AS-BUILT PLAN

lax November 2014

PROJECT ID: 1071-06-77/78

WITH: N/A

COUNTY: LA CROSSE

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 = 770

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MN STATE LN - USH 53/35
(ROUND LAKE BR TO BLACK RIVER BR/WB RDWY)

IH 90

LA CROSSE COUNTY

STATE PROJECT NUMBER
1071-06-77

USH 53/35 - THEATER RD
(BLACK RIVER BR TO THEATER RD/WB RDWY)

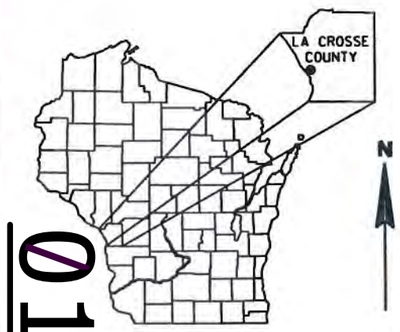
IH 90

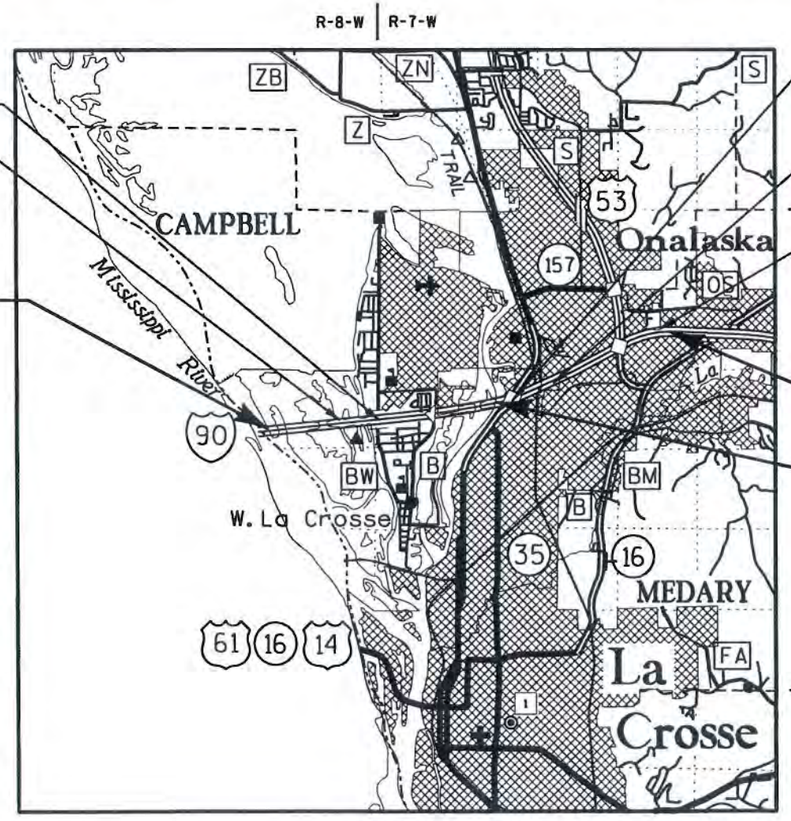
LA CROSSE COUNTY

STATE PROJECT NUMBER
1071-06-78

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1071-06-77	WISC 2014381	1
1071-06-78	WISC 2014382	1

CONTRACTOR: LUNDA CONSTRUCTION
PROJECT LEADER: CHRIS DAHL
PROJECT MANAGER: ROB WINTERTON
PROJECT SUPERVISOR: JIM SAVOLDELLI
DATE STARTED: MARCH 12, 2015
DATE COMPLETED: NOVEMBER 25, 2015





STRUCTURE B-32-51 (1071-06-77)
(CTH BW OVER IH 90)

STRUCTURE B-32-49 (1071-06-77)
(IH 90 WB OVER FRENCH SLOUGH)

BEGIN PROJECT 1071-06-77
STA 71+97.29 WB
Y 148808.02
X 436988.28

STRUCTURE B-32-219 (1071-06-78)
(IH 90 WB OVER USH 53/STH 35)

STRUCTURE B-32-108 (1071-06-78)
(IH 90 WB OVER 12TH AVE)

T-17-N
T-16-N

STRUCTURE B-32-190 (1071-06-78)
(IH 90 WB OVER THEATER RD)

END PROJECT 1071-06-78
STA 313+65.00 WB

END PROJECT 1071-06-77
STA 168+77.55 WB
BEGIN PROJECT 1071-06-78
STA 174+40.02 WB
Y 150241.74
X 447122.10

T-16-N
T-15-N

DESIGN DESIGNATION

		IH 90	CTH BW
A.A.D.T. (2016)	=	43,700	3,600
A.A.D.T. (2036)	=	56,700	3,900
D.H.V.	=	---	675
D.D.	=	60/40	58/42
T.	=	16.6%	2.6%
DESIGN SPEED	=	70 MPH (75 MPH)	30 MPH
ESALS	=	27,637,800	328,500

CONVENTIONAL SYMBOLS

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

PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (955.36)
- CULVERT (Profile View)

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

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE (1071-06-77) = 1.833 MI.
TOTAL NET LENGTH OF CENTERLINE (1071-06-78) = 2.637 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), LA CROSSE COUNTY.

ORIGINAL PLANS PREPARED BY
CH2MHILL
MILWAUKEE, WISCONSIN
CTH BW AND SIGNING PLAN

WISCONSIN
JOEL D. JURSS
E-32142
WAUKESHA WI
PROFESSIONAL ENGINEER
DATE: 7/24/14

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES

WISCONSIN
MARK R. PETERSEN
E-36785
EAU CLAIRE WI
PROFESSIONAL ENGINEER
DATE: 7/24/14

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT / K SINGH
Designer	AYRES ASSOCIATES/CH2M HILL
Project Manager	ANTHONY VANDER WIELEN
Regional Examiner	ANTHONY VANDER WIELEN
Regional Supervisor	JOE GREGAS

APPROVED FOR THE DEPARTMENT
DATE: 7/28/14 (Signature)

E

2

UTILITIES

CHARTER COMMUNICATIONS - COMMUNICATION LINE
2701 DANIELS STREET
MADISON, WI 53718
ATTN: PERRY MCCLELLAN
(715) 370-7140
perry.mcclellan@chartercom.com

XCEL ENERGY - ELECTRIC & GAS/PETROLEUM
3215 COMMERCE STREET
LA CROSSE, WI 53718
ATTN: ALEX LUECK
(715) 789-3625
alex.j.lueck@xcelenergy.com

XCEL ENERGY - ELECTRICAL TRANSMISSION
8701 MONICELLO LANE
MAPLE GROVE, MN 55369
ATTN: CHARLIE DIENGER
(715) 737-1576
charles.g.dienger@xcelenergy.com

* WISCONSIN DOT ITS - FTMS SIGNS
433 WEST ST PAUL AVENUE, SUITE 300
MILWAUKEE, WI 53203
ATTN: DEAN BEEKMAN, PE
(414) 227-2154
Dean.Beekman@dot.wi.gov

CENTURYLINK - COMMUNICATION LINE
333 NORTH FRONT STREET
P.O. BOX 4800
LA CROSSE, WI 54602
ATTN: BRIAN STELPLUGH
(608) 796-5142
brian.stelplugh@centurylink.com

DAIRYLAND POWER COOPERATIVE - ELECTRIC
3200 EAST AVENUE SOUTH
P.O. BOX 817
LA CROSSE, WI 54602
ATTN: KURT CHILDS
(608) 787-1241
kdc@dairynet.com

CITY OF LA CROSSE - WATER/SEWER
400 LA CROSSE STREET
LA CROSSE, WI 54601
ATTN: RANDY TURTENWALD
(608) 789-7505
turtenwaldr@cityoflacrosse.org

CITY OF ONALASKA - WATER/SEWER
415 MAIN STREET
ONALASKA, WI 54650
ATTN: JIM PRINDLE
(608) 281-9545
jprindle@cityofonalaska.com

CITY OF ONALASKA - STORM SEWER
415 MAIN STREET
ONALASKA, WI 54650
ATTN: DAN MCDONALD
(608) 780-1150
dmcdonald@cityofonalaska.com

* WISCONSIN DOT RWIS PROGRAM - COMMUNICATION TOWER
P.O. BOX 7986
ROOM 501
MADISON, WI 53707
ATTN: MIKE ADAMS
(608) 266-5004
Michael.Adams@dot.wi.gov

WISCONSIN INDEPENDENT NETWORK - COMMUNICATION LINE
800 WISCONSIN STREET SUITE 219
EAU CLAIRE, WI 54703
ATTN: JOHN LOUIS
(715) 838-4012
jlouis@wins.net

WINDSTREAM KDL, INC - COMMUNICATION LINE
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005
ATTN: JIM KOSTUCH
(262) 792-7938
James.Kostuch@windstream.com

* NOT A MEMBER OF DIGGERS HOTLINE

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

RAILROAD COORDINATOR

BNSF RAILWAY COMPANY
80-44TH AVENUE NE
MINNEAPOLIS, MN 55421
ATTN: DAVID A JOHNSON
(763) 782-3495
david.johnson@bnsf.com

AIRPORT COORDINATOR

4802 SHEBOYGAN AVENUE 701
MADISON, WI 53705
ATTN: WENDY A HOTTENSTEIN
(608) 261-6278
wendy.hottenstein@dot.wi.gov

ENVIRONMENTAL COORDINATOR

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
LA CROSSE SERVICE CENTER
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
ATTN: KAREN KALVELAGE
(608) 785-9115
karen.kalvelage@wisconsin.gov

DOT CONTACT

SOUTHWEST REGION - LA CROSSE OFFICE
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
ATTN: ANTHONY VANDER WIELEN, PE - PROJECT MANAGER
(608) 789-7878
anthony.vanderwielen@dot.wi.gov

DESIGN CONTACTS

AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: MARK PETERSEN, PE
(715) 831-3161
petersenm@ayresassociates.com

CH2M HILL
135 SOUTH 84TH STREET, SUITE 400
MILWAUKEE, WI 53214
ATTN: JOEL JURSS, PE
(414) 847-0353
joel.jurss@ch2m.com

GENERAL NOTES

REMOVALS
NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

DRAINAGE
PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL FIELD VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

GRADING/EROSION CONTROL
EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION. THE LOCATION FOR EBS WILL BE DETERMINED BY THE ENGINEER.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS.

BROKEN CONCRETE CONTAINING REBAR SHALL NOT BE USED AS RIPRAP OR RIPRAP HEAVY.

SEED, INSTALL EROSION MAT, AND FERTILIZE ALL SALVAGED TOPSOILED AREAS WITHIN 7 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

DO NOT APPLY FERTILIZER WITHIN 20 FEET OF A WATER BODY OR WETLAND.

MISCELLANEOUS
A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE IN ACCORDANCE WITH THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN.

STATIONING, DISTANCES, AND OFFSETS FOR SIGNS SHOWN IN THE PLANS ARE APPROXIMATE AND THE FINAL LOCATION OF SIGNS ARE TO BE DETERMINED BY THE ENGINEER.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER ITEMS TRAFFIC CONTROL COVERING SIGNS TYPE I OR TRAFFIC CONTROL COVERING SIGNS TYPE II.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

EXISTING ELEVATIONS SHALL BE VERIFIED IN THE FIELD.

ASPHALTIC SURFACE TEMPORARY SHALL BE CONSTRUCTED IN A SINGLE LAYER.

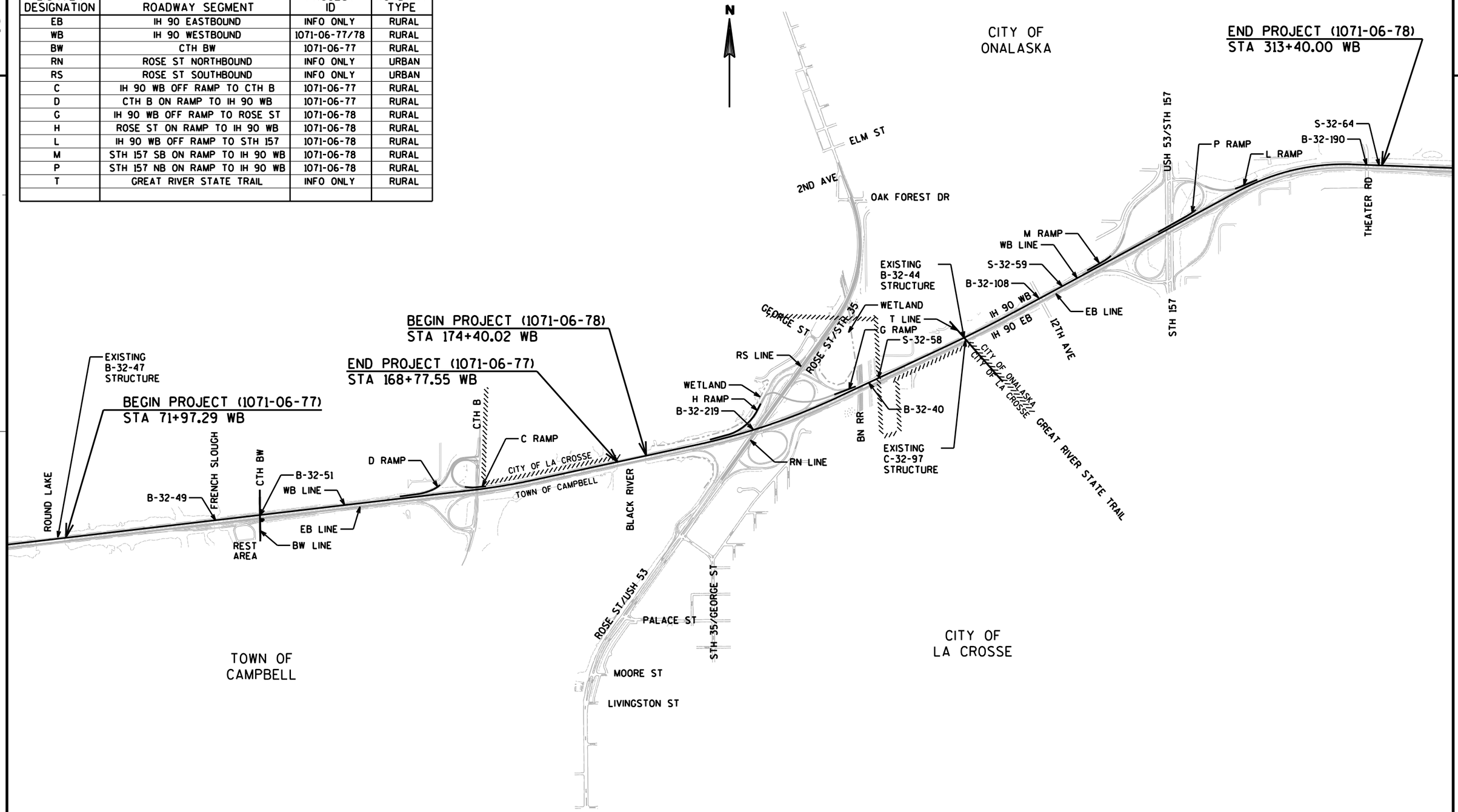
HMA PAVEMENTS

TOTAL LAYER THICKNESS	LAYERS	ASPHALTIC MATERIAL
3 1/2"	3.5" UPPER LAYER	PG 58-28
4"	2" UPPER LAYER	PG 58-28
	2" LOWER LAYER	PG 58-28
5"	2" UPPER LAYER	PG 58-28
	3" LOWER LAYER	PG 58-28

PLACE PAVEMENT FOR TEMPORARY PURPOSES IN A SINGLE LIFT.

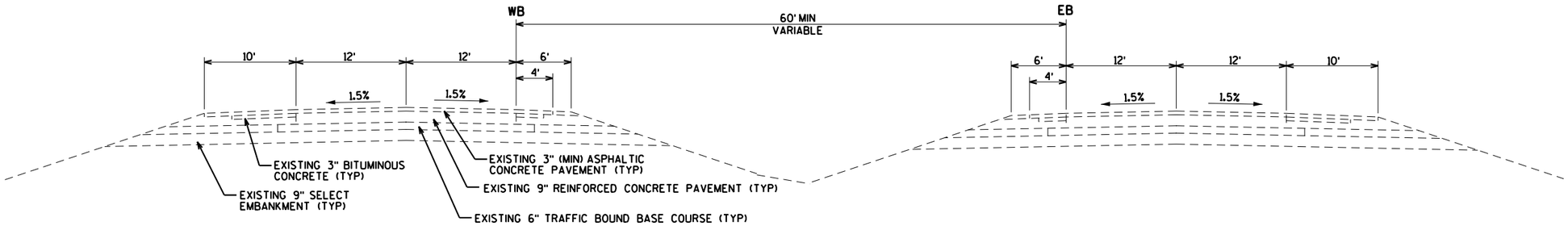
2

ALIGNMENT DESIGNATION	ROADWAY SEGMENT	PROJECT ID	ROADWAY TYPE
EB	IH 90 EASTBOUND	INFO ONLY	RURAL
WB	IH 90 WESTBOUND	1071-06-77/78	RURAL
BW	CTH BW	1071-06-77	RURAL
RN	ROSE ST NORTHBOUND	INFO ONLY	URBAN
RS	ROSE ST SOUTHBOUND	INFO ONLY	URBAN
C	IH 90 WB OFF RAMP TO CTH B	1071-06-77	RURAL
D	CTH B ON RAMP TO IH 90 WB	1071-06-77	RURAL
G	IH 90 WB OFF RAMP TO ROSE ST	1071-06-78	RURAL
H	ROSE ST ON RAMP TO IH 90 WB	1071-06-78	RURAL
L	IH 90 WB OFF RAMP TO STH 157	1071-06-78	RURAL
M	STH 157 SB ON RAMP TO IH 90 WB	1071-06-78	RURAL
P	STH 157 NB ON RAMP TO IH 90 WB	1071-06-78	RURAL
T	GREAT RIVER STATE TRAIL	INFO ONLY	RURAL



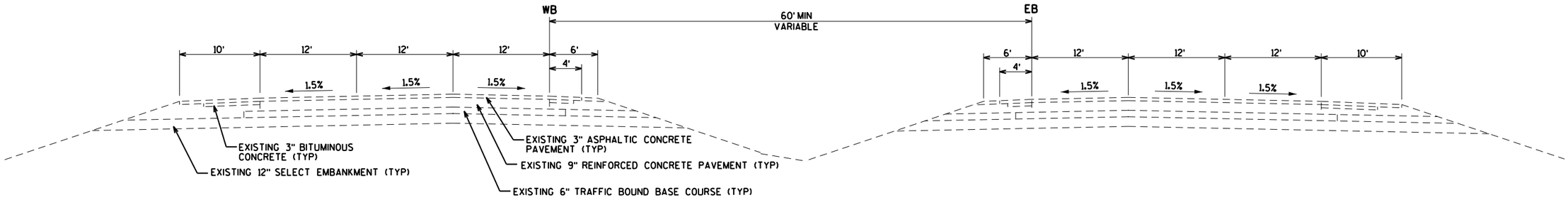
PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	PROJECT OVERVIEW	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_020201_po.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:1600
WISDOT/CADDS SHEET 42



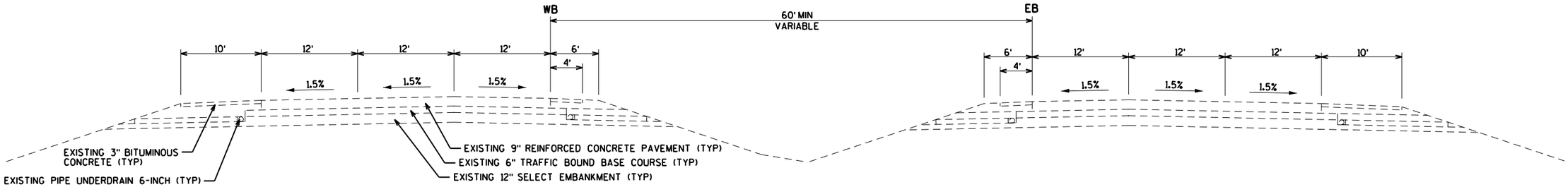
TYPICAL EXISTING SECTION - IH 90 W/O AUXILARY LANES

WEST OF THEATER ROAD



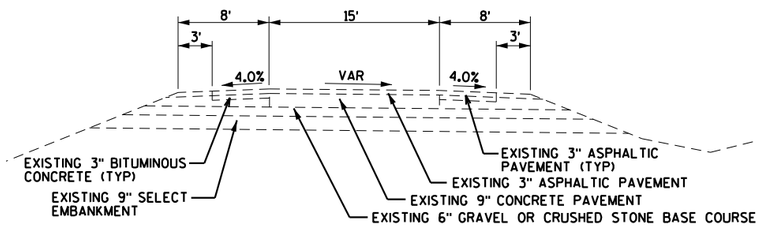
TYPICAL EXISTING SECTION - IH 90 W/AUXILARY LANES

WEST OF THEATER ROAD

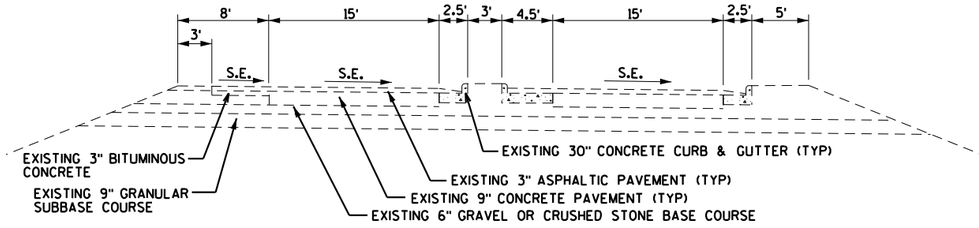


TYPICAL EXISTING SECTION - IH 90 W/AUXILARY LANES

EAST OF THEATER ROAD



TYPICAL EXISTING SECTION - RAMPS

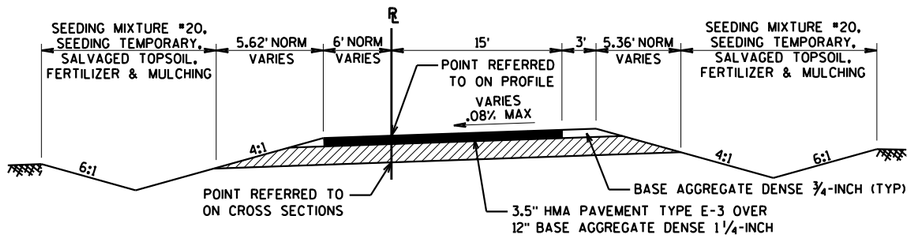


TYPICAL EXISTING SECTION - COMBINED RAMP-LOOP

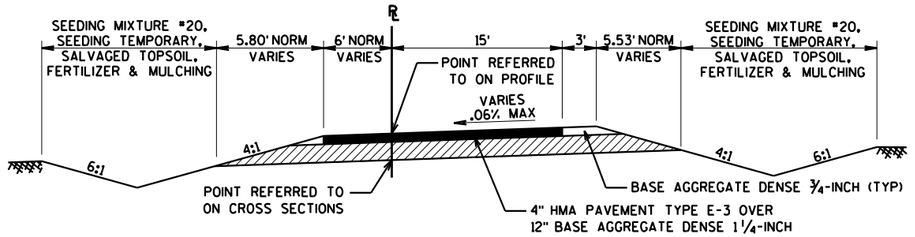
PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TYPICAL SECTIONS - EXISTING	SHEET 4	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_020301_ts.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

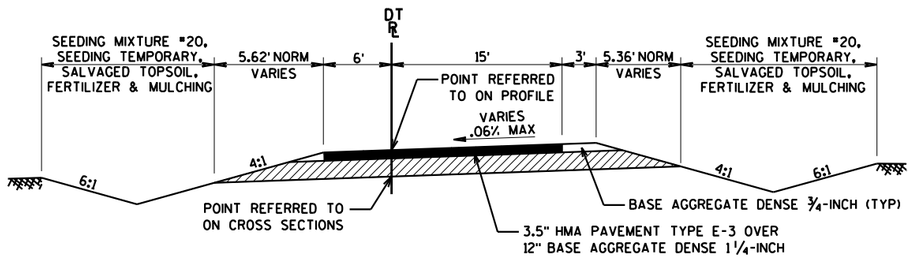


TYPICAL FINISHED SECTION - TEMPORARY RAMP
'CT' RAMP
'CU' RAMP

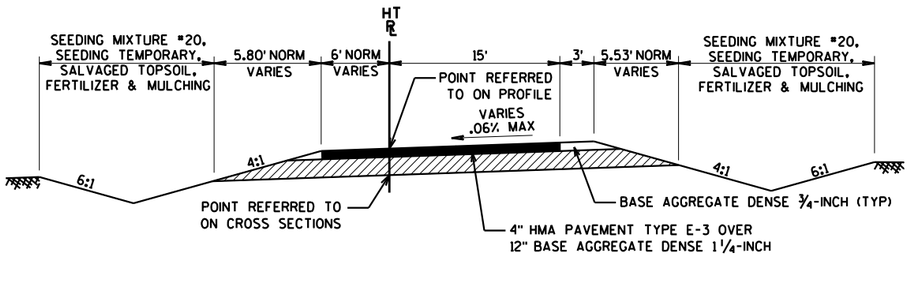


TYPICAL FINISHED SECTION - TEMPORARY RAMPS
'GT' RAMP
'LT' RAMP

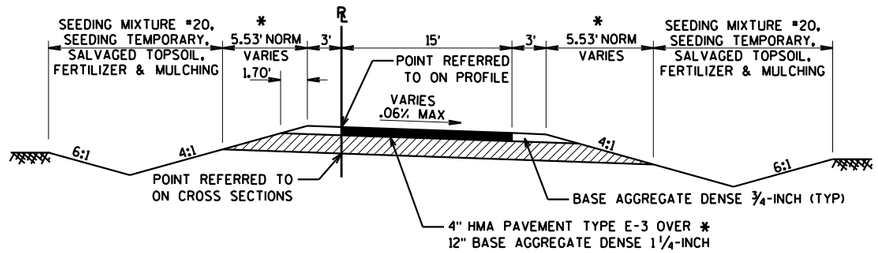
FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED BY OTHERS



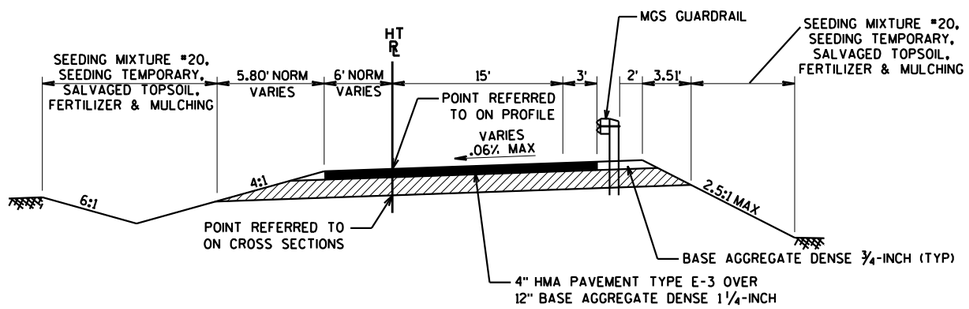
TYPICAL FINISHED SECTION - TEMPORARY RAMPS
'DT' RAMP



TYPICAL FINISHED SECTION - 'HT' TEMPORARY RAMP

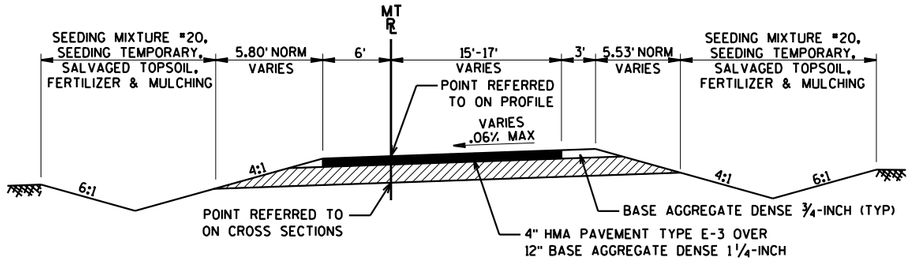


TYPICAL FINISHED SECTION - TEMPORARY RAMPS
'DU' RAMP (3.5" HMA/5.36' GRAVEL RUNOUT) *
'HU' RAMP
'HV' RAMP



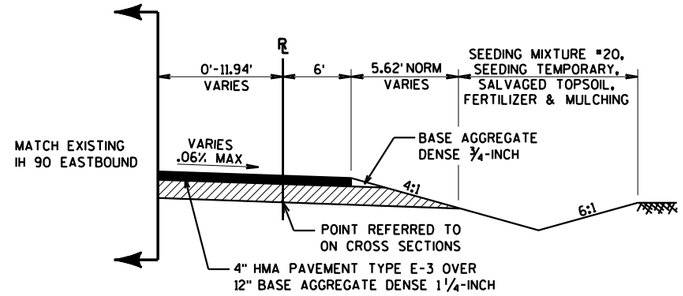
TYPICAL FINISHED SECTION - 'HT' TEMPORARY RAMP W/MGS

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TYPICAL SECTIONS - EXISTING PREVIOUSLY CONSTRUCTED	SHEET 5	E



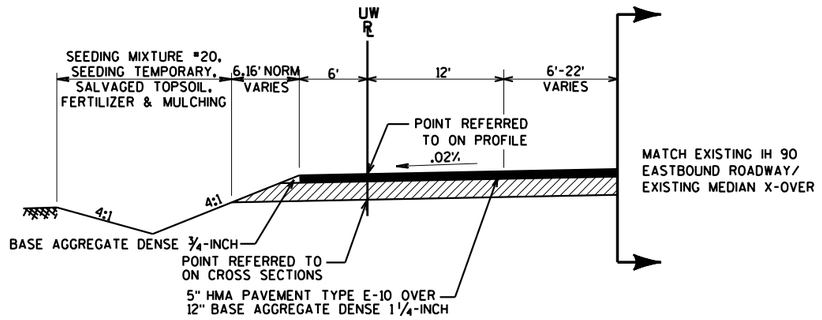
TYPICAL FINISHED SECTION - 'MT' TEMPORARY RAMP

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED BY OTHERS



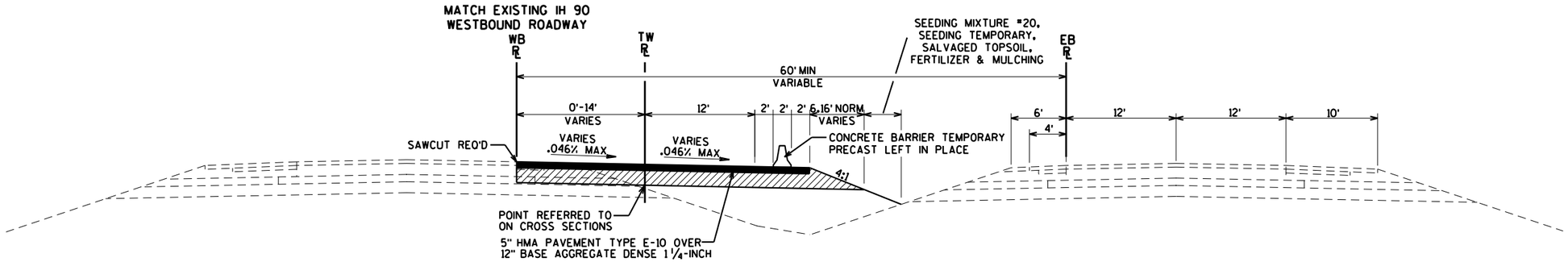
TYPICAL FINISHED SECTION - TEMPORARY WIDENING

'FT' RAMP
'JT' RAMP



TYPICAL FINISHED SECTION - 'UW' LINE (TEMPORARY CROSSOVER)

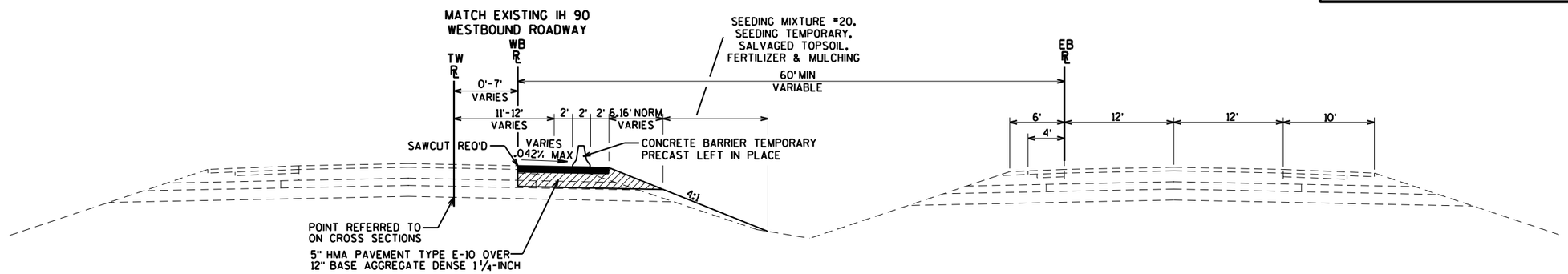
PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TYPICAL SECTIONS - EXISTING PREVIOUSLY CONSTRUCTED	SHEET 6	E



TYPICAL FINISHED SECTION - 'TW' LINE (IH 90 WB WIDENING)

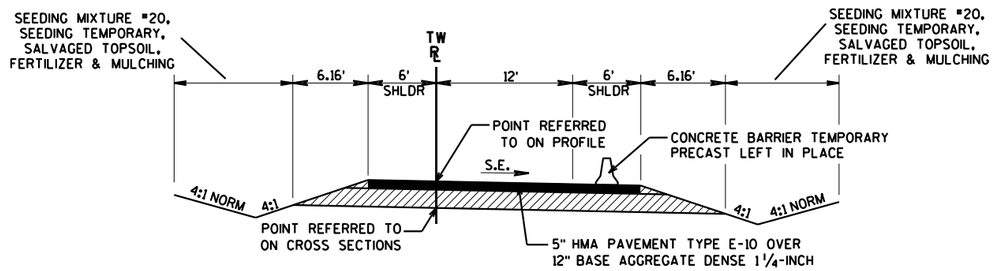
STA 226+61.00 TW - STA 230+65.00 TW
STA 288+50.00 TW - STA 307+38.00 TW

**FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS**



TYPICAL FINISHED SECTION - 'TW' LINE (IH 90 WB WIDENING)

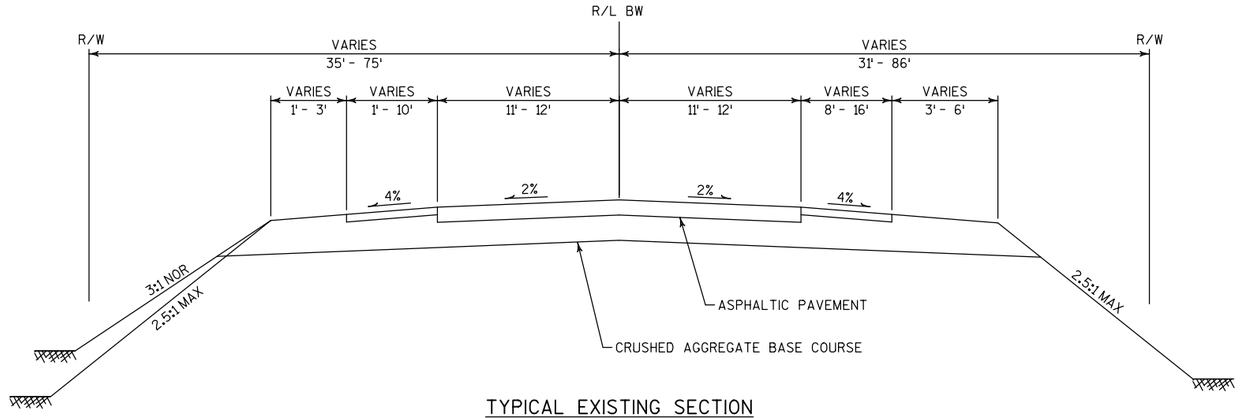
STA 230+65.00 TW - STA 251+50.00 TW
STA 307+00.00 TW - STA 318+72.07 TW



TYPICAL FINISHED SECTION - 'TW' LINE (CROSSOVER)

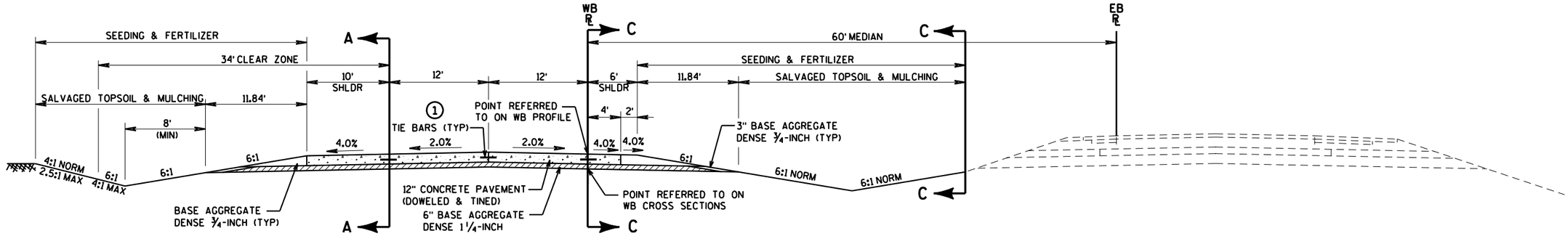
STA 251+50.00 TW - STA 260+18.86 TW
STA 279+17.49 TW - STA 288+50.00 TW

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TYPICAL SECTIONS - EXISTING PREVIOUSLY CONSTRUCTED	SHEET 7	E



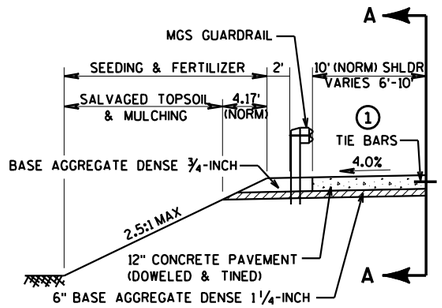
TYPICAL EXISTING SECTION
CTH BW
STA 17+00 BW TO STA 23+00 BW

PROJECT NO:1071-06-77	HWY:IH 90	COUNTY:LA CROSSE	TYPICAL SECTION - CTH BW	SHEET 8	E



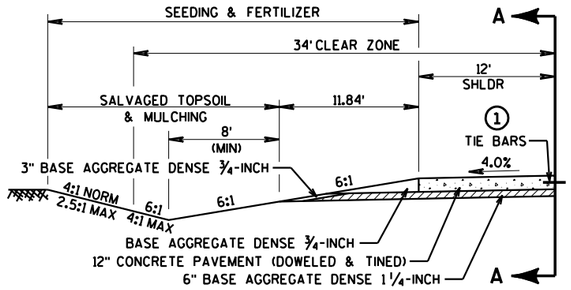
TYPICAL FINISHED SECTION - IH 90

STA 71+97.29 WB - STA 143+35.77 WB
STA 154+39.84 WB - STA 183+19.39 WB
STA 209+23.49 WB - STA 287+95.71 WB
STA 308+27.77 WB - STA 313+40.00 WB



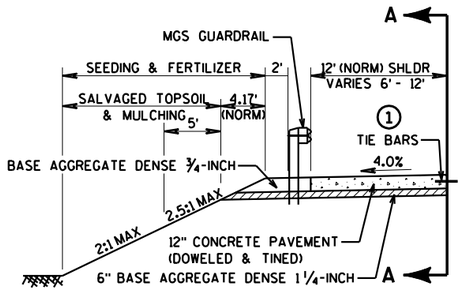
SECTION A-A

STA 71+97.29 WB - STA 97+60.00 WB



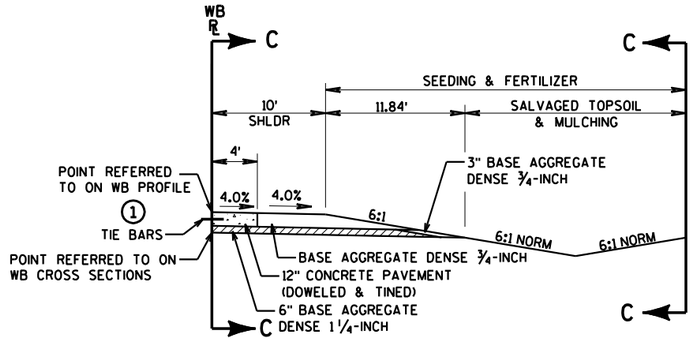
SECTION A-A

STA 105+88.57 WB - STA 117+97.12 WB
STA 133+57.22 WB - STA 143+35.77 WB
STA 275+50.00 WB - STA 287+95.71 WB



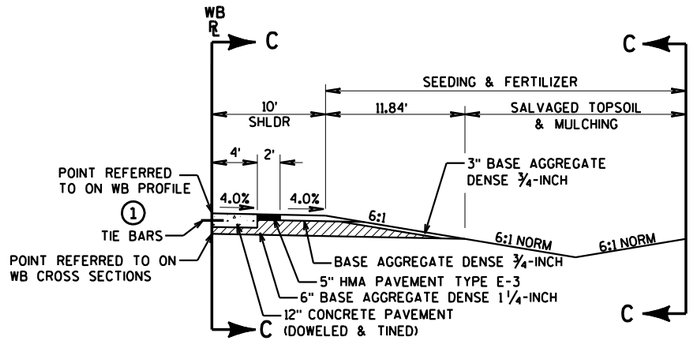
SECTION A-A

STA 154+39.84 WB - STA 174+99.57 WB



SECTION C-C (10' MEDIAN SHOULDER)

STA 209+23.49 WB - STA 228+00.00 WB



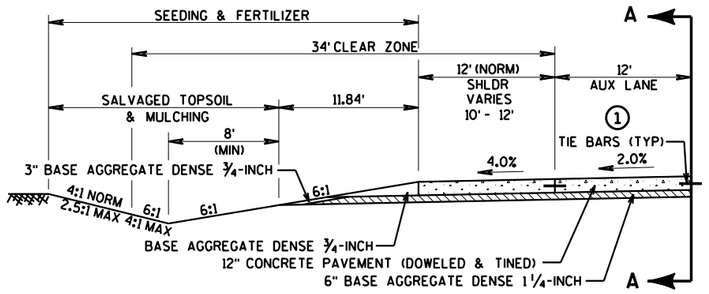
SECTION C-C (10' MEDIAN SHOULDER)

STA 228+00.00 WB - STA 247+77.00 WB

1 TIE BARS ARE INCIDENTAL TO CONCRETE PAVEMENT (UNLESS DRILLED INTO EXISTING PAVEMENT)

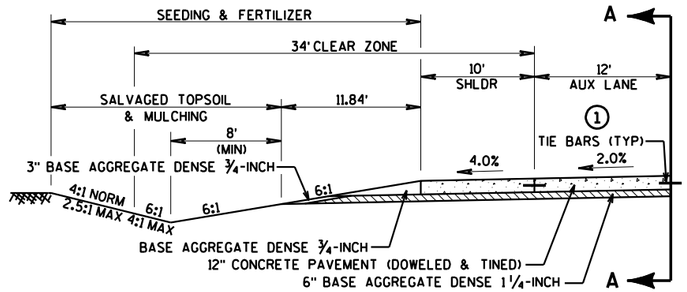
NOTE: ROUTE AND SEAL ALL CONCRETE/ASPHALT JOINTS (SEE DETAIL). NOT REQUIRED ON TEMPORARY JOINTS.

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TYPICAL SECTIONS - IH 90 - TANGENT SECTIONS	SHEET 9	E



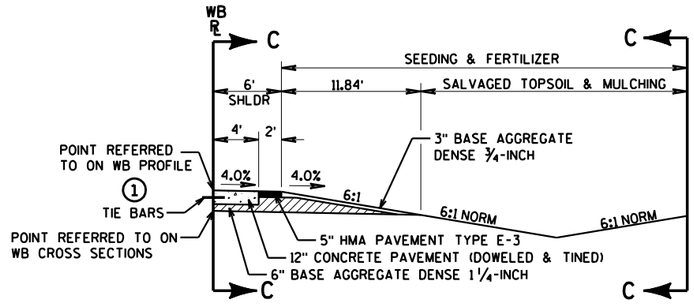
SECTION A-A (AT AUXILIARY LANE)

STA 209+23.49 WB - STA 260+92.53 WB
STA 308+27.77 WB - STA 310+07.00 WB



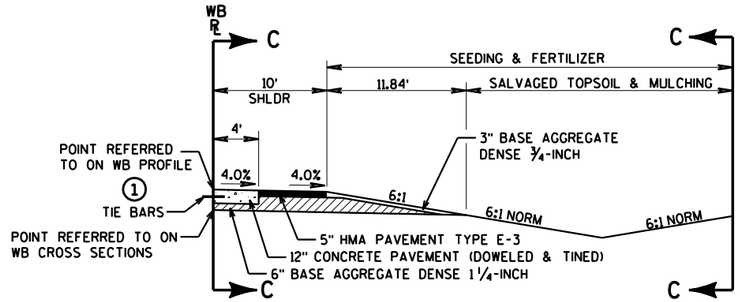
SECTION A-A (AT AUXILIARY LANE)

STA 310+07.00 WB - STA 313+40.00 WB



SECTION C-C (6' MEDIAN SHOULDER)

STA 247+77.00 WB - STA 287+95.71 WB

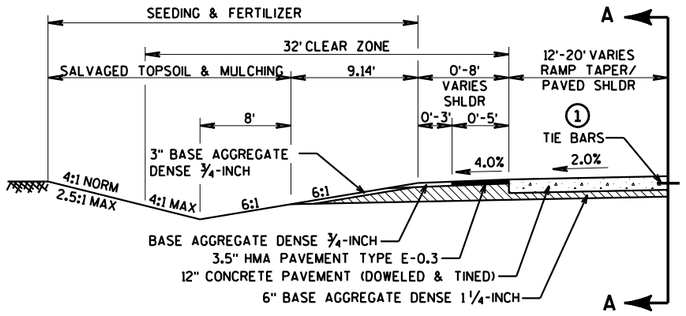


SECTION C-C (10' MEDIAN SHOULDER)

STA 308+27.77 WB - STA 313+40.00 WB

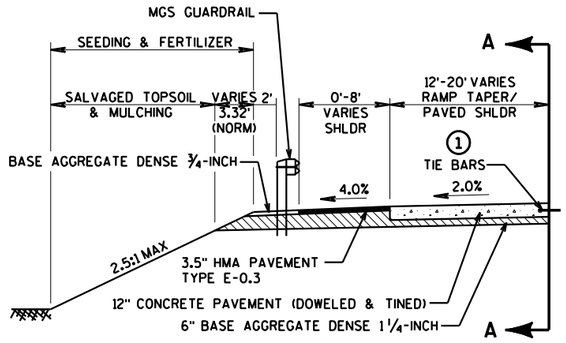
① TIE BARS ARE INCIDENTAL TO CONCRETE PAVEMENT (UNLESS DRILLED INTO EXISTING PAVEMENT)

NOTE: ROUTE AND SEAL ALL CONCRETE/ASPHALT JOINTS (SEE DETAIL). NOT REQUIRED ON TEMPORARY JOINTS.



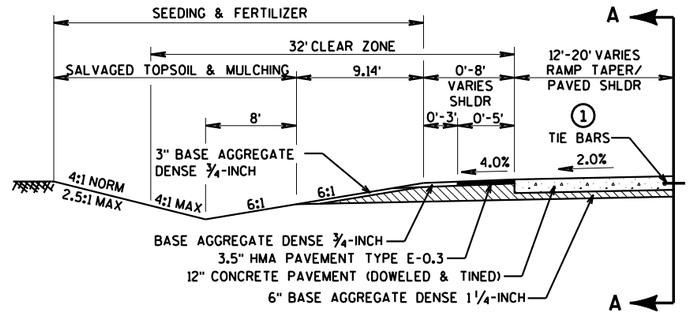
SECTION A-A (AT C & D PARALLEL RAMPS)

STA 117+97.12 WB - STA 133+57.22 WB



SECTION A-A (AT H PARALLEL RAMP)

STA 174+99.57 WB - STA 183+14.39 WB

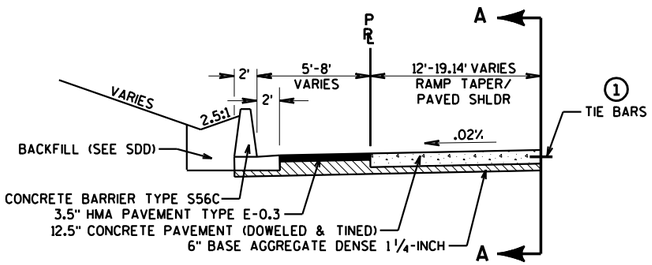


SECTION A-A (AT P RAMP)

STA 260+92.53 WB - STA 273+25.00 WB

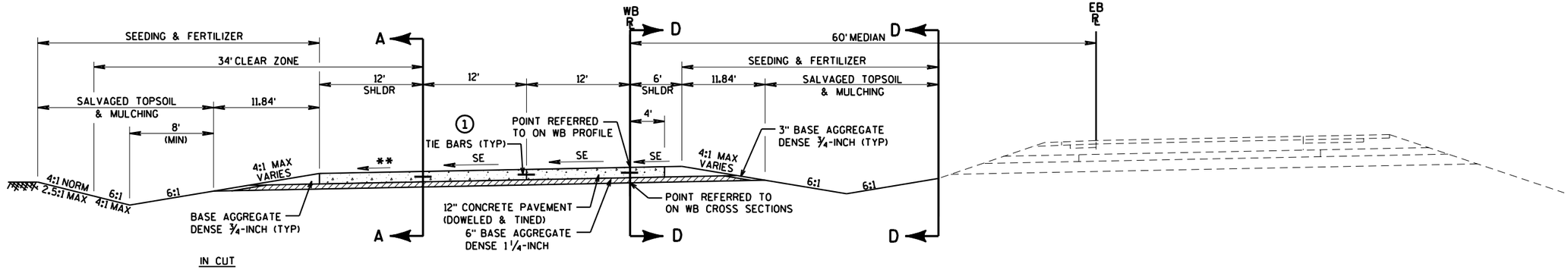
① TIE BARS ARE INCIDENTAL TO CONCRETE PAVEMENT (UNLESS DRILLED INTO EXISTING PAVEMENT)

NOTE: ROUTE AND SEAL ALL CONCRETE/ASPHALT JOINTS (SEE DETAIL). NOT REQUIRED ON TEMPORARY JOINTS.



SECTION A-A (AT P RAMP)

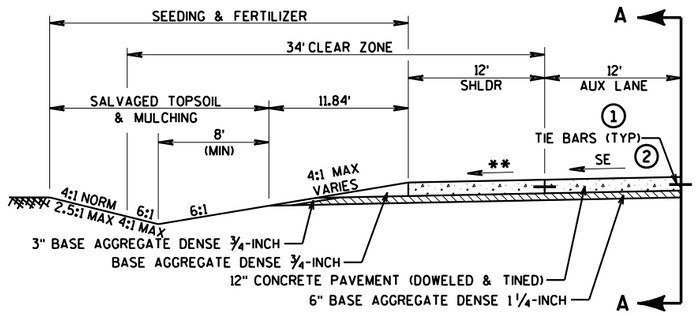
STA 273+25.00 WB - STA 275+50.00 WB



IN CUT

TYPICAL SUPERELEVATED FINISHED SECTION - IH 90

STA 143+35.77 WB - STA 154+39.84 WB
STA 183+19.39 WB - STA 209+23.49 WB
STA 287+95.71 WB - STA 308+27.77 WB



SUPERELEVATION SECTION A-A (AT AUXILIARY LANE)

STA 287+95.71 WB - STA 308+27.77 WB

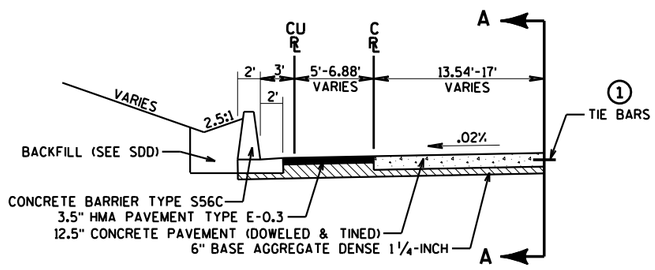
SECTION D-D (10' MEDIAN SHOULDER)

STA 195+72.00 WB - STA 209+23.49 WB

1. TIE BARS ARE INCIDENTAL TO CONCRETE PAVEMENT (UNLESS DRILLED INTO EXISTING PAVEMENT)
2. AUXILARY LANE ON HIGH SIDE OF CURVE HAS A MAX SUPERELEVATION OF 4%

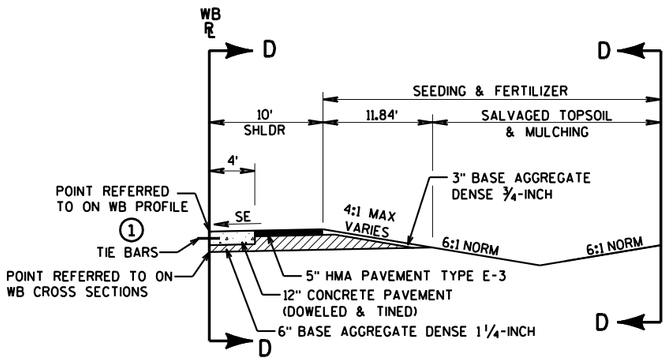
NOTE: ROUTE AND SEAL ALL CONCRETE/ASPHALT JOINTS (SEE DETAIL). NOT REQUIRED ON TEMPORARY JOINTS.

** THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTION EQUALS THE SUPERELEVATION RATE WHEN THE SUPERELEVATION RATE IS GREATER THAN 4%. IF THE SUPERELEVATION RATE IS LESS THAN OR EQUAL TO 4%. THE LOW SIDE SHOULDER SLOPE IS 4%. HIGH SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION RATE. SEE SUPERELEVATION TABLES FOR SE



SECTION A-A (AT C PARALLEL RAMP)

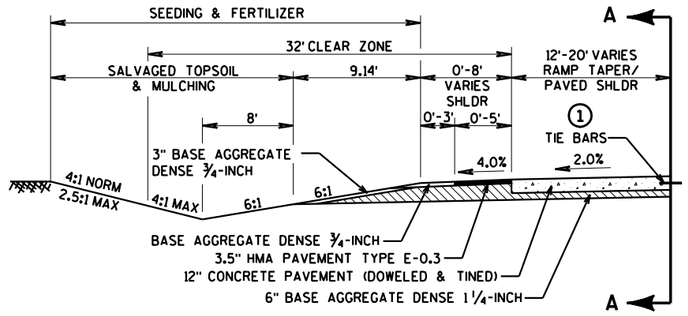
STA 143+64.21 WB - STA 145+05.00 WB



SECTION D-D (10' MEDIAN SHOULDER)

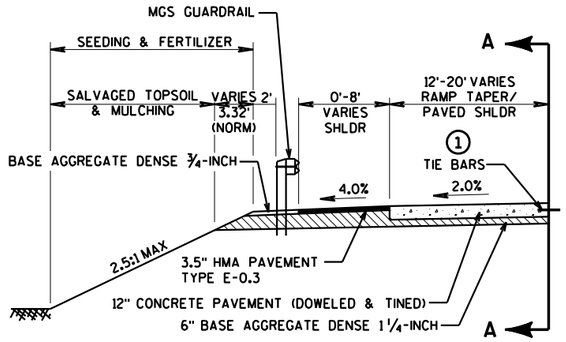
STA 287+95.71 WB - STA 308+27.77 WB

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TYPICAL SECTIONS - IH 90 - CURVED SECTIONS	SHEET 12	E



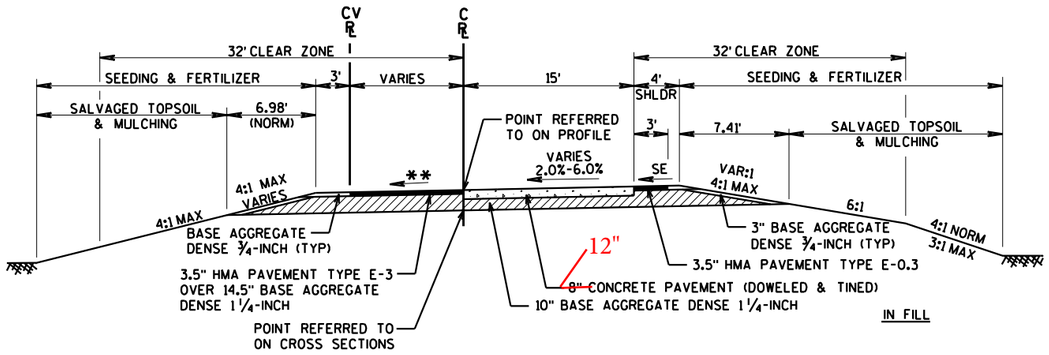
SECTION A-A (AT C & D PARALLEL RAMPS)

STA 145+05.00 WB - STA 153+22.09 WB



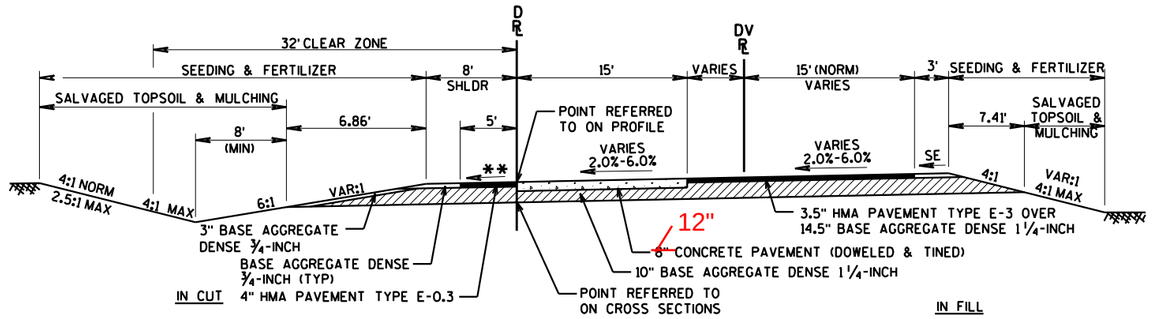
SECTION A-A (AT H PARALLEL RAMP)

STA 183+14.39 WB - STA 188+59.65 WB



TYPICAL FINISHED SECTION - C RAMP

STA 142+00.00 C - STA 143+65.97 C



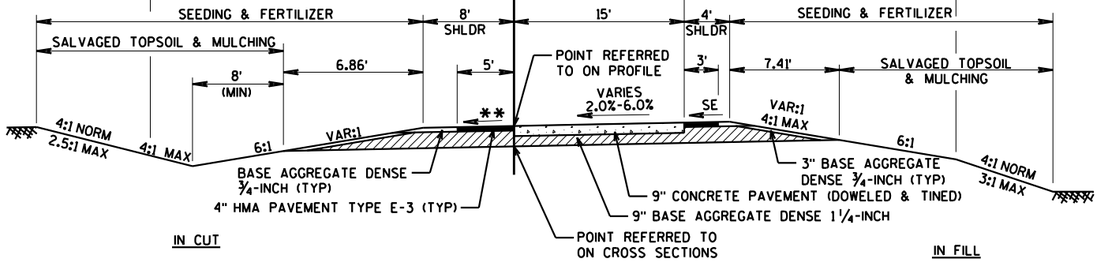
TYPICAL FINISHED SECTION - D RAMP

STA 133+57.28 D - STA 138+00.00 D

** THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTION EQUALS THE SUPERELEVATION RATE WHEN THE SUPERELEVATION RATE IS GREATER THAN 4%. IF THE SUPERELEVATION RATE IS LESS THAN OR EQUAL TO 4%. THE LOW SIDE SHOULDER SLOPE IS 4%. HIGH SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION RATE. SEE SUPERELEVATION TABLES FOR SE

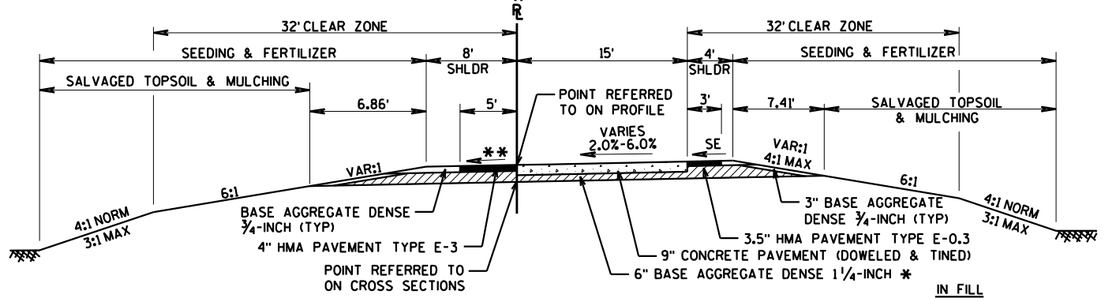
① TIE BARS ARE INCIDENTAL TO CONCRETE PAVEMENT (UNLESS DRILLED INTO EXISTING PAVEMENT)

NOTE: ROUTE AND SEAL ALL CONCRETE/ASPHALT JOINTS (SEE DETAIL)



TYPICAL FINISHED SECTION - RAMPS

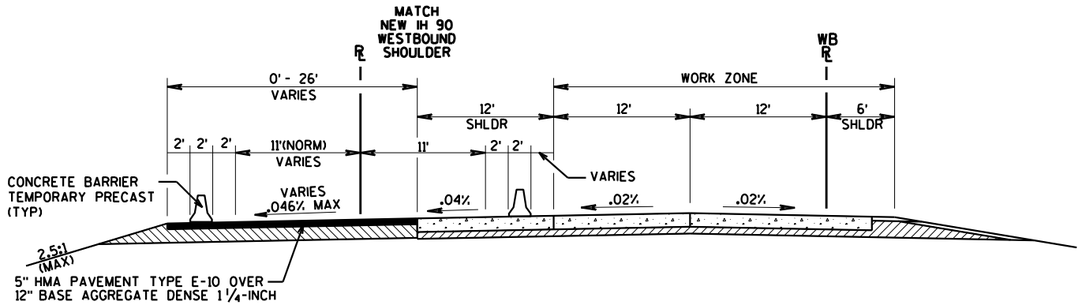
STA 208+79.02 G - STA 212+78.55 G (MATCH GU RAMP LEFT)
STA 287+33.41 L - STA 289+82.61 L
STA 260+92.59 M - STA 262+82.31 M
STA 275+50.00 P - STA 279+63.06 P



TYPICAL FINISHED SECTION - H RAMP

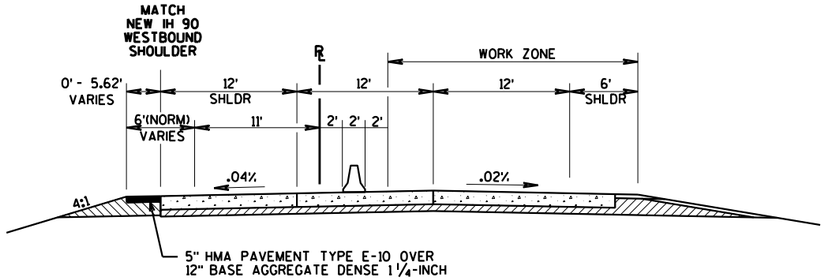
STA 188+58.82 H - STA 197+00.00 H

* 9" BASE AGGREGATE DENSE WHERE H RAMP TIES INTO WB LANES



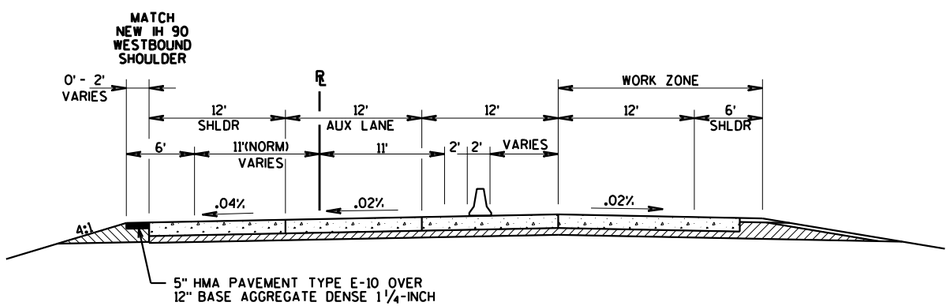
TYPICAL FINISHED SECTION - 'UW' LINE (IH 90 WB WIDENING)

STA 225+14.22 UW - STA 256+82.75 UW



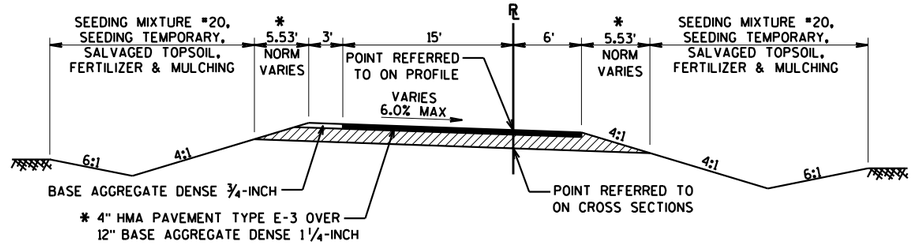
TYPICAL FINISHED SECTION - 'UW' LINE (IH 90 WB WIDENING)

STA 284+68.67 UW - STA 287+56.61 UW



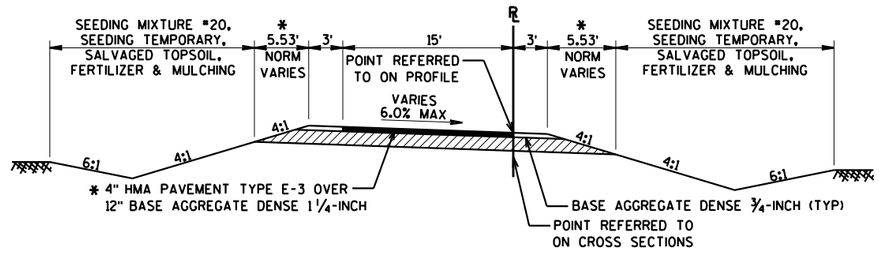
TYPICAL FINISHED SECTION - 'UW' LINE (IH 90 WB WIDENING)

STA 289+42.74 UW - STA 291+54.60 UW



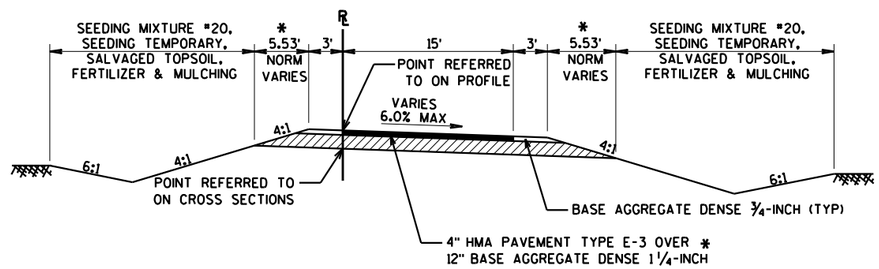
TYPICAL FINISHED SECTION - TEMPORARY RAMPS

'AT' RAMP (3.5" HMA/5.62' GRAVEL RUNOUT) *
'ET' RAMP
'JV' RAMP
'KU' RAMP



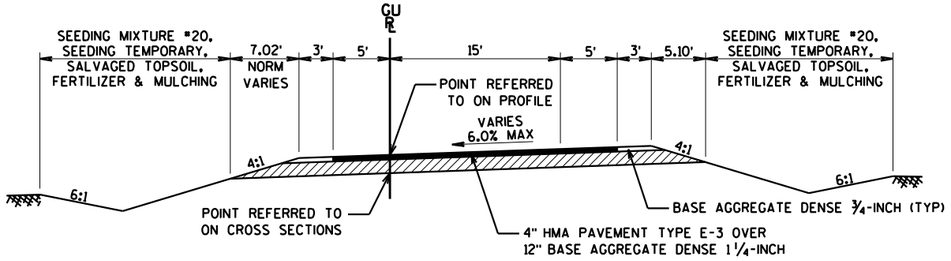
TYPICAL FINISHED SECTION - TEMPORARY RAMPS

'AU' RAMP (3.5" HMA/4.12' GRAVEL RUNOUT) *
'BU' RAMP (3.5" HMA/4.78' GRAVEL RUNOUT) *
'EU' RAMP
'FU' RAMP
'KT' RAMP



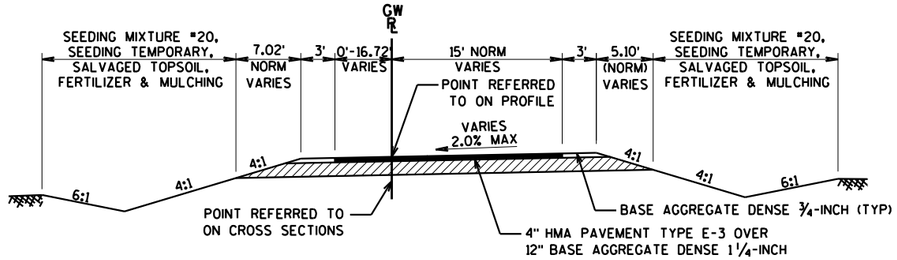
TYPICAL FINISHED SECTION - TEMPORARY RAMPS

'DU' RAMP (3.5" HMA/5.36' GRAVEL RUNOUT) *
'HU' RAMP (6:1 SLOPES/8.68' GRAVEL RUNOUT) *
'HV' RAMP
'HW' RAMP

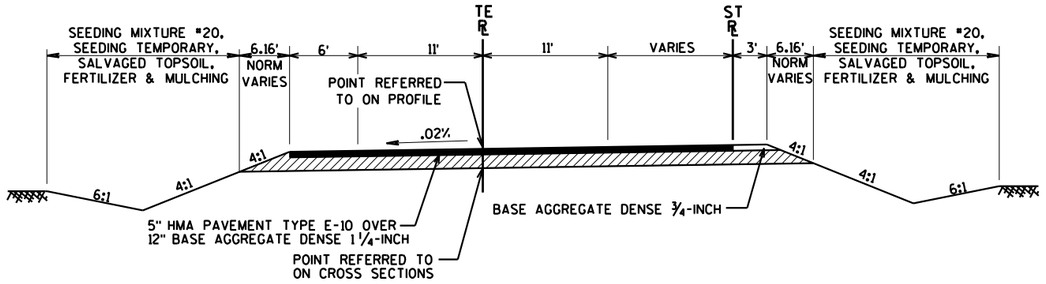


TYPICAL FINISHED SECTION - 'GU' TEMPORARY RAMP

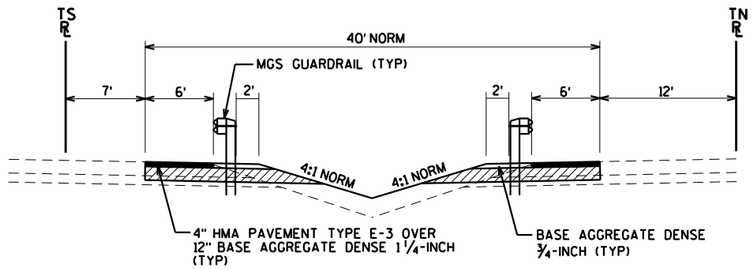
REPLACE EXISTING SHOULDER
STA 210+50 GU STA 211+42 GU, RT



TYPICAL FINISHED SECTION - 'GW' TEMPORARY RAMP

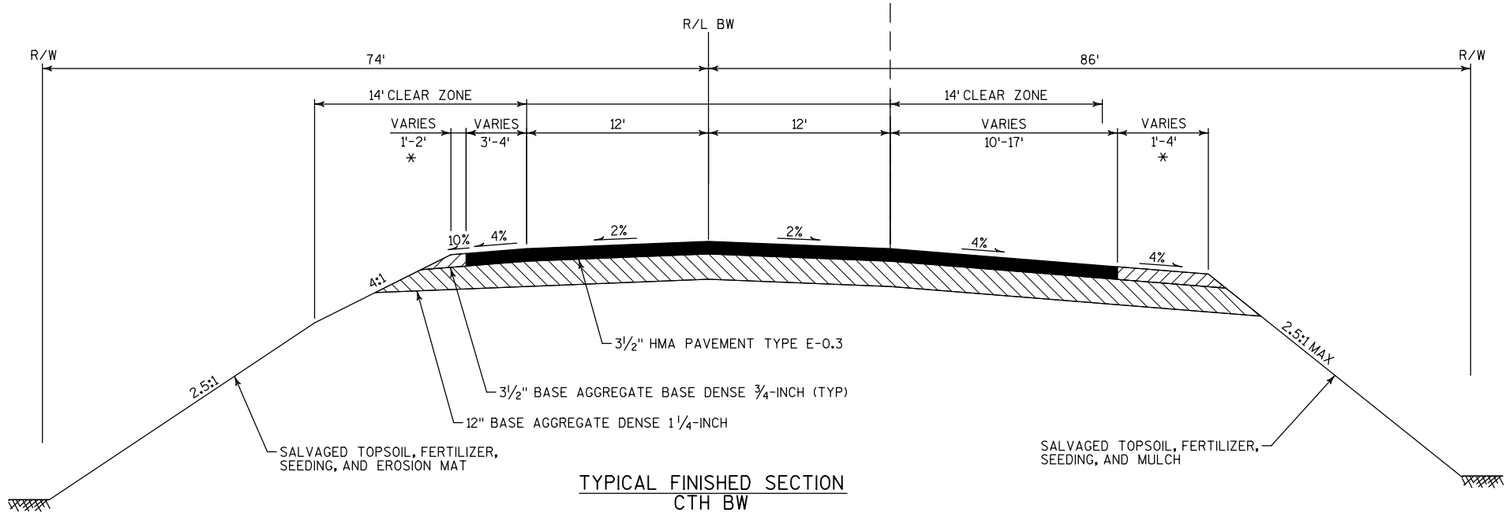


TYPICAL FINISHED SECTION - 'TE' LINE (TEMPORARY CROSSOVER)

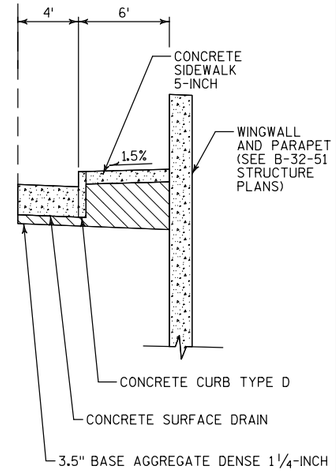


TYPICAL FINISHED SECTION - TN & TS LINE (ROSE TEMPORARY WIDENING)

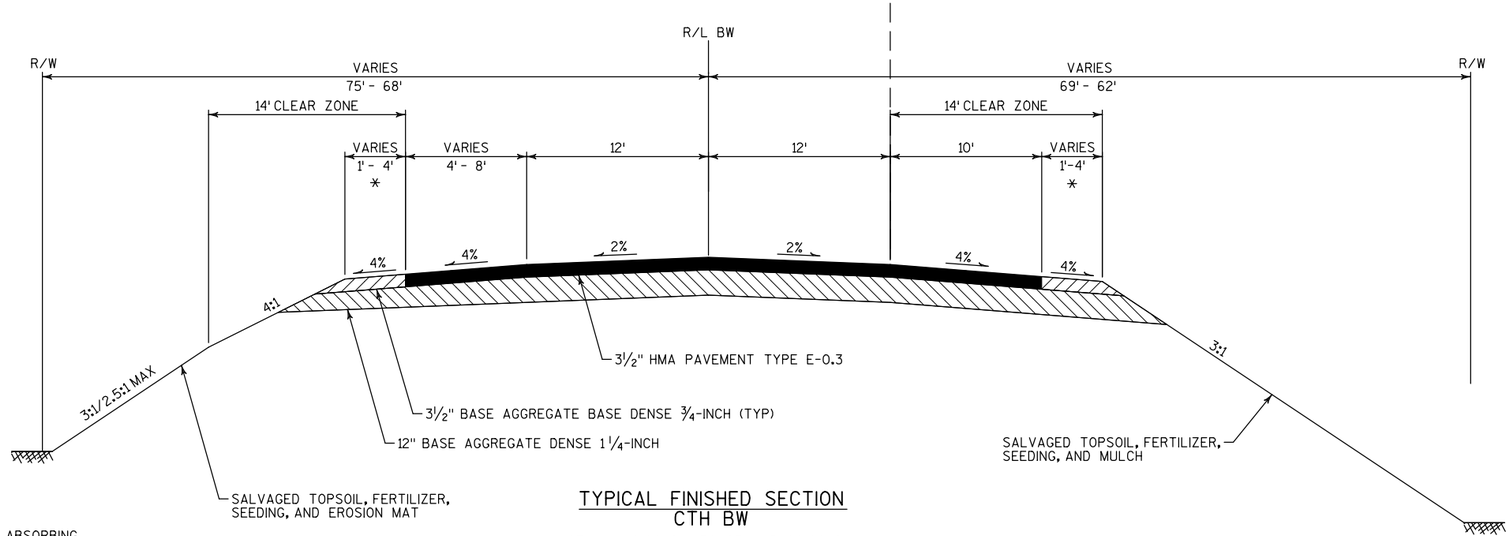
PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TYPICAL SECTIONS - TEMPORARY	SHEET 16	E



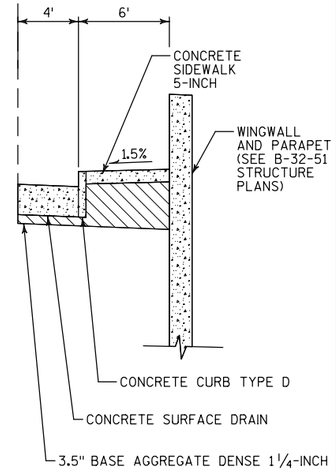
TYPICAL FINISHED SECTION
CTH BW
STA 17+00.00 BW TO STA 18+69.00 BW



STA 18+79.00 BW TO STA 18+88.16 BW



TYPICAL FINISHED SECTION
CTH BW
STA 21+49.00 BW TO STA 23+00.00 BW



STA 21+33.99 BW TO STA 21+43.00 BW

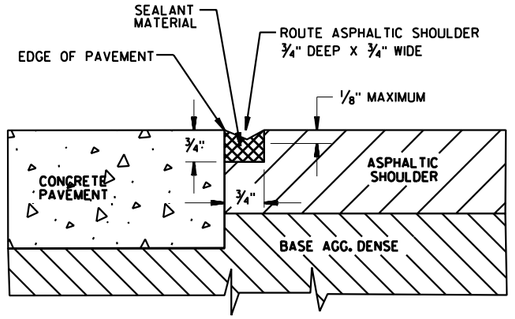
* SEE SDD "MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)" FOR SHOULDER GRADING AT BEAM GUARD LOCATIONS AS SHOWN IN THE PLANS

PROJECT NO:1071-06-77	HWY:IH 90	COUNTY:LA CROSSE	TYPICAL SECTIONS - CTH BW	SHEET 17	E

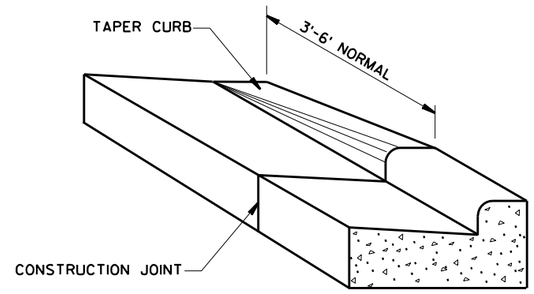
RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

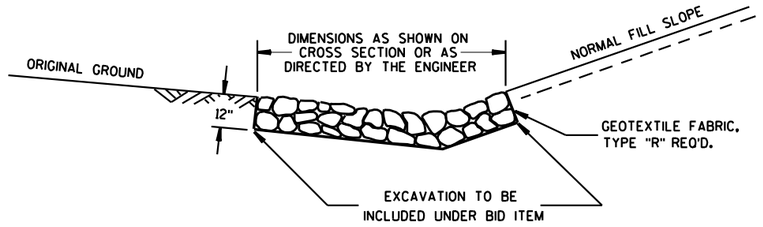
TOTAL PROJECT AREA = 232.5 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 73.5 ACRES



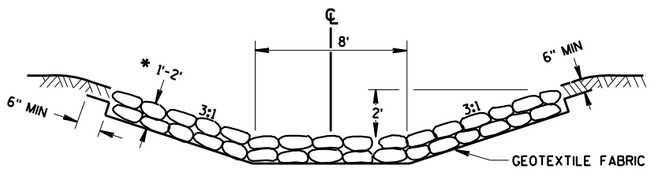
ROUTE AND SEAL DETAIL



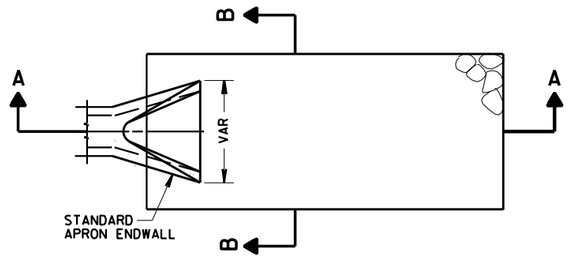
DETAIL OF CURB & GUTTER TERMINI

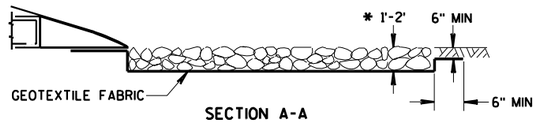


DETAIL FOR RIPRAP IN DITCHES



SECTION B-B



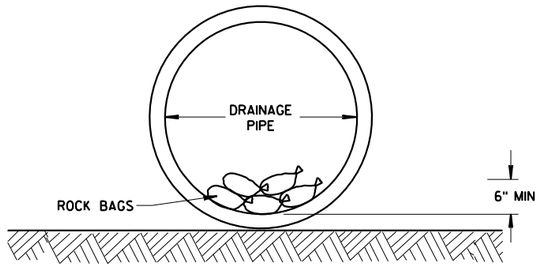


SECTION A-A

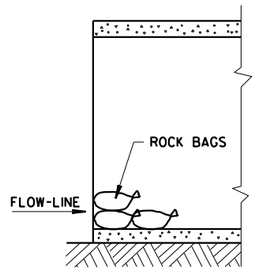
RIPRAP AND GEOTEXTILE FABRIC DETAIL

NOTE: SEE MISCELLANEOUS QUANTITIES FOR TYPE OF RIPRAP AND GEOTEXTILE FABRIC TO BE USED.

* USE 1'MIN DEPTH FOR RIPRAP LIGHT
USE 2'MIN DEPTH FOR RIPRAP HEAVY



FRONT VIEW



SECTION VIEW

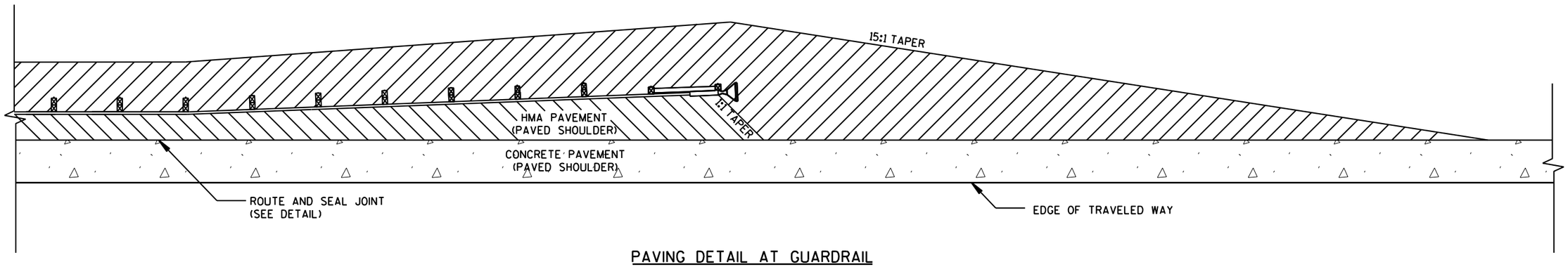
CULVERT PIPE CHECKS
(PLACE AT ALL INLET ENDS OF ALL PIPES)

BASE AGGREGATE DENSE (SHOULDER)

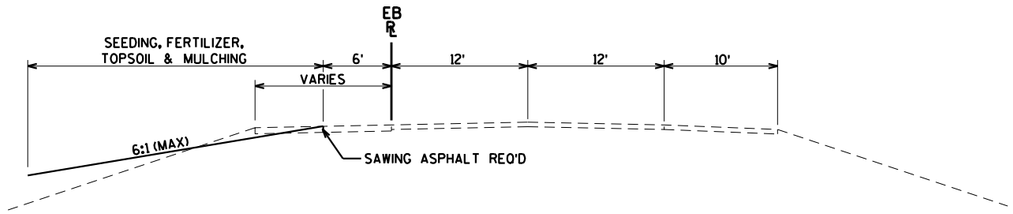
3.5" HMA PAVEMENT E-0.3 (SHOULDER)

CONCRETE PAVEMENT (SHOULDER)
(SEE TYPICAL SECTIONS)

NOTE: SEE STANDARD DETAIL DRAWINGS
MIDWEST GUARDRAIL SYSTEM SYSTEM (MGS) GUARDRAIL
MIDWEST GUARDRAIL SYSTEM (MGS) EAT
MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION
FOR ADDITIONAL INFORMATION

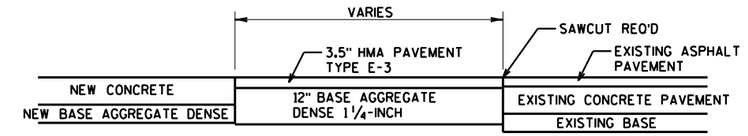


PAVING DETAIL AT GUARDRAIL



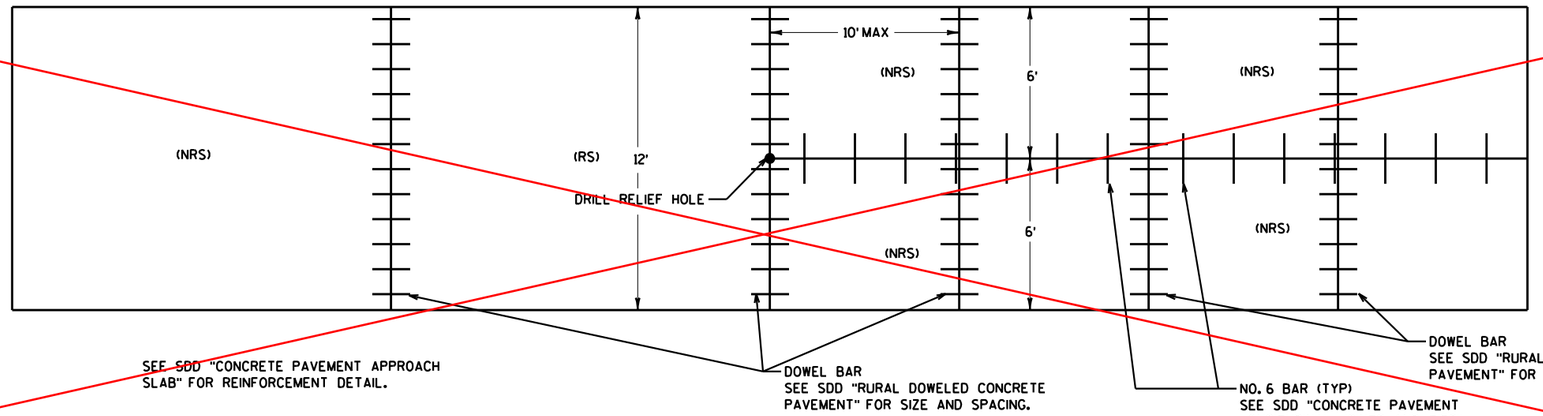
TEMPORARY PAVEMENT REMOVAL DETAIL
EB MEDIAN SHOULDER

NOTE: REMOVING OF TEMPORARY PAVEMENT PAID FOR AS "COMMON EXCAVATION".



SEE TYPICAL SECTIONS FOR
ADDITIONAL INFORMATION.

RAMP TIE IN DETAIL

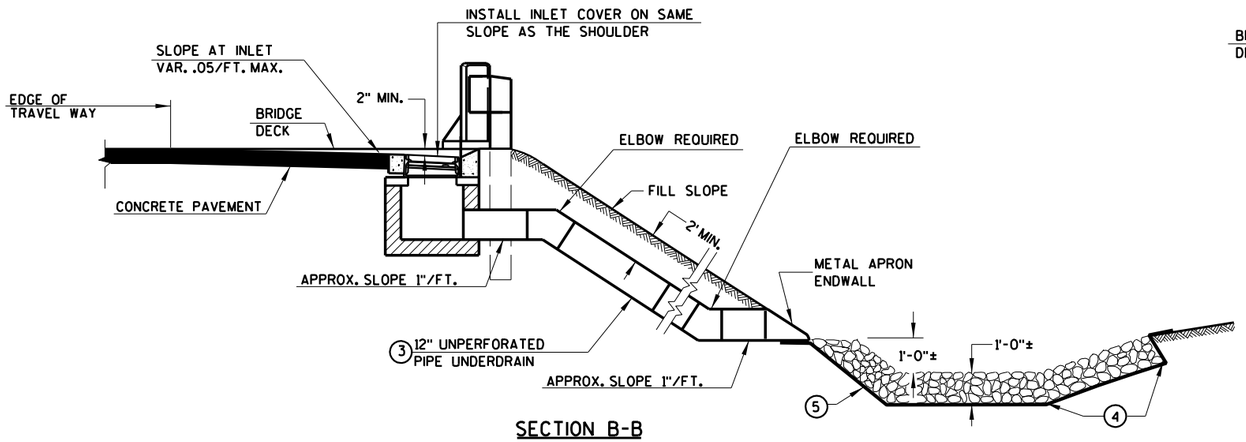


HALF PANEL CONCRETE PAVEMENT DETAIL

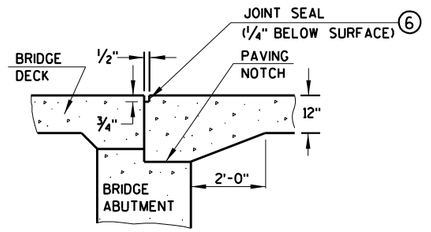
ALL WORK SHOWN IS CONSIDERED INCIDENTAL
TO CONCRETE PAVEMENT BID ITEMS.

(RS) = REINFORCED CONCRETE SLAB
(NRS) = NON-REINFORCED CONCRETE SLAB

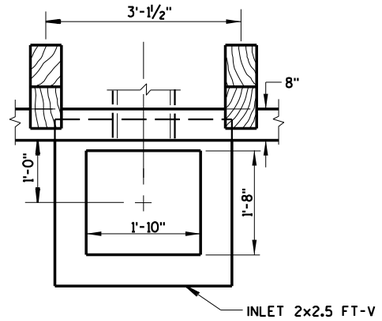
PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	CONSTRUCTION DETAILS	SHEET 19	E



SECTION B-B



SECTION D-D

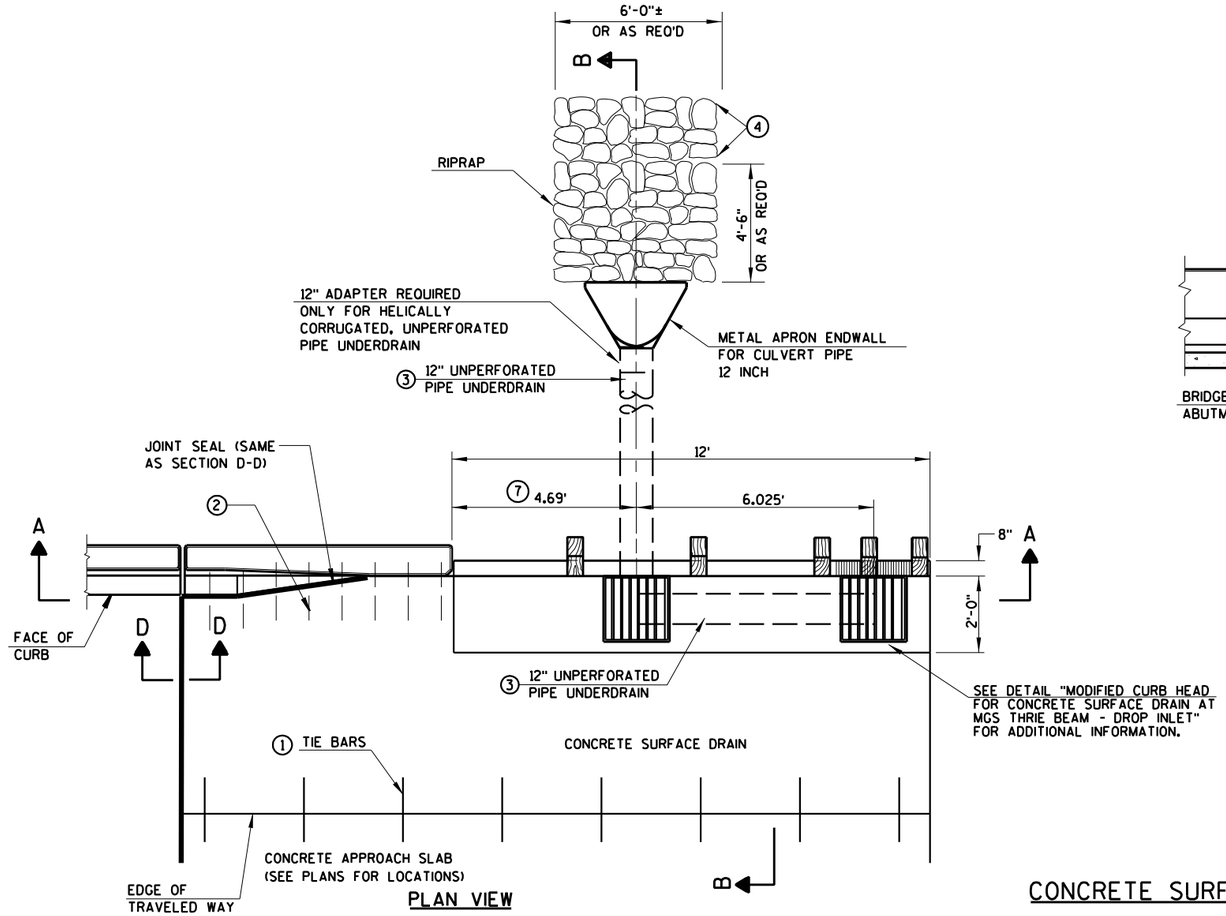


PLAN VIEW

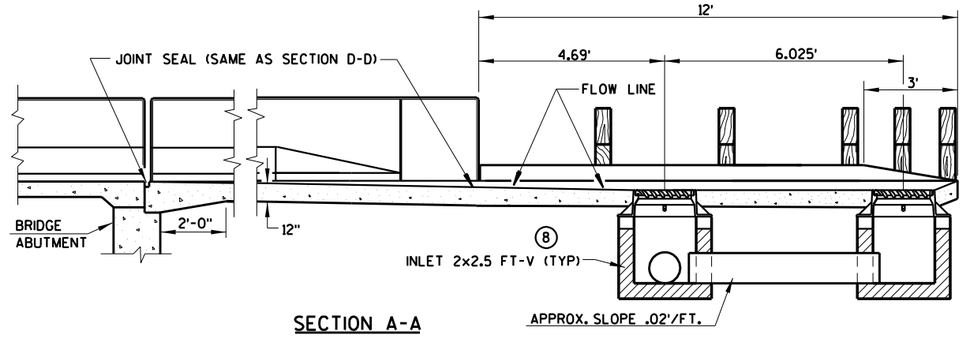
GENERAL NOTES

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

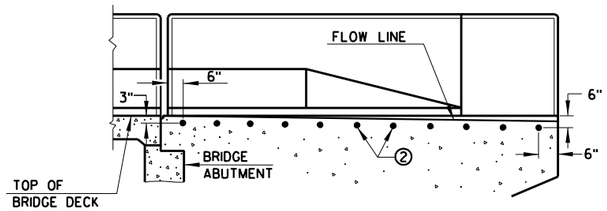
1. NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS.
2. NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. THE PIPE UNDERDRAIN MAY BE CORRUGATED POLYETHYLENE, POLYVINYL CHLORIDE, OR ACRYLONITRILE-BUTADIENE-STYRENE DRAINAGE PIPES AS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2.
4. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
5. GEOTEXTILE FABRIC, TYPE R
6. HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.
7. THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE MGS THRIE BEAM TRANSITION. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½". LAYOUT POSTS BEFORE INLET INSTALLATION.
8. SEE STANDARD DETAIL DRAWINGS "INLET AND MANHOLE COVERS" AND "INLETS 2x2-FT, 2x2.5-FT, 2x3-FT, & 2.5x3-FT" FOR ADDITIONAL DETAILS.



PLAN VIEW



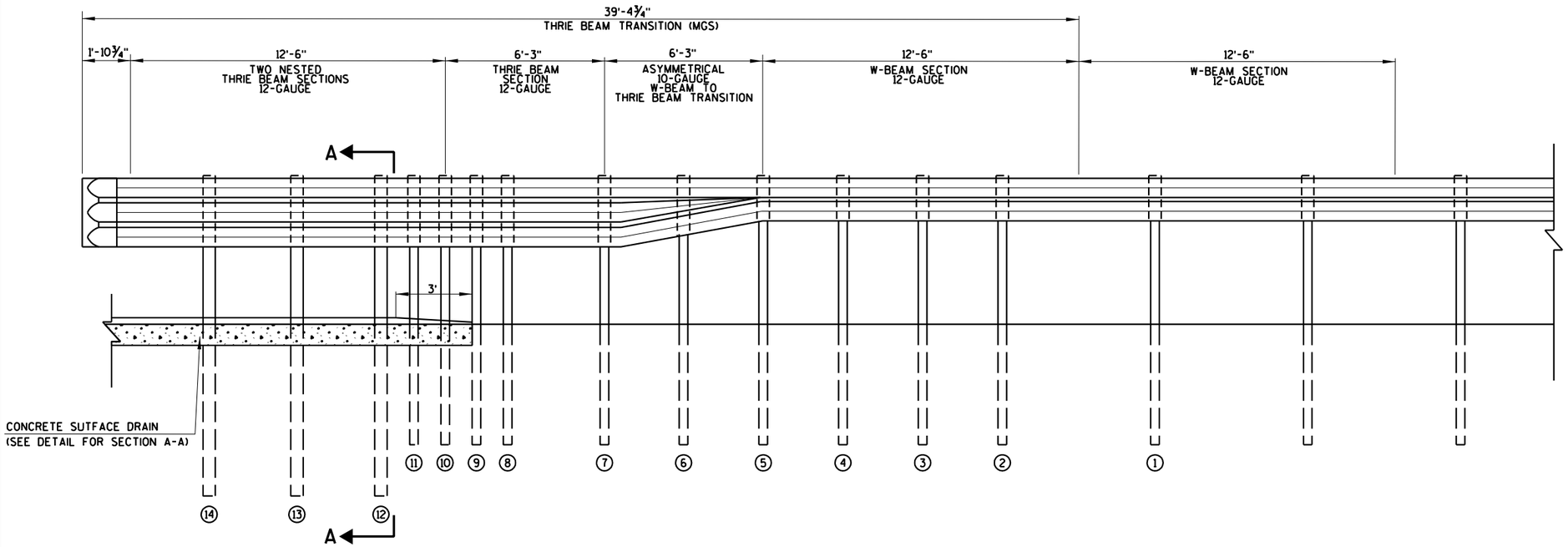
SECTION A-A



LOCATION OF TIE BARS IN WINGWALL

CONCRETE SURFACE DRAIN DROP INLET

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	CONSTRUCTION DETAILS	SHEET 20	E

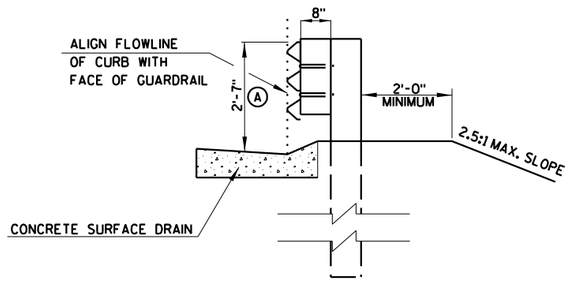


MODIFIED CURB HEAD FOR CONCRETE SURFACE DRAIN AT MGS THRIE BEAM - DROP INLET

SEE SDD "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL" AND "MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)" FOR ADDITIONAL DETAIL.

SEE SDD "CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES" FOR ADDITIONAL DETAILS

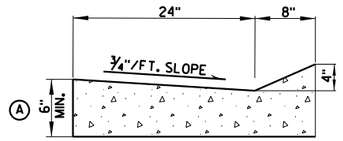
MODIFIED CURB HEAD CONSTRUCTION IS INCIDENTAL TO CONCRETE SURFACE DRAIN



SECTION A-A
POSTS 12-14

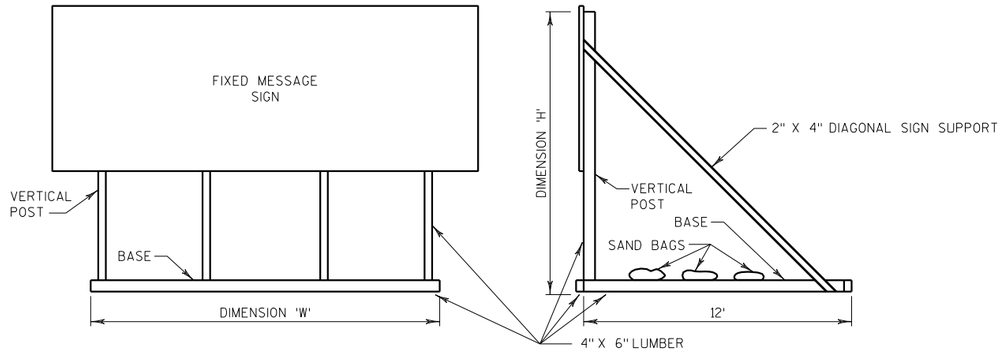
(A) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1".

(A) 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.



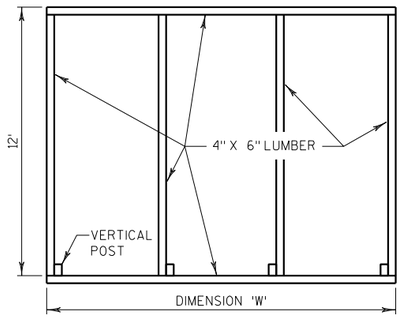
CONCRETE SURFACE DRAIN

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	CONSTRUCTION DETAILS	SHEET 21	E



FRONT VIEW

SIDE VIEW



BASE PLAN VIEW

ANTICIPATED DIMENSIONS & POSTS REQUIRED

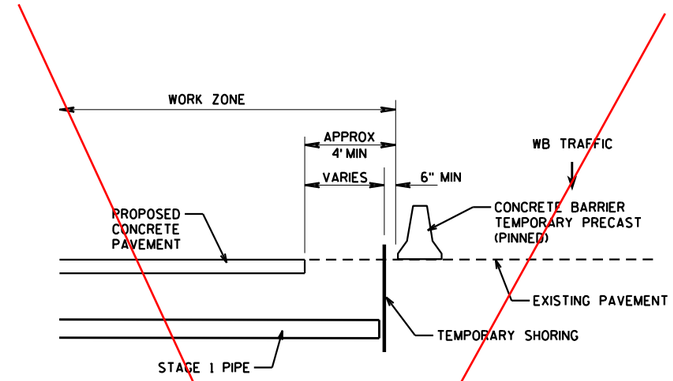
(FOR INFORMATION ONLY, CONTRACTOR IS TO VERIFY)

SIGN NO.	'W' (FT)	'H' (FT)	NO. OF POSTS OF HEIGHT 'H'
303	8	13	3
304	11	16	3
305	13	16	3
306	10	14	3
308	11	17	3

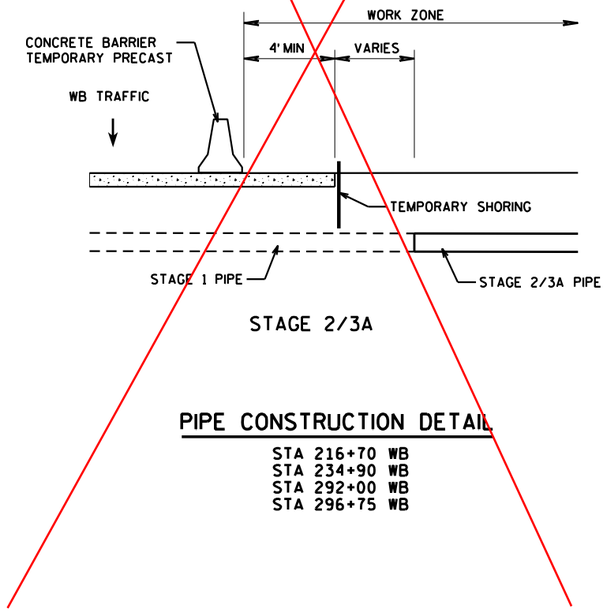
NOTES

1. SEE TRAFFIC CONTROL SHEETS FOR SIGN LOCATIONS.
2. TWO DIAGONAL SUPPORTS SHALL BE INCLUDED AND AFFIXED TO THE OUTSIDE SUPPORTS.
3. DIAGONAL SUPPORTS, VERTICAL POSTS AND BASE LUMBER ARE ALL INCLUDED IN THE "FIXED MESSAGE SIGN PORTABLE SUPPORT" ITEM.
4. PROVIDE AN ADEQUATE NUMBER OF SAND BAGS TO HOLD THE SIGN IN PLACE. SAND BAGS ARE INCLUDED IN THE "FIXED MESSAGE SIGN PORTABLE SUPPORT" ITEM.
5. SEE "TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS" SIGN PLATE FOR ADDITIONAL REQUIREMENTS.
6. PLACE ONLY IN LOCATIONS PROTECTED BY CONCRETE BARRIER OR GUARDRAIL.

FIXED MESSAGE SIGN PORTABLE SUPPORT



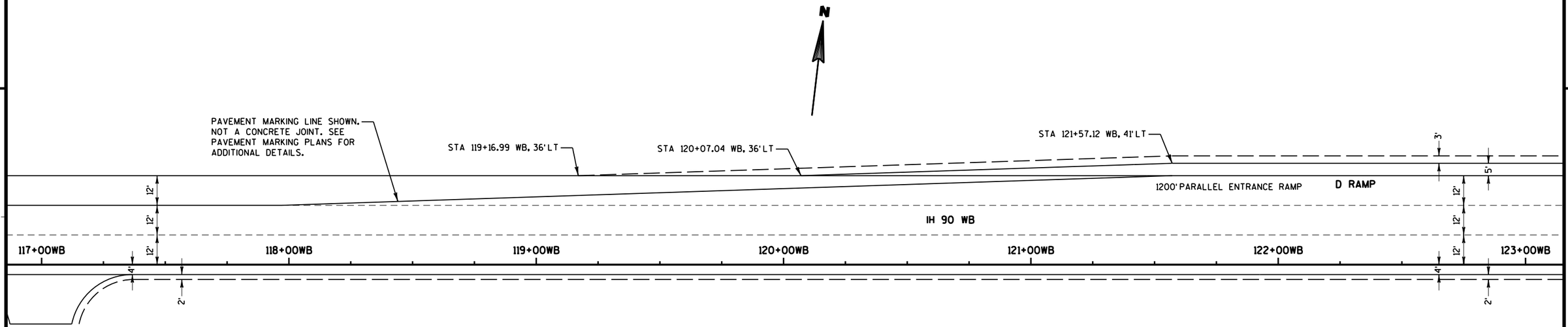
STAGE 1

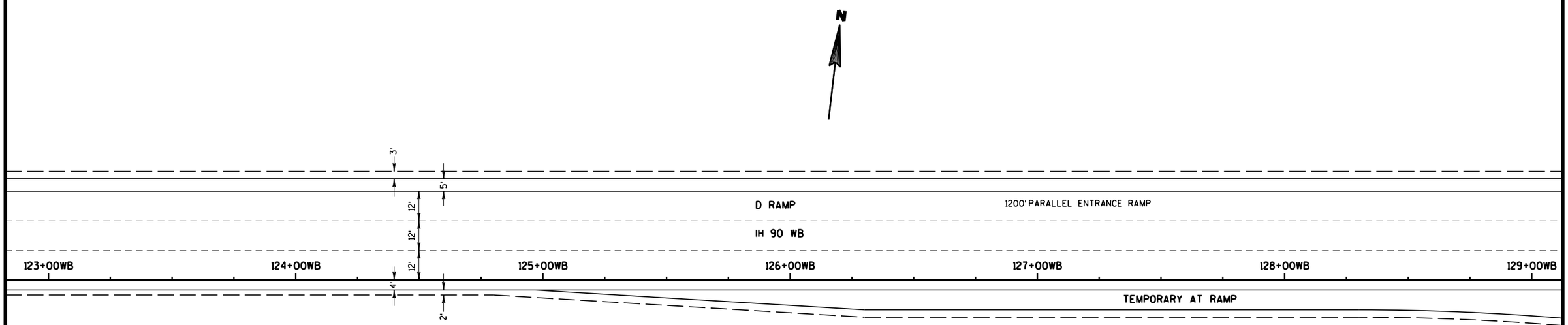


STAGE 2/3A

PIPE CONSTRUCTION DETAIL

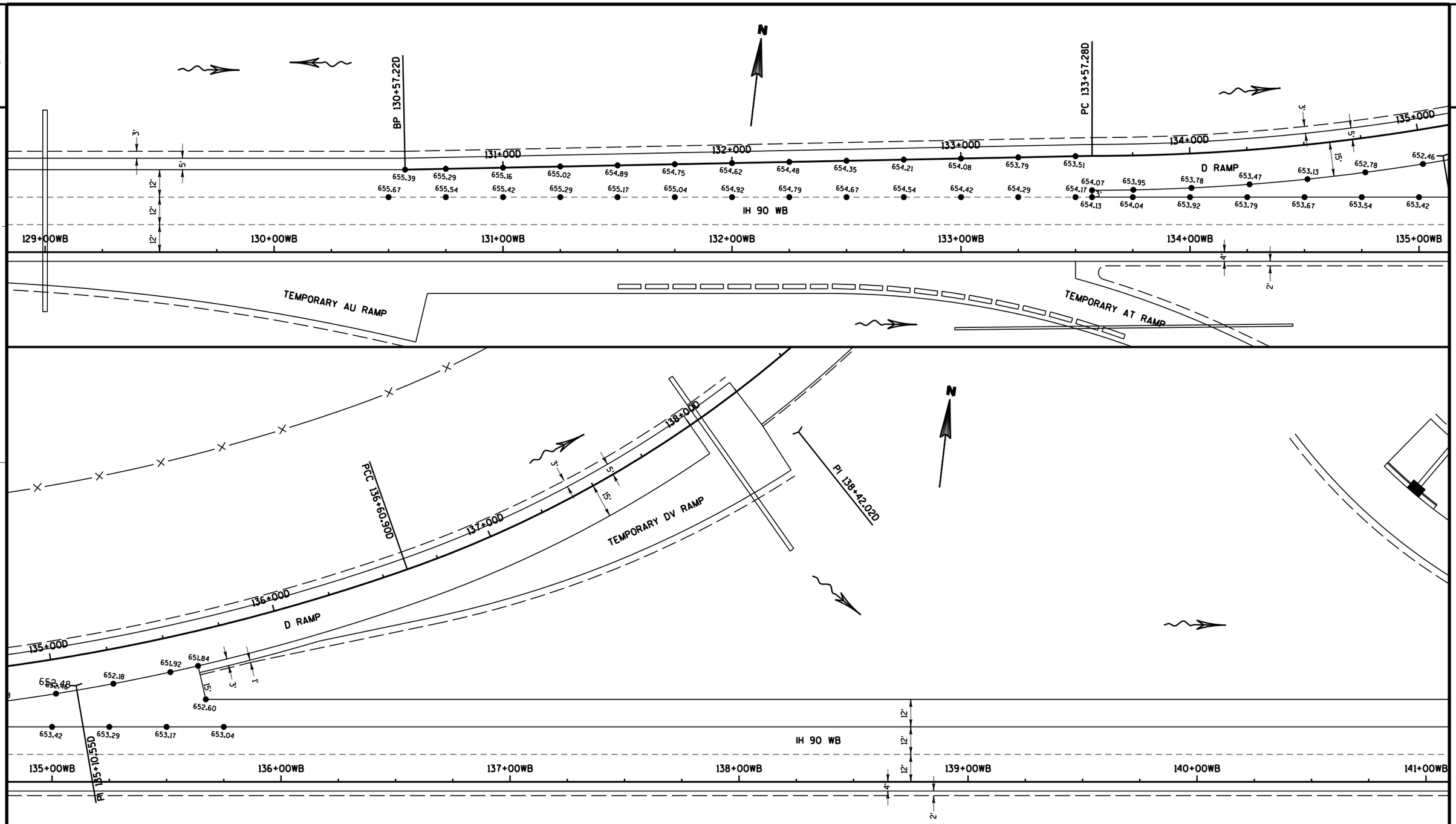
STA 216+70 WB
STA 234+90 WB
STA 292+00 WB
STA 296+75 WB





PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	INTERCHANGE DETAIL	SHEET	E

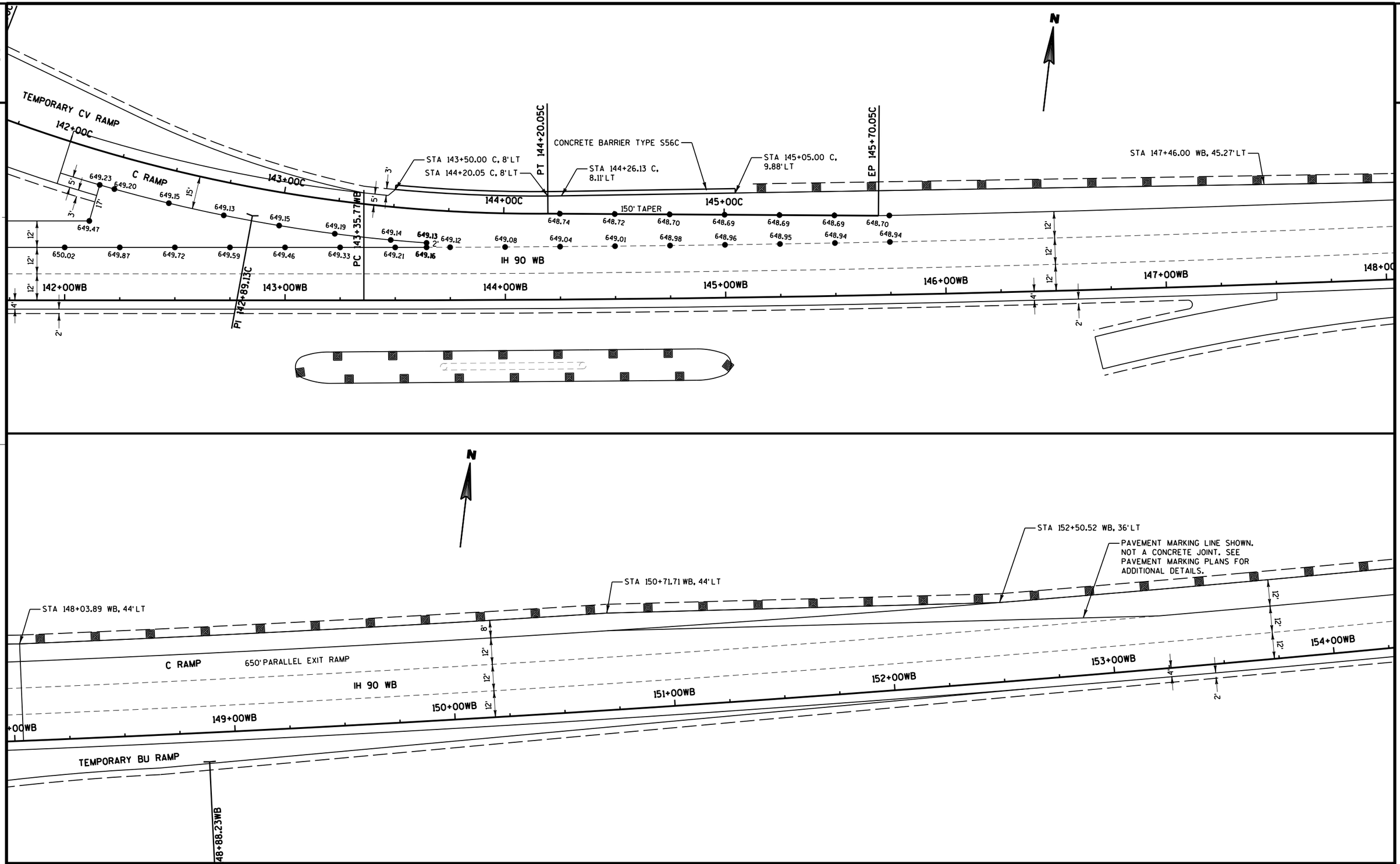
FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\dd_0677_021501_ic.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40



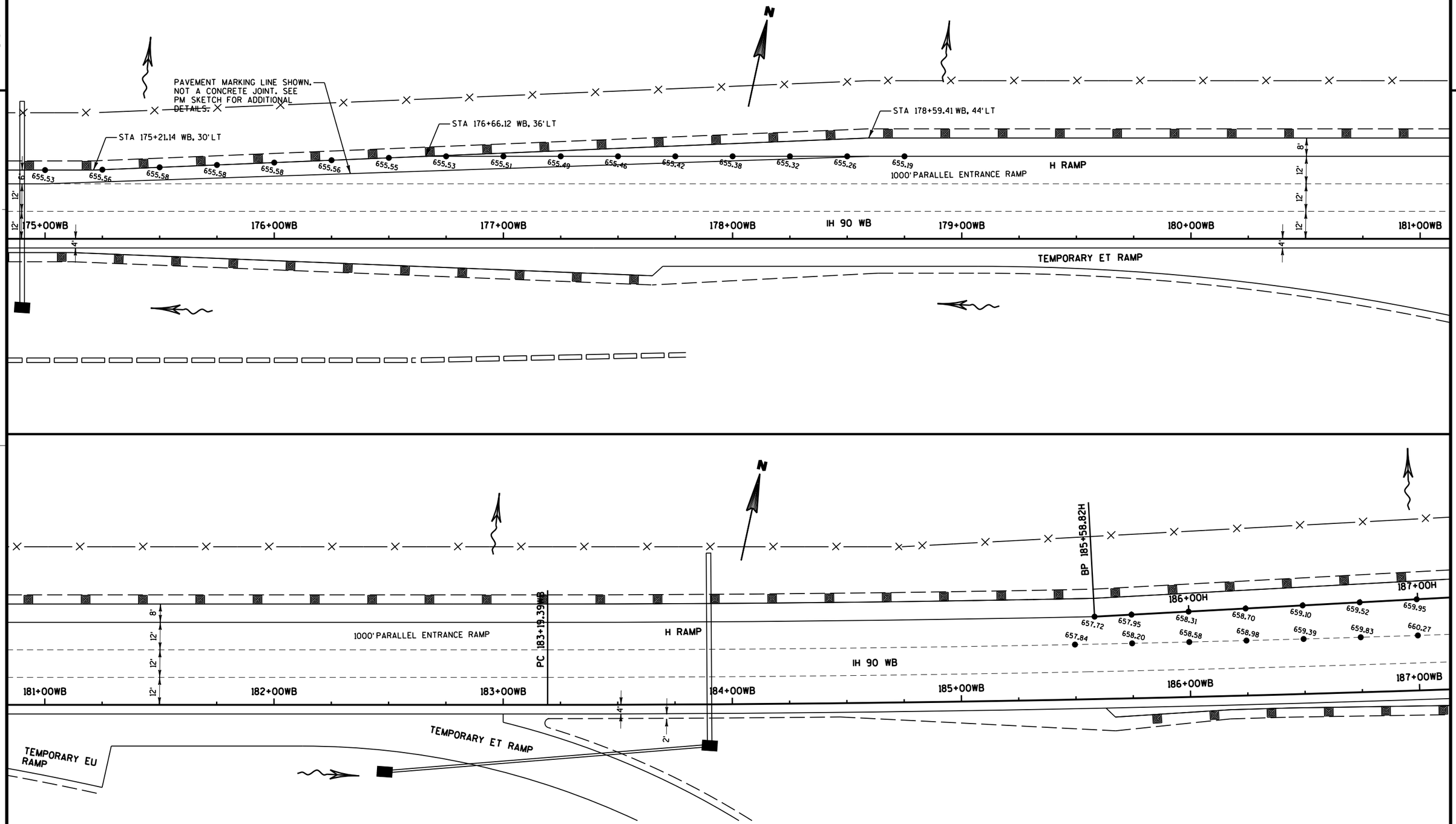
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	INTERCHANGE DETAIL	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_021502_ic.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

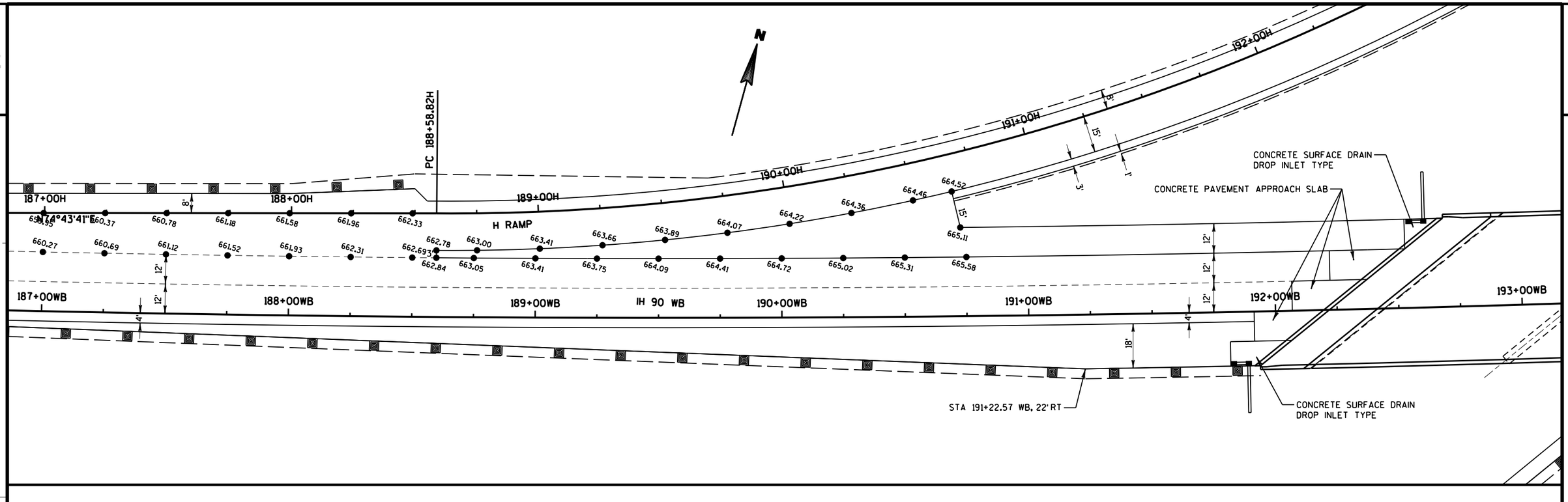


PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	INTERCHANGE DETAIL	SHEET 25	E



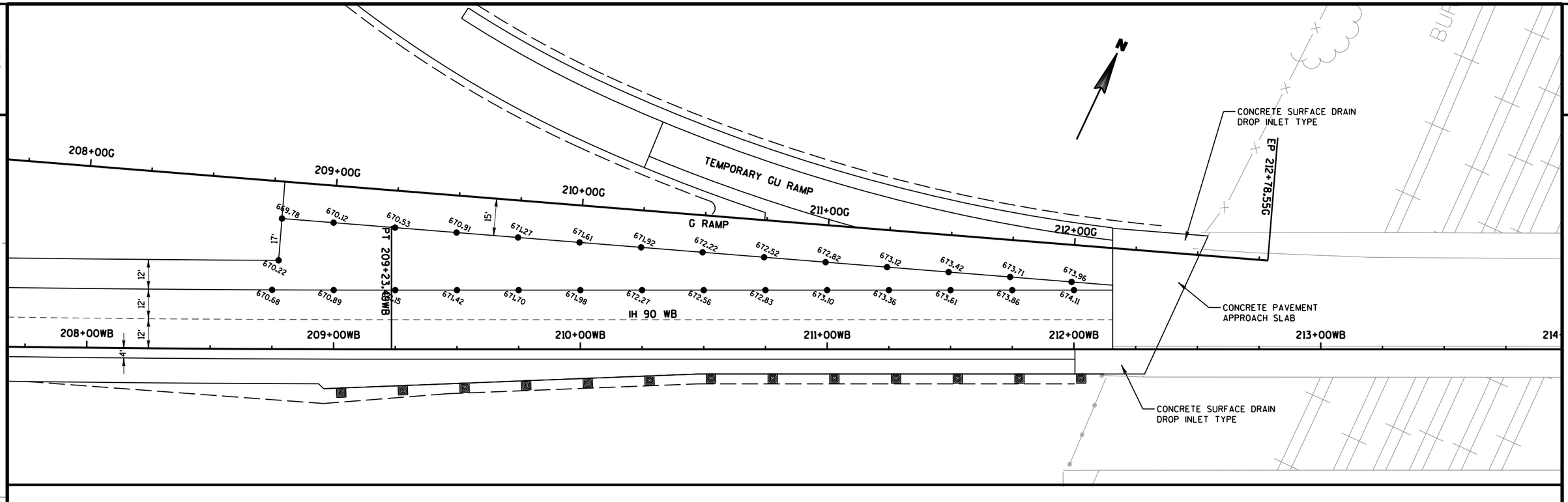
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	INTERCHANGE DETAIL	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_021504_ic.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40



2

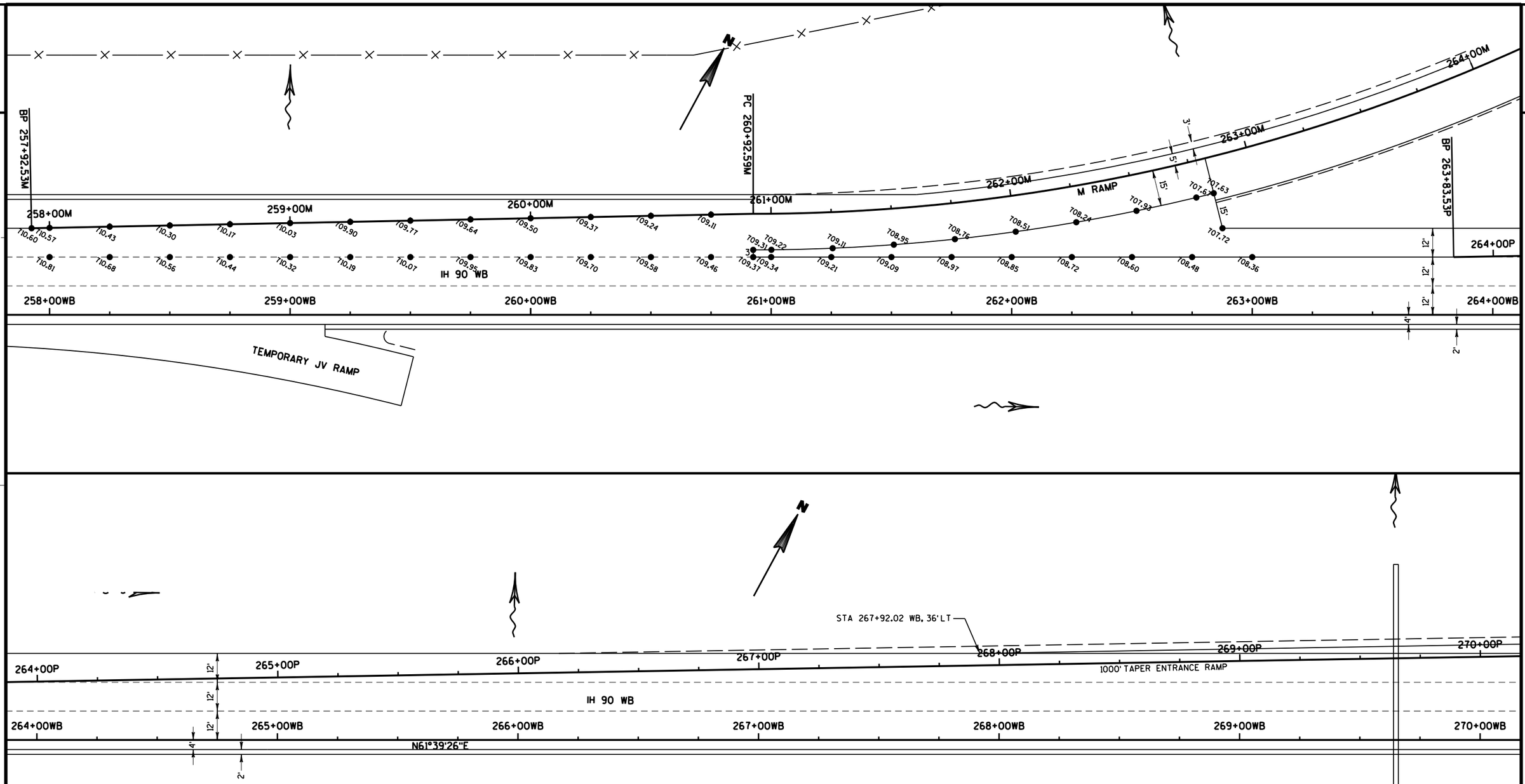
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	INTERCHANGE DETAIL	SHEET 27	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	INTERCHANGE DETAIL	SHEET 28	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_021506_ic.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

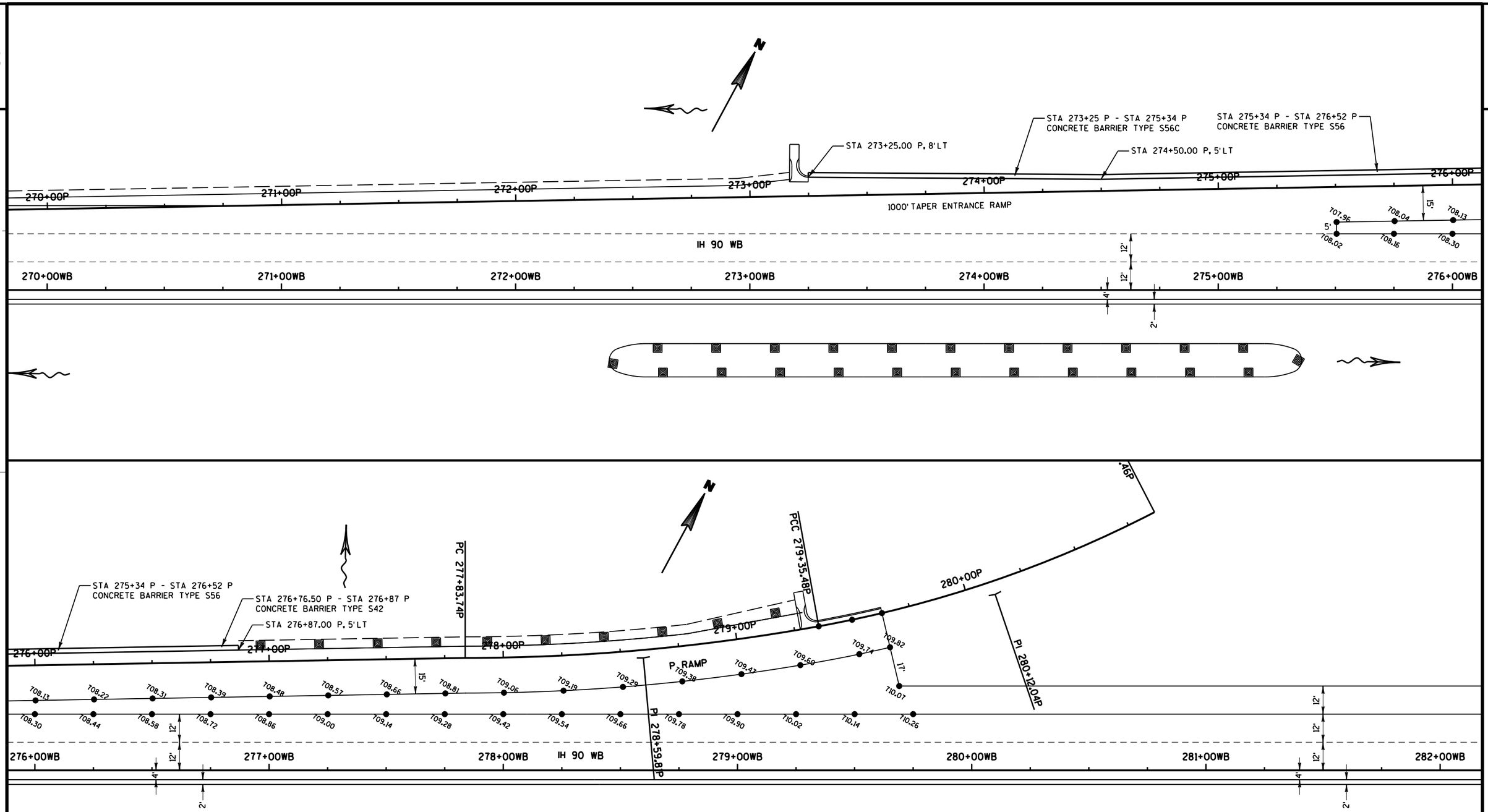
WISDOT/CADDS SHEET 42



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	INTERCHANGE DETAIL	SHEET	E

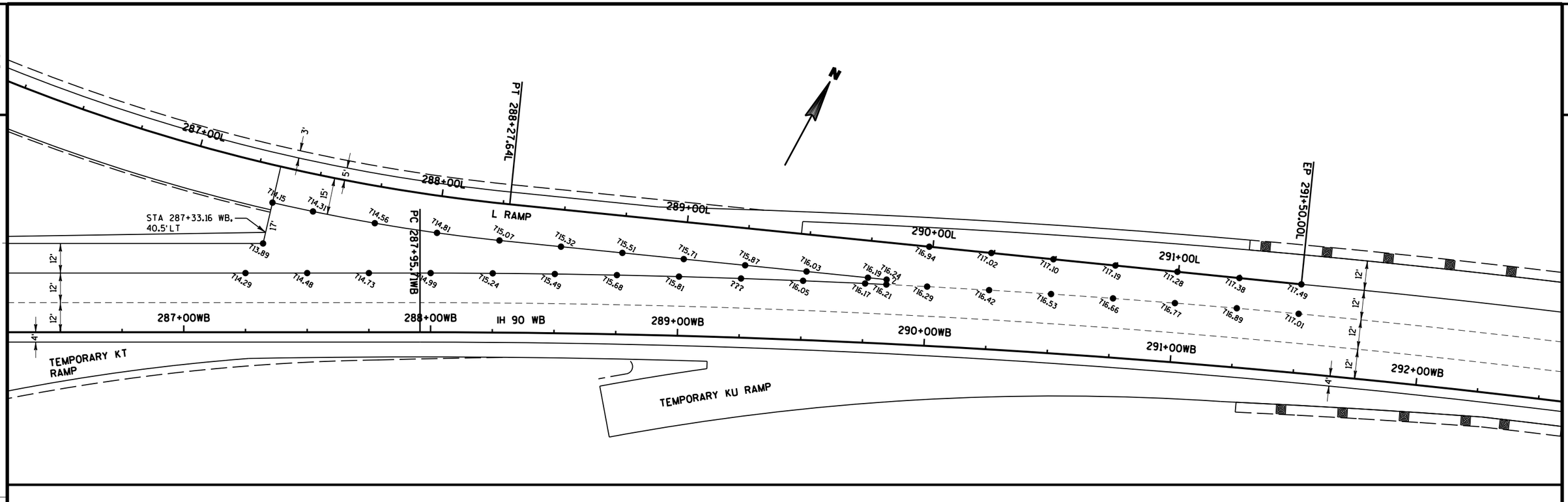
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2



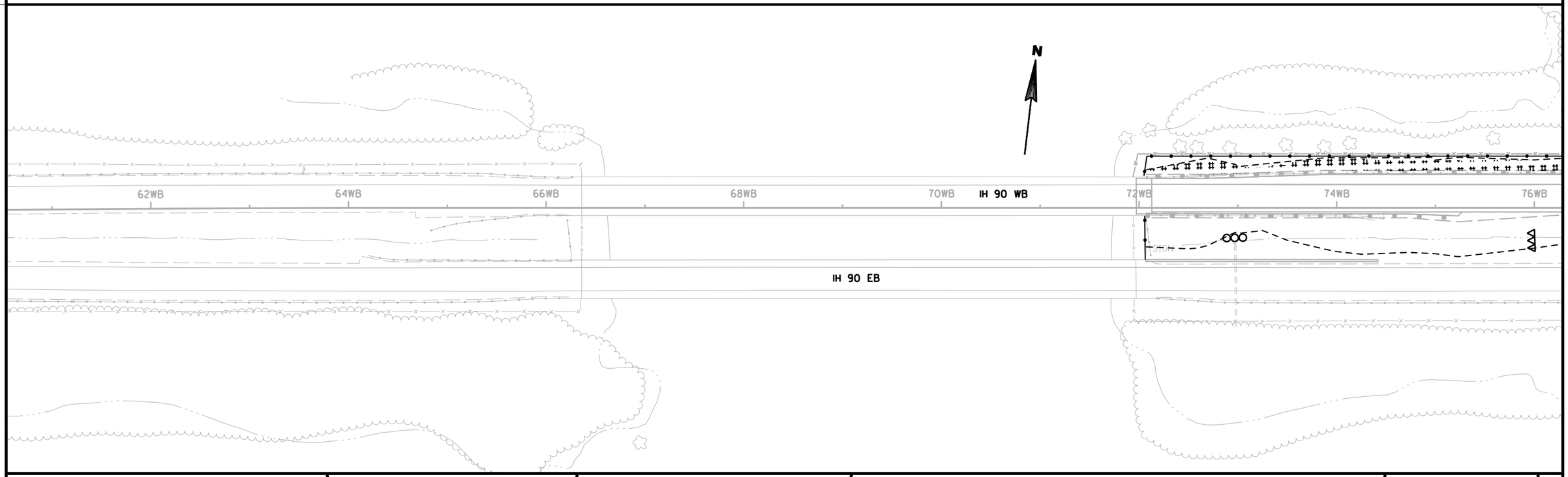
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	INTERCHANGE DETAIL	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_021508_ic.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40


N
PT 288+27.64L
287+00L
288+00L
289+00L
290+00L
291+00L
EP 291+50.00L
L RAMP
STA 287+33.16 WB,
40.5'LT
3'
5'
15'
17'
12'
12'
12'
4'
12'
12'
12'
12'
4'
714.15
714.31
714.56
714.81
715.07
715.32
715.51
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716.53
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716.89
717.01
PC 287+95.71WB
287+00WB
288+00WB
IH 90 WB
289+00WB
290+00WB
291+00WB
292+00WB
TEMPORARY KT
RAMP
TEMPORARY KU RAMP

LEGEND

⌗⌗⌗⌗⌗⌗	EROSION MAT CLASS I, TYPE B
△△△	TEMPORARY DITCH CHECK
●—●—●	SILT FENCE
⊠	INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
○○○	CULVERT PIPE CHECKS
⊂▭⊃	RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
~~→	SURFACE WATER FLOW

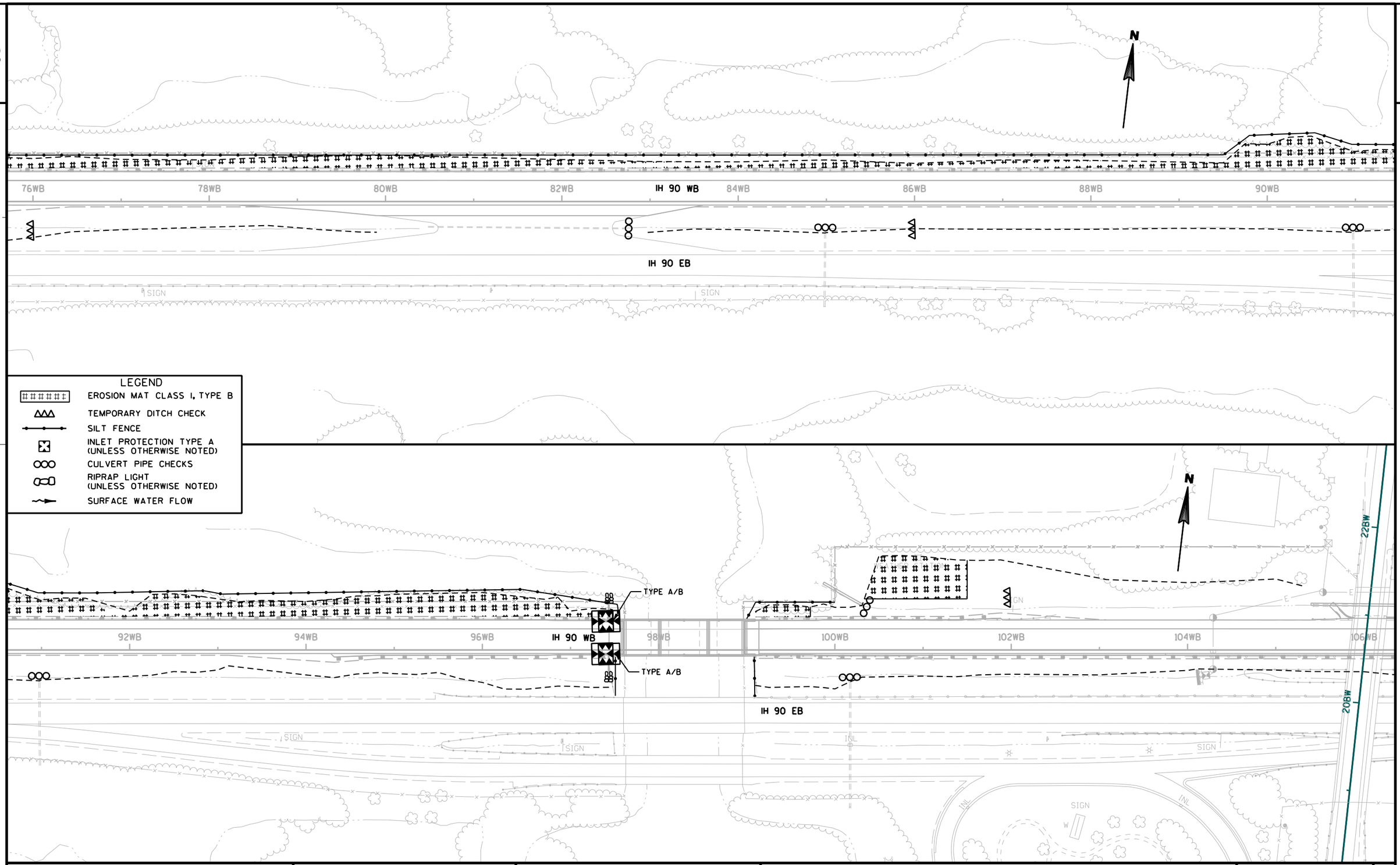


PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 1 & 2	SHEET 32	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022001_ec.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

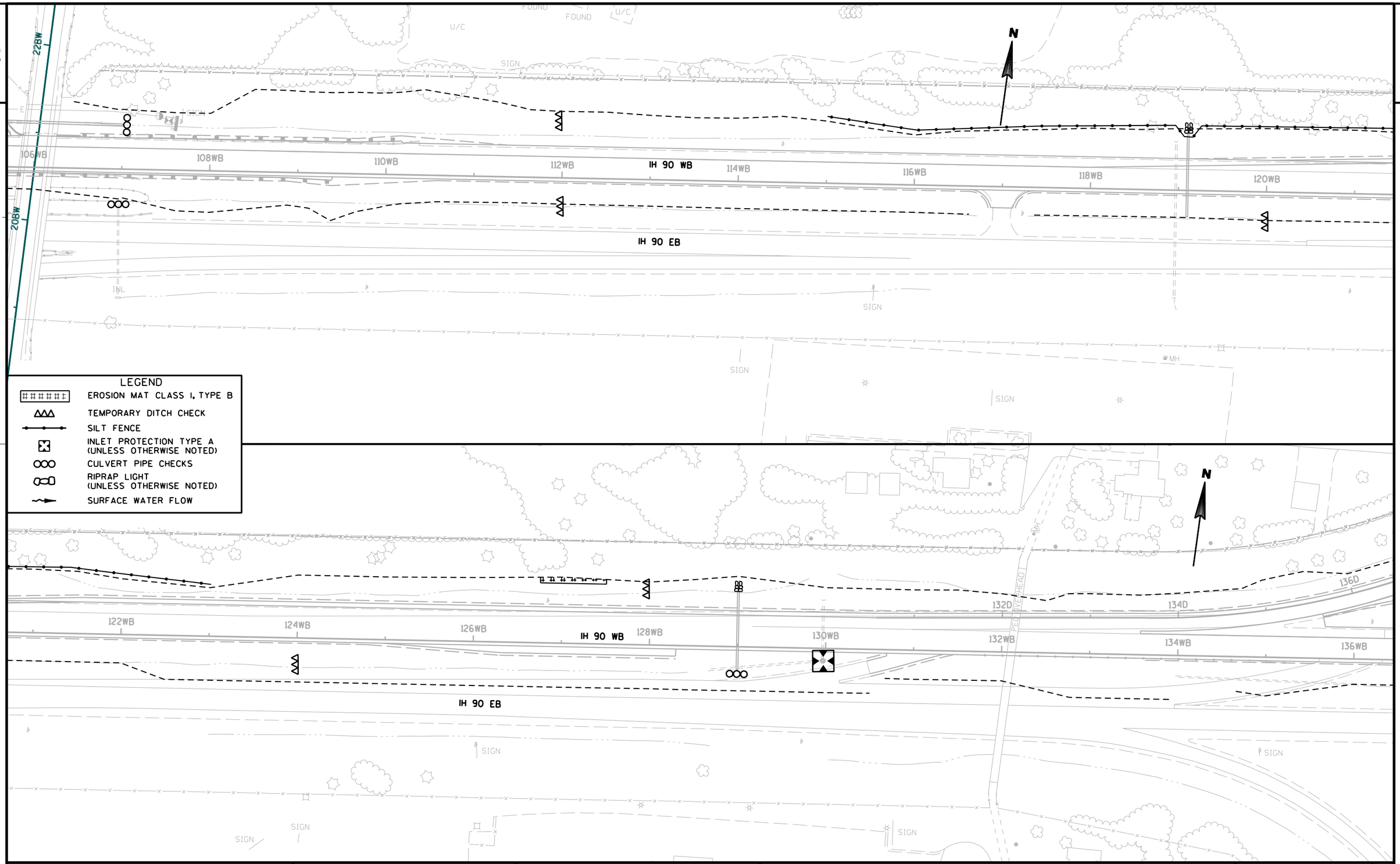


2

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 1 & 2	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022002_ec.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 1 & 2	SHEET 34	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\qq_0677_022003_ec.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

N

TYPE A/C

STAGE 2

STAGE 2

STAGE 2

STAGE 2

IH 90 WB

IH 90 EB

CTH "B"

CTH B

136WB 138WB 140WB 142WB 144WB 146WB 148WB 150WB

136D 138D 140D 142C 144C

SIGN

LEGEND

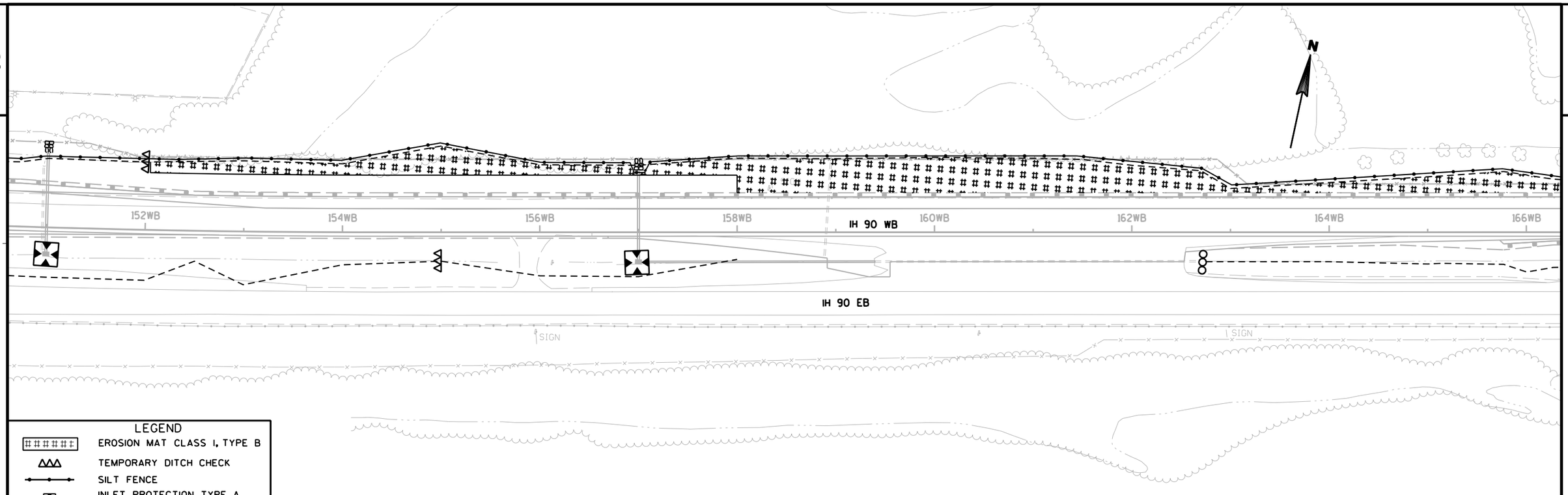
########	EROSION MAT CLASS I, TYPE B
ΔΔΔ	TEMPORARY DITCH CHECK
	SILT FENCE
	INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
	CULVERT PIPE CHECKS
	RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
	SURFACE WATER FLOW

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 1 & 2	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022004_ec.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

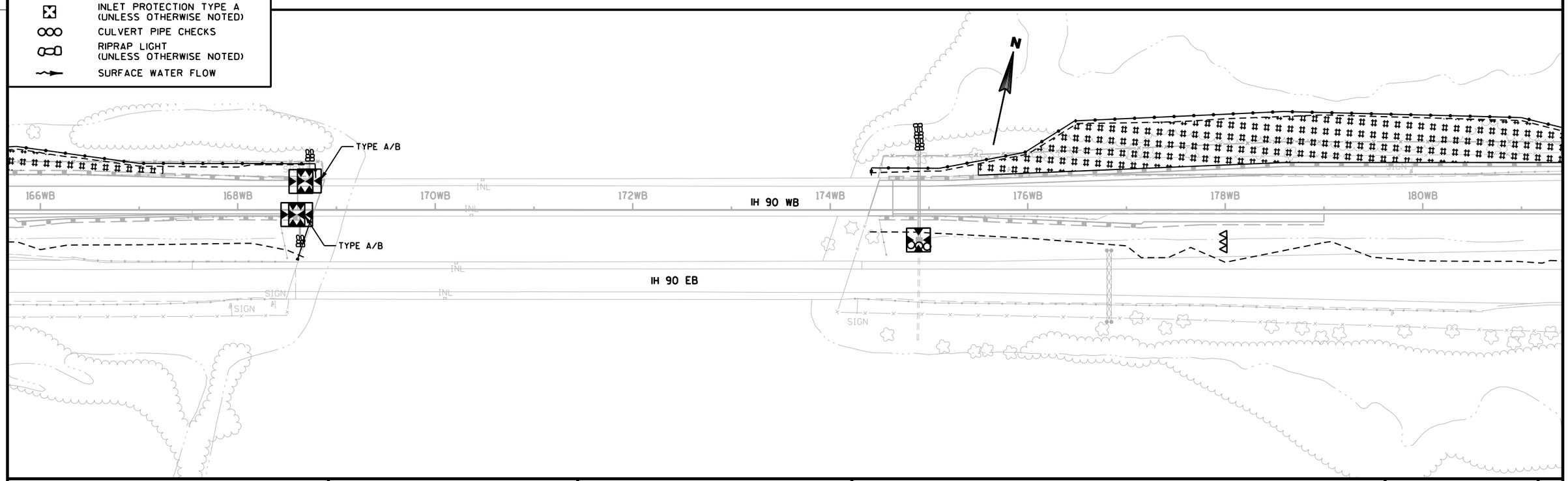
WISDOT/CADDS SHEET 42

2



LEGEND

- EROSION MAT CLASS I, TYPE B
- TEMPORARY DITCH CHECK
- SILT FENCE
- INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
- CULVERT PIPE CHECKS
- RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW



PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 1 & 2	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022005_ec.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- TEMPORARY DITCH CHECK
- SILT FENCE
- INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
- CULVERT PIPE CHECKS
- RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW

N

182WB
184WB
186WB
188WB
190WB
192WB
194WB
196WB
186H
188H
190H
192H
194H
196H

IH 90 WB

IH 90 EB

STAGE 2

STAGE 2

STAGE 2

STAGE 2

ROSE ST SB

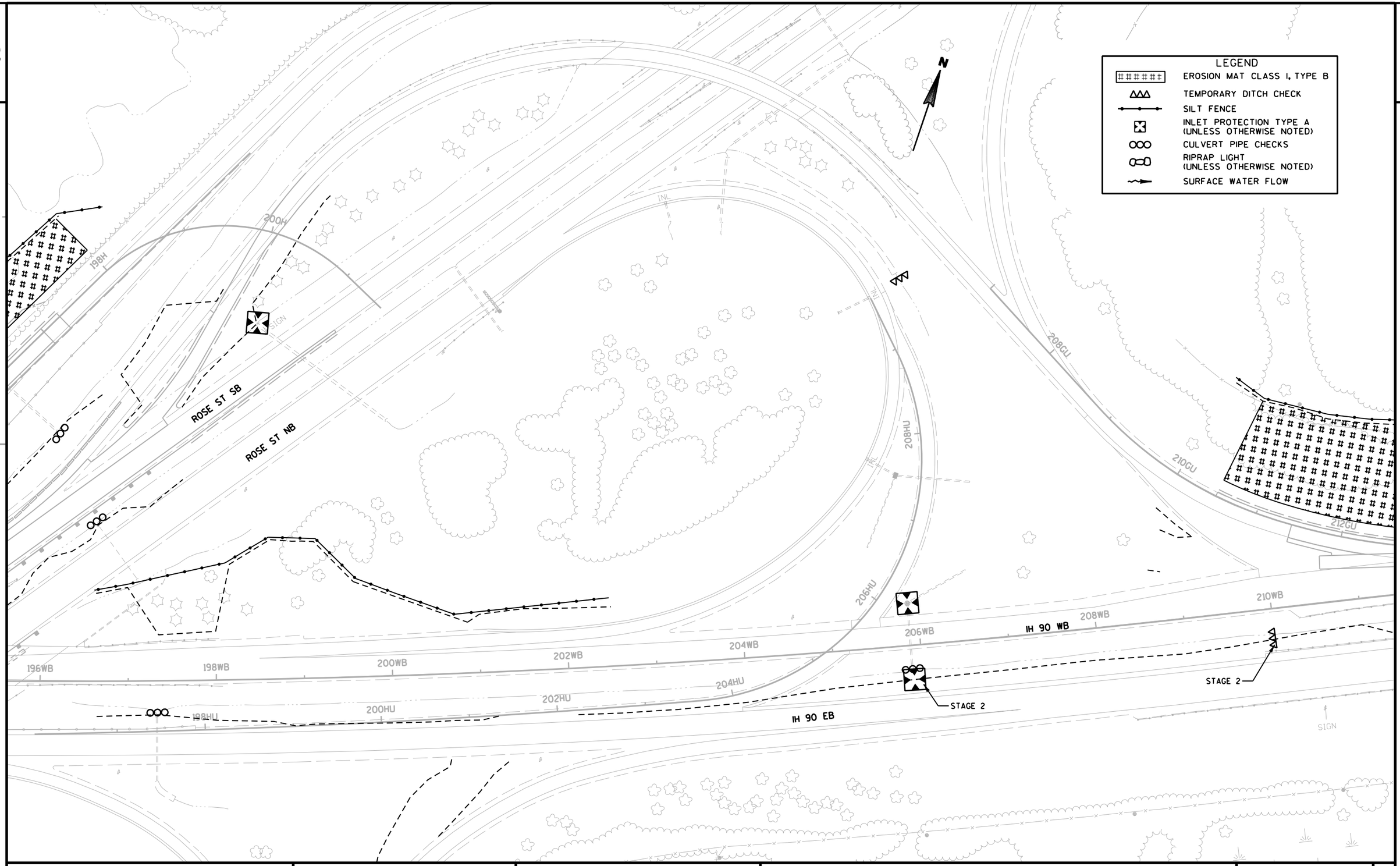
ROSE ST NB

SIGN

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 1 & 2	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022006_ec.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

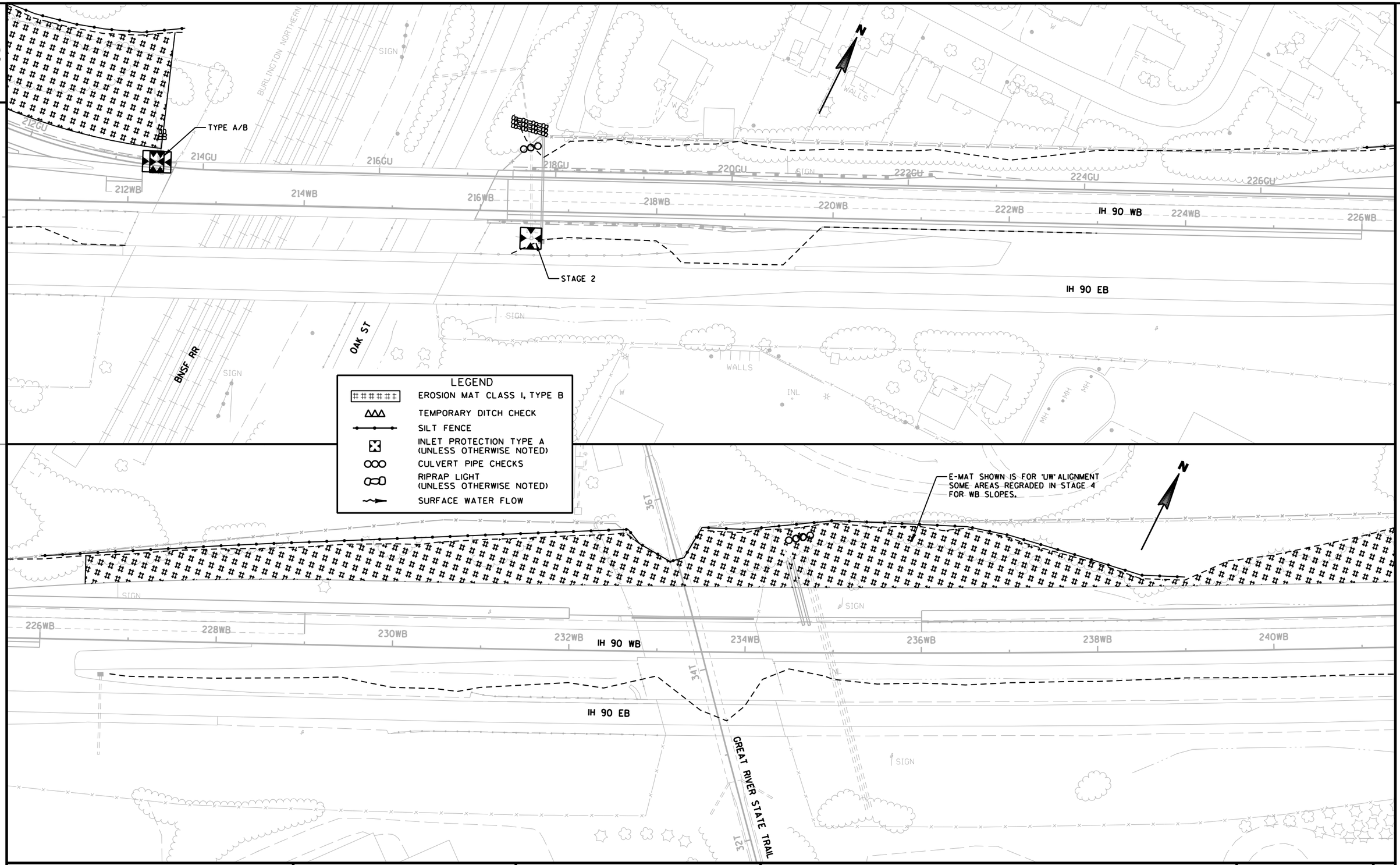
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 1 & 2	SHEET 38	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022007_ec.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 1 & 2	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022008_ec.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- TEMPORARY DITCH CHECK
- SILT FENCE
- INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
- CULVERT PIPE CHECKS
- RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW

