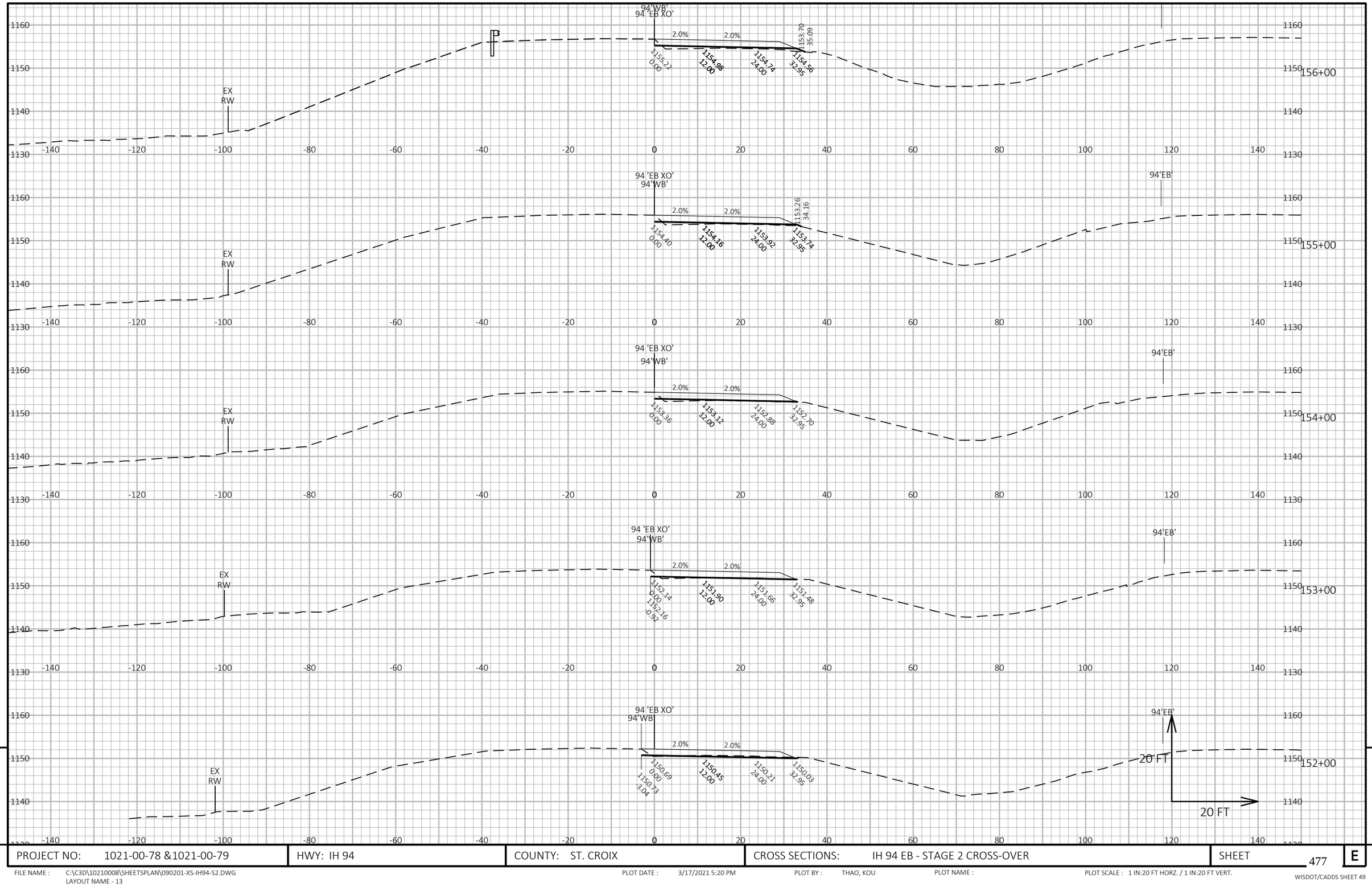
WISDOT/CADDS SHEET 49



PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 476	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 12

PLOT DATE : 3/17/2021 5:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

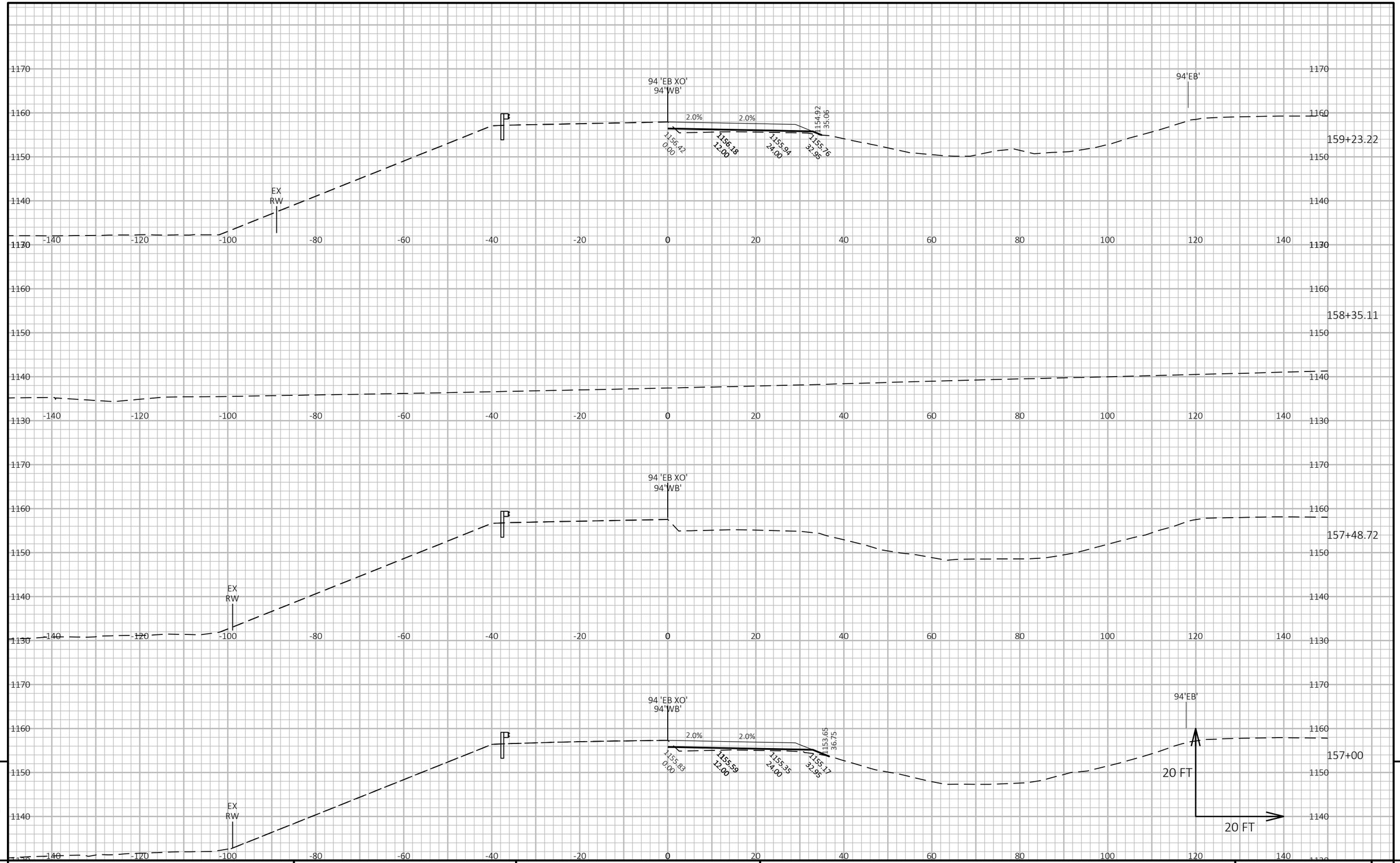
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PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 477	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 13

PLOT DATE : 3/17/2021 5:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

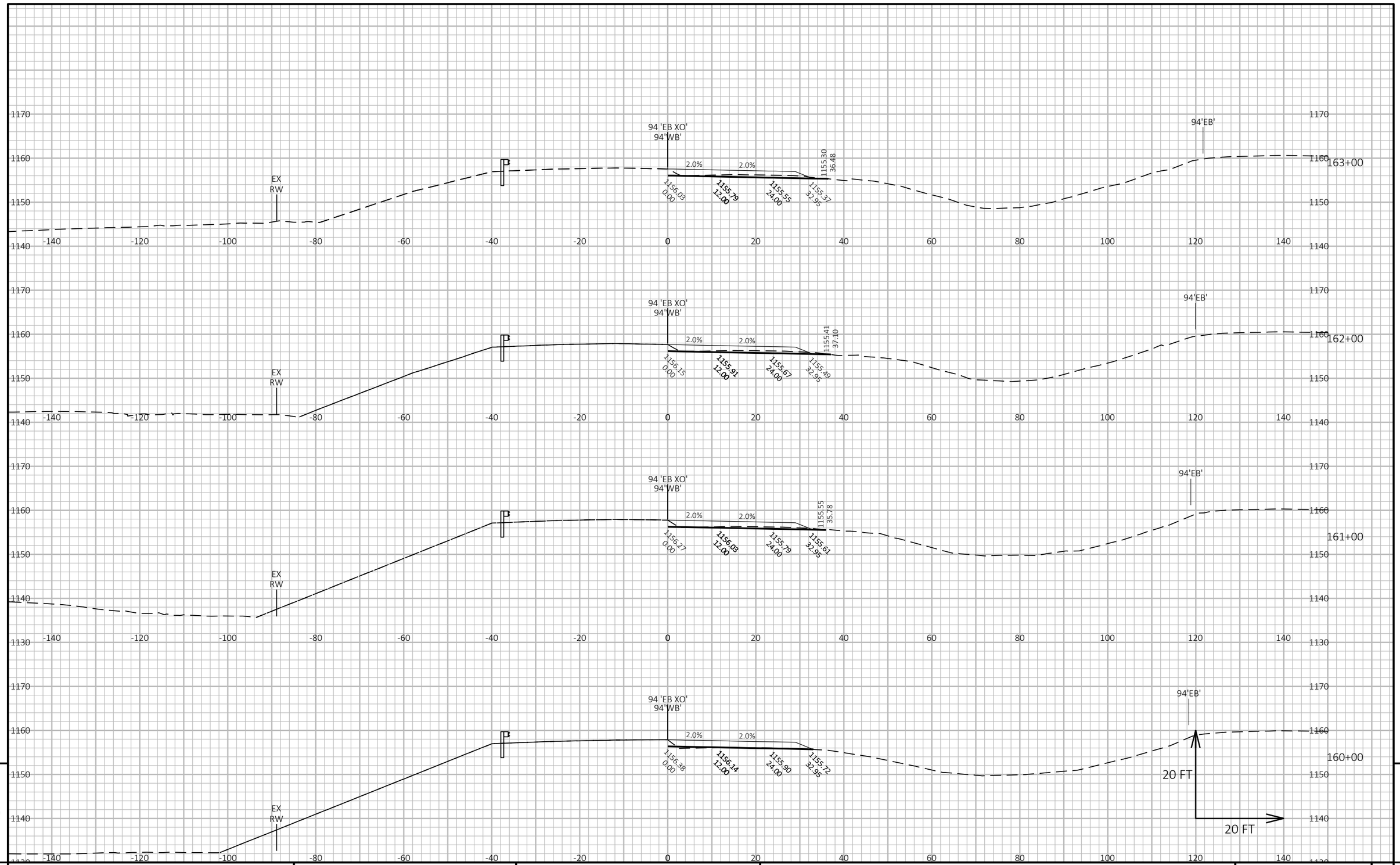
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PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 478	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 14

PLOT DATE : 3/17/2021 5:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

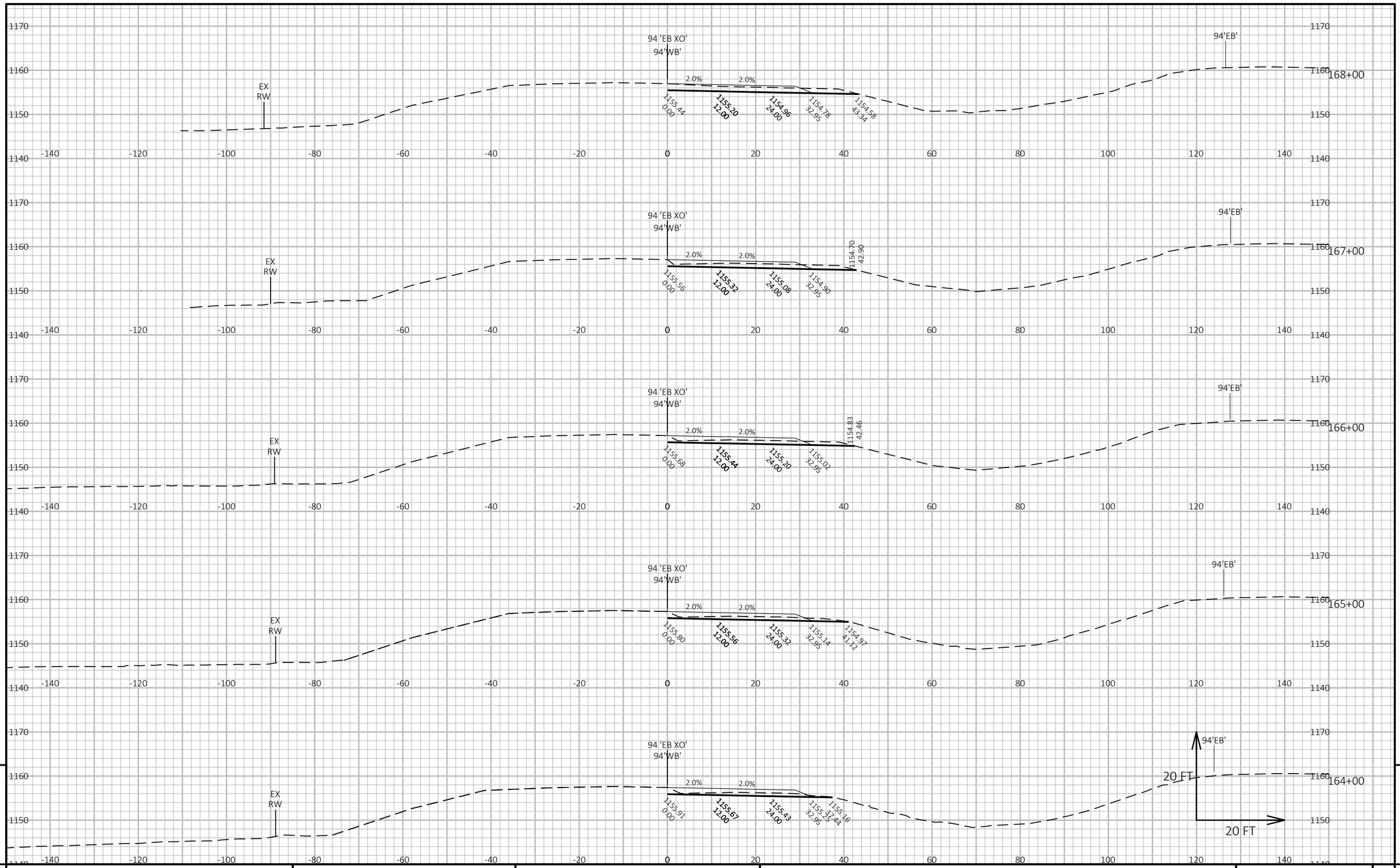
WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 479	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 15
PLOT DATE : 3/17/2021 5:20 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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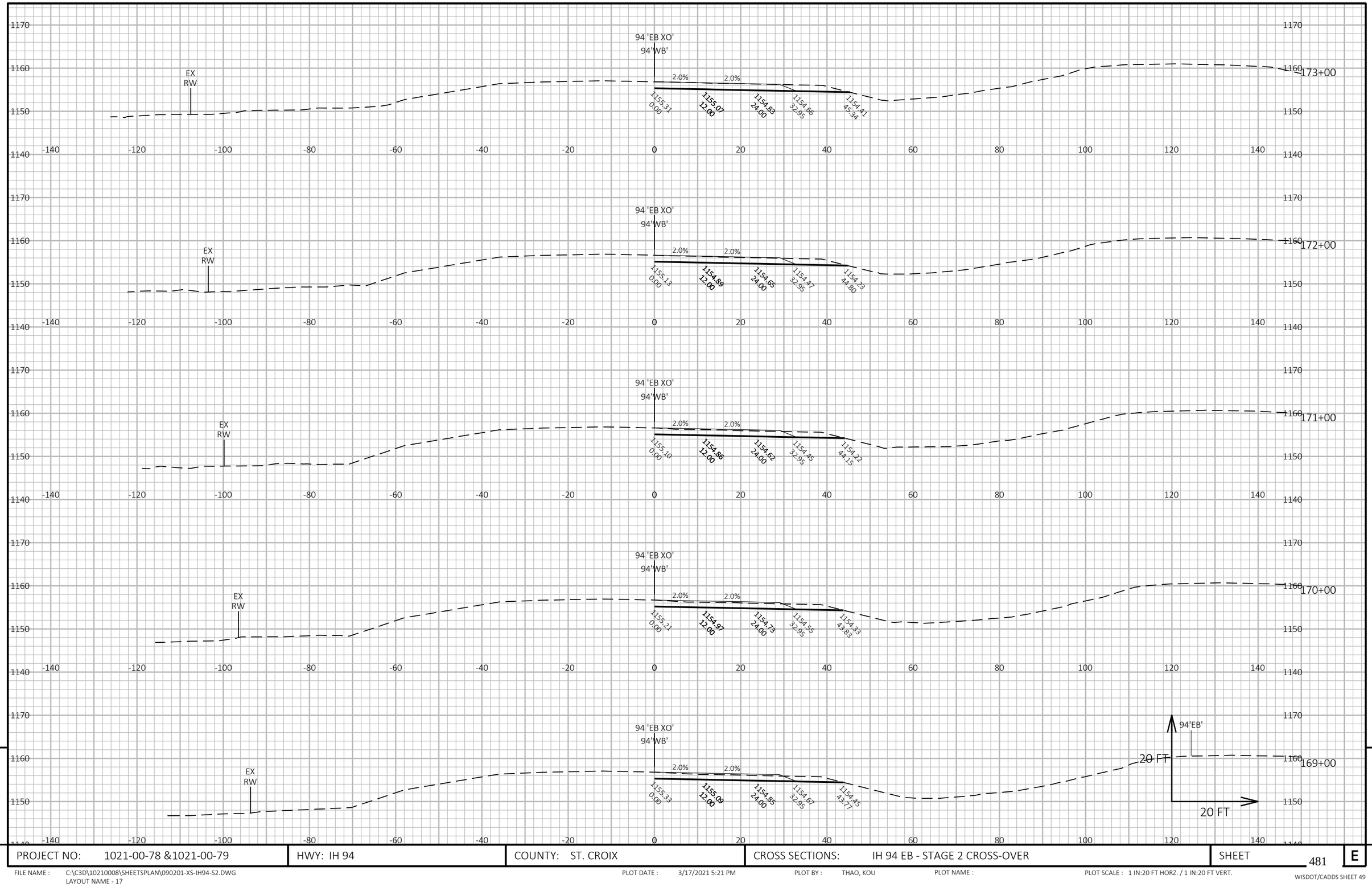
9

PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 480	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 16

PLOT DATE : 3/17/2021 5:20 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 EB - STAGE 2 CROSS-OVER	SHEET 481	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 17

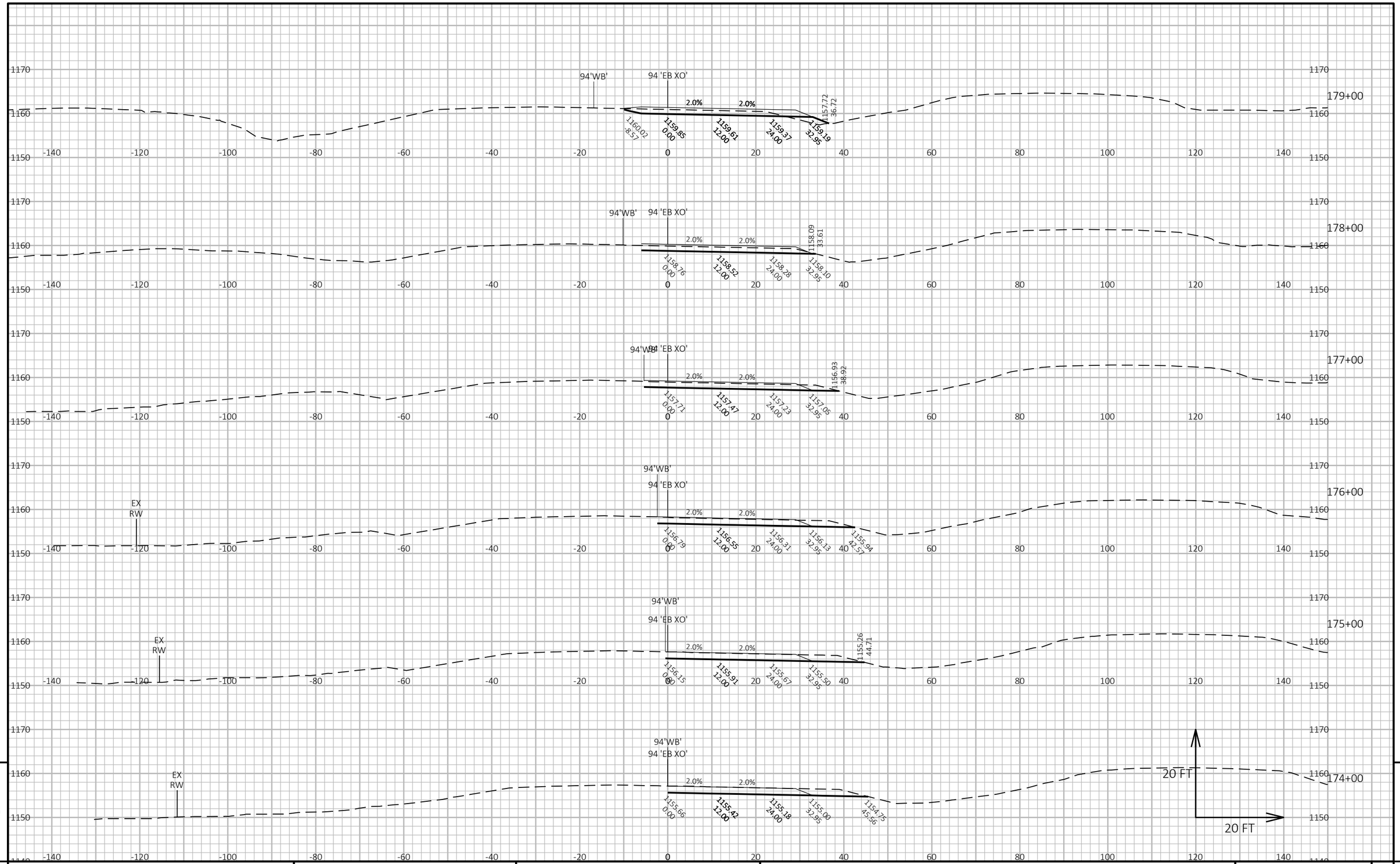
PLOT DATE : 3/17/2021 5:21 PM

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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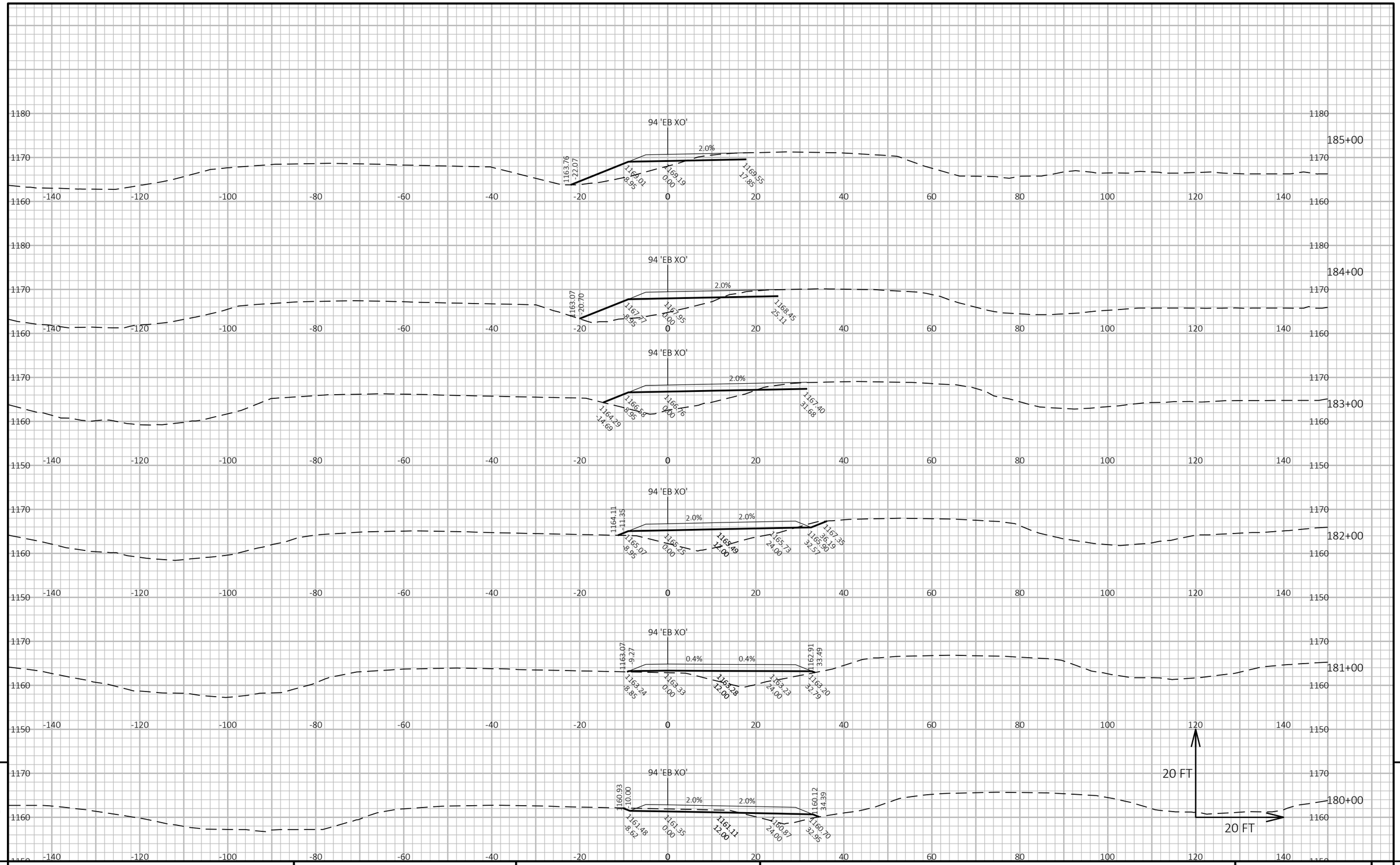
9

PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 482	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 18

PLOT DATE : 3/17/2021 5:21 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

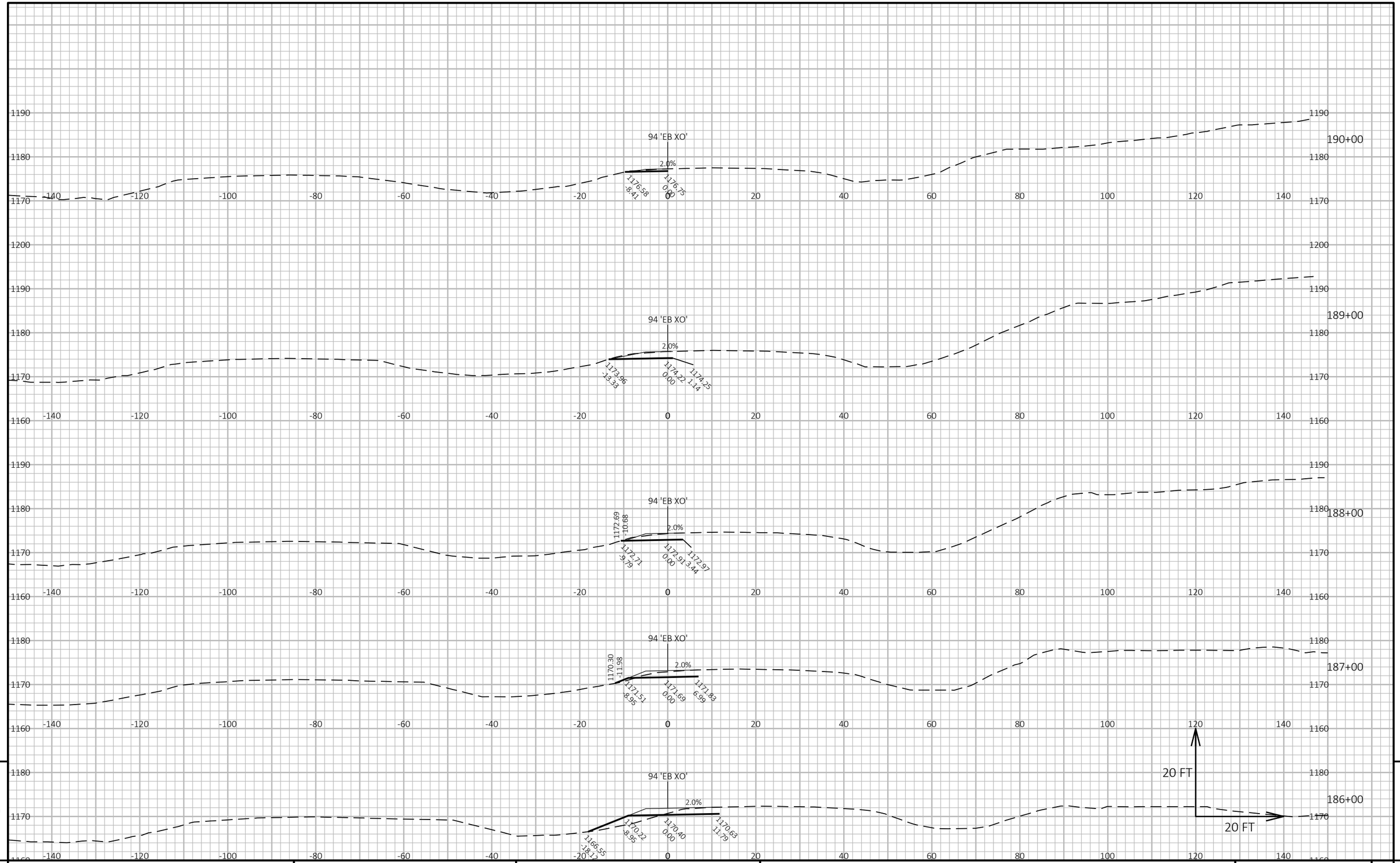


PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 2 CROSS-OVER	SHEET 483 E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 19

PLOT DATE : 3/17/2021 5:21 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 CROSS-OVER	SHEET 484	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S2.DWG
LAYOUT NAME - 20

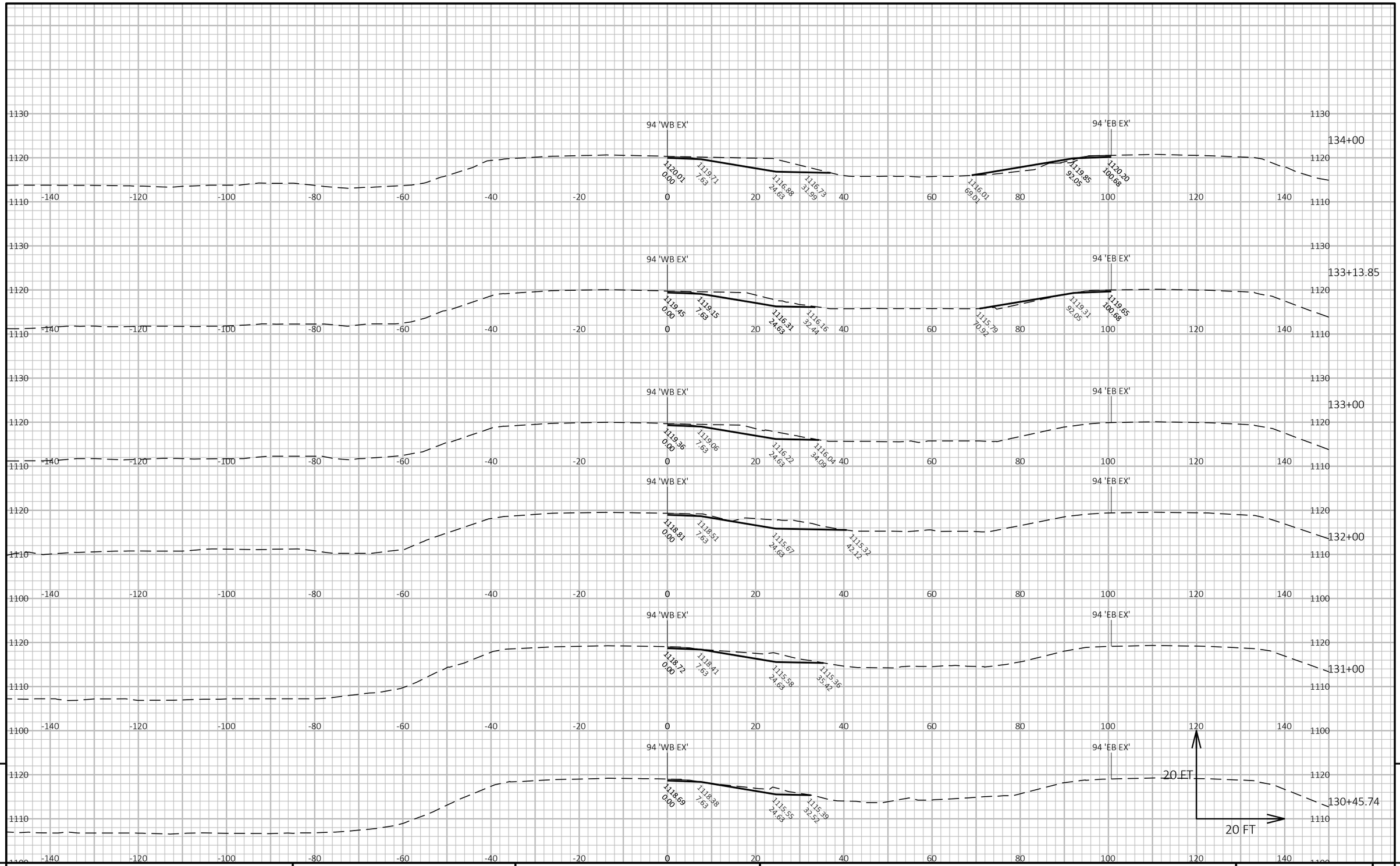
PLOT DATE : 3/17/2021 5:21 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

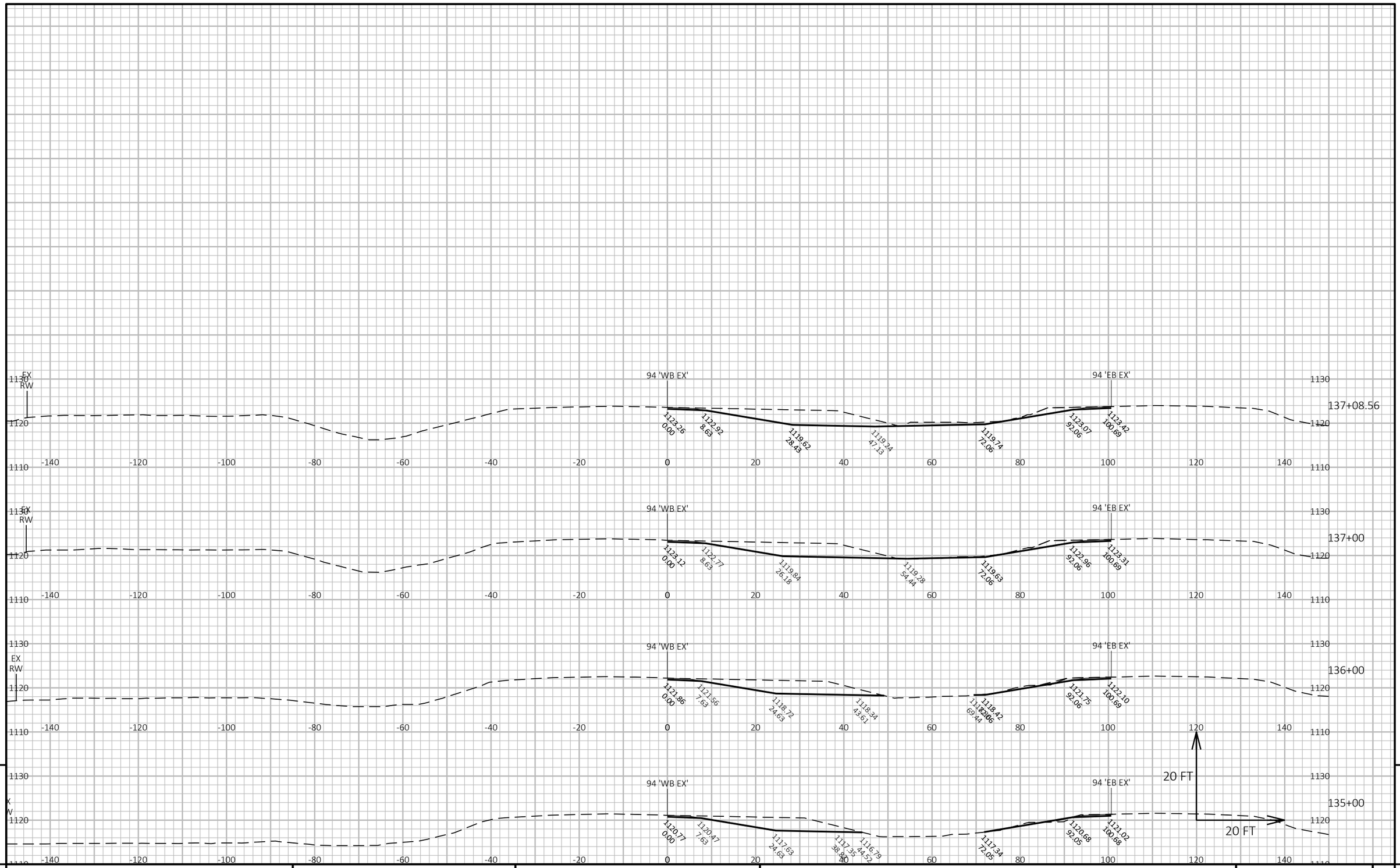


PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB -STAGE 3	SHEET 485	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 1

PLOT DATE : 3/25/2021 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: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB -STAGE 3	SHEET 486	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 2

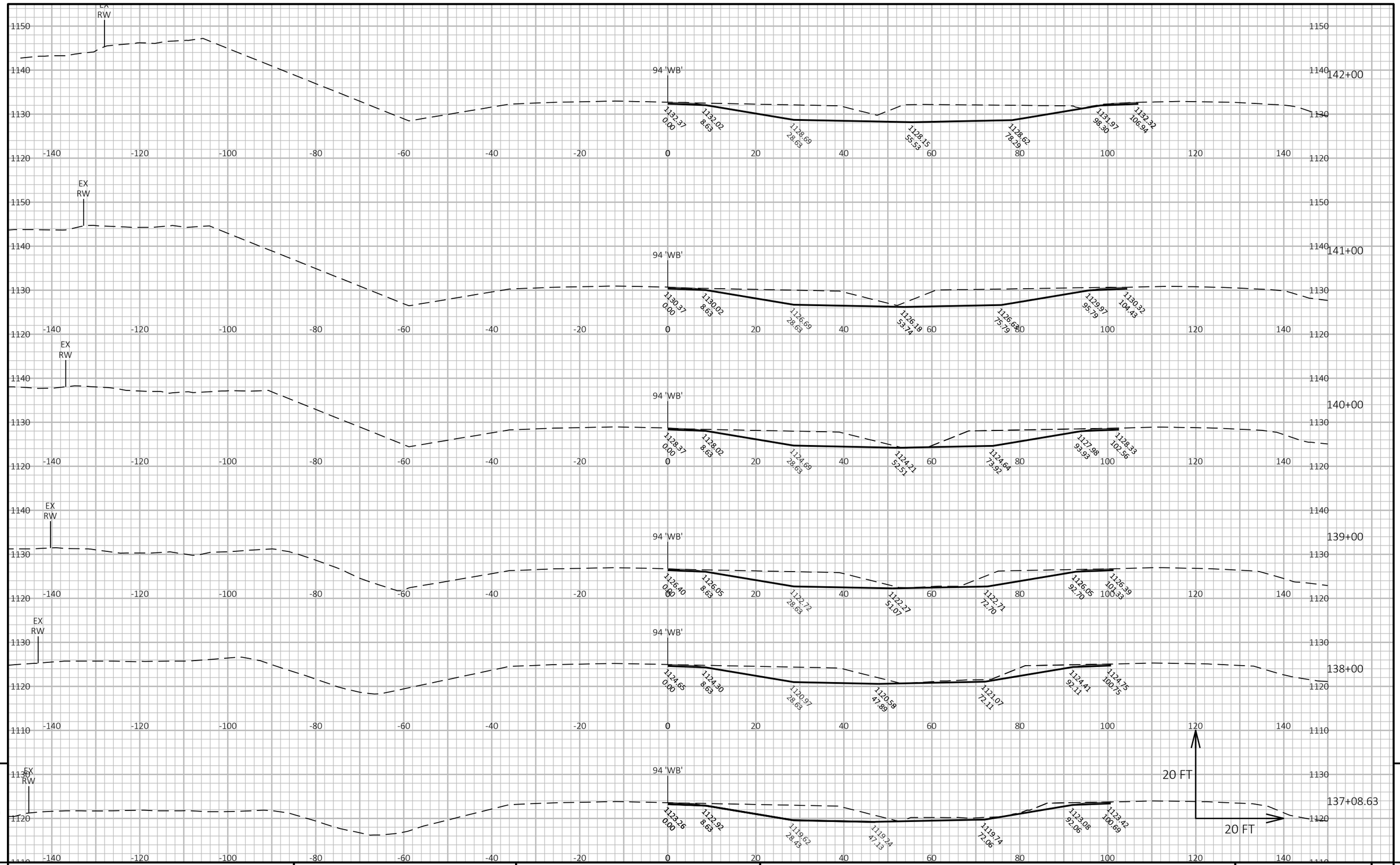
PLOT DATE : 3/25/2021 4:37 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

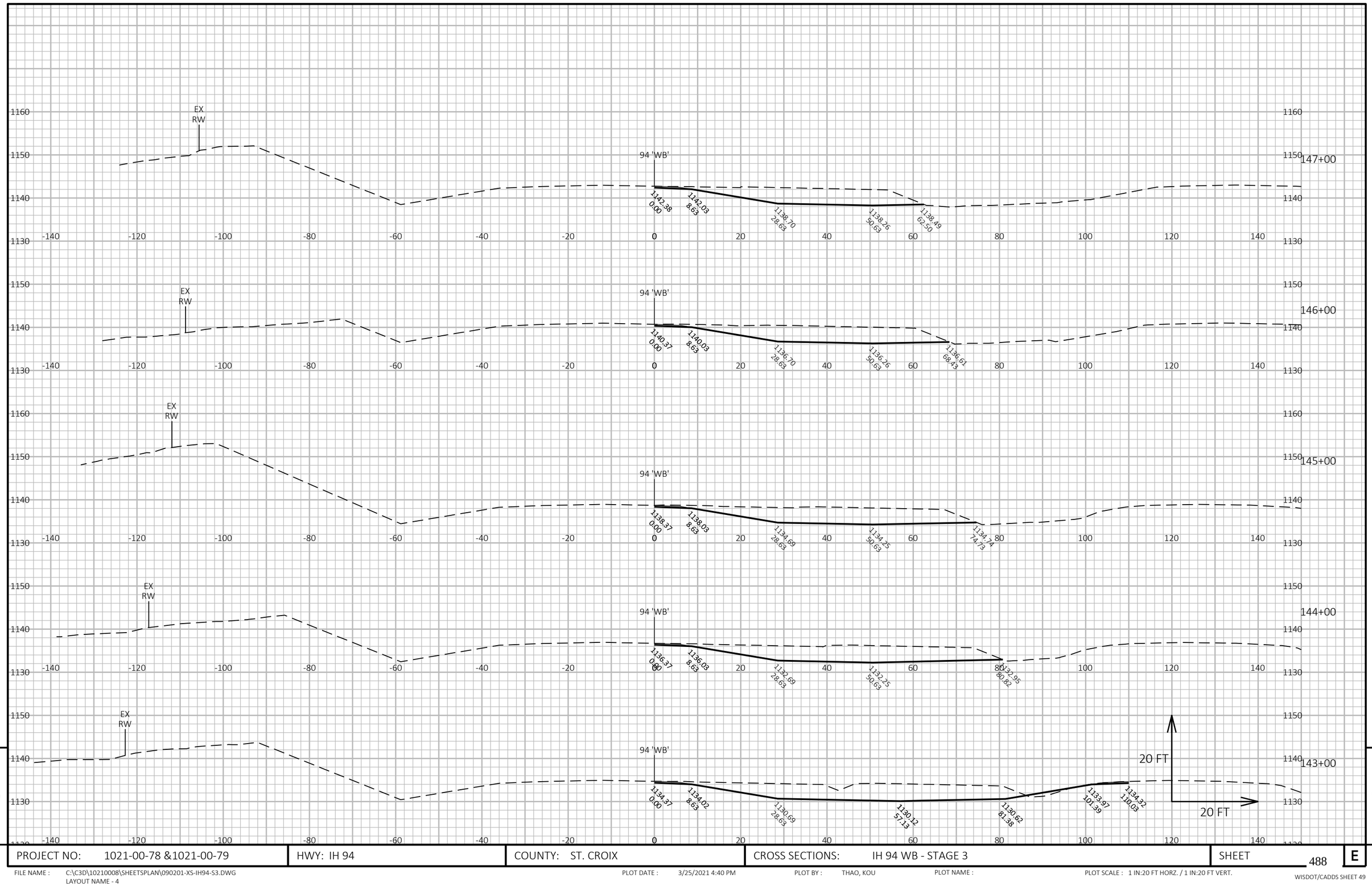


PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 487 E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 3

PLOT DATE : 3/25/2021 4:39 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 488	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 4

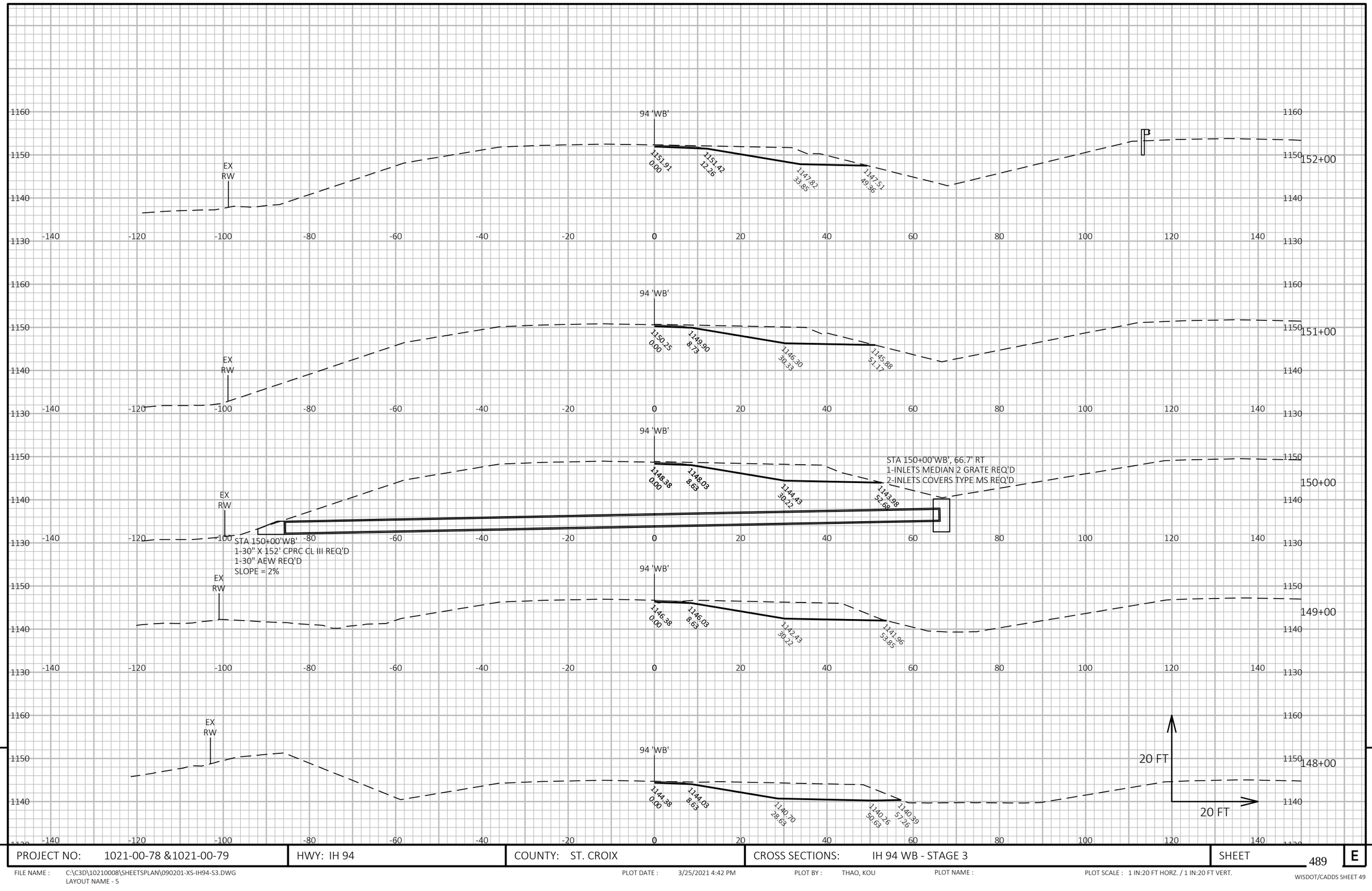
PLOT DATE : 3/25/2021 4:40 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

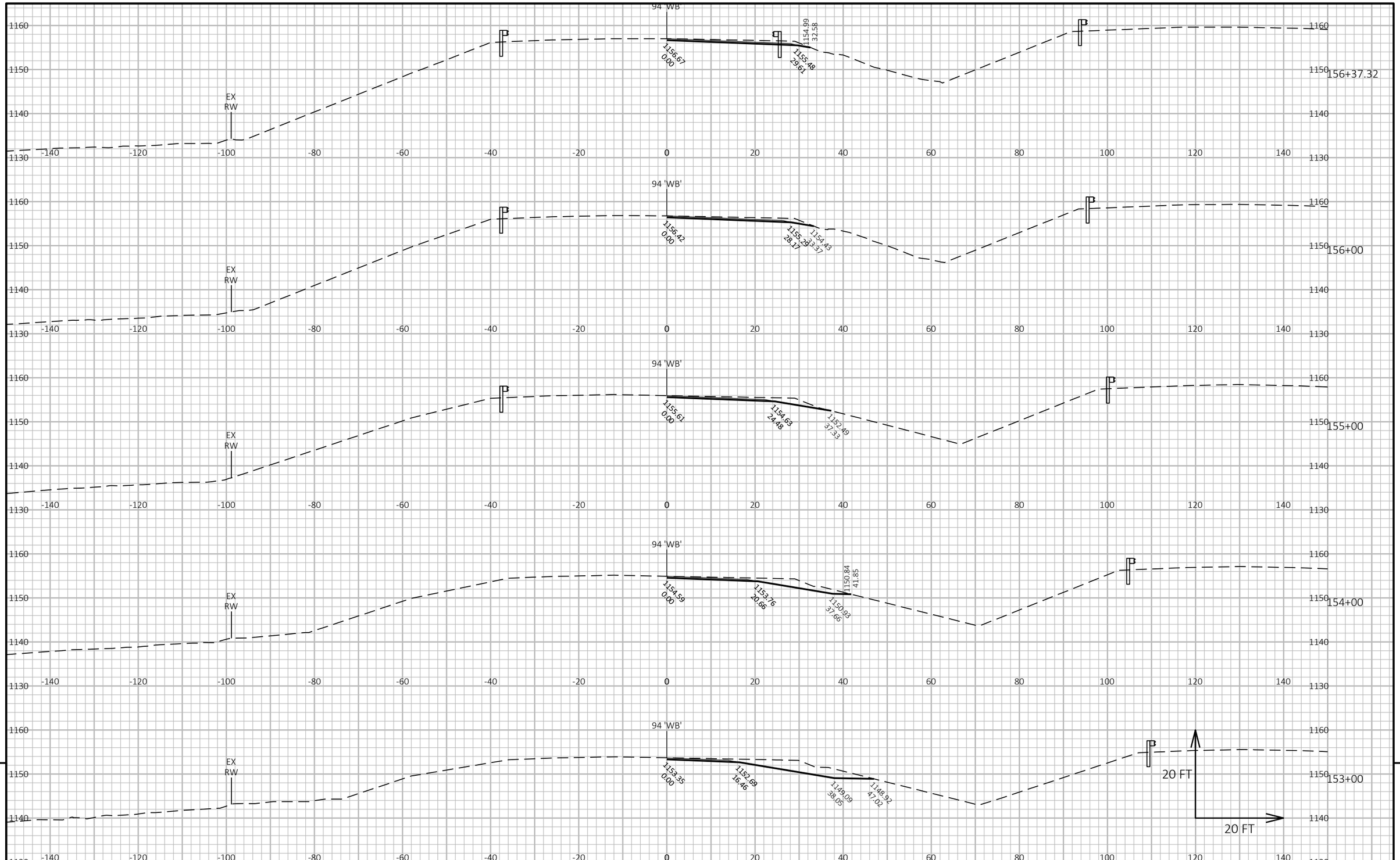


PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 489	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 5

PLOT DATE : 3/25/2021 4:42 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

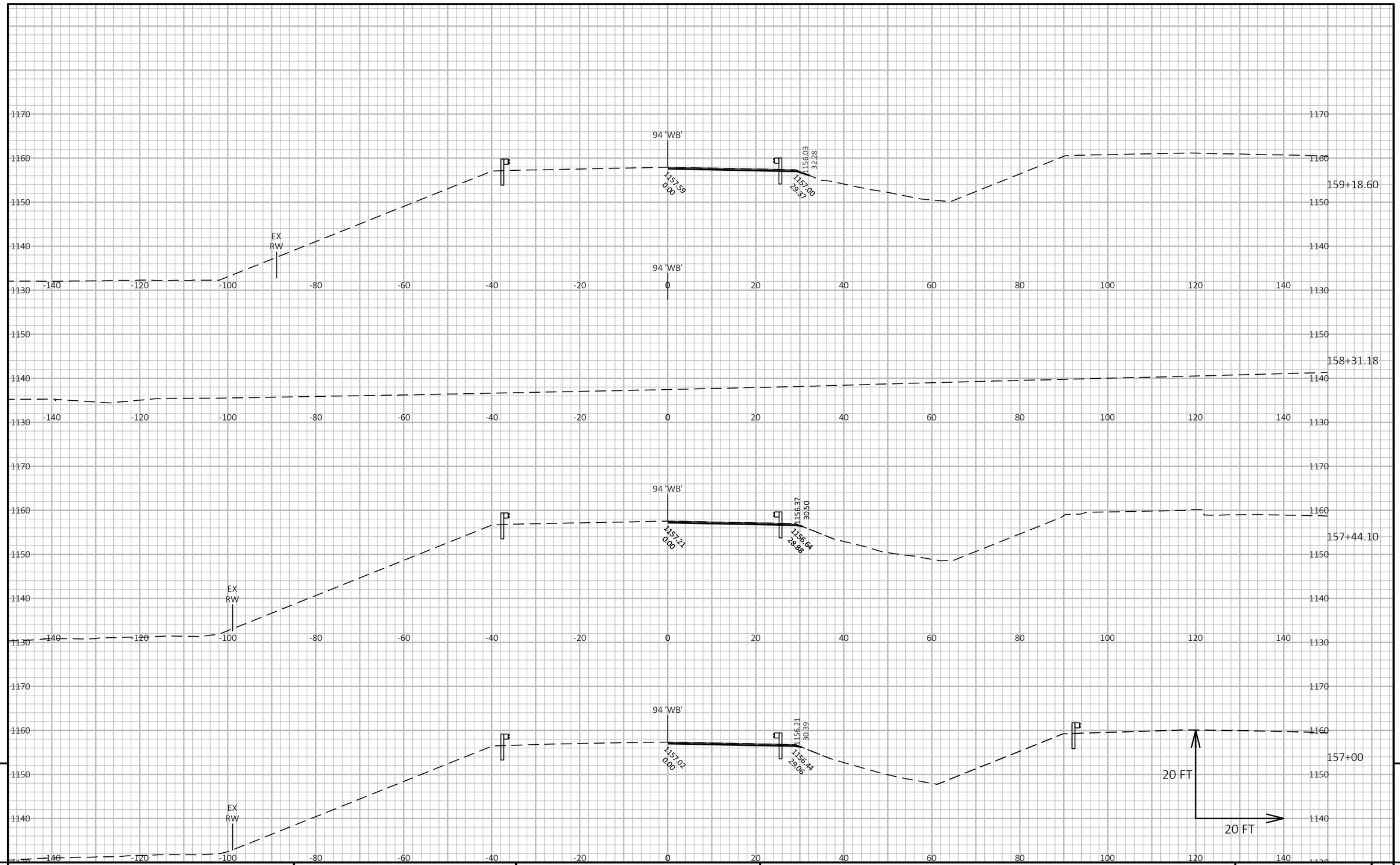
9

PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 490	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 6

