LAX

SEPTEMBER 2018

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 = 438

PROJECT ID: 1071-02-71/1077-02-73

COUNTY: MONROE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

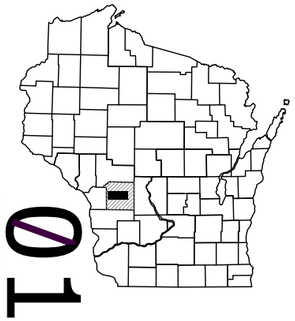
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1071-02-71	WISC 2018371	1
1077-02-73	WISC 2018372	1

SPARTA - TOMAH
CTH M BRIDGES B-41-0293 & 0294
IH 90
MONROE COUNTY

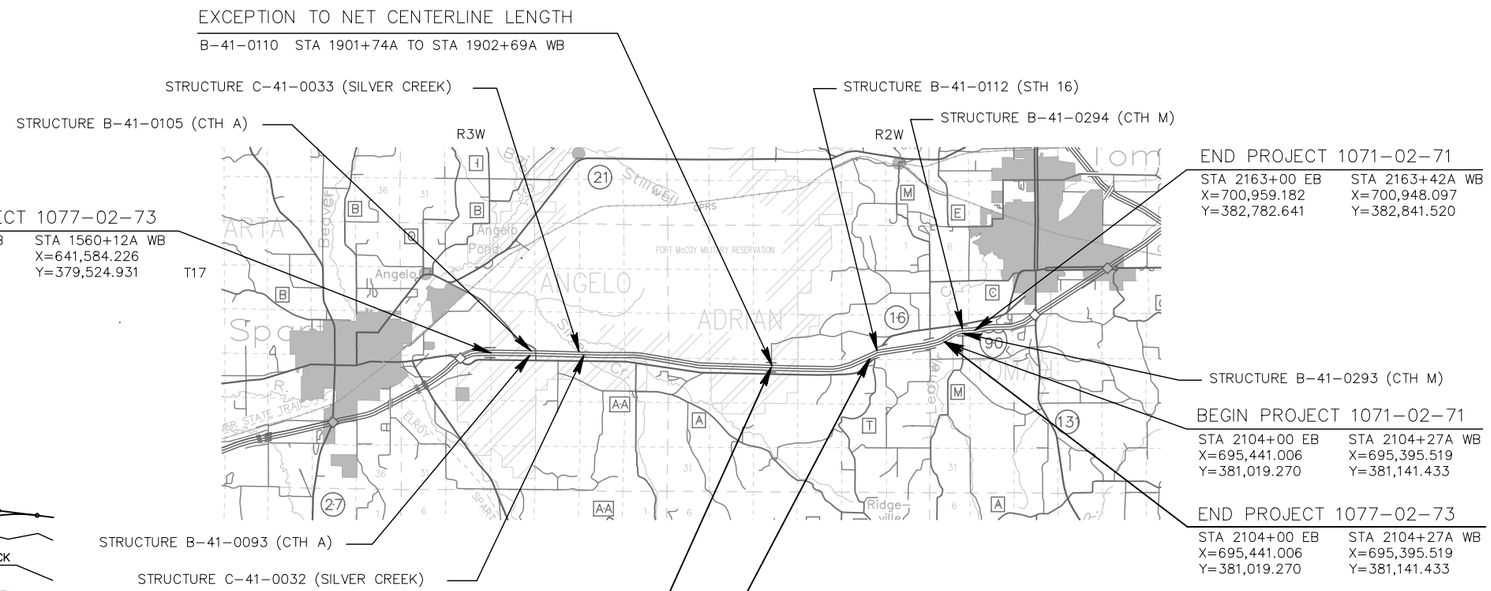
STATE PROJECT NUMBER
1071-02-71

SPARTA - TOMAH
STH 16 TO CTH M//B-41-112,93,105
IH 90
MONROE COUNTY

STATE PROJECT NUMBER
1077-02-73







DESIGN DESIGNATION IH 90			DESIGN DESIGNATION CTH M		
A.A.D.T.	2019	= 17,300	A.A.D.T.	2019	= 810
A.A.D.T.	2039	= 20,600	A.A.D.T.	2039	= 950
D.H.V.		= 1505	D.H.V.		= 91
D.D.		= 58/42	D.D.		= 60/40
T.		= 24.9%	T.		= 10%
DESIGN SPEED		= 70 MPH	DESIGN SPEED		= 60 MPH
ESALS		= 13,000,000	ESALS		= 211,700

CONVENTIONAL SYMBOLS

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

LAYOUT
SCALE 0 2 MI.

1071-02-71 LENGTH OF CENTERLINE = 0.000 MI.
1077-02-73 LENGTH OF CENTERLINE = 10.340 MI.
TOTAL NET LENGTH OF CENTERLINE = 10.340 MI.

HORIZONTAL POSITIONS SHOWN ARE WISCONSIN COUNTY COORDINATES, MONROE COUNTY, NAD83 2012, IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES. VERTICAL DATUM NAVD 88 (2012)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	MIKE GREINER
Project Manager	BRIAN MEYER
Regional Examiner	SW REGION
Regional Supervisor	JIM SAVOLDELLI
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 7/16/2018
(Signature)

E

ORDER OF SECTION 2 SHEETS

GENERAL NOTES/WRITTEN MATERIAL
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL AND DRAINAGE
STORM SEWER
ADVANCED WARNING
ALIGNMENT

GENERAL NOTES

- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH THE EXISTING UTILITY FACILITIES.
- D.O.T. BRIDGE BENCHMARK MONUMENT TO BE FURNISHED BY THE STATE AND PLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.
- RIGHT OF WAY LINES SHOWN ON THE CROSS SECTIONS ARE APPROXIMATE.
- ALL RADII ARE MEASURED TO EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN OR NOTED ON THE PLAN.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES EXCEPT WHEN PIPE LAYING OPERATIONS REQUIRE THE DRIVEWAY TO BE CLOSED. ACCESS TO DRIVEWAY SHALL BE RE-ESTABLISHED IMMEDIATELY AFTER PIPE IN DRIVEWAY AREA IS INSTALLED. ACCESS SHALL BE PROVIDED DURING ALL NON-WORKING HOURS.
- PRIOR TO THE PLACEMENT OF STEEL PLATE BEAM GUARD OR MGS GUARDRAIL, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.
- THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING LANE OR RAMP TAPER.
- HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
- IH 90: 4 INCH PAVEMENT SHALL BE CONSTRUCTED WITH 1 3/4 INCH UPPER LAYER HMA PAVEMENT TYPE 4 SMA 58-28 H AND 2 1/4 INCH LOWER LAYER HMA PAVEMENT TYPE 3 HT 58-28 S.
- CTH M: 4 INCH PAVEMENT SHALL BE CONSTRUCTED WITH 2 INCH UPPER LAYER HMA PAVEMENT AND 2 INCH LOWER LAYER HMA PAVEMENT TYPE 4 LT 58-28 S.
- TACK COAT TO BE APPLIED AT A RATE OF 0.07 GAL/SY ON MILLED SURFACE OR CONCRETE AND 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT.
- CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.
- THE QUANTITY OF THE ITEMS FOR EROSION PROTECTION INCLUDES AN UNDISTRIBUTED AMOUNT FOR PROTECTION, CONTROL AND ABATEMENT OF WATER POLLUTION RESULTING FROM SOIL EROSION. THE DISTRIBUTION AND LOCATION OF THESE MATERIALS ARE TO BE DETERMINED BY THE ENGINEER.
- (SALVAGED) TOPSOIL AND EMAT HAS BEEN COMPUTED BY DIRECT MEASUREMENTS ON THE CROSS SECTIONS TO THE TOE OF SLOPE. SEEDING AND FERTILIZER HAS BEEN COMPUTED BY DIRECT MEASUREMENTS ON THE CROSS SECTIONS PLUS 5 FT.

STANDARD ABBREVIATIONS

AC	ACRE	LC.	LONG CHORD
AGG	AGGREGATE	LS	LUMP SUM
<	ANGLE	M.P.	MARKER POST
AE, AEW	APRON ENDWALL	MGAL	1000 GALLONS
ASPH.	ASPHALTIC	N.C.	NORMAL CROWN
A.D.T.	AVERAGE DAILY TRAFFIC	N	NORTH
A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC	NB	NORTHBOUND
B.F.	BACK FACE	NOR	NORMAL
BM	BENCHMARK	NO.	NUMBER
BTWN	BETWEEN	PAV'T	PAVEMENT
CTR.	CENTER	P.L.E.	PERMANENT LIMITED EASEMENT
C/L	CENTER LINE	P.C.	POINT OF CURVATURE
Δ	CENTRAL ANGLE OR DELTA	P.I.	POINT OF INTERSECTION
C.E.	COMMERCIAL ENTRANCE	P.T.	POINT OF TANGENCY
CONST.	CONSTRUCTION	PCC	PORTLAND CEMENT CONCRETE
CMCP	CORRUGATED METAL CULVERT PIPE	P.E.	PRIVATE ENTRANCE
CMP	CORRUGATED METAL PIPE	PGL	PROFILE GRADE LINE
CO.	COUNTY	P.L.	PROPERTY LINE
CTH	COUNTY TRUNK HIGHWAY	R	RADIUS OR RANGE
CR.	CREEK	R/L	REFERENCE LINE
CABC	CRUSHED AGGREGATE BASE COURSE	R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
CY	CUBIC YARD	REQ'D	REQUIRED
CP	CONTROL POINT OR CULVERT PIPE	RT	RIGHT
C&G	CURB AND GUTTER	R.H.F.	RIGHT HAND FORWARD
D	DEGREE OF CURVE	R/W	RIGHT OF WAY
D.H.V.	DESIGN HOURLY VOLUME	RD.	ROAD
DIA.	DIAMETER	SHLD.	SHOULDER(S)
D.D.	DIRECTIONAL DISTRIBUTION	SHR.	SHRINKAGE
DISCH.	DISCHARGE	S	SOUTH
DMS	DYNAMIC MESSAGE SIGN	SB	SOUTHBOUND
EA	EACH	S.F.	SQUARE FOOT (FEET)
E	EAST	SDD	STANDARD DETAIL DRAWING(S)
EB	EASTBOUND	STH	STATE TRUNK HIGHWAY
ELEC.	ELECTRIC(AL), ELEC. CABLE	STA.	STATION
EL., ELEV.	ELEVATION	S.E.	SUPERELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS	S/L	SURVEY LINE
EXC.	EXCAVATION	SYM	SYMMETRICAL
EXIST	EXISTING	T.	PERCENT TRUCKS
F.F.	FACE TO FACE	TEL.	TELEPHONE
FERT.	FERTILIZER	TEMP.	TEMPORARY
F.E.	FIELD ENTRANCE	T.L.E.	TEMPORARY LIMITED EASEMENT
F/L, F.L.	FLOW LINE	T.O.C.	TOP OF CURB
GALV.	GALVANIZE	TYP	TYPICAL
H.S.	HIGH STRENGTH	UNCL.	UNCLASSIFIED
CWT	HUNDRED WEIGHT	U.G.	UNDERGROUND (CABLE)
INL	INLET	VAR	VARIABLE
INTER.	INTERSECTION	V.C.	VERTICAL CURVE
IH	INTERSTATE HIGHWAY	V.P.C.	VERTICAL POINT OF CURVATURE
JT.	JOINT	V.P.I.	VERTICAL POINT OF INTERSECTION
LT	LEFT	V.P.T.	VERTICAL POINT OF TANGENCY
L.H.F.	LEFT HAND FORWARD	Wt.	WEIGHT
L.	LENGTH OF CURVE	W	WEST
L.F.	LINEAR FOOT(FEET)	WB	WESTBOUND

2

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

UTILITY CONTACTS

TUMS Utility Owners List - As of March 2, 2018

RE: Design Project ID: 1077-02-03 Construction
Project ID: 1071-02-71 SPARTA - TOMAH
CTH M BRIDGES B-41-0293 & 0294
IH 090, Monroe County

Ryan Niemeier
CenturyLink - Communication Line
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Mediacom Wisconsin LLC – Comm Line
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(563) 419-5160
ceggert@mediacomcc.com

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Dairyland Power Cooperative - Electricity
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La Crosse, WI 54602-0817
(608) 788-4000
Rob.Maly@DairylandPower.com

Roy Boyles
Oakdale Electric Cooperative - Electricity
P.O. Box 128
Oakdale, WI 54649-0128
(608) 372-8851 rboyles@oakdalerec.com

Dick Hammetter

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Eau Claire, WI 54703
(715) 838-4406
Hammetter@WINS.net

John Louis
Wisconsin Independent Network, LLC - Communication Line
800 Wisconsin St, Bldg D02, Ste 219
Eau Claire, WI 54703
(715) 864-2918
jlouis@wins.net

DNR LIAISON

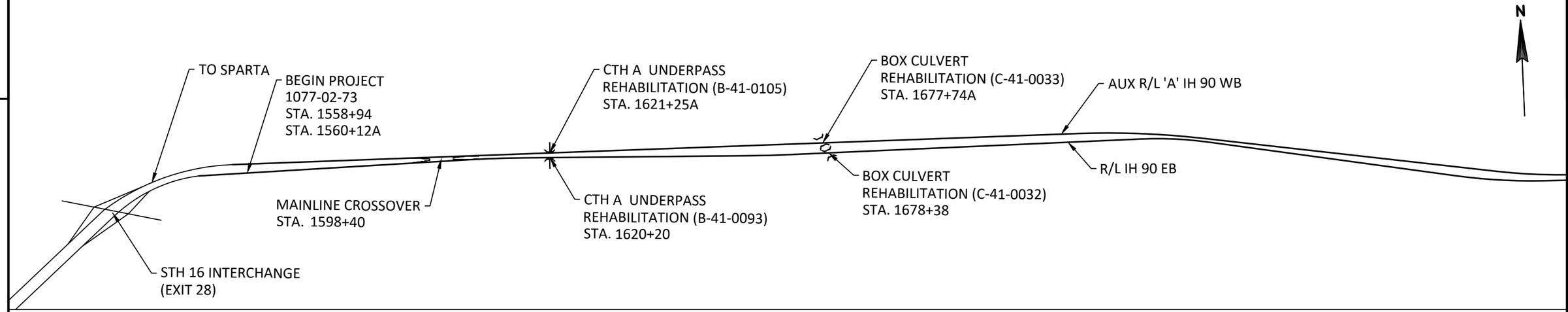
KAREN KALVELAGE
ENVIRONMENTAL ANALYSIS & REVIEW SPECIALIST
WISCONSIN DEPT. OF NATURAL RESOURCES
WEST CENTRAL REGION
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
608-785-9115

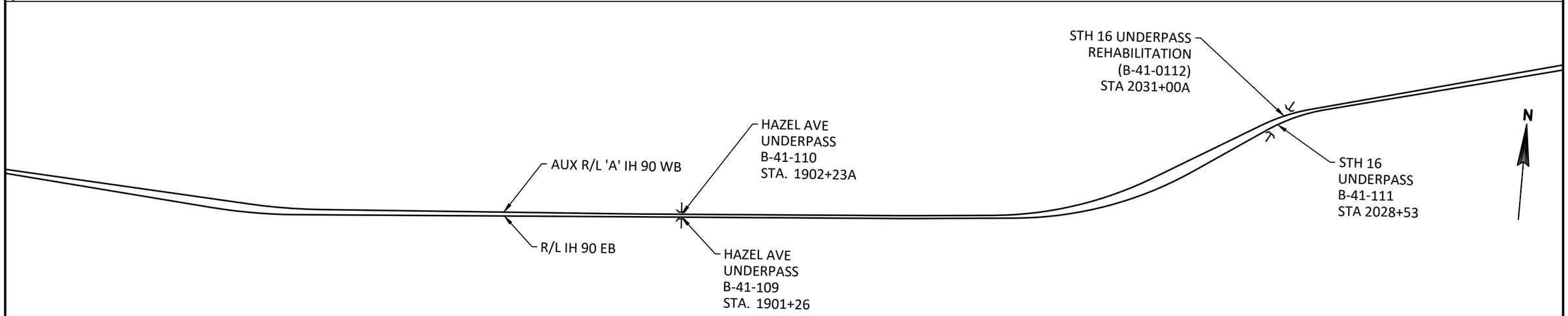
DESIGN CONTACTS

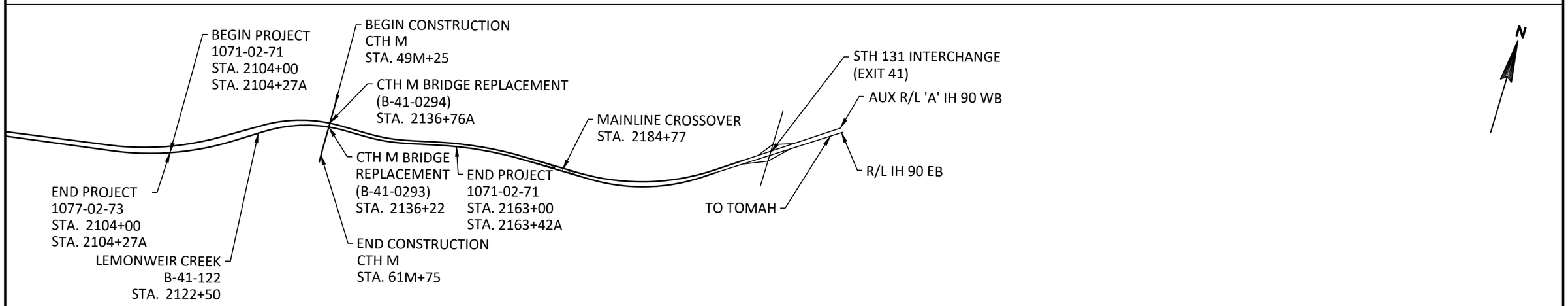
BRIAN MEYER
PROJECT MANAGER
WISDOT SW REGION
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
608-789-5676

MICHAEL GREINER
PROJECT DESIGNER
WISDOT SW REGION
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
608-789-5958

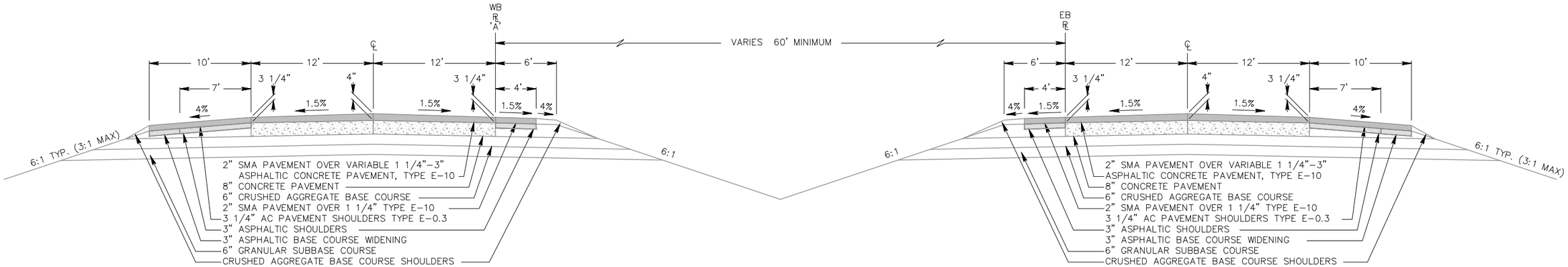
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PROJECT NO: 1071-02-71 & 1077-02-73	HWY: IH 90	COUNTY: MONROE	PROJECT OVERVIEW	SHEET 4	E



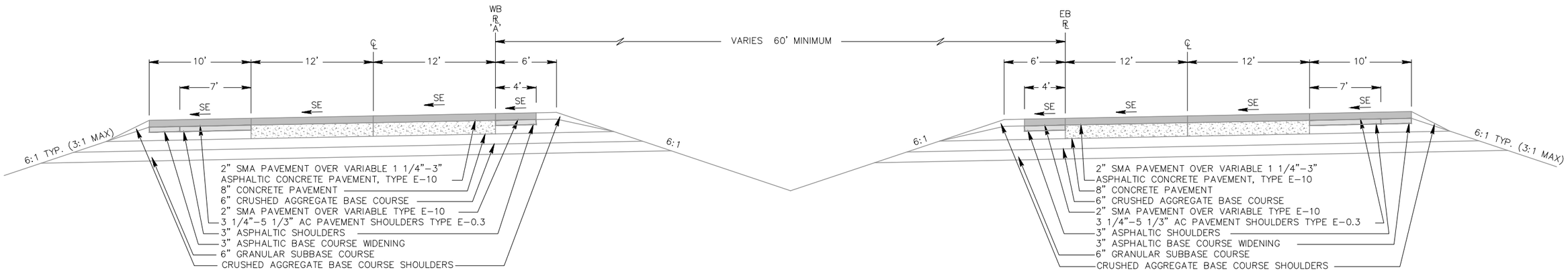
WESTBOUND

STA. 1560+12'A' – 1593+32'A'
STA. 1604+69'A' – 2003+82'A'
STA. 2032+35'A' – 2104+27'A'

EXISTING TYPICAL SECTION
IH 90

EASTBOUND

STA. 1558+94 – 1592+04
STA. 1603+54 – 2003+56
STA. 2029+62 – 2104+00

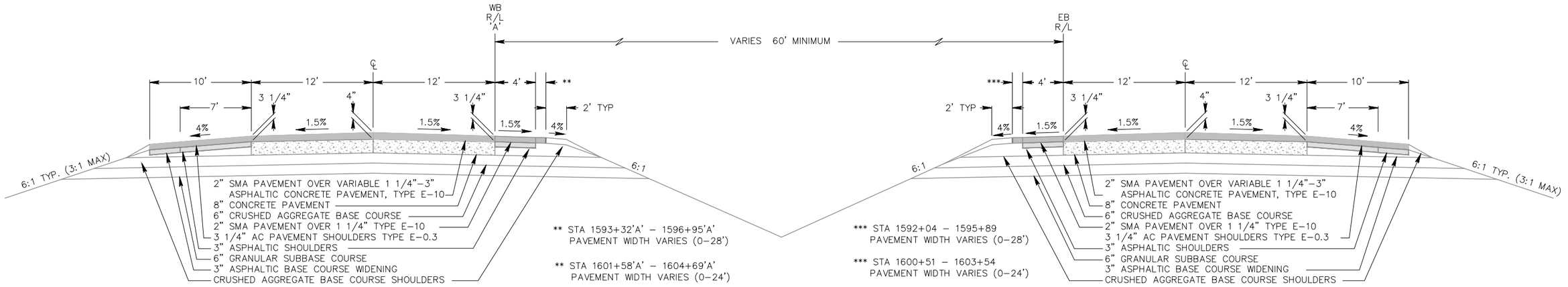


WESTBOUND

EXISTING SUPERELEVATED TYPICAL SECTION
IH 90

EASTBOUND

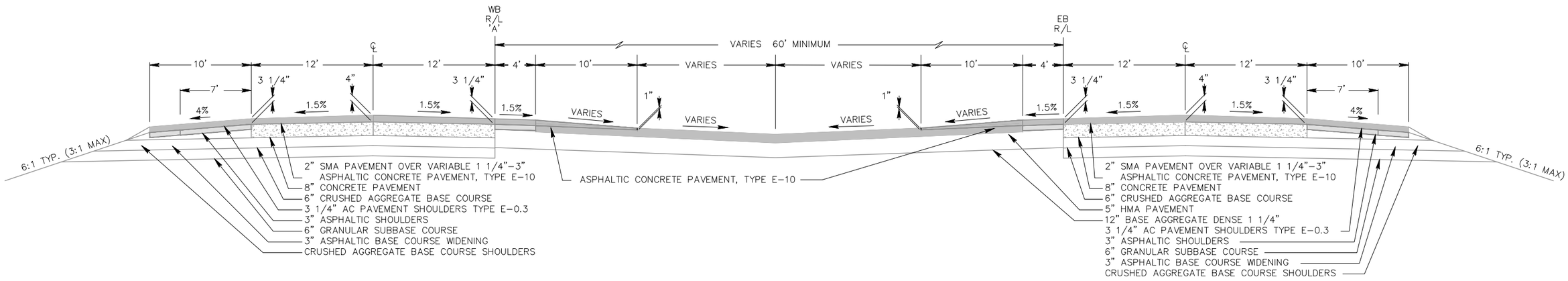
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 5	E



WESTBOUND
STA 1593+32'A' - 1596+95'A'
STA 1601+58'A' - 1604+69'A'

EXISTING CROSS OVER TRANSITION TYPICAL SECTION
IH 90

EASTBOUND
STA 1592+04 - 1595+89
STA 1600+51 - 1603+54

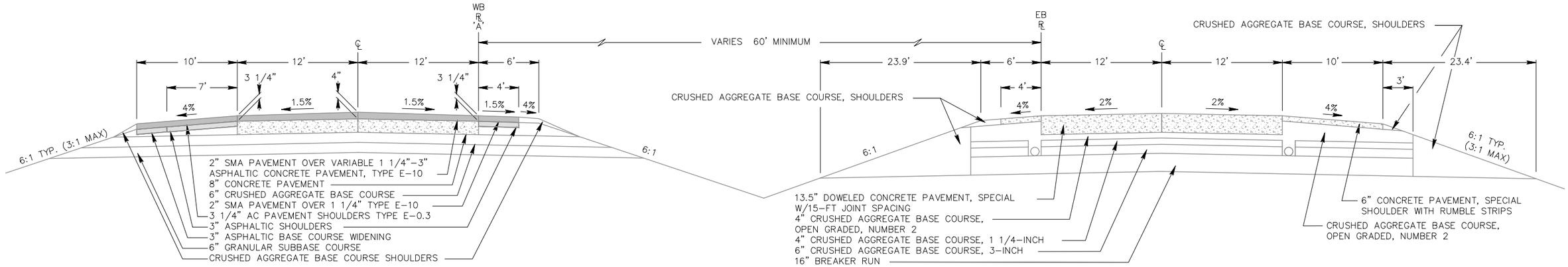


WESTBOUND
STA 1596+95'A' - 1601+58'A'

EXISTING CROSS OVER TRANSITION TYPICAL SECTION
IH 90

EASTBOUND
STA 1595+89 - 1600+51

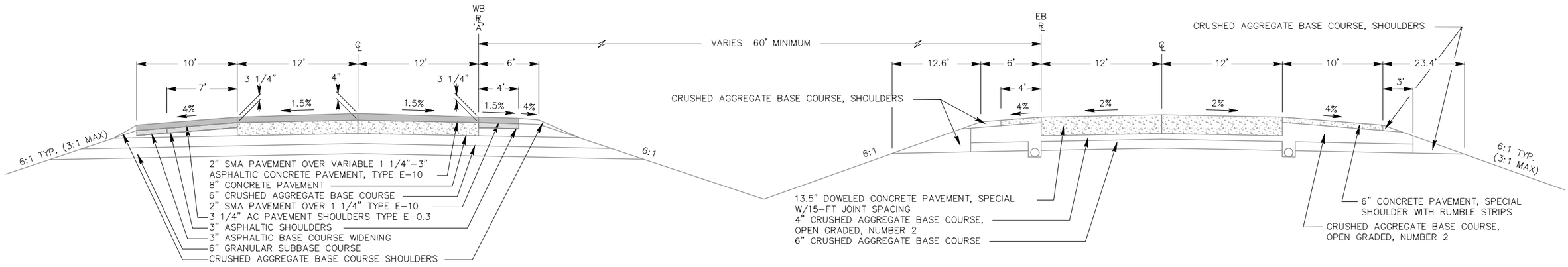
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 6	E



WESTBOUND
STA. 2003+82'A' – 2011+64'A'

EXISTING TYPICAL SECTION
IH 90

EASTBOUND
STA. 2003+56 – 2011+51

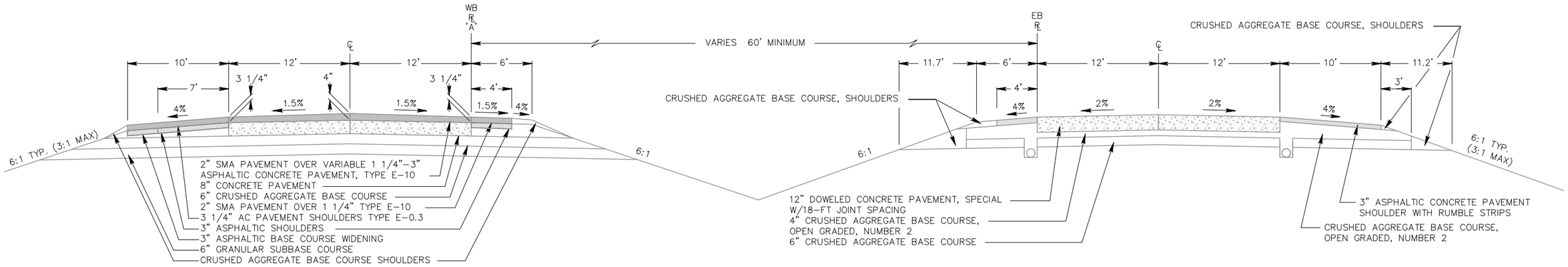


WESTBOUND
STA. 2011+64'A' – 2020+94'A'

EXISTING TYPICAL SECTION
IH 90

EASTBOUND
STA. 2011+51 – 2019+46

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 7	E



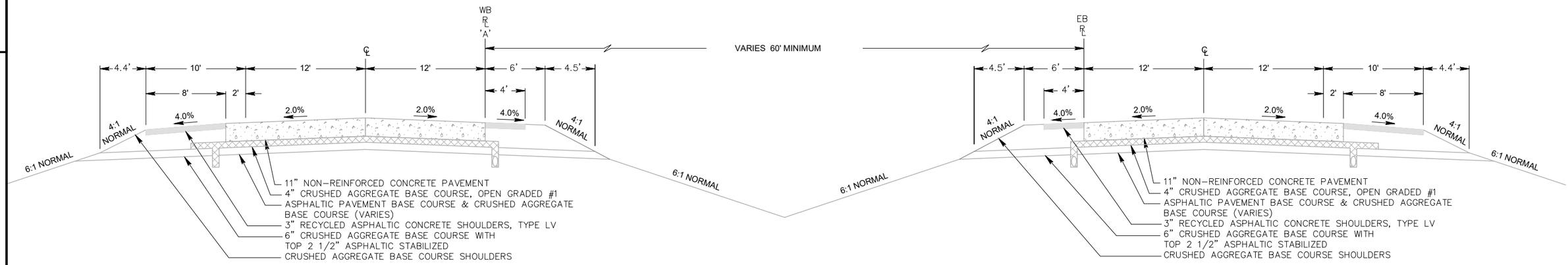
WESTBOUND
STA. 2020+94'A' – 2029+56'A'

EXISTING TYPICAL SECTION
IH 90

EASTBOUND
STA. 2019+46 – 2026+43

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 8	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\020301_TS.DWG
LAYOUT NAME - 03
PLOT DATE : 5/16/2018 2:01 PM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

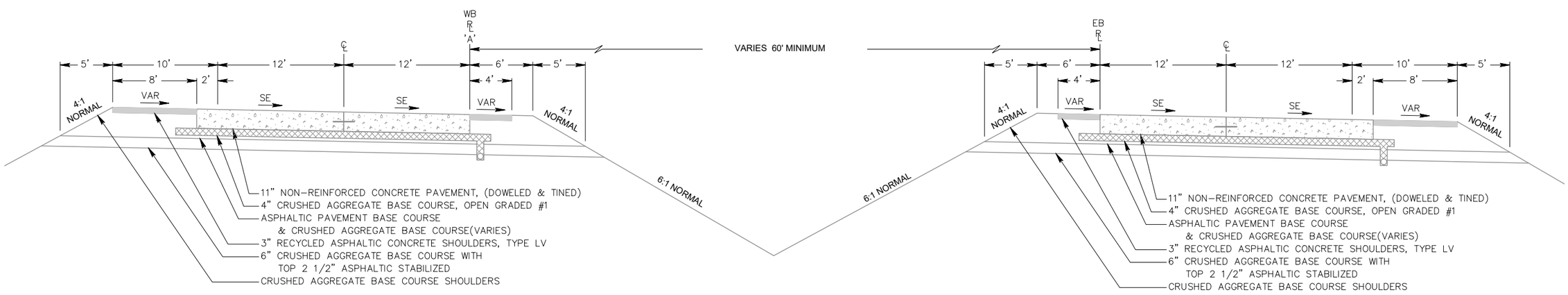


WESTBOUND

EXISTING TYPICAL SECTION
IH 90

EASTBOUND

STA. 2160+75 - 2163+00 (TEMPORARY EMERGENCY PULLOUT)



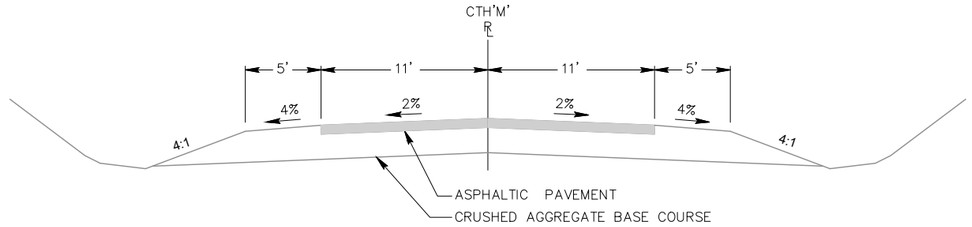
WESTBOUND
STA. 2129+28'A' - 2148+03'A'

EXISTING SUPERELEVATED TYPICAL SECTION
IH 90

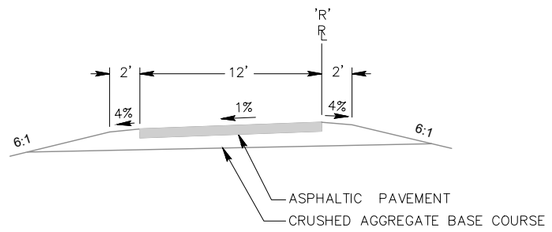
EASTBOUND
STA. 2108+00 - 2110+25 (TEMPORARY EMERGENCY PULLOUT)
STA. 2122+30 - 2126+53 (BEAMGUARD EXTENSION)
STA. 2129+03 - 2142+35
STA. 2144+75 - 2147+00 (TEMPORARY EMERGENCY PULLOUT)

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 9	E

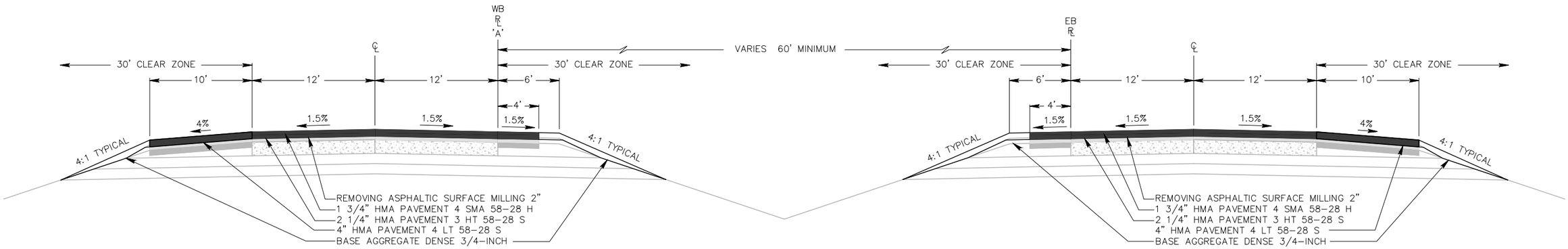
2



EXISTING TYPICAL SECTION
CTH M
STA. 49+25M to 60+75M



EXISTING TYPICAL SECTION
DRIVEWAY
STA. 50+55R to 51+80R



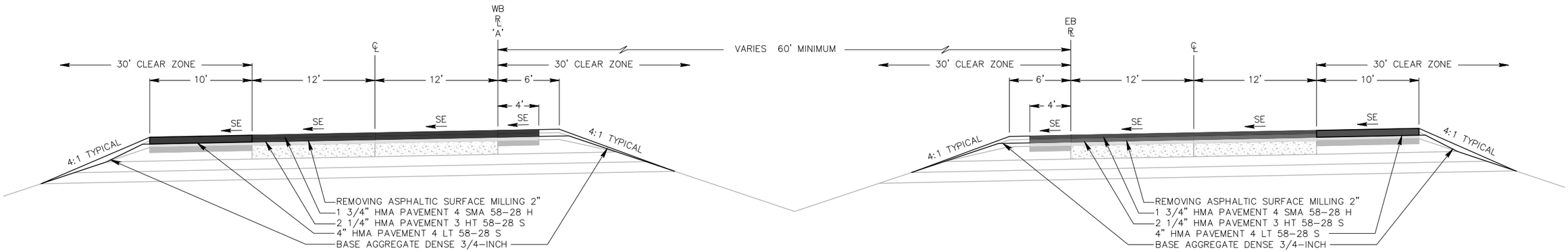
WESTBOUND

STA. 1560+12'A' – 1593+32'A'
STA. 1604+69'A' – 2003+82'A'
STA. 2032+35'A' – 2104+27'A'

PROPOSED TYPICAL SECTION
IH 90

EASTBOUND

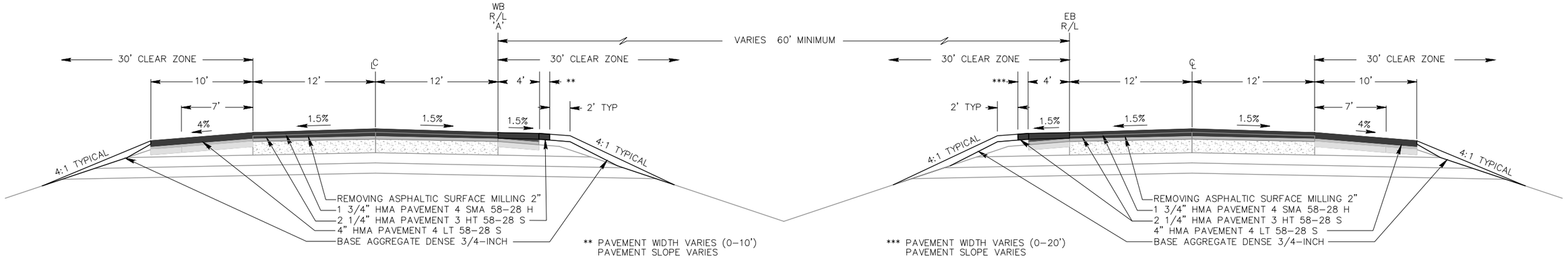
STA. 1558+94 – 1592+04
STA. 1603+54 – 2003+56
STA. 2029+62 – 2104+00



PROPOSED SUPERELEVATED TYPICAL SECTION
IH 90

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 11	E

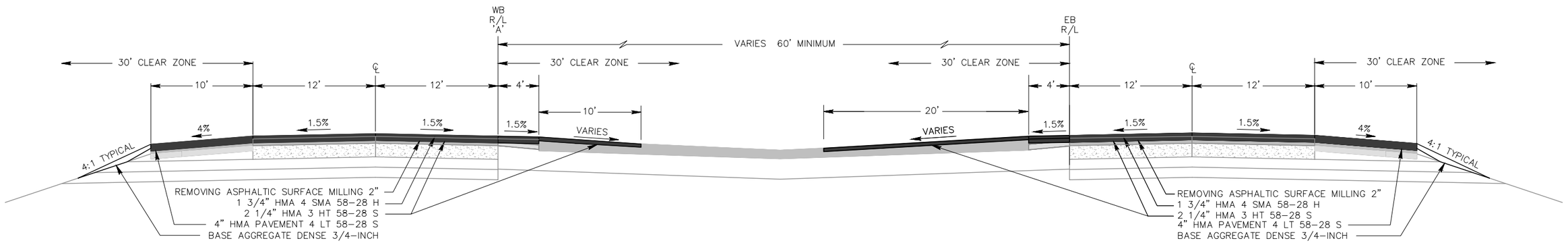
2



WESTBOUND
STA 1593+32'A' – 1594+70'A'
STA 1603+11'A' – 1604+69'A'

PROPOSED TYPICAL SECTION
IH 90

EASTBOUND
STA 1592+04 – 1594+84
STA 1600+91 – 1603+54

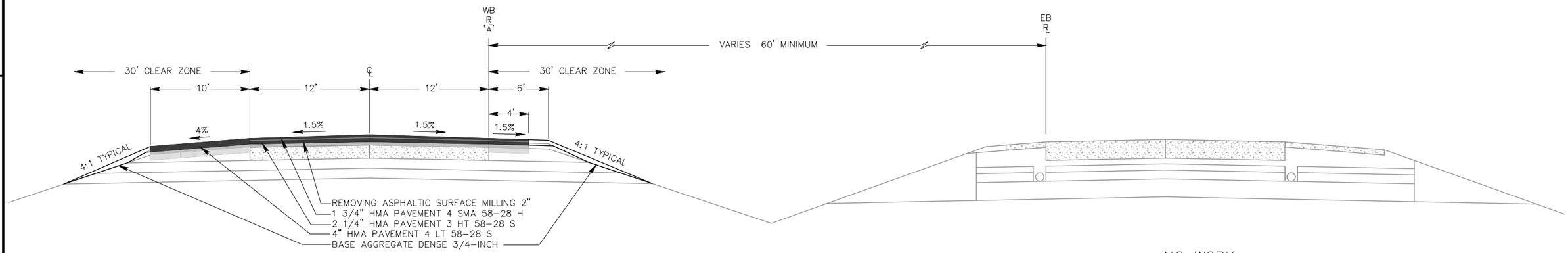


WESTBOUND
STA 1594+70'A' – 1603+11'A'

PROPOSED CROSS OVER TYPICAL SECTION
IH 90

EASTBOUND
STA 1594+84 – 1600+91

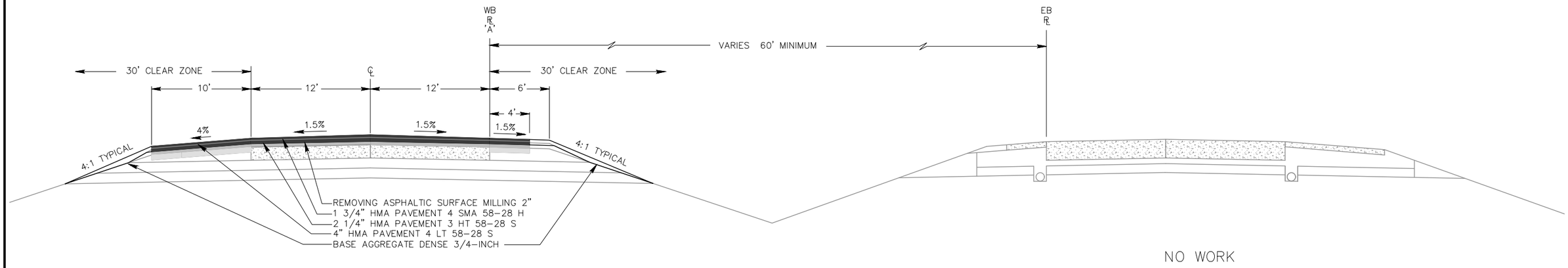
PROJECT NO: 1071-02-73	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 12	E



WESTBOUND
STA. 2003+82'A' – 2011+64'A'

PROPOSED TYPICAL SECTION
IH 90

EASTBOUND
STA. 2003+56 – 2011+51



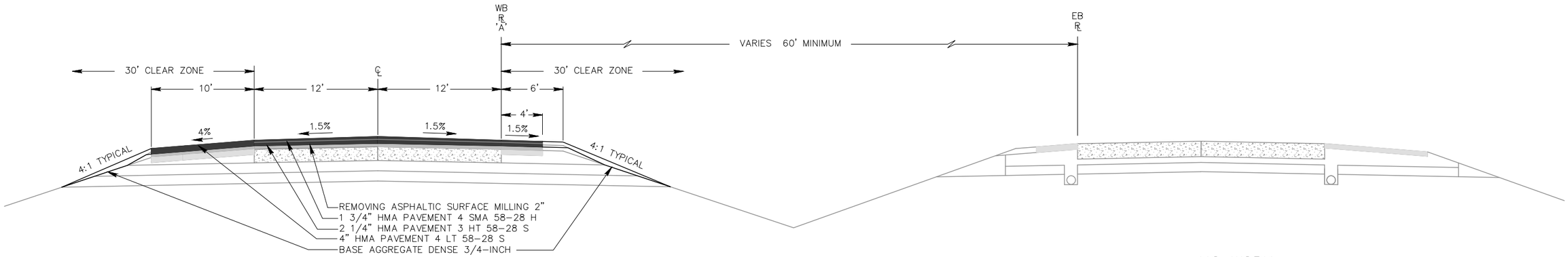
WESTBOUND
STA. 2011+64'A' – 2020+94'A'

PROPOSED TYPICAL SECTION
IH 90

EASTBOUND
STA. 2011+51 – 2019+46

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 13	E

2



WESTBOUND
STA. 2020+94'A' – 2029+56'A'

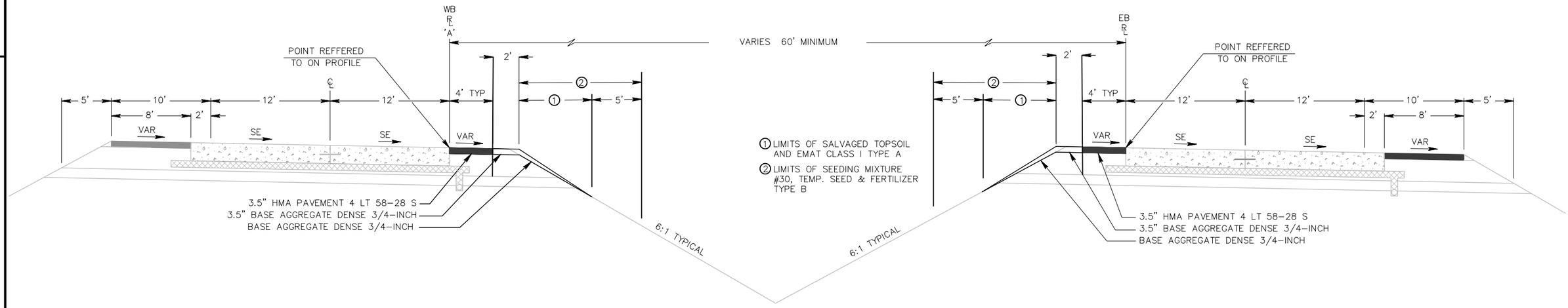
PROPOSED TYPICAL SECTION
IH 90

EASTBOUND
STA. 2019+46 – 2026+43

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 14	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\020313_TS.DWG
LAYOUT NAME - 04
PLOT DATE : 5/17/2018 8:17 AM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



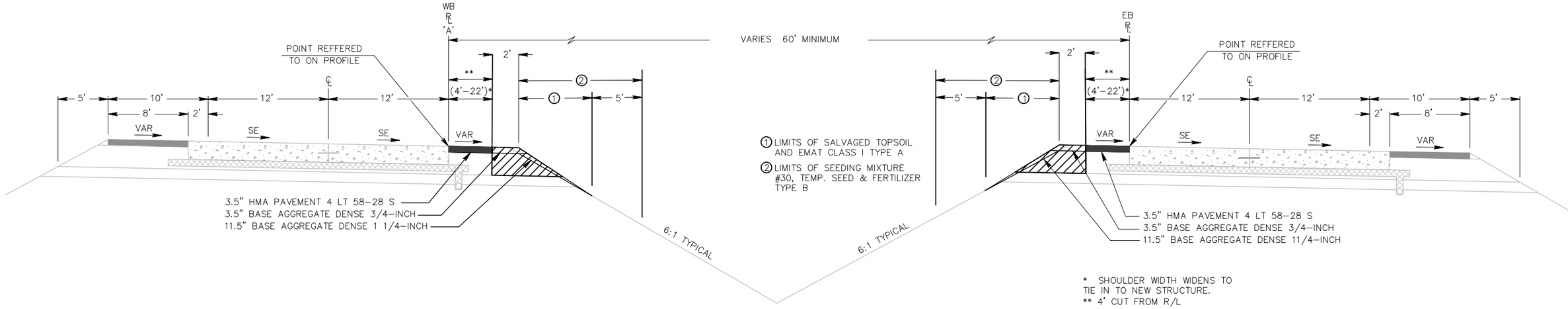
WESTBOUND

STA. 2140+25'A' – 2142+86'A'

PROPOSED SUPER ELEVATED TYPICAL SECTION
IH 90

EASTBOUND

STA. 2130+71 – 2133+75
STA. 2141+84 – 2142+35



* SHOULDER WIDTH WIDENS TO TIE IN TO NEW STRUCTURE.
** 4' CUT FROM R/L

WESTBOUND

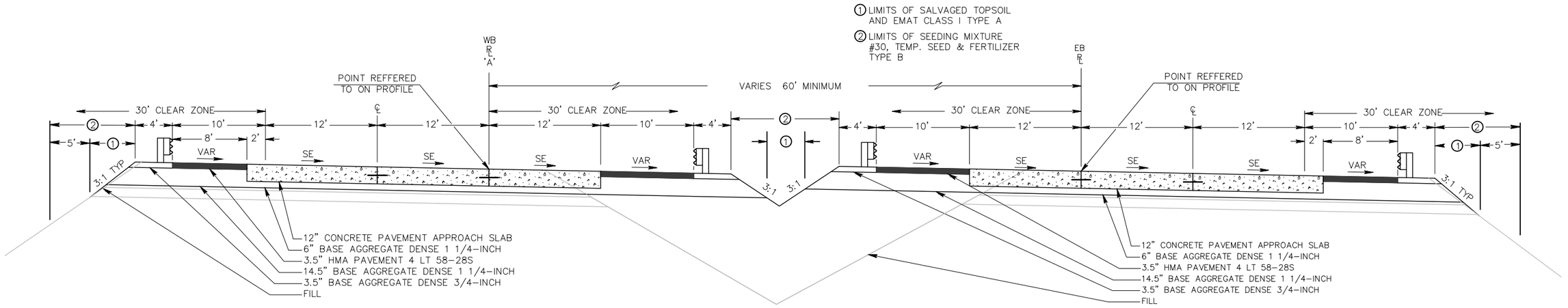
STA. 2133+46'A' – 2136+39'A'
STA. 2141+38'A' – 2140+25'A'

PROPOSED SUPER ELEVATED TYPICAL SECTION
IH 90

EASTBOUND

STA. 2133+75 – 2135+83
STA. 2140+85 – 2141+84

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 15	E



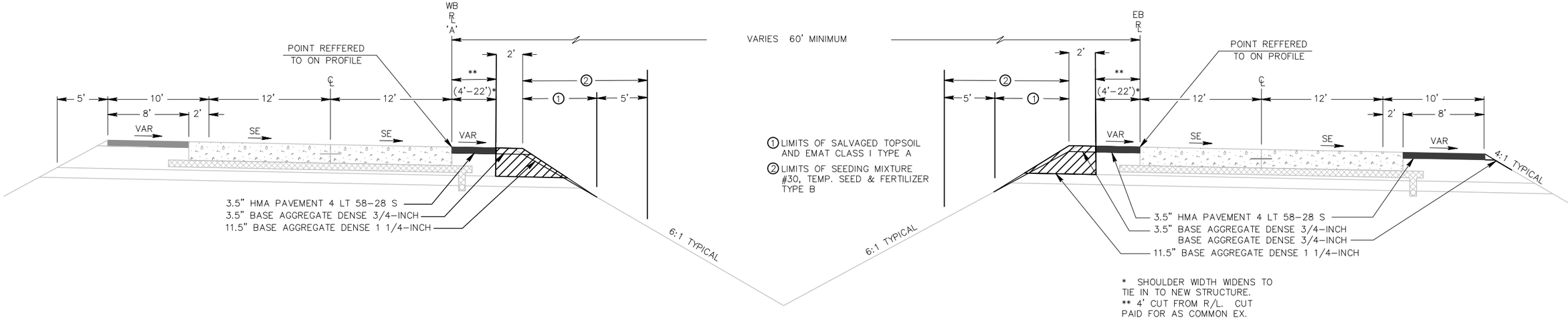
WESTBOUND

STA. 2136+39'A' – 2136+55'A'
STA. 2138+16'A' – 2138+32'A'

PROPOSED SUPER ELEVATED TYPICAL SECTION
IH 90

EASTBOUND

STA. 2135+83 – 2136+02
STA. 2137+62 – 2137+78



WESTBOUND

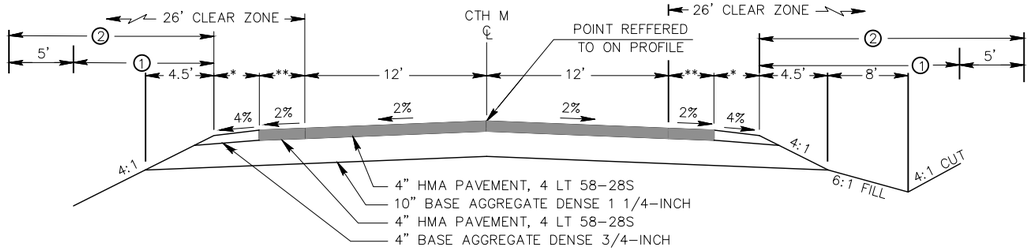
STA. 2138+32'A' – 2141+38'A'

PROPOSED SUPER ELEVATED TYPICAL SECTION
IH 90

EASTBOUND

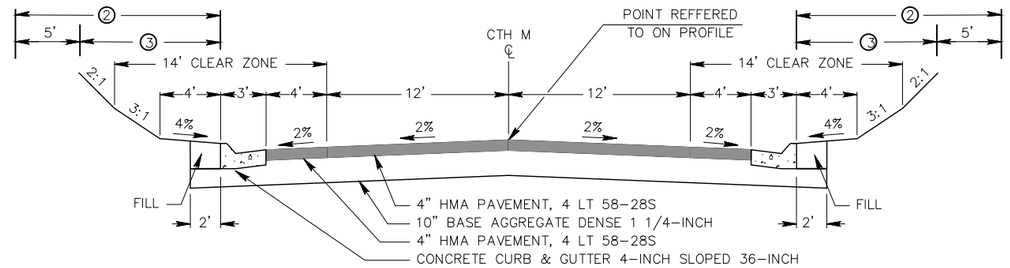
STA. 2137+78 – 2140+85

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 16	E



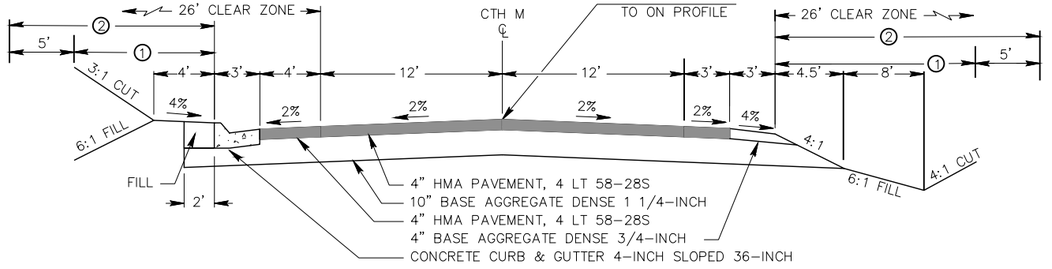
PROPOSED TYPICAL SECTION
CTH M
STA. 49+25M – 50+00M
STA. 60+25M – 60+75M

* UNPAVED SHOULDER WIDTH VARIES (0–3')
**PAVED SHOULDER WIDTH VARIES (0–3')

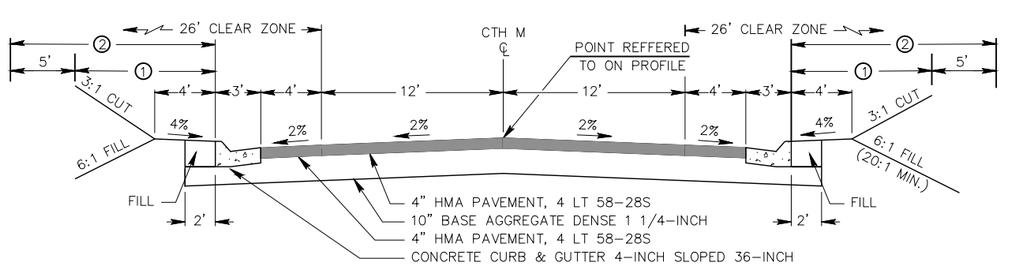


PROPOSED TYPICAL SECTION
CTH M
STA. 53+25M – 55+25M

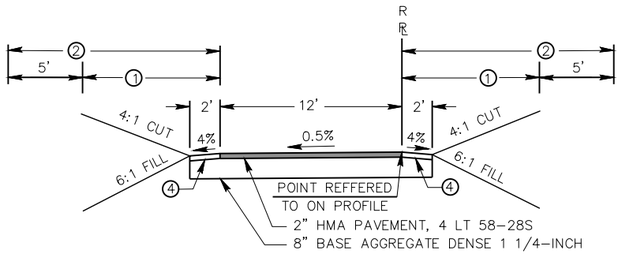
① LIMITS OF SALVAGED TOPSOIL AND EMAT CLASS I TYPE A (SHOULDER BREAK POINT TO SLOPE INTERCEPT)
② LIMITS OF SEEDING MIXTURE #30, TEMP. SEED & FERTILIZER TYPE B
③ LIMITS OF SALVAGED TOPSOIL AND EMAT CLASS I TYPE B (SHOULDER BREAK POINT TO SLOPE INTERCEPT)
④ 2" SALVAGED TOPSOIL



PROPOSED TYPICAL SECTION
CTH M
STA. 50+00M – 53+25M
STA. 58+75M – 60+25M



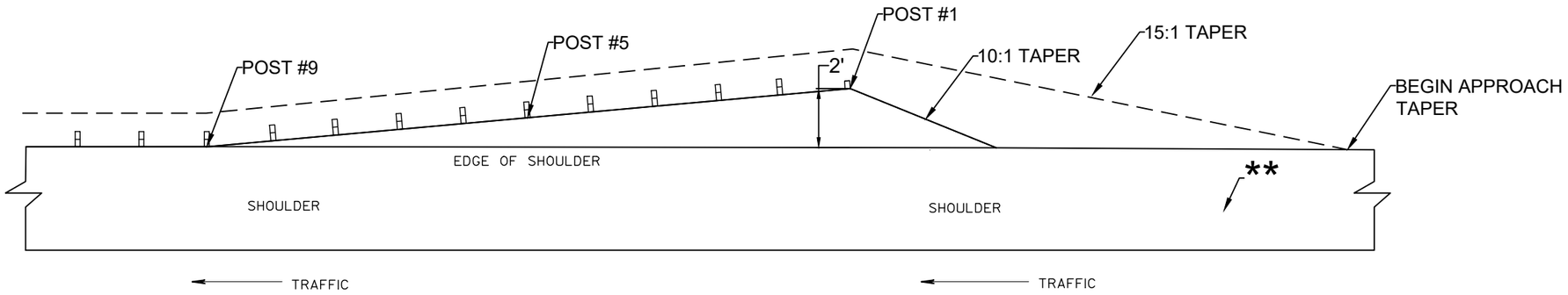
PROPOSED TYPICAL SECTION
CTH M
STA. 55+25M – 58+75M



PROPOSED TYPICAL SECTION
DRIVEWAY RELOCATION
STA. 50+55R to 51+80R

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 17	E

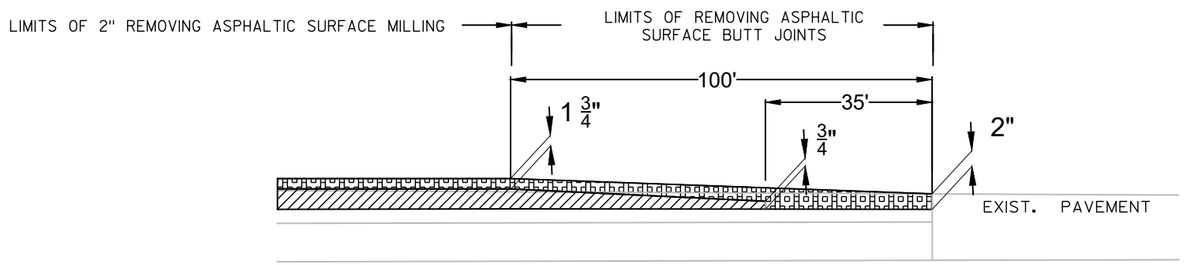
2



PAVEMENT AT MGS GUARDRAIL TERMINAL EAT FLARE AREAS

MEDIAN SHOULDER
1¾-INCH HMA PAVEMENT 4 SMA 52-28 H
2¼-INCH HMA PAVEMENT 3 HT 58-28S

OUTSIDE SHOULDER
4-INCH HMA PAVEMENT 4 LT 58-28 S

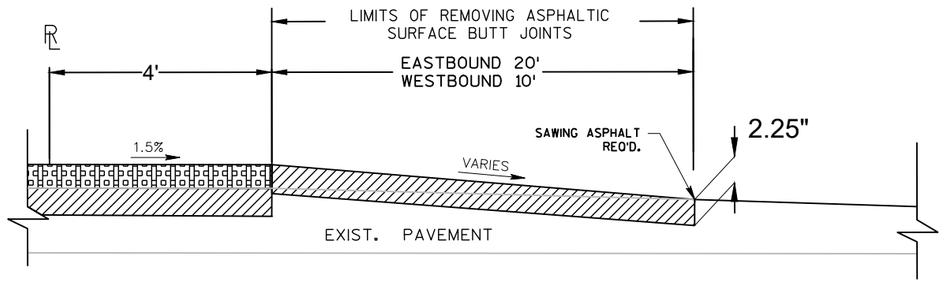


1 3/4-INCH HMA PAVEMENT 4 SMA 58-28 H

2 1/4" HMA PAVEMENT 3 HT 58-28 S

END JOINT TRANSITION

WESTBOUND	EASTBOUND
STA. 1560+12A-1561+12A	STA. 1558+94-1559+94
STA. 1619+17A-1620+17A	STA. 1618+13-1619+13
STA. 1622+03A-1623+03A	STA. 1620+98-1621+98
STA. 1900+23A-1901+23A	STA. 1899+26-1900+26
STA. 1902+89A-1903+89A	STA. 1901+93-1902+93
STA. 2028+56A-2029+56A	STA. 2002+56-2003+56
STA. 2032+35A-2033+35A	STA. 2029+86-2030+86
STA. 2103+27A-2104+27A	STA. 2103+00-2104+00

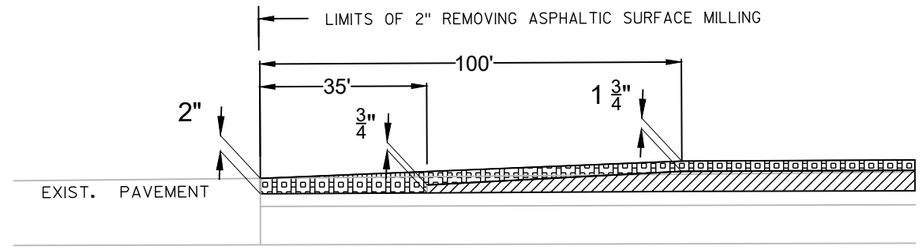


1 3/4-INCH HMA PAVEMENT 4 SMA 58-28 H

2 1/4" HMA PAVEMENT 3 HT 58-28 S

BUTTED JOINT AT MAINLINE CROSSOVER

STA 1592+04 – 1594+84(0–20')
STA 1594+84 – 1600+91
STA 1600+91 – 1603+54(20'–0)
STA 1593+32A – 1594+70A(0–10')
STA 1594+70A – 1603+11A
STA 1603+11A – 1604+69A(10'–0)



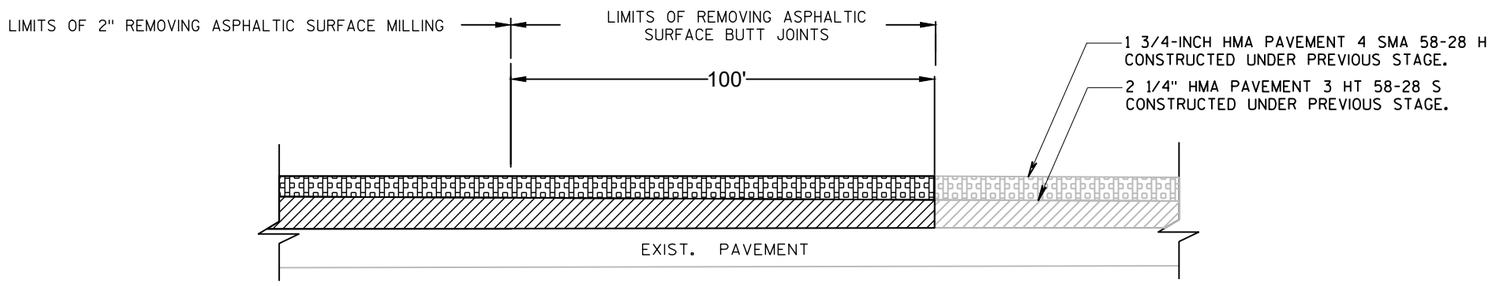
1 3/4-INCH HMA PAVEMENT 4 SMA 58-28 H

2 1/4" HMA PAVEMENT 3 HT 58-28 S

STAGING PAVEMENT TRANSITION
STAGE 1 & STAGE 2

WESTBOUND
STA. 1605+00A-1606+00A

EASTBOUND
STA. 1604+00-1605+00



1 3/4-INCH HMA PAVEMENT 4 SMA 58-28 H

2 1/4" HMA PAVEMENT 3 HT 58-28 S

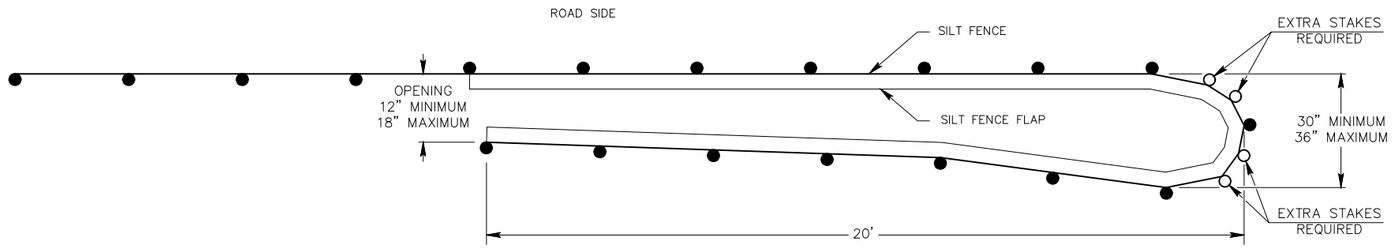
STAGING PAVEMENT TRANSITION
STAGE 3 & STAGE 4

WESTBOUND
STA. 1605+00A-1606+00A

EASTBOUND
STA. 1604+00-1605+00

2

NOTES:
SILT FENCE POSTS FOR THE TURN–AROUND SHALL BE ON THE OUTSIDE OF THE TURN–AROUND.
TO BE PAID FOR AS SILT FENCE.

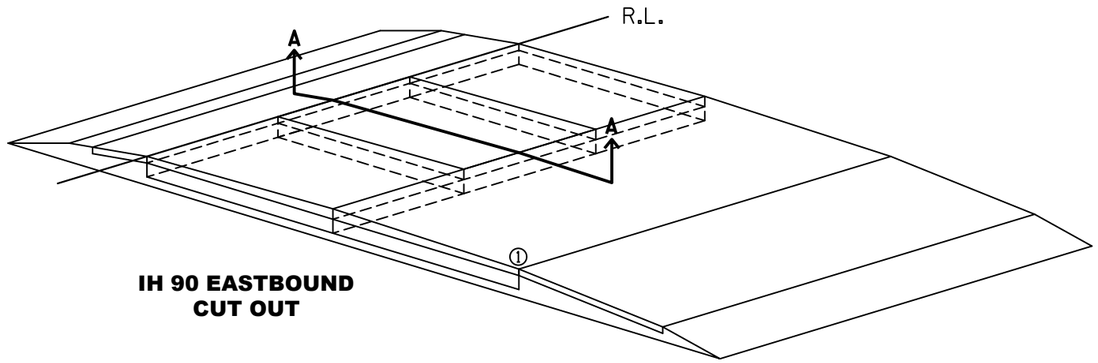


PLAN VIEW

TEMPORARY SMALL ANIMAL TURN–AROUND

STA. 1614+72–1614+92
STA. 1616+78–1616+98
STA. 1621+98–1622+18
STA. 1625+55–1625+75

STA. 1629+29A–1629+49A
STA. 1631+21A–1631+41A



IH 90 EASTBOUND CUT OUT

GENERAL NOTES

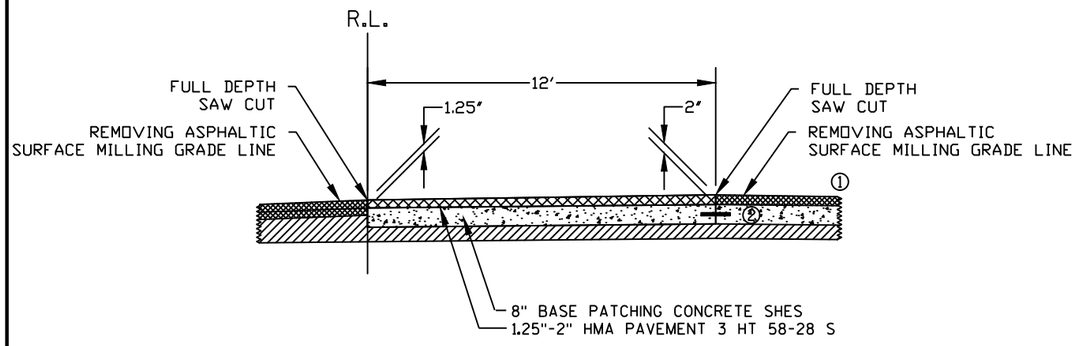
SAW CUT, DRILL, AND LIFT OUT EXISTING ASPHALTIC AND P.C. CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AND REPLACEMENT AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR AND REPLACEMENT LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AND REPLACEMENT AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

① FOR DOUBLE LANE REPAIRS OR OUTSIDE LANE REPAIRS, THE OUTER ASPHALT PAVEMENT THICKNESS IS 1.25".

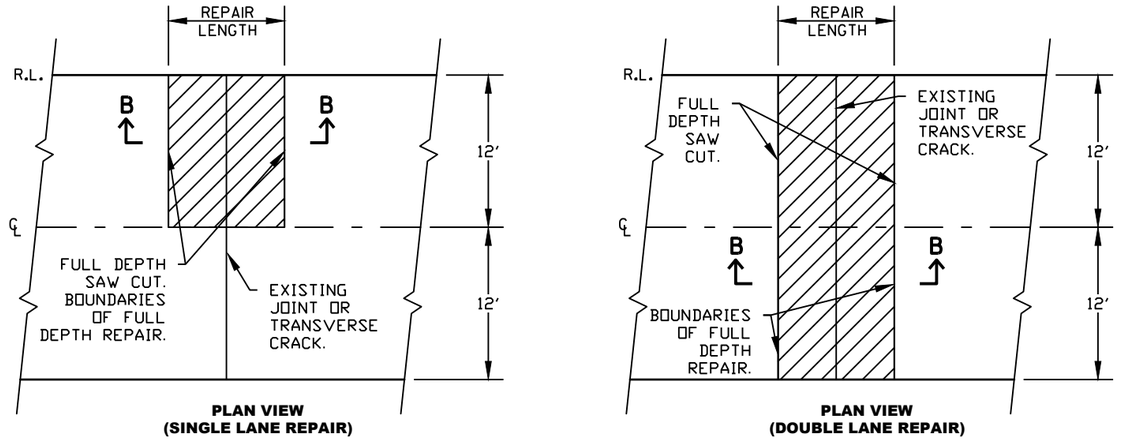
② PAVEMENT TIES WILL BE NECESSARY IF THE LENGTH OF THE REPLACEMENT EXCEEDS 15'. SEE 'CONCRETE PAVEMENT REPAIR AND REPLACEMENT' STANDARD DETAIL FOR TIE BAR PLACEMENT INFORMATION. UTILIZE A 12" PAVEMENT DEPTH FOR MAXIMUM TIE BAR SPACING.

③ DOWEL BARS MAY NOT EXIST. SEE 'BASE PATCHING CONCRETE' STANDARD DETAIL FOR DOWEL BAR PLACEMENT INFORMATION.

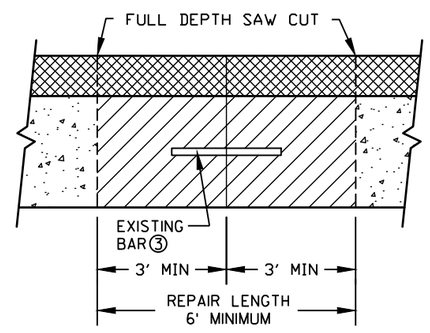


SECTION A-A

PROPOSED HMA-P.C.C. COMPOSITE BASE PATCH REQUIRED THICKNESSES

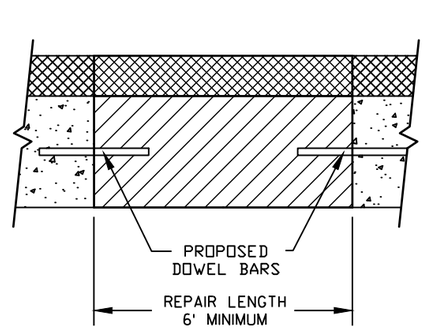


FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B-B

PAVEMENT REMOVAL



SECTION B-B

PROPOSED BASE PATCH

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAIL: COMPOSITE BASE PATCH	SHEET 21	E

2

LEGEND

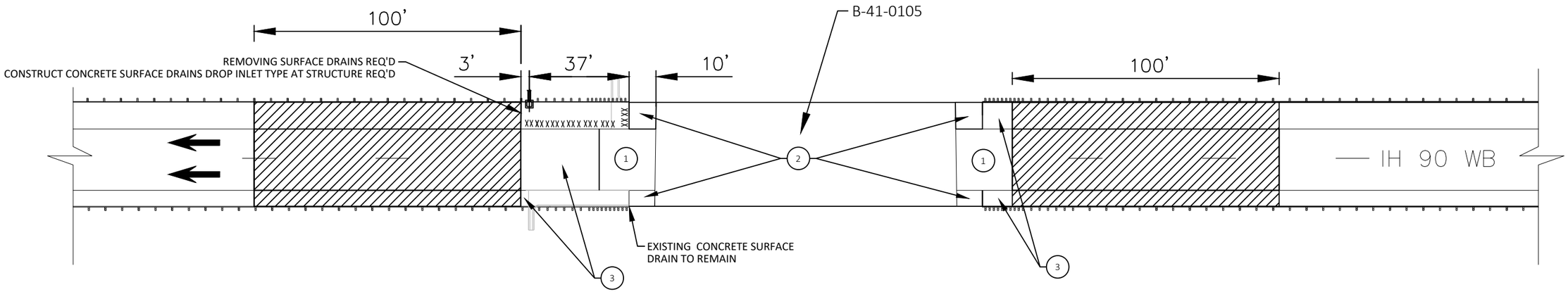
xxxx = SAWING CONCRETE

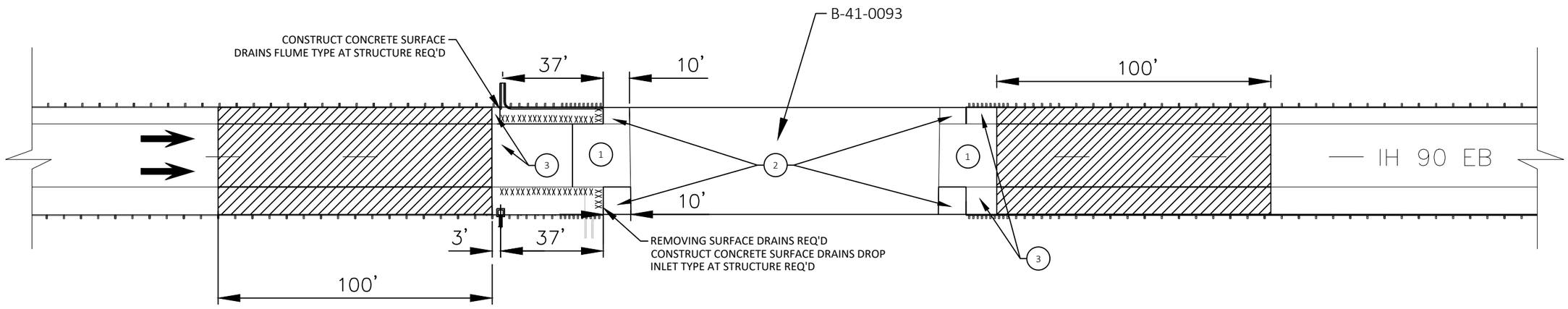
(1) = 12" CONC. PAV'T APPROACH SLAB TO REMAIN

(2) = 12" CONC. SHOULDER TO REMAIN

(3) = REMOVE 2" PAVEMENT AND REPAVE
NOTE: REMOVAL PAID FOR AS REMOVING ASPHALTIC SURFACE BUTT JOINTS

= REMOVING ASPHALTIC SURFACE BUTT JOINTS





PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAIL: B-41-0093 & B-41-0105	SHEET 22	E

2

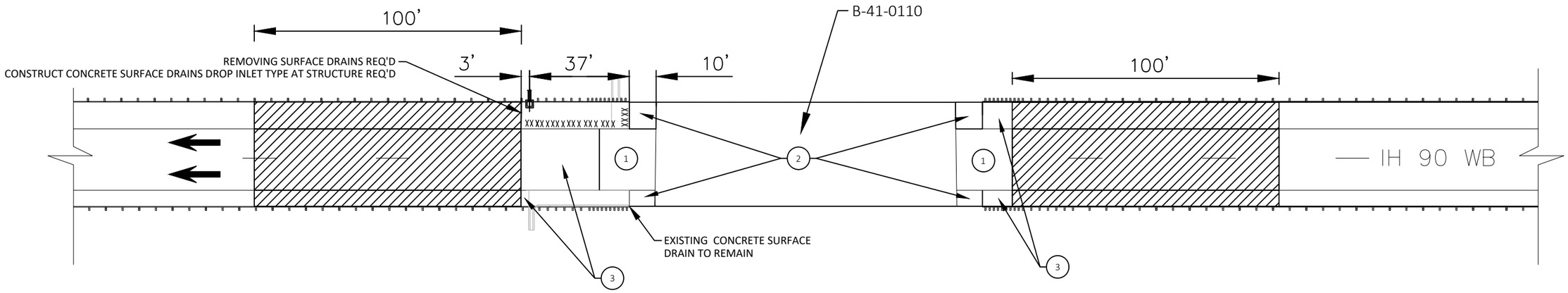
XXXX = SAWING CONCRETE

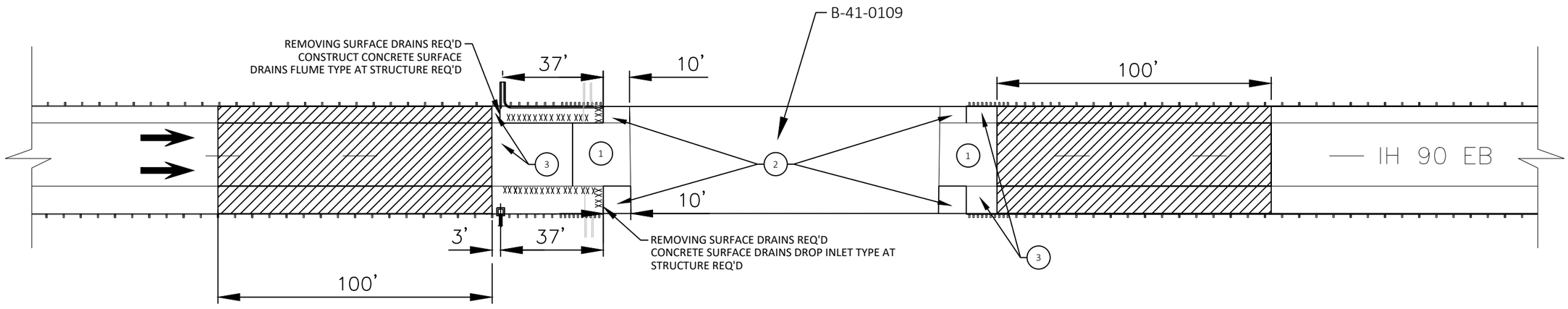
(1) = 12" CONC. PAV'T APPROACH SLAB TO REMAIN

(2) = 12" CONC. SHOULDER TO REMAIN

(3) = REMOVE 2" PAVEMENT AND REPAVE
NOTE: REMOVAL PAID FOR AS REMOVING ASPHALTIC SURFACE BUTT JOINTS

= REMOVING ASPHALTIC SURFACE BUTT JOINTS





PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAIL: B-41-0109 & B-41-0110	SHEET 23	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\021018_CD.DWG
LAYOUT NAME - 2
PLOT DATE : 7/16/2018 2:27 PM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

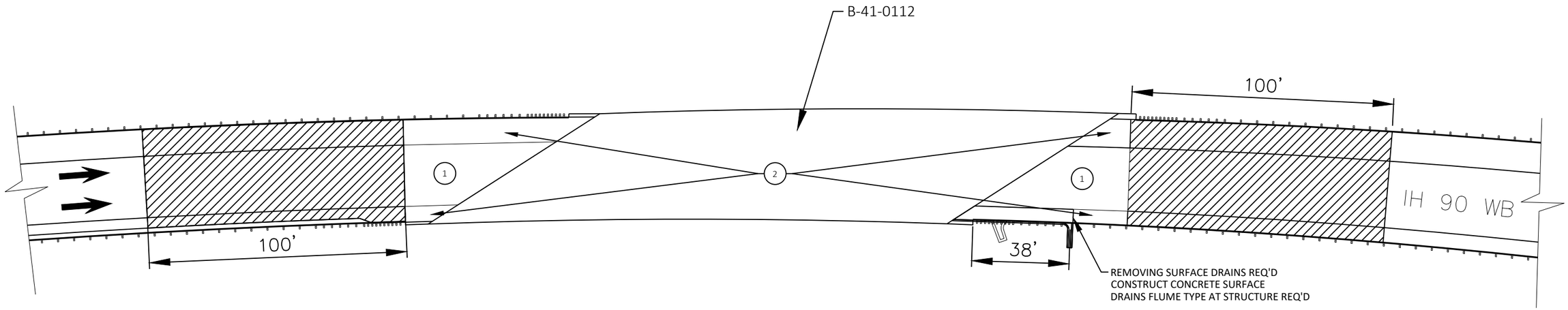
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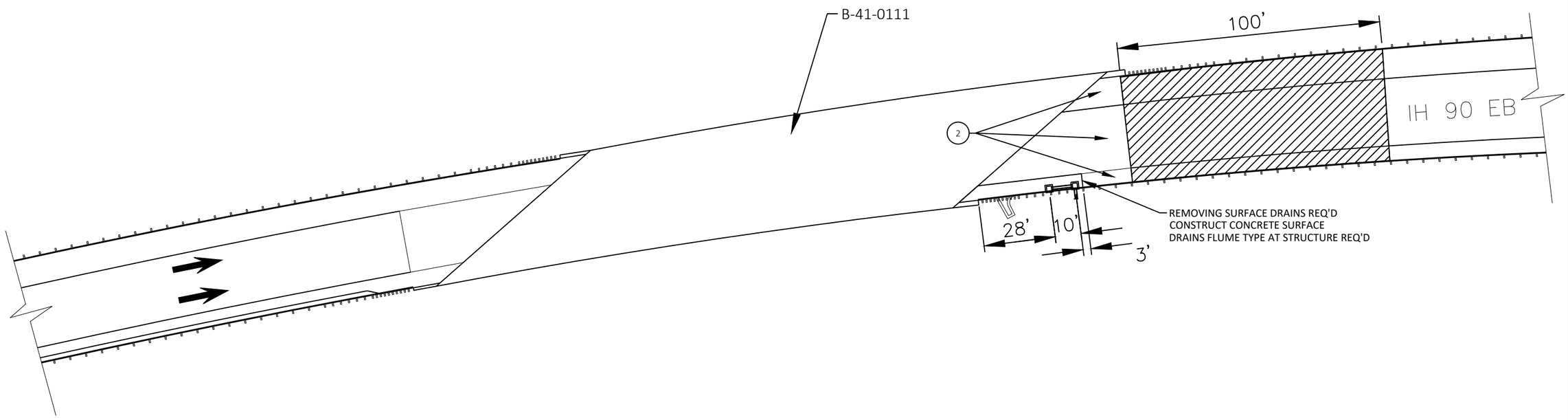
LEGEND

(1) = 12" CONC. PAV'T APPROACH SLAB TO REMAIN

(2) = REMOVE 2" PAVEMENT AND REPAVE
NOTE: REMOVAL PAID FOR AS REMOVING ASPHALTIC SURFACE BUTT JOINTS

= REMOVING ASPHALTIC SURFACE BUTT JOINTS





PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAIL: B-41-0111 & B-41-0112	SHEET 24	E

MIXTURE TESTING TABLE

Location	Station	Mixture Use:	Underlying Surface	Bid Item	Tons	Thickness	Quality Management Program to be used for: Mixture Acceptance	Quality Management Program to be used for: Density Acceptance
EASTBOUND								
Base Patch Locations	VARIOUS	Lower Layer	Concrete	3 HT 58-28 S	292.8	1 5/8" ave.	QMP as per SS 460.	Acceptance by ordinary Compaction
12' Driving Lane	1558+94 to 2003+56, 2029+62 to 2104+00	Lower Layer	Milled Existing HMA Surface	3 HT 58-28 S	8598.4	2 1/4"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
4' Shoulder	1558+94 to 2003+56, 2029+62 to 2104+00	Lower Layer	Milled Existing HMA Surface	3 HT 58-28 S	2989.1	2 1/4"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by the department; Not eligible for incentive
12' Driving Lane	1558+94 to 2003+56, 2029+62 to 2104+00	Lower Layer	Milled Existing HMA Surface	3 HT 58-28 S	8598.4	2 1/4"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
10' Shoulder	1558+94 to 2003+56, 2029+62 to 2104+00	Upper Layer	Milled Existing HMA Surface	4 LT 58-28 S	12811.7	4"	QMP as per SS 460.	QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000
12 foot Driving Lane w/4' integrated shoulder	1558+94 to 2003+56, 2029+62 to 2104+00	Upper Layer	3 HT 58-28 S	4 SMA 58-28 H	9071.2	1 3/4"	QMP as per SS 460.	QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000
12' Driving Lane	1558+94 to 2003+56, 2029+62 to 2104+00	Upper Layer	3 HT 58-28 S	4 SMA 58-28 H	6756.5	2 3/4"	QMP as per SS 460.	QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000
Maintenance Crossover	VARIOUS	Upper Layer	Existing HMA	4 LT 58-28 S	168.8	2"	QMP as per SS 460.	Acceptance by ordinary Compaction
Mainline Crossover	1592+04 to 1603+54	Upper Layer	Milled Existing HMA Surface	3 HT 58-28 S	230.3	2 1/4"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by the department; Not eligible for incentive
WESTBOUND								
Base Patch Locations	VARIOUS	Lower Layer	Concrete	3 HT 58-28 S	291.5	1 5/8" ave.	QMP as per SS 460.	Acceptance by ordinary Compaction
12' Driving Lane	1560+12'A' to 2104+27'A'	Lower Layer	Milled Existing HMA Surface	3 HT 58-28 S	8970.1	2 1/4"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
4' Shoulder	1560+12'A' to 2104+27'A'	Lower Layer	Milled Existing HMA Surface	3 HT 58-28 S	3078.6	2 1/4"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by the department; Not eligible for incentive
12' Driving Lane	1560+12'A' to 2104+27'A'	Lower Layer	Milled Existing HMA Surface	3 HT 58-28 S	8970.1	2 1/4"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
10' Shoulder	1560+12'A' to 2104+27'A'	Upper Layer	Milled Existing HMA Surface	4 LT 58-28 S	13341.5	4"	QMP as per SS 460.	QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000
12 foot Driving Lane w/4' integrated shoulder	1560+12'A' to 2104+27'A'	Upper Layer	3 HT 58-28 S	4 SMA 58-28 H	9453.9	1 3/4"	QMP as per SS 460.	QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000
12' Driving Lane	1560+12'A' to 2104+27'A'	Upper Layer	3 HT 58-28 S	4 SMA 58-28 H	7069.9	1 3/4"	QMP as per SS 460.	QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000
Mainline Crossover	1593+323A to 1604+69A	Upper Layer	Milled Existing HMA Surface	3 HT 58-28 S	138.4	2 1/4"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by the department; Not eligible for incentive

2

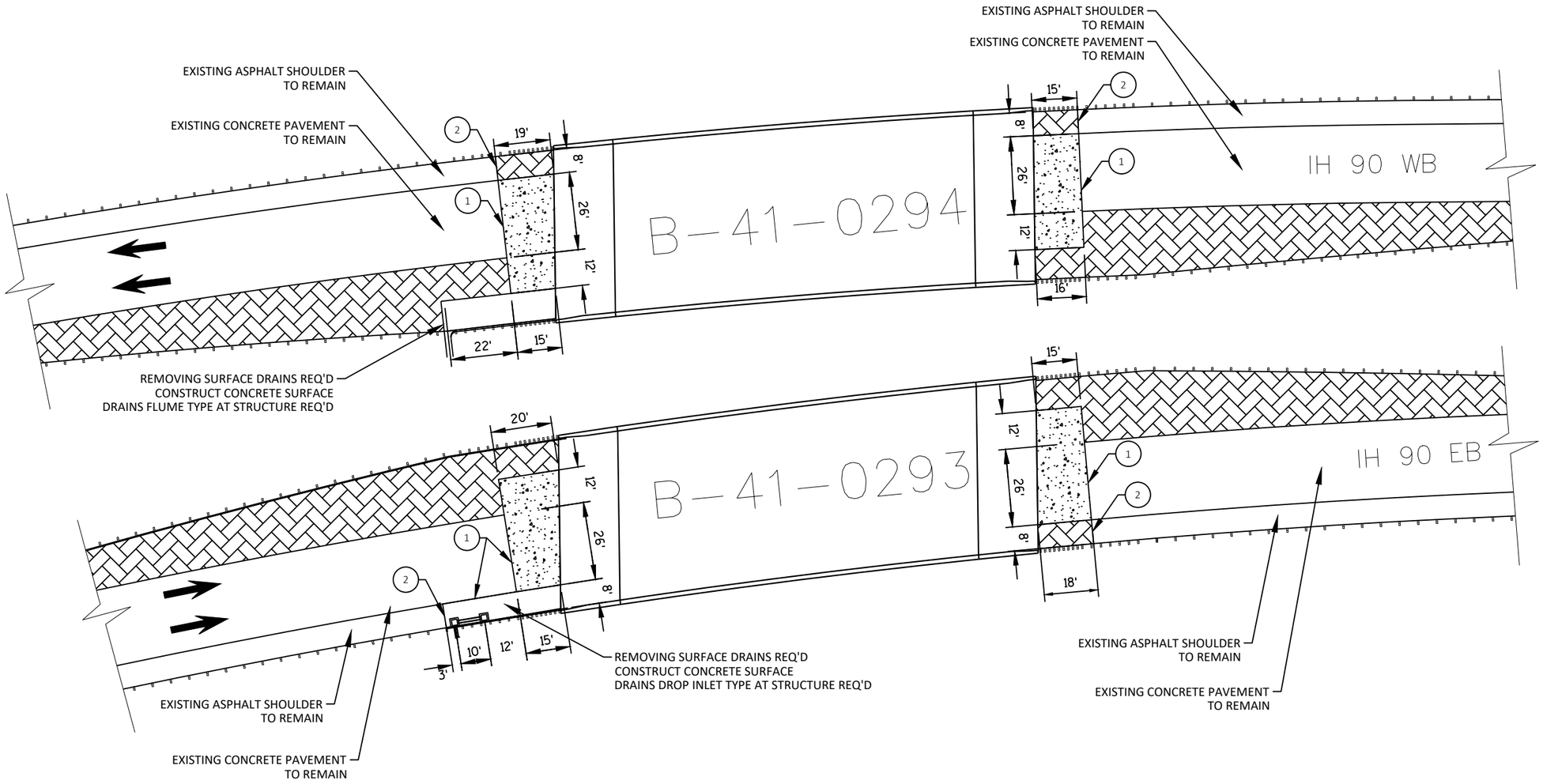
LEGEND

= CONCRETE PAVEMENT APPROACH SLAB

= 3.5" HMA PAVEMENT 4 LT 58-28 S

(1) = SAWING CONCRETE

(2) = SAWING ASPHALT



PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAIL: B-41-0293 & B-41-0294	SHEET 26	E

2

N

POST 9
2131+56A,
-34.00

POST 1
2131+06A,
-36.00

TAPER
2130+86A,
-34.00

TAPER
2133+46A,
4.00

TAPER
2136+16A,
22.00

B-41-0294

TAPER
2138+52A,
22.00

POST 9
2140+92A,
6.00

POST 1
2141+68A,
8.00

TAPER
2142+08A,
4.00

2130A

2135A

2140A

POST 1
2132+39,
-8.00

TAPER
2133+28,
-6.00

TAPER
2131+99,
-4.00

POST 9
2140+66,
-6.00

TAPER
2141+56,
-4.00

2130

2135

2140

TAPER
2135+68,
-22.00

B-41-0293

TAPER
2138+01,
-22.00

POST 9
2132+89,
-6.00

POST 9
2139+24,
34.00

POST 1
2139+74,
36.00

TAPER
2139+94,
34.00

TAPER
2140+41,
-6.00

POST 1
2141+16,
-8.00

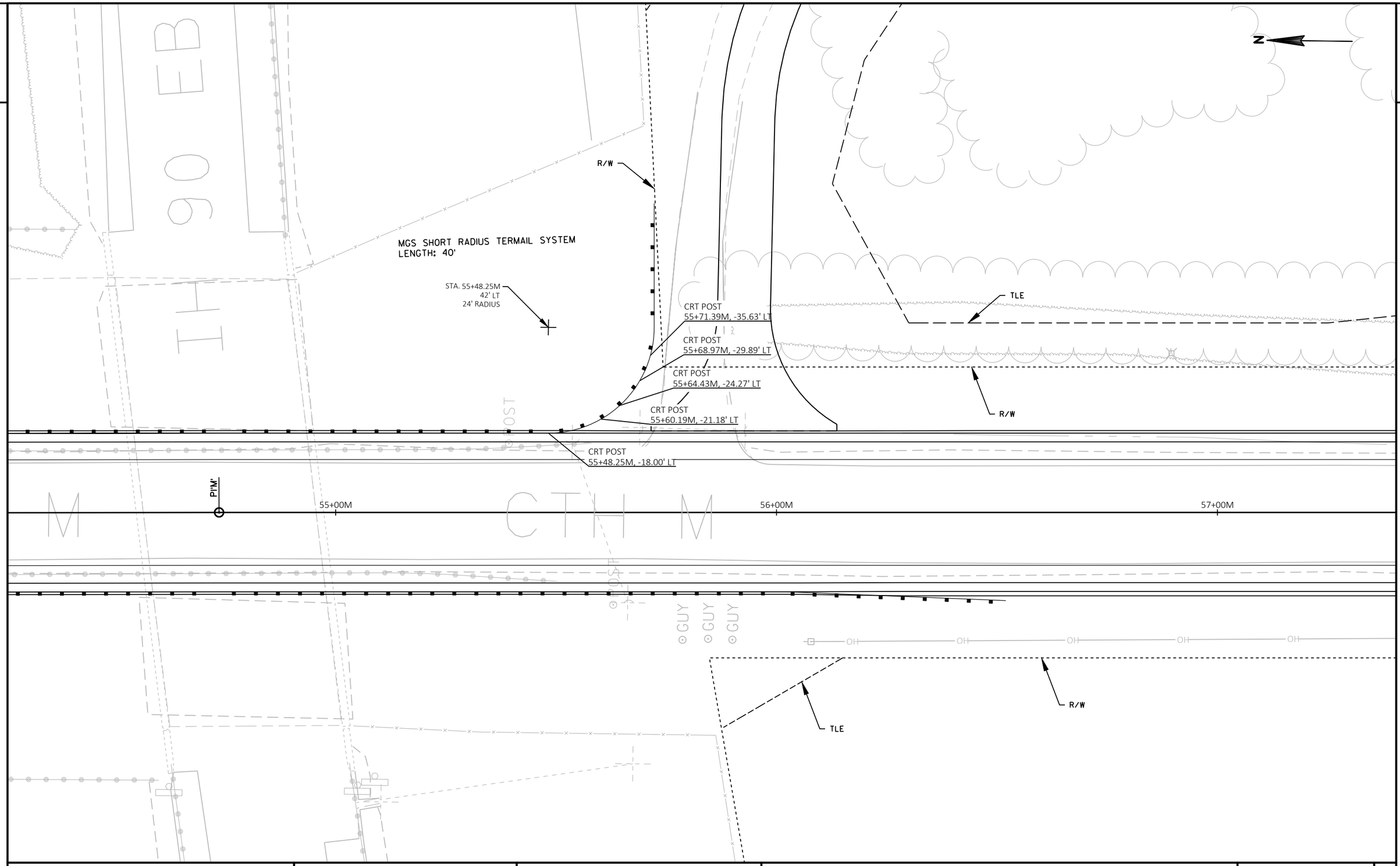
POST 9
2129+73,
34.00

POST 1
2129+23,
36.00

TAPER
2129+03,
34.00

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAIL:BEAM GUARD HINGE POINTS	SHEET 27	E

2



PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CONSTUCTION DETAIL:MGS SHORT RADIUS TERMINAL	SHEET 28	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\2016\021007_CD.DWG
LAYOUT NAME - 2

PLOT DATE : 5/17/2018 8:32 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

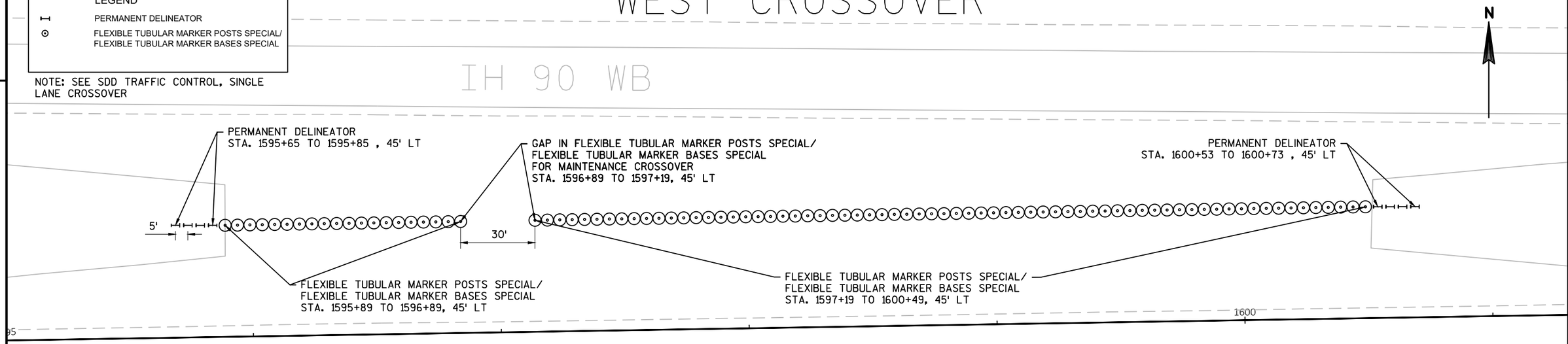
WEST CROSSOVER

LEGEND

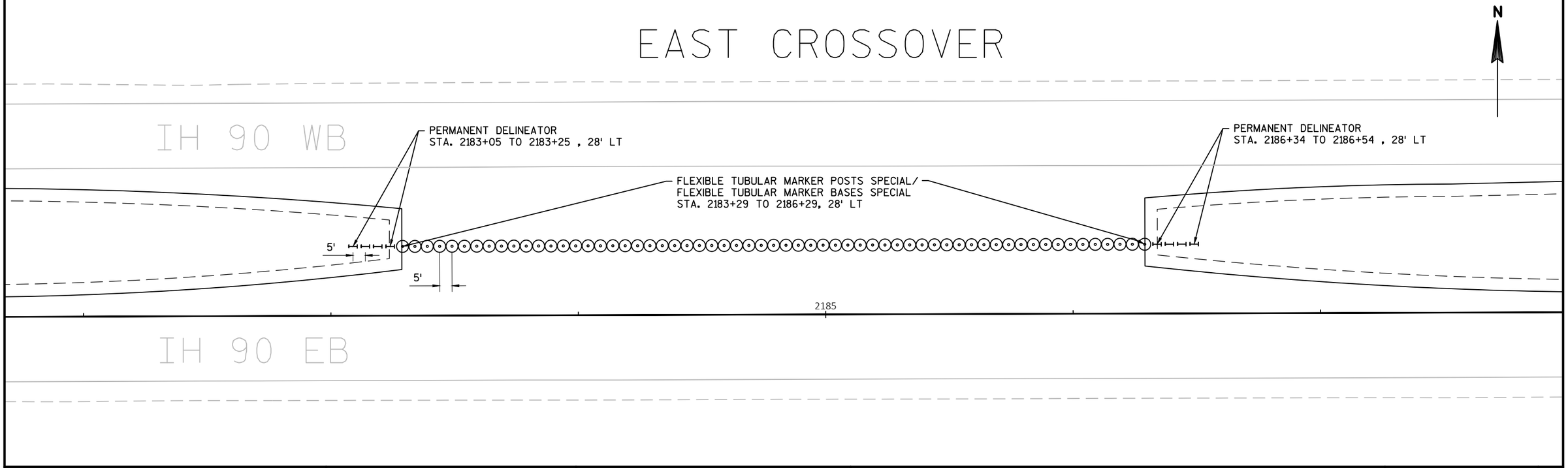
PERMANENT DELINEATOR

FLEXIBLE TUBULAR MARKER POSTS SPECIAL/
FLEXIBLE TUBULAR MARKER BASES SPECIAL

NOTE: SEE SDD TRAFFIC CONTROL, SINGLE LANE CROSSOVER

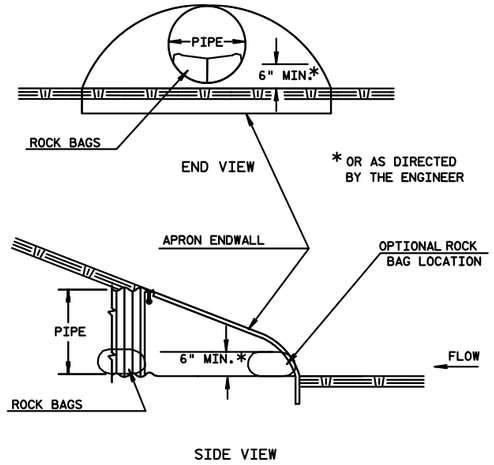


EAST CROSSOVER



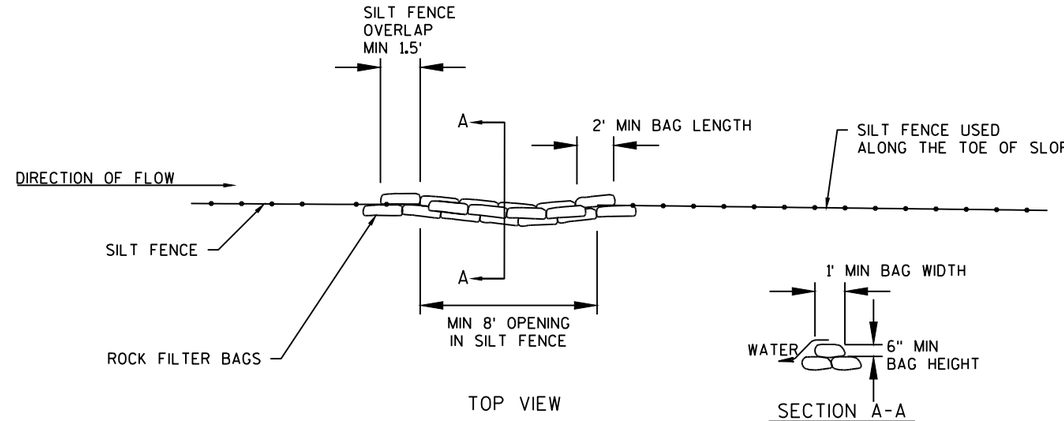
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAIL-CROSSOVER PROTECTION	SHEET 29	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\021016_CD.DWG
LAYOUT NAME - CD delinerators
PLOT DATE : 5/21/2018 1:22 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42



ESTIMATED BAG SIZE = 18" X 12" X 6"	
PIPE SIZE	ESTIMATED NO. OF BAGS
12"	1
15"	2
18"	2
21"	3
14" X 23"	3
24"	3
27"	4
30"	5
19" X 30"	5
36"	7
24" X 38"	8
42"	8
29" X 45"	10
48"	10
34" X 53"	10
38" X 60"	13
60"	13
66"	15
53" X 83"	19

CULVERT PIPE CHECKS



ROCK BAGS USED FOR SILT FENCE RELIEF

2

2

N

LEGEND
EROSION MAT CLASS 1, TYPE A
SILT FENCE
INLET PROTECTION
TEMPORARY DITCH CHECK
SILT FENCE RELIEF
WATER FLOW LINES
SLOPE INTERCEPT

RIPRAP MEDIUM
GEOTEXTILE TYPE R
REQ'D

CONCRETE SURFACE DRAIN
SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #30, FERT TYPE B AND EMAT TYPE 1 CLASS A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

INLET PROTECTION
TYPE B REQ'D

BARRIER SYSTEM GRADING SHAPING FINISHING
SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #30, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

TEMPORARY SMALL ANIMAL
TURN-AROUND REQ'D

SLOPE INTERCEPT

IH 90 WB

IH 90 EB

CTH A

1615
1620A
1620
1625A
1625
1630A
1630

SIGN
SIGN
SIGN

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL	SHEET 31	E

2

LEGEND
EROSION MAT CLASS 1, TYPE A
SILT FENCE
TEMPORARY DITCH CHECK
SILT FENCE RELIEF
WATER FLOW LINES

N

SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #30, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

SILVER CR

IH 90 WB

1670A 1675A 1680A

1670 1675 1680

SHPO COMMITMENT AREA 47Mo408:
STA: 1769+26 TO STA: 1772+81
WITHIN ROW LIMITS.
ARCHITECTURAL/HISTORICAL
COORDINATION REQUIRED.

SHPO COMMITMENT AREA 47Mo1:
STA: 1757+85 TO STA: 1761+07
WITHIN ROW LIMITS.
ARCHITECTURAL/HISTORICAL
COORDINATION REQUIRED.

1760A 1765A 1770A

1760 1765 1770

SHPO COMMITMENT AREA 47Mo5:
STA: 1770+48 TO STA: 1773+25
WITHIN ROW LIMITS.
ARCHITECTURAL/HISTORICAL
COORDINATION REQUIRED.

TH

SLOPE INTERCEPT

SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #30, FERT TYPE B AND EMAT TYPE 1 CLASS A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL	SHEET 32	E

2

LEGEND
EROSION MAT CLASS 1, TYPE A
SILT FENCE
INLET PROTECTION
TEMPORARY DITCH CHECK
SILT FENCE RELIEF
WATER FLOW LINES
SLOPE INTERCEPT

SALVAGE TOPSOIL, TEMP. SEEDING, SEEDING #70, FERT TYPE B AND EMAT CLASS 1 TYPE A UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

SLOPE INTERCEPT

RIPRAP MEDIUM GEOTEXTILE TYPE R REQ'D

HAZEL AVE.

N

1890A

IH 90 WB

INLET PROTECTION TYPE A REQ'D

1895A

CONCRETE SURFACE DRAIN

SALVAGE TOPSOIL, TEMP. SEEDING, SEEDING #70, FERT TYPE B AND EMAT TYPE 1 CLASS A UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

1900A

INLET PROTECTION TYPE B REQ'D

1905A

1890

1895

1900

IH 90 EB

SLOPE INTERCEPT

BARRIER SYSTEM GRADING SHAPING FINISHING SALVAGE TOPSOIL, TEMP. SEEDING, SEEDING #70, FERT TYPE B AND EMAT CLASS 1 TYPE A UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

INLET PROTECTION TYPE B REQ'D

RIPRAP MEDIUM GEOTEXTILE TYPE R REQ'D

INLET PROTECTION TYPE A REQ'D

HAZEL AVE.

BARRIER SYSTEM GRADING SHAPING FINISHING SALVAGE TOPSOIL, TEMP. SEEDING, SEEDING #70, FERT TYPE B AND EMAT CLASS 1 TYPE A UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

N

IH 90 WB

1905A

SLOPE INTERCEPT

1910A

1915A

1905

1910

1915

IH 90 EB

INLET PROTECTION TYPE A REQ'D

SALVAGE TOPSOIL, TEMP. SEEDING, SEEDING #70, FERT TYPE B AND EMAT CLASS 1 TYPE A UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

SLOPE INTERCEPT

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL	SHEET 33	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\022001.0_EC.DWG
LAYOUT NAME - 24
PLOT DATE : 7/12/2018 3:40 PM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

LEGEND
EROSION MAT CLASS 1, TYPE A
SILT FENCE
SILT FENCE RELIEF
WATER FLOW LINES
SLOPE INTERCEPT

IH 90 WB
IH 90 EB

BARRIER SYSTEM GRADING SHAPING FINISHING
SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #70, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

SLOPE INTERCEPT

BARRIER SYSTEM GRADING SHAPING FINISHING
SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #70, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

SLOPE INTERCEPT

SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #70, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

SLOPE INTERCEPT

BARRIER SYSTEM GRADING SHAPING FINISHING
SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #70, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL	SHEET 34	E

LEGEND
EROSION MAT CLASS 1, TYPE A
SILT FENCE
INLET PROTECTION
TEMPORARY DITCH CHECK
SILT FENCE RELIEF
WATER FLOW LINES
SLOPE INTERCEPT

2020A
2025A
2030A
IH 90 WB
STH 16
IH 90 EB
2020
2025
2030

CONCRETE SURFACE DRAIN
SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #30, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

SLOPE INTERCEPT

SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #30, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

RIPRAP MEDIUM
GEOTEXTILE TYPE R
REQ'D

INLET PROTECTION
TYPE B REQ'D

N

CONCRETE SURFACE DRAIN
SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #30, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

RIPRAP MEDIUM
GEOTEXTILE TYPE R
REQ'D

SLOPE INTERCEPT

SLOPE INTERCEPT

SLOPE INTERCEPT

2035A
2040A
2045A
WB
2035
2040
2045

INLET PROTECTION
TYPE A REQ'D

BARRIER SYSTEM GRADING SHAPING FINISHING
SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #30, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #30, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

N

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL	SHEET 35	E

LEGEND
EROSION MAT CLASS 1, TYPE A
SLOPE INTERCEPT

2

2

N

2070A
2075A
2080A
2065
2070
2075
2080

SLOPE INTERCEPT
BARRIER SYSTEM GRADING SHAPING FINISHING
SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #30, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

SLOPE INTERCEPT
SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #30, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

SIGN

POST

IH 90 WB
IH 90 EB

2120A
2125A
2130A
2120
2125
2130

BARRIER SYSTEM GRADING SHAPING FINISHING
SALVAGE TOPSOIL, TEMP. SEEDING,
SEEDING #30, FERT TYPE B AND EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTRIBUTED AREAS

SLOPE INTERCEPT

N

PROJECT NO: 1077-02-73 & 1071-02-71	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL	SHEET 36	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\022001.0_EC.DWG
LAYOUT NAME - 31

PLOT DATE : 7/12/2018 3:42 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND

- SLOPE INTERCEPT
- DIRECTIONAL WATER FLOW
- INLET PROTECTION
- SEED #30, FERT TYPE B, EROSION MAT CLASS 1 TYPE A
- RIPRAP

N

IH 90

2130A

2135A

2135

2130

SLOPE INTERCEPT

SALVAGED TOPSOIL, SEEDING #30, FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE A UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

SLOPE INTERCEPT

SALVAGED TOPSOIL, SEEDING #30, FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE A UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

SLOPE INTERCEPT

INLET PROTECTION TYPE B REQ'D

SALVAGED TOPSOIL, SEEDING #30, FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE A UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

54+00 N'

55+00 N'

56+00 N'

POST

2

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\2016\022001.0_EC.DWG
VFG - IH 90 EB BESTFIT - (1) - 1
PLOT DATE : 5/16/2018 1:02 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

SLOPE INTERCEPT

DIRECTIONAL WATER FLOW

INLET PROTECTION

SILT FENCE

SILT FENCE RELIEF

SEED #30, FERT TYPE B,
EROSION MAT CLASS 1 TYPE A

SEED #30, FERT TYPE B,
EROSION MAT CLASS 1 TYPE B

N

52+00'M'

53+00'M'

54+00'M'

55+00'M'

SALVAGED TOPSOIL, SEEDING #30,
FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

SLOPE INTERCEPT

INLET PROTECTION
TYPE A REQ'D

EROSION MAT CLASS 1 TYPE B

2140A

IH 90

SLOPE INTERCEPT

SALVAGED TOPSOIL, SEEDING #30,
FERTILIZER TYPE B & EMAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

2140

IH 90

SALVAGED TOPSOIL, SEEDING #30,
FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

SLOPE INTERCEPT

SALVAGED TOPSOIL, SEEDING #30,
FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE A
UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

SLOPE INTERCEPT

POST

POST

POST

POST

GUY

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\2016\022001.0_EC.DWG
VFG - IH 90 EB BESTFIT - (1) - 2

PLOT DATE : 5/16/2018 1:03 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

LEGEND

- SLOPE INTERCEPT
- DIRECTIONAL WATER FLOW
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SILT FENCE
- SILT FENCE RELIEF
- SEED #30, FERT TYPE B, EROSION MAT CLASS 1 TYPE A
- SEED #30, FERT TYPE B, EROSION MAT CLASS 1 TYPE B

N

SALVAGED TOPSOIL, SEEDING #30, FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE B ALL DITCH FLOW LINES

SLOPE INTERCEPT

SALVAGED TOPSOIL, SEEDING #30, FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE B UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

R/W

SLOPE INTERCEPT

INLET PROTECTION TYPE A REQ'D

SALVAGED TOPSOIL, SEEDING #30, FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE A UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

SALVAGED TOPSOIL, SEEDING #30, FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE A UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

SLOPE INTERCEPT

TLE

R/W

49+00'M' 50+00'M' 51+00'M' 52+00'M' 53+00'M' 54+00'M' 55+00'M'

INLET PROTECTION TYPE C REQ'D

R/W

TLE

SLOPE INTERCEPT

SLOPE INTERCEPT

SALVAGED TOPSOIL, SEEDING #30, FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE A UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

SALVAGED TOPSOIL, SEEDING #30, FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE A UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

SALVAGED TOPSOIL, SEEDING #30, FERTILIZER TYPE B & EROSION MAT CLASS 1 TYPE B ALL DITCH FLOW LINES

2135

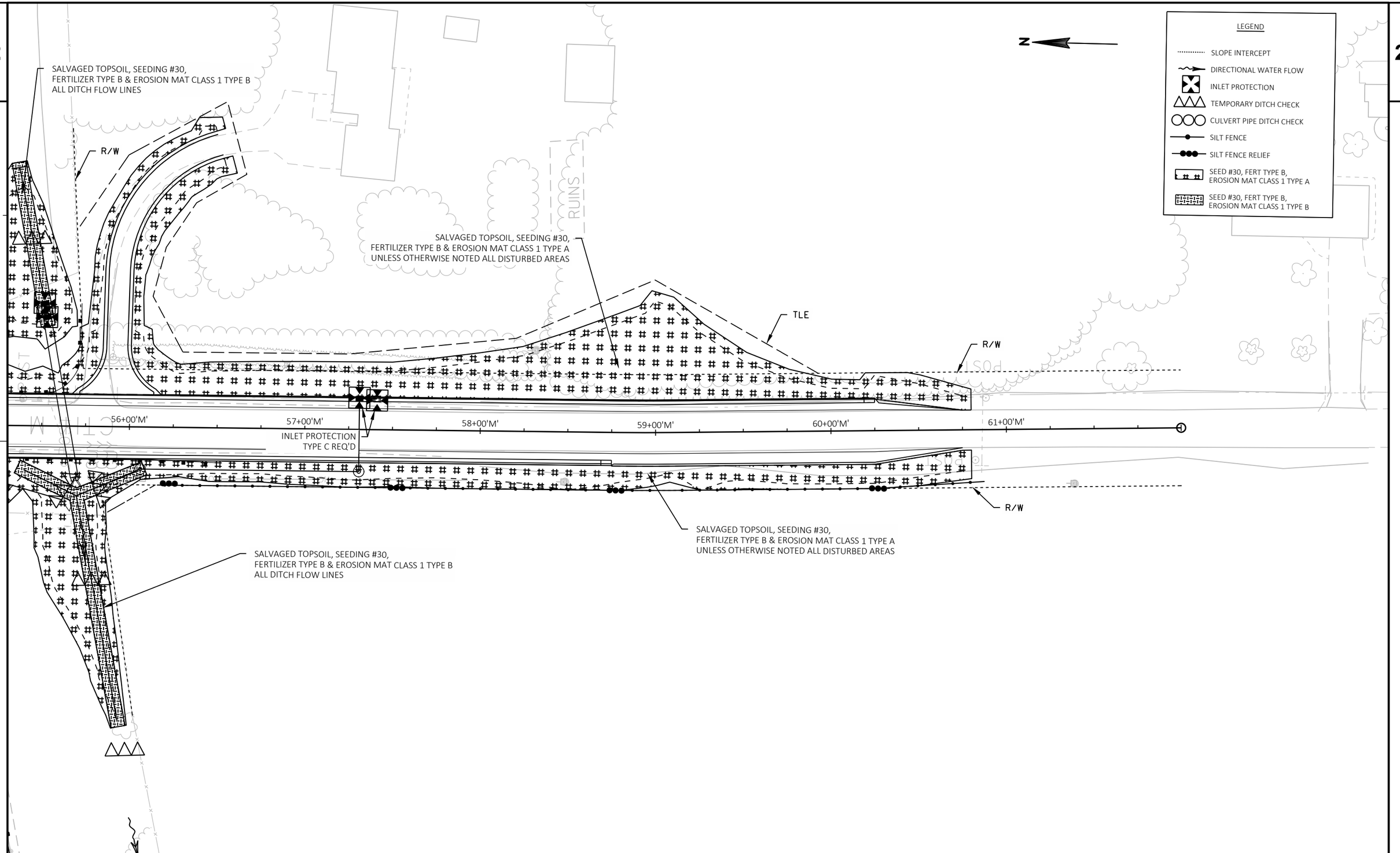
2135A

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\2016\022003.0_EC.DWG
LAYOUT NAME - 3

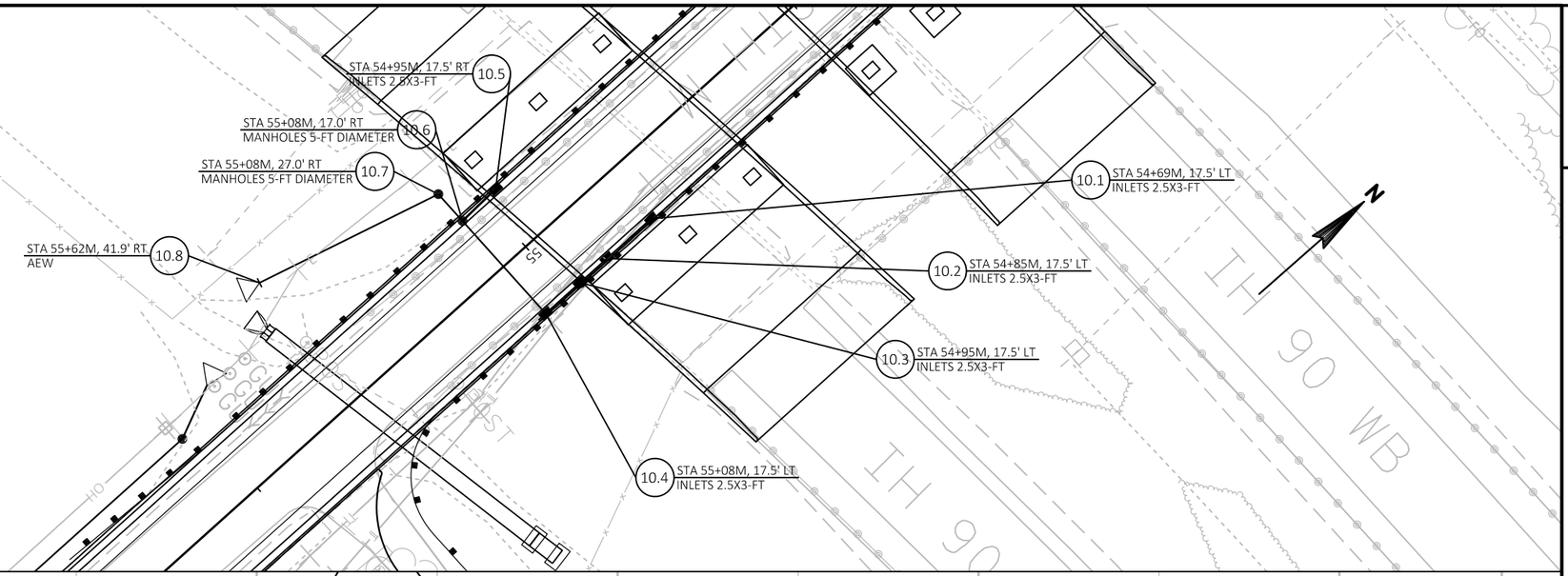
PLOT DATE : 5/16/2018 1:22 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL	SHEET 40	E

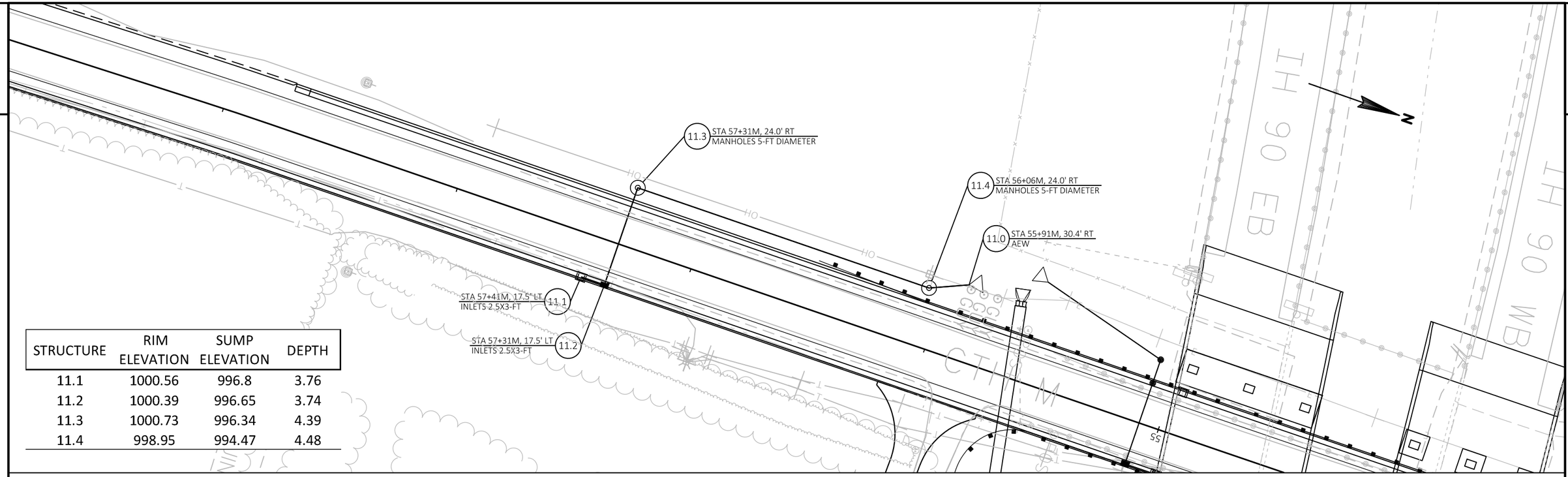
STRUCTURE	RIM ELEVATION	SUMP ELEVATION	DEPTH
10.1	998.30	994.98	3.32
10.2	998.29	994.98	3.31
10.3	998.29	994.12	4.17
10.4	998.31	993.95	4.36
10.5	998.29	994.4	3.89
10.6	998.33	993.65	4.68
10.7	1000.29	993.5	6.79



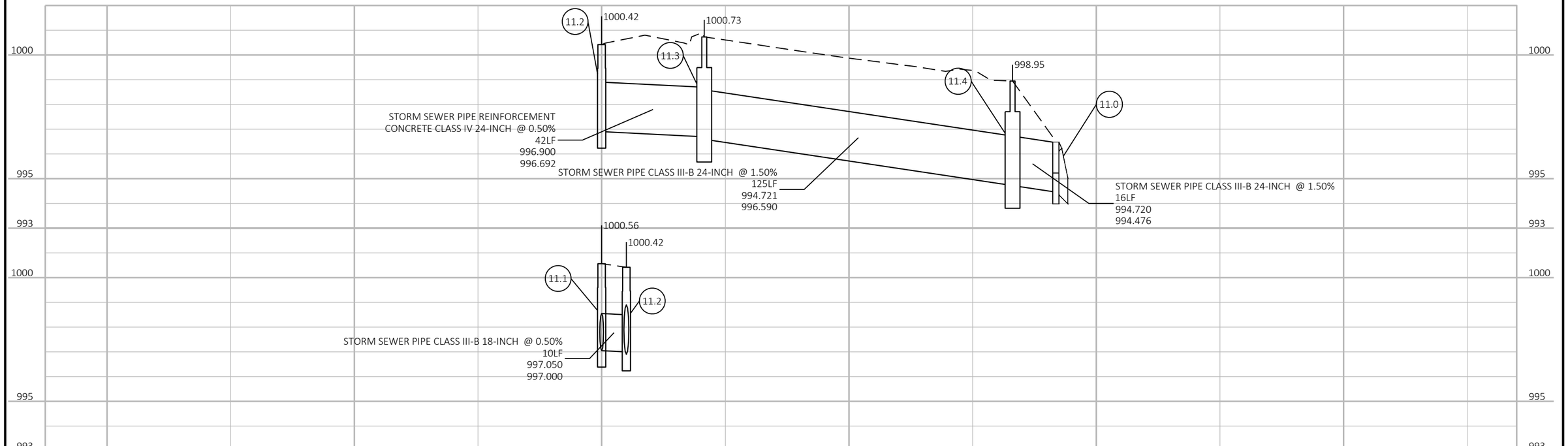
PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	STORM SEWER	SHEET 41	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\022501_SS.DWG
LAYOUT NAME - 022501
PLOT DATE : 5/10/2018 2:58 PM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

2



STRUCTURE	RIM ELEVATION	SUMP ELEVATION	DEPTH
11.1	1000.56	996.8	3.76
11.2	1000.39	996.65	3.74
11.3	1000.73	996.34	4.39
11.4	998.95	994.47	4.48



PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	STORM SEWER	SHEET 42	E

PCMS LOCATIONS		
SITE	PRE-CONSTRUCTION WARNING	
N1	IH 90 ROAD WORK	STARTING X/XX/XX
N2	IH 90 ROAD WORK	STARTING X/XX/XX

EXIT 28

WORK AREA

EXIT 41

N1

N2

STAGE 1

STAGE 2

LOADS EXCEEDING
14 FT MUST USE
EXIT 28

LOADS EXCEEDING
14 FT MUST USE
EXIT 41

EAST
M3-2
36" X 18"
INTERSTATE 90
M1-1
36" X 36"
MAX., 14 WIDTH
W12-52
48" X 48"
3 MILES AHEAD
W57-52
48" X 36"

EAST
M3-2
36" X 18"
INTERSTATE 90
M1-1
36" X 36"
MAX., 14 WIDTH
W12-52
48" X 48"
1 MILE AHEAD
W57-52
48" X 36"

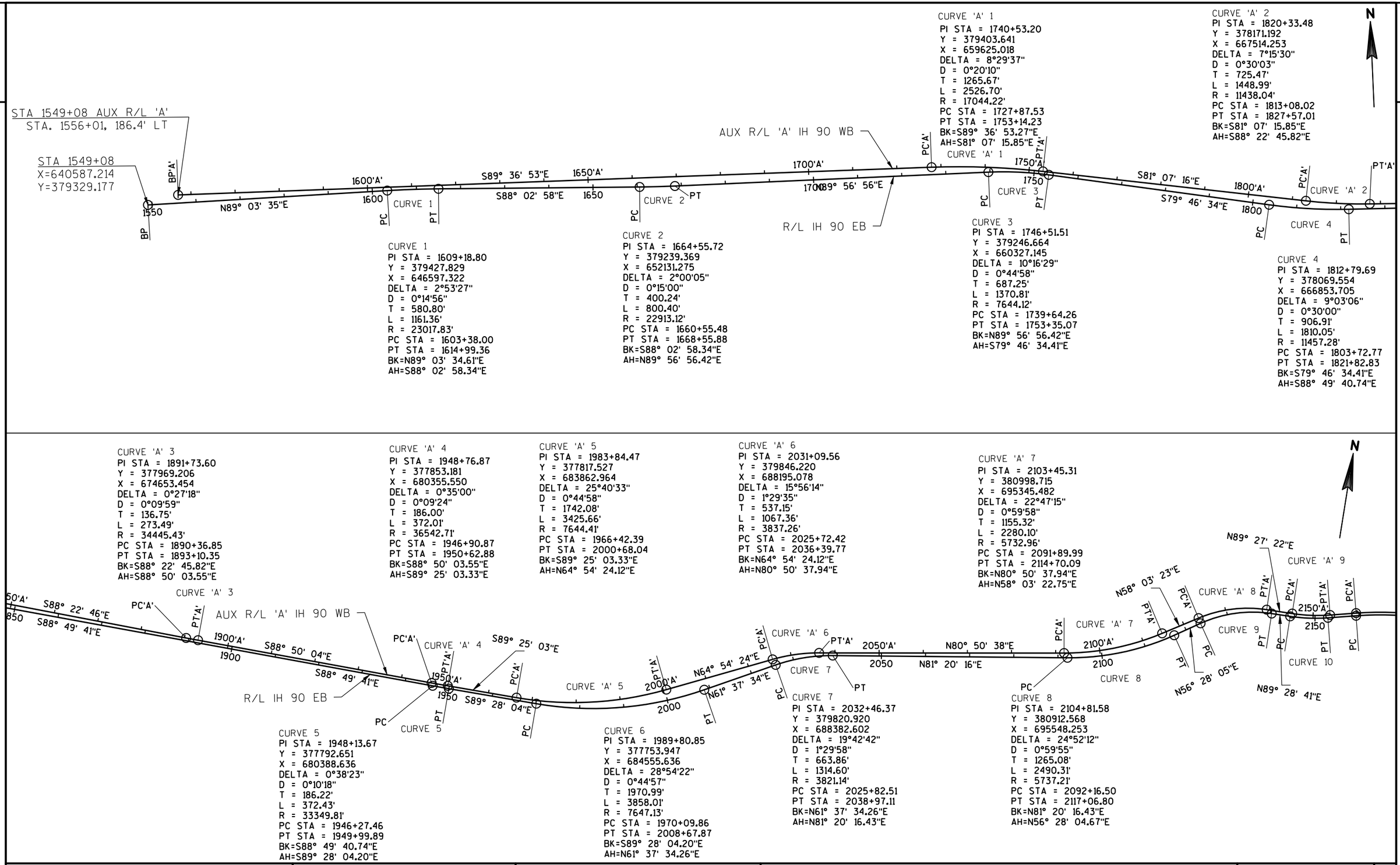
WEST
M3-2
36" X 18"
INTERSTATE 90
M1-1
36" X 36"
MAX., 14 WIDTH
W12-52
48" X 48"
1 MILE AHEAD
W57-52
48" X 36"

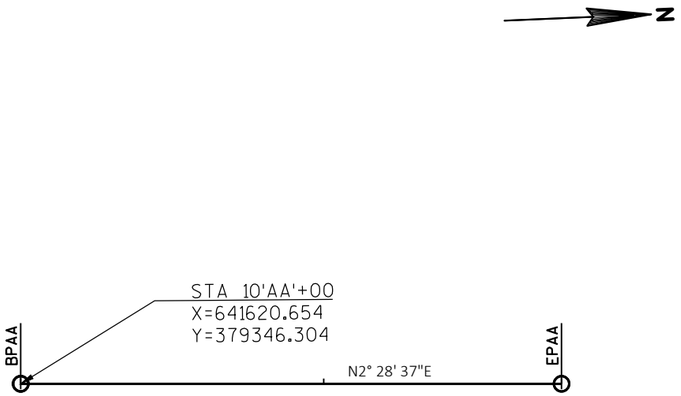
WEST
M3-2
36" X 18"
INTERSTATE 90
M1-1
36" X 36"
MAX., 14 WIDTH
W12-52
48" X 48"
3 MILES AHEAD
W57-52
48" X 36"

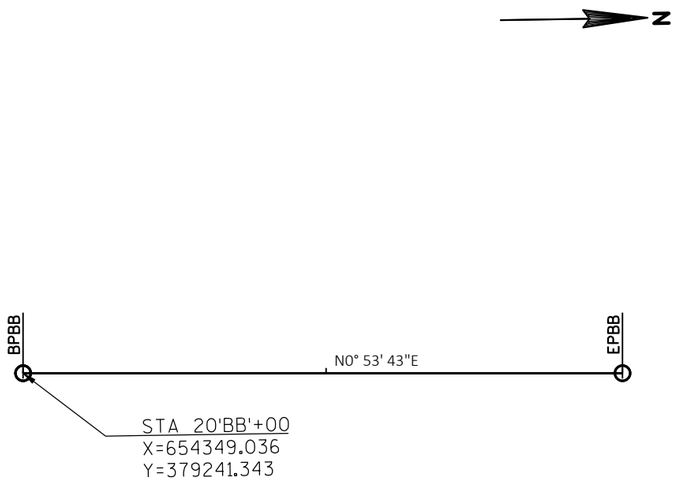
PROJECT NO: 1071-02-71 & 1077-02-73	HWY: IH 90	COUNTY: MONROE	ADVANCED WARNING-STAGE 1 & STAGE 2	SHEET 43 E

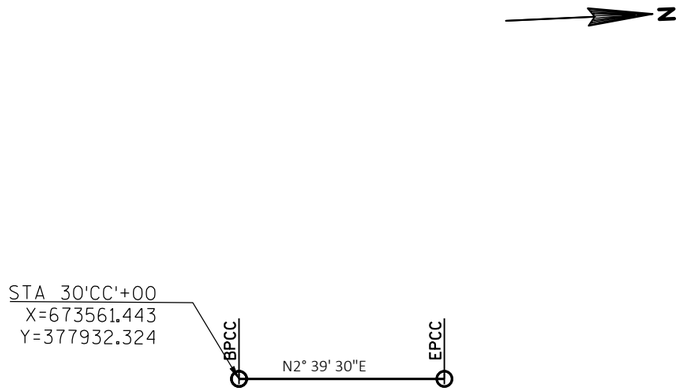
FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\023301_AW.DWG
LAYOUT NAME - Plan 1 IN 1000 FT

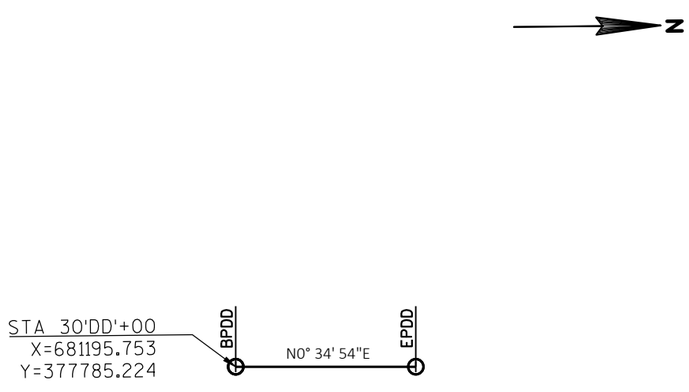
PLOT DATE : 5/30/2018 1:41 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : Custom

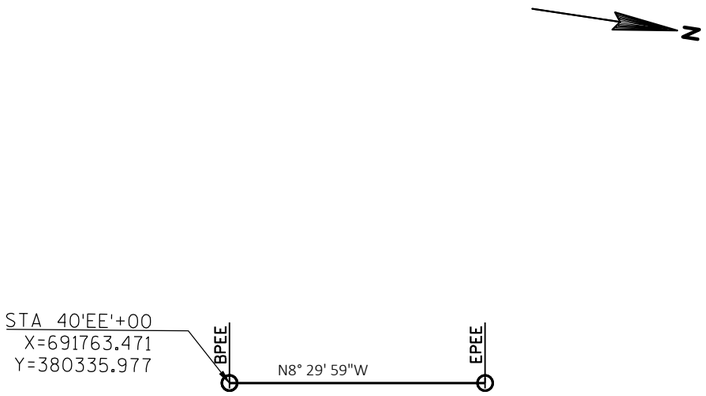

STA 1549+08 AUX R/L 'A'
STA. 1556+01, 186.4' LT
STA 1549+08
X=640587.214
Y=379329.177
BP'A'
BP
1550
N89° 03' 35"E
1600'A'
1600
PC
CURVE 1
PT
S89° 36' 53"E
1650'A'
S88° 02' 58"E
1650
PC
CURVE 2
PT
AUX R/L 'A' IH 90 WB
1700'A'
1700
S89° 56' 56"E
R/L IH 90 EB
PC'A'
CURVE 'A' 1
PT'A'
1750'A'
1750
PC
CURVE 3
PT
S81° 07' 16"E
S79° 46' 34"E
1800'A'
1800
PC
CURVE 4
PT
PC'A'
CURVE 'A' 2
PT'A'
N
CURVE 1
PI STA = 1609+18.80
Y = 379427.829
X = 646597.322
DELTA = 2°53'27"
D = 0°14'56"
T = 580.80'
L = 1161.36'
R = 23017.83'
PC STA = 1603+38.00
PT STA = 1614+99.36
BK=N89° 03' 34.61"E
AH=S88° 02' 58.34"E
CURVE 2
PI STA = 1664+55.72
Y = 379239.369
X = 652131.275
DELTA = 2°00'05"
D = 0°15'00"
T = 400.24'
L = 800.40'
R = 22913.12'
PC STA = 1660+55.48
PT STA = 1668+55.88
BK=S88° 02' 58.34"E
AH=N89° 56' 56.42"E
CURVE 'A' 1
PI STA = 1740+53.20
Y = 379403.641
X = 659625.018
DELTA = 8°29'37"
D = 0°20'10"
T = 1265.67'
L = 2526.70'
R = 17044.22'
PC STA = 1727+87.53
PT STA = 1753+14.23
BK=S89° 36' 53.27"E
AH=S81° 07' 15.85"E
CURVE 3
PI STA = 1746+51.51
Y = 379246.664
X = 660327.145
DELTA = 10°16'29"
D = 0°44'58"
T = 687.25'
L = 1370.81'
R = 7644.12'
PC STA = 1739+64.26
PT STA = 1753+35.07
BK=N89° 56' 56.42"E
AH=S79° 46' 34.41"E
CURVE 'A' 2
PI STA = 1820+33.48
Y = 378171.192
X = 667514.253
DELTA = 7°15'30"
D = 0°30'03"
T = 725.47'
L = 1448.99'
R = 11438.04'
PC STA = 1813+08.02
PT STA = 1827+57.01
BK=S81° 07' 15.85"E
AH=S88° 22' 45.82"E
CURVE 4
PI STA = 1812+79.69
Y = 378069.554
X = 666853.705
DELTA = 9°03'06"
D = 0°30'00"
T = 906.91'
L = 1810.05'
R = 11457.28'
PC STA = 1803+72.77
PT STA = 1821+82.83
BK=S79° 46' 34.41"E
AH=S88° 49' 40.74"E
CURVE 'A' 3
PI STA = 1891+73.60
Y = 377969.206
X = 674653.454
DELTA = 0°27'18"
D = 0°09'59"
T = 136.75'
L = 273.49'
R = 34445.43'
PC STA = 1890+36.85
PT STA = 1893+10.35
BK=S88° 22' 45.82"E
AH=S88° 50' 03.55"E
CURVE 'A' 4
PI STA = 1948+76.87
Y = 377853.181
X = 680355.550
DELTA = 0°35'00"
D = 0°09'24"
T = 186.00'
L = 372.01'
R = 36542.71'
PC STA = 1946+90.87
PT STA = 1950+62.88
BK=S88° 50' 03.55"E
AH=S89° 25' 03.33"E
CURVE 'A' 5
PI STA = 1983+84.47
Y = 377817.527
X = 683862.964
DELTA = 25°40'33"
D = 0°44'58"
T = 1742.08'
L = 3425.66'
R = 7644.41'
PC STA = 1966+42.39
PT STA = 2000+68.04
BK=S89° 25' 03.33"E
AH=N64° 54' 24.12"E
CURVE 'A' 6
PI STA = 2031+09.56
Y = 379846.220
X = 688195.078
DELTA = 15°56'14"
D = 1°29'35"
T = 537.15'
L = 1067.36'
R = 3837.26'
PC STA = 2025+72.42
PT STA = 2036+39.77
BK=N64° 54' 24.12"E
AH=N80° 50' 37.94"E
CURVE 'A' 7
PI STA = 2103+45.31
Y = 380998.715
X = 695345.482
DELTA = 22°47'15"
D = 0°59'58"
T = 1155.32'
L = 2280.10'
R = 5732.96'
PC STA = 2091+89.99
PT STA = 2114+70.09
BK=N80° 50' 37.94"E
AH=N58° 03' 22.75"E
CURVE 5
PI STA = 1948+13.67
Y = 377792.651
X = 680388.636
DELTA = 0°38'23"
D = 0°10'18"
T = 186.22'
L = 372.43'
R = 33349.81'
PC STA = 1946+27.46
PT STA = 1949+99.89
BK=S88° 49' 40.74"E
AH=S89° 28' 04.20"E
CURVE 6
PI STA = 1989+80.85
Y = 377753.947
X = 684555.636
DELTA = 28°54'22"
D = 0°44'57"
T = 1970.99'
L = 3858.01'
R = 7647.13'
PC STA = 1970+09.86
PT STA = 2008+67.87
BK=S89° 28' 04.20"E
AH=N61° 37' 34.26"E
CURVE 7
PI STA = 2032+46.37
Y = 379820.920
X = 688382.602
DELTA = 19°42'42"
D = 1°29'58"
T = 663.86'
L = 1314.60'
R = 3821.14'
PC STA = 2025+82.51
PT STA = 2038+97.11
BK=N61° 37' 34.26"E
AH=N81° 20' 16.43"E
CURVE 8
PI STA = 2104+81.58
Y = 380912.568
X = 695548.253
DELTA = 24°52'12"
D = 0°59'55"
T = 1265.08'
L = 2490.31'
R = 5737.21'
PC STA = 2092+16.50
PT STA = 2117+06.80
BK=N81° 20' 16.43"E
AH=N56° 28' 04.67"E
CURVE 9
PI STA = 2151+00.00
Y = 381800.000
X = 699000.000
DELTA = 0°59'58"
D = 0°59'58"
T = 1.50'
L = 3.00'
R = 5732.96'
PC STA = 2149+98.50
PT STA = 2152+98.50
BK=N89° 27' 22"E
AH=N89° 28' 41"E
CURVE 10
PI STA = 2151+00.00
Y = 381800.000
X = 699000.000
DELTA = 0°59'58"
D = 0°59'58"
T = 1.50'
L = 3.00'
R = 5732.96'
PC STA = 2149+98.50
PT STA = 2152+98.50
BK=N89° 27' 22"E
AH=N89° 28' 41"E
S50'A'
S88° 22' 46"E
850
S88° 49' 41"E
PC'A'
PT'A'
CURVE 'A' 3
AUX R/L 'A' IH 90 WB
1900'A'
1900
S88° 50' 04"E
S88° 49' 41"E
R/L IH 90 EB
PC'A'
CURVE 'A' 4
PT'A'
1950'A'
1950
PC
CURVE 5
PT
S89° 25' 03"E
S89° 28' 04"E
PC'A'
CURVE 'A' 5
2000'A'
2000
PT'A'
N64° 54' 24"E
N61° 37' 34"E
PC
PT
PC'A'
CURVE 'A' 6
PT'A'
2050'A'
2050
N80° 50' 38"E
N81° 20' 16"E
CURVE 7
PT
PC
PC'A'
CURVE 'A' 7
2100'A'
2100
PC
CURVE 8
PT
PC'A'
N58° 03' 23"E
N56° 28' 05"E
CURVE 'A' 8
PT'A'
PC
CURVE 9
PT
N89° 27' 22"E
N89° 28' 41"E
PC'A'
CURVE 'A' 9
2150'A'
2150
PT'A'
PT
CURVE 10
PC'A'
PC
N


N
STA 10'AA'+00
X=641620.654
Y=379346.304
BPAA
EPAA
N2° 28' 37"E


N
BPBB
EPBB
N0° 53' 43"E
STA 20'BB'+00
X=654349.036
Y=379241.343


N
STA 30'CC'+00
X=673561.443
Y=377932.324
BPCC
EPCC
N2° 39' 30"E


N
STA 30'DD'+00
X=681195.753
Y=377785.224
BPDD
EPDD
N0° 34' 54"E


N
STA 40'EE'+00
X=691763.471
Y=380335.977
BPEE
EPEE
N8° 29' 59"W

2

N

PT

PT'A'

CURVE 'R' 1
PI STA = 51+65.49'R'
Y = 382289.409
X = 698539.807
DELTA = 94°04'41"
D = 80°16'37"
T = 76.64'
L = 117.19'
R = 71.37'
PC STA = 50+88.84'R'
PT STA = 52+06.03'R'

PT'R'
S4° 41' 04"W
52+00'R'
EP'R'
51+00'R'
PC'R'
S89° 23' 36"E
BP'R'

R/L 'M' CTH M

STA 48'M'+61
X=698365.396
Y=383027.396

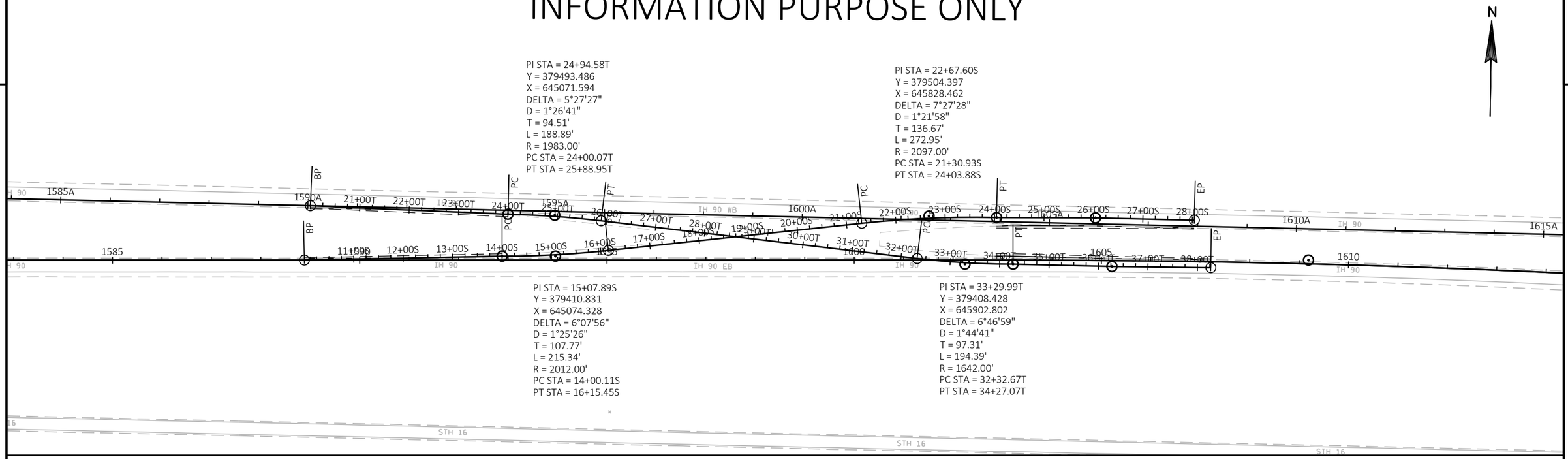
BP'M'
S0° 28' 58"E
50'M'
PI'M'
S0° 47' 00"E
55'M'
PI'M'
S0° 42' 40"E
PC'M'
PT'M'
60'M'
S1° 53' 50"E
EP'M'
CURVE 'M' 1

STA 50'R'+00
X=698374.331
Y=382291.161

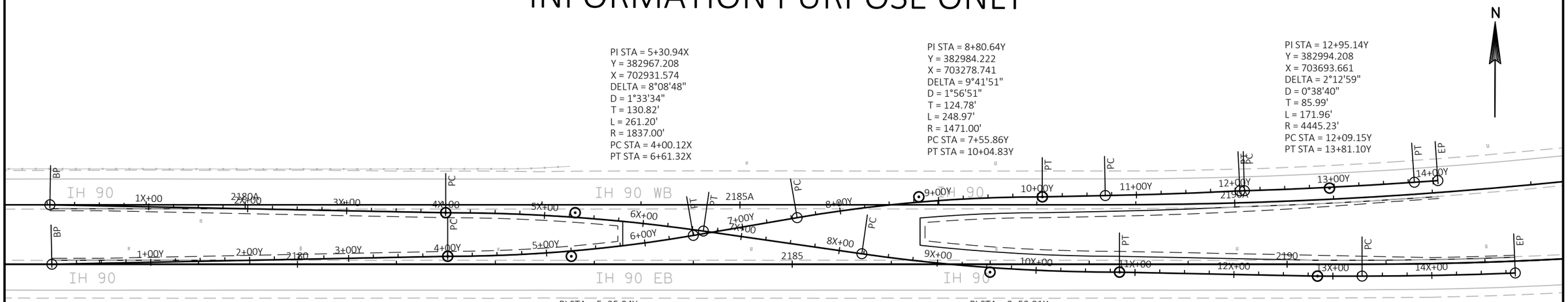
CURVE 'M' 1
PI STA = 58+94.13'M'
Y = 381994.602
X = 698378.259
DELTA = 1°11'09"
D = 4°05'33"
T = 14.49'
L = 28.98'
R = 1400.00'
PC STA = 58+79.64'M'
PT STA = 59+08.62'M'

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	ALIGNMENT PLAN	SHEET 46	E

INFORMATION PURPOSE ONLY

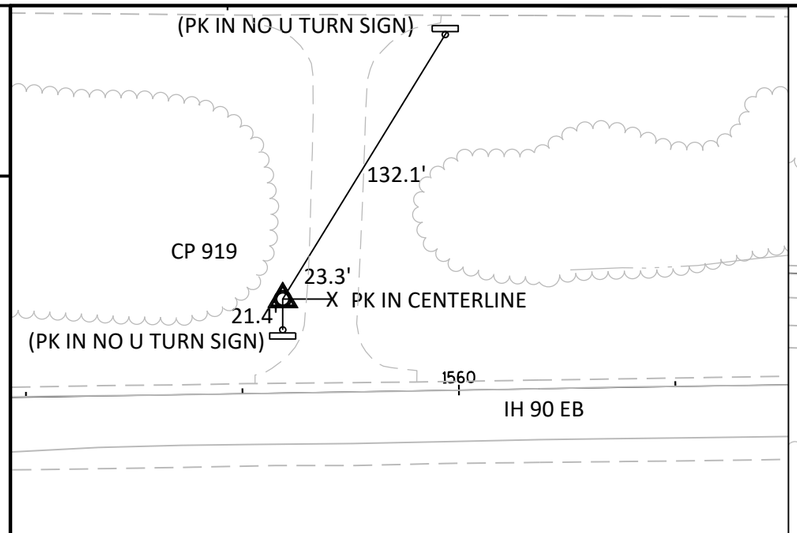


INFORMATION PURPOSE ONLY



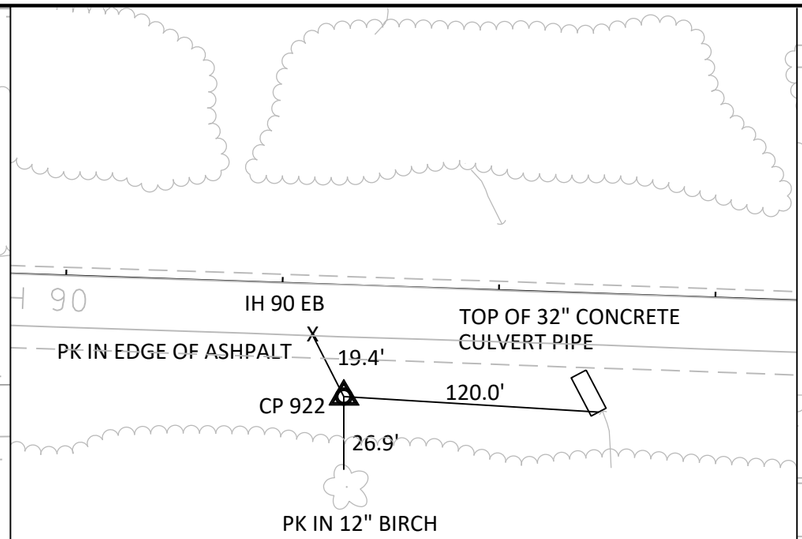
PROJECT NO: 1077-02-73 & 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSSOVER ALIGNMENTS	SHEET 47	E

2



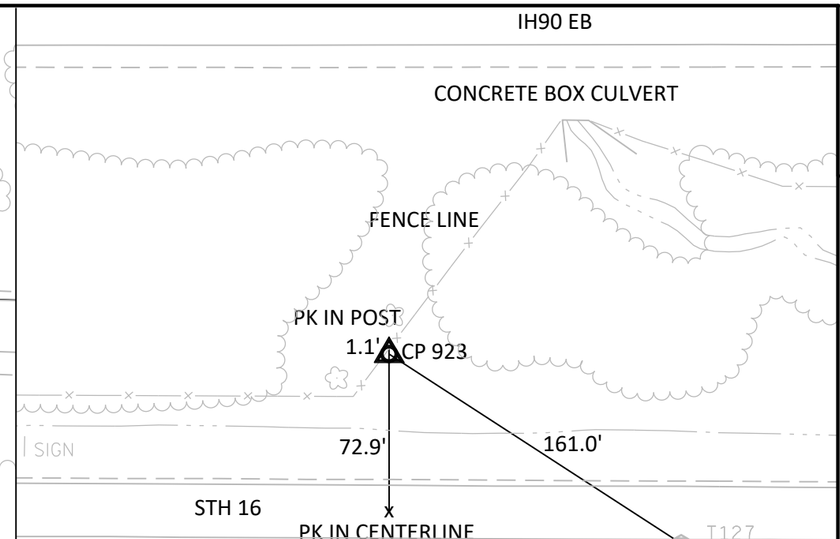
N

CP 919
FENO SPIKE WITH 3.5" CAP
E 641597.892
N 379389.321
LOCATED EAST ON IH90 .5MI TO
IH90 LEFT CROSSOVER FROM STH16 AND
IH90 JUNCTION.TURN LEFT.CP ON LEFT



N

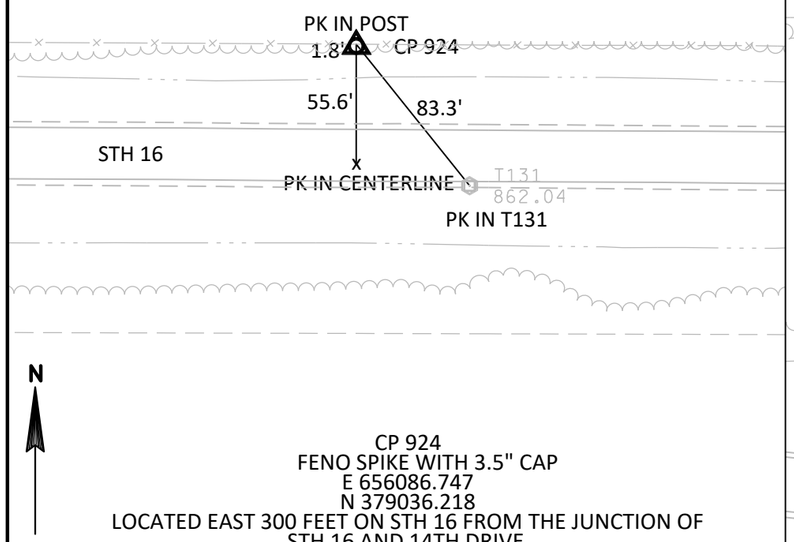
CP 922
FENO SPIKE WITH 3.5" CAP
E 650404.874
N 379246.050
LOCATED EAST ON IH90 2.15MI TO
CP ON RIGHT FROM STH16 AND
IH90 JUNCTION.



N

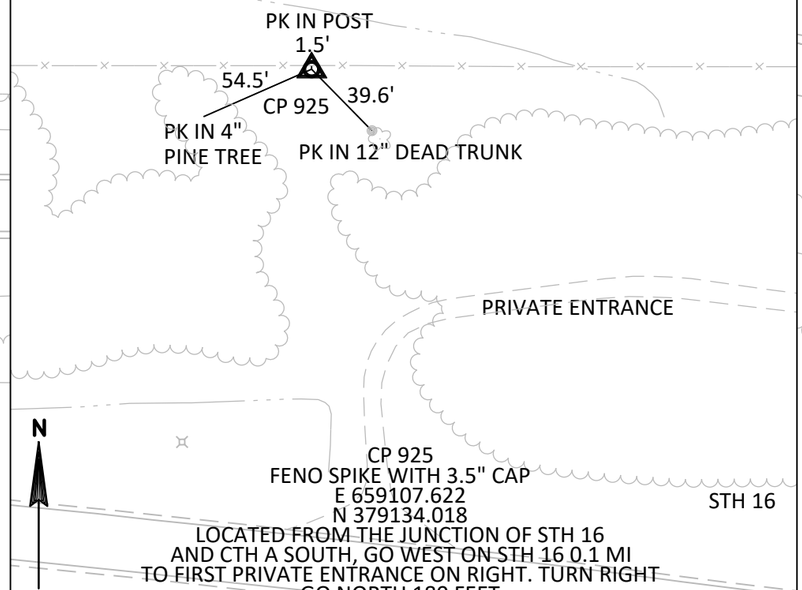
CP 923
FENO SPIKE WITH 3.5" CAP
E 653286.405
N 379073.251
LOCATED EAST ON IH90 2.15MI TO
CP ON RIGHT FROM STH16 AND
IH90 JUNCTION.

2



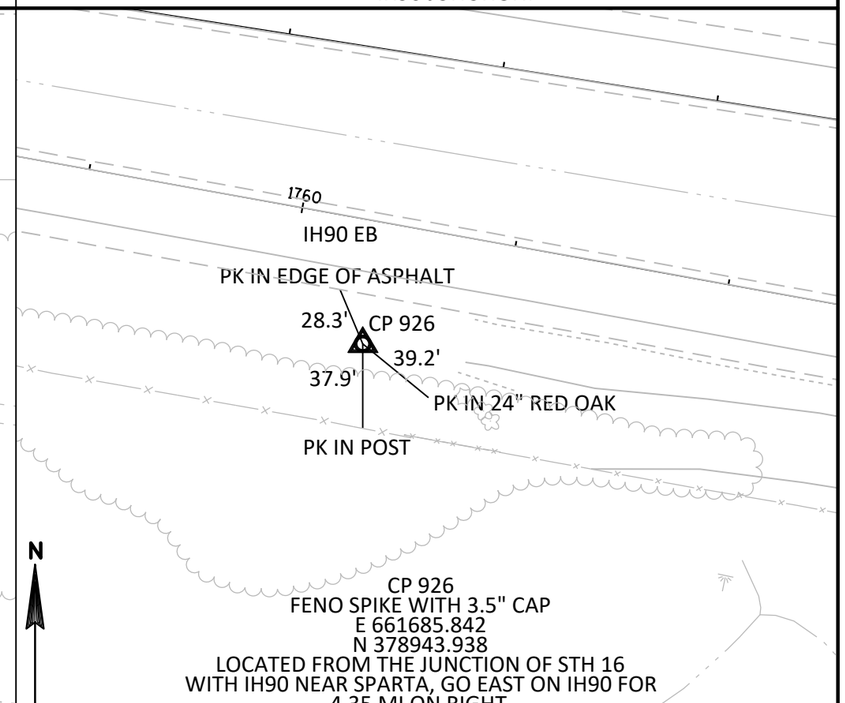
N

CP 924
FENO SPIKE WITH 3.5" CAP
E 656086.747
N 379036.218
LOCATED EAST 300 FEET ON STH 16 FROM THE JUNCTION OF
STH 16 AND 14TH DRIVE.



N

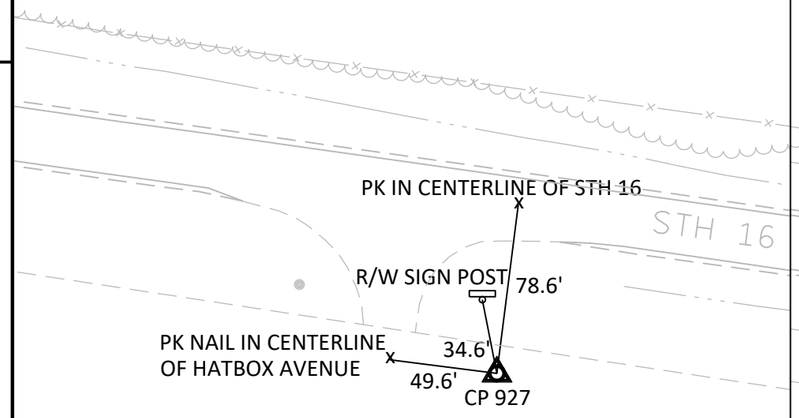
CP 925
FENO SPIKE WITH 3.5" CAP
E 659107.622
N 379134.018
LOCATED FROM THE JUNCTION OF STH 16
AND CTH A SOUTH, GO WEST ON STH 16 0.1 MI
TO FIRST PRIVATE ENTRANCE ON RIGHT. TURN RIGHT
GO NORTH 180 FEET



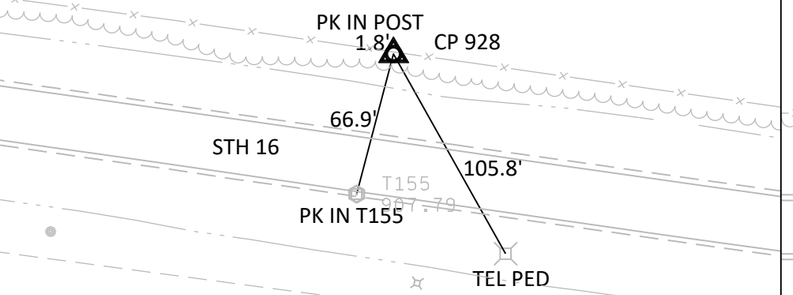
N

CP 926
FENO SPIKE WITH 3.5" CAP
E 661685.842
N 378943.938
LOCATED FROM THE JUNCTION OF STH 16
WITH IH90 NEAR SPARTA, GO EAST ON IH90 FOR
4.35 MI ON RIGHT.

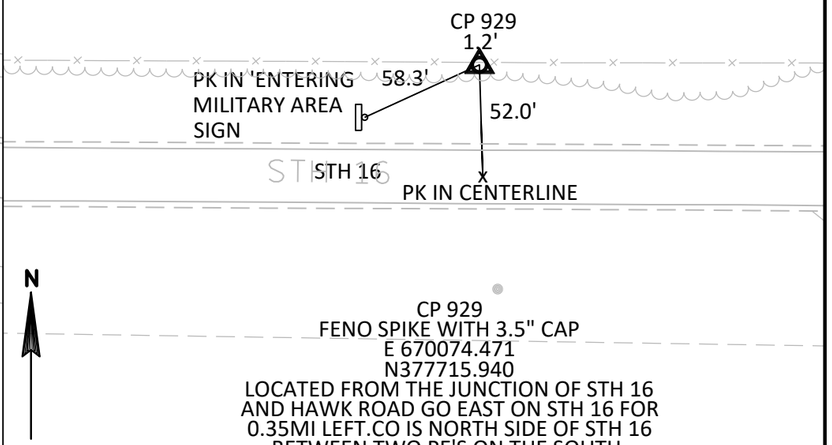
PROJECT NO: 1077-02-73 & 1071-02-71	HWY: IH90	COUNTY: MONROE	ALIGNMENT TIES	SHEET 48	E



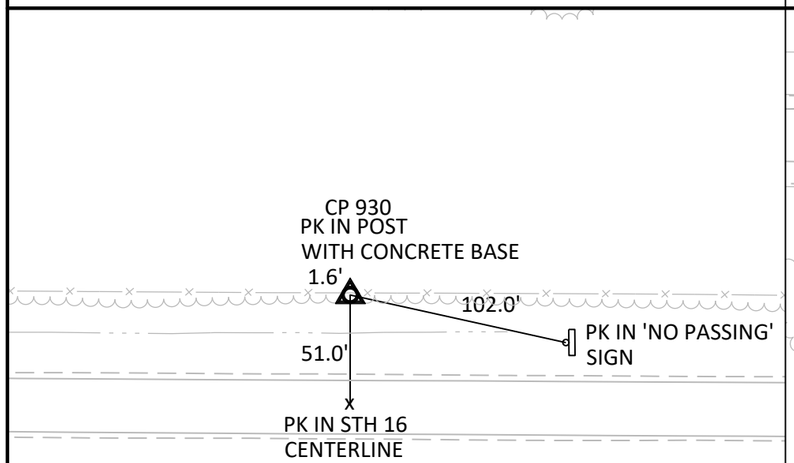
CP 927
FENO SPIKE WITH 3.5" CAP
E 663582.910
N 378199.526
LOCATED IN THE SOUTH EAST QUADRANT OF
THE JUNCTION OF STH 16
AND HATBOX AVE.



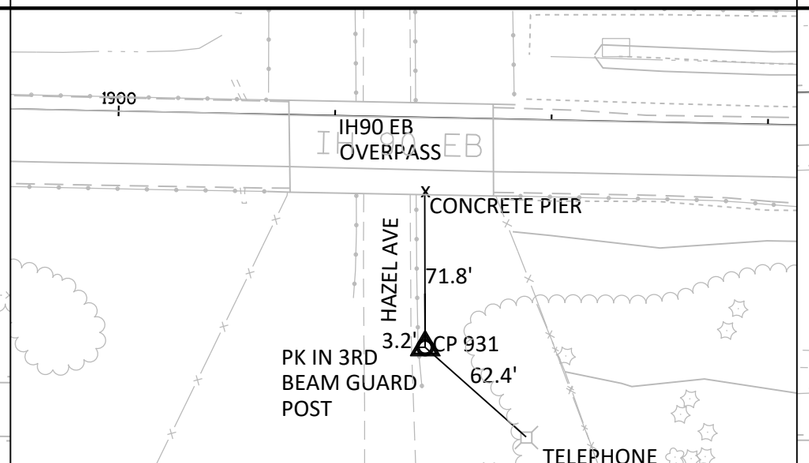
CP 928
FENO SPIKE WITH 3.5" CAP
E 666832.831
N 377873.292
LOCATED WEST ON STH 16 0.2MI FROM STH16 AND
HAWK ROAD JUNCTION.



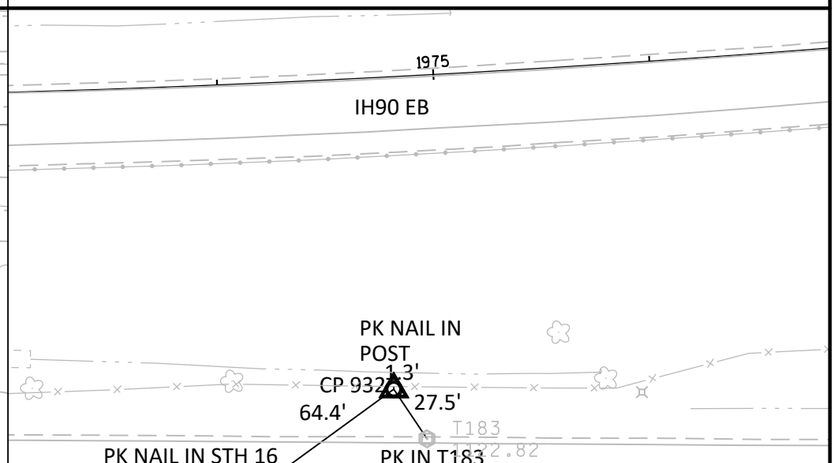
CP 929
FENO SPIKE WITH 3.5" CAP
E 670074.471
N377715.940
LOCATED FROM THE JUNCTION OF STH 16
AND HAWK ROAD GO EAST ON STH 16 FOR
0.35MI LEFT.CO IS NORTH SIDE OF STH 16
BETWEEN TWO PE'S ON THE SOUTH.



CP 930
FENO SPIKE WITH 3.5" CAP
E 672923.990
N 377701.615
LOCATED FROM THE JUNCTION OF STH 16 AND HAZEL AVE.,
GO WEST ON STH 16 FOR 0.5MI ON RIGHT.CP IS
BEFORE PE ON LEFT.



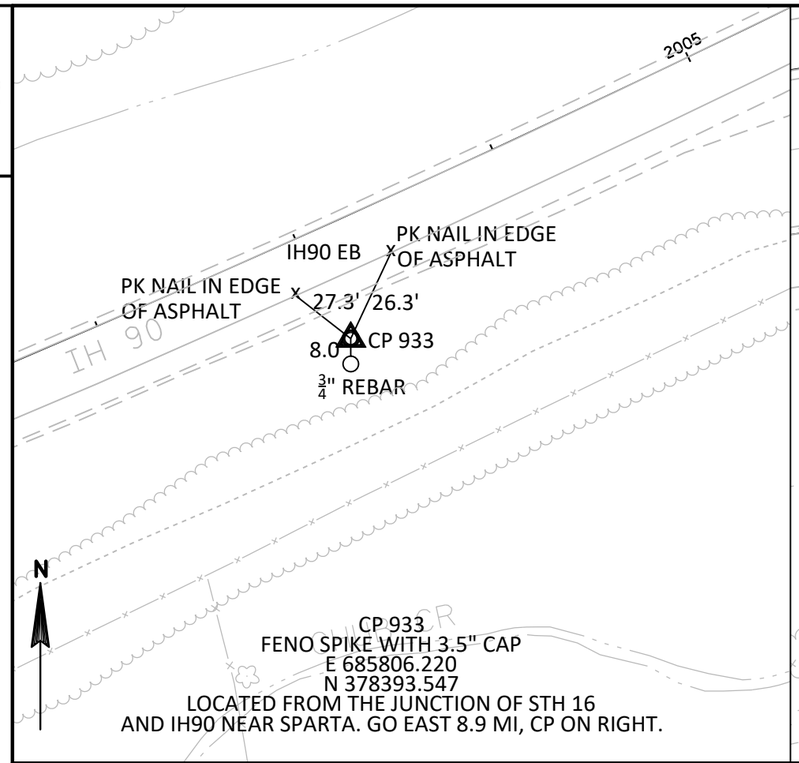
CP 931
FENO SPIKE WITH 3.5" CAP
E 675717.542
N377781.866
LOCATED IN THE NORTH EAST QUADRANT
IN THE JUNCTION OF STH 16
AND HAZEL AVE.



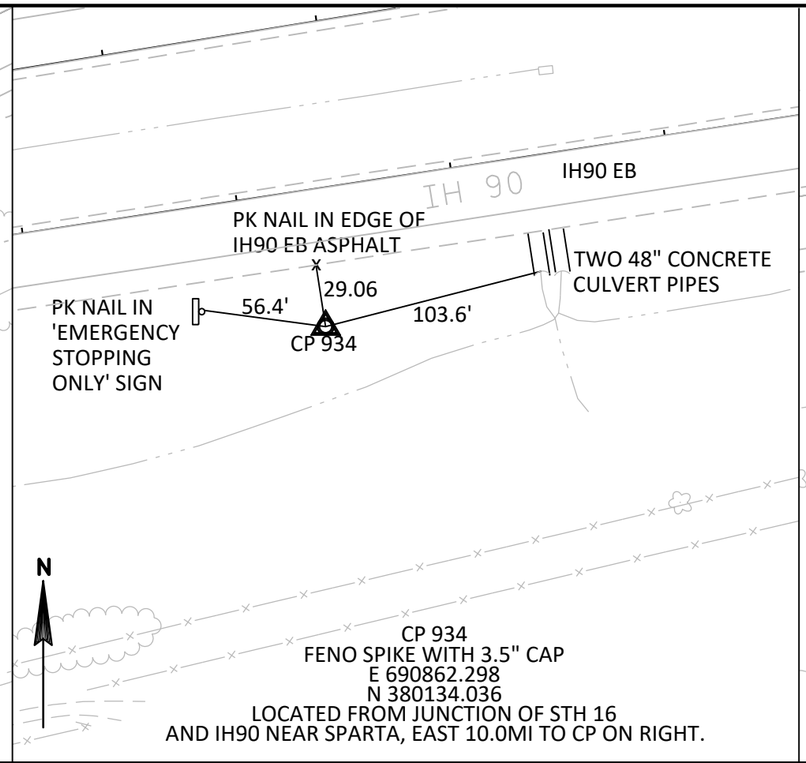
CP 932
FENO SPIKE WITH 3.5" CAP
E 683056.366
N 377638.043
LOCATED FROM THE JUNCTION OF STH 16
AND HEDGE ROAD GO EAST 0.15MI, CP ON LEFT.

PROJECT NO: 1077-02-73 & 1071-02-71	HWY: IH90	COUNTY: MONROE	ALIGNMENT TIES	SHEET 49	E

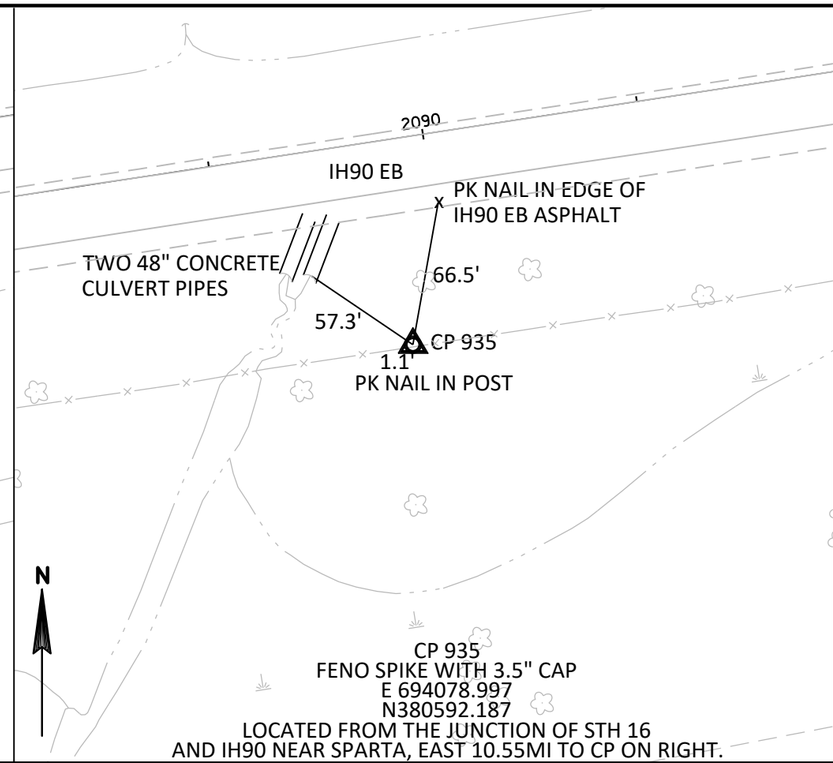
FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\027205_AD.DWG
LAYOUT NAME - Plan Dbl 1 IN 40 FT (2)
PLOT DATE : 2/9/2018 10:07 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:70FT
WISDOT/CADDS SHEET 44



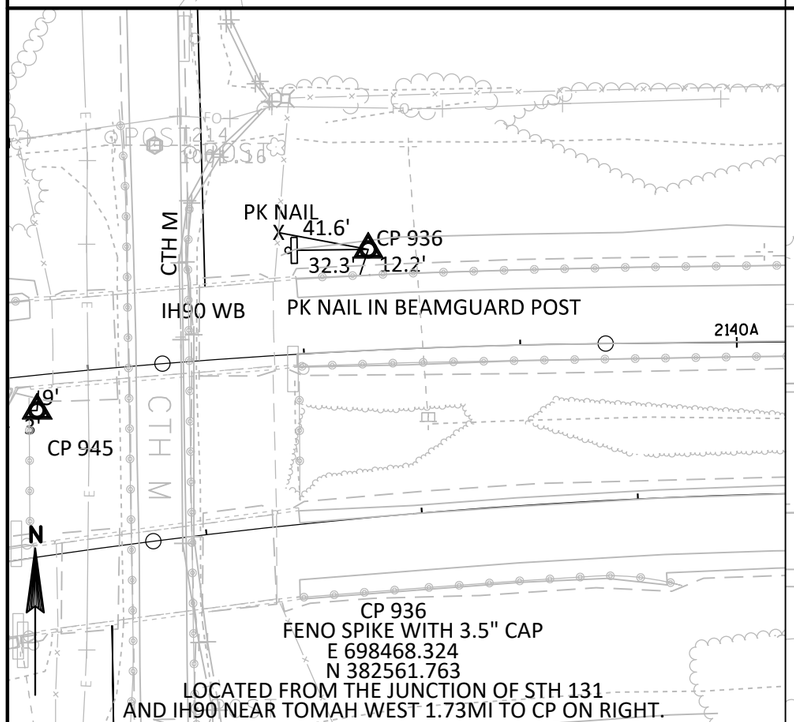
CP 933
FENO SPIKE WITH 3.5" CAP
E 685806.220
N 378393.547
LOCATED FROM THE JUNCTION OF STH 16
AND IH90 NEAR SPARTA. GO EAST 8.9 MI, CP ON RIGHT.



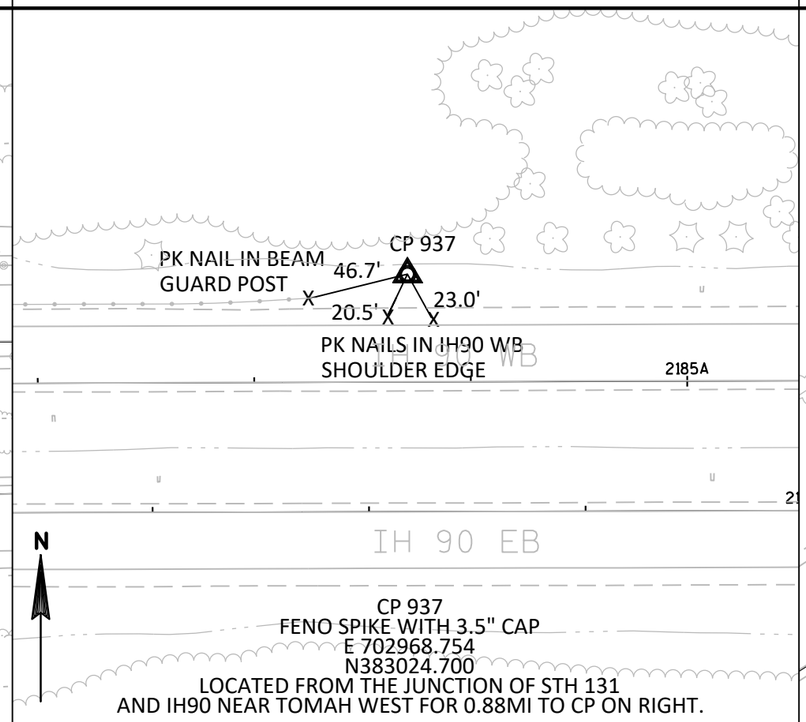
CP 934
FENO SPIKE WITH 3.5" CAP
E 690862.298
N 380134.036
LOCATED FROM JUNCTION OF STH 16
AND IH90 NEAR SPARTA, EAST 10.0MI TO CP ON RIGHT.



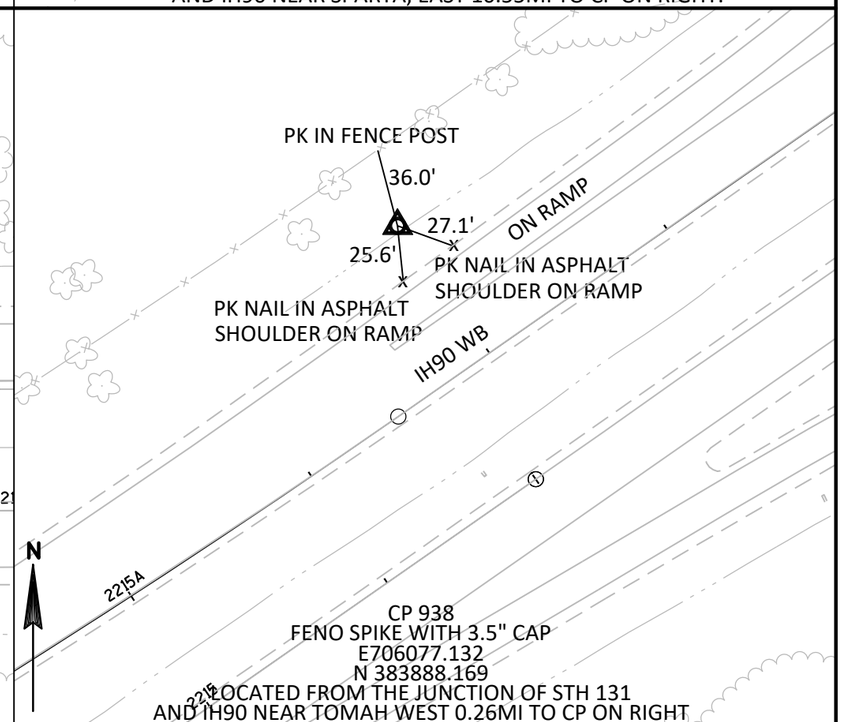
CP 935
FENO SPIKE WITH 3.5" CAP
E 694078.997
N380592.187
LOCATED FROM THE JUNCTION OF STH 16
AND IH90 NEAR SPARTA, EAST 10.55MI TO CP ON RIGHT.



CP 936
FENO SPIKE WITH 3.5" CAP
E 698468.324
N 382561.763
LOCATED FROM THE JUNCTION OF STH 131
AND IH90 NEAR TOMAH WEST 1.73MI TO CP ON RIGHT.



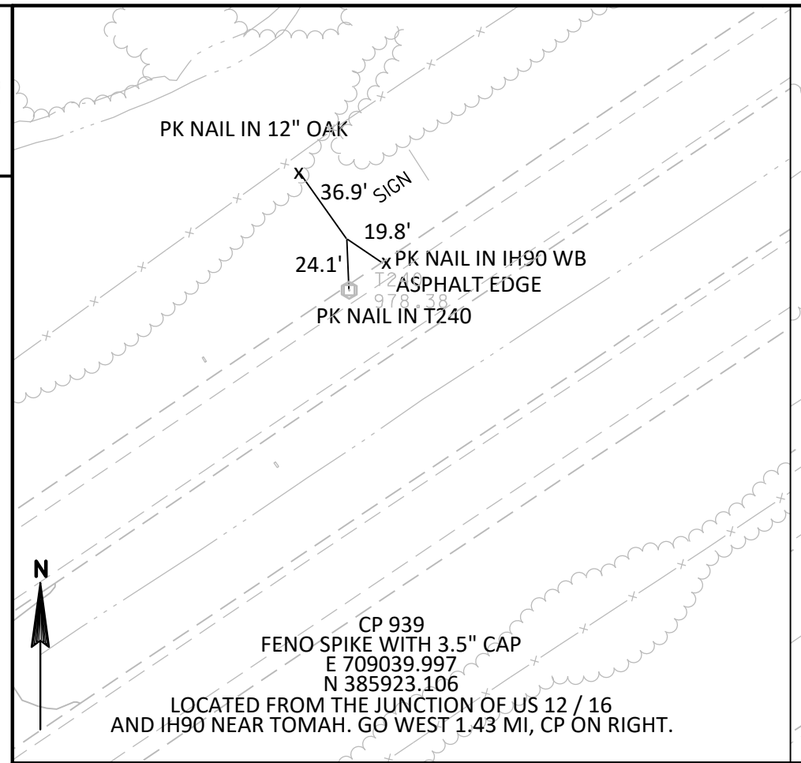
CP 937
FENO SPIKE WITH 3.5" CAP
E 702968.754
N383024.700
LOCATED FROM THE JUNCTION OF STH 131
AND IH90 NEAR TOMAH WEST FOR 0.88MI TO CP ON RIGHT.



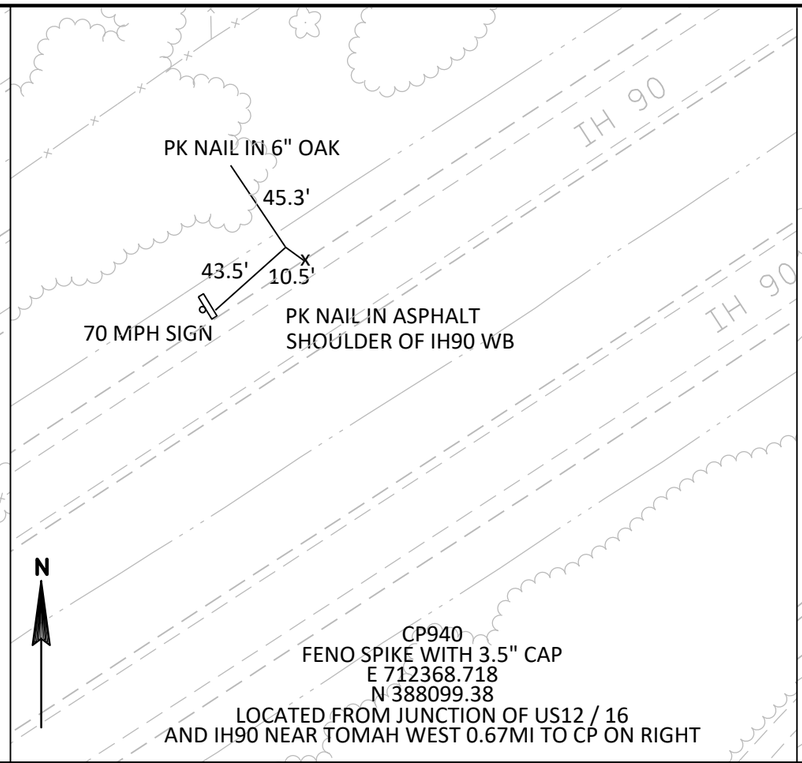
CP 938
FENO SPIKE WITH 3.5" CAP
E706077.132
N 383888.169
LOCATED FROM THE JUNCTION OF STH 131
AND IH90 NEAR TOMAH WEST 0.26MI TO CP ON RIGHT

PROJECT NO: 1077-02-73 & 1071-02-71	HWY: IH 90	COUNTY: MONROE	ALIGNMENT TIES	SHEET 50	E

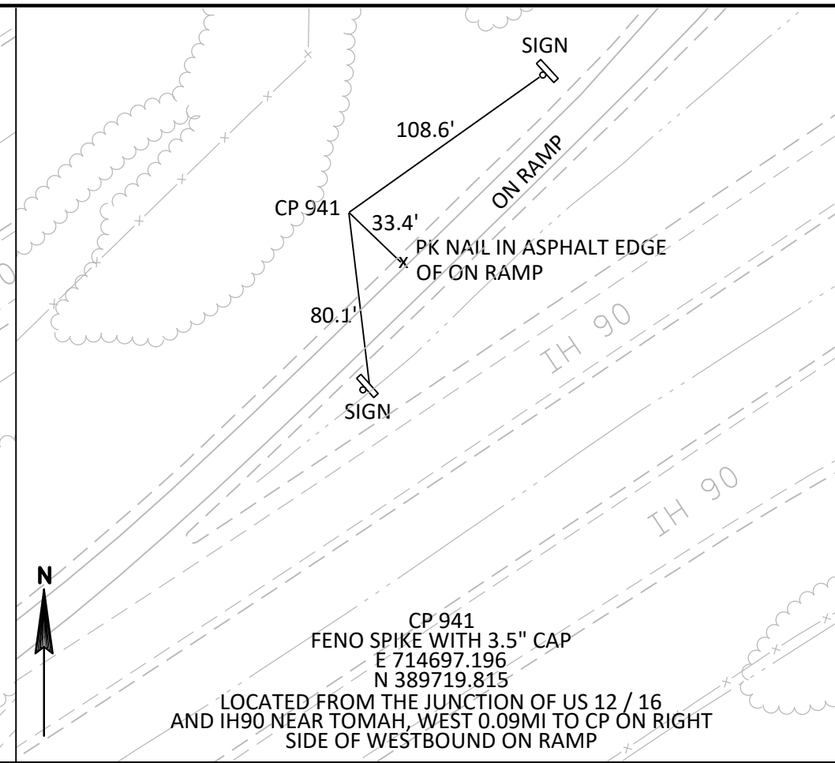
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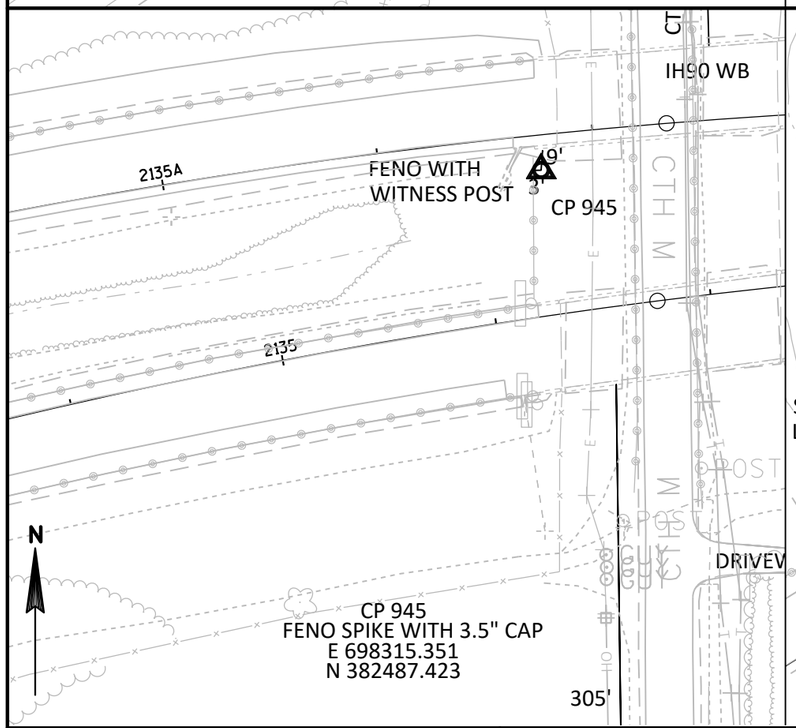
CP 939
FENO SPIKE WITH 3.5" CAP
E 709039.997
N 385923.106
LOCATED FROM THE JUNCTION OF US 12 / 16
AND IH90 NEAR TOMAH. GO WEST 1.43 MI, CP ON RIGHT.



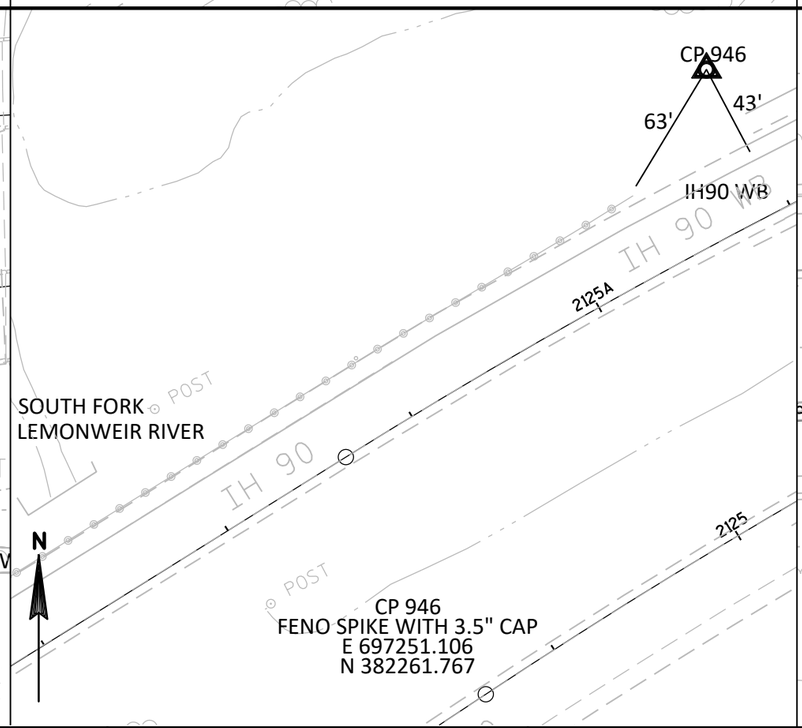
CP940
FENO SPIKE WITH 3.5" CAP
E 712368.718
N 388099.38
LOCATED FROM JUNCTION OF US12 / 16
AND IH90 NEAR TOMAH WEST 0.67MI TO CP ON RIGHT



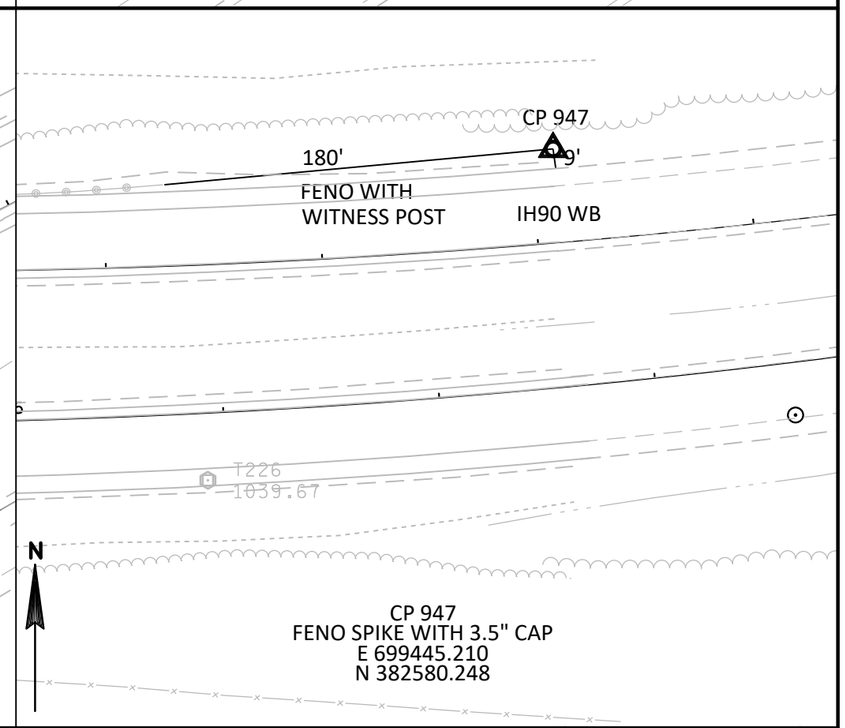
CP 941
FENO SPIKE WITH 3.5" CAP
E 714697.196
N 389719.815
LOCATED FROM THE JUNCTION OF US 12 / 16
AND IH90 NEAR TOMAH, WEST 0.09MI TO CP ON RIGHT
SIDE OF WESTBOUND ON RAMP



CP 945
FENO SPIKE WITH 3.5" CAP
E 698315.351
N 382487.423



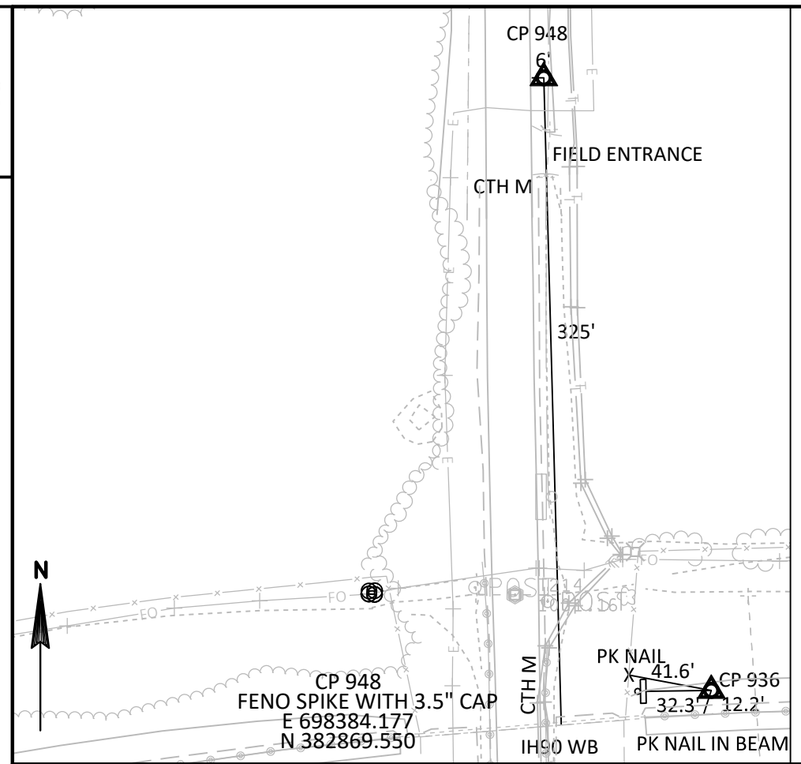
CP 946
FENO SPIKE WITH 3.5" CAP
E 697251.106
N 382261.767

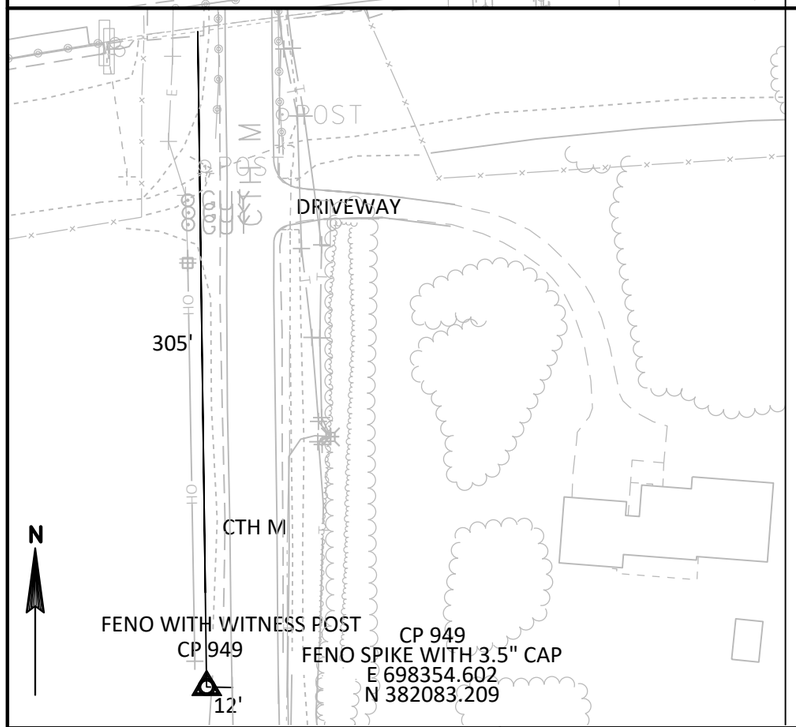


CP 947
FENO SPIKE WITH 3.5" CAP
E 699445.210
N 382580.248

PROJECT NO: 1077-02-73 & 1071-02-71	HWY: IH90	COUNTY: MONROE	ALIGNMENT TIES	SHEET 51	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\027205_AD.DWG
LAYOUT NAME - Plan Dbl 1 IN 40 FT (4)
PLOT DATE : 2/9/2018 10:10 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:70FT





PROJECT NO: 1077-02-73 & 1071-02-71	HWY: IH90	COUNTY: MONROE	ALIGNMENT TIES	SHEET 52	E

					1071-02-71	1077-02-73
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0002	201.0105	Clearing	STA	49.000	12.000	37.000
0004	201.0205	Grubbing	STA	49.000	12.000	37.000
0006	203.0100	Removing Small Pipe Culverts	EACH	14.000	5.000	9.000
0008	203.0200	Removing Old Structure (station) 01. 2136+80	LS	1.000	1.000	
0010	203.0200	Removing Old Structure (station) 02. 2137+33	LS	1.000	1.000	
0012	203.0200	Removing Old Structure (station) 03. 1676+50	LS	1.000		1.000
0014	203.0200	Removing Old Structure (station) 04. 1675+50A	LS	1.000		1.000
0016	203.0210.S	Abatement of Asbestos Containing Material (structure) 01. B-41-0115	LS	1.000	1.000	
0018	203.0210.S	Abatement of Asbestos Containing Material (structure) 02. B-41-0116	LS	1.000	1.000	
0020	204.0100	Removing Pavement	SY	8,294.000	1,681.000	6,613.000
0022	204.0115	Removing Asphaltic Surface Butt Joints	SY	11,671.000		11,671.000
0024	204.0120	Removing Asphaltic Surface Milling	SY	440,051.000		440,051.000
0026	204.0165	Removing Guardrail	LF	14,154.000	3,986.000	10,168.000
0028	204.0170	Removing Fence	LF	110,841.000	368.000	110,473.000
0030	204.0180	Removing Delineators and Markers	EACH	452.000		452.000
0032	204.0190	Removing Surface Drains	EACH	10.000	2.000	8.000
0034	205.0100	Excavation Common	CY	8,182.000	8,064.000	118.000
0036	205.3000.S	Temporary Emergency Pullouts	EACH	21.000	3.000	18.000
0038	206.1000	Excavation for Structures Bridges (structure) 01. B-41-293	LS	1.000	1.000	
0040	206.1000	Excavation for Structures Bridges (structure) 02. B-41-294	LS	1.000	1.000	
0042	206.2000	Excavation for Structures Culverts (structure) 01. C-41-32	LS	1.000		1.000
0044	206.2000	Excavation for Structures Culverts (structure) 02. C-41-33	LS	1.000		1.000
0046	206.5000	Cofferdams (structure) 01. C-41-32	LS	1.000		1.000
0048	206.5000	Cofferdams (structure) 02. C-41-33	LS	1.000		1.000
0050	208.0100	Borrow	CY	5,648.000	876.000	4,772.000
0052	210.1500	Backfill Structure Type A	TON	488.000	488.000	
0054	210.2500	Backfill Structure Type B	TON	648.000		648.000
0056	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	11.000	7.000	4.000
0058	213.0100	Finishing Roadway (project) 01. 1071-02-71	EACH	1.000	1.000	
0060	213.0100	Finishing Roadway (project) 02. 1077-02-73	EACH	1.000		1.000
0062	305.0110	Base Aggregate Dense 3/4-Inch	TON	28,868.000	278.000	28,590.000
0064	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	5,228.000	5,208.000	20.000
0066	311.0115	Breaker Run	CY	42.000		42.000
0068	312.0110	Select Crushed Material	TON	280.000	280.000	
0070	390.0403	Base Patching Concrete Shes	SY	6,461.000		6,461.000

					1071-02-71	1077-02-73
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0072	415.0410	Concrete Pavement Approach Slab	SY	282.000	282.000	
0074	416.0610	Drilled Tie Bars	EACH	162.000		162.000
0076	416.0620	Drilled Dowel Bars	EACH	9,472.000		9,472.000
0078	416.1010	Concrete Surface Drains	CY	74.800	16.600	58.200
0080	440.4410	Incentive IRI Ride	DOL	79,468.000		79,468.000
0082	450.4000	HMA Cold Weather Paving	TON	2,295.000		2,295.000
0084	455.0605	Tack Coat	GAL	48,440.200	607.200	47,833.000
0086	460.0100.S	HMA Pavement Test Strip	EACH	1.000		1.000
0088	460.2000	Incentive Density HMA Pavement	DOL	37,443.000		37,443.000
0090	460.2005	Incentive Density PWL HMA Pavement	DOL	35,230.000		35,230.000
0092	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	84,412.000		84,412.000
0094	460.2010	Incentive Air Voids HMA Pavement	DOL	35,230.000		35,230.000
0096	460.5224	HMA Pavement 4 LT 58-28 S	TON	29,801.300	3,289.300	26,512.000
0098	460.7223	HMA Pavement 3 HT 58-28 S	TON	42,141.500		42,141.500
0100	460.8424	HMA Pavement 4 SMA 58-28 H	TON	32,270.200		32,270.200
0102	465.0400	Asphaltic Shoulder Rumble Strips	LF	213,560.000	2,334.000	211,226.000
0104	502.0100	Concrete Masonry Bridges	CY	2,023.000	2,023.000	
0106	502.3200	Protective Surface Treatment	SY	2,062.000	2,060.000	2.000
0108	502.3210	Pigmented Surface Sealer	SY	320.000	320.000	
0110	504.0100	Concrete Masonry Culverts	CY	136.000		136.000
0112	505.0400	Bar Steel Reinforcement HS Structures	LB	38,040.000	38,040.000	
0114	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	337,850.000	325,990.000	11,860.000
0116	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	1,060.000	1,060.000	
0118	509.0301	Preparation Decks Type 1	SY	2.000		2.000
0120	509.0302	Preparation Decks Type 2	SY	2.000		2.000
0122	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	24.000		24.000
0124	509.1500	Concrete Surface Repair	SF	131.000		131.000
0126	509.2100.S	Concrete Masonry Deck Repair	CY	2.000		2.000
0128	511.1100	Temporary Shoring	SF	3,600.000	3,600.000	
0130	511.1200	Temporary Shoring (structure) 01. C-41-32	SF	644.000		644.000
0132	511.1200	Temporary Shoring (structure) 02. C-41-33	SF	644.000		644.000
0134	516.0500	Rubberized Membrane Waterproofing	SY	106.000	56.000	50.000
0136	517.1800.S	Structure Repainting Recycled Abrasive (structure) 01. B-41-112	LS	1.000		1.000
0138	517.4500.S	Negative Pressure Containment and Collection of Waste Materials (structure) 01. B-41-112	LS	1.000		1.000
0140	517.6001.S	Portable Decontamination Facility	EACH	1.000		1.000
0142	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	2.000	2.000	
0144	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	6.000	1.000	5.000
0146	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	28.000	28.000	

					1071-02-71	1077-02-73
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0148	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	2.000	2.000	
0150	522.2424	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 24x38-Inch	LF	50.000	50.000	
0152	522.2429	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 29x45-Inch	LF	101.000	101.000	
0154	522.2624	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 24x38-Inch	EACH	2.000	2.000	
0156	522.2629	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch	EACH	1.000	1.000	
0158	550.0500	Pile Points	EACH	56.000	56.000	
0160	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	2,080.000	2,080.000	
0162	601.0551	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	LF	1,575.000	1,575.000	
0164	603.8000	Concrete Barrier Temporary Precast Delivered	LF	1,840.000		1,840.000
0166	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,840.000		1,840.000
0168	604.0500	Slope Paving Crushed Aggregate	SY	1,060.000	1,060.000	
0170	606.0200	Riprap Medium	CY	14.000	3.000	11.000
0172	606.0300	Riprap Heavy	CY	44.000		44.000
0174	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	77.000	77.000	
0176	608.3612	Storm Sewer Pipe Class III-B 12-Inch	LF	16.000	16.000	
0178	608.3618	Storm Sewer Pipe Class III-B 18-Inch	LF	33.000	33.000	
0180	608.3624	Storm Sewer Pipe Class III-B 24-Inch	LF	219.000	219.000	
0182	611.0530	Manhole Covers Type J	EACH	3.000	3.000	
0184	611.0627	Inlet Covers Type HM	EACH	7.000	7.000	
0186	611.0642	Inlet Covers Type MS	EACH	4.000	4.000	
0188	611.0654	Inlet Covers Type V	EACH	8.000	2.000	6.000
0190	611.2005	Manholes 5-FT Diameter	EACH	4.000	4.000	
0192	611.3220	Inlets 2x2-FT	EACH	8.000	2.000	6.000
0194	611.3253	Inlets 2.5x3-FT	EACH	7.000	7.000	
0196	611.3902	Inlets Median 2 Grate	EACH	2.000	2.000	
0198	612.0212	Pipe Underdrain Unperforated 12-Inch	LF	418.000	72.000	346.000
0200	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	513.000	513.000	
0202	612.0806	Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	EACH	3.000	3.000	
0204	614.0010	Barrier System Grading Shaping Finishing	EACH	16.000	1.000	15.000
0206	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	8.000	8.000	
0208	614.0905	Crash Cushions Temporary	EACH	4.000		4.000
0210	614.2300	MGS Guardrail 3	LF	14,075.000	3,675.000	10,400.000
0212	614.2310	MGS Guardrail 3 HS	LF	50.000	50.000	
0214	614.2350	MGS Guardrail Short Radius	LF	40.000	40.000	

					1071-02-71	1077-02-73
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0216	614.2500	MGS Thrie Beam Transition	LF	1,143.400	316.000	827.400
0218	614.2610	MGS Guardrail Terminal EAT	EACH	34.000	11.000	23.000
0220	614.2620	MGS Guardrail Terminal Type 2	EACH	5.000	1.000	4.000
0222	614.2630	MGS Guardrail Short Radius Terminal	EACH	1.000	1.000	
0224	616.0100	Fence Woven Wire (height) 01. 4-FT	LF	110,909.000	436.000	110,473.000
0226	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1071-02-71	EACH	1.000	1.000	
0228	618.0100	Maintenance And Repair of Haul Roads (project) 02. 1077-02-73	EACH	1.000		1.000
0230	619.1000	Mobilization	EACH	1.000	0.270	0.730
0232	624.0100	Water	MGAL	1,602.800	1,192.800	410.000
0234	625.0500	Salvaged Topsoil	SY	27,900.000	11,460.000	16,440.000
0236	628.1504	Silt Fence	LF	6,277.000	779.000	5,498.000
0238	628.1520	Silt Fence Maintenance	LF	6,277.000	779.000	5,498.000
0240	628.1905	Mobilizations Erosion Control	EACH	6.000	2.000	4.000
0242	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	1.000	2.000
0244	628.2002	Erosion Mat Class I Type A	SY	27,530.000	11,090.000	16,440.000
0246	628.2004	Erosion Mat Class I Type B	SY	1,343.000	1,343.000	
0248	628.7005	Inlet Protection Type A	EACH	7.000	3.000	4.000
0250	628.7010	Inlet Protection Type B	EACH	10.000	2.000	8.000
0252	628.7015	Inlet Protection Type C	EACH	8.000	8.000	
0254	628.7504	Temporary Ditch Checks	LF	548.000	248.000	300.000
0256	628.7555	Culvert Pipe Checks	EACH	11.000	11.000	
0258	628.7570	Rock Bags	EACH	532.000	85.000	447.000
0260	629.0210	Fertilizer Type B	CWT	17.900	7.300	10.600
0262	630.0130	Seeding Mixture No. 30	LB	272.700	208.000	64.700
0264	630.0170	Seeding Mixture No. 70	LB	52.500		52.500
0266	630.0200	Seeding Temporary	LB	420.700	42.000	378.700
0268	633.0100	Delineator Posts Steel	EACH	16.000		16.000
0270	633.0200	Delineators Flexible	EACH	265.000		265.000
0272	633.0500	Delineator Reflectors	EACH	16.000		16.000
0274	633.1100	Delineators Temporary	EACH	92.000		92.000
0276	633.5200	Markers Culvert End	EACH	12.000	7.000	5.000
0278	637.5453	Barricades Permanent Type III	EACH	6.000		6.000
0280	638.2102	Moving Signs Type II	EACH	2.000	2.000	
0282	642.5001	Field Office Type B	EACH	1.000	1.000	
0284	643.0300	Traffic Control Drums	DAY	47,664.000		47,664.000
0286	643.0420	Traffic Control Barricades Type III	DAY	6,705.000		6,705.000
0288	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	2,608.000		2,608.000
0290	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	2,608.000		2,608.000

					1071-02-71	1077-02-73
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0292	643.0705	Traffic Control Warning Lights Type A	DAY	10,864.000		10,864.000
0294	643.0715	Traffic Control Warning Lights Type C	DAY	8,575.000		8,575.000
0296	643.0800	Traffic Control Arrow Boards	DAY	840.000		840.000
0298	643.0900	Traffic Control Signs	DAY	18,639.000		18,639.000
0300	643.1000	Traffic Control Signs Fixed Message	SF	72.000		72.000
0302	643.1050	Traffic Control Signs PCMS	DAY	10.000		10.000
0304	643.5000	Traffic Control	EACH	1.000		1.000
0306	645.0111	Geotextile Type DF Schedule A	SY	228.000	228.000	
0308	645.0120	Geotextile Type HR	SY	165.000	14.000	151.000
0310	646.1020	Marking Line Epoxy 4-Inch	LF	298,795.000	36,802.000	261,993.000
0312	646.3020	Marking Line Epoxy 8-Inch	LF	800.000		800.000
0314	646.9000	Marking Removal Line 4-Inch	LF	18,120.000		18,120.000
0316	649.0105	Temporary Marking Line Paint 4-Inch	LF	357,662.000		357,662.000
0318	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	11,670.000		11,670.000
0320	649.0250	Temporary Marking Line Removable Tape 8-Inch	LF	400.000		400.000
0322	649.0760	Temporary Marking Raised Pavement Marker Type I	EACH	360.960		360.960
0324	650.4000	Construction Staking Storm Sewer	EACH	12.000	12.000	
0326	650.4500	Construction Staking Subgrade	LF	2,911.000	2,911.000	
0328	650.5000	Construction Staking Base	LF	2,911.000	2,911.000	
0330	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,586.000	1,586.000	
0332	650.6000	Construction Staking Pipe Culverts	EACH	3.000	3.000	
0334	650.6500	Construction Staking Structure Layout (structure) 01. B-41-0293	LS	1.000	1.000	
0336	650.6500	Construction Staking Structure Layout (structure) 02. B-41-0294	LS	1.000	1.000	
0338	650.8000	Construction Staking Resurfacing Reference	LF	123,706.000		123,706.000
0340	650.9910	Construction Staking Supplemental Control (project) 01 1071-02-71	LS	1.000	1.000	
0342	650.9910	Construction Staking Supplemental Control (project) 02. 1077-02-73	LS	1.000		1.000
0344	650.9920	Construction Staking Slope Stakes	LF	5,136.000	2,911.000	2,225.000
0346	662.6030.S	Ramp Closure Barricade Rack 3-Unit	EACH	2.000		2.000
0348	690.0150	Sawing Asphalt	LF	1,718.000	172.000	1,546.000
0350	690.0250	Sawing Concrete	LF	19,383.000	104.000	19,279.000
0352	715.0502	Incentive Strength Concrete Structures	DOL	14,638.000	12,138.000	2,500.000
0354	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	800.000		800.000
0356	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000		300.000
0358	SPV.0060	Special 01. Emergency Parking 2 Hour Max Sign	EACH	21.000	3.000	18.000
0360	SPV.0060	Special 02. Emergency Parking 1/4 Mile Sign	EACH	21.000	3.000	18.000
0362	SPV.0060	Special 03. Removing Temporary Emergency Pullouts	EACH	21.000	3.000	18.000
0364	SPV.0060	Special 04. Embedded Galvanic Anodes	EACH	111.000		111.000

					1071-02-71	1077-02-73
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0366	SPV.0060	Special 05. Cleaning and Painting Bearings	EACH	20.000		20.000
0368	SPV.0060	Special 06. HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000		1.000
0370	SPV.0060	Special 07. HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000		1.000
0372	SPV.0060	Special 08. Tubular Marker Posts Special	EACH	146.000		146.000
0374	SPV.0060	Special 09. Tubular Marker Bases Special	EACH	146.000		146.000
0376	SPV.0105	Special 01. Girder Crack Grinding	LS	1.000		1.000
0378	SPV.0105	Special 02. Material Transfer Vehicle	LS	1.000		1.000
0380	SPV.0165	Special 01. Fiber Wrap Reinforcing Non-Structural	SF	1,460.000		1,460.000
0382	SPV.0165	Special 02. Concrete Surface Cleaning	SF	10.000		10.000

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CLEARING AND GRUBBING SUMMARY

CAT.	STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA	REMARKS
0010	1616+00	-	1617+00	EB RT	1	1	
0010	1618+00	-	1620+00	EB RT	2	2	
0010	1622+00	-	1626+00	EB RT	4	4	
0010	1761+00	-	1769+00	EB RT	8	8	
0010	1902+00	-	1911+00	EB RT	9	9	
0010	1620+00A	-	1621+00A	WB LT	1	1	
0010	1893+00A	-	1902+00A	WB LT	9	9	
0010	2037+00A	-	2040+00A	WB LT	3	3	
				TOTAL 0010	37	37	

FENCE SUMMARY

CAT.	STATION	TO	STATION	LOCATION	204.0170 REMOVING FENCE LF	616.0100 FENCE WOVEN WIRE (4 FT) LF	REMARKS
0010	1558+94	-	1610+65	ROW	6212	6212	
0010	1620+79	-	1900+79	ROW	28550	28550	
0010	1901+75	-	2026+37	ROW	12652	12652	
0010	2028+96	-	2104+00	ROW	7684	7684	
0010	1560+12A	-	1619+63A	ROW	7000	7000	
0010	1620+77A	-	1900+69A	ROW	28159	28159	
0010	1901+64A	-	2029+77A	ROW	12886	12886	
0010	2031+71A	-	2103+42A	ROW	7330	7330	
				TOTAL 0010	110473	110473	

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EARTHWORK SUMMARY

Division	From/To Station	Location	205.0100 Common Excavation (1) Cut (2)	205.0100 Common Excavation (1) EBS Excavation (3)	Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13) Factor 1.25	Mass Ordinate +/- (14)	Waste	208.0100 Borrow	Comment:
Division 1												
	1761+00-1766+50	EB RT	0	0	0	0	138	173	-173	0	173	
	1902+50-1910+25	EB RT	2	0	0	0	1,641	2,051	-2,049	0	2,049	
	0+40FF-1+40FF	WB LT	116	0	0	0	0	0	116	116	0	
	1893+50A-1901+50A	WB LT	0	0	0	0	2,133	2,666	-2,666		2,666	
Division 1 Subtotal			118	0	0	0	3,912	4,890	-4,772			
Grand Total			118	0	0	0	3,912	4,890	-4,772	0	4,772	
Total Common Exc			118									

Notes:
(1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
(2) Salvaged/Unusable Pavement Material is included in Cut.
(4) Salvaged/Unusable Pavement Material
(5) Available Material = Cut - Salvaged/Unusable Pavement Material
(13) Expanded Fill Factor = 1.25
Depending on selections: **Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor**
Or Expanded Fill = (Unexpanded Fill - Rock * Rock Factor - Reduced EBS) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock * Rock Factor - Reduced Marsh) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock * Rock Factor) * Fill Factor
(14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.
(15) Use 4772 CY of material from Division 1. Borrow Excavation item number 208.0100

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BASE PATCHING SUMMARY

STAGE	STATION	TO	STATION	204.0100 REMOVING PAVEMENT SY	390.0403 BASE PATCHING CONCRETE SHES SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	455.0605 TACK COAT **GAL**	460.7223 HMA PAVEMENT 3 HT 58-28 S **TON**	690.0250 SAWING CONCRETE **LF**	COMMENTS
STAGE 1											
EASTBOUND											
	1612+07	-	1612+13	17.3	17.3	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1615+58	-	1615+64	17.3	17.3	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1617+05	-	1617+11	17.3	17.3	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1617+35	-	1617+41	8.0	8.0	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1617+35	-	1619+44	325.1	325.1	84	16	22.8	29.6	643	OUTSIDE LANE
	1619+09	-	1619+15	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1619+28	-	1619+34	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1620+92	-	1620+98	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1621+12	-	1621+18	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1621+26	-	1621+32	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1621+64	-	1621+70	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1624+69	-	1624+75	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1638+52	-	1638+58	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1638+90	-	1638+96	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1653+06	-	1653+12	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1656+52	-	1656+58	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1656+93	-	1656+99	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1657+09	-	1657+15	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1663+04	-	1663+10	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1678+73	-	1678+79	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1686+78	-	1686+84	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1690+74	-	1690+80	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1692+00	-	1692+06	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1696+52	-	1696+58	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1697+57	-	1697+63	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1700+02	-	1700+08	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1701+99	-	1702+05	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1705+72	-	1705+78	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1708+86	-	1708+92	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1721+68	-	1721+74	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1722+42	-	1722+48	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1726+49	-	1726+55	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1729+04	-	1729+10	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1731+67	-	1731+73	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1731+86	-	1731+92	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1731+95	-	1732+01	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1733+93	-	1733+99	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1735+95	-	1736+01	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1737+26	-	1737+32	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1737+85	-	1737+91	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1739+19	-	1739+25	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1739+65	-	1739+71	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1740+04	-	1740+10	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1741+23	-	1741+29	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1752+21	-	1752+27	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
STAGE 1 SUBTOTALS				907	907	84	1088	63.5	82.5	2513	

** QUANTITY LIST ELSEWHERE**

BASE PATCHING SUMMARY(CONT.)

STAGE	STATION	TO	STATION	204.0100 REMOVING PAVEMENT SY	390.0403 BASE PATCHING CONCRETE SHES SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	455.0605 TACK COAT **GAL**	460.7223 HMA PAVEMENT 3 HT 58-28 S **TON**	690.0250 SAWING CONCRETE **LF**	COMMENTS
STAGE 1											
EASTBOUND CONTINUED:											
	1754+19	-	1754+25	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1754+63	-	1754+69	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1754+80	-	1754+94	22	22	5	16	1.5	2.0	56	OUTSIDE LANE
	1758+29	-	1758+35	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1760+30	-	1760+36	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1760+40	-	1760+46	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1760+44	-	1760+50	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1766+43	-	1766+49	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1768+01	-	1768+07	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1770+48	-	1770+54	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1771+01	-	1771+07	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1771+97	-	1772+03	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1773+56	-	1773+62	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1774+73	-	1774+79	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1775+43	-	1775+49	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1778+70	-	1778+76	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1779+42	-	1779+48	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1779+97	-	1780+03	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1782+68	-	1782+74	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1782+84	-	1782+90	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1785+61	-	1785+67	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1786+80	-	1786+86	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1787+64	-	1787+70	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1788+43	-	1788+49	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1789+03	-	1789+09	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1789+26	-	1789+32	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1790+75	-	1790+81	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1794+96	-	1795+02	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1797+18	-	1797+24	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1798+41	-	1798+47	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1798+91	-	1798+97	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1803+00	-	1803+06	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1805+59	-	1805+65	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1807+16	-	1807+22	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1809+08	-	1809+14	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1814+47	-	1814+53	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1818+02	-	1818+08	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1822+61	-	1822+67	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1824+81	-	1824+87	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1827+07	-	1827+13	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1827+99	-	1828+05	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1828+46	-	1828+52	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1828+79	-	1828+85	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1833+66	-	1833+72	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1833+75	-	1833+81	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
STAGE 1 SUBTOTALS				610	610	5	1088	42.7	55.5	1946	

** QUANTITY LIST ELSEWHERE**

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BASE PATCHING SUMMARY(CONT.)

STAGE	STATION	TO	STATION	204.0100 REMOVING PAVEMENT SY	390.0403 BASE PATCHING CONCRETE SHES SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	455.0605 TACK COAT **GAL**	460.7223 HMA PAVEMENT 3 HT 58-28 S **TON**	690.0250 SAWING CONCRETE **LF**	COMMENTS
STAGE 1											
EASTBOUND CONTINUED:											
	1836+66	-	1836+72	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1838+36	-	1838+42	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1857+72	-	1857+78	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1858+89	-	1858+95	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1871+20	-	1871+26	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1883+45	-	1883+51	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1891+13	-	1891+19	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1892+54	-	1892+60	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1894+42	-	1894+48	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1895+90	-	1895+96	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1898+03	-	1898+09	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1899+69	-	1900+59	260	260	0	32	18.2	23.7	364	MEDIAN & OUTSIDE LANES
	1901+66	-	1902+41	217	217	0	32	15.2	19.7	312	MEDIAN & OUTSIDE LANES
	1918+89	-	1919+83	272	272	0	32	19.0	24.7	390	MEDIAN & OUTSIDE LANES
	1926+48	-	1926+54	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1933+02	-	1933+08	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1934+56	-	1934+62	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1934+77	-	1934+83	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1935+15	-	1935+21	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1935+30	-	1935+36	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1936+61	-	1936+67	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1939+12	-	1939+18	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1943+94	-	1944+19	39	39	9	16	2.7	3.5	95	6x14 OUTSIDE LANE
	1944+66	-	1944+72	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1949+26	-	1949+32	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1951+99	-	1952+05	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1952+04	-	1952+10	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1952+53	-	1952+59	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1955+47	-	1955+53	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1968+09	-	1968+15	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1959+83	-	1959+89	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1976+15	-	1976+21	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1982+54	-	1982+60	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1987+83	-	1987+89	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1991+55	-	1991+61	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	199736	-	1997+42	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2002+71	-	2002+77	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2002+79	-	2002+85	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2002+96	-	2003+02	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2031+13	-	2031+19	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2034+36	-	2034+42	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	2038+63	-	2038+69	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2040+59	-	2040+65	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	2050+41	-	2050+55	40	40	0	32	2.8	3.7	78	MEDIAN & OUTSIDE LANES
	2074+76	-	2074+82	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	2077+08		2077+14	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
STAGE 1 SUBTOTALS				1279	1279	0	976	89.5	116.4	2771	

** QUANTITY LIST ELSEWHERE**

BASE PATCHING SUMMARY(CONT.)

STAGE	STATION	TO	STATION	204.0100 REMOVING PAVEMENT SY	390.0403 BASE PATCHING CONCRETE SHES SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	455.0605 TACK COAT **GAL**	460.7223 HMA PAVEMENT 3 HT 58-28 S **TON**	690.0250 SAWING CONCRETE **LF**	COMMENTS
STAGE 1											
EASTBOUND CONTINUED:											
	2077+97		2078+03	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2080+75		2080+81	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	2095+69		2095+75	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	2099+42		2099+48	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2099+91		2099+97	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2100+04		2100+10	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2103+22		2103+28	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2022+56	-	2023+26	85.6	-	-	-	-	-	-	OUSIDE EAT
	2022+75	-	2023+65	65.6	-	-	-	-	-	-	MEDIAN EAT
	UNDISTRIBUTED			96	96	-	192	3	8.7	192	
STAGE 1 SUBTOTALS				326	175	0.0	336	8.6	15.9	458	
STAGE 1 TOTAL				3122	2971	89	3488	204.3	270.3	7688	

** QUANTITY LIST ELSEWHERE**

BASE PATCHING SUMMARY(CONT.)

STAGE	STATION	TO	STATION	204.0100 REMOVING PAVEMENT SY	390.0403 BASE PATCHING CONCRETE SHES SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	455.0605 TACK COAT **GAL**	460.7223 HMA PAVEMENT 3 HT 58-28 S **TON**	690.0250 SAWING CONCRETE **LF**	COMMENTS
STAGE 2											
WESTBOUND											
	1612+92A	-	1612+98A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1618+90A	-	1618+96A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1621+56A	-	1621+62A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1621+66A	-	1621+72A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1621+83A	-	1621+89A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1621+94A	-	1622+00A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1622+15A	-	1622+21A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1622+36A	-	1622+42A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1624+06A	-	1624+12A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1624+24A	-	1624+30A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1624+65A	-	1624+71A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1626+08A	-	1626+14A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1627+29A	-	1627+35A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1627+54A	-	1627+60A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1628+65A	-	1628+71A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1630+21A	-	1630+27A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1630+32A	-	1630+38A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1630+48A	-	1630+54A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1631+33A	-	1631+39A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1635+75A	-	1635+81A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1636+62A	-	1636+68A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1637+32A	-	1637+38A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1637+69A	-	1637+75A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1638+47A	-	1638+53A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1641+07A	-	1641+13A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1644+20A	-	1644+26A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1644+31A	-	1644+37A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1656+25A	-	1656+31A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1656+81A	-	1656+87A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1666+02A	-	1666+08A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1666+68A	-	1666+74A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1667+81A	-	1667+87A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1668+90A	-	1668+96A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1681+69A	-	1681+75A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1683+31A	-	1683+37A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1683+70A	-	1683+76A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1683+83A	-	1683+89A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1685+54A	-	1685+60A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1686+19A	-	1686+25A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1686+31A	-	1686+37A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1687+33A	-	1687+39A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1687+47A	-	1687+53A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1687+72A	-	1687+78A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1688+05A	-	1688+11A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1688+14A	-	1688+50A	56	56	13	16	3.9	5.1	134	OUTSIDE LANE
STAGE 2 SUBTOTALS				582.7	582.7	13	976	40.8	53.1	1882	

** QUANTITY LIST ELSEWHERE**

BASE PATCHING SUMMARY(CONT.)

STAGE	STATION	TO	STATION	204.0100 REMOVING PAVEMENT SY	390.0403 BASE PATCHING CONCRETE SHES SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	455.0605 TACK COAT **GAL**	460.7223 HMA PAVEMENT 3 HT 58-28 S **TON**	690.0250 SAWING CONCRETE **LF**	COMMENTS
STAGE 2											
WESTBOUND CONTINUED:											
	1688+67A	-	1688+73A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1688+82A	-	1688+88A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1690+81A	-	1690+87A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1692+43A	-	1692+49A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1700+27A	-	1700+33A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1700+61A	-	1700+67A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1708+03A	-	1708+09A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1711+74A	-	1711+80A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1712+26A	-	1712+32A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1713+10A	-	1713+16A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1713+95A	-	1714+01A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1715+09A	-	1715+15A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1719+27A	-	1719+33A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1719+82A	-	1719+88A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1721+82A	-	1721+88A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1723+83A	-	1723+89A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1725+42A	-	1725+48A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1728+88A	-	1728+94A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1732+07A	-	1732+13A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1734+61A	-	1734+67A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1736+01A	-	1736+07A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1736+62A	-	1736+68A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1737+83A	-	1737+89A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1738+55A	-	1738+61A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1742+16A	-	1742+22A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1745+58A	-	1745+64A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1746+30A	-	1746+36A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1746+53A	-	1746+59A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1748+06A	-	1748+12A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1751+67A	-	1751+73A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1752+64A	-	1752+70A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1753+92A	-	1753+98A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1760+36A	-	1760+42A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1764+73A	-	1764+79A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1769+00A	-	1769+06A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1770+40A	-	1770+46A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1770+78A	-	1770+84A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1777+76A	-	1777+82A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1783+41A	-	1783+47A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1784+97A	-	1785+03A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1786+79A	-	1786+85A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1788+08A	-	1788+14A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1788+93A	-	1788+99A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1791+52A	-	1791+58A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1792+79A	-	1792+85A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
STAGE 2 SUBTOTALS				542	542	0	1008	38.0	49.3	1786	

** QUANTITY LIST ELSEWHERE**

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BASE PATCHING SUMMARY(CONT.)

STAGE	STATION	TO	STATION	204.0100 REMOVING PAVEMENT SY	390.0403 BASE PATCHING CONCRETE SHES SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	455.0605 TACK COAT **GAL**	460.7223 HMA PAVEMENT 3 HT 58-28 S **TON**	690.0250 SAWING CONCRETE **LF**	COMMENTS
STAGE 2											
WESTBOUND CONTINUED:											
	1795+46A	-	1795+52A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1796+22A	-	1796+28A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1796+83A	-	1796+89A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1797+67A	-	1797+73A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1798+39A	-	1798+45A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1799+19A	-	1799+25A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1799+44A	-	1799+50A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1799+67A	-	1799+73A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1799+91A	-	1799+97A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1802+72A	-	1802+78A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1803+23A	-	1803+29A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1803+32A	-	1803+38A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1804+72A	-	1804+78A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1805+58A	-	1805+64A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1805+90A	-	1805+96A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1806+67A	-	1806+73A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1807+59A	-	1807+65A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1809+37A	-	1809+43A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1809+70A	-	1809+76A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1810+10A	-	1810+16A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1810+59A	-	1810+65A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1812+52A	-	1812+58A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1813+44A	-	1813+50A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1814+53A	-	1814+59A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1817+14A	-	1817+20A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1817+54A	-	1817+60A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1820+58A	-	1820+64A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1820+94A	-	1821+00A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1823+10A	-	1823+16A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1823+42A	-	1823+48A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1823+76A	-	1823+82A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1824+06A	-	1824+12A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1824+35A	-	1824+41A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1825+03A	-	1825+09A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1825+35A	-	1825+41A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1825+77A	-	1825+83A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1826+33A	-	1826+39A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1826+73A	-	1826+79A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1826+96A	-	1827+02A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1827+82A	-	1827+88A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1829+64A	-	1829+70A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1829+57A	-	1829+63A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1829+77A	-	1829+83A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1830+72A	-	1830+78A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1831+22A	-	1831+28A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
STAGE 2 SUBTOTALS				598	598	0	1104	41.9	54.4	1918	

** QUANTITY LIST ELSEWHERE**

BASE PATCHING SUMMARY(CONT.)