TYPE A/B

IH 90 WB

IH 90 EB

12TH AVE

242WB 244WB 246WB 248WB 250WB 252WB 254WB 256WB

256WB 258WB 260WB 262WB 264WB 266WB 268WB 270WB

258M 260M 262M 264M 266M

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 1 & 2	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022009_ec.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

N

STH 157

IH 90 WB

IH 90 EB

272P 274P 276P 278P 280P

272WB 274WB 276WB 278WB 280WB 282WB 284WB 286WB

284L 286L 288L 290L

286WB 288WB 290WB 292WB 294WB 296WB 298WB 300WB

SIGN

INL

LEGEND

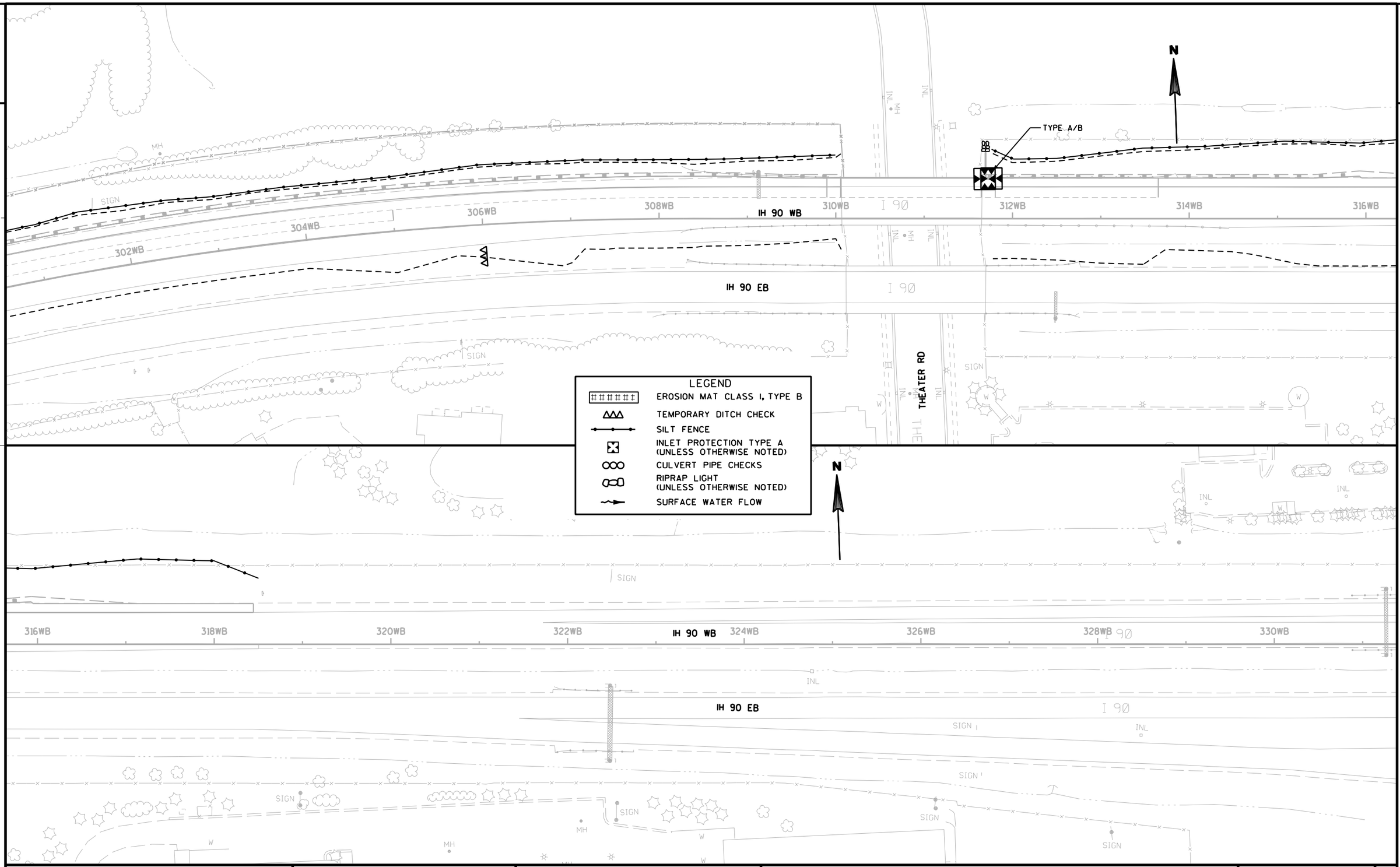
- EROSION MAT CLASS I, TYPE B
- TEMPORARY DITCH CHECK
- SILT FENCE
- INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
- CULVERT PIPE CHECKS
- RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 1 & 2	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022010_ec.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 1 & 2	SHEET 42	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022011_ec.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

2

N

228W

208W

106WB 108WB 110WB 112WB IH 90 WB 114WB 116WB 118WB 120WB

IH 90 EB

FOUND FOUND U/C U/C SIGN SIGN SIGN SIGN SIGN SIGN SIGN SIGN SIGN

LEGEND

- EROSION MAT CLASS I, TYPE B
- TEMPORARY DITCH CHECK
- SILT FENCE
- INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
- CULVERT PIPE CHECKS
- RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW

N

122WB 124WB 126WB IH 90 WB 128WB 130WB 132WB 132D 134D 134WB 136D 136WB

PELTIER HEAD

IH 90 EB

STAGE 3A

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 3 & 4	SHEET 43	E

2

2

N

CTH "B"

CTH "B"

136D

138D

140D

140C

142C

144C

136WB

138WB

IH 90 WB

140WB

142WB

144WB

146WB

148WB

150WB

IH 90 EB

I 90

CTH B

STAGE 3A

SIGN

INL

LEGEND

EROSION MAT CLASS I, TYPE B

TEMPORARY DITCH CHECK

SILT FENCE

INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)

CULVERT PIPE CHECKS

RIPRAP LIGHT (UNLESS OTHERWISE NOTED)

SURFACE WATER FLOW

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 3 & 4	SHEET 44	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022024_ec3.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- TEMPORARY DITCH CHECK
- SILT FENCE
- INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
- CULVERT PIPE CHECKS
- RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW

N

182WB
184WB
186WB
188WB
190WB
192WB
194WB
196WB
186H
188H
190H
192H
194H
196H

IH 90 WB

IH 90 EB

STAGE 4

STAGE 4

STAGE 4B

TYPE A/B
STAGE 3A

TYPE A/B
STAGE 3A

ROSE ST SB

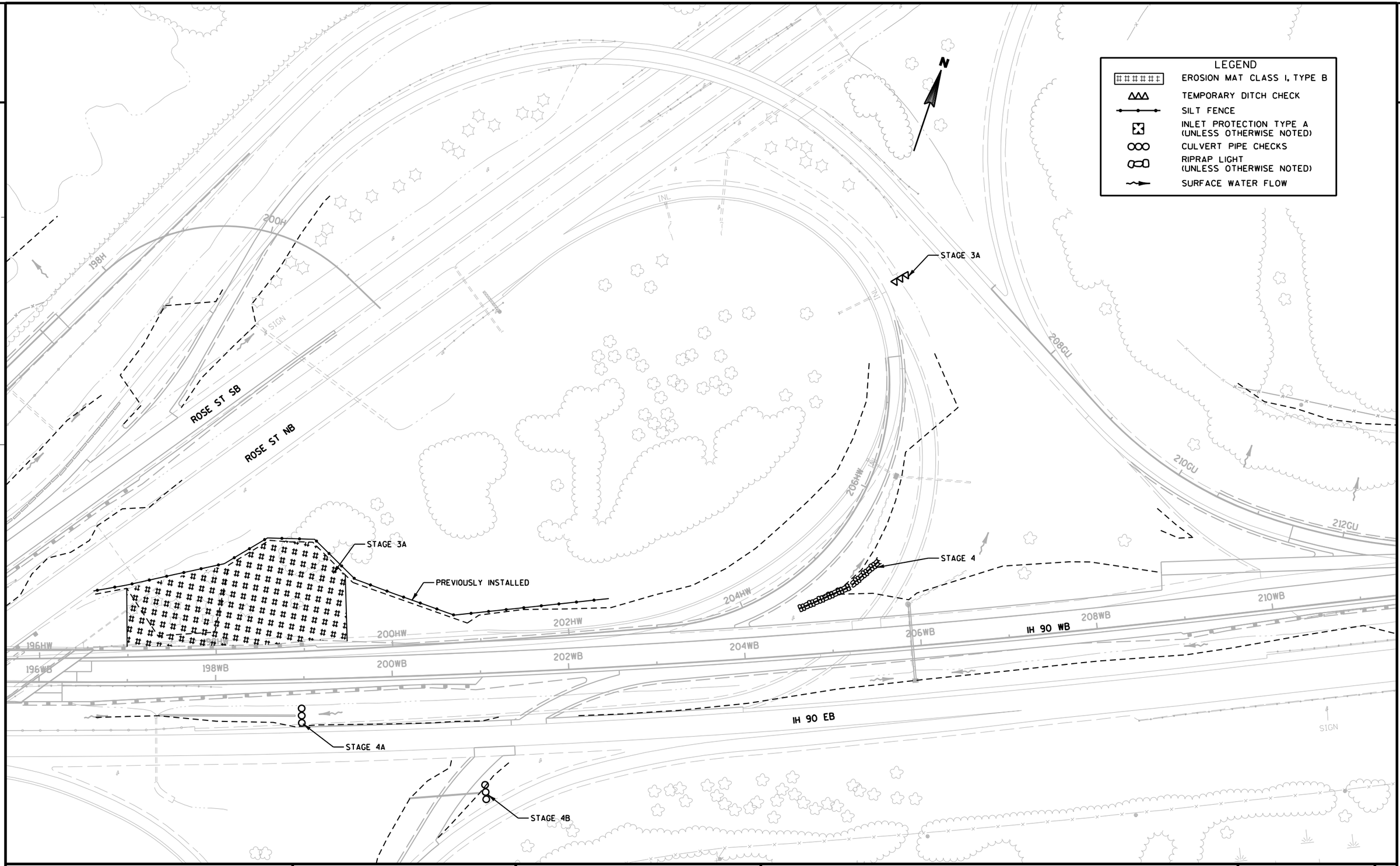
ROSE ST NB

SIGN

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 3 & 4	SHEET 45	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022026_ec3.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



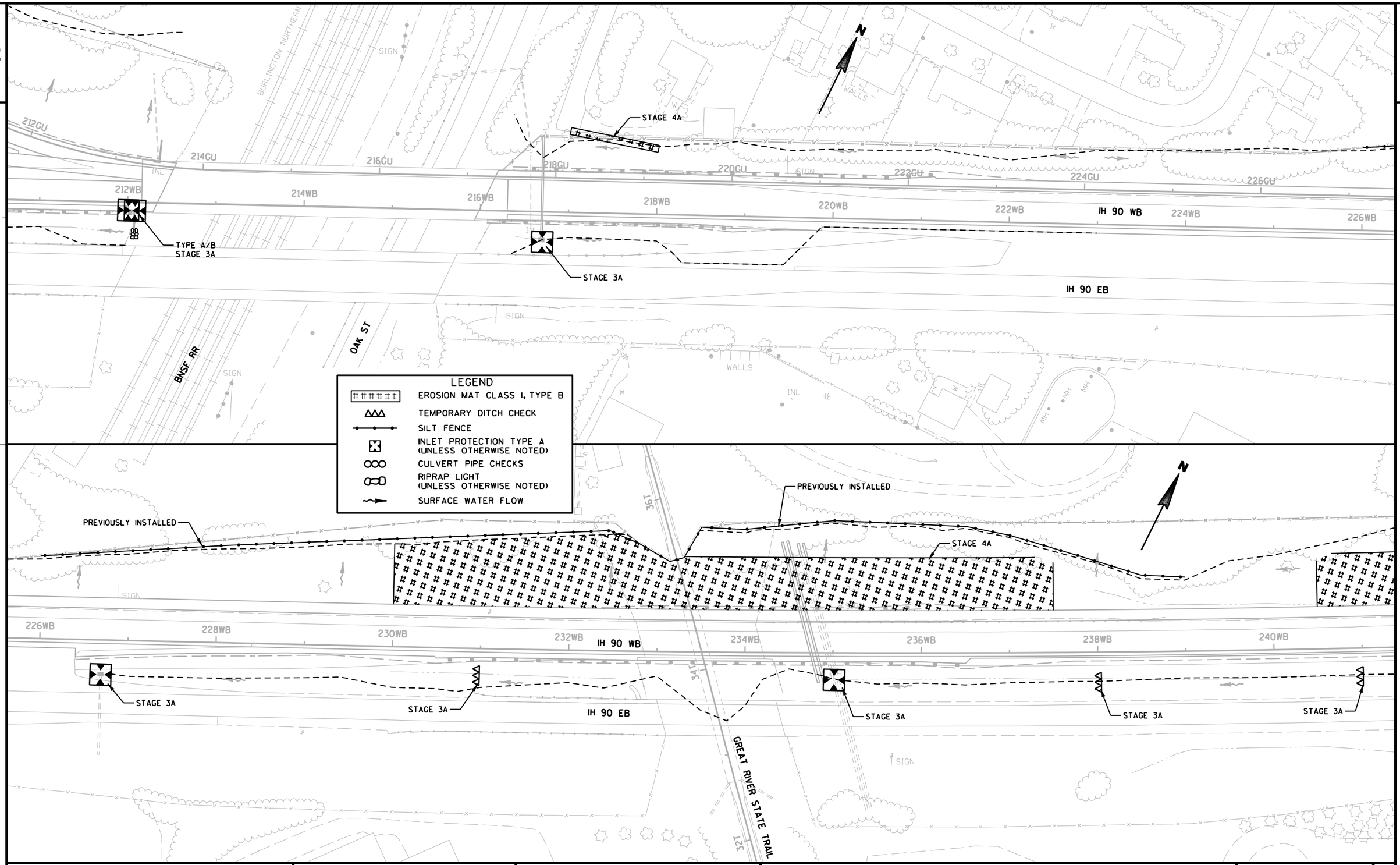
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 3 & 4	SHEET 46	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022027_ec3.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 3 & 4	SHEET 47	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022028_ec3.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

2

STAGE 4A

STAGE 3A

STAGE 3A

STAGE 3A

TYPE A/B
STAGE 3A

STAGE 3A

242WB 244WB 246WB 248WB 250WB 252WB 254WB 256WB

IH 90 WB

IH 90 EB

12TH AVE

256WB 258WB 260WB 262WB 264WB 266WB 268WB 270WB

258M 260M 262M 264M 266M

IH 90 WB

IH 90 EB

SIGN INL MH POOL W

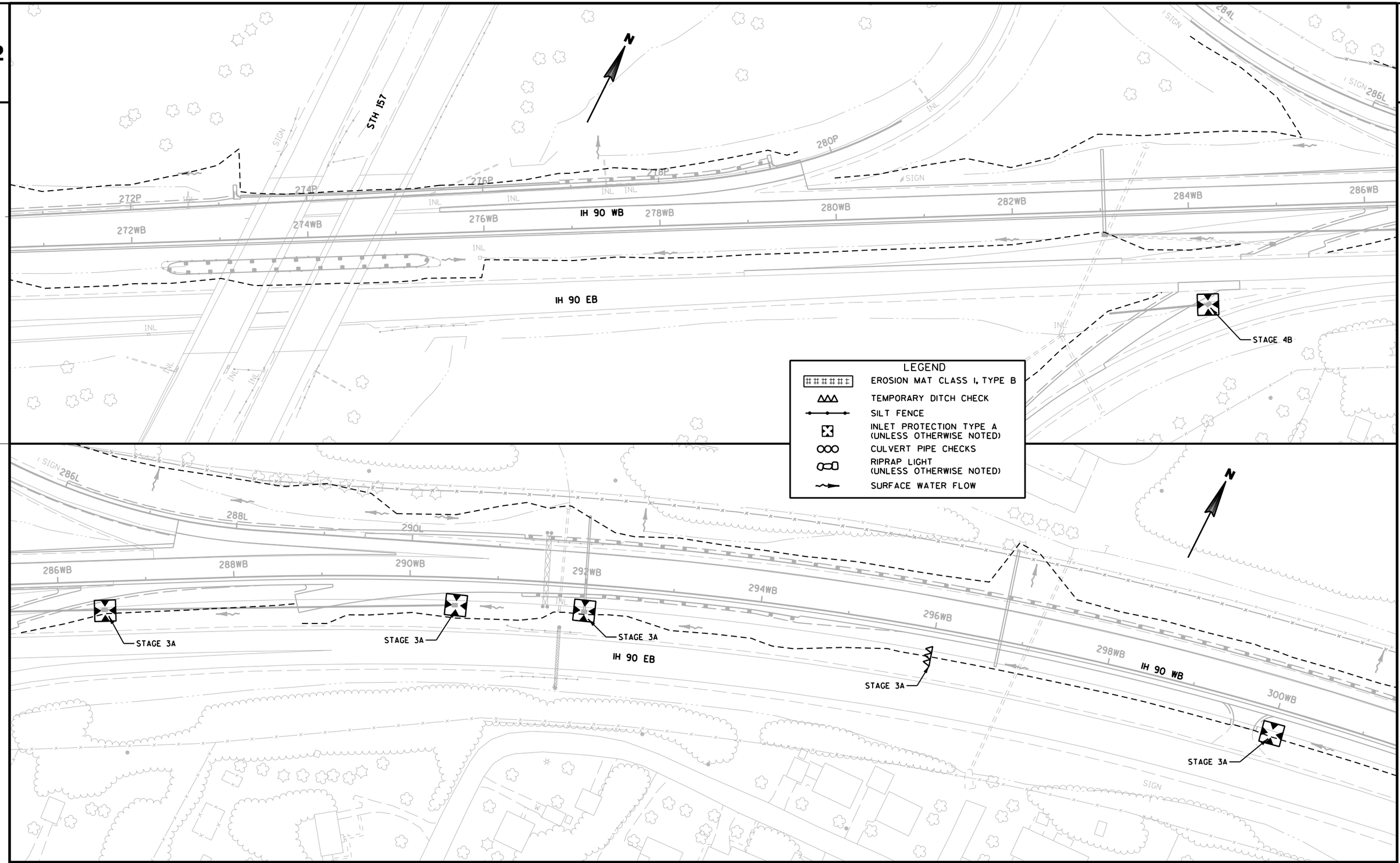
LEGEND

- EROSION MAT CLASS I, TYPE B
- TEMPORARY DITCH CHECK
- SILT FENCE
- INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
- CULVERT PIPE CHECKS
- RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 3 & 4	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022029_ec3.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 3 & 4	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022030_ec3.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

N

IH 90 WB

IH 90 EB

I 90

THEATER RD

302WB 304WB 306WB 308WB 310WB 312WB 314WB 316WB

316WB 318WB 320WB 322WB 324WB 326WB 328WB 330WB

TYPE A/B
STAGE 3A

STAGE 3A

STAGE 3A

STAGE 3A

STAGE 3A

SIGN

MH

INL

W

LEGEND

- EROSION MAT CLASS I, TYPE B
- TEMPORARY DITCH CHECK
- SILT FENCE
- INLET PROTECTION TYPE A (UNLESS OTHERWISE NOTED)
- CULVERT PIPE CHECKS
- RIPRAP LIGHT (UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - STAGES 3 & 4	SHEET 50	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_022031_ec3.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

N

R/L EB

R/L WB

R/L CTH BW

104+00EB

104+00WB

105+00EB

105+00WB

106+00EB

106+00WB

107+00EB

107+00WB

IH 90 EB

IH 90 EB

15BW

16BW

17BW

18BW

19BW

20BW

CTH BW

CTH "BW"

BEGIN CONSTRUCTION

STA 17+00.00 BW

MATCH EXISTING

SLOPE INTERCEPT (TYP)

LEGEND

EROSION MAT CLASS II TYPE C

SILT FENCE

INLET PROTECTION TYPE A & C

SURFACE WATER FLOW

PROJECT NO:1071-06-77	HWY:IH 90	COUNTY:LA CROSSE	EROSION CONTROL - CTH BW	SHEET 51	E

FILE NAME : ch_0677_022001_ec.dgn PLOT DATE : 01-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 40:1

2

N

END CONSTRUCTION
STA 23+00.00 BW
MATCH EXISTING

R/L EB
R/L WB
R/L CTH BW

IH 90 EB
IH 90 EB

104+00EB
105+00EB
106+00EB
107+00EB

104+00WB
105+00WB
106+00WB
107+00WB

20BW
21BW
22BW
23BW
24BW
25BW

CTH BW

SLOPE INTERCEPT (TYP)

SIGN

HW

© MH

LEGEND

- EROSION MAT CLASS II TYPE C
- SILT FENCE
- INLET PROTECTION TYPE A & C
- SURFACE WATER FLOW

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	EROSION CONTROL - CTH BW	SHEET 52	E

2

N

BEGIN PROJECT (1071-06-77)
STA 71+97.29 WB

1-1
W5-52R
18" X 54"

1-2
W5-52L
18" X 54"

1-3
Minnesota
Rest Area
Travel Info
EXIT 276
E3-1
144" X 108"

Travel Phone
1-4

1-5
MILE
1
D10-1
12" X 24"

MATCHLINE STA 95+00 EB

50WB
50EB
55WB
55EB
60WB
60EB
65WB
65EB
70WB
70EB
75WB
75EB
80WB
80EB
85WB
85EB
90WB
90EB
95

ROUND LAKE

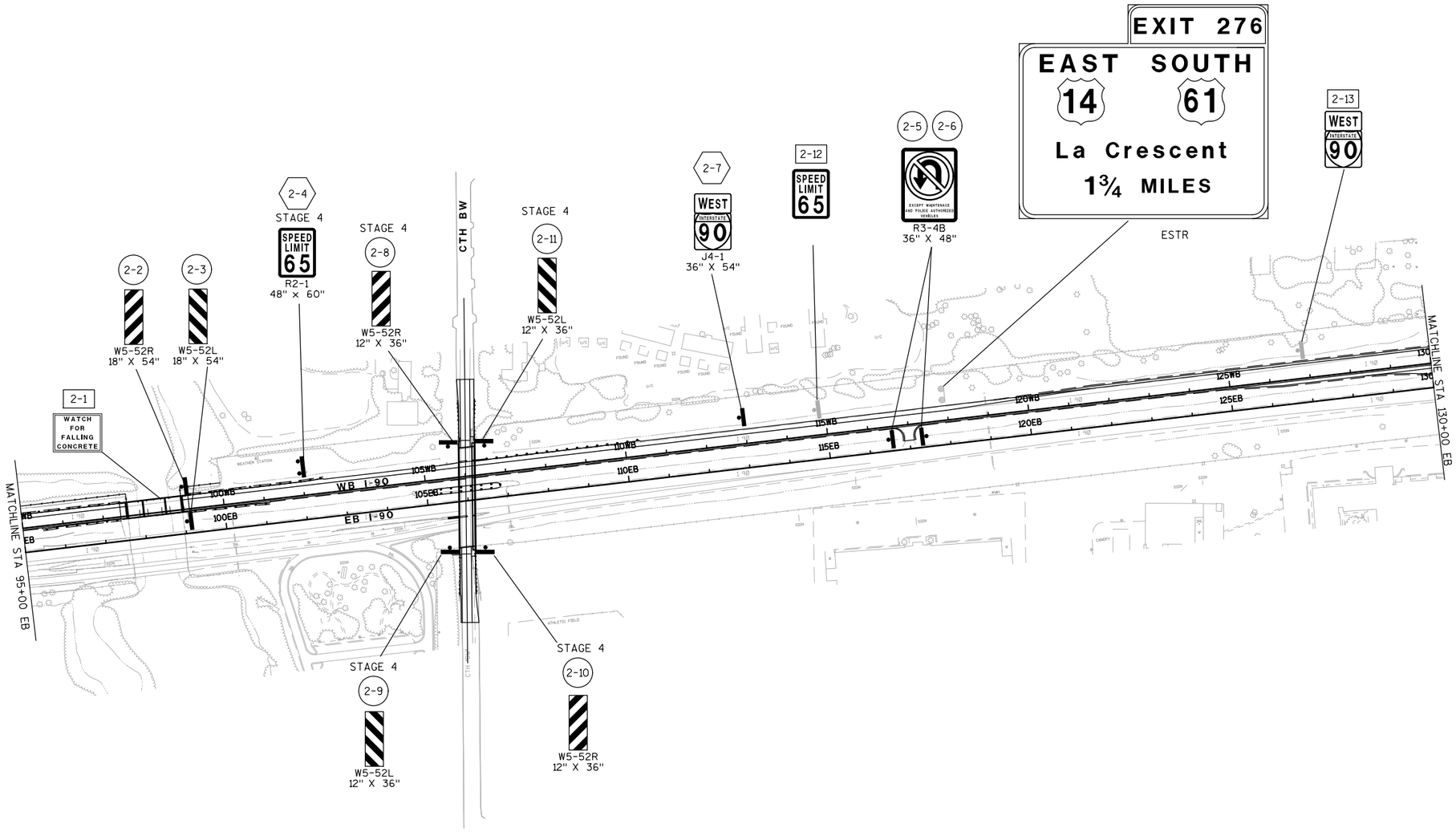
1-6 1-7
EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES
R3-4B
36" X 48"

NOTE: ALL SIGN WORK SHOWN ON THIS SHEET PERFORMED DURING STAGE 2

LEGEND

ESTR	EXISTING SIGN TO REMAIN		TYPE II SIGN ON WOOD POST
X-XX	SIGN - MOVE		EXISTING GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE AND REPLACE		PROPOSED GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE EXISTING		EXISTING OVERHEAD SIGN STRUCTURE
X-XX	SIGN - PLACE NEW		PROPOSED OVERHEAD SIGN STRUCTURE

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PERMANENT SIGNING PLAN	SHEET 53	E

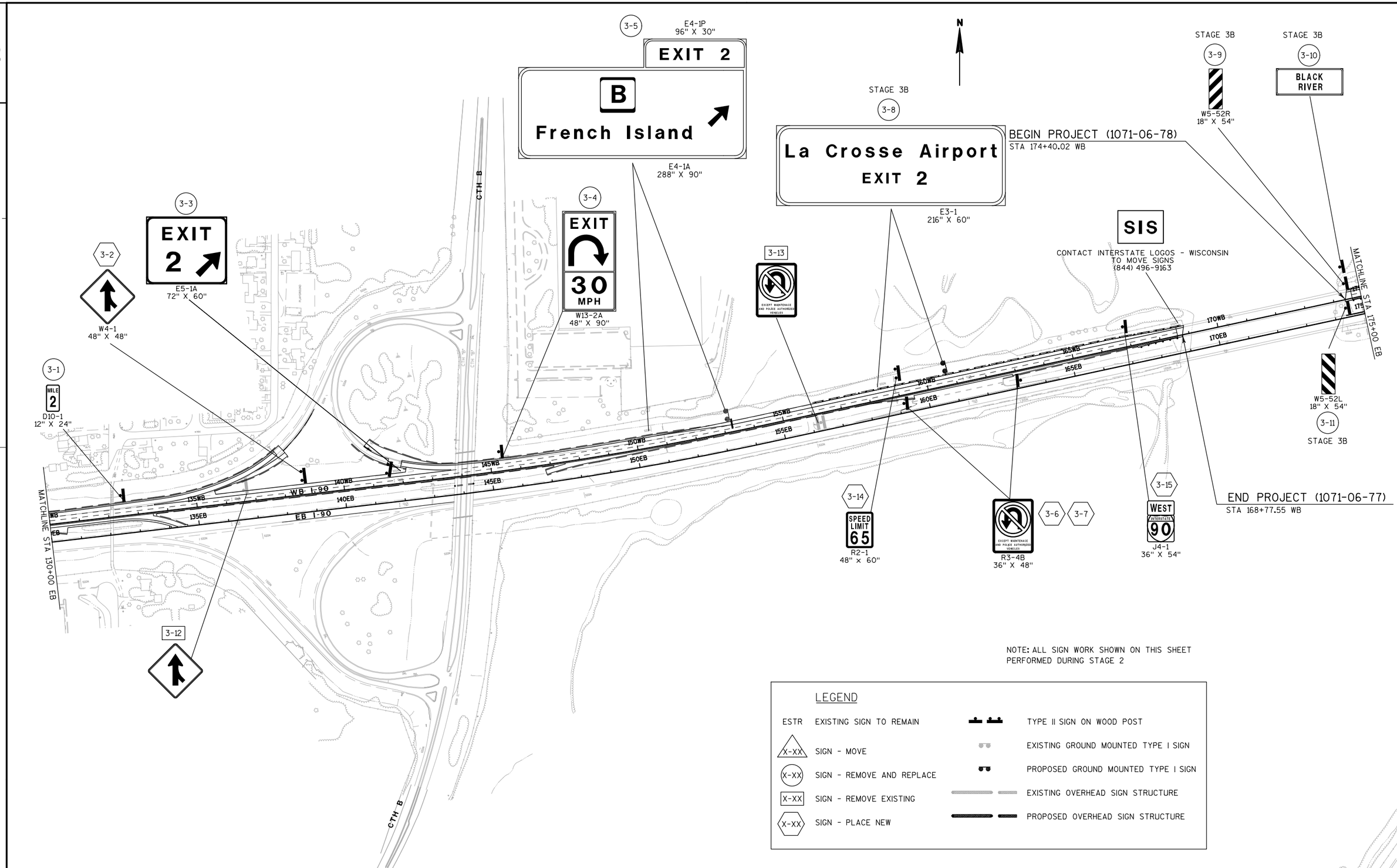


NOTE: ALL SIGN WORK SHOWN ON THIS SHEET PERFORMED DURING STAGE 2

LEGEND

ESTR	EXISTING SIGN TO REMAIN		TYPE II SIGN ON WOOD POST
X-XX	SIGN - MOVE		EXISTING GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE AND REPLACE		PROPOSED GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE EXISTING		EXISTING OVERHEAD SIGN STRUCTURE
X-XX	SIGN - PLACE NEW		PROPOSED OVERHEAD SIGN STRUCTURE

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PERMANENT SIGNING PLAN	SHEET 54	E

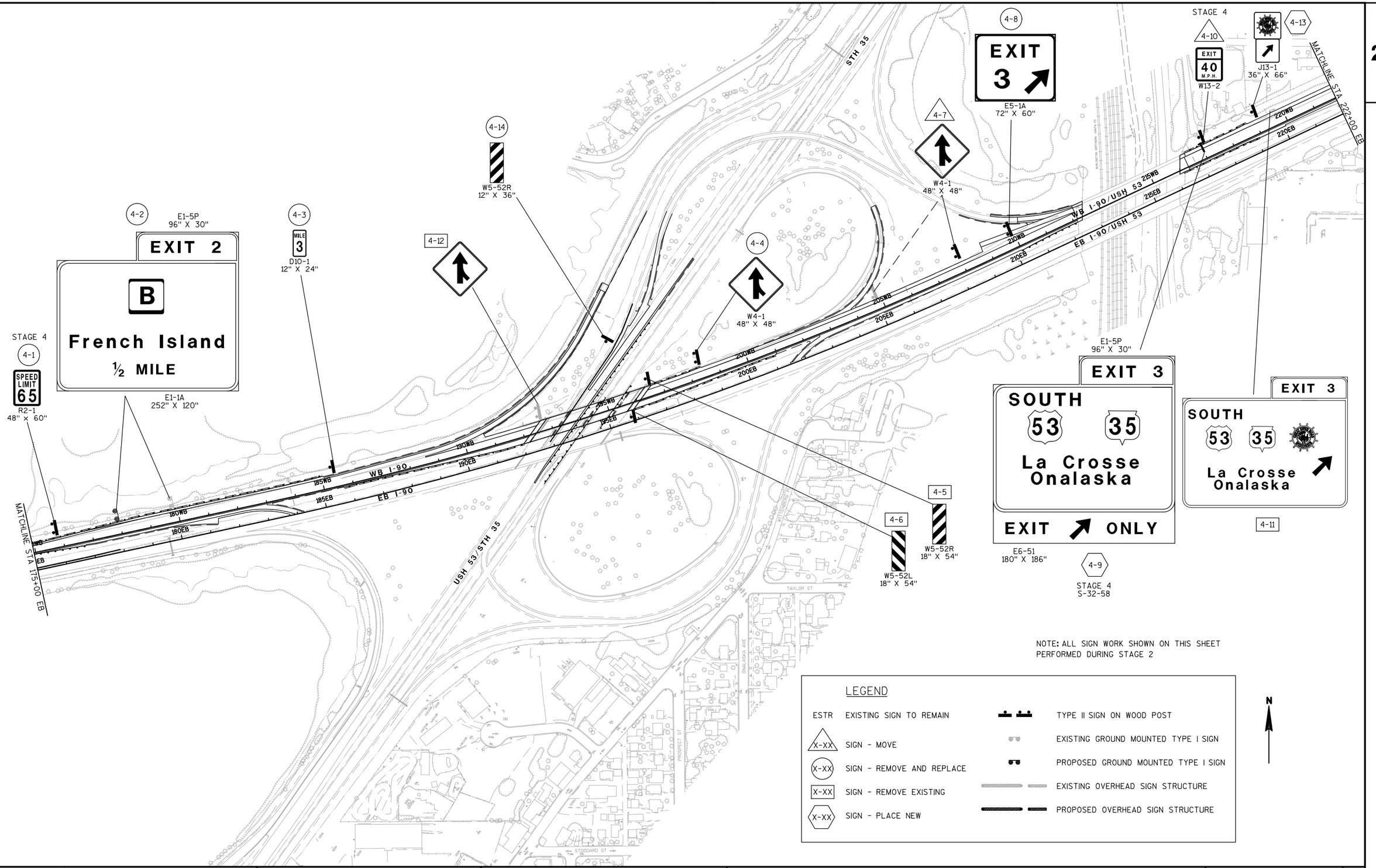


NOTE: ALL SIGN WORK SHOWN ON THIS SHEET PERFORMED DURING STAGE 2

LEGEND

ESTR	EXISTING SIGN TO REMAIN		TYPE II SIGN ON WOOD POST
X-XX	SIGN - MOVE		EXISTING GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE AND REPLACE		PROPOSED GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE EXISTING		EXISTING OVERHEAD SIGN STRUCTURE
X-XX	SIGN - PLACE NEW		PROPOSED OVERHEAD SIGN STRUCTURE

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	PERMANENT SIGNING PLAN	SHEET 55	E



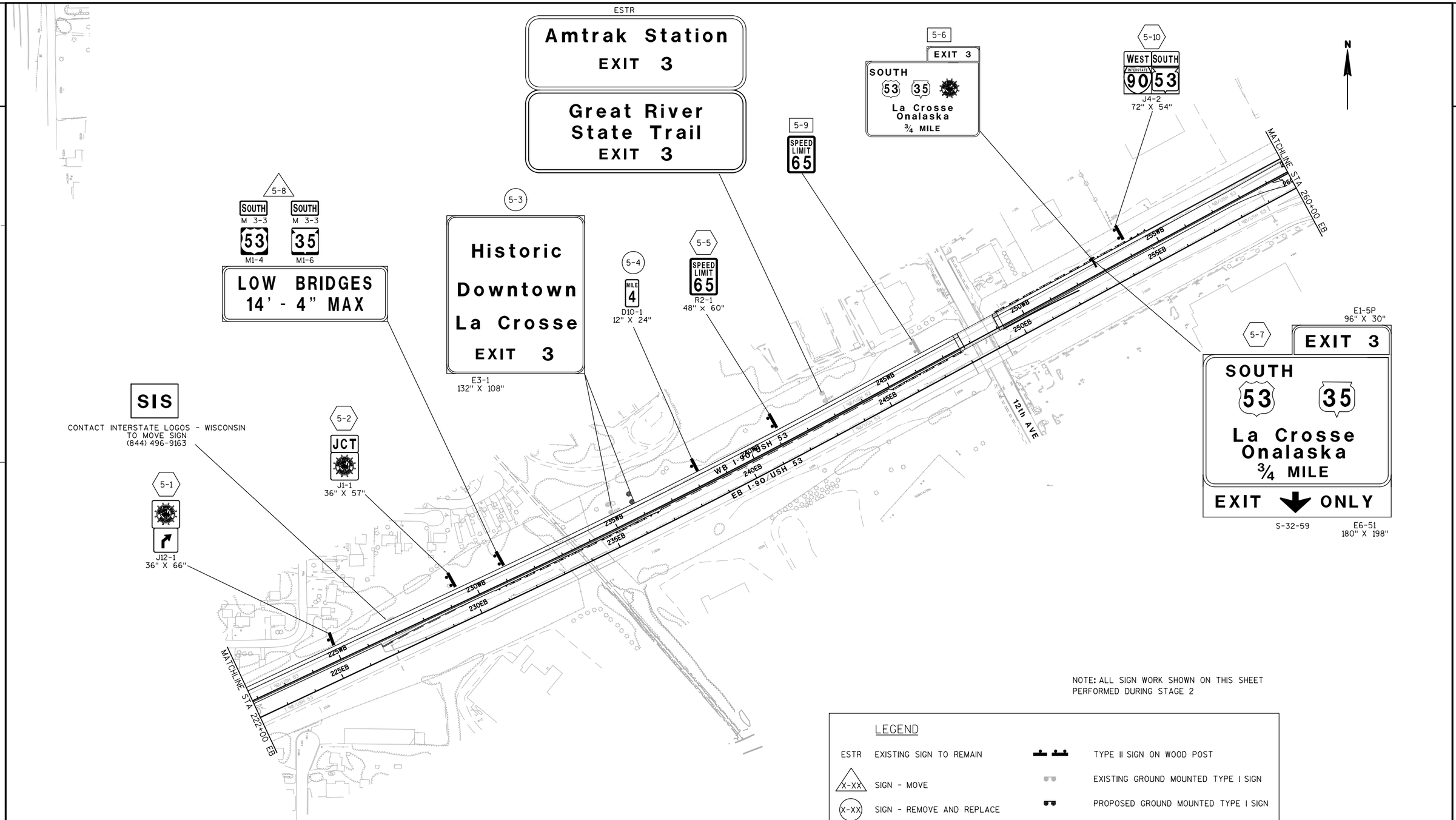
NOTE: ALL SIGN WORK SHOWN ON THIS SHEET PERFORMED DURING STAGE 2

LEGEND

ESTR	EXISTING SIGN TO REMAIN		TYPE II SIGN ON WOOD POST
X-XX	SIGN - MOVE		EXISTING GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE AND REPLACE		PROPOSED GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE EXISTING		EXISTING OVERHEAD SIGN STRUCTURE
X-XX	SIGN - PLACE NEW		PROPOSED OVERHEAD SIGN STRUCTURE

N

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PERMANENT SIGNING PLAN	SHEET 56	E

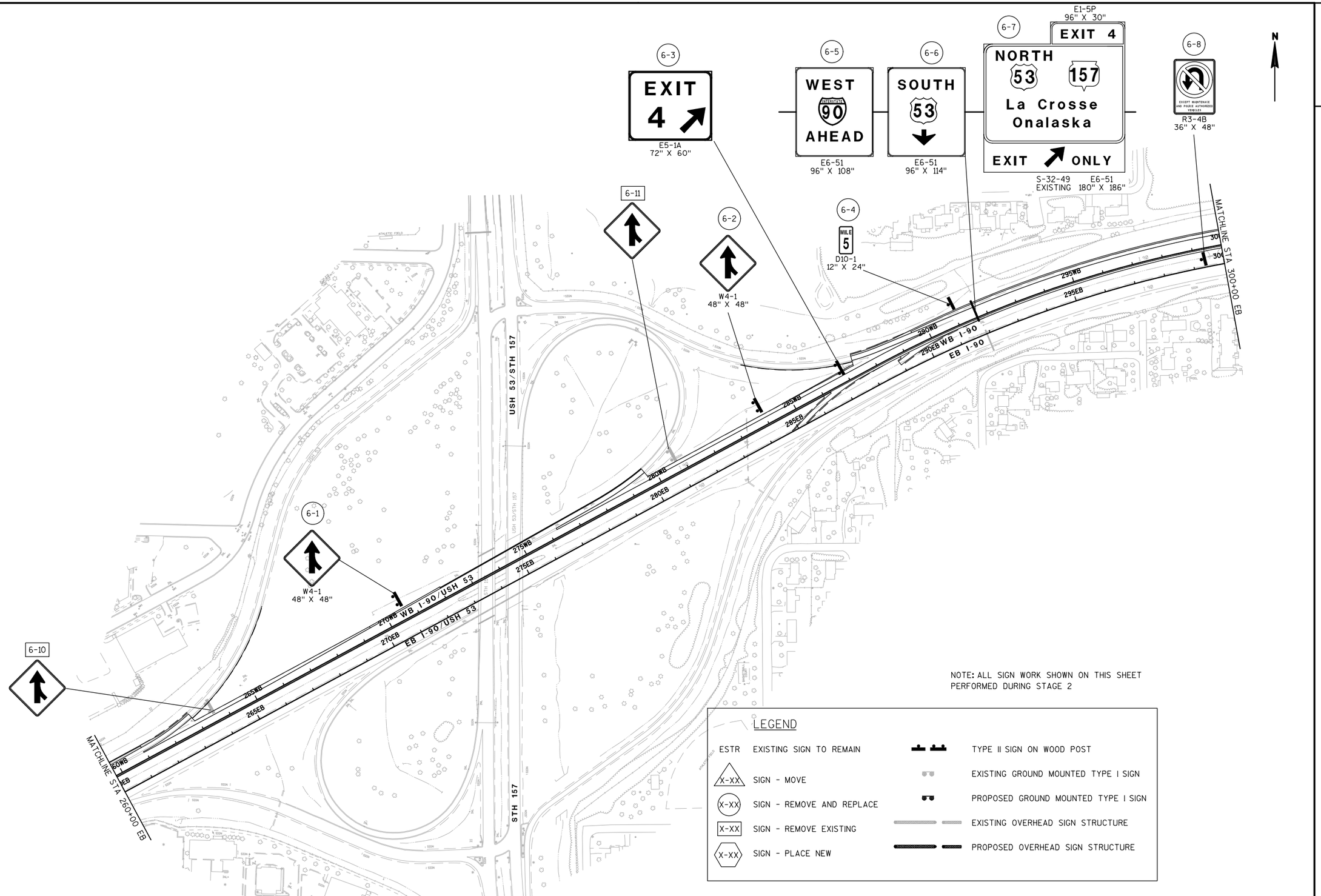


NOTE: ALL SIGN WORK SHOWN ON THIS SHEET PERFORMED DURING STAGE 2

LEGEND

ESTR	EXISTING SIGN TO REMAIN		TYPE II SIGN ON WOOD POST
X-XX	SIGN - MOVE		EXISTING GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE AND REPLACE		PROPOSED GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE EXISTING		EXISTING OVERHEAD SIGN STRUCTURE
X-XX	SIGN - PLACE NEW		PROPOSED OVERHEAD SIGN STRUCTURE

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PERMANENT SIGNING PLAN	SHEET 57	E



NOTE: ALL SIGN WORK SHOWN ON THIS SHEET PERFORMED DURING STAGE 2

LEGEND

ESTR	EXISTING SIGN TO REMAIN		TYPE II SIGN ON WOOD POST
X-XX	SIGN - MOVE		EXISTING GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE AND REPLACE		PROPOSED GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE EXISTING		EXISTING OVERHEAD SIGN STRUCTURE
X-XX	SIGN - PLACE NEW		PROPOSED OVERHEAD SIGN STRUCTURE

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PERMANENT SIGNING PLAN	SHEET 58	E

2

N

7-3
EXIT 4
NORTH
53 157
La Crosse
Onalaska
¼ MILE
EXIT ONLY

REMOVE SIGN STRUCTURE
S-32-29

7-4
WEST
INTERSTATE 90
AHEAD

E6-51
96" X 108"

7-5
SOUTH
53

E6-51
96" X 114"

7-6
E1-5P
96" X 30"
EXIT 4
NORTH
53 157
La Crosse
Onalaska
½ MILE
EXIT ONLY

S-32-64
E6-51
180" X 198"

7-8
WEST
INTERSTATE 90
AHEAD

7-9
SOUTH
53

7-10
EXIT 4
NORTH
53 157
La Crosse
Onalaska
¾ MILE
EXIT ONLY

REMOVE SIGN STRUCTURE
S-32-30

7-7
SPEED LIMIT
65

R2-1
48" x 60"

7-1

W5-52R
18" X 54"

7-2

W5-52L
18" X 54"

7-13
WEST
INTERSTATE 90

J4-1
36" X 54"

7-12
SPEED LIMIT
65

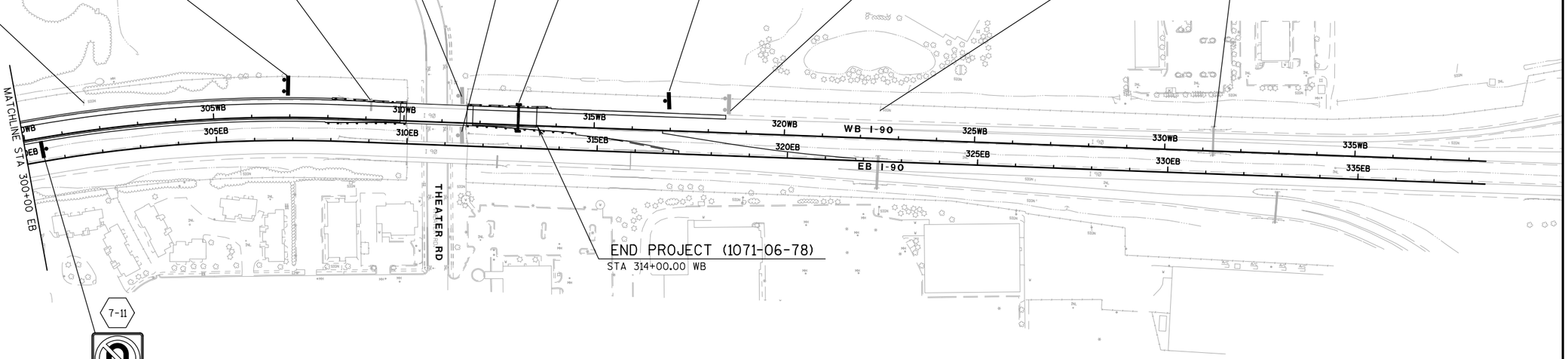
R2-1
48" x 60"

SIS

CONTACT INTERSTATE LOGOS - WISCONSIN
TO MOVE SIGN
(844) 496-9163

SIS

CONTACT INTERSTATE LOGOS - WISCONSIN
TO MOVE SIGN
(844) 496-9163



7-11

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

R3-4B
36" X 48"

NOTE: ALL SIGN WORK SHOWN ON THIS SHEET
PERFORMED DURING STAGE 2

LEGEND

ESTR	EXISTING SIGN TO REMAIN		TYPE II SIGN ON WOOD POST
X-XX	SIGN - MOVE		EXISTING GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE AND REPLACE		PROPOSED GROUND MOUNTED TYPE I SIGN
X-XX	SIGN - REMOVE EXISTING		EXISTING OVERHEAD SIGN STRUCTURE
X-XX	SIGN - PLACE NEW		PROPOSED OVERHEAD SIGN STRUCTURE

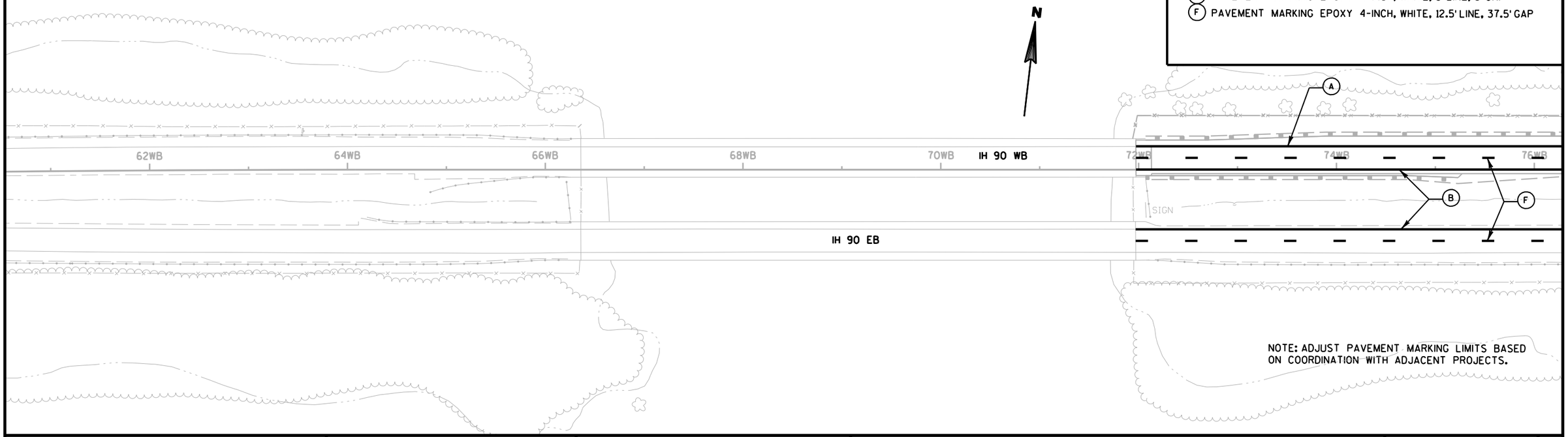
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PERMANENT SIGNING PLAN	SHEET 59	E

2

2

LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 8-INCH, WHITE, 3' LINE, 9' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
- (F) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE, 37.5' GAP



NOTE: ADJUST PAVEMENT MARKING LIMITS BASED ON COORDINATION WITH ADJACENT PROJECTS.

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PAVEMENT MARKING	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\gg_0677_024501_pm.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

N

A

SIGN

76WB 78WB 80WB 82WB IH 90 WB 84WB 86WB 88WB 90WB

B F

76EB 78EB 80EB 82EB 84EB 86EB 88EB 90EB

IH 90 EB

SIGN SIGN

LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 8-INCH, WHITE, 3' LINE, 9' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
- (F) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE, 37.5' GAP

N

FRENCH SLOUGH

WEATHER STATION

A

SIGN

228W

92WB 94WB 96WB IH 90 WB 98WB 100WB 102WB 104WB 106WB

B F

92EB 94EB 96EB 98EB 100EB 102EB 104EB 106EB

IH 90 EB

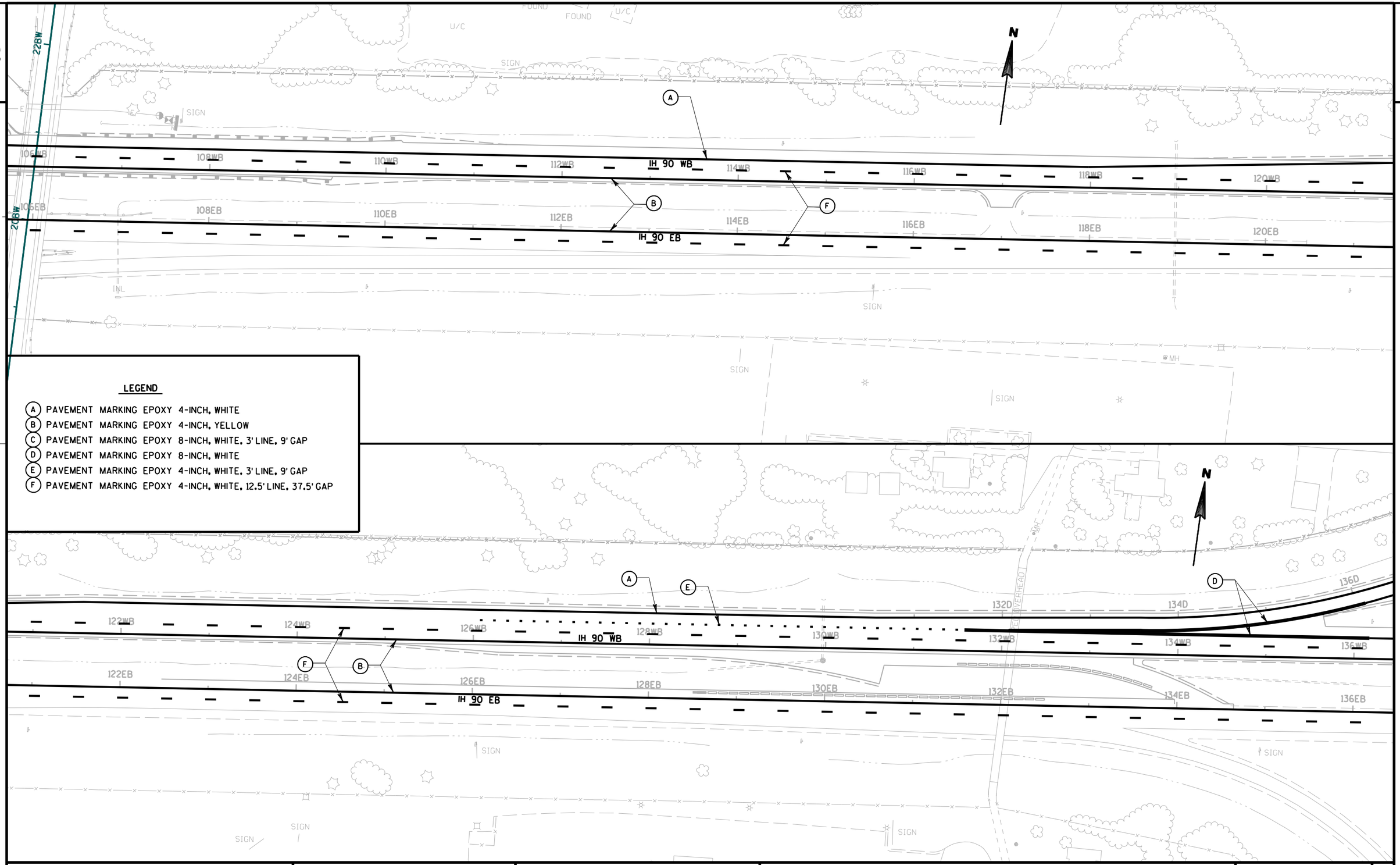
208W

SIGN SIGN INL SIGN INL SIGN

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PAVEMENT MARKING	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_024502_pm.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 8-INCH, WHITE, 3' LINE, 9' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
- (F) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE, 37.5' GAP

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PAVEMENT MARKING	SHEET 62	E

2

2

N

FLEXIBLE TUBULAR MARKER POSTS AND BASES LEFT IN PLACE @ 10' SPACING (TYP)

FLEXIBLE TUBULAR MARKER POSTS AND BASES LEFT IN PLACE @ 10' SPACING (TYP)

IH 90 WB

IH 90 EB

CTH "B"

CTH B

136WB 138WB 140WB 142WB 144WB 146WB 148WB 150WB

136EB 138EB 140EB 142EB 144EB 146EB 148EB 150EB

140D 138D 136D 140C 142C 144C

SIGN INL

LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 8-INCH, WHITE, 3' LINE, 9' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
- (F) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE, 37.5' GAP

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PAVEMENT MARKING	SHEET 63	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_024504_pm.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

N

SIGN

E

A

152WB 154WB 156WB 158WB IH 90 WB 160WB 162WB 164WB 166WB

F

B

152EB 154EB 156EB 158EB 160EB 162EB 164EB 166EB

IH 90 EB

SIGN

FLEXIBLE TUBULAR MARKER POSTS AND BASES LEFT IN PLACE @ 10' SPACING (TYP)

SIGN

LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 8-INCH, WHITE, 3' LINE, 9' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
- (F) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE, 37.5' GAP

BLACK RIVER

N

A

SIGN

166WB 168WB 170WB 172WB IH 90 WB 174WB 176WB 178WB 180WB

F

B

166EB 168EB 170EB 172EB IH 90 EB 174EB 176EB 178EB 180EB

SIGN

SIGN

SIGN

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	PAVEMENT MARKING	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_024505_pm.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 8-INCH, WHITE, 3' LINE, 9' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
- (F) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE, 37.5' GAP

N

IH 90 WB

IH 90 EB

ROSE ST SB

ROSE ST NB

SIGN

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PAVEMENT MARKING	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_024506_pm.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

2

LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 8-INCH, WHITE, 3' LINE, 9' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
- (F) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE, 37.5' GAP

N

ROSE ST SB

ROSE ST NB

IH 90 WB

IH 90 EB

FLEXIBLE TUBULAR MARKER POSTS AND BASES LEFT IN PLACE @ 10' SPACING (TYP)

FLEXIBLE TUBULAR MARKER POSTS AND BASES LEFT IN PLACE @ 10' SPACING (TYP)

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PAVEMENT MARKING	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\da_0677_024507_pm.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

FLEXIBLE TUBULAR MARKER POSTS AND BASES LEFT IN PLACE @ 10' SPACING (TYP)

BURLINGTON NORTHERN BNSF RR

OAK ST

GREAT RIVER STATE TRAIL

IH 90 WB

IH 90 EB

212GU 214GU 216GU 218GU 220GU 222GU 224GU 226GU

212WB 214WB 216WB 218WB 220WB 222WB 224WB 226WB

212EB 214EB 216EB 218EB 220EB 222EB 224EB 226EB

226WB 228WB 230WB 232WB 234WB 236WB 238WB 240WB

226EB 228EB 230EB 232EB 234EB 236EB 238EB 240EB

SIGN WALLS INL MH W 36T 34T 32T

LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 8-INCH, WHITE, 3' LINE, 9' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
- (F) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE, 37.5' GAP

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PAVEMENT MARKING	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_024508_pm.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

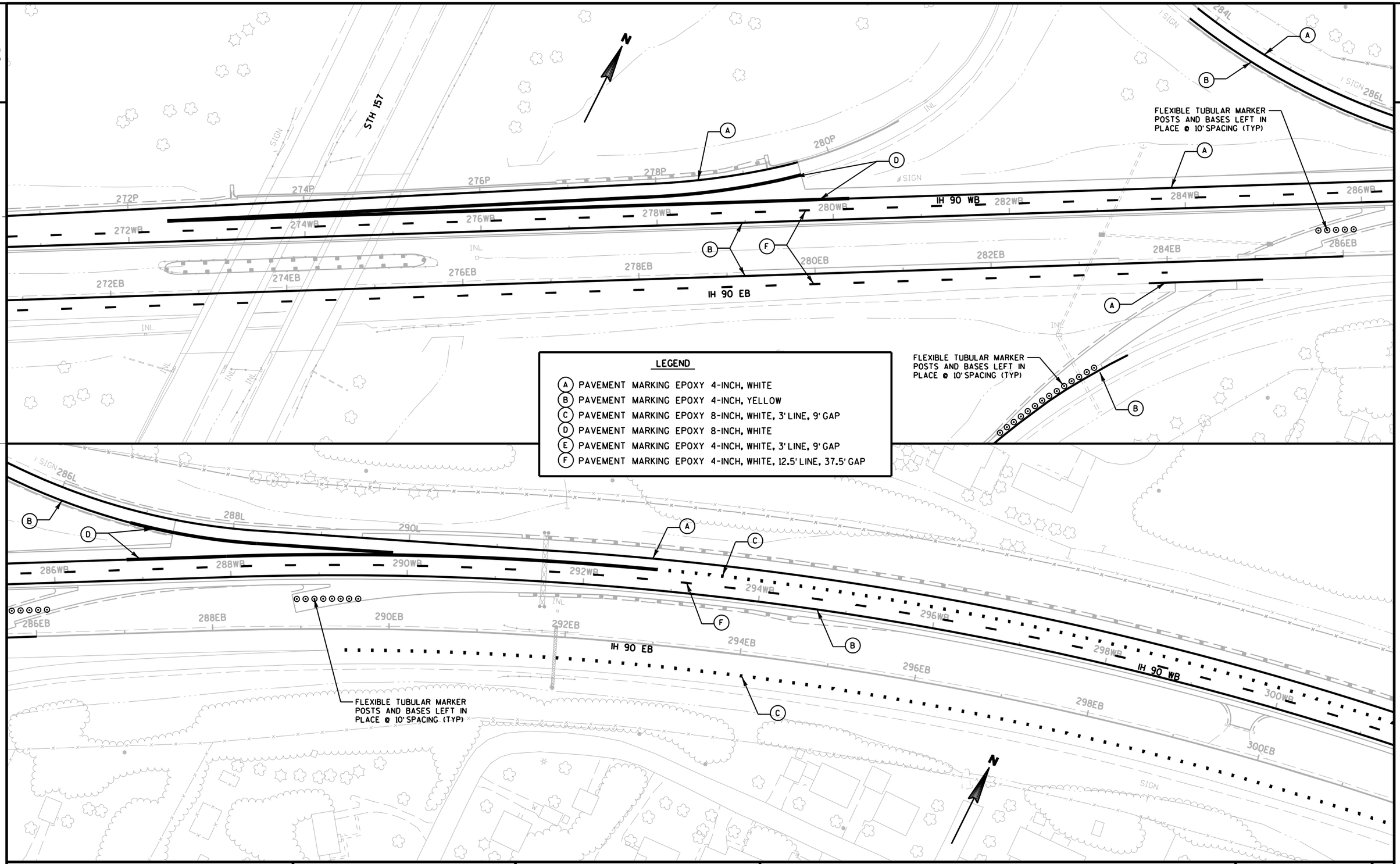
2

LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 8-INCH, WHITE, 3' LINE, 9' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
- (F) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE, 37.5' GAP

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PAVEMENT MARKING	SHEET 68	E

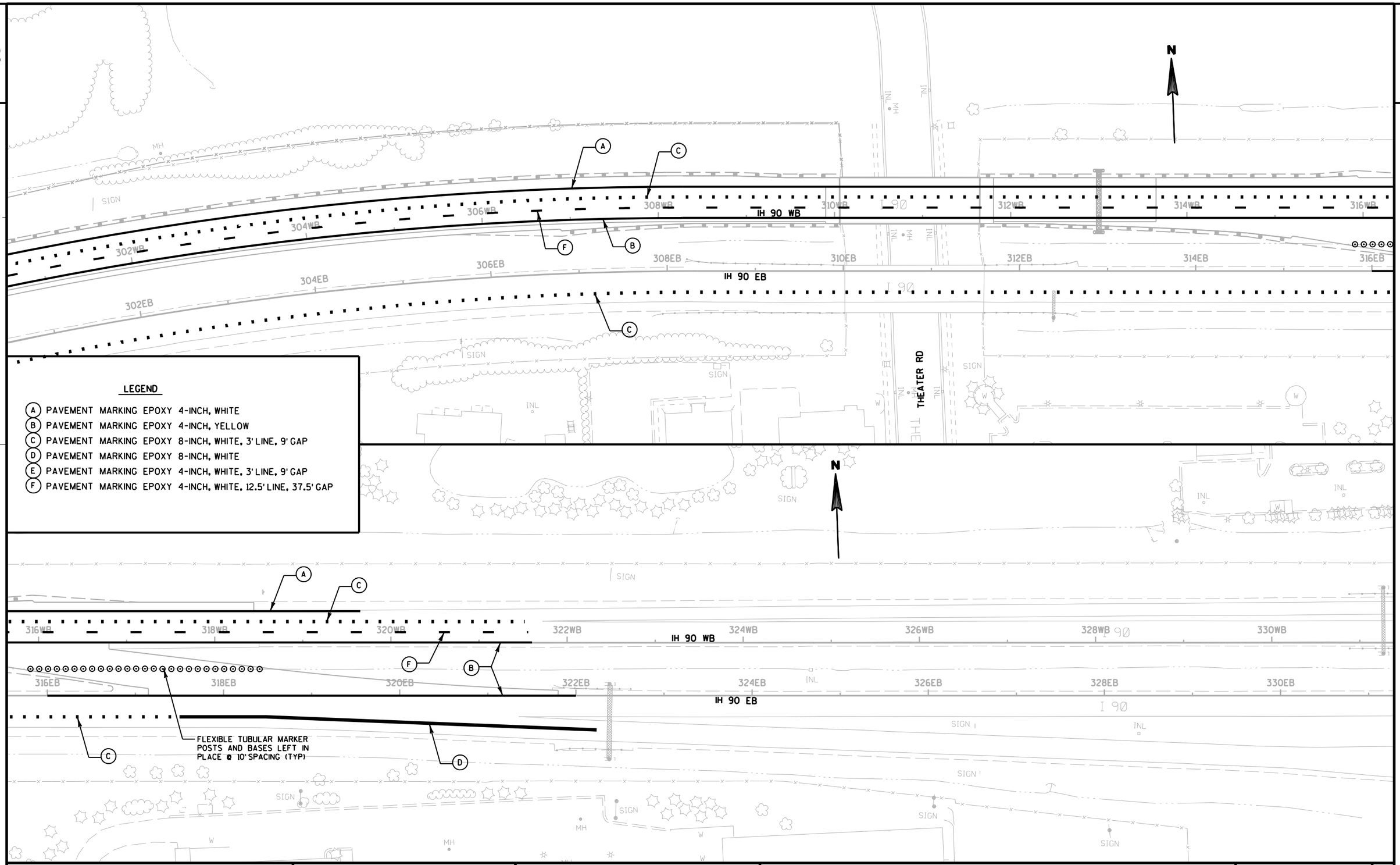
2



LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 8-INCH, WHITE, 3' LINE, 9' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
- (F) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE, 37.5' GAP

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PAVEMENT MARKING	SHEET 69	E



LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 8-INCH, WHITE, 3' LINE, 9' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
- (F) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE, 37.5' GAP

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PAVEMENT MARKING	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_024511_pm.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

2

2

N

R/L EB

R/L WB

105+00EB

105+00WB

IH 90 EB

IH 90 WB

BEGIN CONSTRUCTION
STA 17+00.00 BW
MATCH EXISTING PAVEMENT MARKING

END CONSTRUCTION
STA 23+00.00 BW
MATCH EXISTING PAVEMENT MARKING

PAVEMENT MARKING EPOXY
4-INCH (WHITE)

R/L CTH BW

17BW

18BW

19BW

20BW

21BW

22BW

23BW

12'

12'

CTH BW

PAVEMENT MARKING EPOXY
4-INCH (WHITE)

PAVEMENT MARKING EPOXY
4-INCH (DOUBLE YELLOW)

107+00EB

107+00WB

PROJECT NO:1071-06-77	HWY:IH 90	COUNTY:LA CROSSE	PERMANENT SIGNING & MARKING - CTH BW	SHEET 71	E

FILE NAME : ch_0677_024501_pm.dgn PLOT DATE : 01-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

GENERAL NOTES FOR TRAFFIC CONTROL

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTOR METHODS OR SEQUENCE OF OPERATION.

ADJUST SIGN SPACING TO AVOID CONFLICT WITH AND TO PROVIDE A MINIMUM SPACING OF 200 FEET (500 FEET DESIRABLE) TO EXISTING SIGNS.

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

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

REMOVE OR COVER ANY TEMPORARY OR EXISTING SIGNS THAT CONFLICT WITH "IN USE" TRAFFIC CONTROL.

ALL TRAFFIC CONTROL SIGNING WILL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION, & THE WISCONSIN SUPPLEMENT, DATED MAY 25, 2011.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM OF 1500 FEET IN FRONT OF DRUMS.

IF LANE CLOSURES ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

INSTALL THE LANE CLOSURE SERIES AS A COMPLETE UNIT THAT INCLUDES ALL ADVANCE WARNING SIGNING, DRUMS, AND ARROW BOARDS.

WARNING LIGHTS SHALL NOT BE WORKING ON "COVERED" OR "DOWNED" SIGNS OR BARRICADES.

DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" LIGHTS.

ALL TYPE III BARRICADES SHALL HAVE AN EQUIVALENT WIDTH OF 8 FEET.

REMOVE ALL EXISTING PAVEMENT MARKINGS CONFLICTING WITH THE TRAFFIC CONTROL OR NOT APPROPRIATE TO THE TRAVEL PATH FOR OPERATIONS IN PLACE FOR MORE THAN 4 CONTINUOUS DAYS.

SEE SIGNING PLAN FOR STAGES/LOCATIONS PERMANENT SIGNS ARE PLACED.

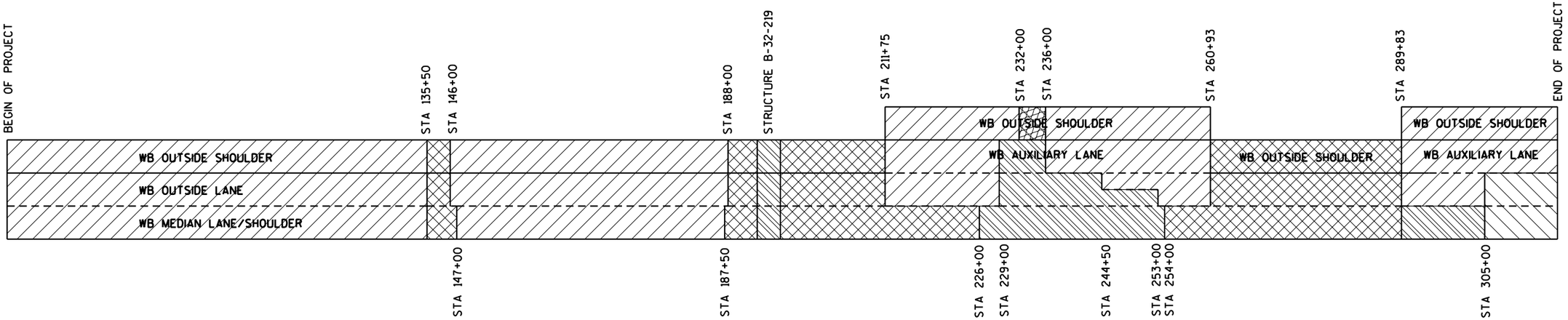
PROVIDE 2' SHY DISTANCE FROM LANE LINE TO FACE OF CONCRETE BARRIER UNLESS CALLED OUT OTHERWISE.

FOR TEMPORARY PAVEMENT MARKINGS CALLED OUT AS REFLECTIVE PAINT/REMOVABLE TAPE THE INTENT IS TO USE REMOVABLE TAPE IN AREAS DIAGONAL TO FINAL LANES OF CONCRETE AND REFLECTIVE PAINT ELSEWHERE. THE ENGINEER MAY MODIFY THE LOCATIONS OF REFLECTIVE PAINT/REMOVABLE TAPE TO FIT FIELD CONDITIONS AND SAFETY CONCERNS.

TEMPORARY ALIGNMENT DESIGNATION	ROADWAY SEGMENT	PROJECT	STAGE(S) CONSTRUCTED	STAGE(S) IN USE
AT	TEMP IH90 EB TO CTH B RAMP	1071-06-77	1,3A	**
AU	TEMP IH90 EB TO CTH B RAMP	1071-06-77	3A	**
BT	TEMP CTH B TO IH90 EB RAMP	1071-06-77	1	**
BU	TEMP CTH B TO IH90 EB RAMP	1071-06-77	3A	**
CT	TEMP IH90 WB TO CTH B RAMP	1071-06-77	PREP	1
CU	TEMP IH90 WB TO CTH B RAMP	1071-06-77	1	2
CV	TEMP IH90 WB TO CTH B RAMP	1071-06-77	1	**
DT	TEMP CTH B TO IH90 WB RAMP	1071-06-77	PREP	1
DU	TEMP CTH B TO IH90 WB RAMP	1071-06-77	1	2
DV	TEMP CTH B TO IH90 WB RAMP	1071-06-77	2	**
ET	TEMP IH90 EB TO ROSE ST SB RAMP	1071-06-78	1,4A,4B	**
EU	TEMP IH90 EB TO ROSE ST SB RAMP	1071-06-78	4A	**
FT	TEMP ROSE ST TO IH90 EB	1071-06-78	PREP	1,2,3A,3B,4
FU	TEMP ROSE ST TO IH90 EB RAMP	1071-06-78	4A	**
FV	TEMP ROSE ST TO IH90 EB RAMP	1071-06-78	3A	**
GT	TEMP IH90 WB TO ROSE ST RAMP	1071-06-78	PREP	1
GU	TEMP IH90 WB TO ROSE ST RAMP	1071-06-78	1	2
GV	FINAL IH90 WB TO ROSE ST RAMP	1071-06-78	1	3A,3B,4A,4B
GW	TEMP IH90 WB TO ROSE ST SB RAMP	1071-06-78	1A	1B,1C,1D
GX	FINAL IH90 WB TO ROSE ST SB RAMP(ALI ONLY)	1071-06-78	1A	4A,4B
HT	TEMP ROSE ST SB TO IH90 WB RAMP	1071-06-78	PREP	1
HU	TEMP ROSE ST NB TO IH90 WB RAMP	1071-06-78	PREP,2	1,3A,3B
HV	TEMP ROSE ST SB TO IH90 WB RAMP	1071-06-78	1	2,3A,3B
HW	FINAL ROSE ST NB TO IH90 WB RAMP	1071-06-78	1,2	4
JT	TEMP IH90 EB TO STH 157 RAMP	1071-06-78	PREP	1,2,4
JU	TEMP IH90 EB TO STH 157 RAMP	1071-06-78	3B	**
JV	TEMP IH90 EB TO STH 157 RAMP	1071-06-78	2	**
KT	TEMP STH 157 NB TO IH90 EB RAMP	1071-06-78	3A,3B	**
KU	TEMP STH 157 NB TO IH90 EB RAMP	1071-06-78	3A	**
LT	TEMP IH90 WB TO STH 157 RAMP	1071-06-78	PREP	1
LU	TEMP IH90 WB TO STH 157 RAMP	1071-06-78	1	2
MT	TEMP STH 157 SB TO IH90 WB RAMP	1071-06-78	PREP	1
MU	TEMP STH 157 SB TO IH90 WB RAMP	1071-06-78	1	2
ST	TEMP IH90 EB TO STH 16 RAMP	1071-06-78	3A	**
TE	TEMP IH90 EB X-OVER	1071-06-78	3A	**
TN	TEMP WIDENING NB ROSE ST	1071-06-78	1A	1B,1C,1D
TS	TEMP WIDENING SB ROSE ST	1071-06-78	1A	1B,1C,1D
TW	TEMP WIDENING IH90 WB	1071-06-78	PREP	1,2
UE	TEMP IH90 EB X-OVER	1071-06-77	1,3A	**
UW	TEMP IH90 WB X-OVER & WIDENING	1071-06-78	1	3A,3B
VW	TEMP IH90 WB X-OVER	1071-06-77	1	3A,3B

PREP (PREP PROJECT - CONSTRUCTED PREVIOUSLY BY OTHERS)

** FOR USE IN FUTURE EB PROJECT



NOTES:

EXHIBIT HAS BEEN CREATED TO ILLUSTRATE WHAT LANE(S)/SHOULDERS OF IH 90 WB ARE COMPLETED DURING EACH STAGE.

WORK ZONES SHOWN ON STAGING SHEETS DEPICT THE COMPLETED WORK AS SHOWN ON THIS EXHIBIT. SOME WORK MAY BE ABLE TO BE COMPLETED DURING DIFFERENT STAGES THAN SHOWN IF TRAFFIC CONTROL CONFIGURATION ALLOWS. SUBMIT ANY CHANGES TO THE ENGINEER IN THE FIELD FOR APPROVAL PRIOR TO MAKING ANY TRAFFIC SWITCH.

- STAGE 1
- STAGE 2
- STAGE 3A
- STAGE 3B
- STAGE 4A/4B

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	CONSTRUCTION SEQUENCE OVERVIEW FOR WESTBOUND PAVEMENT	SHEET 73	E

GENERAL NOTES FOR PCMS

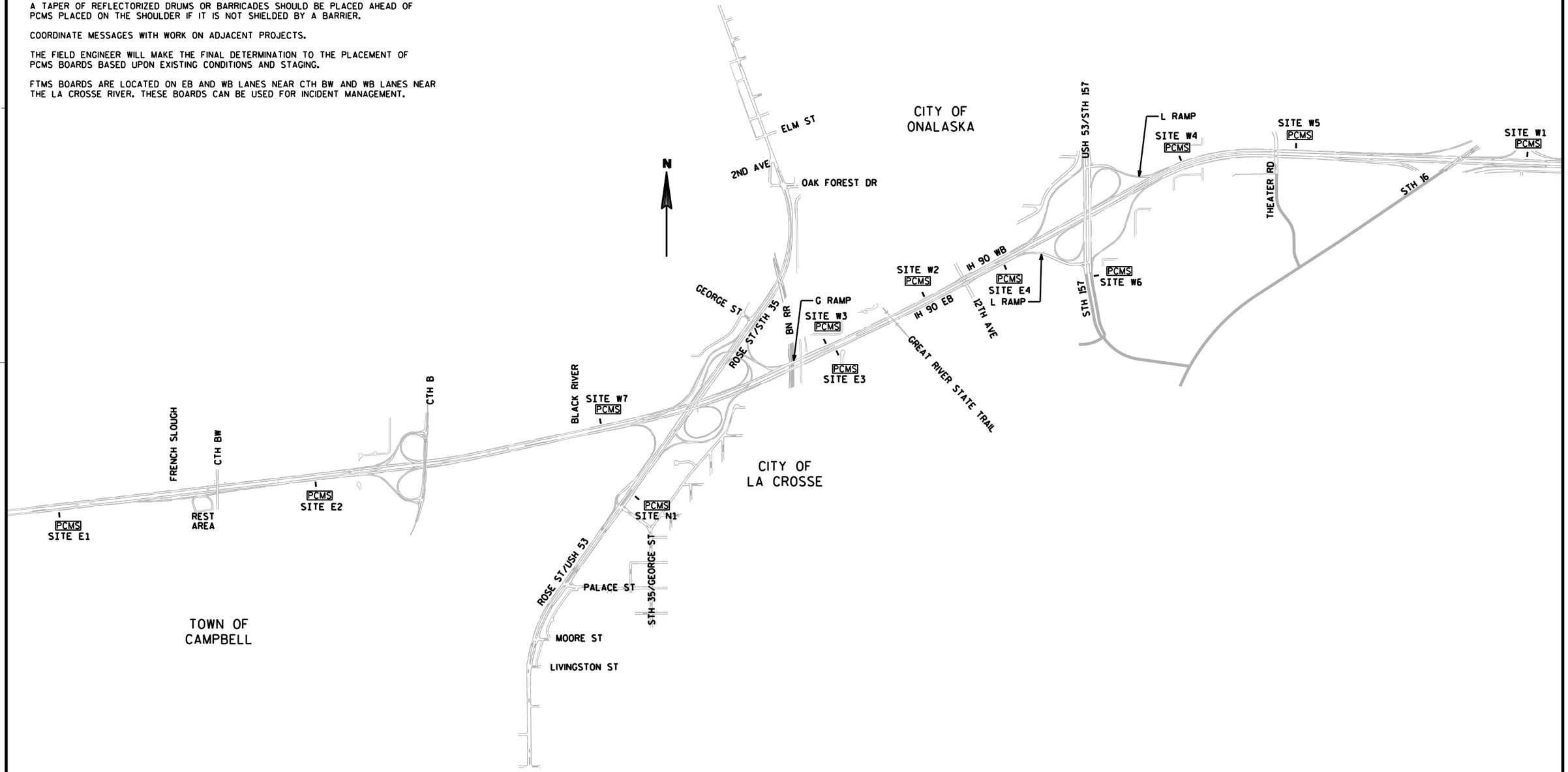
CONSIDER GEOMETRICS WHEN LOCATING PCMS SO THE DRIVER HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1000 FEET IN FRONT OF THE PCMS.

PCMS SHOULD BE PLACED AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF HIGHWAY CONSTRUCTION PROJECTS, THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEHIND THE DITCH. THE LOCATION FOR INTERMITTENT WORK SUCH AS FREEWAY LANE CLOSURE, OR WHERE SITE CONDITIONS DO NOT ALLOW OTHERWISE, THE SIGNS MAY BE PLACED ON THE SHOULDER. THE SITE SHOULD BE VISITED TO ASSURE VISIBILITY, SAFETY AND MAINTENANCE CONSIDERATIONS. A TAPER OF REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF PCMS PLACED ON THE SHOULDER IF IT IS NOT SHIELDED BY A BARRIER.

COORDINATE MESSAGES WITH WORK ON ADJACENT PROJECTS.

THE FIELD ENGINEER WILL MAKE THE FINAL DETERMINATION TO THE PLACEMENT OF PCMS BOARDS BASED UPON EXISTING CONDITIONS AND STAGING.

FTMS BOARDS ARE LOCATED ON EB AND WB LANES NEAR CTH BW AND WB LANES NEAR THE LA CROSSE RIVER. THESE BOARDS CAN BE USED FOR INCIDENT MANAGEMENT.



PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL PCMS MESSAGES	SHEET 74	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_025001_tcmb.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:1800

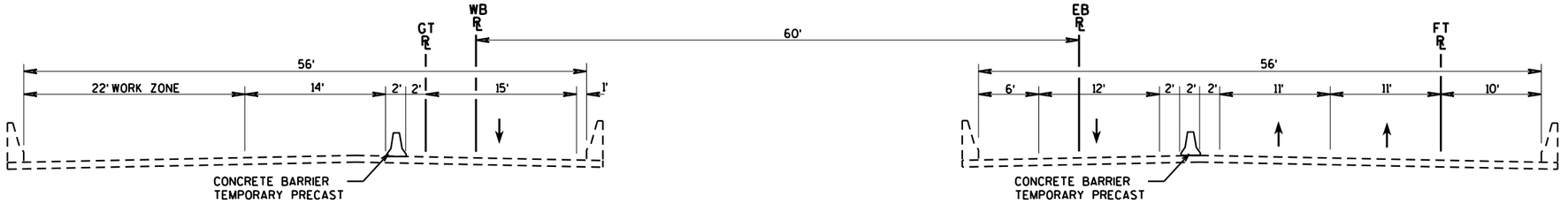
2

SITE NO.	APPROXIMATE LOCATION
E1	EAST OF ROUND LAKE
E2	PRIOR TO CTH B EXIT RAMP
E3	BETWEEN RAILROAD AND GREAT RIVER STATE TRAIL
E4	J RAMP DIVERGENCE POINT
W1	PRIOR TO STH 16 EXIT RAMP
W2	BETWEEN 12TH AVENUE AND GREAT RIVER STATE TRAIL
W3	EAST OF G RAMP DIVERGENCE POINT
W4	EAST OF L RAMP DIVERGENCE POINT
W5	BETWEEN THEATER ROAD AND STH 16
W6	NEAR STH 157 AND STH 16 INTERSECTION
W7	WEST OF ROSE STREET
N1	ROSE STREET, NORTH OF W GEORGE STREET INTERSECTION

ROADWAY CONSTRUCTION OPERATION/CONFIGURATION

	PRIOR TO CONSTRUCTION 2015 (7 DAYS)		MEDIAN/OUTSIDE LANE/SHOULDER CLOSURE (ANY STAGE)		PRIOR TO HWY 157 NB TO IH-90 WB RAMP CLOSURE (7 DAYS)		STAGE 1		STAGE 2		STAGE 3A AND STAGE 3B		STAGE 4		PRIOR TO STH 35/ROSE STREET NB TO IH 90 WB RAMP CLOSURE (7 DAYS)		DURING STH 35/ROSE STREET NB TO IH 90 WB RAMP CLOSURE		INCIDENT MANAGEMENT		DURING ROLLING STOPS	
SITE NO.	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)
SITE E1	I 90 WORK STARTS	"DATE"	LANE/SHLDR CLOSED	XX MILES AHEAD	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		TRAFFIC STOPPED AHEAD	BE PREPARED TO STOP	TEMP CLOSURE AHEAD	EXPECT DELAYS
SITE E2	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		TRAFFIC STOPPED AHEAD	BE PREPARED TO STOP	TEMP CLOSURE AHEAD	EXPECT DELAYS
SITE E3	I 90 WORK STARTS	"DATE"	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		RT LANE MUST EXIT	HWY 53 NB HWY 157	RT LANE MUST EXIT	HWY 53 NB HWY 157	RT LANE MUST EXIT	HWY 53 NB HWY 157	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	
SITE E4	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		HWY 53 NB HWY 157 RT LANE	EXIT ONLY	HWY 53 NB HWY 157 RT LANE	EXIT ONLY	HWY 53 NB HWY 157 RT LANE	EXIT ONLY	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	
SITE W1	I 90 WORK STARTS	"DATE"	LANE/SHLDR CLOSED	XX MILES AHEAD	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		TRAFFIC STOPPED AHEAD	BE PREPARED TO STOP	TEMP CLOSURE AHEAD	EXPECT DELAYS
SITE W2	I 90 WORK STARTS	"DATE"	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		RT LANE MUST EXIT	HWY 53 SB HWY 35	RT LANE MUST EXIT	HWY 53 SB HWY 35	RT LANE MUST EXIT	HWY 53 SB HWY 35	RT LANE MUST EXIT	HWY 53 SB HWY 35	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	
SITE W3	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		HWY 53 SB HWY 35 RT LANE	EXIT ONLY	HWY 53 SB HWY 35 RT LANE	EXIT ONLY	HWY 53 SB HWY 35 RT LANE	EXIT ONLY	HWY 53 SB HWY 35 RT LANE	EXIT ONLY	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	
SITE W4	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		HWY 53 NB HWY 157 RT LANE	EXIT ONLY	HWY 53 NB HWY 157 RT LANE	EXIT ONLY	HWY 53 NB HWY 157 RT LANE	EXIT ONLY	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	
SITE W5	I 90 WORK STARTS	"DATE"	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		RT LANE MUST EXIT	HWY 53 NB HWY 157	RT LANE MUST EXIT	HWY 53 NB HWY 157	RT LANE MUST EXIT	HWY 53 NB HWY 157	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		TRAFFIC STOPPED AHEAD	BE PREPARED TO STOP	TEMP CLOSURE AHEAD	EXPECT DELAYS
SITE W6	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		IH-90 WB ON RAMP	CLOSES "DATE"	IH-90 WB ON RAMP CLOSED	USE DETOUR	IH-90 WB ON RAMP CLOSED	USE DETOUR	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	
SITE W7	I 90 WORK STARTS	"DATE"	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	
SITE N1	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		NO MESSAGE BOARD USED		IH-90 WB ON RAMP	CLOSES "DATE"	IH-90 WB ON RAMP CLOSED	USE DETOUR	NO MESSAGE BOARD USED		NO MESSAGE BOARD USED	

2



EXISTING WB (B-32-40)

I-90 STRUCTURES OVER RAILROAD/OAK ST

(LOOKING EAST)

EXISTING EB (B-32-39)

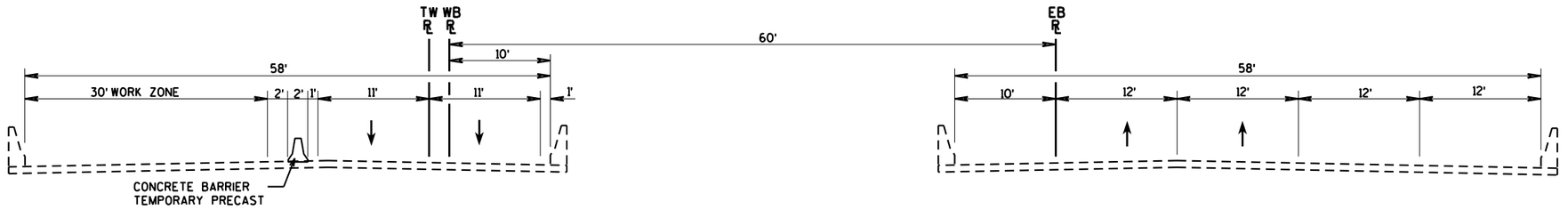


EXISTING WB (B-32-44)

I-90 STRUCTURES OVER GREAT RIVER STATE TRAIL

(LOOKING EAST)

EXISTING EB (B-32-43)

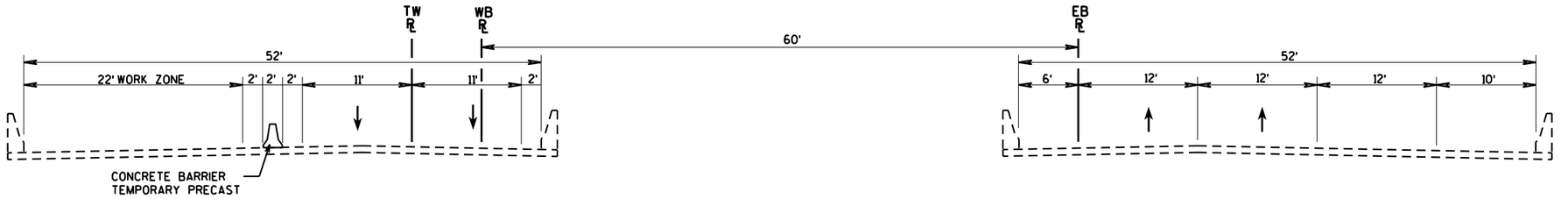


EXISTING WB (B-32-108)

I-90 STRUCTURES OVER 12TH AVE

(LOOKING EAST)

EXISTING EB (B-32-107)



EXISTING WB (B-32-190)

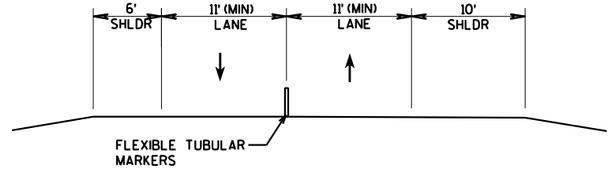
I-90 STRUCTURES OVER THEATER RD

(LOOKING EAST)

EXISTING EB (B-32-189)

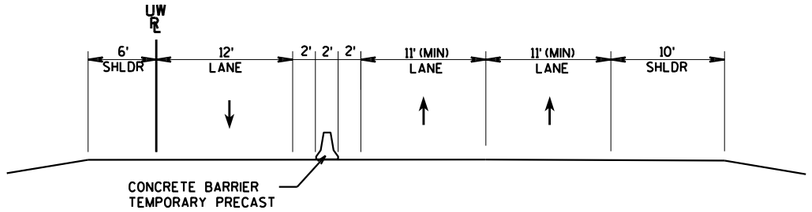
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL TYPICAL LAYOUT - STAGE 1 (STRUCTURES)	SHEET 76	E

2



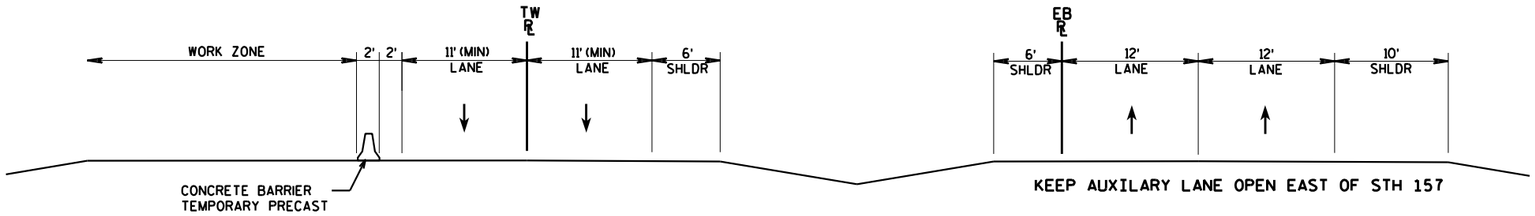
TRAFFIC LAYOUT - STAGE 1
I-90 WEST OF ROSE STREET

1



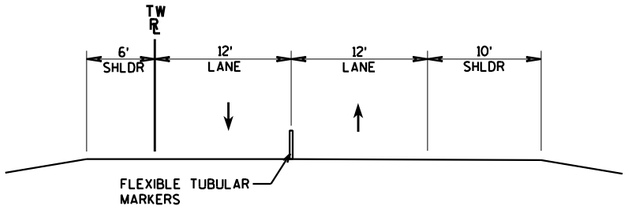
TRAFFIC LAYOUT - STAGE 1
I-90 WEST OF RAILROAD

2



TRAFFIC LAYOUT - STAGE 1
I-90 BETWEEN TRAIL AND 12TH AVENUE
I-90 EAST OF STH 157

3



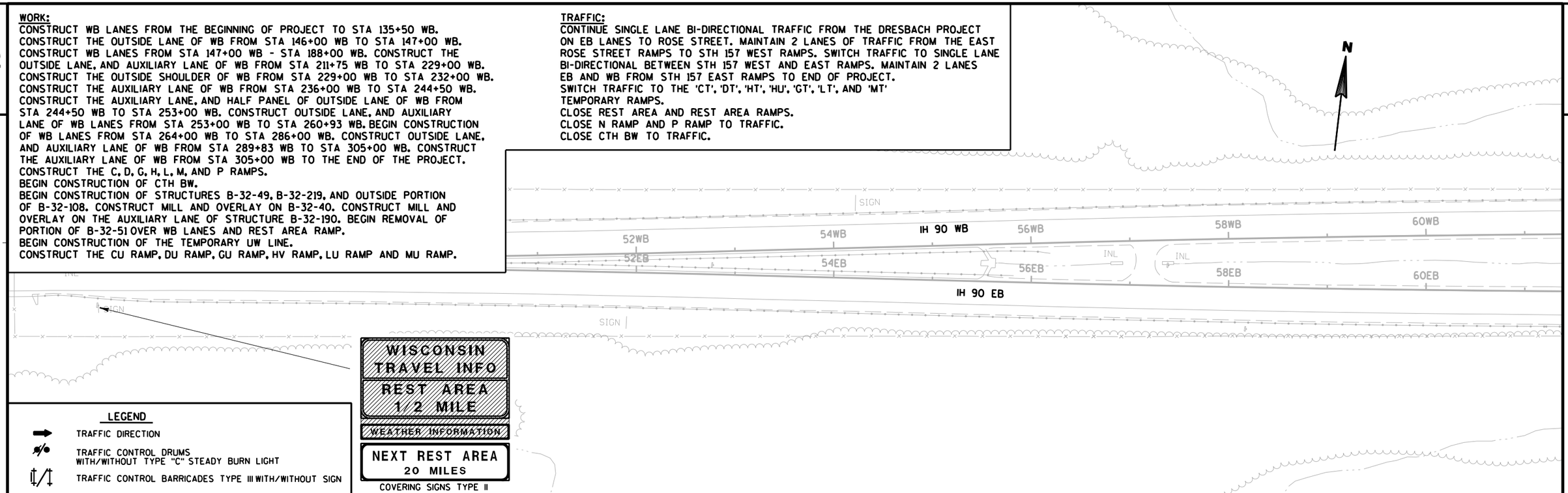
TRAFFIC LAYOUT - STAGE 1
I-90 UNDER STH 157

4

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL TYPICAL LAYOUT - STAGE 1 (ROADWAY)	SHEET 77	E

WORK:
CONSTRUCT WB LANES FROM THE BEGINNING OF PROJECT TO STA 135+50 WB.
CONSTRUCT THE OUTSIDE LANE OF WB FROM STA 146+00 WB TO STA 147+00 WB.
CONSTRUCT WB LANES FROM STA 147+00 WB - STA 188+00 WB. CONSTRUCT THE OUTSIDE LANE, AND AUXILIARY LANE OF WB FROM STA 211+75 WB TO STA 229+00 WB.
CONSTRUCT THE OUTSIDE SHOULDER OF WB FROM STA 229+00 WB TO STA 232+00 WB.
CONSTRUCT THE AUXILIARY LANE OF WB FROM STA 236+00 WB TO STA 244+50 WB.
CONSTRUCT THE AUXILIARY LANE, AND HALF PANEL OF OUTSIDE LANE OF WB FROM STA 244+50 WB TO STA 253+00 WB. CONSTRUCT OUTSIDE LANE, AND AUXILIARY LANE OF WB LANES FROM STA 253+00 WB TO STA 260+93 WB. BEGIN CONSTRUCTION OF WB LANES FROM STA 264+00 WB TO STA 286+00 WB. CONSTRUCT OUTSIDE LANE, AND AUXILIARY LANE OF WB FROM STA 289+83 WB TO STA 305+00 WB. CONSTRUCT THE AUXILIARY LANE OF WB FROM STA 305+00 WB TO THE END OF THE PROJECT.
CONSTRUCT THE C, D, G, H, L, M, AND P RAMPS.
BEGIN CONSTRUCTION OF CTH BW.
BEGIN CONSTRUCTION OF STRUCTURES B-32-49, B-32-219, AND OUTSIDE PORTION OF B-32-108. CONSTRUCT MILL AND OVERLAY ON B-32-40. CONSTRUCT MILL AND OVERLAY ON THE AUXILIARY LANE OF STRUCTURE B-32-190. BEGIN REMOVAL OF PORTION OF B-32-51 OVER WB LANES AND REST AREA RAMP.
BEGIN CONSTRUCTION OF THE TEMPORARY UW LINE.
CONSTRUCT THE CU RAMP, DU RAMP, GU RAMP, HV RAMP, LU RAMP AND MU RAMP.

TRAFFIC:
CONTINUE SINGLE LANE BI-DIRECTIONAL TRAFFIC FROM THE DRESBACH PROJECT ON EB LANES TO ROSE STREET. MAINTAIN 2 LANES OF TRAFFIC FROM THE EAST ROSE STREET RAMPS TO STH 157 WEST RAMPS. SWITCH TRAFFIC TO SINGLE LANE BI-DIRECTIONAL BETWEEN STH 157 WEST AND EAST RAMPS. MAINTAIN 2 LANES EB AND WB FROM STH 157 EAST RAMPS TO END OF PROJECT.
SWITCH TRAFFIC TO THE 'CT', 'DT', 'HT', 'HU', 'GT', 'LT', AND 'MT' TEMPORARY RAMPS.
CLOSE REST AREA AND REST AREA RAMPS.
CLOSE N RAMP AND P RAMP TO TRAFFIC.
CLOSE CTH BW TO TRAFFIC.



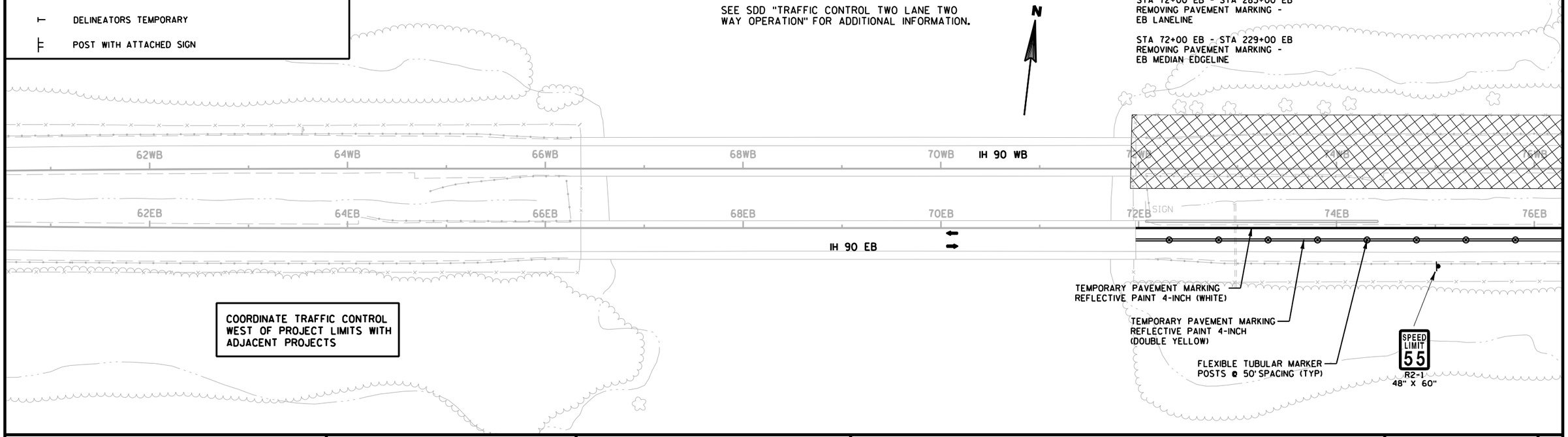
LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATORS TEMPORARY
- POST WITH ATTACHED SIGN

SEE SDD "TRAFFIC CONTROL TWO LANE TWO WAY OPERATION" FOR ADDITIONAL INFORMATION.

STA 72+00 EB - STA 283+00 EB
REMOVING PAVEMENT MARKING - EB LANELINE

STA 72+00 EB - STA 229+00 EB
REMOVING PAVEMENT MARKING - EB MEDIAN EDGELINE



COORDINATE TRAFFIC CONTROL WEST OF PROJECT LIMITS WITH ADJACENT PROJECTS

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 1	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026001_s1.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

STA 79+90 WB - STA 82+97 WB, RT
SAWING ASPHALT REQ'D

N

25' SPACING (TYP)

IH 90 WB

76WB 78WB 80WB 82WB 84WB 86WB 88WB 90WB

76EB 78EB 80EB 82EB 84EB 86EB 88EB 90EB

IH 90 EB

SIGN

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH
(DOUBLE YELLOW)

FLEXIBLE TUBULAR MARKER
POSTS @ 50' SPACING (TYP)

W06-3

DO NOT PASS
R4-1
36" X 48"

REST AREA

COVERING SIGNS TYPE I

CLOSED
R55-58A
44" X 8"

25' SPACING (TYP)

SEE SDD "TRAFFIC CONTROL, EXIT RAMP CLOSURE" FOR ADDITIONAL INFORMATION.

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

FRENCH SLOUGH

N

WEATHER STATION

22BW

92WB 94WB 96WB IH 90 WB 98WB B-32-49 100WB 102WB 104WB 106WB

92EB 94EB 96EB 98EB 100EB 102EB 104EB 106EB

IH 90 EB

SIGN

REST AREA RAMP CLOSED

25' SPACING (TYP)

RAMP CLOSED
R11-2(MOD)
48" X 30"

REST AREA

COVERING SIGNS TYPE II

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH
(DOUBLE YELLOW)

FLEXIBLE TUBULAR MARKER
POSTS @ 50' SPACING (TYP)

W06-3

DO NOT PASS
R4-1
36" X 48"

INL

1

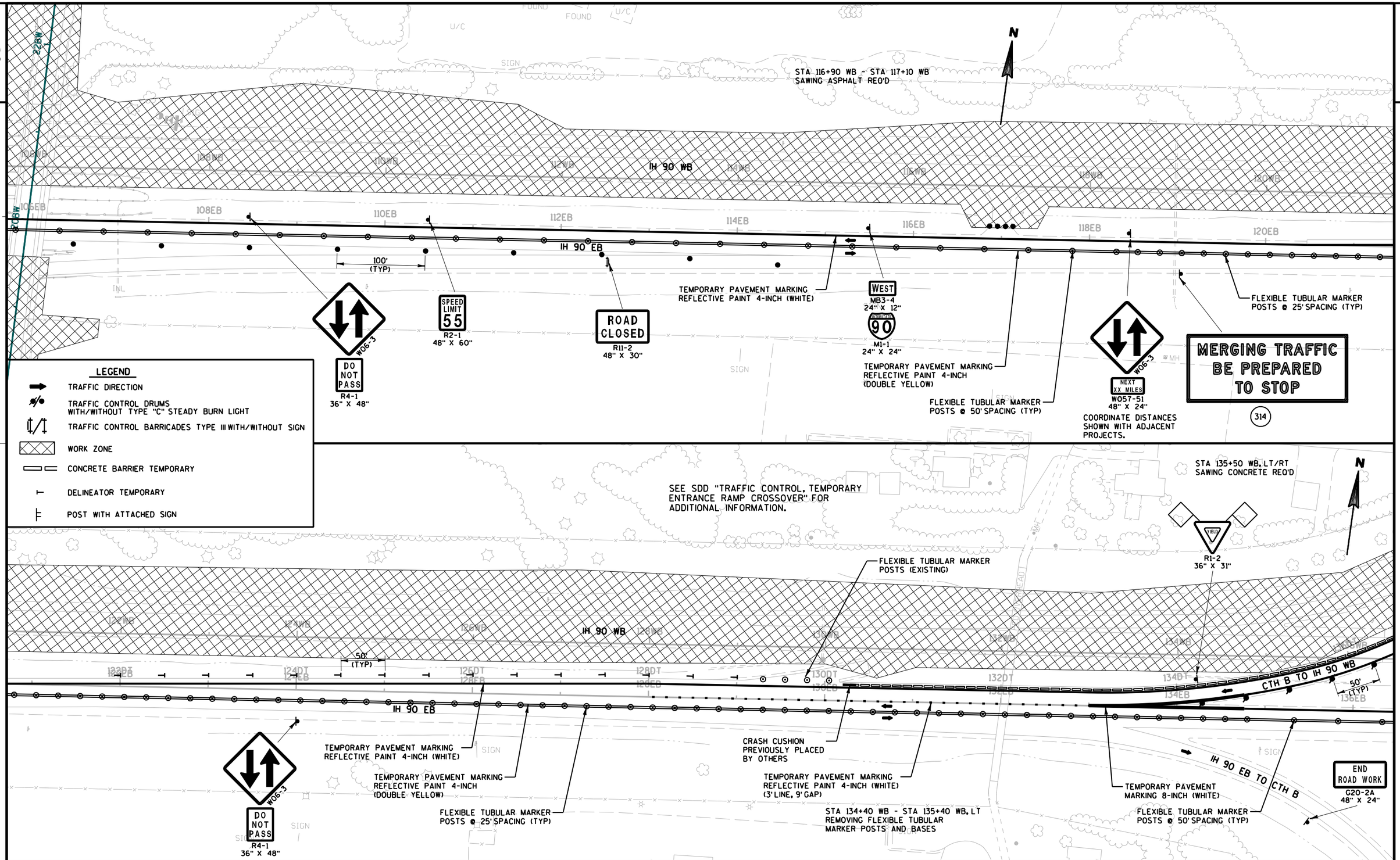
COVERING SIGNS TYPE II

REST AREA RAMP CLOSED

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 1	SHEET 79	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026002_s1.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 1	SHEET 80	E

2

STA 138+25 D, LT/RT
SAWING ASPHALT REQ'D
SAWING CONCRETE REQ'D

STA 138+60 DT - STA 139+50 DT
REMOVING FLEXIBLE TUBULAR
MARKER POSTS AND BASES

MERGE AHEAD
BE PREPARED
TO STOP

322

ROAD
WORK
AHEAD
W20-1

CTH B TO IH 90 WB

CRASH CUSHION TEMPORARY

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

W03-2

50'
(TYP)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

ROAD
CLOSED
R11-2
48" X 30"

ROAD
CLOSED
R11-2
48" X 30"

END
ROAD WORK
G20-2A
48" X 24"

STA 140+60 C - STA 141+50 C, LT
SAWING CONCRETE REQ'D

STA 141+55 C, LT/RT
SAWING ASPHALT REQ'D
SAWING CONCRETE REQ'D

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

N

STA 143+65 WB - STA 147+00 WB, LT
SAWING CONCRETE REQ'D

SEE SDD "TRAFFIC CONTROL, TEMPORARY
EXIT RAMP CROSSOVER" FOR ADDITIONAL
INFORMATION.

IH 90 WB

IH 90 WB TO CTH B

50'
(TYP)

IH 90 EB

CTH B TO IH 90 EB

CTH B

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH
(DOUBLE YELLOW)

FLEXIBLE TUBULAR MARKER
POSTS @ 50' SPACING (TYP)

W06-3

DO
NOT
PASS
R4-1
36" X 48"

W04-1

W03-2

FLEXIBLE TUBULAR MARKER
POSTS @ 25' SPACING (TYP)

YIELD
R1-2
36" X 31"

CRASH CUSHION
TEMPORARY

TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)

EXIT
E5-1
72" X 60"

IH 90 EB TO CTH B

MERGE AHEAD
BE PREPARED
TO STOP

323

ROAD
WORK
AHEAD
W20-1

STA 135+75 WB - STA 137+00 WB
REMOVING PAVEMENT MARKING
(WB LANE EDGELINES & LANELINE)

STA 139+00 DT - STA 140+50 DT
REMOVING PAVEMENT MARKING
(RAMP EDGELINE)

STA 139+00 CT - STA 141+00 CT
REMOVING PAVEMENT MARKING
(RAMP EDGELINE)

STA 142+00 WB - STA 146+50 WB
REMOVING PAVEMENT MARKING
(WB LANE EDGELINES & LANELINE)

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 1	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026004_s1.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

EXIT
25
M.P.H.
W013-2
48" X 60"

EXIT 2
B
French Island

300

La Crosse Airport
EXIT 2

301

STA 159+35 WB - STA 162+50 WB, RT
SAWING ASPHALT REQ'D

N

IH 90 WB

IH 90 EB

50'
(TYP)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH
(DOUBLE YELLOW)

FLEXIBLE TUBULAR MARKER
POSTS @ 25'SPACING (TYP)

25'SPACING (TYP)

W06-3

NEXT
1 MILE
W057-51
48" X 24"

320

MERGING TRAFFIC
BE PREPARED
TO STOP

DO
NOT
PASS
R4-1
36" X 48"

COVERING SIGNS
TYPE II

SPEED
LIMIT
55
R2-1
48" X 60"

WEST
MB3-4
24" X 12"

90
M1-1
24" X 24"

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

BLACK RIVER

FLEXIBLE TUBULAR MARKER
POSTS @ 50'SPACING (TYP)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH
(DOUBLE YELLOW)

FLEXIBLE TUBULAR MARKER
POSTS @ 25'SPACING (TYP)

302

EXIT 2
B
French Island
½ MILE

NEXT
XX MILE
W057-51
48" X 24"

COORDINATE DISTANCES
SHOWN WITH ADJACENT
PROJECTS.

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 1	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026005_s1.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

2

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

N

SEE SDD "TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER" FOR ADDITIONAL INFORMATION.

STA 190+50 HT - STA 198+25 HT
REMOVING FLEXIBLE TUBULAR MARKER POSTS AND BASES

STA 197+25 H, LT/RT
SAWING ASPHALT REO'D
SAWING CONCRETE REO'D

STA 187+50 WB - STA 190+00 WB, LT
SAWING ASPHALT REO'D
SAWING CONCRETE REO'D

MERGE AHEAD
BE PREPARED
TO STOP
324

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

ROAD CLOSED
R11-2
48" X 30"

ROSE ST SB TO IH 90 WB

W03-2

YIELD
R1-2
36" X 31"

IH 90 WB

50' (TYP)

25' SPACING (TYP)

IH 90 EB

TEMPORARY PAVEMENT MARKING 8-INCH (WHITE)

FLEXIBLE TUBULAR MARKER POSTS @ 25' SPACING (TYP)

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (DOUBLE YELLOW)

FLEXIBLE TUBULAR MARKER POSTS @ 50' SPACING (TYP)

W04-1

WEST
MB3-4
24" X 12"

90
MI-1
24" X 24"

FLEXIBLE TUBULAR MARKER POSTS @ 25' SPACING (TYP)

IH 90 EB TO ROSE ST SB

ROSE ST SB

ROSE ST NB

IH 90 EB TO ROSE ST NB

STA 183+95 WB - STA 187+70 WB
REMOVING FLEXIBLE TUBULAR MARKER POSTS AND BASES

STA 188+50 WB - STA 191+00 WB
REMOVING PAVEMENT MARKING
(WB LANE EDGELINES/CHANNELIZING & LANELINE)

NOTE:
SEE STAGE 1A-1D TRAFFIC CONTROL FOR TRAFFIC CONTROL DEVICES ALONG ROSE STREET FOR B-32-219 STRUCTURE.

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 1	SHEET 83	E

2

2

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

N

ROAD WORK AHEAD W20-1

CRASH CUSHION TEMPORARY

STA 198+00 HT - STA 201+00 HT
REMOVING PAVEMENT MARKING
(RAMP EDGELINE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

ROSE ST SB TO IH 90 WB

IH 90 WB TO ROSE ST SB

ROSE ST SB

ROSE ST NB

ROAD WORK AHEAD W20-1

MERGE AHEAD BE PREPARED TO STOP

325

ROSE ST NB TO IH 90 WB

25' SPACING (TYP)

ROAD CLOSED R11-2 48" X 30"

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

STA 210+00 WB - STA 211+00 WB
REMOVING PAVEMENT MARKING
(WB LANE OUTSIDE EDGELINE &
LANELINE)

STA 210+00 WB - STA 263+00 WB
REMOVING PAVEMENT MARKING
(WB LANE MEDIAN EDGELINE)

IH 90 WB TO ROSE ST NB

STA 207+50 GT - STA 208+50 GT
REMOVING PAVEMENT MARKING
(RAMP EDGELINE)

Onalaska
Great River State Trail
Tourist Info

MOVING SIGNS TYPE II

201

STA 211+42 GU, LT/RT
SAWING ASPHALT REQ'D
SAWING CONCRETE REQ'D

SOUTH 53 | SOUTH 35 | NORTH 35

MOVING SIGNS TYPE II

200

STA 209+50 HU - STA 208+50 HU
REMOVING PAVEMENT MARKING
(RAMP EDGELINE)

STA 204+75 WB - STA 205+75 WB
REMOVING PAVEMENT MARKING
(WB LANE EDGELINE & LANELINE)

STA 208+75 HU - STA 209+10 HU
REMOVING FLEXIBLE TUBULAR
MARKER POSTS AND BASES

STA 204+25 EB - STA 207+25 EB
REMOVING PAVEMENT MARKING
(CHANNELIZING)

STA 207+67 EB - STA 228+87 EB
REMOVING PAVEMENT MARKING
(EB LANE EDGELINE)

STA 204+35 WB - STA 204+65 WB
REMOVING FLEXIBLE TUBULAR
MARKER POSTS AND BASES

50' (TYP)

W03-2

YIELD R1-2 36" X 31"

ROAD CLOSED R11-2 48" X 30"

ROAD CLOSED R11-2 48" X 30"

W04-1

ROAD CLOSED R11-2 48" X 30"

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

W06-3

NEXT XX MILES
W057-51
30" X 15"

COORDINATE DISTANCES
SHOWN WITH ADJACENT
PROJECTS.

25' SPACING (TYP)

50' (TYP)

IH 90 WB

IH 90 EB

196EB 198EB 200EB 202EB 204EB 206EB 208EB 210EB

196WB 198WB 200WB 202WB 204WB 206WB 208WB 210WB

196HU 198HU 200HU 202HU 204HU 206HU 208HU 210HU

196HT 198HT 200HT 202HT 204HT 206HT 208HT 210HT

208GT

2

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)
(12.5' LINE, 37.5' GAP)

CRASH CUSHION TEMPORARY

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH
(DOUBLE YELLOW)

FLEXIBLE TUBULAR MARKER
POSTS @ 25' SPACING (TYP)

TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)

IH 90 EB TO ROSE ST NB

ROSE ST TO IH 90 EB

COVERING SIGNS TYPE II

W04-3 36" X 36"

SEE SDD "TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER" FOR ADDITIONAL INFORMATION.

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 1	SHEET 84	E

2

STA 210+65 WB - STA 212+40 WB, LT
SAWING CONCRETE REQ'D

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

W01-2R

35 M.P.H
W013-1
24" X 24"

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CROSSOVER" AND "TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT" FOR ADDITIONAL INFORMATION.

STA 216+05 WB - STA 229+00 WB, LT
SAWING CONCRETE REQ'D

EXIT
E5-1
72" X 60"

IH 90 WB TO ROSE ST

IH 90 WB

25' SPACING (TYP)

FLEXIBLE TUBULAR MARKER
POSTS @ 25' SPACING (TYP)

25' SPACING (TYP)

TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)

IH 90 EB

WEST
MB3-4
24" X 12"

INTERSTATE 90
M1-1
24" X 24"

BNSF RR

OAK ST

315

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)
(12.5' LINE, 37.5' GAP)

STA 220+40 WB - STA 226+40 WB
REMOVING FLEXIBLE TUBULAR
MARKER POSTS AND BASES

**MERGING TRAFFIC
BE PREPARED
TO STOP**

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

STA 232+75 WB - STA 234+10 WB
TEMPORARY SHORING

STA 236+00 WB - STA 247+75 WB, LT
SAWING CONCRETE REQ'D

EXIT 3
SOUTH
53 35
Onalaska
La Crosse
RIGHT LANE ONLY

304

SOUTH 53 SOUTH 35
LOW BRIDGES
14'-4" MAX

202
MOVING SIGNS
TYPE II

IH 90 WB

TEMPORARY PAVEMENT MARKING 8-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

50' (TYP)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

CRASH CUSHION
(PLACED PREVIOUSLY
BY OTHERS)

TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)
(3' LINE, 9' GAP)

IH 90 EB

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)
(12.5' LINE, 37.5' GAP)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

311

EXIT 4
NORTH
53 157
Onalaska
La Crosse
½ MILE
USE RIGHT LANE

STA 230+00 WB - STA 263+00 WB
REMOVING PAVEMENT MARKING
(WB LANE LANELINE)

SEE SDD "LANE DROP PAVEMENT MARKING"
FOR ADDITIONAL INFORMATION.

GREAT RIVER STATE TRAIL

303

INTERSTATE 90 WEST
USE LEFT LANE

3

RIGHT LANE
MUST EXIT
R3-33
78" X 36"

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 1	SHEET 85	E

2

RIGHT LANE MUST EXIT
R3-33
78" X 36"

SPEED LIMIT 55
R2-1
48" X 60"

STA 247+05 WB - STA 260+93 WB, LT
SAWING CONCRETE REQ'D

FLEXIBLE TUBULAR MARKER POSTS @ 25' SPACING (TYP)

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING 8-INCH (WHITE)

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)

IH 90 WB

STH 157 TO IH 90 WB

TEMPORARY PAVEMENT MARKING 8-INCH (WHITE) (3' LINE, 9' GAP)

CRASH CUSHION PLACED PREVIOUSLY BY OTHERS

50' (TYP)

CRASH CUSHION TEMPORARY

50' (TYP)

8:1 TAPER

242EB 244EB 246EB 248EB 250EB 252EB 254EB 256EB

252JT 254JT 256JT

IH 90 EB

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)

305

309

307

W01-4B

12TH AVE

EXIT 4

NORTH 53 157 La Crosse Onalaska

90 EAST
USE LEFT LANE

RIGHT LANE ONLY

W5-52L
12" X 36"

STA 253+25 EB - STA 283+00 EB
REMOVING PAVEMENT MARKING
(EB RAMP DOTTED EDGELINE)

STA 250+50 EB - STA 284+00 EB
REMOVING PAVEMENT MARKING
(EB MEDIAN EDGELINE)

STA 250+50 EB - STA 259+75 EB
REMOVING PAVEMENT MARKING
(EB OUTSIDE EDGELINE)

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

Amtrak Station
Great River State Trail
EXIT 3

STA 262+82 M, LT/RT
SAWING ASPHALT REQ'D
SAWING CONCRETE REQ'D

ROAD CLOSED
R11-2
48" X 30"

ROAD WORK AHEAD
W20-1

W4-3
48" X 48"

CRASH CUSHION TEMPORARY

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)

STA 262+55 MT - STA 264+75 MT
REMOVING FLEXIBLE TUBULAR MARKER POSTS AND BASES

STA 264+00 MT - STA 267+00 MT
REMOVING PAVEMENT MARKING
(RAMP EDGELINE)

STA 262+00 WB - STA 263+25 WB
REMOVING PAVEMENT MARKING
(WB LANE CHANNELIZING)

IH 90 WB

25' SPACING (TYP)

STH 157 SB TO IH 90 WB

50' (TYP)

50' (TYP)

256TW 258TW 260TW 262TW 264TW 266TW 268TW 270TW

256JT 258JT 260JT 262JT 264JT 266JT

IH 90 EB

CRASH CUSHION TEMPORARY

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)

FLEXIBLE TUBULAR MARKER POSTS @ 25' SPACING (TYP)

TEMPORARY PAVEMENT MARKING 8-INCH (WHITE)

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)

IH 90 EB TO STH 157

R4-7
24" X 30"

W01-4R

W06-3

DO NOT PASS
R4-1
36" X 48"

4

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (DOUBLE YELLOW)

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)

STH 157 SB TO IH 90 EB

W06-1

100' (TYP)

CLOSED

FLEXIBLE TUBULAR MARKER POSTS @ 50' SPACING (TYP)

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CROSSOVER" AND "TRAFFIC CONTROL, SINGLE LANE CROSSOVER ENTRANCE WITH BARRIER" FOR ADDITIONAL INFORMATION.

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 1	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026009_s1.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CROSSOVER" AND "TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT" FOR ADDITIONAL INFORMATION.

W06-3

DO NOT PASS
R4-1
36" X 48"

STA 279+64 P, LT/RT
SAWING ASPHALT REQ'D
SAWING CONCRETE REQ'D

STH 157

IH 90 WB

STH 157 NB TO IH 90 WB

CLOSED

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

STA 283+75 LT - STA 286+00 LT
REMOVING PAVEMENT MARKING
(EDGELINE)

IH 90 WB TO STH 157

50'
(TYP)

25' SPACING (TYP)

272TW
274TW
276TW
278TW
280TW
282TW
284TW
284LT
286LT

IH 90 EB

STH 157 SB TO IH 90 EB

CLOSED

100'
(TYP)

FLEXIBLE TUBULAR MARKER
POSTS @ 50' SPACING (TYP)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH
(DOUBLE YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

FLEXIBLE TUBULAR MARKER
POSTS @ 25' SPACING (TYP)

STH 157 NB TO IH 90 EB

STA 283+50 WB - STA 286+00 WB
REMOVING FLEXIBLE TUBULAR
MARKER POSTS AND BASES

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

ROAD CLOSED
R11-2
48" X 30"

EXIT
E5-1
72" X 60"

FLEXIBLE TUBULAR MARKER
POSTS @ 25' SPACING (TYP)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

STA 287+33 L, LT/RT
SAWING ASPHALT REQ'D
SAWING CONCRETE REQ'D

IH 90 WB TO STH 157

50'
(TYP)

286LT
288TW
290TW

CRASH CUSHION
TEMPORARY

50'
(TYP)

STH 157 NB TO IH 90 EB

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)

IH 90 EB

CRASH CUSHION
(PREVIOUSLY INSTALLED
BY OTHERS)

IH 90 WB

STA 289+84 WB - STA 310+05 WB, LT
SAWING CONCRETE REQ'D

STA 287+50 WB - STA 284+00 WB
REMOVING PAVEMENT MARKING
(CHANNELIZING & LANE LINE)

101

EXIT 4

100

COVERING SIGNS
TYPE I

WEST
INTERSTATE 90
AHEAD

SOUTH
US 53

NORTH
US 53
WISCONSIN 157
La Crosse
Onalaska

EXIT ONLY

MOVING SIGNS TYPE I
(MOVE SIGN OVER I-90
WB LANE OF TRAFFIC)

MOVING SIGNS TYPE I
(MOVE SIGN OVER I-90 WB
RAMP LANE OF TRAFFIC)

SOUTH
M3-3
24" X 12"
53
M1-4
24" X 24"
M 6-1
21" X 21"

STA 288+00 WB - STA 318+50 WB
REMOVING PAVEMENT MARKING
(WB LANE MEDIAN EDGELINE)

SEE SDD "LANE DROP PAVEMENT MARKING"
FOR ADDITIONAL INFORMATION.

TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)
(3' LINE, 9' GAP)

306

WEST SOUTH
INTERSTATE 90
US 53
USE LEFT LANE

3

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 1	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026010_s1.dgn
PLOT DATE : 8/27/2014
PLOT BY : AYRES-EC
PLOT NAME :
PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

2

EXIT 4
NORTH
53 157
La Crosse
Onalaska
1/4 MILE
EXIT ONLY

SPEED LIMIT 55
R2-1
48" X 60"

COVERING SIGNS TYPE I

USE RIGHT LANE
310

N

STA 311+65 WB - STA 313+65 WB, LT
SAWING ASPHALT REO'D
SAWING CONCRETE REO'D

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)
TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)
CRASH CUSHION TEMPORARY
50' (TYP)

IH 90 WB

TEMPORARY PAVEMENT MARKING 8-INCH (WHITE) (3' LINE, 9' GAP)

IH 90 EB

I 90

THEATER RD

STA 307+00 WB - STA 318+50 WB
REMOVING PAVEMENT MARKING
(WB LANE LANELINE)

STA 314+00 WB - STA 322+00 WB
REMOVING PAVEMENT MARKING
(WB LANE OUTSIDE EDGELINE AND
AUXILARY LANELINE)

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

N

R1-2
36" X 31"

W03-2

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)
TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)
50' (TYP)

316WB 318WB 320WB 322WB IH 90 WB 324WB 326WB 328WB 330WB

TEMPORARY PAVEMENT MARKING 8-INCH (WHITE) (3' LINE, 9' GAP)

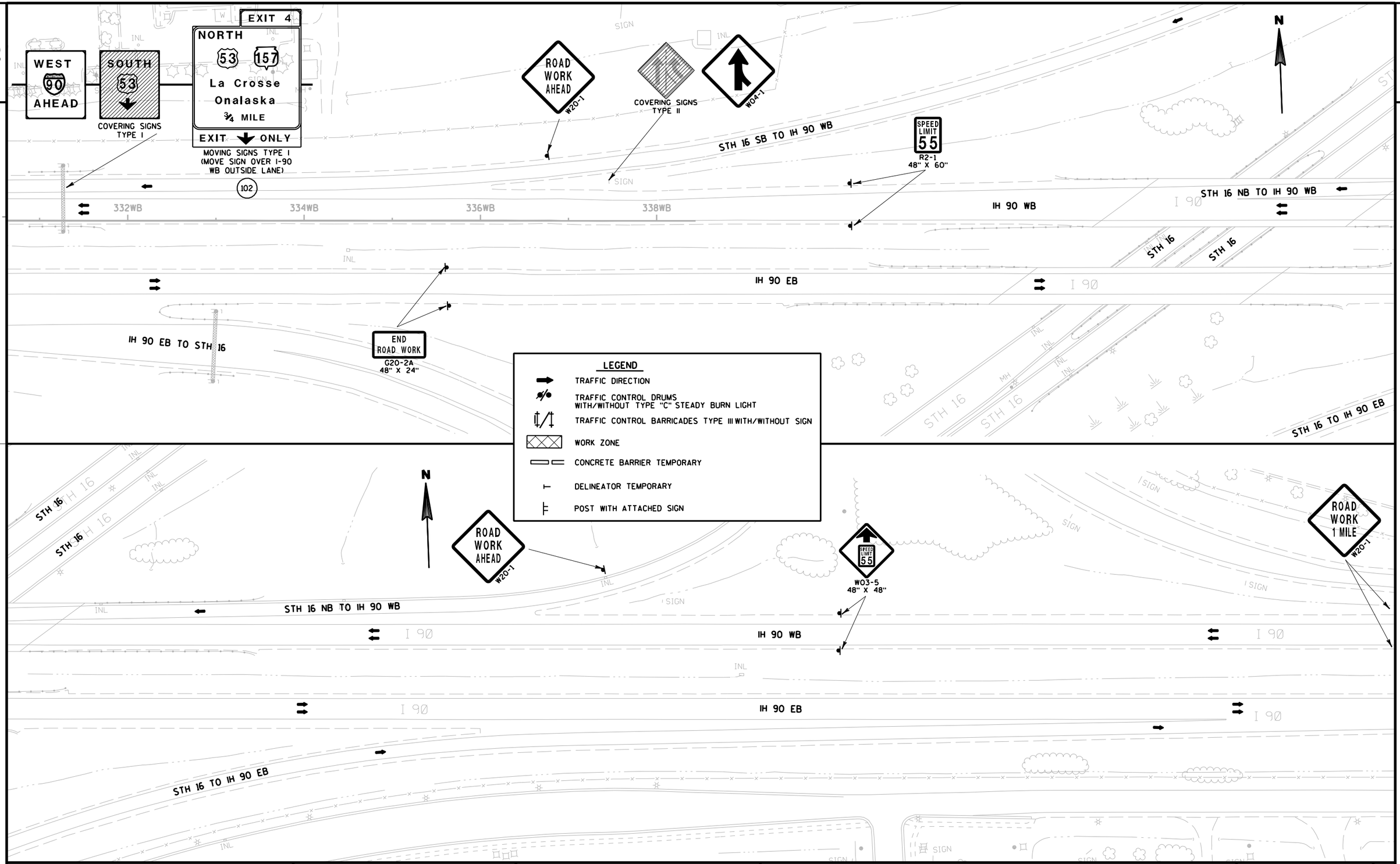
STH 16 TO IH 90 WB

IH 90 EB

IH 90 EB TO STH 16

SEE SDD "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE" FOR ADDITIONAL INFORMATION.

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 1	SHEET 88	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 1	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026012_s1.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

SEE DETOUR PLAN FOR ADDITIONAL INFORMATION.

N

IH 90 EB TO STH 157

STH 157 SB TO IH 90 EB

EXIT

COVERING SIGNS TYPE II

RAMP CLOSED

R11-2(MOD)
48" X 30"

90 EAST

Madison

COVERING SIGNS TYPE I

IH 90 EB

IH 90 WB

RAMP 20 MPH

COVERING SIGNS TYPE II

25' SPACING (TYP)

STH 157 SB

STH 157 NB

STH 157 NB TO IH 90 EB

ROAD WORK AHEAD
W20-1

RAMP CLOSED AHEAD
W20-3(MOD)

WEST SOUTH
90 53
Minnesota
EXIT 1/4 MILE

COVERING SIGNS TYPE I

RAMP CLOSED
500 FT
W20-3(MOD)

COVERING SIGNS TYPE II

EXIT
30
MPH

COVERING SIGNS TYPE II

25' SPACING (TYP)

N

RAMP CLOSED
500 FT
W20-3(MOD)

EAST
90
Madison
1/4 MILE

COVERING SIGNS TYPE I

RAMP CLOSED AHEAD
W20-3(MOD)

ROAD WORK AHEAD
W20-1

25' SPACING (TYP)

STH 157 SB

STH 157 SB TO IH 90 WB

STH 157 NB

25' SPACING (TYP)

WEST SOUTH
90 53
Minnesota

COVERING SIGNS TYPE I

RAMP CLOSED

R11-2(MOD)
48" X 30"

EXIT

COVERING SIGNS TYPE II

STH 157 NB TO IH 90 WB

IH 90 WB TO STH 157

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- FLASHING ARROW BOARD IN CAUTION MODE (UNLESS OTHERWISE NOTED)
- POST WITH ATTACHED SIGN

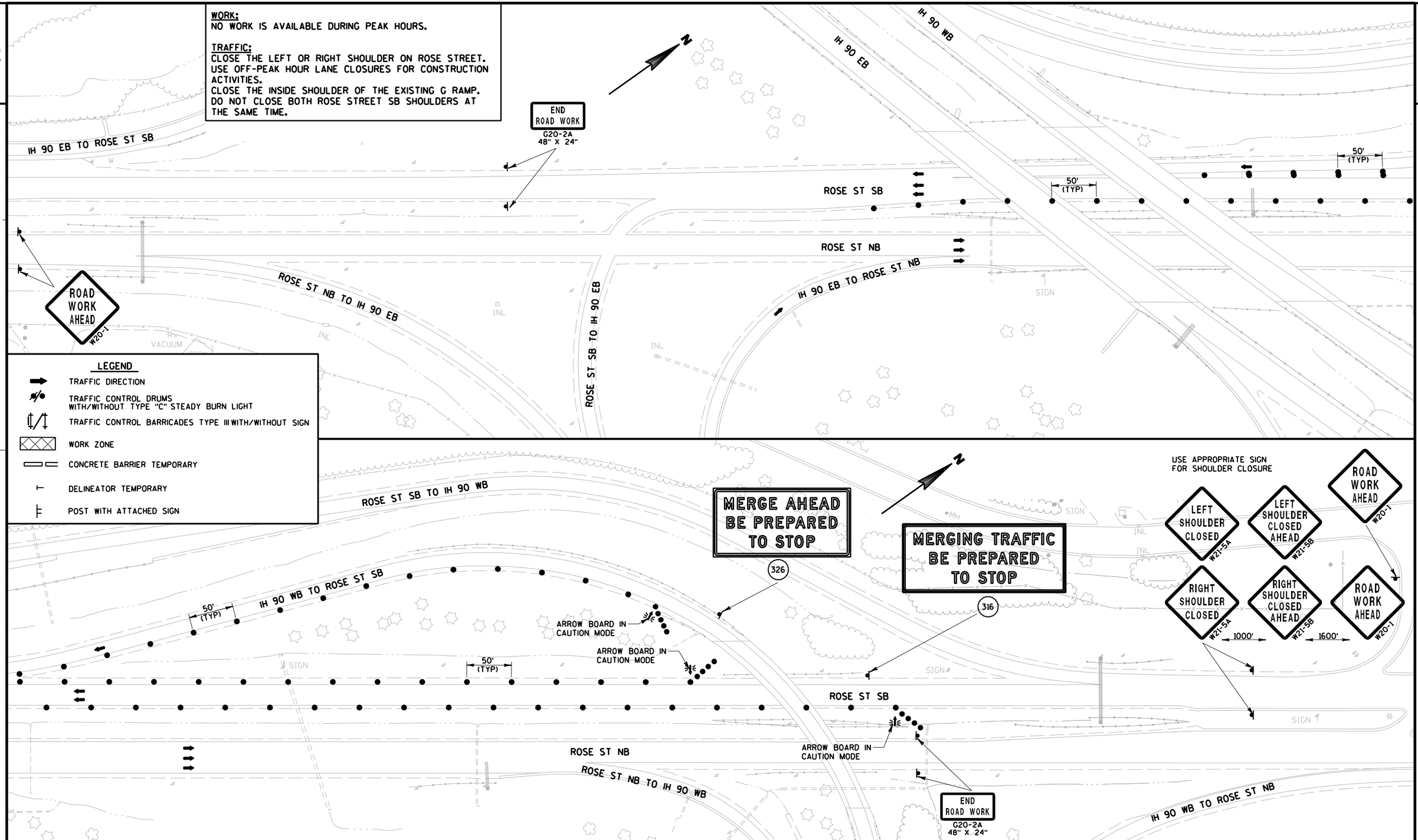
SEE SDD "TRAFFIC CONTROL, EXIT RAMP CLOSURE" FOR ADDITIONAL INFORMATION.

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGES 1/2/3A/3B	SHEET 90	E

2

WORK:
NO WORK IS AVAILABLE DURING PEAK HOURS.

TRAFFIC:
CLOSE THE LEFT OR RIGHT SHOULDER ON ROSE STREET.
USE OFF-PEAK HOUR LANE CLOSURES FOR CONSTRUCTION ACTIVITIES.
CLOSE THE INSIDE SHOULDER OF THE EXISTING G RAMP.
DO NOT CLOSE BOTH ROSE STREET SB SHOULDERS AT THE SAME TIME.



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - ROSE ST (STAGE 1A) PEAK HOUR	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026021_s1a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

WORK:
CONSTRUCT THE TEMPORARY WIDENING FOR THE 'TS' LINE. NO WORK IS ANTICIPATED TO BE AVAILABLE DURING PEAK HOURS.

TRAFFIC:
CLOSE THE RIGHT LANE ON ROSE STREET SB.
USE OFF-PEAK HOUR LANE CLOSURES FOR CONSTRUCTION ACTIVITIES.
CLOSE THE ROSE STREET NB MEDIAN SHOULDER.

N

IH 90 EB

IH 90 WB

IH 90 EB TO ROSE ST SB

END ROAD WORK
G20-2A
48" X 24"

YIELD
R1-2
36" X 31"

100' (TYP)

ROSE ST SB

ROSE ST NB

50' (TYP)

IH 90 EB TO ROSE ST NB

ROSE STREET SB
MEDIAN SHOULDER, LT
SAWING ASPHALT REQ'D

SIGN

INL

ROAD WORK AHEAD
W20-1

1600'

1000'

LEFT SHOULDER CLOSED AHEAD
W21-5B

LEFT SHOULDER CLOSED
W21-5A

ROSE ST NB TO IH 90 EB

ROSE ST SB TO IH 90 EB

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

ROSE ST SB TO IH 90 WB

IH 90 WB TO ROSE ST SB

W03-2

LANE CLOSED
R11-2(MOD)
48" X 30"

100' (TYP)

50' (TYP)

ROSE ST NB

ROSE STREET SB
MEDIAN SHOULDER, LT
SAWING ASPHALT REQ'D

ROSE ST NB TO IH 90 WB

MERGE AHEAD
BE PREPARED
TO STOP

MERGING TRAFFIC
BE PREPARED
TO STOP

ARROW BOARD

END ROAD WORK
G20-2A
48" X 24"

SPEED LIMIT 40
R2-1
24" X 30"

SPEED LIMIT 40
W03-5

W04-2L

LEFT LANE CLOSED AHEAD
W20-5

ROAD WORK AHEAD
W20-1

1000'

1000'

ROSE ST SB

IH 90 WB TO ROSE ST NB

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - ROSE ST (STAGE 1A) OFF-PEAK HOUR	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\da_0677_026022_s1a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

2

WORK:
CONSTRUCT THE 'GW' RAMP. NO WORK IS ANTICIPATED TO BE AVAILABLE DURING PEAK HOURS.

TRAFFIC:
CLOSE THE LEFT OR RIGHT SHOULDER ON ROSE STREET SB. USE OFF-PEAK HOUR LANE CLOSURES FOR CONSTRUCTION ACTIVITIES.

2

IH 90 EB TO ROSE ST SB

END ROAD WORK
G20-2A
48" X 24"

IH 90 EB

IH 90 WB

YIELD
R1-2
36" X 31"

50' (TYP)

200GW

202GW

204GW

100' (TYP)

ROSE ST SB

ROSE ST NB

IH 90 EB TO ROSE ST NB

ROAD WORK AHEAD
W20-1

ROSE ST NB TO IH 90 EB

ROSE ST SB TO IH 90 EB

INL

VACUUM

SIGN

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

STA 209+10 GW, RT
STA 205+85 GW, RT
STA 202+40 GW, LT
STA 204+95 GW, LT
STA 207+20 GW, LT
SAWING ASPHALT REQ'D

ROSE ST SB TO IH 90 WB

MERGE AHEAD BE PREPARED TO STOP

MERGING TRAFFIC BE PREPARED TO STOP

SPEED LIMIT 40
R2-1
24" X 30"

SPEED LIMIT 40
W03-5

ROAD WORK AHEAD
W20-1

W03-2

IH 90 WB TO ROSE ST SB

208GW

206GW

50' (TYP)

COVERING SIGNS TYPE II

W4-3
36" X 36"

ARROW BOARD IN CAUTION MODE

100' (TYP)

ARROW BOARD

W04-2R

1000'

RIGHT LANE CLOSED AHEAD
W20-5

1000'

ROAD WORK AHEAD
W20-1

ROSE ST NB

ROSE ST NB TO IH 90 WB

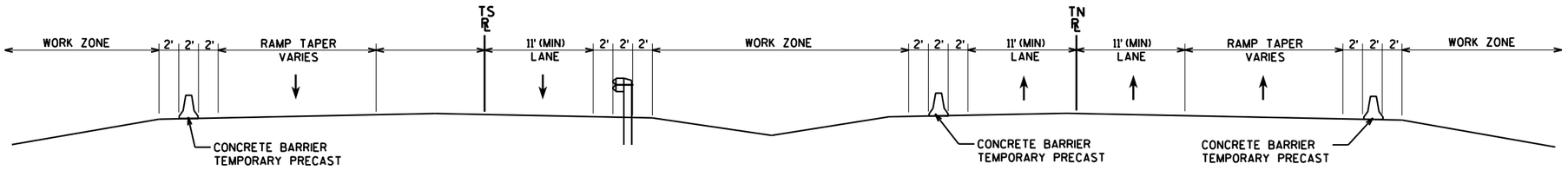
LANE CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

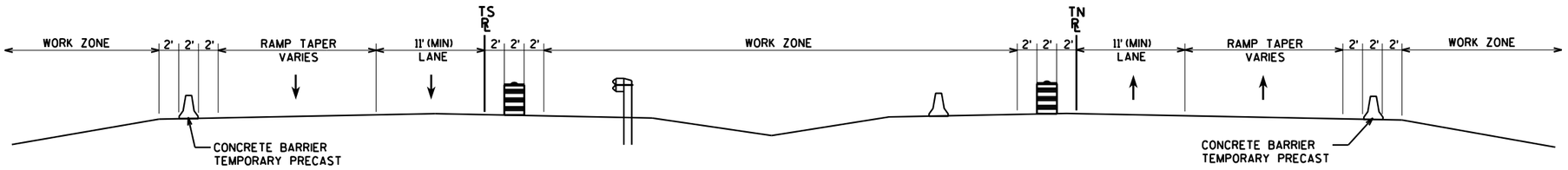
IH 90 WB TO ROSE ST NB

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - ROSE ST (STAGE 1A) OFF-PEAK HOUR	SHEET 93	E

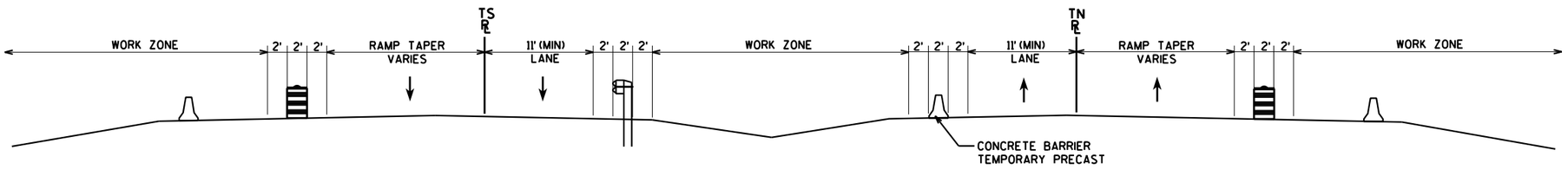
FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026023_s1a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100



TRAFFIC LAYOUT - STAGE 1B (ROSE ST)



TRAFFIC LAYOUT - STAGE 1C (ROSE ST)



TRAFFIC LAYOUT - STAGE 1D (ROSE ST)

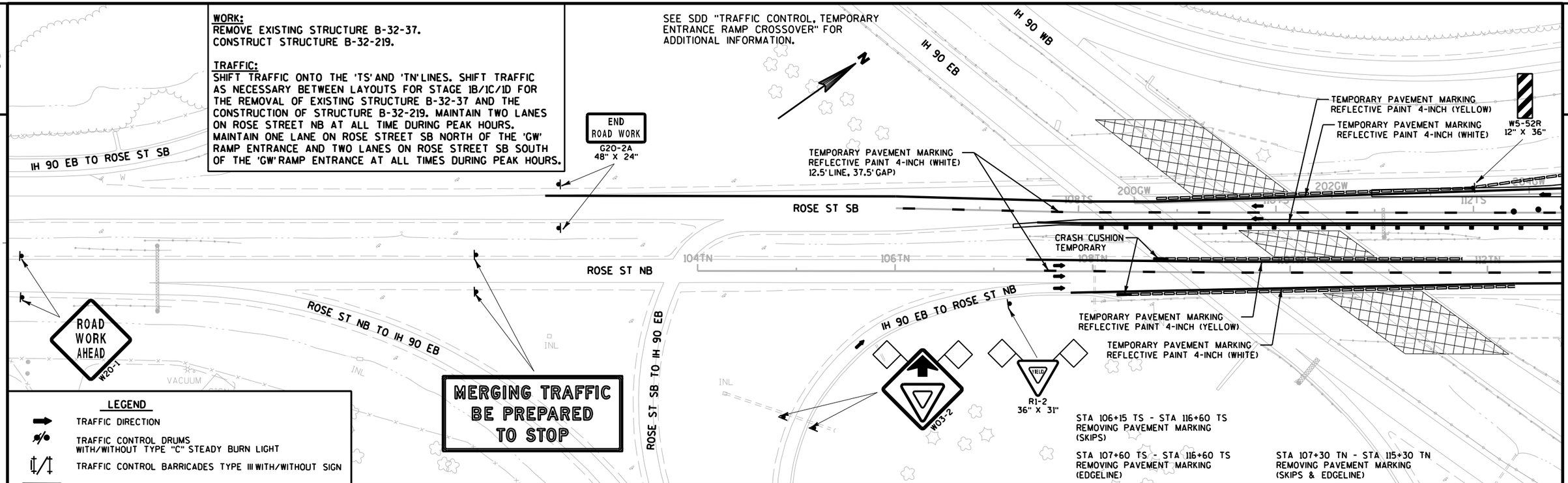
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL TYPICAL LAYOUT - STAGES 1B/1C/1D (ROSE ST)	SHEET 94	E

2

WORK:
REMOVE EXISTING STRUCTURE B-32-37.
CONSTRUCT STRUCTURE B-32-219.

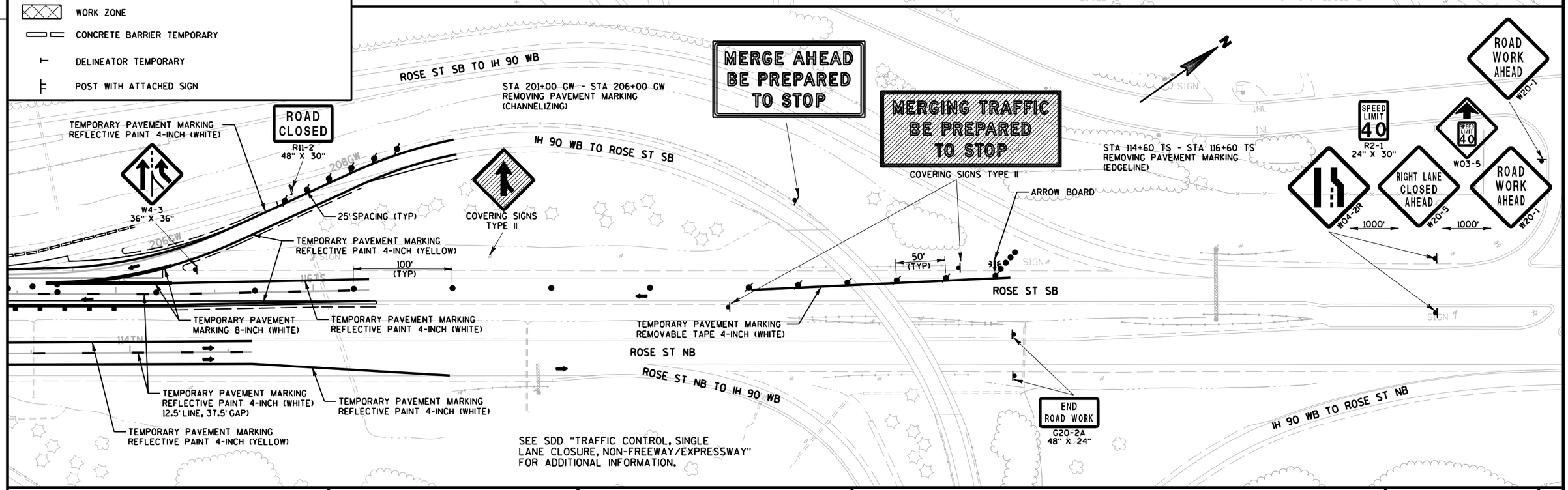
TRAFFIC:
SHIFT TRAFFIC ONTO THE 'TS' AND 'TN' LINES. SHIFT TRAFFIC AS NECESSARY BETWEEN LAYOUTS FOR STAGE 1B/1C/1D FOR THE REMOVAL OF EXISTING STRUCTURE B-32-37 AND THE CONSTRUCTION OF STRUCTURE B-32-219. MAINTAIN TWO LANES ON ROSE STREET NB AT ALL TIME DURING PEAK HOURS. MAINTAIN ONE LANE ON ROSE STREET SB NORTH OF THE 'GW' RAMP ENTRANCE AND TWO LANES ON ROSE STREET SB SOUTH OF THE 'GW' RAMP ENTRANCE AT ALL TIMES DURING PEAK HOURS.

SEE SDD "TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER" FOR ADDITIONAL INFORMATION.



LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN



SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADDITIONAL INFORMATION.

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - ROSE ST (STAGE 1B) PEAK HOUR	SHEET 95	E

WORK:
REMOVE EXISTING STRUCTURE B-32-37.
CONSTRUCT STRUCTURE B-32-219.

TRAFFIC:
SHIFT TRAFFIC AS NECESSARY BETWEEN LAYOUTS FOR STAGE 1B/1C/1D FOR THE REMOVAL OF EXISTING STRUCTURE B-32-37 AND THE CONSTRUCTION OF STRUCTURE B-32-219. MAINTAIN ONE LANE ON ROSE STREET SB AND ONE LANE ON THE ENTRANCE RAMP FROM IH 90 WB AT ALL TIMES DURING PEAK HOURS. OFF-PEAK LANE CLOSURES WILL BE ALLOWED IN STAGE 1C AND 1D.

SEE SDD "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE" FOR ADDITIONAL INFORMATION.

IH 90 EB
IH 90 WB
IH 90 EB TO ROSE ST SB
ROSE ST SB
ROSE ST NB
ROSE ST NB TO IH 90 EB
ROSE ST SB TO IH 90 EB
IH 90 EB TO ROSE ST NB
ROSE ST SB TO IH 90 WB
IH 90 WB TO ROSE ST SB
ROSE ST NB TO IH 90 WB
IH 90 WB TO ROSE ST NB

END ROAD WORK
G20-2A
48" X 24"

ARROW BOARD

500'
50' (TYP)
100' (TYP)
1000'
1000'

ROAD WORK AHEAD
W20-1

LEFT LANE CLOSED AHEAD
W20-5

W04-2L

SPEED LIMIT 40
W03-5

SPEED LIMIT 40
R2-1
24" X 30"

NOTE:
ADJUST LOCATIONS AND NUMBER OF SIGNS TO ACCOUNT FOR WEST GEORGE STREET TRAFFIC.

LANE CLOSED
R11-2(MOD)
48" X 30"

318

MERGING TRAFFIC BE PREPARED TO STOP

W03-2

327

MERGE AHEAD BE PREPARED TO STOP

W5-52R
12" X 36"

CRASH CUSHION TEMPORARY

YIELD
R1-2
36" X 31"

ROAD CLOSED
R11-2
48" X 30"

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADDITIONAL INFORMATION.

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - ROSE ST (STAGE 1C) OFF-PEAK HOUR	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026025_s1c.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

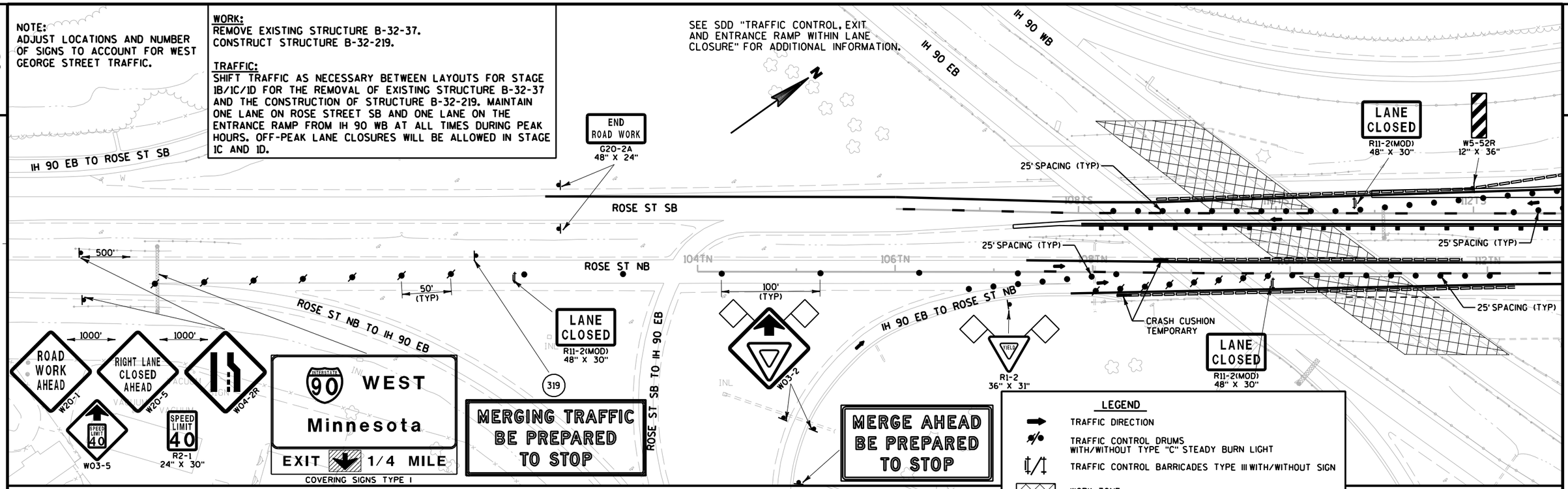
2

NOTE:
ADJUST LOCATIONS AND NUMBER OF SIGNS TO ACCOUNT FOR WEST GEORGE STREET TRAFFIC.

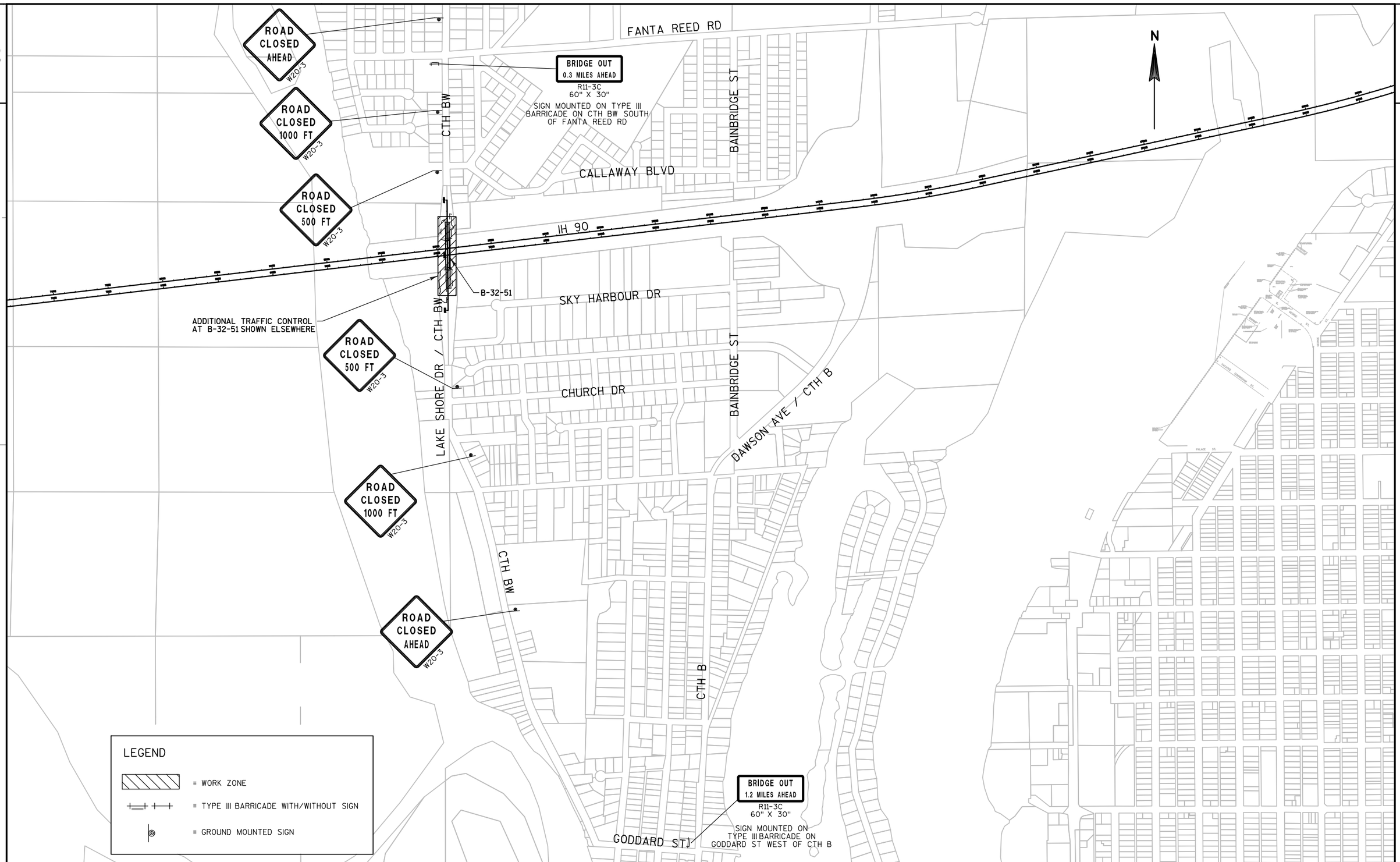
WORK:
REMOVE EXISTING STRUCTURE B-32-37.
CONSTRUCT STRUCTURE B-32-219.

TRAFFIC:
SHIFT TRAFFIC AS NECESSARY BETWEEN LAYOUTS FOR STAGE 1B/1C/1D FOR THE REMOVAL OF EXISTING STRUCTURE B-32-37 AND THE CONSTRUCTION OF STRUCTURE B-32-219. MAINTAIN ONE LANE ON ROSE STREET SB AND ONE LANE ON THE ENTRANCE RAMP FROM IH 90 WB AT ALL TIMES DURING PEAK HOURS. OFF-PEAK LANE CLOSURES WILL BE ALLOWED IN STAGE 1C AND 1D.

SEE SDD "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE" FOR ADDITIONAL INFORMATION.