PLOT DATE : 3/25/2021 4:43 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 491	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 7

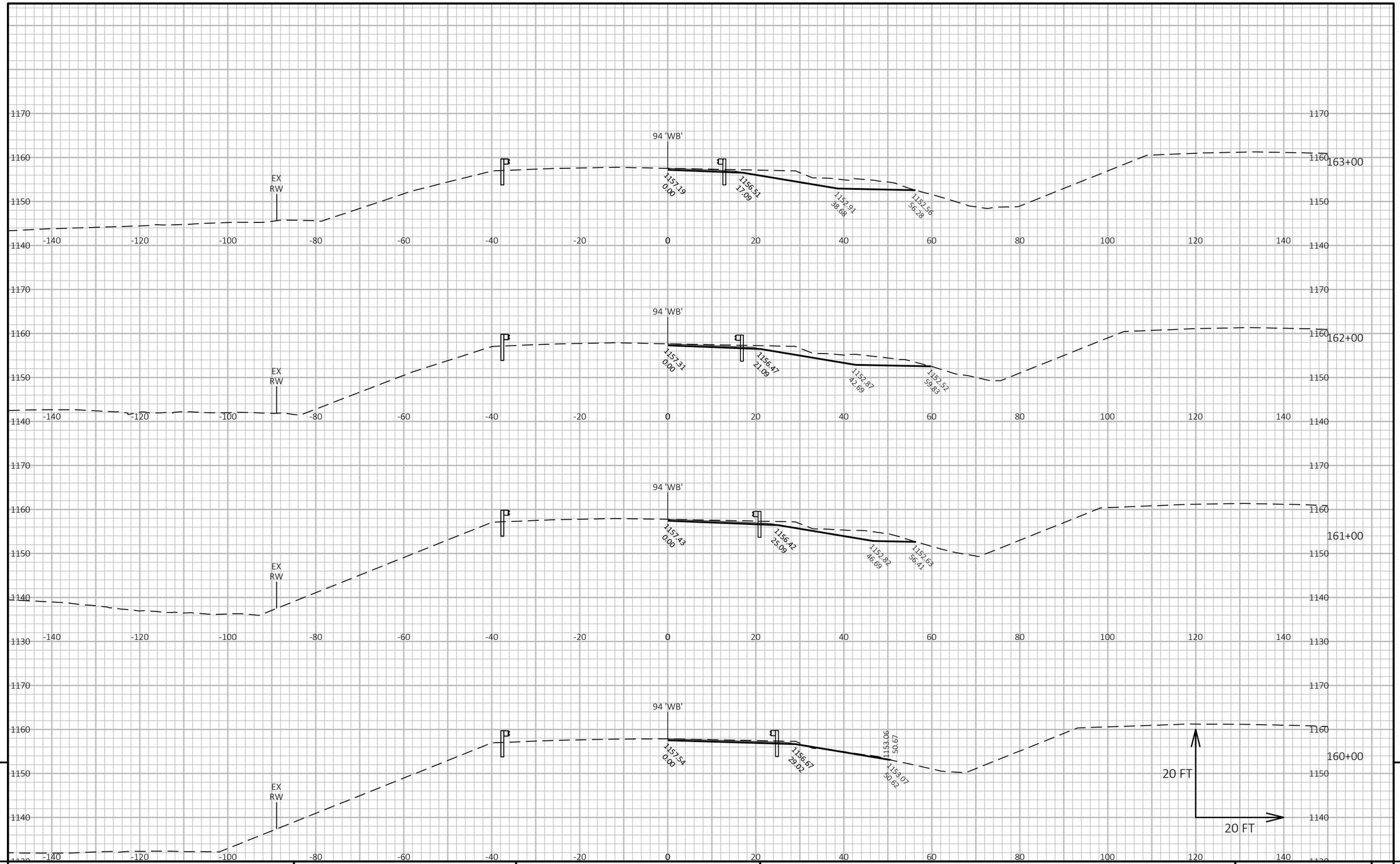
PLOT DATE : 3/25/2021 4:45 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

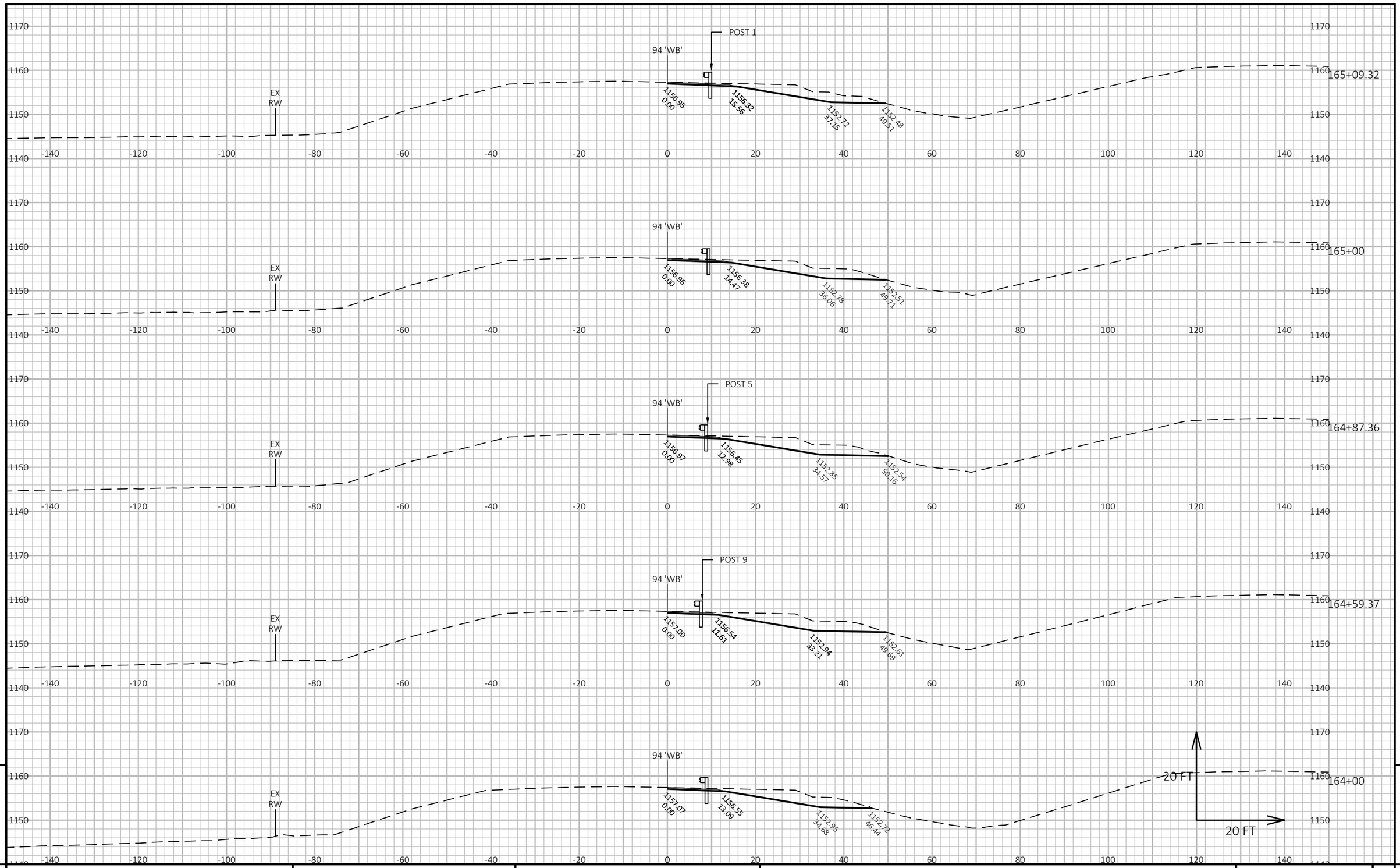


PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 492	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 8

PLOT DATE : 3/25/2021 4:46 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

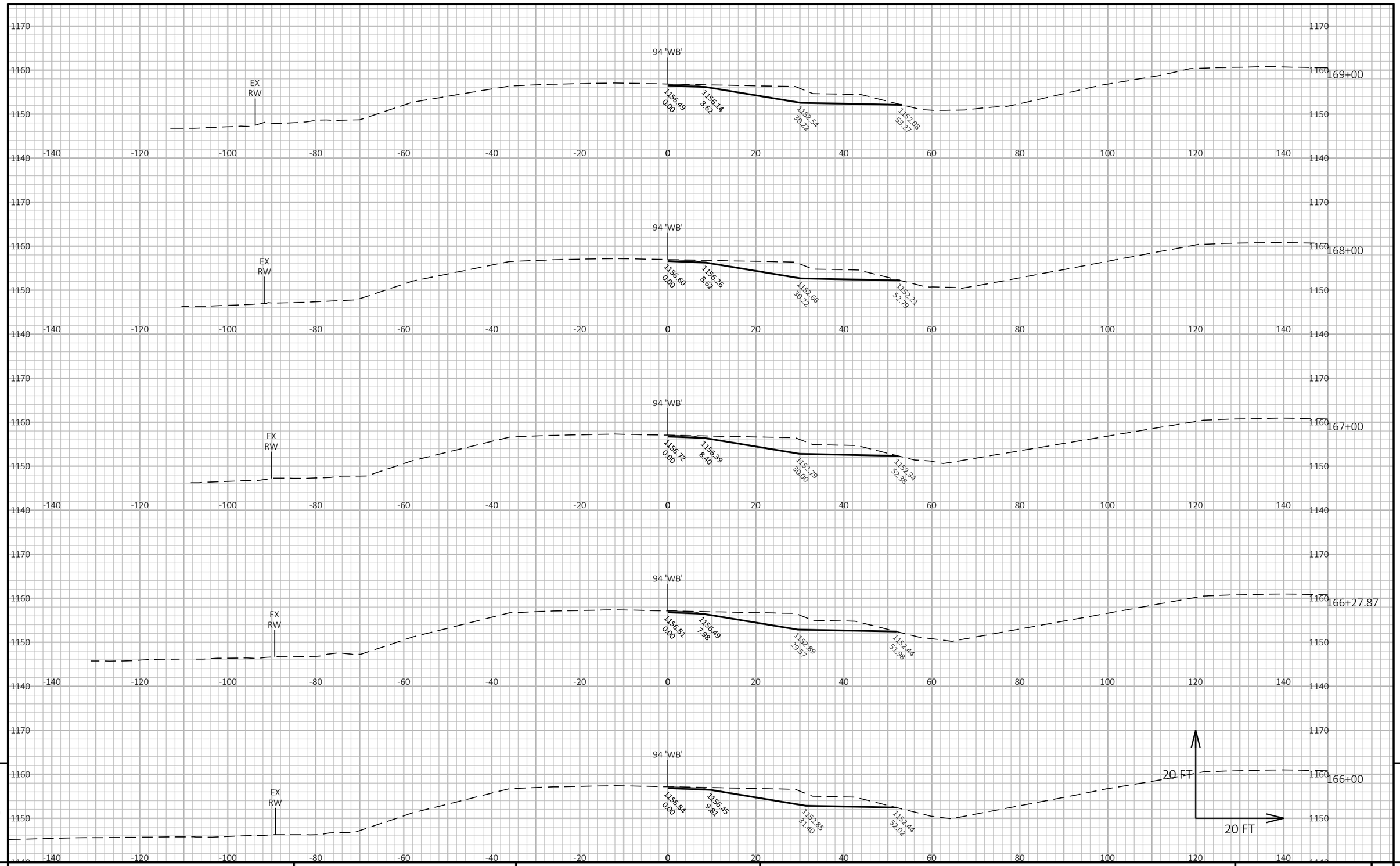
9

PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 493	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 9

PLOT DATE : 3/25/2021 4:48 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

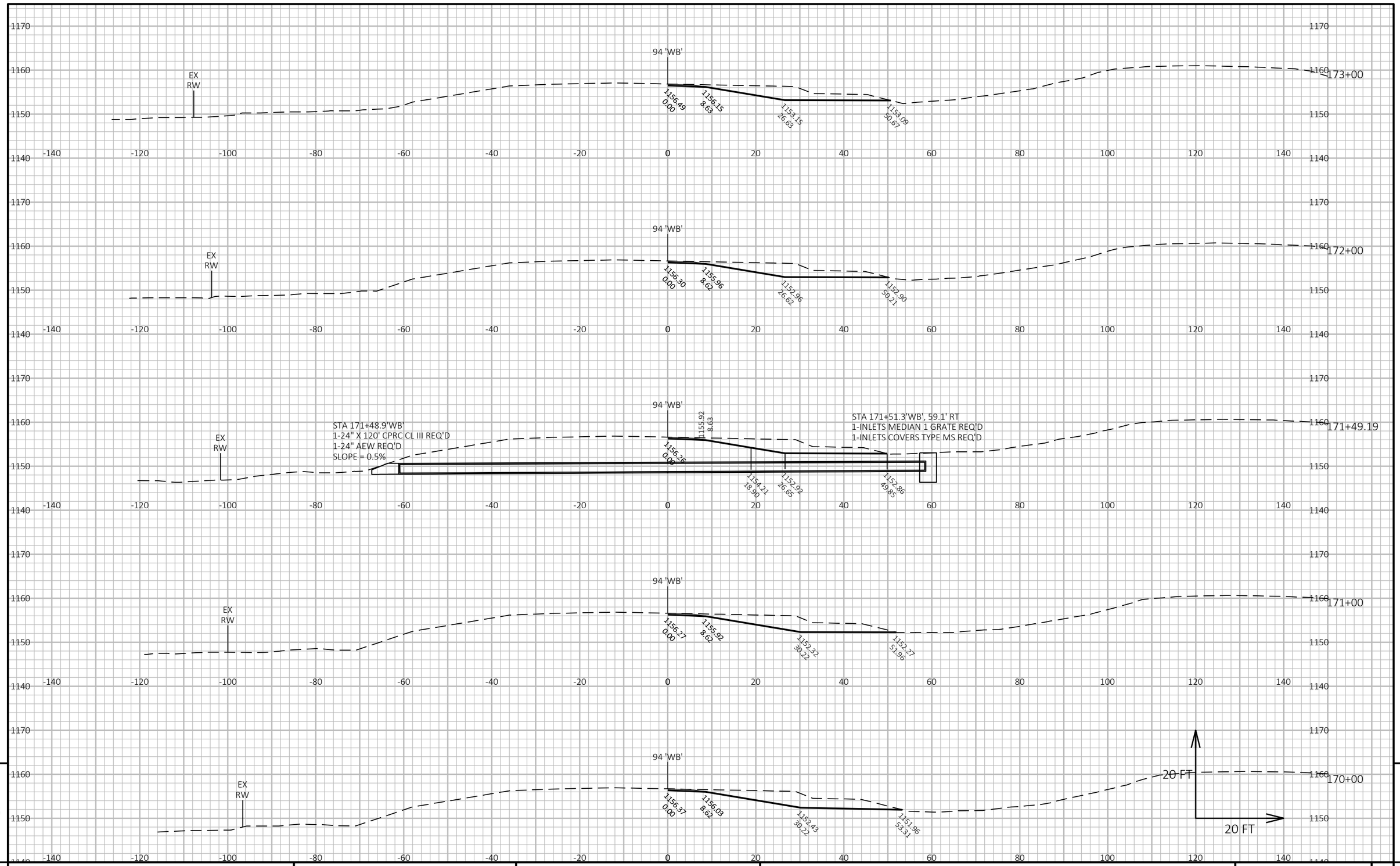
9

PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 494	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 10

PLOT DATE : 3/25/2021 4:50 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

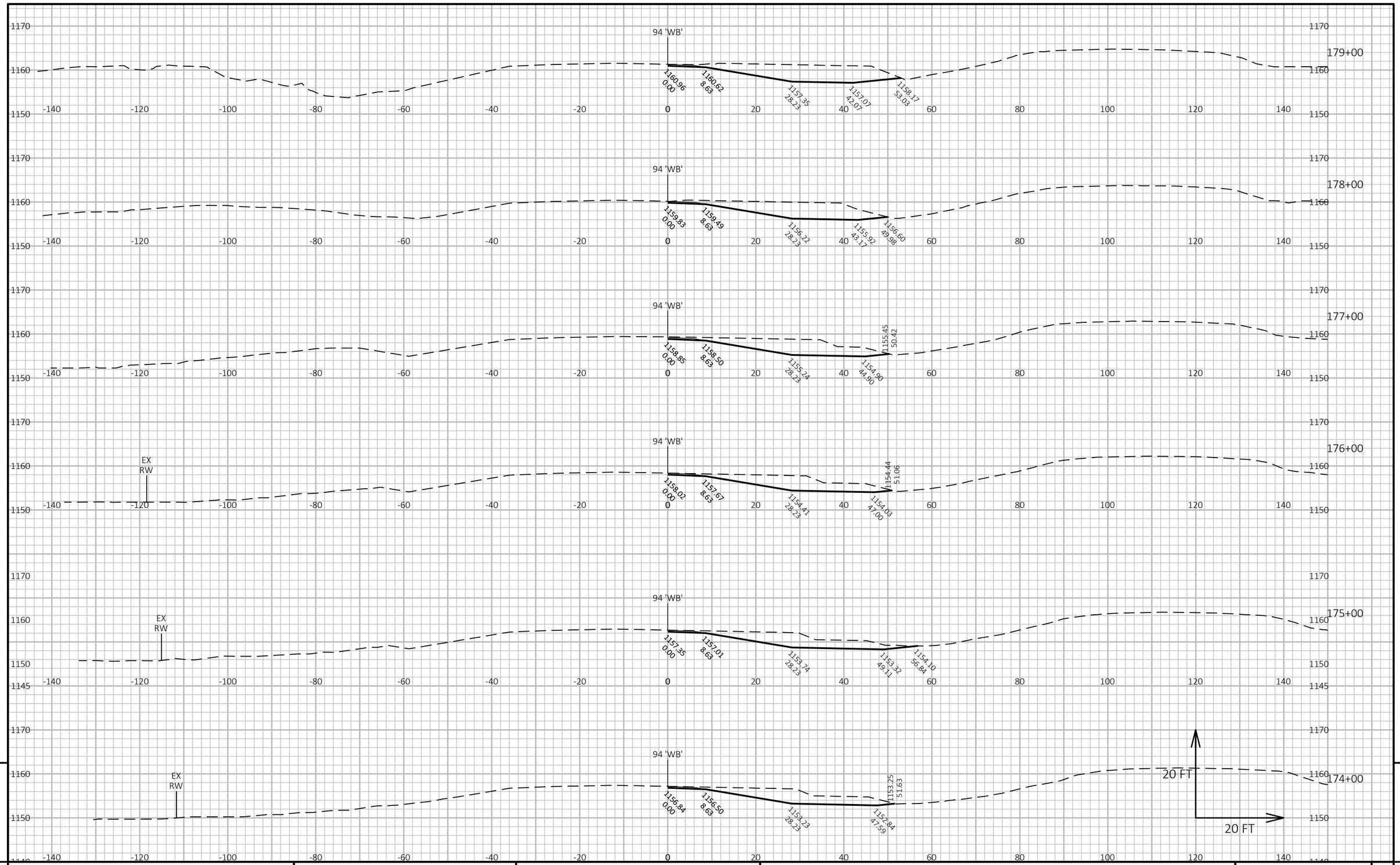
9

PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 495	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 11

PLOT DATE : 3/25/2021 4:51 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

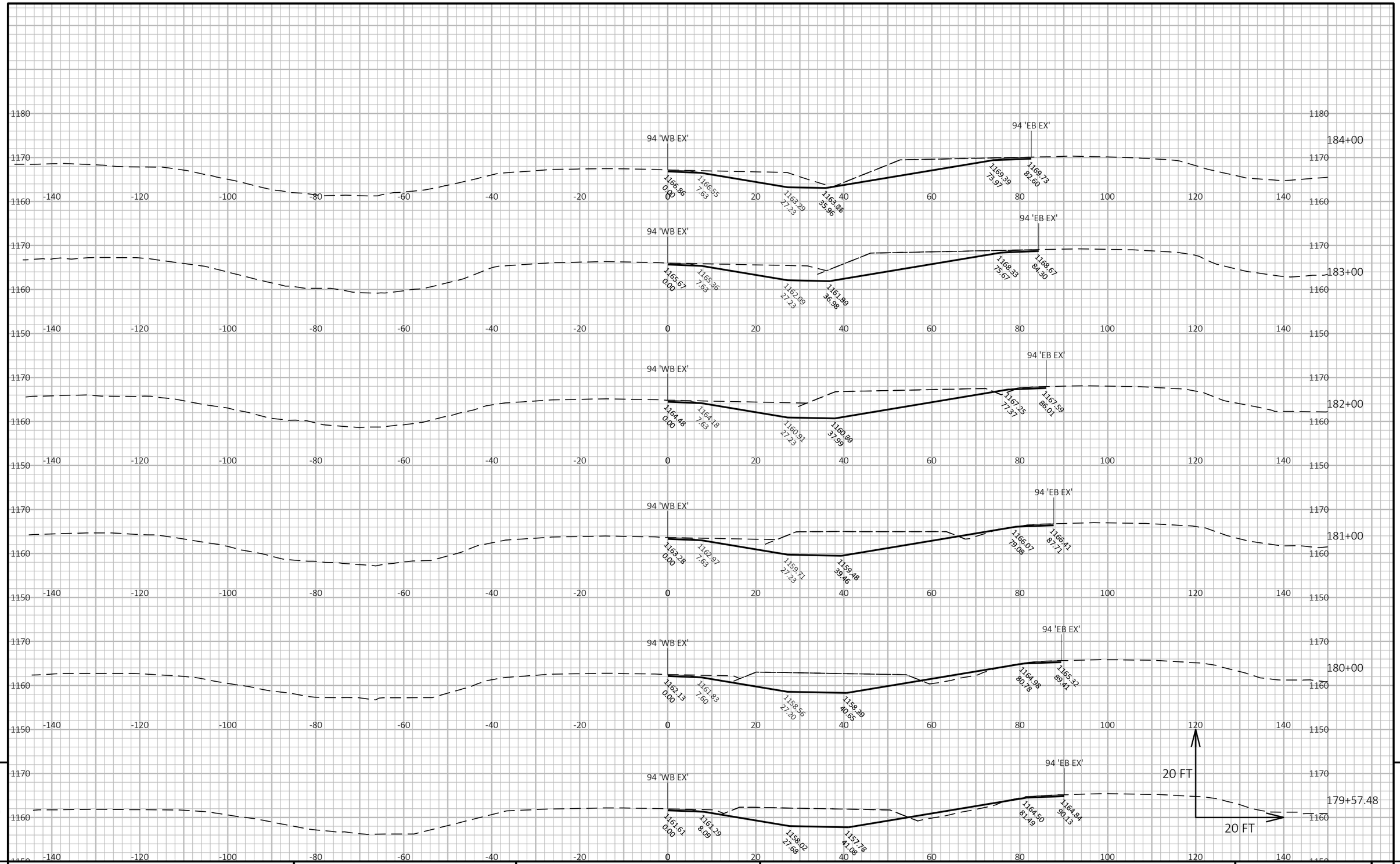


PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 496	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 12

PLOT DATE : 3/25/2021 4:53 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

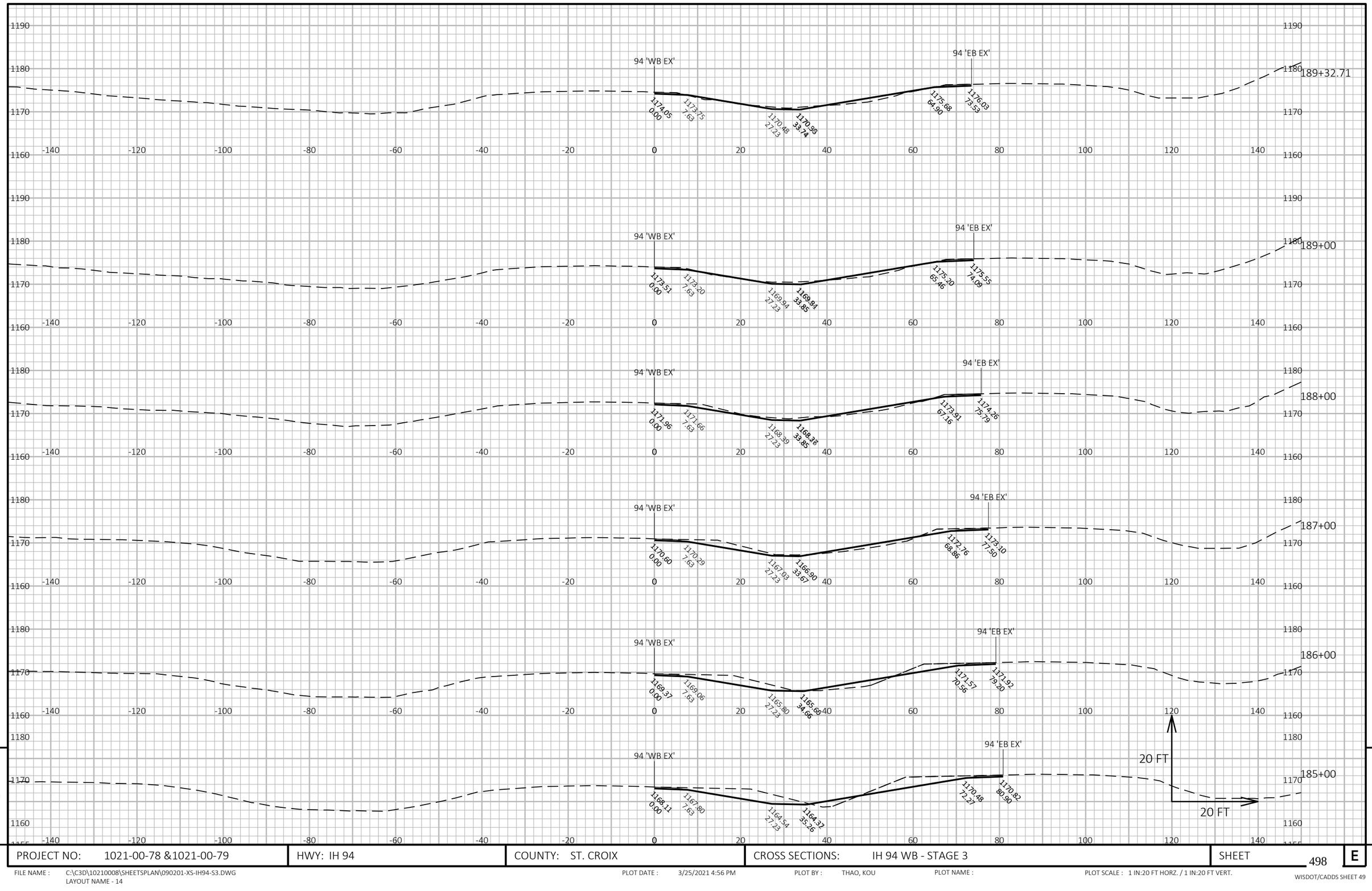


PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 497 E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 13

PLOT DATE : 3/25/2021 4:54 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

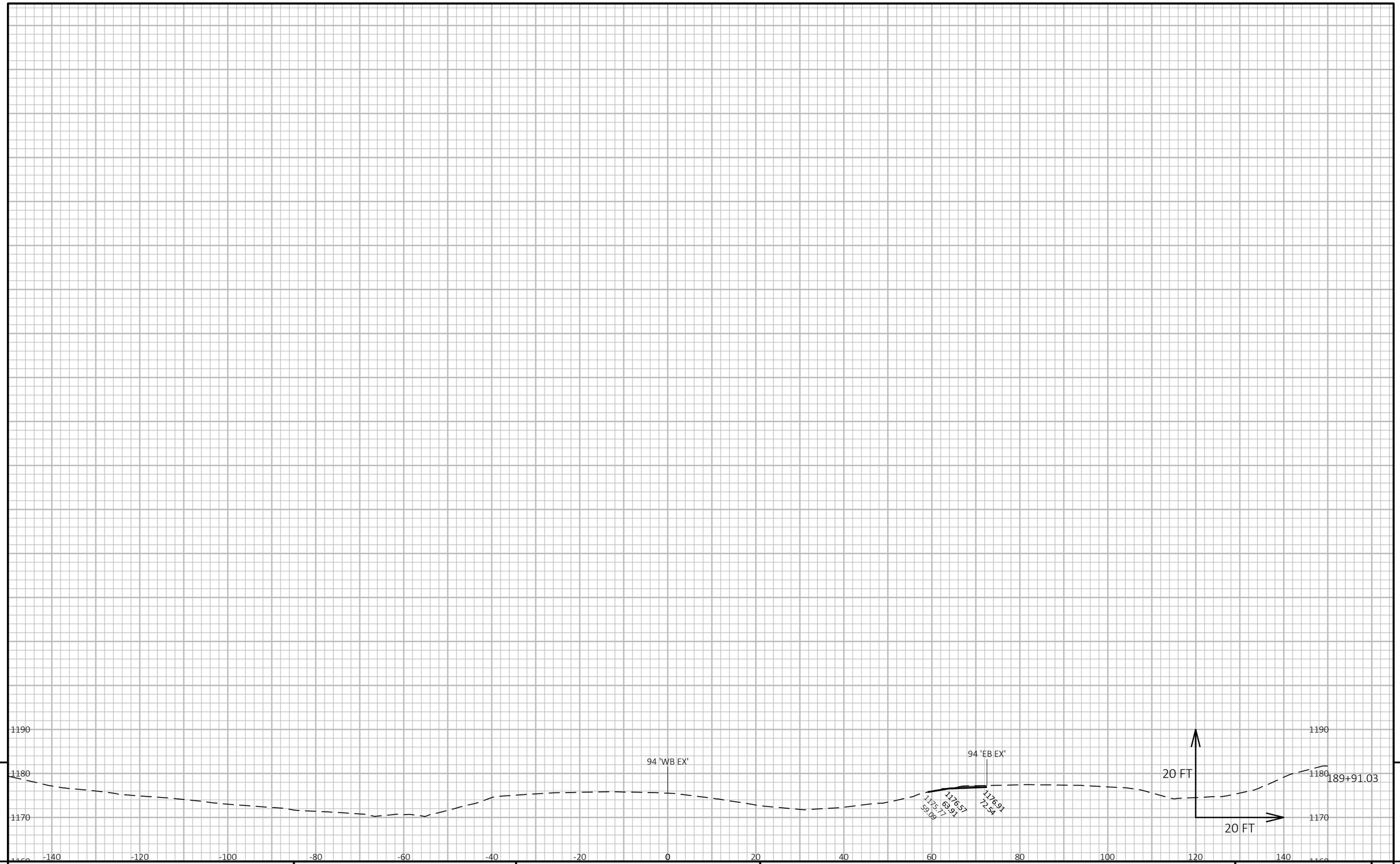


PROJECT NO: 1021-00-78 &1021-00-79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 498	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 14

PLOT DATE : 3/25/2021 4:56 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 499	E

FILE NAME : C:\C3D\10210008\SHEETSPLAN\090201-XS-IH94-S3.DWG
LAYOUT NAME - 15

PLOT DATE : 3/25/2021 4:57 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

Alignment: Stage1-94WB (STAGE 1)
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	9	34	34	0	0	34	34	0	34
2+00.000	13	41	41	0	0	75	75	0	75
3+00.000	39	95	95	0	0	170	170	0	170
4+00.000	37	141	141	0	0	311	311	0	311
5+00.000	42	146	146	0	0	457	457	0	457
6+00.000	63	194	194	0	0	650	650	0	650
7+00.000	45	200	200	1	2	850	850	2	849
8+00.000	58	190	190	0	3	1041	1041	5	1036
9+00.000	47	194	194	2	5	1235	1235	9	1226
10+00.000	44	169	169	2	9	1404	1404	19	1385
11+00.000	40	155	155	4	14	1558	1558	33	1526
12+00.000	45	158	158	2	14	1716	1716	46	1670
13+00.000	45	168	168	2	11	1884	1884	58	1827
14+00.000	45	168	168	1	7	2052	2052	64	1988
15+00.000	47	172	172	2	6	2224	2224	70	2153
16+00.000	58	196	196	0	5	2419	2419	75	2344
17+00.000	53	207	207	0	1	2626	2626	76	2550
18+00.000	43	178	178	7	16	2804	2804	92	2712
19+00.000	45	163	163	10	39	2967	2967	131	2835
20+00.000	44	164	164	10	48	3131	3131	179	2951
21+00.000	42	160	160	19	70	3291	3291	250	3041
22+00.000	43	158	158	17	88	3449	3449	338	3111
23+00.000	42	158	158	19	87	3607	3607	425	3182
24+00.000	41	153	153	17	87	3760	3760	512	3248
25+00.000	44	156	156	16	80	3916	3916	592	3324
26+00.000	40	154	154	19	83	4070	4070	675	3395
27+00.000	40	147	147	19	92	4217	4217	767	3450
28+00.000	42	151	151	15	82	4368	4368	849	3519
29+00.000	42	156	156	8	53	4524	4524	903	3621
30+00.000	50	170	170	5	29	4694	4694	932	3762
31+00.000	52	188	188	1	15	4882	4882	947	3935
32+00.000	48	185	185	3	10	5067	5067	957	4110
33+00.000	42	167	167	1	9	5234	5234	966	4268
34+00.000	41	154	154	2	7	5388	5388	973	4414
35+00.000	52	171	171	1	8	5559	5559	981	4578
36+00.000	129	334	334	0	3	5893	5893	984	4910
37+00.000	99	421	421	0	0	6315	6315	984	5331
38+00.000	101	370	370	0	0	6684	6684	984	5701
39+00.000	111	392	392	0	0	7076	7076	984	6092
40+00.000	125	437	437	0	0	7513	7513	984	6529
41+00.000	137	486	486	0	0	7999	7999	984	7015
42+00.000	134	501	501	0	0	8500	8500	984	7517
43+00.000	137	501	501	0	0	9002	9002	984	8018
43+74.078	133	370	370	0	0	9372	9372	984	8388
44+00.000	129	126	126	0	0	9498	9498	984	8514
44+71.879	93	296	296	0	0	9794	9794	984	8810
44+71.900	0	0	0	0	0	9794	9794	984	8810
45+29.840	0	0	0	0	0	9794	9794	984	8810
45+75.790	0	0	0	0	0	9794	9794	984	8810

~CONTINUE~									
45+75.807	122	0	0	0	0	9794	9794	984	8810
46+00.000	98	99	99	0	0	9893	9893	984	8909
47+00.000	100	366	366	0	0	10259	10259	984	9275
48+00.000	69	313	313	0	0	10572	10572	984	9588
48+59.193	79	163	163	0	0	10735	10735	984	9751
49+00.000	80	120	120	0	0	10855	10855	984	9871
50+00.000	78	293	293	0	0	11148	11148	984	10164
51+00.000	49	236	236	0	0	11383	11383	984	10399
52+00.000	45	175	175	0	0	11558	11558	984	10575
53+00.000	48	173	173	0	0	11731	11731	984	10747
54+00.000	53	187	187	0	0	11918	11918	984	10934
55+00.000	54	198	198	0	0	12116	12116	984	11132
56+00.000	53	198	198	0	0	12313	12313	984	11330
57+00.000	44	180	180	0	0	12494	12494	984	11510
58+00.000	42	159	159	0	0	12653	12653	984	11669
59+00.000	50	170	170	0	0	12823	12823	984	11839
60+00.000	67	218	218	0	0	13041	13041	984	12057
60+82.664	41	166	166	0	0	13207	13207	984	12224
61+47.948	38	96	96	1	1	13303	13303	985	12318
62+00.000	29	64	64	3	5	13368	13368	990	12377
63+00.000	43	134	134	12	36	13501	13501	1026	12475
64+00.000	49	171	171	0	28	13672	13672	1054	12618
64+40.189	55	78	78	0	0	13750	13750	1054	12696
65+00.000	50	117	117	0	0	13867	13867	1054	12813
66+00.000	43	171	171	0	1	14038	14038	1054	12983
67+00.000	41	154	154	0	1	14192	14192	1055	13137
68+00.000	38	145	145	0	0	14337	14337	1055	13282
69+00.000	36	137	137	0	0	14474	14474	1055	13419
70+00.000	35	132	132	0	0	14607	14607	1055	13551
71+00.000	12	87	87	0	0	14694	14694	1055	13639
71+07.544	12	3	3	0	0	14697	14697	1055	13642

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	5	5	5	0	0	5	5	0	5
49+00.000	15	15	15	0	0	20	20	0	20
50+00.000	39	100	100	0	0	120	120	0	120
51+00.000	43	152	152	0	0	272	272	0	272
52+00.000	48	169	169	0	0	441	441	0	441
53+00.000	54	189	189	0	0	631	631	0	630
54+00.000	52	197	197	0	0	827	827	0	827
55+00.000	55	198	198	0	0	1025	1025	0	1025
56+00.000	48	190	190	0	0	1215	1215	0	1214
57+00.000	49	179	179	1	2	1394	1394	2	1392
58+00.000	39	164	164	0	2	1557	1557	4	1553
59+00.000	36	140	140	0	1	1697	1697	5	1692
60+00.000	36	134	134	0	1	1832	1832	6	1826
60+82.664	26	95	95	0	0	1927	1927	6	1921
61+47.948	0	31	31	0	0	1958	1958	6	1952
62+00.000	0	0	0	0	0	1958	1958	6	1952

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 (STAGE 2)
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	66	0	0	2	0	0	0	0	0
9+00.000	75	200	200	4	10	200	200	10	190
10+00.000	83	292	292	18	53	491	491	63	428
11+00.000	82	305	305	6	58	797	797	121	675
12+00.000	74	289	289	25	75	1086	1086	196	889
13+00.000	66	259	259	38	151	1345	1345	347	998
14+00.000	56	226	226	53	217	1572	1572	564	1007
15+00.000	36	171	171	70	295	1743	1743	859	884
16+00.000	28	119	119	90	383	1862	1862	1243	619
17+00.000	23	93	93	102	462	1955	1955	1705	250
18+00.000	20	79	79	107	505	2034	2034	2210	-176
19+00.000	19	72	72	79	448	2106	2106	2658	-552
20+00.000	21	73	73	48	305	2179	2179	2963	-784
21+00.000	20	76	76	204	606	2255	2255	3569	-1314
22+00.000	19	71	71	222	1025	2326	2326	4594	-2267
23+00.000	20	71	71	259	1156	2397	2397	5750	-3353
24+00.000	18	70	70	243	1206	2467	2467	6957	-4489
25+00.000	17	65	65	219	1110	2533	2533	8067	-5534
26+00.000	17	64	64	84	730	2596	2596	8796	-6200
27+00.000	77	175	175	30	276	2771	2771	9072	-6301
28+00.000	23	185	185	97	306	2956	2956	9378	-6421
29+00.000	16	72	72	237	804	3028	3028	10182	-7154
30+00.000	16	60	60	267	1214	3088	3088	11396	-8308
31+00.000	17	61	61	239	1217	3149	3149	12613	-9464
32+00.000	16	60	60	257	1194	3209	3209	13806	-10597
33+00.000	16	59	59	262	1250	3269	3269	15057	-11788
34+00.000	17	62	62	203	1120	3330	3330	16177	-12847
35+00.000	18	64	64	122	783	3394	3394	16960	-13566
36+00.000	21	71	71	48	409	3465	3465	17369	-13904
36+93.873	26	81	81	7	125	3546	3546	17494	-13948

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 (STAGE 3)
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	92	0	0	14	0	0	0	0	0
37+00.000	83	20	20	14	4	20	20	4	16
38+00.000	82	306	306	16	72	326	326	76	250
39+00.000	92	322	322	17	79	648	648	156	492
40+00.000	89	334	334	17	81	982	982	237	745
40+36.390	88	119	119	16	29	1101	1101	265	836
41+00.000	88	208	208	17	50	1309	1309	316	993
42+00.000	84	318	318	19	86	1627	1627	402	1225
42+19.910	82	61	61	19	18	1688	1688	420	1268
43+00.000	0	122	122	0	37	1810	1810	457	1353
43+79.410	90	132	132	22	42	1942	1942	499	1442
44+00.000	93	69	69	2	12	2011	2011	512	1500
45+00.000	123	399	399	0	6	2411	2411	517	1893
46+00.000	328	836	836	0	0	3247	3247	517	2730
46+19.410	371	251	251	0	0	3498	3498	517	2981
46+44.409	424	368	368	0	0	3866	3866	517	3349
46+69.408	479	418	418	0	0	4284	4284	517	3767
47+00.000	564	591	591	3	2	4875	4875	520	4355
48+00.000	798	2522	2522	27	72	7397	7397	592	6805
49+00.000	832	3018	3018	23	120	10415	10415	712	9703

~CONTINUE~									
50+00.000	307	2108	2108	13	86	12523	12523	798	11725
51+00.000	121	793	793	6	46	13316	13316	844	12472
51+50.000	86	192	192	3	11	13508	13508	855	12653
52+00.000	81	155	155	0	4	13663	13663	859	12803
53+00.000	98	331	331	0	1	13994	13994	860	13134
54+00.000	98	363	363	0	0	14357	14357	860	13497
55+00.000	98	363	363	3	7	14720	14720	867	13853
56+00.000	83	335	335	5	20	15055	15055	887	14168
57+00.000	76	295	295	23	68	15350	15350	954	14396
57+10.353	73	29	29	25	12	15379	15379	966	14412

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: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS	SHEET 504	E

Alignment: AliProf-IH94WB-Ref (STAGE 4)
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	9	0	0	2	0	0	0	0	0
-2+00.000	9	7	7	4	3	7	7	3	5
-1+00.000	11	36	36	6	19	43	43	21	22
0+00.000	13	44	44	12	34	87	87	55	32
1+00.000	20	60	60	7	35	147	147	90	56
2+00.000	31	94	94	0	14	241	241	104	137
3+00.000	46	143	143	0	1	384	384	104	280
4+00.000	57	191	191	0	0	575	575	105	470
5+00.000	69	233	233	0	0	808	808	105	704
5+01.042	71	3	3	0	0	811	811	105	706
6+00.000	62	243	243	0	0	1054	1054	105	949
7+00.000	51	209	209	6	11	1263	1263	115	1147
8+00.000	48	185	185	9	27	1448	1448	143	1305
9+00.000	60	202	202	3	22	1649	1649	165	1484
10+00.000	57	217	217	6	16	1866	1866	181	1686
11+00.000	58	212	212	7	22	2078	2078	203	1876
12+00.000	59	216	216	7	25	2295	2295	228	2067

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	64	0	0	7	0	0	0	0	0
13+00.000	78	261	261	3	23	261	261	23	239
14+00.000	88	306	306	1	8	568	568	30	537
15+00.000	103	353	353	0	2	921	921	32	889
16+00.000	72	324	324	0	0	1245	1245	32	1213
17+00.000	80	282	282	0	0	1527	1527	32	1495
18+00.000	22	189	189	14	34	1716	1716	66	1650
19+00.000	14	66	66	16	73	1782	1782	139	1643
20+00.000	4	32	32	19	84	1814	1814	223	1591
21+00.000	0	7	7	24	104	1821	1821	327	1494
21+24.180	37	16	16	13	22	1837	1837	348	1489
22+00.000	30	94	94	16	53	1931	1931	402	1529
22+25.010	35	30	30	16	19	1962	1962	421	1541
23+00.000	34	96	96	14	54	2058	2058	475	1583
23+62.510	51	98	98	9	34	2156	2156	509	1647
24+00.000	58	75	75	6	13	2231	2231	523	1709
24+50.000	61	110	110	4	12	2341	2341	534	1807
25+00.000	64	115	115	2	6	2456	2456	541	1916
26+00.000	76	259	259	1	8	2716	2716	548	2167
26+78.783	91	244	244	2	6	2960	2960	554	2406
27+00.000	94	73	73	2	2	3033	3033	556	2477
28+00.000	99	356	356	3	13	3389	3389	569	2820
29+00.000	92	354	354	4	19	3743	3743	587	3155
30+00.000	103	361	361	2	16	4104	4104	603	3501
31+00.000	115	403	403	5	17	4507	4507	621	3886
32+00.000	103	402	402	9	33	4909	4909	653	4255
33+00.000	96	368	368	1	23	5276	5276	676	4600
33+50.000	94	176	176	7	10	5453	5453	686	4767
34+00.000	91	171	171	8	19	5624	5624	705	4919
34+50.777	88	168	168	9	22	5792	5792	727	5065
35+00.000	87	160	160	10	24	5952	5952	751	5201
36+00.000	86	320	320	12	54	6272	6272	805	5468
36+50.000	85	158	158	13	30	6430	6430	835	5596
36+94.647	73	131	131	0	14	6561	6561	849	5713

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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS	SHEET 505	E

Alignment: AliProf-IH94WB-Carr
Start Sta: 36+93.880
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+93.880	31	0	0	0	0	0	0	0	0
37+00.000	31	7	7	0	0	7	7	0	7
38+00.000	28	109	109	0	0	116	116	0	116
39+00.000	22	92	92	0	0	208	208	0	208
40+00.000	22	81	81	0	0	289	289	0	289
41+00.000	8	55	55	0	0	344	344	0	344
42+00.000	8	28	28	0	0	373	373	0	373
42+19.962	8	6	6	0	0	378	378	0	378
43+00.000	0	12	12	0	0	390	390	0	390
43+79.410	19	27	27	0	0	417	417	0	417
44+00.000	21	15	15	0	0	433	433	0	432
45+00.000	29	93	93	0	0	525	525	0	525
46+00.000	52	149	149	0	0	674	674	0	674
46+23.545	51	45	45	0	0	719	719	0	719
47+00.000	40	129	129	0	0	848	848	0	848
47+13.545	38	20	20	0	0	868	868	0	867
48+00.000	41	127	127	0	0	994	994	0	994
48+03.545	41	5	5	0	0	1000	1000	0	999
48+50.000	47	76	76	0	0	1075	1075	0	1075
49+00.000	52	91	91	0	0	1166	1166	0	1166
49+50.000	41	86	86	0	0	1252	1252	0	1252
50+00.000	34	70	70	0	0	1322	1322	0	1321
50+50.000	34	64	64	0	0	1385	1385	0	1385
51+00.000	27	57	57	1	1	1442	1442	1	1441
51+50.000	13	37	37	2	3	1479	1479	4	1475
52+00.000	11	22	22	2	5	1501	1501	9	1492
52+50.000	11	21	21	2	5	1522	1522	14	1509
53+00.000	11	21	21	2	5	1543	1543	18	1525
53+50.000	12	21	21	2	5	1565	1565	23	1542
54+00.000	16	26	26	3	6	1590	1590	29	1562
54+50.000	1	16	16	5	9	1606	1606	38	1568
55+00.000	0	1	1	10	18	1607	1607	55	1552
55+30.346	0	0	0	10	14	1607	1607	70	1537
55+50.000	0	0	0	10	10	1607	1607	79	1528
56+00.000	0	0	0	9	23	1607	1607	102	1505
56+20.346	3	1	1	6	8	1608	1608	110	1498
57+00.000	23	39	39	0	12	1647	1647	122	1525
57+10.346	20	8	8	0	0	1655	1655	122	1533
57+10.353	20	0	0	0	0	1655	1655	122	1533

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	41	0	0	0	0	0	0	0	0
58+00.000	20	101	101	2	4	101	101	4	96
59+00.000	24	81	81	0	4	182	182	9	173
60+00.000	47	132	132	0	0	314	314	9	305
61+00.000	61	201	201	0	0	514	514	9	506
62+00.000	48	202	202	3	7	717	717	15	701
63+00.000	43	168	168	8	25	885	885	40	845
63+50.000	42	79	79	11	22	964	964	63	901
64+00.000	39	75	75	12	28	1038	1038	91	948

~CONTINUE~									
65+00.000	38	142	142	4	39	1180	1180	130	1050
66+00.000	36	137	137	0	10	1317	1317	140	1177
66+26.516	32	34	34	0	0	1351	1351	140	1211
67+00.000	27	81	81	0	0	1431	1431	140	1291
68+00.000	26	98	98	0	0	1529	1529	140	1389
69+00.000	17	80	80	0	0	1609	1609	140	1469
70+00.000	2	35	35	0	1	1644	1644	141	1504
70+84.906	2	6	6	0	1	1650	1650	141	1509

Alignment: AliProf-IH94EB-Carr (STAGE 5)
Start Sta: 24+50.000
End Sta: 41+69.510

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	74	0	0	21	0	0	0	0	0
25+00.000	79	141	141	42	76	141	141	76	65
26+00.000	82	297	297	65	258	438	438	334	105
27+00.000	81	300	300	71	328	738	738	662	77
28+00.000	84	304	304	73	349	1042	1042	1011	31
29+00.000	82	306	306	84	379	1348	1348	1389	-41
30+00.000	77	294	294	97	436	1642	1642	1825	-183
31+00.000	73	277	277	94	460	1919	1919	2285	-366
32+00.000	72	269	269	68	389	2188	2188	2674	-485
33+00.000	72	267	267	46	274	2455	2455	2948	-493
33+54.731	79	153	153	46	122	2608	2608	3070	-462
34+00.000	91	142	142	44	98	2750	2750	3168	-418
34+73.483	109	272	272	38	144	3022	3022	3312	-290
34+73.500	76	0	0	0	0	3022	3022	3312	-290
35+00.000	76	74	74	1	0	3096	3096	3313	-217
36+00.000	77	283	283	0	1	3380	3380	3314	65
37+00.000	73	279	279	0	1	3659	3659	3315	344
38+00.000	69	263	263	0	1	3922	3922	3316	605
39+00.000	74	264	264	0	1	4185	4185	3317	868
40+00.000	89	301	301	0	0	4487	4487	3318	1169
41+00.000	86	324	324	1	2	4811	4811	3319	1492
41+69.510	89	226	226	0	1	5037	5037	3320	1717

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	98	53	53	50	35	53	53	35	18
44+00.000	118	284	284	33	142	336	336	176	160
45+00.000	133	464	464	4	89	800	800	265	535
46+00.000	224	660	660	6	23	1461	1461	288	1172
47+00.000	318	1004	1004	17	55	2465	2465	344	2121
47+25.000	293	283	283	32	30	2748	2748	373	2375
47+50.000	262	257	257	37	42	3005	3005	415	2590
47+75.000	213	220	220	50	53	3225	3225	467	2757
48+00.000	131	159	159	54	63	3384	3384	530	2854
48+25.000	82	98	98	59	68	3482	3482	598	2884
48+50.000	72	71	71	77	81	3554	3554	680	2874
48+75.000	73	67	67	79	94	3621	3621	774	2847
49+00.000	74	68	68	60	84	3689	3689	858	2831
50+00.000	76	278	278	30	218	3967	3967	1076	2891
51+00.000	87	302	302	28	141	4268	4268	1217	3052
51+23.553	86	75	75	21	28	4344	4344	1245	3099
52+00.000	73	225	225	8	53	4569	4569	1298	3271

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53+00.000	74	273	273	17	59	4841	4841	1356	3485
53+25.000	90	76	76	21	23	4917	4917	1379	3538
54+00.000	97	259	259	43	116	5176	5176	1496	3681
54+11.750	97	42	42	41	24	5218	5218	1519	3699
55+00.000	91	308	308	50	195	5526	5526	1714	3812
56+00.000	88	333	333	63	273	5860	5860	1987	3873
56+50.000	155	226	226	69	159	6085	6085	2146	3939
57+00.000	76	214	214	68	165	6300	6300	2312	3988
58+00.000	62	257	257	63	315	6556	6556	2627	3930
59+00.000	58	223	223	25	212	6779	6779	2839	3941
60+00.000	57	212	212	0	60	6991	6991	2898	4093
61+00.000	44	186	186	1	2	7177	7177	2900	4277
61+66.000	50	115	115	0	1	7292	7292	2902	4391
62+00.000	55	66	66	0	0	7358	7358	2902	4457
62+96.867	71	226	226	0	0	7584	7584	2902	4683
				TOTALS =		12622		6222	

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	36	0	0	25	0	0	0	0	0
35+00.000	67	44	44	9	19	44	44	19	25
36+00.000	161	422	422	6	36	466	466	55	412
37+00.000	204	675	675	10	37	1142	1142	92	1050
38+00.000	211	769	769	9	46	1910	1910	138	1772
39+00.000	237	831	831	4	32	2741	2741	170	2571
40+00.000	106	636	636	15	47	3377	3377	217	3160
41+00.000	4	204	204	65	194	3581	3581	411	3170
41+72.050	4	11	11	51	203	3592	3592	614	2978
41+72.070	0	0	0	0	0	3592	3592	614	2978
42+00.000	0	0	0	0	0	3592	3592	614	2978
43+00.000	0	0	0	0	0	3592	3592	614	2978
43+31.530	0	0	0	0	0	3592	3592	614	2978
43+31.550	0	0	0	105	0	3592	3592	614	2978
44+00.000	0	0	0	143	408	3592	3592	1023	2570
45+00.000	0	0	0	269	991	3592	3592	2013	1579
46+00.000	0	0	0	509	1880	3592	3592	3894	-301
47+00.000	0	0	0	594	2656	3592	3592	6549	-2957
48+00.000	0	0	0	535	2718	3592	3592	9267	-5675
49+00.000	55	101	101	262	1933	3694	3694	11200	-7506
50+00.000	82	251	251	85	858	3944	3944	12058	-8113
51+00.000	142	413	413	15	245	4357	4357	12302	-7945
51+61.917	219	412	412	0	22	4769	4769	12324	-7555

Alignment: AliProf-IH94WB-Carr (STAGE 6)
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	22	0	0	0	0	0	0	0	0
16+00.000	24	21	21	0	0	21	21	0	21
17+00.000	38	115	115	10	25	136	136	25	112
18+00.000	111	275	275	0	25	411	411	49	362
19+00.000	129	444	444	0	0	855	855	49	806
20+00.000	148	514	514	0	0	1369	1369	49	1320
21+00.000	159	569	569	0	0	1938	1938	49	1889