STAGE	STATION	TO	STATION	204.0100 REMOVING PAVEMENT SY	390.0403 BASE PATCHING CONCRETE SHES SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	455.0605 TACK COAT **GAL**	460.7223 HMA PAVEMENT 3 HT 58-28 S **TON**	690.0250 SAWING CONCRETE **LF**	COMMENTS
STAGE 2											
WESTBOUND CONTINUED:											
	1829+77A	-	1829+83A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1830+72A	-	1830+78A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1831+22A	-	1831+28A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1831+49A	-	1831+55A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1834+81A	-	1834+87A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1835+37A	-	1835+43A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1835+66A	-	1835+72A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1838+45A	-	1838+51A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1838+88A	-	1838+94A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1840+59A	-	1840+65A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1841+64A	-	1841+70A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1842+80A	-	1842+86A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1844+22	-	1844+28A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1844+83	-	1844+89A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1845+98	-	1846+04A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1850+31	-	1850+37A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1850+50	-	1850+56A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1850+85	-	1850+91A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1852+99	-	1853+05A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1854+29	-	1854+35A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1855+28	-	1855+34A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1857+31	-	1857+37A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1858+33	-	1858+39A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1858+55	-	1858+61A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1863+28	-	1863+34A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1863+37	-	1863+43A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1863+54	-	1863+60A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1866+42	-	1866+48A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1866+78	-	1866+84A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1870+42	-	1870+48A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1879+51	-	1879+57A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1881+27	-	1881+33	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1899+18A	-	1899+24A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1900+82A	-	1900+88A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1901+00A	-	1901+54A	84	84	21	16	5.9	7.6	180	OUTSIDE LANES
	1902+89A	-	1903+39A	78	78	19	16	5.4	7.1	176	OUTSIDE LANES
	1903+72A	-	1903+96A	37	37	9	16	2.6	3.4	94	OUTSIDE LANES
	1903+96A	-	1904+02A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1903+98A	-	1904+04A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1905+26A	-	1905+32A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1907+44A	-	1907+50A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1917+66A	-	1917+81A	23	23	5	16	1.6	2.1	71	6x14 OUTSIDE LANE
	1928+70A	-	1928+76A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1946+48A	-	1946+54A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1952+08A	-	1952+14A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
STAGE 2 SUBTOTALS				788	788	54	1088	55.2	71.7	2325	

** QUANTITY LIST ELSEWHERE**

BASE PATCHING SUMMARY(CONT.)

STAGE	STATION	TO	STATION	204.0100 REMOVING PAVEMENT SY	390.0403 BASE PATCHING CONCRETE SHES SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	455.0605 TACK COAT **GAL**	460.7223 HMA PAVEMENT 3 HT 58-28 S **TON**	690.0250 SAWING CONCRETE **LF**	COMMENTS
STAGE 2											
WESTBOUND CONTINUED:											
	1953+86A	-	1953+92A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1953+97A	-	1954+03A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1963+25A	-	1963+31A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1973+00A	-	1973+06A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1974+04A	-	1974+10A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1978+24A	-	1978+30A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1981+33A	-	1981+39A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1982+00A	-	1982+06A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1982+15A	-	1982+21A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1984+53A	-	1984+59A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	1987+77A	-	1987+83A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1988+89A	-	1988+95A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	1995+15A	-	1995+21A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2002+10A	-	2002+16A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2002+32A	-	2002+38A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2002+61A	-	2002+67A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2010+87A	-	2010+93A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	2026+71A	-	2026+77A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2027+42A	-	2027+48A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	2028+87A	-	2028+93A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2029+45A	-	2029+51A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2033+42A	-	2033+48A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2034+84A	-	2034+90A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2036+79A	-	2036+85A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	2046+34A	-	2046+40A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	2046+87A	-	2046+93A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2047+21A	-	2047+27A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2048+36A	-	2048+42A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2049+35A	-	2049+41A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	2050+27A	-	2050+33A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2051+12A	-	2051+18A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2052+62A	-	2052+68A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	2073+59A	-	2073+65A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2074+70A	-	2074+88A	24	24	6	16	1.7	2.2	66	6x12 MEDIAN LANE
	2074+70A	-	2074+76A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2095+69A	-	2095+75A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2100+62A	-	2100+68A	9	9	0	16	0.7	0.8	34	6x14 OUTSIDE LANE
	2101+63A	-	2101+69A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	2102+25A	-	2102+31A	17	17	0	32	1.2	1.6	52	MEDIAN & OUTSIDE LANES
	2103+30A	-	2103+36A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	UNDISTRIBUTED			96	96	-	192	3	8.7	192	
STAGE 2 SUBTOTALS				564	564	6	1024	35.8	51.4	1752	
STAGE 2 TOTAL				3075	3075	73	5200	211.7	279.9	9663	

** QUANTITY LIST ELSEWHERE**

BASE PATCHING SUMMARY(CONT.)

STAGE	STATION	TO	STATION	204.0100 REMOVING PAVEMENT SY	390.0403 BASE PATCHING CONCRETE SHES SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	455.0605 TACK COAT **GAL**	460.7223 HMA PAVEMENT 3 HT 58-28 S **TON**	690.0250 SAWING CONCRETE **LF**	COMMENTS
STAGE 3											
EASTBOUND											
	1559+85	-	1559+91	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1560+91	-	1560+97	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1561+73	-	1561+79	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1563+18	-	1563+24	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1571+19	-	1571+25	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1573+17	-	1573+23	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1583+15	-	1583+21	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1585+53	-	1585+59	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1590+72	-	1590+78	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1590+84	-	1590+90	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1591+93	-	1591+99	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1593+45	-	1593+51	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1595+36	-	1595+42	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1596+28	-	1596+34	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1601+55	-	1601+61	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
WESTBOUND											
	1559+65A	-	1559+71A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1562+09A	-	1562+15A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1562+23A	-	1562+29A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1563+08A	-	1563+14A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1563+94A	-	1564+00A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1579+02A	-	1579+08A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1589+05A	-	1589+11A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1591+52A	-	1591+58A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1598+35A	-	1598+41A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
	1605+85A	-	1605+91A	8	8	0	16	0.6	0.7	30	6x12 MEDIAN LANE
STAGE 3 TOTAL				200	200	0	400	14.0	18.2	750	

** QUANTITY LIST ELSEWHERE**

BASE PATCHING SUMMARY(CONT.)

STAGE	STATION	TO	STATION	204.0100 REMOVING PAVEMENT SY	390.0403 BASE PATCHING CONCRETE SHES SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	455.0605 TACK COAT **GAL**	460.7223 HMA PAVEMENT 3 HT 58-28 S **TON**	690.0250 SAWING CONCRETE **LF**	COMMENTS
STAGE 4											
EASTBOUND											
	1559+95	-	1560+01	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1560+91	-	1560+97	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1561+73	-	1561+79	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1563+18	-	1563+24	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1570+19	-	1570+25	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1571+19	-	1571+25	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1573+17	-	1573+23	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1583+15	-	1583+21	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1585+53	-	1585+59	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1590+84	-	1590+90	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1591+93	-	1591+99	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1593+45	-	1593+51	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1596+28	-	1596+34	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1601+55	-	1601+61	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
WESTBOUND											
	1559+65A	-	1559+71A	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1562+09A	-	1562+15A	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1563+94A	-	1564+00A	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1571+83A	-	1571+89A	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1574+25A	-	1574+31A	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1579+02A	-	1579+08A	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1590+18A	-	1590+24A	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1591+52A	-	1591+58A	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1593+14A	-	1593+20A	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
	1598+35A	-	1598+41A	9.0	9	0	16	0.6	0.8	34	6x14 OUTSIDE LANE
STAGE 4 TOTAL				216	216	0	384	15.2	19.7	816	
			TOTAL(S)	6613	6461	162	9472	445	588.1	18917	

** QUANTITY LIST ELSEWHERE**

PAVING SUMMARY

STAGE	STATION	TO	STATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	211.0400 PREPARE FOUNDATION FOR ASPHALTIC STA	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	455.0605 TACK COAT **GAL**	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	460.7223 HMA PAVEMENT 3 HT 58-28 S **TON**	460.8424 HMA PAVEMENT 4 SMA 58-28 H TON	465.0400 ASPHALTIC SHOULDER RUMBLE STRIP LF	690.0150 SAWING ASPHALT **LF**	COMMENTS
STAGE 1														
EASTBOUND														
	1604+00	-	1605+00	-	-	422	-	45.1	18.7	17.0	35.7	-	-	STAGING TRANSITION
	1605+00	-	1618+13	-	-	5625	362	601.7	328.5	523.9	407.9	2626	-	
	1618+13	-	1619+13	444	-	-	27	47.8	18.7	18.2	38.3	200	-	END JOINT TRANSITION
	1619+13	-	1619+44	83	-	-	8	5.8	-	-	9.3	-	-	
	1620+87	-	1620+98	20	-	-	3	1.4	1.4	-	0.8	-	-	
	1620+98	-	1621+98	444	-	-	27	47.8	18.7	18.2	38.3	200		END JOINT TRANSITION
	1621+98	-	1899+26	-	-	117216	7466	12524.7	6904.7	10885.3	8468.1	55456	-	
	1899+26	-	1900+26	444	-	-	27	47.8	18.7	18.2	38.3	200	-	END JOINT TRANSITION
	1900+26	-	1900+59	83	-	-	9	5.8	-	-	9.3	-	-	
	1901+83	-	1901+93	20	-	-	3	1.4	1.4	-	0.8	-	-	
	1901+93	-	1902+93	444	-	-	27	47.8	18.7	18.2	38.3	200	-	END JOINT TRANSITION
	1902+93	-	2002+56	-	-	42158	2714	4504.3	2484.9	3914.1	3044.8	19926	-	
	2002+56	-	2003+56	422	-	-	27	45.1	18.7	17.0	35.7	200	-	END JOINT TRANSITION
	2022+56	-	2023+26	-	2	-	19	-	16.8	-	-	-	20	OUSIDE EAT
	2022+75	-	2023+65	-	2	-	24	-	12.5	-	-	-	10	MEDIAN EAT
	2029+18	-	2029+86	144	-	-	18	10.1	4.7	-	6.3	-	-	
	2029+86	-	2030+86	444	-	-	27	47.8	18.7	18.2	38.3	200	-	END JOINT TRANSITION
	2030+86	-	2103+00	-	-	30559	1983	3265.1	1800.7	2837.5	2207.1	14428	-	
	2103+00	-	2104+00	422	-	-	27	45.1	18.7	17.0	35.7	200	-	END JOINT TRANSITION
	20+04BB	-	20+99BB	-	-	-	11	21.0	38	-	-	-	-	MAINTENANCE CROSSOVER
	30+04CC	-	30+34CC	-	-	-	4	9.0	15.6	-	-	-	-	MAINTENANCE CROSSOVER
	40+04DD	-	40+30DD	-	-	-	4	8.3	14	-	-	-	-	MAINTENANCE CROSSOVER
	50+04EE	-	50+08EE	-	-	-	4	10.0	17.6	-	-	-	-	MAINTENANCE CROSSOVER
STAGE 1 TOTALS				3414	4	195980	12818	21342.9	11790.4	18302.8	14,453.0	93,836	30	
STAGE 2														
WESTBOUND														
	1605+00A	-	1606+00A	-	-	422	-	45.1	18.7	17.0	35.7	-	-	STAGING TRANSITION
	1606+00A	-	1619+17A	-	-	5616	351	600.8	327.8	523.3	407.0	2634	-	
	1619+17A	-	1620+17A	444	-	-	27	47.8	18.7	18.2	38.3	200	-	END JOINT TRANSITION
	1620+17A	-	1620+48A	83	-	-	8	5.8	-	-	9.3	-	-	
	1621+93A	-	1622+03A	20	-	-	3	1.4	1.4	-	0.8	-	-	
	1622+03A	-	1623+03A	444	-	-	27	47.8	18.7	18.2	38.3	200	-	END JOINT TRANSITION
	1623+03A	-	1900+23A	-	-	117247	7395	12525.9	6915.9	10882.9	8464.5	55440	-	
	1900+23A	-	1901+23A	444	-	-	27	47.8	18.7	18.2	38.3	200	-	END JOINT TRANSITION
	1901+23A	-	1901+54A	83	-	-	8	5.8	-	-	9.3	-	-	
	1902+78A	-	1902+89A	20	-	-	3	1.4	1.4	-	0.8	-	-	
	1902+89A	-	1903+89A	444	-	-	27	47.8	18.7	18.2	38.3	200	-	END JOINT TRANSITION
	1903+89A	-	2028+56A	107	-	53674	3379	4864	3151.6	4959.5	3888.8	25396	-	
	2028+56A	-	2029+56A	444	-	-	27	47.8	18.7	18.2	38.3	200	-	END JOINT TRANSITION
	2029+56A	-	2030+32A	90	-	-	20	6.3	8.8	-	1.2	76	-	
	2032+12A	-	2032+35A	29	-	-	6	2.1	2.1	-	1.2	-	-	
	2032+35A	-	2033+35A	444	-	-	27	47.8	18.7	18.2	38.3	200	-	END JOINT TRANSITION
	2033+35A	-	2103+27A	-	-	29932	1910	3203.0	1742.0	2791.6	2140.7	13984	-	
	2103+27A	-	2104+27A	422	-	-	27	45.1	18.7	17.0	35.7	200	-	END JOINT TRANSITION
	20+99BB	-	21+94BB	-	-	-	11	20.9	37.5	-	-	-	-	MAINTENANCE CROSSOVER
	30+34CC	-	30+64CC	-	-	-	3	8.0	15	-	-	-	-	MAINTENANCE CROSSOVER
	40+30DD	-	40+56DD	-	-	-	3	7.0	13.5	-	-	-	-	MAINTENANCE CROSSOVER
	50+42EE	-	50+80EE	-	-	-	4	9.6	17.6	-	-	-	-	MAINTENANCE CROSSOVER
STAGE 2 TOTALS				3518	-	206891	13291	21639.3	12384.2	19300.5	15224.8	98930	-	
STAGE 3														
EASTBOUND/WESTBOUND														
	1558+94	-	1559+94	178	-	-	12	21.4	-	9.7	8.4	100	-	END JOINT TRANSITION
	1559+58	-	1604+00	-	-	7833	526	939.9	-	986.9	767.6	4442	-	
	1604+00	-	1605+00	178	-	-	12	21.4	-	16.8	17.4	100	-	STAGING TRANSITION
	10+04AA	-	11+74AA	-	-	-	19	38.4	61.5	-	-	-	-	MAINTENANCE CROSSOVER
	1592+04	-	1603+54	1952	-	-	-	137.0	-	246.0	-	-	607	MAINLINE CROSSOVER
	1560+12A	-	1561+12A	178	-	-	12	21.4	-	9.7	8.4	100	-	END JOINT TRANSITION
	1561+12A	-	1605+00A	-	-	7801	520	936.1	-	982.9	573.4	4388		
	1605+00A	-	1606+00A	178	-	-	12	21.4	-	16.8	17.4	100		STAGING TRANSITION
	1593+32A	-	1604+69A	1099	-	-	-	76.9	-	138.4	-	-	841	MAINLINE CROSSOVER
STAGE 3 TOTALS				3763	-	15634	1113.0	2213.9	61.5	2407.2	1392.6	9230	1448	
STAGE 4														
EASTBOUND/WESTBOUND														
	1558+94	-	1559+94	244	-	-	15	23.7	18.7	7.3	9.9	100	-	END JOINT TRANSITION
	1559+58	-	1604+00	-	-	10819	658	1053.4	1096.6	746.3	580.4	4442		
	1604+00	-	1605+00	244	-	-	15	23.7	24.9	22.4	13.1	100		STAGING TRANSITION
	1560+12A	-	1561+12A	244	-	-	15	23.7	18.7	7.3	9.9	100		END JOINT TRANSITION
	1561+12A	-	1605+00A	-	-	10727	650	1043.4	1092.1	737.2	573.4	4388		
	1605+00A	-	1606+00A	244	-	-	15	23.7	24.9	22.4	13.1	100	-	STAGING TRANSITION
STAGE 4 TOTAL				976	-	21546	1368	2191.6	2275.9	1542.9	1199.8	9230	-	
			TOTAL(S)	11671	4	440051	28590	47387.7	26512.0	41553.4	32270.2	211226	1478	

** QUANTITY LIST ELSEWHERE**

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	MISCELLANEOUS QUANTITIES	SHEET NO: 66	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ ORG DATE : _____ ORIGINATOR : DIST _ PLOT SCALE : 1:1

GUARDRAIL SUMMARY

CAT.	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	REMARKS
0010	1615+97	-	1619+58	IH 90 EB RT	361	-	-	-	-	
0010	1616+16	-	1619+58	IH 90 EB RT	-	250.0	39.4	1	-	
0010	1615+46	-	1619+55	IH 90 EB LT	409	-	-	-	-	
0010	1615+50	-	1619+55	IH 90 EB LT	-	312.5	39.4	1	-	
0010	1620+87	-	1622+35	IH 90 EB RT	148	-	-	-	-	
0010	1620+87	-	1622+79	IH 90 EB RT	-	100.0	39.4	1	-	
0010	1620+85	-	1624+40	IH 90 EB LT	-	262.5	39.4	1	-	
0010	1895+49	-	1900+71	IH 90 EB RT	522	-	-	-	-	
0010	1895+41	-	1900+71	IH 90 EB RT	-	437.5	39.4	1	-	
0010	1897+60	-	1900+68	IH 90 EB LT	308	-	-	-	-	
0010	1896+88	-	1900+68	IH 90 EB LT	-	287.5	39.4	1	-	
0010	1901+83	-	1903+30	IH 90 EB RT	147	-	-	-	-	
0010	1901+83	-	1903+51	IH 90 EB RT	-	75.0	39.4	1	-	
0010	1901+81	-	1905+36	IH 90 EB LT	-	262.5	39.4	1	-	
0010	1969+75	-	1988+93	IH 90 EB RT	1918	-	-	-	-	
0010	1963+85	-	1990+57	IH 90 EB RT	-	2575.0	-	2	-	
0010	2022+46	-	2026+19	IH 90 EB RT	373	-	-	-	-	
0010	2022+77	-	2026+19	IH 90 EB RT	-	250.0	39.4	1	-	
0010	2022+99	-	2027+20	IH 90 EB LT	421	-	-	-	-	
0010	2023+15	-	2027+20	IH 90 EB LT	-	312.5	39.4	1	-	
0010	2029+05	-	2033+45	IH 90 EB RT	440	-	-	-	-	
0010	2029+05	-	2034+60	IH 90 EB RT	-	462.5	39.4	1	-	
0010	2029+89	-	2030+98	IH 90 EB LT	109	-	-	-	-	
0010	2029+89	-	2033+44	IH 90 EB LT	-	262.5	39.4	1	-	
0010	2070+36	-	2073+14	IH 90 EB RT	278	-	-	-	-	
0010	2069+46	-	2075+52	IH 90 EB RT	-	500.0	-	2	-	
0010	1621+90A	-	1626+00A	IH 90 WB RT	410	-	-	-	-	
0010	1621+90A	-	1625+95A	IH 90 WB RT	-	312.5	39.4	1	-	
0010	1619+13A	-	1620+60A	IH 90 WB LT	147	-	-	-	-	
0010	1619+96A	-	1620+61A	IH 90 WB LT	-	25.0	39.4	-	1	
0010	1621+90A	-	1627+12A	IH 90 WB LT	522	-	-	-	-	
0010	1621+90A	-	1630+08A	IH 90 WB LT	-	725.0	39.4	1	-	
0010	1900+19A	-	1901+66A	IH 90 WB LT	147	-	-	-	-	
0010	1901+01A	-	1901+66A	IH 90 WB LT	-	25.0	39.4	-	1	
0010	1902+78A	-	1905+88A	IH 90 WB RT	310	-	-	-	-	
0010	1902+78A	-	1906+70A	IH 90 WB RT	-	300.0	39.4	1	-	
0010	1902+75A	-	1906+24A	IH 90 WB LT	349	-	-	-	-	
0010	1902+75A	-	1906+55A	IH 90 WB LT	-	287.5	39.4	1	-	
0010	1962+44A	-	1977+64A	IH 90 WB LT	1520	-	-	-	-	
0010	1965+88A	-	1977+66A	IH 90 WB LT	-	1125.0	-	1	1	
0010	2026+46A	-	2030+24A	IH 90 WB LT	378	-	-	-	-	
0010	2025+65A	-	2030+24A	IH 90 WB LT	-	425.0	39.4	-	1	
0010	2032+38A	-	2037+67A	IH 90 WB LT	529	-	-	-	-	
0010	2032+38A	-	2038+43A	IH 90 WB LT	-	512.5	39.4	1	-	
0010	2031+76A	-	2035+98A	IH 90 WB RT	422	-	-	-	-	
0010	2031+76A	-	2035+81A	IH 90 WB RT	-	312.5	39.4	1	-	
				TOTAL 0010	10168	10400.0	827.4	23	4	

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DELINEATORS SUMMARY

CAT.	STATION	TO	STATION	LOCATION	204.0180 REMOVING DELINEATORS AND MARKERS EACH	633.0100 DELINEATOR POSTS STEEL EACH	633.0200 DELINEATORS FLEXIBLE EACH	633.0500 DELINEATOR REFLECTORS EACH	SPV.0060.08 TUBULAR MARKER POSTS SPECIAL EACH	SPV.0060.09 TUBULAR MARKER BASES SPECIAL EACH
0010	1595+89	-	1619+00	MAINLINE CROSSOVER	94	8	-	8	86	86
0010	2183+05	-	2186+54	MAINLINE CROSSOVER	68	8	-	8	60	60
0010	1558+94	-	1619+00	IH 90 EB	17	-	16	-	-	-
0010	1560+12'A'	-	1620+00'A'	IH 90 WB	17	-	16	-	-	-
0010	1623+00	-	1895+00	IH 90 EB	79	-	69	-	-	-
0010	1630+00'A'	-	1900+00'A'	IH 90 WB	77	-	69	-	-	-
0010	1904+00	-	2023+00	IH 90 EB	30	-	30	-	-	-
0010	1907+00'A'	-	2025+00'A'	IH 90 WB	31	-	30	-	-	-
0010	2035+00	-	2104+00	IH 90 EB	20	-	18	-	-	-
0010	2039+00'A'	-	2104+27'A'	IH 90 WB	19	-	17	-	-	-
				TOTAL 0010	452	16	265	16	146	146

REMOVING SMALL PIPE CULVERTS

CAT.	STATION	TO	STATION	LOCATION	TYPE	DIAMETER INCHES	LENGTH LF	203.0100 EACH	REMARKS
0010	1619+14	-	1619+58	EB RT	PIPE UNDERDRAIN UNPERFORATED	18	20	1	SLICED WITH CONCRETE
0010	1619+14	-	1619+58	EB RT	CMCP	12	30	1	
0010	1900+29	-	1900+73	EB RT	PIPE UNDERDRAIN UNPERFORATED	18	20	1	SLICED WITH CONCRETE
0010	1900+29	-	1900+73	EB RT	CMCP	12	30	1	
0010	1620+17'A'	-	1620+61'A'	WB LT	PIPE UNDERDRAIN UNPERFORATED	18	20	1	SLICED WITH CONCRETE
0010	1620+17'A'	-	1620+61'A'	WB LT	CMCP	12	32	1	
0010	1676+28'A'	-	1676+77'A'	WB LT	CMCP	18	54	1	
0010	1900+25'A'	-	1900+69'A'	WB LT	PIPE UNDERDRAIN UNPERFORATED	18	20	1	SLICED WITH CONCRETE
0010	1900+25'A'	-	1900+69'A'	WB LT	CMCP	12	32	1	
							TOTAL 0010	9	

SURFACE DRAIN SUMMARY

CAT.	STATION	TO	STATION	LOCATION	204.0190 REMOVING SURFACE DRAINS EACH	305.0120 BASE ADDREGATE DENSE 1 1/4-INCH TON	416.1010 CONCRETE SURFACE DRAINS CY	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	611.0654 INLET COVERS TYPE V EACH	611.3220 INLETS 2X2-FT EACH	612.0212 PIPE UNDERDRAIN UNPERFORATED 12 INCH LF	633.5200 MARKERS CULVERT END EACH	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
0010	1619+14	-	1619+58	EB RT	1	4	8.8	1	1	1	60	1	10	50	
0010	1619+13	-	1619+57	EB LT	1	2	5.6	-	-	-	-	-	6	46	
0010	1900+29	-	1900+73	EB RT	1	4	8.8	1	1	1	80	1	10	50	
0010	1900+26	-	1900+70	EB LT	1	2	5.6	-	-	-	-	-	6	46	
0010	2029+05	-	2029+49	EB RT	1	-	5.5	1	2	2	88	1	10	30	
0010	1620+17'A'	-	1620+61'A'	WB LT	1	4	8.8	1	1	1	54	1	10	50	
0010	1676+27'A'	-	1676+76'A'	WB LT	-	-	-	-	-	-	-	-	-	-	
0010	1900+25'A'	-	1900+69'A'	WB LT	1	4	8.8	1	1	1	64	1	10	50	
0010	2031+78'A'	-	2032+22'A'	WB RT	1	-	6.3	-	-	-	-	-	6	40	
				TOTAL 0010	8	20	58.2	5	6	6	346	5	** 68	** 362	**

** QUANTITY LIST ELSEWHERE**

BARRIER SYSTEM GRADING SHAPING FINISHING

CAT	STATION	TO	STATION	LOCATION	614.0010 EACH EACH	REMARKS	* FILL CY	* FILL (1.25) CY	* EXCAVATION COMMON CY	* SALVAGED TOPSOIL SY	* FERTILIZER TYPE B CWT	* SEEDING MIX NO. 30 LB	* SEEDING MIX NO. 70 LB	* SEEDING TEMPORARY LB	* EROSION MAT CLASS 1 TYPE A SY
0010	1614+97	-	1616+65	IH 90 EB RT	1		144.1	180.1	-	744	0.6	17.0	-	26	744
0010	1614+31	-	1616+65	IH 90 EB LT	1		-	-	6.0	36	0.1	2.4	-	4	36
0010	1620+90	-	1626+00	IH 90 EB RT	1		314.1	392.6	24.8	1708	1.2	35.4	-	53	1708
0010	1894+85	-	1896+00	IH 90 EB RT	1		71.8	89.8	-	304	0.3	-	1.6	12	304
0010	1895+70	-	1897+60	IH 90 EB LT	1		-	-	10.9	71	0.1	-	0.7	5	71
0010	1904+50	-	1906+55	IH 90 EB LT	1		1.2	1.5	21.7	100	0.1	-	0.7	5	100
0010	1962+67	-	1964+70	IH 90 EB RT	1		0.5	0.6	3.1	65	0.1	-	0.6	4	65
0010	1990+00	-	1991+51	IH 90 EB RT	1		100.0	125.0	3.8	341	0.3	-	1.7	13	341
0010	2032+75	-	2034+60	IH 90 EB LT	1		27.9	34.9	24.5	279	0.2	6.9	-	10	279
0010	2068+25	-	2070+00	IH 90 EB RT	1		2.0	2.5	5.0	88	0.1	3.4	-	5	88
0010	1629+58A	-	1631+26A	IH 90 WB LT	1		0.5	0.6	1.6	86	0.1	3.4	-	5	86
0010	1906+20A	-	1907+89A	IH 90 WB RT	1		3.8	4.8	22.5	133	0.2	-	0.9	7	133
0010	1906+05A	-	1907+74A	IH 90 WB LT	1		-	-	1.0	43	0.1	-	0.5	4	43
0010	1976+92A	-	1978+85A	IH 90 WB LT	1		-	-	5.0	29	0.1	-	0.5	4	29
0010	2037+63A	-	2039+64A	IH 90 WB LT	1		981.8	1227.3	22.6	996	0.7	20.6	-	31	996
				TOTAL 0010	15		1647.7	2059.6	152.5	5023	4	89	7	188	5023

*ITEMS AND QUANTITIES FOR INFORMATION ONLY.

RESTORATION SUMMARY

CAT.	STATION	TO	STATION	LOCATION	624.0100 WATER MGAL	625.0500 SALVAGED TOPSOIL SY	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2002 EROSION MAT CLASS I TYPE A SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0170 SEEDING MIXTURE NO. 70 LB	630.0200 SEEDING TEMPORARY LB	REMARKS
0010	1619+14	-	1619+65	IH 90 EB RT	3	142	-	-	142	0.09	2.6	-	4	CONCRETE SURFACE DRAIN
0010	1620+90		1626+00	IH 90 EB LT	2	86	-	-	86	0.05	1.5		2	EAT LOCATION
0010	1762+00	-	1766+03	IH 90 EB RT	38	1428	-	-	1428	1.07	30.5	-	39	
0010	1900+28	-	1900+65	IH 90 EB RT	3	153	-	-	153	0.10	-	0.6	4	CONCRETE SURFACE DRAIN
0010	1900+16	-	1900+66	IH 90 EB LT	2	89	-	-	89	0.06	-	0.3	2	CONCRETE SURFACE DRAIN
0010	1902+93	-	1910+30	IH 90 EB RT	127	5150	-	-	5150	3.55	-	20.3	139	
0010	1991+00	-	1991+33	IH 90 EB LT	1	27	-	-	27	0.04	-	0.2	1	
0010	2021+50		2023+25	IH 90 EB RT	2	79	-	-	79	0.05	1.4	-	2	EAT LOCATION
0010	2021+97		2023+66	IH 90 EB LT	1	18			18	0.00	0.3	-	1	EAT LOCATION
0010	2029+10	-	2029+49	IH 90 EB RT	4	167	-	-	167	0.11	3.0	-	5	CONCRETE SURFACE DRAIN
0010	2034+00		2035+80	IH 90 EB RT	2	76	-	-	76	0.05	1.4	-	2	EAT LOCATION
0010	2075+00		2076+66	IH 90 EB RT	1	25	-	-	25	0.02	0.5	-	1	EAT LOCATION
0010	1620+17A	-	1620+52A	IH 90 WB LT	3	119	-	-	119	0.07	2.1	-	3	CONCRETE SURFACE DRAIN
0010	1625+45A		1627+14A	IH 90 WB RT	2	76	-	-	76	0.05	1.4	-	2	EAT LOCATION
0010	1676+02A	-	1676+84A	IH 90 WB LT	7	191	-	-	191	0.19	5.5	-	5	
0010	1893+60A	-	1901+61A	IH 90 WB LT	128	5240	-	-	5240	3.60	-	20.6	142	
0010	2031+77A	-	2032+26A	IH 90 WB RT	2	86	-	-	86	0.05	1.5	-	2	CONCRETE SURFACE DRAIN
0010				PROJECT	-	-	4	2	-	-	-	-	-	
0010				UNDISTRIBUTED	82	3288	-	-	3288	1.37	13	11	23	
				TOTAL 0010	410	16440	4	2	16440	10.60	64.7	52.5	379	

Seeded Area (SY) x 1 inch of rain x 0.0278 yd/inch = XXXX CY of water
XXXX CY of water x 1 gal/0.004951 CY x 1 Mgal/1000 gal = XXXX Mgal of water
XXXX Mgal of water x 4 weeks of watering = XXXX Mgal of water

TEMPORARY EMERGENCY PULLOUTS

CAT.	STATION	TO	STATION	LOCATION	205.3000.S EACH	* FILL CY	* FILL (1.25) CY	* EXCAVATION COMMON CY	* SALVAGED TOPSOIL SY	* FERTILIZER TYPE B CWT	* SEEDING MIX NO. 30 LB	* SEEDING TEMPORARY LB	* EROSION MAT CLASS 1 TYPE A SY	* BASE AGGREGATE DENSE 1 1/4-INCH TON
0010	1631+00	-	1633+00	EB MEDIAN	1	-	-	-	104	0.1	4	6	104	29
0010	1657+25	-	1659+50	EB MEDIAN	1	-	-	-	72	0.1	4	6	72	32
0010	1683+75	-	1686+00	EB MEDIAN	1	-	-	-	74	0.1	4	6	74	29
0010	1710+25	-	1720+50	EB MEDIAN	1	-	-	-	93	0.1	4	6	93	42
0010	1736+75	-	1739+00	EB MEDIAN	1	-	-	-	61	0.1	3	5	61	23
0010	1763+25	-	1765+50	EB MEDIAN	1	-	-	-	95	0.1	4	6	95	38
0010	1789+75	-	1792+00	EB MEDIAN	1	-	-	-	124	0.2	5	7	124	65
0010	1816+25	-	1818+50	EB MEDIAN	1	-	-	-	139	0.2	5	7	139	73
0010	1842+75	-	1845+00	EB MEDIAN	1	-	-	-	157	0.2	5	7	157	88
0010	1869+25	-	1871+50	EB MEDIAN	1	-	-	-	92	0.1	4	6	92	42
0010	1888+75	-	1891+00	EB MEDIAN	1	-	-	-	72	0.1	4	6	72	28
0010	1922+25	-	1924+50	EB MEDIAN	1	-	-	-	117	0.2	4	6	117	33
0010	1950+75	-	1953+00	EB MEDIAN	1	-	-	-	143	0.2	5	7	143	53
0010	1975+25	-	1977+50	EB MEDIAN	1	-	-	-	226	0.2	6	9	226	84
0010	2001+75	-	2004+00	EB MEDIAN	1	-	-	-	81	0.1	4	6	81	60
0010	2039+75	-	2042+00	EB MEDIAN	1	-	-	-	101	0.1	4	6	101	33
0010	2054+75	-	2057+00	EB MEDIAN	1	-	-	-	136	0.2	5	7	136	43
0010	2081+25	-	2083+50	EB MEDIAN	1	-	-	-	75	0.1	3	5	75	32
				TOTAL 0010	18				1962	2.5	77	114	1962	827

*ITEMS AND QUANTITIES FOR INFORMATION ONLY.

BARRIER SUMMARY

CAT.	STATION	TO	STATION	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH (FT)	SIGN PLATE	CRASH TEST LEVEL	TRAFFIC DIRECTION	REMARKS
0010	1599+43A	-	1603+93A	IH 90 WB	400	400	1	2	W05-58L	TL-3	BI-DIRECTIONAL	STAGE 1
0010	2182+03A	-	2187+73A	IH 90 WB	520	520	1	2	W05-58L	TL-3	BI-DIRECTIONAL	STAGE 1
0010	1597+51	-	1603+21	IH 90 EB	520	520	1	2	W05-58R	TL-3	BI-DIRECTIONAL	STAGE 2
0010	2181+52	-	2186+02	IH 90 EB	400	400	1	2	W05-58R	TL-3	BI-DIRECTIONAL	STAGE 2
				TOTAL 0010	1840	1840	4					

EROSION CONTROL SUMMARY

CAT.	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7570 ROCK BAGS EACH	REMARKS
0010	1614+74	-	1616+97	EB RT	273	273	-	-	-	34	
0010	1614+75	-	1615+69	EB LT	-	-	-	-	16	-	
0010	1619+14	-	1619+30	EB RT	-	-	-	1	16	-	
0010	1621+99	-	1625+73	EB RT	456	456	-	-	-	51	
0010	1625+38	-	1626+40	EB LT	-	-	-	-	16	-	
0010	1761+55	-	1769+21	EB RT	475	475	-	-	-	34	
0010	1893+04	-	-	EB LT	-	-	1	-	-	-	
0010	1894+71	-	1895+60	EB RT	92	92	-	-	-	17	
0010	1895+54	-	1899+12	EB LT	-	-	-	-	16	-	
0010	1900+29	-	1900+45	EB RT	-	-	-	1	16	-	
0010	1902+29	-	-	EB LT	-	-	1	-	-	-	
0010	1903+32	-	1904+18	EB LT	-	-	-	-	16	-	
0010	1902+39	-	1910+40	EB RT	822	822	-	-	-	51	
0010	1962+65	-	1964+48	EB RT	184	184	-	-	-	17	
0010	1988+89	-	1991+65	EB RT	284	284	-	-	-	17	
0010	2022+09	-	2023+44	EB RT	-	-	-	-	24	-	
0010	2022+83	-	2024+00	EB LT	-	-	-	-	16	-	
0010	2029+15	-	2029+40	EB RT	-	-	-	2	16	-	
0010	2032+72	-	2037+75	EB LT	-	-	1	-	32	-	
0010	2033+80	-	2036+03	EB RT	223	223	-	-	-	17	
0010	1620+13A	-	1621+29A	WB LT	-	-	-	1	16	-	
0010	1629+29A		1631+42A	WB LT	260	260	-	-	-	17	
0010	1675+96A	-	1976+43A	WB LT	-	-	-	-	16	-	
0010	1893+59A	-	1901+60A	WB LT	822	822	-	1	-	51	
0010	1907+25A	-	1907+68A	WB LT	-	-	-	-	16	-	
0010	1976+69A	-	1979+00A	WB LT	230	230	-	-	-	17	
0010	2037+00A		2039+88A	WB LT	277	277	-	-	8	34	
0010				UNDISTRIBUTED	1100	1100	1	2	60	89	
				TOTAL 0010	5498	5498	4	8	300	447	

RIPRAP SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
0010	1619+15	-	1619+21	EB RT	1.5	7	
0010	1900+24	-	1900+30	EB LT	1.5	7	
0010	1900+30	-	1900+36	EB RT	1.5	7	
0010	2029+42	-	2029+48	EB RT	1.5	7	
0010	1620+18A	-	1620+24A	WB LT	1.5	7	
0010	1901+24A	-	1901+30A	WB LT	1.5	7	
0010	2031+77A	-	2032+26'A'	WB RT	1.5	7	
				TOTAL 0010	11	49	

3

TEMP. DELINEATOR SUMMARY

CAT.	STATION	TO	STATION	LOCATION	633.1100 DELINEATORS TEMPORARY EACH	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH
0010	14+00S	-	17+00S	CROSSOVER-LT	6	-	-
0010	14+00S	-	30+04S	CROSSOVER-RT	19	-	-
0010	1603+93A	-	2182+53A	WB	-	1179	1179
0010	09+00X	-	11+00X	CROSSOVER-LT	4	-	-
0010	00+00X	-	05+75X	CROSSOVER-RT	12	-	-
0010	24+00T	-	27+00T	CROSSOVER-LT	6	-	-
0010	31+75T	-	38+27T	CROSSOVER-RT	13	-	-
0010	1603+21	-	2181+52	EB	-	1179	1179
0010	00+00Y	-	05+75Y	CROSSOVER-LT	12	-	-
0010	09+00Y	-	14+00Y	CROSSOVER-RT	10	-	-
				UNDISTRIBUTED	10	250	250
				TOTAL 0010	92	2608	2608

IH 90 ONRAMP CLOSURE SUMMARY

CAT.	LOCATION	662.6030.S RAMP CLOSURE BARRICADE RACK 3-UNIT EACH	637.5453 BARRICADES PERMANENT TYPE III EACH	REMARKS
0010	IH 90 EB	1	3	ENTRANCE RAMP 28
0010	IH 90 WB	1	3	ENTRANCE RAMP 28
	TOTAL 0010	2	6	

3

CONSTRUCTION STAKING

CAT.	STATION	TO	STATION	LOCATION	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (10770273) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
0010	1558+94	-	1619+44	IH 90 EB	6050	-	-	
0010	1620+98	-	1900+59	IH 90 EB	27961	-	-	
0010	1901+93	-	2003+56	IH 90 EB	10163	-	-	
0010	2029+00	-	2103+26	IH 90 EB	7426	-	-	
0010	2029+62	-	2140+00	IH 90 EB	11038			
0010	1560+12A	-	1620+48A	IH 90 WB	6036	-	-	
0010	1621+93A	-	1901+54A	IH 90 WB	27961	-	-	
0010	1902+79A	-	2029+77A	IH 90 WB	12698	-	-	
0010	2031+78A	-	2103+42A	IH 90 WB	7164	-	-	
0010	2032+18A	-	2104+27A	IH 90 WB	7209	-	-	
0010	1761+00	-	1766+50	IH 90 EB	-	-	550	
0010	1902+50	-	1910+25	IH 90 EB	-	-	775	
0010	00+40FF	-	01+40FF	IH 90 WB	-	-	100	
0010	1893+50A	-	1901+50A	IH 90 WB	-	-	800	
0010				PROJECT	-	1	-	
				TOTAL 0010	123706	1	2225	

TEMPORARY EMERGENCY PULLOUT SIGNS

CAT.	STATION	STATION	LOCATION	SPV.0060.01 EMERGENCY PARKING 2 HOUR MAX SIGN EACH	SPV.0060.02 EMERGENCY PARKING 1/4 MILE SIGN EACH	COMMENTS
0010	1617+80A	1631+00A		1	1	
0010	1643+80A	1657+00A		1	1	
0010	1670+80A	1684+00A		1	1	
0010	1696+80A	1710+00A		1	1	
0010	1723+30A	1736+50A		1	1	
0010	1749+80A	1763+00A		1	1	
0010	1776+80A	1790+00A		1	1	
0010	1802+80A	1816+00A		1	1	
0010	1829+30A	1842+50A		1	1	
0010	1854+30A	1867+50A		1	1	
0010	1874+80A	1888+00A		1	1	
0010	1908+30A	1921+50A		1	1	
0010	1937+80A	1951+00A		1	1	
0010	1960+80A	1974+00A		1	1	
0010	1987+80A	2001+00A		1	1	
0010	2006+80A	2020+00A		1	1	
0010	2040+80A	2054+00A		1	1	
0010	2066+80A	2080+00A		1	1	
			TOTAL 0010	18	18	

TRAFFIC CONTROL SUMMARY

CAT.	STATION	TO	STATION	LOCATION	DURATION	DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	LIGHTS EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	LIGHTS EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	ARROW BOARDS EACH	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAY	PCMS EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	REMARKS
0010	46+77M	-	48+25M	CTH M	200	-	-	9	1800	14	2800	-	-	-	-	7	1400	-	-	MAINLINE CLOSURE
0010	60+75M	-	76+75M	CTH M	200	-	-	7	1400	10	2000	-	-	-	-	5	1000	-	-	MAINLINE CLOSURE
0010	-		-	CTH M	200	-	-	2	400	4	800	-	-	-	-	3	600	-	-	HERITAGE AVE & CTH M
STAGE 1																				
0010	1567+35	-	1603+00	EB MEDIAN LANE	5	55	275	3	15	6	30	17	85	2	10	11	55	1	5	BI-DIRECTIONAL SET UP
0010	2155+35	-	2195+00	EB MEDIAN LANE	5	58	290	3	15	6	30	17	85	2	10	11	55	-	-	BI-DIRECTIONAL SET UP
0010	1595+00A	-	2223+00A	WB MEDIAN LANE	5	647	3235	45	225	90	450	17	85	2	10	63	315	1	5	BI-DIRECTIONAL SET UP
0010	1567+35	-	1588+88	EB OUTSIDE LANE	101	40	4040	2	202	4	404	17	1717	2	202	17	1717	-	-	WB COUNTER DIRECTIONAL
0010	2193+00	-	-	EB	101	-	-	-	-	-	-	-	-	-	-	2	202	-	-	WB COUNTER DIRECTIONAL
0010	1594+43A	-	-	WB	101	-	-	-	-	-	-	-	-	-	-	2	202	-	-	WB COUNTER DIRECTIONAL
0010	1603+93A	-	1618+93A	WB	101	-	-	-	-	-	-	-	-	-	-	7	707	-	-	WB COUNTER DIRECTIONAL
0010	2187+73A	-	2223+00A	WB INSIDE LANE	101	55	5555	2	202	4	404	17	1717	2	202	17	1717	-	-	WB COUNTER DIRECTIONAL
0010	1599+43A	-	2187+73A	WB	101	-	-	-	-	-	-	-	-	-	-	12	1212	-	-	WB COUNTER DIRECTIONAL
0010				EXIT 28	101	-	-	-	-	-	-	-	-	-	-	12	1212	-	-	OVERSIZED SIGNING
0010	17+00S	-	24+04S	CROSSOVER-LT	101	28	2828	2	202	-	-	-	-	-	-	-	-	-	-	WB COUNTER DIRECTIONAL
0010	11+00S	-	21+50S	CROSSOVER-RT	101	21	2121	7	707	12	1212	3	303	-	-	2	202	-	-	WB COUNTER DIRECTIONAL
0010	04+50X	-	08+75X	CROSSOVER-LT	101	23	2323	-	-	-	-	-	-	-	-	2	202	-	-	WB COUNTER DIRECTIONAL
0010	05+75X	-	14+84X	CROSSOVER-RT	101	28	2828	-	-	-	-	-	-	-	-	-	-	-	-	WB COUNTER DIRECTIONAL
STAGE 2																				
0010	1567+35	-	2192+00	EB MEDIAN LANE	5	643	3215	47	235	94	470	17	85	2	10	65	325	-	-	BI-DIRECTIONAL SET UP
0010	1567+35	-	1592+88	EB INSIDE LANE	85	44	3740	2	170	4	340	17	1445	2	170	17	1445	-	-	EB COUNTER DIRECTIONAL
0010	2176+02	-	2191+02	EB	85	-	-	-	-	-	-	-	-	-	-	7	595	-	-	EB COUNTER DIRECTIONAL
0010	2191+00		-	EB	85	-	-	-	-	-	-	-	-	-	-	2	170	-	-	EB COUNTER DIRECTIONAL
0010	1588+88		-	WB	85	-	-	-	-	-	-	-	-	-	-	2	170	-	-	EB COUNTER DIRECTIONAL
0010	2190+00A	-	2223+00A	WB OUTSIDE LANE	85	85	7225	3	255	6	510	26	2210	2	170	21	1785	-	-	EB COUNTER DIRECTIONAL
0010	1597+51A		2186+02A	EB	85	-	-	-	-	-	-	-	-	-	-	12	1020	-	-	EB COUNTER DIRECTIONAL
0010				EXIT 41	101	-	-	-	-	-	-	-	-	-	-	12	1212	-	-	OVERSIZED SIGNING
0010	05+75Y	-	12+00Y	CROSSOVER-LT	85	13	1105	7	595	12	1020	-	-	-	-	2	170	-	-	EB COUNTER DIRECTIONAL
0010	04+00Y	-	09+00Y	CROSSOVER-RT	85	20	1700	2	170	2	170	3	255	-	-	2	170	-	-	EB COUNTER DIRECTIONAL
0010	27+00T	-	33+77T	CROSSOVER-LT	85	23	1955	-	-	-	-	-	-	-	-	2	170	-	-	EB COUNTER DIRECTIONAL
0010	20+00T	-	31+50T	CROSSOVER-RT	85	28	2380	-	-	-	-	-	-	-	-	-	-	-	-	EB COUNTER DIRECTIONAL
STAGE 3																				
0010	1529+29	-	1607+00	EB MEDIAN LANE	7	107	749	4	28	8	56	24	168	2	14	24	168	-	-	MEDIAN LANE CLOSURE
0010	1562+12A	-	1628+00	WB MEDIAN LANE	7	84	588	4	28	8	56	17	119	2	14	20	140	-	-	MEDIAN LANE CLOSURE
STAGE 4																				
0010	1529+29	-	1607+00	EB OUTSIDE LANE	7	132	924	4	28	8	56	26	182	2	14	23	161	-	-	OUTSIDE LANE CLOSURE
0010	1562+12A	-	1628+00	WB OUTSIDE LANE	7	84	588	4	28	8	56	17	119	2	14	20	140	-	-	OUTSIDE LANE CLOSURE
				TOTAL 0010			47664		6705		10864		8575		840		18639		10	

PAVEMENT MARKINGS SUMMARY

CAT.	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.3020 MARKING LINE EPOXY 8-INCH LF	646.9000 MARKING REMOVAL LINE 4-INCH LF	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	649.0250 TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH LF	649.0760 TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE I LF	REMARKS
STAGE 1												
0010	1571+88	-	1580+88	EB LT	900	-	900	-	840	-	-	YELLOW
0010	1605+00		2104+00	EB RT	49900	-	-	-	-	-	-	WHITE
0010	2168+00	-	2177+00	EB LT	900	-	900	-	840	-	-	YELLOW
0010	2195+73A	-	2204+73A	EB RT	900	-	900	-	840	-	-	YELLOW
0010	1588+50	-	1596+00	EB LT	750	-	750	-	-	-	-	YELLOW
0010	2186+00	-	2192+50	EB LT	650	-	650	-	-	-	-	YELLOW
0010	1601+50A	-	1609+00A	WB RT	750	-	750	-	-	-	-	YELLOW
0010	1603+93A	-	2182+53A	WB CENTERLINE	-	-	-	115720	-	-	-	DOUBLE YELLOW
0010	1603+93A	-	2182+53A	WB LT	-	-	-	57860	-	-	-	WHITE
0010	1599+43A	-	1603+93A	WEST X-OVER (BARRIER)	-	-	-	450	-	-	-	YELLOW
0010	2182+53A	-	2187+03A	EAST X-OVER (BARRIER)	-	-	-	450	-	-	-	YELLOW
0010	2187+03A	-	2190+03A	EAST X-OVER (BARRIER)	-	-	-	300	-	-	-	YELLOW
0010	2178+03A	-	2189+03A	WB LT	1100	-	1100	-	-	-	-	YELLOW
0010	2195+73A	-	2202+83A	WB LT	710	-	710	-	-	-	-	YELLOW
0010	10+00S	-	24+00S	CROSSOVER-LT	-	-	-	1400	-	-	49	YELOW
0010	10+00S	-	24+00S	CROSSOVER-RT	-	-	-	1400	-	-	56	WHITE
0010	04+00X	-	05+75X	CROSSOVER-LT	-	-	-		175	-	-	YELLOW
0010	05+75X	-	14+85X	CROSSOVER-LT	-	-	-	910	-	-	36	YELLOW
0010	04+00X	-	09+25X	CROSSOVER-RT	-	-	-	525	-	-	21	WHITE
0010	09+25X	-	14+85X	CROSSOVER-RT	-	-	-	-	560	-	22	WHITE
STAGE 2												
0010	1580+51	-	1589+51	EB MEDIAN LANE	900	-	900	-	840	-	-	YELLOW
0010	1605+00	-	2104+00	EB MEDIAN LANE	49900	-	-	-	-	-	-	YELLOW
0010	1605+00	-	2104+00	EB CENTERLINE	12475	-	-	-	-	-	-	WHITE
0010	1606+00'A'	-	2104+27'A'	WB MEDIAN LANE	49827	-	-	-	-	-	-	YELLOW
0010	1606+00'A'	-	2104+27'A'	WB CENTERLINE	12457	-	-	-	-	-	-	WHITE
0010	1606+00'A'	-	2104+27'A'	WB OUTSIDE LANE	49827	-	-	-	-	-	-	WHITE
0010	2196+55A	-	2205+55A	WB MEDIAN LANE	900	-	900	-	840	-	-	WHITE
0010	1580+01	-	1587+51	EB MEDIAN LANE	750	-	750	-	-	-	-	YELLOW
0010	1603+21	-	2181+52	EB CENTERLINE	-	-	-	115662	-	-	-	DOUBLE YELLOW
0010	1603+21	-	2181+52	EB EDGELINE	-	-	-	57831	-	-	-	WHITE
0010	2182+52	-	2187+02	EAST X-OVER (BARRIER)	-	-	-	450	-	-	-	YELLOW
0010	1598+71	-	1603+21	WEST X-OVER (BARRIER)	-	-	-	450	-	-	-	YELLOW
0010	1595+71	-	1598+71	WEST X-OVER (BARRIER)	-	-	-	300	-	-	-	YELLOW
0010	1596+21	-	1607+21	EB LT	1100	-	1100	-	-	-	-	YELLOW
0010	2185+52	-	2192+62	EB LT	710	-	710	-	-	-	-	YELLOW
0010	1590+00A	-	1597+50A	WB RT	750	-	750	-	-	-	-	YELLOW
0010	2185+56A	-	2192+06A	WB RT	650	-	650	-	-	-	-	YELLOW
0010	04+00Y	-	08+50Y	CROSSOVER-LT	-	-	-	450	-	-	18	YELLOW
0010	08+50Y	-	14+00Y	CROSSOVER-LT	-	-	-	-	550	-	18	YELLOW
0010	4+00Y	-	5+75Y	CROSSOVER-RT	-	-	-	-	175	-	-	WHITE
0010	05+75Y	-	14+00Y	CROSSOVER-RT	-	-	-	825	-	-	33	WHITE
0010	20+00T	-	34+27T	CROSSOVER-LT	-	-	-	1427	-	-	57	YELLOW
0010	32+52T	-	34+27T	CROSSOVER-RT	-	-	-	-	175	-	-	WHITE
0010	20+00T	-	32+52T	CROSSOVER-RT	-	-	-	1252	-	-	50	YELLOW
STAGE 3												
0010	1533+94	-	1542+94	EB LT	900	-	900	-	840	-	-	WHITE
0010	1547+19	-	1558+69	EB ENTRANCE RAMP	-	600	1200	-	1300	200	-	
0010	1558+94	-	1605+00	EB LT	4606	-	-	-	-	-	-	YELLOW
0010	1558+94	-	1605+00	EB LT	1152	-	-	-	-	-	-	YELLOW
0010	1560+12A	-	1606+00A	WB RT	4588			-	-	-	-	YELLOW
0010	1560+12A	-	1606+00A	WB CENTERLINE	1147			-	-	-	-	YELLOW
0010	1614+35A	-	1623+35A	WB RT	900	-	900	-	840			YELLOW
STAGE 4												
0010	1533+94	-	1542+94	EB LT	900	-	900	-	840	-	-	YELLOW
0010	1547+69	-	1558+69	EB ENTRANCE RAMP	900	200	900	-	1175	200	-	
0010	1558+94	-	1605+00	EB RT	4606	-	-	-	-	-	-	WHITE
0010	1560+12A	-	1606+00A	WB LT	4588	-	-	-	-	-	-	YELLOW
0010	1614+35A	-	1623+35A	WB CENTERLINE	900	-	900	-	840	-	-	YELLOW
				TOTAL 0010	261993	800	18120	357662	11670	400	361	

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REMOVING TEMPORARY EMERGENCY PULLOUTS

SPV.0060.03

CAT	STATION	TO	STATION	LOCATION	EACH	REMARKS
0010	1631+00'A'	-	1633+25'A'	WB MEDIAN	1	
0010	1657+00'A'	-	1659+25'A'	WB MEDIAN	1	
0010	1684+00'A'	-	1686+25'A'	WB MEDIAN	1	
0010	1710+00'A'	-	1712+25'A'	WB MEDIAN	1	
0010	1736+50'A'	-	1738+75'A'	WB MEDIAN	1	
0010	1763+00'A'	-	1765+25'A'	WB MEDIAN	1	
0010	1790+00'A'	-	1792+25'A'	WB MEDIAN	1	
0010	1816+00'A'	-	1818+25'A'	WB MEDIAN	1	
0010	1842+50'A'	-	1844+75'A'	WB MEDIAN	1	
0010	1867+50'A'	-	1869+75'A'	WB MEDIAN	1	
0010	1888+00'A'	-	1890+25'A'	WB MEDIAN	1	
0010	1921+50'A'	-	1923+75'A'	WB MEDIAN	1	
0010	1951+00'A'	-	1953+25'A'	WB MEDIAN	1	
0010	1974+00'A'	-	1976+25'A'	WB MEDIAN	1	
0010	2001+00'A'	-	2003+25'A'	WB MEDIAN	1	
0010	2020+00'A'	-	2022+25'A'	WB MEDIAN	1	
0010	2054+00'A'	-	2056+25'A'	WB MEDIAN	1	
0010	2080+00'A'	-	2082+25'A'	WB MEDIAN	1	
			TOTAL 0010		18	

TRAFFIC CONTROL SIGNS FIXED MESSAGE

643.1000

CAT.	LOCATION	SF	REMARKS
0010	EXIT 28	36	
0010	EXIT 41	36	
	TOTAL 0010	72	

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EARTHWORK SUMMARY

Division	From/To Station	Location	205.0100 Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	208.0100 Borrow	Comment:
			Cut (2)	EBS Excavation (3)				Factor 1.25				
Division 1												
	2133+50-2136+50	IH 90 EB	257	0	52	205	505	632	-427	0	427	
	2137+50-2142+50	IH 90 EB	154	0	78	76	290	362	-287	0	287	
	2133+00A-2136+60A	IH 90 WB	227	0	72	155	34	42	89	89	0	
	2138+00A-2140+50A	IH 90 WB	242	0	54	188	21	27	-162	0	162	
	49+00M-61+00M	CTH M	6,865	0	400	6,465	122	153	6,312	6,312	0	
	0+00N-0+82N	NEW DITCH NE QUAD	57	0	0	57	0	0	57	57	0	
	1+00L-1+43L	NEW DITCH NW QUAD	2	0	0	2	0	0	2	2	0	
	0+00P-1+86P	NEW DITCH SE QUAD	124	0	0	124	0	0	124	124	0	
	1+00Q-2+25Q	NEW DITCH SW QUAD	77	0	0	77	0	0	77	77	0	
	50+55R-51+80R	DRIVEWAY RELOCATION	59	0	0	59	0	0	59	59	0	
Division 1 Subtotal			8,064	0	656	7,408	972	1,216	5,844			
Grand Total			8,064	0	656	7,272	972	1,216	5,844	6,720	876	
Total Common Exc			8,064									

Notes:
(1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
(2) Salvaged/Unsuable Pavement Material is included in Cut.
(4) Salvaged/Unusable Pavement Material
(5) Available Material = Cut - Salvaged/Unusuable Pavement Material
(13) Expanded Fill Factor = 1.25
(14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

CLEARING AND GRUBBING SUMMARY

CAT.	STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
0010	49+00M	-	52+00M	CTH M RT	6	6
0010	55+00M	-	61+00M	CTH M LT	6	6
				TOTAL 0010	12	12

TEMPORARY EMERGENCY PULLOUTS

CAT.	STATION	TO	STATION	LOCATION	205.3000.S * EACH	FILL * CY	FILL (1.25) * CY	EXCAVATION COMMON * CY	SALVAGED TOPSOIL * SY	FERTILIZER TYPE B * CWT	SEEDING MIX NO. 30 * LB	SEEDING TEMPORARY * LB	EROSION MAT CLASS 1 TYPE A * SY	BASE AGGREGATE DENSE 1 1/4- * TON
0010	2108+00	-	2110+25	EB MEDIAN	1	-	-	-	137	0.2	5	7	137	66
0010	2144+75	-	2147+00	EB MEDIAN	1	-	-	-	125	0.2	5	7	125	61
0010	2160+75	-	2163+00	EB MEDIAN	1	-	-	-	137	0.2	5	7	137	45
				TOTAL 0010	3				399	0.6	15	21	399	172

*ITEMS AND QUANTITIES FOR INFORMATION ONLY.

PAVEMENT SUMMARY

CAT.	STATION	TO	STATION	LOCATION	204.0100 REMOVING PAVEMENT SY	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	455.0605 TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS LF	601.0551 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A LF	624.0100 WATER **MGAL**	REMARKS
0010	2124+83	-	2125+53	IH 90 EB RT	67	2	-	-	-	-	13.1	70	-		
0010	2129+03		2129+73	IH 90 EB RT	67	1					13.1	70	-		
0010	2130+71	-	2136+05	IH 90 EB LT	356	-	36	340	-		114.2	512	-	75.2	
0010	2135+83	-	2136+02	IH 90 EB	-	-	-	11	74	-	-		-	2.2	
0010	2137+62	-	2142+35	IH 90 EB LT	224	-	40	449	-	-	106.4	457	-	97.8	
0010	2137+62	-	2140+85	IH 90 EB RT	368	-	37	-	-		57.0	323	-	-	
0010	2137+62	-	2137+78	IH 90 EB			-	11	70	-	-	-	-	-	
0010	2130+86A		2131+56A	IH 90 WB LT	67	2	-	-	-	-	13.1	70		2.2	
0010	2136+39A	-	2136+55A	IH 90 WB LT	18	-	2	20	-	-	3.5		-	4.4	
0010	2133+47A	-	2136+55A	IH 90 WB RT	140	-	24	394	-	-	95.9	308	-	83.6	
0010	2136+39A	-	2136+55A	IH 90 WB		-	-	11	71	-	-		-	2.2	
0010	2138+16A	-	2138+32A	IH 90 WB LT	18	-	2	20	-	-	3.5	-	-	4.4	
0010	2138+16A	-	2138+32A	IH 90 WB	-	-	11	-	67	-	-	-	-	2.2	
0010	2138+16A	-	2142+79A	IH 90 WB RT	289	-	59	322	-	-	107.6	454	-	76.2	
0010	2145+82A	-	2146+52A	IH 90 WB LT	67.00	2	-	-	-	-	13.1	70	-		
0010	49+50M	-	60+75M	CTH M	-	-	61	2850	-	607.2	2720.2	-		582.2	
0010	50+00M	-	60+25M	CTH M LT	-	-	-	-	-	-	-	-	1025		
0010	53+25M	-	58+75M	CTH M RT	-	-	-	-	-	-	-	-	550		
0010	50+19R	-	51+80R	DRIVEWAY RELOCATION	-	-	6	100	-	-	28.6	-	-	21.2	
				TOTAL 0010	1681	7	278	4528	282	607.2	3289.3	2334	1575	953.8	

QUANTITY LISTED ELSEWHERE

SURFACE DRAINS SUMMARY

CAT.	STATION	TO	STATION	LOCATION	204.0190 REMOVING SURFACE DRAINS EACH	416.1010 CONCRETE SURFACE DRAINS CY	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	611.0654 INLET COVERS TYPE V EACH	611.3220 INLETS 2X2-FT EACH	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	633.5200 MARKERS CULVERT END EACH
0010	2135+59	-	2135+98	IH 90 EB RT	1	7.3	1	2	2	72	1
0010	2136+13A	-	2136+52A	IH 90 WB RT	1	9.3	-	-	-	-	-
0010	49+50M	-	-		-	-	-	-	-	-	2
0010	52+79M	-	-	CTH M	-	-	-	-	-	-	2
0010	55+62M	-	-	CTH M	-	-	-	-	-	-	1
0010	55+91M	-	-	CTH M	-	-	-	-	-	-	1
				TOTAL 0010	2	16.6	1	2	2	72	7

GUARDRAIL SUMMARY

CAT.	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.2300 MGS GUARDRAIL 3 LF	614.2350 MGS GUARDRAIL SHORT RADIUS LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2310 MGS GUARDRAIL 3 HS LF	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	614.2630 MGS GUARDRAIL SHORT RADIUS TERMINAL EACH	REMARKS
0010	2122+30	-	2122+57	IH 90 EB RT	27	-	-	-	-	-	-	-	
0010	2122+30	-	2125+33	IH 90 EB RT	-	250.0	-	-	1	-	-	-	
0010	2129+26	-	2136+16	IH 90 EB RT	690	-	-	-	-	-	-	-	
0010	2129+23	-	2135+99	IH 90 EB RT	-	575.0	-	39.4	1	-	-	-	
0010	2137+38	-	2139+19	IH 90 EB RT	181	-	-	-	-	-	-	-	
0010	2137+57	-	2139+74	IH 90 EB RT	-	125.0	-	39.4	1	-	-	-	
0010	2130+67	-	2136+22	IH 90 EB LT	555	-	-	-	-	-	-	-	
0010	2132+39	-	2136+07	IH 90 EB LT	-	275.0	-	39.4	1	-	-	-	
0010	2137+62	-	2141+17	IH 90 EB LT	-	262.5	-	39.4	1	-	-	-	
0010	2135+92A	-	2136+57A	IH 90 WB RT	-	25.0	-	39.4	-	-	1	-	
0010	2129+28A	-	2136+78A	IH 90 WB LT	750	-	-	-	-	-	-	-	
0010	2131+06A	-	2136+61A	IH 90 WB LT	-	462.5	-	39.4	1	-	-	-	
0010	2137+95A	-	2142+02A	IH 90 WB RT	407	-	-	-	-	-	-	-	
0010	2138+13A	-	2141+68A	IH 90 WB RT	-	262.5	-	39.4	1	-	-	-	
0010	2137+96A	-	2146+28A	IH 90 WB LT	832	-	-	-	-	-	-	-	
0010	2138+15A	-	2146+32A	IH 90 WB LT	-	725.0	-	39.4	1	-	-	-	
0010	52+60M	-	55+50M	CTH M RT	290	-	-	-	-	-	-	-	
0010	53+04M	-	55+58M	CTH M LT	254	-	-	-	-	-	-	-	
0010	51+09M	-	56+52M	CTH M RT	-	400.0	-	-	2	37.5	-	-	MGS GUARDRAIL 3 HS AT PIPE CROSSINGS
0010	51+95M	-	55+72M	CTH M LT	-	312.5	40	-	1	12.5	-	1	MGS GUARDRAIL 3 HS AT PIPE CROSSINGS
				TOTAL 0010	3986	3675	40	316	11	50	1	1	

FENCE SUMMARY

CAT.	STATION	LOCATION	204.0170 REMOVING FENCE LF	616.0100 FENCE WOVEN WIRE (4-FT) LF	REMARKS
0010	2136+09	IH 90 EB RT	94	84	
0010	2136+27	IH 90 EB LT	-	38	
0010	2137+28	IH 90 EB RT	85	116	
0010	2137+46	IH 90 EB LT	-	32	
0010	2136+72A	IH 90 WB LT	94	82	
0010	2138+04A	IH 90 WB LT	95	84	
		TOTAL 0010	368	436	

RIPRAP SUMMARY

CAT.	STATION	TO	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
0010	2135+59	-	2135+98	EB RT	1.5	7	
0010	2136+13A	-	2136+52A	WB RT	1.5	7	
				TOTAL 0010	3.0	14.0	

STORM SEWER SUMMARY

CAT.	STATION	TO	STATION	LOCATION	520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH EACH	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	608.3612 STORM SEWER PIPE CLASS III-B 12-INCH LF	608.3618 STORM SEWER PIPE CLASS III-B 18-INCH LF	608.3624 STORM SEWER PIPE CLASS III-B 24-INCH LF	611.0530 MANHOLE COVERS TYPE J EACH	611.0627 INLET COVERS TYPE HM EACH	611.2005 MANHOLES 5-FT DIAMETER #REF!	611.3253 INLETS 2.5X3 FT EACH	REMARKS
0010	54+95M		-	CTH M RT	-	-	-	-	-	-	1	-	1	10.5
0010	54+95M	-	55+08M	CTH M RT	-	-	-	-	13	-	-	-	-	
0010	55+08M		-	CTH M RT	-	-	-	-	-	-	1	1	-	10.6
0010	55+08M	-	55+08M	CTH M RT	-	-	-	-	10	-	-	-	-	
0010	55+08M		-	CTH M RT	-	-	-	-	-	1	-	1	-	10.7
0010	55+08M	-	55+62M	CTH M RT	-	-	-	-	55	-	-	-	-	
0010	55+62M		-	CTH M RT	1	-	-	-	-	-	-	-	-	10.8
0010	54+69M		-	CTH M LT	-	-	-	-	-	-	1	-	1	10.1
0010	54+69M	-	54+85M	CTH M LT	-	-	16	-	-	-	-	-	-	
0010	54+85M		-	CTH M LT	-	-	-	-	-	-	1	-	1	10.2
0010	54+85M	-	54+95M	CTH M LT	-	-	-	10	-	-	-	-	-	
0010	54+95M		-	CTH M LT	-	-	-	-	-	-	1	-	1	10.3
0010	54+95M	-	55+08M	CTH M LT	-	-	-	13	-	-	-	-	-	
0010	55+08M		-	CTH M RT	-	-	-	-	-	-	-	-	1	10.4
0010	55+08M	-	55+08M	CROSS PIPE	-	35	-	-	-	-	-	-	-	
0010	55+91M		-	CTH M RT	1	-	-	-	-	-	-	-	-	11.0
0010	55+91M	-	56+06M	CTH M RT	-	-	-	-	16	-	-	-	-	
0010	56+06M		-	CTH M RT	-	-	-	-	-	1	-	1	-	11.4
0010	56+06M	-	57+31M	CTH M RT	-	-	-	-	125	-	-	-	-	
0010	57+31M		-	CTH M RT	-	-	-	-	-	1	-	1	-	11.3
0010	57+31M	-	57+31M	CROSS PIPE	-	42	-	-	-	-	-	-	-	
0010	57+31M		-	CTH M LT	-	-	-	-	-	-	1	-	1	11.2
0010	57+31M	-	57+41M	CTH M LT	-	-	-	10	-	-	-	-	-	
0010	57+41M		-	CTH M LT	-	-	-	-	-	-	1	-	1	11.1
				TOTAL 0010	2	77	16	33	219	3	7	4	7	

CULVERT DRAINAGE SUMMARY

CAT.	STATION	TO	STATION	LOCATION	522.2424 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 24X38-INCH LF	522.2429 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 29X45-INCH LF	522.0424 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EA	522.2624 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 24X38-INCH EACH	522.2629 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 29X45-INCH EACH	611.0642 INLET COVERS TYPE MS EACH	611.3902 INLETS MEDIAN 2 GRATE EACH
0010	49+50M		-	CTH M	-	-	28	2				
0010	52+79M		-	CTH M	50	-	-	-	2	-	-	-
0010	55+51M		-	CTH M	-	-	-	-	-	-	2	1
0010	55+51M	-	55+52M	CTH M	-	8	-	-	-	-	-	-
0010	55+52M		-	CTH M	-		-	-	-	-	2	1
0010	55+52M	-	55+69M	CTH M	-	93	-	-	-	-	-	-
0010	55+69M		-	CTH M	-	-	-	-	-	1	-	-
				TOTAL 0010	50	101	28	2	2	1	4	2

3

BARRIER SYSTEM GRADING SHAPING FINISHING

CAT.	STATION	TO STATION	LOCATION	614.0010 EACH	REMARKS	* FILL CY	* FILL (1.25) CY	* EXCAVATION COMMON CY	* SALVAGED TOPSOIL SY	* FERTILIZER TYPE B CWT	* SEEDING MIX NO. 30 LB	* SEEDING TEMPORARY LB	* EROSION MAT CLASS 1 TYPE A SY
0010	2124+77	- 2126+58	IH 90 EB RT	1		0.25	0.31	-	91	0.1	1.60	3	91
			TOTAL 0010	1									

*ITEMS AND QUANTITIES FOR INFORMATION ONLY.

3

RESTORATION SUMMARY

CAT.	STATION	TO	STATION	LOCATION	624.0100 WATER **MGAL**	625.0500 SALVAGED TOPSOIL SY	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2002 EROSION MAT CLASS I TYPE A SY	628.2004 EROSION MAT CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	REMARKS
0010	2131+24	-	2136+00	IH 90 EB LT	18	746	-	-	746	-	0.47	13	-	B-41-0293
0010	2135+56	-	2136+11	IH 90 EB RT	5	197	-	-	197	-	0.12	4	-	B-41-0293
0010	2137+56	-	2142+31	IH 90 EB LT	23	977	-	-	977	-	0.62	18	-	B-41-0293
0010	2137+55	-	2137+85	IH 90 EB RT	1	37	-	-	37	-	0.02	1	-	B-41-0293
0010	2139+21	-	2140+81	IH 90 EB RT	6	255	-	-	255	-	0.16	5	-	B-41-0293
0010	2136+35A	-	2136+55A	IH 90 WB LT	0	20	-	-	20	-	0.01	0	-	B-41-0294
0010	2133+50A	-	2136+50A	IH 90 WB RT	18	745	-	-	745	-	0.47	13	-	B-41-0294
0010	2138+11A	-	2138+36A	IH 90 WB LT	1	61	-	-	61	-	0.04	1	-	B-41-0294
0010	2138+00A	-	2142+10A	IH 90 WB RT	6	250	-	-	250	-	0.16	5	-	B-41-0294
0010	49+45M	-	50+40M	CTH M LT	3	132	-	-	132	-	0.08	2	-	
0010	50+68M	-	53+43M	CTH M LT	27	1139	-	-	1139	134	0.72	21	-	
0010	54+00M	-	54+36M	CTH M LT	3	144	-	-	-	144	0.09	3	-	
0010	54+91M	-	55+89M	CTH M LT	8	346	-	-	346	-	0.22	6	-	
0010	56+00M	-	60+80M	CTH M LT	36	1518	-	-	1518	-	0.96	27	-	
0010	55+14M	-	55+70M	CTH M LT	10	411	-	-	411	84	0.26	7	-	NEW DITCH
0010	49+45M	-	53+00M	CTH M RT	16	684	-	-	684	374	0.43	12	-	
0010	52+83M	-	53+45M	CTH M RT	3	135	-	-	135	-	0.09	2	-	
0010	54+05M	-	54+40M	CTH M RT	4	152	-	-	-	152	0.10	3	-	
0010	55+00M	-	56+07M	CTH M RT	10	432	-	-	432	186	0.27	8	-	
0010	56+07M	-	60+80M	CTH M RT	19	787	-	-	787	-	0.50	14	-	
0010				UNDISTRIBUTED	20	2292	-	-	2218	269	1	42	42	
0010				PROJECT	-	-	2	1	-		-	-	-	
				TOTAL 0010	239	11460	2	1	11090	1343	7.30	208	42	

QUANTITY LISTED ELSEWHERE

WATER EQUATION
Seeded Area (SY) x 1 inch of rain x 0.0278 yd/inch = XXXX CY of water
XXXX CY of water x 1 gal/0.004951 CY x 1 Mgal/1000 gal = XXXX Mgal of water
XXXX Mgal of water x 4 weeks of watering = XXXX Mgal of water

EROSION CONTROL SUMMARY

CAT.	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH	REMARKS
0010	2132+70			IH 90 EB LT	-	-	-	-	-	18	-	-	
0010	2135+65			IH 90 EB RT	-	-	-	2	-	-	-	-	
0010	2139+15	-	2140+91	IH 90 EB RT	189	189	-	-	-	-	-	17	
0010	2141+57			IH 90 EB LT	-	-	-	-	-	18	-	-	
0010	2138+55A			IH 90 WB RT	-	-	1	-	-	-	-	-	
0010	2139+47A			IH 90 WB RT	-	-	-	-	-	18	-	-	
0010	49+50M			CTH M LT	-	-	-	-	-	-	3	-	
0010	56+15M	-	60+87M	CTH M RT	472	472	-	-	-	-	-	-	
0010	54+69M	-	55+11M	CTH M LT	-	-	-	-	4	-	-	-	
0010	54+69M	-	55+11M	CTH M RT	-	-	-	-	2	-	-	-	
0010	57+31M	-	57+41M	CTH M LT	-	-	-	-	2	-	-	-	
0010	55+52M	-	55+52M	CTH M LT	-	-	2		-	-	-	-	
0010	52+79M			CTH M LT	-	-	-	-	-	18	8	-	
0010	55+44M			CTH M LT	-	-	-	-	-	18	-	-	
0010	50+75M			CTH M RT	-	-	-	-	-	18	-	-	
0010	52+25M			CTH M RT	-	-	-	-	-	18	-	-	
0010	52+79M			CTH M RT	-	-	-	-	-	32	-	-	
0010	52+90M			CTH M RT	-	-	-	-	-	18	-	-	
0010	55+60M			CTH M RT	-	-	-	-	-	18	-	-	
0010	55+75M			CTH M RT	-	-	-	-	-	18	-	-	
0010	55+80M			CTH M RT	-	-	-	-	-	18	-	-	
0010	55+85M			CTH M RT	-	-	-	-	-	18	-	-	
0010	56+15M			CTH M RT	-	-	-	-	-	-	-	17	
0010	57+52M			CTH M RT	-	-	-	-	-	-	-	17	
0010	58+75M			CTH M RT	-	-	-	-	-	-	-	17	
0010	60+25M			CTH M RT	-	-	-	-	-	-	-	17	
0010				UNDISTRIBUTED	118	118	-	-	-	-	-	-	
				TOTAL 0010	779	779	3	2	8	248	11	85	

MOVING SIGNS TYPE II

CATEGORY	STATION	LOCATION	638.2102 EACH	REMARKS
0010	2136+10	EB RT	1	
0010	2138+07A	WB LT	1	
		TOTAL 0010	2	

PIPE UNDERDRAIN SUMMARY

CAT.	STATION	TO	STATION	LOCATION	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH LF	612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH EACH	REMARKS
0010	2137+75	-	2137+75	EB RT	65	1	
0010	2135+00A	-	2135+00A	WB RT	20	1	
0010	2138+28A	-	2138+37A	WB RT	28	1	
				TOTAL 0010	113	3	

3

PAVEMENT MARKINGS

CAT.	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	REMARKS
0010	49+25M	-	60+75M	CTH M LT	1150	WHITE
0010	49+25M	-	60+75M	CTH M CENTER	230	YELLOW
0010	49+25M	-	60+75M	CTH M RT	1150	WHITE
STAGE 1						
0010	2104+00	-	2181+52	EB RIGHT	7752	WHITE
STAGE 2						
0010	2104+00	-	2181+52	EB LT	7752	YELLOW
0010	2104+00	-	2181+52	EB CENTER	1550	WHITE
0010	2104+27A	-	2182+53A	WB LT	7826	YELLOW
0010	2104+27A	-	2182+53A	WB CENTER	1565	WHITE
0010	2104+27A	-	2182+53A	WB RT	7826	WHITE
				TOTAL 0010	36802	

TEMPORARY EMERGENCY PULLOUT SIGNS

CAT.	STATION	STATION	LOCATION	SPV.0060.01 EMERGENCY PARKING 2 HOUR MAX SIGN EACH	SPV.0060.02 EMERGENCY PARKING 1/4 MILE SIGN EACH	COMMENTS
0010	2091+80A	2105+00A		1	1	
0010	2113+80A	2127+00A		1	1	
0010	2143+80A	2157+00A		1	1	
			TOTAL 0010	3	3	

SAWING SUMMARY

CAT.	STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
0010	2124+83		-	EB RT	8	-	
0010	2125+53		-	EB RT	8	-	
0010	2129+03		-	EB RT	8	-	
0010	2129+73		-	EB RT	8	-	
0010	2130+71		-	EB LT	4	-	
0010	2135+58		-	EB RT	8	-	
0010	2135+83		-	EB	-	26	
0010	2137+78		-	EB	-	26	
0010	2140+85		-	EB RT	8	-	
0010	2142+35		-	EB LT	4	-	
0010	2130+86A		-	WB LT	8	-	
0010	2131+56A		-	WB LT	8	-	
0010	2133+46A		-	WB RT	4	-	
0010	2136+39A		-	WB	8	26	
0010	2138+32A		-	WB	8	26	
0010	2142+86A		-	WB RT	4	-	
0010	2145+82A		-	WB LT	8	-	
0010	2146+52A			WB LT	8	-	
0010	49+25M		-	CTH M	24	-	
0010	60+75M		-	CTH M	24	-	
0010	51+80R		-	DRIVEWAY	12	-	
				TOTAL 0010	172	104	

REMOVING TEMPORARY EMERGENCY PULLOUTS

CAT	STATION	TO	STATION	LOCATION	SPV.0060.03 EACH	REMARKS
0010	2105+00'A'	-	2107+25'A'	WB MEDIAN	1	
0010	2127+00'A'	-	2129+25'A'	WB MEDIAN	1	
0010	2157+00'A'	-	2159+25'A'	WB MEDIAN	1	
				TOTAL 0010	3	

REMOVING SMALL PIPE CULVERTS

CAT.	STATION	TO	STATION	LOCATION	TYPE	DIAMETER INCHES	LENGTH LF	203.0100 EACH
0010	2135+59	-	2135+98	IH 90 EB RT	CMCP	12	60	1
0010	50+45M	-	50+67M	CTH M LT	CMCP	12	24	1
0010	52+79M	-	-	CTH M	RCP	36	36	1
0010	55+62M	-	-	CTH M	RCP	30	38	1
0010	55+74M	-	56+05M	CTH M LT	RCP	18	24	1
				TOTAL 0010				5

CONSTRUCTION STAKING

CAT.	STATION	TO	STATION	LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER EA	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EA	650.6500.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (B-41-0293) EA	650.6500.02 CONSTRUCTION STAKING STRUCTURE LAYOUT (B-41-0294) EA	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (1071-02-71) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
0010				PROJECT	-	-	-	-	-	-	-	1	-	
0010	2130+72	-	2135+83	IH 90 EB	-	511	511	-	-	-	-	-	511	B-41-0293
0010	2137+78	-	2142+53	IH 90 EB	-	475	475	-	-	-	-	-	475	B-41-0293
0010	2133+47A	-	2136+39A	IH 90 WB	-	292	292	-	-	-	-	-	292	B-41-0294
0010	2138+32A	-	2142+05A	IH 90 WB	-	373	373	-	-	-	-	-	373	B-41-0294
0010	-		-	B-41-0293	-	-	-	-	-	-		-	-	
0010	-		-	B-41-0294	-	-	-	-	-	1	1	-	-	
0010	49+50M	-	60+50M	CTH M	-	1100	1100	-	-	-	-	-	1100	
0010	50+20R	-	51+80R	DRIVEWAY	-	160	160	-	-	-	-	-	160	
0010	49+50M		-	CTH M	-	-	-	-	1	-	-	-	-	
0010	52+79M		-	CTH M	-	-	-	-	1	-	-	-	-	
0010	55+68M		-	CTH M	-	-	-	-	1	-	-	-	-	
0010	50+00M	-	60+25M	CTH M LT	-	-	-	1025	-	-	-	-	-	
0010	53+19M	-	58+80M	CTH M RT	-	-	-	561	-	-	-	-	-	
0010	54+69M		-	CTH M 17.5' LT	1	-	-	-	-	-	-	-	-	
0010	54+85M		-	CTH M 17.5' LT	1	-	-	-	-	-	-	-	-	
0010	54+95M		-	CTH M 17.5' LT	1	-	-	-	-	-	-	-	-	
0010	55+11M		-	CTH M 17.5' LT	1	-	-	-	-	-	-	-	-	
0010	54+85M		-	CTH M 17.5' RT	1	-	-	-	-	-	-	-	-	
0010	54+95M		-	CTH M 17.5' RT	1	-	-	-	-	-	-	-	-	
0010	55+62M		-	CTH M 41.9' RT	1	-	-	-	-	-	-	-	-	
0010	57+41M		-	CTH M 17.5' LT	1	-	-	-	-	-	-	-	-	
0010	57+31M		-	CTH M 17.5' LT	1	-	-	-	-	-	-	-	-	
0010	57+31M		-	CTH M 24' RT	1	-	-	-	-	-	-	-	-	
0010	56+06M		-	CTH M 24' RT	1	-	-	-	-	-	-	-	-	
0010	55+91M		-	CTH M 30.4' RT	1	-	-	-	-	-	-	-	-	
				TOTAL 0010	12	2911	2911	1586	3	1	1	1	2911	



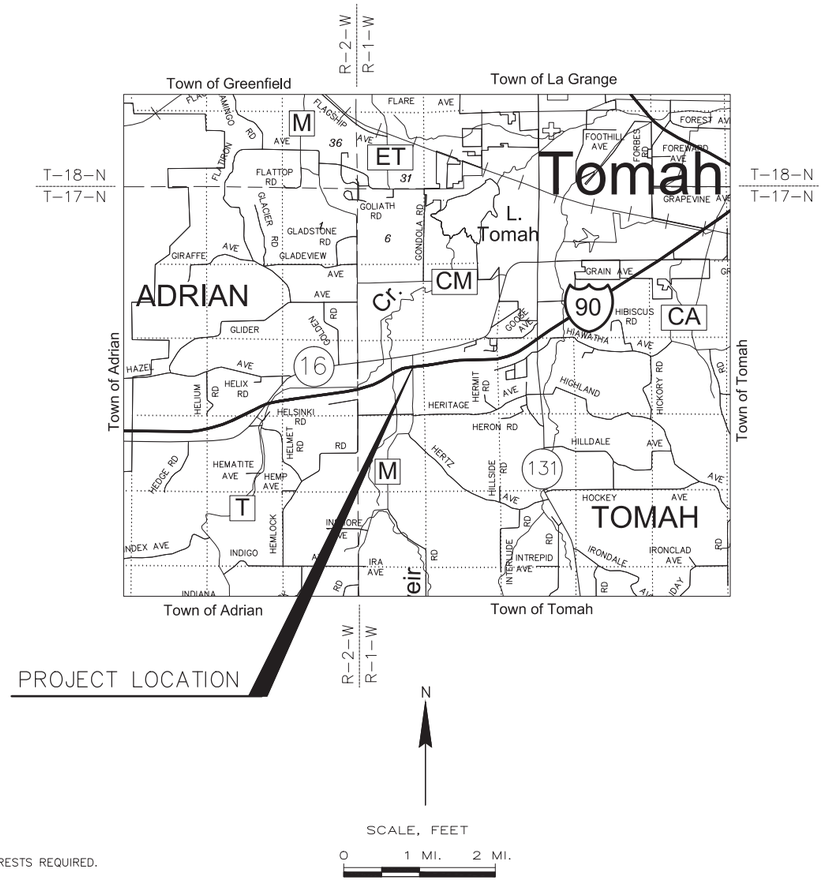
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET

PROJECT NO. 1071-02-21

SPARTA - TOMAH

(CTH M BRIDGES B-41-0293 & 0294)

IH 90
MONROE COUNTY



THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 1071-02-21

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES, (WISCRS), MONROE COUNTY, NAD 83 (2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

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

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

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

EXISTING ACCESS CONTROL AS SHOWN ALONG IH 90 IS BASED ON:
FEDERAL PROJECT I-90-1(18)35
DOCUMENT NO. 284505, VOLUME 221, PAGE 270
DOCUMENT NO. 283937, VOLUME 221, PAGE 19
DOCUMENT 283709, VOLUME 200, PAGE 495

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

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

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR I.H. 90 ESTABLISHED FROM FEDERAL PROJECT I-90-1(18)35,
DOCUMENT NO. 284505, VOLUME 221, PAGE 270,
DOCUMENT NO. 283937, VOLUME 221, PAGE 19,
DOCUMENT 283709, VOLUME 200, PAGE 495.

EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH M IS ESTABLISHED FROM A 33' OFFSET FROM THE CENTERLINE OF EXISTING PAVEMENT PER SECTION 82.31(2), WISCONSIN STATUTES.

CONVENTIONAL SYMBOLS

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

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

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

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

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTICTIVE DEVELOPMENT EASEMENT	RDE
CENTERLINE	C/L	RIGHT	RT
CERTIFIED SURVEY MAP	CSM	RIGHT OF WAY	R/W
CONCRETE	CONC	SECTION	SEC
COUNTY	CO	SEPTIC VENT	SEPV
COUNTY TRUNK HIGHWAY	CTH	SQUARE FEET	SF
DISTANCE	DIST	STATE TRUNK HIGHWAY	STH
CORNER	COR	STATION	STA
DOCUMENT NUMBER	DOC	TELEPHONE PEDESTAL	TP
EASEMENT	EASE	TEMPORARY LIMITED EASEMENT	TLE
EXISTING	EX	TRANSPORTATION PROJECT PLAT	TPP
GAS VALVE	GV	UNITED STATES HIGHWAY	USH
GRID NORTH	GN	VOLUME	V
HIGHWAY EASEMENT	HE		
IDENTIFICATION	ID		
LAND CONTRACT	LC		
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY NUMBER	NGS NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

CURVE DATA

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

CONVENTIONAL UTILITY SYMBOLS

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

PROJECT NUMBER: 1071-02-21 - 4.01
SHEET 2 OF 2

FILENAME: S:\Projects\W11565 CTH M IH90 TPP Monroe Co\W11565 CTH M I 90 TPP.dwg
PLOT BY: Kraemer, Wes
TITLE
APPRAISAL PLAT DATE: JULY 21, 2017
PLOT DATE: July 21, 2017

TRANSPORTATION PROJECT PLAT NO: 1071-02-21 - 4.01

PART OF THE SE¼-NE¼, SECTION 18, TOWNSHIP 17 NORTH, RANGE 1 WEST, TOWN OF TOMAH, MONROE COUNTY, WISCONSIN.

RELOCATION ORDER IH 90, SPARTA - TOMAH, (CTH M BRIDGES B-41-0293 & 0294), MONROE 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 PROJECT.

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

EXISTING ACCESS CONTROL AS SHOWN ALONG IH 90 IS BASED ON: FEDERAL PROJECT I-90-1(18)35, DOCUMENT NO. 284505, VOLUME 221, PAGE 270/271/272, DOCUMENT NO. 283937, VOLUME 221, PAGE 19/20, AND DOCUMENT 283709, VOLUME 200, PAGE 495/496.

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

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES, (WISCRS), MONROE COUNTY, NAD 83 (2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

EXISTING IH 90 RIGHT OF WAY SHOWN HEREIN IS BASED ON: FEDERAL PROJECT I-90-1(18)35, DOCUMENT NO. 284505, VOLUME 221, PAGE 270/271/272, DOCUMENT NO. 283937, VOLUME 221, PAGE 19/20, AND DOCUMENT 283709, VOLUME 200, PAGE 495/496.

EXISTING CTH M RIGHT OF WAY SHOWN HEREIN IS BASED ON: A 33' OFFSET FROM THE CENTERLINE OF EXISTING PAVEMENT PER SECTION 82.31(2), WISCONSIN STATUTES.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS, IN MONROE COUNTY, AS SHEET 2 OF 2 OF THIS DOCUMENT.

DOCUMENT #_____

ACCEPTED FOR RECORDING IN THE OFFICE OF THE REGISTER OF DEEDS IN MONROE COUNTY, WISCONSIN AT __:__ __M. O _____, 2017

FILED IN _____ 85

SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1071-02-21-4.01
SHEET 1 OF 2

4.01

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	R/W ACRES REQUIRED EXISTING	R/W ACRES REQUIRED TOTAL	T.L.E. ACRES
1	DARRICK T. JOHNSON	TLE	--	--	--	0.012
2	DARREL J. PIERCE & LESA L. PIERCE	TLE	--	--	--	0.338
3	NANCY L. VANDERMEER	TLE	--	--	--	0.005
4	WILLIAM K. SHIVLER & DEBRA J. YOUNG	TLE	--	--	--	0.130
5	DeWITT ZIMMERMAN & LILLIAN ZIMMERMAN	TLE	--	--	--	0.101

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

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	OWNER (S)	INTEREST REQUIRED
201	CENTURYLINK (NORTH-WEST TELEPHONE COMPANY)	RELEASE OF RIGHTS
202	OAKDALE ELECTRIC COOPERATIVE (MILWAUKEE GAS LIGHT COMPANY)	RELEASE OF RIGHTS

COORDINATE TABLE - MONUMENTED R/W POINTS

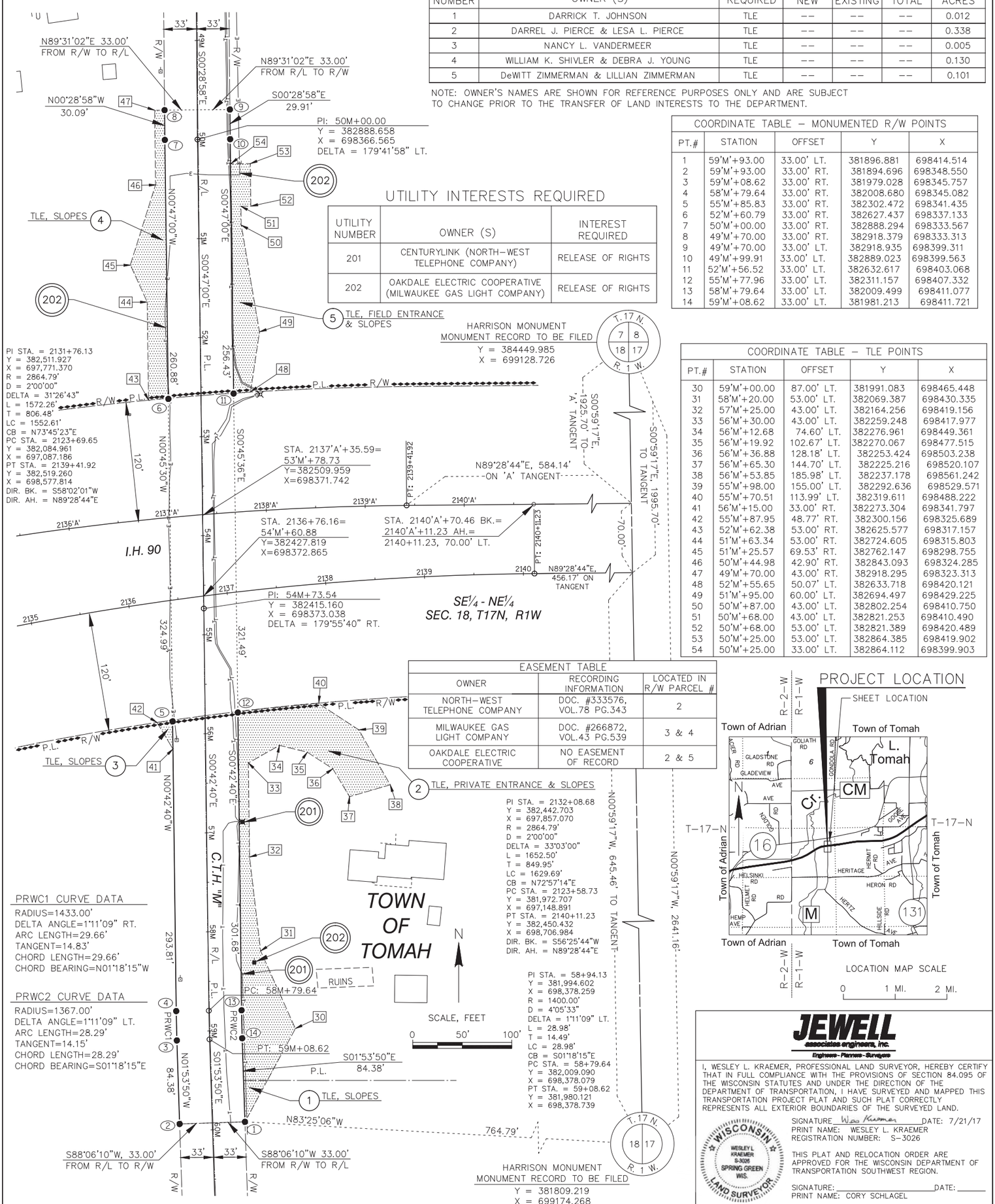
PT.#	STATION	OFFSET	Y	X
1	59'M'+93.00	33.00' LT.	381896.881	698414.514
2	59'M'+93.00	33.00' RT.	381894.696	698348.550
3	59'M'+08.62	33.00' RT.	381979.028	698345.757
4	58'M'+79.64	33.00' RT.	382008.680	698345.082
5	55'M'+85.83	33.00' RT.	382302.472	698341.435
6	52'M'+60.79	33.00' RT.	382627.437	698337.133
7	50'M'+00.00	33.00' RT.	382888.294	698333.567
8	49'M'+70.00	33.00' RT.	382918.379	698333.313
9	49'M'+70.00	33.00' LT.	382918.935	698399.311
10	49'M'+99.91	33.00' LT.	382889.023	698399.563
11	52'M'+56.52	33.00' LT.	382632.617	698403.068
12	55'M'+77.96	33.00' LT.	382311.157	698407.332
13	58'M'+79.64	33.00' LT.	382009.499	698411.077
14	59'M'+08.62	33.00' LT.	381981.213	698411.721

COORDINATE TABLE - TLE POINTS

PT.#	STATION	OFFSET	Y	X
30	59'M'+00.00	87.00' LT.	381991.083	698465.448
31	58'M'+20.00	53.00' LT.	382069.387	698430.335
32	57'M'+25.00	43.00' LT.	382164.256	698419.156
33	56'M'+30.00	43.00' LT.	382259.248	698417.977
34	56'M'+12.68	74.60' LT.	382276.961	698449.361
35	56'M'+19.92	102.67' LT.	382270.067	698477.515
36	56'M'+36.88	128.18' LT.	382253.424	698503.238
37	56'M'+65.30	144.70' LT.	382225.216	698520.107
38	56'M'+53.85	185.98' LT.	382237.178	698561.242
39	55'M'+98.00	155.00' LT.	382292.636	698529.571
40	55'M'+70.51	113.99' LT.	382319.611	698488.222
41	56'M'+15.00	33.00' RT.	382273.304	698341.797
42	55'M'+87.95	48.77' RT.	382300.156	698325.689
43	52'M'+62.38	53.00' RT.	382625.577	698317.157
44	51'M'+63.34	53.00' RT.	382724.605	698315.803
45	51'M'+25.57	69.53' RT.	382762.147	698298.755
46	50'M'+44.98	42.90' RT.	382843.093	698324.285
47	49'M'+70.00	43.00' RT.	382918.295	698323.313
48	52'M'+55.65	50.07' LT.	382633.718	698420.121
49	51'M'+95.00	60.00' LT.	382694.497	698429.225
50	50'M'+87.00	43.00' LT.	382802.254	698410.750
51	50'M'+68.00	43.00' LT.	382821.253	698410.490
52	50'M'+68.00	53.00' LT.	382821.389	698420.489
53	50'M'+25.00	53.00' LT.	382864.385	698419.902
54	50'M'+25.00	33.00' LT.	382864.112	698399.903

EASEMENT TABLE

OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #
NORTH-WEST TELEPHONE COMPANY	DOC. #333576, VOL.78 PG.343	2
MILWAUKEE GAS LIGHT COMPANY	DOC. #266872, VOL.43 PG.539	3 & 4
OAKDALE ELECTRIC COOPERATIVE	NO EASEMENT OF RECORD	2 & 5



PROJECT LOCATION

JEWELL associates engineers, inc.
Engineers - Planners - Surveyors

I, WESLEY L. KRAEMER, 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 AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

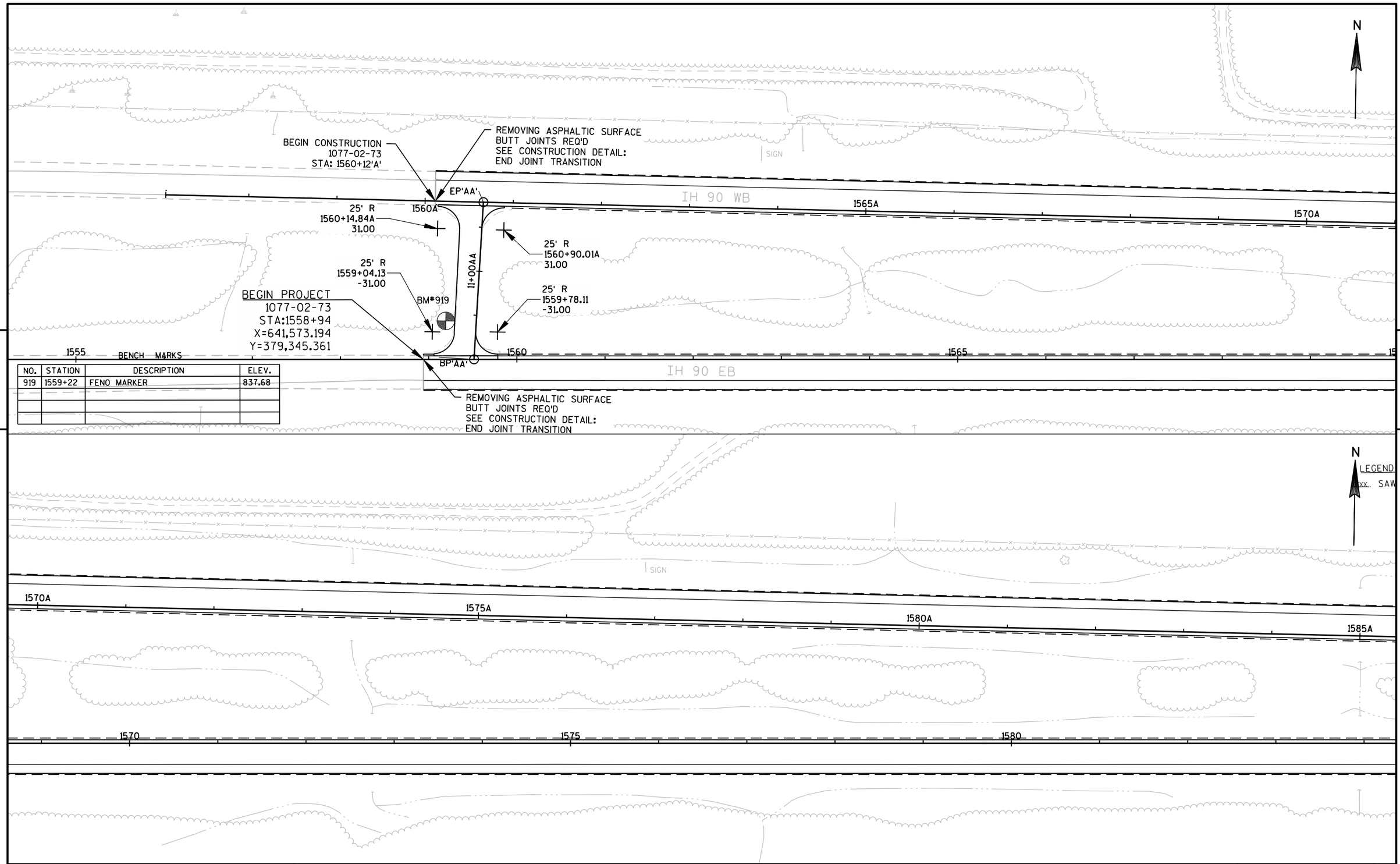
SIGNATURE Wes Kraemer DATE: 7/21/17
PRINT NAME: WESLEY L. KRAEMER
REGISTRATION NUMBER: S-3026

WISCONSIN WESLEY L KRAEMER S-3026 SPRING GREEN WIS. LAND SURVEYOR

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

SIGNATURE:_____ DATE: _____
PRINT NAME: CORY SCHLAGEL

PLOT BY: Kraemer, Wes
PLOT DATE: July 21, 2017
FILENAME: S:\Projects\W1565 CTH M IH90 TPP Monroe Co\W11565 CTH M I 90 TPP.dwg
APPRAISAL PLAT DATE: JULY 21, 2017



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
919	1559+22	FENO MARKER	837.68

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 86 E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\050201.1_PN.DWG
LAYOUT NAME - Sheet - (56)

PLOT DATE : 5/23/2018 1:11 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

xxxx SAWING ASPHALT

N

SIGN

1585A

1590A

1595A

IH 90 WB

1600A

REMOVING ASPHALTIC SURFACE
BUTT JOINT REQ'D

1585

1590

1595

IH 90 EB

5

5

SIGN

N

SIGN

1600A

1605A

1610A

1615A

INL

PC

1600

1605

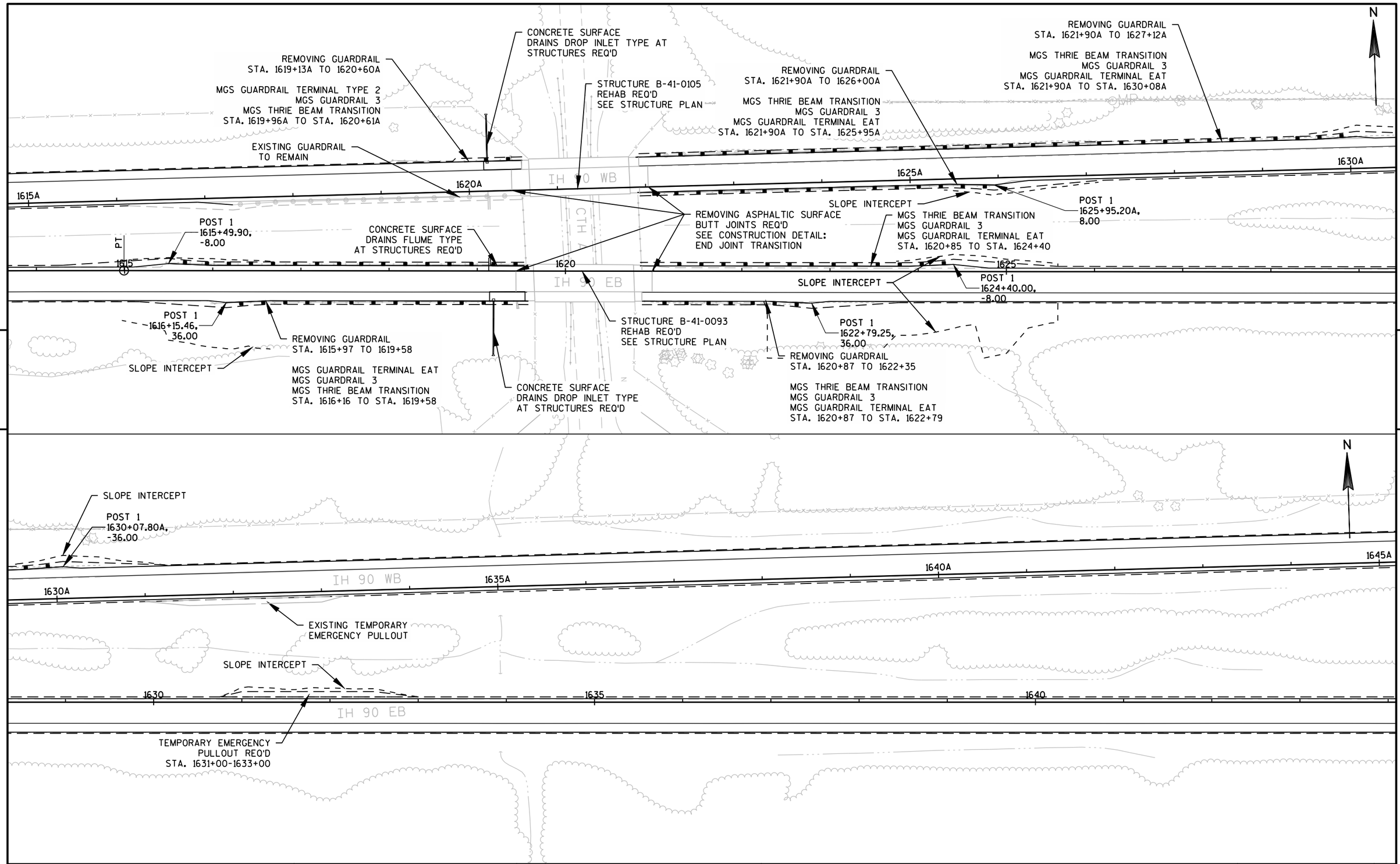
1610

STAGING PAVEMENT
TRANSITION REQ'D

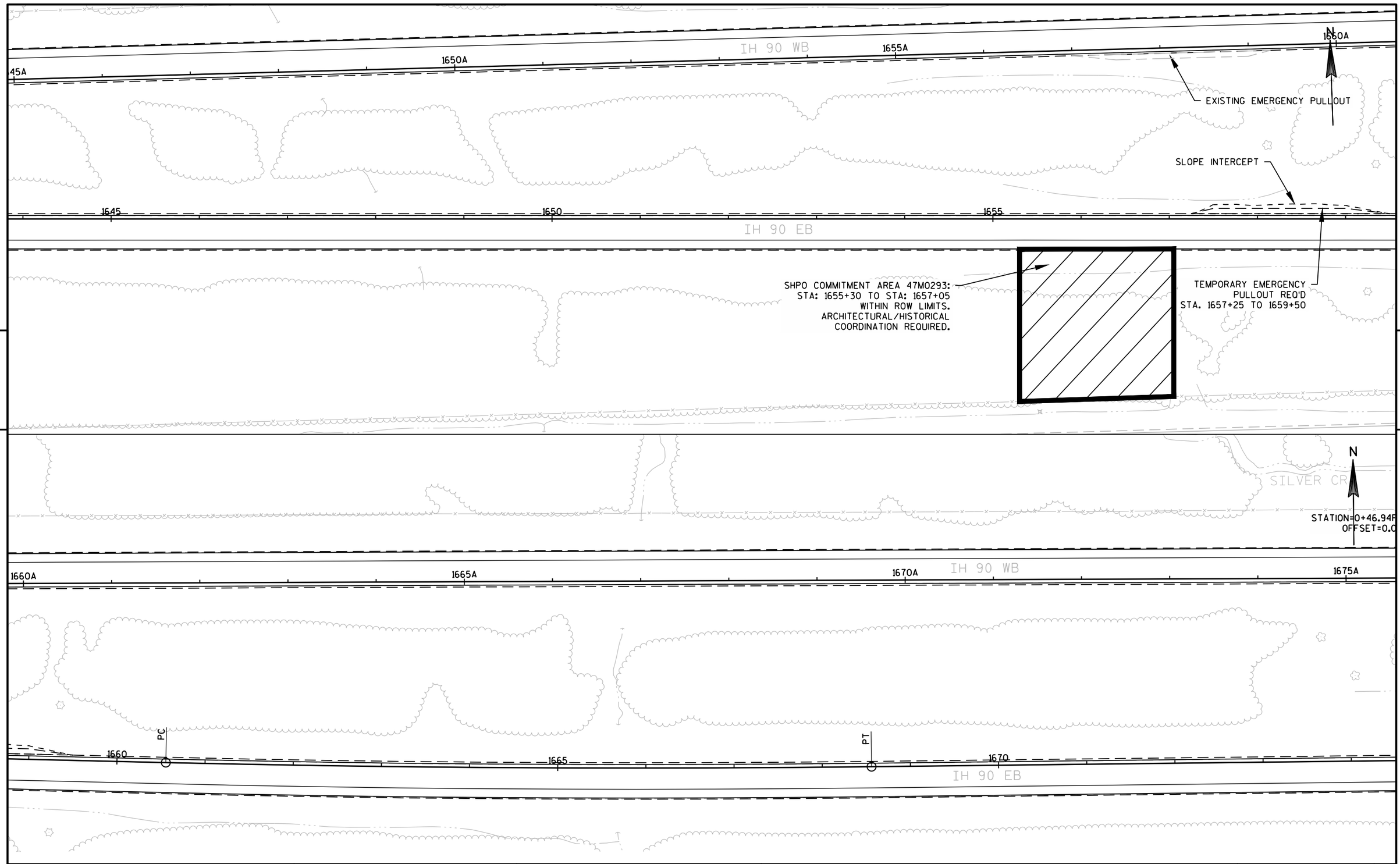
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 87	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\050201.1_PN.DWG
LAYOUT NAME - Sheet - (58)

PLOT DATE : 5/23/2018 1:11 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 88	E



PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 89	E

STATION=1676+09.36A
OFFSET=-94.00

SPECIAL DITCH 9%

STATION=1676+76.59A
OFFSET=-59.00

STATION=1+22.39FF
OFFSET=0.00

STATION=0+46.94FF
OFFSET=0.00

BPFF

EPFF

VER CR

REMOVING SMALL PIPE CULVERT REQ'D

SLOPE INTERCEPT

BOX CULVERT
C-41-0033
REHAB REQ'D
SEE STRUCTURE PLAN

1675A

1680A

1685A

EP'BB'

1690A

EXISTING EMERGENCY PULLOUT

25' R
1687+30.98A
31.00

25' R
1688+04.91A
31.00

21+00BB

BOX CULVERT
C-41-0032
REHAB REQ'D
SEE STRUCTURE PLAN

SLOPE INTERCEPT

25' R
1686+23.85
-31.00

25' R
1686+99.22
-31.00

1675

1680

1685

BP'BB'

TEMPORARY EMERGENCY
PULLOUT REQ'D
STA. 1683+75 TO 1686+00

5

5

N

1690A

IH 90 WB

1695A

1700A

1705A

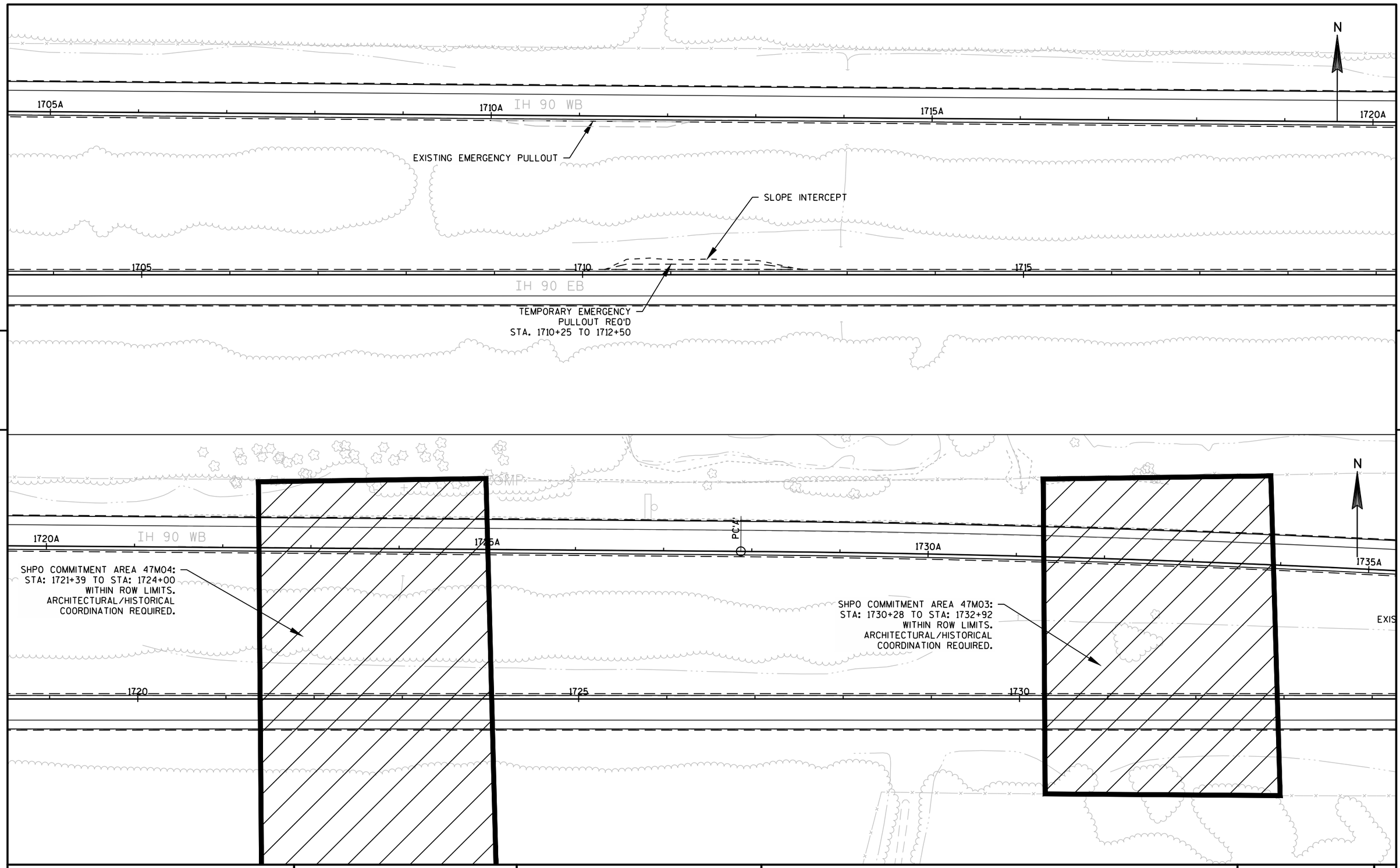
1690

1695

1700

IH 90 EB

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 90	E



PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 91 E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\050201.1_PN.DWG
LAYOUT NAME - Sheet - (66)
PLOT DATE : 5/23/2018 1:14 PM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

SILVER CR

IH 90 WB

1735A

1740A

1745A

1750A

EXISTING EMERGENCY PULLOUT

SLOPE INTERCEPT

SLOPE INTERCEPT

PC

1745

1740

1735

IH 90 EB

TEMPORARY EMERGENCY PULLOUT REQ'D STA. 1736+75 TO 1739+00

TEMPORARY EMERGENCY PULLOUT REQ'D STA. 1736+75 TO 1739+00

5

5

SILVER CR

SHPO COMMITMENT AREA 47Mo1: STA: 1757+85 TO STA: 1761+07 WITHIN ROW LIMITS. ARCHITECTURAL/HISTORICAL COORDINATION REQUIRED.

EXISTING EMERGENCY PULLOUT

PT

1750A

IH 90 WB

1755A

1760A

1765A

PT

1750

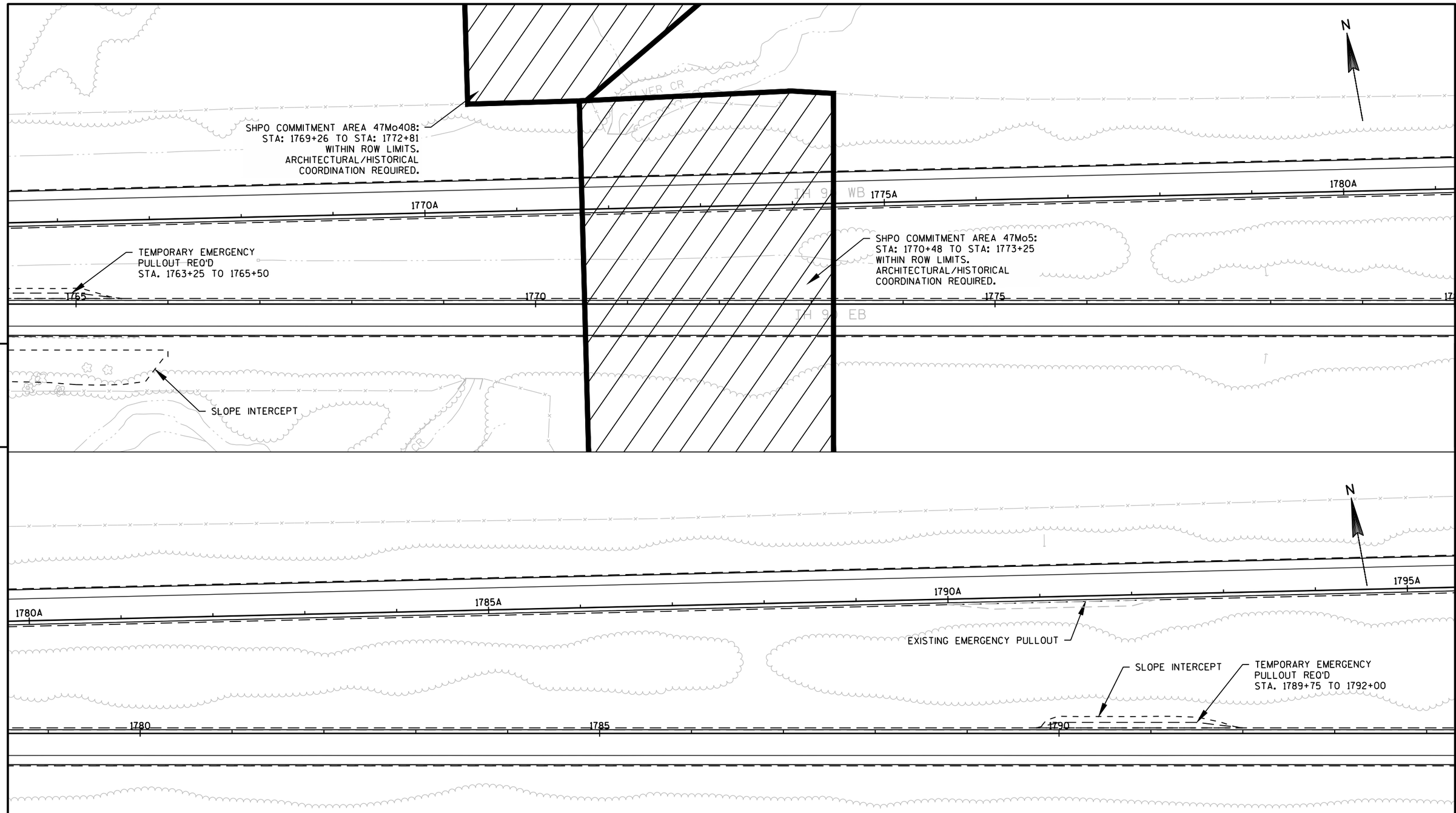
1755

1760

IH 90 EB

SHPO COMMITMENT AREA 47Mo2: STA: 1753+04 TO STA: 1756+25 WITHIN ROW LIMITS. ARCHITECTURAL/HISTORICAL COORDINATION REQUIRED.

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 92 E

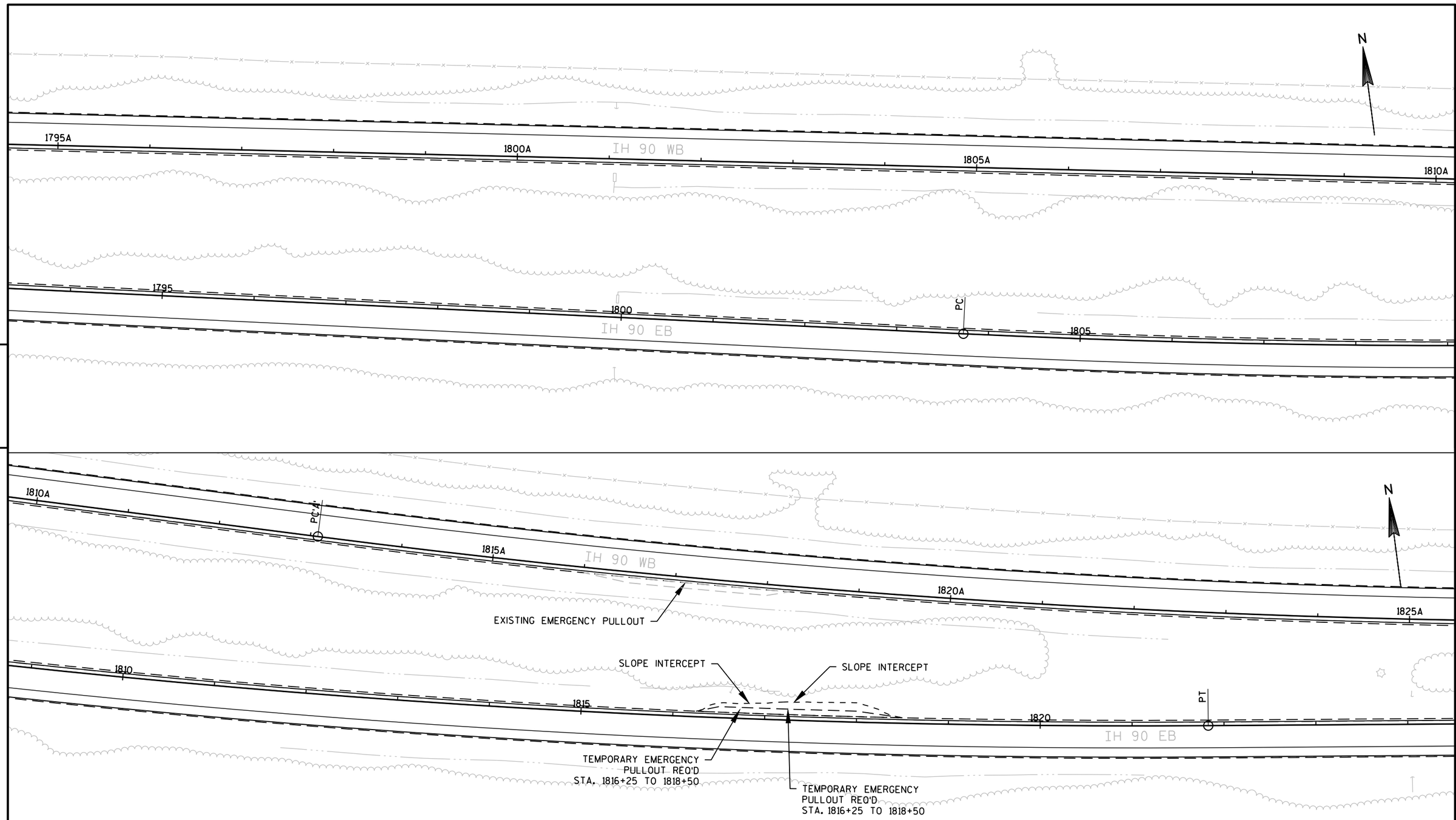


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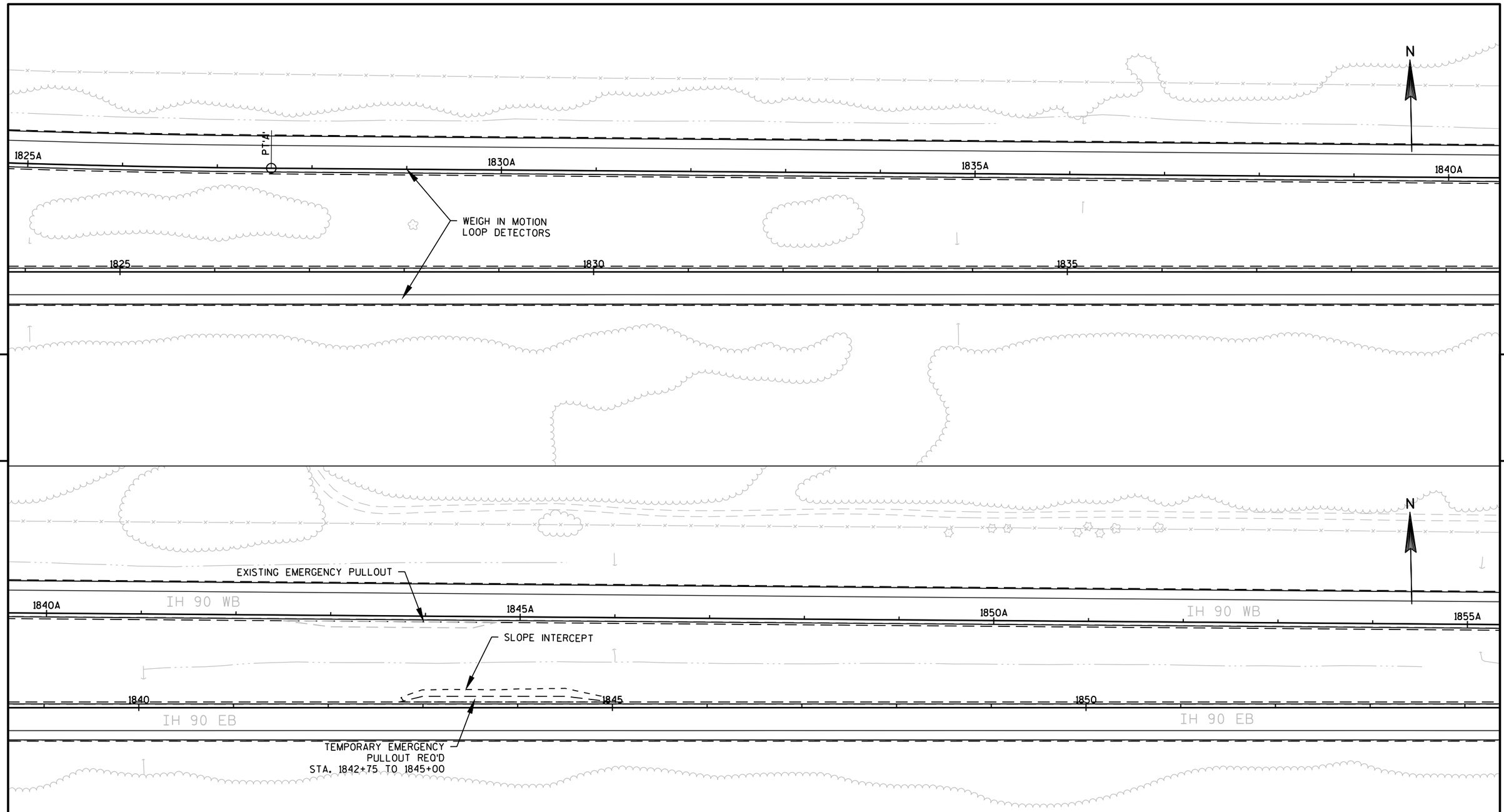
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 93	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\050201.1_PN.DWG
LAYOUT NAME - Sheet - (70)
PLOT DATE : 5/23/2018 1:15 PM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 94	E



PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\050201.1_PN.DWG
LAYOUT NAME - Sheet - (74)

PLOT DATE : 5/23/2018 1:16 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

1860A 1865A 1870A

1855 1860 1865 1870

EXISTING EMERGENCY PULLOUT

TEMPORARY EMERGENCY
PULLOUT REQ'D
STA. 1869+25 TO 1871+50

5

5

N

1870A 1875A

IH 90 WB

SLOPE INTERCEPT

1870 1875

IH 90 EB

TEMPORARY EMERGENCY
PULLOUT REQ'D
STA. 1869+25 TO 1871+50

25' R
1880+34.33A
31.00

1880A

EP'CC'

25' R
1881+08.59A
31.00

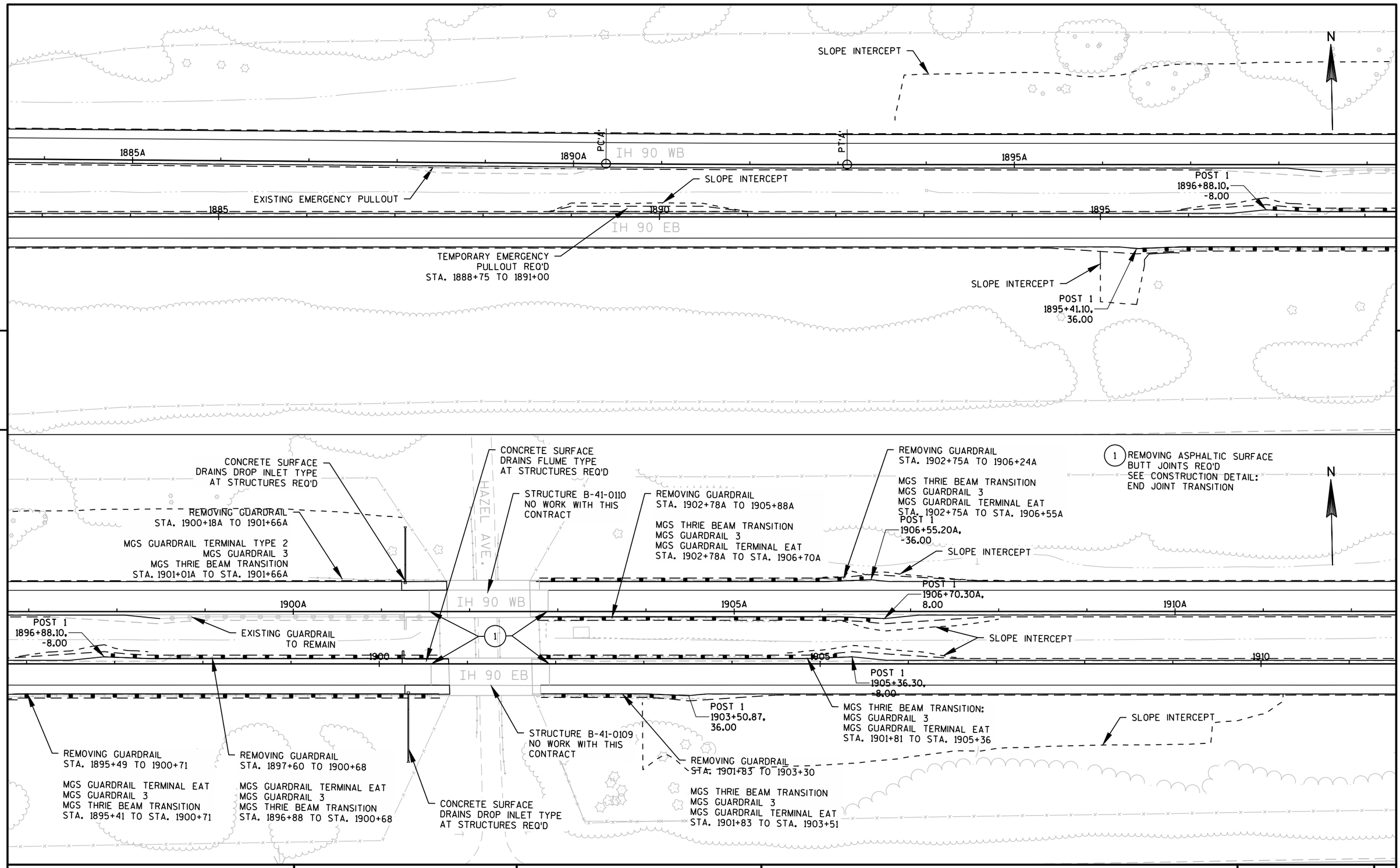
1880

BP'CC'

25' R
1879+36.73
-31.00

25' R
1880+11.01
-29.00

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 96	E



PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 97 E

AIL:

N

EXISTING EMERGENCY PULLOUT

1915A 1920A 1925A

IH 90 WB

SLOPE INTERCEPT

1910 1915 1920 1925

IH 90 EB

TEMPORARY EMERGENCY
PULLOUT REQ'D
STA. 1922+25 TO 1924+50

5 5

N

1930A 1935A 1940A

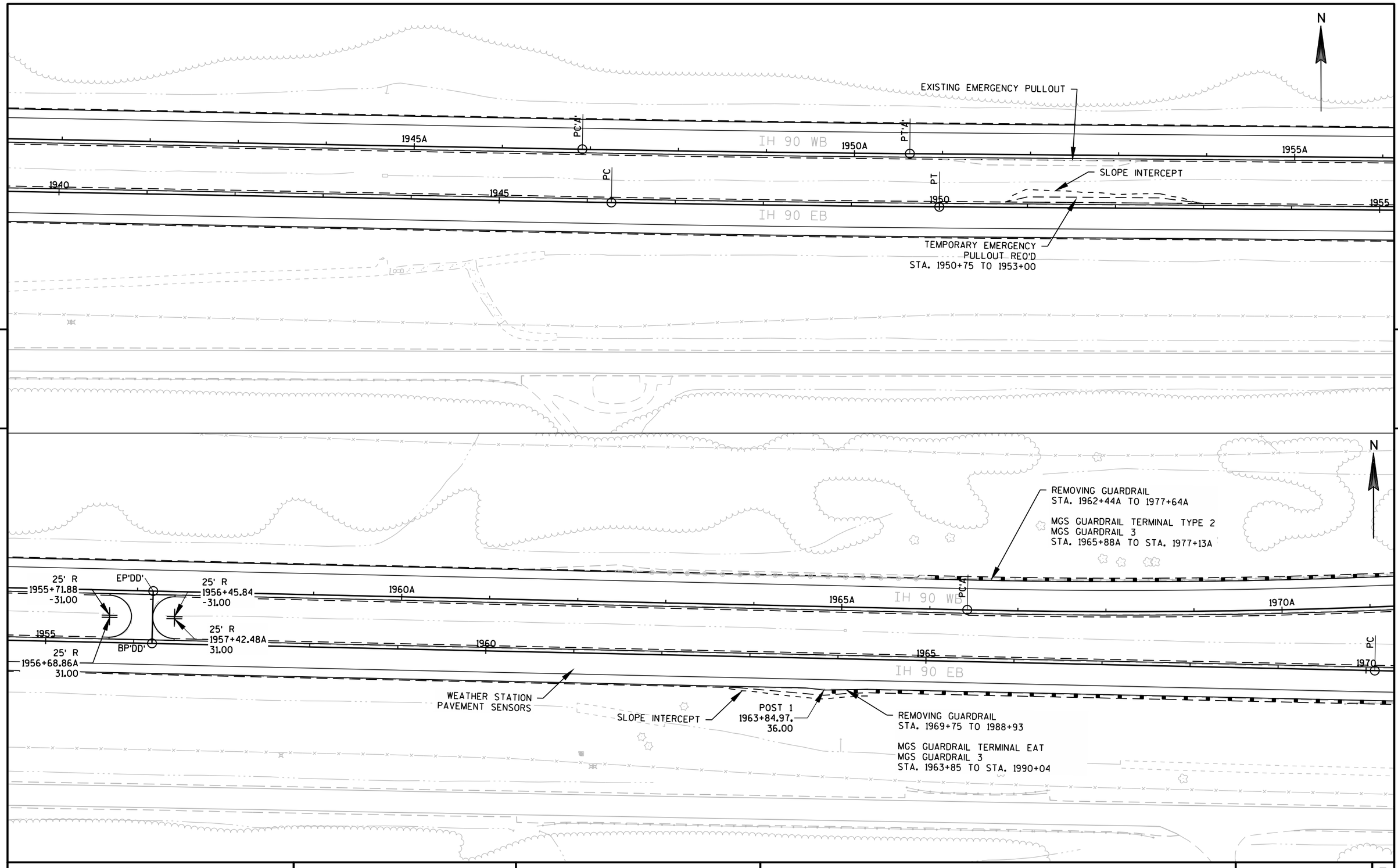
1925 1930 1935 1940

SIGN

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 98	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\050201.1_PN.DWG
LAYOUT NAME - Sheet - (80)

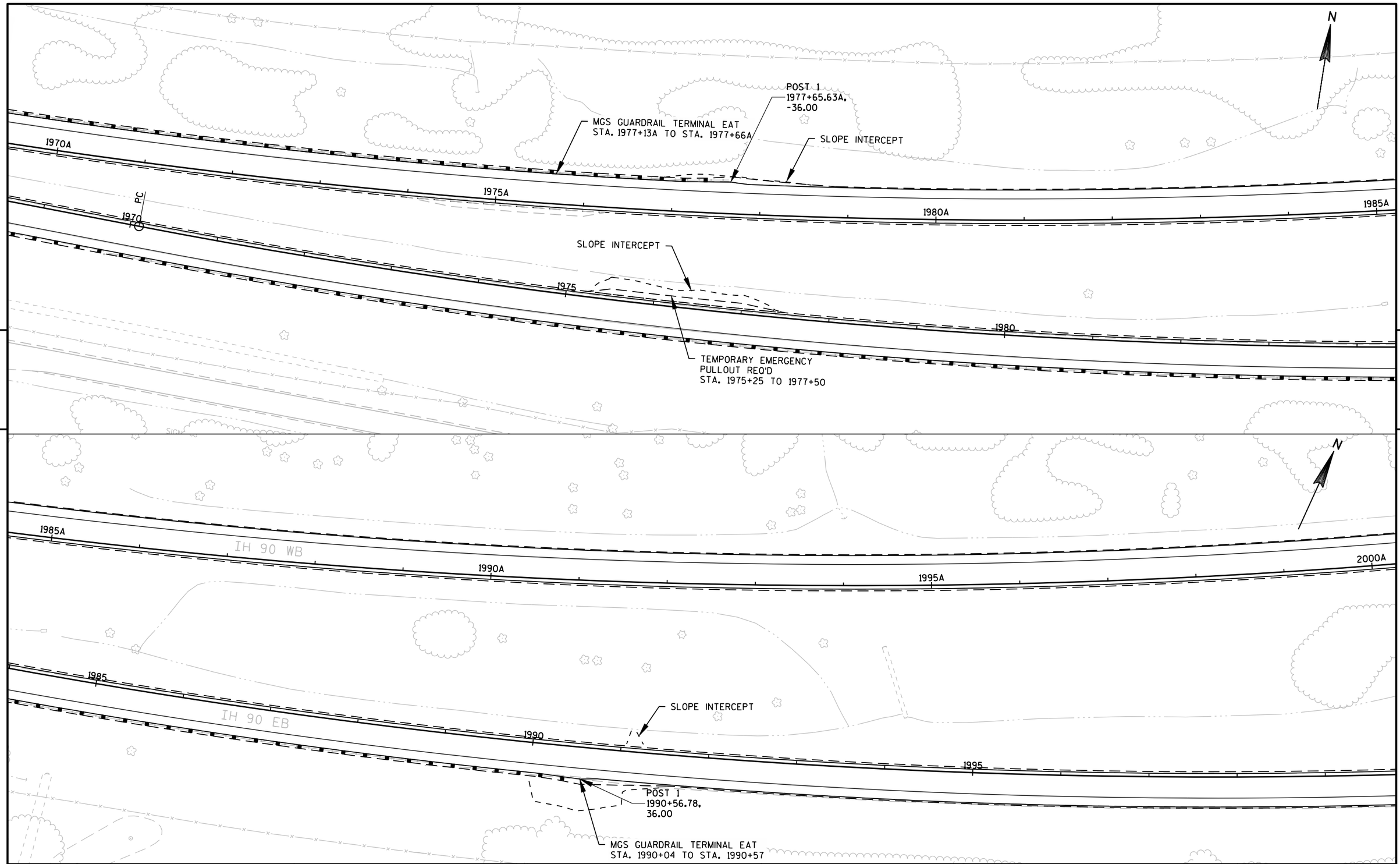
PLOT DATE : 5/23/2018 1:17 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 99	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\050201.1_PN.DWG
LAYOUT NAME - Sheet - (82)

PLOT DATE : 5/23/2018 1:18 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:100 FT

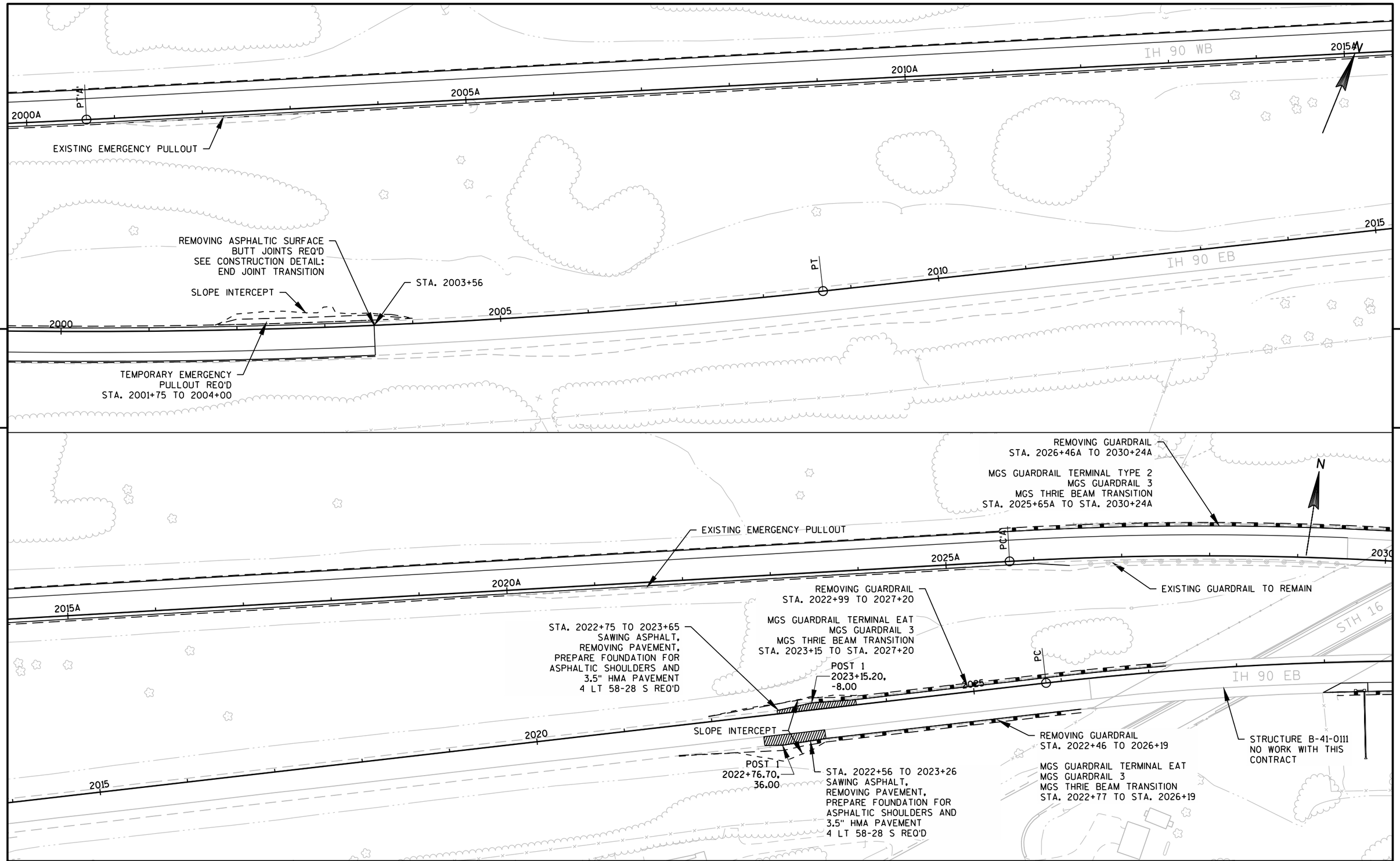


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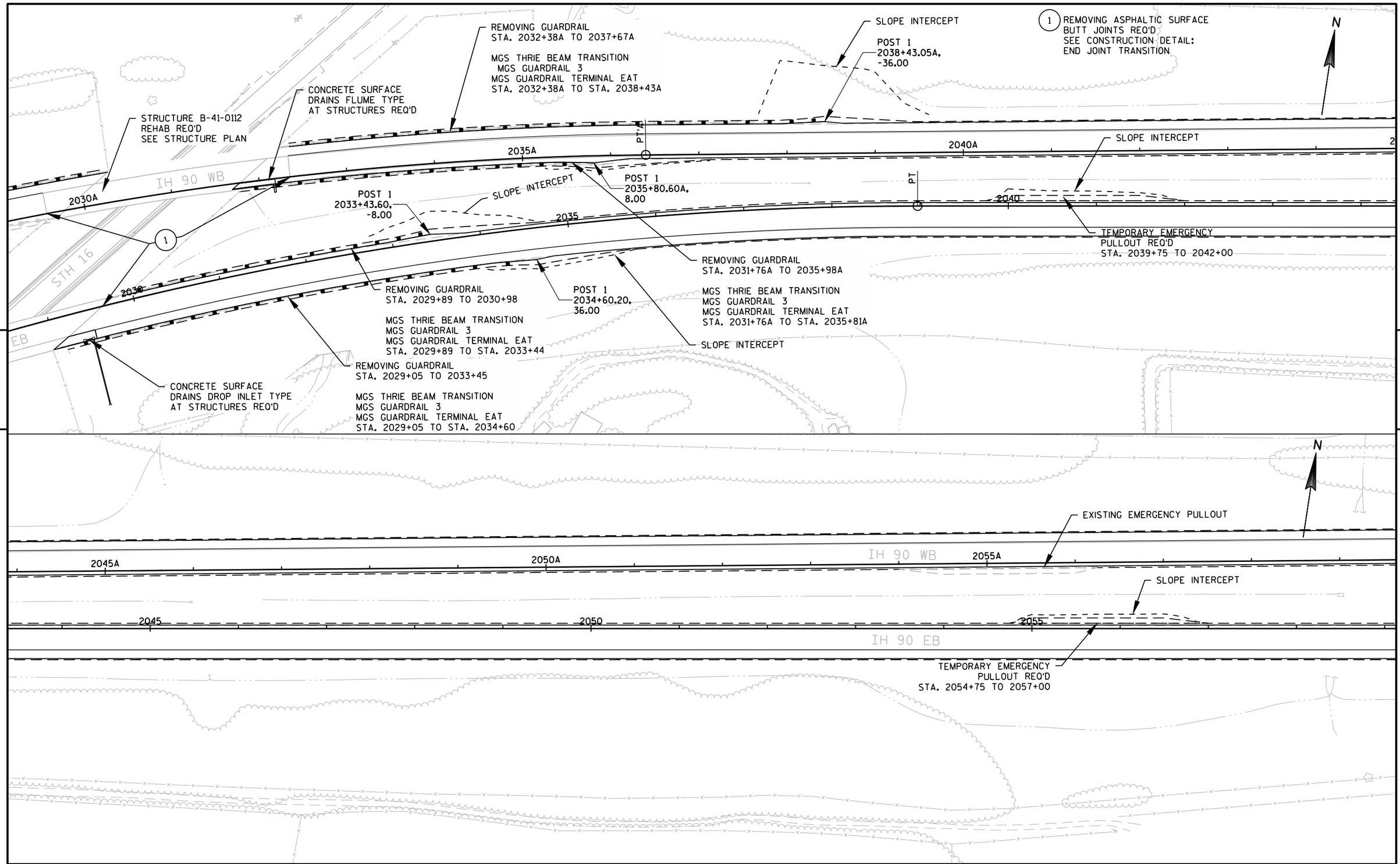
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 100	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\050201.1_PN.DWG
LAYOUT NAME - Sheet - (84)
PLOT DATE : 5/23/2018 1:18 PM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 101	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\050201.1_PN.DWG
LAYOUT NAME - Sheet - (86)
PLOT DATE : 5/23/2018 1:19 PM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

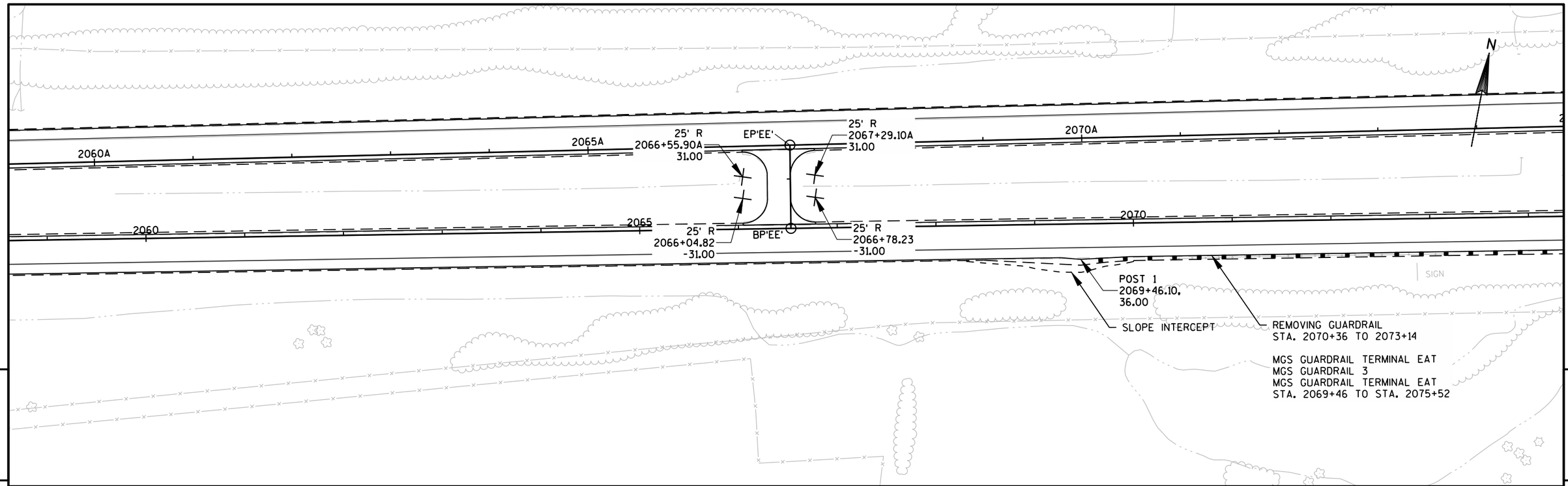


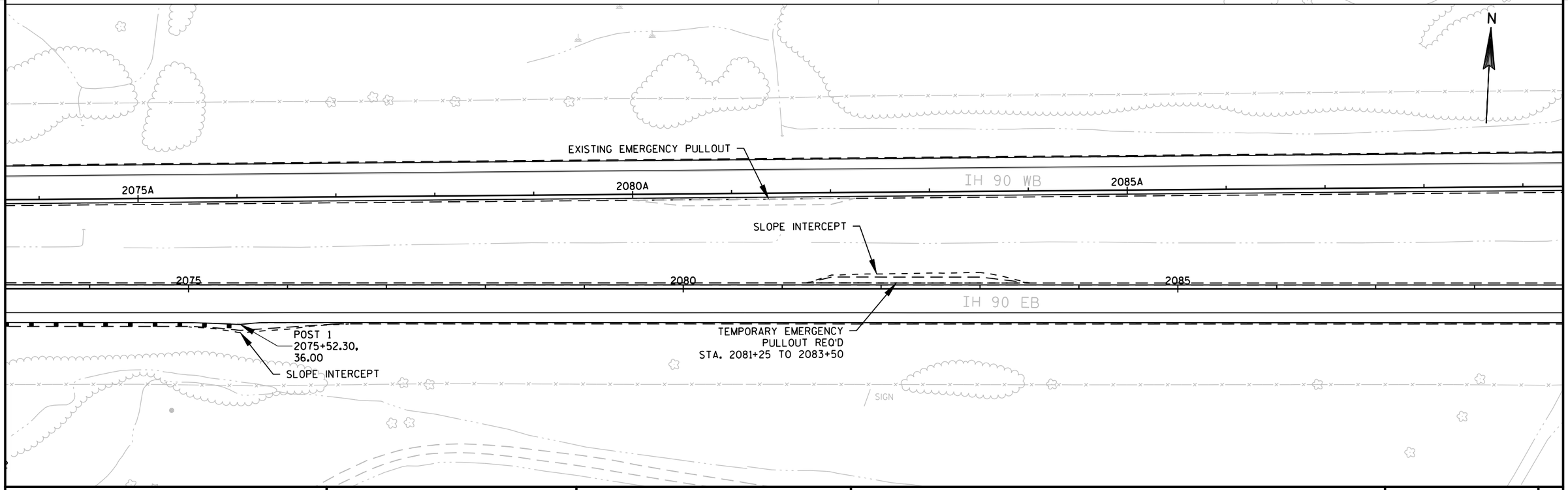
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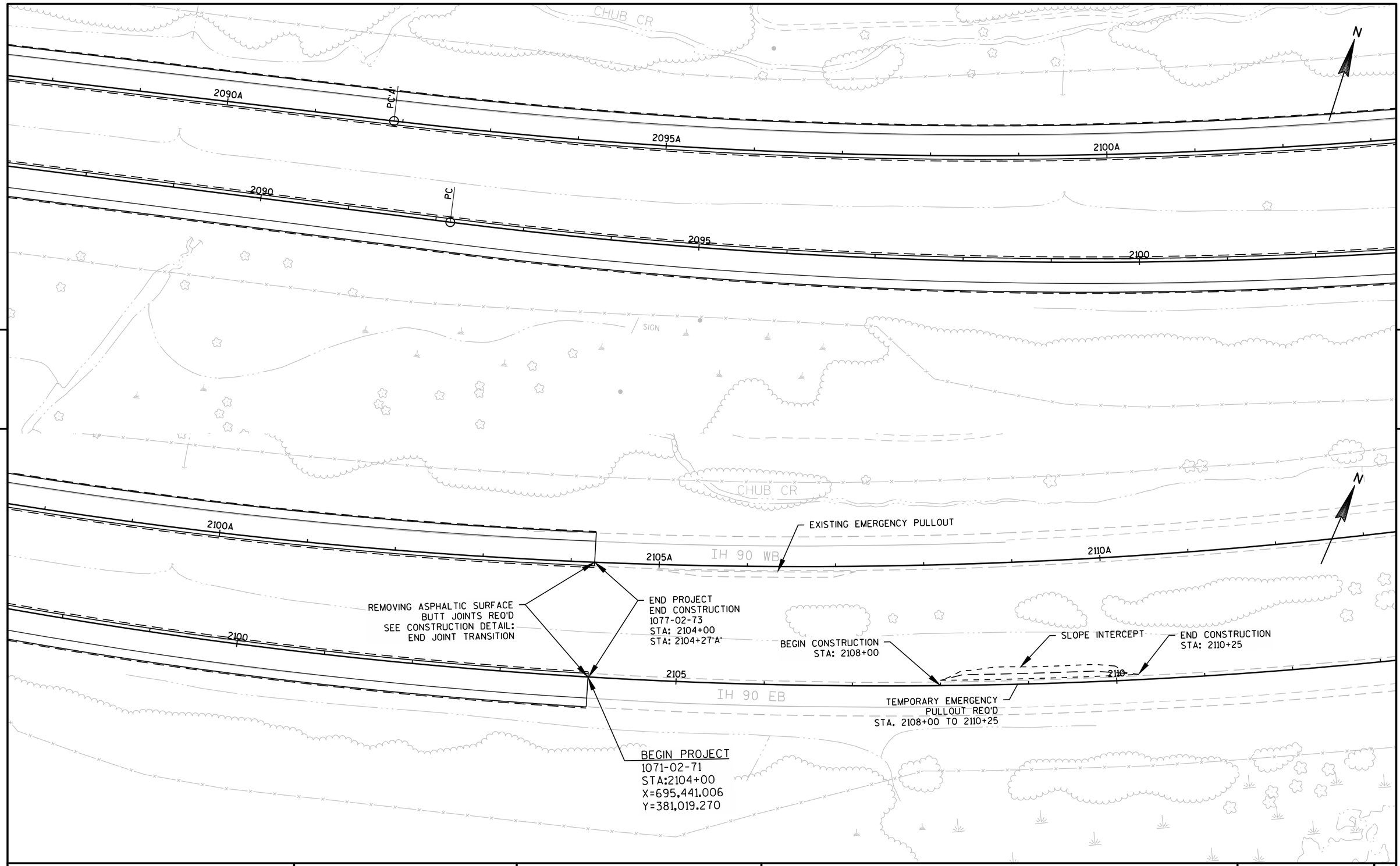
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\050201.1_PN.DWG
LAYOUT NAME - Sheet - (88)
PLOT DATE : 5/23/2018 1:20 PM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44





PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 103	E



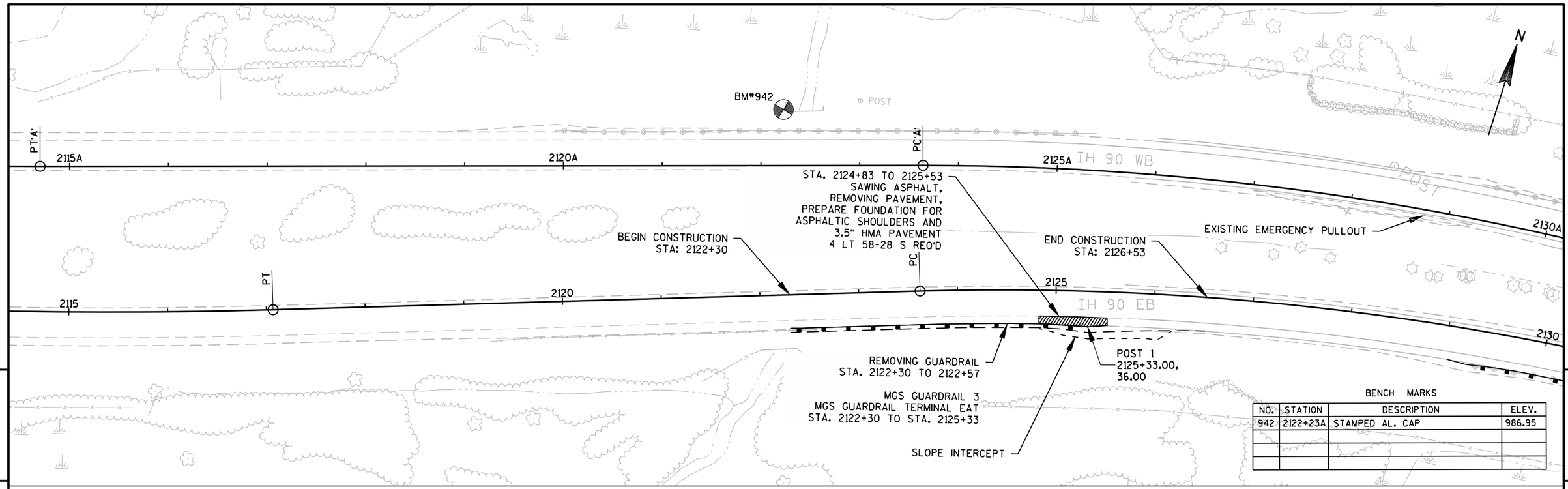
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5

PROJECT NO: 1077-02-73 & 1071-02-71	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\050201.1_PN.DWG
LAYOUT NAME - Sheet - (92)

PLOT DATE : 5/23/2018 1:21 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:100 FT



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
942	2122+23A	STAMPED AL. CAP	986.95

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1. NOTE: PRIOR TO CONSTRUCTING NEW CONCRETE PAVEMENT APPROACH SLAB REMOVE EXISTING OPEN GRADE BASE COURSE. REMOVAL OF EXISTING OPEN GRADE BASE COURSE TO BE MEASURED AND PAID AS COMMON EX.
2. CUTOFF AND CAP END OF EXISTING PAVEMENT UNDERDRAIN IF ENCOUNTERED DURING EXCAVATION.
3. CONNECT PIPE UNDERDRAIN WRAPPED 6" TO EXISTING UNDERDRAIN. INSTALL APRON ENDWALL FOR UNDERDRAIN REINFORCED CONCRETE 6 INCH WITH RODENT SCREEN TO OUTFALL.
4. MOVING SIGNS TYPE II REQ'D

LEGEND
SAWING CONCRETE
SAWING ASPHALT
FENCE WOVEN WIRE 4-FT

N

STA. 2130+86A TO 2131+56A SAWING ASPHALT, REMOVING ASPHALTIC SURFACE, PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS AND 3.5" HMA PAVEMENT 4 LT 58-28 S REQ'D

REMOVING GUARDRAIL STA. 2129+28A TO 2136+78A
MGS GUARDRAIL TERMINAL EAT
MGS GUARDRAIL 3
MGS THRIE BEAM TRANSITION
STA. 2131+06A TO 2136+61A

SAWING ASPHALT REQ'D STA. 2136+39A
SAWING CONCRETE REQ'D STA. 2136+39A
CONCRETE SURFACE DRAIN REQ'D SEE CONSTRUCTION DETAIL

REMOVE STRUCTURE B-41-0116
CONSTRUCT STRUCTURE B-41-0294
SEE STRUCTURE PLANS

SLOPE INTERCEPT

SAWING ASPHALT REQ'D STA. 2138+32A
SAWING CONCRETE REQ'D STA. 2138+32A

REMOVING GUARDRAIL STA. 2137+95A TO 2142+02A
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL EAT
STA. 2138+13A TO STA. 2141+68A

MGS GUARDRAIL TERMINAL TYPE 2
MGS GUARDRAIL 3
MGS THRIE BEAM TRANSITION
STA. 2135+92A TO STA. 2136+57A

IH 90

2130A
POST 1
2131+06.00A,
-36.00

SAWING ASPHALT REQ'D STA. 2133+46A

BM=945

BM=936

2140A

POST 1
2141+67.60A,
8.00

BEGIN CONSTRUCTION STA. 2129+28A

SAWING ASHPALT REQ'D STA. 2130+71

POST 1
2132+39.40,
-8.00

SLOPE INTERCEPT

2135

SAWING CONCRETE REQ'D STA. 2135+83

BM=954

SPECIAL DITCH

SAWING CONCRETE REQ'D STA. 2137+78

BEGIN CONSTRUCTION STA. 2129+03

2130

SAWING ASPHALT REQ'D STA. 2135+58

SAWING ASPHALT REQ'D STA. 2142+86A

POST 1
2141+16.50,
-8.00

REMOVING GUARDRAIL STA. 2130+67 TO 2136+22
MGS GUARDRAIL TERMINAL EAT
MGS GUARDRAIL 3
MGS THRIE BEAM TRANSITION
STA. 2132+39 TO STA. 2136+07

CONCRETE SURFACE DRAIN REQ'D SEE CONSTRUCTION DETAIL

SLOPE INTERCEPT

REMOVE STRUCTURE B-41-0115
CONSTRUCT STRUCTURE B-41-0293
SEE STRUCTURE PLANS

SLOPE INTERCEPT

REMOVING GUARDRAIL STA. 2137+38 TO 2139+19

MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL EAT
STA. 2137+57 TO STA. 2139+74

MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL EAT
STA. 2137+62 TO STA. 2141+17

END CONSTRUCTION
SAWING ASPHALT
STA. 2142+35

POST 1
2129+23.33,
36.00

STA. 2129+03 TO 2129+73 SAWING ASPHALT, REMOVING ASPHALTIC SURFACE, PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS AND 3.5" HMA PAVEMENT 4 LT 58-28 S REQ'D

REMOVING GUARDRAIL STA. 2129+26 TO 2136+16
MGS GUARDRAIL TERMINAL EAT
MGS GUARDRAIL 3
MGS THRIE BEAM TRANSITION
STA. 2129+23 TO STA. 2135+99

POST 1
2139+74.20,
36.00

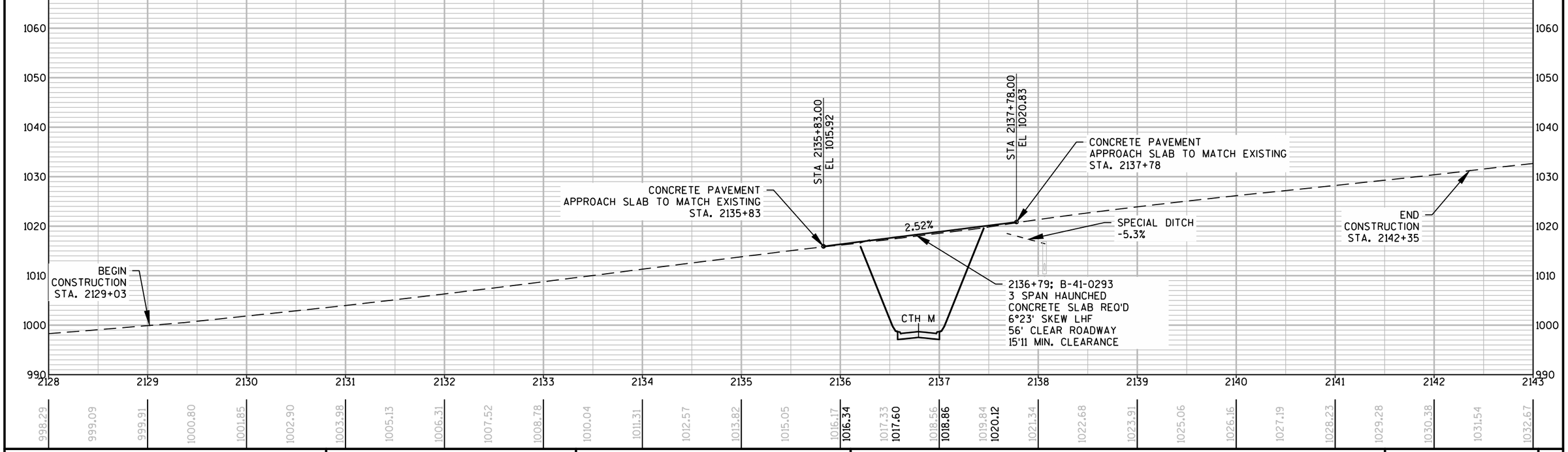
SAWING ASPHALT REQ'D STA. 2140+85

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
936	2137+86	FENO MARKER	1019.40
945	2136+31	FENO MARKER	1015.40
954	2138+39	FENO MARKER	1019.09

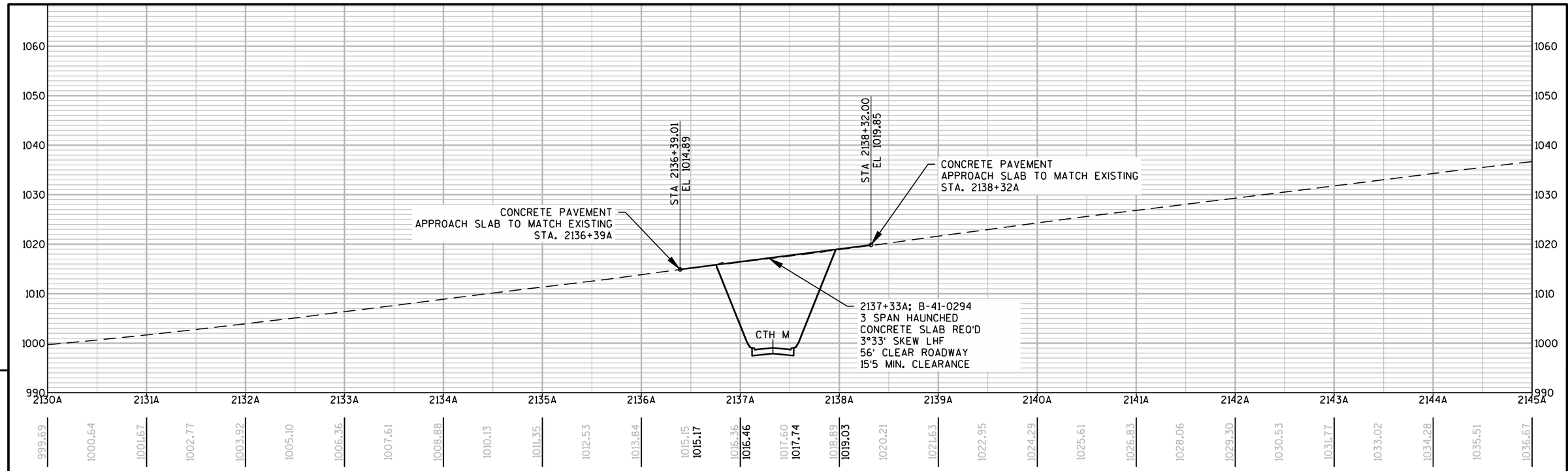
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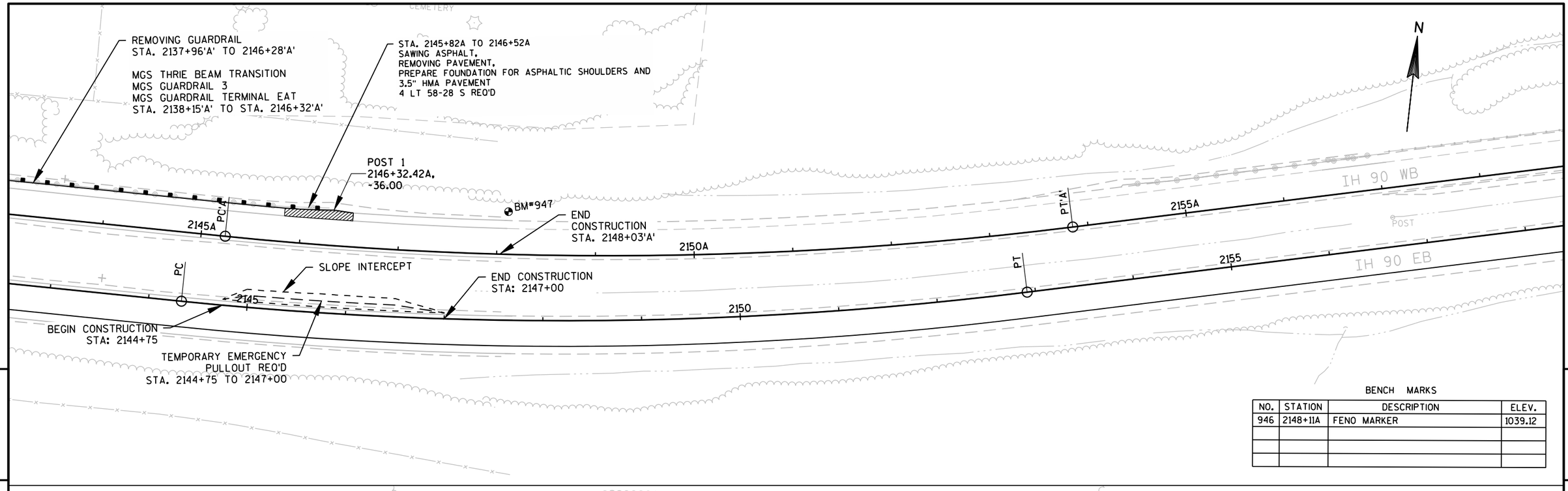
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE (PROFILE IH 90 EB)	SHEET	E

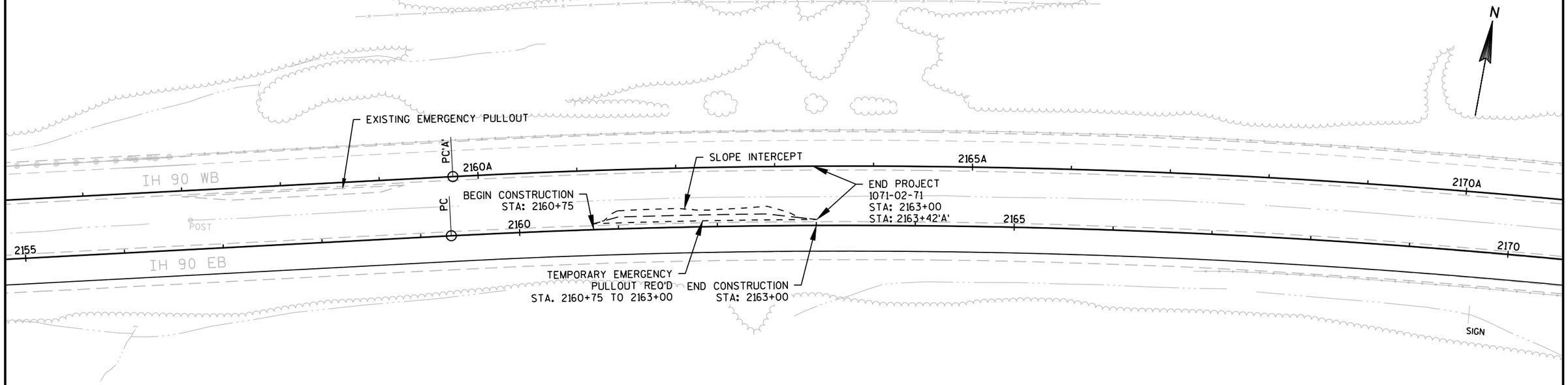
FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\2016\050101.1_PP(71 COMBINED).DWG
LAYOUT NAME - Sheet - (4)
PLOT DATE : 7/12/2018 5:21 PM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44


1060
1050
1040
1030
1020
1010
1000
990
STA. 2136+39.01
EL 1014.89
STA 2138+32.00
EL 1019.85
CONCRETE PAVEMENT
APPROACH SLAB TO MATCH EXISTING
STA. 2136+39A
CONCRETE PAVEMENT
APPROACH SLAB TO MATCH EXISTING
STA. 2138+32A
CTH M
2137+33A; B-41-0294
3 SPAN HAUNCHED
CONCRETE SLAB REQ'D
3°33' SKEW LHF
56' CLEAR ROADWAY
15'5 MIN. CLEARANCE
2130A
2131A
2132A
2133A
2134A
2135A
2136A
2137A
2138A
2139A
2140A
2141A
2142A
2143A
2144A
2145A
999.69
1000.64
1001.67
1002.77
1003.92
1005.10
1006.36
1007.61
1008.88
1010.13
1011.35
1012.53
1013.84
1015.15
1015.17
1016.36
1016.46
1017.60
1017.74
1018.89
1019.03
1020.21
1021.63
1022.95
1024.29
1025.61
1026.83
1028.06
1029.30
1030.53
1031.77
1033.02
1034.28
1035.51
1036.67

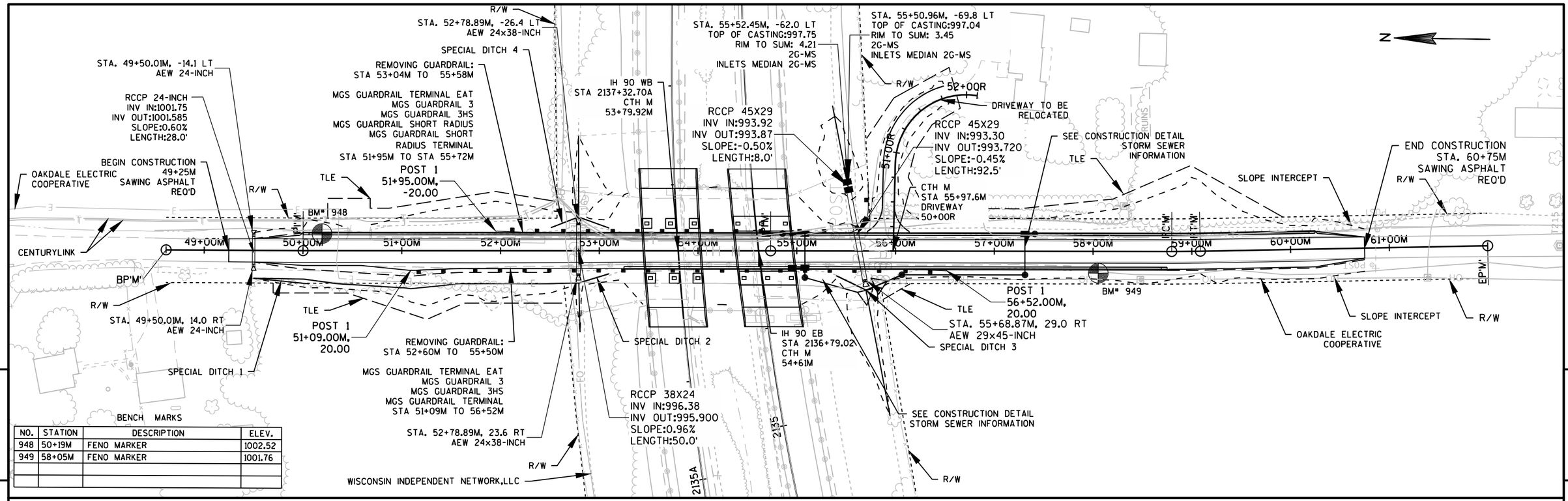


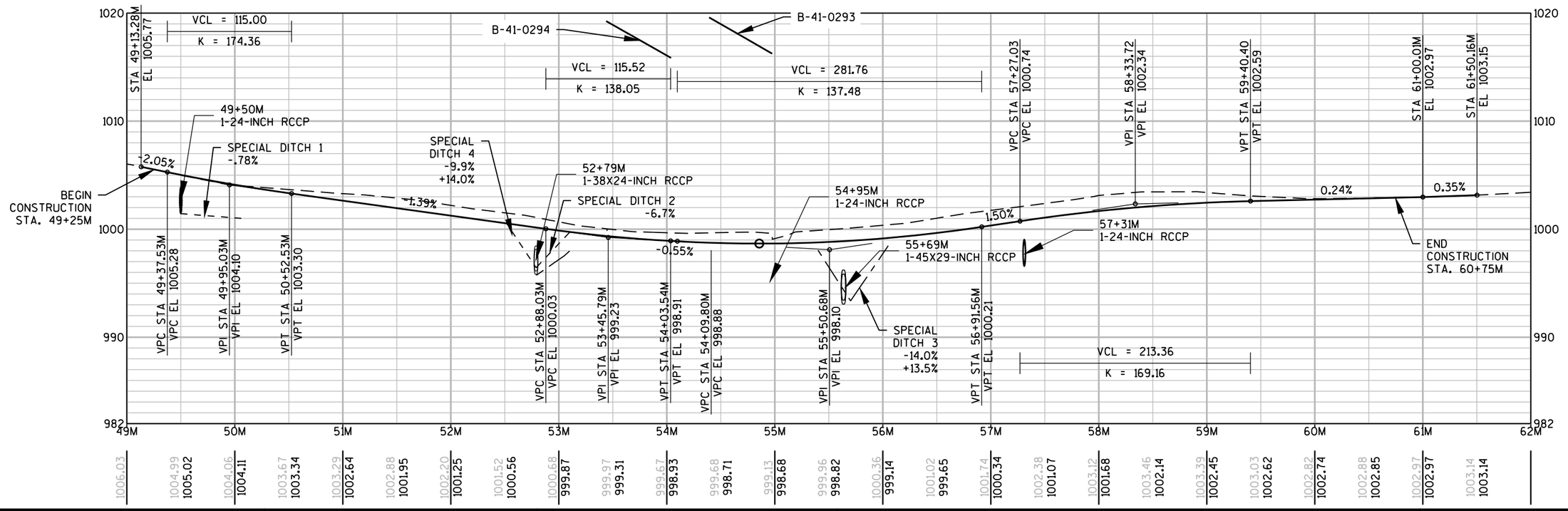
BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
946	2148+11A	FENO MARKER	1039.12



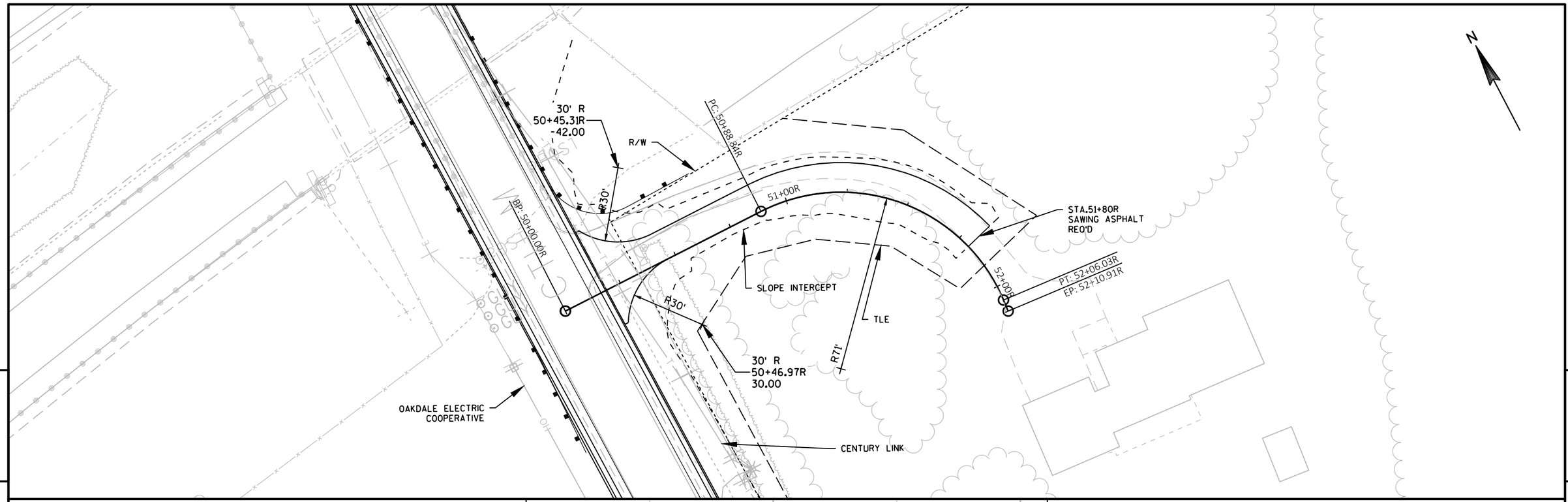
PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	PLAN	SHEET 108 E

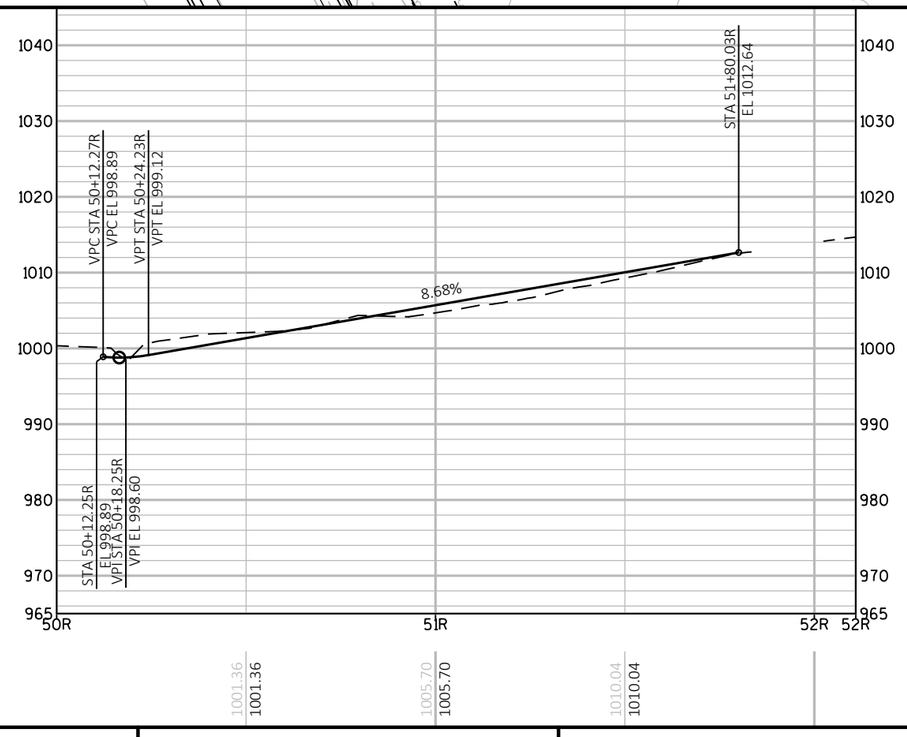




PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: CTH M	SHEET 109	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\2016\050105_PP.DWG
LAYOUT NAME - SHEET - (8)
PLOT DATE : 5/16/2018 10:03 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44





PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: DRIVEWAY RELOCATION-R LINE	SHEET 110	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\2016\050106_PP.DWG
LAYOUT NAME - 3

PLOT DATE : 7/16/2018 11:04 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:40 FT

Standard Detail Drawing List

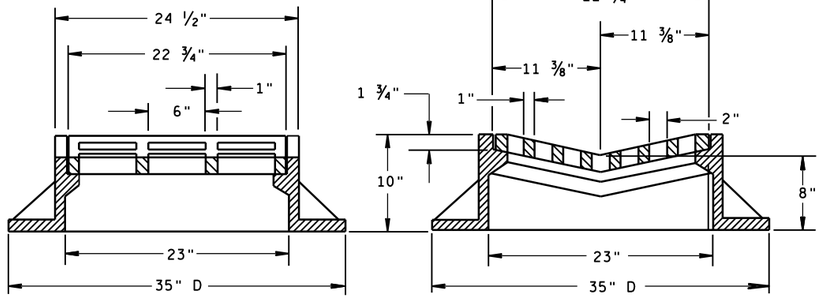
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D03-07	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
12A03-10	NAME PLATE (STRUCTURES)
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13B02-08B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B42-05A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-03A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
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
14B53-01A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

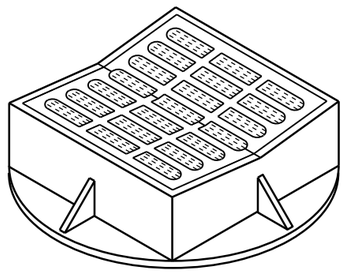
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Standard Detail Drawing List

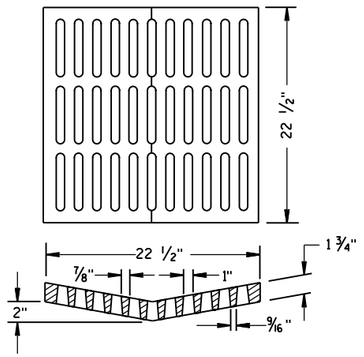
14B53-01D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01G	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01H	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01I	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-04A	FLEXIBLE DELINEATOR POST
15A04-04B	DELINEATOR POST WITH REFLECTIVE SHEETING
15A04-04C	DELINEATOR WITH REFLECTIVE SHEETING
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C19-05C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15D05-04	TRAFFIC CONTROL, SINGLE LANE CROSSOVER ENTRANCE WITH BARRIER
15D06-03	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D10-04	TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT WITH BARRIER
15D11-07	TRAFFIC CONTROL, SINGLE LANE CROSSOVER
15D12-06B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D13-02	TEMPORARY EMERGENCY PULLOUTS
15D15-04A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-04B	TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-04C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-04D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-04E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D36-01	BARRICADE RACK
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

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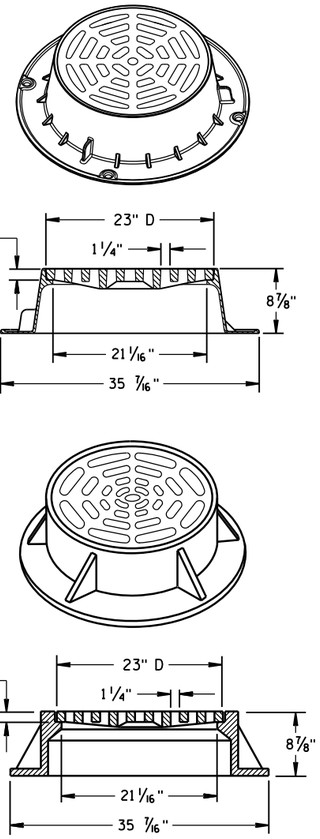


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

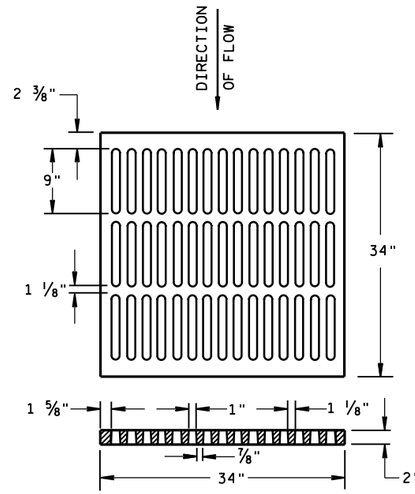
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

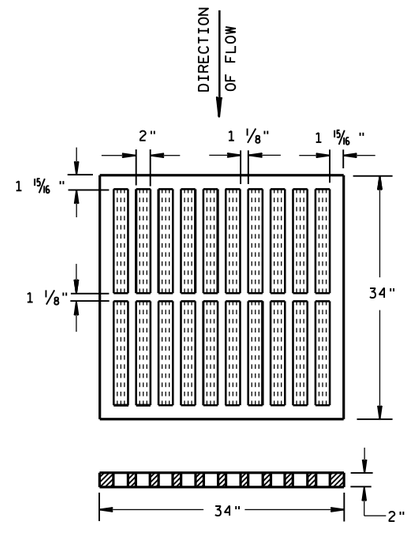
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



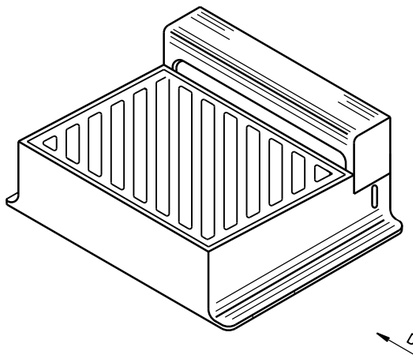
ALTERNATIVE TYPE "MS"

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

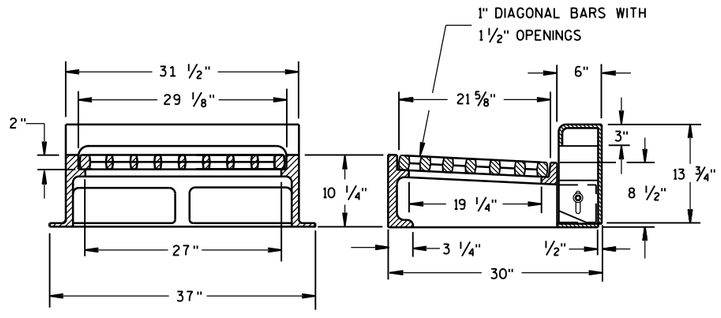


TYPE "MS"

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



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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

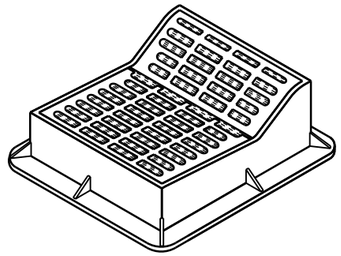
INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM

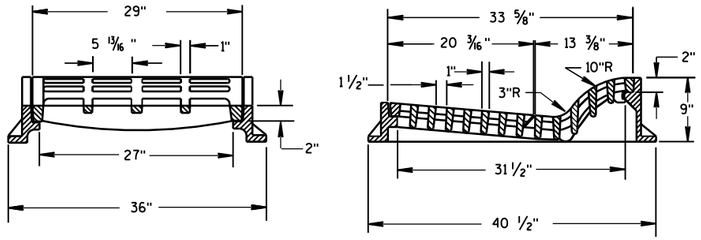
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

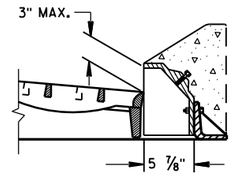
S.D.D. 8 A 5-19b





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

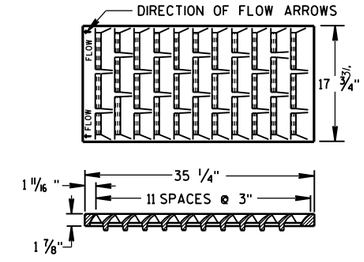
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

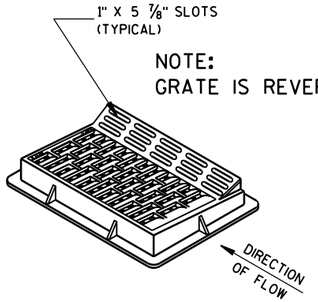
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

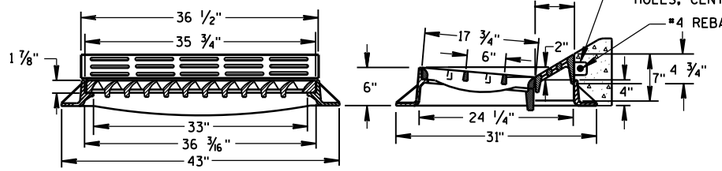
GENERAL NOTES

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

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



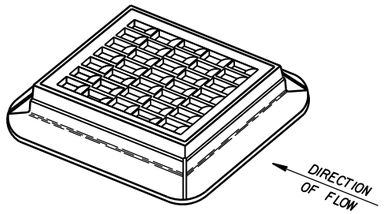


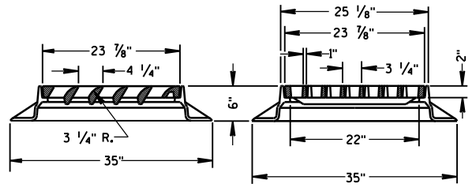


TYPE "HM"

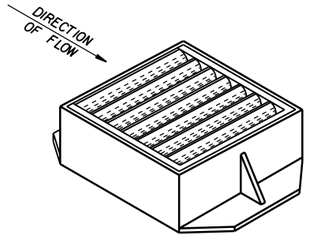
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

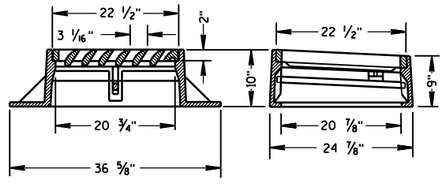
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



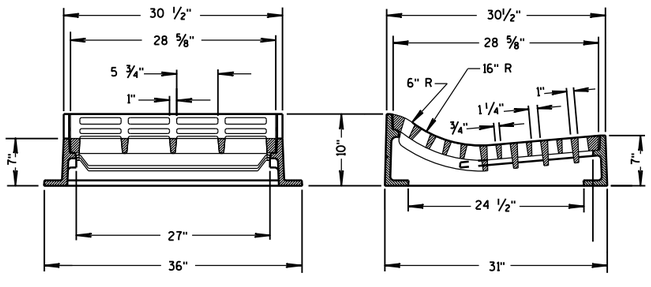


TYPE "S"



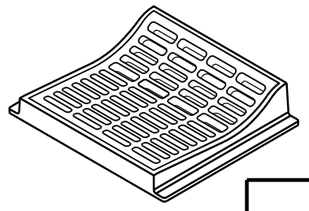


TYPE "V"



TYPE "T"

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

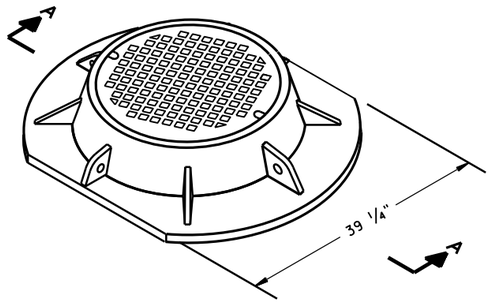
FHWA

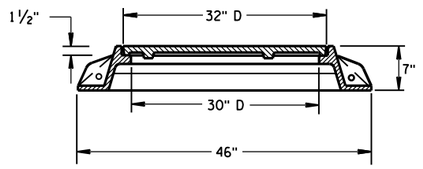
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S.D.D. 8 A 5-19c

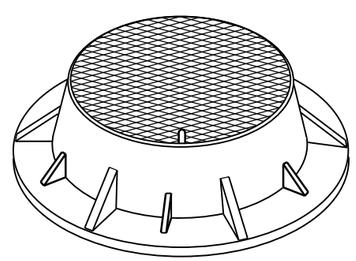
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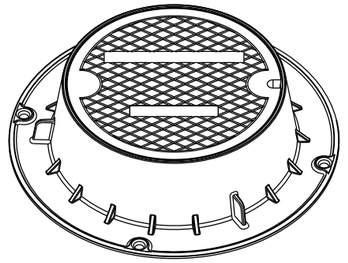
S.D.D. 8 A 5-19c

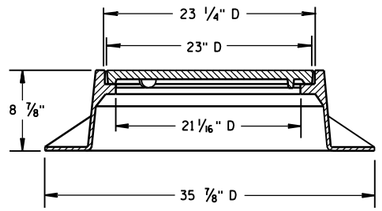


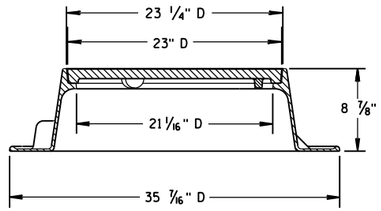


SECTION A-A
TYPE "K"









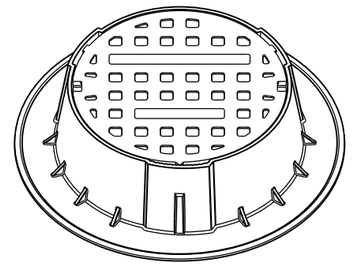
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

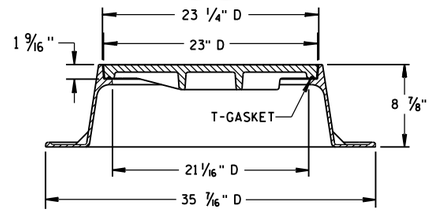
GENERAL NOTES

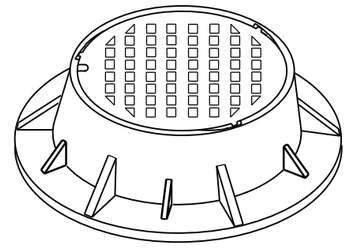
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

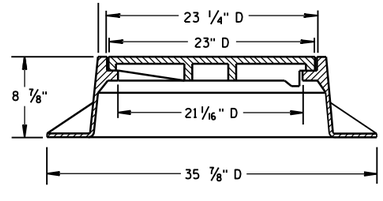
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

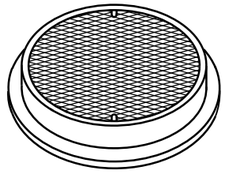


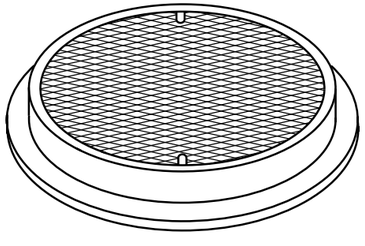


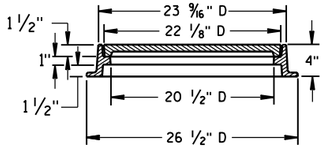




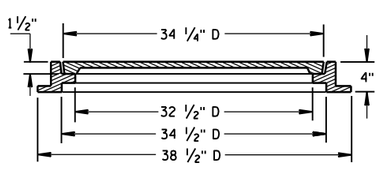
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



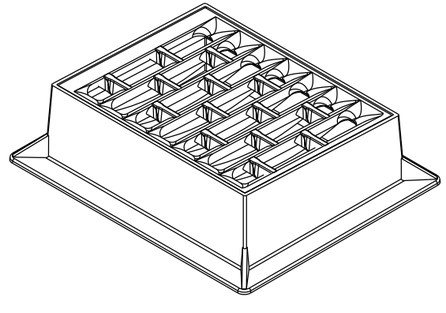


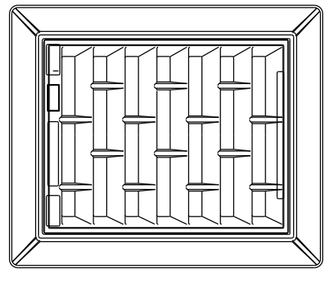


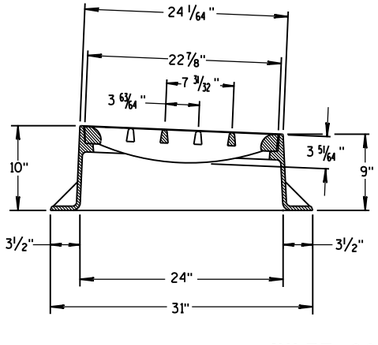
TYPE "L"

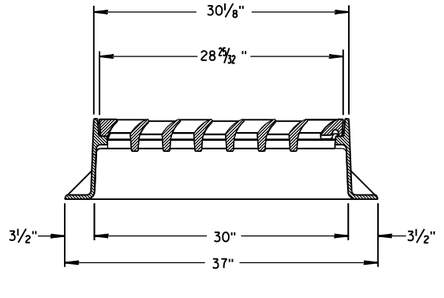


TYPE "M"









INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

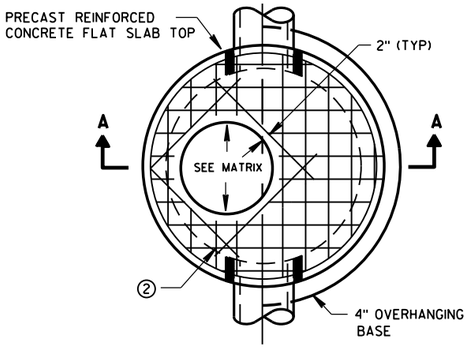
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

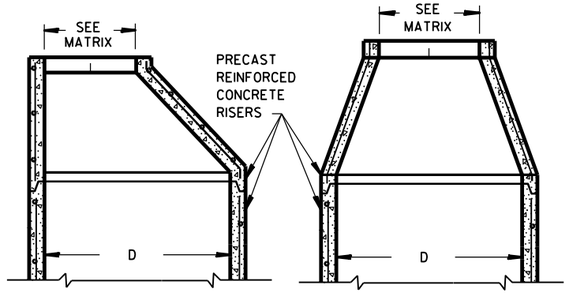
/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER

6

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

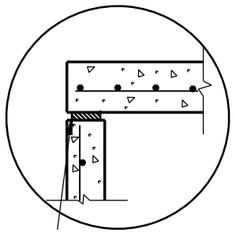


PLAN VIEW CIRCULAR OPENING

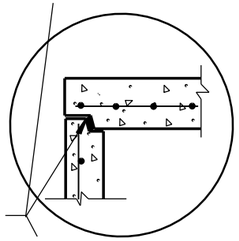


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

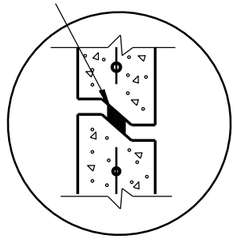


TOP WITH PLAIN END JOINT



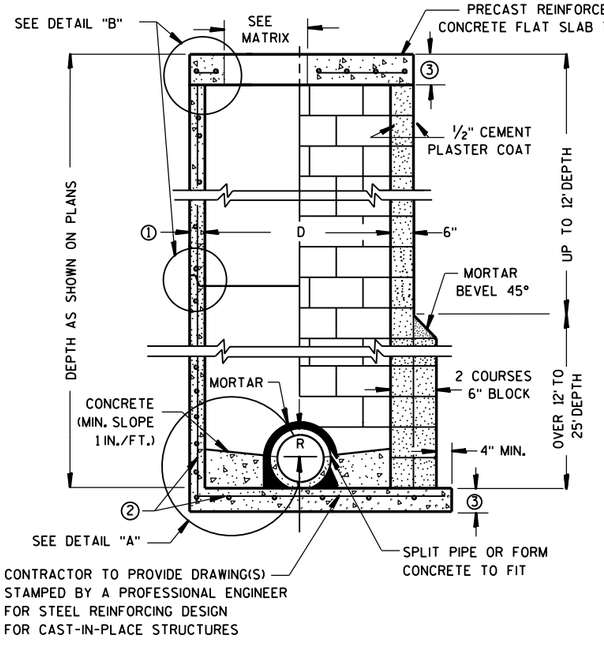
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



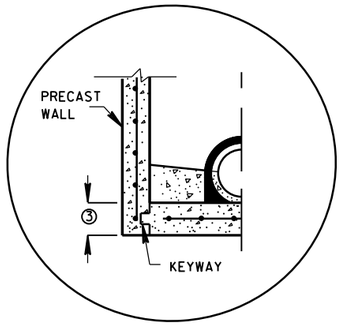
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

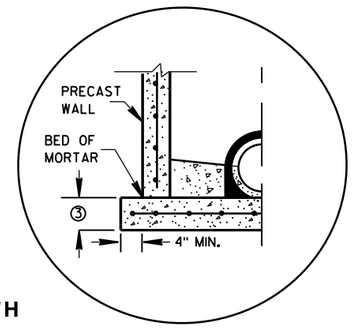


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

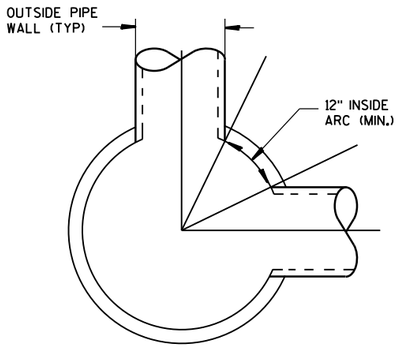


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

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 MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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

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

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

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
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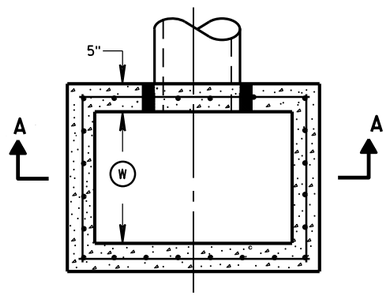
APPROVED

Sept., 2016
DATE

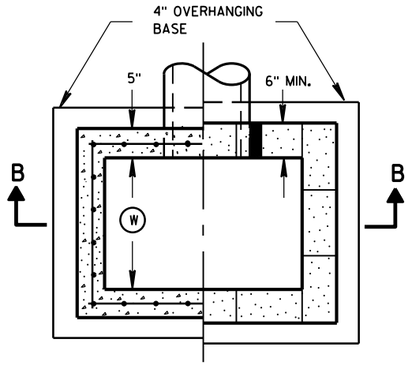
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV

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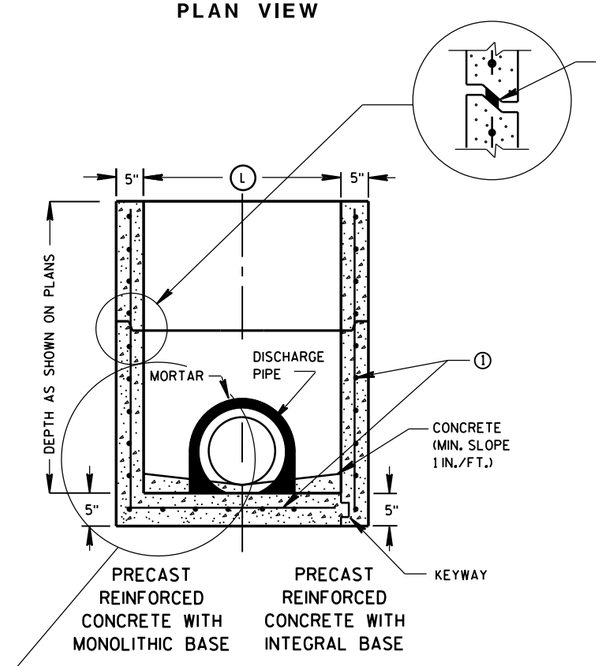
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S.D.D. 8 B 9-2



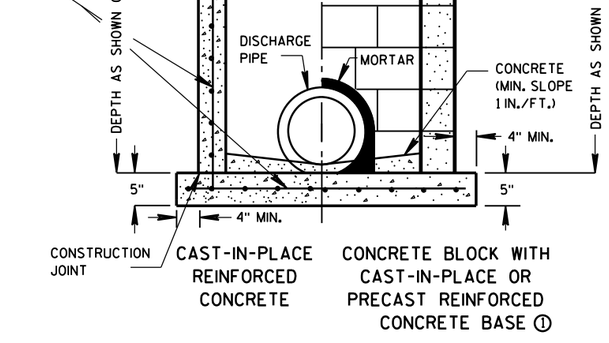
PLAN VIEW



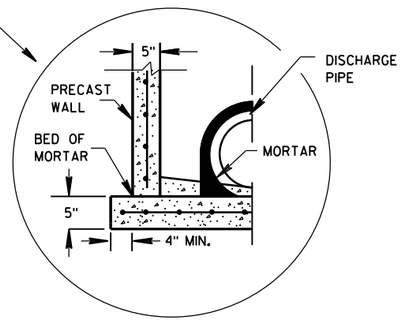
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

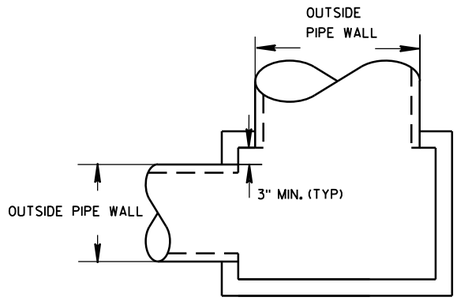
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

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

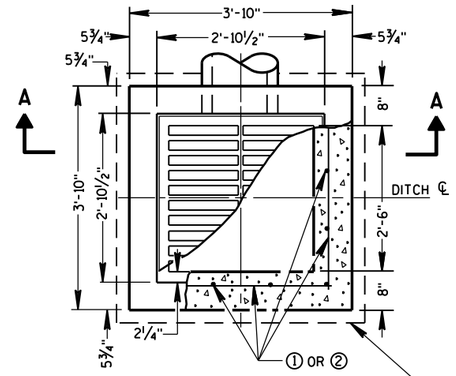
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

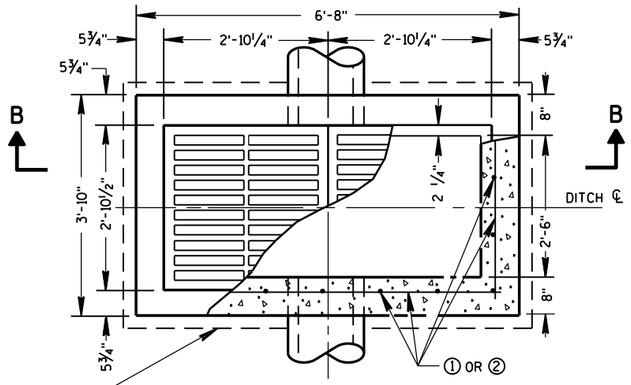
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

6

S.D.D. 8 C 7-2

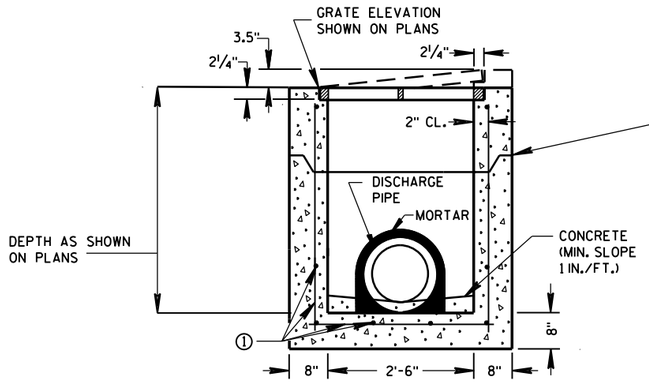


PLAN VIEW

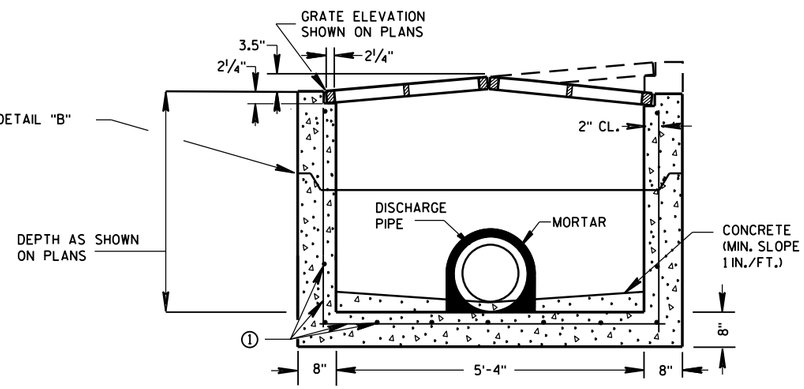


PLAN VIEW

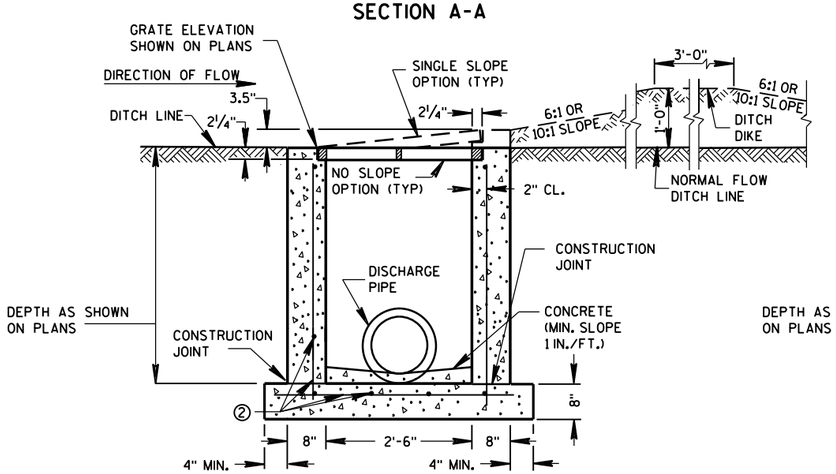
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



PRECAST REINFORCED CONCRETE SECTION A-A

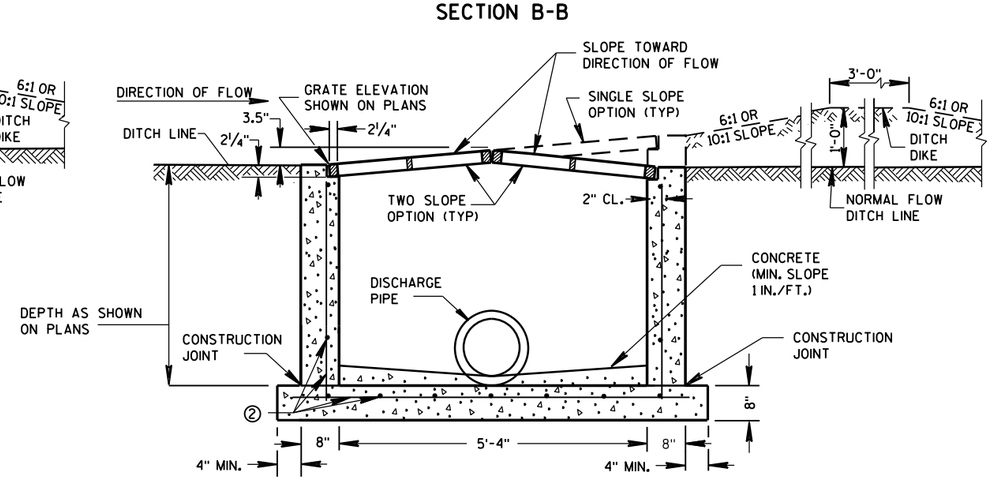


PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

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

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

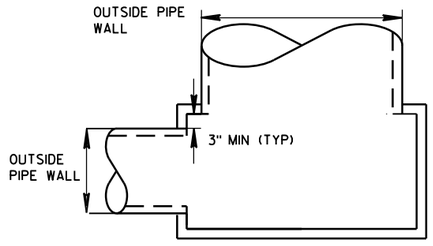
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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

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

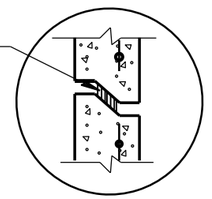
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



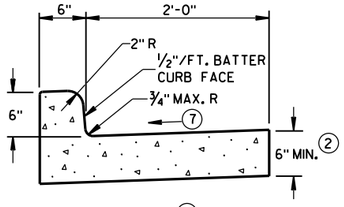
DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

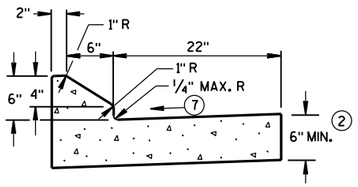
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

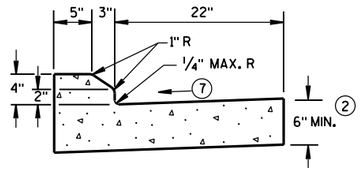
6
S.D.D. 8 C 8-2



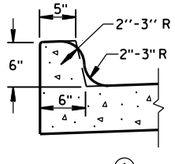
TYPES A (1) & D



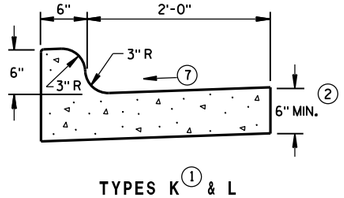
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

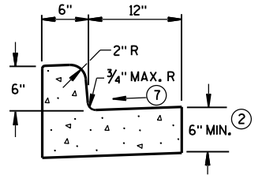


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



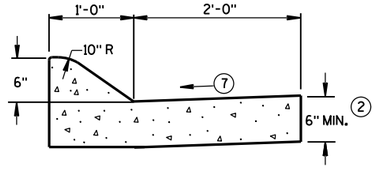
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

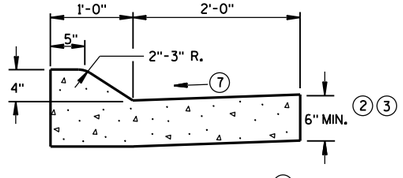


TYPES A (1) & D

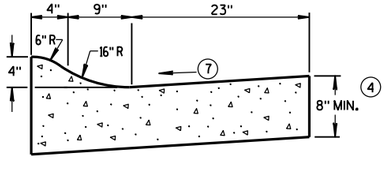
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

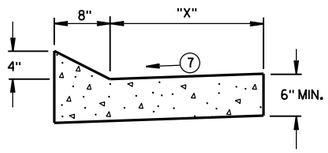


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

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

GENERAL NOTES

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

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

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

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

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

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

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

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

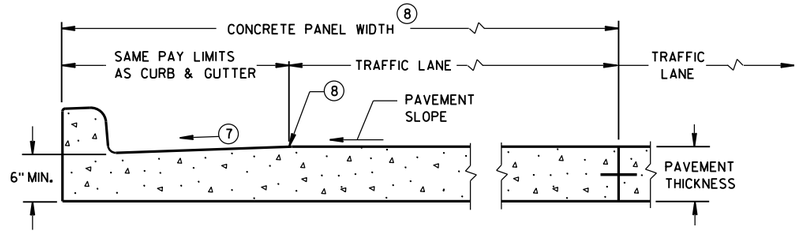
(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

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

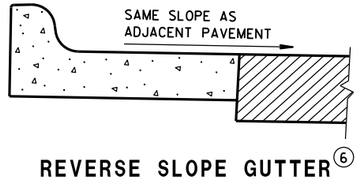
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB & GUTTER

* BIKE LANE IS NOT SHOWN.



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

CONCRETE CURB & GUTTER

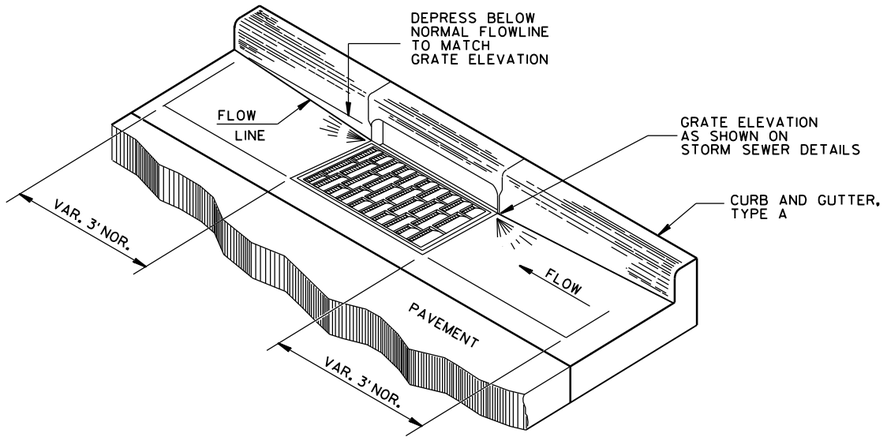
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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S.D.D. 8 D 1-20a

6

S.D.D. 8 D 1-20a



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

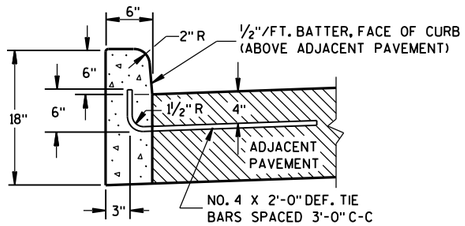
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

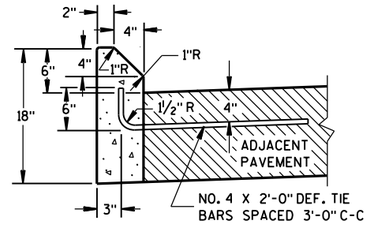
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

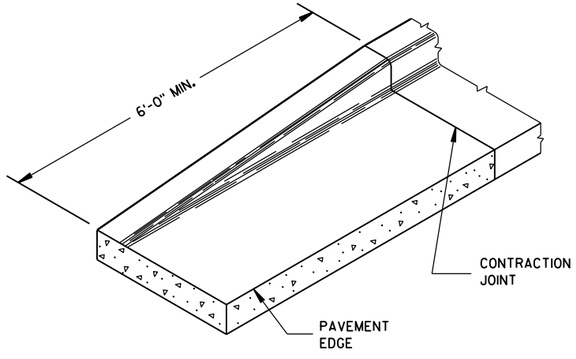


TYPES A(1) & D

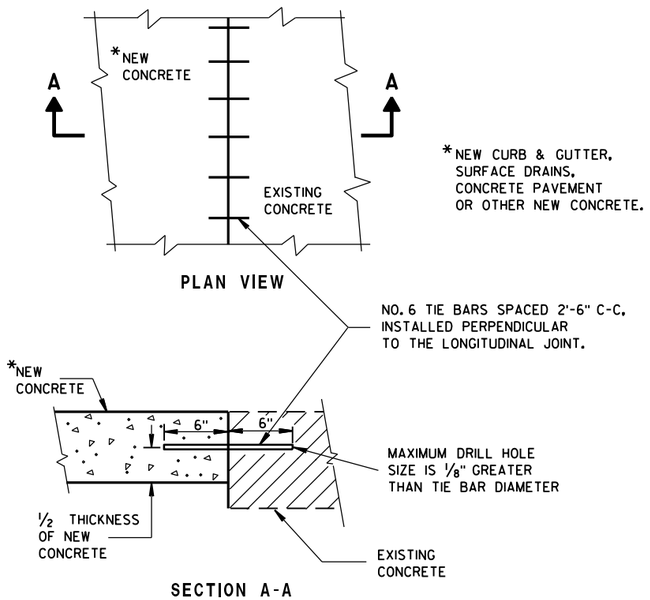


TYPES G(1) & J

CONCRETE CURB



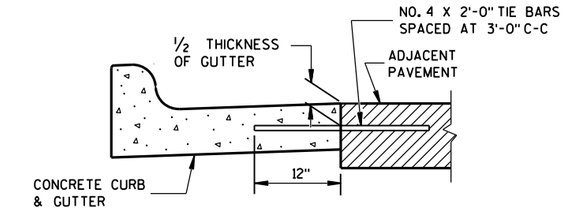
END SECTION CURB & GUTTER



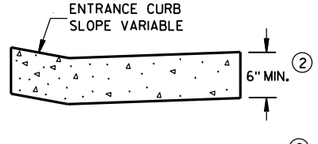
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



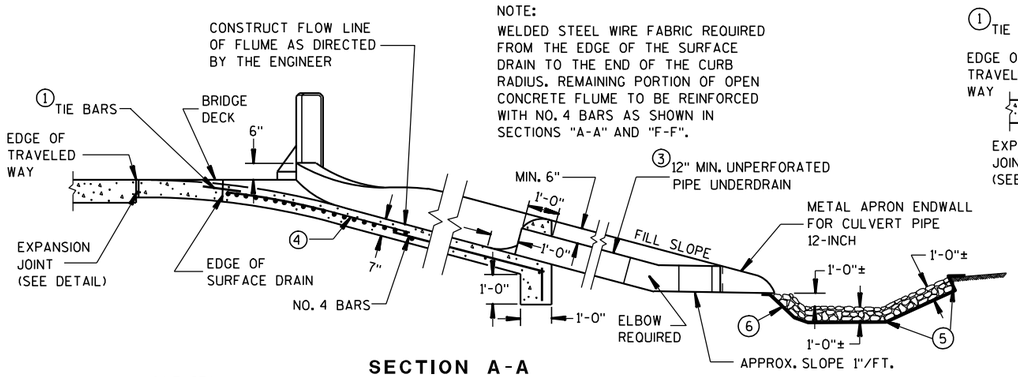
DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

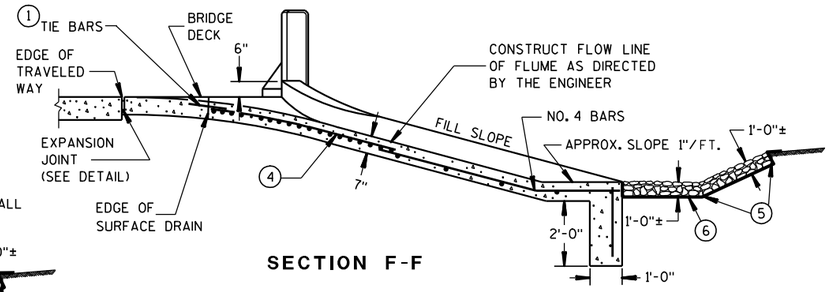
CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
FHWA



SECTION A-A



SECTION F-F

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) NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.

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

(3) PIPE UNDERDRAIN MAY BE ANY OF THE MATERIALS LISTED IN SECTION 612.2 OF THE STANDARD SPECIFICATIONS EXCEPT DRAIN TILE.

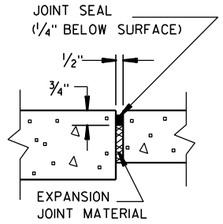
(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

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

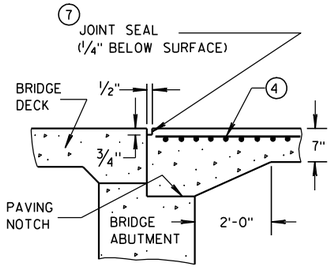
(6) GEOTEXTILE FABRIC, TYPE 'R"

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

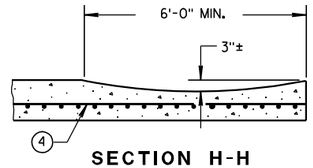
(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



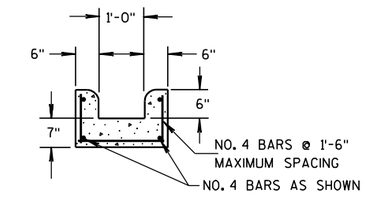
EXPANSION JOINT DETAIL



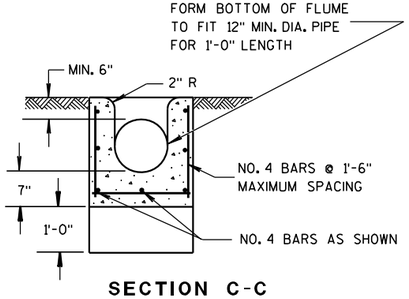
SECTION D-D



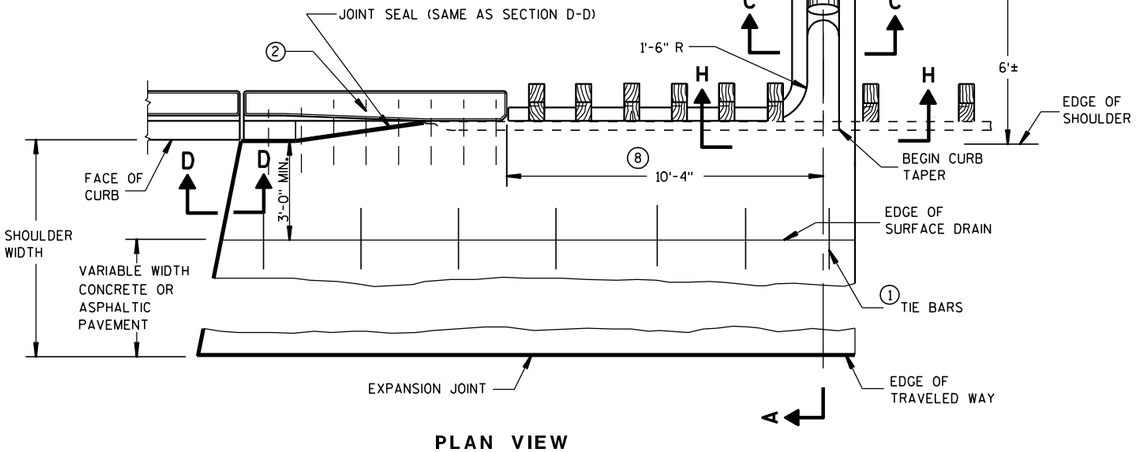
SECTION H-H



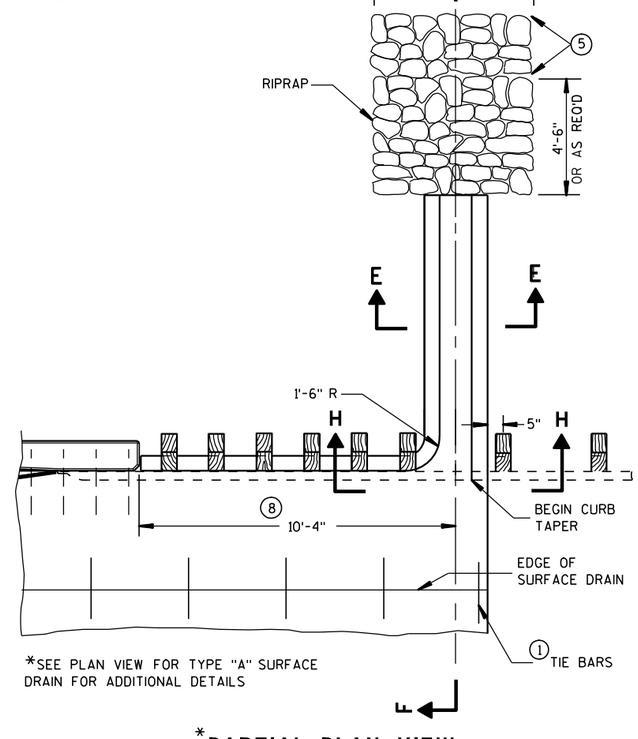
SECTION E-E



SECTION C-C

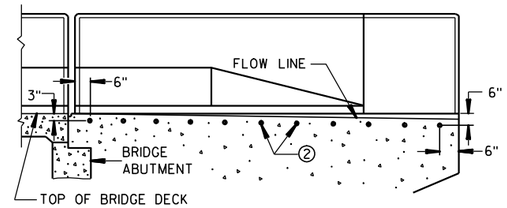


PLAN VIEW
SURFACE DRAIN WITH PIPE
TYPE "A"



*SEE PLAN VIEW FOR TYPE "A" SURFACE DRAIN FOR ADDITIONAL DETAILS

*PARTIAL PLAN VIEW
SURFACE DRAIN WITHOUT PIPE
TYPE "B"



LOCATION OF
TIE BARS IN WINGWALL

CONCRETE SURFACE DRAINS
FLUME TYPE
AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

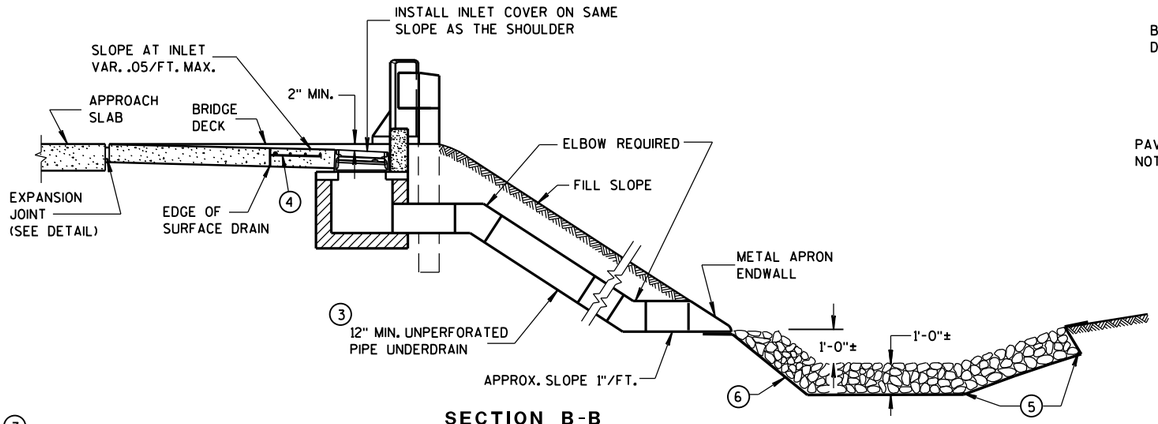
APPROVED
9/4/08
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
121
FHWA

6

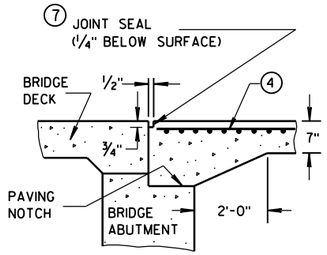
S.D.D. 8 D 2-6

6

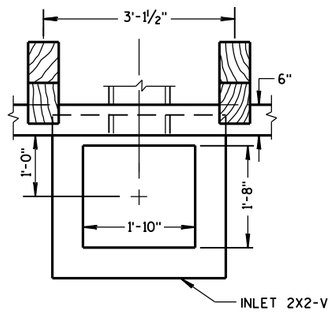
S.D.D. 8 D 2-6



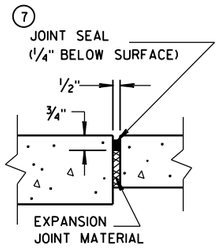
SECTION B-B



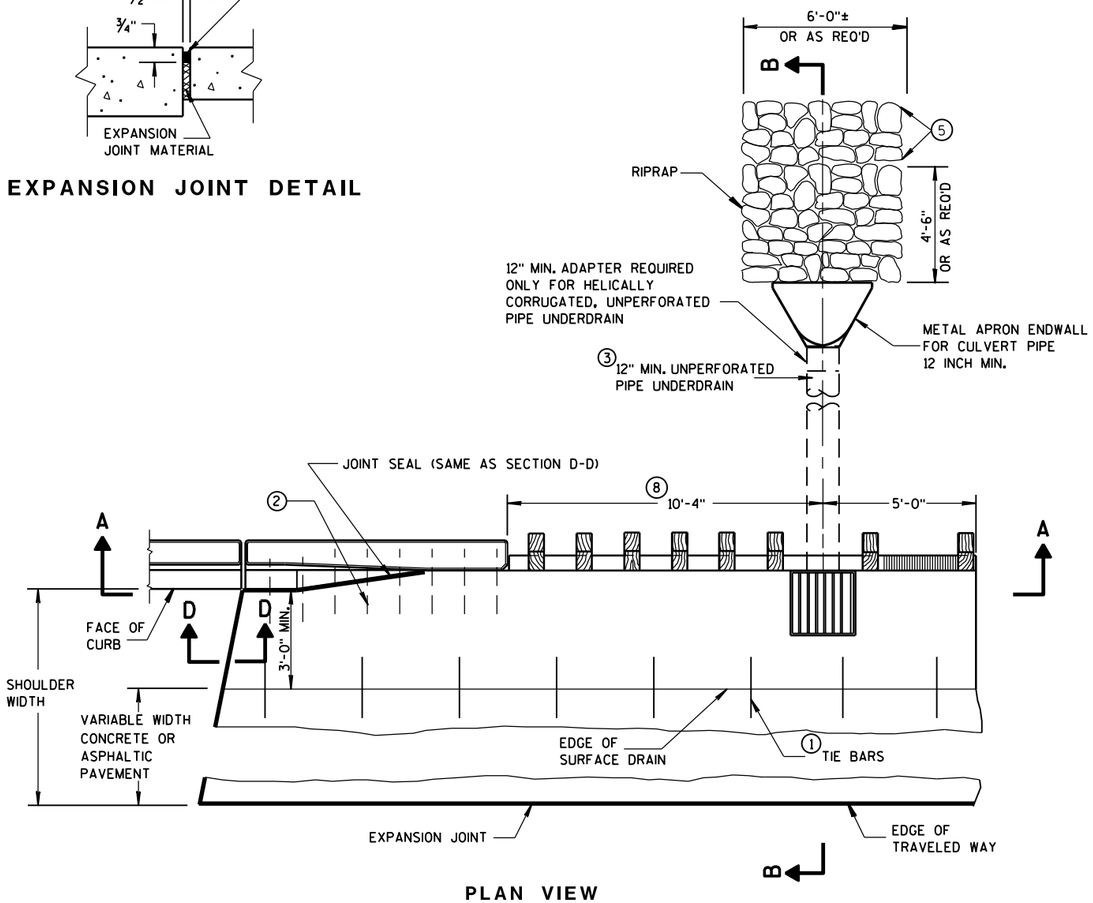
SECTION D-D



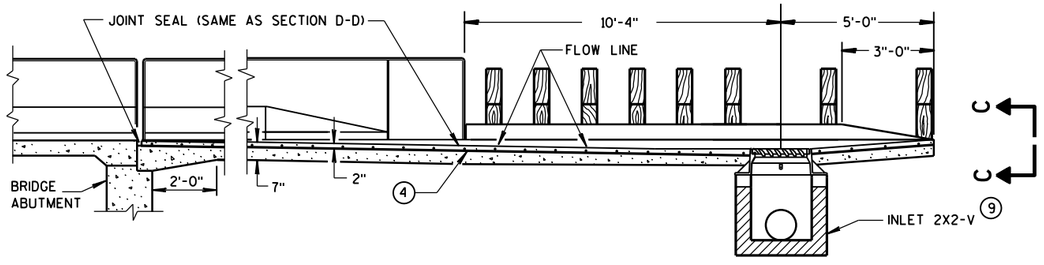
PLAN VIEW



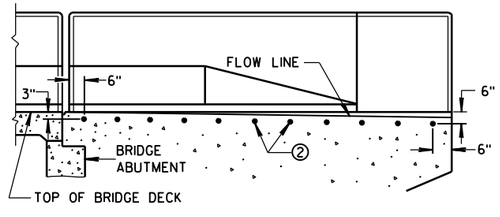
EXPANSION JOINT DETAIL



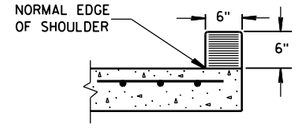
PLAN VIEW



SECTION A-A



LOCATION OF TIE BARS IN WINGWALL



SECTION C-C

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) NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.