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - ROSE ST (STAGE 1D) OFF-PEAK HOUR	SHEET 97	E



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - CTH BW	SHEET 98 E

FILE NAME : ch_0677_025001_tc.dgn PLOT DATE : 01-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 800:1

WISDOT/CADDS SHEET 42

2

2

N

102EB

102WB

104EB

104WB

BEGIN CONSTRUCTION
STA 17+00.00 BW
MATCH EXISTING

END CONSTRUCTION
STA 23+00.00 BW
MATCH EXISTING

R/L CTH BW

BRIDGE OUT
R11-2B
48" X 30"

18BW

20BW

22BW

24BW

106EB

106WB

CTH BW

B-32-51

BRIDGE OUT
R11-2B
48" X 30"

BRIDGE OUT
R11-2B
48" X 30"

BRIDGE OUT
R11-2B
48" X 30"

108EB

108WB

IH-90

110EB

110WB

LEGEND

= WORK ZONE

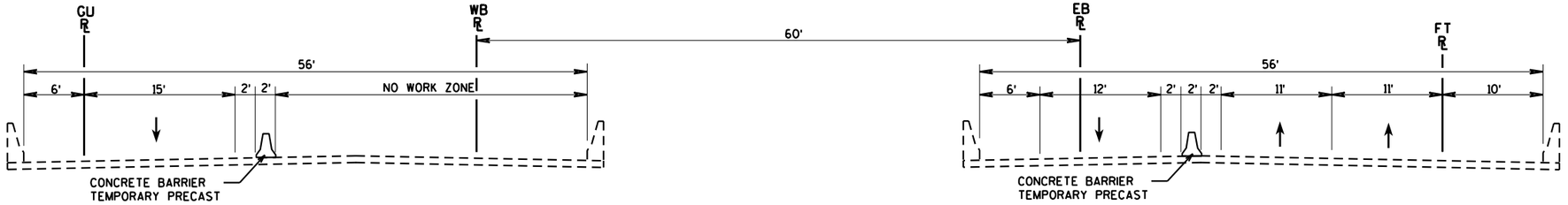
= TYPE III BARRICADE WITH/WITHOUT SIGN

= GROUND MOUNTED SIGN

PROJECT NO:1071-06-77	HWY:IH 90	COUNTY:LA CROSSE	TRAFFIC CONTROL - CTH BW	SHEET 99	E

FILE NAME : ch_0677_025002_tc.dgn PLOT DATE : 01-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

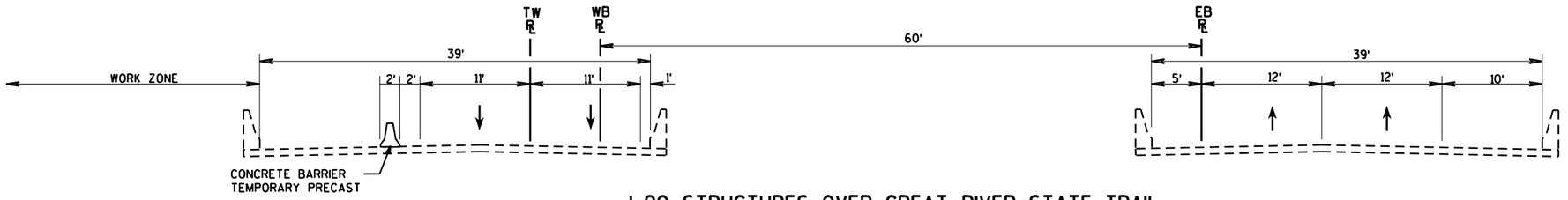


EXISTING WB (B-32-40)

I-90 STRUCTURES OVER RAILROAD/OAK ST

(LOOKING EAST)

EXISTING EB (B-32-39)

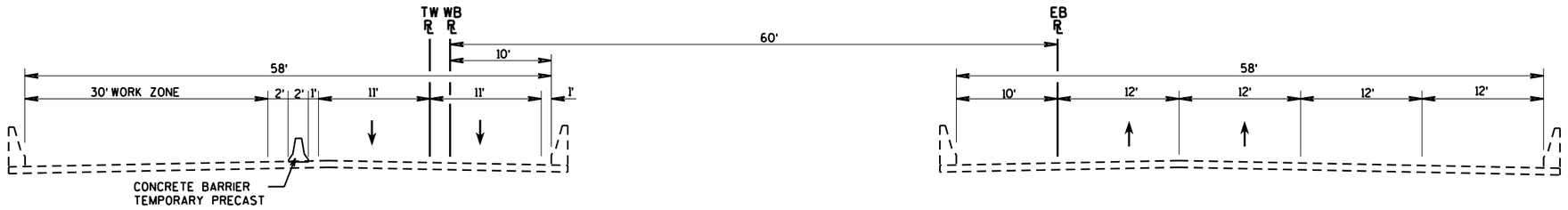


EXISTING WB (B-32-44)

I-90 STRUCTURES OVER GREAT RIVER STATE TRAIL

(LOOKING EAST)

EXISTING EB (B-32-43)

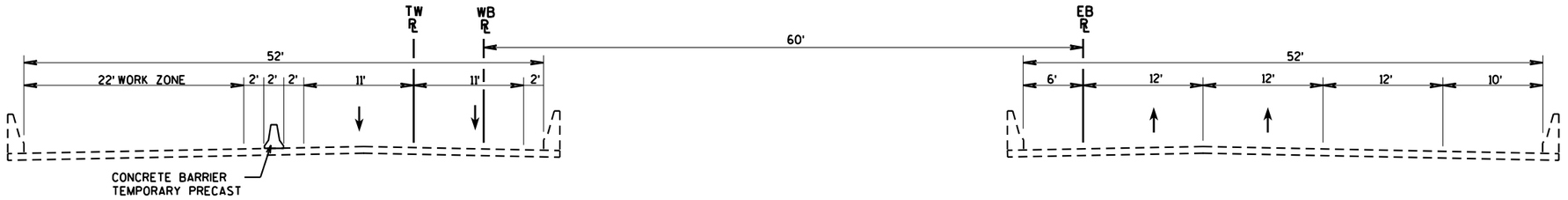


EXISTING WB (B-32-108)

I-90 STRUCTURES OVER 12TH AVE

(LOOKING EAST)

EXISTING EB (B-32-107)



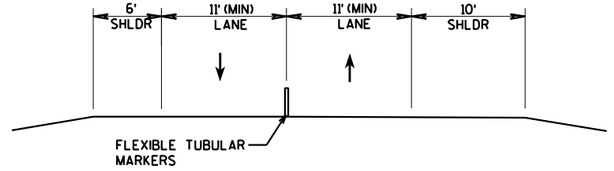
EXISTING WB (B-32-190)

I-90 STRUCTURES OVER THEATER RD

(LOOKING EAST)

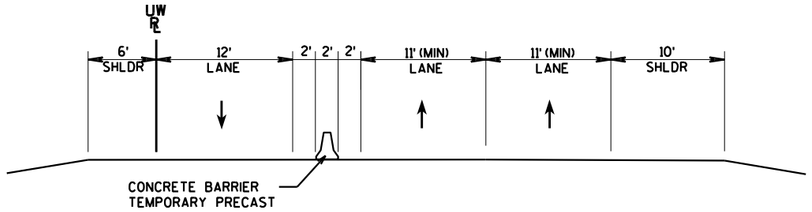
EXISTING EB (B-32-189)

2



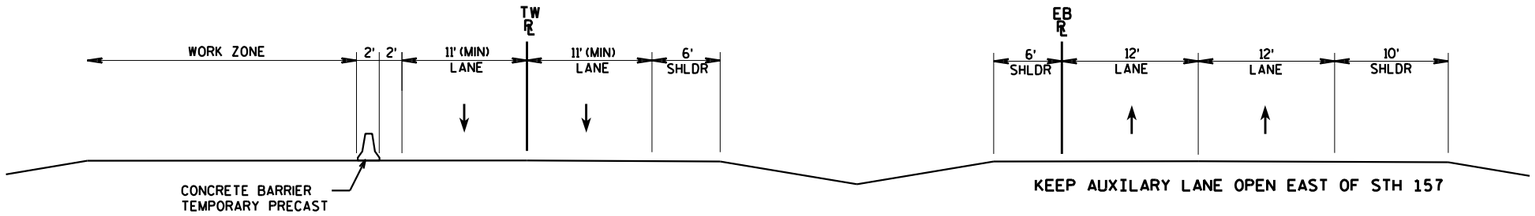
TRAFFIC LAYOUT - STAGE 2
I-90 WEST OF ROSE STREET

1



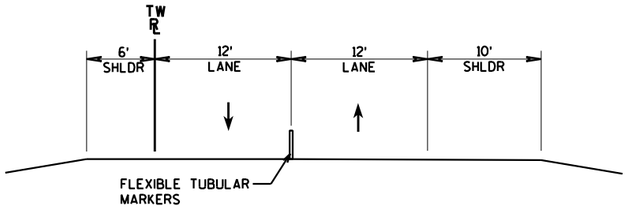
TRAFFIC LAYOUT - STAGE 2
I-90 WEST OF RAILROAD

2



TRAFFIC LAYOUT - STAGE 2
I-90 BETWEEN TRAIL AND 12TH AVENUE
I-90 EAST OF STH 157

3



TRAFFIC LAYOUT - STAGE 2
I-90 UNDER STH 157

4

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL TYPICAL LAYOUT - STAGE 2 (ROADWAY)	SHEET 101	E

SEE STAGE 1 TRAFFIC CONTROL SHEETS FOR TRAFFIC CONTROL DEVICES AND LAYOUT FOR SEGMENT OF PROJECT FROM BEGINNING OF PROJECT TO CTH BW.

WORK:
COMPLETE WB LANES FROM BEGINNING OF PROJECT TO STA 187+50 WB.
CONTINUE WORK ON WB LANES FROM STA 187+50 WB TO RAILROAD STRUCTURE.
CONSTRUCT MEDIAN LANES OF WB FROM RAILROAD STRUCTURE TO STA 226+00 WB.
CONSTRUCT THE 'UW' ALIGNMENT.
CONSTRUCT WB LANES IN AREA PREVIOUSLY GAPPED FOR THE 'MT' AND 'LT' RAMPS.
CONSTRUCT WB OUTSIDE LANE, AUXILARY LANE, AND OUTSIDE SHOULDER FROM 'LU' RAMP TO END OF PROJECT.
COMPLETE B-32-49 AND OUTSIDE PORTION OF B-32-108.
CONSTRUCT 'HU' AND 'HW' RAMPS.
CONTINUE WORK ON CTH BW.

TRAFFIC:
CONTINUE SINGLE LANE BI-DIRECTIONAL TRAFFIC ON EB LANES FROM THE DRESBACH PROJECT TO ROSE STREET.
KEEP WB LANES ON THE 'TW' ALIGNMENT.
SWITCH TRAFFIC TO THE 'CU', 'DU', 'HV', 'GU', 'LU', AND 'MU' TEMPORARY RAMPS.
KEEP REST AREA CLOSED.
CLOSE 'HU' LINE TO TRAFFIC.
KEEP N RAMP AND P RAMP CLOSED TO TRAFFIC.
KEEP CTH BW CLOSED TO TRAFFIC.

LEGEND
- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

108WB 110WB 112WB IH 90 WB 114WB 116WB 118WB 120WB
108EB 110EB 112EB IH 90 EB 114EB 116EB 118EB 120EB
100' (TYP)
W06-3
DO NOT PASS R4-1 36" X 48"
SPEED LIMIT 55 R2-1 48" X 60"
ROAD CLOSED R11-2 48" X 30"
WEST MB3-4 24" X 12"
IH 90 M1-1 24" X 24"
FLEXIBLE TUBULAR MARKER POSTS (INSTALLED PREVIOUSLY)
W06-3
NEXT XX MILES W057-51 48" X 24"
COORDINATE DISTANCES SHOWN WITH ADJACENT PROJECTS.
MERGING TRAFFIC BE PREPARED TO STOP

STA 129+75 WB - STA 130+35 WB
REMOVING FLEXIBLE TUBULAR MARKER POSTS AND BASES

SEE SDD "TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER" FOR ADDITIONAL INFORMATION.

YIELD R1-2 36" X 31"
ROAD CLOSED R11-2 48" X 30"
STA 127+97 DU - STA 133+76 DU TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT/REMOVABLE TAPE 4-INCH (WHITE)
STA 129+72 DU - STA 133+76 DU TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT/REMOVABLE TAPE 4-INCH (YELLOW)
25' SPACING (TYP)
W03-2
W01-4L
25 M.P.H. W013-1 24" X 24"
ROAD CLOSED R11-2 48" X 30"
122WB 124WB 126WB IH 90 WB 128WB 130WB 132WB 134WB 136WB
122EB 124EB 126EB 128DU 130EB 132EB 134EB 136EB
50' (TYP)
CTH B TO IH 90 WB
IH 90 EB TO CTH B
W06-3
DO NOT PASS R4-1 36" X 48"
STA 127+97 EB - STA 129+73 EB TEMPORARY PAVEMENT MARKING 8-INCH (WHITE)
FLEXIBLE TUBULAR MARKER POSTS (INSTALLED PREVIOUSLY)
CRASH CUSHION TEMPORARY PLACED PREVIOUSLY BY OTHERS
STA 129+73 EB - STA 134+77 EB TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)
STA 128+00 EB - STA 130+00 EB REMOVING PAVEMENT MARKING (EDGELINE, LT)
STA 128+00 EB - STA 134+75 EB REMOVING PAVEMENT MARKING (DOTTED EDGELINE & CHANNELIZING)
END ROAD WORK G20-2A 48" X 24"

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 2	SHEET 102	E

2

ROAD WORK AHEAD W20-1

LEFT SHOULDER CLOSED W21-5A

CTH B TO IH 90 WB

STA 138+25 D - STA 139+95 D, RT
SAWING ASPHALT REQ'D

MERGE AHEAD
BE PREPARED
TO STOP

322

MOVING SIGNS TYPE II

25' SPACING (TYP)

END ROAD WORK
G20-2A
48" X 24"

STA 140+25 C - STA 141+55 C, RT
SAWING ASPHALT REQ'D

25' SPACING (TYP)

SEE SDD "TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER" FOR ADDITIONAL INFORMATION.

STA 141+12 CU - STA 160+10 CU
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT/REMOVABLE
TAPE 4-INCH (YELLOW)

STA 141+12 CU - STA 167+79 CU
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT/REMOVABLE
TAPE 4-INCH (WHITE)

ROAD CLOSED
R11-2
48" X 30"

50' (TYP)

IH 90 WB TO CTH B

CRASH CUSHION TEMPORARY

IH 90 WB

IH 90 EB

CTH B TO IH 90 EB

CTH B

W06-3

W04-1

W03-2

DO NOT PASS
R4-1
36" X 48"

YIELD
R1-2
36" X 31"

FLEXIBLE TUBULAR MARKER
POSTS (INSTALLED PREVIOUSLY)

STA 147+90 EB - STA 153+69 EB
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

IH 90 EB TO CTH B

MERGE AHEAD
BE PREPARED
TO STOP

ROAD WORK AHEAD W20-1

N

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 2	SHEET 103	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026104_s2.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT/REMOVABLE
TAPE 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT/REMOVABLE
TAPE 4-INCH (YELLOW)

50' (TYP)

50' (TYP)

IH 90 WB TO CTH B

ROAD CLOSED
R11-2
48" X 30"

STA 159+50 EB - STA 162+50 EB, LT
REMOVING FLEXIBLE TUBULAR
MARKER POSTS AND BASES

IH 90 WB

IH 90 EB

50' (TYP)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

SPEED LIMIT 55
R2-1
48" X 60"

W057-51
NEXT 1 MILE
48" X 24"

W06-3

FLEXIBLE TUBULAR MARKER
POSTS (INSTALLED PREVIOUSLY)

W06-3

DO NOT PASS
R4-1
36" X 48"

COVERING SIGNS
TYPE II

SPEED LIMIT 55
R2-1
48" X 60"

EXIT
E5-1
72" X 60"

STA 160+10 CU - STA 165+79 CU
TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)

STA 161+50 EB - STA 167+80 EB
REMOVING PAVEMENT MARKING
(EDGELINE)

W06-3

DO NOT PASS
R4-1
36" X 48"

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

BLACK RIVER

IH 90 WB

IH 90 EB

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

50' (TYP)

300

EXIT 2

B

French Island

MOVING SIGN TYPE II

FLEXIBLE TUBULAR MARKER
POSTS (INSTALLED PREVIOUSLY)

301

La Crosse Airport

EXIT 2

MOVING SIGN TYPE II

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 2	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026105_s2.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

N

SEE SDD "TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER" FOR ADDITIONAL INFORMATION.

STA 197+25 HT - STA 200+45 HT, RT
SAWING ASPHALT REO'D

STA 182+18 HV - STA 200+00 HV
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT/REMOVABLE
TAPE 4-INCH (WHITE)

STA 183+75 HV - STA 197+60 HV
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT/REMOVABLE
TAPE 4-INCH (YELLOW)

MERGE AHEAD
BE PREPARED
TO STOP
MOVING SIGNS TYPE II

W01-4L

25 M.P.H.
W013-1
24" X 24"

324

ROSE ST SB TO IH 90 WB

YIELD
R1-2
36" X 31"

ROAD CLOSED
R11-2
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

W03-2

25' SPACING (TYP)

IH 90 WB

CRASH CUSHION TEMPORARY

50' (TYP)

50' (TYP)

STA 182+18 HV - STA 183+75 HV
TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)

STA 183+77 EB - STA 186+26 EB
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

W04-1

IH 90 EB

FLEXIBLE TUBULAR MARKER
POSTS (INSTALLED PREVIOUSLY)

WEST
MB3-4
24" X 12"

90
M1-1
24" X 24"

302

EXIT 2
B
French Island
½ MILE
MOVING SIGNS TYPE II

IH 90 EB TO ROSE ST SB

ROSE ST SB

ROSE ST NB

IH 90 EB TO ROSE ST NB

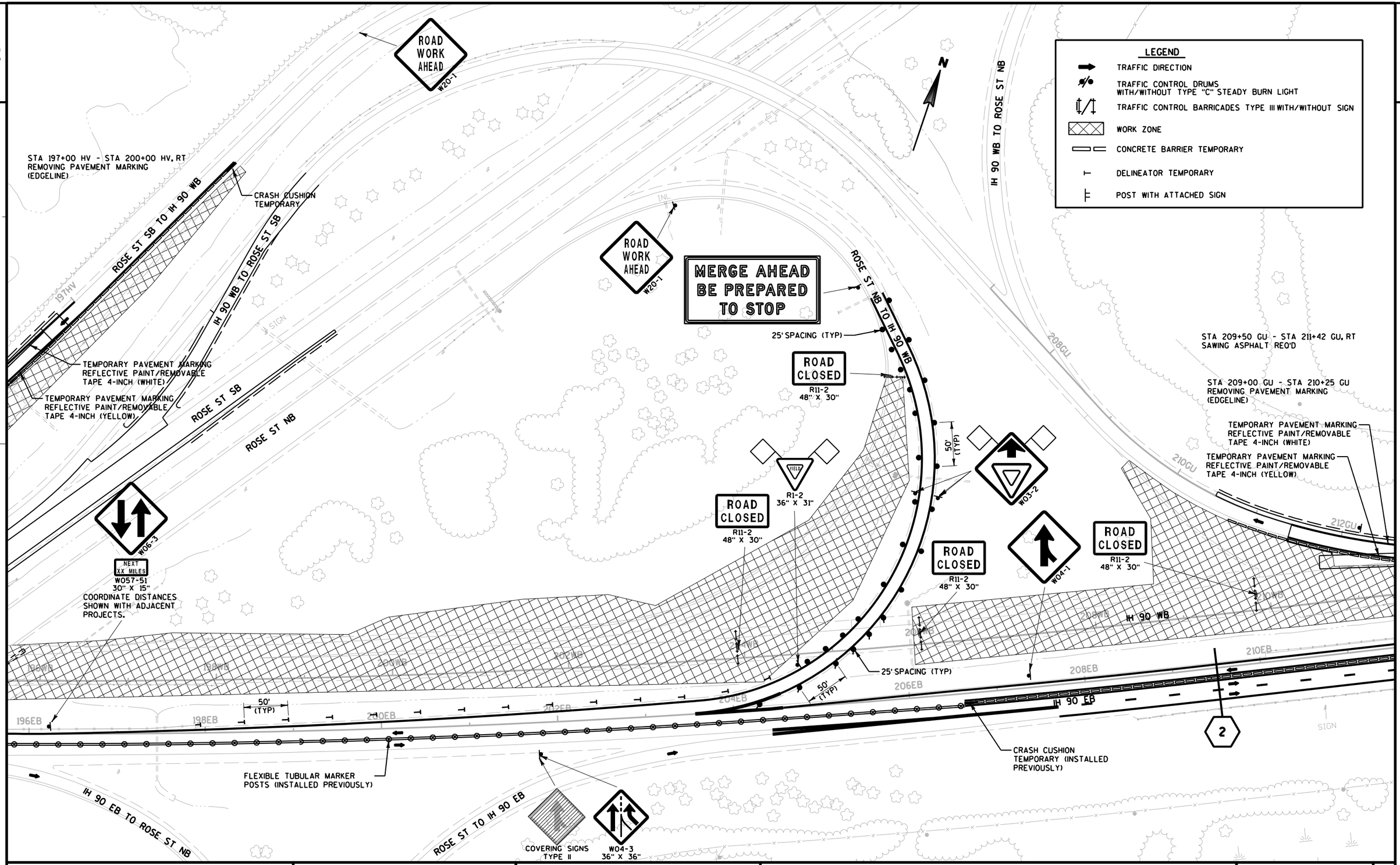
STA 182+00 EB - STA 185+00 EB
REMOVING PAVEMENT MARKING
(EDGELINE)

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 2	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026106_s2.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

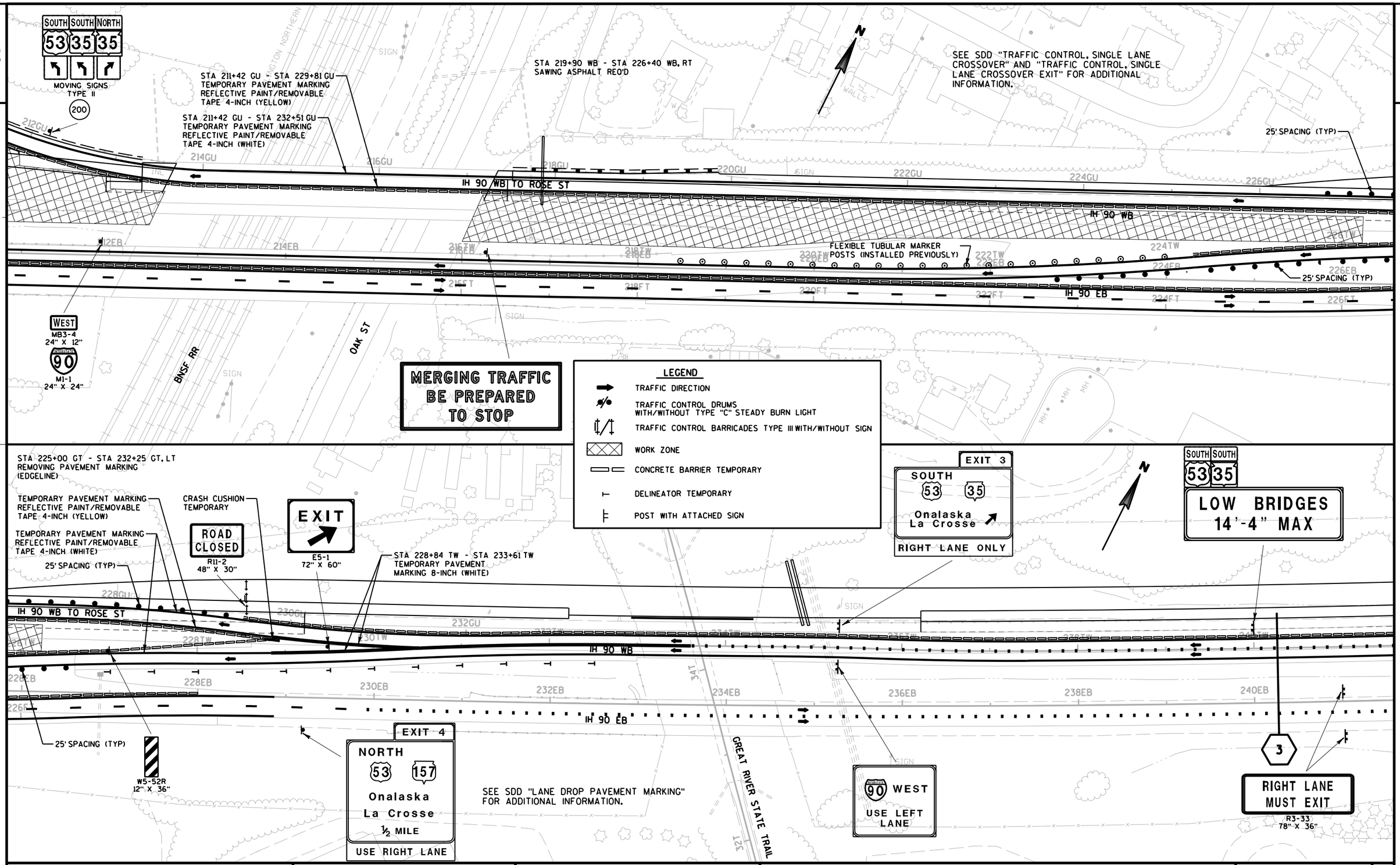
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 2	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026107_s2.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 2	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026108_s2.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

RIGHT LANE MUST EXIT
R3-33
78" X 36"

SPEED LIMIT 55
R2-1
48" X 60"

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT/REMOVABLE
TAPE 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT/REMOVABLE
TAPE 4-INCH (WHITE)

CRASH CUSHION
TEMPORARY

W4-3
36" X 36"

STA 249+50 TW - STA 252+50 TW
TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)

STH 157 TO IH 90 WB

IH 90 WB

50'
(TYP)

FLEXIBLE TUBULAR MARKER
POSTS @ 25' SPACING (TYP)

CRASH CUSHION
PREVIOUSLY PLACED
BY OTHERS

8:1 TAPER

IH 90 EB

STA 250+00 TW - STA 252+50 TW
REMOVING PAVEMENT MARKING
(EDGELINE)

W01-4B

12TH AVE

Amtrak Station
Great River
State Trail
EXIT 3

90 EAST
USE LEFT
LANE

EXIT 4
NORTH
53 157
La Crosse
Onalaska
RIGHT LANE ONLY

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

STA 262+82 M - STA 267+00 M, RT
SAWING ASPHALT REO'D

ROAD WORK AHEAD
W20-1

LEFT SHOULDER CLOSED
W21-5A

STA 262+50 MT - STA 267+22 MT
REMOVING PAVEMENT MARKING
(EDGELINE)

25' SPACING (TYP)

STA 252+27 MU - STA 262+82 MU
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

STA 250+00 MU - STA 262+82 MU
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

W01-4L

STH 157 TO IH 90 WB

IH 90 WB

50'
(TYP)

IH 90 EB

IH 90 EB TO STH 157

W01-4R

W06-3

DO NOT PASS
R4-1
36" X 48"

25' SPACING (TYP)

R4-7
24" X 30"

4

FLEXIBLE TUBULAR MARKER
POSTS (INSTALLED PREVIOUSLY)

STH 157 SB TO IH 90 EB

100'
(TYP)

CLOSED

W06-1

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CROSSOVER" AND "TRAFFIC CONTROL, SINGLE LANE CROSSOVER ENTRANCE WITH BARRIER" FOR ADDITIONAL INFORMATION.

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 2	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026109_s2.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

2

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CROSSOVER" AND "TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT" FOR ADDITIONAL INFORMATION.

W06-3

DO NOT PASS
R4-1
36" X 48"

STH 157

IH 90 WB

STH 157 NB TO IH 90 WB

CLOSED

IH 90 WB TO STH 157

I SIGN

272TW 274TW 276TW 278TW 280TW 282TW

IH 90 EB

STH 157 SB TO IH 90 EB

CLOSED

100' (TYP)

W06-1

FLEXIBLE TUBULAR MARKER POSTS (INSTALLED PREVIOUSLY)

STH 157 NB TO IH 90 EB

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT/REMOVABLE TAPE 4-INCH (WHITE)

STA 283+75 L - STA 287+33 L, RT
SAWING ASPHALT REQ'D

288LU 290LU 292LU 294LU

IH 90 WB TO STH 157

284TW 286TW 288TW

8:1 TAPER

EXIT

E5-1
60" X 48"

STA 292+00 TW - STA 297+00 TW
TEMPORARY PAVEMENT MARKING
8-INCH (WHITE)

IH 90 EB

IH 90 WB

W5-52R
12" X 36"

COVERING SIGNS TYPE I

WEST 90 AHEAD

SOUTH 53

EXIT 4
NORTH 53 157
La Crosse
Onalaska
EXIT ONLY

COVERING SIGNS TYPE I

SOUTH
M3-3
24" X 12"
53
M1-4
24" X 24"
M 6-1
21" X 21"

STA 291+50 TW - STA 295+21 TW
REMOVING PAVEMENT MARKING
(EDGELINE)

WEST SOUTH 90 53
USE LEFT LANE

3

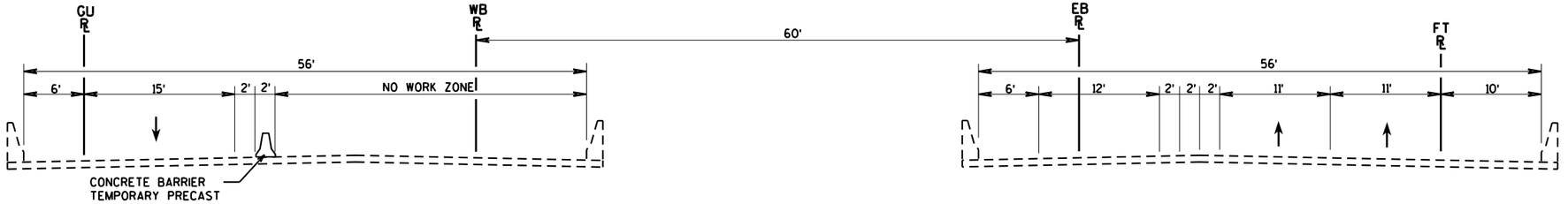
EXIT 4
NORTH 53 157
Onalaska
La Crosse
RIGHT LANE ONLY

308

SEE STAGE 1 TRAFFIC CONTROL SHEETS FOR TRAFFIC CONTROL DEVICES AND LAYOUT FOR SEGMENT OF PROJECT FROM STA 301+00 WB TO THE EAST END.

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 2	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026110_s2.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

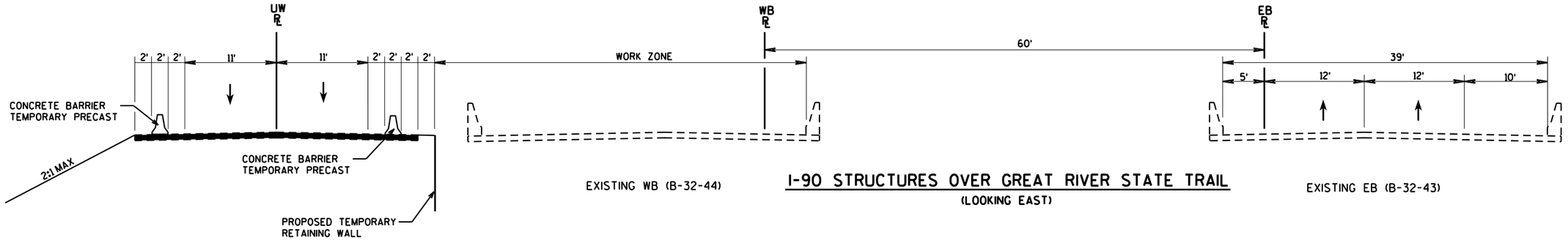


EXISTING WB (B-32-40)

I-90 STRUCTURES OVER RAILROAD/OAK ST

(LOOKING EAST)

EXISTING EB (B-32-39)

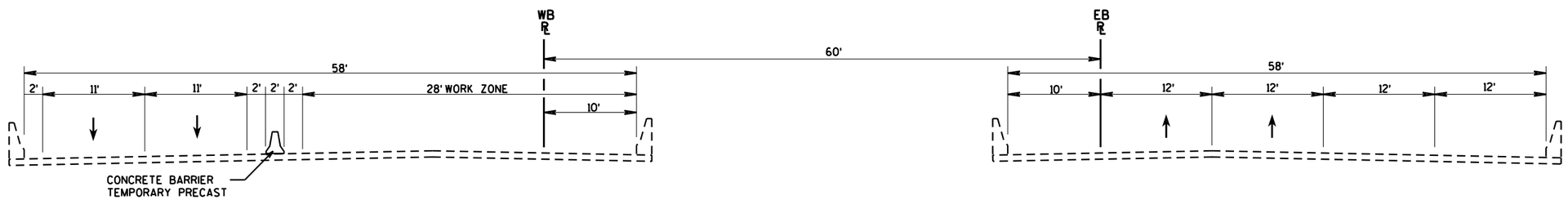


EXISTING WB (B-32-44)

I-90 STRUCTURES OVER GREAT RIVER STATE TRAIL

(LOOKING EAST)

EXISTING EB (B-32-43)

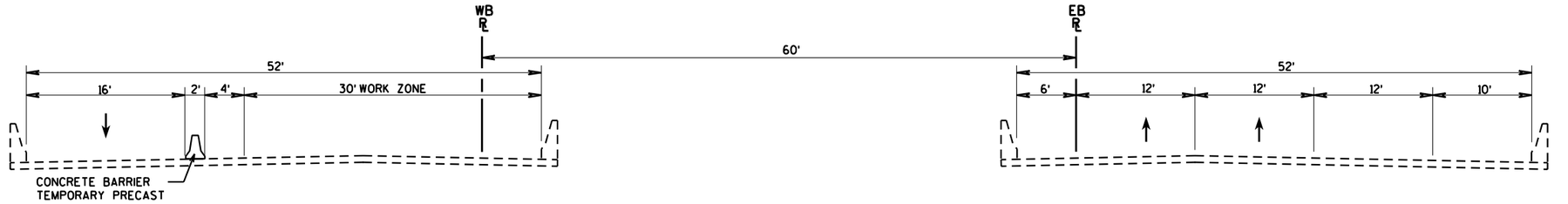


EXISTING WB (B-32-108)

I-90 STRUCTURES OVER 12TH AVE

(LOOKING EAST)

EXISTING EB (B-32-107)



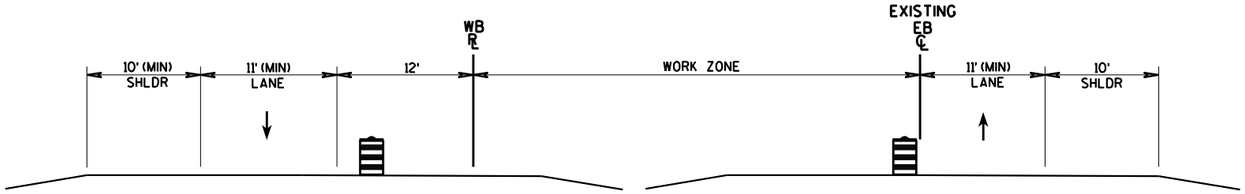
EXISTING WB (B-32-190)

I-90 STRUCTURES OVER THEATER RD

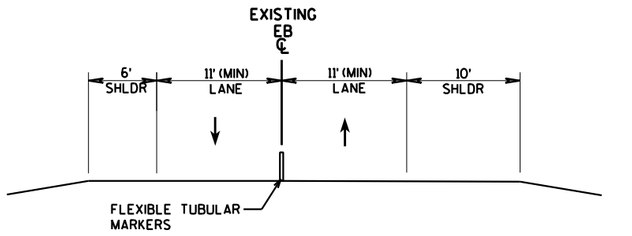
(LOOKING EAST)

EXISTING EB (B-32-189)

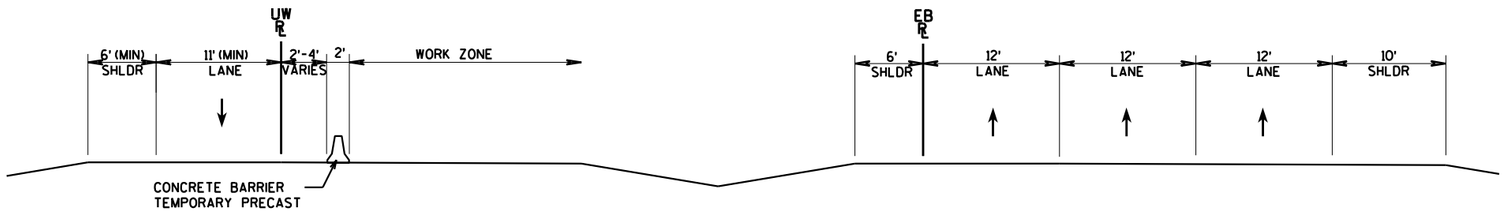
PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL TYPICAL LAYOUT - STAGE 3A (STRUCTURES)	SHEET 110	E



TRAFFIC LAYOUT - STAGE 3A
I-90 WEST OF BLACK RIVER
1-90 UNDER STH 157
1

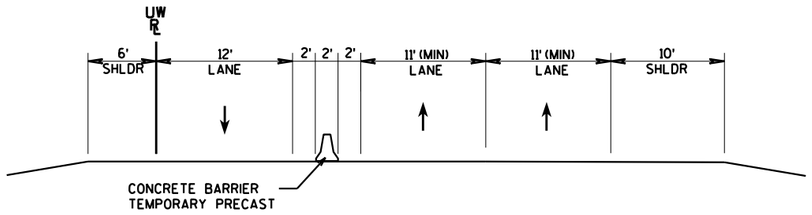


TRAFFIC LAYOUT - STAGE 3A
I-90 BLACK RIVER TO WEST OF RAILROAD
2

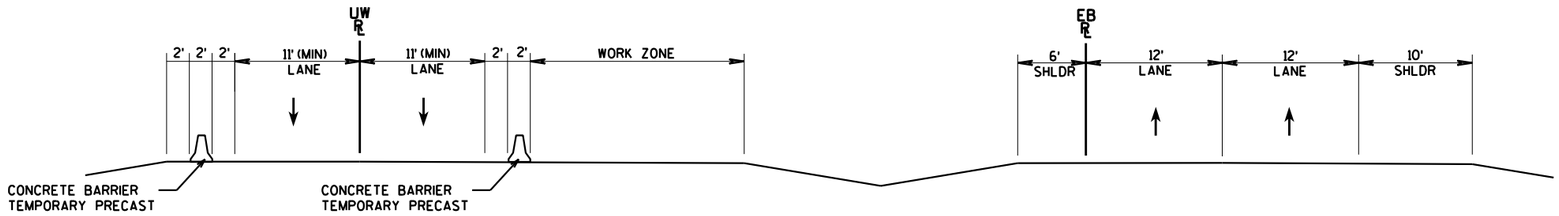


TRAFFIC LAYOUT - STAGE 3A
I-90 EAST OF STH 157
5

* MAINTAIN 16' CLEAR WIDTH AT
THEATER ROAD STRUCTURE



TRAFFIC LAYOUT - STAGE 3A
I-90 WEST OF RAILROAD
3



TRAFFIC LAYOUT - STAGE 3A
I-90 BETWEEN TRAIL AND 12TH AVENUE
4

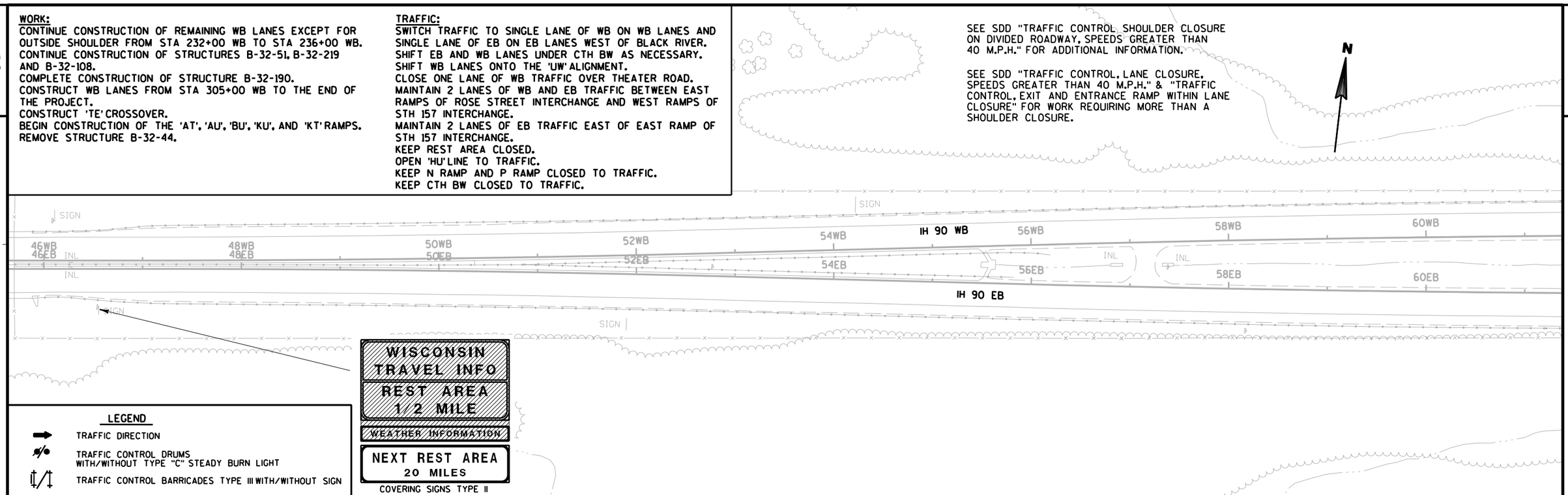
2

WORK:
CONTINUE CONSTRUCTION OF REMAINING WB LANES EXCEPT FOR OUTSIDE SHOULDER FROM STA 232+00 WB TO STA 236+00 WB.
CONTINUE CONSTRUCTION OF STRUCTURES B-32-51, B-32-219 AND B-32-108.
COMPLETE CONSTRUCTION OF STRUCTURE B-32-190.
CONSTRUCT WB LANES FROM STA 305+00 WB TO THE END OF THE PROJECT.
CONSTRUCT 'TE' CROSSOVER.
BEGIN CONSTRUCTION OF THE 'AT', 'AU', 'BU', 'KU', AND 'KT' RAMPS.
REMOVE STRUCTURE B-32-44.

TRAFFIC:
SWITCH TRAFFIC TO SINGLE LANE OF WB ON WB LANES AND SINGLE LANE OF EB ON EB LANES WEST OF BLACK RIVER.
SHIFT EB AND WB LANES UNDER CTH BW AS NECESSARY.
SHIFT WB LANES ONTO THE 'UW' ALIGNMENT.
CLOSE ONE LANE OF WB TRAFFIC OVER THEATER ROAD.
MAINTAIN 2 LANES OF WB AND EB TRAFFIC BETWEEN EAST RAMPS OF ROSE STREET INTERCHANGE AND WEST RAMPS OF STH 157 INTERCHANGE.
MAINTAIN 2 LANES OF EB TRAFFIC EAST OF EAST RAMP OF STH 157 INTERCHANGE.
KEEP REST AREA CLOSED.
OPEN 'HU' LINE TO TRAFFIC.
KEEP N RAMP AND P RAMP CLOSED TO TRAFFIC.
KEEP CTH BW CLOSED TO TRAFFIC.

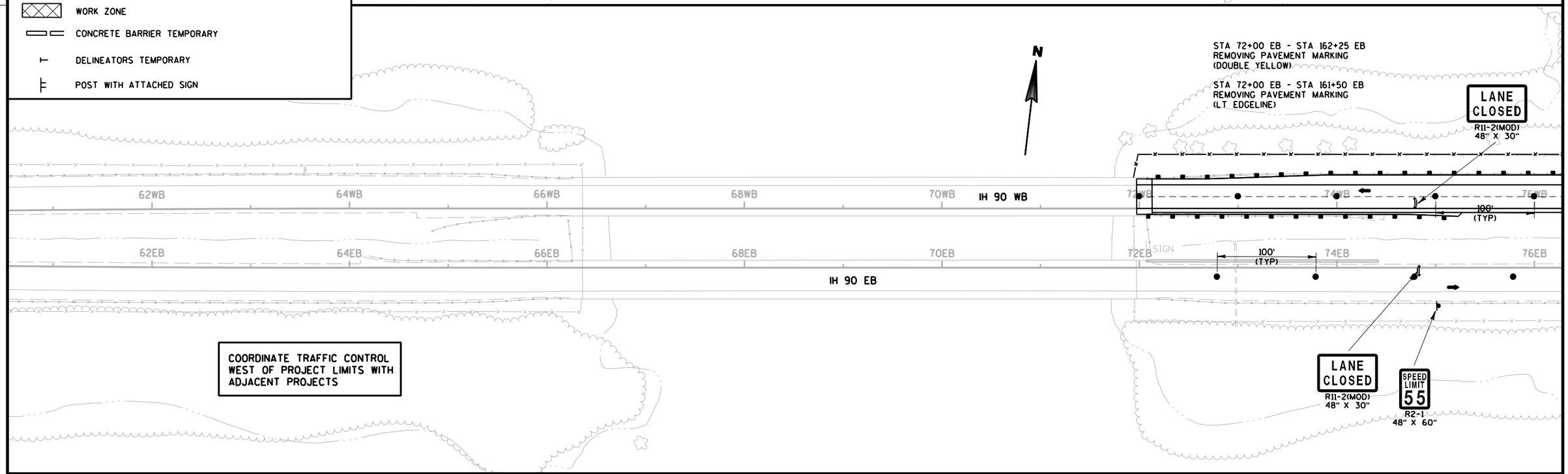
SEE SDD "TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL INFORMATION.

SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." & "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE" FOR WORK REQUIRING MORE THAN A SHOULDER CLOSURE.



LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATORS TEMPORARY
- POST WITH ATTACHED SIGN



STA 72+00 EB - STA 162+25 EB
REMOVING PAVEMENT MARKING
(DOUBLE YELLOW)

STA 72+00 EB - STA 161+50 EB
REMOVING PAVEMENT MARKING
(LT EDGELINE)

COORDINATE TRAFFIC CONTROL WEST OF PROJECT LIMITS WITH ADJACENT PROJECTS

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026201_s3a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

1

N

LANE CLOSED
R11-2(MOD)
48" X 30"

SIGN

76WB 78WB 80WB 82WB IH 90 WB 84WB 86WB 88WB 90WB

100'
(TYP)

76EB 78EB 80EB 100'
(TYP)
82EB 84EB 86EB 88EB 90EB

IH 90 EB

SIGN SIGN

REST AREA

COVERING SIGNS TYPE I

CLOSED
R55-58A
44" X 8"

LANE CLOSED
R11-2(MOD)
48" X 30"

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

N

FRENCH SLOUGH

WEATHER STATION

LANE CLOSED
R11-2(MOD)
48" X 30"

SIGN

22BW

92WB 94WB 96WB IH 90 WB 98WB 100WB 102WB 104WB

100'
(TYP)

92EB 94EB 96EB 100'
(TYP)
98EB 100EB 102EB 50'
(TYP)
104EB

IH 90 EB

SIGN SIGN SIGN

REST AREA RAMPS CLOSED

RAMP CLOSED
R11-2(MOD)
48" X 30"

REST AREA

COVERING SIGNS TYPE II

LANE CLOSED
R11-2(MOD)
48" X 30"

INL INL

COVERING SIGNS TYPE II

20BW

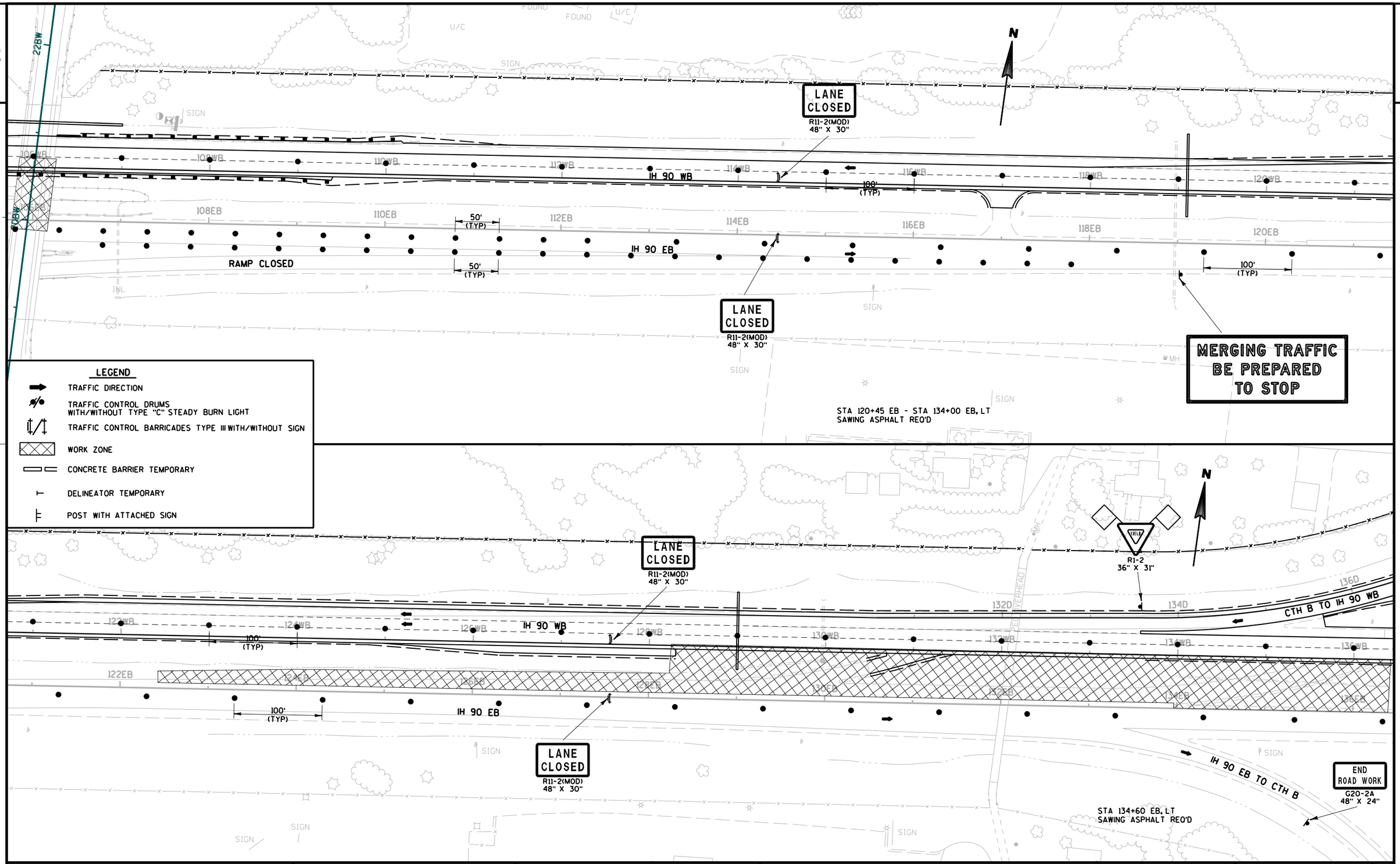
CTH BW

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026202_s3a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

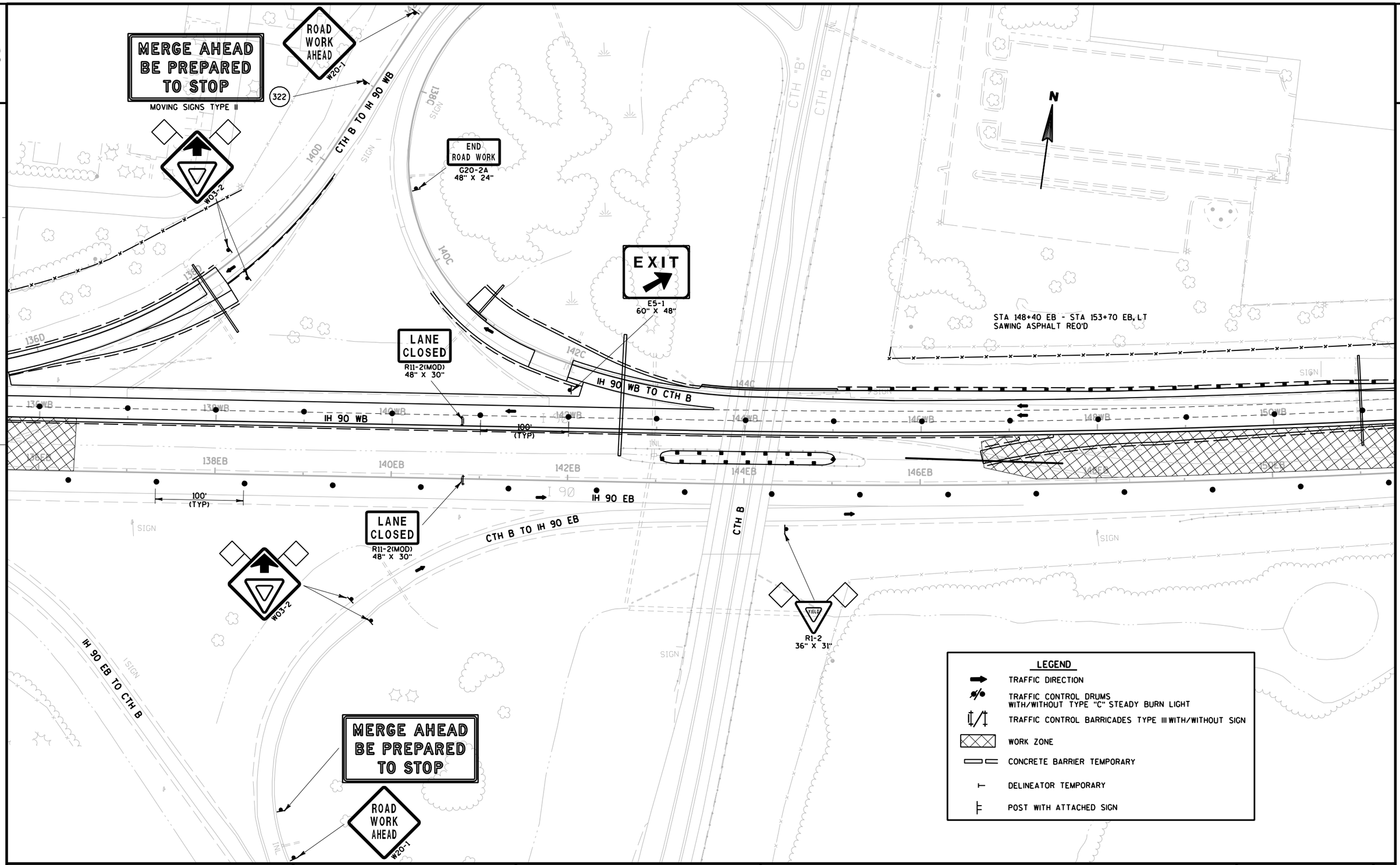
2



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\gg_0677_026203_s3a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026204_s3a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

MERGING TRAFFIC
BE PREPARED
TO STOP

MOVING SIGN TYPE II
320

N

156VW
158VW
160VW
162VW
164VW

IH 90 WB

IH 90 EB

100'
(TYP)

50'
(TYP)

SIGN

FLEXIBLE TUBULAR MARKER
POSTS @ 25' SPACING (TYP)

CRASH CUSHION
TEMPORARY

STA 162+19 EB - STA 167+75 EB
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

STA 161+10 EB - STA 164+59 EB
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

FLEXIBLE TUBULAR MARKER
POSTS (INSTALLED PREVIOUSLY)

W5-52L
12" X 36"

COVERING SIGNS
TYPE II

SPEED LIMIT 55
R2-1
48" X 60"

W06-3

DO NOT PASS
R4-1
36" X 48"

STA 160+00 EB - STA 165+80 EB
REMOVING PAVEMENT MARKING
(MEDIAN EDGELINE & CHANNELIZING)

LANE CLOSED
R11-2(MOD)
48" X 30"

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

BLACK RIVER

N

IH 90 WB

IH 90 EB

FLEXIBLE TUBULAR MARKER
POSTS (INSTALLED PREVIOUSLY)

2

W06-3

NEXT
1 MILE
W057-51
48" X 24"

La Crosse Airport
EXIT 2

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026205_s3a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

2

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

N

SEE SDD "TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER" FOR ADDITIONAL INFORMATION.

MERGE AHEAD
BE PREPARED
TO STOP

W01-4L

25
M.P.H.
W013-1
24" X 24"

ROAD
CLOSED
R11-2
48" X 30"

W03-2

YIELD
R1-2
36" X 31"

ROAD
CLOSED
R11-2
48" X 30"

25' SPACING (TYP)

ROSE ST SB TO I-90 WB

IH 90 WB

CRASH CUSHION
(PREVIOUSLY INSTALLED
BY OTHERS)

IH 90 EB

FLEXIBLE TUBULAR MARKER
POSTS (INSTALLED PREVIOUSLY)

W04-1

WEST
MB3-4
24" X 12"

90
MI-1
24" X 24"

ROSE ST SB

ROSE ST NB

IH 90 EB TO ROSE ST NB

IH 90 EB TO ROSE ST SB

EXIT 2
B
French Island
½ MILE

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026206_s3a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

ROAD WORK AHEAD
W20-1

N

IH 90 WB TO ROSE ST NB

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

REPAVE AREAS OF 'HU' RAMP DISTURBED FOR MAINLINE PAVING OPERATIONS TO MATCH NEW WB PROFILE.

ROSE ST SB TO IH 90 WB

IH 90 WB TO ROSE ST SB

ROSE ST SB

ROSE ST NB

ROSE ST NB TO IH 90 WB

RAMP CLOSED

RAMP CLOSED
R11-2(MOD)
48" X 30"

25' SPACING (TYP)

STA 205+00 HU, LT/RT
SAWING ASPHALT REQ'D

STA 206+00 HU, LT/RT
SAWING ASPHALT REQ'D

STA 207+51 HU, LT/RT
SAWING ASPHALT REQ'D
SAWING CONCRETE REQ'D

INTERSTATE 90 WEST
Minnesota
EXIT ONLY

COVERING SIGNS TYPE I

ROAD CLOSED
R11-2
48" X 30"

W06-3
NEXT XX MILES
W057-51
30" X 15"
COORDINATE DISTANCES SHOWN WITH ADJACENT PROJECTS.

IH 90 WB

IH 90 EB

IH 90 EB TO ROSE ST NB

ROSE ST TO IH 90 EB

FLEXIBLE TUBULAR MARKER POSTS (INSTALLED PREVIOUSLY)

CRASH CUSHION TEMPORARY (INSTALLED PREVIOUSLY)

COVERING SIGNS TYPE II

W04-3
36" X 36"

3

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET 118	E

2

ROAD CLOSED
R11-2
48" X 30"

WEST
MB3-4
24" X 12"

INTERSTATE 90
M1-1
24" X 24"

IH 90 WB TO ROSE ST

IH 90 WB

IH 90 EB

BNSF RR

OAK ST

50'
(TYP)

25' SPACING (TYP)

STA 216+38 UW - STA 224+00 UW
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

STA 216+38 EB - STA 220+00 EB
REMOVING PAVEMENT MARKING
(EDGELINE, LT)

W5-52R
12" X 36"

STA 223+78 GU - STA 224+91 GU
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

CRASH CUSHION
TEMPORARY

EXIT
E5-1
60" X 48"

STA 224+00 UW - STA 229+00 UW
TEMPORARY PAVEMENT MARKING
8-INCH (WHITE)

STA 223+78 GU - STA 263+03 UW
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

STA 216+38 UW - STA 319+29 WB
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

MERGING TRAFFIC
BE PREPARED
TO STOP

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

TEMPORARY PAVEMENT MARKING
8-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

EXIT 3
SOUTH
53 35
Onalaska
La Crosse
RIGHT LANE ONLY
MOVING SIGNS TYPE II

304

303

EXIT 4
NORTH
53 157
Onalaska
La Crosse
½ MILE
USE RIGHT LANE

WEST
90
USE LEFT
LANE
MOVING SIGNS TYPE II

SOUTH 53 SOUTH 35
LOW BRIDGES
14'-4" MAX
MOVING SIGNS TYPE II

STA 229+00 UW - STA 259+66 UW
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)
(3' LINE, 9' GAP)

202

4

RIGHT LANE
MUST EXIT
R3-33
78" X 36"

GREAT RIVER STATE TRAIL

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET 119	E

2

Amtrak Station
Great River State Trail
EXIT 3

MOVING SIGNS TYPE II
305

RIGHT LANE MUST EXIT
R3-33
78" X 36"

SPEED LIMIT 55
R2-1
48" X 60"

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)
(3' LINE, 9' GAP)

IH 90 WB

IH 90 EB

50'
(TYP)

LANE CLOSED
R11-2(MOD)
48" X 30"

12TH AVE

90 EAST
USE LEFT LANE

EXIT 4
NORTH
53 157
La Crosse
Onalaska
RIGHT LANE ONLY

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

ROAD WORK AHEAD
W20-1

W4-3
36" X 36"

STH 157 SB TO IH 90 WB

STA 251+50 MU - STA 262+00 MU
REMOVING PAVEMENT MARKING
(EDGELINE, LT)

STA 253+00 MU - STA 262+82 MU
REMOVING PAVEMENT MARKING
(EDGELINE, RT)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)
(3' LINE, 9' GAP)

W5-52L
12" X 36"

STA 259+66 UW - STA 263+60 UW
TEMPORARY PAVEMENT MARKING
8-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

FLEXIBLE TUBULAR MARKER
POSTS 25' SPACING (TYP)

IH 90 WB

LANE CLOSED
R11-2(MOD)
48" X 30"

100'
(TYP)

50'
(TYP)

IH 90 EB

IH 90 EB TO STH 157

1

LANE CLOSED
R11-2(MOD)
48" X 30"

STH 157 SB TO IH 90 EB

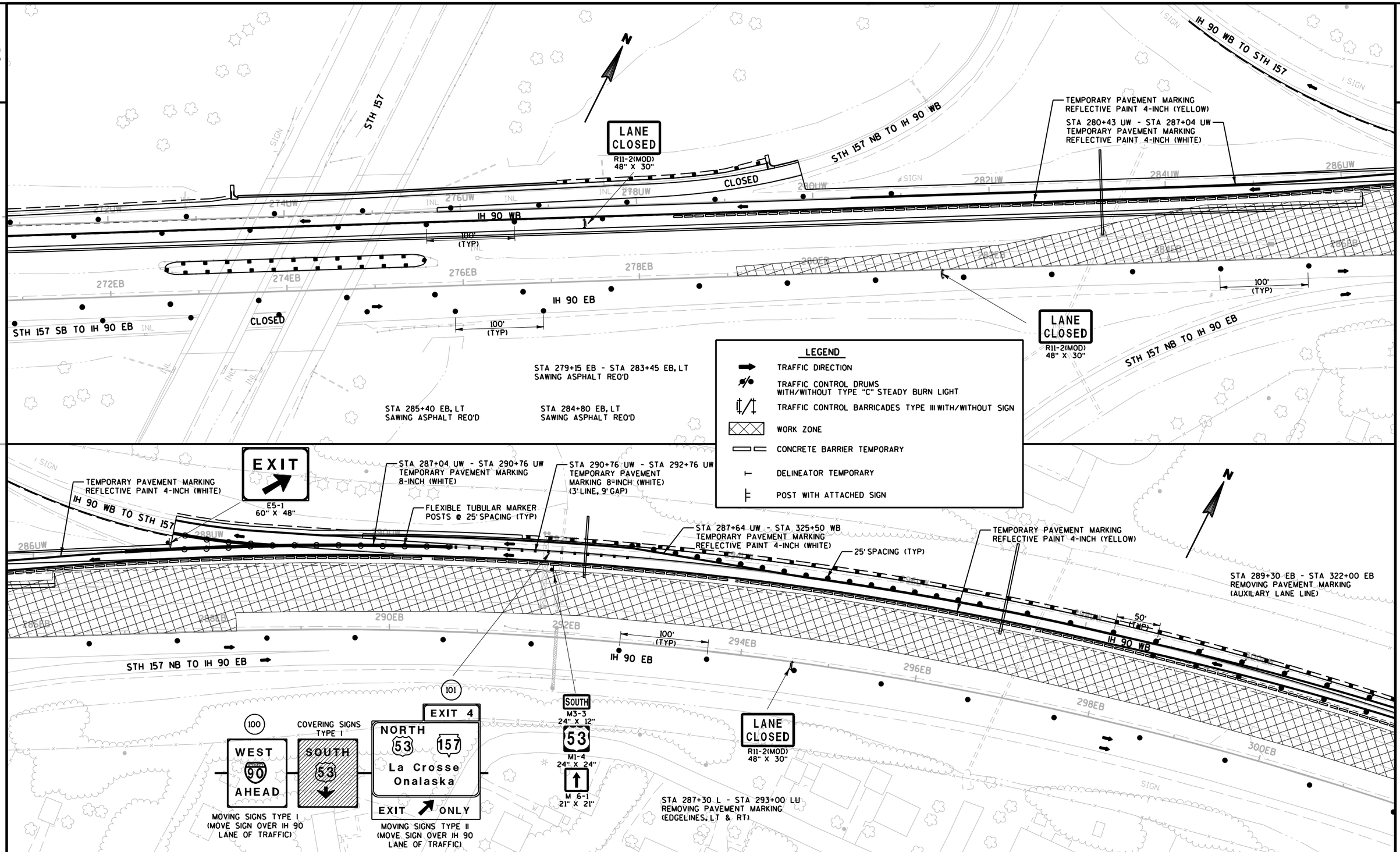
STA 260+10 EB - STA 285+00 EB
REMOVING PAVEMENT MARKING
(CENTERLINE)

STA 258+00 EB - STA 282+00 EB
REMOVING PAVEMENT MARKING
(EDGELINE, LT)

CLOSED

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET 120	E

2



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026210_s3a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

2

EXIT 4
NORTH
53 157
La Crosse
Onalaska
1/4 MILE
RIGHT LANE ONLY

5

COVERING SIGNS TYPE I

IH 90 WB

SPEED LIMIT 55
R2-1
48" X 60"

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)

50' (TYP)

100' (TYP)

100' (TYP)

302EB 304EB 306EB 308EB 310EB 312EB 314EB 316EB

IH 90 EB

I 90

THEATER RD

LANE CLOSED
R11-2(MOD)
48" X 30"

STA 317+15 EB, LT
SAWING ASPHALT REQ'D

N

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

STA 315+00 WB - STA 321+70 WB
REMOVING PAVEMENT MARKING
(OUTSIDE EDGELINE)

STA 315+00 WB - STA 318+50 WB
REMOVING PAVEMENT MARKING
(AUXILARY LANE LINE)

YIELD
R1-2
36" X 31"

STA 316+80 WB, RT
SAWING ASPHALT REQ'D

W5-52L
12" X 36"

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)

100' (TYP)

LANE CLOSED
R11-2(MOD)
48" X 30"

W01-4R

50' (TYP)

50' (TYP)

STH 16 TO IH 90 WB

316WB 318WB 320WB 322WB 324WB 326WB 328WB 330WB

IH 90 WB

CRASH CUSHION TEMPORARY

100' (TYP)

316EB 318EB 320EB 322EB 324EB 326EB 328EB 330EB

IH 90 EB

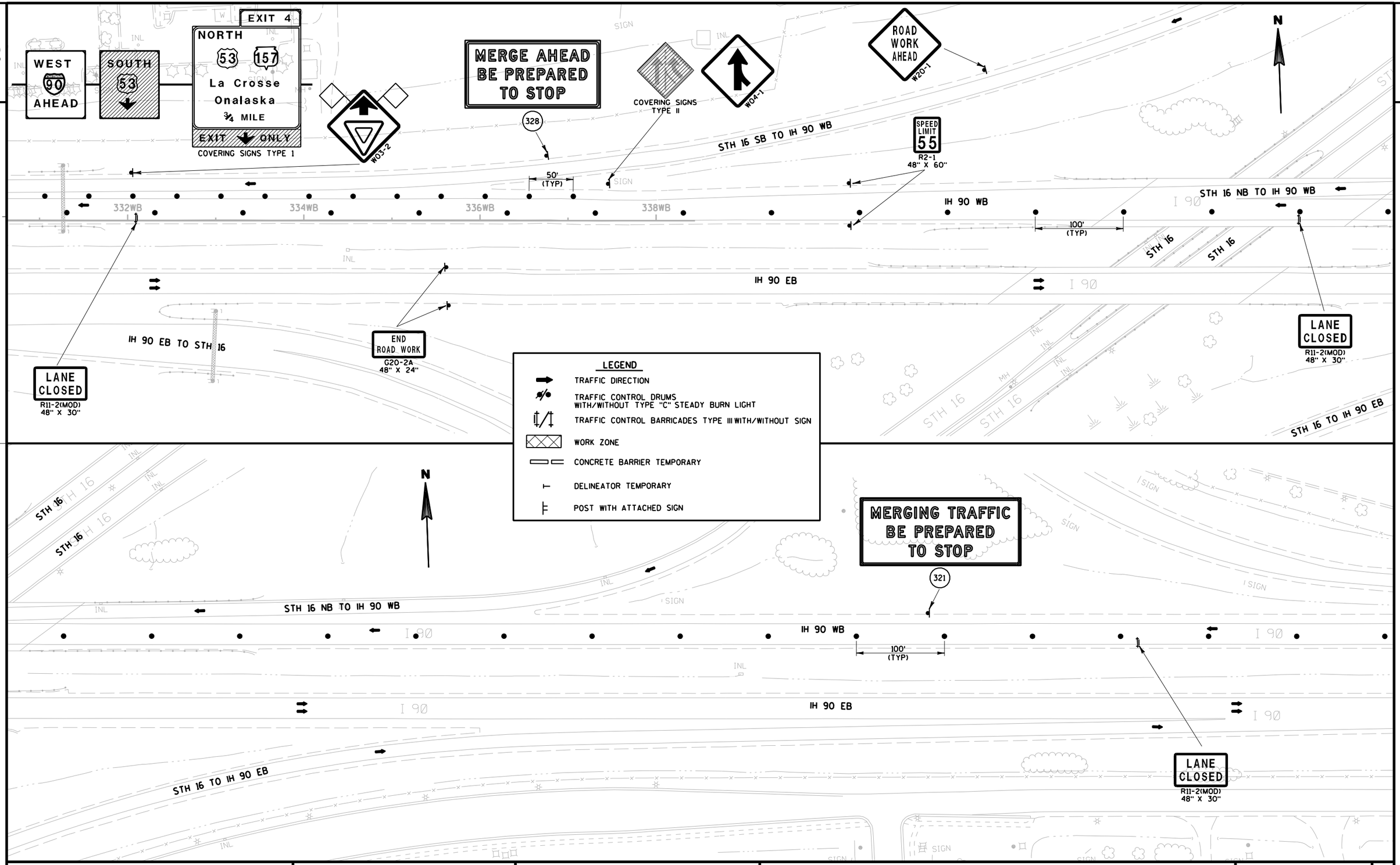
IH 90 EB TO STH 16

STA 321+80 EB, LT
SAWING ASPHALT REQ'D

SEE SDD "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE" AND "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION" FOR ADDITIONAL INFORMATION.

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026211_s3a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026212_s3a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

N

IH 90 WB TO STH 16

IH 90 WB

100'
(TYP)

IH 90 EB

REMOVING PAVEMENT MARKING
(WB LANELINE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

50'
(TYP)

ARROW BOARD

LANE
CLOSED
R11-2(MOD)
48" X 30"

SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL INFORMATION.

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

N

IH 90 WB

50'
(TYP)

IH 90 EB

ARROW BOARD

500'

575'

W04-2R

LEFT LANE
CLOSED
1500 FT
W20-5

LEFT LANE
CLOSED
1/2 MILE
W20-5

SPEED
LIMIT
55
R2-1
48" X 60"

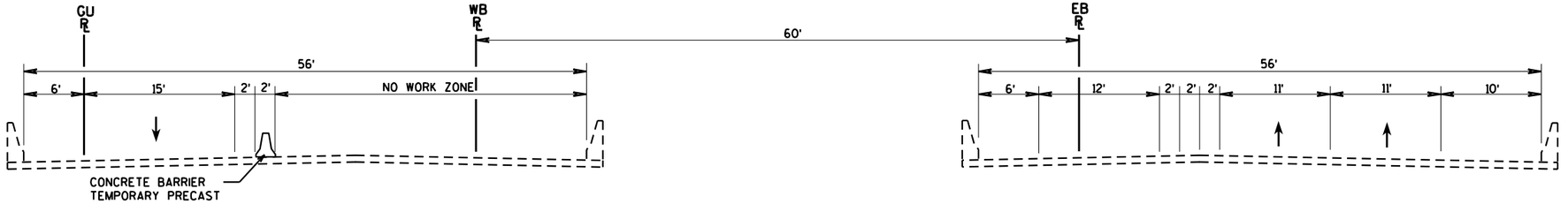
500'

SPEED LIMIT 55
W03-5

ROAD
WORK
1 MILE
W20-1

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3A	SHEET	E

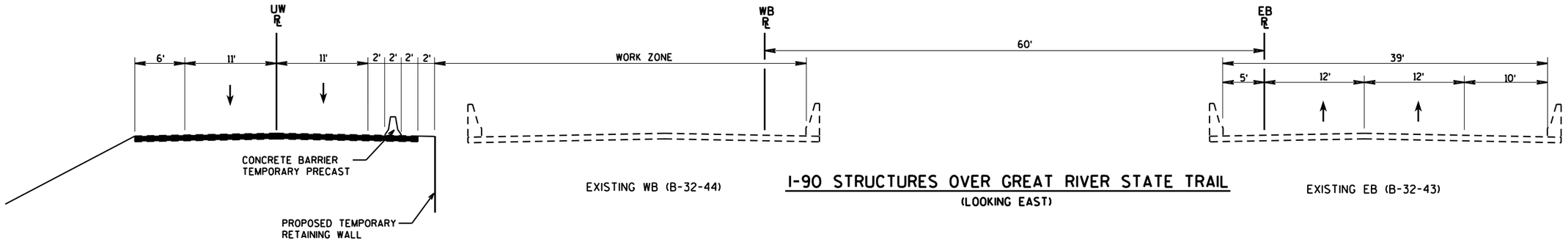
FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026213_s3a.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100



EXISTING WB (B-32-40)

I-90 STRUCTURES OVER RAILROAD/OAK ST
(LOOKING EAST)

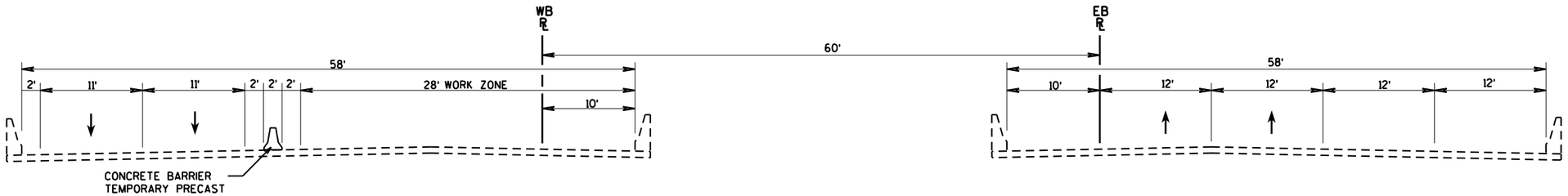
EXISTING EB (B-32-39)



EXISTING WB (B-32-44)

I-90 STRUCTURES OVER GREAT RIVER STATE TRAIL
(LOOKING EAST)

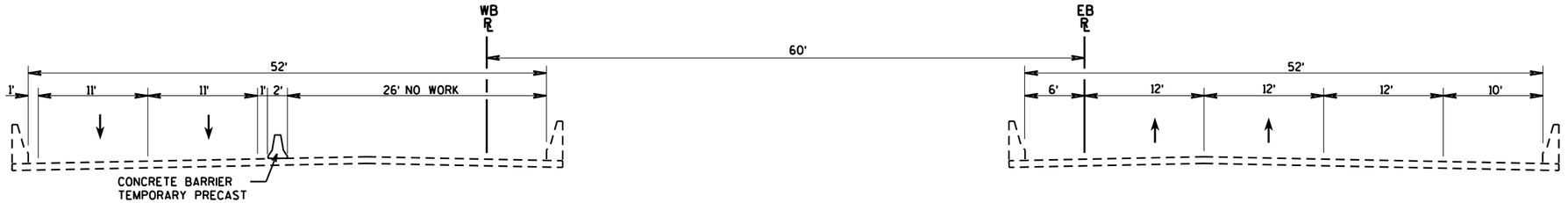
EXISTING EB (B-32-43)



EXISTING WB (B-32-108)

I-90 STRUCTURES OVER 12TH AVE
(LOOKING EAST)

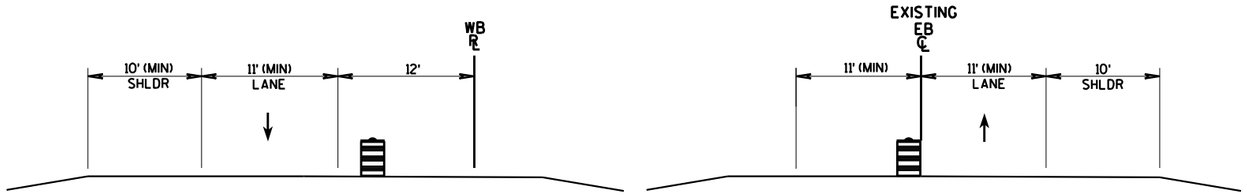
EXISTING EB (B-32-107)



EXISTING WB (B-32-190)

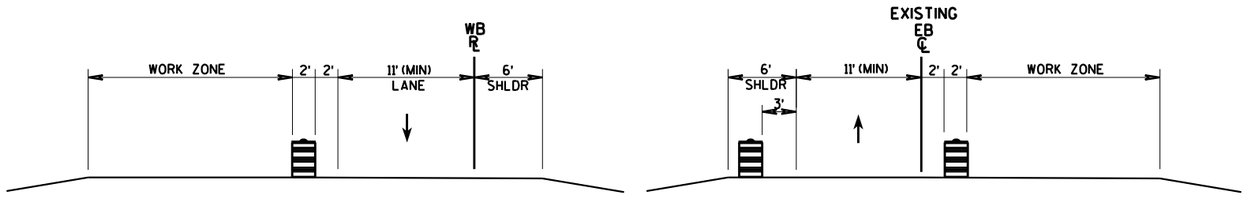
I-90 STRUCTURES OVER THEATER RD
(LOOKING EAST)

EXISTING EB (B-32-189)



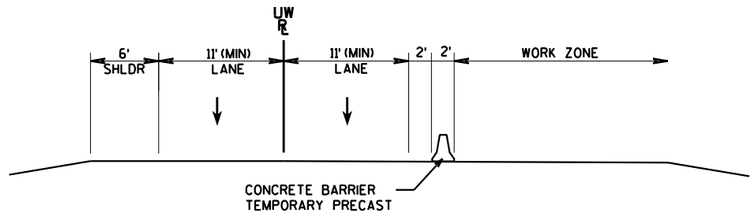
TRAFFIC LAYOUT - STAGE 3B — 1

I-90 WEST OF CTH BW
I-90 BETWEEN CTH BW AND CTH B
I-90 UNDER STH 157



TRAFFIC LAYOUT - STAGE 3B — 2

I-90 UNDER CTH BW



TRAFFIC LAYOUT - STAGE 3B — 3

I-90 EAST OF STH 157

2

WORK:
COMPLETE CONSTRUCTION OF WB LANES EXCEPT FOR OUTSIDE SHOULDER FROM STA 232+00 WB TO STA 236+00 WB.
COMPLETE STRUCTURES B-32-51, B-32-219, AND B-32-108.
COMPLETE CONSTRUCTION OF THE 'AT', 'AU', 'BU', 'JU', 'KU', AND 'KT' RAMPS.

TRAFFIC:
KEEP TRAFFIC TO SINGLE LANE OF WB ON WB LANES AND SINGLE LANE OF EB ON EB LANES WEST OF BLACK RIVER.
SHIFT EB AND WB LANES UNDER CTH BW AS NECESSARY.
KEEP WB LANES ON THE 'UW' ALIGNMENT.
OPEN WB TO 2 LANES OF TRAFFIC OVER THEATER ROAD.
MAINTAIN 2 LANES OF WB AND EB TRAFFIC BETWEEN EAST RAMPS OF ROSE STREET INTERCHANGE AND WEST RAMPS OF STH 157 INTERCHANGE.
MAINTAIN 2 LANES OF EB TRAFFIC EAST OF EAST RAMP OF STH 157 INTERCHANGE.
KEEP REST AREA CLOSED.
KEEP N RAMP AND P RAMP CLOSED TO TRAFFIC.
KEEP CTH BW CLOSED TO TRAFFIC.

SEE SDD "TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL INFORMATION.

SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." & "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE" FOR WORK REQUIRING MORE THAN A SHOULDER CLOSURE.

N

LANE CLOSED
R11-2(MOD)
48" X 30"

IH 90 WB

76WB 78WB 80WB 82WB 84WB 86WB 88WB 90WB

76EB 78EB 80EB 82EB 84EB 86EB 88EB 90EB

IH 90 EB

SIGN

SEE STAGE 3A TRAFFIC CONTROL SHEETS FOR TRAFFIC CONTROL DEVICES AND LAYOUT FOR SEGMENT OF PROJECT FROM BEGINNING OF PROJECT TO FRENCH SLOUGH.

REST AREA
COVERING SIGNS TYPE I

CLOSED
R55-58A
44" X 8"

LANE CLOSED
R11-2(MOD)
48" X 30"

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

NOTE:
IF WB STAGE 3B LANE SHIFT UNDER CTH BW STRUCTURE IS IN PLACE FOR 4 OR MORE CALENDAR DAYS AND NIGHTS, REMOVE ANY LANE LINE PAVEMENT MARKINGS (INCIDENTAL).

N

FRENCH SLOUGH

LANE CLOSED
R11-2(MOD)
48" X 30"

W01-4R

22BW

WEATHER STATION

TEMPORARY PAVEMENT MARKING REFLECTIVE TAPE 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING REFLECTIVE TAPE 4-INCH (YELLOW)

50' (TYP)

TEMPORARY PAVEMENT MARKING REFLECTIVE TAPE 4-INCH (WHITE)

REST AREA RAMPS CLOSED

8:1 TAPER

CRASH CUSHION TEMPORARY

20BW

CTH BW

W5-52R
12" X 36"

92WB 94WB 96WB 98WB 100WB 102WB 104WB 106WB

92EB 94EB 96EB 98EB 100EB 102EB 104EB 106EB

IH 90 WB

IH 90 EB

RAMP CLOSED
R11-2(MOD)
48" X 30"

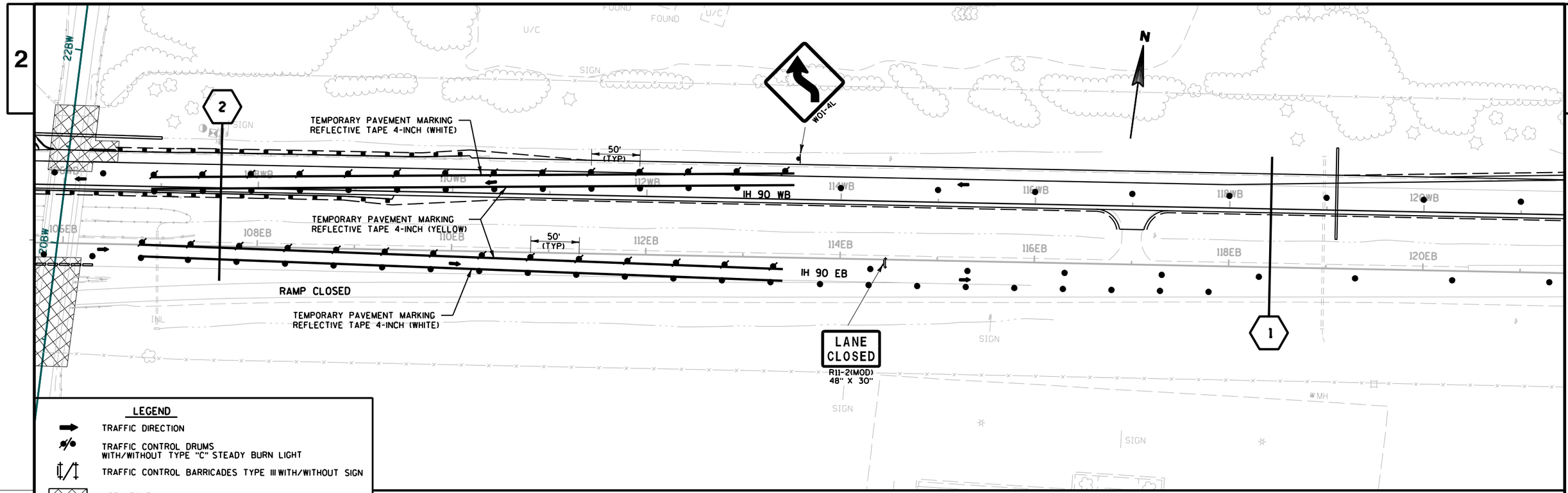
REST AREA
COVERING SIGNS TYPE II

W01-4L

COVERING SIGNS TYPE II

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3B	SHEET 127	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026302_s3b.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100



LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

SEE STAGE 3A TRAFFIC CONTROL SHEETS FOR TRAFFIC CONTROL DEVICES AND LAYOUT FOR SEGMENT OF PROJECT FROM STA 121+00 WB TO 12TH AVENUE.

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3B	SHEET 128	E

2

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

ROAD WORK AHEAD W20-1

ROSE ST SB TO IH 90 WB

IH 90 WB TO ROSE ST SB

ROSE ST SB

ROSE ST NB

ROSE ST NB TO IH 90 WB

ROAD WORK AHEAD W20-1

MERGE AHEAD BE PREPARED TO STOP

IH 90 WB TO ROSE ST NB

ROAD CLOSED R11-2 48" X 30"

W03-2

STA 205+00 HU - STA 206+00 HU
TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)

STA 205+00 HU - STA 206+00 HU
TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)

YIELD R1-2 36" X 31"

ROAD CLOSED R11-2 48" X 30"

ROAD CLOSED R11-2 48" X 30"

ROAD CLOSED R11-2 48" X 30"

W06-3

NEXT XX MILES W057-51 30" X 15"

COORDINATE DISTANCES SHOWN WITH ADJACENT PROJECTS.

FLEXIBLE TUBULAR MARKER POSTS (INSTALLED PREVIOUSLY)

CRASH CUSHION TEMPORARY (INSTALLED PREVIOUSLY)

IH 90 EB TO ROSE ST NB

ROSE ST TO IH 90 EB

COVERING SIGNS TYPE II

W04-3 36" X 36"

IH 90 WB

IH 90 EB

SIGN

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3B	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026307_s3b.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

Amtrak Station
Great River State Trail
EXIT 3

RIGHT LANE MUST EXIT
R3-33
78" X 36"

STA 250+70 EB - STA 260+75 EB
REMOVING PAVEMENT MARKING
(EDGELINE, LT)

STA 250+70 EB - STA 256+20 EB
REMOVING PAVEMENT MARKING
(DOTTED LANE LINE)

IH 90 WB

IH 90 EB

TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

IH 90 EB TO STH 157

25' SPACING (TYP)

312

EXIT 4
NORTH
53
157
Onalaska
La Crosse
RIGHT LANE ONLY

90 EAST
USE LEFT LANE

EXIT
E5-1
60" X 48"

EXIT 4
NORTH
53
157
La Crosse
Onalaska
RIGHT LANE ONLY
COVERING SIGN TYPE I

12TH AVE

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- POST WITH ATTACHED SIGN
- DELINEATOR TEMPORARY

W5-52L
12" X 36"

FLEXIBLE TUBULAR MARKER
POSTS (PREVIOUSLY INSTALLED)

LANE CLOSED
R11-2(MOD)
48" X 30"

STH 157 SB TO IH 90 WB

W4-3
36" X 36"

100'
(TYP)

IH 90 WB

25' SPACING (TYP)

STA 250+68 EB - STA 256+20 EB
TEMPORARY PAVEMENT MARKING
8-INCH (WHITE)

FLEXIBLE TUBULAR MARKER
POSTS (INSTALLED PREVIOUSLY)

LANE CLOSED
R11-2(MOD)
48" X 30"

50'
(TYP)

EXIT
4
COVERING SIGNS TYPE II

IH 90 EB TO STH 157

STA 252+68 EB - STA 286+15 EB
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

100'
(TYP)

CLOSED

STH 157 SB TO IH 90 EB

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3B	SHEET 130	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026309_s3b.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

LANE CLOSED
R11-2(MOD)
48" X 30"

STH 157 NB TO IH 90 WB

CLOSED

212UW 274UW 276UW 278UW 280UW 282UW 284UW 286UW

100' (TYP)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

272EB 274EB 276EB 278EB 280EB 282EB 284EB 286EB

IH 90 EB

50' (TYP)

STH 157 SB TO IH 90 EB

CLOSED

100' (TYP)

ROAD CLOSED
R11-2
48" X 30"

STH 157 NB TO IH 90 EB

50' (TYP)

W04-3
36" X 36"

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

EXIT
E5-1
60" X 48"

IH 90 WB TO STH 157

FLEXIBLE TUBULAR MARKER
POSTS (INSTALLED PREVIOUSLY)

286UW 288UW 290UW

3

STA 292+82 UW - STA 313+90 UW
TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)
(3' LINE, 9' GAP)

STA 292+78 UW - STA 304+38 WB
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

STA 298+32 UW - STA 319+84 UW
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

N

286EB 288EB 290EB 292EB 294EB 296EB 298EB 300EB

STH 157 NB TO IH 90 EB

IH 90 EB

IH 90 WB

COVERING SIGNS TYPE I

WEST 90 AHEAD

SOUTH 53 AHEAD 313

EXIT 4
NORTH 53 157 La Crosse Onalaska
EXIT ONLY

STA 298+00 WB - STA 319+50 WB
REMOVING PAVEMENT MARKING
(MEDIAN EDGELINE)

STA 292+50 WB - STA 304+00 WB
REMOVING PAVEMENT MARKING
(OUTSIDE EDGELINE)

STA 314+00 WB - STA 325+50 WB
REMOVING PAVEMENT MARKING
(OUTSIDE EDGELINE)

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3B	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026310_s3b.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

EXIT 4
NORTH
53 157
La Crosse
Onalaska
1/4 MILE
EXIT ONLY

MOVING SIGNS TYPE I
(MOVE SIGN OVER IH 90
RAMP LANE OF TRAFFIC)

103

TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)
(3' LINE, 9' GAP)

STA 313+90 UW - STA 319+84 UW
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)
(12.5' LINE, 37.5' GAP)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

STA 315+38 UW - STA 319+42 UW
TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

IH 90 WB

IH 90 EB

I 90

THEATER RD

N

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

R1-2
36" X 31"

W05-2

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)
(12.5' LINE, 37.5' GAP)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REFLECTIVE PAINT 4-INCH (WHITE)

CRASH CUSHION TEMPORARY
(INSTALLED PREVIOUSLY)

W5-52L
12" X 36"

STH 16 TO IH 90 WB

IH 90 WB

IH 90 EB

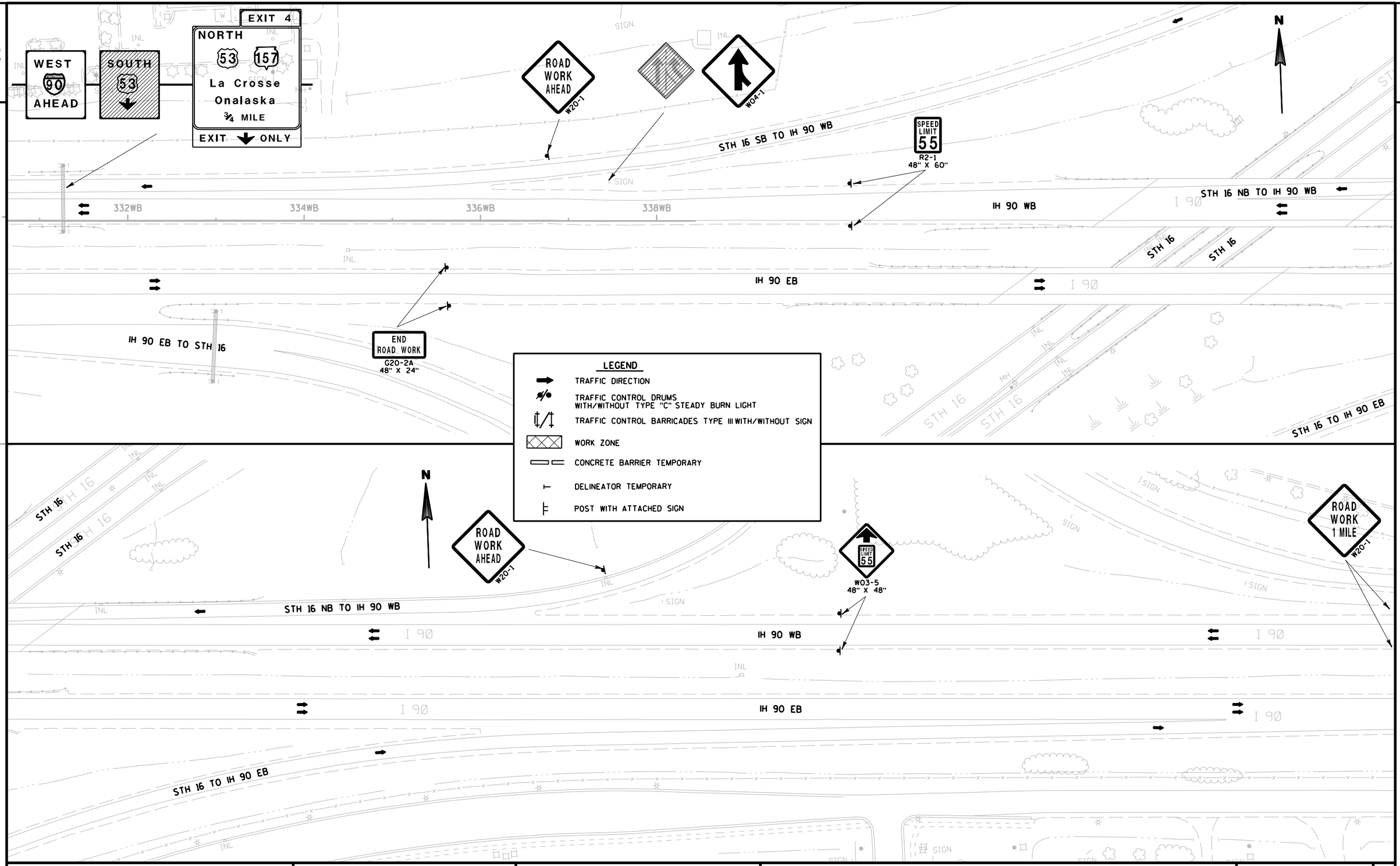
IH 90 EB TO STH 16

318UW 318WB 320WB 322WB 324WB 326WB 328WB 330WB

SEE SDD "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE" AND "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION" FOR ADDITIONAL INFORMATION.

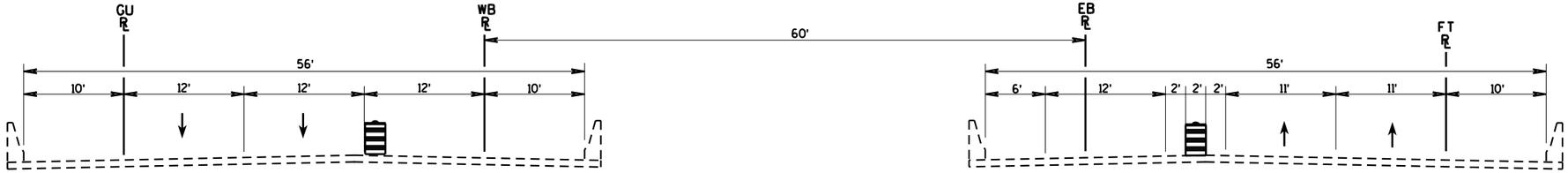
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3B	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026311_s3b.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 3B	SHEET	E

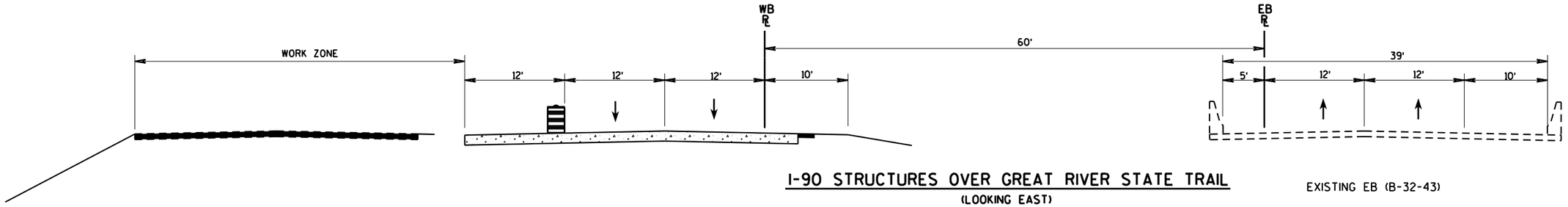
FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026312_s3b.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100



EXISTING WB (B-32-40)

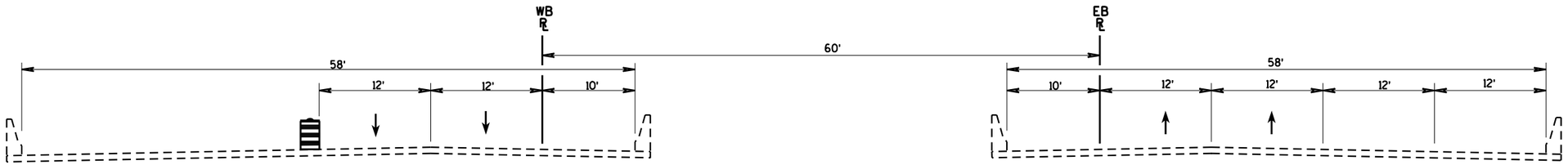
I-90 STRUCTURES OVER RAILROAD/OAK ST
(LOOKING EAST)

EXISTING EB (B-32-39)



I-90 STRUCTURES OVER GREAT RIVER STATE TRAIL
(LOOKING EAST)

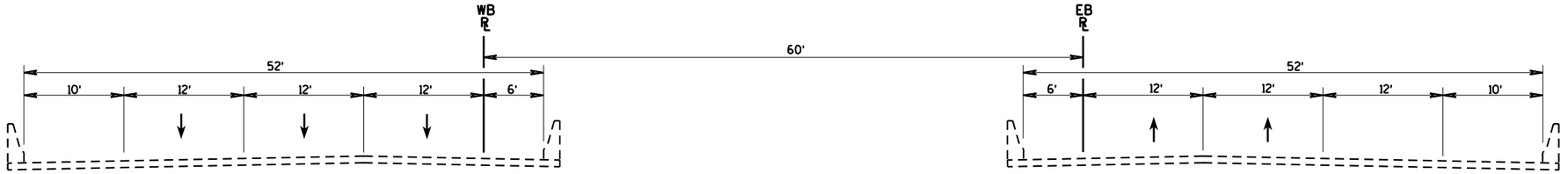
EXISTING EB (B-32-43)



EXISTING WB (B-32-108)

I-90 STRUCTURES OVER 12TH AVE
(LOOKING EAST)

EXISTING EB (B-32-107)



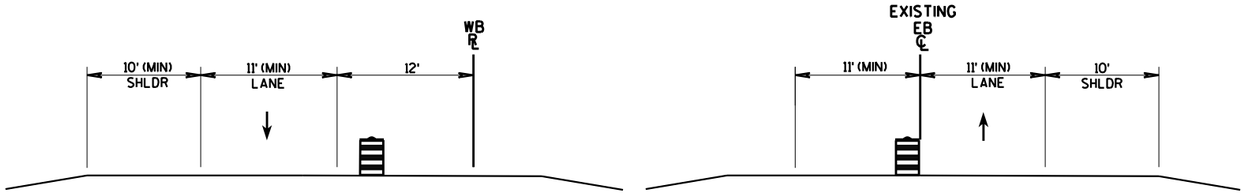
EXISTING WB (B-32-190)

I-90 STRUCTURES OVER THEATER RD
(LOOKING EAST)

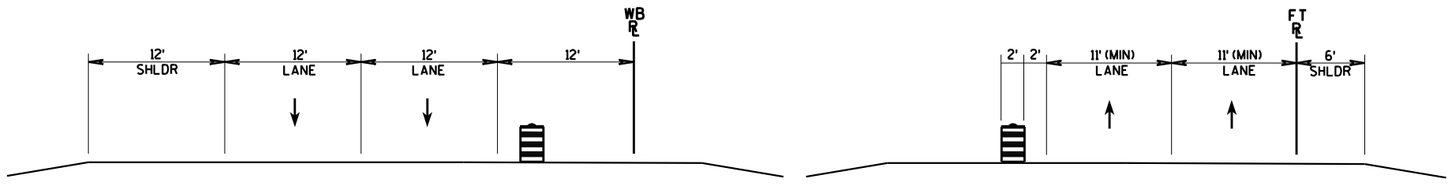
EXISTING EB (B-32-189)

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL TYPICAL LAYOUT - STAGE 4A (STRUCTURES)	SHEET 134	E

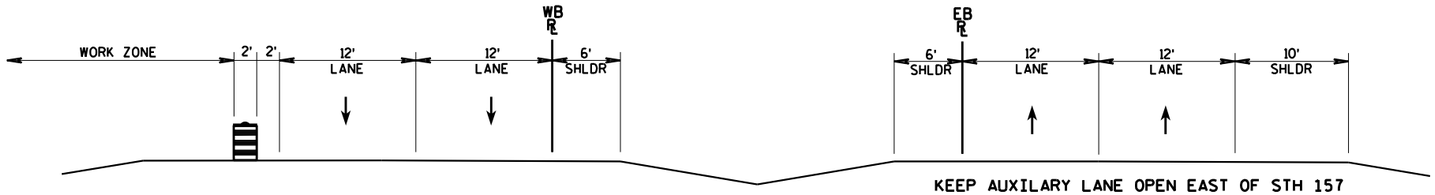
2



TRAFFIC LAYOUT - STAGE 4
I-90 WEST OF ROSE STREET
1



TRAFFIC LAYOUT - STAGE 4
I-90 EAST OF RAILROAD
2



KEEP AUXILARY LANE OPEN EAST OF STH 157

TRAFFIC LAYOUT - STAGE 4
I-90 TRAIL AREA
3

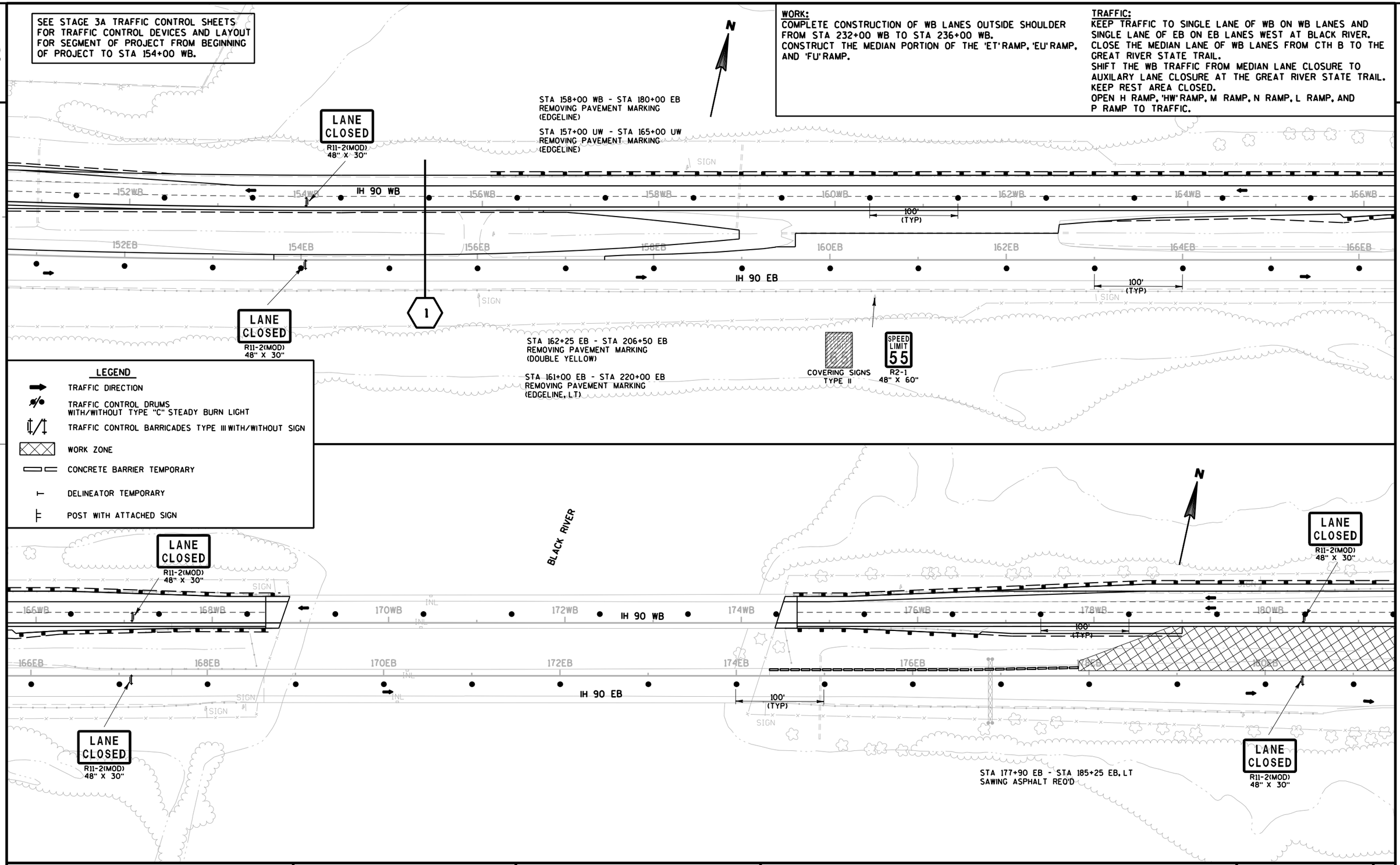
PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL TYPICAL LAYOUT - STAGE 4A (ROADWAY)	SHEET 135	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_025015_tc.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:200

SEE STAGE 3A TRAFFIC CONTROL SHEETS FOR TRAFFIC CONTROL DEVICES AND LAYOUT FOR SEGMENT OF PROJECT FROM BEGINNING OF PROJECT TO STA 154+00 WB.

WORK:
COMPLETE CONSTRUCTION OF WB LANES OUTSIDE SHOULDER FROM STA 232+00 WB TO STA 236+00 WB.
CONSTRUCT THE MEDIAN PORTION OF THE 'ET' RAMP, 'EU' RAMP, AND 'FU' RAMP.

TRAFFIC:
KEEP TRAFFIC TO SINGLE LANE OF WB ON WB LANES AND SINGLE LANE OF EB ON EB LANES WEST AT BLACK RIVER.
CLOSE THE MEDIAN LANE OF WB LANES FROM CTH B TO THE GREAT RIVER STATE TRAIL.
SHIFT THE WB TRAFFIC FROM MEDIAN LANE CLOSURE TO AUXILARY LANE CLOSURE AT THE GREAT RIVER STATE TRAIL.
KEEP REST AREA CLOSED.
OPEN H RAMP, 'HW' RAMP, M RAMP, N RAMP, L RAMP, AND P RAMP TO TRAFFIC.



PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 4A	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026405_s4.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

2

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

N

MERGE AHEAD
BE PREPARED
TO STOP

MOVING SIGN TYPE II

324

W03-2

STA 188+00 H - STA 197+50 H
REMOVING PAVEMENT MARKING
(EDGELINES)

YIELD

R1-2
36" X 31"

LANE
CLOSED

R11-2(MOD)
48" X 30"

ROSE ST SB TO IH 90 WB

182WB
184WB
186WB
188WB
190WB
192WB
194WB
196WB

IH 90 WB

100'
(TYP)

182EB
184EB
186EB
188EB
190EB
192EB
194EB
196EB

IH 90 EB

100'
(TYP)

SIGN

LANE
CLOSED

R11-2(MOD)
48" X 30"

ROSE ST SB

ROSE ST NB

IH 90 EB TO ROSE ST NB

IH 90 EB TO ROSE ST SB

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 4A	SHEET 137	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026406_s4.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

N

ROAD WORK AHEAD W20-1

ROSE ST SB TO IH 90 WB

IH 90 WB TO ROSE ST SB

ROSE ST SB

ROSE ST NB

ROSE ST NB TO IH 90 WB

IH 90 WB TO ROSE ST NB

MERGE AHEAD BE PREPARED TO STOP

STA 207+10 HW - STA 207+65 HW, RT
SAWING ASPHALT REO'D

W03-2

YIELD R1-2 36" X 31"

PLACE FLEXIBLE TUBULAR MARKERS TO REMAIN SEE PAVEMENT MARKING

STA 204+75 WB - STA 205+50 WB
REMOVING PAVEMENT MARKING
(EDGELINES HW RAMP)

LANE CLOSED R11-2(MOD) 48" X 30"

IH 90 WB

100' (TYP)

196WB 198WB 200WB 202WB 204WB 206WB 208WB 210WB

196EB 198EB 200EB 202EB 204EB 206EB 208EB 210EB

IH 90 EB

SIGN

LANE CLOSED R11-2(MOD) 48" X 30"

STA 204+00 EB - STA 227+50 UW
REMOVING PAVEMENT MARKING
(EDGELINE & CHANNELIZING)

STA 206+75 EB - STA 230+00 UW
REMOVING PAVEMENT MARKING
(EDGELINE)

STA 199+10 EB - STA 201+50 EB, LT
SAWING ASPHALT REO'D

STA 201+90 EB - STA 204+10 EB, LT
SAWING ASPHALT REO'D

IH 90 EB TO ROSE ST NB

ROSE ST TO IH 90 EB

ROAD WORK AHEAD W20-1

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 4A	SHEET 138	E

2

EXIT

E5-1
60" X 48"

STA 212+00 GU - STA 225+00 GU
REMOVING PAVEMENT MARKING
(BOTH EDGELINE)

MERGING TRAFFIC
BE PREPARED
TO STOP

MOVING SIGNS TYPE II

315

LANE
CLOSED

R11-2(MOD)
48" X 30"

STA 224+50 WB - STA 231+00 WB
TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)
(12.5' LINE, 37.5' GAP)

STA 224+50 WB - STA 231+00 WB
TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)

STA 224+50 WB - STA 231+00 WB
TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)

IH 90 WB TO ROSE ST

IH 90 WB

IH 90 EB

100'
(TYP)

50'
(TYP)

BURLINGTON NORTHERN

BNSF RR

OAK ST

2

LANE
CLOSED

R11-2(MOD)
48" X 30"

STA 218+00 EB - STA 219+83 EB, LT
SAWING ASPHALT REQ'D

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

3

LANE
CLOSED

R11-2(MOD)
48" X 30"

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)
(12.5' LINE, 37.5' GAP)

GREAT RIVER STATE TRAIL

STA 236+00 WB - STA 319+00 WB
REMOVING PAVEMENT MARKING
(EDGELINE)

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 4A	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026408_s4.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

2

2

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

SPEED LIMIT 55
R2-1
48" X 60"

STA 244+00 UW - STA 259+60 UW
REMOVING PAVEMENT MARKING
(SKIPS)

STA 246+00 UW - STA 263+00 UW
REMOVING PAVEMENT MARKING
(EDGELINE, LT)

EXIT 3
SOUTH 53 35
La Crosse
Onalaska
¾ MILE
EXIT ONLY

COVERING SIGNS TYPE I

100' (TYP)

50' (TYP)

242WB 244WB 246WB 248WB 250WB IH 90 WB 252WB 254WB 256WB

242EB 244EB 246EB 248EB 250EB 252EB 254EB 256EB IH 90 EB

12TH AVE

WB IS IN FINAL CONDITION FROM STA 262+00 WB TO THE END OF PROJECT.

W03-2

STH 157 SB TO IH 90 WB

YIELD
R1-2
36" X 31"

STA 259+37 WB - STA 263+37 WB
REMOVING PAVEMENT MARKING
(CHANNELIZING)

SPEED LIMIT 55
R2-1
48" X 60"

W03-5
48" X 48"

ROAD WORK 1 MILE
W20-1

256WB 258WB 260WB 262WB 264WB IH 90 WB 266WB 268WB 270WB

256EB 258EB 260EB 262EB 264EB IH 90 EB 266EB 268EB 270EB

STH 157 SB TO IH 90 EB

IH 90 EB TO STH 157

STA 287+40 WB - STA 319+00 WB
REMOVING PAVEMENT MARKING
(EDGELINE, LT)

END ROAD WORK
G20-2A
48" X 24"

STA 280+20 WB - STA 286+80 WB
REMOVING PAVEMENT MARKING
(EDGELINE, LT)

STA 286+80 WB - STA 290+50 WB
REMOVING PAVEMENT MARKING
(CHANNELIZING)

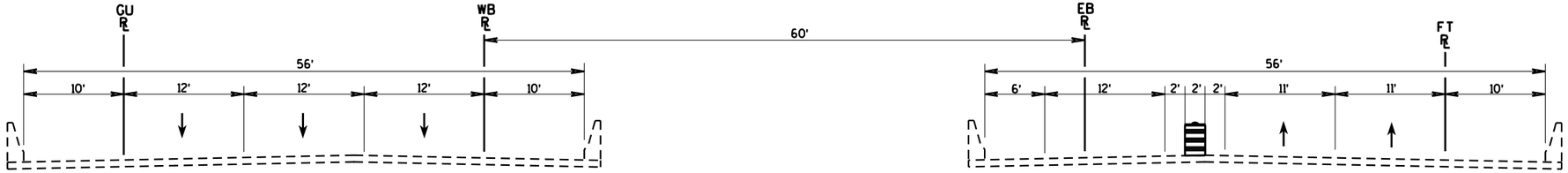
STA 290+50 WB - STA 313+50 WB
REMOVING PAVEMENT MARKING
(SKIPS)

STA 313+50 WB - STA 319+40 WB
REMOVING PAVEMENT MARKING
(DASHES)

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 4A	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026409_s4.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



EXISTING WB (B-32-40)

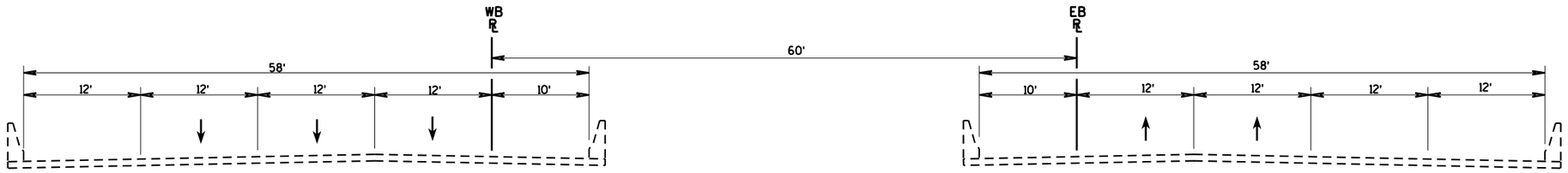
I-90 STRUCTURES OVER RAILROAD/OAK ST
(LOOKING EAST)

EXISTING EB (B-32-39)



I-90 STRUCTURES OVER GREAT RIVER STATE TRAIL
(LOOKING EAST)

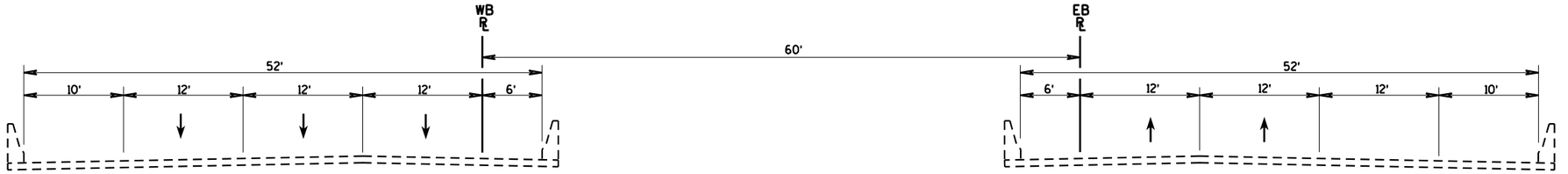
EXISTING EB (B-32-43)



EXISTING WB (B-32-108)

I-90 STRUCTURES OVER 12TH AVE
(LOOKING EAST)

EXISTING EB (B-32-107)



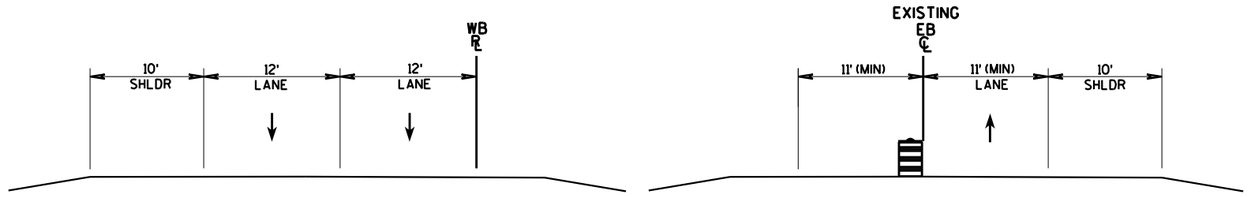
EXISTING WB (B-32-190)

I-90 STRUCTURES OVER THEATER RD
(LOOKING EAST)

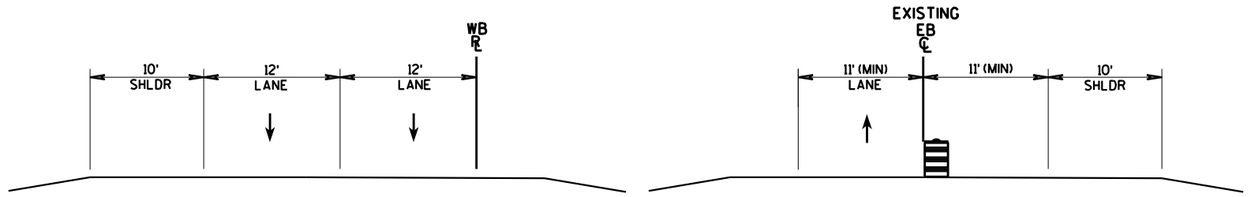
EXISTING EB (B-32-189)

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL TYPICAL LAYOUT - STAGE 4B (STRUCTURES)	SHEET 141	E

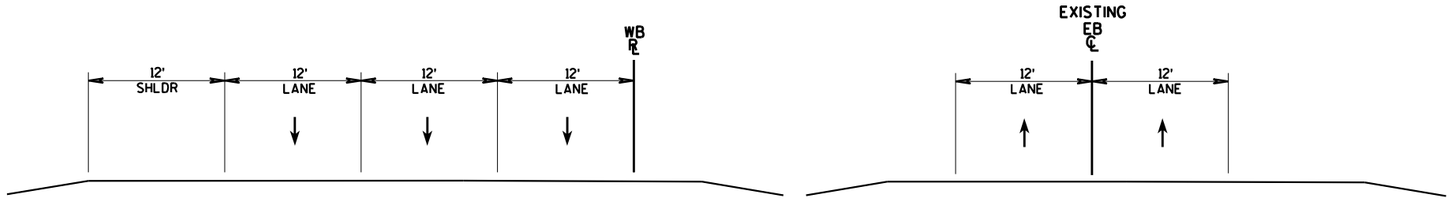
2



TRAFFIC LAYOUT - STAGE 4B
I-90 WEST OF BLACK RIVER
1



TRAFFIC LAYOUT - STAGE 4B
I-90 WEST OF ROSE STREET
2



TRAFFIC LAYOUT - STAGE 4B
I-90 EAST OF RAILROAD
NOT SHOWN ON STAGING PLAN SHEETS
3

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL TYPICAL LAYOUT - STAGE 4B (ROADWAY)	SHEET 142	E

SEE STAGE 3A TRAFFIC CONTROL SHEETS FOR TRAFFIC CONTROL DEVICES AND LAYOUT OF EB LANES FOR SEGMENT OF PROJECT FROM BEGINNING OF PROJECT TO STA 154+00 EB.

WB IS IN FINAL CONDITION FROM BEGINNING OF PROJECT TO STA 154+00 WB. COORDINATE REMOVAL OF TRAFFIC CONTROL DEVICES WITH THE ADJACENT DRESBACH PROJECT.

WORK:
COMPLETE CONSTRUCTION OF 'ET' RAMP, AND 'FU' RAMP.

TRAFFIC:
KEEP TRAFFIC TO SINGLE LANE OF EB ON EB LANES WEST AT BLACK RIVER.
SHIFT TO A CLOSURE OF THE OUTSIDE LANE OF EB LANES FROM BLACK RIVER TO RAILROAD.
KEEP REST AREA CLOSED.
WB LANES ARE IN FINAL TRAFFIC CONDITION.

2

2

N

IH 90 WB

152WB 154WB 156WB 158WB 160WB 162WB 164WB 166WB

152EB 154EB 156EB 158EB 160EB 162EB 164EB 166EB

IH 90 EB

100' (TYP)

50' (TYP)

SIGN

LANE CLOSED
R11-2(MOD)
48" X 30"

1

W01-4L

COVERING SIGNS TYPE II

SPEED LIMIT 55
R2-1
48" X 60"

STA 161+50 EB - STA 168+00 EB
TEMPORARY PAVEMENT MARKING
4-INCH REFLECTIVE PAINT (WHITE)

STA 161+50 EB - STA 168+00 EB
TEMPORARY PAVEMENT MARKING
4-INCH REFLECTIVE PAINT (YELLOW)

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

BLACK RIVER

N

IH 90 WB

166WB 168WB 170WB 172WB 174WB 176WB 178WB 180WB

166EB 168EB 170EB 172EB 174EB 176EB 178EB 180EB

IH 90 EB

100' (TYP)

50' (TYP)

SIGN

TEMPORARY PAVEMENT MARKING
4-INCH REFLECTIVE PAINT (YELLOW)

TEMPORARY PAVEMENT MARKING
4-INCH REFLECTIVE PAINT (WHITE)

LANE CLOSED
R11-2(MOD)
48" X 30"

2

25' SPACING (TYP)

STA 176+20 EB - STA 182+00 EB
TEMPORARY PAVEMENT MARKING
4-INCH REFLECTIVE PAINT (WHITE)

STA 180+20 EB - STA 182+20 EB
TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 4B	SHEET 143	E

2

2

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

N

IH 90 WB

182WB 184WB 186WB 188WB 190WB 192WB 194WB 196WB

182EB 184EB 186EB 188EB 190EB 192EB 194EB 196EB

ROSE ST SB TO IH 90 WB

IH 90 EB

100' (TYP)

25' SPACING (TYP)

STA 189+00 EB - STA 195+00 EB
TEMPORARY PAVEMENT MARKING
4-INCH REFLECTIVE PAINT (WHITE)

EXIT
E5-1
60" X 48"

IH 90 EB TO ROSE ST SB

25' SPACING (TYP)

TEMPORARY PAVEMENT MARKING 8-INCH (WHITE)

TEMPORARY PAVEMENT MARKING 4-INCH REFLECTIVE PAINT (WHITE)

50' (TYP)

ROSE ST SB

ROSE ST NB

IH 90 EB TO ROSE ST NB

STA 193+00 EB - STA 195+00 EB
TEMPORARY PAVEMENT MARKING 8-INCH (WHITE)

EXIT
E5-1
60" X 48"

25' SPACING (TYP)

LANE CLOSED
R11-2(MOD)
48" X 30"

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 4B	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_026506_s4b.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

2

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- DELINEATOR TEMPORARY
- POST WITH ATTACHED SIGN

ROSE ST NB TO IH 90 WB

ROSE ST SB

ROSE ST NB

IH 90 WB TO ROSE ST

IH 90 WB

IH 90 EB

IH 90 EB TO ROSE ST NB

ROSE ST TO IH 90 EB

196WB 198WB 200WB 202WB 204WB 206WB 208WB 210WB

196EB 198EB 200EB 202EB 204EB 206EB 208EB 210EB

100' (TYP)

50' (TYP)

50' (TYP)

W01-4R

W04-3R
30" X 30"

STA 204+40 EB - STA 210+00 EB
TEMPORARY PAVEMENT
MARKING 8-INCH (WHITE)

STA 205+00 EB - STA 210+00 EB
TEMPORARY PAVEMENT MARKING
4-INCH REFLECTIVE PAINT (YELLOW)

STA 206+60 EB - STA 210+00 EB
TEMPORARY PAVEMENT MARKING
4-INCH REFLECTIVE PAINT (WHITE)

STA 206+62 EB - STA 210+00 EB
REMOVING PAVEMENT MARKING
(MEDIAN EDGELINE)

STA 199+10 EB - STA 201+50 EB, LT
SAWING ASPHALT (RAMP SHOULDER)

STA 201+90 EB - STA 204+10 EB, LT
SAWING ASPHALT (EB OUTSIDE SHOULDER)

SEE STAGE 4A TRAFFIC CONTROL SHEETS FOR TRAFFIC CONTROL DEVICES AND LAYOUT FOR EB LANES FOR SEGMENT OF PROJECT FROM STA 211+00 EB - END OF PROJECT.

WB IS IN FINAL CONDITION FROM STA 211+00 WB TO END OF PROJECT.

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL - STAGE 4B	SHEET 145	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\gg_0677_026507_s4b.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

N

IH 90 WB

IH 90 EB

STH 16

CTH PH

DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
WEST
MB3-4
24" X 12"
90
M1-1
24" X 24"
M05-1L
21" X 21"

E MAIN ST

DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
WEST
MB3-4
24" X 12"
SOUTH
M3-3
24" X 12"
90
M1-1
24" X 24"
53
M1-4
24" X 24"
M06-1
21" X 21"

DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
WEST
MB3-4
24" X 12"
SOUTH
M3-3
24" X 12"
90
M1-1
24" X 24"
53
M1-4
24" X 24"
M05-1L
21" X 21"

DETOUR
M04-8
36" X 18"
TO
M04-5
36" X 18"
WEST
MB3-4
36" X 18"
SOUTH
M3-3
36" X 18"
90
M1-1
36" X 36"
53
M1-4
36" X 36"
M06-2
30" X 30"

DETOUR
M04-8
36" X 18"
TO
M04-5
36" X 18"
DETOUR
M04-8
36" X 18"
WEST
MB3-4
36" X 18"
SOUTH
M3-3
36" X 18"
M05-2R
30" X 30"

RAMP CLOSED

DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
DETOUR
M04-8
24" X 12"
WEST
MB3-4
24" X 12"
SOUTH
M3-3
24" X 12"
90
M1-1
24" X 24"
53
M1-4
24" X 24"
M06-1
21" X 21"

TO
M04-5
24" X 12"
WEST
MB3-4
24" X 12"
SOUTH
M3-3
24" X 12"
90
M1-1
24" X 24"
53
M1-4
24" X 24"

DETOUR AHEAD
W20-2

DETOUR ROUTE

USH 53/STH 157

STH 157

OAK FOREST DR

CTH SS

MAIN ST

DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
WEST
MB3-4
24" X 12"
90
M1-1
24" X 24"
M06-1
21" X 21"

DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
WEST
MB3-4
24" X 12"
90
M1-1
24" X 24"
M06-1
21" X 21"

END DETOUR
M4-8A
24" X 18"

IH 90 WB/USH 53

IH 90 EB/USH 53

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	P RAMP DETOUR (STAGES 1/2/3A/3B)	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\da_0677_027001_dt.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:1600

WISDOT/CADDS SHEET 42

2

2

STH 35/ ROSE STREET

STH 157/USH 53

N

RAMP CLOSED

IH 90 WB

IH 90 EB

IH 90 WB/USH 53

IH 90 EB/USH 53

USH 53/STH 35/
ROSE STREET

SEE P RAMP DETOUR
FOR ADDITIONAL SIGNS

STH 157

DETOUR AHEAD W20-2

WEST MB3-4 24" X 12"
INTERSTATE 90 M1-1 24" X 24"

DETOUR M04-8 24" X 12"
TO M04-5 24" X 12"
WEST MB3-4 24" X 12"
INTERSTATE 90 M1-1 24" X 24"
M05-2R 21" X 21"

DETOUR M04-8 24" X 12"
TO M04-5 24" X 12"
WEST MB3-4 24" X 12"
INTERSTATE 90 M1-1 24" X 24"
M06-2 21" X 21"

DETOUR M04-8 36" X 18"
TO M04-5 36" X 18"
WEST MB3-4 36" X 18"
INTERSTATE 90 M1-1 36" X 36"
M06-1 30" X 30"

DETOUR M04-8 36" X 18"
TO M04-5 36" X 18"
WEST MB3-4 36" X 18"
INTERSTATE 90 M1-1 36" X 36"
M05-2R 30" X 30"

DETOUR M04-8 36" X 18"
TO M04-5 36" X 18"
WEST MB3-4 36" X 18"
INTERSTATE 90 M1-1 36" X 36"
M06-2 30" X 30"

DETOUR M04-8 24" X 12"
TO M04-5 24" X 12"
WEST MB3-4 24" X 12"
INTERSTATE 90 M1-1 24" X 24"
M05-1L 21" X 21"

DETOUR M04-8 24" X 12"
TO M04-5 24" X 12"
WEST MB3-4 24" X 12"
INTERSTATE 90 M1-1 24" X 24"
M06-1 21" X 21"

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	'HU' RAMP DETOUR (STAGE 3A)	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_027002_dt.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:2400
WISDOT/CADDS SHEET 42

2

N

EAST
M 3-2
24" X 12"

INTERSTATE 90
M1-1
24" X 24"

DETOUR AHEAD
W20-2

USH 53/STH 157

DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
EAST
MB3-2
24" X 12"
INTERSTATE 90
M1-1
24" X 24"
M06-1
21" X 21"

IH 90 WB

IH 90 EB

END DETOUR
M4-8A
24" X 18"

IH 90 WB/USH 53

IH 90 EB/USH 53

RAMP CLOSED

STH 157

DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
EAST
MB3-2
24" X 12"
INTERSTATE 90
M1-1
24" X 24"
M05-1L
21" X 21"

DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
EAST
MB3-2
24" X 12"
INTERSTATE 90
M1-1
24" X 24"
M06-1
21" X 21"

CTH PH

THEATER RD

STH 16

DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
EAST
MB3-2
24" X 12"
INTERSTATE 90
M1-1
24" X 24"
M06-1
21" X 21"

CTH SS

DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
EAST
MB3-2
24" X 12"
INTERSTATE 90
M1-1
24" X 24"
M06-1
21" X 21"

DETOUR ROUTE

DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
EAST
MB3-2
24" X 12"
INTERSTATE 90
M1-1
24" X 24"
M06-1
21" X 21"

STH 16

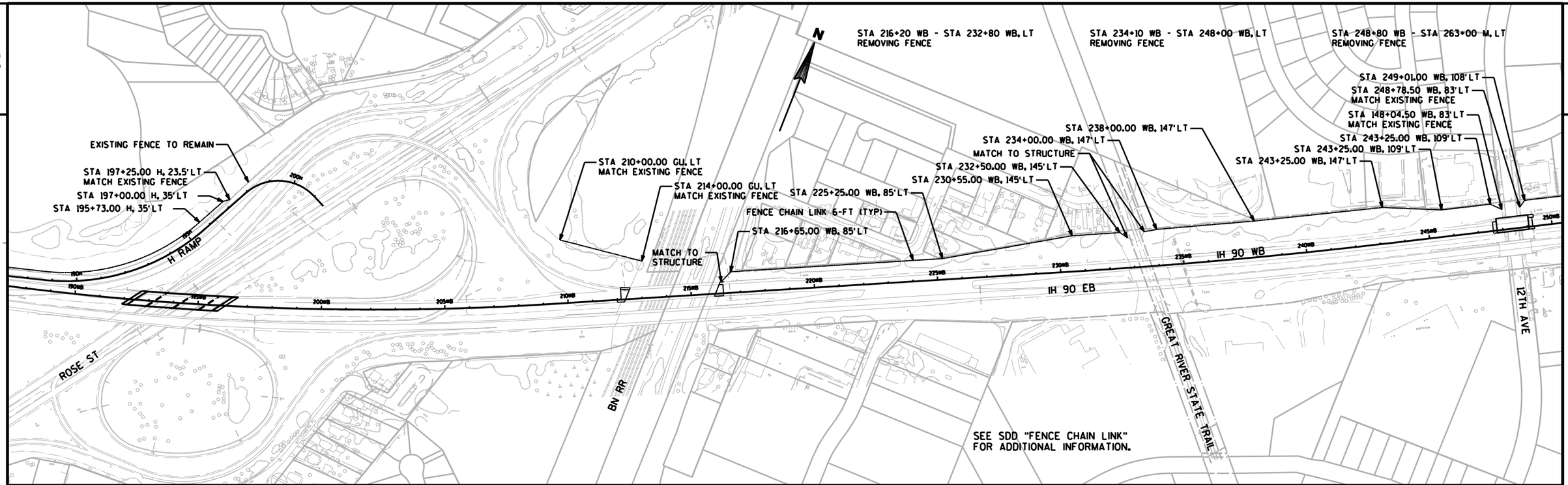
DETOUR
M04-8
24" X 12"
TO
M04-5
24" X 12"
EAST
MB3-2
24" X 12"
INTERSTATE 90
M1-1
24" X 24"
M06-1
21" X 21"

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	STH 157 SB TO IH 90 EB RAMP DETOUR (STAGES 1/2/3A/3B)	SHEET	E

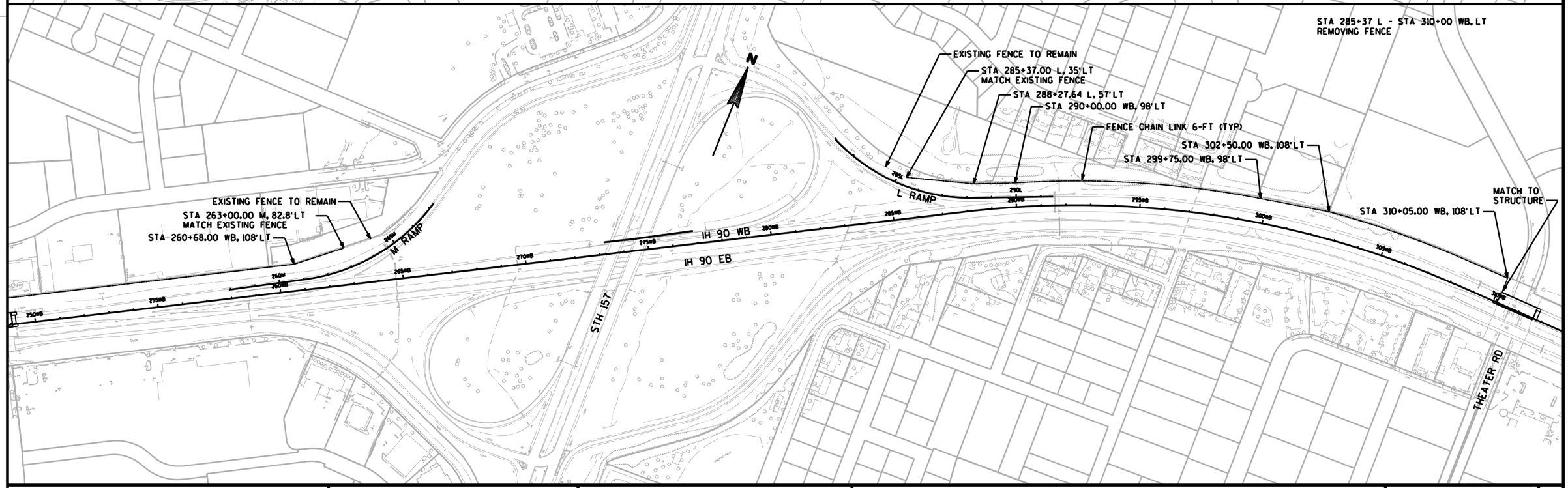
FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_027003_dt.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:2400

WISDOT/CADDS SHEET 42

2



2



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	FENCING DETAIL	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_027102_fn.dgn
PLOT DATE : 7/31/2014
PLOT BY : AYRES-EC
PLOT NAME :
PLOT SCALE : 1:400
WISDOT/CADDS SHEET 42

P.I. DATA
P.I. 18+30.87 EB
Y 148149.14
X 431662.63

CURVE DATA
P.I. 50+00.01 EB
Y 148517.94
X 434810.24
△ = 1°30'00"
D = 0°15'00"
T = 300.02'
L = 600.00'
E = 1.96'
R = 22918.39'
P.C. 47+00.00 EB
P.T. 53+00.00 EB
S.E. NC
L.R. N/A

CURVE DATA
P.I. 59+68.24 EB
Y 148605.40
X 435774.54
△ = 1°30'00"
D = 0°11'00"
T = 409.12'
L = 818.18'
E = 2.68'
R = 31252.33'
P.C. 55+59.12 EB
P.T. 63+77.31 EB
S.E. NC
L.R. N/A

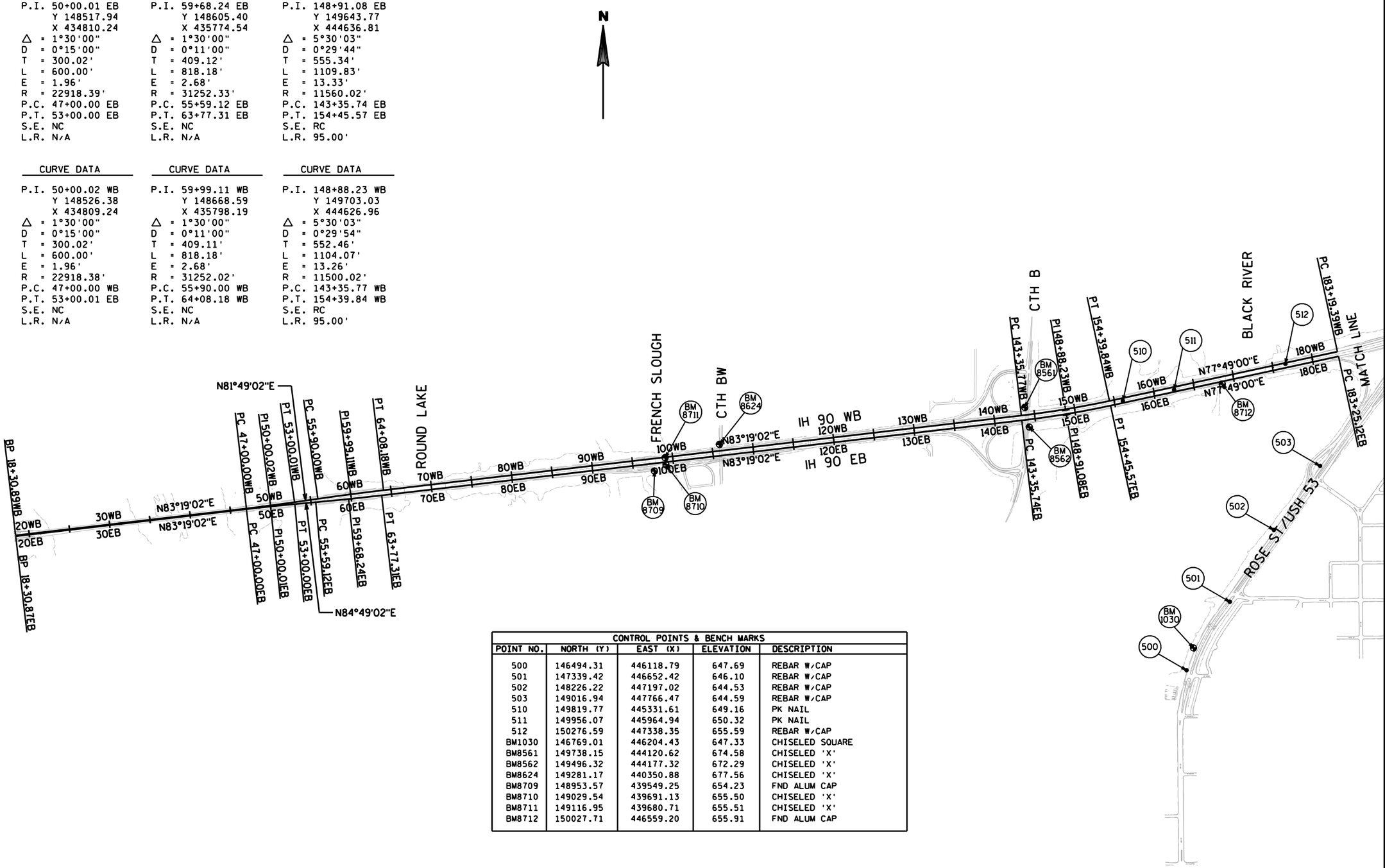
CURVE DATA
P.I. 148+91.08 EB
Y 149643.77
X 444636.81
△ = 5°30'03"
D = 0°29'44"
T = 555.34'
L = 1109.83'
E = 13.33'
R = 11560.02'
P.C. 143+35.74 EB
P.T. 154+45.57 EB
S.E. RC
L.R. 95.00'

P.I. DATA
P.I. 18+30.89 WB
Y 148157.58
X 431661.64

CURVE DATA
P.I. 50+00.02 WB
Y 148526.38
X 434809.24
△ = 1°30'00"
D = 0°15'00"
T = 300.02'
L = 600.00'
E = 1.96'
R = 22918.38'
P.C. 47+00.00 WB
P.T. 53+00.01 EB
S.E. NC
L.R. N/A

CURVE DATA
P.I. 59+99.11 WB
Y 148668.59
X 435798.19
△ = 1°30'00"
D = 0°11'00"
T = 409.11'
L = 818.18'
E = 2.68'
R = 31252.02'
P.C. 55+90.00 WB
P.T. 64+08.18 WB
S.E. NC
L.R. N/A

CURVE DATA
P.I. 148+88.23 WB
Y 149703.03
X 444626.96
△ = 5°30'03"
D = 0°29'54"
T = 552.46'
L = 1104.07'
E = 13.26'
R = 11500.02'
P.C. 143+35.77 WB
P.T. 154+39.84 WB
S.E. RC
L.R. 95.00'



CONTROL POINTS & BENCH MARKS				
POINT NO.	NORTH (Y)	EAST (X)	ELEVATION	DESCRIPTION
500	146494.31	446118.79	647.69	REBAR W/CAP
501	147339.42	446652.42	646.10	REBAR W/CAP
502	148226.22	447197.02	644.53	REBAR W/CAP
503	149016.94	447766.47	644.59	REBAR W/CAP
510	149819.77	445331.61	649.16	PK NAIL
511	149956.07	445964.94	650.32	PK NAIL
512	150276.59	447338.35	655.59	REBAR W/CAP
BM1030	146769.01	446204.43	647.33	CHISELED SQUARE
BM8561	149738.15	444120.62	674.58	CHISELED 'X'
BM8562	149496.32	444177.32	672.29	CHISELED 'X'
BM8624	149281.17	440350.88	677.56	CHISELED 'X'
BM8709	148953.57	439549.25	654.23	FND ALUM CAP
BM8710	149029.54	439691.13	655.50	CHISELED 'X'
BM8711	149116.95	439680.71	655.51	CHISELED 'X'
BM8712	150027.71	446559.20	655.91	FND ALUM CAP

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	ALIGNMENT DIAGRAM	SHEET 150	E

CONTROL POINTS & BENCH MARKS				
POINT NO.	NORTH (Y)	EAST (X)	ELEVATION	DESCRIPTION
504	149752.61	448506.44	645.87	REBAR W/CAP
505	150342.44	448860.17	645.78	REBAR W/CAP
506	151299.07	449393.98	644.67	REBAR W/CAP
507	152241.55	450130.37	654.27	REBAR W/CAP
508	152839.03	450531.25	672.13	REBAR W/CAP
509	153372.06	450804.43	678.15	REBAR W/CAP
513	150587.98	448682.15	661.02	REBAR W/CAP
515	151240.16	450511.00	671.61	REBAR W/CAP
516	151770.22	451612.73	683.51	PK NAIL
517	152140.68	452434.80	697.15	REBAR W/CAP
518	152552.75	453194.52	710.24	DOT ALUMINUM DISK
519	152924.29	453909.57	714.84	REBAR W/CAP
520	153699.02	455207.68	707.84	REBAR W/CAP
521	154277.14	456657.62	712.49	REBAR W/CAP
522	154984.52	457738.49	713.23	REBAR W/CAP
523	155299.42	459404.28	722.11	REBAR W/CAP
524	155274.12	459740.25	722.85	REBAR W/CAP
BM8559	154248.95	456143.67	731.26	FND ALUM CAP
BM8560	154075.55	456288.75	730.26	CHISELED SQUARE
BM8705	155348.94	459735.65	722.40	FND ALUM CAP
BM8706	153051.60	454000.35	717.31	FND ALUM CAP
BM8707	152286.76	452549.33	702.96	CHISELED 'X'
BM8708	151602.48	451064.42	680.82	FND ALUM CAP



CURVE DATA	CURVE DATA	CURVE DATA	P.I. DATA
P.I. 196+39.58 EB	P.I. 237+24.12 EB	P.I. 298+42.71 EB	P.I. 338+34.08 EB
Y 150646.09	Y 152387.25	Y 155292.17	Y 155141.40
X 449279.19	X 452986.45	X 458371.85	X 462409.73
△ = 12°58'27"	△ = 3°11'06"	△ = 30°28'52"	
D = 0°29'44"	D = 0°14'58"	D = 1°30'00"	
T = 1314.46'	T = 638.87'	T = 1040.70'	
L = 2617.68'	L = 1277.40'	L = 2032.07'	
E = 74.49'	E = 8.88'	E = 139.23'	
R = 11559.98'	R = 22979.74'	R = 3819.73'	
P.C. 183+25.12 EB	P.C. 230+85.26 EB	P.C. 288+02.01 EB	
P.T. 209+42.80 EB	P.T. 243+62.66 EB	P.T. 308+34.08 EB	
S.E. RC	S.E. NC	S.E. 5.1%	
L.R. 95.00'	L.R. N/A	L.R. 242.00'	

CURVE DATA	CURVE DATA	CURVE DATA	P.I. DATA
P.I. 196+27.03 WB	P.I. 237+03.14 WB	P.I. 298+36.40 WB	P.I. 338+44.12 WB
Y 150703.30	Y 152440.85	Y 155352.74	Y 155201.36
X 449259.86	X 452959.43	X 458357.76	X 462411.97
△ = 12°58'27"	△ = 3°11'06"	△ = 30°28'52"	
D = 0°29'54"	D = 0°15'00"	D = 1°30'00"	
T = 1307.64'	T = 637.20'	T = 1040.69'	
L = 2604.09'	L = 1274.07'	L = 2032.07'	
E = 74.11'	E = 8.86'	E = 139.23'	
R = 11499.98'	R = 22919.74'	R = 3819.71'	
P.C. 183+19.39 WB	P.C. 230+65.94 WB	P.C. 287+95.71 WB	
P.T. 209+23.49 WB	P.T. 243+40.01 WB	P.T. 308+27.77 WB	
S.E. RC	S.E. NC	S.E. 5.1%	
L.R. 95.00'	L.R. N/A	L.R. 242.00'	

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: DOUGLAS	ALIGNMENT DIAGRAM	SHEET 151	E

P.I. DATA

P.I. 130+57.22 D
Y 149525.71
X 442804.20

CURVE DATA

P.I. 135+10.55 D
Y 149584.41
X 443253.69
△ = 19°19'46"
D = 6°21'58"
T = 153.27'
L = 303.63'
E = 12.96'
R = 900.00'
P.C. 133+57.28 D
P.C.C136+60.90 D
S.E. 6.0%
L.R. 160'

CURVE DATA

P.I. 138+42.02 D
Y 149731.06
X 443554.26
△ = 38°20'19"
D = 10°59'50"
T = 181.12'
L = 348.62'
E = 30.58'
R = 521.00'
P.C.C136+60.90 D
P.T. 140+09.52 D
S.E. 6.0%
L.R. N/A

CURVE DATA

P.I. 143+34.79 D
Y 150187.55
X 443773.40
△ = 59°19'16"
D = 20°59'15"
T = 155.47'
L = 282.65'
E = 41.16'
R = 273.00'
P.C. 141+79.32 D
P.T. 144+61.97 D
S.E. 6.0%
L.R. N/A

P.I. DATA

P.I. 147+02.58 D
Y 150222.27
X 444167.95

P.I. DATA

P.I. 132+73.68 C
Y 150148.57
X 444163.38

P.I. DATA

P.I. 145+70.05 C
Y 149704.03
X 444305.73

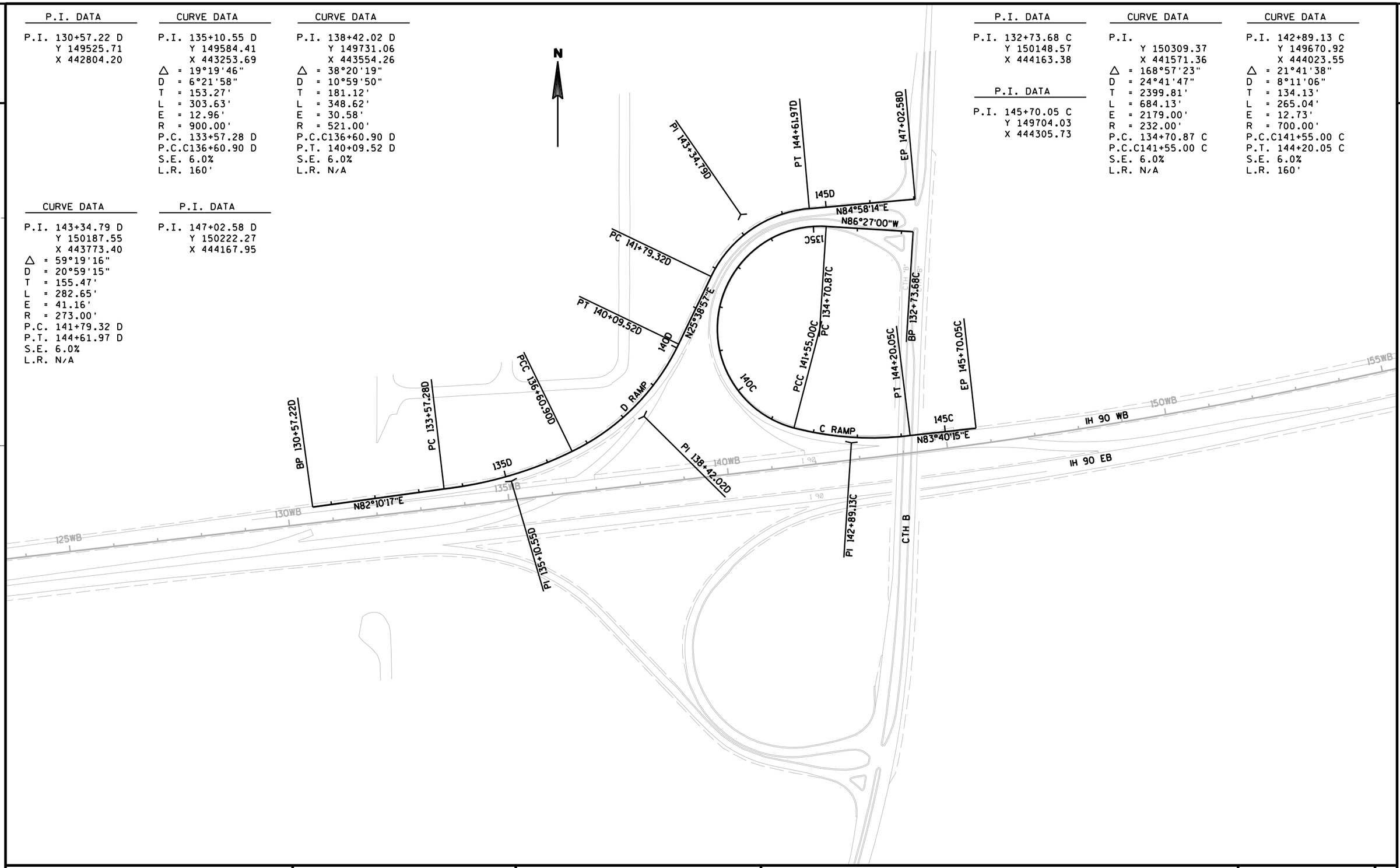
CURVE DATA

P.I.
Y 150309.37
X 441571.36
△ = 168°57'23"
D = 24°41'47"
T = 2399.81'
L = 684.13'
E = 2179.00'
R = 232.00'
P.C. 134+70.87 C
P.C.C141+55.00 C
S.E. 6.0%
L.R. N/A

CURVE DATA

P.I. 142+89.13 C
Y 149670.92
X 444023.55
△ = 21°41'38"
D = 8°11'06"
T = 134.13'
L = 265.04'
E = 12.73'
R = 700.00'
P.C.C141+55.00 C
P.T. 144+20.05 C
S.E. 6.0%
L.R. 160'

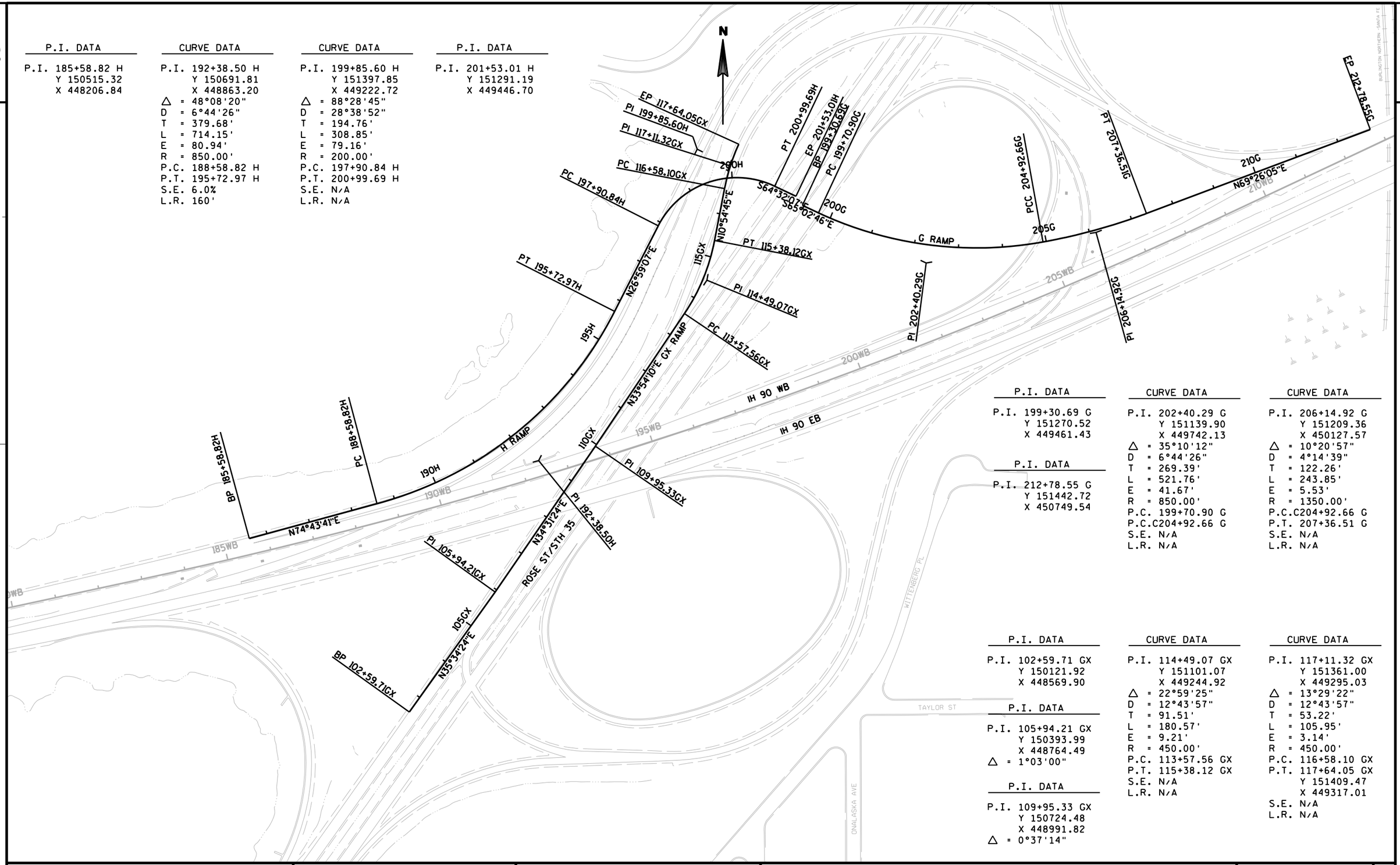
2



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	ALIGNMENT DIAGRAM	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\ad_0677_027203_ad.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:200

2



P.I. DATA

P.I. 185+58.82 H
Y 150515.32
X 448206.84

CURVE DATA

P.I. 192+38.50 H
Y 150691.81
X 448863.20
△ = 48°08'20"
D = 6°44'26"
T = 379.68'
L = 714.15'
E = 80.94'
R = 850.00'
P.C. 188+58.82 H
P.T. 195+72.97 H
S.E. 6.0%
L.R. 160'

CURVE DATA

P.I. 199+85.60 H
Y 151397.85
X 449222.72
△ = 88°28'45"
D = 28°38'52"
T = 194.76'
L = 308.85'
E = 79.16'
R = 200.00'
P.C. 197+90.84 H
P.T. 200+99.69 H
S.E. N/A
L.R. N/A

P.I. DATA

P.I. 201+53.01 H
Y 151291.19
X 449446.70

P.I. DATA

P.I. 199+30.69 G
Y 151270.52
X 449461.43

P.I. DATA

P.I. 212+78.55 G
Y 151442.72
X 450749.54

CURVE DATA

P.I. 202+40.29 G
Y 151139.90
X 449742.13
△ = 35°10'12"
D = 6°44'26"
T = 269.39'
L = 521.76'
E = 41.67'
R = 850.00'
P.C. 199+70.90 G
P.C.C204+92.66 G
S.E. N/A
L.R. N/A

CURVE DATA

P.I. 206+14.92 G
Y 151209.36
X 450127.57
△ = 10°20'57"
D = 4°14'39"
T = 122.26'
L = 243.85'
E = 5.53'
R = 1350.00'
P.C.C204+92.66 G
P.T. 207+36.51 G
S.E. N/A
L.R. N/A

P.I. DATA

P.I. 102+59.71 GX
Y 150121.92
X 448569.90

P.I. DATA

P.I. 105+94.21 GX
Y 150393.99
X 448764.49
△ = 1°03'00"

P.I. DATA

P.I. 109+95.33 GX
Y 150724.48
X 448991.82
△ = 0°37'14"

CURVE DATA

P.I. 114+49.07 GX
Y 151101.07
X 449244.92
△ = 22°59'25"
D = 12°43'57"
T = 91.51'
L = 180.57'
E = 9.21'
R = 450.00'
P.C. 113+57.56 GX
P.T. 115+38.12 GX
S.E. N/A
L.R. N/A

CURVE DATA

P.I. 117+11.32 GX
Y 151361.00
X 449295.03
△ = 13°29'22"
D = 12°43'57"
T = 53.22'
L = 105.95'
E = 3.14'
R = 450.00'
P.C. 116+58.10 GX
P.T. 117+64.05 GX
Y 151409.47
X 449317.01
S.E. N/A
L.R. N/A

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	ALIGNMENT DIAGRAM	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\ao_0677_027204_ad.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:200

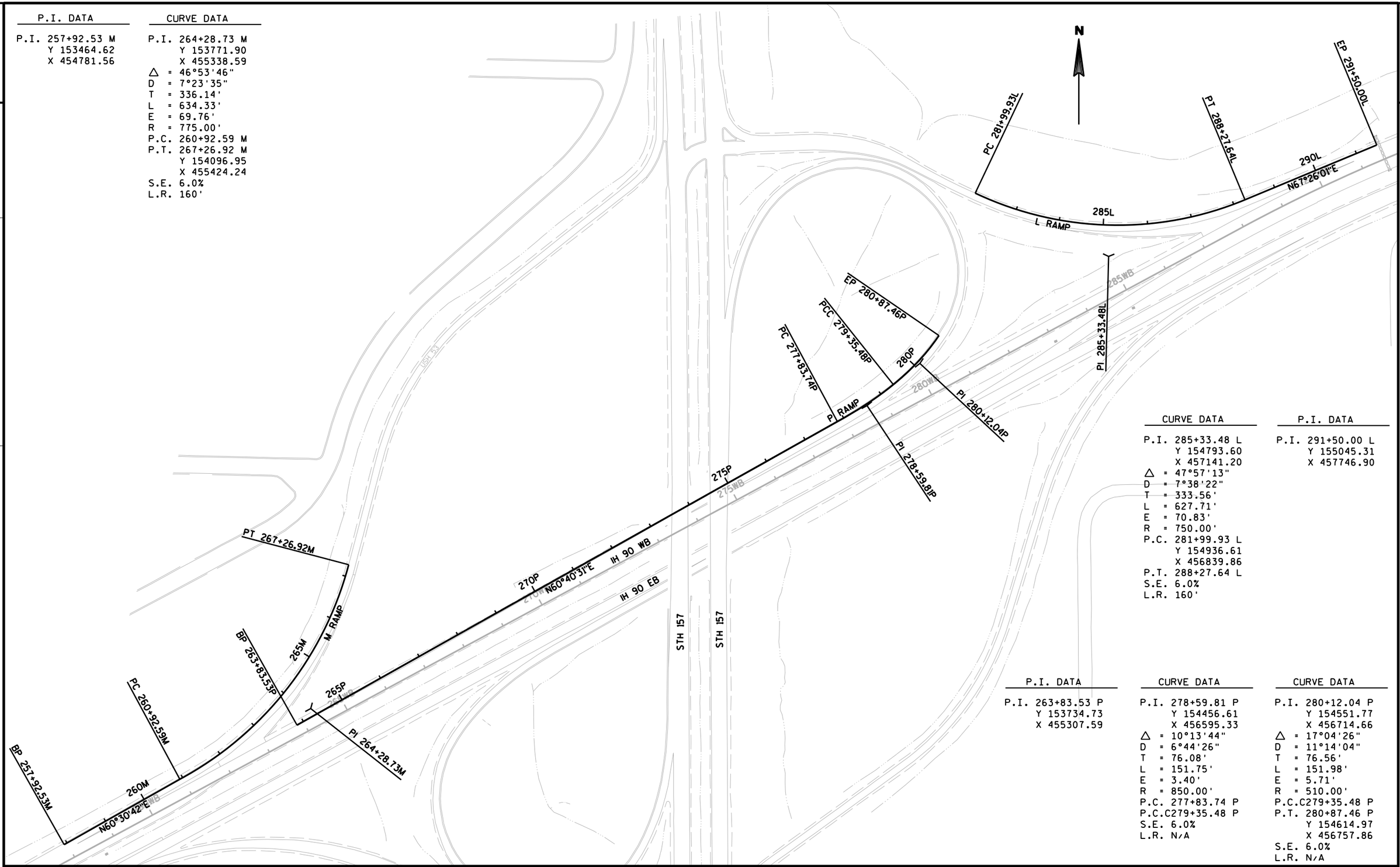
2

P.I. DATA

P.I. 257+92.53 M
Y 153464.62
X 454781.56

CURVE DATA

P.I. 264+28.73 M
Y 153771.90
X 455338.59
△ = 46°53'46"
D = 7°23'35"
T = 336.14'
L = 634.33'
E = 69.76'
R = 775.00'
P.C. 260+92.59 M
P.T. 267+26.92 M
Y 154096.95
X 455424.24
S.E. 6.0%
L.R. 160'