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22+00.000	166	601	601	0	0	2539	2539	49	2490
23+00.000	166	614	614	0	0	3153	3153	49	3104
24+00.000	145	577	577	7	16	3730	3730	65	3665
25+00.893	123	501	501	0	16	4231	4231	81	4150
26+00.000	98	405	405	2	4	4635	4635	85	4551
27+00.000	85	339	339	2	8	4974	4974	93	4881
28+00.000	80	306	306	3	11	5280	5280	104	5177
29+00.000	81	298	298	1	9	5578	5578	112	5466
30+00.000	80	296	296	2	7	5874	5874	119	5755
31+00.000	79	294	294	6	19	6168	6168	138	6030
32+00.000	84	301	301	1	15	6469	6469	153	6317
33+00.000	82	307	307	1	5	6777	6777	157	6619
34+00.000	79	300	300	1	5	7076	7076	162	6914
35+00.000	89	311	311	0	2	7387	7387	165	7223
36+00.000	90	331	331	0	0	7719	7719	165	7554
37+00.000	81	316	316	0	0	8035	8035	165	7870
38+00.000	60	260	260	1	2	8295	8295	167	8128
39+00.000	46	196	196	4	11	8490	8490	178	8313
40+00.000	37	153	153	9	31	8643	8643	208	8435
41+00.000	32	128	128	15	58	8771	8771	266	8505
42+00.000	31	117	117	22	89	8889	8889	356	8533
42+19.910	31	23	23	22	21	8912	8912	377	8535
42+19.930	0	0	0	0	0	8912	8912	377	8535
43+00.000	0	0	0	0	0	8912	8912	377	8535
43+79.390	0	0	0	0	0	8912	8912	377	8535
43+79.411	25	0	0	44	0	8912	8912	377	8535
44+00.000	25	19	19	44	44	8931	8931	420	8511
45+00.000	25	94	94	41	204	9025	9025	624	8401
46+00.000	27	97	97	23	152	9122	9122	777	8346
47+00.000	21	89	89	23	111	9211	9211	887	8324
47+87.895	23	72	72	24	100	9283	9283	988	8295
48+00.000	23	10	10	24	14	9293	9293	1002	8292
49+00.000	31	101	101	26	121	9394	9394	1123	8271
49+50.392	41	67	67	22	59	9461	9461	1182	8279
50+00.000	44	78	78	33	66	9539	9539	1247	8292
51+00.000	33	142	142	54	209	9681	9681	1456	8225
52+00.000	32	119	119	32	207	9801	9801	1663	8138
53+00.000	30	114	114	30	149	9914	9914	1811	8103
54+00.000	27	105	105	27	137	10019	10019	1948	8071
55+00.000	55	153	153	3	71	10172	10172	2020	8152
56+00.000	64	221	221	0	8	10393	10393	2027	8365
57+00.000	52	215	215	6	16	10608	10608	2043	8564
57+10.353	55	21	21	4	2	10628	10628	2046	8582

Alignment: IH94WB-ref
Start Sta: 57+10.353
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.)
57+10.353	57	0	0	4	0	0	0	0	0
58+00.000	59	192	192	1	10	192	192	10	182
59+00.000	61	222	222	4	13	414	414	23	391
59+65.618	59	145	145	2	9	560	560	32	528
60+00.000	55	72	72	0	1	632	632	33	599
61+00.000	60	212	212	0	0	844	844	33	811
62+00.000	64	229	229	0	0	1073	1073	33	1040
62+11.074	66	27	27	0	0	1100	1100	33	1067
63+00.000	63	213	213	0	0	1313	1313	33	1279
63+42.394	57	94	94	0	0	1407	1407	33	1374
64+00.000	72	137	137	0	0	1544	1544	33	1511

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65+00.000	56	237	237	4	11	1781	1781	44	1737
66+00.000	32	164	164	11	36	1945	1945	80	1865
67+00.000	28	112	112	6	40	2057	2057	120	1937
68+00.000	27	103	103	13	44	2160	2160	164	1996
68+78.409	23	73	73	5	33	2234	2234	197	2037
69+00.000	14	15	15	0	3	2248	2248	200	2049
69+95.109	10	43	43	0	0	2291	2291	200	2092
70+00.000	10	2	2	0	0	2293	2293	200	2094
70+84.055	1	17	17	0	0	2310	2310	200	2111

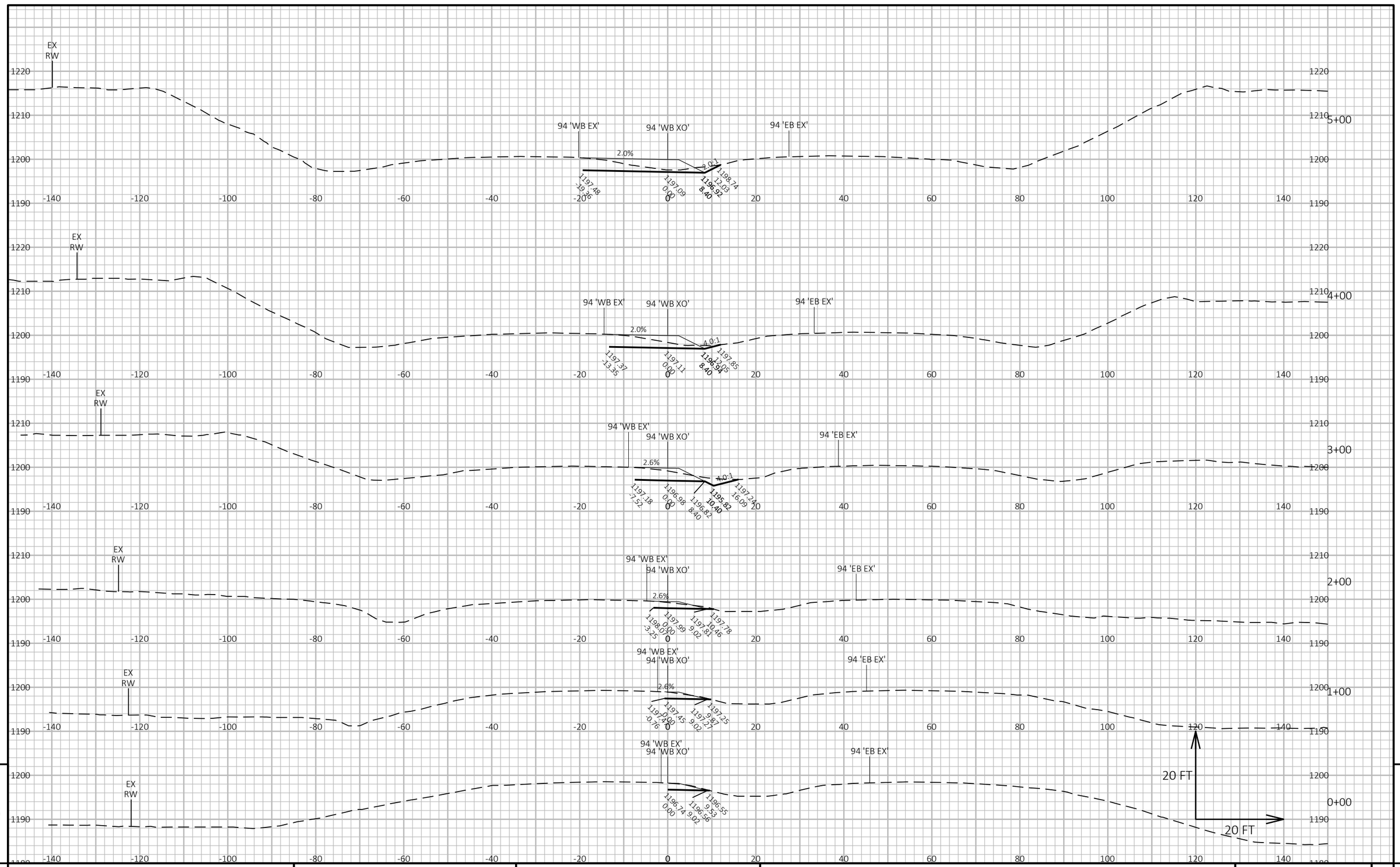
Alignment: AliProf-RmpB
Start Sta: 46+87.657
End Sta: 51+61.917

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	27	39	32	32	288	-256
48+25.000	18	15	15	17	27	47	47	315	-268
48+50.000	23	19	19	2	12	66	66	326	-261
48+75.000	27	23	23	0	1	89	89	328	-239
49+00.000	27	25	25	0	0	114	114	328	-214
49+25.000	27	25	25	0	0	139	139	328	-189
49+50.000	27	25	25	0	0	164	164	328	-164
49+75.000	27	25	25	0	0	189	189	328	-139
50+00.000	27	25	25	0	0	214	214	328	-114
50+25.000	27	25	25	0	0	239	239	328	-89
50+50.000	26	25	25	0	0	264	264	328	-64
50+75.000	8	16	16	13	8	280	280	336	-56
51+00.000	17	12	12	4	10	292	292	346	-54
51+25.000	13	14	14	5	6	306	306	352	-46
51+50.000	13	12	12	18	15	318	318	366	-48
51+61.917	15	6	6	18	11	324	324	377	-53

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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	EARTHWORK TABULATIONS	SHEET 510	E



9

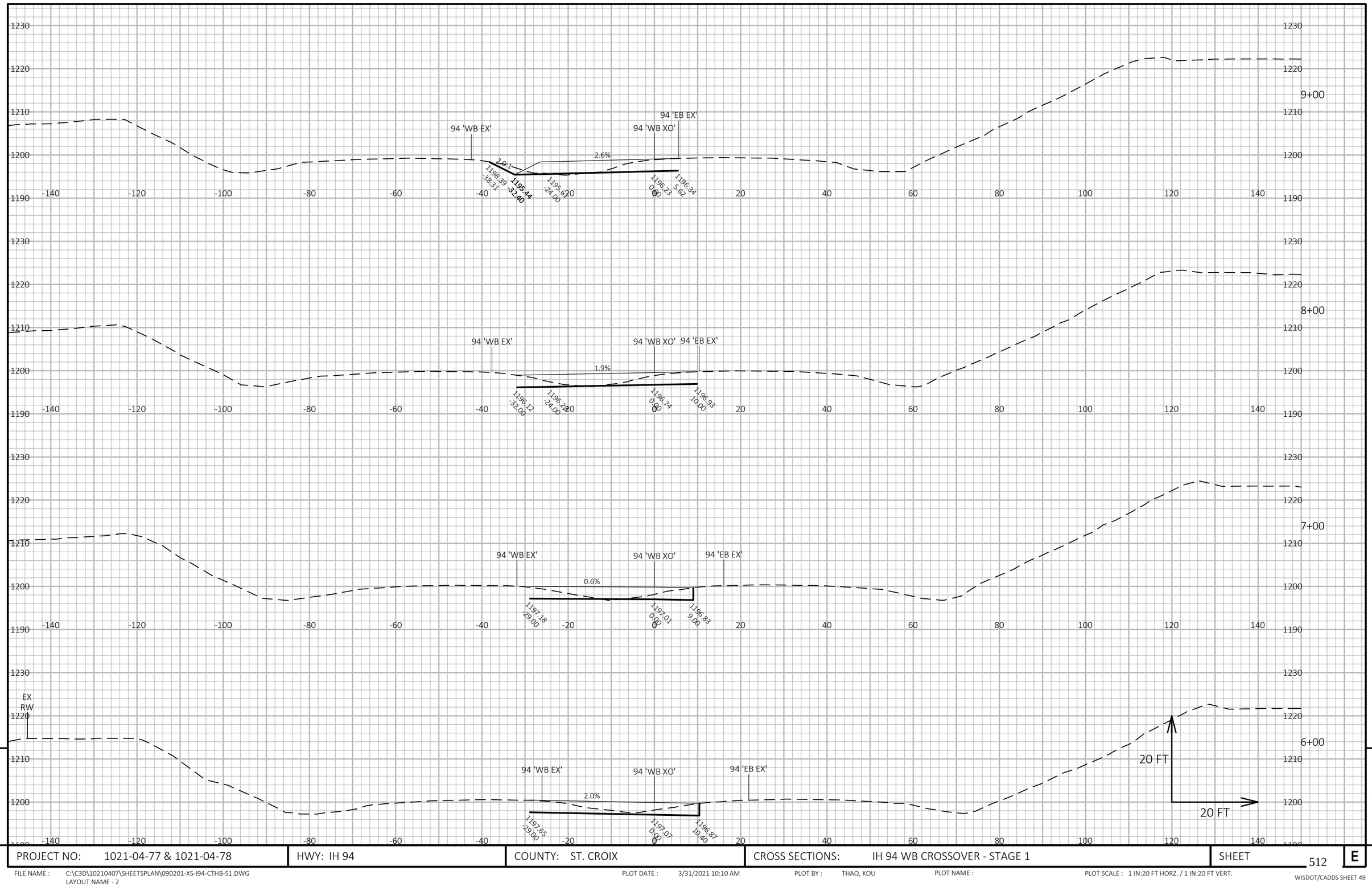
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 511	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 1

PLOT DATE : 3/31/2021 10:09 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



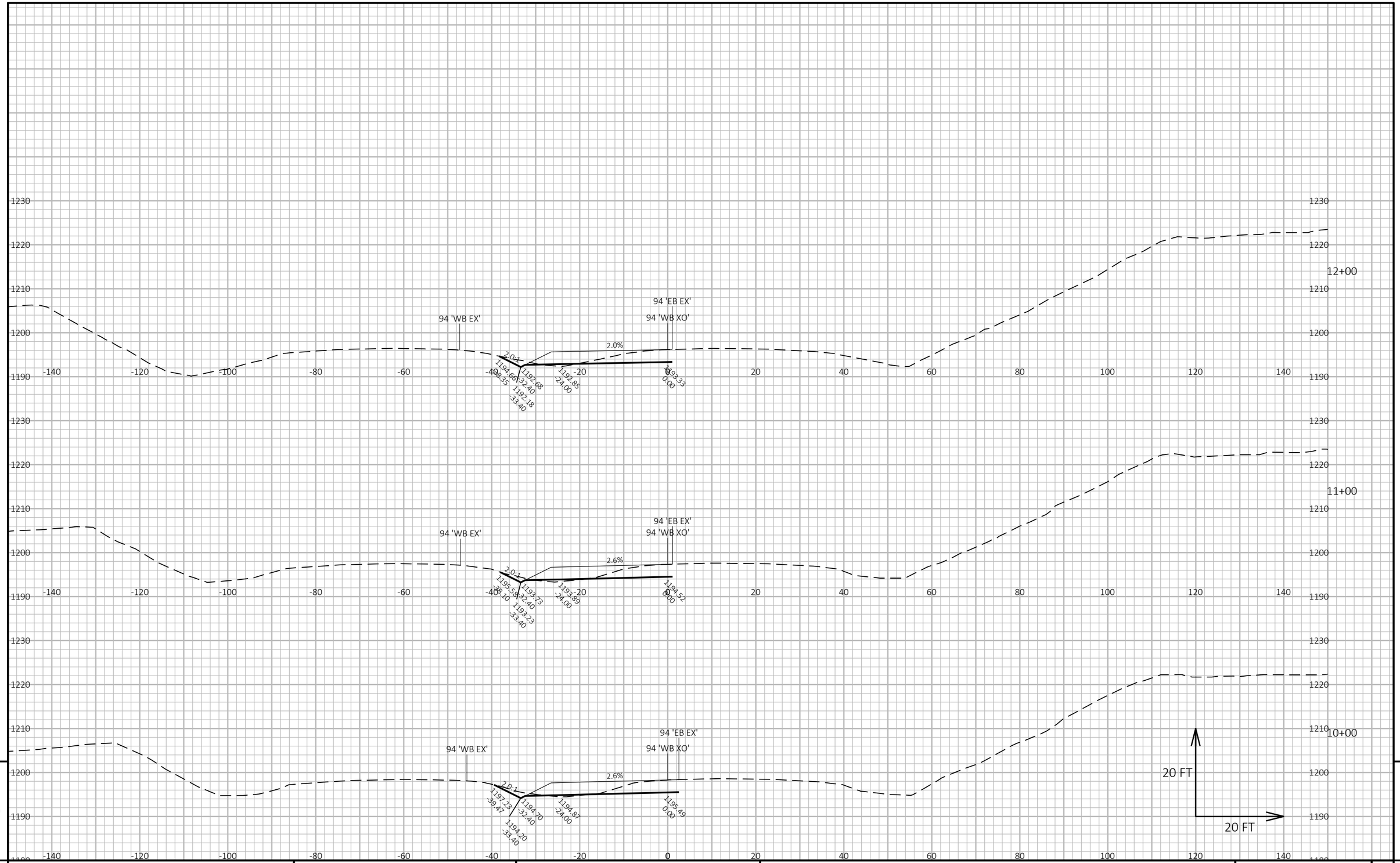
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 512	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 2

PLOT DATE : 3/31/2021 10:10 AM 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 CROSSOVER - STAGE 1	SHEET 513	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 3

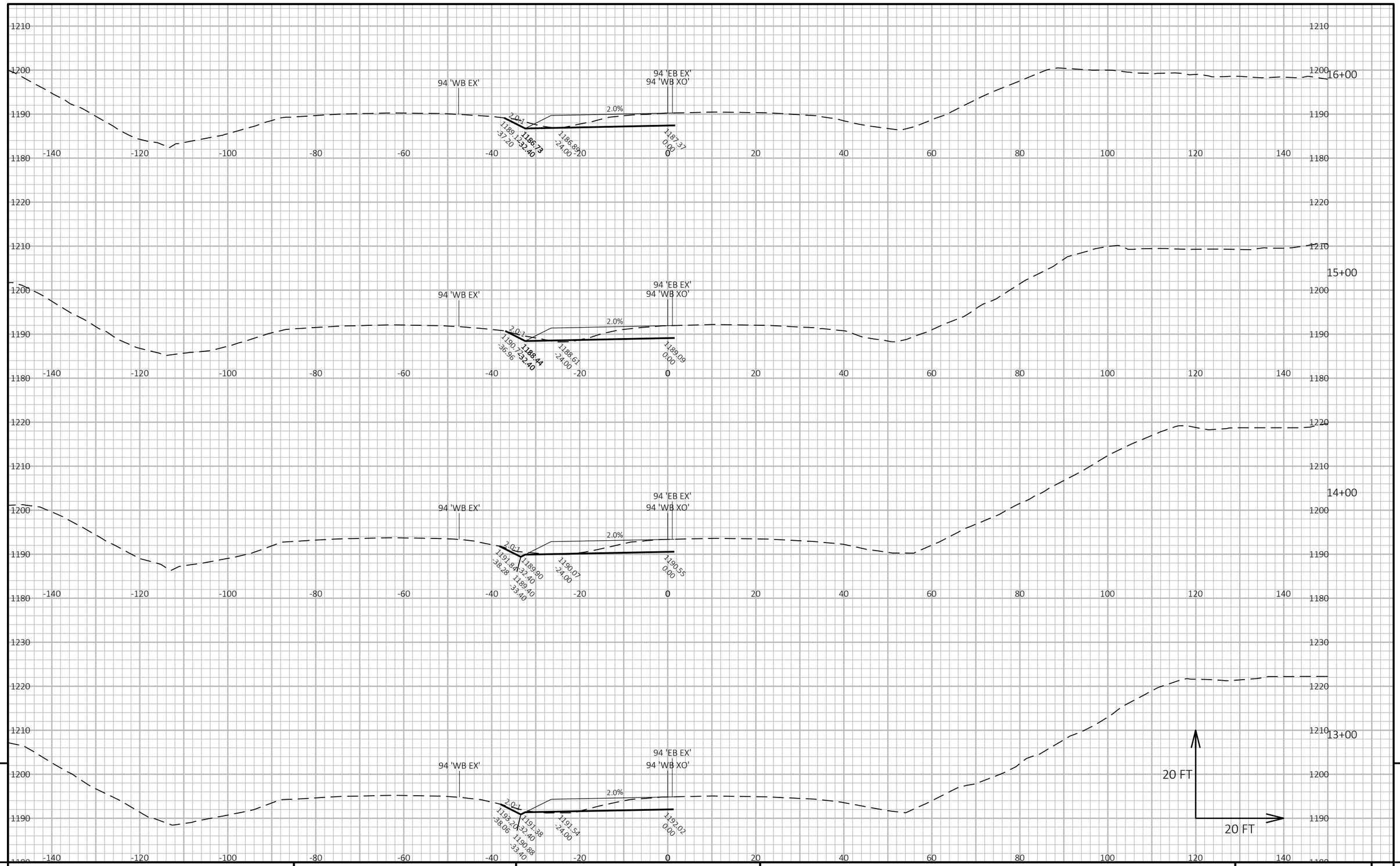
PLOT DATE : 3/31/2021 10:12 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



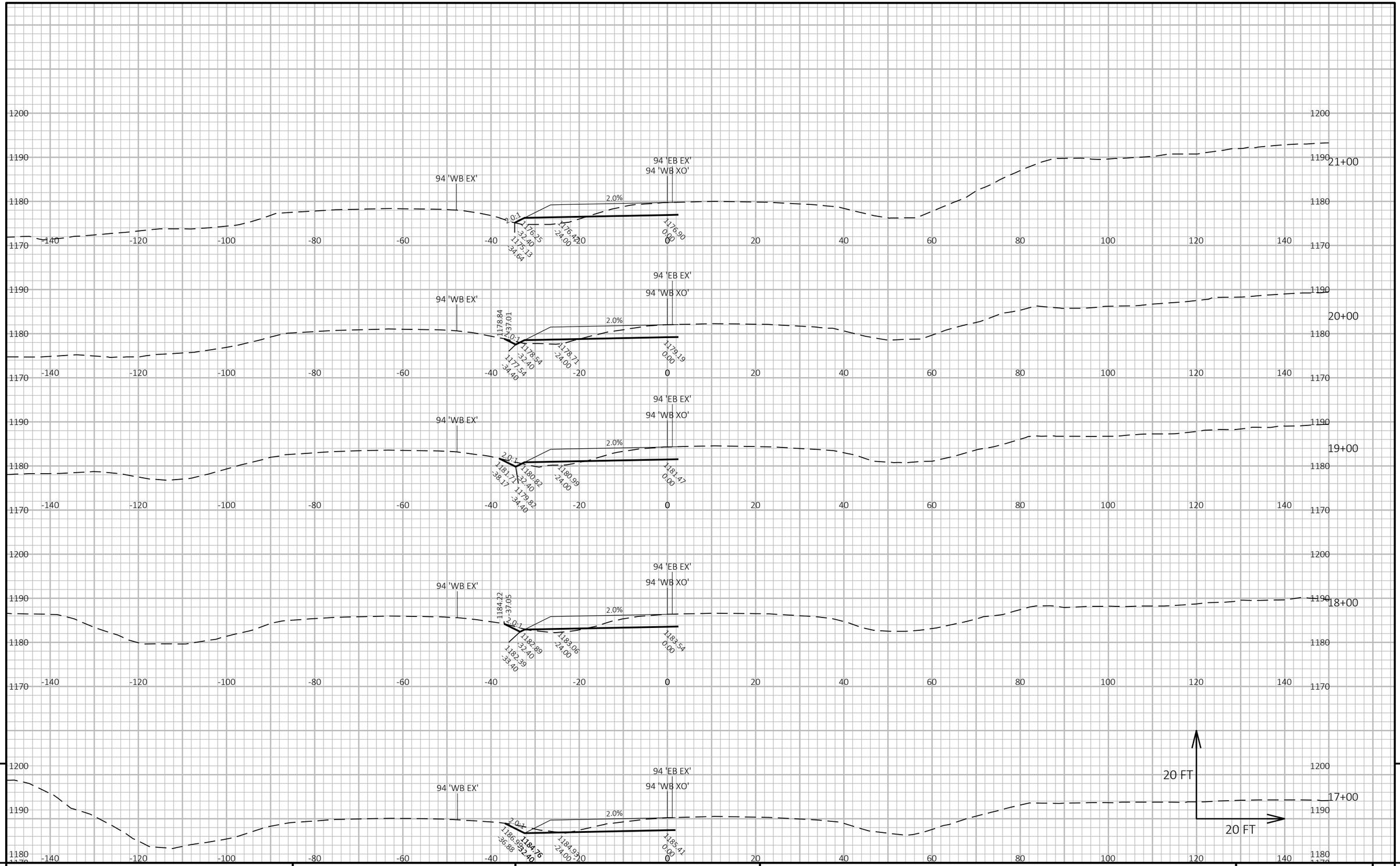
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9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 514	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 4

PLOT DATE : 3/31/2021 10:13 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

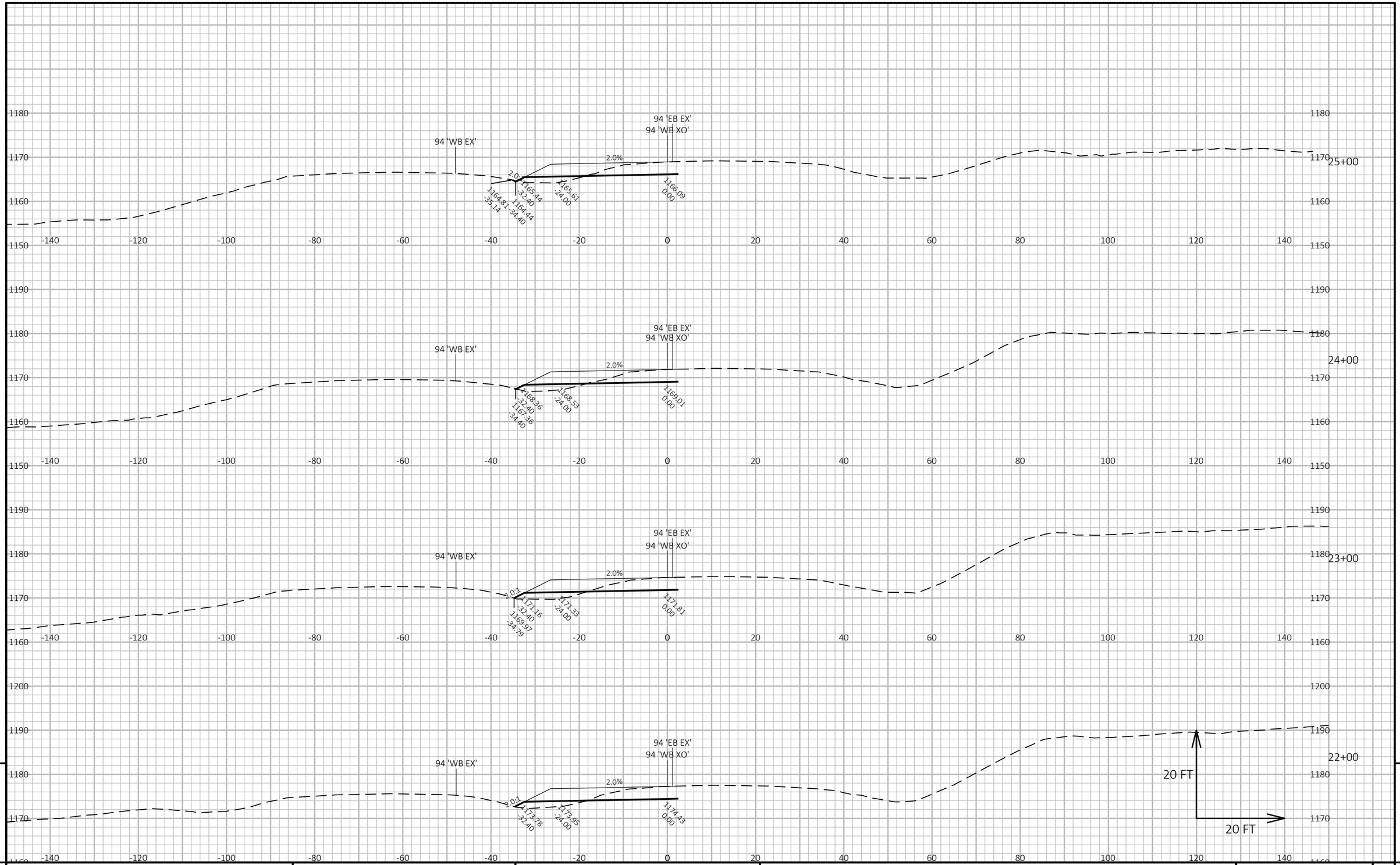
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 515	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 5

PLOT DATE : 3/31/2021 10:14 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

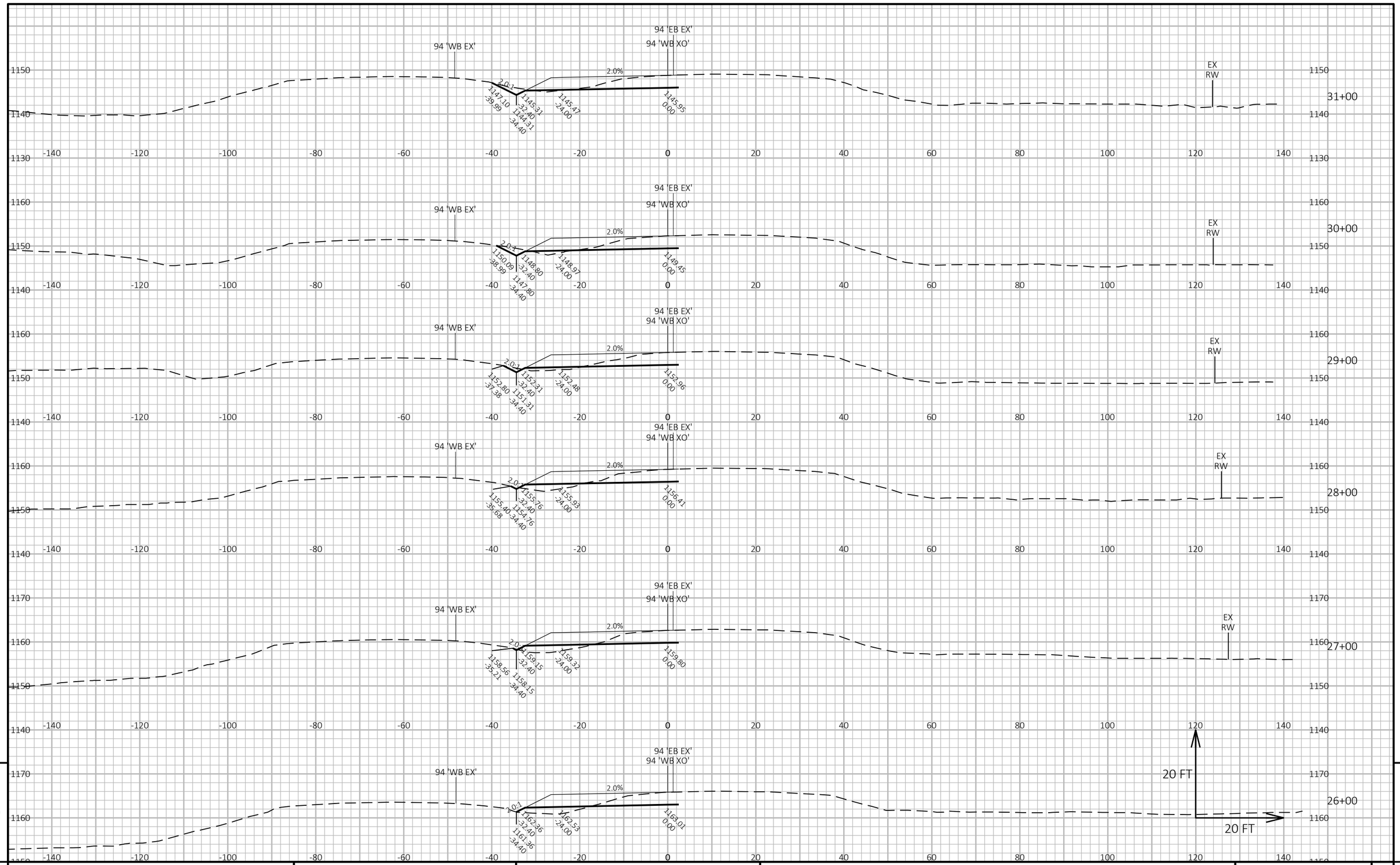
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 516	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 6

PLOT DATE : 3/31/2021 10:15 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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9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 517	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 7

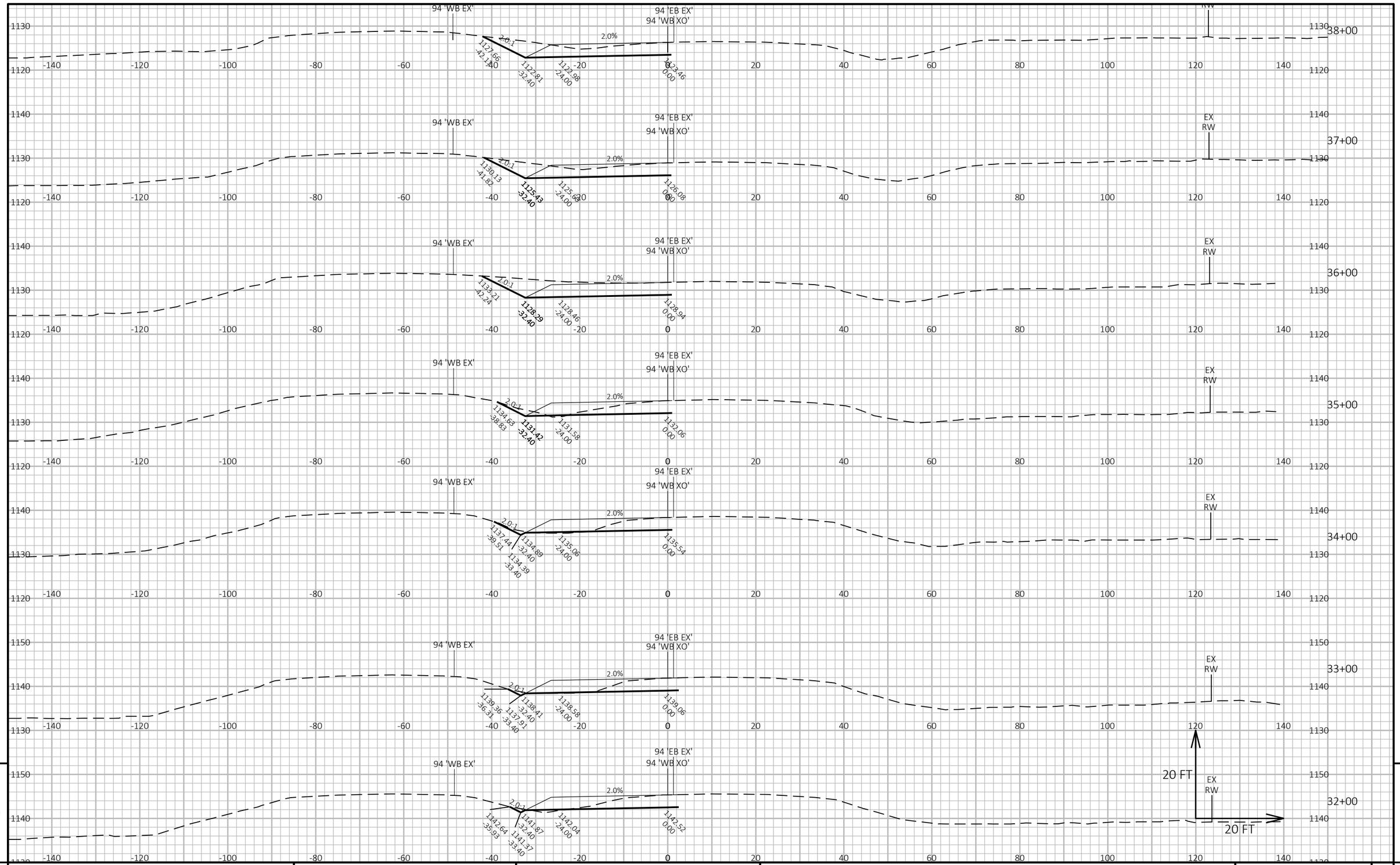
PLOT DATE : 3/31/2021 10:17 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

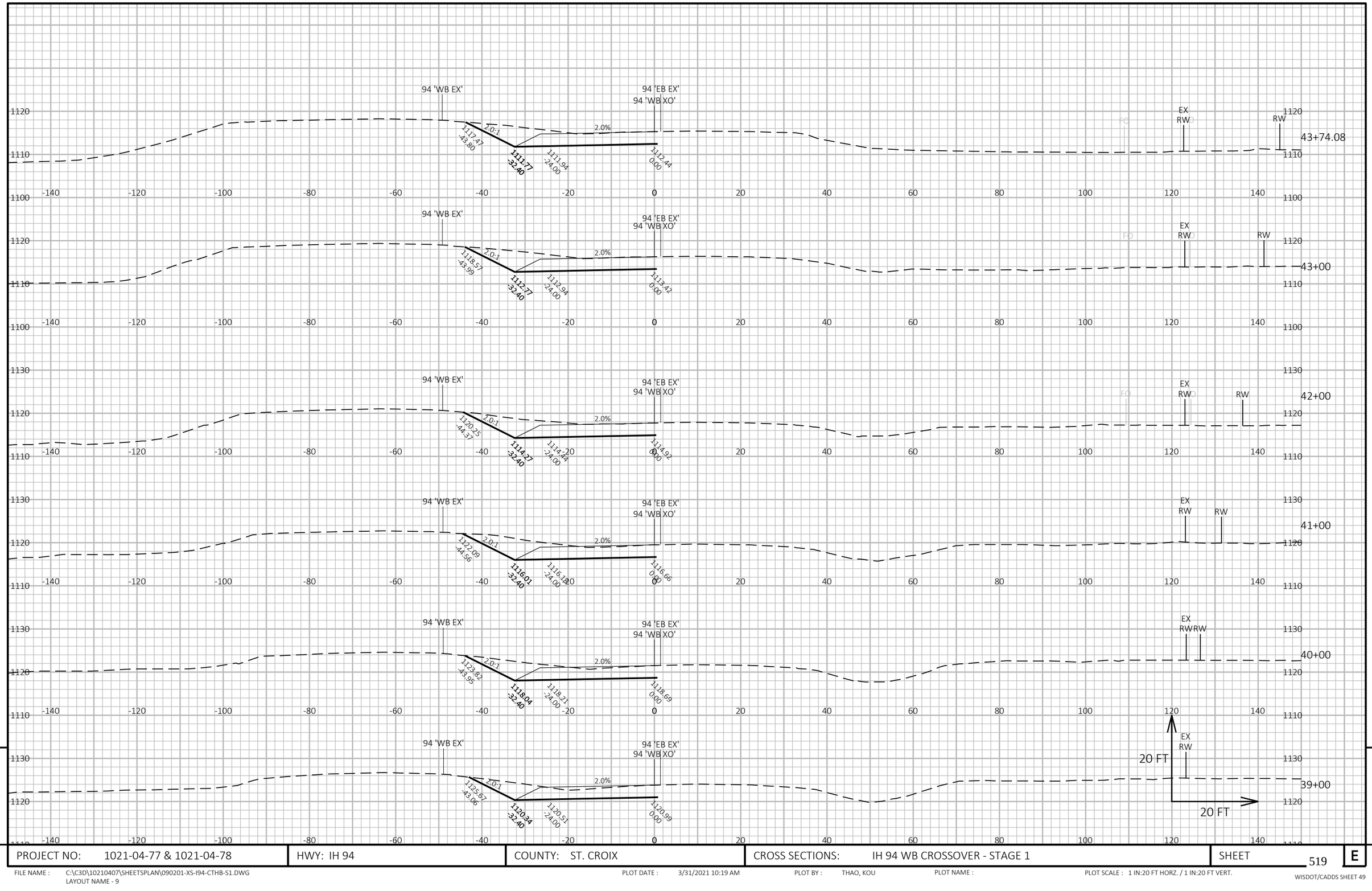


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 518	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 8

PLOT DATE : 3/31/2021 10:18 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

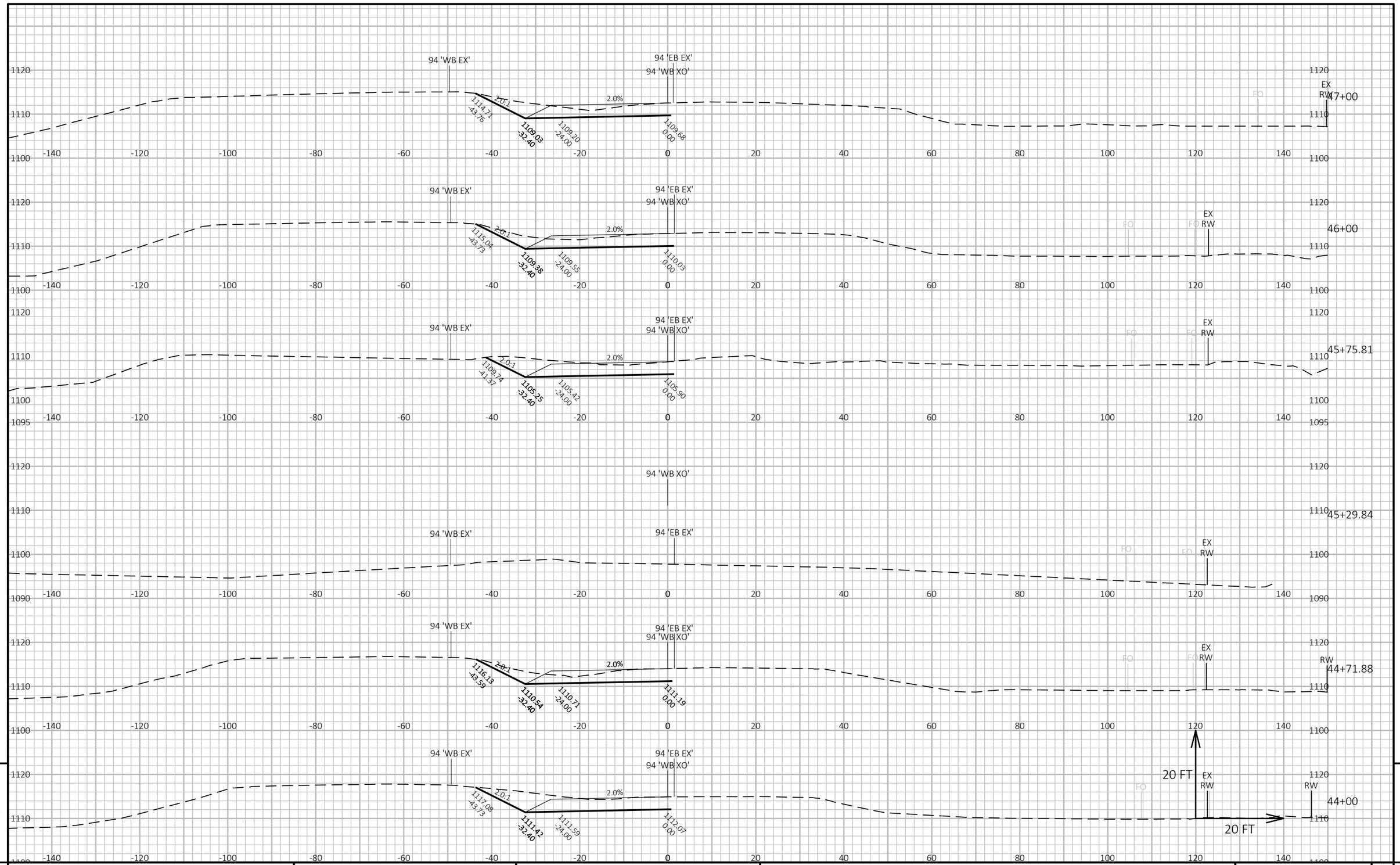
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 519	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 9

PLOT DATE : 3/31/2021 10:19 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

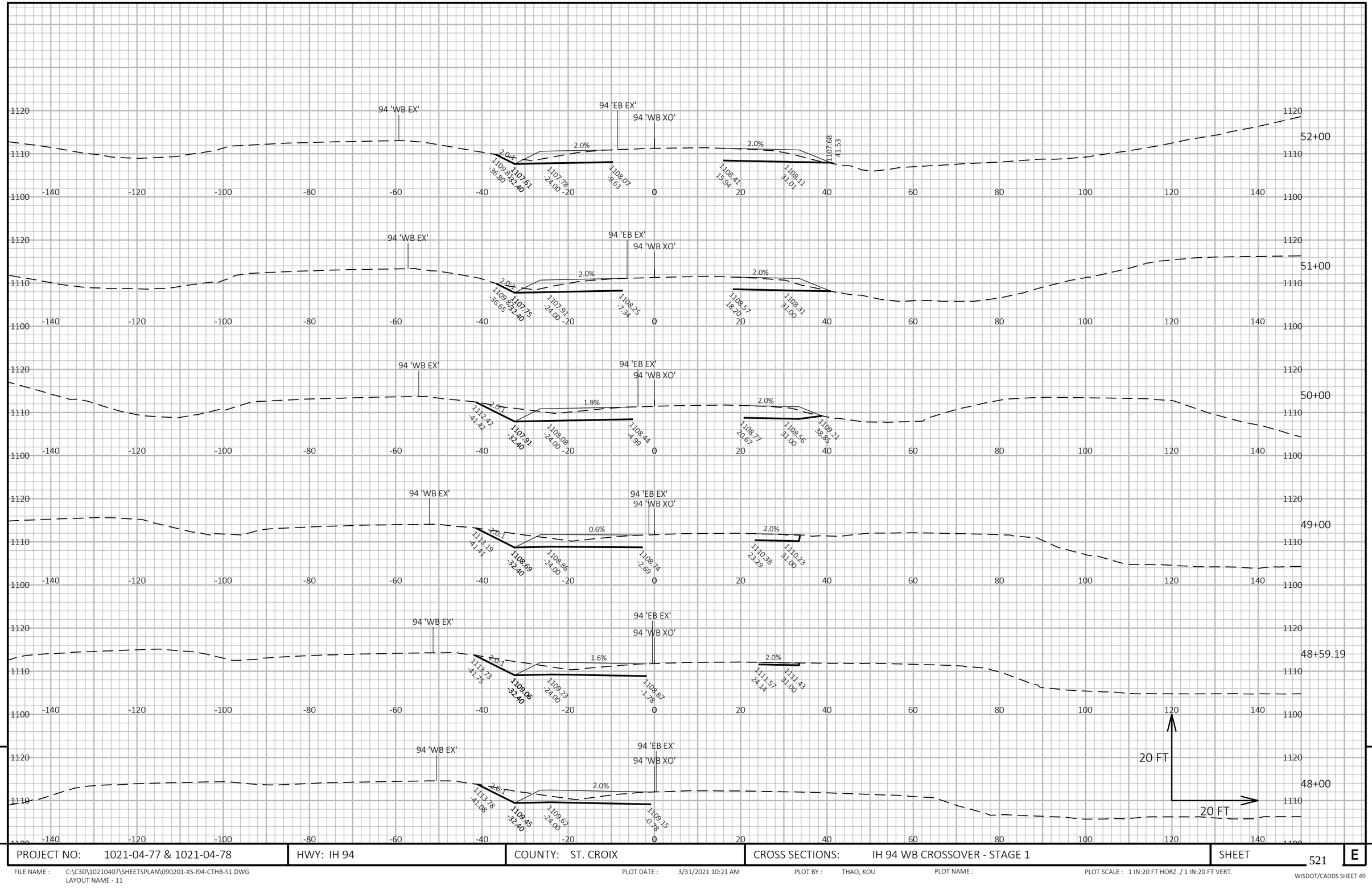


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 520 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 10

PLOT DATE : 3/31/2021 10:20 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

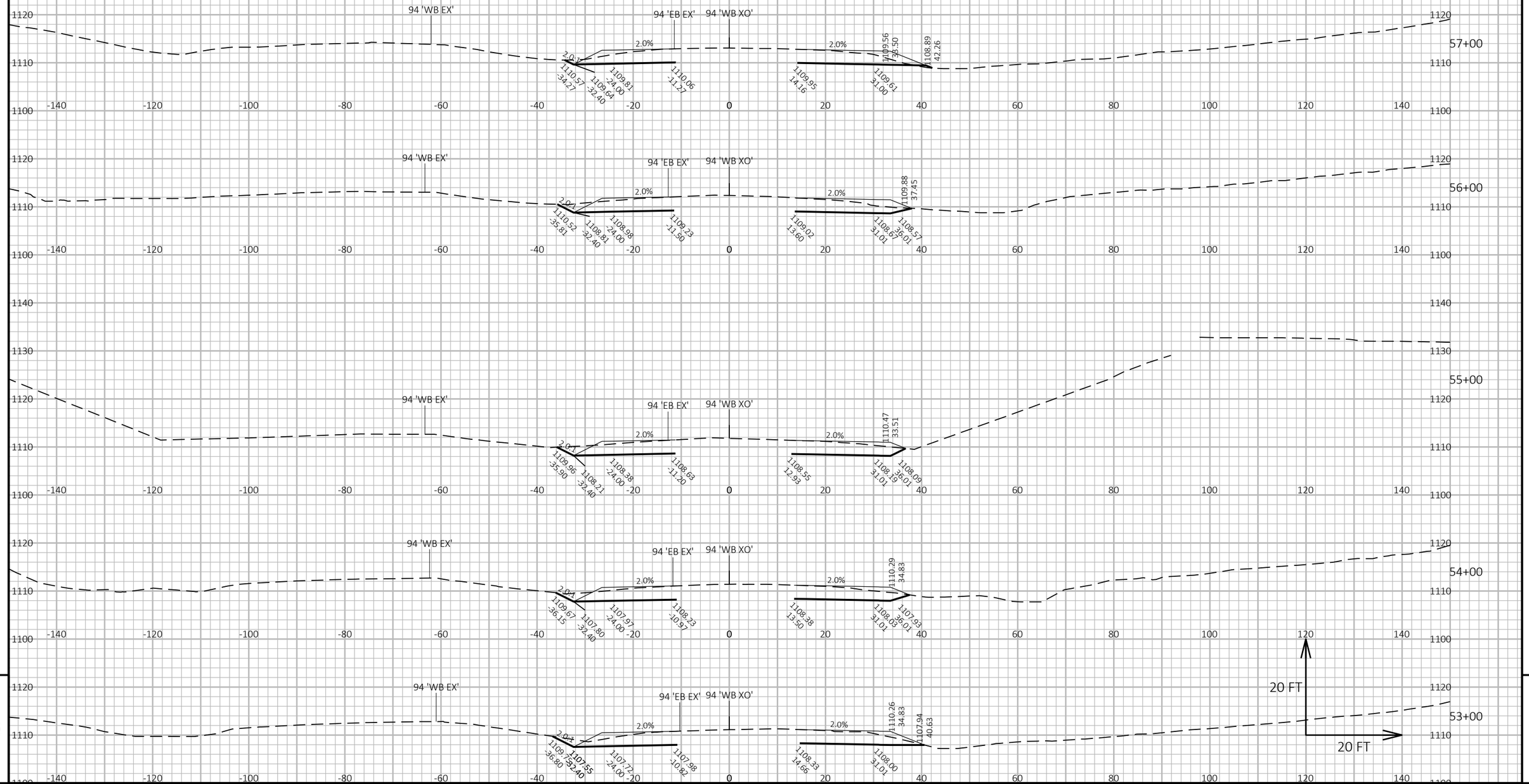
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 521	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 11

PLOT DATE : 3/31/2021 10:21 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

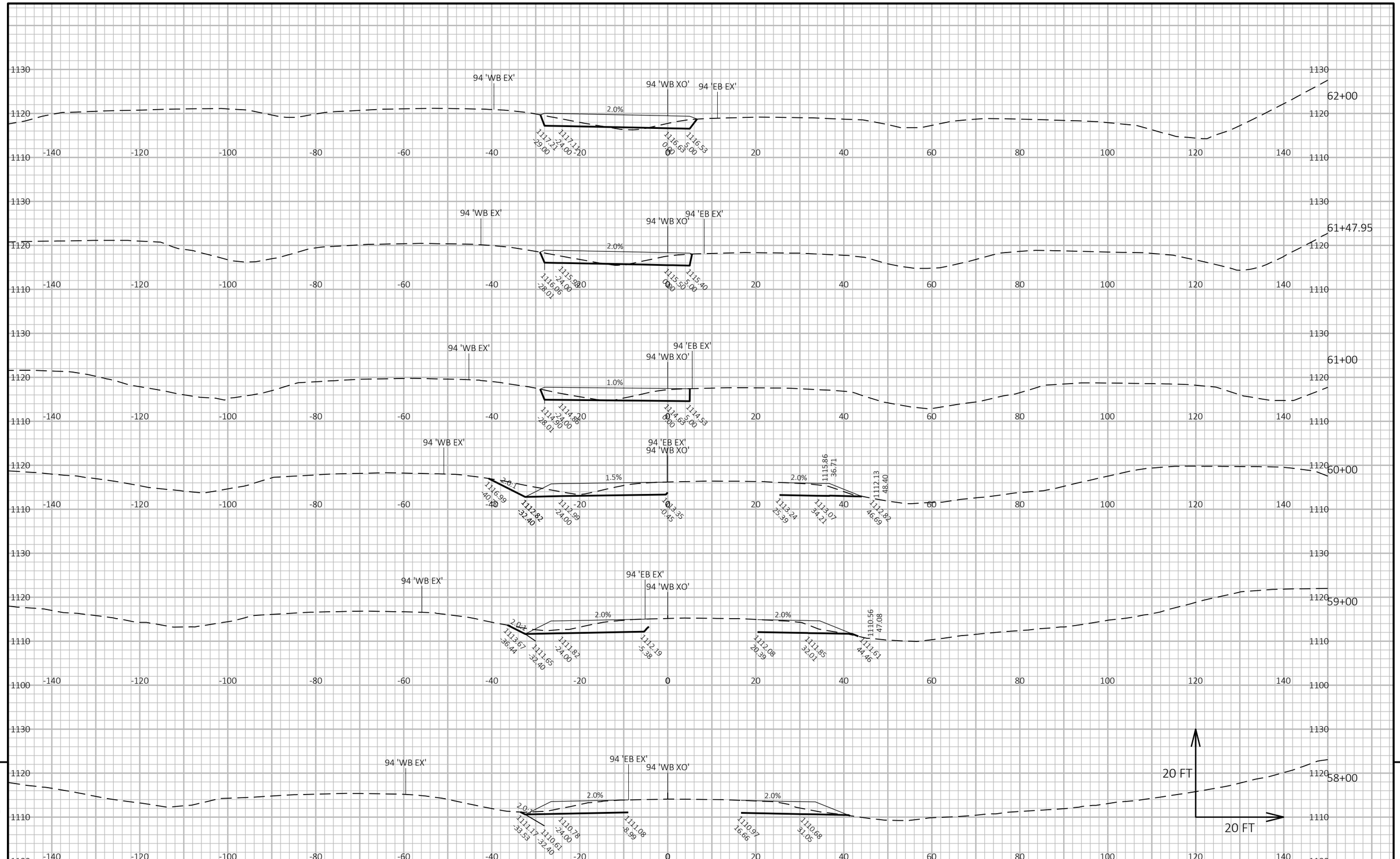


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 522 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 12

PLOT DATE : 3/31/2021 10:23 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

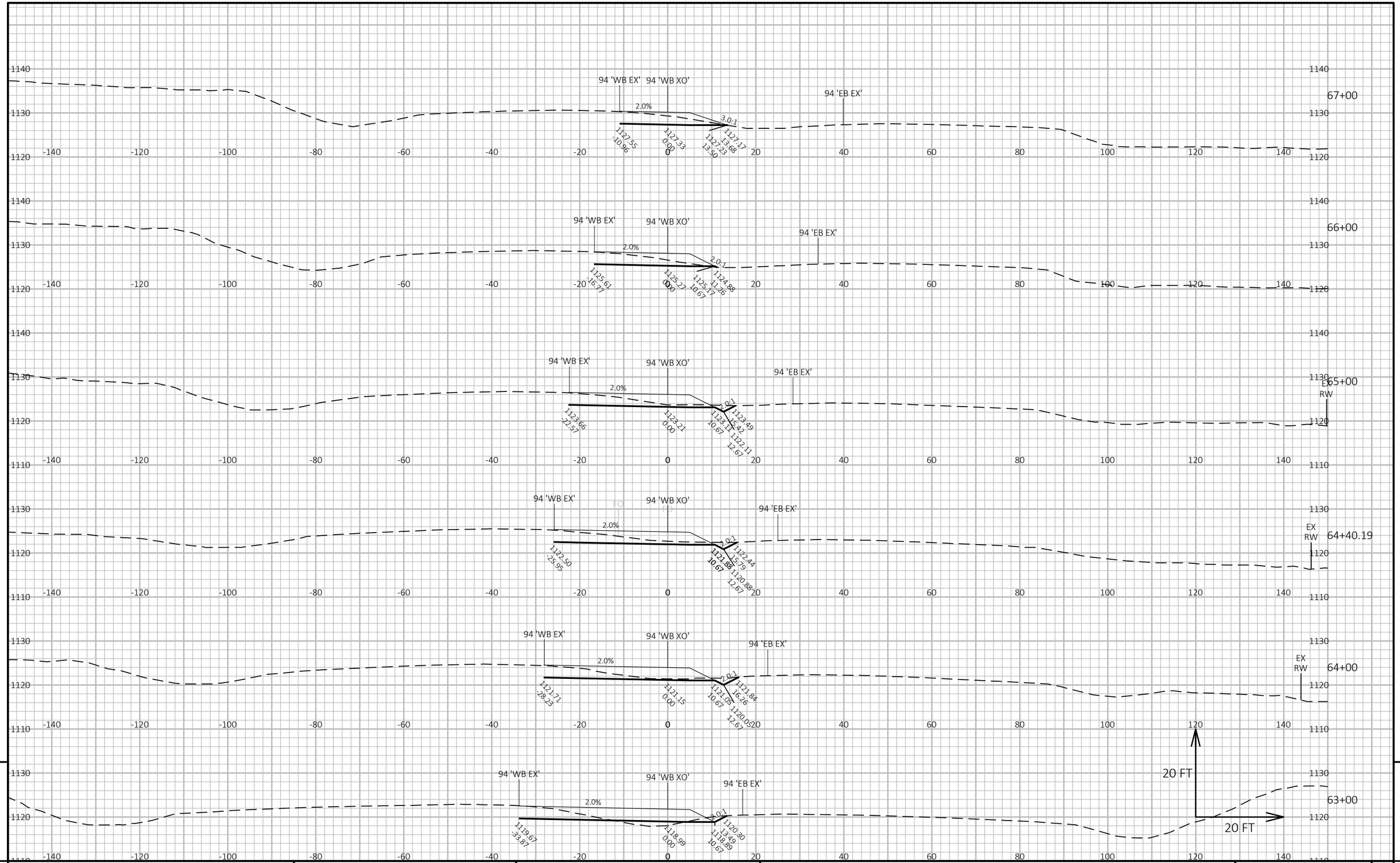
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 523	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 13