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

(3) THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE SIX MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2 EXCEPT DRAIN TILE.

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

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

(6) GEOTEXTILE FABRIC.

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".

(9) SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C7 FOR DETAILS.

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV...
FHWA

6

S.D.D. 8 D 3-7

6

S.D.D. 8 D 3-7

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) UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

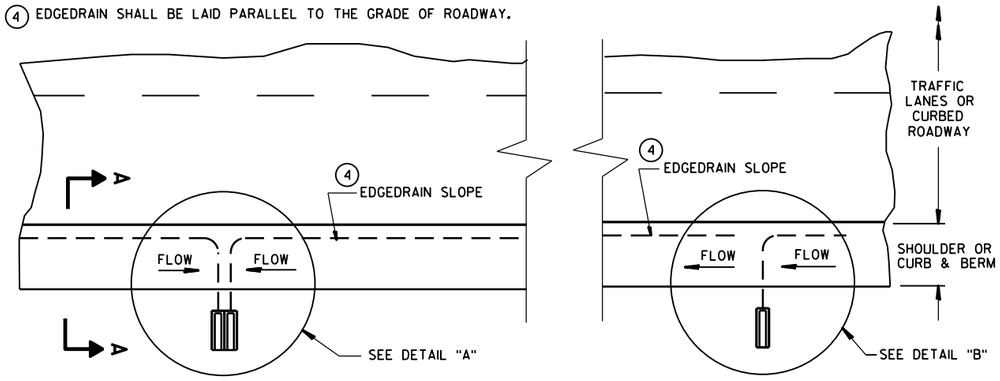
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.

(2) MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.

(3) EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.

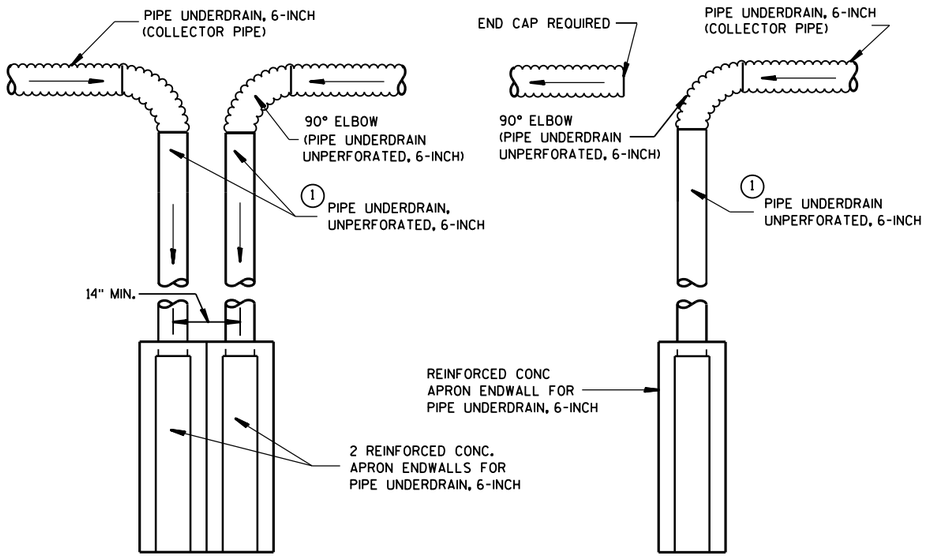
(4) EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



PLAN VIEW

ROADWAY WITH SHOULDERS OR CURBS

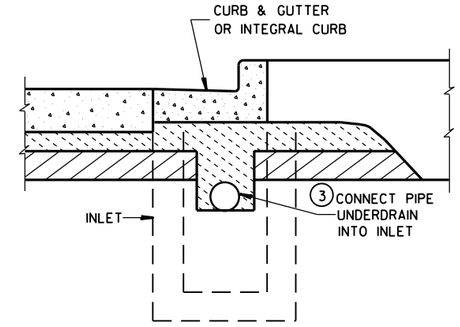
(EDGEDRAIN OUTLETS TO ROADSIDE)(2)



DETAIL "A"
TO BE USED AT LOW POINT LOCATIONS

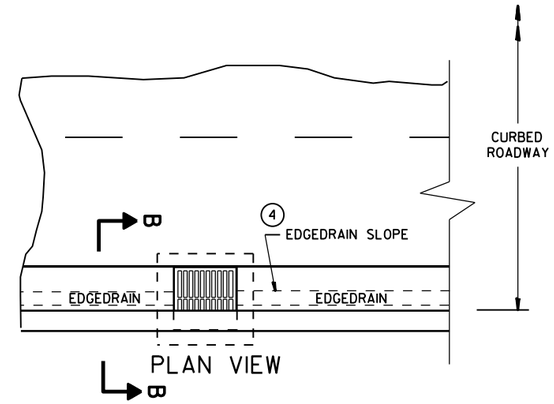
DETAIL "B"
TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



SECTION B-B

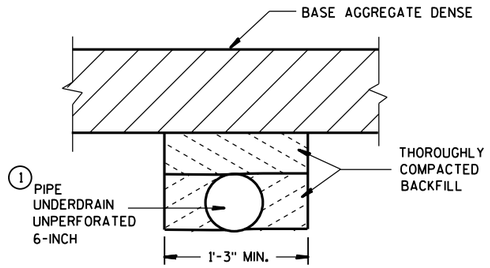
URBAN CROSS SECTION



PLAN VIEW

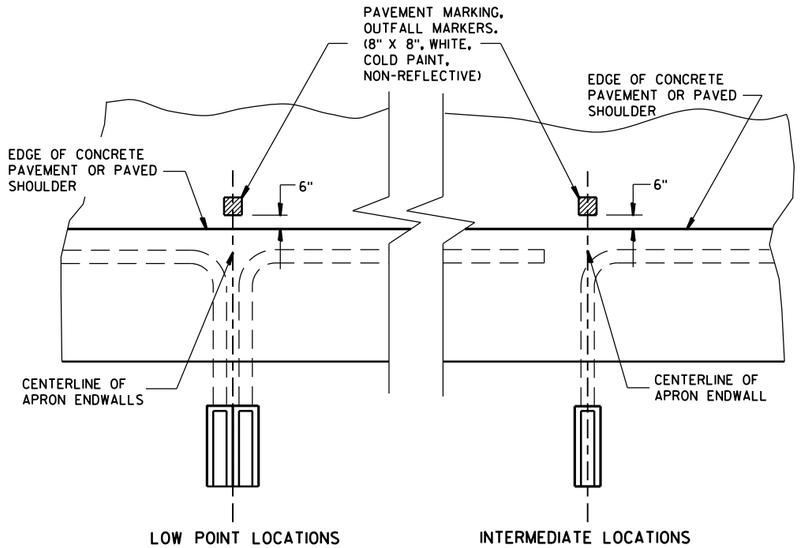
ROADWAY WITH CURBS

(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)



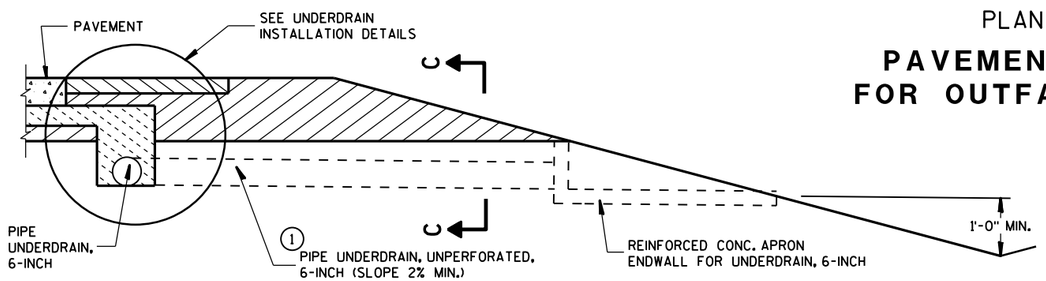
SECTION C-C

(TRENCH FOR OUTFALL PIPE)



PLAN VIEW

PAVEMENT MARKING FOR OUTFALL MARKERS



SECTION A-A

RURAL CROSS SECTION

EDGEDRAIN OUTLET AND OUTFALL MARKERS

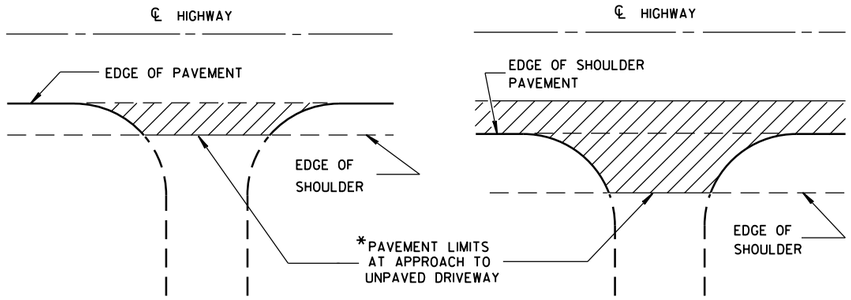
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 15-5a

6

S.D.D. 8 D 15-5a

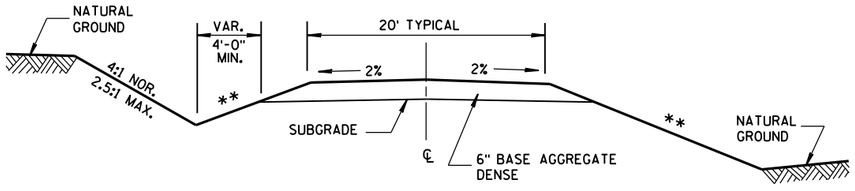


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

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

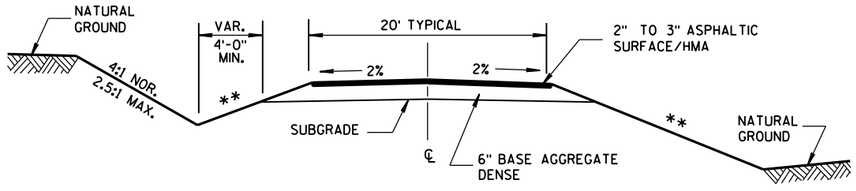


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

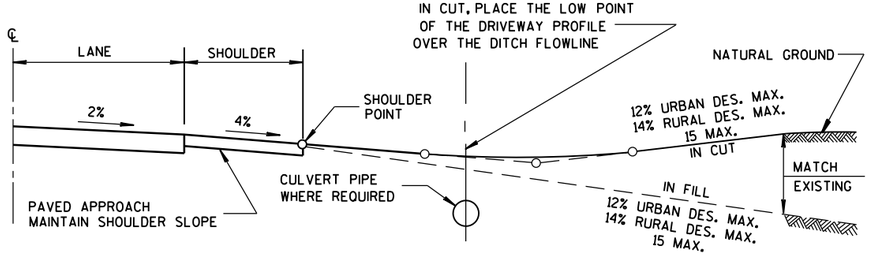
** SLOPE CAN VARY WITH SPEED. SEE 11-45-2.6.2.

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



IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE



TYPICAL DRIVEWAY PROFILES

DRIVEWAYS WITHOUT CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

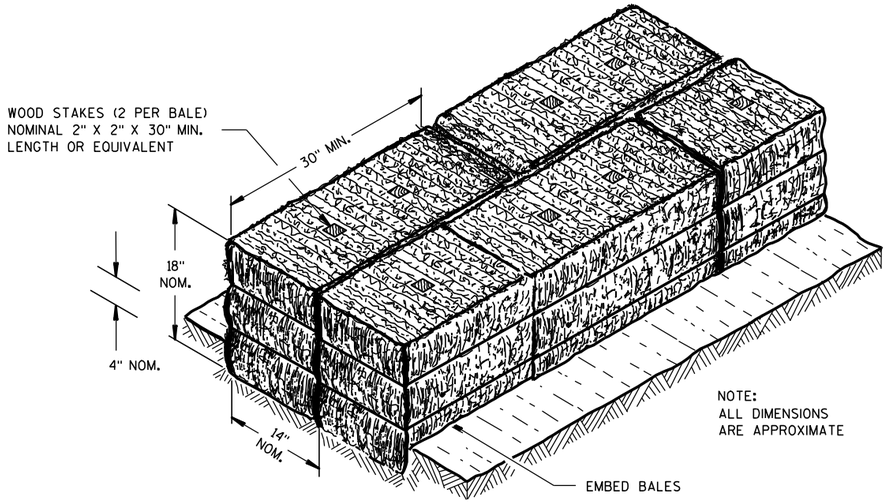
APPROVED
December, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERV
FHWA

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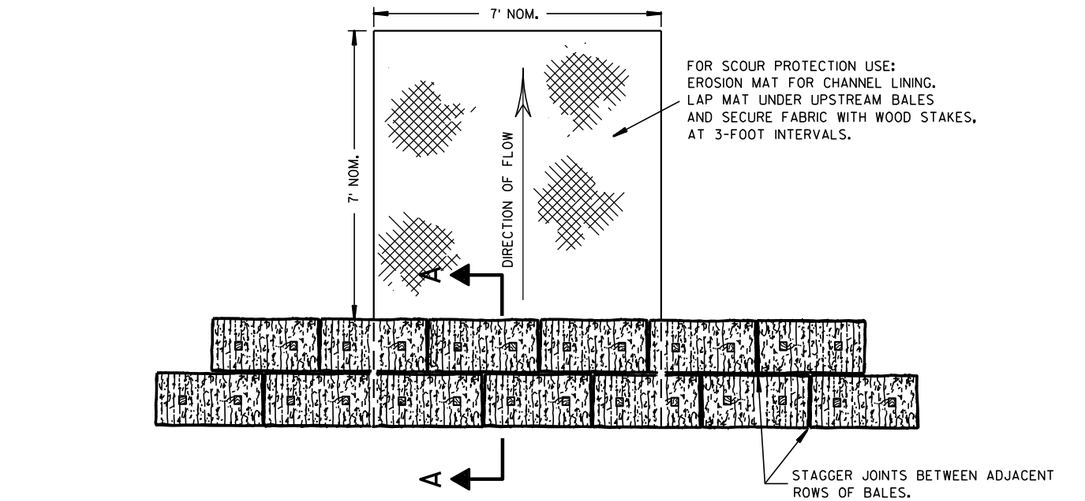
S.D.D. 8 D 21-1

6

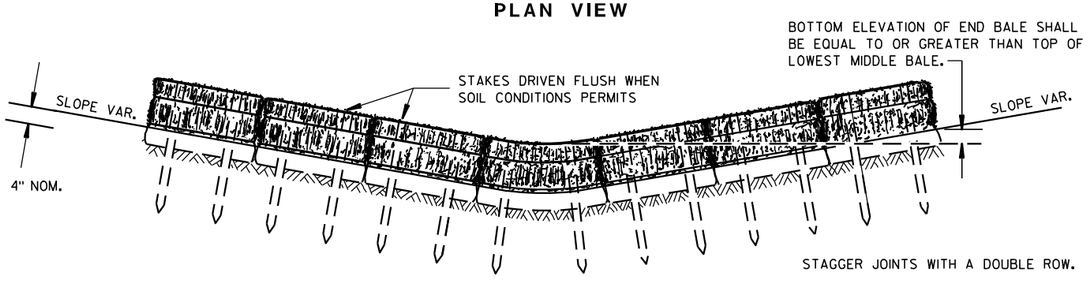
S.D.D. 8 D 21-1



SECTION A-A



PLAN VIEW



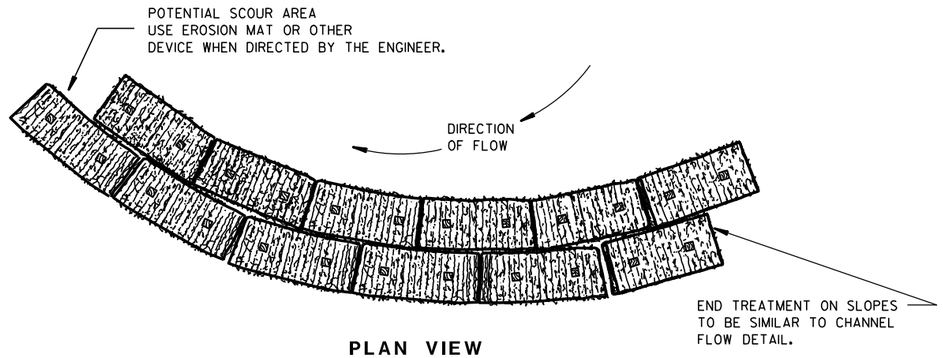
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

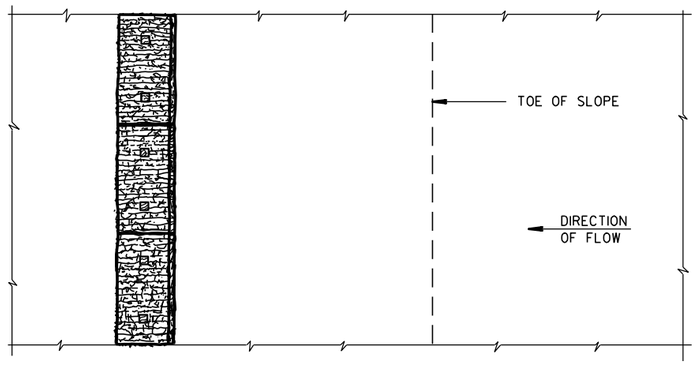
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

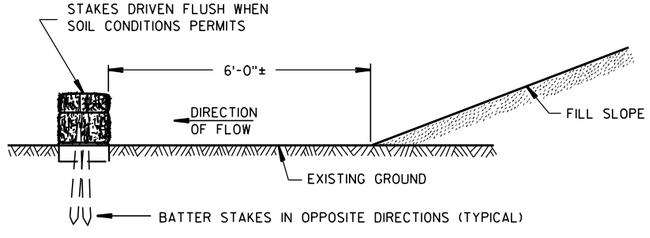


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

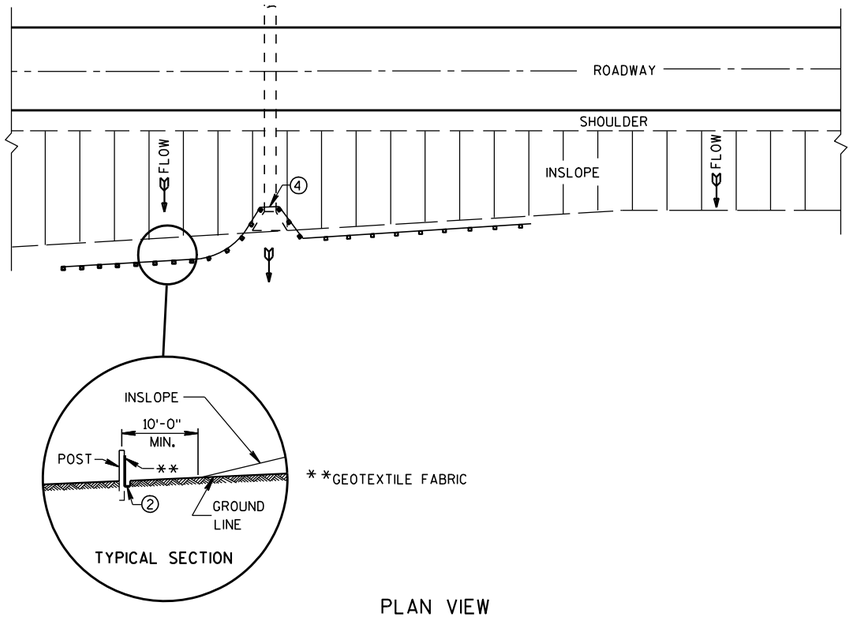
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 E 8-3

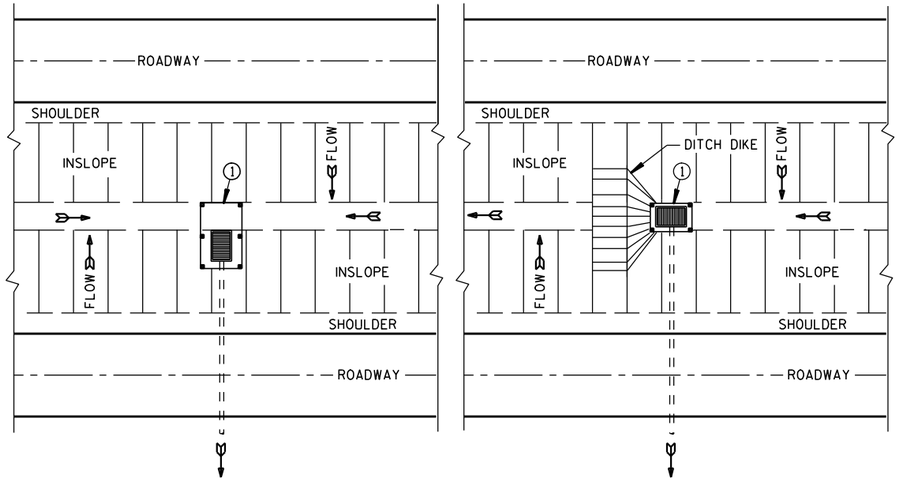
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



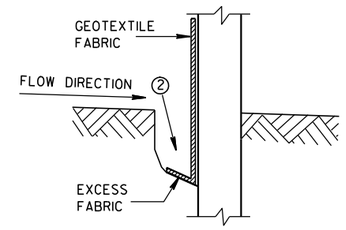
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

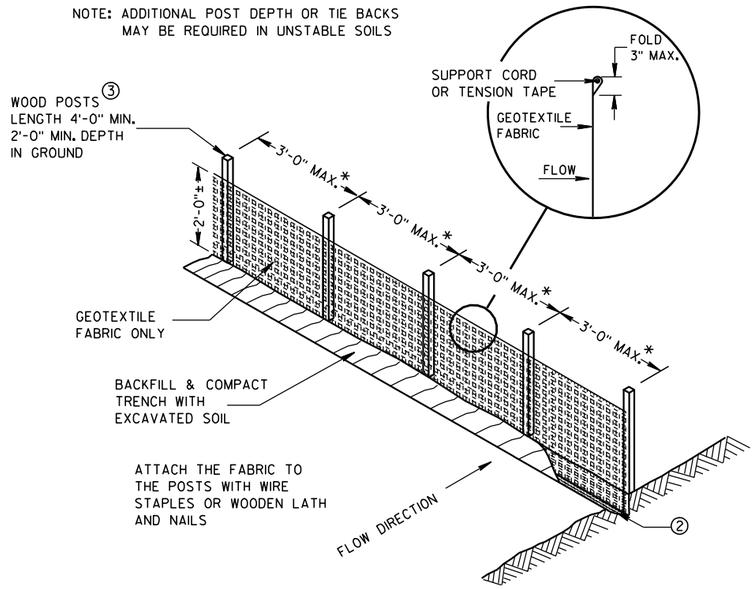
GENERAL NOTES

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.

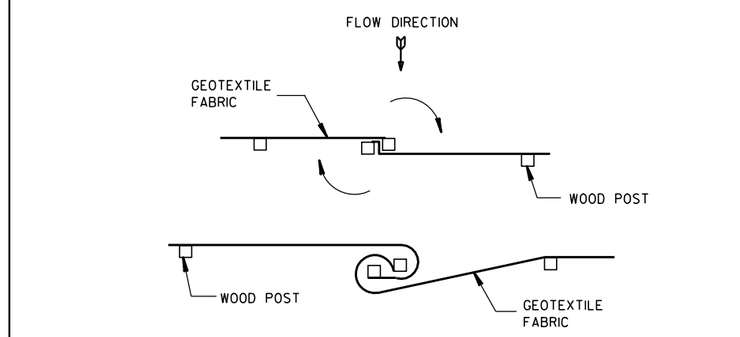


TRENCH DETAIL

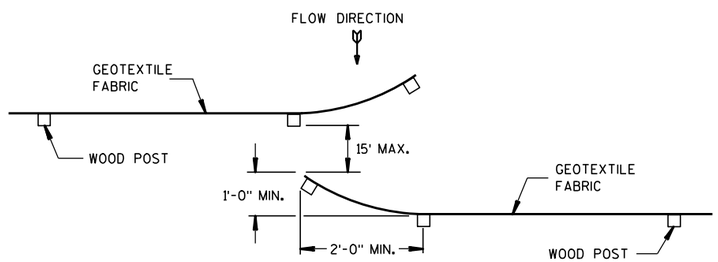


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

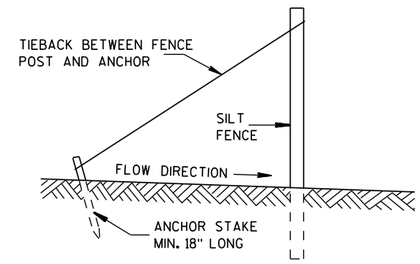


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

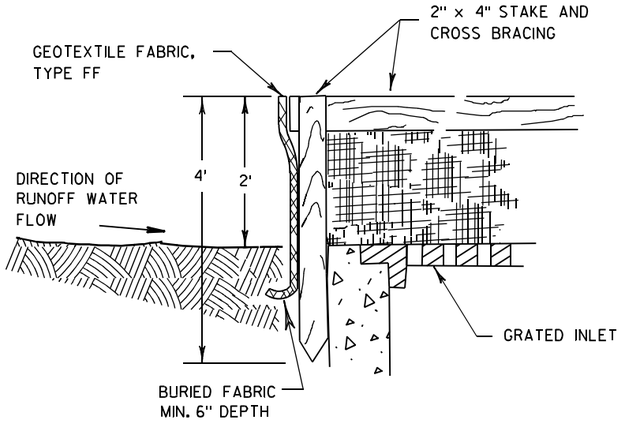
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

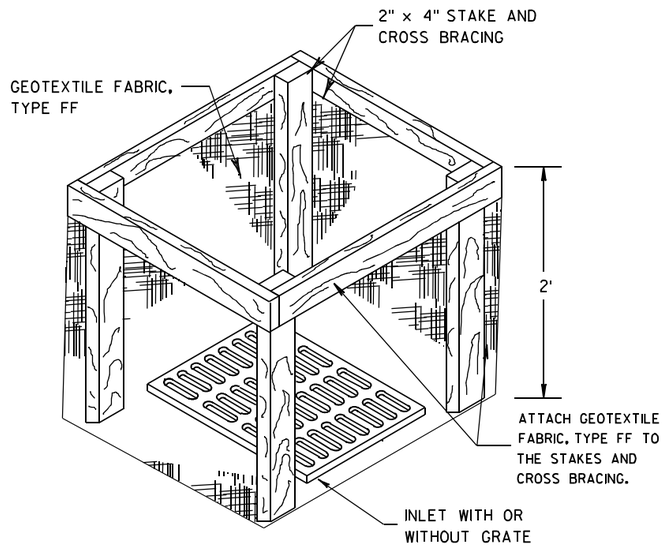
6

S.D.D. 8 E 9-6

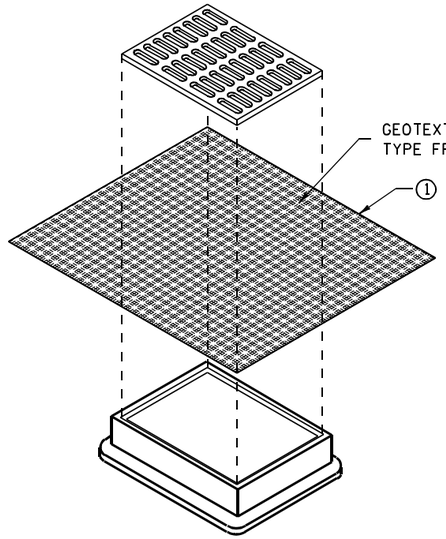
6

S.D.D. 8 E 9-6



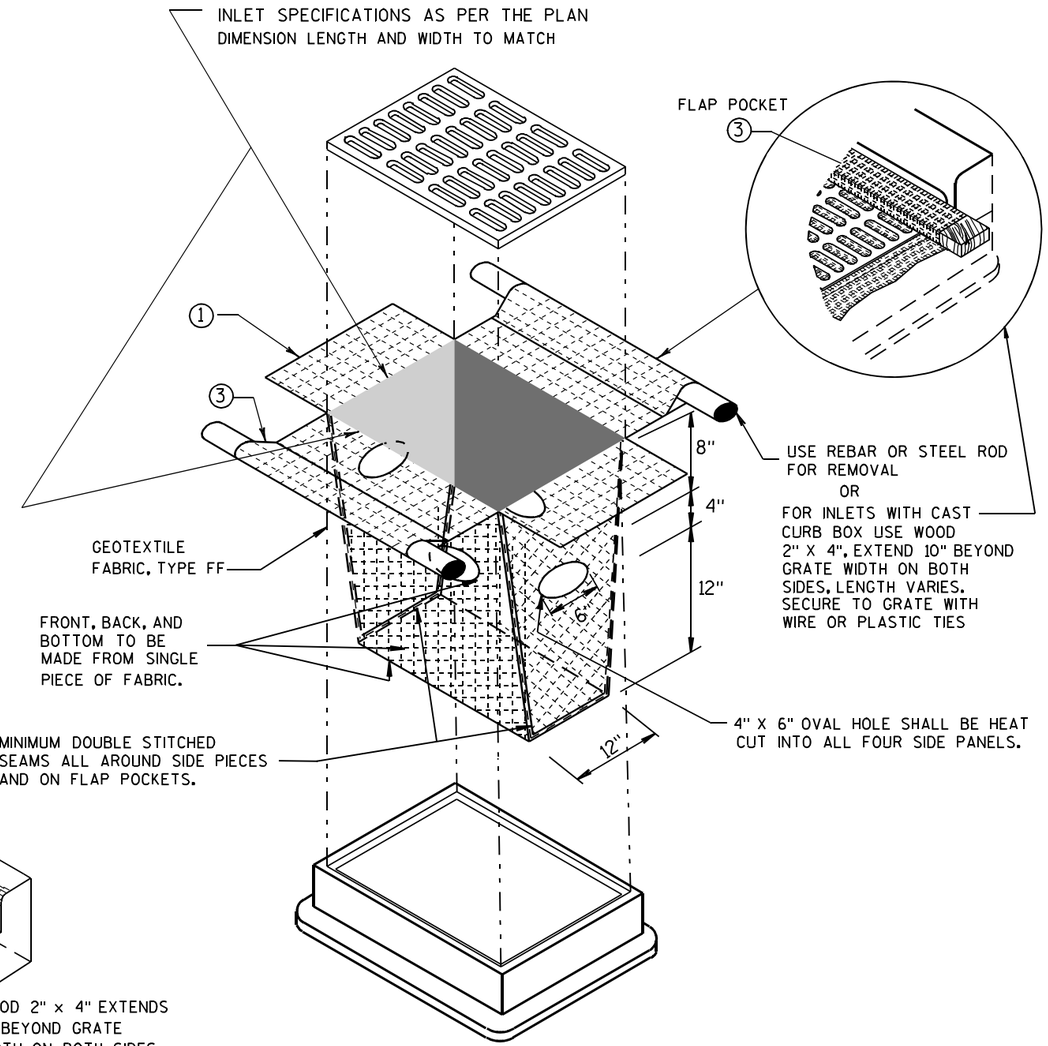


INLET PROTECTION, TYPE A



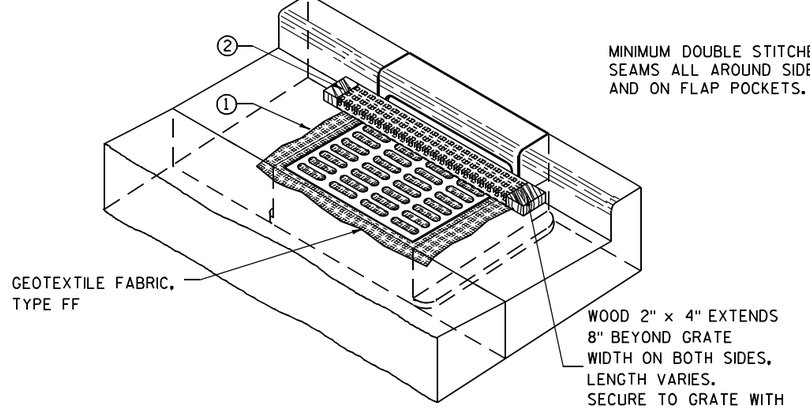
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

METAL APRON ENDWALLS

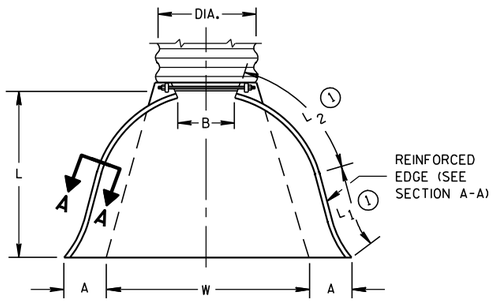
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

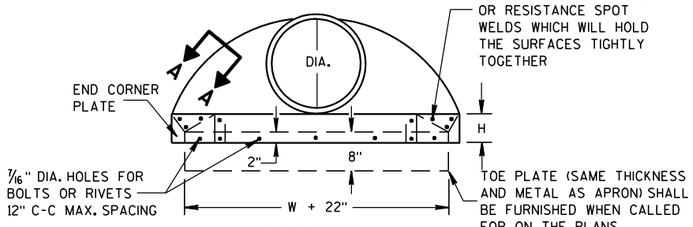
REINFORCED CONCRETE APRON ENDWALLS

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

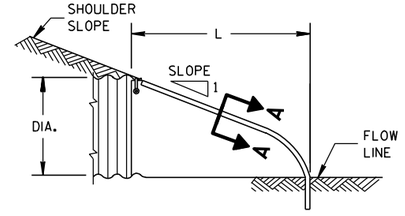
* MINIMUM
** MAXIMUM



PLAN VIEW

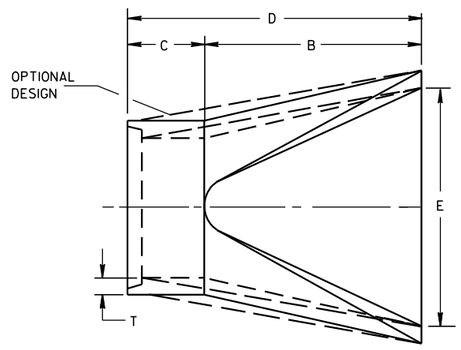


END VIEW

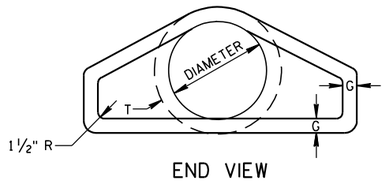


SIDE ELEVATION

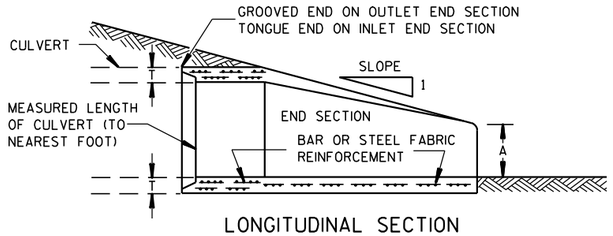
METAL ENDWALLS



PLAN

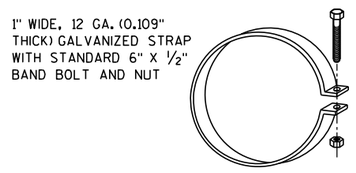


END VIEW



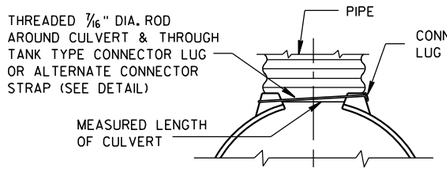
LONGITUDINAL SECTION

CONCRETE ENDWALLS

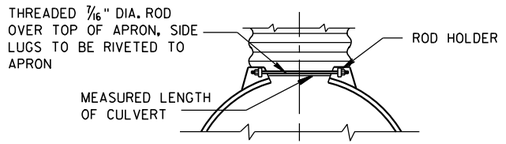


ALTERNATE FOR TYPE 1 CONNECTION

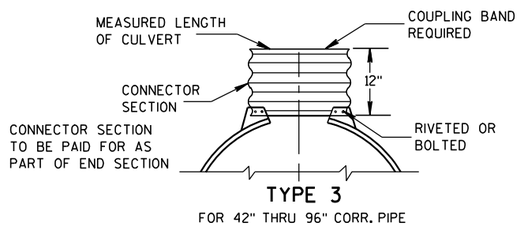
END SECTION CONNECTOR STRAP



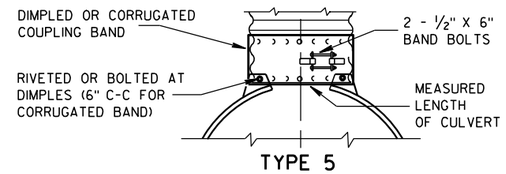
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

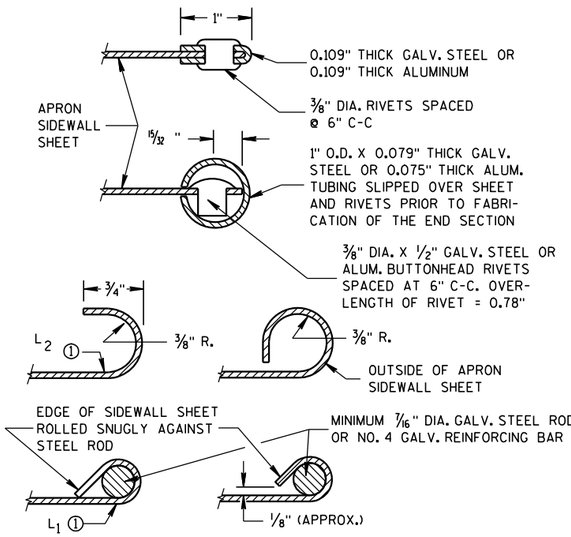
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

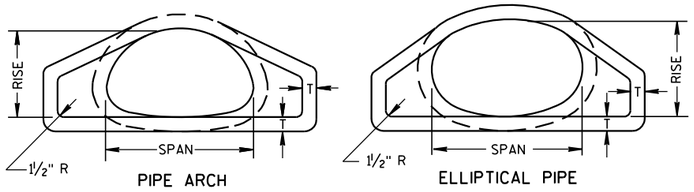
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

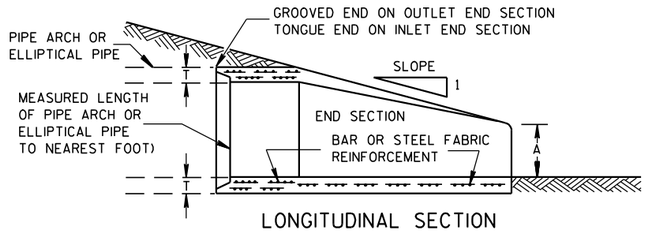
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

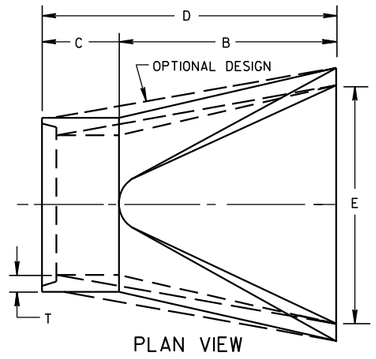
6
S.D.D. 8 F 1-11



END VIEW

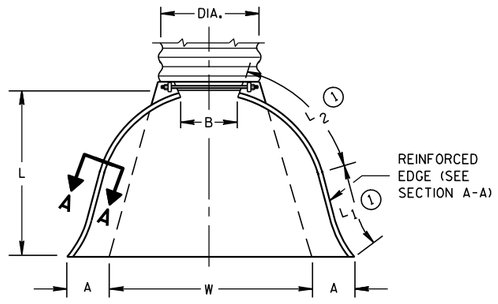


LONGITUDINAL SECTION

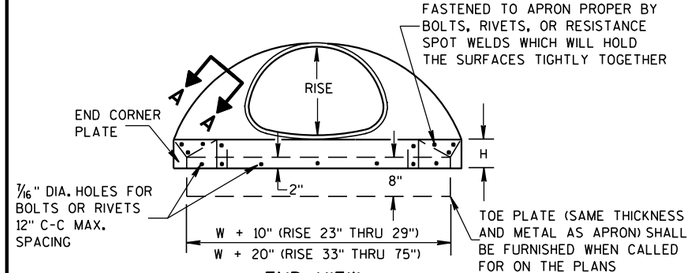


PLAN VIEW

CONCRETE ENDWALLS

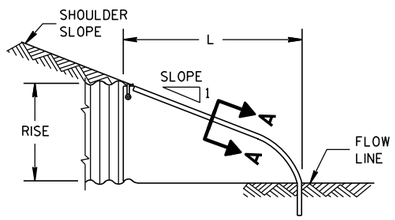


PLAN VIEW



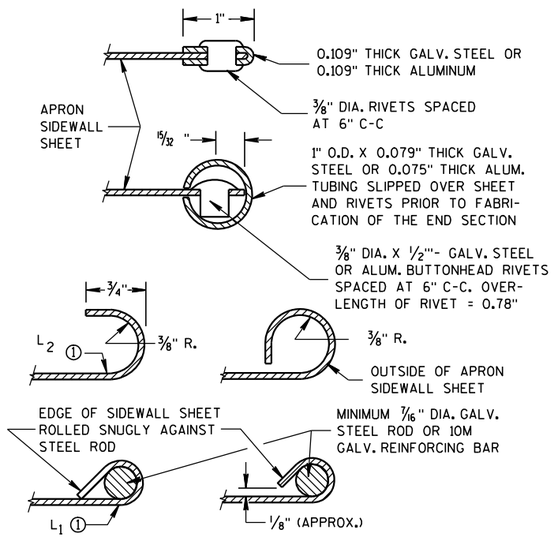
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

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

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

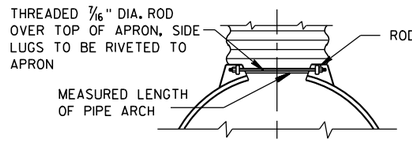
REINFORCED CONCRETE PIPE ARCH

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

REINFORCED CONCRETE ELLIPTICAL PIPE

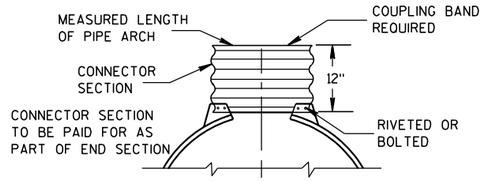
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48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

**NOMINAL SIZE



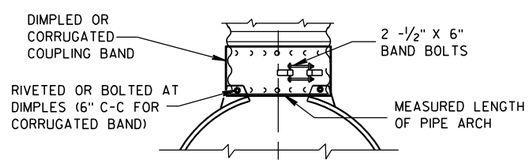
TYPE 2

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



TYPE 3

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



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

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

CONNECTION DETAILS

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

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

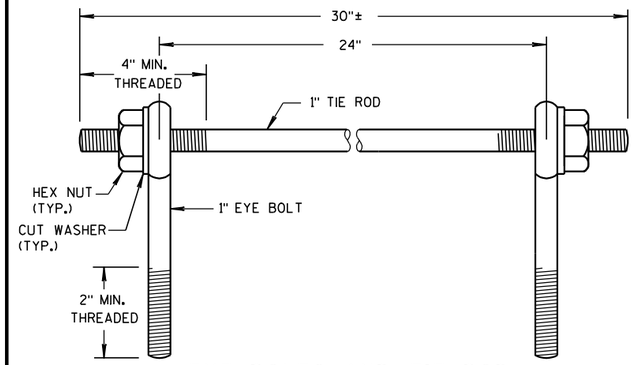
FHWA

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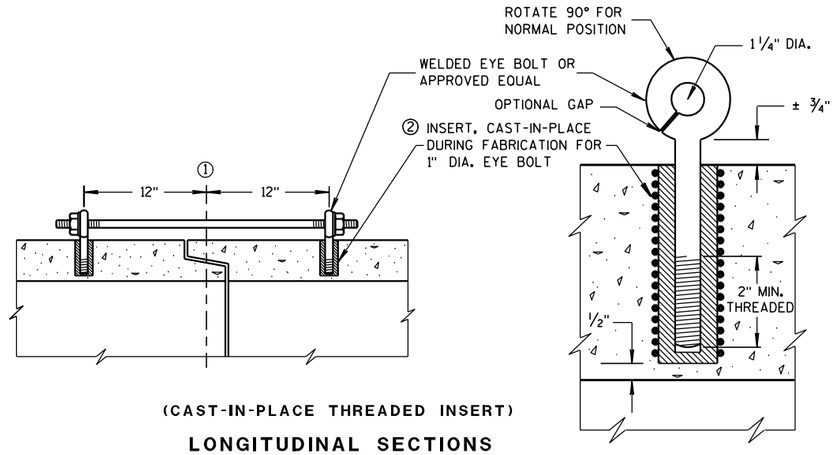
S.D.D. 8 F 2-1

6

S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

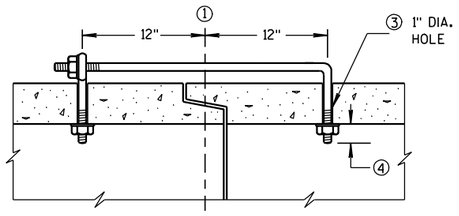
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

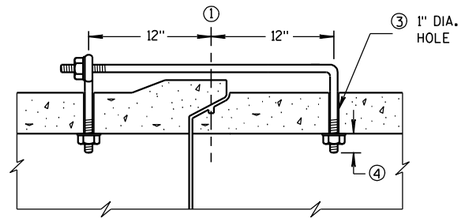
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

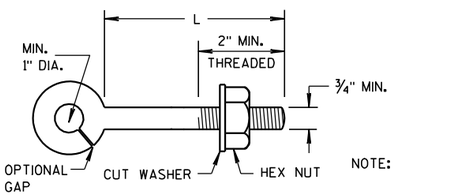


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

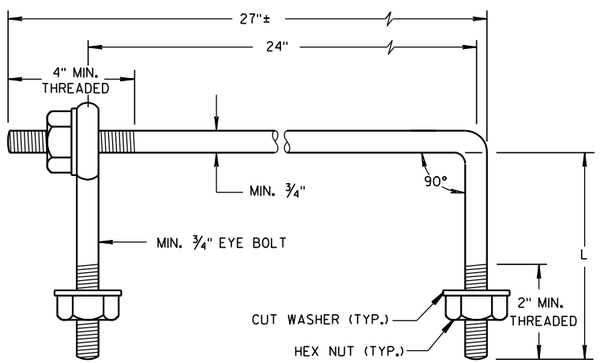
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

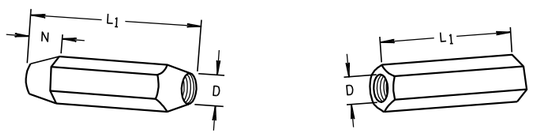
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

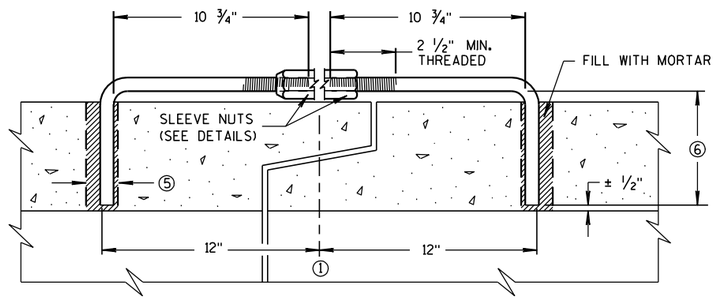
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

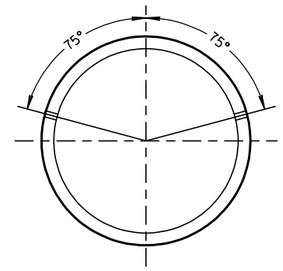
SLEEVE NUTS



LONGITUDINAL SECTION

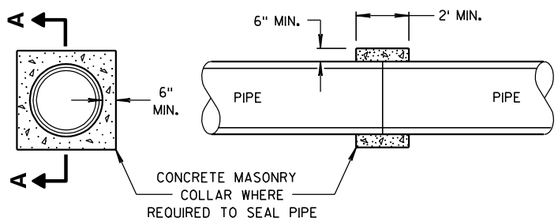
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
130
FHWA

6

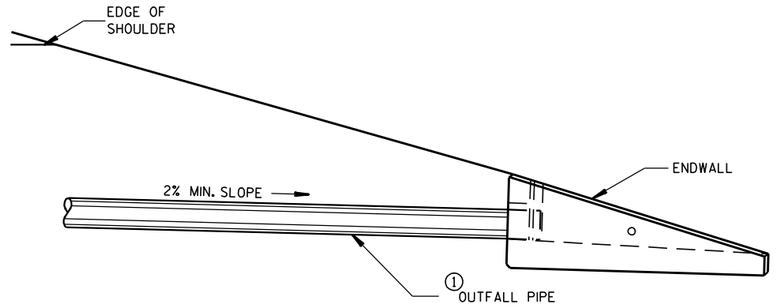
S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

**APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION 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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

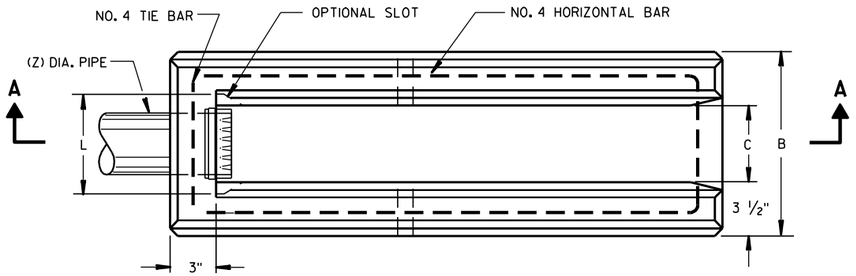
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

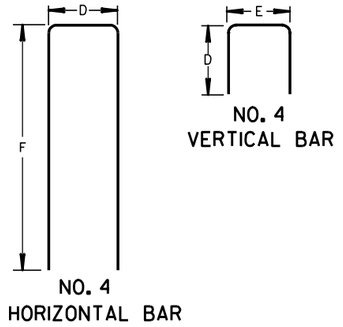
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

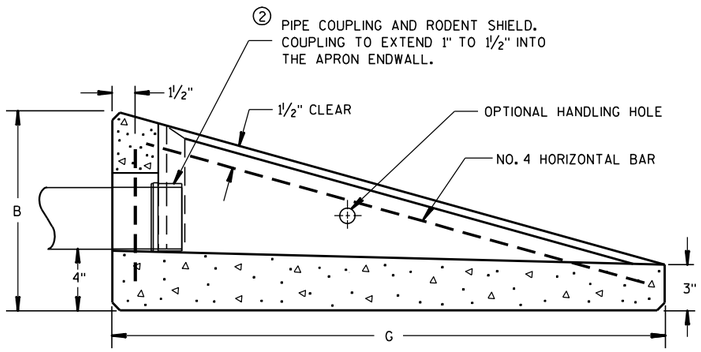
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



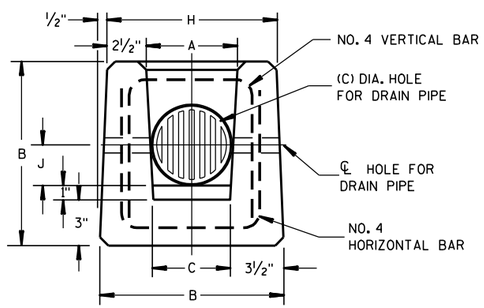
PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS

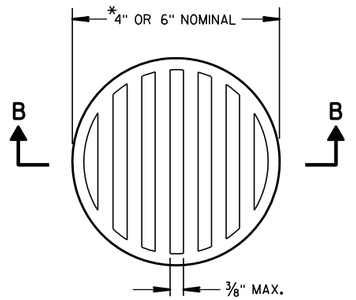


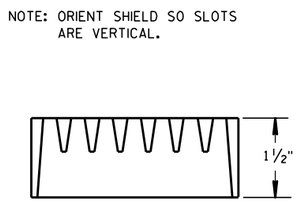
SECTION A-A



END VIEW

CONCRETE APRON ENDWALL FOR UNDERDRAIN





SECTION B-B

② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

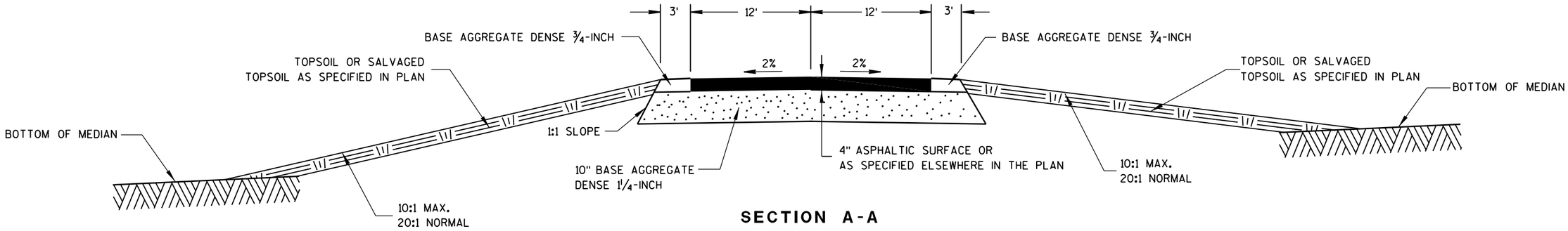
APPROVED
3/10/98 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

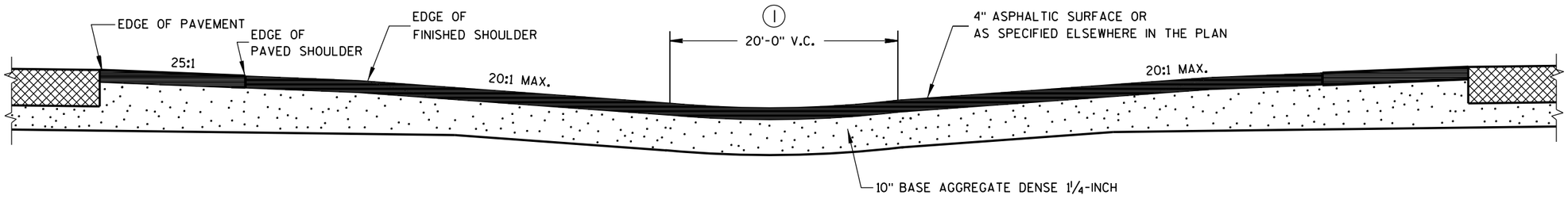
S.D.D. 8 F 6-4

6

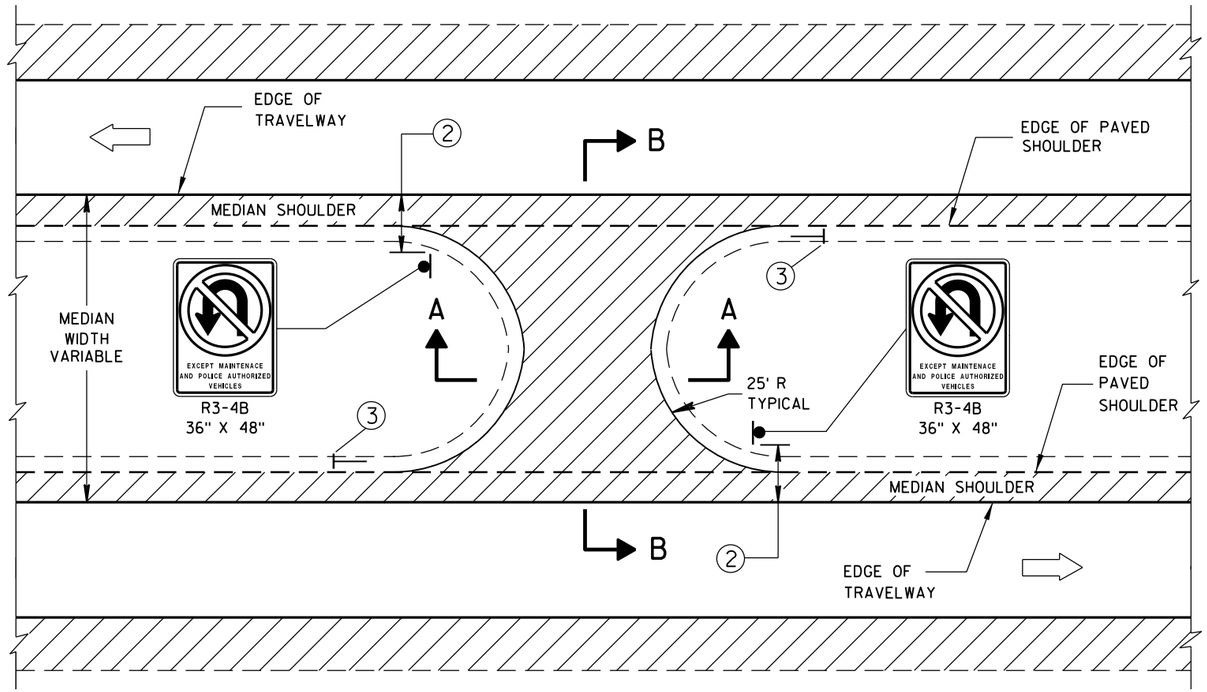
S.D.D. 8 F 6-4



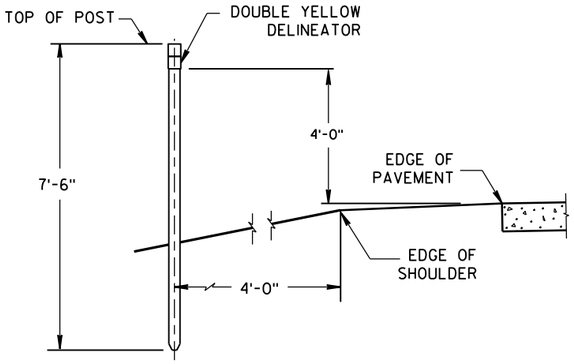
SECTION A-A



SECTION B-B



PLAN VIEW



DOUBLE YELLOW DELINEATOR INSTALLATION

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) ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.

(2) SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

(3) INSTALL DOUBLE YELLOW DELINEATOR. SEE STANDARD DETAIL DRAWING 15A2.

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

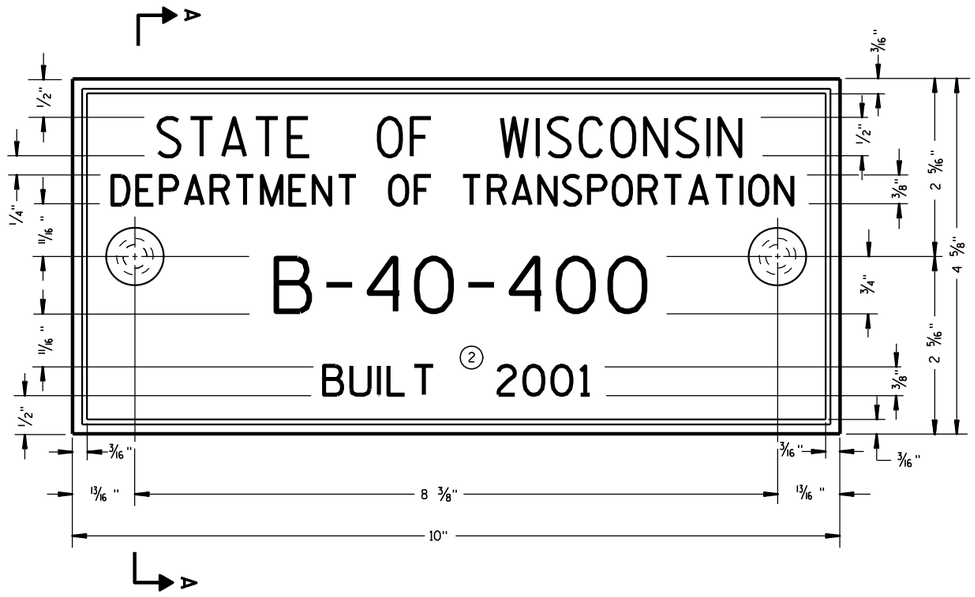
8/2013 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

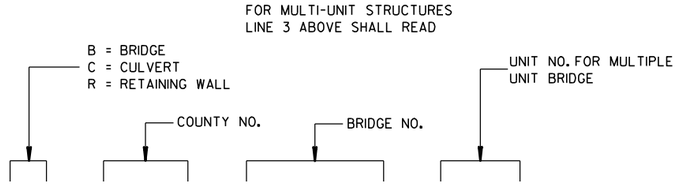
6

S.D.D. 11 A 1-5



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

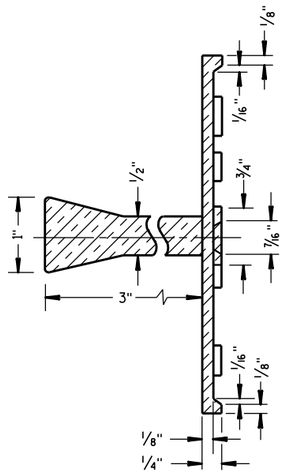
GENERAL NOTES

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.

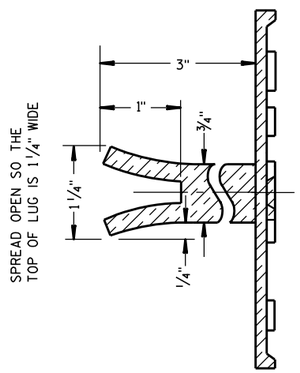
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

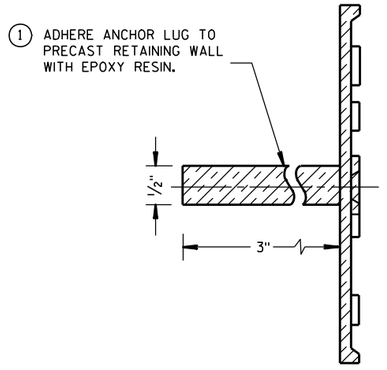
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

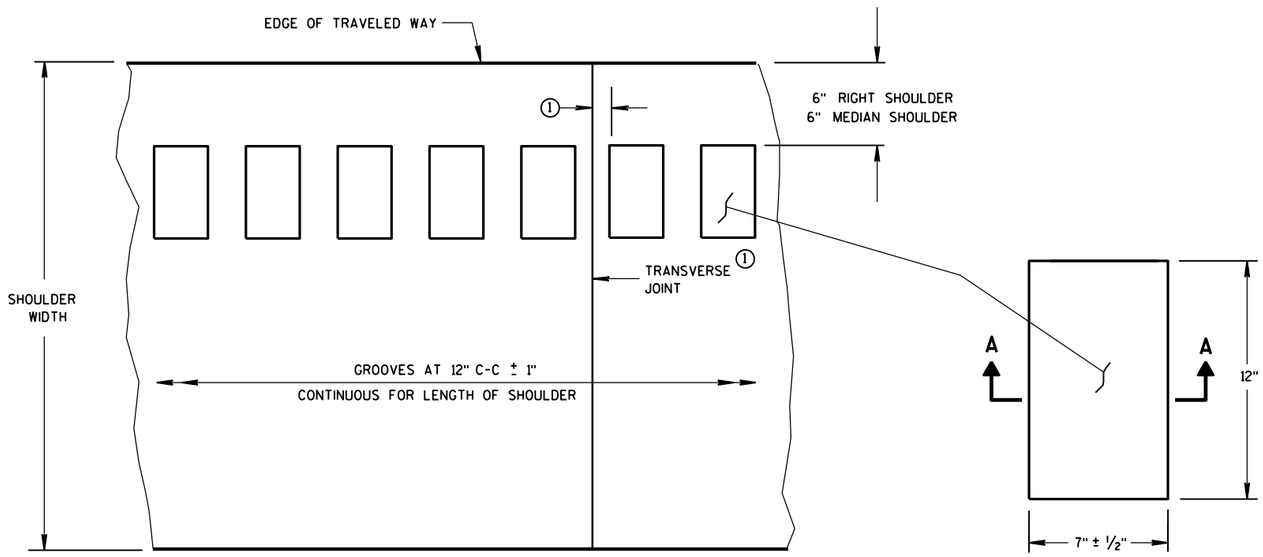
NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER
FHWA	

6

S.D.D. 12 A 3-10

6

S.D.D. 12 A 3-10



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

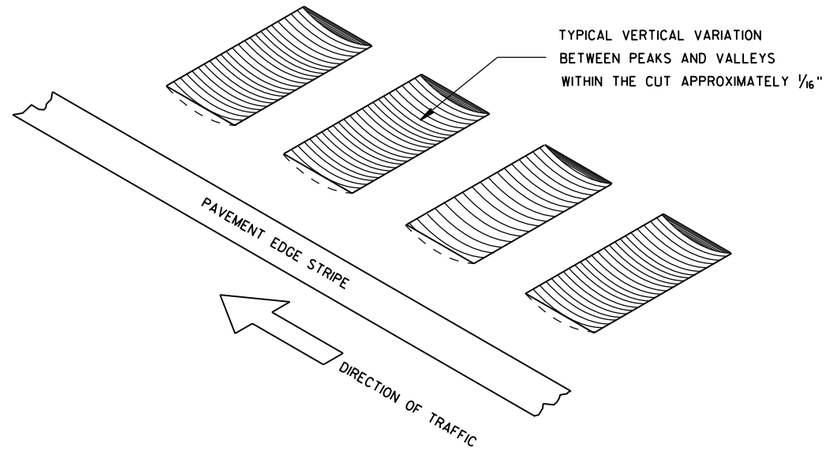
GENERAL NOTES

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

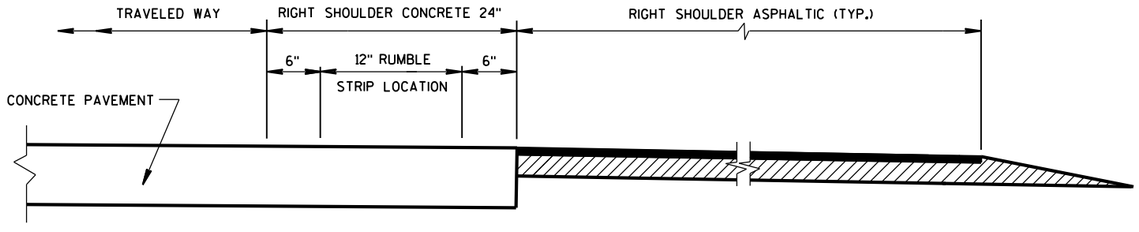
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

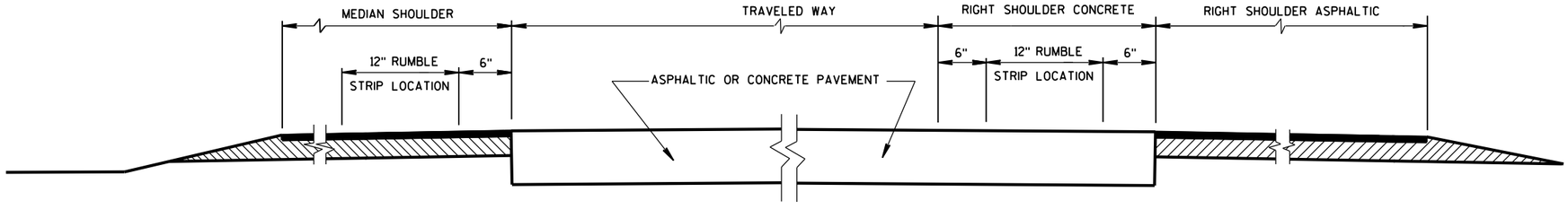
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



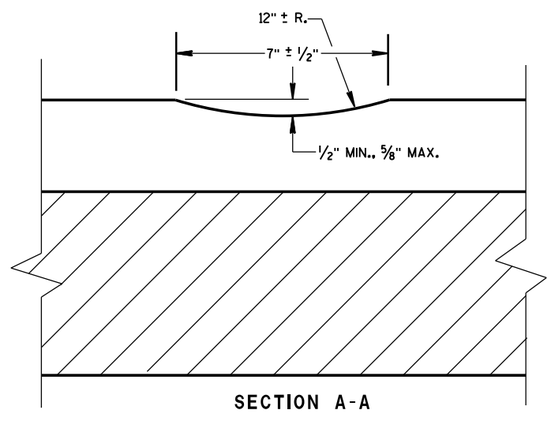
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

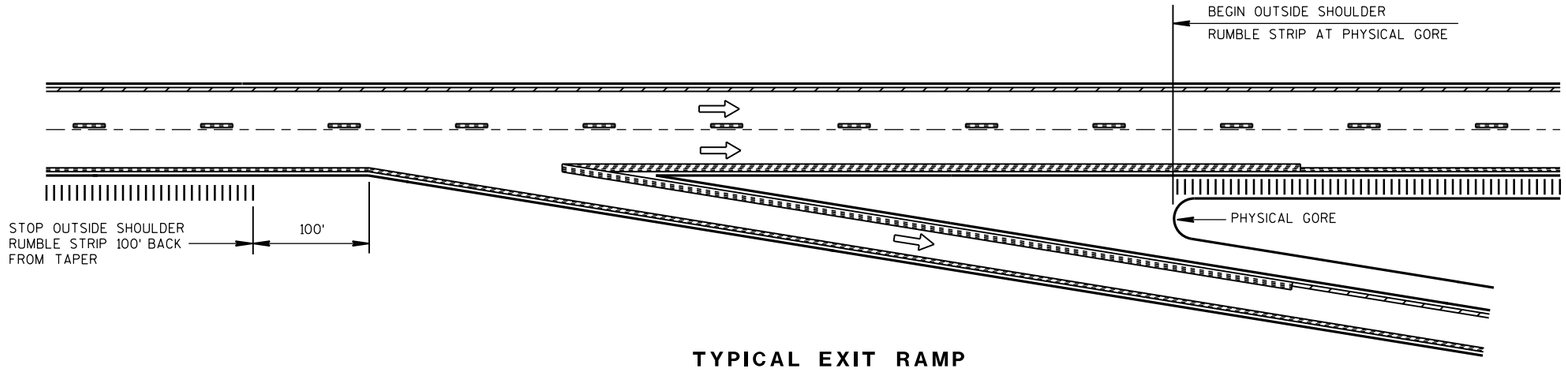
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

6

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



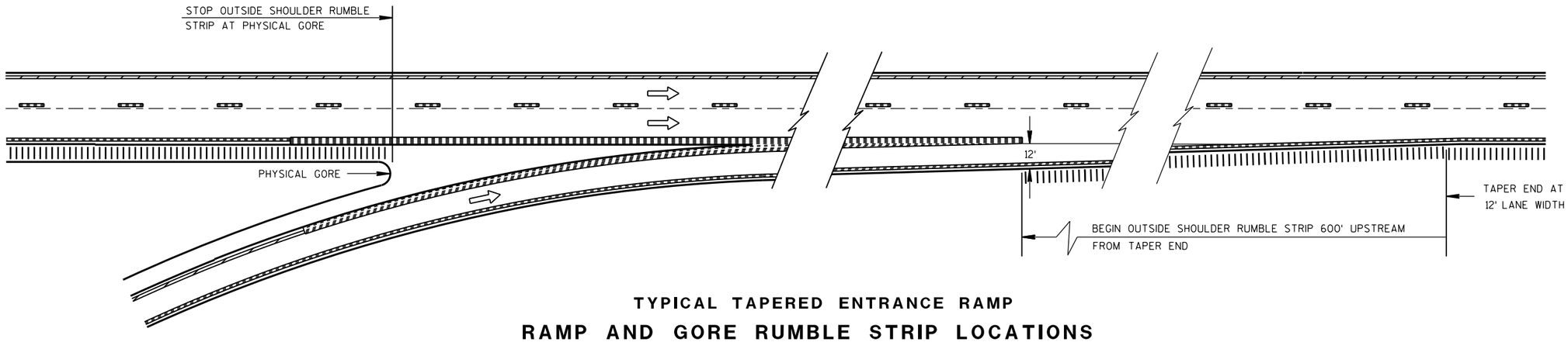
TYPICAL EXIT RAMP

NOTES:

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

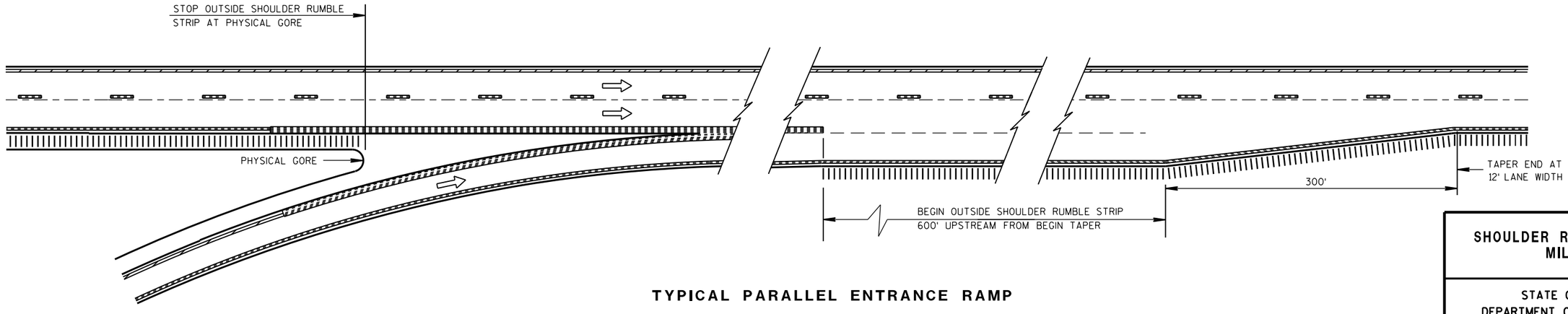
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/2012
DATE

/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER

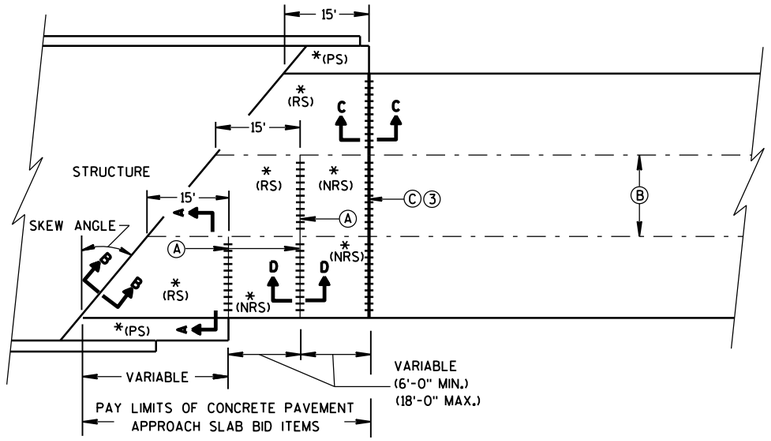
FHWA

6

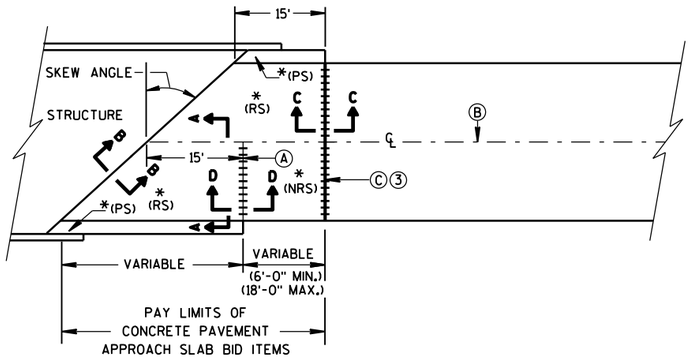
S.D.D. 13 A 5-5b

6

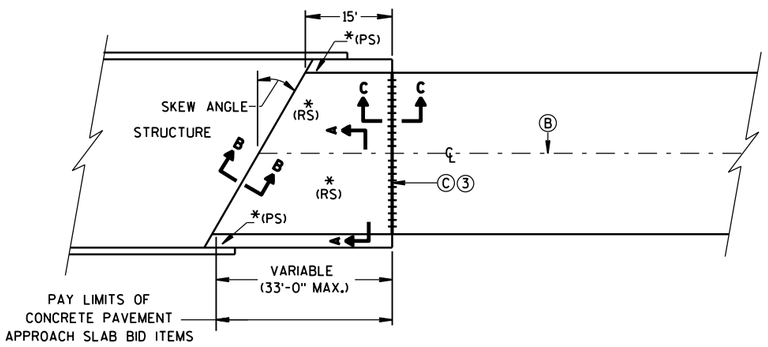
S.D.D. 13 A 5-5b



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



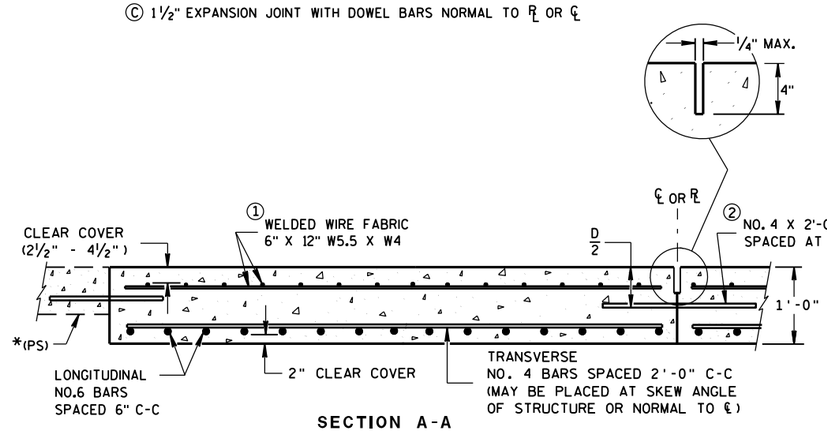
SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

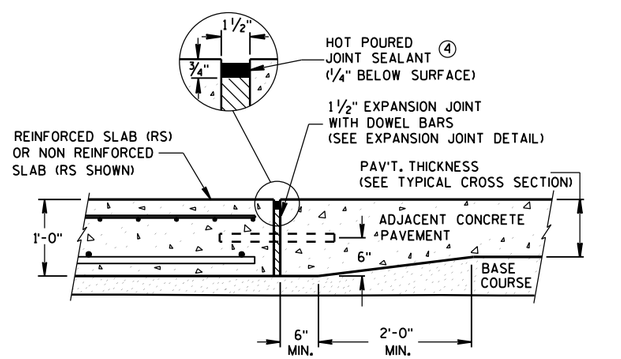
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

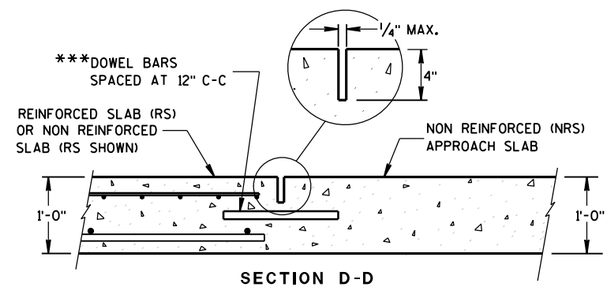
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

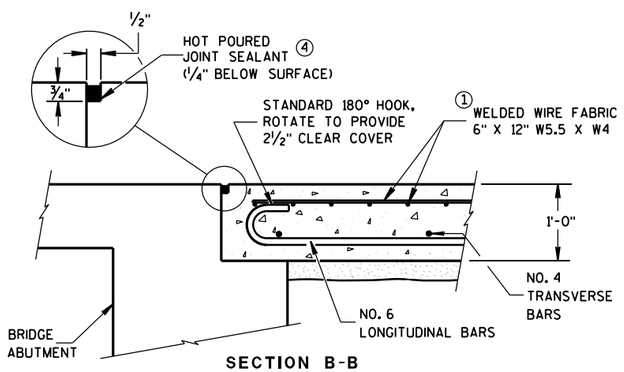
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

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

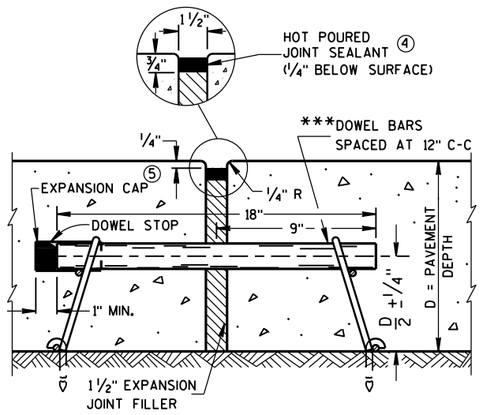
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

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

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



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

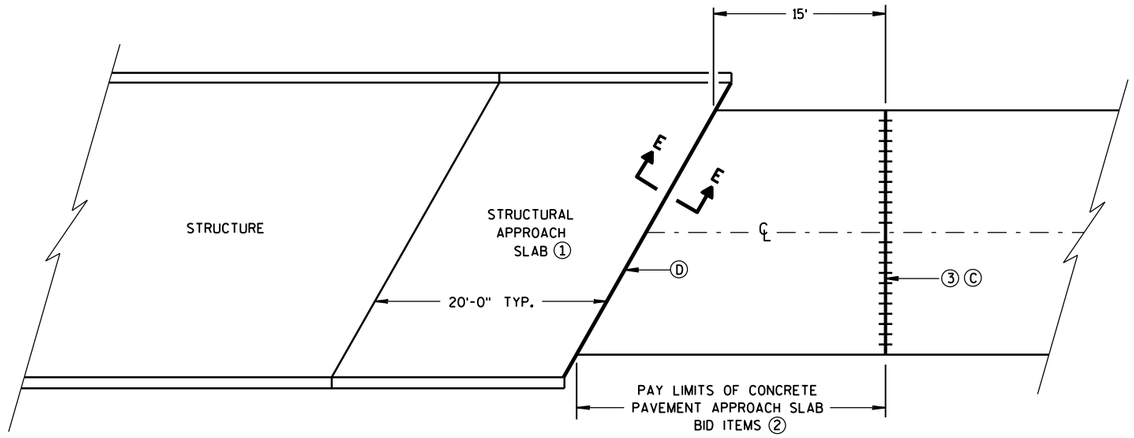
APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

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

6

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



GENERAL NOTES

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

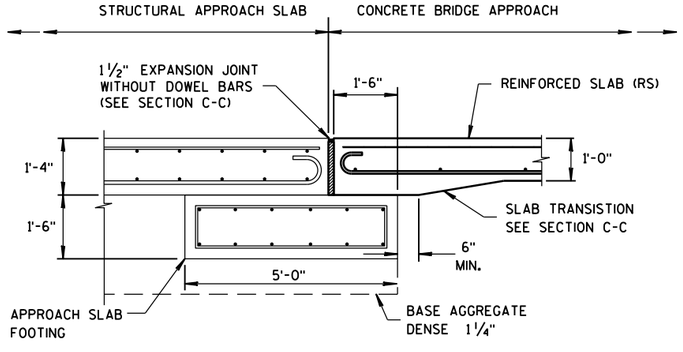
① SEE BRIDGE PLAN.

② CONFORM TO SHEET 13 B 2(A) FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS.

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

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

Ⓓ 1½" 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

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

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

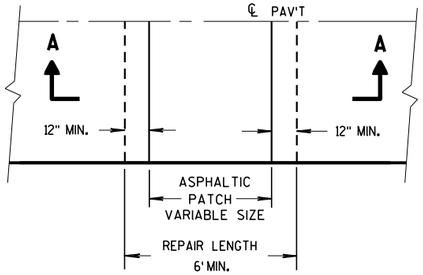
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

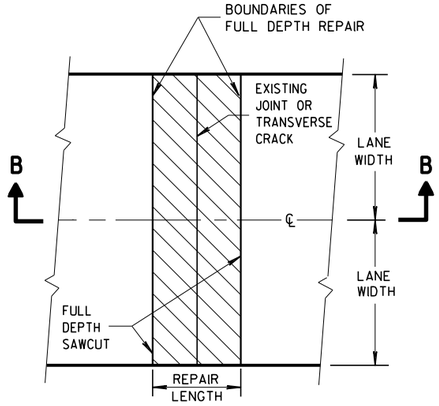
PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

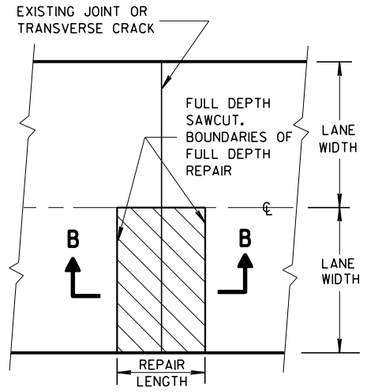
(1) DOWEL BARS MIGHT NOT EXIST.



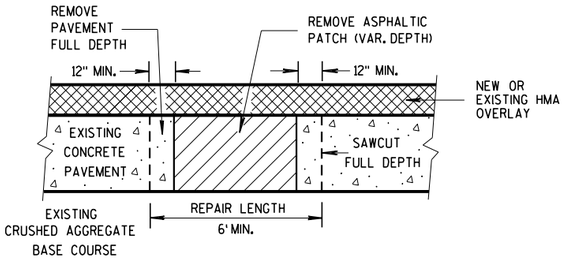
PLAN VIEW



PLAN VIEW
(DOUBLE LANE REPAIR)



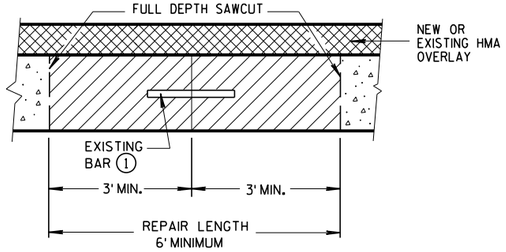
PLAN VIEW
(SINGLE LANE REPAIR)



SECTION A-A

HMA PATCH REMOVAL

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B-B

CONCRETE REMOVAL

6

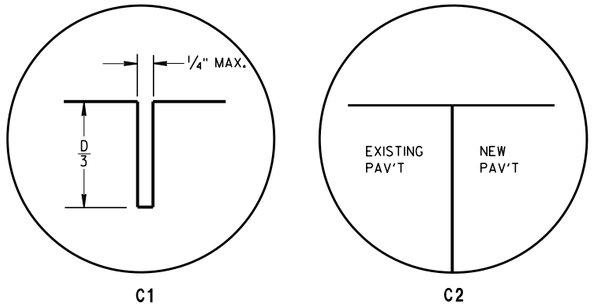
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S.D.D. 13 C 14-7a

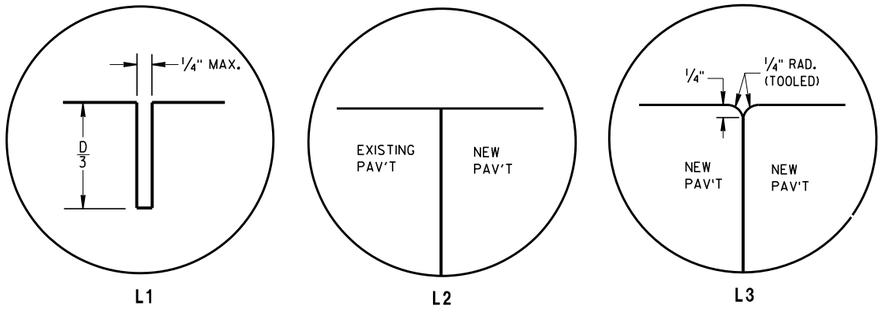
S.D.D. 13 C 14-7a

BASE PATCHING CONCRETE

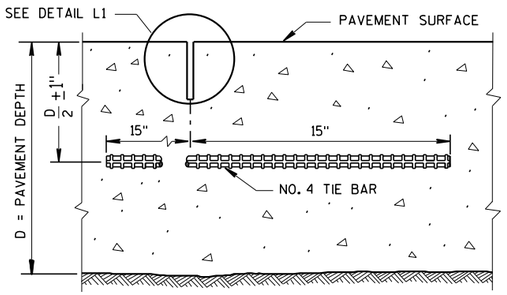
STATE OF WISCONSI
DEPARTMENT OF TRANSPORTATION



TRANSVERSE JOINTS

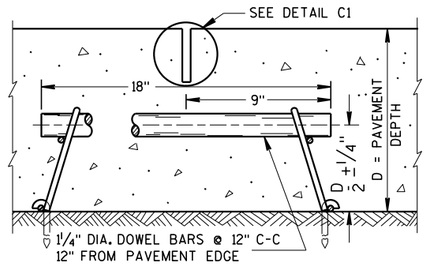


LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT



SECTION F-F

CONTRACTION JOINT

GENERAL NOTES

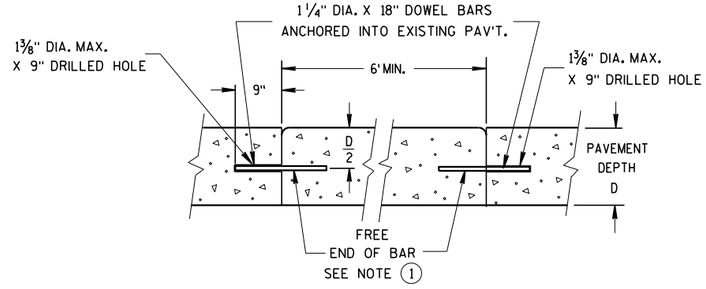
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

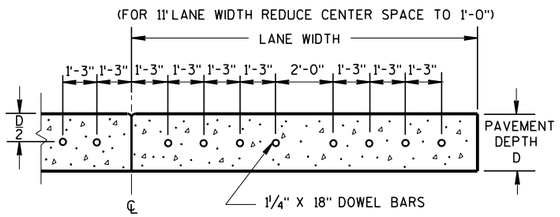
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

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

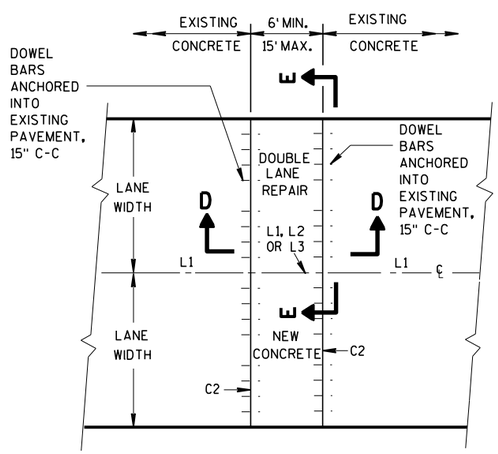


SECTION D-D



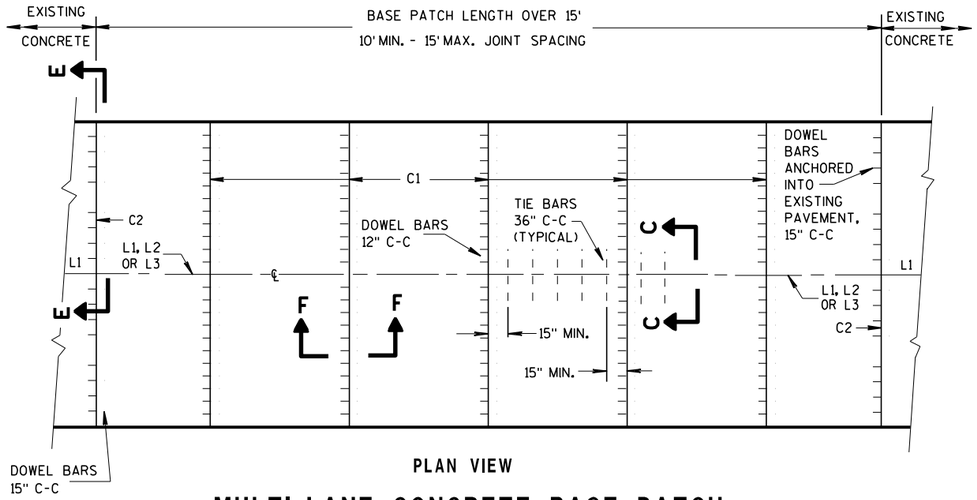
SECTION E-E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH

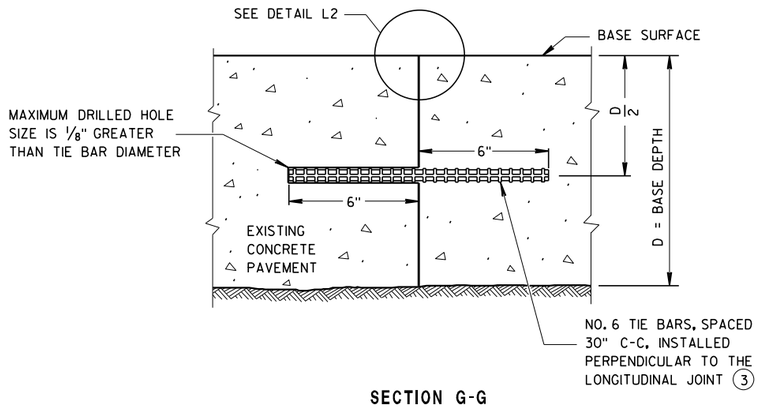


PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

6
S.D.D. 13 C 14-7b



SECTION G-G

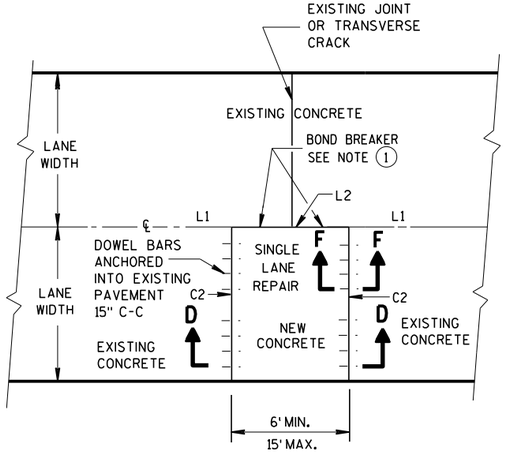
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

(1) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.

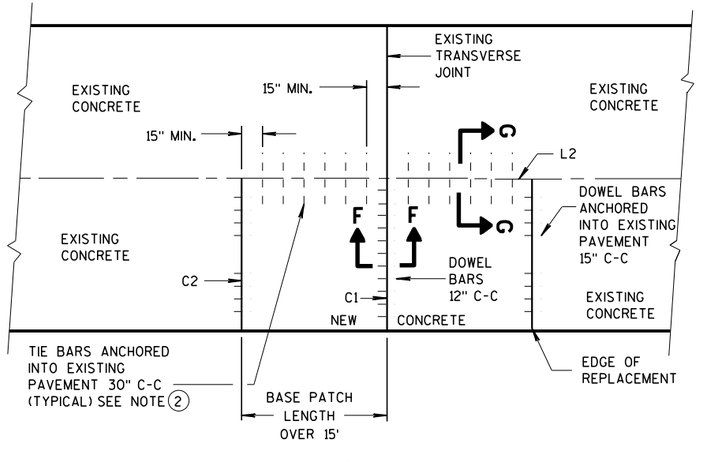
(2) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

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



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

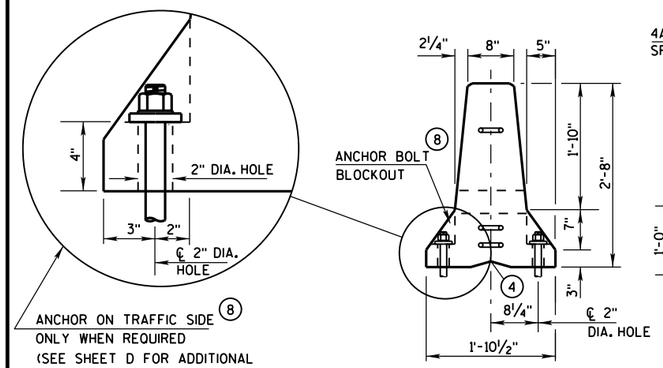
BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

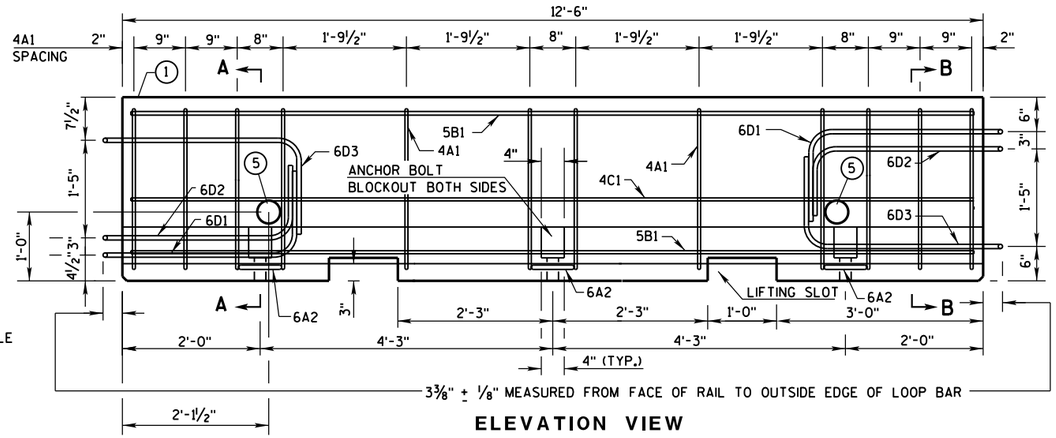
APPROVED
March 2018 — DATE
/S/ Peter Kemp P.E. — PAVEMENT SUPERVISOR
FHWA

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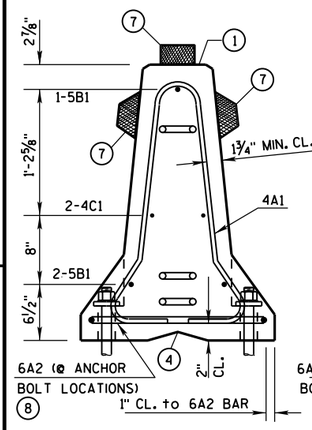
S.D.D. 13 C 14-7c



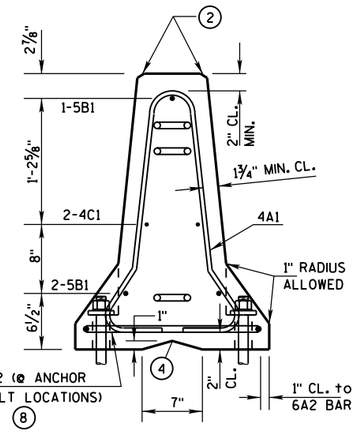
END VIEW



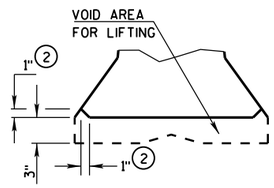
ELEVATION VIEW



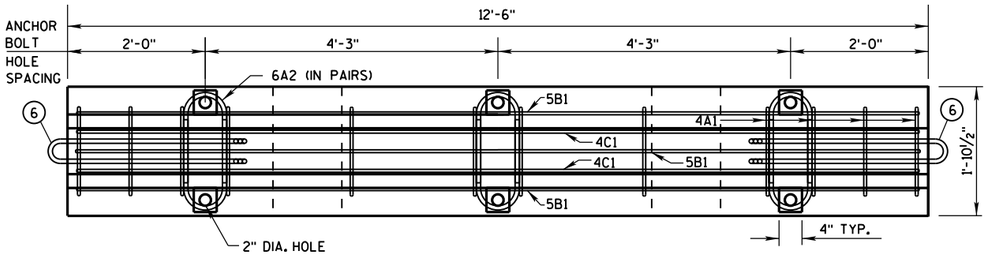
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)



DETAIL "B"
LIFTING SLOT DETAIL



PLAN VIEW

DETAILS OF BARRIER SECTION

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).

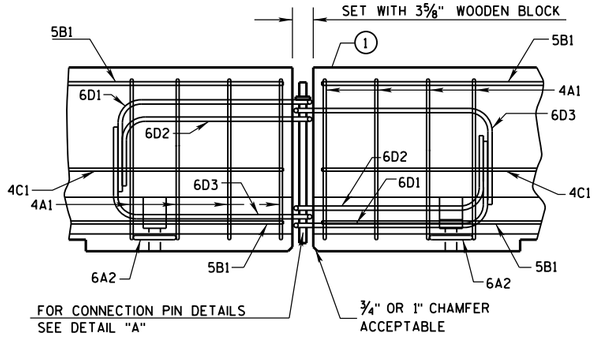
(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

(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.

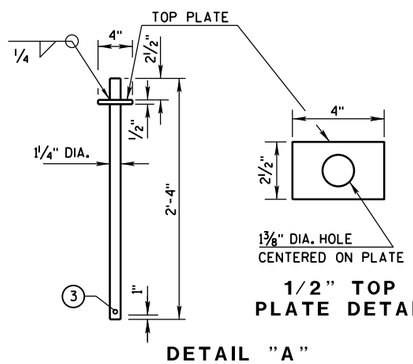
(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

(9) 1" CHAMFER OPTIONAL.

f'c = 4,000 psi

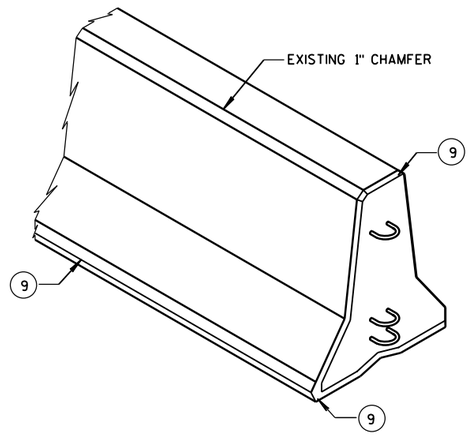


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

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

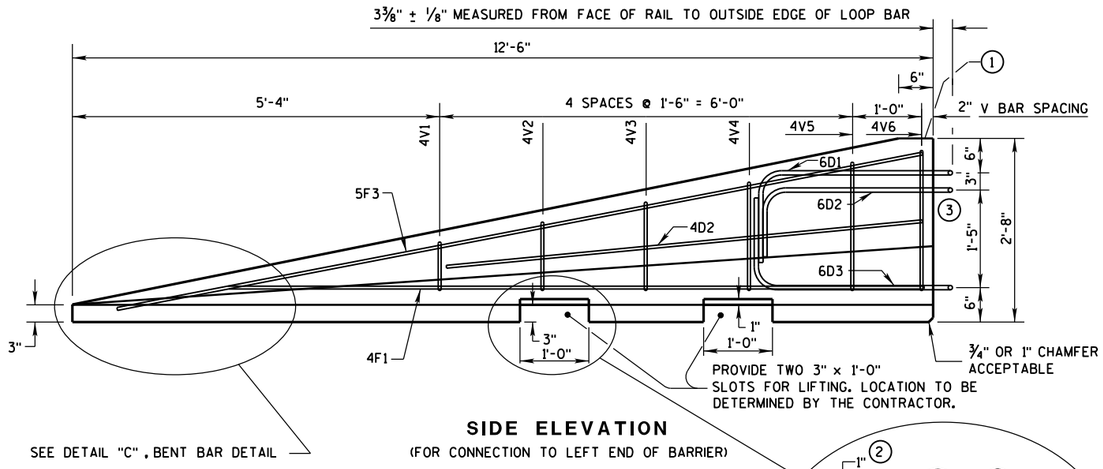


CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

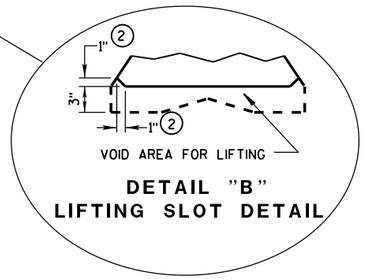
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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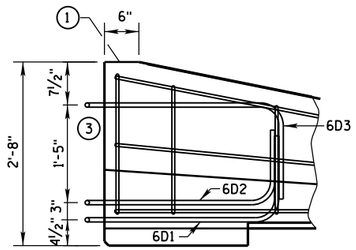
S.D.D. 14 B 7-15a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



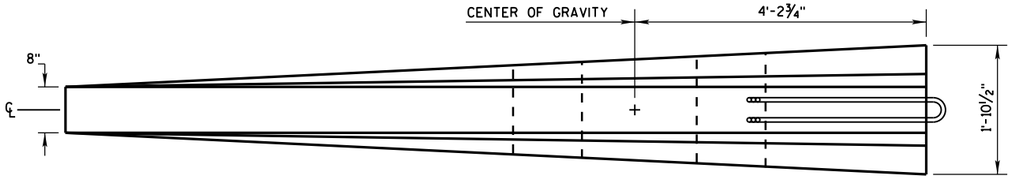
DETAIL "B"
LIFTING SLOT DETAIL



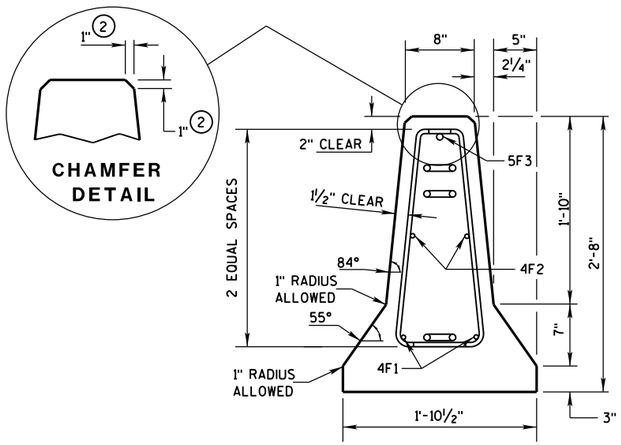
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

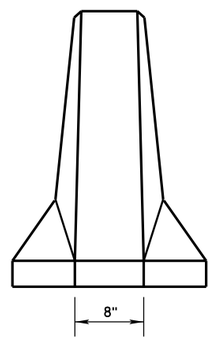
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



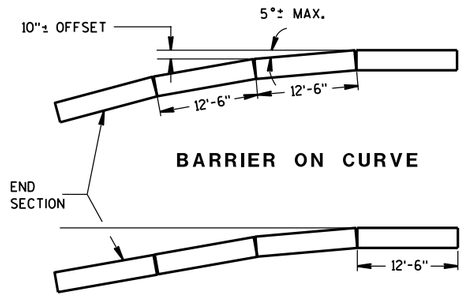
PLAN VIEW



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

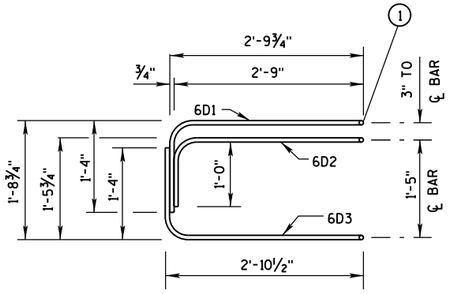
6

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

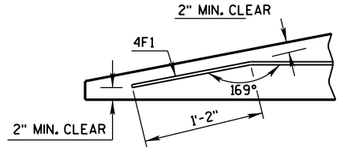
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

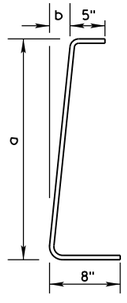
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

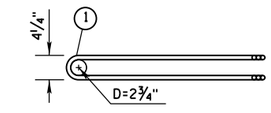
GENERAL NOTES

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

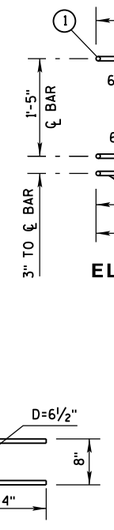
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

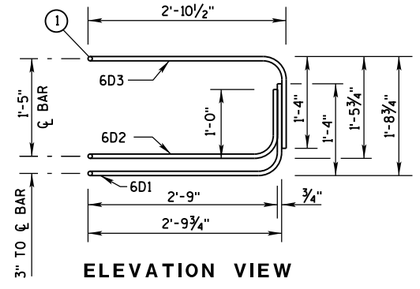
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



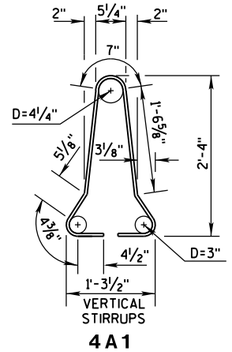
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



4A1

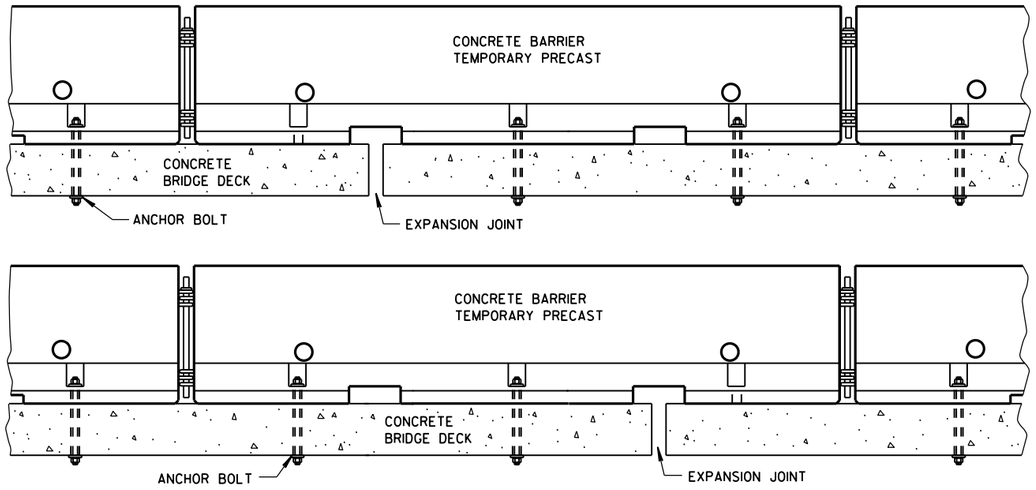
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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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

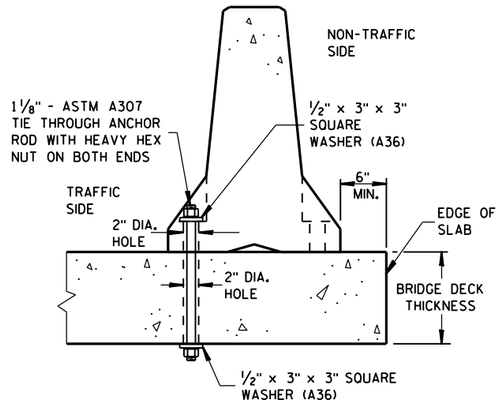
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

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.

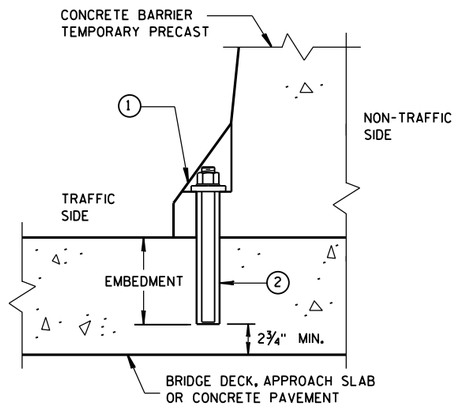
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

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



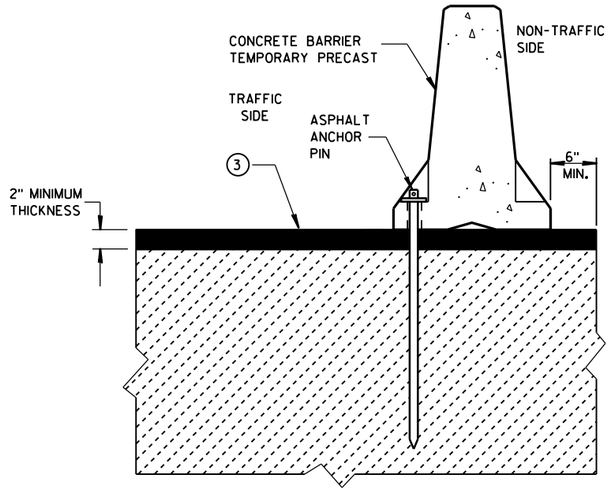
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

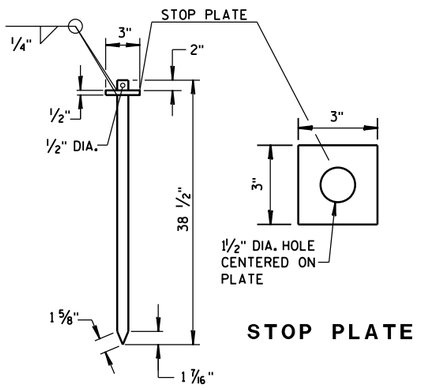


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



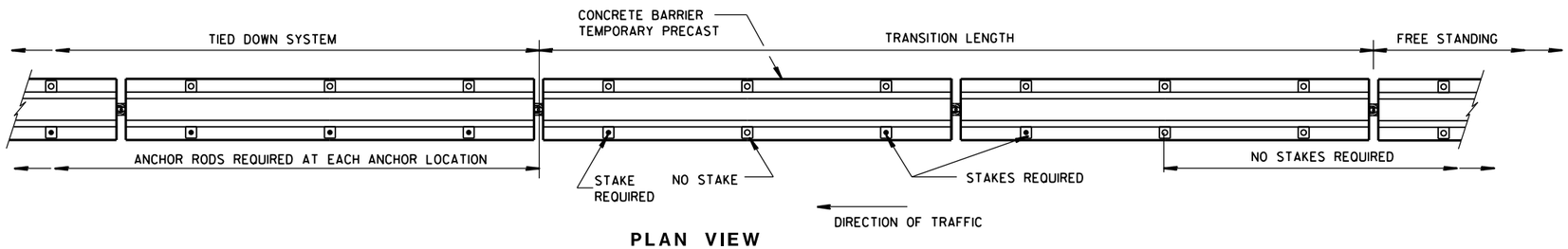
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

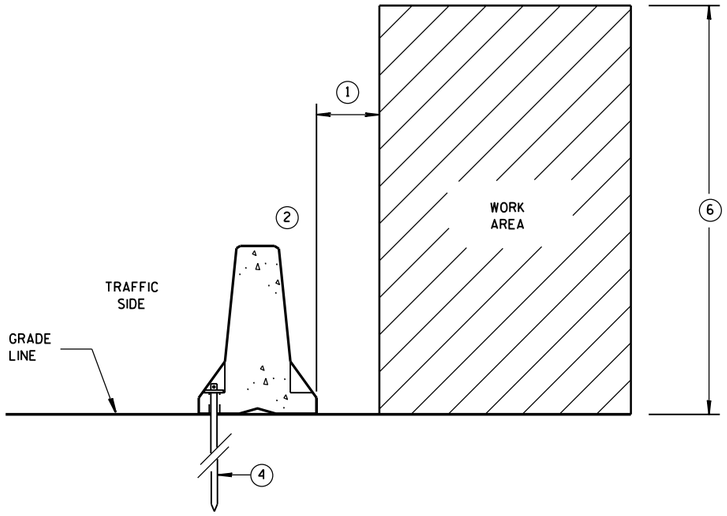
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

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

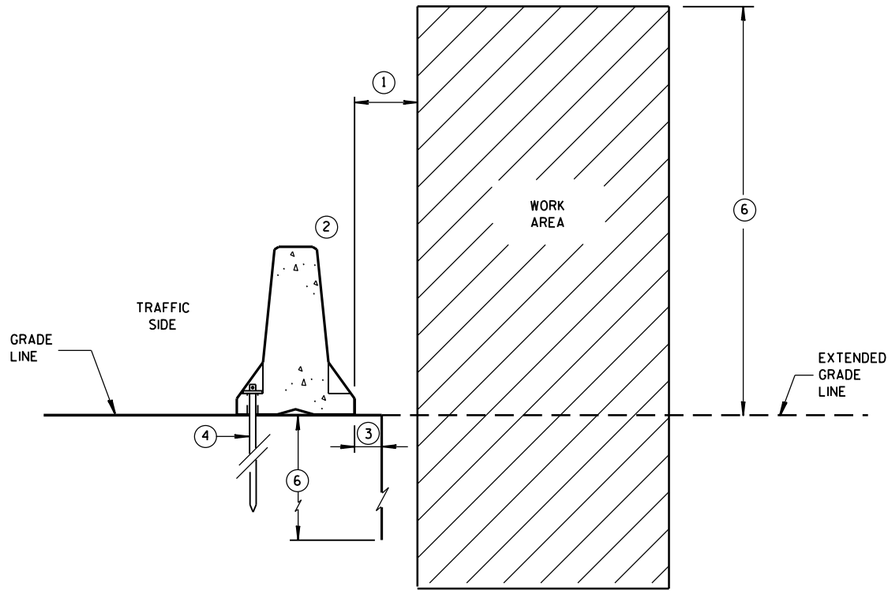
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

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

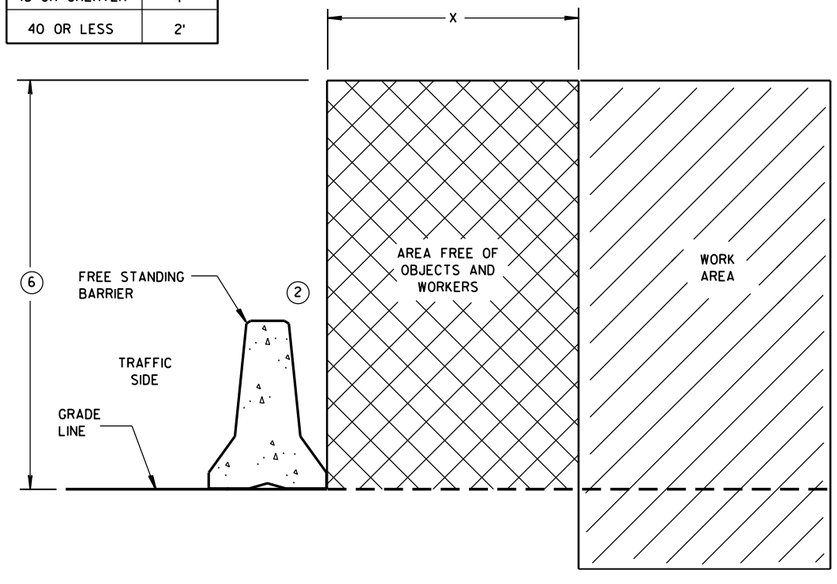


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

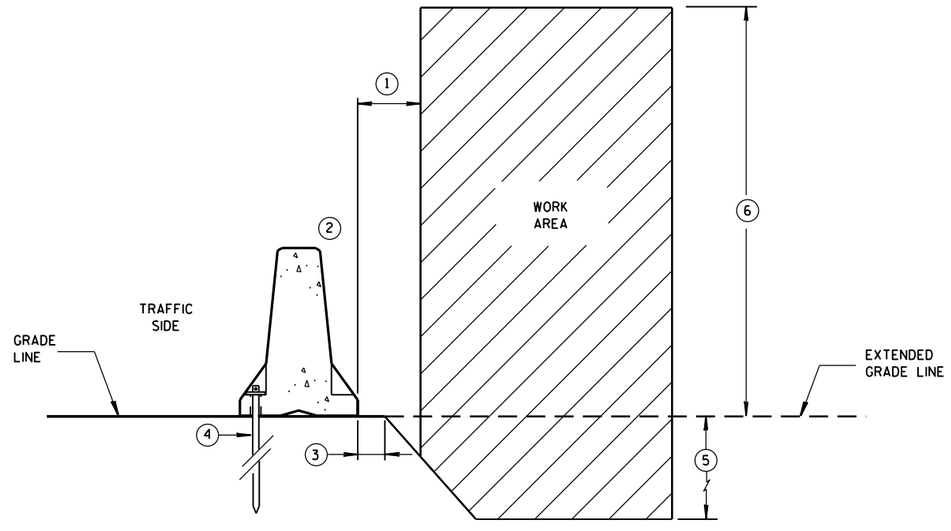
GENERAL NOTES

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



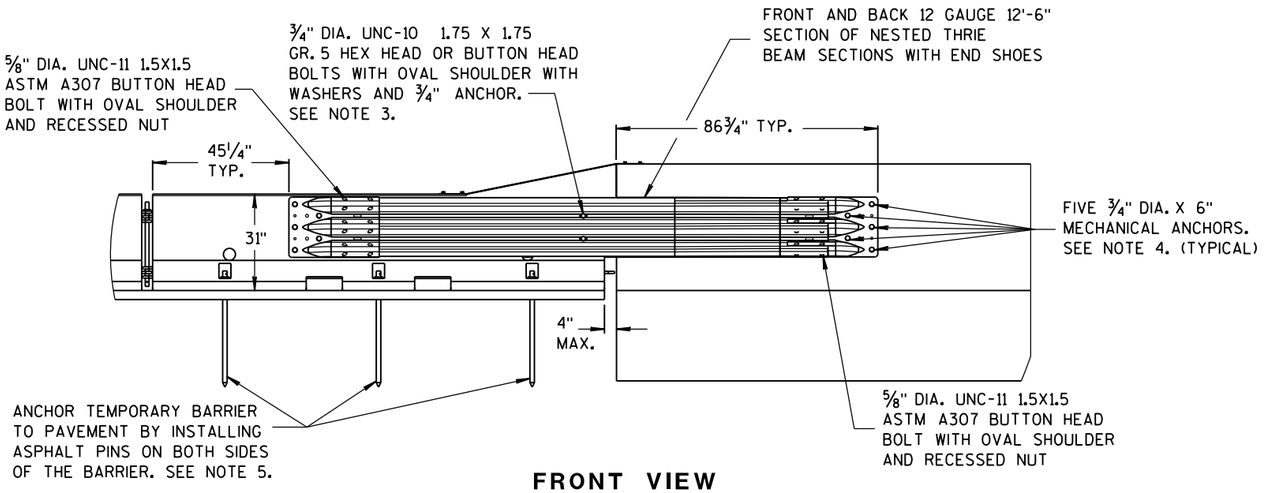
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

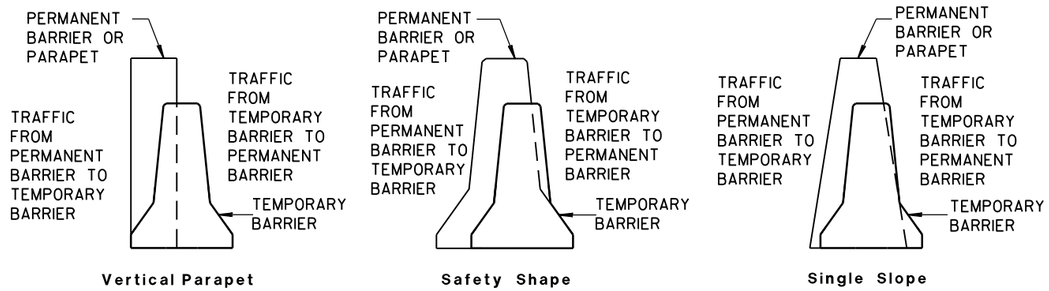
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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



FRONT VIEW

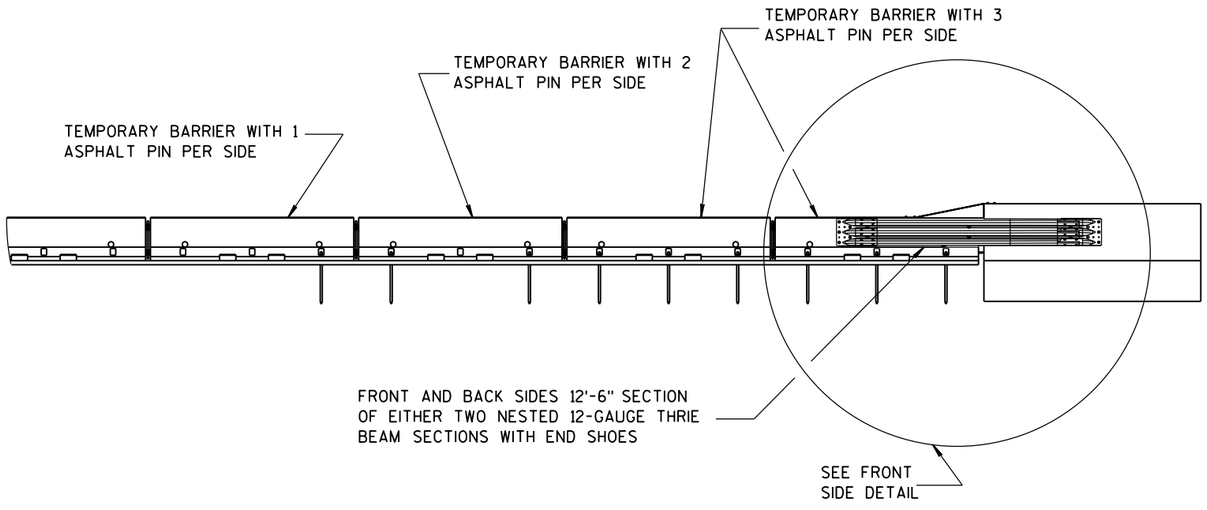


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

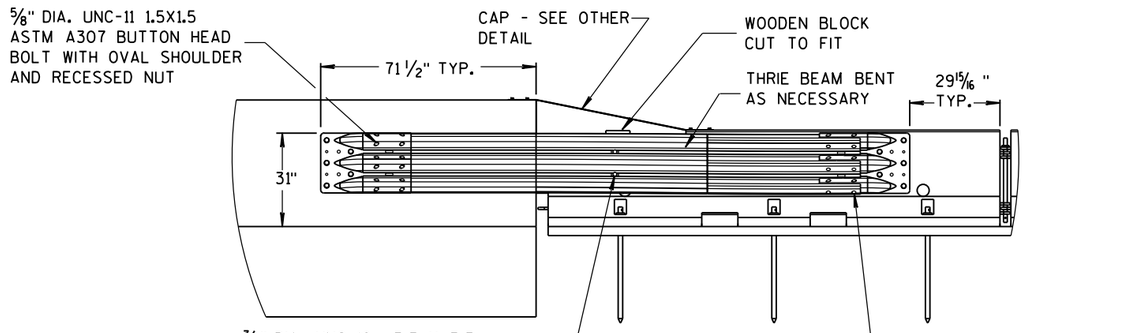
NOTES

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

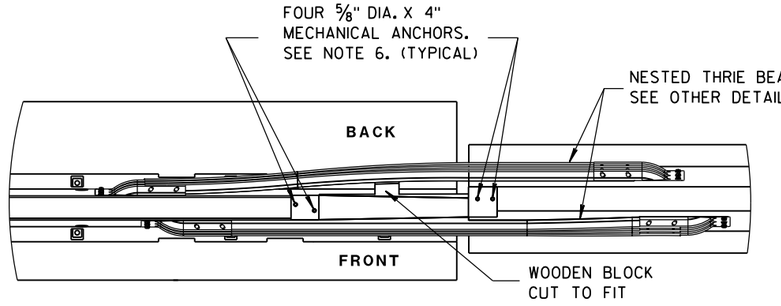
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



FRONT VIEW



BACK VIEW



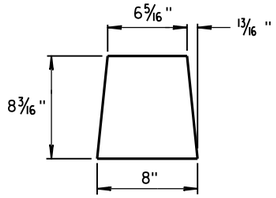
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

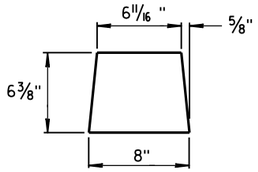
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

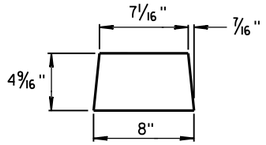
6
S.D.D. 14 B 7-15f



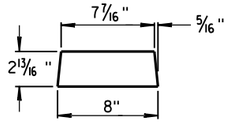
GUSSET 1



GUSSET 2

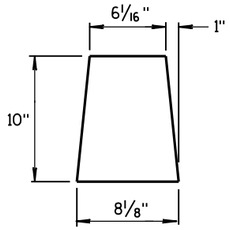


GUSSET 3

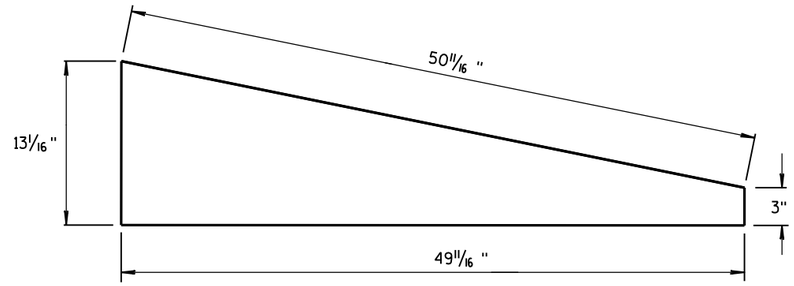


GUSSET 4

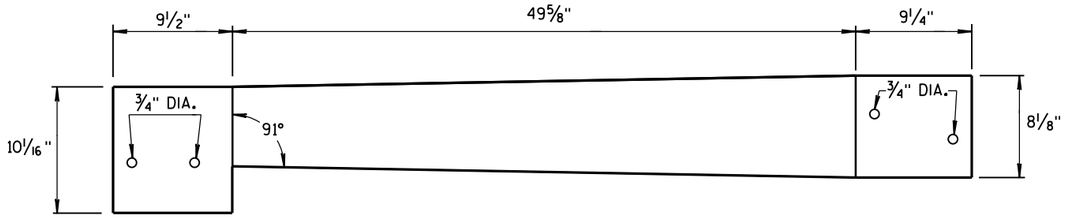
GUSSETS

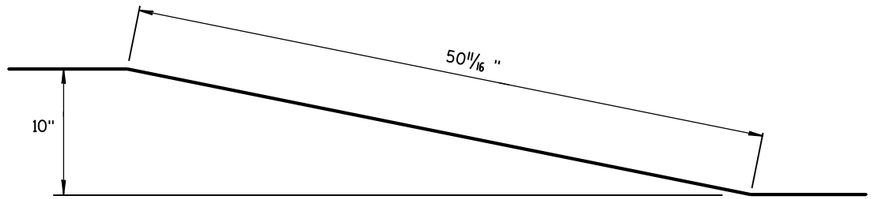


END PLATE



SIDE PLATE

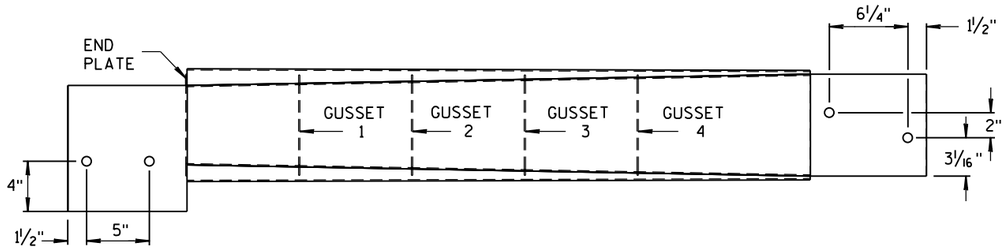


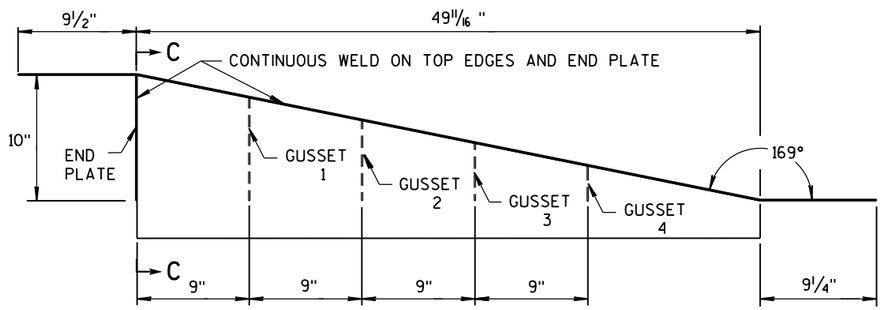


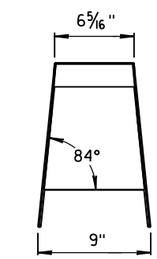
TOP PLATE

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

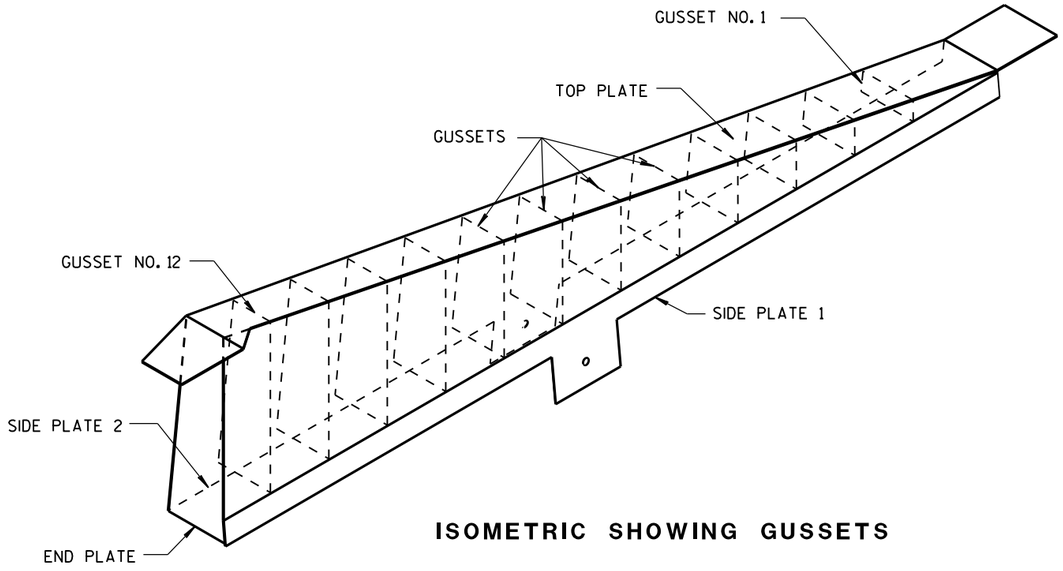
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

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

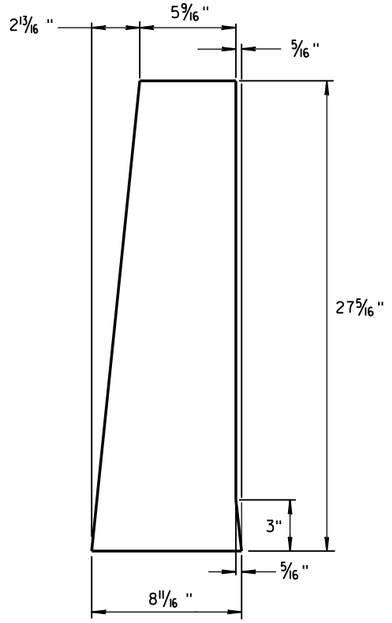
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

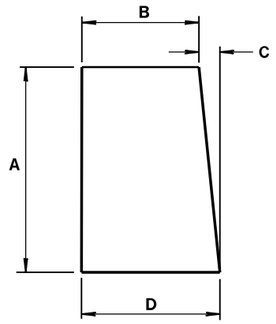


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



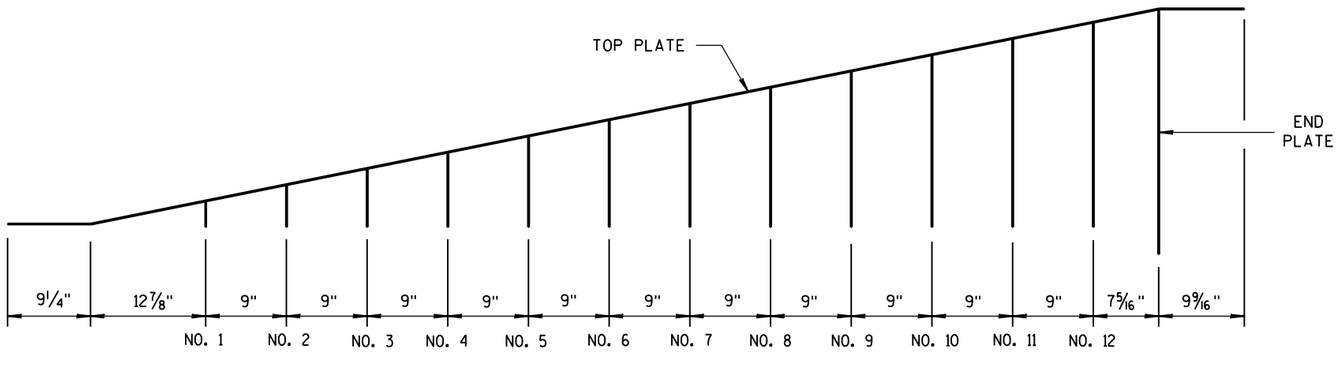
GUSSETS 1 - 12

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.



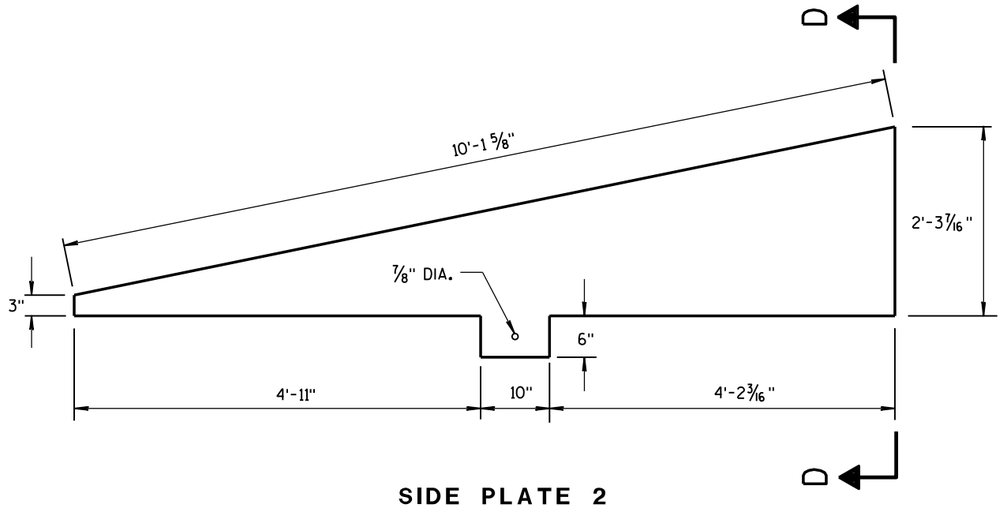
GUSSET LOCATION

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

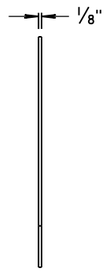
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

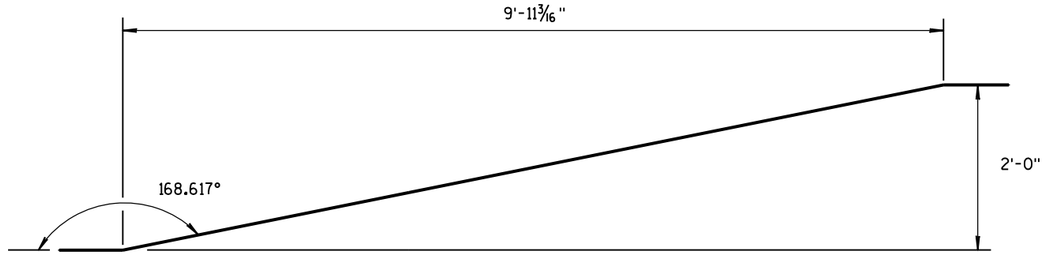
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S.D.D. 14 B 7-15h



SIDE PLATE 2

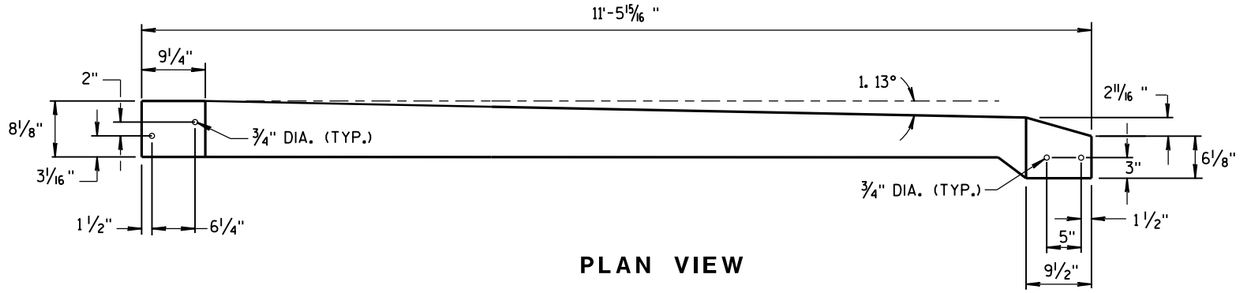


END VIEW



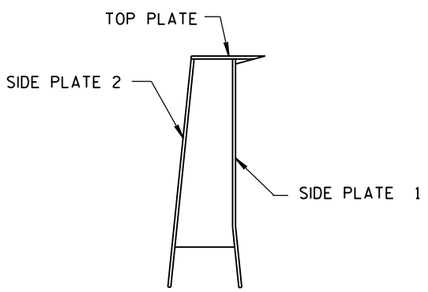
SIDE VIEW

TOP PLATE

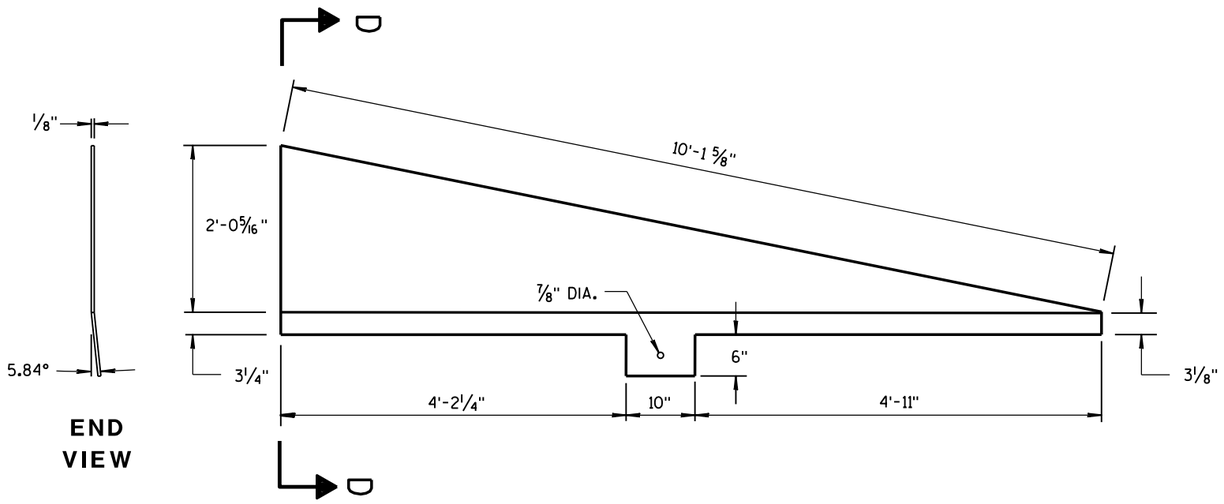


PLAN VIEW

TOP PLATE



SECTION D-D



END VIEW

SIDE PLATE 1

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
FHWA

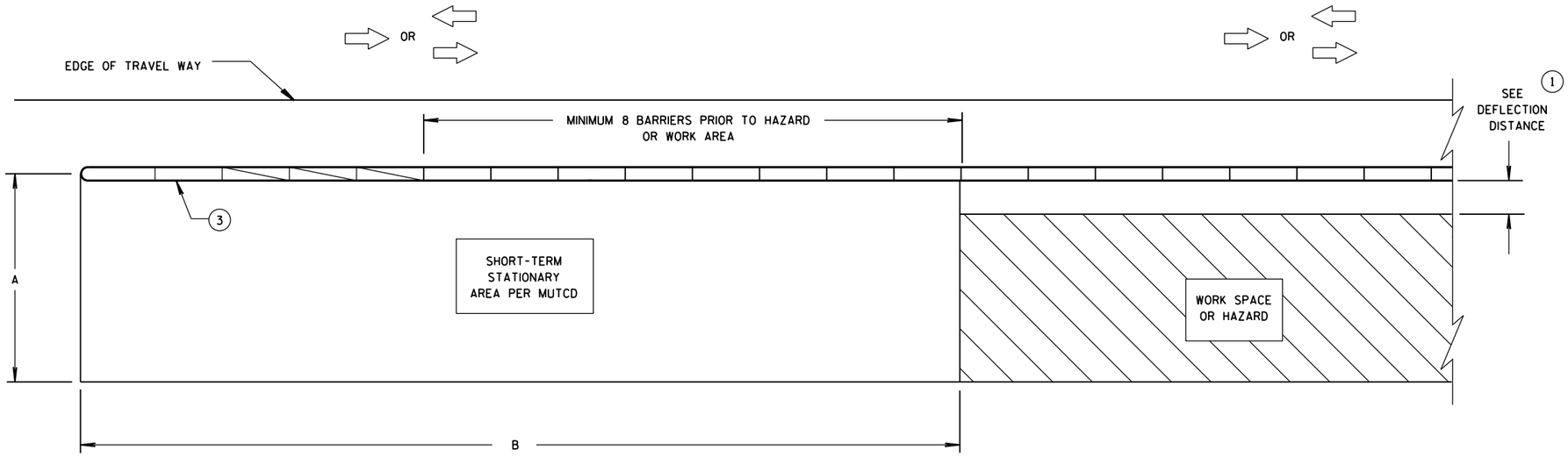
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S.D.D. 14 B 7-15i

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



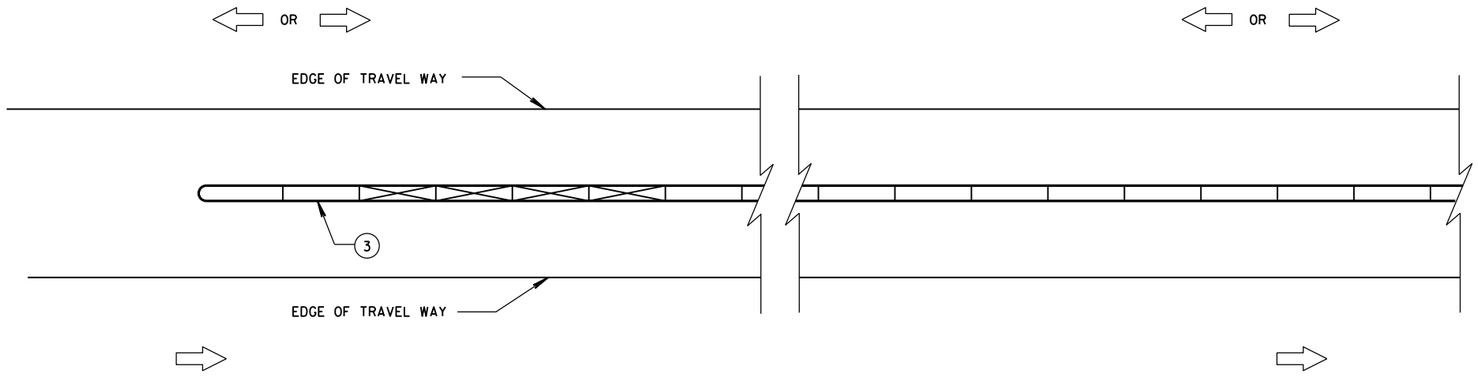
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

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

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

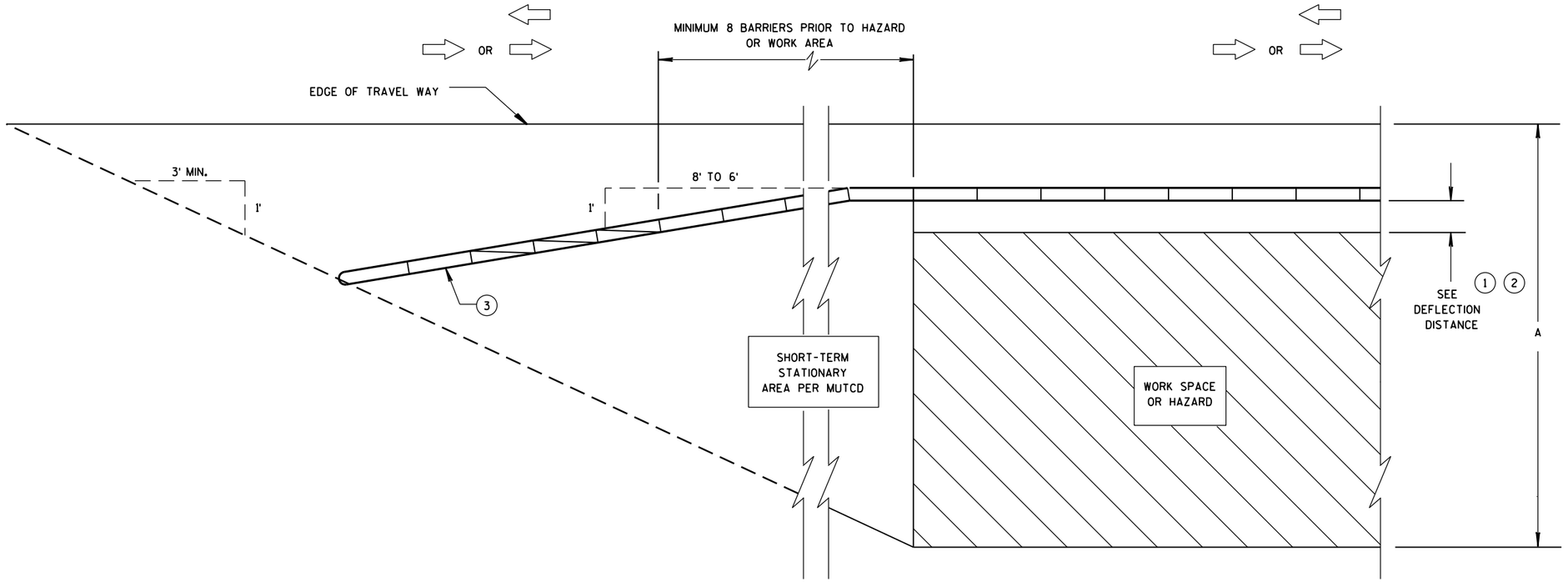
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

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

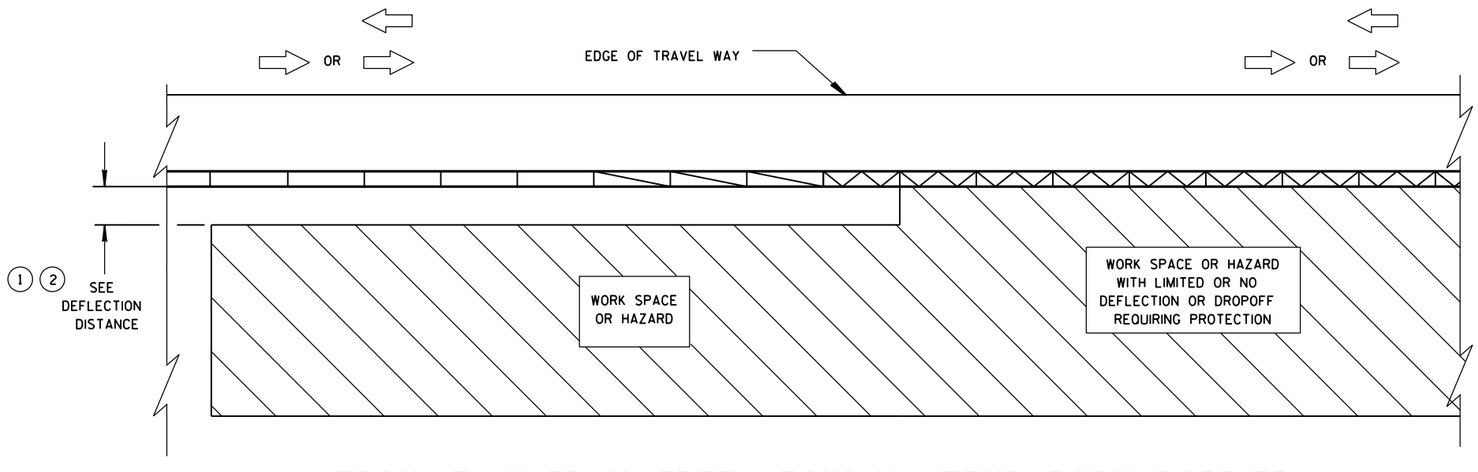
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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



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



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

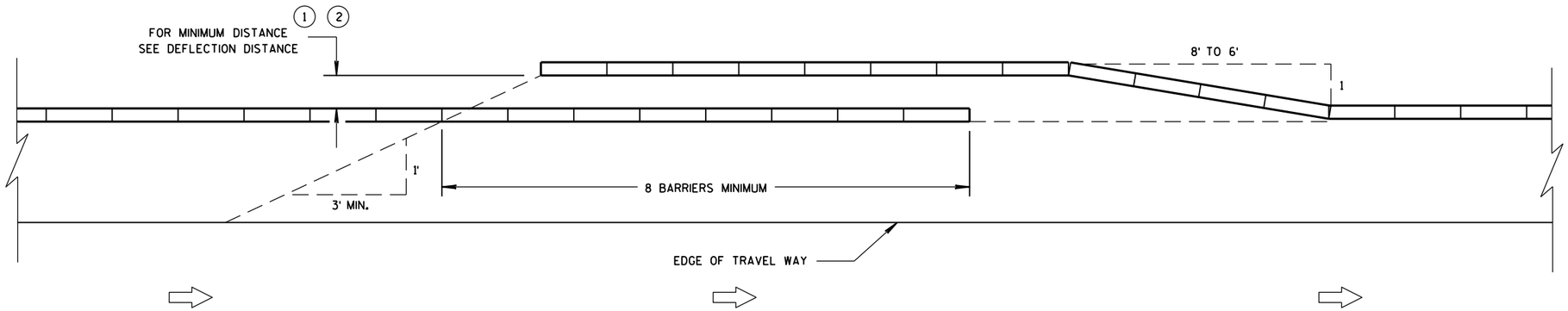
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

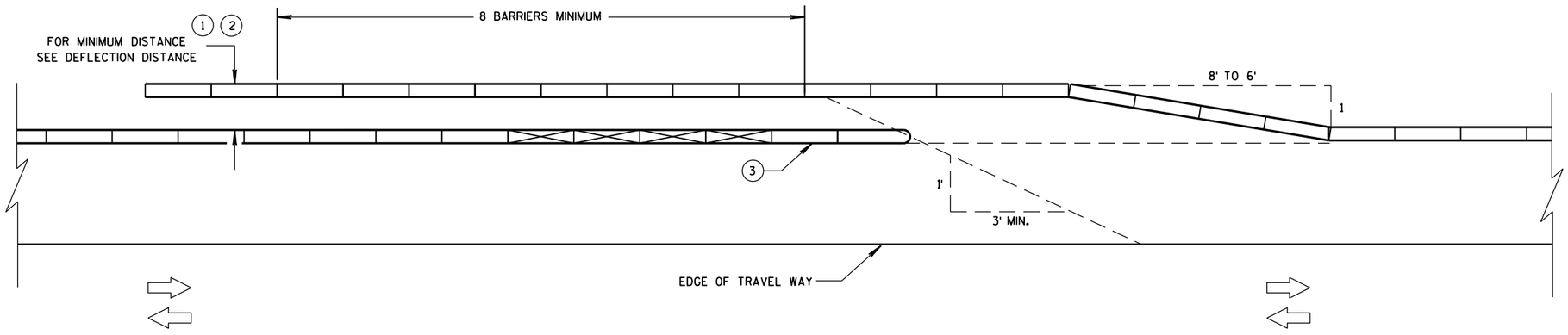
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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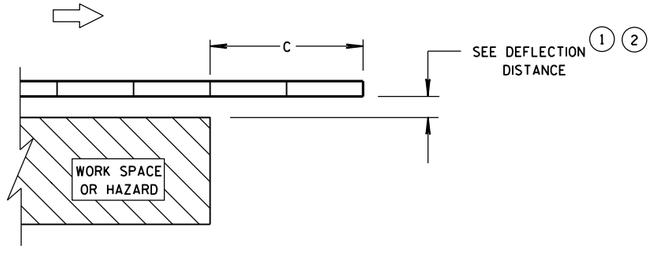
S.D.D. 14 B 8-2b



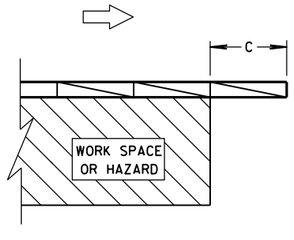
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

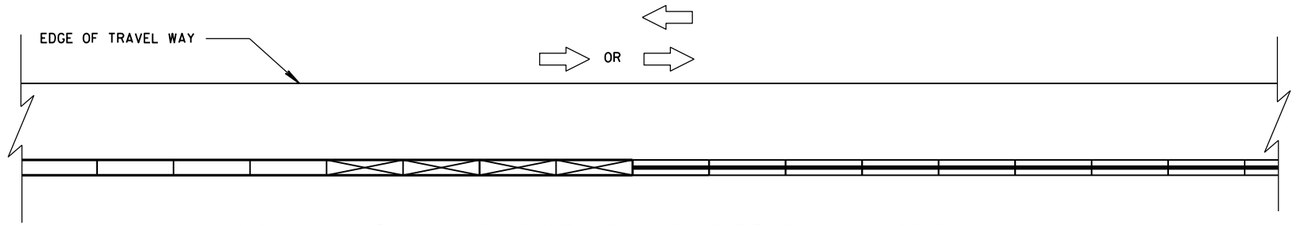
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

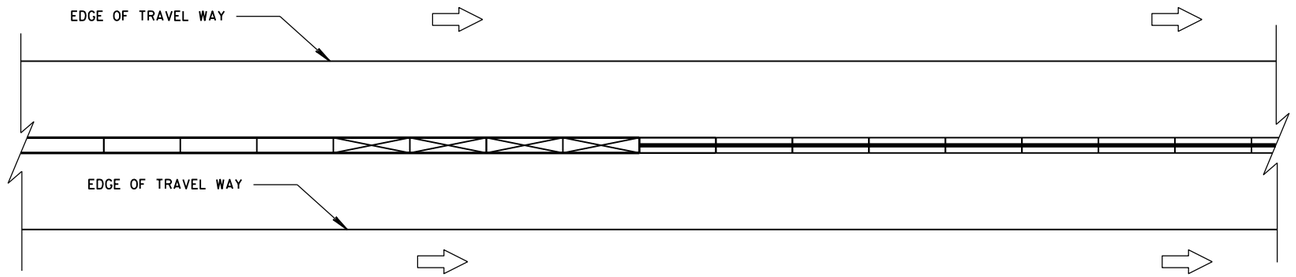
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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



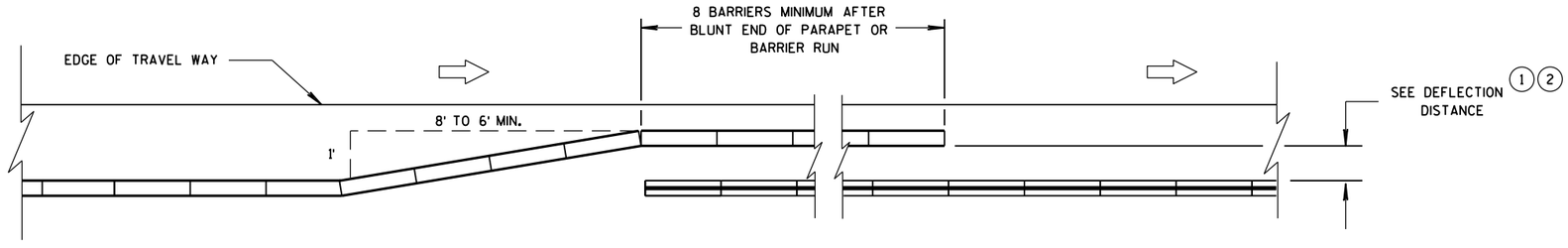
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



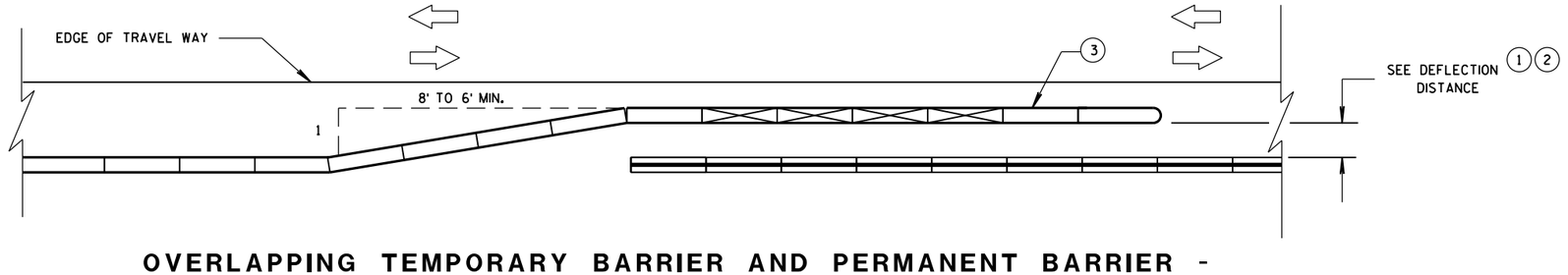
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

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



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

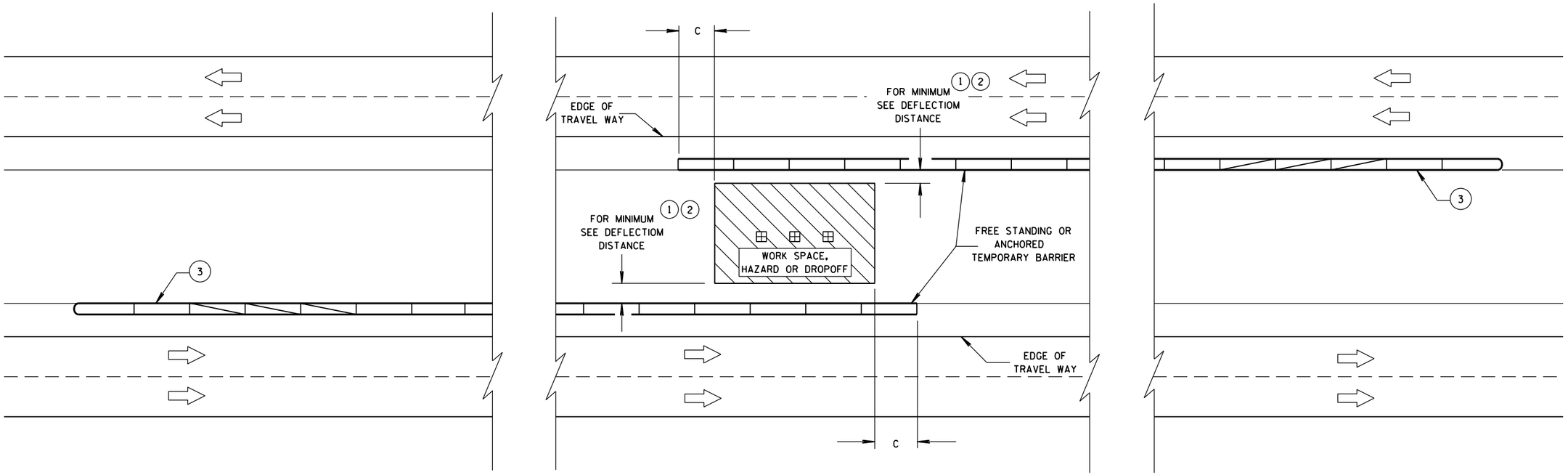
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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

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

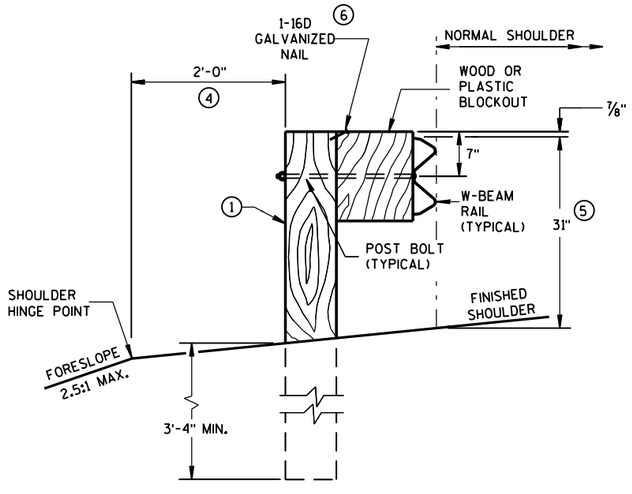
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

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

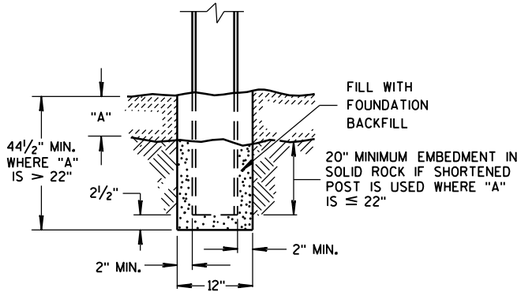
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

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



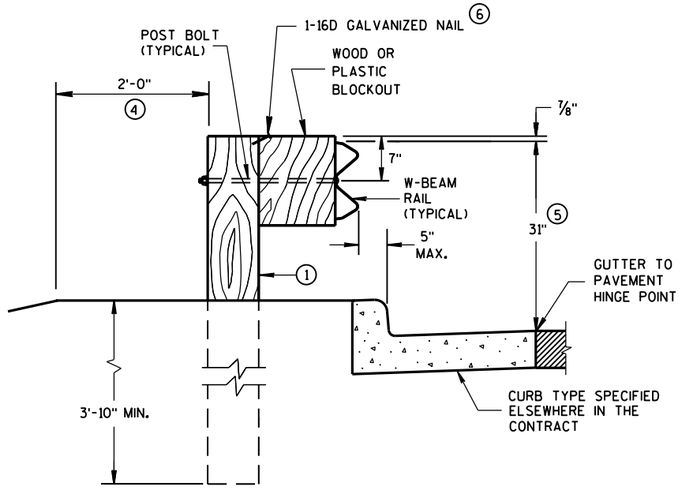
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



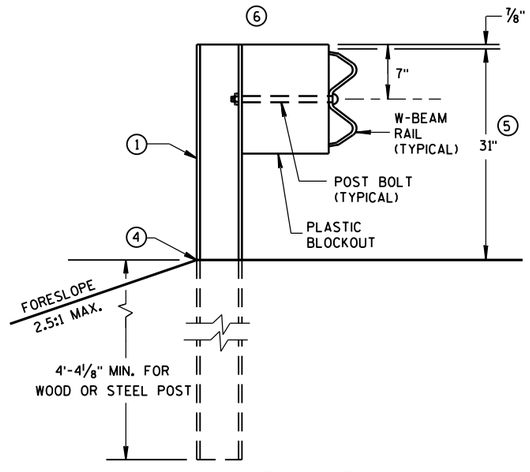
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



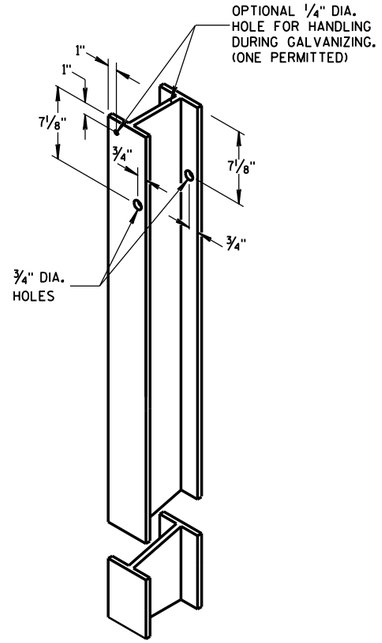
END VIEW

LOCATED ALONG A CURBED ROADWAY

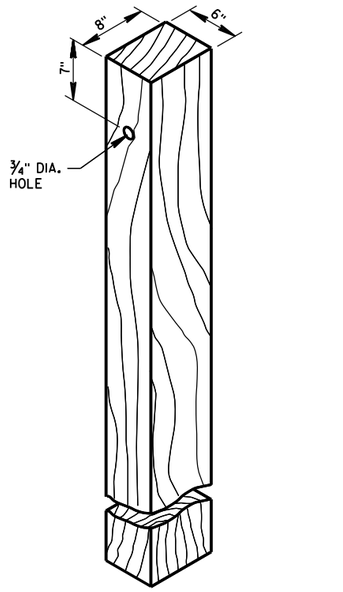


END VIEW

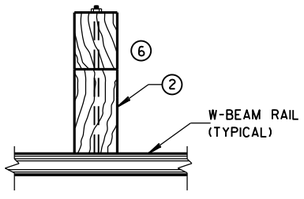
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



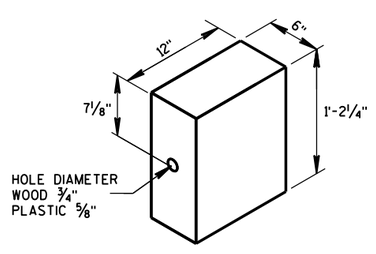
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



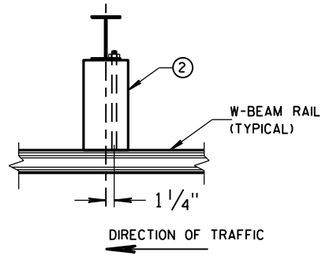
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)



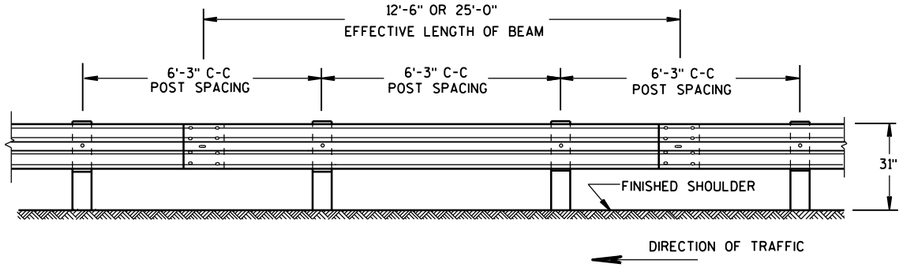
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

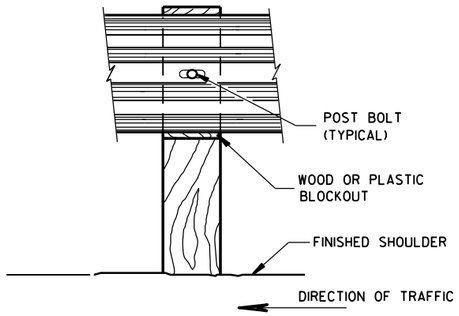
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S.D.D. 14 B 42-5a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

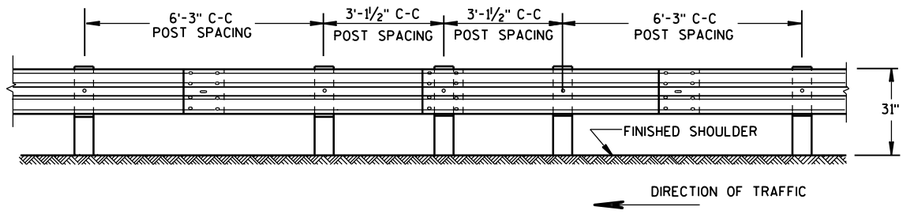
GENERAL NOTES

(8) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

(11) 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

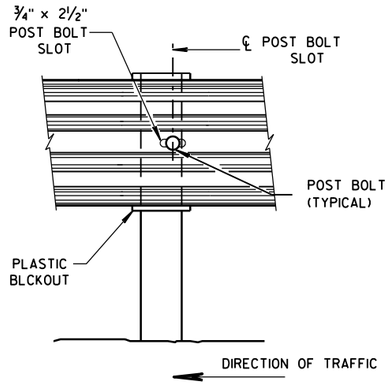
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

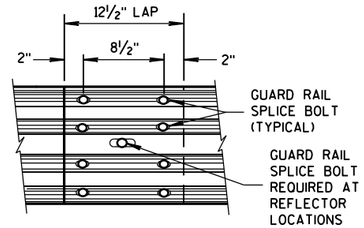


FRONT VIEW

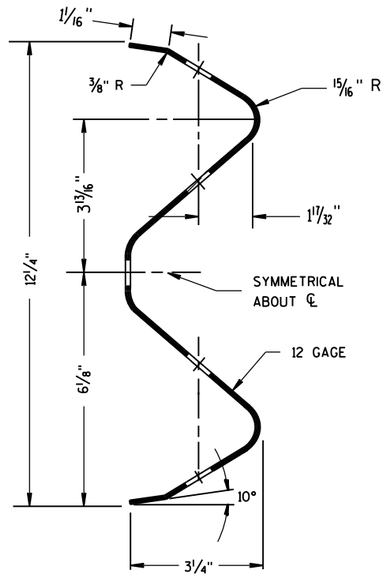
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



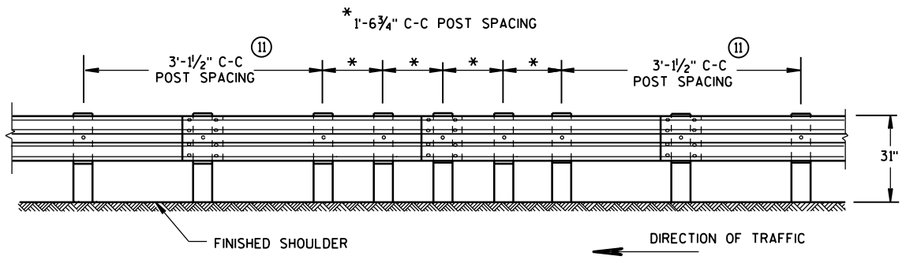
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

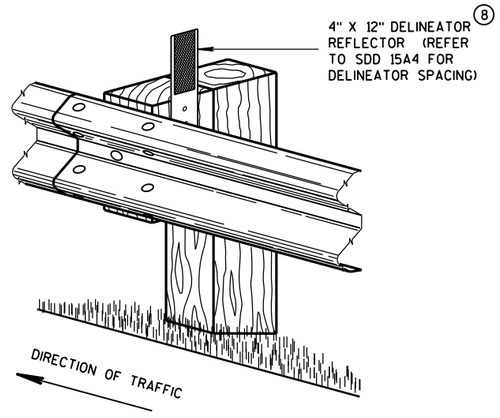


SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)



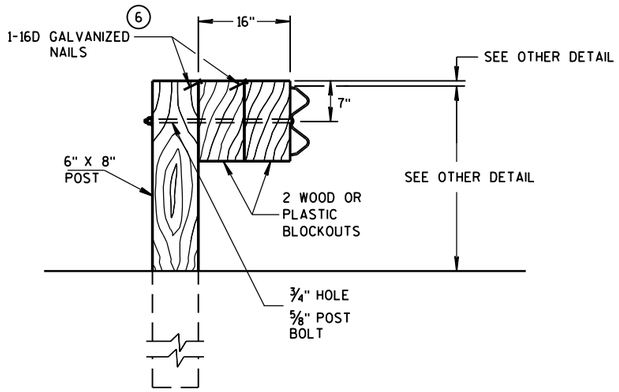
ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

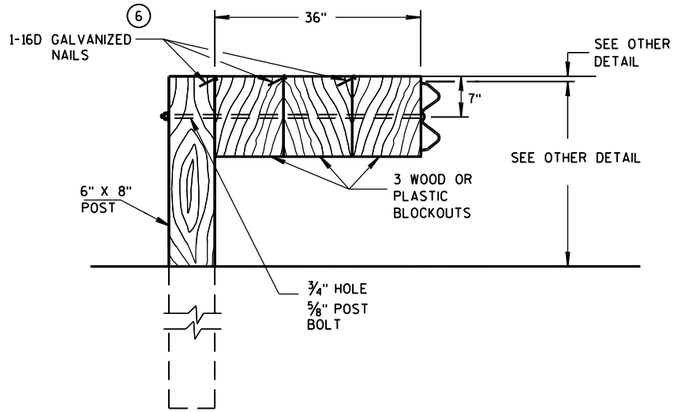
6

S.D.D. 14 B 42-5b



DETAIL FOR 16" BLOCKOUT DEPTH

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

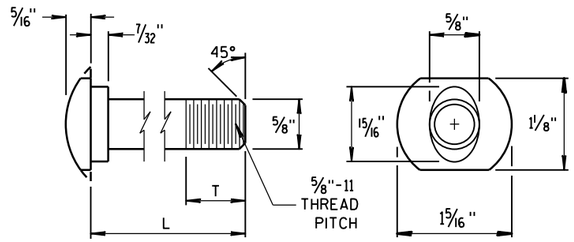


DETAIL FOR 36" BLOCKOUT DEPTH

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

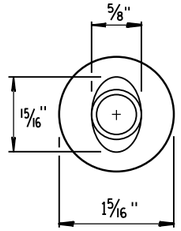
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

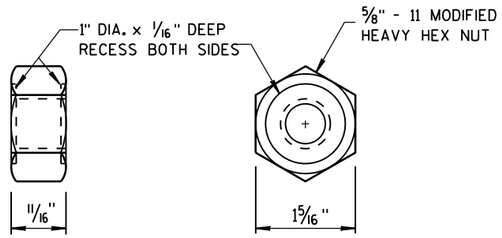


POST BOLT TABLE

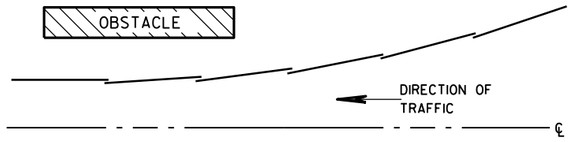
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

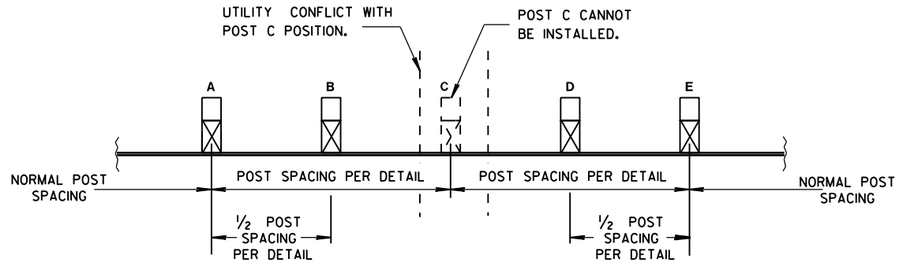


POST BOLT, SPLICE BOLT AND RECESS NUT

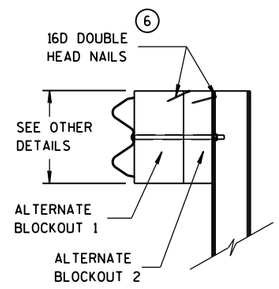


PLAN VIEW

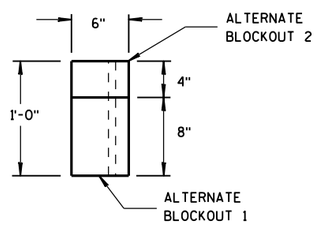
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

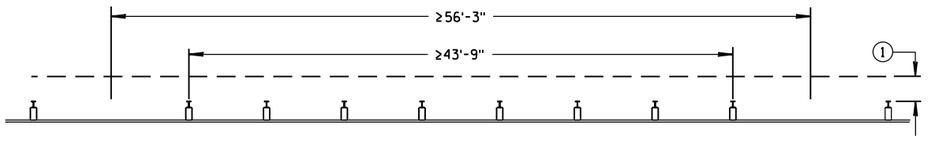
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

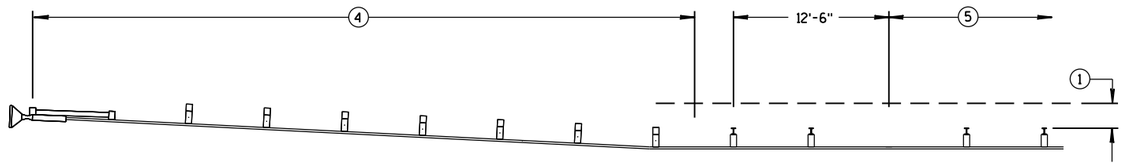
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

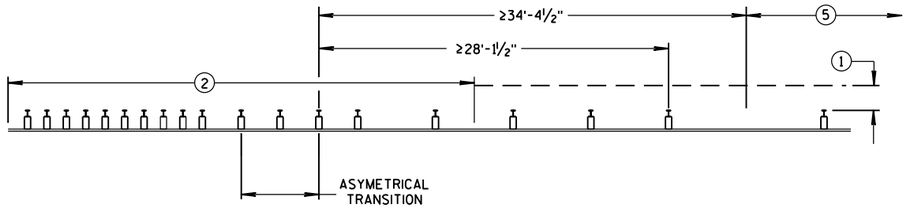
S.D.D. 14 B 42-5c



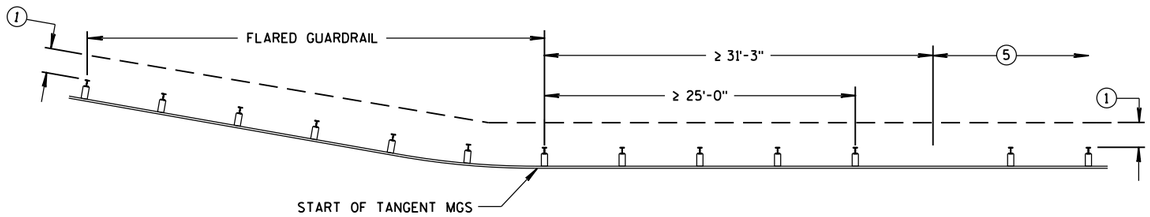
MISSING POST IN NORMAL BEAM GUARD RUN



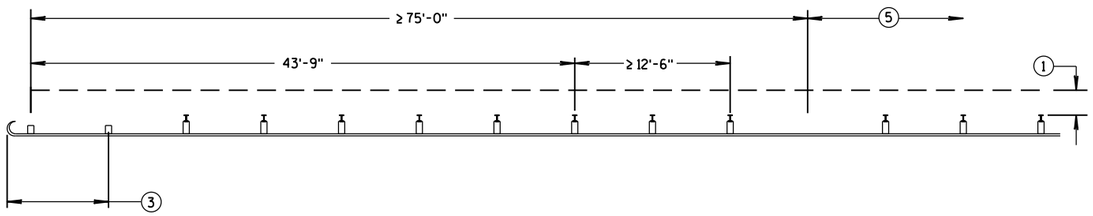
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



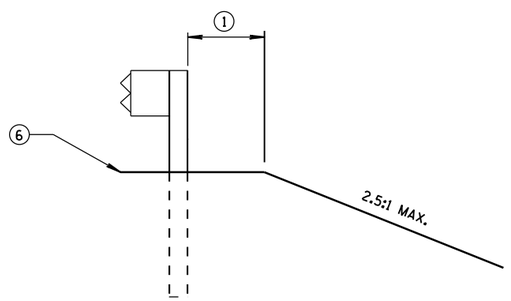
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



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
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

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S.D.D. 14 B 42-5d

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S.D.D. 14 B 42-5d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

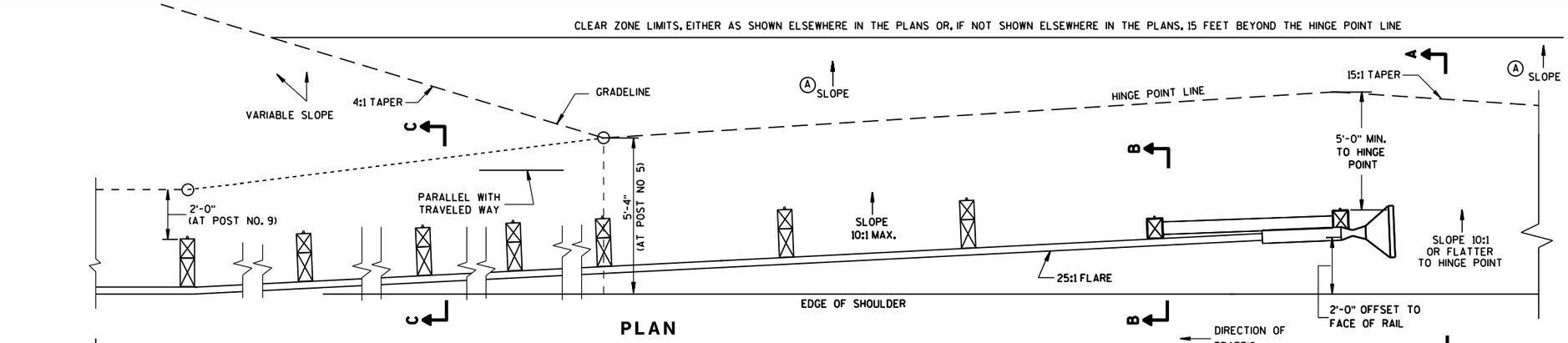
SEE SDD 14B42 FOR MORE INFORMATION.

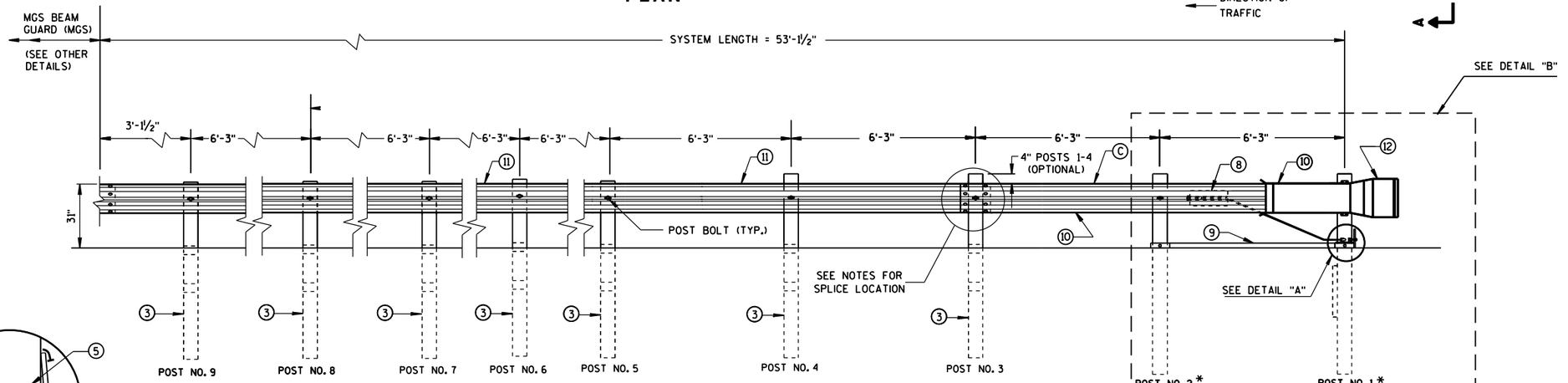
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

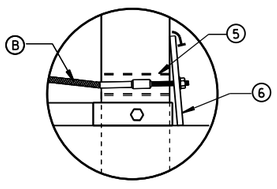
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

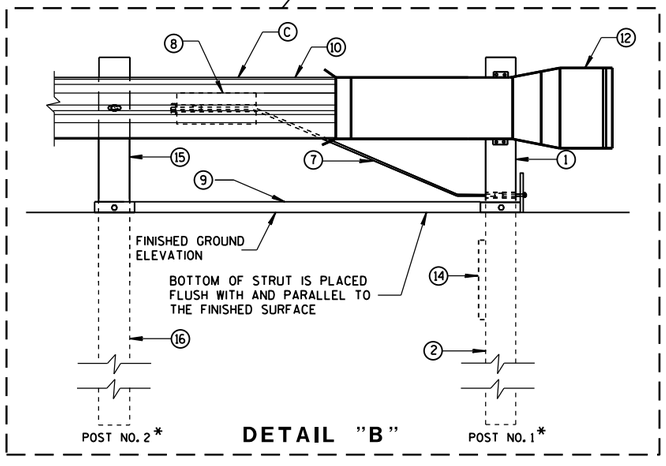
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

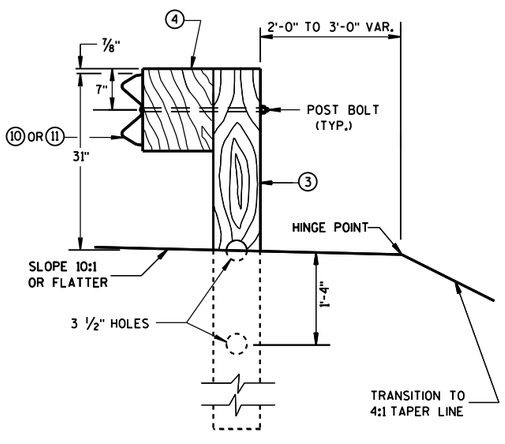
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

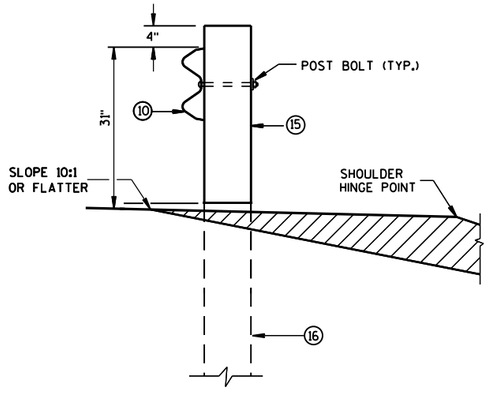


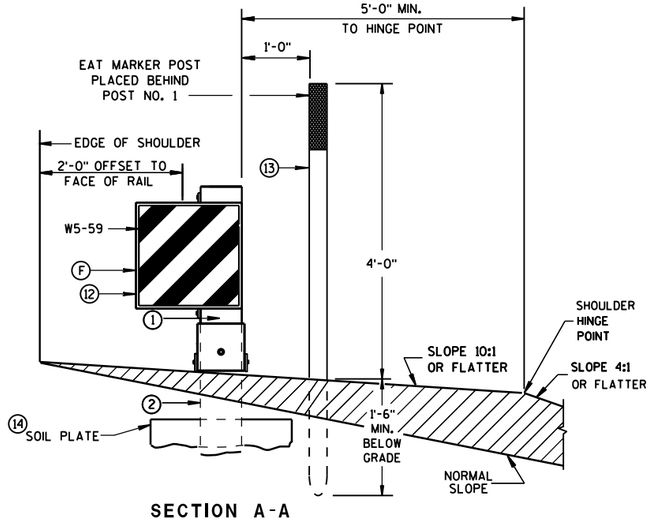






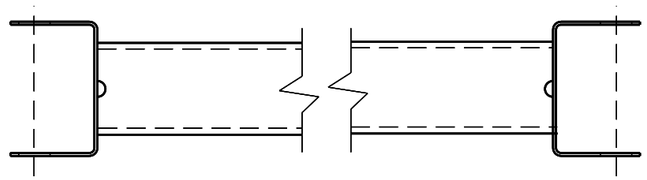




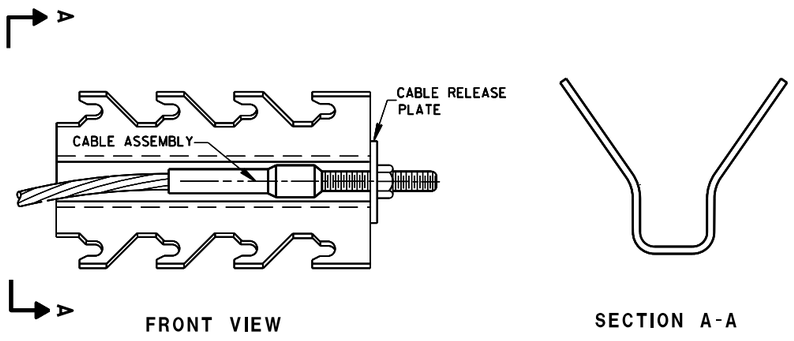


MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
STATE OF WISCONSIN DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 44-3a



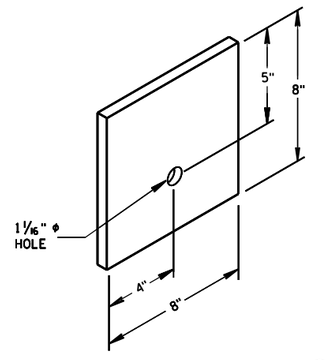
GENERIC GROUND STRUT (9) (H)



GENERIC ANCHOR CABLE BOX (8) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'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



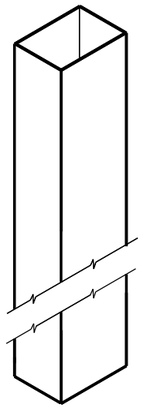
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

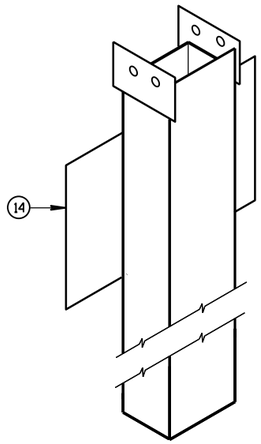
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

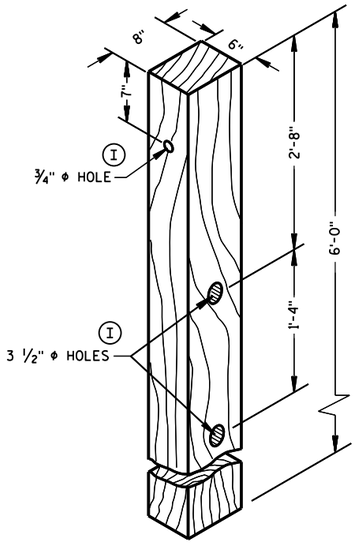
S.D.D. 14 B 44-3b



UPPER POST NO. 1 (1)

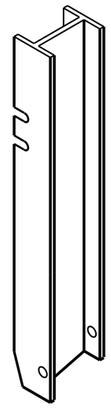


LOWER POST NO. 1 (2)

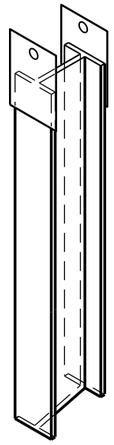


POSTS NUMBER 3-9

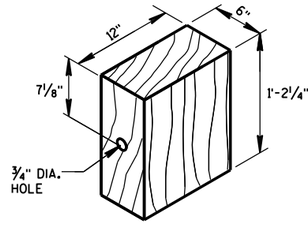
WOOD CRT POST (3)



UPPER POST NO. 2 (15)

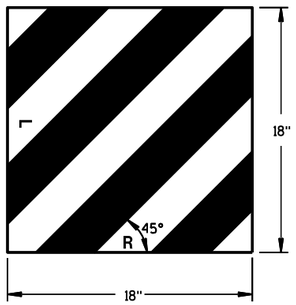


LOWER POST NO. 2 (16)



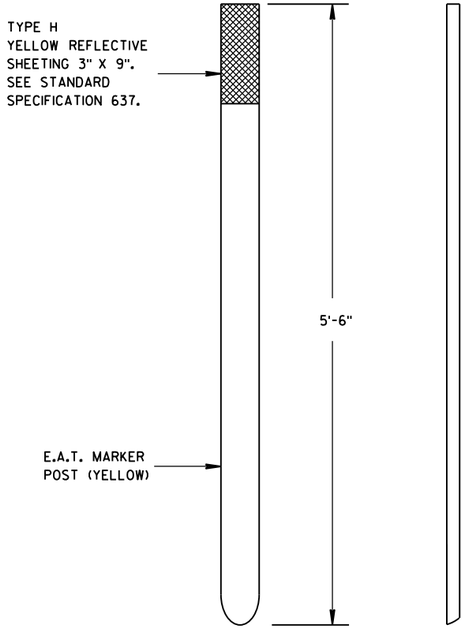
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



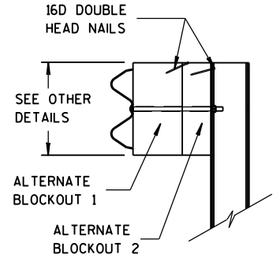
W5-59

REFLECTIVE SHEETING DETAIL (H)

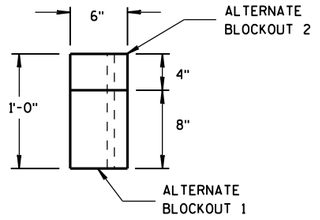


FRONT VIEW SIDE VIEW

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

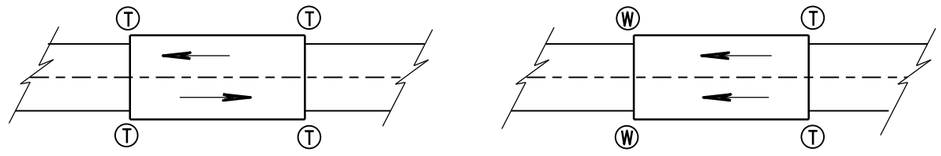
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERVISOR

FHWA

6

S.D.D. 14 B 44-3c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

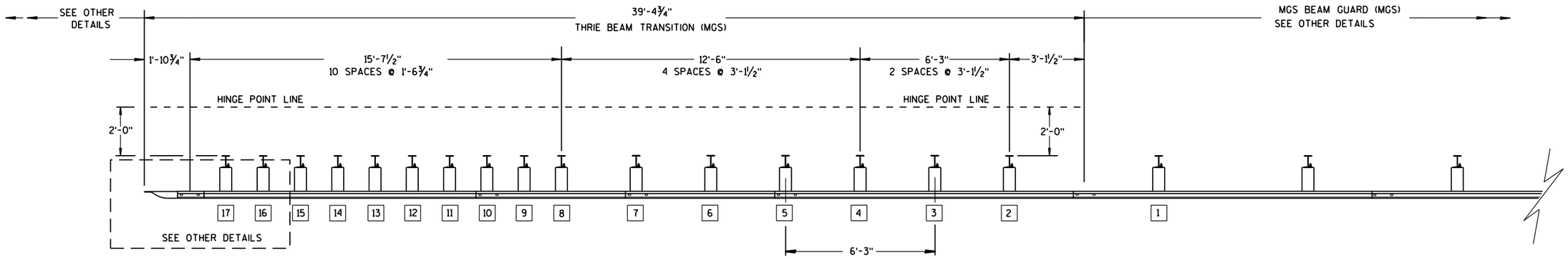
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

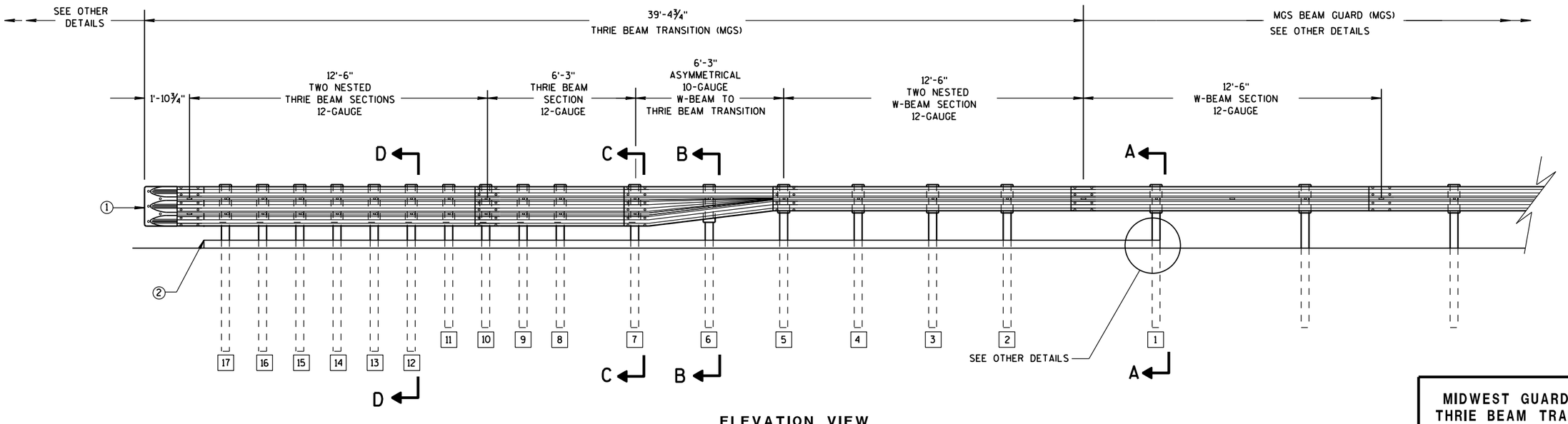
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

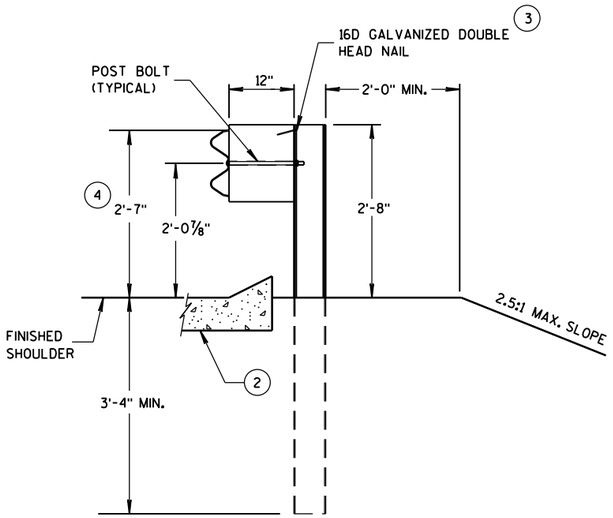
S.D.D. 14 B 45-4a

GENERAL NOTES

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

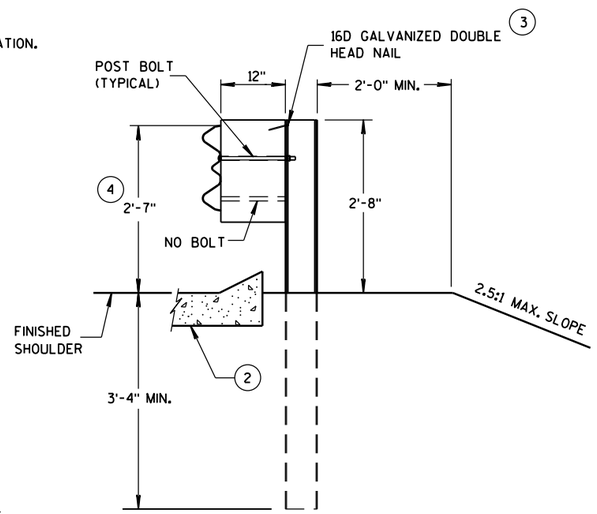
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



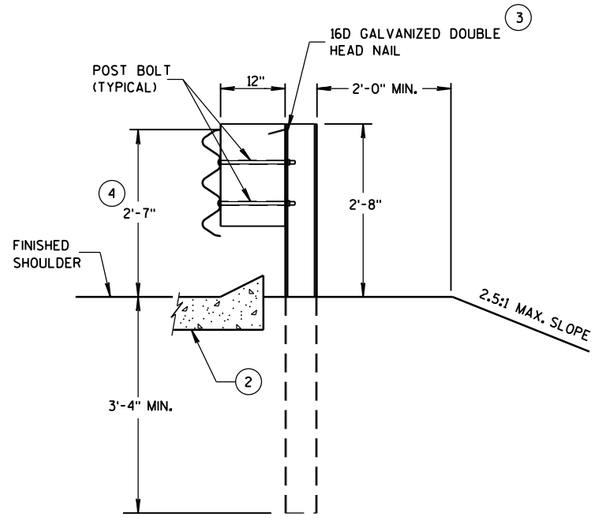
SECTION A-A

POSTS 1-5



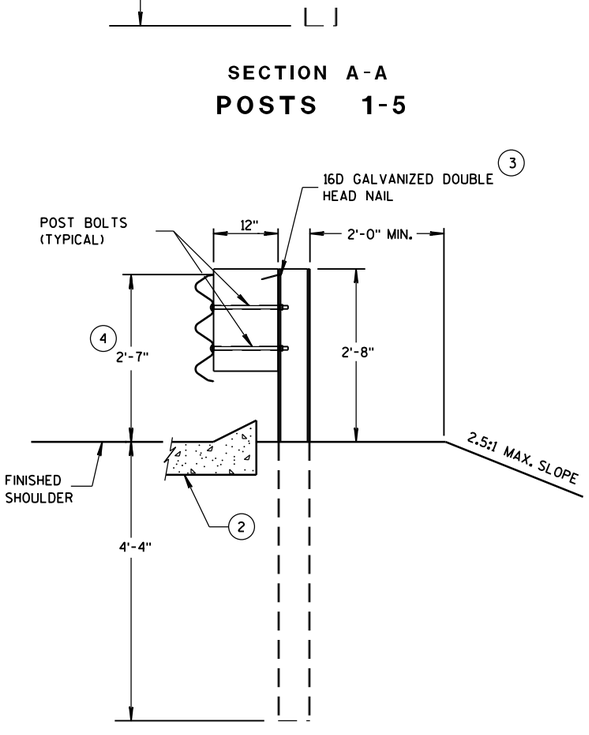
SECTION B-B

POST 6



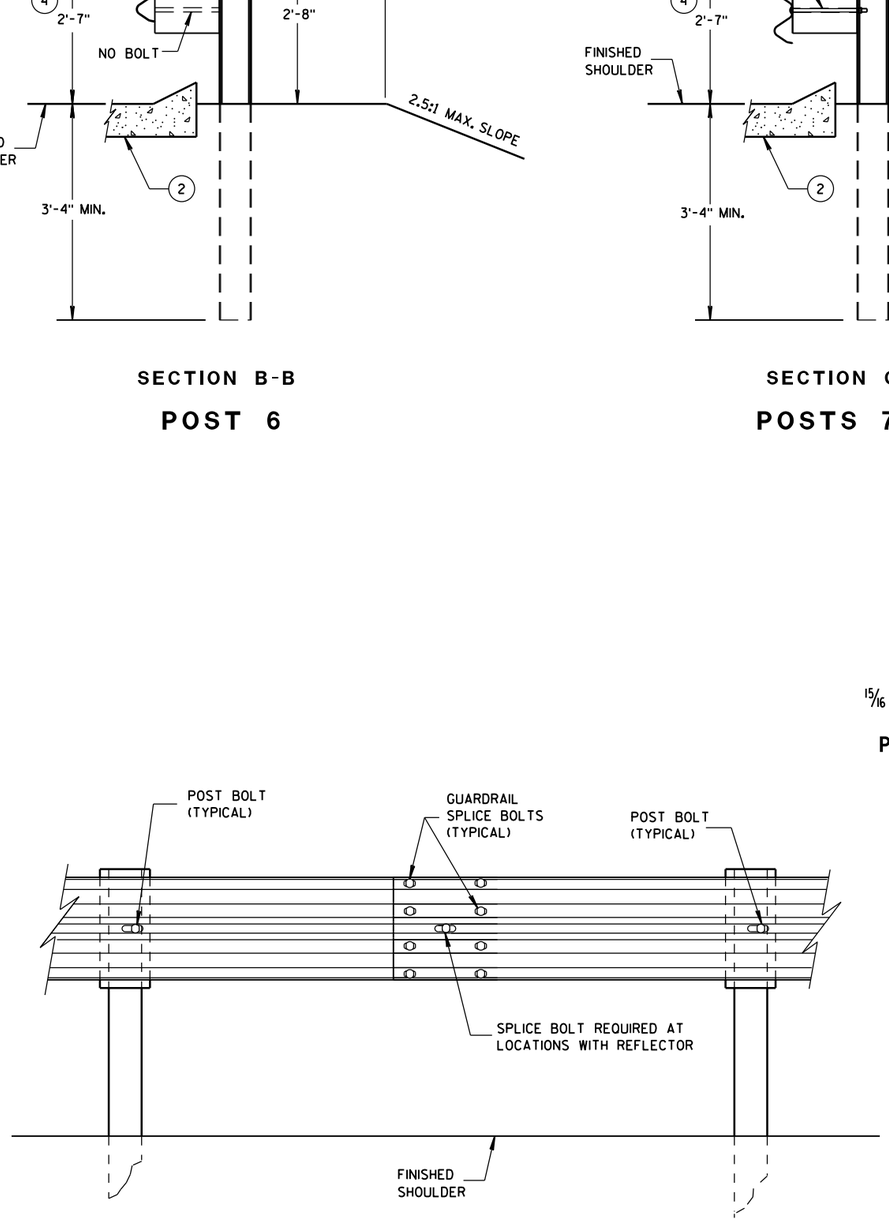
SECTION C-C

POSTS 7-11



SECTION D-D

POSTS 12-17



SPLICE DETAIL

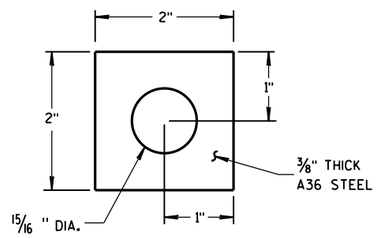
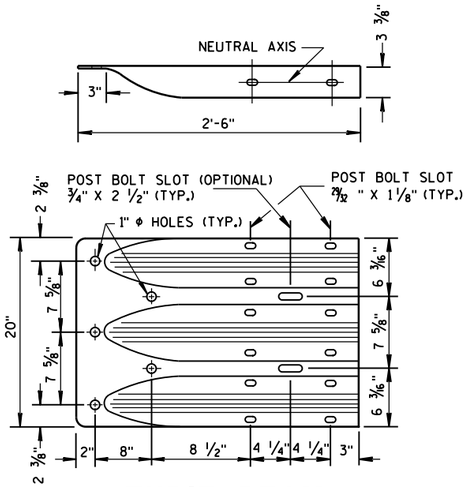
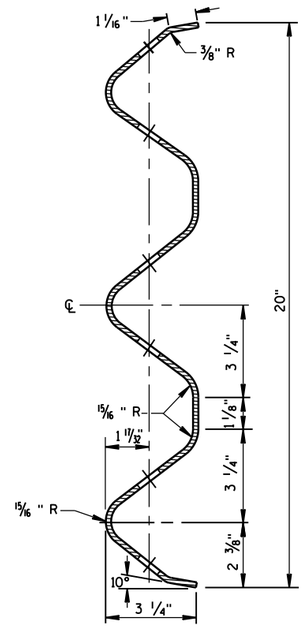


PLATE WASHER DETAIL



THRIE BEAM TERMINAL CONNECTOR



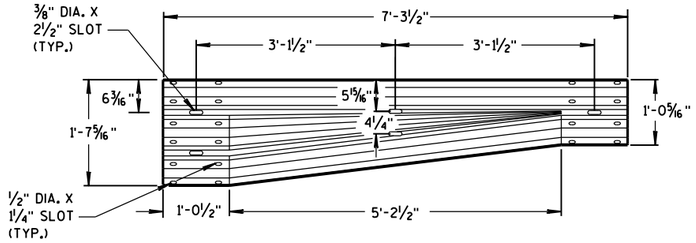
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

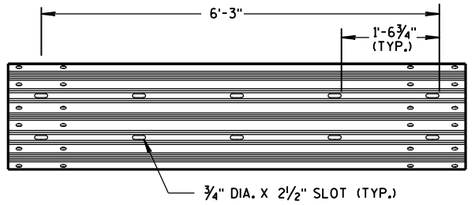
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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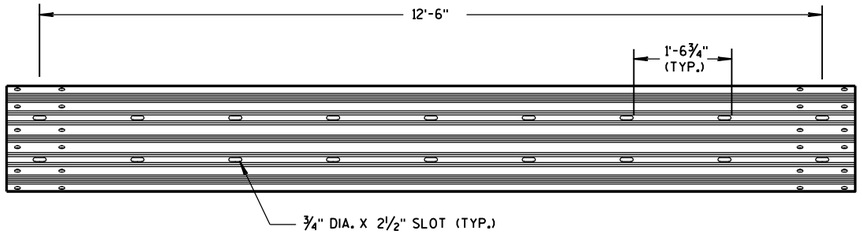
S.D.D. 14 B 45-4b



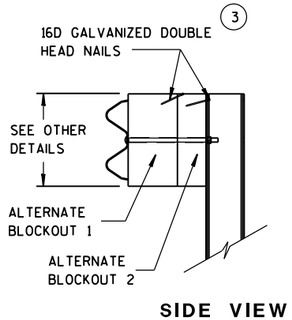
W-BEAM TO THRIE BEAM TRANSITION SECTION



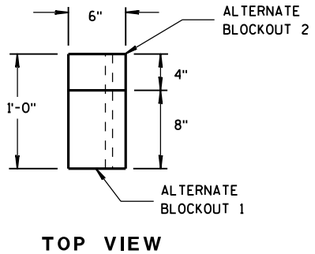
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

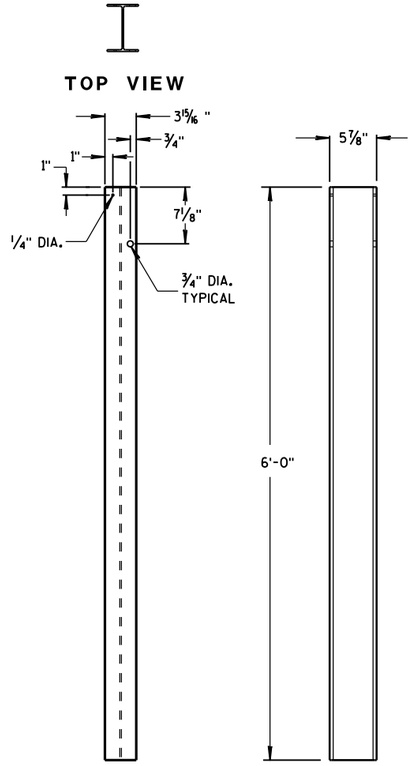


SIDE VIEW

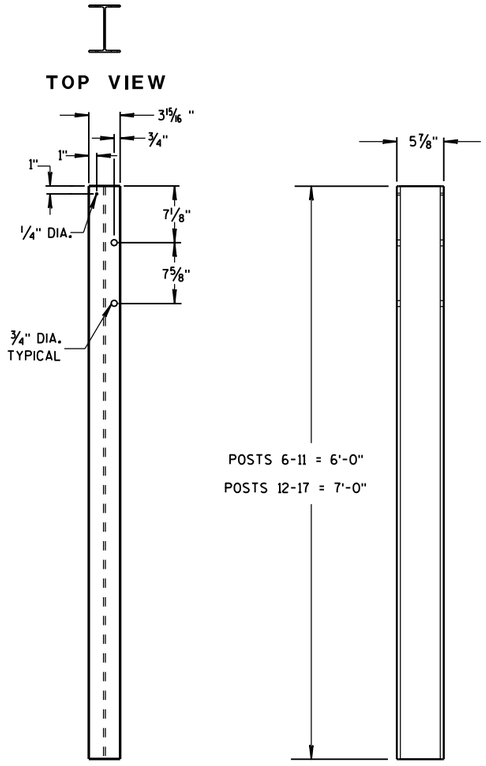


TOP VIEW

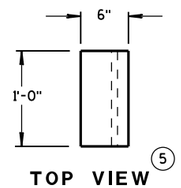
ALTERNATE WOOD BLOCKOUT DETAIL



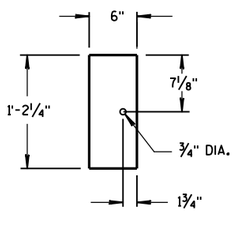
STEEL POSTS 1-5



STEEL POSTS 6-17

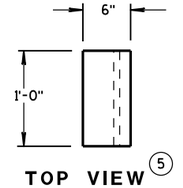


TOP VIEW

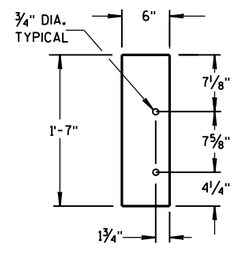


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

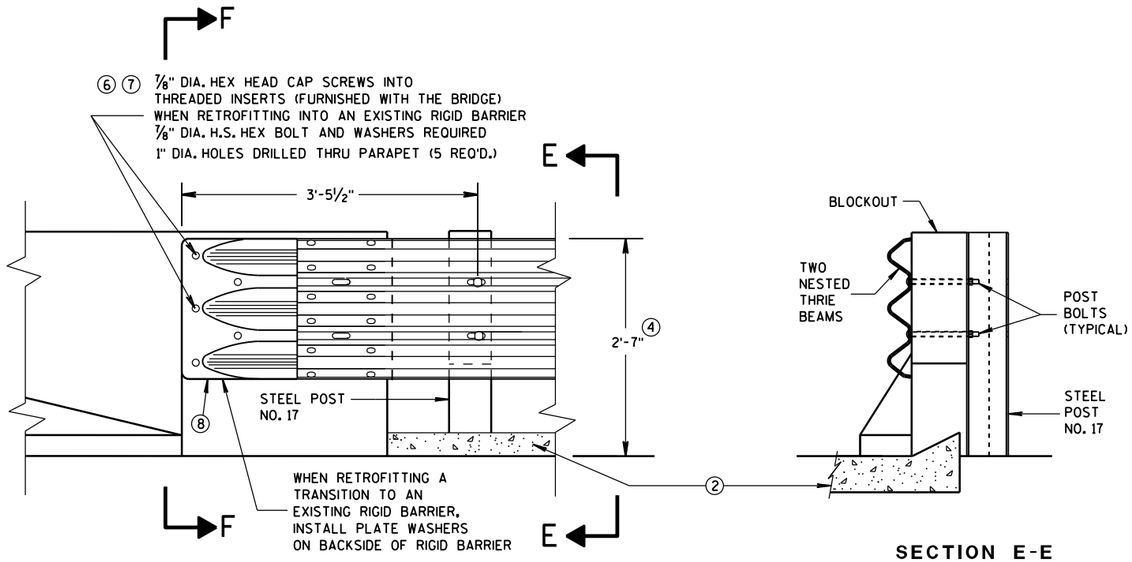
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 45-4c
S.D.D. 14 B 45-4c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

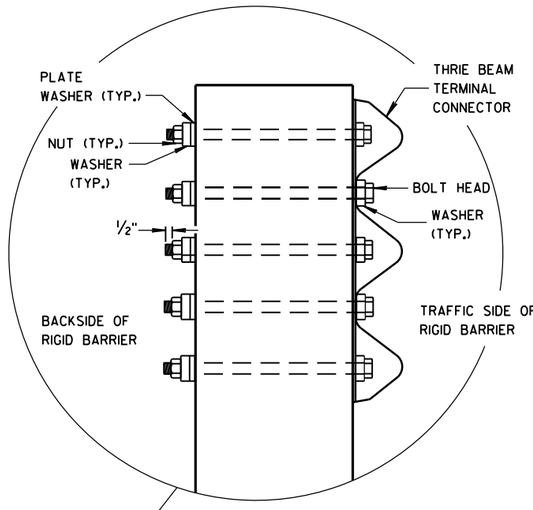
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

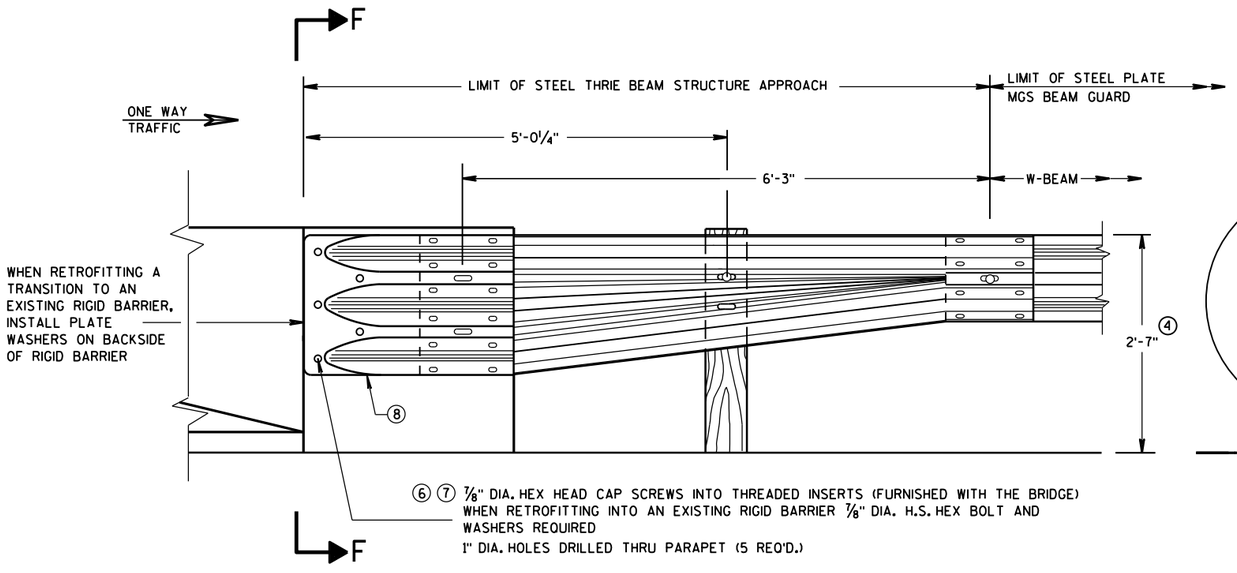
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

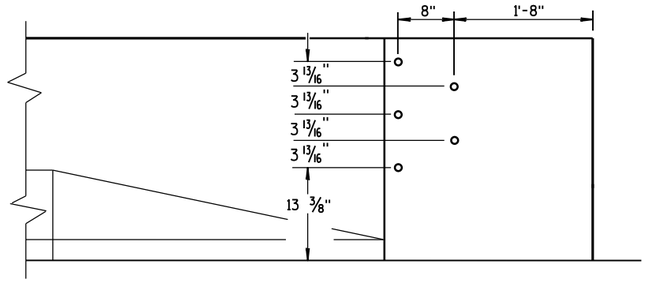
⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".