CURVE DATA

P.I. 285+33.48 L
Y 154793.60
X 457141.20
△ = 47°57'13"
D = 7°38'22"
T = 333.56'
L = 627.71'
E = 70.83'
R = 750.00'
P.C. 281+99.93 L
Y 154936.61
X 456839.86
P.T. 288+27.64 L
S.E. 6.0%
L.R. 160'

P.I. DATA

P.I. 291+50.00 L
Y 155045.31
X 457746.90

P.I. DATA

P.I. 263+83.53 P
Y 153734.73
X 455307.59

CURVE DATA

P.I. 278+59.81 P
Y 154456.61
X 456595.33
△ = 10°13'44"
D = 6°44'26"
T = 76.08'
L = 151.75'
E = 3.40'
R = 850.00'
P.C. 277+83.74 P
P.C.C279+35.48 P
S.E. 6.0%
L.R. N/A

CURVE DATA

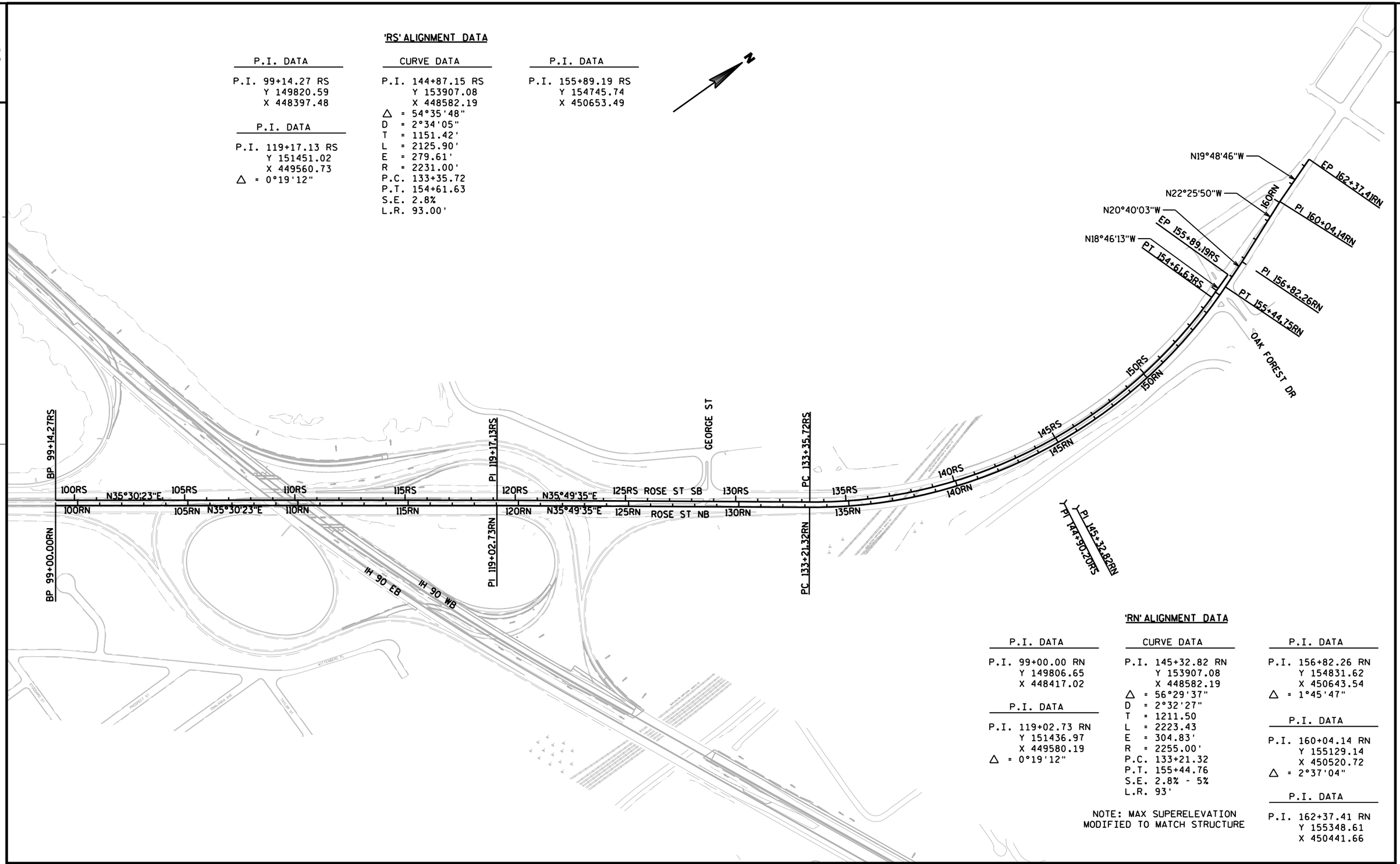
P.I. 280+12.04 P
Y 154551.77
X 456714.66
△ = 17°04'26"
D = 11°14'04"
T = 76.56'
L = 151.98'
E = 5.71'
R = 510.00'
P.C.C279+35.48 P
P.T. 280+87.46 P
Y 154614.97
X 456757.86
S.E. 6.0%
L.R. N/A

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	ALIGNMENT DIAGRAM	SHEET 154	E

'RS' ALIGNMENT DATA

P.I. DATA	CURVE DATA	P.I. DATA
P.I. 99+14.27 RS Y 149820.59 X 448397.48	P.I. 144+87.15 RS Y 153907.08 X 448582.19 △ = 54°35'48" D = 2°34'05" T = 1151.42' L = 2125.90' E = 279.61' R = 2231.00' P.C. 133+35.72 P.T. 154+61.63 S.E. 2.8% L.R. 93.00'	P.I. 155+89.19 RS Y 154745.74 X 450653.49

P.I. DATA
P.I. 119+17.13 RS Y 151451.02 X 449560.73 △ = 0°19'12"



'RN' ALIGNMENT DATA

P.I. DATA	CURVE DATA	P.I. DATA
P.I. 99+00.00 RN Y 149806.65 X 448417.02	P.I. 145+32.82 RN Y 153907.08 X 448582.19 △ = 56°29'37" D = 2°32'27" T = 1211.50 L = 2223.43 E = 304.83' R = 2255.00' P.C. 133+21.32 P.T. 155+44.76 S.E. 2.8% - 5% L.R. 93'	P.I. 156+82.26 RN Y 154831.62 X 450643.54 △ = 1°45'47"
P.I. DATA		P.I. DATA
P.I. 119+02.73 RN Y 151436.97 X 449580.19 △ = 0°19'12"		P.I. 160+04.14 RN Y 155129.14 X 450520.72 △ = 2°37'04"
		P.I. DATA
		P.I. 162+37.41 RN Y 155348.61 X 450441.66

NOTE: MAX SUPERELEVATION MODIFIED TO MATCH STRUCTURE

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	ALIGNMENT DIAGRAM	SHEET 155	E

P.I. DATA

P.I. 204+41.87 UW
Y 151001.82
X 450011.08

CURVE DATA

P.I. 208+02.29 UW
Y 151148.80
X 450340.16
△ = 1°23'33"
D = 0°29'45"
T = 140.43'
L = 280.84'
E = 0.85'
R = 11555.98'
P.C. 206+61.86 UW
P.T. 209+42.70 UW

CURVE DATA

P.I. 219+64.38 UW
Y 151642.83
X 451392.03
△ = 9°45'08"
D = 1°30'00"
T = 325.88'
L = 650.19'
E = 13.88'
R = 3820.00'
P.C. 216+38.50 UW
P.R.C222+88.69 UW

CURVE DATA

P.I. 226+29.93 UW
Y 152024.61
X 451939.10
△ = 9°45'08"
D = 1°25'57"
T = 341.24'
L = 680.83'
E = 14.53'
R = 4000.00'
P.R.C222+88.69 UW
P.T. 229+69.51 UW

CURVE DATA

P.I. 236+39.86 UW
Y 152454.65
X 452854.73
△ = 2°44'51"
D = 0°15'02"
T = 548.29'
L = 1096.37'
E = 6.57'
R = 22862.74'
P.C. 230+91.57 UW
P.R.C241+87.94 UW

CURVE DATA

P.I. 243+23.70 UW
Y 152774.79
X 453459.24
△ = 3°53'16"
D = 1°25'57"
T = 135.76'
L = 271.42'
E = 2.30'
R = 4000.00'
P.R.C241+87.94 UW
P.T. 244+59.35 UW

CURVE DATA

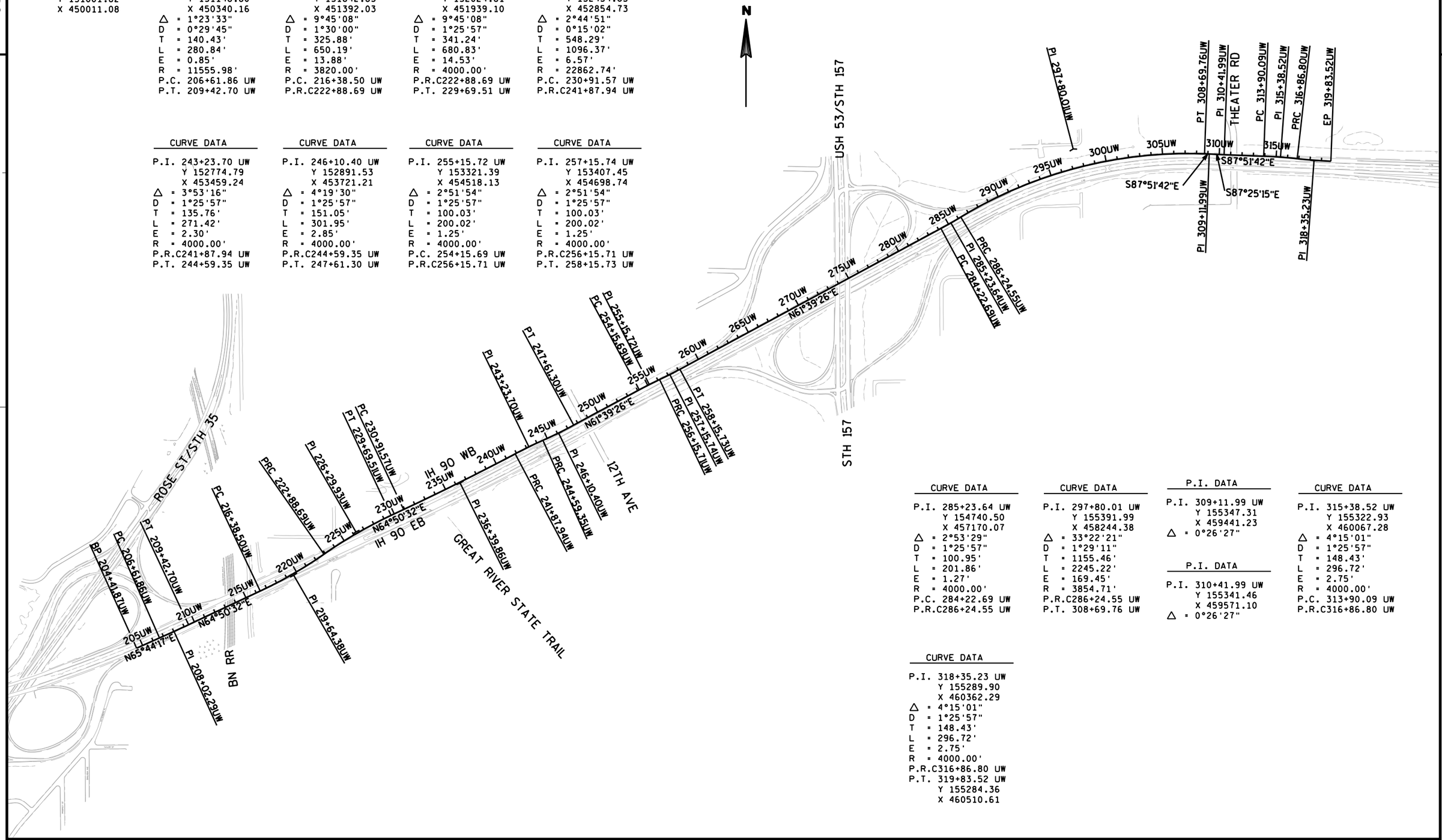
P.I. 246+10.40 UW
Y 152891.53
X 453721.21
△ = 4°19'30"
D = 1°25'57"
T = 151.05'
L = 301.95'
E = 2.85'
R = 4000.00'
P.R.C244+59.35 UW
P.T. 247+61.30 UW

CURVE DATA

P.I. 255+15.72 UW
Y 153321.39
X 454518.13
△ = 2°51'54"
D = 1°25'57"
T = 100.03'
L = 200.02'
E = 1.25'
R = 4000.00'
P.C. 254+15.69 UW
P.R.C256+15.71 UW

CURVE DATA

P.I. 257+15.74 UW
Y 153407.45
X 454698.74
△ = 2°51'54"
D = 1°25'57"
T = 100.03'
L = 200.02'
E = 1.25'
R = 4000.00'
P.R.C256+15.71 UW
P.T. 258+15.73 UW



CURVE DATA

P.I. 285+23.64 UW
Y 154740.50
X 457170.07
△ = 2°53'29"
D = 1°25'57"
T = 100.95'
L = 201.86'
E = 1.27'
R = 4000.00'
P.C. 284+22.69 UW
P.R.C286+24.55 UW

CURVE DATA

P.I. 297+80.01 UW
Y 155391.99
X 458244.38
△ = 33°22'21"
D = 1°29'11"
T = 1155.46'
L = 2245.22'
E = 169.45'
R = 3854.71'
P.R.C286+24.55 UW
P.T. 308+69.76 UW

P.I. DATA

P.I. 309+11.99 UW
Y 155347.31
X 459441.23
△ = 0°26'27"

P.I. DATA

P.I. 310+41.99 UW
Y 155341.46
X 459571.10
△ = 0°26'27"

CURVE DATA

P.I. 315+38.52 UW
Y 155322.93
X 460067.28
△ = 4°15'01"
D = 1°25'57"
T = 148.43'
L = 296.72'
E = 2.75'
R = 4000.00'
P.C. 313+90.09 UW
P.R.C316+86.80 UW

CURVE DATA

P.I. 318+35.23 UW
Y 155289.90
X 460362.29
△ = 4°15'01"
D = 1°25'57"
T = 148.43'
L = 296.72'
E = 2.75'
R = 4000.00'
P.R.C316+86.80 UW
P.T. 319+83.52 UW
Y 155284.36
X 460510.61

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	ALIGNMENT DIAGRAM	SHEET 156	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_027207_ad.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:800

2

IH 90 WESTBOUND (WB)

Station	Description	LEFT	RIGHT
18+30.89	Begin Alignment	-2.00%	-2.00%
141+85.77	End Normal Crown	-2.00%	-2.00%
142+75.77	Level Crown	-2.00%	0.00%
143+65.77	Begin Full Super	-2.00%	2.00%
154+09.85	End Full Super	-2.00%	2.00%
154+99.85	Level Crown	-2.00%	0.00%
155+89.85	Begin Normal Crown	-2.00%	-2.00%
181+69.39	End Normal Crown	-2.00%	-2.00%
182+59.39	Level Crown	-2.00%	0.00%
183+49.39	Begin Full Super	-2.00%	2.00%
208+93.49	End Full Super	-2.00%	2.00%
209+83.49	Level Crown	-2.00%	0.00%
210+73.49	Begin Normal Crown	-2.00%	-2.00%
285+67.70	End Normal Crown	-2.00%	-2.00%
286+57.70	Level Crown	0.00%	-2.00%
287+47.70	Reverse Crown	2.00%	-2.00%
288+64.70	Begin Full Super	4.60%	-4.60%
307+58.78	End Full Super	4.60%	-4.60%
308+75.78	Reverse Crown	2.00%	-2.00%
309+65.78	Level Crown	0.00%	-2.00%
310+55.78	Begin Normal Crown	-2.00%	-2.00%
338+44.12	End Alignment	-2.00%	-2.00%

C RAMP (C)

Station	Description	Left	Right
132+73.68	Begin Alignment	-2.00%	2.00%
134+26.53	End Normal Crown	-2.00%	2.00%
135+15.20	Begin Full Super	-6.00%	6.00%
143+75.72	End Full Super	-6.00%	6.00%
144+64.72	Begin Normal Crown	-2.00%	2.00%
145+70.05	End Alignment	-2.00%	2.00%

D RAMP (D)

Station	Description	Left	Right
130+57.22	Begin Alignment	-2.00%	2.00%
133+09.27	End Normal Crown	-2.00%	2.00%
134+05.27	Begin Full Super	-6.00%	6.00%
139+68.20	End Full Super	-6.00%	6.00%

H RAMP (H)

Station	Description	Left	Right
185+58.82	Begin Alignment	-2.00%	2.00%
188+10.81	End Normal Crown	-2.00%	2.00%
189+06.81	Begin Full Super	-6.00%	6.00%
195+24.98	End Full Super	-6.00%	6.00%
196+20.98	Begin Normal Crown	-2.00%	2.00%
196+91.11	End Normal Crown	-2.00%	2.00%
197+25.50	Level Crown	0.00%	0.00%

I RAMP (I)

Station	Type	Left	Right
282+43.59	Begin Full Super	-5.90%	5.90%
287+05.84	End Full Super	-5.90%	5.90%
287+92.44	Begin Normal Crown	-2.00%	2.00%
289+25.12	Begin Full Super	4.00%	-4.00%

M RAMP (M)

Station	Description	Left	Right
257+92.53	Begin Alignment	-2.00%	2.00%
260+49.66	End Normal Crown	-2.00%	2.00%
261+36.25	Begin Full Super	-5.90%	5.90%

P RAMP (P)

Station	Description	Left	Right
263+83.53	Begin Alignment	-2.00%	2.00%
277+72.81	End Normal Crown	-2.00%	2.00%
278+07.40	Begin Full Super	-3.90%	3.90%
279+11.82	End Full Super	-3.90%	3.90%
279+64.48	Begin Full Super	-4.80%	4.80%
280+58.46	End Full Super	-4.80%	4.80%

2

DATE 29AUG14 — E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1071-06-77 QUANTITY	1071-06-78 QUANTITY
0010	201.0105	CLEARING	STA	165.000	92.000	73.000
0020	201.0205	GRUBBING	STA	165.000	92.000	73.000
0030	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	34.000	13.000	21.000
0040	203.0200	REMOVING OLD STRUCTURE (STATION) 01. 233+50 WB	LS	1.000		1.000
0050	203.0200	REMOVING OLD STRUCTURE (STATION) 02. 194+08.38	LS	1.000		1.000
0060	203.0200	REMOVING OLD STRUCTURE (STATION) 04. 18+85 BW	LS	1.000	1.000	
0070	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 01. B-32-37	LS	1.000		1.000
0080	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 03. B-32-44	LS	1.000		1.000
0090	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 05. B-32-49	LS	1.000	1.000	
0100	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 07. B-32-51	LS	1.000	1.000	
0110	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 01. B-32-37	LS	1.000		1.000
0120	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 02. B-32-49	LS	1.000	1.000	
0130	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 03. B-32-108	LS	1.000		1.000
0140	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 04. B-32-190	LS	1.000		1.000
0150	204.0100	REMOVING PAVEMENT	SY	73,311.000	27,960.000	45,351.000
0160	204.0150	REMOVING CURB & GUTTER	LF	1,659.000	280.000	1,379.000
0170	204.0165	REMOVING GUARDRAIL	LF	13,765.000	7,386.000	6,379.000
0180	204.0170	REMOVING FENCE	LF	18,869.000	9,284.000	9,585.000
0190	204.0175	REMOVING CONCRETE SLOPE PAVING	SY	75.000	75.000	
0200	204.0180	REMOVING DELINEATORS AND MARKERS	EACH	140.000	50.000	90.000
0210	204.0190	REMOVING SURFACE DRAINS	EACH	7.000	3.000	4.000
0220	204.0195	REMOVING CONCRETE BASES	EACH	1.000	1.000	
0230	204.0220	REMOVING INLETS	EACH	20.000	3.000	17.000
0240	204.0270	ABANDONING CULVERT PIPES	EACH	2.000		2.000
0250	204.9060.S	REMOVING (ITEM DESCRIPTION) 01. REMOVING FLEXIBLE TUBULAR MARKER POSTS AND BASES	EACH	510.000	135.000	375.000
0260	204.9060.S	REMOVING (ITEM DESCRIPTION) 02. REMOVING APRON ENDWALL FOR PIPE UNDERDRAIN	EACH	4.000		4.000
0270	204.9060.S	REMOVING (ITEM DESCRIPTION) 03. REMOVING CRASH CUSHIONS LEFT IN PLACE	EACH	4.000	1.000	3.000
0280	204.9060.S	REMOVING (ITEM DESCRIPTION) 04. REMOVING WEATHER STATION TOWER	EACH	1.000	1.000	
0290	204.9090.S	REMOVING (ITEM DESCRIPTION) 01. REMOVING PIPE UNDERDRAIN	LF	961.000		961.000
0300	205.0100	EXCAVATION COMMON	CY	135,217.000	48,523.000	86,694.000
0310	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-32-219	LS	1.000		1.000
0320	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 02. B-32-51	LS	1.000	1.000	
0330	206.6000.S	TEMPORARY SHORING	SF	6,360.000		6,360.000
0340	208.1100	SELECT BORROW	CY	65,967.000	5,000.000	60,967.000
0350	209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	21.000		21.000
0360	210.0100	BACKFILL STRUCTURE	CY	1,414.000	134.000	1,280.000

3

DATE 29AUG14 — E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1071-06-77 QUANTITY	1071-06-78 QUANTITY
0370	213.0100	FINISHING ROADWAY (PROJECT) 01. 1071-06-77	EACH	1.000	1.000	
0380	213.0100	FINISHING ROADWAY (PROJECT) 02. 1071-06-78	EACH	1.000		1.000
0390	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	14,205.000	6,325.000	7,880.000
0400	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	99,505.000	32,905.000	66,600.000
0410	312.0110	SELECT CRUSHED MATERIAL	TON	28.000	28.000	
0420	415.0090	CONCRETE PAVEMENT 9-INCH	SY	4,427.000	1,025.000	3,402.000
0430	415.0120	CONCRETE PAVEMENT 12-INCH	SY	106,757.000	41,402.000	65,355.000
0440	415.0410	CONCRETE PAVEMENT APPROACH SLAB	SY	974.000	272.000	702.000
0450	415.6000.S	ROUT AND SEAL	LF	21,287.000	6,534.000	14,753.000
0460	416.0610	DRILLED TIE BARS	EACH	220.000	80.000	140.000
0470	416.0620	DRILLED DOWEL BARS	EACH	77.000		77.000
0480	416.1010	CONCRETE SURFACE DRAINS	CY	113.800	47.100	66.700
0490	440.4410.S	INCENTIVE IRI RIDE	DOL	8,700.000	7,400.000	1,300.000
0500	455.0105	ASPHALTIC MATERIAL PG58-28	TON	385.000	116.000	269.000
0510	460.1100	HMA PAVEMENT TYPE E-0.3	TON	654.000	263.000	391.000
0520	460.1103	HMA PAVEMENT TYPE E-3	TON	2,826.000	1,064.000	1,762.000
0530	460.1110	HMA PAVEMENT TYPE E-10	TON	3,514.000	783.000	2,731.000
0540	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	4,250.000	1,350.000	2,900.000
0550	465.0105	ASPHALTIC SURFACE	TON	19.000	19.000	
0560	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	1,738.000	20.000	1,718.000
0570	465.0315	ASPHALTIC FLUMES	SY	48.000	21.000	27.000
0580	502.0100	CONCRETE MASONRY BRIDGES	CY	2,611.000	498.000	2,113.000
0590	502.0717.S	CRACK SEALING EPOXY	LF	2,575.000	1,900.000	675.000
0600	502.3100	EXPANSION DEVICE (STRUCTURE) 01. B-32-219	LS	1.000		1.000
0610	502.3100	EXPANSION DEVICE (STRUCTURE) 02. B-32-40	LS	1.000		1.000
0620	502.3200	PROTECTIVE SURFACE TREATMENT	SY	4,310.000	2,050.000	2,260.000
0630	502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	519.000	494.000	25.000
0640	502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	79.000	77.000	2.000
0650	502.5015	MASONRY ANCHORS TYPE L NO. 7 BARS	EACH	10.000	10.000	
0660	503.0136	PRESTRESSED GIRDER TYPE I 36-INCH	LF	136.000	136.000	
0670	503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	2,700.000		2,700.000
0680	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	33,261.000	1.000	33,260.000
0690	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	497,940.000	127,370.000	370,570.000
0700	506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	78.000	62.000	16.000
0710	506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	48.000		48.000
0720	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 01. B-32-219	EACH	42.000		42.000
0730	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 02. B-32-51	EACH	26.000	26.000	
0740	506.7060.S	BRIDGE JACKING (STRUCTURE) 01. B-32-51	LS	1.000	1.000	
0750	509.0301	PREPARATION DECKS TYPE 1	SY	235.000	100.000	135.000
0760	509.0302	PREPARATION DECKS TYPE 2	SY	120.000	65.000	55.000
0770	509.0500	CLEANING DECKS	SY	1,865.000		1,865.000
0780	509.1000	JOINT REPAIR	SY	12.000		12.000
0790	509.1500	CONCRETE SURFACE REPAIR	SF	52.000	42.000	10.000
0800	509.2000	FULL-DEPTH DECK REPAIR	SY	35.000	20.000	15.000
0810	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	230.000	75.000	155.000
0820	509.5100.S	POLYMER OVERLAY	SY	2,590.000		2,590.000
0830	509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY (STRUCTURE) 01. B-32-49	SY	600.000	600.000	
0840	509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY (STRUCTURE) 02. B-32-0190	SY	920.000		920.000

DATE 29AUG14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1071-06-77 QUANTITY	1071-06-78 QUANTITY
0850	509.9050.S	CLEANING PARAPETS	LF	320.000	320.000	
0860	513.4090	RAILING TUBULAR SCREENING (STRUCTURE) 01. B-32-51	LS	1.000	1.000	
0870	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	80.000	36.000	44.000
0880	517.1010.S	CONCRETE STAINING (STRUCTURE) 01. B-32-219	SF	13,350.000		13,350.000
0890	517.1010.S	CONCRETE STAINING (STRUCTURE) 02. B-32-51	SF	8,760.000	8,760.000	
0900	517.1015.S	CONCRETE STAINING MULTI-COLOR (STRUCTURE) 01. B-32-219	SF	6,190.000		6,190.000
0910	517.1015.S	CONCRETE STAINING MULTI-COLOR (STRUCTURE) 02. B-32-51	SF	1,006.000	1,006.000	
0920	517.1050.S	ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 01. B-32-219	SF	6,190.000		6,190.000
0930	517.1050.S	ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 02. B-32-51	SF	1,065.000	1,065.000	
0940	520.8000	CONCRETE COLLARS FOR PIPE	EACH	4.000	1.000	3.000
0950	521.0112	CULVERT PIPE CORRUGATED STEEL 12-INCH	LF	538.000	326.000	212.000
0960	521.0115	CULVERT PIPE CORRUGATED STEEL 15-INCH	LF	428.000		428.000
0970	521.0118	CULVERT PIPE CORRUGATED STEEL 18-INCH	LF	154.000		154.000
0980	521.0124	CULVERT PIPE CORRUGATED STEEL 24-INCH	LF	26.000		26.000
0990	521.1012	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH	EACH	23.000	12.000	11.000
1000	521.1015	APRON ENDWALLS FOR CULVERT PIPE STEEL 15-INCH	EACH	2.000		2.000
1010	521.1018	APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH	EACH	2.000		2.000
1020	521.1024	APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH	EACH	1.000		1.000
1030	522.0112	CULVERT PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	1,000.000		1,000.000
1040	522.0118	CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	223.000	223.000	
1050	522.0124	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	1,050.000	468.000	582.000
1060	522.0130	CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH	LF	328.000	160.000	168.000
1070	522.0136	CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH	LF	240.000	140.000	100.000
1080	522.0324	CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH	LF	90.000	90.000	
1090	522.0530	CULVERT PIPE REINFORCED CONCRETE CLASS V 30-INCH	LF	332.000		332.000
1100	522.1012	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	EACH	1.000		1.000
1110	522.1018	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	EACH	1.000	1.000	
1120	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	15.000	10.000	5.000
1130	522.1030	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	EACH	7.000	2.000	5.000
1140	522.1036	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH	EACH	2.000	1.000	1.000
1150	550.2104	PILING CIP CONCRETE 10 3/4 X 0.25-INCH	LF	300.000	300.000	
1160	550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	22,490.000		22,490.000
1170	601.0110	CONCRETE CURB TYPE D	LF	18.000	18.000	
1180	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	57.000	29.000	28.000

3

DATE 29AUG14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1071-06-77 QUANTITY	1071-06-78 QUANTITY
1190	602.0410	CONCRETE SIDEWALK 5-INCH	SF	106.000	106.000	
1200	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	16.000	16.000	
1210	603.1142	CONCRETE BARRIER TYPE S42	LF	21.000	10.500	10.500
1220	603.1156	CONCRETE BARRIER TYPE S56	LF	118.000		118.000
1230	603.1456	CONCRETE BARRIER TYPE S56C	LF	329.000	120.000	209.000
1240	603.3559	CONCRETE BARRIER TRANSITION TYPE S42 TO S56	EACH	49.000	24.500	24.500
1250	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	34,830.000	2,888.000	31,942.000
1260	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	38,278.000	3,440.000	34,838.000
1270	604.0400	SLOPE PAVING CONCRETE	SY	1,114.000	314.000	800.000
1280	604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	60.000		60.000
1290	606.0100	RIPRAP LIGHT	CY	265.000	45.000	220.000
1300	606.0300	RIPRAP HEAVY	CY	75.000	75.000	
1310	611.0430	RECONSTRUCTING INLETS	EACH	3.000	1.000	2.000
1320	611.0642	INLET COVERS TYPE MS	EACH	28.000	6.000	22.000
1330	611.0654	INLET COVERS TYPE V	EACH	31.000	15.000	16.000
1340	611.0660	INLET COVERS TYPE WM	EACH	1.000	1.000	
1350	611.3225	INLETS 2X2.5-FT	EACH	32.000	16.000	16.000
1360	611.3902	INLETS MEDIAN 2 GRATE	EACH	14.000	3.000	11.000
1370	612.0212	PIPE UNDERDRAIN UNPERFORATED 12-INCH	LF	434.000	202.000	232.000
1380	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	1,190.000	300.000	890.000
1390	614.0115	ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2	EACH	1.000		1.000
1400	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	9.000	5.000	4.000
1410	614.0220	STEEL THRIE BEAM BULLNOSE TERMINAL	EACH	4.000	2.000	2.000
1420	614.0230	STEEL THRIE BEAM	LF	600.000	200.000	400.000
1430	614.0305	STEEL PLATE BEAM GUARD CLASS A	LF	175.000		175.000
1440	614.0370	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	EACH	1.000		1.000
1450	614.0905	CRASH CUSHIONS TEMPORARY	EACH	22.000	4.000	18.000
1460	614.0920	SALVAGED RAIL	LF	1,288.000	366.000	922.000
1470	614.0925	SALVAGED GUARDRAIL END TREATMENTS	EACH	6.000	2.000	4.000
1480	614.2300	MGS GUARDRAIL 3	LF	15,956.000	6,951.000	9,005.000
1490	614.2500	MGS THRIE BEAM TRANSITION	LF	1,069.000	484.000	585.000
1500	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	31.000	10.000	21.000
1510	614.2620	MGS GUARDRAIL TERMINAL TYPE 2	EACH	4.000		4.000
1520	616.0206	FENCE CHAIN LINK 6-FT	LF	19,091.000	9,316.000	9,775.000
1530	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1071-06-77	EACH	1.000	1.000	
1540	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 02. 1071-06-78	EACH	1.000		1.000
1550	619.1000	MOBILIZATION	EACH	1.000	0.500	0.500
1560	624.0100	WATER	MGAL	2,500.000	800.000	1,700.000
1570	625.0500	SALVAGED TOPSOIL	SY	133,713.000	39,513.000	94,200.000
1580	627.0200	MULCHING	SY	163,800.000	46,000.000	117,800.000
1590	628.1504	SILT FENCE	LF	22,350.000	9,310.000	13,040.000
1600	628.1520	SILT FENCE MAINTENANCE	LF	22,350.000	9,310.000	13,040.000
1610	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	30.000	15.000	15.000
1620	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	20.000	10.000	10.000
1630	628.2004	EROSION MAT CLASS I TYPE B	SY	54,400.000	10,600.000	43,800.000
1640	628.2027	EROSION MAT CLASS II TYPE C	SY	3,100.000	3,100.000	

3

DATE 29AUG14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1071-06-77 QUANTITY	1071-06-78 QUANTITY
1650	628.7005	INLET PROTECTION TYPE A	EACH	64.000	21.000	43.000
1660	628.7010	INLET PROTECTION TYPE B	EACH	31.000	15.000	16.000
1670	628.7015	INLET PROTECTION TYPE C	EACH	1.000	1.000	
1680	628.7504	TEMPORARY DITCH CHECKS	LF	700.000	320.000	380.000
1690	628.7555	CULVERT PIPE CHECKS	EACH	120.000	60.000	60.000
1700	628.7560	TRACKING PADS	EACH	10.000	4.000	6.000
1710	629.0210	FERTILIZER TYPE B	CWT	106.000	31.000	75.000
1720	630.0120	SEEDING MIXTURE NO. 20	LB	4,100.000	1,100.000	3,000.000
1730	630.0130	SEEDING MIXTURE NO. 30	LB	1,800.000	640.000	1,160.000
1740	630.0200	SEEDING TEMPORARY	LB	3,500.000	1,100.000	2,400.000
1750	630.0300	SEEDING BORROW PIT	LB	34.000		34.000
1760	633.0100	DELINEATOR POSTS STEEL	EACH	210.000	90.000	120.000
1770	633.0500	DELINEATOR REFLECTORS	EACH	290.000	120.000	170.000
1780	633.1000	DELINEATOR BRACKETS	EACH	15.000	5.000	10.000
1790	633.1100	DELINEATORS TEMPORARY	EACH	120.000	54.000	66.000
1800	633.5200	MARKERS CULVERT END	EACH	37.000	17.000	20.000
1810	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	8.000	5.000	3.000
1820	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	4.000	3.000	1.000
1830	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	15.000	4.000	11.000
1840	634.0620	POSTS WOOD 4X6-INCH X 20-FT	EACH	63.000	21.000	42.000
1850	634.0622	POSTS WOOD 4X6-INCH X 22-FT	EACH	23.000	10.000	13.000
1860	635.0200	SIGN SUPPORTS STRUCTURAL STEEL HS	LB	4,900.000	2,400.000	2,500.000
1870	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	52.300	4.400	47.900
1880	636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	6,712.000	264.000	6,448.000
1890	637.1220	SIGNS TYPE I REFLECTIVE SH	SF	1,965.500	398.000	1,567.500
1900	637.2210	SIGNS TYPE II REFLECTIVE H	SF	1,393.250	365.000	1,028.250
1910	637.2230	SIGNS TYPE II REFLECTIVE F	SF	563.500	197.000	366.500
1920	637.3220	SIGNS TYPE III REFLECTIVE SH	SF	768.000	246.000	522.000
1930	638.2101	MOVING SIGNS TYPE I	EACH	5.000		5.000
1940	638.2102	MOVING SIGNS TYPE II	EACH	25.000	7.000	18.000
1950	638.2601	REMOVING SIGNS TYPE I	EACH	21.000	5.000	16.000
1960	638.2602	REMOVING SIGNS TYPE II	EACH	72.000	27.000	45.000
1970	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	128.000	45.000	83.000
1980	638.3100	REMOVING STRUCTURAL STEEL SIGN SUPPORTS	EACH	14.000	6.000	8.000
1990	638.4000	MOVING SMALL SIGN SUPPORTS	EACH	36.000	19.000	17.000
2000	641.1200	SIGN BRIDGE CANTILEVERED (STRUCTURE) 01. S-32-58	LS	1.000		1.000
2010	641.1200	SIGN BRIDGE CANTILEVERED (STRUCTURE) 02. S-32-59	LS	1.000		1.000
2020	641.6600	SIGN BRIDGE (STRUCTURE) 01. B-32-64	LS	1.000		1.000
2030	642.5201	FIELD OFFICE TYPE C	EACH	1.000	0.500	0.500
2040	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1071-06-77	DAY	214.000	214.000	
2050	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 02. 1071-06-78	DAY	214.000		214.000
2060	643.0300	TRAFFIC CONTROL DRUMS	DAY	60,000.000	5,300.000	54,700.000
2070	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	12,100.000	4,600.000	7,500.000
2080	643.0500	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	EACH	1,000.000	350.000	650.000
2090	643.0600	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	EACH	1,000.000	350.000	650.000
2100	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	17,400.000	7,200.000	10,200.000
2110	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	17,700.000	7,500.000	10,200.000
2120	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	240.000		240.000

3

DATE 29AUG14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1071-06-77 QUANTITY	1071-06-78 QUANTITY
2130	643.0900	TRAFFIC CONTROL SIGNS	DAY	34,500.000	17,400.000	17,100.000
2140	643.0910	TRAFFIC CONTROL COVERING SIGNS TYPE I	EACH	22.000	1.000	21.000
2150	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	68.000	4.000	64.000
2160	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	2,540.000	490.000	2,050.000
2170	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 02. 1071-06-78	EACH	1.000		1.000
2180	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	26,400.000		26,400.000
2190	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	110.000	110.000	
2200	645.0130	GEOTEXTILE FABRIC TYPE R	SY	750.000	130.000	620.000
2210	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	98,326.000	39,477.000	58,849.000
2220	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	11,559.000	1,440.000	10,119.000
2230	646.0600	REMOVING PAVEMENT MARKINGS	LF	152,734.000	49,799.000	102,935.000
2240	649.0200	TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	LF	130,300.000	36,914.000	93,386.000
2250	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	16,860.000	8,267.000	8,593.000
2260	649.0701	TEMPORARY PAVEMENT MARKING 8-INCH	LF	17,470.000	1,840.000	15,630.000
2270	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	36,500.000	11,768.000	24,732.000
2280	650.5000	CONSTRUCTION STAKING BASE	LF	11,398.000	1,558.000	9,840.000
2290	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	75.000	47.000	28.000
2300	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	48.000	23.000	25.000
2310	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-32-219	LS	1.000		1.000
2320	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	25,102.000	10,210.000	14,892.000
2330	650.7500	CONSTRUCTION STAKING CONCRETE BARRIER	LF	517.000	155.000	362.000
2340	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1071-06-77	LS	1.000	1.000	
2350	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 02. 1071-06-78	LS	1.000		1.000
2360	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	37,820.000	12,313.000	25,507.000
2370	690.0150	SAWING ASPHALT	LF	6,800.000	2,966.000	3,834.000
2380	690.0250	SAWING CONCRETE	LF	7,469.000	585.000	6,884.000
2390	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	33,330.000	12,730.000	20,600.000
2400	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	12,642.000		12,642.000
2410	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	HRS	2,100.000		2,100.000
2420	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	6,480.000		6,480.000
2430	SPV.0060	SPECIAL 01. CRASH CUSHION TEMPORARY LEFT IN PLACE	EACH	2.000	1.000	1.000
2440	SPV.0060	SPECIAL 02. FLEXIBLE TUBULAR MARKER POSTS LEFT IN PLACE	EACH	290.000	100.000	190.000
2450	SPV.0060	SPECIAL 03. FLEXIBLE TUBULAR MARKER BASES LEFT IN PLACE	EACH	290.000	100.000	190.000
2460	SPV.0060	SPECIAL 04. COVER PLATES TEMPORARY LEFT IN PLACE	EACH	6.000	2.000	4.000
2470	SPV.0060	SPECIAL 05. FIXED MESSAGE SIGN PORTABLE SUPPORT	EACH	5.000		5.000
2480	SPV.0060	SPECIAL 06. CONNECTION TO EXISTING INLETS	EACH	1.000		1.000
2490	SPV.0085	SPECIAL 01. BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	2,100.000		2,100.000
2500	SPV.0090	SPECIAL 01. CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE	LF	337.000		337.000
2510	SPV.0105	SPECIAL 01. ADJUSTING CONSTRUCTION STAKING 1071-06-77	LS	1.000	1.000	

3

DATE 29AUG14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1071-06-77 QUANTITY	1071-06-78 QUANTITY
2520	SPV.0105	SPECIAL 02. ADJUSTING CONSTRUCTION STAKING 1071-06-78	LS	1.000		1.000
2530	SPV.0105	SPECIAL 03. CONCRETE PAVEMENT JOINT LAYOUT 1071-06-77	LS	1.000	1.000	
2540	SPV.0105	SPECIAL 04. CONCRETE PAVEMENT JOINT LAYOUT 1071-06-78	LS	1.000		1.000
2550	SPV.0105	SPECIAL 10. UNDERMINING REPAIR	LS	1.000	1.000	
2560	SPV.0105	SPECIAL 20. REMOVING SIGN BRIDGE S-32-29	LS	1.000		1.000
2570	SPV.0105	SPECIAL 21. REMOVING SIGN BRIDGE S-32-30	LS	1.000		1.000
2580	SPV.0165	SPECIAL 02. SHOTCRETE	SF	310.000	310.000	
2590	SPV.0165	SPECIAL 10. FIBER WRAP REINFORCING	SF	5,220.000	5,220.000	

3

CLEARING AND GRUBBING

STATION TO STATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
72+00 WB - 98+00 WB	26	26
99+00 WB - 131+00 WB	32	32
131+00 D - 138+00 D	7	7
142+00 C - 144+00 C	2	2
151+00 WB - 169+00 WB	18	18
15+00 BW - 17+00 BW	4	4
21+00 BW - 24+00 BW	3	3
PROJECT ID 1071-06-77 SUMMARY	**92**	**92**
174+00 WB - 186+00 WB	12	12
186+00 H - 198+00 H	12	12
192+00 WB - 194+00 WB	2	2
196+00 WB - 199+00 WB	3	3
216+00 WB - 245+00 WB	29	29
288+00 WB - 297+00 WB	9	9
301+00 WB - 307+00 WB	6	6
PROJECT ID 1071-06-78 SUMMARY	**73**	**73**
PROJECT TOTALS	**165**	**165**

REMOVING PAVEMENT

STATION TO STATION	LOCATION	204.0100 SY
71+97 WB - 97+60 WB	WB LANES	6748
98+97 WB - 168+86 WB	WB LANES	19262
141+55 C - 145+70 C	C RAMP	698
130+57 D - 138+25 D	D RAMP	1252
PROJECT ID 1071-06-77 SUMMARY		**27960**
174+40 WB - 192+86 WB	WB LANES	5388
195+80 WB - 212+49 WB	WB LANES	5124
215+98 WB - 232+85 WB	WB LANES	4898
234+14 WB - 247+77 WB	WB LANES	3604
249+06 WB - 310+05 WB	WB LANES	19791
311+65 WB - 313+65 WB	WB LANES	790
185+59 H - 197+25 H	H RAMP	1901
198+48 HW - 207+51 HW	HW RAMP	1303
211+43 GU - 212+77 GU	G RAMP	218
258+20 M - 262+82 M	M RAMP	745
273+29 P - 279+64 P	P RAMP	1016
287+33 L - 290+88 L	L RAMP	573
PROJECT ID 1071-06-78 SUMMARY		**45351**
PROJECT TOTAL		**73311**

REMOVING SMALL PIPE CULVERTS

STATION TO STATION	LOCATION	TYPE	DIAMETER INCHES	LENGTH LF	STAGE	203.0100 EACH	COMMENTS
99+78 WB - 100+31 WB	LT, DRAIN	PLASTIC	30	58	1	1	
105+42 WB - 106+75 WB	LT, DRAIN	CONCRETE	30	133	1	1	
129+95 WB	MEDIAN DRAIN	CONCRETE	24	70	1	1	
128+60 WB	MEDIAN DRAIN	CONCRETE	24	128	1	1	
134+94 DT	CROSS CULVERT	CONCRETE	18	208	3A	1	
137+31 DT	CROSS CULVERT	CONCRETE	12	116	2	1	
138+37 DT	CROSS CULVERT	CONCRETE	24	100	1 / 2	1	REMOVE PIPE IN STAGES
140+78 C	CROSS CULVERT	CONCRETE	24	20	1	1	PARTIAL REMOVAL OF PIPE
142+00 C	DRAIN	METAL	24	40	1	1	
143+41 C	DRAIN	METAL	12	26	1	1	
150+95 WB	MEDIAN DRAIN	METAL	18	90	1	1	
158+90 WB	MEDIAN DRAIN	METAL	18	100	1	1	
159+39 WB	RT, MEDIAN DRAIN	CONCRETE	18	---	1	1	ENDWALL ONLY
PROJECT ID 1071-06-77 SUMMARY						**13**	
174+90 EB	MEDIAN DRAIN	METAL	18	8	1	1	PARTIAL REMOVAL OF PIPE
183+90 WB	MEDIAN DRAIN	METAL	18	110	1	1	
185+84 HT	CROSS CULVERT	CONCRETE	18	186	4	1	INL 113 TO REMAIN
188+04 HT	CROSS CULVERT	CONCRETE	18	225	2	1	
192+88 WB - 193+51 WB	DRAIN	METAL	12	69	2	1	
196+26 H	LT, CROSS CULVERT	METAL	24	---	1	1	ENDWALLS ONLY
196+49 WB - 197+40 WB	DRAIN	METAL	12	112	2	1	
205+90 WB	MEDIAN DRAIN	CONCRETE	18	70	3A	1	
212+30 WB	DRAIN	METAL	12	100	1	1	
231+95 WB	CROSS CULVERT	CONCRETE	30	---	1	2	ENDWALLS ONLY
269+65 WB	CROSS CULVERT	CONCRETE	30	90	1	1	
283+04 WB - 284+94 WB	CROSS CULVERT	CONCRETE	24	191	3A	1	
283+20 WB	CROSS CULVERT	CONCRETE	24	110	1	1	
272+60 P	DRAIN	METAL	12	30	1	1	
275+40 P	DRAIN	METAL	12	90	1	1	
277+40 P	DRAIN	METAL	12	30	1	1	
277+70 P	DRAIN	METAL	12	50	1	1	
206+30 HW	CROSS CULVERT	CONCRETE	18	40	3A	1	
207+50 HU	CROSS CULVERT	CONCRETE	18	76	4	1	
207+00 HU	DRAIN	CONCRETE	12	88	4	1	
PROJECT ID 1071-06-78 SUMMARY						**21**	
PROJECT TOTAL						**34**	

REMOVING OLD STRUCTURE

ITEM	PROJECT	CATEGORY	STATION	DESCRIPTION	203.0200 LS
203.0200.01	1071-06-78	0050	233+50 WB	B-32-44 - IH90 WB OVER TRAIL	1

REMOVING SIGN BRIDGE

ITEM	DESCRIPTION	PROJECT	CATEGORY	STATION	LS
SPV.0105.20	S-32-29	1071-06-78	0010	309+10 WB	1
SPV.0105.21	S-32-30	1071-06-78	0010	331+25 WB	1

REMOVING CURB & GUTTER

STATION TO STATION	STAGE	204.0150 LF
140+60 C - 143+40 C	1	280
PROJECT ID 1071-06-77 SUMMARY		**280**
201+08 HW - 207+51 HW	2	615
272+00 P - 279+64 P	1	764
PROJECT ID 1071-06-78 SUMMARY		**1379**
PROJECT TOTAL		**1659**

REMOVING CONCRETE SLOPE PAVING

STATION TO STATION	LOCATION	204.0175 SY
143+85 C - 144+50 C	CTH B STRUCTURE	75
PROJECT ID 1071-06-77 SUMMARY		**75**
NONE		---
PROJECT ID 1071-06-78 SUMMARY		**0**
PROJECT TOTAL		**75**

ABATEMENT OF ASBESTOS CONTAINING MATERIAL

PROJECT	CATEGORY	LOCATION	203.0210.S.07 LS
1071-06-77	0030	STRUCTURE B-32-51	1

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

REMOVING GUARDRAIL

STATION TO STATION	LOCATION	STAGE	204.0165 LF
72+07 WB - 97+48 WB	LT	1	2541
72+07 WB - 74+39 WB	RT	1	232
99+07 WB - 101+12 WB	RT	1	205
99+07 WB - 102+50 WB	LT	1	343
103+97 WB - 107+21 WB	RT	1	324
104+65 WB - 107+33 WB	RT	1	544
105+38 WB - 110+38 WB	LT	1	500
156+09 WB - 168+77 WB	LT	1	1268
167+23 WB - 168+68 WB	RT	1	145
143+25 C - 145+15 C	LT	1	190
17+50 BW - 18+75 BW	LT	1	125
17+55 BW - 18+80 BW	RT	1	160
21+40 BW - 22+35 BW	LT	1	95
21+35 BW - 22+40 BW	RT	1	140
142+57 WB - 145+36 WB	RT	2	574
PROJECT ID 1071-06-77 SUMMARY			**7386**
174+58 WB - 185+03 WB	LT	1	1045
174+49 WB - 176+70 WB	RT	1	221
190+53 WB - 192+40 WB	RT	1	187
191+80 WB - 192+28 WB	RT	1	64
191+93 WB - 192+91 WB	LT	1	98
195+20 WB - 195+83 WB	RT	1	76
195+85 WB - 198+07 WB	RT	1	222
196+40 WB - 198+04 WB	LT	1	164
211+60 WB - 212+41 WB	LT	1	82
216+36 WB - 218+69 WB	LT	1	233
234+20 WB - 238+77 WB	LT	1	457
272+33 WB - 275+49 WB	RT	1	644
291+28 WB - 292+39 WB	LT	1	111
308+26 WB - 310+06 WB	LT	1	180
311+65 WB - 313+85 WB	LT	1	220
107+47 TS - 110+85 TS	LT	1A	338
107+50 TS - 112+07 TS	RT	1A	914
110+00 TN - 111+50 TN	RT	1A	150
210+30 WB - 212+12 WB	RT	2	182
216+08 WB - 218+90 WB	RT	2	282
232+78 WB - 232+89 WB	RT	3A	38
234+33 WB - 234+45 WB	RT	3A	38
308+24 WB - 310+07 WB	RT	3A	183
184+80 ET - 187+25 ET	LT	4B	250
PROJECT ID 1071-06-78 SUMMARY			**6379**
PROJECT TOTAL			**13765**

REMOVING FENCE

STATION TO STATION	LOCATION	204.0170 LF
72+00 WB - 97+60 WB	LT	2560
99+00 WB - 105+90 WB	LT	690
106+30 WB - 138+25 D	LT	3195
145+65 WB - 168+85 WB	LT	2320
16+00 BW - 18+85 BW	LT	331
18+85 BW - 18+94 BW	RT	75
21+39 BW - 21+72 BW	LT	52
21+43 BW - 21+85 BW	RT	61
PROJECT ID 1071-06-77 SUMMARY		**9284**
174+50 WB - 197+00 H	LT	2250
210+00 GU - 214+00 GU	LT	400
216+20 WB - 232+80 WB	LT	1660
234+10 WB - 248+00 WB	LT	1390
248+80 WB - 263+00 M	LT	1420
285+37 L - 310+00 WB	LT	2465
PROJECT ID 1071-06-78 SUMMARY		**9585**
PROJECT TOTAL		**18869**

REMOVING DELINEATOR AND MARKERS

STATION TO STATION	LOCATION	204.0180 EACH
71+97 WB - 97+60 WB	WB LANES	15
98+97 WB - 168+86 WB	WB LANES	35
PROJECT ID 1071-06-77 SUMMARY		**50**
174+40 WB - 192+86 WB	WB LANES	10
195+80 WB - 212+49 WB	WB LANES	25
215+98 WB - 232+85 WB	WB LANES	10
234+14 WB - 247+77 WB	WB LANES	10
249+06 WB - 310+05 WB	WB LANES	30
311+65 WB - 313+65 WB	WB LANES	5
PROJECT ID 1071-06-78 SUMMARY		**90**
PROJECT TOTAL		**140**

REMOVING SURFACE DRAINS

STATION TO STATION	LOCATION	204.0190 EACH
143+41 C	LT	1
21+30 BW - 21+46 BW	LT	1
21+33 BW - 21+50 BW	RT	1
PROJECT ID 1071-06-77 SUMMARY		**3**
192+07 WB	LT	1
196+50 WB	LT	1
212+35 G	LT	1
232+58 WB	LT	1
PROJECT ID 1071-06-78 SUMMARY		**4**
PROJECT TOTAL		**7**

REMOVING CONCRETE BASES

STATION	LOCATION	204.0195 EACH	COMMENTS
100+95 WB	LT	1	WEATHER STATION BASE
PROJECT ID 1071-06-77 SUMMARY		**1**	
NONE			
PROJECT ID 1071-06-78 SUMMARY		**0**	
PROJECT TOTAL		**1**	

REMOVING INLETS

STATION	LOCATION	STAGE	204.0220 EACH	COMMENTS
130+00 DU	LT	1	1	
142+00 C	LT	1	1	
143+41 C	LT	1	1	
PROJECT ID 1071-06-77 SUMMARY			**3**	
212+35 G	LT	1	1	
269+65 WB	RT	1	1	
272+60 P	RT	1	1	
275+40 P	RT	1	1	
276+30 P	RT	1	1	PATRIALLY REMOVE INLET AND CAP
277+40 P	RT	1	1	
277+70 P	RT	1	1	
283+04 WB	RT	1	1	
188+04 HT	RT	2	1	
~~216+55 WB~~	~~RT~~	~~2~~	~~1~~	
205+90 WB	LT	3A	1	INLET COVER ONLY
206+30 HW	LT	3A	1	
206+25 HW	RT	3A	1	
284+94 WB	LT	3A	1	
291+75 WB	RT	3A	1	
183+99 HV	LT	4	1	
185+84 HT	LT	4	1	
PROJECT ID 1071-06-78 SUMMARY			**17**	
PROJECT TOTAL			**20**	

ABANDONING CULVERT PIPES

STATION	204.0270 EACH
NONE	---
PROJECT ID 1071-06-77 SUMMARY	**0**
~~216+58 WB~~	~~1~~
291+72 WB	1
PROJECT ID 1071-06-78 SUMMARY	**2**
PROJECT TOTAL	**2**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

REMOVING FLEXIBLE TUBULAR MARKER POSTS AND BASES

STATION TO STATION	LOCATION	STAGE	204.9060.S.01 EACH
134+40 WB - 135+40 WB	RT	1	20
138+60 DT - 139+50 DT	RT	1	18
129+75 WB - 130+35 WB	RT	2	12
159+50 EB - 162+50 EB	LT	2	60
UNDISTRIBUTED			25
PROJECT ID 1071-06-77 SUMMARY			**135**
183+95 WB - 187+70 WB	RT	1	46
190+50 HT - 198+25 HT	LT	1	77
204+35 WB - 204+65 WB	RT	1	6
208+75 HU - 209+10 HU	RT/LT	1	7
220+40 WB - 226+40 WB	RT	1	120
262+55 MT - 264+75 MT	RT	1	44
283+50 WB - 286+00 WB	RT	1	50
UNDISTRIBUTED			25
PROJECT ID 1071-06-78 SUMMARY			**375**
PROJECT TOTAL			**510**

REMOVING APRON ENDWALL FOR PIPE UNDERDRAIN

LOCATION	204.9060.S.02 EACH
NONE	---
PROJECT ID 1071-06-77 SUMMARY	**---**
WB LANES - UNDISTRIBUTED	2
EB LANES - UNDISTRIBUTED	2
PROJECT ID 1071-06-78 SUMMARY	**4**
PROJECT TOTAL	**4**

REMOVING CRASH CUSHIONS LEFT IN PLACE

STATION	204.9060.S.03 EACH
130+20 DT	1
PROJECT ID 1071-06-77 SUMMARY	**1**
237+53 TW	1
252+17 TW	1
294+30 TW	1
PROJECT ID 1071-06-78 SUMMARY	**3**
PROJECT TOTAL	**4**

REMOVING PIPE UNDERDRAIN

STATION TO STATION	LOCATION	204.9090.S.01 LF
NONE		---
PROJECT ID 1071-06-77 SUMMARY		**---**
313+50 WB - 318+44 WB	LT	496
317+15 EB - 321+80 EB	LT	465
PROJECT ID 1071-06-78 SUMMARY		**961**
PROJECT TOTAL		**961**

REMOVING WEATHER STATION TOWER

STATION	LOCATION	204.9060.S.04 EACH
100+95 WB	LT	1
PROJECT ID 1071-06-77 SUMMARY		**1**
NONE		---
PROJECT ID 1071-06-78 SUMMARY		**---**
PROJECT TOTAL		**1**

BACKFILL CONTROLLED LOW STRENGTH

STATION	209.0200.S CY
NONE	---
PROJECT ID 1071-06-77 SUMMARY	**---**
~~216+58 WB~~	~~7~~
291+72 WB	14
PROJECT ID 1071-06-78 SUMMARY	**21**
PROJECT TOTAL	**21**

BASE AGGREGATE DENSE

STATION TO STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON
72+13 WB - 97+43 WB	WB LANES	1775	5970
99+14 WB - 168+61 WB	WB LANES	4070	21690
141+55 C - 143+66 C	C RAMP	45	505
133+57 D - 138+25 D	D RAMP	80	730
17+00 BW - 18+86 BW	CTH BW	50	660
21+31 BW - 23+00 BW	CTH BW	35	570
130+50 DU - 131+35 DU	DU RAMP (STAGE 1)	20	150
124+30 AT - 134+65 AT	AT/AU RAMPS	80	1350
135+63 DV - 138+32 DV	DV RAMP	50	320
140+75 CV - 143+35 CV	CV RAMP	50	340
146+75 WB - 152+55 WB	BU RAMP	70	600
PROJECT ID 1071-06-77 SUMMARY		**6325**	**32885**
174+63 WB - 192+50 WB	WB LANES	770	6575
196+08 WB - 212+16 WB	WB LANES	650	4930
216+30 WB - 247+61 WB	WB LANES	1470	11370
249+22 WB - 309+90 WB	WB LANES	2450	18715
311+80 WB - 313+65 WB	WB LANES	125	475
313+65 WB - 318+44 WB	WB SHOULDER LT	260	410
188+59 H - 197+00 H	H RAMP	280	2190
208+79 G - 212+16 G	G RAMP	55	560
260+93 M - 262+82 M	M RAMP	60	620
276+25 P - 279+64 P	P RAMP	35	915
287+33 L - 289+83 L	L RAMP	80	745
174+63 WB - 184+17 WB	ET RAMP/EU RAMP	180	1490
104+38 TN - 111+26 TN	TN WIDENING	165	720
107+35 TS - 116+57 TS	TS WIDENING	170	840
184+75 HV - 185+65 HV	HV RAMP (STAGE 1)	20	160
201+29 FU - 212+12 WB	FU RAMP	210	1220
202+40 GW - 209+10 GW	GW RAMP	130	975
200+86 HW - 207+51 HW	HW RAMP	210	1180
210+50 GU - 213+01 GU	GU RAMP	100	540
225+14 UW - 247+84 UW	UW WIDENING (STAGE 1)	---	5500
229+30 GU - 230+25 GU	GU RAMP (STAGE 1)	20	220
249+22 WB - 309+90 WB	KT RAMP/KU RAMP/JU RAMP	180	3170
251+00 MU - 253+00 MU	MU RAMP (STAGE 1)	40	290
291+60 LU - 293+00 LU	LU RAMP (STAGE 1)	30	210
311+81 WB - 321+90 WB	WB SHOULDER RT/TE CROSSOVER	190	2580
PROJECT ID 1071-06-78 SUMMARY		**7880**	**66600**
PROJECT TOTALS		**14205**	**99485**

FINISHING ROADWAY

LOCATION	213.0100 EACH
01. 1071-06-77	1
PROJECT ID 1071-06-77 SUMMARY	**1**
02. 1071-06-78	1
PROJECT ID 1071-06-78 SUMMARY	**1**
PROJECT TOTAL	**2**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

EARTHWORK SUMMARY

DIVISION	PROJECT	STATION TO STATION	LOCATION	205.0100 EXCAVATION COMMON CUT CY	205.0100 EXCAVATION COMMON EBS (8) CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL CY	(6) AVAILABLE MATERIAL CY	(9) EXPANDED EBS BACKFILL CY	(1) REDUCED EBS IN FILL CY	UNEXPANDED FILL CY	(2) (4) EXPANDED FILL CY	(5) MASS ORDINATE +/- CY	(3) 208.1100 SELECT BORROW CY
	1071-06-77	71+97 WB - 97+60 WB	WB LANES	6150	1900	2300	3850	2470	1520	663	1484	-2366	---
	1071-06-77	98+97 WB - 168+78 WB	WB LANES	27797	7800	6300	21497	10140	6240	3006	6421	-15076	---
	1071-06-77	141+60 C - 144+20 C	C RAMP	1104	100	600	504	130	80	318	404	-100	---
	1071-06-77	133+57 D - 138+25 D	D RAMP	1505	200	250	1255	260	160	31	112	-1143	---
	1071-06-77	15+72 BW - 18+86 BW	CTH BW	518	---	---	518	---	---	900	1035	517	---
	1071-06-77	21+32 BW - 23+75 BW	CTH BW	420	---	---	420	---	---	270	311	-110	---
	1071-06-77	132+41 AT - 134+65 AT	AT RAMP	300	---	---	300	---	---	18	21	-279	---
	1071-06-77	128+30 AU - 130+56 AU	AU RAMP	252	---	---	252	---	---	8	9	-243	---
	1071-06-77	146+75 BU - 148+57 BU	BU RAMP	224	---	---	224	---	---	47	54	-170	---
	1071-06-77	136+16 DU -138+32 DU	DU RAMP	31	---	---	31	---	---	---	---	-31	---
	1071-06-77	155+21 UE - 159+64	UE CROSSOVER	222	---	---	222	---	---	40	46	-176	---
	1071-06-78	174+40 WB - 192+13 WB	WB LANES	6277	3675	1575	4702	4778	2940	5020	7170	2468	---
	1071-06-78	196+28 WB - 212+33 WB	WB LANES	2946	3400	1425	1521	4420	2720	5565	7692	6171	---
	1071-06-78	215+98 WB - 247+77 WB	WB LANES	15753	6525	2825	12928	8483	5220	34222	41835	28907	---
	1071-06-78	249+06 WB - 310+07 WB	WB LANES	18839	9120	5425	13414	11856	7296	3614	7622	-5792	---
	1071-06-78	311+65 WB - 318+00 WB	WB LANES	1542	380	175	1367	494	304	8	154	-1213	---
	1071-06-78	208+79 G - 212+79 G	G RAMP	471	300	150	321	390	240	93	221	-100	---
	1071-06-78	188+59 H - 197+25 H	H RAMP	2725	3500	800	1925	4550	2800	20450	24848	22923	---
	1071-06-78	287+33 L - 291+50 L	L RAMP	1001	300	200	801	390	240	687	904	103	---
	1071-06-78	260+93 M - 262+82 M	M RAMP	868	100	450	418	130	80	69	117	-301	---
	1071-06-78	277+83 P - 279+65 P	P RAMP	869	100	550	319	130	80	13	53	-266	---
	1071-06-78	182+13 ET - 184+21 ET	ET RAMP	519	---	---	519	---	---	1959	2253	1734	---
	1071-06-78	179+07 EU - 181+27 EU	EU RAMP	184	---	---	184	---	---	---	---	-184	---
	1071-06-78	201+29 FU - 203+20 FU	FU RAMP	214	---	---	214	---	---	800	920	706	---
	1071-06-78	209+50 GU - 213+30 GU	GU RAMP	666	---	---	666	---	---	7632	8777	8111	---
	1071-06-78	200+00 GW - 209+10 GW	GW RAMP	724	---	---	724	---	---	118	136	-588	---
	1071-06-78	184+50 HV - 185+11 HV	HV RAMP	12	---	---	12	---	---	44	51	39	---
	1071-06-78	203+13 HW - 207+51 HW	HW RAMP	1748	---	550	1198	---	---	625	719	-479	---
	1071-06-78	259+64 JU - 265+00JU	JU RAMP	242	---	---	242	---	---	26	30	-212	---
	1071-06-78	257+54 JV - 259+50 JV	JV RAMP	127	---	---	127	---	---	41	47	-80	---
	1071-06-78	311+88 TE - 322+00 TE	TE CROSSOVER	616	---	---	616	---	---	185	213	-403	---
	1071-06-78	104+38 TN - 111+26 TN	TN WIDENING	517	---	---	517	---	---	3	3	-514	---
	1071-06-78	107+35 TS - 116+57 TS	TS WIDENING	596	---	---	596	---	---	22	25	-571	---
	1071-06-78	225+58 UW - 248+00 UW	UW WIDENING	865	---	---	865	---	---	5304	6100	5235	---
	1071-06-78	282+55 KT - 285+80 KT	KT RAMP	662	---	---	662	---	---	369	424	-238	---
	1071-06-78	288+71 KU - 291+46 KU	KU RAMP	311	---	---	311	---	---	1	1	-310	---
DIVISION 1 SUBTOTAL				97817	37400	23575	74242	48620	29920	92171	120209	45967	45967
		UNDISTRIBUTED (7)											20000
PROJECT ID 1071-06-77 SUMMARY				**48523**									**5000**
PROJECT ID 1071-06-78 SUMMARY				**86694**									**60967**
PROJECT TOTALS				**135217**									**65967**

(1) REDUCED EBS IN FILL IS EXCAVATED EBS MATERIAL THAT IS USUABLE OUTSIDE THE 1:1 SLOPES. EBS IN FILL REDUCTION FACTOR = 0.8
(2) EXPANSION FACTOR = 1.15
(3) SELECT BORROW = EXPANDED FILL - EXCAVATION COMMON
(4) EXPANDED FILL = (UNEXPANDED FILL - REDUCED EBS)* EXPANSION FACTOR + EXPANDED EBS BACKFILL
(5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. MINUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. PLUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
(6) AVAILABLE MATERIAL = COMMON EXCAVATION - SALVAGED/UNUSABLE MATERIAL
(7) UNDISTRIBUTED SELECT BORROW IS INCLUDED TO ACCOUNT FOR LACK OF AVAILABILITY OF MATERIALS DURING STAGING AND POTENTIAL UNUSABLE MATERIALS WITHIN THE PROJECT DURING THE EARLY STAGES OF CONSTRUCTION.
(8) EBS QUANTITY IS BASED ON OBSERVED TOPSOIL IN EXCESS OF 1' IN SOME AREAS. QUANTITIES SHOWN ARE UNDISTRIBUTED. VOLUMES FOR TEMPORARY ALIGNMENTS IS INCLUDED WITHIN THE PERMANENT ALIGNMENT VOLUMES.
(9) EXPANDED EBS BACKFILL 1.3

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

CONCRETE PAVEMENT

STATION TO STATION	LOCATION	~~415.0080 8 INCH SY~~	415.0090 9-INCH SY	415.0120 12-INCH SY
72+13 WB - 97+43 WB	WB LANES	---	---	10631
99+14 WB - 168+61 WB	WB LANES	---	---	30771
142+00 C - 143+66 C	C RAMP	280	---	---
133+57 D - 138+00 D	D RAMP	745	---	---
PROJECT ID 1071-06-77 SUMMARY		**1025**	**---**	**41402**
174+63 WB - 192+50 WB	WB LANES	---	---	7829
195+81 WB - 196+26 WB	SHOULDER, RT	---	---	43
196+08 WB - 212+16 WB	WB LANES	---	---	7086
216+30 WB - 247+61 WB	WB LANES	---	---	17978
249+22 WB - 309+90 WB	WB LANES	---	---	31394
311+80 WB - 313+65 WB	WB LANES	---	---	1025
188+59 H - 197+00 H	H RAMP	---	1413	---
208+79 G - 212+16 G	G RAMP	---	562	---
260+93 M - 262+82 M	M RAMP	---	319	---
276+25 P - 279+64 P	P RAMP	---	691	---
287+33 L - 289+83 L	L RAMP	---	417	---
PROJECT ID 1071-06-78 SUMMARY		---	**3402**	**65355**
PROJECT TOTALS		**1025**	**3402**	**106757**

BOTH RAMPS
12" PAVT

ROUTE AND SEAL

STATION - STATION	LOCATION	415.6000.S LF
72+13 WB - 75+27 WB	RT SHOULDER	314
78+34 WB - 83+60 WB	RT SHOULDER	526
94+28 WB - 97+36 WB	RT SHOULDER	308
99+14 WB - 109+40 WB	RT SHOULDER	1026
116+63 WB - 117+37 WB	RT SHOULDER	74
120+07 WB - 138+00 D	LT SHOULDER	1793
135+63 D - 138+00 D	RT SHOULDER	237
142+00 C - 142+18 C	RT SHOULDER	18
142+00 C - 152+51 WB	LT SHOULDER	1051
156+69 WB - 168+56 WB	RT SHOULDER	1187
PROJECT ID 1071-06-77 SUMMARY		**6534**
176+66 WB - 197+00 H	LT SHOULDER	2034
185+63 WB - 191+91 WB	RT SHOULDER	628
190+66 H - 197+00 H	RT SHOULDER	634
196+26 WB - 201+02 WB	RT SHOULDER	476
210+74 G - 212+15 G	LT SHOULDER	141
216+31 WB - 247+61 WB	RT SHOULDER	3130
249+28 WB - 309+90 WB	RT SHOULDER	6062
254+44 WB - 255+48 WB	LT SHOULDER	104
260+92 M - 262+81 M	LT SHOULDER	189
267+92 P - 279+35 P	LT SHOULDER	1143
287+34 L - 289+46 L	LT SHOULDER	212
PROJECT ID 1071-06-78 SUMMARY		**14753**
PROJECT TOTAL		**21287**

DRILLED DOWEL BARS

STATION	LOCATION	416.0620 EACH
NONE		---
PROJECT ID 1071-06-77 SUMMARY		**---**
262+82 M	M RAMP	14
279+64 P	P RAMP	14
287+33 L	L RAMP	14
313+65 WB	WB LANES	35
PROJECT ID 1071-06-78 SUMMARY		**77**
PROJECT TOTAL		**77**

CONCRETE PAVEMENT APPROACH SLAB

STATION	LOCATION	415.0410 SY
72+00 WB	B-32-47 (EAST END)	42
97+50 WB	B-32-49 (WEST END)	42
99+10 WB	B-32-49 (EAST END)	42
168+75 WB	B-32-35 (WEST END)	56
18+86 BW	CTH BW	45
21+31 BW	CTH BW	45
PROJECT ID 1071-06-77 SUMMARY		**272**
174+50 WB	B-32-35 (EAST END)	52
192+07 WB	B-32-219 (WEST END)	91
196+26 WB	B-32-219 (EAST END)	94
212+50 WB	B-32-40 (WEST END)	117
216+25 WB	B-32-40 (EAST END)	96
247+75 WB	B-32-108 (WEST END)	63
249+10 WB	B-32-108 (EAST END)	63
310+00 WB	B-32-190 (WEST END)	63
311+75 WB	B-32-190 (EAST END)	63
PROJECT ID 1071-06-78 SUMMARY		**702**
PROJECT TOTAL		**974**

DRILLED TIE BARS

STATION TO STATION	LOCATION	416.0610 EACH
71+97 WB - 72+07 WB	RT/LT (TIE INTO EXISTING STRUCTURE)	20
97+48 WB - 97+58 WB	RT/LT (TIE INTO EXISTING STRUCTURE)	20
98+98 WB - 99+08 WB	RT/LT (TIE INTO EXISTING STRUCTURE)	20
168+68 WB - 168+88 WB	RT/LT (TIE INTO EXISTING STRUCTURE)	20
PROJECT ID 1071-06-77 SUMMARY		**80**
174+38 WB - 174+58 WB	RT/LT (TIE INTO EXISTING STRUCTURE)	20
212+12 WB - 212+54 WB	RT/LT (TIE INTO EXISTING STRUCTURE)	30
215+94 WB - 216+36 WB	RT/LT (TIE INTO EXISTING STRUCTURE)	30
247+66 WB - 247+76 WB	RT/LT (TIE INTO EXISTING STRUCTURE)	20
249+06 WB - 249+16 WB	RT/LT (TIE INTO EXISTING STRUCTURE)	20
309+95 WB - 310+05 WB	RT/LT (TIE INTO EXISTING STRUCTURE)	10
311+65 WB - 311+75 WB	RT/LT (TIE INTO EXISTING STRUCTURE)	10
PROJECT ID 1071-06-78 SUMMARY		**140**
PROJECT TOTAL		**220**

CONCRETE SURFACE DRAINS

STATION	LOCATION	416.1010 CY
97+50 WB	RT	5.2
97+50 WB	LT	8.9
168+70 WB	RT	5.1
168+70 WB	LT	6.3
18+75 BW	LT	3.7
18+75 BW	RT	7.1
21+40 BW	LT	3.7
21+40 BW	RT	7.1
PROJECT ID 1071-06-77 SUMMARY		**47.1**
191+85 WB	RT	8.1
192+55 WB	LT	4.9
212+25 WB	RT	12.1
212+25 WB	LT	11.6
247+75 WB	RT	8.9
247+75 WB	LT	10.7
311+75 WB	RT	3.9
311+75 WB	LT	6.5
PROJECT ID 1071-06-78 SUMMARY		**66.7**
PROJECT TOTAL		**113.8**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

HMA PAVEMENT ITEMS

STATION TO STATION	LOCATION	460.1100 HMA PAVEMENT TYPE E-0.3 TON	460.1103 HMA PAVEMENT TYPE E-3 TON	460.1110 HMA PAVEMENT TYPE E-10 TON	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	455.0105 ASPHALTIC MATERIAL PG58-28 TON
72+13 WB - 75+27 WB	WB SHOULDER RT	15	---	---	---	---	0.8
78+34 WB - 83+59 WB	CROSSOVER	---	---	153	---	---	8.4
94+28 WB - 97+36 WB	WB SHOULDER RT	14	---	---	---	---	0.8
99+14 WB - 109+40 WB	WB SHOULDER RT	45	---	---	---	---	2.5
17+00 BW - 18+86 BW	CTH BW	---	156	---	---	---	7.8
21+31 BW - 23+00 BW	CTH BW	---	142	---	---	---	8.6
116+63 WB - 117+37 WB	MAINTANANCE CROSSOVER	---	---	---	19	---	---
130+50 DU - 131+35 DU	DU RAMP (STAGE 1)	---	---	---	---	20	---
124+96 AT - 134+68 AT	AT/AU RAMPS	---	282	---	---	---	15.5
135+63 DV - 138+32 DV	DV RAMP	---	77	---	---	---	4.2
120+07 WB - 138+00 D	D RAMP SHOULDER LT	187	---	---	---	---	10.3
138+00 D - 138+25 D	D RAMP TIE IN	---	11	---	---	---	0.6
140+75 CV - 143+35 CV	CV RAMP	---	104	---	---	---	5.7
141+55 C - 142+00 C	C RAMP TIE IN	---	20	---	---	---	1.1
142+00 C - 142+18 C	C RAMP SHOULDER RT	2	---	---	---	---	0.1
142+00 C - 152+51 WB	C RAMP SHOULDER LT	---	174	---	---	---	9.6
146+60 BU - 152+53 BU	BU RAMP	---	98	---	---	---	5.4
156+69 WB - 168+56 WB	WB SHOULDER RT/BT RAMP/CU RAMP	---	---	630	---	---	34.7
PROJECT ID 1071-06-77 SUMMARY		**263**	**1064**	**783**	**19**	**20**	**116**
174+63 WB - 187+22 ET	WB SHOULDER RT/ET RAMP/EU RAMP	---	411	---	---	---	22.6
176+66 WB - 197+00 H	H RAMP SHOULDER LT	---	323	---	---	---	17.8
184+75 HV - 185+68 HV	HV RAMP (STAGE 1)	---	---	---	---	24	---
190+66 H - 197+00 H	H RAMP SHOULDER RT	42	---	---	---	---	2.3
197+00 H - 197+25 H	H RAMP TIE IN	---	14	---	---	---	0.8
107+35 TS - 116+57 TS	TS WIDENING	---	126	---	---	---	6.9
185+64 WB - 191+91 WB	WB SHOULDER RT	116	---	---	---	---	6.4
196+26 WB - 201+03 WB	WB SHOULDER RT	112	---	---	---	---	6.2
197+64 WB - 212+12 WB	WB SHOULDER RT/FU RAMP	---	401	---	---	---	22.1
202+40 GW - 209+10 GW	GW RAMP	---	212	---	---	---	11.7
200+86 HW - 207+51 HW	HW RAMP	---	177	---	---	---	9.7
210+50 GU - 213+30 GU	GU RAMP	---	98	---	---	---	5.4
216+31 WB - 247+61 WB	WB SHOULDER RT	---	---	530	---	---	29.2
225+14 UW - 247+90 UW	UW WIDENING (STAGE 1)	---	---	---	---	1597	---
229+30 GU - 230+25 GU	GU RAMP (STAGE 1)	---	---	---	---	45	---
249+22 WB - 309+90 WB	WB SHOULDER RT/KT RAMP/KU RAMP/JU RAMP	---	---	1378	---	---	75.8
254+44 WB - 264+00 M	M RAMP SHOULDER LT	65	---	---	---	---	3.6
251+00 MU - 253+00 MU	MU RAMP (STAGE 1)	---	---	---	---	30	---
284+45 WB - 287+33 WB	WB SHOULDER LT	---	---	20	---	---	1.1
286+00 L - 291+28 L	WB SHOULDER LT/L RAMP SHOULDER LT	56	---	---	---	---	3.1
291+60 LU - 293+00 LU	LU RAMP (STAGE 1)	---	---	---	---	22	---
311+81 WB - 321+93 TE	WB SHOULDER RT/TE CROSSOVER	---	---	652	---	---	35.9
313+65 WB - 318+44 WB	WB SHOULDER LT	---	---	151	---	---	8.3
PROJECT ID 1071-06-78 SUMMARY		**391**	**1762**	**2731**	**0**	**1718**	**269**
PROJECT TOTALS		**654**	**2826**	**3514**	**19**	**1738**	**385.0**

ASPHALTIC FLUME

STATION	LOCATION	465.0315 SY
105+87 WB	LT	12
145+05 C	LT	9
PROJECT ID 1071-06-77 SUMMARY		**21**
273+25 P	LT	10
279+64 P	LT	17
PROJECT ID 1071-06-78 SUMMARY		**27**
PROJECT TOTAL		**48**

CONCRETE COLLARS FOR PIPE

STATION	LOCATION	520.8000 EACH
UNDISTRIBUTED	PROJECT LIMITS	1
PROJECT ID 1071-06-77 SUMMARY		**1**
UNDISTRIBUTED	PROJECT LIMITS	3
PROJECT ID 1071-06-78 SUMMARY		**3**
PROJECT TOTAL		**4**

CONCRETE CURB AND GUTTER

STATION TO STATION	LOCATION	601.0411 30-INCH TYPE D LF	601.0110 CONCRETE CURB TYPE D LF
140+61 C - 140+90 C	C RAMP LT	29	---
18+79 BW - 18+88 BW	RT	---	9
21+34 BW - 21+43 BW	RT	---	9
PROJECT ID 1071-06-77 SUMMARY		**29**	**18**
279+35 P - 279+63 P	LT	28	---
PROJECT ID 1071-06-78 SUMMARY		**28**	**---**
PROJECT TOTALS		**57**	**18**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

CULVERT PIPE CORREGATED STEEL

STRUCTURE NUMBER	STATION	OFFSET	521.0112 CULVERT PIPE CORREGATED STEEL 12-INCH LF	521.0115 CULVERT PIPE CORREGATED STEEL 15-INCH LF	521.0118 CULVERT PIPE CORREGATED STEEL 18-INCH LF	521.0124 CULVERT PIPE CORREGATED STEEL 24-INCH LF	INVERT IN	INVERT OUT	SLOPE	521.1012 APRON ENDWALLS FOR CPS 12-INCH EACH	521.1015 APRON ENDWALLS FOR CPS 15-INCH EACH	521.1018 APRON ENDWALLS FOR CPS 18-INCH EACH	521.1024 APRON ENDWALLS FOR CPS 24-INCH EACH	THICKNESS INCHES
AE 126	133+00 AT	17.3 RT	148	---	---	---	---	651.01	---	1	---	---	---	0.064
AE 127	134+38 AT	31.3 LT	---	---	---	---	650.72	---	-0.20%	1	---	---	---	
AE 131	147+50 BU	15.7 RT	178	---	---	---	---	646.88	---	1	---	---	---	0.064
AE 132	145+75 BU	27.7 LT	---	---	---	---	647.21	---	0.19%	1	---	---	---	
PROJECT ID 1071-06-77 SUMMARY			**326**	**0**	**0**	**0**				**4 ***	**0**	**0**	**0**	
AE 182	184+50 ET	22 RT	132	---	---	---	653.64	---	---	1	---	---	---	0.064
AE 183	185+50 ET	60 LT	---	---	---	---	---	646.03	5.77%	1	---	---	---	
AE 180	198+89 WB	41 RT	---	---	154	---	664.70	---	---	---	---	1	---	0.064
AE 181	197+35 WB	38 RT	---	---	---	---	---	662.49	1.44%	---	---	1	---	
AE 184	200+50 FU	17 RT	80	---	---	---	664.54	---	---	1	---	---	---	0.064
AE 185	200+00 FU	44 LT	---	---	---	---	---	660.79	4.69%	1	---	---	---	
AE 162	315+25 TE	27.2 RT	---	428	---	---	718.48	---	---	---	1	---	---	0.064
AE 163	319+50 TE	27.2 LT	---	---	---	---	---	717.00	0.35%	---	1	---	---	
AE 161	196+26 H	78 LT	---	---	---	26	---	637.61	---	---	---	---	1	0.064
PROJECT ID 1071-06-77 SUMMARY			**212**	**428**	**154**	**26**				**4 ***	**2**	**2**	**1**	
PROJECT TOTALS			**538**	**428**	**154**	**26**				**23 ***	**2**	**2**	**1**	

NOTE:
OFFSET IS MEASURED TO THE TOP OF PIPE DAYLIGHTS.
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS**

SLOPE PAVING

STATION TO STATION	LOCATION	604.0400 CONCRETE SY	604.0500 CRUSHED AGGREGATE SY
143+85 C - 144+50 C	CTH B STRUCTURE	35	---
PROJECT ID 1071-06-77 SUMMARY		**35**	**---**
273+50 P - 274+10 P	STH 157 STRUCTURE	---	30
274+50 P - 275+10 P	STH 157 STRUCTURE	---	30
PROJECT ID 1071-06-78 SUMMARY		**---**	**60**
PROJECT TOTALS		**35**	**60**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

STORM SEWER SCHEDULE

STRUCTURE NUMBER	STATION	OFFSET	522.0112 CULVERT PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	522.0118 CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH LT	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	522.0324 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.0530 CULVERT PIPE REINFORCED CONCRETE CLASS V 30-INCH LF	INVERT IN	INVERT OUT	RIM EL	DEPTH LF	SLOPE	522.1012 APRON ENDWALLS FOR CPRC 12-INCH EACH	522.1018 APRON ENDWALLS FOR CPRC 18-INCH EACH	522.1024 APRON ENDWALLS FOR CPRC 24-INCH EACH	522.1030 APRON ENDWALLS FOR CPRC 30-INCH EACH	522.1036 APRON ENDWALLS FOR CPRC 36-INCH EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.3225 INLET 2 X 2.5 FT EACH	611.0642 INLET COVERS TYPE MS EACH	611.0660 INLET COVERS TYPE WM EACH	SPV.0060.04 COVER PLATES TEMPORARY LEFT IN PLACE EACH
AE 170	99+87 WB	73 LT	---	---	52	---	---	---	---	---	646.89	---	---	---	---	---	1	---	---	---	---	---	---	---
AE 171	100+31 WB	51 LT	---	---	---	---	---	---	---	650.39	---	---	---	6.73%	---	---	1	---	---	---	---	---	---	---
AE 150	105+40 WB	52' LT	---	---	---	160	---	---	---	---	652.89	---	---	---	---	---	---	1	---	---	---	---	---	---
AE 151	107+00 WB	50' LT	---	---	---	---	---	---	---	653.30	---	---	---	0.26%	---	---	---	1	---	---	---	---	---	---
AE 100	119+10 WB	64 LT	---	---	94	---	---	---	---	---	653.95	---	---	---	---	---	1	---	---	---	---	---	---	---
COVER PLATE	119+10 WB	30 RT	---	---	---	---	---	---	---	654.25	---	---	---	0.32%	---	---	---	---	---	---	---	---	---	1
AE 102	129+00 WB	66 LT	---	---	---	---	---	90	---	---	651.41	---	---	---	---	---	1	---	---	---	---	---	---	---
AE 103	129+00 WB	24 RT	---	---	---	---	---	---	---	652.74	---	---	---	1.48%	---	---	1	---	---	---	---	---	---	---
AE 104	138+05 D	24 LT	---	---	96	---	---	---	---	646.50	---	---	---	---	---	---	1	---	---	---	---	---	---	---
AE 105	138+05 D	72 RT	---	---	---	---	---	---	---	---	646.00	---	---	0.52%	---	---	1	---	---	---	---	---	---	---
AE 152	142+50 C	50' LT	---	---	---	---	140	---	---	---	639.42	---	---	---	---	---	---	---	1	---	---	---	---	---
INL 153	142+58 WB	30' RT	---	---	---	---	---	---	---	638.32	---	647.57	9.25	-0.79%	---	---	---	---	---	1	---	2	---	1
AE 106	151+00 WB	65 LT	---	---	92	---	---	---	---	---	639.83	---	---	---	---	---	1	---	---	---	---	---	---	---
INL 107	151+00 WB	27 RT	---	---	---	---	---	---	---	643.06	---	646.06	3.00	3.51%	---	---	---	---	---	1	---	2	---	---
AE 108	157+00 WB	62 LT	---	---	92	---	---	---	---	---	637.41	---	---	---	---	---	1	---	---	---	---	---	---	---
INL 109	157+00 WB	30 RT	---	---	---	---	---	---	---	639.64	---	644.64	5.00	2.42%	---	---	---	---	---	1	---	2	---	---
AE 160	157+07 WB	30 RT	---	232	---	---	---	---	---	---	644.64	---	---	---	---	1	---	---	---	---	---	---	---	---
AE 128	140+78 C	44.5 LT	---	---	42	---	---	---	---	---	642.45	---	---	---	---	---	1	---	---	---	---	---	---	---
INL 129	140+78 C	2.5 LT	---	---	---	---	---	---	---	643.11	---	649.20	4.74	1.57%	---	---	---	---	---	---	1	---	1	---
EX. AE 130	140+78 C	53 RT	---	---	---	---	---	---	---	644.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
PROJECT ID 1071-06-77 SUMMARY			**0**	**232**	**468**	**160**	**140**	**90**	**0**						**0**	**1**	**10**	**2**	**1**	**3**	**1 ***	**6**	**1**	**2**

NOTES:

NOTE: OFFSET IS MEASURED TO THE TOP OF PIPE DAYLIGHTS OR CENTER OF INLET STRUCTURE

TIE JOINTS AS SPECIFIED IN SECTION 520.3.3 OF THE STANDARD SPECIFICATIONS, 6 JOINT TIES REQUIRED AT PIPE ENDS.

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

STORM SEWER SCHEDULE

STRUCTURE NUMBER	STATION	OFFSET	522.0112 CULVERT PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	522.0118 CLASS III 18-INCH LT	522.0124 CLASS III 24-INCH LF	522.0130 CLASS III 30-INCH LF	522.0136 CLASS III 36-INCH LF	522.0324 CLASS IV 24-INCH LF	522.0530 CLASS V 30-INCH LF	INVERT IN	INVERT OUT	RIM EL	DEPTH LF	SLOPE	522.1012 APRON ENDWALLS FOR CPRC 12-INCH EACH	522.1018 18-INCH EACH	522.1024 24-INCH EACH	522.1030 30-INCH EACH	522.1036 36-INCH EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.3225 INLET 2 X 2.5 FT EACH	611.0642 INLET COVERS TYPE MS EACH	611.0660 INLET COVERS TYPE WM EACH	SPV.0060.04 COVER PLATES TEMPORARY LEFT IN PLACE EACH
AE 110	174+90 WB	60 LT	---	---	90	---	---	---	---	---	643.78	---	---	---	---	---	1	---	---	---	---	---	---	---
INL 111	174+90 WB	30 RT	---	---	---	---	---	---	---	646.40	---	651.40	5.00	2.91%	---	---	---	---	---	1	---	2	---	---
AE 112	183+90 WB	64 LT	---	---	82	---	---	---	---	---	647.38	---	---	---	---	---	1	---	---	---	---	---	---	---
INL 113	183+80 ET	37 LT	---	---	---	---	---	---	---	648.96	---	653.96	5.00	1.93%	---	---	---	---	---	1	---	2	---	---
INL 113A	182+50 ET	15.3 RT	142	---	---	---	---	---	---	649.70	649.01	652.70	3.00	0.49%	---	---	---	---	---	1	---	2	---	---
CONNECT TO EX INL	205+90 WB	48 LT	---	---	88	---	---	---	---	---	658.24	---	---	---	---	---	---	---	---	---	---	---	---	1
INL 115	205+90 WB	39 RT	---	---	---	---	---	---	---	662.69	---	666.69	4.00	5.06%	---	---	---	---	---	1	---	2	---	---
~~AE 116~~	~~216+70 WB~~	~~78 LT~~	~~---~~	~~---~~	~~110~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~671.43~~						~~1~~					~~---~~	~~---~~	~~---~~
~~INL 117~~	~~216+70 WB~~	~~32 RT~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~671.79~~	~~---~~	~~675.29~~	~~3.50~~	~~0.33%~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~1~~	~~---~~	~~2~~	~~---~~	~~---~~
~~AE 118~~	~~234+53 WB~~	~~135 LT~~							~~2 x 166'~~	~~671.20~~								~~2~~				~~---~~	~~---~~	~~---~~
~~COVER PLATE~~	~~234+90 WB~~	~~34 RT~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~670.65~~	~~---~~	~~---~~	~~0.33%~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~---~~	~~2~~
AE 120	269+65 WB	72 LT	---	---	100	---	---	---	---	---	698.44	---	---	---	---	---	1	---	---	---	---	---	---	---
INL 121	269+65 WB	26 RT	---	---	---	---	---	---	---	698.03	---	702.43	4.40	-0.41%	---	---	---	---	---	1	---	2	---	---
AE 122	283+04 WB	77 LT	---	---	---	---	100	---	---	---	701.51	---	---	---	---	---	---	---	1	---	---	---	---	---
INL 154	283+04 WB	26' RT	---	---	---	---	---	---	---	701.85	---	709.69	7.84	0.34%	---	---	---	---	---	1	---	2	---	---
INL 123	284+50 KT	12.5 RT	350	---	---	---	---	---	---	706.42	704.00	710.42	4.00	0.69%	---	---	---	---	---	1	---	2	---	---
INL 155	290+50 KU	20' RT	396	---	---	---	---	---	---	708.38	706.42	711.38	3.00	0.49%	---	---	---	---	---	1	---	2	---	---
AE 124	292+00 WB	78 LT	---	---	112	---	---	---	---	---	708.52	---	---	---	---	---	1	---	---	---	---	---	---	---
INL 125	292+00 WB	34 RT	---	---	---	---	---	---	---	709.67	---	712.67	3.00	1.03%	---	---	---	---	---	1	---	2	---	---
AE 164	281+00 KT	36 LT	112	---	---	---	---	---	---	---	707.80	---	---	---	1	---	---	---	---	---	---	---	---	---
INL 165	282+00 KT	14 RT	---	---	---	---	---	---	---	708.28	---	710.78	2.50	0.43%	---	---	---	---	---	1	---	2	---	---
AE 167	296+75 WB	105 LT	---	---	---	128	---	---	---	---	703.01	---	---	---	---	---	---	1	---	---	---	---	---	---
COVER PLATE	296+75 WB	30 RT	---	---	---	---	---	---	---	703.71	---	---	---	0.55%	---	---	---	---	---	---	---	---	---	1
AE 168	234+65 WB	122 LT	---	---	---	2 x 16'	---	---	---	671.48	671.39	---	---	0.56%	---	---	---	2	---	---	---	---	---	---
PROJECT ID 1071-06-77 SUMMARY			**1000**	**0**	**582**	**168**	**100**	**0**	**332**						**1**	**0**	**5**	**5**	**1**	**11**	**0**	**22**	**0**	**4**
PROJECT TOTALS			**1000**	**232**	**1050**	**328**	**240**	**90**	**332**						**1**	**1**	**15**	**7**	**2**	**14**	**33 ***	**28**	**1**	**6**

NOTES:

NOTE: OFFSET IS MEASURED TO THE TOP OF PIPE DAYLIGHTS OR CENTER OF INLET STRUCTURE

TIE JOINTS AS SPECIFIED IN SECTION 520.3.3 OF THE STANDARD SPECIFICATIONS, 6 JOINT TIES REQUIRED AT PIPE ENDS.

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS**

ADDED 24" CLASS III RCCP AND MEDIAN 2 GRATE INLET AT STATION 300+00.

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

DROP INLETS

STRUCTURE NUMBER	STATION	OFFSET	LOCATION	611.3225 INLETS 2x2.5-FT EACH	611.0654 INLET COVERS TYPE V EACH	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	GRATE ELEV	TOP OF BOX ELEV	OUTLET INVERT ELEV	STRUCTURE DEPTH FT	COMMENTS
INL 126	97+37 WB	32.4 LT	END OF B-32-47	1	1	---	6	652.03	651.03	648.03	3.00	
INL 127	97+43 WB	32.4 LT	END OF B-32-47	1	1	1	20	652.06	651.06	647.97	3.09	
INL 128	97+37 WB	4.4 RT	END OF B-32-47	1	1	---	6	652.19	651.19	649.19	2.00	
INL 129	97+43 WB	4.4 RT	END OF B-32-47	1	1	1	20	652.22	651.22	649.13	2.09	
INL 130	168+67 WB	28.9 LT	END OF B-32-35	1	1	---	6	652.94	651.94	648.94	3.00	
INL 131	168+73 WB	28.9 LT	END OF B-32-35	1	1	1	20	652.97	651.97	648.88	3.09	
INL 132	168+57 WB	4.9 RT	END OF B-32-35	1	1	---	6	652.90	651.90	649.90	2.00	
INL 133	168+63 WB	4.9 RT	END OF B-32-35	1	1	1	20	652.93	651.93	649.84	2.09	
INL 300	18+67 BW	15 LT	END OF B-32-51	1	1	1	45	679.32	678.32	674.32	4.00	
INL 301	18+70 BW	21 RT	END OF B-32-51	1	1	1	6	679.10	678.10	675.10	3.00	
INL 302	18+64 BW	21 RT	END OF B-32-51	1	1	-1-	60	679.07	678.07	675.00	3.07	
INL 303	21+47 BW	15 LT	END OF B-32-51	1	1	1	45	675.51	674.51	670.21	4.30	
INL 304	21+53 BW	15 LT	END OF B-32-51	1	1	---	6	675.31	674.31	670.31	4.00	
INL 305	21+51 BW	21 RT	END OF B-32-51	1	1	1	50	675.15	674.15	670.85	3.30	
INL 306	21+57 BW	21 RT	END OF B-32-51	1	1	---	6	674.95	673.95	670.95	3.00	
PROJECT ID 1071-06-77 SUMMARY				**15 ***	**15**	**8 ***	**322**					
INL 134	192+55 WB	35 LT	END OF B-32-219	1	1	---	10	666.78	665.78	662.78	3.00	
INL 135	192+61 WB	35 LT	END OF B-32-219	1	1	1	20	666.83	665.83	662.72	3.11	
INL 136	191+83 WB	20.9 RT	END OF B-32-219	1	1	---	6	667.46	666.46	664.46	2.00	
INL 137	191+89 WB	20.9 RT	END OF B-32-219	1	1	1	20	667.51	666.51	664.40	2.11	
INL 138	212+29 WB	47 LT	END OF B-32-40	1	1	---	6	673.73	672.73	669.73	3.00	
INL 139	212+35 WB	46.5 LT	END OF B-32-40	1	1	1	25	673.80	672.80	669.67	3.13	
INL 140	212+02 WB	8.9 RT	END OF B-32-40	1	1	1	20	673.73	672.73	670.73	2.00	
INL 141	212+08 WB	8.9 RT	END OF B-32-40	1	1	---	6	673.79	672.79	670.67	2.12	
INL 142	249+21 WB	46.9 LT	END OF B-32-108	1	1	---	25	714.36	713.36	710.27	3.09	TIE PIPE INTO EX. SS (INCIDENTAL)
INL 143	249+27 WB	46.9 LT	END OF B-32-108	1	1	---	6	714.33	713.33	710.33	3.00	
INL 144	249+21 WB	8.9 RT	END OF B-32-108	1	1	1	20	714.68	713.68	711.59	2.09	
INL 145	249+27 WB	8.9 RT	END OF B-32-108	1	1	---	6	714.65	713.65	711.65	2.00	
INL 146	311+70 WB	44.9 LT	END OF B-32-190	1	1	1	30	722.34	721.34	718.27	3.07	
INL 147	311+76 WB	44.9 LT	END OF B-32-190	1	1	---	6	722.33	721.33	718.33	3.00	
INL 148	311+70 WB	4.9 RT	END OF B-32-190	1	1	1	20	722.74	721.74	719.67	2.07	
INL 149	311+76 WB	4.9 RT	END OF B-32-190	1	1	---	6	722.73	721.73	719.73	2.00	
PROJECT ID 1071-06-78 SUMMARY				**16 ***	**16**	**7 ***	**232**					
PROJECT TOTALS				**33 ***	**31**	**23 ***	**554**					

NOTES:
- ALL SUBSURFACE ELEVATIONS ARE PIPE FLOWLINES
- STRUCTURE DEPTH = DISTANCE FROM TOP OF BOX TO DISCHARGE ELEVATION
- TOP OF BOX ELEVATION = GRATE ELEVATION - (10")INLET COVER DEPTH - (2") ADJUSTMENT
- GRATE ELEVATION MEASURED FROM THE FLOWLINE OF THE INLET
- OFFSETS ARE MEASURED TO THE CENTER OF THE INLET
- ALL PIPES ARE MEASURE CENTER OF STRUCTURE TO CENTER OF STRUCTURE
- MINIMUM STRUCTURE DEPTH IS 2.0'
- THE PIPE UNDERDRAIN MAY BE CORRUGATED POLYETHYLENE, POLYVINYL CHLORIDE, OR ACRYLONITRILE-BUTADIENE-STYRENE DRAINAGE PIPES AS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2.

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS**

CONCRETE SIDEWALK 5-INCH

STATION TO STATION	LOCATION	602.0410 SF
18+79 BW - 18+88 BW	RT	53
21+34 BW - 21+43 BW	RT	53
PROJECT ID 1071-06-77 SUMMARY		**106**
NONE		---
PROJECT ID 1071-06-78 SUMMARY		**---**
PROJECT TOTAL		**106**

CURB RAMP DETECTABLE WARNING FIELD YELLOW

STATION	LOCATION	602.0505 SF
18+80 BW	RT	8
21+42 BW	RT	8
PROJECT ID 1071-06-77 SUMMARY		**16**
NONE		---
PROJECT ID 1071-06-78 SUMMARY		**---**
PROJECT TOTAL		**16**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

CONCRETE BARRIER TEMPORARY PRECAST

STATION TO STATION	LOCATION	STAGE	603.8000 DELIVERED LF	603.8125 INSTALLED LF	614.0905 CRASH CUSHION TEMPORARY LF	OBJECT MARKING PATTERN	CRASH TEST LEVEL	BACK WIDTH	TRAFFIC LOCATION	TRAFFIC DIRECTION	CRASH CUSHION SHIELDS
133+15 DT - 140+18 DT	LT	1	703	703	1	OM-3R	TL-3	2	LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
140+10 CT - 147+61 EB	LT	1	750	750	1	OM-3R	TL-3	2	LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
141+81 CU - 150+83 CU	RT	2	350	902	1	OM-3L	TL-3	2	RT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
132+00 WB - 133+10 WB	RT	2	110	110	---	---	---	---	---	---	---
128+50 EB - 132+50 EB	LT	3A	400	400	---	---	---	---	---	---	---
131+50 WB - 132+00 WB	RT	3A	50	50	---	---	---	---	---	---	---
132+50 WB - 133+72 WB	RT	3A	125	125	---	---	---	---	---	---	---
159+35 EB - 163+35 EB	RT	3A	400	400	1	OM-3R	TL-3	2	LT	BIDIRECTIONAL	TEMPORARY CONCRETE BARRIER BETWEEN TRAFFIC
PROJECT ID 1071-06-77 SUMMARY			**2888**	**3440**	**4**	**---**					
177+90 HT - 201+00 HT	LT	1	2310	2310	1	OM-3R	TL-3	2	LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
206+61 EB - 228+00 EB	MEDIAN	1	2139	2139	1	OM-3L	TL-3	2	RT/LT	BIDIRECTIONAL	TEMPORARY CONCRETE BARRIER BETWEEN TRAFFIC
207+31 GT - 266+00 MT	LT	1	5850	5850	1	OM-3R	TL-3	2	LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
283+67 TW - 288+00 TW	LT	1	433	433	1	OM-3R	TL-3	2	RT/LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER IN GORE
284+65 LT - 314+43 EB	LT	1	2978	2978	1	OM-3R	TL-3	2	LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
202+25 GW - 205+75 GW	LT	1B	660	660	---	---	---	---	---	---	---
108+25 TN - 111+75 TN	LT	1B	350	350	1	OM-3R	TL-3	2	LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
108+60 TN - 112+25 TN	RT	1B	365	365	1	OM-3L	TL-3	2	RT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
182+00 HV	LT	2	---	---	1	OM-3R	TL-3	2	LT	BIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
186+69 HV - 200+25 HT	RT	2	300	1331	1	OM-3L	TL-3	2	RT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
210+74 GU - 229+90 GU	RT	2	1916	1916	1	OM-3C	TL-3	6	RT/LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER IN GORE
229+46 GU - 232+39 GU	LT	2	293	293	---	---	---	---	---	---	---
224+31 TW - 228+90 TW	LT	2	459	459	1	OM-3C	TL-3	6	RT/LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER IN GORE
250+44 MU - 253+20 MU	LT	2	276	276	1	OM-3R	TL-3	2	LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
251+78 WB - 262+83 WB	LT	2	1105	1105	1	OM-3L	TL-3	2	RT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
252+03 TW - 260+19 TW	LT	2	816	816	1	OM-3R	TL-3	2	LT	BIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
287+76 TW - 292+32 TW	LT	2	456	456	1	OM-3C	TL-3	6	RT/LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER IN GORE
287+10 WB - 292+07 WB	LT	2	497	497	1	OM-3C	TL-3	6	RT/LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER IN GORE
291+82 LU - 295+00 LU	LT	2	318	318	---	---	---	---	---	---	---
221+00 UW - 223+27 UW	LT	3A	227	227	1	OM-3C	TL-3	6	RT/LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER IN GORE
222+89 UW - 259+00 UW	RT	3A	3611	3611	---	---	---	---	---	---	---
225+53 UW - 247+90 UW	LT	3A	2237	2237	---	---	---	---	---	---	---
278+18 UW - 319+00 UW	LT	3A	4082	4082	1	OM-3R	TL-3	2	LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER ON SHOULDER
304+00 WB - 317+85 WB	LT	3B	---	1385	---	---	---	---	---	---	---
107+65 TS - 204+00 GW	LT	4A	---	480	---	---	---	---	---	---	---
249+16 WB - 251+95 WB	RT	4A	264	264	---	---	---	---	---	---	---
PROJECT ID 1071-06-78 SUMMARY			**31942**	**34838**	**18**						
PROJECT TOTALS			**34830**	**38278**	**22**						

CONCRETE BARRIER

STATION TO STATION	LOCATION	603.1156 TYPE S56 LF	603.1456 TYPE S56C LF	603.1142 TYPE S42 LF	603.3559 TRANSITION TYPE S42 T0 S56 LF
143+50 C - 145+05 C	LT	---	120	10.5	24.5
PROJECT ID 1071-06-77 SUMMARY		**---**	**120**	**10.5**	**24.5**
273+25 P - 275+34 P	LT	---	209	---	---
275+34 P - 276+87 P	LT	118	---	10.5	24.5
PROJECT ID 1071-06-78 SUMMARY		**118**	**209**	**10.5**	**24.5**
PROJECT TOTALS		**118**	**329**	**21.0**	**49.0**

RECONSTRUCTING INLETS

STATION	LOCATION	611.0430 EACH	COMMENTS
142+97 WB	RT	1	ADD RISER TO MATCH NEW DITCH GRADE
PROJECT ID 1071-06-77 SUMMARY		**1**	
235+00 WB	RT	1	ADD RISER TO MATCH NEW DITCH GRADE
276+30 P	RT	1	PLACE NEW PRECAST REINFORCED CONCRETE FLAT SLAB TOP OVER REMAINING INLET
PROJECT ID 1071-06-78 SUMMARY		**2**	
PROJECT TOTAL		**3**	

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

MGS GUARDRAIL

STATION TO STATION	LOCATION	614.2300 GUARDRAIL 3 LF	614.2610 TERMINAL EAT EACH	614.2500 THRIE BEAM TRANSITION LF	614.2620 TERMINAL TYPE 2 EACH
72+07 WB - 97+48 WB	WB LANES LT	2500	---	47	---
72+07 WB - 75+23 WB	WB LANES RT	225	1	39	---
94+32 WB - 97+48 WB	WB LANES RT	225	1	39	---
99+10 WB - 101+88 WB	WB LANE LT	188	1	39	---
99+10 WB - 109+38 WB	WB LANES RT	938	1	39	---
106+52 WB - 110+17 WB	WB LANES LT	275	1	39	---
145+05 WB - 168+77 WB	WB LANES LT	2325	---	47	---
165+77 WB - 168+68 WB	WB LANES RT	225	1	39	---
17+66 BW - 18+71 BW	LT	12.5	1	39	---
17+70 BW - 18+75 BW	RT	12.5	1	39	---
21+43 BW - 22+48 BW	LT	12.5	1	39	---
21+46 BW - 22+51 BW	RT	12.5	1	39	---
PROJECT ID 1071-06-77 SUMMARY		**6951**	**10**	**484**	**---**
174+49 WB - 177+65 WB	WB LANES RT	225	1	39	---
174+58 WB - 188+50 WB	WB LANES LT	1300	1	39	---
185+67 WB - 191+94 WB	WB LANES RT	538	1	39	---
195+81 WB - 200+94 WB	WB LANES RT	425	1	39	---
196+61 WB - 199+14 WB	WB LANES LT	163	1	39	---
208+96 WB - 212+12 WB	WB LANES RT	225	1	39	---
216+08 WB - 218+86 WB	WB LANES RT	188	1	39	---
216+36 WB - 221+14 WB	WB LANES LT	388	1	39	---
230+50 WB - 236+50 WB	WB LANES RT	500	2	---	---
232+97 WB - 236+00 WB	WB LANES LT	250	1	---	1
244+89 WB - 247+67 WB	WB LANES RT	188	1	39	---
249+16 WB - 255+44 WB	WB LANES LT	538	1	39	---
276+87 P - 279+30 P	WB LANES LT	150	1	39	---
291+28 WB - 310+06 WB	WB LANES LT	1850	---	39	1
291+28 WB - 294+44 WB	WB LANES RT	213	2	---	---
306+90 WB - 310+06 WB	WB LANES RT	225	1	39	---
311+65 WB - 315+18 WB	WB LANES RT	263	1	39	---
311+65 WB - 315+93 WB	WB LANES LT	338	1	39	---
108+08 TS - 113+86 TS	ROSE STREET	525	1	---	1
105+59 TN - 111+25 TN	ROSE STREET	513	1	---	1
PROJECT ID 1071-06-78 SUMMARY		**9005**	**21**	**585**	**4**
PROJECT TOTALS		**15956**	**31**	**1069**	**4**

STEEL PLATE BEAM GUARD

STATION TO STATION	LOCATION	614.0305 CLASS A LF	614.0230 THRIE BEAM LF	614.0220 THRIE BEAM BULLNOSE TERMINAL EACH	614.0115 ANCHORAGE TYPE 2 EACH	614.0370 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH
143+05 WB - 145+02 WB	MEDIAN	---	200	2	---	---
PROJECT ID 1071-06-77 SUMMARY		**---**	**200**	**2**	**---**	**---**
186+75 ET - 187+25 ET	LT	---	---	---	---	1
272+40 WB - 275+36 WB	RT	---	400	2	---	---
ROSE STREET NB LANES	RT	175	---	---	1	---
PROJECT ID 1071-06-78 SUMMARY		**175**	**400**	**2**	**1**	**1**
PROJECT TOTALS		**175**	**600**	**4**	**1**	**1**

RIPRAP AND GEOTEXTILE FABRIC

STATION TO STATION	LOCATION	606.0100 LIGHT CY	645.0130 TYPE R SY
97+43 WB	DROP INLET END	2	6
97+43 WB	DROP INLET END	2	6
105+87 WB	FLUME END	1	3
119+10 WB	LT PIPE END	2	6
129+00 WB	LT PIPE END	2	6
138+05 D	RT PIPE END	2	6
140+78 C	LT PIPE END	2	6
145+05 C	FLUME END	1	3
151+00 WB	LT PIPE END	4	12
157+00 WB	LT PIPE END	4	12
168+63 WB	DROP INLET END	2	6
168+73 WB	DROP INLET END	2	6
18+67 BW	DROP INLET END	2	6
18+64 BW	DROP INLET END	2	6
21+47 BW	DROP INLET END	2	6
21+51 BW	DROP INLET END	2	6
UNDISTRIBUTED		11	28
PROJECT ID 1071-06-77 SUMMARY		**45**	**130**
174+90 WB	LT PIPE END	6	20
183+90 WB	LT PIPE END	6	20
192+00 H - 193+50 H	RT DITCH	60	170
196+26 H	LT PIPE END	4	14
204+50 HW - 205+50 HW	RT DITCH	40	110
212+08 WB	DROP INLET END	2	6
212+35 WB	DROP INLET END	2	6
216+70 WB	LT PIPE END	2	6
244+00 WB - 245+00 WB	LT DITCH	40	110
249+21 WB	DROP INLET END	2	6
249+21 WB	DROP INLET END	2	6
269+65 WB	LT PIPE END	2	6
273+25 P	FLUME END	1	3
279+64 P	FLUME END	1	3
292+00 WB	LT PIPE END	2	6
311+70 WB	DROP INLET END	2	6
311+70 WB	DROP INLET END	2	6
UNDISTRIBUTED		44	116
PROJECT ID 1071-06-78 SUMMARY		**220**	**620**
PROJECT TOTALS		**265**	**750**

SALVAGED RAIL

STATION TO STATION	LOCATION	STAGE	614.0920 RAIL LF	614.0925 GUARDRAIL END TREATMENTS EACH
131+65 WB - 135+31 WB	RT	1	366	2
PROJECT ID 1071-06-77 SUMMARY			**366**	**2**
249+16 WB - 250+35 WB	LT	1	119	2
192+50 H - 197+50 H	RT	2	523	1
311+65 WB - 314+45 WB	RT	3A	280	1
PROJECT ID 1071-06-78 SUMMARY			**922**	**4**
PROJECT TOTAL			**1288**	**6**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

FENCE CHAIN LINK 6-FT

STATION TO STATION	LOCATION	616.0206 LF
72+00 WB - 97+60 WB	LT	2610
99+00 WB - 105+55 WB	LT	740
106+74 WB - 138+25 D	LT	3095
145+65 WB - 168+85 WB	LT	2360
16+00 BW - 18+85 BW	LT	331
18+85 BW - 18+94 BW	RT	75
21+39 BW - 21+72 BW	LT	52
21+43 BW - 21+79 BW	RT	53
PROJECT ID 1071-06-77 SUMMARY		**9316**
174+50 WB - 197+25 H	LT	2265
210+00 GU - 214+00 GU	LT	400
216+25 WB - 232+80 WB	LT	1680
233+50 WB - 248+05 WB	LT	1460
248+80 WB - 263+00 M	LT	1415
285+37 L - 310+05 WB	LT	2555
PROJECT ID 1071-06-78 SUMMARY		**9775**
PROJECT TOTAL		**19091**

MOBILIZATION

PROJECT	619.1000 EACH
1071-06-77	0.5
PROJECT ID 1071-06-77 SUMMARY	**0.5**
1071-06-78	0.5
PROJECT ID 1071-06-78 SUMMARY	**0.5**
PROJECT TOTAL	**1**

WATER

LOCATION	624.0100 MGAL
BASE COMPACTION	600
DUST CONTROL	200
PROJECT ID 1071-06-77 SUMMARY	**800**
BASE COMPACTION	1200
DUST CONTROL	500
PROJECT ID 1071-06-78 SUMMARY	**1700**
PROJECT TOTAL	**2500**

SILT FENCE

STATION TO STATION	LOCATION	STAGE	628.1504 LF	628.1520 MAINTENANCE LF
72+07 WB - 97+08 WB	RT	1	2600	2600
72+06 WB		1	50	50
97+50 WB	LT	1	50	50
99+00 WB - 100+00 WB	RT	1	110	110
99+10 WB	LT	1	50	50
115+00 WB - 123+00 WB	LT	1	815	815
145+00 WB - 168+80 WB	LT	1	2450	2450
168+70 WB	RT	1	50	50
140+50 C - 143+50 C	LT	1	300	300
15+50 BW - 18+86 BW	LT	1	350	350
16+90 BW - 18+86 BW	RT	1	220	220
21+31 BW - 23+50 BW	LT	1	175	175
21+31 BW - 24+00 BW	RT	1	230	230
UNDISTRIBUTED			1860	1860
PROJECT ID 1071-06-77 SUMMARY			**9310**	**9310**
174+50 WB - 197+50 H	LT	1	2375	2375
196+60 WB - 202+50 HW	LT	1	615	615
210+50 GU - 213+50 GU	LT	1	300	300
226+00 WB - 239+00 WB	LT	1	1340	1340
244+50 WB - 247+00 WB	LT	1	260	260
249+20 WB - 263+00 M	LT	1	1380	1380
265+00 WB - 271+00 WB	LT	1	620	620
275+60 P - 276+35 P	LT	1	90	90
277+00 P - 279+70 P	LT	1	300	300
281+00 WB - 286+00 WB	LT	1	510	510
291+00 WB - 310+00 WB	LT	1	1960	1960
311+75 WB - 318+50 WB	LT	1	680	680
UNDISTRIBUTED			2610	2610
PROJECT ID 1071-06-78 SUMMARY			**13040**	**13040**
PROJECT TOTALS			**22350**	**22350**

MAINTENANCE AND REPAIR OF HAUL ROADS

PROJECT	618.0100.01 EACH
1071-06-77	1
PROJECT ID 1071-06-77 SUMMARY	**1**

PROJECT	618.0100.02 EACH
1071-06-78	1
PROJECT ID 1071-06-78 SUMMARY	**1**

MOBILIZATIONS EROSION CONTROL AND EMERGENCY EROSION CONTROL

PROJECT	628.1905 EACH	628.1910 EMERGENCY EACH
1071-06-77	15	10
PROJECT ID 1071-06-77 SUMMARY	**15**	**10**
1071-06-78	15	10
PROJECT ID 1071-06-78 SUMMARY	**15**	**10**
PROJECT TOTALS	**30**	**20**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

SALVAGED TOPSOIL, MULCHING, FERTILIZER, & SEEDING

STATION TO STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING NO. 20 LB	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	630.0300 SEEDING BORROW PIT LB
71+97 WB - 97+60 WB	WB LANES LT	3570	3570	2.2	123	---	61	---
71+97 WB - 97+60 WB	WB LANES RT	4050	4050	2.6	---	121	91	---
98+97 WB - 168+86 WB	WB LANES LT	14550	14550	9.2	641	---	321	---
98+97 WB - 168+86 WB	WB LANES RT	11370	11370	7.2	---	336	252	---
141+60 C - 144+20 C	C RAMP	545	545	0.3	20	---	10	---
133+57 D - 138+25 D	D RAMP	1743	1743	1.1	57	---	28	---
17+00 BW - 18+86 BW	LT	1520	---	1.0	---	27	41	---
17+00 BW - 18+86 BW	RT	205	---	0.1	---	4	6	---
21+31 BW - 23+00 BW	LT	710	---	0.5	---	15	23	---
21+31 BW - 23+00 BW	RT	300	---	0.2	---	5	8	---
132+41 AT - 134+65 AT	AT RAMP	506	506	0.3	14	---	7	---
128+30 AU - 130+56 AU	AU RAMP	371	371	0.2	10	---	5	---
146+75 BU - 148+57 BU	BU RAMP	40	40	---	1	---	1	---
136+16 DU -138+32 DU	DU RAMP	33	33	---	1	---	---	---
UNDISTRIBUTED			9222	6.1	233	132	246	---
PROJECT ID 1071-06-77 SUMMARY		**39513**	**46000**	**31.0**	**1100**	**640**	**1100**	**---**
174+40 WB - 192+68 WB	WB LANES LT	5160	5160	3.3	204	---	102	---
174+40 WB - 192+68 WB	WB LANES RT	5010	5010	3.2	---	125	93	---
195+84 WB - 212+49 WB	WB LANES LT	2880	2880	1.8	137	---	68	---
195+84 WB - 212+49 WB	WB LANES RT	2200	2200	1.4	---	71	53	---
215+98 WB - 247+77 WB	WB LANES LT	16560	16560	10.4	560	---	280	---
215+98 WB - 247+77 WB	WB LANES RT	5260	5260	3.3	---	155	116	---
249+06 WB - 310+05 WB	WB LANES LT	9780	9780	6.2	481	---	240	---
249+06 WB - 310+05 WB	WB LANES RT	14450	14450	9.1	---	375	281	---
311+65 WB - 313+65 WB	WB LANES LT	270	270	0.2	112	---	56	---
311+65 WB - 313+65 WB	WB LANES RT	640	640	0.4	---	203	152	---
179+07 EU - 181+27 EU	EU RAMP	723	723	0.5	20	---	10	---
182+13 ET - 184+21 ET	ET RAMP	743	743	0.5	20	---	10	---
200+00 GW - 209+10 GW	GW RAMP	819	819	0.5	22	---	11	---
203+13 HW - 207+51 HW	HW RAMP	3241	3241	2.0	88	---	44	---
201+29 FU - 203+20 FU	FU RAMP	324	324	0.2	9	---	4	---
188+59 H - 197+25 H	H RAMP	3000	3000	1.9	118	---	59	---
184+50 HV - 185+11 HV	HV RAMP	110	110	0.1	3	---	1	---
208+79 G - 212+79 G	G RAMP	825	825	0.5	31	---	15	---
209+50 GU - 213+30 GU	GU RAMP	2639	2639	1.7	71	---	36	---
257+54 JV - 259+50 JV	JV RAMP	345	345	0.2	9	---	5	---
260+93 M - 262+82 M	M RAMP	971	971	0.6	30	---	15	---
282+55 KT - 285+80 KT	KT RAMP	478	478	0.3	13	---	6	---
288+71 KU - 291+46 KU	KU RAMP	183	183	0.1	5	---	2	---
277+83 P - 279+65 P	P RAMP	89	89	0.1	2	---	1	---
287+33 L - 291+50 L	L RAMP	818	818	0.5	31	---	15	---
311+88 TE - 322+00 TE	TE CROSSOVER	633	633	0.4	17	---	9	---
104+38 TN - 111+26 TN	TN WIDENING	856	856	0.5	23	---	12	---
107+35 TS - 116+57 TS	TS WIDENING	800	800	0.5	22	---	11	---
225+58 UW - 248+00 UW	UW WIDENING	12393	12393	7.8	335	---	167	---
BORROW PIT		2000	2000	1.3	---	---	27	27
UNDISTRIBUTED			23600	15.5	637	231	499	7
PROJECT ID 1071-06-78 SUMMARY		**94200**	**117800**	**75.0**	**3000**	**1160**	**2400**	**34**
PROJECT TOTALS		**133713**	**163800**	**106.0**	**4100**	**1800**	**3500**	**34**

EROSION MAT

STATION TO STATION	LOCATION	STAGE	628.2004 CLASS I TYPE B SY	628.2027 CLASS II TYPE C SY
72+07 WB - 97+08 WB	WB SLOPE LT	1	3730	---
99+10 WB - 99+75 WB	WB SLOPE LT	1	90	---
100+35 WB - 101+50 WB	WB SLOPE LT	1	300	---
126+75 WB - 127+50 WB	WB SLOPE LT	1	60	---
131+50 WB - 133+50 WB	WB SLOPE LT	1	460	---
143+50 C - 143+75 C	C RAMP LT	1	100	---
152+00 WB - 153+00 WB	WB DITCH LT	1	90	---
152+50 WB - 167+25 WB	WB SLOPE LT	1	3660	---
15+50 BW - 18+86 BW	LT	3	---	1520
21+31 BW - 24+00 BW	LT	3	---	905
21+31 BW - 24+00 BW	RT	3	---	60
UNDISTRIBUTED			2110	615
PROJECT ID 1071-06-77 SUMMARY			**10600**	**3100**
175+50 WB - 182+50 WB	WB SLOPE LT	1	3070	---
185+75 WB - 188+60 WB	WB SLOPE LT	1	1840	---
226+50 WB - 247+75 WB	UW SLOPE LT	1	9400	---
291+25 WB - 293+00 WB	WB SLOPE LT	1	380	---
188+60 H - 198+00 H	H RAMP LT	1	7000	---
210+50 GU - 213+50 GU	GU RAMP LT	1	3000	---
196+00 WB - 199+50 WB	WB SLOPE LT	3A	2530	---
217+00 WB - 218+00 WB	WB DITCH LT	4A	90	---
230+00 WB - 237+00 WB	WB SLOPE LT	4A	5450	---
240+00 WB - 244+00 WB	WB SLOPE LT	4A	2230	---
UNDISTRIBUTED			8810	---
PROJECT ID 1071-06-78 SUMMARY			**43800**	**0**
PROJECT TOTALS			**54400**	**3100**

DELINEATORS TEMPORARY

STATION TO STATION	LOCATION	STAGE	633.1100 EACH
122+00 EB - 129+00 EB	LT	1	15
137+75 DT - 139+75 DT	RT	1	5
148+05 CT - 153+55 CT	LT	1	12
129+50 DU - 130+00 DU	LT	2	2
163+00 CU - 167+00 CU	LT	2	9
UNDISTRIBUTED			11
PROJECT ID 1071-06-77 SUMMARY			**54**
197+89 HU - 204+50 HU	LT	1	14
227+00 TW - 232+52 TW	RT	1	12
255+50 TW - 260+00 TW	LT	1	10
279+10 TW - 283+10 TW	LT	1	9
183+00 HV - 185+00 HV	LT	2	5
218+50 UW - 221+00 UW	LT	3A	6
UNDISTRIBUTED			10
PROJECT ID 1071-06-78 SUMMARY			**66**
PROJECT TOTAL			**120**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

INLET PROTECTION

STATION	LOCATION	STAGE	628.7005 TYPE A EACH	628.7010 TYPE B EACH	629.7015 TYPE C EACH
97+40 WB	LT	1	2	2	---
97+40 WB	RT	1	2	2	---
129+95 WB	RT	1	1	---	---
140+78 C	LT	1	1	---	1
151+00 WB	RT	1	1	---	---
157+00 WB	RT	1	1	---	---
168+60 WB	RT	1	2	2	---
168+70 WB	LT	1	2	2	---
142+58 WB	RT	2	1	---	---
143+00 WB	RT	2	1	---	---
18+67 BW	LT	3	1	1	---
18+70 BW	RT	3	1	1	---
18+64 BW	RT	3	1	1	---
21+47 BW	LT	3	1	1	---
21+53 BW	LT	3	1	1	---
21+51 BW	RT	3	1	1	---
21+57 BW	RT	3	1	1	---
PROJECT ID 1071-06-77 SUMMARY			**21**	**15**	**1**
174+90 WB	RT	1	1	---	---
183+90 WB	RT	1	1	---	---
185+75 WB	RT	1	1	---	---
188+00 WB	RT	1	2	---	---
205+90 WB	LT	1	1	---	---
207+30 GW	RT	1	1	---	---
212+30 G	LT	1	2	2	---
249+25 WB	LT	1	2	2	---
258+65 WB	RT	1	1	---	---
265+00 WB	LT	1	1	---	---
269+70 WB	RT	1	1	---	---
276+00 WB	RT	1	1	---	---
283+10 WB	RT	1	1	---	---
291+70 WB	RT	1	1	---	---
311+70 WB	LT	1	2	2	---
205+90 WB	RT	2	1	---	---
216+60 WB	RT	2	1	---	---
191+85 WB	RT	3A	2	2	---
192+60 WB	LT	3A	2	2	---
212+05 WB	RT	3A	2	2	---
216+70 WB	RT	3A	1	---	---
226+60 WB	RT	3A	1	---	---
235+00 WB	RT	3A	1	---	---
249+25 WB	RT	3A	2	2	---
253+20 WB	RT	3A	1	---	---
284+50 KT	RT	3A	1	---	---
290+50 WB	RT	3A	1	---	---
292+00 WB	RT	3A	1	---	---
300+00 WB	RT	3A	1	---	---
311+70 WB	RT	3A	2	2	---
324+80 WB	RT	3A	1	---	---
182+50 ET	RT	4	1	---	---
183+90 WB	RT	4	1	---	---
282+00 KT	RT	4B	1	---	---
PROJECT ID 1071-06-78 SUMMARY			**43**	**16**	**---**
PROJECT TOTALS			**64**	**31**	**1**

TEMPORARY DITCH CHECKS

STATION	LOCATION	STAGE	628.7504 LF
76+00 WB	RT	1	20
86+00 WB	RT	1	20
102+00 WB	LT	1	20
112+00 WB	RT	1	20
112+00 WB	LT	1	20
120+00 WB	RT	1	20
124+00 WB	RT	1	20
128+00 WB	LT	1	20
138+50 D	LT	1	20
148+00 WB	LT	1	20
152+00 WB	LT	1	20
155+00 WB	RT	1	20
138+00 WB	RT	2	20
UNDISTRIBUTED			60
PROJECT ID 1071-06-78 SUMMARY			**320**
178+00 WB	RT	1	20
209+50 HU	RT	1	20
244+00 WB	LT	1	20
265+00 WB	RT	1	20
279+00 WB	RT	1	20
188+00 WB	RT	2	20
190+00 WB	RT	2	20
210+00 WB	RT	2	20
209+50 HU	RT	3A	20
231+00 WB	RT	3A	20
238+00 WB	RT	3A	20
241+00 WB	RT	3A	20
244+00 WB	RT	3A	20
296+00 WB	RT	3A	20
322+50 WB	RT	3A	20
UNDISTRIBUTED			80
PROJECT ID 1071-06-78 SUMMARY			**380**
PROJECT TOTAL			**700**

TRACKING PADS

LOCATION	628.7560 EACH
UNDISTRIBUTED	4
PROJECT ID 1071-06-77 SUMMARY	**4**
UNDISTRIBUTED	6
PROJECT ID 1071-06-78 SUMMARY	**6**
PROJECT TOTALS	**10**

CULVERT PIPE CHECKS

STATION	LOCATION	STAGE	628.7555 EACH
73+00 WB	LT	1	2
82+75 WB	RT	1	2
85+00 WB	RT	1	2
91+00 WB	LT	1	2
100+15 WB	LT	1	2
100+30 WB	LT	1	5
107+00 WB	LT	1	5
107+00 WB	RT	1	2
129+00 WB	RT	1	3
138+05 D	LT	1	3
140+80 C	RT	1	3
142+50 C	LT	1	7
162+80 WB	RT	1	2
145+80 WB	RT	2	2
133+00 AT	RT	3A	2
145+75 BU	RT	3A	2
UNDISTRIBUTED			14
PROJECT ID 1071-06-77 SUMMARY			**60**
113+00 TN	LT	1	3
174+90 WB	RT	1	2
196+25 H	RT	1	3
197+30 WB	RT	1	2
216+55 WB	LT	1	2
235+00 WB	LT	1	5
235+00 WB	LT	1	5
283+75 WB	LT	1	7
283+04 WB	LT	1	7
315+25 TE	RT	1	2
205+90 WB	RT	2	3
198+90 WB	RT	4A	2
184+50 ET	RT	4B	2
200+50 FU	RT	4B	2
UNDISTRIBUTED			13
PROJECT ID 1071-06-78 SUMMARY			**60**
PROJECT TOTAL			**120**

DELINEATORS

STATION TO STATION	LOCATION	633.0100 POSTS STEEL EACH	633.0500 REFLECTORS EACH	633.1000 BRACKETS EACH
72+00 WB - 168+75 WB	LT	80	110	2
UNDISTRIBUTED		10	10	3
PROJECT ID 1071-06-77 SUMMARY		**90**	**120**	**5**
174+50 WB - 313+40 WB	LT	105	155	8
191+00 H - 197+00 H	LT	6	6	---
UNDISTRIBUTED		9	9	2
PROJECT ID 1071-06-78 SUMMARY		**120**	**170**	**10**
PROJECT TOTALS		**210**	**290**	**15**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0614 POSTS WOOD 4x6 14-FT EACH	634.0616 16-FT EACH	634.0618 18-FT EACH	634.0620 20-FT EACH	634.0622 22-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	638.2601 REMOVING SIGNS TYPE I EACH	638.2602 TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING EACH	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS EACH	COMMENTS
1-1	IH 90 WB	W5-52R	18" X 54"	--	--	6.75	--	--	1	--	--	--	--	1	1	--	--	
1-2	IH 90 WB	W5-52L	18" X 54"	--	--	6.75	--	1	--	--	--	--	--	1	1	--	--	
1-3	IH 90 WB	E3-1	144" X 108"	108.00	--	--	--	--	--	--	--	--	1	--	--	--	2	MINNESOTA REST AREA TRAVEL INFO
1-4	IH 90 WB	-	- X -	--	--	--	--	--	--	--	--	--	1	--	--	--	--	TRAVEL PHONE (MOUNT W/1-3)
1-5	IH 90 WB	D10-1	12" X 24"	--	2.00	--	--	1	--	--	--	--	--	1	1	--	--	MILE 1
1-6	IH 90 WB	R3-4B	36" X 48"	--	12.00	--	--	--	--	1	--	--	--	--	--	--	--	
1-7	IH 90 EB	R3-4B	36" X 48"	--	12.00	--	--	--	--	1	--	--	--	--	--	--	--	
2-1	IH 90 WB (BRIDGE)	-	X -	--	--	--	--	--	--	--	--	--	--	1	1	--	--	WATCH FOR FALLING CONCRETE
2-2	IH 90 WB	W5-52R	18" X 54"	--	--	6.75	--	--	1	--	--	--	--	1	1	--	--	
2-3	IH 90 WB	W5-52L	18" X 54"	--	--	6.75	--	1	--	--	--	--	--	1	1	--	--	
2-4	IH 90 WB	R2-1	48" X 60"	--	20.00	--	--	--	--	2	--	--	--	--	--	--	--	65 MPH
2-5	IH 90 WB	R3-4B	36" X 48"	--	12.00	--	--	--	--	1	--	--	--	2	1	--	--	
2-6	IH 90 EB	R3-4B	36" X 48"	--	12.00	--	--	--	--	1	--	--	--	--	--	--	--	
2-7	IH 90 WB	J4-1	36" X 54"	--	--	--	--	--	--	--	1	--	--	--	--	--	--	DIRECTIONAL ASSEMBLY
		M3-4	36" X 18"	--	4.50	--	--	--	--	--	--	--	--	--	--	--	--	WEST (MOUNT W/2-7)
		M1-1	36" X 36"	--	9.00	--	--	--	--	--	--	--	--	--	--	--	--	INTERSTATE 90 (MOUNT W/2-7)
2-8	CTH BW NB	W5-52R	12" X 36"	--	--	3.00	1	--	--	--	--	--	--	1	1	--	--	
2-9	CTH BW NB	W5-52L	12" X 36"	--	--	3.00	1	--	--	--	--	--	--	1	1	--	--	
2-10	CTH BW SB	W5-52R	12" X 36"	--	--	3.00	1	--	--	--	--	--	--	1	1	--	--	
2-11	CTH BW SB	W5-52L	12" X 36"	--	--	3.00	1	--	--	--	--	--	--	1	1	--	--	
2-12	IH 90 WB	-	- X -	--	--	--	--	--	--	--	--	--	--	1	2	--	--	
2-13	IH 90 WB	-	- X -	--	--	--	--	--	--	--	--	--	--	1	2	--	--	
3-1	IH 90 WB	D10-1	12" X 24"	--	2.00	--	1	--	--	--	--	--	--	--	--	--	--	MILE 2
3-2	IH 90 WB	W4-1	48" X 48"	--	--	16.00	--	--	2	--	--	--	--	1	2	--	--	
3-3	IH 90 WB	E5-1A	72" X 60"	--	30.00	-	--	--	--	--	2	--	--	1	2	--	--	EXIT 2
3-4	IH 90 WB	W13-2A	48" X 90"	--	--	30.00	--	--	--	2	--	--	--	1	1	--	--	
3-5	IH 90 WB	E4-1A	288" X 90"	180.00	--	--	--	--	--	--	--	--	1	--	--	--	2	FRENCH ISLAND
		E1-5	96" X 30"	20.00	--	--	--	--	--	--	--	--	1	--	--	--	--	EXIT 2 (MOUNT W/3-5)
3-6	IH 90 WB	R3-4B	36" X 48"	--	12.00	--	--	--	--	1	--	--	--	--	--	--	--	
3-7	IH 90 WB	R3-4B	36" X 48"	--	12.00	--	--	--	--	--	--	--	--	--	--	--	--	
3-8	IH 90 EB	E3-1	216" X 60"	90.00	--	--	--	--	--	--	--	--	1	--	--	--	2	LA CROSSE AIRPORT, EXIT 2
PROJECT ID 1071-06-77 SUMMARY				**398.00**	**365.00 ***	**197 ***	**5**	**3**	**4**	**21 ***	**10 ***	**7 ***	**5**	**27 ***	**45 ***	**19 ***	**6**	
3-9	IH 90 WB	W5-52R	18" X 54"	--	--	6.75	--	--	1	--	--	--	--	1	1	--	--	
3-10	IH 90 WB	I3-1	48" X 36"	--	12.00	--	--	--	--	2	--	--	--	1	1	--	--	BLACK RIVER
3-11	IH 90 WB	W5-52L	18" X 54"	--	--	6.75	--	1	--	--	--	--	--	1	1	--	--	
3-12	IH 90 WB	-	- X -	--	--	--	--	--	--	--	--	--	--	1	1	--	--	
3-13	IH 90 WB	-	- X -	--	--	--	--	--	--	--	--	--	--	2	1	--	--	
3-14	IH 90 WB	R2-1	48" X 60"	--	20.00	--	--	--	2	--	--	--	--	--	--	--	--	65 MPH
3-15	IH 90 WB	J4-1	36" X 54"	--	--	--	--	--	--	1	--	--	--	--	--	--	--	DIRECTIONAL ASSEMBLY
		M3-4	36" X 18"	--	4.50	--	--	--	--	--	--	--	--	--	--	--	--	WEST (MOUNT W/3-15)
		M1-1	36" X 36"	--	9.00	--	--	--	--	--	--	--	--	--	--	--	--	INTERSTATE 90 (MOUNT W/3-15)
4-1	IH 90 WB	R2-1	48" X 60"	--	20.00	--	--	--	--	--	2	--	--	1	2	--	--	65 MPH
4-2	IH 90 WB	E1-1A	252" X 120"	210.00	--	--	--	--	--	--	--	--	1	--	--	--	2	FRENCH ISLAND 1/2 MILE
		E1-5	96" X 30"	20.00	--	--	--	--	--	--	--	--	1	--	--	--	--	EXIT 2 (MOUNT W/4-2)
4-3	IH 90 WB	D10-1	12" X 24"	--	2.00	--	1	--	--	--	--	--	--	1	1	--	--	MILE 3
4-4	IH 90 WB	W4-1	48" X 48"	--	16.00	--	--	--	2	--	--	--	--	--	--	--	--	
4-5	IH 90 WB	-	X	--	--	--	--	--	--	--	--	--	--	1	1	--	--	

- CONTINUED -

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W	X	H	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 F SF	634.0614 POSTS WOOD 4x6 14-FT EACH	634.0616 16-FT EACH	634.0618 18-FT EACH	634.0620 20-FT EACH	634.0622 22-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	638.2601 REMOVING SIGNS TYPE I EACH	638.2602 TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING EACH	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS EACH	COMMENTS
4-6	IH 90 WB	-		X		--	--	--	--	--	--	--	--	--	--	1	1	--	--	
4-7	IH 90 WB	-	-	X	-	--	--	--	--	--	2	--	--	1	--	--	2	--	--	MERGE
4-8	IH 90 WB	E5-1A	72"	X	60"	--	30.00	--	--	--	--	2	--	--	--	1	2	--	--	EXIT 3
4-9	IH 90 WB	E6-51	180"	X	144"	180.00	--	--	--	--	--	--	--	--	--	--	--	--	--	LA CROSSE ONALASKA (MOUNT W/S-32-58)
		E1-5	96"	X	30"	20.00	--	--	--	--	--	--	--	--	--	--	--	--	--	EXIT 3 (MOUNT W/4-11)
4-10	IH 90 WB	-	-	X	-	--	--	--	--	--	--	1	--	1	--	--	2	--	--	EXIT 40 MPH
4-11	IH 90 WB	-	-	X	-	--	--	--	--	--	--	--	--	--	2	--	--	--	2	SOUTH 53 35 LA CROSSE ONALASKA
4-12	IH 90 WB	-	-	X	-	--	--	--	--	--	--	--	--	--	--	1	2	--	--	
4-13	IH 90 WB	J13-1	36"	X	66"	--	--	--	--	--	--	1	--	--	--	--	--	--	--	DIRECTIONAL ASSEMBLY
	IH 90 WB	M1-96	36"	X	36"	--	9.00	--	--	--	--	--	--	--	--	--	--	--	--	GREAT RIVER ROAD SYMBOL (MOUNT W/4-13)
4-14	ROSE ST	W5-52	12"	X	36"	--	--	3.00	1	--	--	--	--	--	--	--	--	--	--	
	IH 90 WB	M6-1	36"	X	30"	--	7.50	--	--	--	--	--	--	--	--	--	--	--	--	DIRECTIONAL-TILT RIGHT (MOUNT W/4-13)
5-1	IH 90 WB	J12-1	36"	X	66"	--	--	--	--	--	--	1	--	--	--	--	--	--	--	DIRECTIONAL ASSEMBLY
		M1-96	36"	X	36"	--	9.00	--	--	--	--	--	--	--	--	--	--	--	--	GREAT RIVER ROAD SYMBOL (MOUNT W/5-1)
		M5-2	36"	X	30"	--	7.50	--	--	--	--	--	--	--	--	--	--	--	--	DIRECTIONAL-BENT RIGHT DIAGONAL (MOUNT W/5-1)
5-2	IH 90 WB	J1-1	36"	X	57"	--	--	--	--	--	--	1	--	--	--	--	--	--	--	JUNCTION ASSEMBLY
		M2-1	36"	X	21"	--	5.25	--	--	--	--	--	--	--	--	--	--	--	--	JUNCTION (MOUNT W/5-2)
		M1-96	36"	X	36"	--	9.00	--	--	--	--	--	--	--	--	--	--	--	--	GREAT RIVER ROAD SYMBOL (MOUNT W/5-2)
5-3	IH 90 WB	E3-1	132"	X	108"	99.00	--	--	--	--	--	--	--	--	1	--	--	--	2	HISTORIC DOWNTOWN LA CROSSE
5-4	IH 90 WB	D10-1	12"	X	24"	--	2.00	--	1	--	--	--	--	--	--	--	1	--	--	MILE 4
5-5	IH 90 WB	R2-1	48"	X	60"	--	20.00	--	--	--	--	2	--	--	--	--	--	--	--	65 MPH
5-6	IH 90 WB	-	-	X	-	--	--	--	--	--	--	--	--	--	2	--	--	--	2	LA CROSSE ONALASKA 3/4 MILE, EXIT 3
5-7	IH 90 WB	E6-51	180"	X	162"	202.50	--	--	--	--	--	--	--	--	--	--	--	--	--	LA CROSSE ONALASKA 3/4 MILE EXIT ONLY (MOUNT W/S-32-59)
		E1-5	96"	X	30"	20.00	--	--	--	--	--	--	--	--	--	--	--	--	--	EXIT 3 (MOUNT W/5-7)
5-8	IH 90 EB	-	-	X	-	--	--	--	--	--	--	3	--	2	--	1	3	1	--	SOUTH 53, SOUTH 35, LOW BRIDGES
5-9	IH 90 WB	-	-	X	-	--	--	--	--	--	--	--	--	--	--	1	2	--	--	
5-10	IH 90 WB	J4-2	72"	X	54"	--	--	--	--	--	--	--	--	--	--	--	--	--	--	DIRECTIONAL ASSEMBLY
	IH 90 WB	M3-4	36"	X	18"	--	4.50	--	--	--	--	--	--	--	--	--	--	--	--	WEST (MOUNT W/5-10)
	IH 90 WB	M1-1	36"	X	36"	--	9.00	--	--	--	--	--	--	--	--	--	--	--	--	INTERSTATE 90 (MOUNT W/5-10)
	IH 90 WB	M3-3	36"	X	18"	--	4.50	--	--	--	--	--	--	--	--	--	--	--	--	SOUTH (MOUNT W/5-10)
	IH 90 WB	M1-4	36"	X	36"	--	9.00	--	--	--	--	--	--	--	--	--	--	--	--	USH 53 (MOUNT W/5-10)
6-1	IH 90 WB	W4-1	48"	X	48"	--	--	16.00	--	--	2	--	--	--	--	--	--	--	--	
6-2	IH 90 WB	W4-1	48"	X	48"	--	--	16.00	--	--	2	--	--	--	--	--	--	--	--	
6-3	IH 90 WB	E5-1A	72"	X	60"	--	30.00	--	--	--	--	--	2	--	--	1	2	--	--	EXIT 4
6-4	IH 90 WB	D10-1	12"	X	24"	--	2.00	--	1	--	--	--	--	--	--	1	1	--	--	MILE 5
6-5	IH 90 WB	E6-51	96"	X	108"	72.00	--	--	--	--	--	--	--	--	1	--	--	--	--	WEST 90 AHEAD (MOUNT W/S-32-49)
6-6	IH 90 WB	E6-51	96"	X	114"	76.00	--	--	--	--	--	--	--	--	1	--	--	--	--	SOUTH 53 (MOUNT W/6-5)
6-7	IH 90 WB	E6-51	180"	X	186"	232.50	--	--	--	--	--	--	--	--	1	--	--	--	--	LA CROSSE ONALASKA EXIT ONLY (MOUNT W/6-5)
		E1-5	96"	X	30"	20.00	--	--	--	--	--	--	--	--	1	--	--	--	--	EXIT 4 (MOUNT W/6-5)
6-8	IH 90 WB	R3-4B	36"	X	48"	--	12.00	--	--	--	--	1	--	--	--	2	1	--	--	
6-10	IH 90 WB	-	-	X	-	--	0.00	--	--	--	--	--	--	--	--	1	2	--	--	
6-11	IH 90 WB	-	-	X	-	--	0.00	--	--	--	--	--	--	--	--	1	2	--	--	
7-1	IH 90 WB	-	-	X	-	--	--	--	--	--	--	--	--	--	--	1	1	--	--	
7-2	IH 90 WB	-	-	X	-	--	--	--	--	--	--	--	--	--	--	1	1	--	--	
7-3	IH 90 WB	-	-	X	-	--	--	--	--	--	--	--	--	--	2	--	--	--	--	LA CROSSE ONALASKA EXIT ONLY, EXIT 4
7-4	IH 90 WB	E6-51	96"	X	108"	72.00	--	--	--	--	--	--	--	--	--	--	--	--	--	WEST 90 AHEAD (MOUNT W/S-32-64)
7-5	IH 90 WB	E6-51	96"	X	114"	76.00	--	--	--	--	--	--	--	--	--	--	--	--	--	SOUTH 53 (MOUNT W/7-4)
7-6	IH 90 WB	E6-51	180"	X	198"	247.50	--	--	--	--	--	--	--	--	--	--	--	--	--	LA CROSSE ONALASKA EXIT ONLY (MOUNT W/7-4)
		E1-5	96"	X	30"	20.00	--	--	--	--	--	--	--	--	--	--	--	--	--	EXIT 4 (MOUNT W/7-4)
7-7	IH 90 WB	R2-1	48"	X	60"	--	20.00	--	--	--	--	2	--	--	--	--	--	--	--	65 MPH
7-8	IH 90 WB	-		X		--	--	--	--	--	--	--	--	--	1	--	--	--	--	

- CONTINUED -

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0614 POSTS WOOD 4x6 14-FT EACH	634.0616 POSTS WOOD 4x6 16-FT EACH	634.0618 POSTS WOOD 4x6 18-FT EACH	634.0620 POSTS WOOD 4x6 20-FT EACH	634.0622 POSTS WOOD 4x6 22-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	638.2601 REMOVING SIGNS TYPE I EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS EACH	COMMENTS
7-9	IH 90 WB	-	X	--	--	--	--	--	--	--	--	--	1	--	--	--	--	
7-10	IH 90 WB	-	X	--	--	--	--	--	--	--	--	--	1	--	--	--	--	
7-11	IH 90 EB	R3-4B	36" X 48"	--	12.00	--	--	--	--	--	--	--	--	--	--	--	--	
7-12	IH 90 EB	-	X	--	--	--	--	--	--	--	--	--	--	1	2	--	--	
7-13	IH 90 EB	J4-1	36" X 54"	--	--	--	--	--	--	1	--	--	--	--	--	--	--	DIRECTIONAL ASSEMBLY
		M3-4	36" X 18"	--	4.50	--	--	--	--	--	--	--	--	--	--	--	--	WEST (MOUNT W/7-13)
		M1-1	36" X 36"	--	9.00	--	--	--	--	--	--	--	--	--	--	--	--	INTERSTATE 90 (MOUNT W/7-13)
PROJECT ID 1071-06-78 SUMMARY				**1567.50**	**1028.25 ***	**366.50 ***	**4**	**1**	**11**	**42 ***	**13 ***	**18 ***	**16**	**45 ***	**83 ***	**17 ***	**8**	
PROJECT TOTALS				**1965.50**	**1393.25 ***	**563.50 ***	**9**	**4**	**15**	**63 ***	**23 ***	**25 ***	**21**	**72 ***	**128 ***	**36 ***	**14**	

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS**

FIELD OFFICE TYPE C

PROJECT	642.5201 EACH
1071-06-77	0.5
PROJECT ID 1071-06-78 SUMMARY	**0.5**
1071-06-78	0.5
PROJECT ID 1071-06-78 SUMMARY	**0.5**
PROJECT TOTAL	**1**

TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE

PROJECT	643.0200 DAYS
01. 1071-06-77	214
PROJECT ID 1071-06-77 SUMMARY	**214**
02. 1071-06-78	214
PROJECT ID 1071-06-78 SUMMARY	**214**

TYPE I SIGN SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	STEEL POST TYPE	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS LB	636.0100 SIGN SUPPORTS CONCRETE MASONRY CY	636.1000 SIGN SUPPORTS STEEL REINFORCEMENT HS LB	SIGN MOUNTED ON SAME POSTS AS	COMMENTS
1-3	IH 90 WB	E3-1	B	900	1.6	98		
3-5	IH 90 WB	E4-1A	B	900	1.6	98		FRENCH ISLAND
		E1-5	-	--	--	--	3-5	EXIT 2
3-7	IH 90 WB	E3-1	A	600	1.2	68		
PROJECT ID 1071-06-77 SUMMARY				**2400**	**4.4**	**264**		
4-2	IH 90 WB	E1-1A	C	1900	2.7	150		FRENCH ISLAND 1/2 MILE
		E1-5	-	--	--	--	4-2	EXIT 2
5-4	IH 90 WB	E3-1	A	600	1.2	68		HISTORIC DOWNTOWN LA CROSSE
PROJECT ID 1071-06-78 SUMMARY				**2500**	**3.9**	**218**		
PROJECT TOTALS				**4900**	**8.3**	**482**		

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

SIGNS TYPE II

SIGN NUMBER	STATION	SIZE FEET	DESCRIPTION	SIGN MESSAGE (ORDER LINES)	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0620 POSTS WOOD 20-FT EACH	634.0622 4X6-INCH 22-FT EACH	SPV.0060.05 FIXED MESSAGE SIGN PORTABLE SUPPORT EACH	COMMENTS
300	153+75 EB	5 X 14 2 X 7	EXIT GUIDE SIGN EXIT NUMBER 2	B FRENCH ISLAND	84	---	---	4	---	STAGE 1
301	158+25 EB	4 X 14	ADVANCE GUIDE SIGN	LA CROSSE AIRPORT EXIT 2	56	---	4	---	---	STAGE 1
302	175+25 EB	6.5 X 11 2 X 7	ADVANCE GUIDE SIGN EXIT NUMBER 2	B FRENCH ISLAND 1/2 MILE	85.5	---	---	3	---	STAGE 1
314	119+00 EB	4 X 9.5	---	MERGING TRAFFIC BE PREPARED TO STOP	---	38	2	---	---	
320	156+25 EB	4 X 9.5	---	MERGING TRAFFIC BE PREPARED TO STOP	---	38	2	---	---	
322	140+50 D	3 X 6	---	MERGE AHEAD BE PREPARED TO STOP	---	18	2	---	---	
323	B RAMP	3 X 6	---	MERGE AHEAD BE PREPARED TO STOP	---	18	2	---	---	
PROJECT ID 1071-06-77 SUMMARY					**365.0 ***	**197 ***	**21 ***	**10 ***	**---**	
303	235+30 WB	5.5 X 8	EXIT GUIDE SIGN	90 WEST USE LEFT LANE	44	---	---	---	1	
304	235+30 WB	1 X 11 8 X 11 2 X 7	EXIT ONLY PANEL EXIT GUIDE SIGN EXIT NUMBER 3	SOUTH 53 35 ONALASKA LA CROSSE RIGHT LANE ONLY	113	---	---	---	1	
305	243+25 WB	8 X 13	SUPPLEMENTAL GUIDE SIGN	AMTRAK STATION GREAT RIVER STATE TRAIL EXIT 3	104	---	---	---	1	
306	253+00 EB	6 X 10	EXIT GUIDE SIGN	WEST SOUTH 90 53 USE LEFT LANE	60	---	---	3	1	
307	254+00 JT	1 X 11	EXIT ONLY PANEL	RIGHT LANE ONLY	11	---	---	---	---	ATTACH TO EX TYPE I SIGN
308	296+75 WB	1 X 11 8 X 11 2 X 7	EXIT ONLY PANEL EXIT GUIDE SIGN EXIT NUMBER 4	NORTH 53 157 ONALASKA LA CROSSE RIGHT LANE ONLY	113	---	---	---	1	
309	296+75 WB	5.5 X 8	EXIT GUIDE SIGN	90 EAST USE LEFT LANE	44	---	2	---	---	
310	309+30 WB	1 X 10	EXIT ONLY PANEL	USE RIGHT LANE	10	---	---	---	---	ATTACH TO EX TYPE I OVERHEAD SIGN
311	229+20 WB	9.5 X 10 2 X 7	ADVANCE GUIDE SIGN EXIT NUMBER 4	NORTH 53 157 ONALASKA LA CROSSE 1/2 MILE USE RIGHT LANE	109	---	---	3	---	

- CONTINUED -

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

SIGNS TYPE II

SIGN NUMBER	STATION	SIZE FEET	DESCRIPTION	SIGN MESSAGE (ORDER LINES)	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0620 POSTS WOOD 20-FT EACH	634.0622 4X6-INCH 22-FT EACH	SPV.0060.05 FIXED MESSAGE SIGN PORTABLE SUPPORT EACH	COMMENTS
		1 X 11 8 X 11	EXIT ONLY PANEL EXIT GUIDE SIGN	NORTH 53 157 ONALASKA LA CROSSE						
312	250+50 EB	2 X 7	EXIT NUMBER 4	RIGHT LANE ONLY	113	---	---	3	---	
313	291+65 WB	2 X 4	AHEAD	AHEAD	8	---	---	---	---	ATTACH TO EX TYPE I OVERHEAD SIGN
315	216+25 EB	4 X 9.5	---	MERGING TRAFFIC BE PREPARED TO STOP	---	38	2	---	---	
316	ROSE ST SB	4 X 9.5	---	MERGING TRAFFIC BE PREPARED TO STOP	---	38	2	---	---	
317	ROSE ST SB	4 X 9.5	---	MERGING TRAFFIC BE PREPARED TO STOP	---	38	2	---	---	
318	ROSE ST NB	4 X 9.5	---	MERGING TRAFFIC BE PREPARED TO STOP	---	38	2	---	---	
319	ROSE ST NB	4 X 9.5	---	MERGING TRAFFIC BE PREPARED TO STOP	---	38	2	---	---	
321	356+00 WB	4 X 9.5	---	MERGING TRAFFIC BE PREPARED TO STOP	---	38	2	---	---	
324	194+50 H	3 X 6	---	MERGE AHEAD BE PREPARED TO STOP	---	18	2	---	---	
325	209+50 HU	3 X 6	---	MERGE AHEAD BE PREPARED TO STOP	---	18	2	---	---	
326	210+00 GW	3 X 6	---	MERGE AHEAD BE PREPARED TO STOP	---	18	2	---	---	
327	ROSE ST LOOP RAMP	3 X 6	---	MERGE AHEAD BE PREPARED TO STOP	---	18	2	---	---	
328	STH 16 RAMP	3 X 6	---	MERGE AHEAD BE PREPARED TO STOP	---	18	2	---	---	
PROJECT ID 1071-06-78 SUMMARY					**1028.25 ***	**366.5 ***	**42 ***	**13 ***	**5**	
PROJECT TOTALS					**1393.25 ***	**563.50 ***	**63 ***	**23 ***	**5**	

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS**

MARKERS CULVERT END

STATION	LOCATION	633.5200 EACH
100+10 WB	WB LANES	2
106+20 WB	WB LANES	2
119+10 WB	WB LANES	2
129+00 WB	WB LANES	2
138+05 D	D RAMP	2
140+78 C	C RAMP	2
142+62 WB	WB LANES	1
151+00 WB	WB LANES	2
157+00 WB	WB LANES	2
PROJECT ID 1071-06-77 SUMMARY		**17**
174+90 WB	WB LANES	2
183+05 WB	WB LANES	2
183+90 WB	WB LANES	2
198+12 WB	WB MEDIAN	2
205+90 WB	WB LANES	2
216+70 WB	WB LANES	2
234+75 WB	WB LANES	1
269+65 WB	WB LANES	2
283+05 WB	WB LANES	2
292+00 WB	WB LANES	2
296+75 WB	WB LANES	1
PROJECT ID 1071-06-78 SUMMARY		**20**
PROJECT TOTAL		**37**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

REMOVING SIGNS TYPE II

SIGN NUMBER	STATION	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
300	167+75 EB	1	4
301	175+25 EB	1	4
302	196+20 EB	1	3
320	162+75 EB	1	2
322	141+00 D	1	2
315	220+00 WB	1	2
314	119+00 EB	1	2
320	156+25 EB	1	2
322	140+50 D	1	2
323	B RAMP	1	2
PROJECT ID 1071-06-77 SUMMARY		**27 ***	**45 ***
303	235+30 WB	1	---
304	235+30 WB	1	---
305	243+25 WB	1	---
306	253+00 EB	1	3
307	254+00 JT	1	---
308	296+75 WB	1	---
309	296+75 WB	1	2
310	309+30 WB	1	---
311	229+20 WB	1	3
312	250+50 EB	1	3
313	291+65 WB	1	---
315	216+25 EB	1	2
316	ROSE ST SB	1	2
317	ROSE ST SB	1	2
318	ROSE ST NB	1	2
319	ROSE ST NB	1	2
321	356+00 WB	1	2
324	194+50 H	1	2
325	209+50 HU	1	2
326	210+00 GW	1	2
327	ROSE ST LOOP RAMP	1	2
328	STH 16 RAMP	1	2
PROJECT ID 1071-06-78 SUMMARY		**45 ***	**83 ***
PROJECT TOTALS		72 *	128 *

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS**

MOVING SIGNS

SIGN NUMBER	STAGE	STATION FROM	STATION TO	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	COMMENTS
300	2	153+75 EB	167+75 EB	---	1	4	MOVE SIGN PLACED UNDER STAGE 1
301	2	158+25 EB	175+25 EB	---	1	4	MOVE SIGN PLACED UNDER STAGE 1
302	2	175+25 EB	196+20 EB	---	1	3	MOVE SIGN PLACED UNDER STAGE 1
322	2	140+50 D	138+25 D	---	1	2	MOVE SIGN PLACED UNDER STAGE 1
320	3A	156+25 EB	162+75 EB	---	1	2	MOVE SIGN PLACED UNDER STAGE 1
322	3A	138+25 D	141+00 D	---	1	2	MOVE SIGN PLACED UNDER STAGE 1
315	4A	216+25 EB	220+00 WB	---	1	2	MOVE SIGN PLACED UNDER STAGE 1
PROJECT ID 1071-06-77 SUMMARY				**---**	**7**	**19**	
200	1	209+00 GT	209+00 GT	---	1	2	
201	1	208+00 GT	207+80 GT	---	1	2	
202	1	231+00 WB	240+00 WB	---	3	3	PLACE ON FIXED MESSAGE SIGN PORTABLE SUPPORT
100	1	291+65 WB	291+65 WB	1	---	---	MOVE SIGN ON EXISTING SIGN BRIDGE
101	1	291+65 WB	291+65 WB	1	---	---	MOVE SIGN ON EXISTING SIGN BRIDGE
102	1	331+40 WB	331+40 WB	1	---	---	MOVE SIGN ON EXISTING SIGN BRIDGE
200	2	209+00 GT	212+50 GU	---	1	2	
324	2	194+50 H	192+50 H	---	1	2	MOVE SIGN PLACED UNDER STAGE 1
303	3A	235+30 WB	235+30 WB	---	1	---	
304	3A	235+30 WB	235+30 WB	---	1	---	
202	3A	240+00 WB	240+00 WB	---	3	3	
305	3A	243+25 WB	242+00 WB	---	1	---	
100	3A	291+65 WB	291+65 WB	1	---	---	MOVE SIGN ON EXISTING SIGN BRIDGE
101	3A	291+65 WB	291+65 WB	1	---	---	MOVE SIGN ON EXISTING SIGN BRIDGE
103	3B	309+30 WB	309+30 WB	1	---	---	MOVE SIGN ON EXISTING SIGN BRIDGE
324	4A	192+50 H	199+00 H	---	1	2	MOVE SIGN PLACED UNDER STAGE 1
PROJECT ID 1071-06-78 SUMMARY				**6**	**18 ***	**17 ***	
PROJECT TOTALS				**6**	**25 ***	**36 ***	

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS**

TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER

STATION TO STATION	LOCATION	STAGE	643.0500 POSTS EACH	643.0600 BASES EACH
72+00 EB - 174+00 EB	C/L EXISTING EB	1	298	298
162+25 EB - 164+25 EB	CROSSOVER	3A	9	9
UNDISTRIBUTED			43	43
PROJECT ID 1071-06-77 SUMMARY			**350**	**350**
174+00 EB - 206+50 EB	C/L EXISTING EB	1	328	328
218+50 TW - 250+00 TW	GORE	1	50	50
256+50 TW - 283+00 TW	C/L EXISTING EB	1	84	84
288+00 TW - 292+00 TW	GORE	1	24	24
250+00 TW - 252+00 TW	GORE	2	10	10
259+00 WB - 291+00 WB	GORE	3A	24	24
273+50 UW - 280+00 UW	GORE	3A	48	48
287+75 UW - 291+00 UW	GORE	3A	18	18
UNDISTRIBUTED			64	64
PROJECT ID 1071-06-78 SUMMARY			**650**	**650**
PROJECT TOTALS			**1000**	**1000**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