PLOT DATE : 3/31/2021 10:24 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

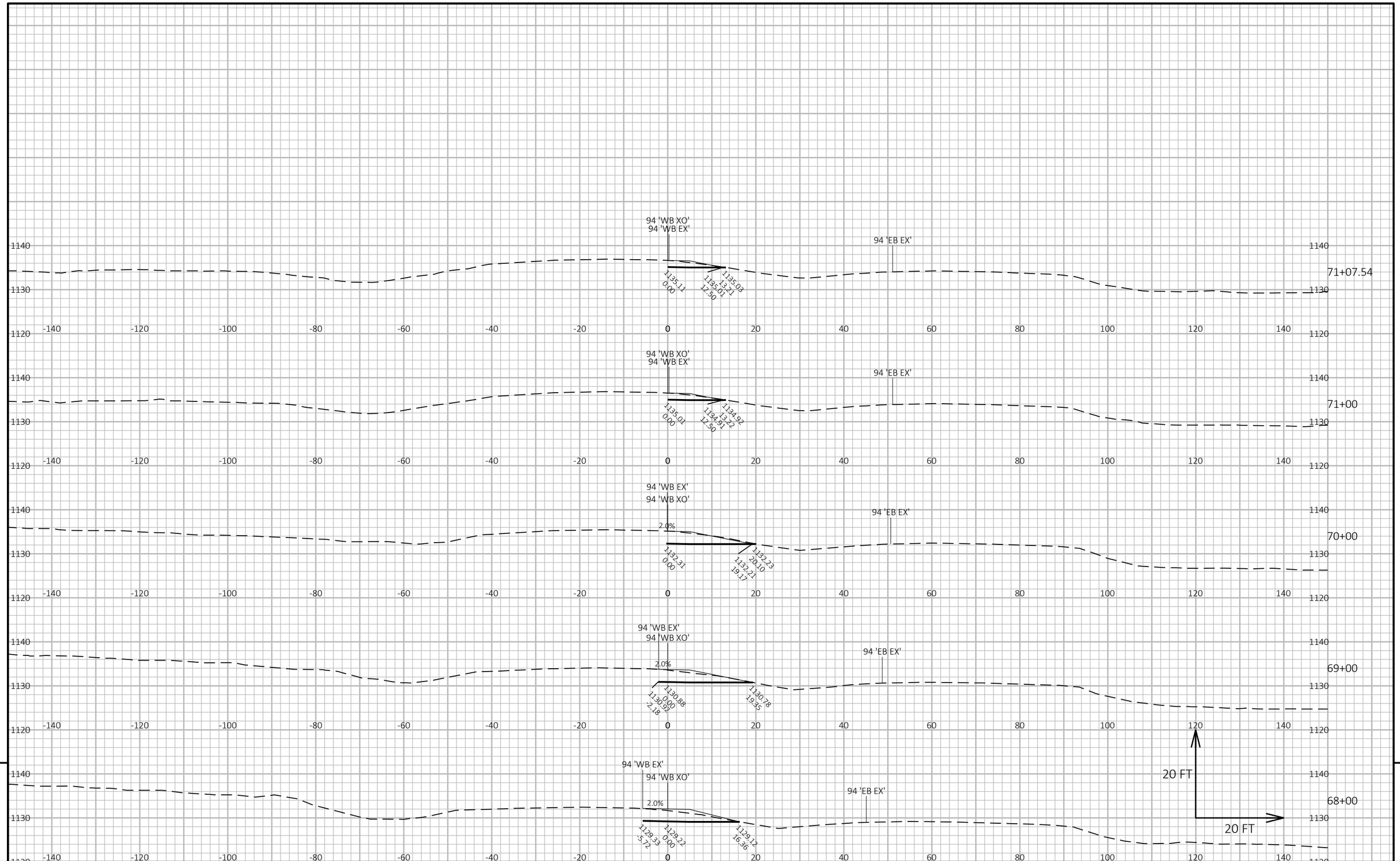


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 524 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 14

PLOT DATE : 3/31/2021 10:25 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



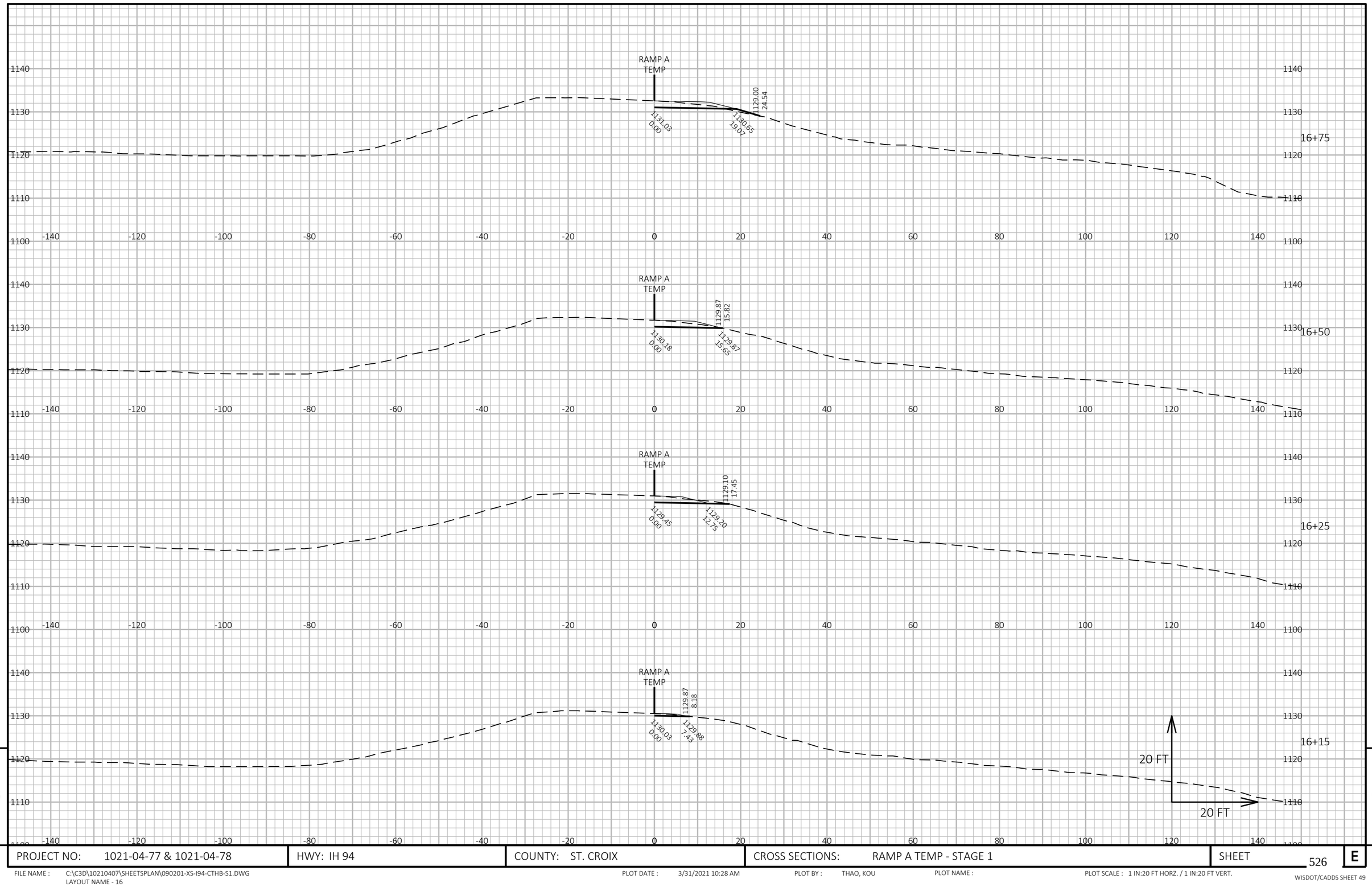
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB CROSSOVER - STAGE 1	SHEET 525	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 15

PLOT DATE : 3/31/2021 10:26 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

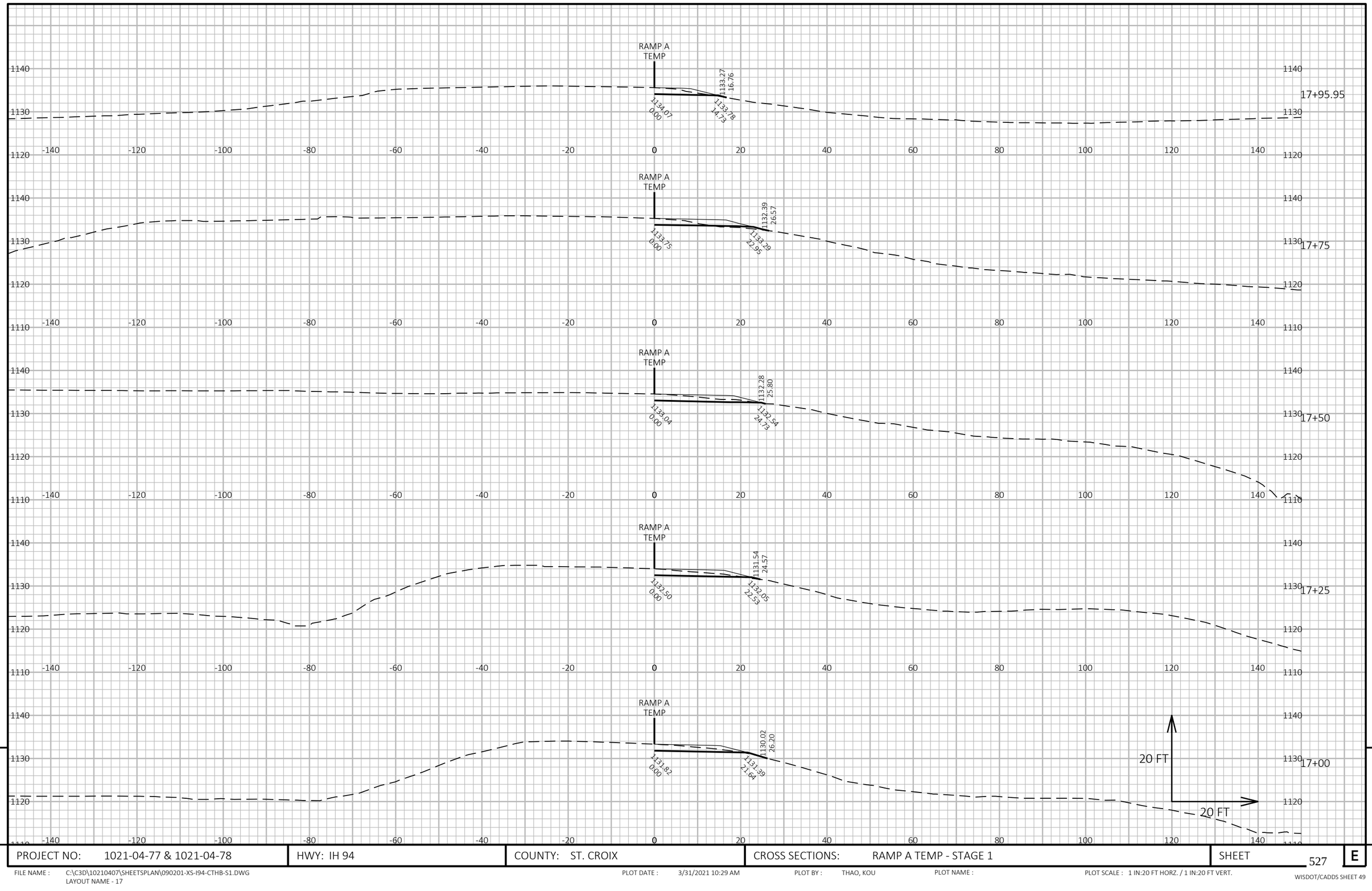
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP A TEMP - STAGE 1	SHEET 526	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 16

PLOT DATE : 3/31/2021 10:28 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

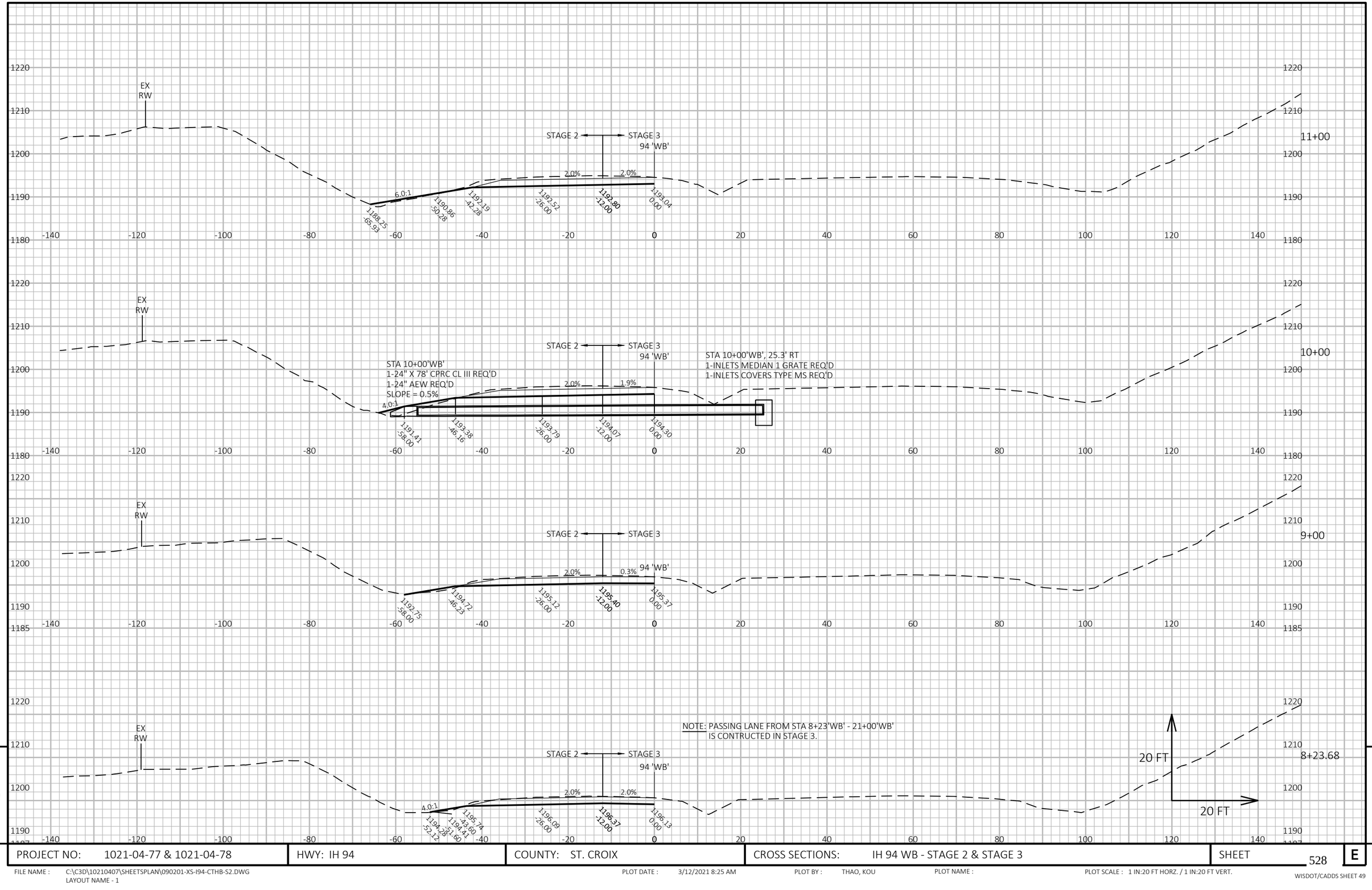
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP A TEMP - STAGE 1	SHEET 527	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S1.DWG
LAYOUT NAME - 17

PLOT DATE : 3/31/2021 10:29 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

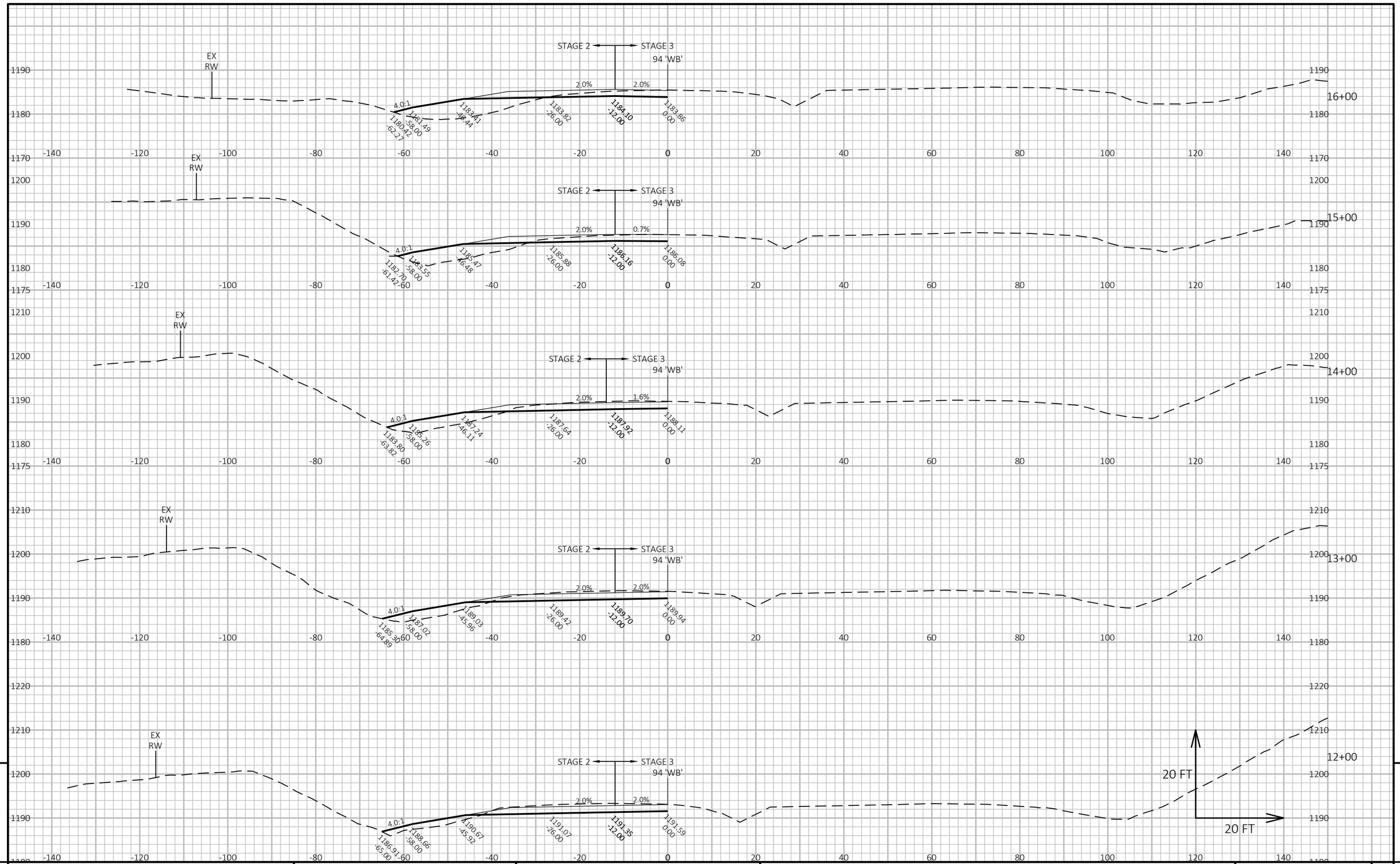
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 2 & STAGE 3	SHEET 528	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 1

PLOT DATE : 3/12/2021 8:25 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 - STAGE 2 & STAGE 3	SHEET 529	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 2

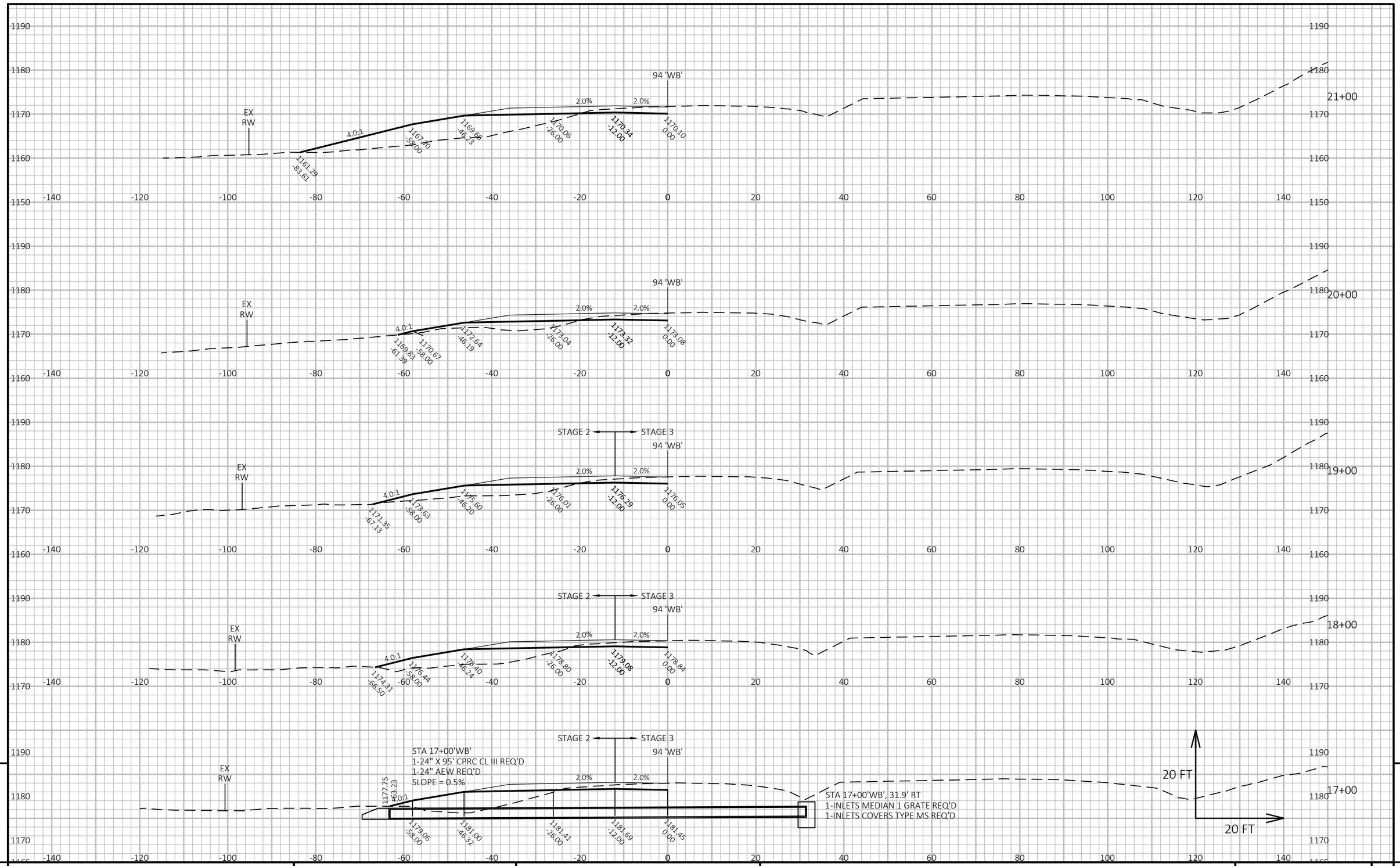
PLOT DATE : 3/12/2021 8:25 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

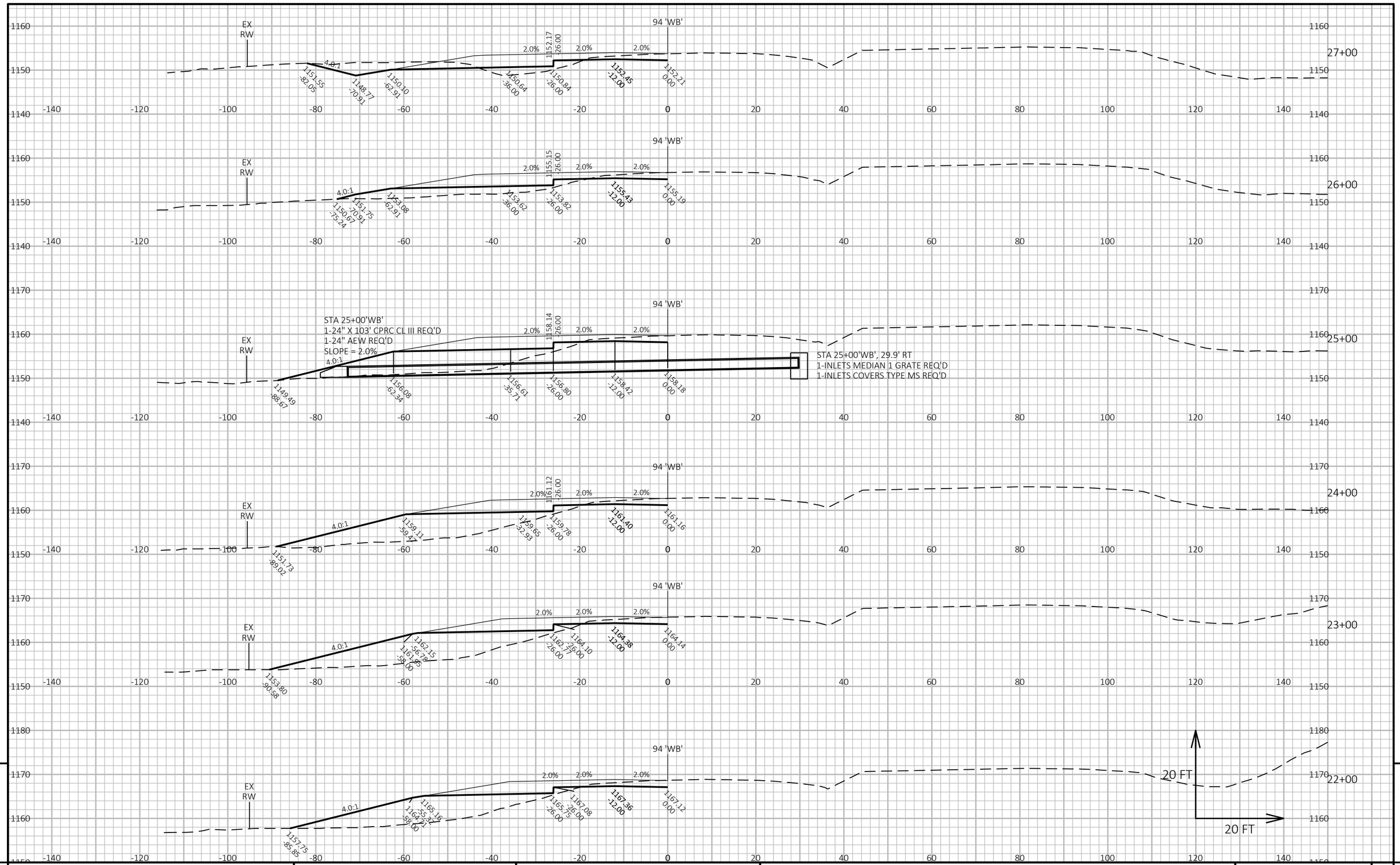
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 2 & STAGE 3	SHEET 530	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 3

PLOT DATE : 3/12/2021 8:25 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



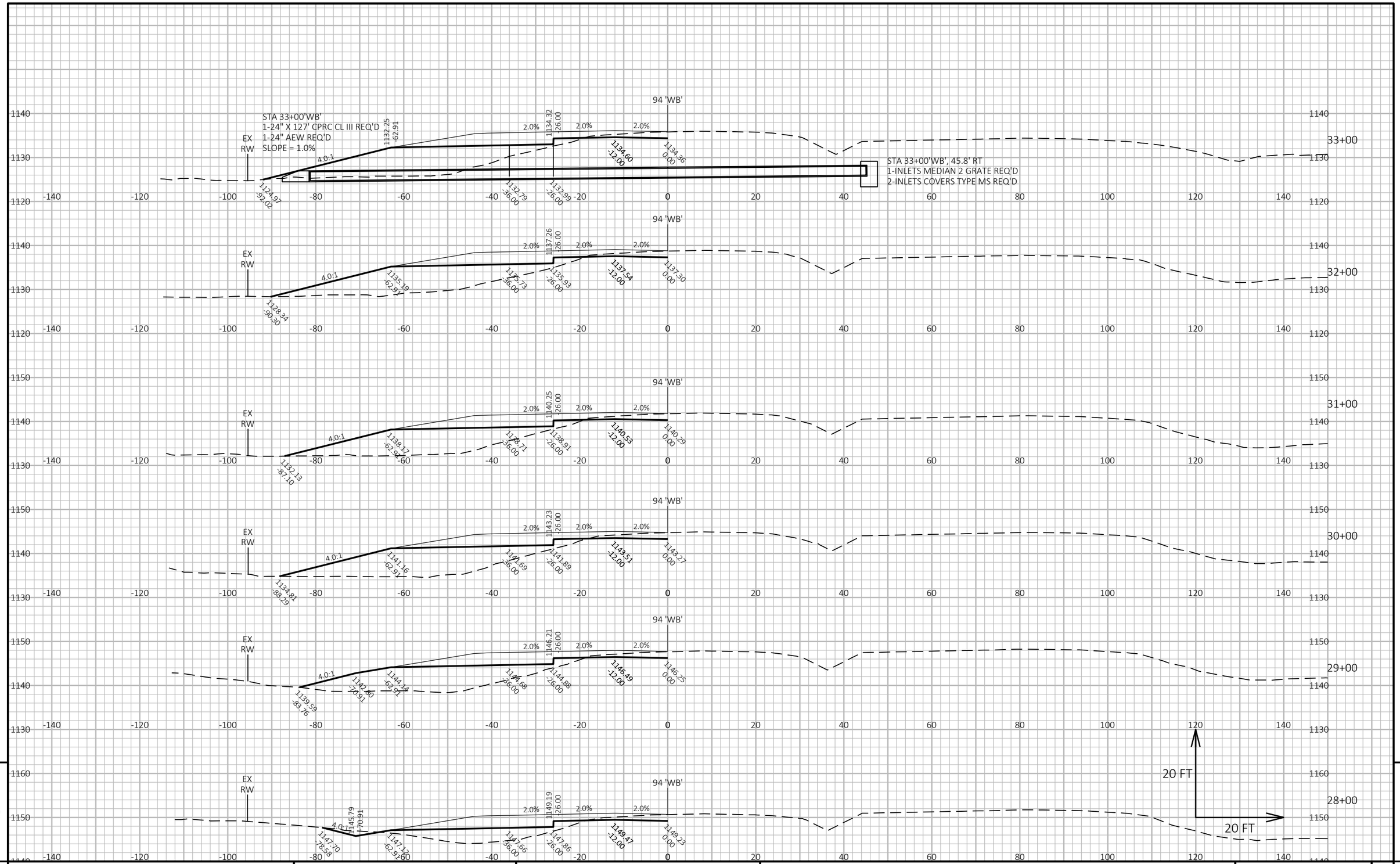
9 9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 2	SHEET 531	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 4

PLOT DATE : 3/12/2021 8:25 AM 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 WB - STAGE 2	SHEET 532	E

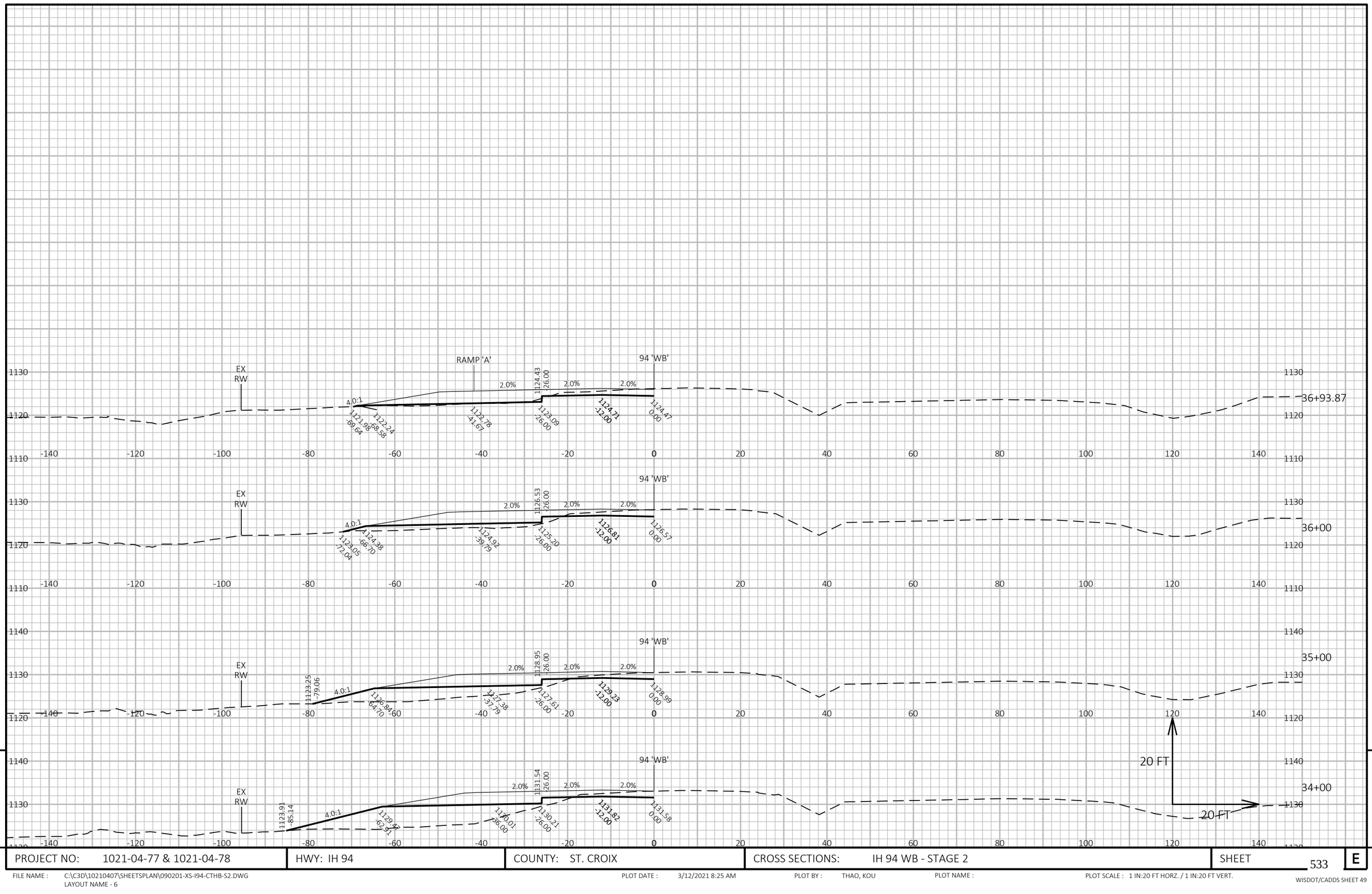
FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 5

PLOT DATE : 3/12/2021 8:25 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

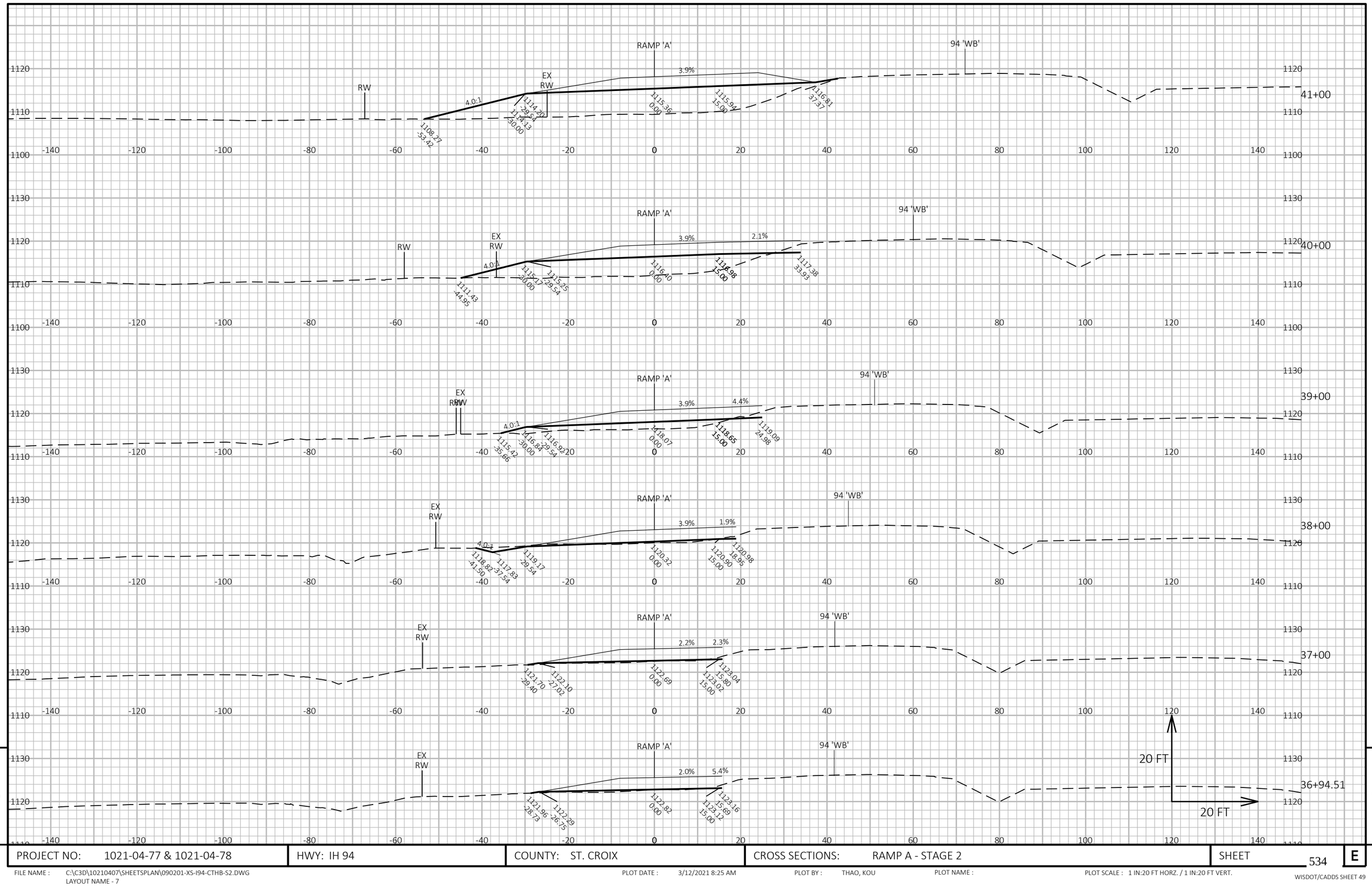


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 2	SHEET 533	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 6

PLOT DATE : 3/12/2021 8:25 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

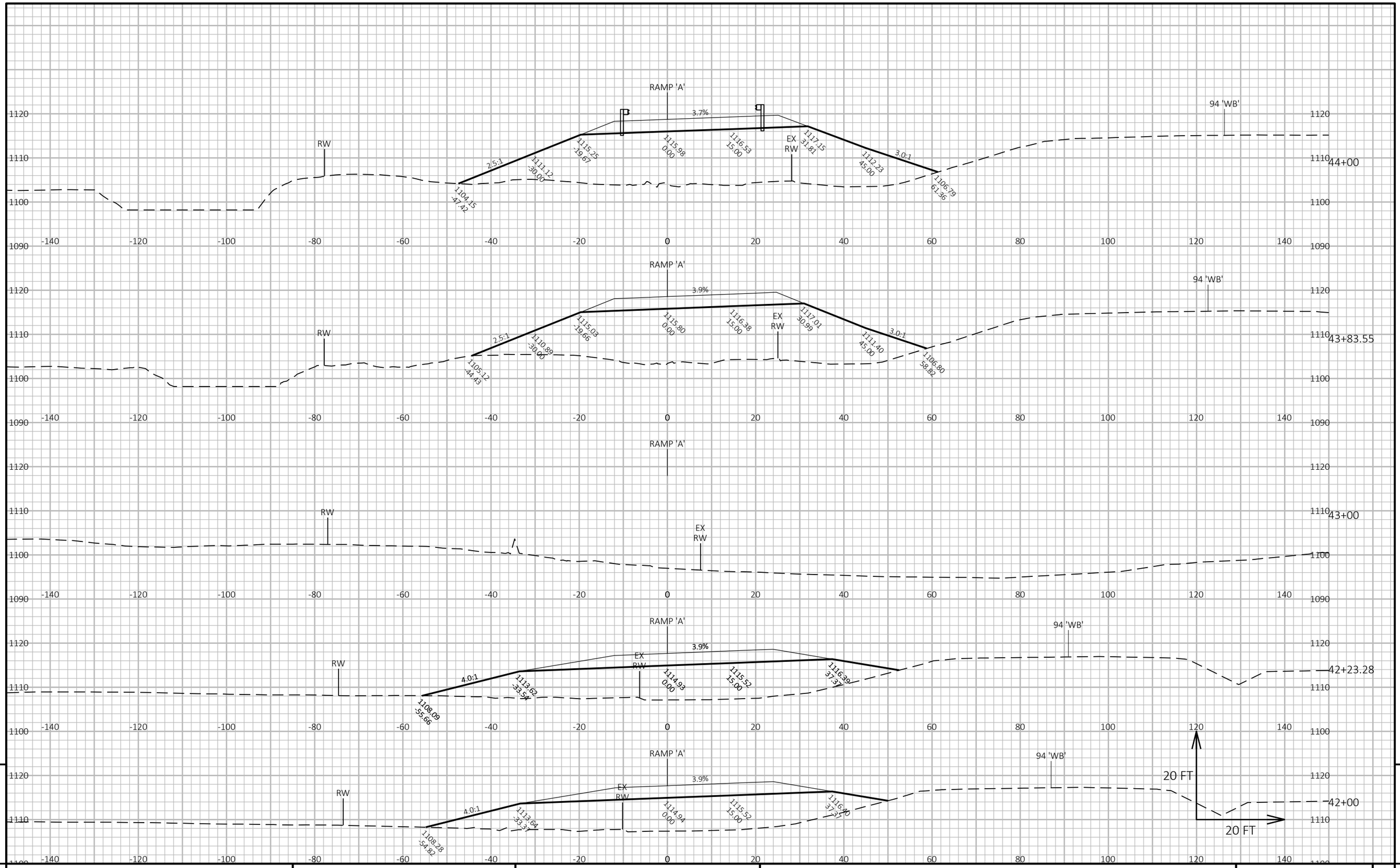
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP A - STAGE 2	SHEET 534	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 7

PLOT DATE : 3/12/2021 8:25 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



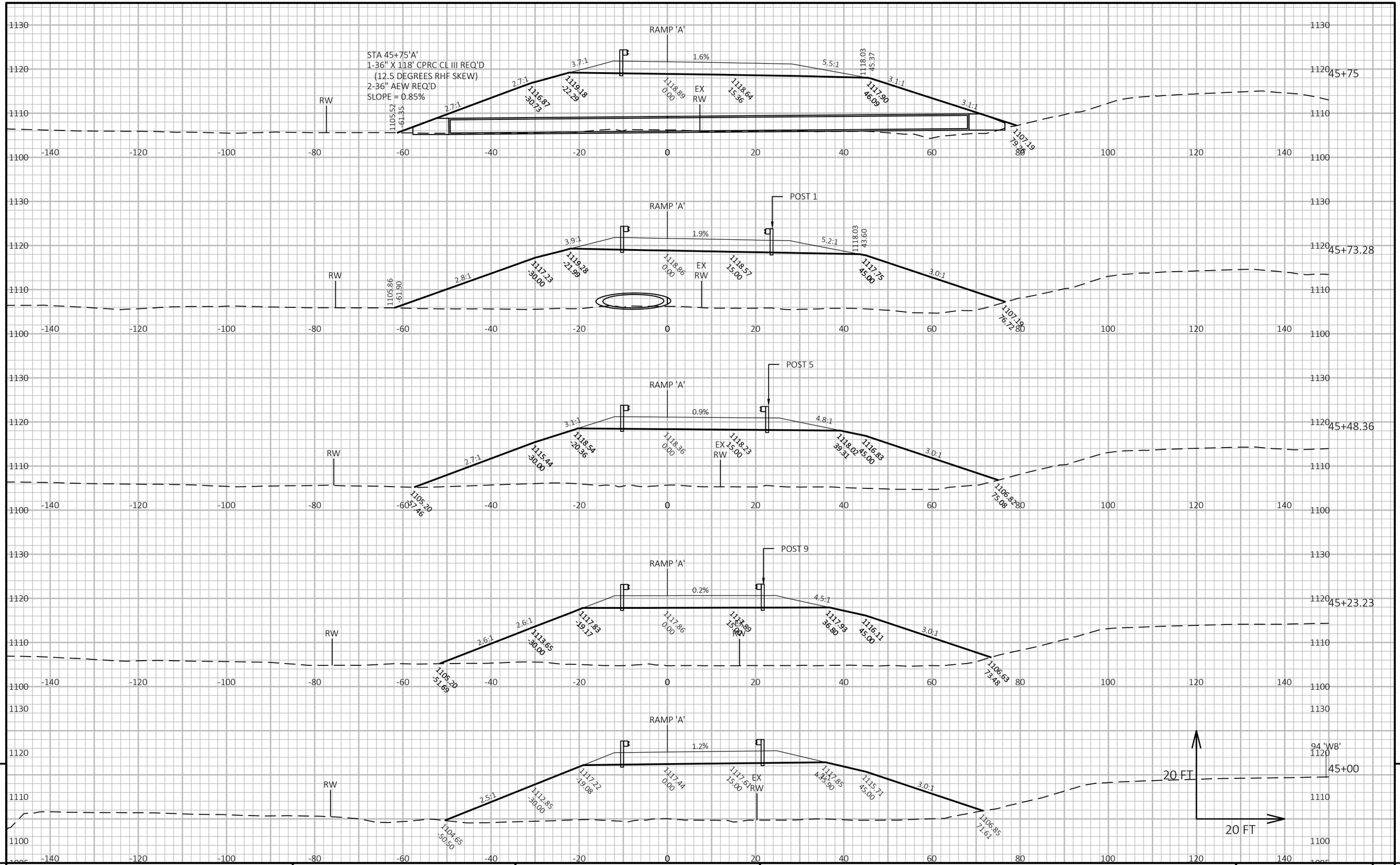
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9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP A - STAGE 2	SHEET 535	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 8

PLOT DATE : 3/12/2021 8:25 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

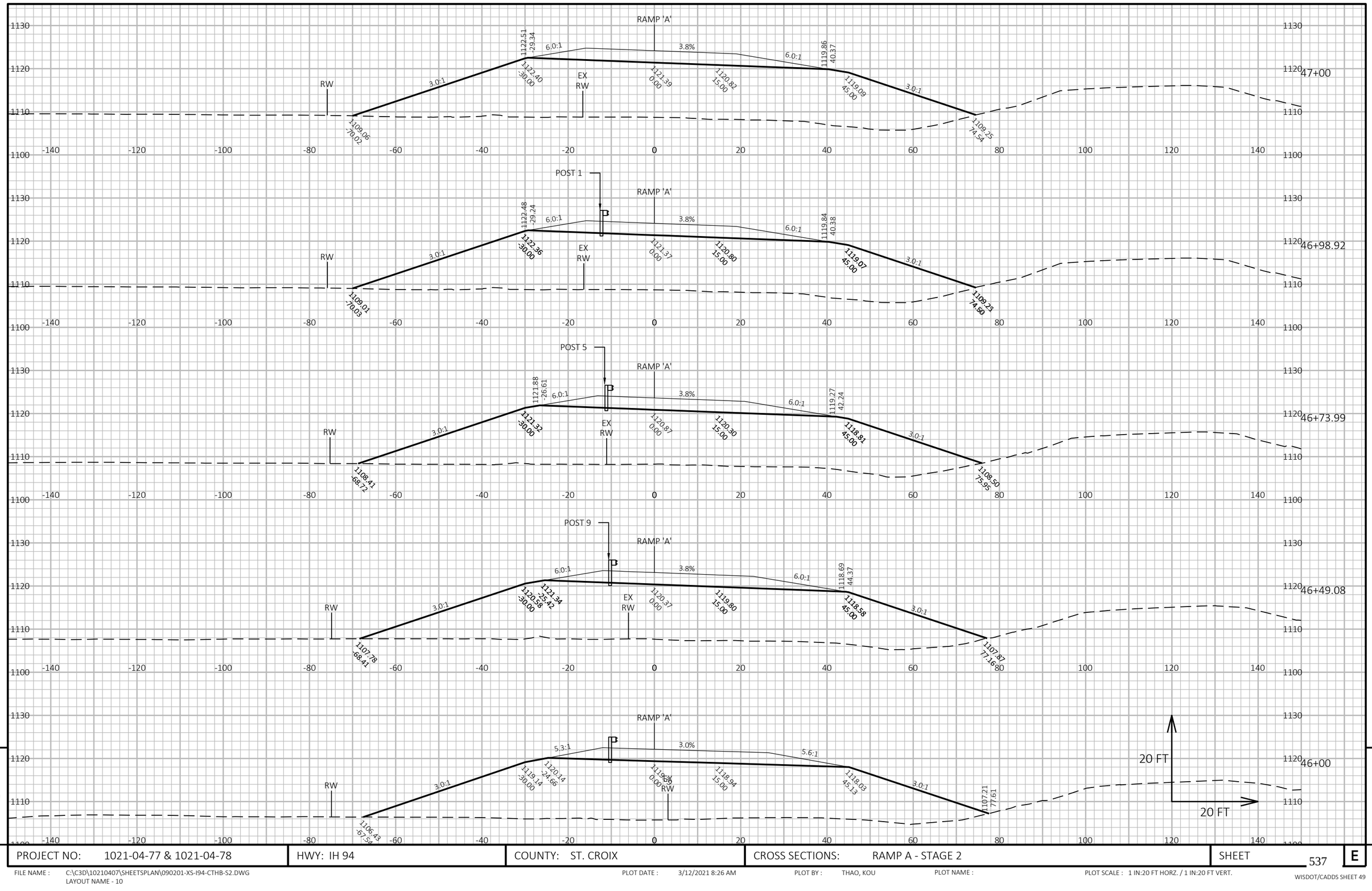


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP A - STAGE 2	SHEET 536	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 9

PLOT DATE : 3/12/2021 8:26 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

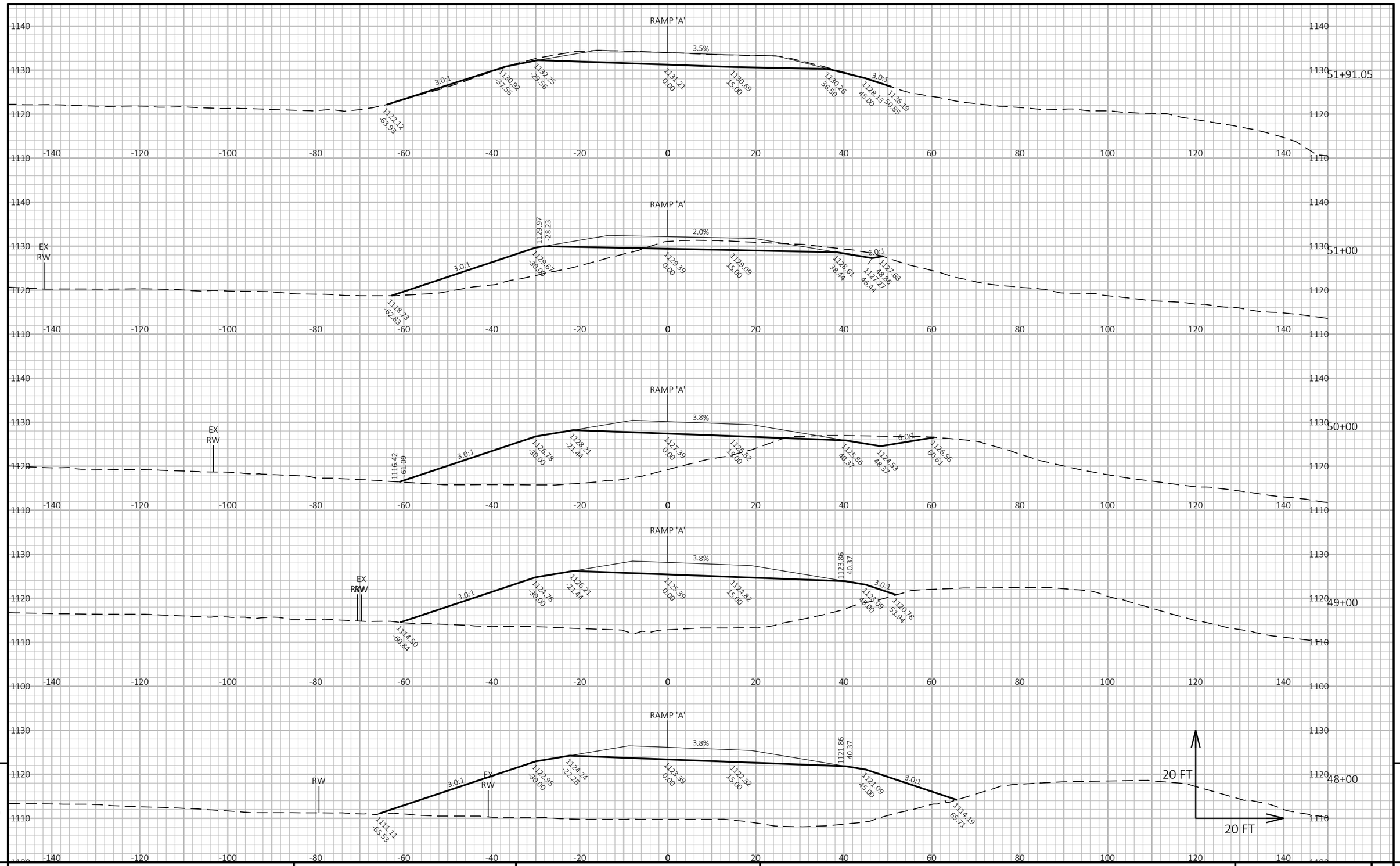
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP A - STAGE 2	SHEET 537	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 10