FRONT VIEW

SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED June, 2015 — DATE /S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER FHWA NT

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S.D.D. 14 B 45-4d

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S.D.D. 14 B 45-4d

GENERAL NOTES

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

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

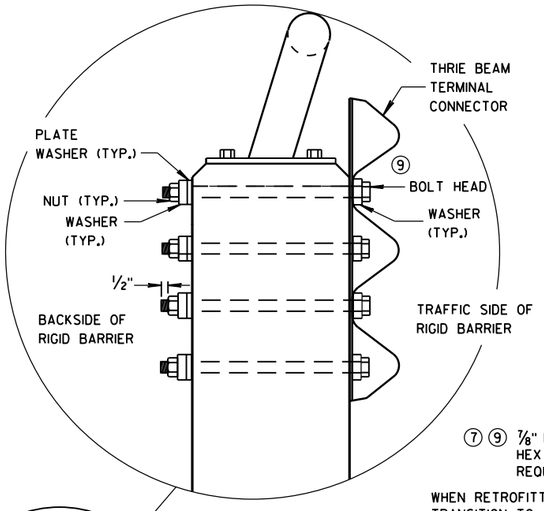
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

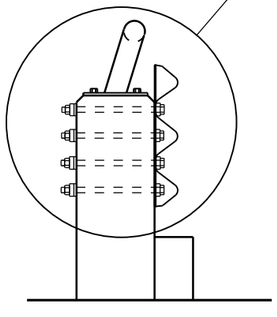
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

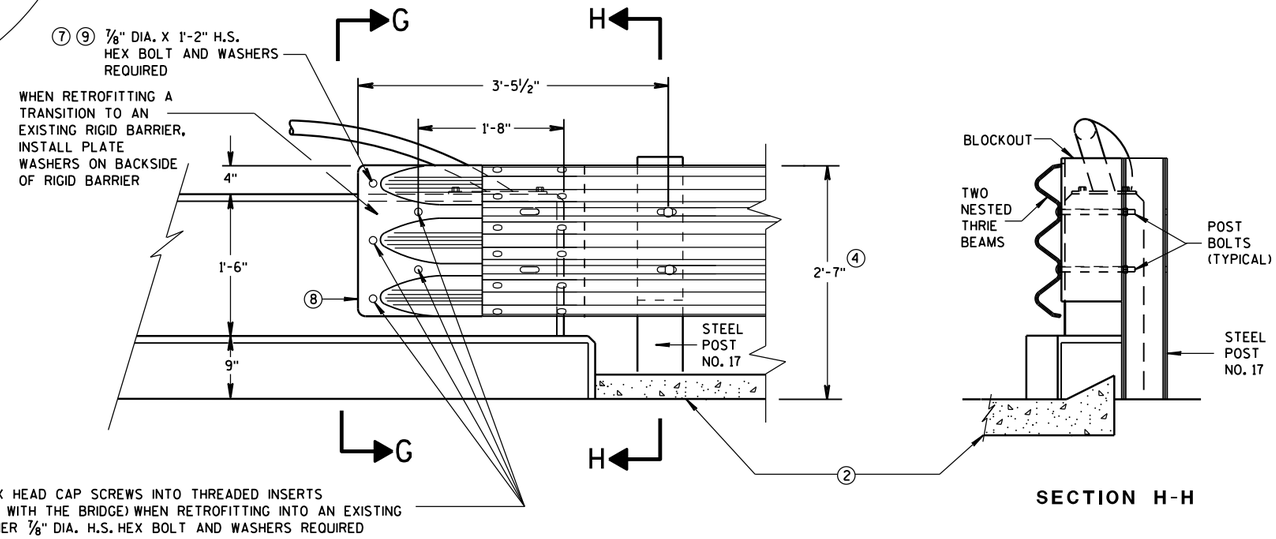
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





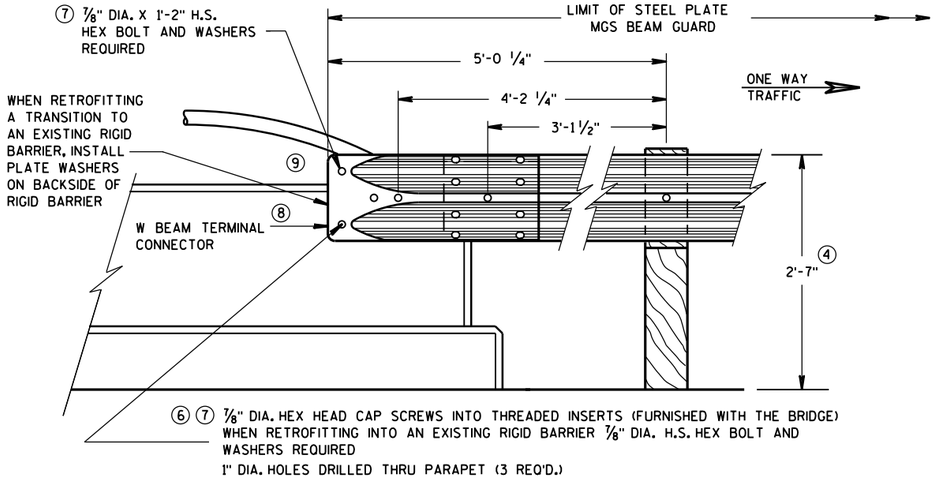
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

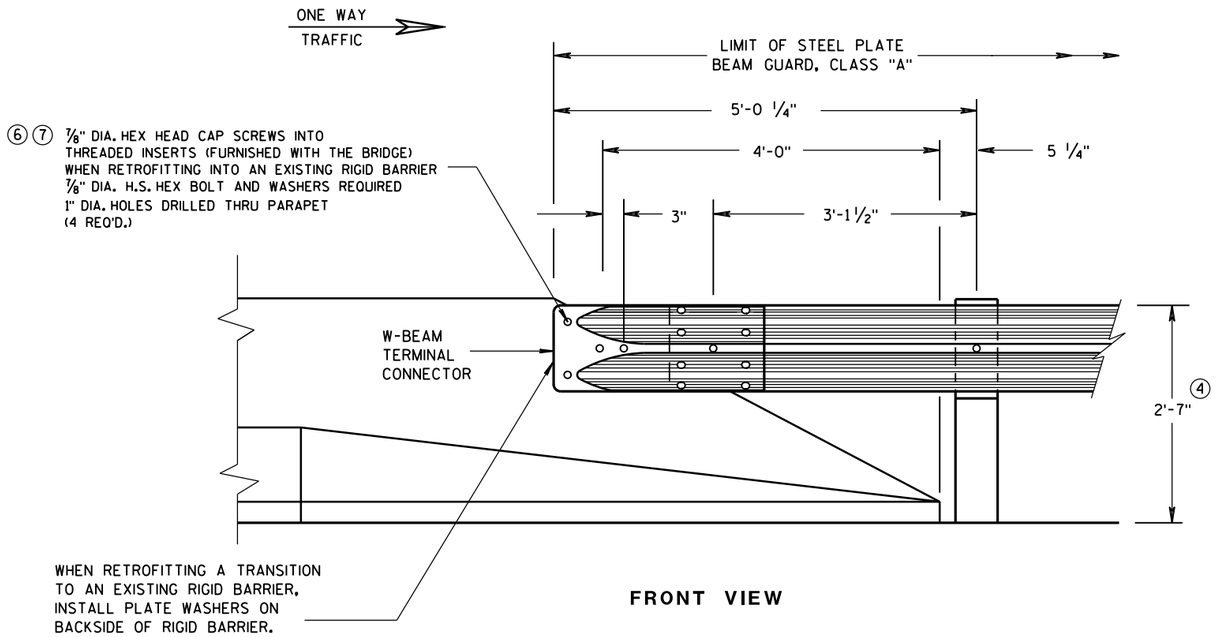
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 45-4e

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S.D.D. 14 B 45-4e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

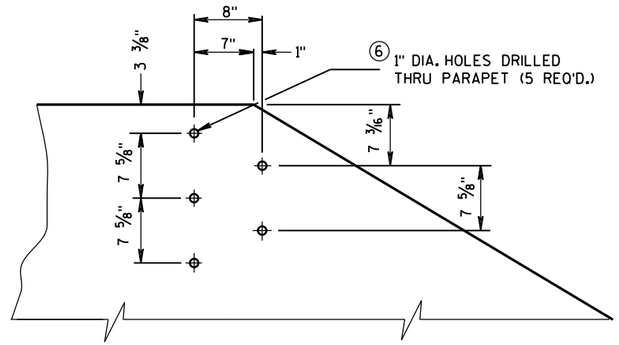
GENERAL NOTES

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

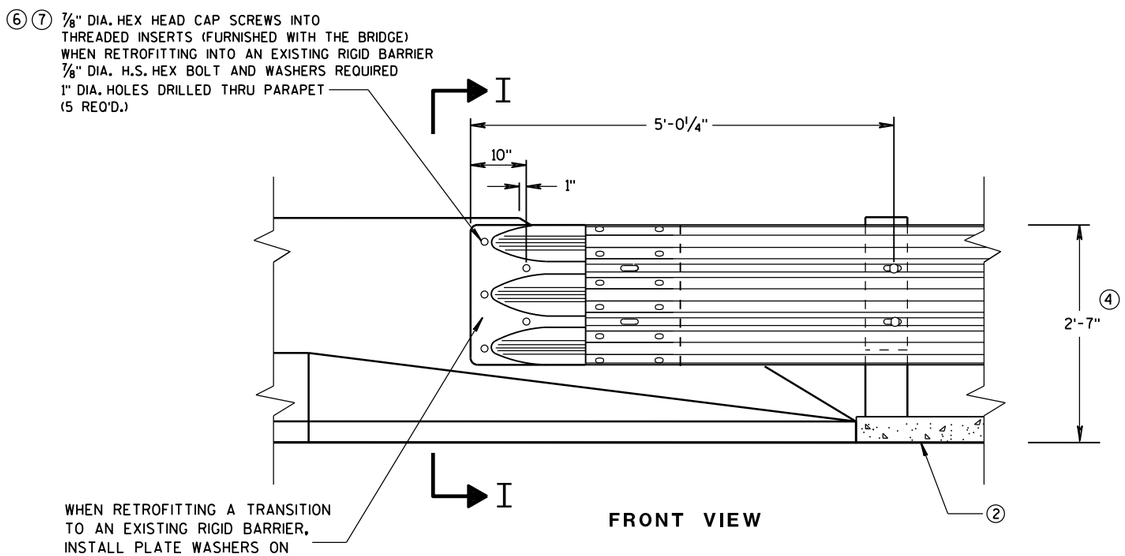
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

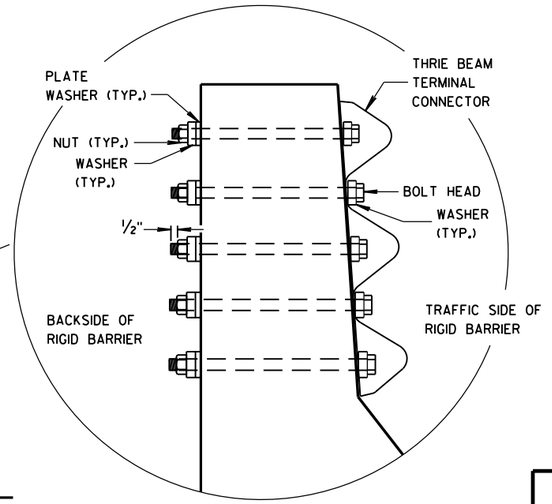


DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW

SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

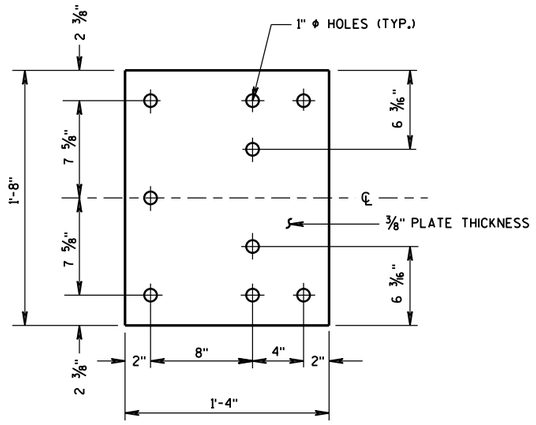
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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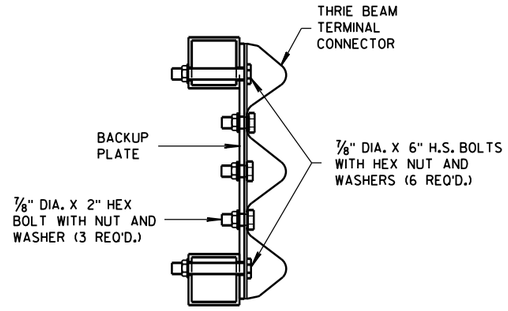
S.D.D. 14 B 45-4f

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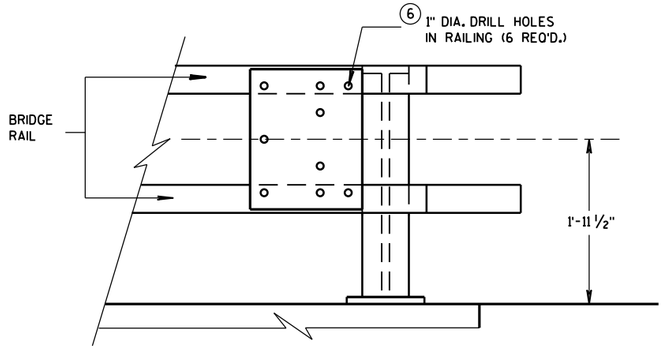
S.D.D. 14 B 45-4f



BACK-UP PLATE DETAIL



SECTION J-J

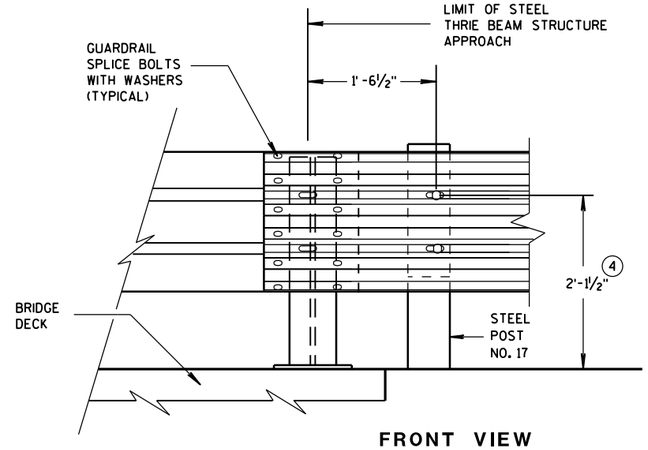


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

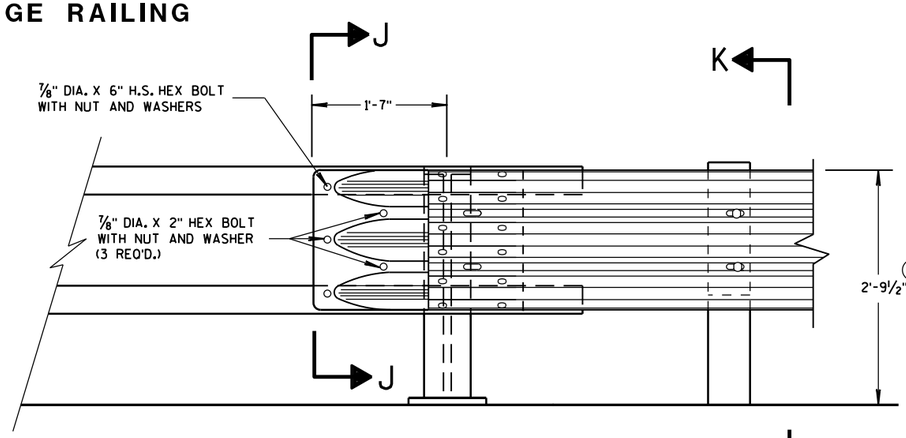
4 TOLERANCE FOR TOP OF BEAM IS ± 1".

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

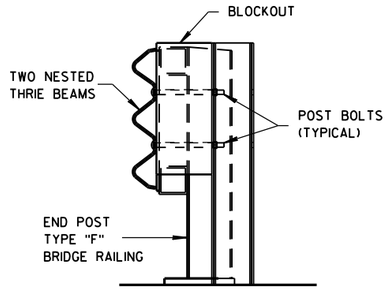


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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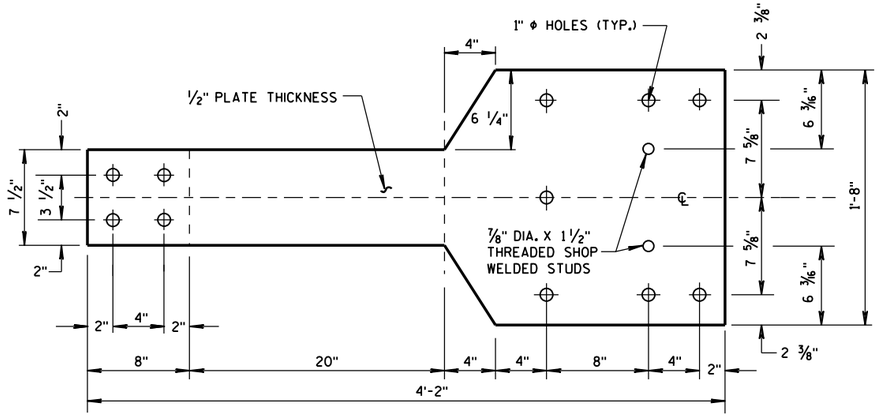
S.D.D. 14 B 45-4g

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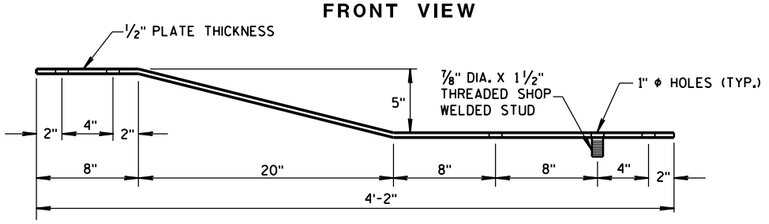
S.D.D. 14 B 45-4g

GENERAL NOTES

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

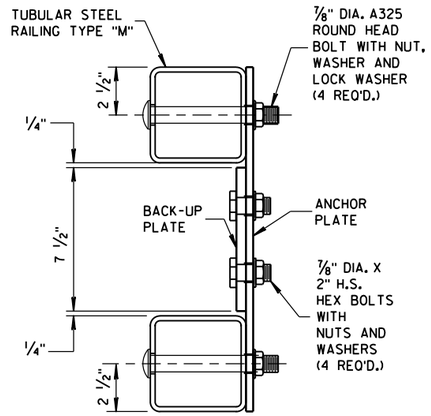


FRONT VIEW

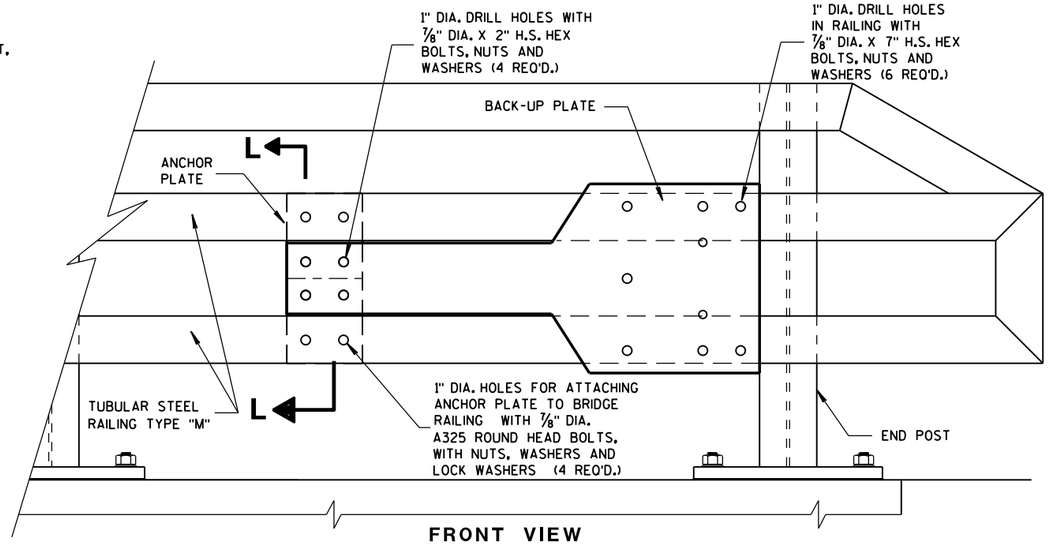


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

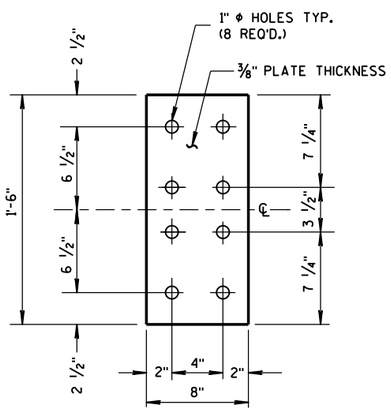


SECTION L-L



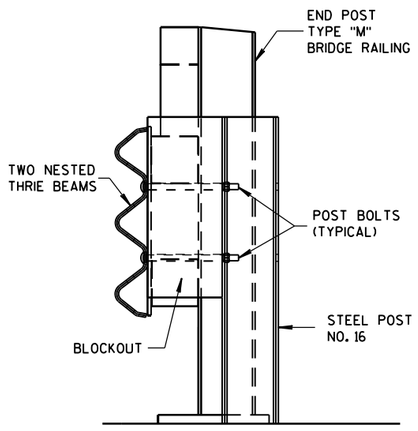
FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"

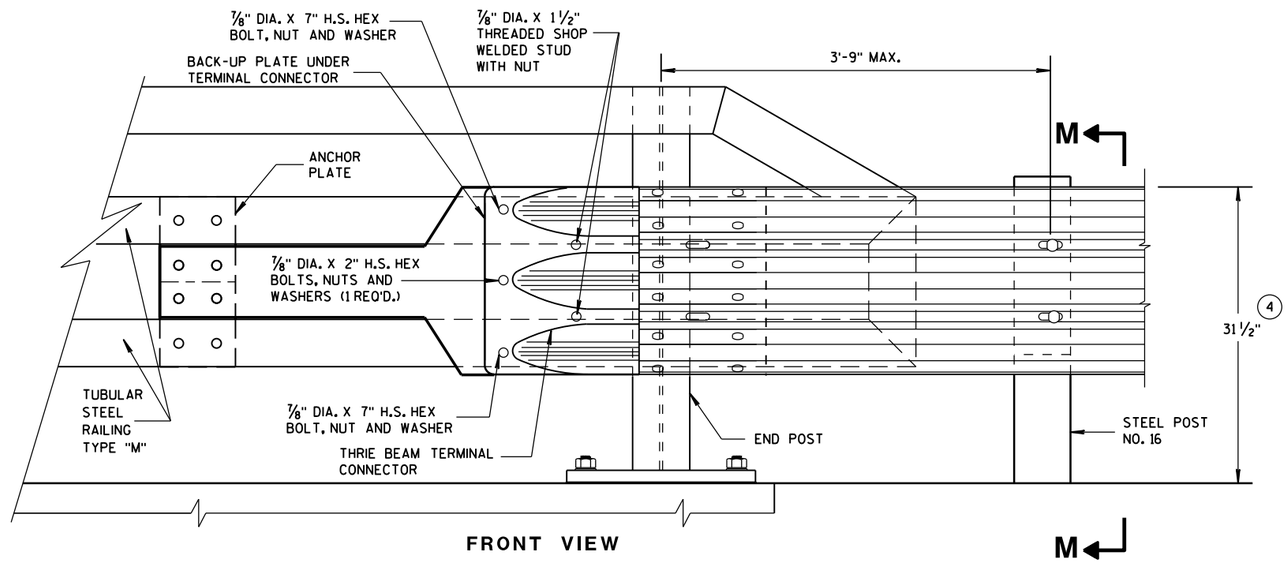


FRONT VIEW

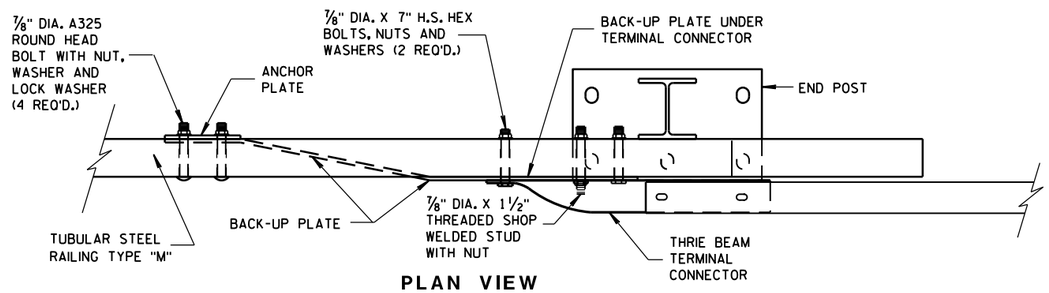
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

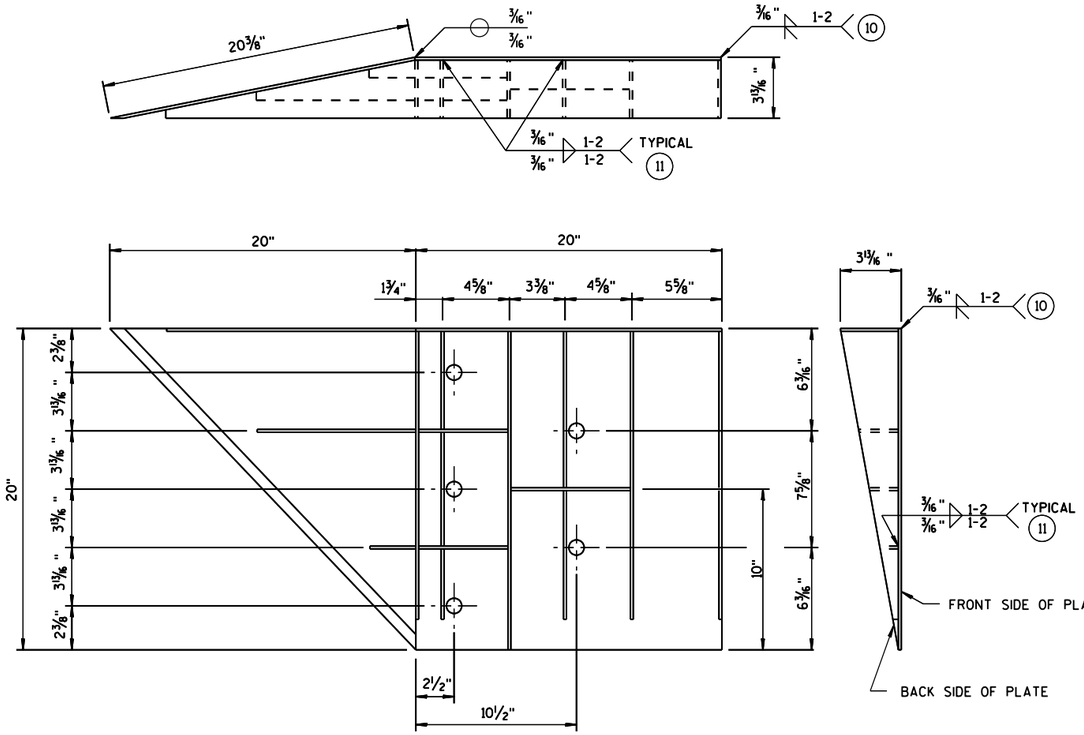
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June, 2015 — DATE
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WELDING INSTRUCTION

(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".

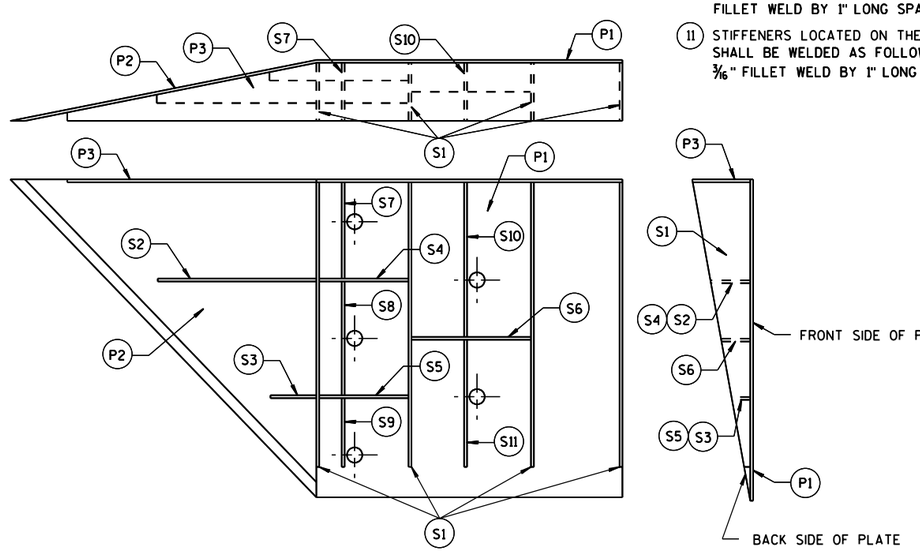


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 3/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 1/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

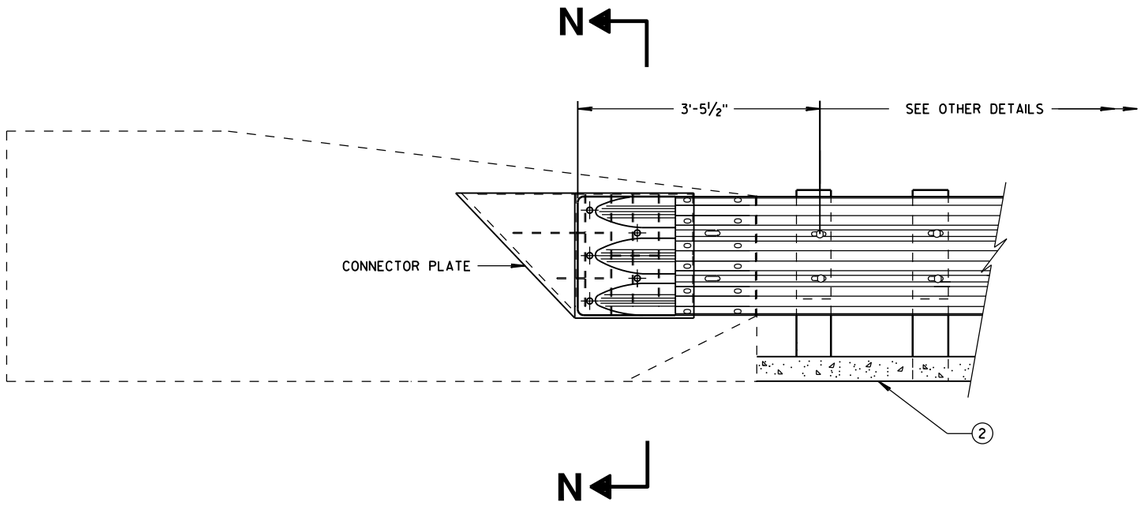
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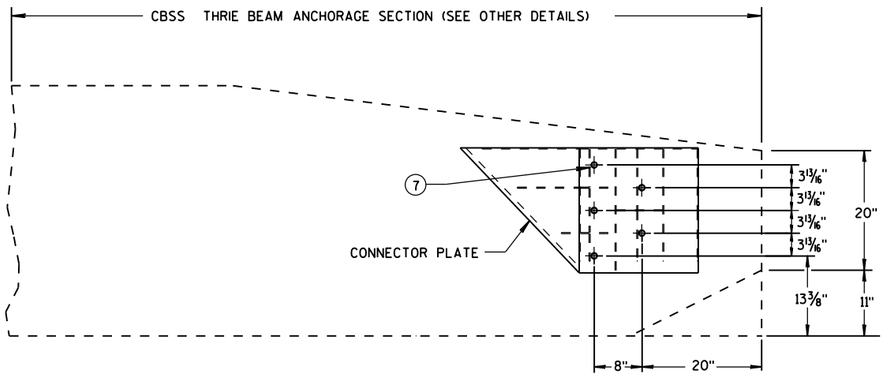
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S.D.D. 14 B 45-4i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



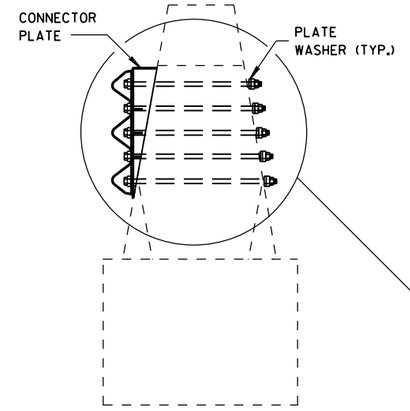
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

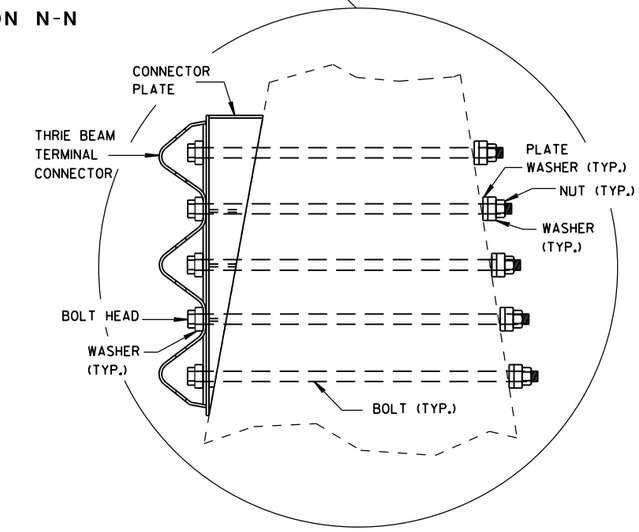
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

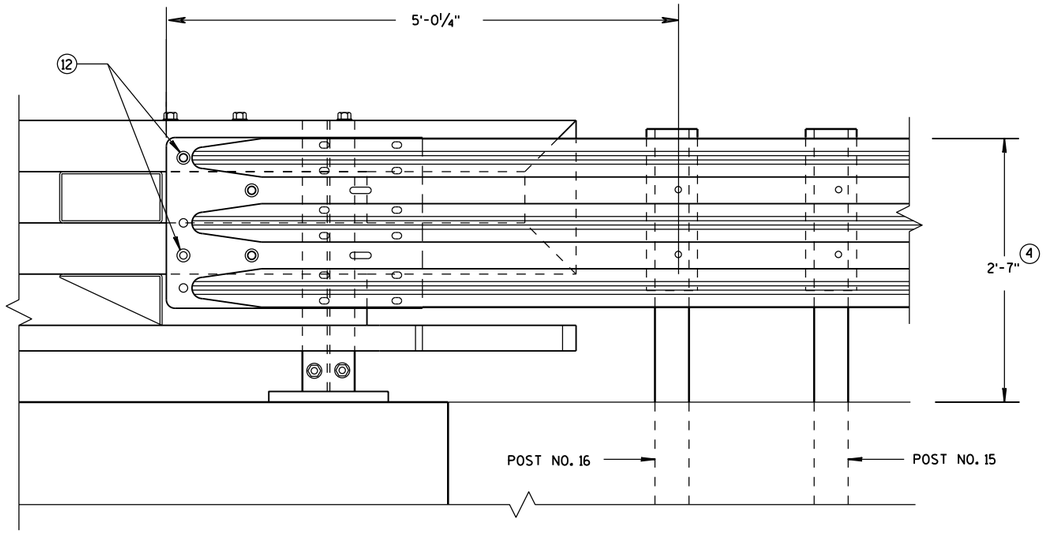
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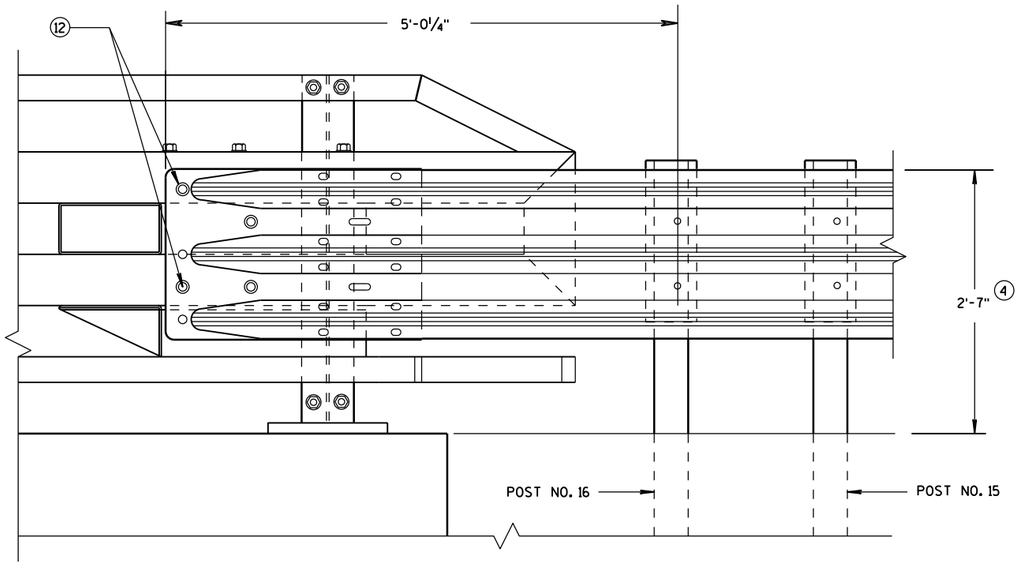
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S.D.D. 14 B 45-4j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE

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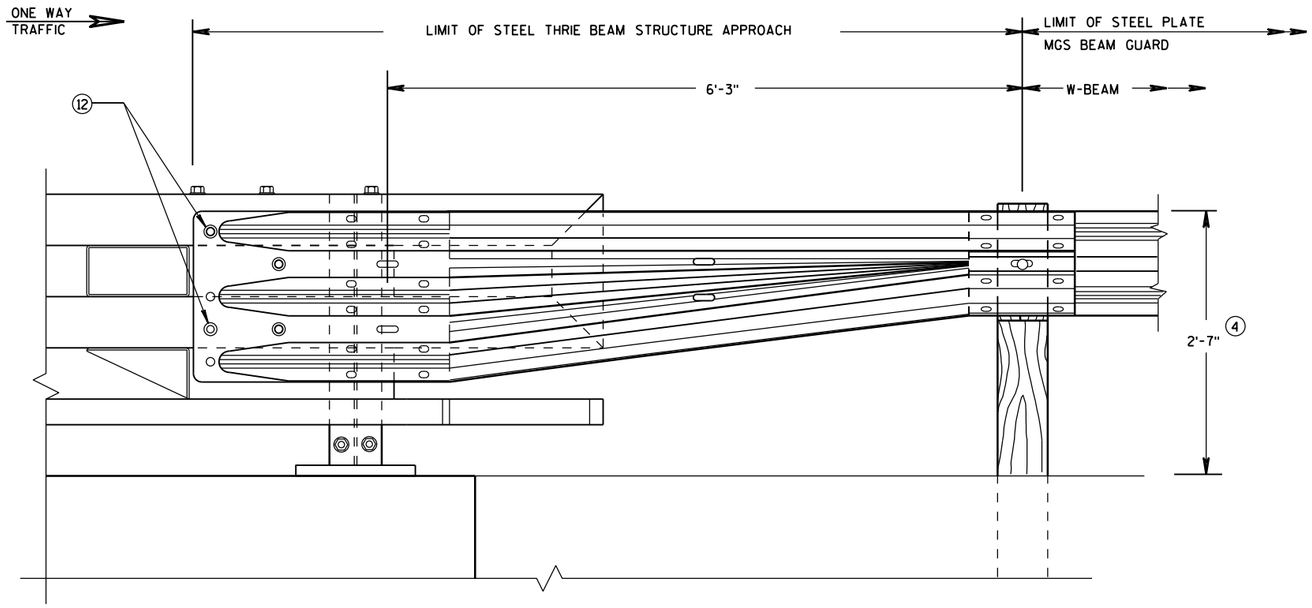
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S.D.D. 14 B 45-4k



FRONT VIEW

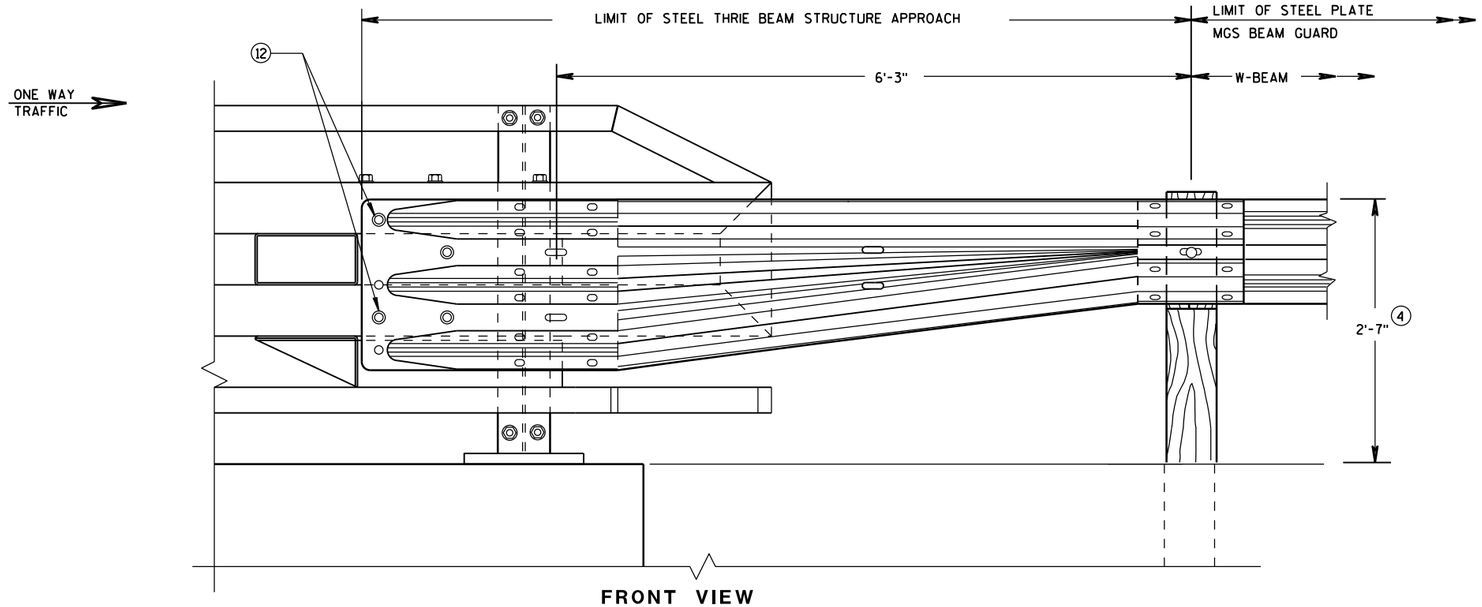
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

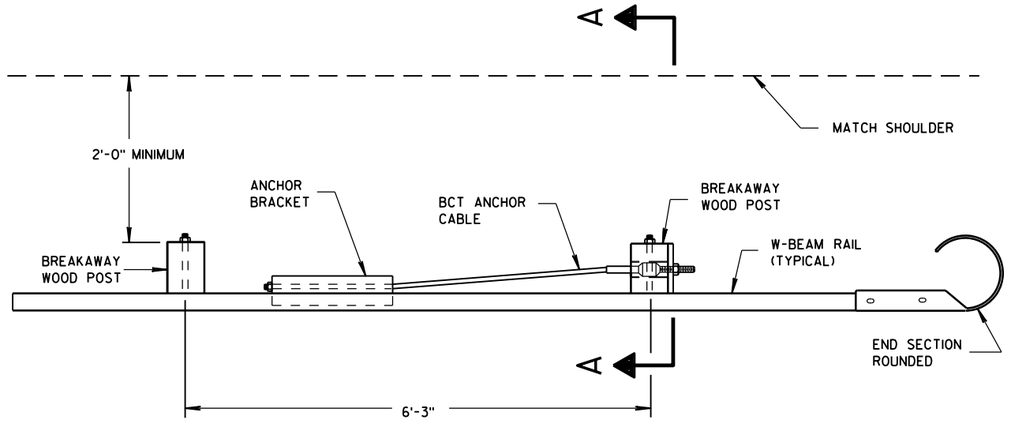
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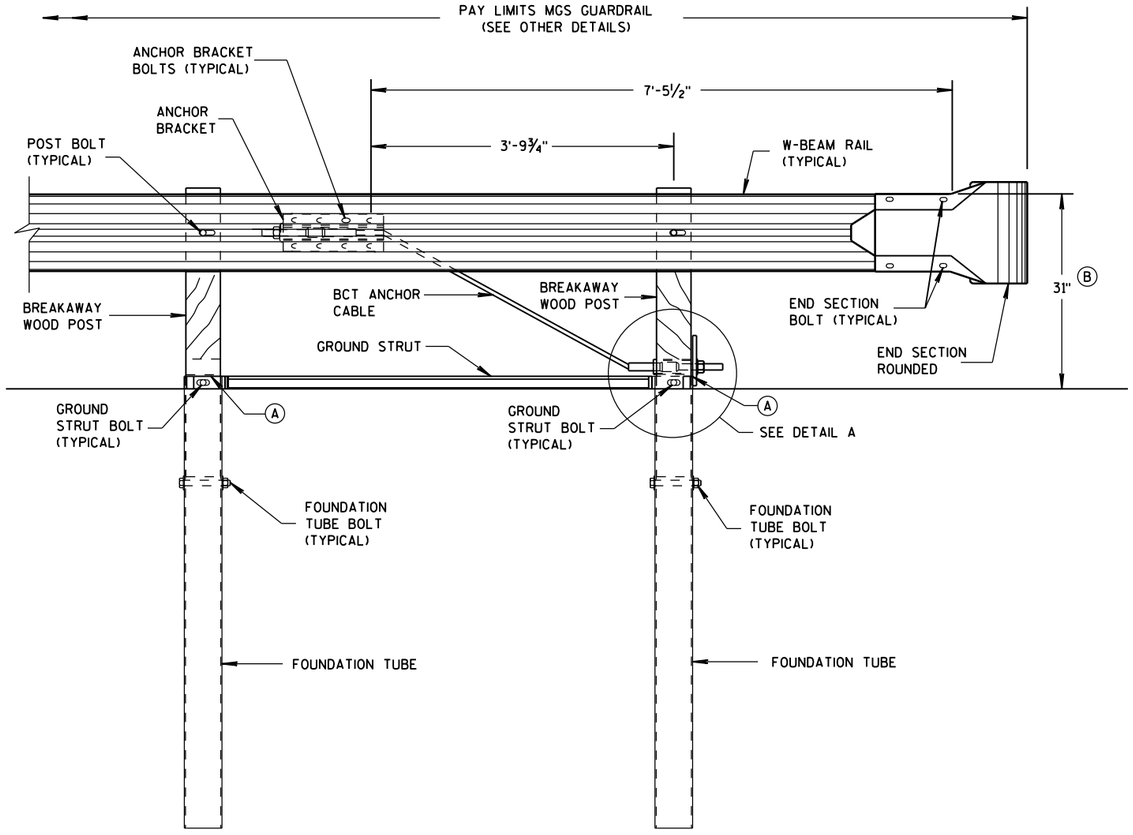
S.D.D. 14 B 45-4L

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S.D.D. 14 B 45-4L

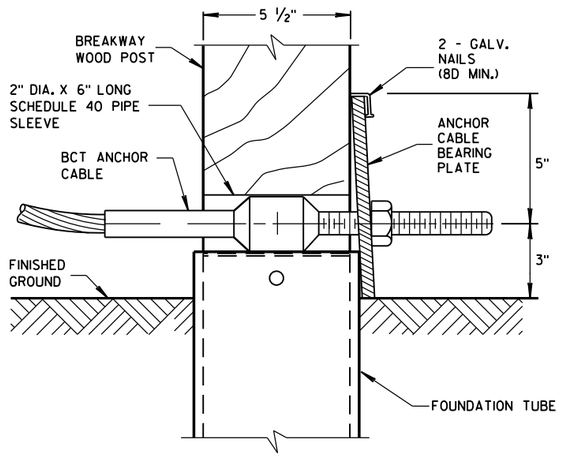


PLAN VIEW



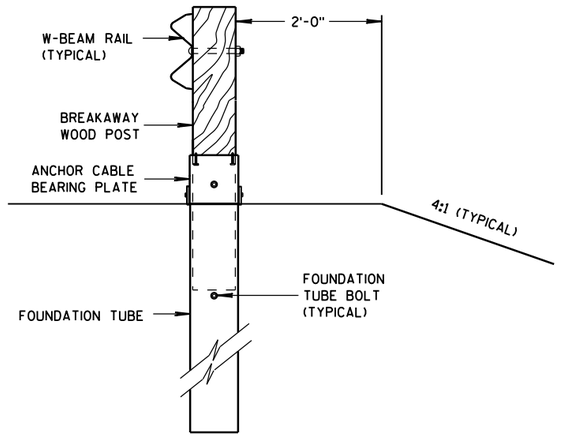
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

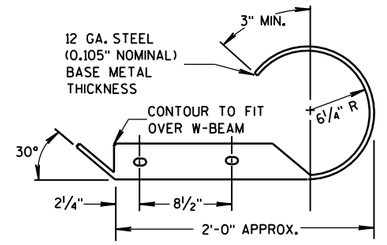
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

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.

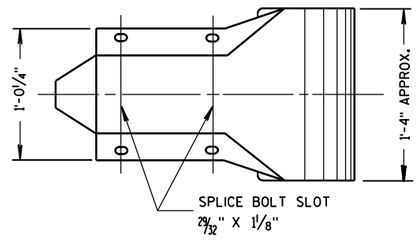
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(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".



PLAN VIEW



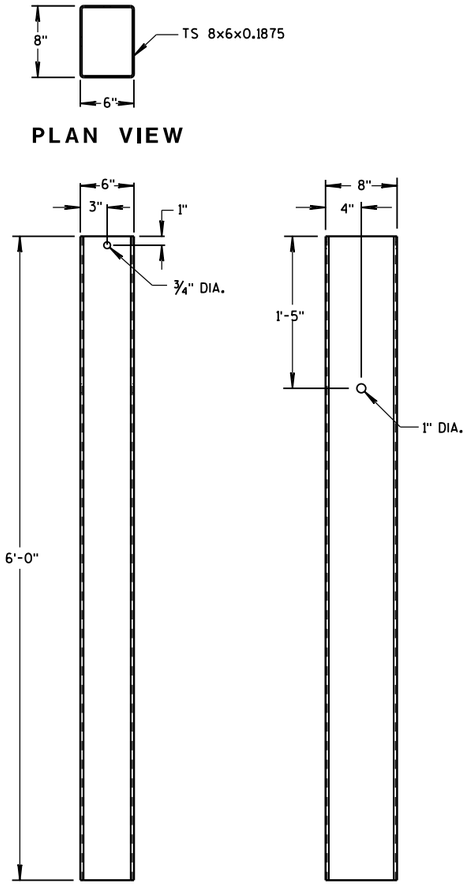
FRONT VIEW

W BEAM END
SECTION ROUNDED

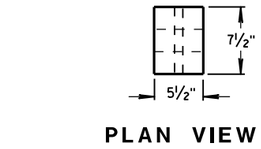
MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

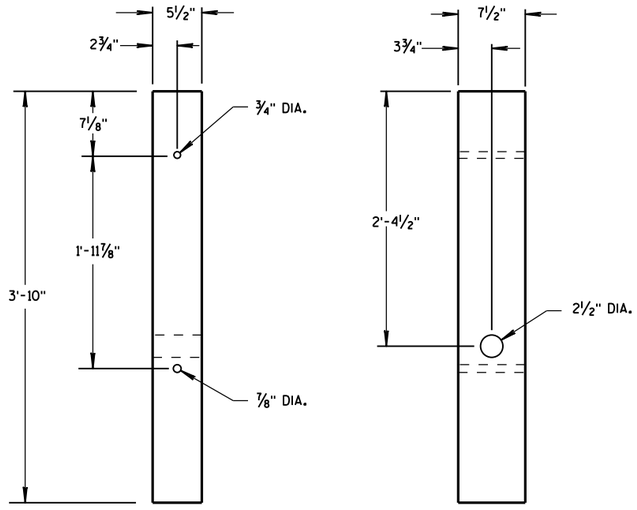
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DEPARTMENT OF TRANSPO

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FOUNDATION TUBE



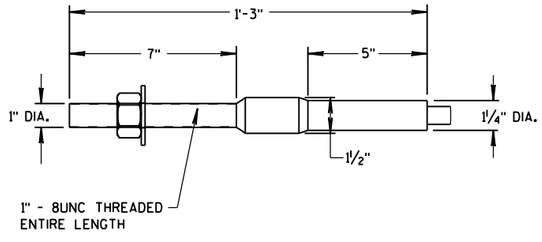


BREAKAWAY WOOD POST

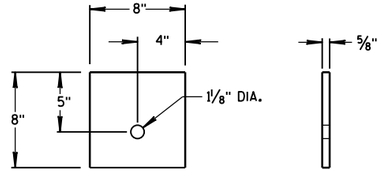
GENERAL NOTES

BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



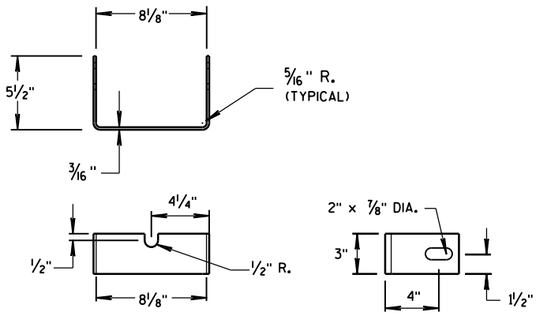
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

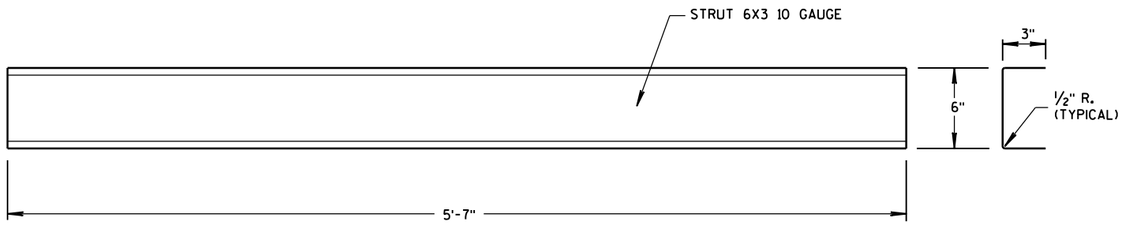
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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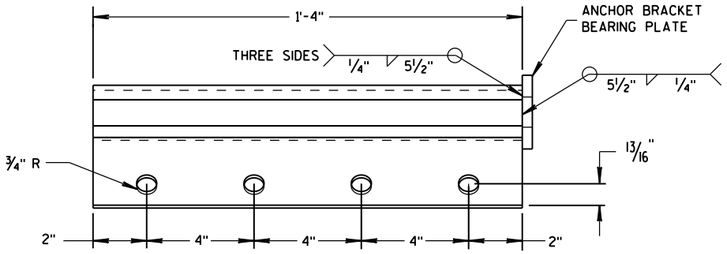
S.D.D. 14 B 47-2b

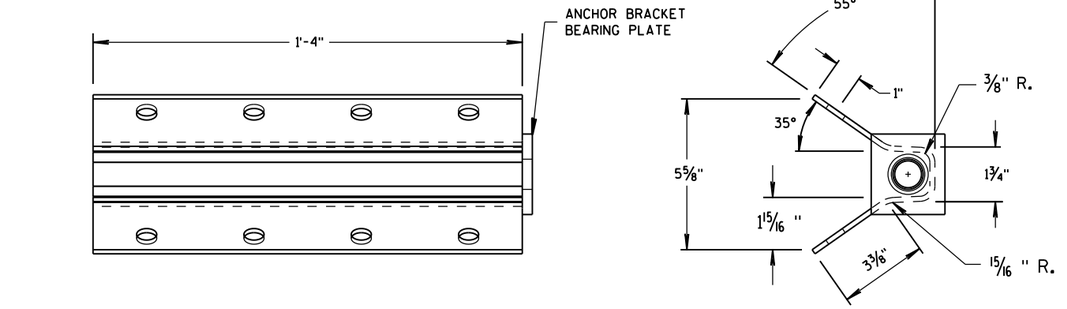


YOKE DETAIL

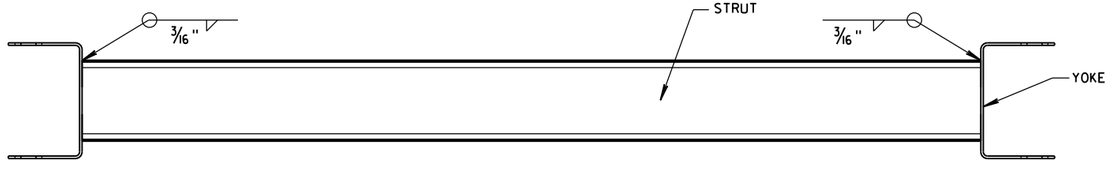


STRUT DETAIL

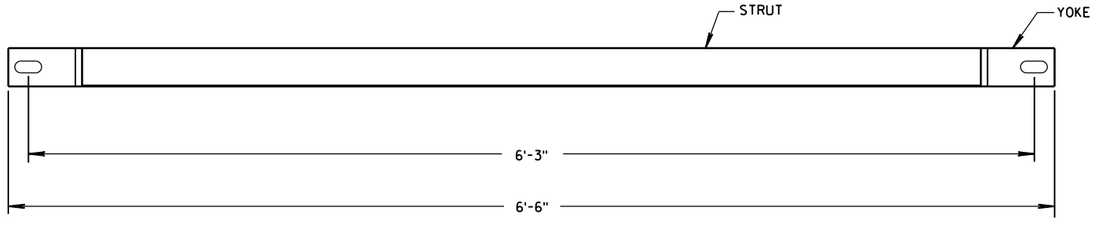




ANCHOR BRACKET

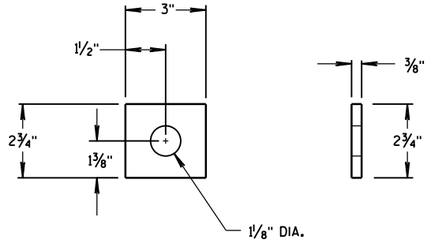


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

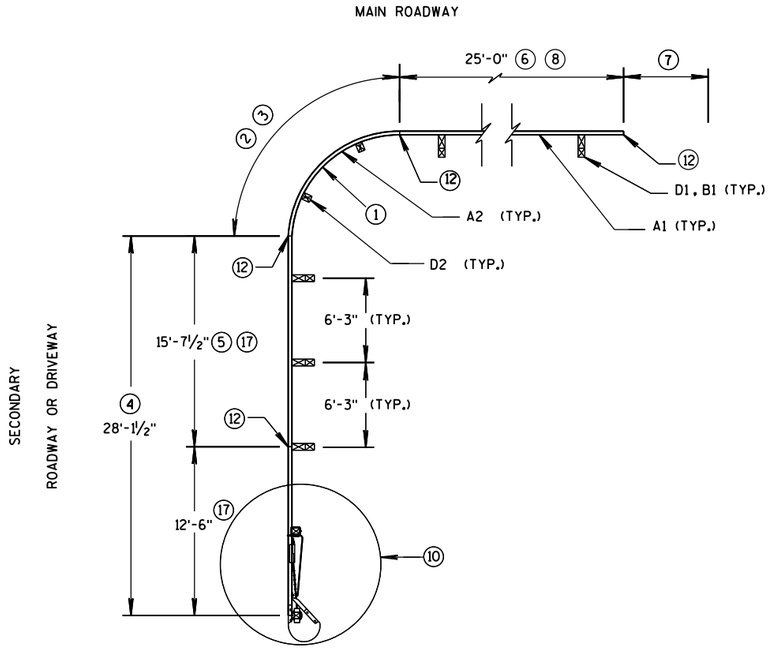
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

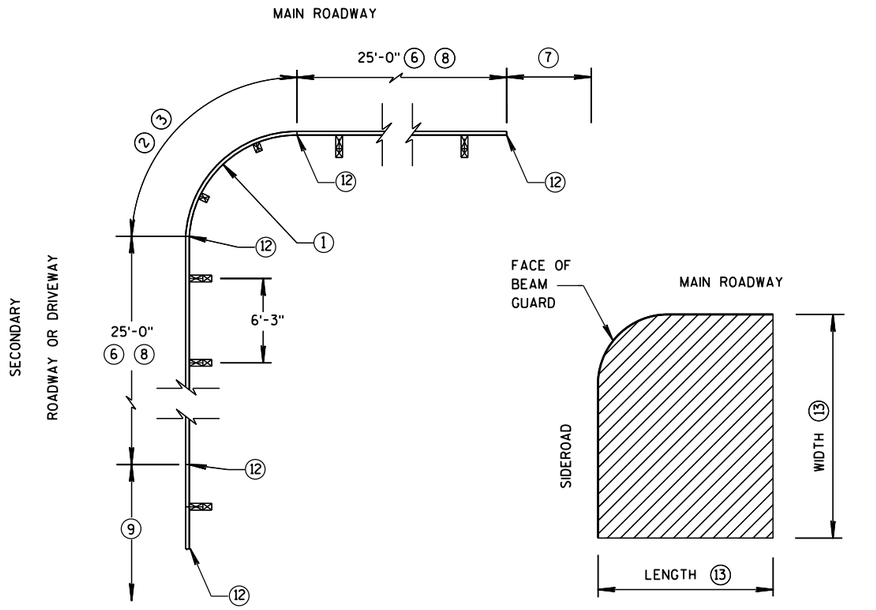
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June 2014
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S.D.D. 14 B 47-2c



SHORT RADIUS BEAM GUARD WITH SHORT RADIUS TERMINAL ON SECONDARY ROAD OR DRIVEWAY PLAN VIEW



SHORT RADIUS BEAM GUARD WITH EAT, ADDITIONAL BEAM GUARD OR TRANSITION TO RIGID BARRIER ON SECONDARY ROAD OR DRIVEWAY PLAN VIEW

AREA FREE OF FIXED OBJECTS FOR RADIUS 32' AND LESS (16)

TABLE FOR RADIUS OF 32' AND LESS

RADIUS FT	LENGTH FT	WIDTH FT
8	25	15
16	30	15
24	40	20
32	50	30

GENERAL NOTES

SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.

SEE 14B42 FOR MORE INFORMATION ON BEAM GUARD INSTALLATION, PARTS, MATERIALS, AND INSTALLATION INFORMATION.

GALVANIZE PARTS AFTER FABRICATION.

WELDING IS TO FOLLOW CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1

UNLESS NOTED OTHERWISE, ALL PLATES ARE FLAT AND FREE OF WARP.

UNLESS NOTED OTHERWISE, ALL EDGES ARE SMOOTH, STRAIGHT AND VERITCAL.

ALL CUTS AND HOLES, EXCEPT IN BEAM GUARD RAIL ARE TO BE MACHINED OR MACHINE FLAME CUTS.

UNLESS NOTED OTHERWISE CUT OR PROVIDE BOLTS THAT ARE ¼" TO ½" BEYOND THE NUT

DRAWINGS ARE NOT TO SCALE.

(1) RADIUS MEASURE FROM INSIDE OF RAIL. LENGTH OF BEAM GUARD SHORT RADIUS GUARD MEASURED ALONG TRAFFIC SIDE OF RAIL. RADIUS BETWEEN 8 FEET TO 150 FEET. SEE PLAN FOR REQUIRED RADIUS. BEAM GUARD RAIL IN RADIUS IS SHOP BENT. ODD RAIL LENGTH OR FIELD CUTS MAY BE REQUIRED.

(2) CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE USED IN THE RADIUS. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE SPACED 6'-3". SEE PLAN FOR NUMBER OF CONTROLLED RELEASE TERMINAL (CRT) POSTS.

(3) WITHIN RADIUS BEAM GUARD RAILS ARE NOT BOLTED TO POSTS. BEAM GUARD RAILS RESTED ON TOP OF LAG SCREW.

(4) MINIMUM LENGTH OF BEAM GUARD ALONG SIDE ROAD OR DRIVEWAY TO INSTALL SHORT RADIUS TERMINAL. BEAM GUARD IS PAID FOR WITH BEAM GUARD ITEM.

(5) ODD LENGTH OF BEAM GUARD REQUIRED TO INSTALL SHORT RADIUS TERMINAL.

(6) MINIMUM AMOUNT OF BEAM GUARD TO BE INSTALLED PRIOR TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD, OR EAT. BEAM GUARD PAID FOR WITH BEAM GUARD ITEM. SEE PLANS FOR MORE DETAIL.

(7) BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. SEE PLAN.

(8) TOP OF BEAM GUARD BY THE RADIUS IS 27". HEIGHT OF BEAM GUARD IS 31" BY TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD OR EAT.

(9) ADDITIONAL BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. BEAM GUARD SHOWN. SEE PLAN FOR DETAILS.

(10) SHORT RADIUS TERMINAL (SEE OTHER DETAILS)

(11) HEIGHT VARIES. SEE NOTE (8) AND (17).

(12) BEAM GUARD RAIL SPLICE LOCATION. SPLICE LOCATION REQUIRE PART F1 AND F2. SEE SDD 14B42 FOR DETAILS.

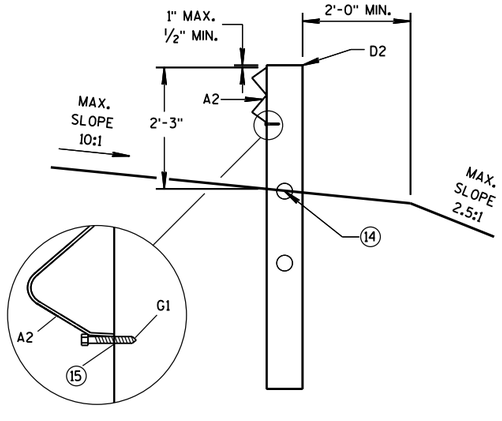
(13) SEE TABLE FOR VALUES.

(14) MAXIMUM HEIGHT FOR CENTER OF HOLE IS ¾" ABOVE FINISHED GROUND ±1".

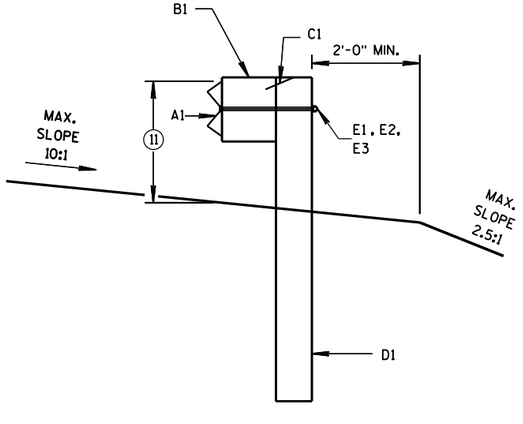
(15) DRILL 15/64" DIA. PILOT HOLE. DO NOT HAMMER LAG SCREW INTO POST.

(16) SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.

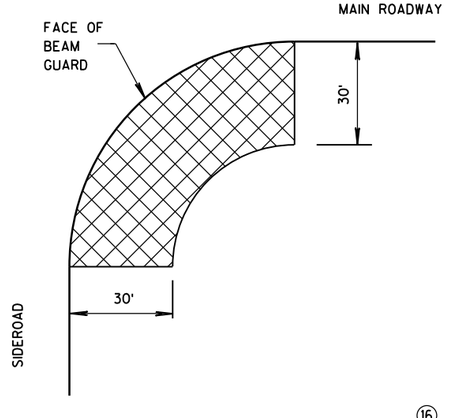
(17) TOP OF RAIL HEIGHT IS 27" WHEN USING A SHORT RADIUS TERMINAL.



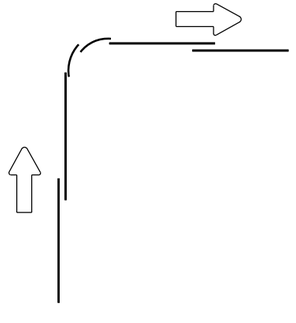
CONTROLLED RELEASE TERMINAL POST (CRT) IN RADIUS



BEAM GUARD POSTS IN HEIGHT TRANSITION



AREA FREE OF FIXED OBJECTS (16) RADIUS GREATER THAN 32'



LAP SPLICE DETAIL

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

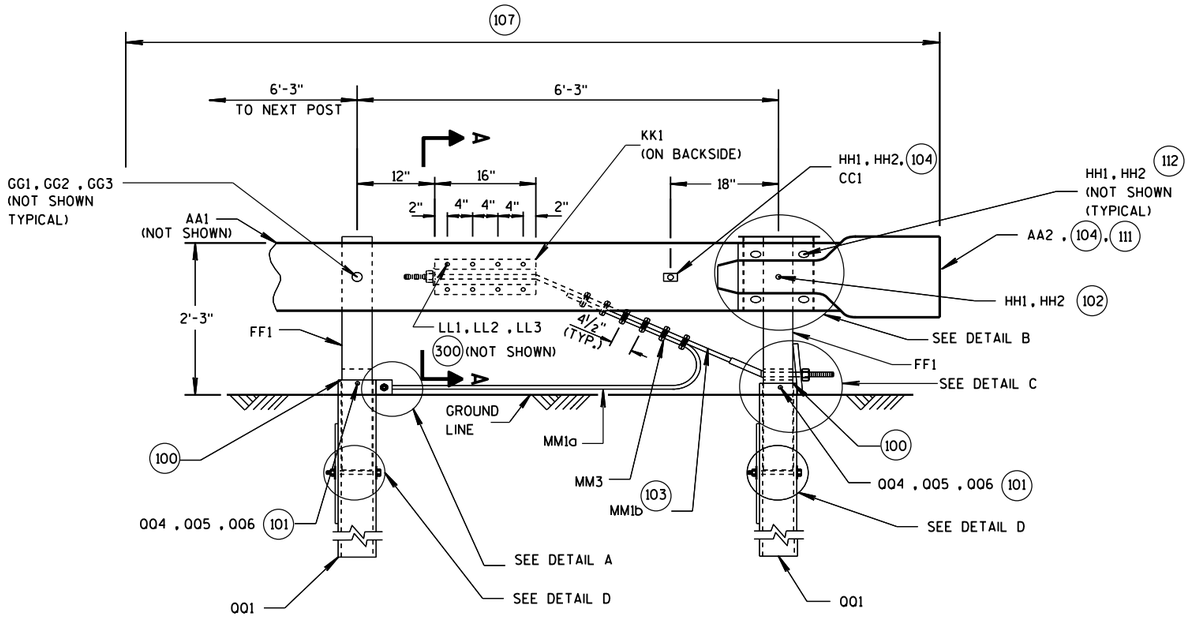
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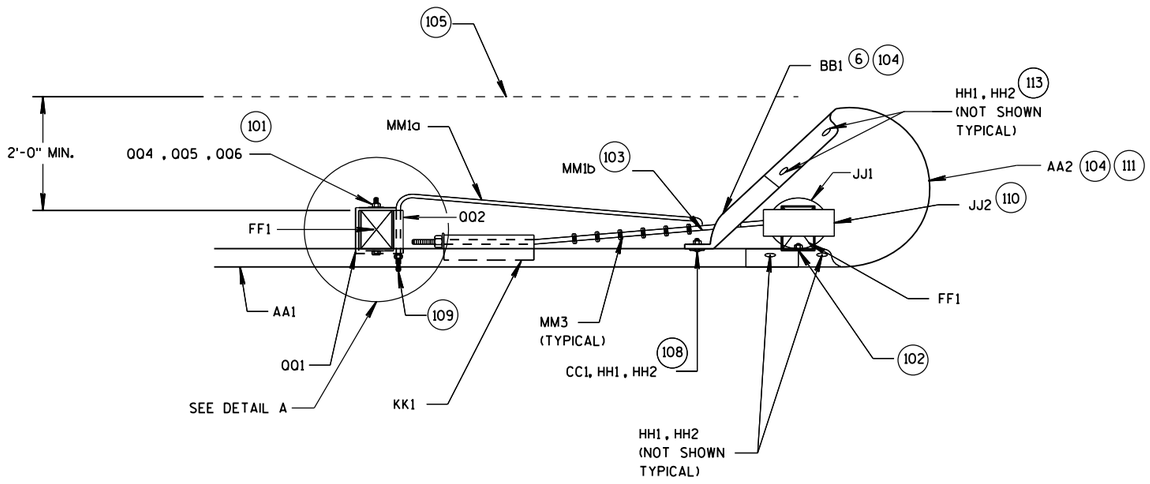
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S.D.D. 14 B 53-1a



SHORT RADIUS TERMINAL
PROFILE VIEW



SHORT RADIUS TERMINAL
TOP VIEW

100 TOP OF FOUNDATION TUBE 2 INCHES MAXIMUM ABOVE FINISHED GROUND.

101 WASHERS REQUIRED BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

102 SPLICE BOLT AND NUT CONNECTS BEAM GUARD RAIL, W-BEAM END SECTION BUFFER, AND STEEL PIPE ASSEMBLY. NO WASHER REQUIRED. SEE DETAIL B.

103 CABLE IS TAUT.

104 ADJUST AA2 AND BB1 TO FIT.

105 BREAK POINT OF SHOULDER.

106 TACK WELD CABLE CONNECTOR TUBE PLATE TO CABLE CONNECTION TUBE. SEE DETAIL A PROFILE VIEW.

107 PAY LIMIT FOR BEAM GUARD.

108 SQUARE WASHER BETWEEN HEAD OF BOLT AND TRAFFIC FACE OF BEAM GUARD. ROUND WASHER REQUIRED BETWEEN NUT AND BB1.

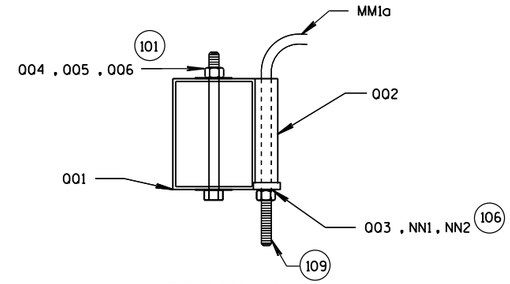
109 CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS ½" TOLERANCE). DEBURR AFTER CUTTING.

110 SEE STEEL PIPE ASSEMBLY DETAILS.

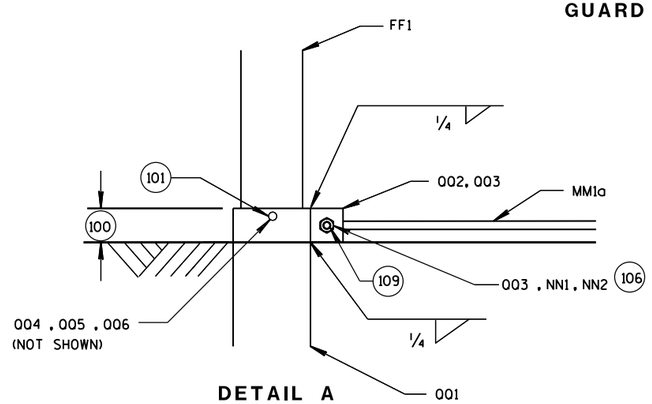
111 ATTACH UU2 WITH UU3. SHOP APPLY UU1 TO UU2.

112 FOUR HH1 AND HH2 REQUIRED TO ATTACH AA1 TO AA2.

113 FOUR HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.



DETAIL A
TOP VIEW
(WOOD BREAKAWAY AND BEAM GUARD RAIL POSTS NOT SHOWN)

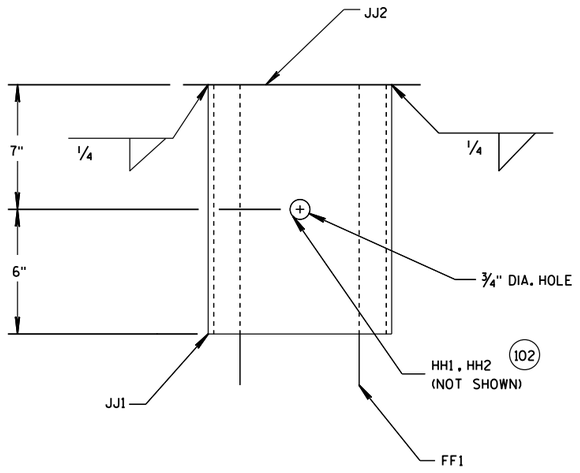


DETAIL A
PROFILE VIEW

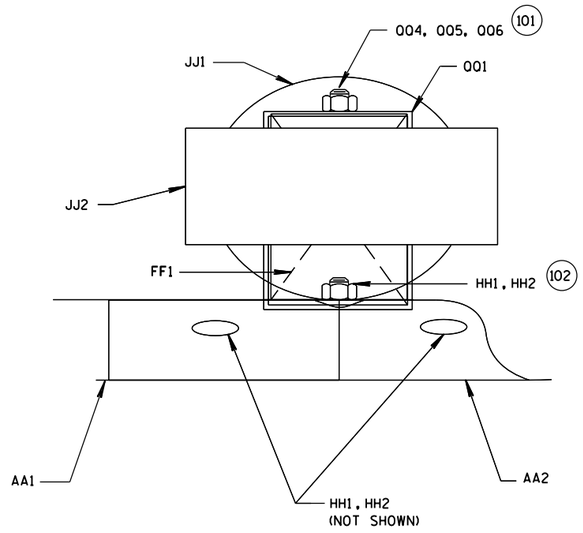
STEEL PLATE BEAM GUARD
SHORT RADIUS TERMINAL
MGS

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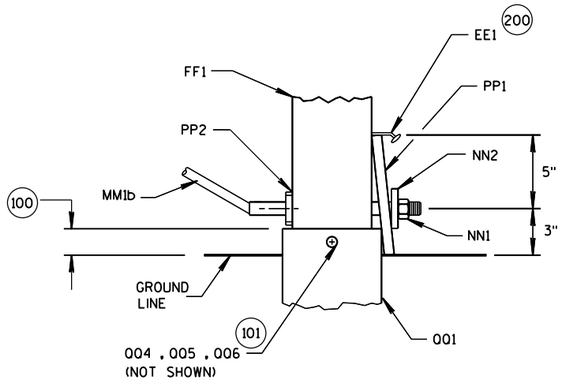


DETAIL B
PROFILE VIEW OF STEEL PIPE ASSEMBLY
(BEAM GUARD AND W-BEAM
END SECTION NOT SHOWN)

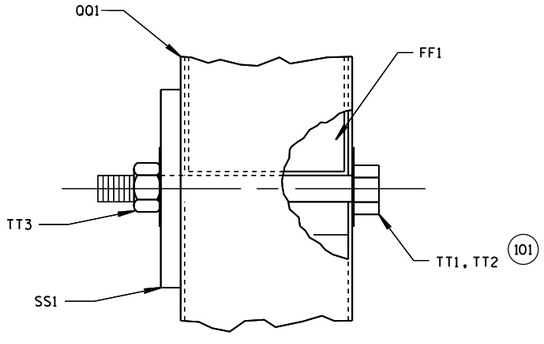


DETAIL B
PLAN VIEW OF STEEL PIPE ASSEMBLY

200 2 NAILS SPACED 4 INCHES CENTER TO CENTER.



DETAIL C
PROFILE VIEW



DETAIL D
PROFILE VIEW

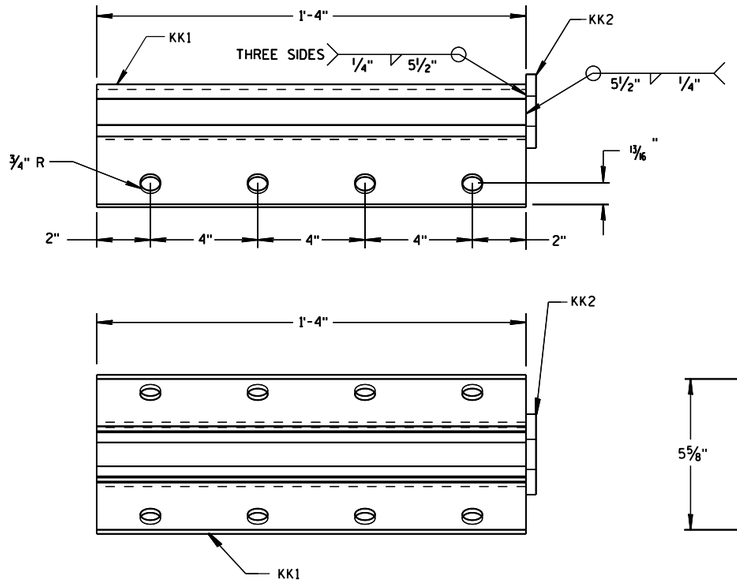
SHORT RADIUS BEAM GUARD
(MGS) SHORT RADIUS
TERMINAL (MGS)

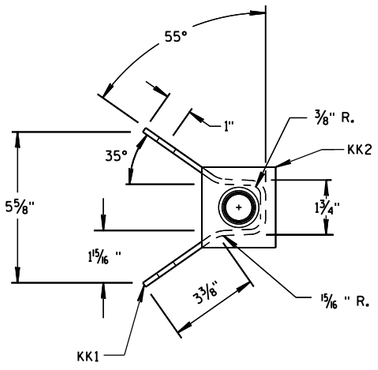
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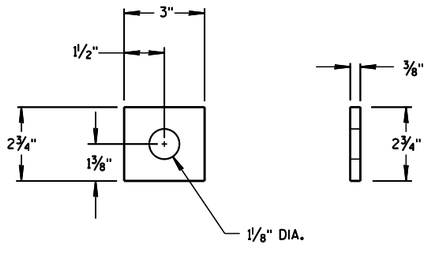
S.D.D. 14 B 53-1c

(300) WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT LL1 AND LL3 REQUIRED. SIXTEEN LL2 REQUIRED.

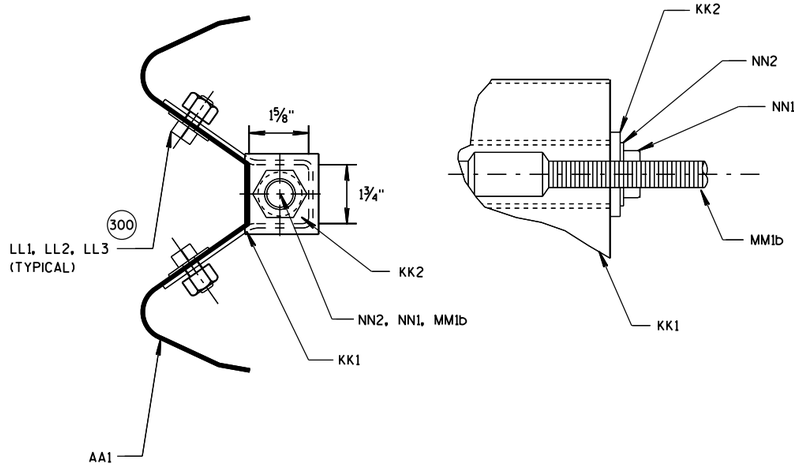




ANCHOR BRACKET (KK1, KK2)



ANCHOR BRACKET BEARING PLATE (KK2)

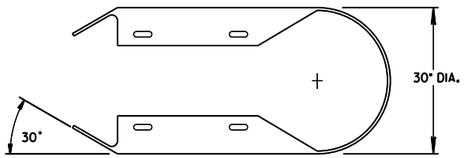


SECTION A-A

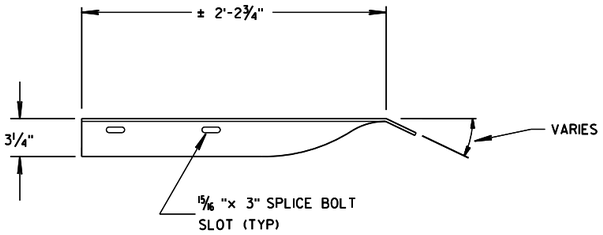
SHORT RADIUS BEAM GUARD
(MGS) SHORT RADIUS
TERMINAL (MGS)

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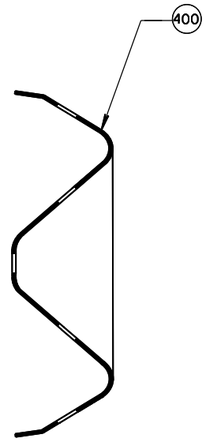
TOP VIEW



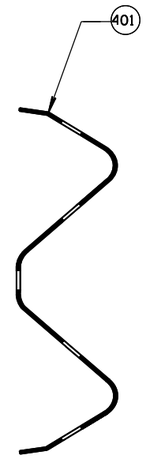
TOP VIEW

(400) CROSS SECTON OF PART IS TO FIT OVER AA1.

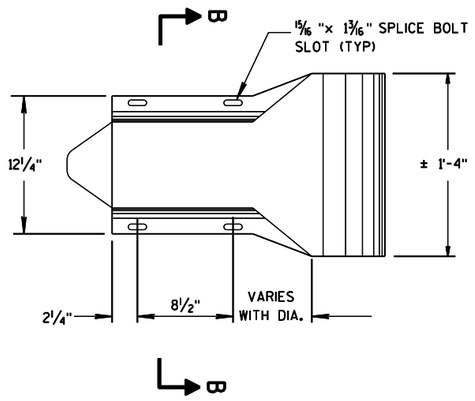
(401) CROSS SECTON OF PART IS TO FIT OVER OR UNDER AA1.



SECTION B-B

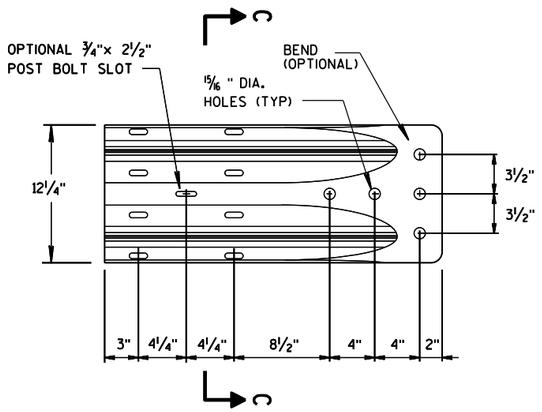


SECTION C-C



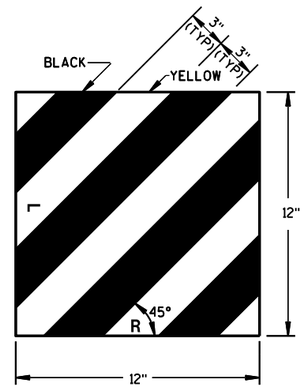
W-BEAM
END SECTION BUFFER (AA2)

PROFILE VIEW



W-BEAM
TERMINAL CONNECTOR (BB1)

PROFILE VIEW



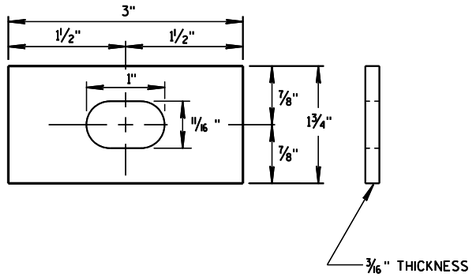
REFLECTIVE SHEETING
(UU1, UU2)

SHORT RADIUS BEAM GUARD
(MGS) SHORT RADIUS
TERMINAL (MGS)

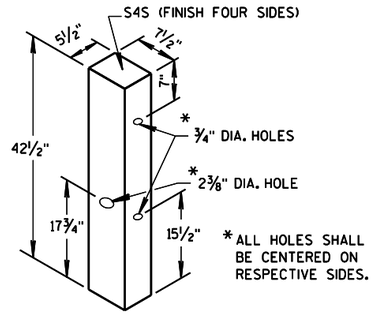
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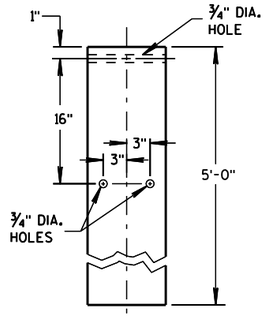
S.D.D. 14 B 53-1e



RECTANGULAR PLATE WASHER (CC1)



WOOD BREAKAWAY POST (FF1)



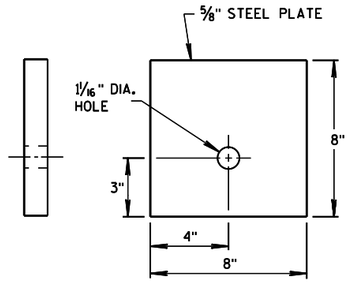
FOUNDATION TUBE (QQ1) (500)

(500) SEE DETAIL "D" FOR LOCATION AND ATTACHING SS1.

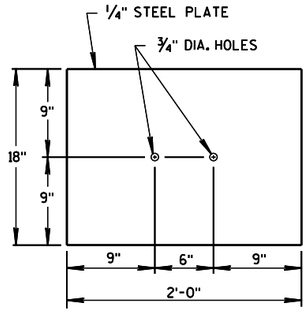
(501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.

(502) LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.

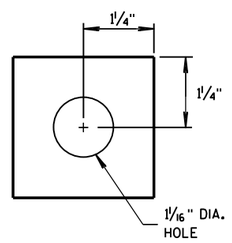
(503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).



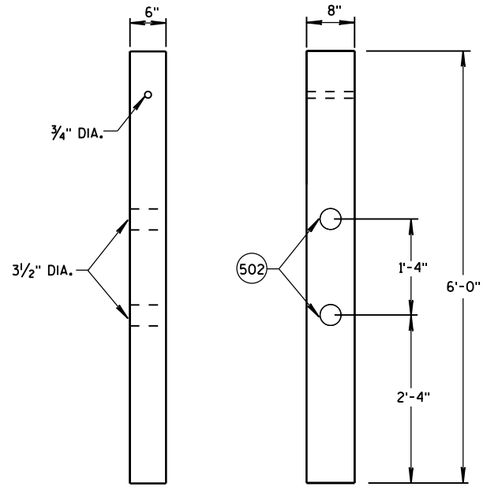
BEARING PLATE (PP1)



SOIL PLATE (SS1)

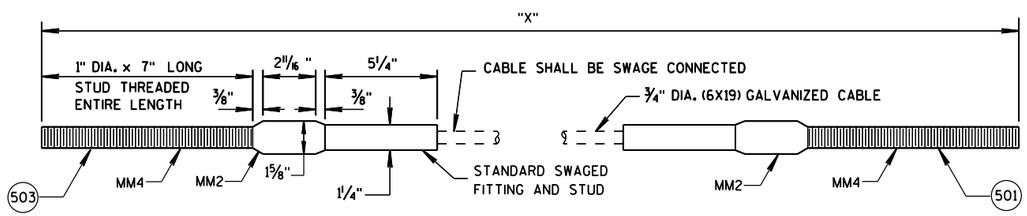


TUBE END PLATE (QQ3)



FRONT VIEW SIDE VIEW

CONTROLLED RELEASE TERMINAL POST (CRT) (D2)



"X" LENGTH	
MM1a	9'-0"
MM1b	6'-8"

CABLE ASSEMBLY (MM1a , MM1b)

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

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BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	BEAM GUARD RAIL	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
A2	BEAM GUARD RAIL - SHOP BENT	INDICATE ON BACK OF RAIL RADIUS THAT RAIL WAS BENT TO. SHOP BEND RADIUS IS TO THE NEAREST FOOT. FOLLOW AASHTO M180 ON HOW TO MARK RADIUS INFORMATION.	
		AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
B1	BLOCK - WOOD	WISDOT SPEC. 614	SEE SDD 14B42
C1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEAD)	
D1	POST-STRONG POST-WOOD	WISDOT SPEC. 614	SEE SDD 14B42
D2	POST-CRT-WOOD	WISDOT SPEC. 614	
E1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
E2	POST BOLT-WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111/ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329	
E3	POST BOLT - NUT		5/8" DIA. SEE SDD 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291/ ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
F1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR GEOMETRY AND OTHER INFORMATION
		UNC	
		AASHTO M180	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
F2	SPLICE BOLT - NUT	ASTM A563 GRADE A	5/8" DIA. SEE SDD 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291/ ASTM A 563	
		UNC	
G1	LAG SCREW	ASTM A308 GRADE A ASTM A153 CLASS D	3/8" DIA. 3" LONG
H1	DELINEATOR - BEAM GUARD		SEE SDD 14B42 FOR MORE INFORMATION
H2	DELINEATION - SHEETING	YELLOW OR WHITE	
		WISDOT SPEC 637 TYPE SH	
		APPROVED PRODUCT LIST	
J1	FOUNDATION BACKFILL	STANDARD SPEC. 614	
AA1	BEAM GUARD RAIL - PUNCHED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
AA2	BEAM GUARD RAIL - END SECTION BUFFER	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
BB1	BEAM GUARD RAIL - TERMINAL CONNECTOR MODIFIED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
CC1	SHORT RADIUS - SQUARE WASHER	AASHTO M180	
		GALV. AASHTO M111 / ASTM A123	
EE1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)	
FF1	POST - BCT - WOOD	S4S FINISH ON 4 SIDES	
		WISDOT SPEC. 614	
GG1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	3/8" DIA. SEE SDD 14B42 FOR GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
GG2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	3/8" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	

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S.D.D. 14 B 53-1g

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S.D.D. 14 B 53-1g

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	3/8" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	SEE 14B42 FOR GEOMETRY
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
HH1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	3/8" DIA. SEE 14B42 FOR GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180 HEAD GEOMETRY	
HH2	SPLICE BOLT - NUT	ASTM A563 GRADE A	3/8" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	SEE 14B42 FOR GEOMETRY
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
JJ1	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	10" O.D.
JJ2	TOP PLATE	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	DIMENSIONS 3/8" X 4" X 1'-0"
		GALV. AASHTO M111 / ASTM A123	
KK1	ANCHOR BRACKET	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	
		GALV. AASHTO M111 / ASTM A123	
KK2	ANCHOR BRACKET - BEARING PLATE	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	
		GALV. AASHTO M111 / ASTM A123	
LL1	ANCHOR BRACKET - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	5/8" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
LL2	ANCHOR BRACKET - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
LL3	ANCHOR BRACKET - NUT	ASTM A563 GRADE A	5/8" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A563	
		UNC	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
MM1a	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM1b	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM2	ANCHOR CABLE - SWAGE FITTING	ASTM A576 GRADE 1035	
		SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. WITH A BREAKING STRENGTH 40,000 LBS.	
		GALV. AASHTO M111 / ASTM A123	
		ASME B30.26 FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING INTO CONNECTION: NAME OF MANUFACTURER OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE.	
MM3	WIRE ROPE CABLE CLAMPS	FF-C-450D TYPE 1 CLASS 1	3/4"
		ASTM A153 HOT DIP CLASS D	
MM4	ANCHOR CABLE - SWAGE FITTING - STUD	ASTM F3125 GRADE A325 TYPE 1 OR SAE GRADE 5 OR ASTM A449 TYPE 1 HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
NN1	ANCHOR CABLE - NUT	ASTM A563 GRADE A	1" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A563	
		UNC	
NN2	ANCHOR CABLE - NUT - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	1" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
PP1	BEARING PLATE AT POST	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	
		GALV. AASHTO M111 / ASTM A123	
PP2	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	2" DIA. x 6" LONG
QQ1	FOUNDATION TUBE	ASTM A500 GRADE B	8" X 6" X 3/16"
		GALV. AASHTO M111 / ASTM A123	
QQ2	SHORT RADIUS - FOUNDATION TUBE - ANCHOR CABLE - TUBE	ASTM A500 GRADE B	DIMENSIONS 2 1/2" X 2 1/4" X 1/4" X 8"
		GALV. AASHTO M111 / ASTM A123	

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S.D.D. 14 B 53-1h

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
003	SHORT RADIUS - SOIL TUBE - ANCHOR CABLE - TUBE - END PLATE	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	DIMENSIONS 2½" X 2½" X ¼"
		GALV. AASHTO M111 / ASTM A123	
004	GROUND STRUT AND YOKE - BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	⅝" DIA.
		ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	
		UNC	
005	GROUND PLATE AND YOKE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	⅝" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
006	GROUND STRUT AND YOKE - NUT	HEAVY HEX	⅝" DIA.
		UNC	
		ASTM A563 GRADE A	
		OVER TAPPED NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
SS1	SOIL PLATE	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	
		GALV. AASHTO M111 / ASTM A123	
TT1	SOIL PLATE - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
TT2	SOIL PLATE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	⅝" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
TT3	SOIL PLATE - NUT	GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	⅝" DIA.
UU1	OBJECT MARKER - SHEETING	MUTCD / WISDOT OBJECT MARKER TYPE 3	PATTERN AND COLOR FOR SHEETING SHEETING TYPE FOR MARKER
		WISDOT SPEC 637 TYPE F	
		APPROVED PRODUCT LIST	
UU2	OBJECT MARKER - ALUMINUM PLATE	WISDOT SPEC 637 ALUMINUM PLATE	MATERIAL AND THICKNESS OF MATERIALS
UU3	OBJECT MARKER - SCREWS	STAINLESS SELF-TAPPING SCREWS	
VV1	FOUNDATION BACKFILL	WISDOT SPEC 614	

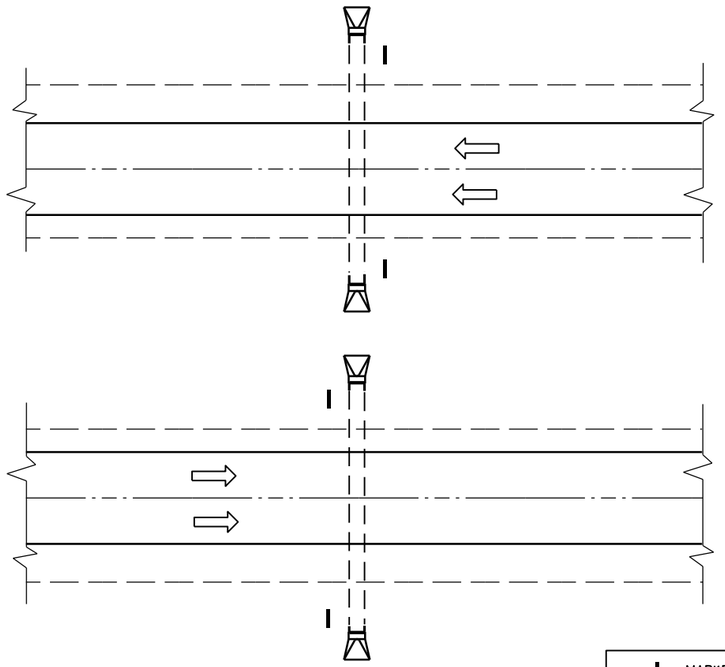
SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVI
NT
FHWA

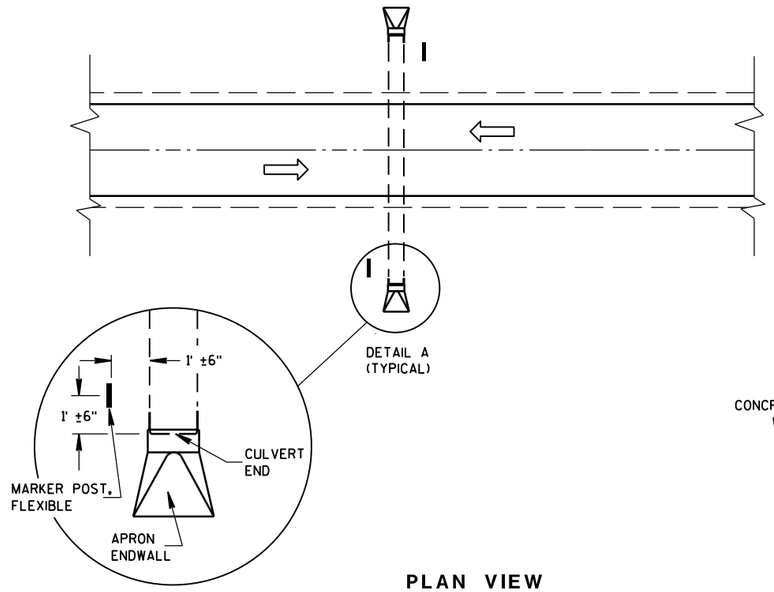
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S.D.D. 14 B 53-1i



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

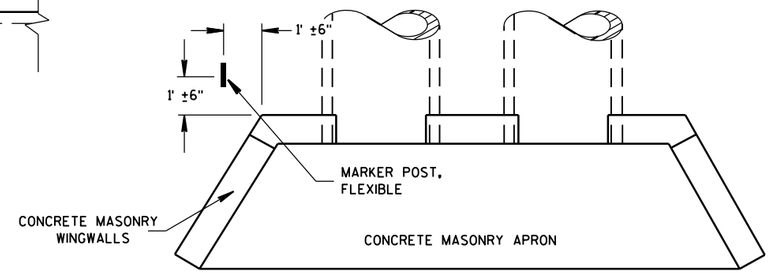
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

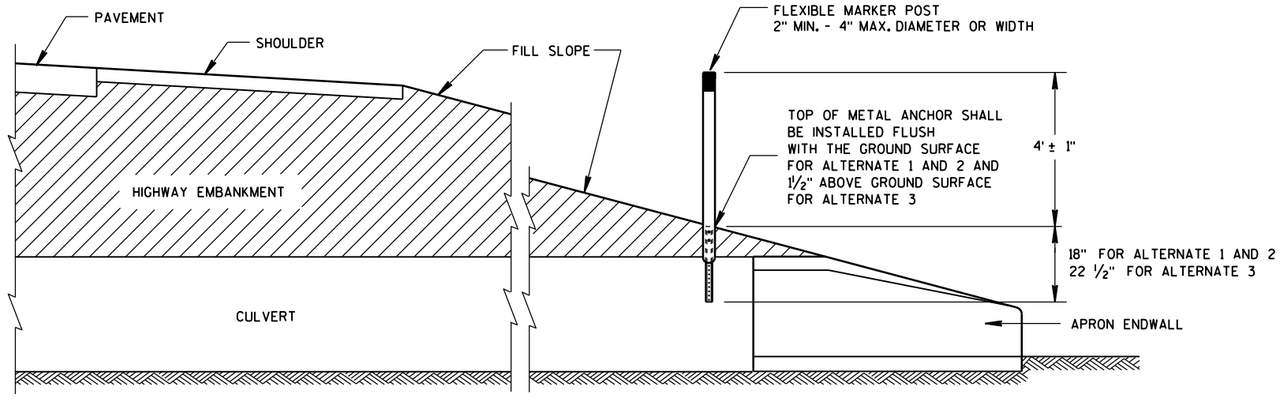
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

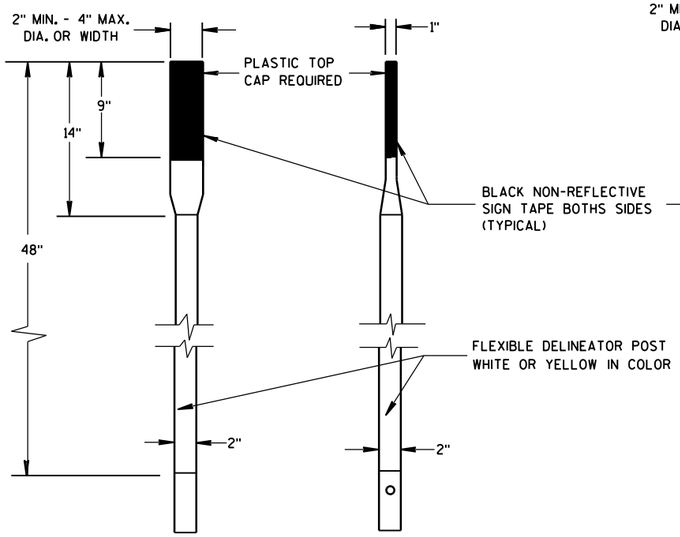
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

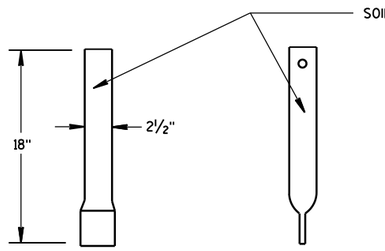
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S.D.D. 15 A 3-2a

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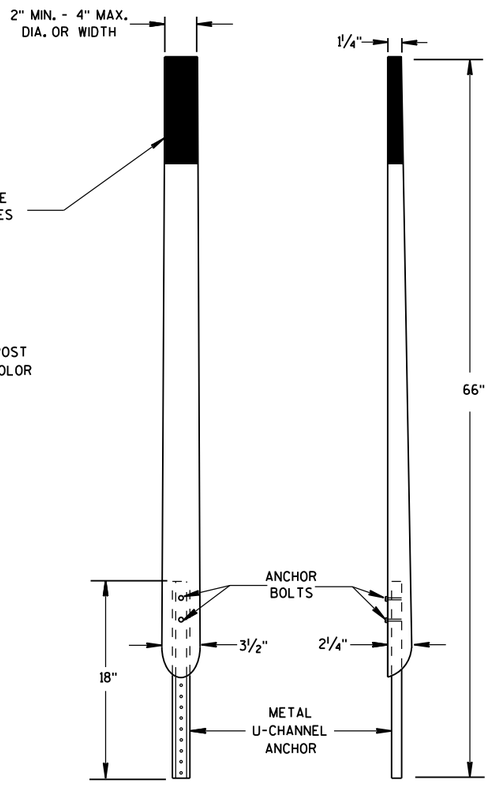
S.D.D. 15 A 3-2a





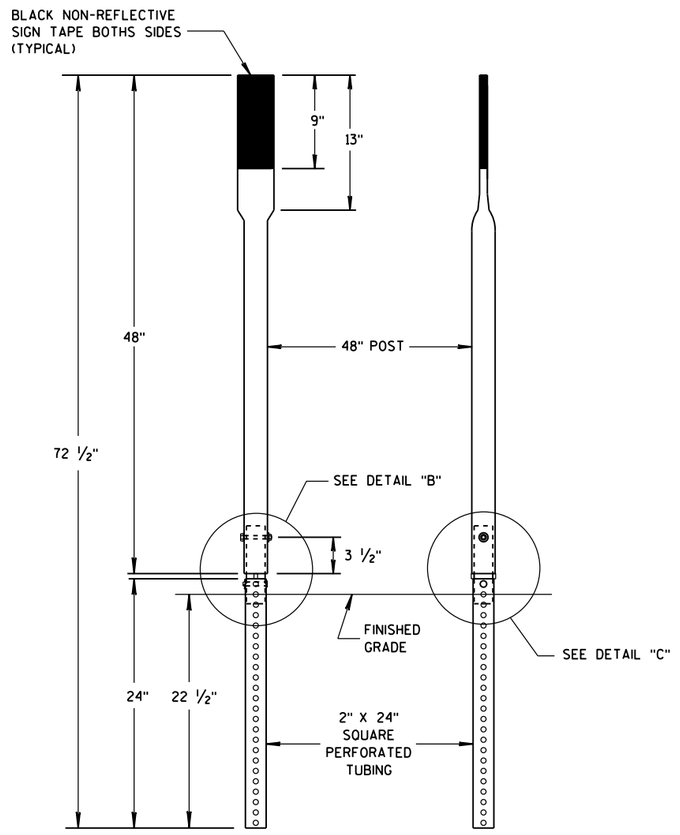
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

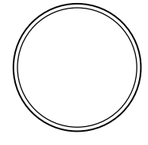
ALTERNATE 2



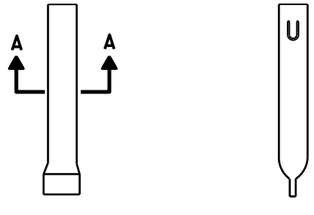
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

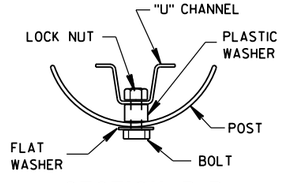


SECTION A-A

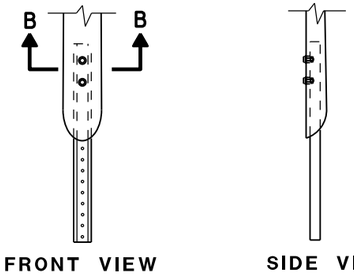


FRONT VIEW SIDE VIEW

ALTERNATE 1

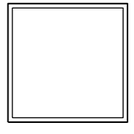


SECTION B-B

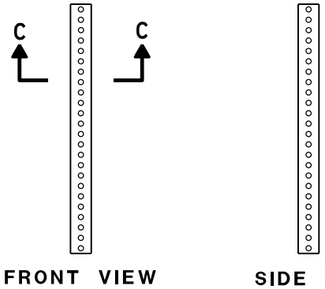


FRONT VIEW SIDE VIEW

ALTERNATE 2



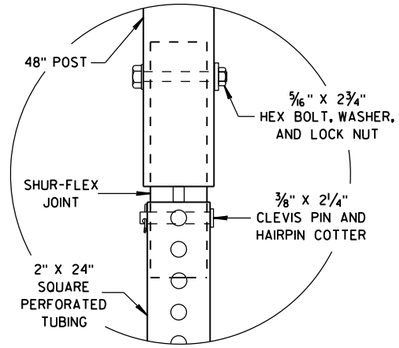
SECTION C-C



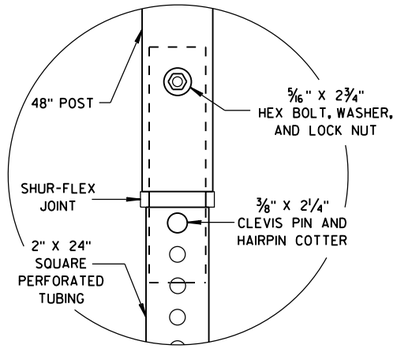
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

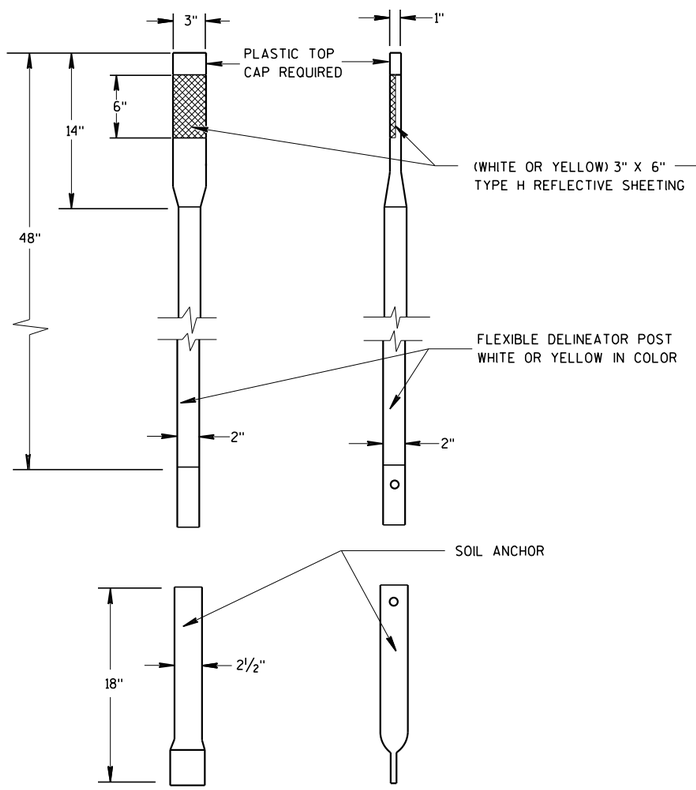
FHWA

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

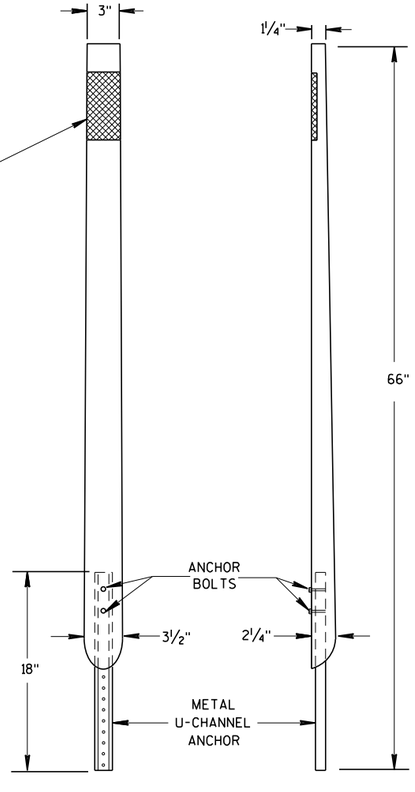
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S.D.D. 15 A 3-2b



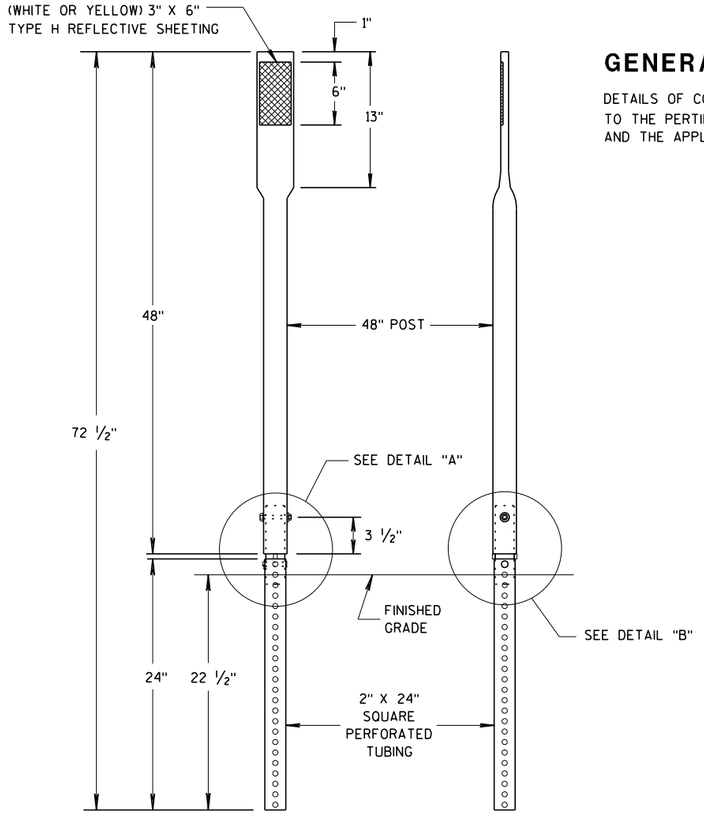
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2
FLEXIBLE DELINEATOR POSTS

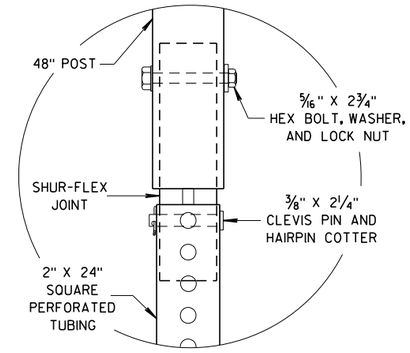


FRONT VIEW SIDE VIEW

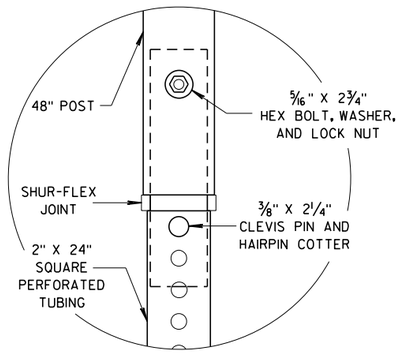
ALTERNATE 3

GENERAL NOTES

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



DETAIL A

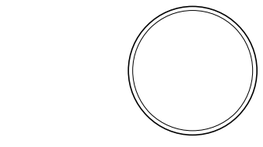


DETAIL B

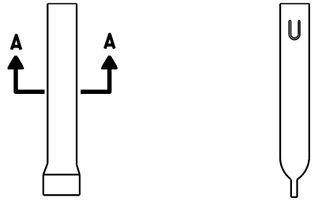
REFLECTOR SPACING TABLE

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

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

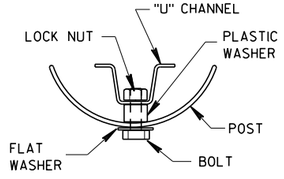


SECTION A-A

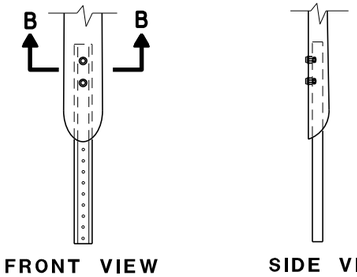


FRONT VIEW SIDE VIEW

ALTERNATE 1

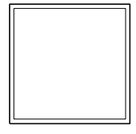


SECTION B-B

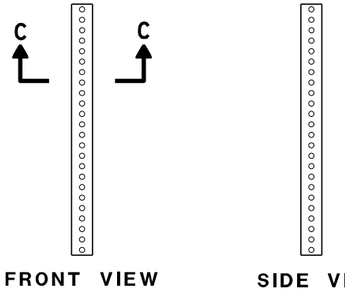


FRONT VIEW SIDE VIEW

ALTERNATE 2
FLEXIBLE MARKER POST ANCHORS



SECTION C-C



FRONT VIEW SIDE VIEW

ALTERNATE 3

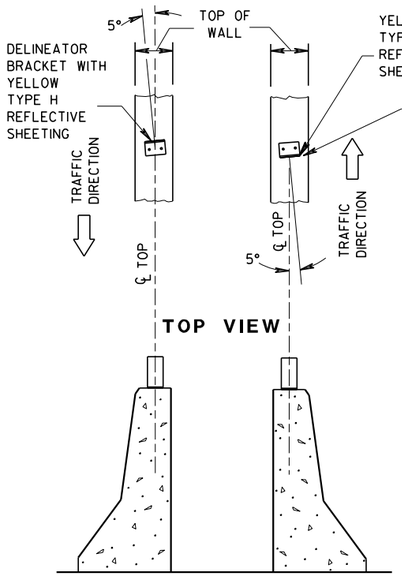
FLEXIBLE DELINEATOR POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

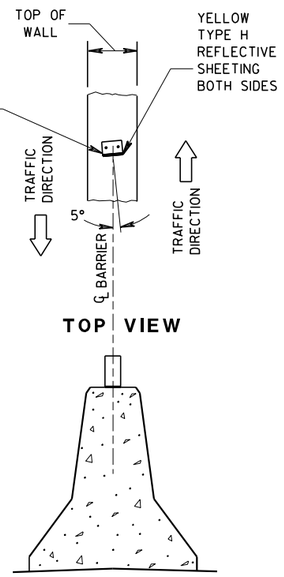
APPROVED
March 2018 — DATE
/S/ Matt Rauch — STATE SIGNING AND MA[illegible] INEER
FHWA

6

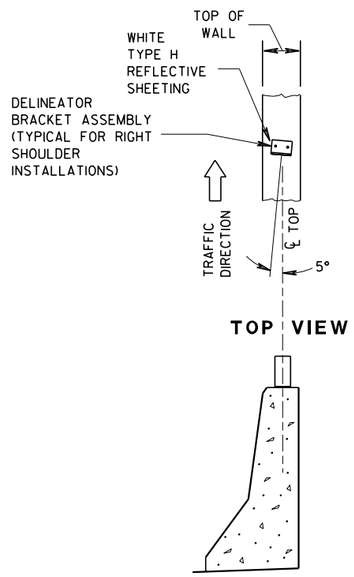
S.D.D. 15 A 4-4a



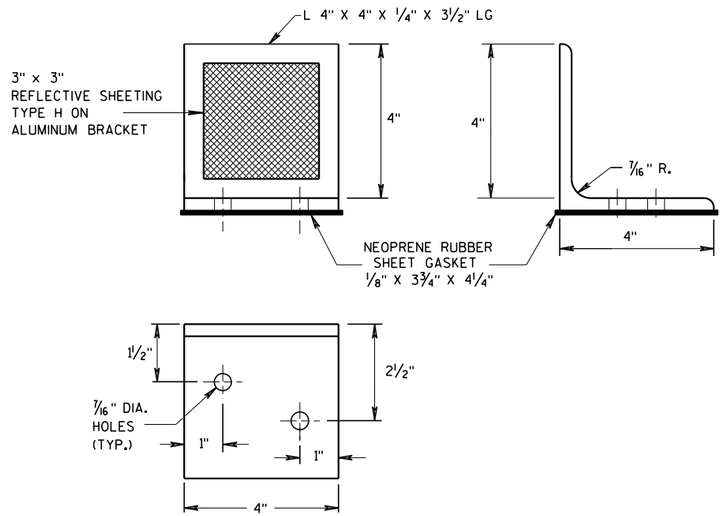
DOUBLE BARRIERS IN MEDIAN



MEDIAN BARRIER

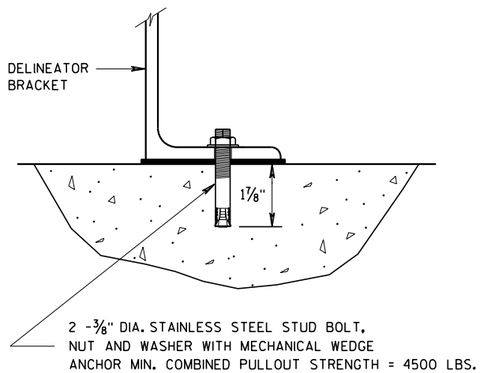


BARRIER LOCATED
TO RT. OF TRAFFIC FLOW



DELINEATOR BRACKET

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET
MOUNTING DETAIL

REFLECTOR SPACING TABLE

REFLECTOR SPACING	MINIMUM NUMBER OF REFLECTORS
100' C-C	3

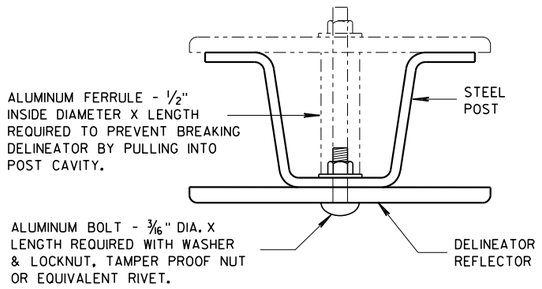
DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

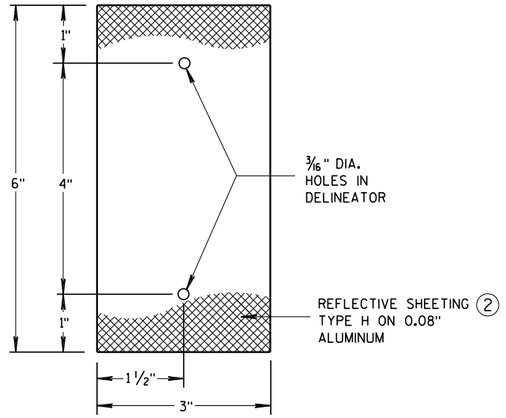
APPROVED
March 2018 — DATE
/S/ Matthew P. Rauch
STATE SIGNING AND M[illegible] ENGINEER
FHWA

6

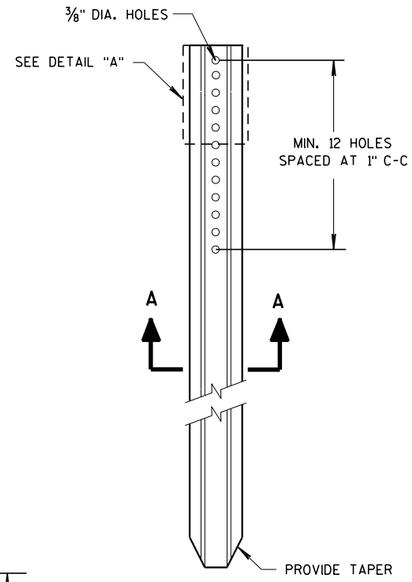
S.D.D. 15 A 4-4b



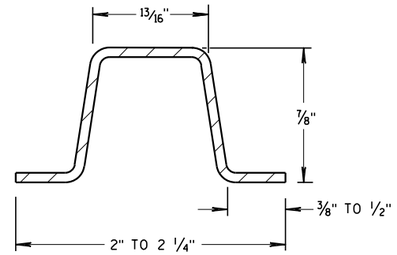
MOUNTING DETAIL
FOR DELINEATOR REFLECTOR



DETAIL "A"
3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



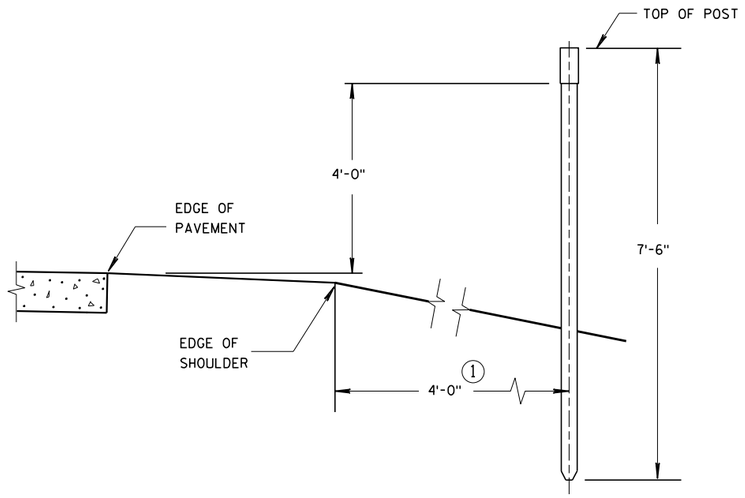
SECTION A-A

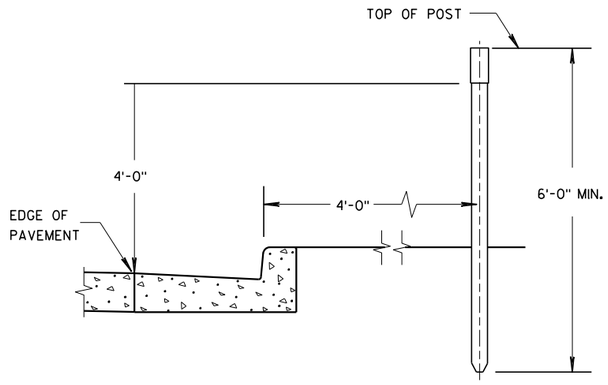
WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

REFLECTOR SPACING TABLE

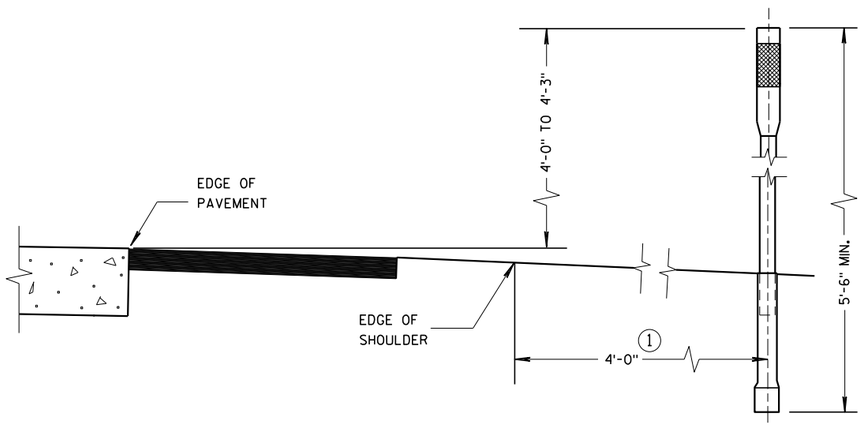
REFLECTOR SPACING	LOCATION
400'	MAINLINE
100'	RAMPS *

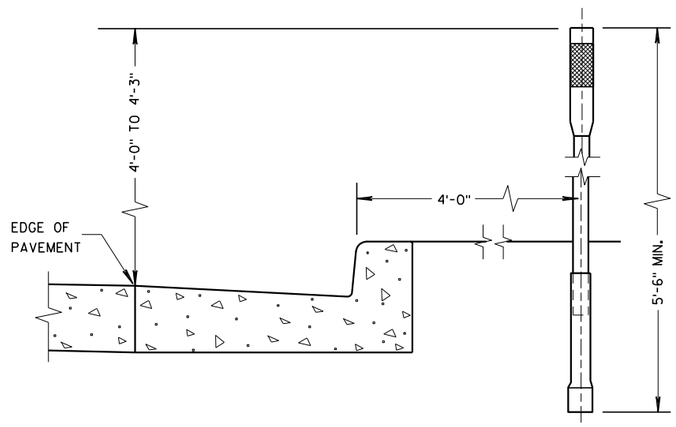
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER.





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 THE 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

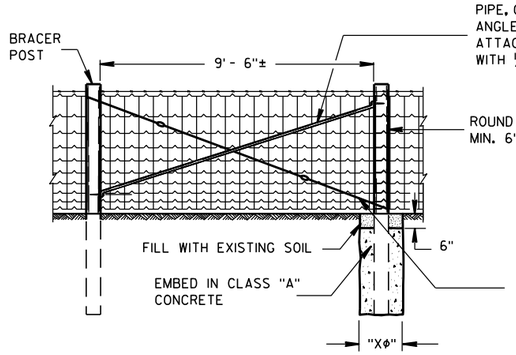
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Matthew P Rauch
DATE STATE SIGNING AND M[illegible] ENGINEER
FHWA

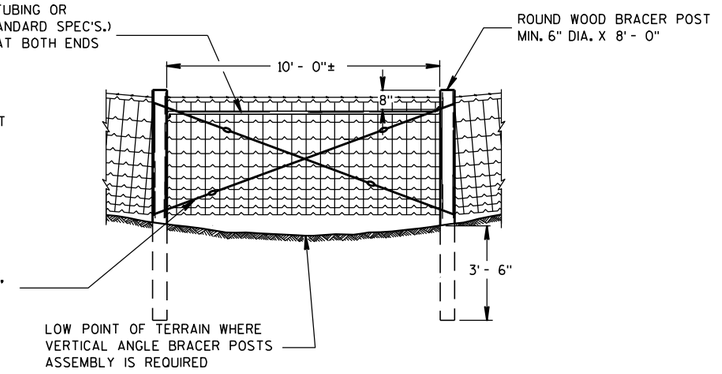
6
S.D.D. 15 A 4-4c

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

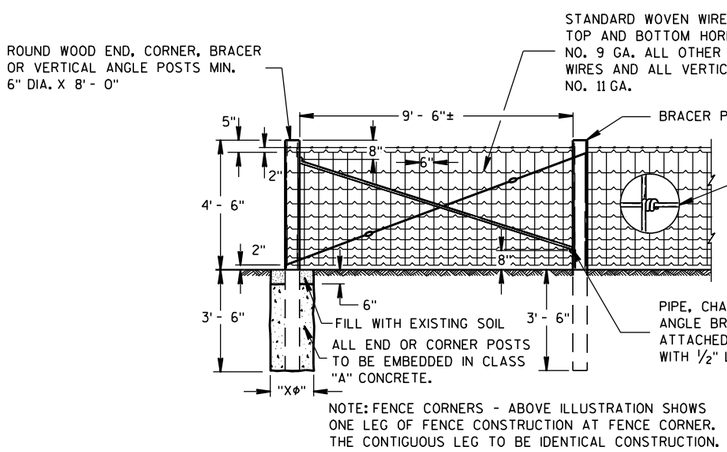
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

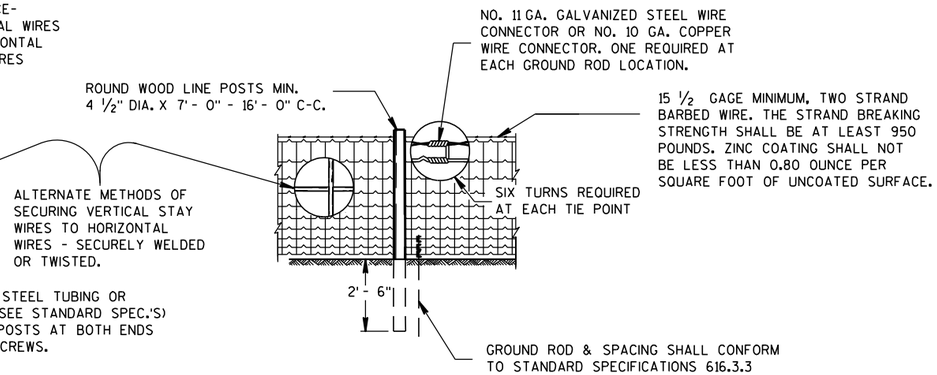
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED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

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



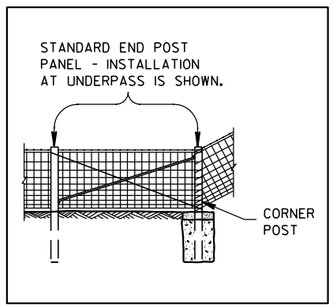
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

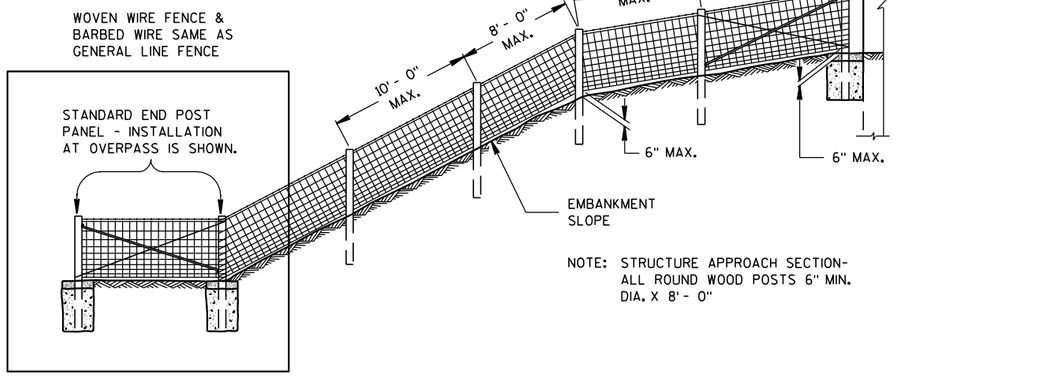


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



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

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

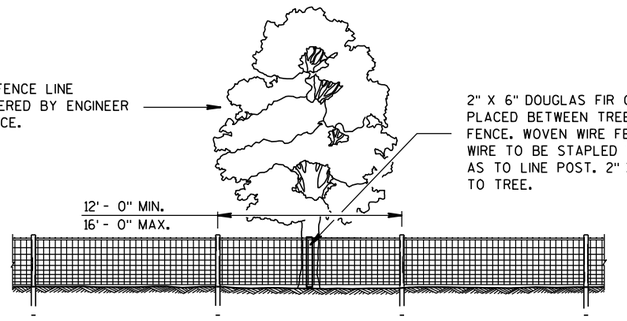
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

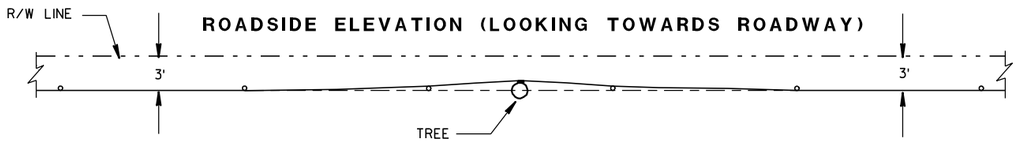
S.D.D. 15 B 1-8a

NOTE: TREE IN NORMAL FENCE LINE SPECIFICALLY ORDERED BY ENGINEER TO REMAIN IN PLACE.

2" X 6" DOUGLAS FIR OR SO. YELLOW PINE PLACED BETWEEN TREE AND WOVEN WIRE FENCE. WOVEN WIRE FENCE AND BARBED WIRE TO BE STAPLED TO 2" X 6" LIKE AS TO LINE POST. 2" X 6" NOT FASTENED TO TREE.

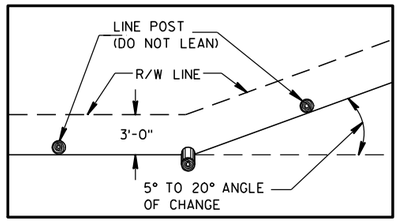


ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

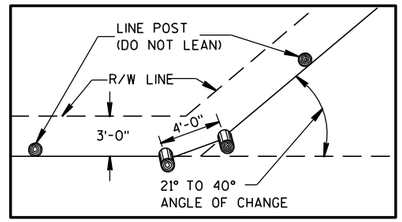


PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



PLAN VIEW
SINGLE POST CORNER

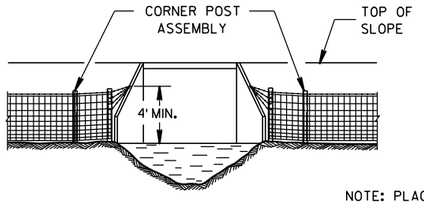


PLAN VIEW
DOUBLE POST CORNER

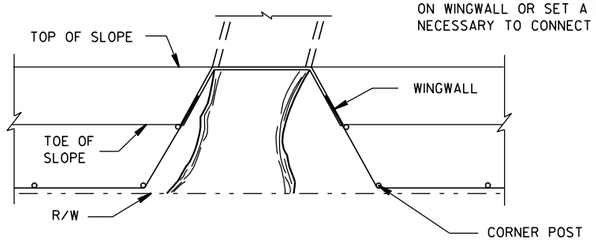
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

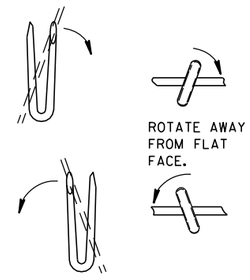
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



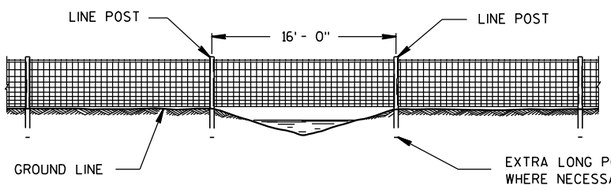
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

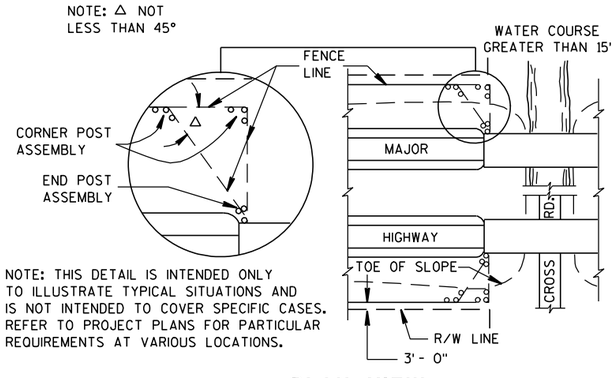


LINE POST



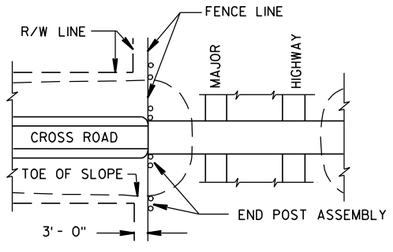
FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH

NOTE: △ NOT LESS THAN 45°



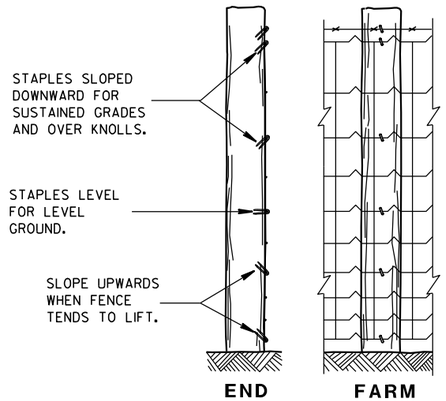
NOTE: THIS DETAIL IS INTENDED ONLY TO ILLUSTRATE TYPICAL SITUATIONS AND IS NOT INTENDED TO COVER SPECIFIC CASES. REFER TO PROJECT PLANS FOR PARTICULAR REQUIREMENTS AT VARIOUS LOCATIONS.

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



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

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



END ELEVATION

FARM SIDE ELEVATION

FENCE MOUNTING DETAIL

FENCE LOCATION AT STRUCTURES

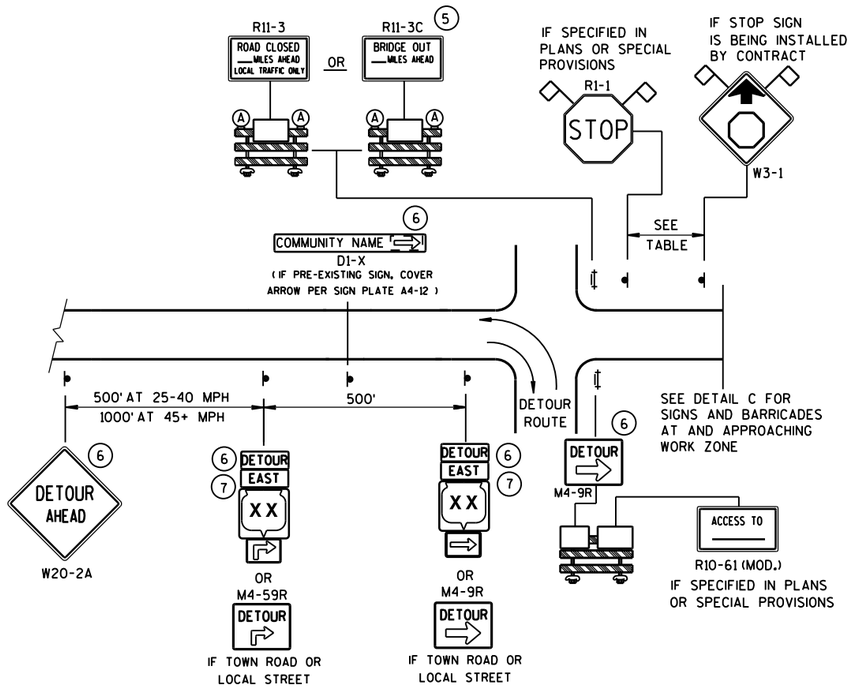
FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS [illegible] ENGINEER
FHWA

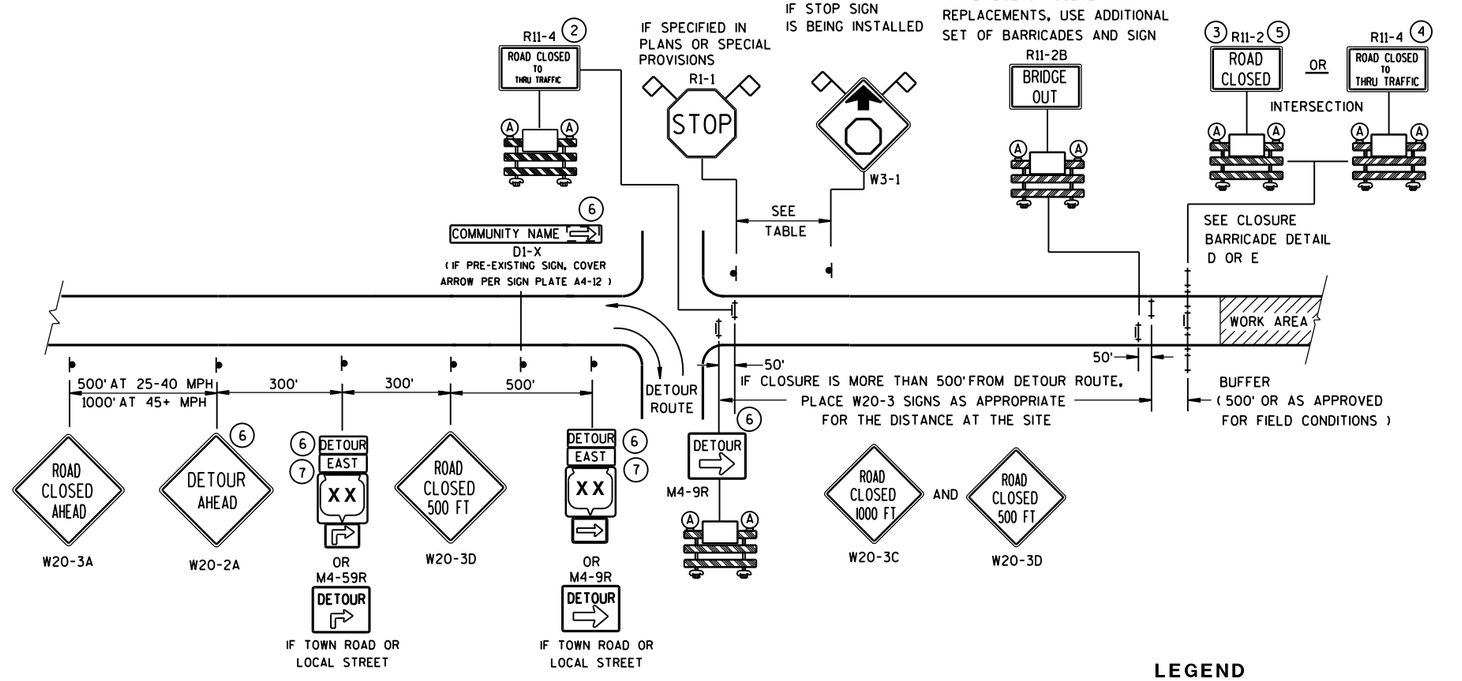
6

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



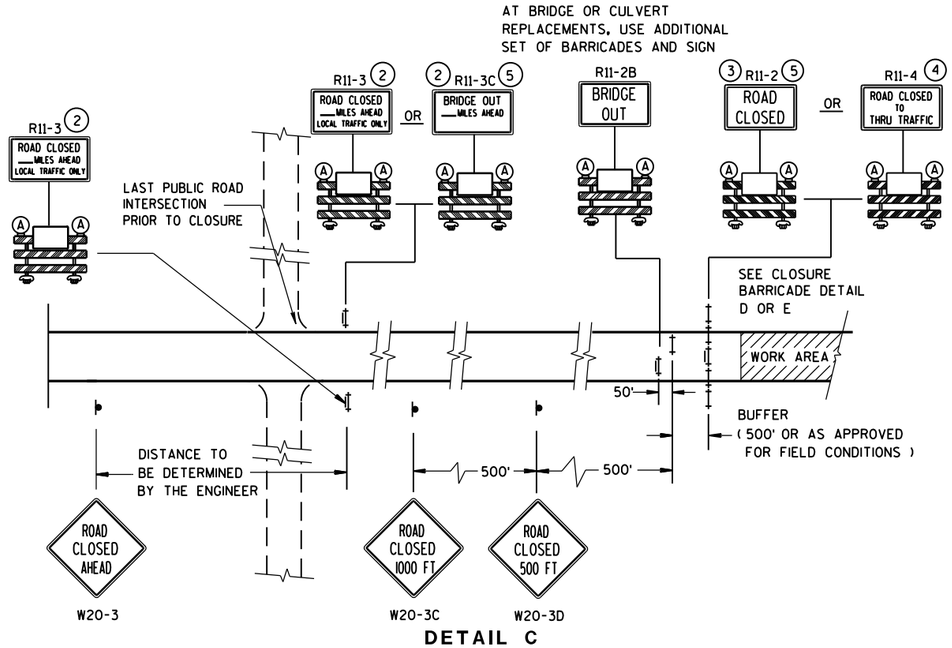
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

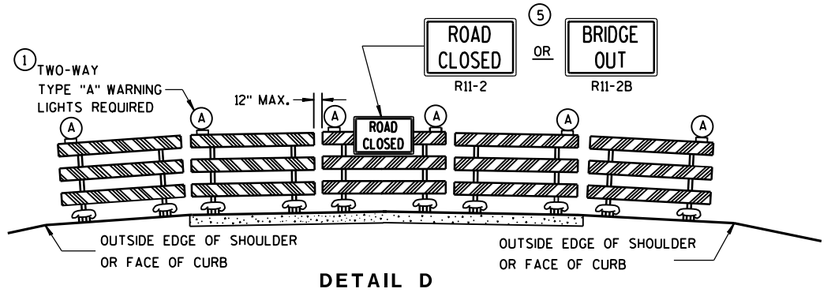
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

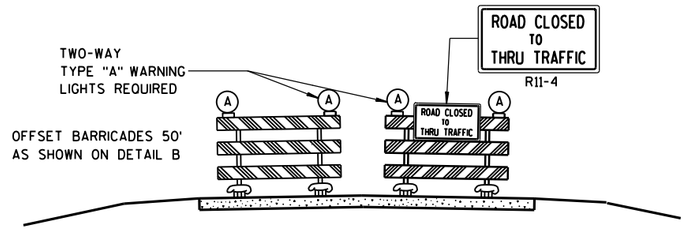
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI

FHWA

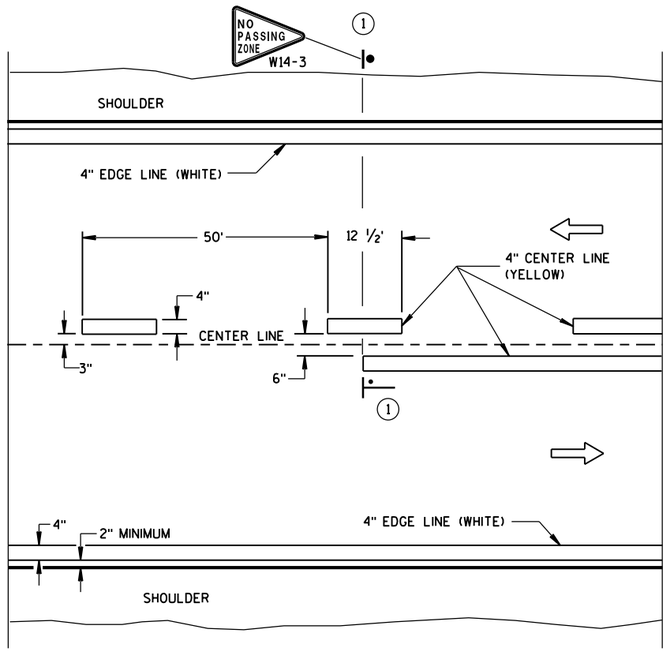
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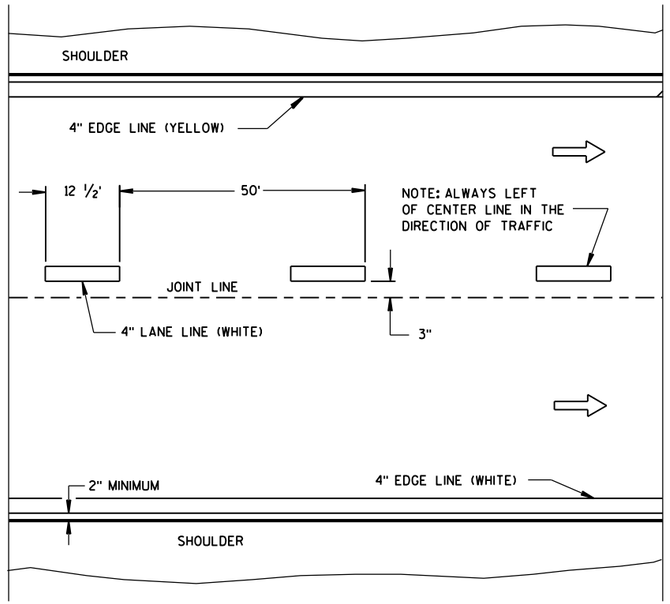
S.D.D. 15 C 2-6b

6

S.D.D. 15 C 2-6b



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

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

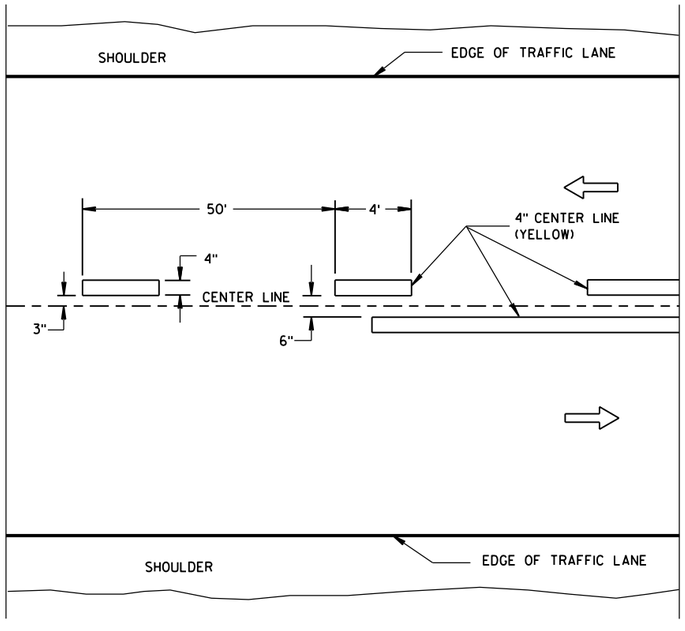
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

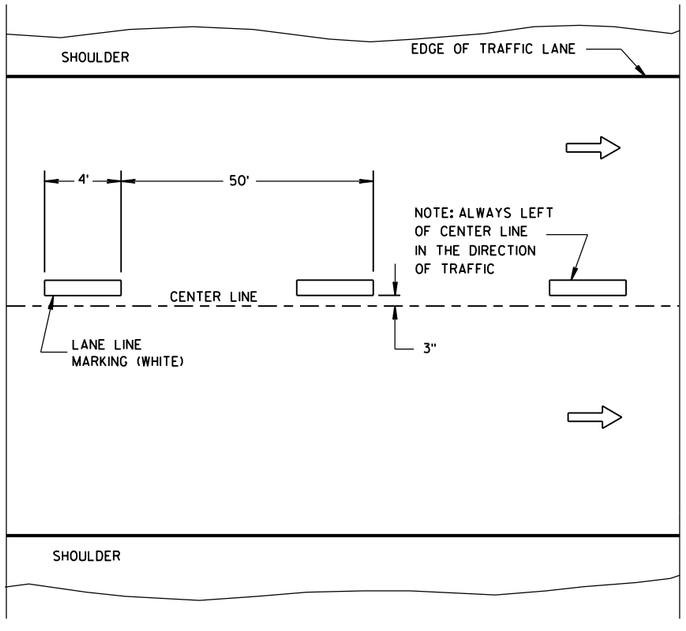
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



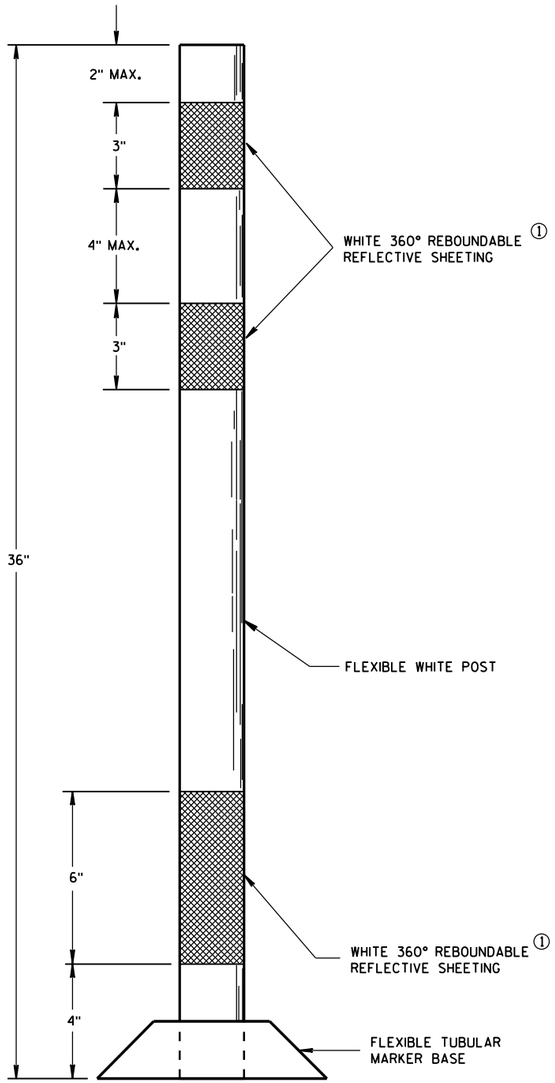
ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

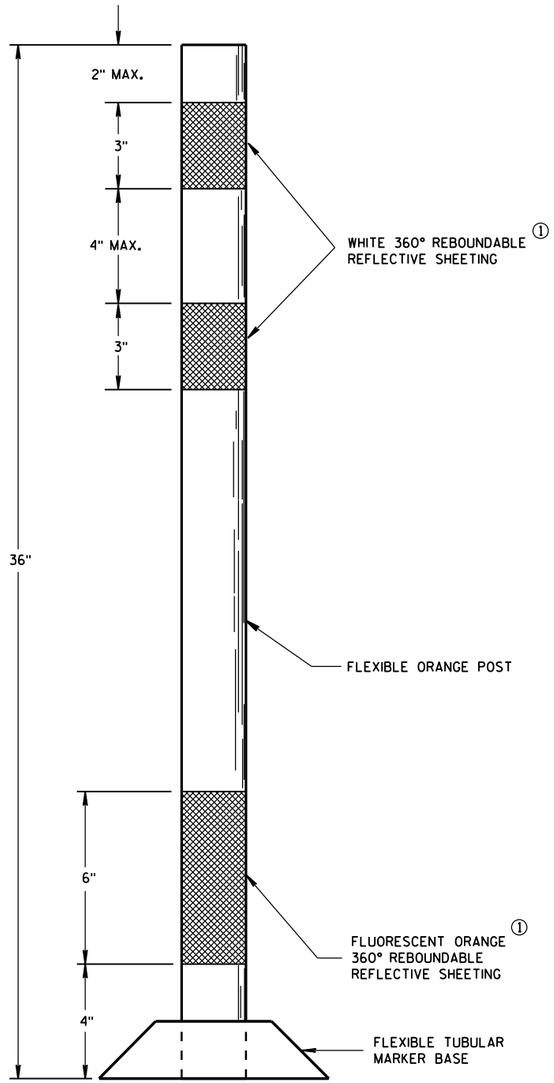
LONGITUDINAL MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
June 2017 (DATE)	/S/ Matthew R. Rauch (STATE SIGNING AND MARKING ENGINEER)
FHWA	

6

S.D.D. 15 C 8-18a



FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER



FLEXIBLE
TUBULAR MARKER POST
WORK ZONE

GENERAL NOTES

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

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

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

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

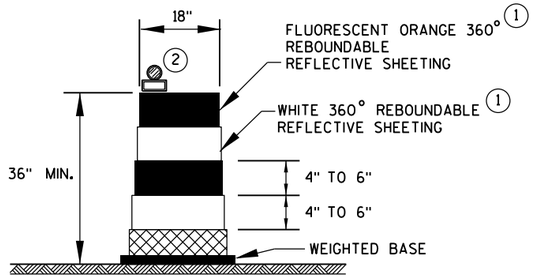
CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

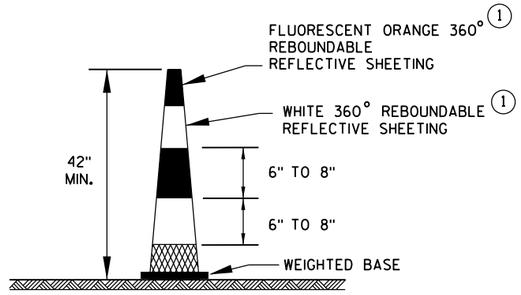
APPROVED
June 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENGI
FHWA

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S.D.D. 15 C 11-7a



DRUM

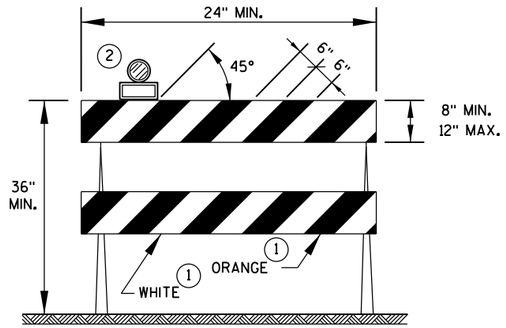


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

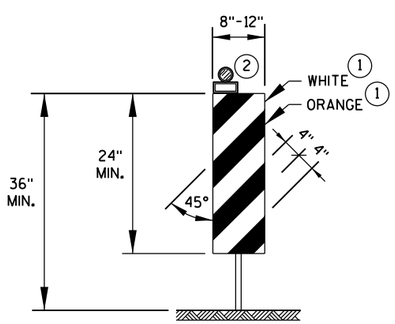
GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



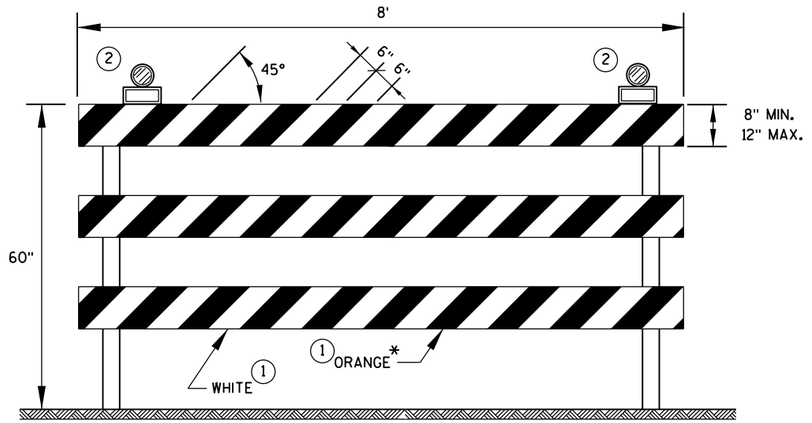
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

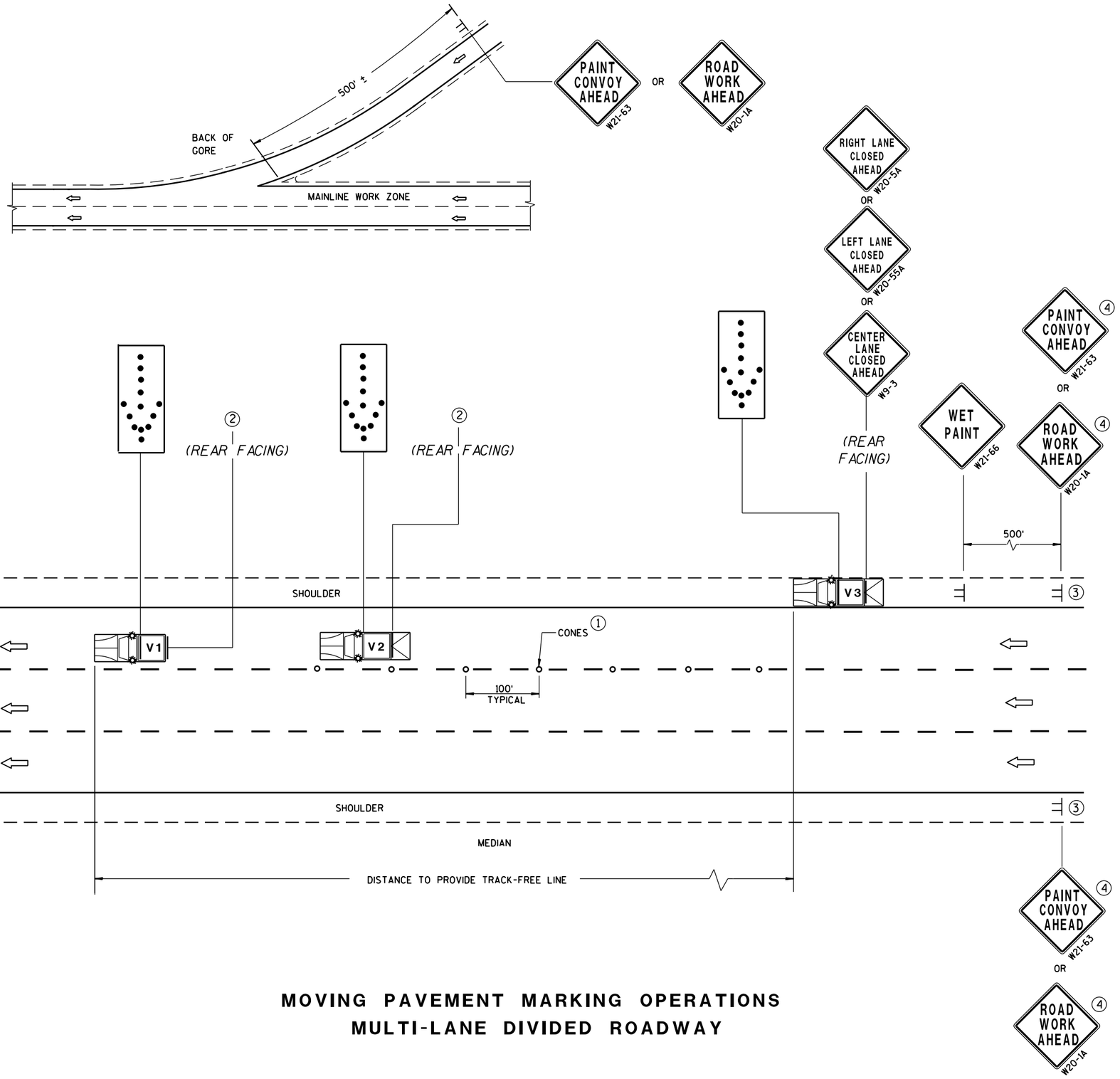
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENG
FHWA	

6

S.D.D. 15 C 11-7b



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

③ SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

④ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	CONES
	FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION
MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENGR
FHWA

6

S.D.D. 15 C 19-5c

6

S.D.D. 15 C 19-5c

** NOTE: SEE SDD 15 D 12 FOR LANE CLOSURE DETAILS.

GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

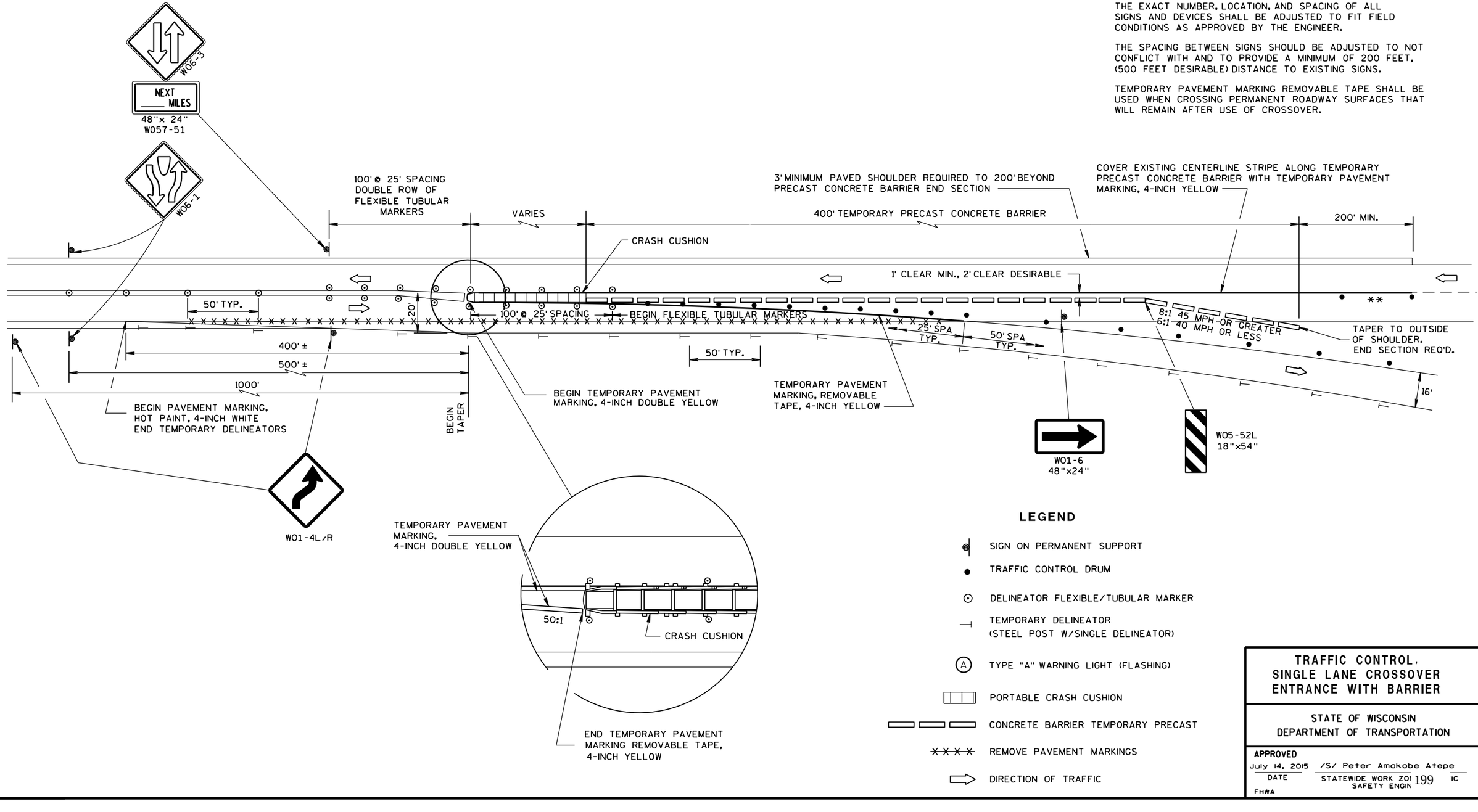
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

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

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

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



LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR)
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- PORTABLE CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, SINGLE LANE CROSSOVER ENTRANCE WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

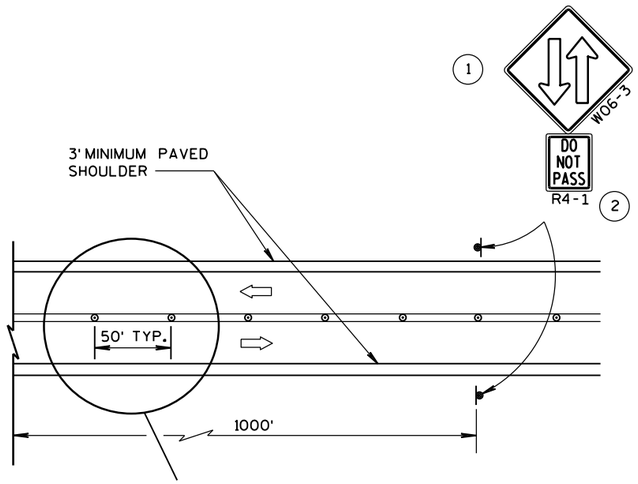
APPROVED
July 14, 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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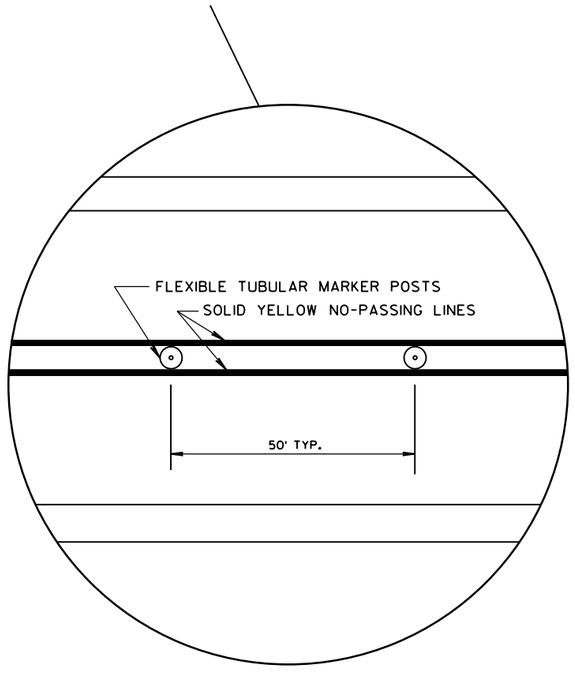
S.D.D. 15 D 5-4

6

S.D.D. 15 D 5-4



TWO LANE, TWO WAY OPERATION



LEGEND

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

GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERS NOTED.

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

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

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

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

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

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

(1)



W057-51
48"x24"



R4-1 (2)

THE W06-3 WITH THE W057-51 SHALL BE LOCATED 200 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND/OR 500 FEET BEYOND ANY SIDEROAD. THE W06-3 WITH THE R4-1 SHALL BE LOCATED 1000 FEET BEYOND THE W06-3 AND THE W057-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN W06-3 SIGNS.

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

TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

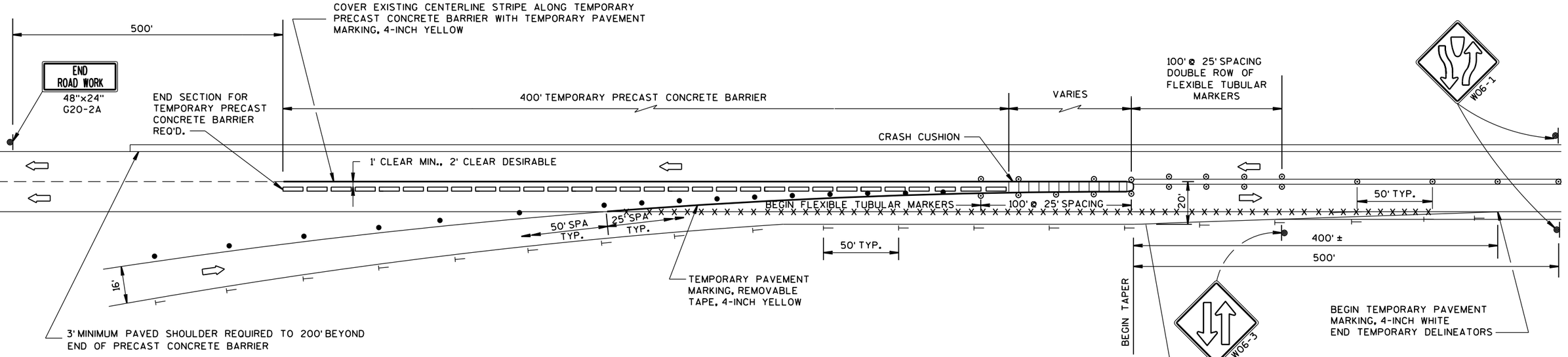
APPROVED
8/2013 DATE
/S/ Travis Feltes STATE TRAFFIC ENGINEER
SIGN
FHWA

6

S.D.D. 15 D 6-3

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- PORTABLE CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- ~~XXXX~~ REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC



GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

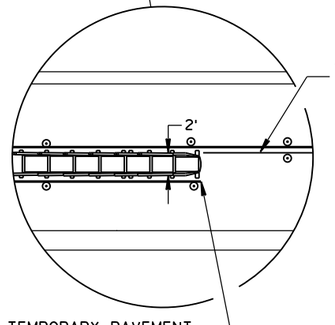
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

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

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

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



TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

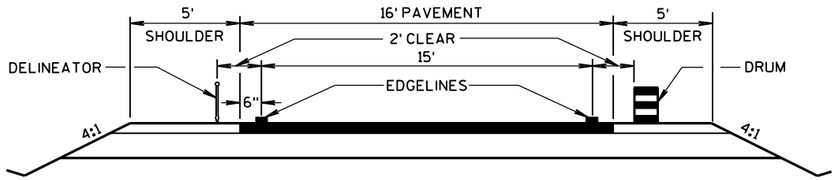
APPROVED
July 14, 2015
DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 10-4

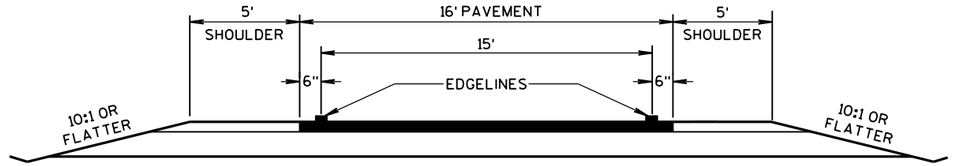
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S.D.D. 15 D 10-4



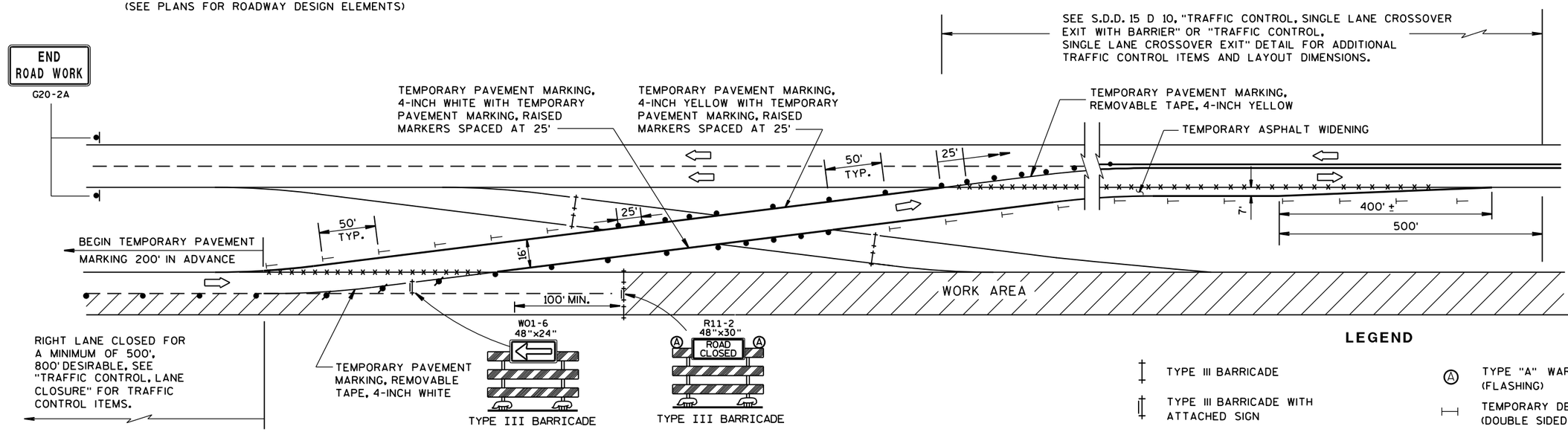
TYPICAL TEMPORARY CROSSOVER ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



TYPICAL CROSSOVER TO REMAIN IN PLACE ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

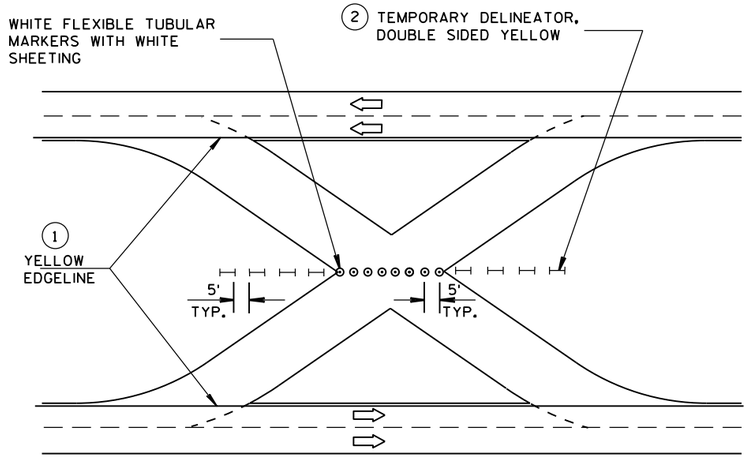
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

REVERSE DEVICES WHEN OTHER LEG OF CROSSOVER IS IN USE.

(1) FOR PERMANENT CROSSOVER, PAVEMENT MARKING SHOULD CONFORM TO SECTION 646 OF THE STANDARD SPECIFICATIONS.

(2) FOR PERMANENT CROSSOVER, INSTALL PERMANENT DELINEATORS ACCORDING TO SECTION 633 OF THE STANDARD SPECIFICATIONS.



TRAFFIC CONTROL FOR CROSSOVER THAT IS NOT IN USE

TRAFFIC CONTROL, SINGLE LANE CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENGI
FHWA

6

S.D.D. 15 D 11-7

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

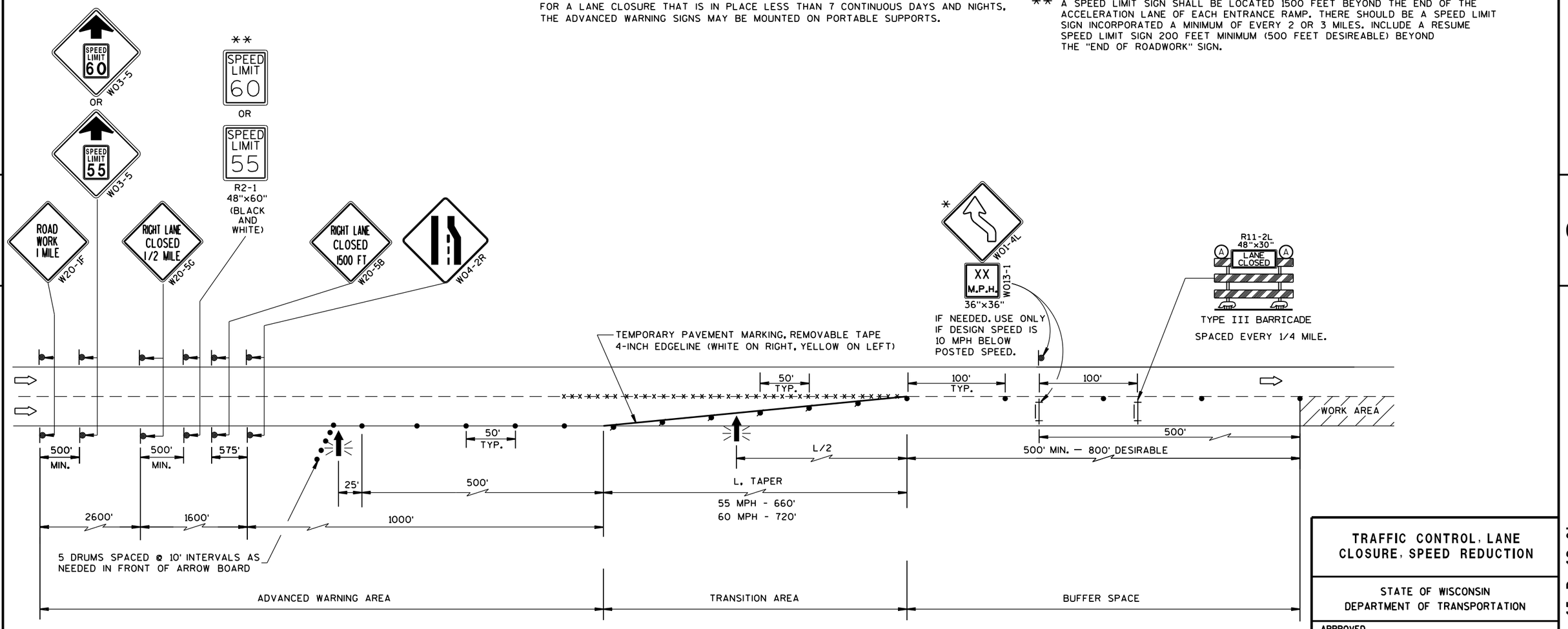
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



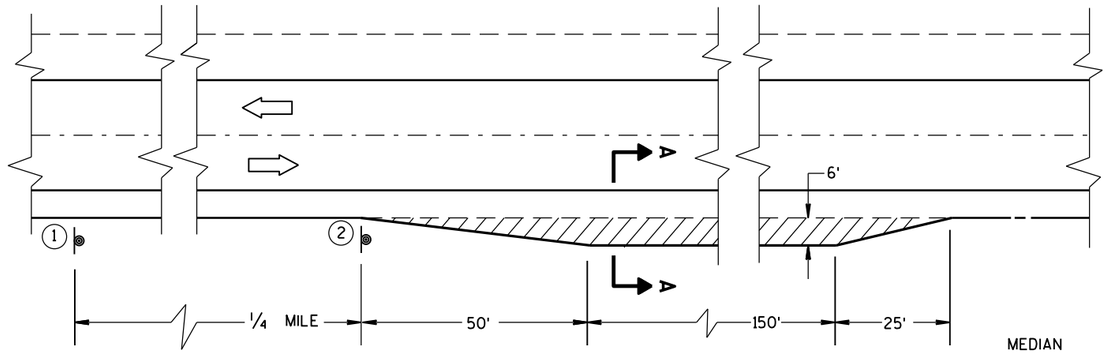
TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

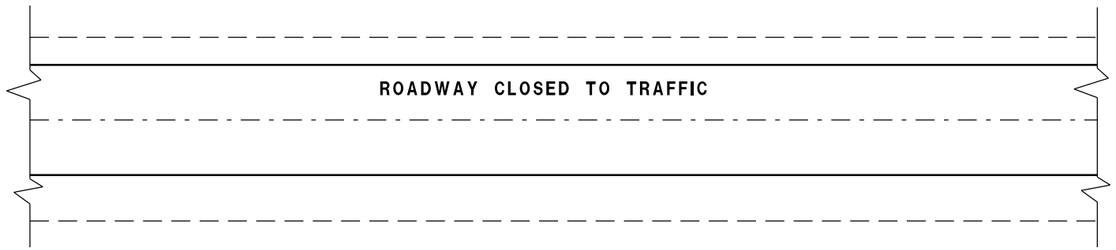
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

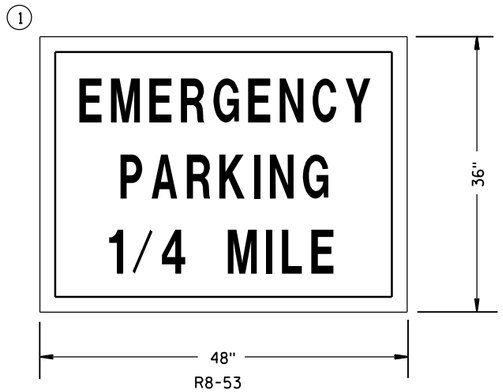
S.D.D. 15 D 12-6b





PLAN VIEW

TEMPORARY EMERGENCY PULLOUTS FOR DIVIDED HIGHWAYS



SIGNS TO BE BLACK LETTERS ON WHITE REFLECTIVE BACKGROUND

SIGNS FOR TEMPORARY EMERGENCY PULLOUTS

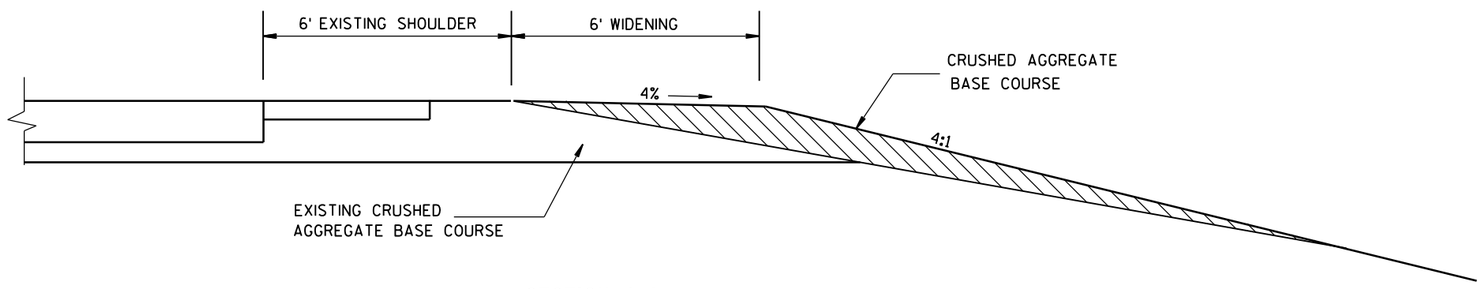
GENERAL NOTES

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

TEMPORARY EMERGENCY PULLOUTS AND SIGNS SHALL BE REMOVED AND THE ROADWAY RESTORED TO ITS ORIGINAL CROSS SECTION AND CONDITION PRIOR TO REOPENING THE ROADWAY TO ONE WAY TRAFFIC.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC



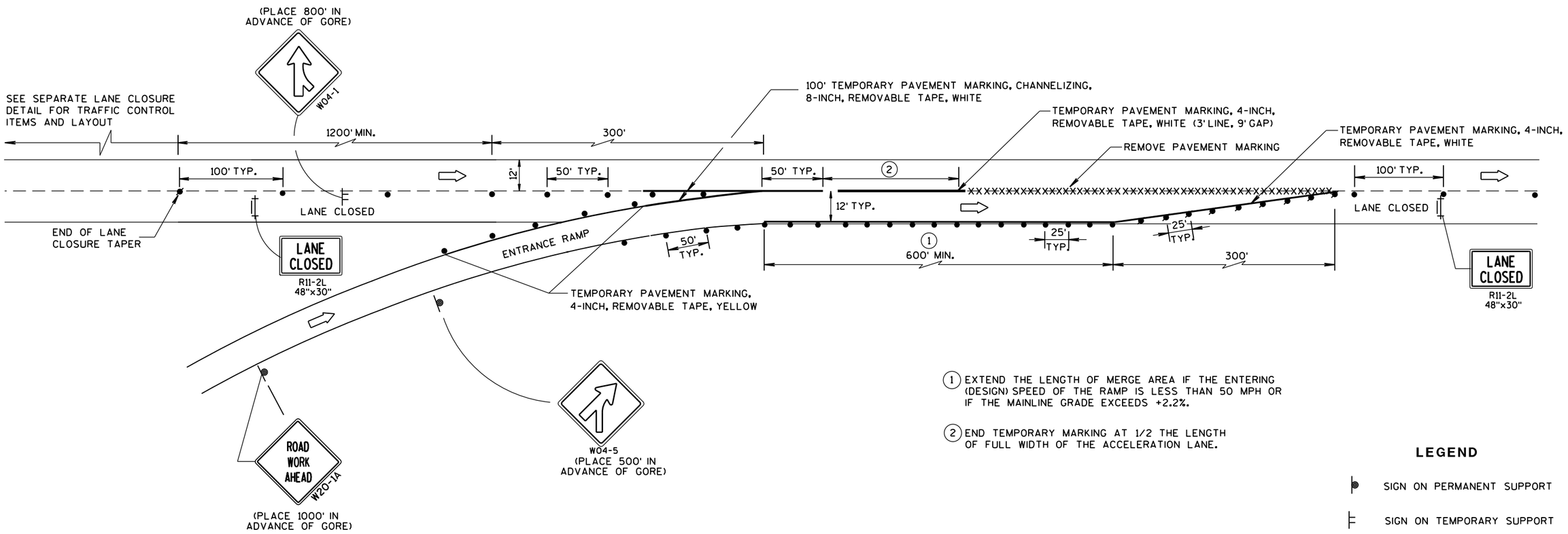
SECTION A-A

TEMPORARY EMERGENCY PULLOUTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER
FHWA	SIGN

6 S.D.D. 15 D 13-2

6 S.D.D. 15 D 13-2

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE



1. EXTEND THE LENGTH OF 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 1/2 THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.

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
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC

PARALLEL ENTRANCE RAMP

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"x48" 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 CONTINUOUS 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.

TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE

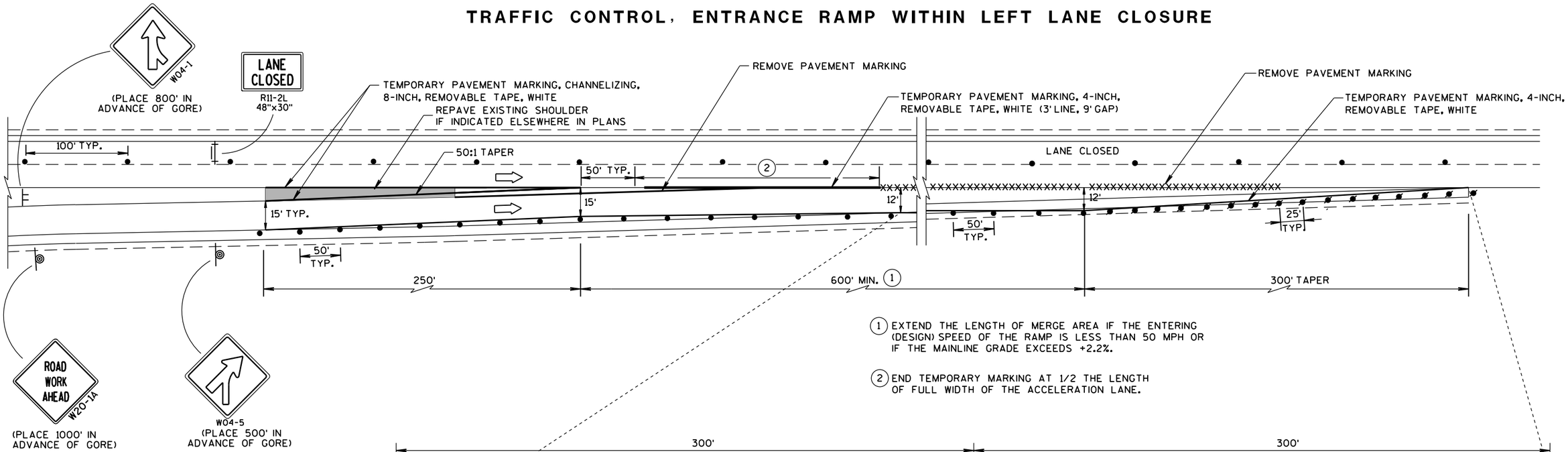
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENG
FHWA

6

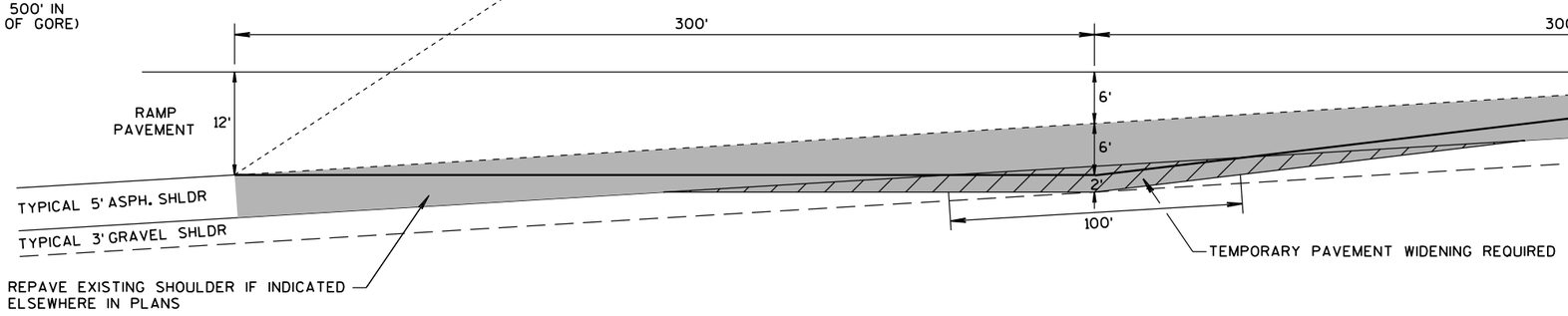
S.D.D. 15 D 15-4a

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LEFT LANE CLOSURE



(1) EXTEND THE LENGTH OF 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 1/2 THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



TEMPORARY PAVEMENT DETAIL

(EXISTING RAMP DIMENSIONS MAY VARY. ADJUST TEMPORARY PAVEMENT ACCORDINGLY)

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
- XXXXX REMOVING PAVEMENT MARKING
- 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"x48" 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 CONTINUOUS 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.

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.

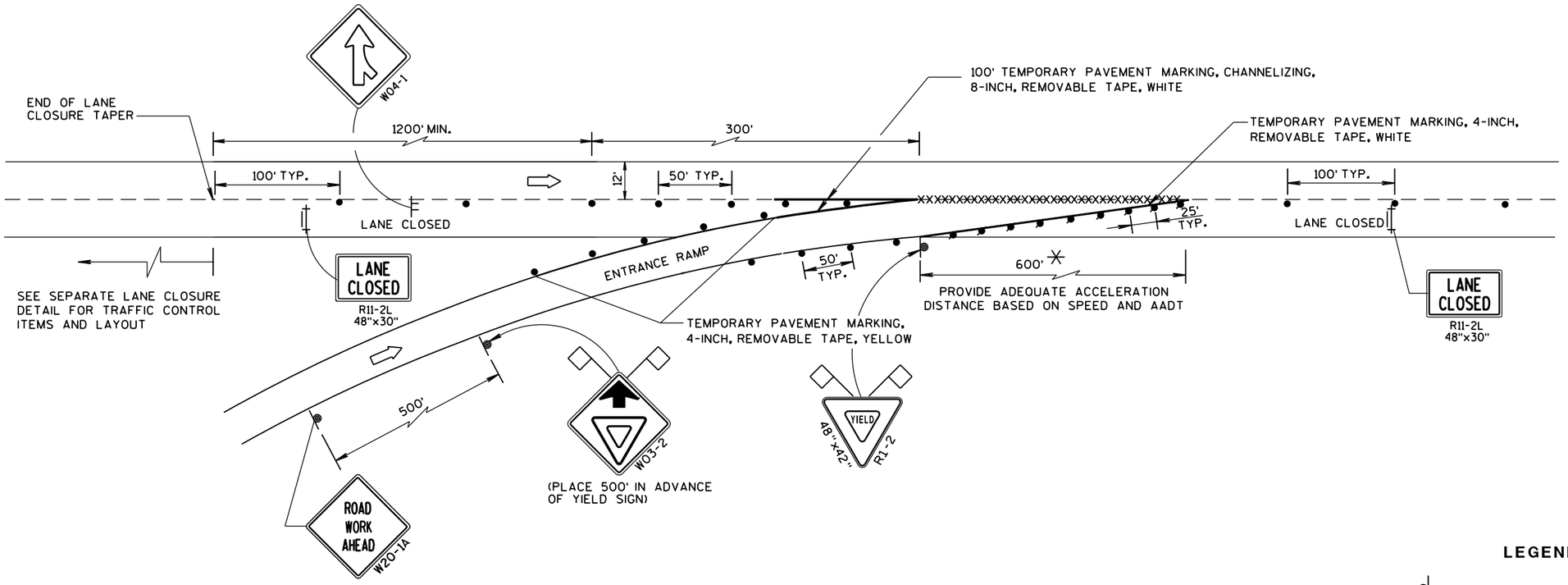
TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

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S.D.D. 15 D 15-4b



TAPERED ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE

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"x48" 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 CONTINUOUS 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 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.

* CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.

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

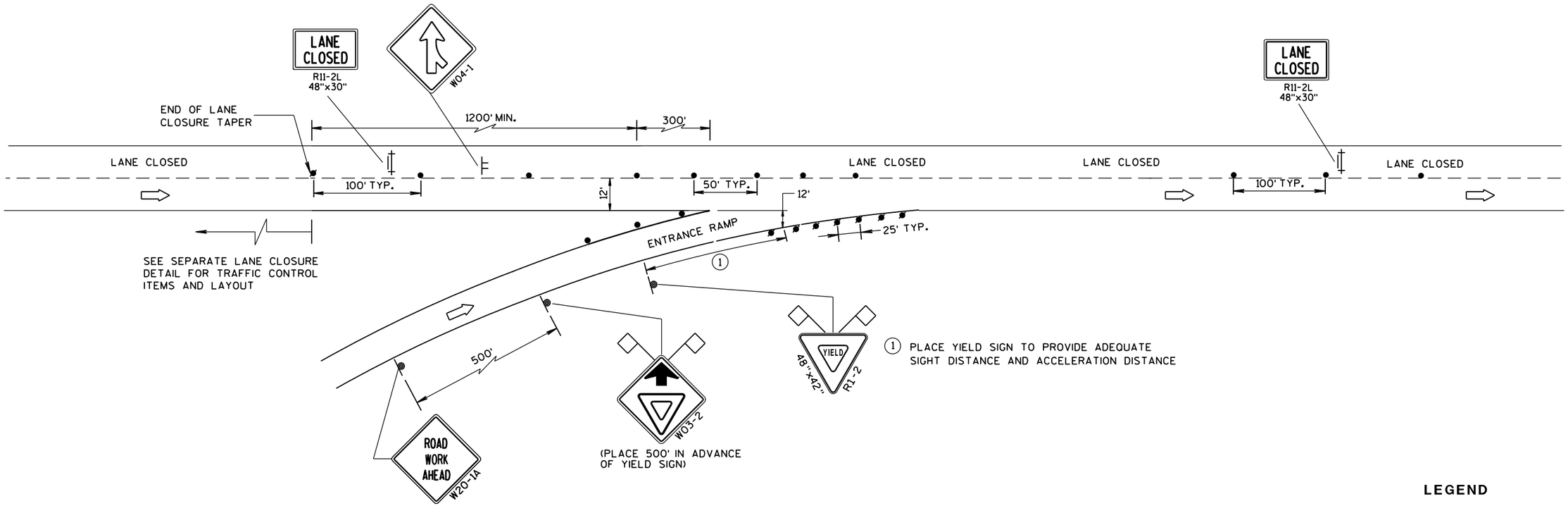
TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

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S.D.D. 15 D 15-4c



TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE

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"x48" 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 CONTINUOUS 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 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.

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

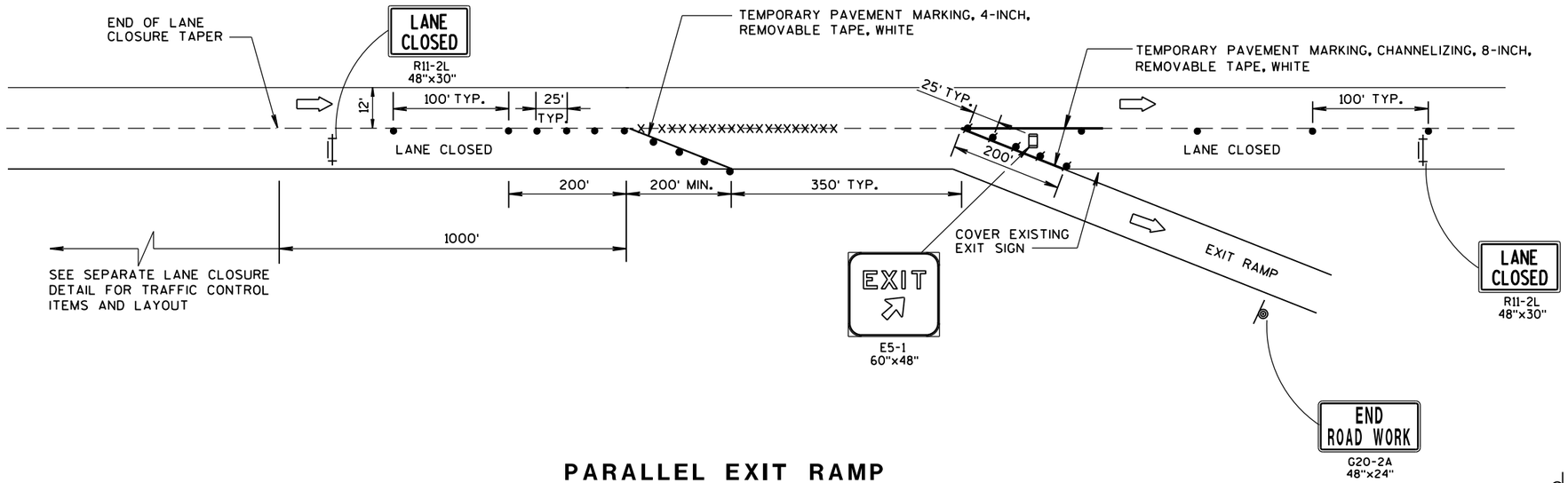
TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heidtke — WORK ZONE ENG
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S.D.D. 15 D 15-4d



PARALLEL EXIT RAMP

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.

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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 CONTINUOUS 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 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.

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

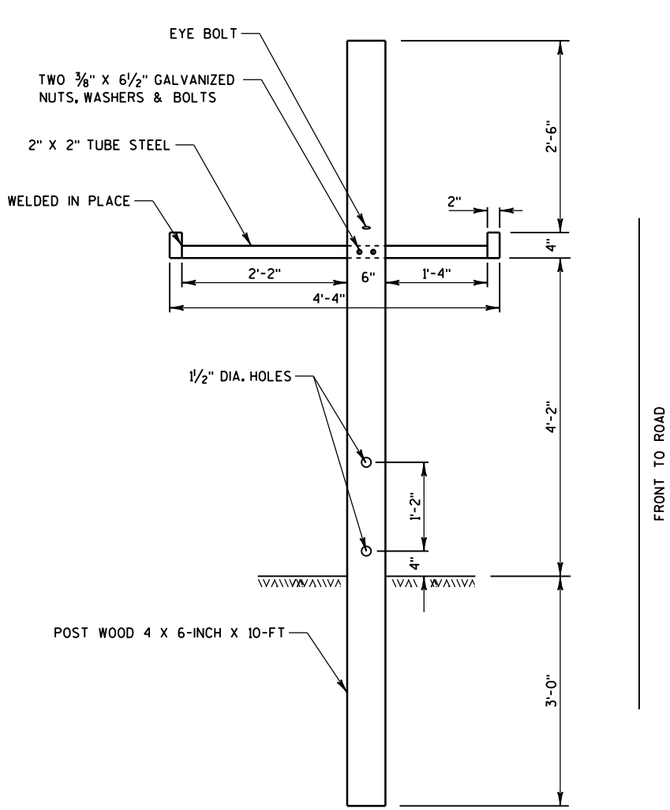
TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

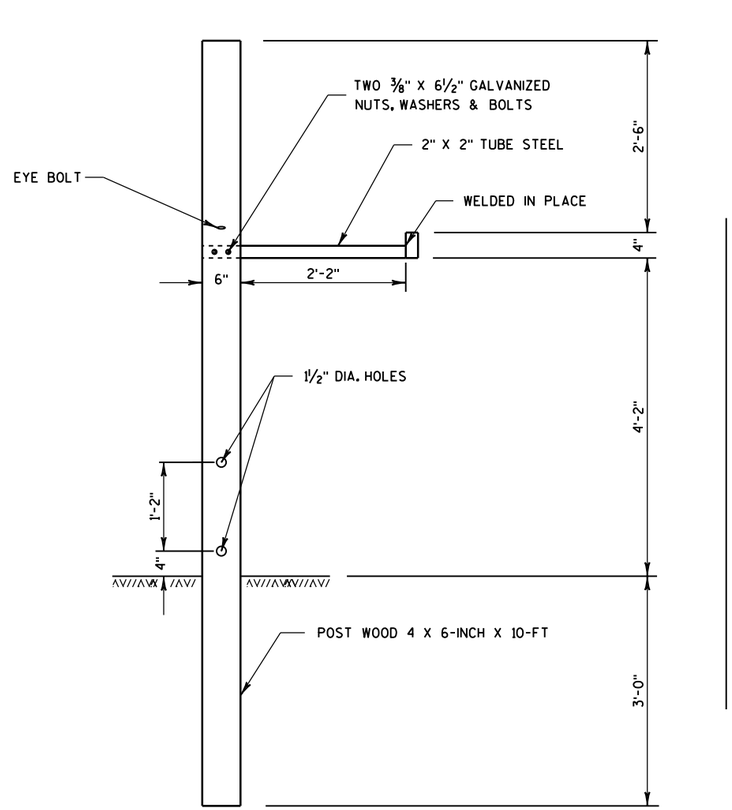
APPROVED
Sept., 2017 (DATE) /S/ Andrew Heidtke (WORK ZONE ENG)
FHWA

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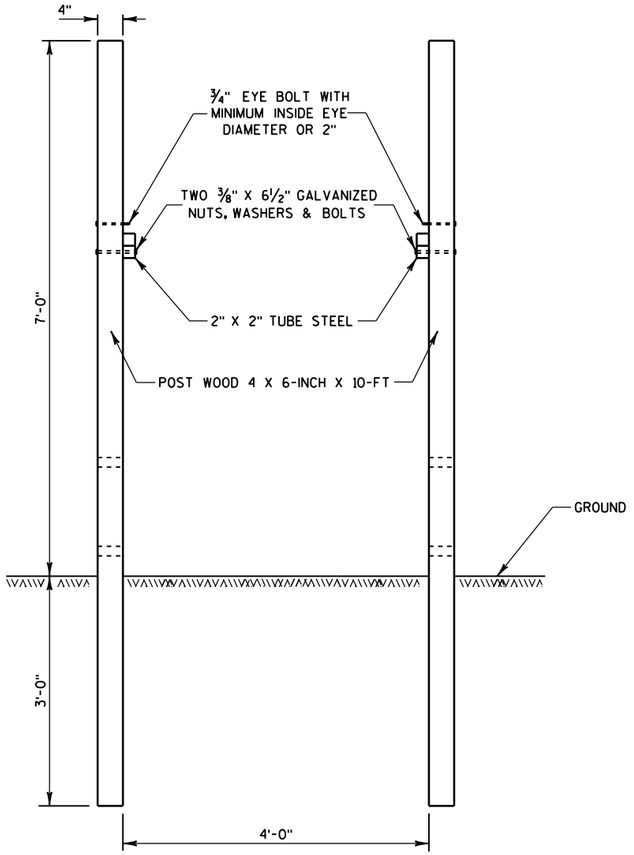
S.D.D. 15 D 15-4e



SIDE VIEW
(3 BARRICADE SYSTEM)



SIDE VIEW
(2 BARRICADE SYSTEM)



FRONT VIEW

BARRICADE RACK

* LOCATE OUTSIDE CLEAR ZONE AS DIRECTED BY ENGINEER

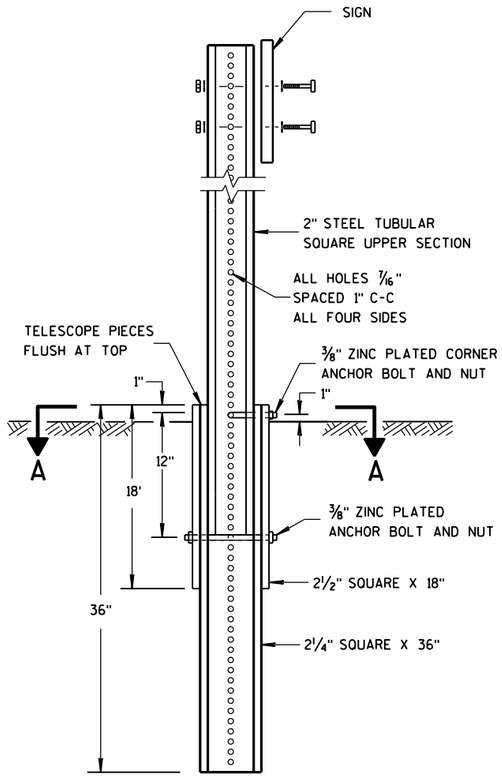
BARRICADE RACK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-30-2013 DATE FHWA	/S/ Bill Wondrachek STATE TRAFFIC I MANAGEMENT E

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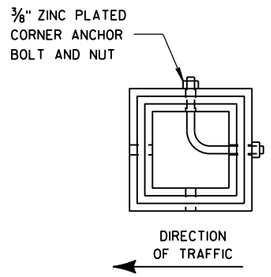
S.D.D. 15 D 36-1

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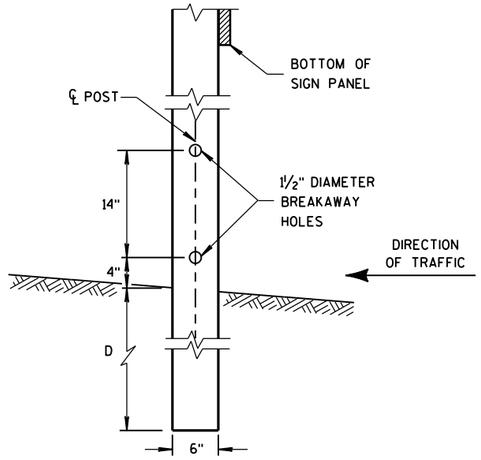
S.D.D. 15 D 36-1



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



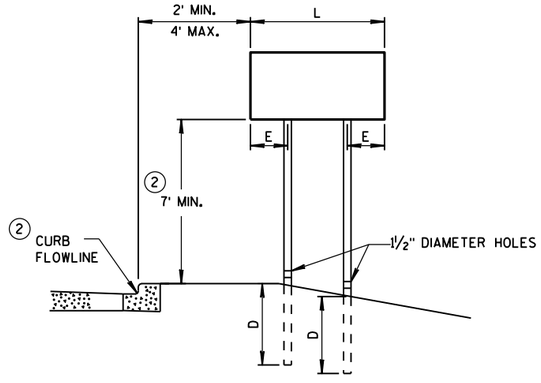
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

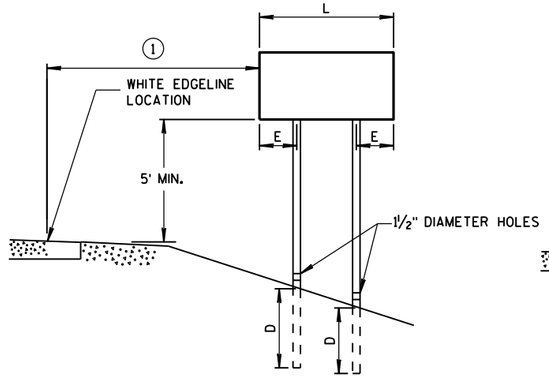
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

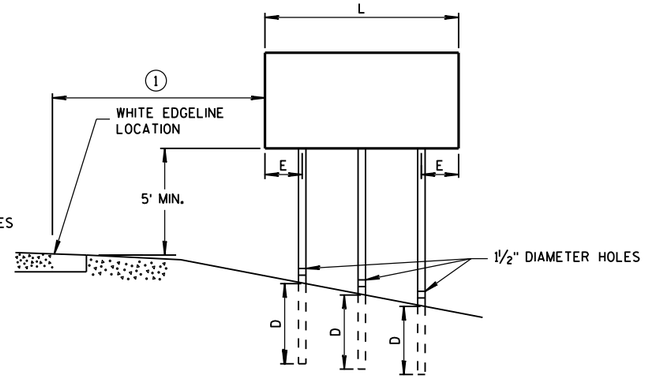
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK 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

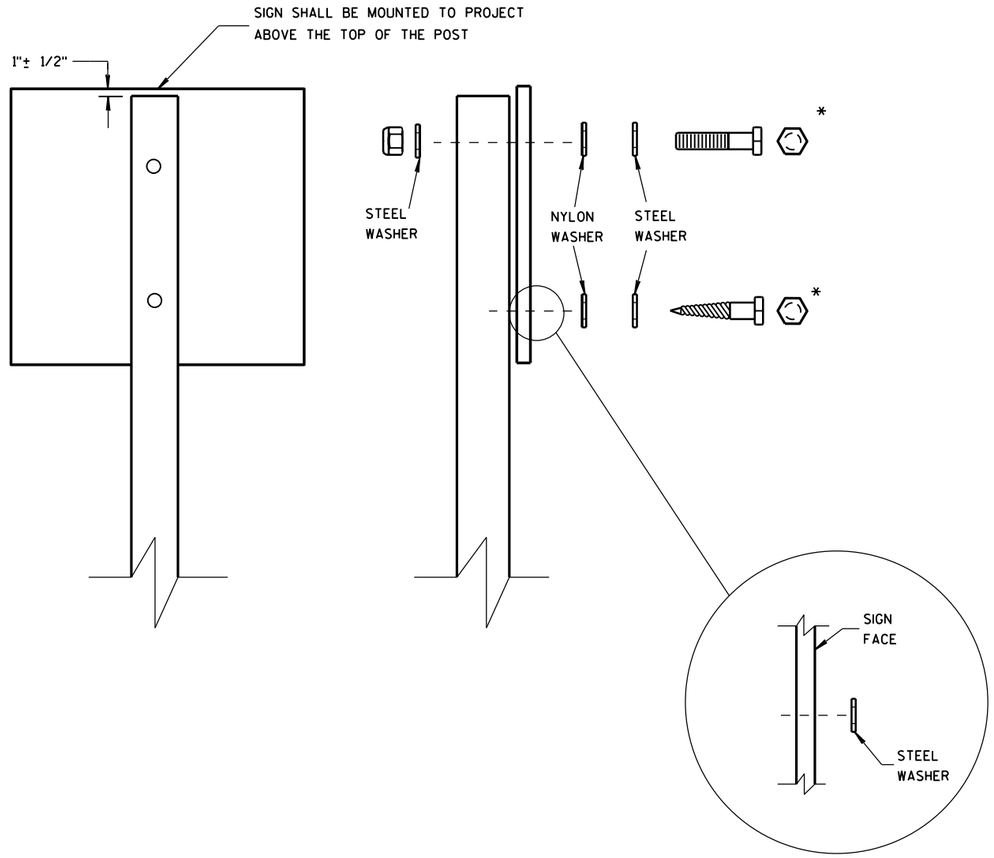
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

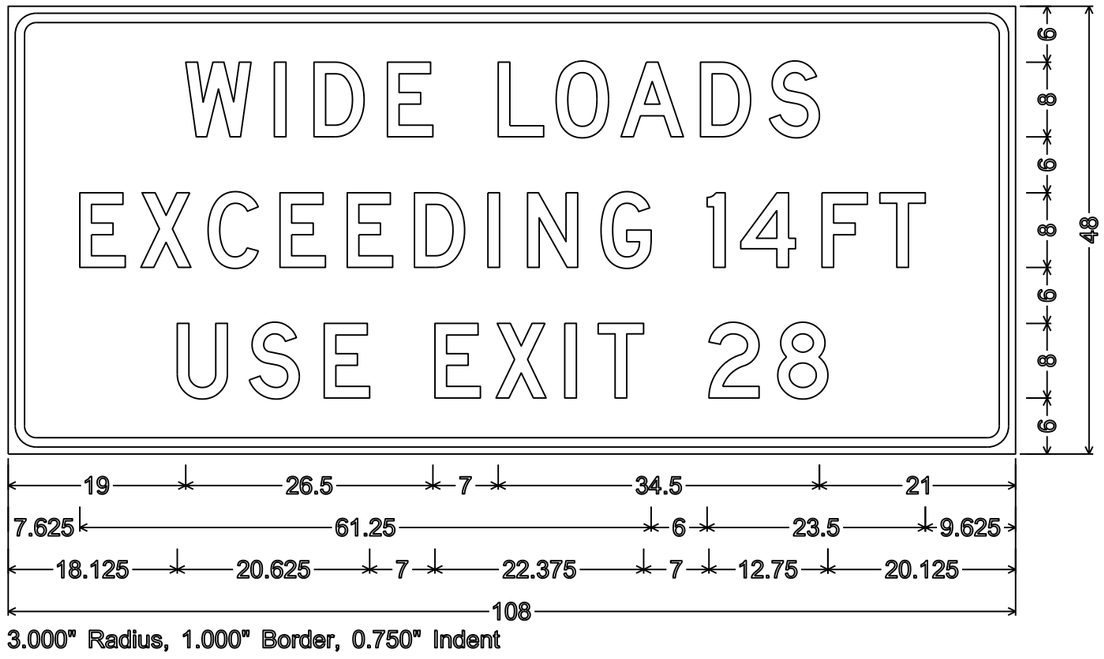
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

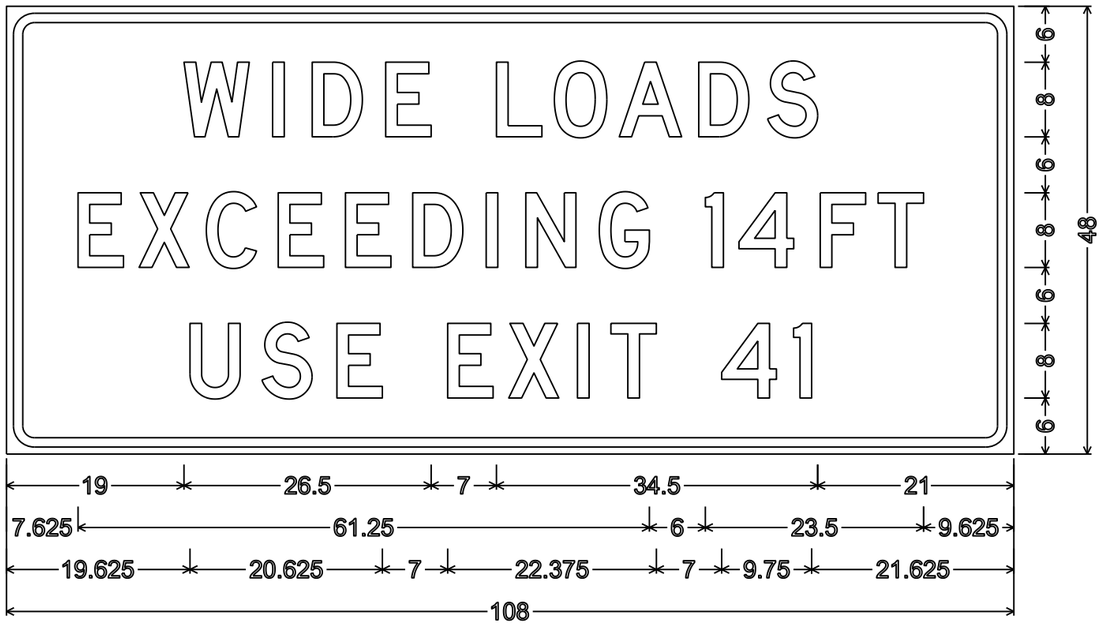
FHWA

NOTES

1. Fixed Message Type II Signs - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



3.000" Radius, 1.000" Border, 0.750" Indent



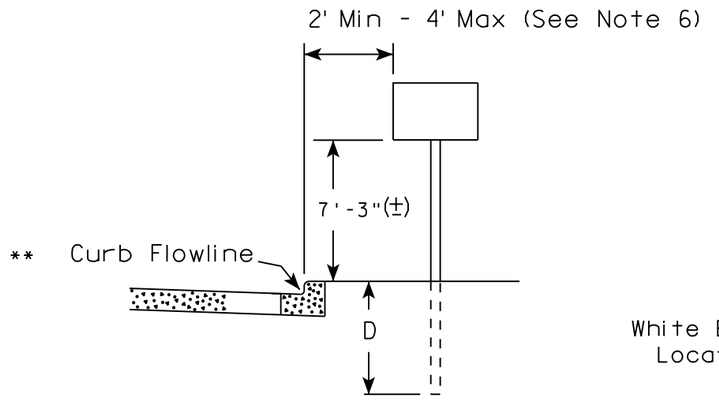
3.000" Radius, 1.000" Border, 0.750" Indent

7

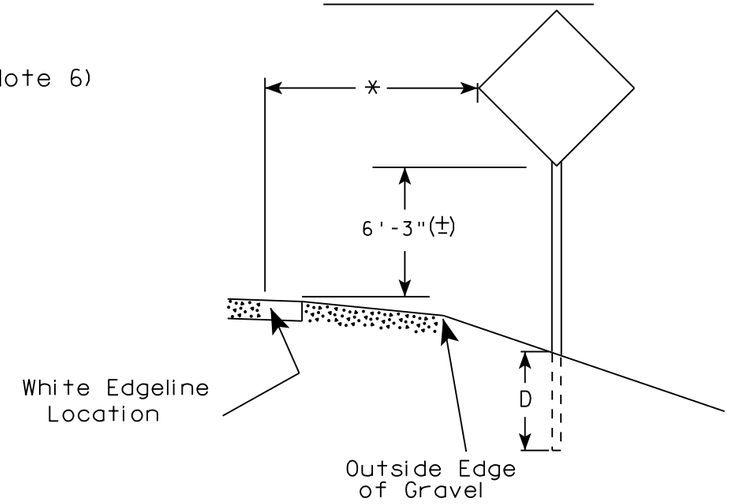
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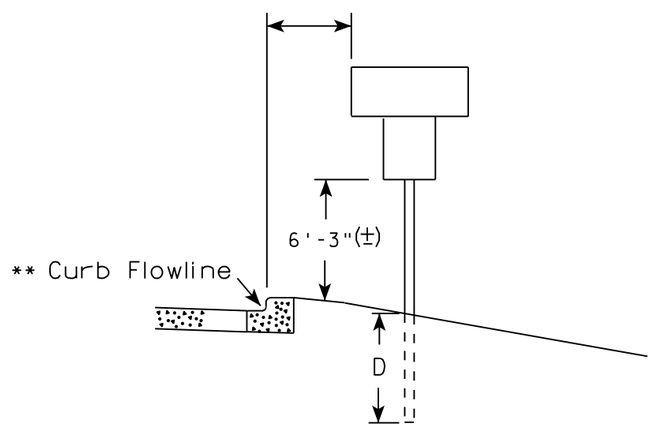
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	TEMPORARY SIGNING	SHEET NO: 213	E

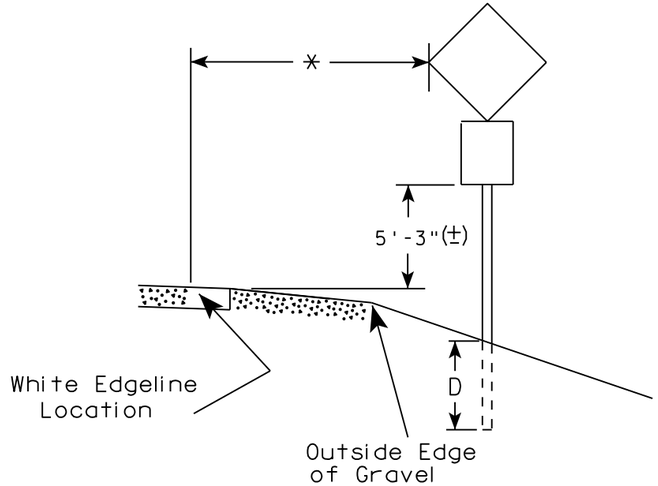
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

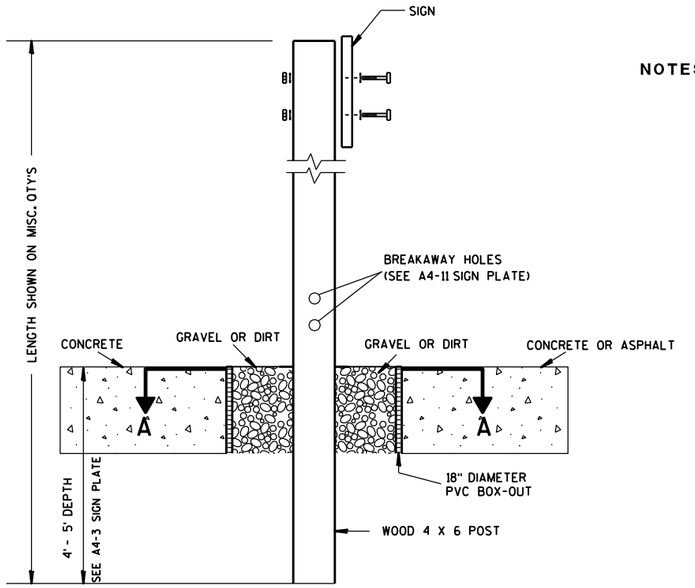
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

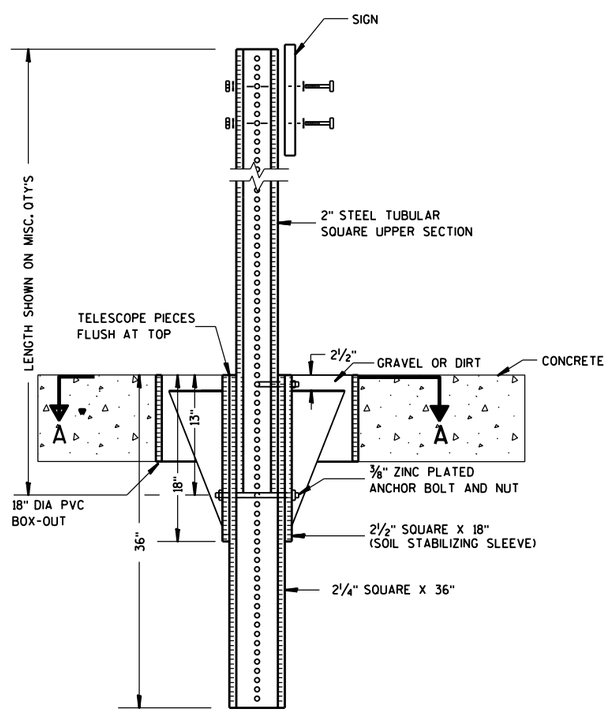
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

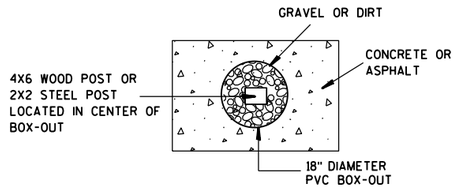
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

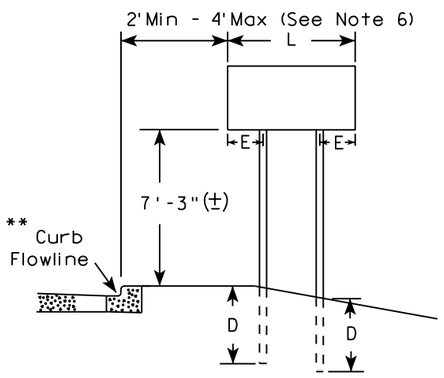
APPROVED Matthew R Rauch
for State Traffic Engineer

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

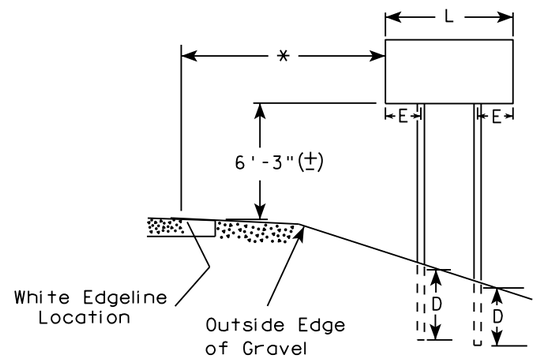
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

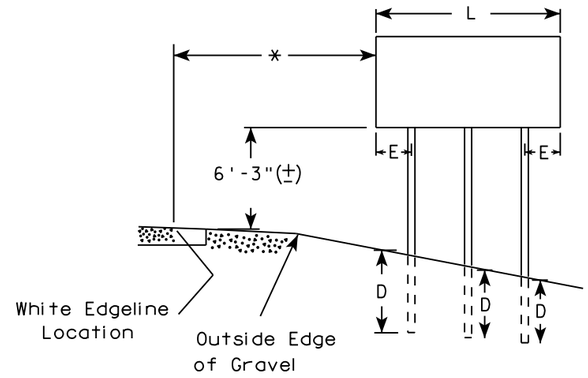
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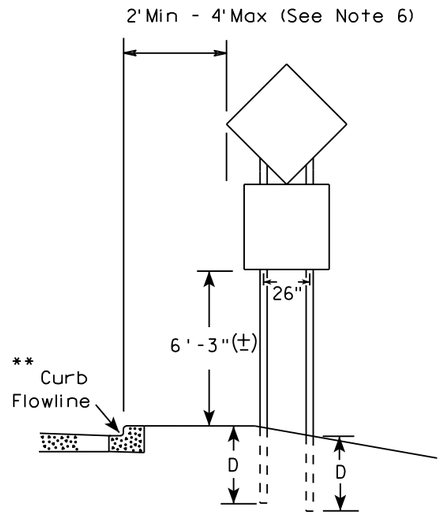
URBAN AREA



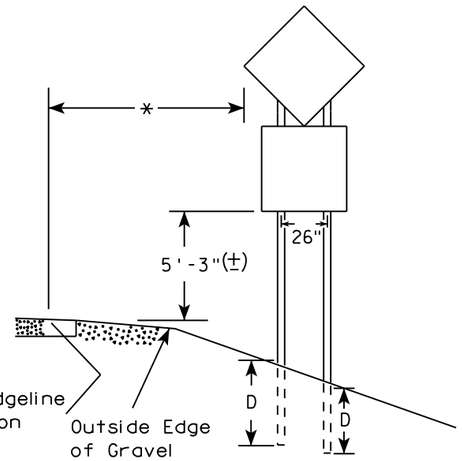
RURAL AREA (See Note 3)







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'

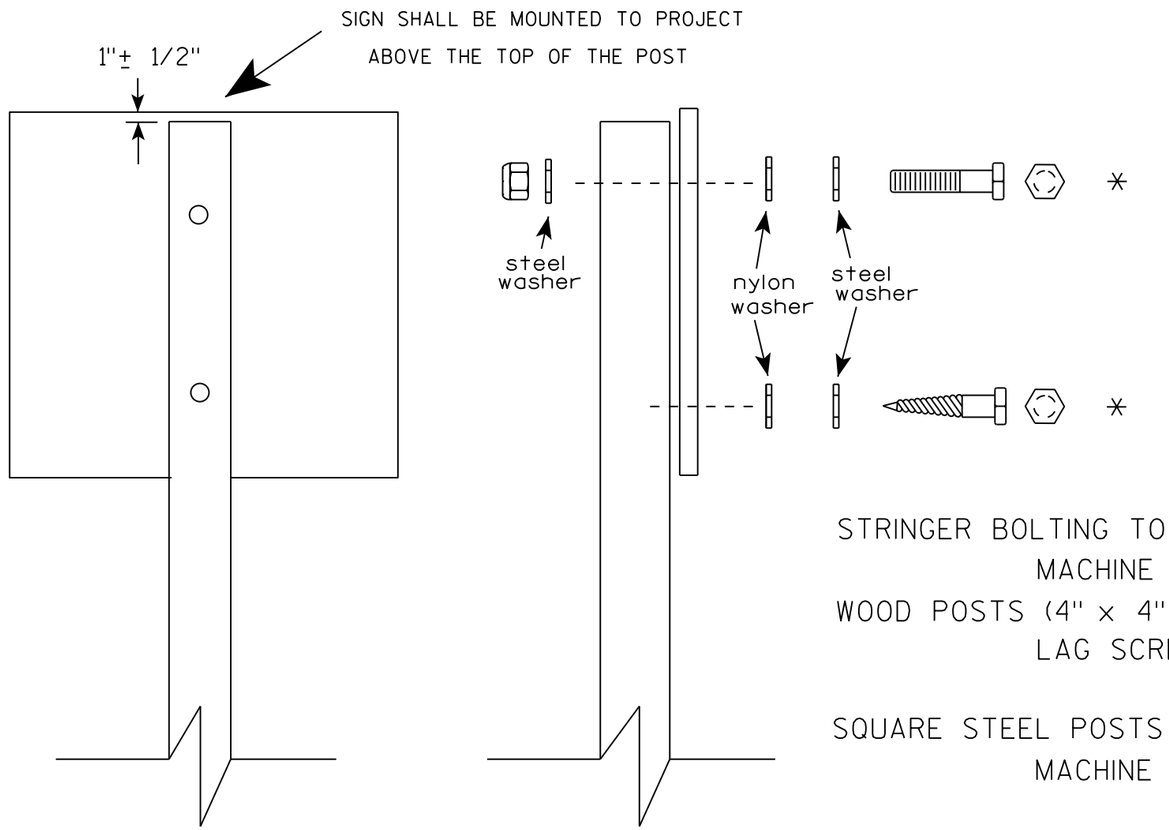
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 216	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 4" or 4" x 6")
LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)
SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

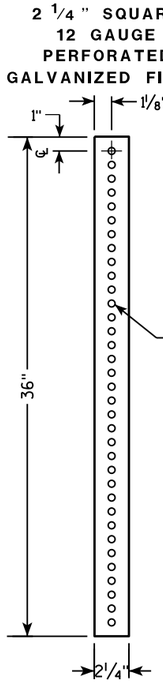
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

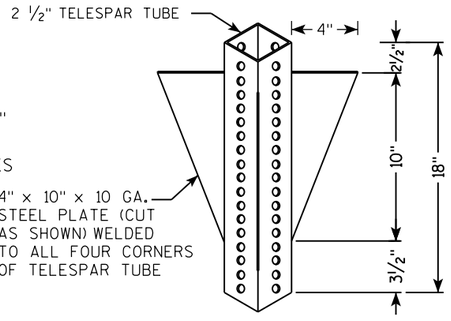
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TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

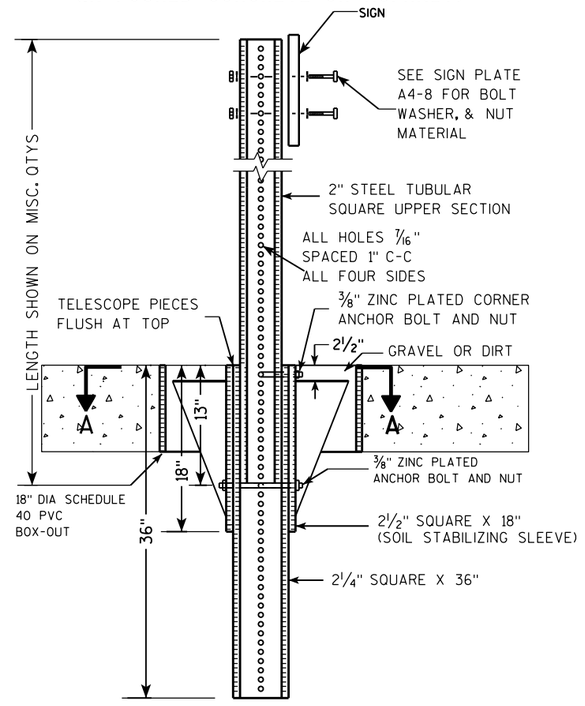
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



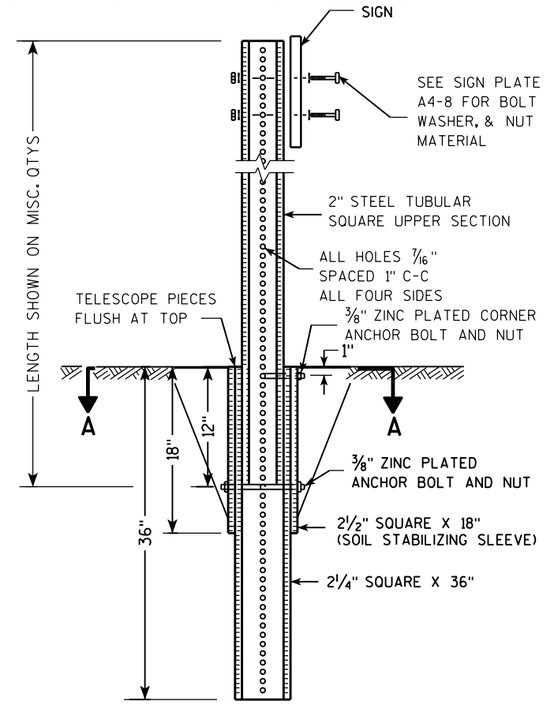
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

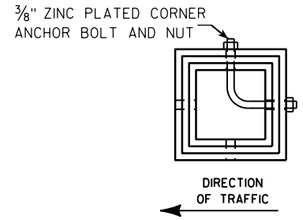


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

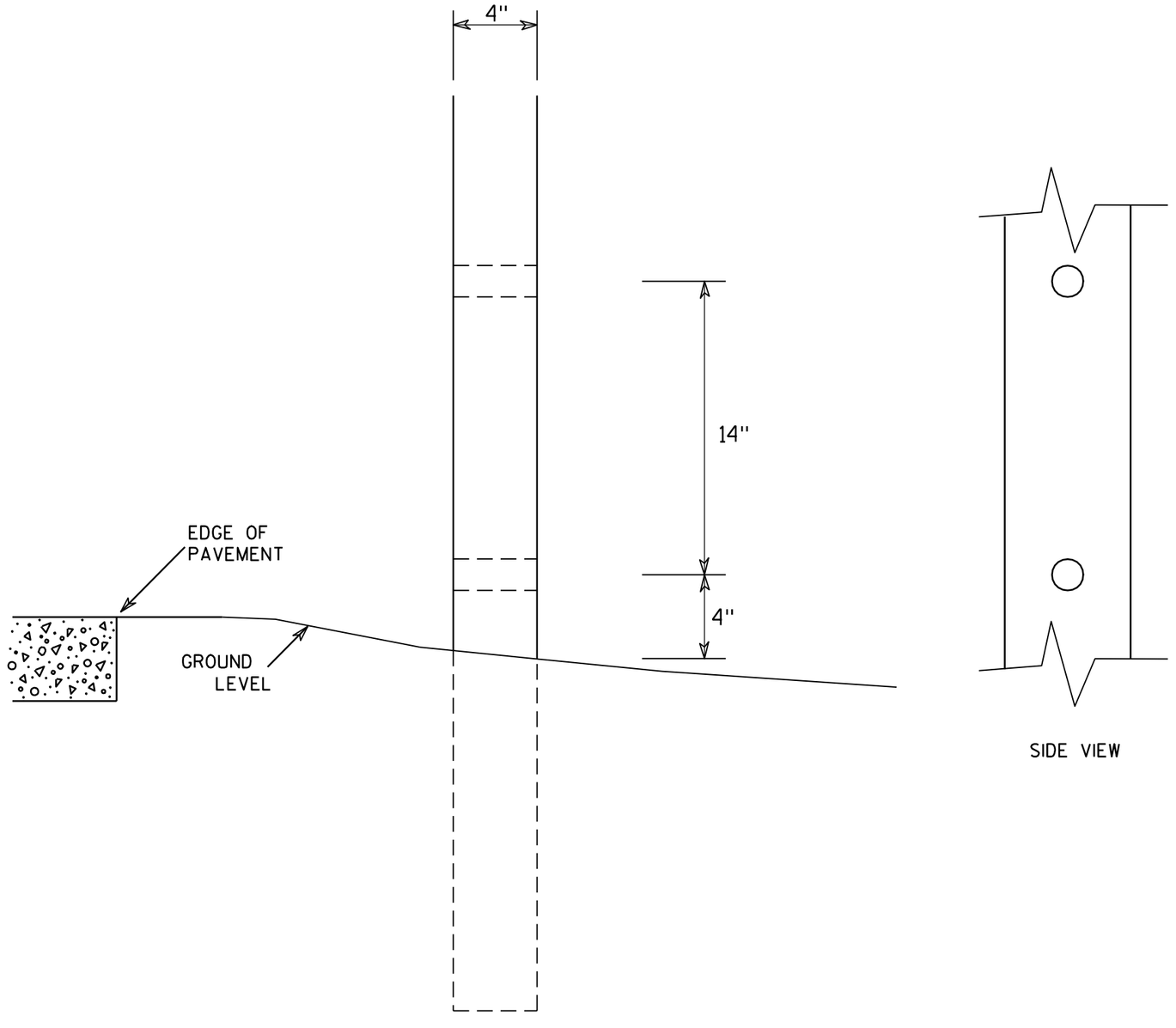
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 218 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.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

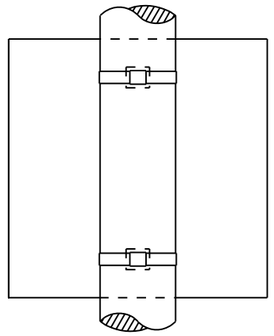
APPROVED Chester J Spang for State Traffic Engineer

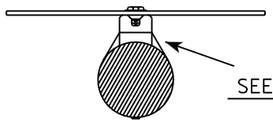
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 219	E

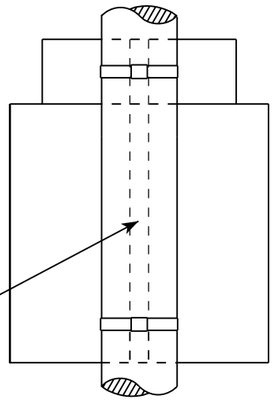
BANDING

SINGLE SIGN



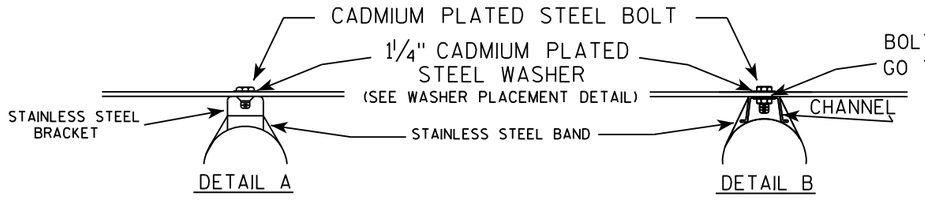


"J" ASSEMBLY

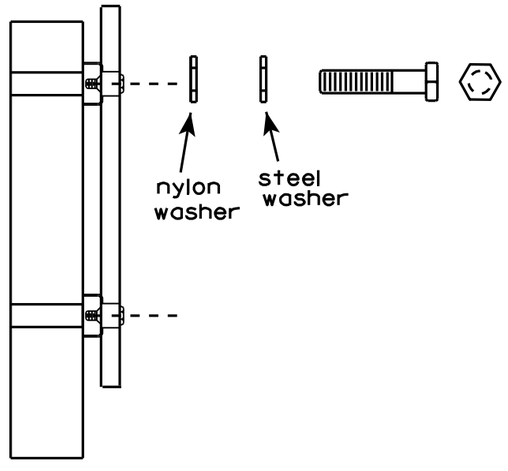


CHANNEL
SEE TYPICAL PANEL INSTALLATION SHEET





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

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.