TRAFFIC CONTROL SIGNS, LIGHTS, AND BARRICADES

STAGE	643.0300 DRUMS EACH	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III EACH	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A EACH	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C EACH	643.0715 WARNING LIGHTS TYPE C DAYS	643.0800 ARROW BOARDS EACH	643.0800 ARROW BOARDS DAYS	643.0900 SIGNS EACH	643.0900 SIGNS DAYS	643.1050 SIGNS PCMS EACH	643.1050 SIGNS PCMS DAYS
STAGE 1	68	5168	14	1064	18	1368	23	1748	---	---	145	11020	2	152
STAGE 2	146	2190	21	315	27	405	21	315	---	---	35	525	2	30
STAGE 3A	283	5660	25	500	42	840	---	---	---	---	32	640	2	40
STAGE 3B	336	24528	22	1606	36	2628	46	3358	---	---	35	2555	2	146
STAGE 4A	287	5740	20	400	38	760	---	---	---	---	30	600	2	40
STAGE 4B	285	4275	18	270	34	510	45	675	---	---	29	435	2	30
UNDISTRIBUTED	---	5439	---	445	---	689	---	674	---	---	---	1625	---	52
PROJECT ID 1071-06-77 SUMMARY		**53000**		**4600**		**7200**		**6770**		**---**		**17400**		**490**
STAGE 1	167	11690	36	2520	45	3150	49	3430	---	---	68	4760	9	630
STAGE 1A	45	675	1	15	2	30	6	90	2	30	24	360	---	---
STAGE 1B	28	1400	3	150	4	200	12	600	1	50	22	1100	---	---
STAGE 1C	70	2100	5	150	8	240	18	540	2	60	34	1020	---	---
STAGE 1D	80	2400	6	180	10	300	18	540	1	30	34	1020	---	---
STAGE 2	208	4160	31	620	40	800	33	660	---	---	74	1480	9	180
STAGE 3A	323	6783	36	756	54	1134	49	1029	2	42	72	1512	9	189
STAGE 3B	208	15184	30	2190	40	2920	21	1533	---	---	50	3650	8	584
STAGE 4A	160	3200	9	180	18	360	33	660	---	---	26	520	8	160
STAGE 4B	138	2070	2	30	4	60	10	150	---	---	7	105	8	120
UNDISTRIBUTED	---	5038	---	709	---	1006	---	968	---	28	---	1573	---	187
PROJECT ID 1071-06-78 SUMMARY		**54700**		**7500**		**10200**		**10200**		**240**		**17100**		**2050**
PROJECT TOTALS		**107700**		**12100**		**17400**		**16970**		**240**		**34500**		**2540**

TRAFFIC CONTROL DETOUR

PROJECT	643.2000 EACH
NONE	0
PROJECT ID 1071-06-77 SUMMARY	**0**
02. 1071-06-78	1
PROJECT ID 1071-06-78 SUMMARY	**1**

TRAFFIC CONTROL DETOUR SIGNS

STAGE	643.3000 EACH	643.3000 DAYS
NONE	---	---
PROJECT ID 1071-06-77 SUMMARY		**0**
STAGE 1	126	8820
STAGE 2	126	2520
STAGE 3A	165	3465
STAGE 3B	126	9198
UNDISTRIBUTED		2397
PROJECT ID 1071-06-78 SUMMARY		**26400**

PAVEMENT MARKING EPOXY

STATION TO STATION	DESCRIPTION	646.0106 4-INCH WHITE LF	646.0106 4-INCH YELLOW LF	646.0126 8-INCH WHITE LF
71+97 EB - 174+00 EB	MEDIAN EDGELINE	---	10203	---
71+97 EB - 174+00 EB	CENTERLINE SKIP	2551	---	---
71+97 WB - 174+00 WB	MEDIAN EDGELINE	---	10203	---
71+97 WB - 174+00 WB	CENTERLINE SKIP	2551	---	---
71+97 WB - 130+57 WB	OUTSIDE EDGELINE	5860	---	---
130+57 D - 140+10 D	EDGELINE	953	---	---
136+10 D - 140+10 D	EDGELINE	---	400	---
126+10 WB - 131+60	DOTTED LANE LINE	138	---	---
131+60 WB - 136+20 WB	CHANNELIZING	---	---	870
136+20 WB - 141+60 WB	OUTSIDE EDGELINE	540	---	---
141+60 WB - 144+70 WB	CHANNELIZING	---	---	570
139+50 C - 141+70 C	EDGELINE	---	220	---
144+70 WB - 153+22 WB	DOTTED LANE LINE	213	---	---
141+55 C - 145+70 C	EDGELINE	415	---	---
145+70 WB - 174+00 WB	OUTSIDE EDGELINE	2830	---	---
17+00 BW - 23+00 BW	EDGELINE	600	---	---
17+00 BW - 23+00 BW	CENTERLINE	---	1200	---
17+00 BW - 23+00 BW	EDGELINE	600	---	---
SUBTOTALS		**17251**	**22226**	**1440**
PROJECT ID 1071-06-77 SUMMARY			**39477**	**1440**

- CONTINUE -

PAVEMENT MARKING EPOXY

STATION TO STATION	DESCRIPTION	646.0106 4-INCH WHITE LF	646.0106 4-INCH YELLOW LF	646.0126 8-INCH WHITE LF
174+00 EB - 284+00 EB	CENTERLINE SKIP	2750	---	---
174+00 EB - 286+00 EB	MEDIAN EDGELINE	---	11200	---
174+00 WB - 321+60 WB	MEDIAN EDGELINE	---	14760	---
174+00 WB - 321+60 WB	CENTERLINE SKIP	3690	---	---
174+00 WB - 185+59 WB	OUTSIDE EDGELINE	1159	---	---
185+59 H - EXISTING H RAMP	EDGELINE	1551	---	---
182+10 WB - 186+15 WB	DOTTED LANE LINE	101	---	---
186+15 WB - 191+20 WB	CHANNELIZING	---	---	960
191+20 H - EXISTING H RAMP	EDGELINE	---	1003	---
191+20 WB - 193+07 WB	OUTSIDE EDGELINE	187	---	---
193+07 HW - 208+00 HW	EDGELINE	1493	---	---
197+64 FU - 191+91 FU	EDGELINE	---	260	---
202+00 WB - 204+60 WB	CHANNELIZING	---	---	520
204+60 HW - 208+00 HW	EDGELINE	---	340	---
207+25 EB - 212+75 EB	DOTTED LANE LINE	138	---	---
204+60 WB - 210+30 WB	OUTSIDE EDGELINE	570	---	---
210+30 WB - 217+00 WB	CHANNELIZING	---	---	940
208+80 GU - 211+50 GU	EDGELINE	---	270	---
208+80 GU - 214+17 GU	EDGELINE	537	---	---
214+17 WB - 257+93 WB	OUTSIDE EDGELINE	4376	---	---
216+40 EB - 229+00 EB	EDGELINE	1260	---	---
217+00 WB - 258+90 WB	DOTTED LANE LINE	---	---	1048
250+60 EB - 264+30 EB	EDGELINE	1460	---	---
253+20 EB - 259+20 EB	DOTTED LANE LINE	150	---	---
257+93 M - 267+10 M	EDGELINE	917	---	---
258+90 WB - 263+40 WB	CHANNELIZING	---	---	900
263+30 M - 267+10 M	EDGELINE	---	380	---
263+40 WB - 263+84 WB	OUTSIDE EDGELINE	44	---	---
263+84 P - 279+65 P	EDGELINE	1581	---	---
272+50 WB - 280+20 WB	CHANNELIZING	---	---	1540
278+27 KT - 280+92 KT	EDGELINE	---	290	---
280+20 WB - 286+80 WB	OUTSIDE EDGELINE	660	---	---
283+75 L - 286+80 L	EDGELINE	---	305	---
283+75 L - 291+50 L	EDGELINE	775	---	---
283+78 EB - 285+08 EB	OUTSIDE EDGELINE	130	---	---
286+80 WB - 292+80 WB	CHANNELIZING	---	---	900
289+50 EB - 317+50 EB	DASHES	---	---	700
291+50 WB - 319+65 WB	OUTSIDE EDGELINE	2815	---	---
292+80 WB - 321+60 WB	DOTTED LANE LINE	---	---	720
316+00 EB - 322+00 EB	MEDIAN EDGELINE	---	600	---
317+50 EB - 322+25 EB	CHANNELIZING	---	---	475
321+72 WB - 325+50 WB	CHANNELIZING	---	---	756
ROSE STREET SB LANES	OUTSIDE EDGELINE	160	---	---
ROSE STREET SB LANES	CENTERLINE SKIP	263	---	---
ROSE STREET SB LANES	MEDIAN EDGELINE	---	900	---
102+60 GX - 117+64 GX	EDGELINE	1504	---	---
111+67 GX - 114+74 GX	CHANNELIZING	---	---	660
114+94 GX - 117+64 GX	EDGELINE	---	270	---
SUBTOTALS		**28271**	**30578**	**10119**
PROJECT ID 1071-06-78 SUMMARY			**58849**	**10119**
PROJECT TOTALS			**98326**	**11559**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING PAVEMENT MARKINGS

STATION TO STATION	DESCRIPTION	STAGE	646.0600 LF
72+00 EB - 174+00 EB	WHITE SKIPS	1	2550
72+00 EB - 174+00 EB	LT EDGELINE	1	10200
135+75 WB - 137+00 WB	LT EDGELINE	1	125
135+75 WB - 137+00 WB	RT EDGENLINE	1	125
135+75 WB - 137+00 WB	SKIPS	1	32
139+00 DT - 140+50 DT	RT EDGENLINE	1	150
139+00 CT - 141+00 CT	RT EDGENLINE	1	200
142+00 WB - 146+50 WB	RT EDGENLINE	1	450
142+00 WB - 146+50 WB	SKIPS	1	112
142+00 WB - 142+00 WB	CHANNELIZING	1	200
128+00 EB - 133+00 EB	DASHES	2	125
133+00 EB - 134+75 EB	CHANNELIZING	2	350
128+00 EB - 130+00 EB	EDGELINE	2	200
161+50 EB - 167+80 EB	EDGELINE	2	630
72+00 EB - 162+25 EB	CENTERLINE	3A	18050
72+00 EB - 161+50 EB	LT EDGELINE	3A	8950
158+00 WB - 174+00 EB	EDGELINE	4A	1600
157+00 VW - 165+00 VW	EDGELINE	4A	800
162+25 EB - 174+00 EB	CENTERLINE	4A	2350
161+00 EB - 174+00 EB	LT EDGELINE	4A	1300
161+50 EB - 168+00 EB	RT EDGENLINE	FINAL	650
161+50 EB - 168+00 EB	LT EDGELINE	FINAL	650
PROJECT ID 1071-06-77 SUMMARY			**49799**
174+00 EB - 283+00 EB	WHITE SKIPS	1	2725
174+00 EB - 229+00 EB	EDGELINE	1	5500
188+50 WB - 191+00 WB	EDGELINE	1	250
188+50 WB - 191+00 WB	SKIPS	1	63
188+50 WB - 191+00 WB	EDGELINE/CHANNELIZING	1	350
198+00 HT - 201+00 HT	EDGELINE	1	300
209+50 HU - 208+50 HU	EDGELINE	1	100
204+25 EB - 207+25 EB	CHANNELIZING	1	600
204+75 WB - 205+75 WB	LT EDGELINE	1	100
204+75 WB - 205+75 WB	SKIPS	1	25
204+75 WB - 205+75 WB	RT EDGELINE	1	100
207+67 EB - 228+87 EB	EDGELINE	1	2120
210+00 WB - 211+00 WB	EDGELINE	1	100
210+00 WB - 211+00 WB	SKIPS	1	25
210+00 WB - 263+00 WB	EDGELINE	1	5300
207+50 GT - 208+50 GT	EDGELINE	1	100
230+00 WB - 263+00 WB	SKIPS	1	825
252+25 EB - 283+00 EB	DASHES	1	750
250+50 EB - 284+00 EB	EDGELINE	1	3350
250+50 EB - 259+75 EB	EDGELINE	1	925
264+00 MT - 267+00 MT	EDGELINE	1	300
262+00 WB - 263+25 WB	CHANNELIZING	1	250
288+00 WB - 318+50 WB	EDGELINE	1	3050
283+75 LT - 286+00 LT	EDGELINE	1	225
284+50 WB - 289+00 WB	CHANNELIZING	1	300
287+50 WB - 289+00 WB	SKIPS	1	38
307+00 WB - 318+50 WB	SKIPS	1	288
314+00 WB - 318+50 WB	SKIPS	1	200
314+00 WB - 318+50 WB	EDGELINE	1	800
ROSE STREEET SB	SKIPS	1B	88
207+50 GW - 208+40 GW	RT EDGELINE	1B	90
201+00 GW - 206+00 GW	CHANNELIZING	1B	1000
107+60 TS - 116+60 TS	RT EDGELINE	1B	900
106+15 TS - 116+60 TS	SKIPS	1B	262
114+60 TS - 116+60 TS	LT EDGELINE	1B	200
107+30 TN - 115+30 TN	SKIPS	1B	200
107+30 TN - 115+30 TN	LT EDGELINE	1B	800

- CONTINUE -

REMOVING PAVEMENT MARKINGS

STATION TO STATION	DESCRIPTION	STAGE	646.0600 LF
197+00 HU - 200+00 HU	EDGELINE	2	300
182+00 EB - 185+00 EB	EDGELINE	2	300
209+50 GU - 210+25 GU	EDGELINE	2	125
225+00 GT - 232+75 GT	RT EDGELINE	2	725
250+00 TW - 252+50 TW	EDGELINE	2	250
262+50 MT - 267+22 MT	EDGELINE	2	472
292+50 LT - 286+50 LT	LT EDGELINE	2	371
283+64 LT - 286+50 LT	LT EDGELINE	2	286
216+38 EB - 222+00 EB	LT EDGELINE	3A	362
251+50 MU - 262+00 MU	EDGELINE	3A	1050
253+00 MU - 262+82 MU	EDGELINE	3A	982
287+30 LU - 293+00 LU	RT EDGELINE	3A	570
287+30 LU - 293+00 LU	LT EDGELINE	3A	570
289+30 EB - 322+00 EB	SKIPS	3A	825
315+00 WB - 321+70 WB	EDGELINE	3A	670
315+00 WB - 318+50 WB	SKIPS	3A	88
EAST END OF PROJECT	SKIPS	3A	175
260+10 EB - 285+00 EB	CENTERLINE	3A	4980
258+00 EB - 282+00 EB	LT EDGELINE	3A	2400
250+70 EB - 260+25 EB	LT EDGELINE	3B	955
250+70 EB - 256+20 EB	SKIPS	3B	138
298+00 WB - 319+50 WB	EDGELINE	3B	2150
292+50 WB - 304+00 WB	EDGELINE	3B	1150
314+00 WB - 325+50 WB	EDGELINE	3B	1150
204+75 WB - 205+50 WB	EDGELINE	4A	400
204+00 EB - 227+50 UW	CHANNELIZING	4A	500
204+00 EB - 227+50 UW	EDGELINE	4A	2310
206+75 EB - 230+00 UW	EDGELINE	4A	2325
212+00 GU - 225+00 GV	EDGELINES	4A	2600
223+00 WB - 236+00 WB	EDGELINE	4A	1300
236+00 WB - 319+00 WB	EDGELINE	4A	8300
188+10 H - 197+50 H	LT EDGELINE	4A	940
188+10 H - 197+50 H	RT EDGELINE	4A	940
174+00 EB - 206+50 EB	CENTERLINE	4A	6500
174+00 EB - 220+00 EB	LT EDGELINE	4A	4600
244+00 UW - 259+60 UW	SKIPS	4A	390
246+00 UW - 263+00 UW	LT EDGELINE	4A	1700
259+37 WB - 263+37 WB	CHANNELIZING	4A	1200
280+20 WB - 286+80 WB	LT EDGELINE	4A	660
286+80 WB - 290+50 WB	CHANNELIZING	4A	1000
290+50 WB - 313+50 WB	SKIPS	4A	1054
313+50 WB - 319+40 WB	DASHES	4A	150
287+40 WB - 319+00 WB	LT EDGELINE	4A	3160
206+62 EB - 210+00 EB	LT EDGELINE	4B	338
176+20 EB - 182+00 EB	RT EDGELINE	FINAL	580
180+20 EB - 182+00 EB	CHANNELIZING	FINAL	800
189+00 EB - 195+00 EB	RT EDGELINE	FINAL	600
193+00 EB - 195+00 EB	CHANNELIZING	FINAL	800
204+40 EB - 228+00 EB	LT EDGELINE	FINAL	2360
205+00 EB - 210+00 EB	RT EDGELINE	FINAL	500
206+60 EB - 210+00 EB	CHANNELIZING	FINAL	680
210+00 EB - 229+00 EB	SKIPS	FINAL	475
207+20 EB - 229+00 EB	RT EDGELINE	FINAL	2130
PROJECT ID 1071-06-78 SUMMARY			**102935**
PROJECT TOTAL			**152734**

TRAFFIC CONTROL COVERING SIGNS

STATION	STAGE	CYCLES	643.0910 TYPE I EACH	643.0920 TYPE II EACH
46+50 EB RT	1 - 4B	1	---	1
83+50 EB RT	1 - 4B	1	1	---
93+90 EB RT	1 - 4B	1	---	1
102+25 EB RT	1 - 4B	1	---	1
160+50 EB RT	1 - 4B	1	---	1
PROJECT ID 1071-06-78 SUMMARY			**1**	**4**
201+90 EB RT	1 - 3	1	---	1
291+90 WB LT	1 - 3	1	1	---
309+15 WB LT	1 - 3	1	1	---
331+40 WB LT	1 - 3B	1	1	---
337+50 WB LT	1 - 3B	1	---	1
STH 157 NB RT	1 - 3B	1	---	2
STH 157 NB RT	1 - 3B	1	---	1
STH 157 NB RT	1 - 3B	1	---	1
STH 157 NB OVERHEAD	1 - 3B	1	1	---
STH 157 NB OVERHEAD	1 - 3B	1	1	---
STH 157 SB RT	1 - 3B	1	---	1
STH 157 SB RT	1 - 3B	1	---	1
STH 157 SB OVERHEAD	1 - 3B	1	1	---
STH 157 SB OVERHEAD	1 - 3B	1	1	---
ROSE ST SB LT	1A	10	---	10
ROSE ST SB LT	1B	1	---	1
ROSE ST SB LT	1B	20	---	20
ROSE ST SB RT	1B	20	---	20
ROSE ST NB OVERHEAD	1D	10	10	---
291+90 WB LT	2	1	1	---
ROSE ST NB RT	3A	1	1	---
261+20 EB RT	3B	1	---	1
291+90 WB LT	3B	1	1	---
252+70 WB OVERHEAD	4A	1	1	---
PROJECT ID 1071-06-78 SUMMARY			**21**	**60**
PROJECT TOTALS			**22**	**64**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

TEMPORARY PAVEMENT MARKING

STATION TO STATION	DESCRIPTION	STAGE	649.0200 REFLECTIVE PAINT 4-INCH WHITE LF	649.0200 REFLECTIVE PAINT 4-INCH YELLOW LF	649.0400 REMOVABLE TAPE 4-INCH WHITE LF	649.0400 REMOVABLE TAPE 4-INCH YELLOW LF	649.0701 8-INCH WHITE LF
72+00 EB - 120+47 EB	EDGELINE	1	4847	---	---	---	---
120+47 EB - 140+58 DT	EDGELINE	1	2011	---	---	---	---
134+77 EB - 147+90 EB	EDGELINE	1	1314	---	---	---	---
139+20 CT - 149+70 EB	EDGELINE	1	1050	---	---	---	---
149+70 EB - 174+00 EB	EDGELINE	1	2430	---	---	---	---
72+00 EB - 174+00 EB	CENTERLINE	1	---	20400	---	---	---
134+75 DT - 140+58 DT	EDGELINE	1	---	583	---	---	---
139+00 CT - 147+90 CT	EDGELINE	1	---	890	---	---	---
128+00 DT - 133+00 DT	DASHES	1	125	---	---	---	---
133+00 EB - 134+75 DT	CHANNELIZING	1	---	---	---	---	350
147+90 EB - 148+90 EB	CHANNELIZING	1	---	---	---	---	200
127+97 DU - 133+76 DU	EDGELINE	2	---	---	579	---	---
141+12 CU - 167+79 CU	EDGELINE	2	979	---	1688	---	---
129+73 EB - 134+77 EB	EDGELINE	2	504	---	---	---	---
147+90 EB - 153+69 EB	EDGELINE	2	579	---	---	---	---
129+72 DU - 133+76 DU	EDGELINE	2	---	150	---	252	---
141+12 CU - 160+10 CU	EDGELINE	2	---	150	---	1748	---
127+97 EB - 129+73 EB	CHANNELIZING	2	---	---	---	---	352
160+10 EB - 165+79 EB	CHANNELIZING	2	---	---	---	---	938
162+19 EB - 167+75 EB	EDGELINE	3A	556	---	---	---	---
161+10 EB - 164+59 EB	EDGELINE	3A	---	346	---	---	---
98+75 EB - 105+50 EB	EDGELINE	3B	---	---	675	---	---
98+75 EB - 105+50 EB	EDGELINE	3B	---	---	---	675	---
106+75 EB - 113+50 EB	EDGELINE	3B	---	---	675	---	---
106+75 EB - 113+50 EB	EDGELINE	3B	---	---	---	675	---
161+50 EB - 168+00 EB	EDGELINE	4B	---	---	650	---	---
161+50 EB - 168+00 EB	EDGELINE	4B	---	---	---	650	---
SUBTOTALS			**14395**	**22519**	**4267**	**4000**	**1840**
PROJECT ID 1071-06-77 SUMMARY			**36914**		**8267**		**1840**
174+00 EB - 201+00 HT	EDGELINE	1	2660	---	---	---	---
186+26 EB - 209+64 HU	EDGELINE	1	2324	---	---	---	---
204+56 EB - 225+11 TW	EDGELINE	1	2055	---	---	---	---
207+67 EB - 228+87 EB	EDGELINE	1	2120	---	---	---	---
250+62 JT - 259+82 JT	EDGELINE	1	920	---	---	---	---
255+21 TW - 288+10 TW	EDGELINE	1	3290	---	---	---	---
207+31 GT - 267+22 MT	EDGELINE	1	5991	---	---	---	---
283+63 LT - 321+69 WB	EDGELINE	1	3806	---	---	---	---
229+80 EB - 256+20 EB	DASHES	1	660	---	---	---	---
229+66 GT - 249+29 WB	DASHES	1	490	---	---	---	---
291+92 WB - 318+50 WB	DASHES	1	665	---	---	---	---
174+00 EB - 206+62 EB	CENTERLINE	1	---	6524	---	---	---
206+62 EB - 260+18 EB	EDGELINE	1	---	5356	---	---	---
206+62 EB - 228+87 EB	EDGELINE	1	---	2225	---	---	---
260+18 EB - 279+16 EB	CENTERLINE	1	---	3796	---	---	---
186+23 HT - 201+15 HT	EDGELINE	1	---	1488	---	---	---
204+54 HU - 209+64 HU	CENTERLINE	1	---	510	---	---	---
207+31 GT - 221+14 GT	EDGELINE	1	---	1383	---	---	---
250+62 JT - 260+18 JT	EDGELINE	1	---	956	---	---	---
254+57 MT - 267+22 MT	EDGELINE	1	---	1265	---	---	---
279+16 EB - 318+50 WB	EDGELINE	1	---	3949	---	---	---
283+63 LT - 287+94 LT	EDGELINE	1	---	431	---	---	---
207+67 EB - 229+80 EB	SKIPS	1	550	---	---	---	---
183+64 EB - 186+26 EB	CHANNELIZING	1	---	---	---	---	525
203+56 EB - 204+42 EB	CHANNELIZING	1	---	---	---	---	200
204+42 EB - 207+67 EB	CHANNELIZING	1	---	---	---	---	400

- CONTINUE -

TEMPORARY PAVEMENT MARKING

STATION TO STATION	DESCRIPTION	STAGE	649.0200 REFLECTIVE PAINT 4-INCH WHITE LF	649.0200 REFLECTIVE PAINT 4-INCH YELLOW LF	649.0400 REMOVABLE TAPE 4-INCH WHITE LF	649.0400 REMOVABLE TAPE 4-INCH YELLOW LF	649.0701 8-INCH WHITE LF
221+14 WB - 229+67 WB	CHANNELIZING	1	---	---	---	---	1029
249+29 WB - 254+98 WB	CHANNELIZING	1	---	---	---	---	750
256+20 EB - 259+20 EB	CHANNELIZING	1	---	---	---	---	300
287+88 WB - 291+92 WB	CHANNELIZING	1	---	---	---	---	500
ROSE STREET	EDGELINE	1B	2652	2001	---	---	---
ROSE STREET	SKIPS	1B	463	---	---	---	---
ROSE STREET	CHANNELIZING	1B	---	---	---	---	257
182+18 HV - 197+60 HV	EDGELINE	2	1242	---	300	---	---
183+77 EB - 186+26 EB	EDGELINE	2	249	---	---	---	---
211+14 GU - 232+51 GU	EDGELINE	2	350	---	1816	---	---
250+00 MV - 262+82 MV	EDGELINE	2	1282	---	---	---	---
283+66 LT - 295+21 TW	EDGELINE	2	655	---	500	---	---
183+75 HV - 200+00 HV	EDGELINE	2	---	200	---	1425	---
211+42 GU - 229+81 GU	EDGELINE	2	---	200	---	1639	---
252+27 MU - 262+82 MU	EDGELINE	2	---	955	---	100	---
287+50 LU - 292+00 LU	EDGELINE	2	---	---	---	450	---
182+18 HV - 183+75 HV	CHANNELIZING	2	---	---	---	---	320
228+84 HW - 233+61 HW	CHANNELIZING	2	---	---	---	---	650
249+50 TW - 252+50 TW	CHANNELIZING	2	---	---	---	---	410
292+00 TW - 297+00 TW	CHANNELIZING	2	---	---	---	---	700
216+38 UW - 224+00 UW	EDGELINE	3A	762	---	---	---	---
223+78 GU - 224+91 GU	EDGELINE	3A	---	113	---	---	---
223+78 GU - 263+03 UW	EDGELINE	3A	4017	---	---	---	---
216+38 UW - 319+29 WB	EDGELINE	3A	---	10330	---	---	---
229+00 UW - 259+66 UW	DASHES	3A	768	---	---	---	---
280+43 UW - 287+04 UW	EDGELINE	3A	661	---	---	---	---
287+64 UW - 325+50 WB	EDGELINE	3A	3836	---	---	---	---
224+00 UW - 229+00 UW	CHANNELIZING	3A	---	---	---	---	700
259+66 UW - 263+60 UW	CHANNELIZING	3A	---	---	---	---	600
287+04 UW - 290+76 UW	CHANNELIZING	3A	---	---	---	---	500
290+76 UW - 292+76 UW	DASHES	3A	---	---	---	---	50
EAST END OF PROJECT	EDGELINE	3A	---	---	---	700	---
205+00 HU - 206+00 HU	EDGELINE	3B	---	---	---	100	---
205+00 HU - 206+00 HU	EDGELINE	3B	---	---	100	---	---
292+82 UW - 313+90 UW	SKIPS	3B	---	---	---	---	527
292+78 UW - 304+38 WB	EDGELINE	3B	1160	---	---	---	---
298+32 UW - 319+84 WB	EDGELINE	3B	---	2152	---	---	---
313+90 UW - 319+84 UW	SKIPS	3B	150	---	---	---	---
315+38 UW - 319+42 UW	EDGELINE	3B	404	---	---	---	---
250+68 EB - 256+20 EB	CHANNELIZING	3B	---	---	---	---	5752
252+68 EB - 286+15 EB	EDGELINE	3B	3350	---	---	---	---
224+50 WB - 231+00 WB	SKIPS	4A	---	---	163	---	---
224+50 WB - 231+00 WB	EDGELINE	4A	---	---	650	650	---
176+20 EB - 182+00 EB	EDGELINE	4B	580	---	---	---	---
180+20 EB - 182+20 EB	CHANNELIZING	4B	---	---	---	---	400
189+00 EB - 195+00 EB	EDGELINE	4B	600	---	---	---	---
193+00 EB - 195+00 EB	CHANNELIZING	4B	---	---	---	---	400
204+40 EB - 210+00 EB	CHANNELIZING	4B	---	---	---	---	660
205+00 EB - 210+00 EB	EDGELINE	4B	---	500	---	---	---
206+60 EB - 210+00 EB	EDGELINE	4B	340	---	---	---	---
SUBTOTALS			**49052**	**44334**	**3529**	**5064**	**15630**
PROJECT ID 1071-06-78 SUMMARY			**93386**		**8593**		**15630**
PROJECT TOTALS			**130300**		**16860**		**17470**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

CONSTRUCTION STAKING

STATION TO STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.9920 SLOPE STAKES LF	650.7000 CONCRETE PAVEMENT LF
71+97 WB - 97+60 WB	WB LANES	2563	---	2563	2563
98+97 WB - 168+86 WB	WB LANES	6989	---	6989	6989
140+26 C - 144+20 C	C RAMP	260	45	394	215
133+57 D - 139+94 D	D RAMP	468	25	637	443
17+00 BW - 18+86 BW	CTH BW	190	190	335	---
21+32 BW - 23+00 BW	CTH BW	168	168	265	---
132+41 AT - 134+65 AT	AT RAMP	224	224	224	---
128+30 AU - 130+64 AU	AU RAMP	234	234	234	---
146+60 BU - 148+57 BU	BU RAMP	197	197	197	---
140+75 CV - 143+35 CV	CV RAMP	260	260	260	---
136+17 DV -138+32 DV	DV RAMP	215	215	215	---
PROJECT ID 1071-06-77 SUMMARY		**11768**	**1558**	**12313**	**10210**
174+40 WB - 192+68 WB	WB LANES	1828	---	1828	1828
195+84 WB - 212+49 WB	WB LANES	1665	---	1665	1665
215+98 WB - 232+85 WB	WB LANES	1687	---	1687	1687
234+14 WB - 247+77 WB	WB LANES	1363	---	1363	1363
249+06 WB - 310+05 WB	WB LANES	6099	---	6099	6099
311+65 WB - 318+44 WB	WB LANES	679	479	679	200
179+07 EU - 181+27 EU	EU RAMP	220	220	220	---
182+13 ET - 187+22 ET	ET RAMP	509	509	509	---
200+00 GW - 209+10 GW	GW RAMP	670	670	910	---
205+00 HU - 206+00 HU	HU RAMP	100	100	100	---
184+75 HV - 185+81 HV	HV RAMP	106	106	106	---
203+13 HW - 207+51 HW	HW RAMP	438	438	438	---
197+64 FU - 203+20 FU	FU RAMP	556	556	556	---
188+59 H - 197+25 H	H RAMP	866	---	866	866
208+79 G - 212+79 G	G RAMP	400	---	400	400
209+50 GU - 213+30 GU	GU RAMP	380	380	380	---
257+54 JV - 259+65 JV	JV RAMP	211	211	211	---
260+93 M - 267+09 M	M RAMP	307	118	616	189
278+27 KT - 285+80 KT	KT RAMP	753	753	753	---
288+71 KU - 291+46 KU	KU RAMP	275	275	275	---
277+84 P - 279+63 P	P RAMP	179	---	179	179
283+74 L - 291+50 L	L RAMP	550	134	776	416
311+88 TE - 321+93 TE	TE LINE	1005	1005	1005	---
107+34 TS - 116+57 TS	TS LINE	923	923	923	---
104+39 TN - 111+26 TN	TN LINE	687	687	687	---
225+14 UW - 247+90 UW	UW WIDENING	2276	2276	2276	---
PROJECT ID 1071-06-78 SUMMARY		**24732**	**9840**	**25507**	**14892**
PROJECT TOTALS		**36500**	**11398**	**37820**	**25102**

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

PROJECT	650.9910.01 LS
01. 1071-06-77	1

PROJECT	650.9910.02 LS
02. 1071-06-78	1

CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER

STATION TO STATION	LOCATION	650.5500 LF
18+79 BW - 18+88 BW	RT	9
21+34 BW - 21+43 BW	RT	9
140+61 C - 140+90 C	C RAMP LT	29
PROJECT ID 1071-06-77 SUMMARY		**47**
279+35 P - 279+63 P	LT	28
PROJECT ID 1071-06-78 SUMMARY		**28**
PROJECT TOTAL		**75**

CONSTRUCTION STAKING CONCRETE BARRIER

STATION TO STATION	LOCATION	650.7500 LF
143+50 C - 145+05 C	LT	155
PROJECT ID 1071-06-77 SUMMARY		**155**
273+25 P - 275+34 P	LT	209
275+34 P - 276+87 P	LT	153
PROJECT ID 1071-06-78 SUMMARY		**362**
PROJECT TOTAL		**517**

CONNECTION TO EXISTING INLETS

STATION	OFFSET	INVERT ELEV	SPV.0060.06 EACH
NONE			---
PROJECT ID 1071-06-77 SUMMARY			**---**
205+90 WB	47 LT	657.65 (VERIFY)	1
PROJECT ID 1071-06-78 SUMMARY			**1**
PROJECT TOTAL			1

ADJUSTING CONSTRUCTION STAKING

PROJECT	SPV.0105.01 LS
01. 1071-06-77	1

PROJECT	SPV.0105.02 LS
02. 1071-06-78	1

CONSTRUCTION STAKING PIPE CULVERTS

STATION	LOCATION	650.6000 EACH
119+10 WB	WB LANES	1
129+00 WB	WB LANES	1
138+05 D	D RAMP	1
151+00 WB	WB LANES	1
158+50 WB	WB LANES	1
133+70 AT	AT RAMP	1
140+78 C	C RAMP	1
146+74 BU	BU RAMP	1
97+33 WB	DROP INLET	2
97+31 WB	DROP INLET	2
168+52 WB	DROP INLET	2
168+49 WB	DROP INLET	2
18+67 BW	DROP INLET	1
18+70 BW	DROP INLET	1
18+64 BW	DROP INLET	1
21+47 BW	DROP INLET	1
21+53 BW	DROP INLET	1
21+51 BW	DROP INLET	1
21+57 BW	DROP INLET	1
PROJECT ID 1071-06-77 SUMMARY		**23**
174+90 WB	WB LANES	1
183+90 WB	WB LANES	1
183+07 ET	ET RAMP	1
205+90 WB	WB LANES	1
216+70 WB	WB LANES	1
234+90 WB	WB LANES	1
269+65 WB	WB LANES	1
283+93 KT	KT RAMP	1
292+00 WB	WB LANES	1
299+67 WB	MEDIAN CROSSOVER	1
299+67 TE	TE LINE	1
192+40 WB	DROP INLET	2
212+02 WB	DROP INLET	2
211+99 WB	DROP INLET	2
249+24 WB	DROP INLET	2
249+25 WB	DROP INLET	2
311+79 WB	DROP INLET	2
311+77 WB	DROP INLET	2
PROJECT ID 1071-06-78 SUMMARY		**25**
PROJECT TOTAL		**48**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

SAWING

STATION TO STATION	LOCATION	STAGE	690.0150 ASPHALT LF	690.0250 CONCRETE LF
79+90 WB - 82+97 WB	RT	1	307	---
116+90 WB - 117+10 WB	RT	1	20	---
135+50 WB	RT/LT	1	14	24
138+25 D	RT/LT	1	10	15
141+55 C	RT/LT	1	5	18
140+60 C - 141+55 C	LT	1	---	98
143+85 C - 144+50 C	SLOPE PAVING	1	---	65
143+65 WB - 147+00 WB	LT	1	---	365
159+35 WB - 162+50 WB	RT	1	335	---
138+25 D - 139+95 D	RT	2	170	---
140+25 C - 141+55 C	RT	2	130	---
17+00 BW	RT/LT	3	44	---
23+00 BW	RT/LT	3	42	---
120+45 EB - 134+00 EB	LT	3A	1355	---
134+60 EB	LT	3A	4	---
148+50 EB - 153+70 EB	LT	3A	530	---
PROJECT ID 1071-06-77 SUMMARY			**2966**	**585**
187+50 WB - 190+00 WB	LT	1	105	74
197+25 H	RT/LT	1	5	15
211+42 GU	RT/LT	1	10	15
210+65 WB - 212+40 WB	LT	1	---	190
216+05 WB - 229+00 WB	LT	1	10	1307
236+00 WB - 247+75 WB	LT	1	---	1775
249+05 WB - 260+93 WB	LT	1	---	1200
262+82 M	RT/LT	1	5	15
279+64 P	RT/LT	1	5	18
287+33 L	RT/LT	1	5	15
289+84 WB - 310+05 WB	LT	1	---	2045
311+65 WB - 313+65 WB	LT	1	10	200
202+40 GW	LT	1A	7	---
204+95 GW	LT	1A	5	---
205+85 GW	RT	1A	8	---
207+20 GW	LT	1A	5	---
209+10 GW	RT	1A	5	---
ROSE STREET SB MEDIAN SHOULDER	LT	1A	4	---
ROSE STREET SB MEDIAN SHOULDER	LT	1A	4	---
197+25 H - 200+45 HT	RT	2	285	---
209+50 GU - 211+42 GU	RT	2	192	---
219+90 WB - 226+40 WB	RT	2	650	---
262+82 M - 267+00 M	RT	2	418	---
283+75 L - 287+33 L	RT	2	358	---
205+00 HU	RT/LT	3A	15	---
206+00 HU	RT/LT	3A	15	---
207+51 HW	RT/LT	3A	8	15
279+15 EB - 283+45 EB	LT	3A	430	---
284+80 EB	LT	3A	4	---
285+40 EB	LT	3A	4	---
316+80 WB	LT	3A	4	---
317+15 EB	LT	3A	4	---
321+80 EB	LT	3A	4	---
177+90 EB - 185+25 EB	LT	4A	735	---
199+10 EB - 201+50 EB	LT	4A	240	---
201+90 EB - 204+10 EB	LT	4A	220	---
207+10 HW - 207+65 HW	RT	4A	55	---
218+40 EB - 219+83 EB	LT	4A	155	---
PROJECT ID 1071-06-78 SUMMARY			**3834**	**6884**
PROJECT TOTALS			**6800**	**7469**

FLEXIBLE TUBULAR MARKER LEFT IN PLACE

STATION TO STATION	LOCATION	SPV.0060.02 POSTS EACH	SPV.0060.03 BASES EACH
136+60 D - 138+25 D	RT	17	17
141+00 C - 143+00 C	LT	21	21
146+80 WB - 147+50 WB	RT	7	7
159+00 WB - 162+50 WB	RT	36	36
UNDISTRIBUTED		19	19
PROJECT ID 1071-06-77 SUMMARY		**100**	**100**
201+90 FU - 202+30 FU	LT/RT	5	5
208+80 G - 211+50 G	RT	34	34
220+30 WB - 226+30 WB	RT	61	61
279+25 KT - 280+50 KT	LT/RT	14	14
285+50 WB - 285+90 WB	RT	5	5
288+80 WB - 289+20 WB	RT	8	8
315+90 WB - 318+50 WB	RT	27	27
UNDISTRIBUTED		36	36
PROJECT ID 1071-06-78 SUMMARY		**190**	**190**
PROJECT TOTALS		**290**	**290**

TEMPORARY SHORING

STATION TO STATION	LOCATION	STAGE	206.6000.S SF
NONE			---
PROJECT ID 1071-06-77 SUMMARY			**---**
216+70 WB	PIPE INSTALLATION	1	110
234+90 WB	PIPE INSTALLATION	1	1000
232+75 WB - 234+10 WB	LT	1	1400
292+00 WB	PIPE INSTALLATION	1	160
296+75 WB	PIPE INSTALLATION	1	100
216+70 WB	PIPE INSTALLATION	2	70
234+90 WB	PIPE INSTALLATION	3A	1150
234+90 EB	PIPE INSTALLATION	3A	1000
292+00 WB	PIPE INSTALLATION	3A	110
296+75 WB	PIPE INSTALLATION	3A	110
PROJECT ID 1071-06-78 SUMMARY			**5210**
PROJECT TOTAL			**5210**

CRASH CUSHION TEMPORARY LEFT IN PLACE

STATION	LOCATION	SPV.0060.01 EACH	OBJECT MARKING PATTERN	CRASH TEST LEVEL	BACK WIDTH	TRAFFIC LOCATION	TRAFFIC DIRECTION	CRASH CUSHION SHIELDS
128+50 EB	LT	1	OM-3L	TL-3	2	RT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER TO REMAIN ON SHOULDER
PROJECT ID 1071-06-77 SUMMARY		**1**						
251+95 WB	RT	1	OM-3R	TL-3	2	LT	UNIDIRECTIONAL	TEMPORARY CONCRETE BARRIER TO REMAIN ON SHOULDER
PROJECT ID 1071-06-78 SUMMARY		**1**						
PROJECT TOTAL		**2**						

CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE

STATION TO STATION	LOCATION	SPV.0090.01 LF	COMMENTS
131+50 AT - 133+75 AT	RT	225	
128+50 EB - 132+50 EB	LT	400	
LEFT IN PLACE FROM PREVIOUS PROJECT		-625	STATE OWNED CONCRETE BARRIER ON SITE
PROJECT ID 1071-06-77 SUMMARY		**---**	
249+16 WB - 251+95 WB	RT	264	
107+65 TS - 205+75 GW	LT	660	
174+38 EB - 177+88 EB	LT	350	BARRIER IS NOT MOVED FROM CURRENT LOCATION
LEFT IN PLACE FROM PREVIOUS PROJECT		-937	STATE OWNED CONCRETE BARRIER ON SITE
PROJECT ID 1071-06-78 SUMMARY		**337**	
PROJECT TOTAL		**337**	

CONCRETE PAVEMENT JOINT LAYOUT

PROJECT	SPV.0105.03 LS
03. 1071-06-77	1

PROJECT	SPV.0105.04 LS
04. 1071-06-78	1

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

STA 72+00 WB
B-32-47 (EAST END)
CONCRETE PAVEMENT
APPROACH SLAB

STA 72+07 WB - STA 97+48 WB, LT
STA 72+07 WB - STA 75+23 WB, RT
MGS GUARDRAIL

STA 72+07 WB - STA 97+48 WB, LT
REMOVING GUARDRAIL

STA 72+07 WB - STA 74+39 WB, RT
REMOVING GUARDRAIL

STA 72+00 WB - STA 97+60 WB, LT
REMOVING FENCE

N

EXISTING R/W

STA 73+89.46 WB, 34' LT

STA 72+69.46 WB, 30' LT

FENCE CHAIN LINK 6-FT

SLOPE INTERCEPT

SIGN

70WB B-32-47 | 72WB | 74WB | 76WB | 78WB | IH 90 WB | 80WB | 82WB | 84WB

70EB | 72EB | 74EB | 76EB | 78EB | 80EB | 82EB | 84EB

SLOPE INTERCEPT

MATCH EXISTING
SAWCUT REQ'D

IH 90 EB

SIGN

SIGN

ROUND LAKE

BEGIN PROJECT 1071-06-77
STA 71+97.29 WB
N 148808.02
E 436988.28
MATCH EXISTING

EXISTING R/W

5

5

VPC STA 72+60.00
VPC EL 653.48

VPI STA 76+60.00
VPI EL 654.67

VPT STA 80+60.00
VPT EL 653.58

FINISHED PROFILE

EXISTING PROFILE

0.30%

-0.27%

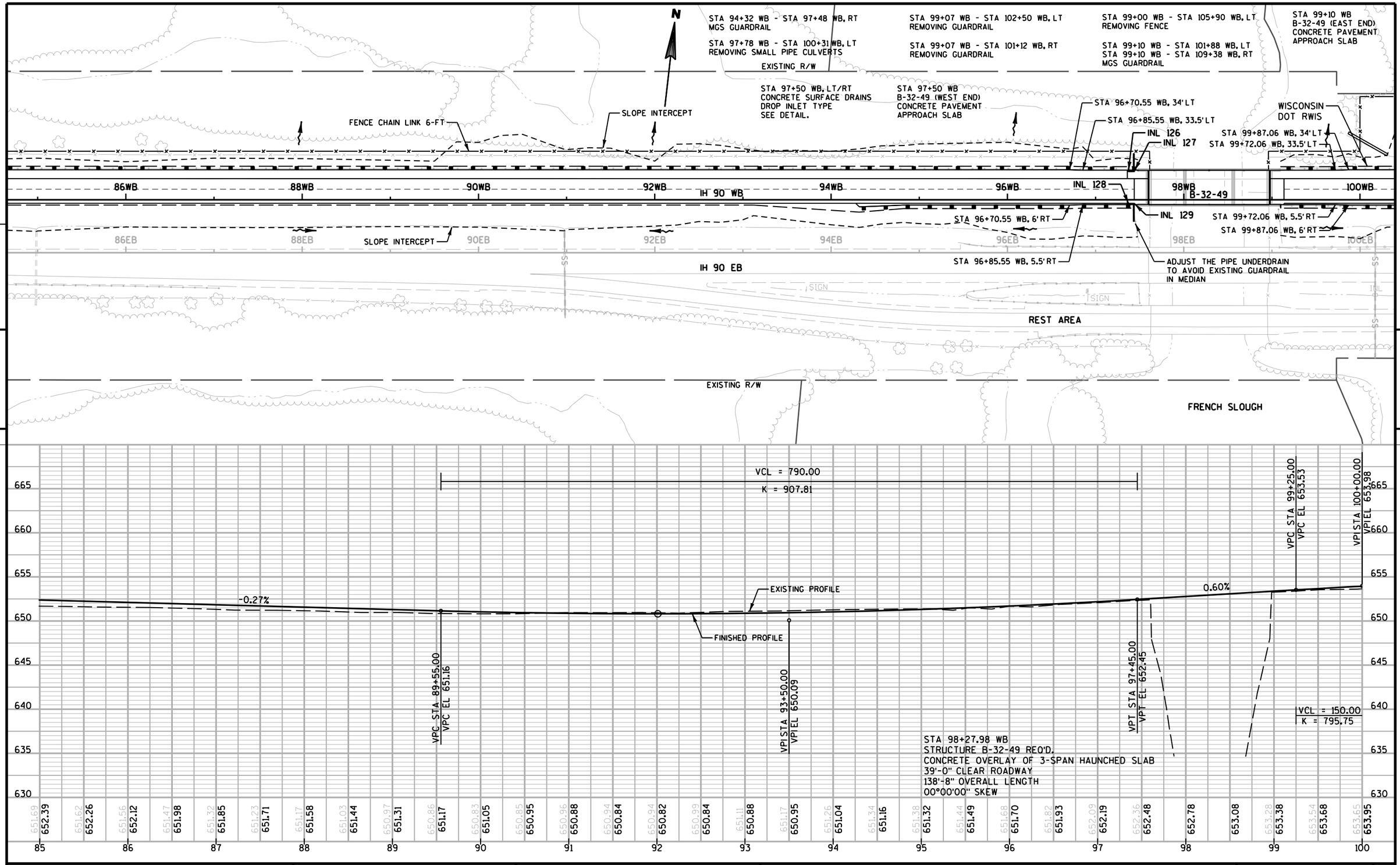
VCL = 800.00
K = 1407.16

665	660	655	650	645	640	635	630

70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
652.71	652.85	653.00	653.15	653.30	653.45	653.59	653.72	653.83	653.92	653.99	654.04	654.08	654.10	654.10	654.08	654.05	654.00	653.93	653.84	653.73	653.61	653.48	653.34	653.20	653.07	652.93	652.80	652.66	652.53	652.39
		653.30	653.45	653.59	653.72	653.83	653.92	653.99	654.04	654.08	654.10	654.10	654.08	654.05	654.00	653.93	653.84	653.73	653.61	653.48	653.34	653.20	653.07	652.93	652.80	652.66	652.53	652.39		
		653.30	653.45	653.60	653.70	653.82	653.74	653.64	653.57	653.52	653.51	653.53	653.50	653.41	653.29	653.19	653.10	653.01	652.89	652.80	652.74	652.68	652.47	652.36	652.17	652.03	651.90	651.69		

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050101_ppwb.dgn
PLOT DATE : 7/31/2014
PLOT BY : AYRES-EC
PLOT NAME :
PLOT SCALE : 1:100
WISDOT/CADDS SHEET 40



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050102_ppwb.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

STA 105+87, LT
ASPHALTIC FLUME

XCEL ENERGY - ELECTRIC
/CENTURYLINK

WISCONSIN
DOT RWIS

STA 100+95 WB, LT
REMOVING CONCRETE BASES
REMOVING WEATHER STATION TOWER

AE 170

AE 171

STA 105+88.57 WB, 36'LT

AE 150

STA 105+38.57 WB, 34'LT

WISCONSIN DOT ITS

CTH BW

STA 106+52 WB - STA 110+17 WB, LT
MGS GUARDRAIL

STA 103+97 WB - STA 107+21 WB, RT
REMOVING GUARDRAIL

STA 104+65 WB - STA 107+33 WB, RT
REMOVING GUARDRAIL

STA 105+38 WB - STA 110+38 WB, LT
REMOVING GUARDRAIL

STA 106+30 WB - STA 138+25 D, LT
REMOVING FENCE

FENCE CHAIN LINK 6-FT

EXISTING R/W

SLOPE INTERCEPT

STA 107+15 WB, 35.4'LT

STA 107+40 WB, 36'LT

DMS BOARD
(TO REMAIN)

AE 151

N

100WB 102WB 104WB 106WB 108WB IH 90 WB 110WB 112WB 114WB

N83°19'02"E

100EB 102EB 104EB 106EB 108EB 110EB 112EB 114EB

IH 90 EB

SLOPE INTERCEPT

DMS BOARD
(TO REMAIN)

REST AREA

B-32-51

22SW

20SW

18SW

EXISTING R/W

STA 105+42 WB - STA 106+75 WB, LT
REMOVING SMALL PIPE CULVERTS

STA 105+40 WB, 52'LT - STA 107+00 WB, 50'LT
160'x30" CPRC CLASS III
2-APRON ENDWALLS

STA 99+87 WB, 76'LT - STA 100+31 WB, 50'LT
52'x30" CPRC CLASS III
2-APRON ENDWALLS

5

5

VCL = 150.00
K = 929.26

VPI STA 100+00.00
VPI EL 653.98

VPT STA 100+75.00
VPT EL 654.29

VPC STA 104+25.00
VPC EL 655.73

VPI STA 105+00.00
VPI EL 656.03

VPT STA 105+75.00
VPT EL 656.46

VPC STA 111+05.00
VPC EL 659.49

FINISHED PROFILE

EXISTING PROFILE

0.41%

0.57%

VCL = 150.00
K = 795.75

VCL = 1100.00
K = 1026.09

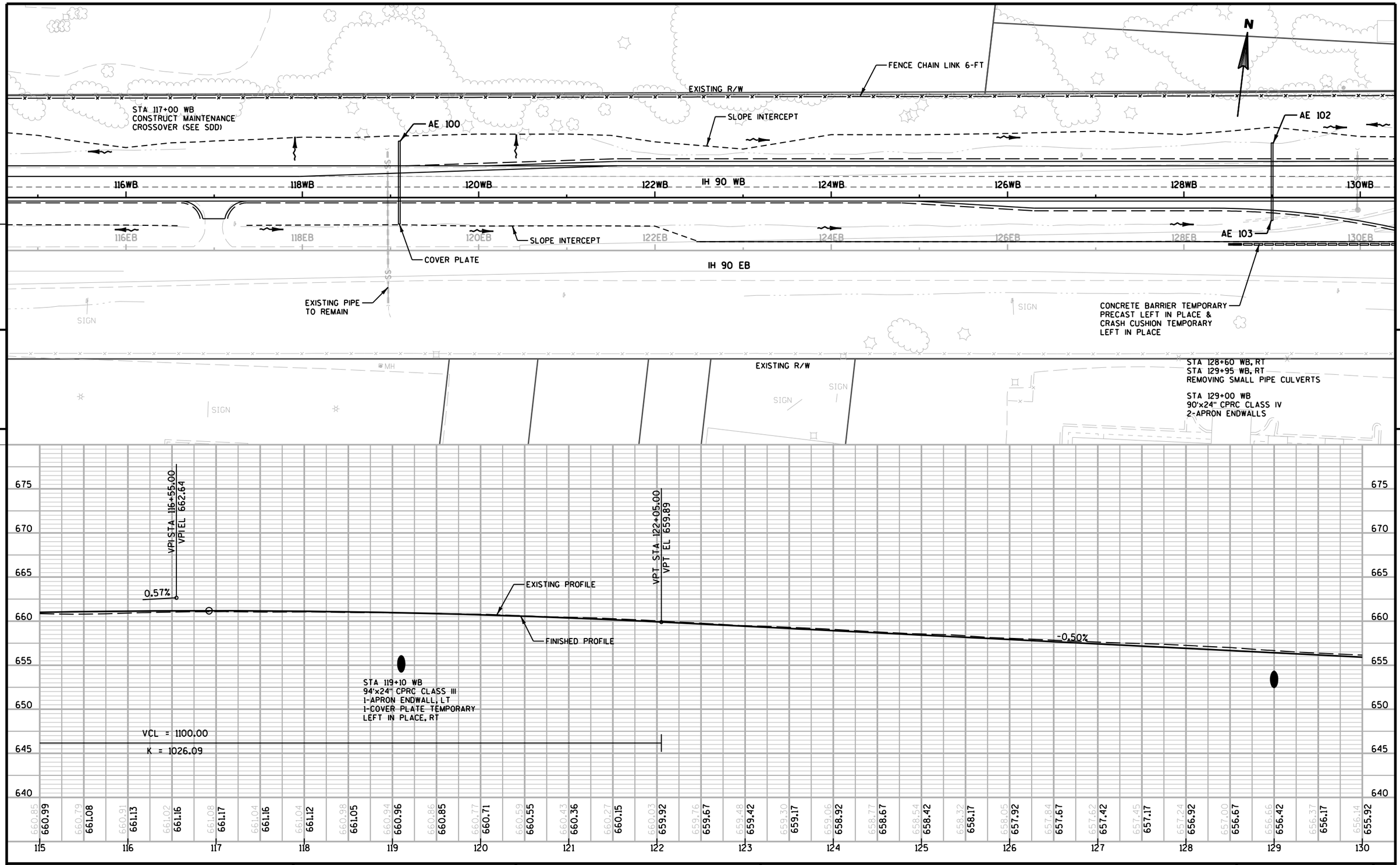
670 665 660 655 650 645 640 635

100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115
653.65	653.97	654.32	654.61	654.87	655.12	655.31	655.49	655.72	655.91	656.13	656.32	656.61	656.97	657.27	657.49	657.75	658.02	658.29	658.54	658.87	659.08	659.33	659.60	659.89	660.11	660.29	660.38	660.58	660.65	660.85
653.95	654.18	654.39	654.60	654.80	655.01	655.21	655.42	655.62	655.83	656.06	656.32	656.61	656.89	657.18	657.46	657.75	658.04	658.32	658.61	658.89	659.18	659.47	659.74	659.99	660.22	660.42	660.60	660.76	660.89	660.99

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET 193 E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050103_ppwb.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050104_ppwb.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 40

STA 134+94 DT
STA 137+31 DT
REMOVING SMALL PIPE CULVERTS

FENCE CHAIN LINK 6-FT

EXISTING R/W

XCEL ENERGY - ELECTRIC

STA 131+65 WB - STA 135+31 WB, RT
SALVAGED RAIL

N

STA 142+97 WB, RT
RECONSTRUCTING INLETS

SLOPE INTERCEPT

STA 142+58 WB
PLACE EARTHEN BERM AT
END OF NEW PIPE TO DIRECT
WATER TO EXISTING PIPE

STA 142+57 WB - STA 145+36 WB, RT
REMOVING GUARDRAIL

STA 143+05 WB - STA 145+02 WB, RT
STEEL PLATE BEAM GUARD

CITY OF LA CROSSE - WATER

AE 152

PC 143+35.77WB

CTH B

D RAMP

DV RAMP

CV RAMP

C RAMP

130WB 132WB 134WB 136WB 138WB IH 90 WB 140WB 142WB 144WB

AU RAMP

AT RAMP

130EB 132EB 134EB 136EB 138EB 140EB 142EB 144EB

INL 153

SLOPE INTERCEPT

IH 90 EB

CAUTION

CONCRETE BARRIER TEMPORARY
PRECAST LEFT IN PLACE

EXISTING
B-32-73

XCEL ENERGY - GAS

XCEL ENERGY - ELECTRIC/
CENTURYLINK

EXISTING R/W

IH 90 EB TO CTH B

CTH B TO IH 90 EB

ADJUST PROFILE ON WB LANES IF NECESSARY TO PROVIDE 16'9" VERTICAL CLEARANCE UNDER EXISTING CTH B OVERPASS STRUCTURE.

STA 142+58 WB
140'x36" CPRC CLASS III
1-INLET MEDIAN, 30' RT
1-APRON ENDWALL, LT
(REMAINING PIPE TO BE
INSTALLED BY OTHERS)

XCEL ENERGY - ELECTRIC

5

5

VCL = 750.00
K = 1099.48

-0.50%

EXISTING PROFILE

FINISHED PROFILE

0.18%

VPC STA 140+25.00
VPC EL 650.79

VPI STA 144+00.00
VPI EL 648.92

STA 142+58 WB
140'x36" CPRC CLASS III
1-INLET MEDIAN 2 GRATE, 30' RT
1-COVER PLATE TEMPORARY LEFT IN PLACE
1-APRON ENDWALL, LT
(REMAINING PIPE UNDER EB TO
BE INSTALLED BY OTHERS)

665 660 655 650 645 640 635 630

656.14 655.92 655.81 655.67 655.53 655.42 655.25 655.17 654.99 654.92 654.71 654.67 654.60 654.42 654.24 654.17 653.98 653.92 653.71 653.67 653.51 653.42 653.30 653.17 653.10 652.92 652.77 652.67 652.47 652.42 652.26 652.17 652.08 651.92 651.78 651.67 651.60 651.42 651.34 651.17 651.17 650.92 651.05 650.67 650.92 650.44 650.80 650.24 650.55 650.06 650.42 649.90 650.15 649.76 650.13 649.65 649.97 649.56 649.91 649.49 649.87 649.44

130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050105_ppwb.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

STA 145+05 WB - STA 168+77 WB, LT
MGS GUARDRAIL

STA 145+65 WB - STA 168+85 WB, LT
REMOVING FENCE

STA 150+95 WB
REMOVING SMALL PIPE CULVERT

STA 155+95 WB
REMOVE EXISTING
MAINTENANCE CROSSOVER

STA 156+09 WB - STA 168+77 WB, LT
REMOVING GUARDRAIL

STA 158+90 WB
REMOVING SMALL PIPE CULVERT

CITY OF LA CROSSE - WATER

FENCE CHAIN LINK 6-FT

AE 106

EXISTING R/W

STA 148+04 WB, 44'LT

STA 150+72 WB, 44'LT

STA 152+50.5 WB, 36'LT

PT 154+39.84WB

SLOPE INTERCEPT

AE 108

146WB

148WB

150WB

152WB

IH 90 WB

154WB

156WB

158WB

160WB

BU RAMP

INL 107

INL 109

SLOPE INTERCEPT

MATCH EXISTING
SAWCUT REQ'D

SAWCUT REQ'D

146EB

148EB

150EB

152EB

154EB

156EB

158EB

160EB

IH 90 EB

PI 148+88.23WB

XCEL ENERGY - ELECTRIC

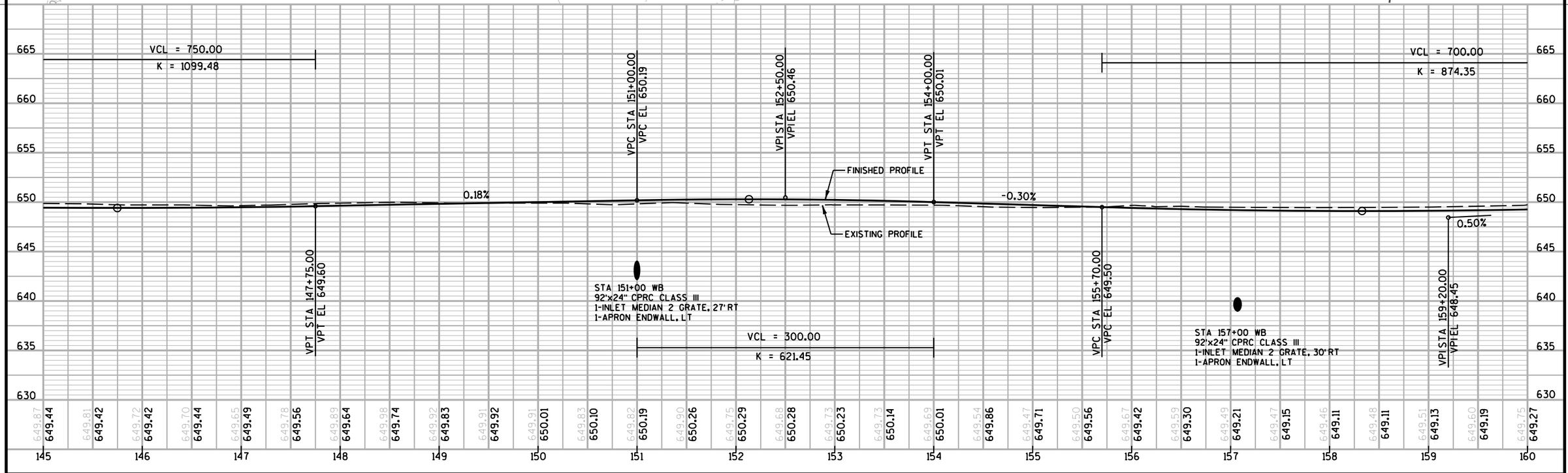
STA 159+39 WB, RT
REMOVING SMALL PIPE CULVERT
(APRON ENDWALL ONLY)

STA 157+07 WB
232'x18" CPRC CLASS III
PIPE EXTENSION

N

5

5



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050106_ppwb.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

STA 168+70 WB, LT/RT
CONCRETE SURFACE DRAINS
DROP INLET TYPE
SEE DETAIL.

STA 168+75 WB
B-32-35 (WEST END)
CONCRETE PAVEMENT
APPROACH SLAB

STA 167+23 WB - STA 168+68 WB, RT
REMOVING GUARDRAIL

STA 165+77 WB - STA 168+68 WB, RT
MGS GUARDRAIL

N

EXISTING R/W

STA 166+34.76, 36' LT

STA 168+14.76, 30' LT

INL 130

INL 131

FENCE CHAIN LINK 6-FT

SLOPE INTERCEPT

160WB 162WB 164WB 166WB IH 90 WB 168WB 170WB 172WB EXISTING B-32-35 174WB

N77°49'00"E

INL 132

INL 133

STA 167+68.76, 6' RT

STA 166+27.00, 8.84' RT

STA 165+77.00, 11.84' RT

160EB 162EB 164EB 166EB IH 90 EB 168EB 170EB 172EB 174EB

SLOPE INTERCEPT

MATCH EXISTING
SAWCUT REQ'D

END PROJECT 1071-06-77
STA 168+77.55 WB
MATCH EXISTING

BLACK RIVER

EXISTING R/W

5

5

VCL = 700.00
K = 874.35

FINISHED PROFILE

EXISTING PROFILE

0.50%

0.15%

VPT STA 162+70.00
VPT EL 650.20

STA 173+00.00
EL 655.35

665 660 655 650 645 640 635 630

649.75 649.27 649.93 649.38 649.88 649.52 650.03 649.68 650.18 649.88 650.33 650.10 650.47 650.35 650.57 650.60 650.70 650.85 650.88 651.10 651.02 651.35 651.20 651.60 651.62 651.85 652.07 652.10 652.49 652.35 652.89 652.60 653.06 652.85 653.07 653.10 636.81 653.35 653.60 653.85 654.10 654.35 654.60 654.85 655.10 655.35 655.42 655.50 655.32 655.58 655.54 655.65

160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\gg_0677_050107_ppwb.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 40

STA 174+90 EB
REMOVING SMALL PIPE CULVERTS

STA 174+50 WB
B-32-35 (EAST END)
CONCRETE PAVEMENT
APPROACH SLAB

STA 174+49 WB - STA 176+70 WB, RT
REMOVING GUARDRAIL

STA 174+58 WB - STA 185+03 WB, LT
REMOVING GUARDRAIL

STA 174+49 WB - STA 177+65 WB, RT
STA 174+58 WB - STA 188+50 WB, LT
MGS GUARDRAIL

STA 174+50 WB - STA 197+00 H, LT
REMOVING FENCE

STA 183+90 WB
REMOVING SMALL PIPE CULVERTS

N

WETLAND

EXISTING R/W

SLOPE INTERCEPT

STA 178+59.38, 44' LT

STA 175+21.14, 30' LT

AE 110

FENCE CHAIN LINK 6-FT

PC 183+19.39WB

AE 112

170WB EXISTING B-32-35 172WB 174WB 176WB 178WB IH 90 WB 180WB 182WB

N77°49'00"E

INL 113

184WB

EU RAMP

ET RAMP

170EB 172EB 174EB 176EB 178EB 180EB 182EB

INL 111

STA 175+11.78, 6' RT

STA 177+65, 16.1' RT

SLOPE INTERCEPT

IH 90 EB

INL 113A

IH 90 EB TO ROSE ST SB

CONCRETE BARRIER TEMPORARY
PRECAST LEFT IN PLACE

BLACK RIVER

BEGIN PROJECT 1071-06-78
STA 174+40.02 WB
N 150241.74
E 447122.10
MATCH EXISTING

EXISTING R/W

5

5

VCL = 700.00
K = 337.81

VPC STA 175+25.00
VPC EL 655.69

VPI STA 177+00.00
VPI EL 655.95

VPT STA 178+75.00
VPT EL 655.43

STA 173+00.00
EL 655.35

EXISTING PROFILE

FINISHED PROFILE

0.15%

0.30%

1.78%

VPC STA 179+75.00
VPC EL 655.13

VPI STA 183+25.00
VPI EL 654.09

VCL = 350.00
K = 782.65

STA 174+90 WB
102'x24" CPRC CLASS III
1-INLET MEDIAN 2 GRATE, 30' RT
1-APRON ENDWALL, LT

STA 183+90 WB
84'x24" CPRC CLASS III
1-INLET MEDIAN 2 GRATE, 18' RT
1-APRON ENDWALL, LT

670 665 660 655 650 645 640 635

636.81 653.35 653.60 653.85 654.10 654.35 654.60 654.85 655.10 655.35 655.42 655.50 655.32 655.58 655.54 655.65 655.72 655.72 655.69 655.76 655.67 655.78 655.71 655.75 655.92 655.70 656.05 655.62 656.16 655.50 656.21 655.36 656.23 655.21 656.31 655.07 656.43 654.99 656.57 654.99 656.63 655.07 656.75 655.21 656.91 655.43 657.10 655.73 657.30 656.10 657.56 656.54

169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050108_ppwb.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 40

N

STA 185+84 HT, LT
STA 188+04 HT, RT
REMOVING INLET

STA 185+84 HT, LT
STA 188+04 HT, RT
REMOVING INLET
REMOVING SMALL PIPE CULVERTS

SLOPE INTERCEPT

WETLAND

STA 185+84 HT, LT
STA 188+04 HT, RT
REMOVING INLET

FENCE CHAIN LINK 6-FT

H RAMP

ROSE ST SB

ROSE ST NB

STA 191+93 WB - STA 192+91 WB, LT
REMOVING GUARDRAIL

STA 190+53 WB - STA 192+40 WB, RT
REMOVING GUARDRAIL

STA 191+80 WB - STA 192+28 WB, RT
REMOVING GUARDRAIL

SLOPE INTERCEPT

IH 90 WB

INL 134

INL 135

B-32-219

AE 180

AE 181

SLOPE INTERCEPT

INL 136

INL 137

IH 90 EB

IH 90 EB TO ROSE ST NB

PI 196+27.03WB

SLOPE INTERCEPT

FT RAMP

IH 90 EB TO ROSE ST SB

STA 185+67 WB - STA 191+94 WB, RT
MGS GUARDRAIL

STA 191+85 WB, RT
STA 192+55 WB, LT
CONCRETE SURFACE DRAINS
DROP INLET TYPE
SEE DETAIL.

STA 192+07 WB
B-32-219 (WEST END)
CONCRETE PAVEMENT
APPROACH SLAB

STA 196+26 WB
B-32-219 (EAST END)
CONCRETE PAVEMENT
APPROACH SLAB

STA 196+40 WB - STA 198+04 WB, LT
REMOVING GUARDRAIL

STA 195+20 WB - STA 195+83 WB, RT
REMOVING GUARDRAIL

STA 195+85 WB - STA 198+07 WB, RT
REMOVING GUARDRAIL

STA 196+49 WB - STA 197+40 WB, LT
STA 192+88 WB - STA 193+51 WB, LT
REMOVING SMALL PIPE CULVERTS

STA 195+81 WB - STA 200+94 WB, RT
STA 196+61 WB - STA 199+14 WB, LT
MGS GUARDRAIL

STA 197+35 WB, 38' RT - STA 198+89 WB, 41' RT
154'x18" CPCS
2-APRON ENDWALLS

VPI STA 192+75.00
VPI EL 670.96

VPT STA 198+65.00
VPT EL 669.18

VPC STA 186+85.00
VPC EL 660.48

VPT STA 186+75.00
VPT EL 660.30

-0.30%

1.78%

FINISHED PROFILE

EXISTING PROFILE

VCL = 1180.00
K = 568.67

STA 194+08.38 WB
REMOVING EXISTING 4-SPAN STEEL
DECK GIRDER BRIDGE B-32-37
40' AVERAGE CLEAR WIDTH
321.5' LENGTH

STA 194+30.16 WB
STRUCTURE B-32-219 REO'D.
4-SPAN 45W PRESTRESSED CONCRETE GIRDER BRIDGE
58'-0" CLEAR ROADWAY
349'-8" OVERALL LENGTH
53°13'27" SKEW

680 675 670 665 660 655 650 645

657.56 656.54 657.84 657.06 658.10 657.65 658.43 658.32 658.79 659.06 659.12 659.87 659.52 660.75 660.01 661.60 660.51 662.41 661.00 663.17 661.55 663.89 662.03 664.57 662.51 665.20 663.04 665.79 663.55 666.33 663.89 666.84 664.28 667.29 664.61 667.70 649.11 668.07 645.34 668.40 644.94 668.68 645.18 668.92 645.29 669.11 645.26 669.26 666.11 669.36 666.25 669.42 666.45 669.44 666.64 669.41 666.77 669.34 666.81 669.23 666.83 669.08

184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050109_ppwb.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 40

SLOPE INTERCEPT

200WB

202WB

204WB

206WB

208WB

IH 90 WB

210WB

212WB

214WB

200EB

202EB

204EB

206EB

208EB

210EB

212EB

214EB

HW RAMP

PT 209+23.49WB

GV RAMP

G RAMP

WETLAND

STA 210+30 WB - STA 212+12 WB, RT
REMOVING GUARDRAIL

STA 211+60 WB - STA 212+41 WB, LT
REMOVING GUARDRAIL

XCEL ENERGY - ELECTRIC/
CENTURYLINK

CITY OF LA CROSSE - WATER

INL 138

INL 139

INL 140

INL 141

B-32-40

INL 115

IH 90 EB

STA 208+96 WB, 16' RT

SLOPE INTERCEPT

STA 210+47.71 WB, 10' RT

FU RAMP

ROSE ST TO IH 90 EB

CITY OF ONALASKA - SANITARY

STA 208+96 WB - STA 212+12 WB, RT
MGS GUARDRAIL

STA 205+90 WB
STA 212+30 WB, LT
REMOVING SMALL PIPE CULVERTS

STA 212+25 WB, LT/RT
CONCRETE SURFACE DRAINS
DROP INLET TYPE
SEE DETAIL.

STA 212+50 WB
B-32-40 (WEST END)
CONCRETE PAVEMENT
APPROACH SLAB

EXISTING R/W

WISCONSIN
INDEPENDENT
NETWORK

VCL = 1200.00
K = 920.81

FINISHED PROFILE

EXISTING PROFILE

-0.30%

1.00%

VPC STA 199+15.00
VPC EL 669.04

VPI STA 205+15.00
VPI EL 667.24

VPT STA 211+15.00
VPT EL 673.25

STA 205+90 WB
88'x24" CPRC CLASS III
1-INLET MEDIAN 2 GRATE, 39' RT
TIE INTO EXISTING INLET, LT

STA 212+49.89 WB - STA 212+97.09 WB
STRUCTURE B-32-40
4-SPAN WELDED STEEL PLATE GIRDER
BRIDGE - CONCRETE OVERLAY
56'-0" CLEAR ROADWAY
368'-10½" OVERALL LENGTH
SKEW 24°53'30"

666.83	667.10	667.23	667.48	667.70	667.90	668.10	668.28	668.50	668.73	668.79	668.89	669.09	669.28	669.48	669.67	669.99	670.25	670.47	670.71	671.02	671.38	671.89	672.47	673.02	673.47	674.13	666.06	646.25	645.87	646.00
669.08	668.94	668.82	668.73	668.67	668.63	668.62	668.64	668.68	668.76	668.86	668.98	669.14	669.32	669.53	669.76	670.03	670.32	670.63	670.98	671.35	671.75	672.17	672.63	673.10	673.61	674.11	674.61	675.11	675.61	676.11
199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214															

PROJECT NO: 1071-06-78 | HWY: IH 90 | COUNTY: LA CROSSE | PLAN & PROFILE - IH 90 WESTBOUND (WB LINE) | SHEET 200 | E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050110_ppwb.dgn | PLOT DATE : 7/31/2014 | PLOT BY : AYRES-EC | PLOT NAME : | PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

STA 216+25 WB
B-32-40 (EAST END)
CONCRETE PAVEMENT
APPROACH SLAB

STA 216+36 WB - STA 218+69 WB, LT
REMOVING GUARDRAIL
STA 216+08 WB - STA 218+90 WB, RT
REMOVING GUARDRAIL

STA 216+55 WB
REMOVING INLET
ABANDONING CULVERT PIPES
FILL WITH BACKFILL
CONTROLLED LOW STRENTH
STA 216+08 WB - STA 218+86 WB, RT
STA 216+36 WB - STA 221+14 WB, LT
MGS GUARDRAIL

STA 216+20 WB - STA 232+80 WB, LT
REMOVING FENCE

AE 116
STA 217+00 WB
S-32-58
XCEL ENERGY - ELECTRIC
XCEL ENERGY - ELECTRIC
SLOPE INTERCEPT
EXISTING R/W
FENCE CHAIN LINK 6-FT
214WB
B-32-40
216WB
218WB
220WB
IH 90 WB
222WB
224WB
226WB
228WB
N64°50'32"E
214EB
216EB
218EB
220EB
222EB
224EB
226EB
228EB
INL 117
SLOPE INTERCEPT
SAWCUT REQ'D
MATCH EXISTING
SAWCUT REQ'D
IH 90 EB
WISCONSIN
INDEPENDENT
NETWORK
EXISTING R/W
CITY OF LA CROSSE - WATER

5

5

VCL = 900.00
K = 1178.39

695
690
685
680
675
670
665
660

FINISHED PROFILE
EXISTING PROFILE
1.00%
1.77%

VPC STA 219+70.00
VPC EL 681.83
VPI STA 224+20.00
VPI EL 686.35
VPT STA 228+70.00
VPT EL 694.30

STA 216+70 WB
110'x24" CPRC CLASS III
1-INLET MEDIAN 2 GRATE, 32' RT
1-APRON ENDWALL, LT

646.00	676.11	214
643.60	676.61	
653.20	677.12	215
656.48	677.62	
678.21	678.12	216
678.50	678.62	
678.93	679.12	217
679.28	679.62	
679.83	680.13	218
680.29	680.63	
680.77	681.13	219
681.52	681.63	
682.00	682.14	220
682.59	682.66	
683.14	683.21	221
683.55	683.77	
684.19	684.36	222
684.74	684.97	
685.39	685.60	223
686.13	686.26	
686.94	686.93	224
687.49	687.62	
688.29	688.34	225
689.04	689.08	
689.88	689.84	226
690.63	690.62	
691.48	691.42	227
692.27	692.24	
693.13	693.08	228
693.88	693.95	
694.71	694.83	229

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET 201 E

STA 230+50 WB - STA 236+50 WB, RT
MGS GUARDRAIL

STA 232+97 WB - STA 236+00 WB, LT
MGS GUARDRAIL

STA 232+78 WB - STA 232+89 WB, RT
REMOVING GUARDRAIL

STA 234+33 WB - STA 234+45 WB, RT
REMOVING GUARDRAIL

STA 234+20 WB - STA 238+77 WB, LT
REMOVING GUARDRAIL

STA 234+10 WB - STA 248+00 WB, LT
REMOVING FENCE

FENCE CHAIN LINK 6-FT

EXISTING R/W

AE 118

AE 168

SLOPE INTERCEPT

EXISTING C-32-97
(TO REMAIN)

STA 234+95 WB
2-16'x30" CPRC CLASS III
2-APRON ENDWALL, LT REQ'D
EXTEND EXISTING PIPES

PC 230+65.94WB

PT 243+40.01WB

B-32-44

230WB 232WB 234WB 236WB 238WB IH 90 WB 240WB 242WB 244WB

230EB 232EB 234EB 236EB 238EB 240EB 242EB 244EB

SLOPE INTERCEPT

COVER PLATES

PI 237+03.14WB

IH 90 EB

CENTURYLINK

CITY OF ONALASKA - SEWER

XCEL ENERGY - ELECTRIC

GREAT RIVER STATE TRAIL

STA 235+00 WB, RT
RECONSTRUCTING INLET

CITY OF LA CROSSE - WATER

WISCONSIN
INDEPENDENT
NETWORK

STA 234+44 WB, LT
PLACE EARTHEN BERM AT END
OF NEW PIPE TO DIRECT WATER
TO EXISTING PIPE

EXISTING R/W

STA 234+95 WB
REMOVING SMALL PIPE CULVERTS
(ENDWALLS ONLY)

5 5

VPC STA 236+95.00
VPC EL 708.87

VPI STA 242+20.00
VPI EL 718.15
-0.44%

FINISHED PROFILE

EXISTING PROFILE

1.77%

VCL = 1050.00
K = 476.01

STA 234+78 WB
2-166'x30" CPRC CLASS IV
2-COVER PLATES REQ'D
2-APRON ENDWALL, LT REQ'D
SKEW 15° RHF

STA 233+50 WB
REMOVING EXISTING 3-SPAN STEEL
DECK GIRDER BRIDGE B-32-44
137.7' LONG AND 39' CLEAR WIDTH
EXISTING C-32-97 TO REMAIN

720	715	710	705	700	695	690	685

694.71	695.76	696.65	697.57	698.49	699.47	700.38	701.03	692.45	675.48	691.81	704.53	705.42	706.28	707.24	708.20	709.04	709.84	710.43	711.29	712.02	712.62	713.10	713.66	714.15	714.70	715.08	715.32	715.61	715.95	715.86
694.83	695.71	696.59	697.48	698.36	699.24	700.13	701.01	701.90	702.78	703.66	704.55	705.43	706.31	707.20	708.08	708.96	709.81	710.61	711.36	712.06	712.70	713.29	713.82	714.31	714.74	715.12	715.45	715.72	715.94	716.11

229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET 202	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050112_ppwb.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

STA 244+89 WB - STA 247+67 WB, RT
MGS GUARDRAIL

STA 247+75 WB
B-32-108 (WEST END)
CONCRETE PAVEMENT
APPROACH SLAB

STA 247+75 WB, LT/RT
CONCRETE SURFACE DRAINS
DROP INLET TYPE
SEE DETAIL.

STA 249+16 WB - STA 255+44 WB, LT
MGS GUARDRAIL

STA 249+10 WB
B-32-108 (EAST END)
CONCRETE PAVEMENT
APPROACH SLAB

STA 248+80 WB - STA 263+00 M, LT
REMOVING FENCE

STA 249+16 WB - STA 250+35 WB, LT
SALVAGED RAIL

WISCONSIN INDEPENDENT NETWORK

CHARTER COMMUNICATIONS

12TH AVE

TIE INTO EXISTING STORM SEWER (INCIDENTAL)

EXISTING R/W

STA 252+80 WB
S-32-59

FENCE CHAIN LINK 6-FT

SLOPE INTERCEPT

INL 142

INL 143

XCEL ENERGY - ELECTRIC

244WB 246WB 248WB B-32-108 250WB 252WB IH 90 WB 254WB 256WB 258WB

JU RAMP

JT RAMP

MATCH EXISTING
SAWCUT REQ'D

CAUTION

INL 144

INL 145

244EB 246EB 248EB 250EB 252EB 254EB 256EB 258EB

IH 90 EB

SLOPE INTERCEPT

CENTURYLINK

CONCRETE BARRIER TEMPORARY
PRECAST LEFT IN PLACE &
CRASH CUSHION TEMPORARY
LEFT IN PLACE

XCEL ENERGY - GAS

EXISTING R/W

WISCONSIN INDEPENDENT NETWORK

XCEL ENERGY - TRANSMISSION

CITY OF ONALASKA - SEWER

N

5

5

730
725
720
715
710
705
700
695

VPT STA 247+45.00
VPT EL 715.85

STA 250+00.00
EL 714.73

-0.44%

FINISHED PROFILE

EXISTING PROFILE

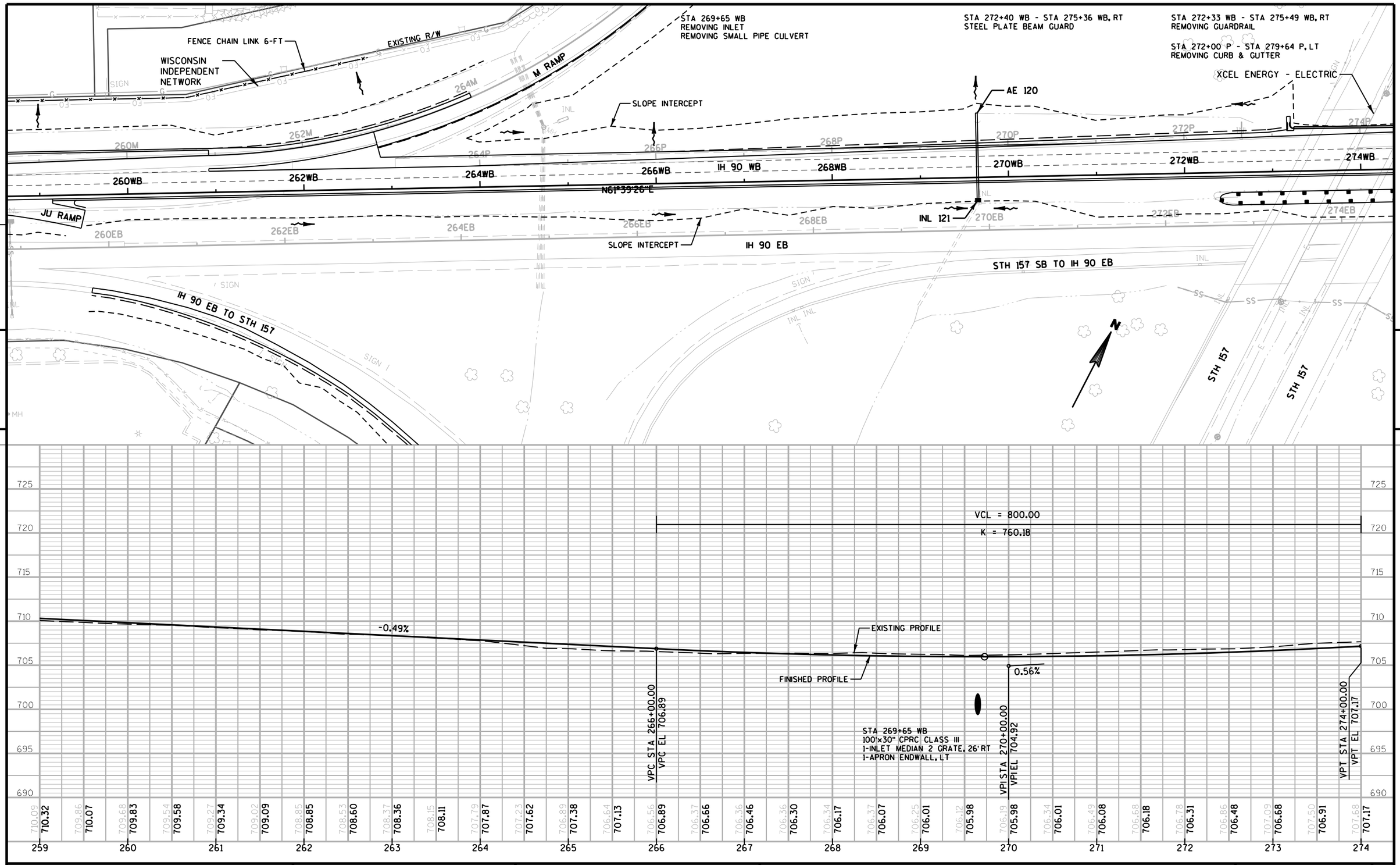
-0.49%

VCL = 1050.00
K = 476.01

STA 248+40.44 WB
STRUCTURE B-32-108
CONCRETE OVERLAY OF 3-SPAN HAUNCHED SLAB
58'-0" CLEAR ROADWAY
129'-4" OVERALL LENGTH
SKEW 90°03'49"

715.86	715.92	716.18	716.19	716.23	716.09	715.83	715.54	700.82	698.02	708.98	714.65	714.32	714.09	713.88	713.72	713.44	713.22	713.02	712.68	712.44	712.28	712.08	711.86	711.35	711.18	711.09	710.88	710.75	710.47	710.09
716.11	716.23	716.29	716.30	716.26	716.17	716.02	715.83	715.61	715.39	715.17	714.95	714.73	714.48	714.24	713.99	713.75	713.50	713.26	713.01	712.77	712.52	712.28	712.03	711.79	711.54	711.30	711.05	710.81	710.56	710.32
244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259															

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET 203	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET 204 E

STA 285+37 L - STA 310+00 WB, LT
REMOVING FENCE

STA 283+04 WB, RT
STA 284+94 WB, RT
REMOVING INLET

STA 283+20 WB
REMOVING SMALL PIPE CULVERT

FENCE CHAIN LINK 6-FT

WISCONSIN INDEPENDENT NETWORK

EXISTING R/W

XCEL ENERGY - ELECTRIC

STH 157

STH 157

P RAMP

SLOPE INTERCEPT

AE 122

BM 1756+282.36

L RAMP

KU RAMP

274WB 276WB 278WB 280WB 282WB IH 90 WB 284WB 286WB 288WB

INL 154

INL 123

274EB 276EB 278EB 280EB 282EB 284EB 286EB 286EB

SLOPE INTERCEPT

IH 90 EB

KT RAMP

STH 157 NB TO IH 90 EB

XCEL ENERGY - ELECTRIC/
CHARTER COMMUNICATIONS/
CENTURYLINK

N

5

5

VPT STA 274+00.00
VPT EL 707.17

STA 278+00.00
EL 709.42

0.56%

FINISHED PROFILE

EXISTING PROFILE

0.48%

STA 283+04 WB
100'x36" CPRC CLASS III
1-INLET MEDIAN 2 GRATE, 26' RT
1-APRON ENDWALL, LT

274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289
707.68	707.80	707.95	708.21	708.38	708.82	708.95	709.16	709.39	709.67	710.11	710.19	710.33	710.65	710.83	711.12	711.12	711.37	711.57	711.99	712.12	712.25	712.38	712.98	713.02	713.28	713.91	714.27	714.49	714.45	714.52
707.17	707.45	707.74	708.02	708.30	708.58	708.86	709.14	709.42	709.66	709.90	710.14	710.38	710.62	710.86	711.10	711.34	711.58	711.82	712.07	712.31	712.55	712.79	713.03	713.27	713.51	713.75	713.99	714.23	714.47	714.71

725	720	715	710	705	700	695	690

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET 205	E

STA 291+28 WB - STA 292+39 WB, LT
REMOVING GUARDRAIL

STA 291+75 WB
REMOVING INLET
ABANDONING CULVERT PIPES
FILL WITH BACKFILL CONTROLLED
LOW STRENGTH

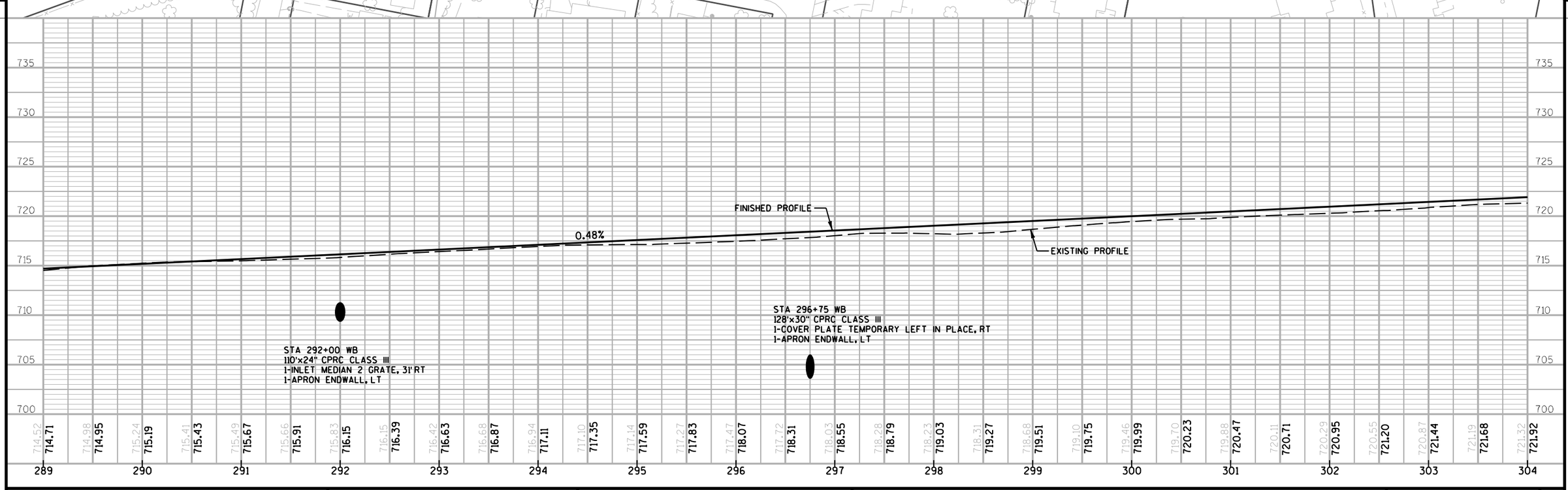
STA 291+28 WB - STA 310+06 WB, LT
STA 291+28 WB - STA 294+44 WB, RT
MGS GUARDRAIL

XCEL ENERGY - ELECTRIC
AE 124
AE 167
FENCE CHAIN LINK 6-FT
WISCONSIN INDEPENDENT NETWORK
EXISTING R/W
SLOPE INTERCEPT
SLOPE INTERCEPT
IH 90 WB
IH 90 EB
L RAMP
KU RAMP
INL 125
INL 155
STA 299+67 WB
CONSTRUCT MAINTENANCE
CROSSOVER (SEE SDD)
CITY OF ONALASKA - WATER & SANITARY
DAIRYLAND POWER COOPERATIVE/ KDL COMMUNICATIONS

290L 290WB 290EB 292WB 292EB 294WB 294EB 296WB 296EB 298WB 298EB 300WB 300EB 302WB 302EB 304WB 304EB

STATION 300+22
MEDIAN 2 GRATE INLET
118' - 24" RCCP WITH ENDWALL

5



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET 206	E

STA 308+24 WB - STA 310+07 WB, RT
STA 308+26 WB - STA 310+06 WB, LT
REMOVING GUARDRAIL

STA 309+10 WB, LT
REMOVING SIGN BRIDGE S-32-29

STA 306+90 WB - STA 310+06 WB, RT
MGS GUARDRAIL

STA 310+00 WB
B-32-190 (WEST END)
CONCRETE PAVEMENT
APPROACH SLAB

STA 311+65 WB - STA 313+85 WB, LT
REMOVING GUARDRAIL

STA 311+65 WB - STA 314+45 WB, RT
SALVAGED RAIL

STA 311+75 WB, LT/RT
CONCRETE SURFACE DRAINS
DROP INLET TYPE
SEE DETAIL.

STA 311+75 WB
B-32-190 (EAST END)
CONCRETE PAVEMENT
APPROACH SLAB

STA 331+25 WB
REMOVING SIGN BRIDGE S-32-30

STA 311+65 WB - STA 315+18 WB, RT
STA 311+65 WB - STA 315+93 WB, LT
MGS GUARDRAIL

WISCONSIN
INDEPENDENT
NETWORK

THEATER RD

EXISTING R/W

SLOPE INTERCEPT

STA 308+84.46 WB, 48' LT

STA 309+44.46 WB, 46' LT

XCEL ENERGY - ELECTRIC

INL 146

INL 147

STA 313+00 WB
S-32-64

EXISTING R/W

PT 308+27.77WB

304WB 306WB 308WB IH 90 WB 310WB B-32-190 312WB 314WB 316WB 318WB

TE X-OVER

INL 148

INL 149

STA 312+27.34 WB, 6' RT

304EB 306EB 308EB STA 308+40.00 WB, 6' RT 310EB 312EB 314EB 316EB 318EB

STA 306+90.00 WB, 12' RT

SLOPE INTERCEPT

IH 90 EB

STA 315+17.84 WB, 22.6' RT

STA 314+68.31 WB, 18.6' RT

DAIRYLAND POWER COOPERATIVE/
KDL COMMUNICATIONS

END PROJECT 1071-06-78
STA 313+65.00 WB
MATCH EXISTING
SAWCUT REQ'D.

N

5

5

VPC STA 306+50.00
VPC EL 723.12

VPI STA 308+25.00
VPI EL 723.96

VPT STA 310+00.00
VPT EL 723.46

STA 311+85.00
EL 722.94

STA 313+65.00
EL 722.08

FINISHED PROFILE

EXISTING PROFILE

0.48%

-0.28%

-0.48%

VCL = 350.00

K = 458.25

STA 310+86.18 WB
STRUCTURE B-32-190
3-SPAN HAUNCHED SLAB BRIDGE - CONCRETE OVERLAY
52'-0" CLEAR ROADWAY
160'-6" OVERALL LENGTH
SKEW 90°00'00"

735 730 725 720 715 710 705 700

721.32 721.92 721.55 722.16 721.88 722.40 721.94 722.64 721.89 722.88 722.05 723.12 722.26 723.33 722.46 723.49 722.44 723.59 722.63 723.64 722.71 723.64 722.93 723.58 723.19 723.46 705.19 723.32 704.08 723.18 713.21 723.04 722.79 722.87 722.47 722.63 722.29 722.39 721.95 722.15 721.77 721.74 721.59 721.47 721.33 721.19 721.07 720.94 720.73 720.51 720.30

304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WESTBOUND (WB LINE)	SHEET 207 E

N

CONSTRUCTION LIMITS
STA 141+55.00 C
MATCH EXISTING
SAWCUT REQ'D

STA 140+78 C
STA 143+41 C
REMOVING SMALL PIPE CULVERTS

STA 142+00 C
REMOVING INLET
REMOVING SMALL PIPE CULVERTS

STA 140+60 C - STA 143+40 C, LT
REMOVING CURB & GUTTER

STA 140+78 C
42"x24" CPRC CLASS III
1-INLET 2x2.5 FT, WM COVER, 2.5' LT
TIE INTO EXISTING PIPE
1-APRON ENDWALL, LT

STA 145+05 C, LT
ASPHALTIC FLUME

STA 143+50 C - STA 145+05 C, LT
CONCRETE BARRIER

STA 143+25 C - STA 145+15 C, LT
REMOVING GUARDRAIL

CITY OF LA CROSSE - WATER

XCEL ENERGY - ELECTRIC

AE 128
AE 152
SLOPE INTERCEPT
INL 129
EX. AE 130
INL 153

PC 134+70.87C
BP 132+73.68C
PCC 141+55.00C
PT 144+20.05C
ER 145+70.05C
PI 142+89.13C

N86°27'00"W
N83°40'15"E

CTH B
CTH "B"

EXISTING R/W

D RAMP
C RAMP
BU RAMP

IH 90 WB
IH 90 EB
CTH B TO IH 90 EB

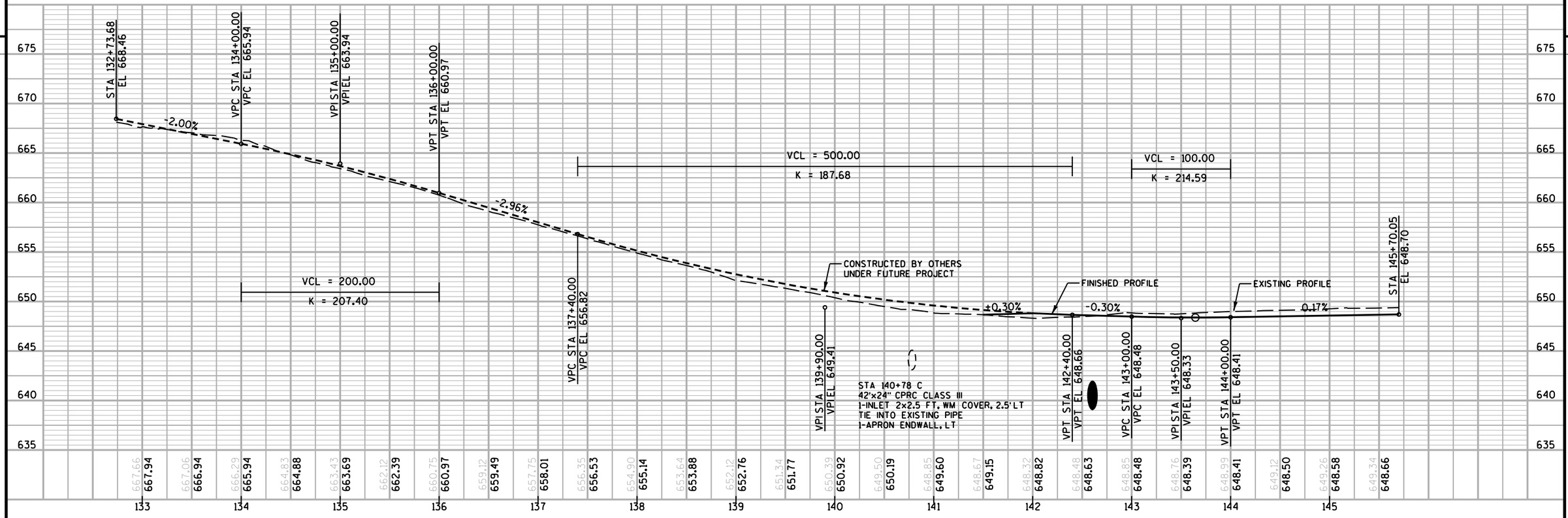
PLAYGROUND

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WB OFF RAMP TO CTH B (C RAMP)	SHEET 208 E

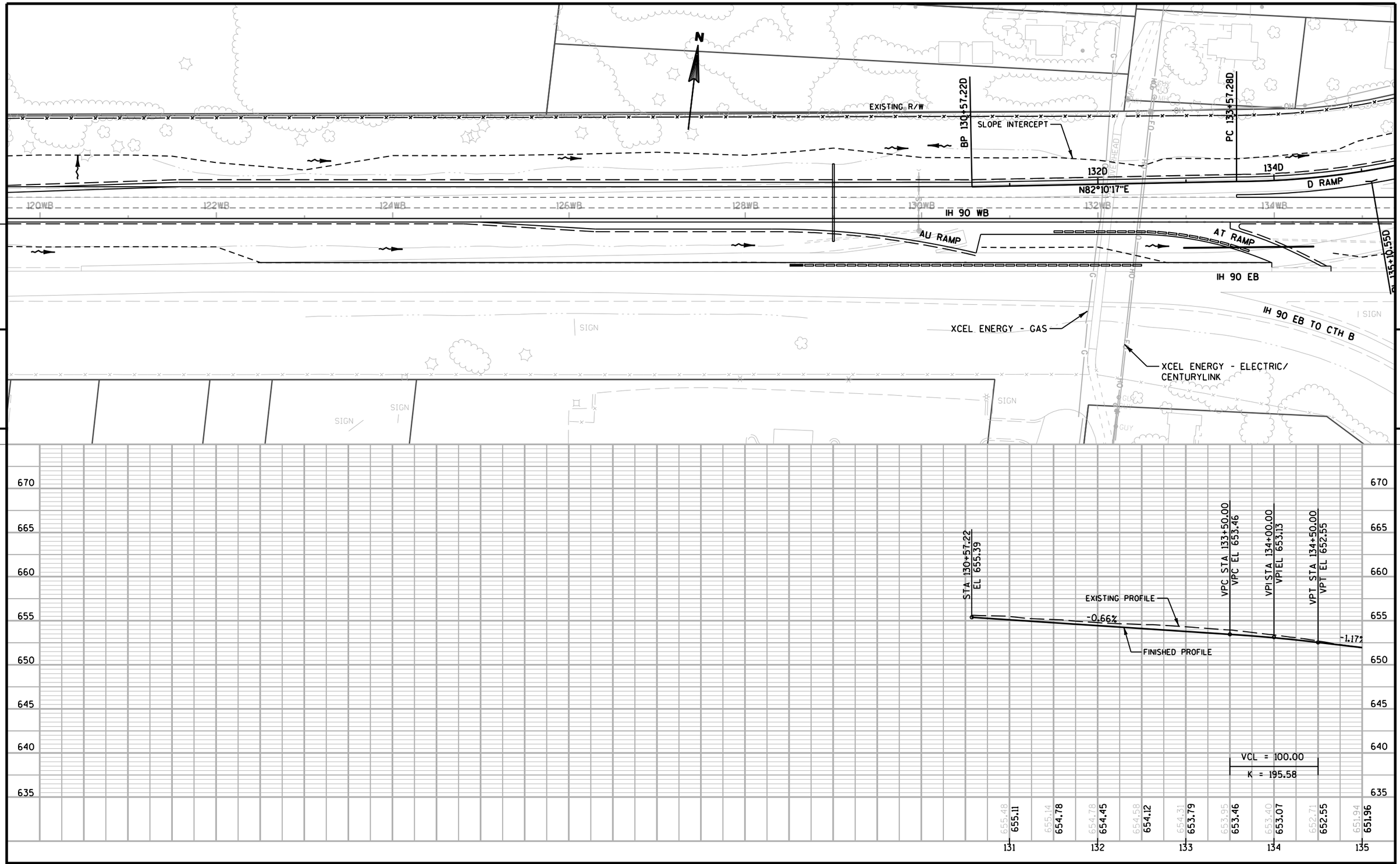
FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050118_ppc.dgn
PLOT DATE : 7/31/2014
PLOT BY : AYRES-EC
PLOT NAME :
PLOT SCALE : 1:100

WISDOT/CADDS SHEET 44

SEE PREVIOUS SHEET



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WB OFF RAMP TO CTH B (C RAMP)	SHEET 209	E



5

5

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - CTH B ON RAMP TO IH 90 WB (D RAMP)	SHEET 210	E

STA 106+30 WB - STA 138+25 D.LT
REMOVING FENCE

XCEL ENERGY - ELECTRIC

PCC 138+60.90D

PT 140+09.52D

EXISTING R/W

PC 141+79.32D

PI 143+34.79D

PT 144+61.97D

142D

144D

146D

N25°38'57"E

N84°58'14"E

EP 147+02.58D

CTH B

CITY OF LA CROSSE - WATER

SLOPE INTERCEPT

AE 104

136D

138D

D RAMP

CONSTRUCTION LIMITS
STA 138+25.00 D
MATCH EXISTING
SAWCUT REQ'D

AE 105

SLOPE INTERCEPT

PI 135+10.55D

PI 138+42.02D

IH 90 WB

IH 90 EB

C RAMP

CTH "B"

N

5

5

VCL = 650.00
K = 143.34

VPC STA 135+25.00
VPC EL 651.67

VPC STA 142+00.00
VPC EL 659.63

VPI STA 144+00.00
VPI EL 666.36

VPT STA 146+00.00
VPT EL 665.86

VCL = 60.00
K = 33.17

STA 147+02.58
EL 666.55

-0.48%

3.36%

-0.25%

1.56%

FINISHED PROFILE

EXISTING PROFILE

CONSTRUCTED BY OTHERS
UNDER FUTURE PROJECT

VCL = 400.00
K = 110.67

VPC STA 146+20.00
VPC EL 665.81

VPI STA 146+50.00
VPI EL 665.73

VPT STA 146+80.00
VPT EL 666.20

VPT STA 141+75.00
VPT EL 658.79

VPI STA 138+50.00
VPI EL 647.86

STA 138+05 D
92'x24" CPRC CLASS III
2-APRON ENDWALLS
CONSTRUCT PIPE IN STAGES

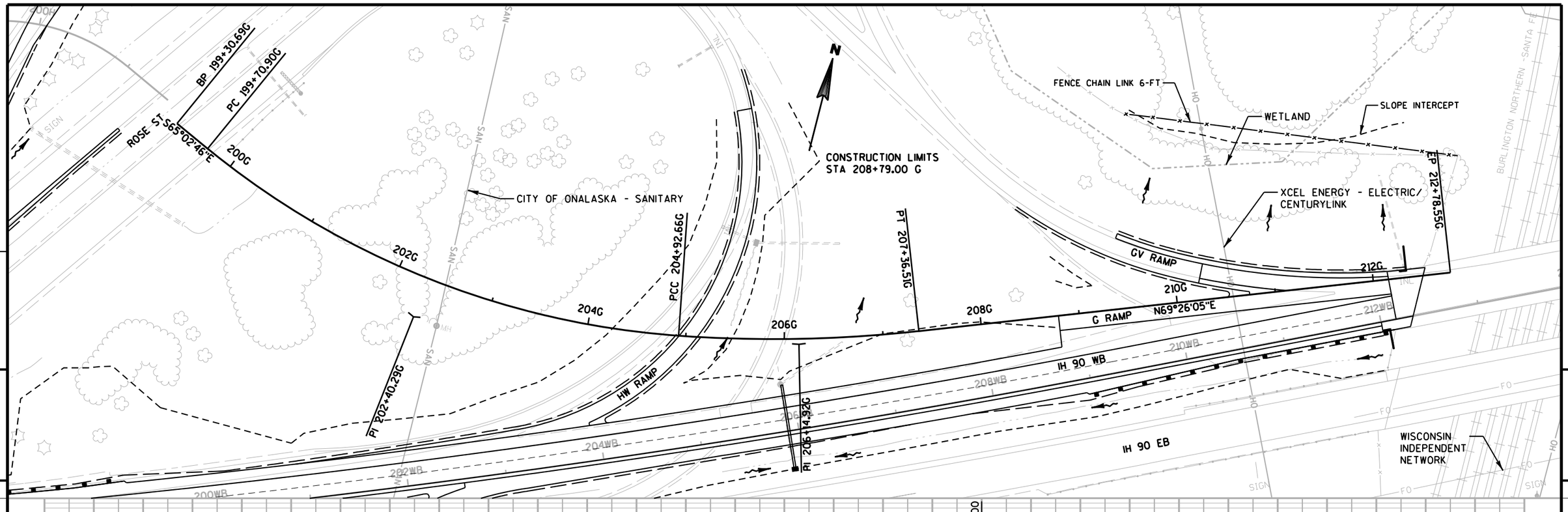
675	670	665	660	655	650	645	640

135	136	137	138	139	140	141	142	143	144	145	146	147
651.94	651.28	650.93	650.71	650.51	650.65	650.78	651.13	651.65	652.43	653.47	655.14	656.67	658.25	659.81	661.26	662.35	663.52	664.50	665.18	665.54	665.64	665.51	665.58	666.10
651.96	651.40	650.99	650.75	650.69	650.80	651.08	651.55	652.18	652.99	653.97	655.13	656.47	657.97	659.63	661.20	662.54	663.66	664.55	665.22	665.66	665.87	665.86	665.87	666.51

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - CTH B ON RAMP TO IH 90 WB (D RAMP)	SHEET 211	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050121_ppd.dgn | PLOT DATE : 7/31/2014 | PLOT BY : AYRES-EC | PLOT NAME : | PLOT SCALE : 1:100

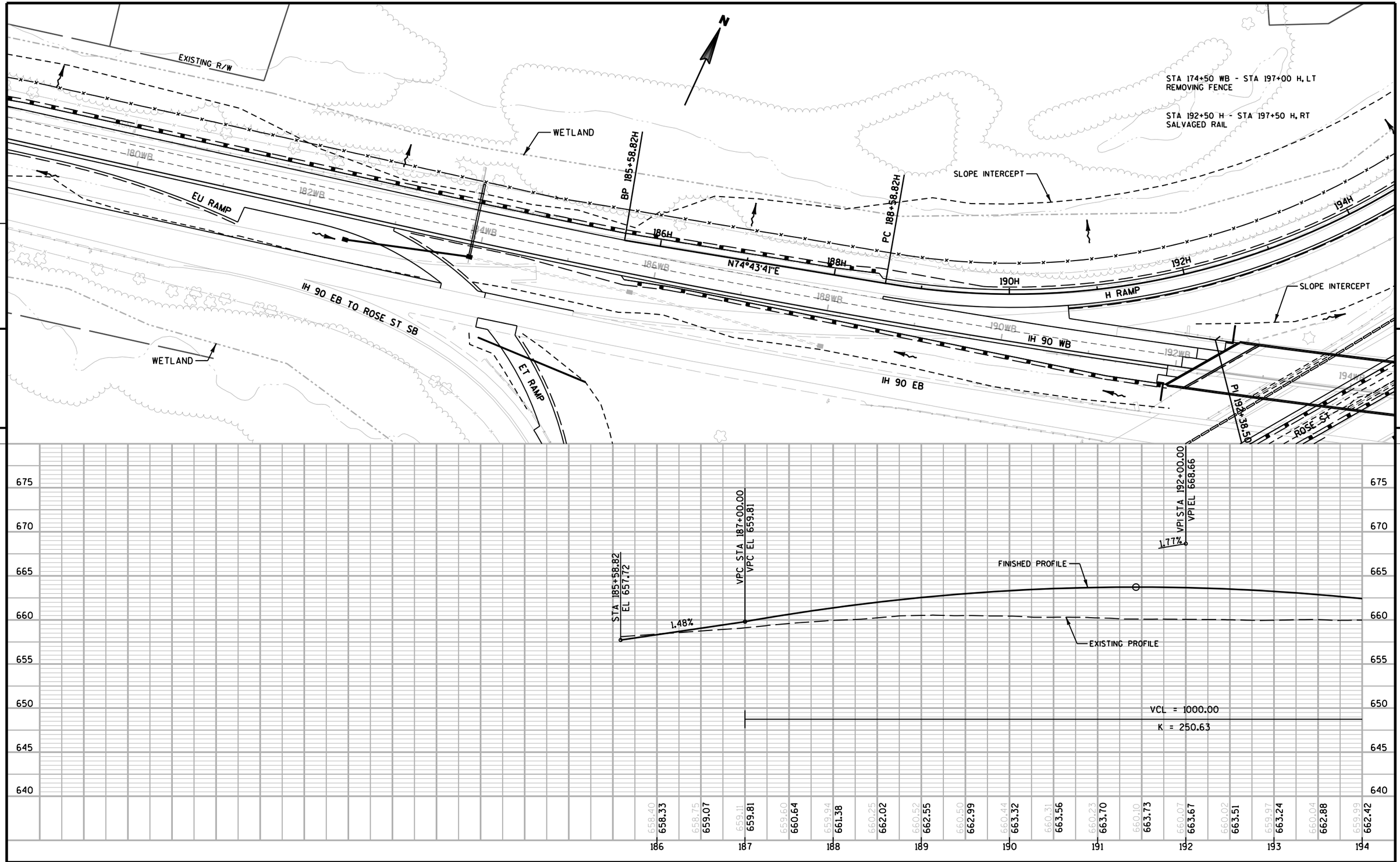
WISDOT/CADDS SHEET 40



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - IH 90 WB TO ROSE ST (G RAMP)	SHEET 212	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\gg_0677_050122_ppg.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40



5

5

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - ROSE ST ON RAMP TO IH 90 WB (H RAMP)	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050123_pph.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

CONSTRUCTION LIMITS
STA 197+25.00 H
MATCH EXISTING
SAWCUT REQ'D

AE 161
SLOPE INTERCEPT
PT 195+72.97H
PC 197+90.84H
WETLAND
EXISTING R/W
PI 199+85.60H
194H
196H
198H
H RAMP
N26°59'07"E
SLOPE INTERCEPT
200H
IH 90 WB TO ROSE ST SB
ROSE ST SB TO IH 90 WB
PT 200+99.69H
S64°32'07"E
EP 201+53.01H
ROSE ST
IH 90 WB
N

5

5

VPT STA 197+00.00
VPT EL 657.55
VCL = 120.00
K = 28.43
FINISHED PROFILE
EXISTING PROFILE
-2.84%
-2.22%
CONSTRUCTED BY OTHERS
UNDER FUTURE PROJECT
STA 201+40.82
EL 651.60
2.00%
2.00%
VPC STA 199+90.00
VPC EL 651.12
VPI STA 200+50.00
VPI EL 649.78
VPT STA 201+10.00
VPT EL 650.98
STA 201+53.01
EL 651.36
STA 196+26 H
26"x24" CPCS EXTENSION
1-APRON ENDWALL, LT

670 665 660 655 650 645 640 635

659.99 662.42 | 659.97 661.86 | 659.86 661.20 | 659.35 660.44 | 658.66 659.58 | 657.95 658.62 | 657.19 657.55 | 656.47 656.44 | 655.72 655.33 | 655.02 654.22 | 653.27 653.11 | 647.38 652.00 | 651.02 650.91 | 645.23 650.42 | 644.21 650.80 | 644.47 651.42

194 195 196 197 198 199 200 201

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - ROSE ST ON RAMP TO IH 90 WB (H RAMP)	SHEET 214	E

CONSTRUCTION LIMITS
STA 287+33.53 L
MATCH EXISTING
SAWCUT REQ'D

WISCONSIN INDEPENDENT NETWORK

XCEL ENERGY - ELECTRIC/
CHARTER COMMUNICATIONS/
CENTURYLINK

EXISTING R/W

SLOPE INTERCEPT

STA 285+37 L - STA 310+00 WB, LT
REMOVING FENCE

284L
286L
288L
290L
PT 288+27.64L
EP 291+50.00L
PI 285+33.18L
P RAMP
L RAMP
KU RAMP
KT RAMP
280P
N67°26'01"E
IH 90 WB
IH 90 EB
STH 157 NB TO IH 90 EB
280WB
282WB
284WB
286WB
288WB
290WB
292WB
294WB
FOOTBRIDGE
N

5

5

VCL = 250.00
K = 75.21

STA 280+00.00
EL 716.75

-2.79%

VPC STA 281+40.00
VPC EL 712.84

VPI STA 282+65.00
VPI EL 709.35

VPT STA 283+90.00
VPT EL 710.02

FOR INFORMATION ONLY

0.53%

STA 285+00.00
EL 710.60

0.87%

STA 288+00.00
EL 713.22

EXISTING PROFILE

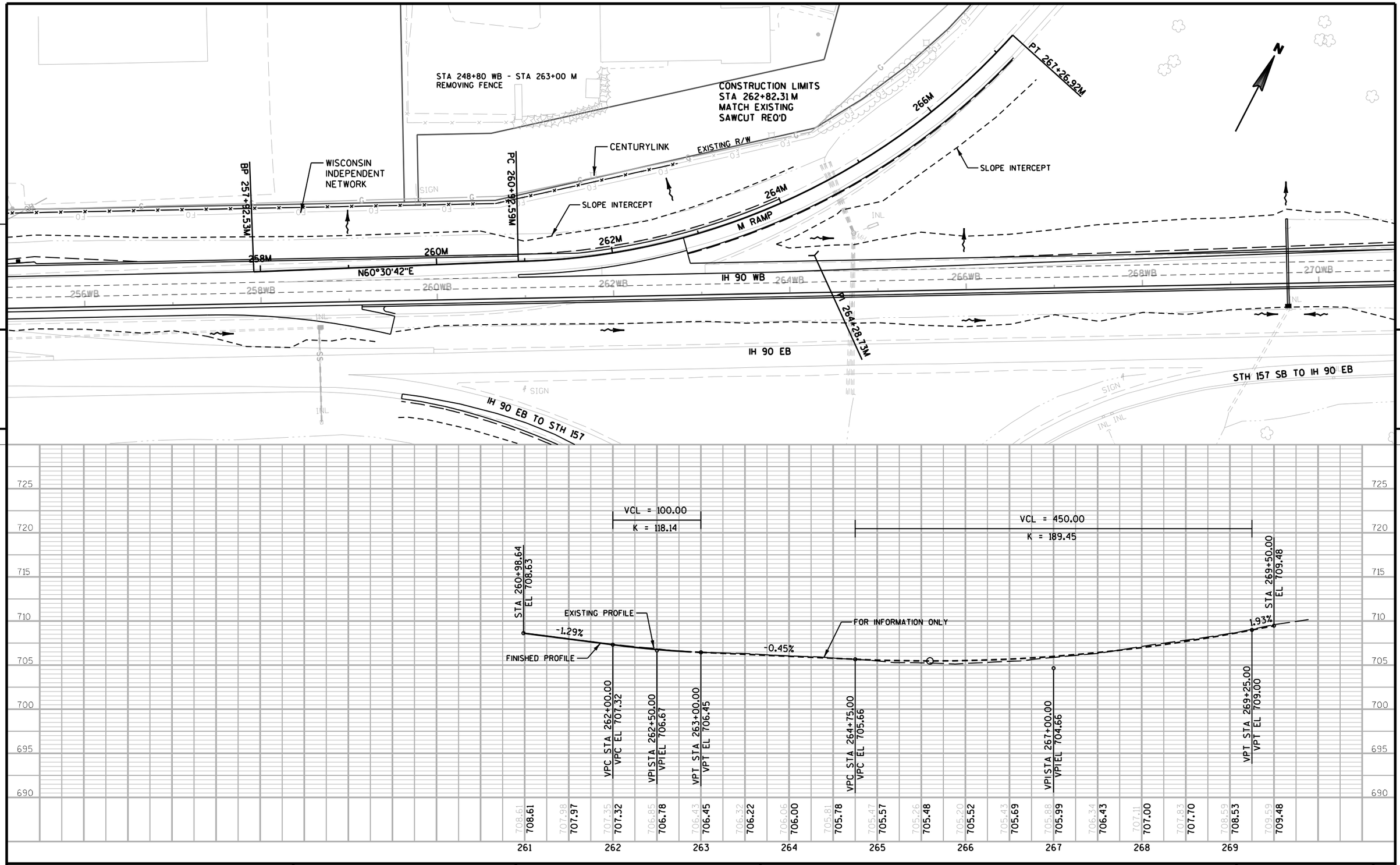
1.18%

FINISHED PROFILE

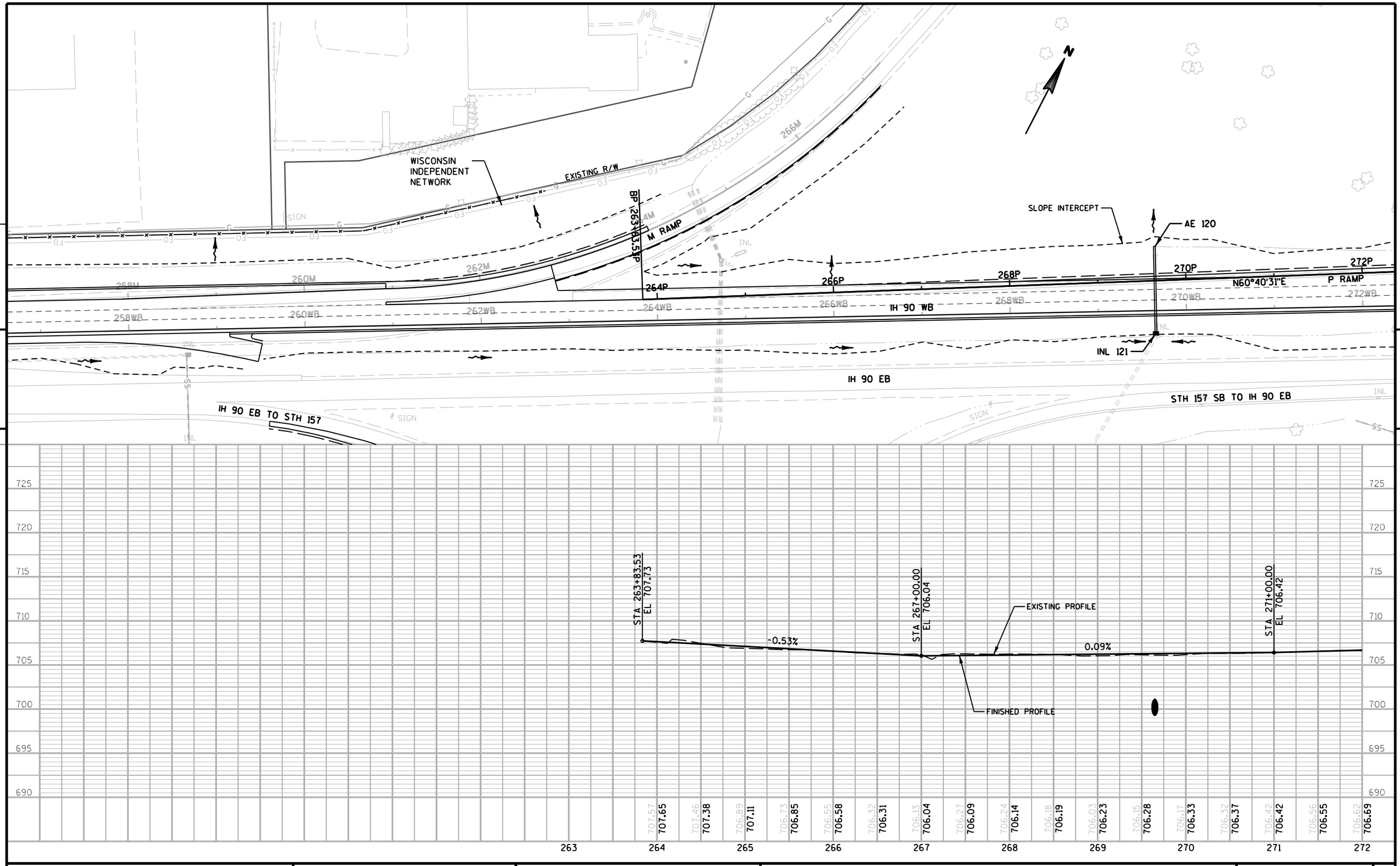
STA 290+57.68
EL 716.25

725
720
715
710
705
700
695
690

| | | |



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - STH 157 SB ON RAMP TO IH 90 WB (M RAMP)	SHEET 216	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - STH 157 NB ON RAMP TO IH 90 WB (P RAMP)	SHEET 217	E

STA 272+60 P
STA 275+40 P
STA 277+40 P
STA 277+70 P
REMOVING SMALL PIPE CULVERT

STA 272+60 P, RT
STA 275+40 P, RT
STA 276+30 P, RT
STA 277+40 P, RT
STA 277+70 P, RT
REMOVING INLETS

STA 276+30 P, RT
RECONSTRUCTING INLETS

STA 273+25 P, LT
STA 279+64 P, LT
ASPHALTIC FLUMES

STA 273+25 P - STA 276+87 P, LT
CONCRETE BARRIER

STA 272+00 P - STA 279+64 P, LT
REMOVING CURB & GUTTER

STA 276+87 P - STA 279+30 P, LT
MGS GUARDRAIL

CONSTRUCTION LIMITS
STA 279+63.06 P
MATCH EXISTING
SAWCUT REQ'D

XCEL ENERGY - ELECTRIC

XCEL ENERGY - ELECTRIC
WISCONSIN INDEPENDENT NETWORK

EXISTING R/W

STH 157

STH 157

PC 277+83.74P

PCC 279+35.48P

EP 280+87.46P

SLOPE INTERCEPT

P RAMP

L RAMP

272P 274P 276P 278P 280P

272WB 274WB 276WB 278WB 280WB 282WB 284WB 286WB

IH 90 WB

IH 90 EB

PI 278+59.81P

PI 280+12.04P

KT RAMP

STH 157 NB TO IH 90 EB

XCEL ENERGY - ELECTRIC/
CHARTER COMMUNICATIONS/
CENTURYLINK

5

5

STA 275+00.00
EL 707.48

STA 280+87.46
EL 709.54

EXISTING PROFILE

FINISHED PROFILE

FOR INFORMATION ONLY

0.27%

0.35%

272	273	274	275	276	277	278	279	280	281
706.69	706.82	706.95	707.08	707.22	707.35	707.48	707.66	707.83	708.01	708.18	708.36	708.53	708.71	708.88	709.06	709.24	709.41

725 720 715 710 705 700 695 690

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - STH 157 NB ON RAMP TO IH 90 WB (P RAMP)	SHEET 218	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050127_ppp2.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

STA 16+00 BW - STA 18+85 BW, LT
STA 18+85 BW - STA 18+94 BW, RT
REMOVING FENCE

EXISTING R/W

STA 17+66 BW - STA 18+71 BW, LT
STA 17+70 BW - STA 18+75 BW, RT
MGS GUARDRAIL

STA 18+86 BW
B-32-51 (SOUTH END)
CONCRETE PAVEMENT
APPROACH SLAB

XCEL ENERGY

CENTURY TEL

IH 90 EB

STA 17+75.00 BW, 16.00' LT

STA 17+65.00 BW, 15.00' LT

R/L CTH BW

INL 300

15BW 16BW 17BW 18BW 19BW 20

CTH "BW"

CTH BW

3'
4'
12'
12'
17'
10'
16'
16'
6'

MATCH LINE STA 20+00 BW

106+00 BW

INL 301

INL 302

B-32-51

TAPER HEIGHT OF CONCRETE CURB
0" TO 6" IN 6 FEET
CONCRETE SIDEWALK TO MATCH TOP OF CURB

DETECTABLE WARNING FIELD

STA 17+00.00 BW,
29.00' RT

STA 17+70.00 BW, 22.00' RT

SLOPE INTERCEPT (TYP)

BEGIN CONSTRUCTION
STA 17+00.00 BW
SAWCUT AND MATCH EXISTING

STA 18+75 BW, LT/RT
CONCRETE SURFACE DRAINS
DROP INLET TYPE
SEE DETAIL

EXISTING R/W

VPI STA 17+00.00
VPI EL 678.25

VPC STA 18+25.00
VPC EL 679.56

HP STA 19+04.26
HP EL 679.98

VPI STA 20+00.00
VPI EL 681.40

1.05%

EXISTING PROFILE

FINISHED PROFILE

VCL = 350'
K = 75

STRUCTURE B-32-51 REQUIRED
STA 18+86 BW TO STA 21+32 BW
5 SPAN 36-INCH PRESTRESSED GIRDER
32' CLEAR ROADWAY WIDTH
SKEW 6° RHF

16'-9" MINIMUM CLEARANCE

EXISTING PROFILE ELEVATION AT R/L
FINISHED PROFILE ELEVATION

677.43	677.90	678.25	678.25	678.56	678.51	678.84	678.78	679.11	679.04	679.32	679.30	679.37	679.56	679.24	679.78	678.98	679.92	670.82	679.98	657.39	679.95	656.35	679.84	656.44	679.65	656.77	679.37

17BW 18BW 19BW 20BW

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN AND PROFILE - CTH BW	SHEET 219	E

FILE NAME : ch_0677_050101_pp.dgn PLOT DATE : 27-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 40:1

STA 21+31 BW
B-32-51 (NORTH END)
CONCRETE PAVEMENT
APPROACH SLAB

STA 21+43 BW - STA 22+48 BW, LT
STA 21+46 BW - STA 22+51 BW, RT
MGS GUARDRAIL

STA 21+39 BW - STA 21+73 BW, LT
STA 21+43 BW - STA 21+85 BW, RT
REMOVING FENCE

N

XCEL ENERGY
CENTURY TEL

IH 90 WB

BM#100

INL 303
INL 304

STA 22+35.00 BW,
16.00'LT

STA 22+95.00 BW,
20.00'LT

EXISTING R/W

R/L CTH BW

MATCH LINE STA 20+00 BW

BMOD+106 WB

20BW
21BW
22BW
23BW
24BW
25BW

8'
4'
16'
16'
6'
12'
12'
10'

DETECTABLE
WARNING
FIELD

CTH BW

INL 306
INL 305

B-32-51

SLOPE INTERCEPT (TYP)

TAPER HEIGHT OF CURB
0" TO 6" IN 6 FEET
CONCRETE SIDEWALK TO MATCH TOP OF CURB

STA 21+40 BWLT/RT
CONCRETE SURFACE DRAINS
DROP INLETTYPE
SEE DETAIL

EXISTING R/W

END CONSTRUCTION
STA 23+00.00 BW
SAWCUT AND MATCH EXISTING

MH

BENCHMARK			
NO.	LOCATION	DESCRIPTION	ELEVATION
100	STA 21+37 BW +/- LT	CHISELED "X"	677.56

5

5

682
680
678
676
674
672
670
668
666

VPI STA 20+00.00
VPI EL 681.40

STRUCTURE B-32-51 REQUIRED
STA 18+86 BW TO STA 21+32 BW
5 SPAN 36-INCH PRESTRESSED GIRDER
32' CLEAR ROADWAY WIDTH
SKEW 6° RHF

VPT STA 21+75.00
VPT STA 675.12

FINISHED PROFILE

VCL = 350'
K = 75

-3.59%

EXISTING PROFILE

VPI STA 23+00.00
VPI EL 670.64

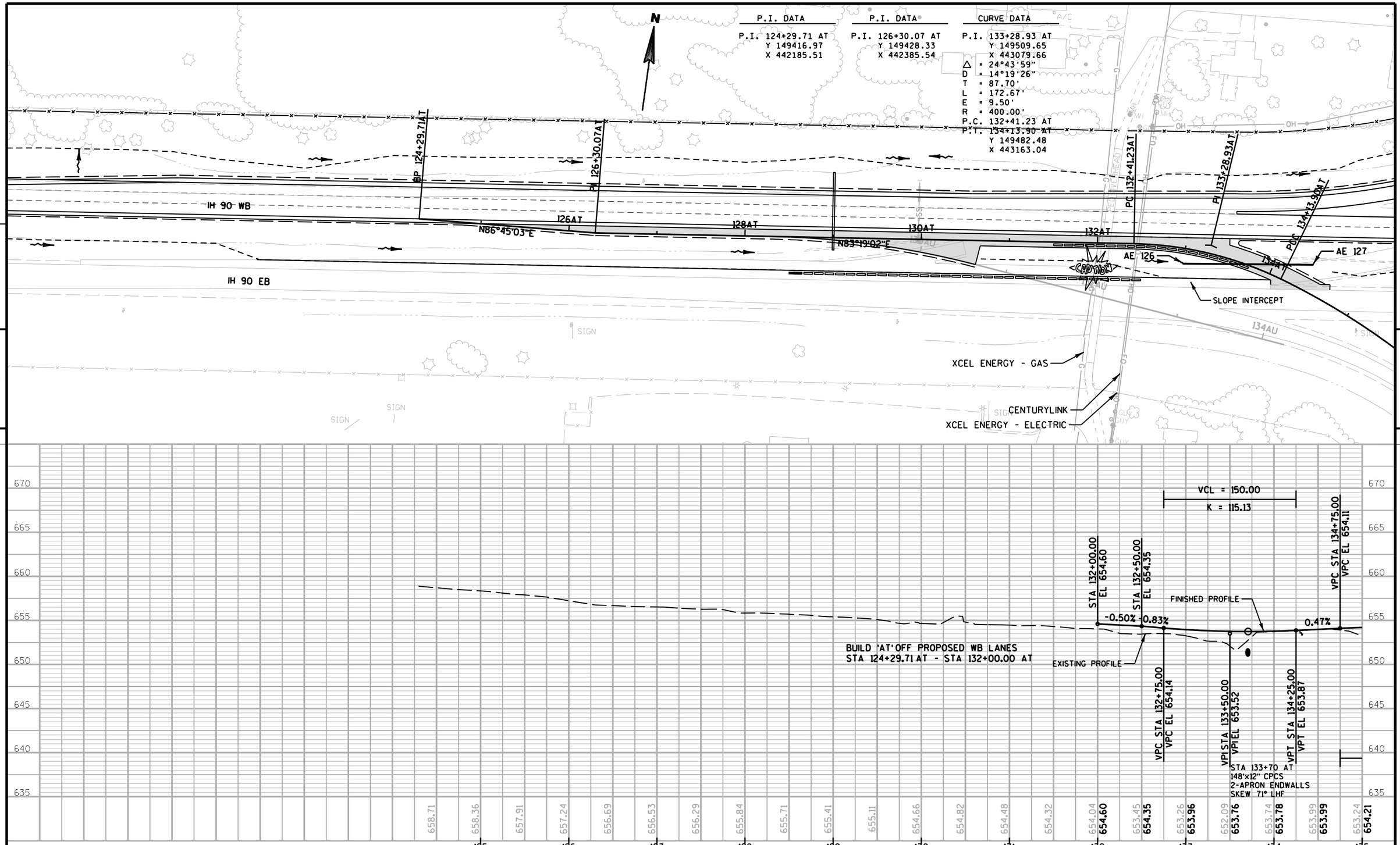
EXISTING PROFILE ELEVATION AT R/L
FINISHED PROFILE ELEVATION

656.77	679.37	654.66	679.01	655.76	678.57	656.62	678.05	657.65	677.44	671.44	676.75	674.99	675.98	674.35	675.12	673.67	674.23	672.82	673.33	671.99	672.43	671.32	671.54	670.64	670.64	669.85	669.04	668.22	667.39	666.58

20BW 21BW 22BW 23BW 24BW

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN AND PROFILE - CTH BW	SHEET 220	E

P.I. DATA	P.I. DATA	CURVE DATA
P.I. 124+29.71 AT Y 149416.97 X 442185.51	P.I. 126+30.07 AT Y 149428.33 X 442385.54	P.I. 133+28.93 AT Y 149509.65 X 443079.66 △ = 24°43'59" D = 14°19'26" T = 87.70' L = 172.67' E = 9.50' R = 400.00' P.C. 132+41.23 AT P.T. 134+13.90 AT Y 149482.48 X 443163.04

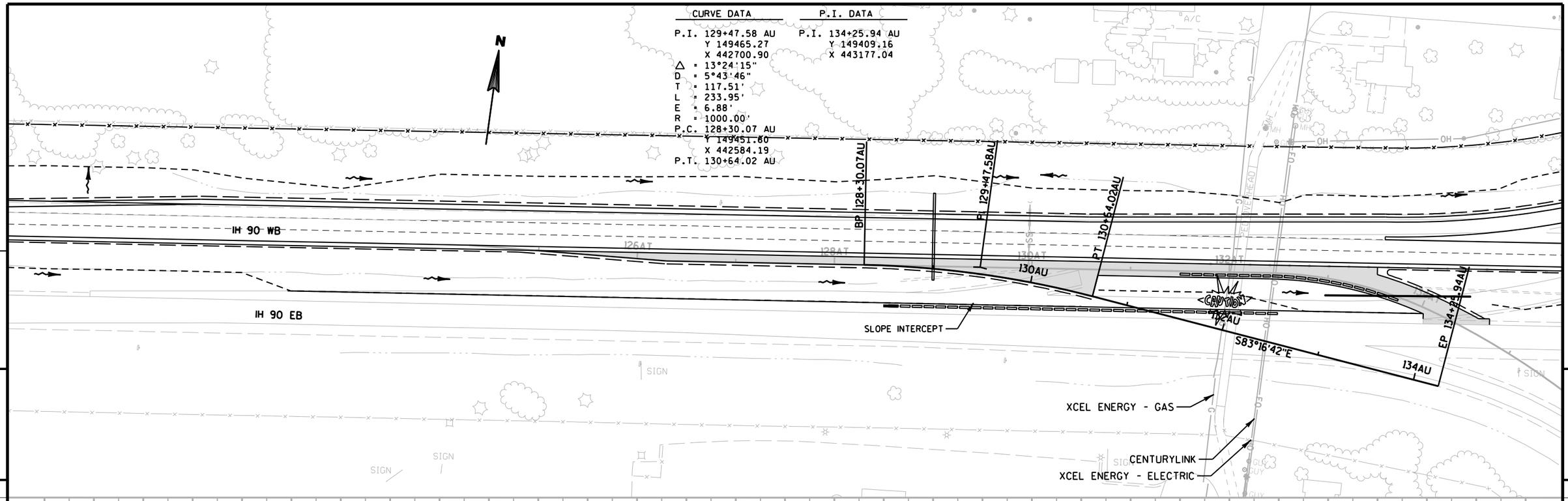


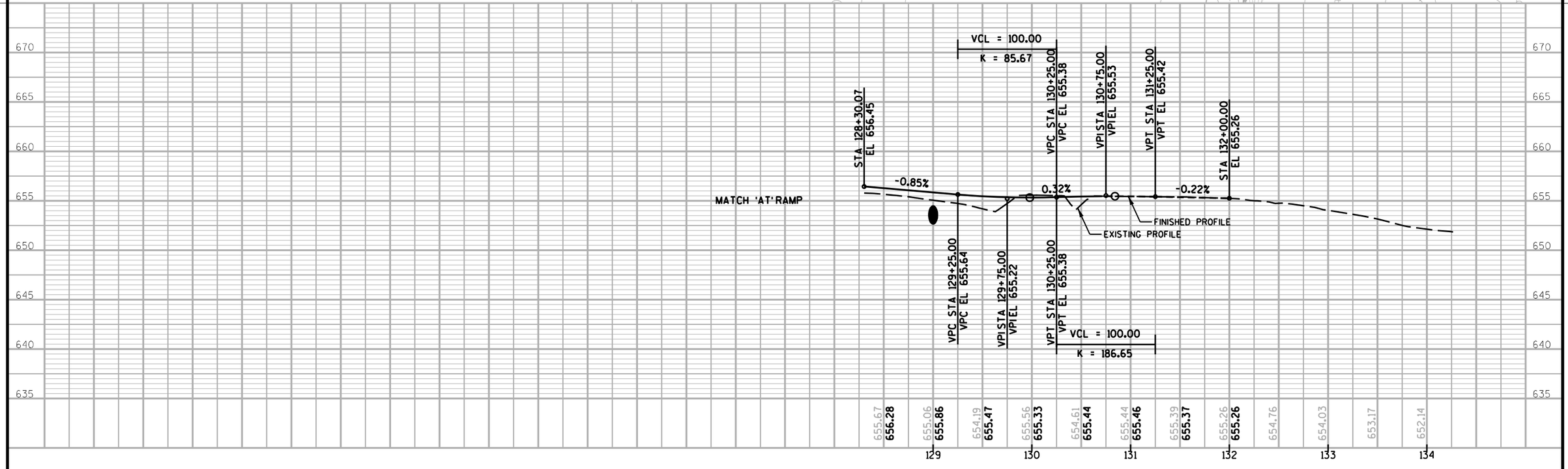
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP IH 90 EB TO CTH B RAMP (AT)	SHEET 221 E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050128_pptmpat.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

CURVE DATA	P.I. DATA
P.I. 129+47.58 AU	P.I. 134+25.94 AU
Y 149465.27	Y 149409.16
X 442700.90	X 443177.04
△ = 13°24'15"	
D = 5°43'46"	
T = 117.51'	
L = 233.95'	
E = 6.88'	
R = 1000.00'	
P.C. 128+30.07 AU	
Y 149451.80	
X 442584.19	
P.T. 130+64.02 AU	



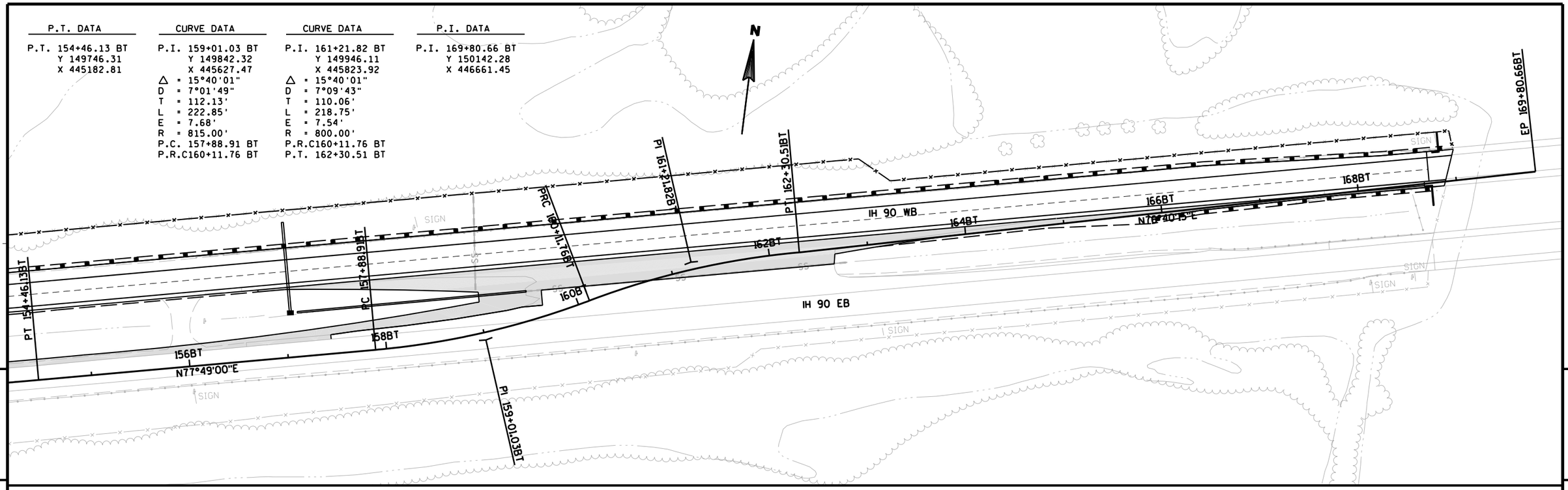


PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP IH 90 EB TO CTH B RAMP (AU)	SHEET 222	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050129_pptmpau.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

P.T. DATA	CURVE DATA	CURVE DATA	P.I. DATA
P.T. 154+46.13 BT Y 149746.31 X 445182.81	P.I. 159+01.03 BT Y 149842.32 X 445627.47 △ = 15°40'01" D = 7°01'49" T = 112.13' L = 222.85' E = 7.68' R = 815.00' P.C. 157+88.91 BT P.R.C160+11.76 BT	P.I. 161+21.82 BT Y 149946.11 X 445823.92 △ = 15°40'01" D = 7°09'43" T = 110.06' L = 218.75' E = 7.54' R = 800.00' P.R.C160+11.76 BT P.T. 162+30.51 BT	P.I. 169+80.66 BT Y 150142.28 X 446661.45



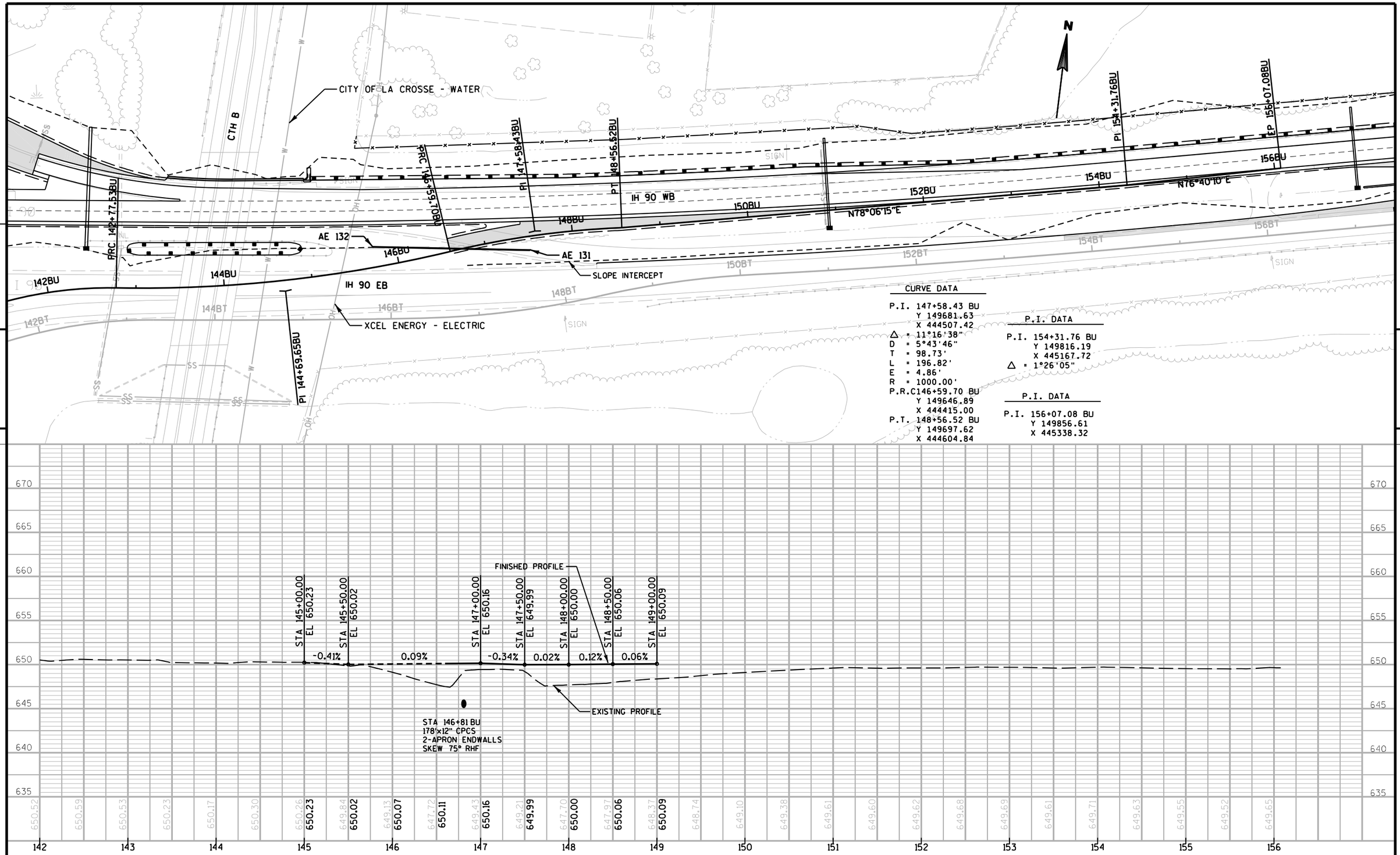
5

5

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP CTH B TO IH 90 EB RAMP (BT)	SHEET 223	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050130_pptmpbt.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

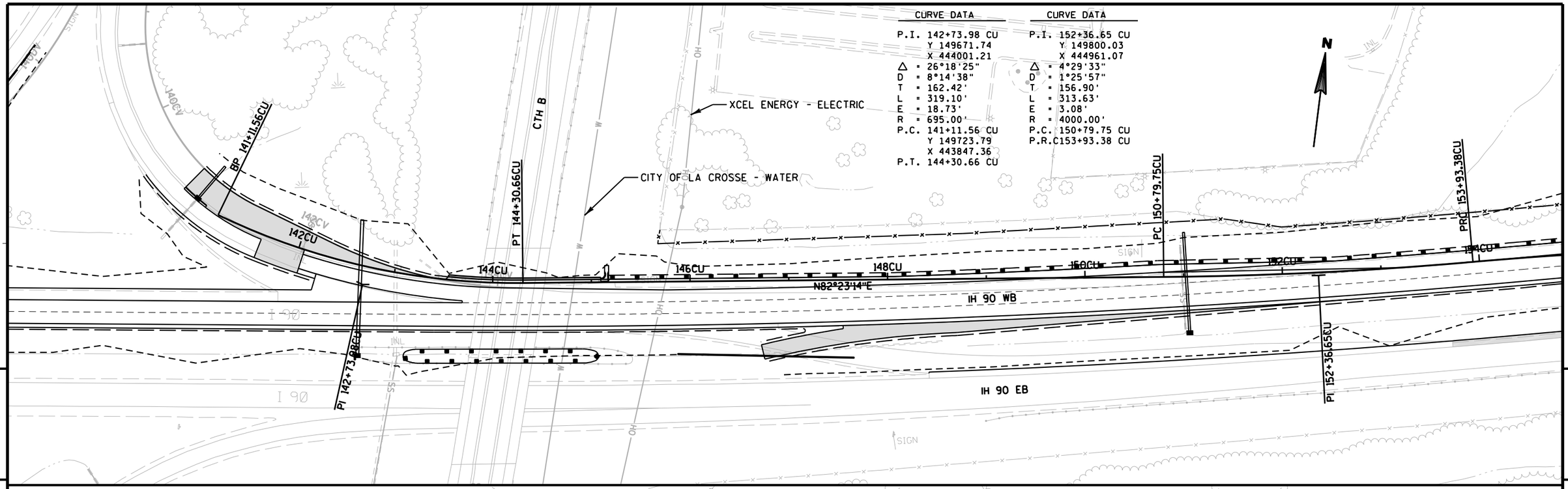
WISDOT/CADDS SHEET 44

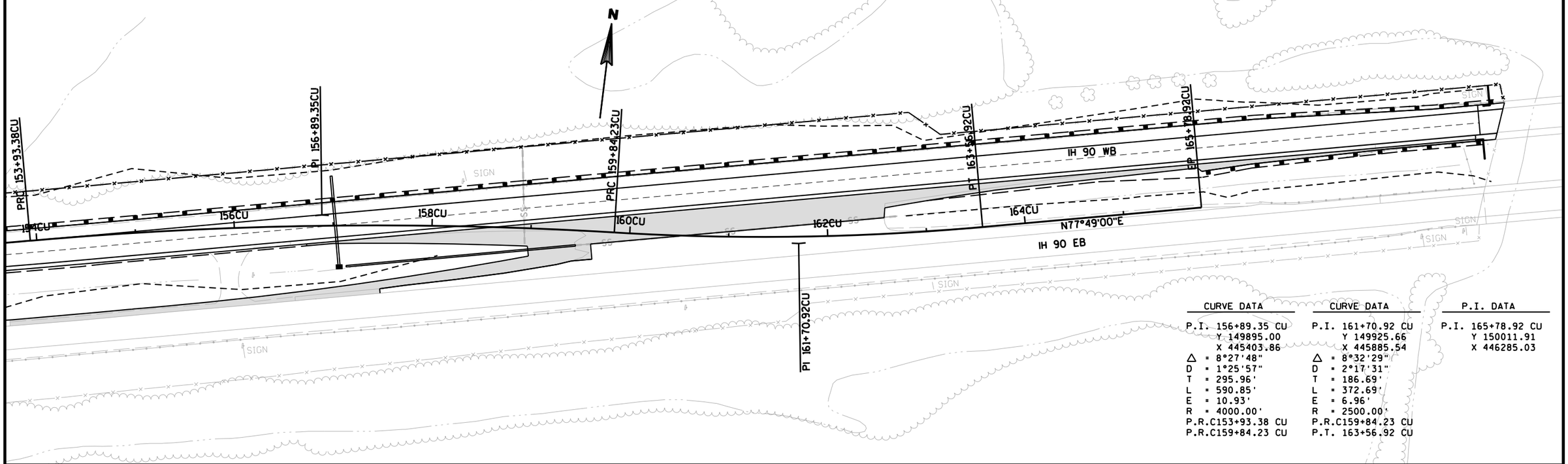


PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP CTH B TO IH 90 EB RAMP (BU)	SHEET 224 E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050131_pptmpbu.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

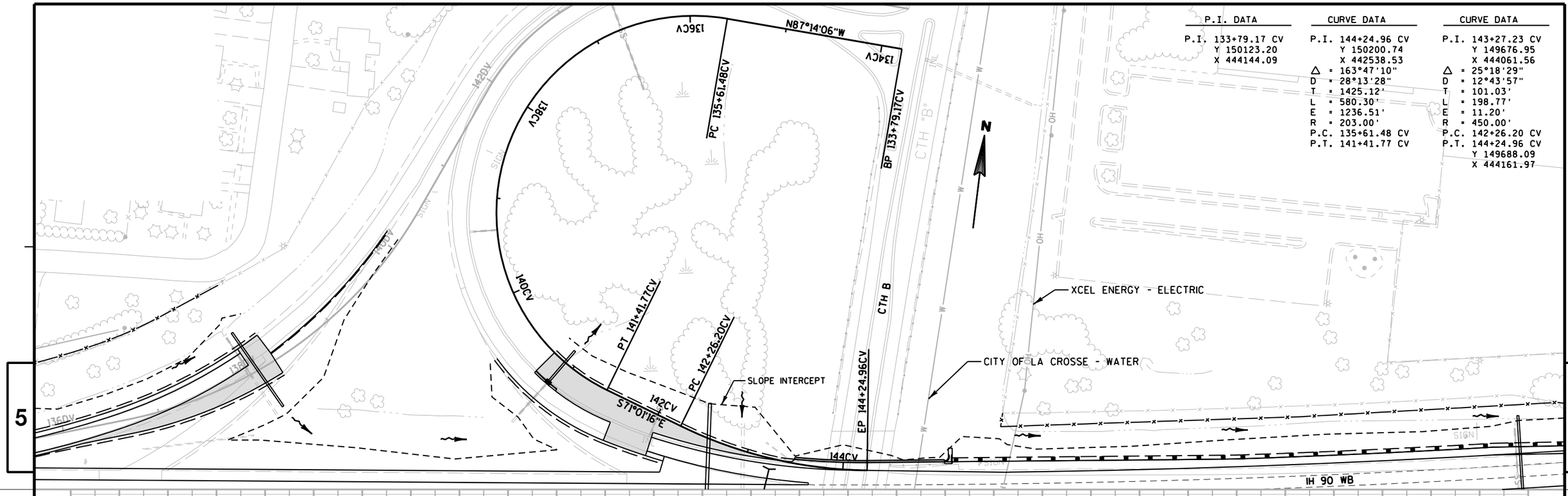




PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN - TEMP IH 90 WB TO CTH B RAMP (CU)	SHEET 225	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050132_pptmpcu.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 44



BUILD OFF C RAMP CROSS SECTIONS

665 660 655 650 645 640 635 630

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP IH 90 WB TO CTH B RAMP (CV)	SHEET 226	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050133_pptmpcv.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

CURVE DATA	CURVE DATA
P.I. 129+48.00 DU	P.I. 132+37.44 DU
Y 149432.53	Y 149550.48
X 442705.03	X 442971.82
△ = 17°10'06"	△ = 16°01'21"
D = 5°43'46"	D = 5°43'46"
T = 150.95'	T = 140.74'
L = 299.64'	L = 279.65'
E = 11.33'	E = 9.86'
R = 1000.00'	R = 1000.00'
P.C. 127+97.05 DU	P.R.C130+96.69 DU
Y 149414.97	P.T. 133+76.34 DU
X 442555.11	Y 149569.65
P.R.C130+96.69 DU	X 443111.25
S.E. RC	S.E. RC
L.R. ***	L.R. ***

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

STA 130+00 DU, LT
REMOVING INLET

STA 134+94 DT
STA 137+31 DT
STA 138+37 DT
REMOVING SMALL PIPE CULVERT

N

BP 127+97.05DU

PRC 130+96.69DU

PI 132+37.44DU

EP 133+76.34DU

SLOPE INTERCEPT

IH 90 WB

IH 90 EB

124DT 126DT 128DU 130DU 132DU 134DT 136DT 138DT

PI 129+48.00DU

CRASH CUSHION
TEMPORARY LEFT
IN PLACE REQ'D

XCEL ENERGY - GAS

CENTURYLINK

XCEL ENERGY - ELECTRIC

CAUTION

CONCRETE BARRIER TEMPORARY
PRECAST LEFT IN PLACE
STA 130+20 EB - STA 133+15 EB

SIGN OH MH A/C GUY

5 5

STA	EL
127+97.05	656.90
128+50.00	656.70
129+00.00	656.38
129+50.00	655.93
130+00.00	655.53
130+50.00	655.46
130+86.07	655.52

-0.39% -0.63% -0.90% -0.80% -0.14% 0.15%

FINISHED PROFILE

EXISTING PROFILE

670 665 660 655 650 645 640 635

655.64 656.89 655.25 656.70 654.67 656.38 653.84 655.93 653.00 655.53 654.60 655.46 655.57 655.46 655.01 654.72 654.41 653.97

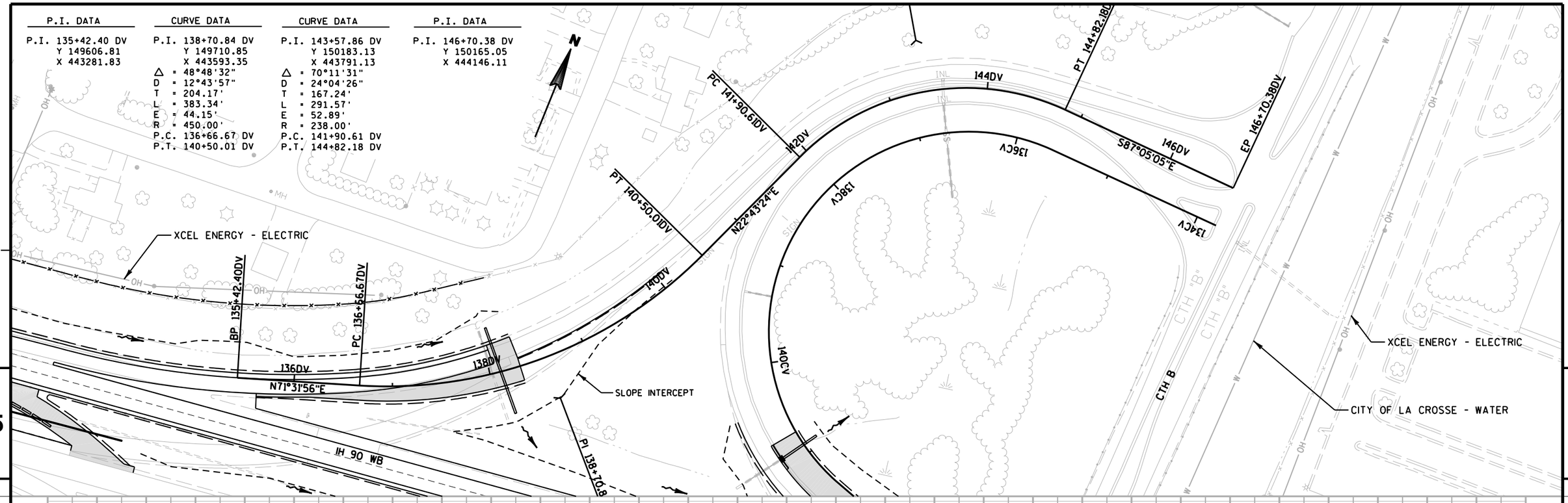
128 129 130 131 132 133 134

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP CTH B TO IH 90 WB RAMP (DU)	SHEET 227	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050134_pptmpdu.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

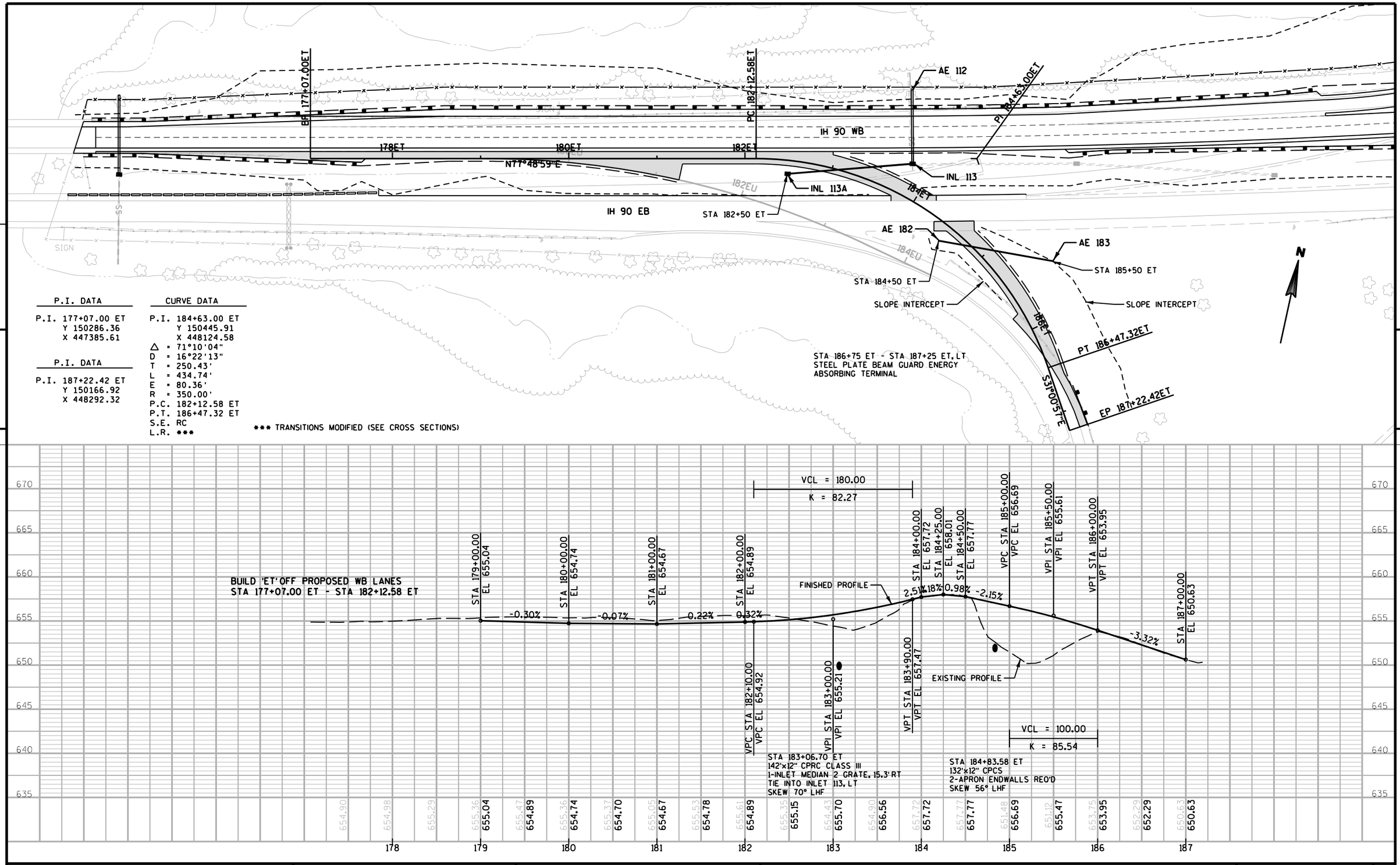
P.I. DATA	CURVE DATA	CURVE DATA	P.I. DATA
P.I. 135+42.40 DV Y 149606.81 X 443281.83	P.I. 138+70.84 DV Y 149710.85 X 443593.35 △ = 48°48'32" D = 12°43'57" T = 204.17' L = 383.34' E = 44.15' R = 450.00' P.C. 136+66.67 DV P.T. 140+50.01 DV	P.I. 143+57.86 DV Y 150183.13 X 443791.13 △ = 70°11'31" D = 24°04'26" T = 167.24' L = 291.57' E = 52.89' R = 238.00' P.C. 141+90.61 DV P.T. 144+82.18 DV	P.I. 146+70.38 DV Y 150165.05 X 444146.11



BUILD OFF D RAMP CROSS SECTIONS

665 660 655 650 645 640 635 630

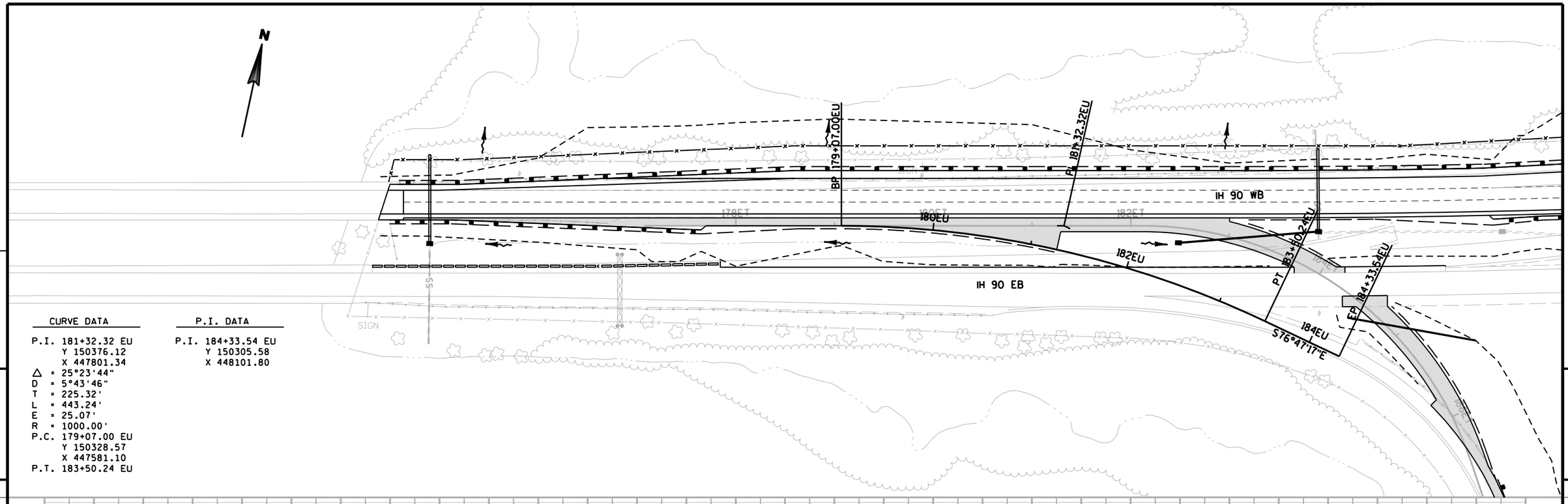
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP CTH B TO IH 90 WB RAMP (DV)	SHEET 228	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP IH 90 EB TO ROSE ST SB RAMP (ET)	SHEET 229 E

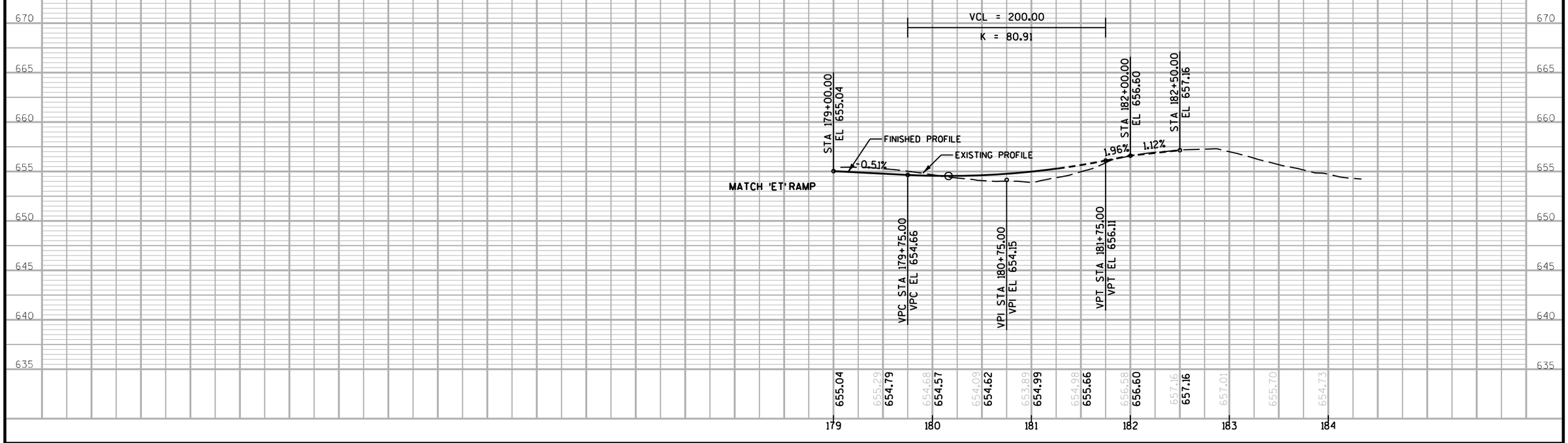
FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050136_pptmpet.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

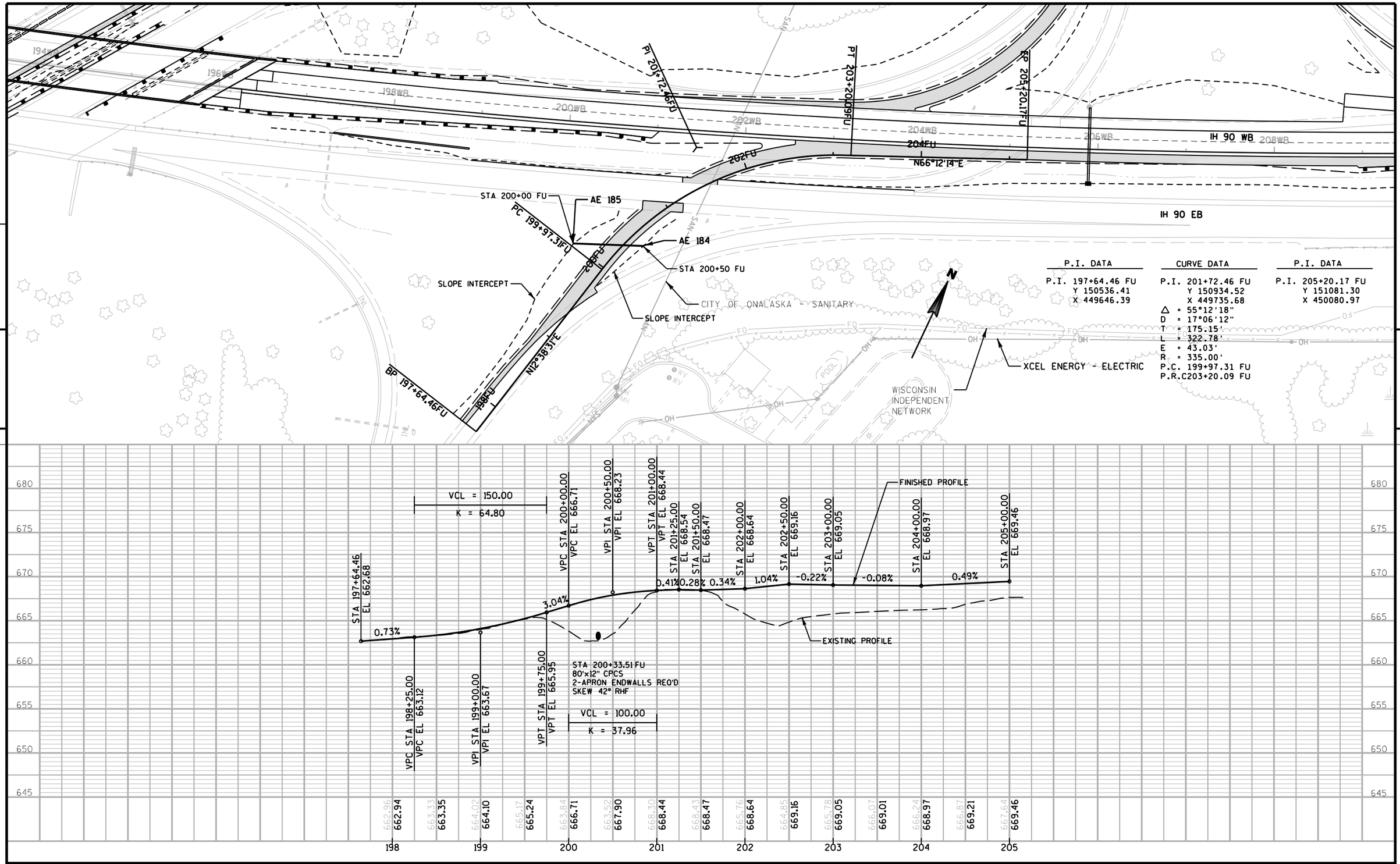


CURVE DATA	
P.I.	181+32.32 EU
	Y 150376.12
	X 447801.34
△	= 25°23'44"
D	= 5°43'46"
T	= 225.32'
L	= 443.24'
E	= 25.07'
R	= 1000.00'
P.C.	179+07.00 EU
	Y 150328.57
	X 447581.10
P.T.	183+50.24 EU

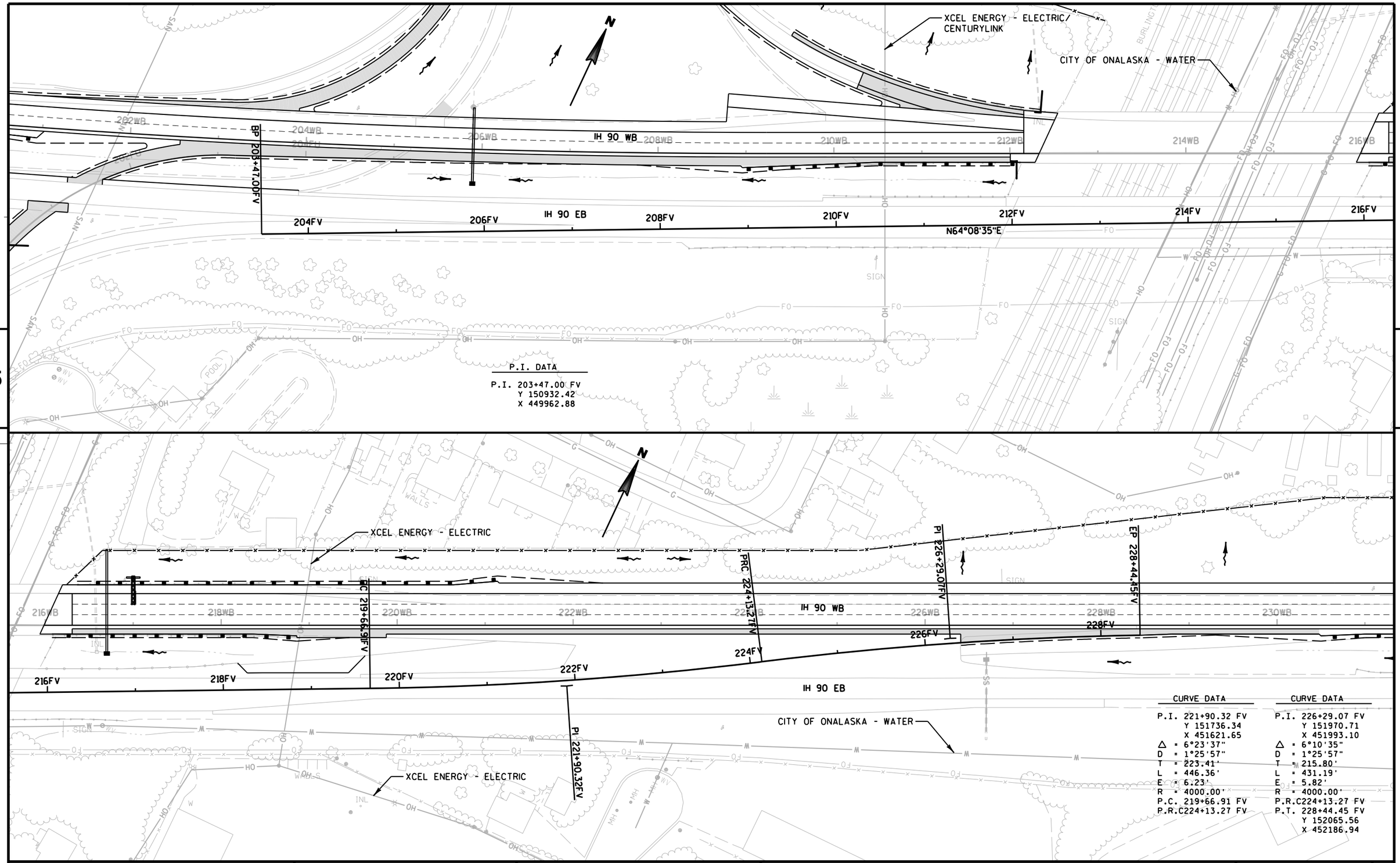
P.I. DATA
P.I. 184+33.54 EU
Y 150305.58
X 448101.80



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP IH 90 EB TO ROSE ST SB RAMP (EU)	SHEET 230	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP ROSE ST TO IH 90 EB RAMP (FU)	SHEET 231	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN - TEMP ROSE ST TO IH 90 EB RAMP (FV)	SHEET 232	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\da_0677_050139_pptmpfv.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 44

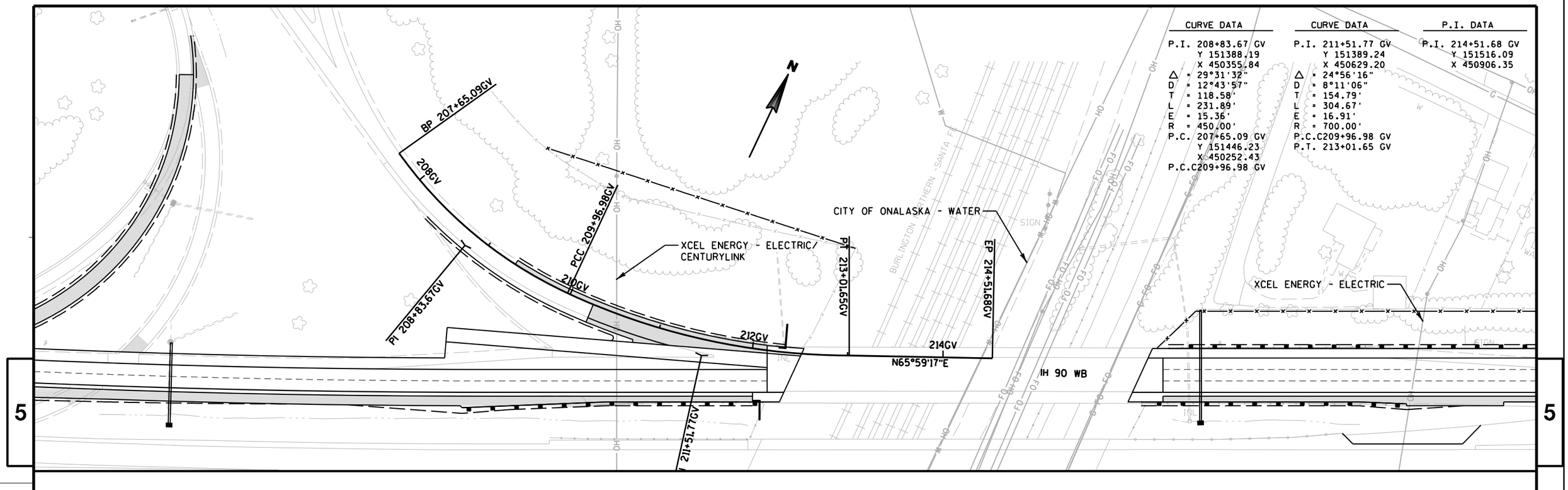
P.I. DATA	CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA
P.I. 207+00.00 GU Y 151533.78 X 450094.45	P.I. 210+00.89 GU Y 151387.91 X 450357.62 △ = 29°21'17" D = 12°43'57" T = 117.87' L = 230.55' E = 15.18' R = 450.00' P.C. 208+83.03 GU P.C.C211+13.58 GU S.E. 6.0% L.R. ***	P.I. 212+67.49 GU Y 151389.61 X 450629.40 △ = 24°48'05" D = 8°11'06" T = 153.91' L = 303.01' E = 16.72' R = 700.00' P.C.C211+13.58 GU P.T. 214+16.58 GU S.E. 6.0% L.R.	P.I. 228+33.79 GU Y 152057.51 X 452051.48 △ = 6°23'54" D = 2°50'36" T = 112.63' L = 225.02' E = 3.15' R = 2015.00' P.C. 227+21.16 GU P.R.C229+46.18 GU S.E. 6.0% L.R.	P.I. 230+99.01 GU Y 152142.87 X 452302.83 △ = 8°44'21" D = 2°51'53" T = 152.83' L = 305.06' E = 5.83' R = 2000.00' P.R.C229+46.18 GU P.T. 232+51.24 GU Y 152213.44 X 452438.39 S.E. 6.0% L.R.