PLOT DATE : 3/12/2021 8:26 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

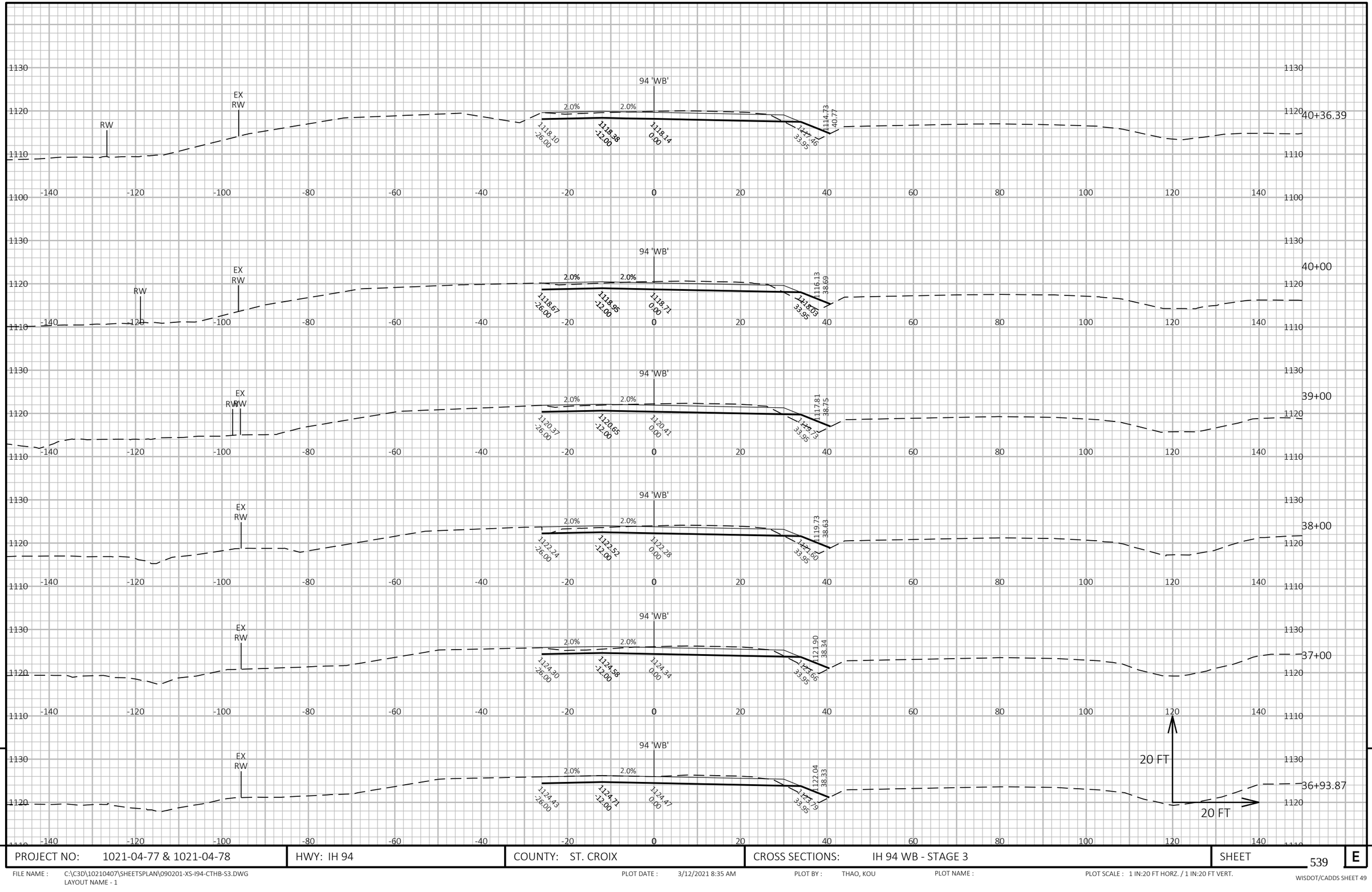
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP A - STAGE 2	SHEET 538	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S2.DWG
LAYOUT NAME - 11

PLOT DATE : 3/12/2021 8:26 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

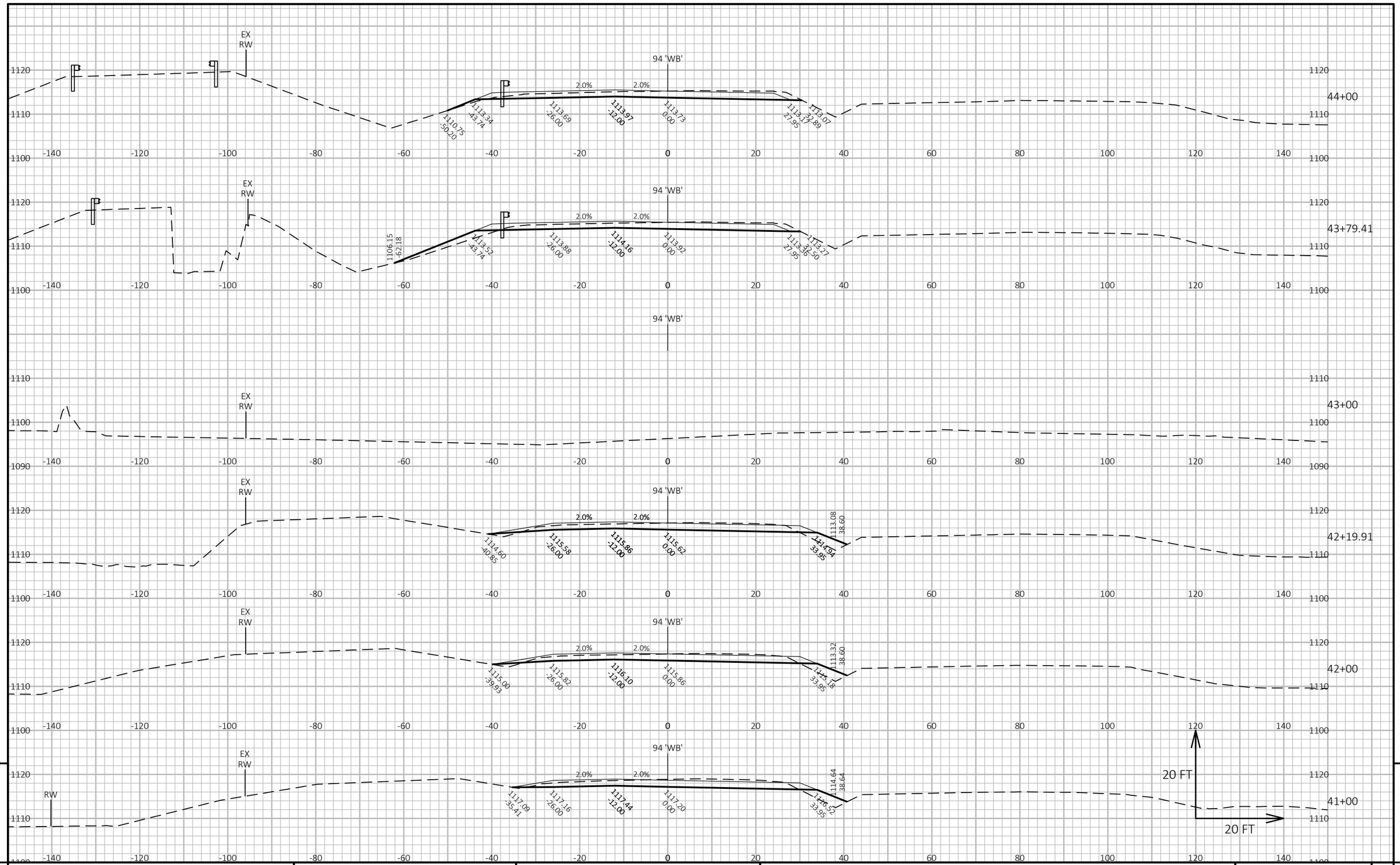
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 539	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 1

PLOT DATE : 3/12/2021 8:35 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

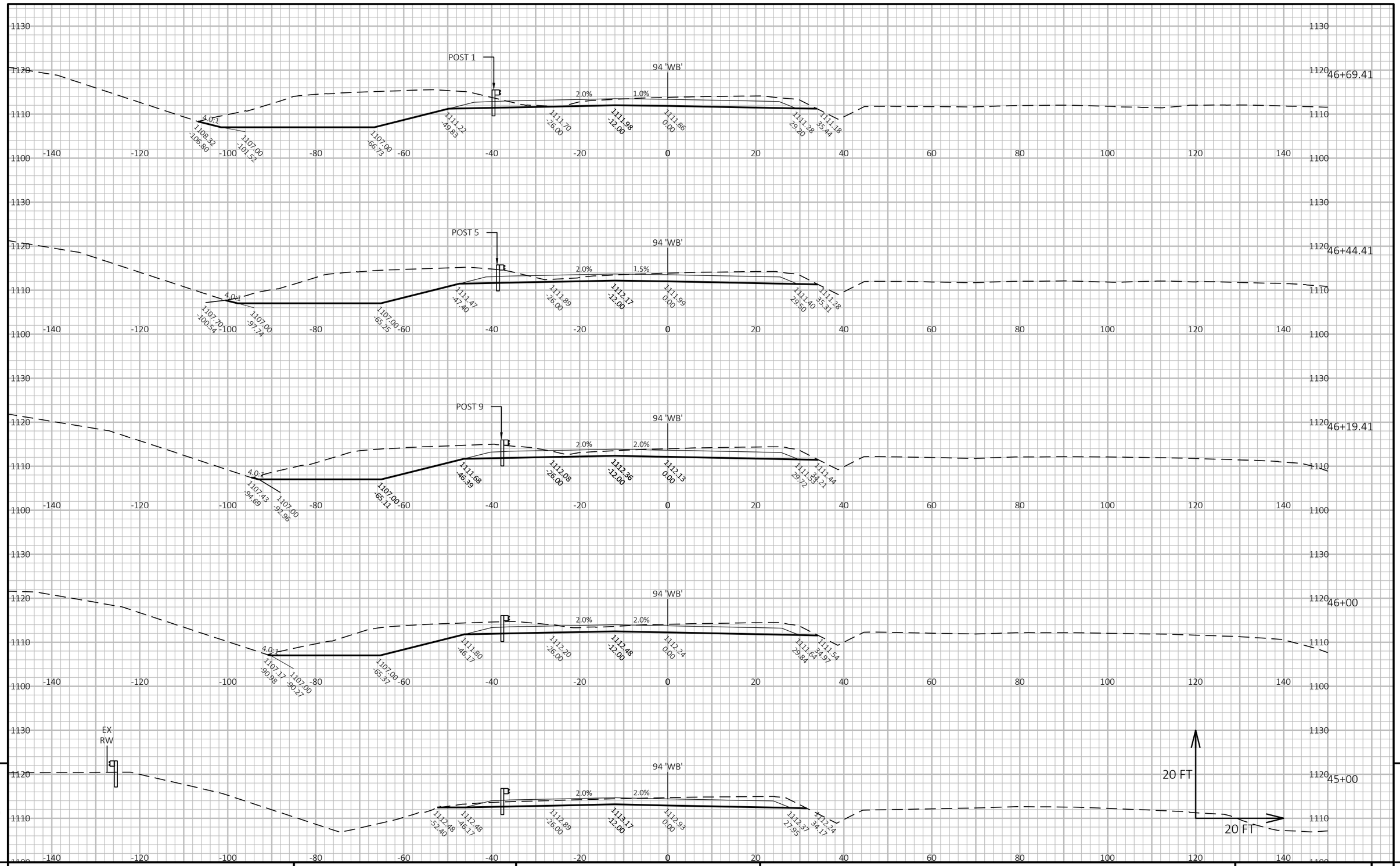


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 540	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 2

PLOT DATE : 3/12/2021 8:35 AM 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 WB - STAGE 3	SHEET 541	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 3

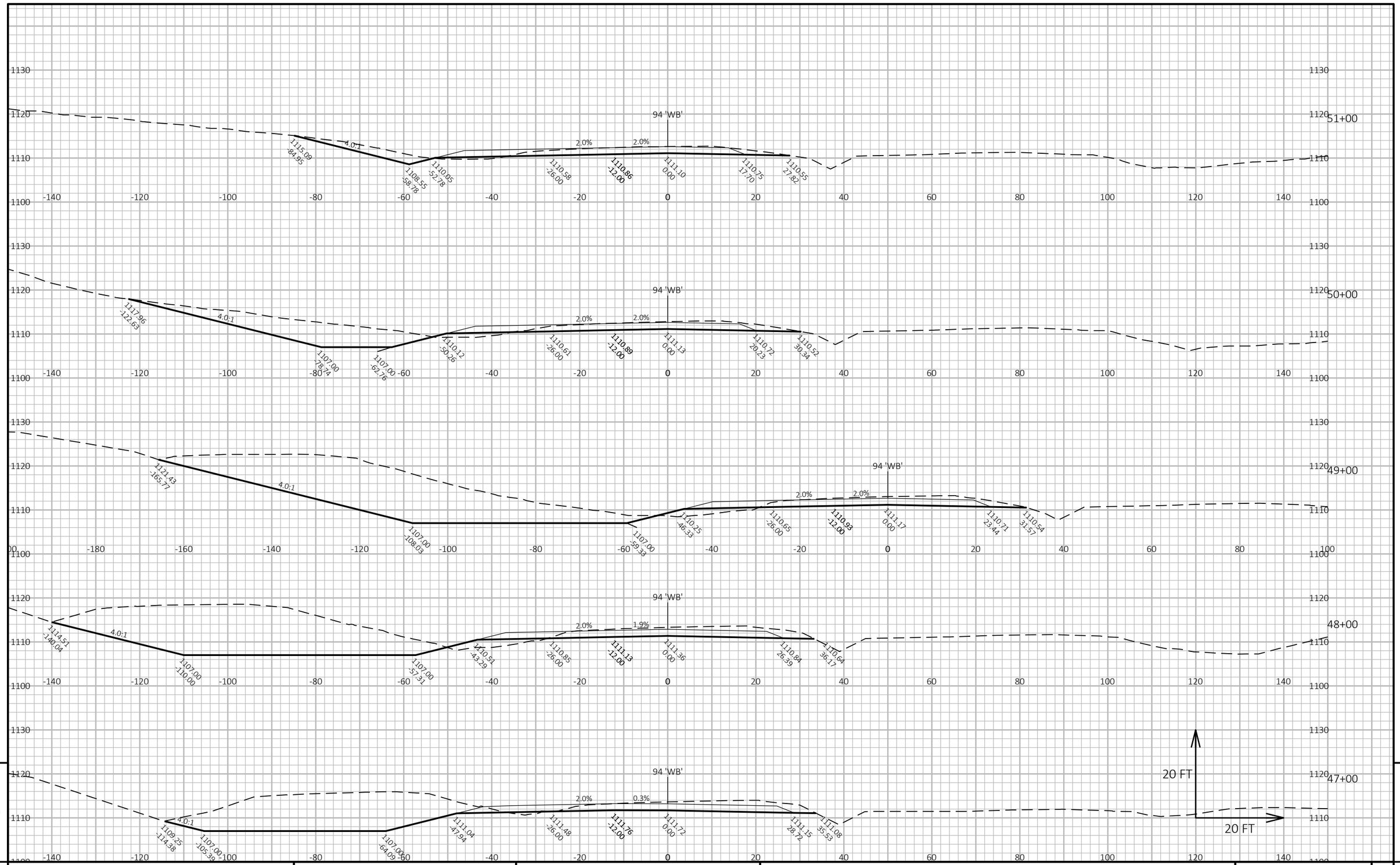
PLOT DATE : 3/12/2021 8:35 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

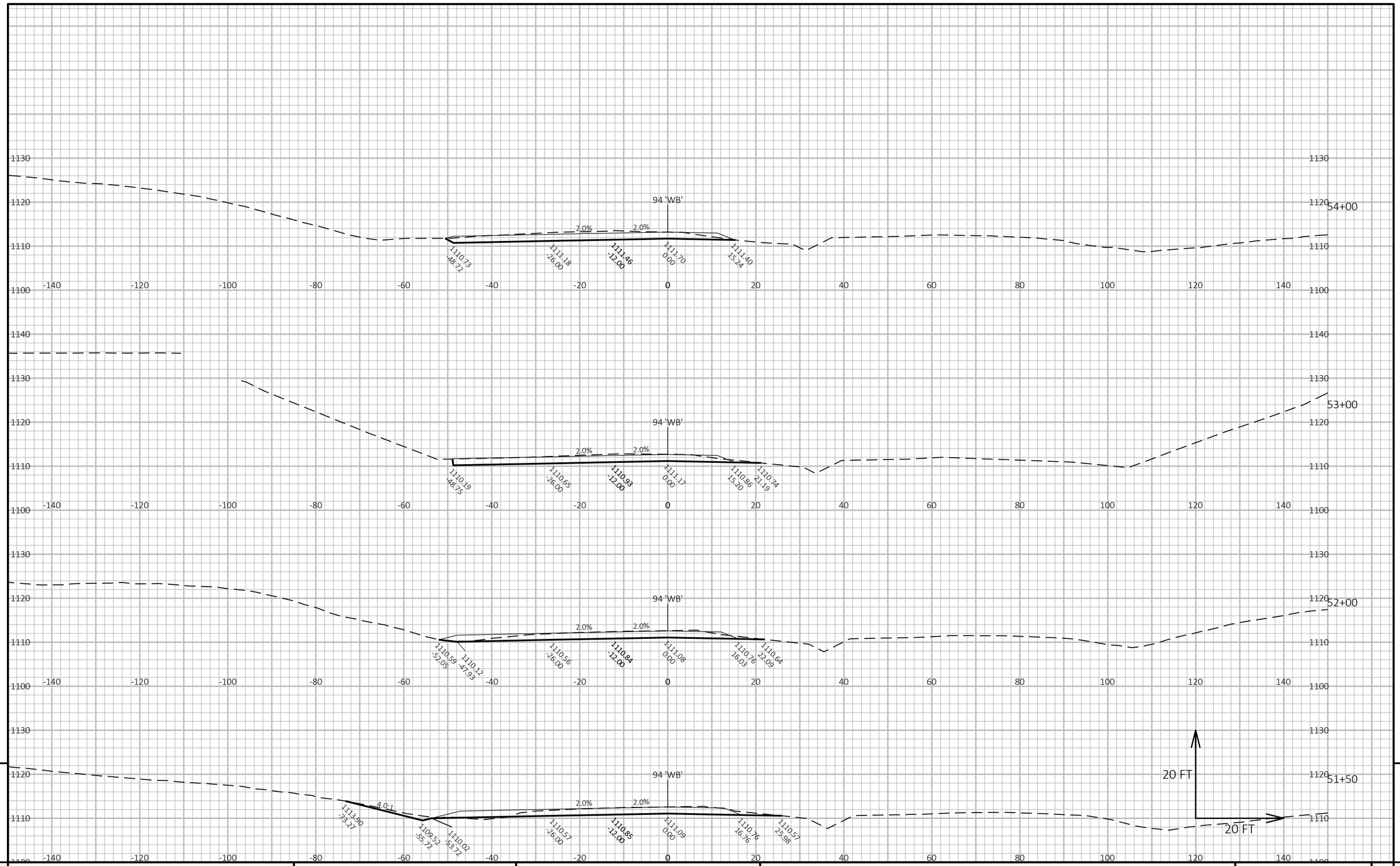
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 542	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 4

PLOT DATE : 3/12/2021 8:35 AM 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 WB - STAGE 3	SHEET 543	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 5

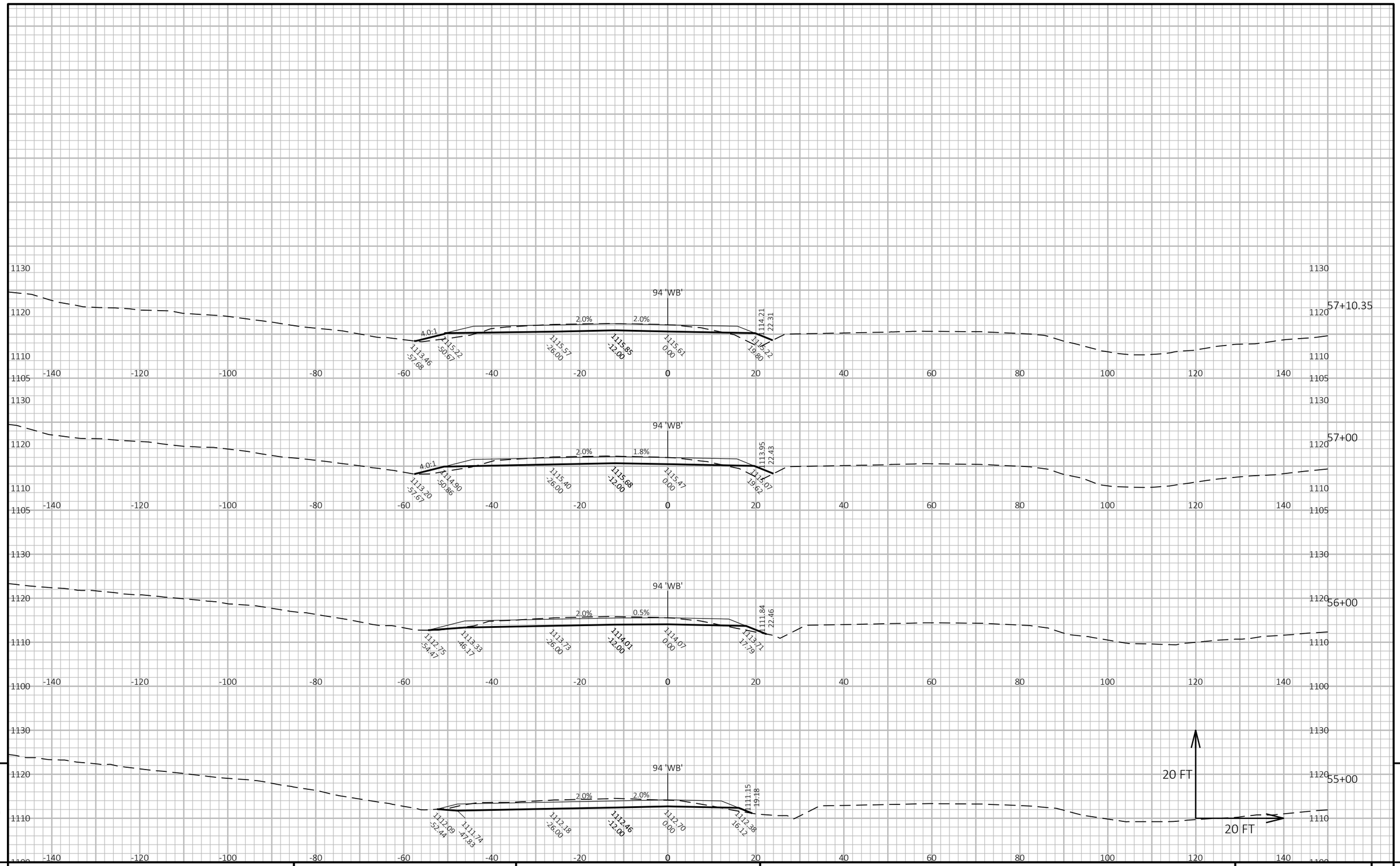
PLOT DATE : 3/12/2021 8:35 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

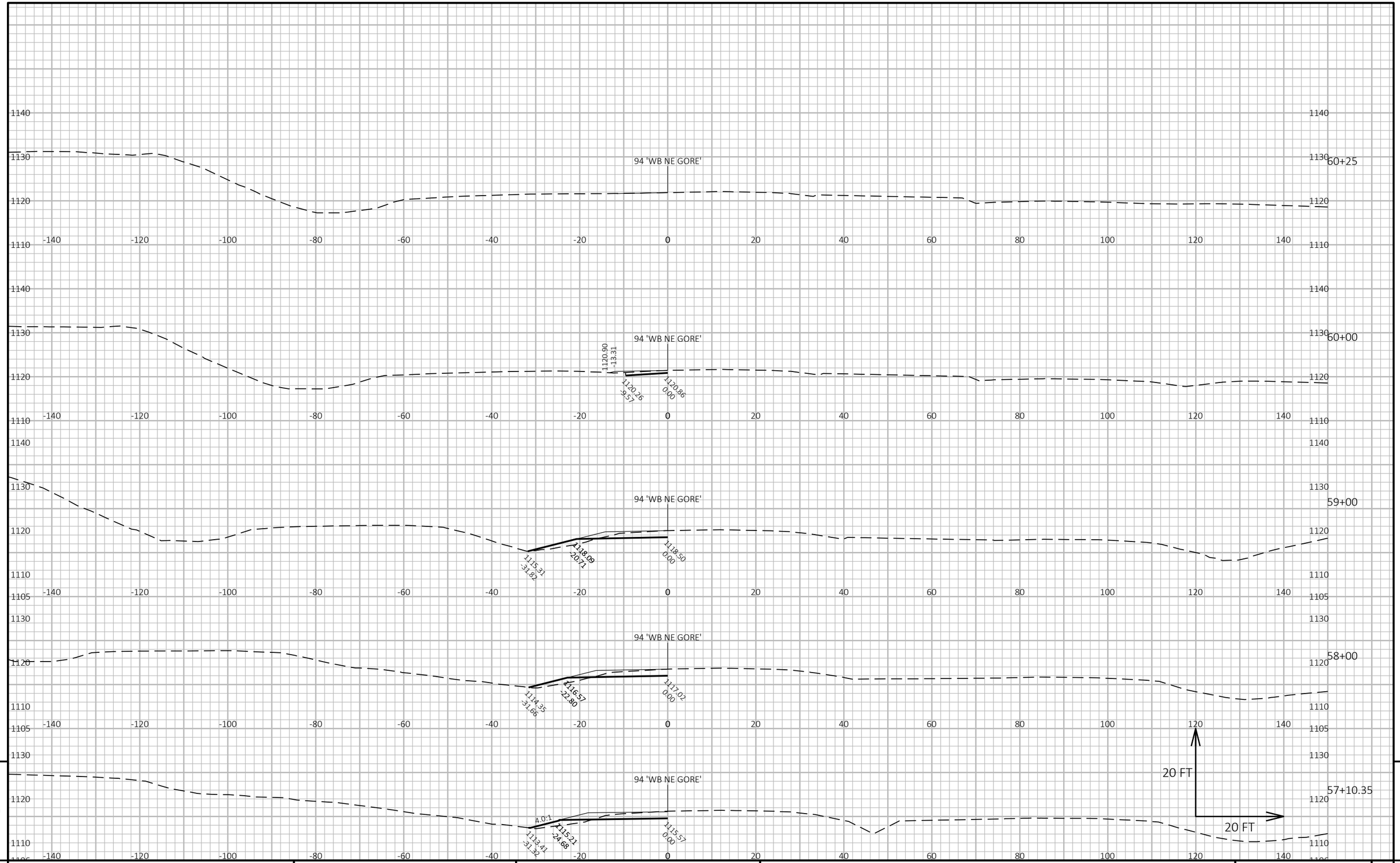
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3	SHEET 544	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 6

PLOT DATE : 3/12/2021 8:35 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

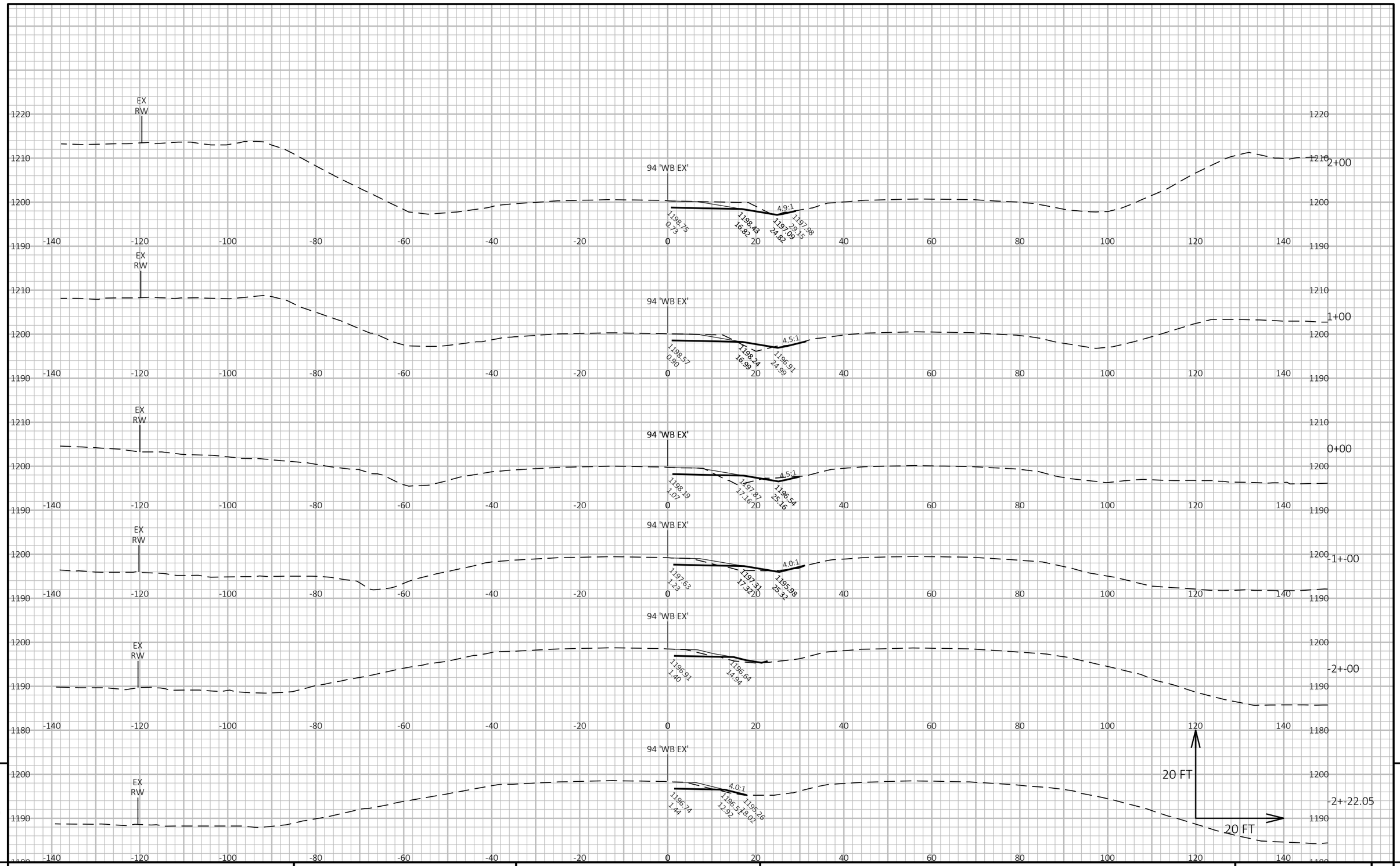
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 3 (SHLD WIDENING)	SHEET 545	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S3.DWG
LAYOUT NAME - 8

PLOT DATE : 3/12/2021 8:35 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

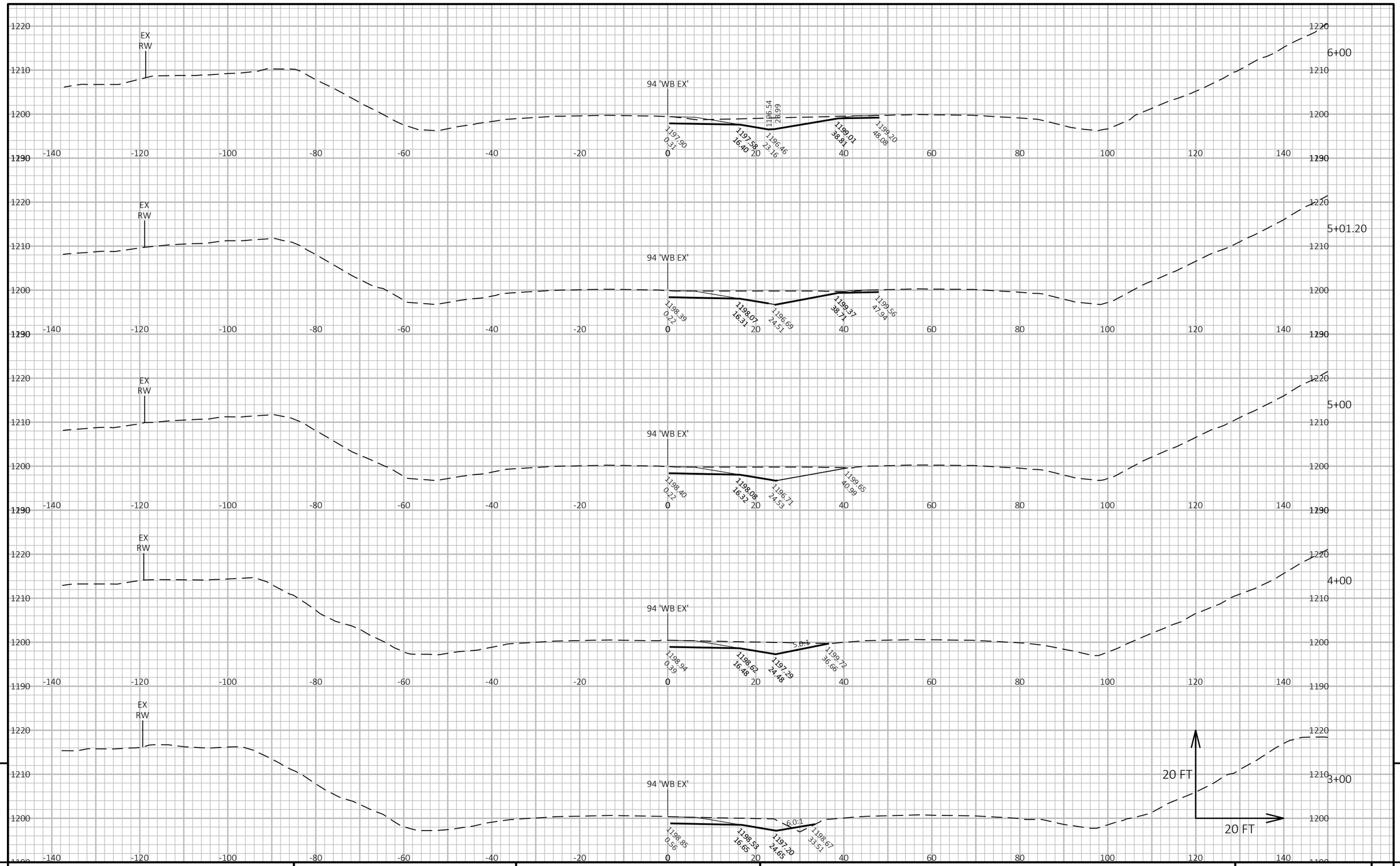
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 546	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 1

PLOT DATE : 3/26/2021 8:19 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

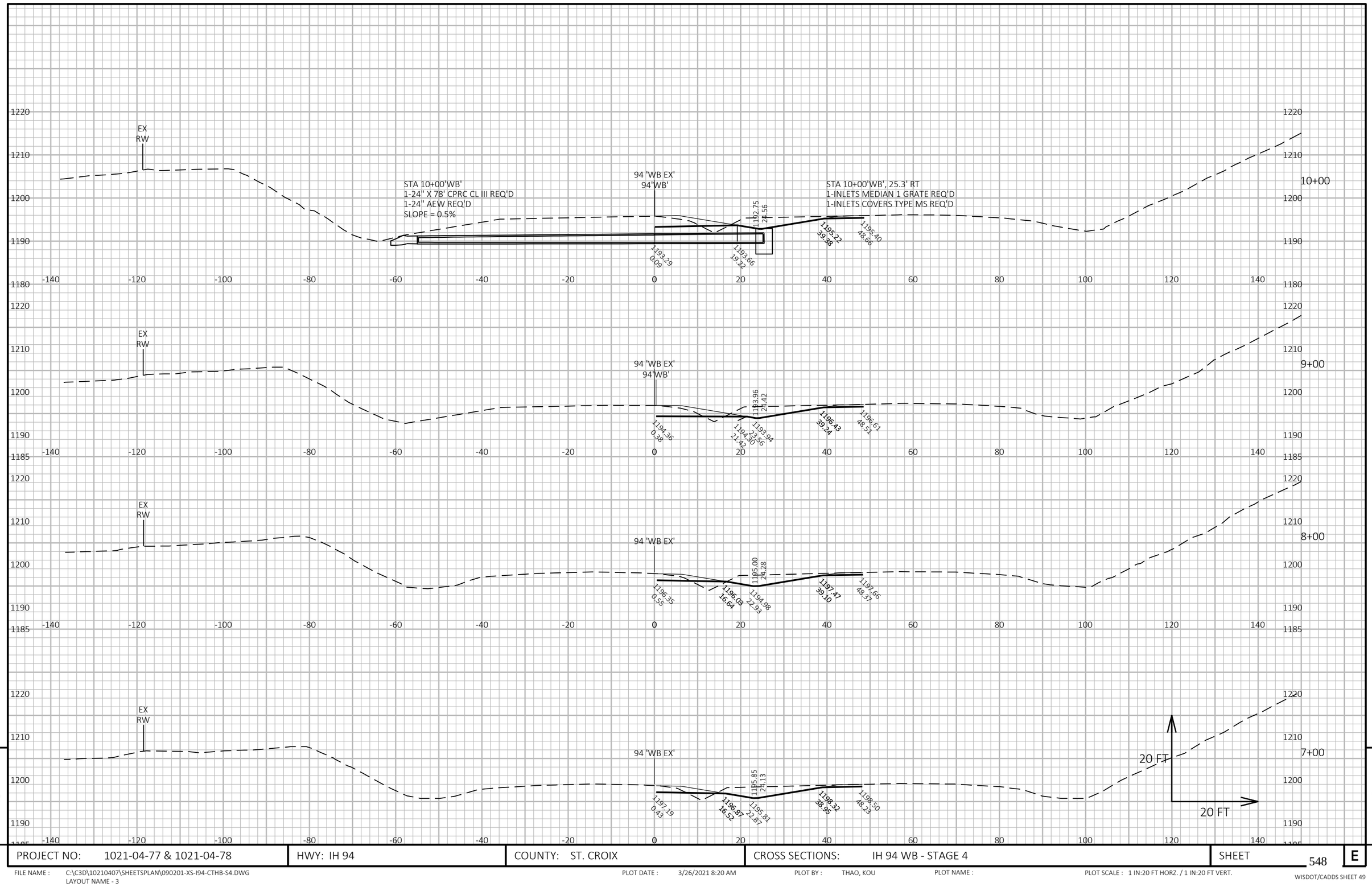


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 547	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 2

PLOT DATE : 3/26/2021 8:19 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

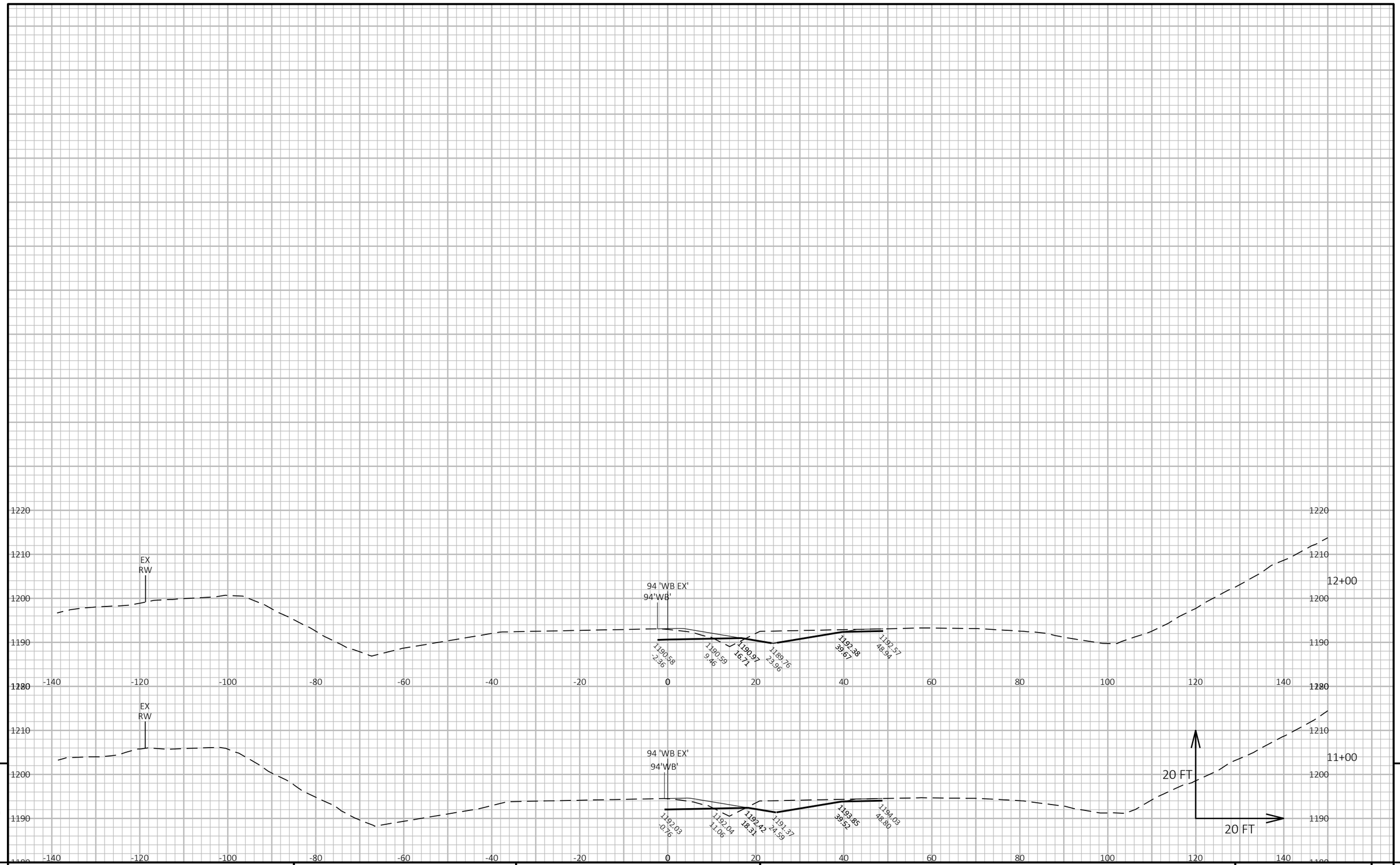


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 548	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 3

PLOT DATE : 3/26/2021 8:20 AM 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 WB - STAGE 4	SHEET 549	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 4

PLOT DATE : 3/26/2021 8:20 AM

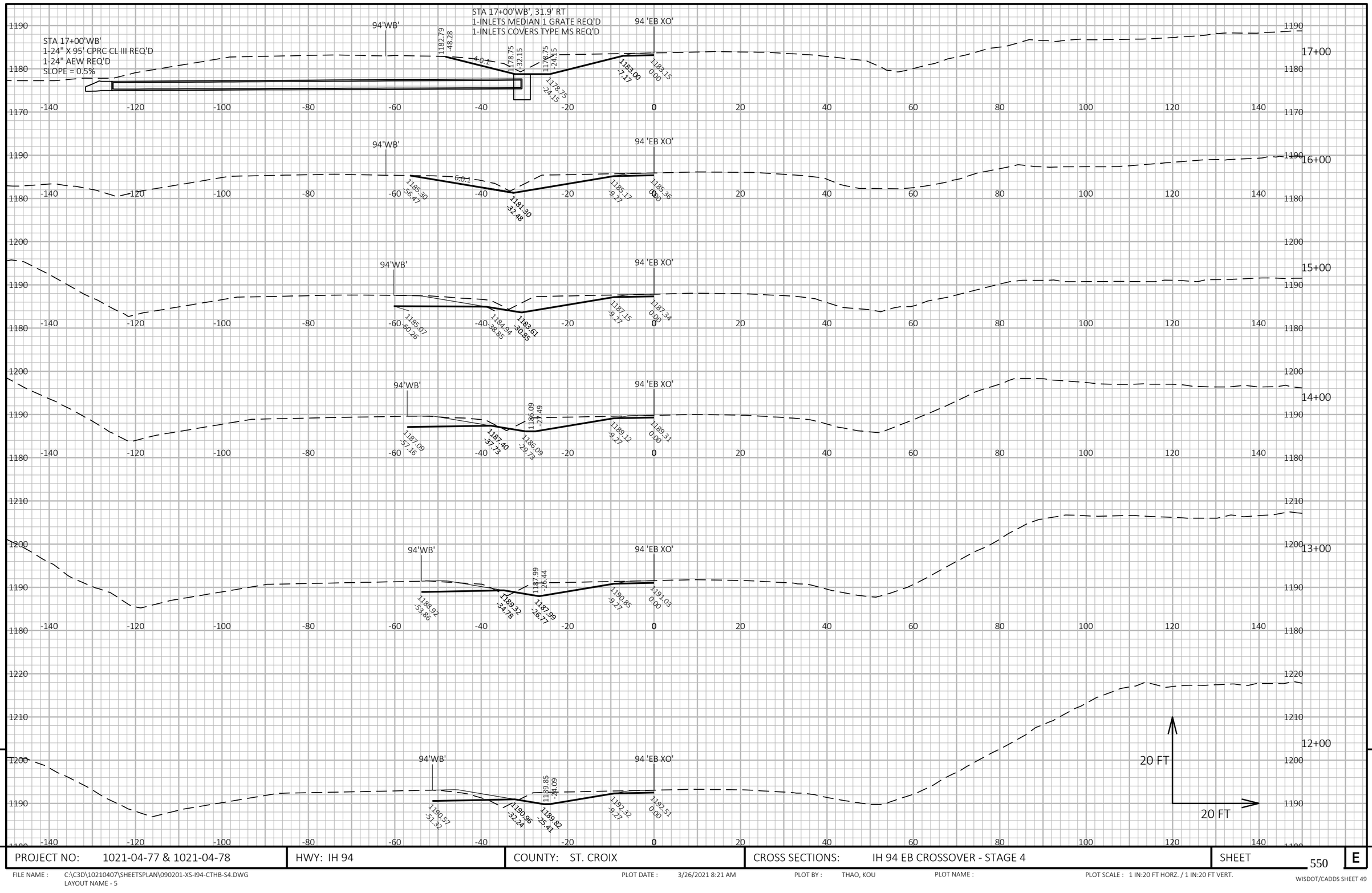
PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

STA 17+00'WB'
1-24" X 95' CPRC CL III REQ'D
1-24" AEW REQ'D
SLOPE = 0.5%

STA 17+00'WB', 31.9' RT
1-INLETS MEDIAN 1 GRATE REQ'D
1-INLETS COVERS TYPE MS REQ'D

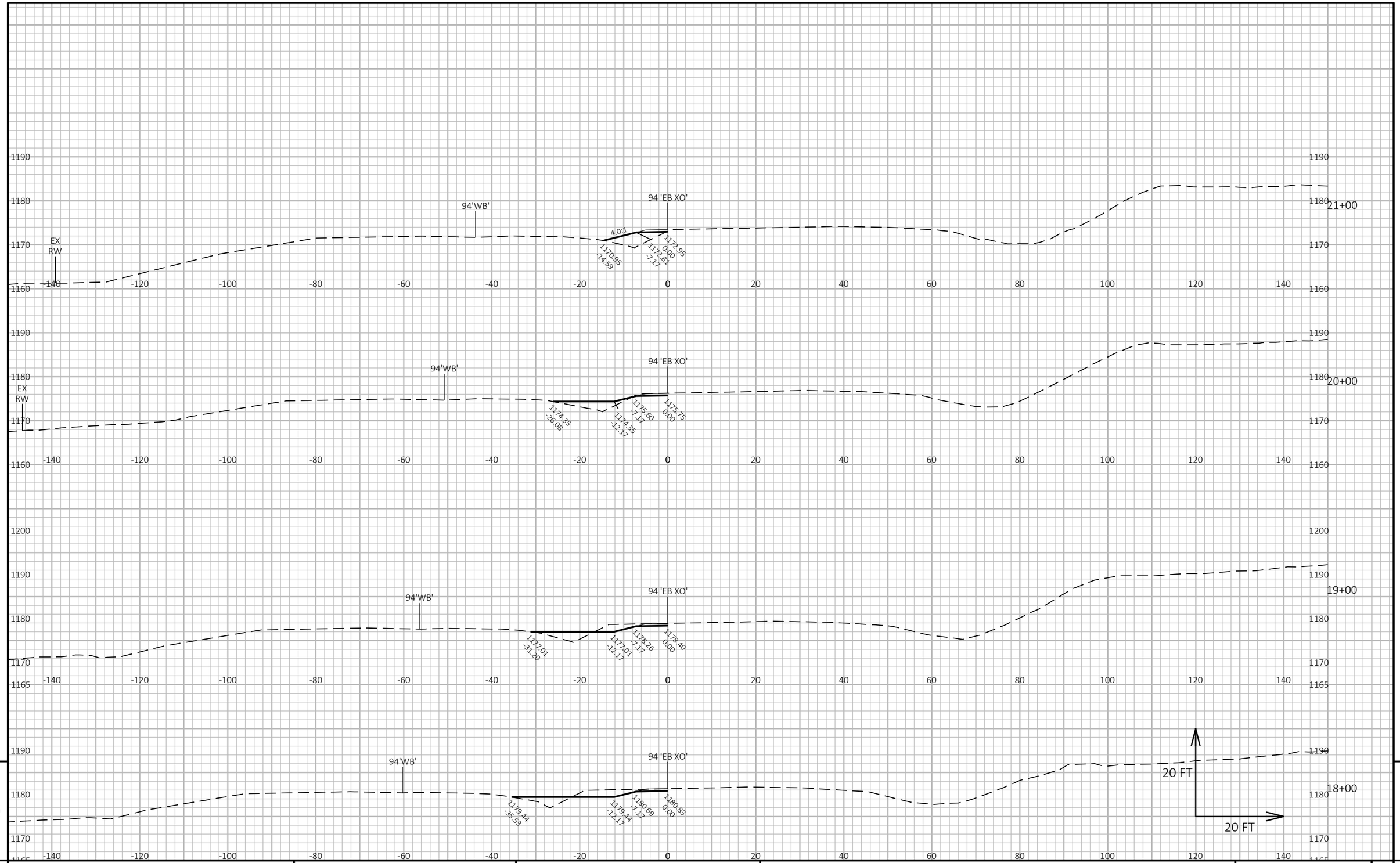


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 550	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 5

PLOT DATE : 3/26/2021 8:21 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

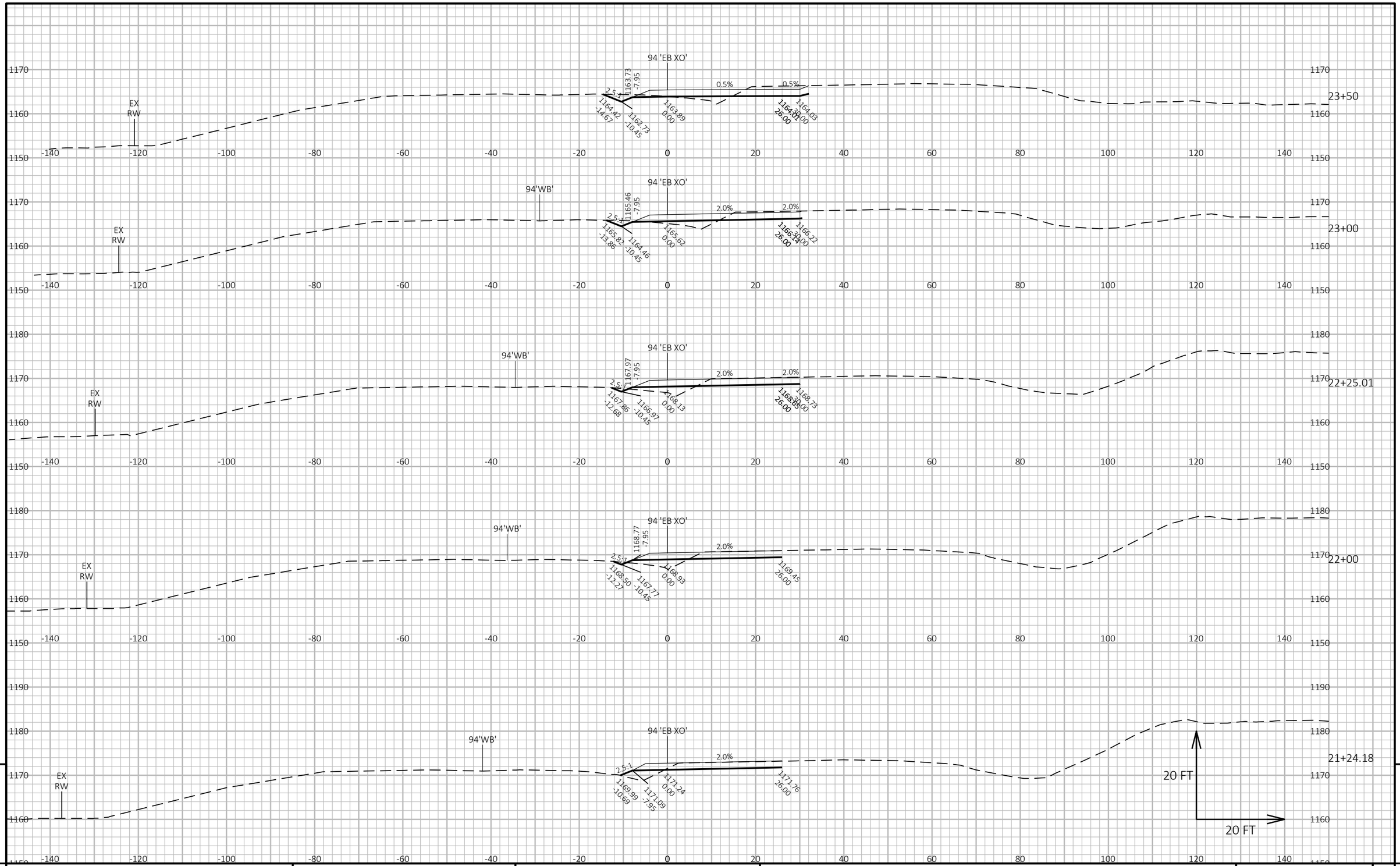


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 551	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 6

PLOT DATE : 3/26/2021 8:21 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

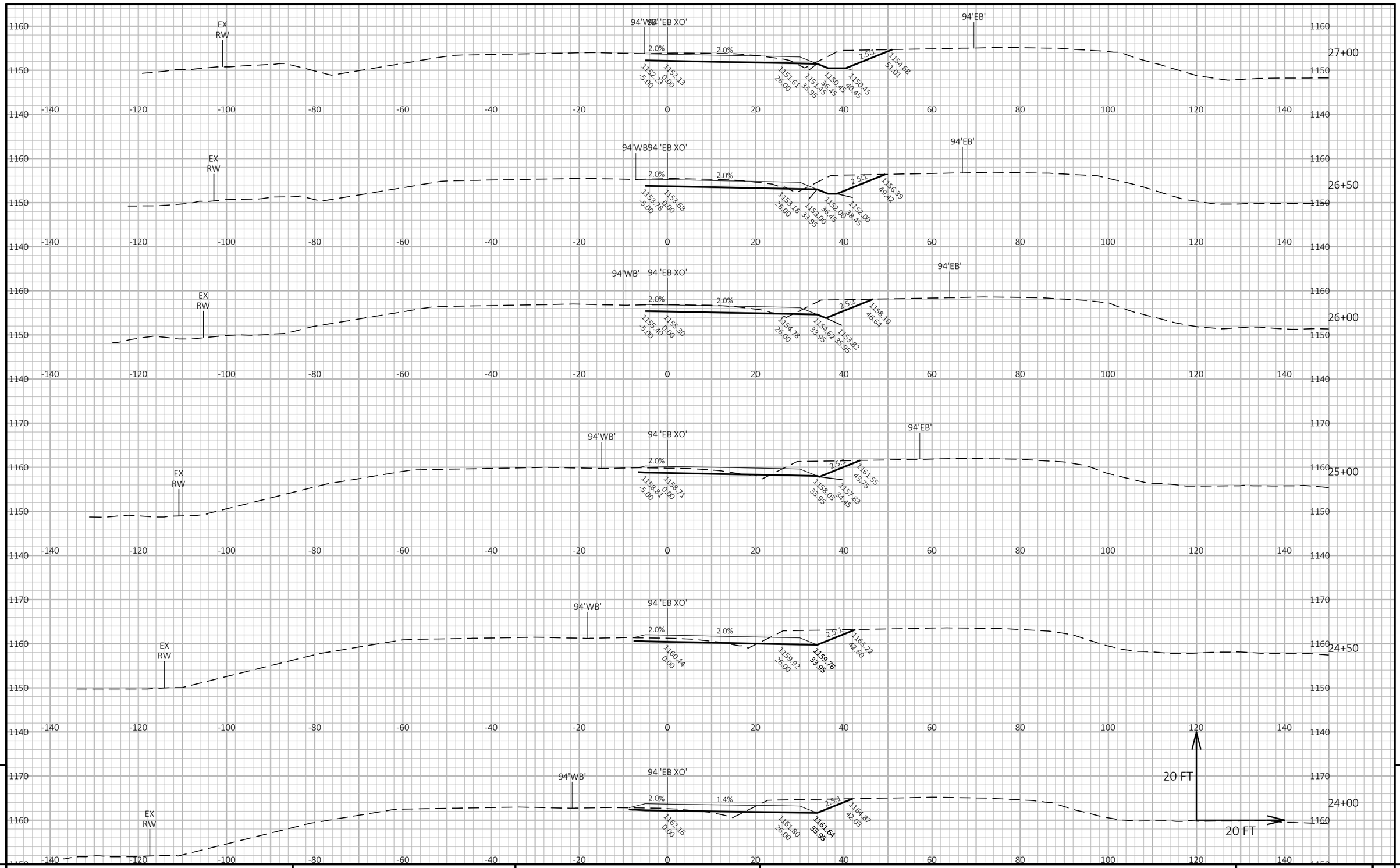


9 9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 552	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 7