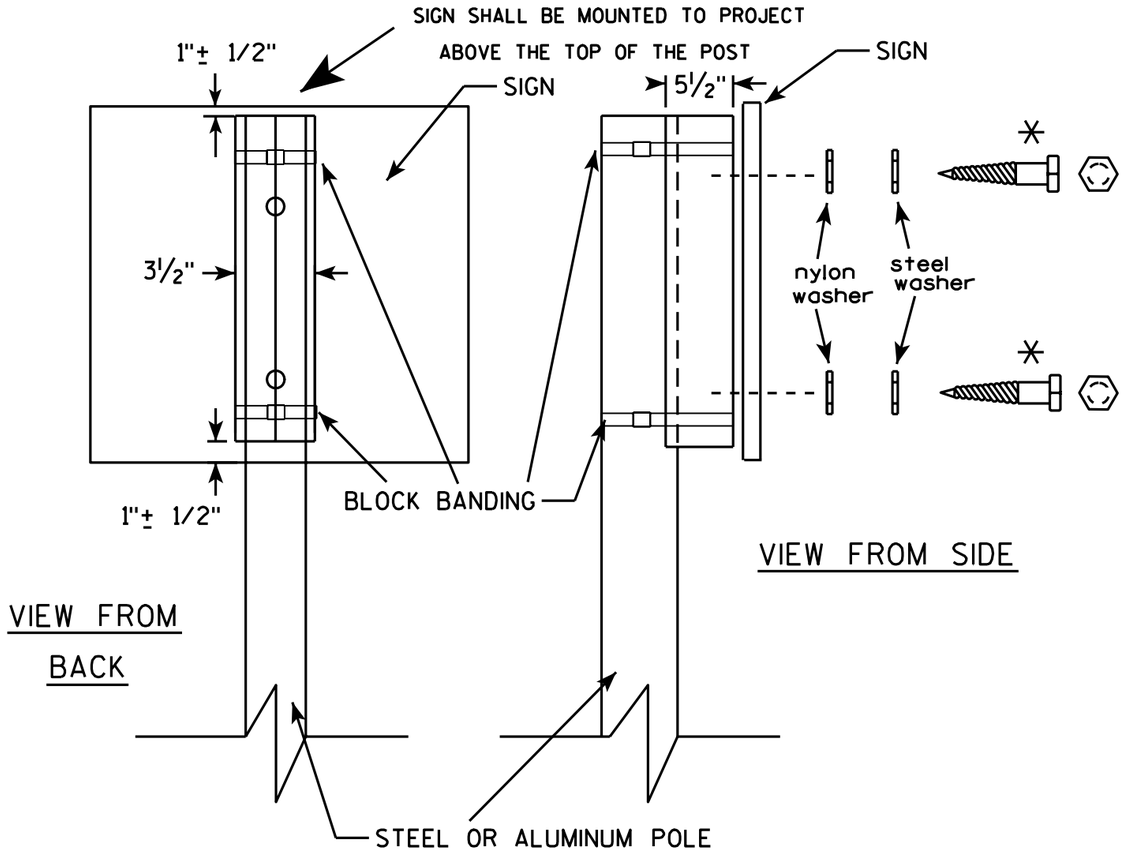
STANDARD SIGN
SIGN BANDING DETAILS

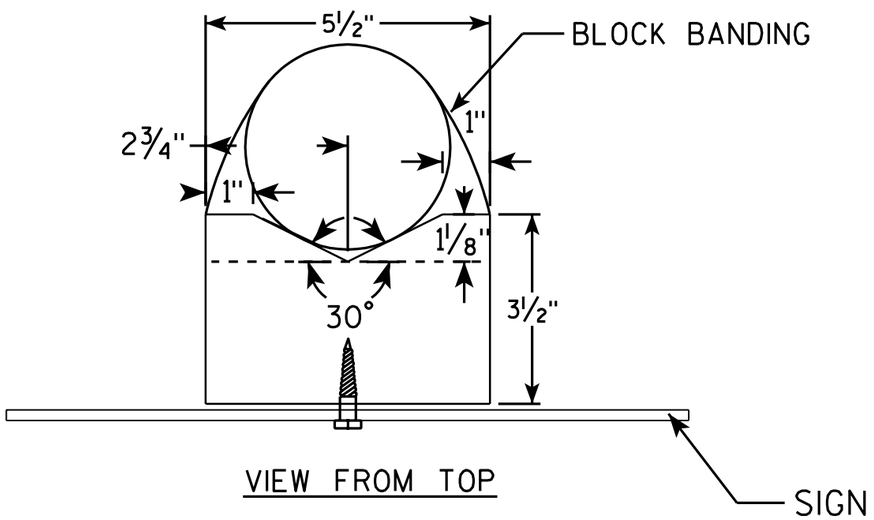
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 220	E





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, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. 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

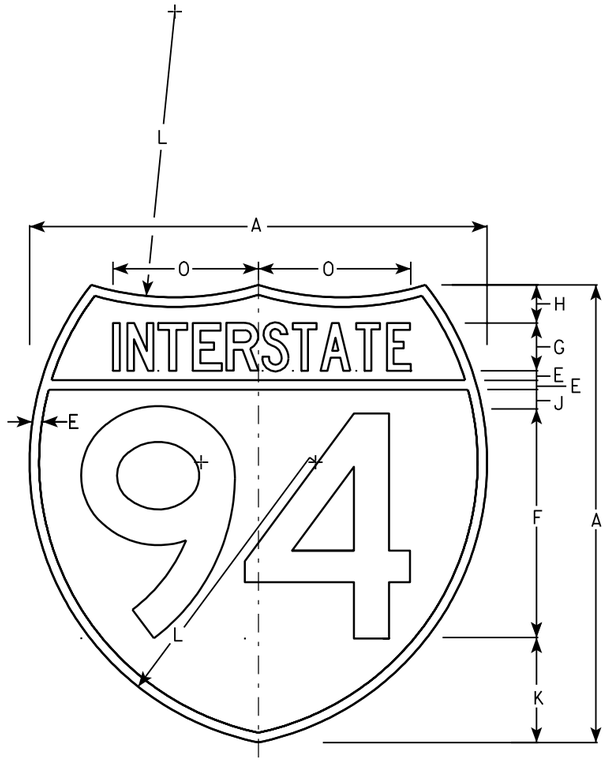
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

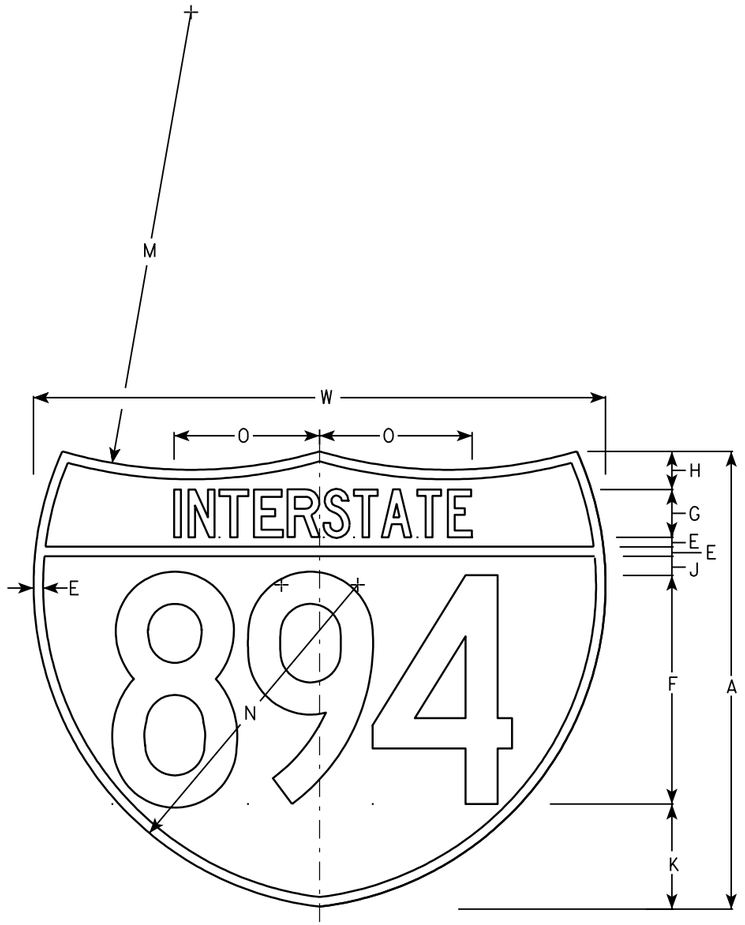
SHEET NO: 221 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

WISDOT/CADDS SHEET 42



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 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	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

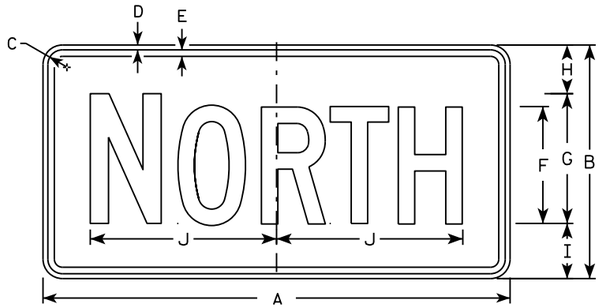
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

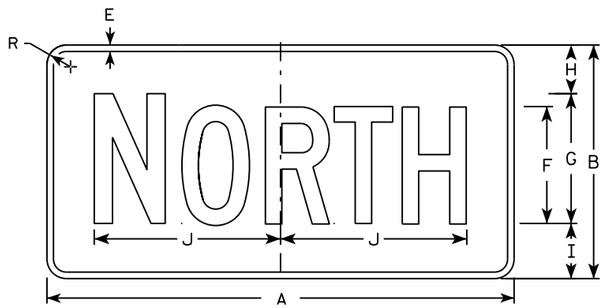
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 222	E



M3-1
MM3-1
MP3-1



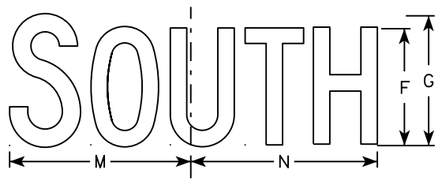
MB3-1
MK3-1
MN3-1



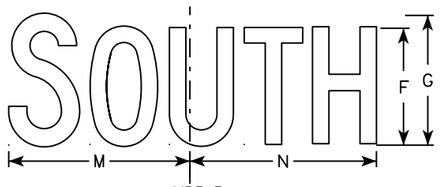
M3-2
MM3-2
MP3-2



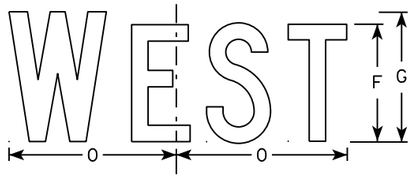
MB3-2
MK3-2
MN3-2



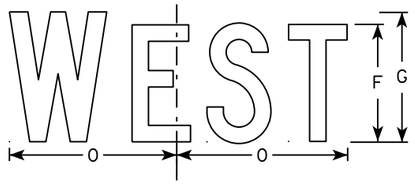
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

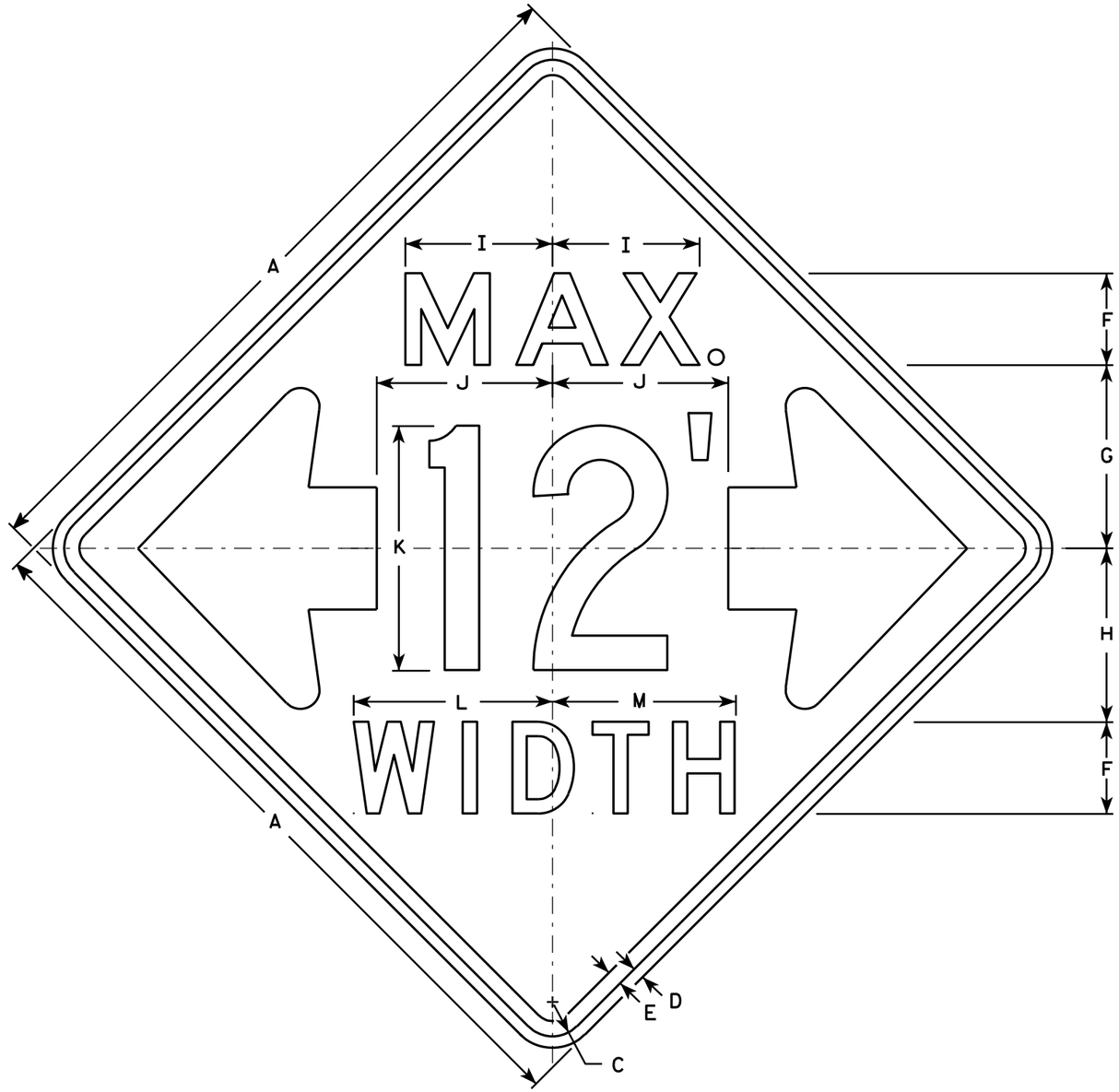
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

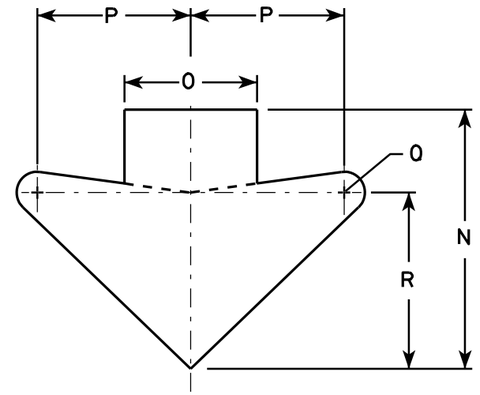
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



W12-52

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. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



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	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

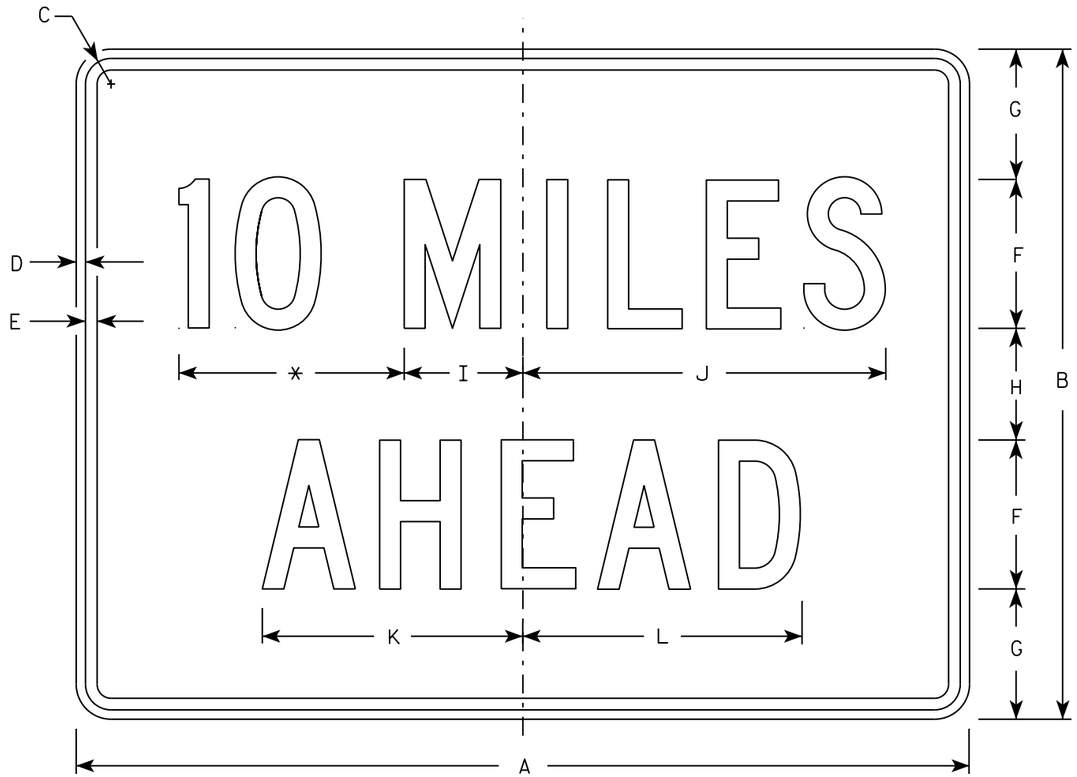
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

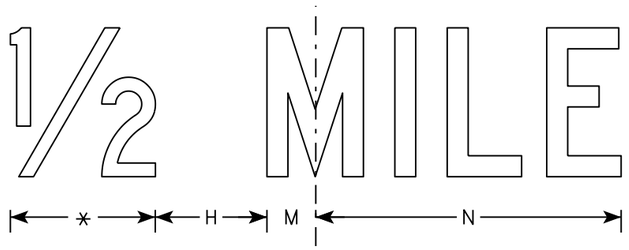
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 224 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000
WISDOT/CADDS SHEET 42



W057-52



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.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.

* 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	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

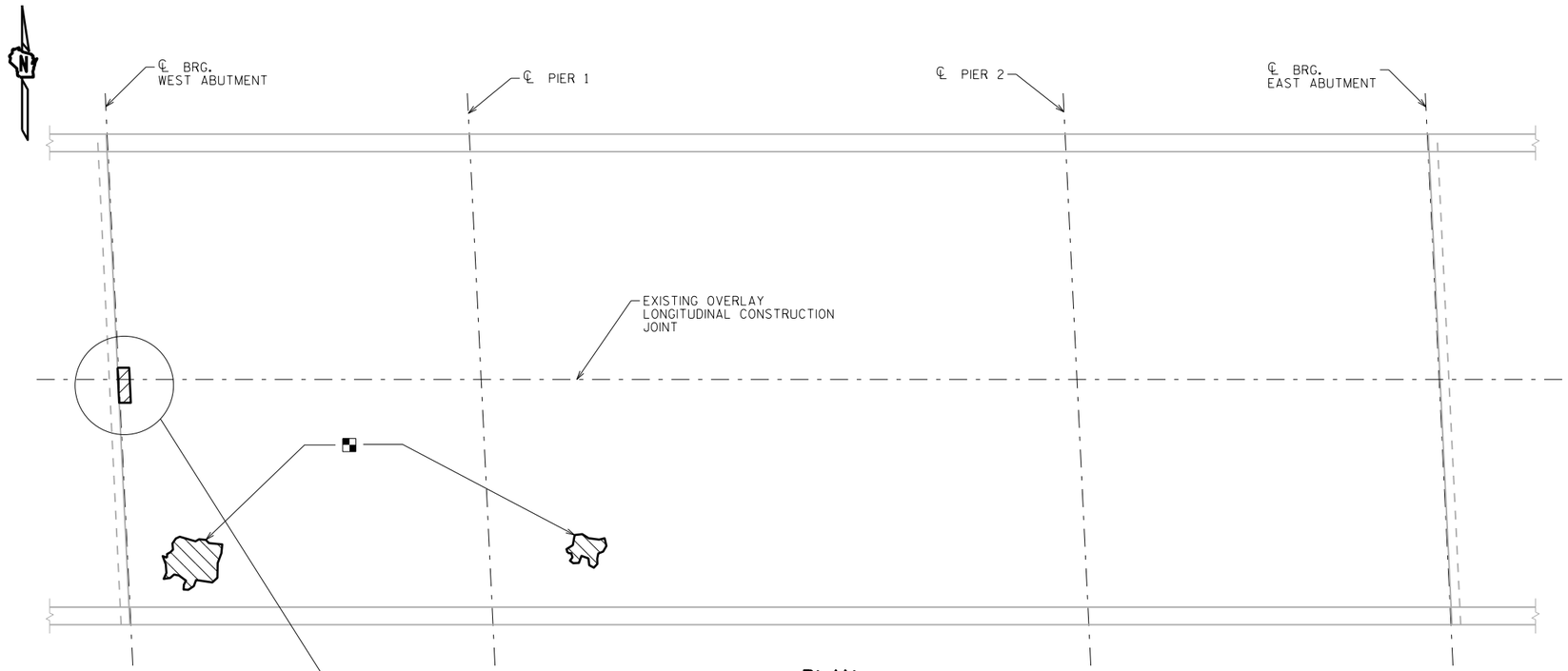
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W057-52.2

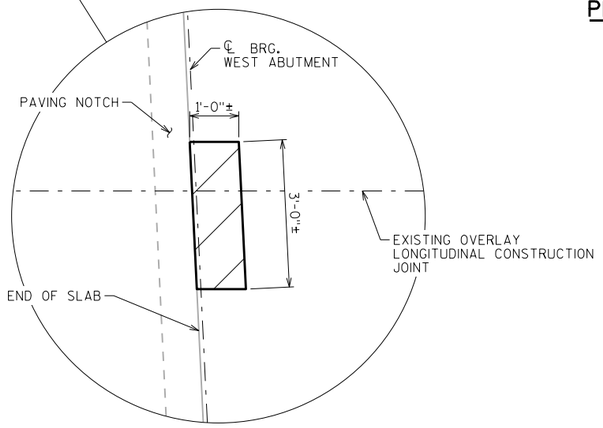
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 225	E

STATE PROJECT NUMBER

1077-02-73



PLAN



REPAIR DETAIL

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY:

CONCRETE MASONRY DECK REPAIR ——— f'c = 4,000 P.S.I.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO ENTIRE TOP OF CONCRETE REPAIR SURFACE.

EXACT LOCATIONS AND DIMENSIONS OF DECK REPAIR TO BE DERTERMINED BY ENGINEER.

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

TOTAL ESTIMATED QUANTITIES

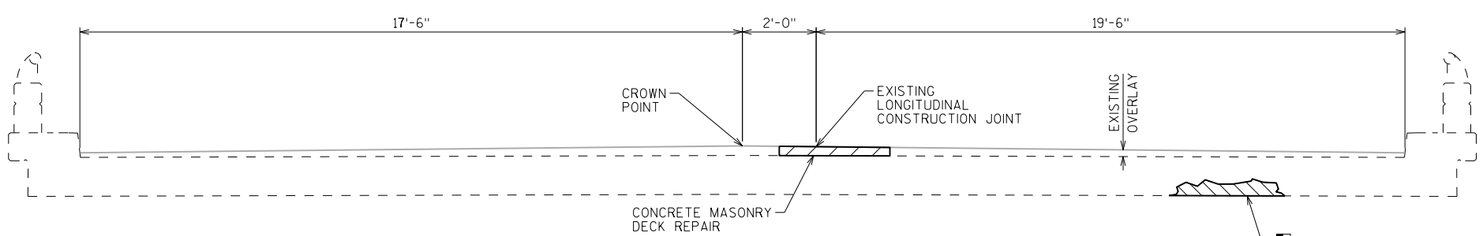
BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1
509.0301	PREPARATION DECKS TYPE 1	SY	1
509.0302	PREPARATION DECKS TYPE 2	SY	1
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	8
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	1
SPV.0165	CONCRETE SURFACE CLEANING	SF	10

STRUCTURE DESIGN CONTACTS:

JONATHON RESHESKE (608) 266-8491

LAURA SHADEWALD (608) 267-9592

■ REMOVE DELAMINATIONS AND LOOSE CONCRETE. CLEAN AND EPOXY COAT EXPOSED REBAR. WORK IS PAID FOR UNDER ITEM "CONCRETE SURFACE CLEANING".



ELEVATION

LOOKING EAST

LIST OF DRAWINGS

1. CONCRETE MASONRY DECK REPAIR

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS 6/18/18

CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-41-93

IH 90 EB OVER CTH A

COUNTY: MONROE | TOWN: ANGELO

DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY JLR | DESIGNED CK'D. DLM | DRAWN BY JLR | PLANS CK'D. DLM

CONCRETE MASONRY DECK REPAIR

SHEET 1 OF 1

226

I.D. 1077-02-03C DATE: APR 2018

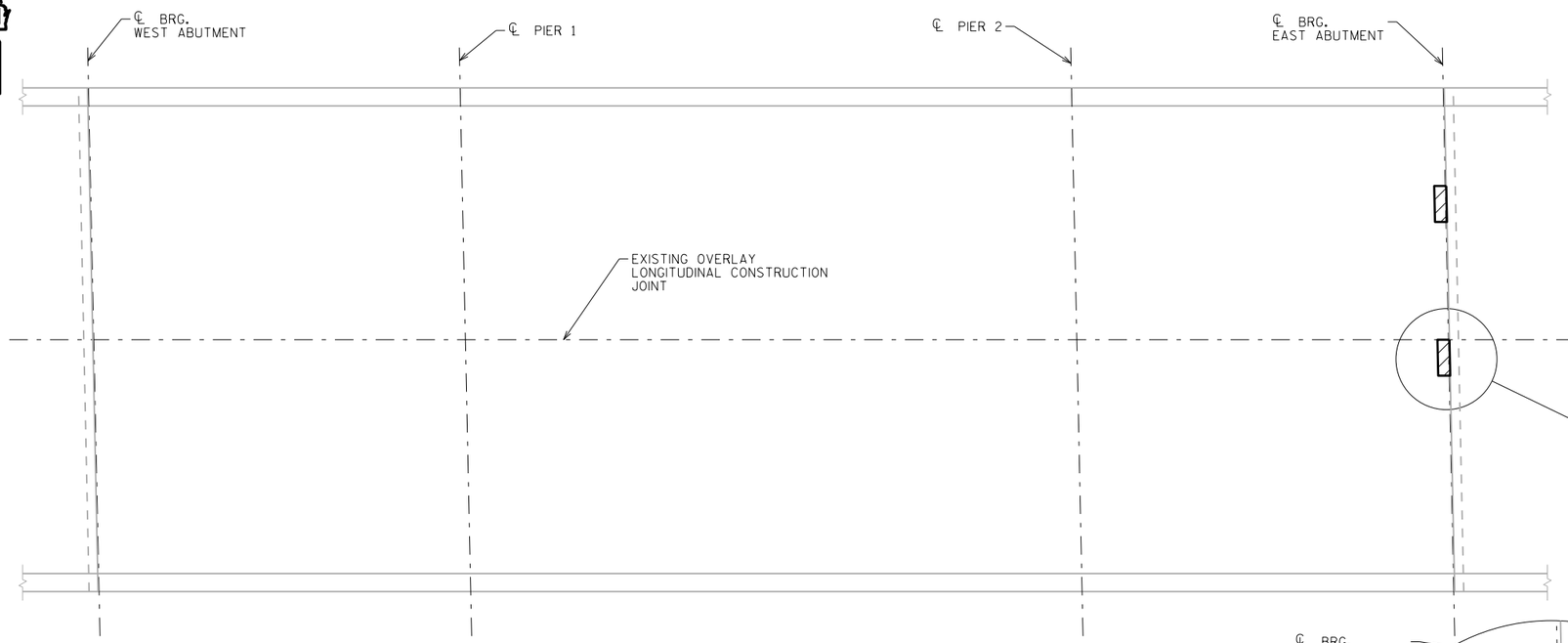
SCALE = 6.00

8

8

STATE PROJECT NUMBER

1077-02-73



PLAN

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY:
CONCRETE MASONRY DECK REPAIR ——— f'c = 4,000 P.S.I.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

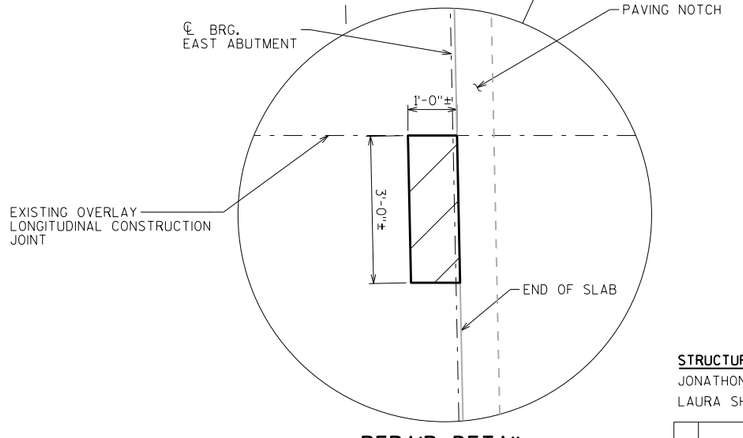
PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO ENTIRE TOP OF CONCRETE REPAIR SURFACE.

EXACT LOCATIONS AND DIMENSIONS OF DECK REPAIR TO BE DETERMINED BY ENGINEER.

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

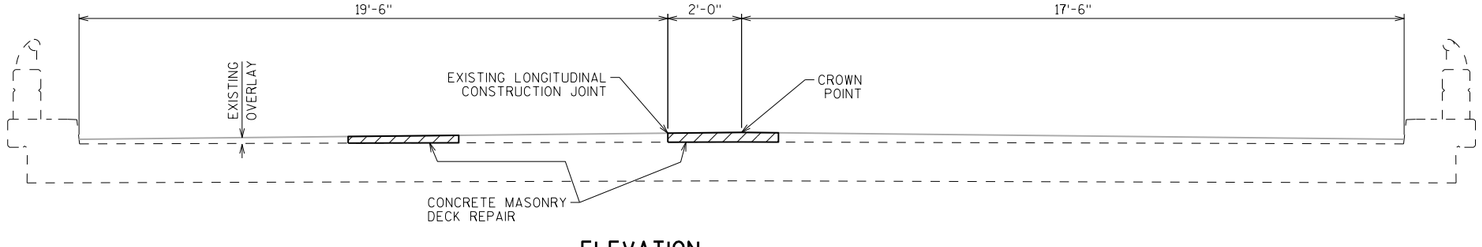
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1
509.0301	PREPARATION DECKS TYPE 1	SY	1
509.0302	PREPARATION DECKS TYPE 2	SY	1
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	16
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	1



REPAIR DETAIL

BOTH REPAIR SECTIONS SIMILAR



ELEVATION

LOOKING EAST

LIST OF DRAWINGS

1. CONCRETE MASONRY DECK REPAIR

STRUCTURE DESIGN CONTACTS:

JONATHON RESHESKE (608) 266-8491
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 6/18/18
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-41-105

IH 90 WB OVER CTH A

COUNTY	TOWN
MONROE	ANGELO

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
JLR	DLM	JLR	DLM

CONCRETE MASONRY DECK REPAIR

SHEET 1 OF 1

227

I.D. 1077-02-03D DATE: APR 2018

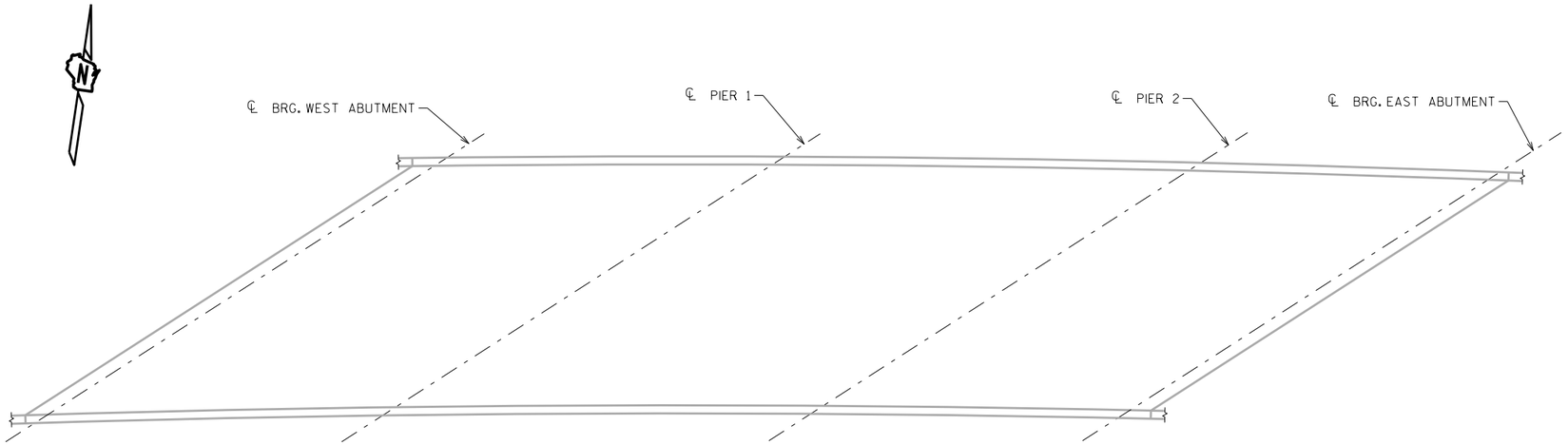
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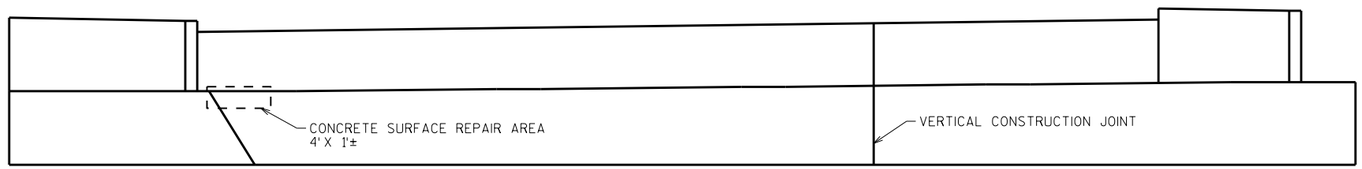
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STATE PROJECT NUMBER

1077-02-73

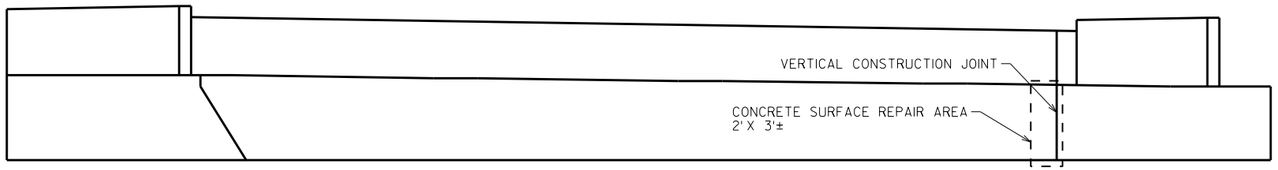


PLAN



ELEVATION WEST ABUTMENT

LOOKING WEST



ELEVATION EAST ABUTMENT

LOOKING EAST

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
509.1500	CONCRETE SURFACE REPAIR	SF	131
517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-41-112	LS	1
517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-41-112	LS	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1
SPV.0060	EMBEDDED GALVANIC ANODES	EACH	111
SPV.0060	CLEANING AND PAINTING BEARINGS	EACH	20
SPV.0105	GIRDER CRACK GRINDING	LS	1
SPV.0165	FIBER WRAP REINFORCING NON-STRUCTURAL	SF	1,460

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY:
- SUPERSTRUCTURE — f'c = 4,000 P.S.I.
- ALL OTHER — f'c = 3,500 P.S.I.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

CONCRETE SURFACE REPAIR IS REQUIRED ON BOTH ABUTMENTS AND ON COLUMNS ON BOTH PIERS

"CONCRETE SURFACE REPAIR" AREAS TO BE DETERMINED BY FIELD ENGINEER

"EMBEDDED GALVANIC ANODES" ONLY REQUIRED ON PIER COLUMNS. QUANTITY FOR "EMBEDDED GALVANIC ANODES" IS FOR INFORMATIONAL PURPOSES ONLY. FIELD ENGINEER TO VERIFY THE EXACT NUMBER OF ANODES REQUIRED AT EACH INDIVIDUAL PIER COLUMN SURFACE REPAIR LOCATION PRIOR TO ANODE INSTALLATION.

QUANTITY FOR "FIBER WRAP COLUMN REINFORCING" IS FOR INFORMATIONAL PURPOSES ONLY. FIELD ENGINEER TO VERIFY THE QUANTITY NEEDED.

ABRASIVE BLAST AND REPAINT ALL EXPOSED STRUCTURAL STEEL AREAS. THE COLOR OF THE FINISH TOP COAT OF THE STEEL GIRDERS AND BEARINGS SHALL BE LIGHT GRAY. (FEDERAL STANDARD COLOR NO. 26293)

PAYMENT FOR CLEANING AND PAINTING ALL STEEL ELEMENTS, NOT INCLUDING BEARINGS, SHALL BE INCLUDED IN THE BID ITEM "STRUCTURE REPAINTING RECYCLED ABRASIVE B-41-112".

PAYMENT FOR CLEANING AND PAINTING BEARINGS AT PIERS AND ABUTMENTS SHALL BE INCLUDED IN THE BID ITEM "CLEANING AND PAINTING BEARINGS".

LIST OF DRAWINGS

1. ABUTMENT CONCRETE SURFACE REPAIR
2. PIER CONCRETE SURFACE REPAIR
3. CATHODIC PROTECTION
4. CRACK REPAIR

STRUCTURE DESIGN CONTACTS:

JONATHON RESHESKE (608) 266-8491

LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION — BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 6/18/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-41-112

IH 90 WB OVER STH 16

COUNTY: MONROE | TOWN: ADRIAN

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
JLR	DLM	JLR	DLM

ABUTMENT CONCRETE SURFACE REPAIR

SHEET 1 OF 4

228

I.D. 1077-02-03E DATE: APR 2018

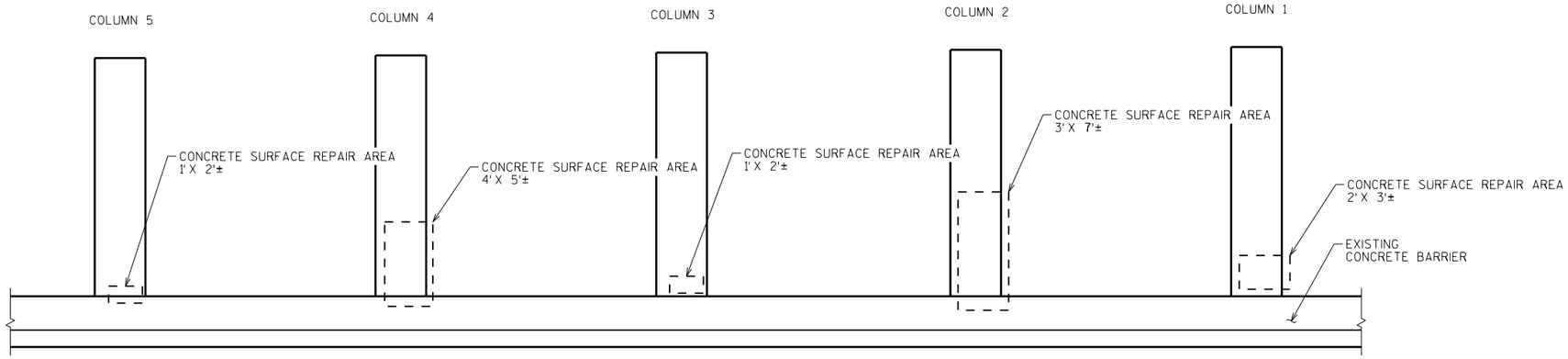
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8

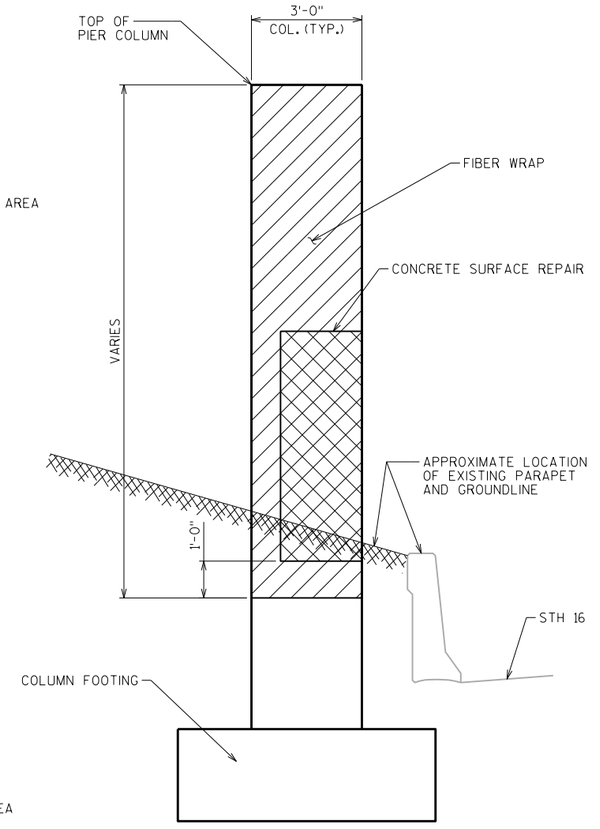
STATE PROJECT NUMBER

1077-02-73



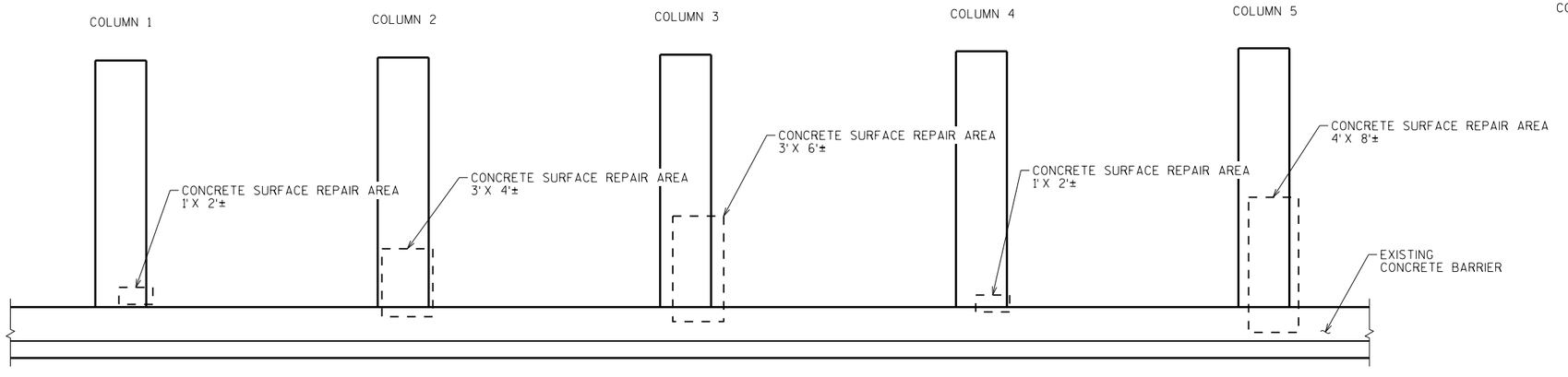
PIER 1 COLUMN CONCRETE SURFACE REPAIR

LOOKING WEST



PIER COLUM FIBER WRAP

NOTE: FIBER WRAP TO COVER COLUMN FROM TOP OF COLUMN TO 1'-0" BELOW THE CONCRETE SURFACE REPAIR AREA.



PIER 2 COLUMN CONCRETE SURFACE REPAIR

LOOKING EAST

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-112

DRAWN BY JLR | PLANS CK'D. DLM

PIER CONCRETE SURFACE REPAIR

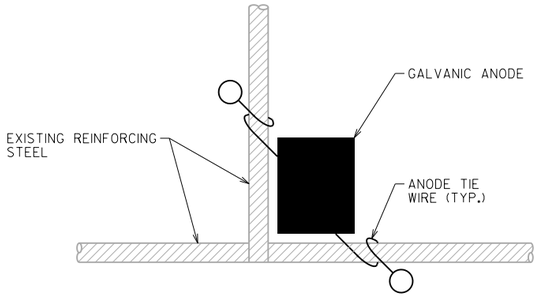
SHEET 2

229

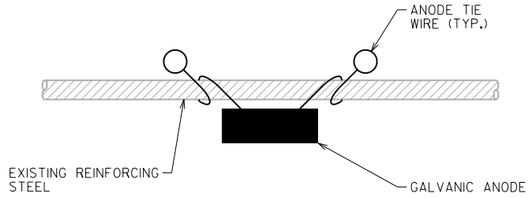
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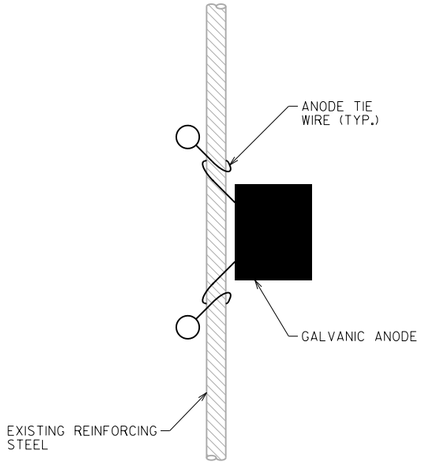
1077-02-73



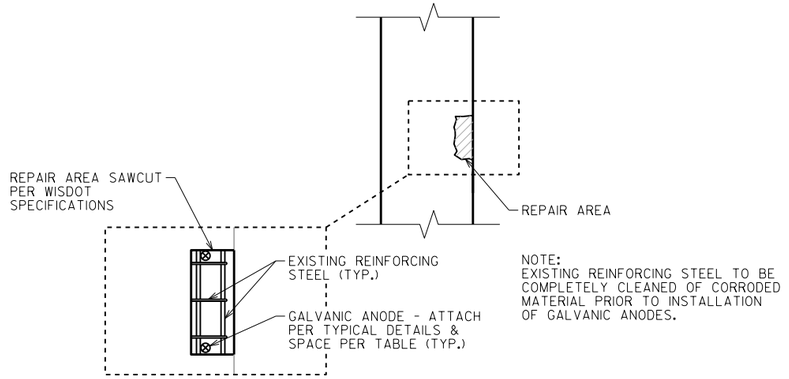
TYPICAL INSTALLATION AT BAR STEEL INTERSECTION



TYPICAL INSTALLATION BELOW BAR STEEL



TYPICAL INSTALLATION BESIDE BAR STEEL



TYPICAL PIER & COLUMN REPAIR DETAIL

GENERAL NOTES

SEE SPECIAL PROVISION "EMBEDDED GALVANIC ANODES" FOR DESCRIPTION, MATERIALS, CONSTRUCTION, MEASUREMENT, AND PAYMENT INFORMATION.

LOCATIONS OF GALVANIC ANODES SHOULD BE WITHIN 6" OF THE EDGE OF THE REPAIR AREA.

AFTER PLACEMENT, GALVANIC ANODES SHOULD MAINTAIN A MINIMUM TOP COVER OF 1½" AND A MINIMUM BOTTOM COVER OF ¾".

GALVANIC ANODES ONLY REQUIRED ON PIERS.

MAXIMUM GALVANIC ANODE SPACING

STEEL DENSITY RATIO	MAXIMUM ANODE SPACING (INCHES)
⩽ 0.30	24
0.31 → 0.50	20
0.51 → 0.60	18
0.61 → 0.80	16
0.81 → 0.90	15
0.91 → 1.00	14
1.01 → 1.20	12
⩾ 1.20	*

NOTES:

1) *AT STEEL DENSITY RATIOS GREATER THAN 1.20, GC TO CONSULT THE ENGINEER TO DETERMINE MAXIMUM ANODE SPACING AND ANODE LAYOUT.

2) STEEL DENSITY RATIO IS THE RATIO OF STEEL REINFORCING BAR SURFACE AREA TO EXPOSED CONCRETE SURFACE AREA WITHIN THE REPAIR AREA.

3) TABLE IS BASED ON HIGH CORROSION RISK WITHIN THE SURFACE REPAIR AREA, A MINIMUM ZINC MASS OF 38 GRAMS, AND AN APPROXIMATE SERVICE LIFE OF 10-20 YEARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-45-112

DRAWN BY JLR | PLANS CK'D. DLM

CATHODIC PROTECTION

SHEET 3

230

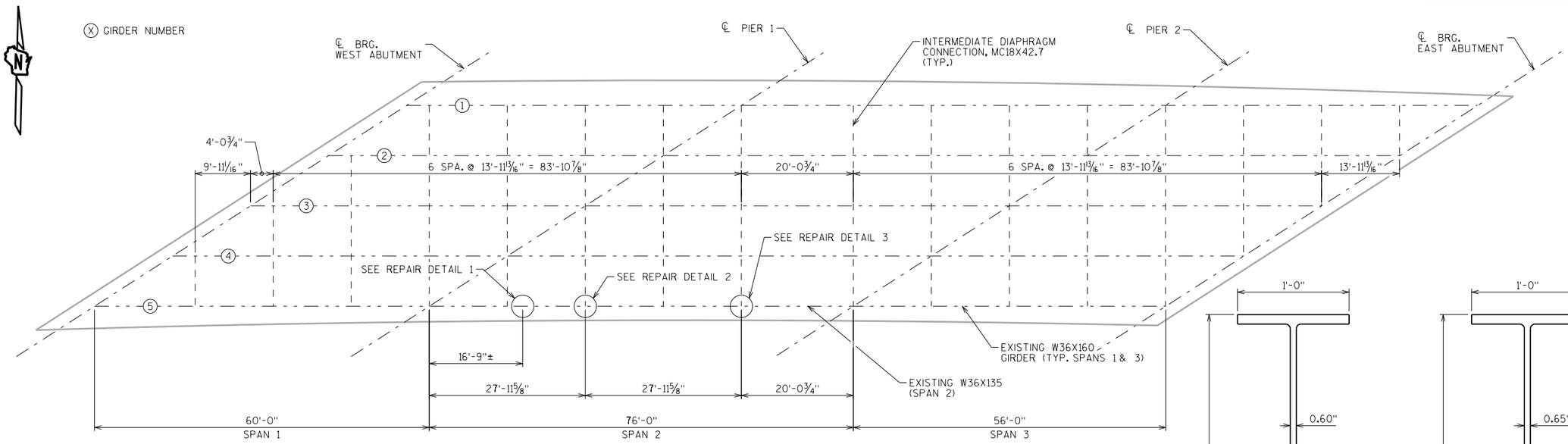
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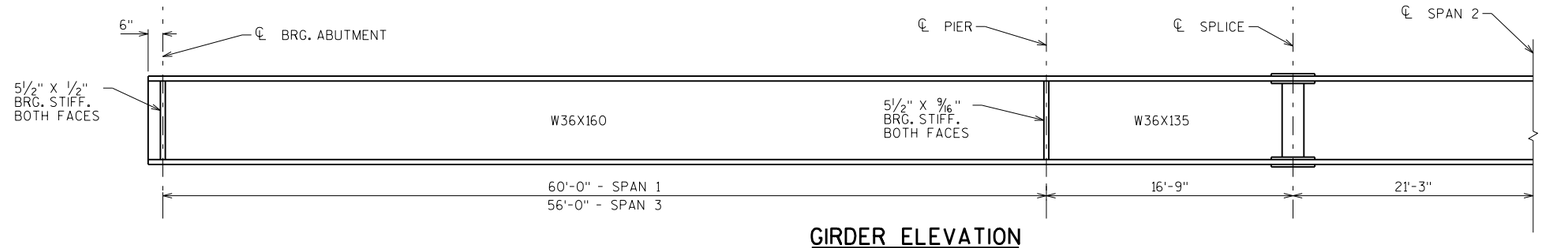
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STATE PROJECT NUMBER

1077-02-73

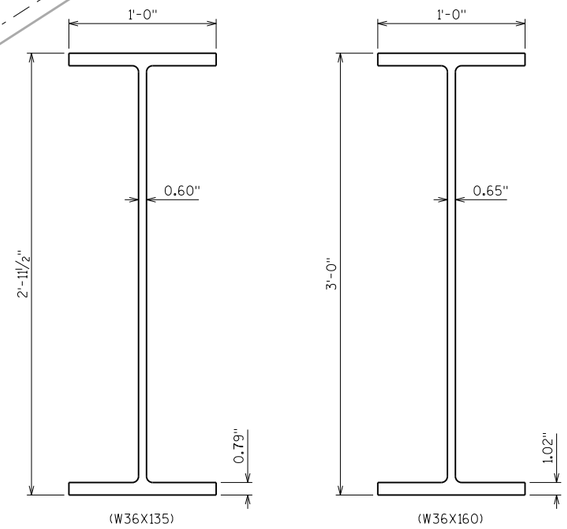


EXISTING STEEL FRAMING PLAN

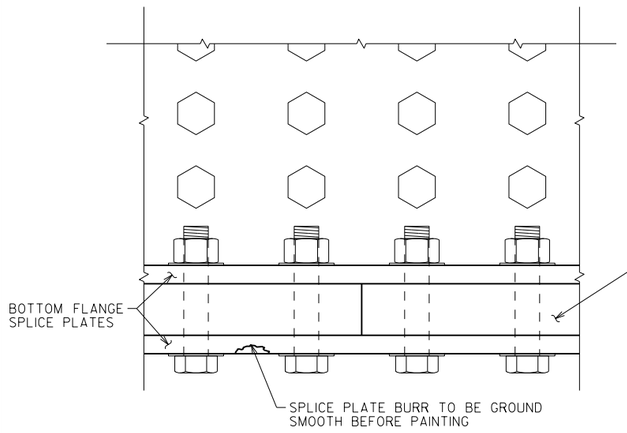


GIRDER ELEVATION

(INTERMEDIATE STIFFENERS NOT SHOWN FOR CLARITY)

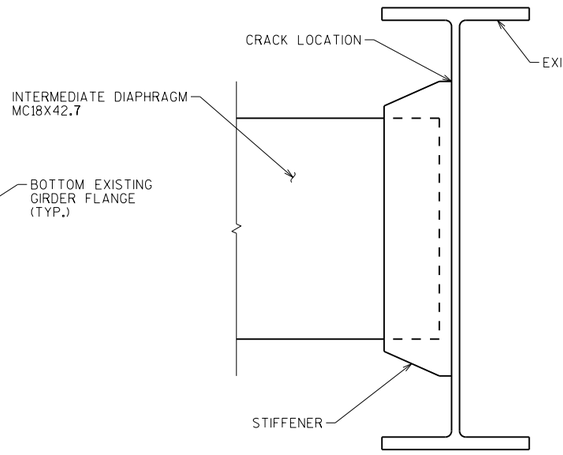


GIRDER DIMENSIONS

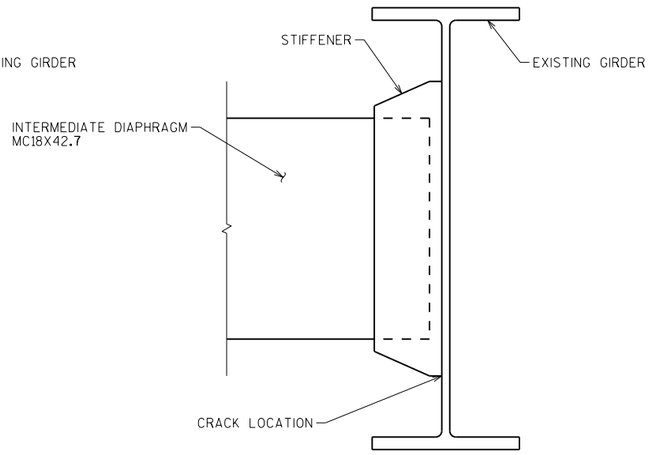


REPAIR DETAIL 1

SHOWING EXTERIOR SIDE OF GIRDER



REPAIR DETAIL 2



REPAIR DETAIL 3

NOTE: ALL REPAIR LOCATIONS TO BE VERIFIED BY FIELD ENGINEER. REFER TO SPECIAL PROVISIONS FOR REPAIR DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-112

DRAWN BY JLR | PLANS CK'D. DLM

CRACK REPAIR

SHEET 4

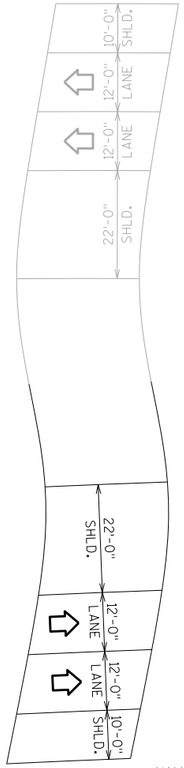
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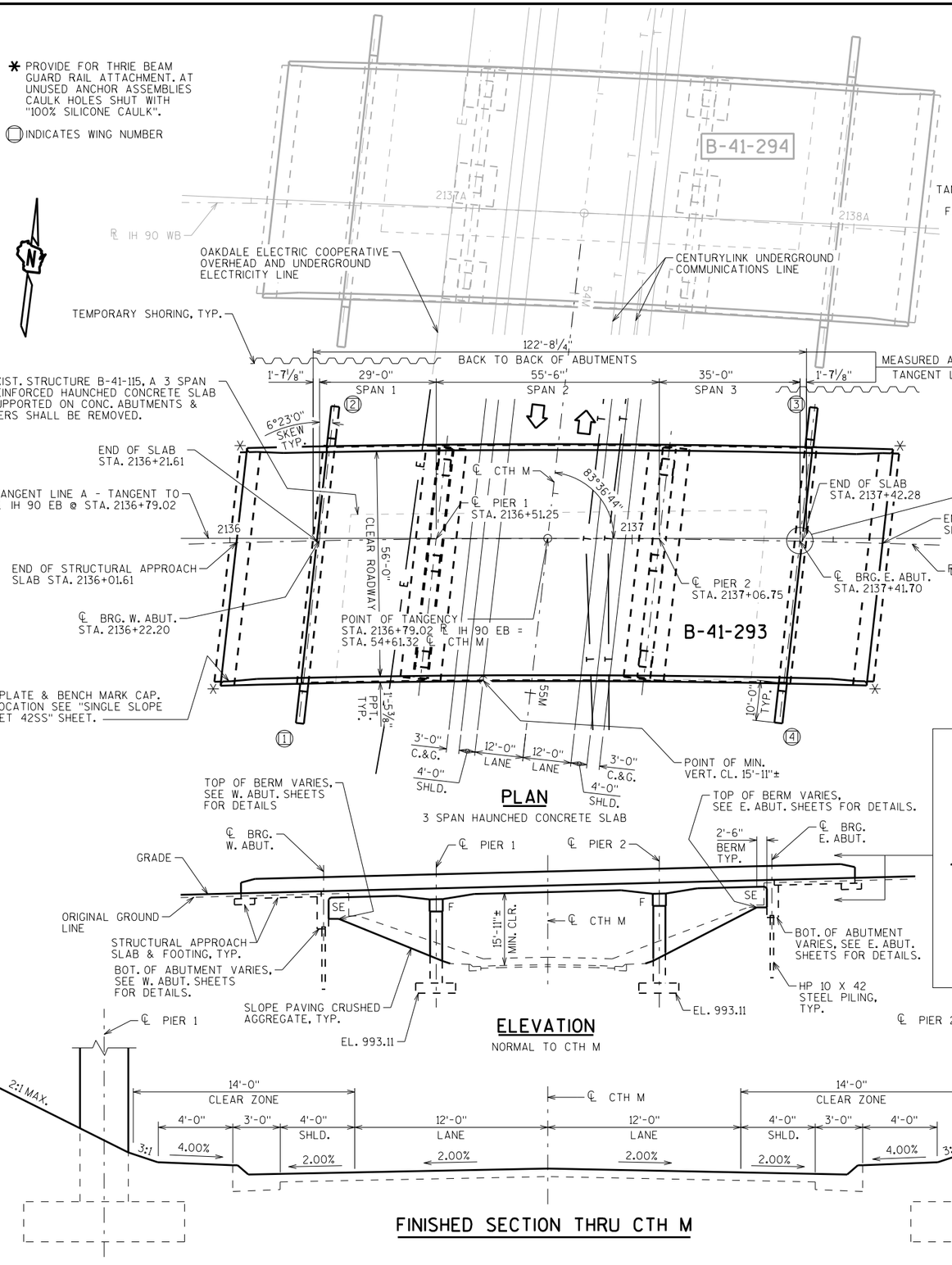
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STATE PROJECT NUMBER
1071-02-71



* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

(1) INDICATES WING NUMBER

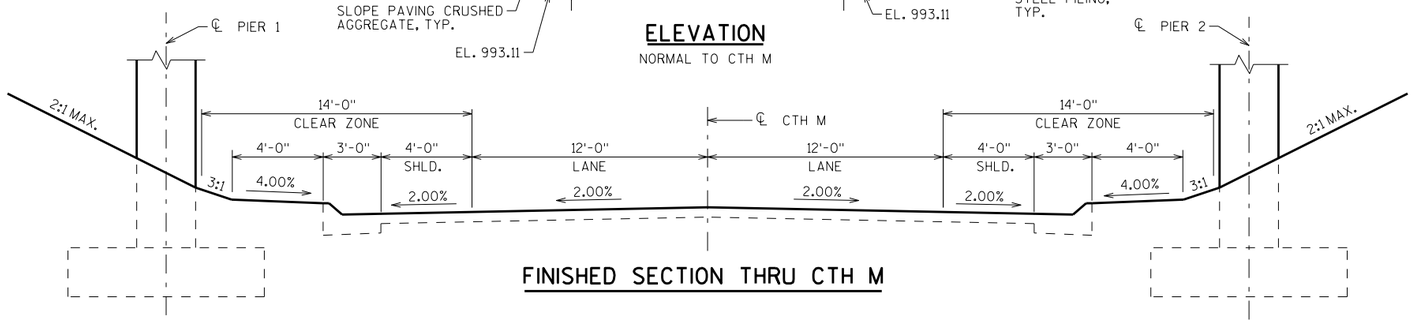


PLAN

3 SPAN HAUNCHED CONCRETE SLAB

ELEVATION

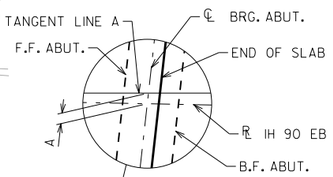
NORMAL TO CTH M

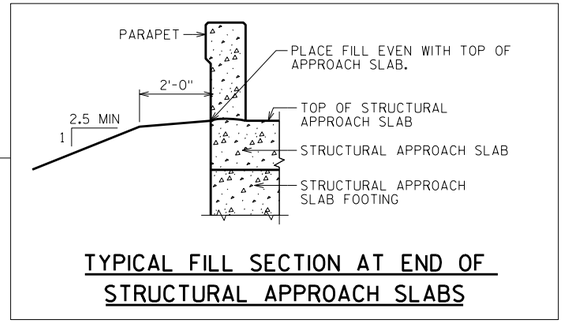


FINISHED SECTION THRU CTH M

LOCATION	DIM. A
WEST ABUT.	0'-6¾"
EAST ABUT.	0'-8¼"

TANGENT OFFSET DETAIL & TABLE





TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.17
OPERATING RATING FACTOR: RF = 1.52
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGN 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.

HIGH STRENGTH STRUCTURAL STEEL:
ASTM A709, GRADE 50 — Fy = 50,000 P.S.I.

FOUNDATION DATA

WEST ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 105 TONS ✱✱ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 55'-0" LONG AT WEST ABUT.

EAST ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 115 TONS ✱✱ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 25'-0" LONG AT EAST ABUT.

PIERS WITH SPREAD FOOTINGS TO BE SUPPORTED ON COMPETENT ROCK AND SELECT CRUSHED AGGREGATE WITH A REQ'D. FACTORED BEARING RESISTANCE OF 8,000 PSF ✱✱✱ A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY VISUAL INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTINGS.

✱✱ 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.

✱✱✱ THE FACTORED BEARING RESISTANCE IS THE VALUE USED FOR DESIGN.

CURVE DATA

IH 90 EB
P.I. = 2132+10.27
△ = 33°00'36"
D = 2°00'07"
T = 848.06'
L = 1648.94'
R = 2862.09'
S.E. = 5.50%
P.C. = 2123+62.21
P.T. = 2140+11.16

TRAFFIC VOLUME

IH 90
ADT = 20,500 (2038)
R.D.S. = 75 M.P.H.

CTH M
ADT = 760 (2038)
R.D.S. = 60 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. SUPERSTRUCTURE
13. SUPERSTRUCTURE DETAILS 1
14. SUPERSTRUCTURE DETAILS 2
15. SUPERSTRUCTURE DETAILS 3
16. SINGLE SLOPE PARAPET 42SS
17. SLOPE PAVING (CRUSHED AGGREGATE)
18. WEST STRUCTURAL APPROACH SLAB
19. WEST STRUCTURAL APPROACH SLAB DETAILS
20. EAST STRUCTURAL APPROACH SLAB
21. EAST STRUCTURAL APPROACH SLAB DETAILS
22. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

JONATHON RESHESKE (608) 266-8491
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION — BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS 6/18/18
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-41-293

IH 90 EB OVER CTH M

COUNTY	TOWN ~~CITY/VILLAGE~~
MONROE	TOMAH

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
JLR	DLM	WWR	JLR

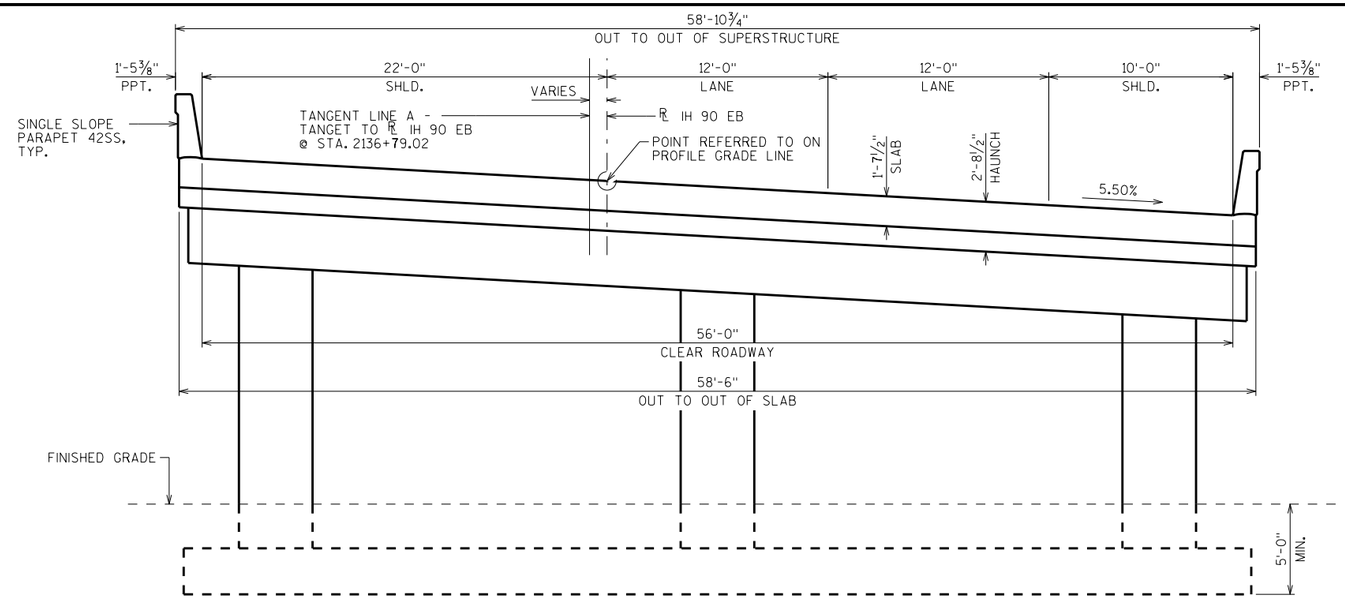
GENERAL PLAN

SHEET 1 OF 22

232

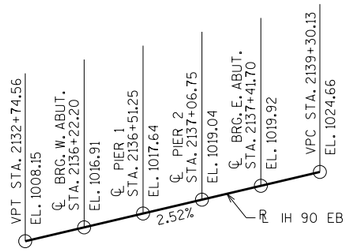
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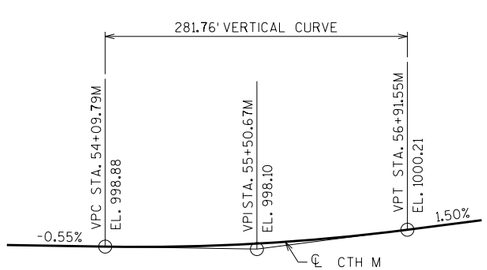


CROSS SECTION THRU BRIDGE

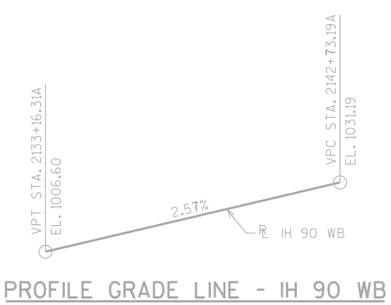
(LOOKING UPSTATION)



PROFILE GRADE LINE - IH 90 EB



PROFILE GRADE LINE - CTH M



PROFILE GRADE LINE - IH 90 WB

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	EAST APPROACH	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 2136+80	LS	———	———	———	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-41-293	LS	———	———	———	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	———	122	———	———	122	———	244
305.0120	BASE AGGREGATE DENSE 1¼-INCH	TON	———	170	———	———	———	———	170	340
312.0110	SELECT CRUSHED MATERIAL	TON	———	———	———	180	100	———	———	280
502.0100	CONCRETE MASONRY BRIDGES	CY	525	80	41	163	174	41	80	1104
502.3200	PROTECTIVE SURFACE TREATMENT	SY	780	125	———	———	———	———	125	1030
502.3210	PIGMENTED SURFACE SEALER	SY	120	20	———	———	———	———	20	160
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	———	2950	10,160	10,600	2940	———	26,650
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	108,980	13,500	640	12,790	13,460	640	13,470	163,480
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	530	———	———	———	———	———	———	530
511.1200	TEMPORARY SHORING B-41-293	SF	———	———	1800	———	———	1800	———	3600
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	———	14	———	———	14	———	28
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	———	———	440	———	———	200	———	640
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	———	———	260	———	———	270	———	530
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	———	100	———	———	100	———	200
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	———	2	———	———	———	———	2	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	EACH	———	———	57	———	———	57	———	114
	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.

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. 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.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF SLAB AND APPROACH SLAB SURFACES.

PIGMENTED PROTECTIVE SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

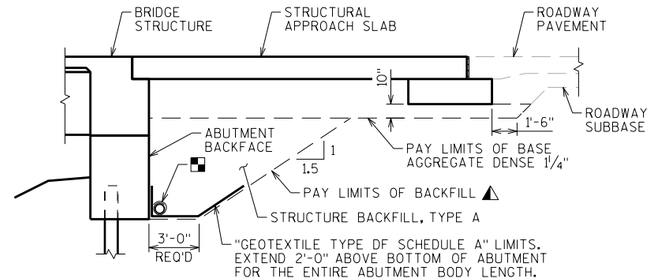
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON THE "GENERAL PLAN" SHEET AND THE ABUTMENT DETAILS.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

FOR PIER SPREAD FOOTINGS, EXCAVATE TO COMPETENT ROCK AND BACKFILL WITH SELECT CRUSHED MATERIAL UP TO THE BASE OF FOOTING. CONTRACTOR MAY POUR CONCRETE IN LIEU OF SELECT CRUSHED MATERIAL, BUT PAYMENT FOR CONCRETE WILL BE BASED ON THE QUANTITIES AND PRICE BID FOR "SELECT CRUSHED MATERIAL".

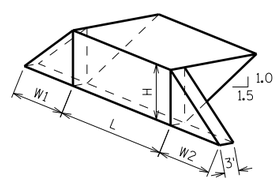
LOCATION HAS DENSE SAND, SANDSTONE GRAVEL, AND WEATHERED SANDSTONE BEDROCK AT SHALLOW LOCATIONS AND SHOULD BE TAKEN INTO CONSIDERATION WHEN CHOOSING TEMPORARY SHORING.



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)

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

DRAWN BY WWR | PLANS CK'D. JLR

CROSS SECTION & QUANTITES

SHEET 2

233

8

8

SCALE = 4.00

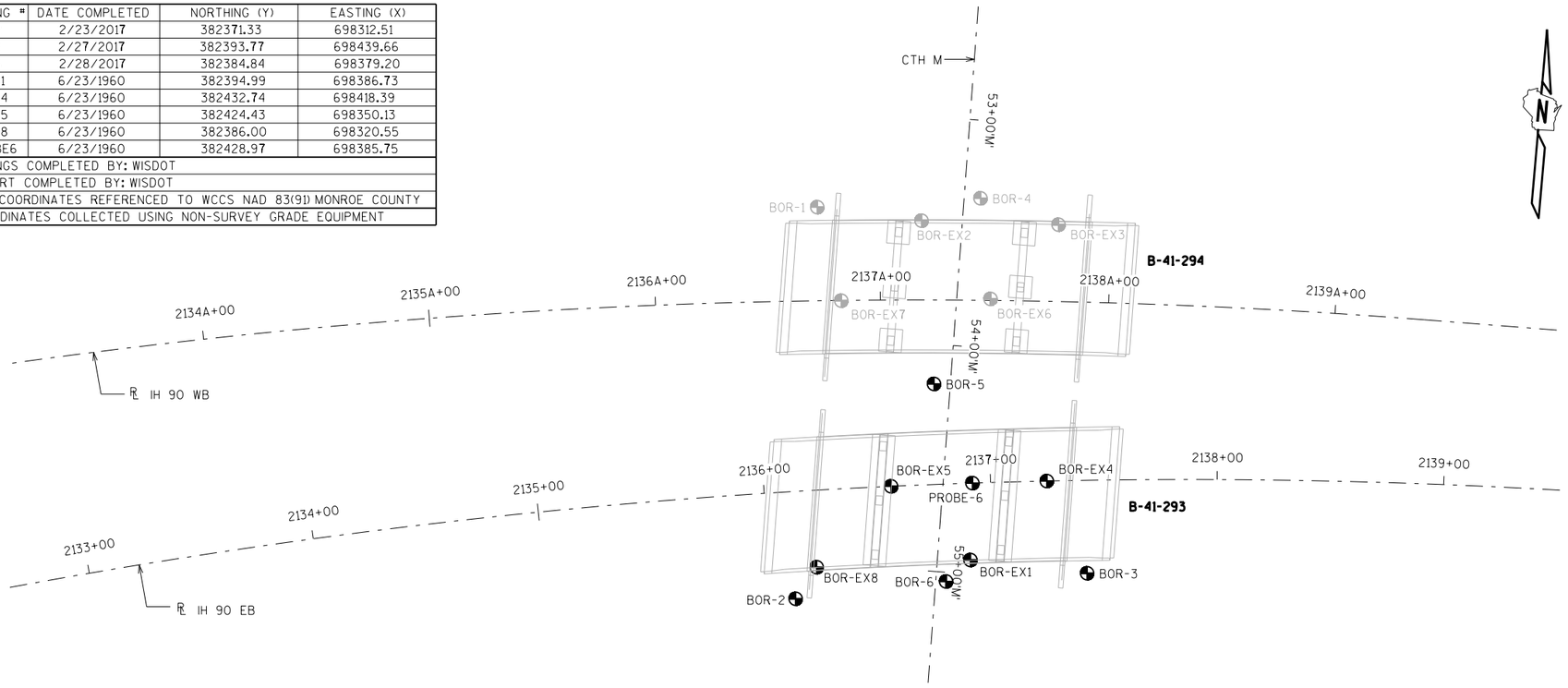
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
2	2/23/2017	382371.33	698312.51
3	2/27/2017	382393.77	698439.66
6	2/28/2017	382384.84	698379.20
EX1	6/23/1960	382394.99	698386.73
EX4	6/23/1960	382432.74	698418.39
EX5	6/23/1960	382424.43	698350.13
EX8	6/23/1960	382386.00	698320.55
PROBE6	6/23/1960	382428.97	698385.75

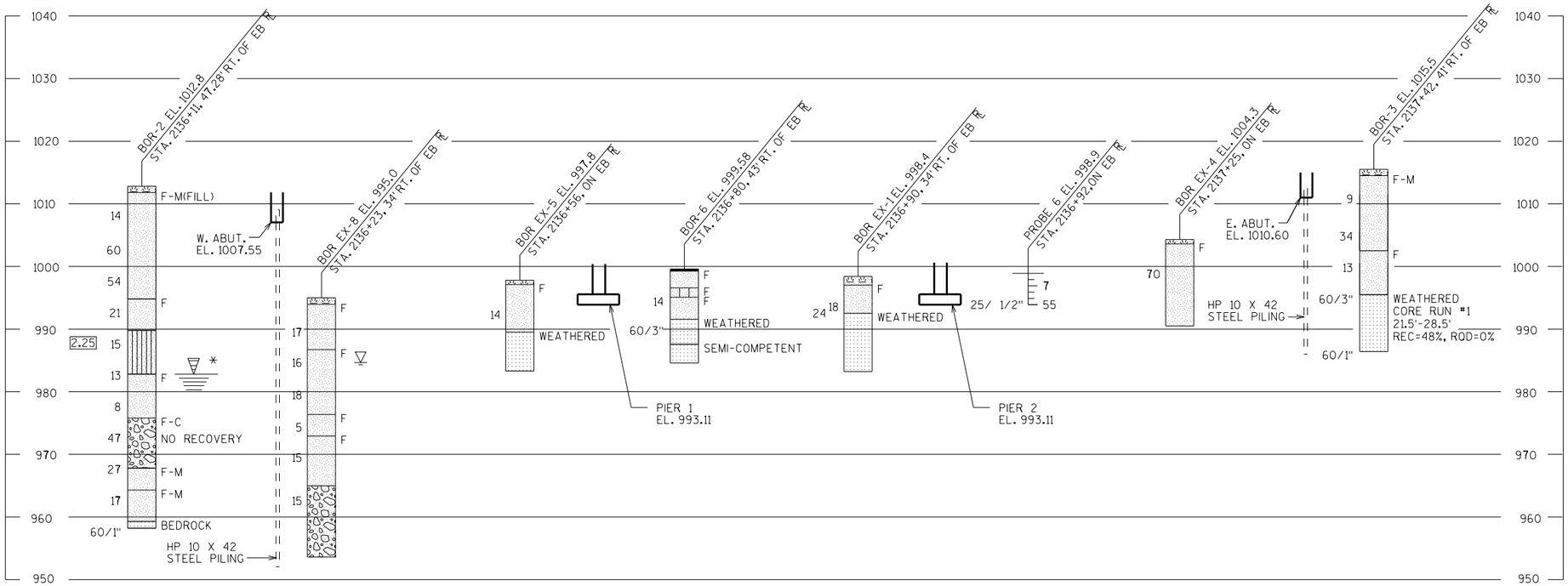
BORINGS COMPLETED BY: WISDOT

REPORT COMPLETED BY: WISDOT

ALL COORDINATES REFERENCED TO WCCS NAD 83(91) MONROE COUNTY

COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT





* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

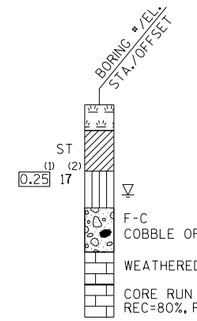
STATE PROJECT NUMBER

1071-02-71

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-41-293

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SUBSURFACE EXPLORATION

SHEET 3

234

8

8

SCALE =

(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.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 105 TONS PER PILE.

(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.

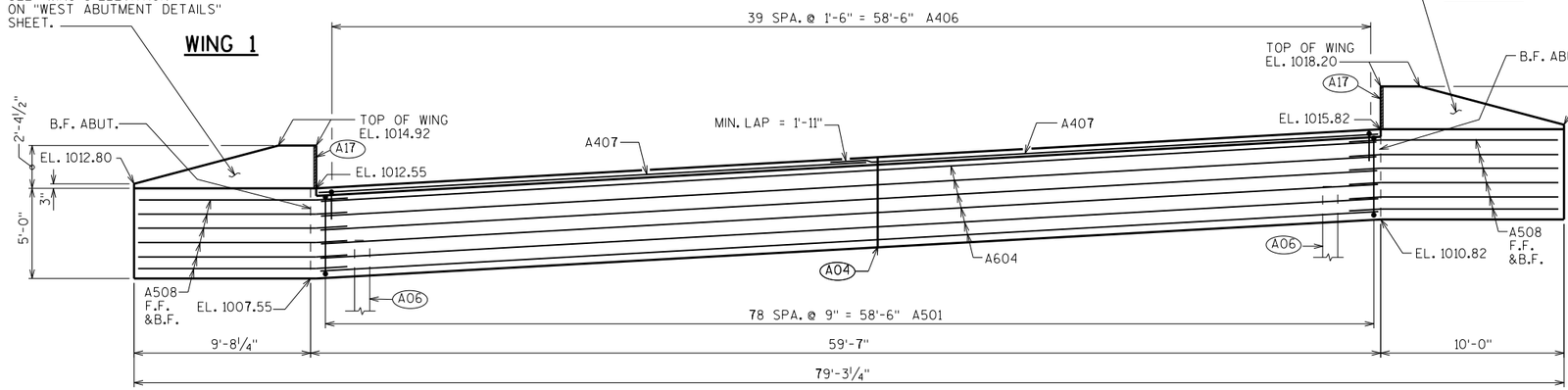
STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

STATE PROJECT NUMBER

1071-02-71

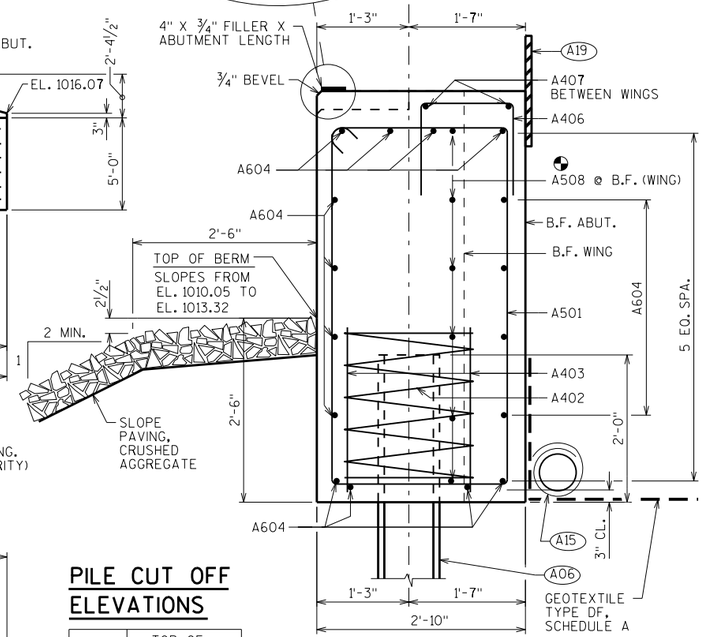
FOR WING 1 REBAR SEE "WING 1 ELEVATION" ON "WEST ABUTMENT DETAILS" SHEET.

FOR WING 2 REBAR SEE "WING 2 ELEVATION" ON "WEST ABUTMENT DETAILS" SHEET.

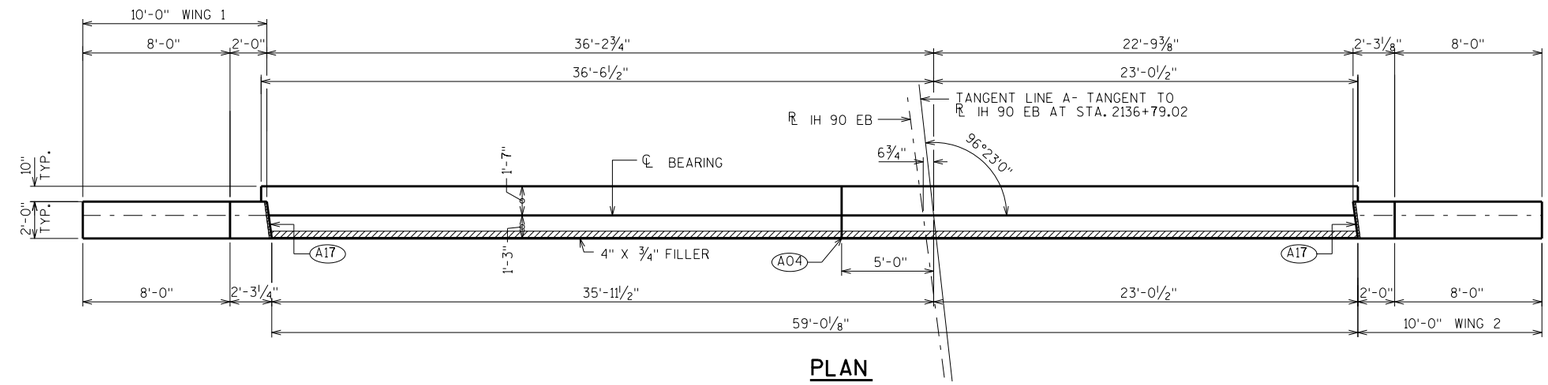


ELEVATION
(LOOKING WEST)

A508 BARS ARE ALSO PLACED AT F.F. OF WING. (NOT SHOWN, FOR CLARITY)



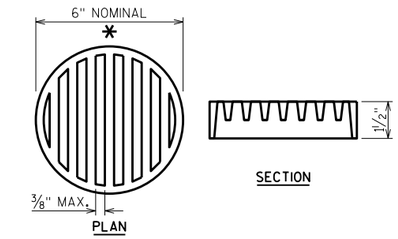
SECTION THRU BODY



PLAN

PILE CUT OFF ELEVATIONS

PILE #	TOP OF PILE
1	EL. 1009.71
2	EL. 1010.13
3	EL. 1010.56
4	EL. 1010.98
5	EL. 1011.40
6	EL. 1011.82
7	EL. 1012.24
8	EL. 1012.66

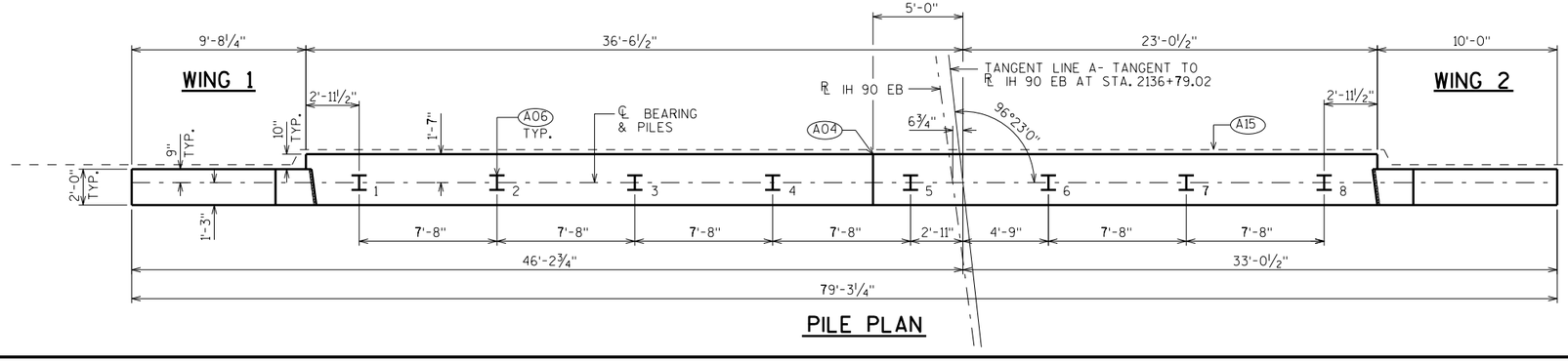


RODENT SHIELD DETAIL

* 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 PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

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WEST ABUTMENT

SHEET 4

235

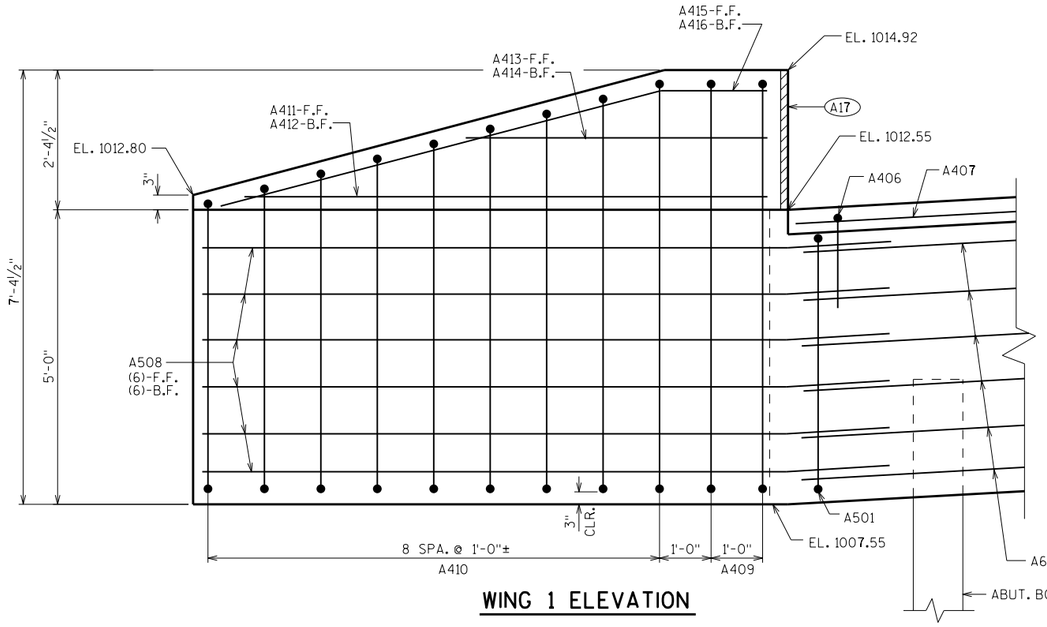
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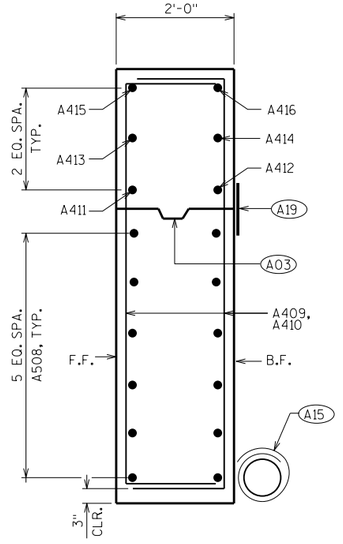
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STATE PROJECT NUMBER

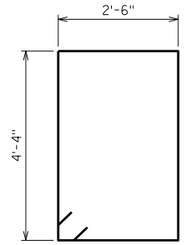
1071-02-71



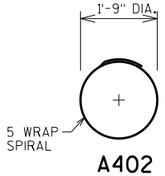
WING 1 ELEVATION



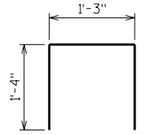
WING 1 SECTION



A501



A402



A406

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

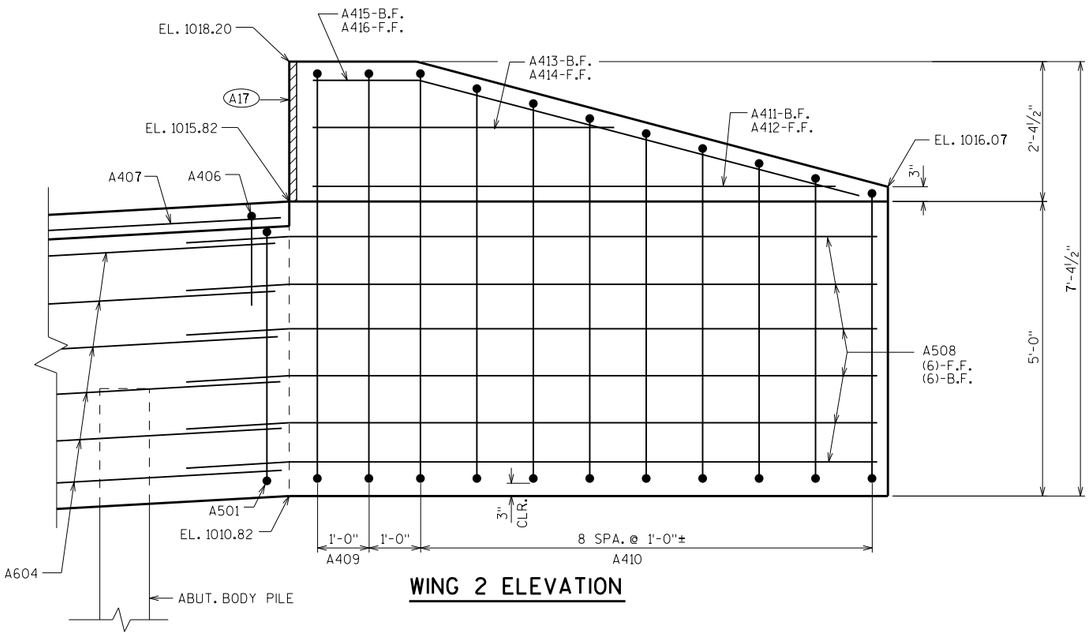
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		79	14'-4"	X		BODY-VERT. STIRRUP
A402		8	28'-0"	X		BODY-1 PER PILE
A403		16	2'-3"			BODY-2 PER PILE
A604		16	58'-8"			BODY-HORIZ.
~~A505~~		~~NOT~~	~~USED~~			~~BODY HORIZ. TOP~~
A406		40	3'-9"	X		BODY-VERT. U-BAR
A407		4	30'-5"			BODY-HORIZ.-TOP NOTCH
A508	X	24	11'-10	X		WINGS/BODY-HORIZ.
A409	X	8	10'-2"	X		WINGS-VERT.
A410	X	36	9'-1"	X	⚠	WINGS-VERT.
A411	X	2	9'-6"			WINGS-HORIZ.-UPPER
A412	X	2	9'-4"			WINGS-HORIZ.-UPPER
A413	X	2	5'-9"			WINGS-HORIZ.-UPPER
A414	X	2	5'-7"			WINGS-HORIZ.-UPPER
A415	X	2	10'-2"	X		WINGS-HORIZ.-TOP
A416	X	2	10'-0"	X		WINGS-HORIZ.-TOP

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

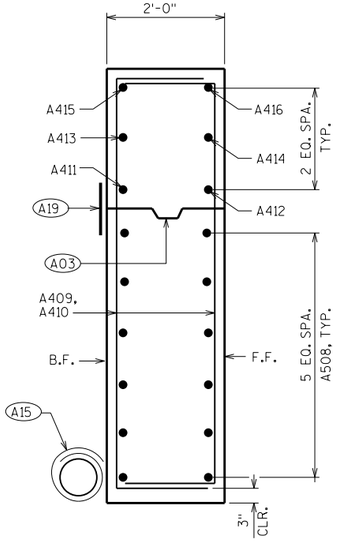
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A410	4 SERIES OF 9	8'-0" TO 10'-1"

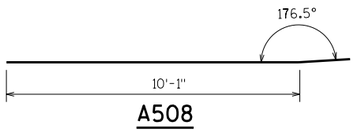
BUNDLE AND TAG EACH SERIES SEPARATELY.



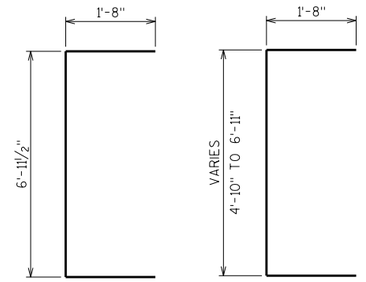
WING 2 ELEVATION



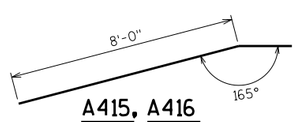
WING 2 SECTION



A508



A409 A410



A415, A416

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 × 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

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WEST ABUTMENT DETAILS

SHEET 5

236

SCALE = 1.25

8

8

STATE PROJECT NUMBER

1071-02-71

(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.

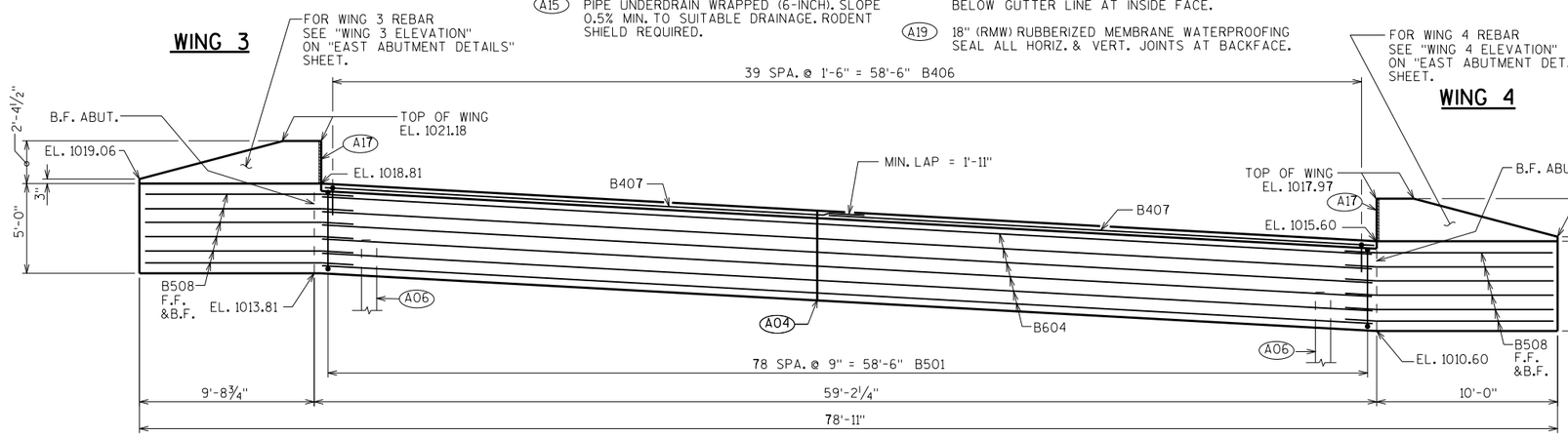
(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 115 TONS PER PILE.

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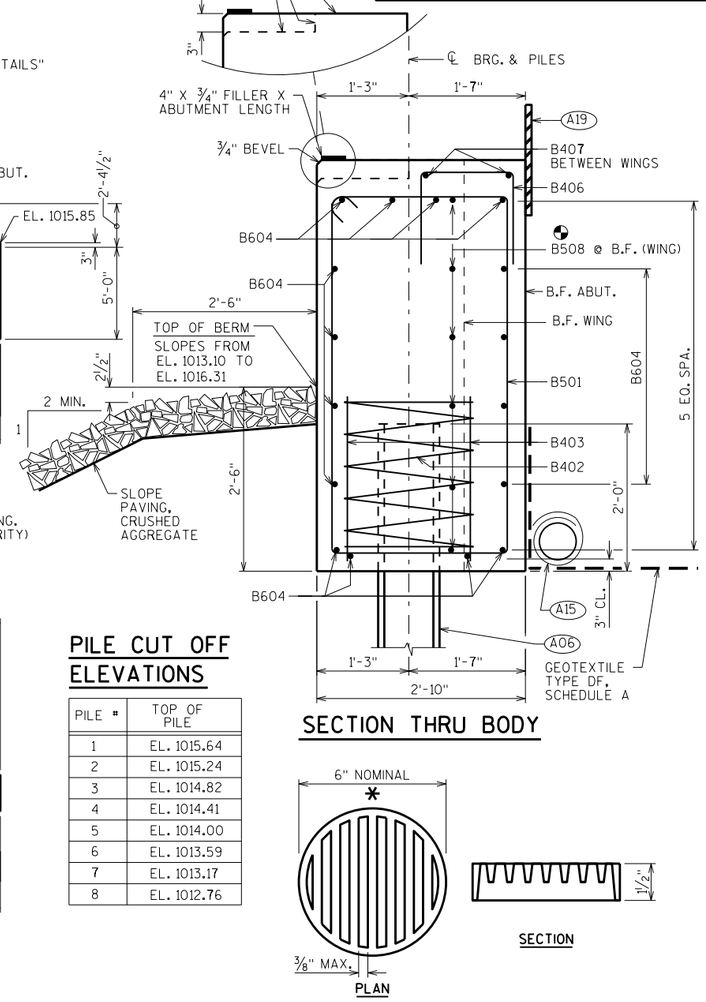
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STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

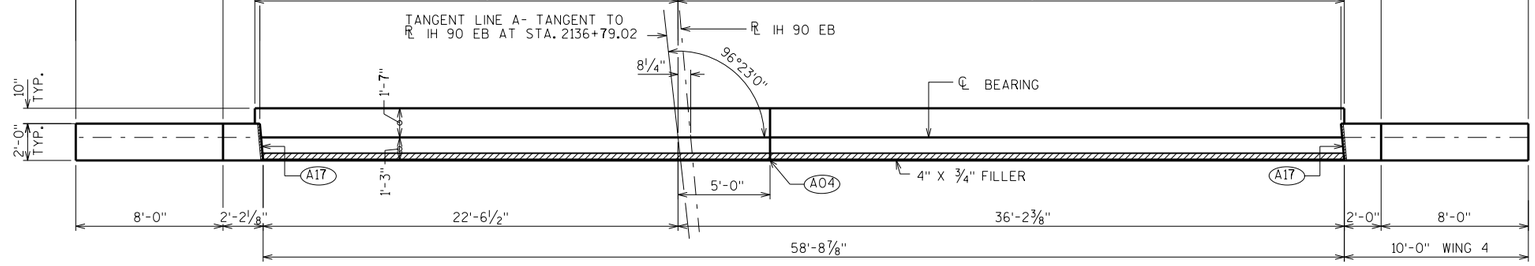


ELEVATION
(LOOKING EAST)

B508 BARS ARE ALSO PLACED AT F.F. OF WING. (NOT SHOWN, FOR CLARITY)



SECTION THRU BODY



PLAN

PILE CUT OFF ELEVATIONS

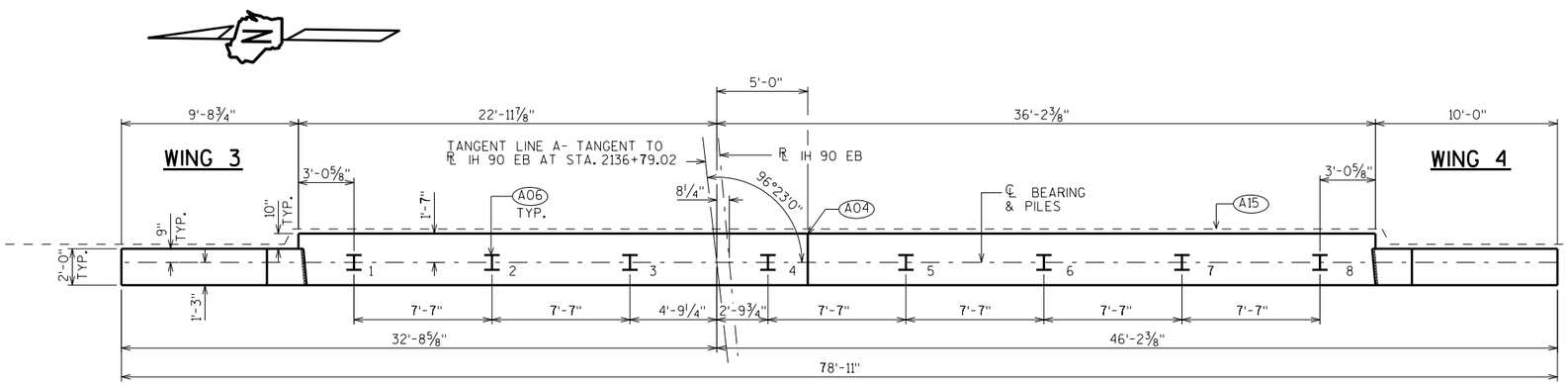
PILE #	TOP OF PILE
1	EL. 1015.64
2	EL. 1015.24
3	EL. 1014.82
4	EL. 1014.41
5	EL. 1014.00
6	EL. 1013.59
7	EL. 1013.17
8	EL. 1012.76

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 PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

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EAST ABUTMENT

SHEET 6

237

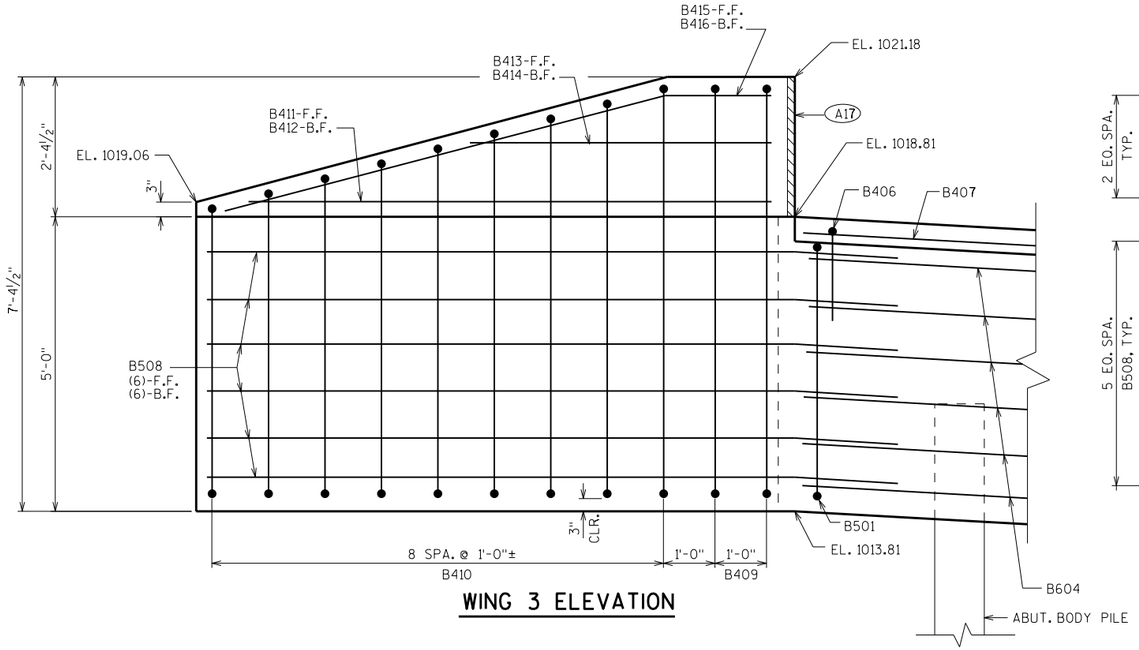
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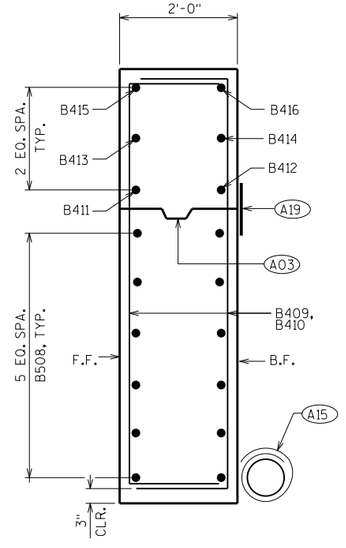
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STATE PROJECT NUMBER

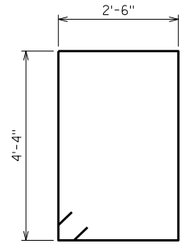
1071-02-71



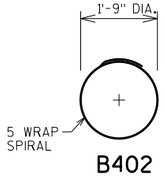
WING 3 ELEVATION



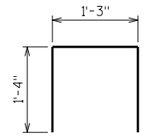
WING 3 SECTION



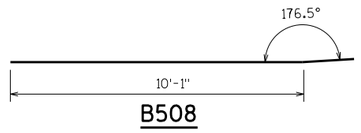
B501



B402



B406



B508

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

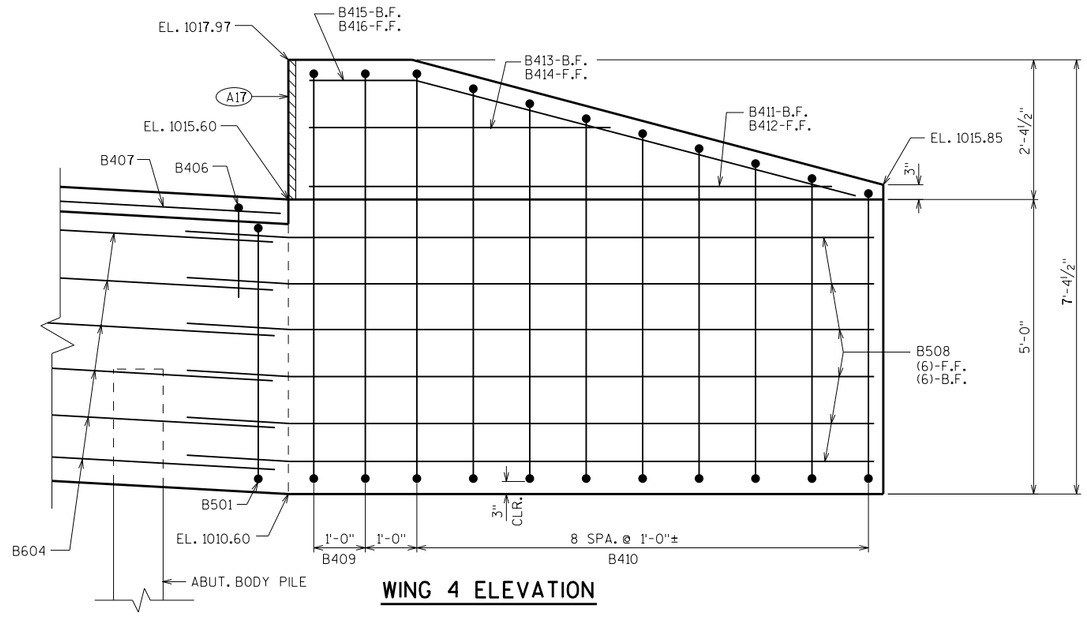
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		79	14'-4"	X		BODY-VERT. STIRRUP
B402		8	28'-0"	X		BODY-1 PER PILE
B403		16	2'-3"			BODY-2 PER PILE
B604		16	58'-5"			BODY-HORIZ.
~~B505~~		NOT	USED			~~BODY HORIZ. TOP~~
B406		40	3'-9"	X		BODY-VERT. U-BAR
B407		4	30'-5"			BODY-HORIZ.-TOP NOTCH
B508	X	24	11'-10"	X		WINGS/BODY-HORIZ.
B409	X	8	10'-2"	X		WINGS-VERT.
B410	X	36	9'-1"	X	⚠	WINGS-VERT.
B411	X	2	9'-5"			WINGS-HORIZ.-UPPER
B412	X	2	9'-3"			WINGS-HORIZ.-UPPER
B413	X	2	5'-8"			WINGS-HORIZ.-UPPER
B414	X	2	5'-6"			WINGS-HORIZ.-UPPER
B415	X	2	10'-1"	X		WINGS-HORIZ.-TOP
B416	X	2	9'-11"	X		WINGS-HORIZ.-TOP

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

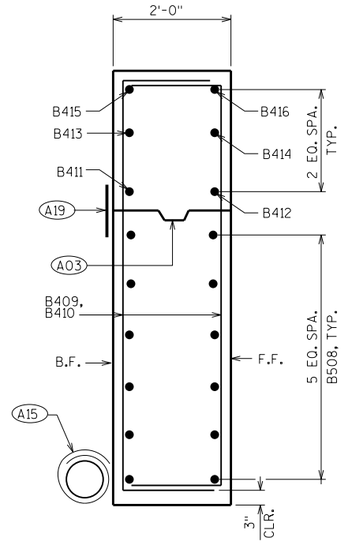
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B410	4 SERIES OF 9	8'-0" TO 10'-1"

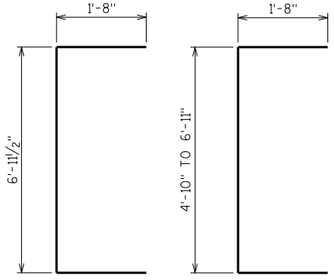
BUNDLE AND TAG EACH SERIES SEPARATELY.



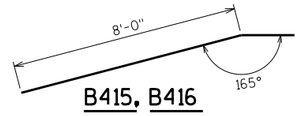
WING 4 ELEVATION



WING 4 SECTION



B409 B410



B415, B416

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 × 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

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EAST ABUTMENT DETAILS

SHEET 7

238

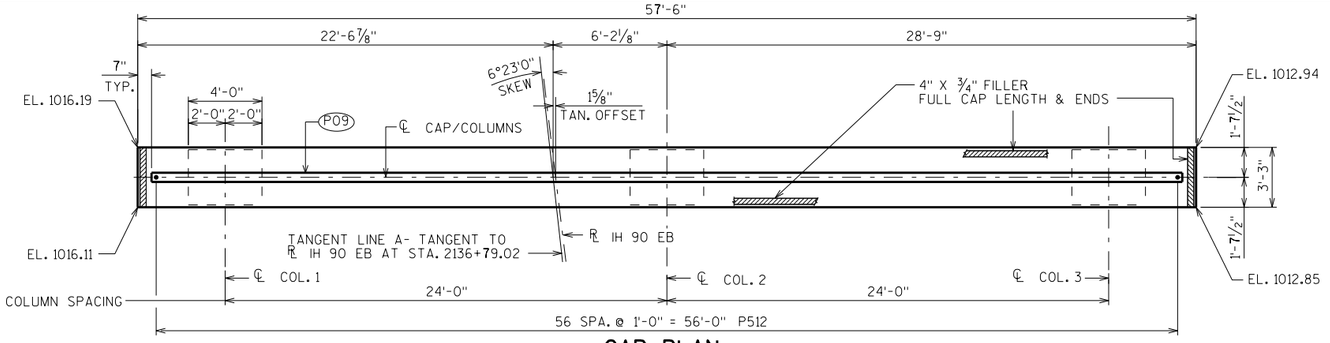
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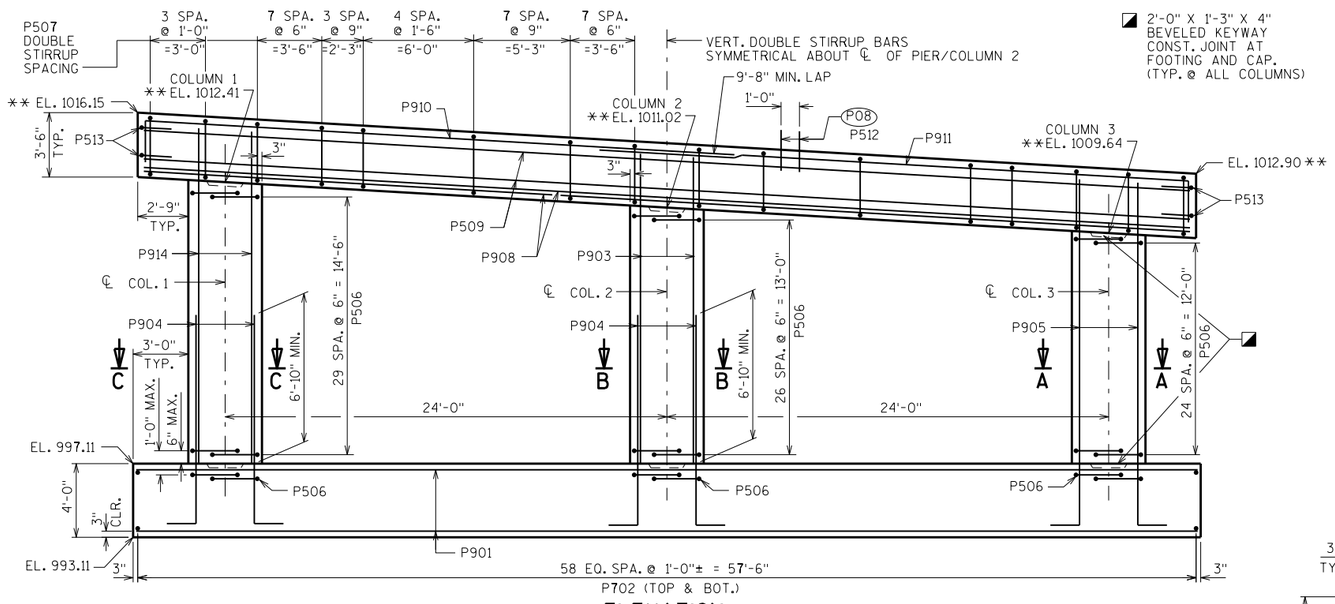
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STATE PROJECT NUMBER

1071-02-71

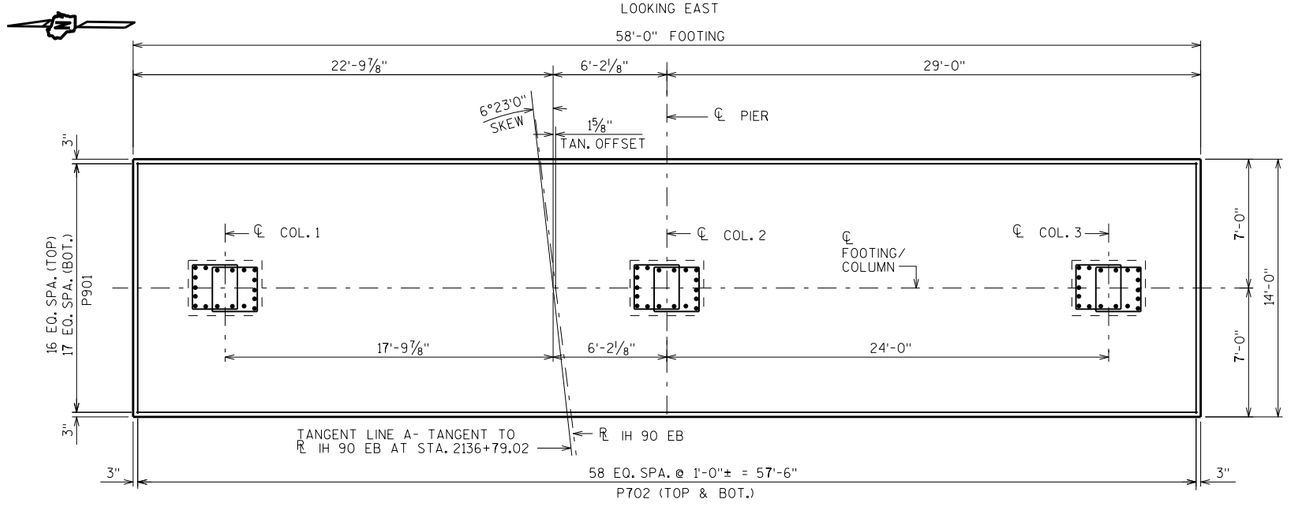


CAP PLAN

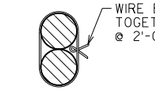


ELEVATION

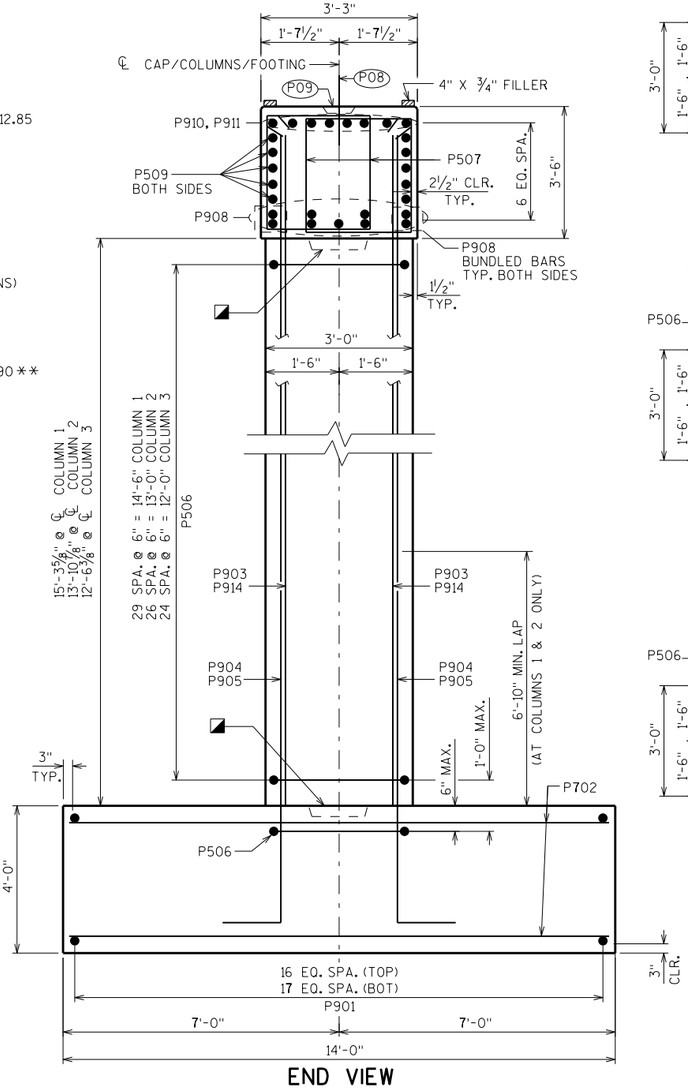
LOOKING EAST



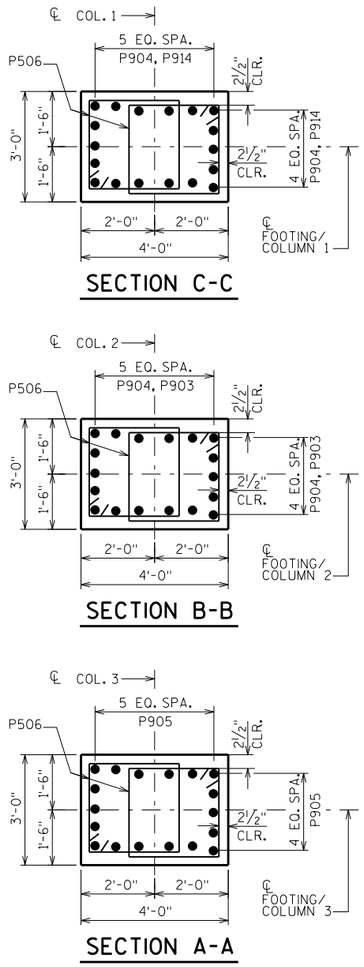
FOOTING PLAN



BUNDLING DETAIL



END VIEW



** ELEVATIONS AT ℄ OF PIER

(P08) P512 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

DRAWN BY WWR | PLANS CK'D. JLR

PIER 1

SHEET 8

239

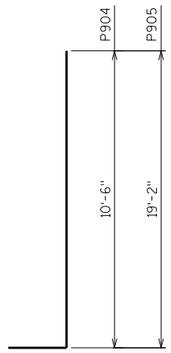
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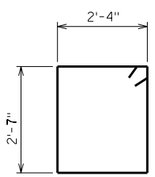
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STATE PROJECT NUMBER

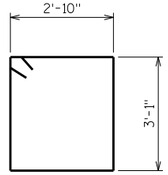
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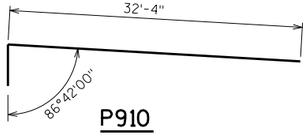
P904, P905



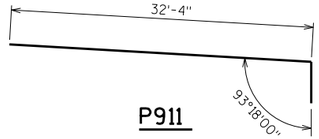
P506



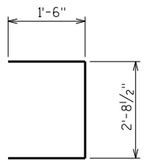
P507



P910



P911



P513

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P901		35	57'-8"			FOOTING-HORIZ.
P702		118	13'-8"			FOOTING-HORIZ.
P903	X	18	16'-10"			COLUMN 2-VERT.
P904	X	36	11'-10"	X		FOOTING/COLUMNS 1 & 2-VERT.
P905	X	18	20'-6"	X		FOOTING/COLUMN 3-VERT.
P506	X	170	10'-6"	X		FOOTING/COLUMN-HORIZ.
P507	X	132	12'-6"	X		CAP-VERT. STIRRUP
P908	X	9	57'-3"			CAP-HORIZ.-BOT.
P509	X	10	57'-3"			CAP-HORIZ.-MIDDLE
P910	X	8	33'-10"	X		CAP-TOP
P911	X	8	33'-10"	X		CAP-TOP
P512	X	57	2'-0"			CAP-VERT.-DOWEL BAR
P513	X	10	5'-6"	X		CAP-HORIZ.-END
P914	X	18	18'-2"			COLUMN 1-VERT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

DRAWN BY WWR | PLANS CK'D. JLR

PIER 1
DETAILS

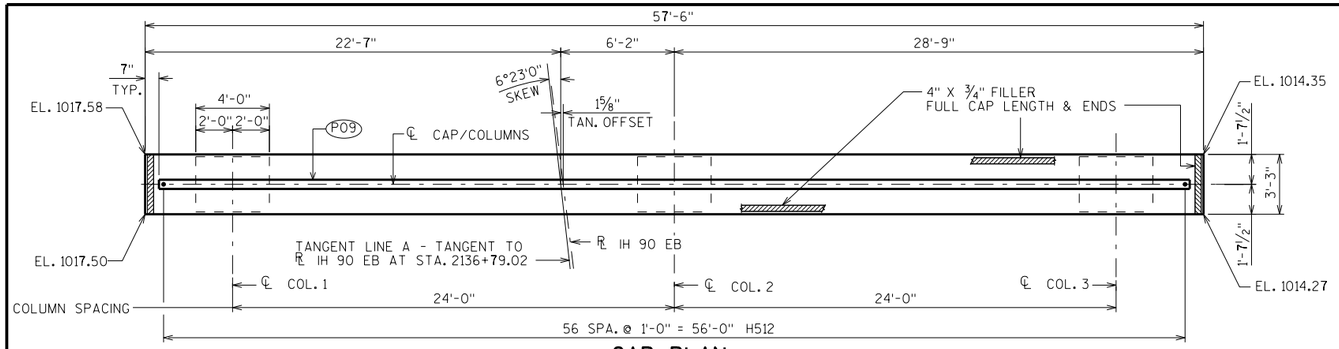
SHEET 9

240

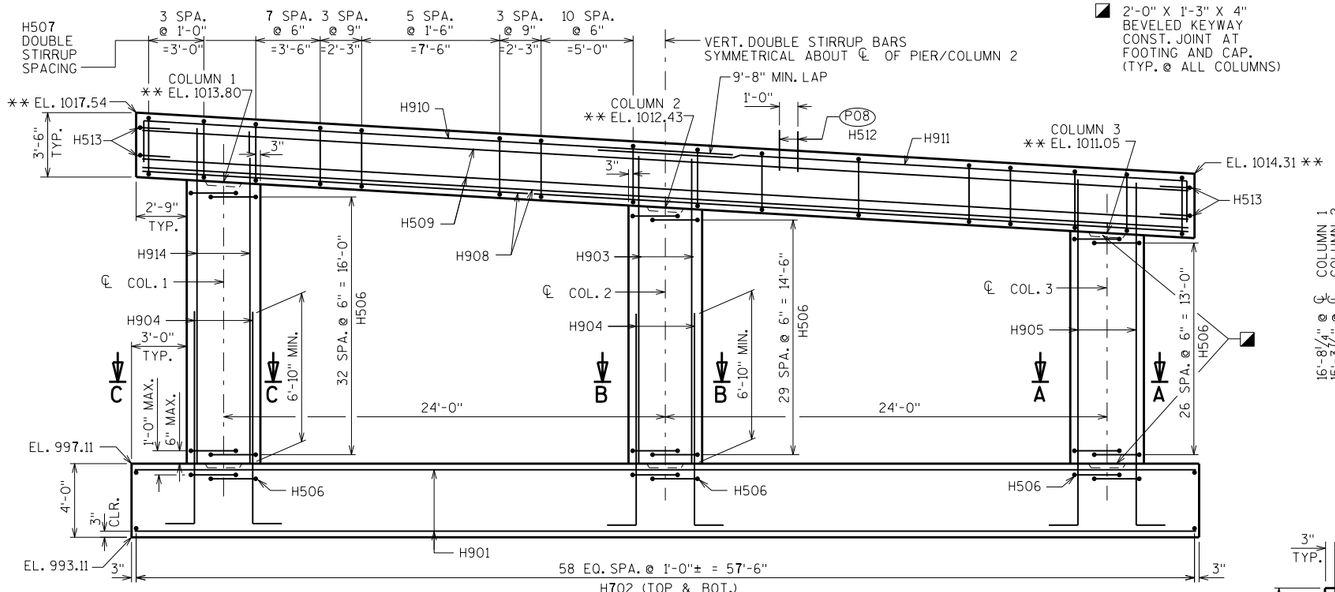
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STATE PROJECT NUMBER

1071-02-71

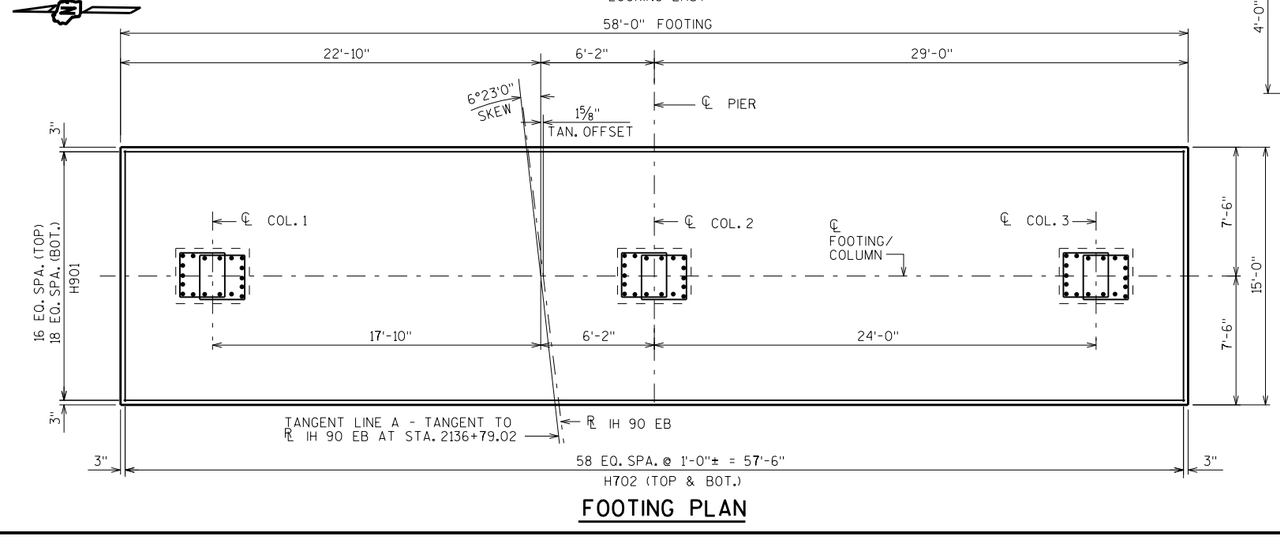


CAP PLAN



ELEVATION

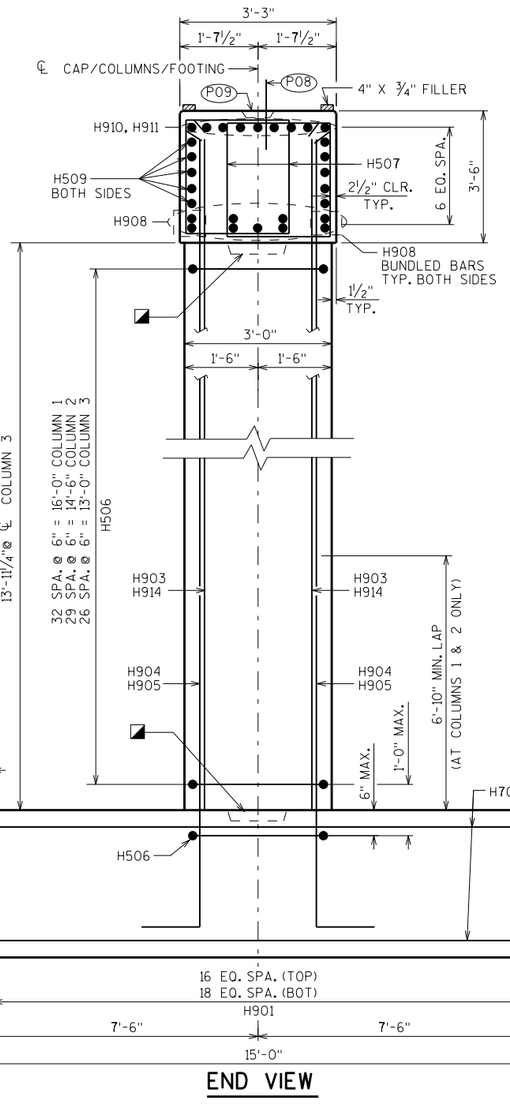
LOOKING EAST



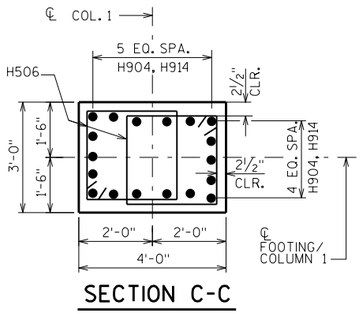
FOOTING PLAN



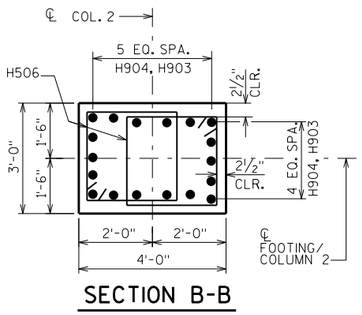
BUNDLING DETAIL



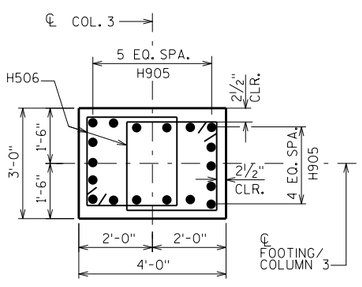
END VIEW



SECTION C-C



SECTION B-B



SECTION A-A

** ELEVATIONS AT ℄ OF PIER

(P08) H512 BARS @ 1'-0" CTRS. 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

DRAWN BY WWR | PLANS CK'D. JLR

PIER 2

SHEET 10

241

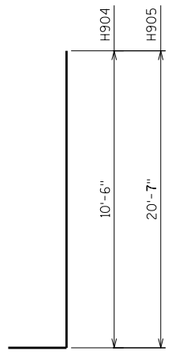
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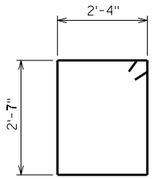
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STATE PROJECT NUMBER

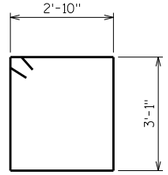
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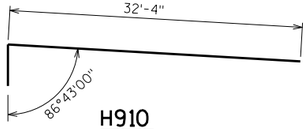
H904, H905



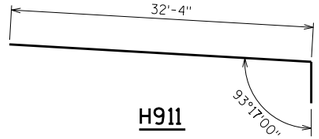
H506



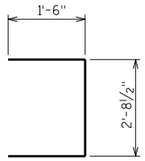
H507



H910



H911



H513

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
H901		36	57'-8"			FOOTING-HORIZ.
H702		118	14'-8"			FOOTING-HORIZ.
H903	X	18	18'-3"			COLUMN 2-VERT.
H904	X	36	11'-10"	X		FOOTING/COLUMNS 1 & 2 -VERT.
H905	X	18	21'-11"	X		FOOTING/COLUMN 3-VERT.
H506	X	186	10'-6"	X		FOOTING/COLUMN-HORIZ.
H507	X	132	12'-6"	X		CAP-VERT. STIRRUP
H908	X	9	57'-3"			CAP-HORIZ.-BOT.
H509	X	10	57'-3"			CAP-HORIZ.-MIDDLE
H910	X	9	33'-10"	X		CAP-TOP
H911	X	9	33'-10"	X		CAP-TOP
H512	X	57	2'-0"			CAP-VERT.-DOWEL BAR
H513	X	10	5'-6"	X		CAP-HORIZ.-END
H914	X	18	19'-8"			COLUMN 1-VERT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

DRAWN BY WWR | PLANS CK'D. JLR

PIER 2
DETAILS

SHEET 11

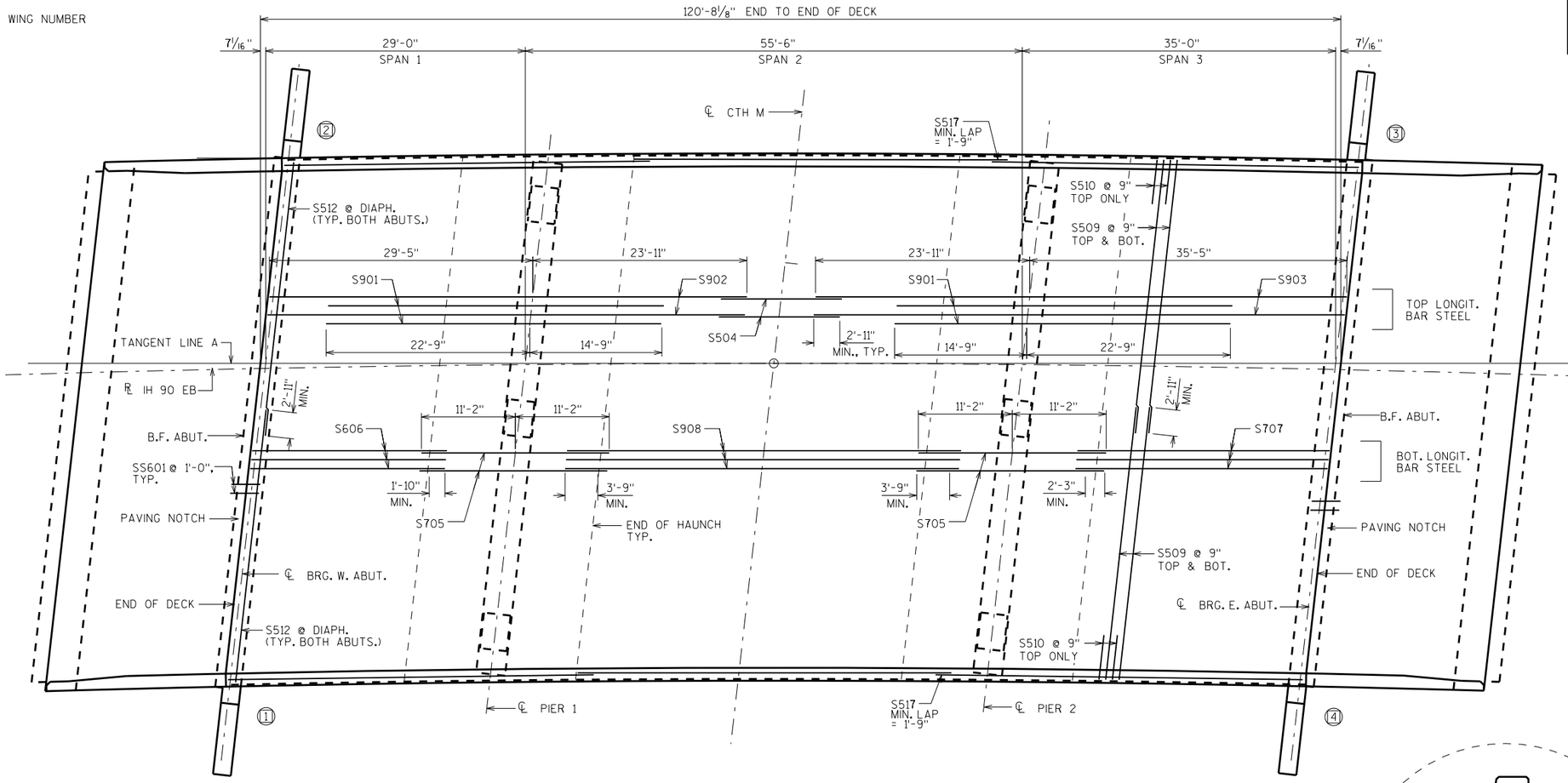
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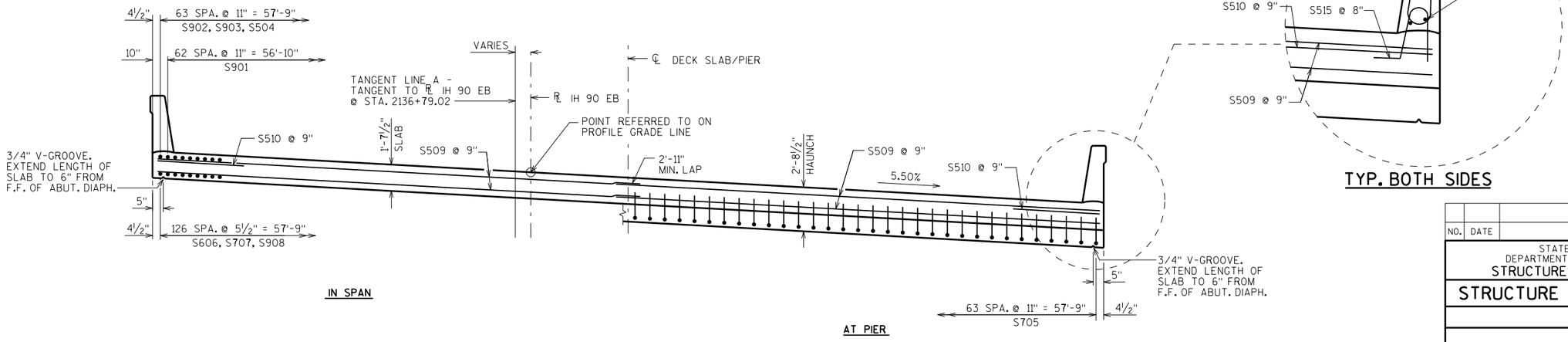
STATE PROJECT NUMBER

1071-02-71

INDICATES WING NUMBER

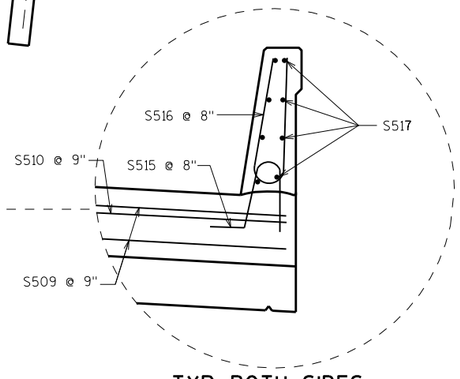


PLAN



CROSS SECTION THRU DECK SLAB

(LOOKING UPSTATION)



TYP. BOTH SIDES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

DRAWN BY WWR | PLANS CK'D. JLR

SUPERSTRUCTURE

SHEET 12

243

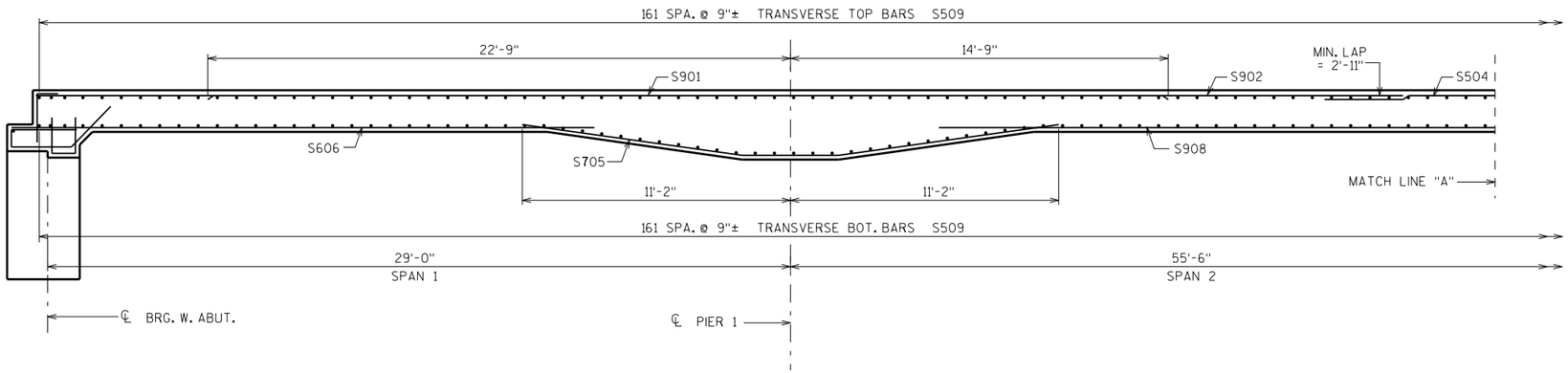
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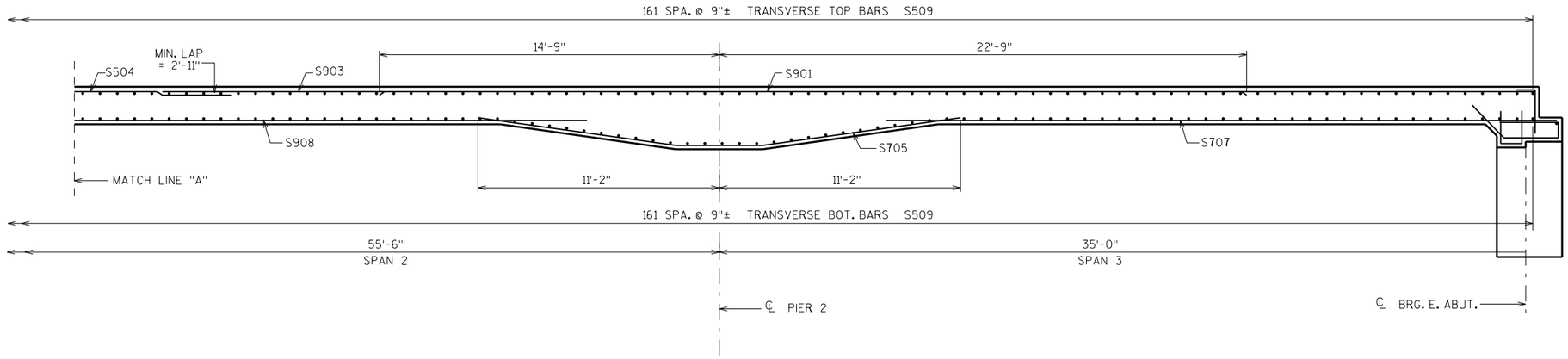
STATE PROJECT NUMBER

1071-02-71



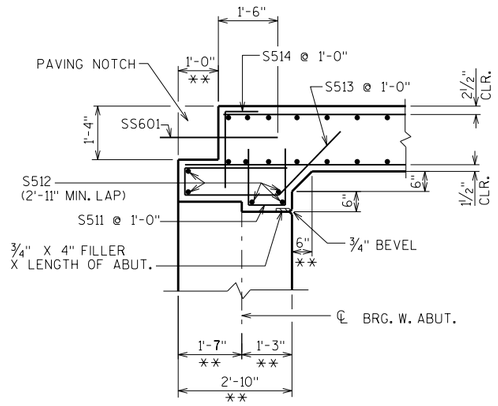
PART LONGITUDINAL SECTION

(LOOKING NORMAL TO TANGENT LINE A)

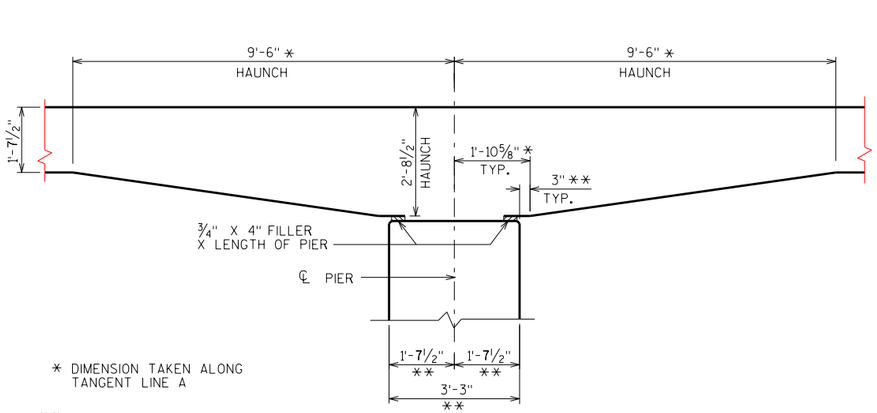


PART LONGITUDINAL SECTION

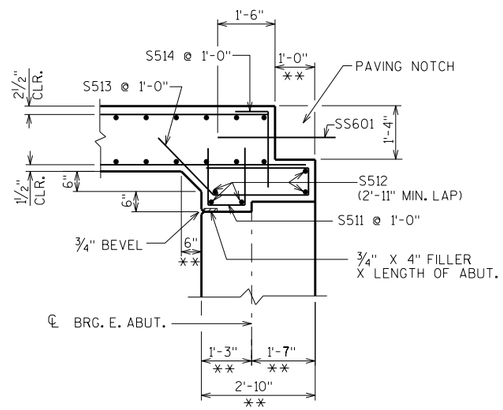
(LOOKING NORMAL TO TANGENT LINE A)



WEST ABUTMENT DETAIL



PIER DETAIL



EAST ABUTMENT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

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SUPERSTRUCTURE DETAILS 1

SHEET 13

244

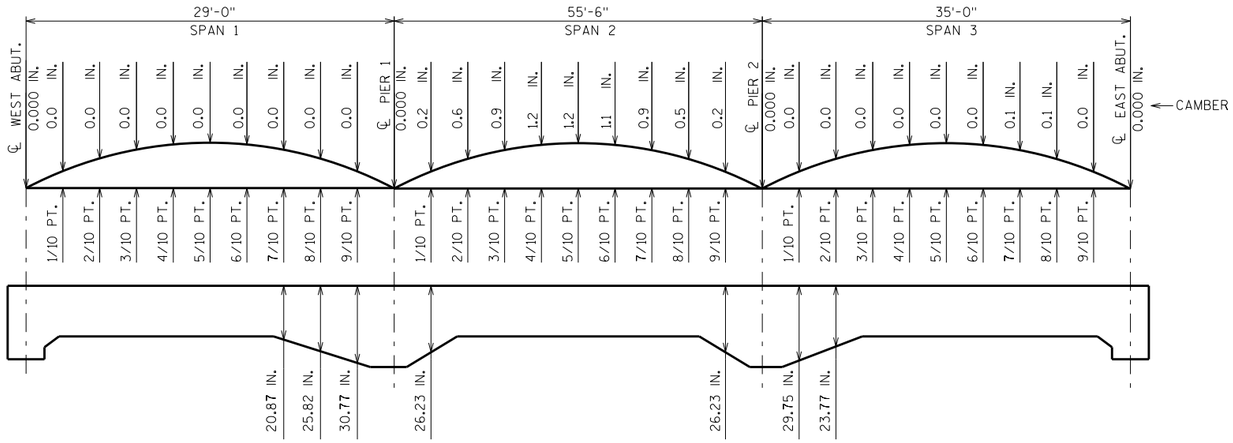
SCALE = 2.75

8

8

STATE PROJECT NUMBER

1071-02-71



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
LESS (-) SLAB THICKNESS
PLUS (+) CAMBER
PLUS (+) FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS = TOP OF SLAB FALSEWORK ELEVATION.

SURVEY TOP OF SLAB ELEVATIONS

	PIER 1	5/10 PT.	PIER 2	5/10 PT.	PIER 3	5/10 PT.	PIER 4	5/10 PT.	PIER 5	5/10 PT.	E. ABUT.
N. EDGE											
CROWN OR ℄											
S. EDGE											

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE ℄ OF ABUTMENTS, THE ℄ OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR ℄. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

TOP OF SLAB ELEVATIONS

	℄ 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
N. EDGE OF SLAB	1018.20	1018.27	1018.34	1018.42	1018.49	1018.56	1018.63	1018.71	1018.78	1018.85	1018.92	1019.06	1019.20	1019.34	1019.48	1019.62	1019.76	1019.89	1020.03	1020.17	1020.31
℄ IH 90	1016.91	1016.98	1017.06	1017.13	1017.20	1017.28	1017.35	1017.42	1017.50	1017.57	1017.64	1017.78	1017.92	1018.06	1018.20	1018.34	1018.48	1018.62	1018.76	1018.90	1019.04
S. EDGE OF SLAB	1014.92	1015.00	1015.07	1015.14	1015.22	1015.29	1015.37	1015.44	1015.51	1015.59	1015.66	1015.80	1015.95	1016.09	1016.23	1016.37	1016.51	1016.65	1016.80	1016.94	1017.08

℄ PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. E. ABUT.
1020.31	1020.40	1020.49	1020.57	1020.66	1020.75	1020.83	1020.92	1021.01	1021.10	1021.18
1019.04	1019.13	1019.22	1019.31	1019.39	1019.48	1019.57	1019.66	1019.75	1019.83	1019.92
1017.08	1017.17	1017.26	1017.35	1017.44	1017.53	1017.61	1017.70	1017.79	1017.88	1017.97

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIAMTELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

PARAPETS SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

DRAWN BY WWR | PLANS CK'D. JLR

SUPERSTRUCTURE DETAILS 2

SHEET 14

245

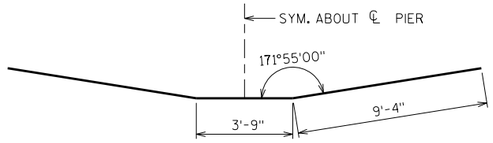
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8

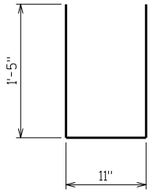
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STATE PROJECT NUMBER

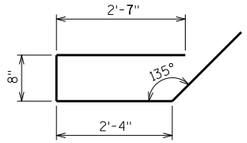
1071-02-71



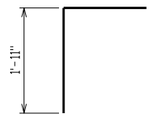
S705



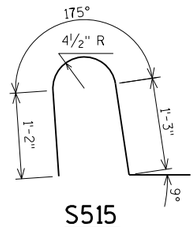
S511



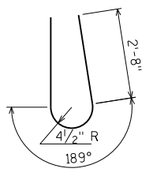
S513



S514



S515



S516

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
S901	X	126	37'-6"			SLAB- TOP-LONGIT.
S902	X	64	53'-4"			SLAB- TOP-LONGIT.
S903	X	64	59'-4"			SLAB- TOP-LONGIT.
S504	X	64	13'-9"			SLAB- TOP-LONGIT.
S705	X	128	22'-4"	X		SLAB-BOT.-HAUNCH
S606	X	127	21'-9"			SLAB-BOT.-LONGIT.
S707	X	127	28'-2"			SLAB-BOT.-LONGIT.
S908	X	127	44'-0"			SLAB-BOT.-LONGIT.
S509	X	648	30'-10			SLAB-TOP & BOT.-TRANSVERSE
S510	X	322	5'-0"			SLAB-TOP-TRANS.-EDGES
S511	X	120	3'-6"	X		DIAPH.-VERT.
S512	X	20	30'-10			DIAPH.-HORIZ.
S513	X	120	7'-5"	X		DIAPH.-VERT.
S514	X	120	2'-9"	X		DIAPH.-VERT.
S515	X	364	4'-5"	X		SLAB/PARAPET-VERT.
S516	X	364	6'-8"	X		PARAPET-VERT.
S517	X	48	41'-11"			PARAPET-HORIZ.
STAINLESS STEEL → SS601		118	3'-0"			STRUCTURE SLAB/APPROACH SLAB

8

8

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

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SUPERSTRUCTURE DETAILS 3

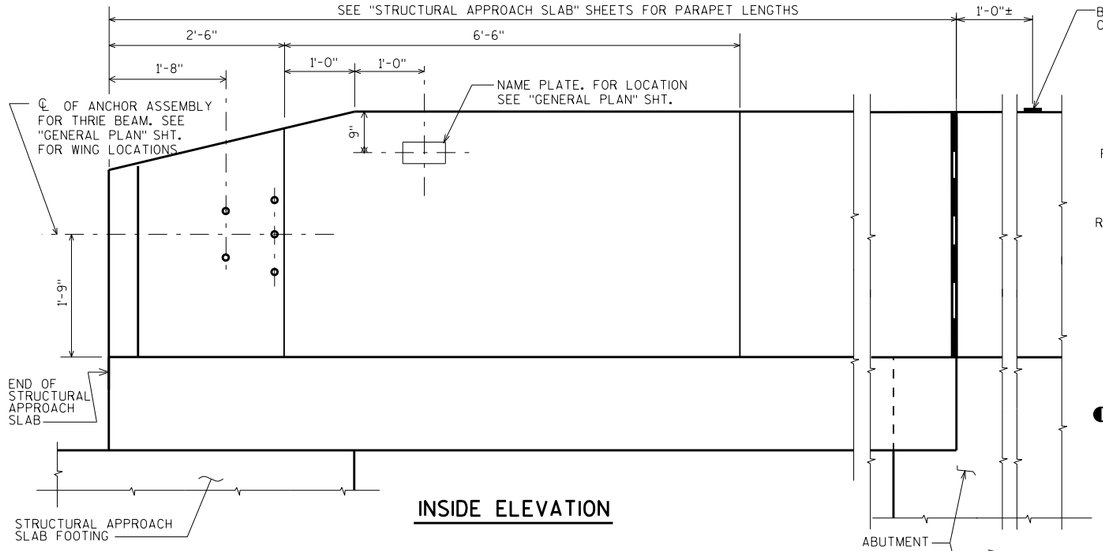
SHEET 15

246

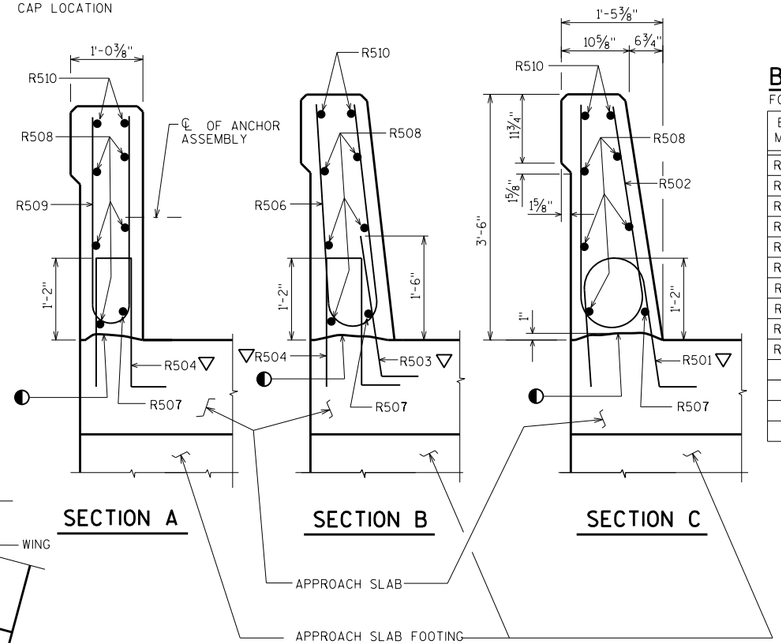
SCALE = 2.667

STATE PROJECT NUMBER

1071-02-71



INSIDE ELEVATION



SECTION A

SECTION B

SECTION C

BILL OF BARS

FOR STRUCTURAL APPROACH SLAB PARAPETS

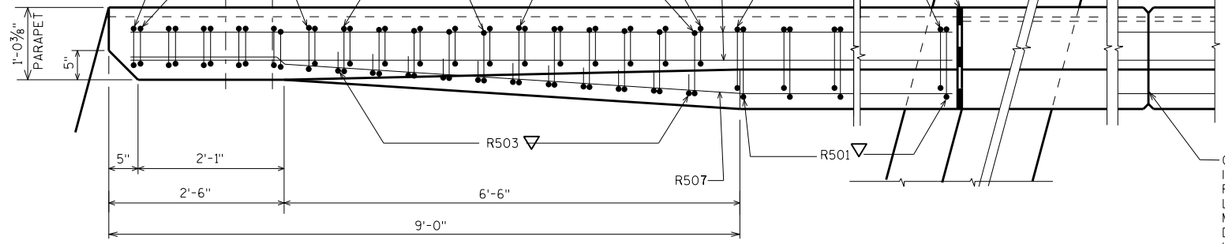
BAR MARK	COAT	WEST APPR.	EAST APPR.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	22	22	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-7"	X		PARAPET HORIZ.
R508	X	10	10	19'-7"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	19'-7"	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

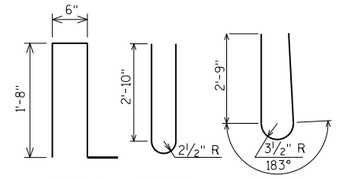
MARK	NO. REQD.	LENGTH
S509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

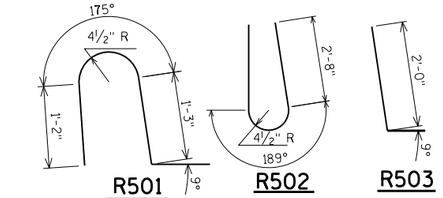


PLAN

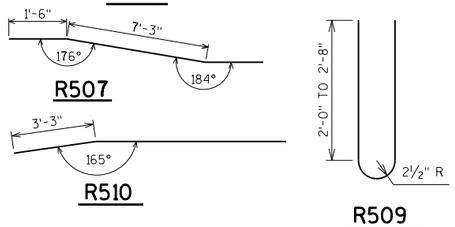
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



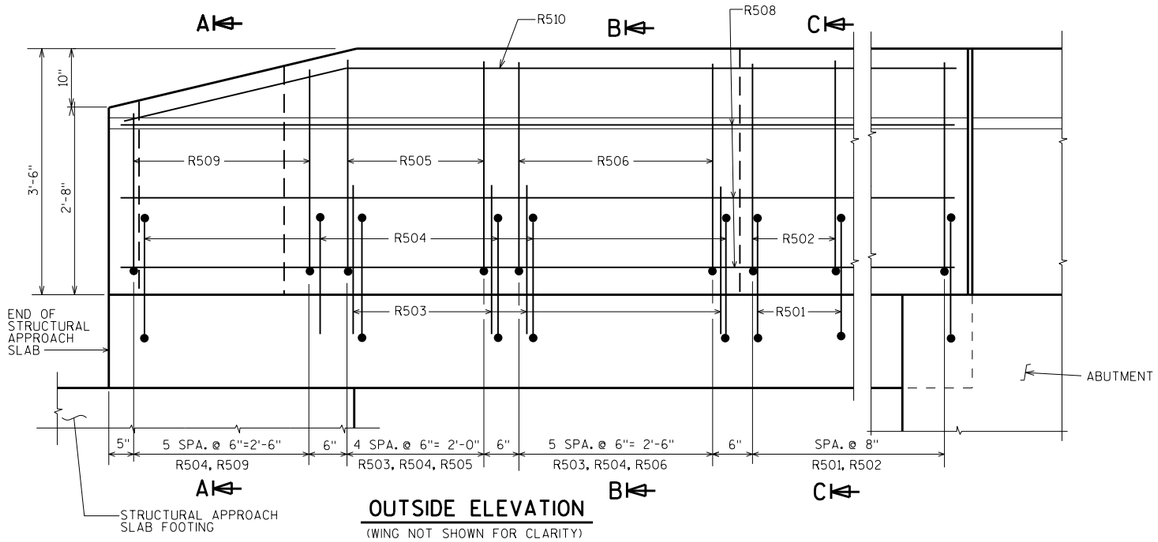
R504 R505 R506



R501 R502 R503

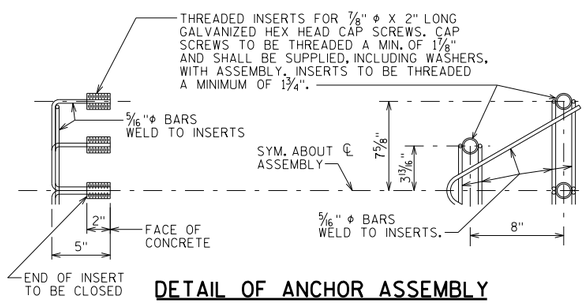


R507 R510 R509



OUTSIDE ELEVATION

(WING NOT SHOWN FOR CLARITY)



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.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◆ SLOPE FOR DRAINAGE

▽ R501, R503, AND R504 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-41-293

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SINGLE SLOPE PARAPET 42SS

SHEET 16

247

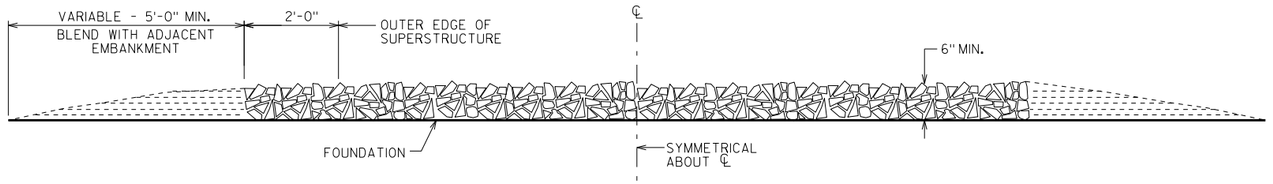
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8

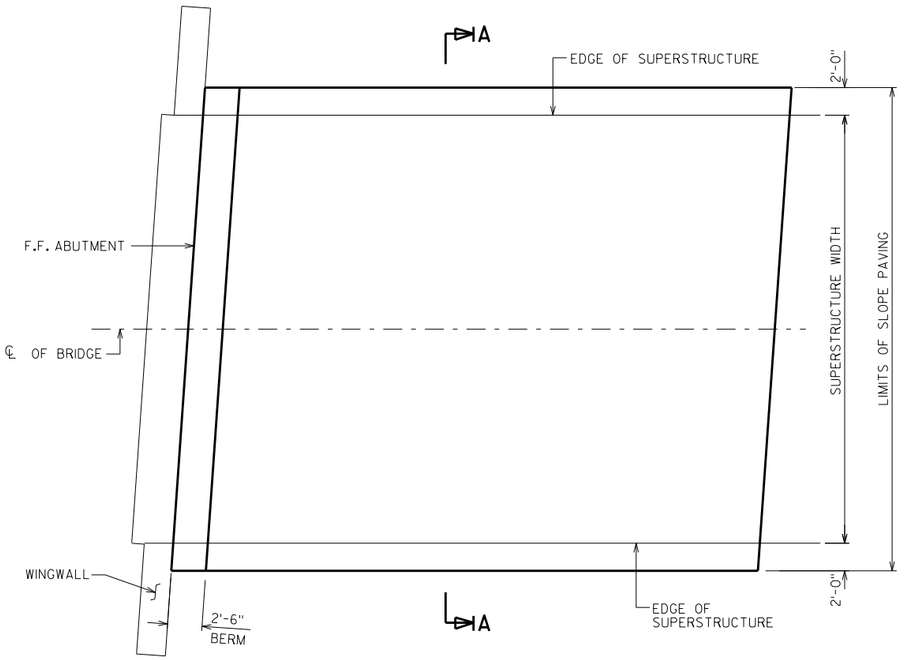
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STATE PROJECT NUMBER

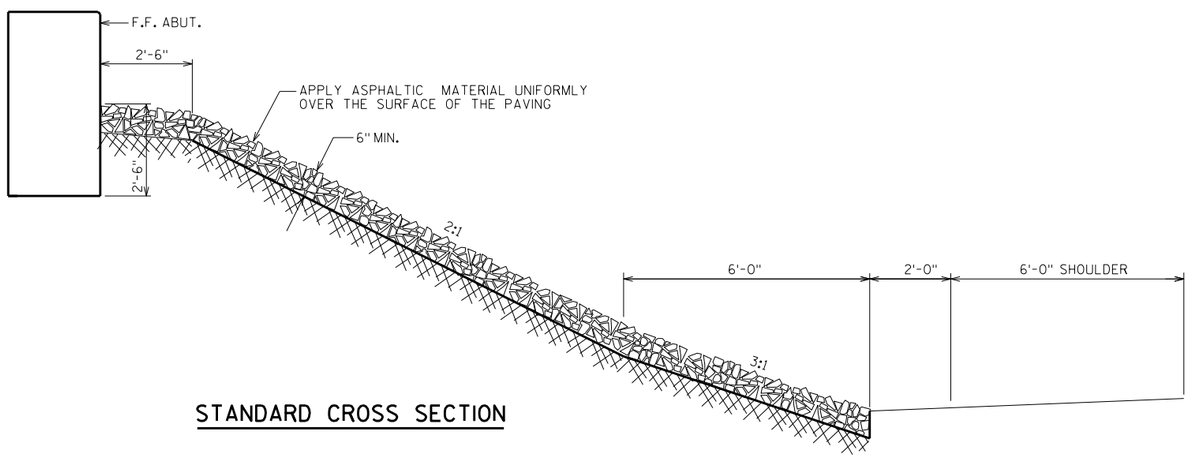
1071-02-71



SECTION A-A



PLAN



STANDARD CROSS SECTION

GENERAL NOTES

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

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-41-293

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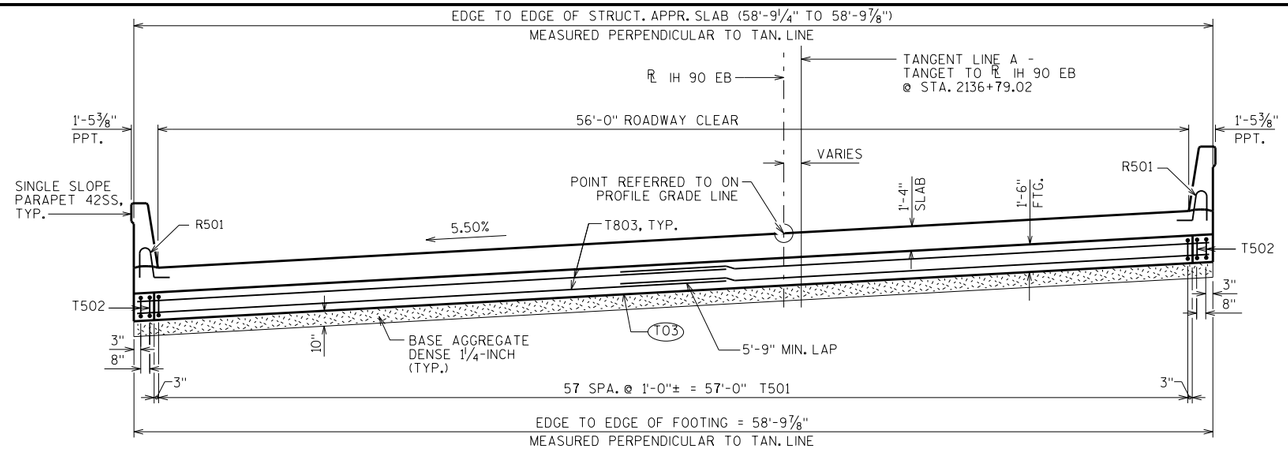
SLOPE PAVING (CRUSHED AGGREGATE)

SHEET 17

248

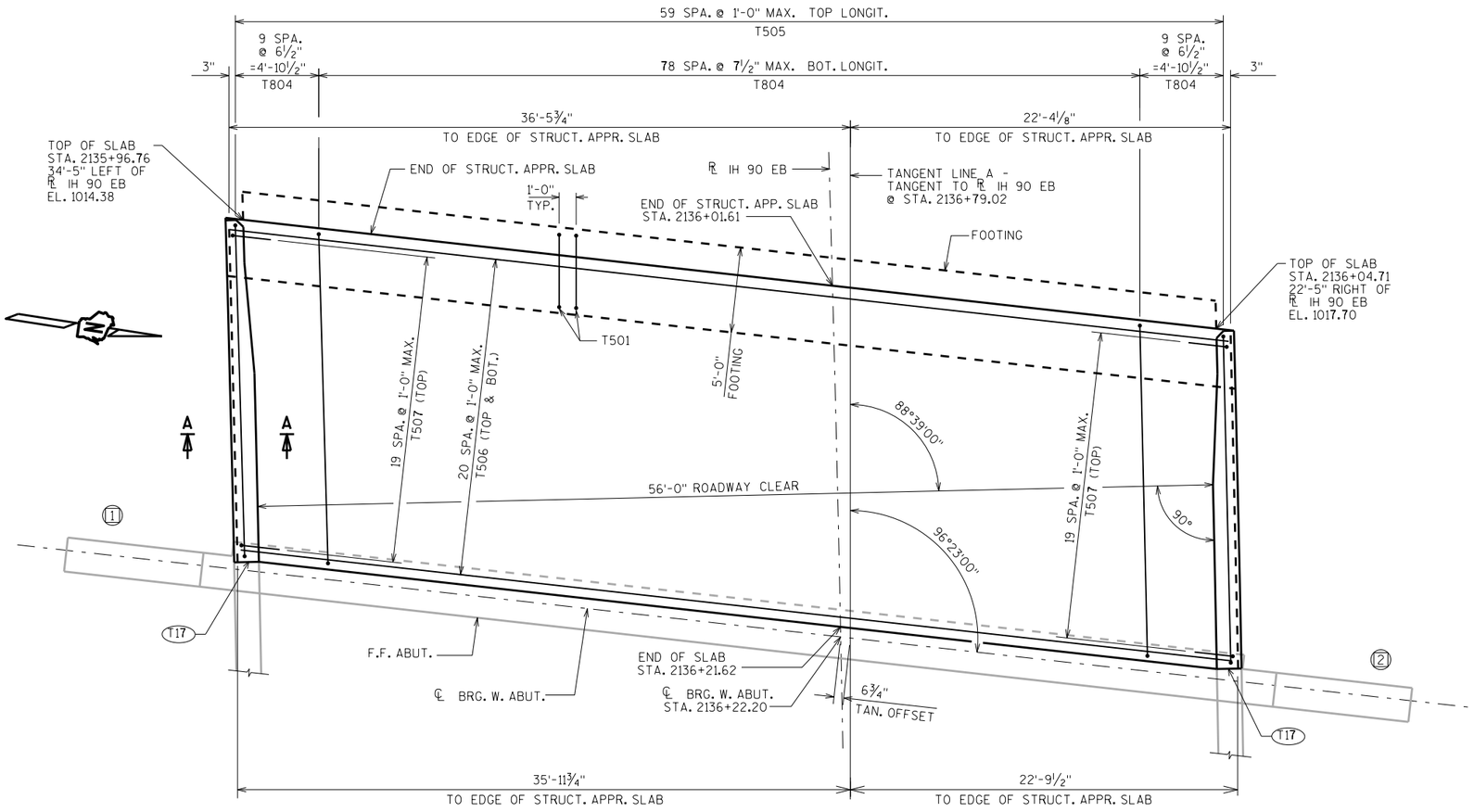
SLPPAVCRAG

SCALE =



SECTION THRU STRUCT. APPR. SLAB

SHOWING FOOTING STEEL & PARAPET STEEL IN STRUCT. APPR. SLAB ONLY
(LOOKING WEST)



PLAN

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

T17 ½" FILLER (INCLUDED IN 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.

NOTE: SEE "WEST STRUCTURAL APPROACH SLAB DETAILS" SHEET FOR SECTION A-A.

(1) INDICATES WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

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WEST STRUCTURAL APPROACH SLAB

SHEET 18

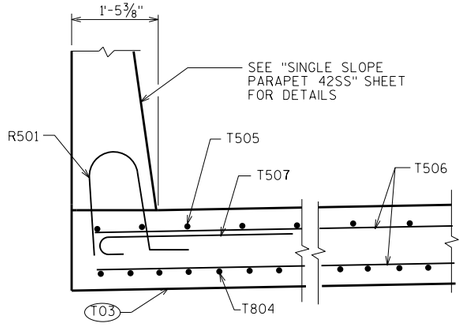
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8

STATE PROJECT NUMBER
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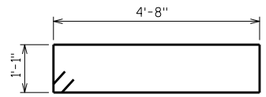


SECTION A-A

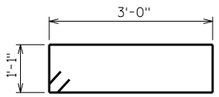
BILL OF BARS

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

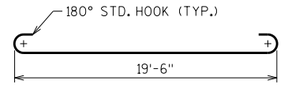
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	58	12'-2"	X		FOOTING STIRRUP
T502	X	4	8'-10"	X		FOOTING STIRRUP
T803	X	24	32'-5"			FOOTING - TRANSVERSE-HORIZ.
T804	X	97	21'-4"	X		APPROACH SLAB - LONG. - BOT.
T505	X	60	19'-6"			APPROACH SLAB - LONG. - TOP
T506	X	42	58'-10"			APPROACH SLAB - TRANS. - TOP & BOT.
T507	X	40	4'-1"	X		APPROACH SLAB - TRANS. - TOP - EDGE



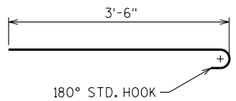
T501



T502



T804



T507

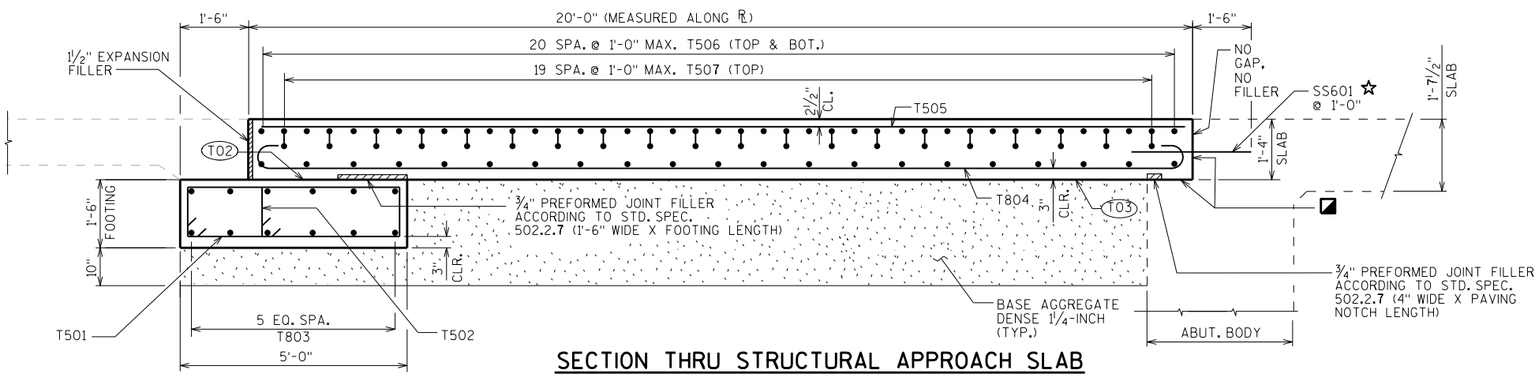
T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

◪ APPLY PROTECTIVE SURFACE TREATMENT TO ENTIRE PAVING NOTCH SURFACE PRIOR TO POURING THE STRUCTURAL APPROACH SLAB.

☆ THE BID ITEM FOR SS601 BAR STEEL IS "BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES".

ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.



SECTION THRU STRUCTURAL APPROACH SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

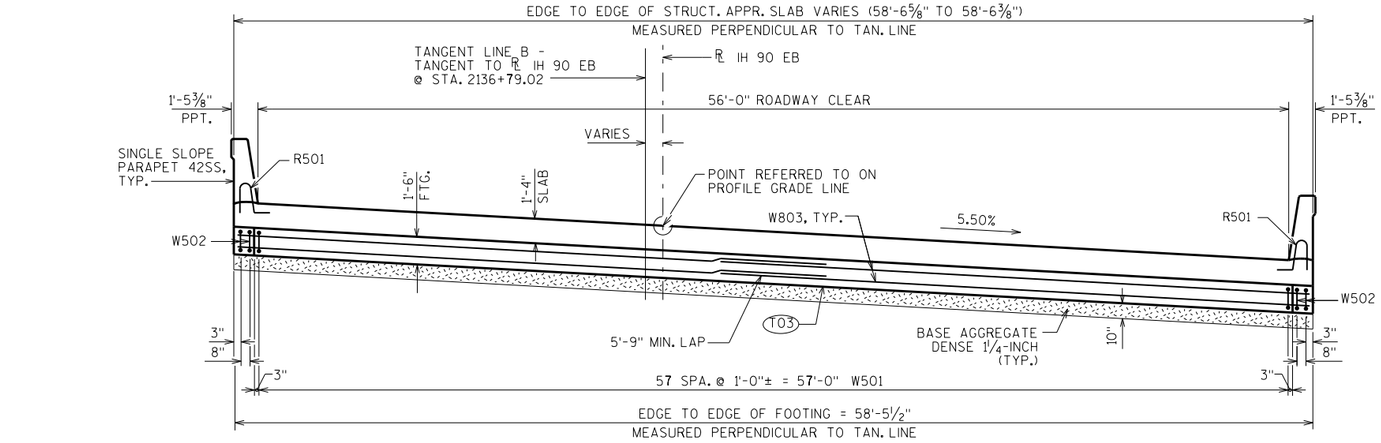
DRAWN BY WWR | PLANS CK'D. JLR

WEST STRUCTURAL APPROACH SLAB DETAILS

SHEET 19

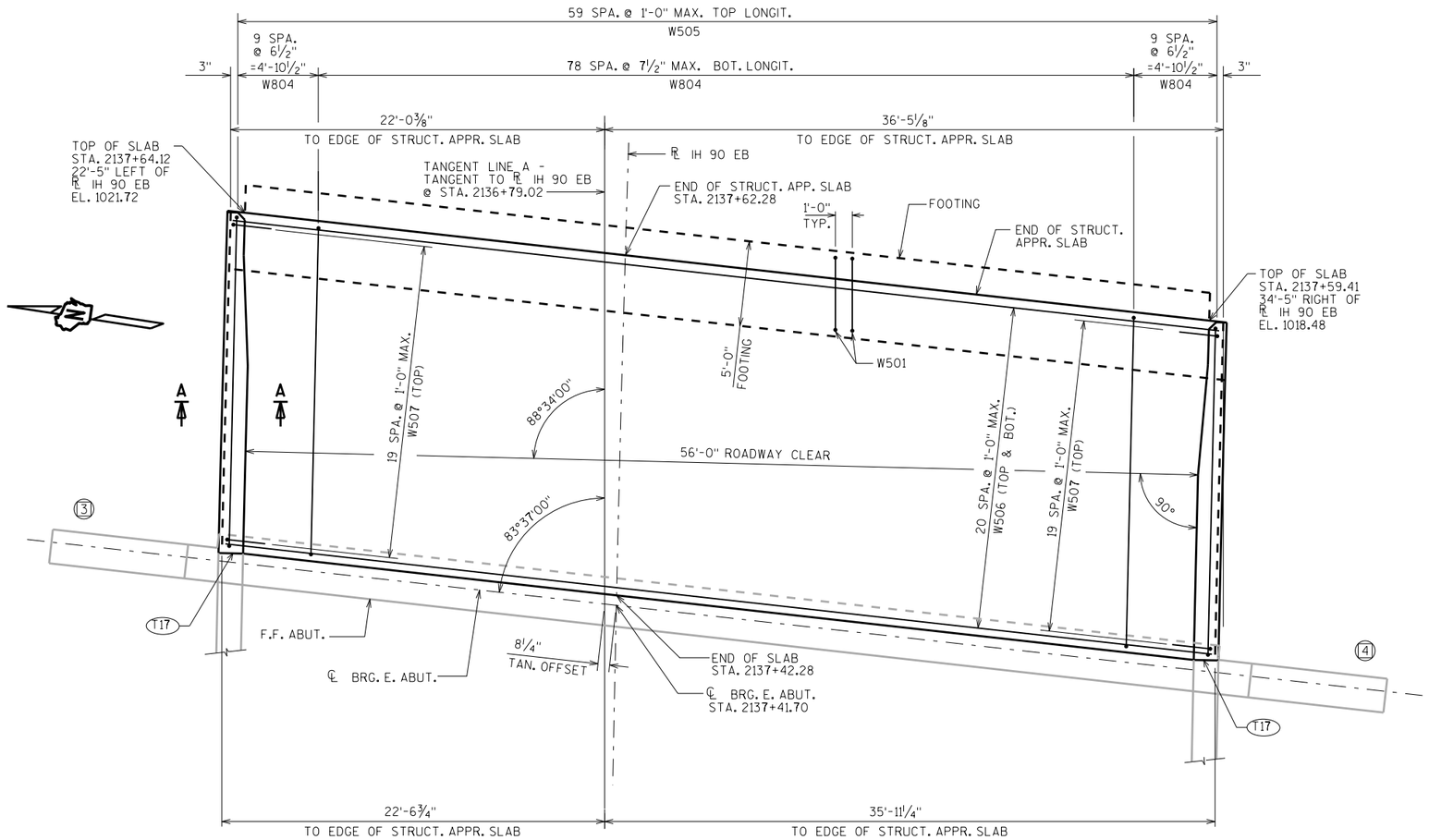
250

SCALE = 4.00



SECTION THRU STRUCT. APPR. SLAB

SHOWING FOOTING STEEL & PARAPET STEEL IN STRUCT. APPR. SLAB ONLY
(LOOKING EAST)



PLAN

STATE PROJECT NUMBER

1071-02-71

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

(T17) ½" FILLER (INCLUDED IN 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.

NOTE: SEE "EAST STRUCTURAL APPROACH SLAB DETAILS" SHEET FOR SECTION A-A.

(3) INDICATES WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

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EAST STRUCTURAL APPROACH SLAB

SHEET 20

251

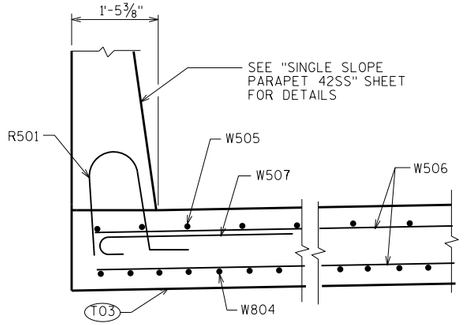
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8

STATE PROJECT NUMBER

1071-02-71

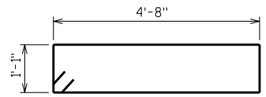


SECTION A-A

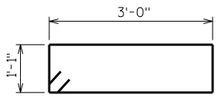
BILL OF BARS

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

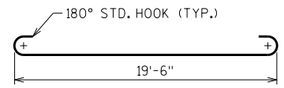
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
W501	X	58	12'-2"	X		FOOTING STIRRUP
W502	X	4	8'-10"	X		FOOTING STIRRUP
W803	X	24	32'-3"			FOOTING - TRANSVERSE-HORIZ.
W804	X	97	21'-4"	X		APPROACH SLAB - LONG. - BOT.
W505	X	60	19'-6"			APPROACH SLAB - LONG. - TOP
W506	X	42	58'-5"			APPROACH SLAB - TRANS. - TOP & BOT.
W507	X	40	4'-1"	X		APPROACH SLAB - TRANS. - TOP - EDGE



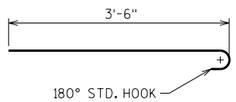
W501



W502



W804



W507

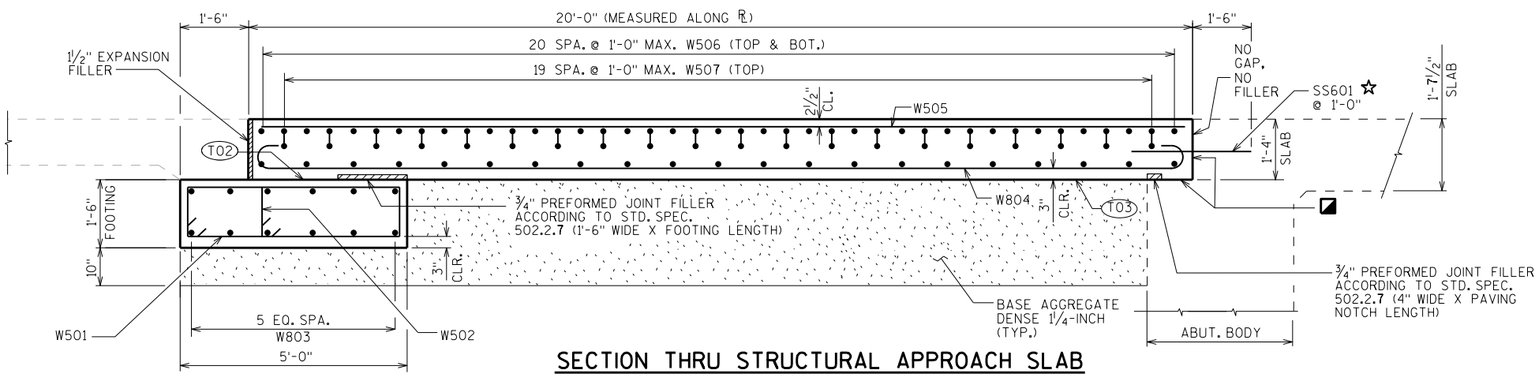
T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

◪ APPLY PROTECTIVE SURFACE TREATMENT TO ENTIRE PAVING NOTCH SURFACE PRIOR TO POURING THE STRUCTURAL APPROACH SLAB.

☆ THE BID ITEM FOR SS601 BAR STEEL IS "BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES".

ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.



SECTION THRU STRUCTURAL APPROACH SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-293

DRAWN BY WWR | PLANS CK'D. JLR

EAST STRUCTURAL APPROACH SLAB DETAILS

SHEET 21

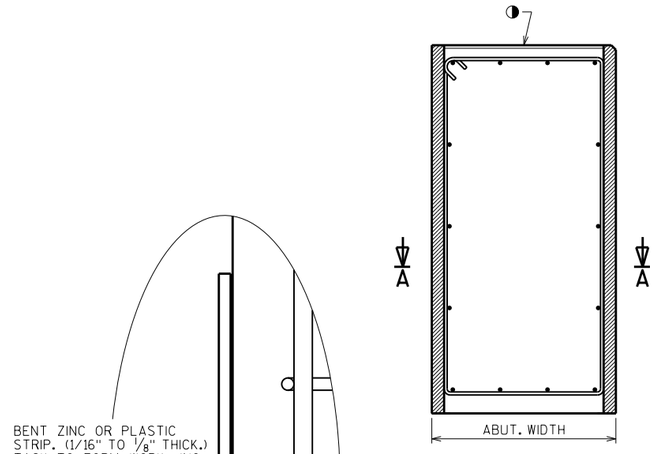
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SCALE = 4.00

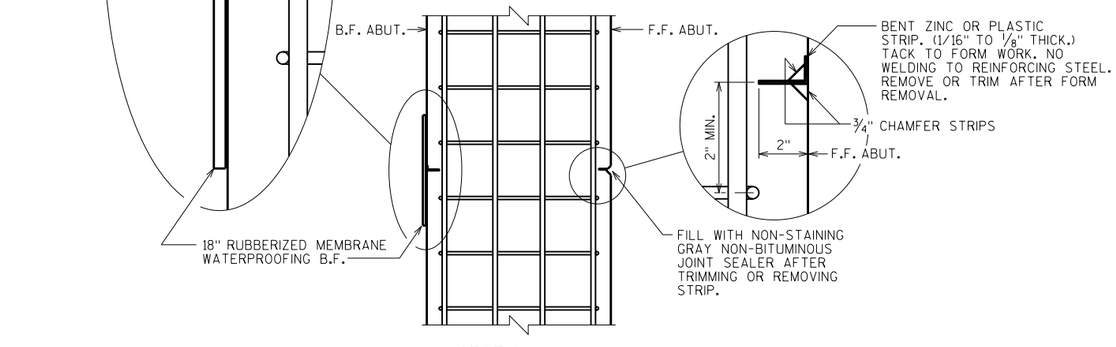
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8

STATE PROJECT NUMBER
1071-02-71



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-41-293

DRAWN BY WWR | PLANS CK'D. JLR

ALTERNATE CONSTRUCTION JOINT

SHEET 22

253

8

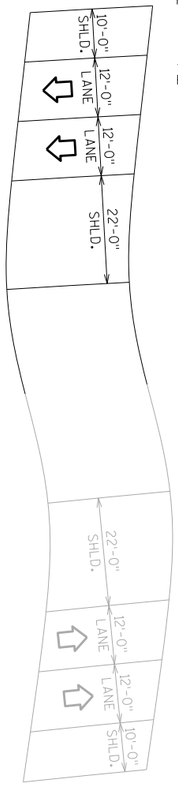
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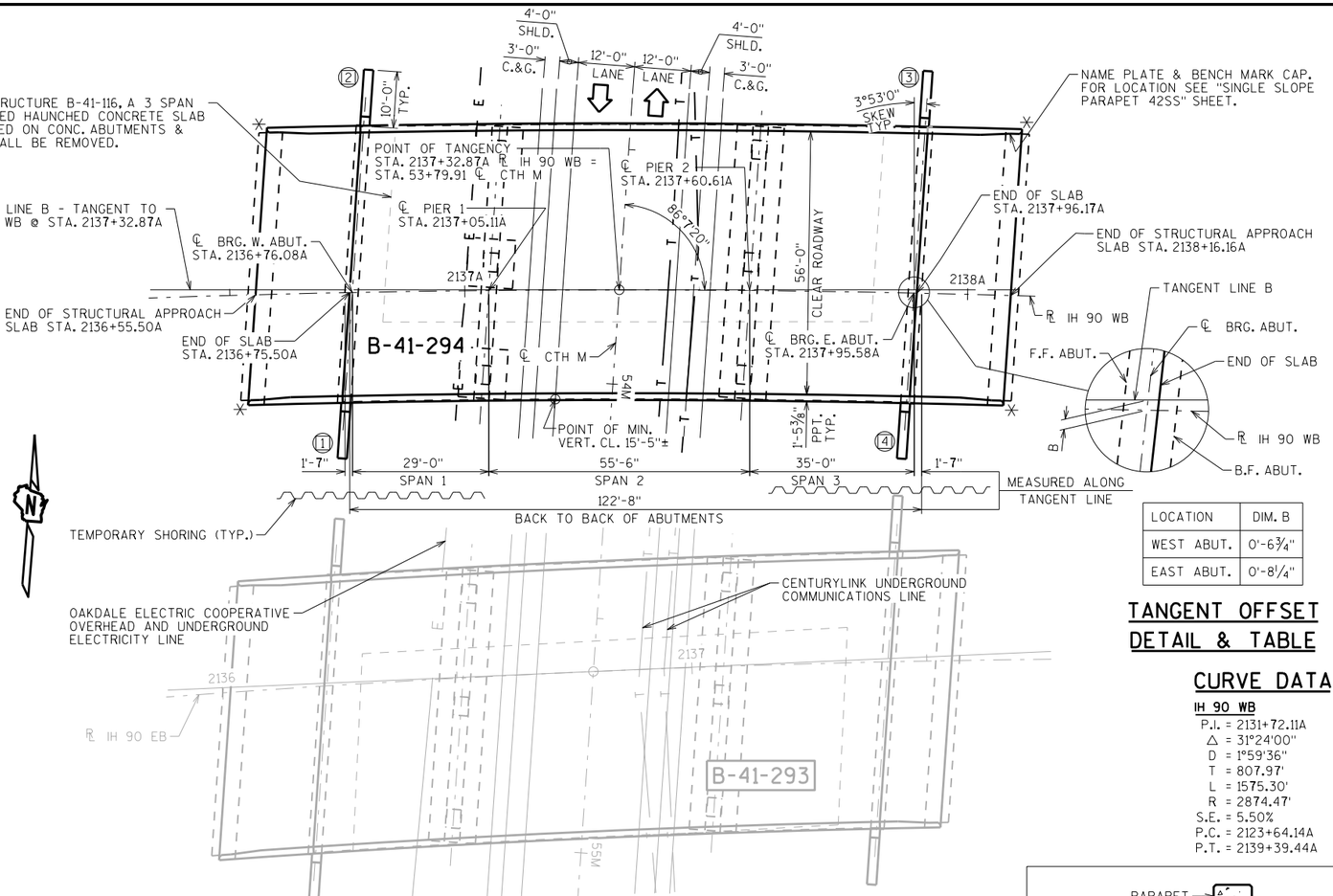
SCALE = 1.0

ALTJOINT
7-15

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

(2) INDICATES WING NUMBER



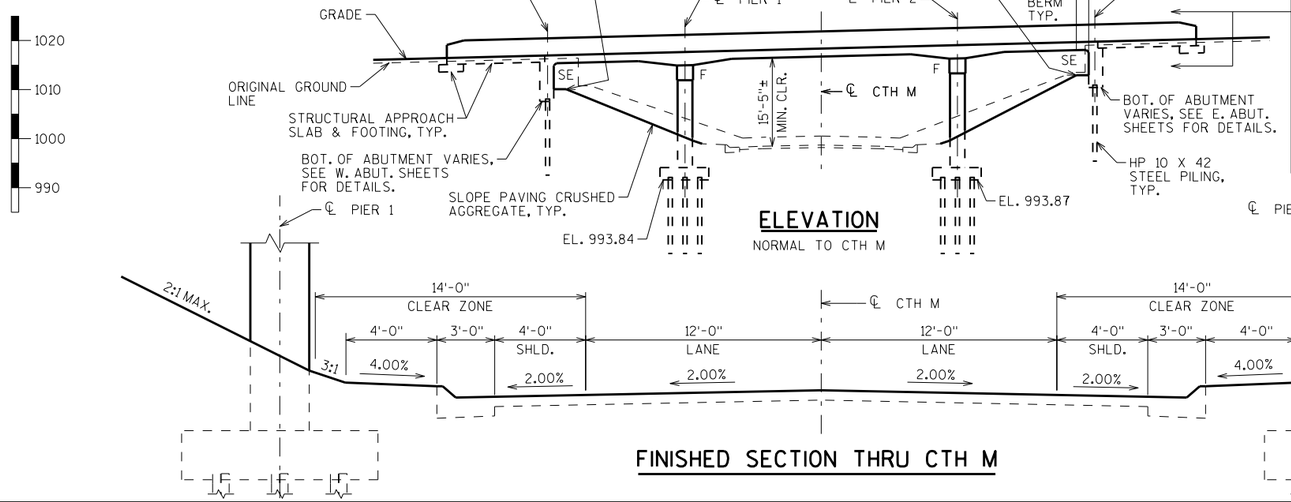


LOCATION	DIM. B
WEST ABUT.	0'-6¾"
EAST ABUT.	0'-8¼"

TANGENT OFFSET DETAIL & TABLE

PLAN

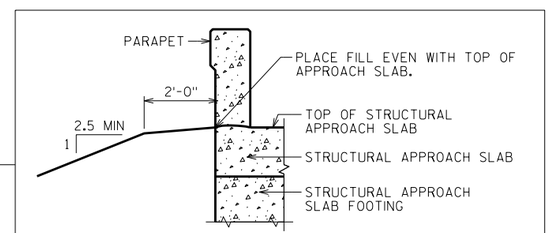
3 SPAN HAUNCHED CONCRETE SLAB



ELEVATION

NORMAL TO CTH M

FINISHED SECTION THRU CTH M



TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.17
OPERATING RATING FACTOR: RF = 1.52
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGN FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STUCTURAL 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.

HIGH STRENGTH STRUCTURAL STEEL:
ASTM A709, GRADE 50 — Fy = 50,000 P.S.I.

FOUNDATION DATA

WEST ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 105 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 55'-0" LONG AT WEST ABUT. PILE POINTS REQ'D.

EAST ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 115 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 35'-0" LONG AT EAST ABUT.

PIERS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 15'-0" LONG. PILE POINTS REQ'D.

** 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.

CURVE DATA

IH 90 WB

P.I. = 2131+72.11A
Δ = 31°24'00"
D = 1°59'36"
T = 807.97'
L = 1575.30'
R = 2874.47'
S.E. = 5.50%
P.C. = 2123+64.14A
P.T. = 2139+39.44A

TRAFFIC VOLUME

IH 90

ADT = 20,500 (2038)
R.D.S. = 75 M.P.H.

CTH M

ADT = 760 (2038)
R.D.S. = 60 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. SUPERSTRUCTURE
13. SUPERSTRUCTURE DETAILS 1
14. SUPERSTRUCTURE DETAILS 2
15. SUPERSTRUCTURE DETAILS 3
16. SINGLE SLOPE PARAPET 42SS
17. SLOPE PAVING (CRUSHED AGGREGATE)
18. WEST STRUCTURAL APPROACH SLAB
19. WEST STRUCTURAL APPROACH SLAB DETAILS
20. EAST STRUCTURAL APPROACH SLAB
21. EAST STRUCTURAL APPROACH SLAB DETAILS
22. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

JONATHON RESHESKE (608) 266-8491
LAURA SHADEWALD (608) 267-9592

STATE PROJECT NUMBER

1071-02-71

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION — BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 6/18/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-41-294

IH 90 WB OVER CTH M

COUNTY	TOWN, ~~CITY, VILLAGE~~
MONROE	TOMAH

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
JLR	DLM	WWR	JLR

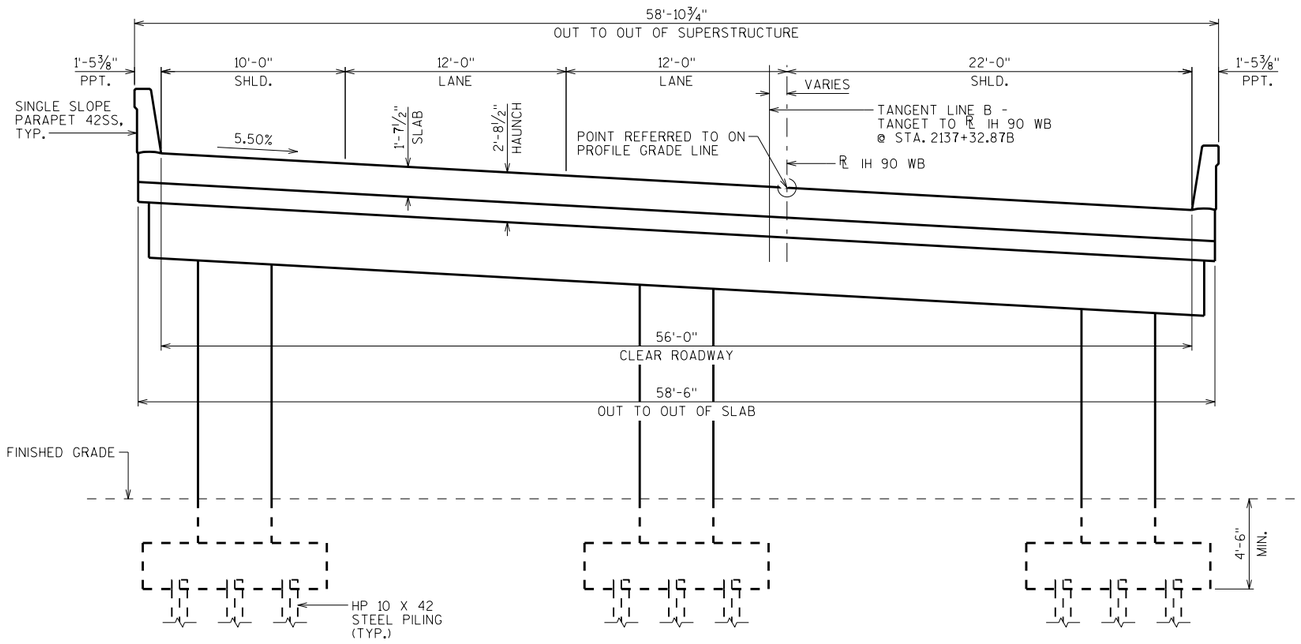
GENERAL PLAN

SHEET 1 OF 22

254

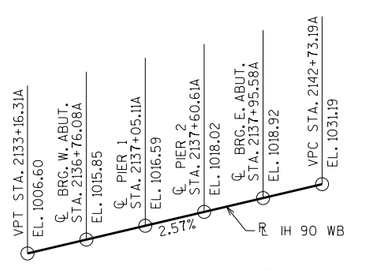
I.D. 1077-02-03B DATE: MAY 2018

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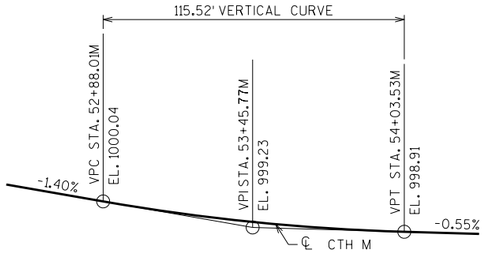


CROSS SECTION THRU BRIDGE

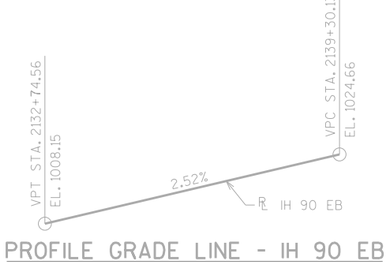
(LOOKING UPSTATION)



PROFILE GRADE LINE - IH 90 WB



PROFILE GRADE LINE - CTH M



PROFILE GRADE LINE - IH 90 EB

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	EAST APPROACH	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 2137+33	LS	——	——	——	——	——	——	——	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-41-294	LS	——	——	——	——	——	——	——	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	——	——	122	——	——	122	——	244
305.0120	BASE AGGREGATE DENSE 1¼-INCH	TON	——	170	——	——	——	——	170	340
502.0100	CONCRETE MASONRY BRIDGES	CY	524	80	41	74	79	41	80	919
502.3200	PROTECTIVE SURFACE TREATMENT	SY	780	125	——	——	——	——	125	1030
502.3210	PIGMENTED SURFACE SEALER	SY	120	20	——	——	——	——	20	160
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	——	——	2940	2580	2930	2940	——	11,390
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	108,980	13,480	640	12,440	12,870	640	13,460	162,510
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	530	——	——	——	——	——	——	530
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	——	——	14	——	——	14	——	28
550.0500	PILE POINTS	EACH	——	——	8	24	24	——	——	56
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	——	——	440	360	360	280	——	1440
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	——	——	260	——	——	270	——	530
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	——	——	100	——	——	100	——	200
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	——	2	——	——	——	——	2	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	EACH	——	——	57	——	——	57	——	114
	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.

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. 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.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF SLAB AND APPROACH SLAB SURFACES.

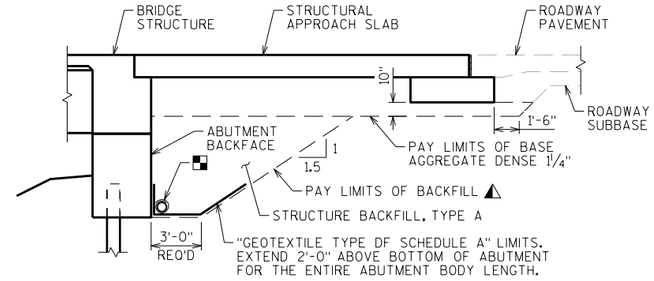
PIGMENTED PROTECTIVE SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON THE "GENERAL PLAN" SHEET AND THE ABUTMENT DETAILS.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

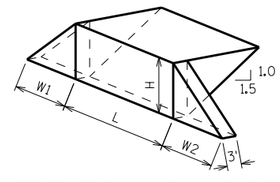
LOCATION HAS DENSE SAND, SANDSTONE GRAVEL, AND WEATHERED SANDSTONE BEDROCK AT SHALLOW LOCAATIONS AND SHOULD BE TAKEN INTO CONSIDERATION WHEN CHOOSING TEMPORARY SHORING.



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)

STATE PROJECT NUMBER
1071-02-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

DRAWN BY WWR | PLANS CK'D. JLR

CROSS SECTION & QUANTITIES

SHEET 2

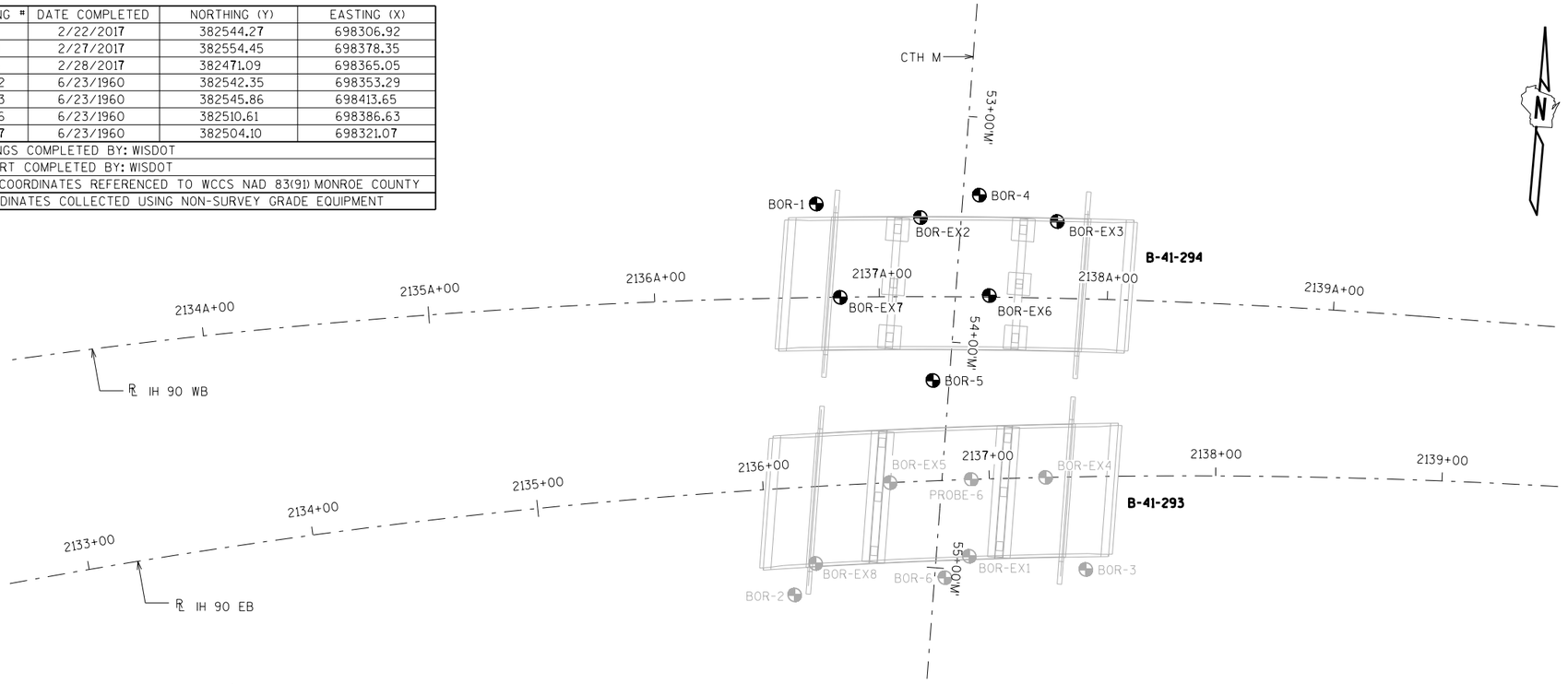
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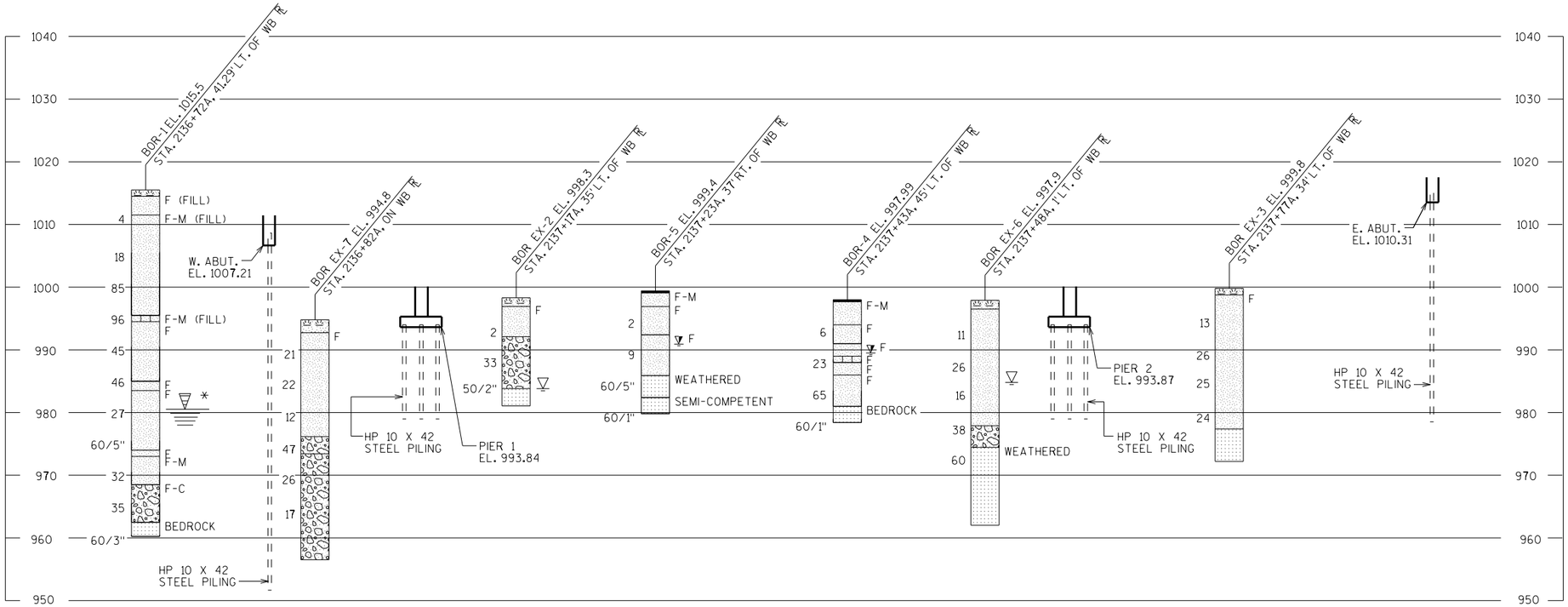
8

8

SCALE = 4.00

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	2/22/2017	382544.27	698306.92
4	2/27/2017	382554.45	698378.35
5	2/28/2017	382471.09	698365.05
EX2	6/23/1960	382542.35	698353.29
EX3	6/23/1960	382545.86	698413.65
EX6	6/23/1960	382510.61	698386.63
EX7	6/23/1960	382504.10	698321.07
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) MONROE COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

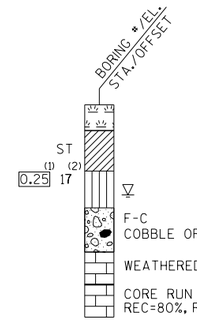
STATE PROJECT NUMBER

1071-02-71

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

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

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SUBSURFACE EXPLORATION

SHEET 3

256

8

8

SCALE =

(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.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 105 TONS PER PILE. PILE POINTS REQ'D.

(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.

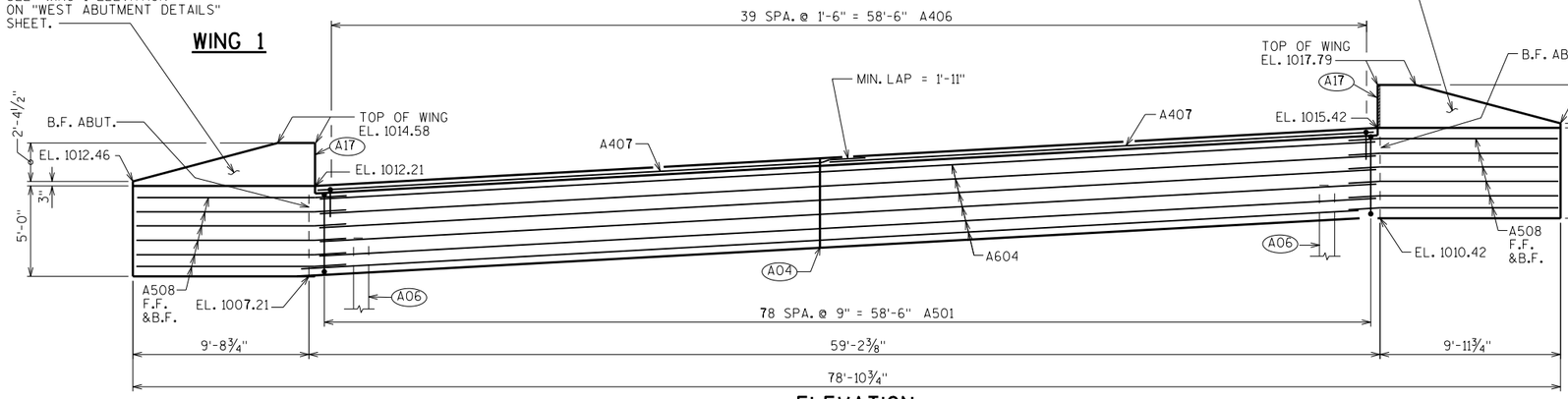
STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

STATE PROJECT NUMBER

1071-02-71

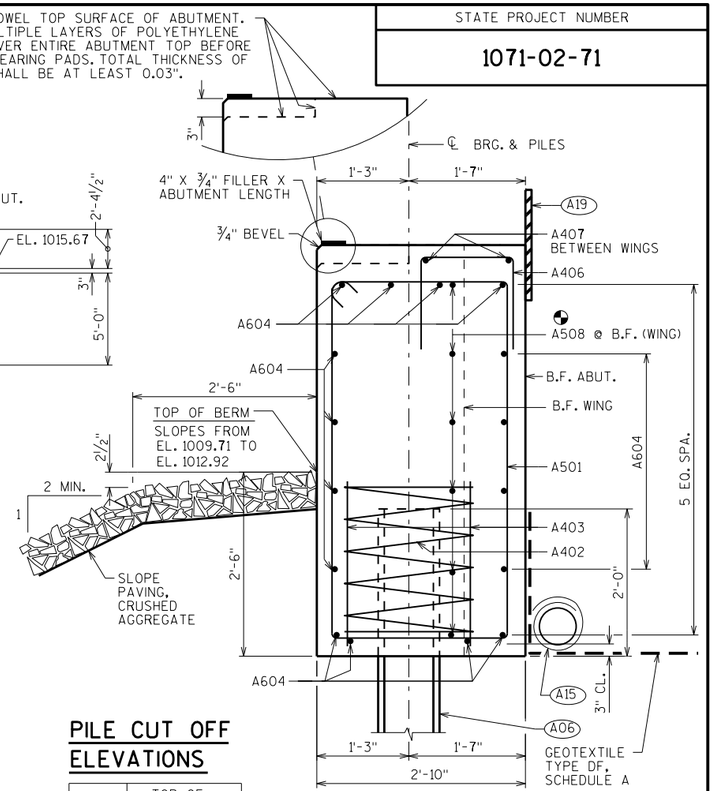
FOR WING 1 REBAR SEE "WING 1 ELEVATION" ON "WEST ABUTMENT DETAILS" SHEET.

FOR WING 2 REBAR SEE "WING 2 ELEVATION" ON "WEST ABUTMENT DETAILS" SHEET.

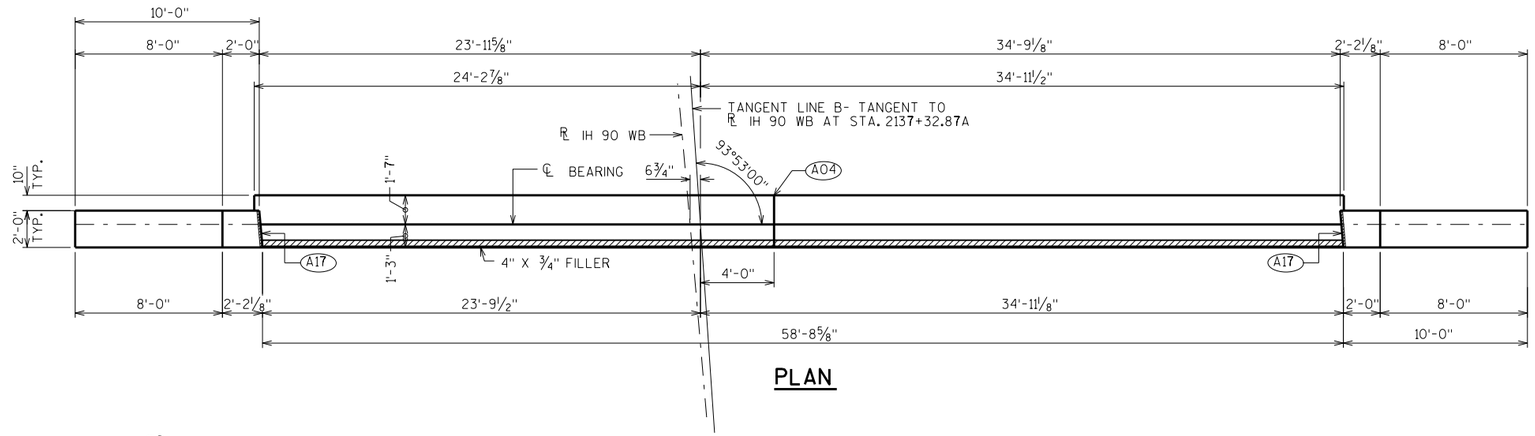


ELEVATION
(LOOKING WEST)

A508 BARS ARE ALSO PLACED AT F.F. OF WING. (NOT SHOWN, FOR CLARITY)



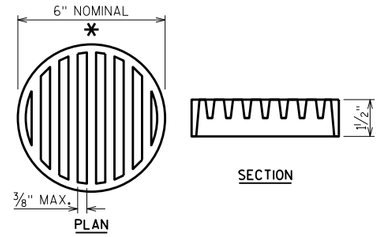
SECTION THRU BODY



PLAN

PILE #	TOP OF PILE
1	EL. 1009.38
2	EL. 1009.79
3	EL. 1010.20
4	EL. 1010.61
5	EL. 1011.02
6	EL. 1011.43
7	EL. 1011.84
8	EL. 1012.26

PILE CUT OFF ELEVATIONS

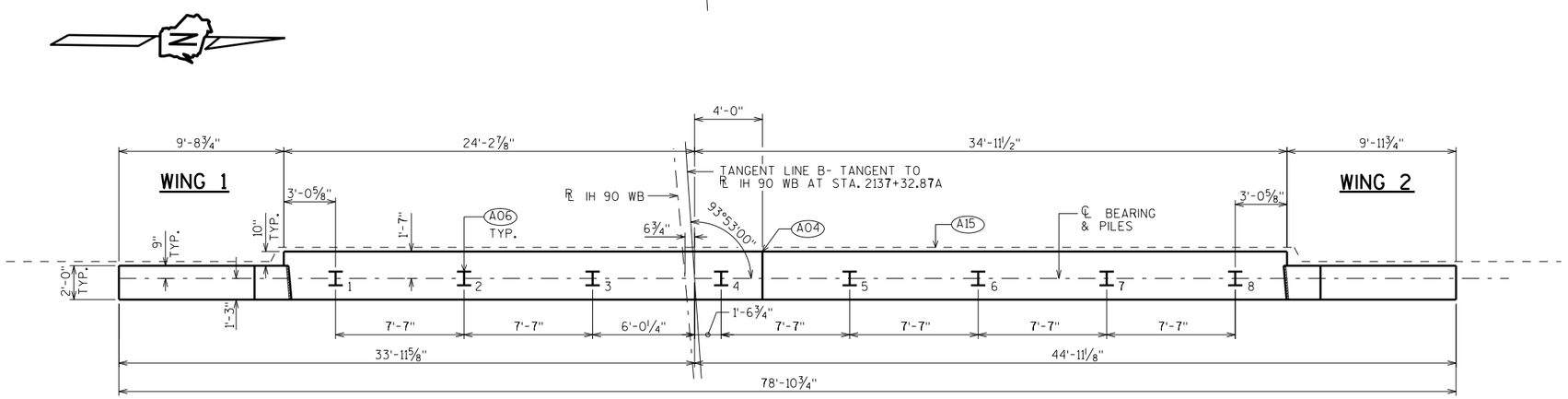


RODENT SHIELD DETAIL

* 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 PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

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WEST ABUTMENT

SHEET 4

257

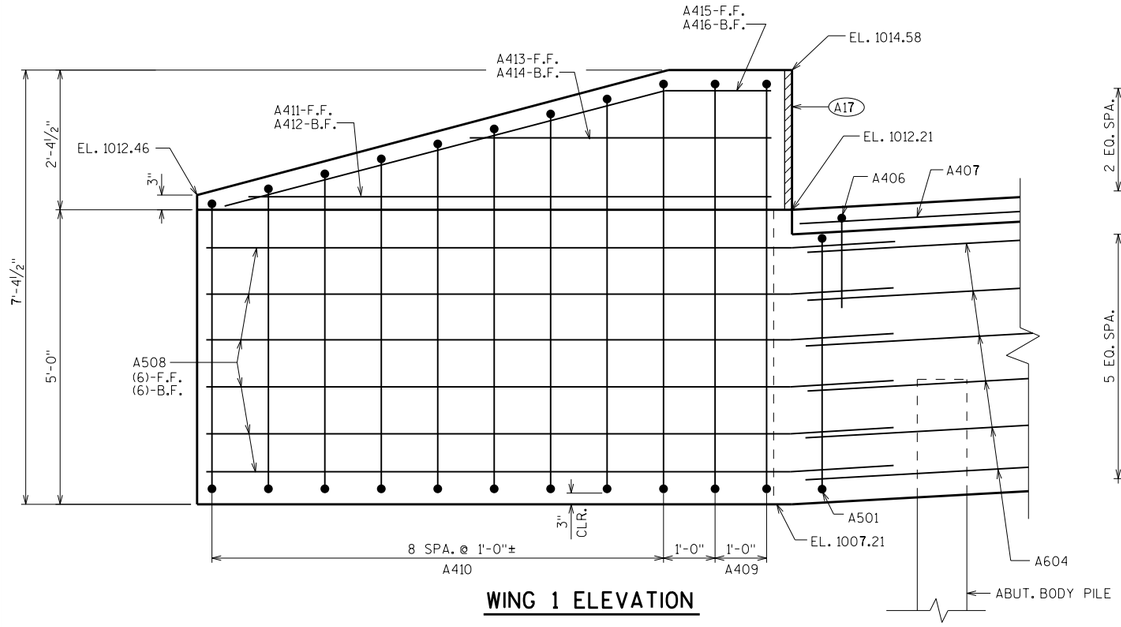
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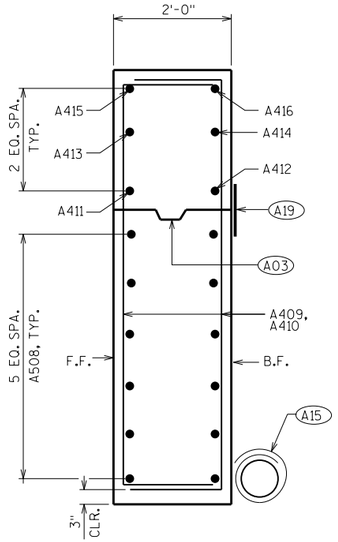
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STATE PROJECT NUMBER

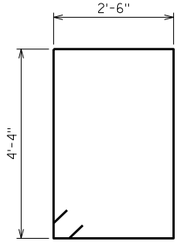
1071-02-71



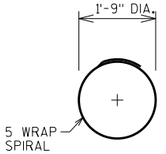
WING 1 ELEVATION



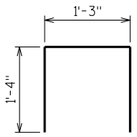
WING 1 SECTION



A501



A402



A406

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		79	14'-4"	X		BODY-VERT. STIRRUP
A402		8	28'-0"	X		BODY-1 PER PILE
A403		16	2'-3"			BODY-2 PER PILE
A604		16	58'-4"			BODY-HORIZ.
~~A505~~		~~NOT~~	~~USED~~			~~BODY HORIZ. TOP~~
A406		40	3'-9"	X		BODY-VERT. U-BAR
A407		4	30'-5"			BODY-HORIZ.-TOP NOTCH
A508	X	24	11'-10"	X		WINGS/BODY-HORIZ.
A409	X	8	10'-2"	X		WINGS-VERT.
A410	X	36	9'-1"	X	⚠	WINGS-VERT.
A411	X	2	9'-6"			WINGS-HORIZ.-UPPER
A412	X	2	9'-4"			WINGS-HORIZ.-UPPER
A413	X	2	5'-9"			WINGS-HORIZ.-UPPER
A414	X	2	5'-7"			WINGS-HORIZ.-UPPER
A415	X	2	10'-2"	X		WINGS-HORIZ.-TOP
A416	X	2	10'-0"	X		WINGS-HORIZ.-TOP

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

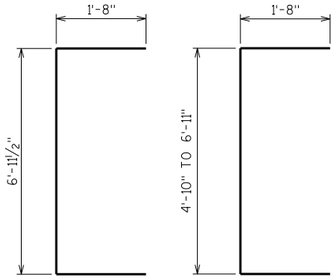


A508

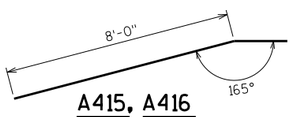
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A410	4 SERIES OF 9	8'-0" TO 10'-1"

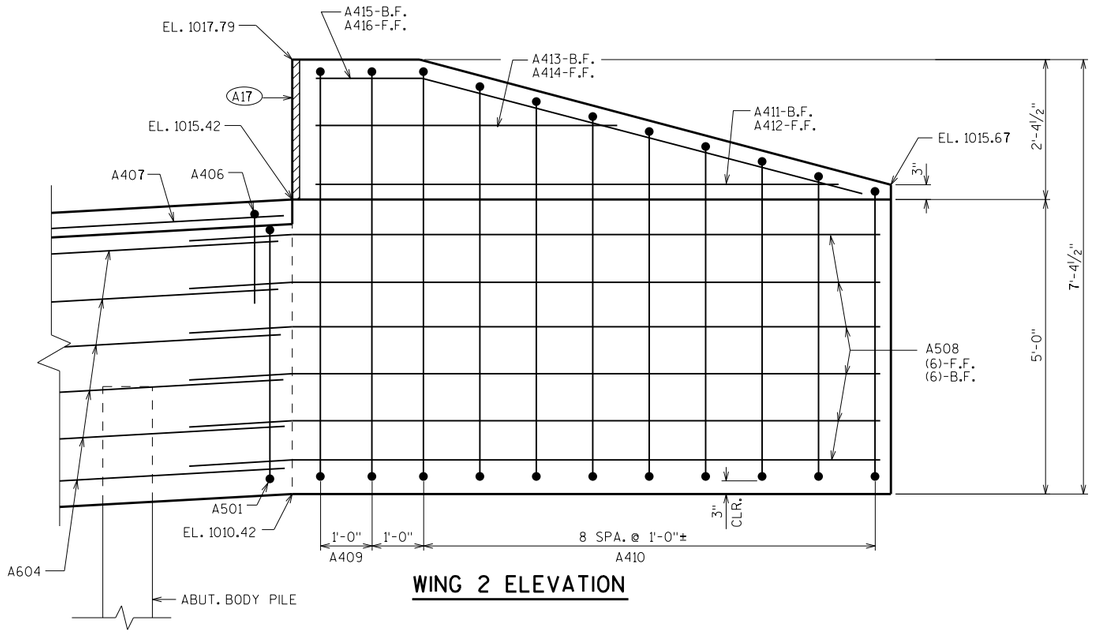
BUNDLE AND TAG EACH SERIES SEPARATELY.