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

BP 207+00
S61°00'05"E
208GU
PC 208+83.03GU
STA 210+00 GU - STA 214+00 GU
REMOVING FENCE, LT
FENCE CHAIN LINK 6-FT
SLOPE INTERCEPT
CITY OF ONALASKA - WATER
210GU
PCC 211+13.58GU
PI 214+16.58GU
XCEL ENERGY - ELECTRIC/
CENTURYLINK
212GU
PI 210+00.89GU
214GU
216GU
IH 90 WB
XCEL ENERGY - ELECTRIC
218GU
220GU
N64°50'32"E
7.49G
BURLINGTON NORTHERN - SANTA FE

FINISHED PROFILE
EXISTING PROFILE
VCL = 200.00
K = 59.07
VCL = 100.00
K = 93.82
VCL = 100.00
K = 71.70
VPC STA 209+75.00 VPC EL 666.56
VPI STA 210+75.00 VPI EL 666.64
VPC STA 211+75.00 VPC EL 670.10
VPT STA 211+75.00 VPT EL 670.10
VPI STA 212+25.00 VPI EL 671.83
VPC STA 212+75.00 VPC EL 672.87
VPI STA 213+25.00 VPI EL 673.90
VPT STA 213+75.00 VPT EL 674.40
STA 207+00.00 EL 666.30
STA 208+00.00 EL 666.42
STA 218+00.00 EL 678.67
0.12%
0.08%
3.46%
3.46%
2.07%
2.07%
1.00%

| | | |



CURVE DATA	CURVE DATA	P.I. DATA
P.I. 208+83.67 GV	P.I. 211+51.77 GV	P.I. 214+51.68 GV
Y 151388.19	Y 151389.24	Y 151516.09
X 450355.84	X 450629.20	X 450906.35
△ = 29°31'32"	△ = 24°56'16"	
D = 12°43'57"	D = 8°11'06"	
T = 118.58'	T = 154.79'	
L = 231.89'	L = 304.67'	
E = 15.36'	E = 16.91'	
R = 450.00'	R = 700.00'	
P.C. 207+65.09 GV	P.C.C209+96.98 GV	
Y 151446.23	P.T. 213+01.65 GV	
X 450252.43		
P.C.C209+96.98 GV		

PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	PLAN - FINAL IH 90 WB TO ROSE ST RAMP (GV)	SHEET 234	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\ga_0677_050141_pptmpgv.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

VERIFY VERTICAL CLEARANCE ON 'TN' AND 'TS' LINE PRIOR TO OPENING TO TRAFFIC. ADJUST SHOULDER WIDTH TO KEEP VERTICAL CLEARANCE.
14'7" SOUTHBOUND / 15'1" NORTHBOUND

P.I. DATA	CURVE DATA	CURVE DATA	P.I. DATA
P.I. 106+14.97 TS	P.I. 108+02.72 TS	P.I. 114+56.59 TS	P.I. 116+56.52 TS
Y 150403.91	Y 150554.29	Y 151086.46	Y 151251.54
X 448786.34	X 448898.75	X 449278.67	X 449391.45
	△ = 01°15'20"	△ = 1°10'54"	

STA 107+47 TS - STA 110+85 TS, LT
REMOVING GUARDRAIL

STA 107+50 TS - STA 112+07 TS, RT
REMOVING GUARDRAIL

P.I. DATA	CURVE DATA
P.I. 200+00.00 GW	P.I. 205+63.43 GW
Y 150603.55	Y 151069.85
X 448922.65	X 449238.90
	△ = 23°13'57"
	D = 12°43'57"
	T = 92.51'
	L = 182.47'
	E = 9.41'
	R = 450.00'
	P.C. 204+70.93 GW
	P.T. 206+53.39 GW

CURVE DATA
P.I. 208+57.40 GW
Y 151361.00
X 449295.03
△ = 13°29'22"
D = 12°43'57"
T = 53.22'
L = 105.95'
E = 3.14'
R = 450.00'
P.C. 208+04.18 GW
P.T. 209+10.13 GW
Y 151409.47
X 449317.01

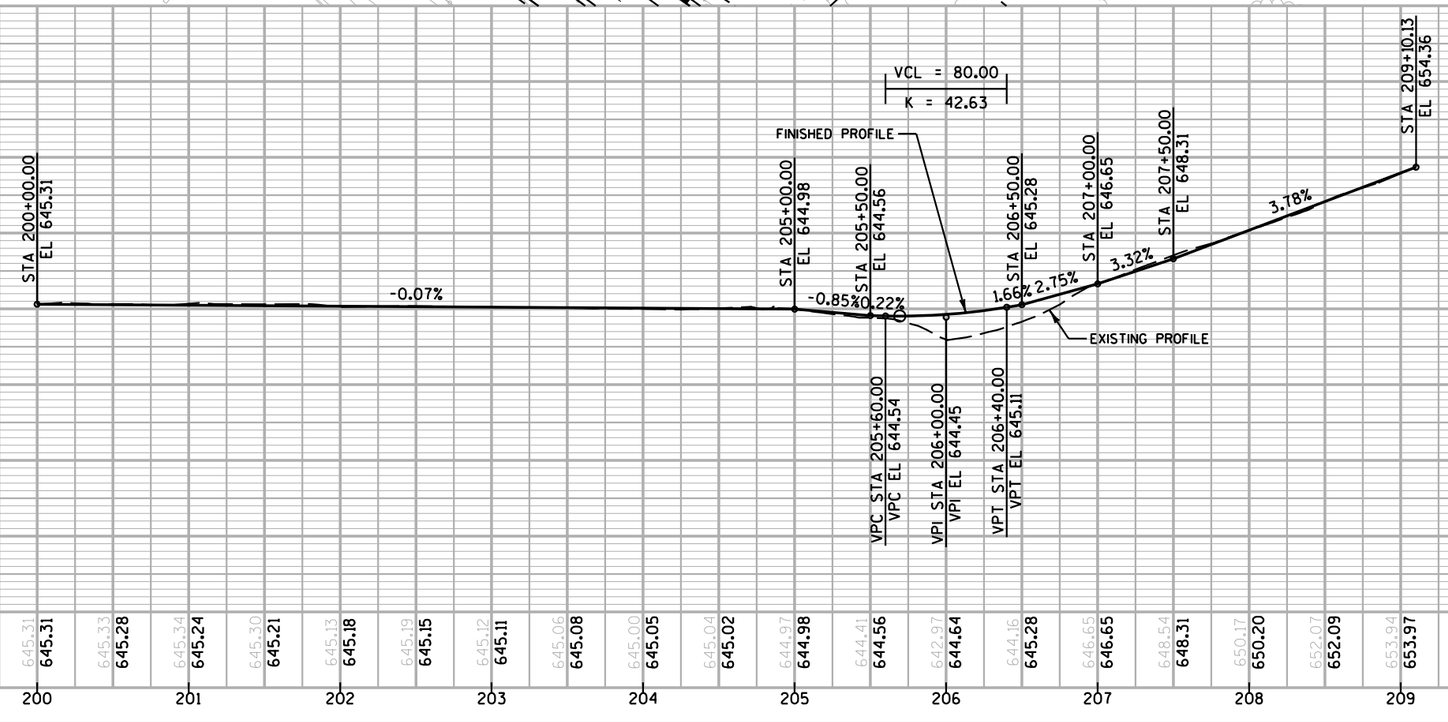
BP 104+00.00TN
BP 106+14.97TS
BP 200+00.00GW
PI 108+02.72TS
PI 108+02.26TN
PI 109+32.72TN
PI 112+27.86TN
PI 114+56.59GW
PI 205+63.43GW
PI 206+53.39GW
PC 204+70.93GW
PC 208+04.18GW
PI 208+57.40GW
EP 209+10.13GW
EP 116+56.52TS
EP 115+23.72TN
200GW
202GW
204GW
208GW
104TN
106TN
108TN
110TN
112TN
114TN
116TS
110TS
112TS
114TS
N36°46'43"E
N35°30'23"E
N36°05'54"E
N35°31'23"E
N34°08'42"E
N35°28'30"E
N35°07'59"E
N34°20'29"E
N10°54'45"E
IH 90 WB
IH 90 EB
SLOPE INTERCEPT
SLOPE INTERCEPT
ROSE ST SB
ROSE ST NB
SIGN
SIGN
SS
INL
SS

P.I. DATA	CURVE DATA	CURVE DATA
P.I. 104+00.00 TN	P.I. 108+02.26 TN	P.I. 109+32.72 TN
Y 150203.51	Y 150530.97	Y 150636.38
X 448721.66	X 448955.29	X 449032.16
	△ = 00°35'31"	△ = 0°37'14"

STA 110+00 TN - STA 111+50 TN, RT
REMOVING GUARDRAIL

CURVE DATA	P.I. DATA
P.I. 112+27.86 TN	P.I. 115+23.72 TN
Y 150876.74	Y 151118.69
X 449203.44	X 449373.70
△ = 0°20'31"	

GW PROFILE



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - GW/TN/TS TEMPORARYS	SHEET 235	E

CURVE DATA	CURVE DATA	P.I. DATA
P.I. 199+81.16 HU	P.I. 207+66.55 HU	P.I. 209+63.95 HU
Y 150834.07	Y 151138.48	Y 151479.57
X 449582.10	X 450306.34	X 449969.54
△ = 3°43'08"	△ = 112°23'14"	
D = 00°29'46"	D = 20°50'05"	
T = 374.96'	T = 410.69'	
L = 749.66'	L = 539.42'	
E = 6.09'	E = 219.26'	
R = 11550.17'	R = 275.00'	
P.C. 196+06.20 HU	P.C.C203+55.86 HU	
Y 150707.81	P.T. 208+95.28 HU	
X 449229.04	S.E. 6.0%	
P.C.C203+55.86 HU	L.R. ***	
S.E. NC		
L.R. ***		

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

ROSE ST NB

BP 196+06.20HU

IH 90 WB

IH 90 EB

198HU

200HU

202HU

204HU

206HU

208HU

PI 199+81.16HU

PCC 203+55.86HU

EP 209+63.95HU

PT 208+95.28HU

N44°38'15"W

CITY OF ONALASKA - SANITARY

STA 207+00 HU
STA 207+50 HU
REMOVING SMALL PIPE CULVERTS

STA 203+00.00
EL 668.40

VPC STA 204+15.00
VPC EL 669.25

VPI STA 204+65.00
VPI EL 669.62

VPT STA 205+15.00
VPT EL 669.15

STA 205+75.00
EL 668.58

STA 206+25.00
EL 667.80

FINISHED PROFILE

EXISTING PROFILE

0.74%

-0.95%

-1.55%

VCL = 100.00

K = 59.12

NOTE:
ADJUST PROFILE AS NECCESARY TO MATCH NEW WB LANES AND 'HW' RAMP (STAGE 3A). NO CROSS SECTIONS INCLUDED IN PLAN FOR THIS WORK.

680 675 670 665 660 655 650 645

666.77 666.87 667.04 667.00 667.04 667.00 667.13 667.13 666.93 666.82 666.97 666.85 666.77 666.74 668.77 666.46 669.14 664.90 669.41 668.45 669.27 668.90 668.81 663.38 668.19 657.62 656.64 656.28 656.23 657.89 656.53 652.79

196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP ROSE ST NB TO IH 90 WB RAMP (HU)	SHEET 236	E

CURVE DATA	CURVE DATA	CURVE DATA	P.I. DATA
P.I. 183+65.30 HV	P.I. 186+94.25 HV	P.I. 192+37.71 HV	P.I. 197+59.59 HV
Y 150391.79	Y 150552.17	Y 150693.56	Y 151186.89
X 448030.30	X 448319.93	X 448846.55	X 449115.29
△ = 16°47'31"	△ = 13°56'50"	△ = 46°21'25"	
D = 5°43'46"	D = 3°49'11"	D = 6°46'50"	
T = 147.60'	T = 183.48'	T = 361.79'	
L = 293.07'	L = 365.14'	L = 683.67'	
E = 10.83'	E = 11.18'	E = 74.19'	
R = 1000.00'	R = 1500.00'	R = 845.00'	
P.C. 182+17.70 HV	P.R.C185+10.77 HV	P.R.C188+75.92 HV	
Y 150360.64	P.R.C188+75.92 HV	P.T 195+59.59 HV	
X 447886.02	S.E. RC	S.E. RC	
P.R.C185+10.77 HV	L.R. ***	L.R. ***	
S.E. RC			
L.R. ***			

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

BP 182+17.70HV
182HV
184HV
PRC 185+10.77HV
PI 183+65.30HV
184WB
186HV
185WB
PI 186+94.25HV
188HV
PRC 188+75.92HV
187WB
190HV
190WB
192HV
192WB
194HV
PT 195+59.59HV
196HV
N28°30'55"E
EP 197+59.59HV
197HV
IH 90 EB
IH 90 WB
ROSE ST SB
ROSE ST NB

5

5

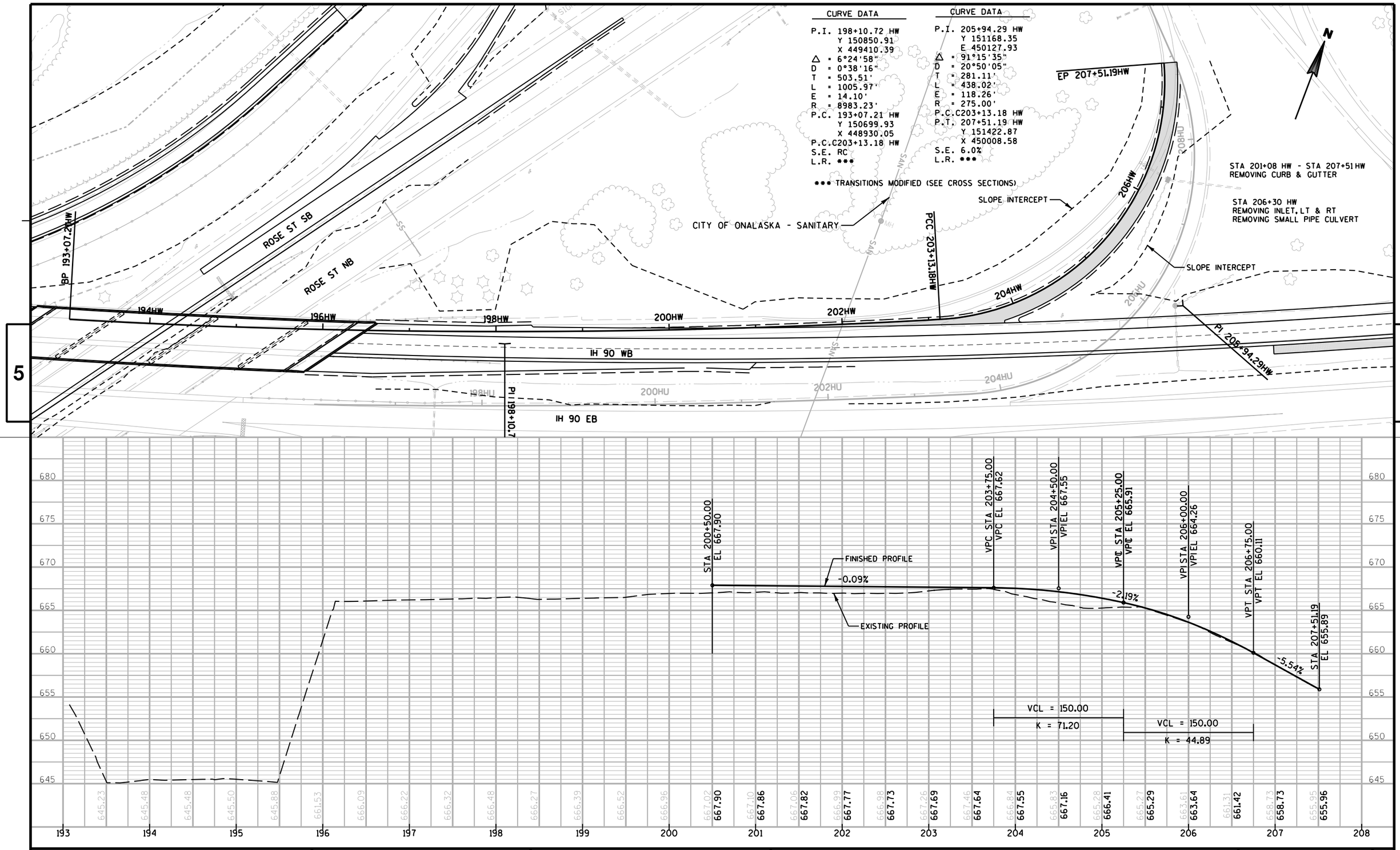
675
670
665
660
655
650
645
640

STA 183+00.00 EL 656.78
STA 183+50.00 EL 656.90
STA 184+00.00 EL 656.95
STA 184+50.00 EL 657.13
STA 185+00.00 EL 657.57
STA 185+60.85 EL 658.24
STA 187+25.00 EL 659.45
EXISTING PROFILE
FINISHED PROFILE
.26%
0.24%
0.09%
0.37%
0.86%
1.11%
0.74%

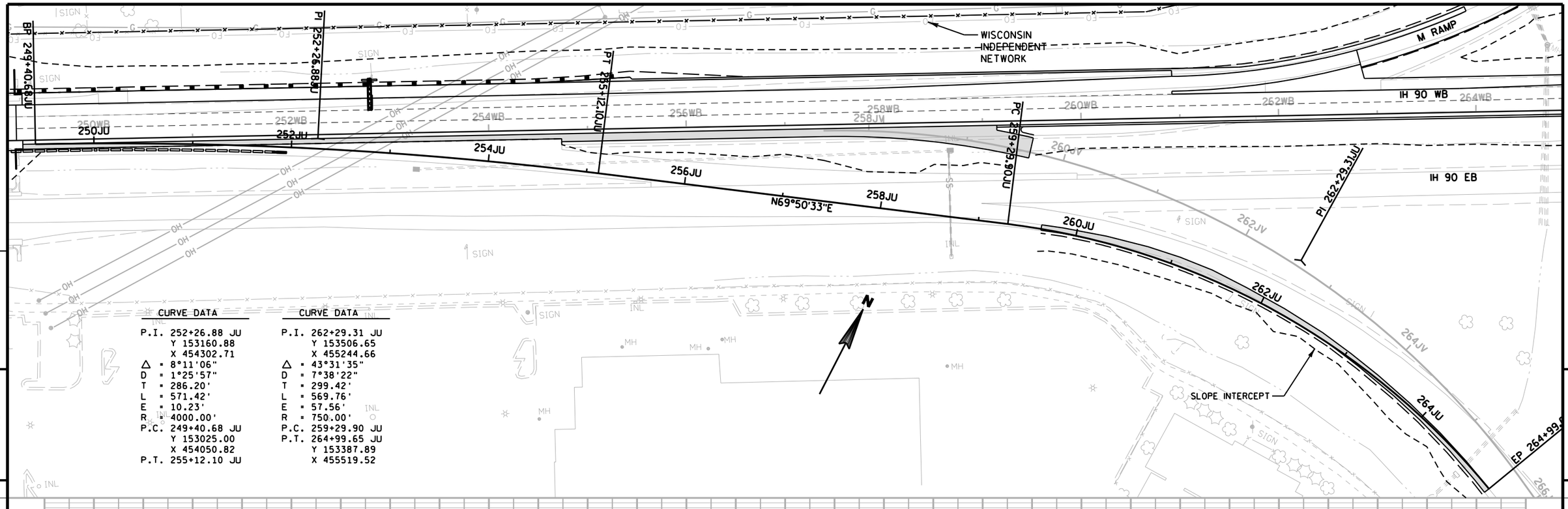
656.65 656.78 656.90 656.95 657.13 657.57 658.12 658.53 658.89 659.26 659.47 659.76 659.93 660.17 660.09 660.00 659.83 659.81 659.62 659.59 659.49 659.39 659.49 659.48 659.41 659.40 659.22 658.68 658.02 657.27 656.61

183 184 185 186 187 188 189 190 191 192 193 194 195 196 197

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP ROSE ST SB TO IH 90 WB RAMP (HV)	SHEET 237	E



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - FINAL ROSE ST NB TO IH 90 WB RAMP (HW)	SHEET 238	E



CURVE DATA	CURVE DATA
P.I. 252+26.88 JU	P.I. 262+29.31 JU
Y 153160.88	Y 153506.65
X 454302.71	X 455244.66
△ = 8°11'06"	△ = 43°31'35"
D = 1°25'57"	D = 7°38'22"
T = 286.20'	T = 299.42'
L = 571.42'	L = 569.76'
E = 10.23'	E = 57.56'
R = 4000.00'	R = 750.00'
P.C. 249+40.68 JU	P.C. 259+29.90 JU
Y 153025.00	P.T. 264+99.65 JU
X 454050.82	Y 153387.89
P.T. 255+12.10 JU	X 455519.52

BUILD OFF WB LANES CROSS SECTIONS

725 720 715 710 705 700 695 690

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP IH 90 EB TO STH 157 RAMP (JU)	SHEET 239	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050146_pptmpju.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

CURVE DATA	
P.I.	262+03.24 JV
	Y 153615.41
	X 455149.57
△	= 55°41'42"
D	= 6°44'26"
T	= 449.05'
L	= 826.25'
E	= 111.33'
R	= 850.00'
P.C.	257+54.19 JV
	Y 153402.22
	X 454754.35
P.T.	265+80.44 JV

CURVE DATA	
P.I.	269+27.64 JV
	Y 153249.56
	X 455856.81
△	= 27°31'27"
D	= 14°19'26"
T	= 97.97'
L	= 192.15'
E	= 11.82'
R	= 400.00'
P.C.	268+29.67 JV
P.T.	270+21.83 JV
	Y 153249.86
	X 455954.77

WISCONSIN INDEPENDENT NETWORK

BP 257+54.19 JV

IH 90 WB

IH 90 EB

M RAMP PI 262+03.24

SLOPE INTERCEPT

STA 258+70 JV
RECONSTRUCT INLET

S62°38'52"E

PT 265+80.44 JV

PC 268+29.67 JV

EP 270+21.83 JV

256WB 258WB 260WB 262JV 264JV 266JV 268JV 270JV

256JU 258JU 260JU 262JU 264JU

269+27.64 JV

FINISHED PROFILE

EXISTING PROFILE

STA 257+54.19 EL 710.91
-0.68%
STA 258+00.00 EL 710.60
-0.74%
STA 258+50.00 EL 710.23
-0.80%
STA 259+00.00 EL 709.83
-1.02%
STA 259+50.00 EL 709.32
-0.26%
STA 260+35.01 EL 709.10
-0.60%
VPC STA 261+00.00 VPC EL 708.71
VPI STA 261+50.00 VPI EL 708.41
VPT STA 262+00.00 VPT EL 707.61
-1.58%
VCL = 150.00
K = 92.99
VCL = 80.00
K = 163.17
VPC STA 262+00.00 VPC EL 707.61
VPI STA 262+75.00 VPI EL 706.43
VPT STA 263+50.00 VPT EL 706.45
VPC STA 263+60.00 VPC EL 706.45
VPI STA 264+00.00 VPI EL 706.47
VPT STA 264+40.00 VPT EL 706.67
0.03%
0.52%
STA 265+00.00 EL 706.99
VCL = 100.00
K = 101.94

725 720 715 710 705 700 695 690

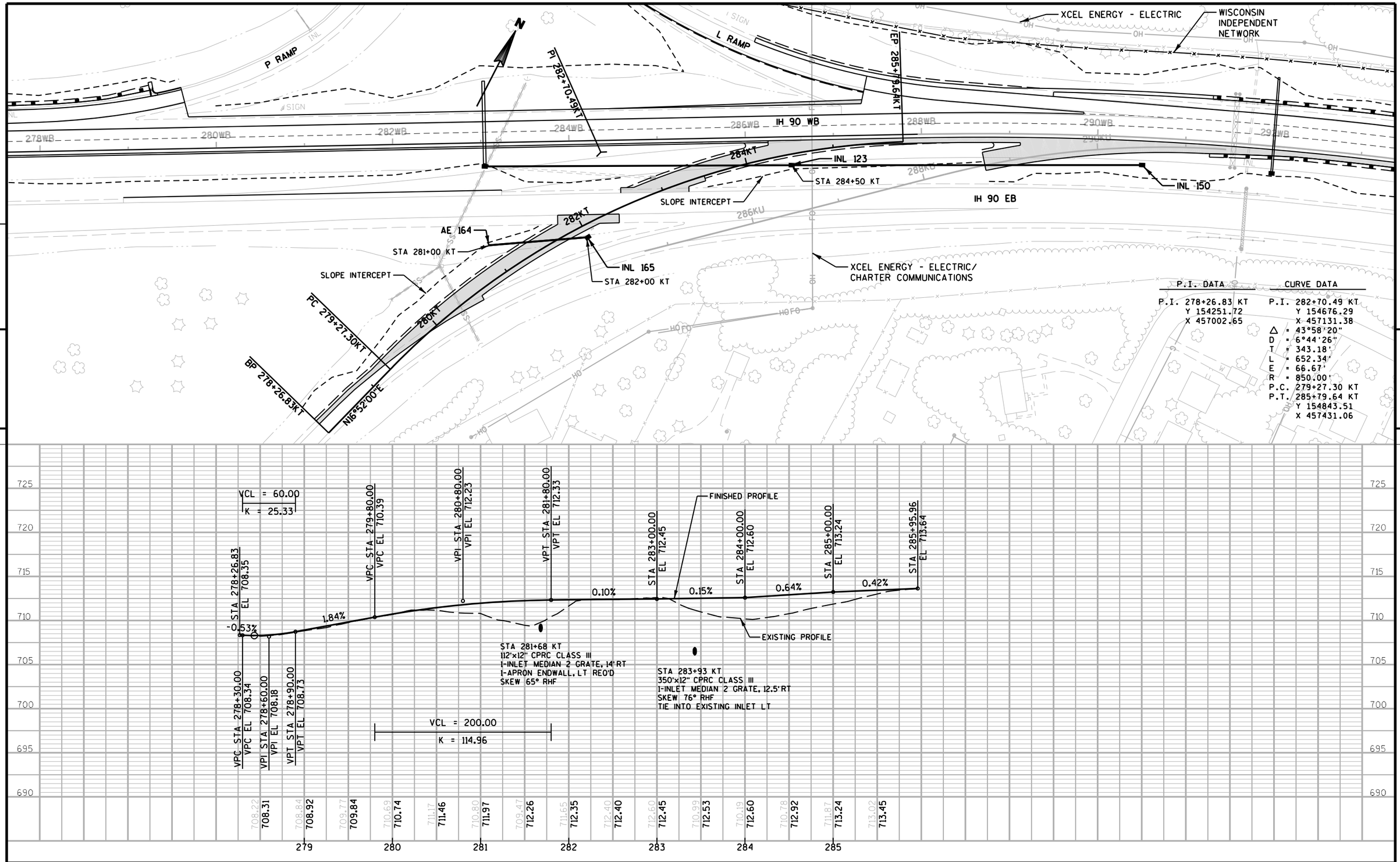
710.60 710.60 710.23 710.23 709.15 709.83 707.28 709.32 707.79 709.19 709.01 709.01 708.45 708.71 705.69 708.28 704.71 707.61 705.61 706.96 706.33 706.57 706.39 706.45 706.46 706.52 706.81 706.73 706.99 706.99 707.70 708.68 708.99 709.71 710.31

258 259 260 261 262 263 264 265 266 267

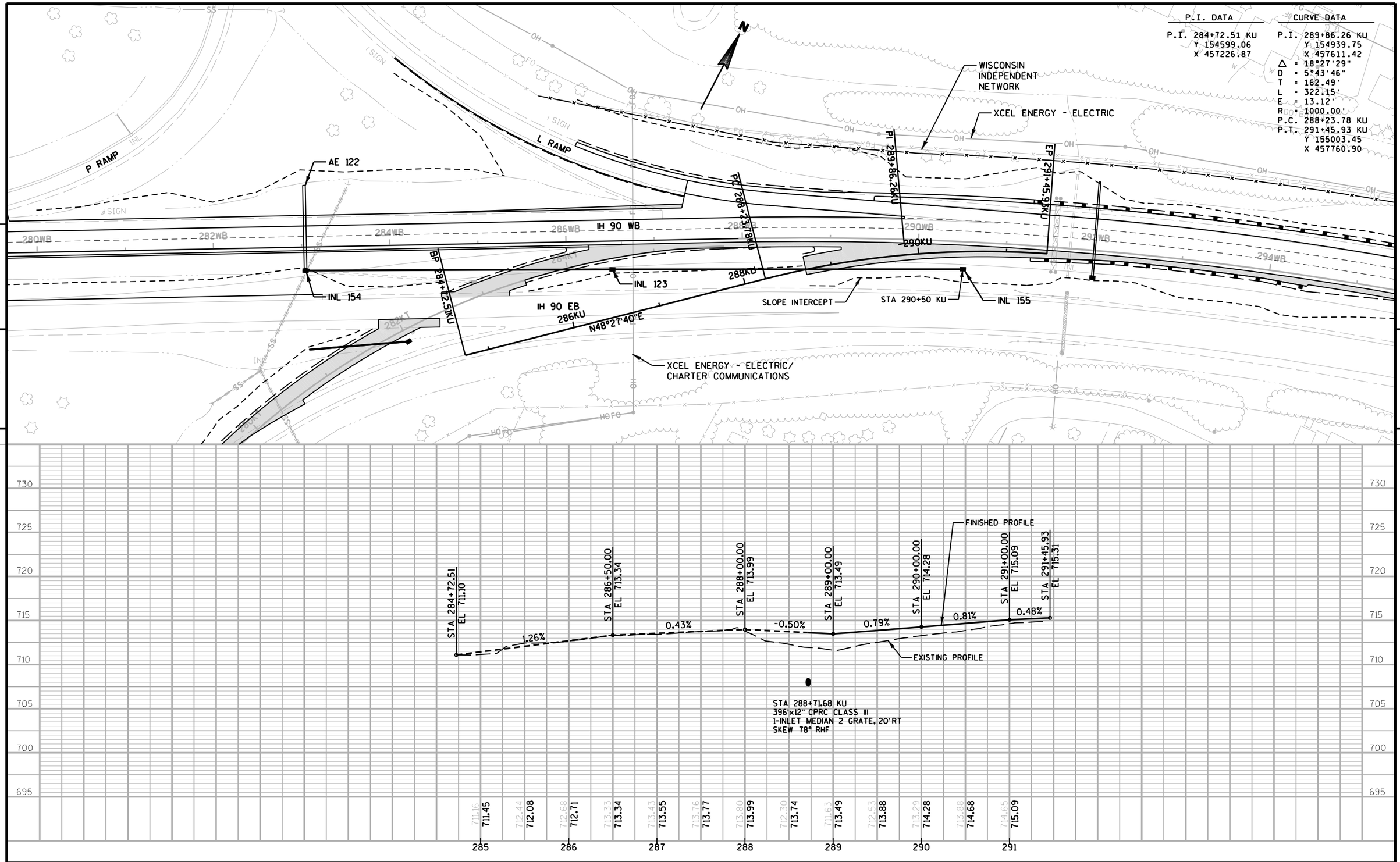
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP IH 90 EB TO STH 157 RAMP (JV)	SHEET 240	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050147_pptmpjv.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP STH 157 NB TO IH 90 EB RAMP (KT)	SHEET 241	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP STH 157 NB TO IH 90 EB RAMP (KU)	SHEET 242	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050149_pptmpku.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

CURVE DATA	CURVE DATA	P.I. DATA
P.I. 251+25.44 MU	P.I. 253+27.91 MU	P.I. 256+93.62 MU
Y 153127.13	Y 153246.00	Y 153419.76
X 454205.64	X 454369.94	X 454692.07
△ = 7°51'05"	△ = 7°32'30"	△ = 1°08'45"
D = 3°49'11"	D = 3°46'55"	
T = 102.94'	T = 99.85'	
L = 205.55'	L = 199.42'	
E = 3.53'	E = 3.29'	
R = 1500.00'	R = 1515.00'	
P.C. 250+22.50 MU	P.R.C252+28.05 MU	
Y 153078.75	P.T. 254+27.47 MU	
X 454114.78		
P.R.C252+28.05 MU		

CURVE DATA	CURVE DATA
P.I. 261+89.06 MU	P.I. 263+83.54 MU
Y 153661.96	Y 153793.89
X 455124.25	X 455268.45
△ = 14°07'07"	△ = 10°56'33"
D = 7°26'28"	D = 11°27'33"
T = 95.35'	T = 47.89'
L = 189.74'	L = 95.49'
E = 5.88'	E = 2.29'
R = 770.00'	R = 500.00'
P.C. 260+93.71 MU	P.C. 263+35.65 MU
P.T. 262+83.44 MU	P.T. 264+31.14 MU
Y 153726.33	Y 153832.34
X 455194.60	X 455297.00

WISCONSIN INDEPENDENT NETWORK

BP 250+22.50MU

PRC 252+28.05MU

PI 253+27.91MU

PT 254+27.47MU

PI 256+93.62MU

PC 260+93.71MU

PT 262+83.44MU

PC 263+35.65MU

EP 264+31.14MU

PI 263+83.54MU

PI 261+89.06MU

PI 251+25.44MU

N61°39'27"E

N60°30'42"E

N47°32'33"E

250MU 252MU 254MU 256MU 258MU 260MU 262MU 264MU

250TW 252TW 254TW 256TW 258TW 260TW 262TW 264TW

250UW 252UW 254UW 256UW 258UW 260UW 262UW 264UW

IH 90 WB

IH 90 EB

XCEL ENERGY - TRANSMISSION

CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA
P.I. 286+54.28 LU	P.I. 288+01.85 LU	P.I. 291+03.62 LU	P.I. 293+44.31 LU
Y 154869.04	Y 154907.84	Y 155023.69	Y 155079.92
X 457260.33	X 457403.06	X 457681.85	X 457916.22
△ = 11°28'42"	△ = 7°21'31"	△ = 9°04'31"	△ = 4°35'41"
D = 11°27'33"	D = 7°41'27"	D = 5°38'42"	D = 1°25'57"
T = 50.25'	T = 47.91'	T = 80.55'	T = 160.48'
L = 100.17'	L = 95.68'	L = 160.77'	L = 320.78'
E = 2.52'	E = 1.54'	E = 3.19'	E = 3.22'
R = 500.00'	R = 745.00'	R = 1015.00'	R = 4000.00'
P.C. 286+04.03 LU	P.C. 287+53.95 LU	P.C. 290+23.07 LU	P.R.C291+83.84 LU
Y 154865.77	P.R.C288+49.63 LU	P.R.C291+83.84 LU	P.T. 295+04.62 LU
X 457210.19			Y 155129.74
P.T. 287+04.20 LU			X 458068.77

BP 286+04.03LU

PT 287+04.20LU

PC 287+53.95LU

PT 288+49.63LU

PC 290+23.07LU

PI 291+03.62LU

PRC 291+83.84LU

EP 295+04.62LU

PI 286+54.28LU

PI 288+01.85LU

PI 293+44.31LU

N74°47'32"E

N67°26'01"E

286LU 288LU 290LU 292LU 294LU

286TW 288TW 290TW 292TW 294TW 296TW 298TW 300TW

286UW 288UW 290UW 292UW 294UW 296UW 298UW 300UW

XCEL ENERGY - ELECTRIC

WISCONSIN INDEPENDENT NETWORK

XCEL ENERGY - ELECTRIC/ CHARTER COMMUNICATIONS

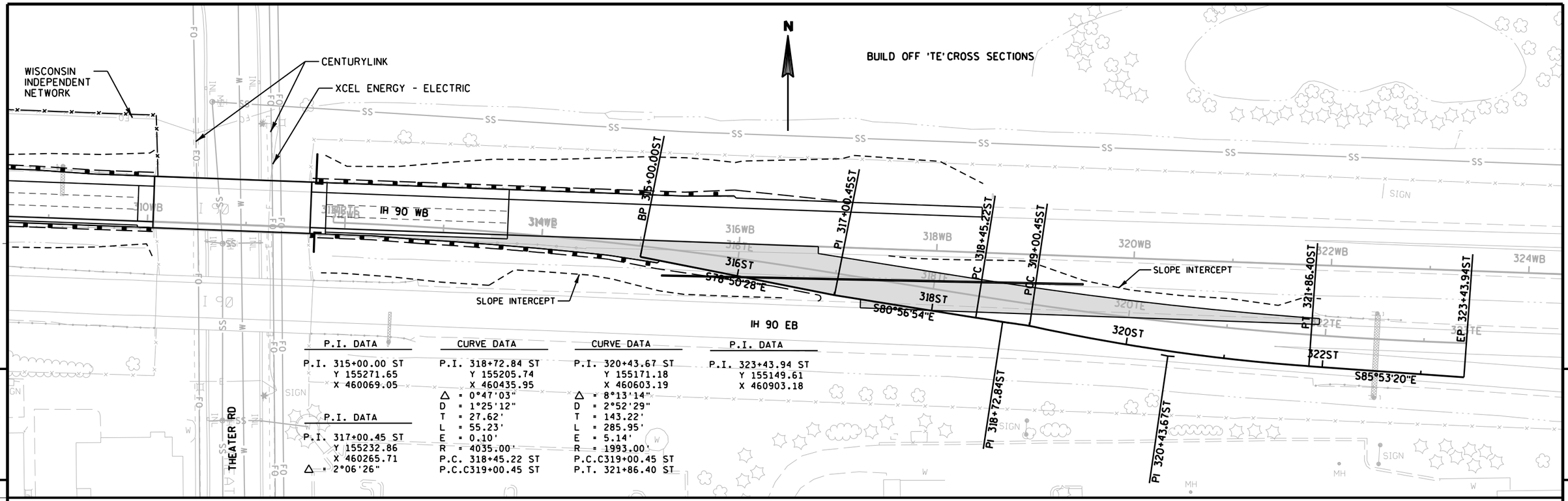
CITY OF ONALASKA - WATER & SEWER

IH 90 WB

IH 90 EB

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN - MU TEMPORARY & LU TEMPORARY	SHEET 243	E

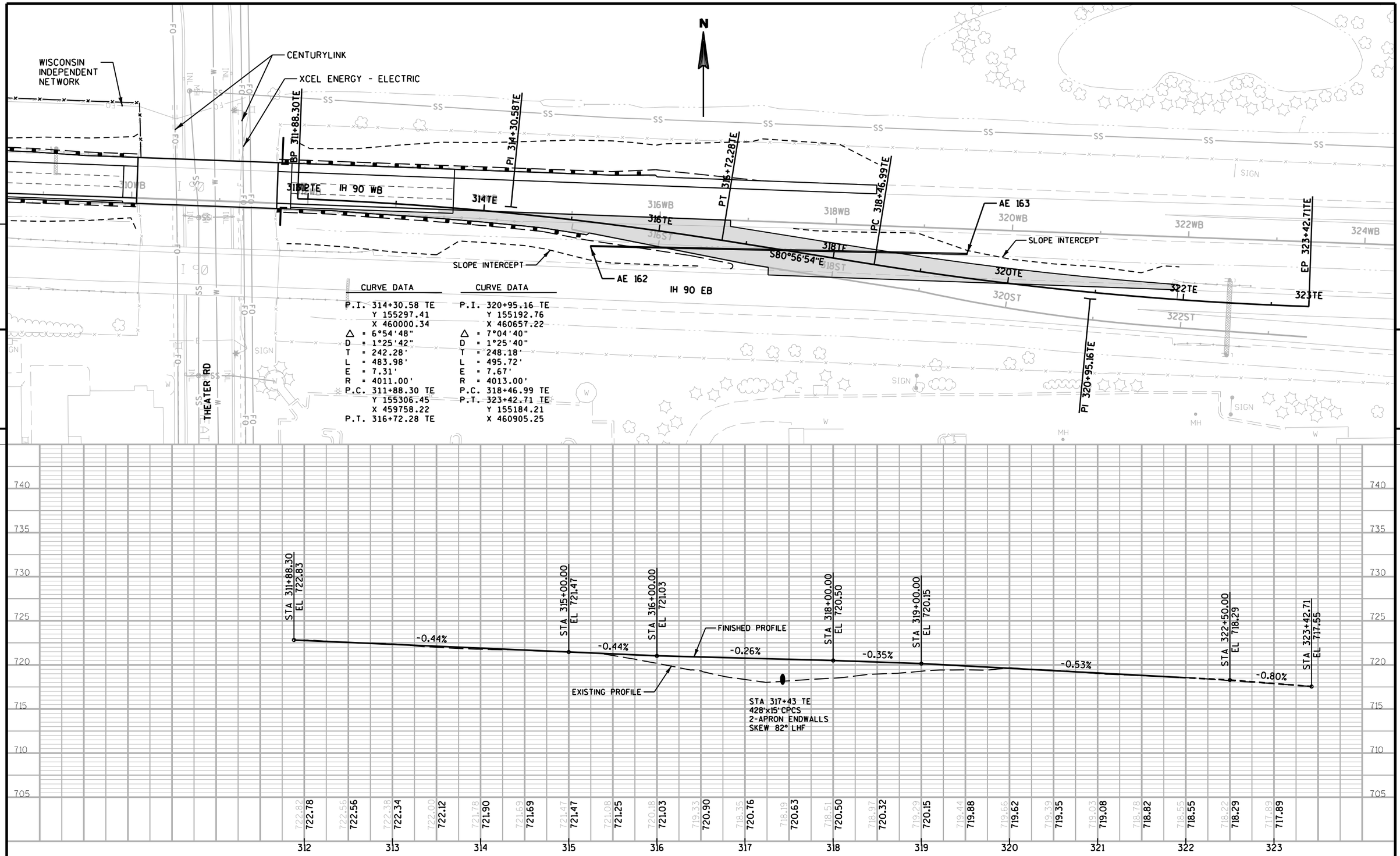
FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050150_pptmpmulu.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100



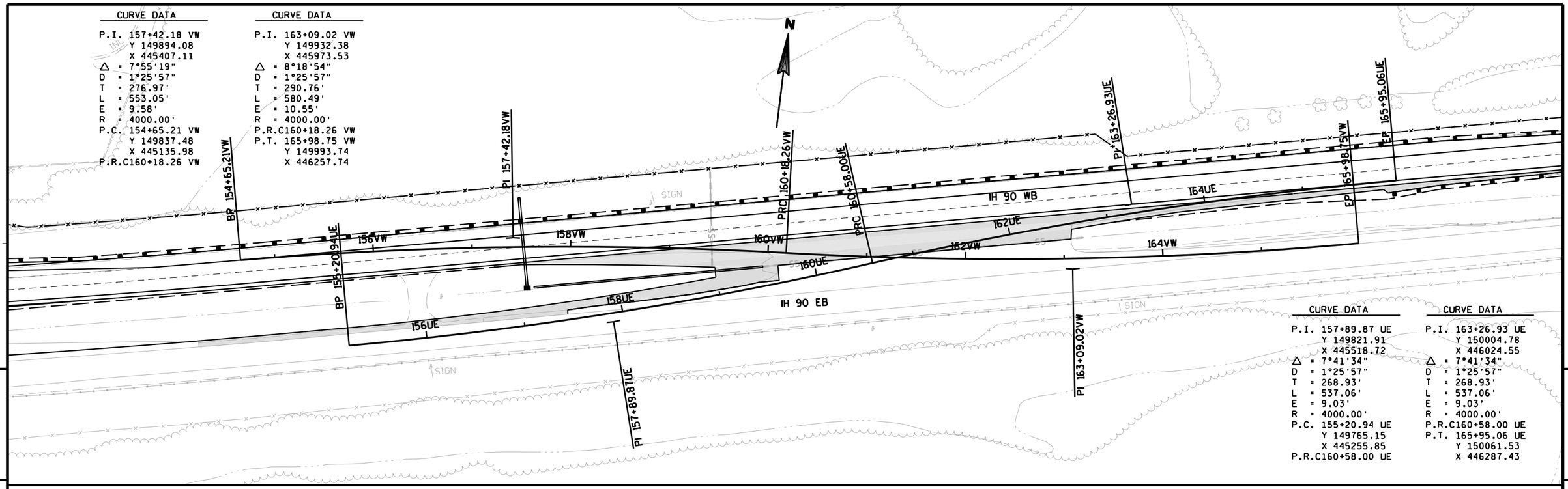
P.I. DATA	CURVE DATA	CURVE DATA	P.I. DATA
P.I. 315+00.00 ST Y 155271.65 X 460069.05	P.I. 318+72.84 ST Y 155205.74 X 460435.95 △ = 0°47'03" D = 1°25'12" T = 27.62' L = 55.23' E = 0.10' R = 4035.00' P.C. 318+45.22 ST P.C.C319+00.45 ST	P.I. 320+43.67 ST Y 155171.18 X 460603.19 △ = 8°13'14" D = 2°52'29" T = 143.22' L = 285.95' E = 5.14' R = 1993.00' P.C.C319+00.45 ST P.T. 321+86.40 ST	P.I. 323+43.94 ST Y 155149.61 X 460903.18

P.I. DATA
P.I. 317+00.45 ST Y 155232.86 X 460265.71 △ = 2°06'26"

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN - TEMP IH 90 EB TO STH 16 RAMP (ST)	SHEET 244	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TEMP IH 90 EB X-OVER (TE)	SHEET 245	E



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN - TEMP IH 90 EB & WB X-OVERS (VW & UE)	SHEET 246	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0677_050153_pptmpuevw.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 44

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED BY OTHERS

CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA	P.I. DATA
P.I. 140+61.13 CT	P.I. 142+70.85 CT	P.I. 145+91.22 CT	P.I. 148+35.97 CT	P.I. 150+68.57 CT	P.I. 153+68.83 CT
N 149704.71	N 149642.61	N 149682.29	N 149658.90	N 149698.84	N 149745.03
E 443788.37	E 444012.70	E 444332.68	E 444577.21	E 444807.97	E 445104.57
△ = 54°03'23"	△ = 22°32'33"	△ = 12°32'02"	△ = 15°17'04"	△ = 0°59'32"	
D = 19°05'55"	D = 17°19'26"	D = 5°38'42"	D = 5°43'46"	D = 0°29'46"	
T = 153.04'	T = 79.72'	T = 111.46'	T = 134.18'	T = 100.01'	
L = 283.04'	L = 157.38'	L = 222.04'	L = 266.76'	L = 200.01'	
E = 36.78'	E = 7.87'	E = 6.10'	E = 8.96'	E = 0.43'	
R = 300.00'	R = 400.00'	R = 1015.00'	R = 1000.00'	R = 11548.02'	
P.C. 139+08.09 CT	P.C.C141+91.13 CT	P.C. 144+79.76 CT	P.R.C147+01.80 CT	P.C.C149+68.56 CT	
N 149848.09	P.T. 143+48.51 CT	P.R.C147+01.80 CT	P.C.C149+68.56 CT	P.T. 151+68.57 CT	
E 443734.85	S.E. RC	S.E. RC	S.E. RC	S.E. RC	
P.C.C141+91.13 CT	L.R. ***	L.R. ***	L.R. ***	L.R. ***	
S.E. 8.0%					
L.R. ***					

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

BP 139+08.09CT
140DT
140CT
SLOPE INTERCEPT
STA 140+59 CT, RT
REMOVING SMALL PIPE CULVERTS
(ENDWALL ONLY)
STA 140+56 CT, RT
1-24" CPRC CL.III EXTENSION
PI 140+61.13CT
142CT
PCC 141+91.13CT
PT 143+48.50CT
CTH B
PC 144+79.76CT
CITY OF LA CROSSE - WATER
144CT
N82°55'52"E
PI 145+91.22CT
146CT
PRC 147+01.80CT
STA 148+50 CT,
18.4'LT
IH 90 WB
148CT
PCC 149+68.56CT
SLOPE INTERCEPT
150CT
PT 151+68.57CT
152CT
EP 153+68.83CT
N82°07'40"E
SLOPE INTERCEPT
IH 90 EB
STA 146+50 CT,
28'RT
PI 142+70.85CT
XCEL ENERGY - ELECTRIC
148+35.97CT
150+68.57CT

VCL = 100.00
K = 54.15
VCL = 80.00
K = 110.91
VCL = 80.00
K = 123.67

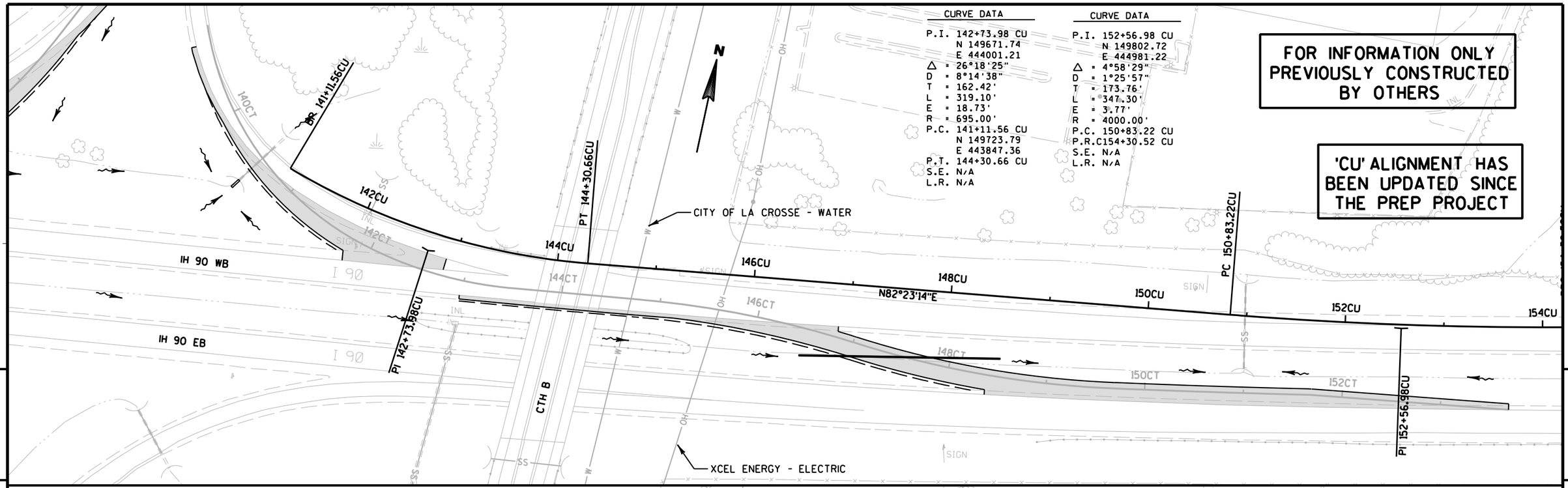
STA 139+08.09 EL 651.63
VPC STA 139+65.00 VPC EL 650.80
VPI STA 140+15.00 VPI EL 650.08
VPT STA 140+65.00 VPT EL 650.28
VPC STA 140+80.00 VPC EL 650.34
VPI STA 141+20.00 VPI EL 650.50
VPT STA 141+60.00 VPT EL 650.41
STA 142+00.00 EL 650.31
STA 143+25.00 EL 650.30
STA 145+00.00 EL 649.69
STA 146+50.00 EL 649.72
VPC STA 147+10.00 VPC EL 649.50
VPI STA 147+50.00 VPI EL 649.36
VPT STA 147+90.00 VPT EL 649.50
STA 147+54 CT
1 - 15" CPRC CL IV
STA 148+50.00 EL 649.72
STA 150+00.00 EL 649.88
STA 151+00.00 EL 649.88
STA 152+00.00 EL 649.82
STA 153+68.83 EL 649.76

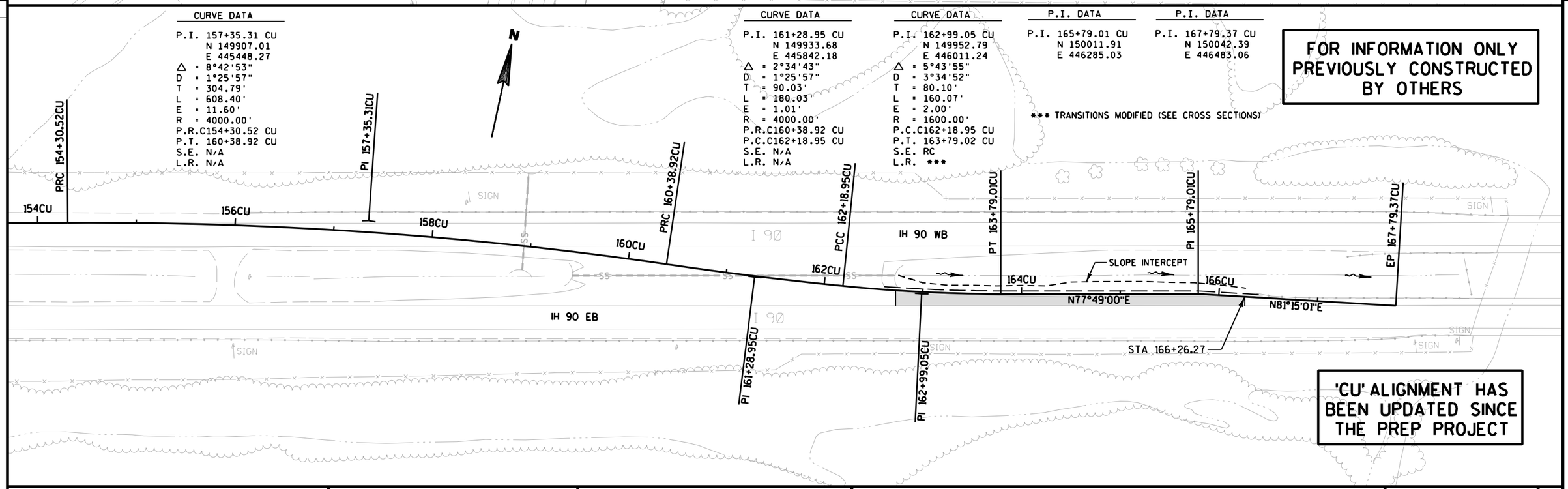
-1.45% 0.40% -0.25% -0.00% -0.35% 0.02% -0.36% 0.36% 0.11% 0.00% -0.07% -0.03%

FINISHED PROFILE
EXISTING PROFILE

650.99 651.02 650.34 650.41 650.09 650.24 650.38 650.41 649.77 650.43 649.91 650.31 650.38 650.31 650.39 650.30 650.15 650.22 649.98 650.04 649.83 649.87 649.73 649.69 649.74 649.70 649.77 649.71 649.71 649.72 648.31 649.54 647.12 649.43 647.48 649.54 648.16 649.72 648.51 649.77 648.87 649.83 649.01 649.88 648.95 649.88 648.66 649.88 648.69 649.85 648.84 649.82 649.24 649.80 649.55 649.79 649.76 649.77

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - CT TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 247	E





PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN - CU TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0680_050102_pptmpcu.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 44

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

N

P.I. DATA
P.I. 120+46.90 DT
N 149312.79
E 441811.95

P.I. DATA
P.I. 127+97.05 DT
N 149414.97
E 442555.11

STA 129+97 DT, LT
REMOVING SMALL PIPE CULVERTS
(ENDWALL ONLY)

BP 120+46.90DT

PI 127+97.05DT

IH 90 WB

IH 90 EB

SLOPE INTERCEPT

122DT

124DT

126DI

128DT

N82°10'17"E

STA 131+65 WB - STA 135+31 WB
MGS GUARDRAIL REO'D

S109

P113

130DT

SLOPE INTERCEPT

132DT

N83°19'02"E

CRASH CUSHION
TEMPORARY LEFT
IN PLACE REO'D

CONCRETE BARRIER TEMPORARY
PRECAST LEFT IN PLACE
STA 130+20 EB - STA 133+15 EB

XCEL ENERGY - GAS

STA 131+06 DT - STA 133+10 DT, LT
REMOVING GUARDRAIL

CENTURYLINK

XCEL ENERGY - ELECTRIC

BUILD DT OFF EXISTING EB LANES
STA 120+46.90 DT - STA 133+00.16 DT

EXISTING PROFILE

| | | |

CURVE DATA	CURVE DATA	P.I. DATA
P.I. 134+19.74 DT	P.I. 137+60.58 DT	P.I. 140+58.11 DT
N 149487.43	N 149606.19	N 149894.33
E 443173.57	E 443494.25	E 443632.61
△ = 13°38'21"	△ = 44°01'44"	
D = 5°43'46"	D = 10°25'03"	
T = 119.59'	T = 222.38'	
L = 238.05'	L = 422.65'	
E = 7.13'	E = 43.26'	
R = 1000.00'	R = 550.00'	
P.C. 133+00.15 DT	P.C.C135+38.20 DT	
P.C.C135+38.20 DT	P.T. 139+60.85 DT	
S.E. RC	S.E. 6.0%	
L.R. ***	L.R. ***	

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

N

PT 139+60.85DT

140DT

N25°38'57"E

STA 138+39 DT, RT
REMOVING SMALL PIPE CULVERTS
(ENDWALL ONLY)

STA 138+37 DT, RT
1-24" CPRC CL.III EXTENSION

SLOPE INTERCEPT

STA 138+00 DT,
40.7' RT

STA 137+00 DT,
14.5' LT

138DT

STA 131+65 WB - STA 135+31 WB
MGS GUARDRAIL REO'D

PCC 135+38.20DT

PC 133+00.15DT

SLOPE INTERCEPT

STA 134+00 DT,
16.1' LT

136DT

134DT

132DT

PI 137+60.58DT

IH 90 WB

IH 90 EB

STA 136+00 DT,
31.8' RT

SLOPE INTERCEPT

PI 134+19.74DT

CONCRETE BARRIER TEMPORARY
PRECAST LEFT IN PLACE
STA 130+20 EB - STA 133+15 EB

XCEL ENERGY - GAS

XCEL ENERGY - ELECTRIC

CENTURYLINK

STA 131+06 DT - STA 133+10 DT, LT
REMOVING GUARDRAIL

CITY OF LA CROSSE - WATER

CTH B

140CT

142CT

144CT

146CT

XCEL ENERGY - ELECTRIC

5

5

VCL = 120.00
K = 120.25

VCL = 100.00
K = 29.15

VCL = 100.00
K = 123.13

STA 133+00.00
EL 654.23

STA 134+00.00
EL 653.66

STA 136+00.00
EL 653.15

STA 136+50.00
EL 653.00

STA 138+00.00
EL 652.67

VPC STA 138+50.00
VPC EL 652.70

VPI STA 139+00.00
VPI EL 652.83

VPT STA 139+50.00
VPT EL 652.55

FINISHED PROFILE

EXISTING PROFILE

-0.57%
-0.75%
0.25%
-0.31%
-2.50%
0.93%
0.06%
0.26%
-0.55%

VPC STA 134+40.00
VPC EL 653.36

VPI STA 135+00.00
VPI EL 652.91

VPT STA 135+60.00
VPT EL 653.05

VPC STA 136+50.00
VPC EL 653.00

VPI STA 137+00.00
VPI EL 651.74

VPT STA 137+50.00
VPT EL 652.21

STA 134+94 DT
1-18" CPRC CL.IV

STA 137+32 DT
1-12" CPRC CL.IV

654.00	653.48	653.16	652.85	652.04	651.39	650.96	651.82	653.15	652.93	650.90	648.70	649.37	651.38	652.46	652.59	652.65	653.52
654.23		653.94	653.66	653.29	653.06	653.03	653.15	653.00	652.17	652.21	652.67	652.70	652.73	652.55			

670 665 660 655 650 645 640 635

132 133 134 135 136 137 138 139 140 141 142

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - DT TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 250	E

CURVE DATA	CURVE DATA
P.I. 129+48.00 DU	P.I. 132+37.44 DU
N 149432.53	N 149550.48
E 442705.03	E 442971.82
△ = 17°10'06"	△ = 16°01'21"
D = 5°43'46"	D = 5°43'46"
T = 150.95'	T = 140.74'
L = 299.64'	L = 279.65'
E = 11.33'	E = 9.86'
R = 1000.00'	R = 1000.00'
P.C. 127+97.05 DU	P.R.C130+96.69 DU
N 149414.97	P.T. 133+76.34 DU
E 442555.11	N 149569.65
P.R.C130+96.69 DU	E 443111.25
S.E. RC	S.E. RC
L.R. ***	L.R. ***

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

N

IH 90 WB

IH 90 EB

BP 127+97.05DU

PRC 130+96.69DU

PI 132+37.44DU

EP 133+76.34DU

SLOPE INTERCEPT

P113

S109

128DU

130DU

132DU

124DT

126DT

130DT

134DT

136DT

138DT

PI 129+48.00DU

CRASH CUSHION
TEMPORARY LEFT
IN PLACE REQ'D

XCEL ENERGY - GAS

CENTURYLINK

XCEL ENERGY - ELECTRIC

CONCRETE BARRIER TEMPORARY
PRECAST LEFT IN PLACE
STA 130+20 EB - STA 133+15 EB

SIGN

OH

MH

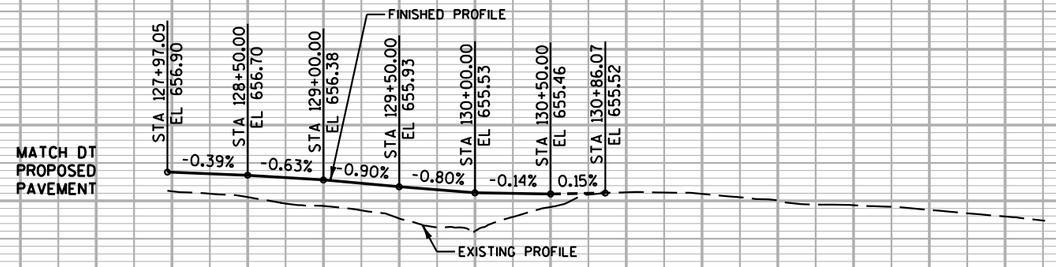
A/C

GUY

CLOVERHILL RD

I 90

5



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - DU TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 251	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0680_050105_pptmpdu.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

P.I. DATA
P.I. 207+31.08 GT
N 151446.16
E 450252.33

CURVE DATA
P.I. 210+33.47 GT
N 151299.03
E 450516.52
△ = 54°16'18"
D = 16°22'13"
T = 179.38'
L = 331.53'
E = 43.29'
R = 350.00'
P.C. 208+54.09 GT
P.R.C211+85.62 GT
S.E. 6.0%
L.R. ***

P.I. DATA
P.I. 216+12.25 GT
N 151556.65
E 451065.04

P.I. DATA
P.I. 217+26.84 GT
N 151603.55
E 451169.60

P.I. DATA
P.I. 224+48.91 GT
N 151910.51
E 451823.18

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

BP 207+31.08GT
S50°53'10"E 208GT
PC 208+54.09GT
XCEL ENERGY - ELECTRIC
SLOPE INTERCEPT
210GT
PT 211+85.62GT
MILL EXISTING RUMBLE STRIPS AND REPAVE
212GT
214GT
N64°50'32"E
IH 90 WB
216GT
PI 216+12.25GT
CITY OF ONALASKA - WATER
XCEL ENERGY - ELECTRIC
PI 217+26.84GT
MILL EXISTING RUMBLE STRIPS AND REPAVE
218GT
220GT
222GT
N65°50'33"E
N64°50'32"E
XCEL ENERGY - ELECTRIC
PI 210+33.47GT
IH 90 EB
208UW
210UW
212UW
214UW
216UW
218UW
220UW
222UW
220TW
222TW
BURLINGTON NORTHERN - SANTA FE

VCL = 100.00
K = 53.91
FINISHED PROFILE
EXISTING PROFILE
STA 207+31.08 EL 666.48
0.40%
2.26%
STA 209+00.00 EL 669.02
2.05%
STA 210+00.00 EL 671.07
2.43%
STA 210+50.00 EL 672.28
2.21%
VPI STA 211+05.00 VPI EL 673.50
VPT STA 211+55.00 VPT EL 673.98
VPC STA 207+50.00 VPC EL 666.56
VPI STA 208+00.00 VPI EL 666.76
VPT STA 208+50.00 VPT EL 667.89
VPC STA 210+50.00 VPC EL 672.39
VCL = 100.00
K = 80.10

685 680 675 670 665 660 655 650

666.51 666.56 666.90 666.99 667.90 667.89 667.72 669.02 667.62 670.04 670.74 671.07 672.22 672.28 673.22 673.26 673.63 673.93 674.21 667.18 647.48 645.85 645.98 643.65 652.55 656.48 678.05 678.62 679.03 679.40 679.92 680.37 680.82 681.56 682.05 682.64 683.13 683.56 684.22

208 209 210 211 212 213 214 215 216 217 218 219 220 221 222

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - GT TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 252	E

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED BY OTHERS

STA 174+38 HT - STA 181+33 HT, LT/RT
STA 179+39 HT - STA 180+43 HT, LT
REMOVING GUARDRAIL

BP 174+67.55HT
PI 182+17.70HT
PC 183+63.80HT
IH 90 WB
IH 90 EB
SLOPE INTERCEPT
S110
S108
S107
176HT
178HT
180HT
182HT
184HT
186HT
188HT
186HV
188HV
N76°40'15"E
N77°30'50"E
SIGN
SS

CONCRETE BARRIER TEMPORARY
PRECAST LEFT IN PLACE
STA 174+38 HT - STA 177+88 HT

STA 176+88 EB
SIGN BRIDGE S-32-0048

STA 179+58 HT
REMOVING SIGN BRIDGE S-32-0022

P.I. DATA	CURVE DATA
P.I. 174+67.55 HT	P.I. 187+31.29 HT
N 150187.70	N 150471.68
E 447156.08	E 448387.46
	△ = 16°43'29"
P.I. DATA	D = 2°17'31"
P.I. 182+17.70 HT	T = 367.49'
N 150360.64	L = 729.75'
E 447886.02	E = 26.87'
	R = 2500.00'
	P.C. 183+63.80 HT
	P.C.C190+93.55 HT
	S.E. RC
	L.R. ***

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

BUILD HT OFF EXISTING EB LANES
STA 174+67.55 HT - STA 183+63.81 HT

STA 182+00.00
EL 656.51
STA 184+00.00
EL 657.26
STA 185+00.00
EL 657.65
STA 186+25.00
EL 658.29
FINISHED PROFILE
EXISTING PROFILE
0.37%
0.39%
0.52%
1.00%
VCL =
K = 2
VPC STA 187+50.00
VPC EL 659.54
VPI STA 188+00.00

675 670 665 660 655 650 645 640

655.45 655.49 655.47 655.52 655.54 655.58 655.64 655.91 655.96 655.98 655.56 655.18 655.04 655.53 655.54 656.51 655.47 656.70 655.52 656.88 655.49 657.07 655.75 657.26 655.98 657.45 656.02 657.65 656.66 657.91 655.43 658.16 655.27 658.54 655.77 659.04 656.69 659.54 658.31 660.09

173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - HT TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 253	E

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

CURVE DATA	CURVE DATA	CURVE DATA
P.I. 187+31.29 HT	P.I. 193+89.11 HT	P.I. 201+57.35 HT
N 150471.68	N 150795.26	N 151518.28
E 448387.46	E 448966.19	E 449282.36
△ = 16°43'29"	△ = 37°10'12"	△ = 09°47'53"
D = 2°17'31"	D = 6°31'06"	D = 11°27'33"
T = 367.49'	T = 295.56'	T = 42.86'
L = 729.75'	L = 570.24'	L = 85.51'
E = 26.87'	E = 48.36'	E = 1.83'
R = 2500.00'	R = 879.00'	R = 500.00'
P.C. 183+63.80 HT	P.C.C190+93.55 HT	P.C. 201+14.50 HT
P.C.C190+93.55 HT	P.T. 196+63.79 HT	P.T. 202+00.00 HT
S.E. RC	S.E. 6.0%	N 151554.05
L.R. ***	L.R. ***	E 449305.96
		S.E. NC
		L.R. ***

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

N

188HT
190HT
PCC 190+93.55HT
192HT
194HT
PT 196+63.79HT
196HT
198HT
200HT
PC 201+14.50HT
PI 201+57.35HT
EP 202+00.00HT
202HT
N23°37'09"E
S107
IH 90 EB
IH 90 WB
PI 193+89.11HT
SLOPE INTERCEPT
STA 192+75 HT - STA 197+78 HT
MGS GUARDRAIL REQ'D
STA 196+65 HT, RT
REMOVING SMALL PIPE CULVERTS
(ENDWALL ONLY)
STA 196+65 HT, RT
1-24" CPRC CL.III EXTENSION
SIGN
ROSE ST SB
ROSE ST NB
MH

5

5

100.00
81.65
VPI EL 660.04
VPT STA 188+50.00
VPT EL 660.72
1.35%
STA 189+00.00
EL 661.40
0.82%
VPC STA 190+00.00
VPC EL 662.22
VPI STA 190+50.00
VPI EL 662.63
-0.97%
STA 191+00.00
EL 662.15
-0.30%
STA 191+50.00
EL 662.00
FINISHED PROFILE
0.09%
VPC STA 193+60.00
VPC EL 662.18
VPI STA 194+50.00
VPI EL 662.26
-1.23%
VPT STA 195+40.00
VPT EL 661.15
STA 195+50.00
EL 661.02
-1.94%
STA 196+50.00
EL 659.08
-2.26%
EXISTING PROFILE
-1.16%
STA 198+00.00
EL 656.25
-1.53%
STA 199+00.00
EL 654.72
VCL = 100.00
K = 90.64
BUILD HT OFF EXISTING H RAMP
STA 198+78.73 HT - STA 202+00.00 HT
VCL = 100.00
K = 55.82
VCL = 180.00
K = 136.62
VPC STA 197+00.00
VPC EL 657.95
VPI STA 197+50.00
VPI EL 656.82
VPT STA 198+00.00
VPT EL 656.25

675 670 665 660 655 650 645 640

658.31 660.09 660.57 660.72 661.42 661.40 661.83 661.81 662.17 662.22 662.41 662.41 662.29 662.15 661.79 662.00 661.79 662.04 661.66 662.08 661.70 662.13 661.59 662.17 661.45 662.15 661.25 661.96 660.49 661.58 659.54 661.02 658.83 660.05 657.89 659.08 657.36 657.95 656.81 656.96 656.34 656.25 655.55 655.48 654.90 654.72 654.18 653.40 652.50 651.73 651.07 650.11

188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - HT TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 254	E

CURVE DATA	CURVE DATA	P.I. DATA
P.I. 199+81.16 HU	P.I. 207+66.55 HU	P.I. 209+63.95 HU
N 150834.07	N 151138.48	N 151479.57
E 449582.10	E 450306.34	E 449969.54
△ = 3°43'08"	△ = 112°23'14"	
D = 00°29'46"	D = 20°50'05"	
T = 374.96'	T = 410.69'	
L = 749.66'	L = 539.42'	
E = 6.09'	E = 219.26'	
R = 11550.17'	R = 275.00'	
P.C. 196+06.20 HU	P.C.C203+55.86 HU	
N 150707.81	P.T. 208+95.28 HU	
E 449229.04	S.E. 6.0%	
P.C.C203+55.86 HU	L.R. ***	
S.E. NC		
L.R. ***		

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

ROSE ST NB

BP 196+06.20HU

STA 195+21EB - STA 197+89 EB
MGS GUARDRAIL REQ'D

IH 90 WB

198HU

IH 90 EB

SLOPE INTERCEPT

200HU

PI 199+81.16HU

202HU

PCC 203+55.86HU

204HU

STA 195+24 HU - STA 197+33 HU, LT
REMOVING GUARDRAIL

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

CITY OF LA CROSSE - SANITARY

STA 207+50 HU, LT
REMOVING SMALL PIPE CULVERTS

EP 209+63.95HU

N44°38'15"W

PT 208+95.28HU

208HU

S106

P101

P109

SLOPE INTERCEPT

206HU

SLOPE INTERCEPT

P115

S105

208GT

208UW

BUILD HU OFF EXISTING EB LANES
STA 196+06.20 HU - STA 203+55.86 HU

FINISHED PROFILE

EXISTING PROFILE

VCL = 90.00
K = 142.19

VCL = 100.00
K = 120.93

VCL = 60.00
K = 30.78

VCL = 100.00
K = 64.41

VCL = 100.00
K = 23.79

0.74%
-0.08%
0.56%
-1.40%
-2.95%
-7.16%

| | | |

CURVE DATA	CURVE DATA
P.I. 183+65.30 HV	P.I. 186+94.25 HV
N 150391.79	N 150552.17
E 448030.30	E 448319.17
△ = 16°47'31"	△ = 13°56'51"
D = 5°45'00"	D = 3°49'45"
T = 147.60'	T = 183.48'
L = 293.07'	L = 365.14'
E = 10.83'	E = 11.18'
R = 1000.00'	R = 1500.00'
P.C. 182+17.70 HV	P.R.C185+10.77 HV
N 150360.64	P.R.C188+75.92 HV
E 447886.02	N 150599.75
P.R.C185+12.42 HV	E 448497.13
S.E. RC	S.E. RC
L.R. ***	L.R. ***

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

STA 183+98 HV, LT
REMOVING SMALL PIPE CULVERTS

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

N

BP 182+17.70HV
PRC 185+10.77HV
PI 186+94.25HV
PRC 188+75.92HV
PI 192+37.71HV
PI 183+65.30HV

182HV 184HV 186HV 188HV 190HV 192HV 194HV

182HT 184HT 186HT 188HT 190HT 192HT 194HT

SLOPE INTERCEPT
S110
S108
S107

IH 90 WB
IH 90 EB
ROSE ST SB
ROSE ST NB
SIGN
SS

5 5

FINISHED PROFILE
EXISTING PROFILE
MATCH HT PROPOSED PAVEMENT

STA 182+17.70	STA 183+00.00	STA 183+50.00	STA 184+00.00	STA 184+50.00	STA 185+00.00	STA 185+60.85
EL 656.57	EL 656.78	EL 656.90	EL 656.95	EL 657.13	EL 657.57	EL 658.24

0.26% 0.24% 0.09% 0.37% 0.86% 1.11%

675 670 665 660 655 650 645 640

655.43 656.65 | 655.10 656.78 | 654.59 656.90 | 653.51 656.95 | 655.19 657.13 | 657.67 657.57 | 658.37 658.12 | 658.52 | 658.68 | 659.00 | 659.47 | 659.76 | 659.93 | 660.17 | 660.09 | 660.00 | 659.83 | 659.81 | 659.62 | 659.59 | 659.49 | 659.39 | 659.49 | 659.48 | 659.41 | 659.40 | 659.22 | 658.68 | 658.02

182 183 184 185 186 187 188 189 190 191 192 193 194 195 196

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - HV TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 256	E

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

'FT' ALIGNMENT HAS
BEEN UPDATED SINCE
THE PREP PROJECT

XCEL ENERGY - ELECTRIC

BP 216+00.00FT

PI 218+00.00FT

PC 224+29.99FT

EP 226+68.67FT

S111

IH 90 WB

IH 90 EB

I 90/USH 53

216FT

218FT

220FT

222FT

224FT

226FT

N64°33'21"E

N64°50'32"E

CITY OF LA CROSSE - WATER

SLOPE INTERCEPT

PI 225+49.37FT

WISCONSIN
INDEPENDENT
NETWORK

STA 226+89 FT, RT
REMOVING SMALL PIPE CULVERTS
(ENDWALL ONLY)

BUILD FT WIDENING OFF
EXISTING EB LANES

P.I. DATA

P.I. 216+00.00 FT
N 151451.68
E 451079.13

P.I. DATA

P.I. 218+00.00 FT
N 151537.61
E 451259.73

CURVE DATA

P.I. 225+49.37 FT
N 151856.17
E 451938.01
△ = 3°22'42"
D = 1°24'55"
T = 119.38'
L = 238.68'
E = 1.76'
R = 4048.00'
P.C. 224+30.00 FT
P.T. 226+68.67 FT
N 151913.20
E 452042.88
S.E. NC
L.R. N/A

5

5

12TH AVENUE

WISCONSIN
INDEPENDENT
NETWORK

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

XCEL ENERGY - ELECTRIC

XCEL ENERGY - GAS

CAUTION

BP 250+61.82JT

PI 251+70.78JT

PRC 252+79.68JT

PT 255+00.05JT

PI 259+18.01JT

EP 259+81.53JT

S103

S100

IH 90 WB

IH 90 EB

I 90/USH 53

248TW

250TW

252TW

254MT

254TW

256MT

256TW

258MT

258TW

260MT

260TW

262TW

252JT

254JT

256JT

258JT

N61°39'26"E

CENTURYTEL

XCEL ENERGY - TRANSMISSION

CHARTER
COMMUNICATIONS

STA 252+54.52 JT,
6'RT

PI 253+89.89JT

SLOPE INTERCEPT

BUILD JT WIDENING OFF
EXISTING EB PAVEMENT

CURVE DATA

P.I. 251+70.78 JT
N 153053.97
E 454270.93
△ = 3°08'19"
D = 1°26'26"
T = 108.96'
L = 217.86'
E = 1.49'
R = 3977.00'
P.C. 250+61.82 JT
N 153002.25
E 454175.04
P.R.C252+79.68 JT
S.E. NC
L.R. N/A

CURVE DATA

P.I. 253+89.89 JT
N 153147.31
E 454469.24
△ = 3°08'19"
D = 1°25'27"
T = 110.22'
L = 220.38'
E = 1.51'
R = 4023.00'
P.R.C252+79.68 JT
P.T. 255+00.05 JT
S.E. NC
L.R. N/A

CURVE DATA

P.I. 259+18.01 JT
N 153398.05
E 454934.09
△ = 9°36'48"
D = 7°32'56"
T = 63.82'
L = 127.35'
E = 2.68'
R = 759.00'
P.C. 258+54.18 JT
P.T. 259+81.53 JT
N 153418.55
E 454994.53
S.E. NC
L.R. N/A

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN - FT & JT TEMPORARYS (PREVIOUSLY CONSTRUCTED)	SHEET 257	E

P.I. DATA	CURVE DATA
P.I. 283+63.10 LT N 154880.71 E 457004.79	P.I. 286+95.92 LT N 154811.21 E 457330.27 △ = 37°50'27" D = 6°44'26" T = 291.36' L = 561.38' E = 48.55' R = 850.00' P.C. 284+04.56 LT P.T. 289+65.94 LT N 154937.97 E 457592.61 S.E. 6.0% L.R. ***

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

N

WISCONSIN INDEPENDENT NETWORK

XCEL ENERGY - ELECTRIC

CHARTER COMMUNICATIONS

BP 283+63.10LT

PC 284+04.56LT

284LT

S77°56'49"E

286LT

288LT

EP 289+65.94LT

IH 90 WB

IH 90 EB

294TW

292TW

290TW

288TW

286TW

SLOPE INTERCEPT

PI 286+95.92LT

S101

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

BUILD LT OFF EXISTING L RAMP
STA 283+63.10 LT - STA 285+98.05 LT

STA 285+50.00	STA 286+00.00	STA 286+50.00	STA 287+00.00	STA 287+50.00	STA 288+00.00	STA 288+50.00
EL 712.48	EL 713.29	EL 713.31	EL 713.81	EL 714.21	EL 714.74	EL 714.70

1.63% 0.04% 1.00% 0.81% 1.06% -0.08%

EXISTING PROFILE

FINISHED PROFILE

730 725 720 715 710 705 700 695

709.91 710.41 711.66 712.29 712.48 713.29 713.39 713.31 714.14 713.81 714.15 714.21 714.69 714.74 714.70 714.70 714.76 715.05

283 284 285 286 287 288 289 290 291

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - LT TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 258	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0680_050112_pptmplt.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

P.T. DATA	CURVE DATA	P.T. DATA
P.T. 254+57.13 MT N 153273.65 E 454503.35	P.I. 263+89.49 MT N 153716.28 E 455323.94 △ = 46°53'46" D = 6°37'26" T = 375.18' L = 708.00' E = 77.86' R = 865.00' P.C. 260+14.31 MT P.T. 267+22.30 MT S.E. 6.0% L.R. ***	P.T. 269+00.00 MT N 154250.91 E 455464.81

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

XCEL ENERGY - TRANSMISSION

WISCONSIN INDEPENDENT NETWORK

CENTURYLINK

PT 254+57.13MT

S100
254MT

SLOPE INTERCEPT

256MT

PC 260+14.31MT

S103

258MT

N61°39'26"E

IH 90 WB

260MT

262MT

264MT

SLOPE INTERCEPT

PT 267+22.30MT

268MT
N14°45'40"E

EP 269+00.00MT
269MT

PI 253+43.21MT

254JT

256JT

258JT

IH 90 EB

260TW

262TW

264TW

PI

BUILD MT OFF EXISTING WB LANES
STA 254+73.74 MT - STA 262+18.75 MT

BUILD MT OFF EXISTING M RAMP
STA 264+02+52 MT - STA 267+22.30 MT

EXISTING PROFILE

FINISHED PROFILE

0.04%
-1.79%
-1.75%
-0.20%
-0.75%
-0.54%

VCL = 200.00
K = 935.15

VCL = 100.00
K = 54.65

STA 261+00.00 EL 709.31
VPC STA 261+50.00 VPC EL 709.33
VPI STA 262+00.00 VPI EL 709.35
VPT STA 262+50.00 VPT EL 708.46
STA 263+00.00 EL 707.58
STA 263+50.00 EL 707.48
VPC STA 263+50.00 VPC EL 707.48
VPI STA 264+50.00 VPI EL 706.73
VPT STA 265+50.00 VPT EL 706.19
VPC STA 266+00.00 VPC EL 705.92

725 720 715 710 705 700 695 690

712.28 712.08 711.86 711.35 711.18 711.09 710.88 710.75 710.48 710.10 709.86 709.68 709.58 709.31 709.31 709.01 709.33 708.98 709.12 708.47 708.46 707.62 707.58 707.52 707.48 707.09 707.12 706.75 706.78 706.20 706.47 705.70 706.19 705.45 705.92 705.53 705.80 706.21 706.88 707.64 708.36

255 256 257 258 259 260 261 262 263 264 265 266 267 268 269

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - MT TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 259	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0680_050113_pptmpmt.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

P.I. DATA	CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA
P.I. 216+00.00 TW N 151487.78 E 451061.91	P.I. 221+21.33 TW N 151751.92 E 451624.30 △ = 6°00'43" D = 1°25'57" T = 210.05' L = 419.72' E = 5.51' R = 4000.00' P.C. 220+11.28 TW P.R.C224+31.00 TW S.E. RC L.R. ***	P.I. 226+14.42 TW N 151955.57 E 451960.97 △ = 5°15'04" D = 1°25'57" T = 183.42' L = 366.59' E = 4.20' R = 4000.00' P.R.C224+31.00 TW P.R.C227+97.59 TW S.E. RC L.R. ***	P.I. 229+15.01 TW N 152087.07 E 452231.56 △ = 3°21'46" D = 1°25'57" T = 117.42' L = 234.77' E = 1.72' R = 4000.00' P.R.C227+97.59 TW P.R.C230+32.36 TW S.E. NC L.R. ***	P.I. 231+59.06 TW N 152206.46 E 452444.48 △ = 3°37'42" D = 1°25'57" T = 126.69' L = 253.30' E = 2.01' R = 4000.00' P.R.C230+32.36 TW P.R.C232+85.67 TW S.E. NC L.R. ***	P.I. 233+70.27 TW N 152297.94 E 452634.95 △ = 0°25'23" D = 0°15'00" T = 84.60' L = 169.20' E = 0.16' R = 22912.74' P.R.C232+85.67 TW P.R.C234+54.87 TW S.E. NC L.R. ***

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

N

PC 220+11.28TW
PI 222+21.33TW
PRC 224+31.00TW
PI 226+14.42TW
PRC 227+97.59TW
PRC 230+32.36TW
PI 231+59.06TW
PRC 232+85.67TW
PI 233+70.27TW
PI 229+15.01TW

220TW
222TW
224TW
226TW
228TW
230TW
232TW
234TW

220GT
222GT
224GT
226GT
228GT
230GT

220UW
222UW
224UW
226UW
228UW
230UW
232UW
234UW

220FT
222FT
224FT
226FT
228FT
230FT

I 90/USH 53
IH 90 WB
IH 90 EB

N64°50'32"E
S111
SLOPE INTERCEPT
GREAT RIVER STATE TRAIL

XCEL ENERGY - ELECTRIC
CITY OF LA CROSSE - WATER
STA 226+90 TW
REMOVING INLETS, LT
REMOVING SMALL PIPE CULVERTS, RT
WISCONSIN
INDEPENDENT
NETWORK
CITY OF ONALASKA - SEWER
CENTURYLINK
XCEL ENERGY - ELECTRIC

MATCH EXISTING
CROSSOVER PAVEMENT
EXISTING PROFILE
BUILD TW OFF EXISTING CROSSOVER/WB LANES
STA 226+50.00 TW - STA 249+89.53 TW

705
700
695
690
685
680
675
670

681.94 682.35 682.77 683.36 683.87 684.40 684.89 685.37 685.75 686.19 687.13 688.04 688.89 689.75 689.67 689.71 691.22 692.46 693.50 694.66 696.02 697.14 698.13 698.99 699.83 700.69 701.44 677.93 683.89

219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TW TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 260	E

CURVE DATA	CURVE DATA	CURVE DATA	CURVE DATA
P.I. 233+70.27 TW	P.I. 235+14.16 TW	P.I. 236+57.80 TW	P.I. 240+51.80 TW
N 152297.94	N 152361.19	N 152420.48	N 152598.10
E 452634.95	E 452764.19	E 452895.03	E 453246.75
△ = 0°25'23"	△ = 1°41'54"	△ = 2°24'59"	△ = 1°32'54"
D = 0°15'00"	D = 1°25'57"	D = 1°25'57"	D = 0°15'00"
T = 84.60'	T = 59.29'	T = 84.36'	T = 309.67'
L = 169.20'	L = 118.57'	L = 168.70'	L = 619.29'
E = 0.16'	E = 0.44'	E = 0.89'	E = 2.09'
R = 22912.74'	R = 4000.00'	R = 4000.00'	R = 22917.74'
P.R.C232+85.67 TW	P.R.C234+54.87 TW	P.R.C235+73.44 TW	P.C.C237+42.13 TW
P.R.C234+54.87 TW	P.R.C235+73.44 TW	P.C.C237+42.13 TW	P.T. 243+61.43 TW
S.E. NC	S.E. NC	S.E. NC	S.E. NC
L.R. ***	L.R. ***	L.R. ***	L.R. ***

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED BY OTHERS

CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE
STA 234+53 TW - STA 237+53 TW

PRC 234+54.87TW
PI 235+14.16TW
PRC 235+73.44TW
PCC 237+42.13TW
PT 243+61.43TW

234TW 236TW 238TW 240TW 242TW 244TW 246TW 248TW

IH 90 WB
I 90/USH 53
IH 90 EB

N61°39'26"E

PI 233+70.27TW
PI 236+57.80TW
PI 240+51.80TW

CRASH CUSHION TEMPORARY LEFT IN PLACE REQ'D

SLOPE INTERCEPT

WISCONSIN INDEPENDENT NETWORK

XCEL ENERGY - GAS
XCEL ENERGY - ELECTRIC

12TH AVENUE

XCEL ENERGY - ELECTRIC
CITY OF ONALASKA - SEWER
CENTURYLINK

STA 234+53 TW - STA 236+58 TW, RT
REMOVING GUARDRAIL

STA 246+25 EB - STA 247+92 EB, LT
REMOVING GUARDRAIL

STA 245+49 EB - STA 247+91 EB, RT
REMOVE AND REINSTALL GUARDRAIL

STA 245+25 EB - STA 247+91 EB, LT
MGS GUARDRAIL

CHARTER COMMUNICATIONS
CENTURYLINK

WISCONSIN INDEPENDENT NETWORK

CAUTION

EXISTING PROFILE
FINISHED PROFILE

BUILD TW OFF EXISTING CROSSOVER/WB LANES
STA 226+50.00 TW - STA 249+89.53 TW

725 720 715 710 705 700 695 690

683.89 704.02 705.02 705.88 706.82 707.78 708.64 709.46 710.19 710.90 711.70 712.33 712.88 713.37 713.97 714.44 714.95 715.24 715.41 715.83 715.86 715.87 716.11 716.19 716.29 716.26 715.94 715.74 713.69 698.04 698.93

234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TW TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0680_050115_pptmptw.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 40

STA 249+16 WB - STA 250+35 WB
MGS GUARDRAIL REO'D

STA 249+34 TW - STA 252+40 TW, RT
STA 249+16 WB - STA 250+05 WB, LT
REMOVING GUARDRAIL

STA 249+37 TW, LT
REMOVING CONCRETE SURFACE DRAINS
REMOVING INLETS
REMOVING SMALL PIPE CULVERTS

CURVE DATA

P.I. 252+71.71 TW
N 153177.27
E 454320.46
△ = 7°08'16"
D = 1°25'27"
T = 249.48'
L = 498.32'
E = 7.77'
R = 4000.00'
P.C. 250+22.23 TW
P.R.C255+20.55 TW
S.E. RC
L.R. ***

CURVE DATA

P.I. 257+70.03 TW
N 153357.74
E 454785.64
△ = 7°08'16"
D = 1°25'27"
T = 249.48'
L = 498.32'
E = 7.77'
R = 4000.00'
P.R.C255+20.55 TW
P.T. 260+18.86 TW
S.E. RC
L.R. ***

XCEL ENERGY - ELECTRIC

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

PC 250+22.23TW

PI 252+71.71TW

PRC 255+20.55TW

PT 260+18.87TW

CONCRETE BARRIER TEMPORARY
PRECAST LEFT IN PLACE
STA 249+17 TW - STA 252+17 TW

CRASH CUSHION
TEMPORARY LEFT
IN PLACE REO'D

WISCONSIN
INDEPENDENT
NETWORK

STA 258+90 TW
STA 247+37 TW
STA 247+39 TW (EB LANES)
REMOVING INLETS

STA 247+37 TW, LT
STA 247+37 TW (EB LANES)
REMOVING SURFACE DRAINS

SLOPE INTERCEPT

S103

SLOPE INTERCEPT

S100

IH 90 WB

IH 90 EB

I-90/USH 53

250TW 252TW 254TW 256TW 258TW 260TW 262TW 264TW

252JT 254JT 256JT 258JT

254MT 256MT 258MT 260MT 262MT 264MT

XCEL ENERGY - TRANSMISSION

CHARTER
COMMUNICATIONS

CENTURYLINK

12TH AVE

STA 249+39 TW, EB LANES
REMOVING CONCRETE SURFACE DRAINS
REMOVING INLETS
REMOVING SMALL PIPE CULVERTS

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

5

5

STA 249+50.00 EL 714.87
-0.76%
STA 250+00.00 EL 714.49
-0.52%
STA 250+50.00 EL 714.23
-0.49%
STA 251+00.00 EL 713.98
-0.35%
STA 251+50.00 EL 713.81
-0.52%
STA 252+00.00 EL 713.55
-0.60%
STA 252+50.00 EL 713.25
-0.55%
STA 253+00.00 EL 712.98
-0.91%
STA 253+50.00 EL 712.52
-0.22%
STA 254+00.00 EL 712.41
-0.70%
STA 254+50.00 EL 712.06
-1.09%
STA 255+50.00 EL 710.97
-0.70%
STA 256+00.00 EL 710.62
-0.20%
STA 256+50.00 EL 710.52
-0.57%
STA 257+00.00 EL 710.24
-0.17%
STA 257+50.00 EL 710.15
-0.22%
STA 258+00.00 EL 710.04
-0.42%
STA 258+50.00 EL 709.83
-0.33%
STA 259+00.00 EL 709.66
-0.29%
STA 259+50.00 EL 709.52
-0.34%
STA 260+00.00 EL 709.35

FINISHED PROFILE

EXISTING PROFILE

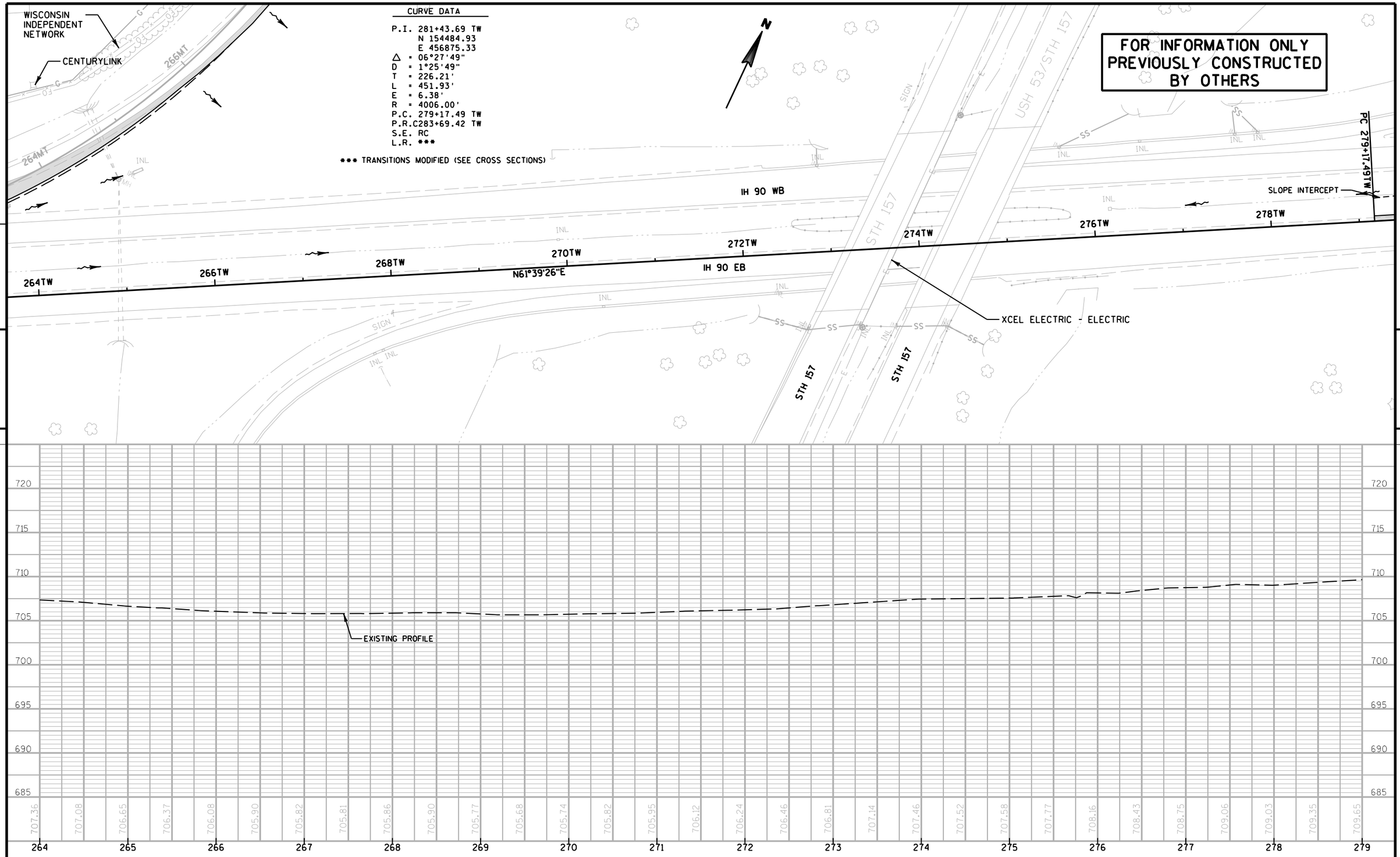
MATCH EXISTING
EB PAVEMENT

725 720 715 710 705 700 695 690

698.93 714.82 714.87 714.50 714.49 714.25 714.23 713.99 713.98 713.81 713.81 713.52 713.55 713.20 713.25 712.84 712.98 712.29 712.52 711.47 712.41 710.77 712.06 709.92 711.51 709.34 710.97 709.38 710.62 709.32 710.52 709.68 710.24 709.99 710.15 710.03 710.04 709.93 709.83 709.71 709.66 709.53 709.52 709.35 709.35 709.14 708.87 708.62 708.30 708.12 707.79 707.60 707.36

249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TW TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 262	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TW TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 263	E

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

STA 283+31 TW
REMOVING INLETS

PC 279+17.49TW

PRC 283+69.42TW

PI 285+86.91TW

PCC 288+03.98TW

PI 281+43.69TW

S102

S101

SLOPE INTERCEPT

280TW

282TW

284TW

286TW

288TW

290TW

292TW

294TW

IH 90 WB

IH 90 EB

SLOPE INTERCEPT

CRASH CUSHION
TEMPORARY LEFT
IN PLACE REQ'D

CONCRETE BARRIER TEMPORARY
PRECAST LEFT IN PLACE
STA 290+55 WB - STA 294+30 WB

WISCONSIN
INDEPENDENT
NETWORK

XCEL ENERGY - ELECTRIC

STA 291+72 TW - STA 292+60 TW, LT
REMOVING GUARDRAIL

STA 291+52 TW - STA 291+77 TW, LT
STEEL PLATE BEAM GUARD

STA 291+52 TW, LT
REMOVE AND REINSTALL ANCHORAGE TYPE 2

STA 291+65 WB
REMOVING SIGN BRIDGE
S-32-0028

STA 291+55 WB
SIGN BRIDGE S-32-0049

CURVE DATA	CURVE DATA	CURVE DATA
P.I. 281+43.69 TW	P.I. 285+86.91 TW	P.I. 296+40.16 TW
N 154484.93	N 154738.20	N 155242.71
E 456875.33	E 457239.64	E 458164.68
△ = 06°27'49"	△ = 06°11'54"	△ = 24°45'09"
D = 1°25'49"	D = 1°25'35"	D = 1°30'13"
T = 226.21'	T = 217.49'	T = 836.18'
L = 451.93'	L = 434.56'	L = 1646.27'
E = 6.38'	E = 5.88'	E = 90.66'
R = 4006.00'	R = 4017.00'	R = 3810.71'
P.C. 279+17.49 TW	P.R.C283+69.42 TW	P.C.C288+03.98 TW
P.R.C283+69.42 TW	P.C.C288+03.98 TW	P.T. 304+50.25 TW
S.E. RC	S.E. RC	S.E. 4.2%
L.R. ***	L.R. ***	L.R. ***

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

STA 279+17.49
EL 709.68

STA 280+00.00
EL 710.08

STA 281+00.00
EL 710.35

STA 281+50.00
EL 710.64

STA 282+00.00
EL 710.74

STA 282+50.00
EL 710.92

STA 283+00.00
EL 711.23

STA 286+00.00
EL 712.84

STA 286+50.00
EL 712.73

STA 287+00.00
EL 713.29

STA 287+50.00
EL 713.90

STA 288+21.69
EL 714.24

0.48%
0.27%
0.60%
0.19%
0.37%
0.62%
0.53%
-0.20%
1.10%
1.23%
0.47%

FINISHED PROFILE

EXISTING PROFILE

MATCH EXISTING
EB PAVEMENT

BUILD TW OFF EXISTING WB LANES
STA 282+21.69 TW - STA 318+72.07 TW

730 725 720 715 710 705 700 695

709.65 709.85 709.84 710.08 710.08 710.22 710.21 710.42 710.35 710.62 710.64 710.79 710.74 710.54 710.92 710.58 711.23 710.01 711.50 709.84 711.77 709.98 712.03 710.20 712.30 710.62 712.57 711.49 712.84 711.80 712.73 712.34 713.29 712.79 713.90 713.46 714.14 713.68 713.69 713.79 714.01 714.40 714.72 714.85 715.05 715.43 715.57 715.90 716.09

279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TW TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 264	E

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED BY OTHERS

N

DAIRYLAND POWER COOPERATIVE/
KDL COMMUNICATIONS

CITY OF ONALASKA -
WATER & SANITARY

WISCONSIN
INDEPENDENT
NETWORK

PI 296+40.16TW

294TW
296TW
298TW
300TW
302TW
304TW
306TW
308TW

PT 304+50.25TW

PC 305+93.55TW

PI 308+03.37TW

IH 90 WB

IH 90 EB

N86°08'40"E

SLOPE INTERCEPT

SAWCUT REQ'D

STA 299+90 TW, RT
1-18" CP CL.III

STA 299+90 TW, RT
REMOVING SMALL PIPE CULVERTS

STA 308+45 TW - STA 310+29 TW, RT
REMOVING GUARDRAIL

CURVE DATA	CURVE DATA
P.I. 296+40.16 TW	P.I. 308+03.37 TW
N 155242.71	N 155322.69
E 458164.68	E 459351.29
△ = 24°45'09"	△ = 06°00'20"
D = 1°30'13"	D = 1°25'27"
T = 836.18'	T = 209.82'
L = 1646.27'	L = 419.26'
E = 90.66'	E = 5.50'
R = 3810.71'	R = 4000.00'
P.C.C288+03.98 TW	P.C. 305+93.55 TW
P.T. 304+50.25 TW	P.T. 310+12.81 TW
S.E. 4.2%	S.E. 4.2%
L.R. ***	L.R. ***

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

730
725
720
715
710
705
700
695

EXISTING PROFILE

716.09 716.19 716.41 716.28 716.42 716.68 716.85 717.03 717.31 717.56 717.75 718.01 718.85 718.88 719.12 719.29 719.61 720.08 720.22 720.25 720.48 720.74 721.10 721.54 721.64 721.72 722.04 722.36 722.50 722.67 722.81

294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TW TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 265	E

STA 308+45 TW - STA 310+29 TW, RT
STA 311+87 TW - STA 313+69 TW, RT
REMOVING GUARDRAIL

N

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

CENTURYLINK

XCEL ENERGY - ELECTRIC

WISCONSIN
INDEPENDENT
NETWORK

PT 310+12.81TW

PI 314+64.82TW

EP 318+72.07TW

310TW

312TW

IH 90 WB

314TW

316TW

318TW

S87°51'01"E

S88°34'40"E

STA 311+87 TW - STA 314+77 TW
MGS GUARDRAIL REQ'D

SLOPE INTERCEPT

IH 90 EB

THEATER RD

SIGN

MH

5

5

CURVE DATA

P.I. 308+03.37 TW
N 155322.69
E 459351.29
△ = 6°00'20"
D = 1°25'27"
T = 209.82'
L = 419.26'
E = 5.50'
R = 4000.00'
P.C. 305+93.55 TW
P.T. 310+12.81 TW
S.E. 4.2%
L.R. ***
*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

P.I. DATA

P.I. 314+64.82 TW
N 155297.86
E 460012.66

P.I. DATA

P.I. 318+72.07 TW
N 155287.75
E 460419.78

730
725
720
715
710
705
700
695

EXISTING PROFILE

722.81 722.95 723.14 711.38 704.21 705.60 722.83 722.69 722.50 722.20 721.98 721.98 721.92 721.75 721.59 721.36 721.31 721.31 721.32 720.93

309 310 311 312 313 314 315 316 317 318 319

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - TW TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 266	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0680_050120_pptmptw.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

CITY OF LA CROSSE - SANITARY

BP 204+41.87UW

PC 206+61.86UW

PT 209+42.70UW

PI 208+02.29UW

IH 90 WB

IH 90 EB

SLOPE INTERCEPT

N65°44'17"E

200HU 202HU 204HU 206HU

206UW 208UW 210UW 212UW 214UW

208GT 210GT 212GT 214GT

P.I. DATA

P.I. 204+41.87 UW
N 151001.82
E 450011.08

*** TRANSITIONS MODIFIED
(SEE CROSS SECTIONS)

CURVE DATA

P.I. 208+02.29 UW
N 151148.80
E 450340.16
△ = 1°23'33"
D = 0°29'45"
T = 140.43'
L = 280.84'
E = 0.85'
R = 11555.98'
P.C. 206+61.86 UW
P.T. 209+42.70 UW
S.E. NC
L.R. ***

XCEL ENERGY - ELECTRIC

CITY OF LA CROSSE - WATER

5

5

680 675 670 665 660 655 650 645

680.00 670.00 660.00 650.00 640.00

EXISTING PROFILE

BUILD UW OFF EXISTING CROSSOVER/EB LANES
STA 204+41.87 UW - STA 216+00.00 UW

669.36 669.43 669.49 669.69 669.89 670.04 670.21 670.36 670.64 671.01 671.32 671.84 672.28 672.77 673.44 673.92 664.34 645.36 646.00 645.51

204 205 206 207 208 209 210 211 212 213 214

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - UW TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 267	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0680_050121_pptmpuw.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

CURVE DATA	CURVE DATA
P.I. 219+64.38 UW	P.I. 226+29.93 UW
N 151642.83	N 152024.61
E 451392.03	E 451939.10
△ = 9°45'08"	△ = 9°45'08"
D = 1°30'00"	D = 1°25'57"
T = 325.88'	T = 341.24'
L = 650.19'	L = 680.83'
E = 13.88'	E = 14.53'
R = 3820.00'	R = 4000.00'
P.C. 216+38.50 UW	P.R.C222+88.69 UW
P.R.C222+88.69 UW	P.T. 229+69.51 UW
S.E. NC	N 152169.68
L.R. ***	E 452247.97
	S.E. NC
	L.R. ***

*** TRANSITIONS MODIFIED (SEE CROSS SECTIONS)

FOR INFORMATION ONLY
PREVIOUSLY CONSTRUCTED
BY OTHERS

PC 216+38.50UW

PRC 222+88.69UW

PI 226+29.93UW

PI 219+64.38UW

STA 222+00 UW, RT
REMOVE EXISTING ASPHALTIC FLUME
(INCIDENTAL TO COMMON EXCAVATION)

214UW 216UW 218UW 220UW 222UW 224UW 226UW 228UW

N64°50'32"E

SLOPE INTERCEPT

SAWCUT REQ'D

IH 90 WB

IH 90 EB

I 90/USH 53

S111

XCEL ENERGY - ELECTRIC

XCEL ENERGY - ELECTRIC

STA 216+11 EB - STA 218+38 EB
MGS GUARDRAIL REQ'D

STA 216+11 UW - STA 217+44 UW, LT
REMOVING GUARDRAIL

CITY OF LA CROSSE - WATER

WISCONSIN
INDEPENDENT
NETWORK

5

5

STA	EL
STA 216+00.00	EL 678.10
STA 216+50.00	EL 678.49
STA 217+00.00	EL 679.00
STA 217+50.00	EL 679.26
STA 218+00.00	EL 679.78
STA 218+50.00	EL 680.15
STA 219+00.00	EL 680.58
STA 219+50.00	EL 681.17
STA 220+00.00	EL 681.55
STA 220+50.00	EL 681.92
STA 221+00.00	EL 682.26
STA 221+50.00	EL 682.74
STA 222+00.00	EL 683.44
STA 223+50.00	EL 685.88

0.77% 1.04% 0.52% 1.04% 0.73% 0.86% 1.18% 0.76% 0.74% 0.68% 0.96% 1.41% 1.63%

FINISHED PROFILE

EXISTING PROFILE

700 695 690 685 680 675 670 665

645.51 643.51 654.66 656.76 677.95 678.10 678.37 678.49 678.84 679.00 679.07 679.26 679.42 679.78 679.67 680.15 679.80 680.58 679.23 681.17 679.14 681.55 679.51 681.92 680.02 682.26 681.72 682.74 683.45 683.44 684.28 684.25 685.05 685.07 685.90 685.88 686.54 687.29 687.78 688.20 687.34 686.36 685.76 685.51 685.92 685.69 685.67

214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	PLAN & PROFILE - UW TEMPORARY (PREVIOUSLY CONSTRUCTED)	SHEET 268	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\aa_0680_050122_pptmpuw.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

Standard Detail Drawing List

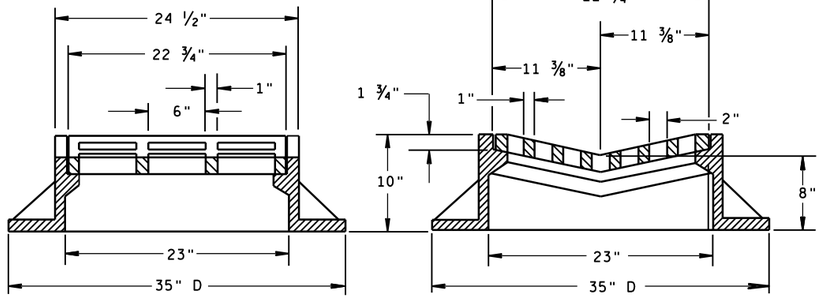
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D03-06	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
12A03-10	NAME PLATE (STRUCTURES)
13A03-05	CONCRETE PAVEMENT SHOULDERS
13B02-06	CONCRETE PAVEMENT APPROACH SLAB
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-11A	RURAL DOWELED CONCRETE PAVEMENT
13C11-11B	RURAL DOWELED CONCRETE PAVEMENT
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B07-13A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B15-07A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B16-04A	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B16-04B	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-11G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B24-07A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-07B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-07C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B26-02A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B32-02A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-02B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-02C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-02D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B33-01G	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B33-01H	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B39-01E	42-INCH SSCB TO 56-INCH SSCB HEIGHT TRANSITION
14B41-01A	SINGLE SLOPE ROADSIDE RETAINING WALL
14B41-01B	SINGLE SLOPE ROADSIDE RETAINING WALL

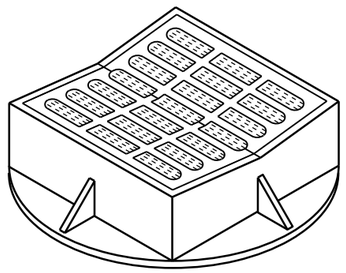
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Standard Detail Drawing List

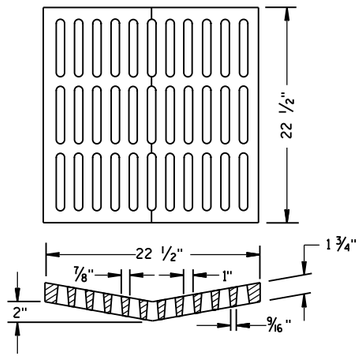
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-01A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A02-08	DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A06-02	DELINEATOR LAYOUT
15B03-13A	FENCE CHAIN LINK
15B03-13B	FENCE CHAIN LINK
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C06-07	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C19-02C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-01B	LANE DROP PAVEMENT MARKING
15C31-01D	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15D05-03	TRAFFIC CONTROL, SINGLE LANE CROSSOVER ENTRANCE WITH BARRIER
15D06-03	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D07-03	TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER
15D08-04	TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER
15D09-03	TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT
15D11-04	TRAFFIC CONTROL, SINGLE LANE CROSSOVER
15D12-04	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

6



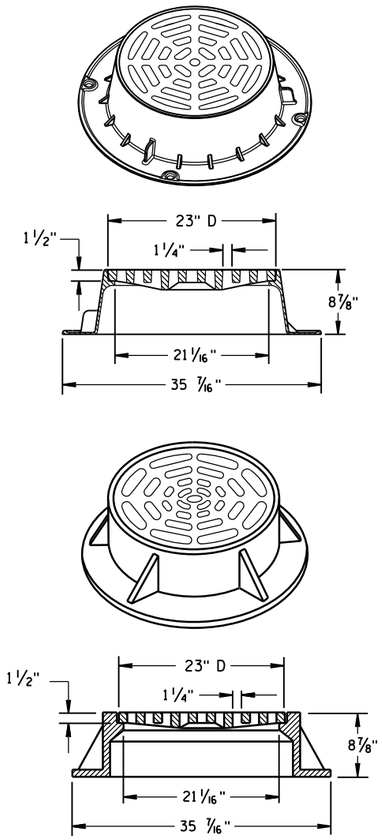


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

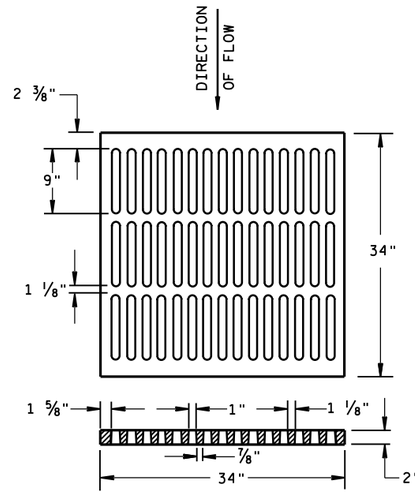
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

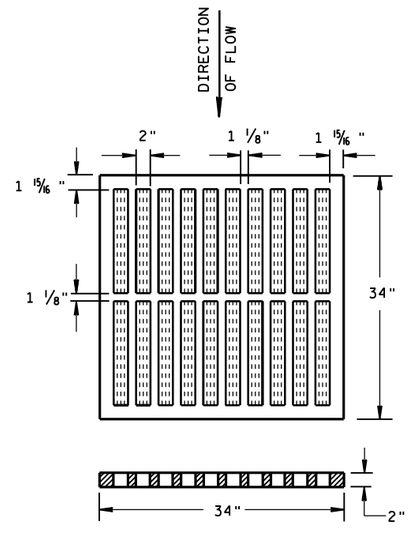
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



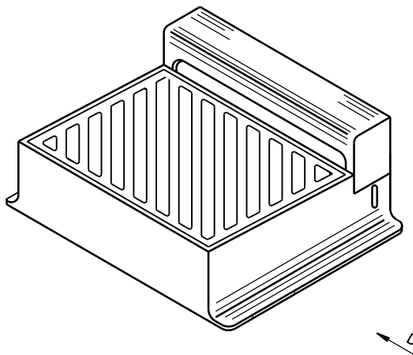
ALTERNATIVE TYPE "MS"

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

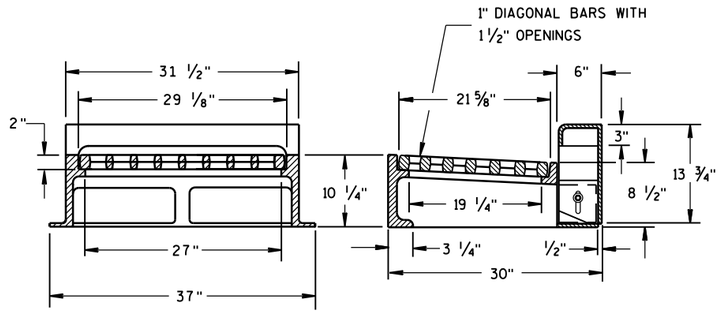


TYPE "MS"

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



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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

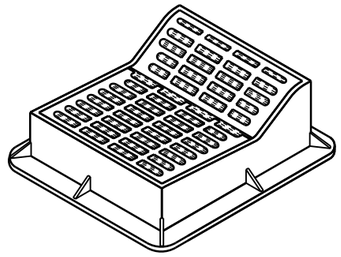
INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM

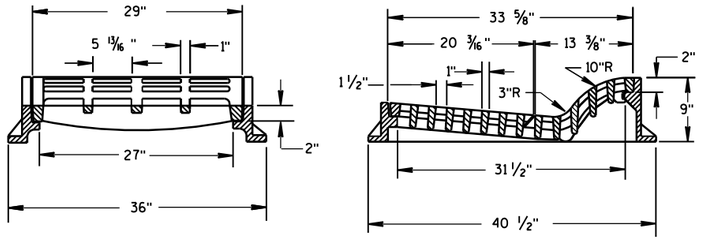
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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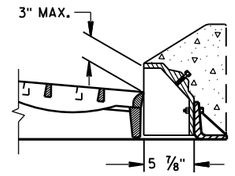
S.D.D. 8 A 5-19b





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

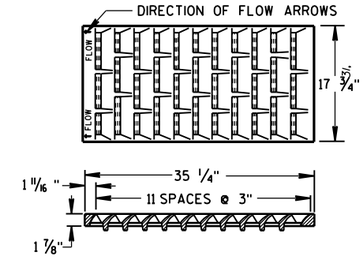
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

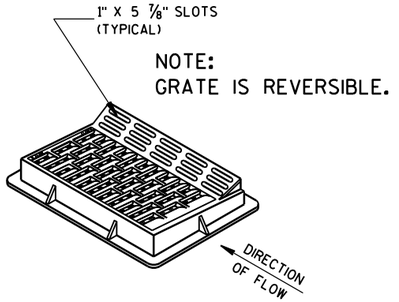
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

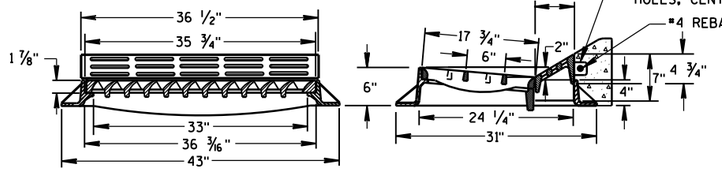
GENERAL NOTES

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.



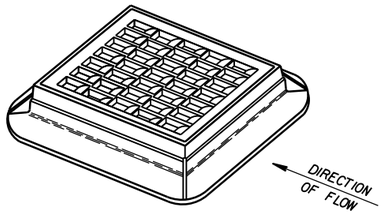


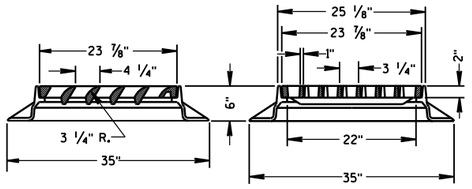


TYPE "HM"

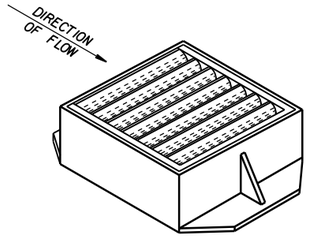
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

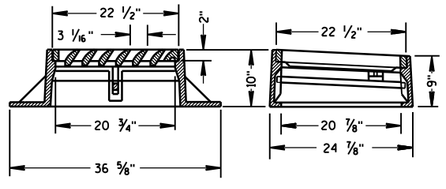
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



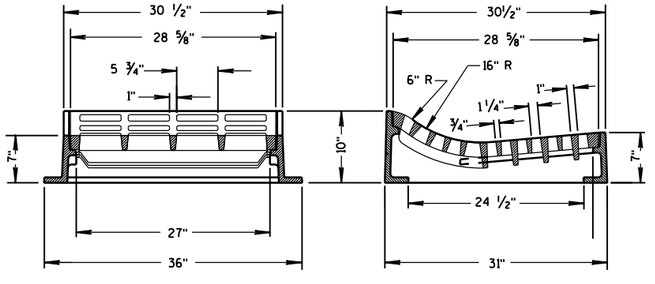


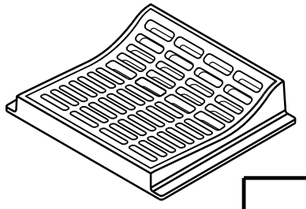
TYPE "S"





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

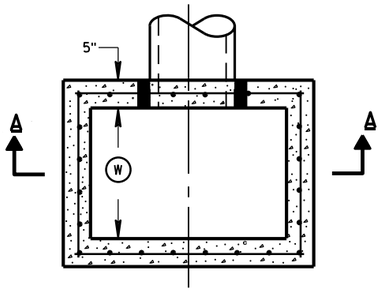
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

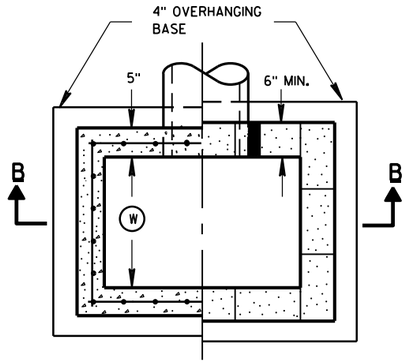
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

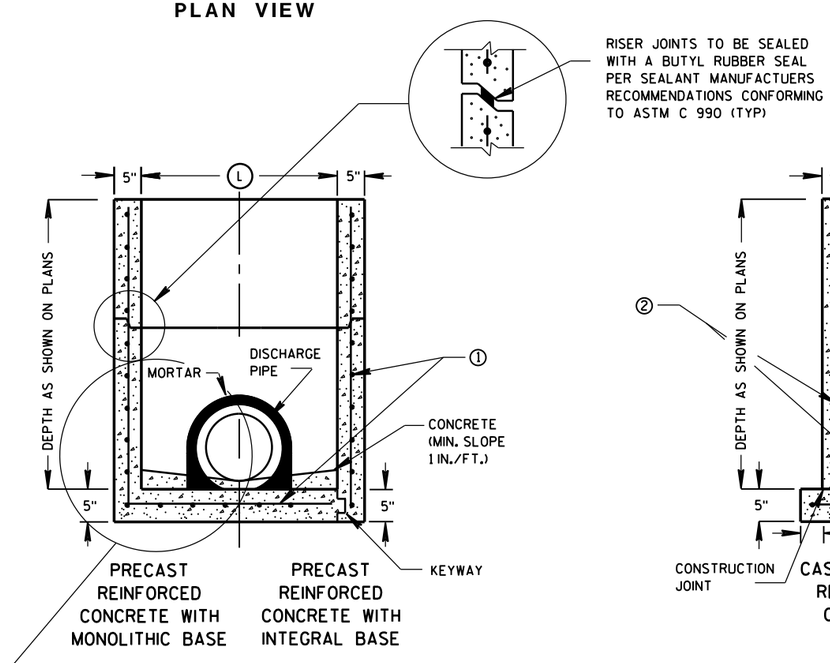
6
S.D.D. 8 A 5-19c



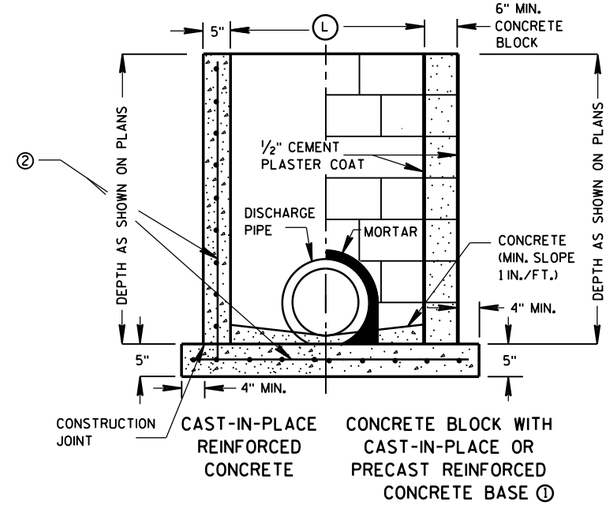
PLAN VIEW



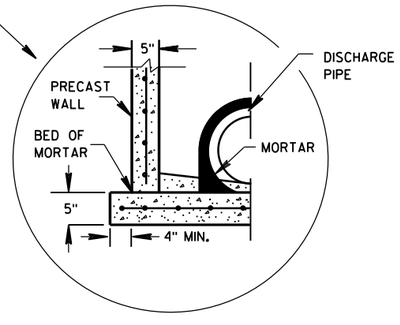
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

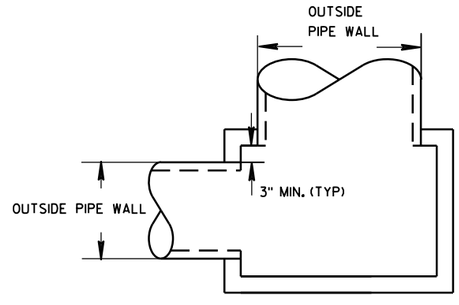
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

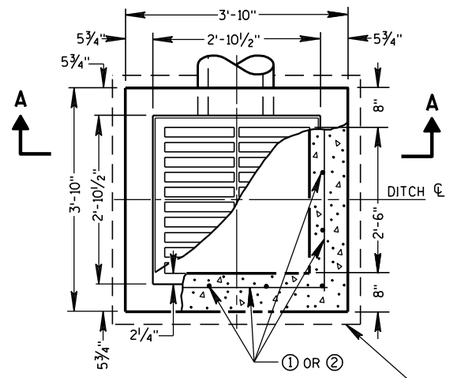
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

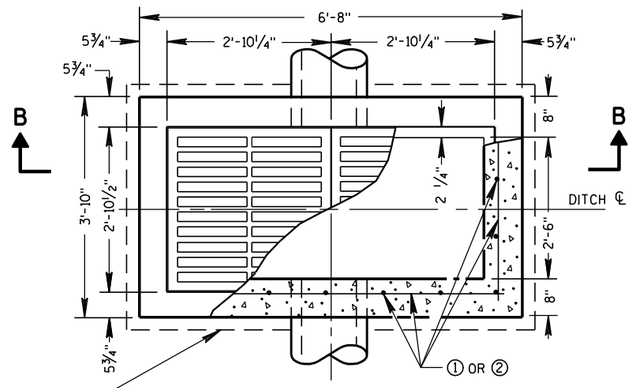
APPROVED
6/5/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DE ENGINEER
FHWA

6

S.D.D. 8 C 7-1

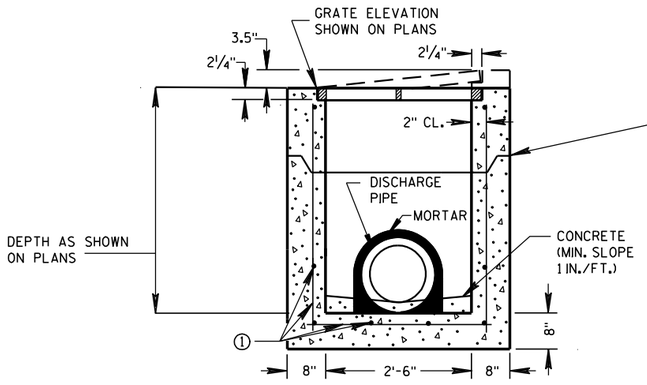


PLAN VIEW

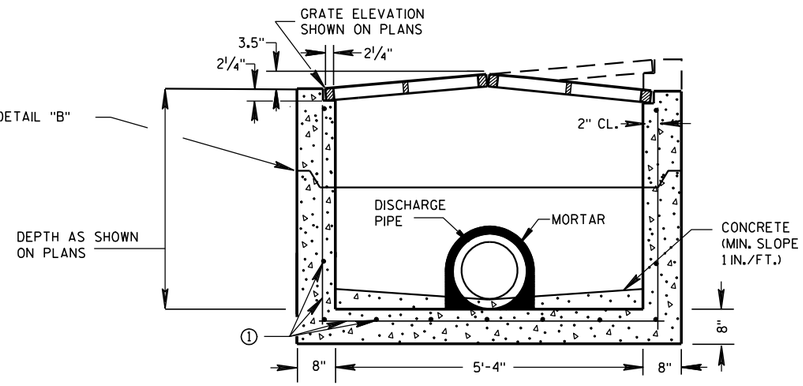


PLAN VIEW

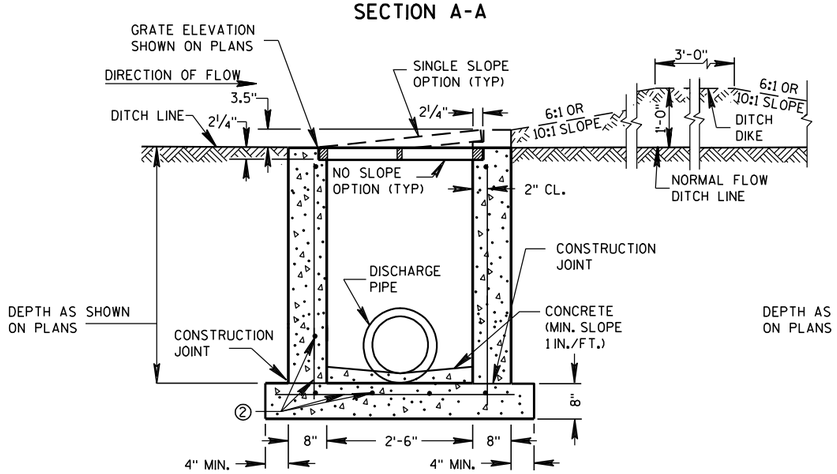
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



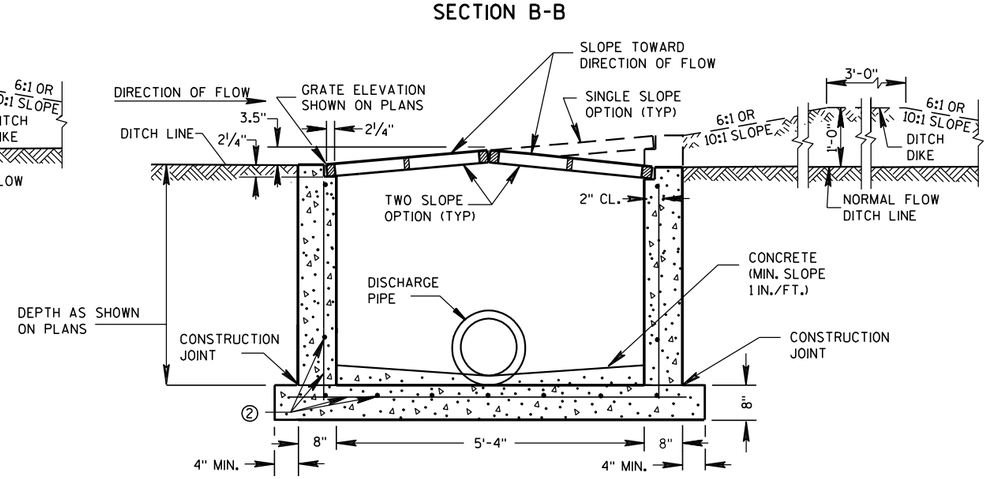
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

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

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

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.

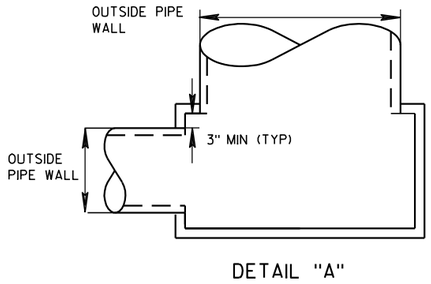
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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.

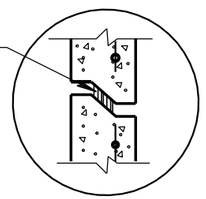
PIPE MATRIX

	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

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

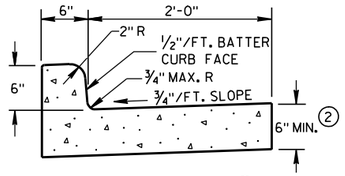
FHWA

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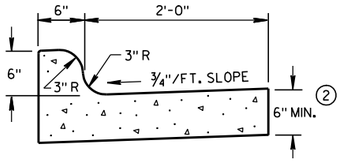
S.D.D. 8 C 8-1

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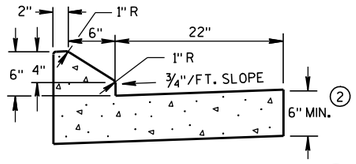
S.D.D. 8 C 8-1



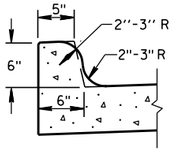
TYPES A & D (1)



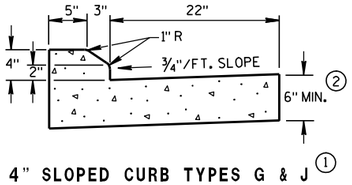
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

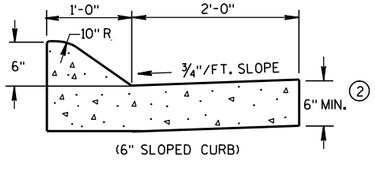


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

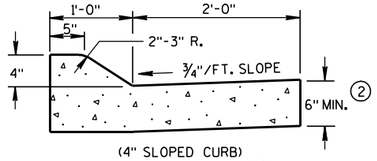


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

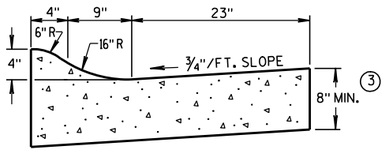


(6" SLOPED CURB)



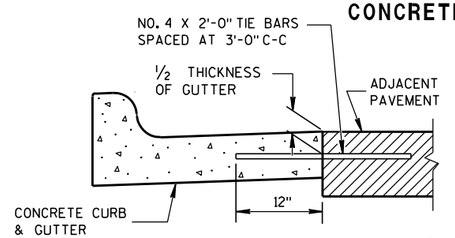
(4" SLOPED CURB)

TYPES A & D (1)

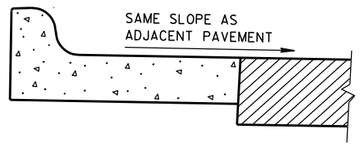


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION (1)



REVERSE SLOPE GUTTER (5)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

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. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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.

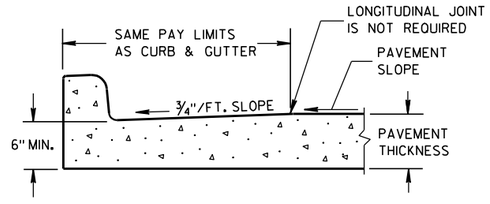
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(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.

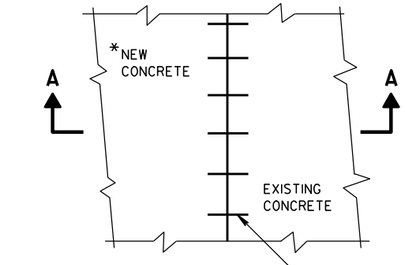
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

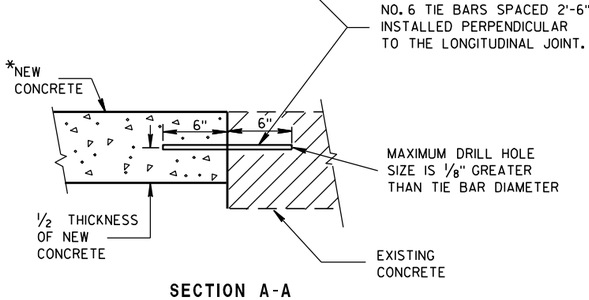


PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



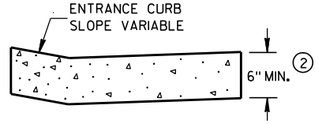
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

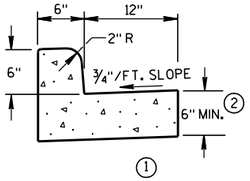


SECTION A-A

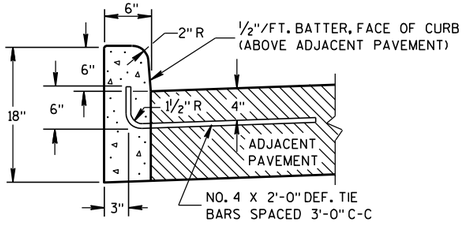
TIE BARS DRILLED INTO EXISTING PAVEMENT



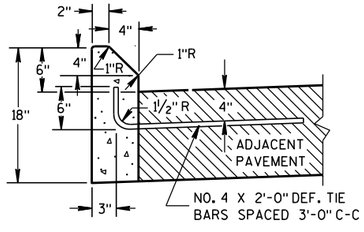
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



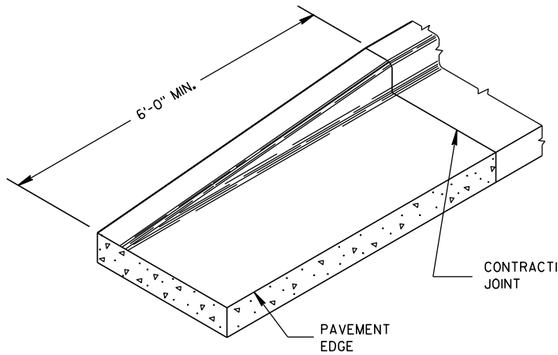
(1)
TYPES A & D
CONCRETE CURB & GUTTER 18"



(1)
TYPES A & D



(1)
TYPES G & J



END SECTION CURB & GUTTER

CONCRETE CURB

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

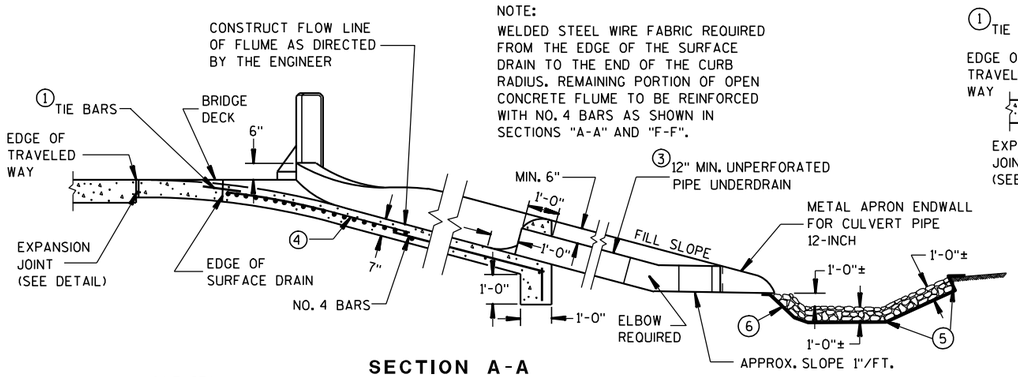
APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER
FHWA

6

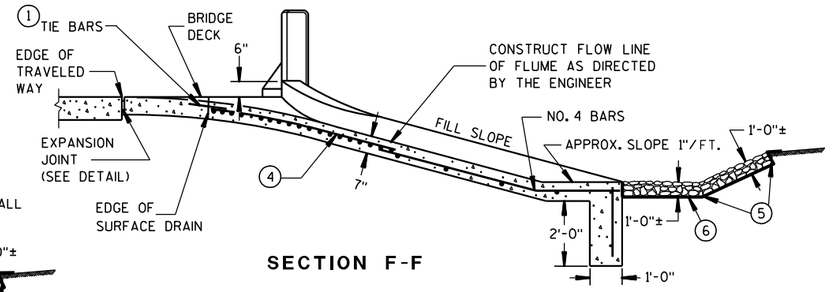
S.D.D. 8 D 1-17

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S.D.D. 8 D 1-17



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.