PLOT DATE : 3/26/2021 8:21 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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 553	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 8

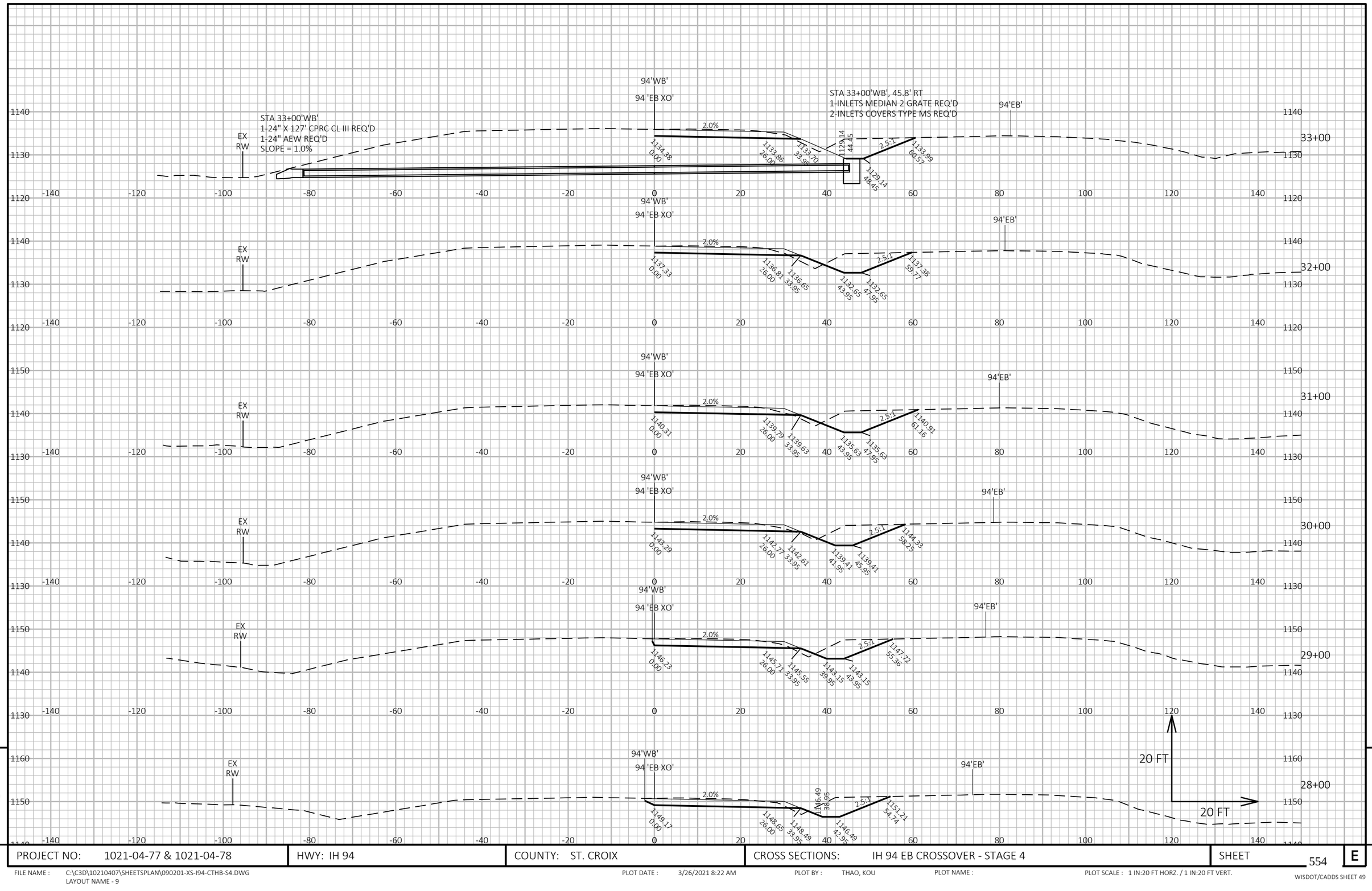
PLOT DATE : 3/26/2021 8:22 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

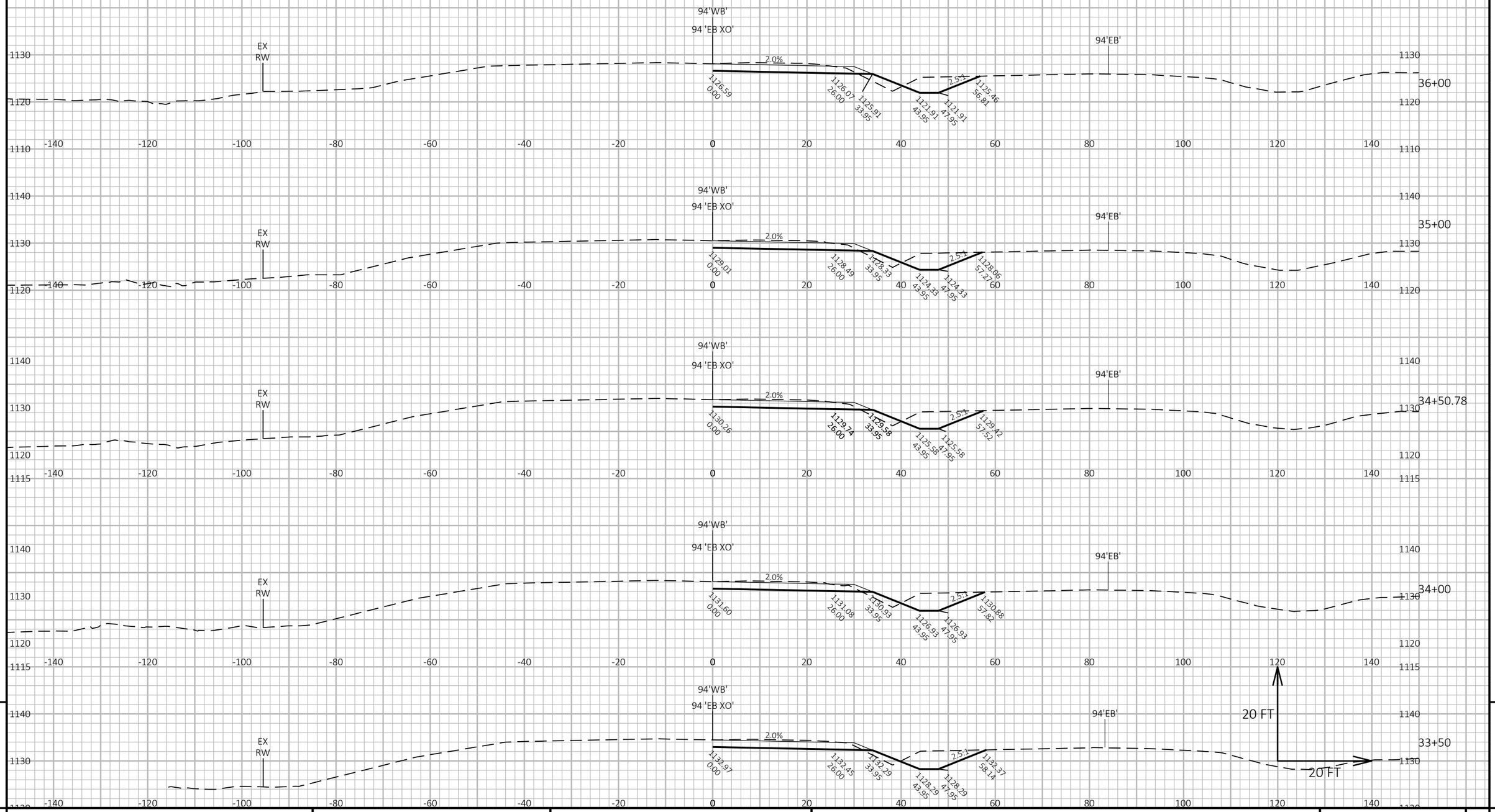


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 554	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 9

PLOT DATE : 3/26/2021 8:22 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

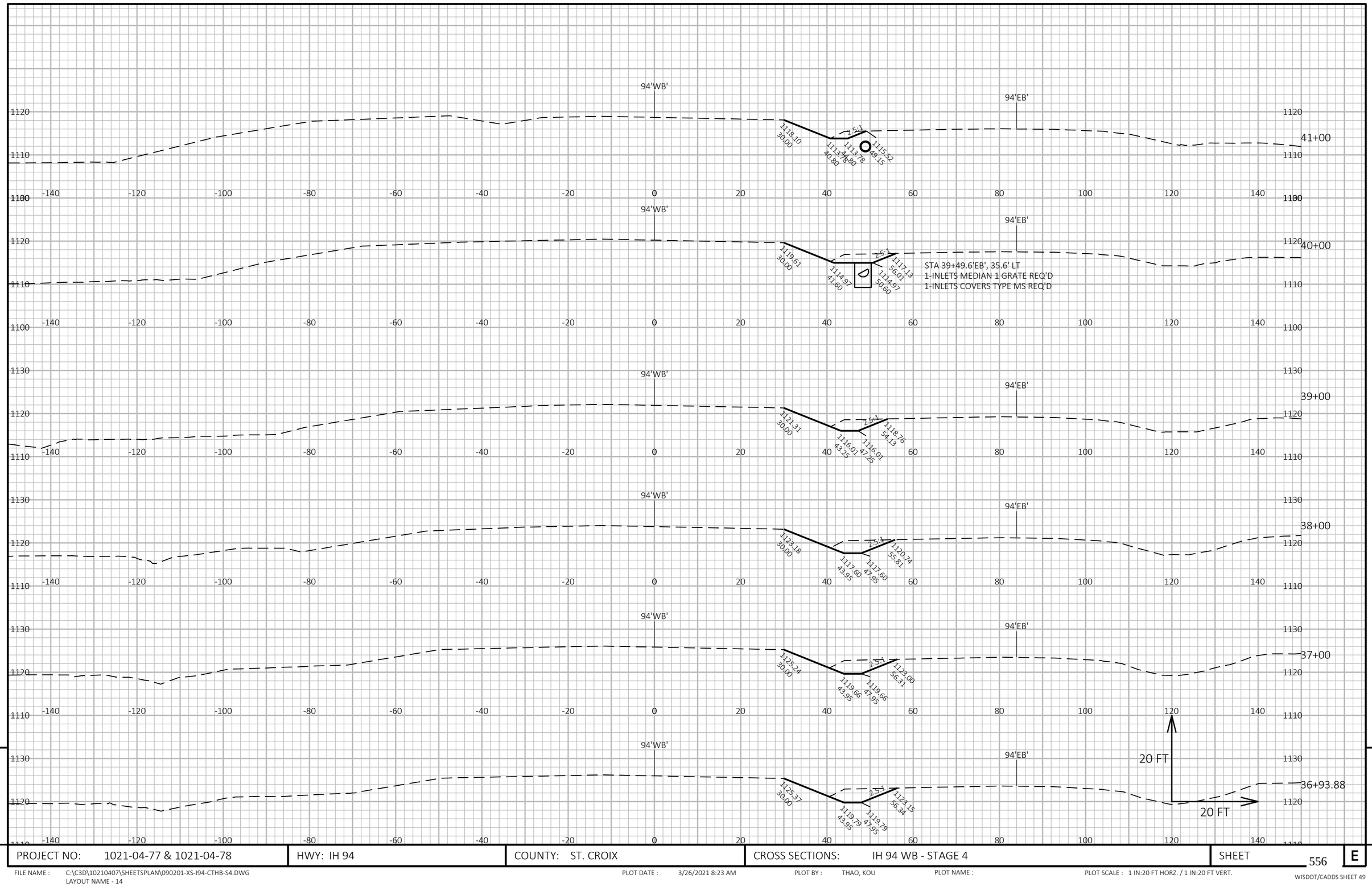
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 555	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 10

PLOT DATE : 3/26/2021 8:22 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

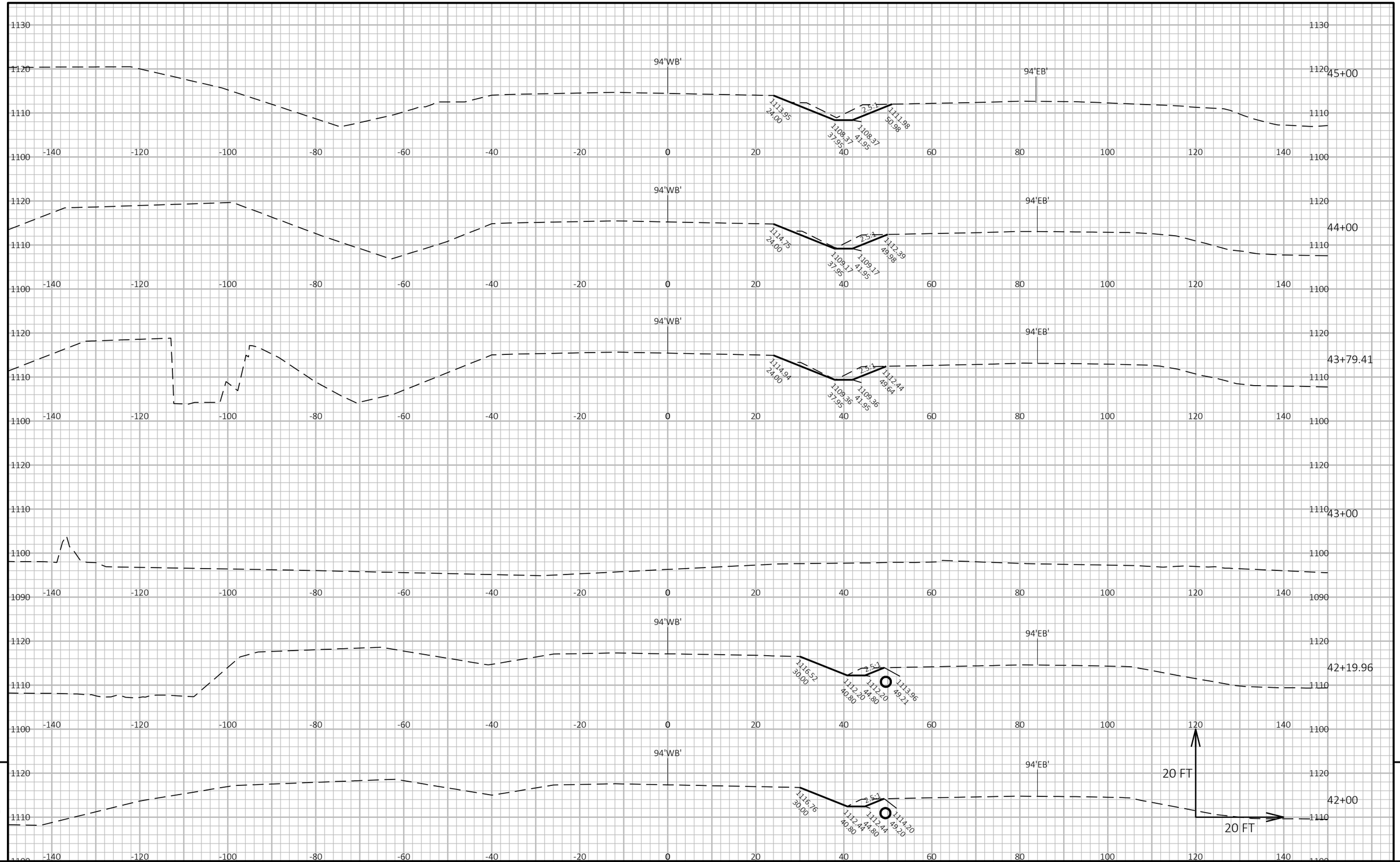
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 556	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 14

PLOT DATE : 3/26/2021 8:23 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

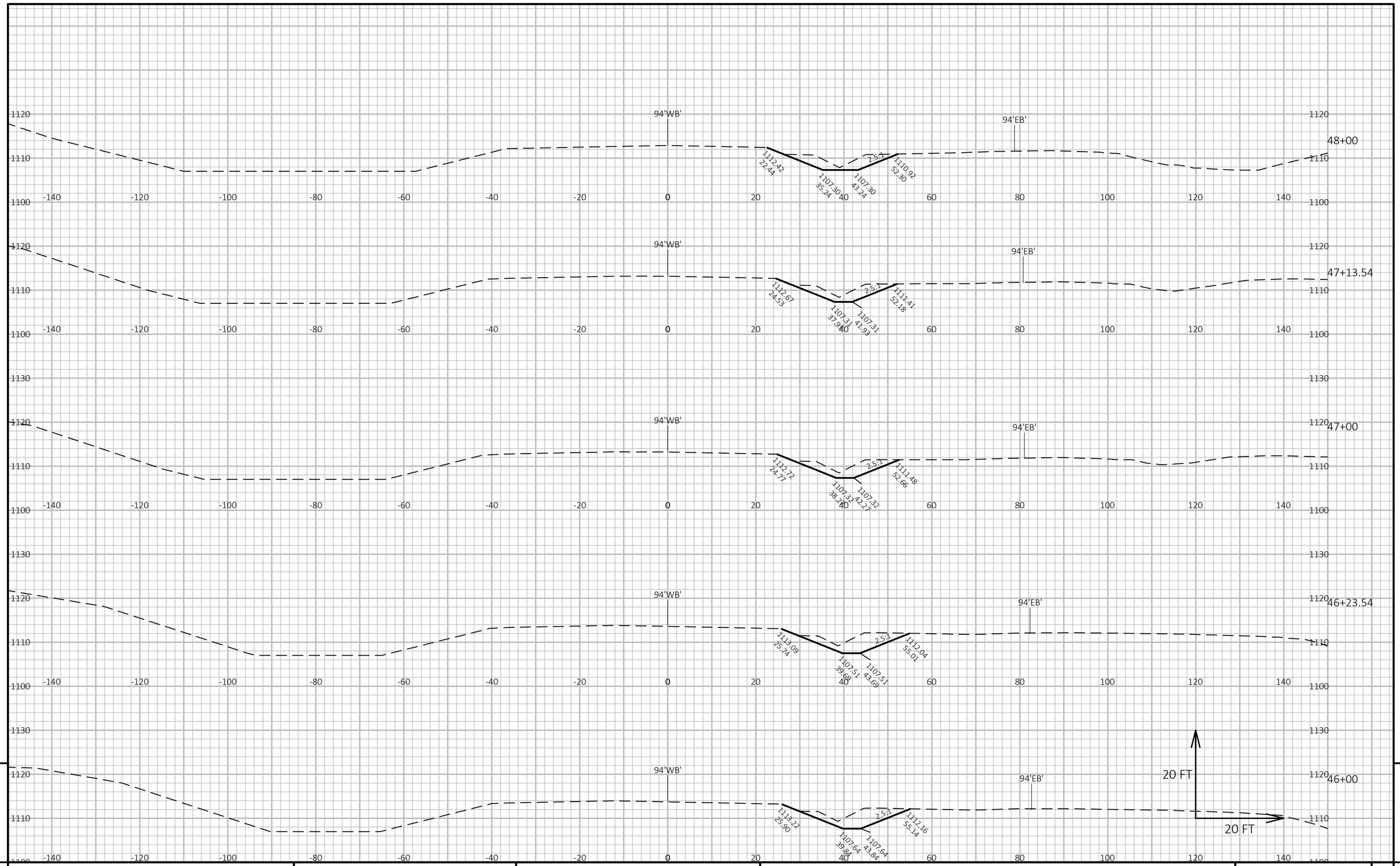


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 557	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 15

PLOT DATE : 3/26/2021 8:23 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

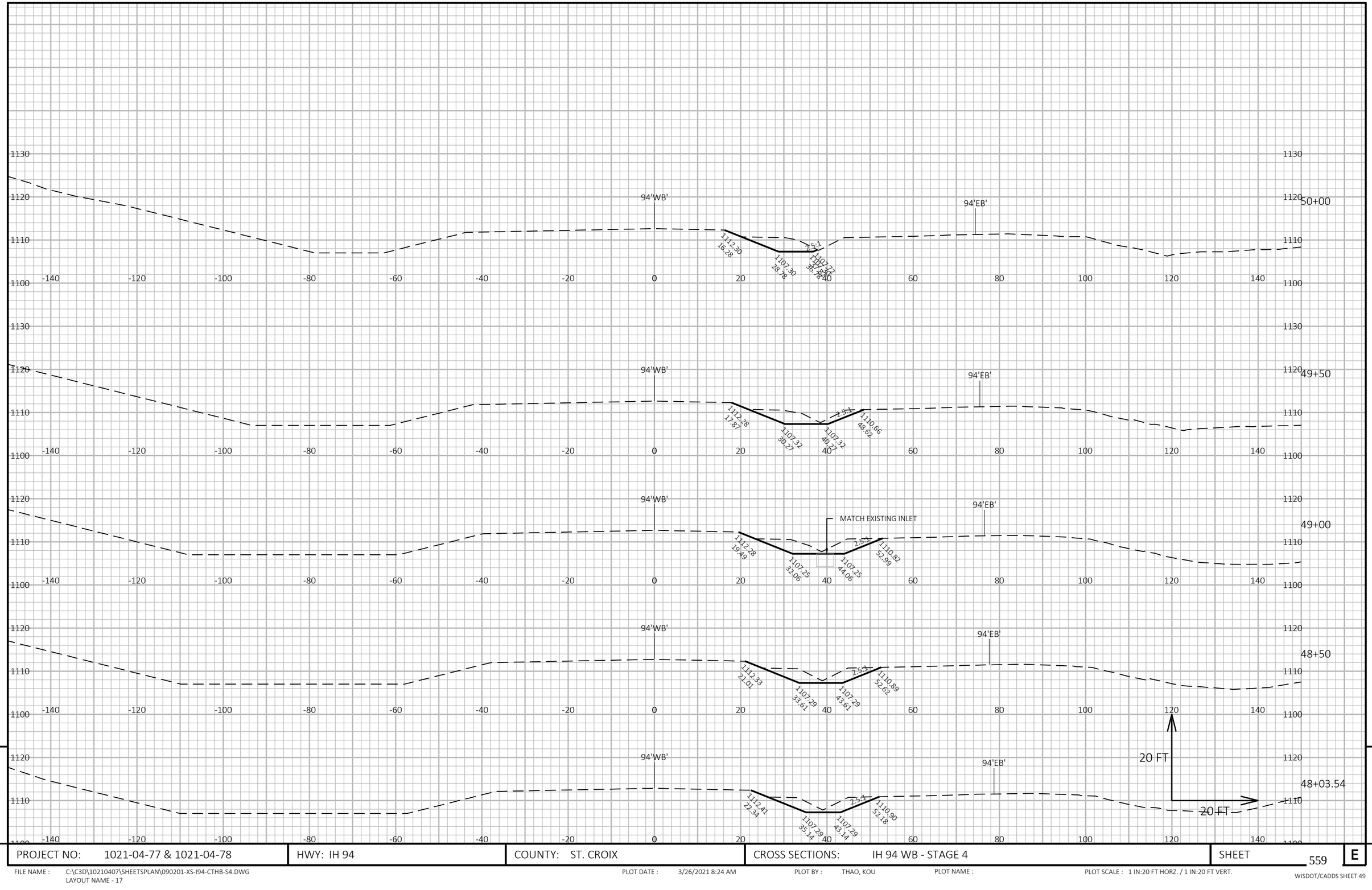
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 558	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 16

PLOT DATE : 3/26/2021 8:23 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

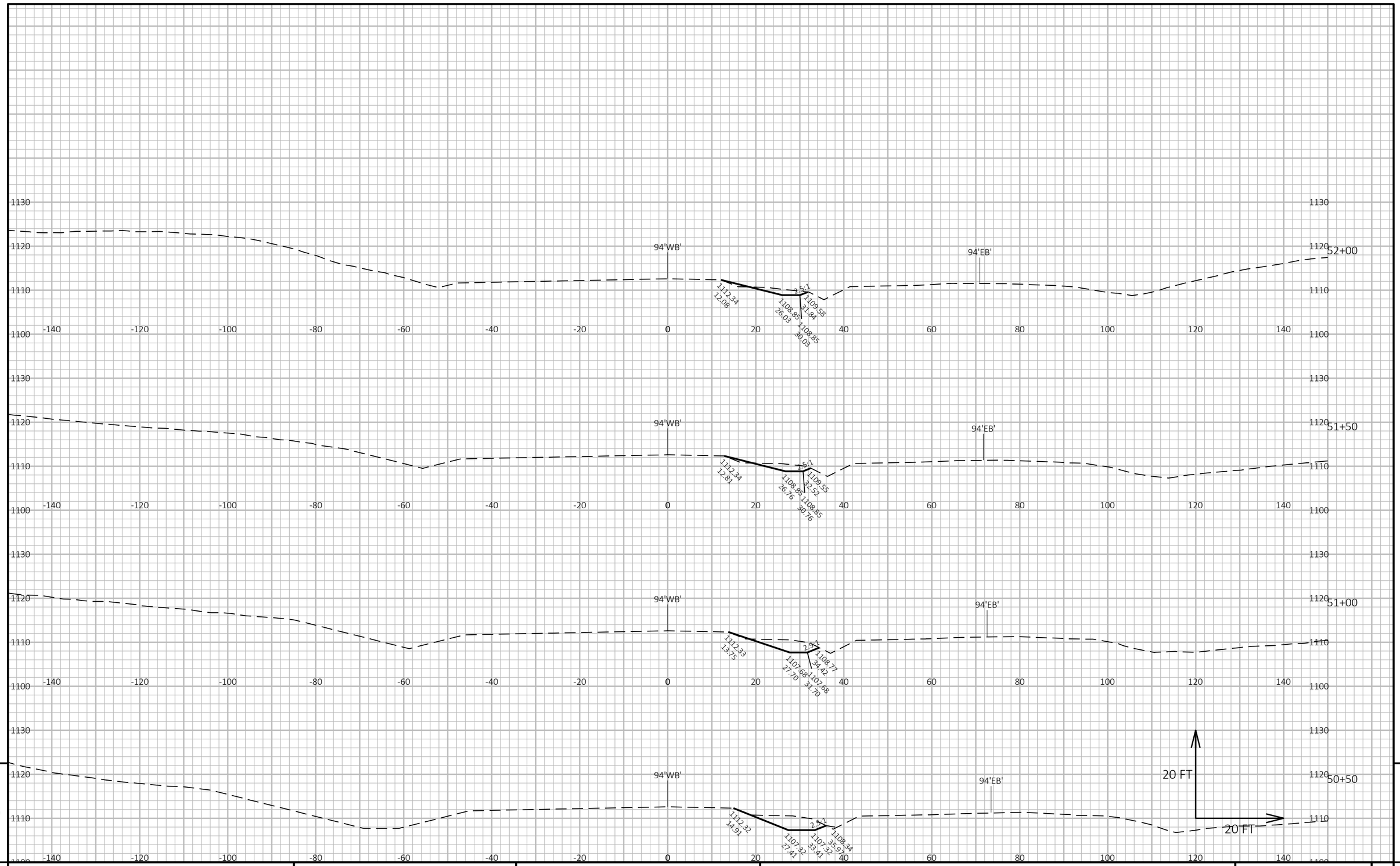
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 559	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 17

PLOT DATE : 3/26/2021 8:24 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

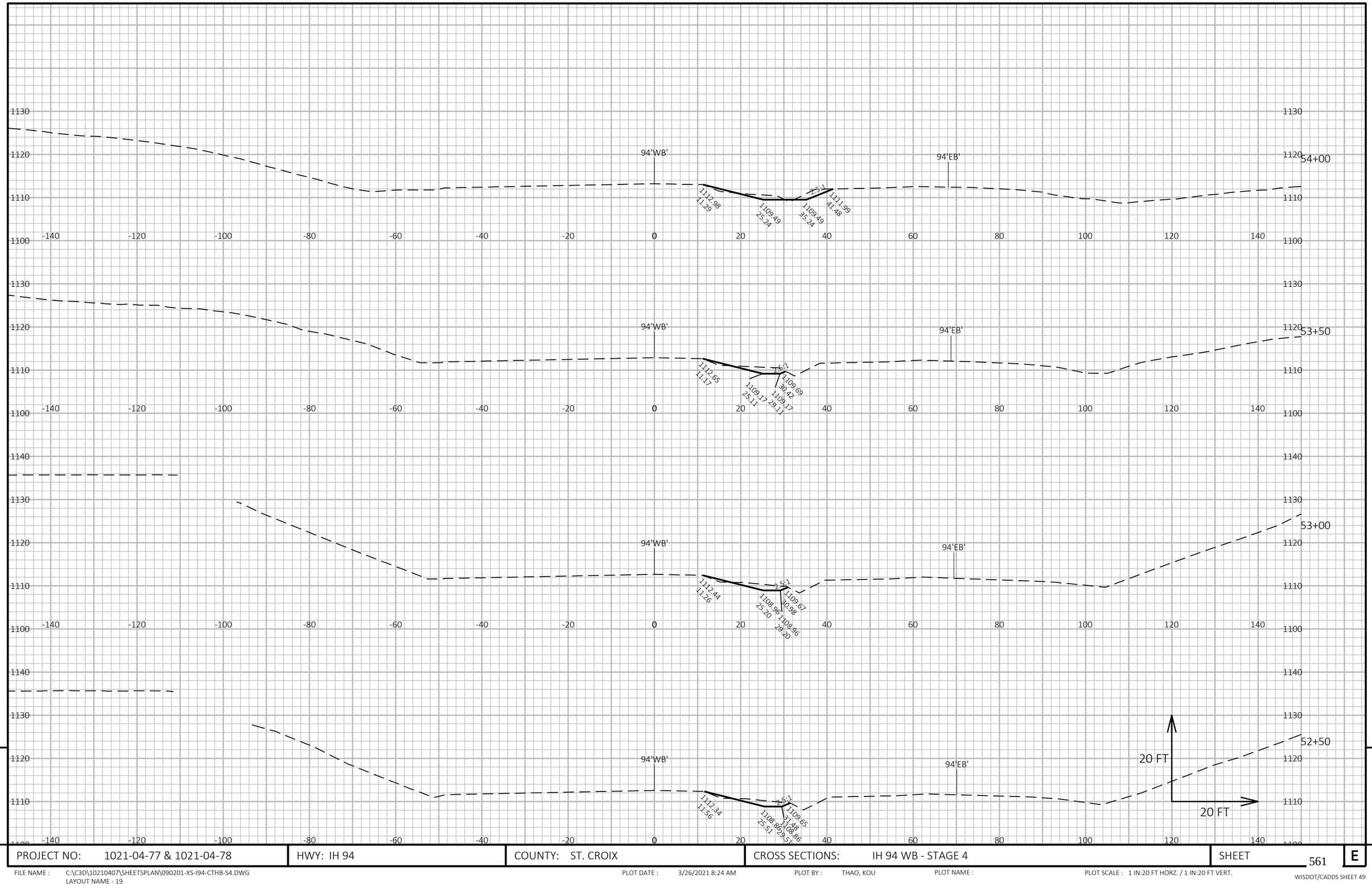


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 560	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 18

PLOT DATE : 3/26/2021 8:24 AM 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 WB - STAGE 4	SHEET 561	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 19

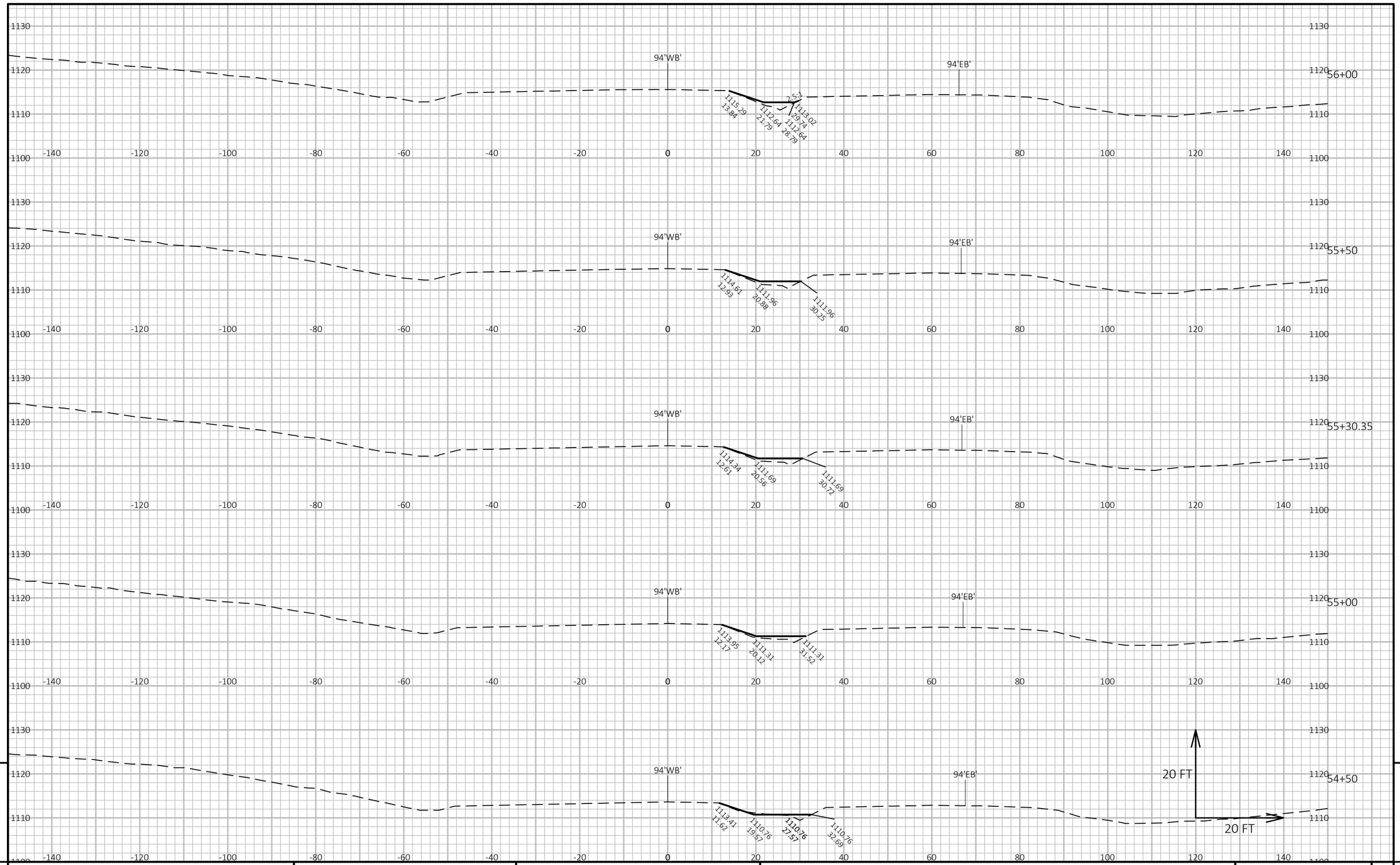
PLOT DATE : 3/26/2021 8:24 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

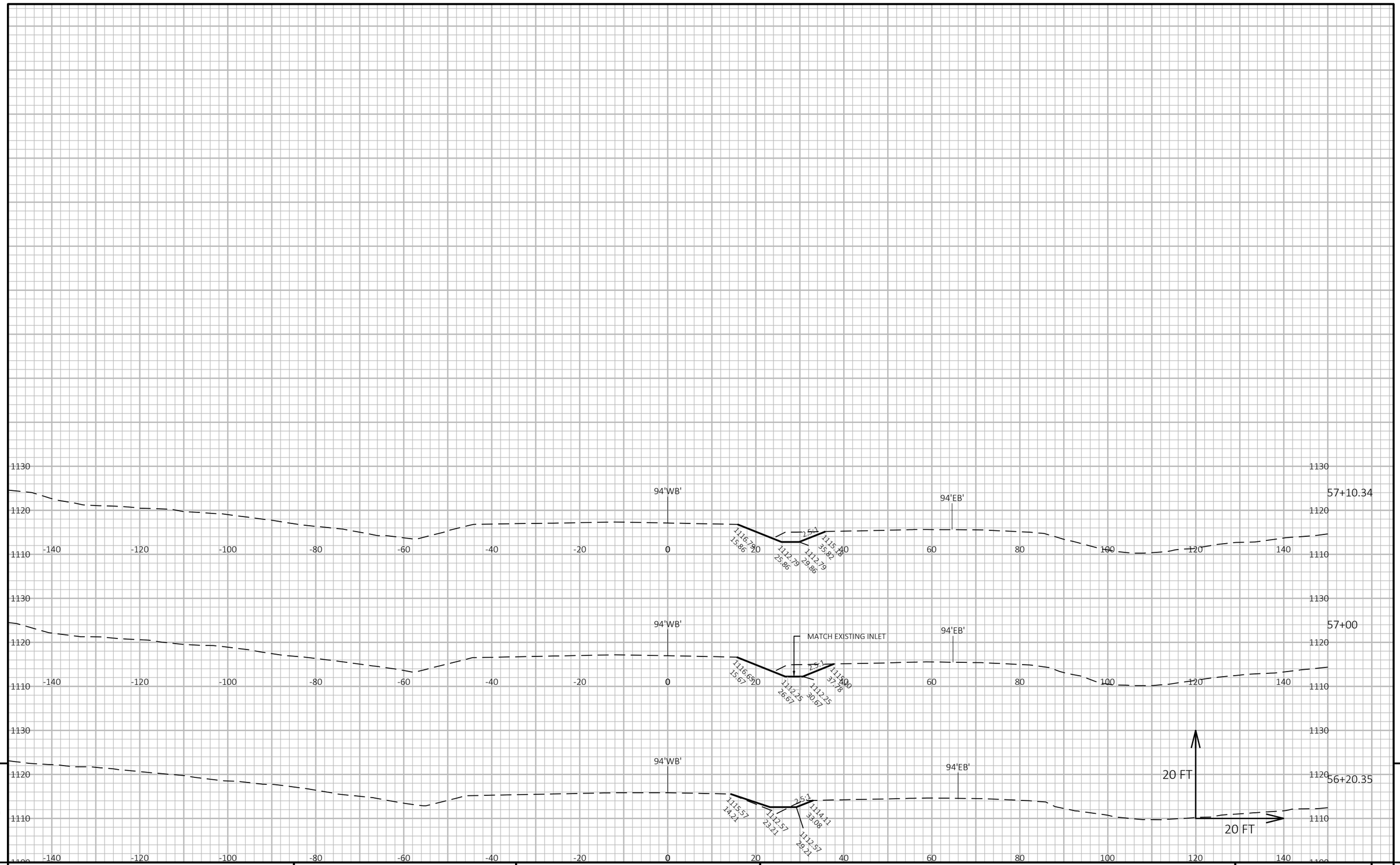


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 562	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 20

PLOT DATE : 3/26/2021 8:25 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

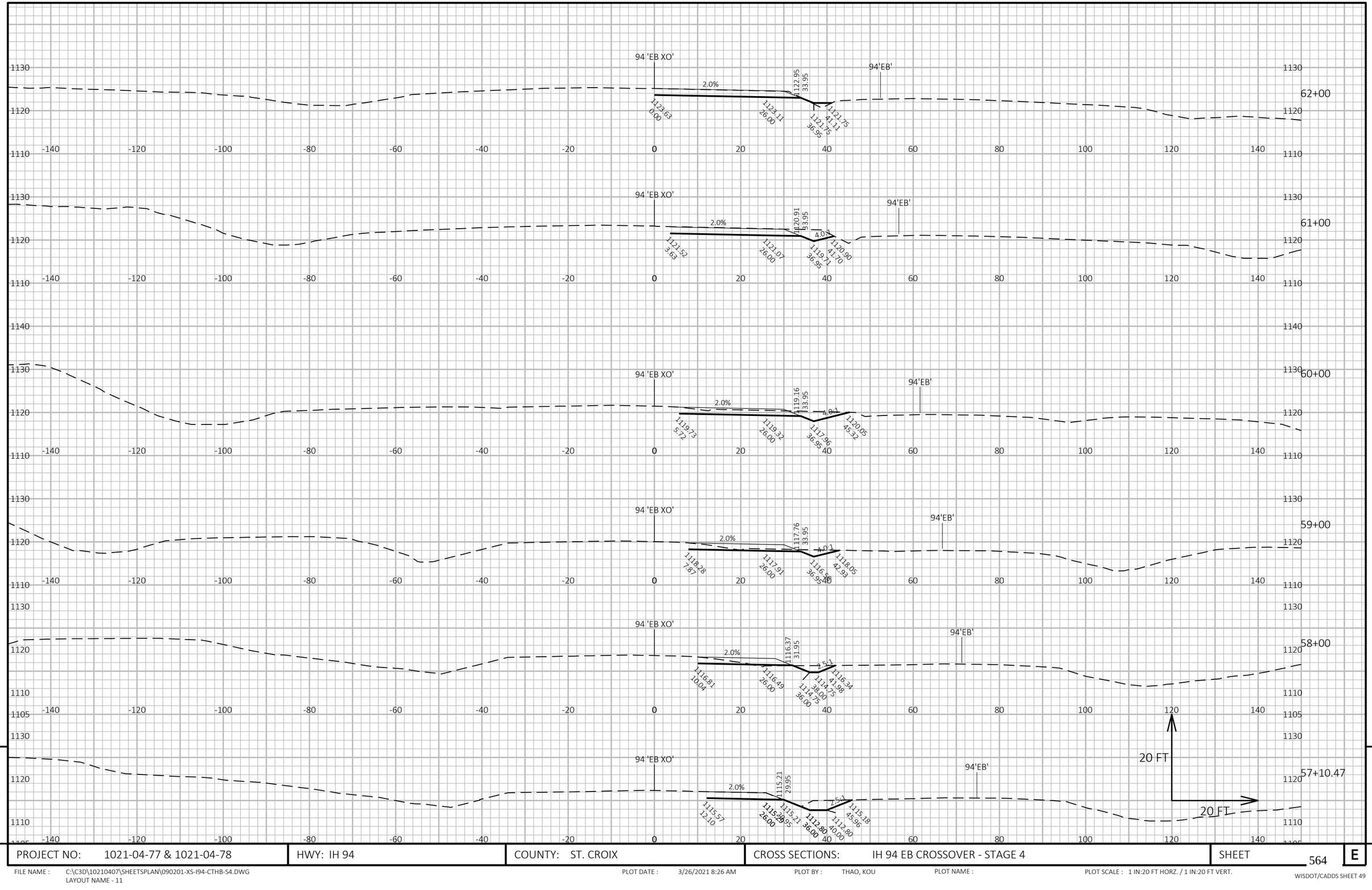
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 4	SHEET 563	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 21

PLOT DATE : 3/26/2021 8:25 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

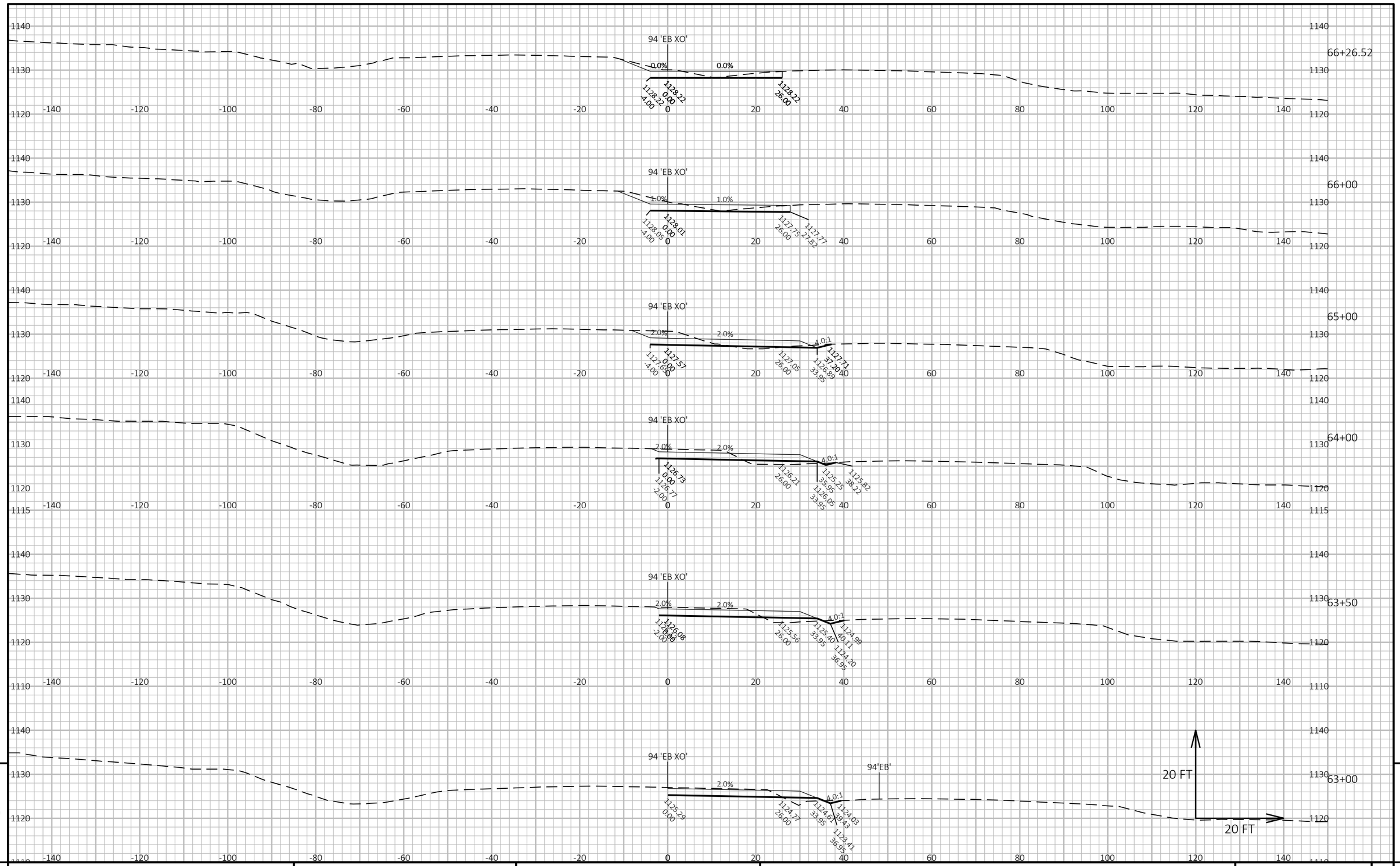


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 564	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 11

PLOT DATE : 3/26/2021 8:26 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

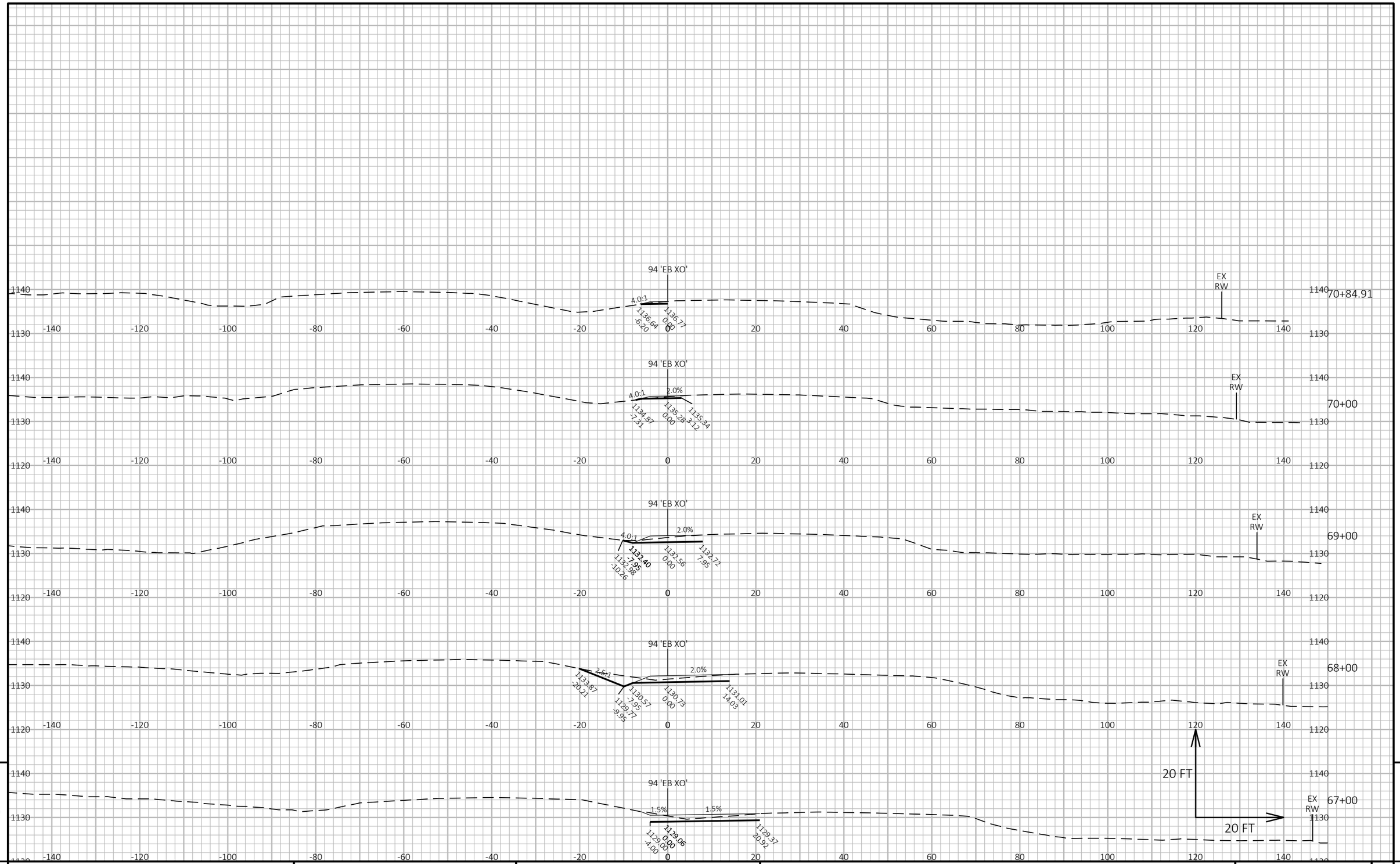
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 565	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 12

PLOT DATE : 3/26/2021 8:26 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

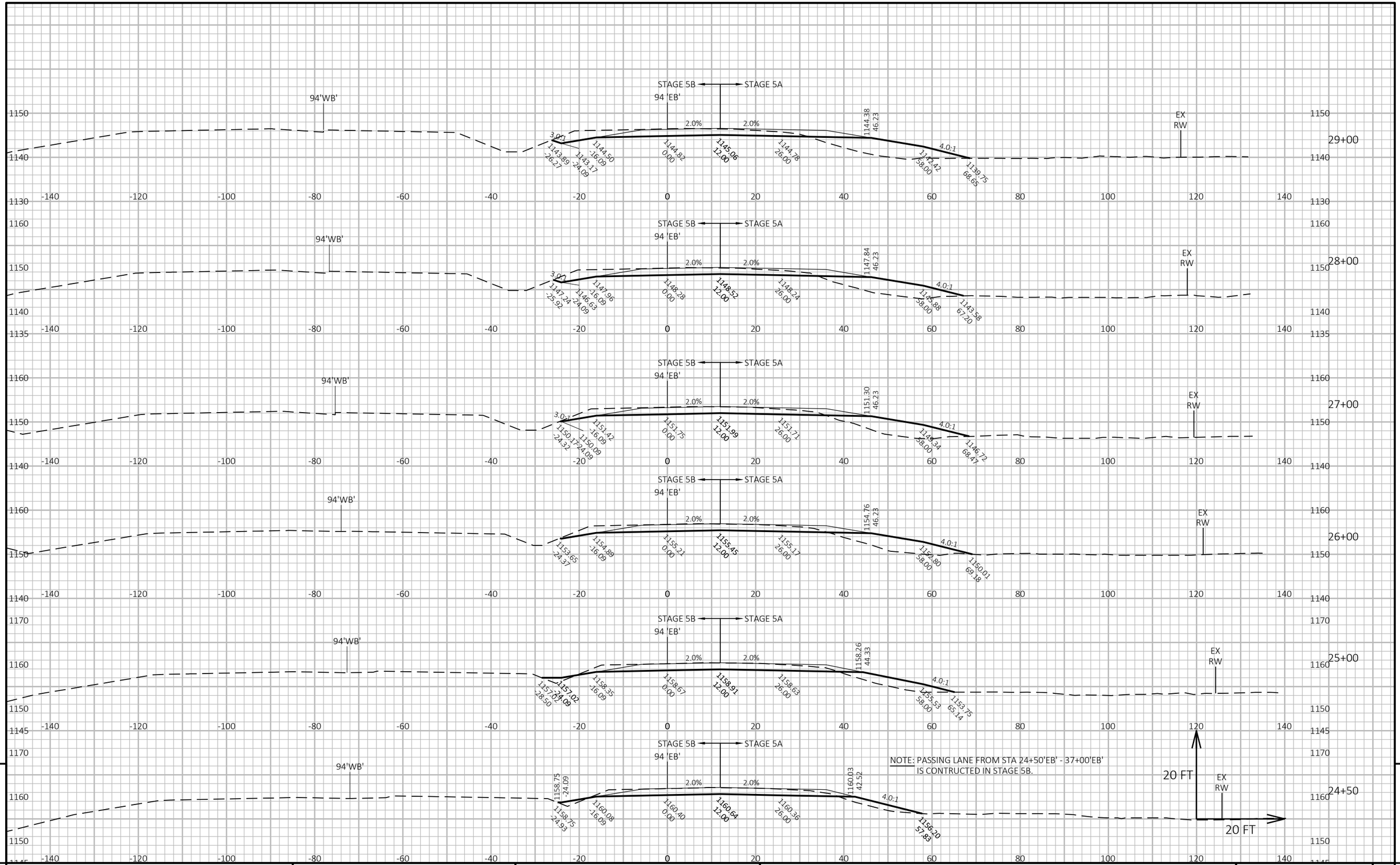


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB CROSSOVER - STAGE 4	SHEET 566 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S4.DWG
LAYOUT NAME - 13

PLOT DATE : 3/26/2021 8:26 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

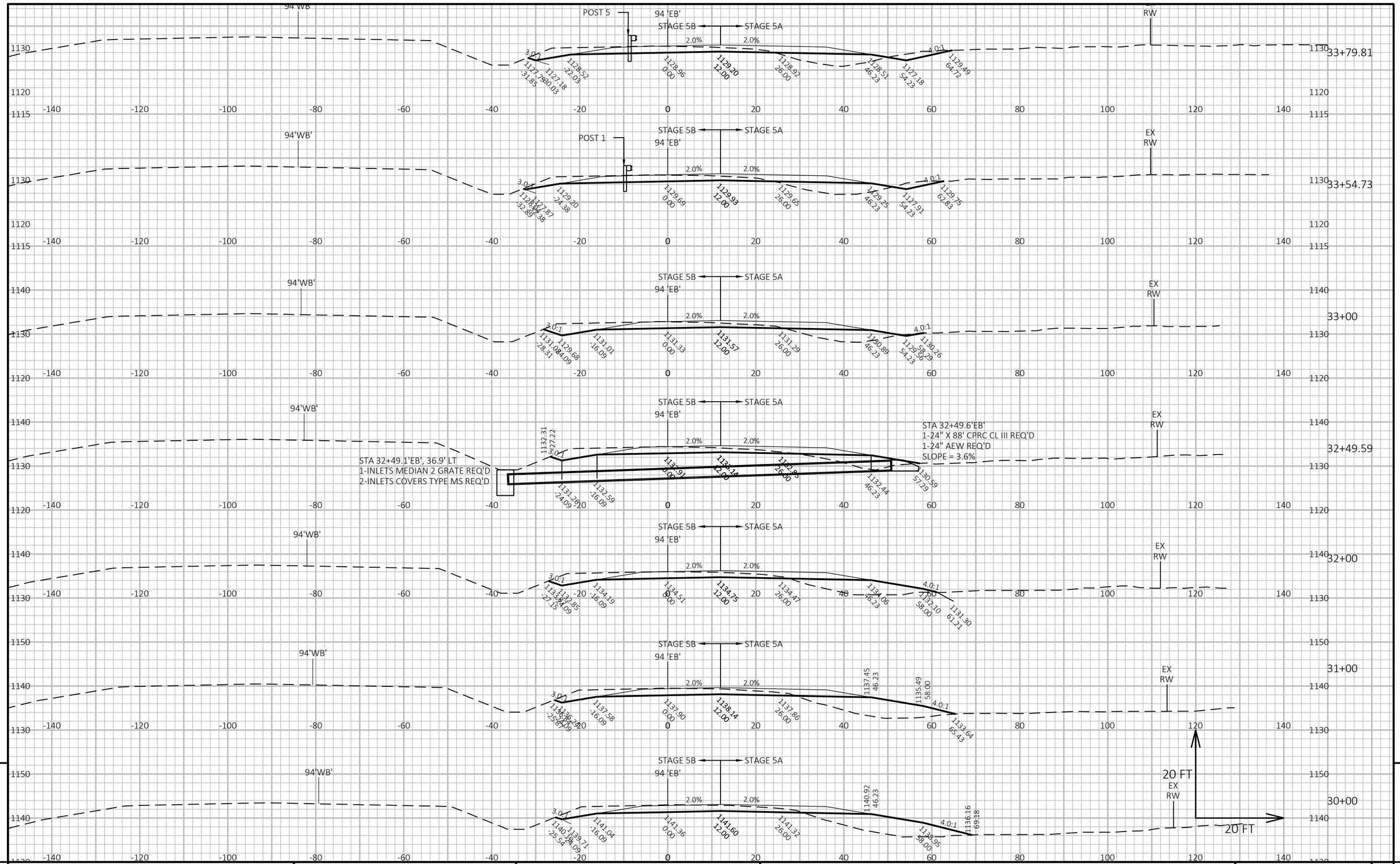
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 567	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 1