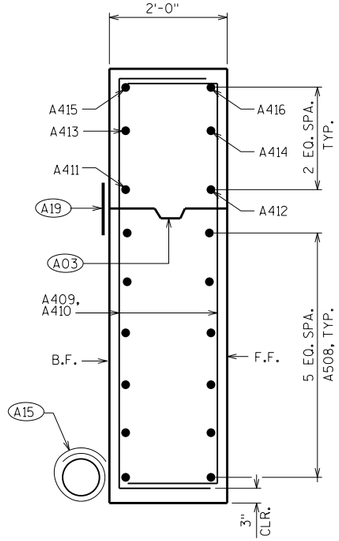
A409 A410



A415, A416



WING 2 ELEVATION



WING 2 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

DRAWN BY WWR | PLANS CK'D. JLR

WEST ABUTMENT DETAILS

SHEET 5

258

SCALE = 1.25

8

8

STATE PROJECT NUMBER

1071-02-71

(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.

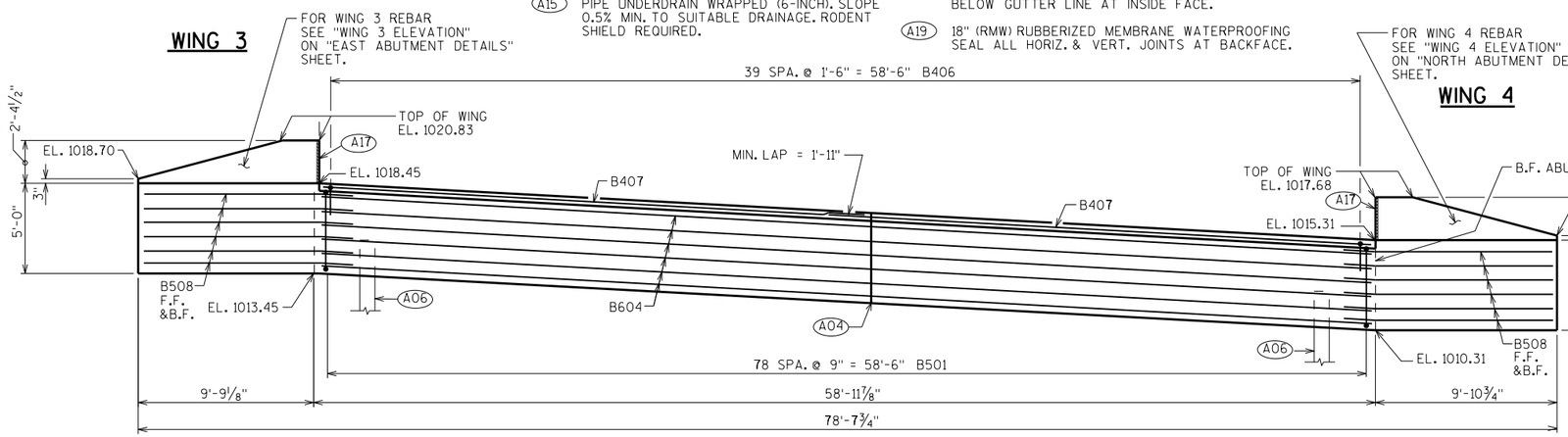
(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 35'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 115 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

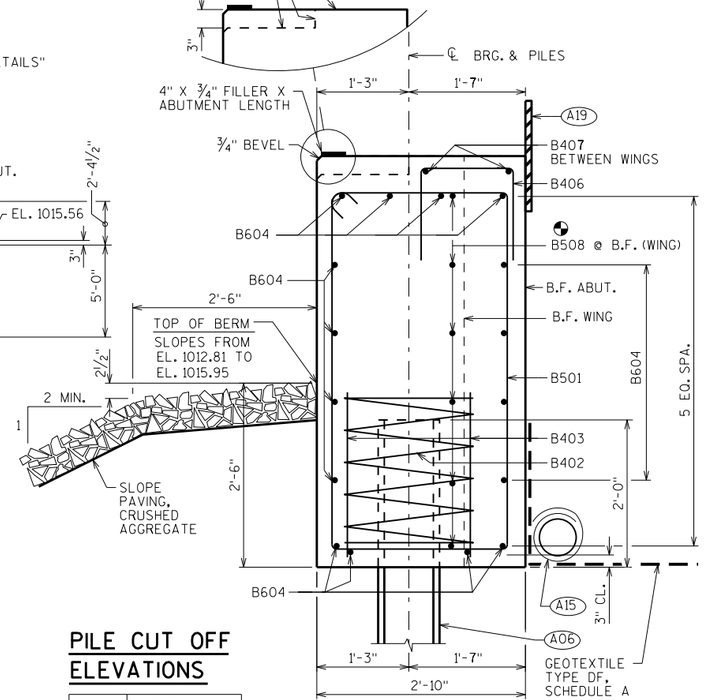
(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

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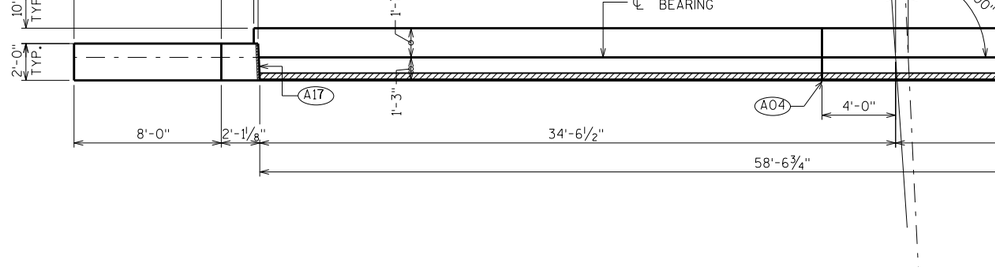
STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".



B508 BARS ARE ALSO PLACED AT F.F. OF WING. (NOT SHOWN, FOR CLARITY)

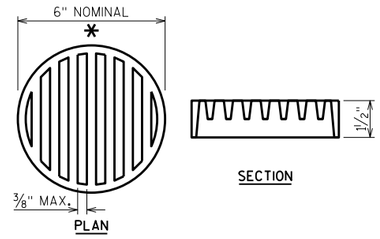


SECTION THRU BODY



PILE CUT OFF ELEVATIONS

PILE #	TOP OF PILE
1	EL. 1015.29
2	EL. 1014.89
3	EL. 1014.48
4	EL. 1014.08
5	EL. 1013.67
6	EL. 1013.27
7	EL. 1012.86
8	EL. 1012.46

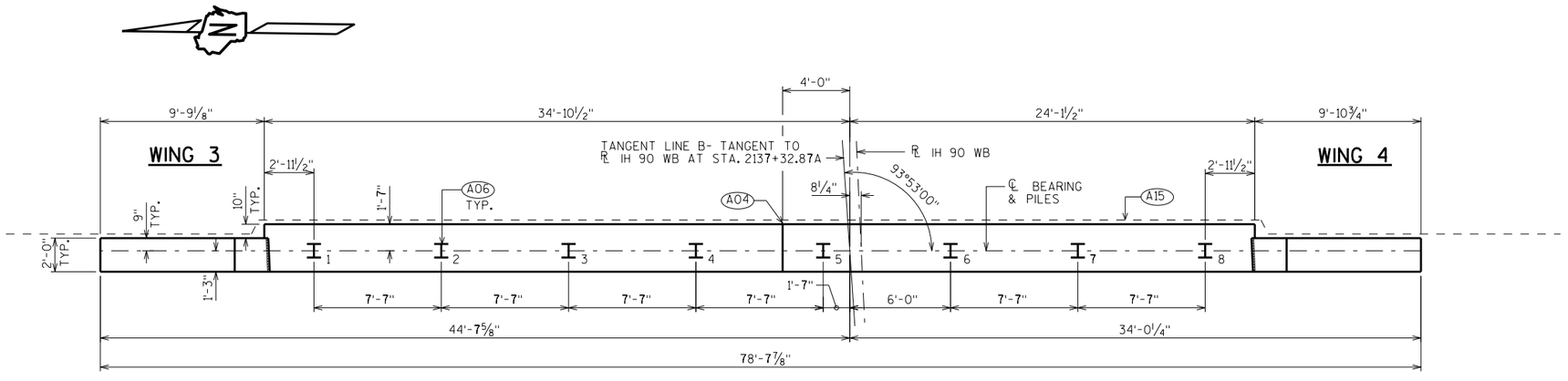


RODENT SHIELD DETAIL

* 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.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

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EAST ABUTMENT

SHEET 6

259

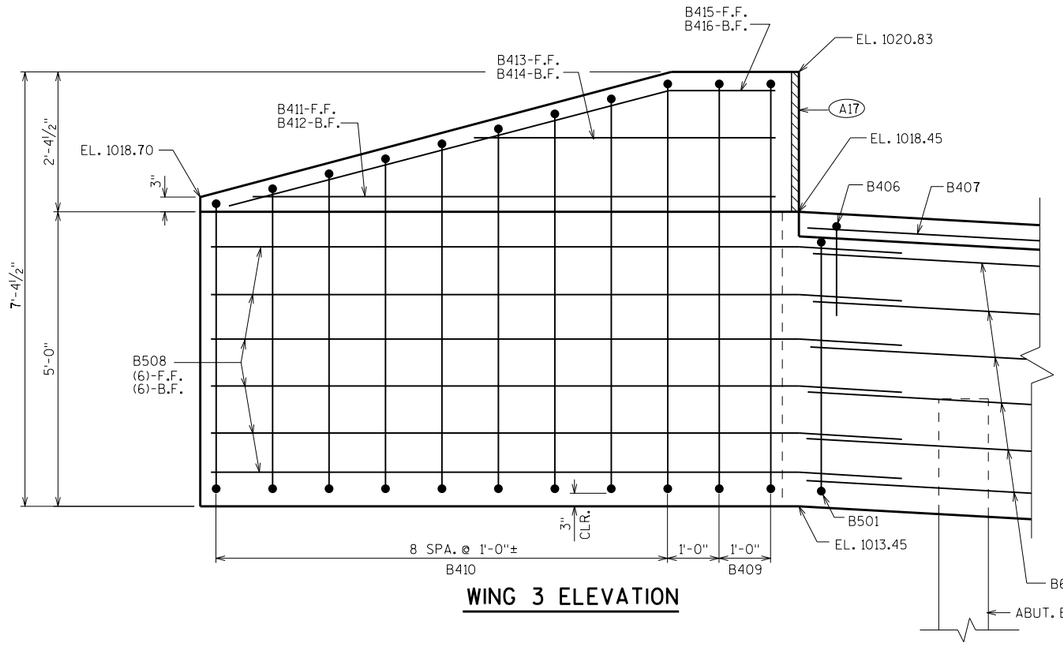
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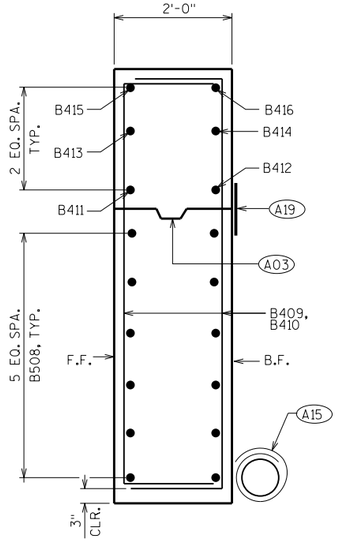
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STATE PROJECT NUMBER

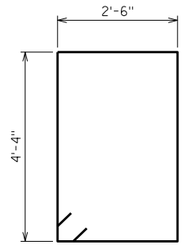
1071-02-71



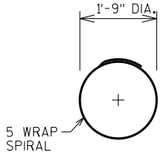
WING 3 ELEVATION



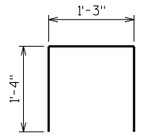
WING 3 SECTION



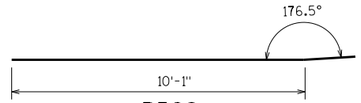
B501



B402



B406



B508

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

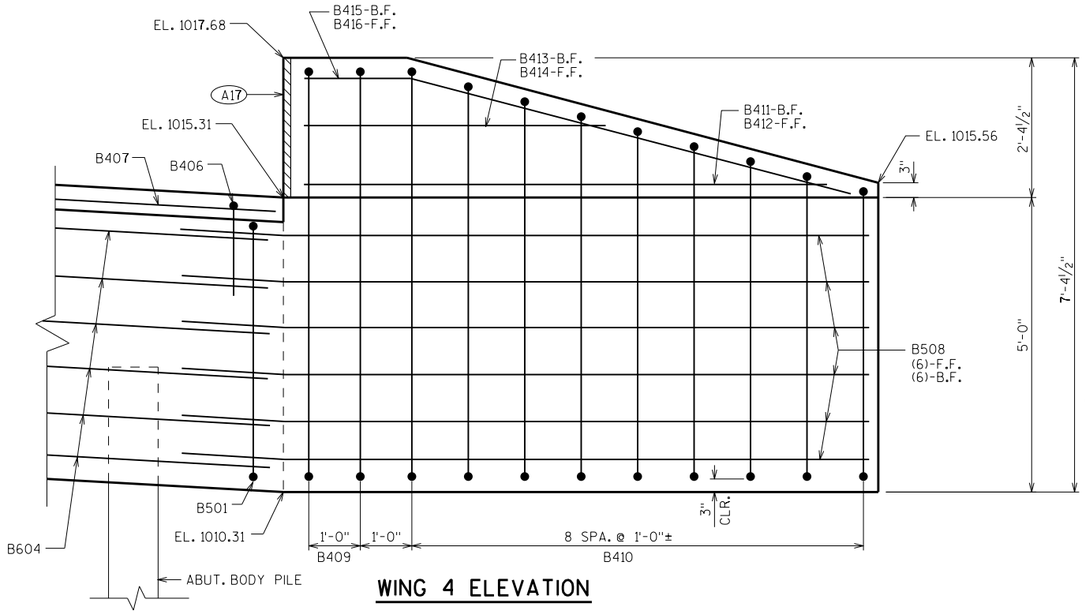
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
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B402		8	28'-0"	X		BODY-1 PER PILE
B403		16	2'-3"			BODY-2 PER PILE
B604		16	58'-5"			BODY-HORIZ.
~~B505~~		NOT	USED			~~BODY HORIZ. TOP~~
B406		40	3'-9"	X		BODY-VERT. U-BAR
B407		4	30'-3"			BODY-HORIZ.-TOP NOTCH
B508	X	24	11'-10"	X		WINGS/BODY-HORIZ.
B409	X	8	10'-2"	X		WINGS-VERT.
B410	X	36	9'-1"	X	⚠	WINGS-VERT.
B411	X	2	9'-5"			WINGS-HORIZ.-UPPER
B412	X	2	9'-3"			WINGS-HORIZ.-UPPER
B413	X	2	5'-8"			WINGS-HORIZ.-UPPER
B414	X	2	5'-6"			WINGS-HORIZ.-UPPER
B415	X	2	10'-1"	X		WINGS-HORIZ.-TOP
B416	X	2	9'-11"	X		WINGS-HORIZ.-TOP

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

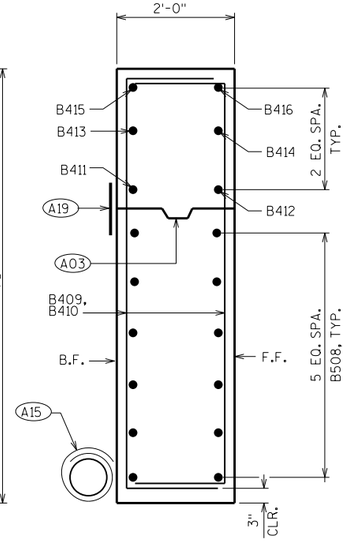
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B410	4 SERIES OF 9	8'-0" TO 10'-1"

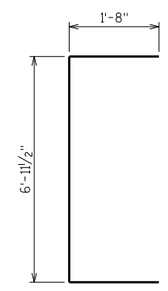
BUNDLE AND TAG EACH SERIES SEPARATELY.



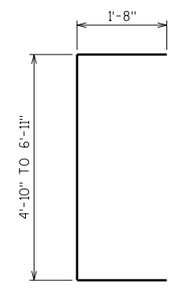
WING 4 ELEVATION



WING 4 SECTION



B409



B410



B415, B416

(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.

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STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

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EAST ABUTMENT DETAILS

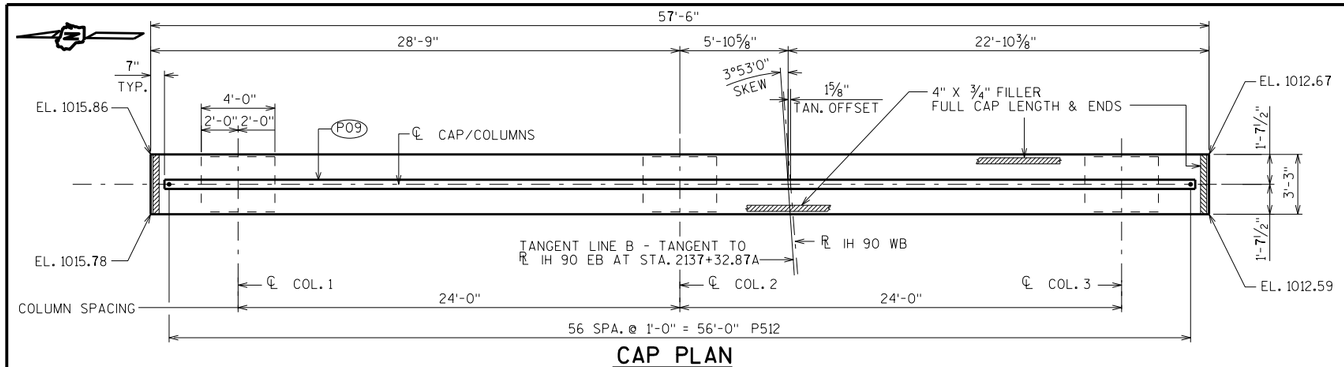
SHEET 7

260

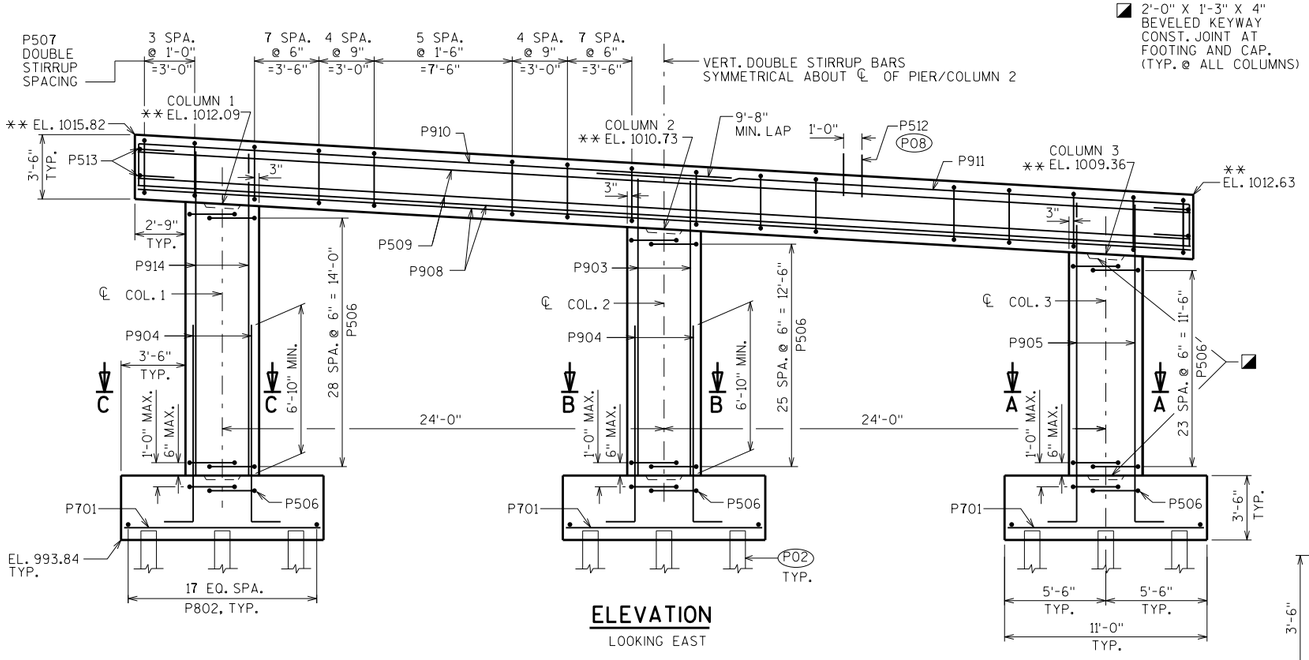
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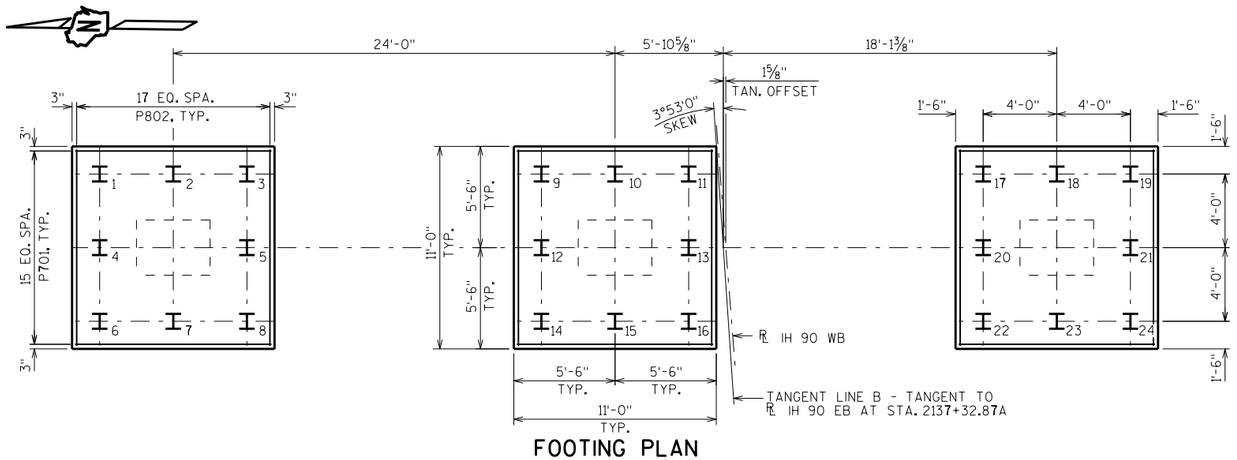


CAP PLAN



ELEVATION

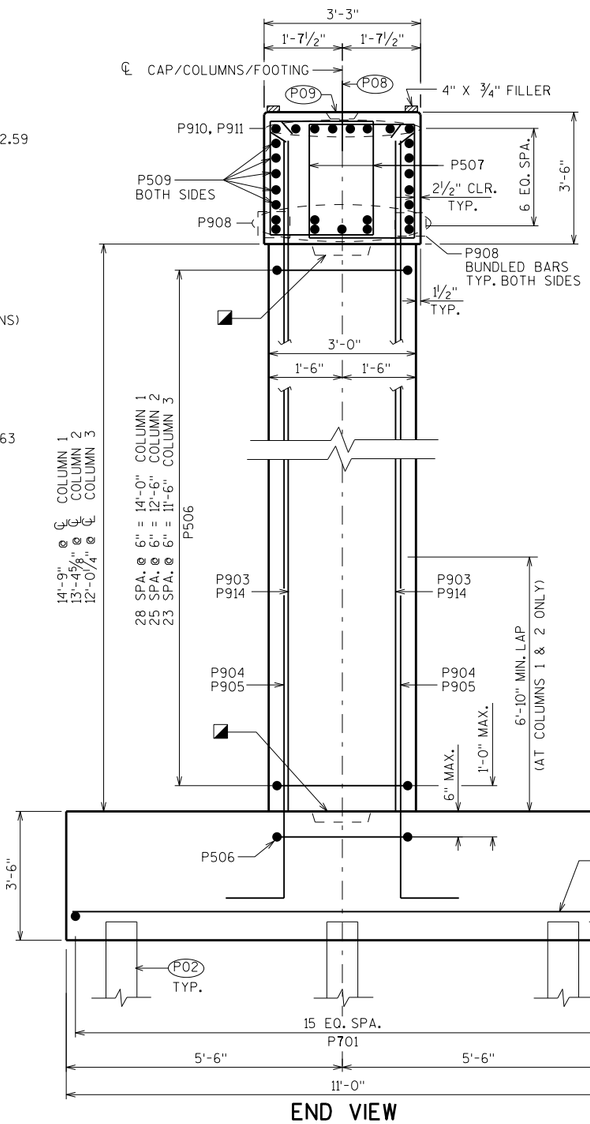
LOOKING EAST



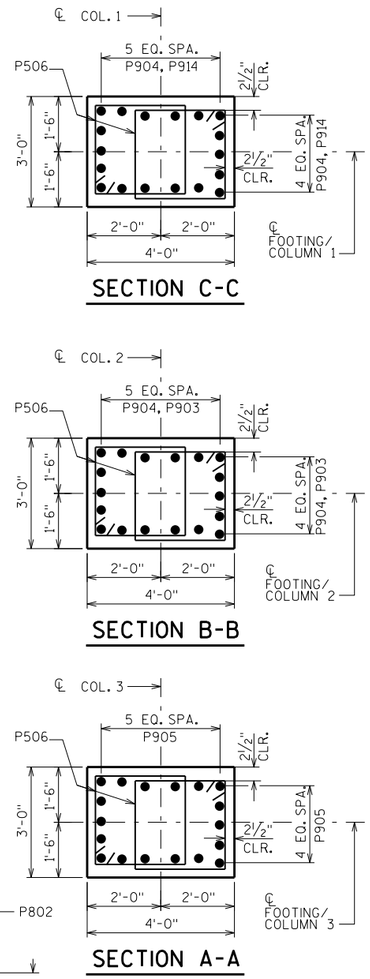
FOOTING PLAN

WIRE BARS TOGETHER @ 2'-0" CTR'S.

BUNDLING DETAIL



END VIEW



** ELEVATIONS GIVEN AT ℄ PIER

(P02) SUPPORT PIER ON HP 10 x 42 STEEL PILING, ESTIMATED 15'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQ'D.

(P08) P512 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.

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STRUCTURE B-41-294

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PIER 1

SHEET 8

261

STATE PROJECT NUMBER

1071-02-71

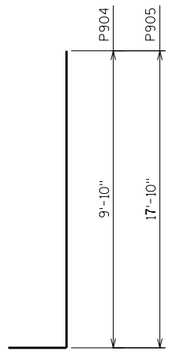
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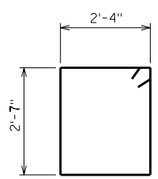
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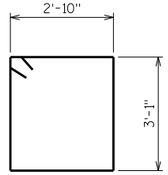
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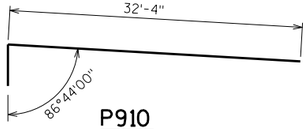
P904, P905



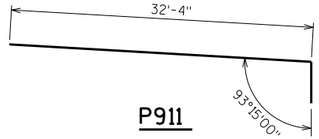
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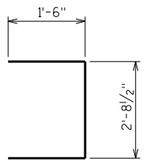
P507



P910



P911



P513

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
P701		48	10'-8"			FOOTING-HORIZ.
P802		54	10'-8"			FOOTING-HORIZ.
P903	X	18	16'-2"			COLUMN 2-VERT.
P904	X	36	11'-2"	X		FOOTING/COLUMNS 1 & 2-VERT.
P905	X	18	19'-2"	X		FOOTING/COLUMN 3-VERT.
P506	X	164	10'-6"	X		FOOTING/COLUMN-HORIZ.
P507	X	128	12'-6"	X		CAP-VERT. STIRRUP
P908	X	9	57'-3"			CAP-HORIZ.-BOT.
P509	X	10	57'-3"			CAP-HORIZ.-MIDDLE
P910	X	8	33'-10"	X		CAP-TOP
P911	X	8	33'-10"	X		CAP-TOP
P512	X	57	2'-0"			CAP-VERT.-DOWEL BAR
P513	X	10	5'-6"	X		CAP-HORIZ.-END
P914	X	18	17'-7"			COLUMN 1-VERT.

NO.	DATE	REVISION	BY

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STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

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PIER 1
DETAILS

SHEET 9

262

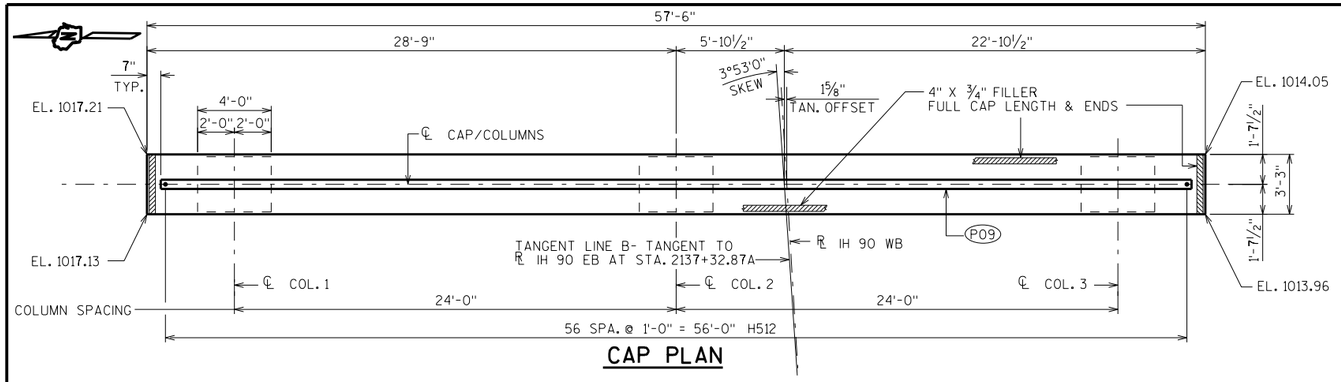
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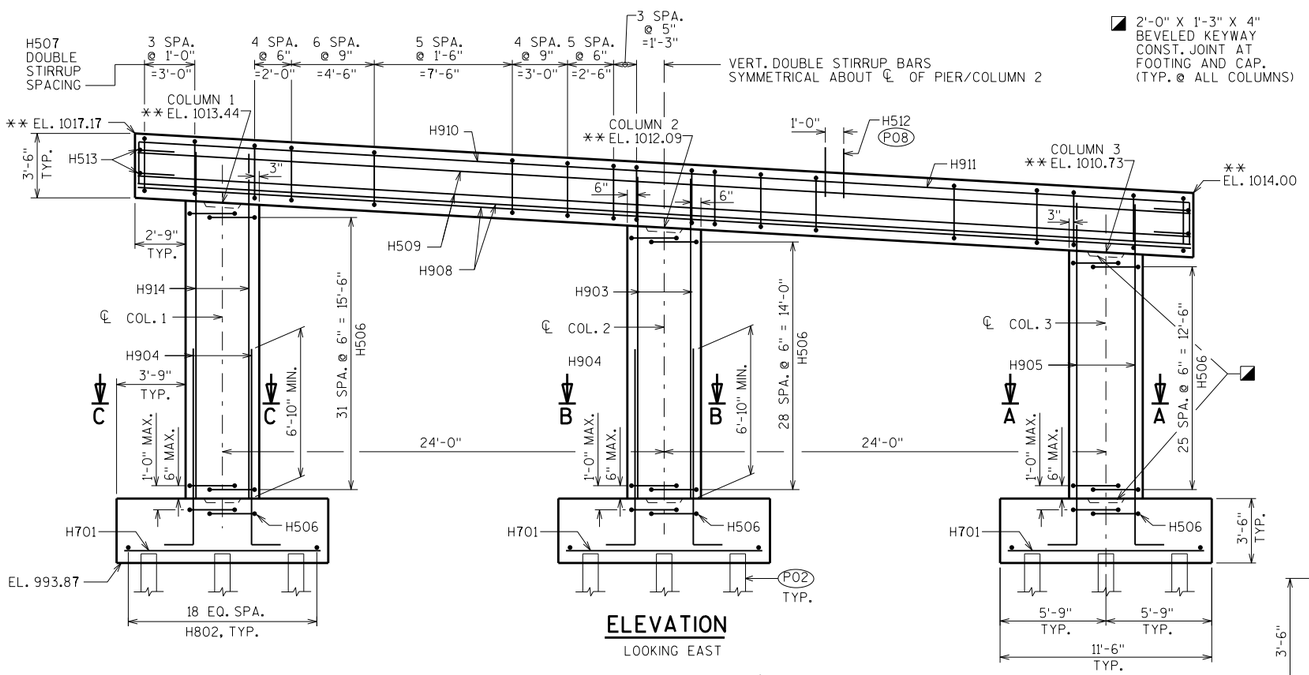
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STATE PROJECT NUMBER

1071-02-71

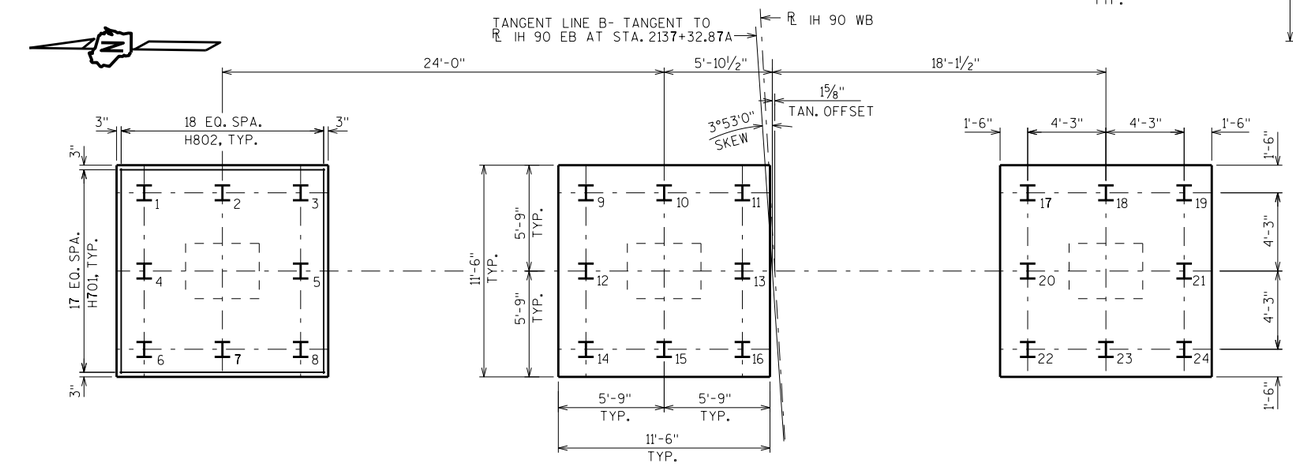


CAP PLAN



ELEVATION

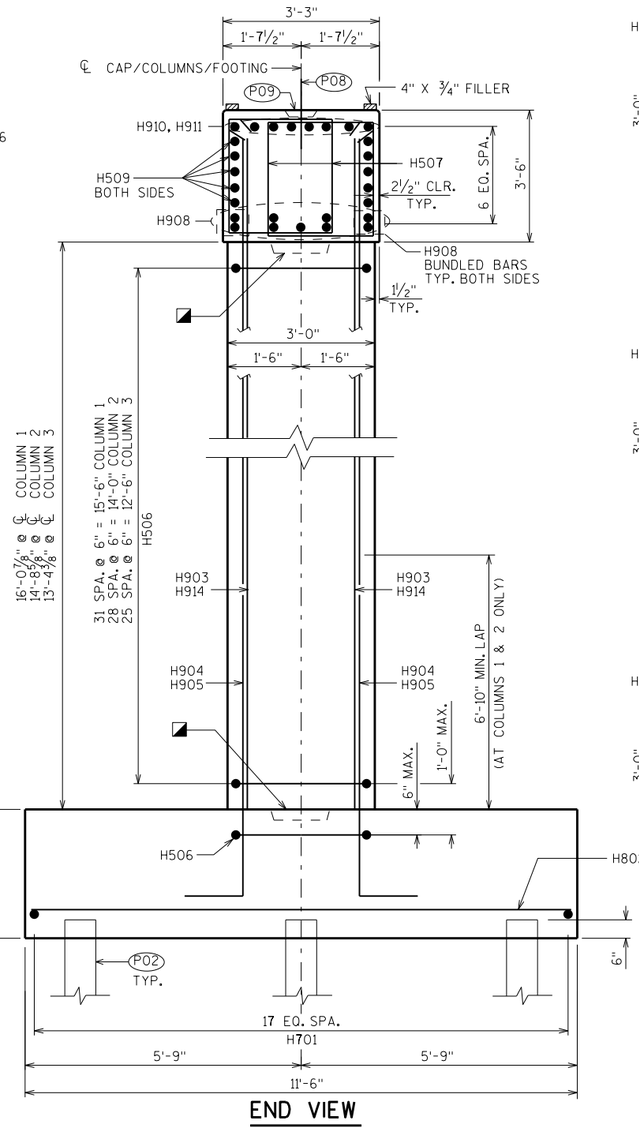
LOOKING EAST



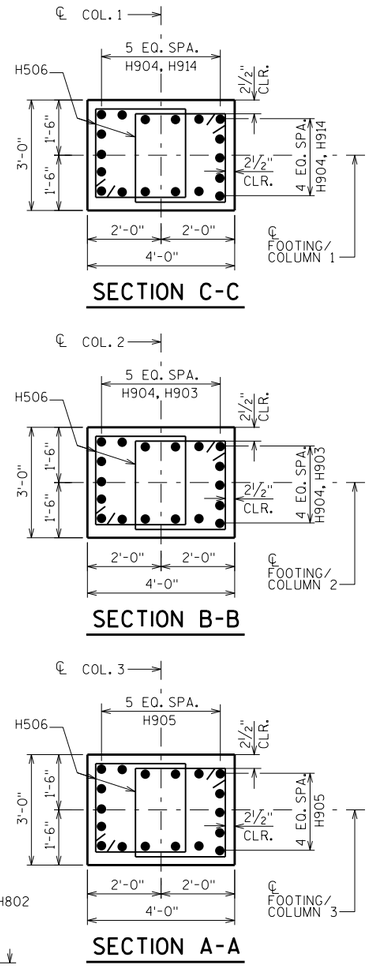
FOOTING PLAN



BUNDLING DETAIL



END VIEW



** ELEVATIONS GIVEN AT ℄ PIER

(P02) SUPPORT PIER ON HP 10 x 42 STEEL PILING. ESTIMATED 15'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQ'D.

(P08) H512 BARS @ 1'-0" CTRS. 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.

NO.	DATE	REVISION	BY

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PIER 2

SHEET 10

263

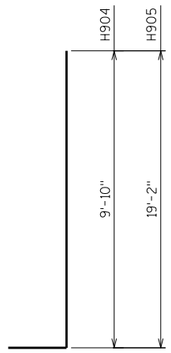
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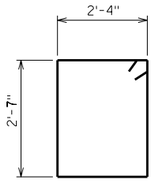
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STATE PROJECT NUMBER

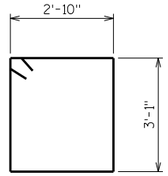
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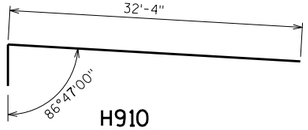
H904, H905



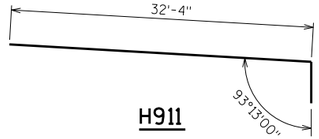
H506



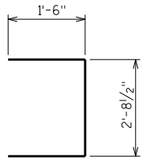
H507



H910



H911



H513

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
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H802		57	11'-2"			FOOTING-HORIZ.
H903	X	18	17'-8"			COLUMN 2-VERT.
H904	X	36	11'-2"	X		FOOTING/COLUMNS 1 & 2-VERT.
H905	X	18	20'-6"	X		FOOTING/COLUMN 3-VERT.
H506	X	180	10'-6"	X		FOOTING/COLUMN-HORIZ.
H507	X	128	12'-6"	X		CAP-VERT. STIRRUP
H908	X	9	57'-3"			CAP-HORIZ.-BOT.
H509	X	10	57'-3"			CAP-HORIZ.-MIDDLE
H910	X	8	33'-10"	X		CAP-TOP
H911	X	8	33'-10"	X		CAP-TOP
H512	X	57	2'-0"			CAP-VERT.-DOWEL BAR
H513	X	10	5'-6"	X		CAP-HORIZ.-END
H914	X	18	18'-11"			COLUMN 1-VERT.

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STRUCTURE B-41-294

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PIER 2
DETAILS

SHEET 11

264

8

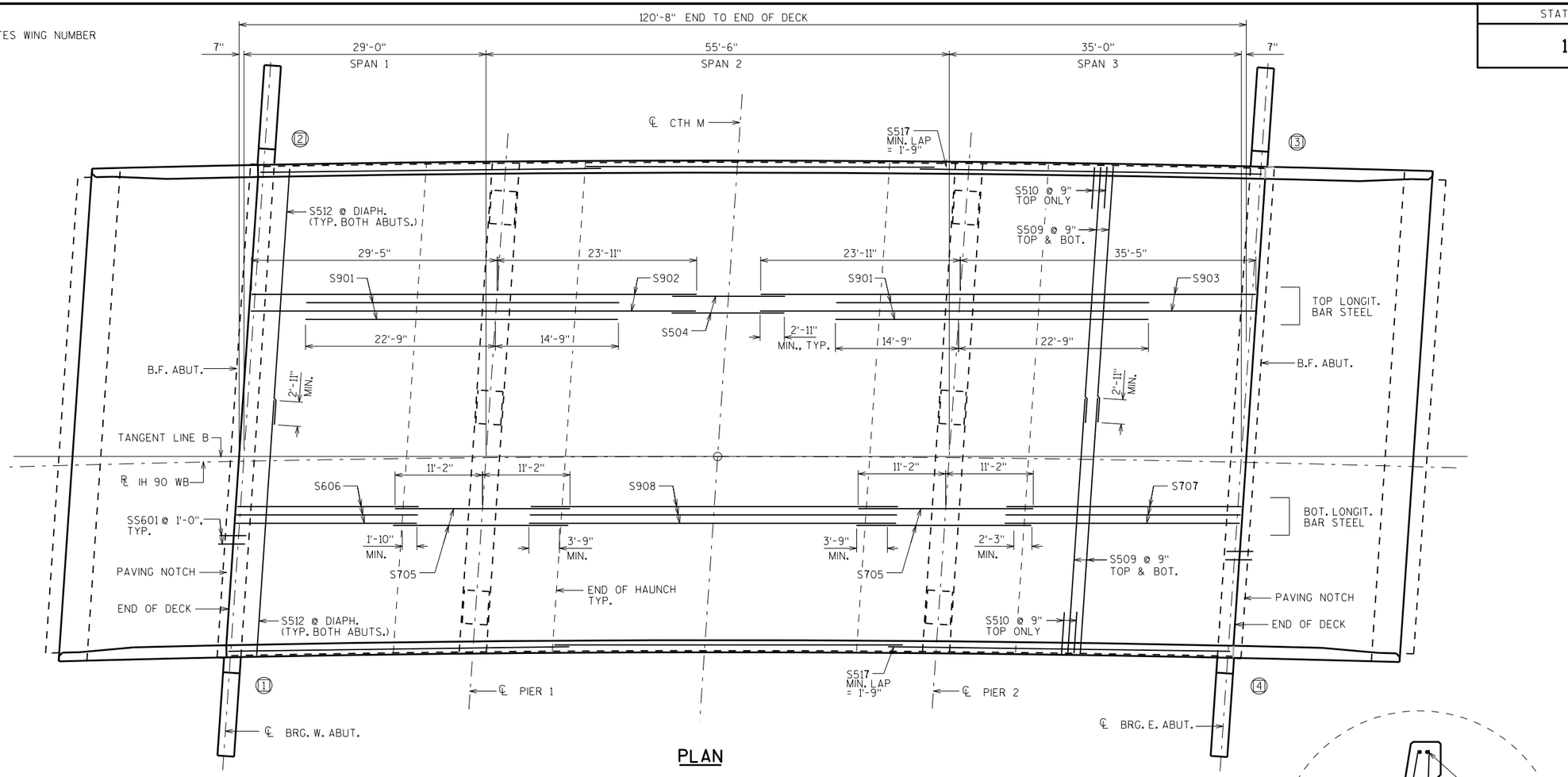
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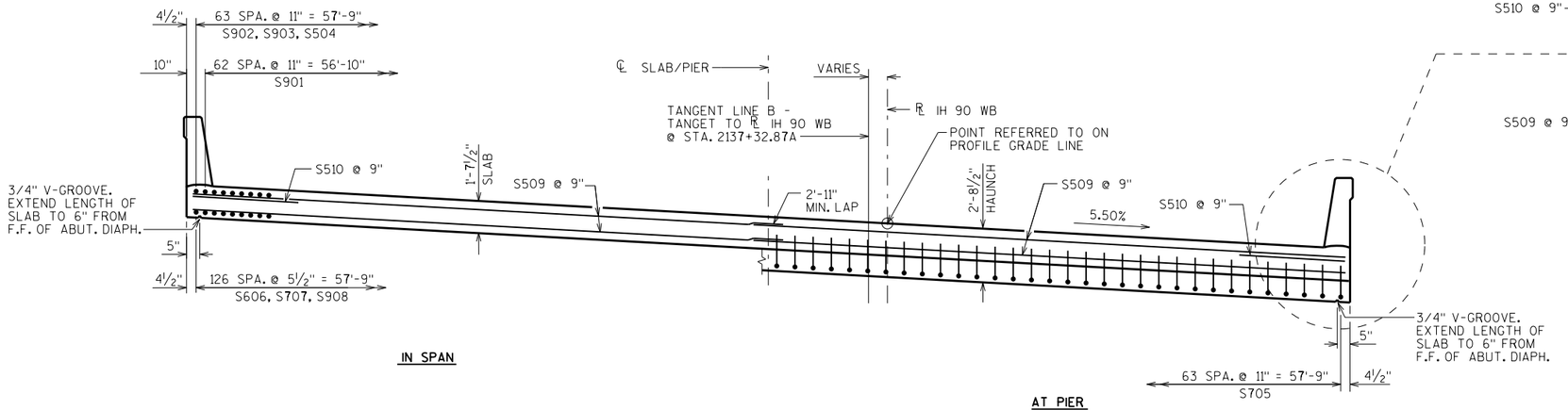
STATE PROJECT NUMBER

1071-02-71

INDICATES WING NUMBER

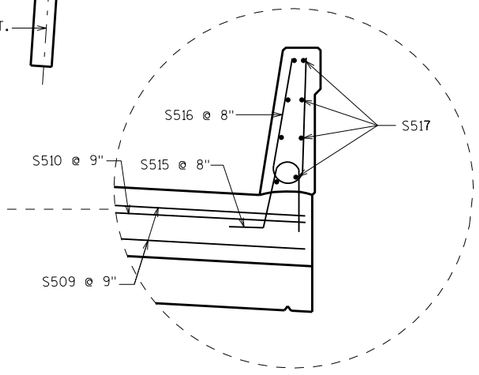


PLAN



CROSS SECTION THRU DECK SLAB

(LOOKING UPSTATION)



TYP. BOTH SIDES

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DEPARTMENT OF TRANSPORTATION
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SUPERSTRUCTURE

SHEET 12

265

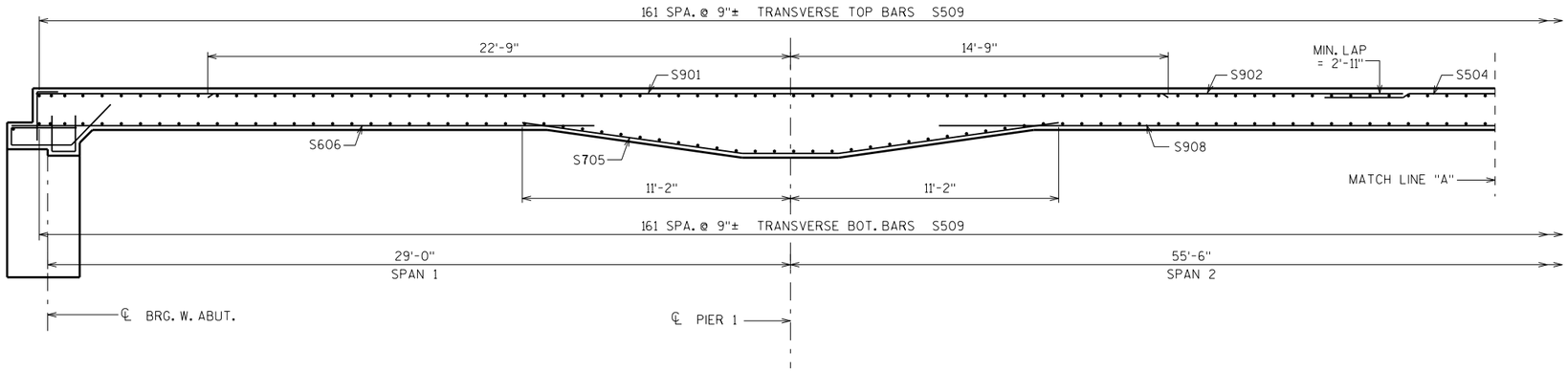
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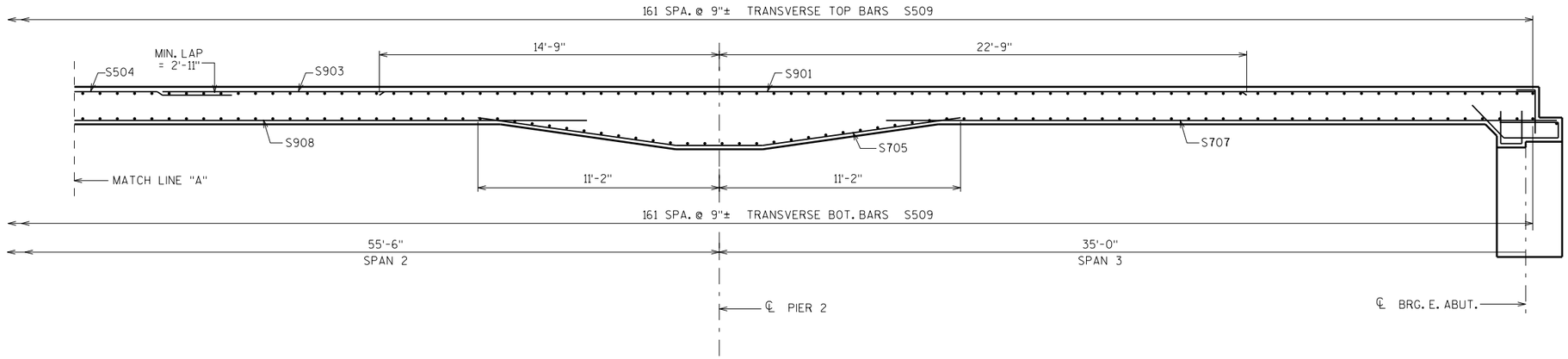
STATE PROJECT NUMBER

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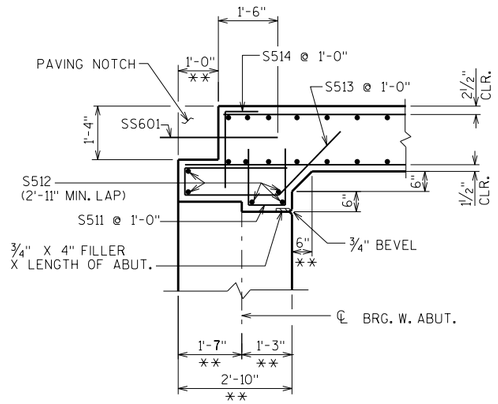
PART LONGITUDINAL SECTION

(LOOKING NORMAL TO TANGENT LINE B)

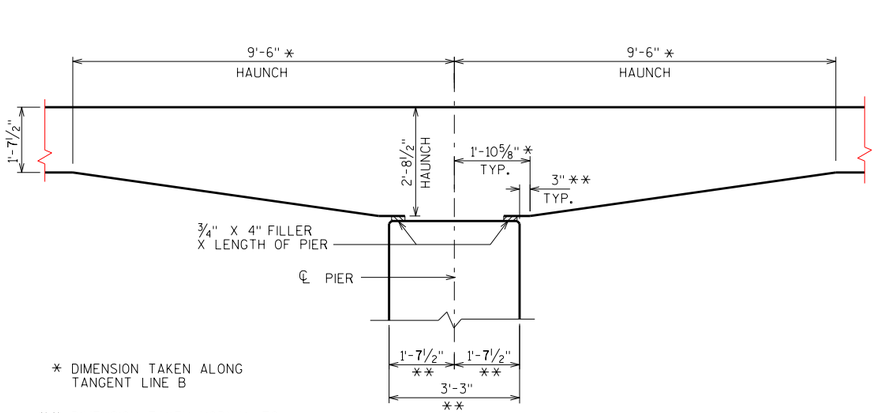


PART LONGITUDINAL SECTION

(LOOKING NORMAL TO TANGENT LINE B)



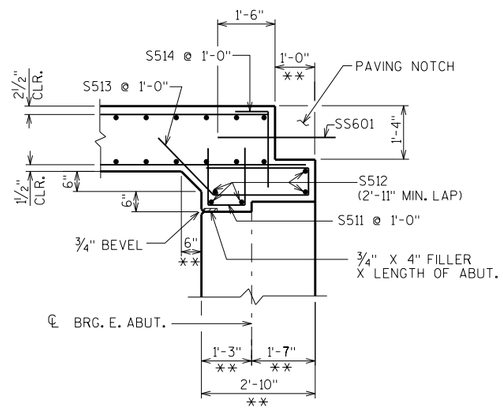
WEST ABUTMENT DETAIL



* DIMENSION TAKEN ALONG TANGENT LINE B

** DIMENSION TAKEN NORMAL TO ℄ SUBSTRUCTURE

PIER DETAIL



EAST ABUTMENT DETAIL

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SUPERSTRUCTURE DETAILS 1

SHEET 13

266

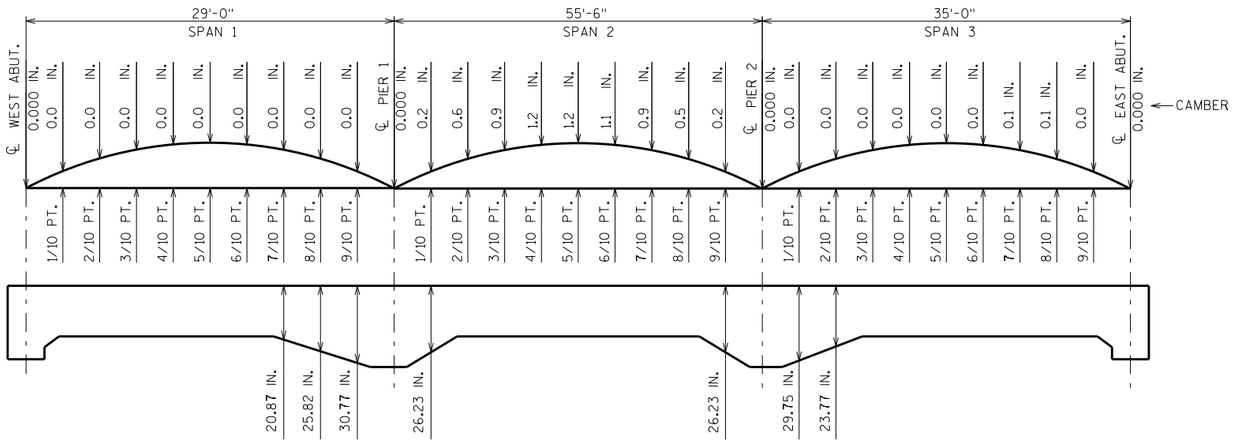
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STATE PROJECT NUMBER

1071-02-71



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
LESS (-) SLAB THICKNESS
PLUS (+) CAMBER
PLUS (+) FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS = TOP OF SLAB FALSEWORK ELEVATION.

SURVEY TOP OF SLAB ELEVATIONS

	PIER 1	5/10 PT.	PIER 2	5/10 PT.	PIER 3	5/10 PT.	PIER 4	5/10 PT.	PIER 5	5/10 PT.	E. ABUT.
N. EDGE											
CROWN OR ℄											
S. EDGE											

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE ℄ OF ABUTMENTS, THE ℄ OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR ℄. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

TOP OF SLAB ELEVATIONS

	℄ 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
N. EDGE OF SLAB	1017.79	1017.87	1017.94	1018.02	1018.09	1018.16	1018.24	1018.31	1018.38	1018.46	1018.53	1018.67	1018.81	1018.95	1019.10	1019.24	1019.38	1019.52	1019.66	1019.80	1019.94
℄ IH 90	1015.85	1015.92	1016.00	1016.07	1016.14	1016.22	1016.29	1016.37	1016.44	1016.52	1016.59	1016.73	1016.88	1017.02	1017.16	1017.31	1017.45	1017.59	1017.73	1017.88	1018.02
S. EDGE OF SLAB	1014.58	1014.66	1014.73	1014.81	1014.88	1014.96	1015.03	1015.11	1015.19	1015.26	1015.34	1015.48	1015.62	1015.77	1015.91	1016.05	1016.20	1016.34	1016.49	1016.63	1016.77

℄ PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. E. ABUT.
1019.94	1020.03	1020.12	1020.21	1020.30	1020.38	1020.47	1020.56	1020.65	1020.74	1020.83
1018.02	1018.11	1018.20	1018.29	1018.38	1018.47	1018.56	1018.65	1018.74	1018.83	1018.92
1016.77	1016.86	1016.95	1017.05	1017.14	1017.23	1017.32	1017.41	1017.50	1017.59	1017.68

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIAMTELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

PARAPETS SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

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STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

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SUPERSTRUCTURE DETAILS 2

SHEET 14

267

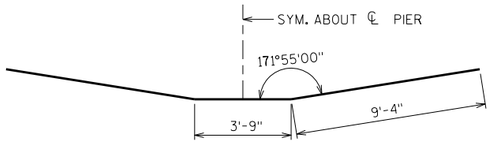
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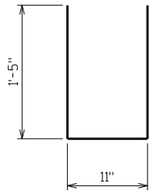
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STATE PROJECT NUMBER

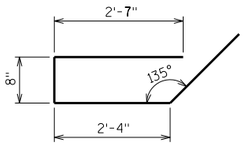
1071-02-71



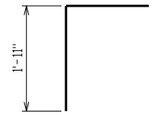
S705



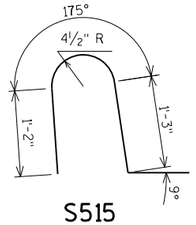
S511



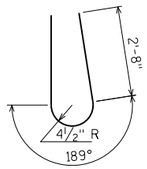
S513



S514



S515



S516

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
S901	X	126	37'-6"			SLAB- TOP-LONGIT.
S902	X	64	53'-4"			SLAB- TOP-LONGIT.
S903	X	64	59'-4"			SLAB- TOP-LONGIT.
S504	X	64	13'-9"			SLAB- TOP-LONGIT.
S705	X	128	22'-4"	X		SLAB-BOT.-HAUNCH
S606	X	127	21'-9"			SLAB-BOT.-LONGIT.
S707	X	127	28'-2"			SLAB-BOT.-LONGIT.
S908	X	127	44'-0"			SLAB-BOT.-LONGIT.
S509	X	648	30'-10			SLAB-TOP & BOT.-TRANSVERSE
S510	X	322	5'-0"			SLAB-TOP-TRANS.-EDGES
S511	X	120	3'-6"	X		DIAPH.-VERT.
S512	X	20	30'-10			DIAPH.-HORIZ.
S513	X	120	7'-5"	X		DIAPH.-VERT.
S514	X	120	2'-9"	X		DIAPH.-VERT.
S515	X	364	4'-5"	X		SLAB/PARAPET-VERT.
S516	X	364	6'-8"	X		PARAPET-VERT.
S517	X	48	41'-11"			PARAPET-HORIZ.
STAINLESS STEEL → SS601		118	3'-0"			STRUCTURE SLAB/APPROACH SLAB

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

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SUPERSTRUCTURE DETAILS 3

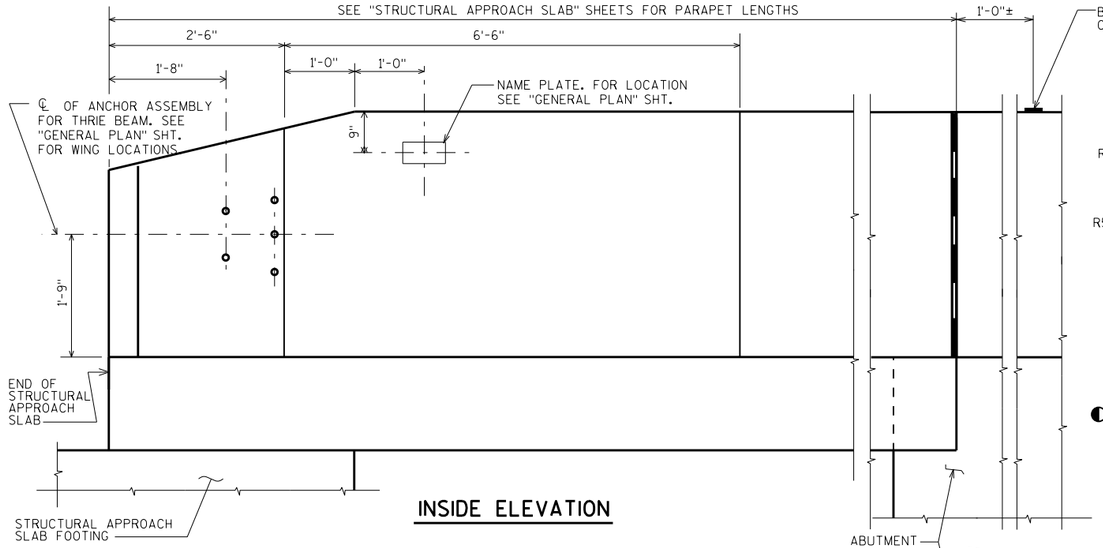
SHEET 15

268

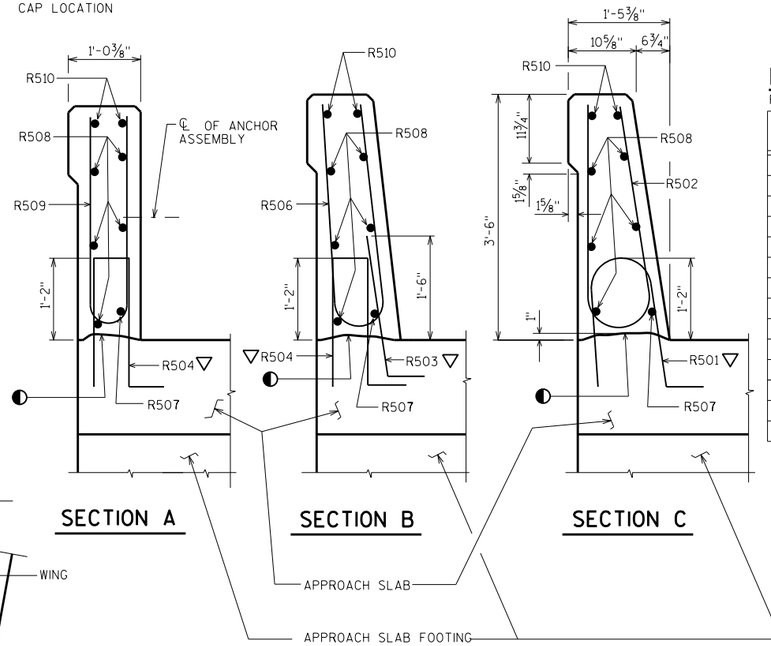
SCALE = 2.667

STATE PROJECT NUMBER

1071-02-71



INSIDE ELEVATION



BILL OF BARS

FOR STRUCTURAL APPROACH SLAB PARAPETS

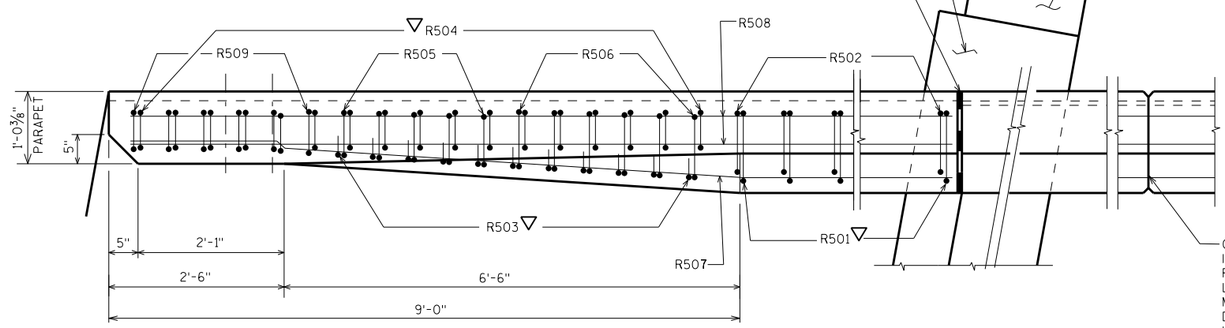
BAR MARK	COAT	WEST APPR.	EAST APPR.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	22	22	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-7"	X		PARAPET HORIZ.
R508	X	10	10	19'-7"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	19'-7"	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

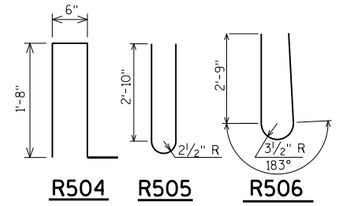
MARK	NO. REQD.	LENGTH
S509	4 SERIES OF 6	4'-9" TO 6'-1"

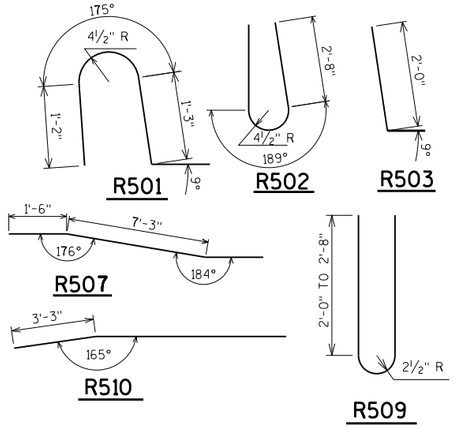
BUNDLE AND TAG EACH SERIES SEPARATELY.

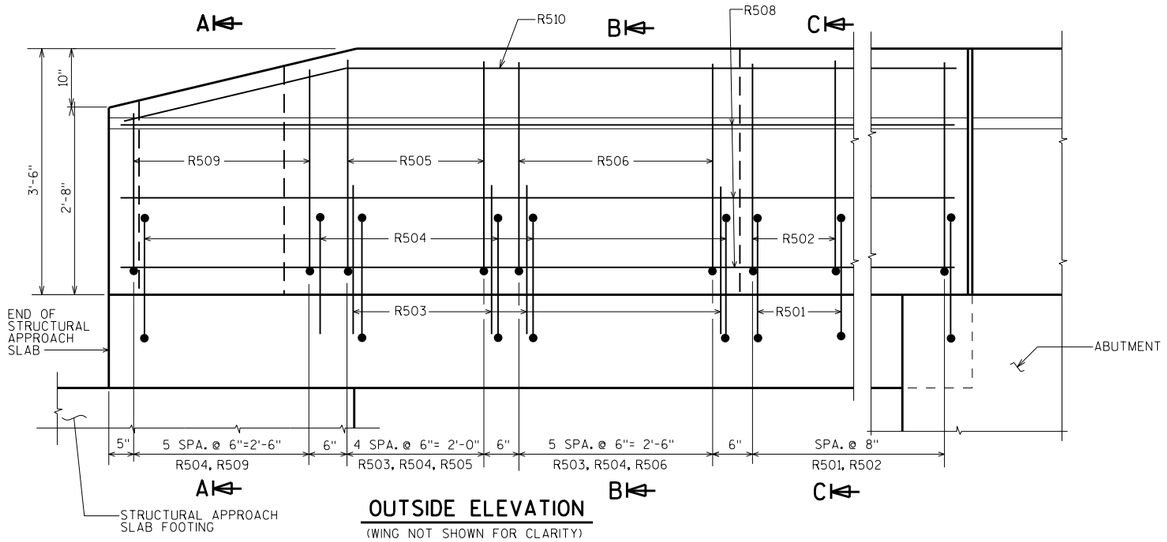


PLAN

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.

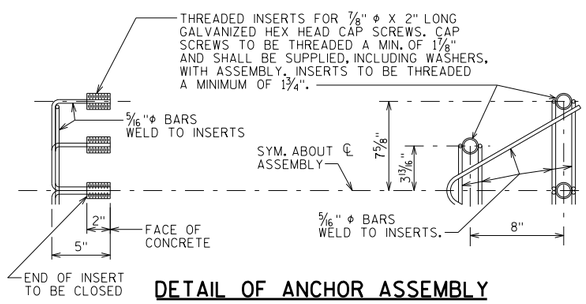






OUTSIDE ELEVATION

(WING NOT SHOWN FOR CLARITY)



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.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◆ SLOPE FOR DRAINAGE

▽ R501, R503, AND R504 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-41-294

DRAWN BY WWR | PLANS CK'D. JLR

SINGLE SLOPE PARAPET 42SS

SHEET 16

269

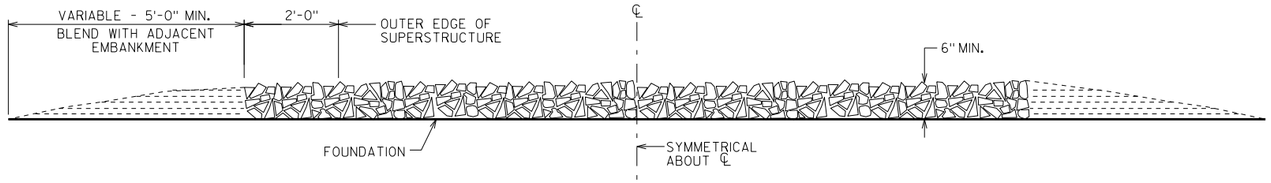
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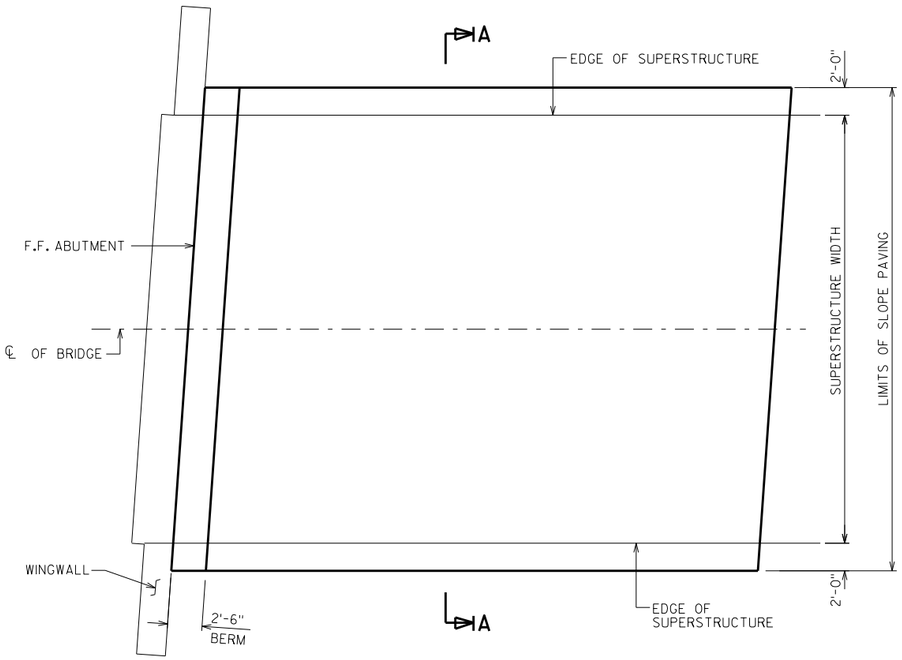
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STATE PROJECT NUMBER

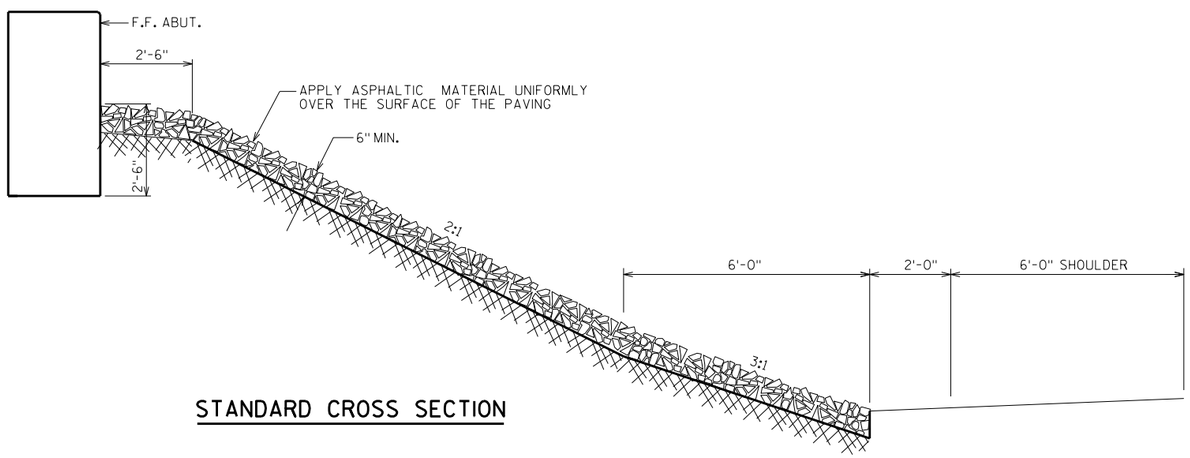
1071-02-71



SECTION A-A



PLAN



STANDARD CROSS SECTION

GENERAL NOTES

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

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-41-294

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SLOPE PAVING (CRUSHED AGGREGATE)

SHEET 17

270

SLPPAVCRAG

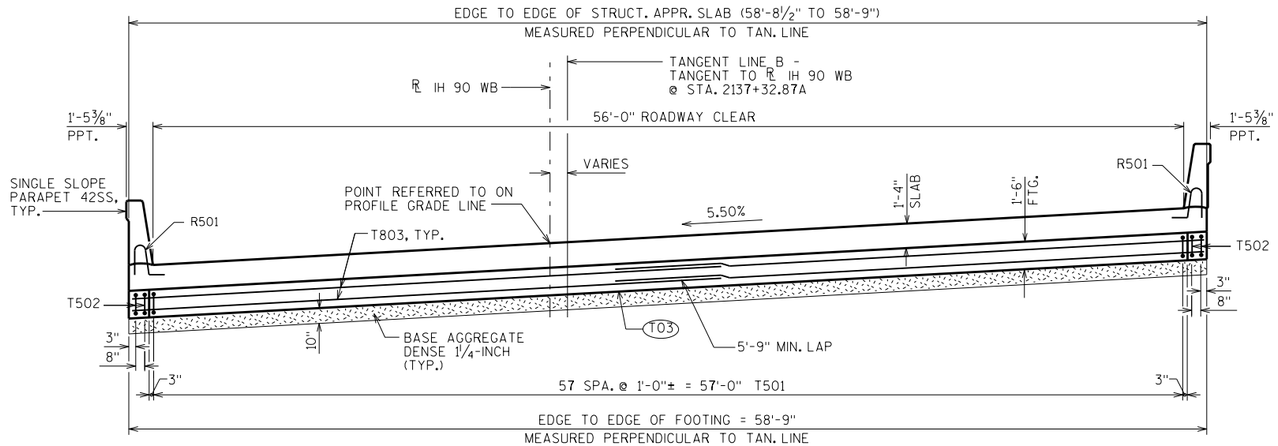
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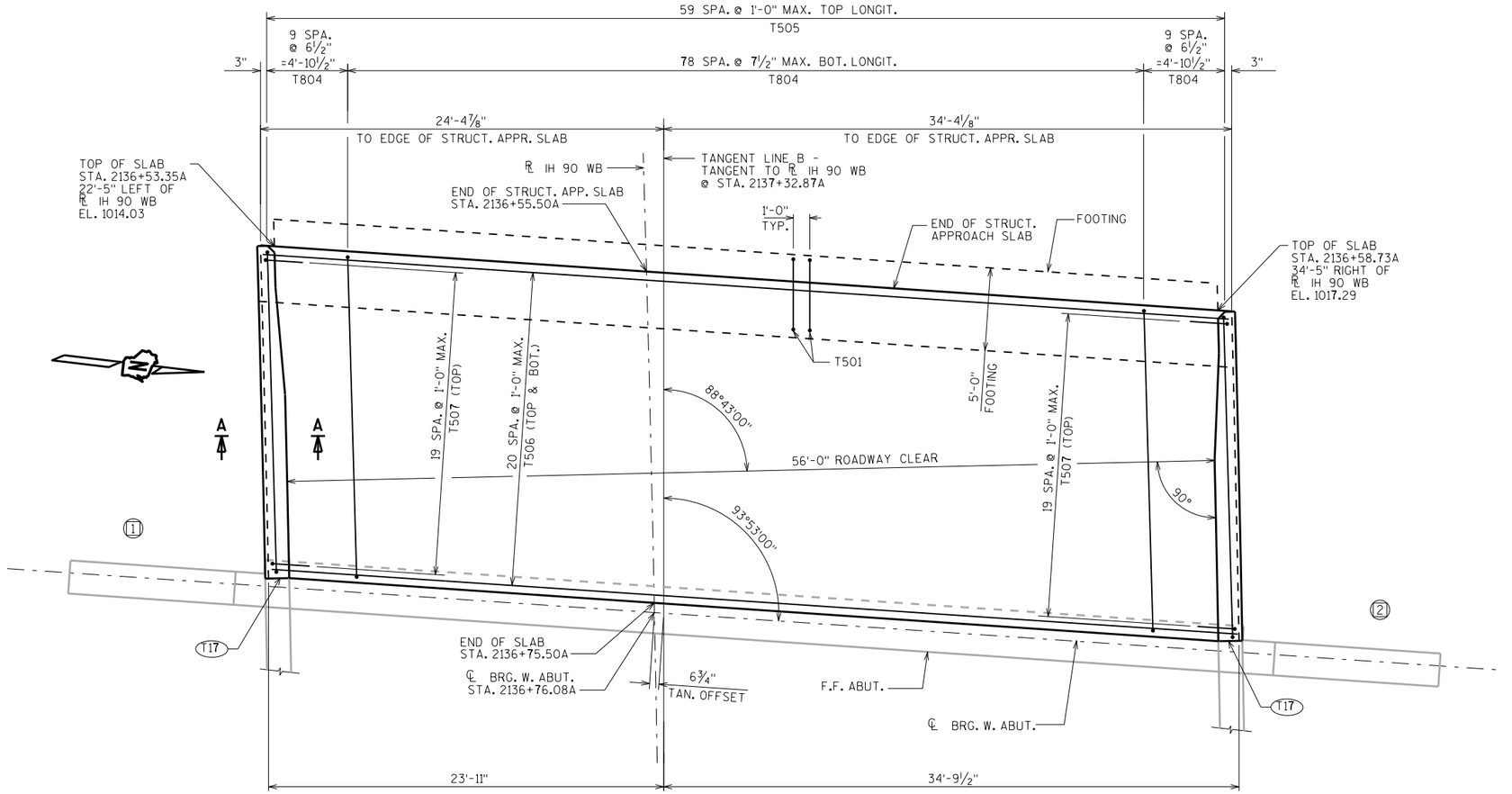
STATE PROJECT NUMBER

1071-02-71



SECTION THRU STRUCT. APPR. SLAB

SHOWING FOOTING STEEL & PARAPET STEEL IN STRUCT. APPR. SLAB ONLY
(LOOKING WEST)



PLAN

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

T17 ½" FILLER (INCLUDED IN 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.

NOTE: SEE "WEST STRUCTURAL APPROACH SLAB DETAILS" SHEET FOR SECTION A-A.

(□) INDICATES WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

DRAWN BY WWR | PLANS CK'D. JLR

WEST STRUCTURAL APPROACH SLAB

SHEET 18

271

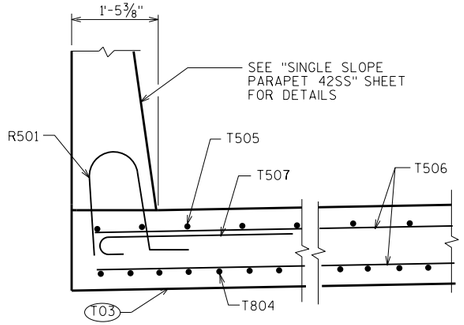
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STATE PROJECT NUMBER

1071-02-71

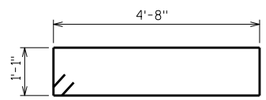


SECTION A-A

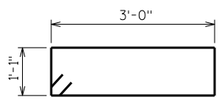
BILL OF BARS

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

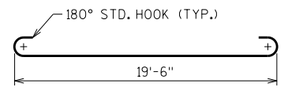
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	58	12'-2"	X		FOOTING STIRRUP
T502	X	4	8'-10"	X		FOOTING STIRRUP
T803	X	24	32'-5"			FOOTING - TRANSVERSE-HORIZ.
T804	X	97	21'-4"	X		APPROACH SLAB - LONG. - BOT.
T505	X	60	19'-6"			APPROACH SLAB - LONG. - TOP
T506	X	42	58'-6"			APPROACH SLAB - TRANS. - TOP & BOT.
T507	X	40	4'-1"	X		APPROACH SLAB - TRANS. - TOP - EDGE



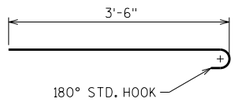
T501



T502



T804



T507

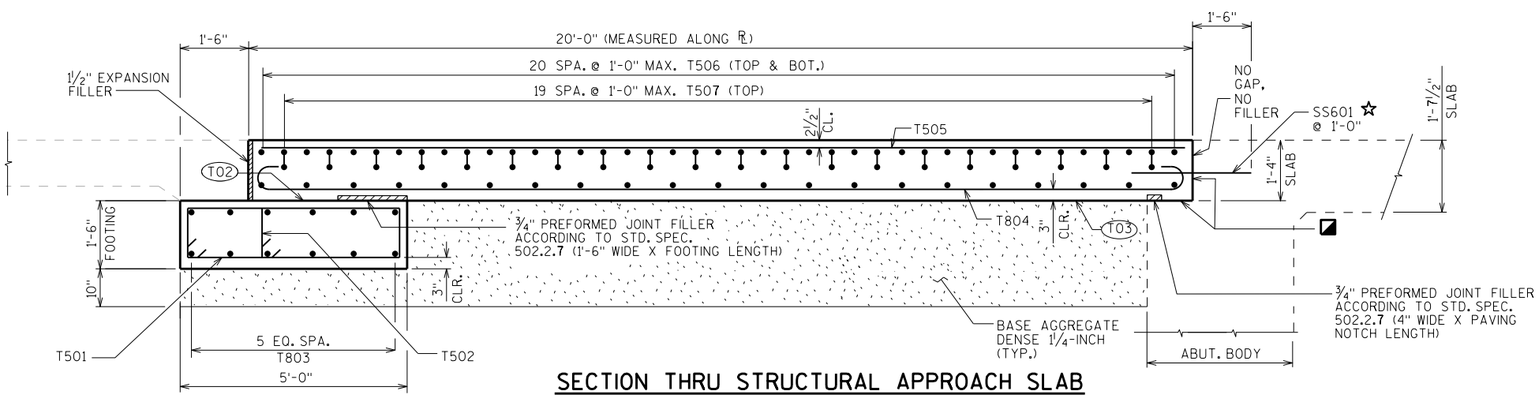
(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

◪ APPLY PROTECTIVE SURFACE TREATMENT TO ENTIRE PAVING NOTCH SURFACE PRIOR TO POURING THE STRUCTURAL APPROACH SLAB.

☆ THE BID ITEM FOR SS601 BAR STEEL IS "BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES".

ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.



SECTION THRU STRUCTURAL APPROACH SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

DRAWN BY WWR | PLANS CK'D. JLR

WEST STRUCTURAL APPROACH SLAB DETAILS

SHEET 19

272

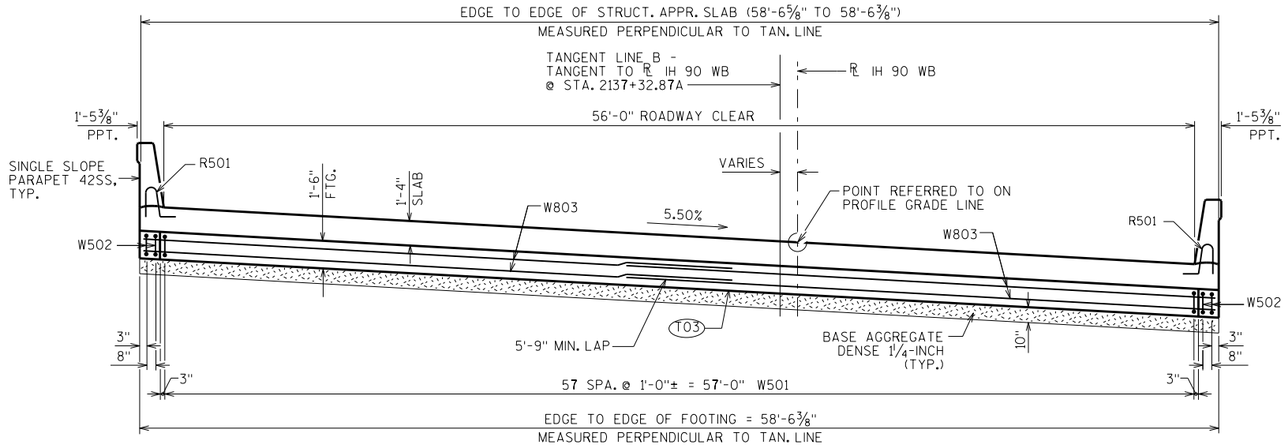
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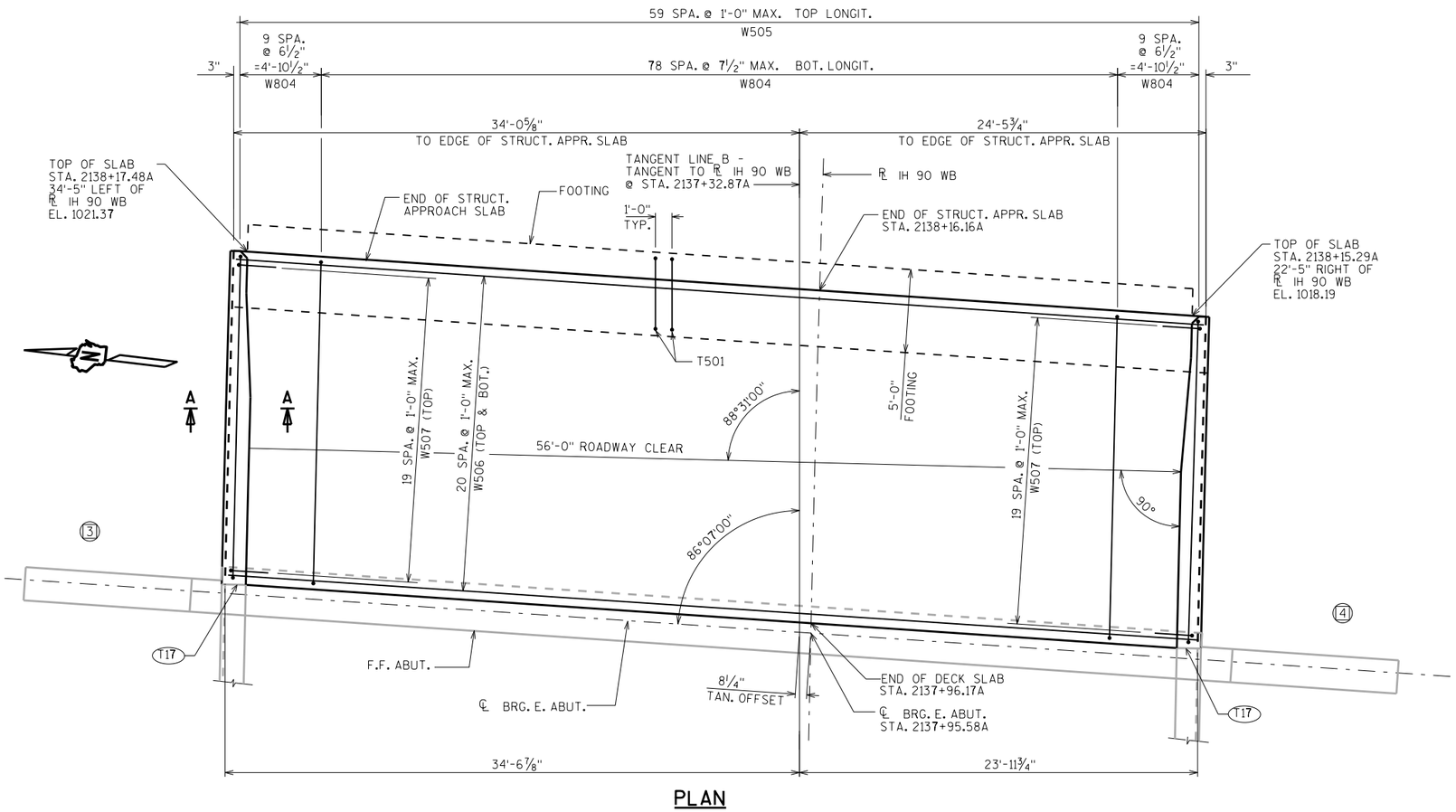
STATE PROJECT NUMBER

1071-02-71



SECTION THRU STRUCT. APPR. SLAB

SHOWING FOOTING STEEL & PARAPET STEEL IN STRUCT. APPR. SLAB ONLY
(LOOKING EAST)



PLAN

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

T17 ½" FILLER (INCLUDED IN 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.

NOTE: SEE "EAST STRUCTURAL APPROACH SLAB DETAILS" SHEET FOR SECTION A-A.

(3) INDICATES WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

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EAST STRUCTURAL APPROACH SLAB

SHEET 20

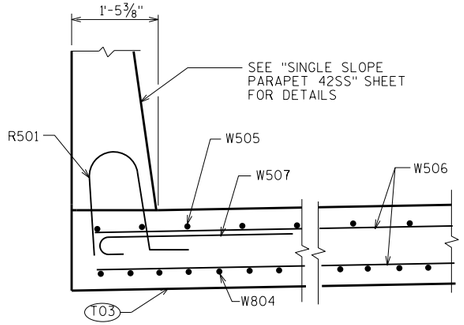
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STATE PROJECT NUMBER
1071-02-71

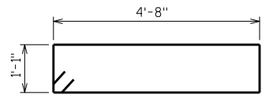


SECTION A-A

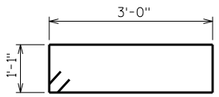
BILL OF BARS

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

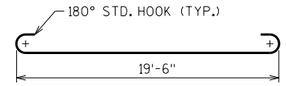
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
W501	X	58	12'-2"	X		FOOTING STIRRUP
W502	X	4	8'-10"	X		FOOTING STIRRUP
W803	X	24	32'-3"			FOOTING - TRANSVERSE-HORIZ.
W804	X	97	21'-4"	X		APPROACH SLAB - LONG. - BOT.
W505	X	60	19'-6"			APPROACH SLAB - LONG. - TOP
W506	X	42	58'-4"			APPROACH SLAB - TRANS. - TOP & BOT.
W507	X	40	4'-1"	X		APPROACH SLAB - TRANS. - TOP - EDGE



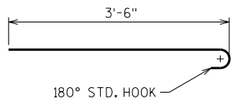
W501



W502



W804



W507

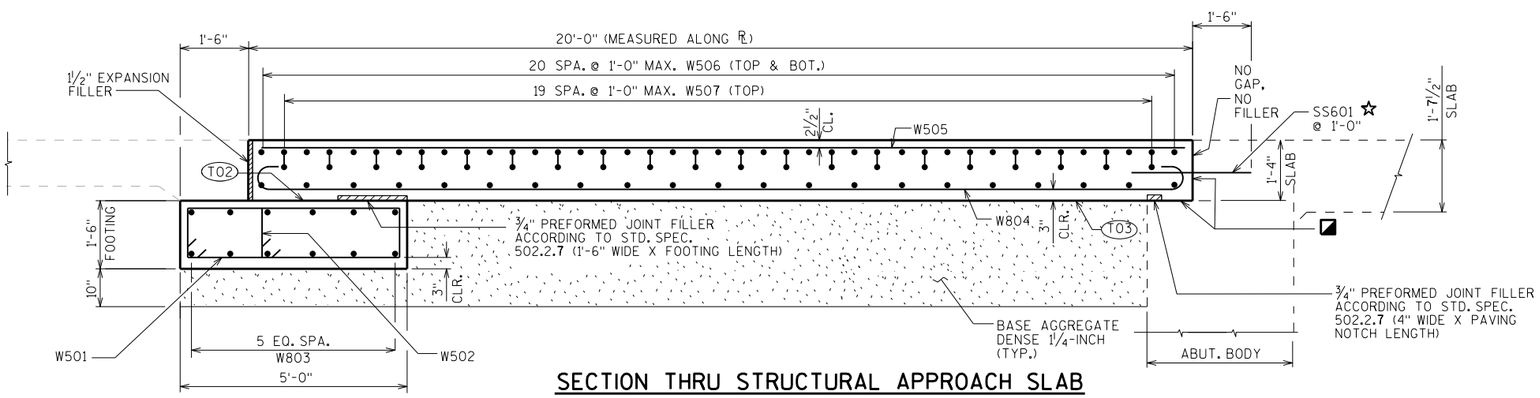
T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

◪ APPLY PROTECTIVE SURFACE TREATMENT TO ENTIRE PAVING NOTCH SURFACE PRIOR TO POURING THE STRUCTURAL APPROACH SLAB.

☆ THE BID ITEM FOR SS601 BAR STEEL IS "BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES".

ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.



SECTION THRU STRUCTURAL APPROACH SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-41-294

DRAWN BY WWR | PLANS CK'D. JLR

EAST STRUCTURAL APPROACH SLAB DETAILS

SHEET 21

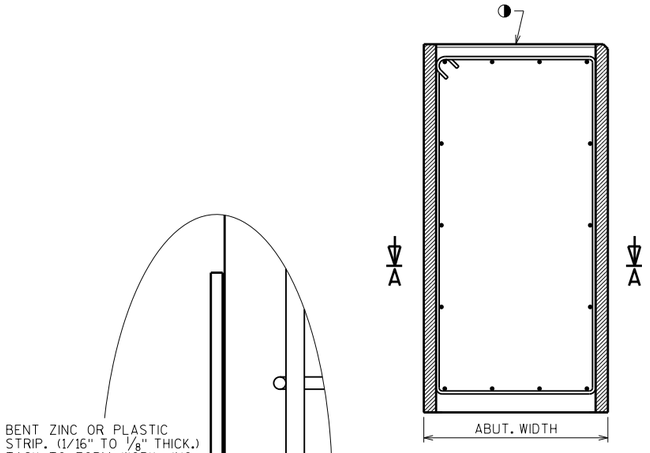
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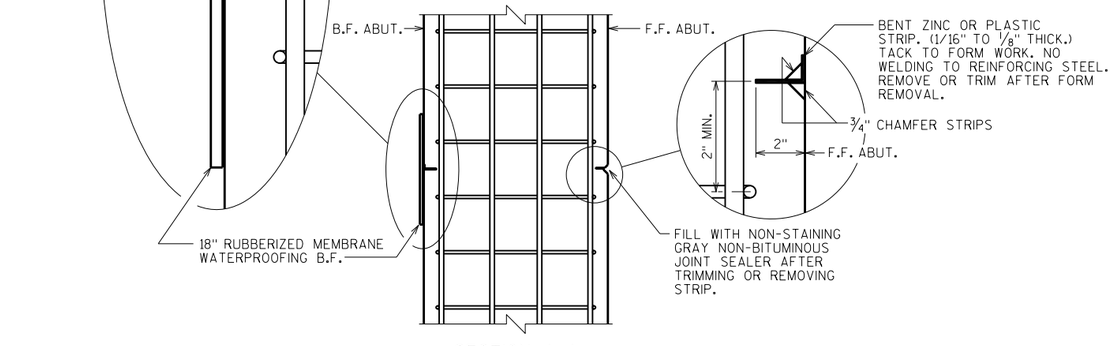
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8

STATE PROJECT NUMBER
1071-02-71



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-41-294

DRAWN BY WWR | PLANS CK'D. JLR

ALTERNATE CONSTRUCTION JOINT

SHEET 22

275

8

1 2 3

ALTJOINT
7-15

SCALE = 1.0

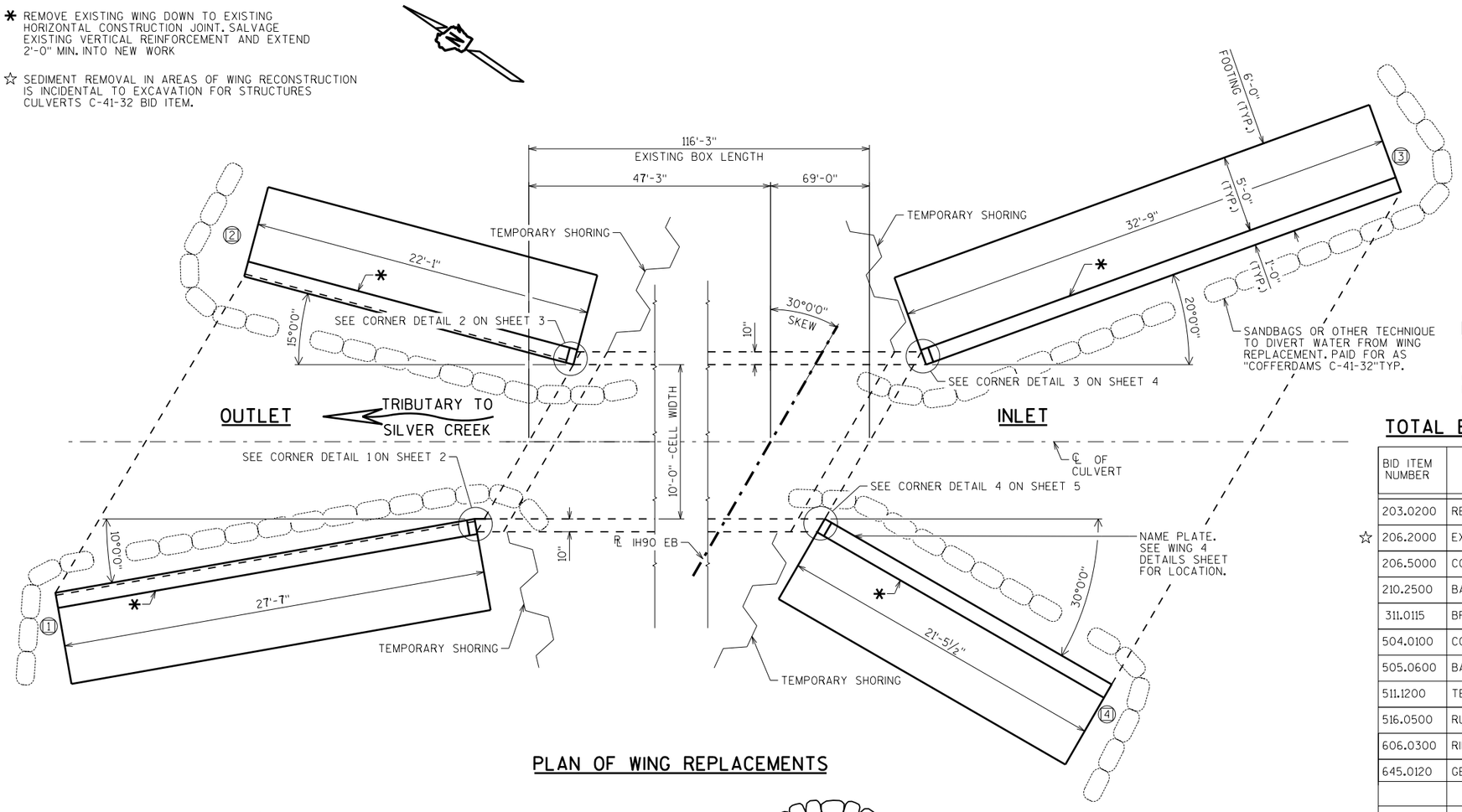
STATE PROJECT NUMBER

1077-02-73

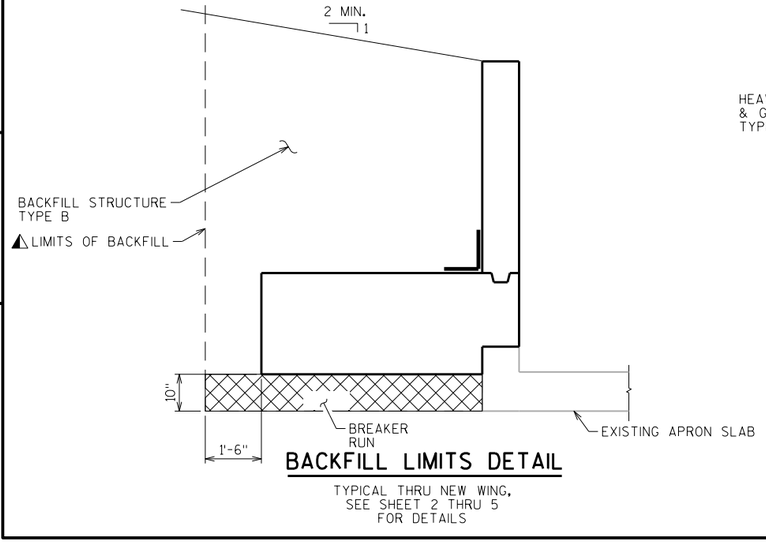
(3) INDICATES WING NUMBER

* REMOVE EXISTING WING DOWN TO EXISTING HORIZONTAL CONSTRUCTION JOINT. SALVAGE EXISTING VERTICAL REINFORCEMENT AND EXTEND 2'-0" MIN. INTO NEW WORK

☆ SEDIMENT REMOVAL IN AREAS OF WING RECONSTRUCTION IS INCIDENTAL TO EXCAVATION FOR STRUCTURES CULVERTS C-41-32 BID ITEM.

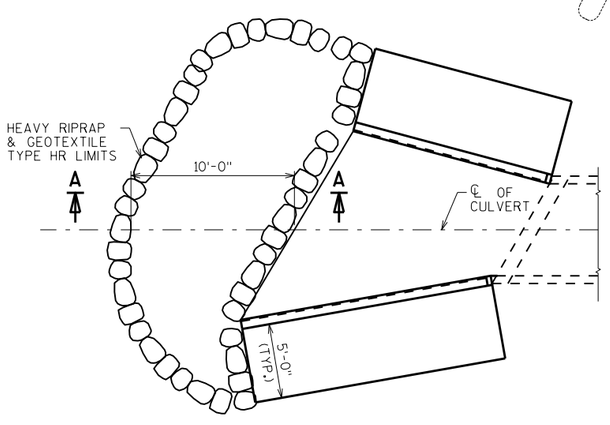


PLAN OF WING REPLACEMENTS



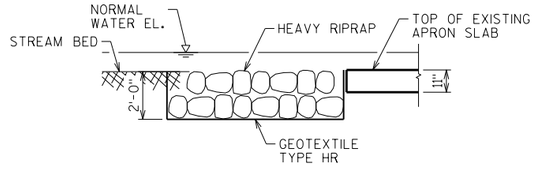
BACKFILL LIMITS DETAIL

TYPICAL THRU NEW WING, SEE SHEET 2 THRU 5 FOR DETAILS



RIPRAP & GEOTEXTILE LIMITS

AT OUTLET ONLY



SECTION A-A

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TO THE TOP OF THE WING WITHIN THE LENGTH OF THE WING WALL.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-41-32" SHALL BE THE EXISTING GROUND LINE.

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF STANDARD SPEC. 210.2.2 FOR GRADE 1 MATERIAL.

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY, GRADE A-FA ——— f'c = 3,500 P.S.I.
HIGH STRENGTH BAR STEEL REINFORCEMENT ——— f'y = 60,000 P.S.I.

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	203.0200	REMOVING OLD STRUCTURE STA.1676+50	LS	1
☆	206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-41-32	LS	1
	206.5000	COFFERDAMS C-41-32	LS	1
	210.2500	BACKFILL STRUCTURE TYPE B	TON	324
	311.0115	BREAKER RUN	CY	21
	504.0100	CONCRETE MASONRY CULVERTS	CY	68
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	5,930
	511.1200	TEMPORARY SHORING C-41-32	SF	644
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	25
	606.0300	RIPRAP HEAVY	CY	22
	645.0120	GEOTEXTILE TYPE HR	SY	51
		NON-BID ITEMS		
		FILLER	SIZE	3/4"

LIST OF DRAWINGS

1. WING REPLACEMENTS
2. WING 1 DETAILS
3. WING 2 DETAILS
4. WING 3 DETAILS
5. WING 4 DETAILS

STRUCTURE DESIGN CONTACTS

DOMINIQUE BECHLE (608) 261-8205
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS 8/1/18
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE C-41-32

IH 90 EB OVER TRIBUTARY TO SILVER CREEK

COUNTY	TOWN
MONROE	ANGELO

DESIGN SPEC. REHABILITATION, N/A

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BLJ	DMB	JDM	DMB

WING REPLACEMENTS

SHEET 1 OF 5

276

I.D. 1077-02-03G DATE: JAN. 2018

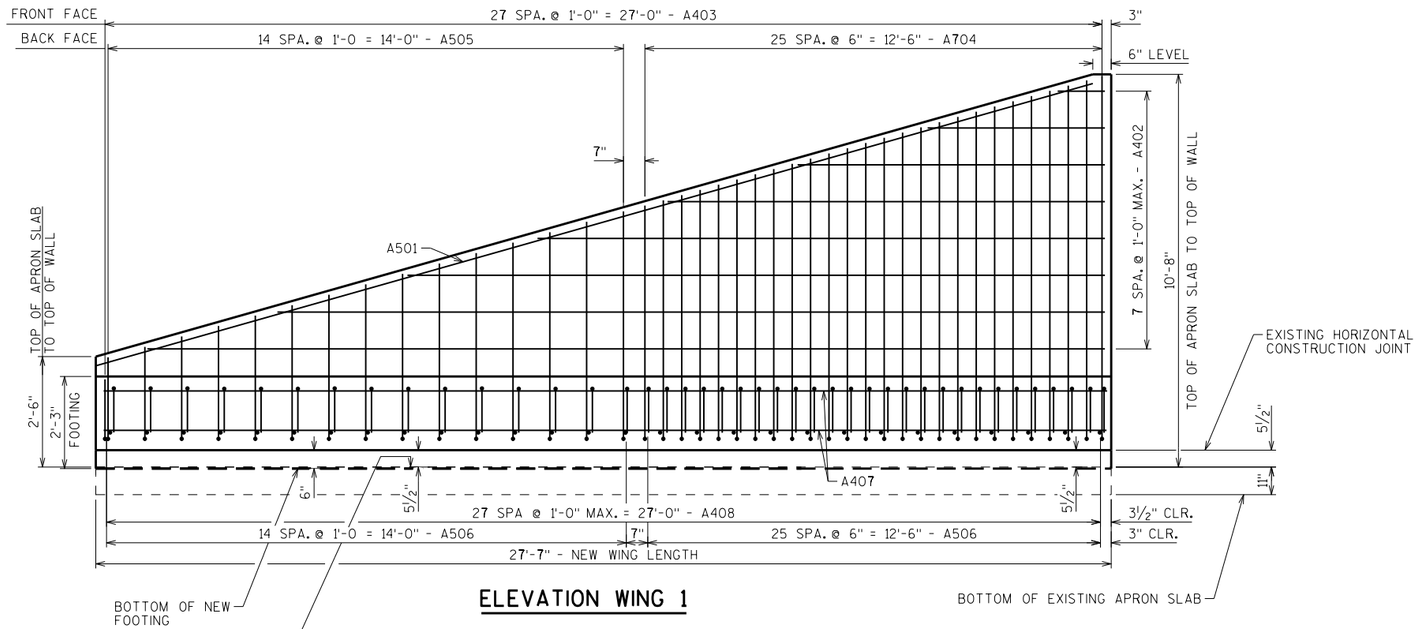
SCALE = 4.00

8

8

STATE PROJECT NUMBER

1077-02-73



ELEVATION WING 1

BILL OF BARS

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

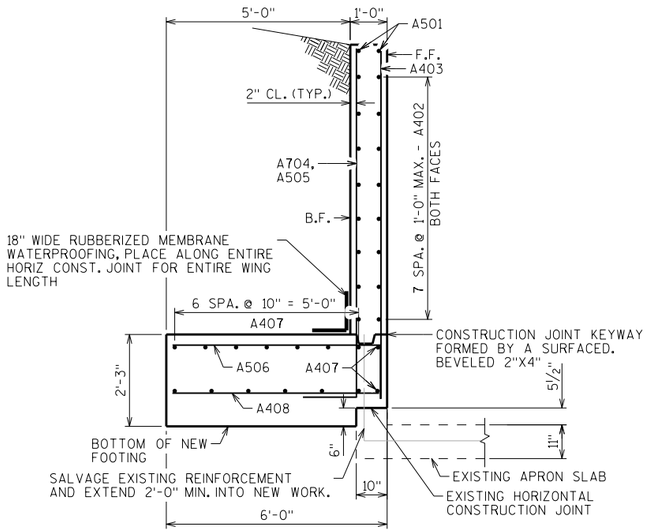
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	2	28'-0"			WING 1 HORIZ. BOTH FACES TOP
A402	X	16	14'-10"		⚠	WING 1 HORIZ. BOTH FACES
A403	X	28	5'-11"		⚠	WING 1 VERT. FRONT FACE
A704	X	26	9'-3"	X	⚠	WING 1 VERT. BACK FACE
A505	X	15	4'-9"	X	⚠	WING 1 VERT. BACK FACE
A506	X	41	6'-4"	X		WING 1 FOOTING TOP
A407	X	16	27'-3"			WING 1 FOOTING TOP & BOTTOM
A408	X	28	5'-8"			WING 1 FOOTING BOTTOM

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

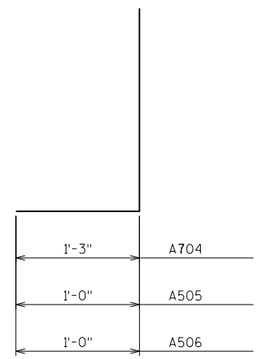
BAR SERIES TABLE

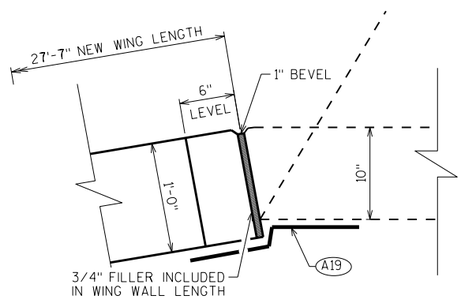
BAR MARK	NO. REQ'D.	LENGTHS FOR EACH SERIES
A402	2 SERIES OF 8	2'-8" TO 27'-0"
A403	1 SERIES OF 28	1'-11" TO 9'-10"
A704	1 SERIES OF 26	7'-6" TO 10'-11"
A505	1 SERIES OF 15	2'-6" TO 7'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY



SECTION THRU WING 1





CORNER DETAIL 1

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM EXISTING HORIZONTAL CONSTRUCTION JOINT TO TOP OF WING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-41-32

DRAWN BY JDM | PLANS CK'D. DMB

WING 1 DETAILS

SHEET 2

277

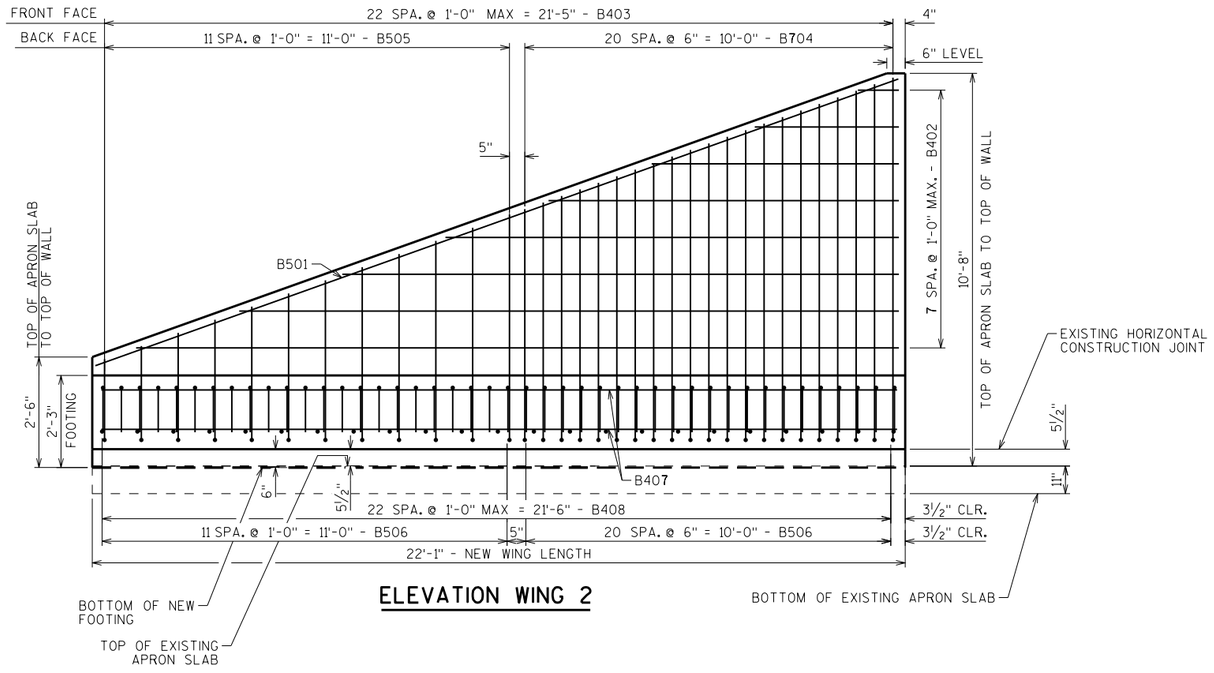
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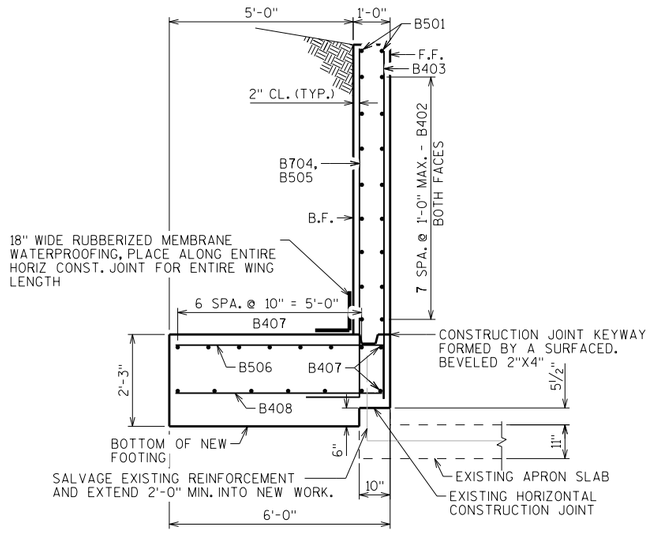
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STATE PROJECT NUMBER

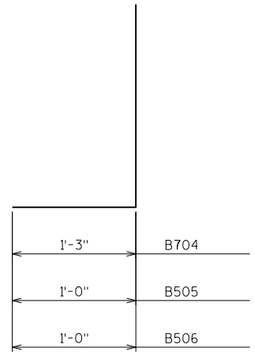
1077-02-73

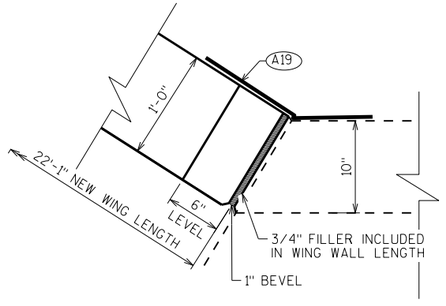


ELEVATION WING 2



SECTION THRU WING 2





CORNER DETAIL 2

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501	X	2	23'-0"			WING 2 HORIZ. BOTH FACES TOP
B402	X	16	11'-6"		⚠	WING 2 HORIZ. BOTH FACES
B403	X	23	5'-11"		⚠	WING 2 VERT. FRONT FACE
B704	X	21	9'-2"	X	⚠	WING 2 VERT. BACK FACE
B505	X	12	4'-9"	X	⚠	WING 2 VERT. BACK FACE
B506	X	33	6'-4"	X		WING 2 FOOTING TOP
B407	X	16	21'-9"			WING 2 FOOTING TOP AND BOTTOM
B408	X	23	5'-8"			WING 2 FOOTING BOTTOM

⚠ 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.	LENGTHS FOR EACH SERIES
B402	2 SERIES OF 8	2'-6" TO 20"-6"
B403	1 SERIES OF 23	1'-11" TO 9'-10"
B704	1 SERIES OF 21	7'-4" TO 10'-11"
B505	1 SERIES OF 12	2'-6" TO 7'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM EXISTING HORIZONTAL CONSTRUCTION JOINT TO TOP OF WING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-41-32

DRAWN BY JDM | PLANS CK'D. DMB

WING 2 DETAILS

SHEET 3

278

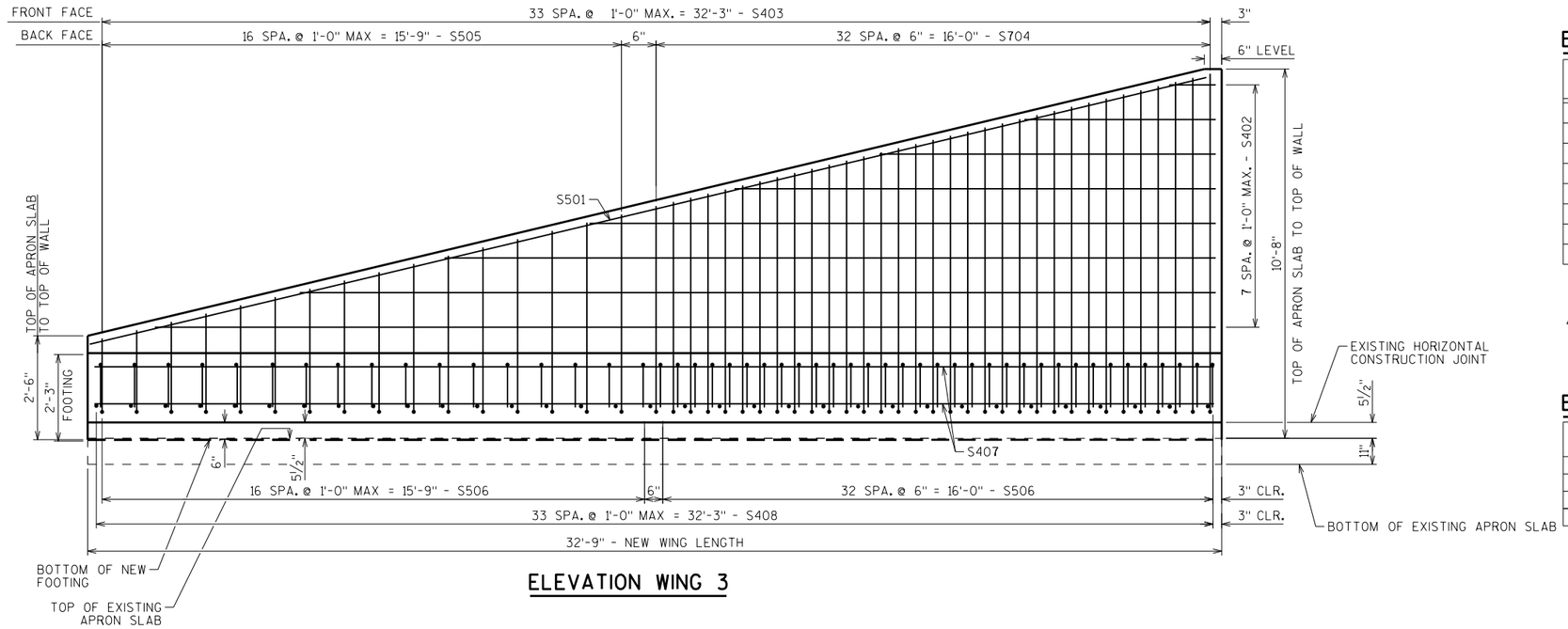
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8

STATE PROJECT NUMBER

1077-02-73



ELEVATION WING 3

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

BILL OF BARS

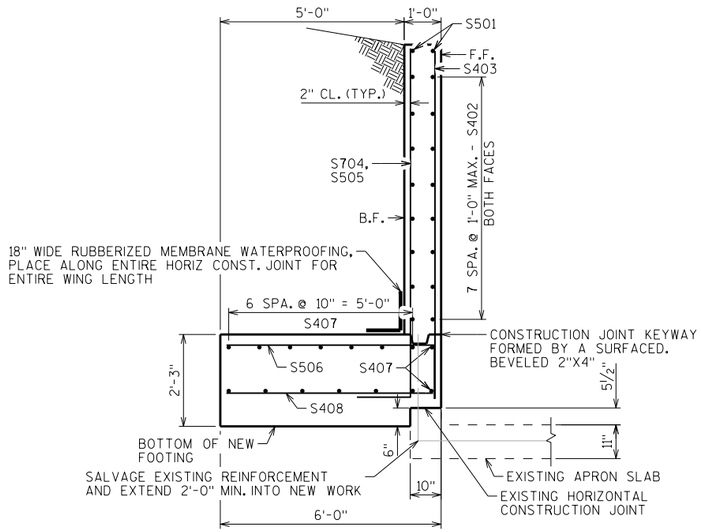
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	2	33'-0"			WING 3 HORIZ. BOTH FACES TOP
S402	X	16	16'-0"		◭	WING 3 HORIZ. BOTH FACES
S403	X	34	5'-11"		◭	WING 3 VERT. FRONT FACE
S704	X	33	9'-0"	X	◭	WING 3 VERT. BACK FACE
S505	X	17	4'-8"	X	◭	WING 3 VERT. BACK FACE
S506	X	50	6'-4"	X		WING 3 FOOTING TOP
S407	X	16	32'-4"			WING 3 FOOTING TOP AND BOTTOM
S408	X	34	5'-8"			WING 3 FOOTING BOTTOM

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

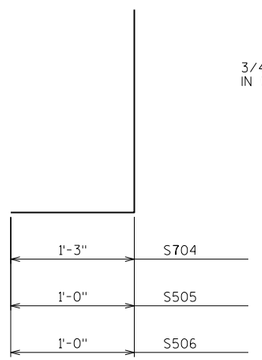
BAR SERIES TABLE

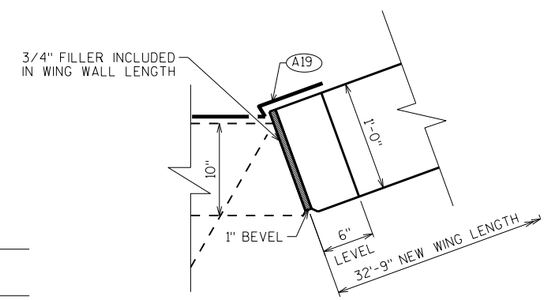
BAR MARK	NO. REQ'D.	LENGTHS FOR EACH SERIES
S402	2 SERIES OF 8	2'-6" TO 29'-6"
S403	1 SERIES OF 34	1'-11" TO 9'-10"
S704	1 SERIES OF 33	7'-1" TO 10'-11"
S505	1 SERIES OF 17	2'-6" TO 6'-9"

BUNDLE AND TAG EACH SERIES SEPARATELY



SECTION THRU WING 3





CORNER DETAIL 3

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM EXISTING HORIZONTAL CONSTRUCTION JOINT TO TOP OF WING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-41-32

DRAWN BY JDM | PLANS CK'D. DMB

WING 3 DETAILS

SHEET 4

279

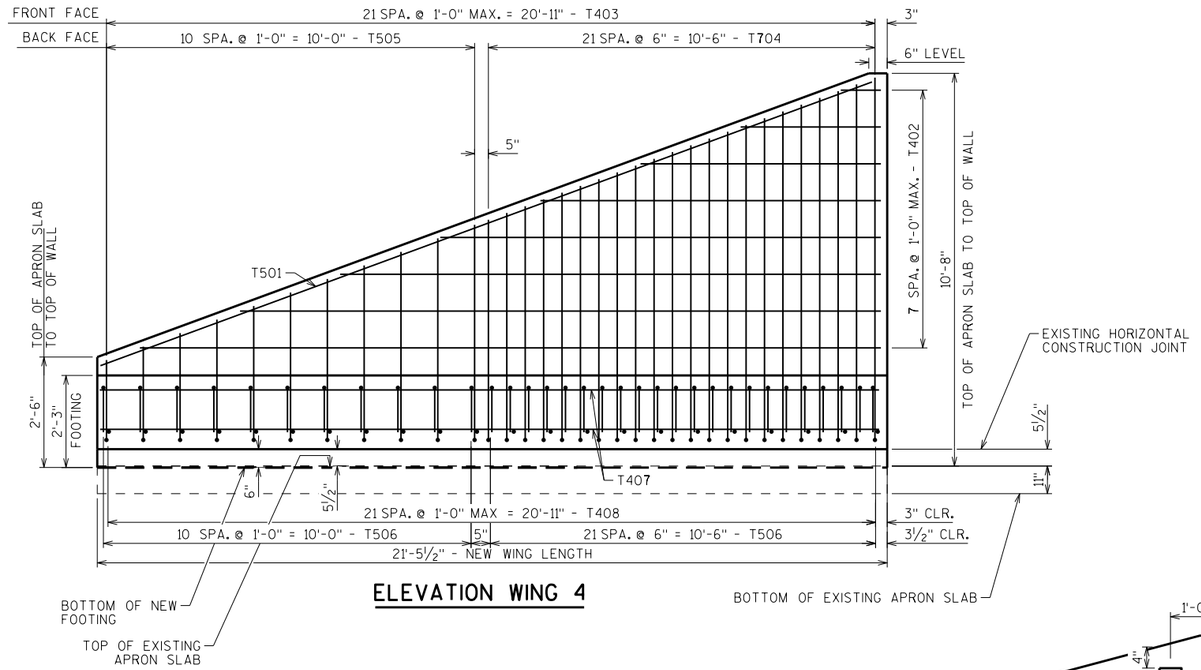
SCALE = 2.00

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8

STATE PROJECT NUMBER

1077-02-73



ELEVATION WING 4

BILL OF BARS

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

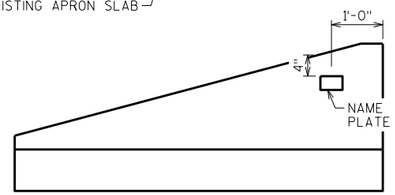
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	2	22'-3"			WING 4 HORIZ. BOTH FACES TOP
T402	X	16	11'-8"		⚠	WING 4 HORIZ. BOTH FACES
T403	X	22	5'-11"		⚠	WING 4 VERT. FRONT FACE
T704	X	22	9'-0"	X	⚠	WING 4 VERT. BACK FACE
T505	X	11	4'-7"	X	⚠	WING 4 VERT. BACK FACE
T506	X	33	6'-4"	X		WING 4 FOOTING TOP
T407	X	16	21'-0"			WING 4 FOOTING TOP AND BOTTOM
T408	X	22	5'-8"			WING 4 FOOTING BOTTOM

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

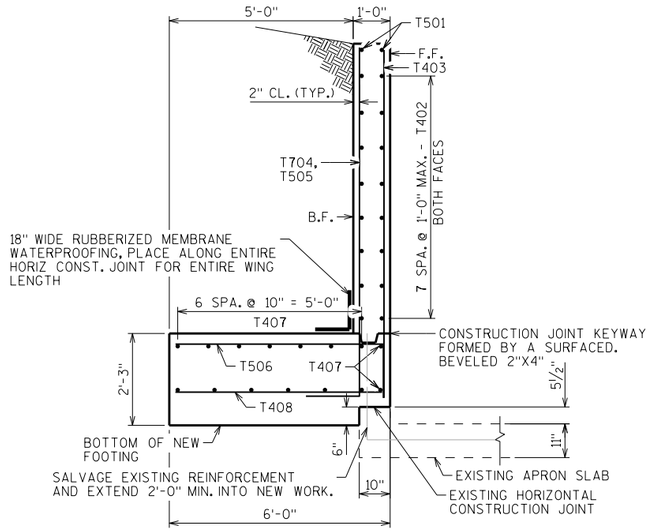
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTHS FOR EACH SERIES
T402	2 SERIES OF 8	2'-9" TO 20'-6"
T403	1 SERIES OF 22	1'-11" TO 9'-10"
T704	1 SERIES OF 22	7'-1" TO 10'-11"
T505	1 SERIES OF 11	2'-6" TO 6'-8"

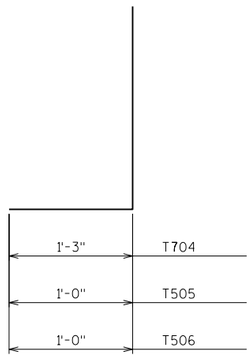
BUNDLE AND TAG EACH SERIES SEPARATELY

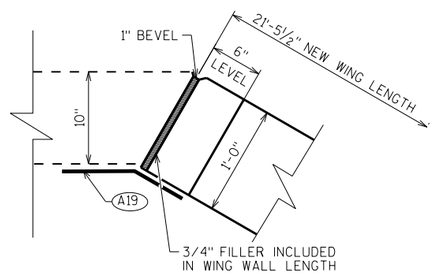


NAME PLATE LOCATION



SECTION THRU WING 4





CORNER DETAIL 4

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM EXISTING HORIZONTAL CONSTRUCTION JOINT TO TOP OF WING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-41-32

DRAWN BY JDM | PLANS CK'D. DMB

WING 4 DETAILS

SHEET 5

280

SCALE = 2.00

8

8

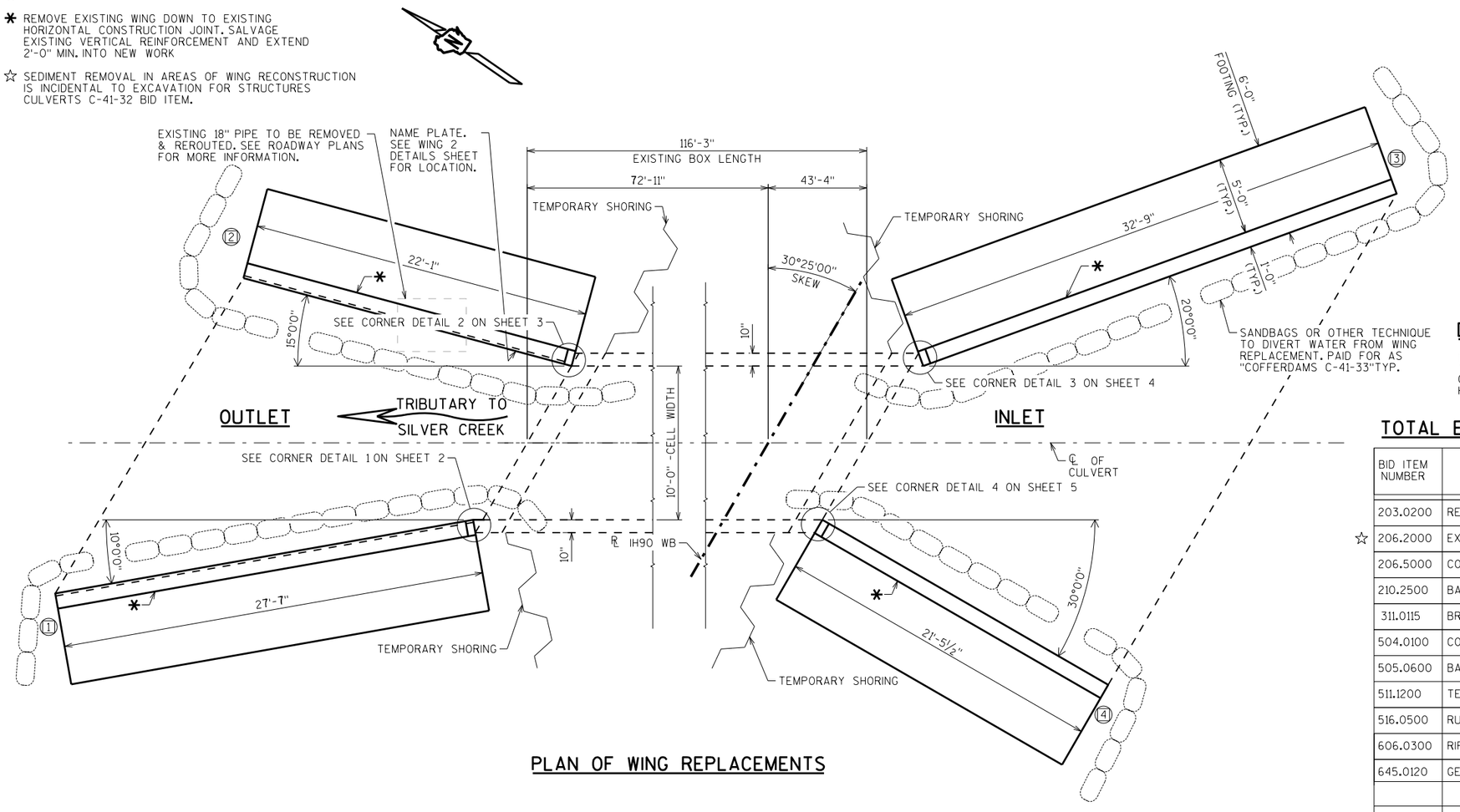
STATE PROJECT NUMBER

1077-02-73

(3) INDICATES WING NUMBER

* REMOVE EXISTING WING DOWN TO EXISTING HORIZONTAL CONSTRUCTION JOINT. SALVAGE EXISTING VERTICAL REINFORCEMENT AND EXTEND 2'-0" MIN. INTO NEW WORK

☆ SEDIMENT REMOVAL IN AREAS OF WING RECONSTRUCTION IS INCIDENTAL TO EXCAVATION FOR STRUCTURES CULVERTS C-41-32 BID ITEM.



PLAN OF WING REPLACEMENTS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TO THE TOP OF THE WING WITHIN THE LENGTH OF THE WING WALL.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-41-33" SHALL BE THE EXISTING GROUND LINE.

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF STANDARD SPEC. 210.2.2 FOR GRADE 1 MATERIAL.

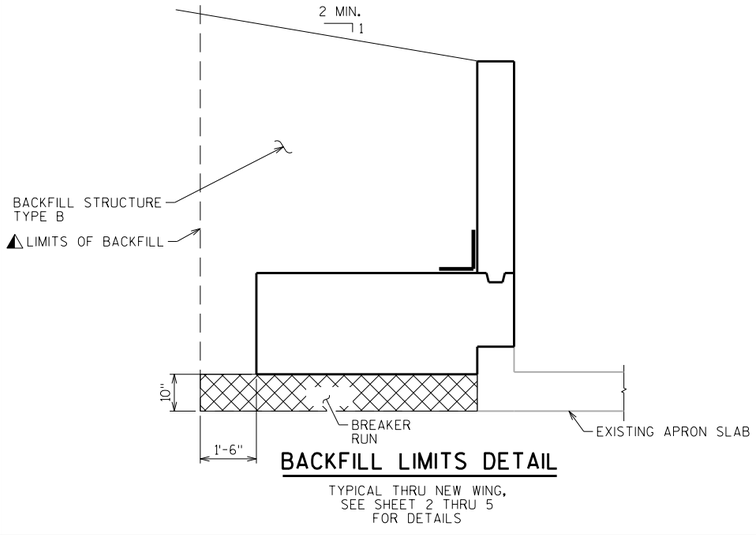
DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY, GRADE A-FA ——— f'c = 3,500 P.S.I.
HIGH STRENGTH BAR STEEL REINFORCEMENT ——— f'y = 60,000 P.S.I.

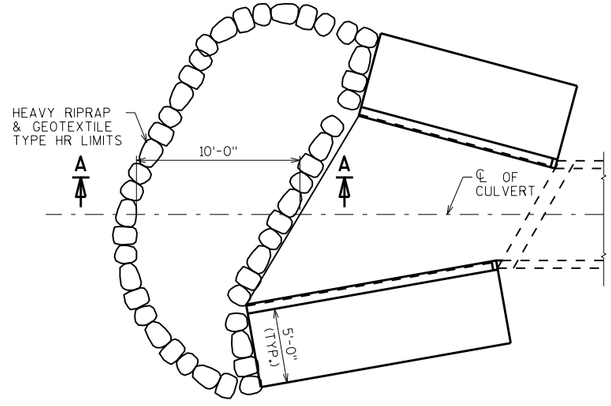
TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	203.0200	REMOVING OLD STRUCTURE STA.1675+50A	LS	1
☆	206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-41-33	LS	1
	206.5000	COFFERDAMS C-41-33	LS	1
	210.2500	BACKFILL STRUCTURE TYPE B	TON	324
	311.0115	BREAKER RUN	CY	21
	504.0100	CONCRETE MASONRY CULVERTS	CY	68
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	5,930
	511.1200	TEMPORARY SHORING C-41-33	SF	644
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	25
	606.0300	RIPRAP HEAVY	CY	22
	645.0120	GEOTEXTILE TYPE HR	SY	51
		NON-BID ITEMS		
		FILLER	SIZE	3/4"



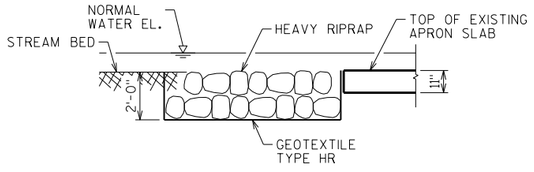
BACKFILL LIMITS DETAIL

TYPICAL THRU NEW WING, SEE SHEET 2 THRU 5 FOR DETAILS



RIPRAP & GEOTEXTILE LIMITS

AT OUTLET ONLY



SECTION A-A

LIST OF DRAWINGS

1. WING REPLACEMENTS
2. WING 1 DETAILS
3. WING 2 DETAILS
4. WING 3 DETAILS
5. WING 4 DETAILS

STRUCTURE DESIGN CONTACTS

DOMINIQUE BECHLE (608) 261-8205
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 8/1/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-41-33

IH 90 WB TRIBUTARY TO SILVER CREEK

COUNTY	TOWN
MONROE	ANGELO

DESIGN SPEC. REHABILITATION, N/A

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BLJ	DMB	JDM	DMB

WING REPLACEMENTS

SHEET 1 OF 5

281

I.D. 1077-02-03H DATE: JAN. 2018

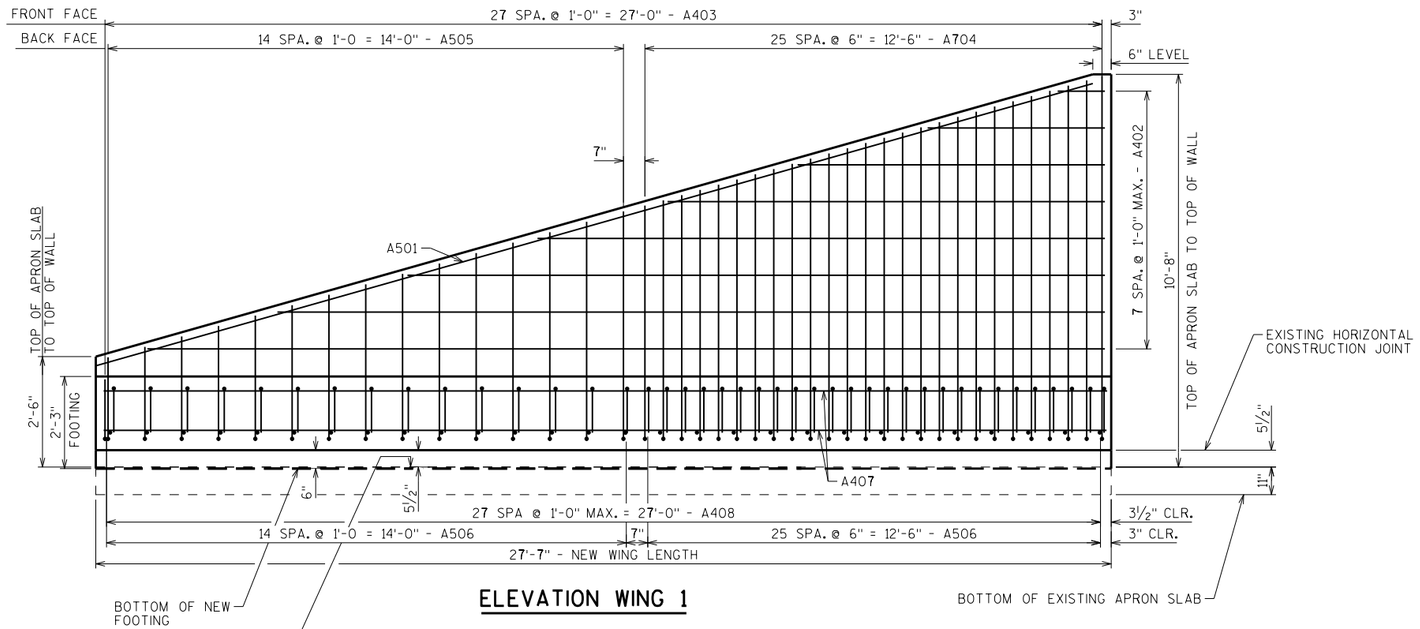
SCALE = 4.00

8

8

STATE PROJECT NUMBER

1077-02-73



ELEVATION WING 1

BILL OF BARS

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

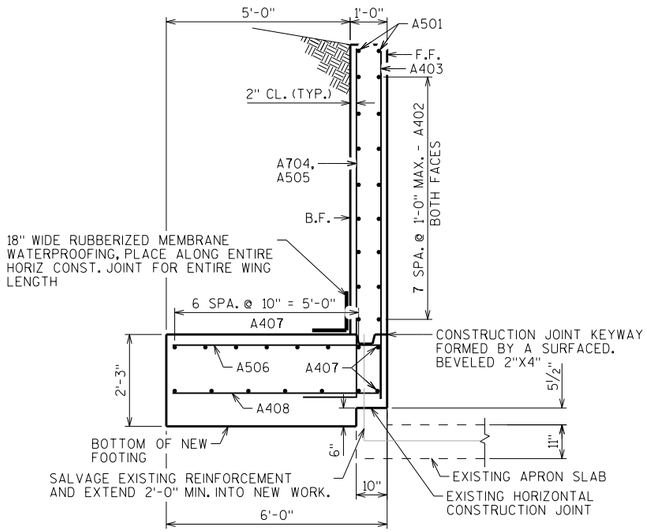
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	2	28'-0"			WING 1 HORIZ. BOTH FACES TOP
A402	X	16	14'-10"		⚠	WING 1 HORIZ. BOTH FACES
A403	X	28	5'-11"		⚠	WING 1 VERT. FRONT FACE
A704	X	26	9'-3"	X	⚠	WING 1 VERT. BACK FACE
A505	X	15	4'-9"	X	⚠	WING 1 VERT. BACK FACE
A506	X	41	6'-4"	X		WING 1 FOOTING TOP
A407	X	16	27'-3"			WING 1 FOOTING TOP & BOTTOM
A408	X	28	5'-8"			WING 1 FOOTING BOTTOM

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

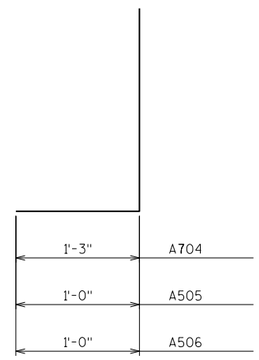
BAR SERIES TABLE

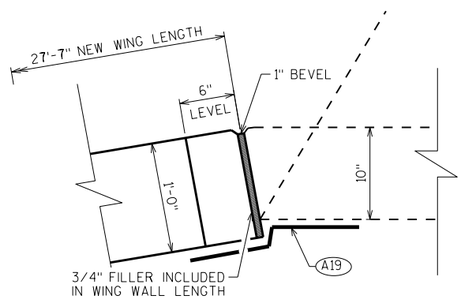
BAR MARK	NO. REQ'D.	LENGTHS FOR EACH SERIES
A402	2 SERIES OF 8	2'-8" TO 27'-0"
A403	1 SERIES OF 28	1'-11" TO 9'-10"
A704	1 SERIES OF 26	7'-6" TO 10'-11"
A505	1 SERIES OF 15	2'-6" TO 7'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY



SECTION THRU WING 1





CORNER DETAIL 1

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM EXISTING HORIZONTAL CONSTRUCTION JOINT TO TOP OF WING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-41-33

DRAWN BY JDM | PLANS CK'D. DMB

WING 1 DETAILS

SHEET 2

282

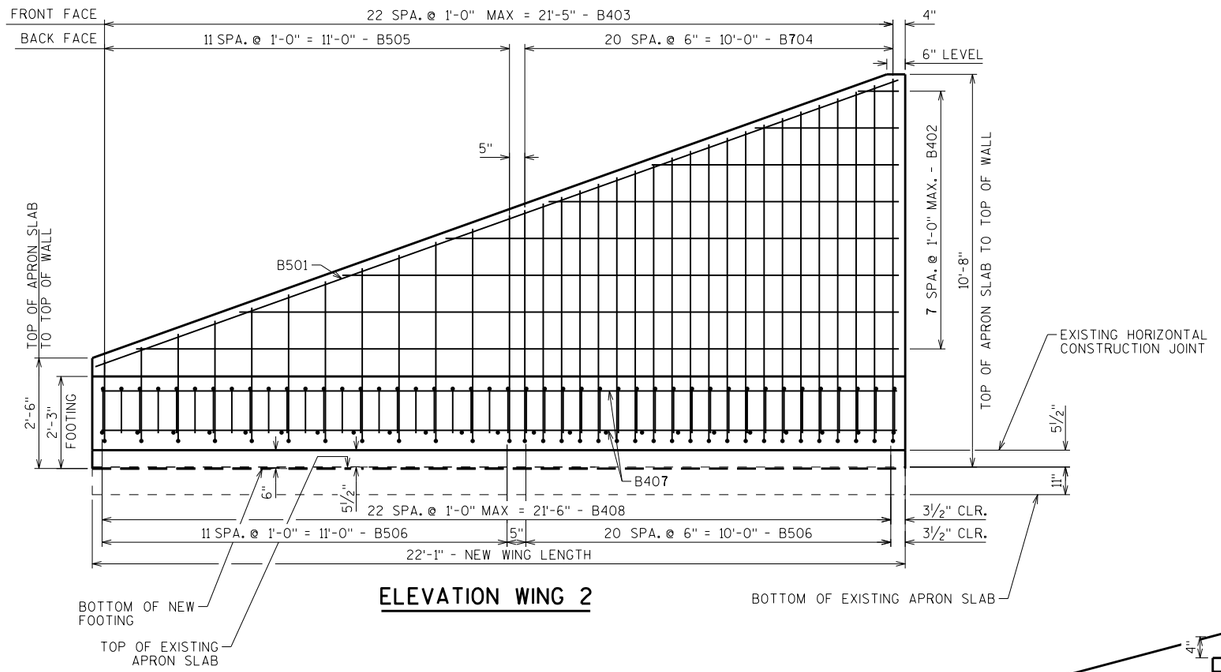
SCALE = 2.00

8

8

STATE PROJECT NUMBER

1077-02-73



ELEVATION WING 2

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

BILL OF BARS

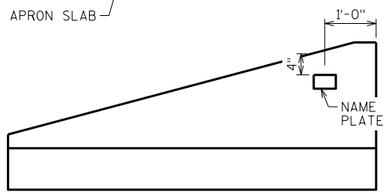
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501	X	2	23'-0"			WING 2 HORIZ. BOTH FACES TOP
B402	X	16	11'-6"		⚠	WING 2 HORIZ. BOTH FACES
B403	X	23	5'-11"		⚠	WING 2 VERT. FRONT FACE
B704	X	21	9'-2"	X	⚠	WING 2 VERT. BACK FACE
B505	X	12	4'-9"	X	⚠	WING 2 VERT. BACK FACE
B506	X	33	6'-4"	X		WING 2 FOOTING TOP
B407	X	16	21'-9"			WING 2 FOOTING TOP AND BOTTOM
B408	X	23	5'-8"			WING 2 FOOTING BOTTOM

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

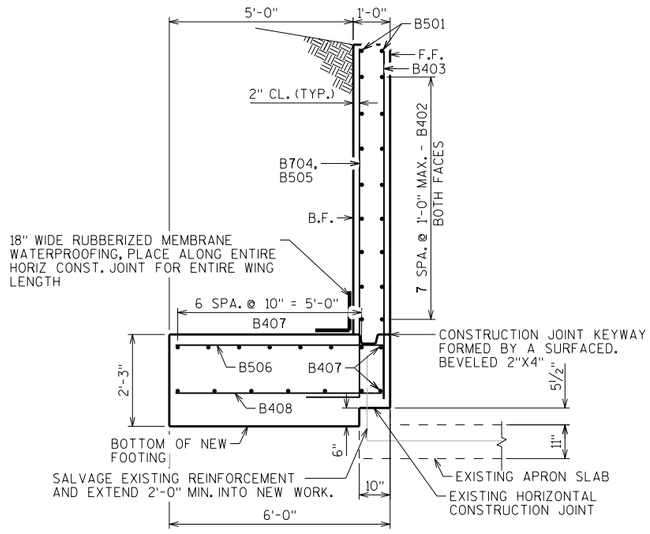
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTHS FOR EACH SERIES
B402	2 SERIES OF 8	2'-6" TO 20"-6"
B403	1 SERIES OF 23	1'-11" TO 9'-10"
B704	1 SERIES OF 21	7'-4" TO 10'-11"
B505	1 SERIES OF 12	2'-6" TO 7'-0"

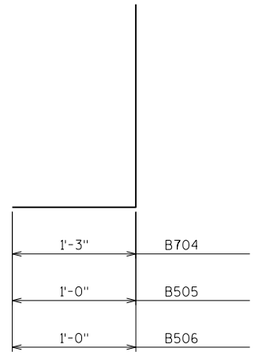
BUNDLE AND TAG EACH SERIES SEPARATELY

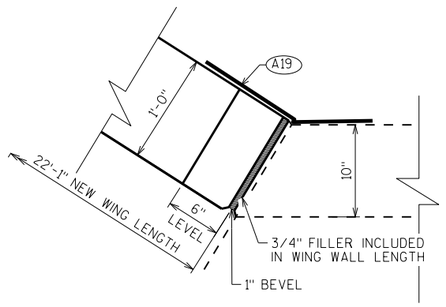


NAME PLATE LOCATION



SECTION THRU WING 2





CORNER DETAIL 2

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM EXISTING HORIZONTAL CONSTRUCTION JOINT TO TOP OF WING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-41-33

DRAWN BY JDM | PLANS CK'D. DMB

WING 2 DETAILS

SHEET 3

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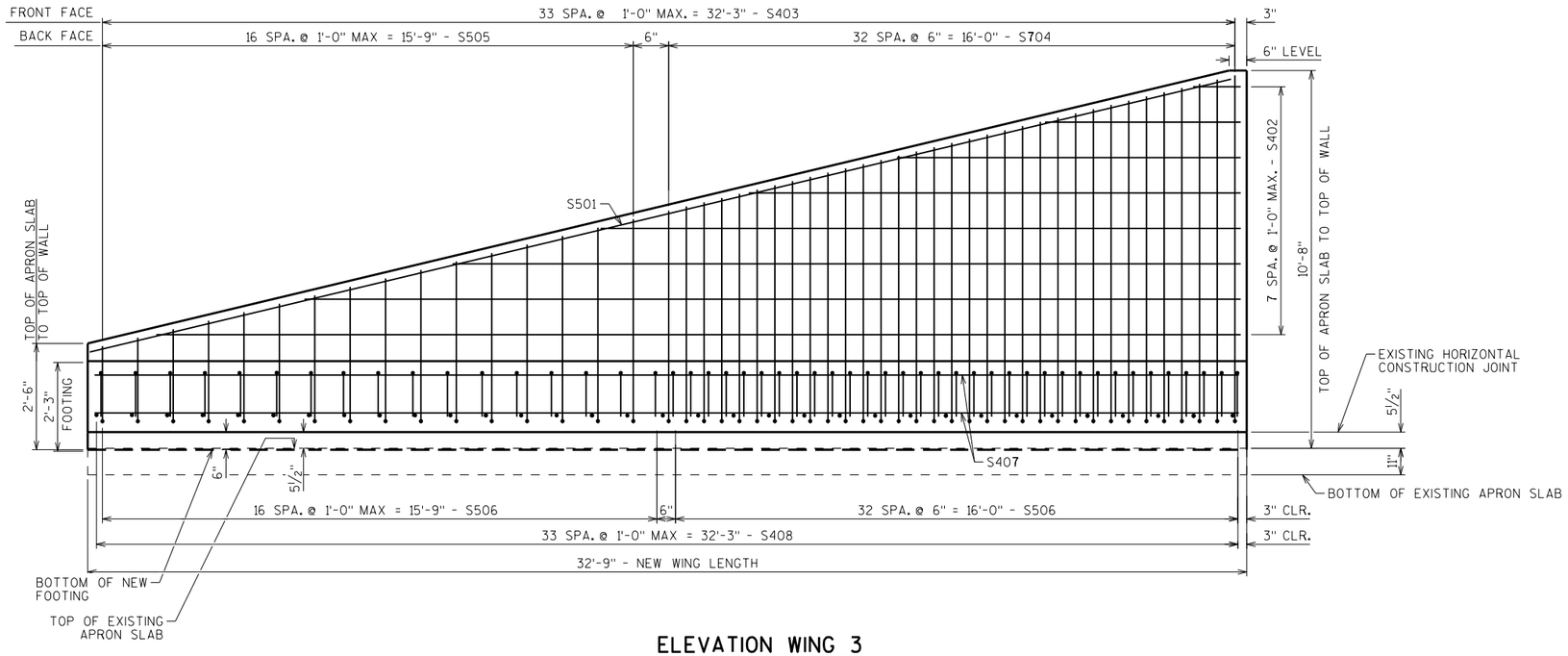
SCALE = 2.00

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8

STATE PROJECT NUMBER

1077-02-73



ELEVATION WING 3

BILL OF BARS

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

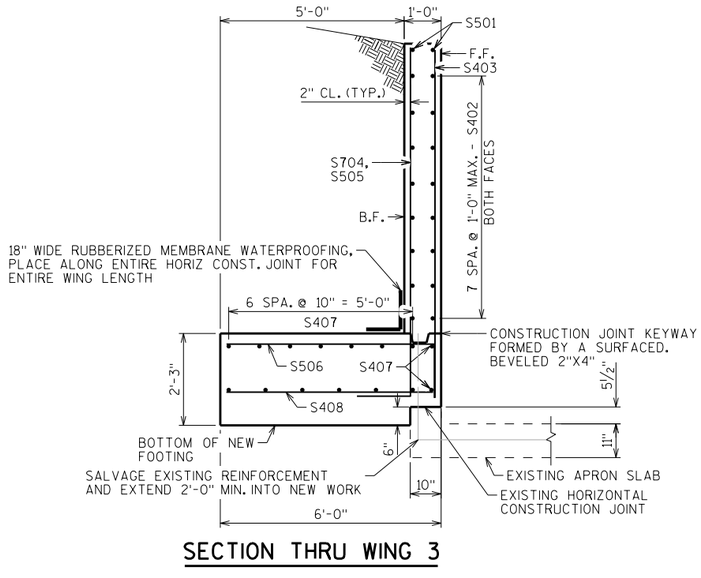
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	2	33'-0"			WING 3 HORIZ. BOTH FACES TOP
S402	X	16	16'-0"		⚠	WING 3 HORIZ. BOTH FACES
S403	X	34	5'-11"		⚠	WING 3 VERT. FRONT FACE
S704	X	33	9'-0"	X	⚠	WING 3 VERT. BACK FACE
S505	X	17	4'-8"	X	⚠	WING 3 VERT. BACK FACE
S506	X	50	6'-4"	X		WING 3 FOOTING TOP
S407	X	16	32'-4"			WING 3 FOOTING TOP AND BOTTOM
S408	X	34	5'-8"			WING 3 FOOTING BOTTOM

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

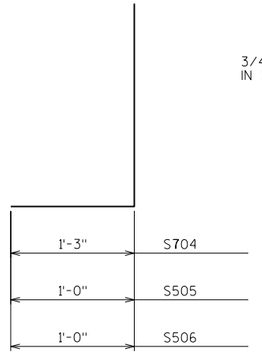
BAR SERIES TABLE

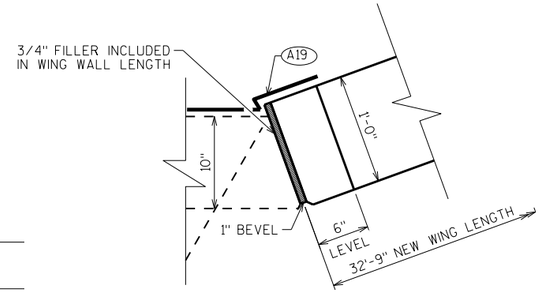
BAR MARK	NO. REQ'D.	LENGTHS FOR EACH SERIES
S402	2 SERIES OF 8	2'-6" TO 29'-6"
S403	1 SERIES OF 34	1'-11" TO 9'-10"
S704	1 SERIES OF 33	7'-1" TO 10'-11"
S505	1 SERIES OF 17	2'-6" TO 6'-9"

BUNDLE AND TAG EACH SERIES SEPARATELY



SECTION THRU WING 3





CORNER DETAIL 3

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM EXISTING HORIZONTAL CONSTRUCTION JOINT TO TOP OF WING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-41-33

DRAWN BY JDM | PLANS CK'D. DMB

WING 3 DETAILS

SHEET 4

284

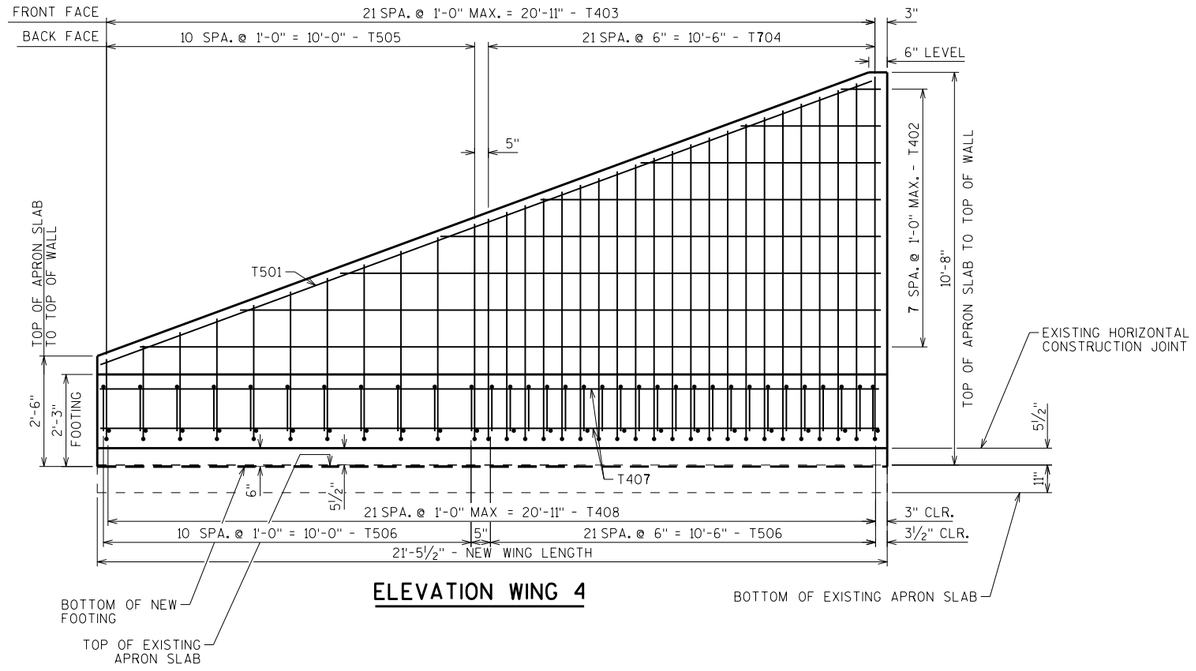
8

8

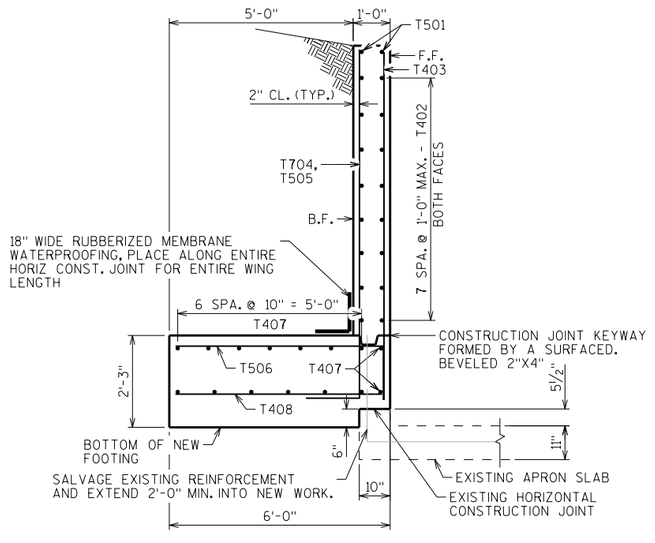
SCALE = 2.00

STATE PROJECT NUMBER

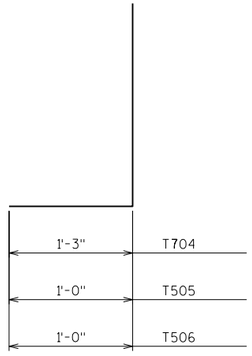
1077-02-73



ELEVATION WING 4



SECTION THRU WING 4



BILL OF BARS

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

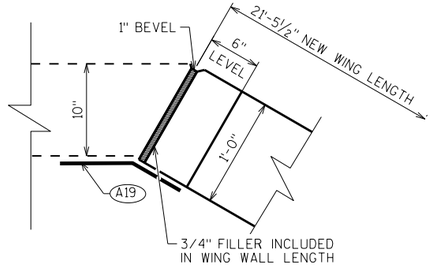
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	2	22'-3"			WING 4 HORIZ. BOTH FACES TOP
T402	X	16	11'-8"		⚠	WING 4 HORIZ. BOTH FACES
T403	X	22	5'-11"		⚠	WING 4 VERT. FRONT FACE
T704	X	22	9'-0"	X	⚠	WING 4 VERT. BACK FACE
T505	X	11	4'-7"	X	⚠	WING 4 VERT. BACK FACE
T506	X	33	6'-4"	X		WING 4 FOOTING TOP
T407	X	16	21'-0"			WING 4 FOOTING TOP AND BOTTOM
T408	X	22	5'-8"			WING 4 FOOTING BOTTOM

⚠ 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.	LENGTHS FOR EACH SERIES
T402	2 SERIES OF 8	2'-9" TO 20'-6"
T403	1 SERIES OF 22	1'-11" TO 9'-10"
T704	1 SERIES OF 22	7'-1" TO 10'-11"
T505	1 SERIES OF 11	2'-6" TO 6'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY



CORNER DETAIL 4

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM EXISTING HORIZONTAL CONSTRUCTION JOINT TO TOP OF WING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-41-33

DRAWN BY JDM | PLANS CK'D. DMB

WING 4 DETAILS

SHEET 5

285

SCALE = 2.00

8

8

CLEARZONE GRADING										
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
STATION	Distance	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Expanded Fill	Mass Ordinate
								1.00	1.25	
					Note 1	Note 2	Note 3	Note 1		Note 8
1761+00.	0.00	0.00	0.00	0.00	0.0	0	0	0	0	0
1762+00.	100.00	0.06	0.00	0.00	0.0	0	0	0	0	0
1763+00.	100.00	0.01	0.00	11.43	0.0	0	21	0	26	-26
1764+00.	100.00	0.00	0.00	0.02	0.0	0	21	0	53	-53
1765+00.	100.00	0.00	0.00	25.85	0.0	0	48	0	113	-113
1766+00.	100.00	0.14	0.00	0.09	0.0	0	48	0	173	-173
1766+50.	50.00	0.00	0.00	0.00	0.0	0	0	0	173	-173
					0.0	0	138	0	173	

CLEARZONE GRADING										
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
STATION	Distance	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Expanded Fill	Mass Ordinate
								1.00	1.25	
					Note 1	Note 2	Note 3	Note 1		Note 8
1902+50.	0.00	0.00	0.00	0.00	0	0	0	0	0	0
1903+00.	50.00	0.53	0.00	61.66	0	0	57	0	71	-71
1903+00.87	0.87	0.53	0.00	60.15	0	0	2	1	74	-73
1903+25.87	25.00	0.00	0.00	45.95	0	0	49	1	135	-134
1903+50.87	25.00	0.00	0.00	89.21	0	0	63	1	213	-213
1904+00.	49.13	0.00	0.00	123.81	0	0	194	1	456	-455
1904+69.31	69.31	0.00	0.00	93.95	0	0	279	1	805	-804
1904+86.3	16.99	0.00	0.00	91.14	0	0	58	1	878	-877
1905+00.	13.70	0.00	0.00	94.65	0	0	47	1	937	-936
1905+11.3	11.30	0.00	0.00	91.85	0	0	39	1	986	-985
1905+36.3	25.00	0.00	0.00	93.94	0	0	86	1	1,093	-1,092
1906+00.	63.70	0.00	0.00	73.75	0	0	198	1	1,340	-1,340
1906+54.74	54.74	0.00	0.00	50.19	0	0	126	1	1,497	-1,497
1907+00.	45.26	0.00	0.00	47.60	0	0	82	1	1,600	-1,599
1908+00.	100.00	0.00	0.00	44.45	0	0	170	1	1,813	-1,812
1909+00.	100.00	0.11	0.00	28.87	0	0	136	1	1,983	-1,982
1910+00.	100.00	0.38	0.00	0.46	1	0	54	2	2,051	-2,049
1910+25.	25.00	0.00	0.00	0.00	0	0	0	2	2,051	-2,049
					2	0	1,641	2		

9

9

PROJECT NO:1077-02-73	HWY: IH 90	COUNTY: MONROE	EARTHWORK SUMMARY	SHEET NO:	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ ORG DATE : _____ ORIGINATOR : DIST _ PLOT SCALE : 1:1

WESTBOUND SPECIAL DITCH

STATION	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Expanded Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) Mass Ordinate Note 8
+40FF	0.00	0.00	0.00	0.00	0	0	0	0	0	0
+60FF	20.00	29.01	0.00	0.00	11	0	0	11	0	11
+80FF	20.00	55.97	0.00	0.00	31	0	0	42	0	42
1+00FF	20.00	51.55	0.00	0.00	40	0	0	82	0	82
1+20FF	20.00	19.49	0.00	0.00	26	0	0	108	0	108
1+40FF	20.00	0.00	0.00	0.00	7	0	0	116	0	116
					116	0	0		0	

CLEARZONE GRADING

STATION	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Expanded Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) Mass Ordinate Note 8
1893+50A	0.00	0.00	0.00	0.00	0	0	0	0	0	0
1894+00A	50.00	0.00	0.00	61.61	0	0	57	0	71	-71
1895+00A	100.00	0.00	0.00	68.97	0	0	242	0	374	-374
1896+00A	100.00	0.00	0.00	55.91	0	0	231	0	663	-663
1897+00A	100.00	0.00	0.00	99.12	0	0	287	0	1,022	-1,022
1898+00A	100.00	0.00	0.00	79.20	0	0	330	0	1,434	-1,434
1899+00A	100.00	0.00	0.00	75.47	0	0	286	0	1,792	-1,792
1900+00A	100.00	0.00	0.00	82.71	0	0	293	0	2,158	-2,158
1901+00A	100.00	0.00	0.00	78.02	0	0	298	0	2,531	-2,531
1901+24A	23.67	0.00	0.00	80.33	0	0	69	0	2,617	-2,617
1901+50A	26.33	0.00	0.00	0.00	0	0	39	0	2,666	-2,666
					0	0	2,133	0		

EAST BOUND MAINLINE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
2133+50	213350.00	0.00	0.00	2.20	0.00	0	0	0	0	0	0
2134+00	213400.00	50.00	11.40	2.20	8.31	11	4	8	11	10	-3
2134+50	213450.00	50.00	8.32	2.20	33.19	18	4	38	29	58	-37
2135+00	213500.00	50.00	7.99	2.20	57.40	15	4	84	44	163	-131
2135+50	213550.00	50.00	7.19	2.20	76.56	14	4	124	58	318	-276
2135+83	213583.00	33.00	70.60	2.20	68.70	48	3	89	106	429	-342
2136+00	213600.00	50.00	66.82	2.20	47.30	89	4	119	147	577	-405
2136+50	213650.00	50.00	0.00	29.20	0.00	62	29	44	209	632	-427
						257	52	505		632	

EASTBOUND MAINLINE

STATION	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
2137+50.	0.00	0.00	29.20	0.00	0	0	0	0	0	0
2137+62.	12.00	54.83	29.20	16.55	24	13	7	0	9	2
2137+78.	16.00	65.20	29.20	30.10	36	17	14	36	26	3
2137+75.21	-2.79	58.84	29.20	29.85	-6	-3	-3	29	23	4
2138+00.	24.79	7.53	2.20	48.96	30	14	36	60	68	-26
2138+50.	50.00	5.60	2.20	47.30	12	4	89	72	179	-129
2139+00.	50.00	5.28	2.20	26.97	10	4	69	82	265	-209
2139+24.2	24.20	5.04	2.20	20.71	5	2	21	86	292	-233
2139+49.2	25.00	5.10	2.20	15.50	5	2	17	91	313	-251
2139+50.	0.80	5.10	2.20	14.93	0	0	0	91	313	-252
2139+74.2	24.20	5.08	2.20	8.71	5	2	11	96	327	-262
2140+00.	25.80	5.00	2.20	6.99	5	2	8	101	336	-269
2140+11.16	11.16	5.07	2.20	8.42	2	1	3	103	340	-272
2140+50.	38.84	5.36	2.20	0.46	8	3	6	110	348	-275
2140+66.5	16.50	5.33	2.20	0.78	3	1	0	114	348	-274
2140+84.95	18.45	5.37	2.20	2.86	4	2	1	117	350	-273
2140+91.5	6.55	5.31	2.20	3.63	1	1	1	119	351	-274
2141+00.	8.50	5.27	2.20	5.61	2	1	1	120	353	-274
2141+16.5	16.50	0.00	2.20	0.00	2	1	2	122	355	-276
2141+50.	33.50	4.86	2.20	3.85	3	3	2	125	358	-279
2142+00.	50.00	0.00	2.20	0.00	5	4	4	129	362	-283
2142+26.31	26.31	0.00	2.20	0.00	0	2	0	129	362	-285
2142+50.	23.69	0.00	2.20	0.00	0	2	0	129	362	-287
					154	78	290		362	

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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	EARTHWORK SUMMARY	SHEET NO: 288	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ ORG DATE : _____ ORIGINATOR : DIST _ PLOT SCALE : 1:1

IH 90 WEST BOUND										
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
STATION	Distance	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 2	Note 3	Note 1		Note 8
2133+00.A	0.00	0.00	2.20	0.00	0	0	0	0	0	0
2133+47.A	47.00	8.74	2.20	0.01	8	4	0	8	0	4
2134+00.A	53.00	7.83	2.20	3.25	16	4	3	24	4	12
2134+50.A	50.00	7.54	2.20	7.23	14	4	10	38	16	10
2135+00.A	50.00	9.61	2.20	6.13	16	4	12	54	32	6
2135+50.A	50.00	14.58	2.20	0.79	22	4	6	76	40	16
2136+00.A	50.00	1.18	2.20	0.47	15	4	1	91	41	25
2136+16.61A	16.61	9.06	2.20	0.72	3	1	0	94	42	27
2136+39.A	22.39	80.62	29.20	0.13	37	13	0	131	42	51
2136+50.A	33.39	84.25	29.20	0.00	72	25	0	166	42	73
2136+55.A	5.00	89.50	29.20	0.00	16	5	0	182	42	84
2136+60.A	5.00	0.00	0.00	0.00	8	3	0	190	42	89
					227	72	34		42	

IH 90 WEST BOUND										
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
STATION	Distance	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 2	Note 3	Note 1		Note 8
2138+00.00A	0.00	0.00	29.20	0.00	0	0	0	0	0	0
2138+16.16A	16.16	129.60	29.20	8.60	39	17	3	39	3	18
2138+32.16A	16.00	114.57	29.20	8.51	72	17	5	72	10	67
2138+50.00A	17.84	21.33	1.34	0.00	45	10	3	117	13	98
2138+56.78A	6.78	19.76	1.34	2.34	5	0	0	122	13	103
2139+00.00A	43.22	14.61	1.34	2.80	28	2	4	150	19	123
2139+39.44A	39.44	12.40	1.34	1.91	20	2	3	170	23	136
2139+50.00A	10.56	11.83	1.34	1.63	5	1	1	174	24	140
2140+00.00A	50.00	9.90	1.34	0.42	20	2	2	194	26	155
2140+50.00A	50.00	0.00	0.00	0.00	9	1	0	204	27	162
					242	54	21		27	

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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	EARTHWORK SUMMARY	SHEET NO: 289	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ ORG DATE : _____ ORIGINATOR : DIST _ PLOT SCALE : 1:1

CTH M										
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
STATION	Distance	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 2	Note 3	Note 1		Note 8
49+00.M	0.00	0.00	0.00	0.00	0	0	0	0	0	0
49+25.M	25.00	37.88	9.20	0.00	18	4	0	18	0	13
49+50.M	25.00	41.81	9.20	0.00	37	9	0	54	0	42
50+00.M	50.00	43.45	9.20	0.87	79	17	1	133	1	103
50+50.M	50.00	68.84	9.20	0.00	104	17	1	237	2	188
50+77.01M	27.01	74.12	9.20	0.01	71	9	0	309	2	251
51+00.M	22.99	106.81	9.20	0.00	77	8	0	386	2	320
51+09.M	9.00	133.17	9.20	0.00	40	3	0	426	2	357
51+34.M	25.00	198.03	9.20	0.00	153	9	0	579	2	502
51+50.M	16.00	192.60	9.20	0.00	116	5	0	695	2	612
51+59.M	9.00	201.36	9.20	0.00	66	3	0	761	2	675
51+95.M	36.00	292.60	9.20	0.00	329	12	0	1,090	2	992
52+00.M	5.00	255.56	9.20	0.00	51	2	0	1,141	2	1,041
52+20.M	20.00	221.54	9.20	0.00	177	7	0	1,317	2	1,211
52+45.M	25.00	170.23	9.20	0.00	181	9	0	1,499	2	1,383
52+50.M	5.00	153.30	9.20	0.23	30	2	0	1,529	2	1,412
52+79.M	29.00	177.68	9.20	36.62	178	10	20	1,706	27	1,555
53+00.M	21.00	80.28	9.20	5.77	100	7	16	1,807	47	1,627
53+50.M	50.00	410.08	9.20	0.00	454	17	5	2,261	54	2,058
54+00.M	50.00	240.07	9.20	0.00	602	17	0	2,863	54	2,643
54+50.M	50.00	323.73	9.20	0.00	522	17	0	3,385	54	3,148
54+69.M	19.00	347.24	9.20	0.00	236	6	0	3,621	54	3,377
54+73.54M	4.54	331.54	9.20	0.00	57	2	0	3,678	54	3,433
54+85.58M	12.04	293.79	9.20	0.00	139	4	0	3,817	54	3,568
54+95.46M	9.88	267.49	9.20	0.00	103	3	0	3,920	54	3,667
55+00.M	4.54	243.35	9.20	0.00	43	2	0	3,963	54	3,709
55+11.M	11.00	166.69	9.20	0.00	84	4	0	4,047	54	3,789
55+50.43M	39.44	137.48	9.20	10.39	222	13	8	4,269	64	3,988
55+68.12M	17.68	189.49	9.20	14.66	107	6	8	4,376	74	4,079
55+96.M	27.88	95.52	9.20	2.05	147	10	9	4,523	85	4,205
56+00.M	4.00	95.20	9.20	1.97	14	1	0	4,537	85	4,218
56+21.M	21.00	110.47	9.20	0.27	80	7	1	4,617	86	4,290
56+46.M	25.00	115.14	9.20	1.46	104	9	1	4,722	87	4,385
56+50.M	4.00	115.82	9.20	1.50	17	1	0	4,739	87	4,400
57+00.M	50.00	116.44	9.20	2.50	215	17	4	4,954	92	4,593
57+31.M	31.00	115.50	9.20	3.73	133	11	4	5,087	96	4,711
57+41.M	10.00	115.92	9.20	3.13	43	3	1	5,130	98	4,749
57+50.M	9.00	116.76	9.20	2.81	39	3	1	5,168	99	4,784
58+00.M	50.00	152.97	9.20	1.99	250	17	4	5,418	105	5,011
58+50.M	50.00	223.38	9.20	6.72	348	17	8	5,767	115	5,332
58+79.64M	29.64	283.83	9.20	0.00	278	10	4	6,045	120	5,596
58+94.13M	14.49	309.16	9.20	0.00	159	5	0	6,204	120	5,750
59+00.M	5.87	303.10	9.20	0.00	67	2	0	6,271	120	5,815
59+08.62M	8.62	253.96	9.20	0.00	89	3	0	6,360	120	5,901
59+50.M	41.38	89.45	9.20	3.06	263	14	2	6,623	122	6,147
60+00.M	50.00	42.57	9.20	6.73	122	17	9	6,745	134	6,241
60+50.M	50.00	38.47	9.20	3.81	75	17	10	6,820	146	6,287
60+75.M	25.00	29.76	9.20	3.87	32	9	4	6,852	150	6,305
61+00.M	25.00	0.00	0.00	0.00	14	4	2	6,865	153	6,312
					6,865	400	122		153	

CTH M-NEW DITCH NE QUAD

Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) Mass Ordinate Note 8
+8N	0.00	14.45	0.00	0.00	0	0	0	0	0	0
+25N	16.72	50.97	0.00	0.00	20	0	0	20	0	20
+50N	25.00	12.48	0.00	0.00	29	0	0	50	0	50
+82N	32.08	0.00	0.00	0.00	7	0	0	57	0	57
					57	0	0		0	

CTH M-NEW DITCH NW QUAD

STATION	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) Mass Ordinate Note 8
1+00L	0.00	0.00	0.00	0.00	0	0	0	0	0	0
1+25L	25.00	1.28	0.00	0.00	1	0	0	1	0	1
1+43L	18.42	3.17	0.00	0.00	2	0	0	2	0	2
					2	0	0		0	

CTH M-NEW DITCH SE QUAD

STATION	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) Mass Ordinate Note 8
+99P	0.00	0.00	0.00	0.00	0	0	0	0	0	0
1+10P	10.78	54.40	0.00	0.00	11	0	0	11	0	11
1+18P	8.00	69.98	0.00	0.00	18	0	0	29	0	29
1+50P	32.19	38.60	0.00	0.00	65	0	0	94	0	94
1+79P	29.01	14.79	0.00	0.00	29	0	0	123	0	123
1+86P	6.56	0.00	0.00	0.00	2	0	0	124	0	124
					124	0	0		0	

CTH M-NEW DITCH SW QUAD

STATION	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) Mass Ordinate Note 8
1+00Q	0.00	0.00	0.00	0.00	0	0	0	0	0	0
1+50Q	50.00	6.77	0.00	0.00	6	0	0	6	0	6
2+00Q	50.00	35.38	0.00	0.00	39	0	0	45	0	45
2+25Q	25.00	32.17	0.00	0.00	31	0	0	77	0	77
					77	0	0		0	

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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	EARTHWORK SUMMARY	SHEET NO: 291	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ ORG DATE : _____ ORIGINATOR : DIST _ PLOT SCALE : 1:1

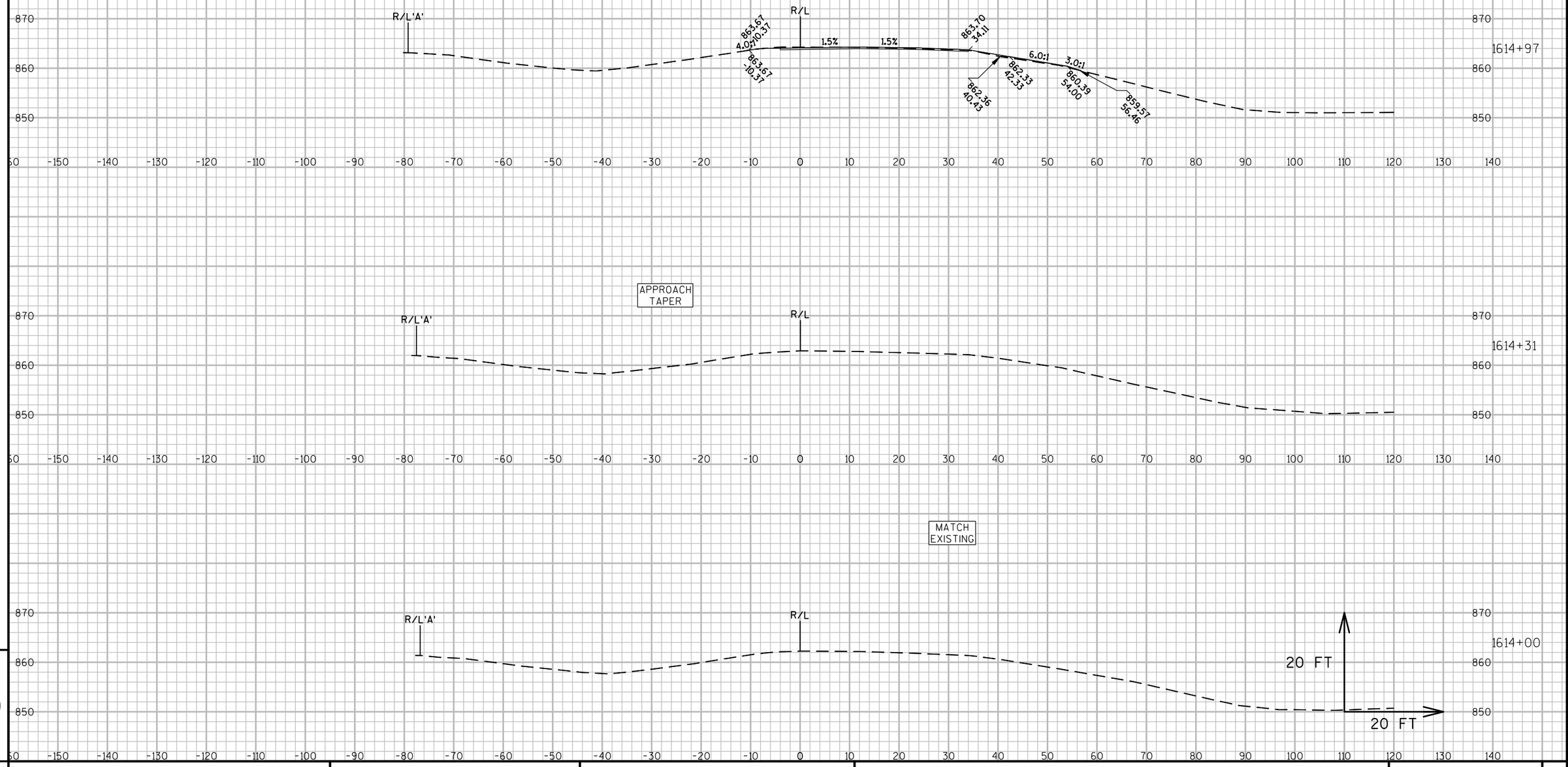
CTH M-DRIVEWAY RELOCATION											
		AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)			
STATION	Distance	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Expanded Fill	Mass Ordinate	
								1.00	1.25		
					Note 1	Note 2	Note 3	Note 1		Note 8	
50+55R	0.00	25.19	1.70	0.00	0	0	0	0	0	0	
50+89R	33.84	11.28	1.70	0.36	23	2	0	23	0	20	
51+00R	11.16	9.81	1.70	2.43	4	1	1	27	1	23	
51+47R	47.44	9.76	1.70	4.15	17	3	6	44	8	30	
51+50R	2.56	10.10	1.70	3.85	1	0	0	45	9	31	
51+80R	30.00	13.90	0.00	1.55	13	1	3	59	12	39	
					59	7	10		12		

9

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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	EARTHWORK SUMMARY	SHEET NO:	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ ORG DATE : _____ ORIGINATOR : DIST _ PLOT SCALE : 1:1



APPROACH TAPER

MATCH EXISTING

9

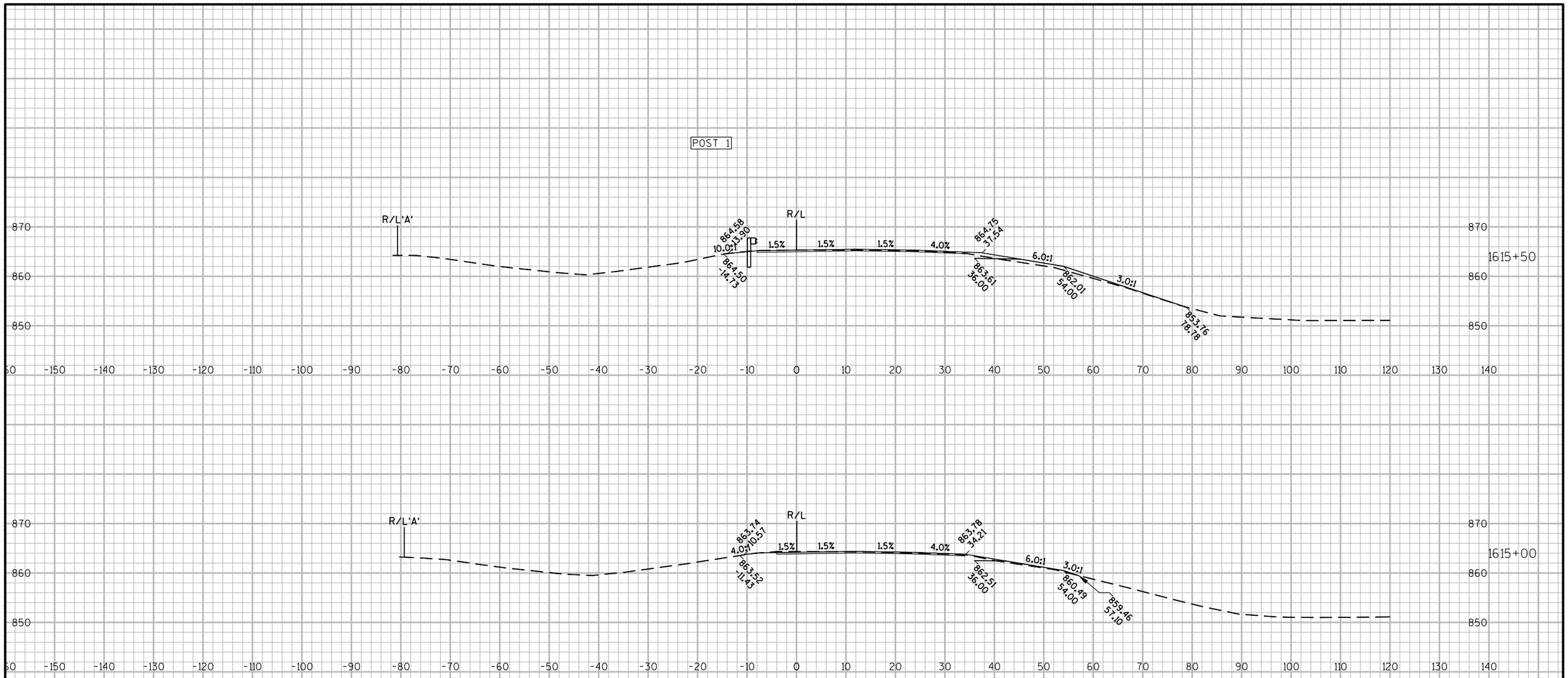
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 293	E

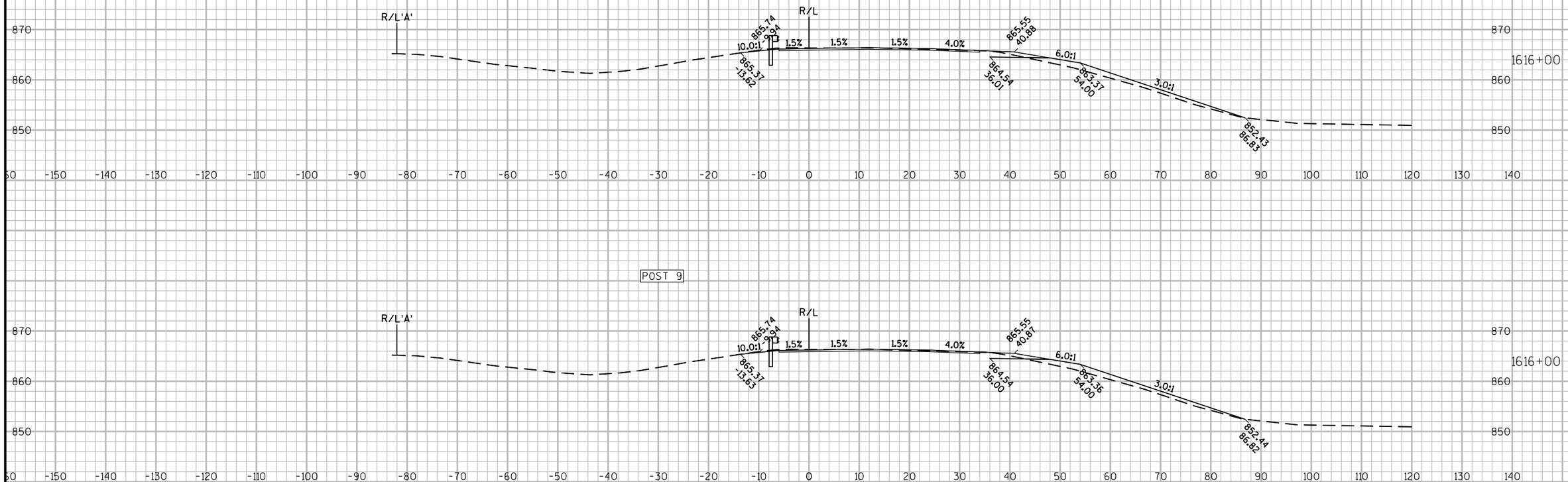
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LAYOUT NAME - SECTION SHEET - (1)

PLOT DATE : 7/11/2018 12:38 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

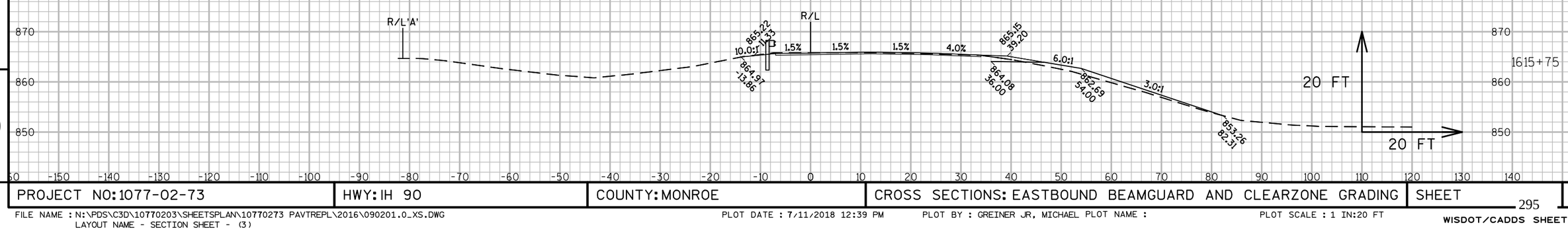


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 294	E



POST 9

POST 5



9 9

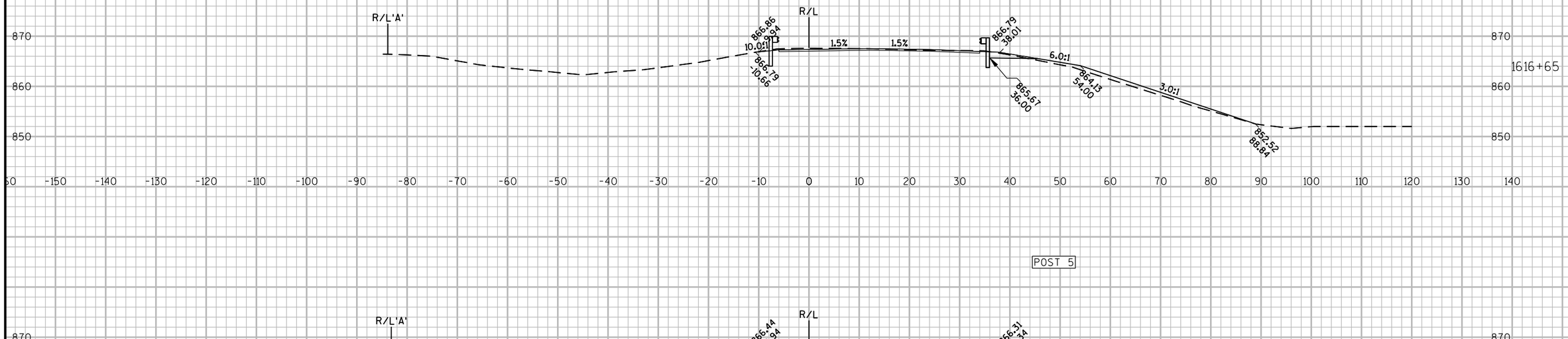
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 295	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (3)

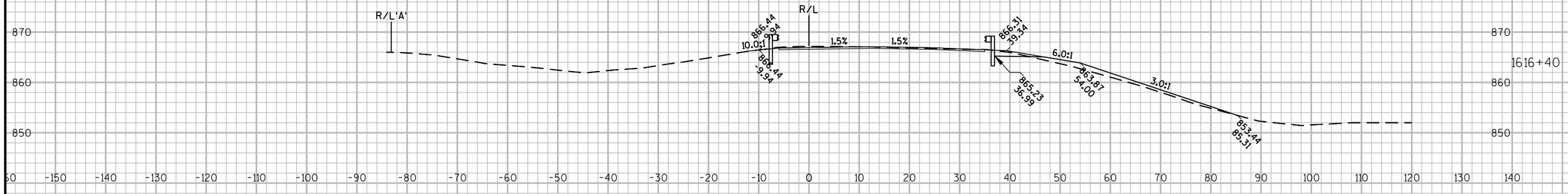
PLOT DATE : 7/11/2018 12:39 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

POST 9



POST 5

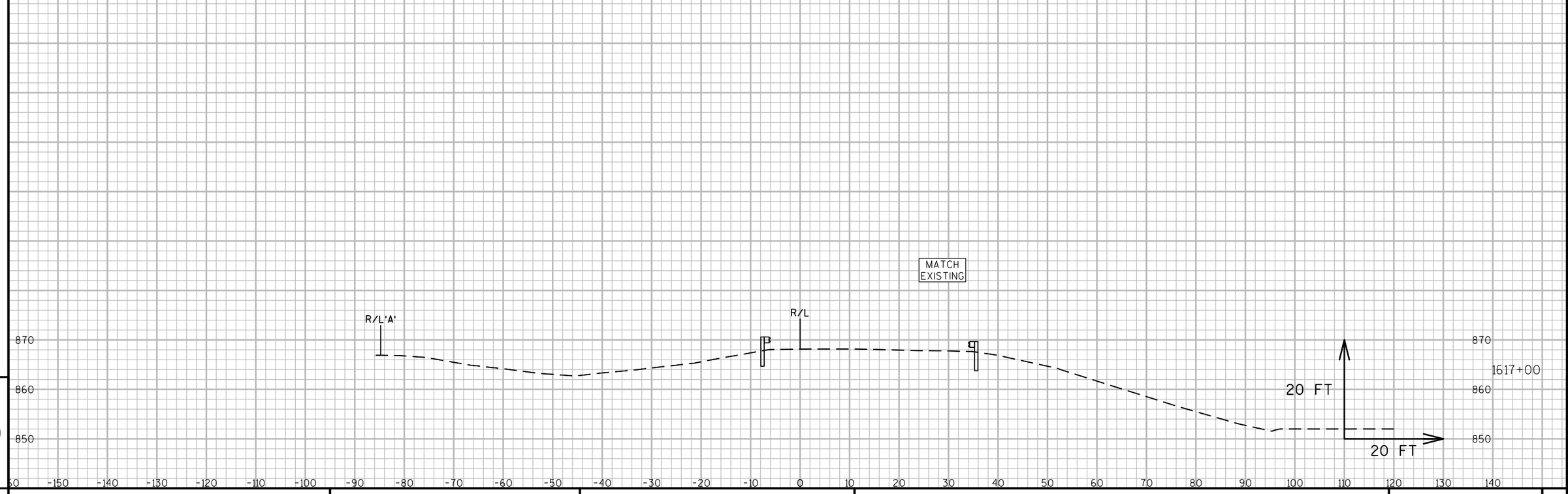


POST 1

9 9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (4)
PLOT DATE : 7/11/2018 12:39 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



9

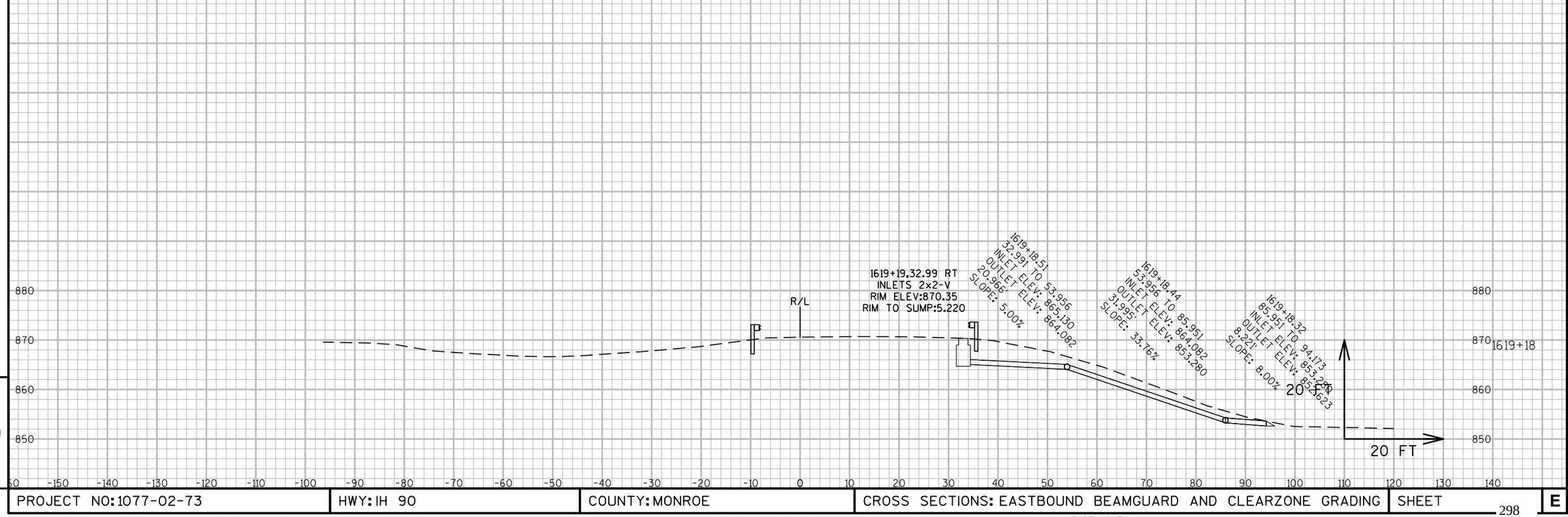
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 297	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (5)

PLOT DATE : 7/11/2018 12:39 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



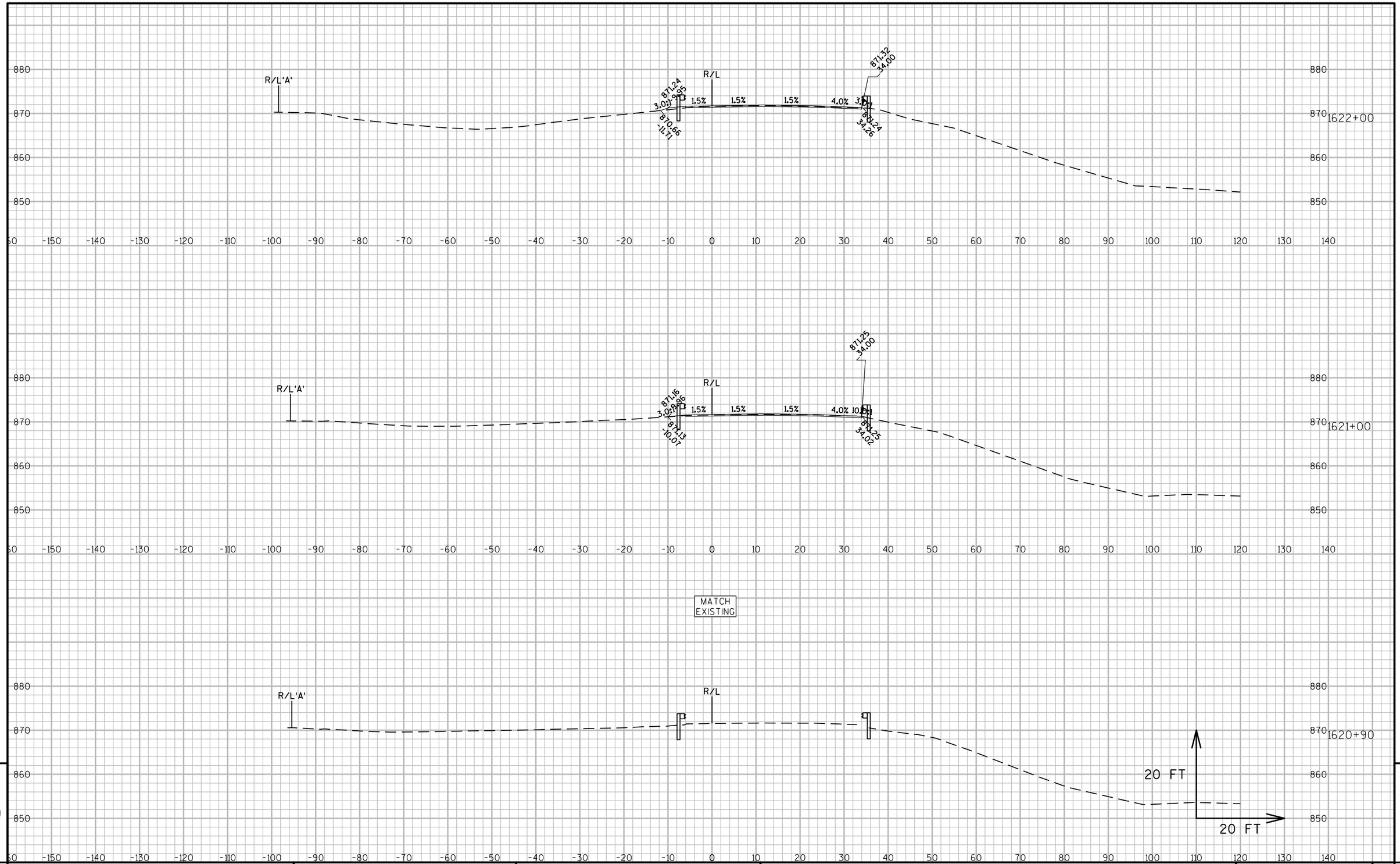
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (6)

PLOT DATE : 7/11/2018 12:40 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

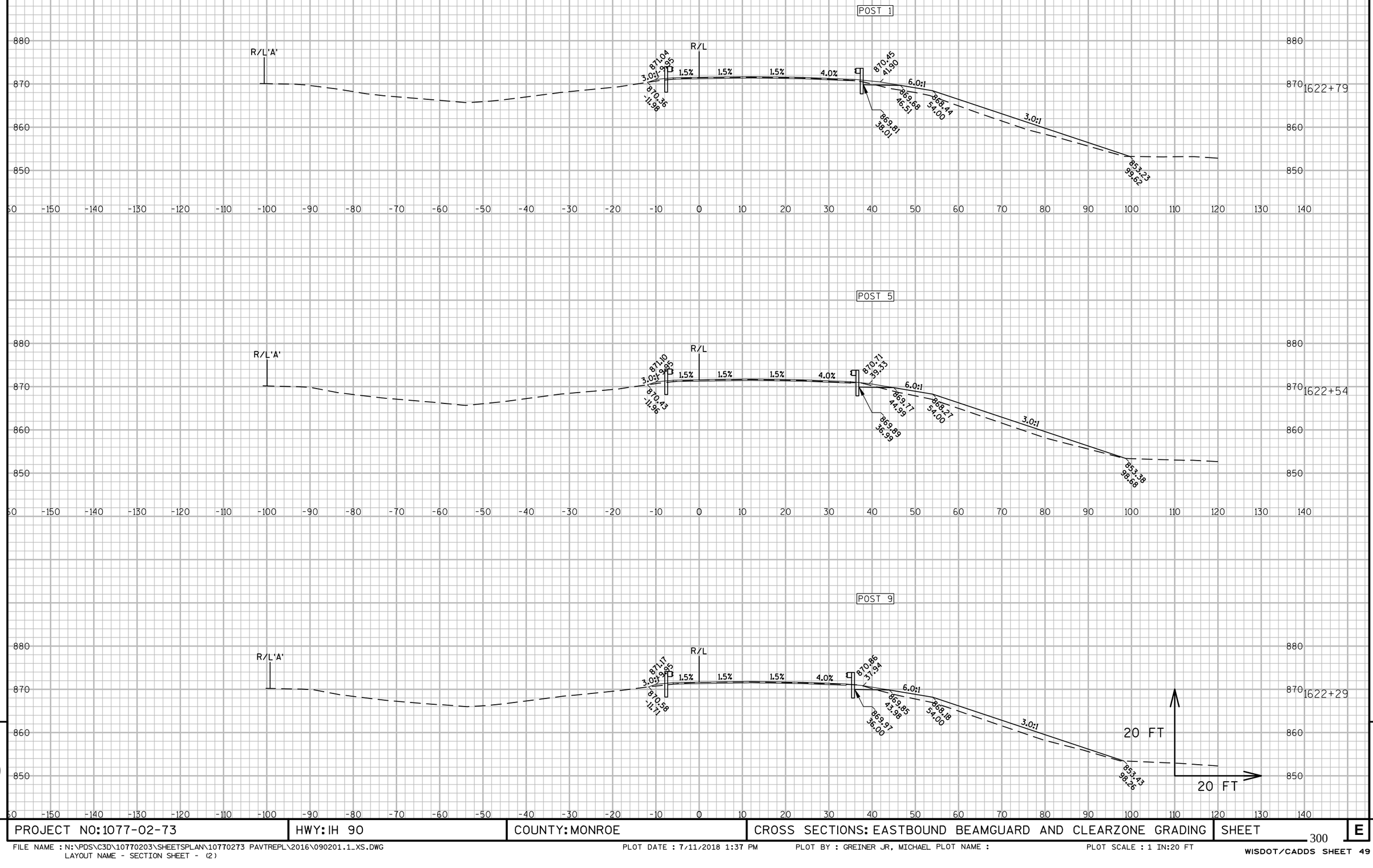


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9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (1)
PLOT DATE : 7/11/2018 1:37 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

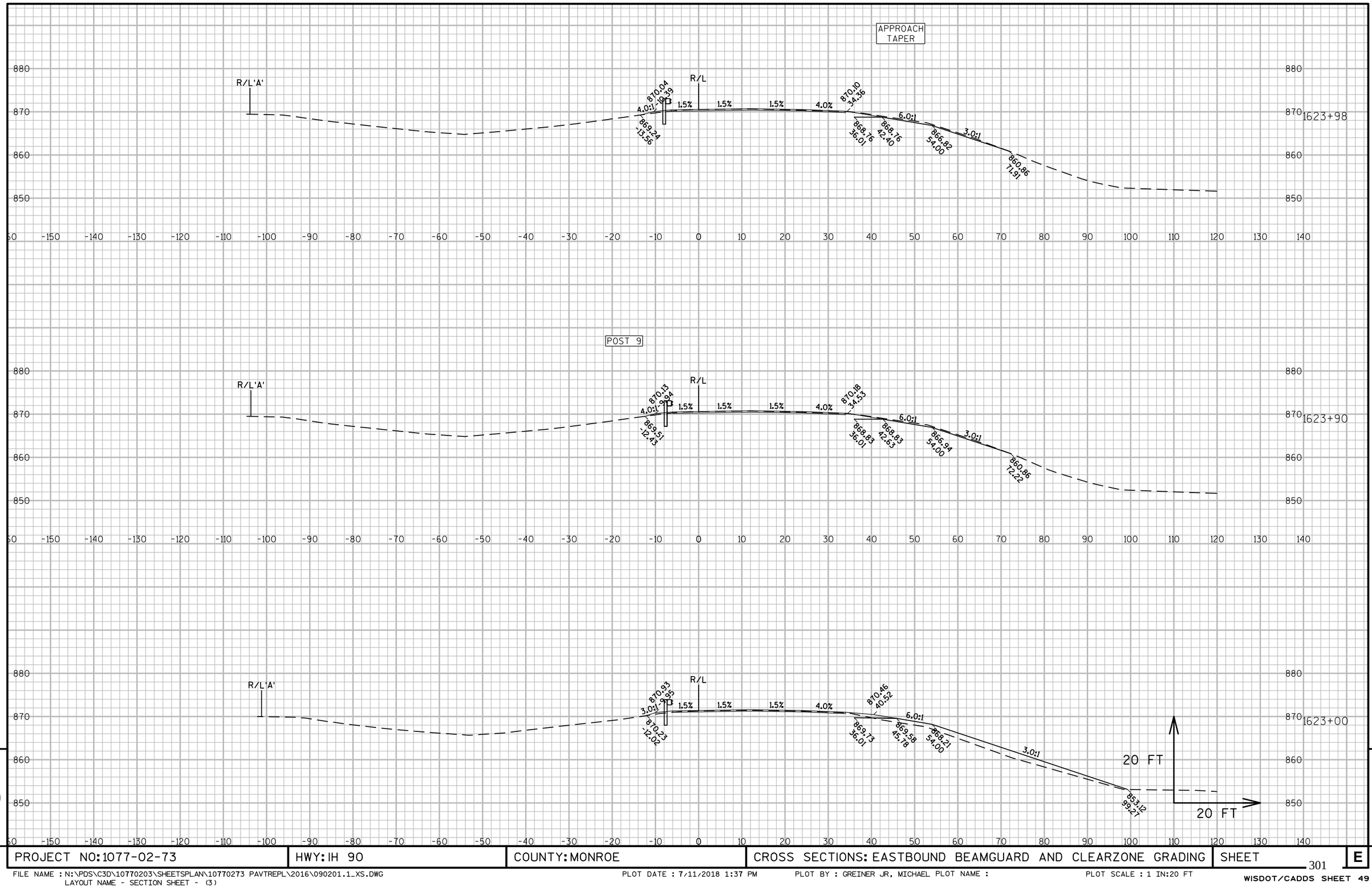


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (2)

PLOT DATE : 7/11/2018 1:37 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME :

PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

9

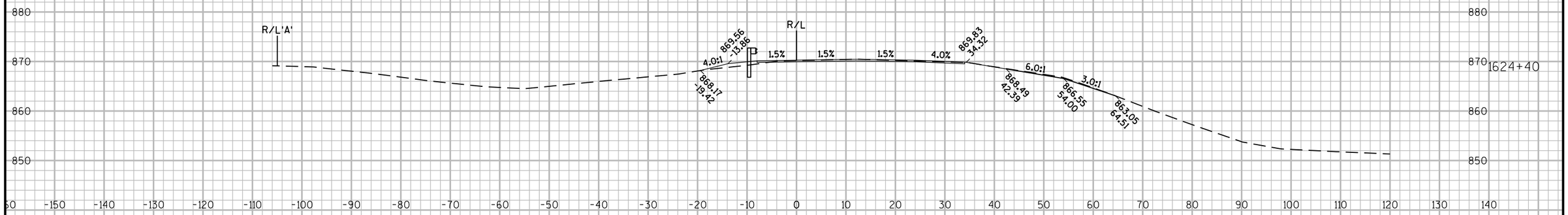
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LAYOUT NAME - SECTION SHEET - (3)

PLOT DATE : 7/11/2018 1:37 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME :

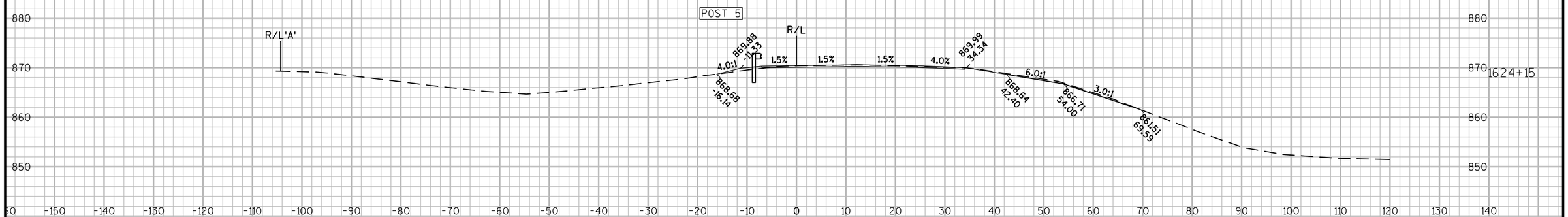
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WISDOT/CADDS SHEET 49

POST 1



POST 5



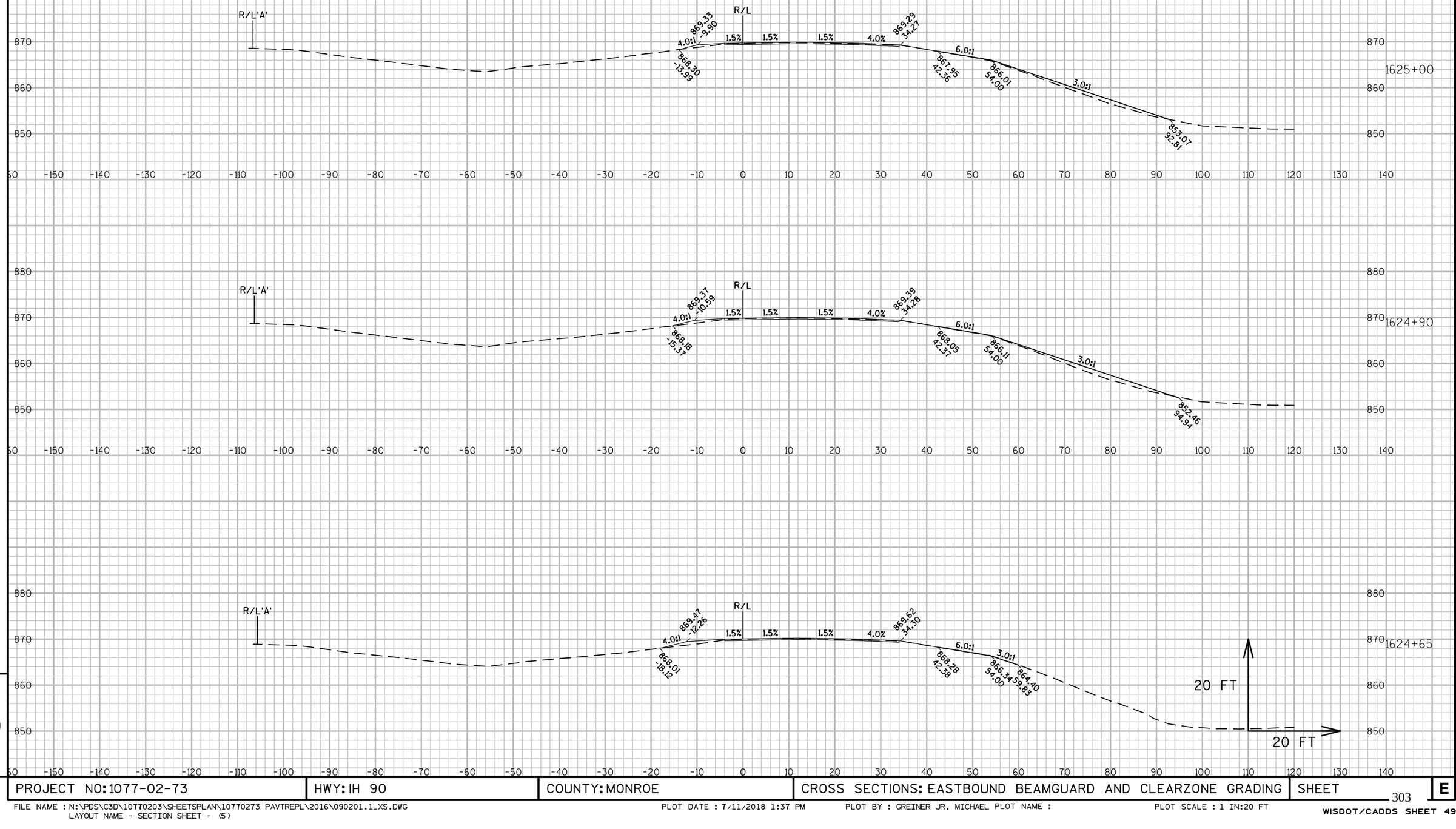


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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (4)

PLOT DATE : 7/11/2018 1:37 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (5)

PLOT DATE : 7/11/2018 1:37 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

MATCH EXISTING

R/L'A'

R/L

1626+00

APPROACH TAPER

R/L'A'

R/L

868.94
-6.01

4.0:1

1.5%

1.5%

1.5%

4.0%

868.61
34.22

6.0:1

3.0:1

868.12
-9.21

867.26
42.34

865.32
54.00

864.11
57.62

1625+58

20 FT

20 FT

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860
850

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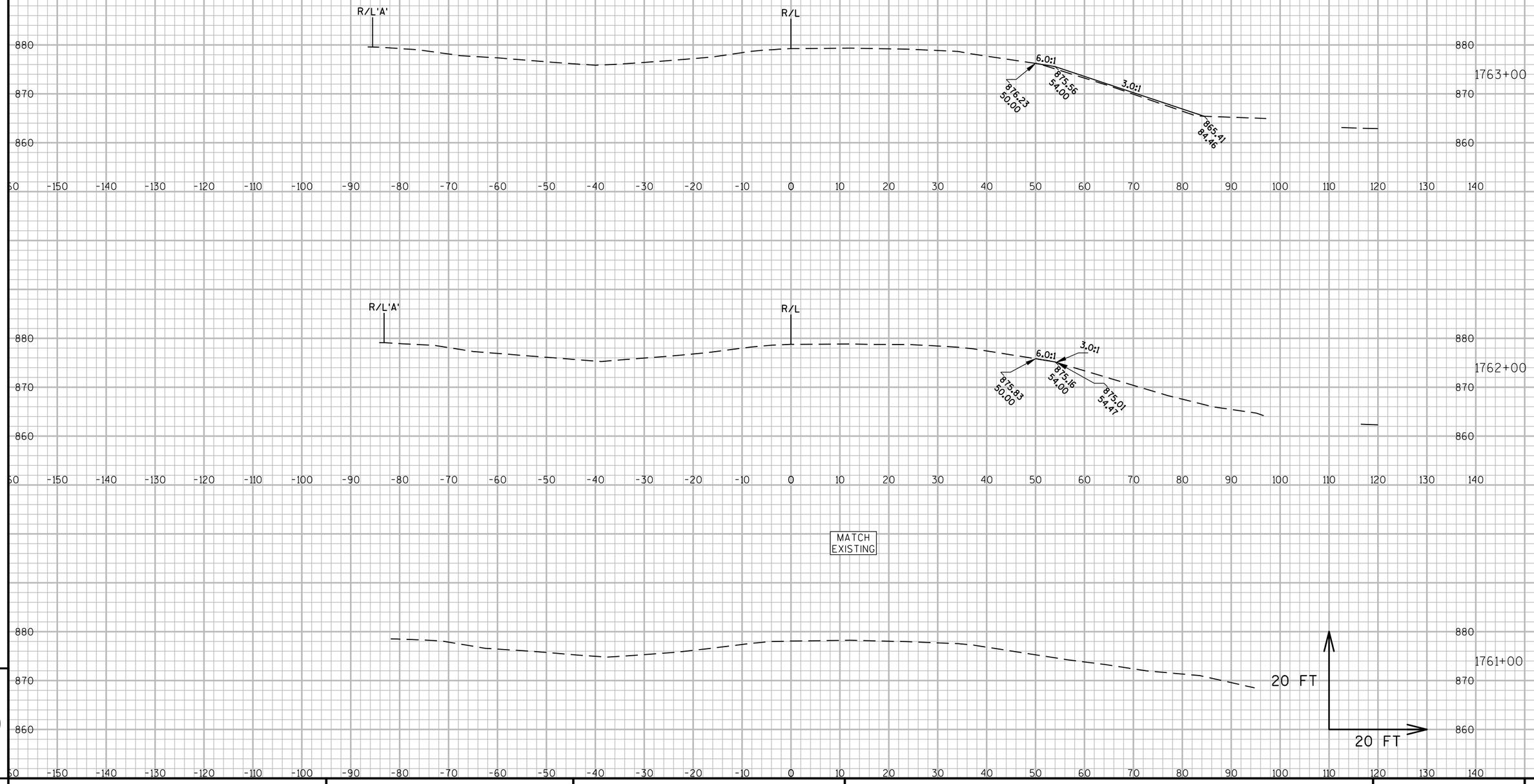
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (6)

PLOT DATE : 7/11/2018 1:38 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 305	E

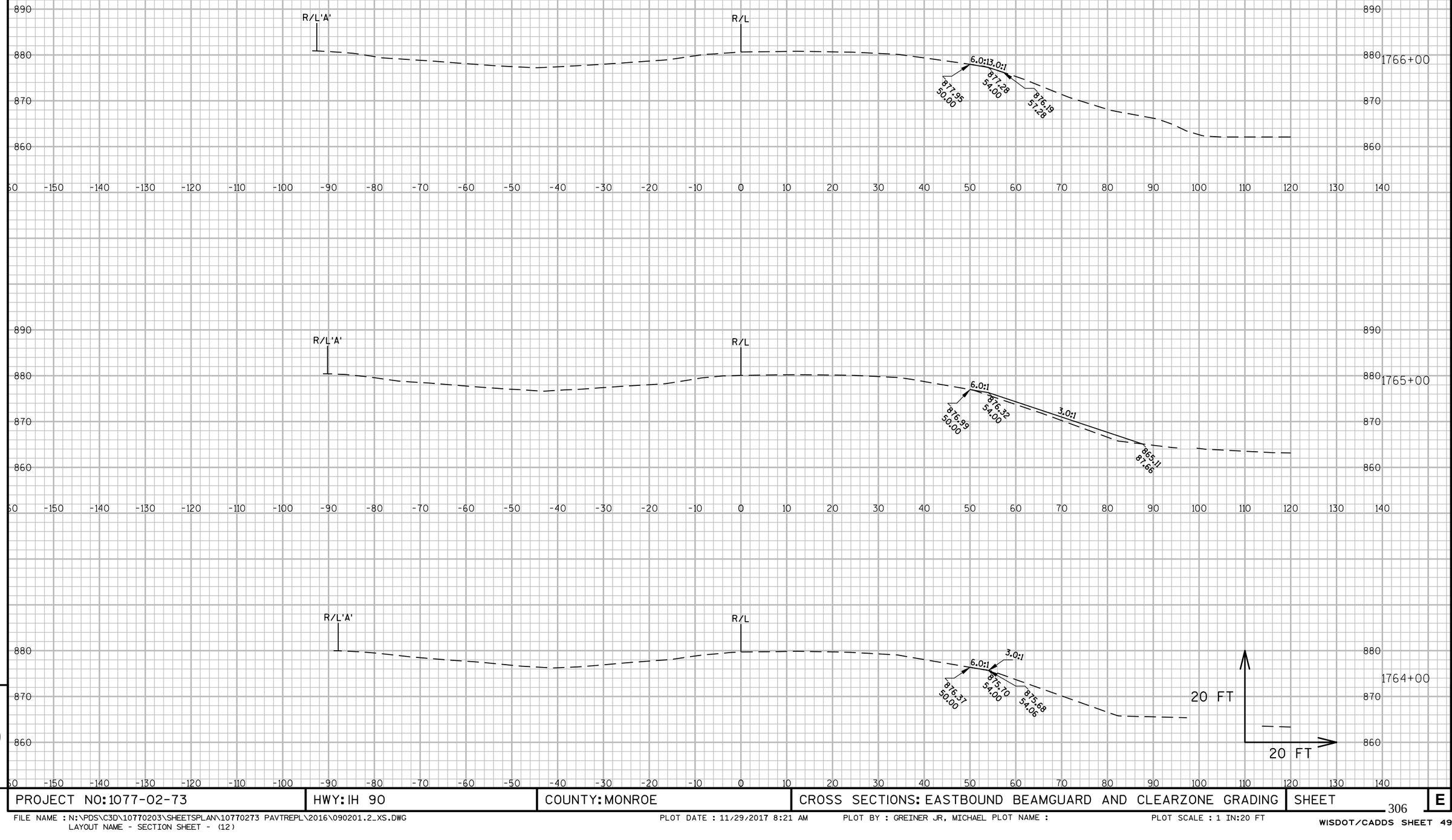
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FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.2_XS.DWG
LAYOUT NAME - SECTION SHEET - (11)

PLOT DATE : 11/29/2017 8:21 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :

PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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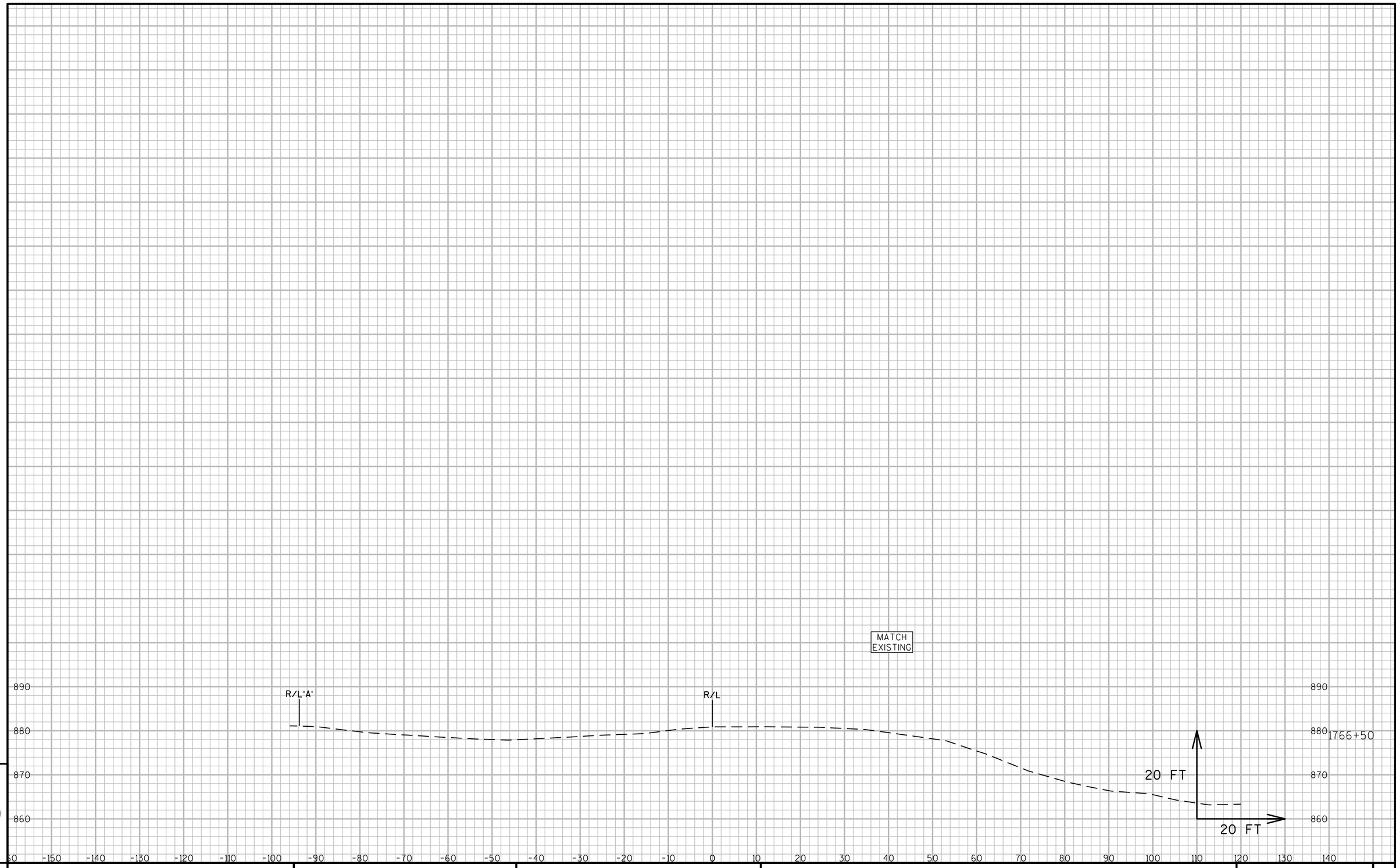
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.2_XS.DWG
LAYOUT NAME - SECTION SHEET - (12)

PLOT DATE : 11/29/2017 8:21 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.2_XS.DWG
LAYOUT NAME - SECTION SHEET - (13)

PLOT DATE : 11/29/2017 8:21 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

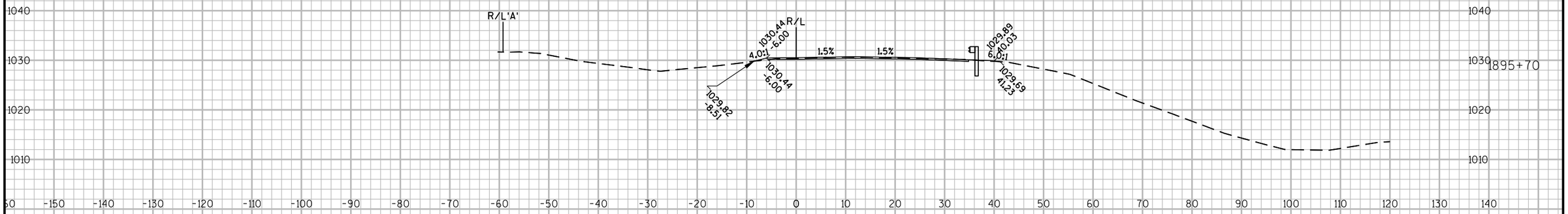
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.3_XS.DWG
LAYOUT NAME - SECTION SHEET - (16)

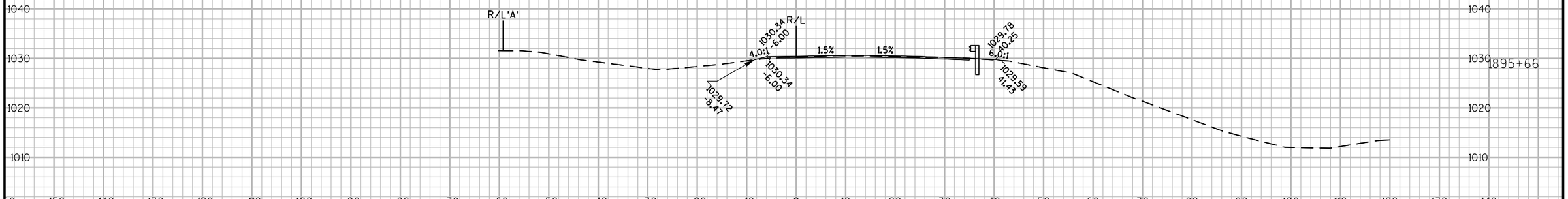
PLOT DATE : 7/11/2018 3:15 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

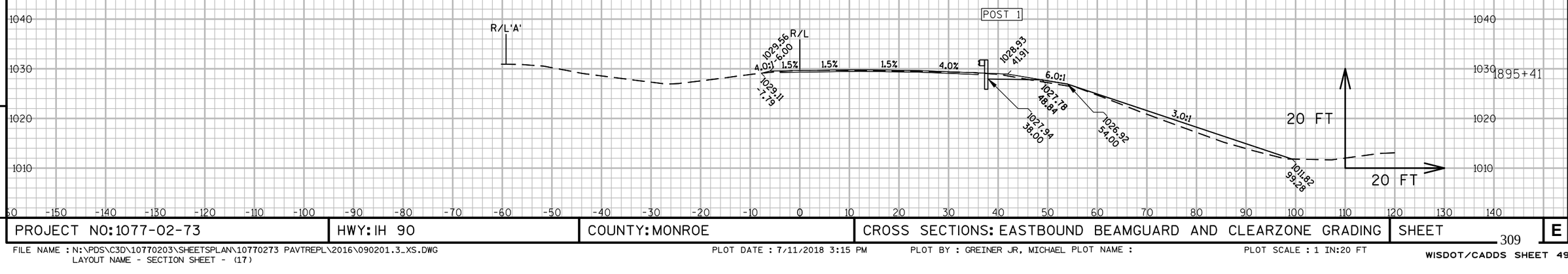
APPROACH TAPER



POST 5



POST 1



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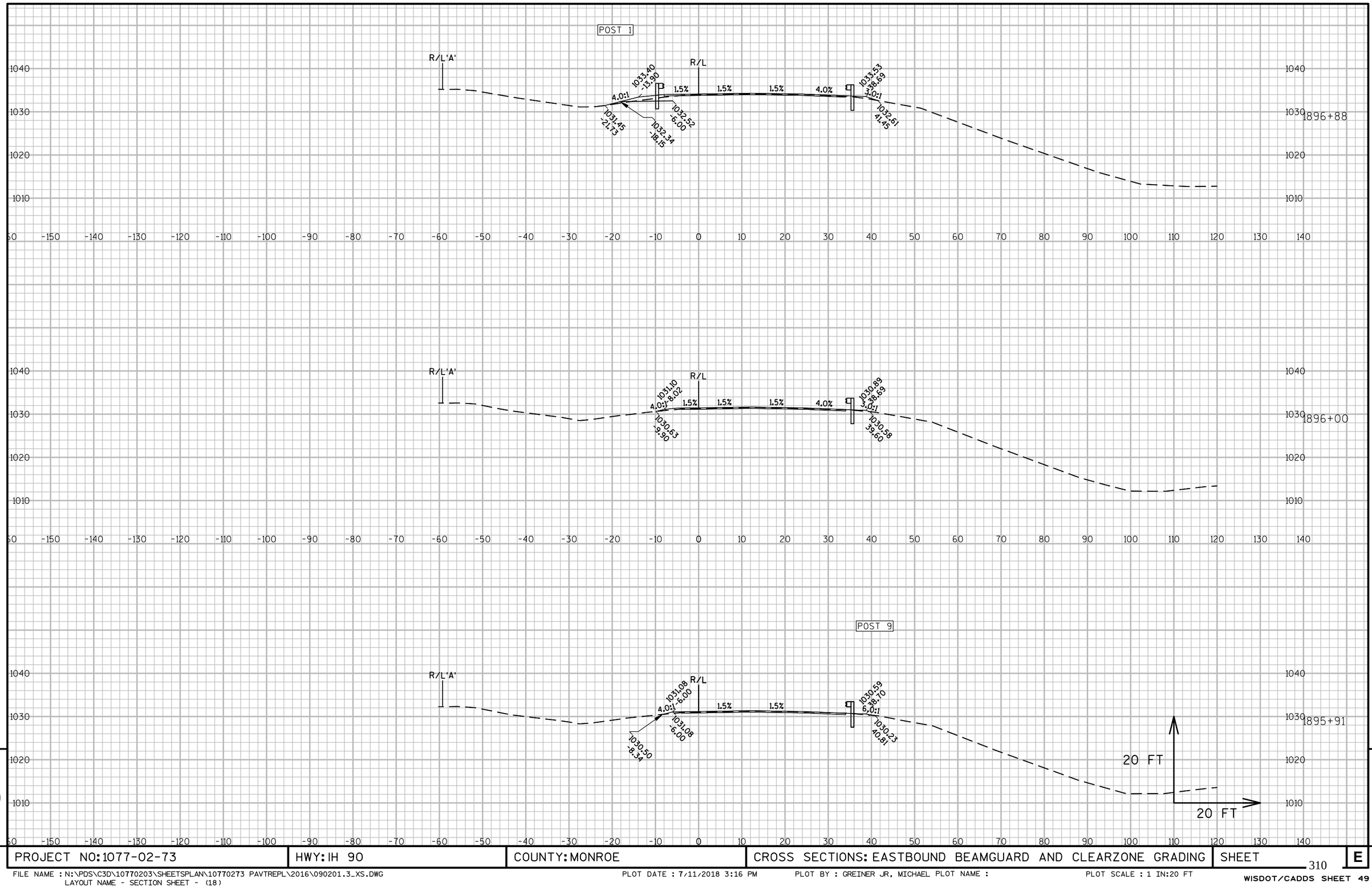
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.3_XS.DWG
LAYOUT NAME - SECTION SHEET - (17)

PLOT DATE : 7/11/2018 3:15 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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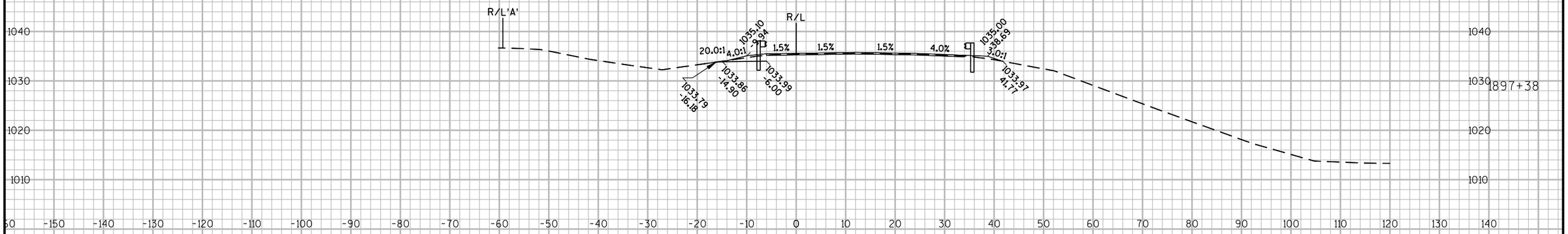
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FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.3_XS.DWG
LAYOUT NAME - SECTION SHEET - (18)

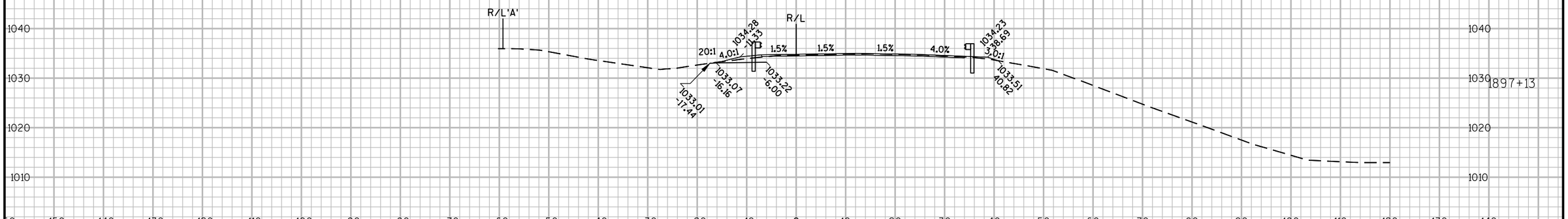
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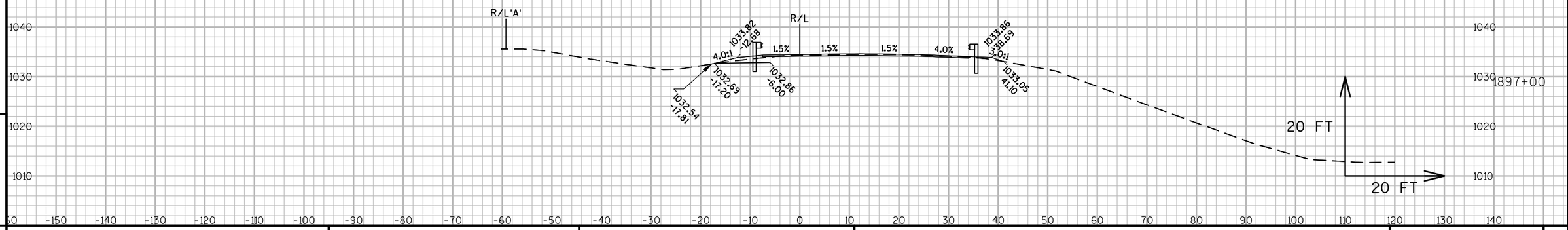
WISDOT/CADDS SHEET 49

POST 9



POST 5

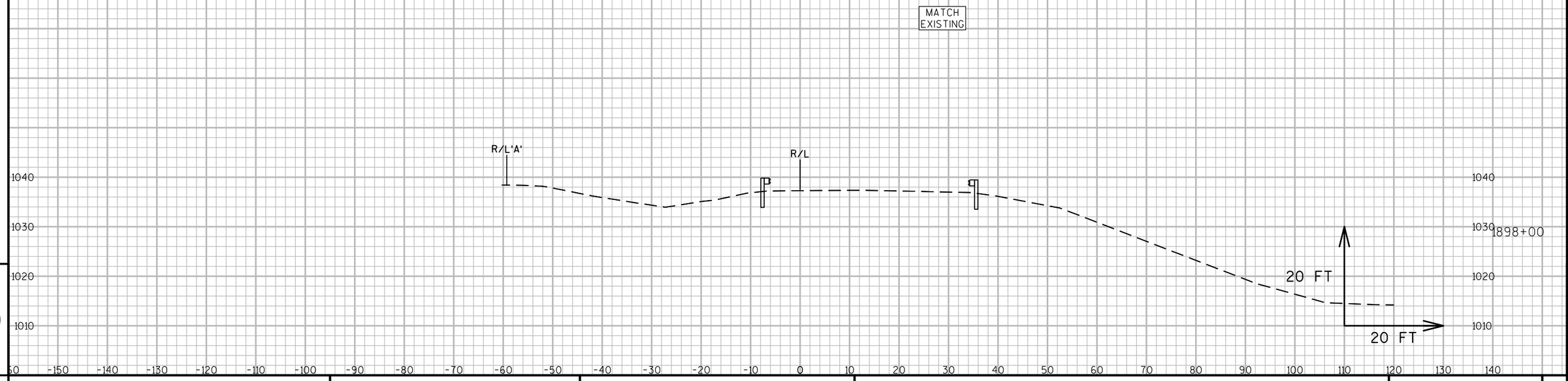




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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.3_XS.DWG
LAYOUT NAME - SECTION SHEET - (19)
PLOT DATE : 7/11/2018 3:16 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



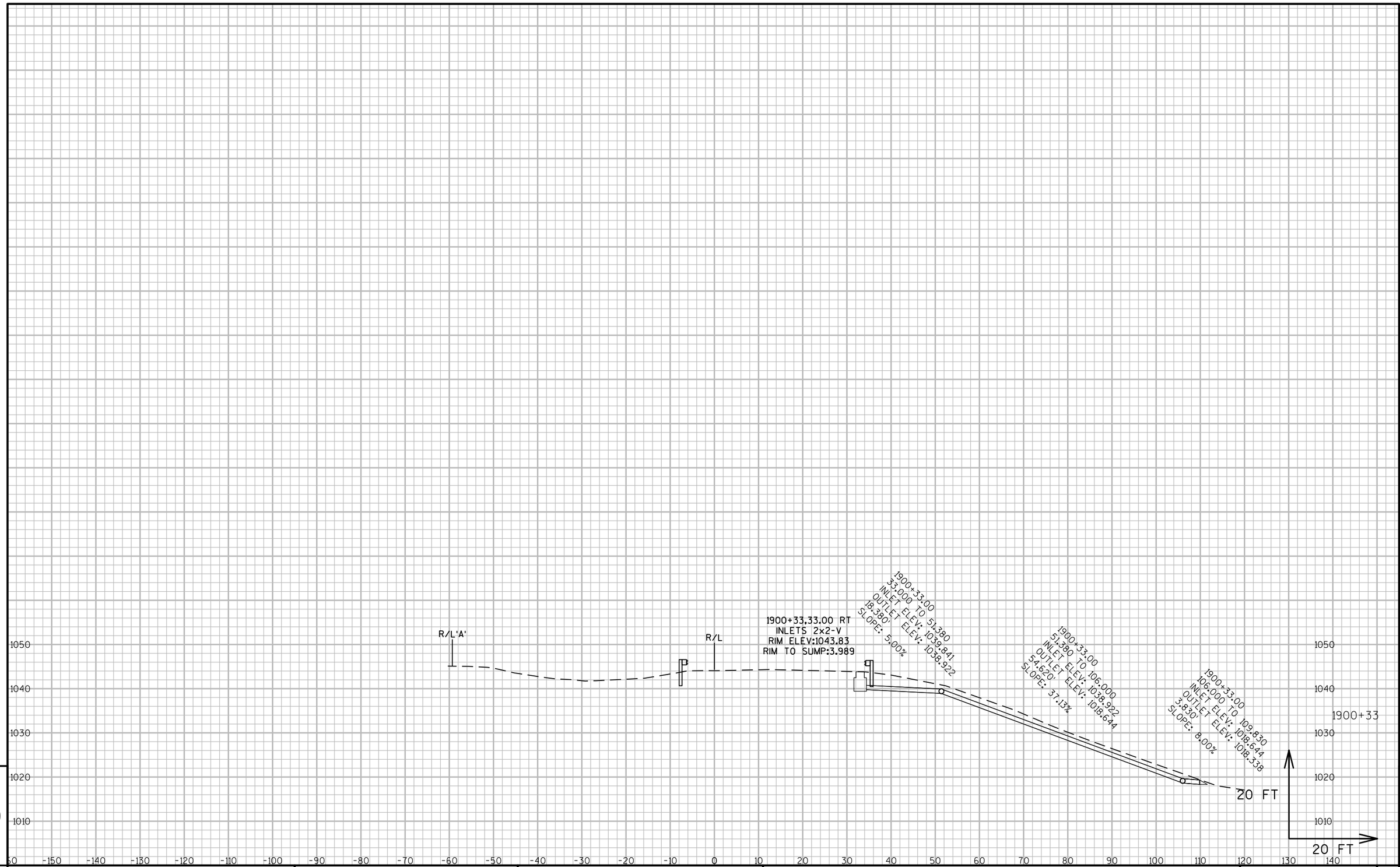
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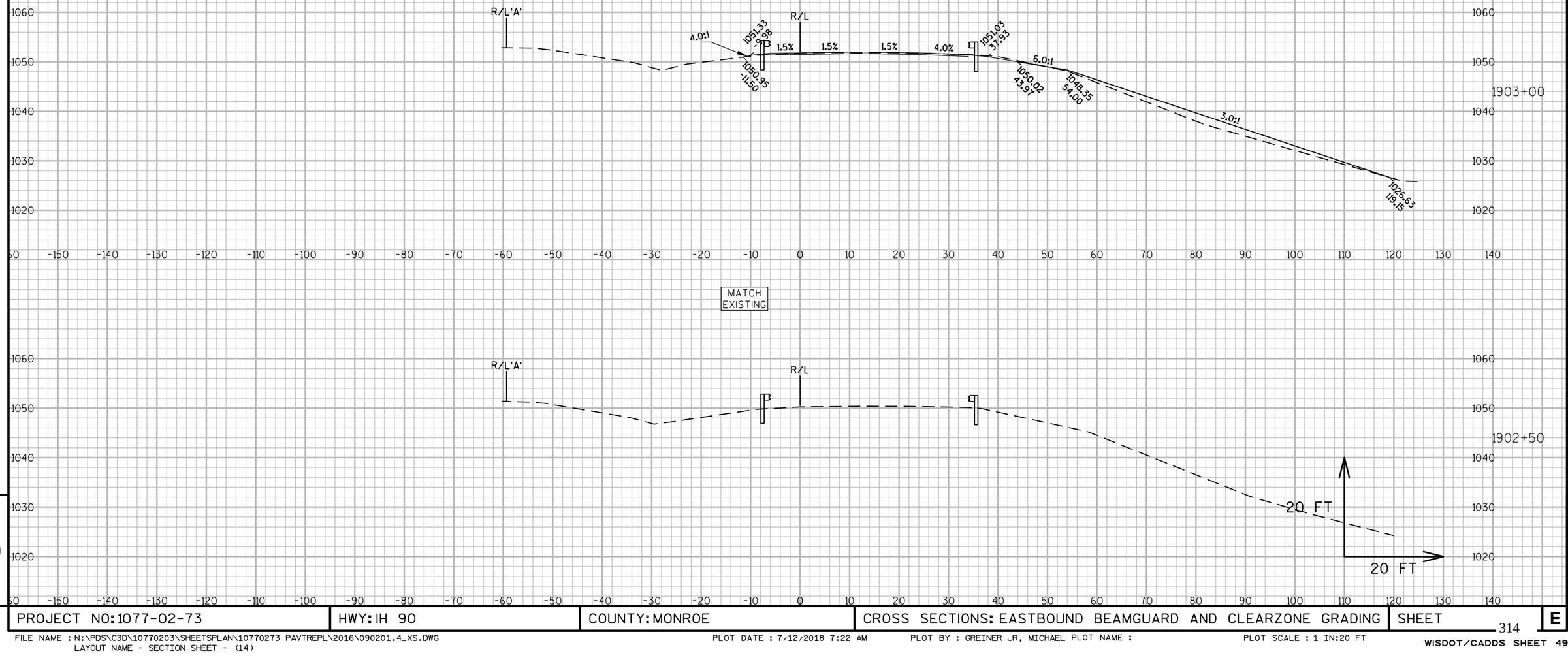
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LAYOUT NAME - SECTION SHEET - (20)

PLOT DATE : 7/11/2018 3:16 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 313	E



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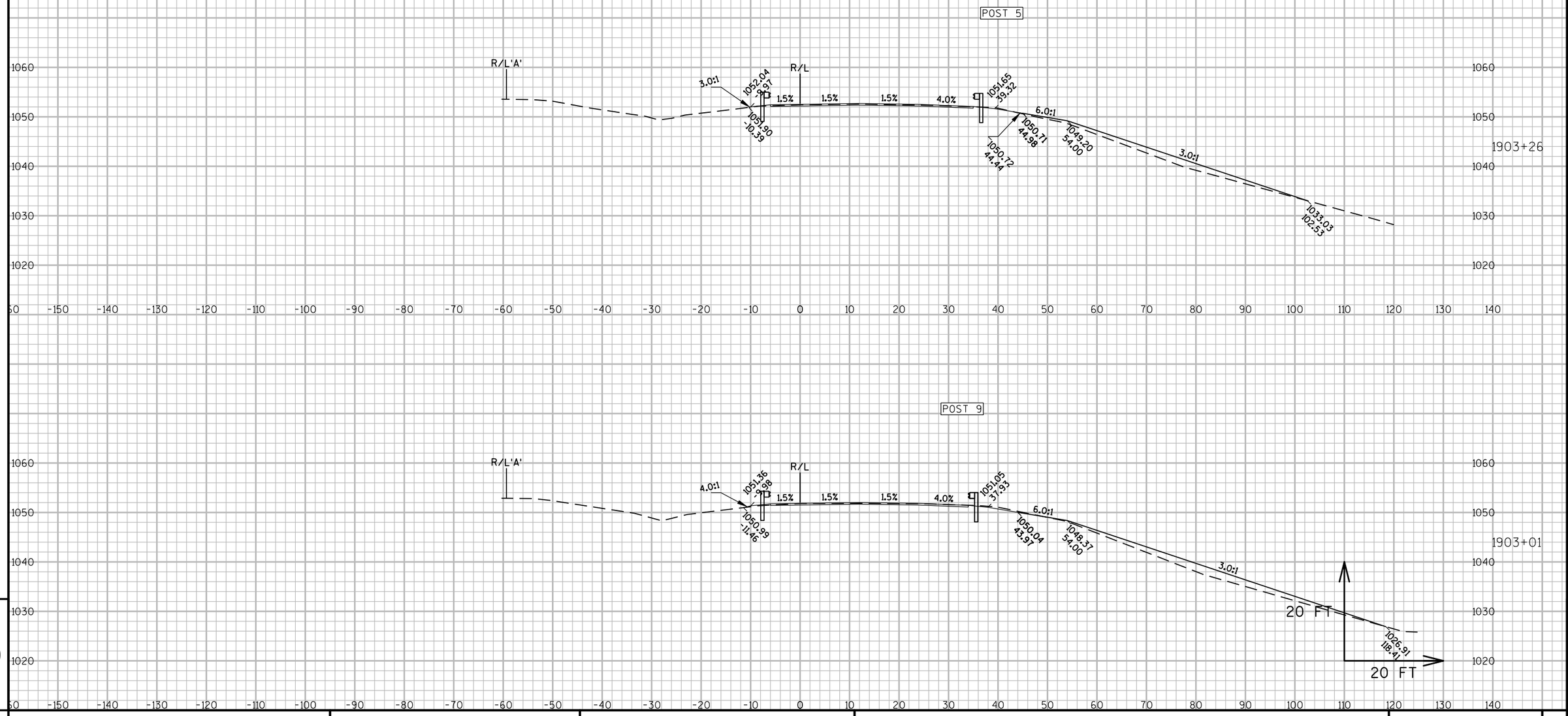
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.4_XS.DWG
LAYOUT NAME - SECTION SHEET - (14)

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PLOT SCALE : 1 IN:20 FT



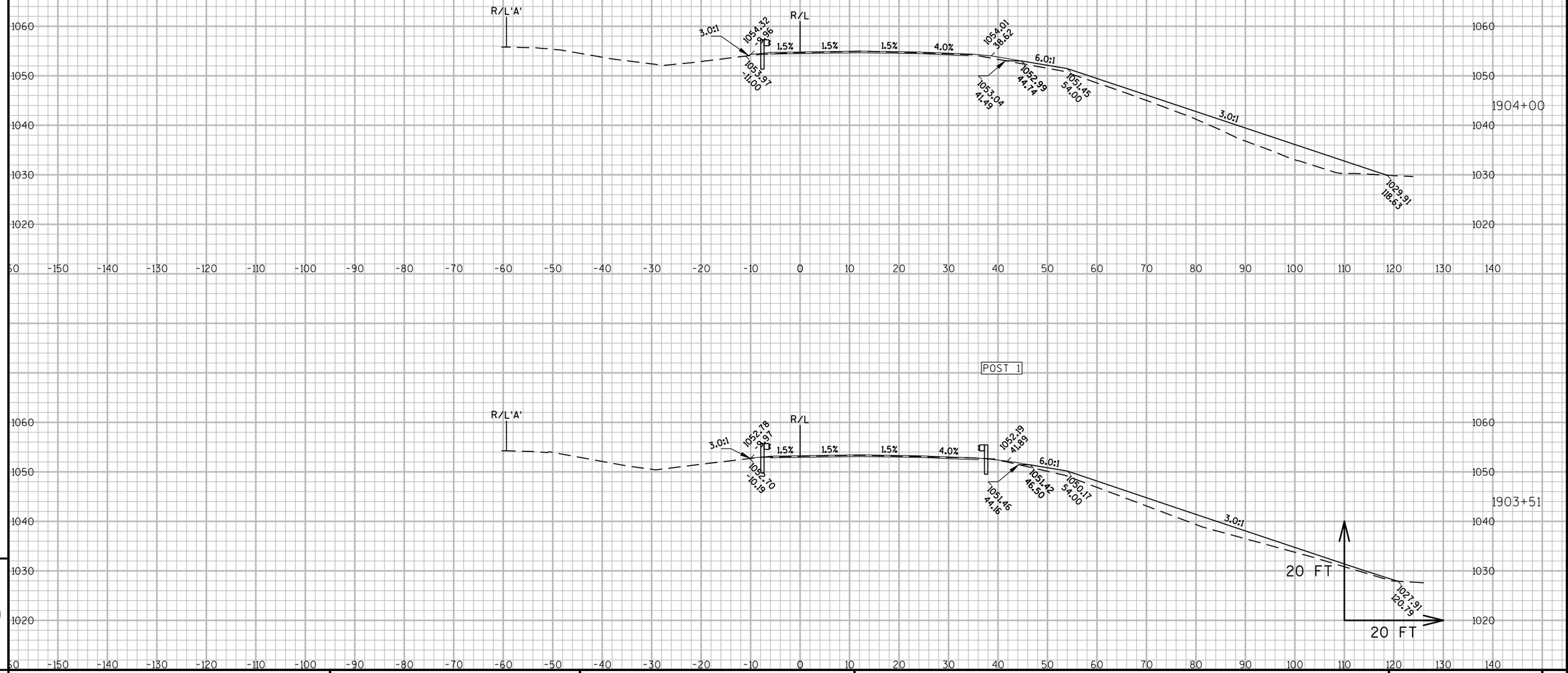
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

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FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.4_XS.DWG
LAYOUT NAME - SECTION SHEET - (15)

PLOT DATE : 7/12/2018 7:22 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



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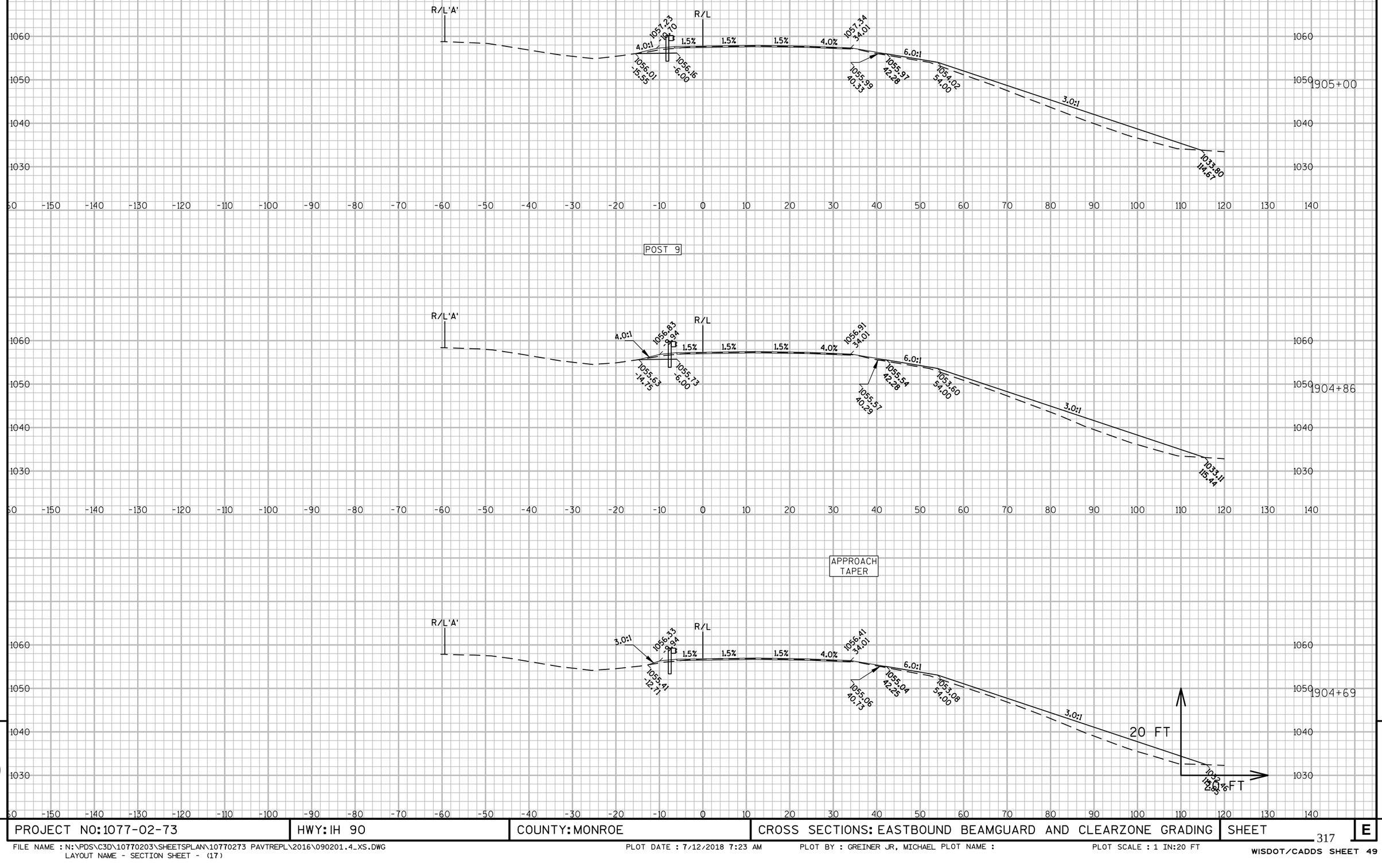
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

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FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.4_XS.DWG
LAYOUT NAME - SECTION SHEET - (16)

PLOT DATE : 7/12/2018 7:23 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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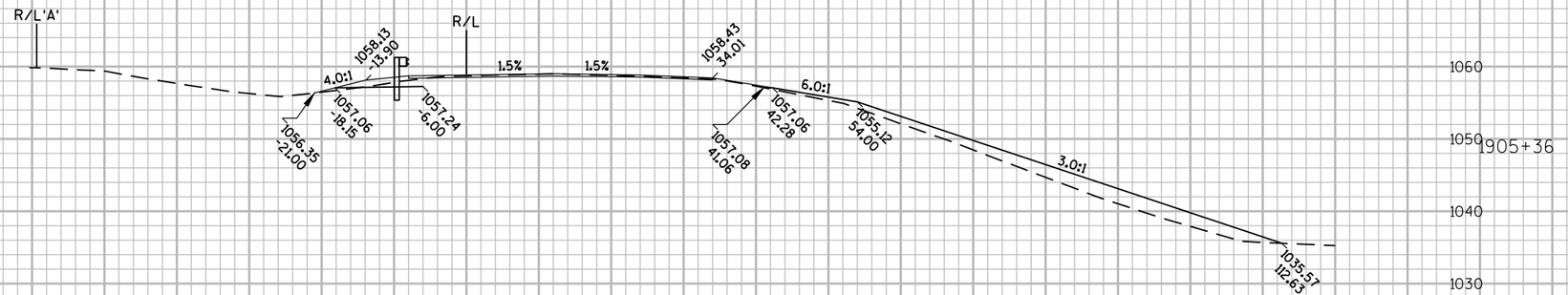
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

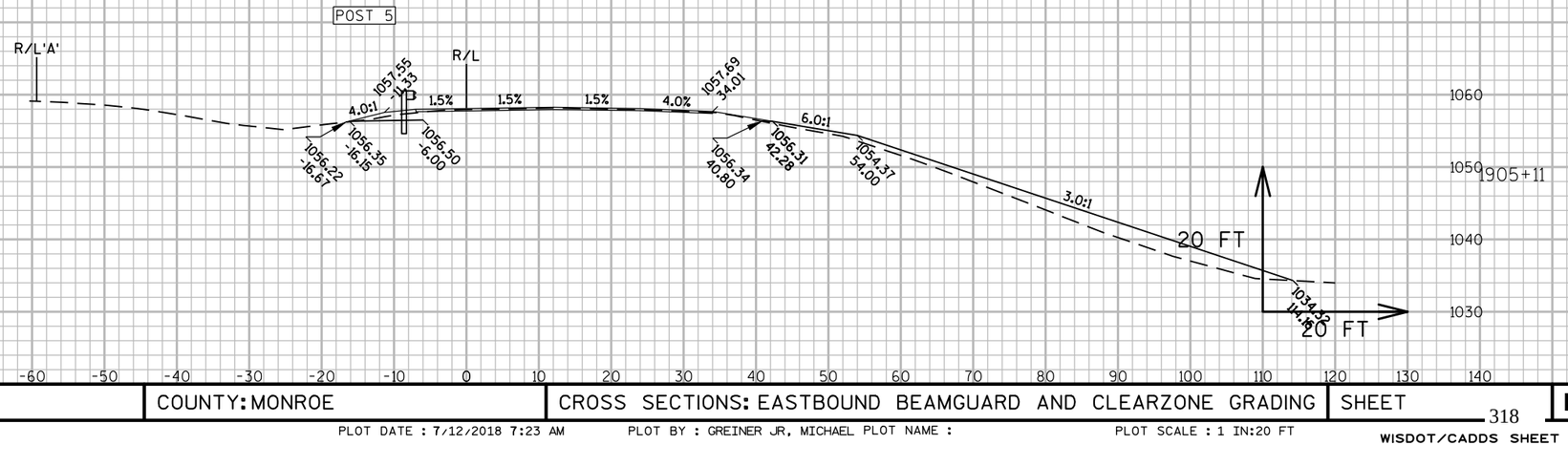
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LAYOUT NAME - SECTION SHEET - (17)

PLOT DATE : 7/12/2018 7:23 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

POST 1



POST 5

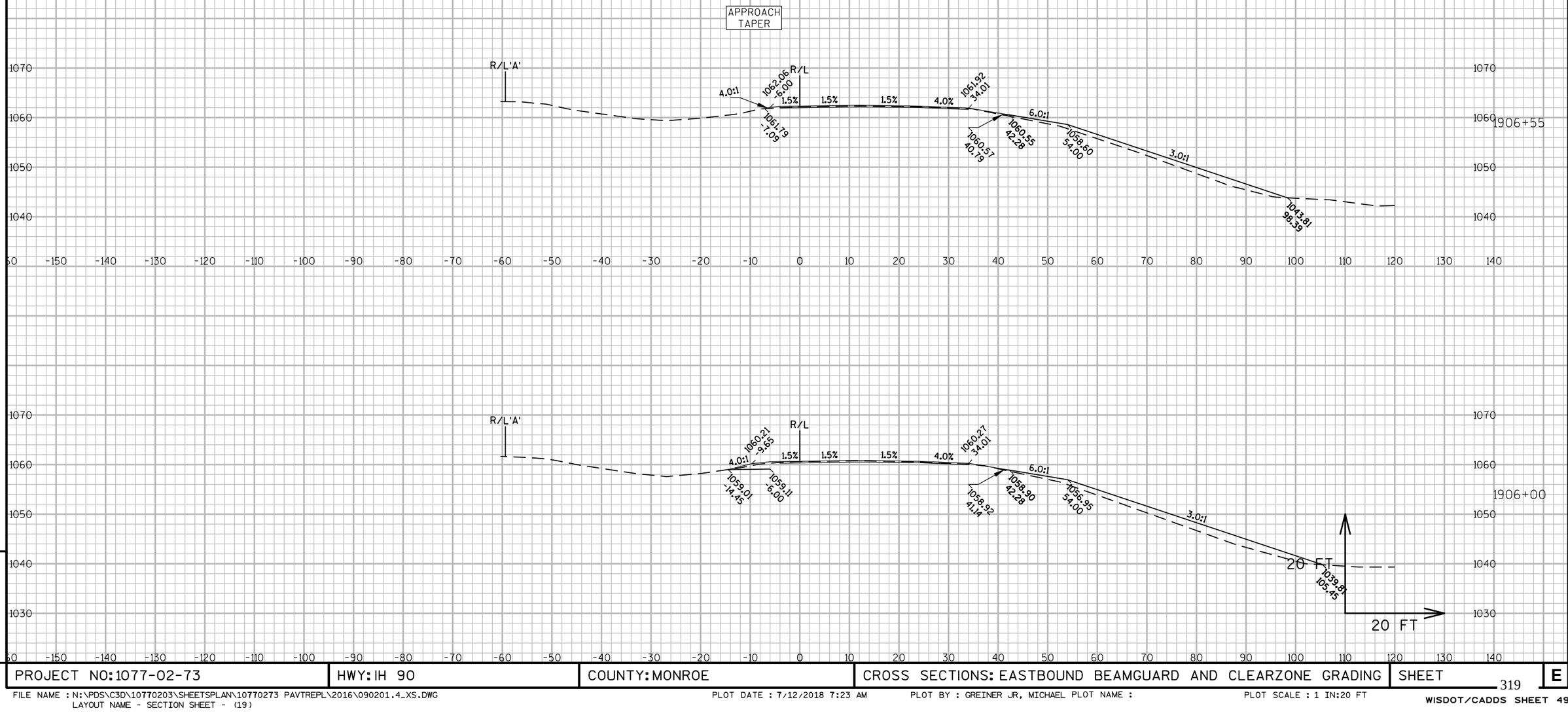


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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.4_XS.DWG
LAYOUT NAME - SECTION SHEET - (18)
PLOT DATE : 7/12/2018 7:23 AM
PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



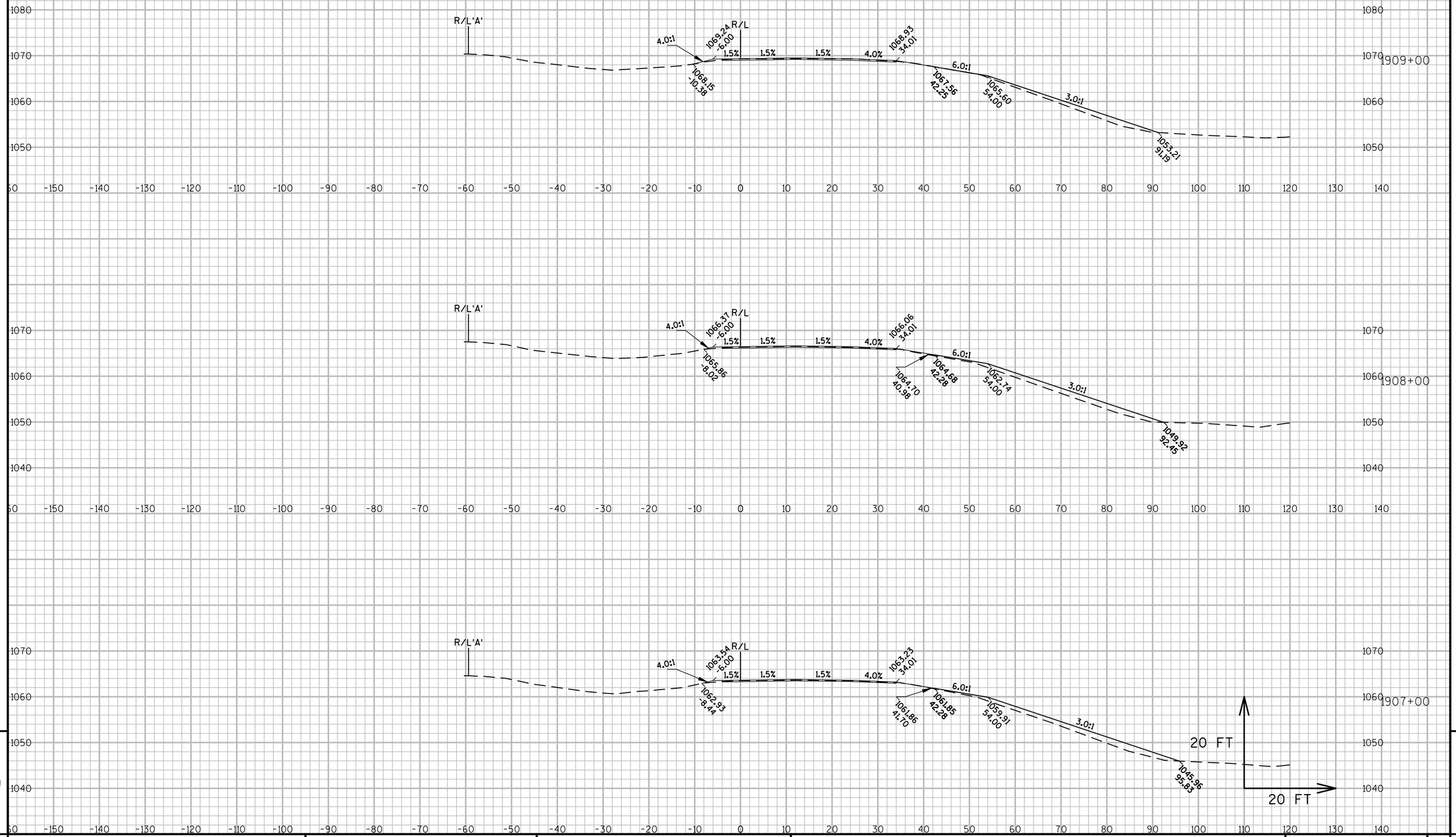
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.4_XS.DWG
LAYOUT NAME - SECTION SHEET - (19)

PLOT DATE : 7/12/2018 7:23 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



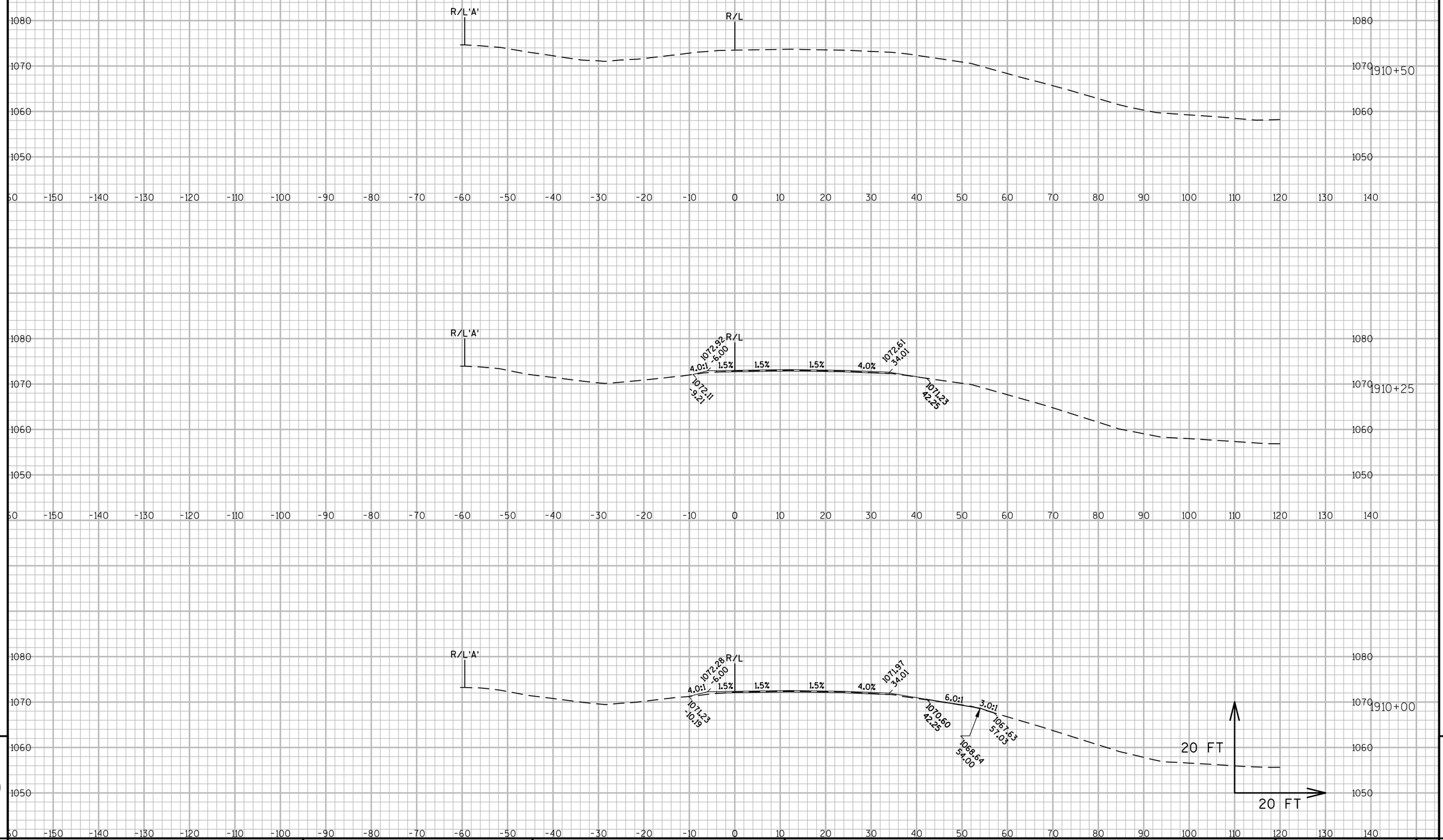
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 320 E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.4_XS.DWG
LAYOUT NAME - SECTION SHEET - (20)

PLOT DATE : 7/12/2018 7:24 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

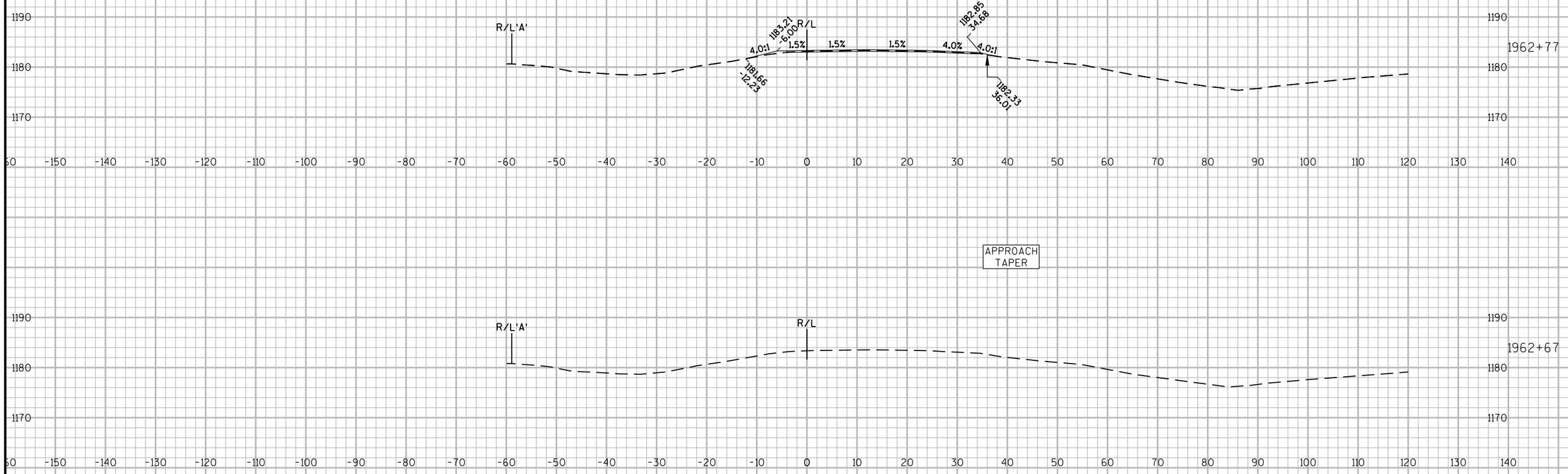
MATCH EXISTING



PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.4_XS.DWG
LAYOUT NAME - SECTION SHEET - (21)

PLOT DATE : 7/12/2018 7:24 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

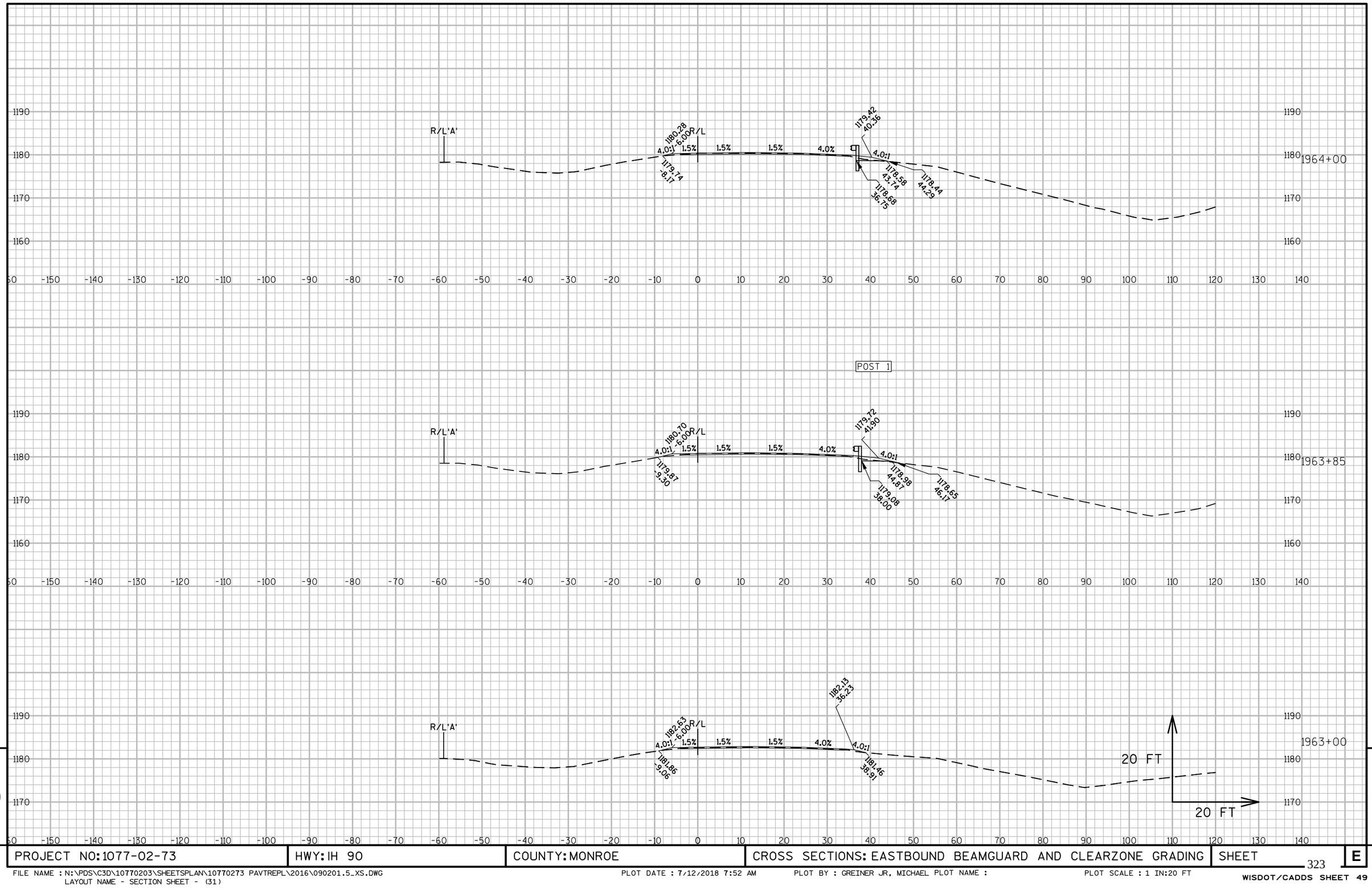


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (30)

PLOT DATE : 7/12/2018 7:52 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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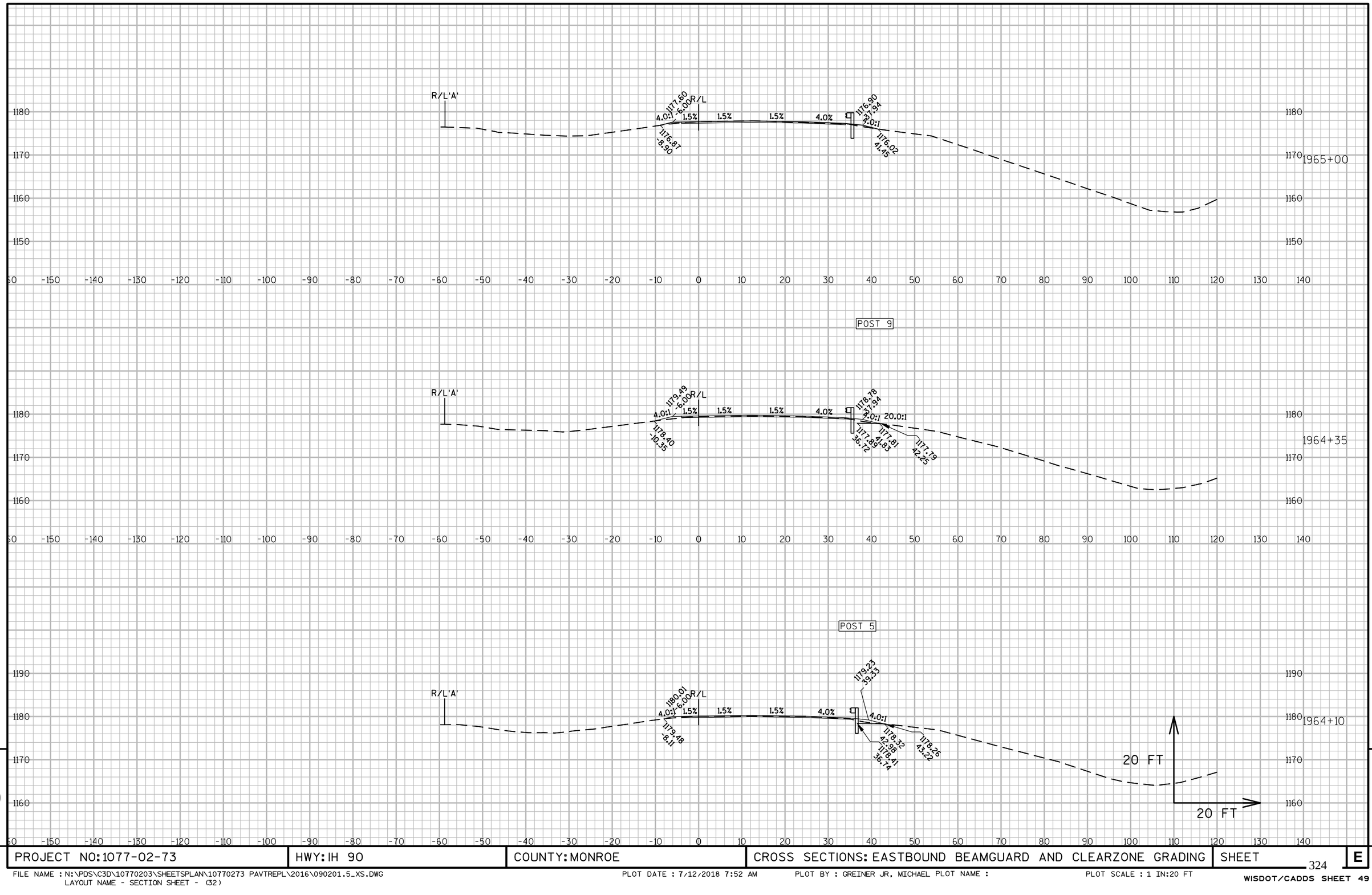
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FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (31)

PLOT DATE : 7/12/2018 7:52 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :

PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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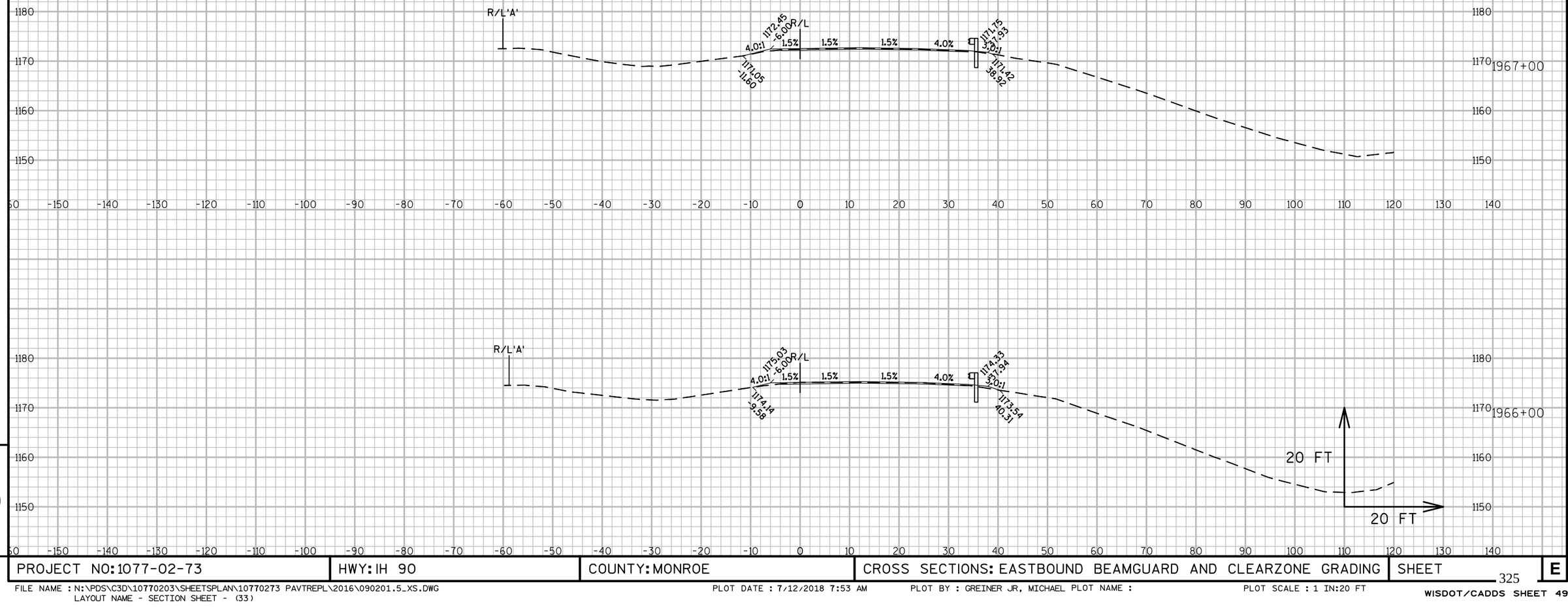
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (32)

PLOT DATE : 7/12/2018 7:52 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

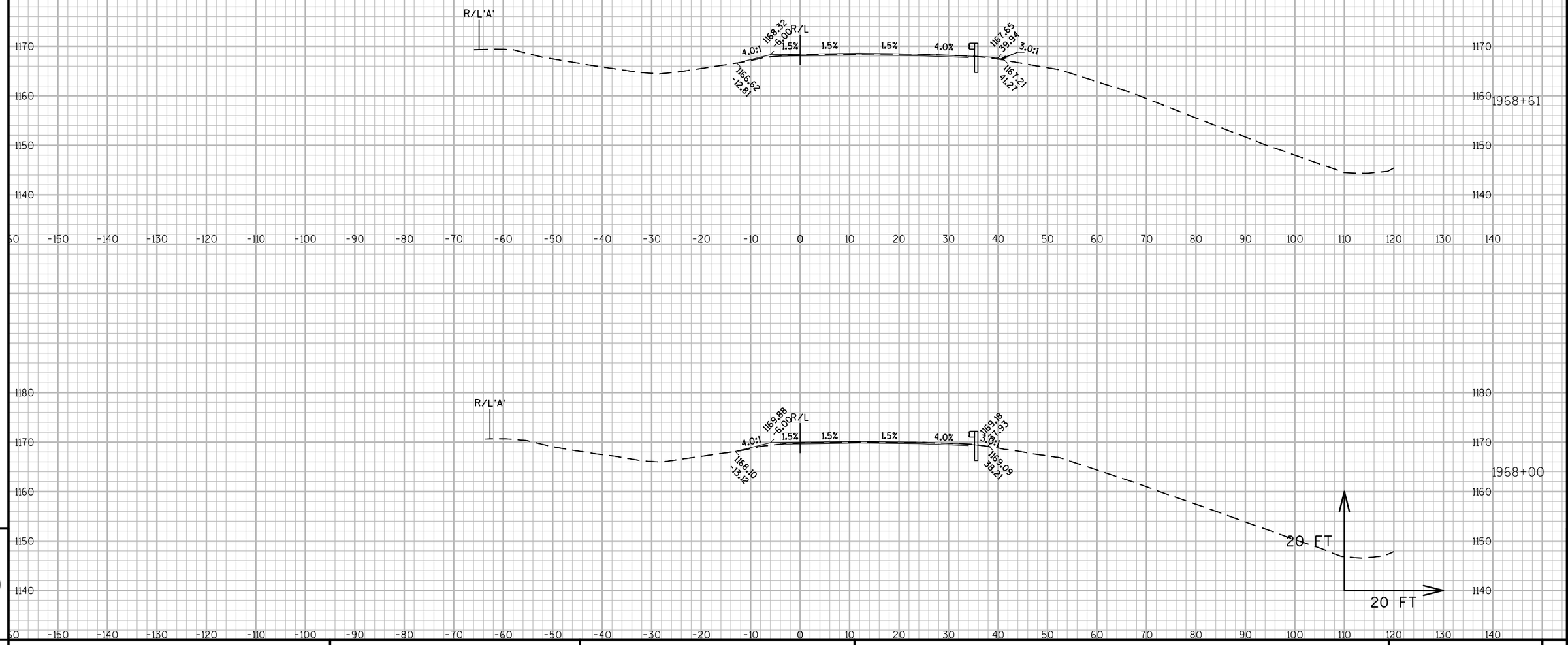
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (33)

PLOT DATE : 7/12/2018 7:53 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



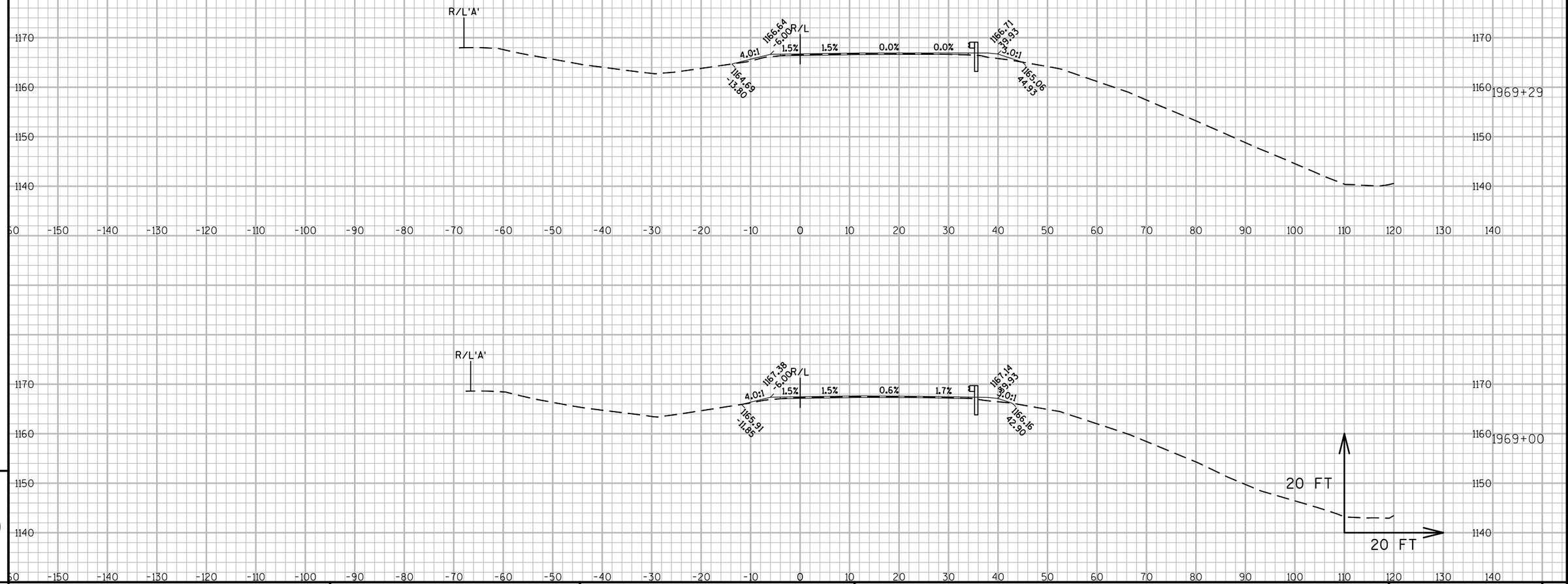
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (34)

PLOT DATE : 7/12/2018 7:53 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

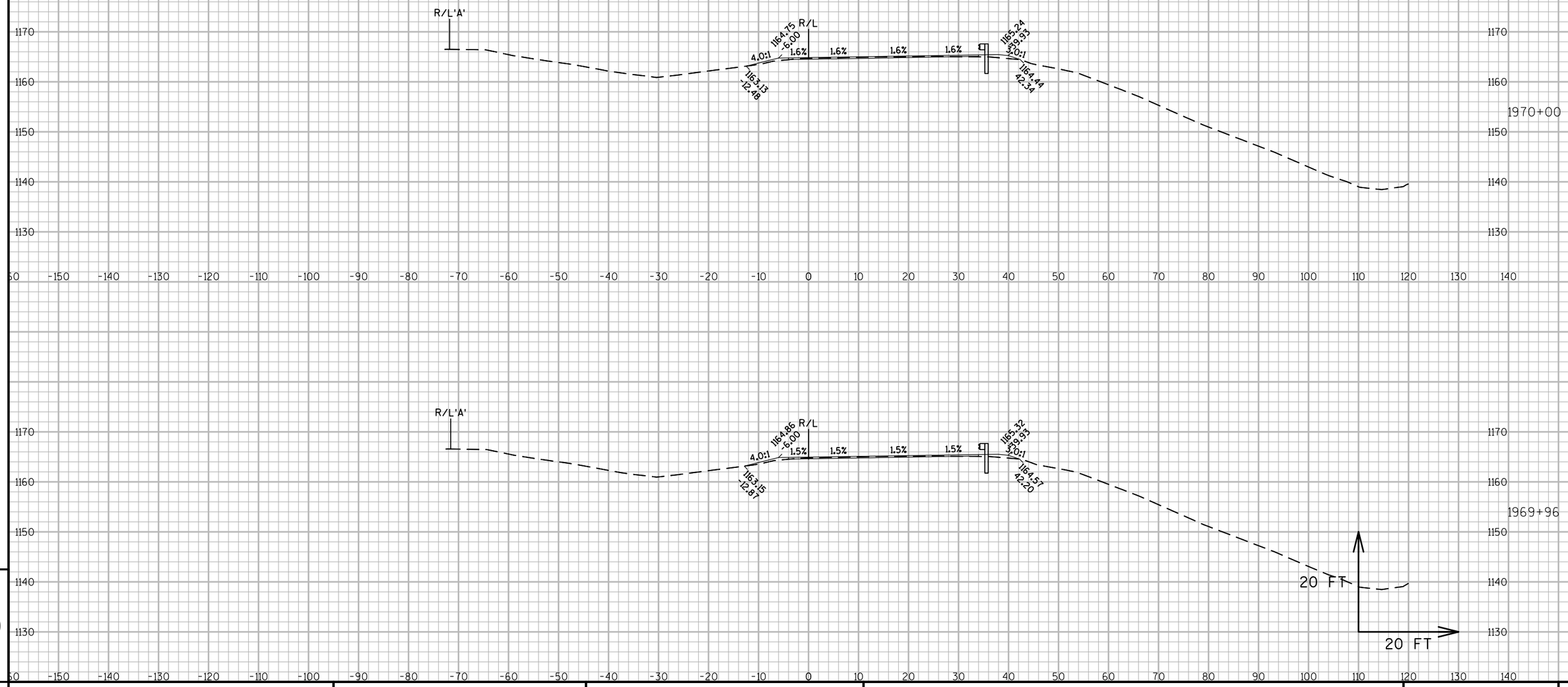


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 327 E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (35)

PLOT DATE : 7/12/2018 7:53 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



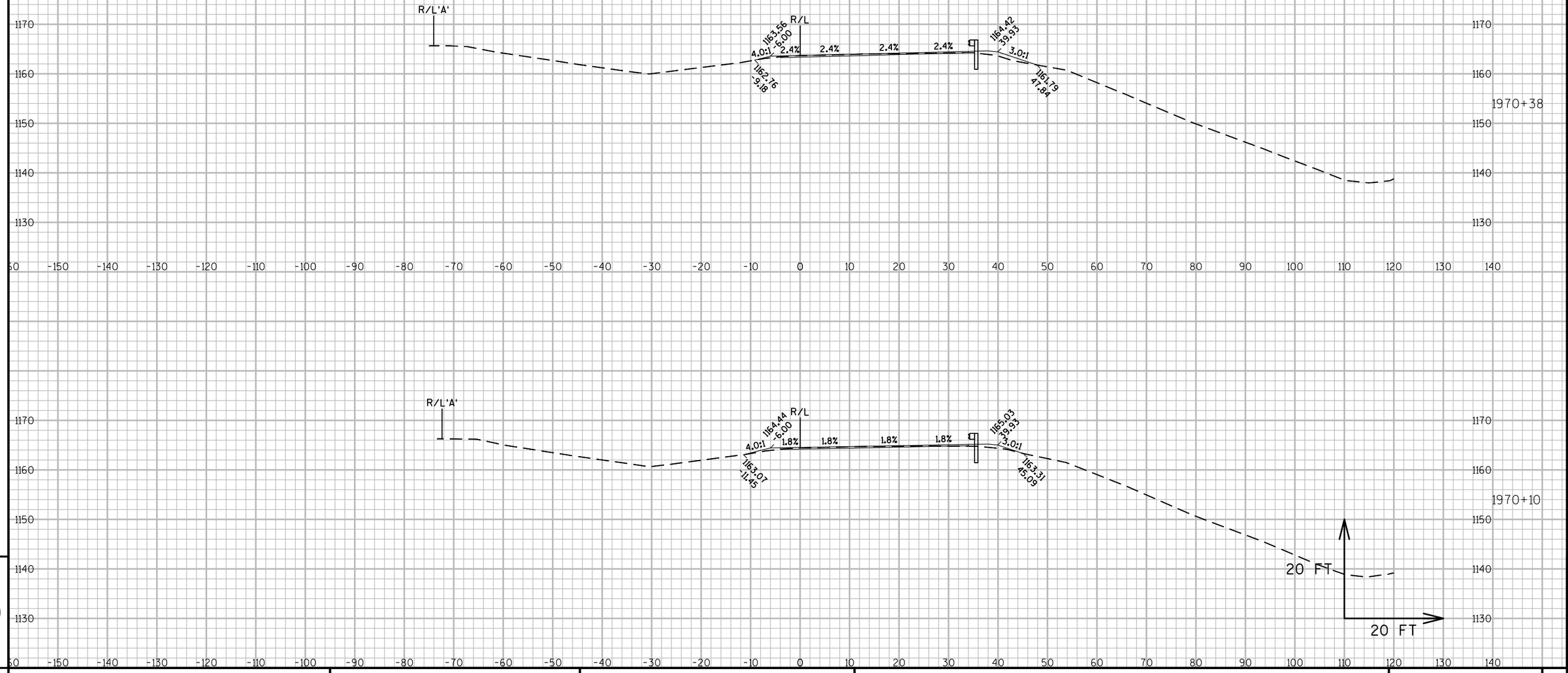
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (36)

PLOT DATE : 7/12/2018 7:53 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

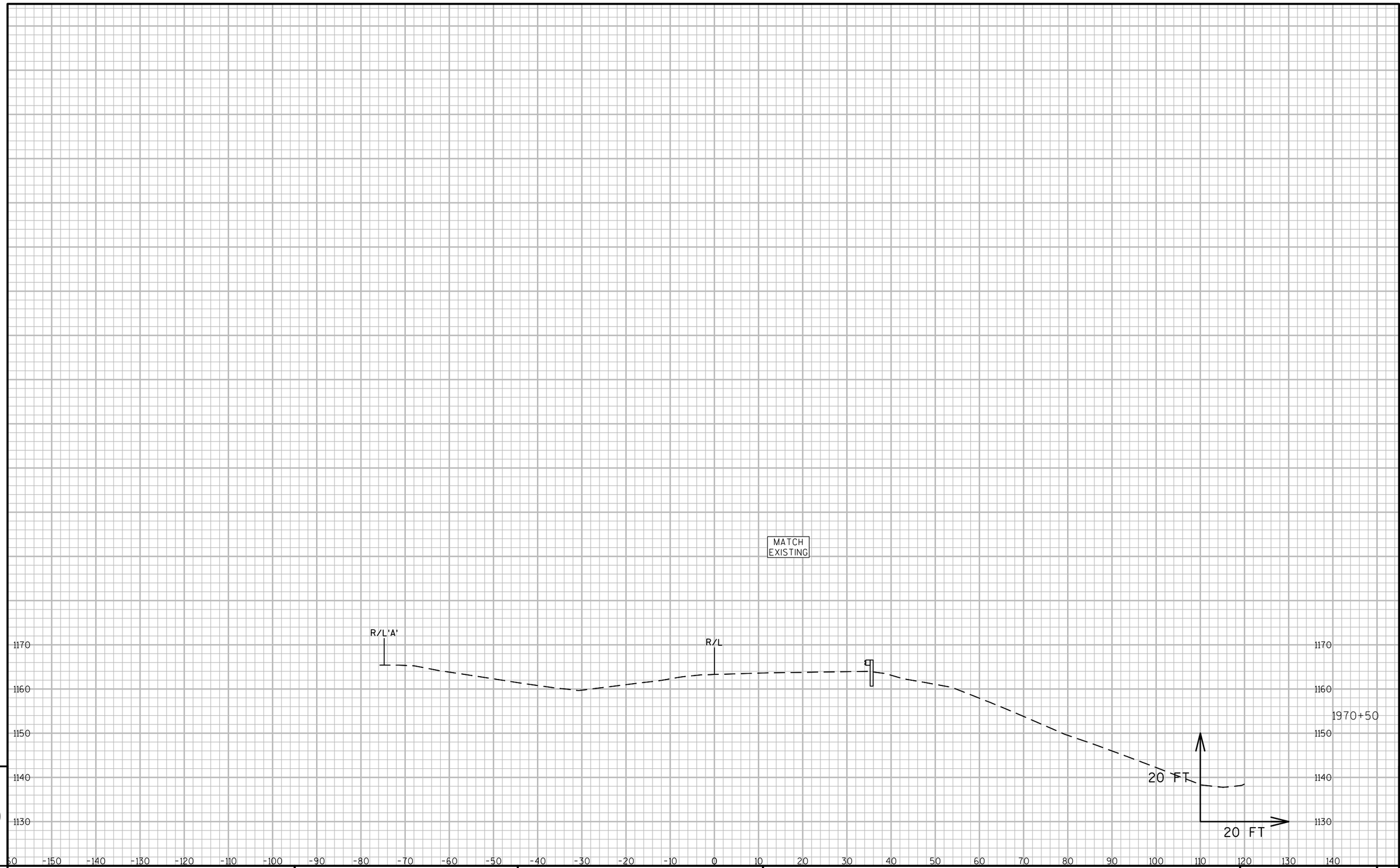


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 329 E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (37)

PLOT DATE : 7/12/2018 7:54 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

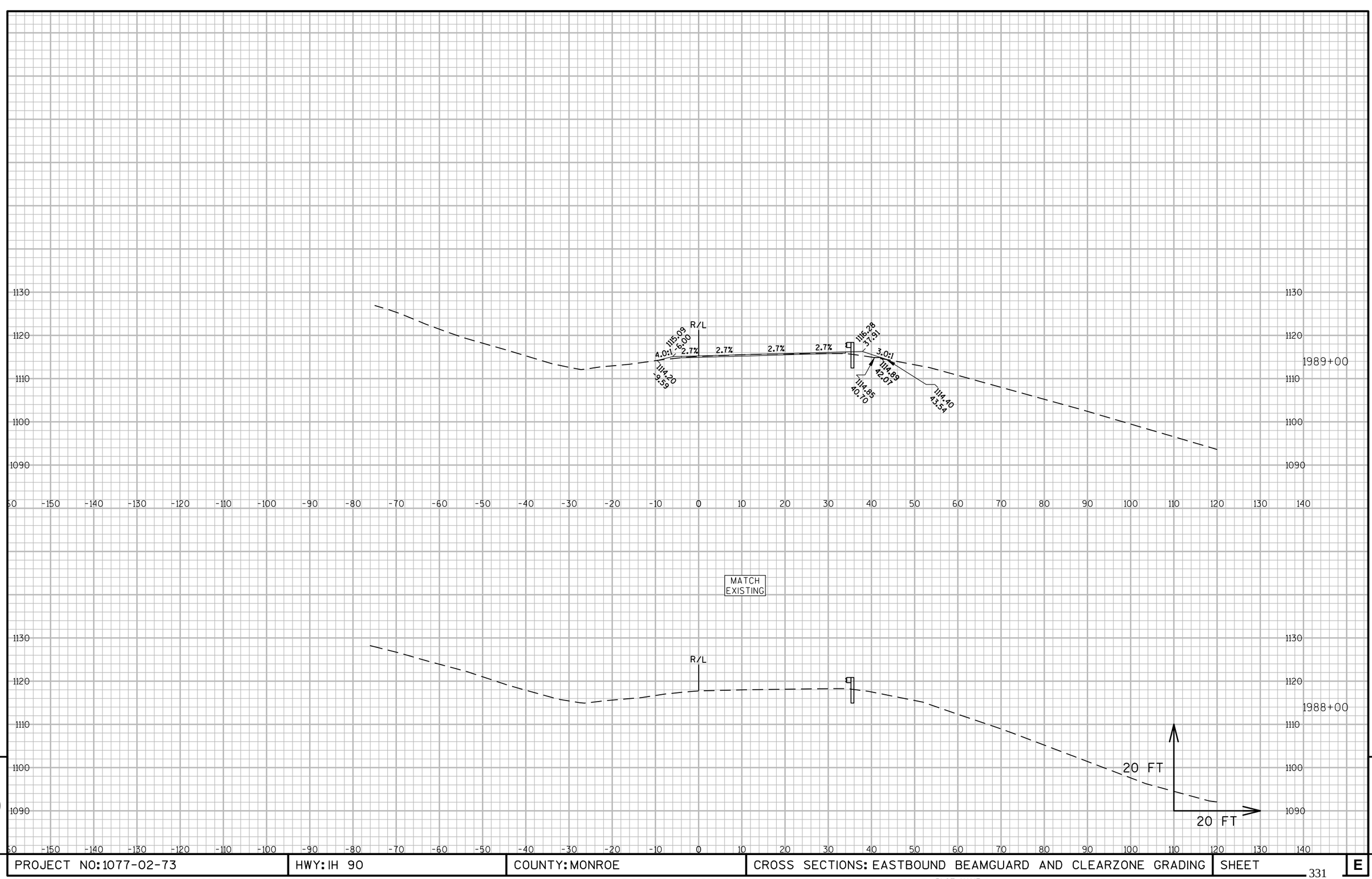
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 330	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (38)

PLOT DATE : 7/12/2018 7:54 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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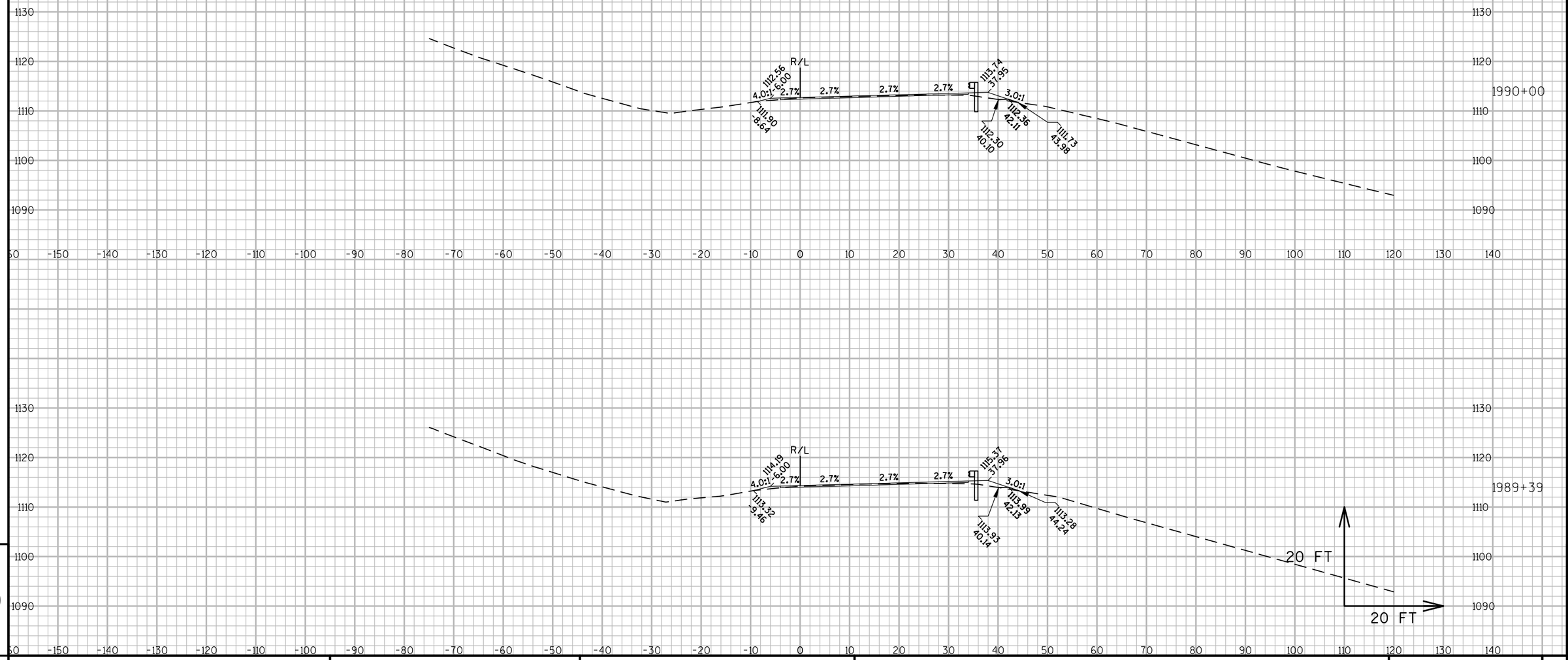
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.6_XS.DWG
LAYOUT NAME - SECTION SHEET - (30)

PLOT DATE : 7/12/2018 8:01 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

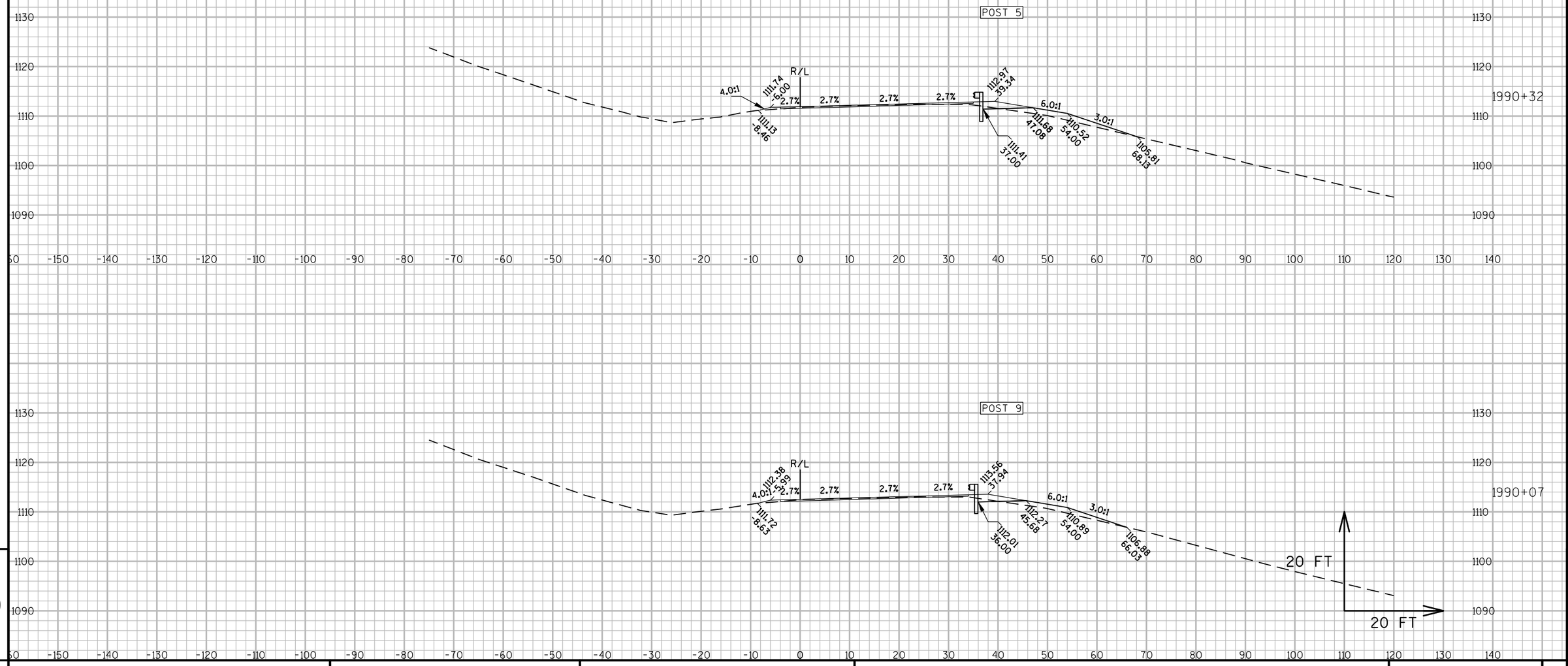


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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.6_XS.DWG
LAYOUT NAME - SECTION SHEET - (31)
PLOT DATE : 7/12/2018 8:01 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

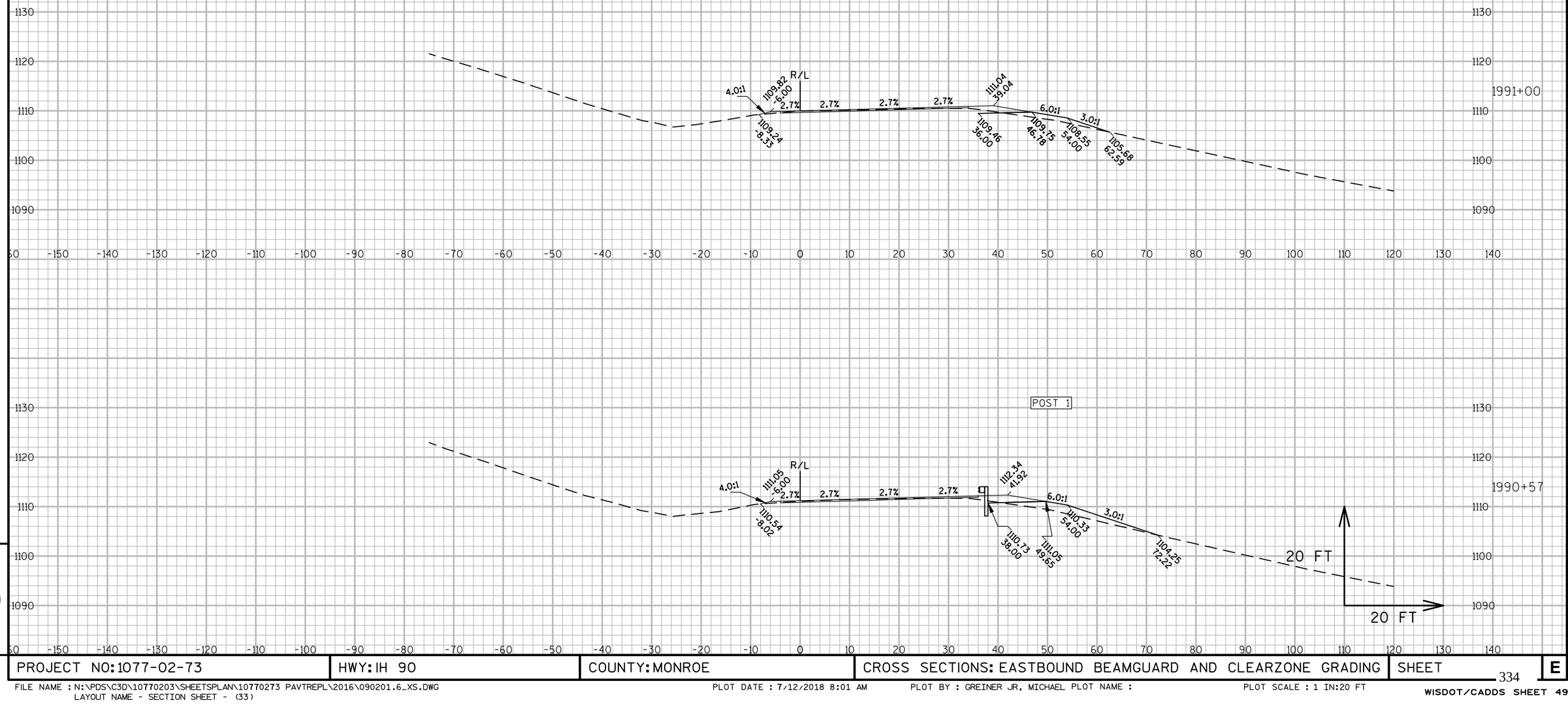


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 333	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.6_XS.DWG
LAYOUT NAME - SECTION SHEET - (32)

PLOT DATE : 7/12/2018 8:01 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.6_XS.DWG
LAYOUT NAME - SECTION SHEET - (33)

PLOT DATE : 7/12/2018 8:01 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

MATCH EXISTING

R/L

1992+00

APPROACH TAPER

R/L

1991+75

20 FT

20 FT

9

9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.6_XS.DWG
LAYOUT NAME - SECTION SHEET - (34)

PLOT DATE : 7/12/2018 8:02 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :

PLOT SCALE : 1 IN:20 FT

APPROACH TAPER

R/L

1062.66
34.00

1062.63
34.65

1062.44
36.58

4.0:1

1062.36
36.89

2021+97

1070
1060
1050

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

APPROACH TAPER

R/L

2021+58

1070
1060
1050

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

MATCH EXISTING

R/L

2021+00

20 FT

20 FT

1080
1070
1060

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

9

9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 336	E

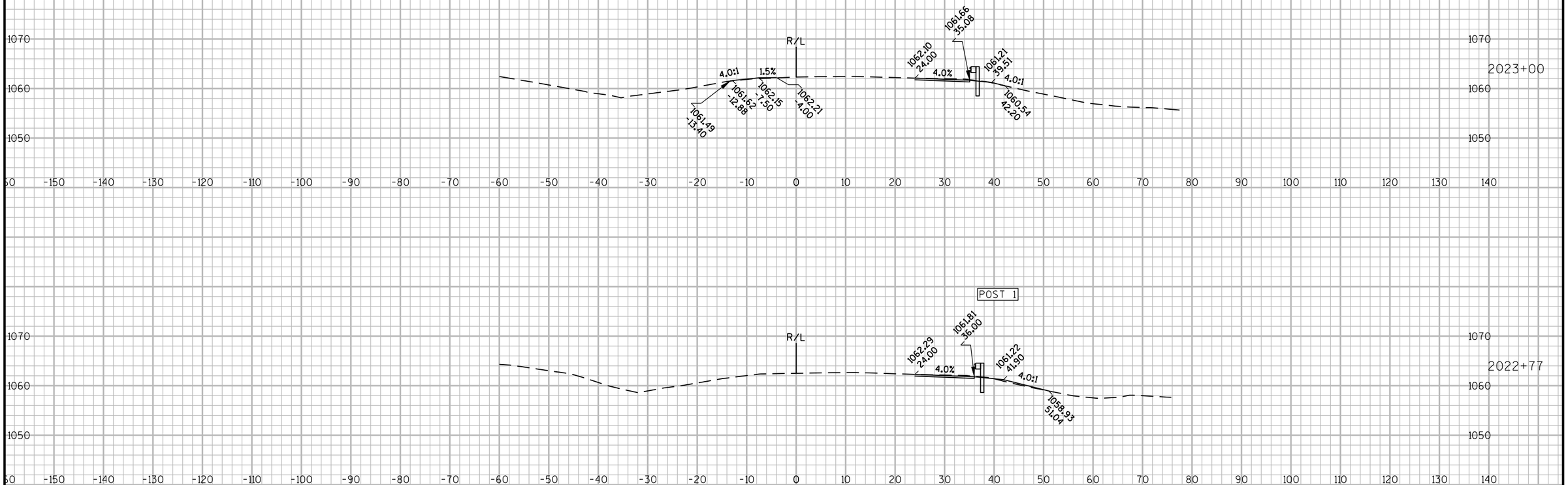
FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.7_XS.DWG
LAYOUT NAME - Section Sheet - (42)

PLOT DATE : 7/16/2018 1:00 PM

PLOT BY : GREINER JR, MICHAEL

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

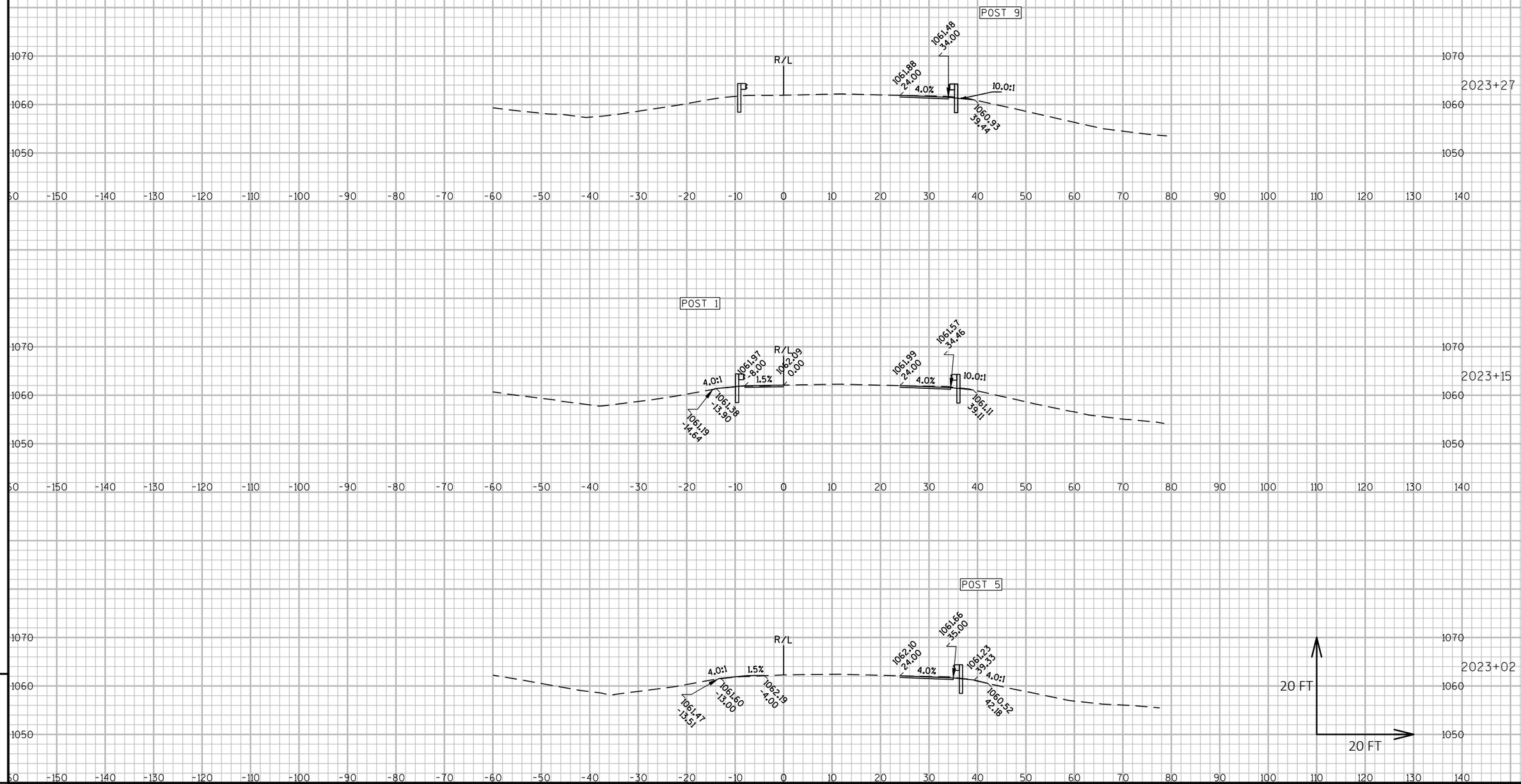


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 337 E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.7_XS.DWG
LAYOUT NAME - Section Sheet - (43)

PLOT DATE : 7/16/2018 1:00 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

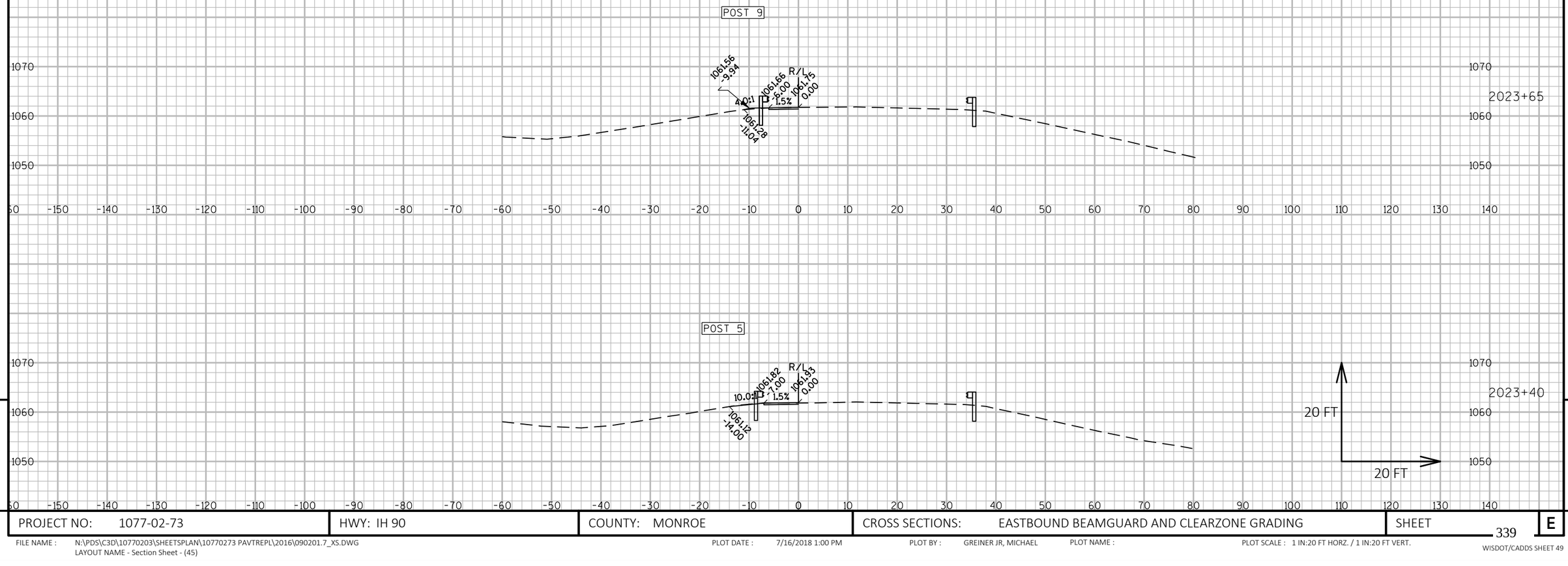


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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 338	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.7_XS.DWG
LAYOUT NAME - Section Sheet - (44)
PLOT DATE : 7/16/2018 1:00 PM
PLOT BY : GREINER JR, MICHAEL
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 339	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.7_XS.DWG
LAYOUT NAME - Section Sheet - (45)

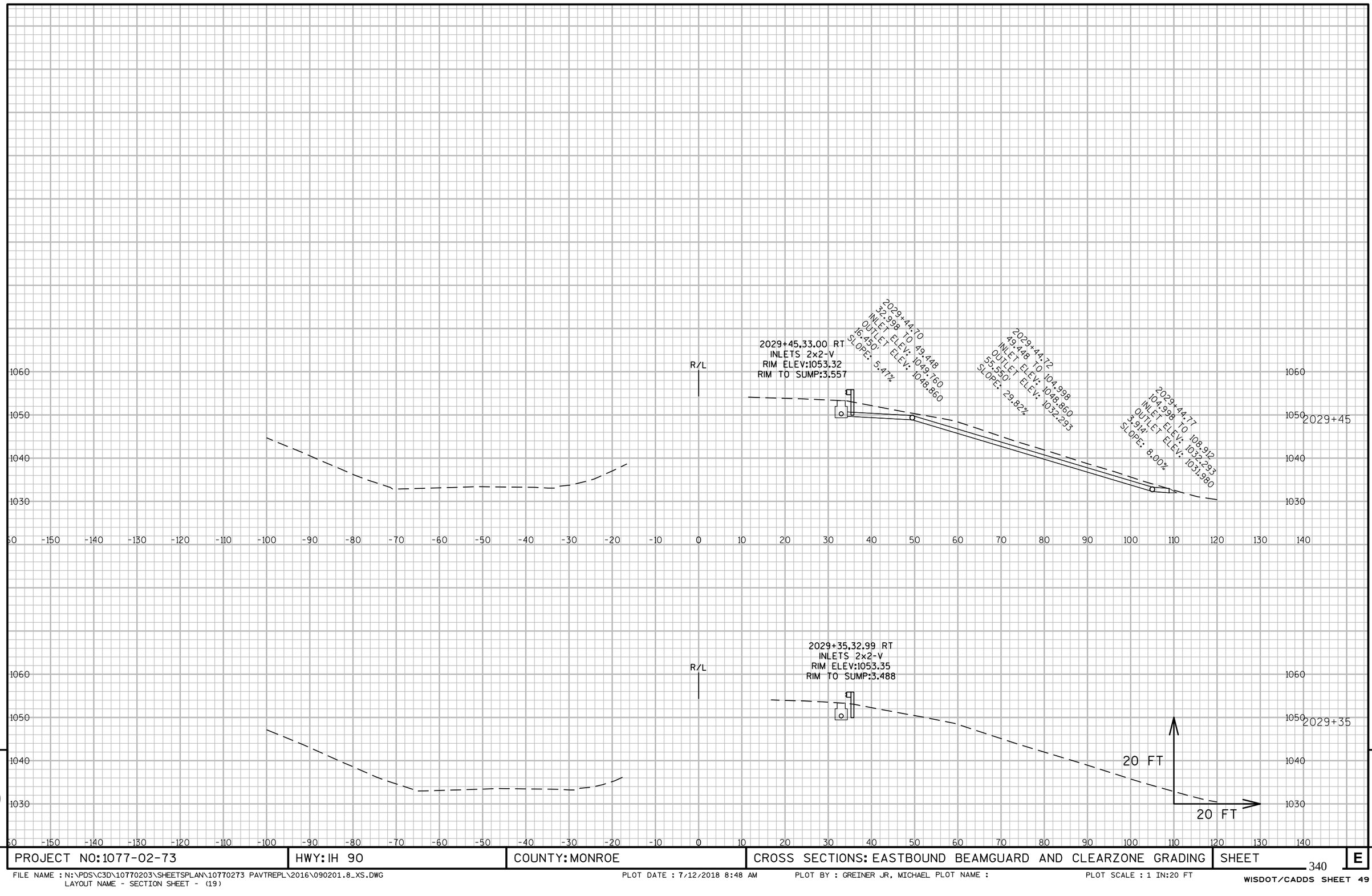
PLOT DATE : 7/16/2018 1:00 PM

PLOT BY : GREINER JR, MICHAEL

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



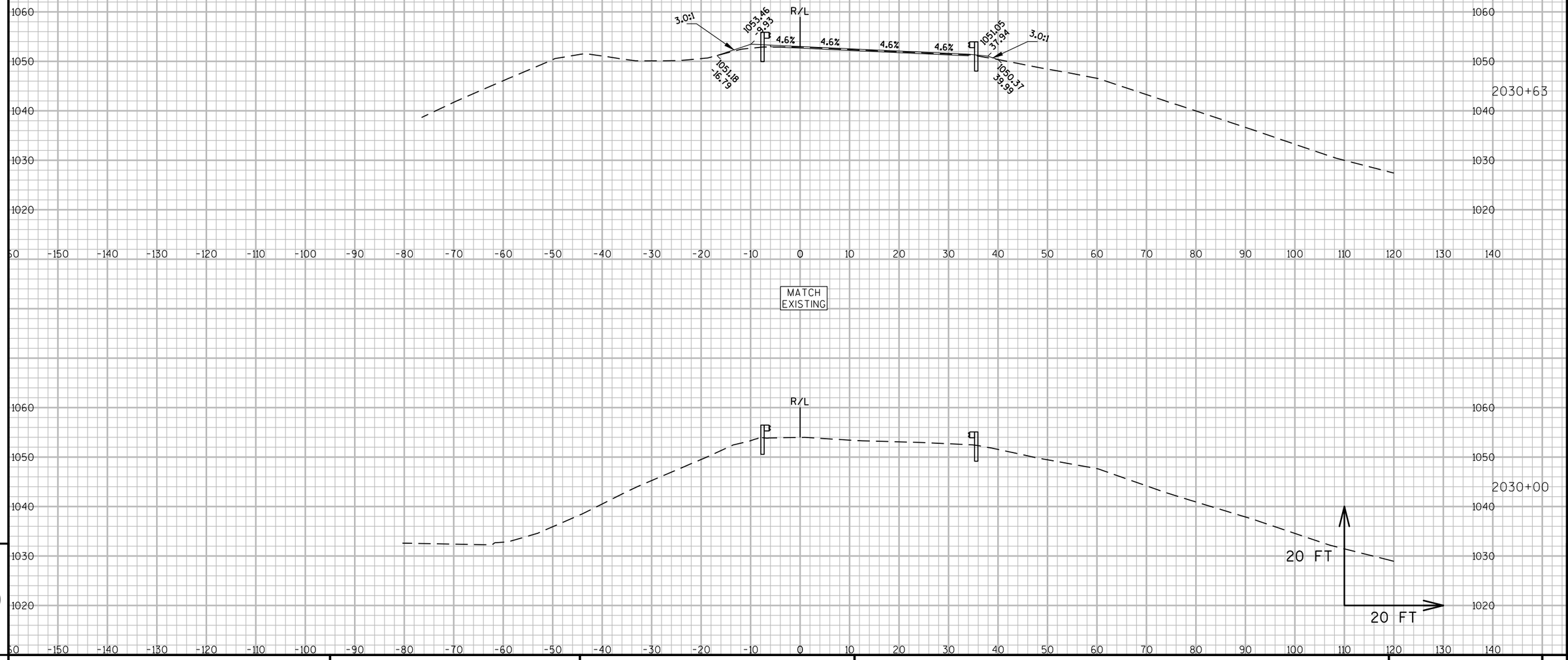
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.8_XS.DWG
LAYOUT NAME - SECTION SHEET - (19)

PLOT DATE : 7/12/2018 8:48 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



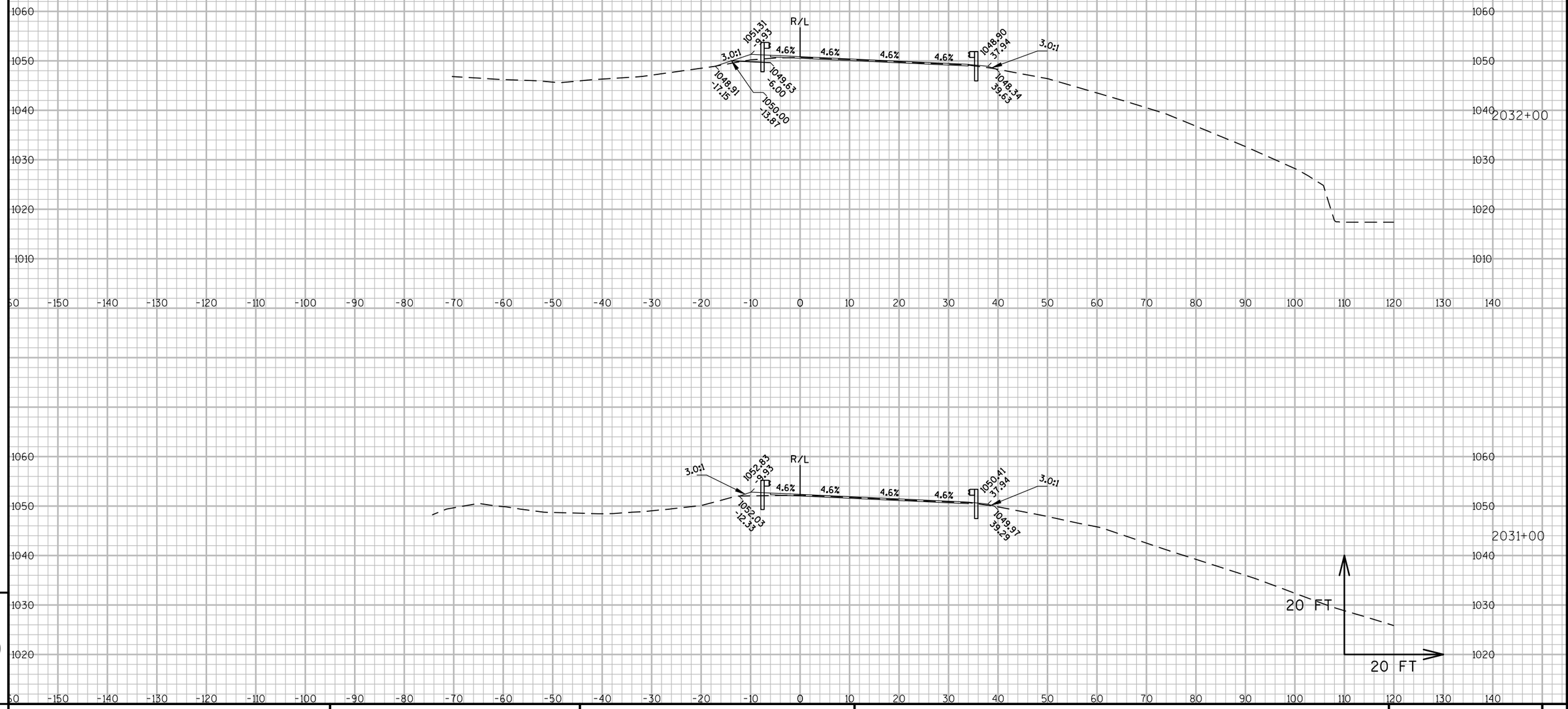
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.8_XS.DWG
LAYOUT NAME - SECTION SHEET - (11)

PLOT DATE : 7/12/2018 8:47 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



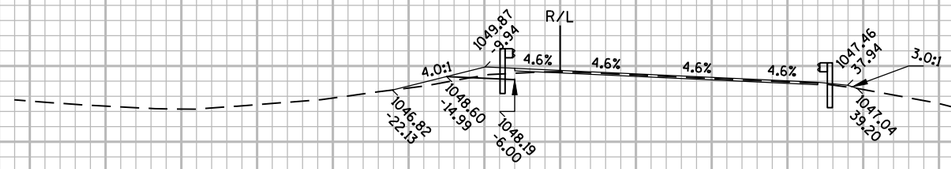
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.8_XS.DWG
LAYOUT NAME - SECTION SHEET - (12)

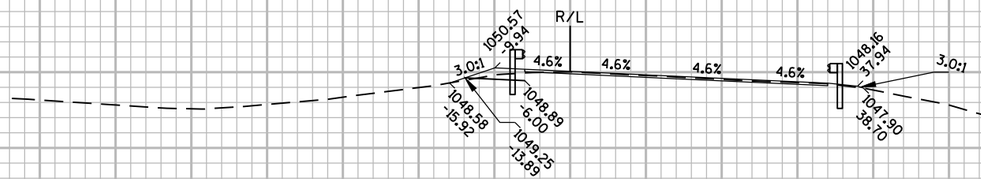
PLOT DATE : 7/12/2018 8:47 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

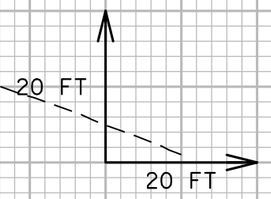
POST 9



2032+94



2032+40

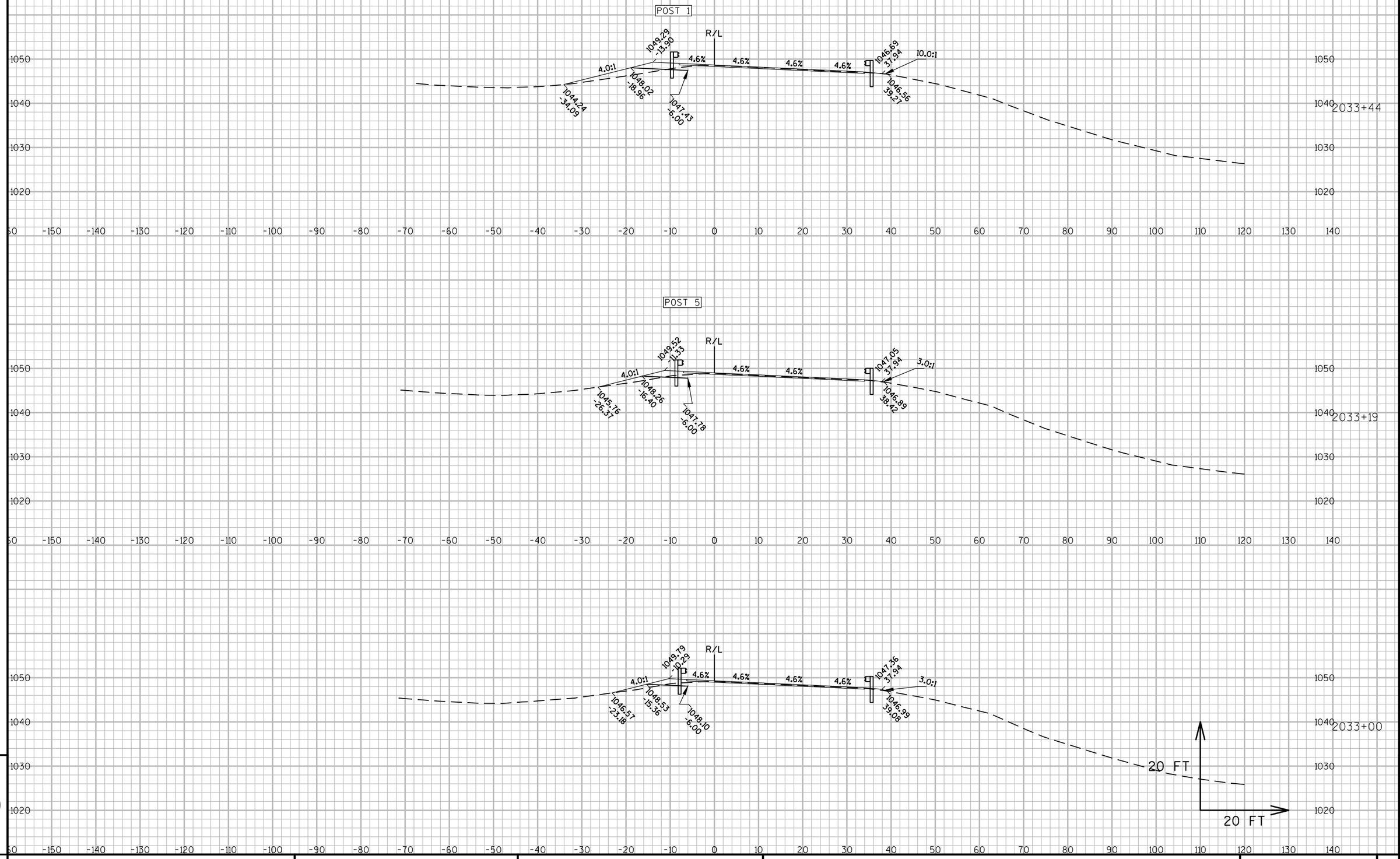


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 343 E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.8_XS.DWG
LAYOUT NAME - SECTION SHEET - (13)

PLOT DATE : 7/12/2018 8:47 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

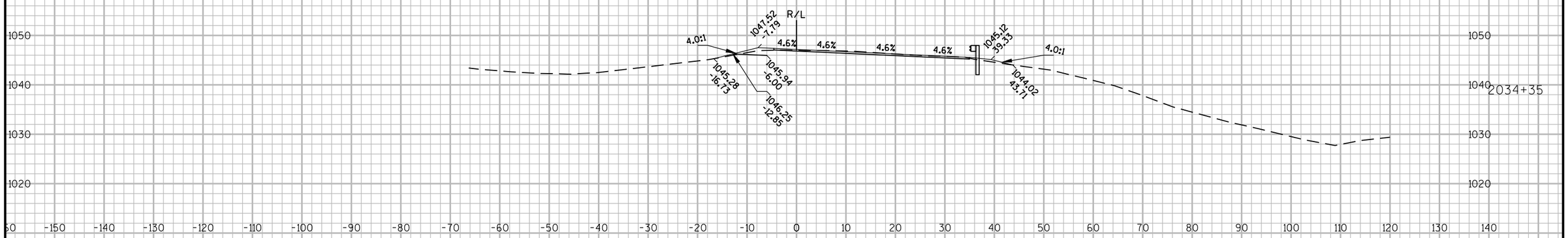
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 344	E

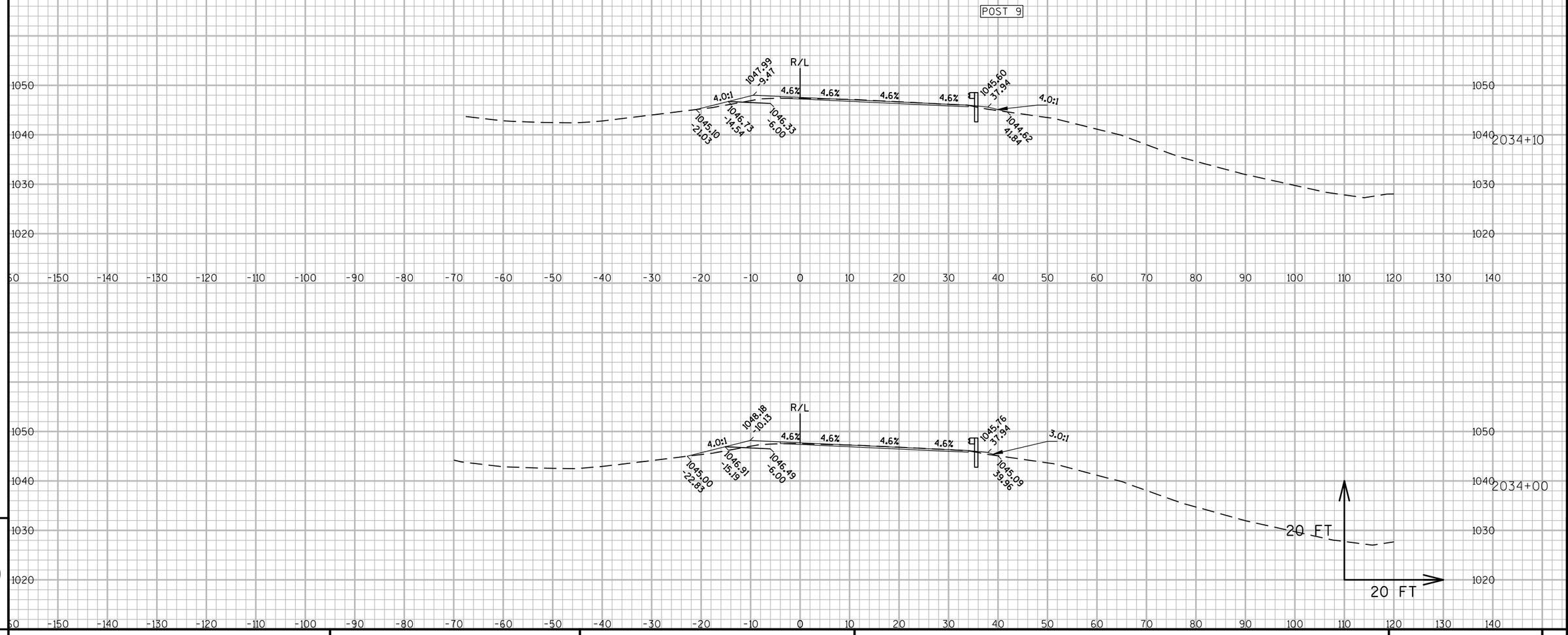
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LAYOUT NAME - SECTION SHEET - (14)

PLOT DATE : 7/12/2018 8:47 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

POST 5



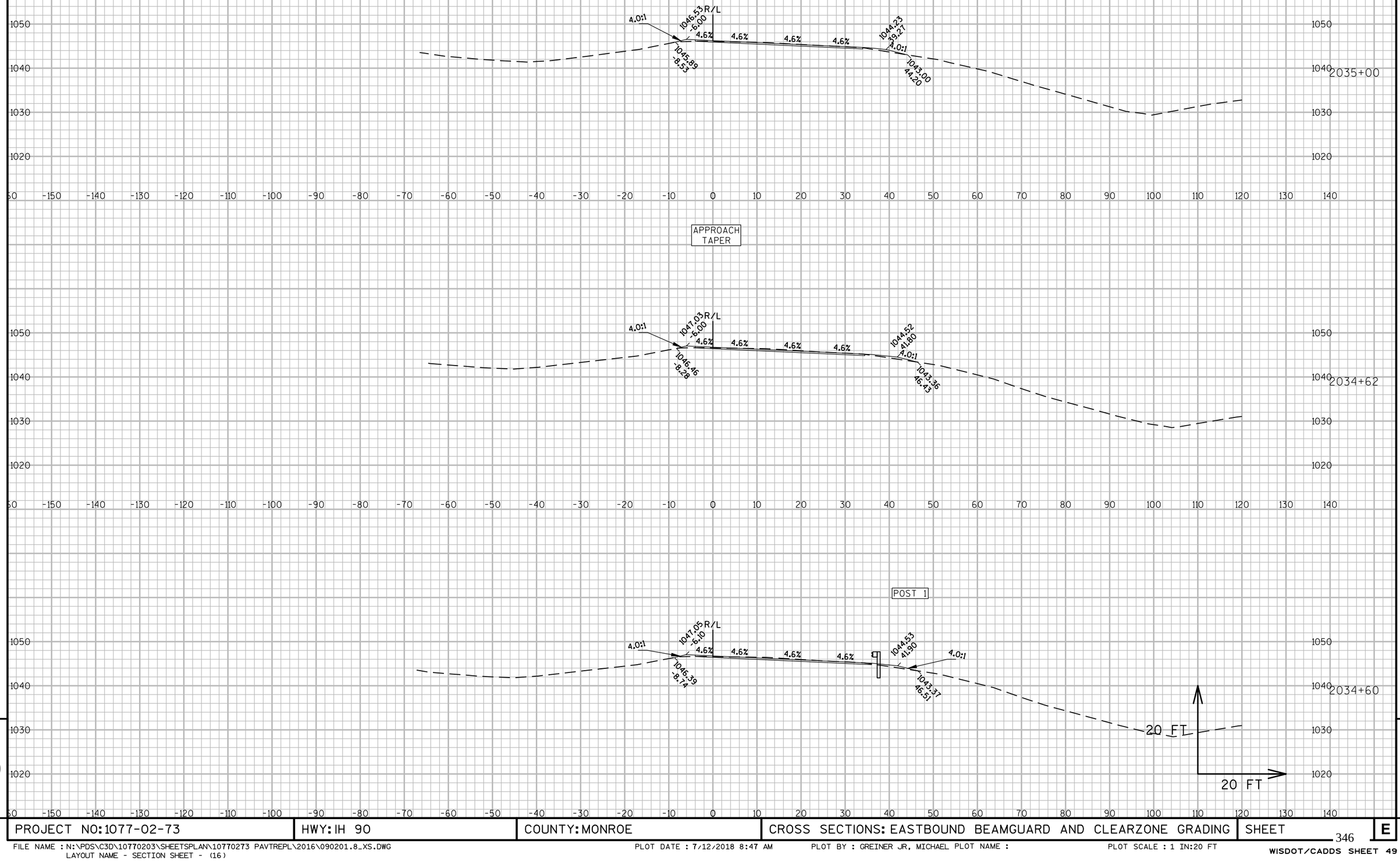
POST 9



9 9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.8_XS.DWG
LAYOUT NAME - SECTION SHEET - (15)
PLOT DATE : 7/12/2018 8:47 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



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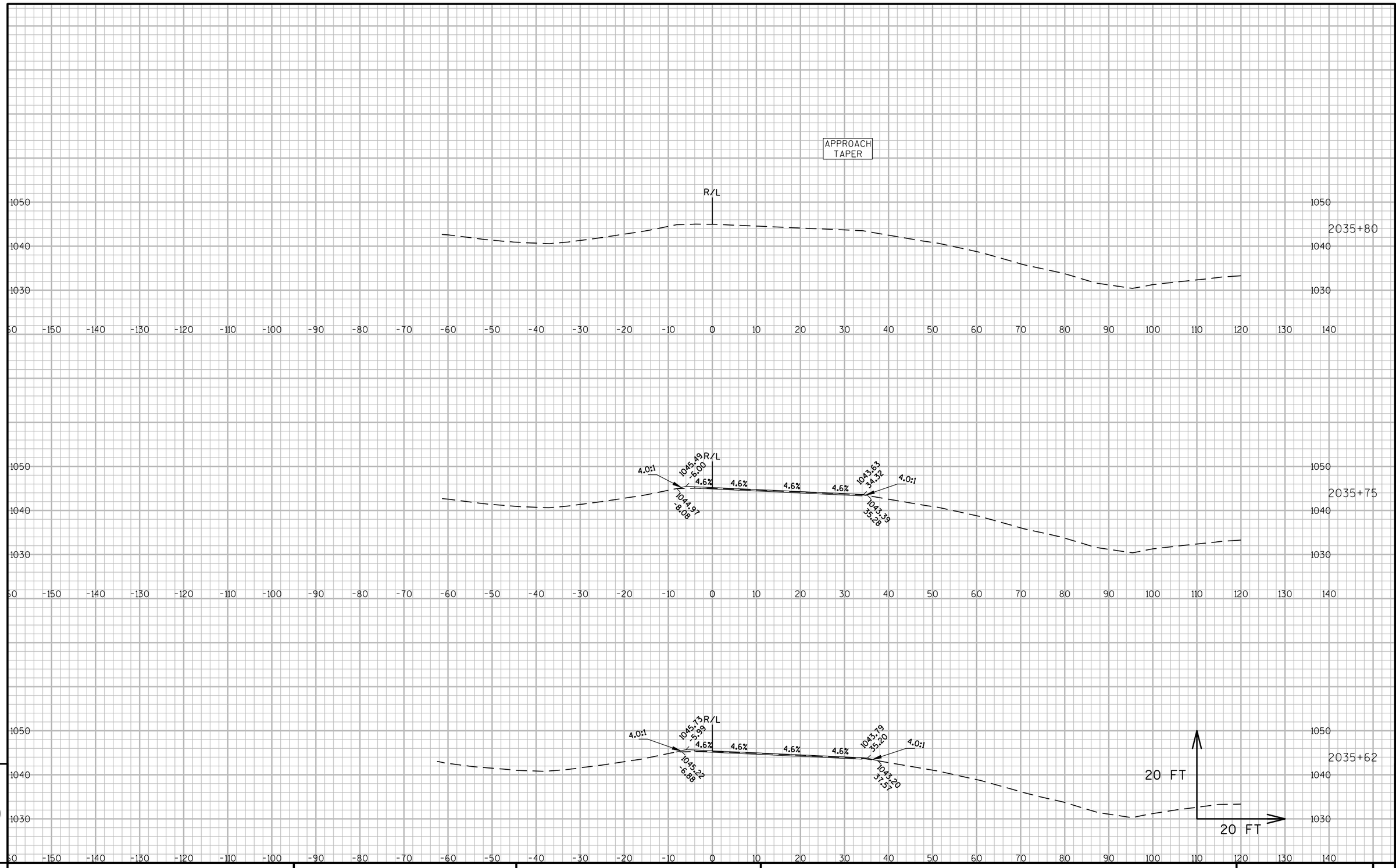
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 346	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.8_XS.DWG
LAYOUT NAME - SECTION SHEET - (16)

PLOT DATE : 7/12/2018 8:47 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

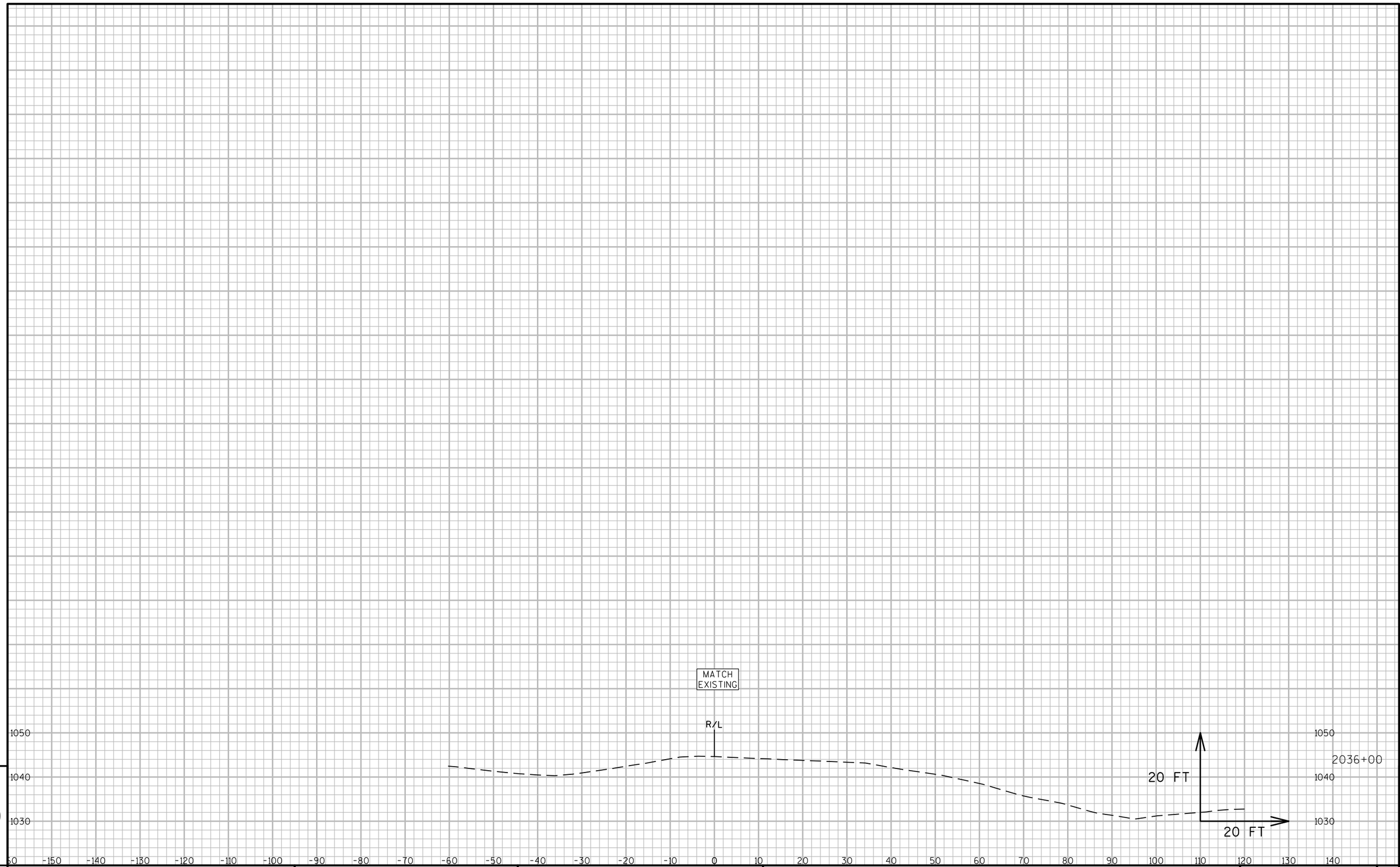


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.8_XS.DWG
LAYOUT NAME - SECTION SHEET - (17)

PLOT DATE : 7/12/2018 8:48 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



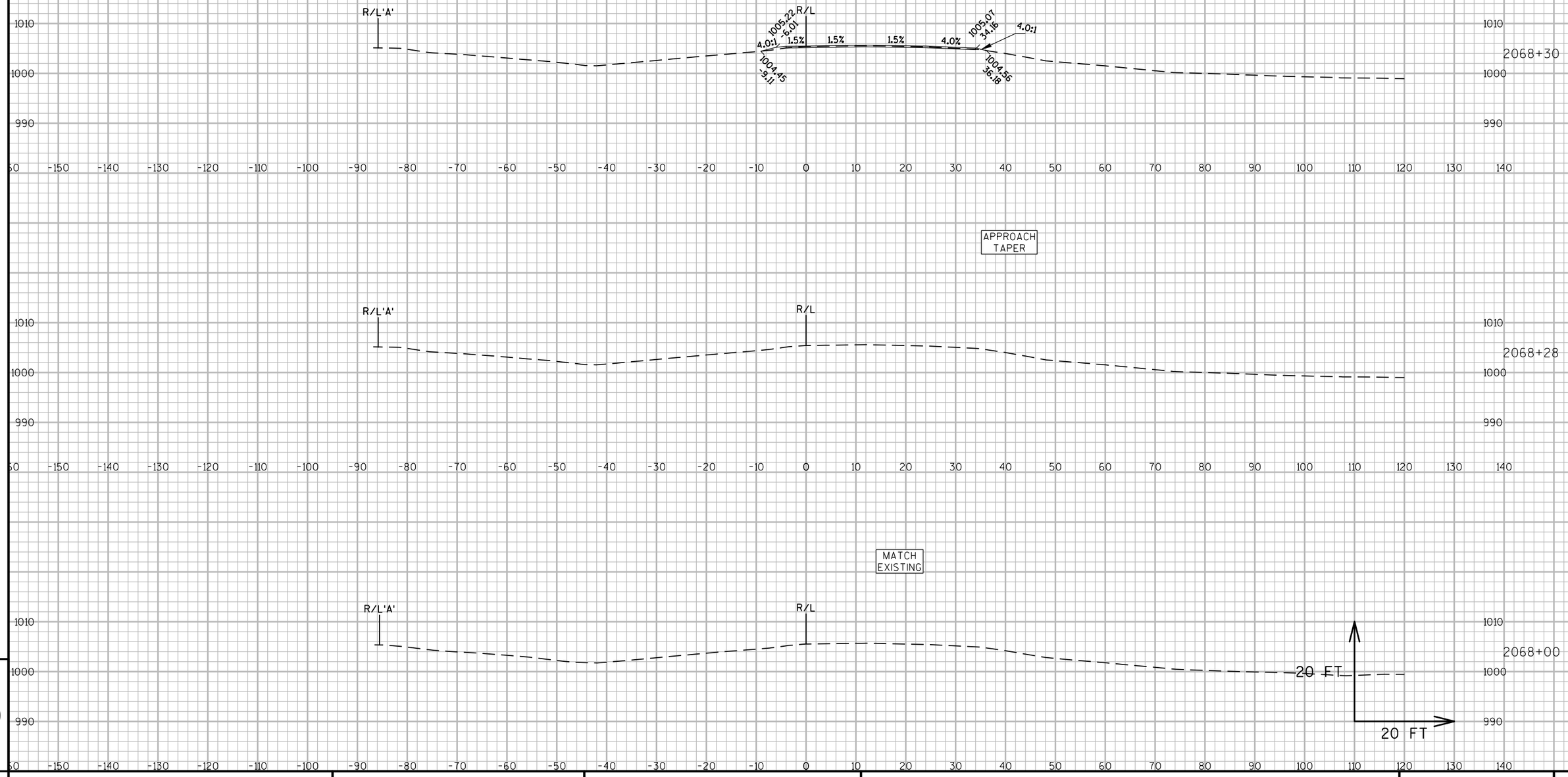
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 348	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.8_XS.DWG
LAYOUT NAME - SECTION SHEET - (18)

PLOT DATE : 7/12/2018 8:48 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



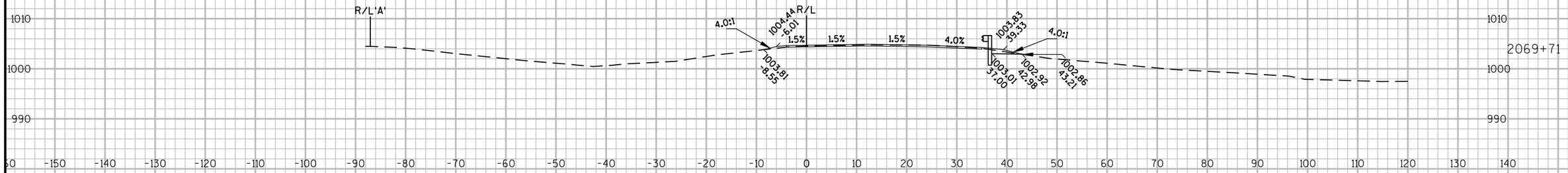
9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

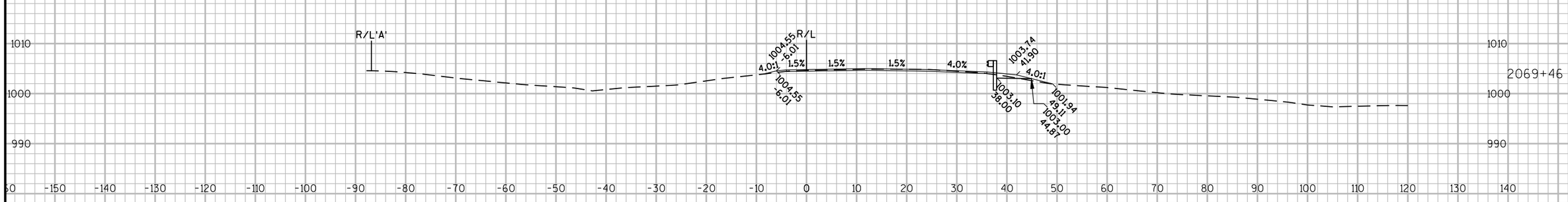
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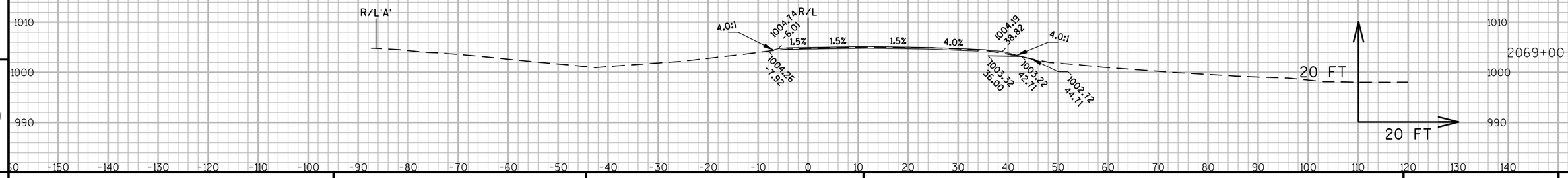
FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.9_XS.DWG
LAYOUT NAME - SECTION SHEET - (38)
PLOT DATE : 7/12/2018 9:39 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

POST 5



POST 1





9

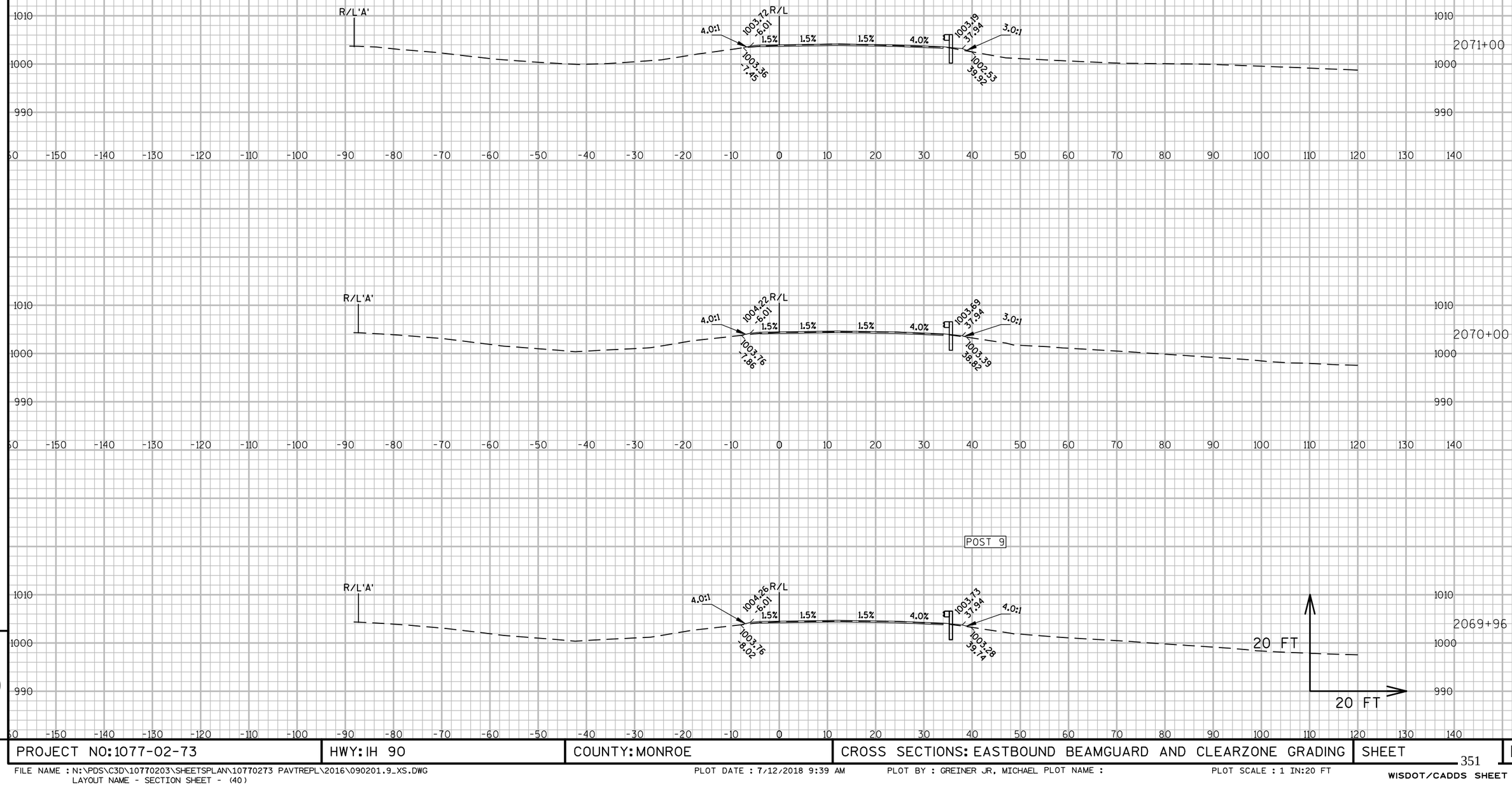
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 350	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.9_XS.DWG
LAYOUT NAME - SECTION SHEET - (39)

PLOT DATE : 7/12/2018 9:39 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.9_XS.DWG
LAYOUT NAME - SECTION SHEET - (40)
PLOT DATE : 7/12/2018 9:39 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

9

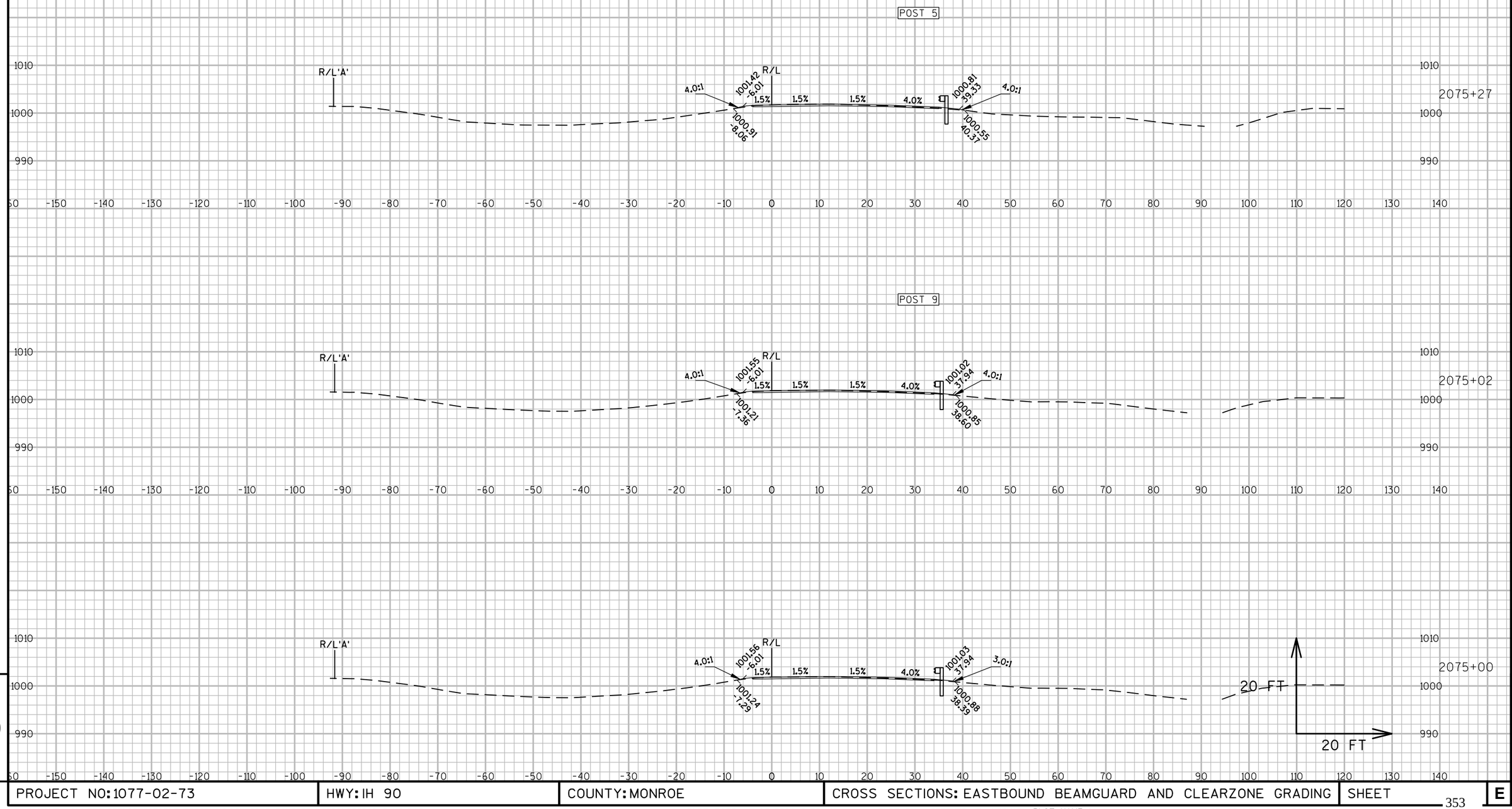
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 352	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.9_XS.DWG
LAYOUT NAME - SECTION SHEET - (41)

PLOT DATE : 7/12/2018 9:39 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



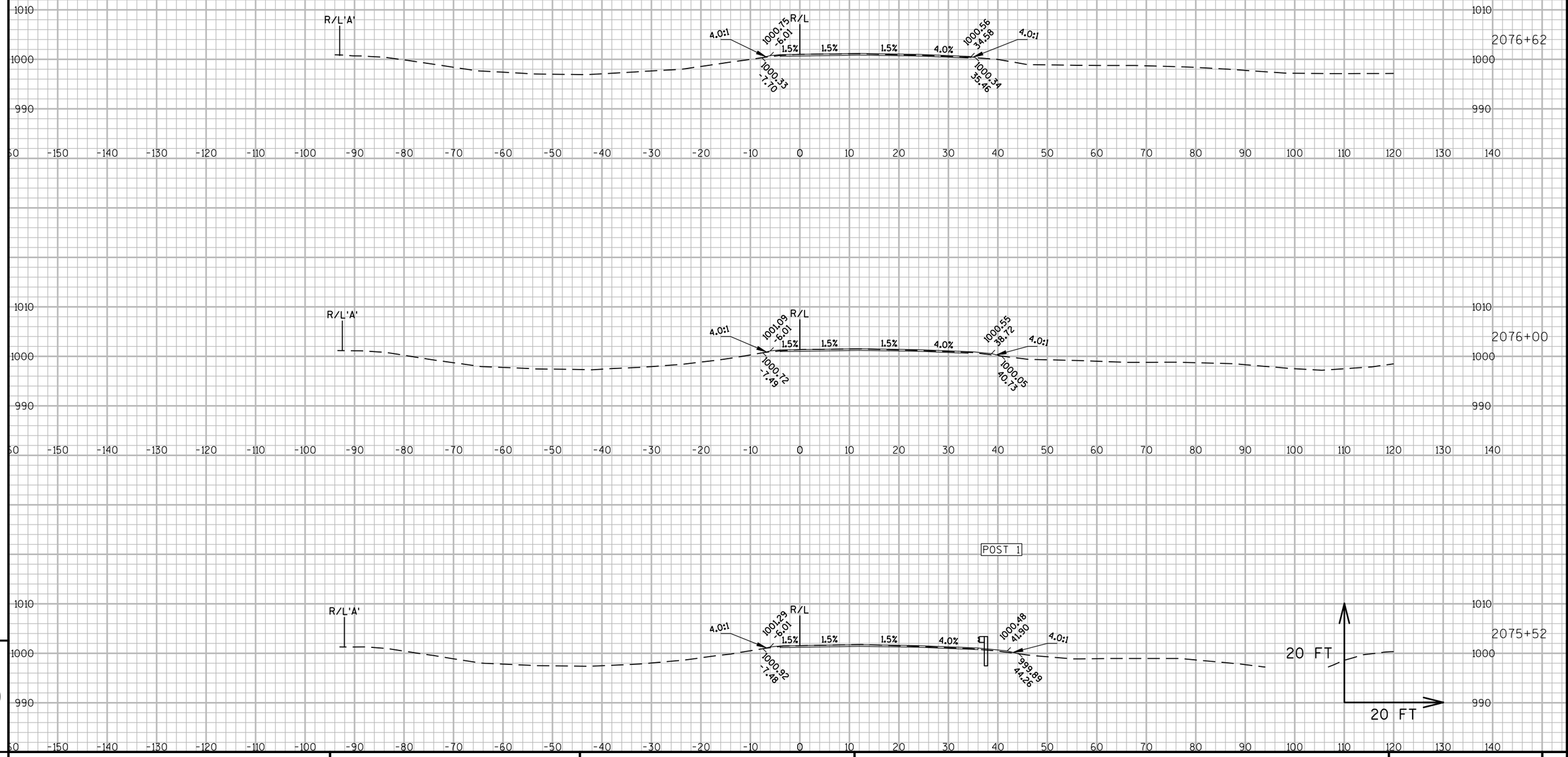
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 353	E

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FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.9_XS.DWG
LAYOUT NAME - SECTION SHEET - (42)

PLOT DATE : 7/12/2018 9:39 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

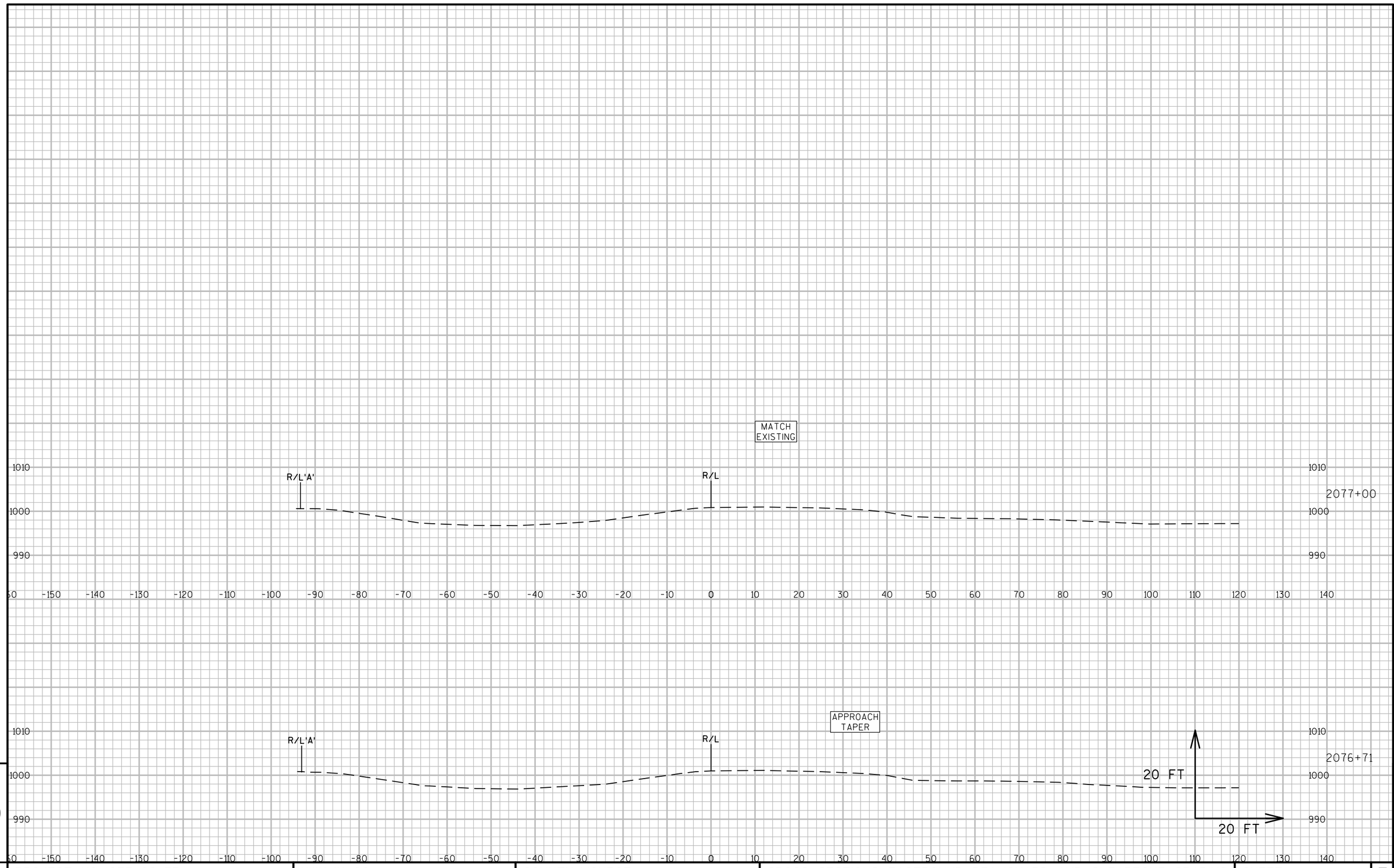


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 354 E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.9_XS.DWG
LAYOUT NAME - SECTION SHEET - (42)

PLOT DATE : 7/12/2018 9:39 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

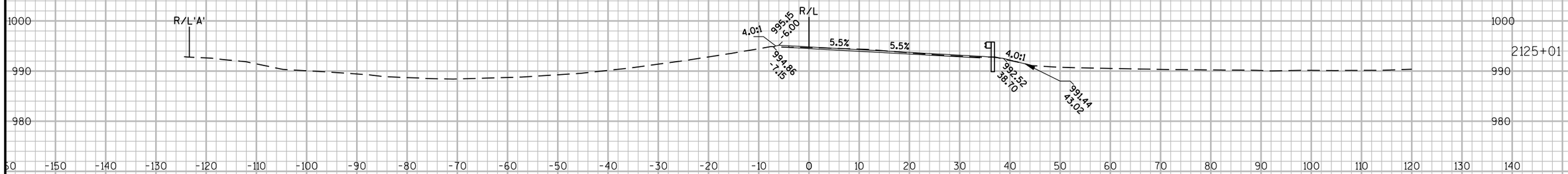
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 355	E

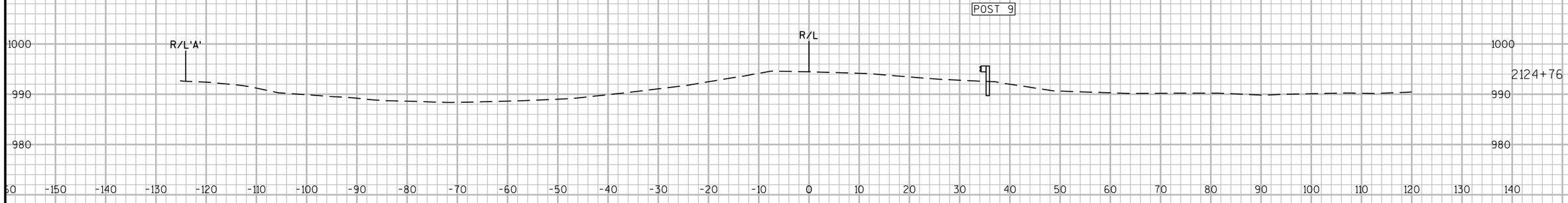
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LAYOUT NAME - SECTION SHEET - (42)

PLOT DATE : 7/12/2018 9:40 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

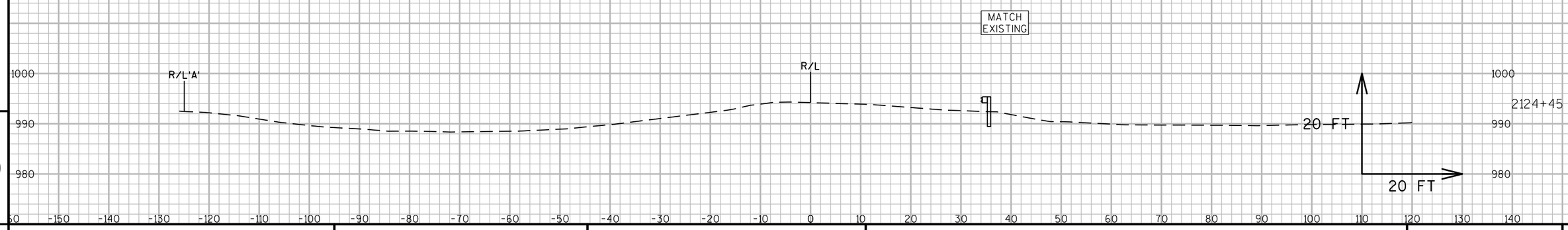
POST 5



POST 9



MATCH EXISTING



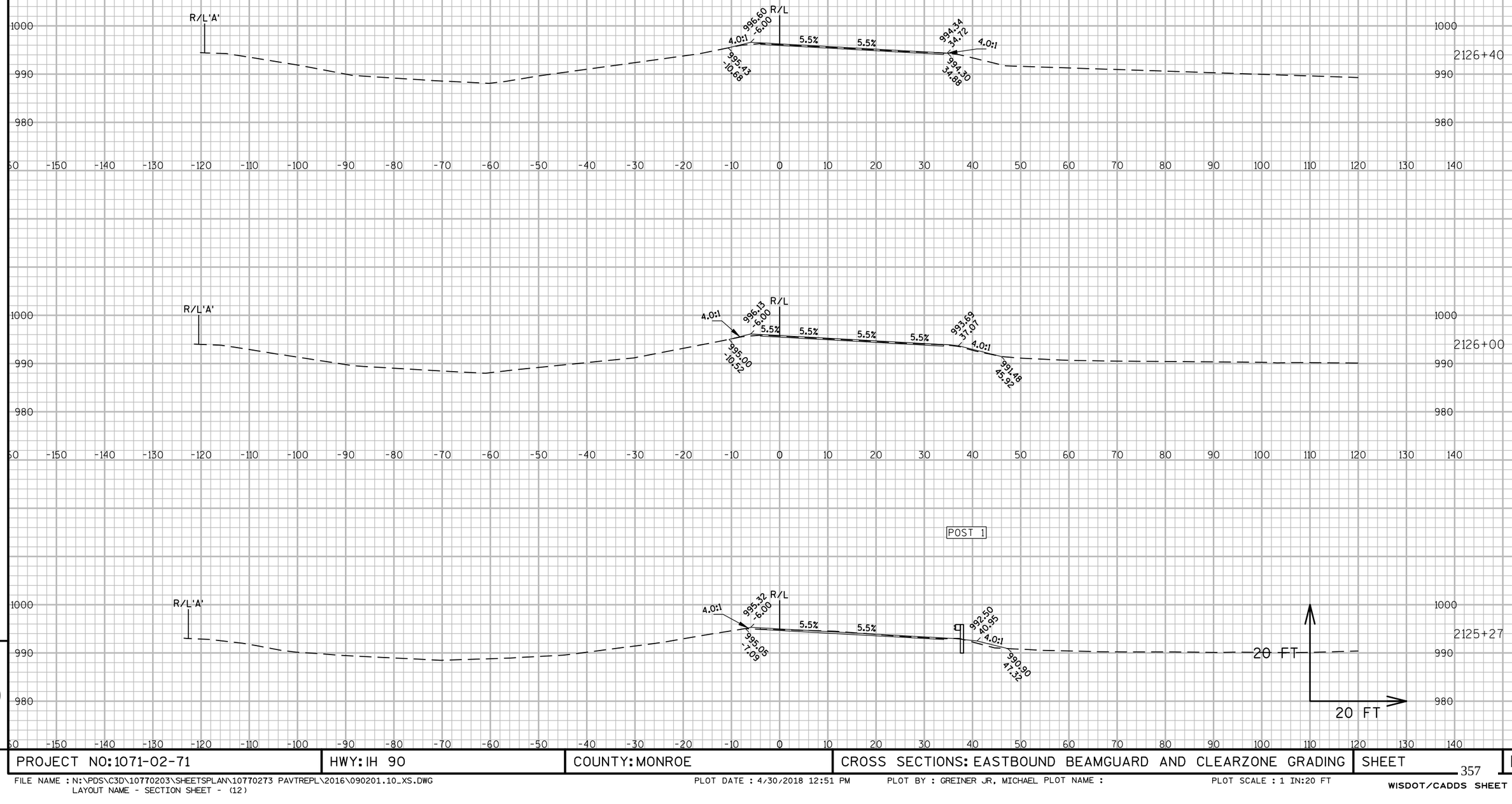
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 356	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.10_XS.DWG
LAYOUT NAME - SECTION SHEET - (11)

PLOT DATE : 4/30/2018 12:51 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



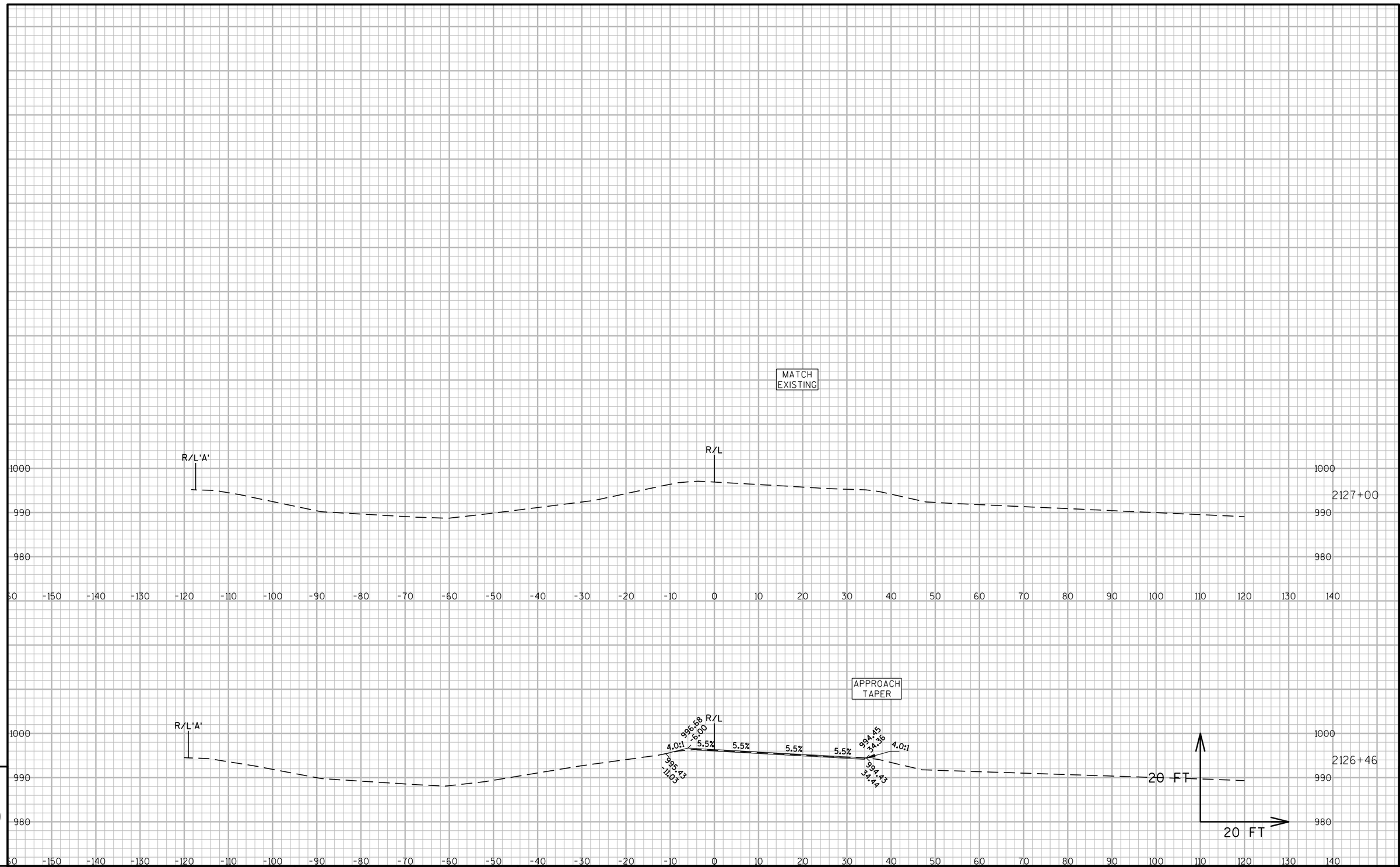
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 357	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.10_XS.DWG
LAYOUT NAME - SECTION SHEET - (12)

PLOT DATE : 4/30/2018 12:51 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



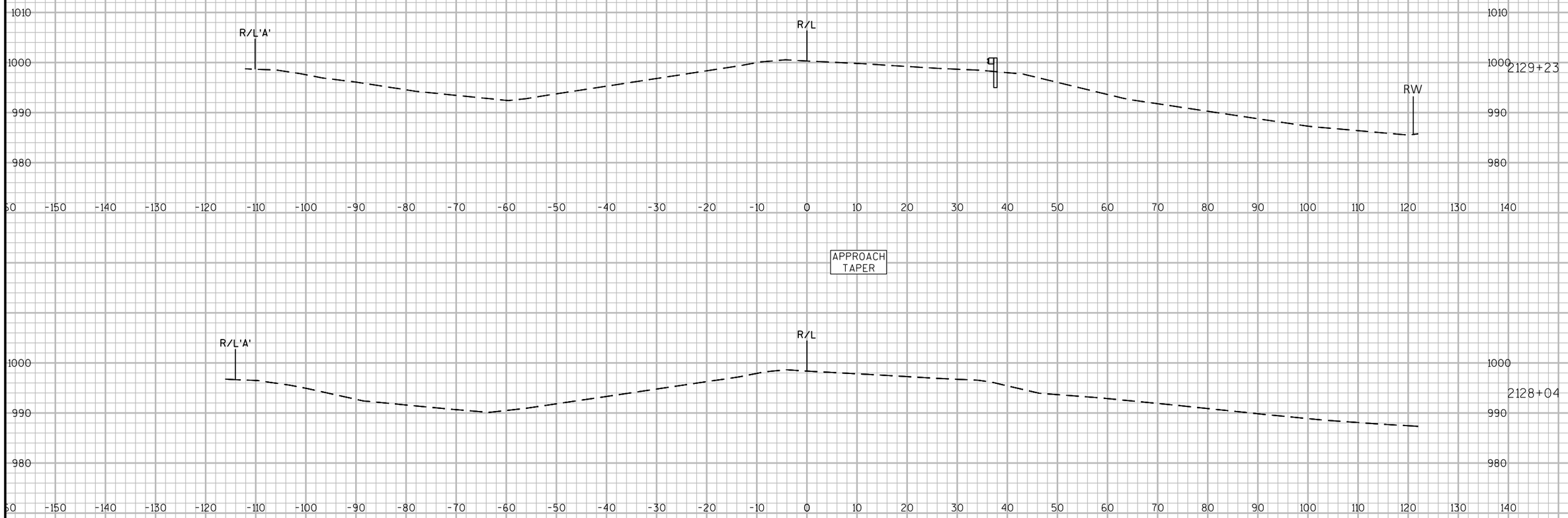
PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EASTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 358	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090201.10_XS.DWG
LAYOUT NAME - SECTION SHEET - (13)

PLOT DATE : 4/30/2018 12:51 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

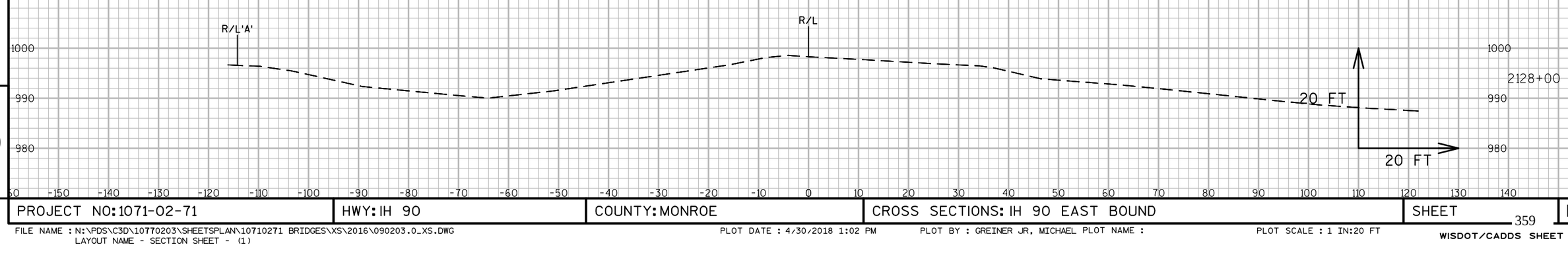
WISDOT/CADDS SHEET 49

POST 1



APPROACH TAPER

MATCH EXISTING



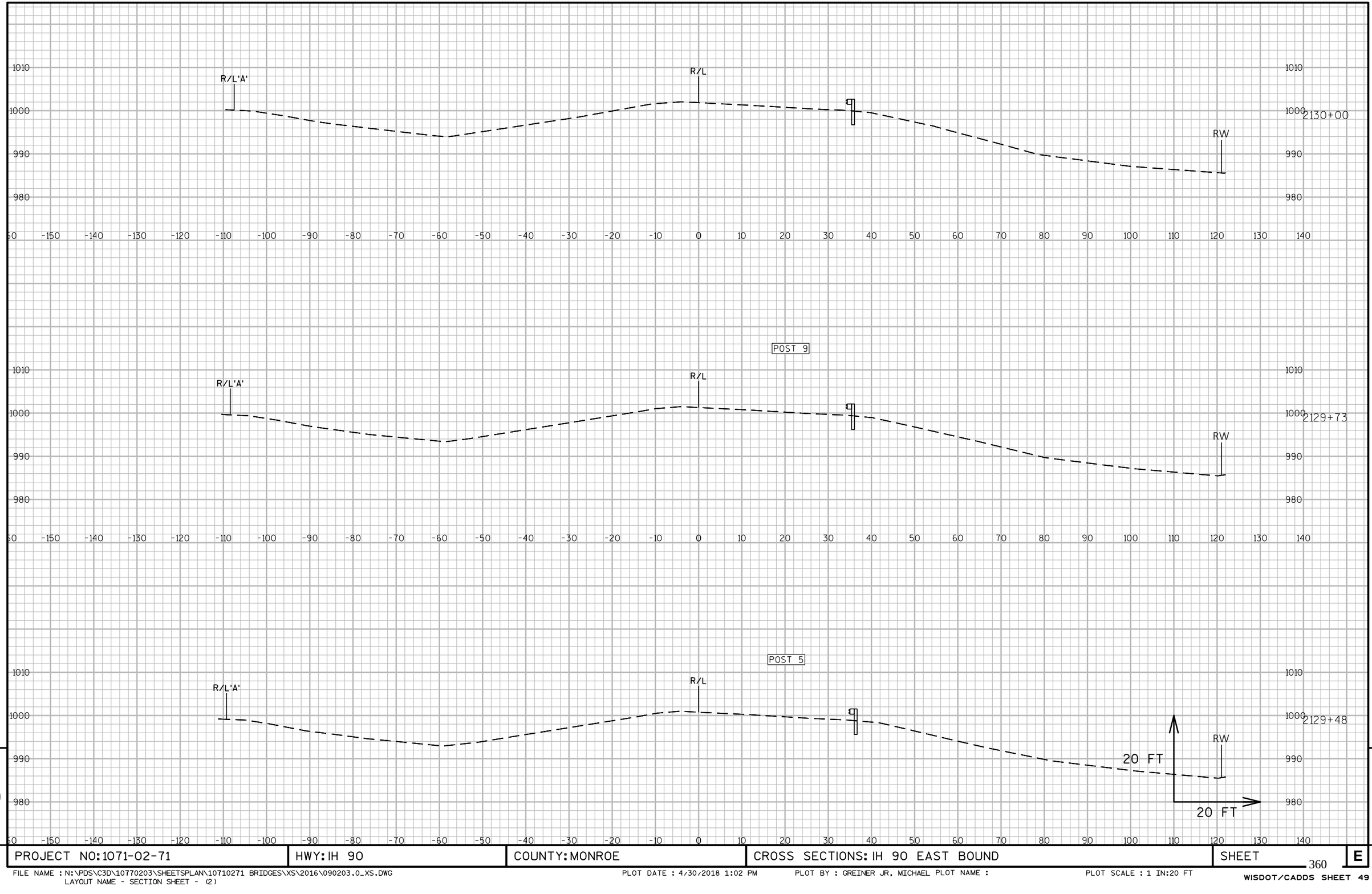
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET 359	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (1)

PLOT DATE : 4/30/2018 1:02 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

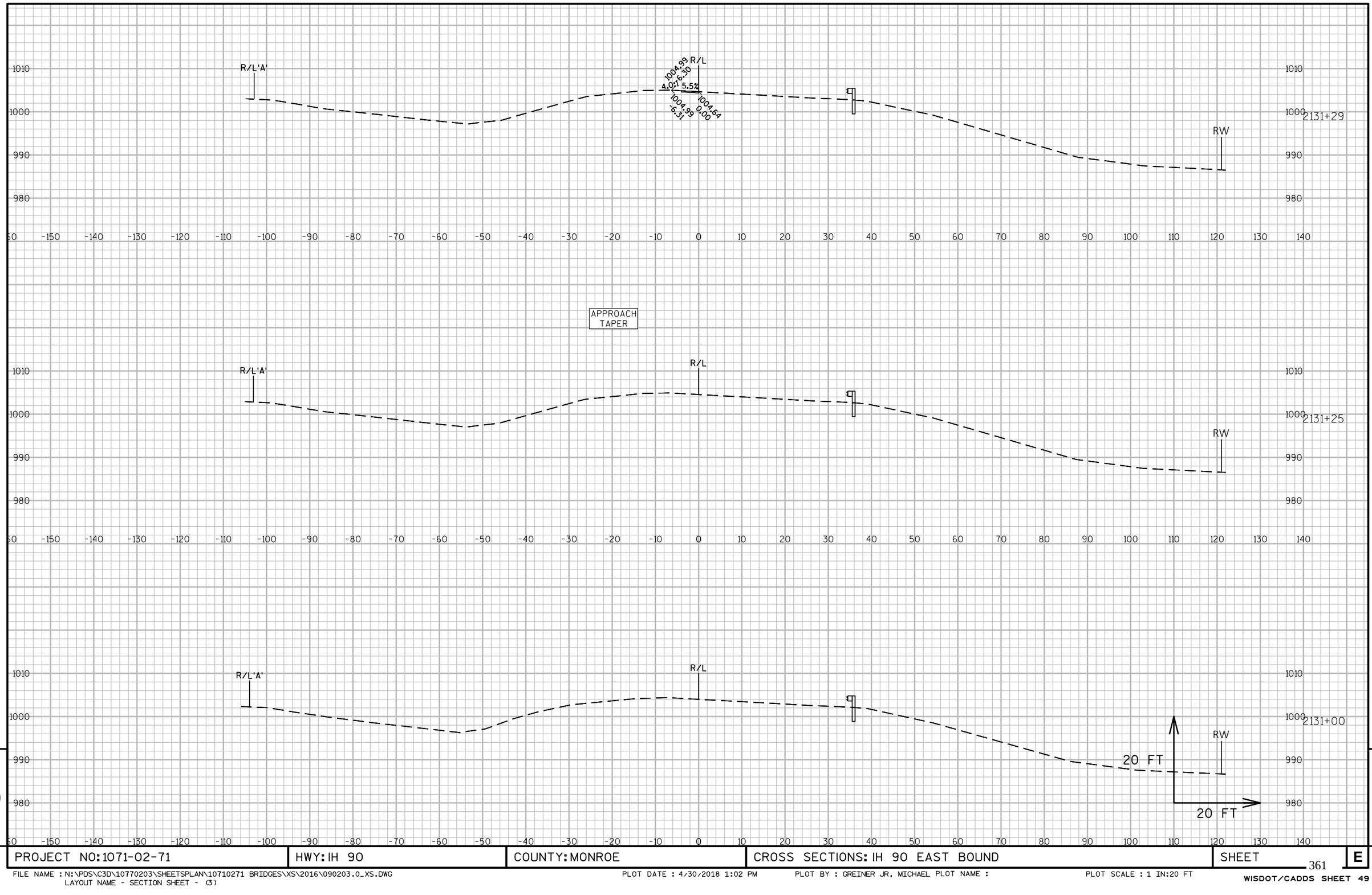
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET 360	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (2)

PLOT DATE : 4/30/2018 1:02 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

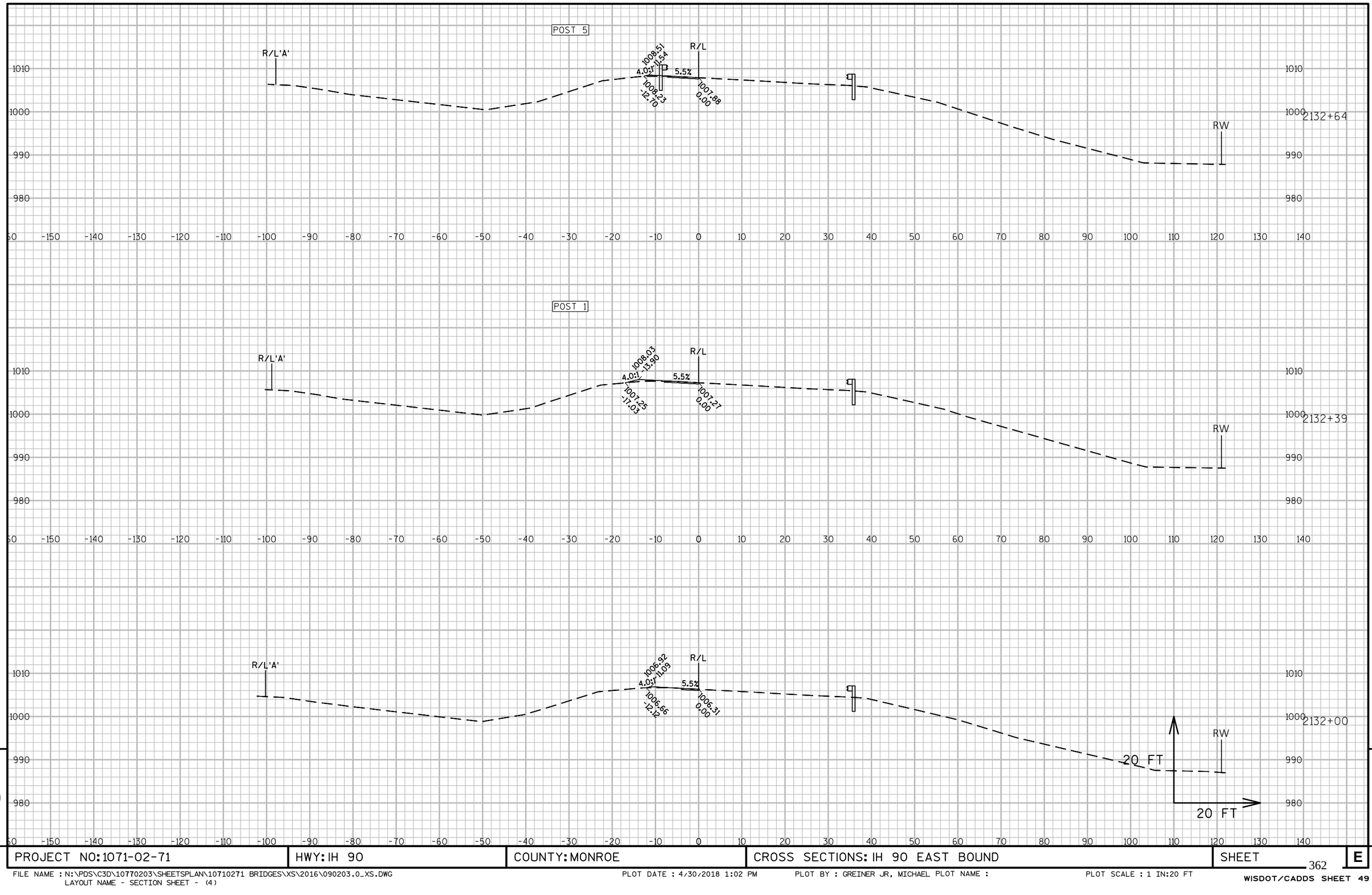


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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (3)
PLOT DATE : 4/30/2018 1:02 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

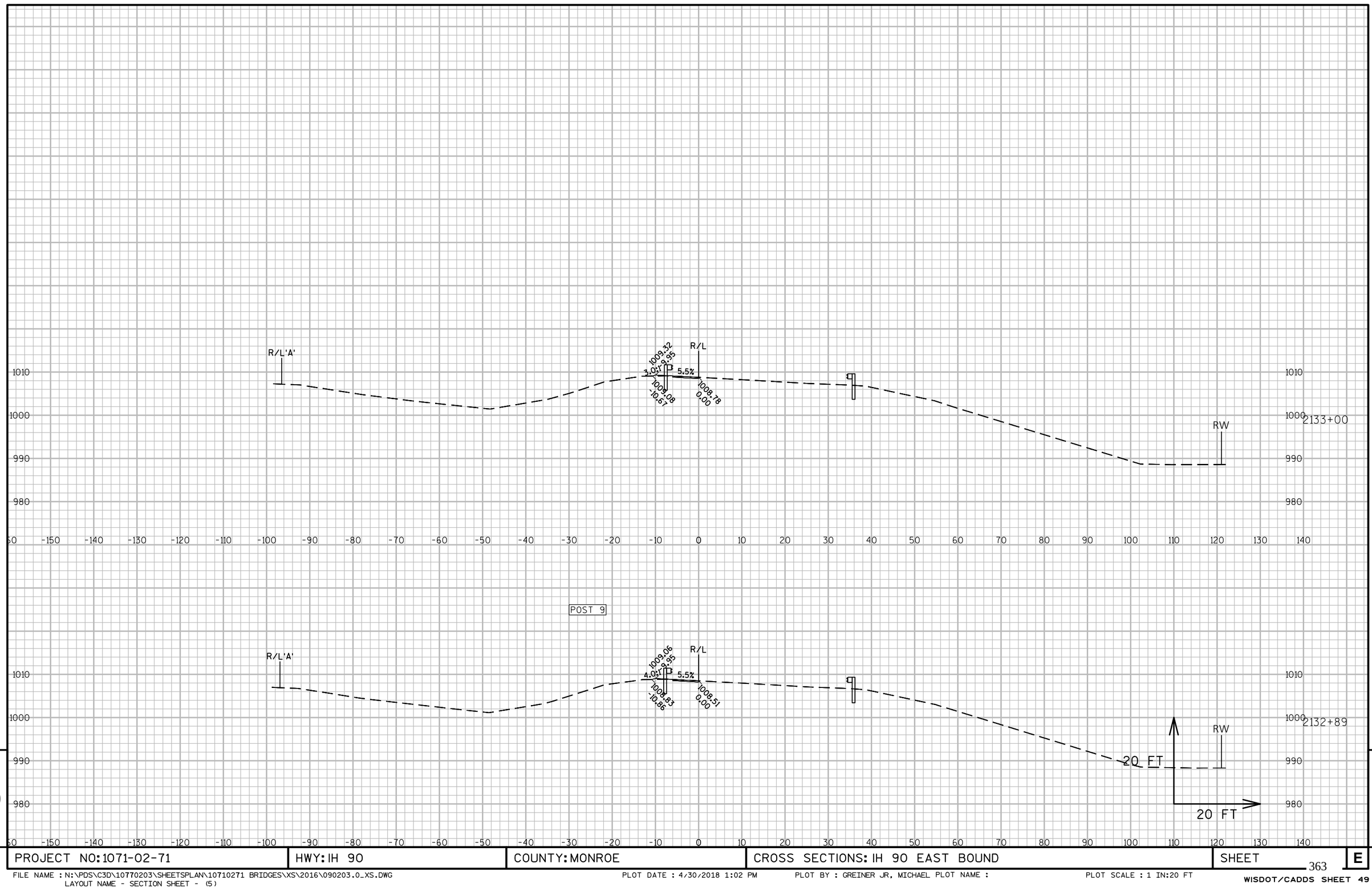


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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (4)

PLOT DATE : 4/30/2018 1:02 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



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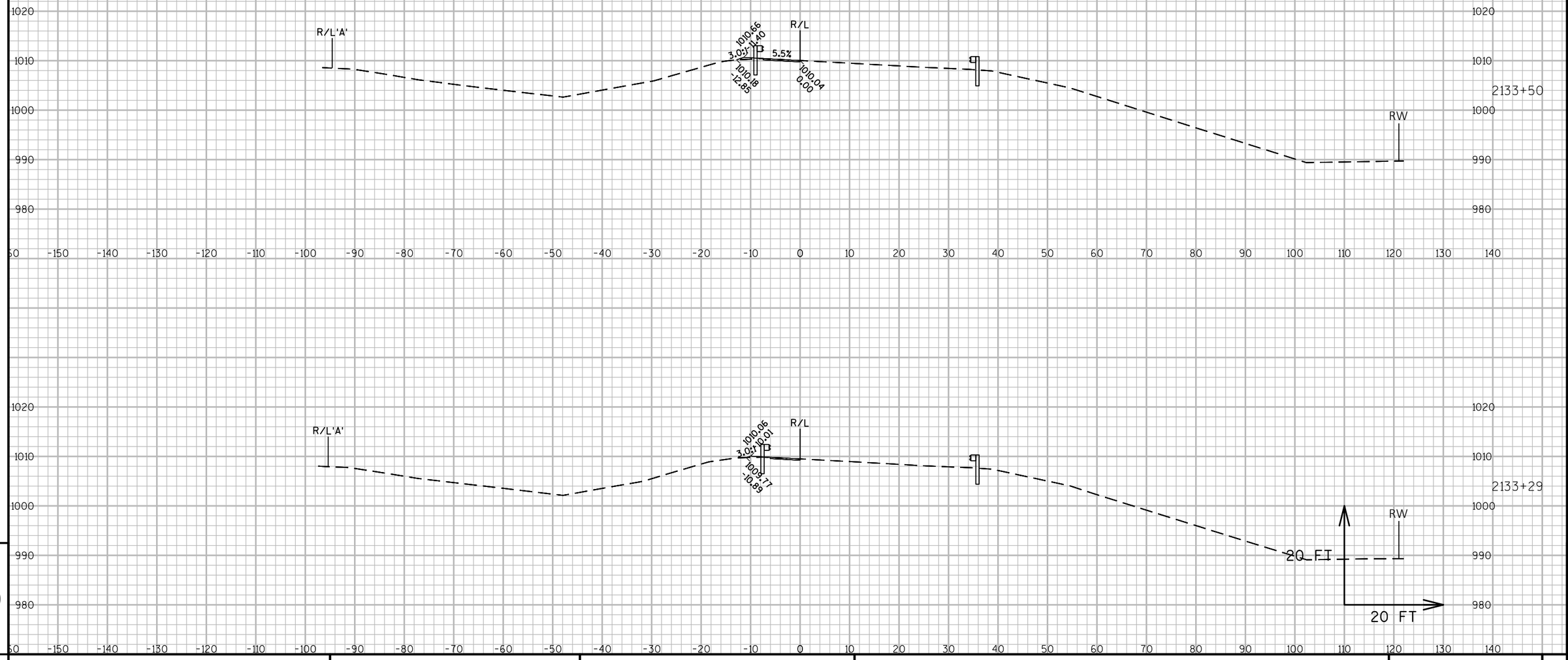
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (5)

PLOT DATE : 4/30/2018 1:02 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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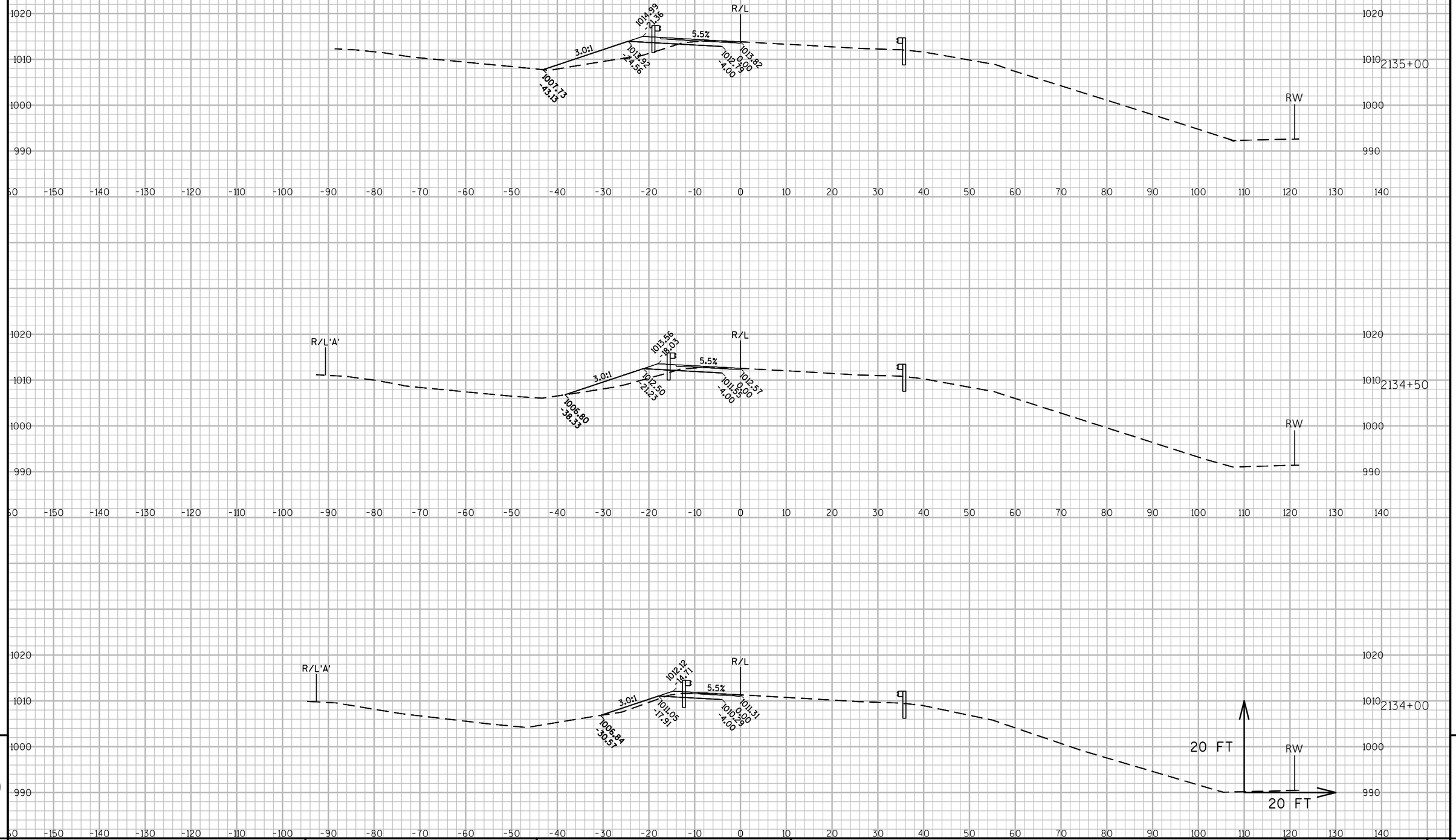
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET 364	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (6)

PLOT DATE : 4/30/2018 1:02 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

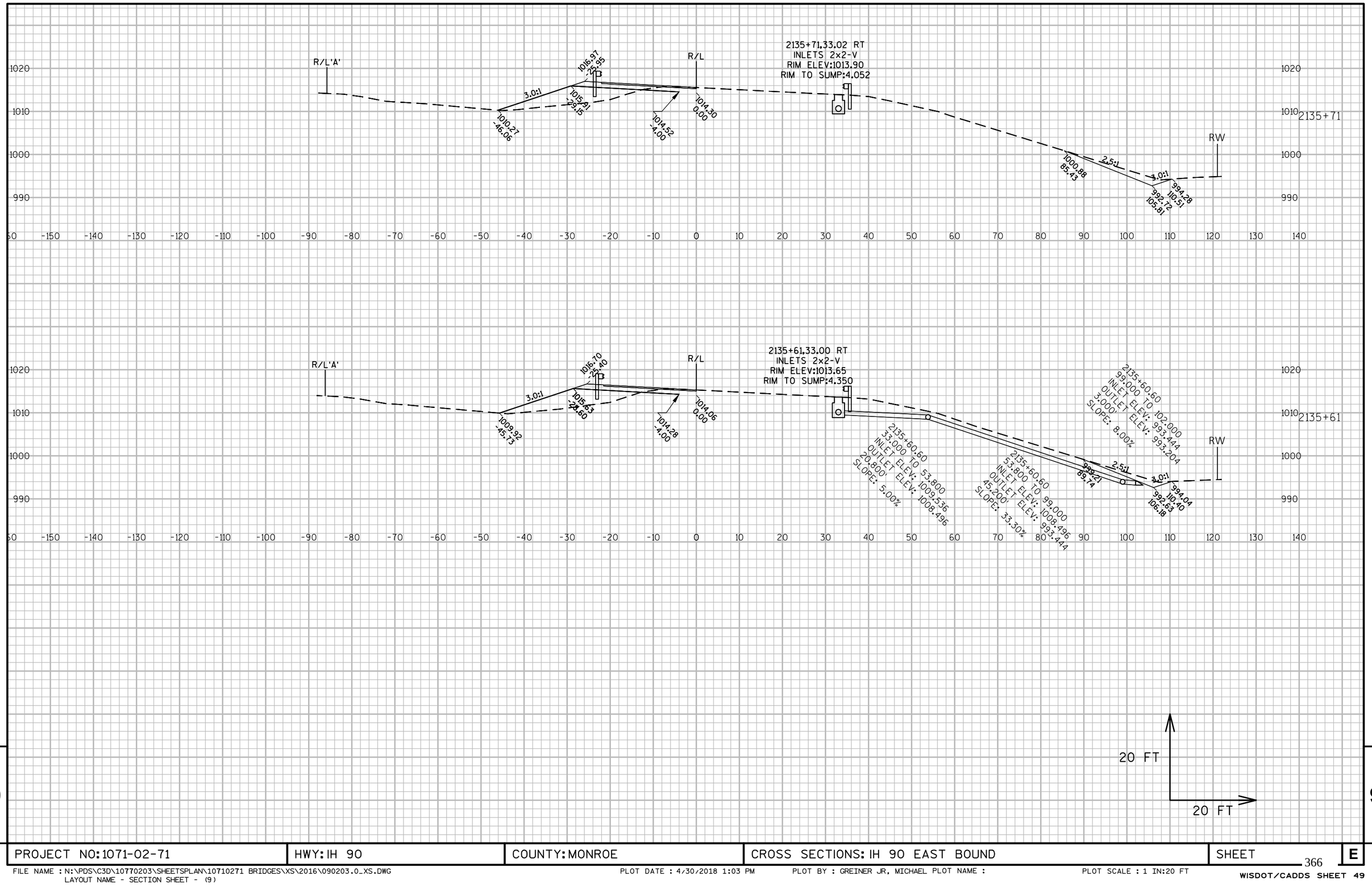
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (7)

PLOT DATE : 4/30/2018 1:02 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



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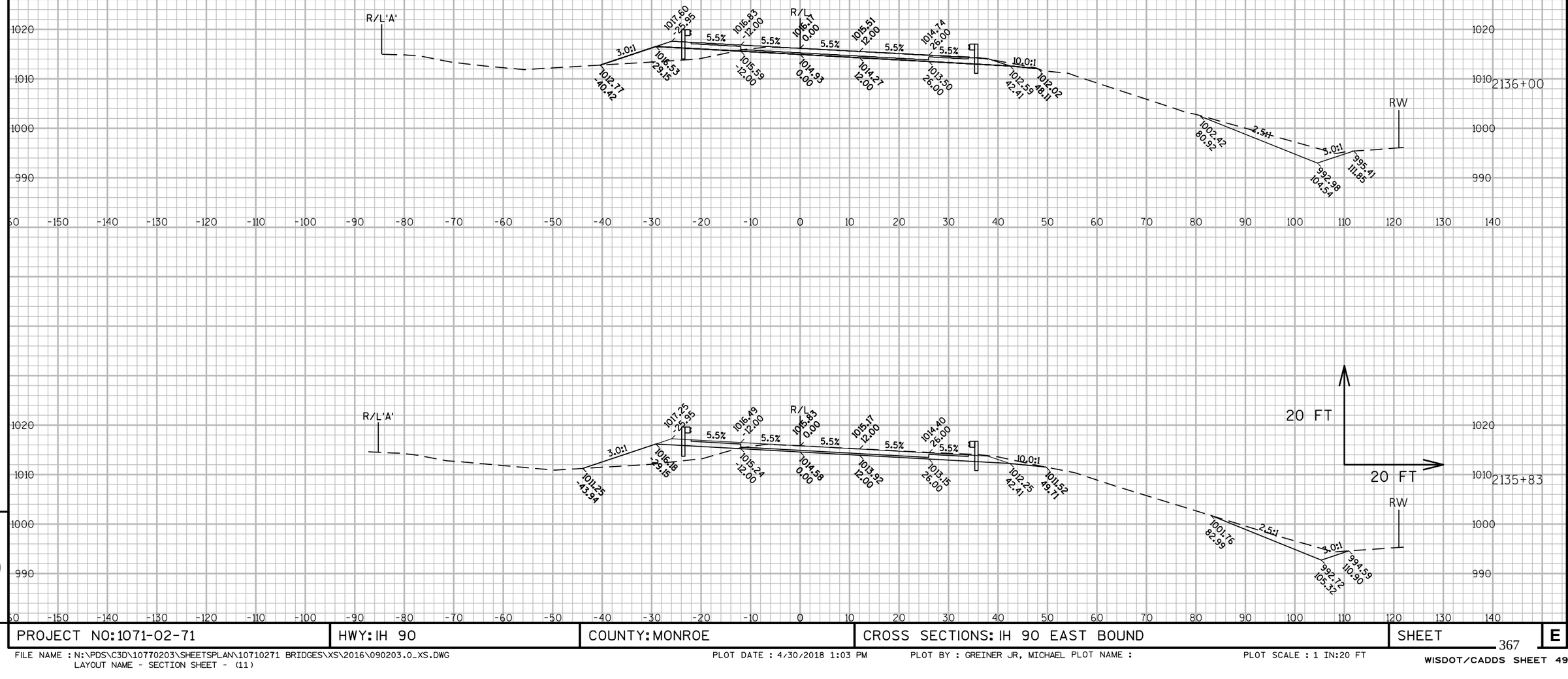
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (9)

PLOT DATE : 4/30/2018 1:03 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

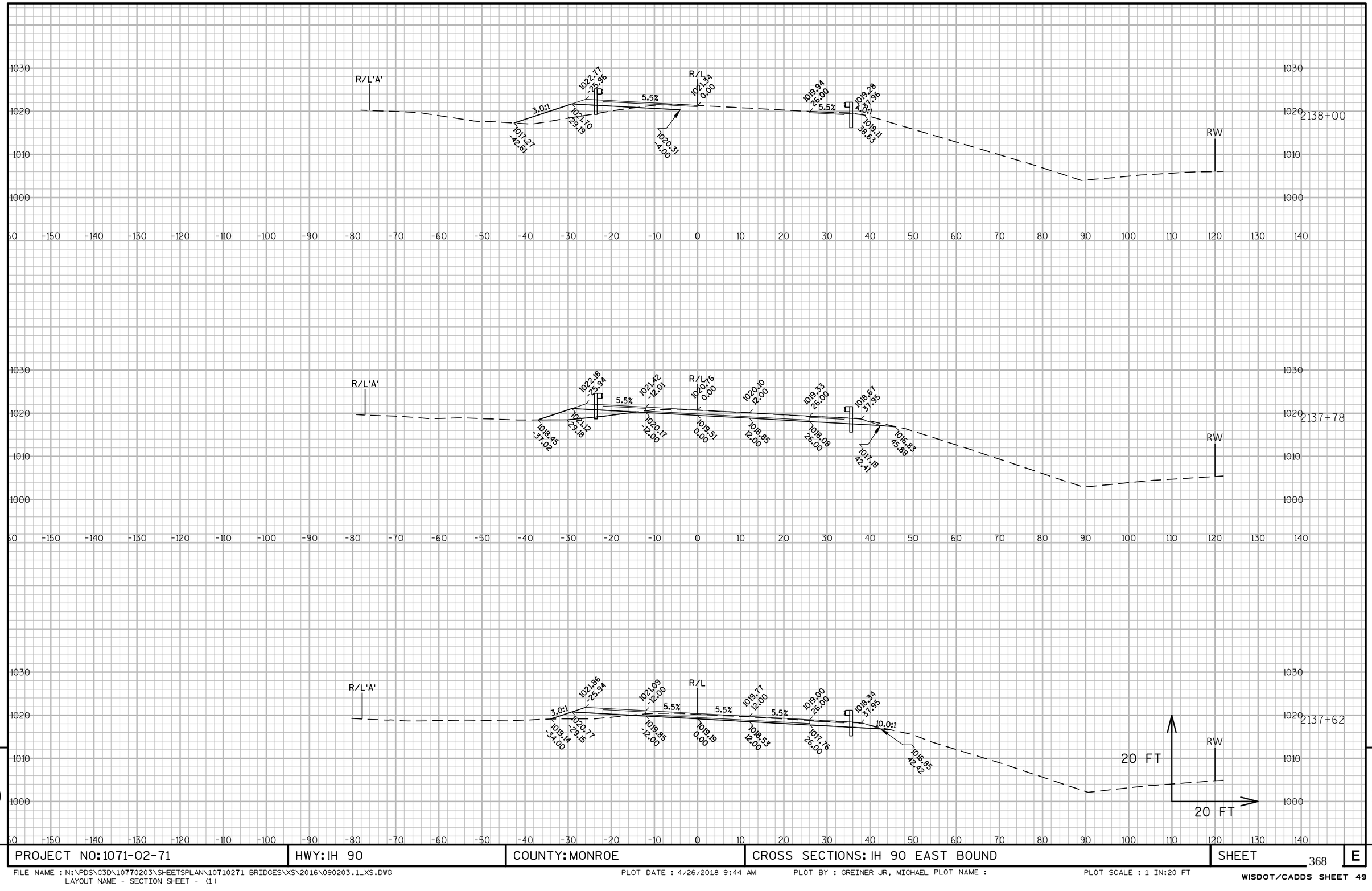
WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (11)
PLOT DATE : 4/30/2018 1:03 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



9

9

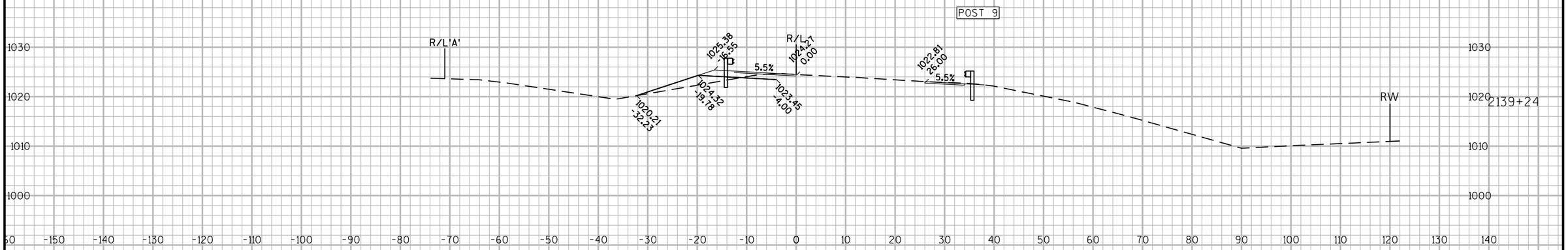
PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET 368	E

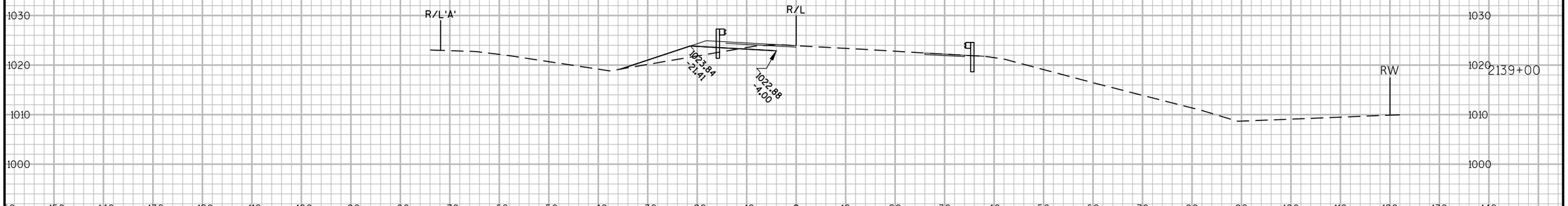
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LAYOUT NAME - SECTION SHEET - (1)

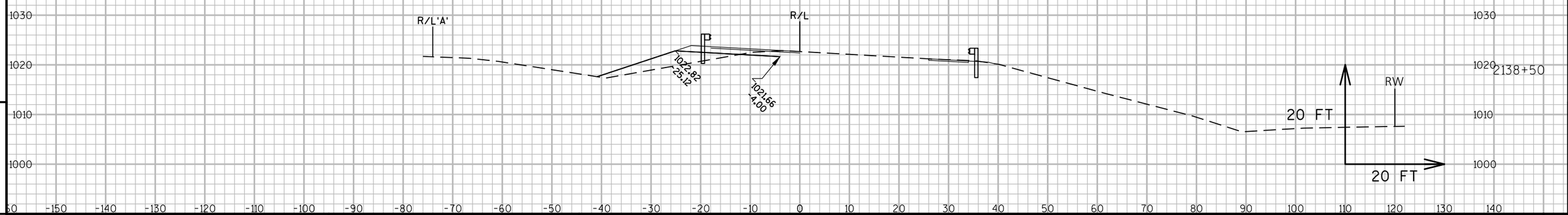
PLOT DATE : 4/26/2018 9:44 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

POST 9







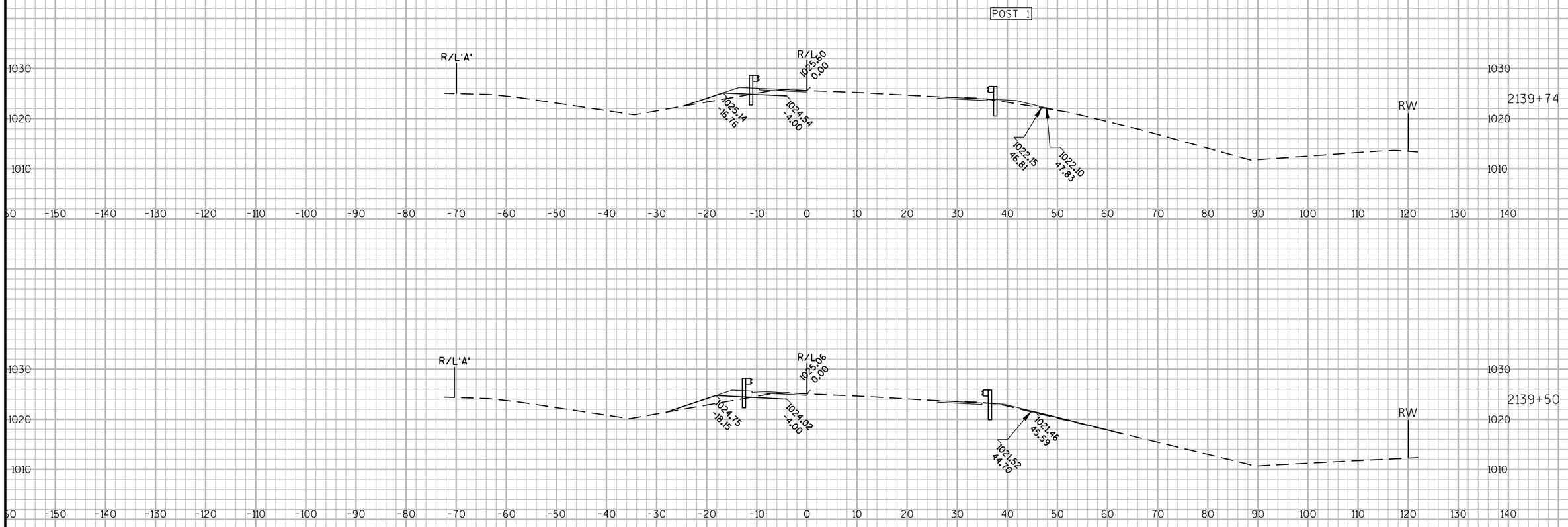
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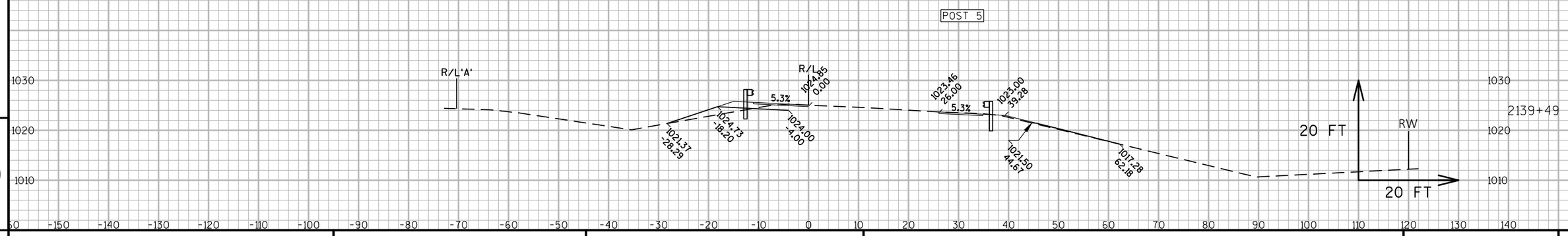
PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET 369	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (2)

PLOT DATE : 4/26/2018 9:42 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

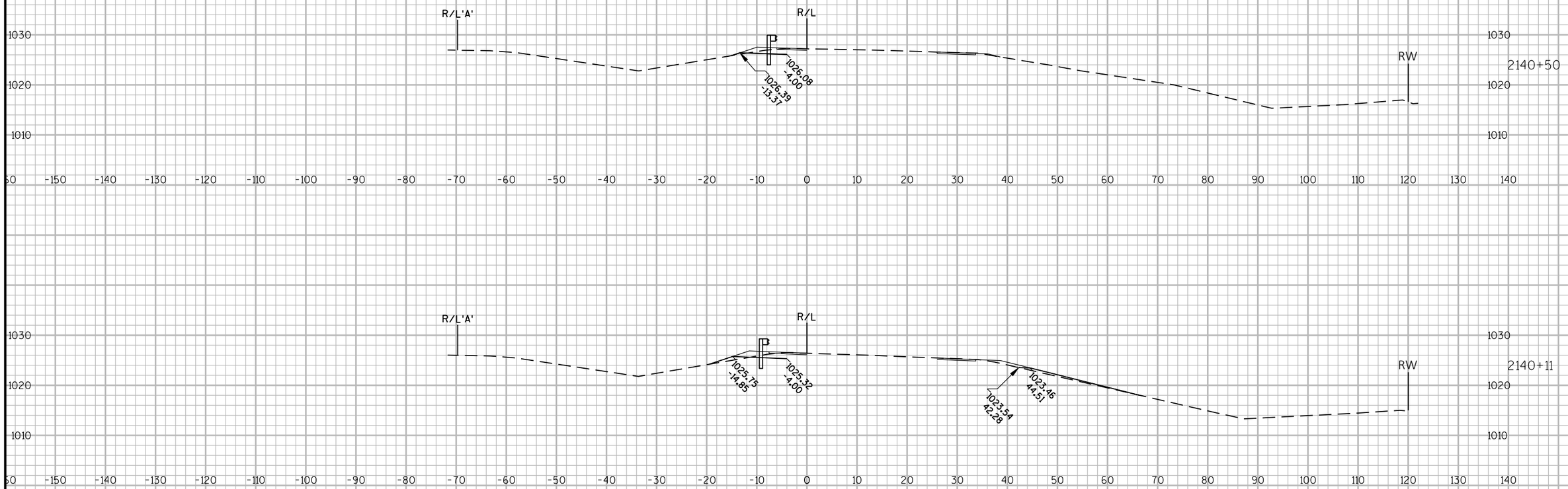
WISDOT/CADDS SHEET 49





9 9

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET 370	E



9

9

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET 371	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (4)

PLOT DATE : 4/26/2018 9:42 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

APPROACH TAPER

R/L'A'

R/L

1028.05
0.00

2.6%

1025.46
-22.90

1027.22
-15.87

1026.91
-4.00

RW

2140+92

POST 5

R/L'A'

R/L

1026.78
-4.00

1027.09
-15.46

RW

2140+85

POST 9

R/L'A'

1027.83
-10.08

R/L

1025.78
-16.39

1026.70
-15.65

1026.40
-4.00

RW

20 FT

20 FT

2140+66

9

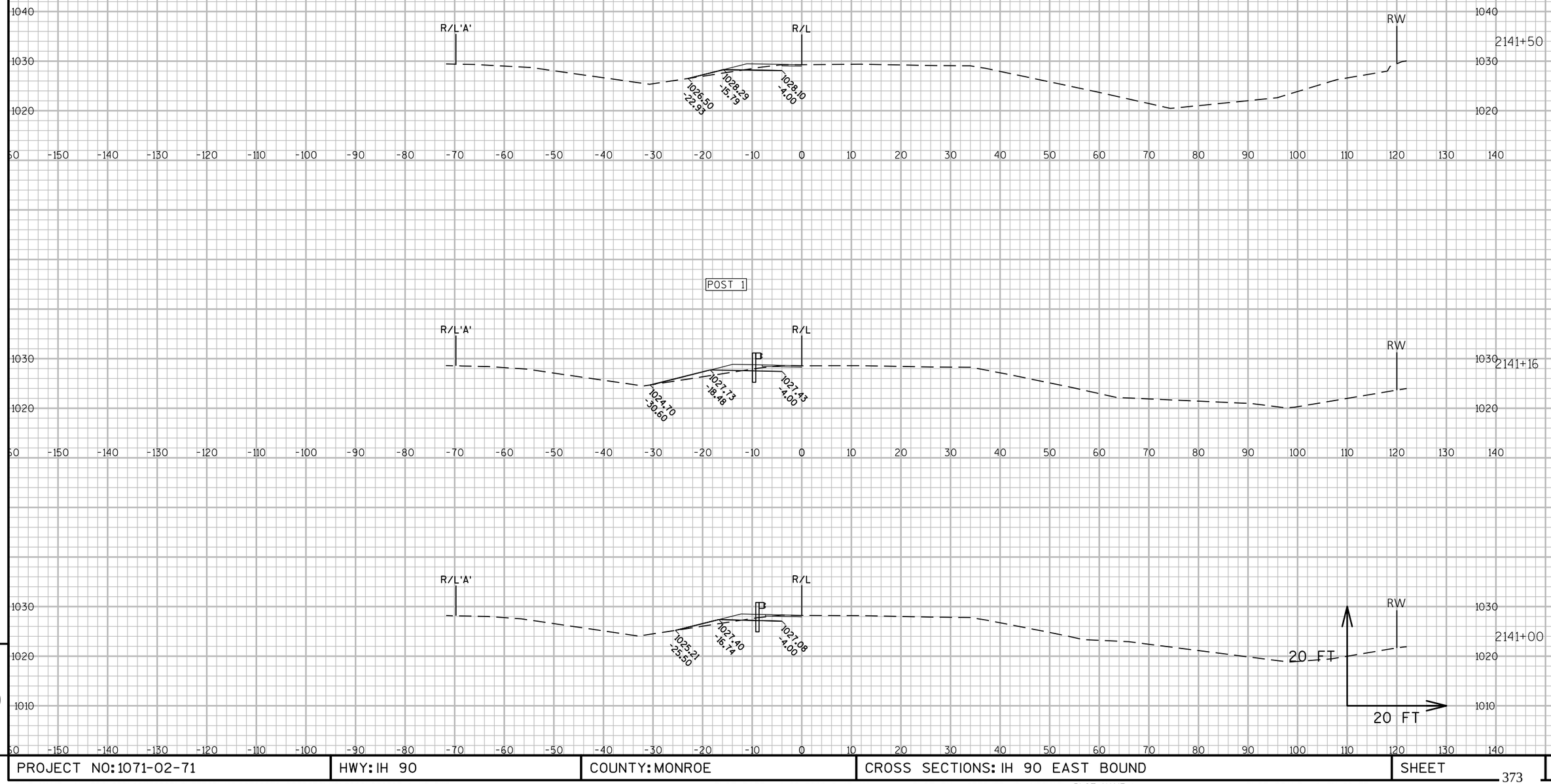
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (5)

PLOT DATE : 4/26/2018 9:42 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

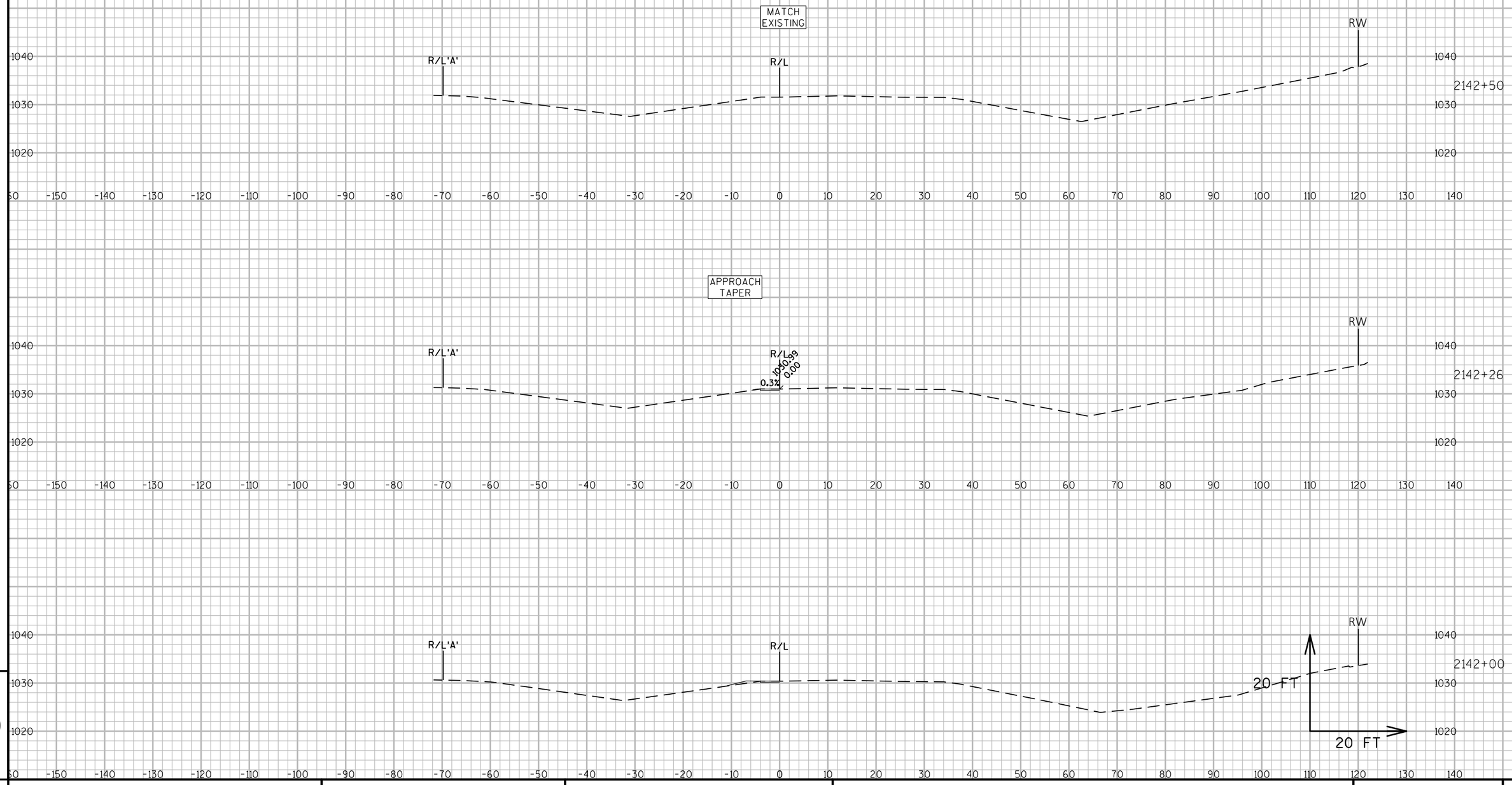
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET 373	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (6)

PLOT DATE : 4/26/2018 9:43 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

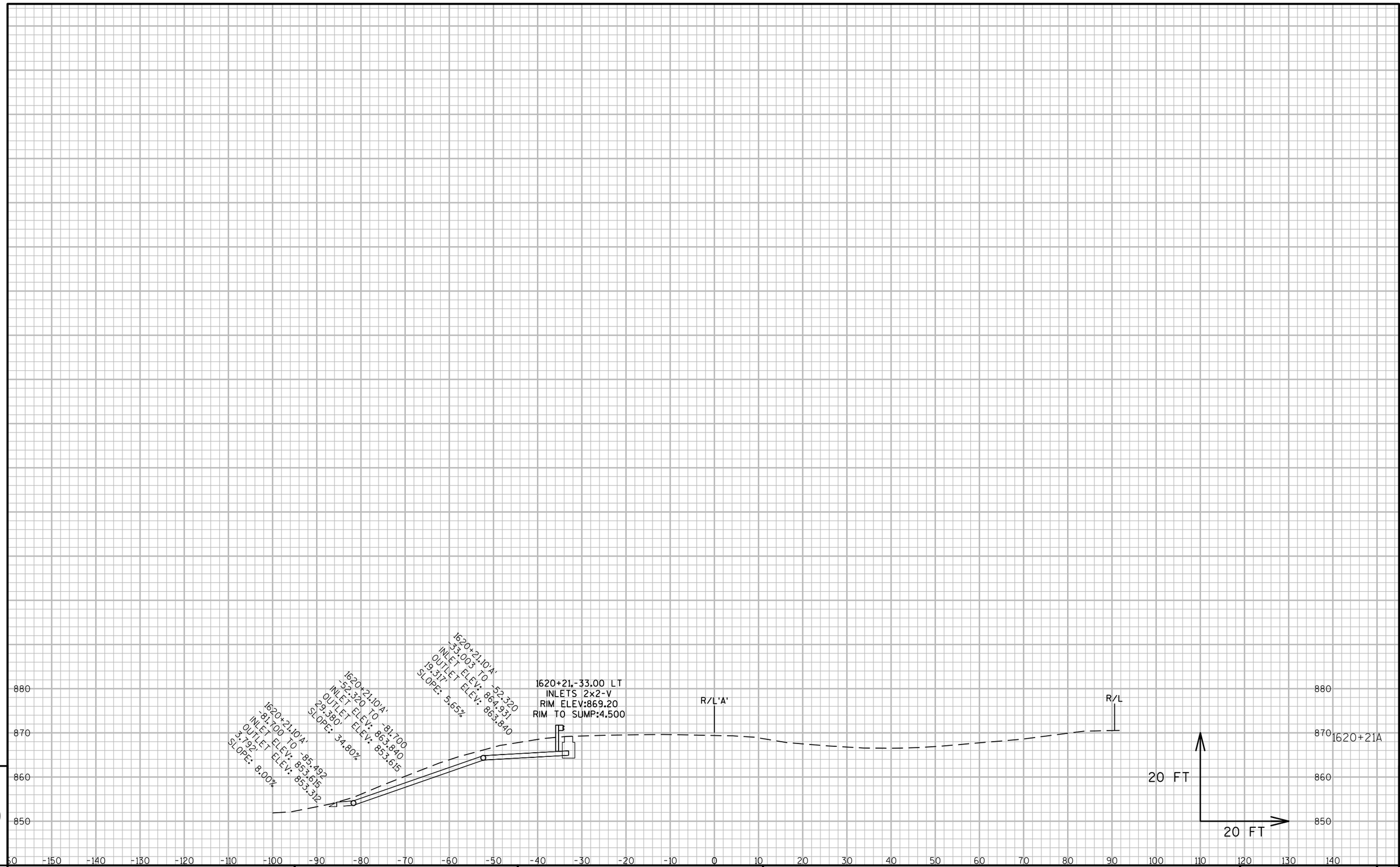


PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 EAST BOUND	SHEET 374	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090203.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (7)

PLOT DATE : 4/26/2018 9:43 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

9

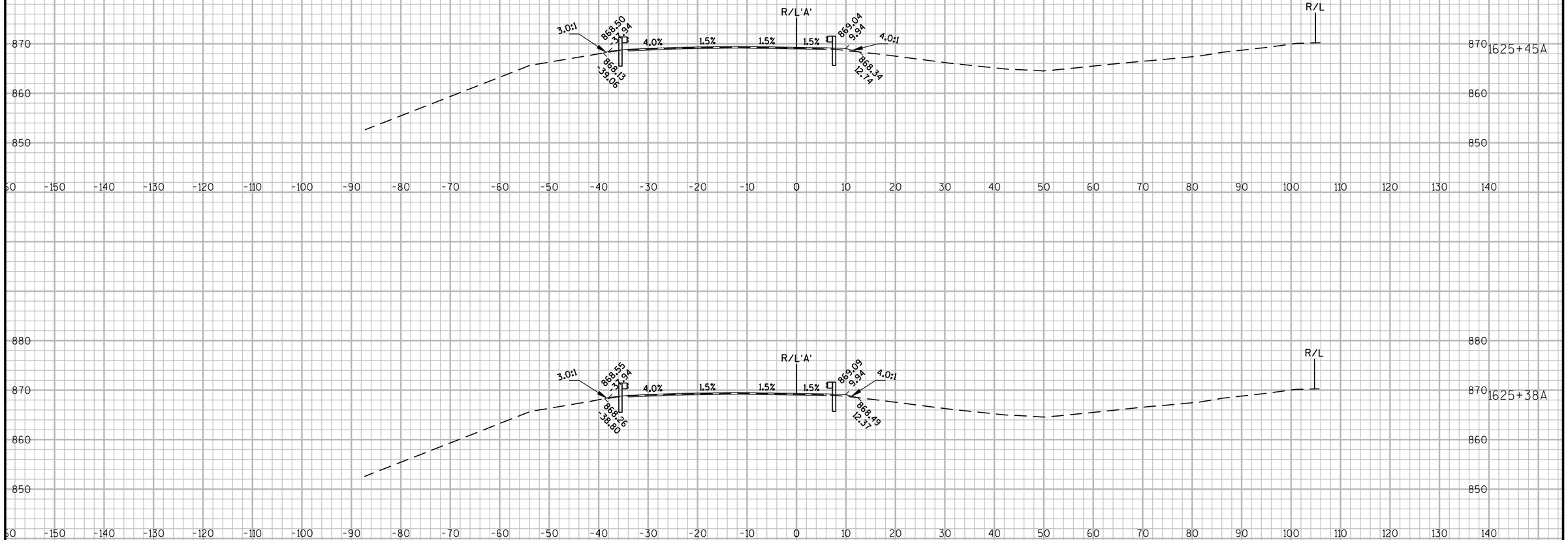
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 375	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (1)