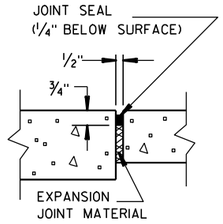
(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

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

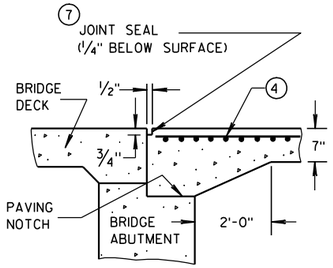
(6) GEOTEXTILE FABRIC, TYPE 'R"

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

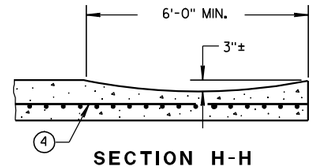
(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



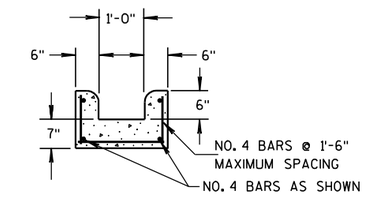
EXPANSION JOINT DETAIL



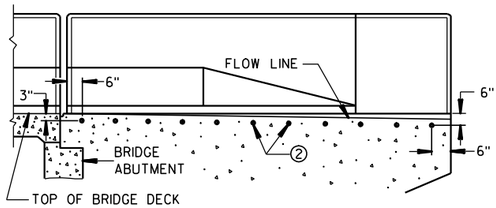
SECTION D-D



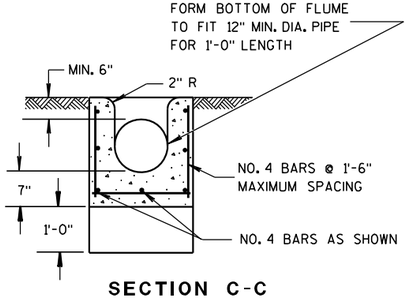
SECTION H-H



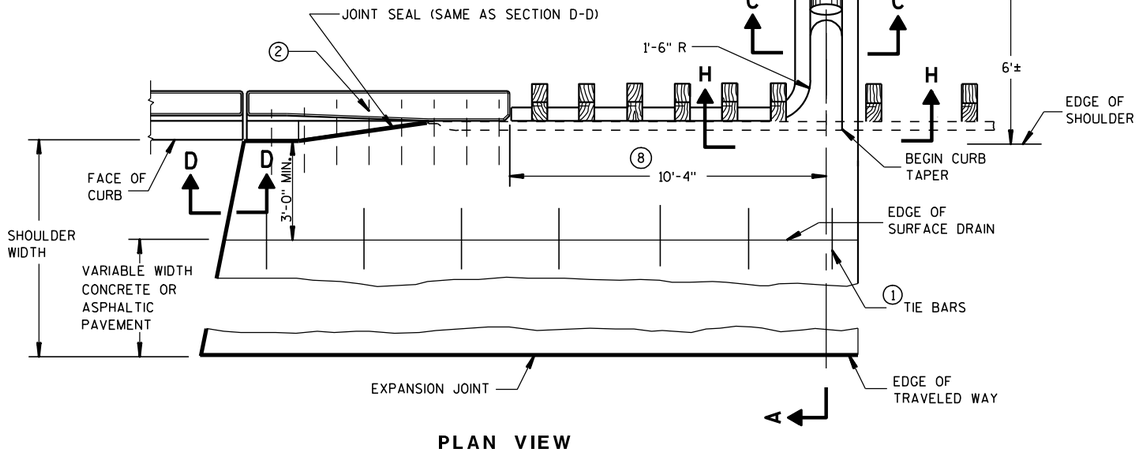
SECTION E-E



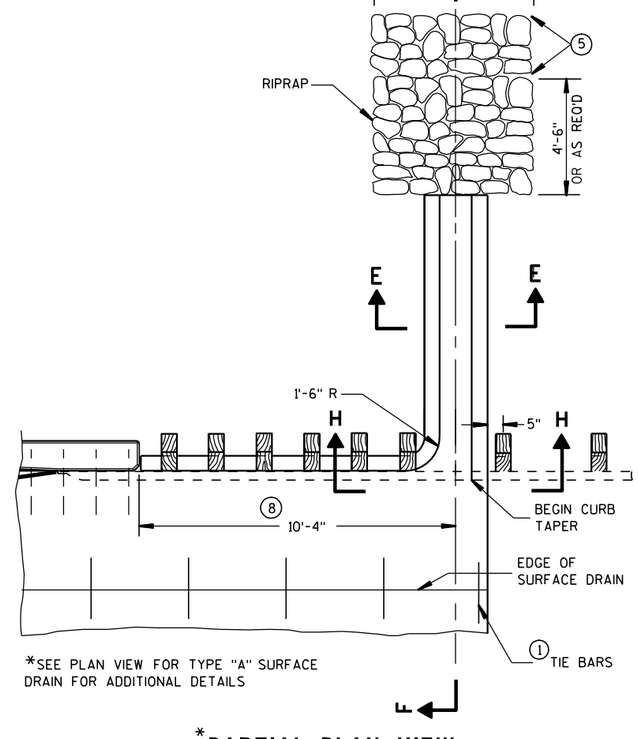
LOCATION OF TIE BARS IN WINGWALL



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"

CONCRETE SURFACE DRAINS
FLUME TYPE
AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

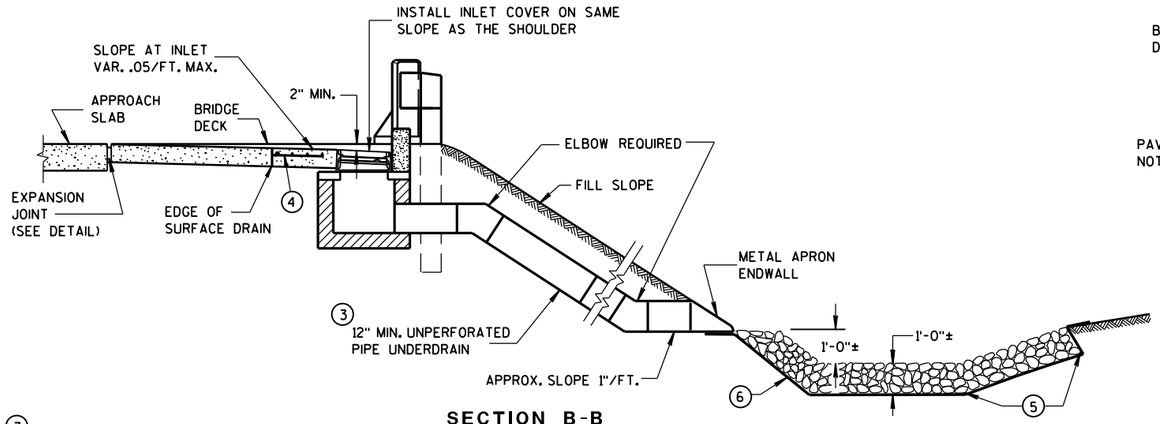
APPROVED
9/4/08
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
276
FHWA

6

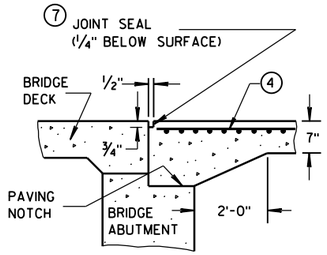
S.D.D. 8 D 2-6

6

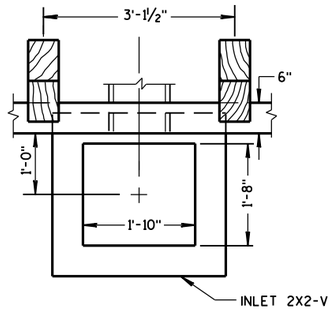
S.D.D. 8 D 2-6



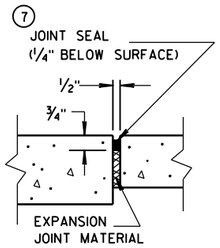
SECTION B-B



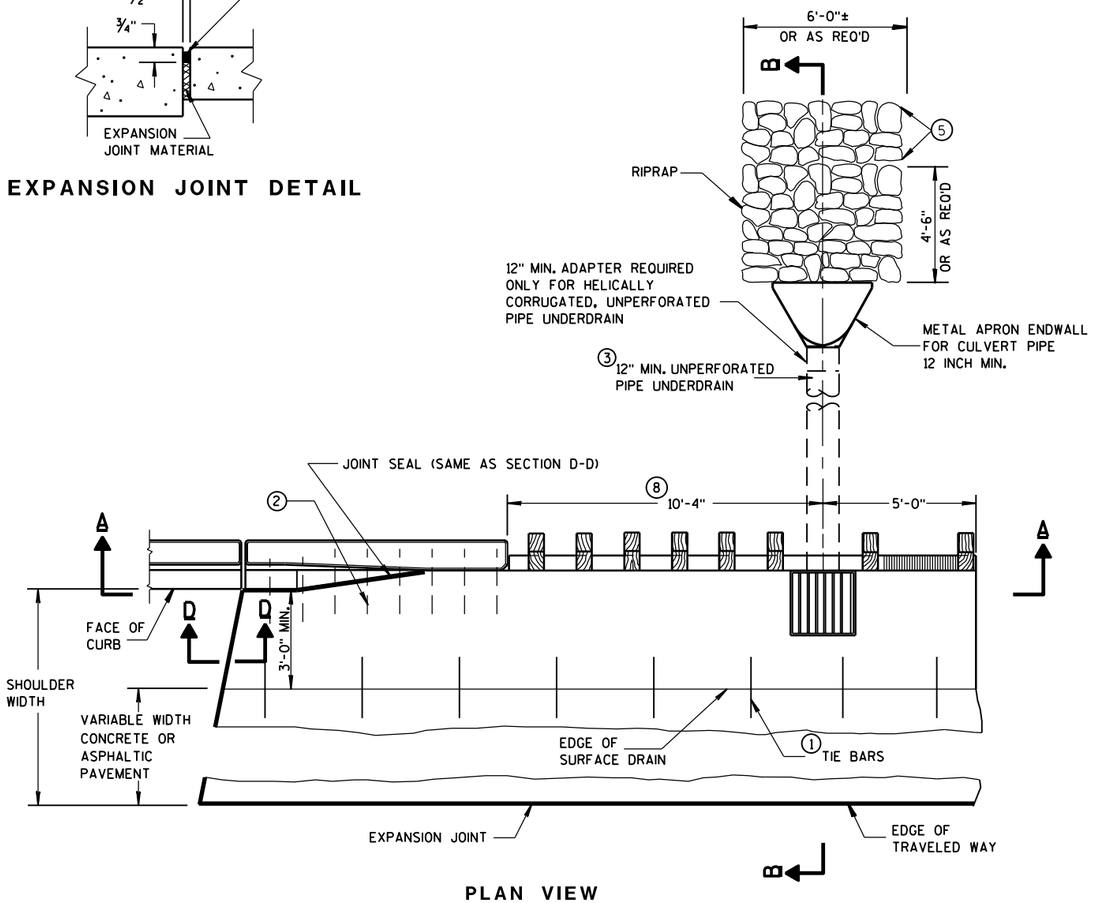
SECTION D-D



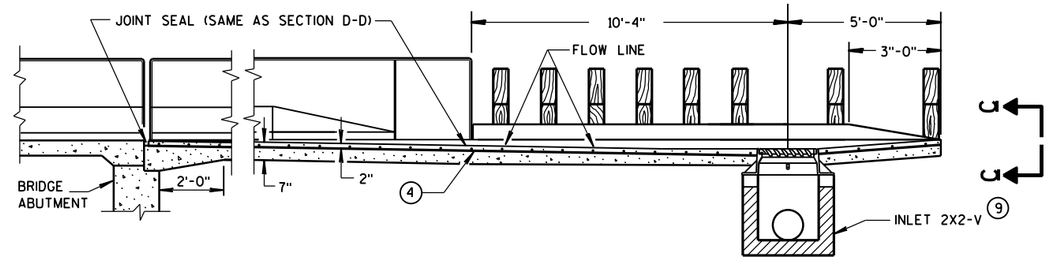
PLAN VIEW



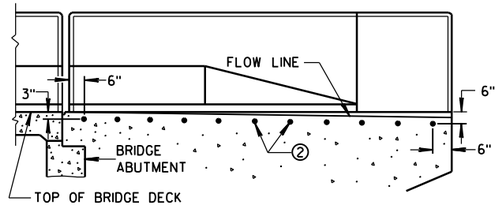
EXPANSION JOINT DETAIL



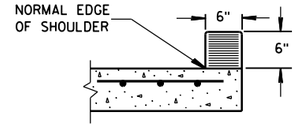
PLAN VIEW



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, 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".

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

277

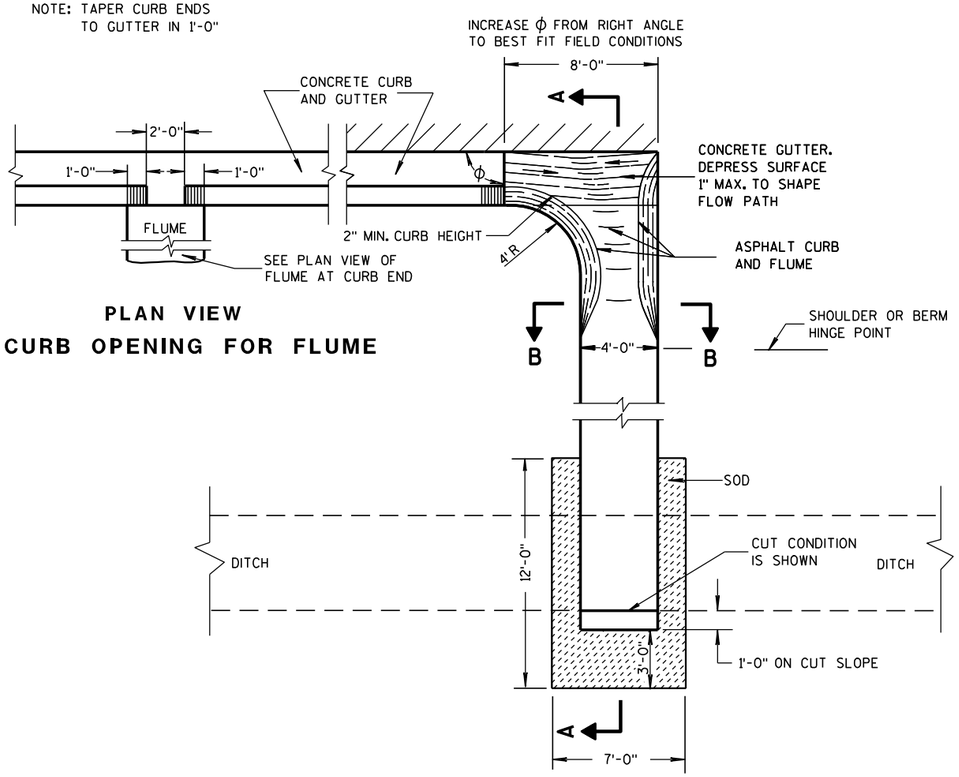
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S.D.D. 8 D 3-6

6

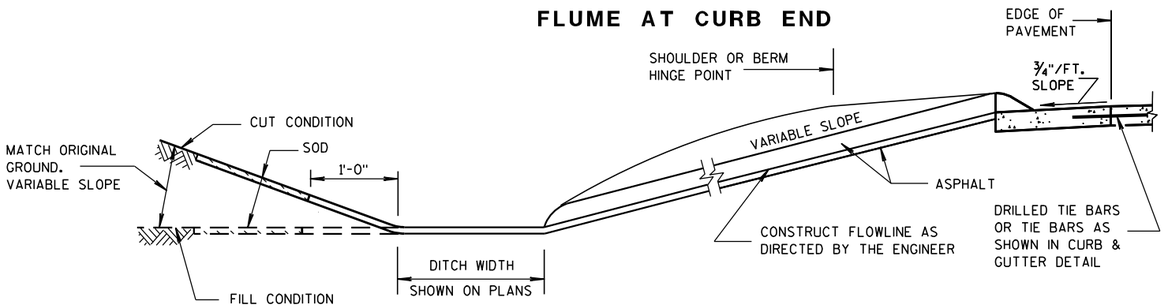
S.D.D. 8 D 3-6

ASPHALTIC FLUME

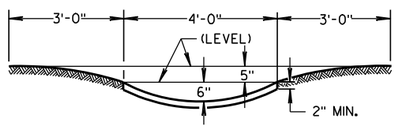


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

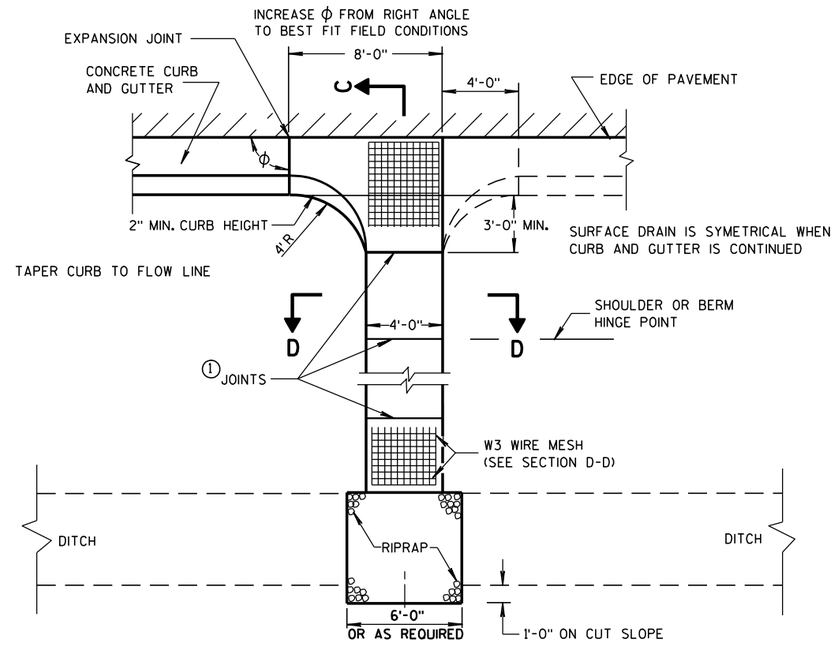
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

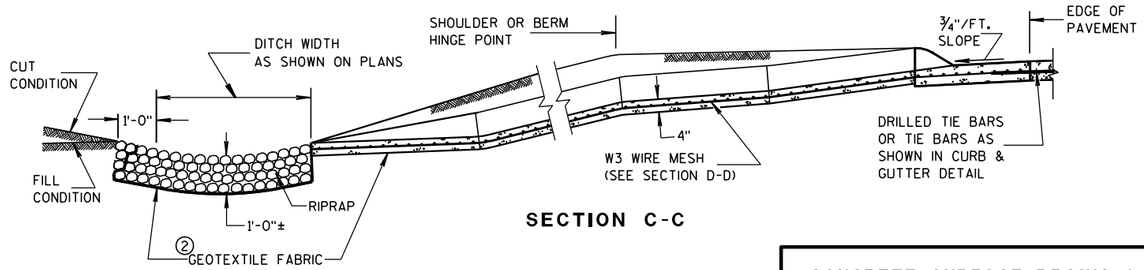
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

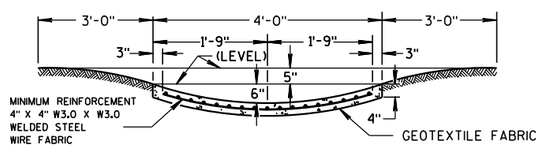
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

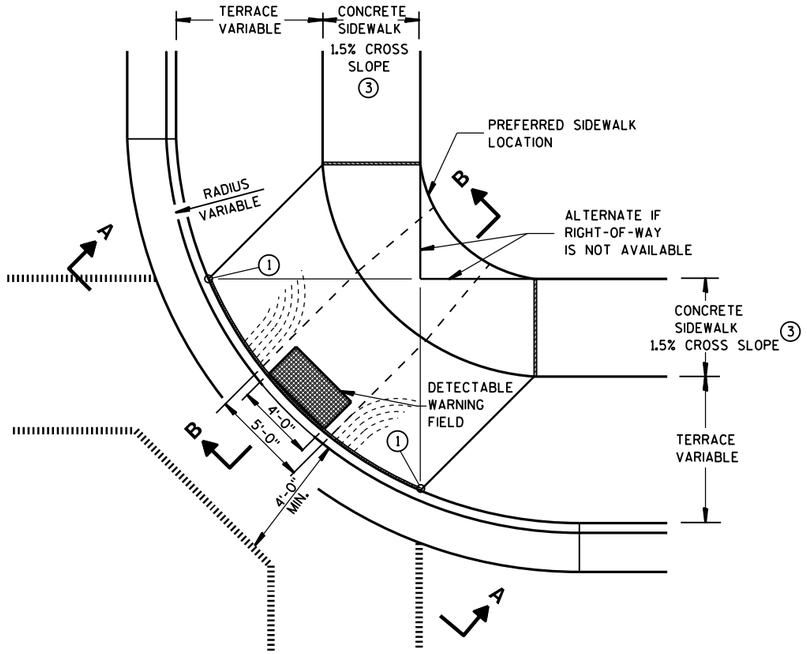
APPROVED
9-4-08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
278
[illegible]MENT
FHWA

6

S.D.D. 8 D 4-5

6

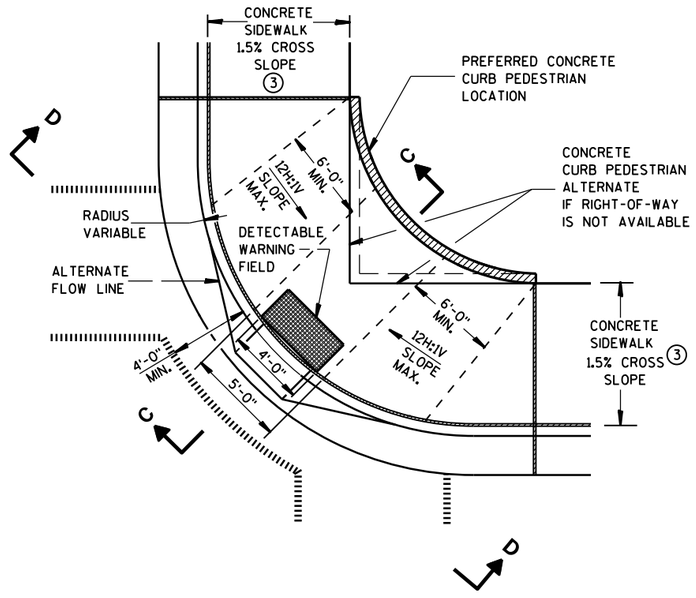
S.D.D. 8 D 4-5



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

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.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

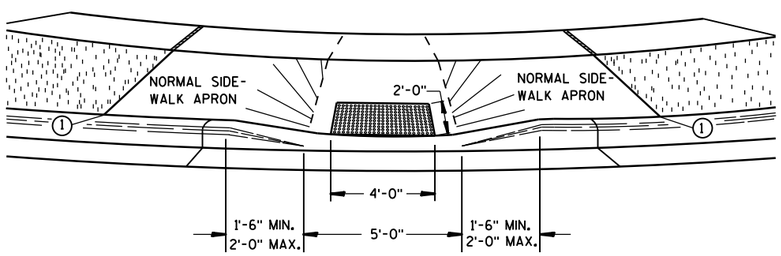
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

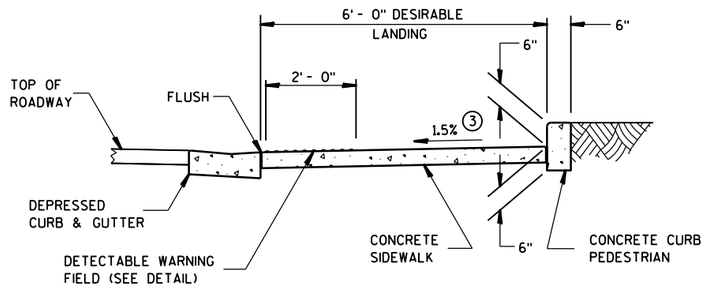
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

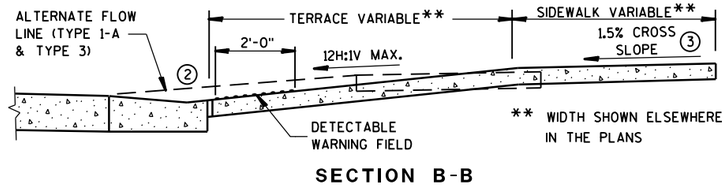
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



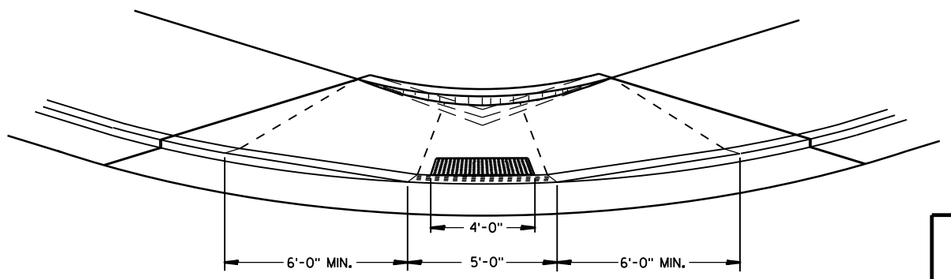
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

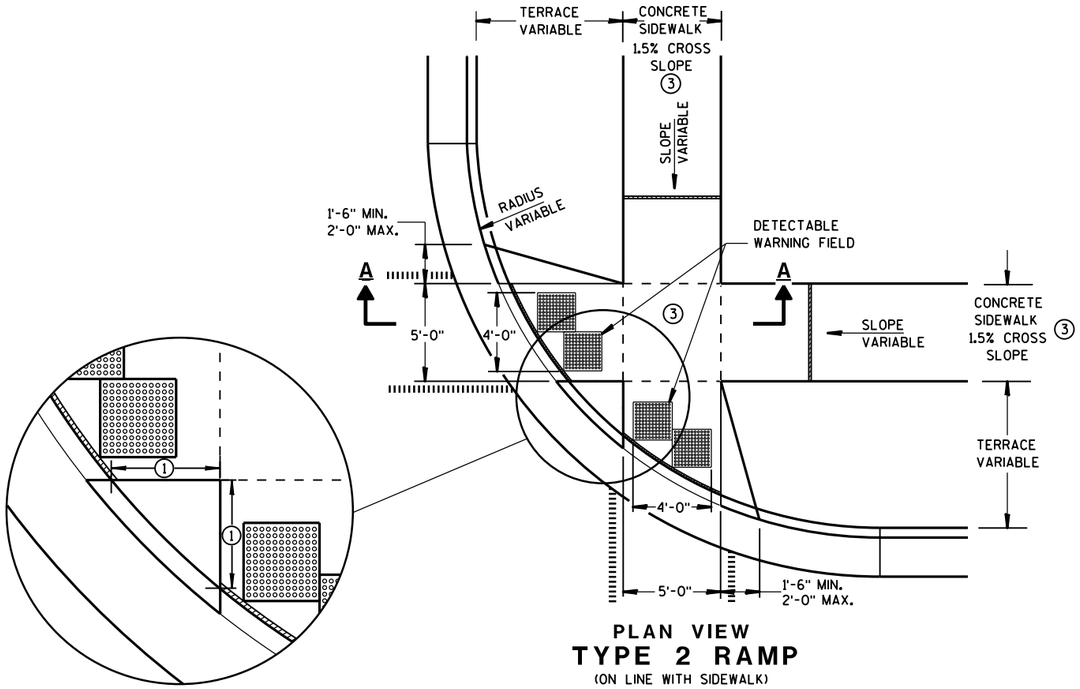
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

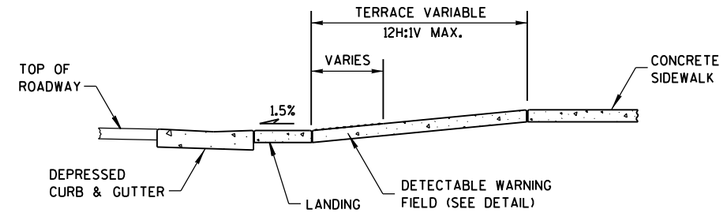
S.D.D. 8 D 5-15a

6

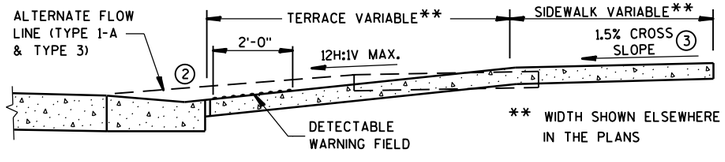
S.D.D. 8 D 5-15a



PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

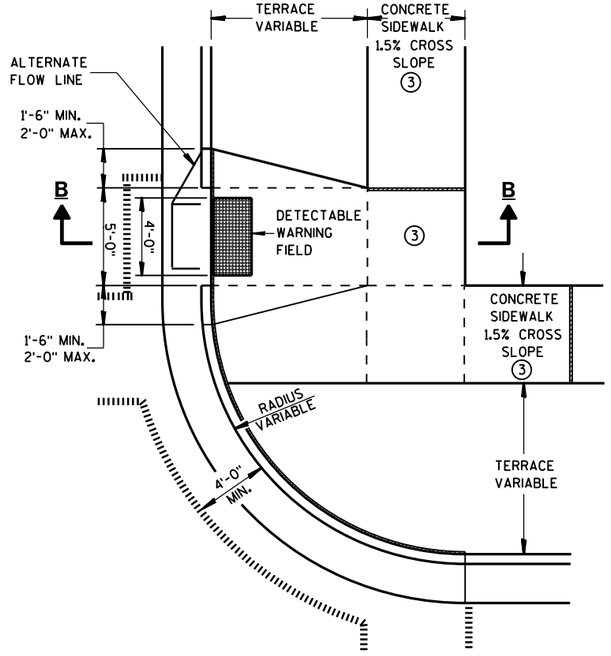
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



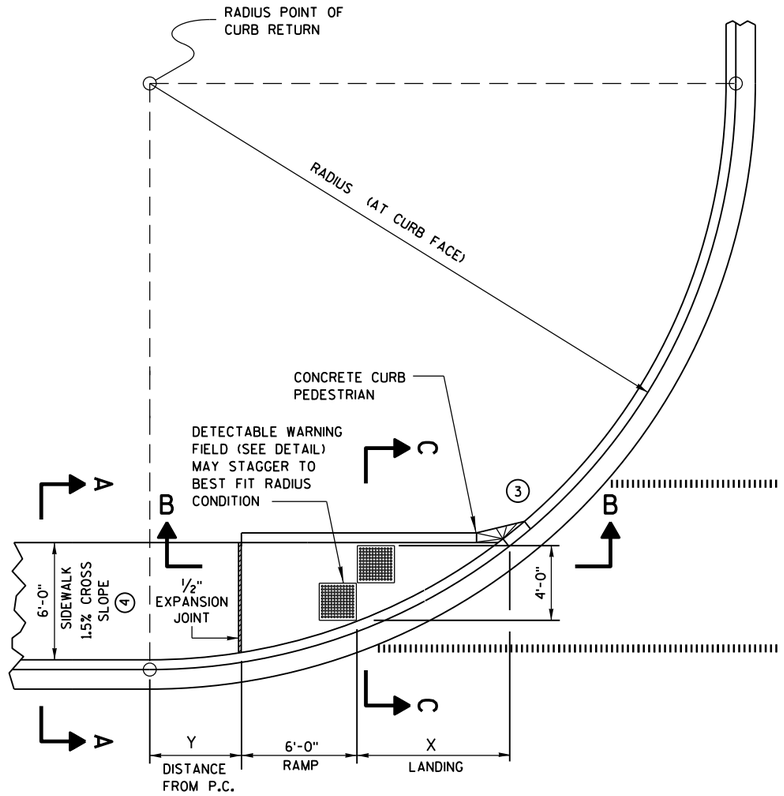
PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

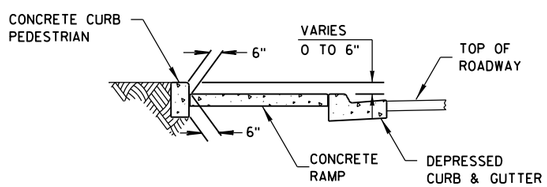
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

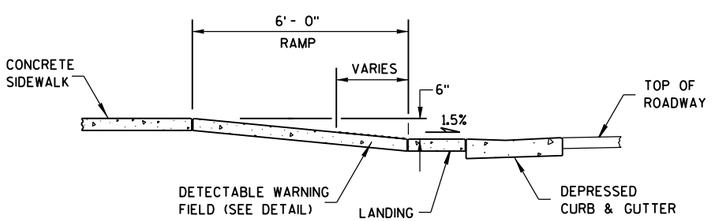
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



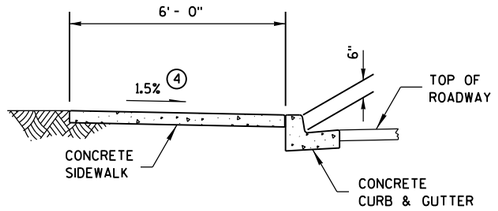
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

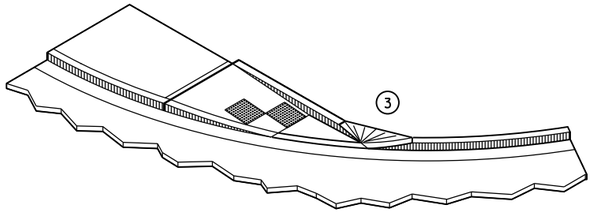
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

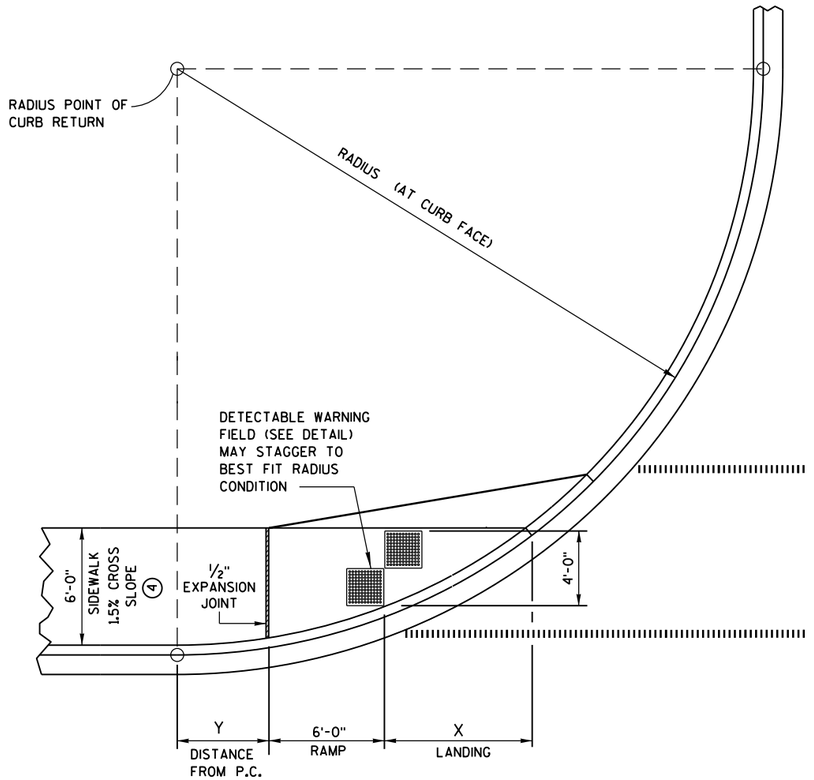
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

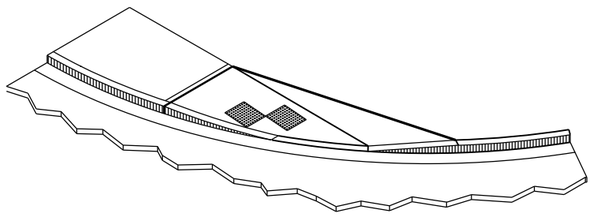
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

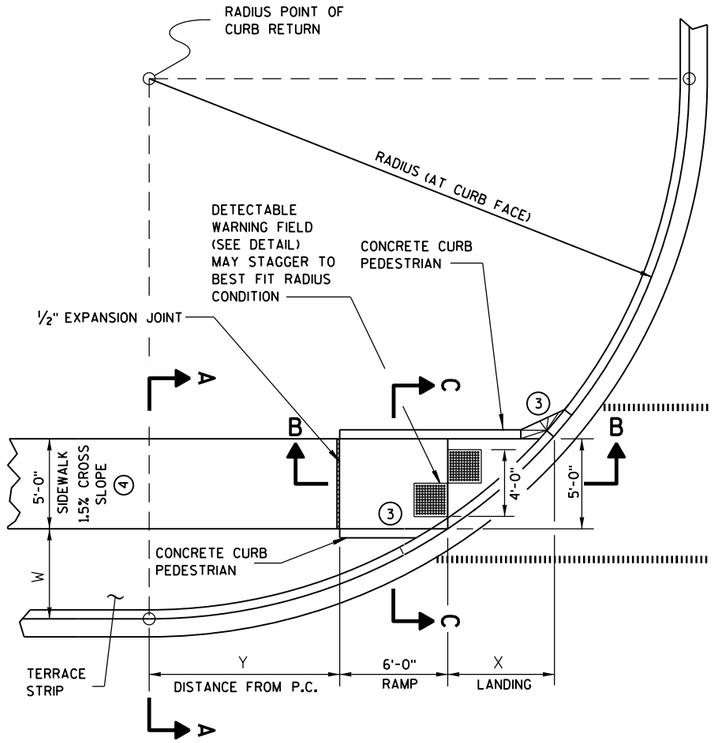
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-15c



CURB RAMP TYPE 4B
PLAN VIEW

LEGEND

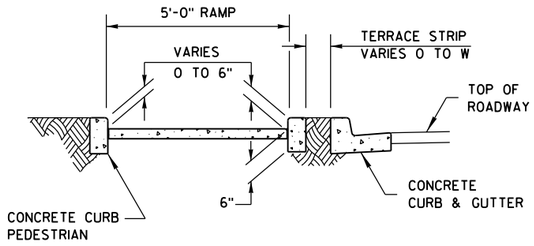
½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION C-C FOR TYPE 4B

GENERAL NOTES

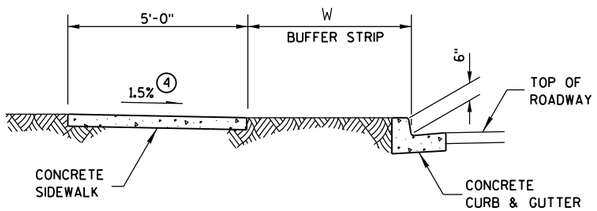
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

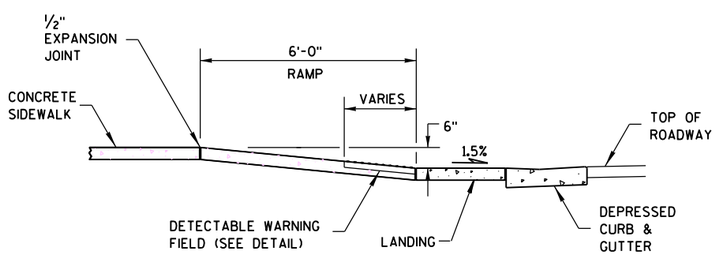
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

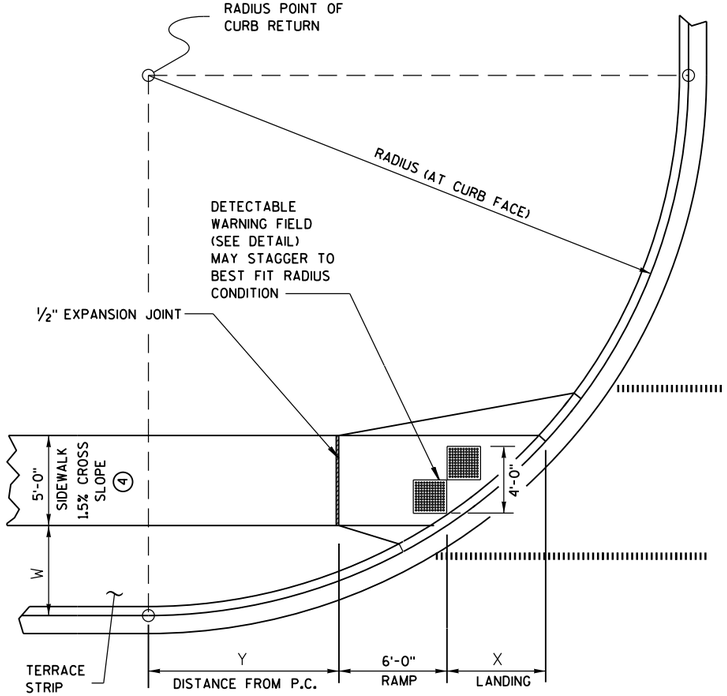
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



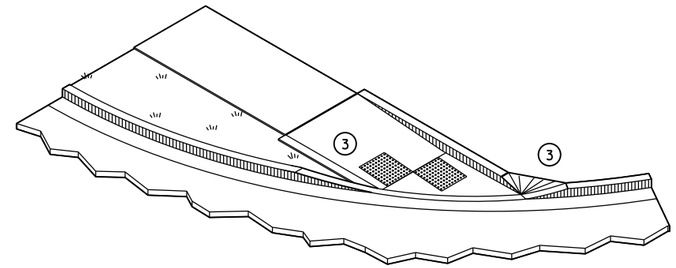
SECTION A-A FOR TYPE 4B



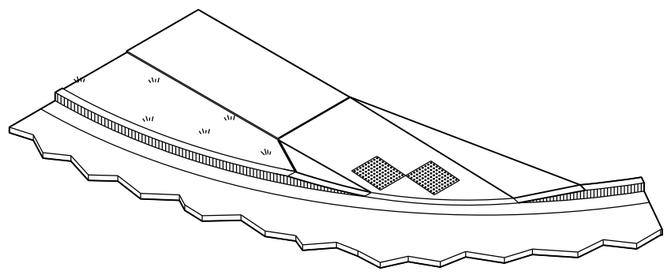
SECTION B-B FOR TYPE 4B



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



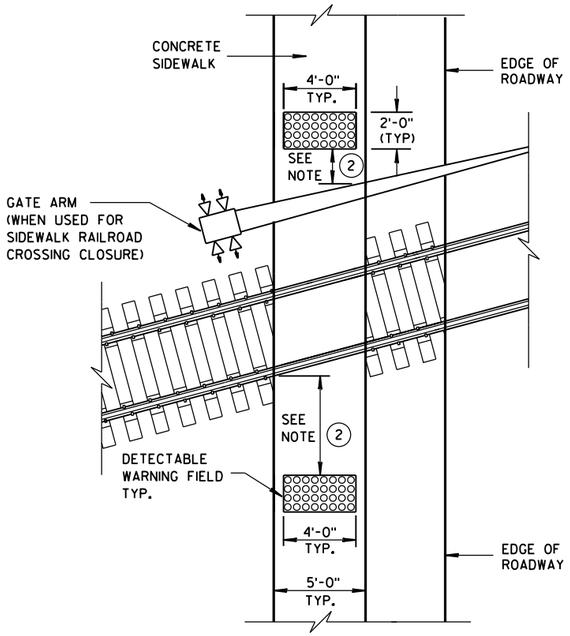
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

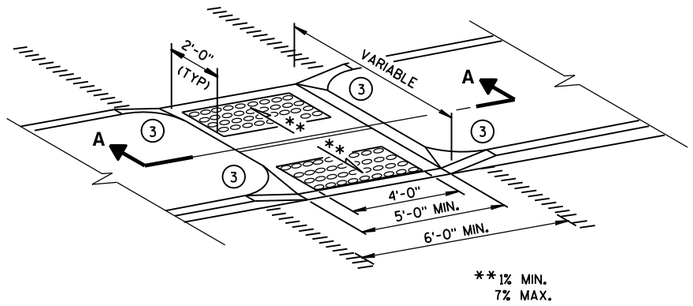
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-15d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

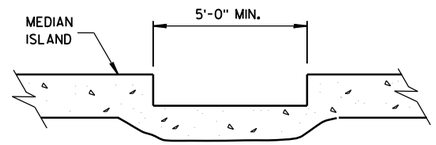
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(1) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

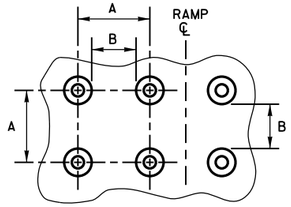
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



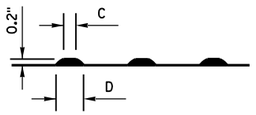
SECTION A-A



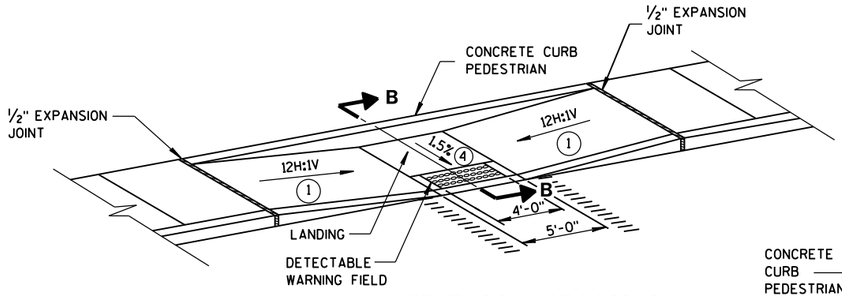
PLAN VIEW

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

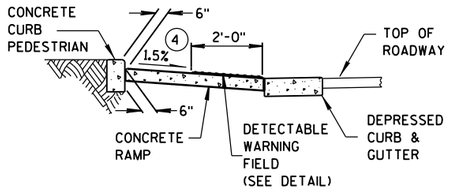
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

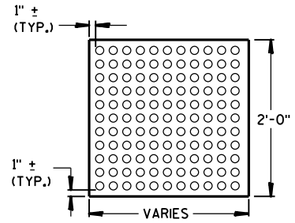


MID-BLOCK CROSSING
TYPE 7A



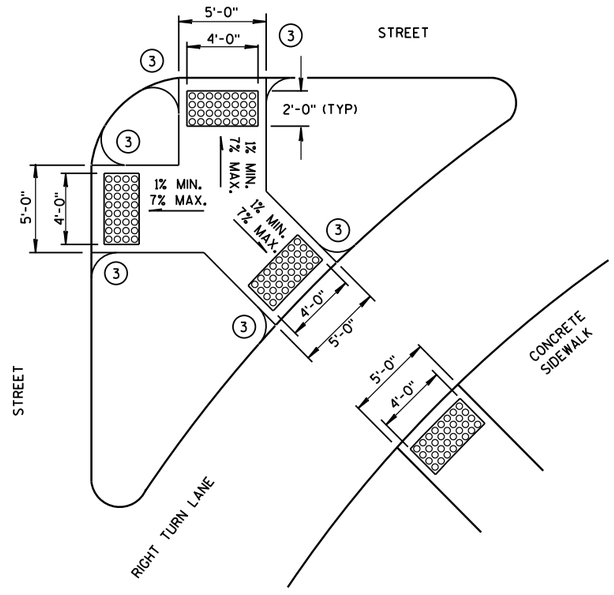
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

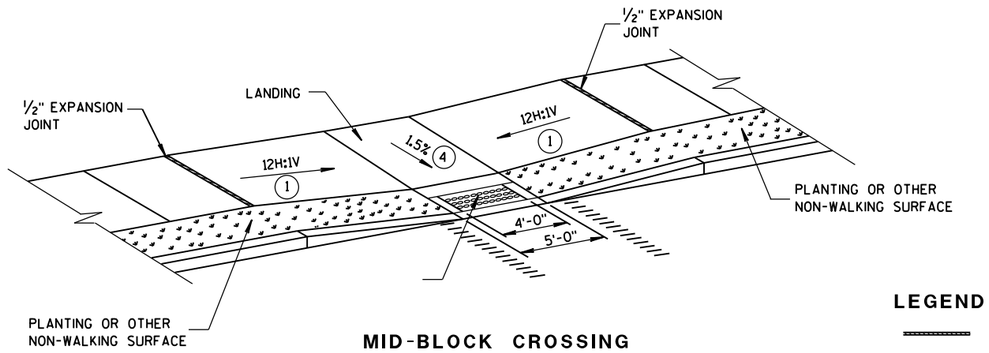


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

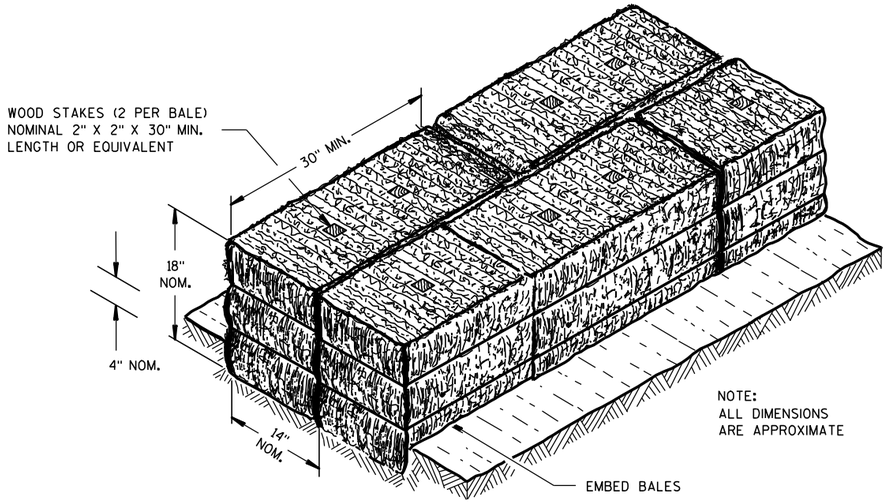
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

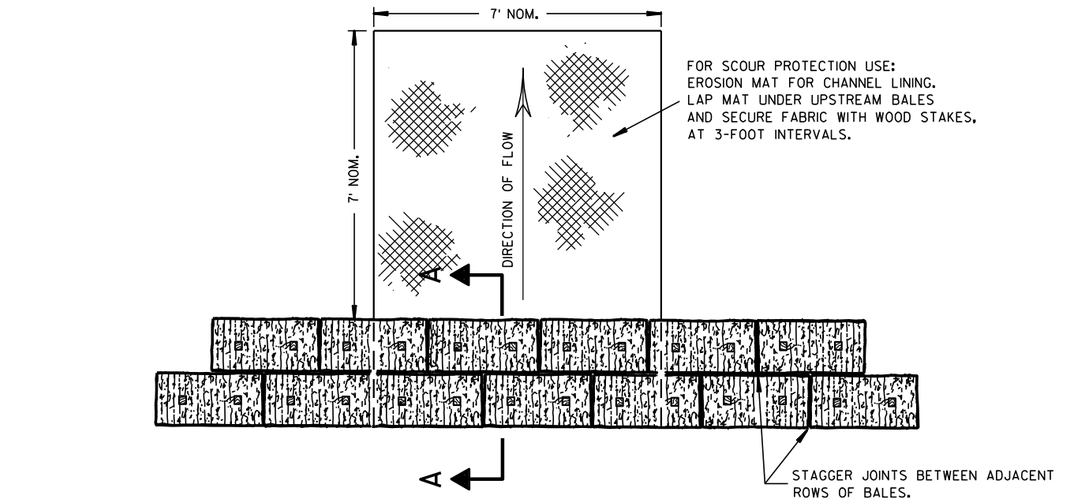
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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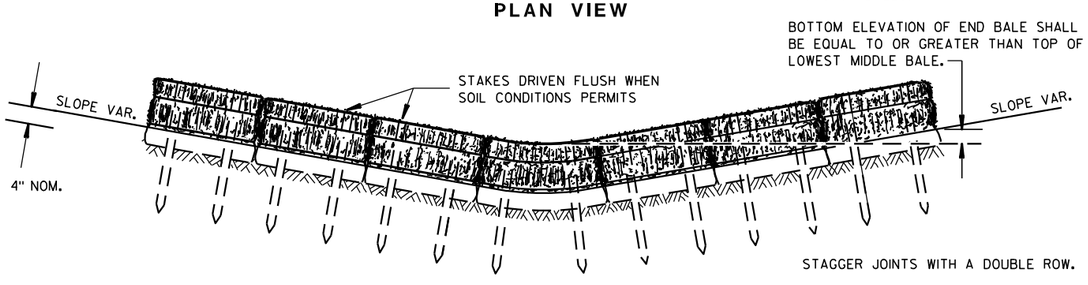
S.D.D. 8 D 5-15e



SECTION A-A



PLAN VIEW



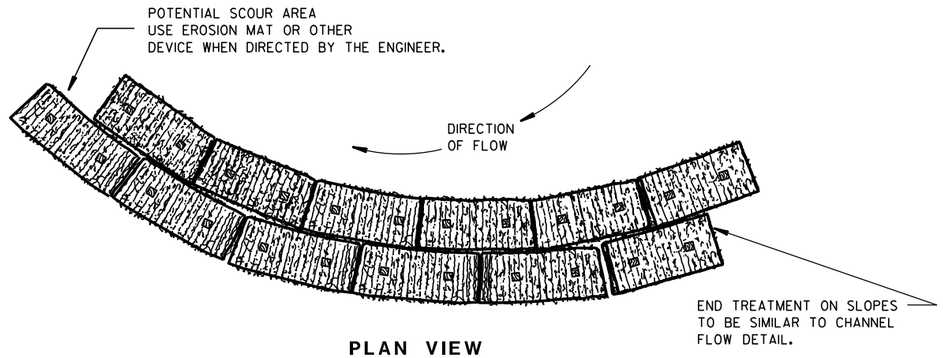
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

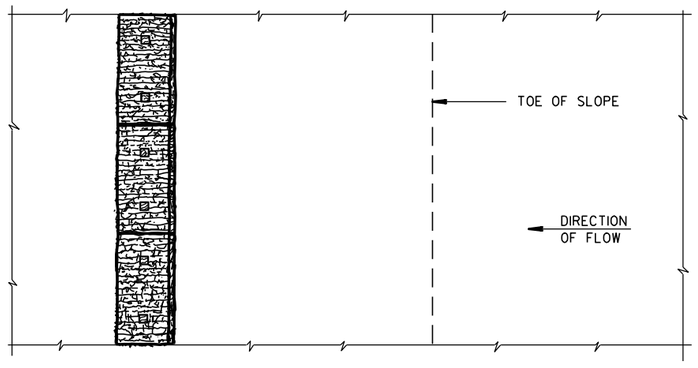
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

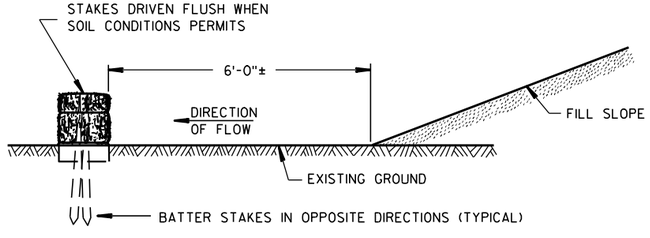


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

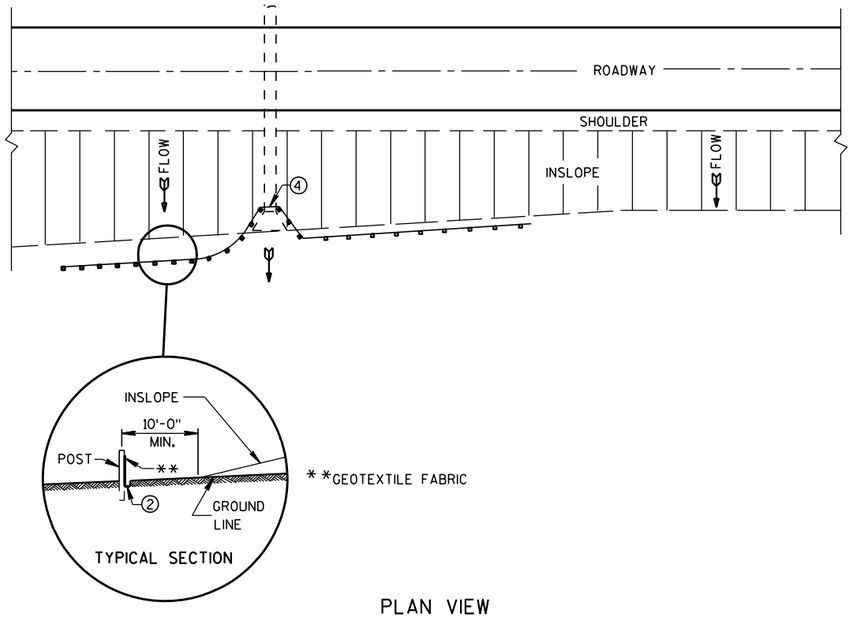
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

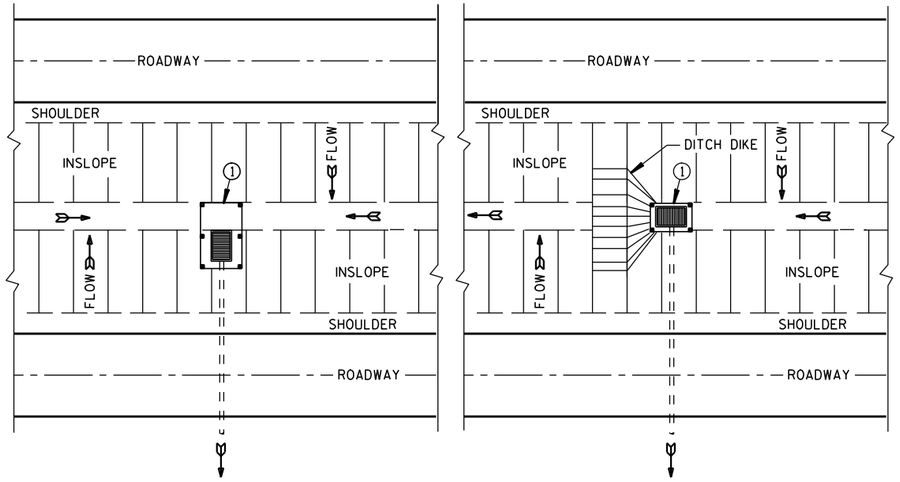
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

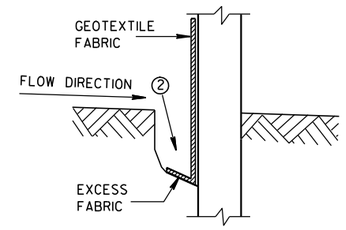
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

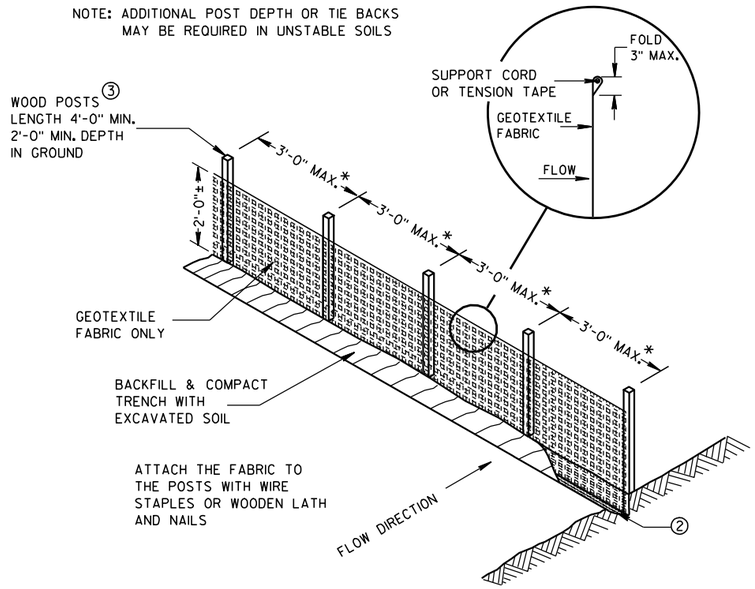
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

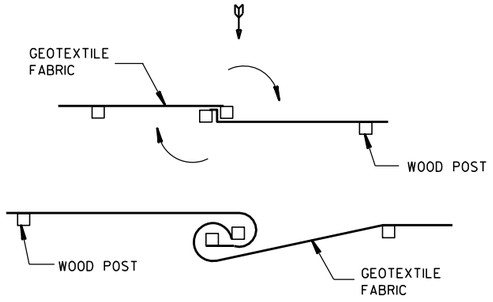


TRENCH DETAIL

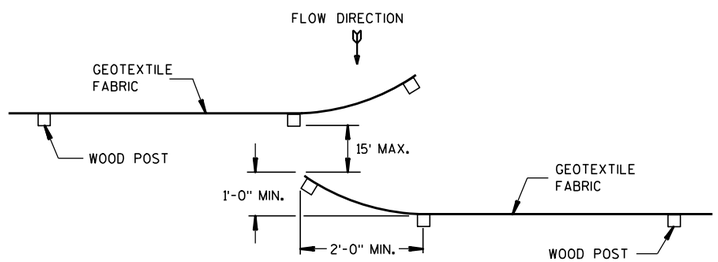


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

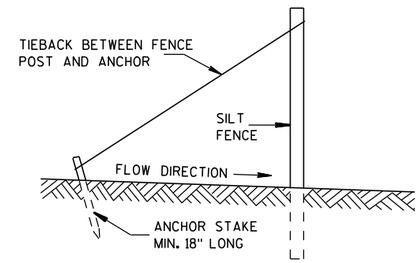


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

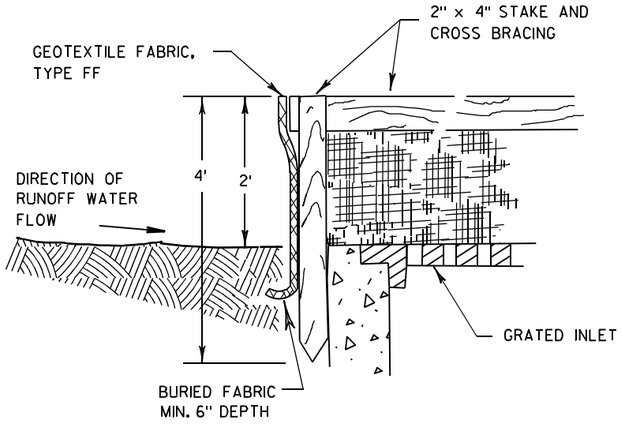
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

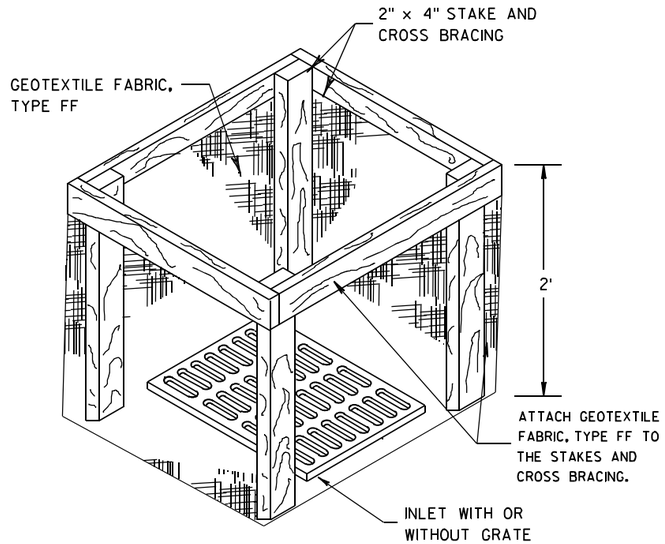
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S.D.D. 8 E 9-6

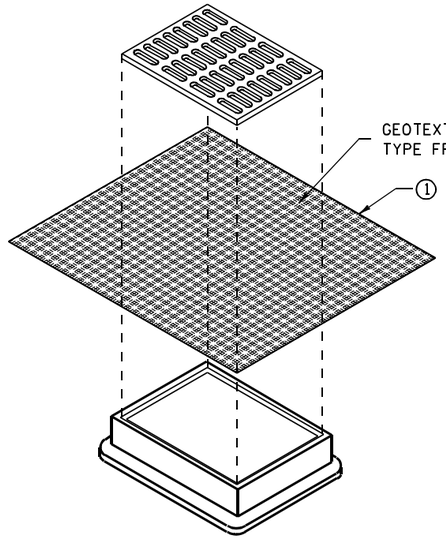
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S.D.D. 8 E 9-6



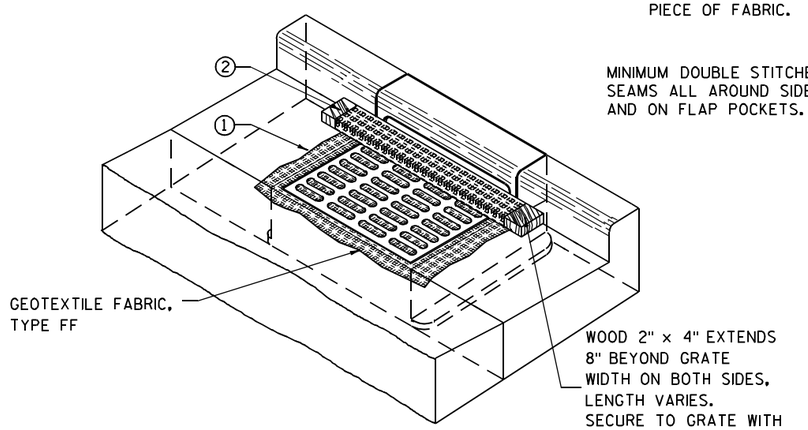


INLET PROTECTION, TYPE A

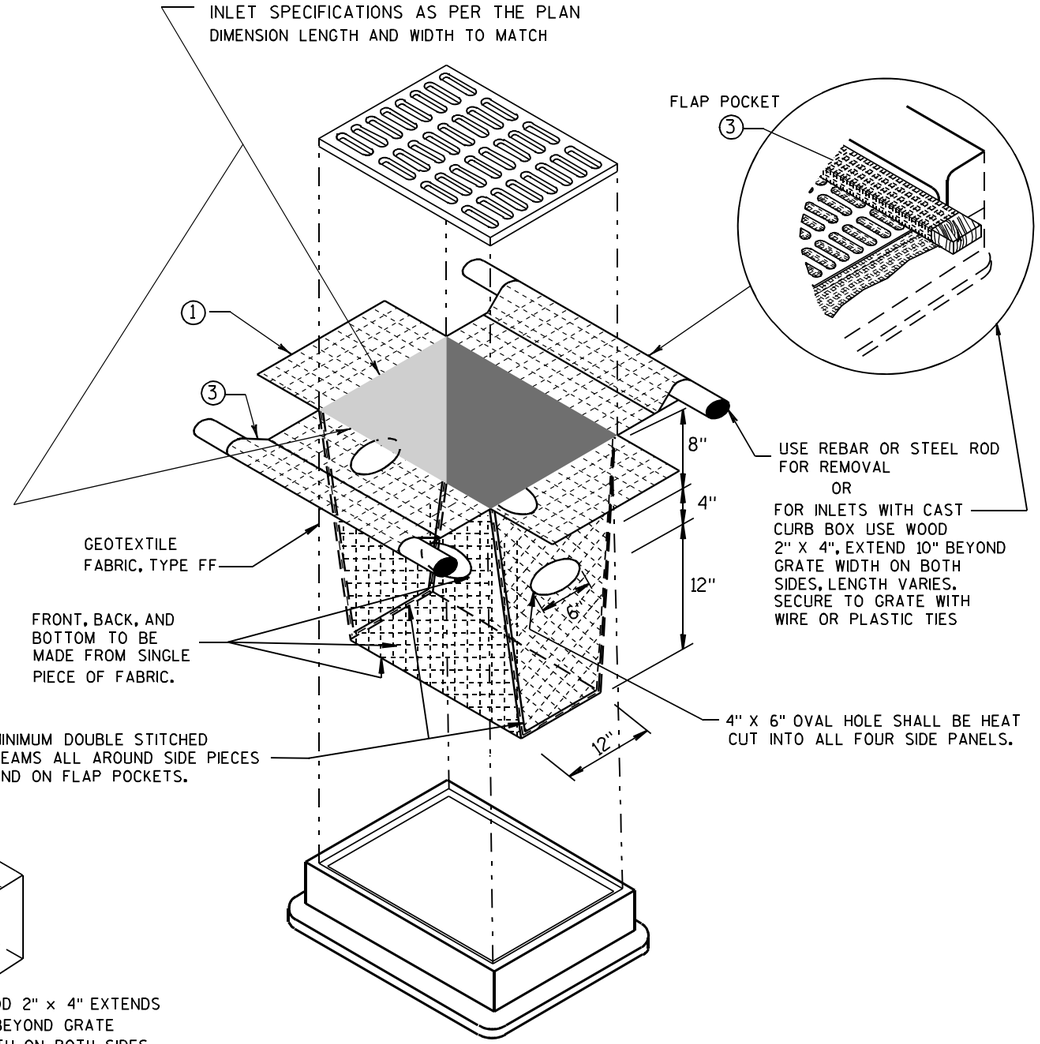


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

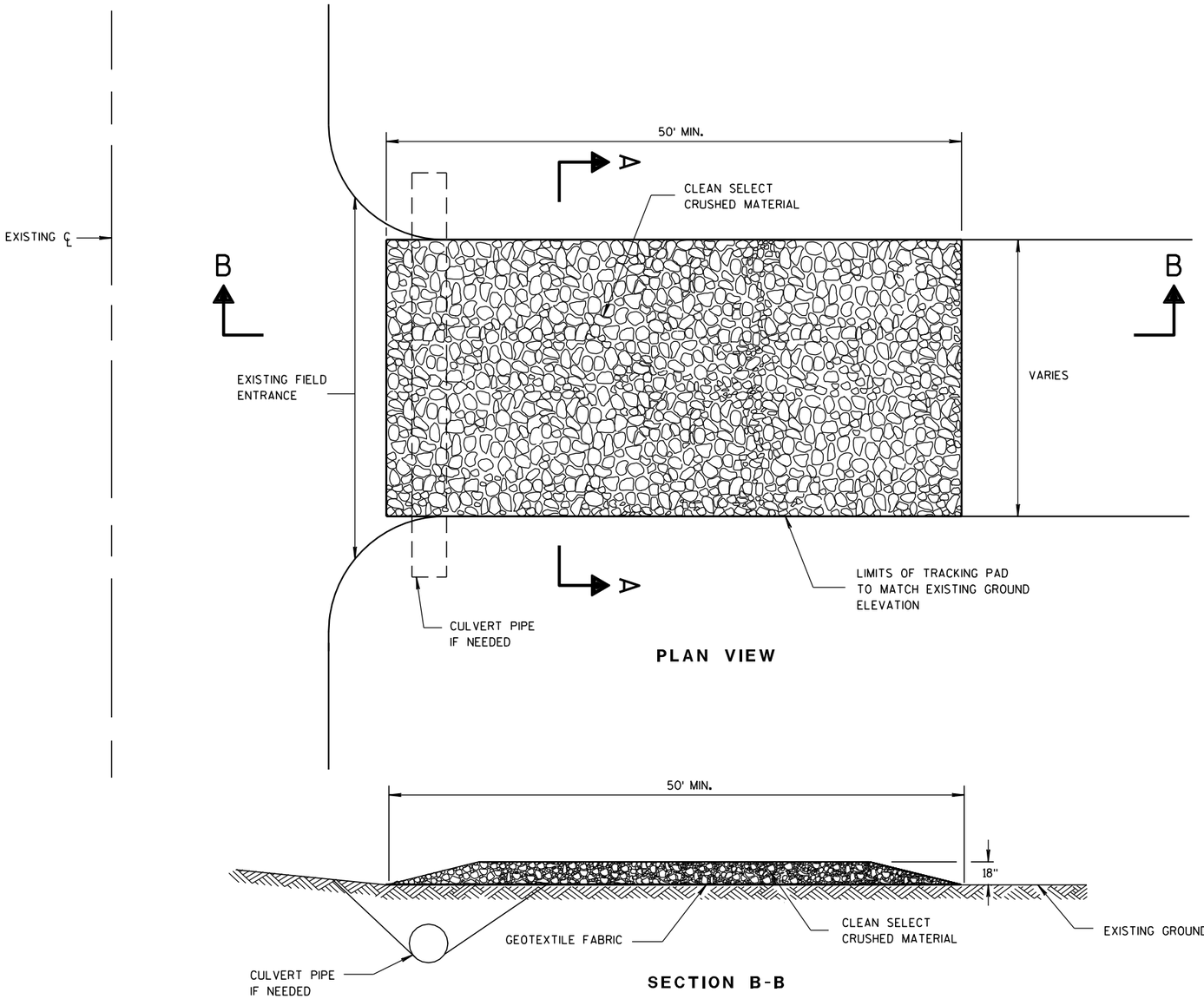
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



PLAN VIEW

SECTION B-B

GENERAL NOTES

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

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

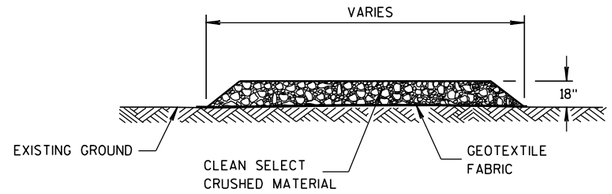
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A-A

TRACKING PAD

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 14-1

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

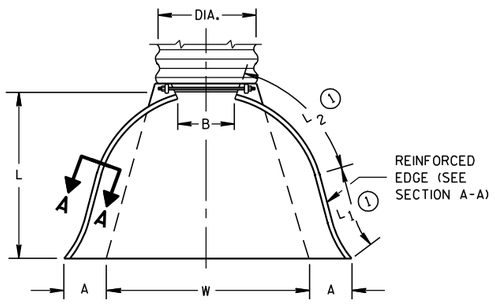
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

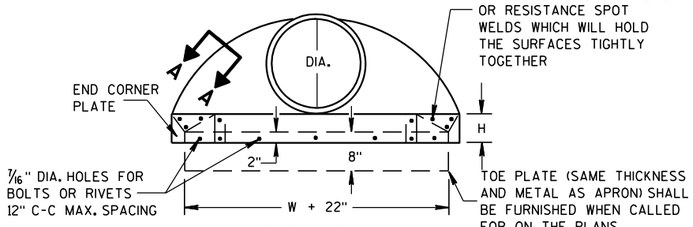
REINFORCED CONCRETE APRON ENDWALLS

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

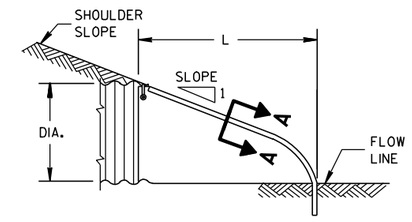
*MINIMUM
**MAXIMUM



PLAN VIEW

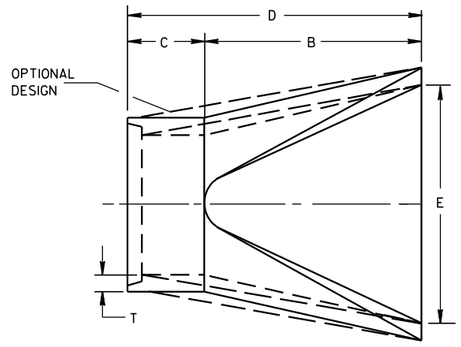


END VIEW

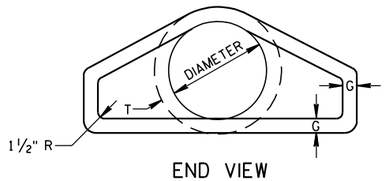


SIDE ELEVATION

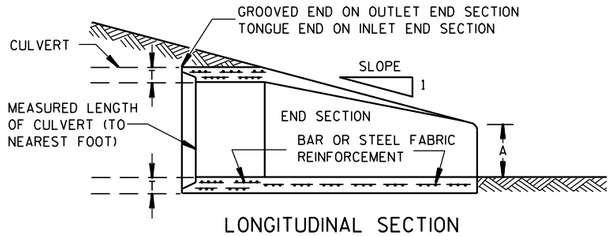
METAL ENDWALLS



PLAN

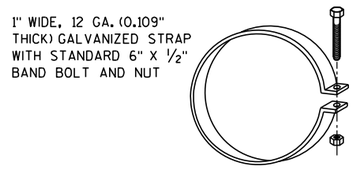


END VIEW



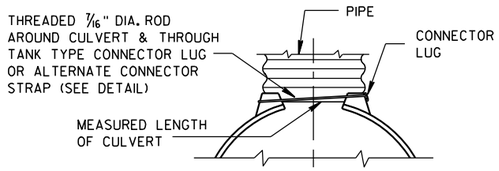
LONGITUDINAL SECTION

CONCRETE ENDWALLS

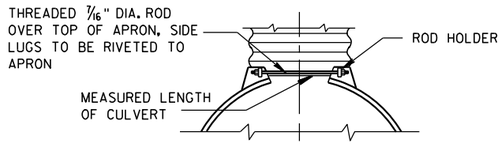


ALTERNATE FOR TYPE 1 CONNECTION

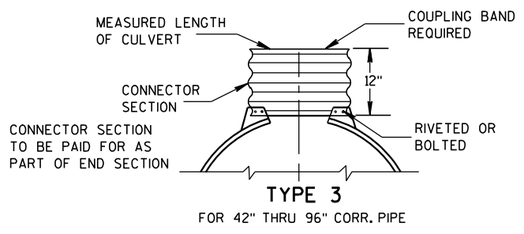
END SECTION CONNECTOR STRAP



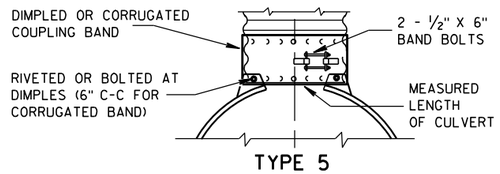
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

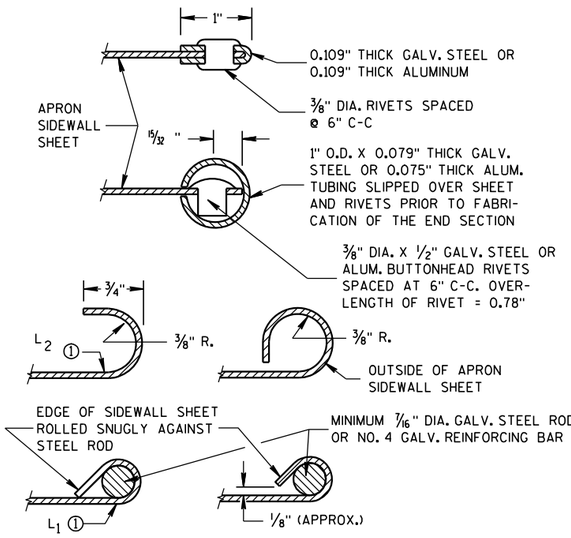
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

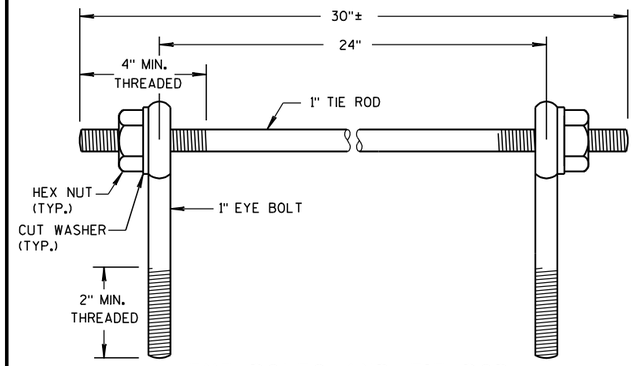
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

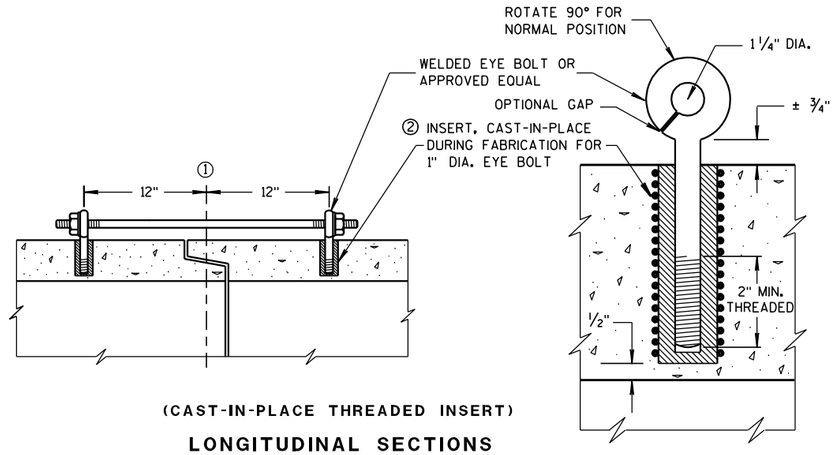
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP 288 NEER
FHWA

6

S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

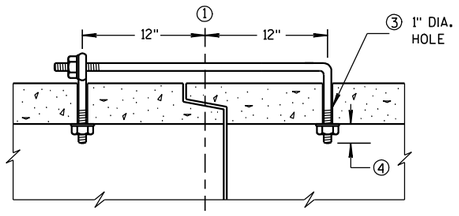
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

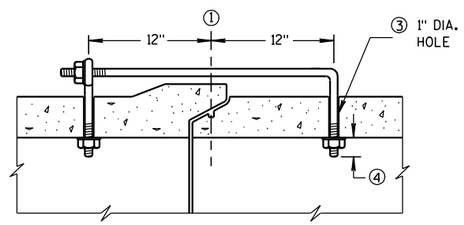
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

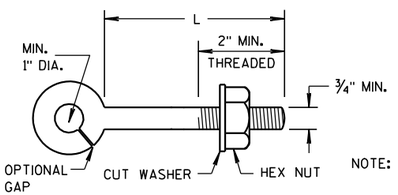


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

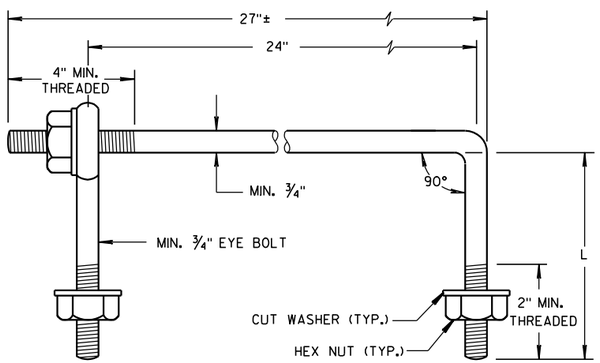
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

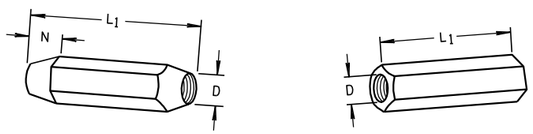
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

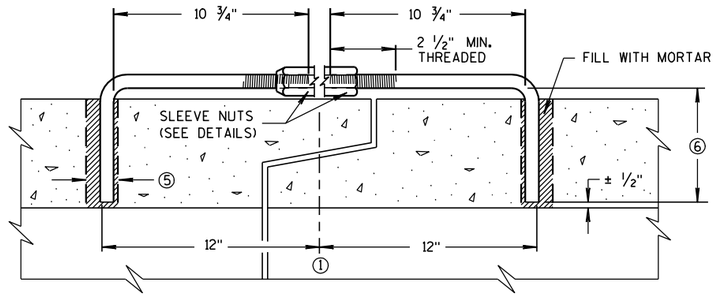
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

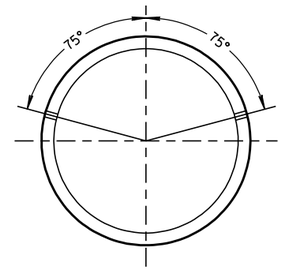
SLEEVE NUTS



LONGITUDINAL SECTION

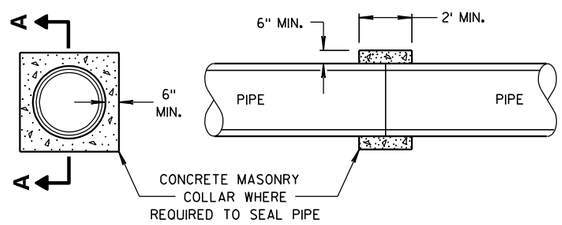
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

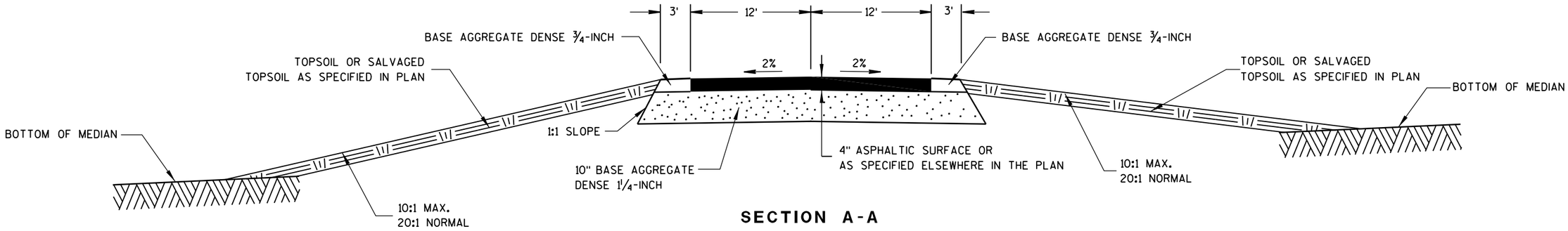
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

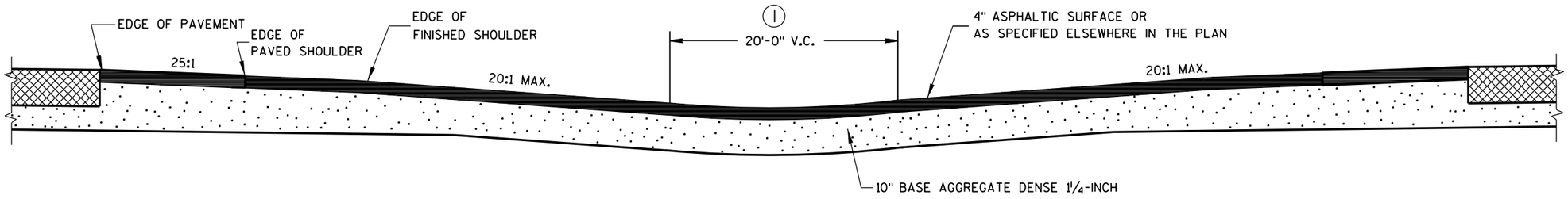
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
289
FHWA

6

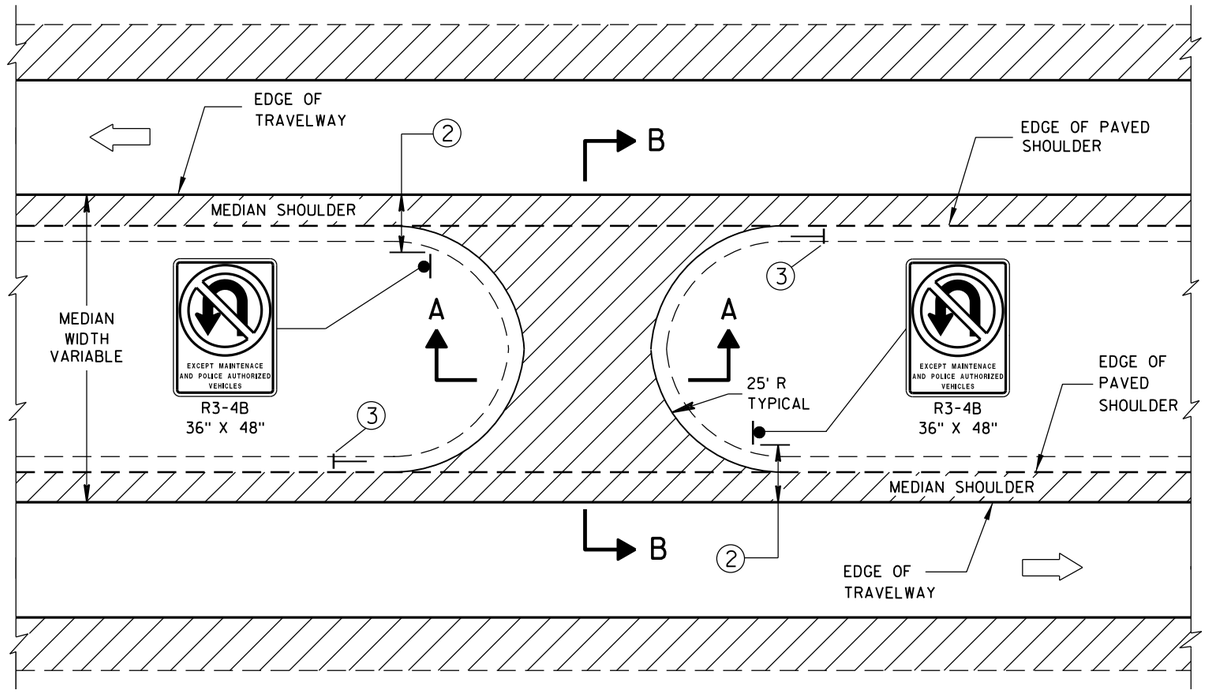
S.D.D. 8 F 4-7



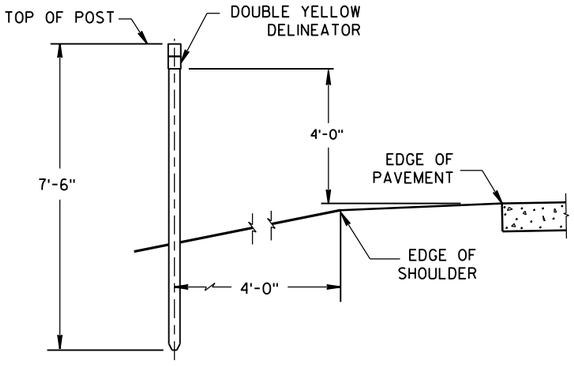
SECTION A-A



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

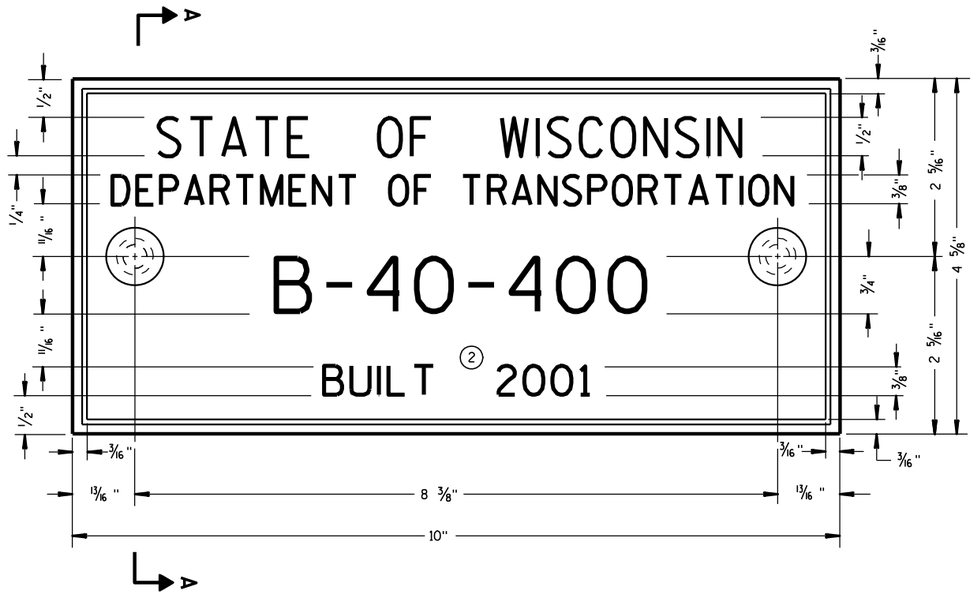
FHWA

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S.D.D. 11 A 1-5

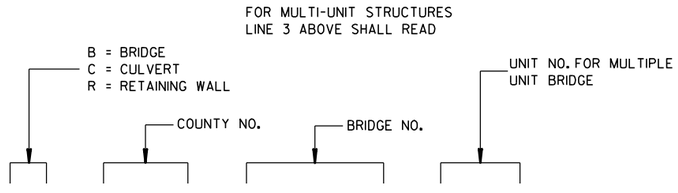
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S.D.D. 11 A 1-5



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

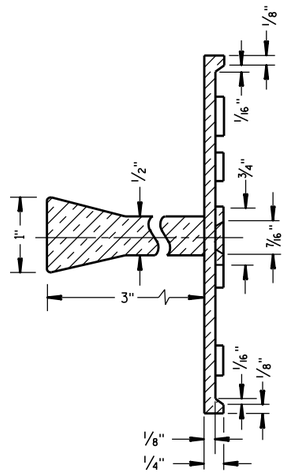
GENERAL NOTES

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.

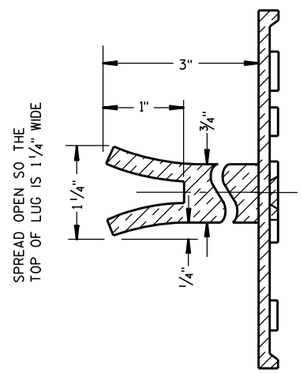
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

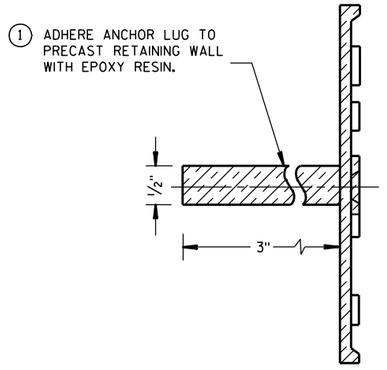
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

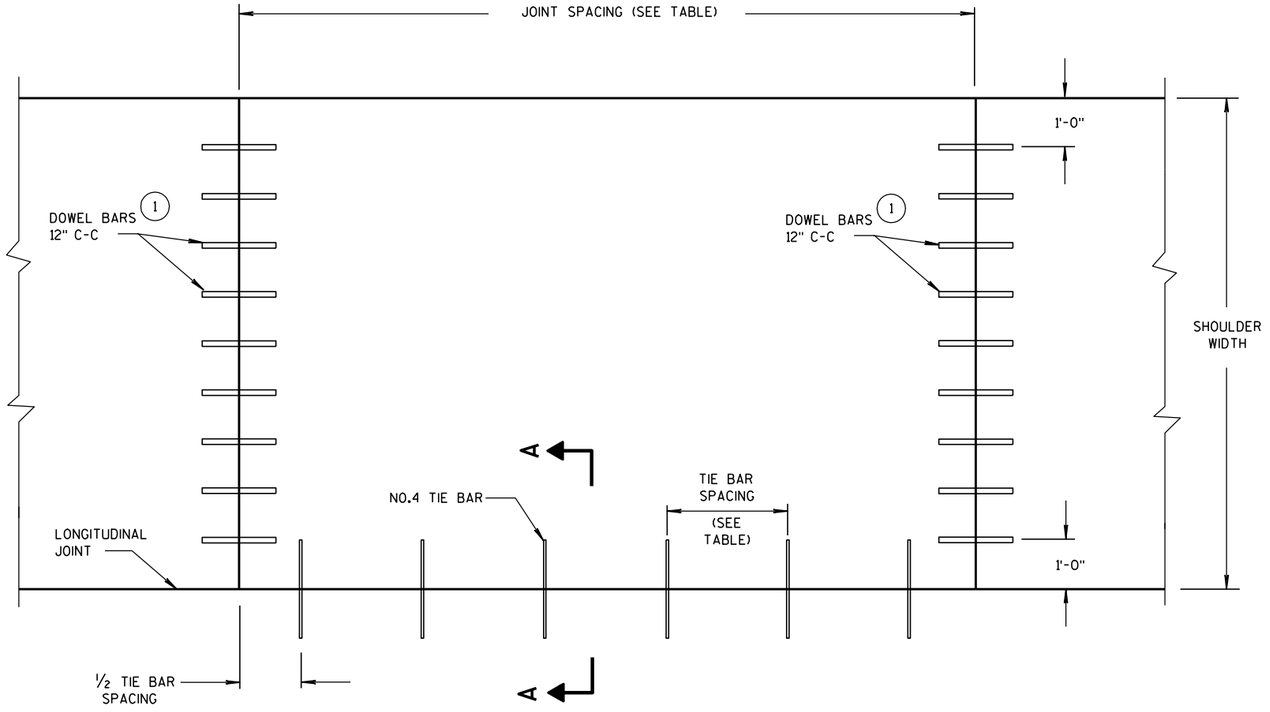
APPROVED

3/26/10 DATE — /S/ Scot Beck — CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

6

S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

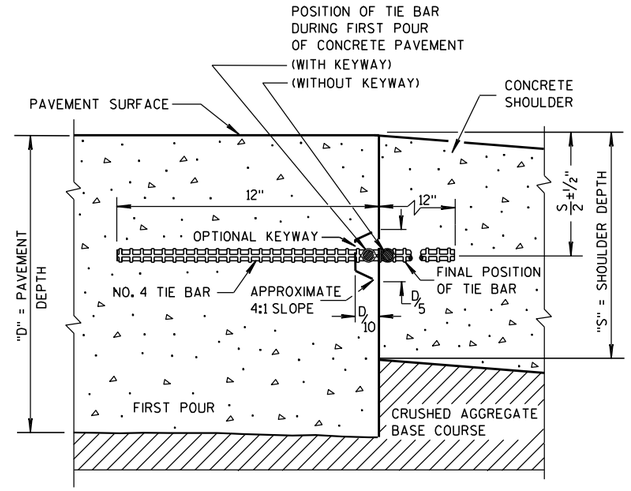
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

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

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



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

PAVEMENT TYPE OF TRAFFIC LANES	TIE BAR SPACING	SHOULDER JOINT SPACING
NON-REINFORCED	30"	MATCH JOINT SPACING OF ADJACENT TRAFFIC LANE
CONTINUOUSLY REINFORCED	30"	15' FOR 6' TO 10' WIDE SHOULDERS
CONTINUOUSLY REINFORCED	36"	12' FOR 3' WIDE SHOULDERS

(1) **PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE**

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

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

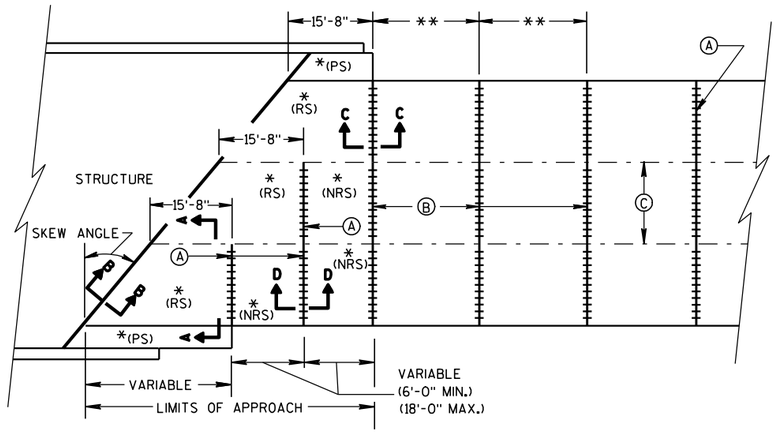
CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

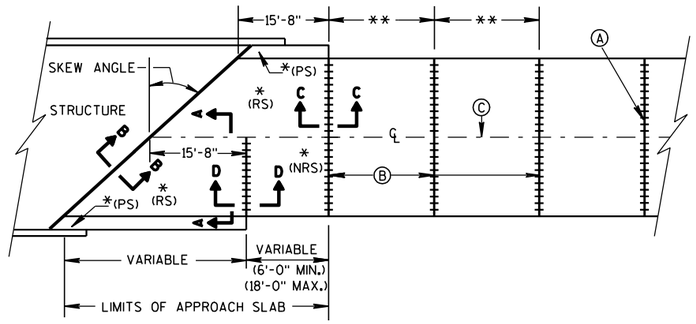
APPROVED
8/15/2011 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & D — INEER
FHWA

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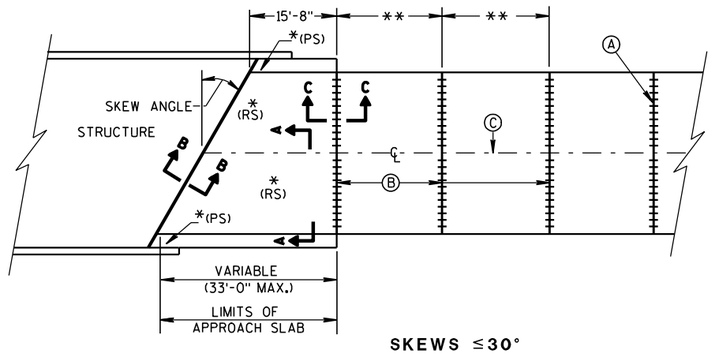
S.D.D. 13 A 3-5



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



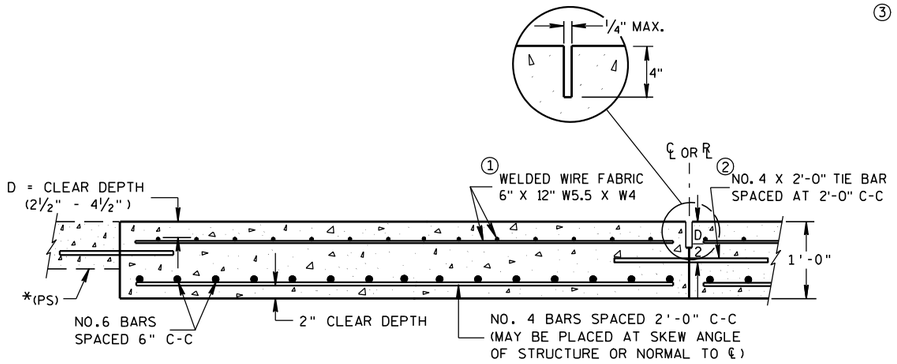
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

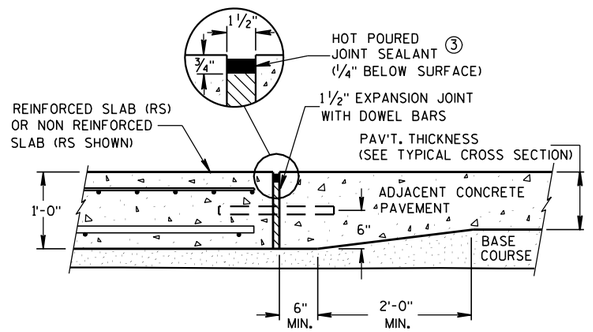
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

**STANDARD TRANSVERSE JOINT SPACING
(SEE SDD 13C4, SDD 13C11, & SDD 13C13)

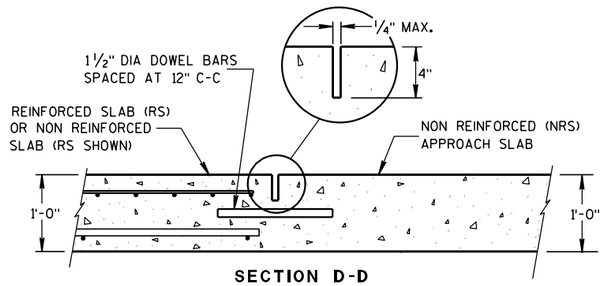
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
(C) STANDARD LONGITUDINAL JOINT AND TIE BARS.



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

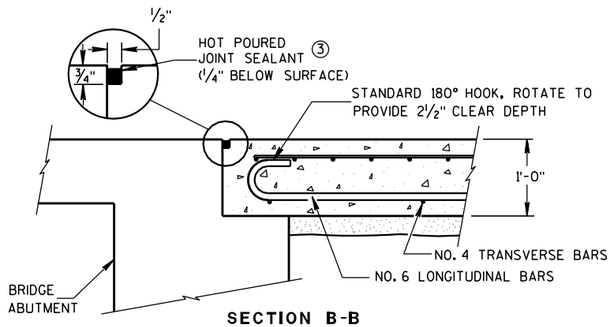
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

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.

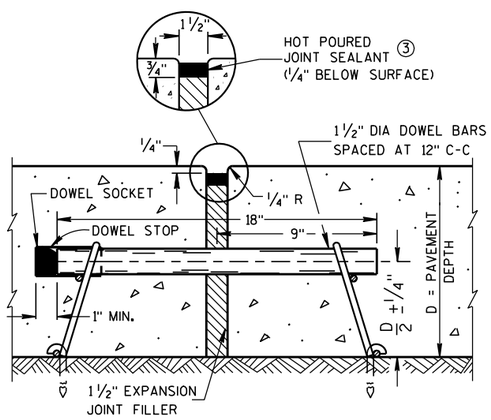
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

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

③ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



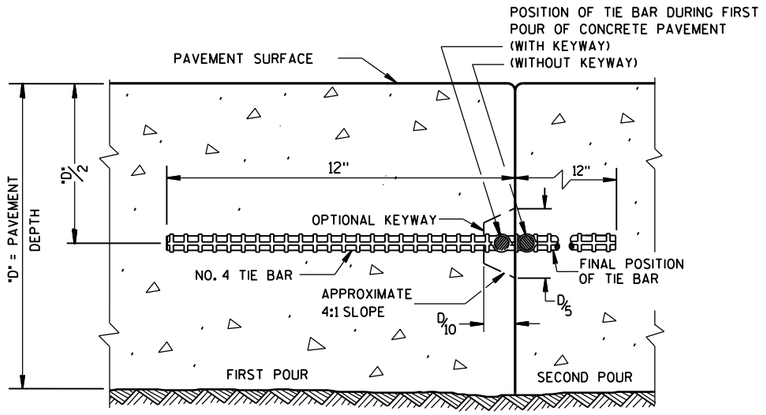
EXPANSION JOINT

CONCRETE PAVEMENT APPROACH SLAB

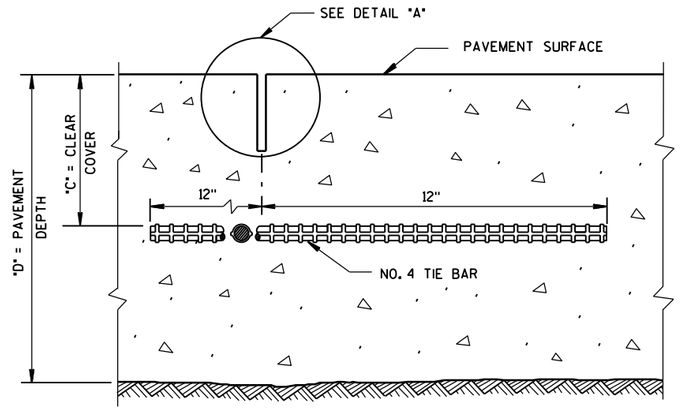
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/11/2009 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DESIGN ENGINEER
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S.D.D. 13 B 2-6



CONSTRUCTION JOINT



SAWED JOINT

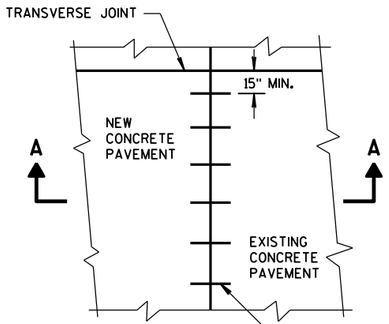
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

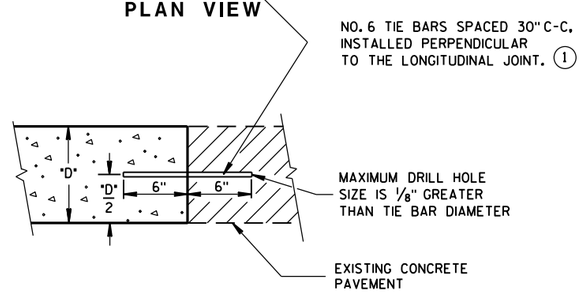
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

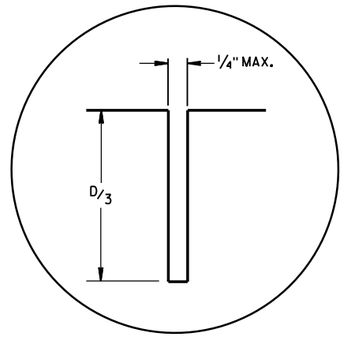


PLAN VIEW



SECTION A-A

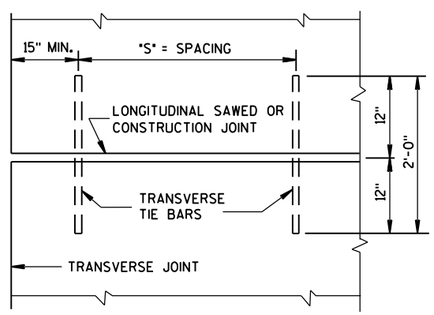
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 1/2"	3"±1/2"	48"	42"
7, 7 1/2"	3 1/4"±1"	45"	36"
8, 8 1/2"	3 3/4"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 1/2"	4 3/4"±1"	30"	24"
11, 11 1/2"	5 1/4"±1"	27"	21"
12"	5 3/4"±1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER

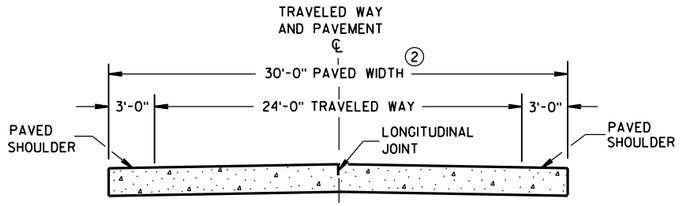
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S.D.D. 13 C 1-16

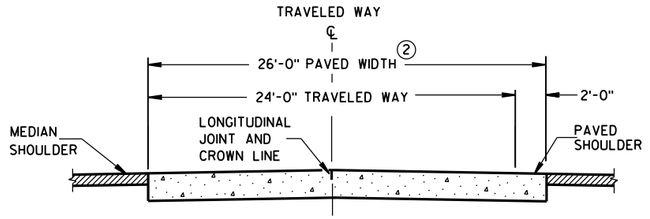
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S.D.D. 13 C 1-16

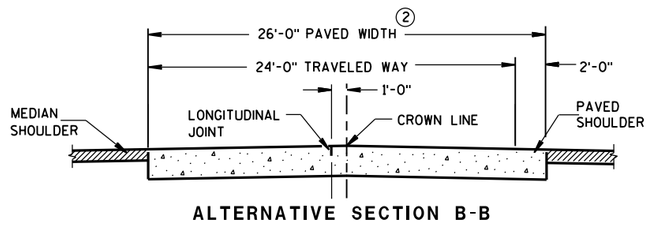


SECTION A-A ①

TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B ①

DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

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

DO NOT SEAL OR FILL CONTRACTION JOINTS.

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

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

CONSTRUCTION JOINTS

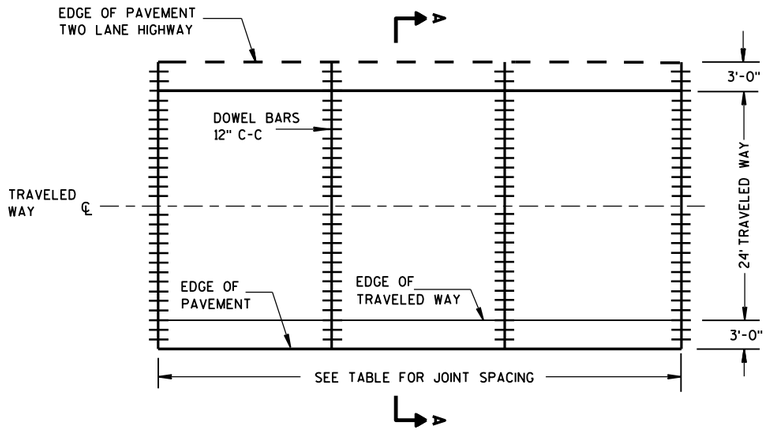
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

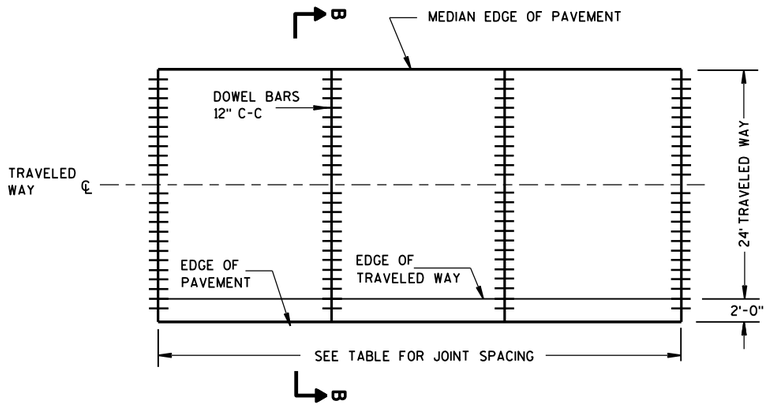
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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



CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



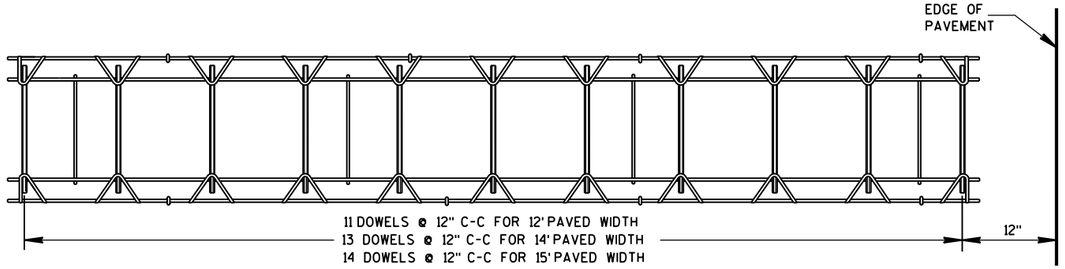
CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED
CONCRETE PAVEMENT

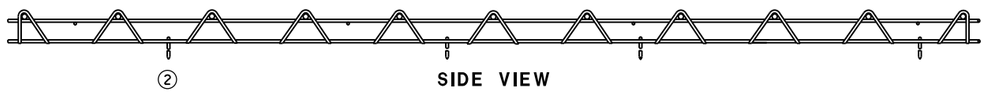
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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



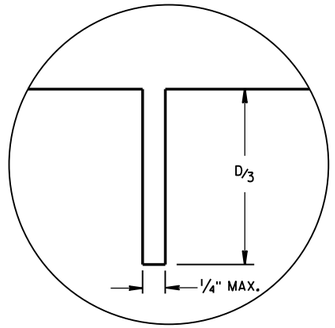
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

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

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

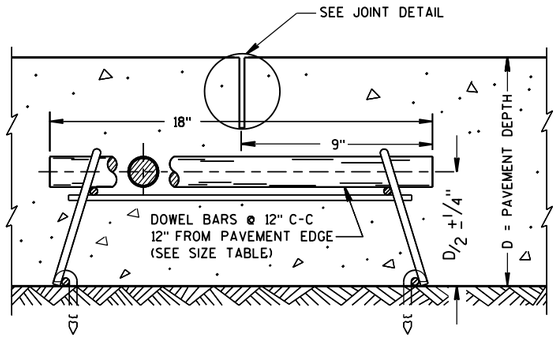
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

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

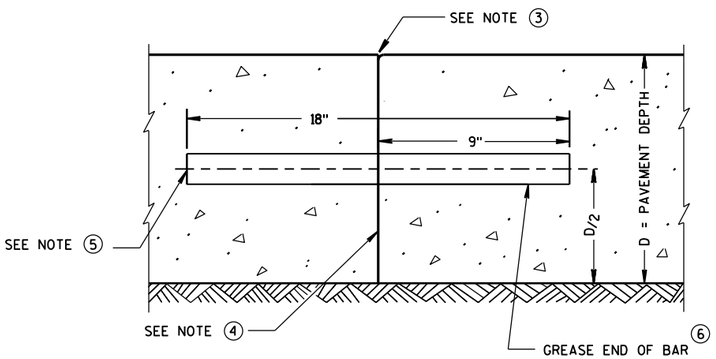
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL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

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

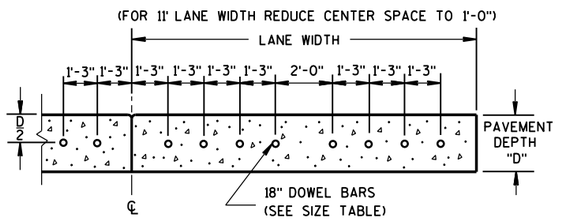
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

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

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

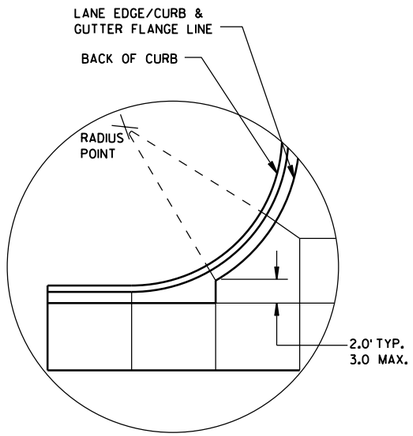
5/3/2013 DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER

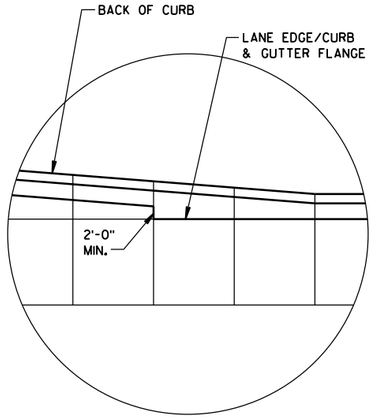
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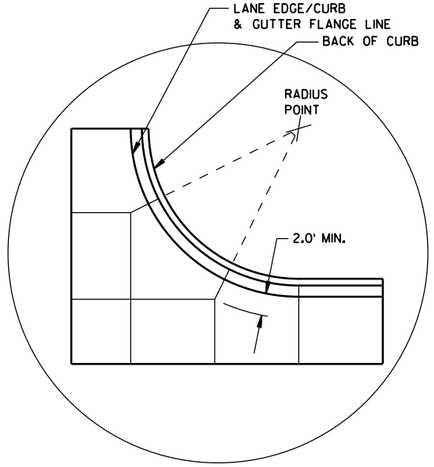
S.D.D. 13 C 11-11b



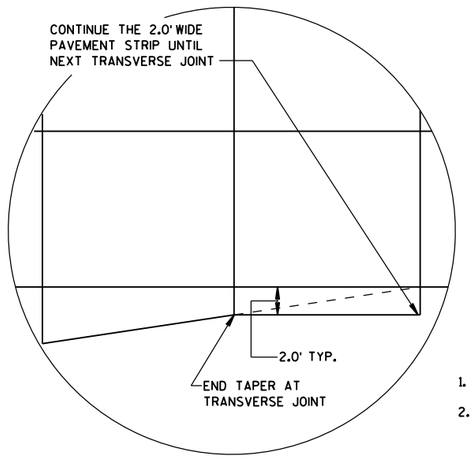
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

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

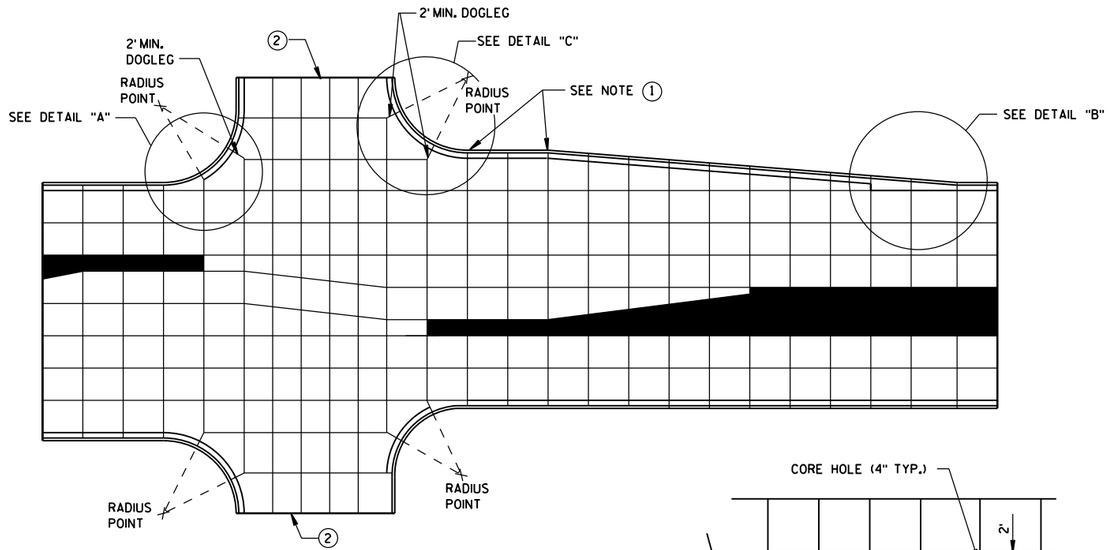
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

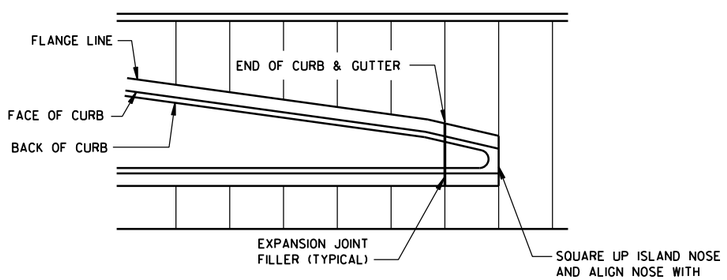


STANDARD INTERSECTION

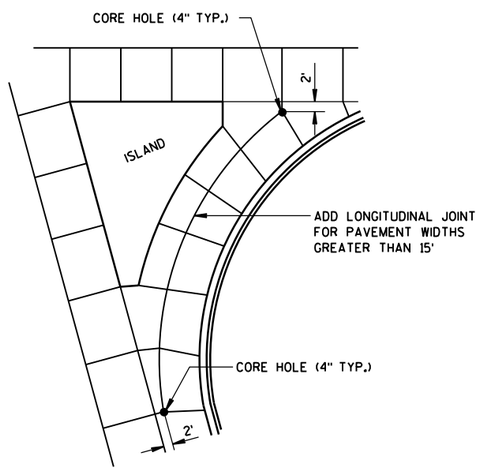
PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'

SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

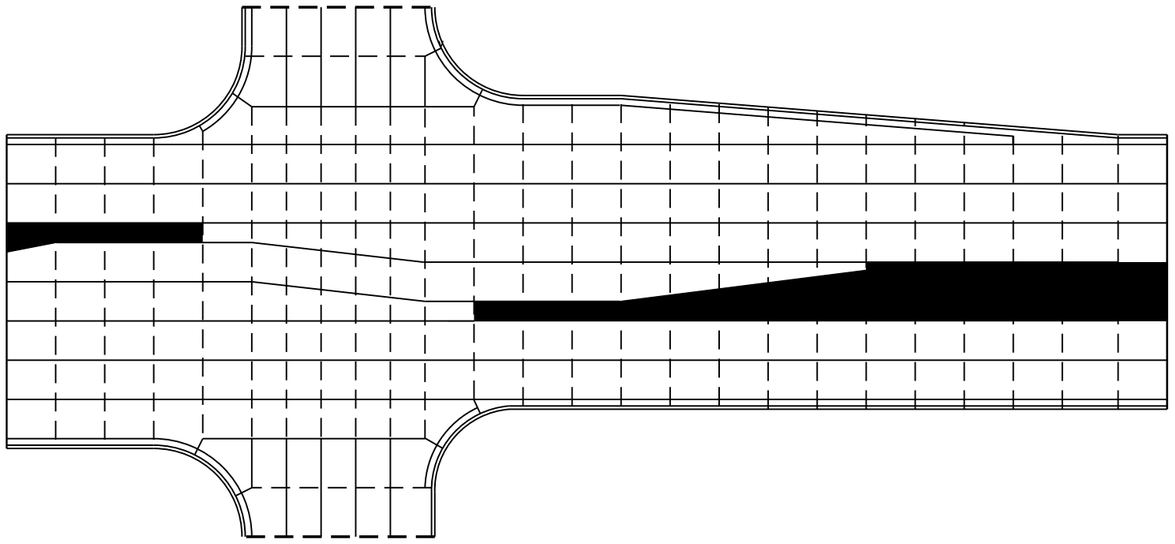
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S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

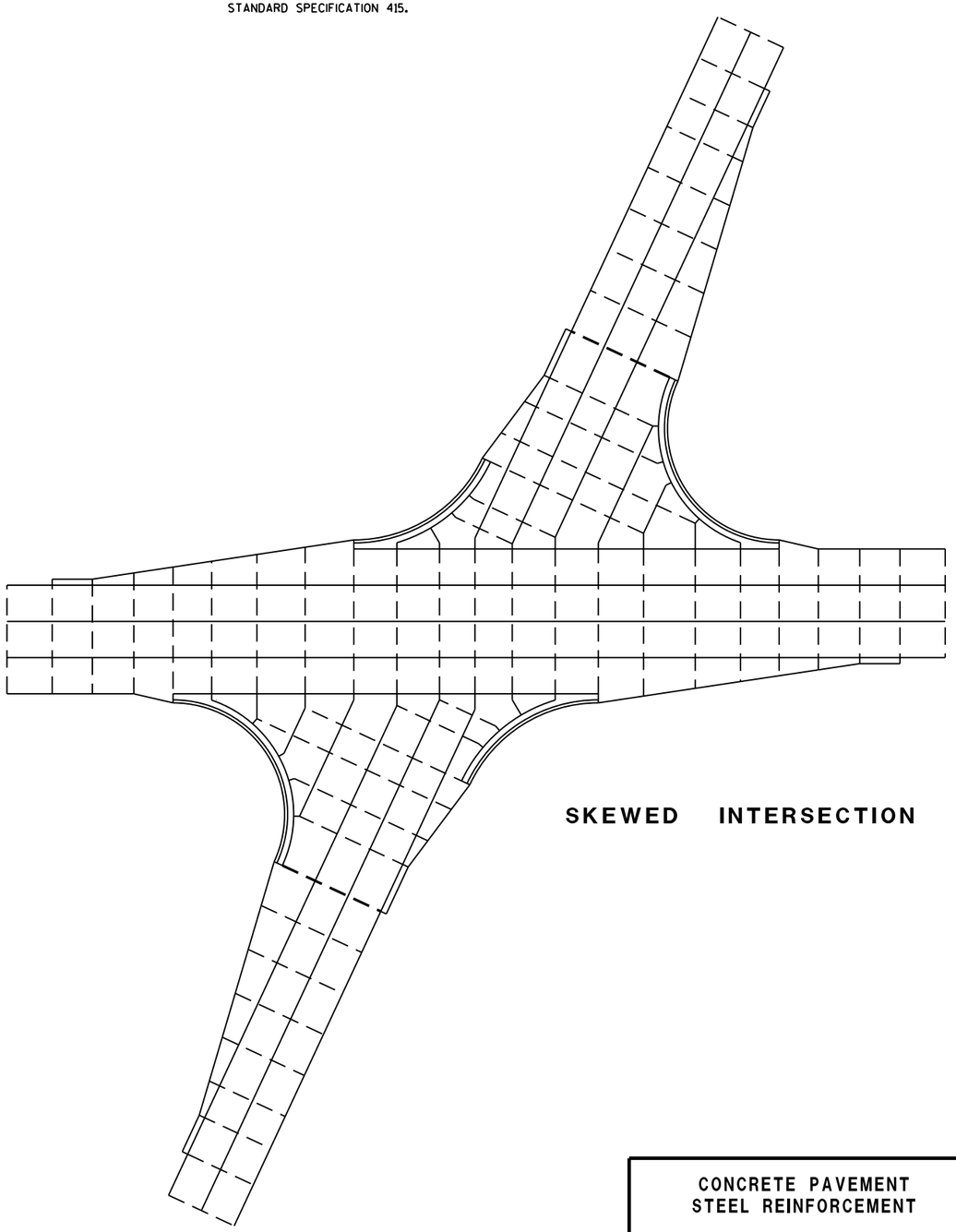
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

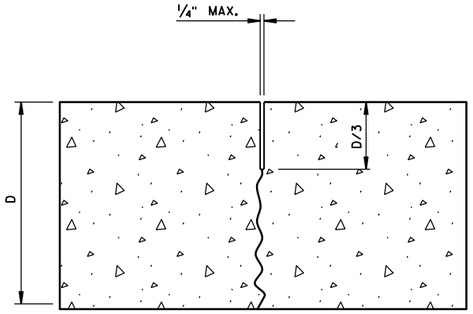
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

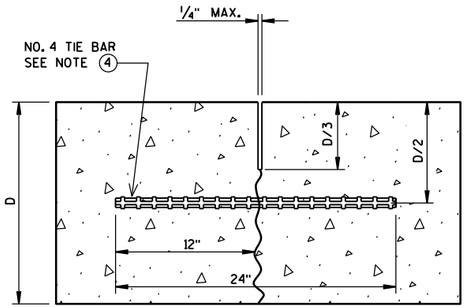
S.D.D. 13 C 18-2b

6

S.D.D. 13 C 18-2b



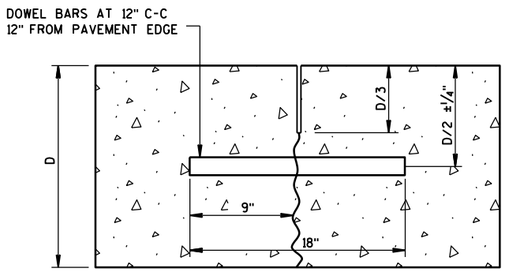
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

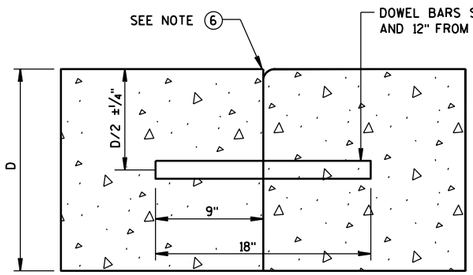
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.



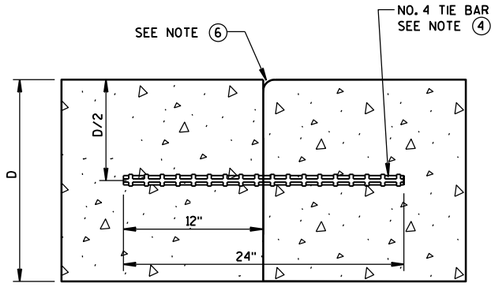
DOWELED-TRANSVERSE

CONTRACTION JOINTS

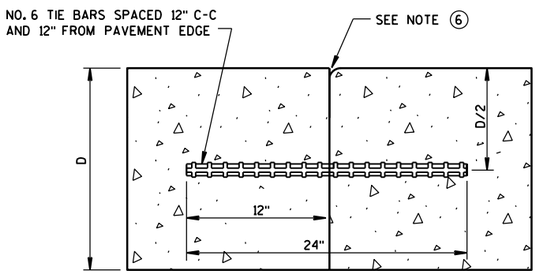
SEE NOTE (2)



DOWELED TRANSVERSE

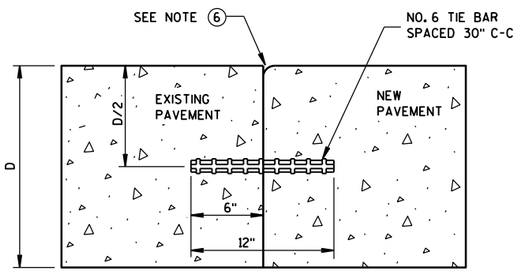


TIED LONGITUDINAL



TIED TRANSVERSE

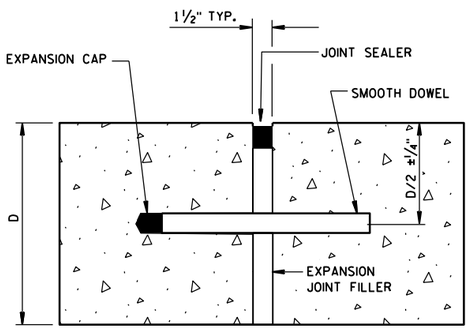
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

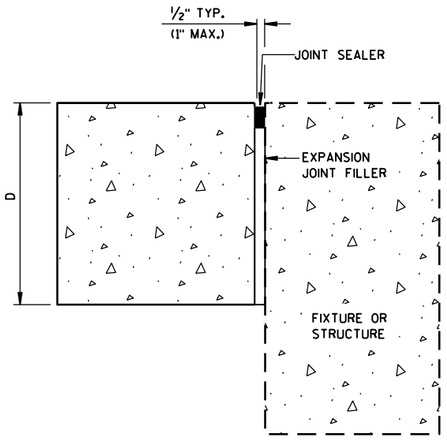
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

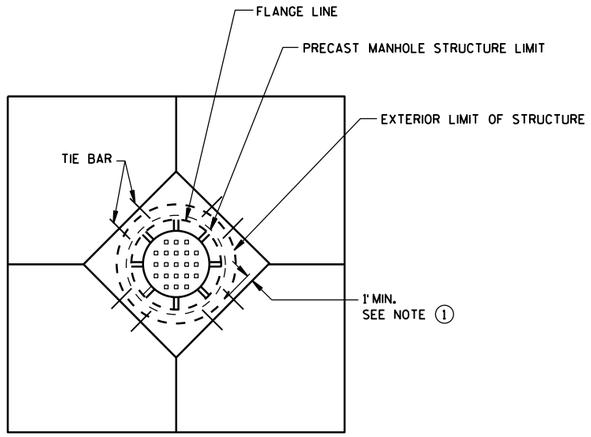
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

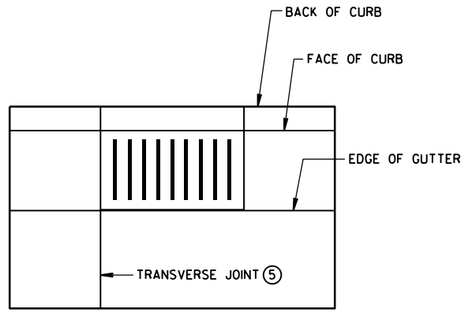
S.D.D. 13 C 18-2c

6

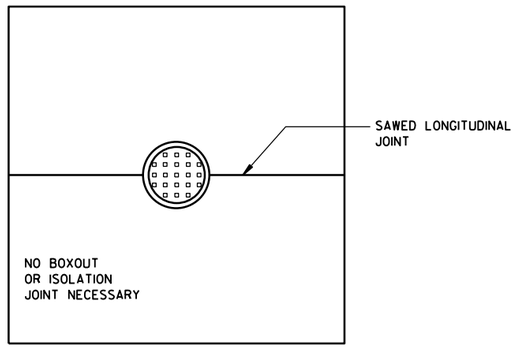
S.D.D. 13 C 18-2c



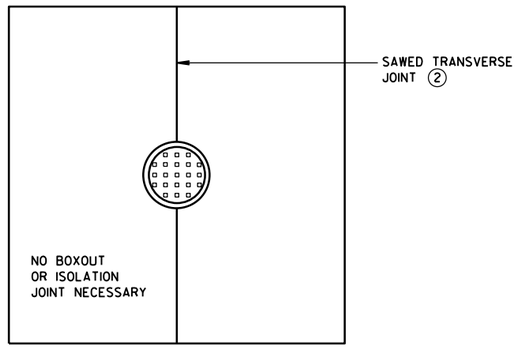
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



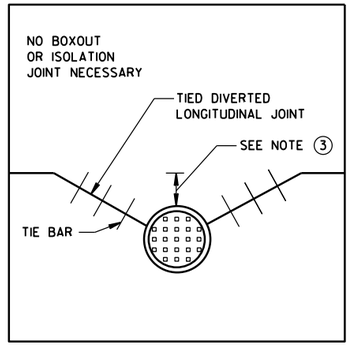
INLET WITH TRANSVERSE JOINT



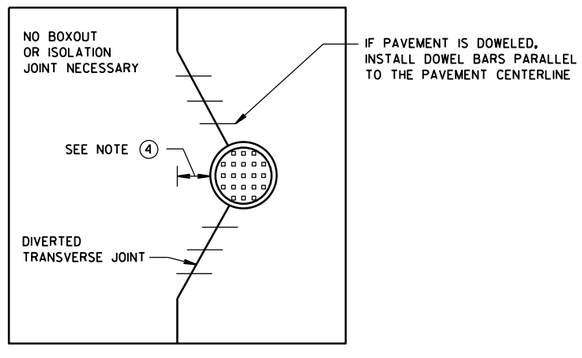
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

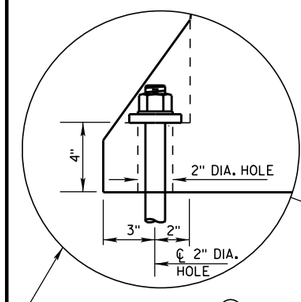
/S/ Deb Bischoff
PAVEMENT POLICY & DE

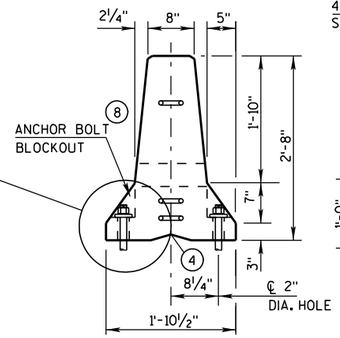
NEER

FHWA

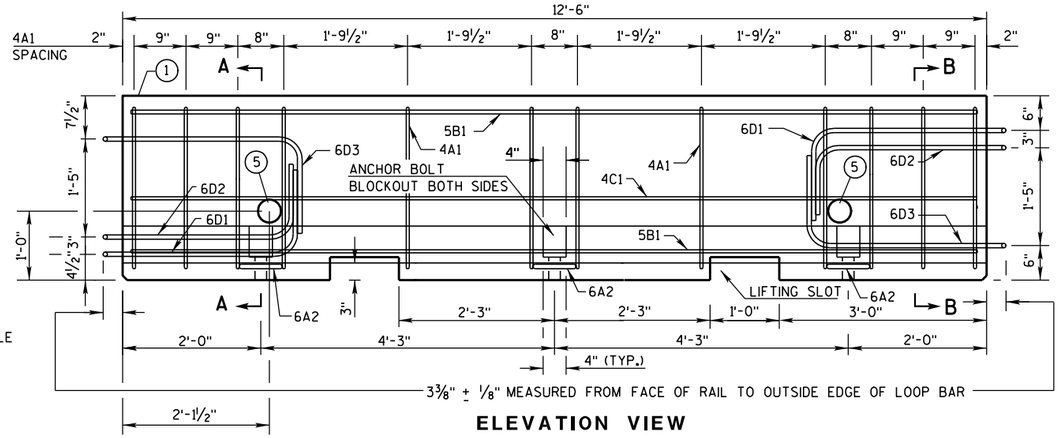
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S.D.D. 13 C 18-2d

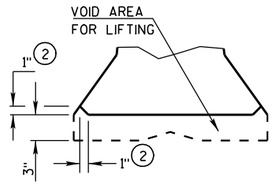




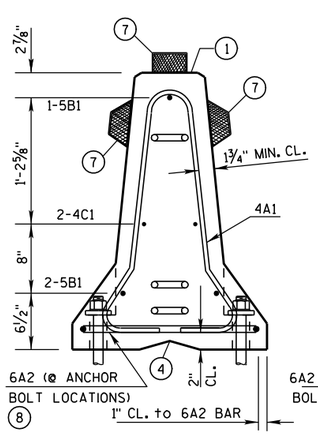
END VIEW



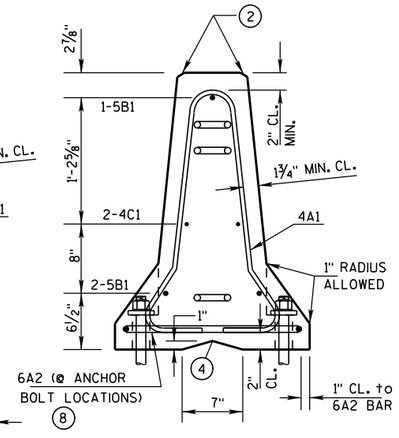
ELEVATION VIEW



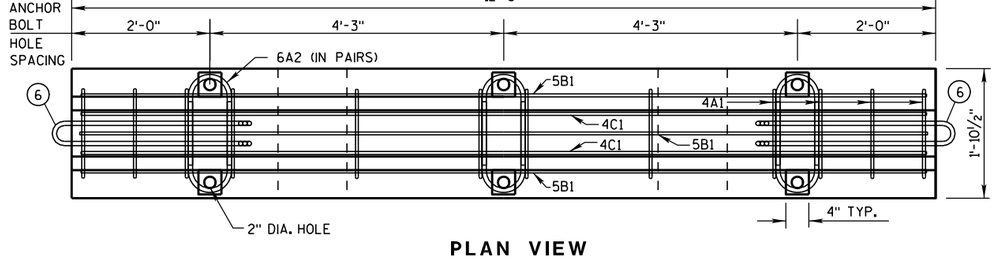
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

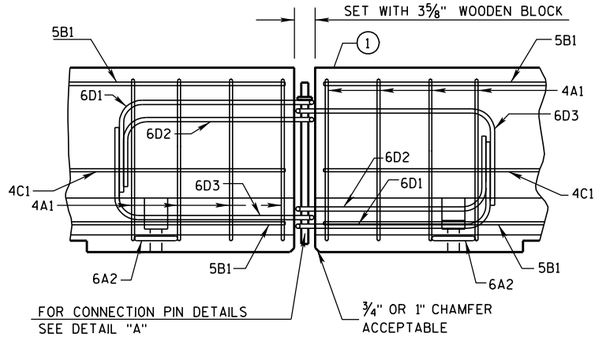


SECTION B-B
(STIRRUP PLACEMENT)

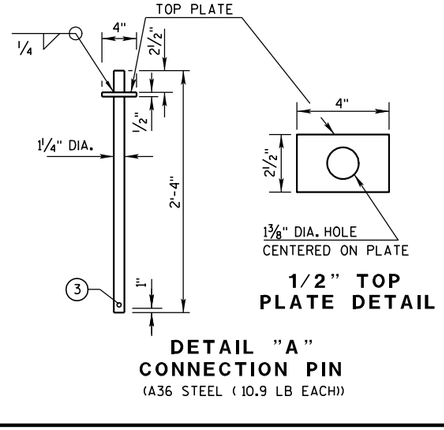


PLAN VIEW

DETAILS OF BARRIER SECTION

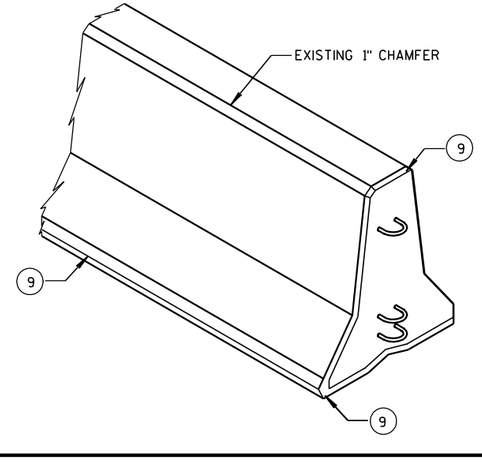


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(a) THRU 14B7-13(h).

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

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

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

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

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

INSTALL MECHANICAL OR EPOXY 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: WICBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

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

(4) "V" NOTCH IS OPTIONAL.

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

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

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

(8) SEE SHEET D FOR ANCHORING CRITERIA.

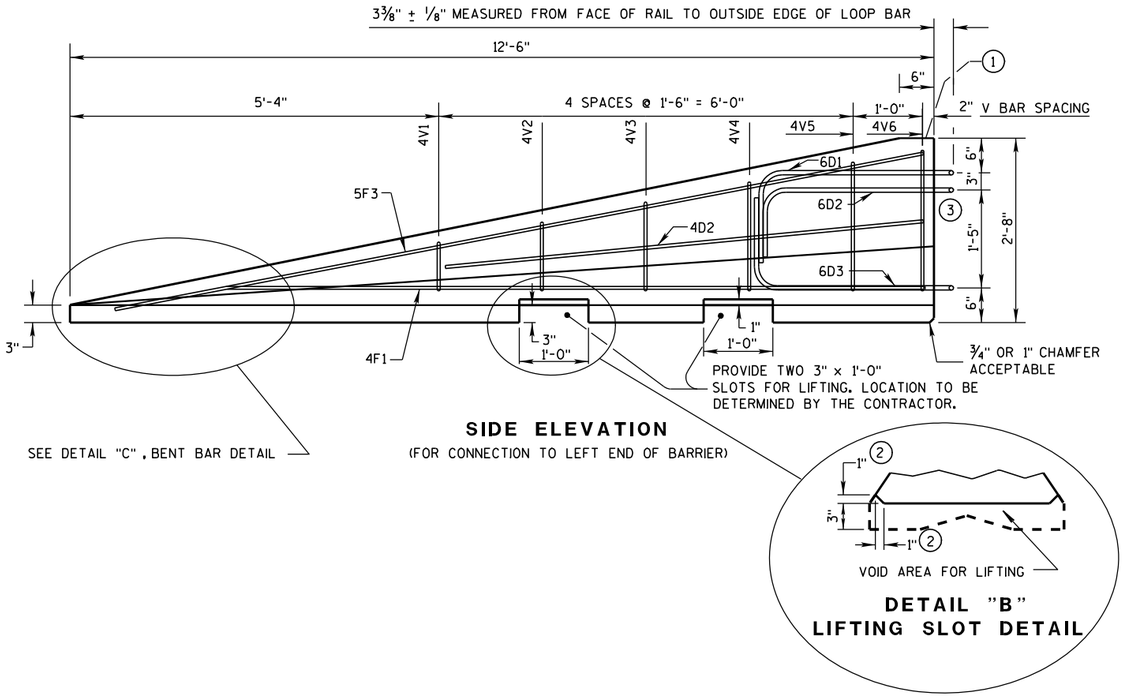
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

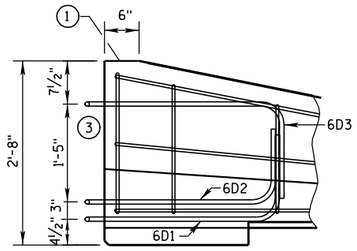
S.D.D. 14 B 7-13a



SIDE ELEVATION

(FOR CONNECTION TO LEFT END OF BARRIER)

DETAIL "B"
LIFTING SLOT DETAIL

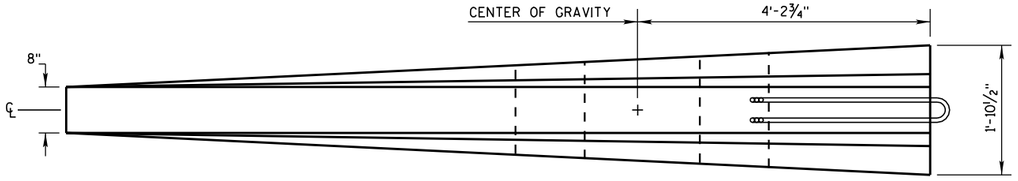


SIDE ELEVATION

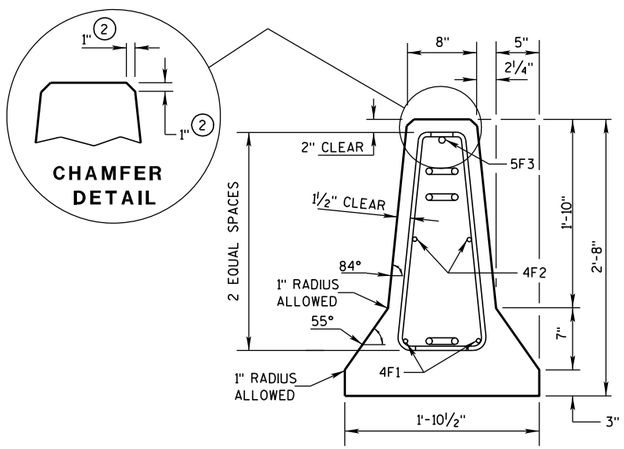
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

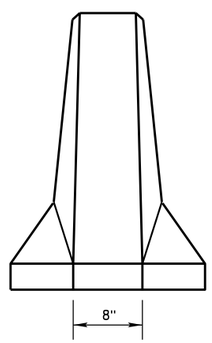
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



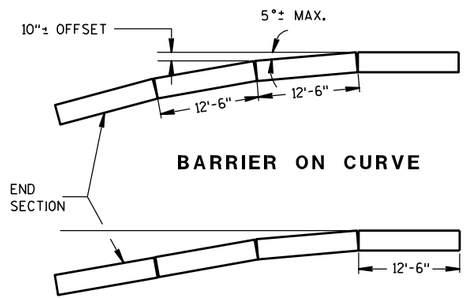
PLAN VIEW



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 TRANSPORTATION

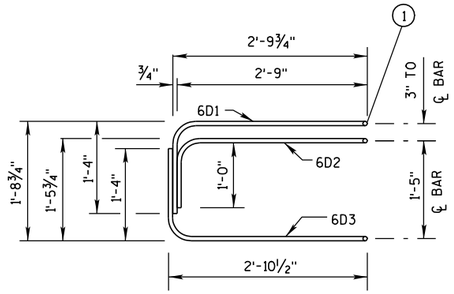
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S.D.D. 14 B 7-13b

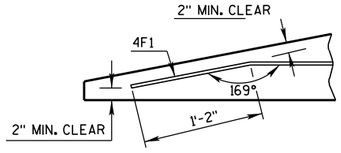
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

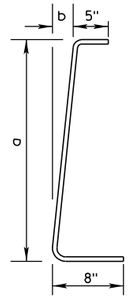
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

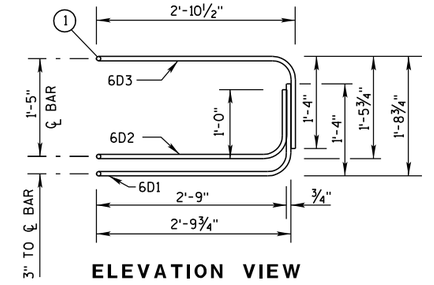
GENERAL NOTES

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

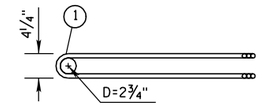
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

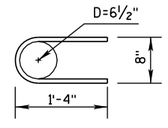
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



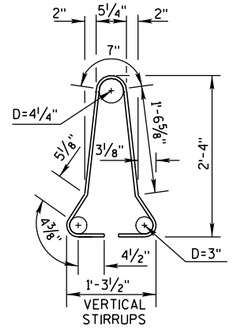
ELEVATION VIEW



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



6A2



4A1

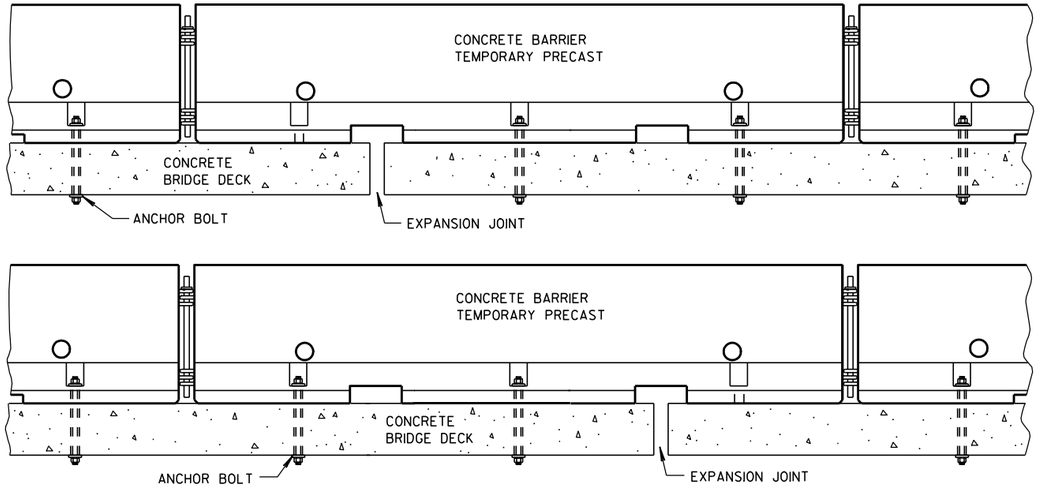
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

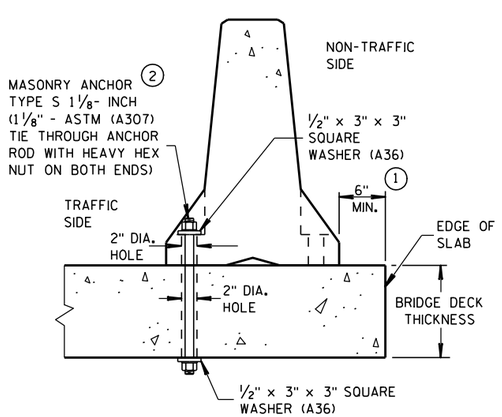
6

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



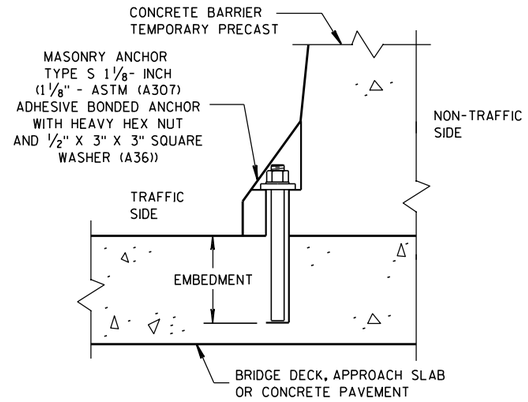
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



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

2

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

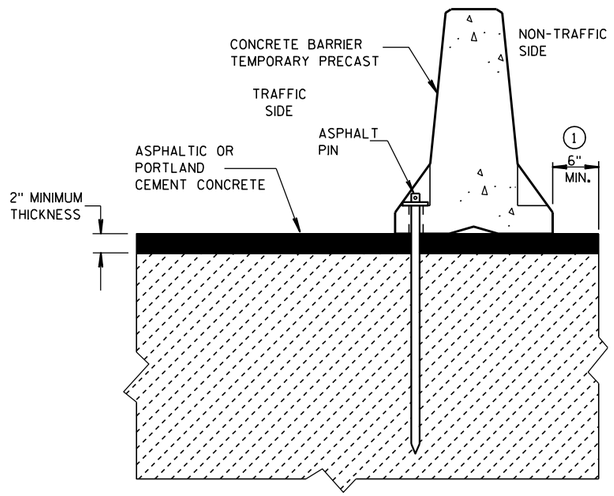
1. CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

2. ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

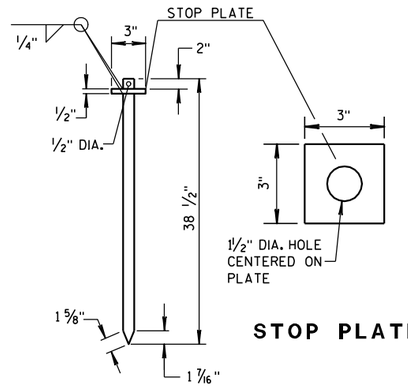
   WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

   UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALLANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

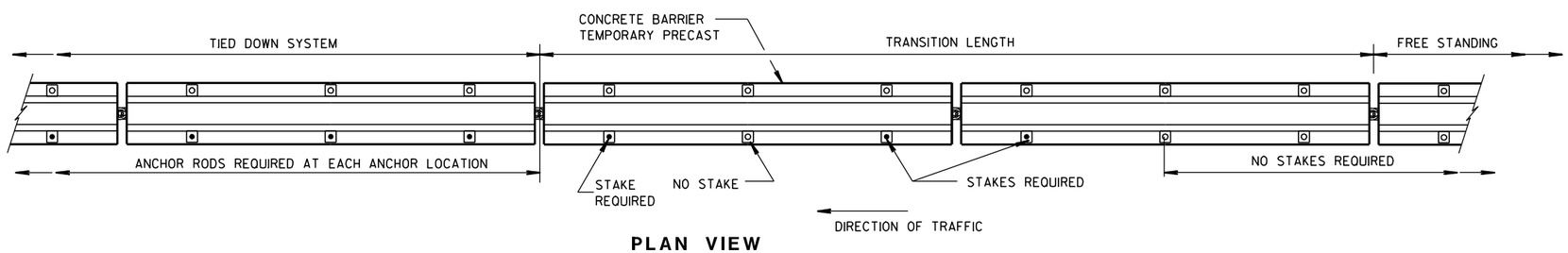
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



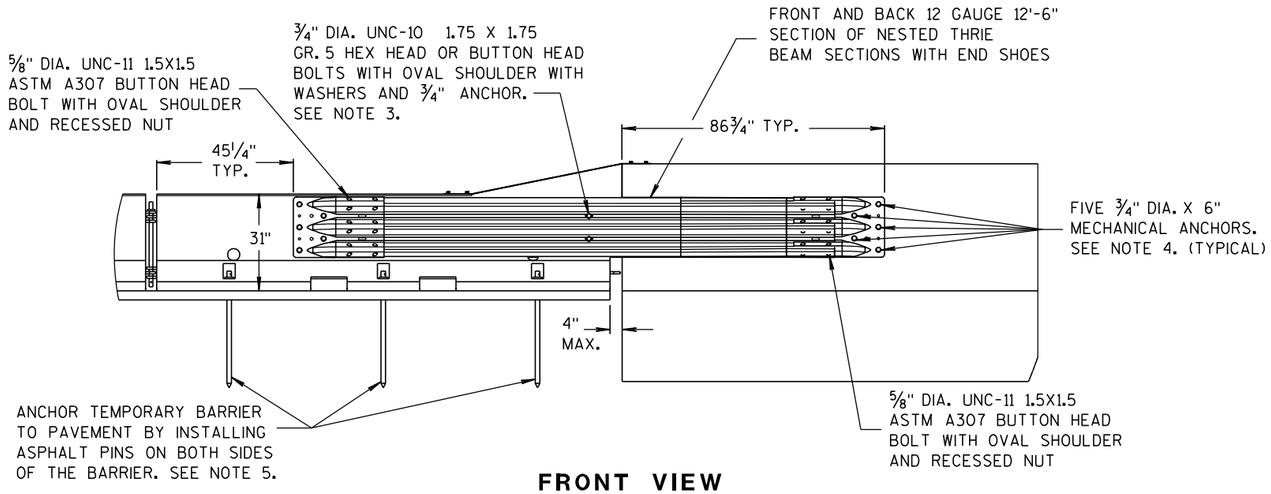
PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

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

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

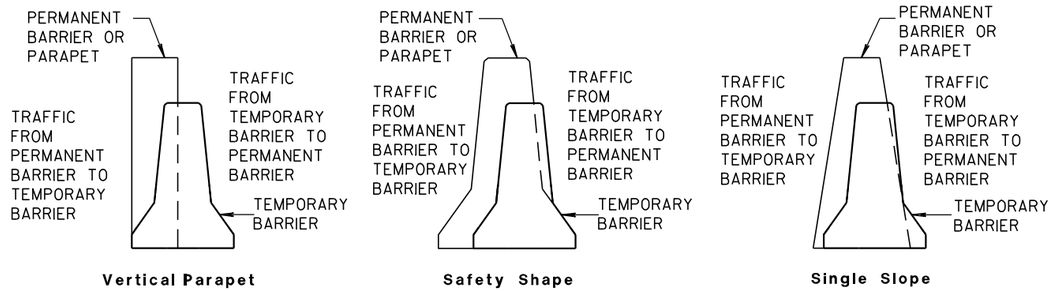
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...



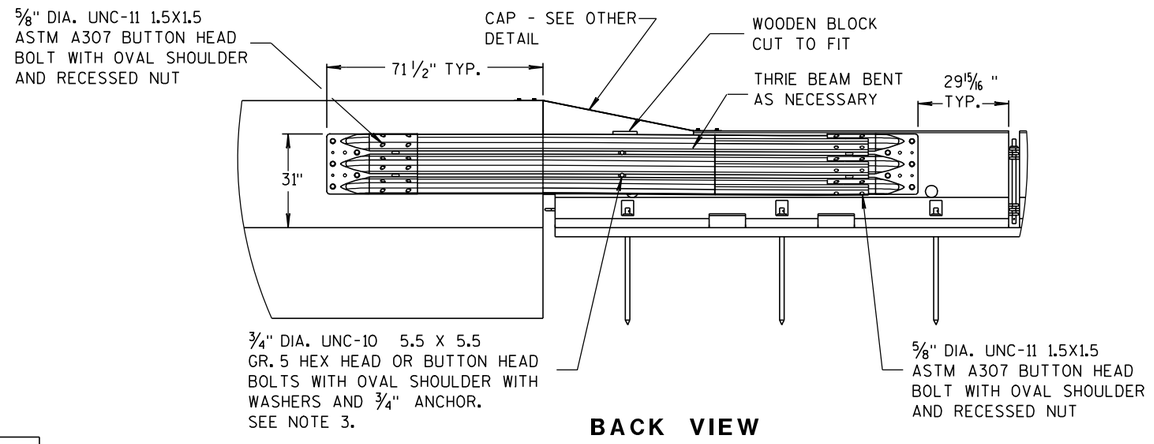
FRONT VIEW

NOTES

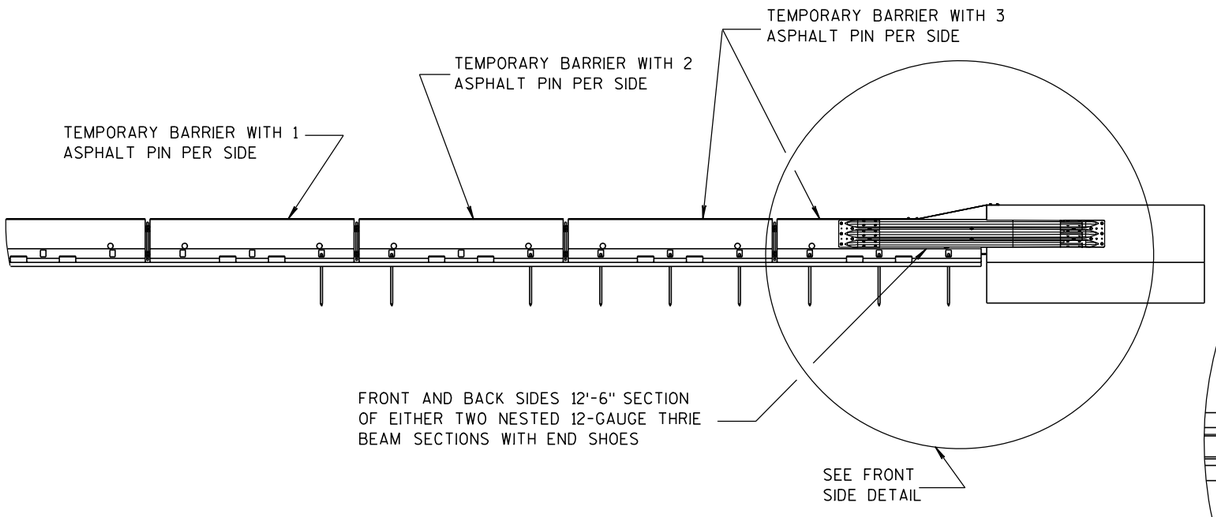
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR EPOXY 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 EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



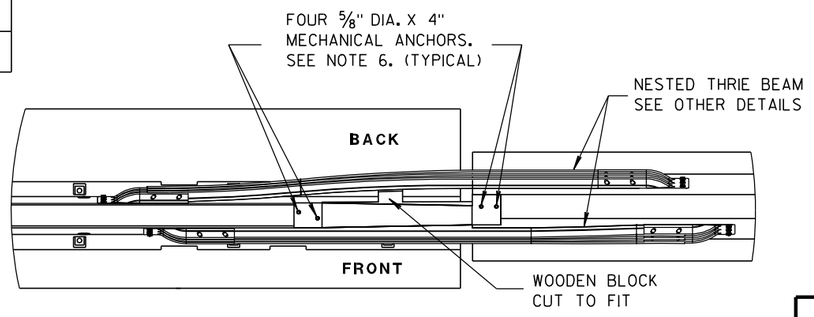
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



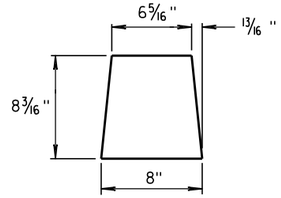
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

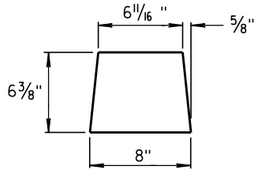
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

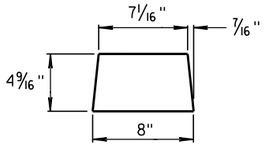
6
S.D.D. 14 B 7-13e



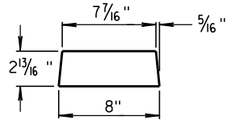
GUSSET 1



GUSSET 2

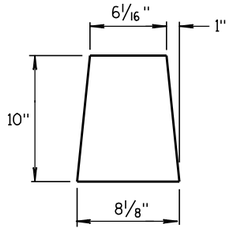


GUSSET 3

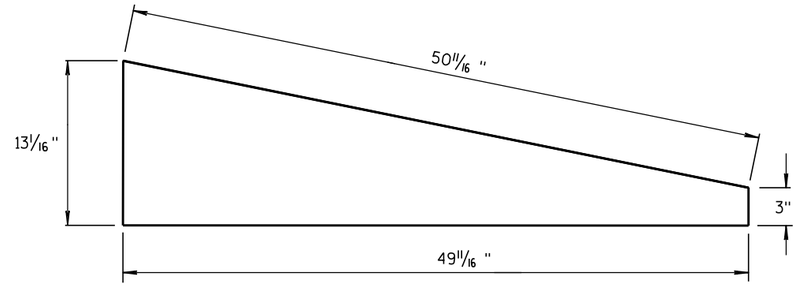


GUSSET 4

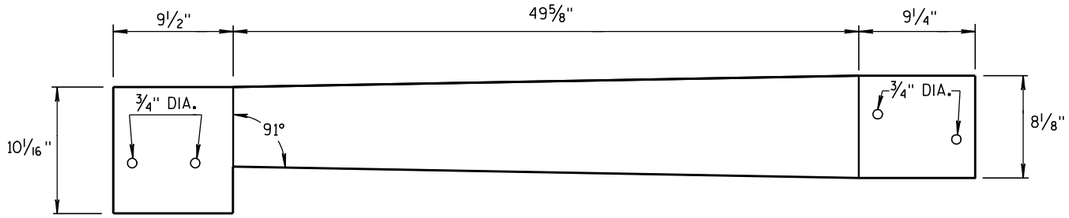
GUSSETS

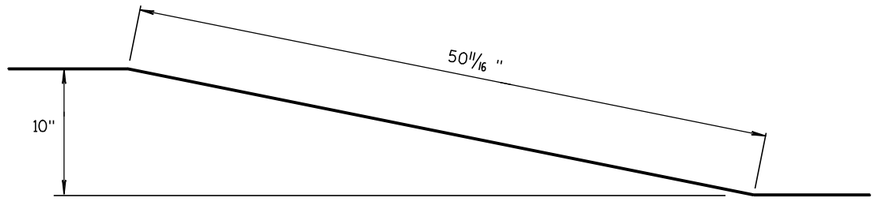


END PLATE

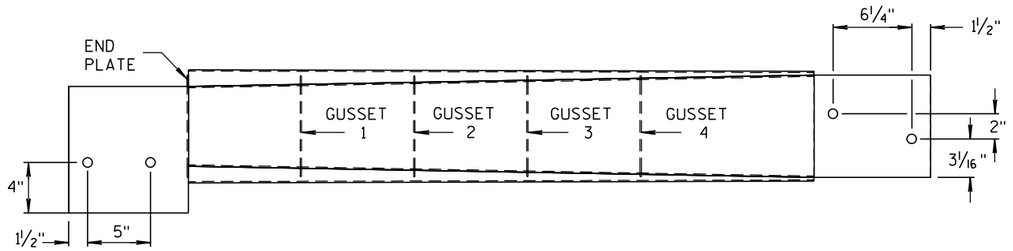


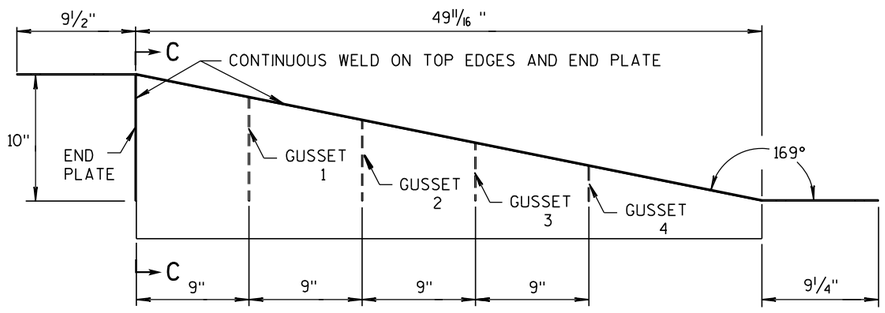
SIDE PLATE

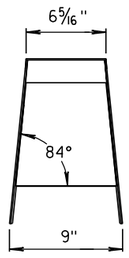




TOP PLATE







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.