PLOT DATE : 3/15/2021 12:19 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

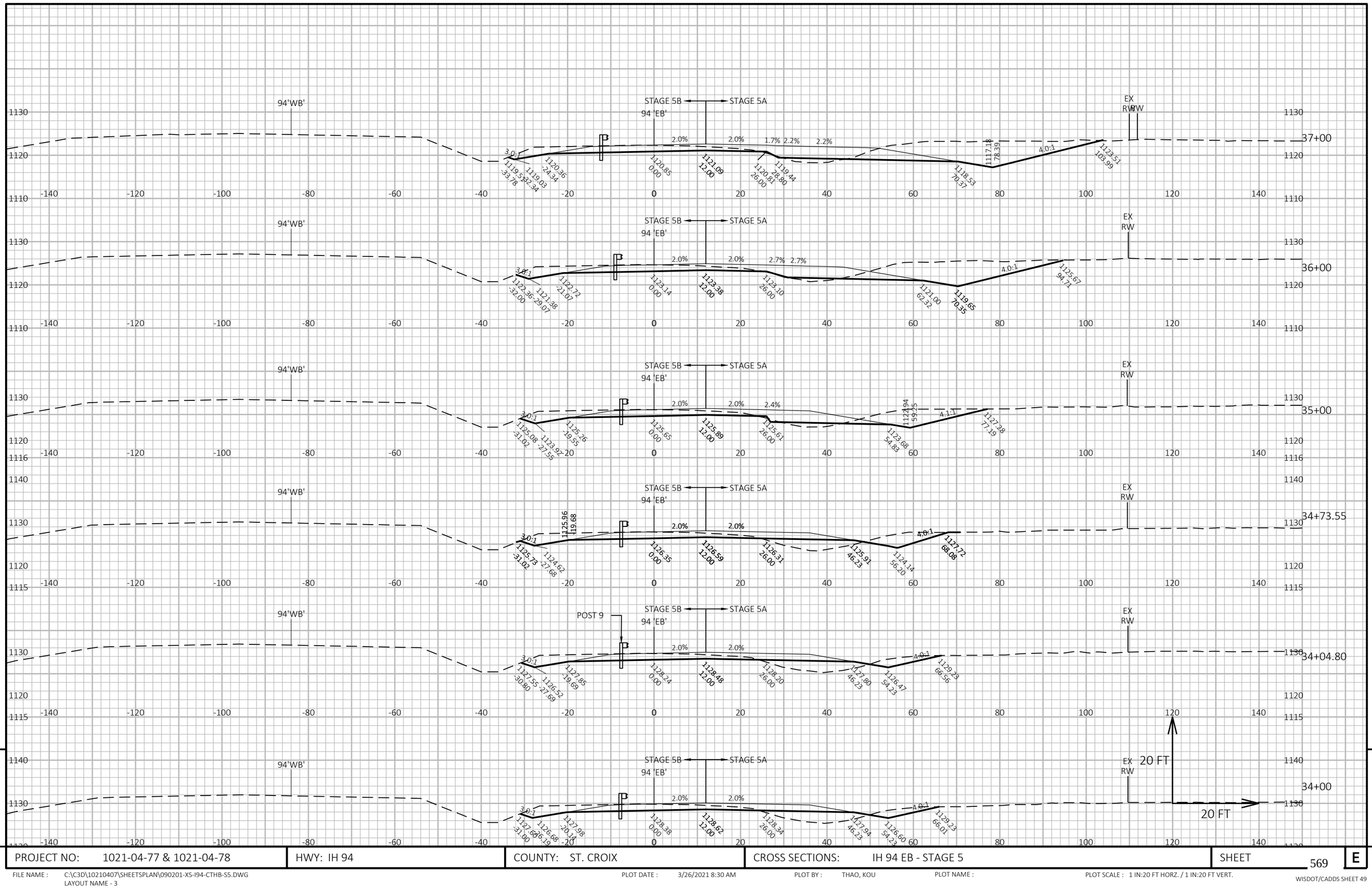


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 568	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 2

PLOT DATE : 3/15/2021 12:19 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

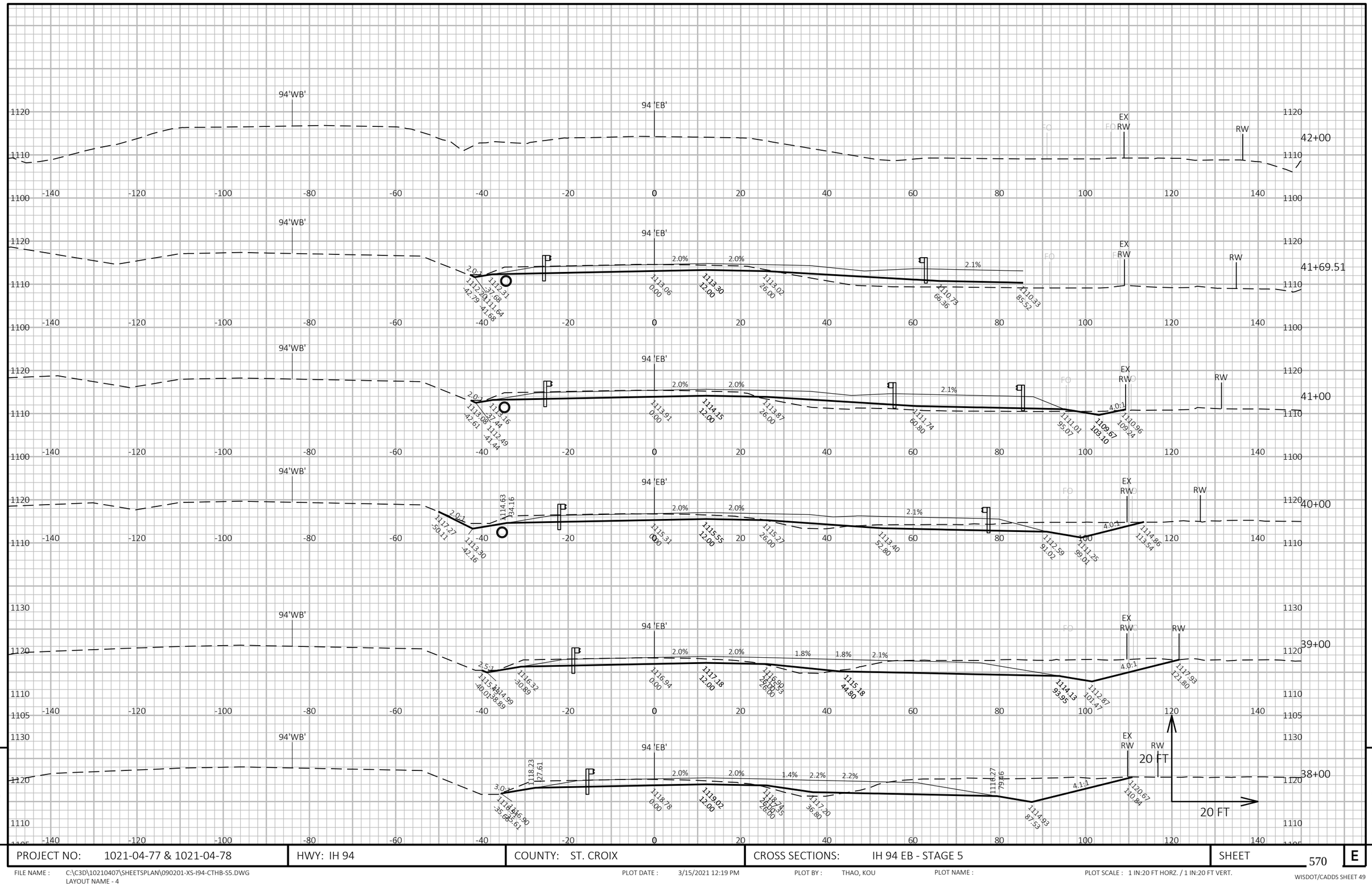
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 569	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 3

PLOT DATE : 3/26/2021 8:30 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

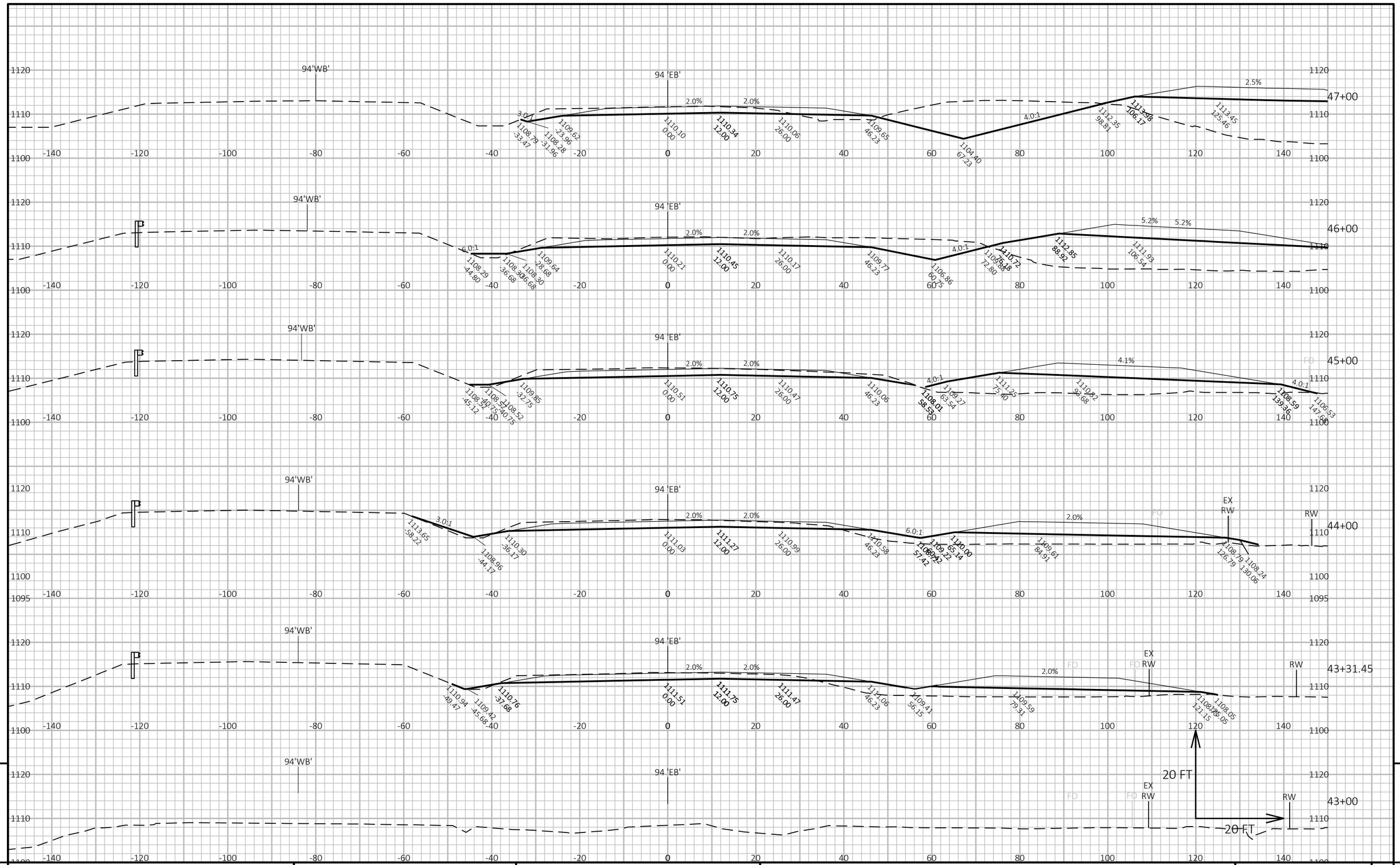
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 570	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 4

PLOT DATE : 3/15/2021 12:19 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 571	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 5

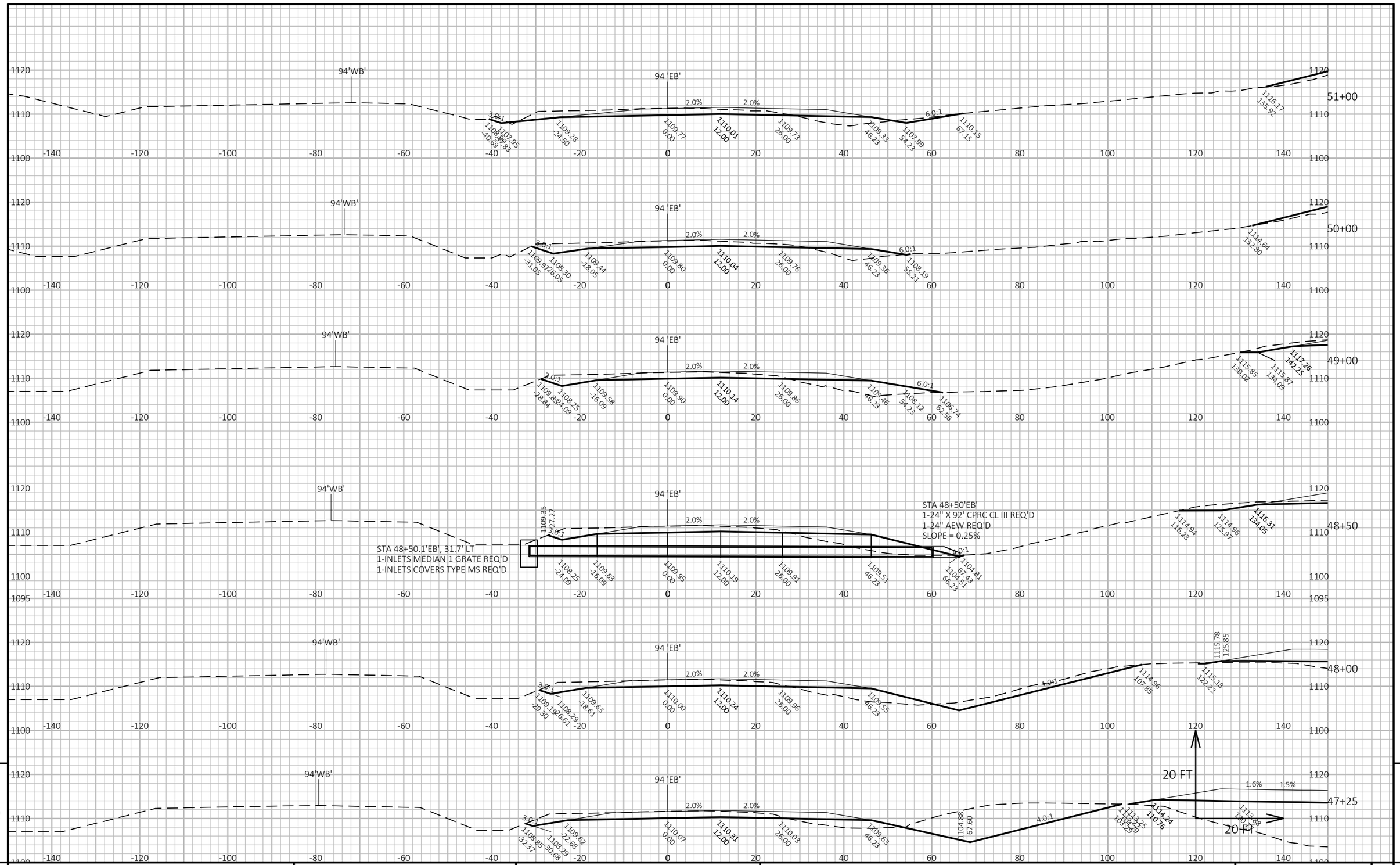
PLOT DATE : 3/15/2021 12:19 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

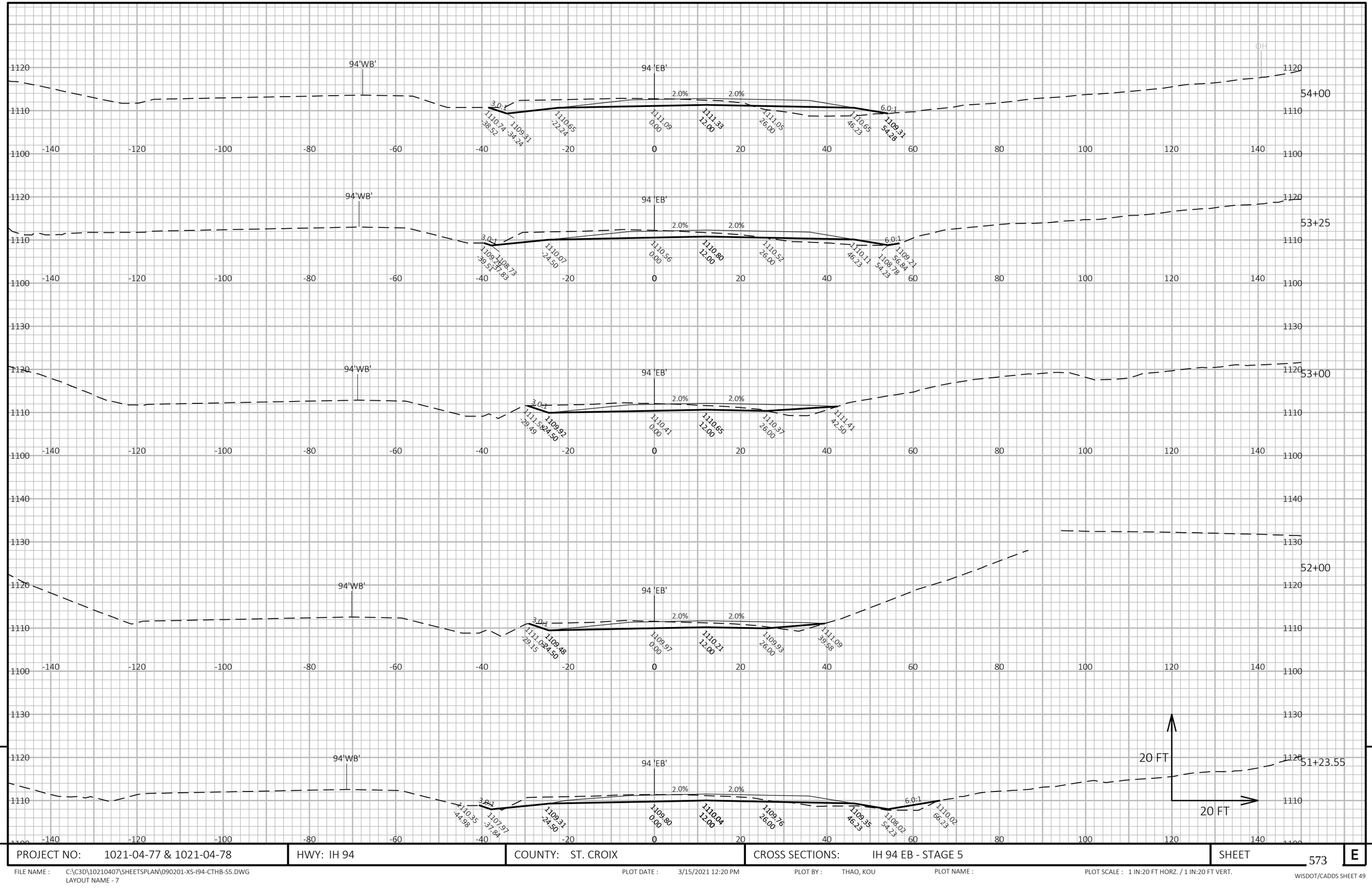


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 572	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 6

PLOT DATE : 3/15/2021 12:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

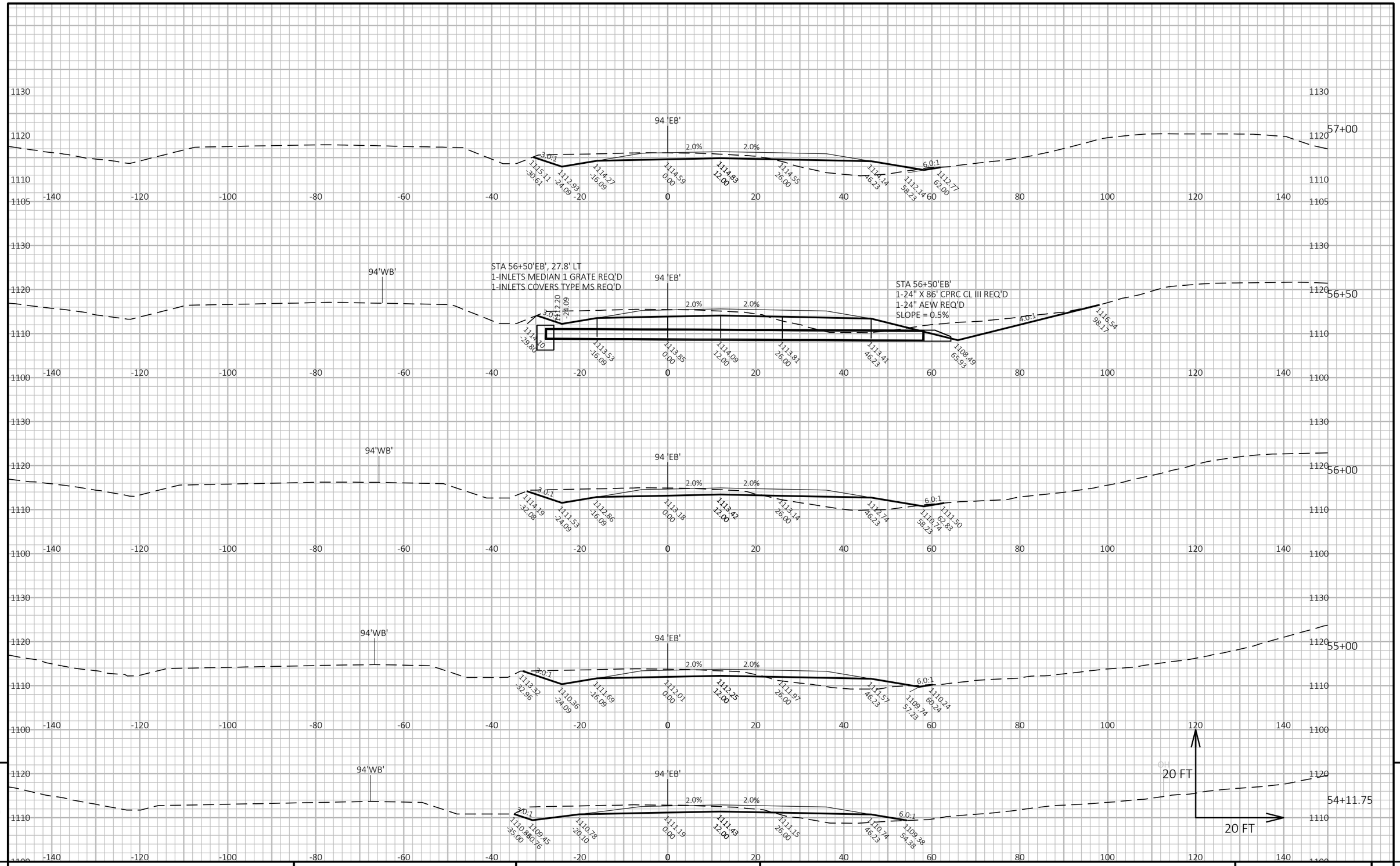


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 573 E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 7

PLOT DATE : 3/15/2021 12:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 574	E

9

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 8

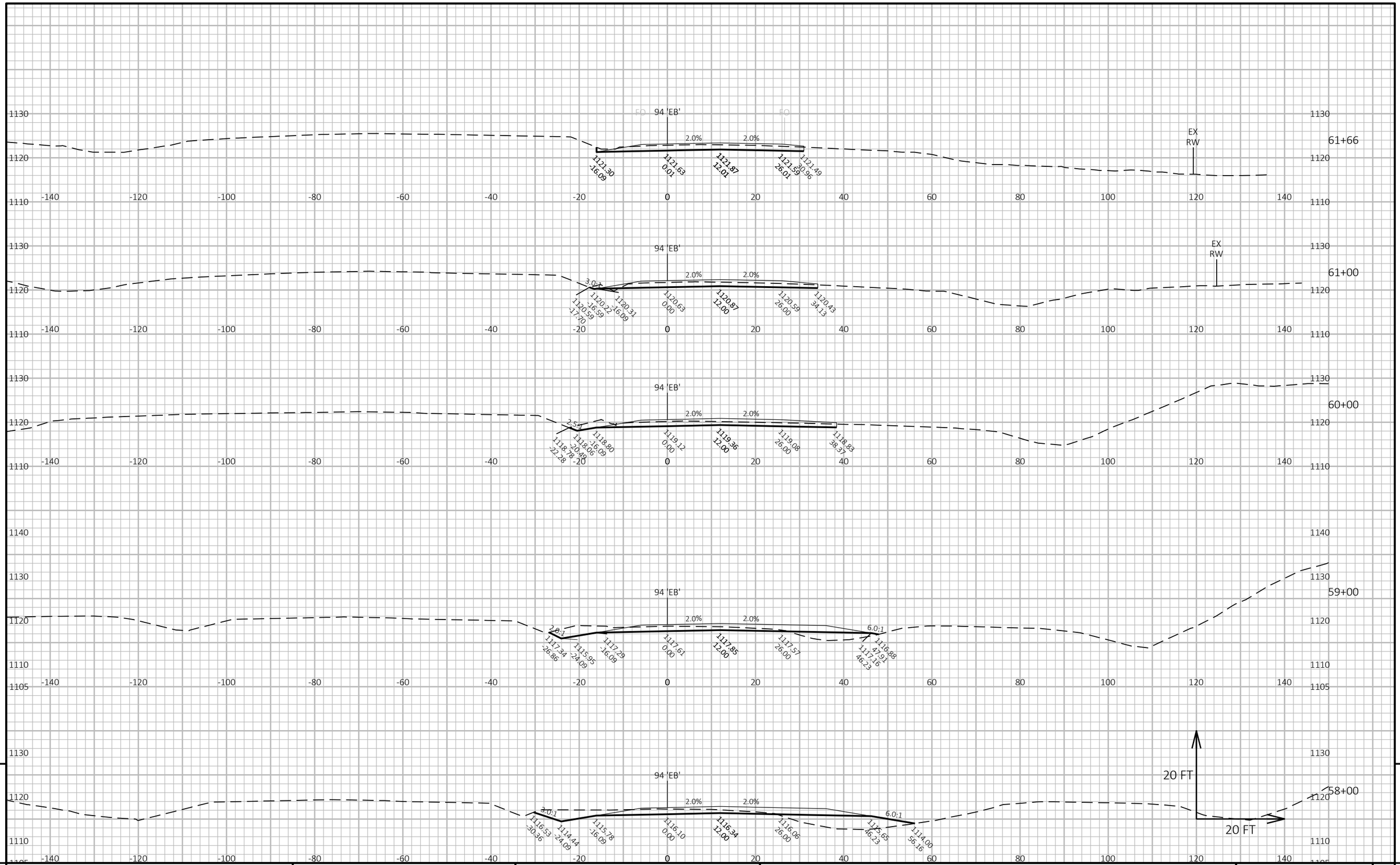
PLOT DATE : 3/15/2021 12:20 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

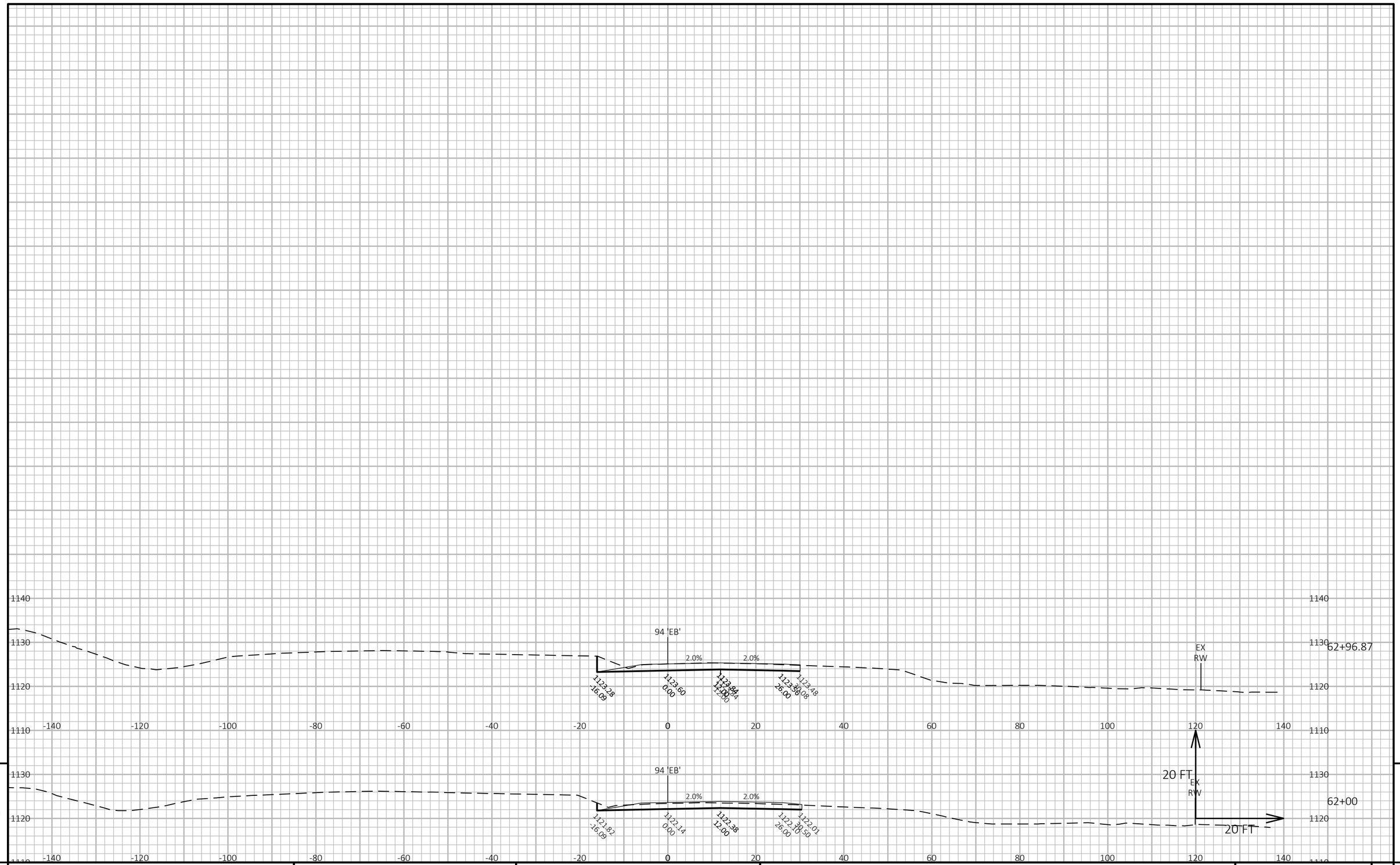


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 575	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 8 (2)

PLOT DATE : 3/15/2021 12:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



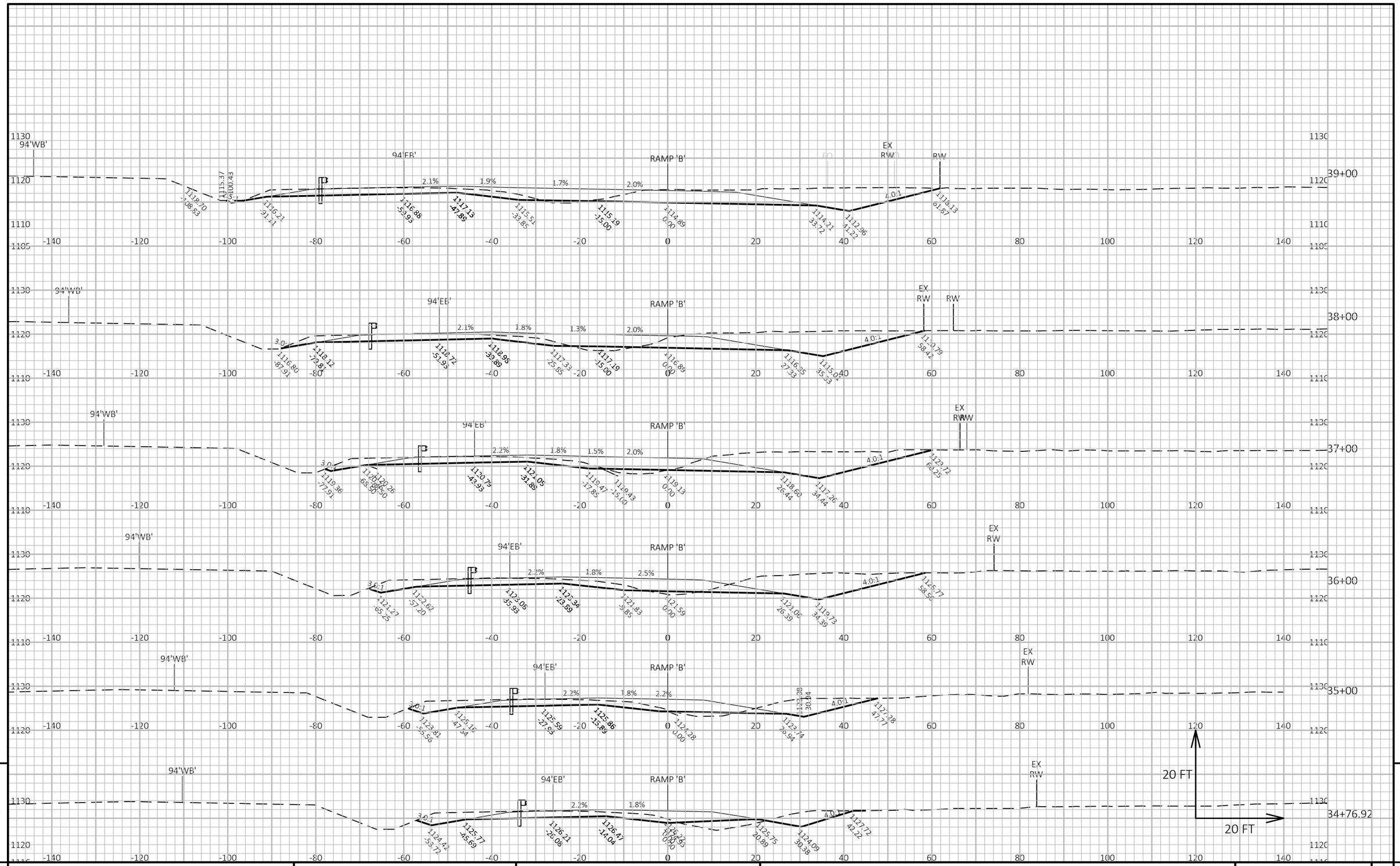
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 EB - STAGE 5	SHEET 576	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 8 (3)

PLOT DATE : 3/15/2021 12:20 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP B - STAGE 5	SHEET 577	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 9

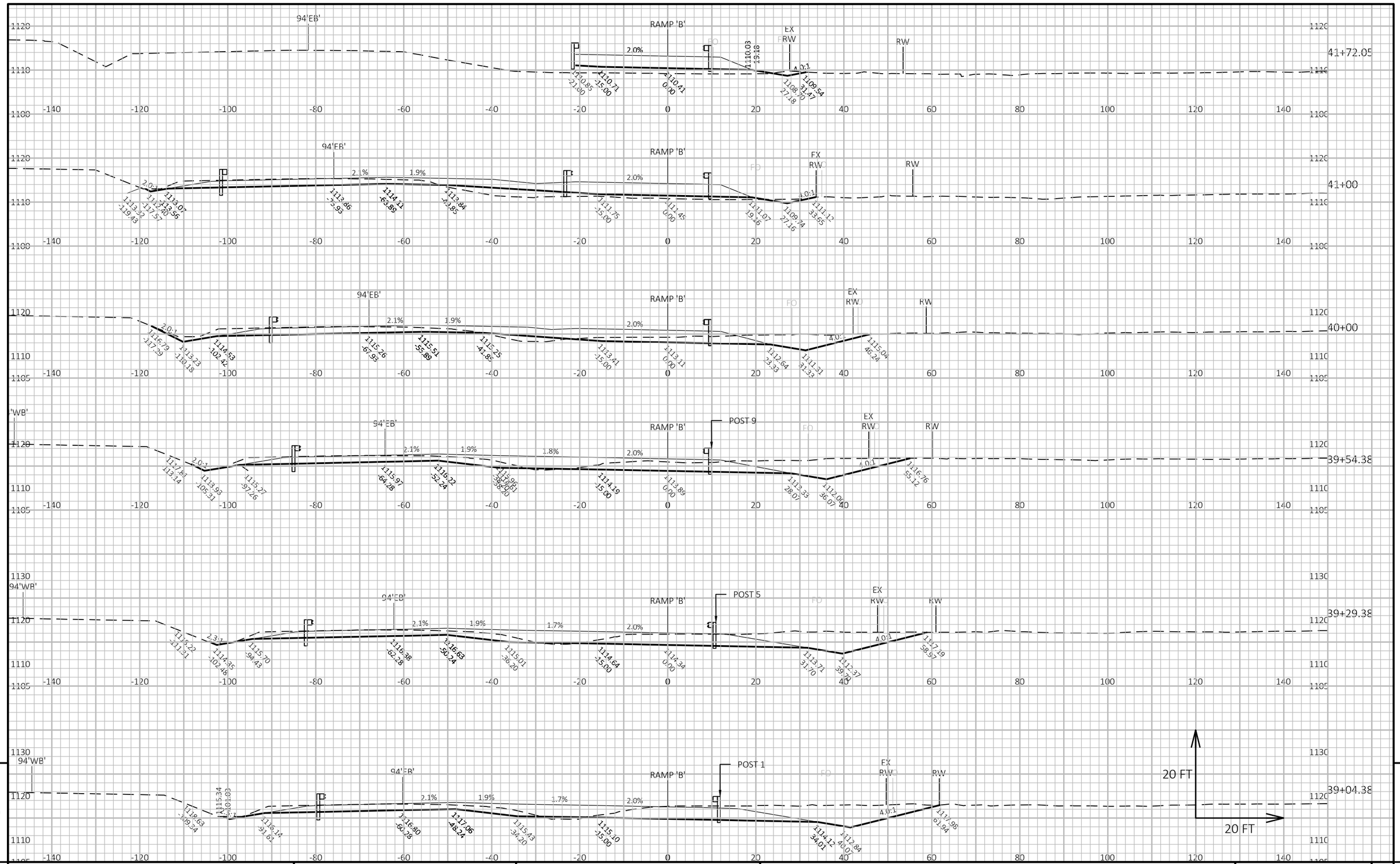
PLOT DATE : 3/15/2021 12:20 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP B - STAGE 5	SHEET 578	E

9

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 10

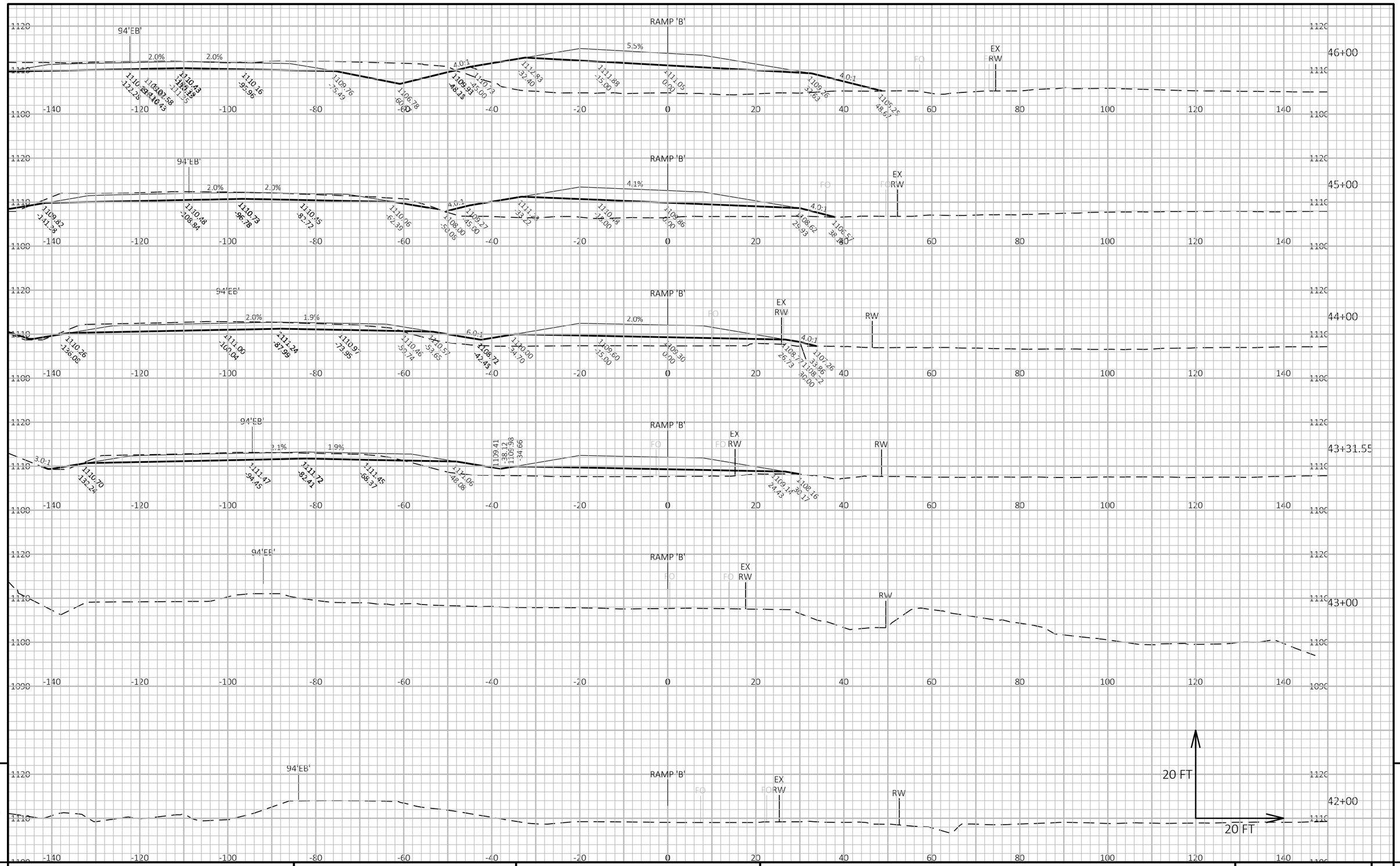
PLOT DATE : 3/15/2021 12:20 PM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

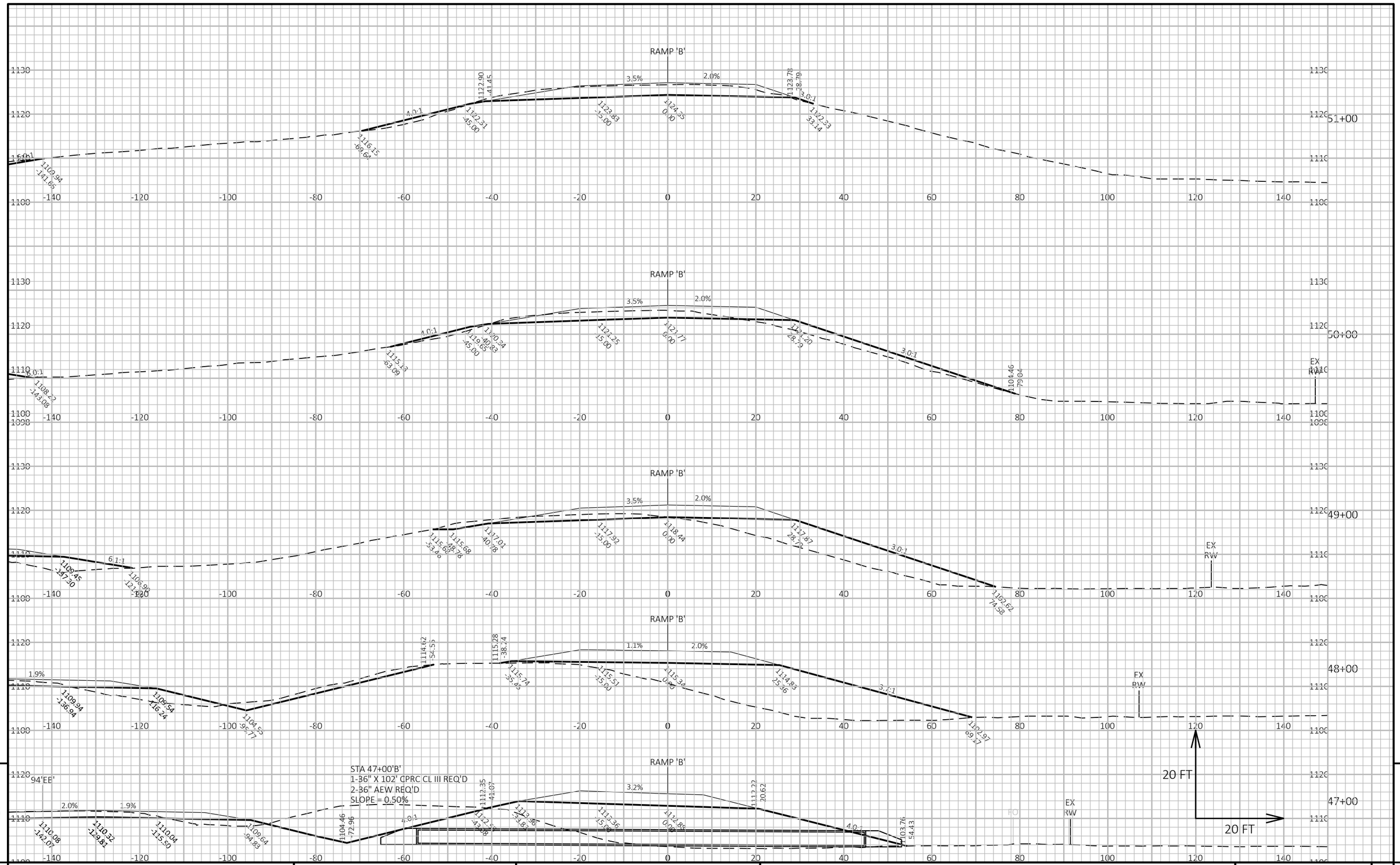


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP B - STAGE 5	SHEET 579	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 11

PLOT DATE : 3/15/2021 12:21 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

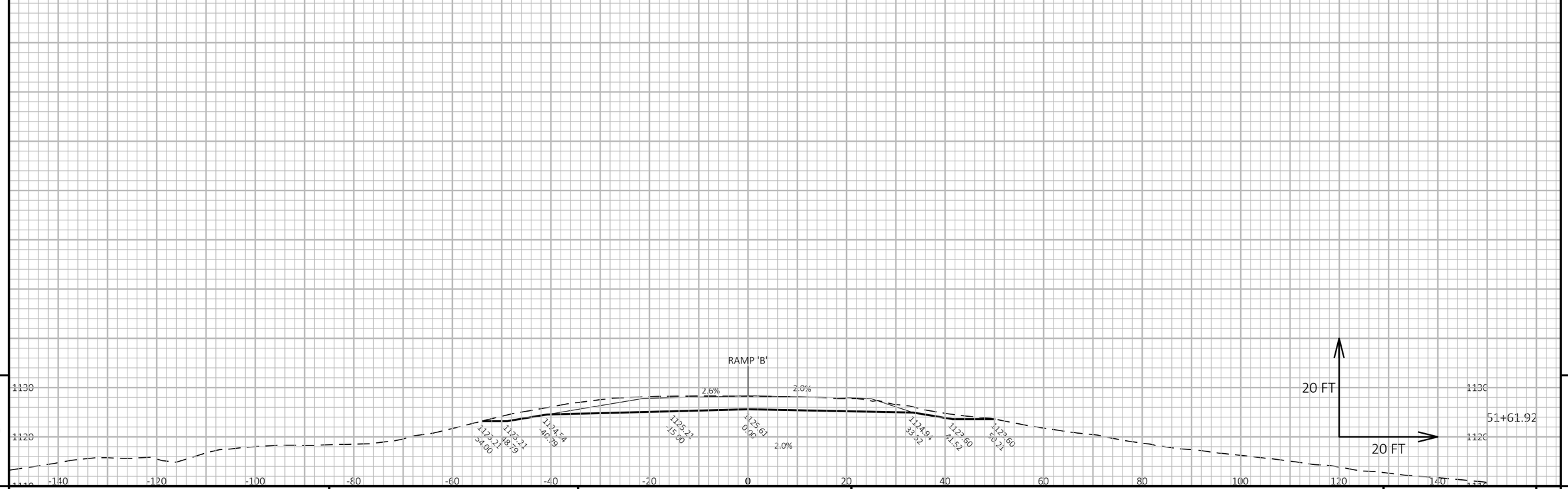
PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP B - STAGE 5	SHEET 580	E

9

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 12

PLOT DATE : 3/15/2021 12:21 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

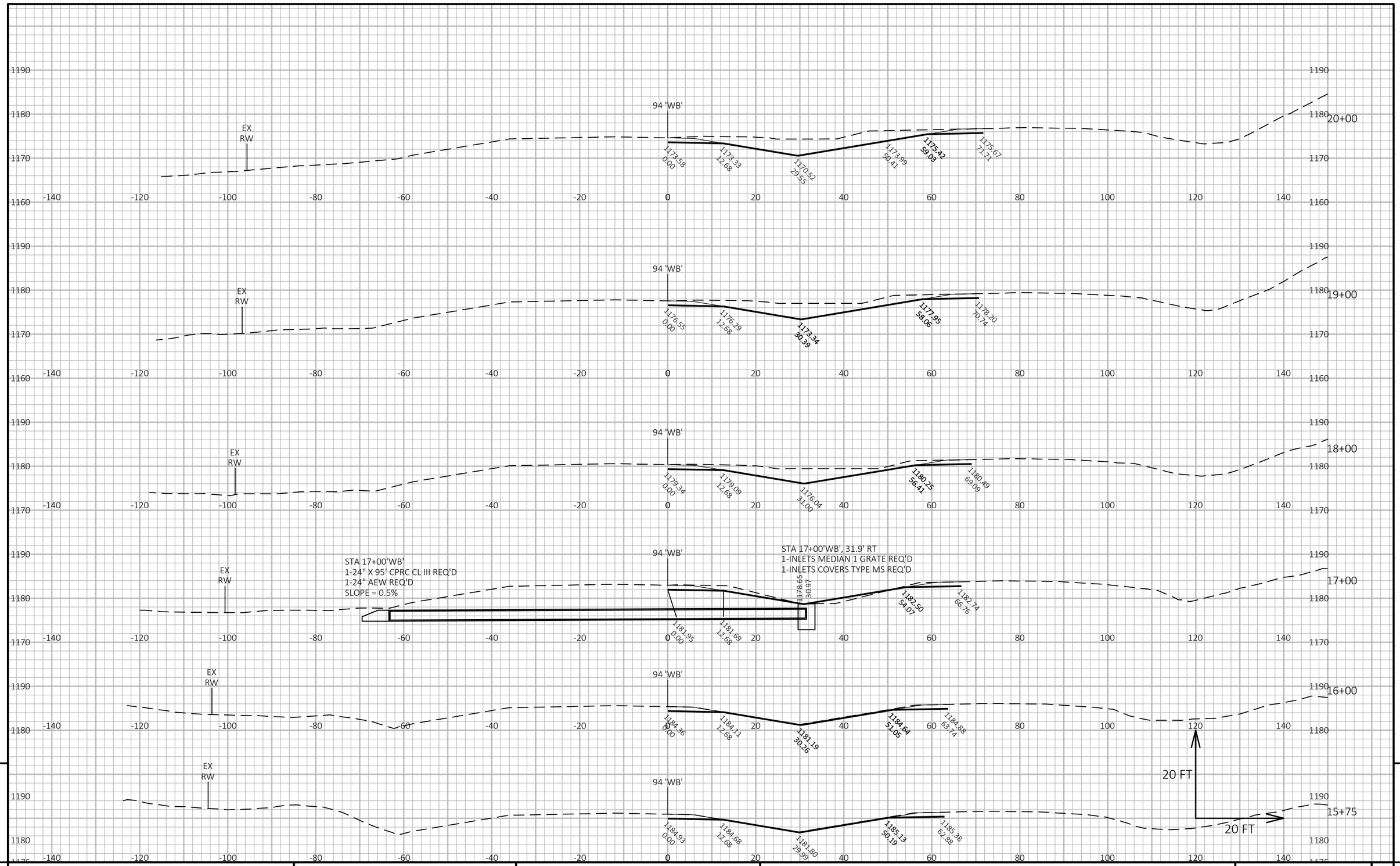


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP B - STAGE 5	SHEET 581	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S5.DWG
LAYOUT NAME - 13

PLOT DATE : 3/15/2021 12:21 PM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