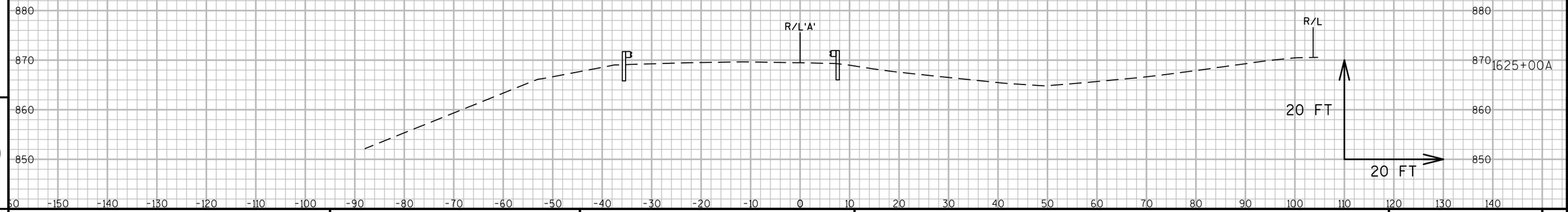
PLOT DATE : 4/30/2018 2:41 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

POST 9



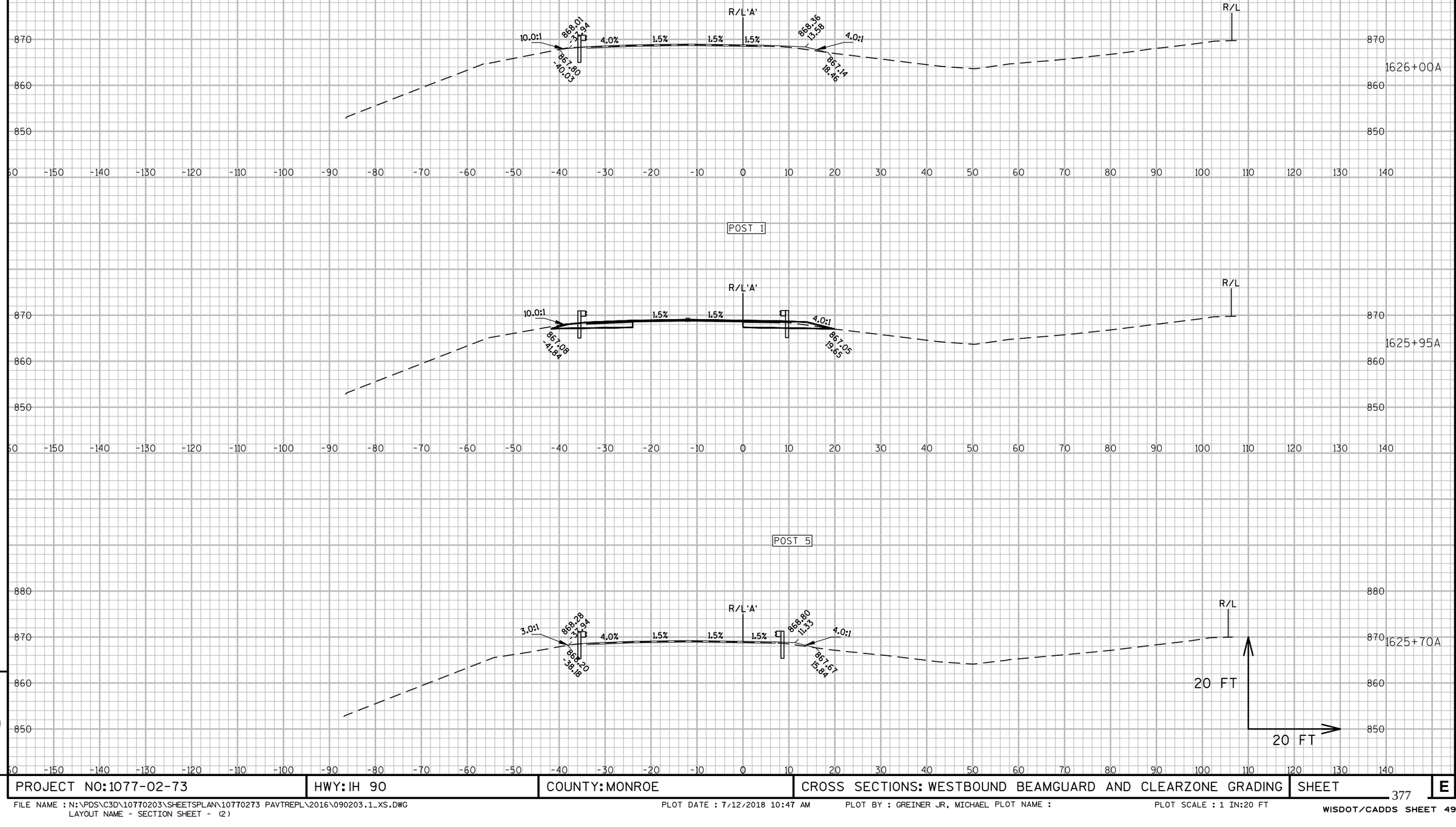
MATCH EXISTING



9 9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (1)
PLOT DATE : 7/12/2018 10:47 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



9

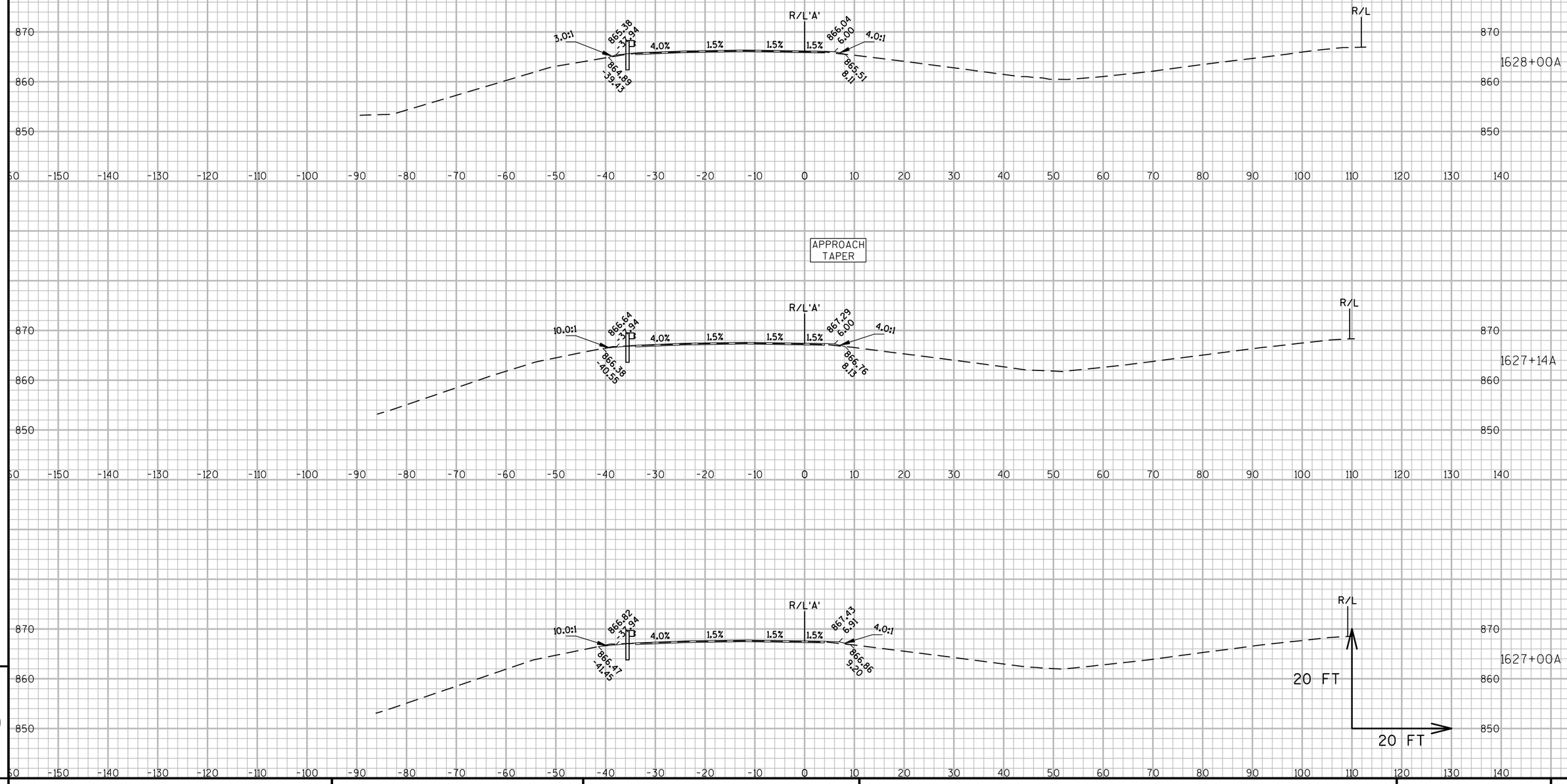
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 377	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (2)

PLOT DATE : 7/12/2018 10:47 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

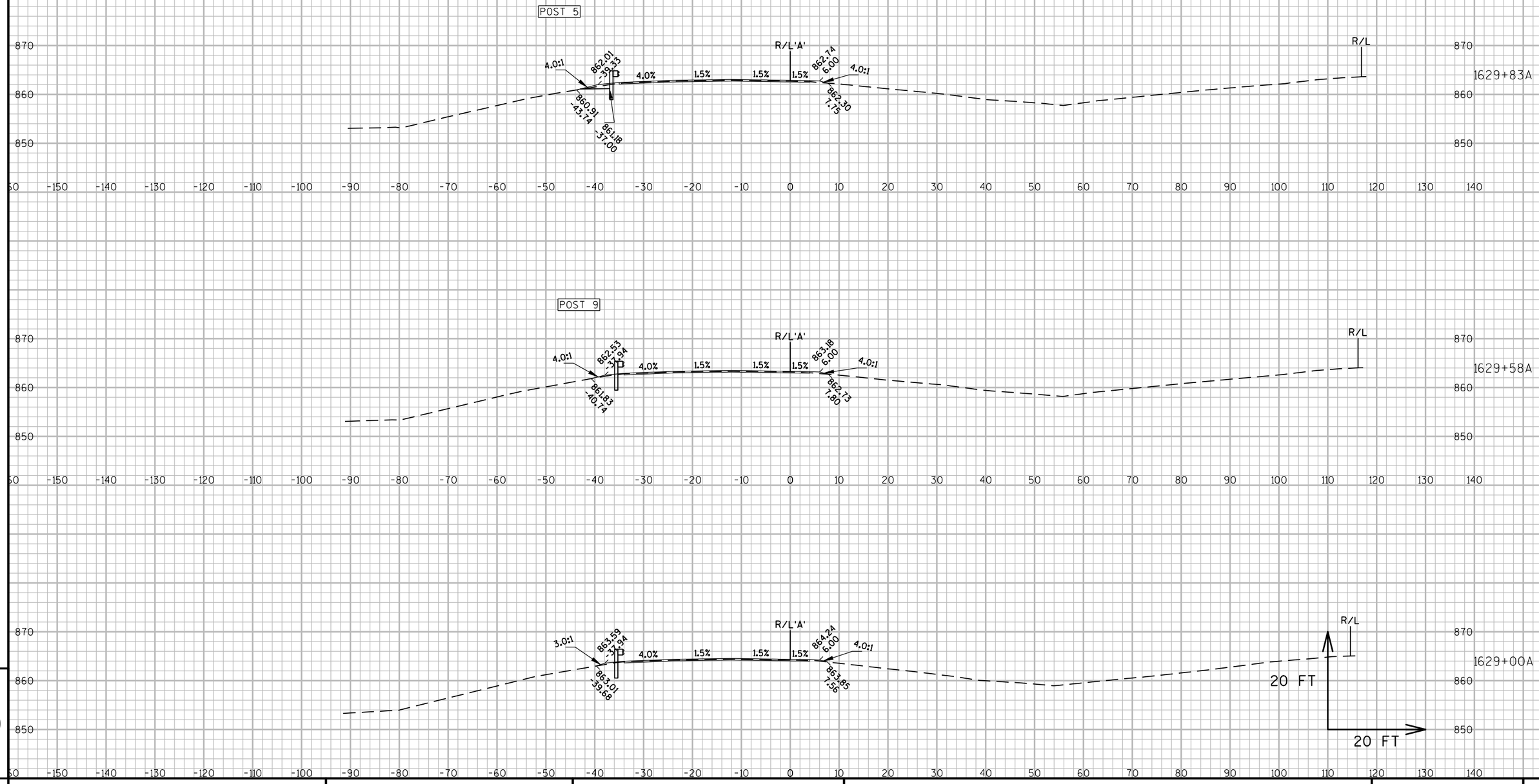
9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 378	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (3)

PLOT DATE : 7/12/2018 10:47 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 379	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (4)

PLOT DATE : 7/12/2018 10:48 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

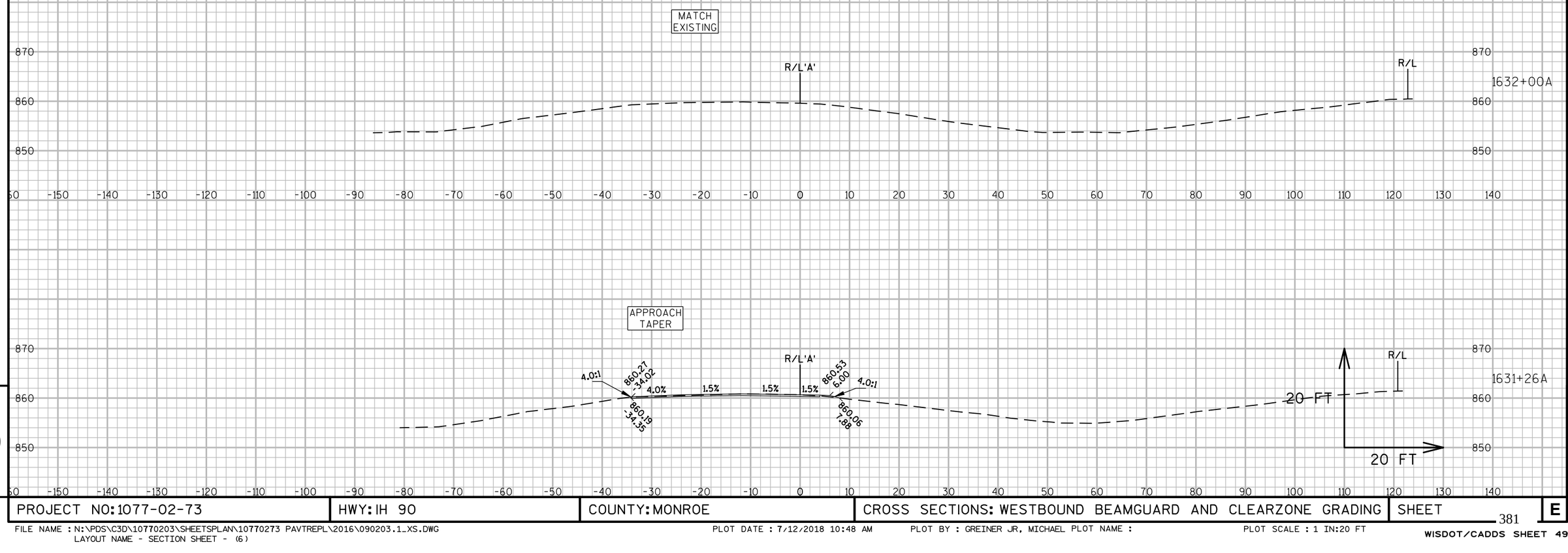
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 380	E

9

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (5)

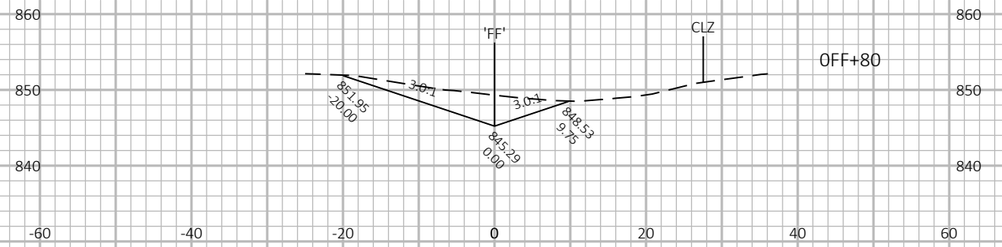
PLOT DATE : 7/12/2018 10:48 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

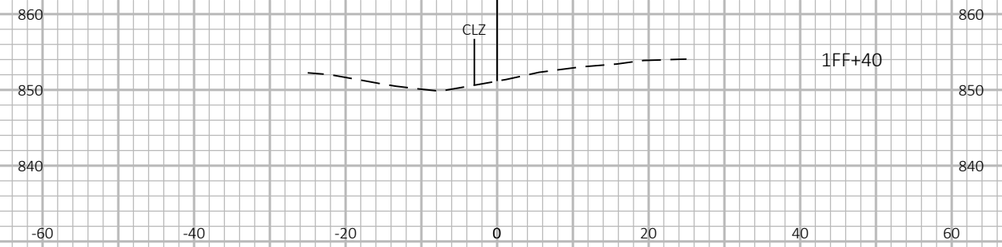


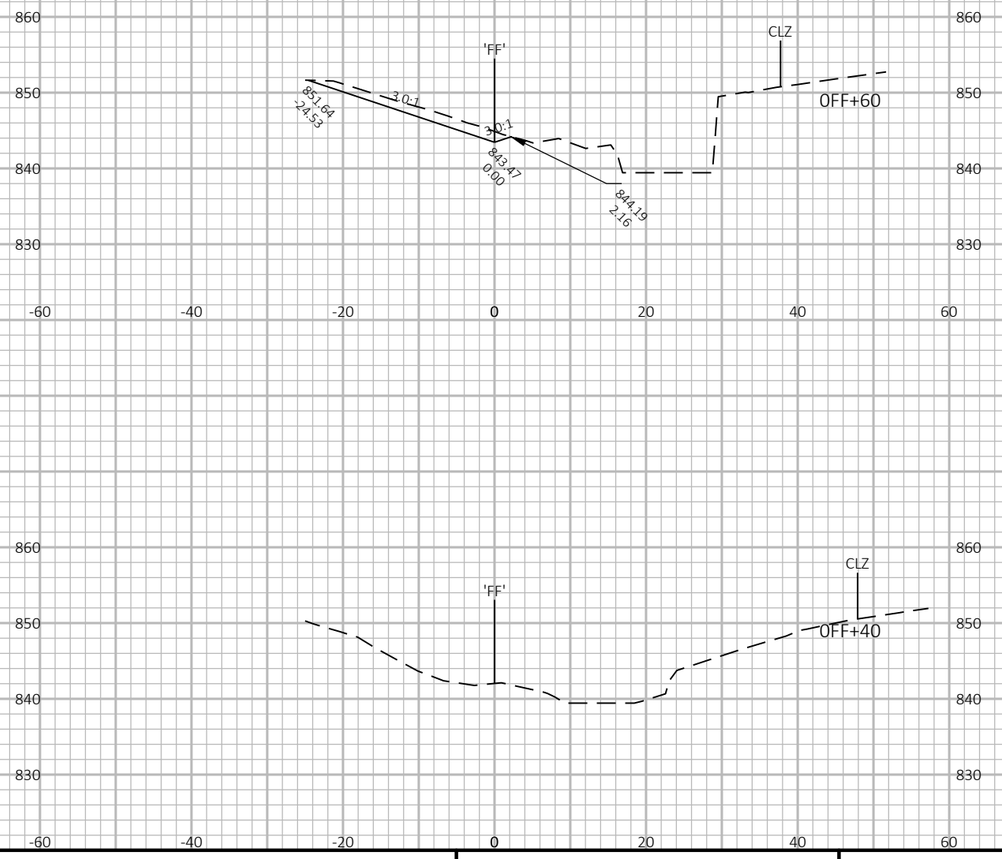
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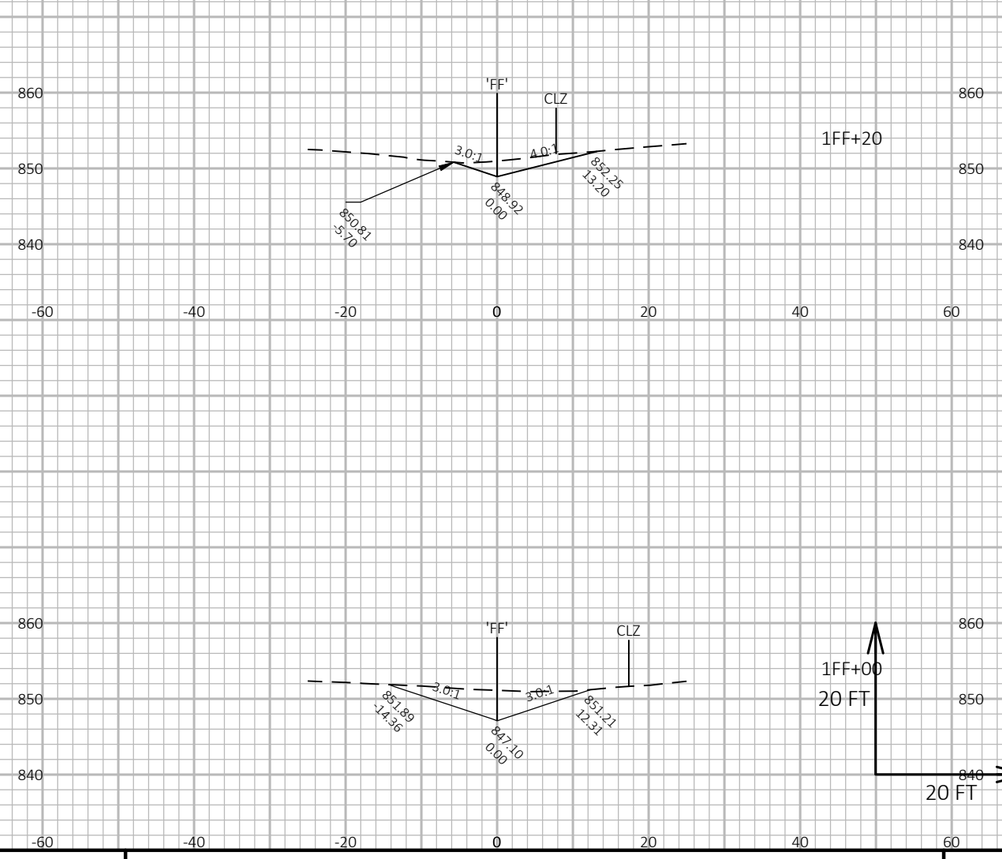
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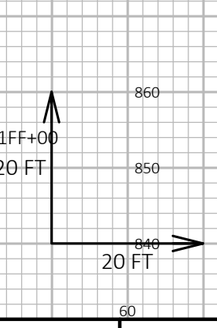
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 381	E











9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND SPECIAL DITCH	SHEET	E

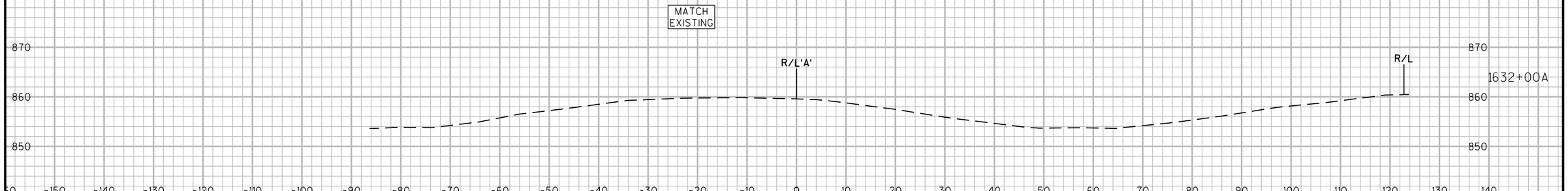
382

9

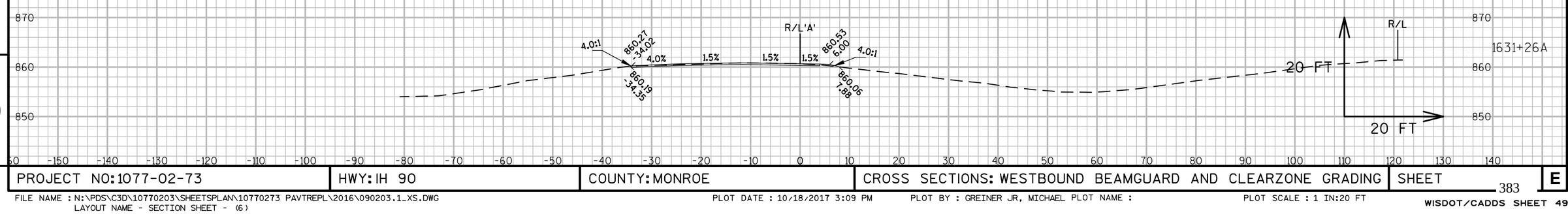
FILE NAME : N:\PDS\C3D\10770203\DESIGN\SURFACES\(73)\(73) SURFACE IH 90 WB SPECIAL DITCH SURFACE.DWG
LAYOUT NAME - X-Section 1 IN 20 FT Horiz 20 FT Vert

PLOT DATE : 4/18/2018 1:28 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

MATCH EXISTING

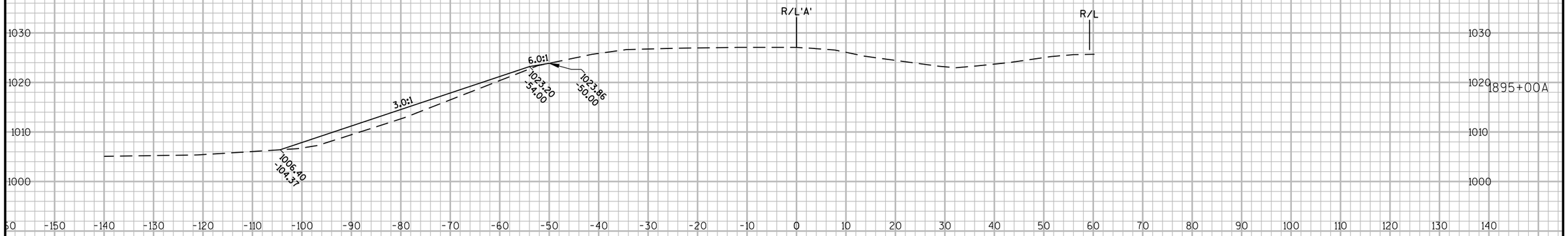


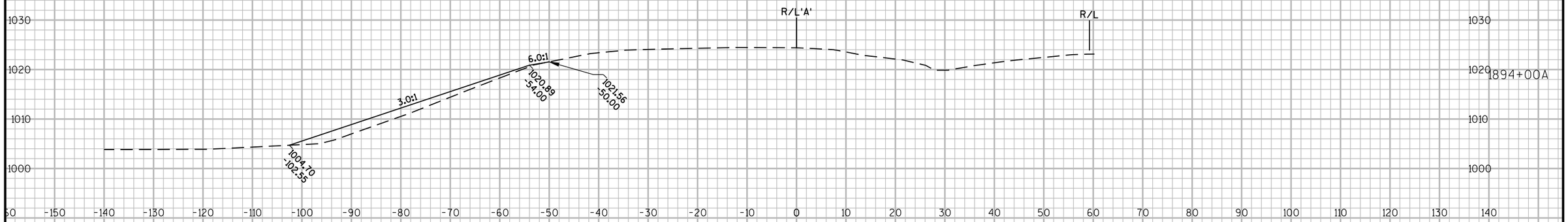
APPROACH TAPER



9 9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 383	E





MATCH EXISTING



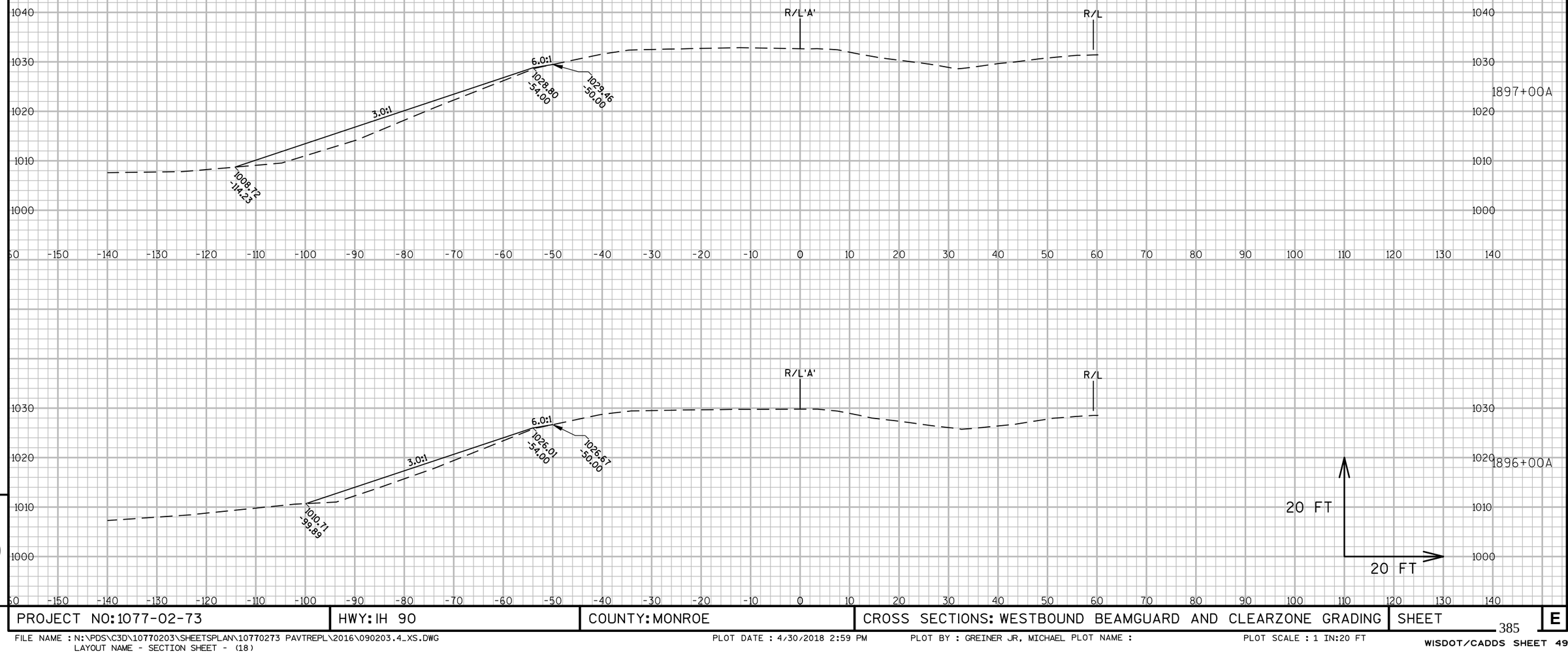
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.4_XS.DWG
LAYOUT NAME - SECTION SHEET - (17)

PLOT DATE : 4/30/2018 2:59 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME :

PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

9

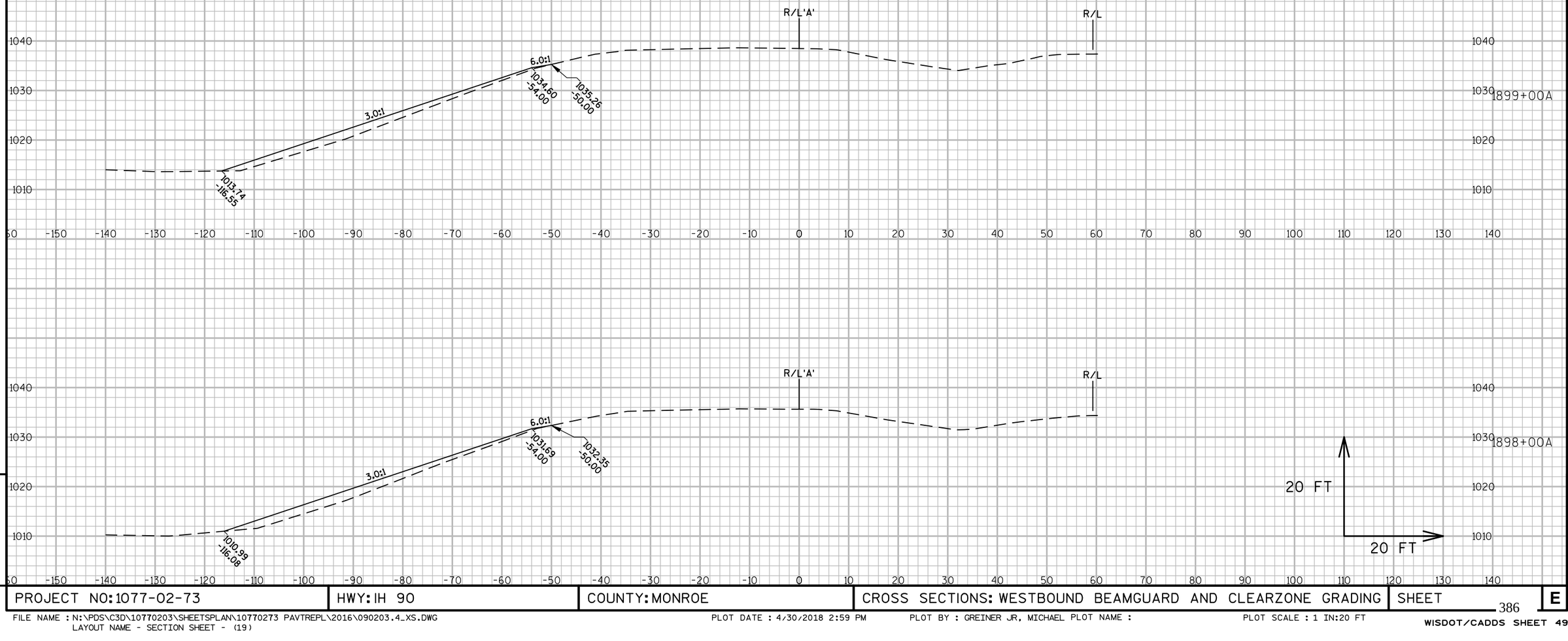
PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.4_XS.DWG
LAYOUT NAME - SECTION SHEET - (18)

PLOT DATE : 4/30/2018 2:59 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME :

PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

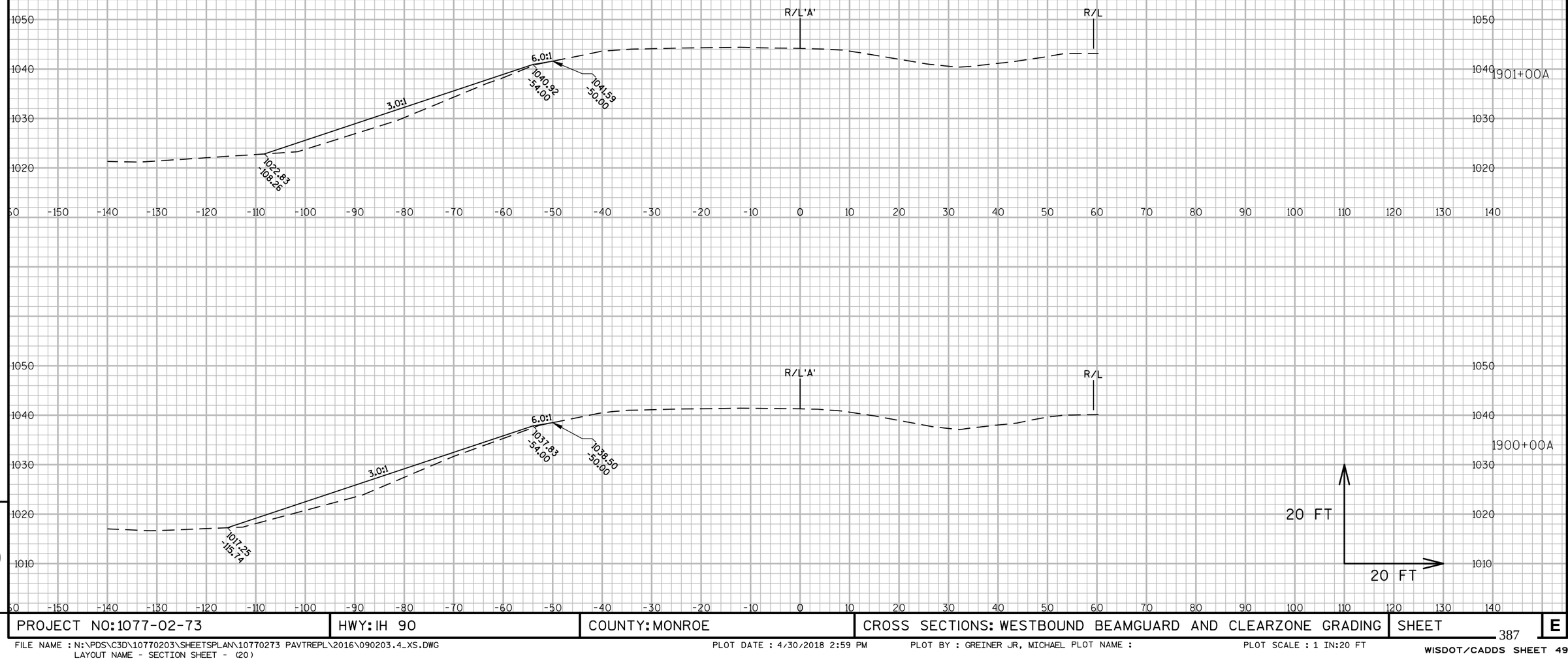


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.4_XS.DWG
LAYOUT NAME - SECTION SHEET - (19)

PLOT DATE : 4/30/2018 2:59 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.4_XS.DWG
LAYOUT NAME - SECTION SHEET - (20)

PLOT DATE : 4/30/2018 2:59 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

MATCH EXISTING

R/L'A'

R/L

1901+50A

1901+27.00'A'
-91.430 TO -94.260
INLET ELEV: 1025.364
OUTLET ELEV: 1025.138
2.830'
SLOPE: 8.00%

1901+27.00'A'
-53.200 TO -91.430
INLET ELEV: 1039.595
OUTLET ELEV: 1025.364
38.230'
SLOPE: 37.23%

1901+27.00'A'
-33.000 TO -53.200
INLET ELEV: 1040.606
OUTLET ELEV: 1039.595
20.200'
SLOPE: 5.00%

1901+27,-33.00 LT
INLETS 2x2-V
RIM ELEV:1044.93
RIM TO SUMP:4.500

1901+27A

20 FT

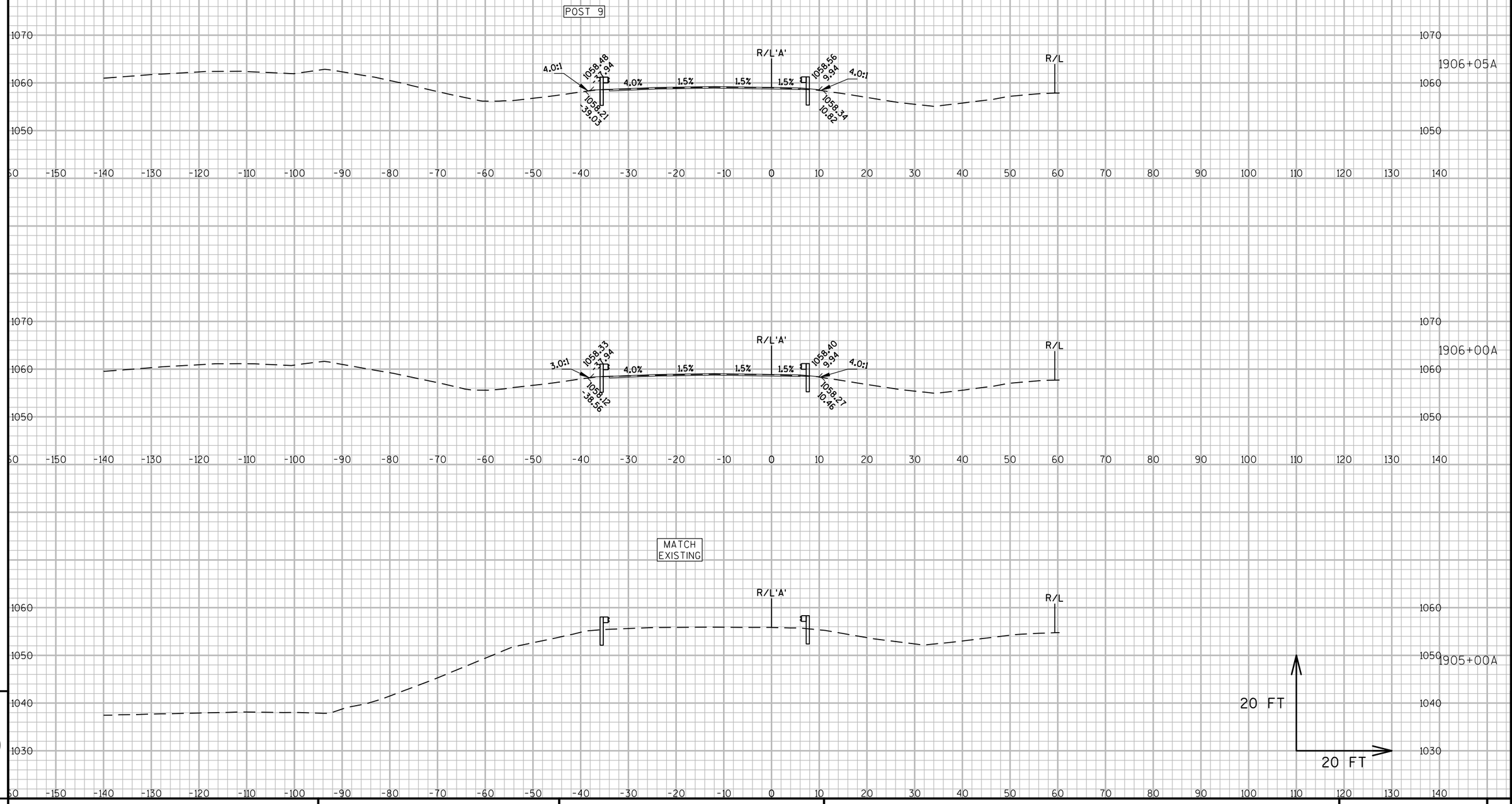
20 FT

9

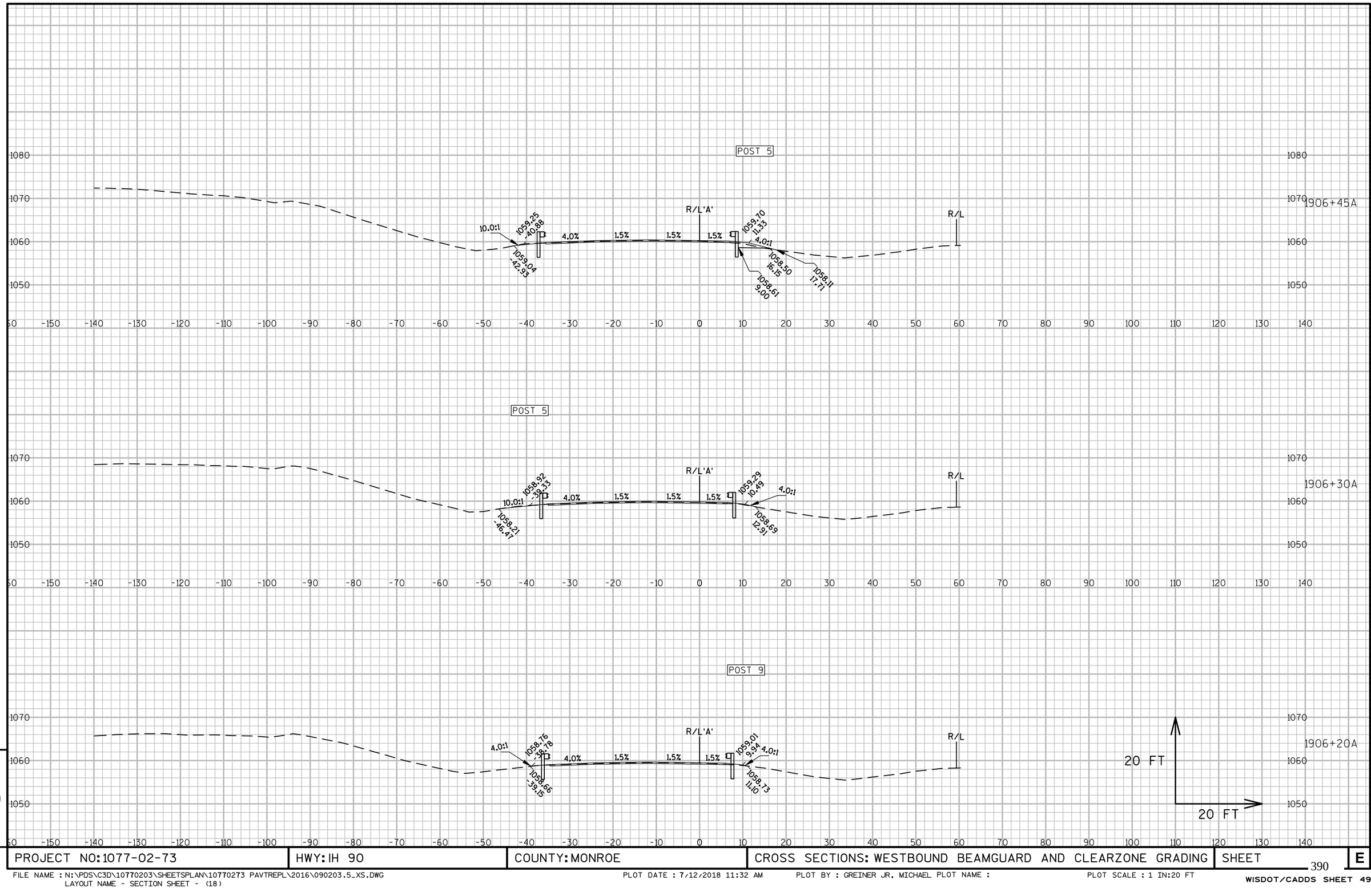
9

PROJECT NO:1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.4_XS.DWG
LAYOUT NAME - SECTION SHEET - (21)
PLOT DATE : 4/30/2018 2:59 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 389 E

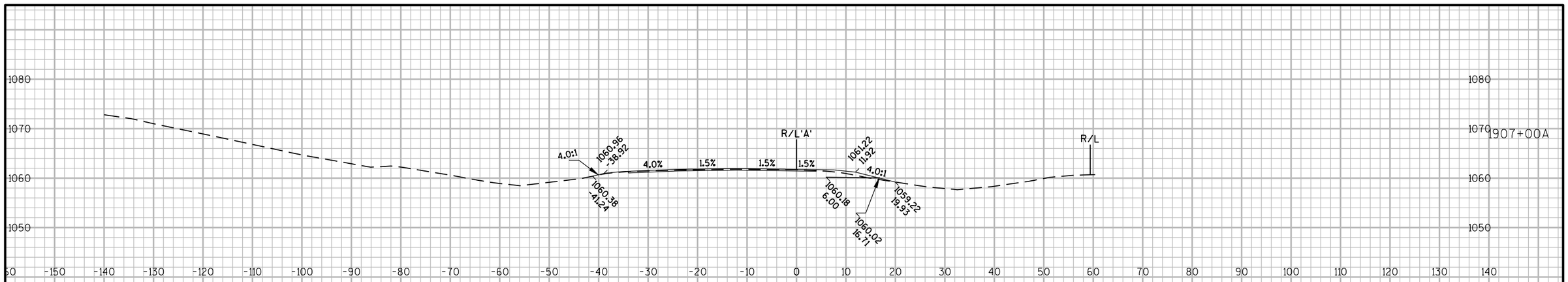


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 390	E

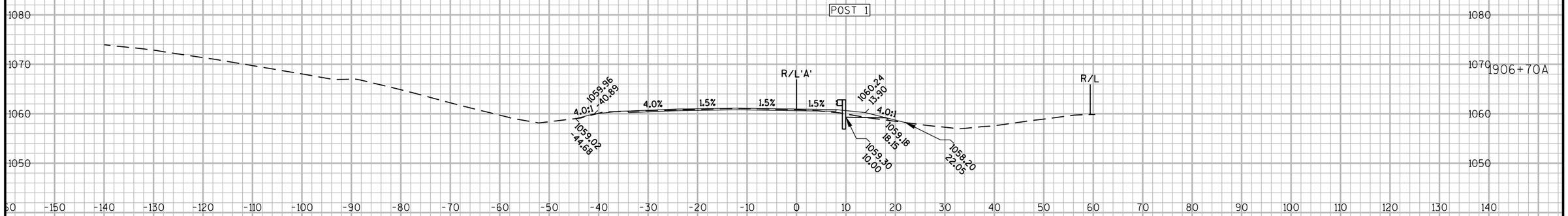
FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (18)

PLOT DATE : 7/12/2018 11:32 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

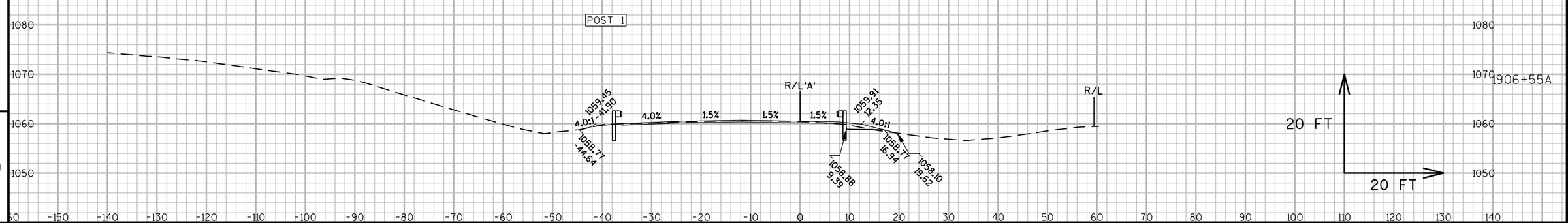
WISDOT/CADDS SHEET 49



POST 1



POST 1



9 9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (19)

PLOT DATE : 7/12/2018 11:32 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :

PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

MATCH EXISTING

R/L'A'

R/L

1908+50A

1070
1060

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

APPROACH TAPER

R/L'A'

R/L

4.0:1
106.4.05
-34.02
4.0%
1.5%
1.5%
1.5%
106.4.37
6.02
4.0:1
20.0:1
106.3.71
-35.39
106.2.87
6.00
106.2.77
12.40
106.2.74
12.99

1907+89A

1070
1060
1050

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

APPROACH TAPER

R/L'A'

R/L

4.0:1
106.3.61
-34.03
4.0%
1.5%
1.5%
1.5%
106.3.84
7.02
4.0:1
106.3.29
-35.28
106.2.42
6.00
106.2.31
13.13
106.2.28
13.25

1907+74A

20 FT
20 FT

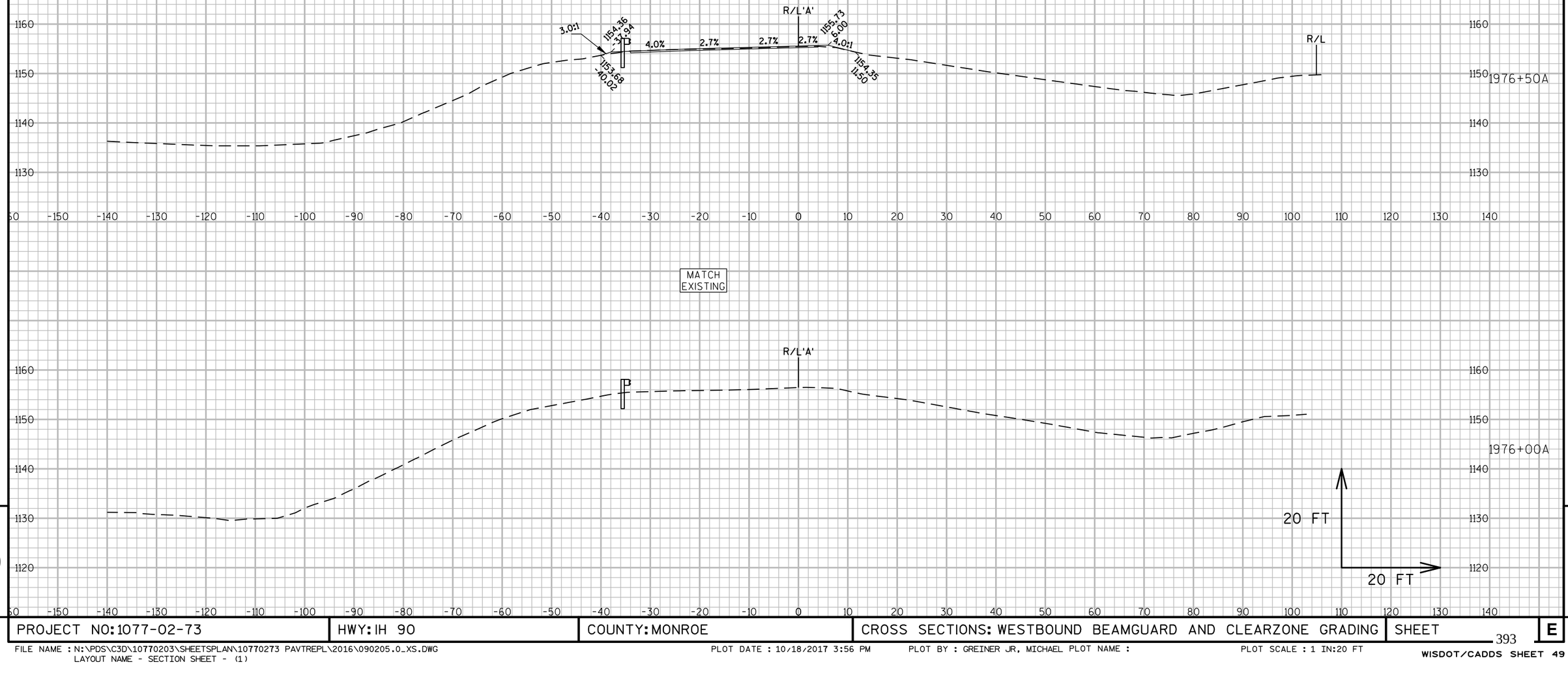
1070
1060
1050

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

9 9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090203.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (20)
PLOT DATE : 7/12/2018 11:32 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

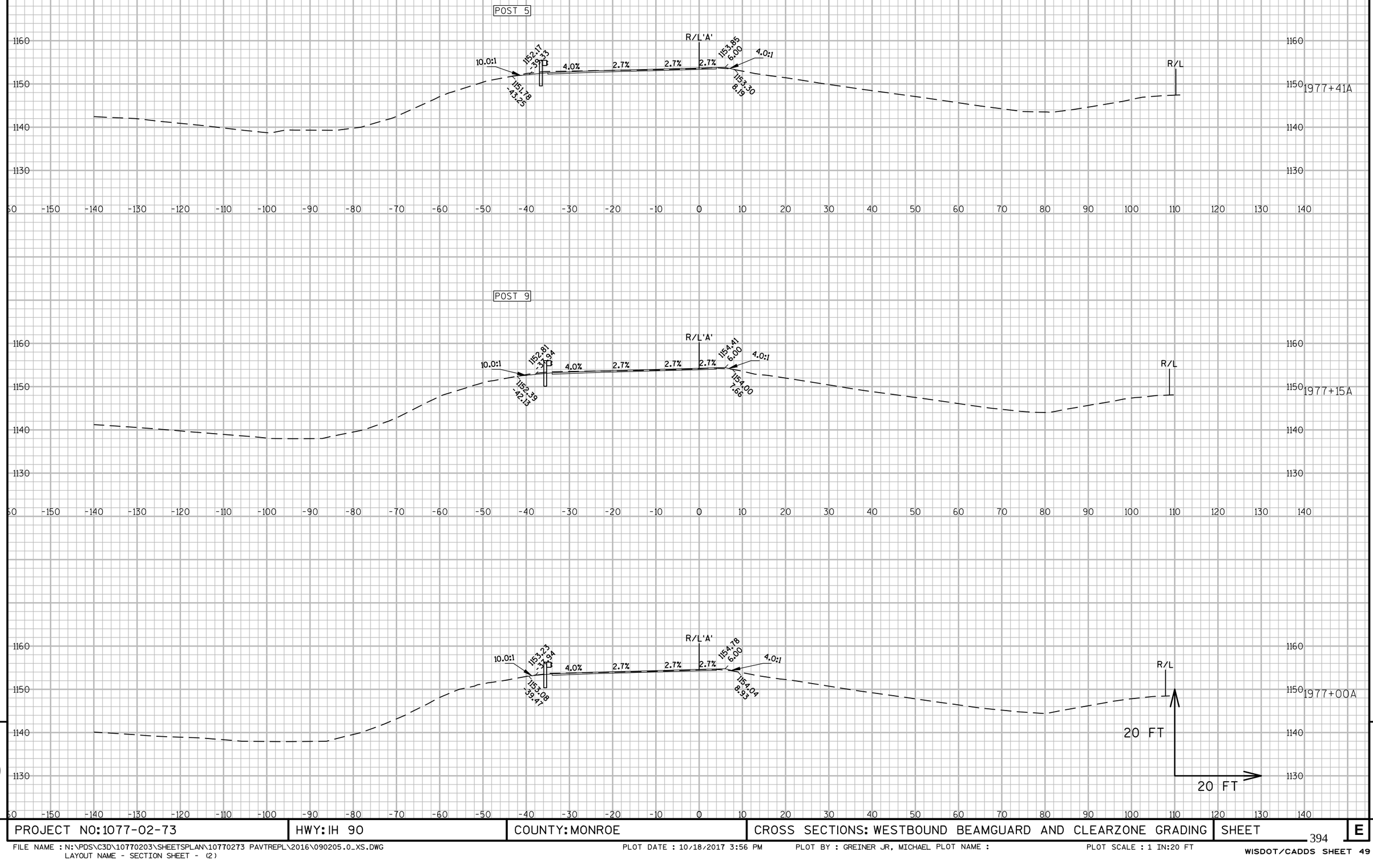


PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090205.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (1)

PLOT DATE : 10/18/2017 3:56 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

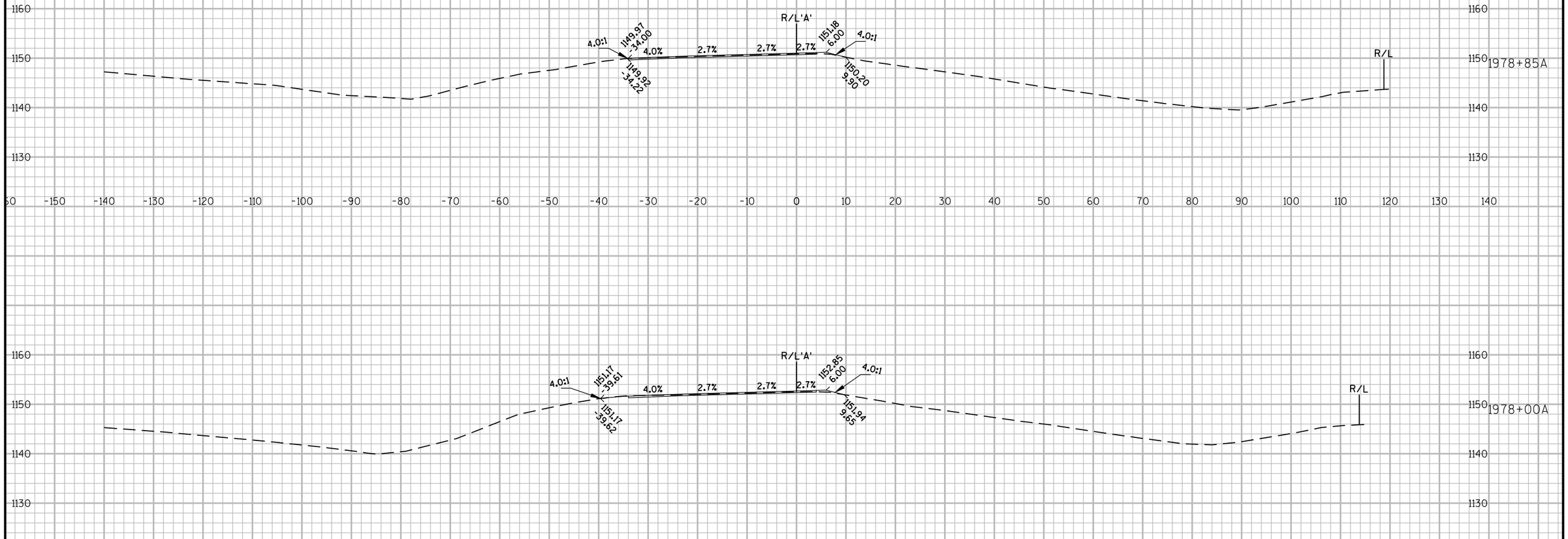
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

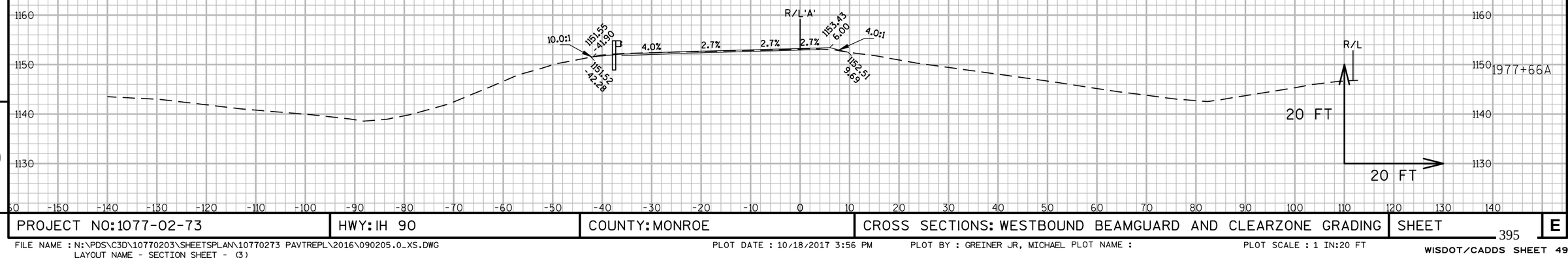
FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090205.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (2)

PLOT DATE : 10/18/2017 3:56 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

APPROACH TAPER



POST 1



9

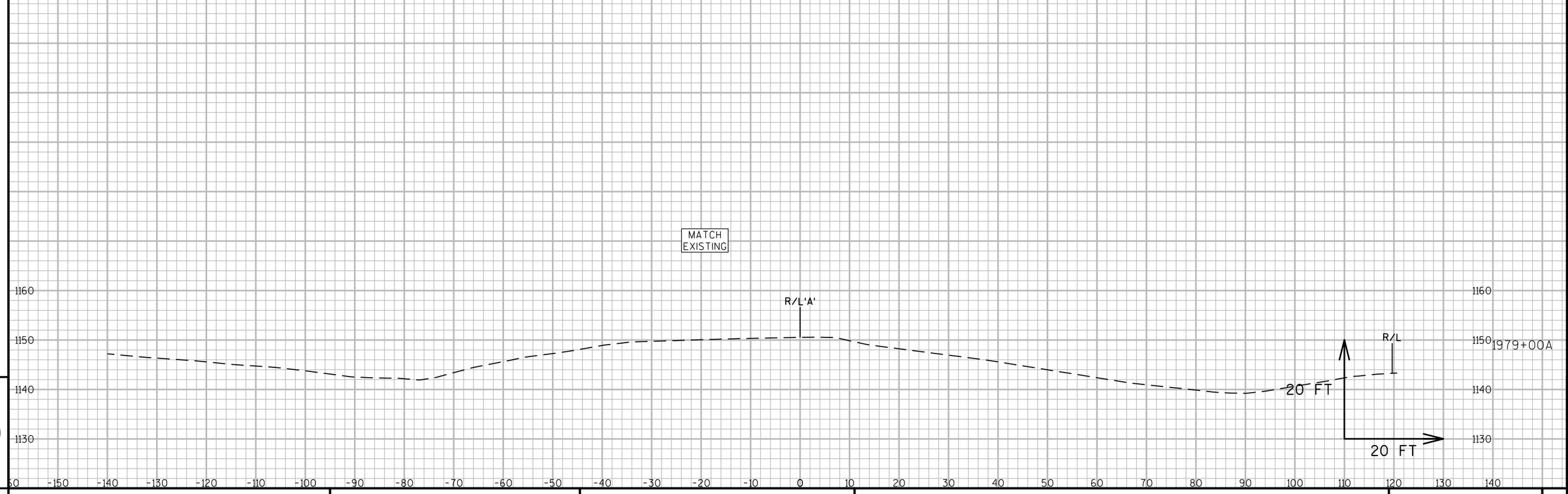
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090205.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (3)

PLOT DATE : 10/18/2017 3:56 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



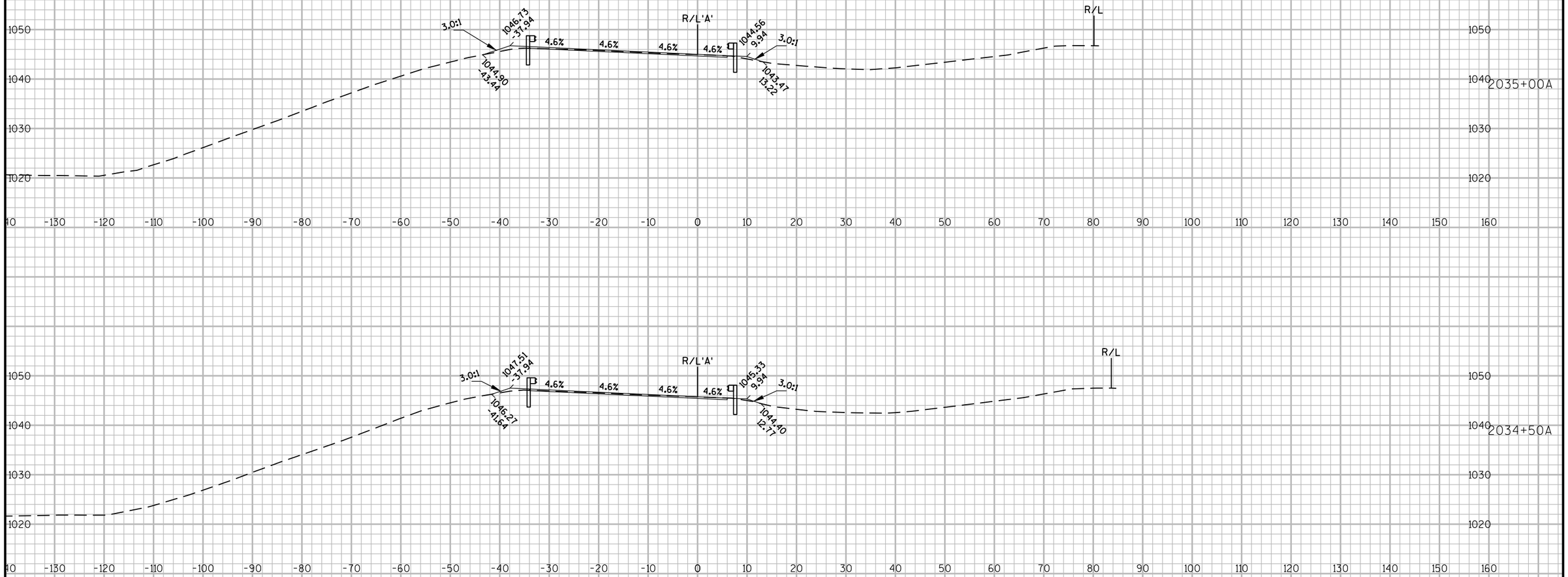
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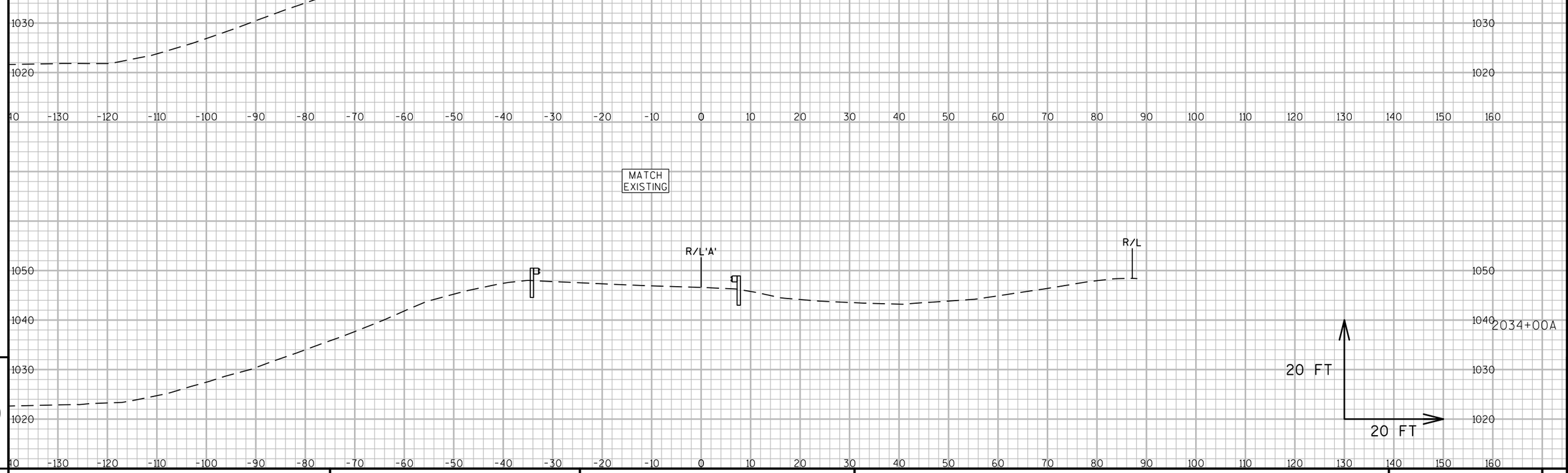
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 396	E

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LAYOUT NAME - SECTION SHEET - (3)

PLOT DATE : 10/18/2017 3:56 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



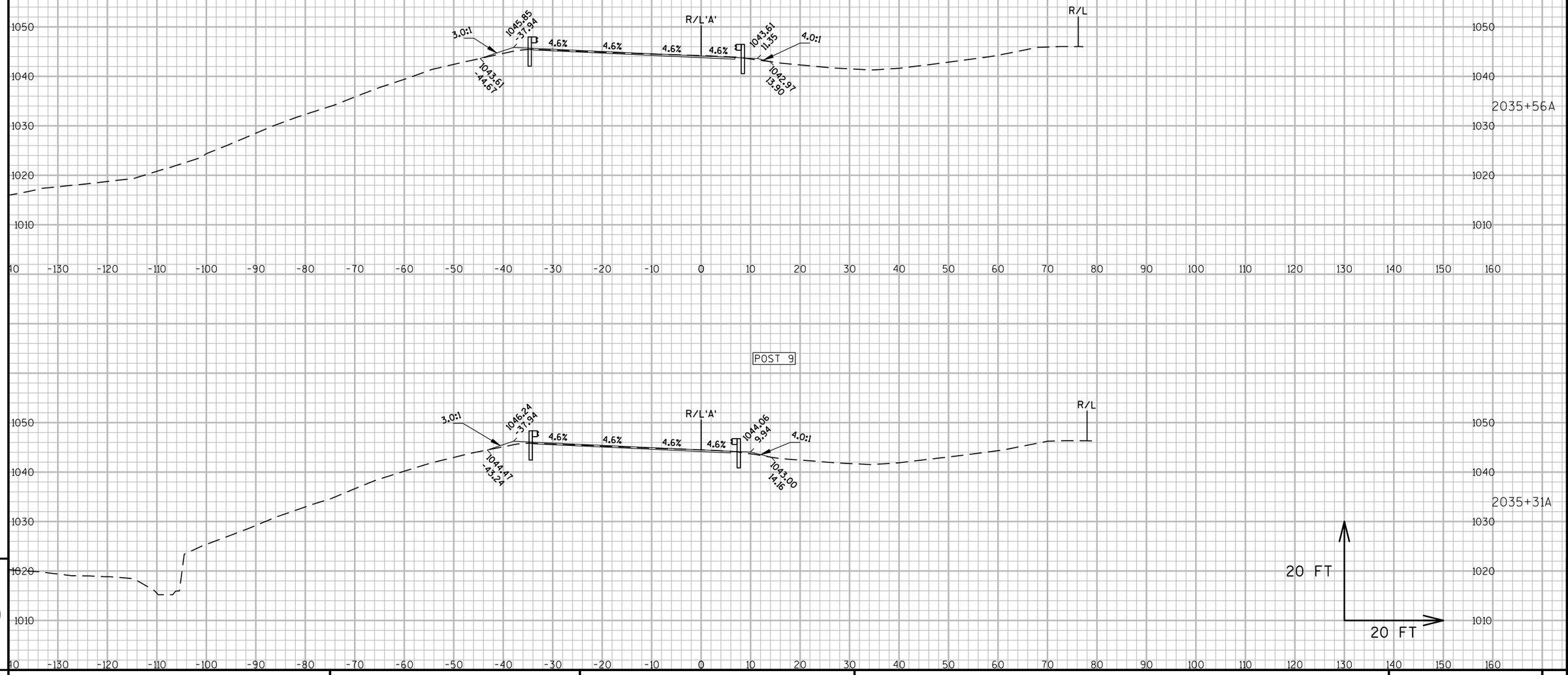


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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 397	E

POST 5



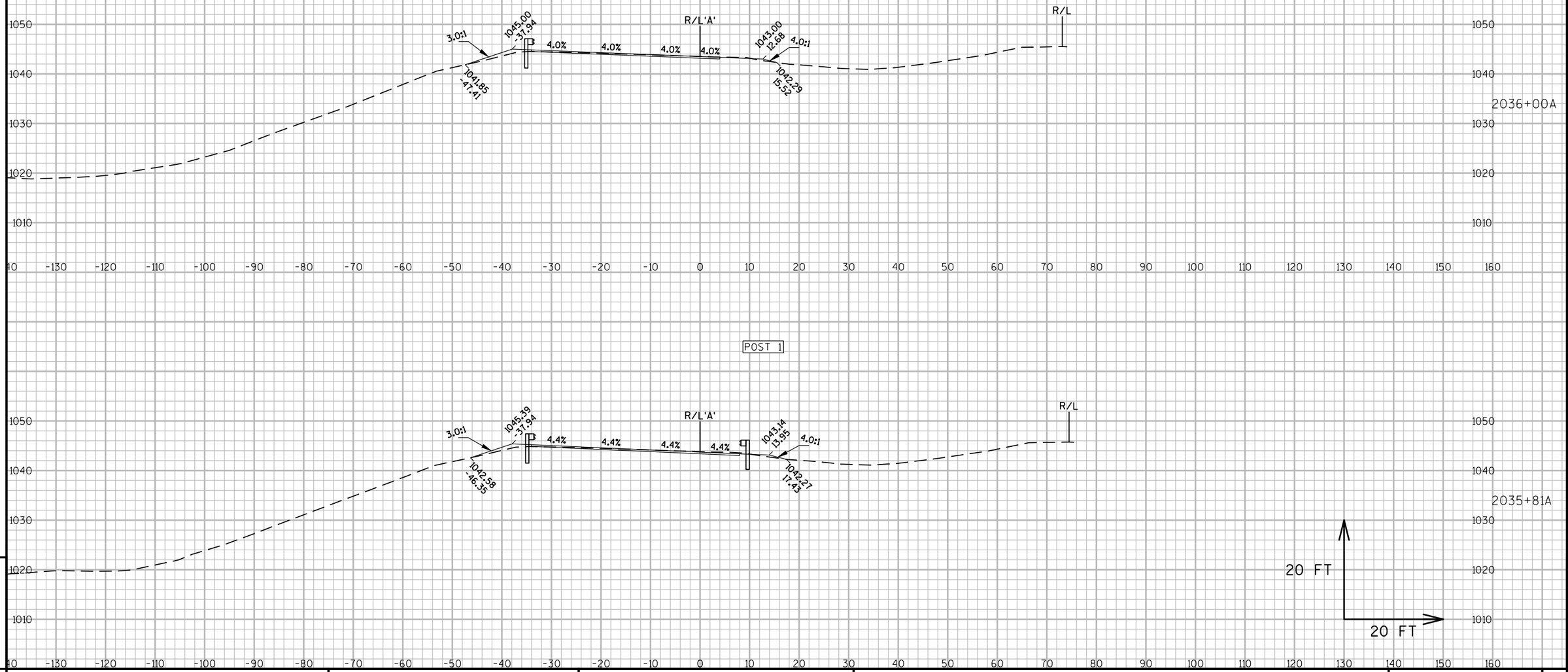
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090205.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (5)
PLOT DATE : 4/30/2018 3:18 PM
PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



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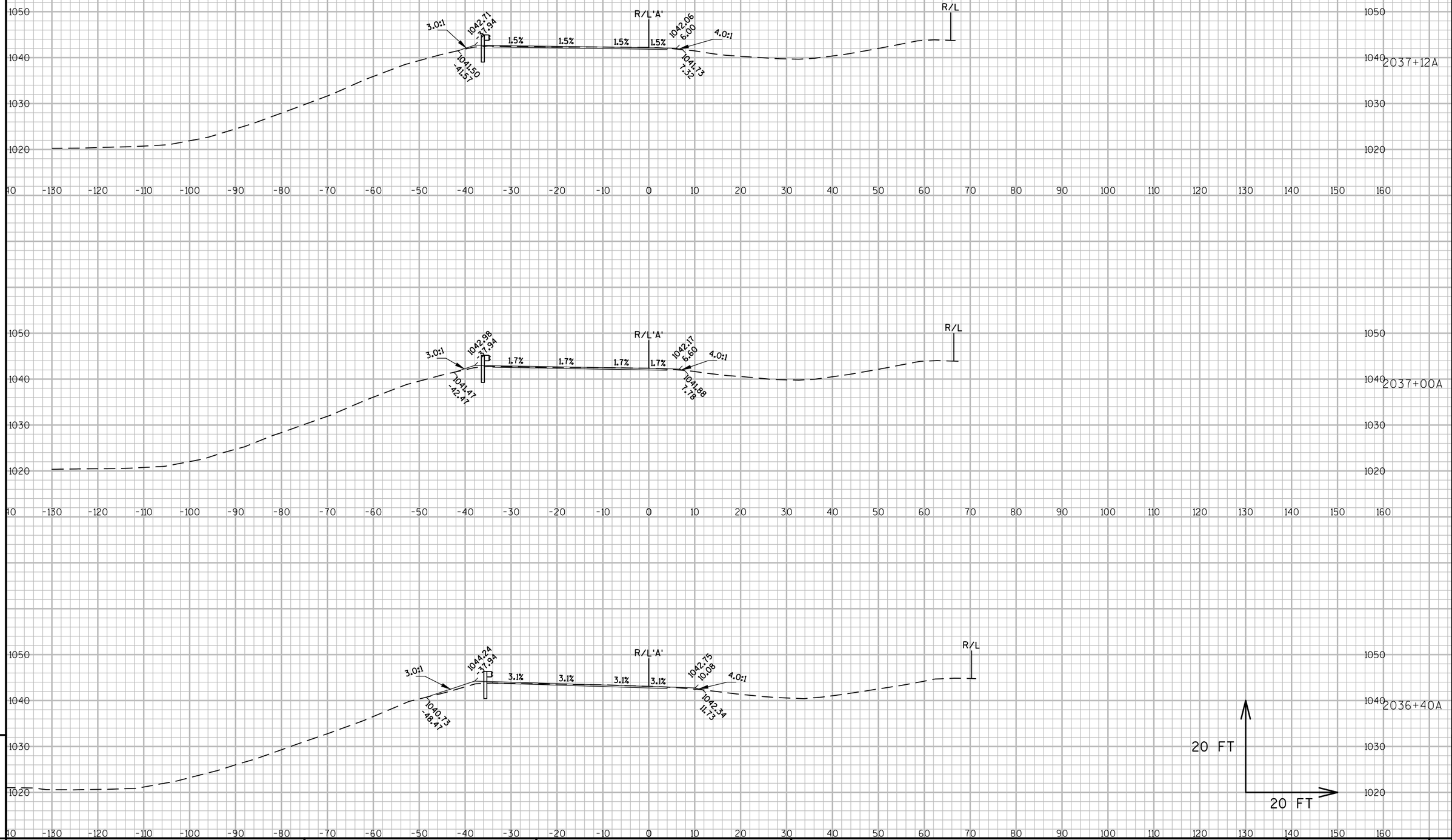
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FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090205.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (6)

PLOT DATE : 4/30/2018 3:18 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

APPROACH TAPER



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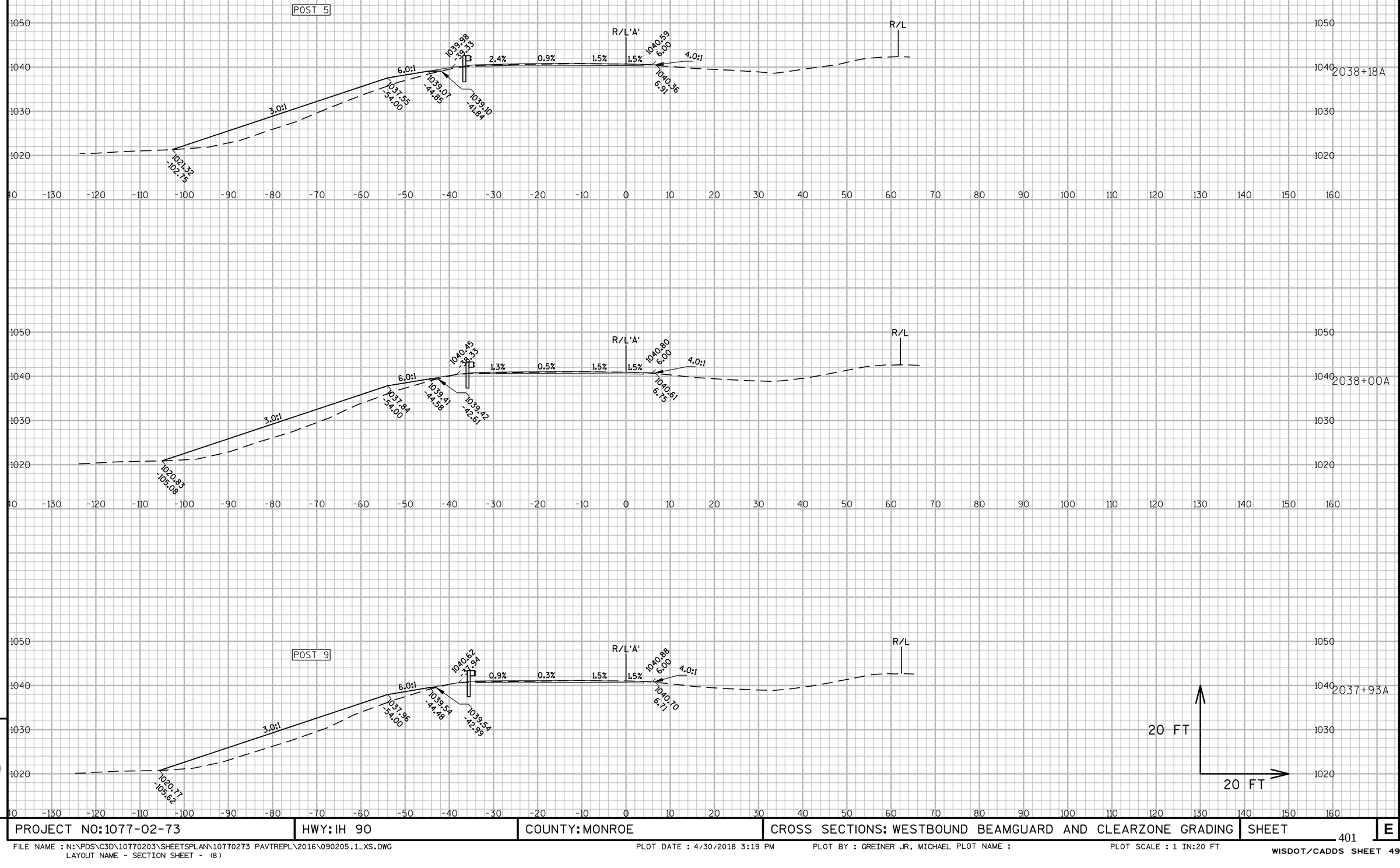
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FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090205.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (7)

PLOT DATE : 4/30/2018 3:19 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

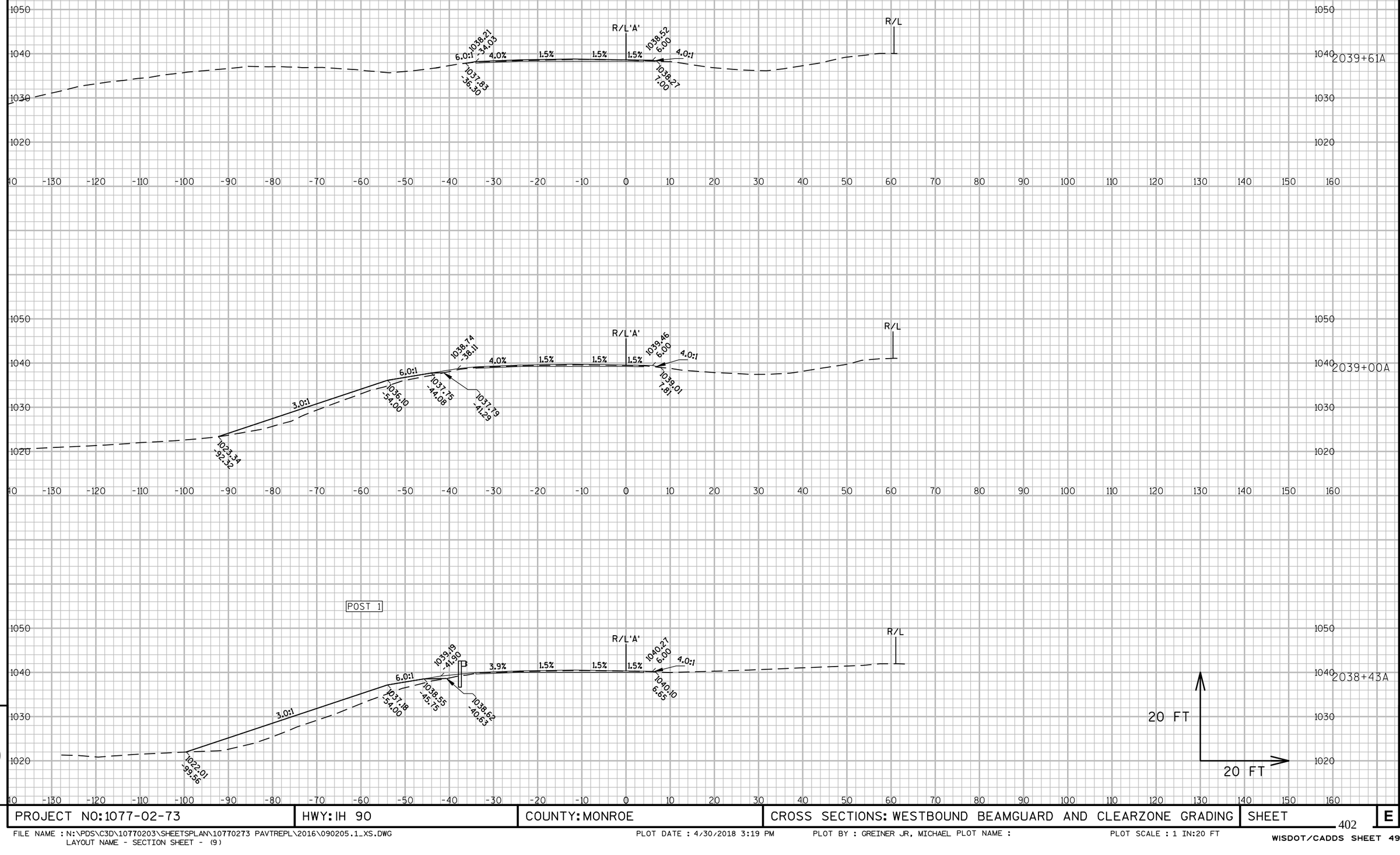


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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090205.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (8)
PLOT DATE : 4/30/2018 3:19 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

APPROACH TAPER



9 9

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10770273 PAVTREPL\2016\090205.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (9)

PLOT DATE : 4/30/2018 3:19 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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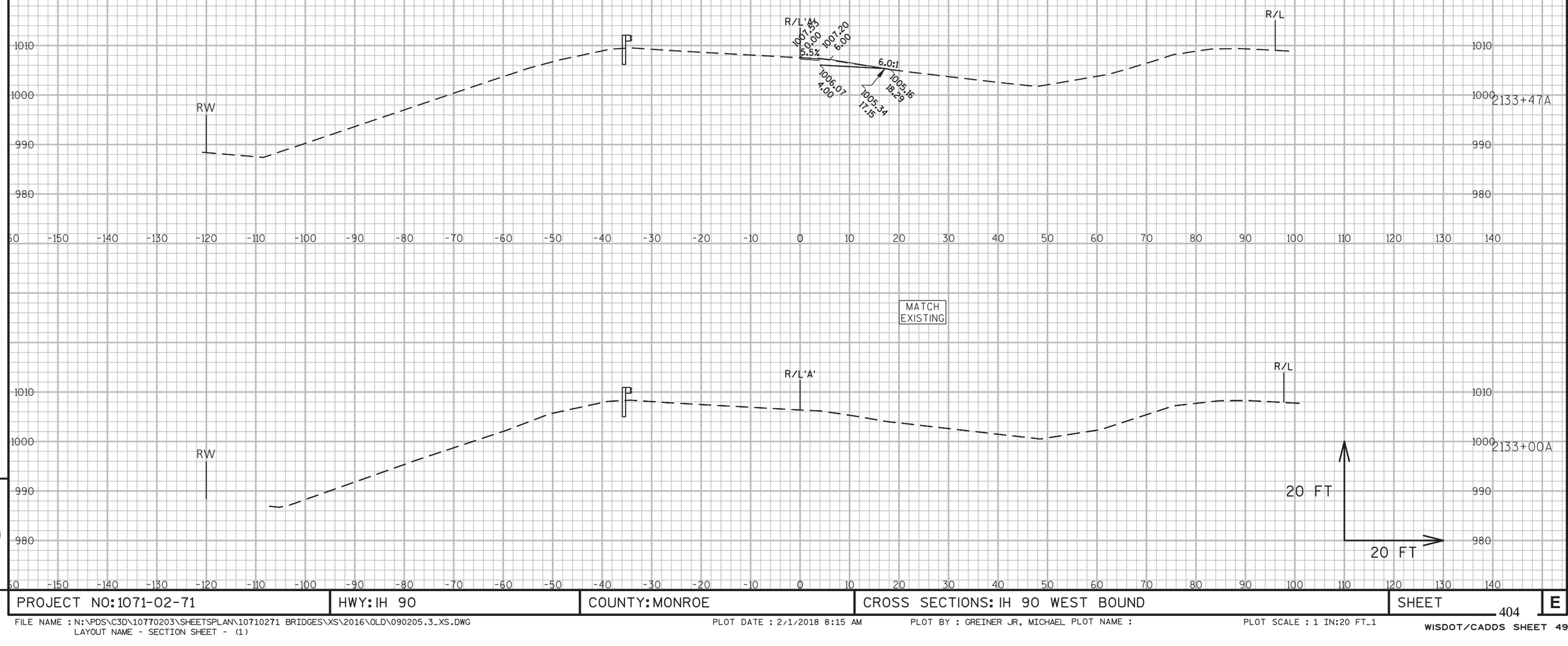
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PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WESTBOUND BEAMGUARD AND CLEARZONE GRADING	SHEET 403	E

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LAYOUT NAME - SECTION SHEET - (9)

PLOT DATE : 4/30/2018 3:19 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

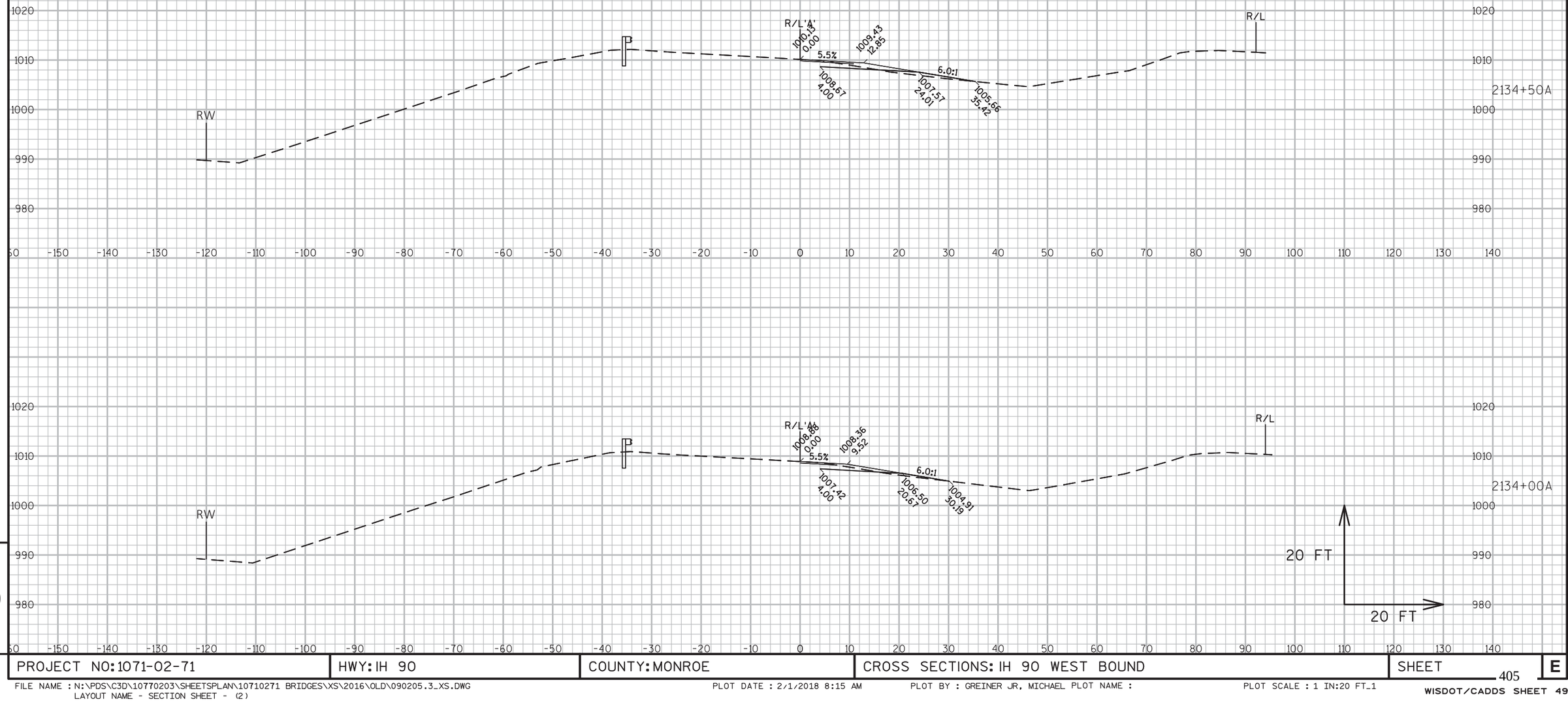


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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 WEST BOUND	SHEET	E

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LAYOUT NAME - SECTION SHEET - (1)
PLOT DATE : 2/1/2018 8:15 AM
PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT_1
WISDOT/CADDS SHEET 49



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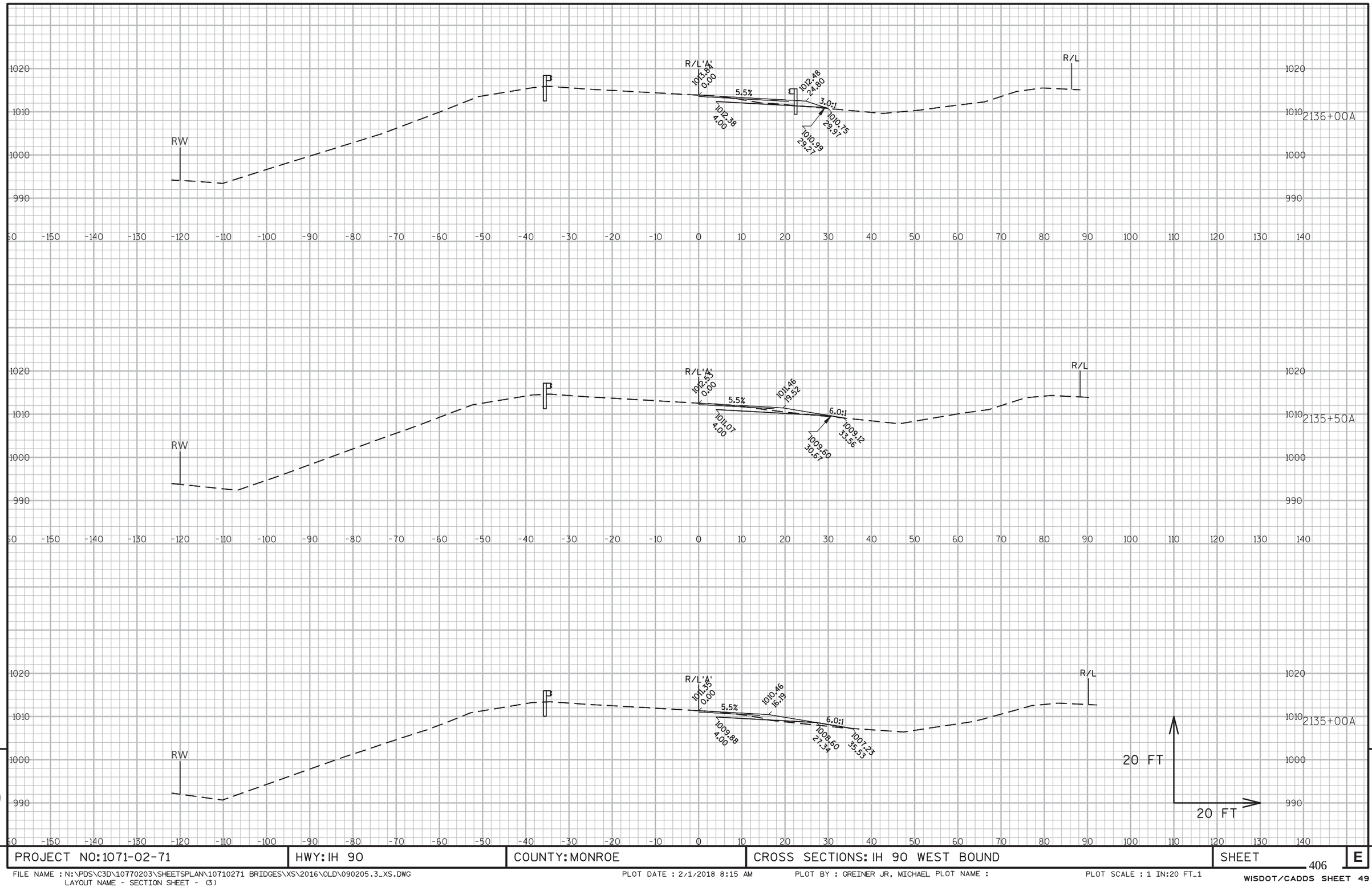
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 WEST BOUND	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\OLD\090205.3_XS.DWG
LAYOUT NAME - SECTION SHEET - (2)

PLOT DATE : 2/1/2018 8:15 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

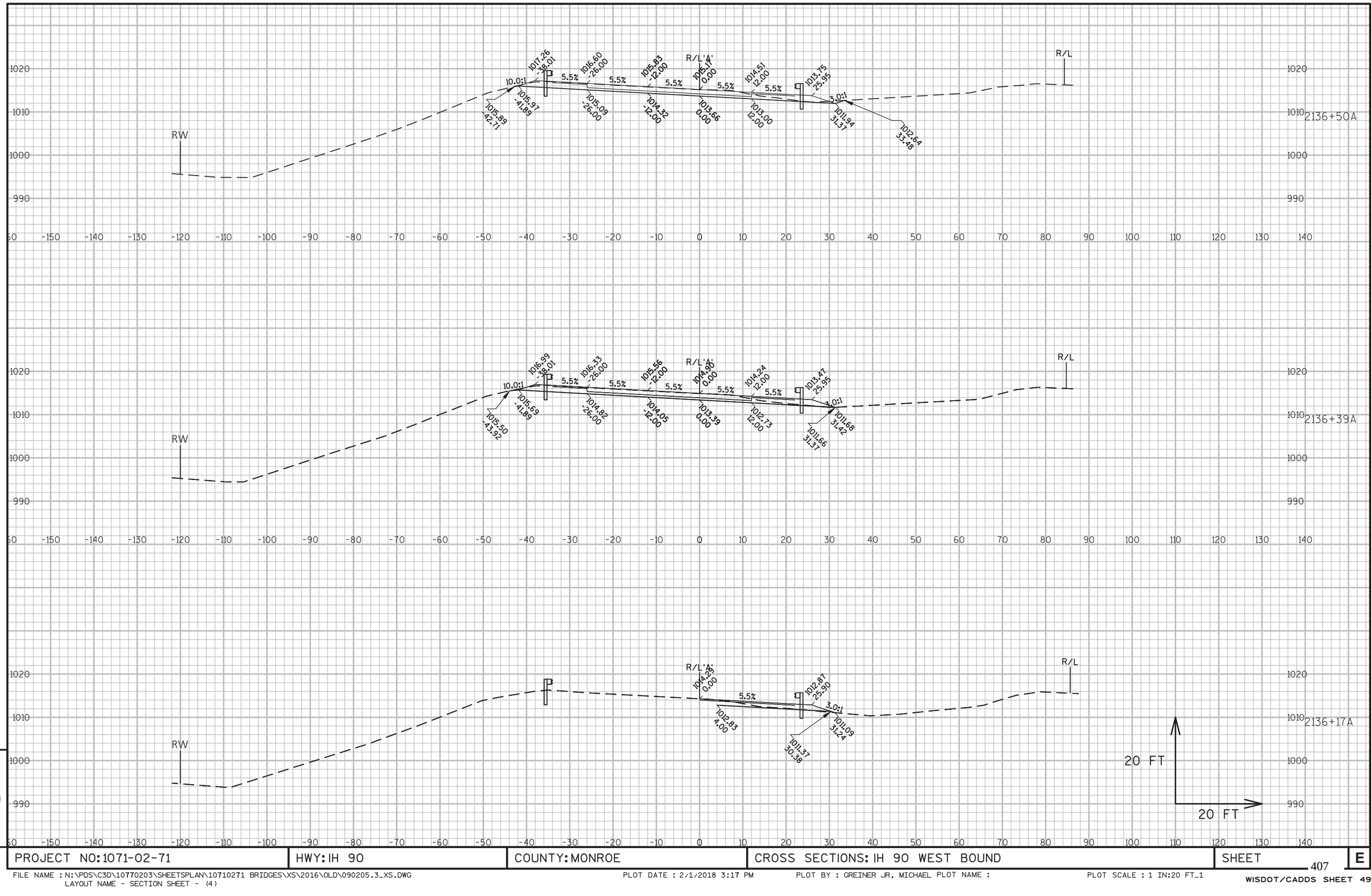
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 WEST BOUND	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\OLD\090205.3_XS.DWG
LAYOUT NAME - SECTION SHEET - (3)

PLOT DATE : 2/1/2018 8:15 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

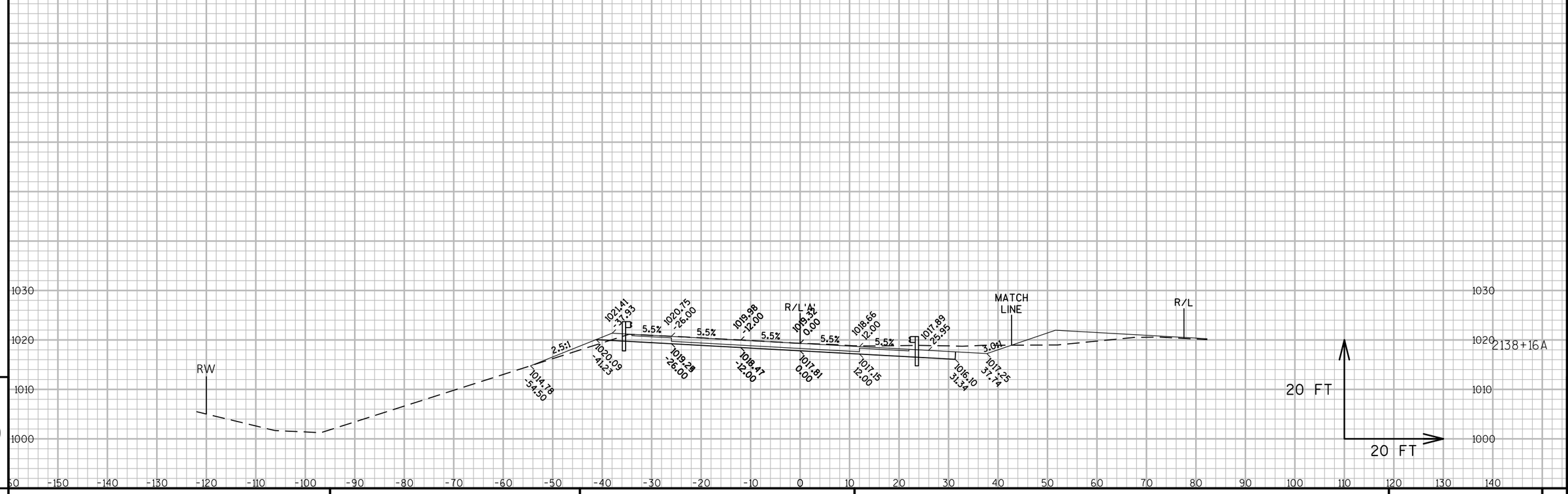


PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 WEST BOUND	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\OLD\090205.3_XS.DWG
LAYOUT NAME - SECTION SHEET - (4)

PLOT DATE : 2/1/2018 3:17 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



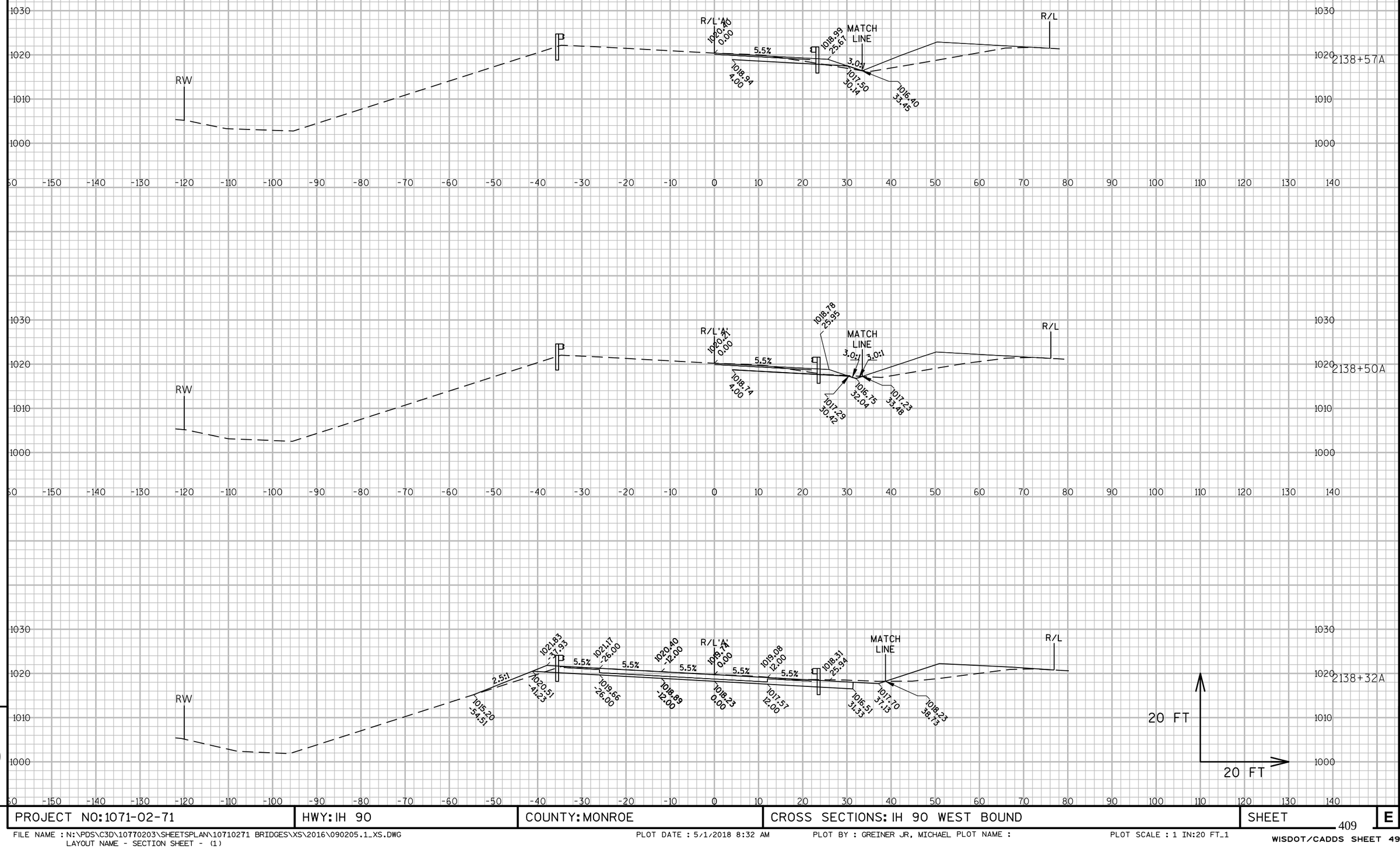
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 WEST BOUND	SHEET 408	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090205.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (7)

PLOT DATE : 5/1/2018 8:32 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

9

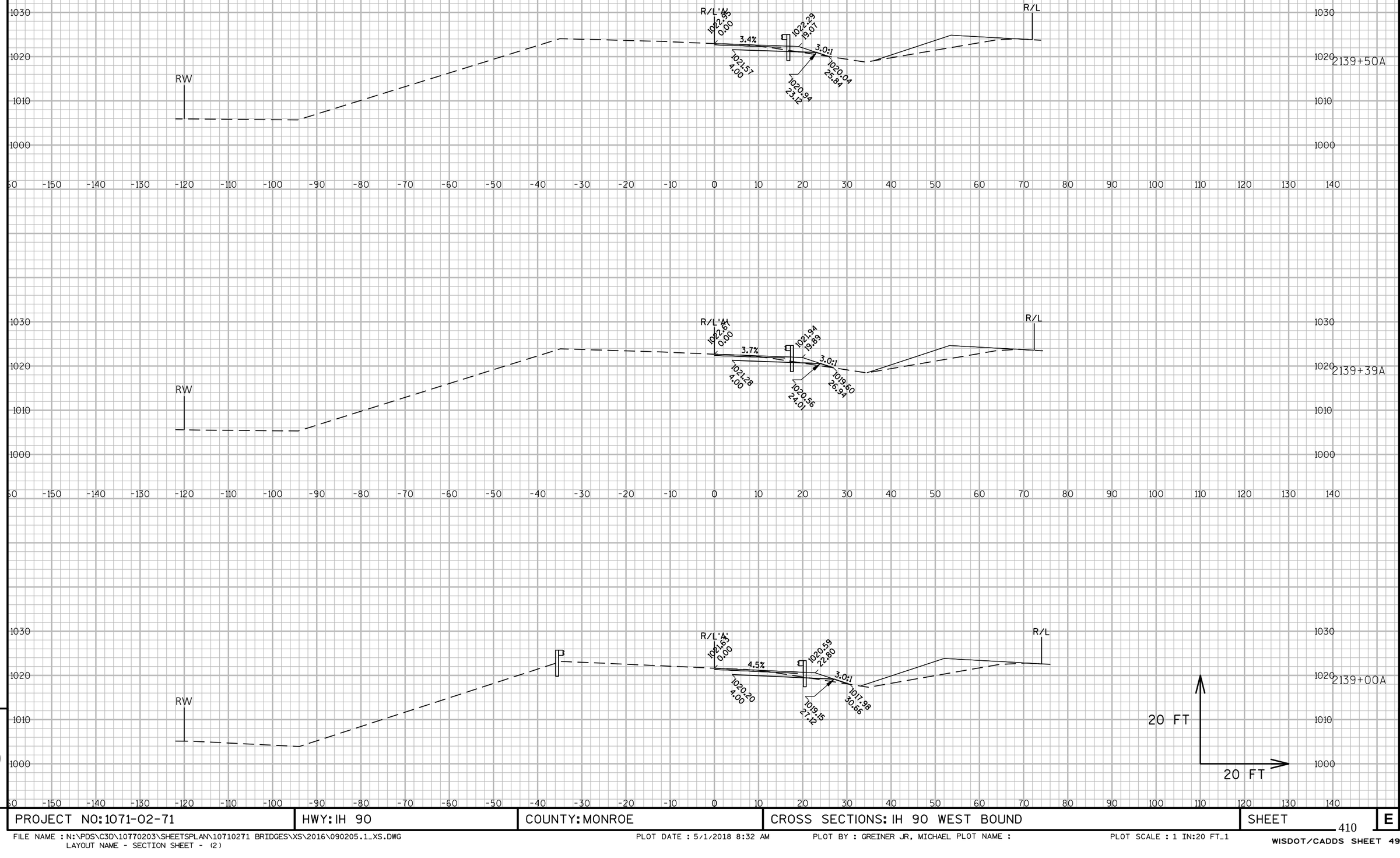
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FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090205.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (1)

PLOT DATE : 5/1/2018 8:32 AM

PLOT BY : GREINER JR, MICHAEL PLOT NAME :

PLOT SCALE : 1 IN:20 FT_1

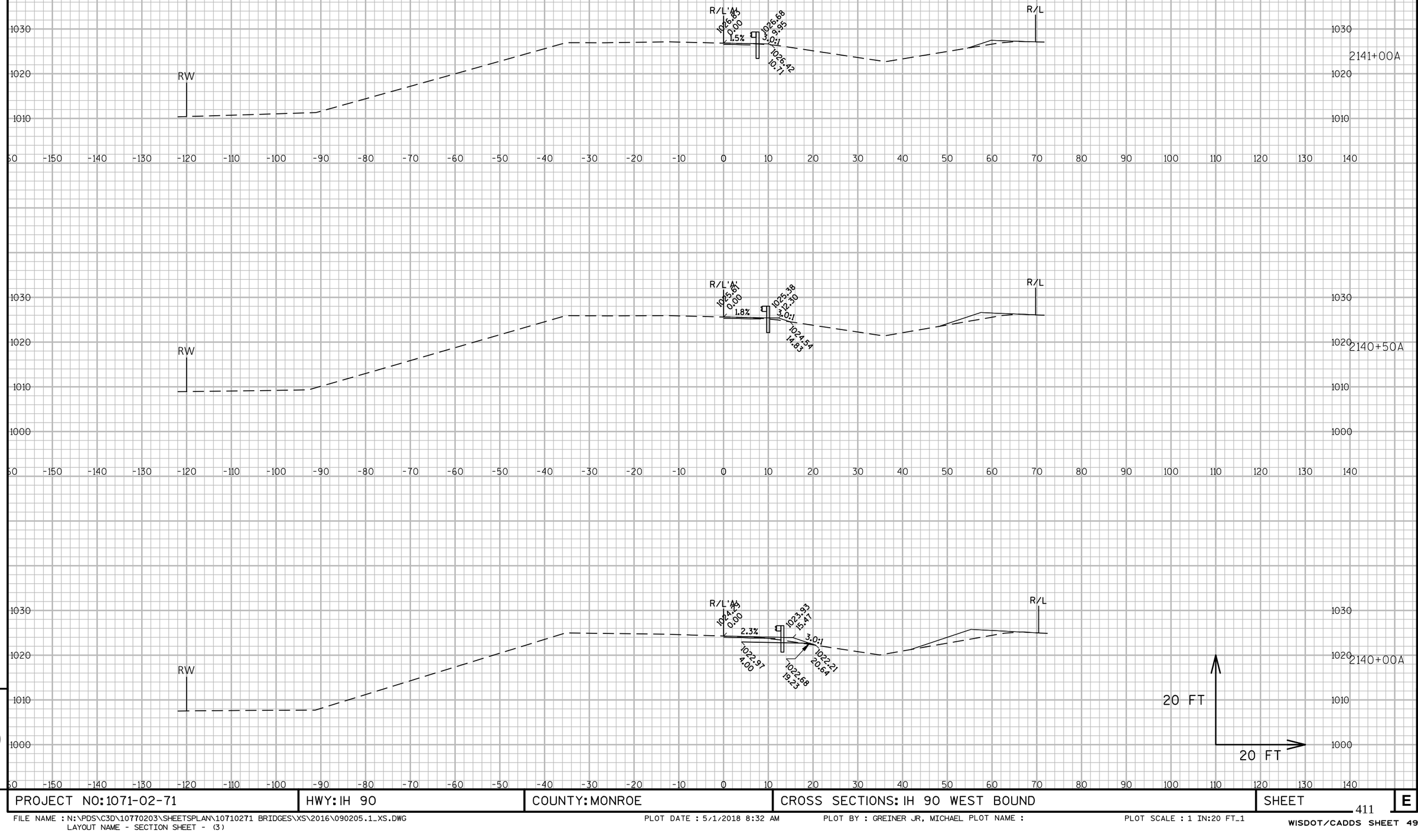


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FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090205.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (2)

PLOT DATE : 5/1/2018 8:32 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49

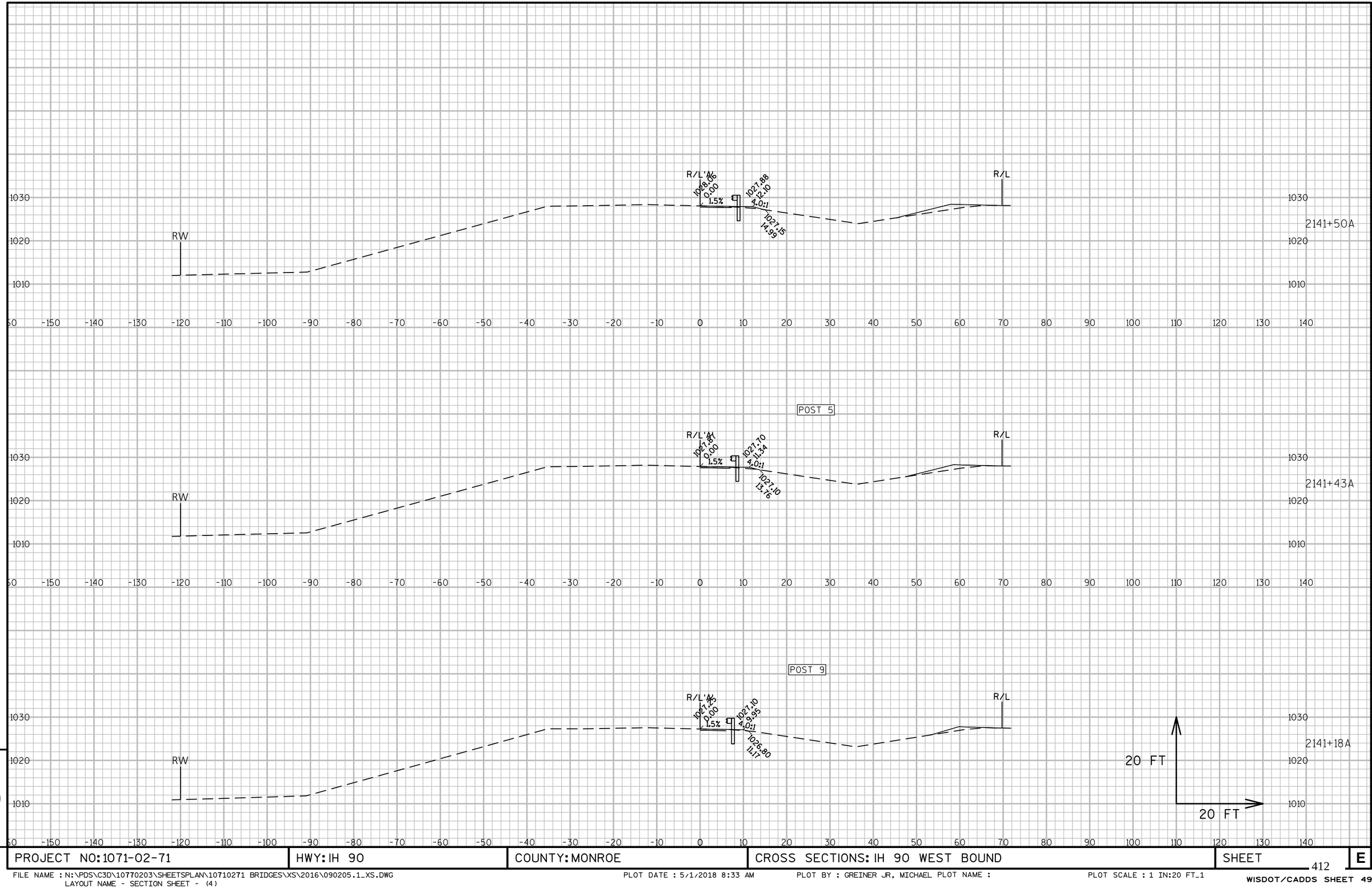


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LAYOUT NAME - SECTION SHEET - (3)

PLOT DATE : 5/1/2018 8:32 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49

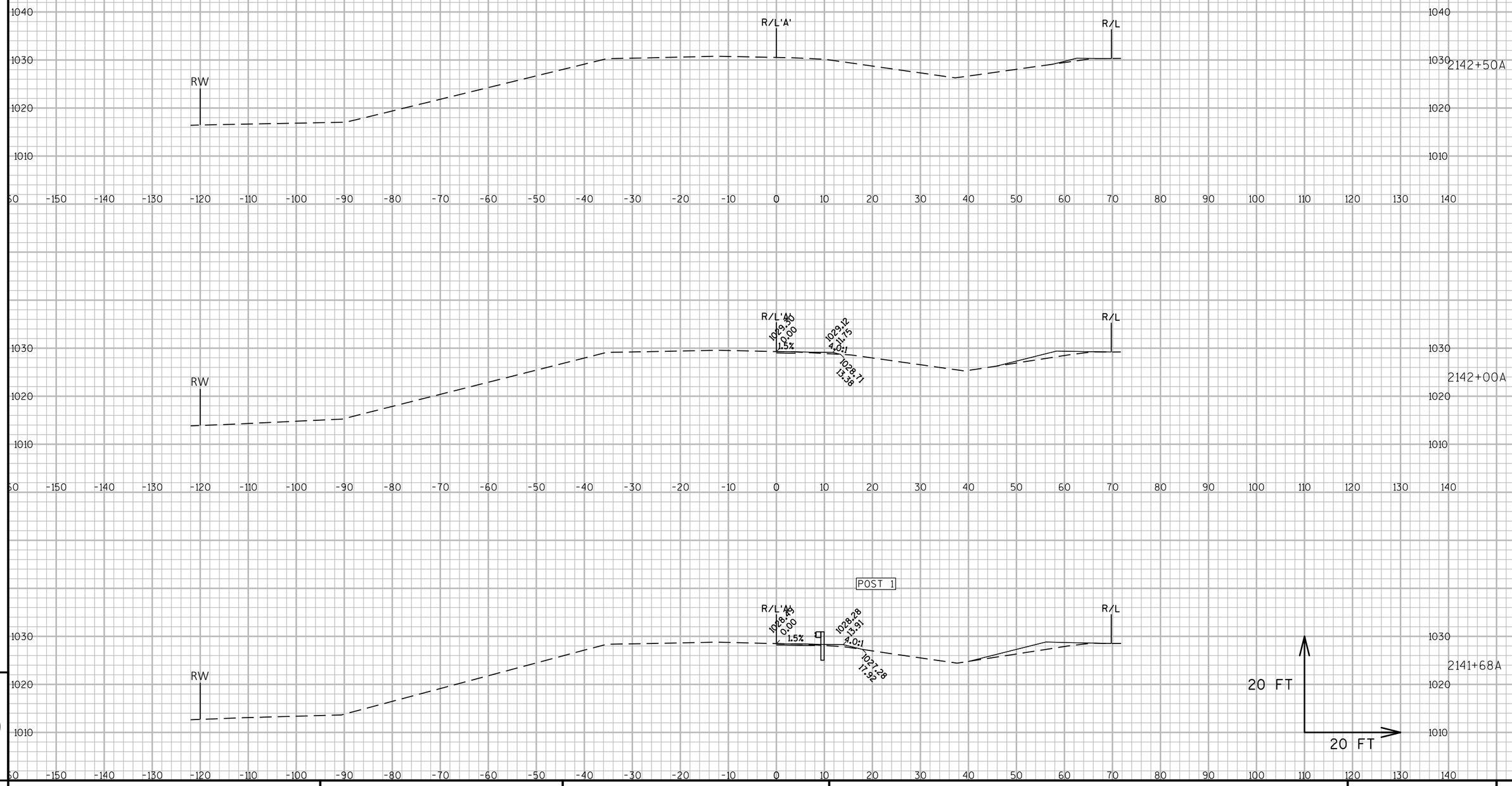


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LAYOUT NAME - SECTION SHEET - (4)

PLOT DATE : 5/1/2018 8:33 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



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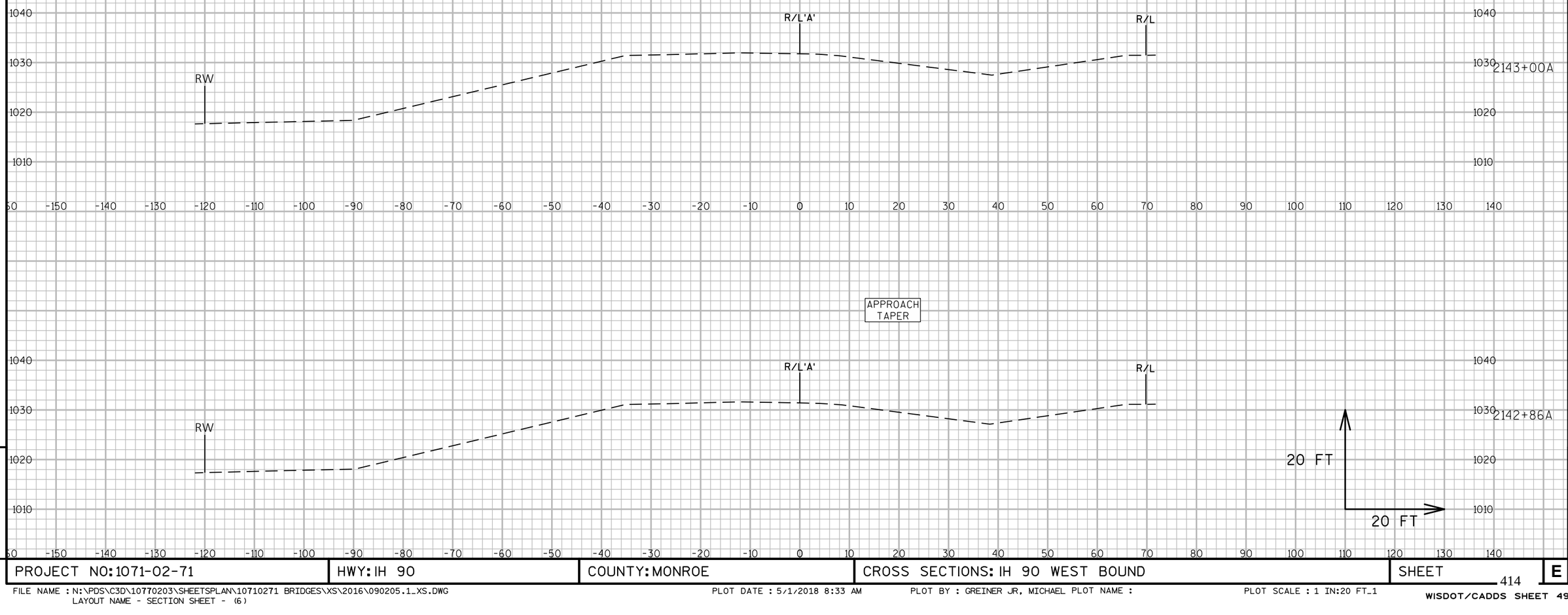
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FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090205.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (5)

PLOT DATE : 5/1/2018 8:33 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49

MATCH EXISTING

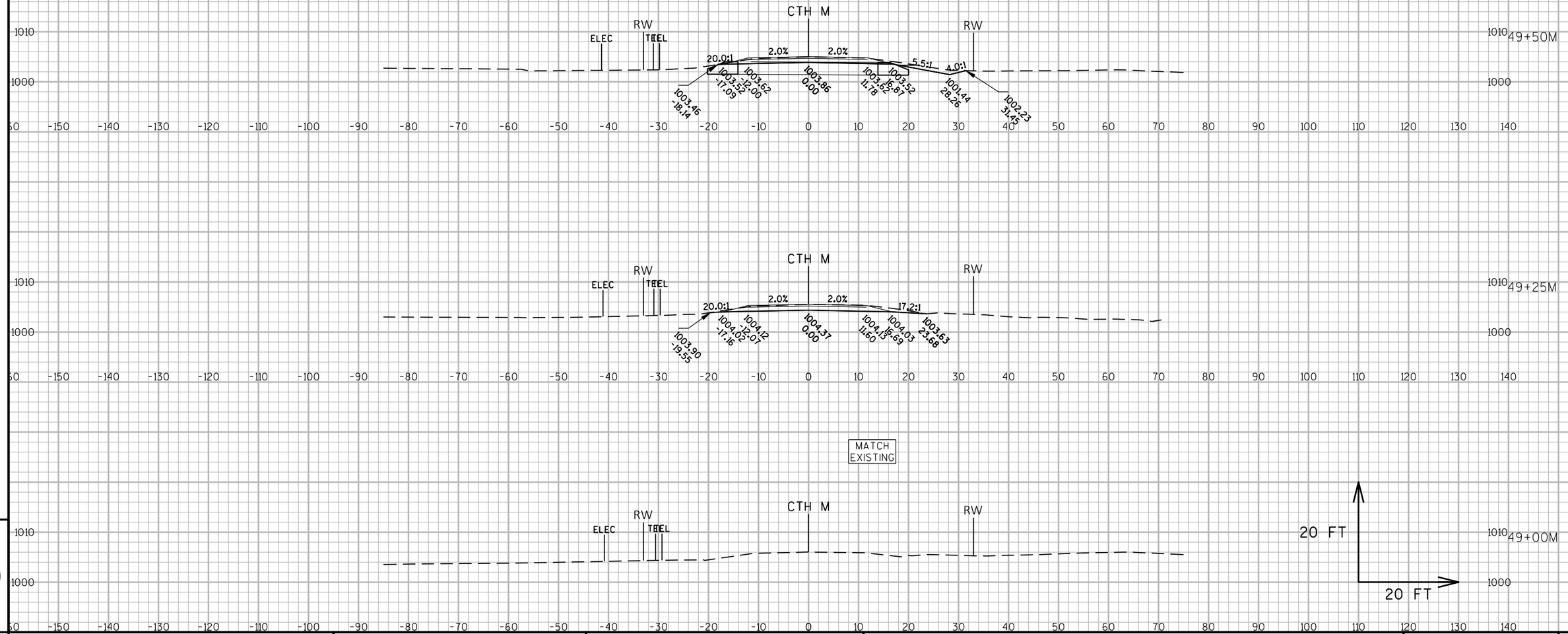


APPROACH TAPER

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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: IH 90 WEST BOUND	SHEET 414	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090205.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (6)
PLOT DATE : 5/1/2018 8:33 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT_1
WISDOT/CADDS SHEET 49



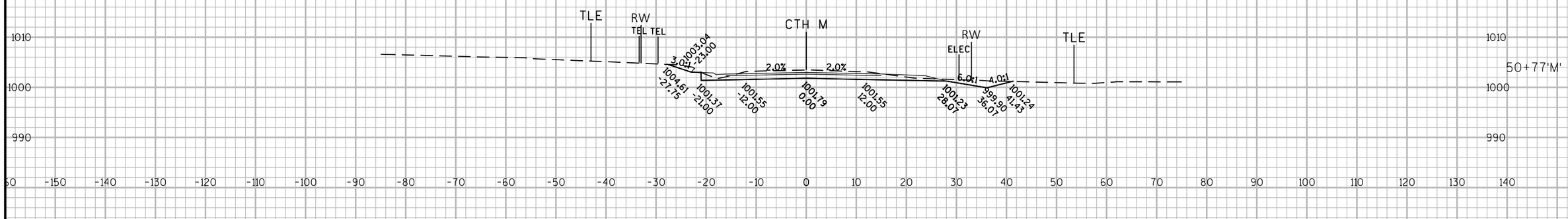
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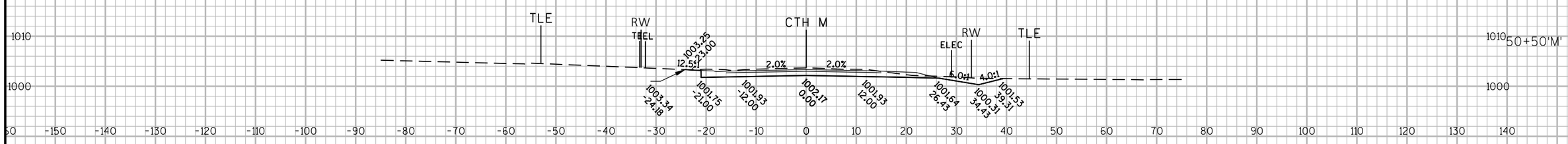
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LAYOUT NAME - SECTION SHEET - (15)

PLOT DATE : 5/16/2018 8:19 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

FIELD ENTRANCE





APPROACH TAPER

20 FT
20 FT

9 9

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (1)

PLOT DATE : 5/16/2018 8:19 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

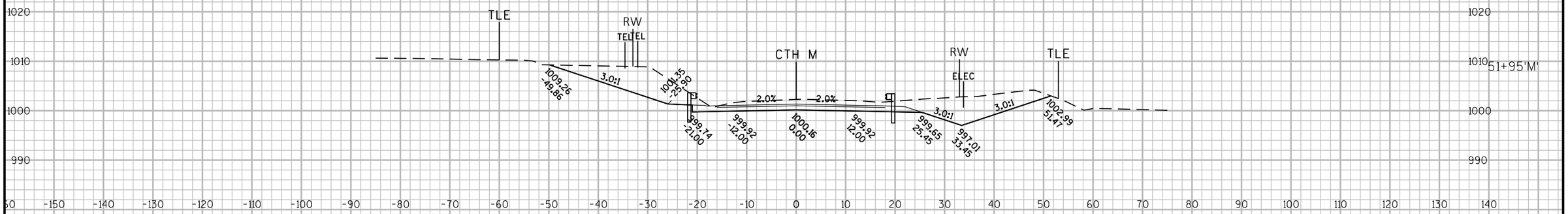
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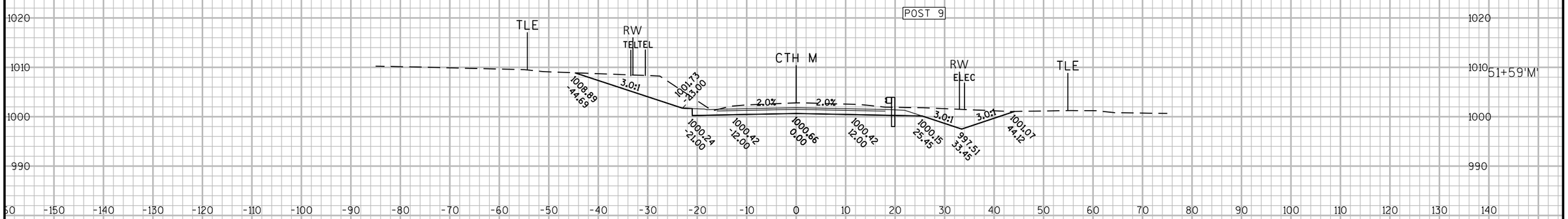
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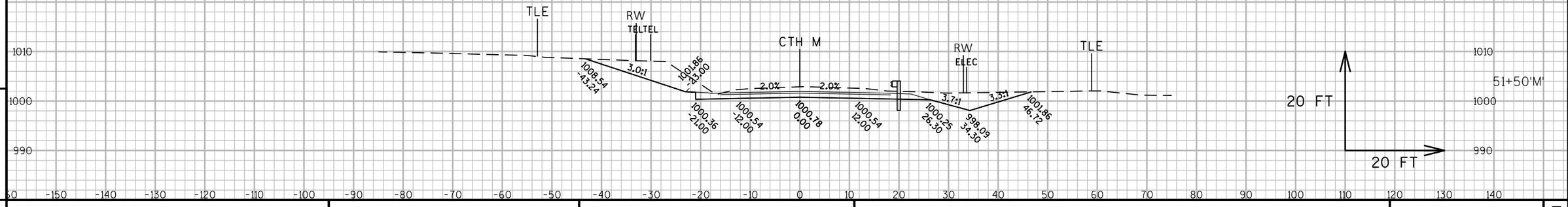
FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (2)
PLOT DATE : 5/16/2018 8:20 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

POST 1



POST 9





9 9

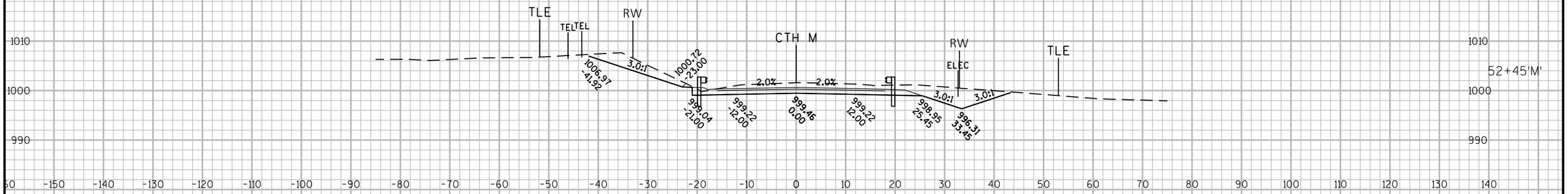
PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET 418	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (3)

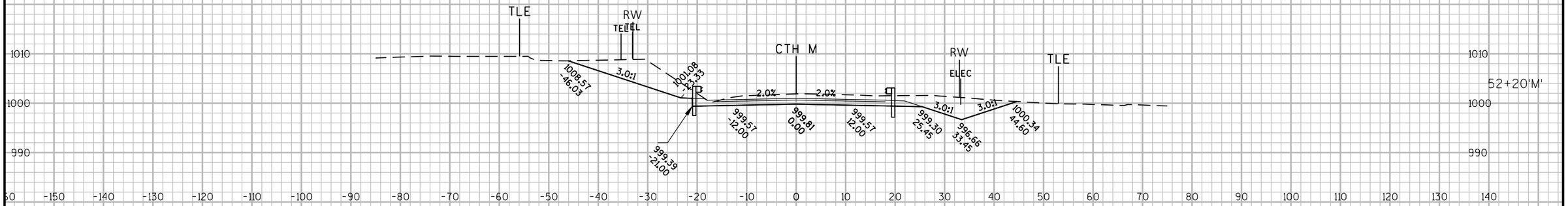
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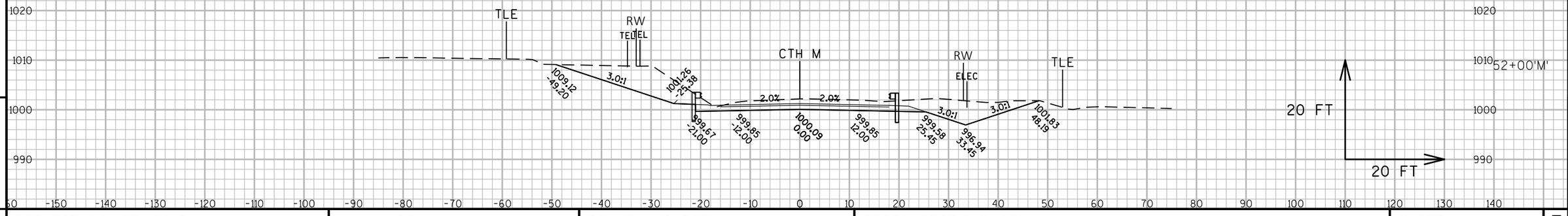
WISDOT/CADDS SHEET 49

POST 9



POST 5





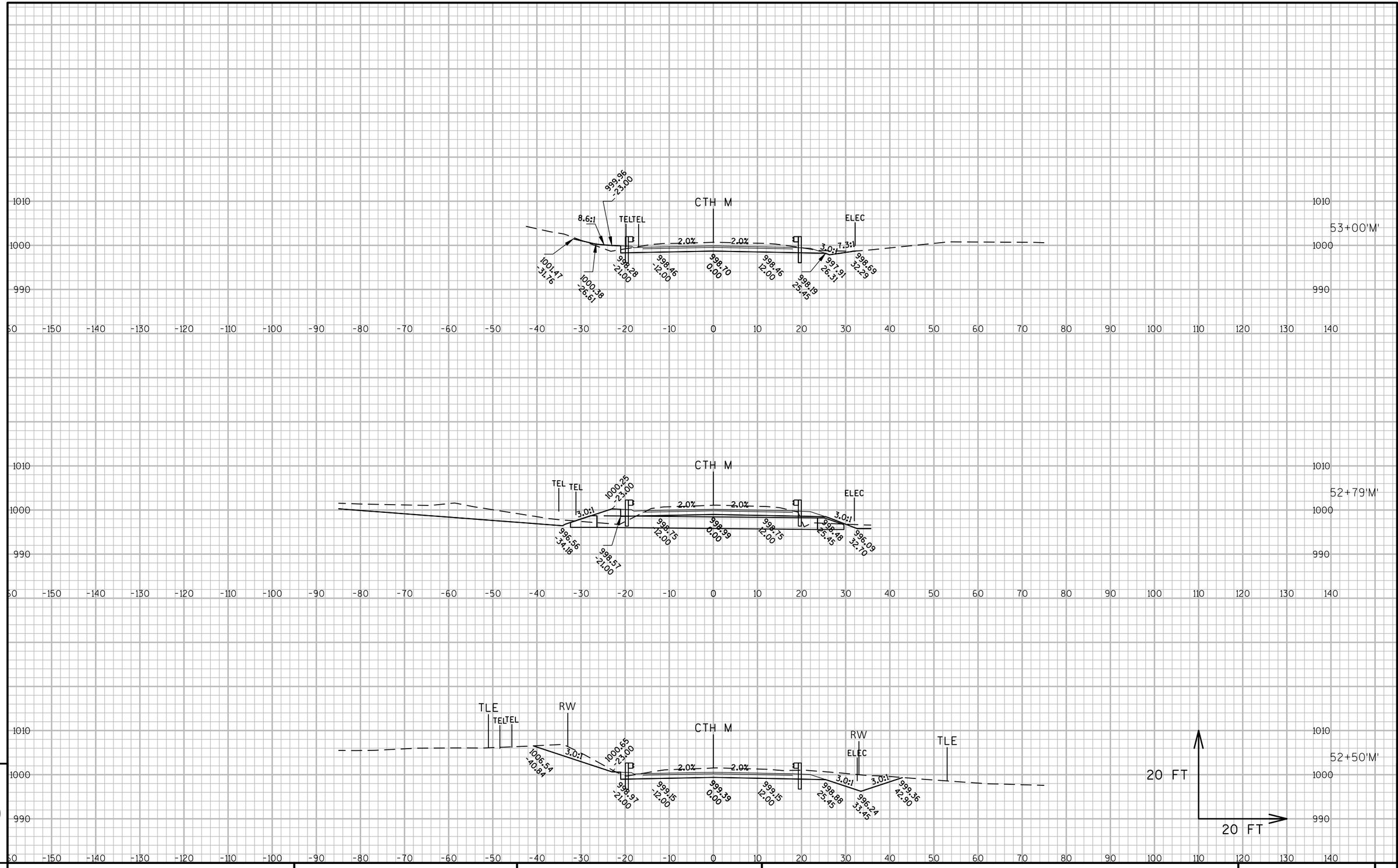
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (4)

PLOT DATE : 5/16/2018 8:21 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

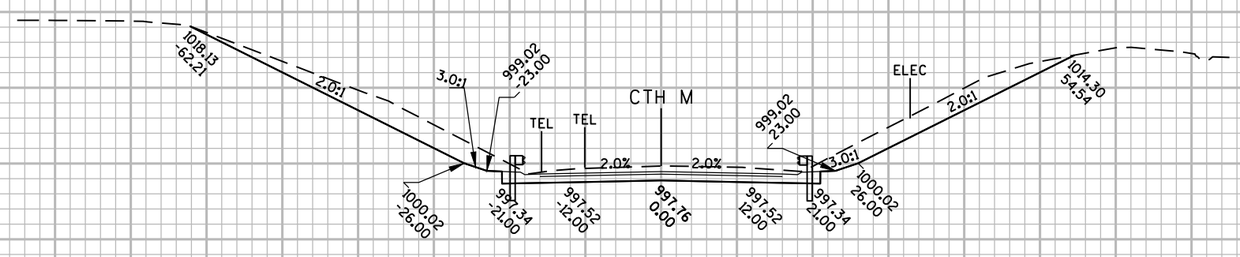


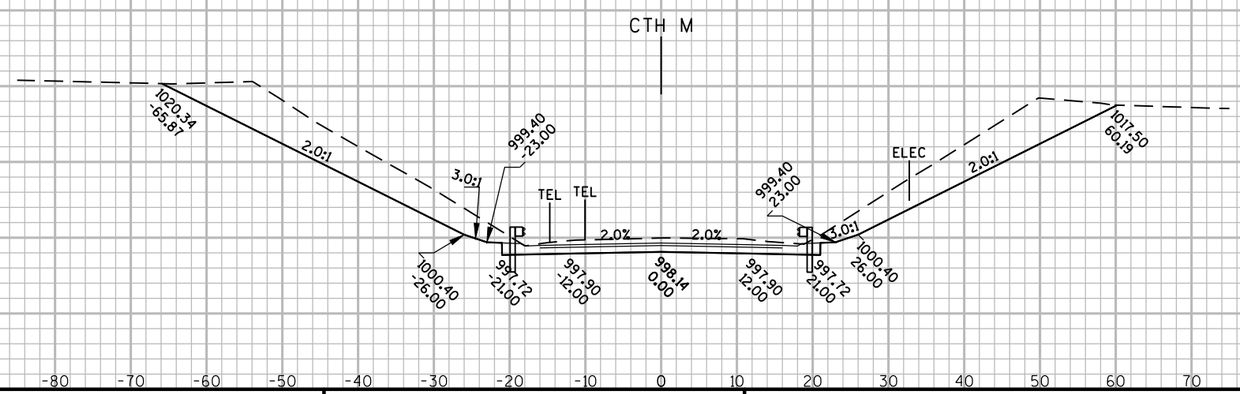
PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET 420	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (5)

PLOT DATE : 5/16/2018 8:21 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





1020 1010 1000 990

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

54+00'M'

1030 1020 1010 1000 990

53+50'M'

20 FT

20 FT

9

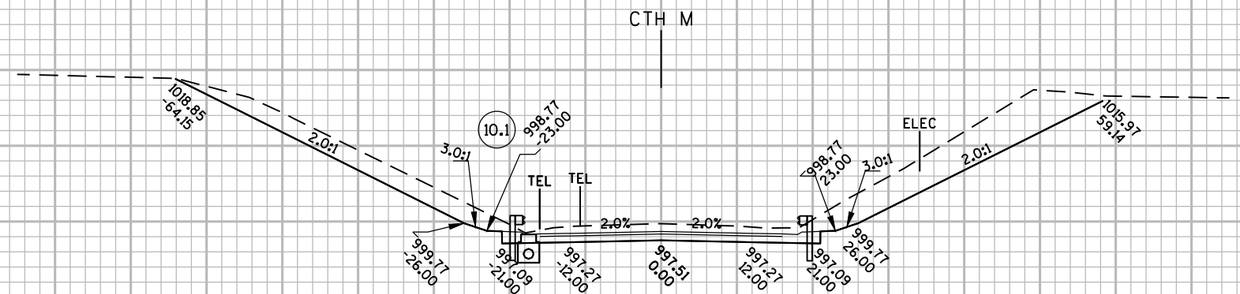
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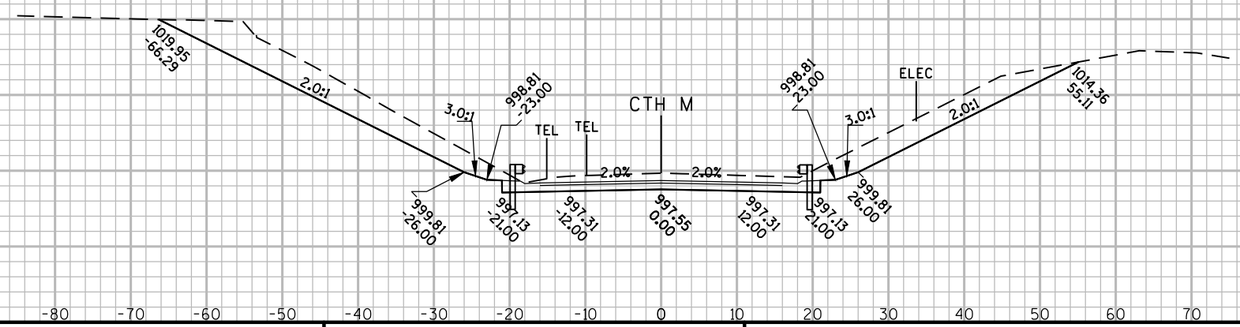
PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (6)

PLOT DATE : 5/16/2018 8:21 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





1020 1010 1000 990

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

54+69'M'

1030 1020 1010 1000 990

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54+50'M'

20 FT

20 FT

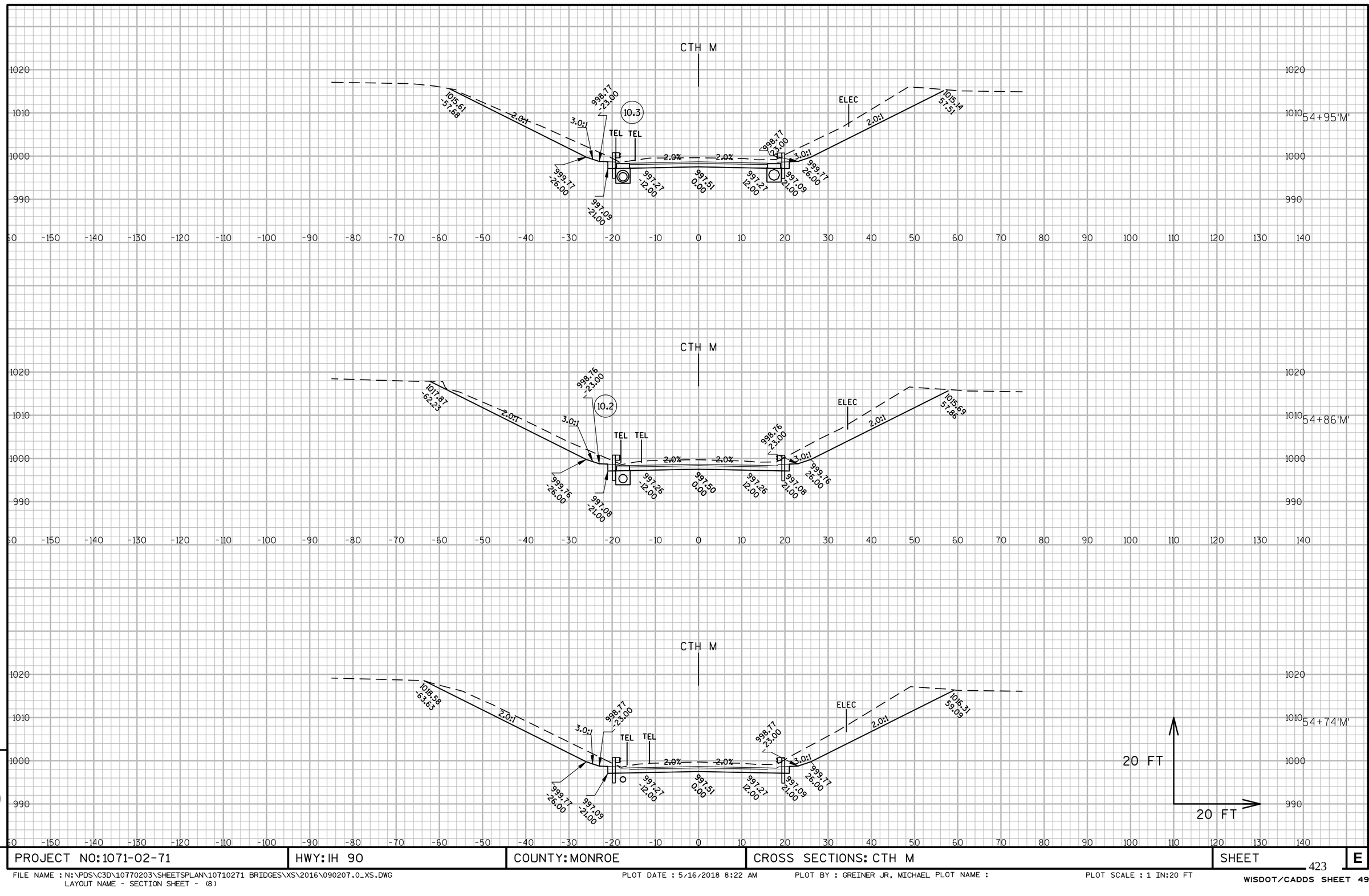
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (7)

PLOT DATE : 5/16/2018 8:22 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



9

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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (8)

PLOT DATE : 5/16/2018 8:22 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

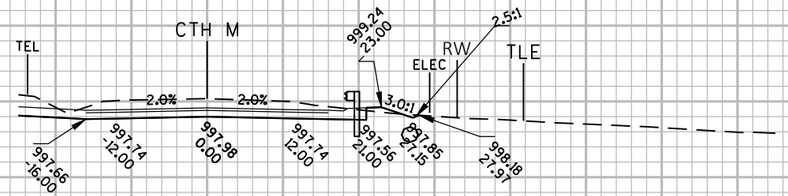
PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET 424	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (9)

PLOT DATE : 5/16/2018 8:23 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

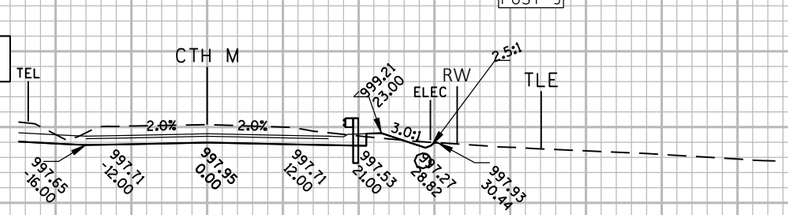
DRIVEWAY
RELOCATION



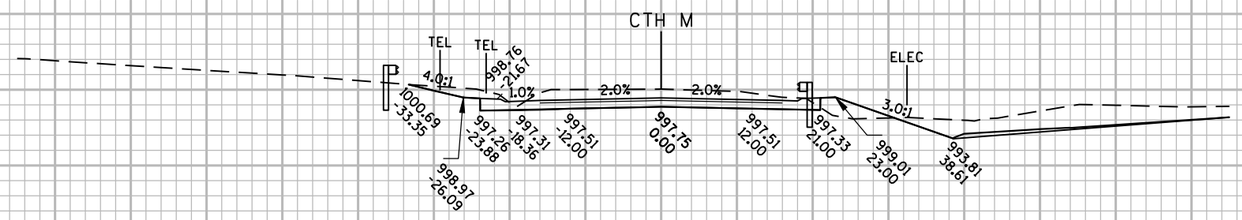
56+00'M'

POST 9

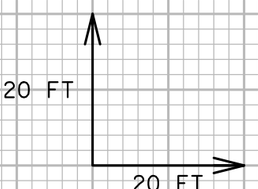
DRIVEWAY
RELOCATION



55+96'M'



55+68'M'



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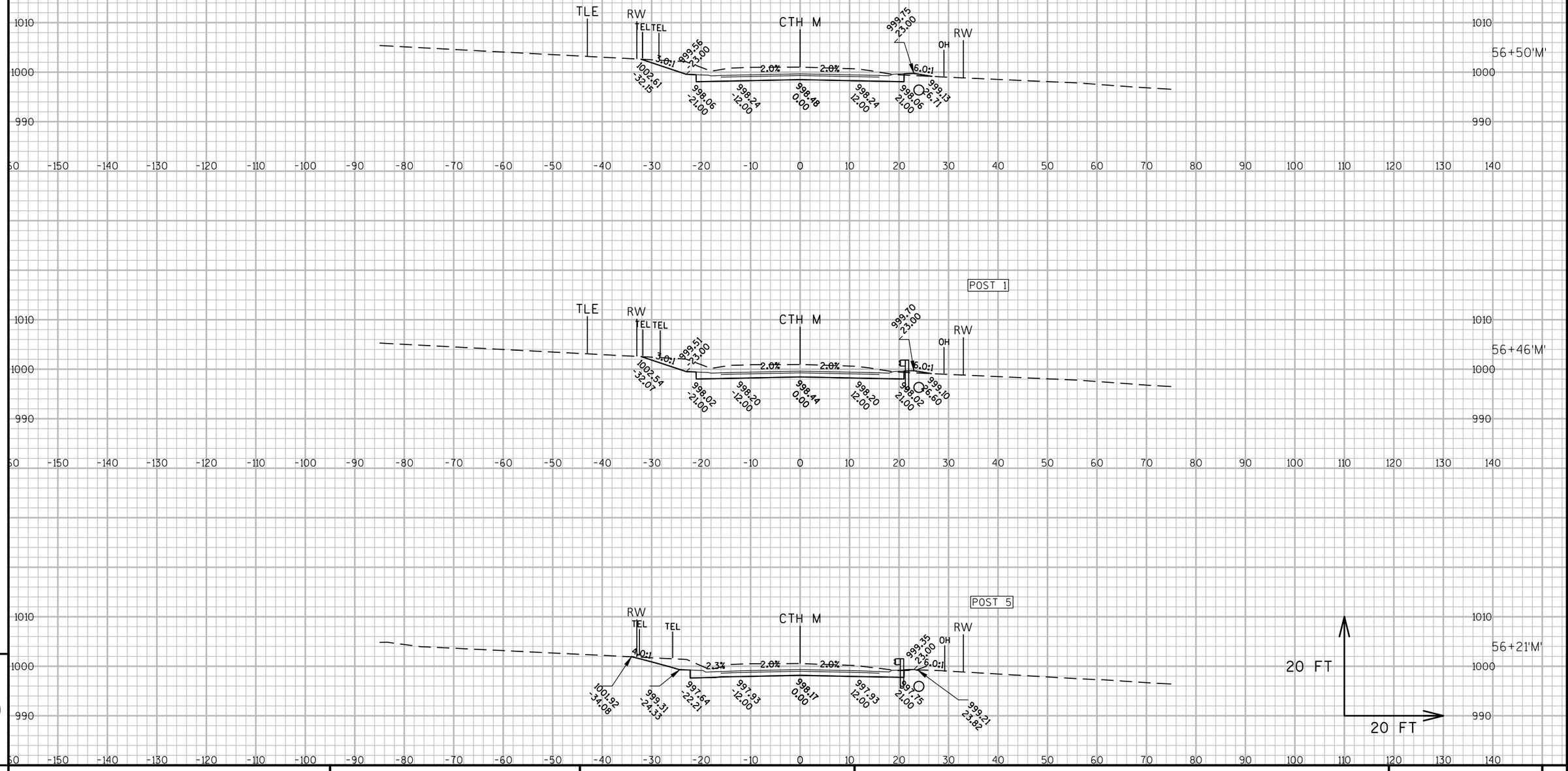
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET 425	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (10)

PLOT DATE : 5/16/2018 8:23 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

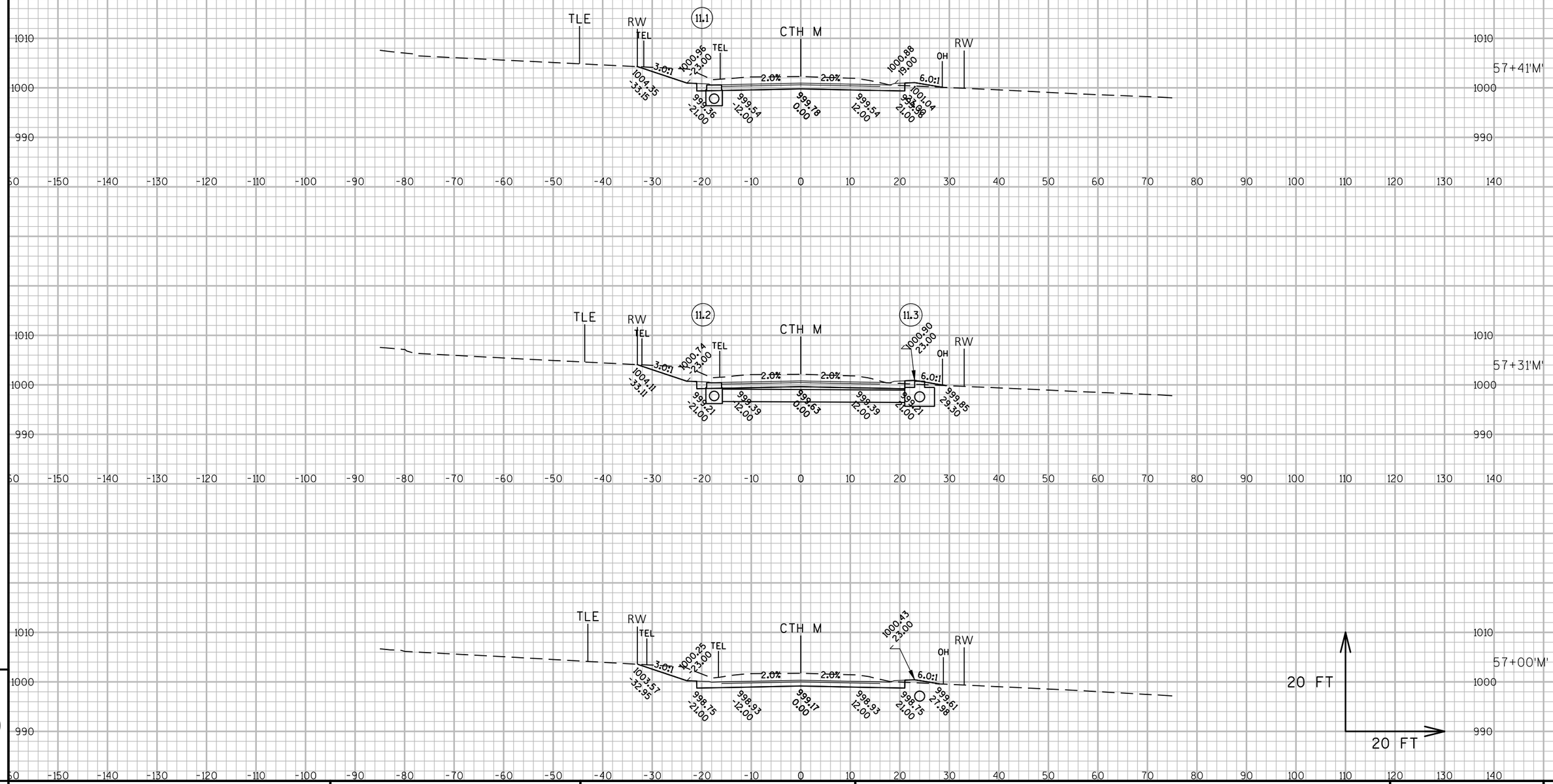


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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (11)
PLOT DATE : 5/16/2018 8:23 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

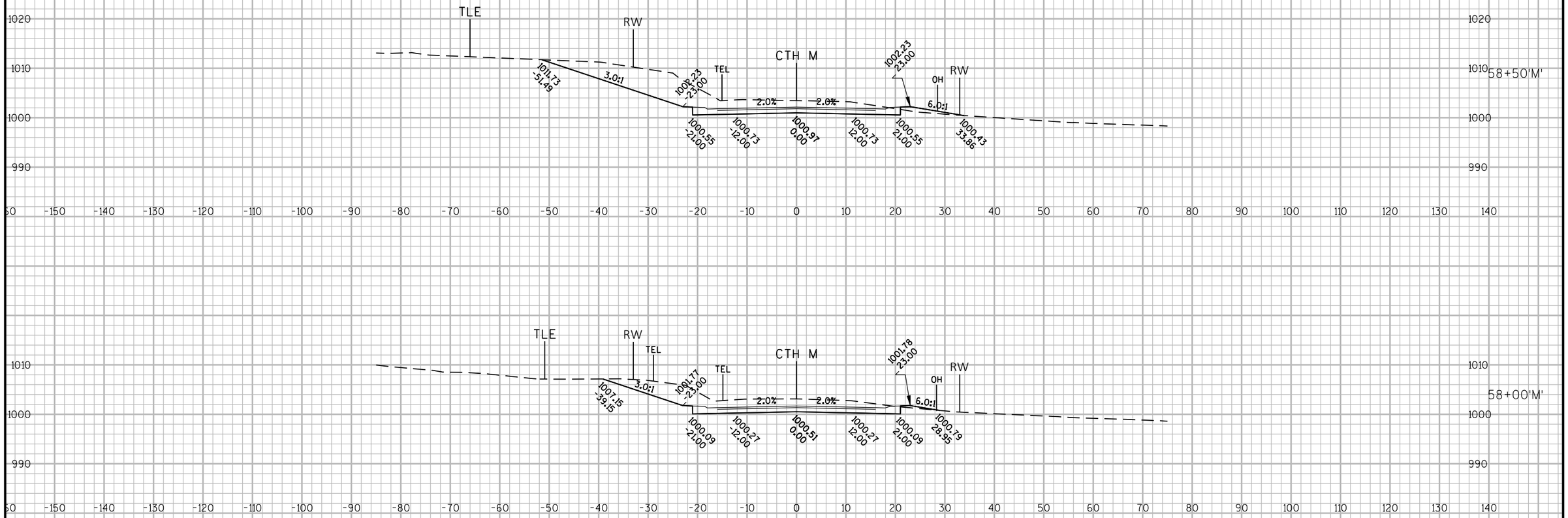


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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET 427	E

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LAYOUT NAME - SECTION SHEET - (12)
PLOT DATE : 5/16/2018 8:24 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



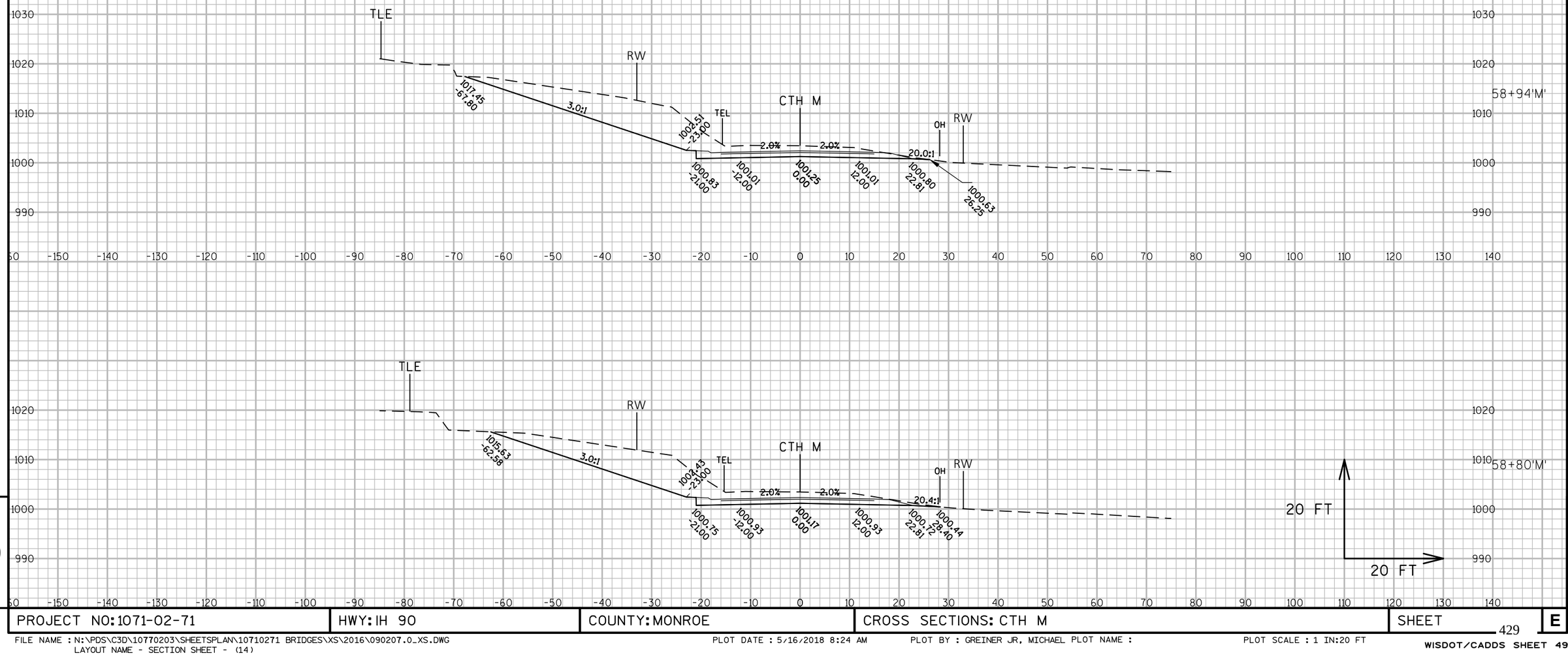
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (13)

PLOT DATE : 5/16/2018 8:24 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

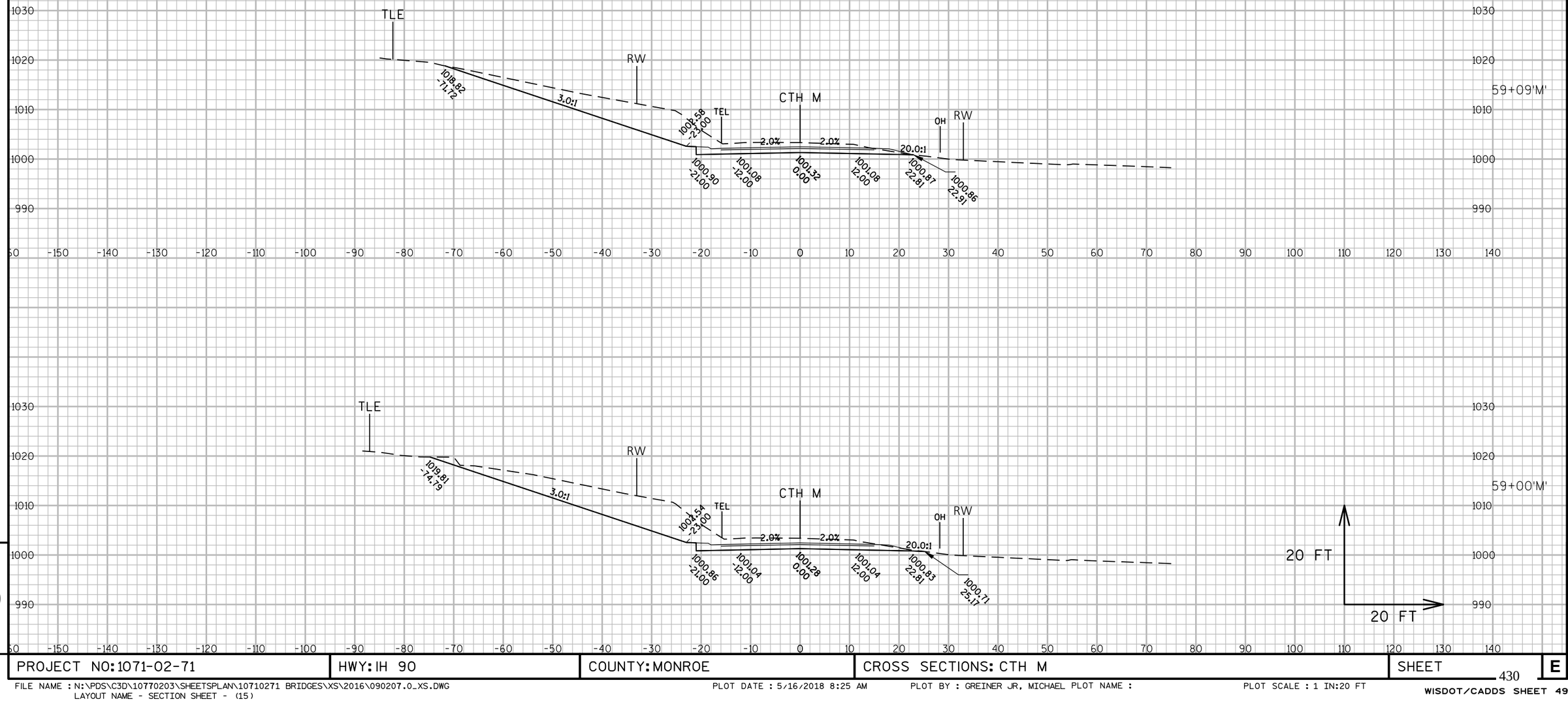


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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET 429	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (14)
PLOT DATE : 5/16/2018 8:24 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



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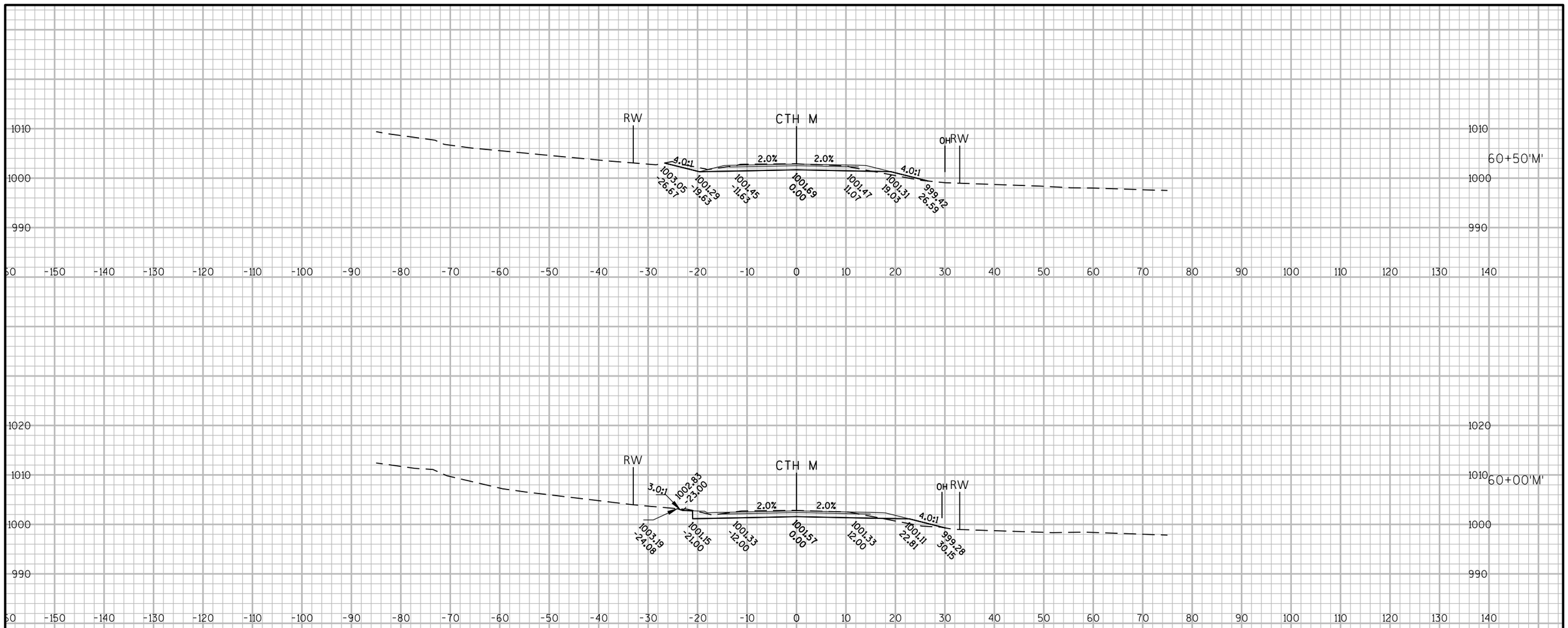
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (15)

PLOT DATE : 5/16/2018 8:25 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

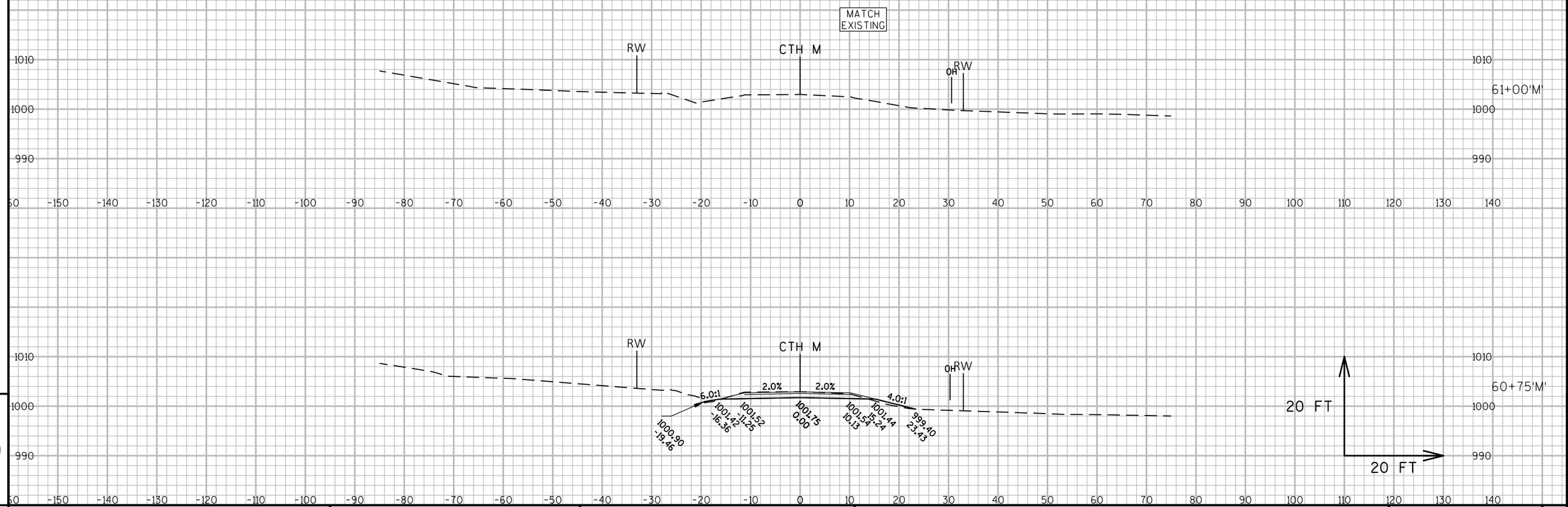


PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.0_XS.DWG
LAYOUT NAME - SECTION SHEET - (15)

PLOT DATE : 5/16/2018 8:25 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :

PLOT SCALE : 1 IN:20 FT

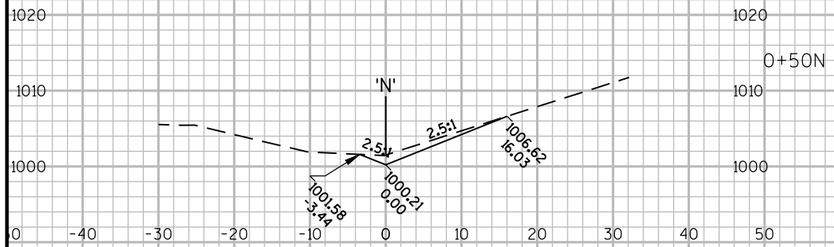


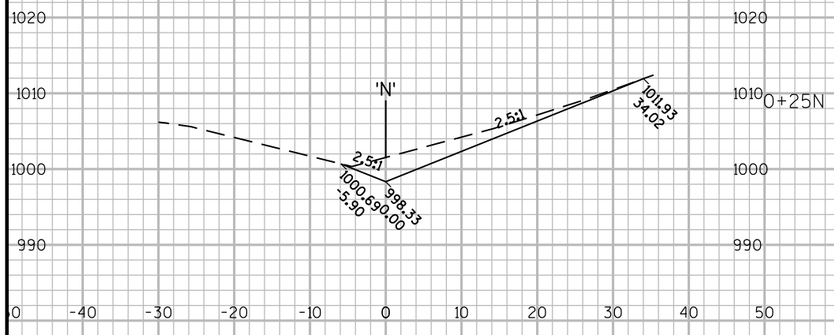
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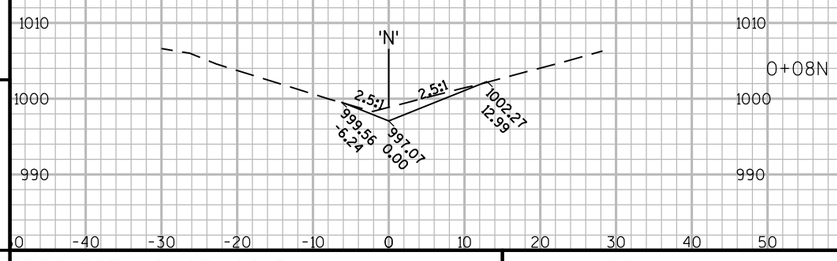
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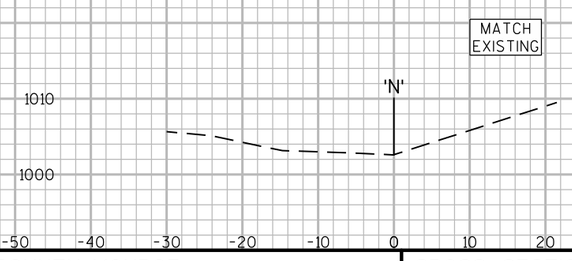
PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M	SHEET 432	E

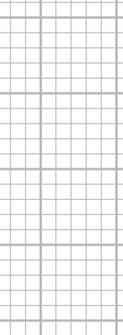
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LAYOUT NAME - SECTION SHEET - (15)
PLOT DATE : 5/16/2018 8:26 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

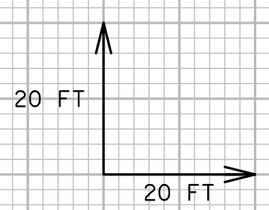












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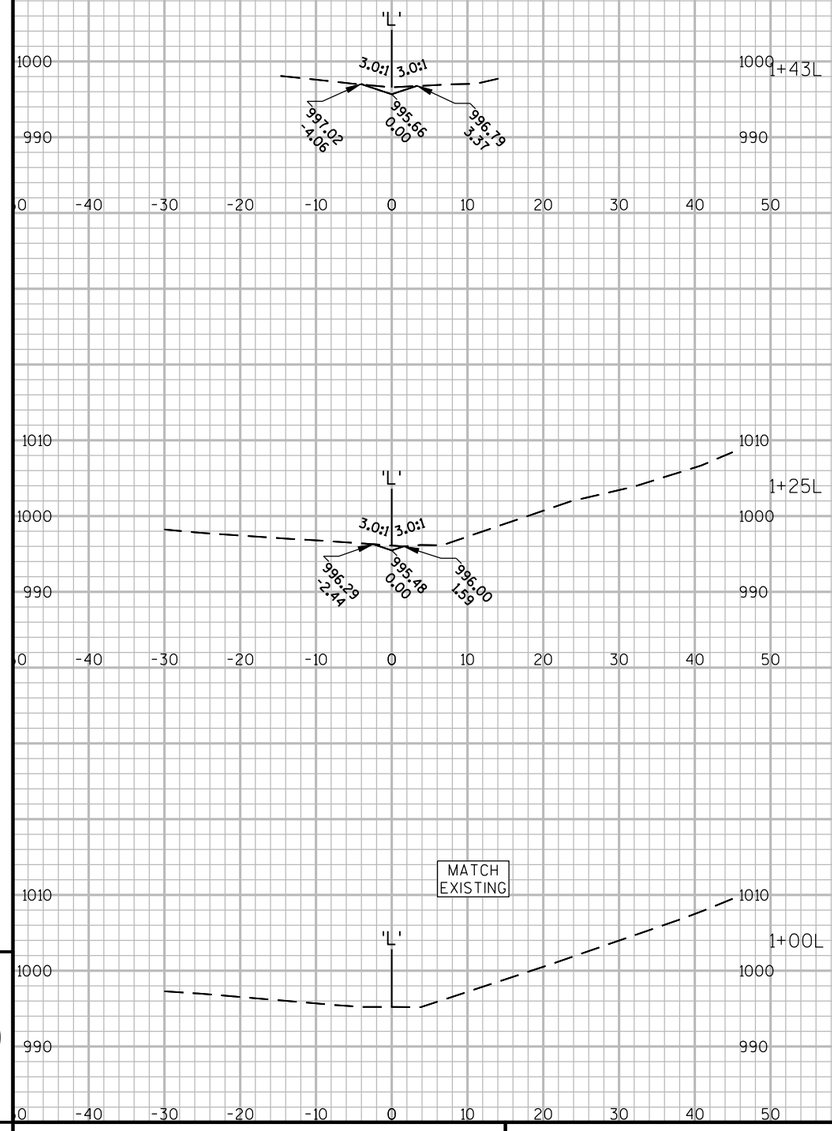
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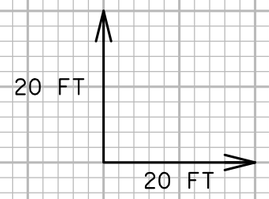
PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M-NEW DITCH NE QUAD	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.2_XS.DWG
LAYOUT NAME - SECTION SHEET - (1)

PLOT DATE : 1/24/2018 10:09 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





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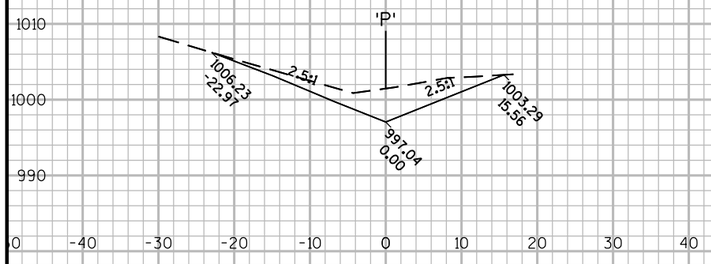
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PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M-NEW DITCH NW QUAD	SHEET 434	E

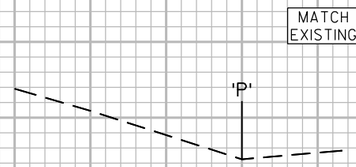
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LAYOUT NAME - SECTION SHEET - (1)

PLOT DATE : 1/24/2018 10:12 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

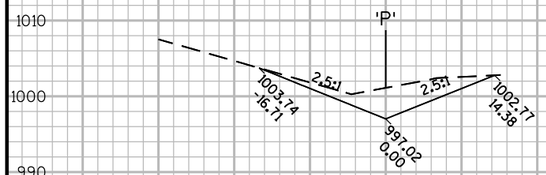
WISDOT/CADDS SHEET 49



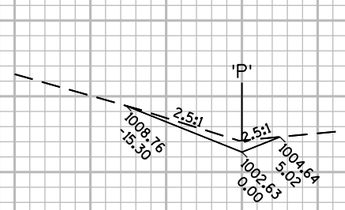
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1+86P



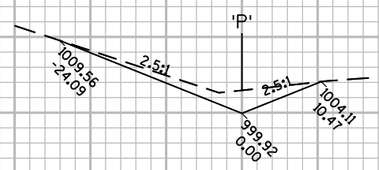
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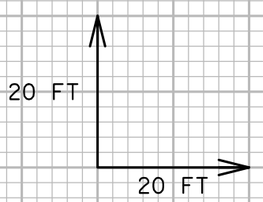
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0+99P



1+50P



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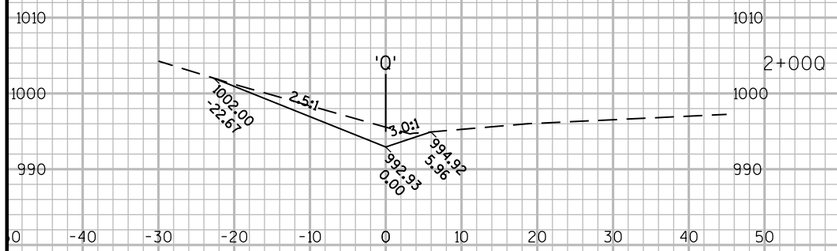
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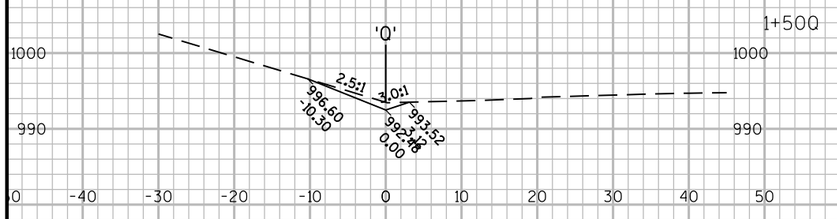
PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M-NEW DITCH SE QUAD	SHEET	E

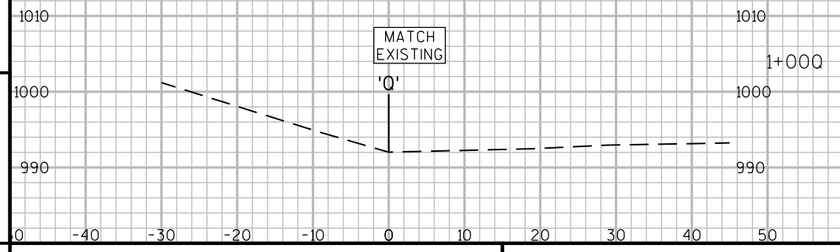
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LAYOUT NAME - SECTION SHEET - (1)

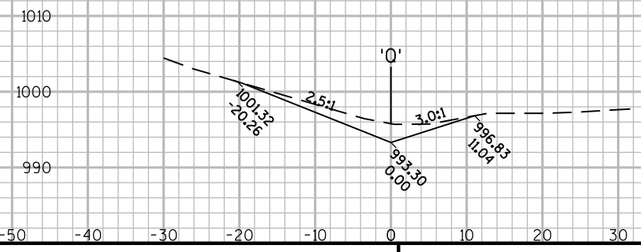
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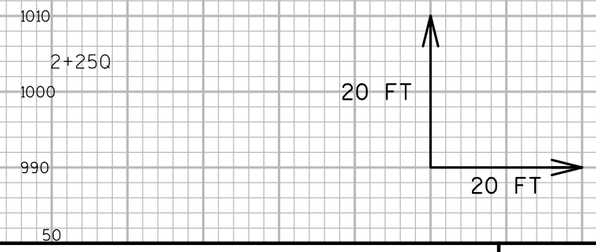
WISDOT/CADDS SHEET 49









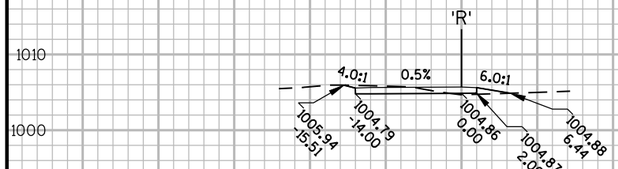


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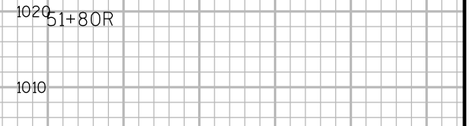
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FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (1)
PLOT DATE : 1/24/2018 10:19 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

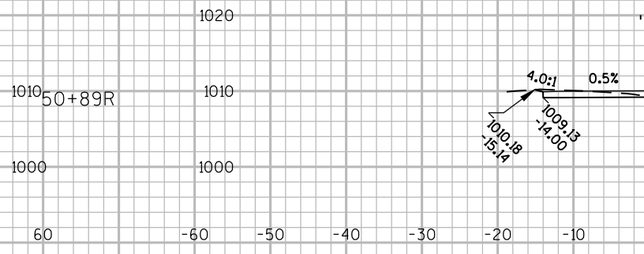


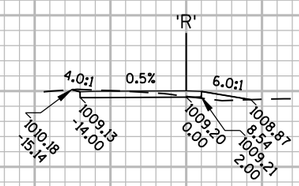


MATCH EXISTING

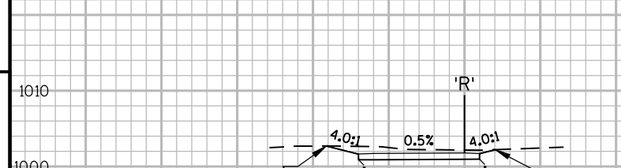


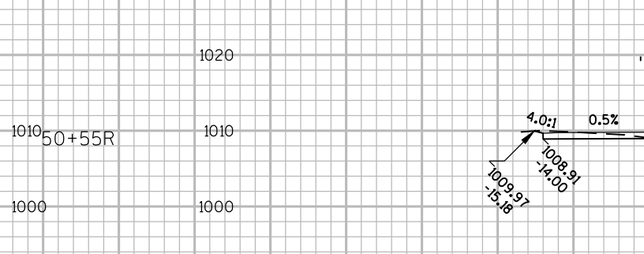


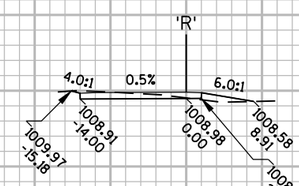


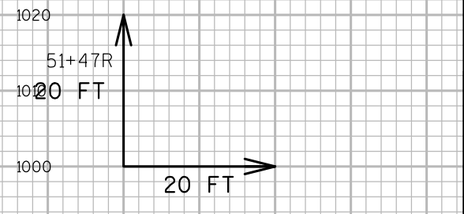












9

9

PROJECT NO: 1071-02-71	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: CTH M-DRIVEWAY RELOCATION	SHEET	E

FILE NAME : N:\PDS\C3D\10770203\SHEETSPLAN\10710271 BRIDGES\XS\2016\090207.1_XS.DWG
LAYOUT NAME - SECTION SHEET - (1)
PLOT DATE : 5/31/2018 12:27 PM
PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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Addendum No. 01
ID 1077-02-73
Added Sheet 30A
September 7, 2018

2

LEGEND

- SIGN ON PERMANENT SUPPORT
- MARKING REMOVAL LINE 4-INCH
- TYPE III BARRICADE WITH ATTACHED SIGN
- CONCRETE BARRIER TEMPORARY PRECAST
- FLAGS, 16" x 16" MINIMUM (ORANGE)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- 4" X 6" WOOD POST
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE

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"×48" UNLESS OTHERWISE NOTED.

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

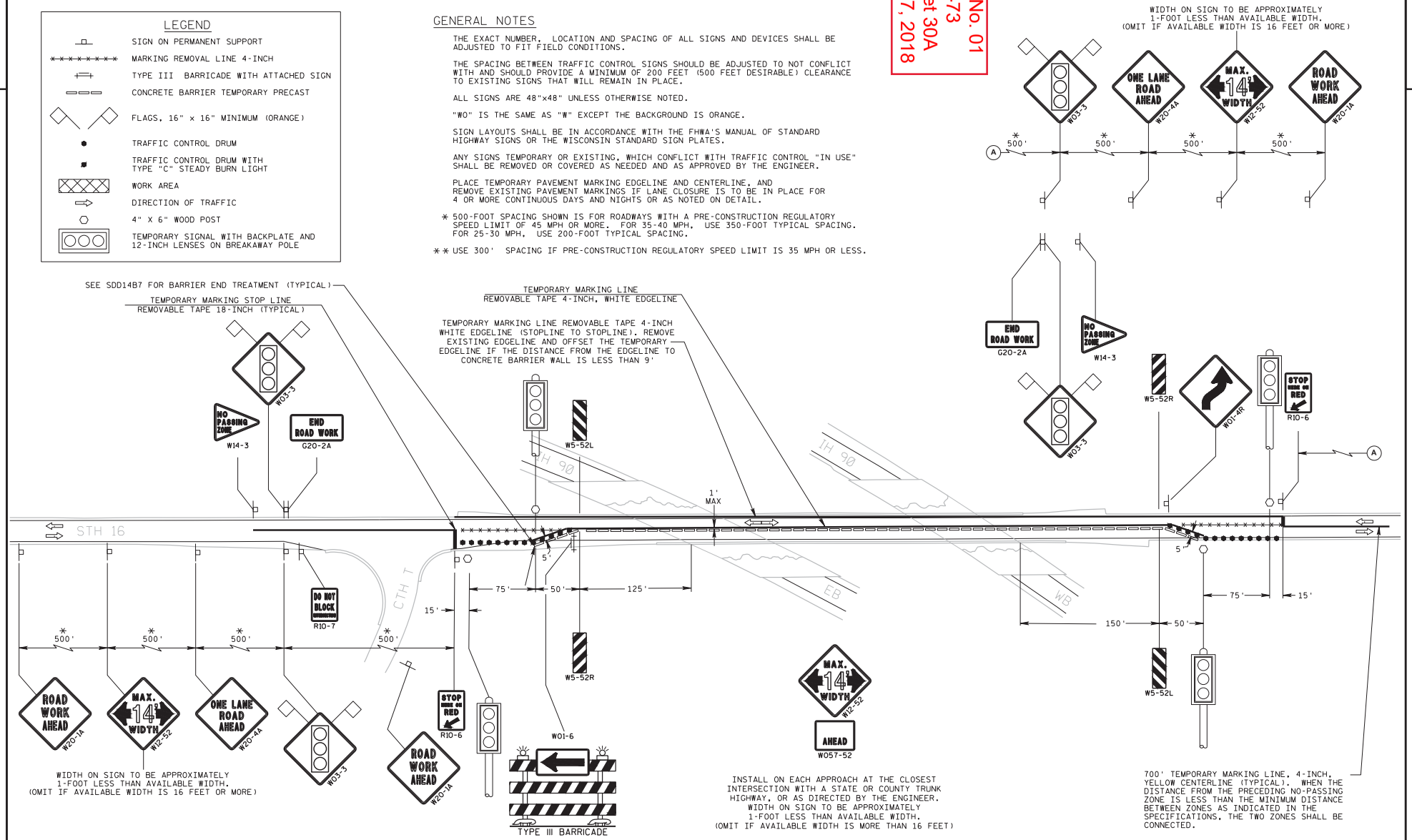
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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.

PLACE TEMPORARY PAVEMENT MARKING EDGELINE AND CENTERLINE, AND REMOVE EXISTING PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.

* 500-FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350-FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200-FOOT TYPICAL SPACING.

** USE 300' SPACING IF PRE-CONSTRUCTION REGULATORY SPEED LIMIT IS 35 MPH OR LESS.



PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	TRAFFIC CONTROL - TEMPORARY STOP SIGNALS	SHEET 30A	E

FILE NAME: P:\STATE\I90\10770203\DESIGN\PS&E\71\5_ADDENDA\025003_TC.DWG
LAYOUT NAME - Plan 1 IN 10 FT
PLOT DATE: 9/6/2018 4:41 PM
PLOT BY: GREINER JR, MICHAEL
PLOT NAME:
PLOT SCALE: Custom
WISDOT/CADDS SHEET 42

TEMPORARY EMERGENCY PULLOUTS

CAT.	STATION	TO	STATION	LOCATION	205.3000.S EACH	FILL * CY	FILL (1.25) * CY	EXCAVATION COMMON * CY	SALVAGED TOPSOIL * SY	FERTILIZER TYPE B * CWT	SEEDING MIX NO. 30 * LB	SEEDING TEMPORARY * LB	EROSION MAT CLASS 1 TYPE A * SY	BASE AGGREGATE DENSE 1 1/4-INCH * TON
0010	1631+00	-	1633+00	EB MEDIAN	1	-	-	-	104	0.1	4	6	104	29
0010	1657+25	-	1659+50	EB MEDIAN	1	-	-	-	72	0.1	4	6	72	32
0010	1683+75	-	1686+00	EB MEDIAN	1	-	-	-	74	0.1	4	6	74	29
0010	1710+25	-	1720+50	EB MEDIAN	1	-	-	-	93	0.1	4	6	93	42
0010	1736+75	-	1739+00	EB MEDIAN	1	-	-	-	61	0.1	3	5	61	23
0010	1763+25	-	1765+50	EB MEDIAN	1	-	-	-	95	0.1	4	6	95	38
0010	1789+75	-	1792+00	EB MEDIAN	1	-	-	-	124	0.2	5	7	124	65
0010	1816+25	-	1818+50	EB MEDIAN	1	-	-	-	139	0.2	5	7	139	73
0010	1842+75	-	1845+00	EB MEDIAN	1	-	-	-	157	0.2	5	7	157	88
0010	1869+25	-	1871+50	EB MEDIAN	1	-	-	-	92	0.1	4	6	92	42
0010	1888+75	-	1891+00	EB MEDIAN	1	-	-	-	72	0.1	4	6	72	28
0010	1922+25	-	1924+50	EB MEDIAN	1	-	-	-	117	0.2	4	6	117	33
0010	1950+75	-	1953+00	EB MEDIAN	1	-	-	-	143	0.2	5	7	143	53
0010	1975+25	-	1977+50	EB MEDIAN	1	-	-	-	226	0.2	6	9	226	84
0010	2001+75	-	2004+00	EB MEDIAN	1	-	-	-	81	0.1	4	6	81	60
0010	2039+75	-	2042+00	EB MEDIAN	1	-	-	-	101	0.1	4	6	101	33
0010	2054+75	-	2057+00	EB MEDIAN	1	-	-	-	136	0.2	5	7	136	43
0010	2081+25	-	2083+50	EB MEDIAN	1	-	-	-	75	0.1	3	5	75	32
				TOTAL 0010	18				1962	2.5	77	114	1962	827

*ITEMS AND QUANTITIES FOR INFORMATION ONLY.

BARRIER SUMMARY

CAT.	STATION	TO	STATION	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH (FT)	SIGN PLATE	CRASH TEST LEVEL	TRAFFIC DIRECTION	REMARKS
0010	1599+43A	-	1603+93A	IH 90 WB	400	400	1	2	W05-58L	TL-3	BI-DIRECTIONAL	STAGE 1
0010	2182+03A	-	2187+73A	IH 90 WB	520	520	1	2	W05-58L	TL-3	BI-DIRECTIONAL	STAGE 1
0010	1597+51	-	1603+21	IH 90 EB	520	520	1	2	W05-58R	TL-3	BI-DIRECTIONAL	STAGE 2
0010	2181+52	-	2186+02	IH 90 EB	400	400	1	2	W05-58R	TL-3	BI-DIRECTIONAL	STAGE 2
0010				STH 16	1288	1288	-	2	W05-58R	TL-3	SINGLE LANE	STAGE 2
0010				STH 16	-	1288	-	2	W05-58R	TL-3	SINGLE LANE	STAGE 2
				TOTAL 0010	3128	4416	4					

Addendum No. 01
ID 1077-02-73
Revised Sheet 70
September 7, 2018

Addendum No. 01
ID 1077-02-73
Revised Sheet 73
September 7, 2018

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TRAFFIC CONTROL SUMMARY

CAT.	STATION	TO	STATION	LOCATION	DURATION	DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	LIGHTS EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	LIGHTS EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	ARROW BOARDS EACH	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAY	PCMS EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	REMARKS
0010	46+77M	-	48+25M	CTH M	200	-	-	9	1800	14	2800	-	-	-	-	7	1400	-	-	MAINLINE CLOSURE
0010	60+75M	-	76+75M	CTH M	200	-	-	7	1400	10	2000	-	-	-	-	5	1000	-	-	MAINLINE CLOSURE
0010	-		-	CTH M	200	-	-	2	400	4	800	-	-	-	-	3	600	-	-	HERITAGE AVE & CTH M
STAGE 1																				
0010	1567+35	-	1603+00	EB MEDIAN LANE	5	55	275	3	15	6	30	17	85	2	10	11	55	1	5	BI-DIRECTIONAL SET UP
0010	2155+35	-	2195+00	EB MEDIAN LANE	5	58	290	3	15	6	30	17	85	2	10	11	55	-	-	BI-DIRECTIONAL SET UP
0010	1595+00A	-	2223+00A	WB MEDIAN LANE	5	647	3235	45	225	90	450	17	85	2	10	63	315	1	5	BI-DIRECTIONAL SET UP
0010	1567+35	-	1588+88	EB OUTSIDE LANE	101	40	4040	2	202	4	404	17	1717	2	202	17	1717	-	-	WB COUNTER DIRECTIONAL
0010	2193+00	-	-	EB	101	-	-	-	-	-	-	-	-	-	-	2	202	-	-	WB COUNTER DIRECTIONAL
0010	1594+43A	-	-	WB	101	-	-	-	-	-	-	-	-	-	-	2	202	-	-	WB COUNTER DIRECTIONAL
0010	1603+93A	-	1618+93A	WB	101	-	-	-	-	-	-	-	-	-	-	7	707	-	-	WB COUNTER DIRECTIONAL
0010	2187+73A	-	2223+00A	WB INSIDE LANE	101	55	5555	2	202	4	404	17	1717	2	202	17	1717	-	-	WB COUNTER DIRECTIONAL
0010	1599+43A	-	2187+73A	WB	101	-	-	-	-	-	-	-	-	-	-	12	1212	-	-	WB COUNTER DIRECTIONAL
0010				EXIT 28	101	-	-	-	-	-	-	-	-	-	-	12	1212	-	-	OVERSIZED SIGNING
0010	17+00S	-	24+04S	CROSSOVER-LT	101	28	2828	2	202	-	-	-	-	-	-	-	-	-	-	WB COUNTER DIRECTIONAL
0010	11+00S	-	21+50S	CROSSOVER-RT	101	21	2121	7	707	12	1212	3	303	-	-	2	202	-	-	WB COUNTER DIRECTIONAL
0010	04+50X	-	08+75X	CROSSOVER-LT	101	23	2323	-	-	-	-	-	-	-	-	2	202	-	-	WB COUNTER DIRECTIONAL
0010	05+75X	-	14+84X	CROSSOVER-RT	101	28	2828	-	-	-	-	-	-	-	-	-	-	-	-	WB COUNTER DIRECTIONAL
STAGE 2																				
0010	1567+35	-	2192+00	EB MEDIAN LANE	5	643	3215	47	235	94	470	17	85	2	10	65	325	-	-	BI-DIRECTIONAL SET UP
0010	1567+35	-	1592+88	EB INSIDE LANE	85	44	3740	2	170	4	340	17	1445	2	170	17	1445	-	-	EB COUNTER DIRECTIONAL
0010	2176+02	-	2191+02	EB	85	-	-	-	-	-	-	-	-	-	-	7	595	-	-	EB COUNTER DIRECTIONAL
0010	2191+00		-	EB	85	-	-	-	-	-	-	-	-	-	-	2	170	-	-	EB COUNTER DIRECTIONAL
0010	1588+88		-	WB	85	-	-	-	-	-	-	-	-	-	-	2	170	-	-	EB COUNTER DIRECTIONAL
0010	2190+00A	-	2223+00A	WB OUTSIDE LANE	85	85	7225	3	255	6	510	26	2210	2	170	21	1785	-	-	EB COUNTER DIRECTIONAL
0010	1597+51A		2186+02A	EB	85	-	-	-	-	-	-	-	-	-	-	12	1020	-	-	EB COUNTER DIRECTIONAL
0010				EXIT 41	101	-	-	-	-	-	-	-	-	-	-	12	1212	-	-	OVERSIZED SIGNING
0010	05+75Y	-	12+00Y	CROSSOVER-LT	85	13	1105	7	595	12	1020	-	-	-	-	2	170	-	-	EB COUNTER DIRECTIONAL
0010	04+00Y	-	09+00Y	CROSSOVER-RT	85	20	1700	2	170	2	170	3	255	-	-	2	170	-	-	EB COUNTER DIRECTIONAL
0010	27+00T	-	33+77T	CROSSOVER-LT	85	23	1955	-	-	-	-	-	-	-	-	2	170	-	-	EB COUNTER DIRECTIONAL
0010	20+00T	-	31+50T	CROSSOVER-RT	85	28	2380	-	-	-	-	-	-	-	-	-	-	-	-	EB COUNTER DIRECTIONAL
0010	-	-	-	STH 16	10	18	180	1	10	-	-	12	120	-	-	26	260			LANE CLOSURE
0010	-	-	-	STH 16	10	18	180	1	10	-	-	12	120	-	-	26	260			LANE CLOSURE
STAGE 3																				
0010	1529+29		1607+00	EB MEDIAN LANE	7	107	749	4	28	8	56	24	168	2	14	24	168	-	-	MEDIAN LANE CLOSURE
0010	1562+12A	-	1628+00	WB MEDIAN LANE	7	84	588	4	28	8	56	17	119	2	14	20	140	-	-	MEDIAN LANE CLOSURE
STAGE 4																				
0010	1529+29	-	1607+00	EB OUTSIDE LANE	7	132	924	4	28	8	56	26	182	2	14	23	161	-	-	OUTSIDE LANE CLOSURE
0010	1562+12A	-	1628+00	WB OUTSIDE LANE	7	84	588	4	28	8	56	17	119	2	14	20	140	-	-	OUTSIDE LANE CLOSURE
				TOTAL 0010			48024		6725		10864		8815		840		19159		10	

Addendum No. 01
ID 1077-02-73
Revised Sheet 74
September 7, 2018

PAVEMENT MARKINGS SUMMARY

CAT.	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.3020 MARKING LINE EPOXY 8-INCH LF	646.9000 MARKING REMOVAL LINE 4-INCH LF	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	649.0250 TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH LF	649.0760 TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE I LF	REMARKS
STAGE 1												
0010	1571+88	-	1580+88	EB LT	900	-	900	-	840	-	-	YELLOW
0010	1605+00		2104+00	EB RT	49900	-	-	-	-	-	-	WHITE
0010	2168+00	-	2177+00	EB LT	900	-	900	-	840	-	-	YELLOW
0010	2195+73A	-	2204+73A	EB RT	900	-	900	-	840	-	-	YELLOW
0010	1588+50	-	1596+00	EB LT	750	-	750	-	-	-	-	YELLOW
0010	2186+00	-	2192+50	EB LT	650	-	650	-	-	-	-	YELLOW
0010	1601+50A	-	1609+00A	WB RT	750	-	750	-	-	-	-	YELLOW
0010	1603+93A	-	2182+53A	WB CENTERLINE	-	-	-	115720	-	-	-	DOUBLE YELLOW
0010	1603+93A	-	2182+53A	WB LT	-	-	-	57860	-	-	-	WHITE
0010	1599+43A	-	1603+93A	WEST X-OVER (BARRIER)	-	-	-	450	-	-	-	YELLOW
0010	2182+53A	-	2187+03A	EAST X-OVER (BARRIER)	-	-	-	450	-	-	-	YELLOW
0010	2187+03A	-	2190+03A	EAST X-OVER (BARRIER)	-	-	-	300	-	-	-	YELLOW
0010	2178+03A	-	2189+03A	WB LT	1100	-	1100	-	-	-	-	YELLOW
0010	2195+73A	-	2202+83A	WB LT	710	-	710	-	-	-	-	YELLOW
0010	10+00S	-	24+00S	CROSSOVER-LT	-	-	-	1400	-	-	49	YELOW
0010	10+00S	-	24+00S	CROSSOVER-RT	-	-	-	1400	-	-	56	WHITE
0010	04+00X	-	05+75X	CROSSOVER-LT	-	-	-		175	-	-	YELLOW
0010	05+75X	-	14+85X	CROSSOVER-LT	-	-	-	910	-	-	36	YELLOW
0010	04+00X	-	09+25X	CROSSOVER-RT	-	-	-	525	-	-	21	WHITE
0010	09+25X	-	14+85X	CROSSOVER-RT	-	-	-	-	560	-	22	WHITE
STAGE 2												
0010	1580+51	-	1589+51	EB MEDIAN LANE	900	-	900	-	840	-	-	YELLOW
0010	1605+00	-	2104+00	EB MEDIAN LANE	49900	-	-	-	-	-	-	YELLOW
0010	1605+00	-	2104+00	EB CENTERLINE	12475	-	-	-	-	-	-	WHITE
0010	1606+00'A'	-	2104+27'A'	WB MEDIAN LANE	49827	-	-	-	-	-	-	YELLOW
0010	1606+00'A'	-	2104+27'A'	WB CENTERLINE	12457	-	-	-	-	-	-	WHITE
0010	1606+00'A'	-	2104+27'A'	WB OUTSIDE LANE	49827	-	-	-	-	-	-	WHITE
0010	2196+55A	-	2205+55A	WB MEDIAN LANE	900	-	900	-	840	-	-	WHITE
0010	1580+01	-	1587+51	EB MEDIAN LANE	750	-	750	-	-	-	-	YELLOW
0010	1603+21	-	2181+52	EB CENTERLINE	-	-	-	115662	-	-	-	DOUBLE YELLOW
0010	1603+21	-	2181+52	EB EDGELINE	-	-	-	57831	-	-	-	WHITE
0010	2182+52	-	2187+02	EAST X-OVER (BARRIER)	-	-	-	450	-	-	-	YELLOW
0010	1598+71	-	1603+21	WEST X-OVER (BARRIER)	-	-	-	450	-	-	-	YELLOW
0010	1595+71	-	1598+71	WEST X-OVER (BARRIER)	-	-	-	300	-	-	-	YELLOW
0010	1596+21	-	1607+21	EB LT	1100	-	1100	-	-	-	-	YELLOW
0010	2185+52	-	2192+62	EB LT	710	-	710	-	-	-	-	YELLOW
0010	1590+00A	-	1597+50A	WB RT	750	-	750	-	-	-	-	YELLOW
0010	2185+56A	-	2192+06A	WB RT	650	-	650	-	-	-	-	YELLOW
0010	04+00Y	-	08+50Y	CROSSOVER-LT	-	-	-	450	-	-	18	YELLOW
0010	08+50Y	-	14+00Y	CROSSOVER-LT	-	-	-	-	550	-	18	YELLOW
0010	4+00Y	-	5+75Y	CROSSOVER-RT	-	-	-	-	175	-	-	WHITE
0010	05+75Y	-	14+00Y	CROSSOVER-RT	-	-	-	825	-	-	33	WHITE
0010	20+00T	-	34+27T	CROSSOVER-LT	-	-	-	1427	-	-	57	YELLOW
0010	32+52T	-	34+27T	CROSSOVER-RT	-	-	-	-	175	-	-	WHITE
0010	20+00T	-	32+52T	CROSSOVER-RT	-	-	-	1252	-	-	50	YELLOW
0010	-	-	-	STH 16	-	-	400	1400	2900	-	-	LANE CLOSURE
0010	-	-	-	STH 16	3975	-	-	-	2900	-	-	LANE CLOSURE
STAGE 3												
0010	1533+94	-	1542+94	EB LT	900	-	900	-	840	-	-	WHITE
0010	1547+19	-	1558+69	EB ENTRANCE RAMP	-	600	1200	-	1300	200	-	
0010	1558+94	-	1605+00	EB LT	4606	-	-	-	-	-	-	YELLOW
0010	1558+94	-	1605+00	EB LT	1152	-	-	-	-	-	-	YELLOW
0010	1560+12A	-	1606+00A	WB RT	4588			-	-	-	-	YELLOW
0010	1560+12A	-	1606+00A	WB CENTERLINE	1147			-	-	-	-	YELLOW
0010	1614+35A	-	1623+35A	WB RT	900	-	900	-	840			YELLOW
STAGE 4												
0010	1533+94	-	1542+94	EB LT	900	-	900	-	840	-	-	YELLOW
0010	1547+69	-	1558+69	EB ENTRANCE RAMP	900	200	900	-	1175	200	-	
0010	1558+94	-	1605+00	EB RT	4606	-	-	-	-	-	-	WHITE
0010	1560+12A	-	1606+00A	WB LT	4588	-	-	-	-	-	-	YELLOW
0010	1614+35A	-	1623+35A	WB CENTERLINE	900	-	900	-	840	-	-	YELLOW
				TOTAL 0010	265968	800	18520	359062	17470	400	361	

PROJECT NO: 1077-02-73	HWY: IH 90	COUNTY: MONROE	MISCELLANEOUS QUANTITIES	SHEET NO: 74	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ ORG DATE : _____ ORIGINATOR : DIST _ PLOT SCALE : 1:1

REMOVING TEMPORARY EMERGENCY PULLOUTS

SPV.0060.03

CAT	STATION	TO	STATION	LOCATION	EACH	REMARKS
0010	1631+00'A'	-	1633+25'A'	WB MEDIAN	1	
0010	1657+00'A'	-	1659+25'A'	WB MEDIAN	1	
0010	1684+00'A'	-	1686+25'A'	WB MEDIAN	1	
0010	1710+00'A'	-	1712+25'A'	WB MEDIAN	1	
0010	1736+50'A'	-	1738+75'A'	WB MEDIAN	1	
0010	1763+00'A'	-	1765+25'A'	WB MEDIAN	1	
0010	1790+00'A'	-	1792+25'A'	WB MEDIAN	1	
0010	1816+00'A'	-	1818+25'A'	WB MEDIAN	1	
0010	1842+50'A'	-	1844+75'A'	WB MEDIAN	1	
0010	1867+50'A'	-	1869+75'A'	WB MEDIAN	1	
0010	1888+00'A'	-	1890+25'A'	WB MEDIAN	1	
0010	1921+50'A'	-	1923+75'A'	WB MEDIAN	1	
0010	1951+00'A'	-	1953+25'A'	WB MEDIAN	1	
0010	1974+00'A'	-	1976+25'A'	WB MEDIAN	1	
0010	2001+00'A'	-	2003+25'A'	WB MEDIAN	1	
0010	2020+00'A'	-	2022+25'A'	WB MEDIAN	1	
0010	2054+00'A'	-	2056+25'A'	WB MEDIAN	1	
0010	2080+00'A'	-	2082+25'A'	WB MEDIAN	1	
				TOTAL 0010	18	

TRAFFIC CONTROL SIGNS FIXED MESSAGE

643.1000

CAT.	LOCATION	SF	REMARKS
0010	EXIT 28	36	
0010	EXIT 41	36	
	TOTAL 0010	72	

TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

649.0850

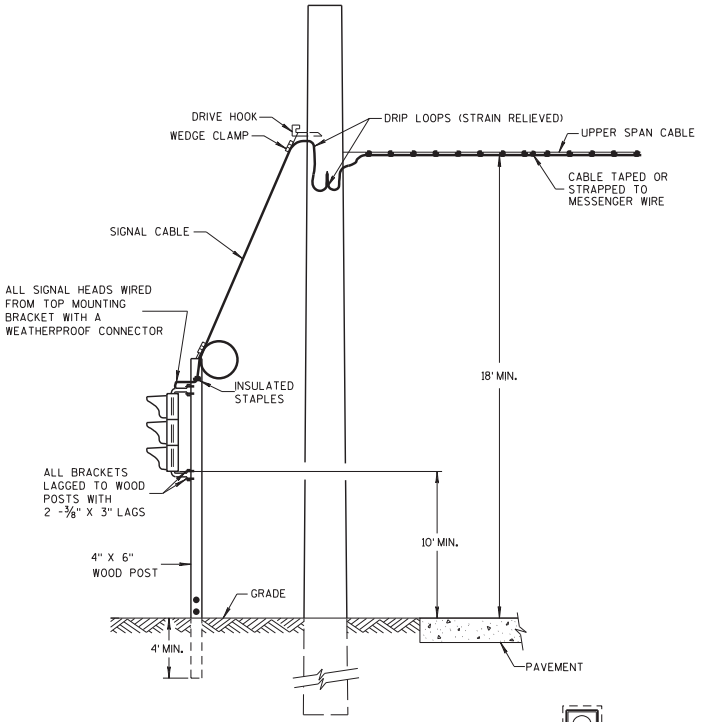
CATEGORY	LOCATION	LF	REMARKS
0010	STH 16	30	
0010	STH 16	30	
	TOTAL 0010	60	

TEMPORARY TRAFFIC SIGNAL FOR BRIDGES (B-41-112)

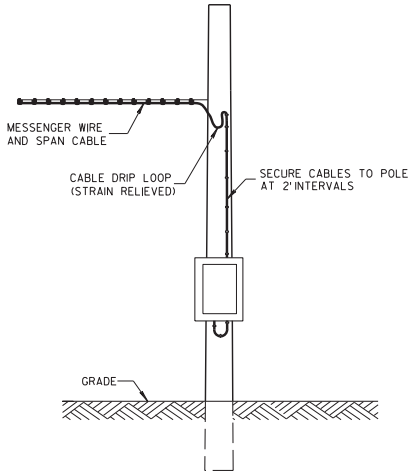
661.0100

CATEGORY	LOCATION	LS	REMARKS
0010	STH 16	1	
	TOTAL 0010	1	

Addendum No. 01
ID 1077-02-73
Revised Sheet 75
September 7, 2018



TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION

Addendum No. 01
ID 1077-02-73
Added Sheet 131A
September 7, 2018

GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAYBE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

WOOD POLES (NONBREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

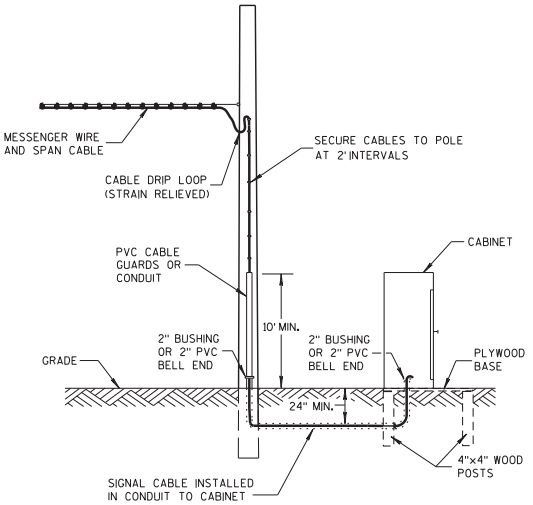
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL FACE SHALL HAVE A BACKPLATE.

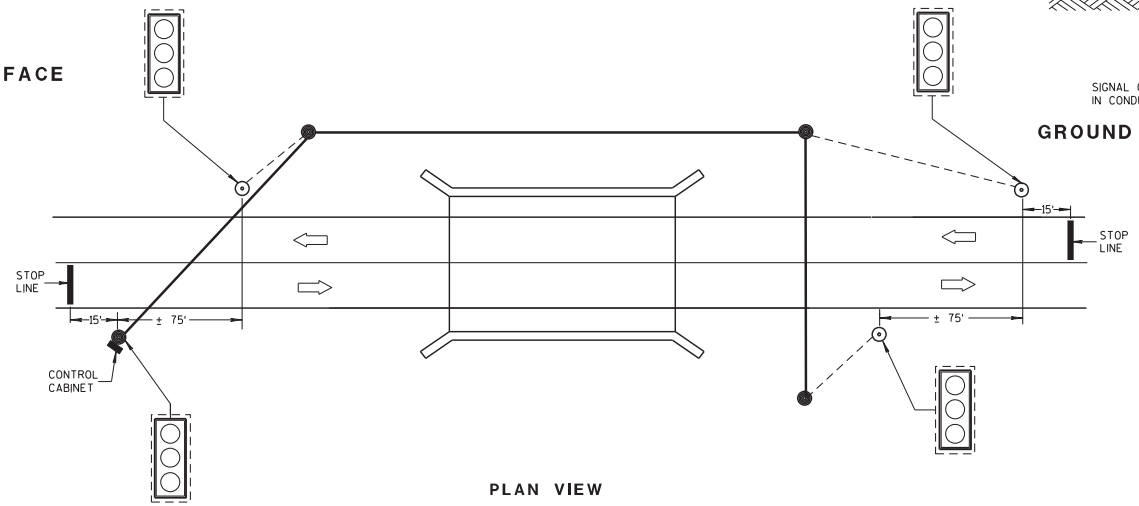
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15 D 33.



GROUND MOUNT CABINET INSTALLATION

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE**
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/ CURBS	2 FT

**NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.



PLAN VIEW

TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREAKAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- LED TRAFFIC SIGNAL FACE WITH BACKPLATE (3-12")
- DIRECTION OF TRAFFIC

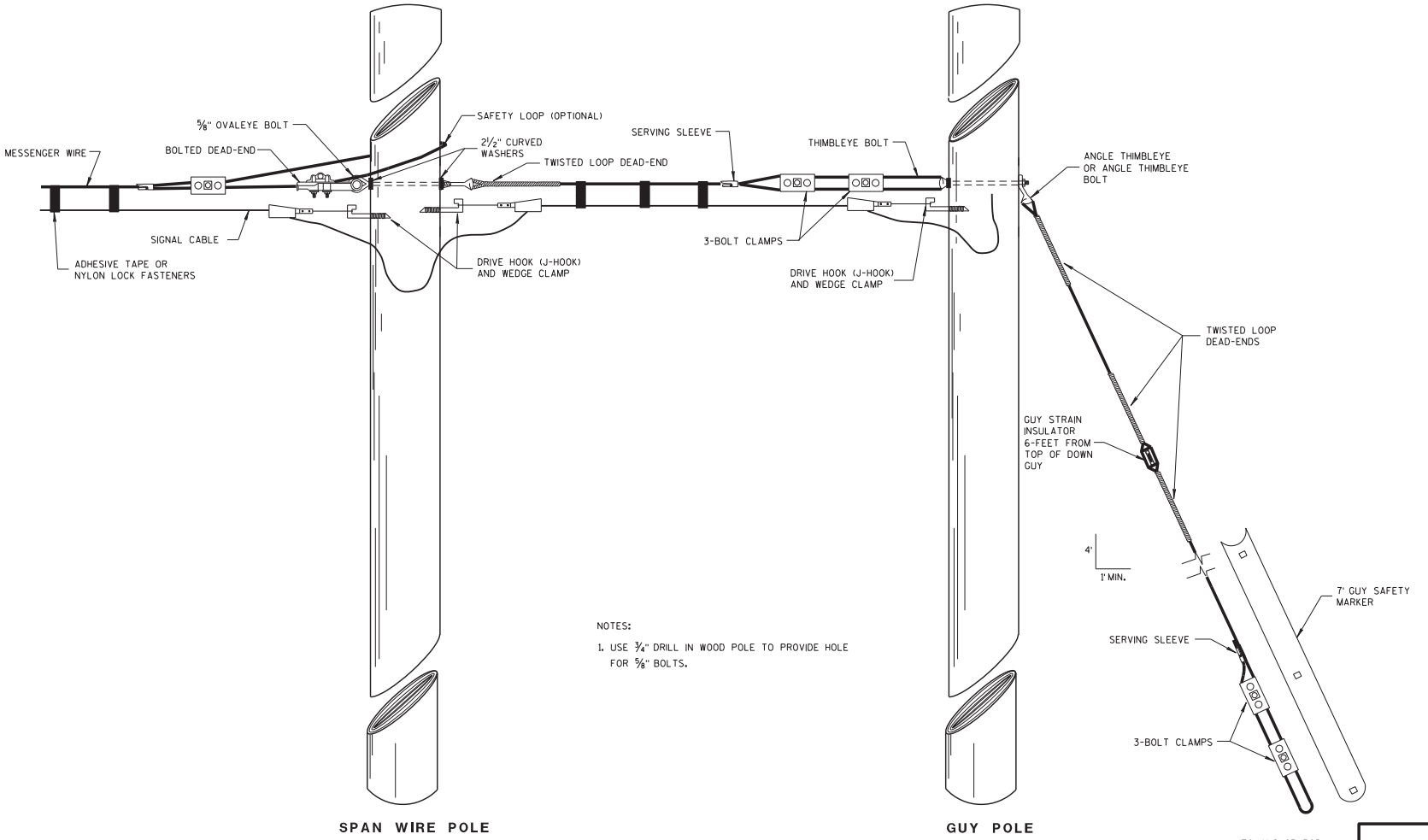
MINIMUM POLE LENGTHS	CLASS	MINIMUM BURIAL DEPTHS
25 FEET	V	5 FEET
30 FEET	V	6 FEET
35 FEET	IV	7 FEET
40 FEET	IV	8 FEET
45 FEET	IV	9 FEET

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER
FHWA

6
S.D.D. 9 G 2-5a



NOTES:

1. USE 3/4" DRILL IN WOOD POLE TO PROVIDE HOLE FOR 5/8" BOLTS.

TYPICAL DEAD-ENDINGS OR GUYING

Addendum No. 01
ID 1077-02-73
Added Sheet 131B
September 7, 2018

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

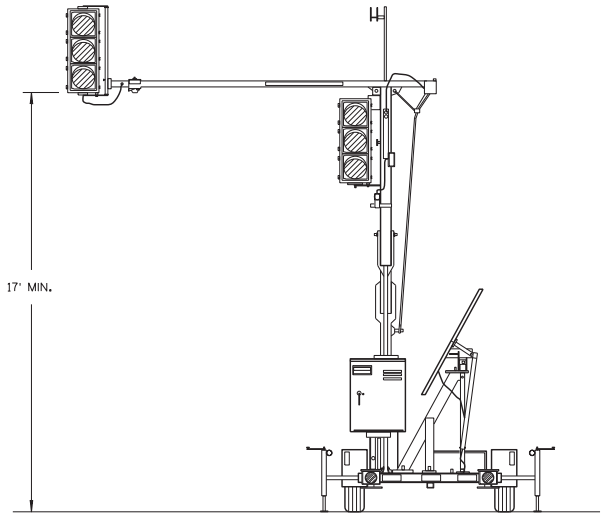
APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER
FHWA

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S.D.D. 9 G 2-5b

S.D.D. 9 G 2-5b

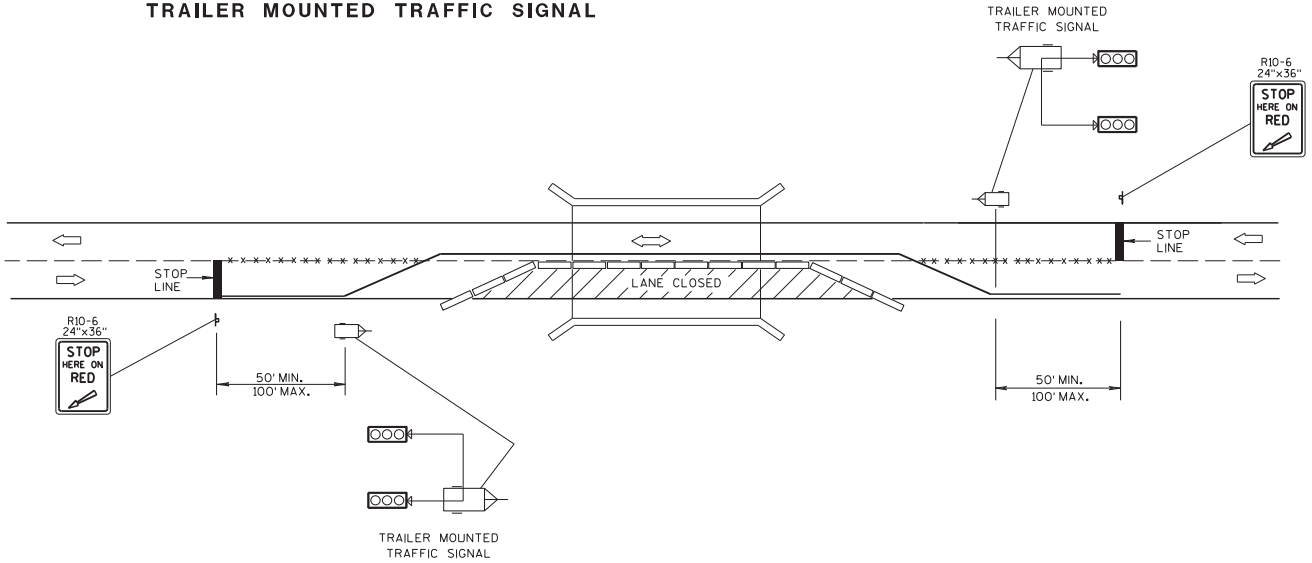


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15 D 33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW

Addendum No. 01
ID 1077-02-73
Added Sheet 131C
September 7, 2018

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER
FHWA

6

6

S.D.D. 9 G 2-5c

S.D.D. 9 G 2-5c