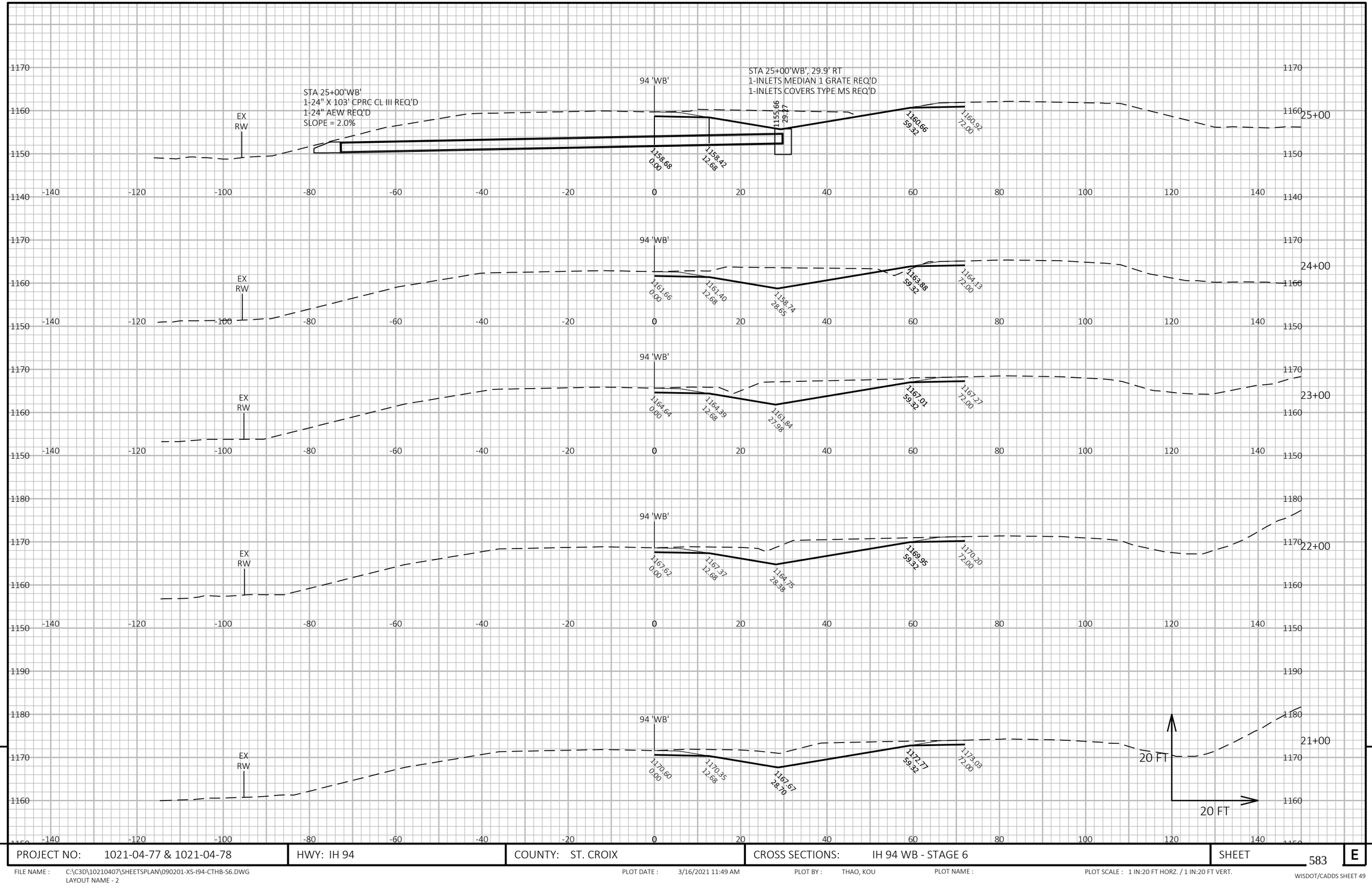
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 582	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 1

PLOT DATE : 3/16/2021 11:49 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

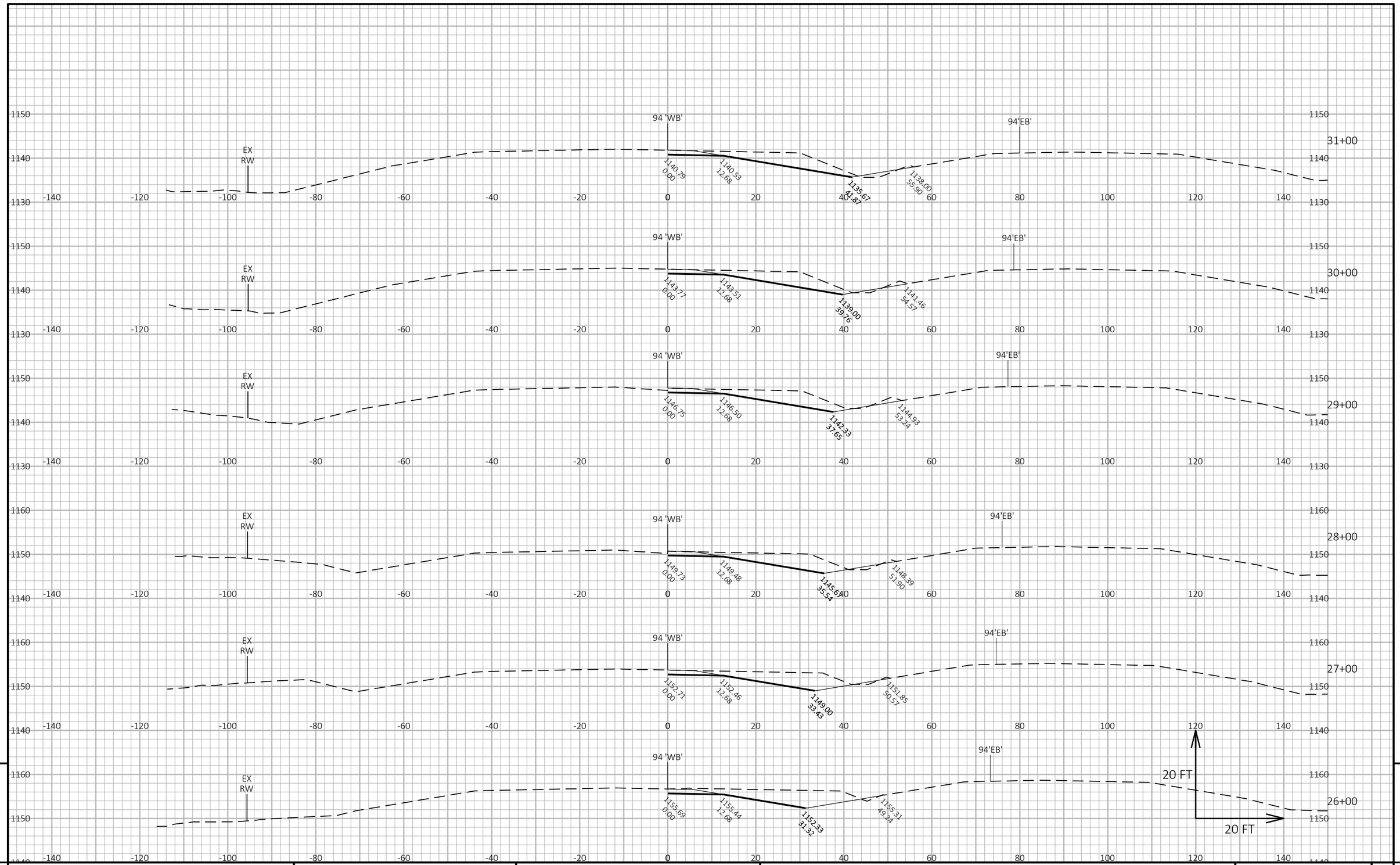


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 583	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 2

PLOT DATE : 3/16/2021 11:49 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

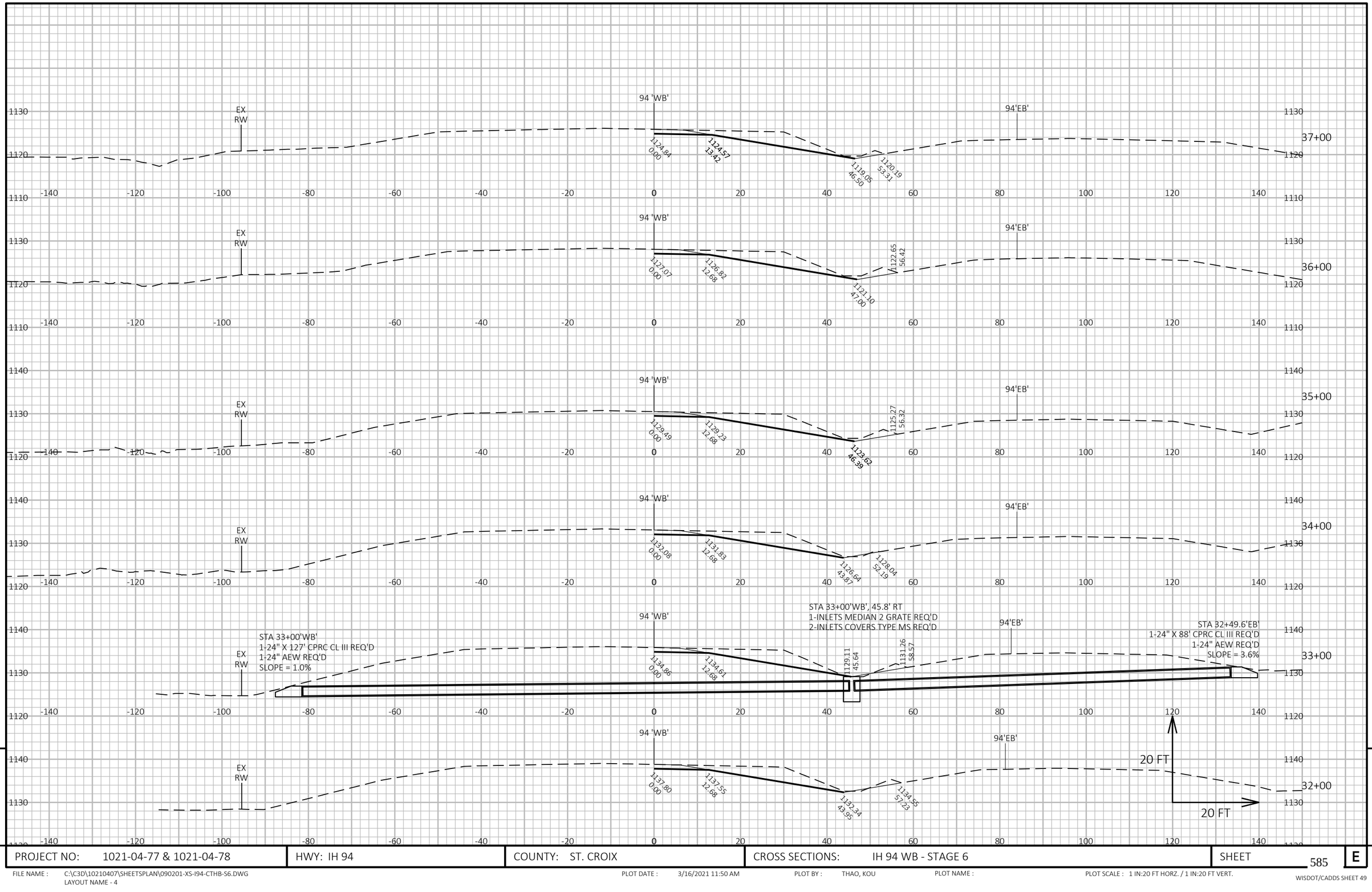
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 584	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 3

PLOT DATE : 3/16/2021 11:50 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

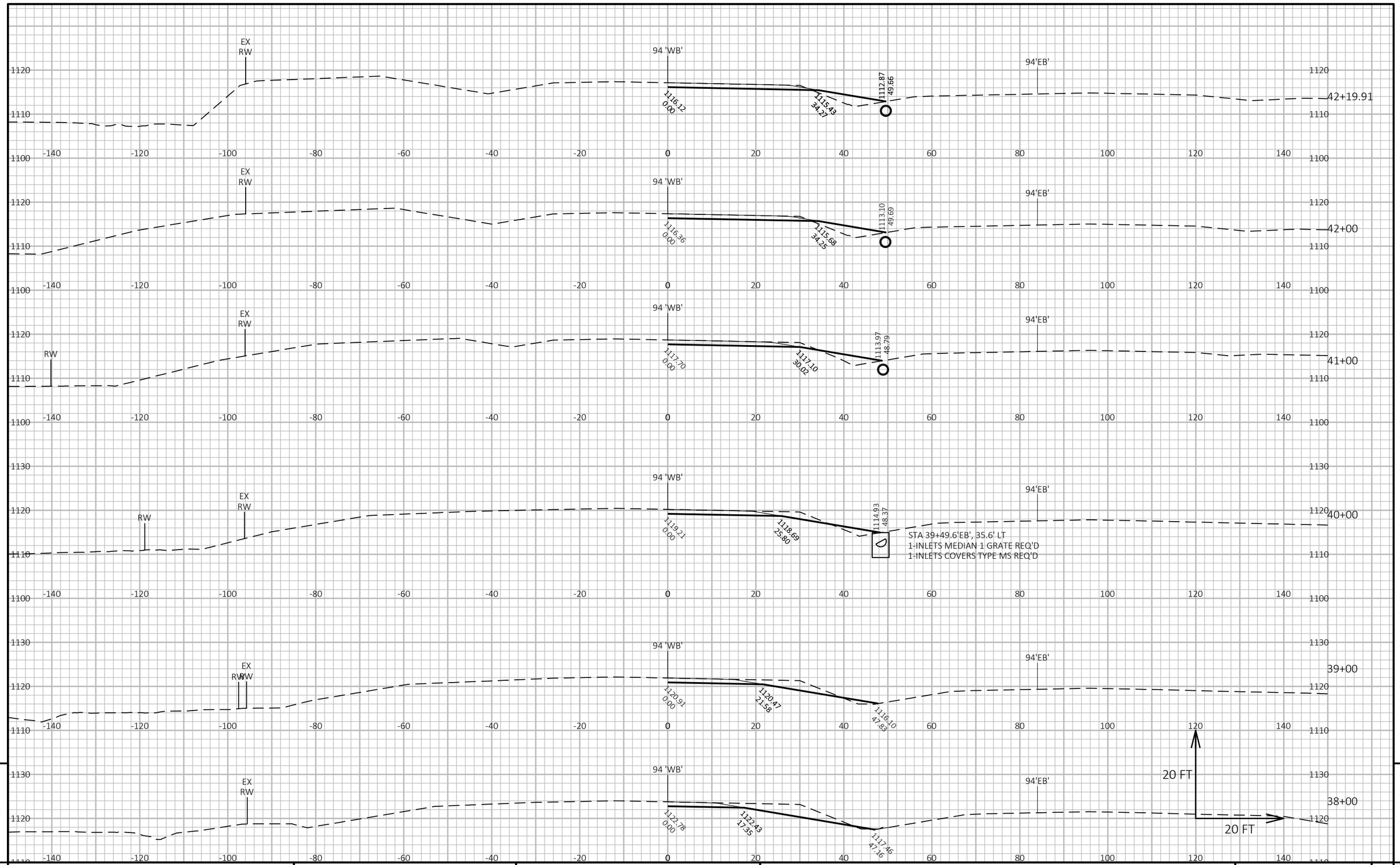


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 585	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 4

PLOT DATE : 3/16/2021 11:50 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

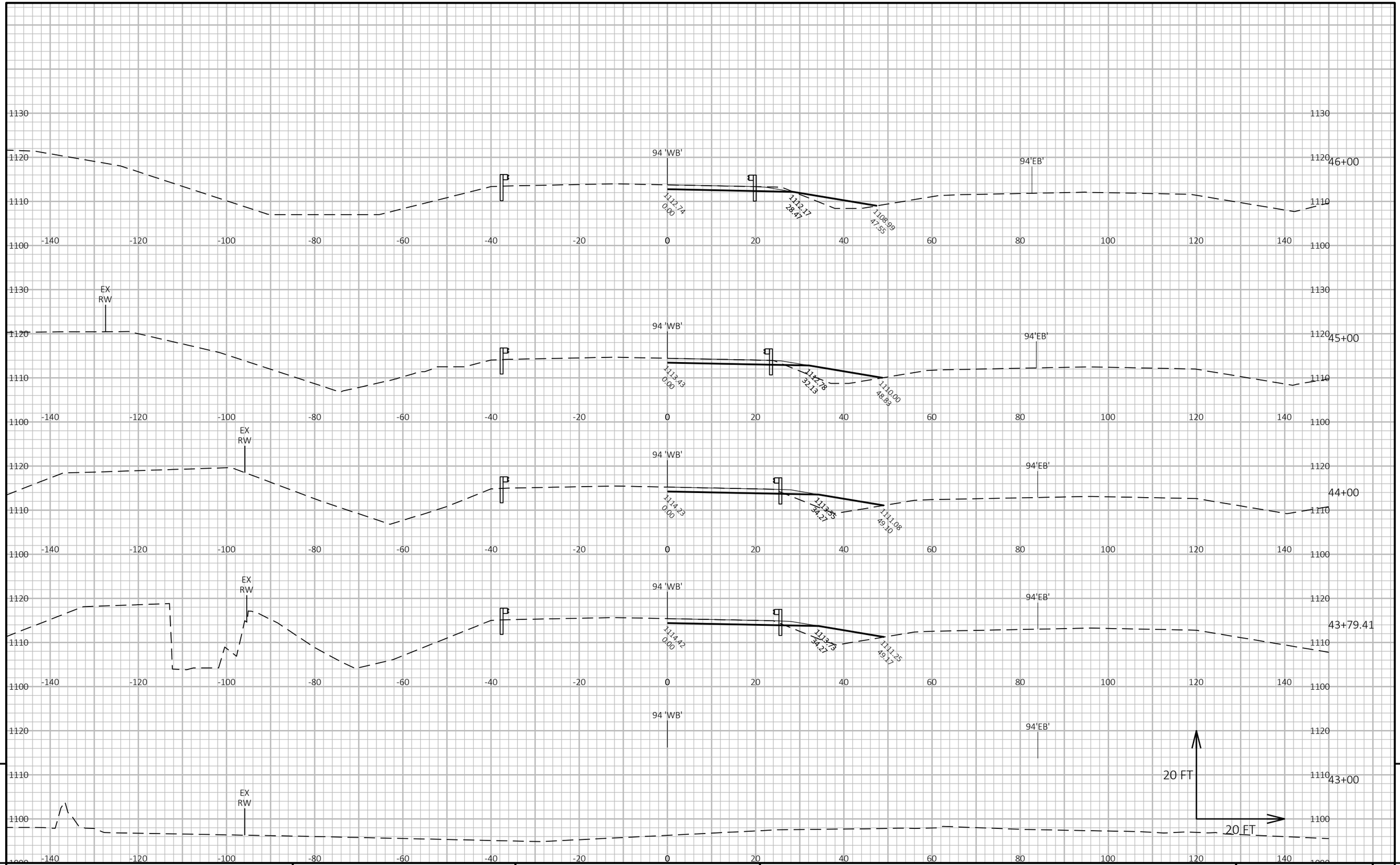
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 586	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 5

PLOT DATE : 3/16/2021 11:50 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

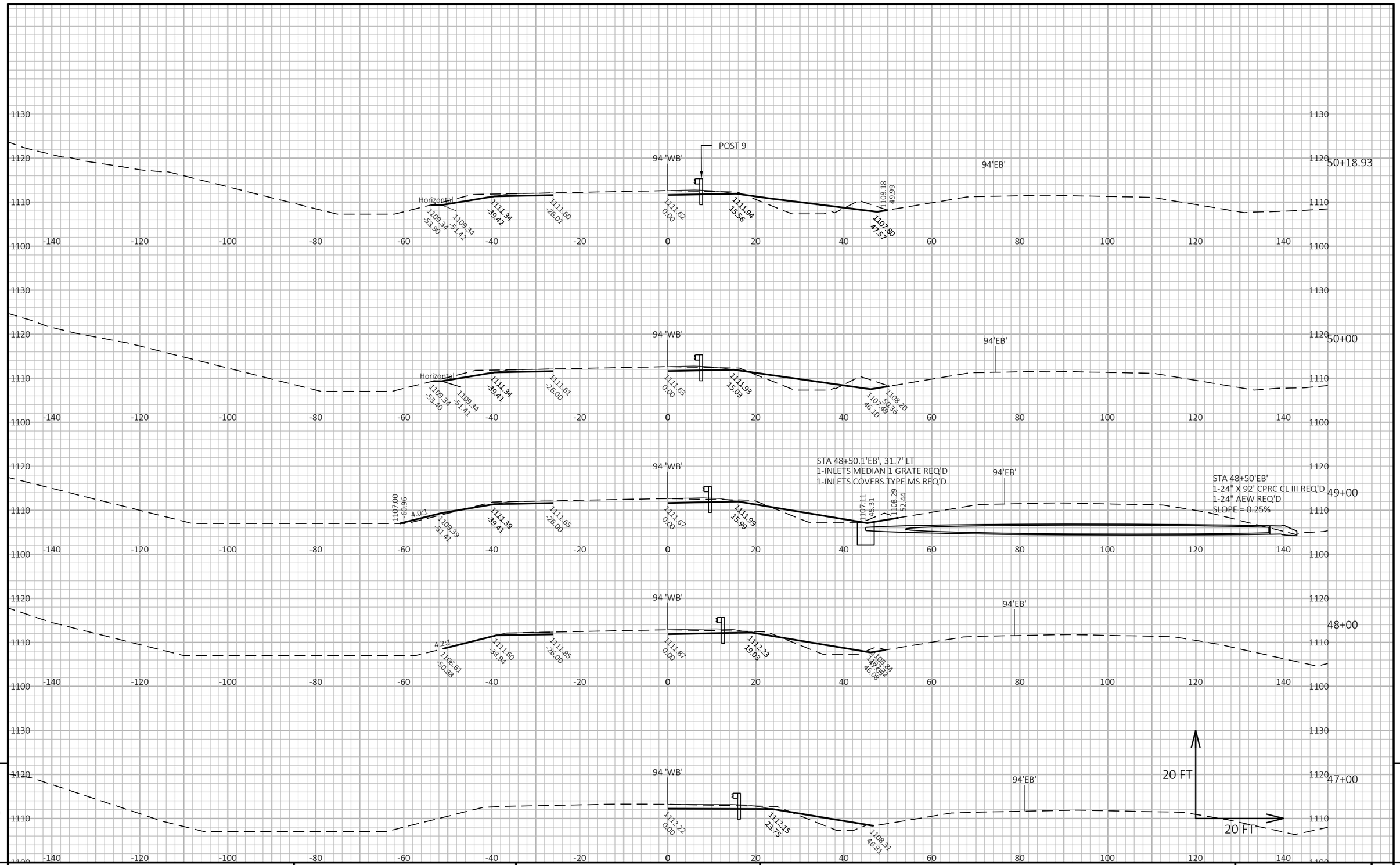
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 587	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 6

PLOT DATE : 3/16/2021 11:50 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

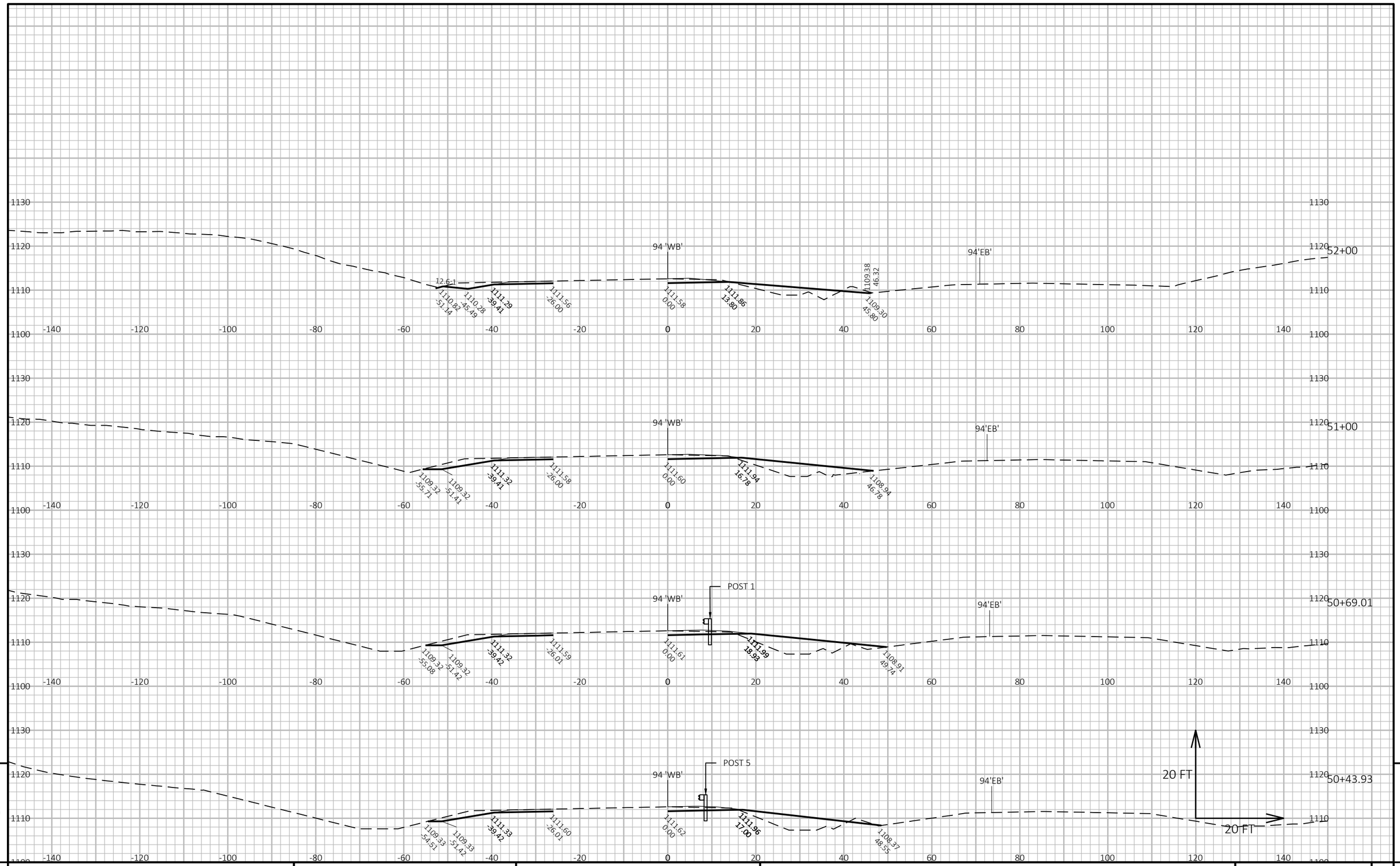
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 588	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 7

PLOT DATE : 3/16/2021 11:50 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

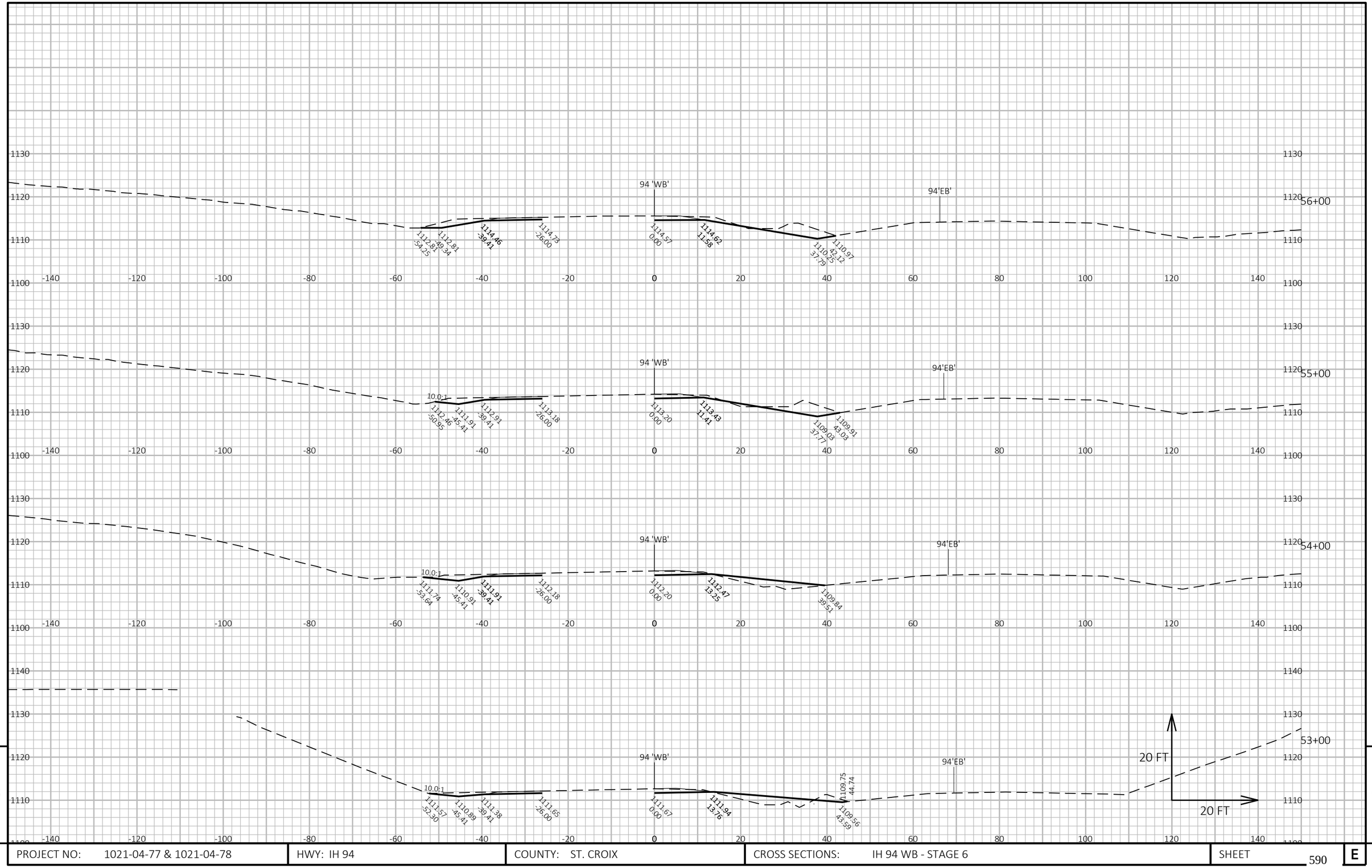
WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 589	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 8
PLOT DATE : 3/16/2021 11:51 AM
PLOT BY : THAO, KOU
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



9

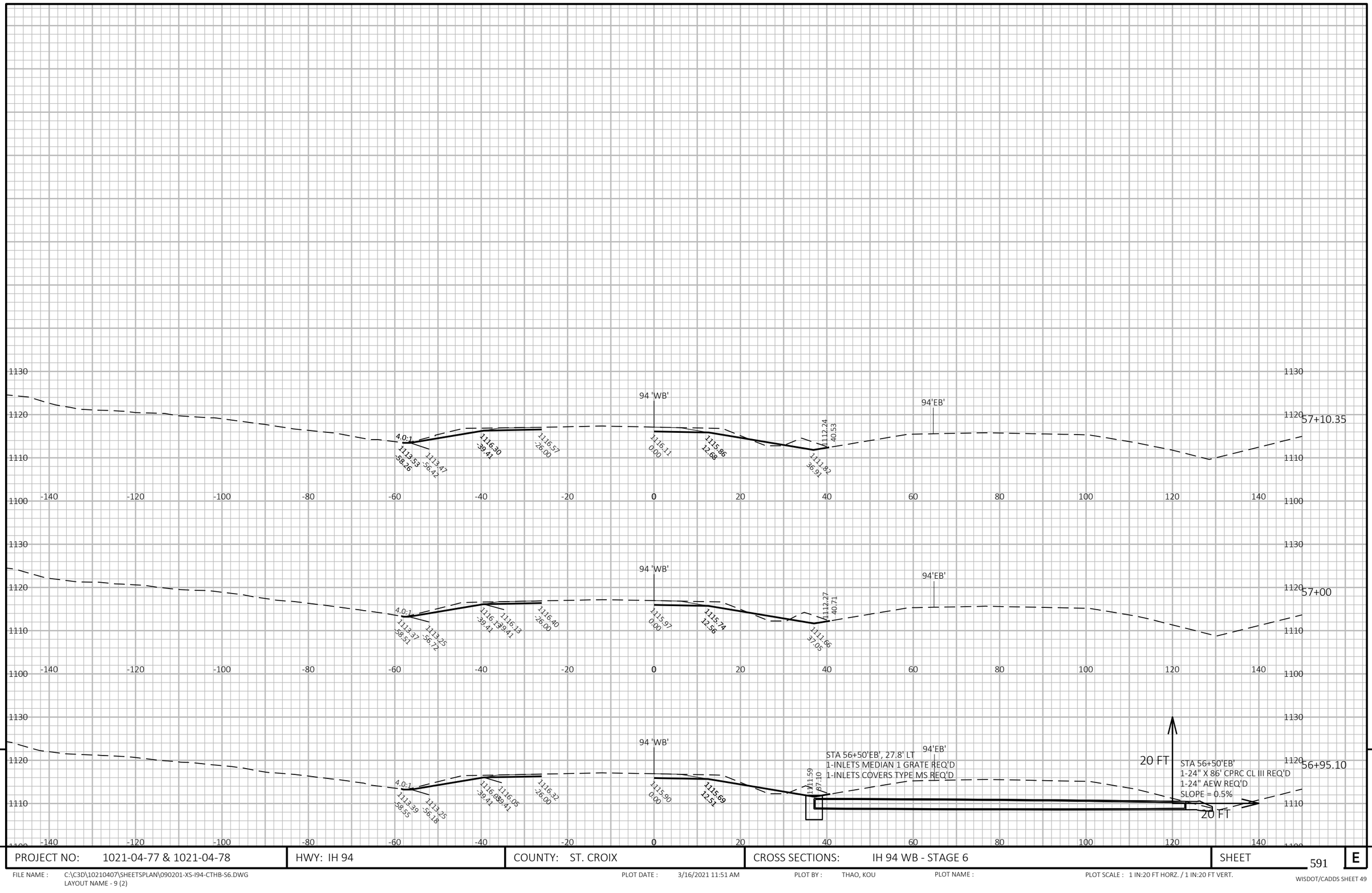
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB - STAGE 6	SHEET 590	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 9

PLOT DATE : 3/16/2021 11:51 AM 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 WB - STAGE 6	SHEET 591	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 9 (2)

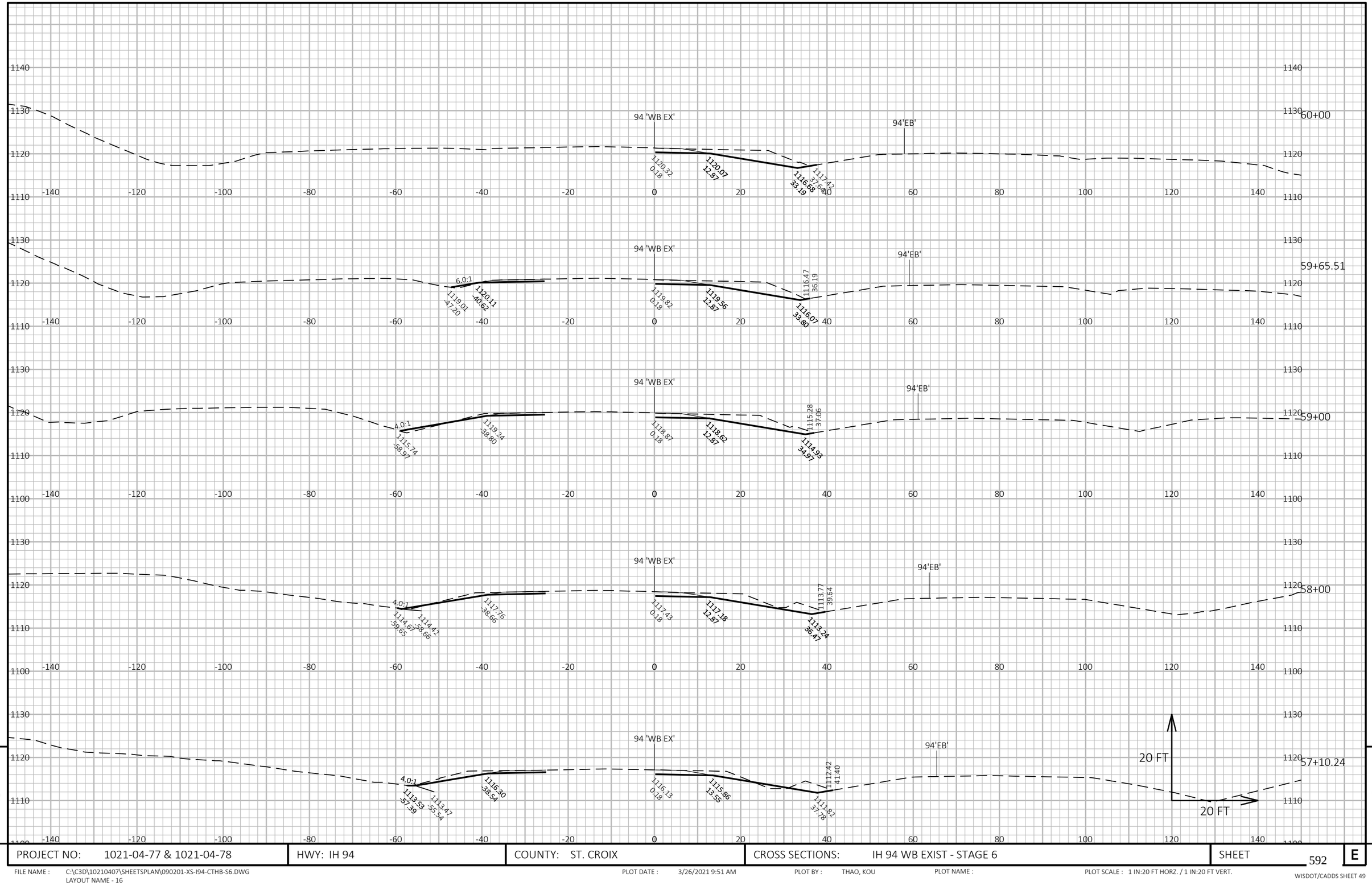
PLOT DATE : 3/16/2021 11:51 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

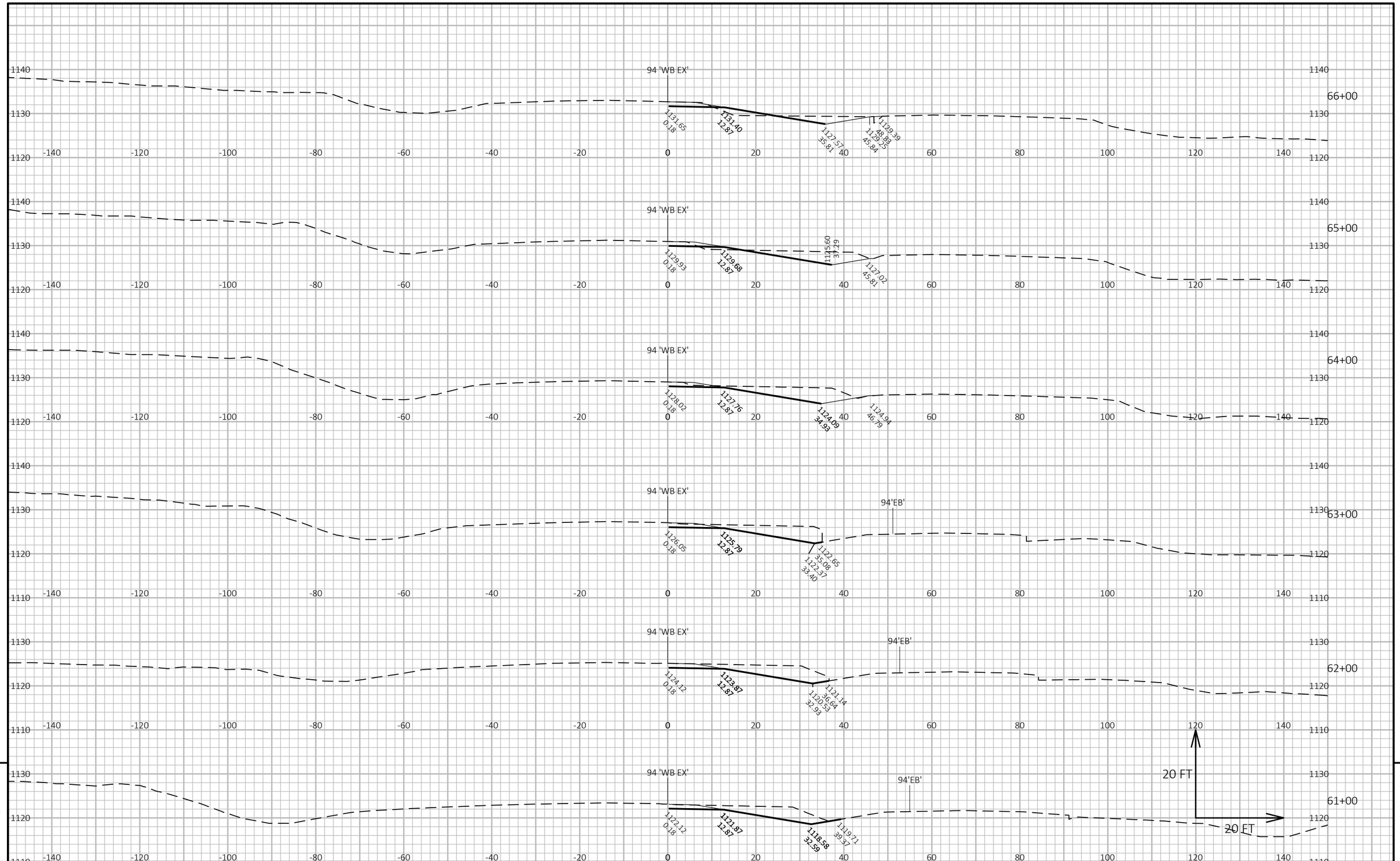


PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB EXIST - STAGE 6	SHEET 592	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 16

PLOT DATE : 3/26/2021 9:51 AM 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 WB EXIST - STAGE 6	SHEET 593	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 17

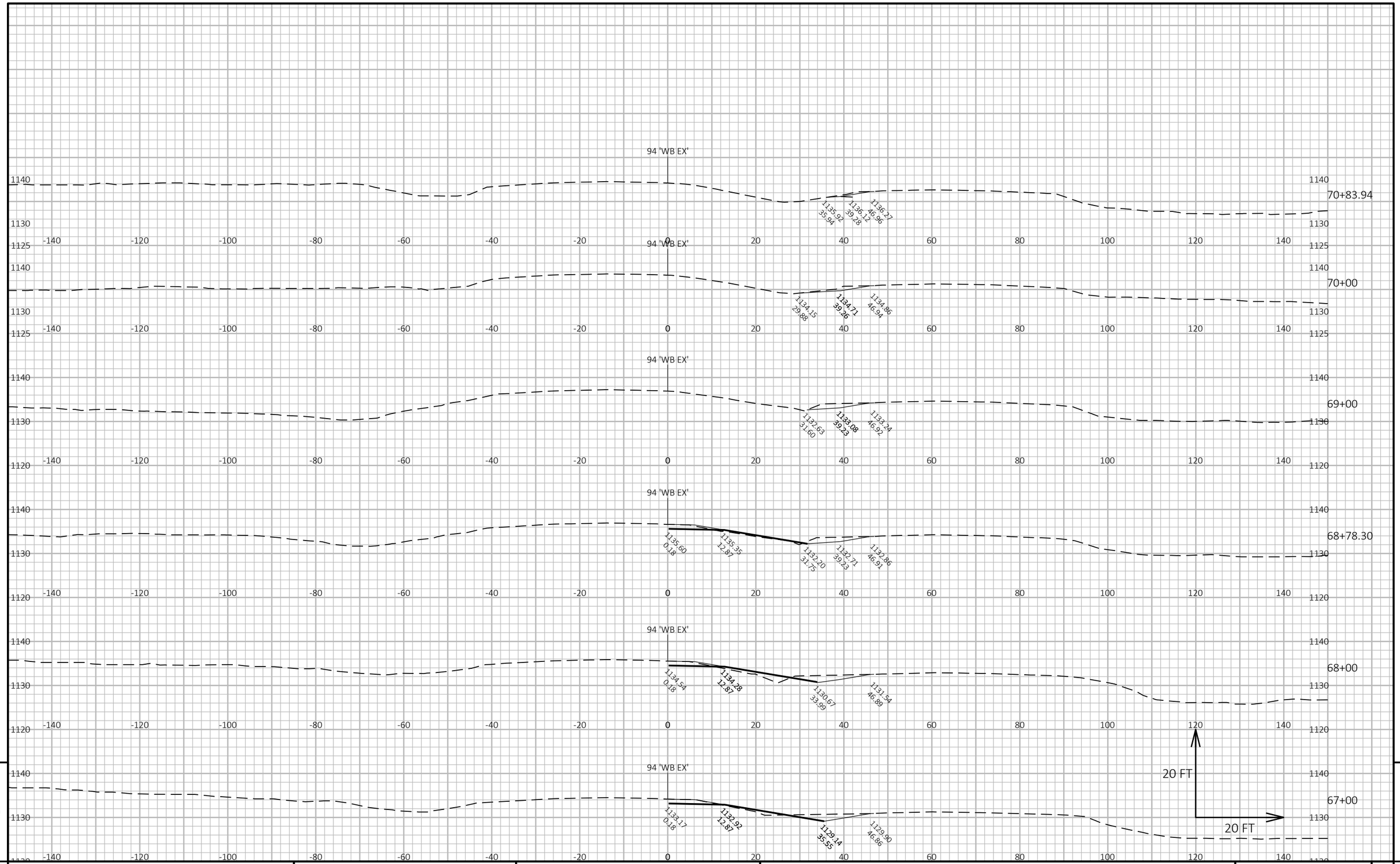
PLOT DATE : 3/26/2021 9:52 AM

PLOT BY : THAO, KOU

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

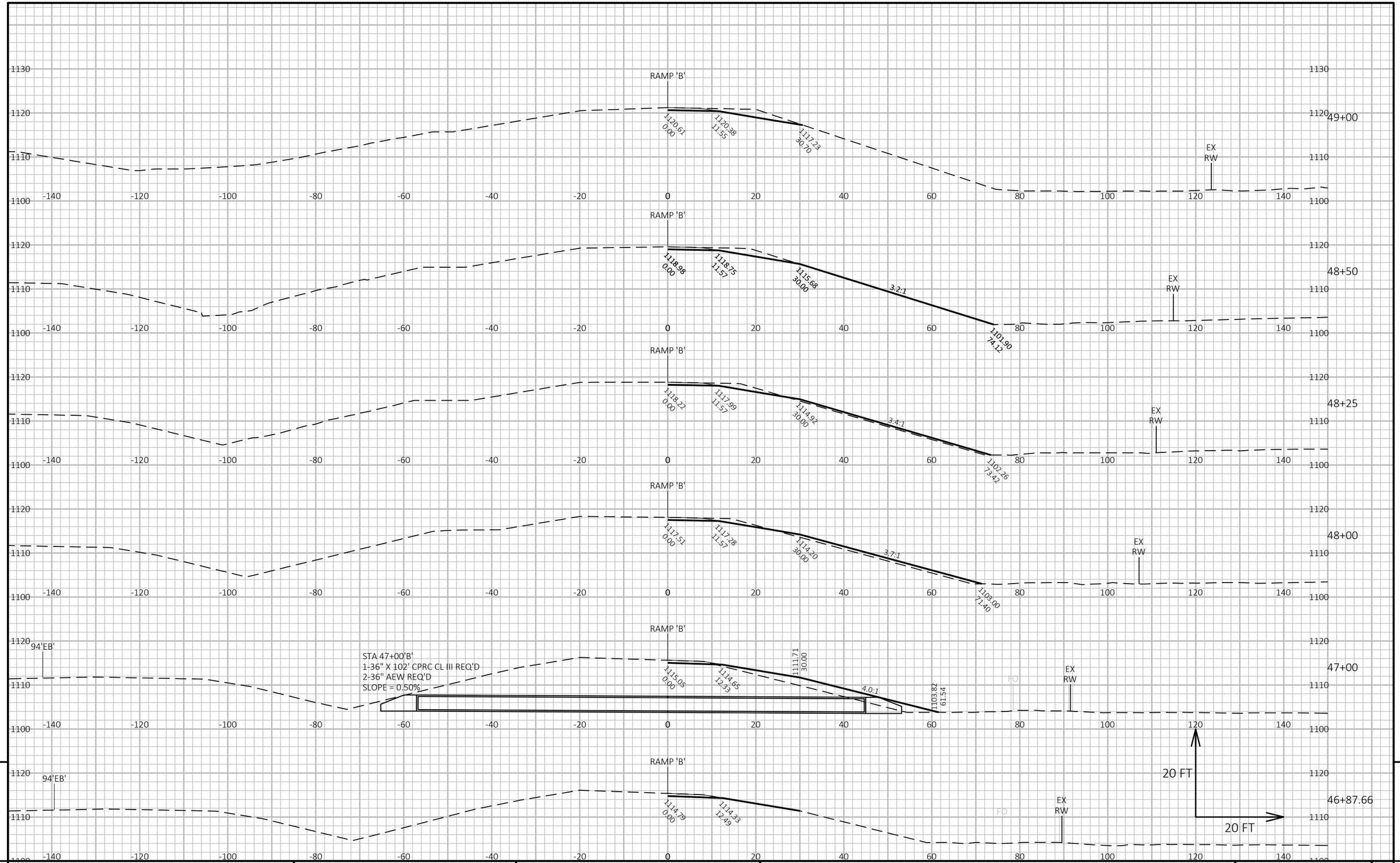
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94 WB EXIST - STAGE 6	SHEET 594	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 18

PLOT DATE : 3/26/2021 9:52 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

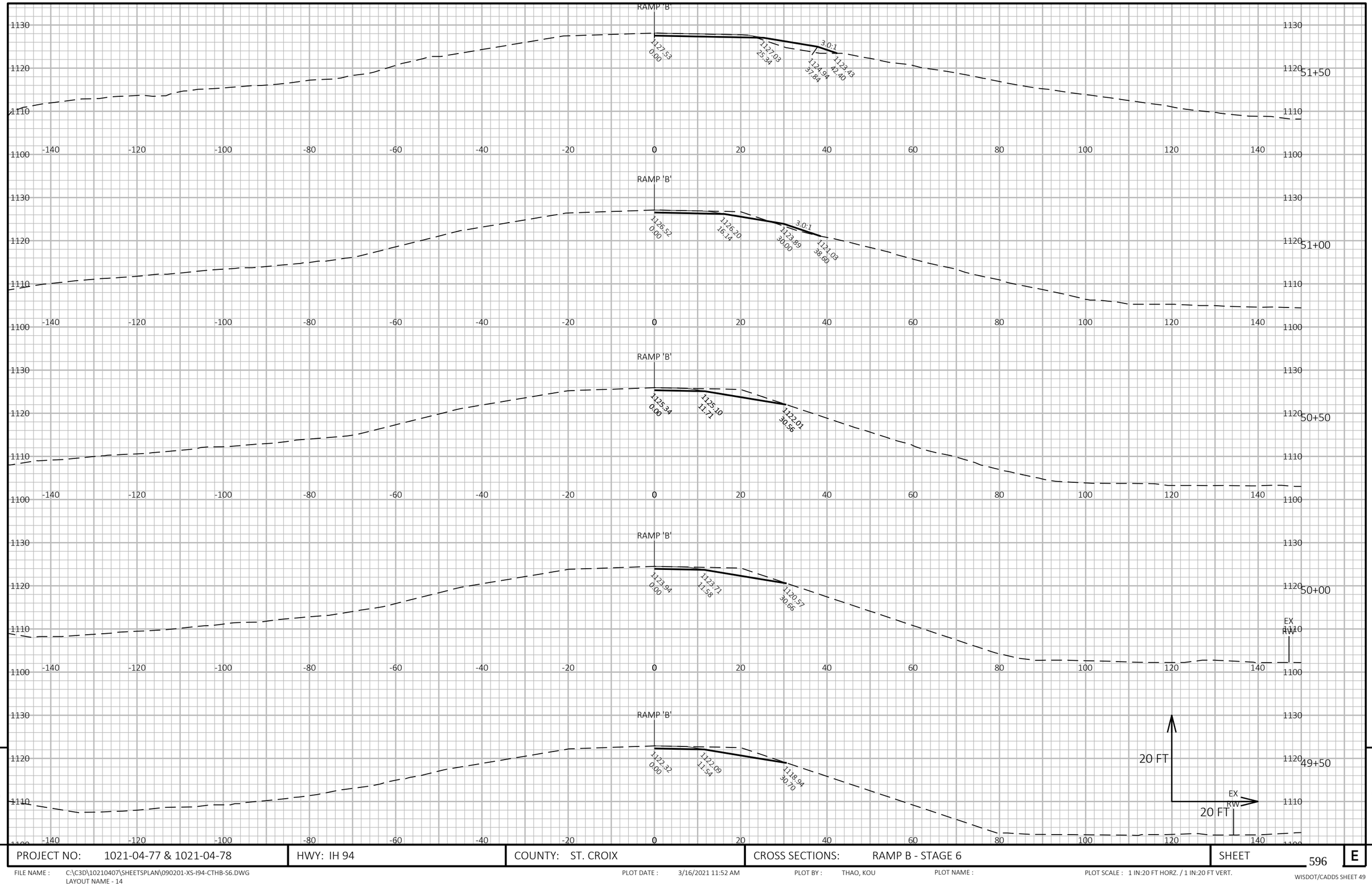
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PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP B - STAGE 6	SHEET 595	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 13

PLOT DATE : 3/16/2021 11:52 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

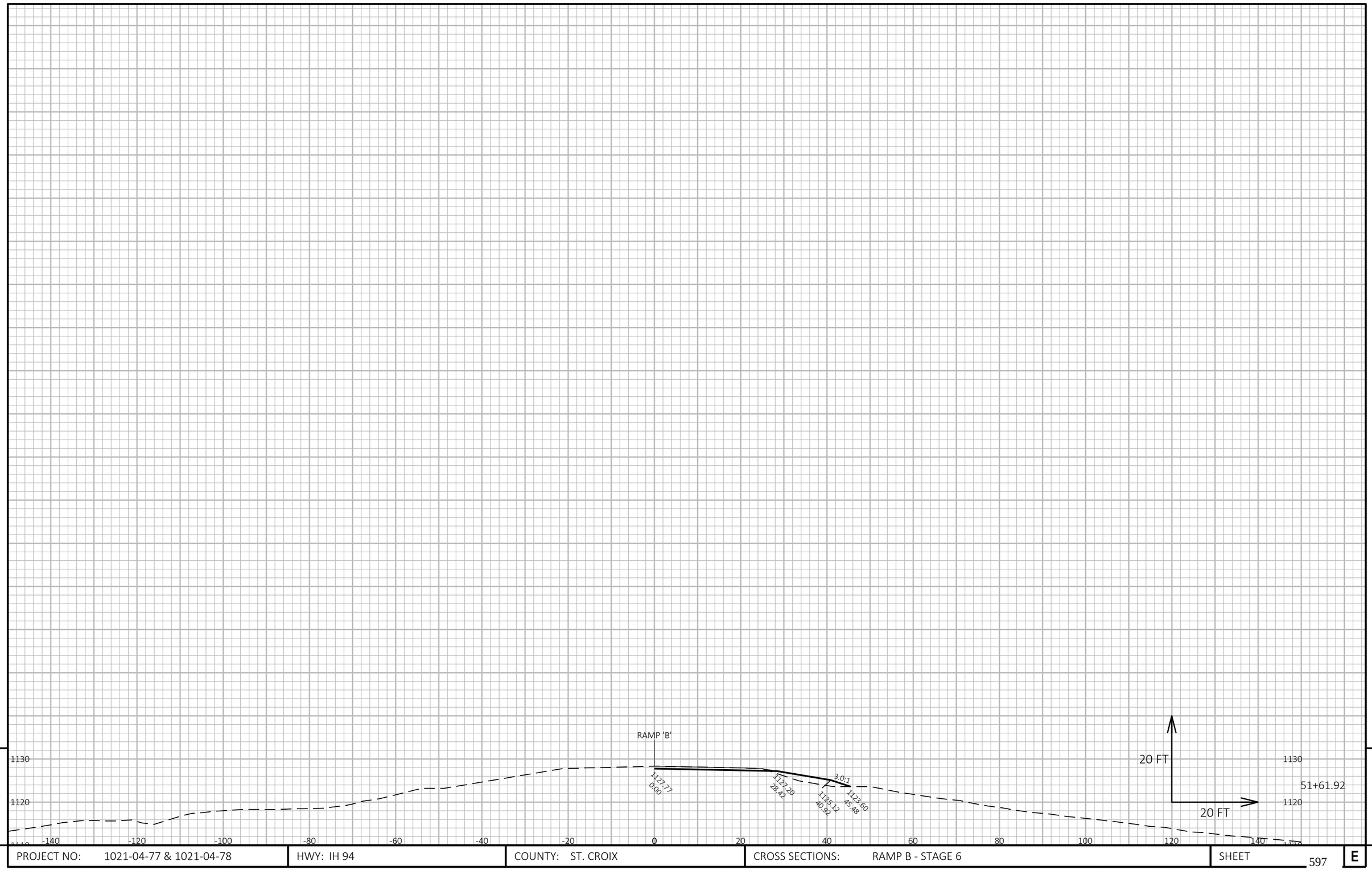
9

PROJECT NO: 1021-04-77 & 1021-04-78	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: RAMP B - STAGE 6	SHEET 596	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 14

PLOT DATE : 3/16/2021 11:52 AM 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: RAMP B - STAGE 6	SHEET 597	E

FILE NAME : C:\C3D\10210407\SHEETSPLAN\090201-XS-I94-CTHB-S6.DWG
LAYOUT NAME - 15

PLOT DATE : 3/16/2021 11:52 AM PLOT BY : THAO, KOU PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

Wisconsin Department of Transportation

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