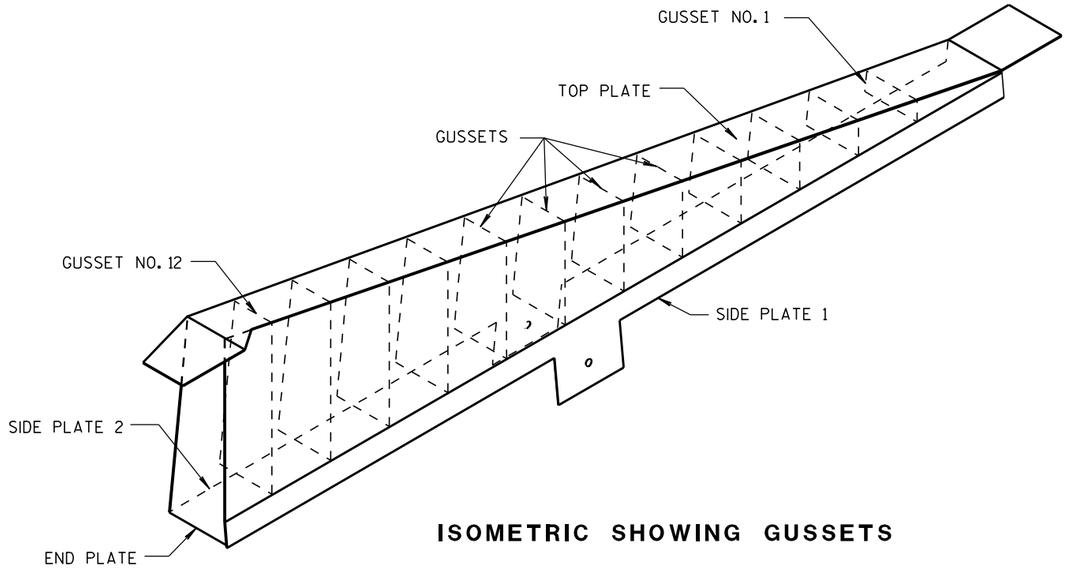
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

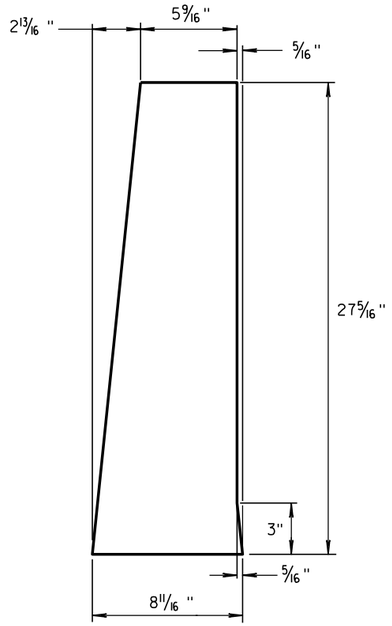
SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

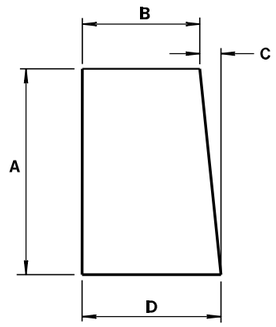


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



GUSSETS 1 - 12

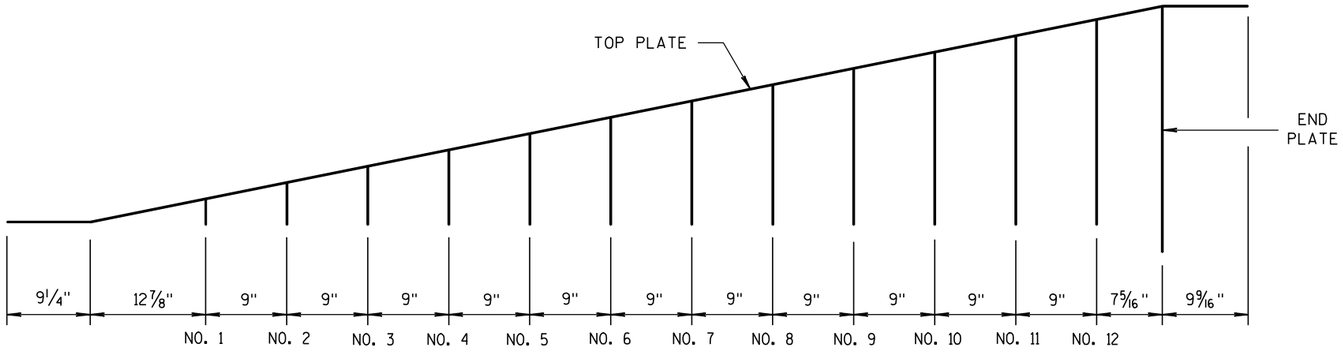
ALL GUSSETS 1/8" STEEL PLATE

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"

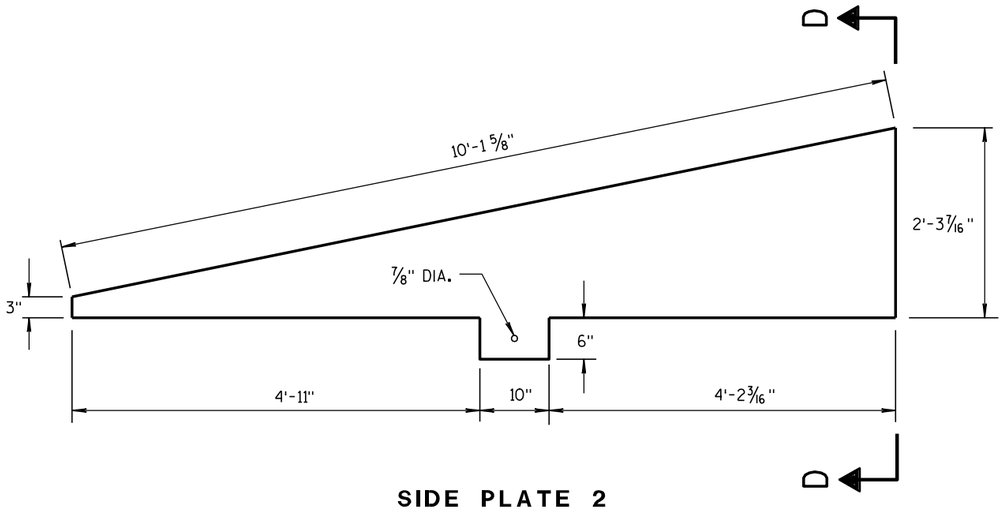
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO[illegible]

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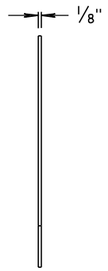
S.D.D. 14 B 7-13g

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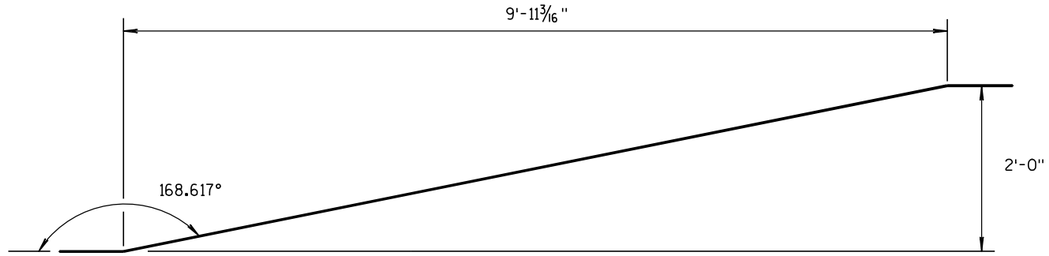
S.D.D. 14 B 7-13g



SIDE PLATE 2

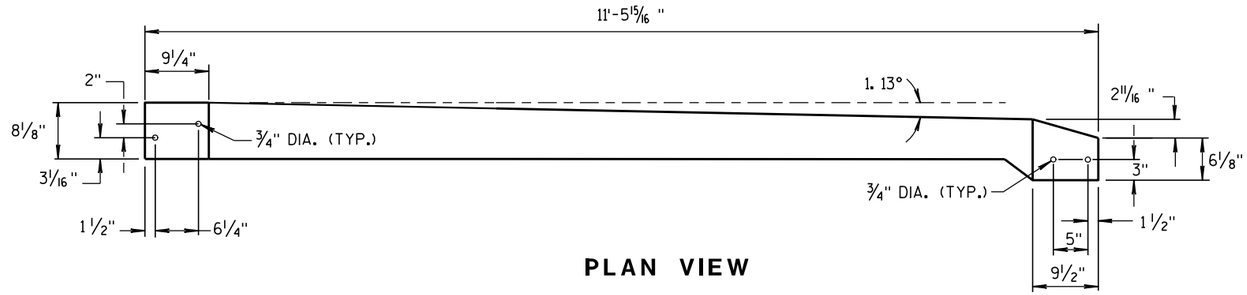


END VIEW



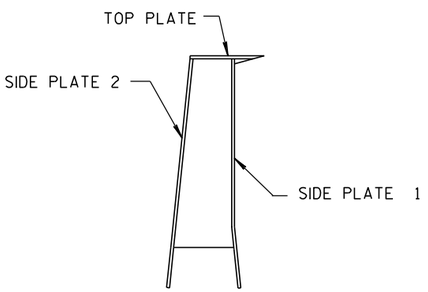
SIDE VIEW

TOP PLATE

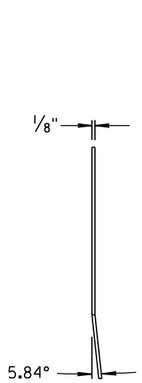


PLAN VIEW

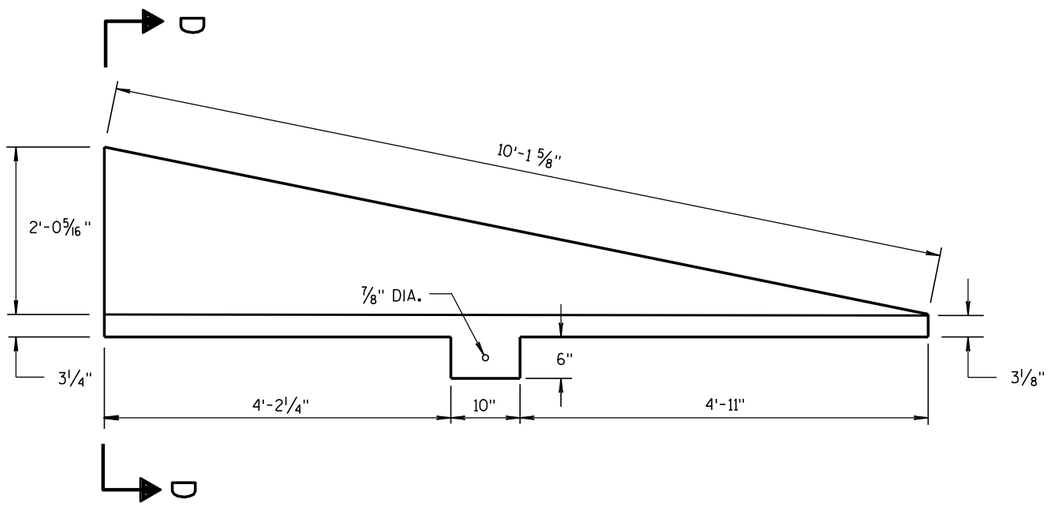
TOP PLATE



SECTION D-D



END VIEW



SIDE PLATE 1

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

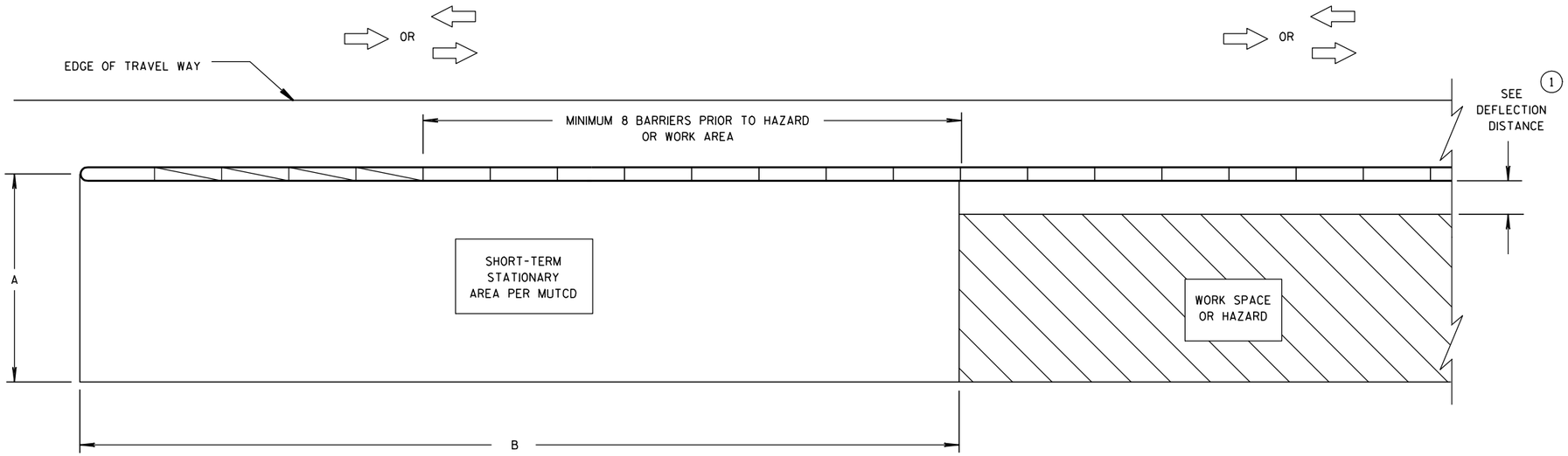
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 8/31/2012 DATE /S/ Jerry H. ROADWAY STANDARDS ENGINEER 308 ENT
FHWA

6

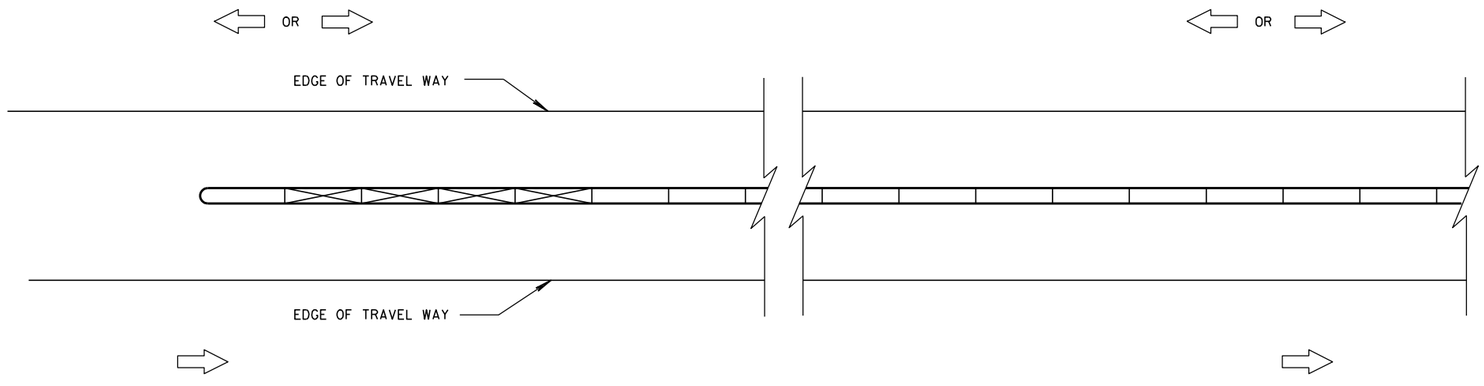
S.D.D. 14 B 7-13h

6

S.D.D. 14 B 7-13h



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



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

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.

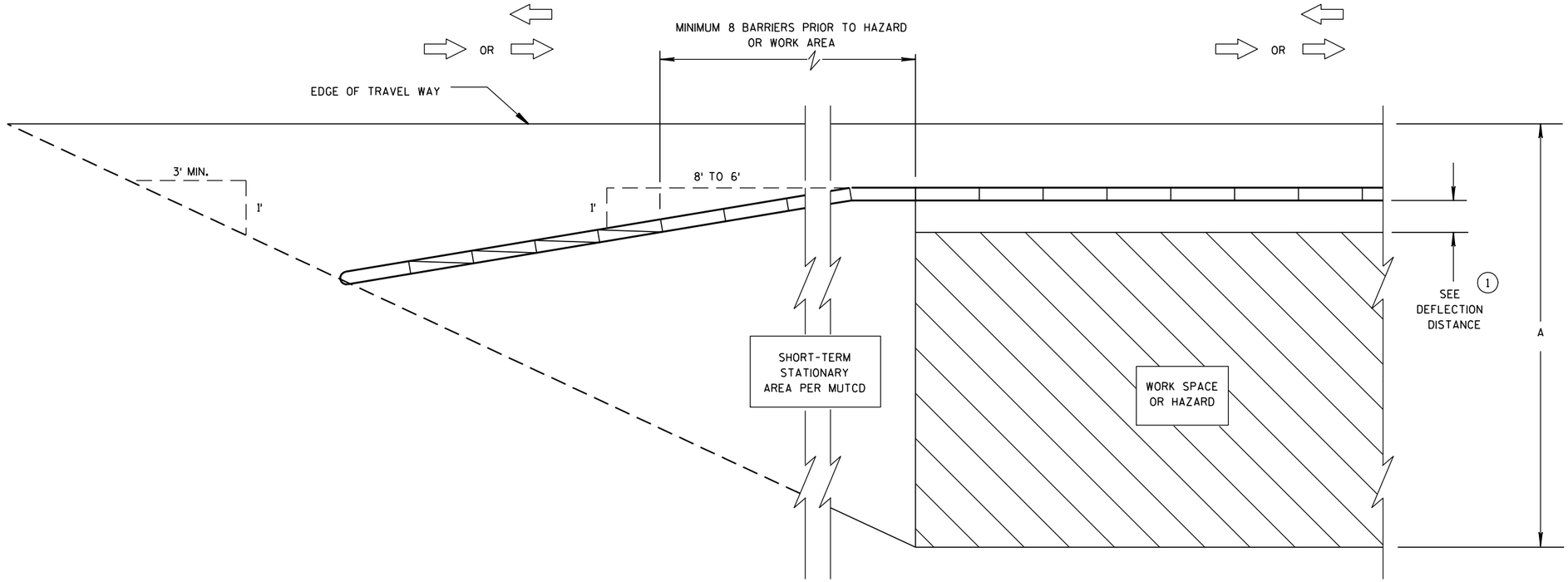
(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

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

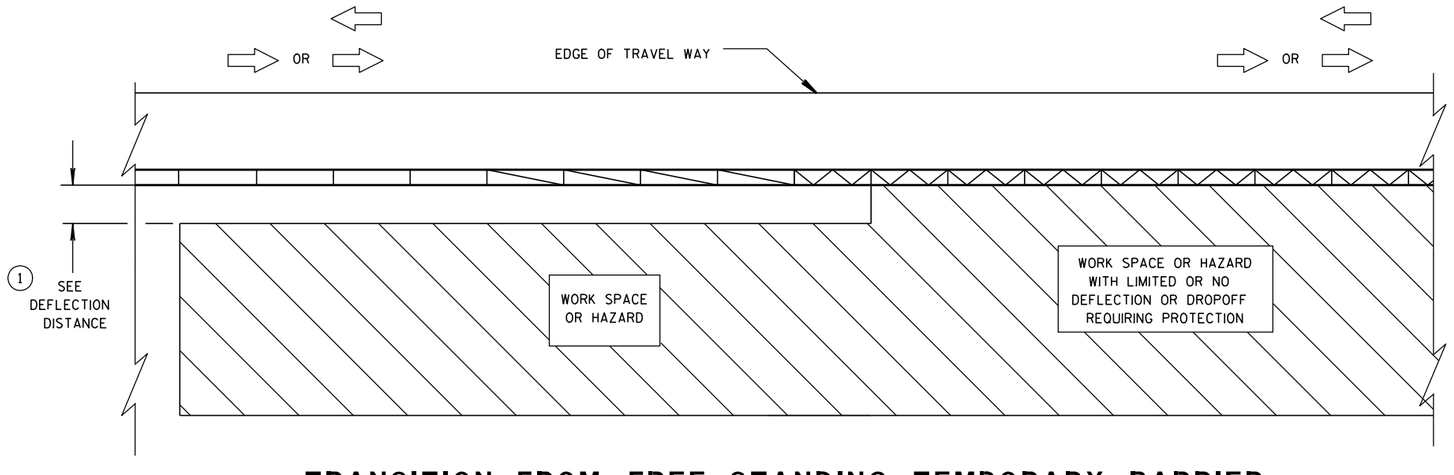
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 8-1a



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

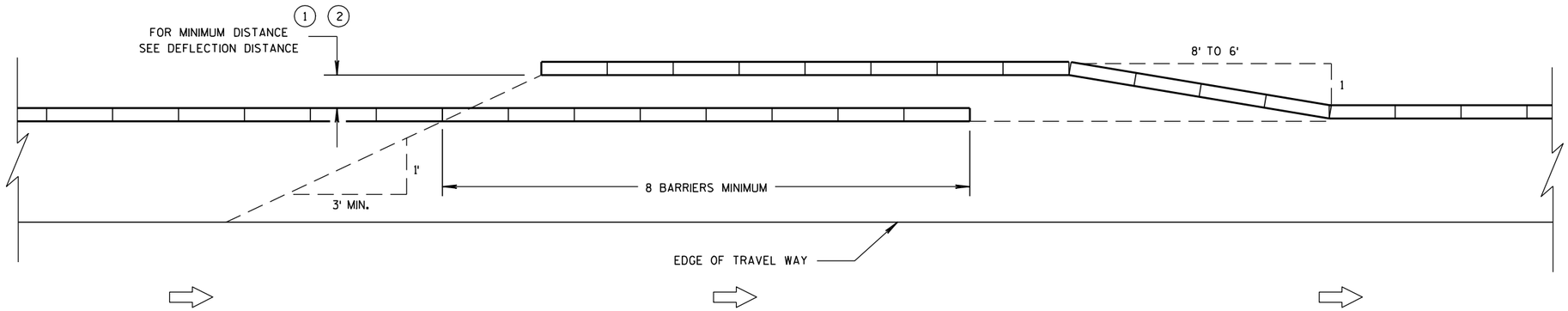
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

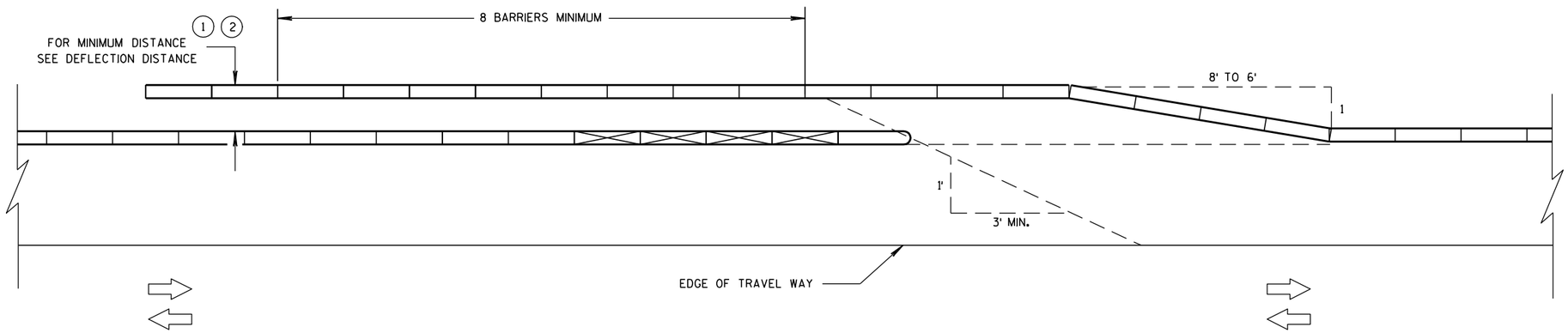
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

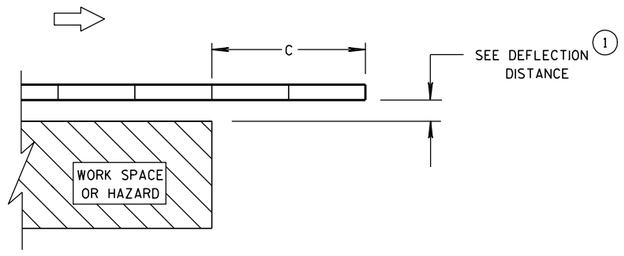
S.D.D. 14 B 8-1b



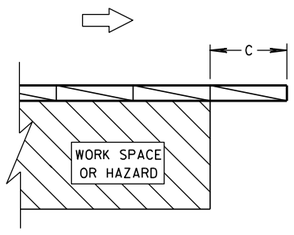
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

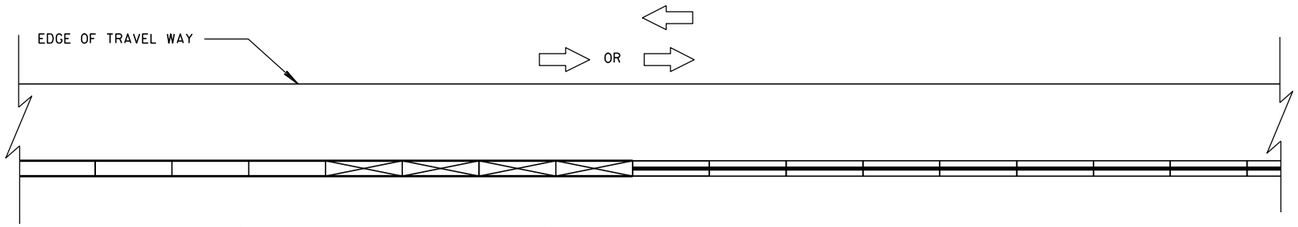
LEGEND

- 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

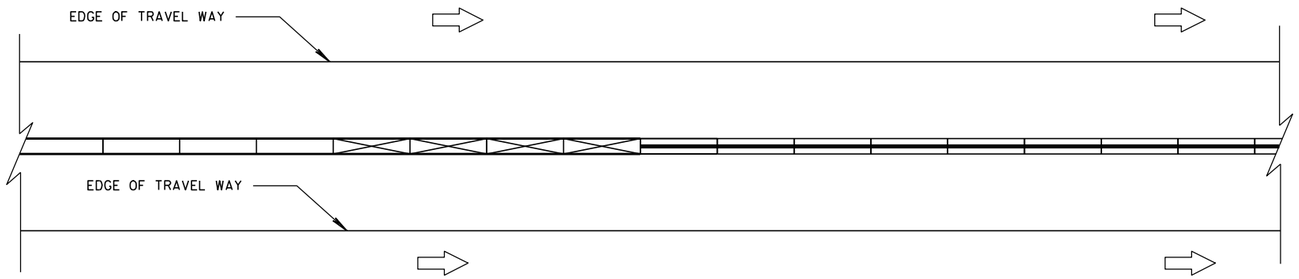
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 8-1c



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

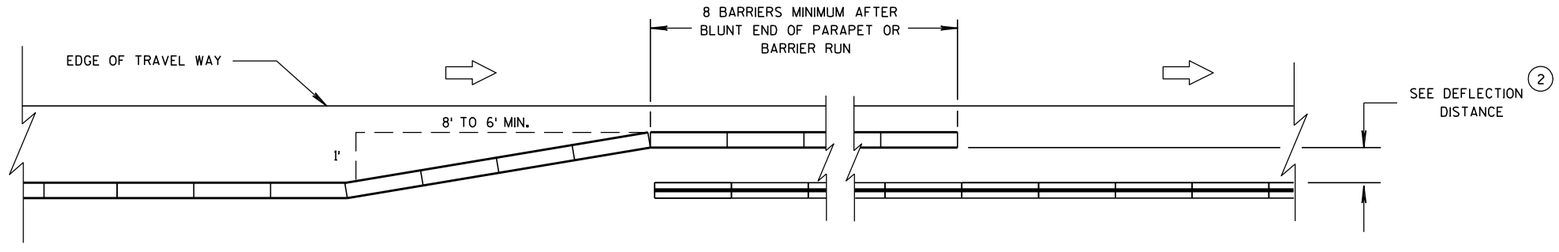
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

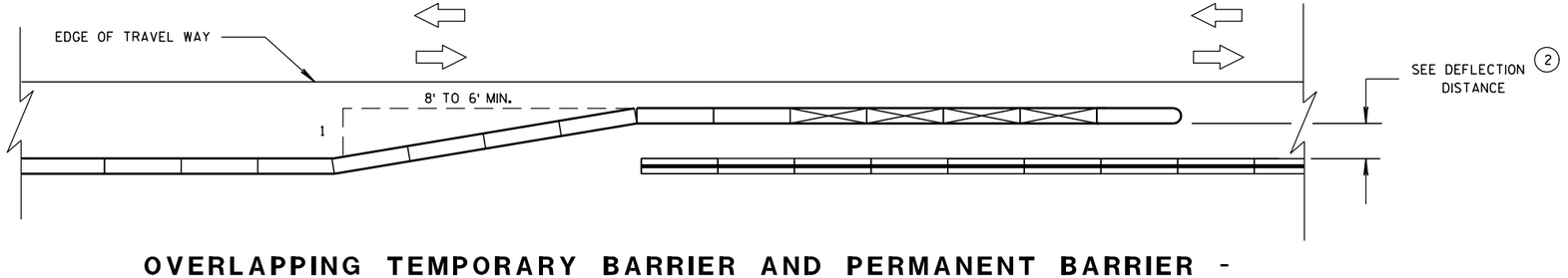
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

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 TRANSPORTATION

6

S.D.D. 14 B 8-1d

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

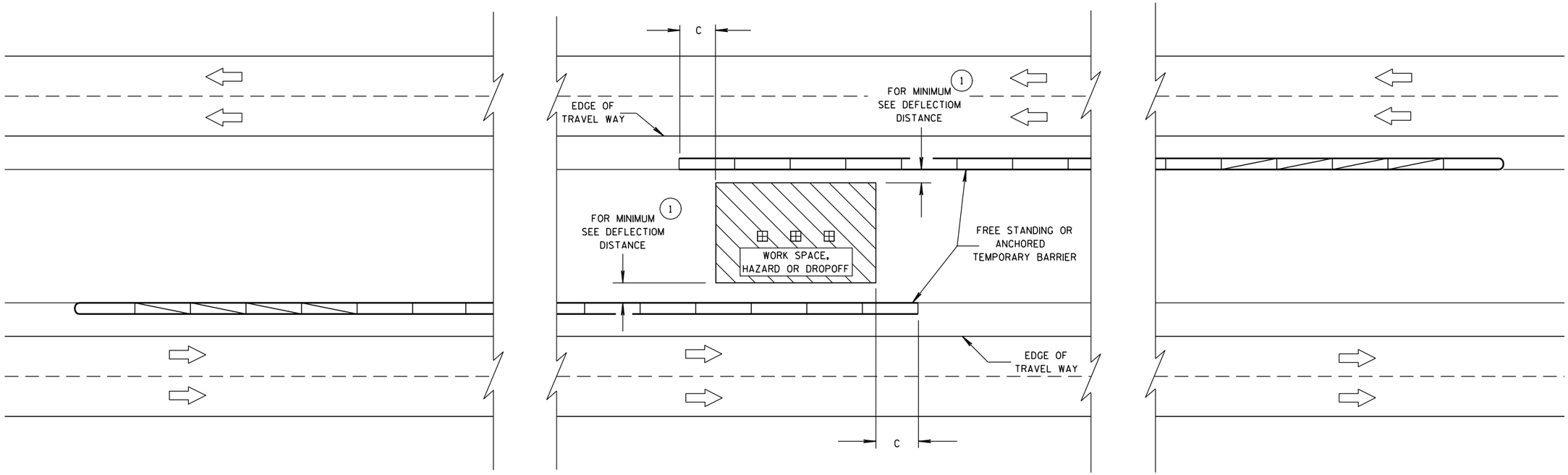
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

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

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER

FHWA

6

S.D.D. 14 B 8-1e

6

S.D.D. 14 B 8-1e

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) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

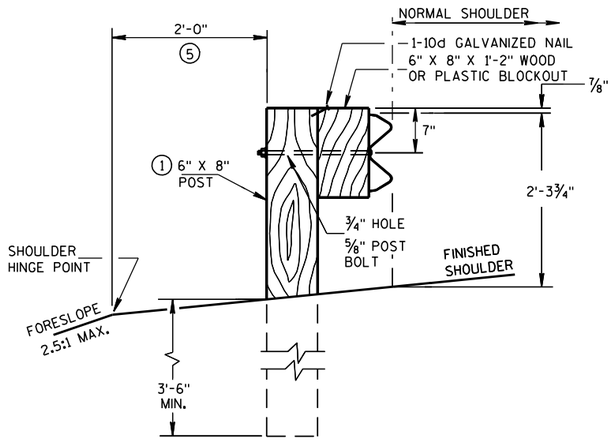
(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

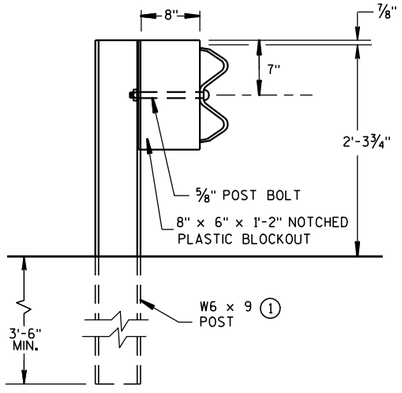
(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

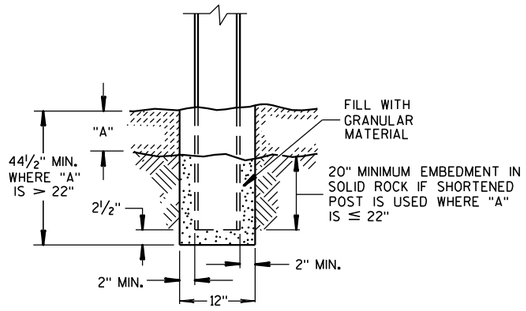
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



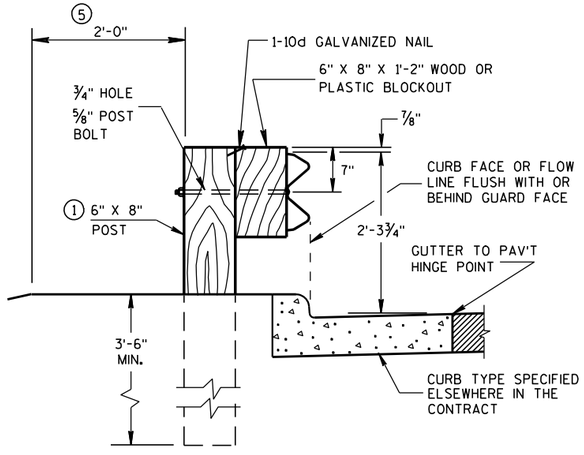
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



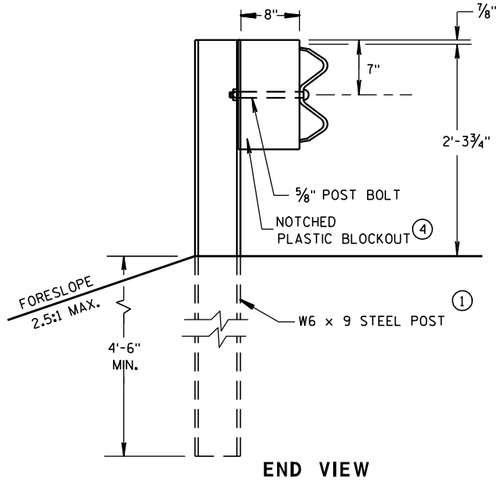
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



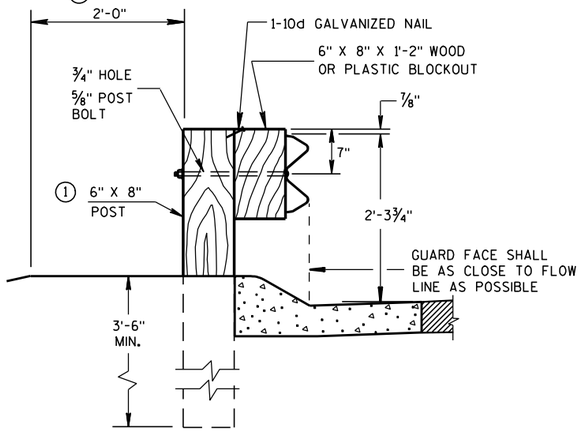
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



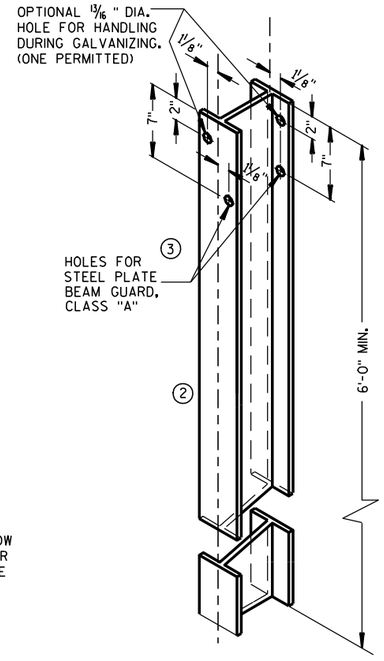
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

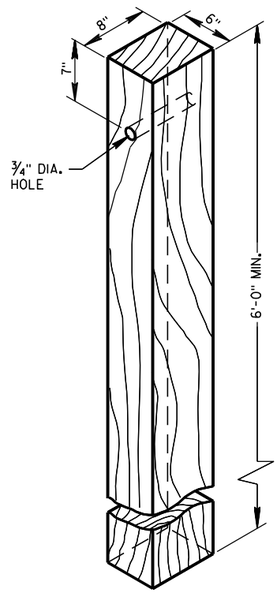


END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

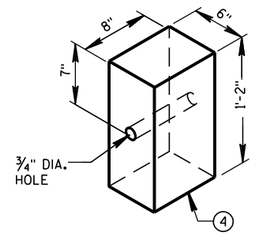


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

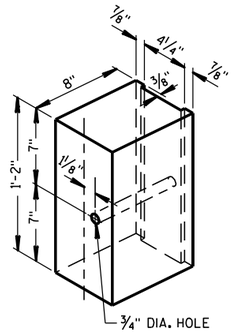
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



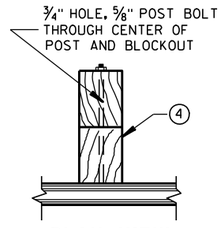
WOOD POST
(6"X8") NOMINAL



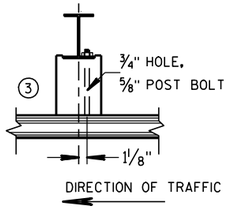
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



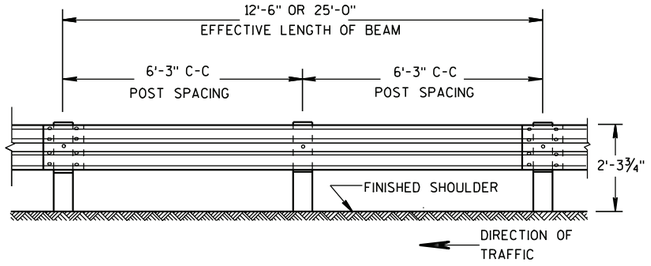
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

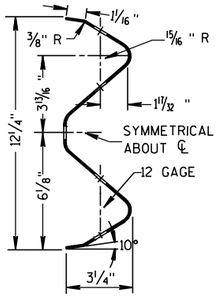
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

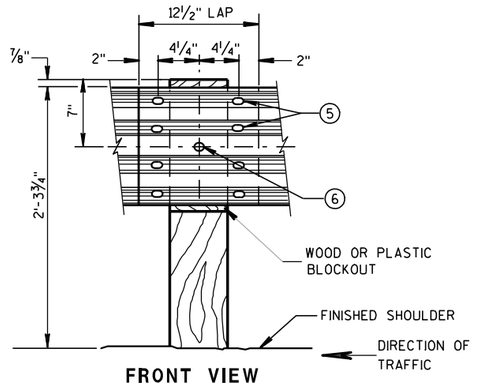


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM

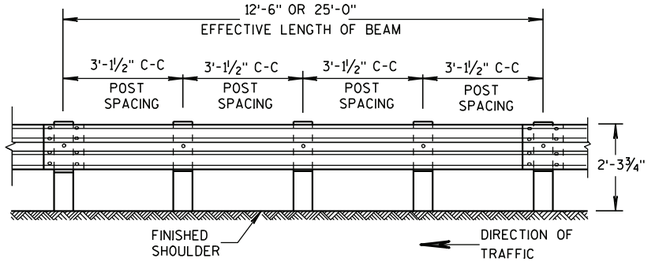


FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

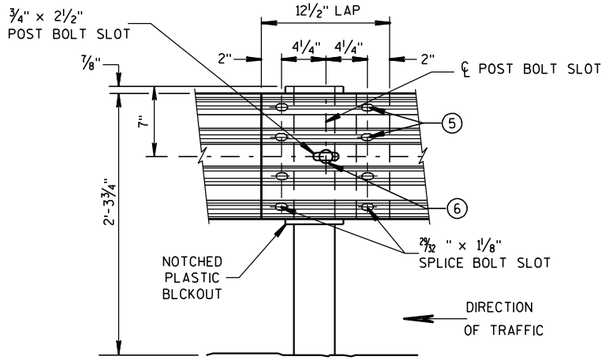
GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 8 - 5/8" ϕ X 2 " BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
6. 5/8" ϕ X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.



FRONT VIEW

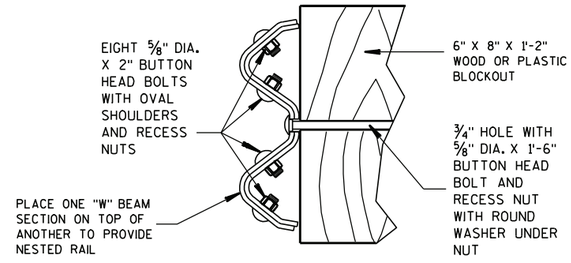
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

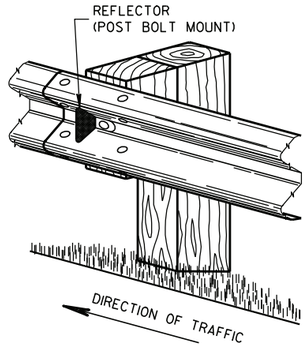


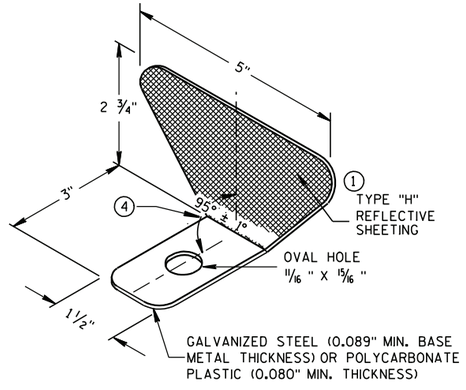
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING (2)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 (3)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 (4)	



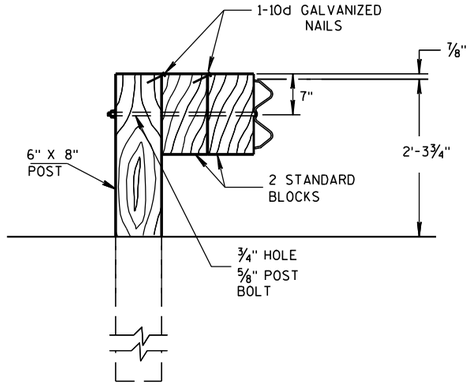


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

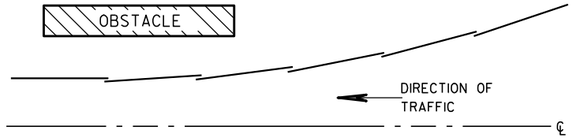
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

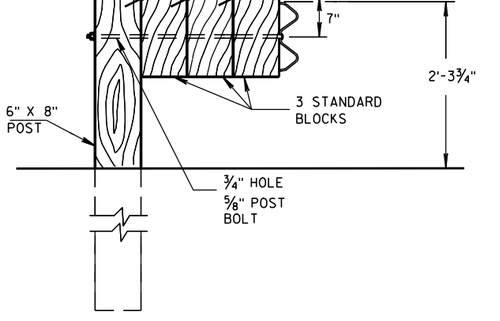


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

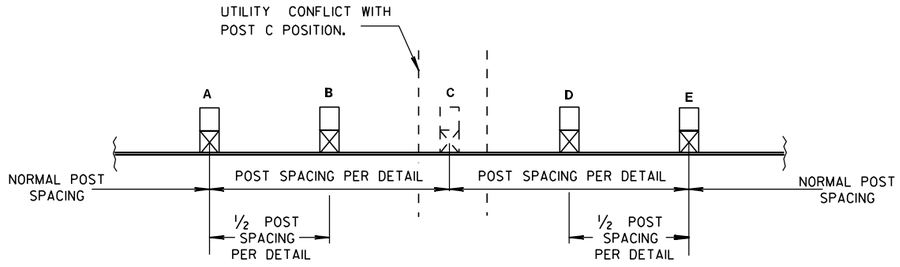


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

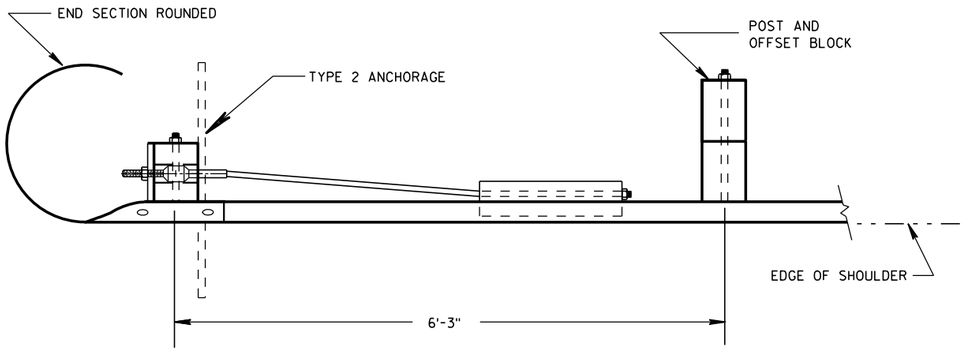
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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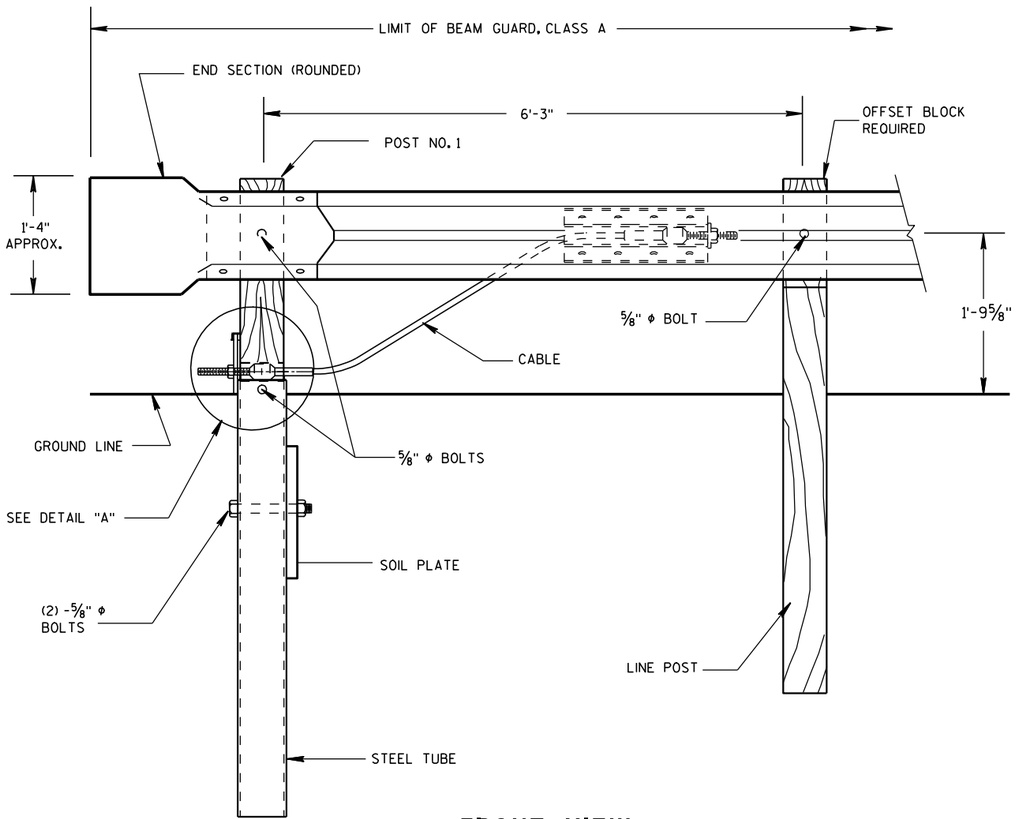
5/23/11	/S/ Jerry H. Zogg	
DATE	ROADWAY STANDARDS ENGINEER	ENT

FHWA

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



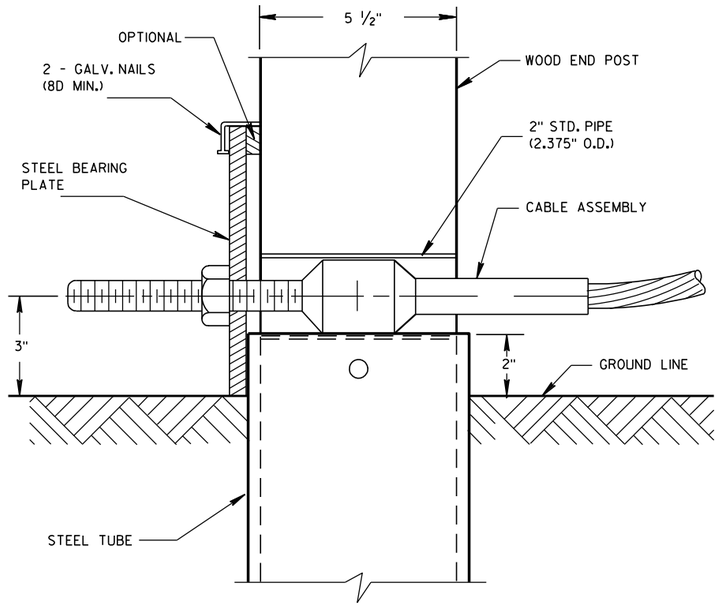
PLAN VIEW



FRONT VIEW

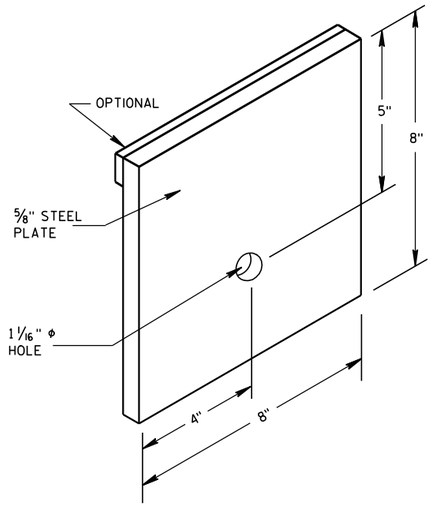
END TREATMENT WITH TYPE 2 ANCHORAGE

(USE ON ONE-WAY ROADWAYS ONLY - DEPARTING END)



DETAIL "A"

POST NO. 1



STEEL BEARING PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

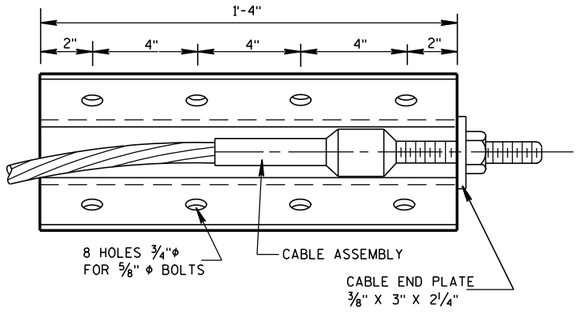
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....T

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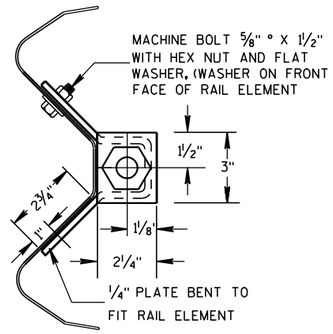
S.D.D. 14 B 16-4a

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S.D.D. 14 B 16-4a

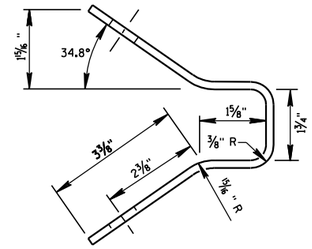


FRONT VIEW

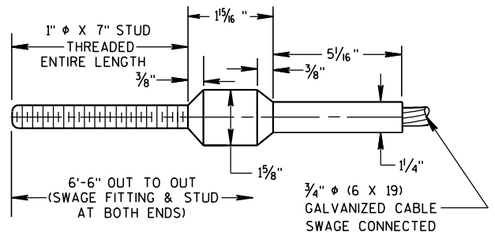


END VIEW

ANCHOR PLATE DETAIL



END VIEW OF BRACKET



CABLE ASSEMBLY

CABLE, SWAGE FITTING, STUD AND NUT SHALL DEVELOP
A MINIMUM BREAKING STRENGTH OF 40,000 LB
(TIGHTEN UNTIL TAUT)

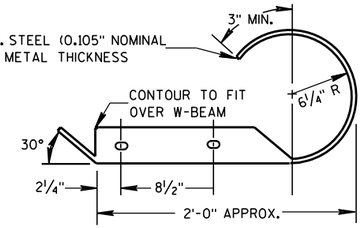
GENERAL NOTES

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

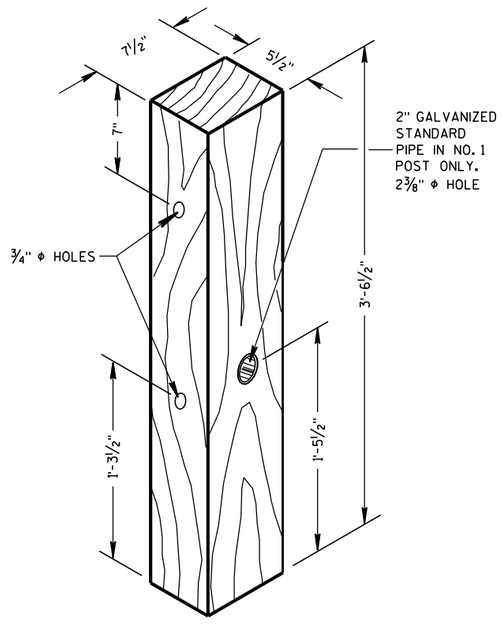
STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500 GRADE B OR ASTM A-501.

POST NO. 1 SHALL BE WOOD BREAKAWAY POST INSERTED AND BOLTED INTO STEEL TUBE.

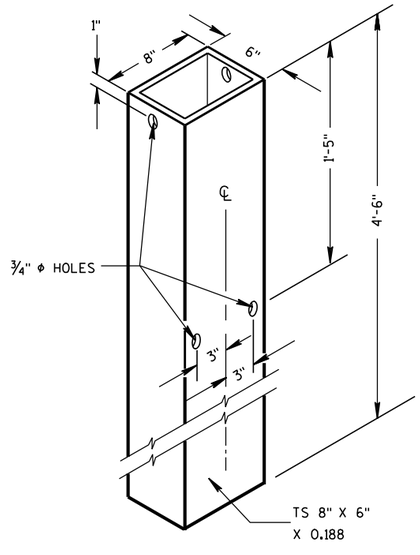
TYPE 2 ANCHORAGE SHALL CONSIST OF A STEEL TUBE, SOIL PLATE WOOD BREAKAWAY POST, BEARING PLATE, ANCHOR PLATE, CABLE ASSEMBLY AND ALL ASSOCIATED HARDWARE, ALL STEEL PARTS SHALL BE GALVANIZED.



PLAN VIEW

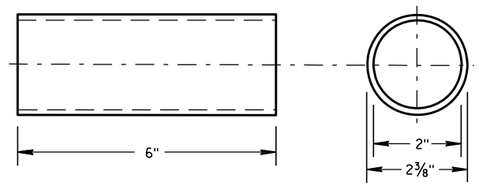


WOOD BREAKAWAY POST



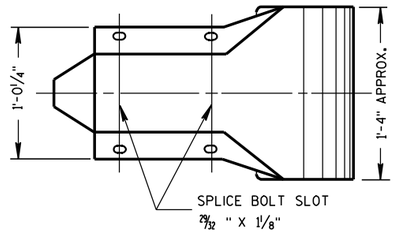
STEEL TUBE

STEEL TUBE SHALL CONFORM TO
REQUIREMENTS OF ASTM A500

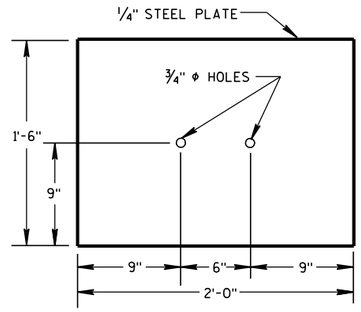


BREAKAWAY TERMINAL POST SLEEVE

GALVANIZED STANDARD STRENGTH STEEL PIPE, ASTM 53 GRADE "B"



FRONT VIEW
W BEAM END SECTION ROUNDED



SOIL PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

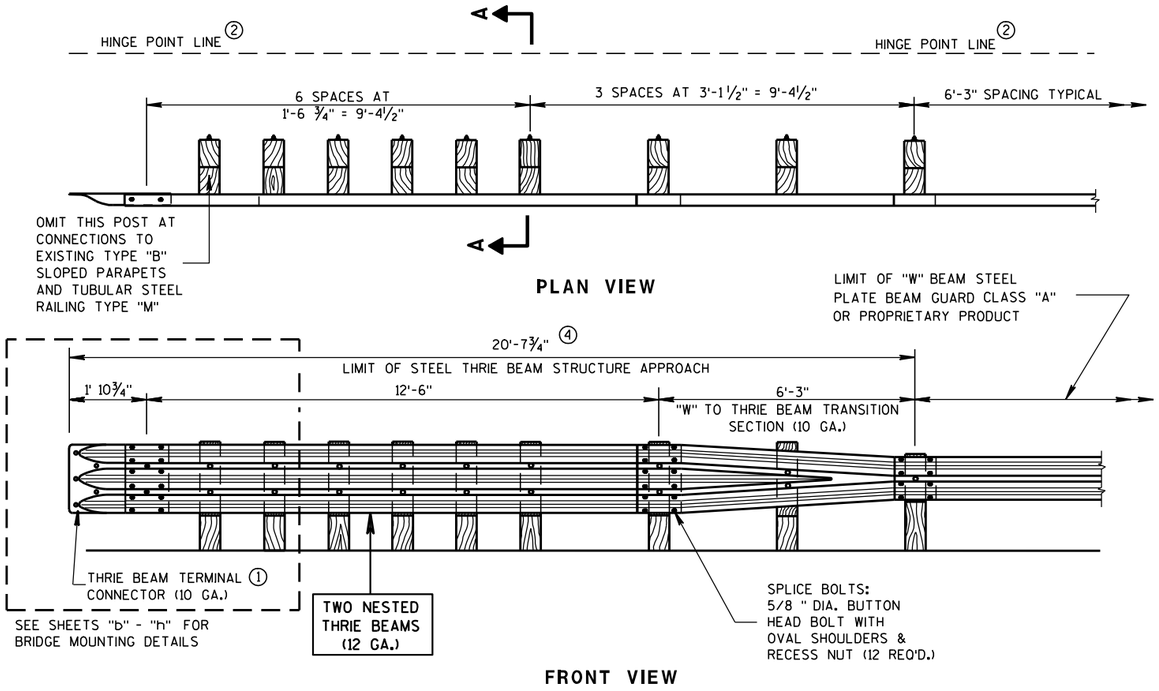
APPROVED
8/21/2007
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
318
FHWA

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S.D.D. 14 B 16-4b

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S.D.D. 14 B 16-4b



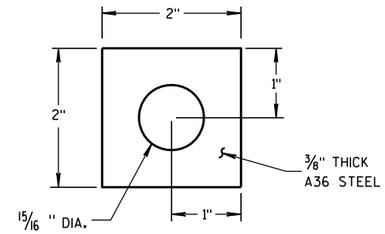


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

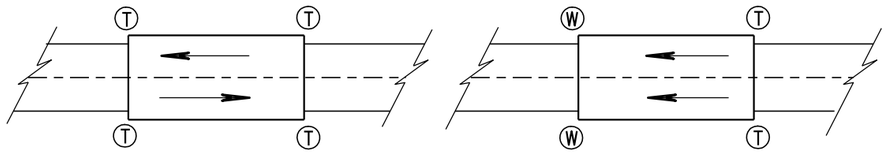
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



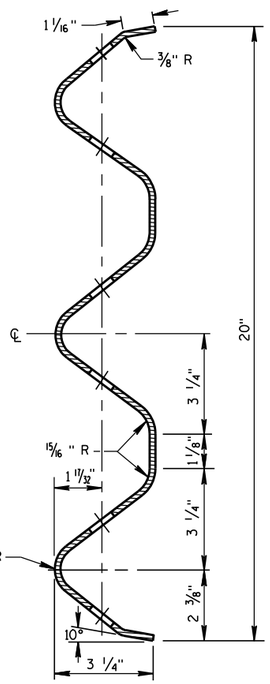
TWO WAY TRAFFIC

ONE WAY TRAFFIC

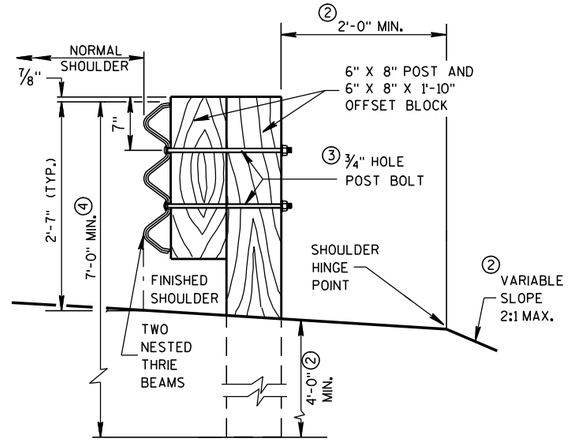
T THRIE BEAM CONNECTION

W W-BEAM CONNECTION WHEN REQUIRED

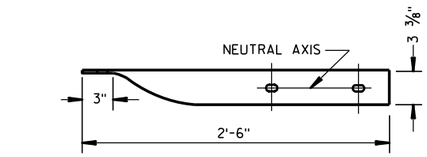
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

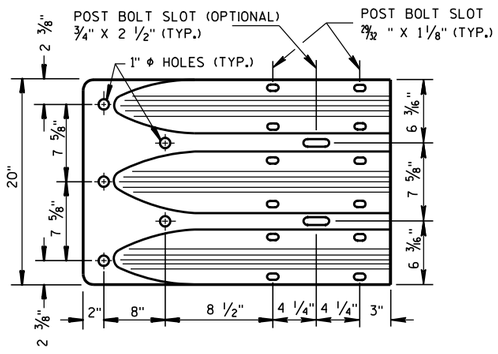


SECTION THRU THRIE BEAM RAIL ELEMENT

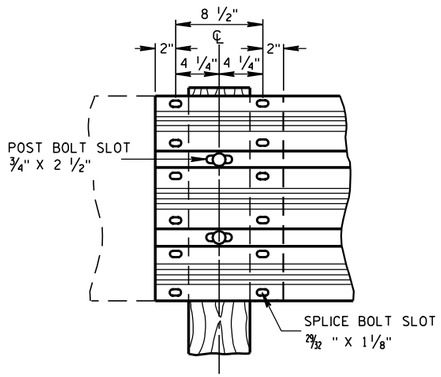


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

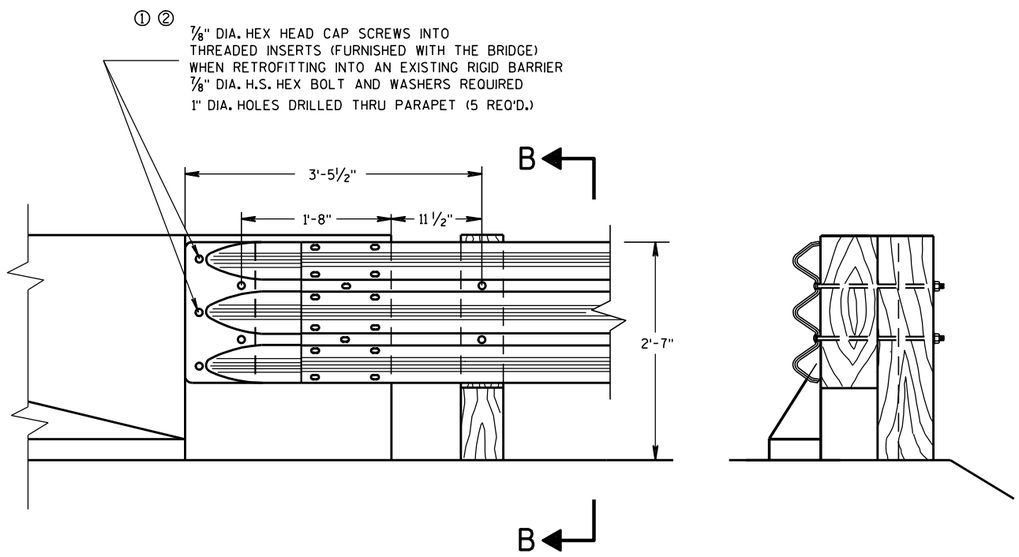
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

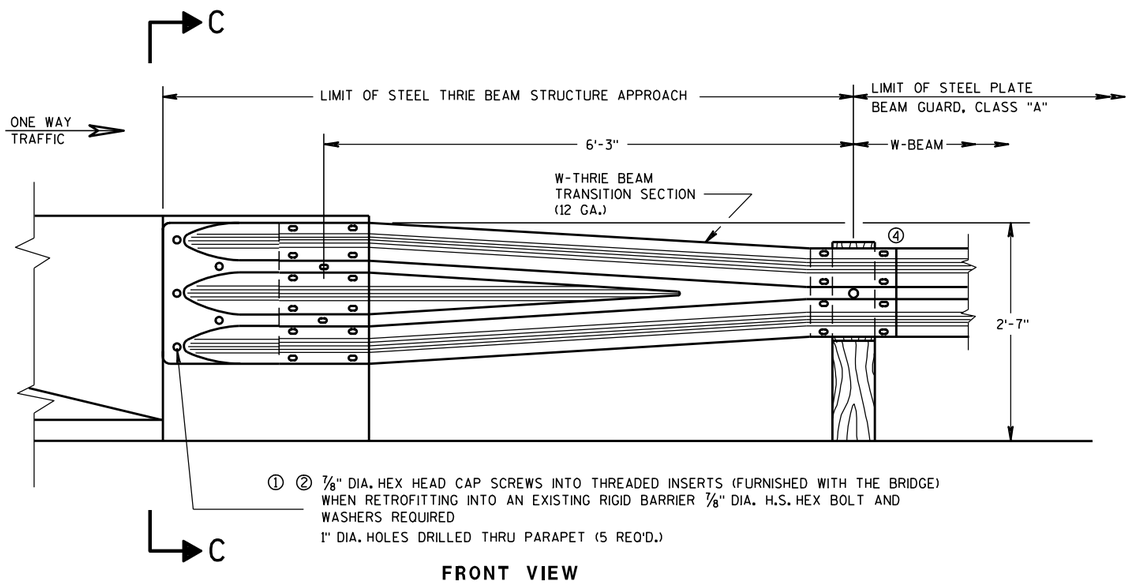
FHWA



FRONT VIEW

SECTION B-B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET (5 REQ'D.)

FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

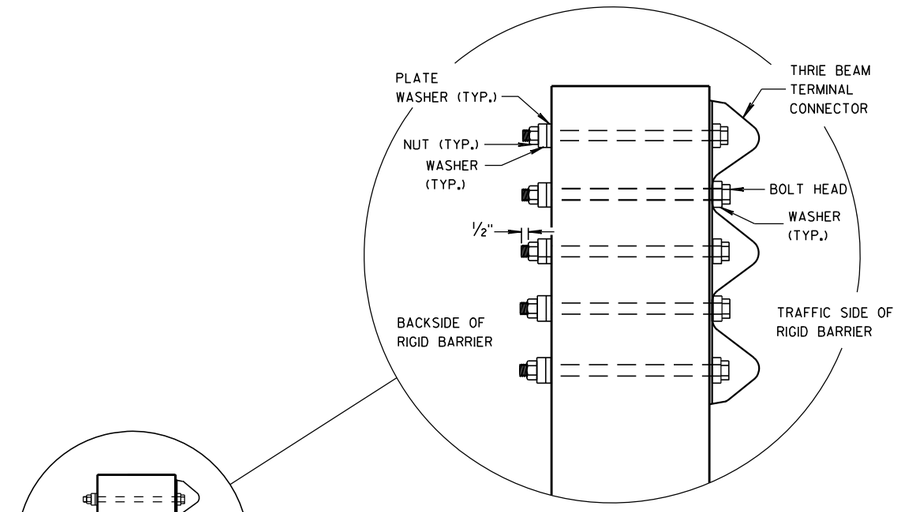
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

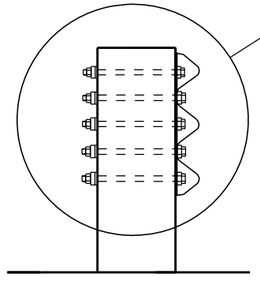
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.





SECTION C-C

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 14 B 20-11b

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.

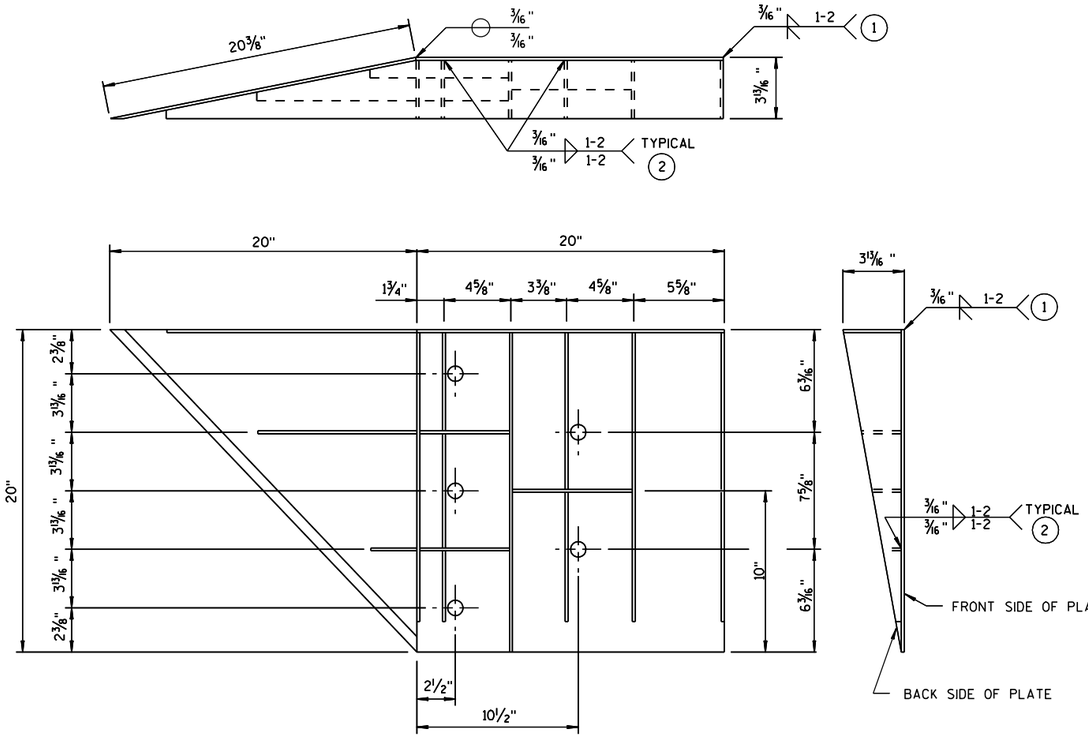
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) 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.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

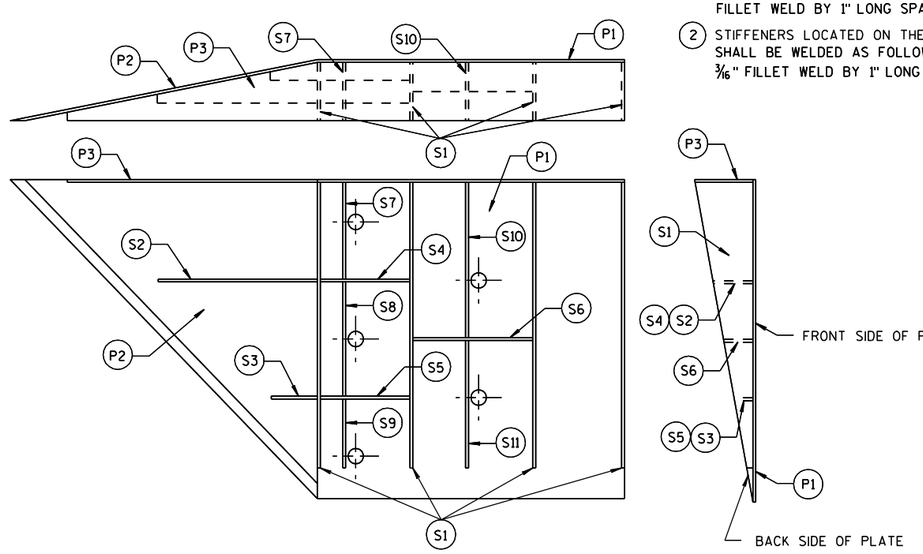


PLATE AND STIFFENER IDENTIFICATION

(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 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
(1)	4	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
(2)	**	STEEL TUBE: OPTION 1 - QUANITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
(3)	2	SOIL PLATE: 2'-0" X 1'-6" X ¼" **
(4)	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
(5)	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
(6)	1	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
(7)	1	BEARING PLATE
(8)	1	BCT CABLE ASSEMBLY
(9)	1	CABLE ANCHOR BOX
(10)	1	STRUT & YOKE
(11)	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6½" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
(12)	3	STEEL PLATE BEAM: 12 GA. 13'-6½"
(13)	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
(14)	1	REFLECTIVE SHEETING TYPE H: 18" X 18"
(15)	1	E.A.T. MARKER POST

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL ⅝" ϕ X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), 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) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

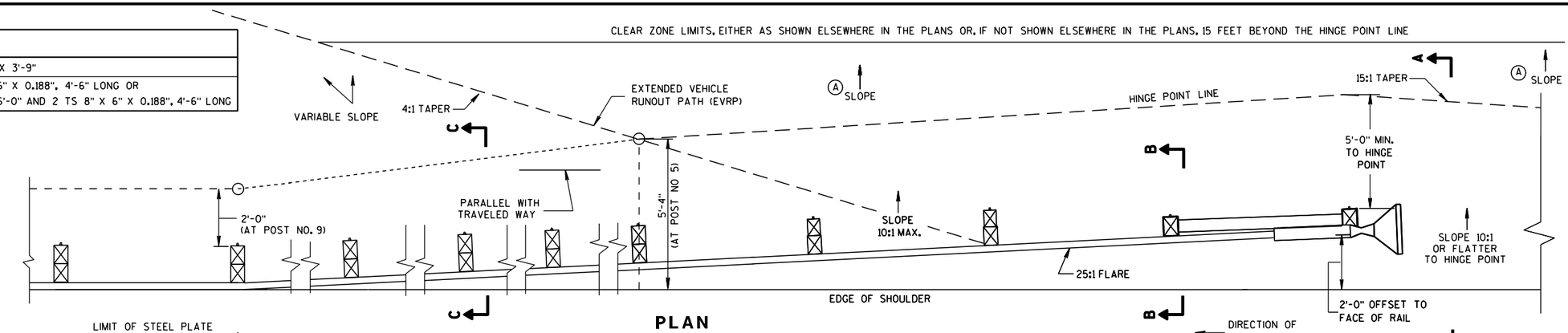
(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

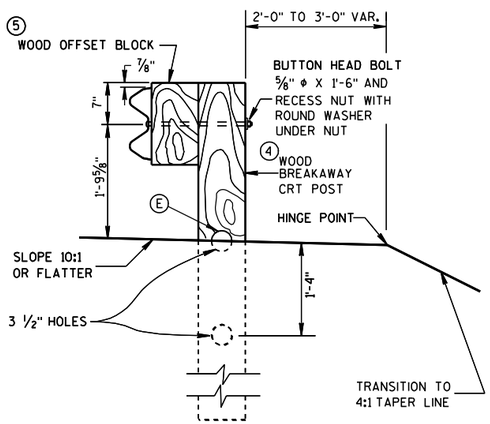
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

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

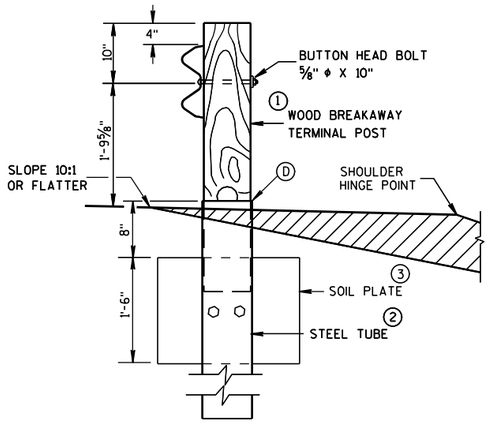
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.

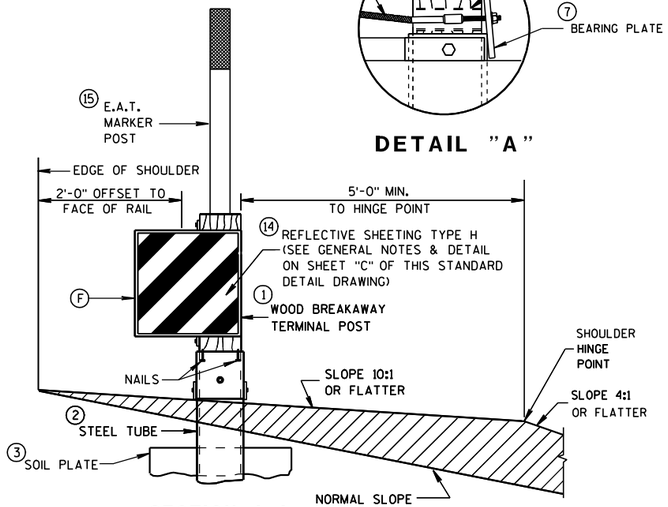




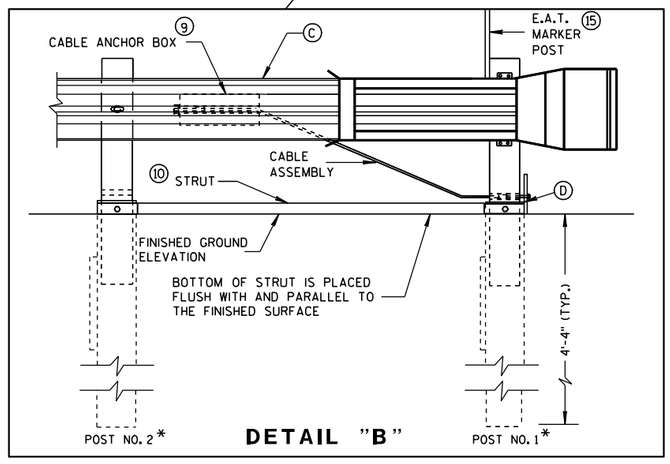
SECTION C-C
TYPICAL AT POST NOS. 6, 8



SECTION B-B
TYPICAL AT POST NO. 2*

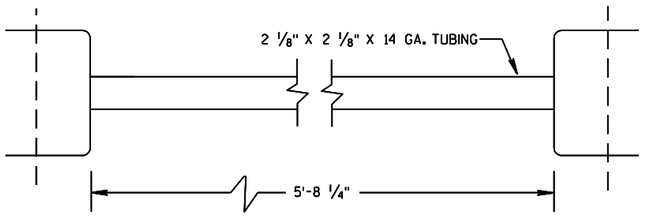


SECTION A-A
TYPICAL AT POST NO. 1*

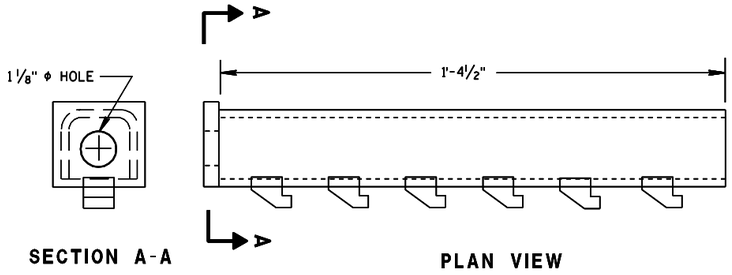


STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

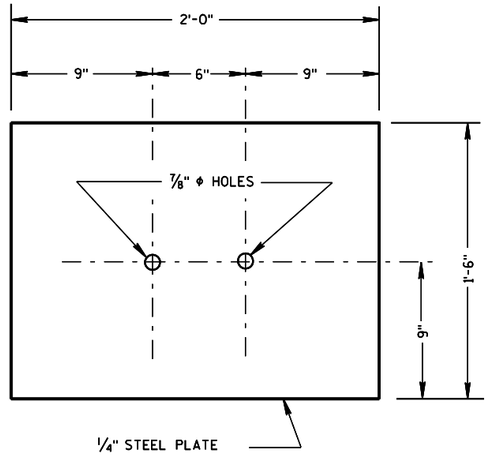
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



⑩ STRUT DETAIL (SKT-350)

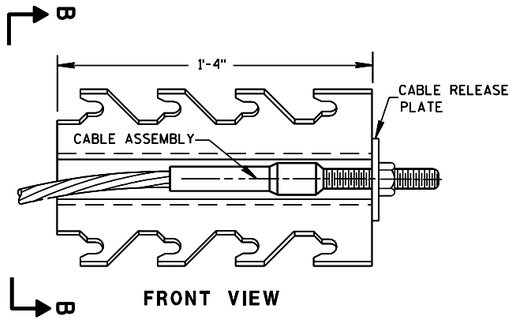


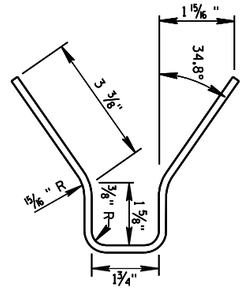
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



③ SOIL PLATE

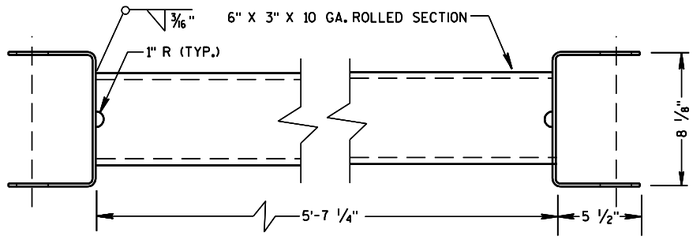
(SKT-350, ET-2000/ET-2000 PLUS)





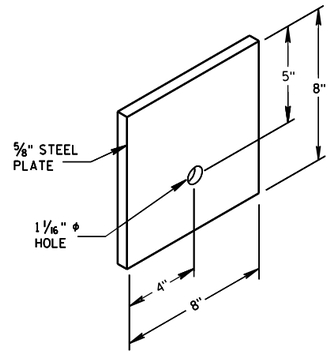
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



⑦ STEEL BEARING PLATE

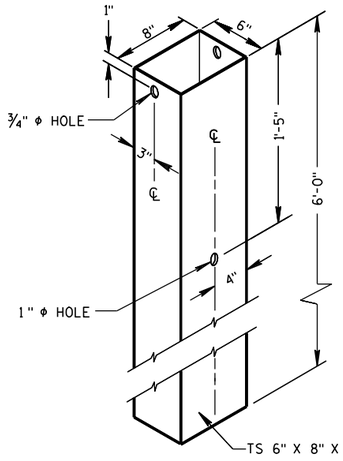
(SKT-350, ET-2000/ET-2000 PLUS)

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

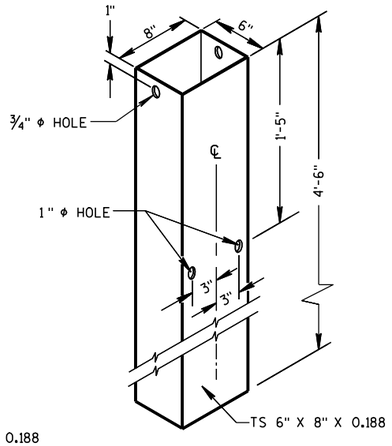
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

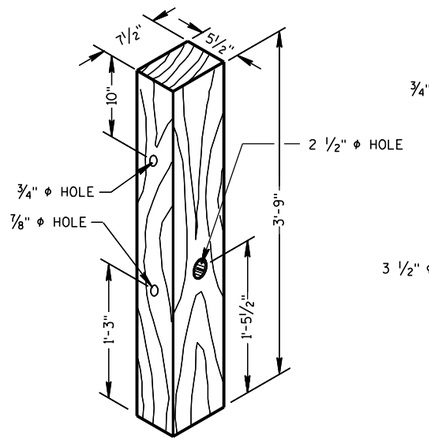
S.D.D. 14 B 24-7b



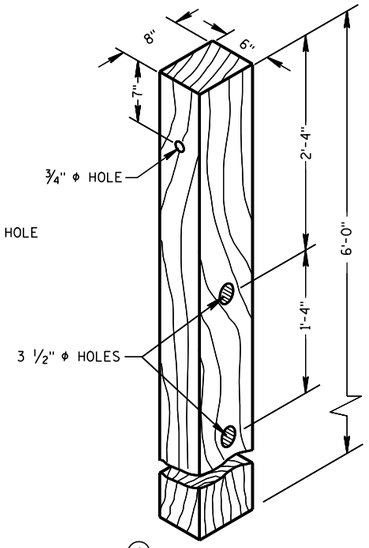
② 72" STEEL TUBE
(POSTS NO. 1-4



② 54" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST
(POSTS NO. 1-4



④ CRT POST
(POSTS NO'S 5-8

WOOD BREAKAWAY POSTS

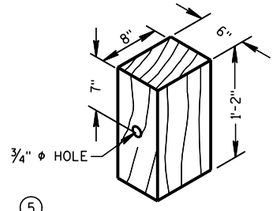
GENERAL NOTES

STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, WHICH SHALL INCLUDE HARDWARE, STEEL PLATE BEAM GUARD, POSTS, REFLECTIVE SHEETING AND INSTALLATION AS SHOWN.

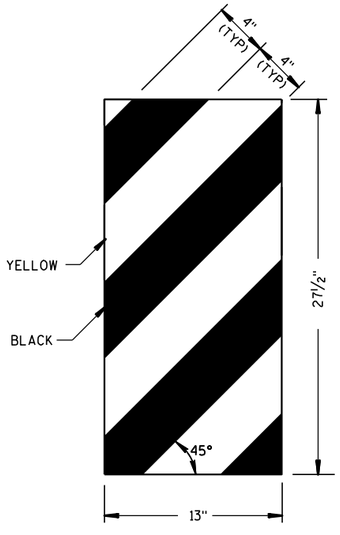
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

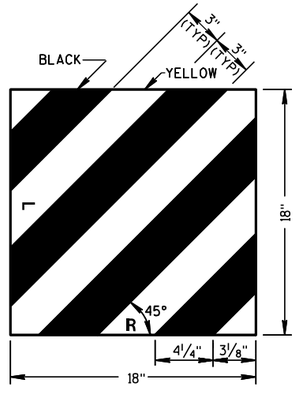
(G) ½" DIA. X 3" LAG BOLT WITH WASHER.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

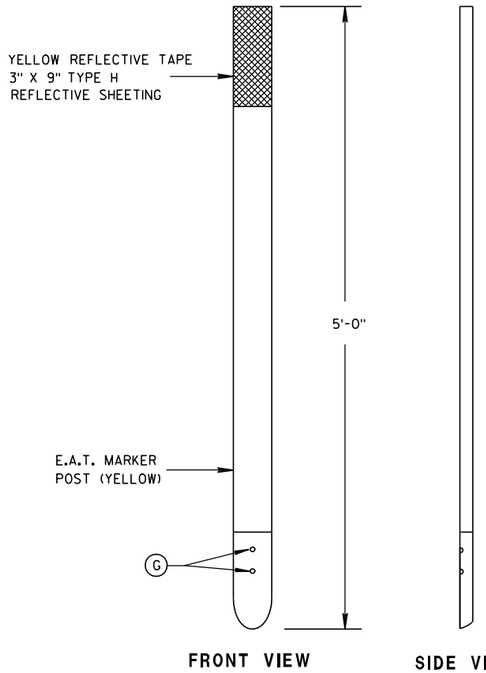


ET-2000 PLUS ONLY

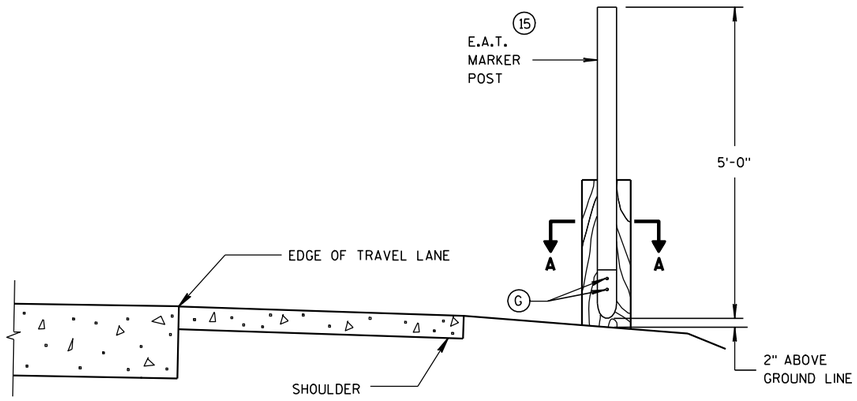


ET-2000 AND SKT-350

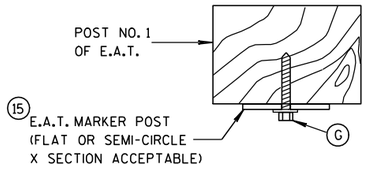
⑭ REFLECTIVE SHEETING DETAILS



⑮ E.A.T. MARKER POST



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

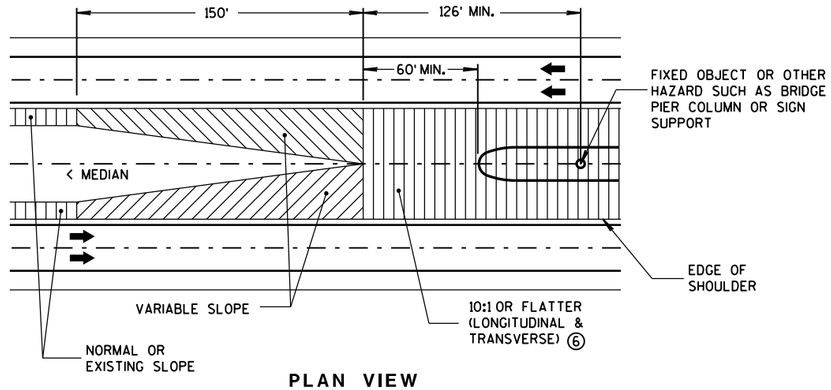
APPROVED
4-12-10
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
324
FHWA

6

S.D.D. 14 B 24-7c

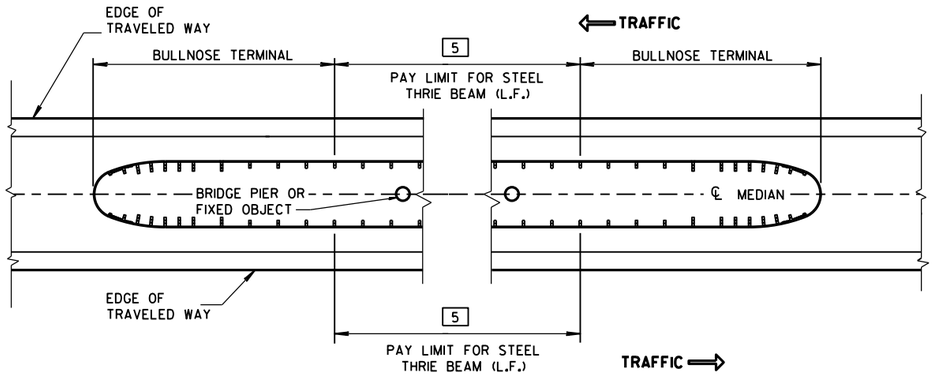
6

S.D.D. 14 B 24-7c

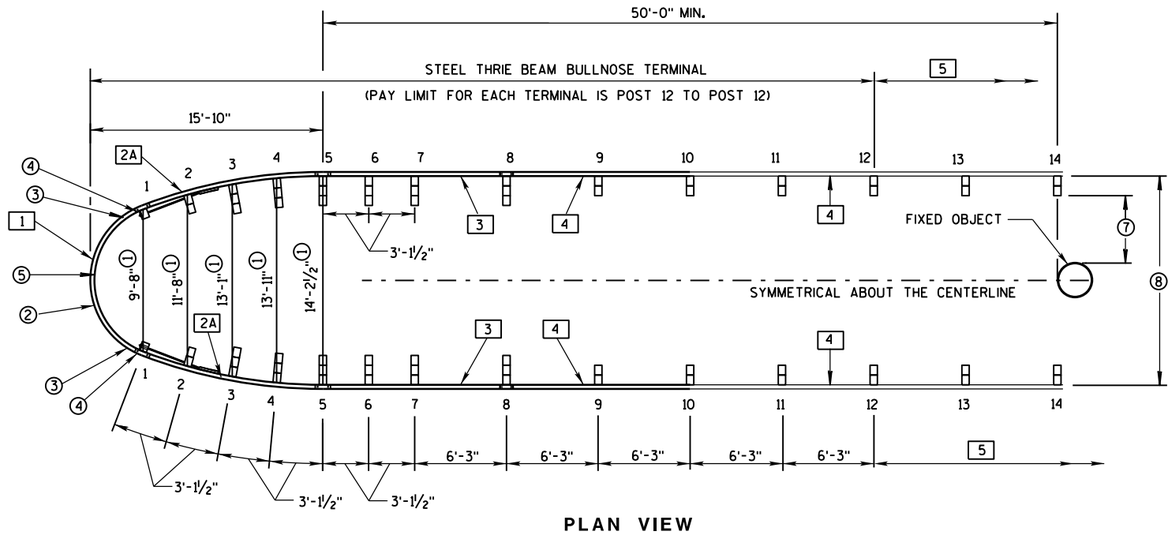


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

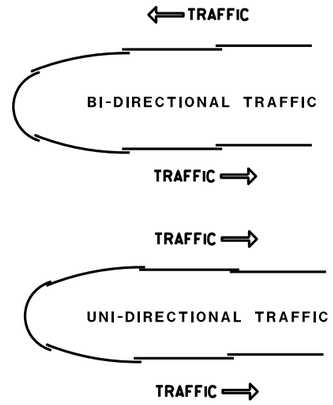


MEDIAN HAZARD PROTECTION PAY LIMITS



PLAN VIEW

TYPICAL BULLNOSE LAYOUT



LAPPING DETAIL
(ALL INSTALLATIONS)

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

PUNCHING, DRILLING, CUTTING OR WELDING IS NOT PERMITTED ON ANY GALVANIZED THRIE BEAM ACCESSORY OR TERMINAL ACCESSORY.

OTHER ANCHOR CABLE ASSEMBLIES HAVING 40,000 LBS. MIN. BREAKING STRENGTH MAY BE USED.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

THE USE OF STEEL POSTS ON THE BULLNOSE IS NOT ALLOWED.

BOLTS AND ALL NECESSARY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

ALL THRIE BEAM SHALL BE 12-GAUGE.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

[4] UNBENT STANDARD THRIE-BEAM RAIL NO.4. (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.

② U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.

③ NOSE CABLE W/SWAGGED END BUTTONS.

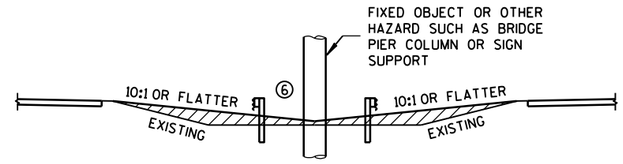
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

⑤ THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.

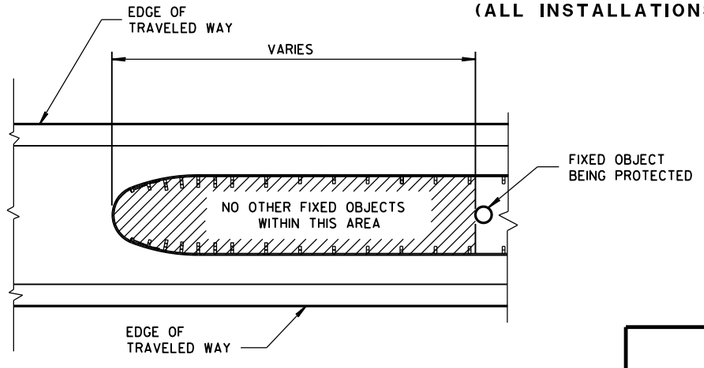
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

⑦ 2'-6" MINIMUM LATERAL DISTANCE BETWEEN BACK OF POST AND FACE OF FIXED OBJECT.

⑧ MAXIMUM WIDTH OF SYSTEM IS 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



MEDIAN GRADING SECTION
(ALL INSTALLATIONS)

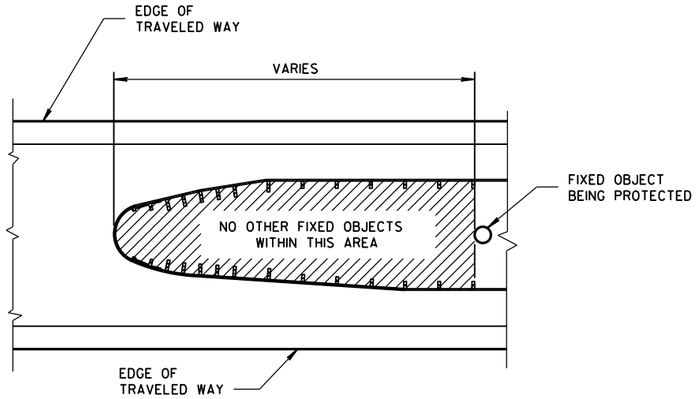


HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

S.D.D. 14 B 26-2a



HAZARD FREE
AREA INSIDE BULLNOSE

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A, (POST 1 TO POST 5)

[2B] SLOTTED THRIE BEAM RAIL NO. 2B, (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

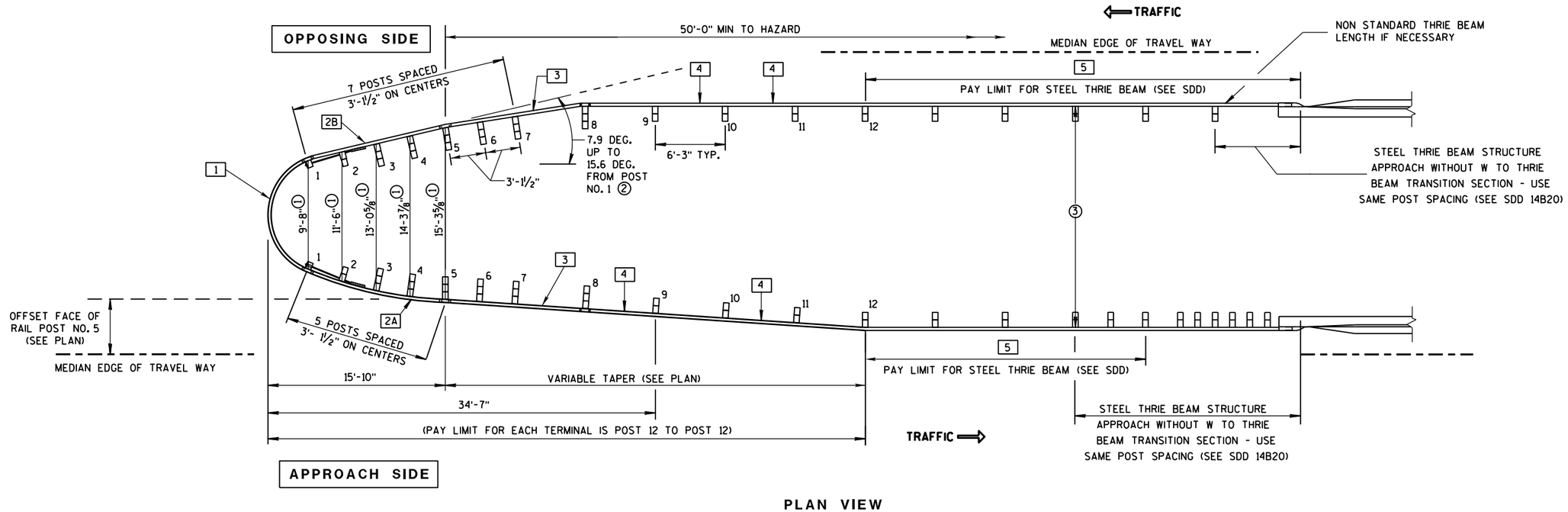
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST.

② TAPER BEGINNING AT POST NO. 1 MUST CONTINUE TO POST NO. 5. PAST POST NO. 5 TAPER MAY END OR BE EXTENDED UP TO 15.6 DEGREES TO FIT VARIABLE MEDIAN WIDTHS. (SEE PLAN)

③ FOR MEDIANS WIDER THAN 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



PLAN VIEW

WIDENED BULLNOSE DESIGN

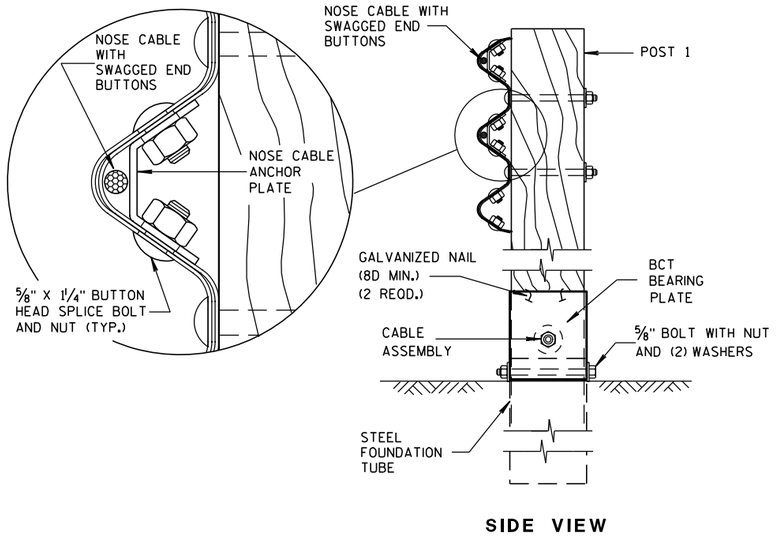
(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

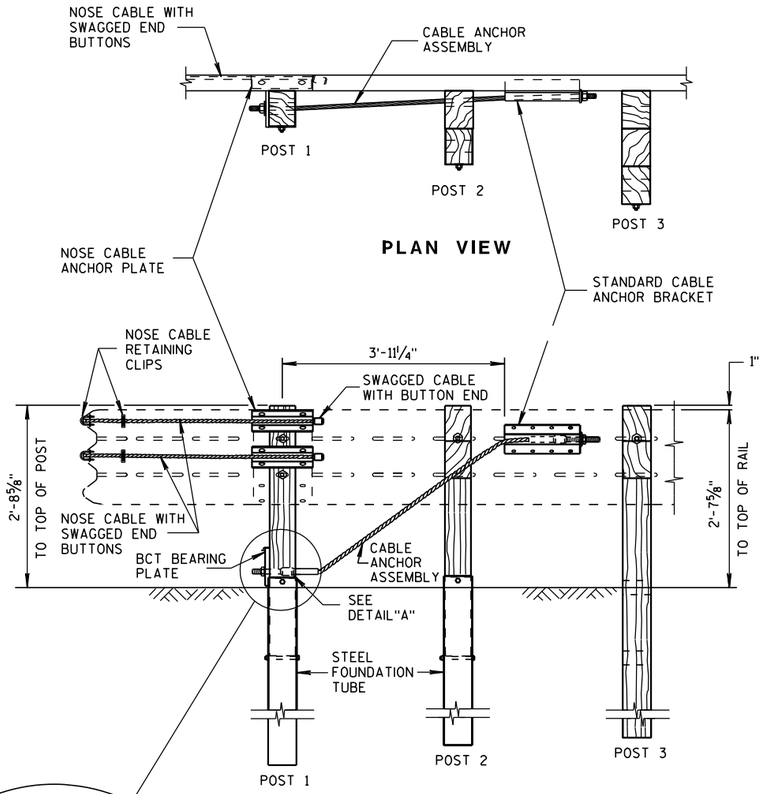
6

S.D.D. 14 B 26-2b



SIDE VIEW

NOSE CABLE ASSEMBLY AT POST NO. 1



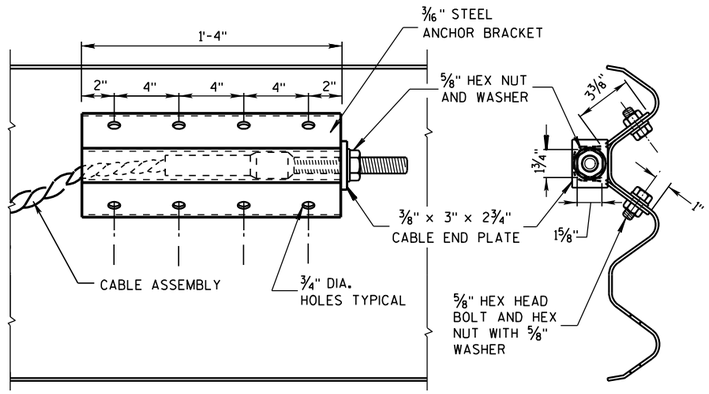
PLAN VIEW

FRONT VIEW

NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY

GENERAL NOTES

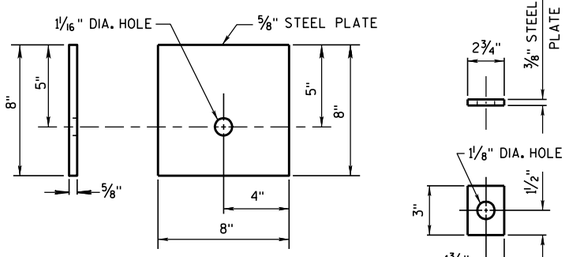
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



FRONT VIEW

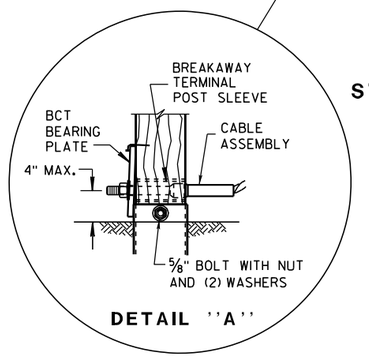
END VIEW

DETAILS OF CABLE ANCHOR BRACKET

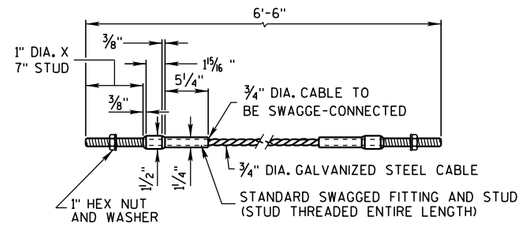


BCT BEARING PLATE

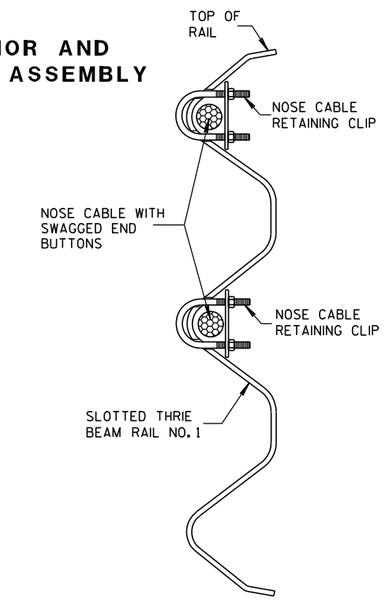
CABLE END PLATE



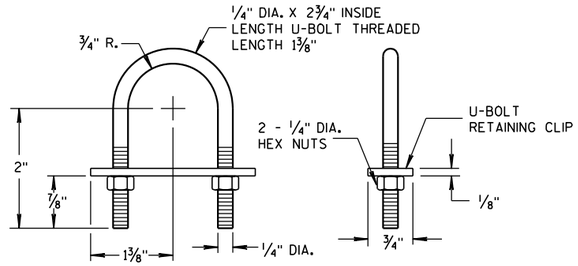
DETAIL ''A''



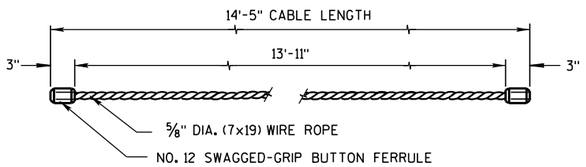
DETAILS OF CABLE ANCHOR ASSEMBLY



PLACEMENT OF NOSE CABLE RETAINING CLIP

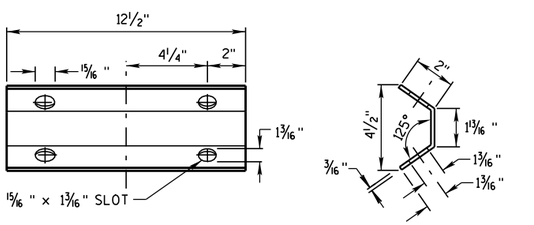


NOSE CABLE RETAINING CLIP



NOSE CABLE WITH SWAGGED END BUTTONS

TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGHT.



ELEVATION VIEW

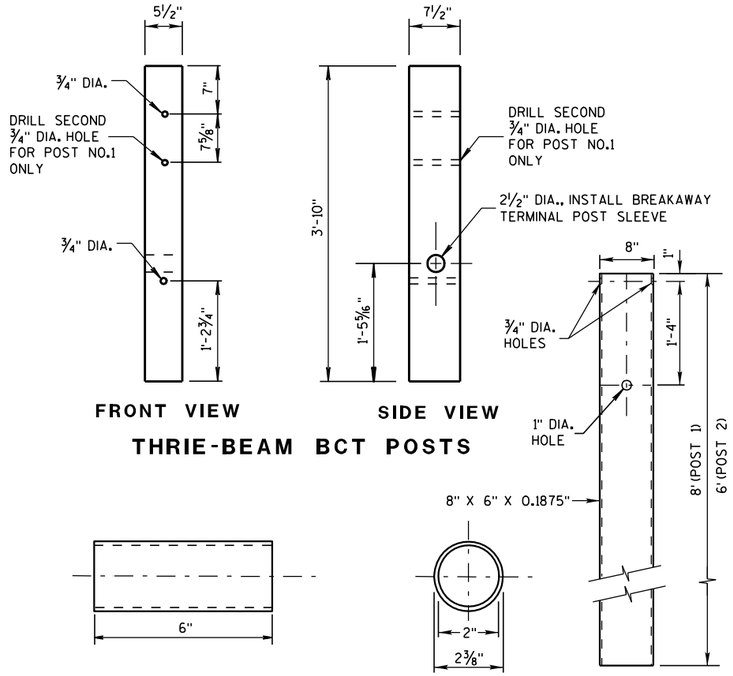
END VIEW

NOSE CABLE ANCHOR PLATE

NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)

STEEL THRIE BEAM BULLNOSE TERMINAL

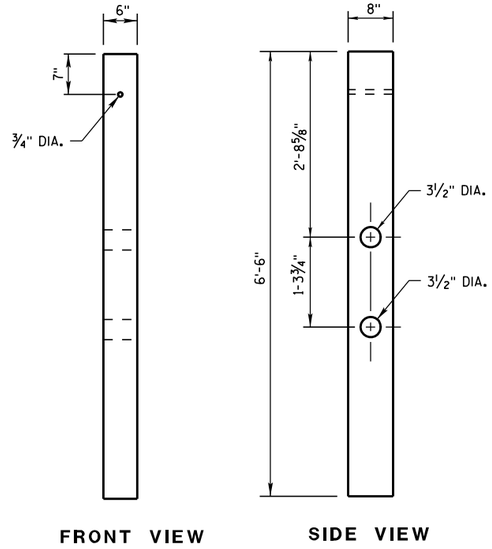
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

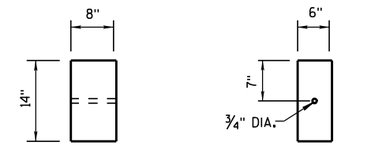
STEEL FOUNDATION TUBE



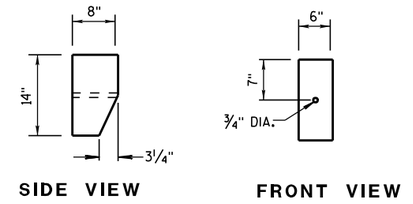
THRIE-BEAM CRT WOOD POSTS

GENERAL NOTES

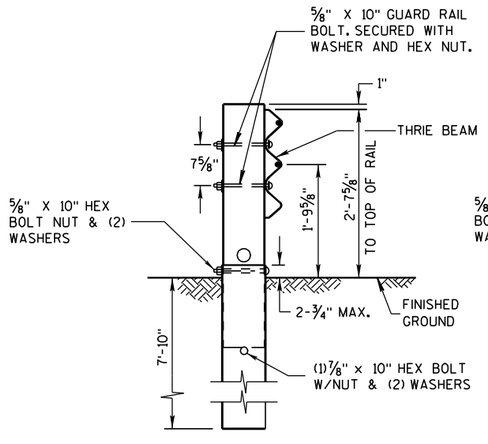
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



STANDARD WOOD BLOCK

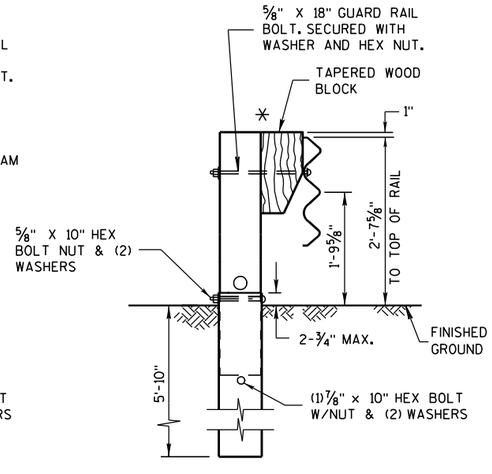


TAPERED WOOD BLOCK



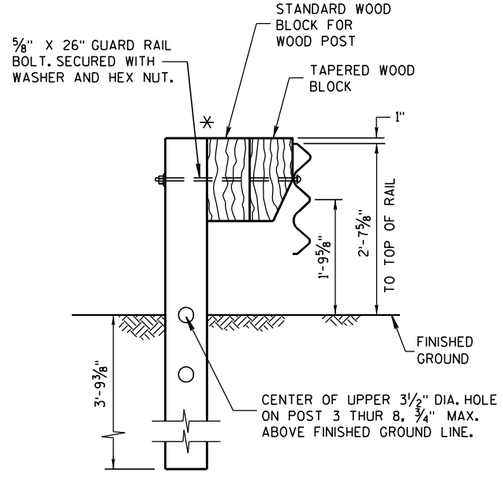
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



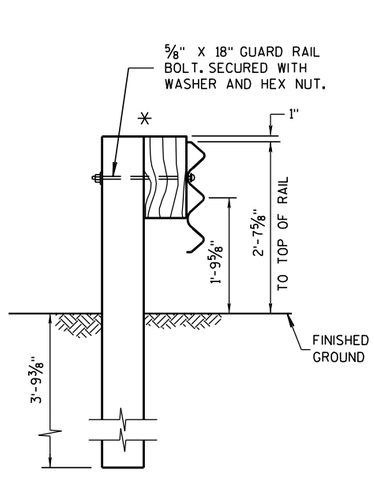
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

POST NO. 2



THRIE-BEAM CRT POST
(6'-6" LONG POST WITH 1'-2" BLOCK AND 1'-2" TAPERED BLOCK)

POST NO. 3,4,5,6,7, & 8



THRIE-BEAM POST
(6'-6" LONG POST WITH 1'-2" BLOCK)

POST NO. 9,10,11,& 12

(ALSO USE FOR STEEL THRIE BEAM BEYOND POST 12)

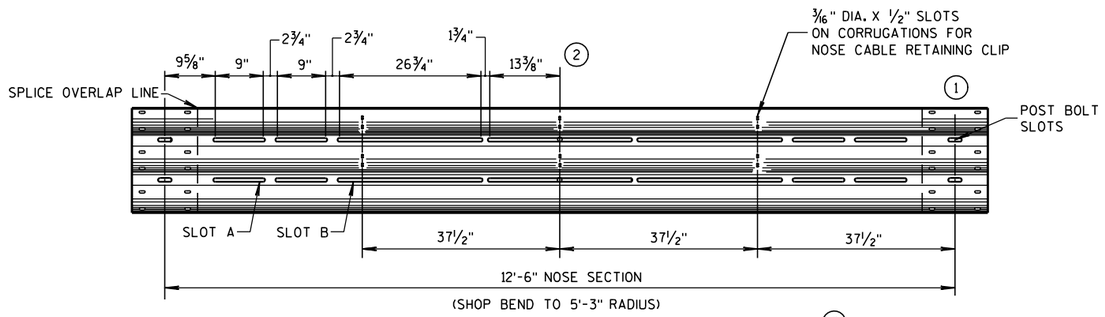
✳ IF NEEDED DUE TO AN UNDERGROUND OBSTACLE ADD 1 ADDITIONAL STANDARD BLOCKOUT TO POST.

STEEL THRIE BEAM BULLNOSE TERMINAL

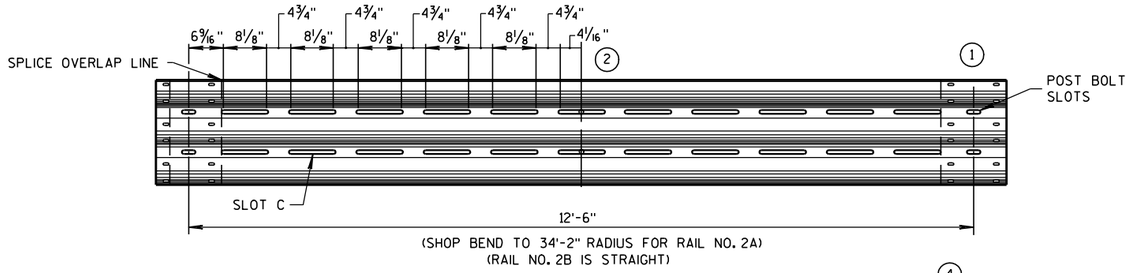
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

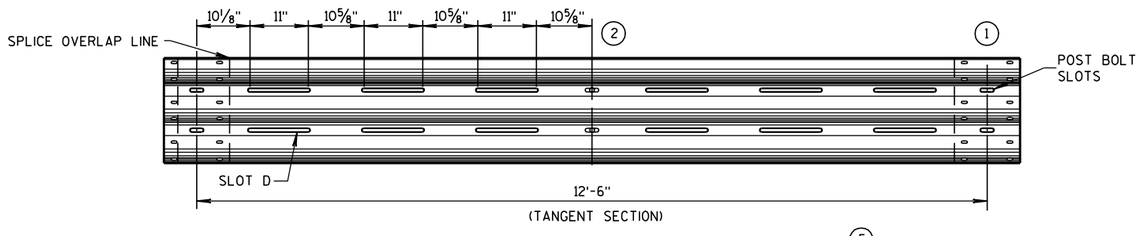
S.D.D. 14 B 26-2d



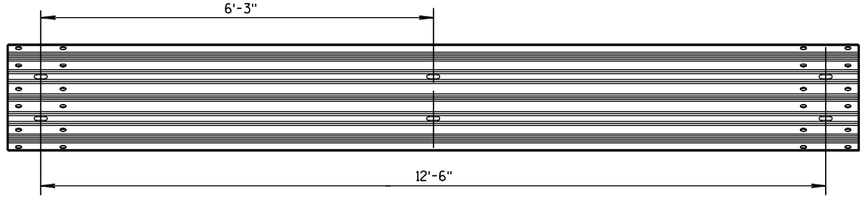
SLOTTED THRIE BEAM RAIL NO. 1 (3)



SLOTTED THRIE BEAM RAILS NO. 2A AND NO. 2B (4)



SLOTTED THRIE BEAM RAIL NO. 3 (5)



UNBENT STANDARD THRIE BEAM RAIL NO. 4 AND NO. 5

GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

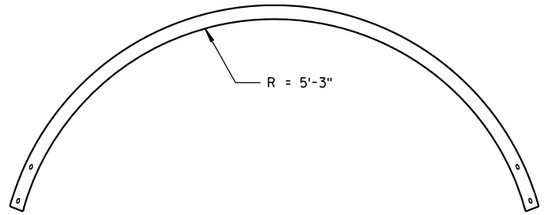
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

(3) SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".

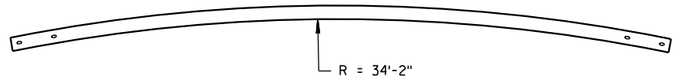
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

(5) SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



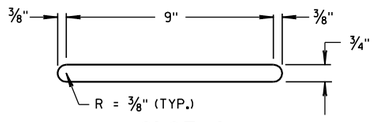
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1

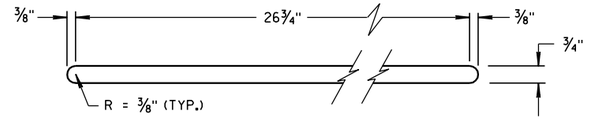


PLAN VIEW

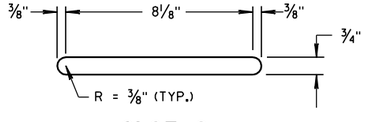
SLOTTED THRIE BEAM RAIL NO. 2A



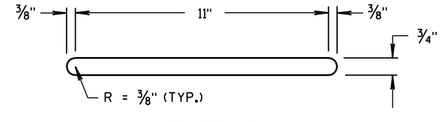
SLOT A



SLOT B



SLOT C



SLOT D

SLOT DETAILS

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

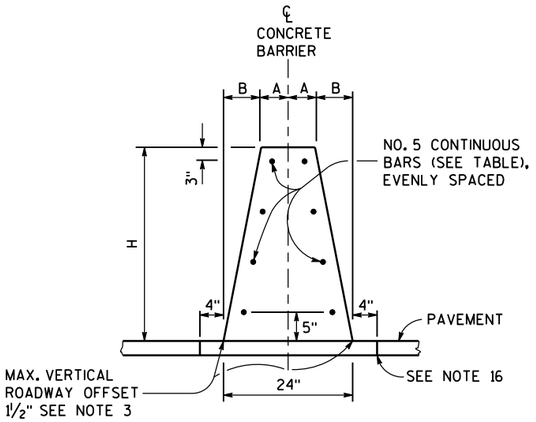
9-16-2010
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

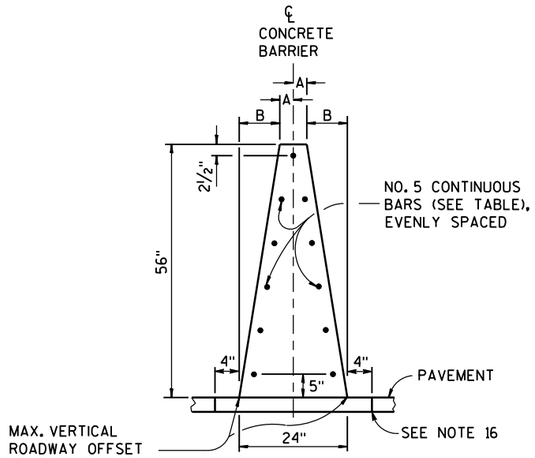
FHWA

6

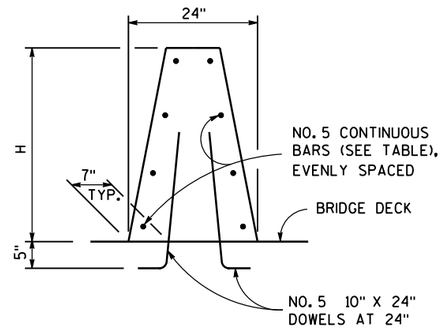
S.D.D. 14 B 26-2e



32-INCH, 36-INCH OR 42-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S32, TYPE S36, AND TYPE S42)



56-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S56)



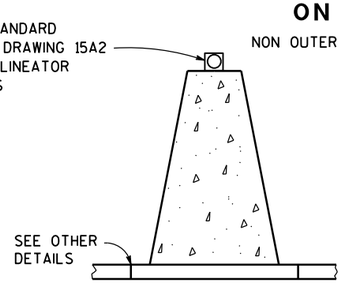
SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

NON OUTER PARAPET APPLICATION

GENERAL NOTES

1. WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.
2. EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK, PAVEMENT AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OR ½" MINIMUM.
3. WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1½", USE TYPE A
4. PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.
5. EXCEPT IN ANCHORS, VERTICAL REINFORCING STIRRUP NOT REQUIRED FOR ROADWAY OFFSETS LESS THAN 1'-0".
6. FOR TYPE S32, TYPE S36, TYPE S42, AND S56 MONOLITHIC FOOTING OR DOWELED FOOTING WITH 2-#8 x 8" @ 2'-0".
7. STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL 2 FEET. BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.
8. 4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.
9. WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.
10. USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
11. 2" CLEAR COVER TYPICAL.
12. COLD-JOINTS MAY BE USED BETWEEN ANCHOR INSTALLATIONS. WHEN A COLD JOINT IS NEEDED, 3 FEET OF LAP OF LONGITUDINAL STEEL IS REQUIRED. LAPS TO BE FIRMLY TIED.
13. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 NO ADDITIONAL VERTICAL STEEL NEEDED. IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A REQUIRES VERTICAL STEEL. SEE OTHER DETAIL.
14. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 DEPTH OF FOOTING 10". IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A MATCH TOTAL HEIGHT OF SINGLE SLOPE BARRIER RETAINING WALL.
15. FOR ALL BARRIER TYPES SHOWN, ANCHOR IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN ON DRAWING OR DETAILS SHOWN ON S.D.D. 14B33. ANCHORS INCIDENTAL TO CBSS.
16. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCERET BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11



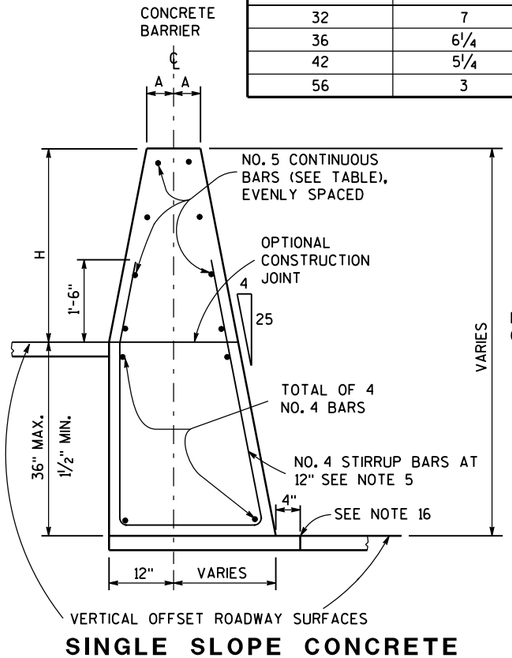
DELINEATION

DELINEATOR SPACING ON HORIZONTAL CURVES

RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

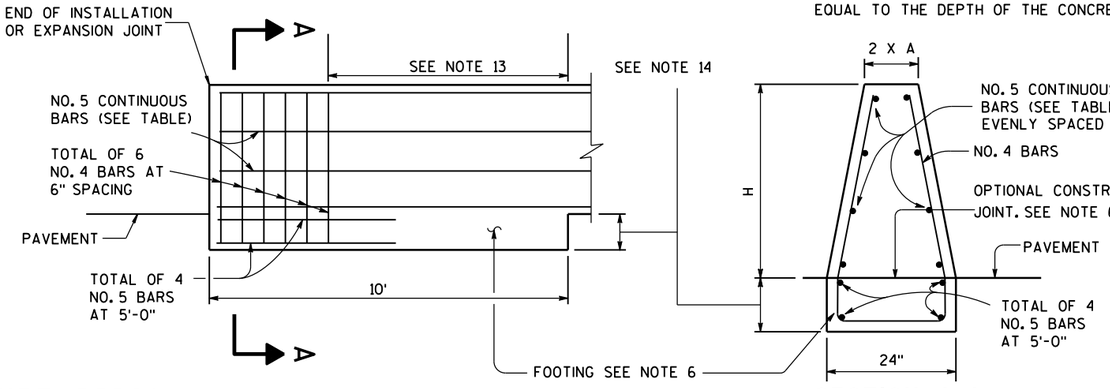
DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

	LENGTH OF BARRIER	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2	



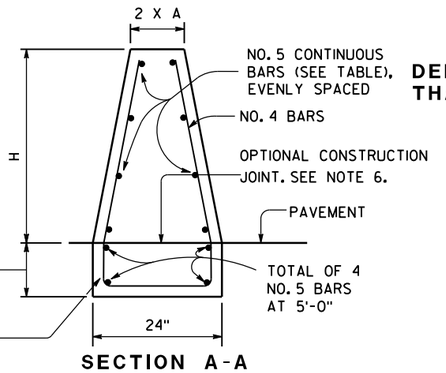
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

(BETWEEN ADJACENT ROADWAYS)



END ANCHOR SINGLE SLOPE CONCRETE BARRIER

AT CONSTRUCTION JOINT

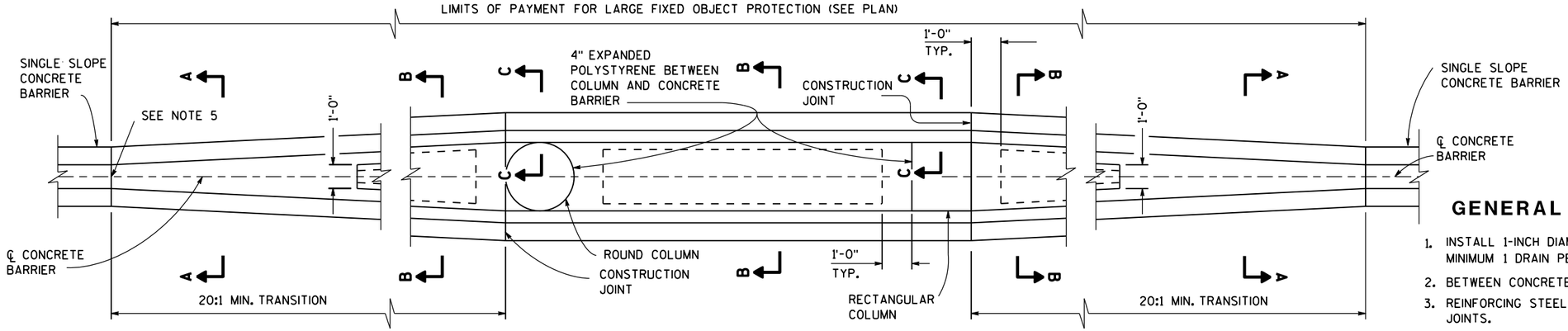


SECTION A-A

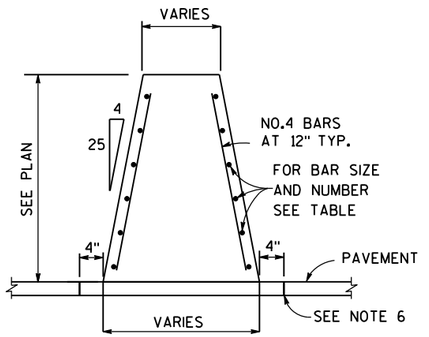
CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

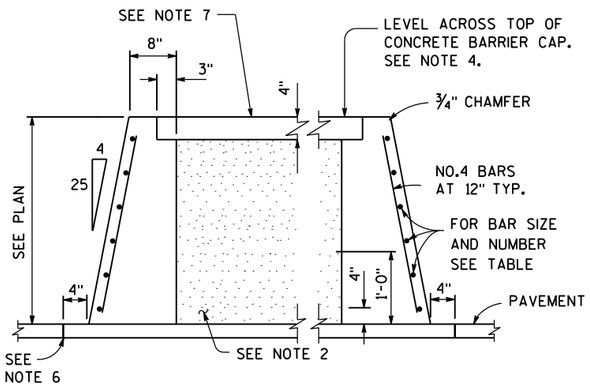
6
S.D.D. 14 B 32-2a



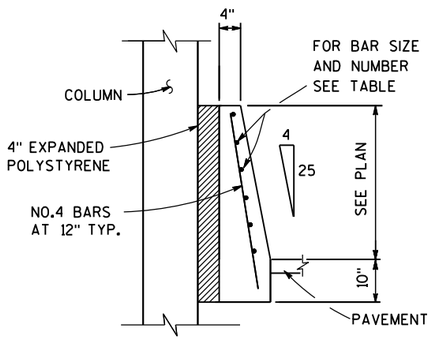
LARGE FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56



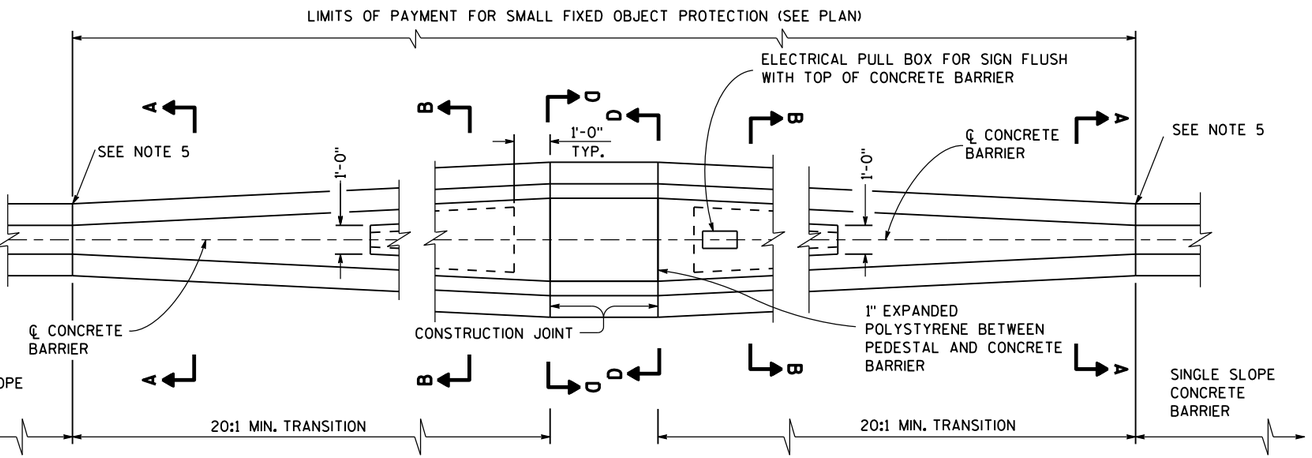
SECTION A-A



SECTION B-B



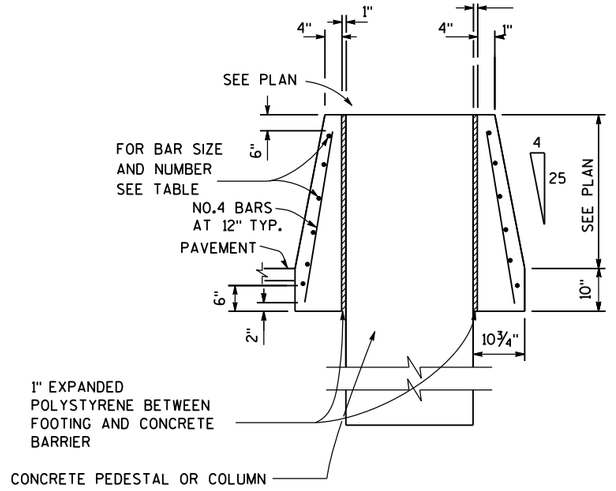
SECTION C-C



SMALL FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56

GENERAL NOTES

1. INSTALL 1-INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B-B. MINIMUM 1 DRAIN PER CAVITY.
2. BETWEEN CONCRETE BARRIER WALLS FILL WITH GRANULAR BACKFILL GRADE 2
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.
5. IF FIXED OBJECT PROTECTION IS INSTALLED FIRST, USE COLD JOINTS. IF CBSS PLACED FIRST, USE EXPANSION JOINT.
6. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
7. USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.



SECTION D-D

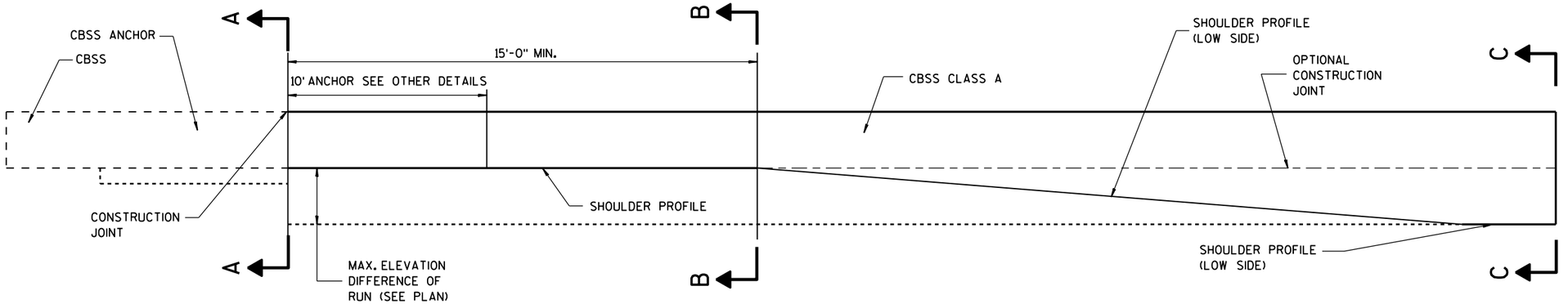
BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	9

CONCRETE BARRIER SINGLE SLOPE (CBSS)

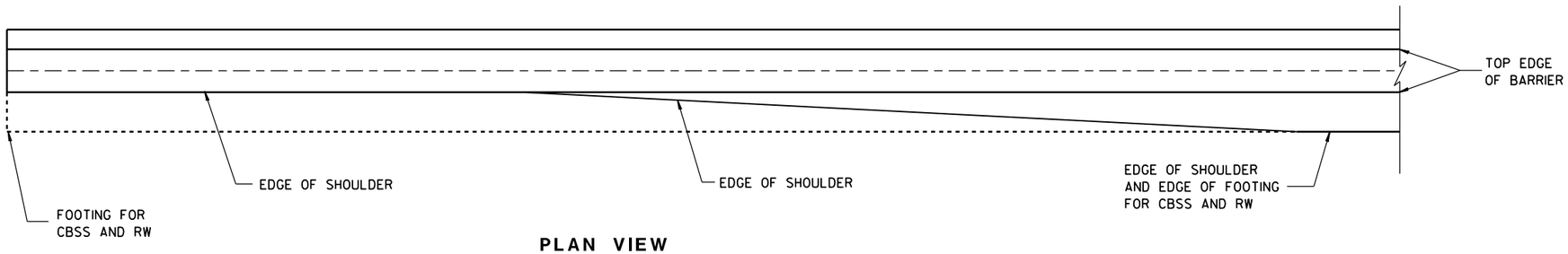
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

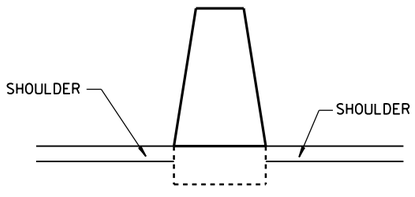
S.D.D. 14 B 32-2b



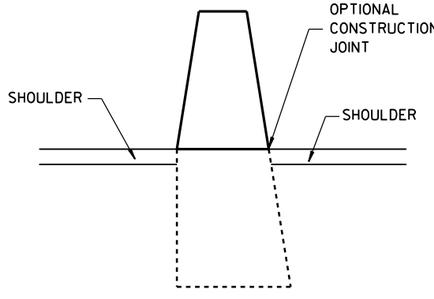
ELEVATION VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



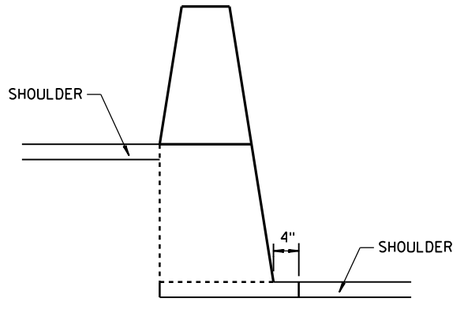
PLAN VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



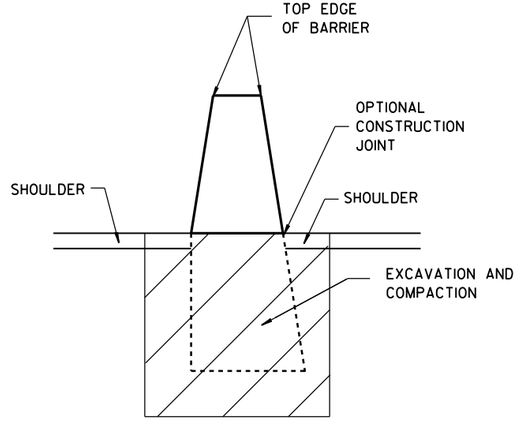
SECTION A-A



SECTION B-B



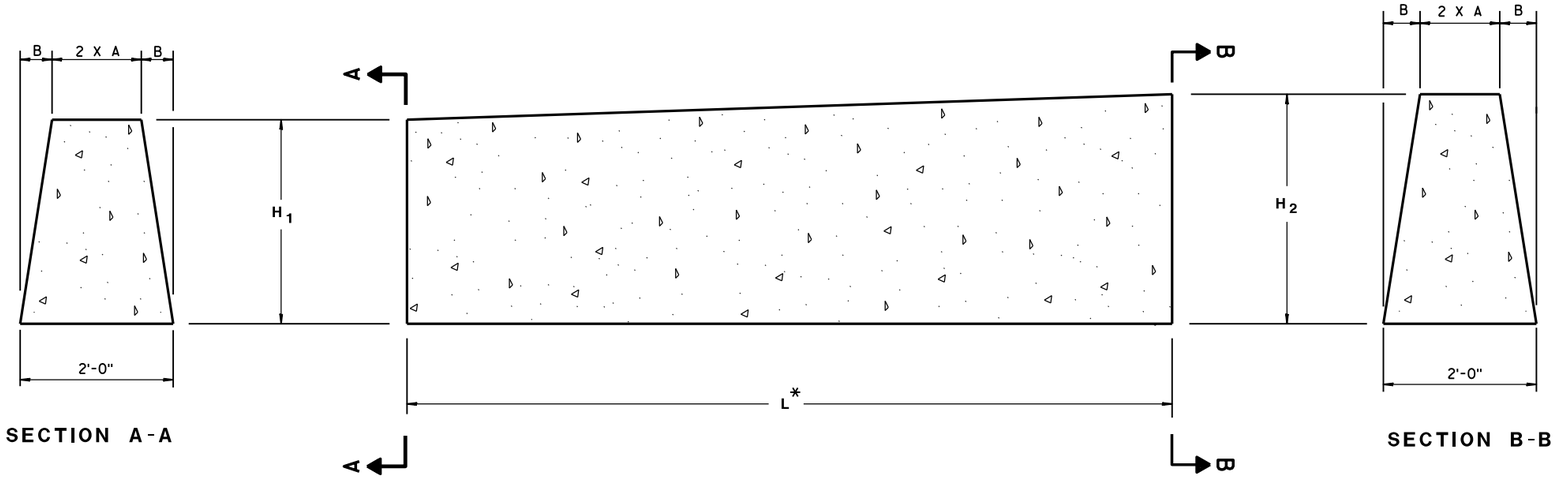
SECTION C-C



CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 32-2c



SECTION A-A

SECTION B-B

DOUBLE COLD JOINT HEIGHT TRANSITION

BARRIER DIMENSIONS

BARRIER HEIGHT INCHES	A INCHES	B INCHES
32	7	5
36	6 1/4	5 3/4
42	5 1/4	6 3/4
56	3	9

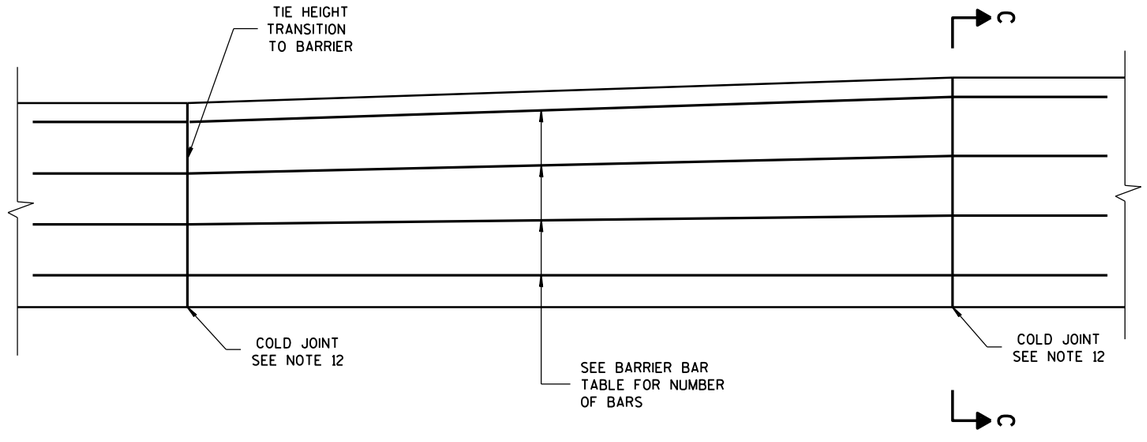
MULTIPLE HEIGHT TRANSITIONS MAY BE USED IN SEQUENCE TO GET TO APPROPRIATE HEIGHT.

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

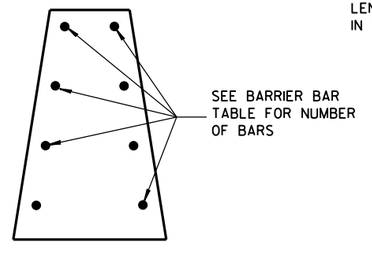
BARRIER BARS

H_1	H_2	L*	NUMBER OF NO. 5 BARS
32"	36"	10'-0"	8
36"	42"	10'-6"	10
42"	56"	24'-6"	11

* LENGTH OF DOUBLE COLD JOINT INCLUDED IN THE TOTAL LENGTH OF CBSS.



STEEL REINFORCEMENT DETAIL



SECTION C-C

CONCRETE BARRIER SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-10-2013
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

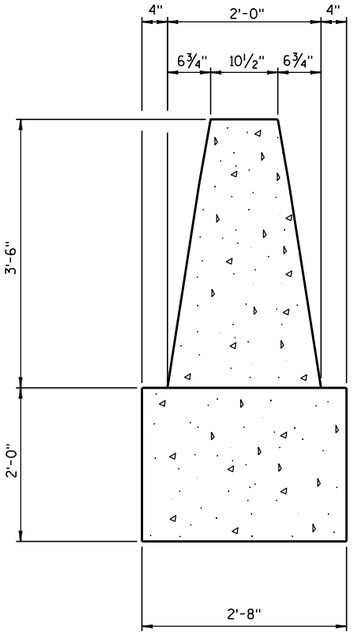
FHWA

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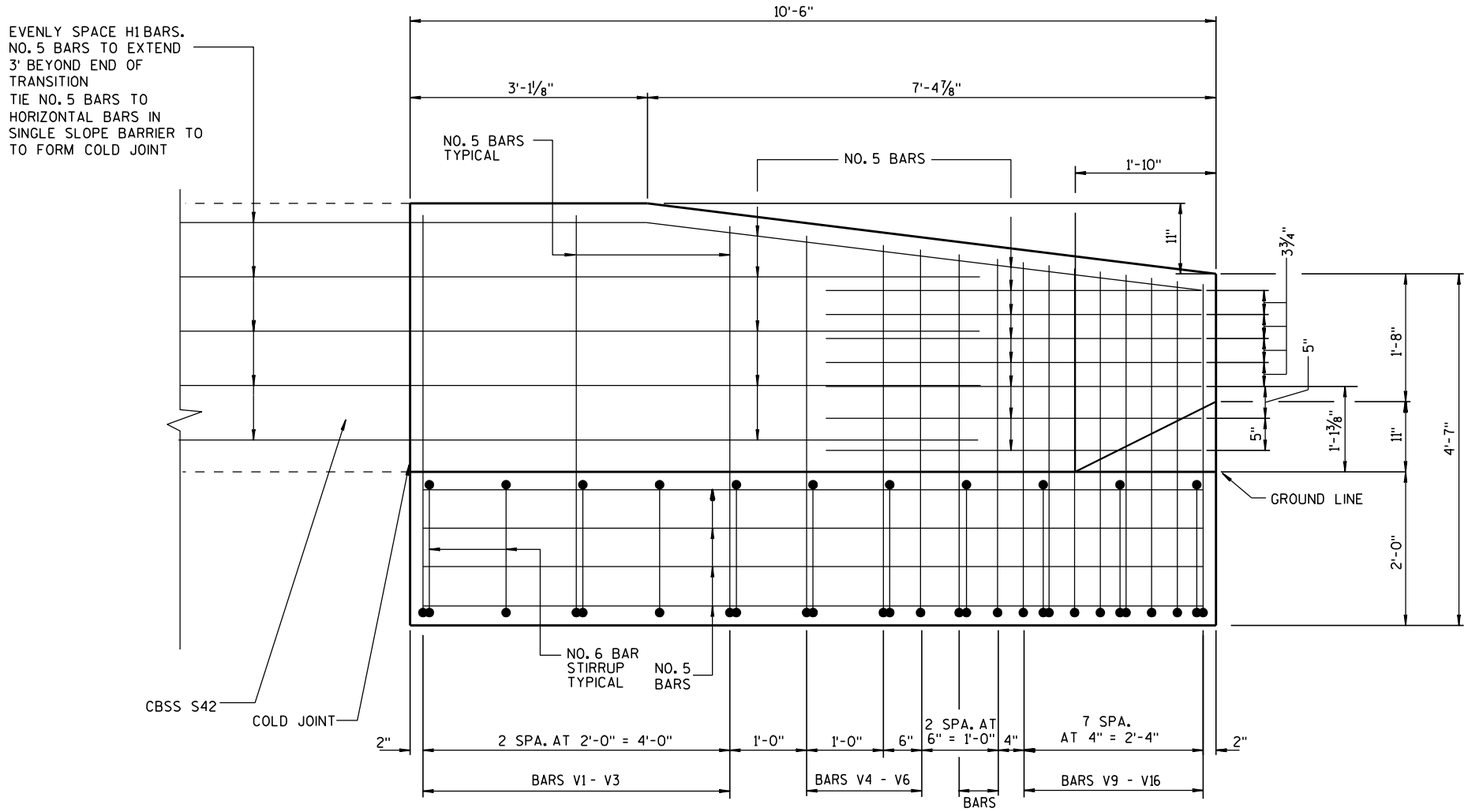
S.D.D. 14 B 32-2d

6

S.D.D. 14 B 32-2d

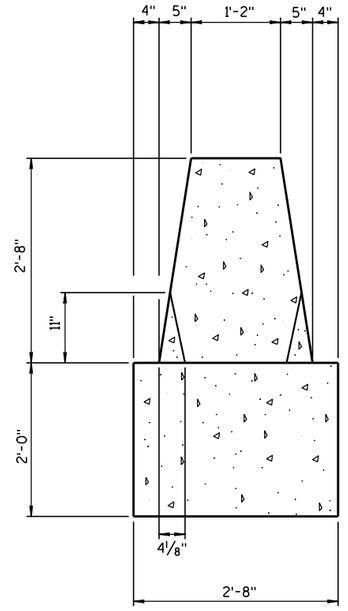


SECTION A-A

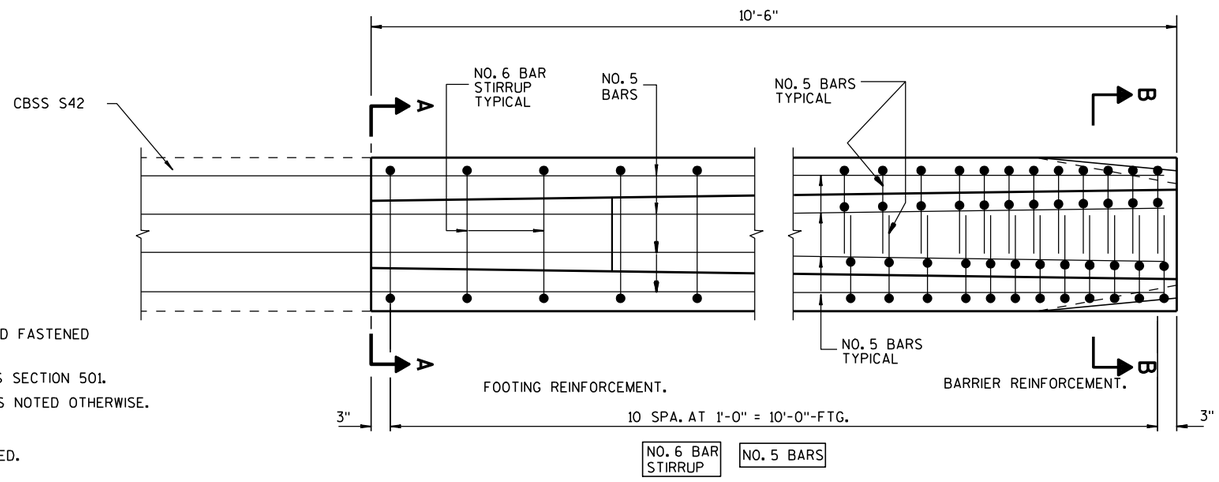


SEE SECTIONS ① THRU ⑯

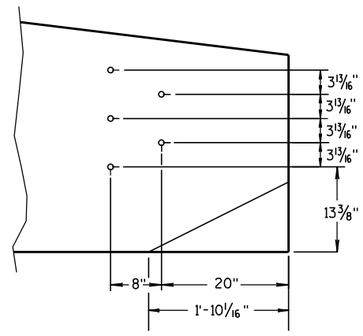
ELEVATION VIEW



SECTION B-B



PLAN VIEW



PVC PIPE LOCATIONS

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THRIE BEAM ANCHOR INCIDENTAL TO CONCRETE BARRIER ITEM.

INSTALL SCHEDULE 40 PVC PIPE 1" DIAMETER AT LOCATIONS INDICATED.

EXTEND PVC PIPE COMPLETELY THROUGH BARRIER.

CUT ENDS OF PVC PIPE FLUSH WITH FINISHED FACE of BARRIER.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

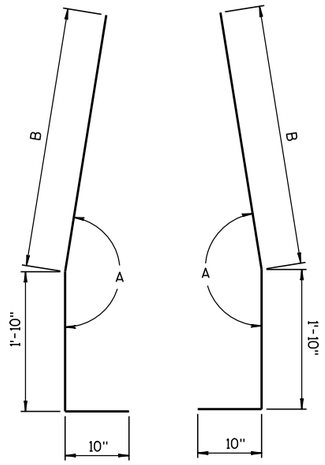
CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 33-1g

BAR CHART
SECTIONS V1 - V11

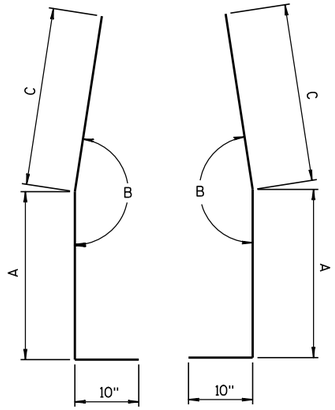
BAR	A	B
V1	170°-50'	3'-4½"
V2	171°-20'	3'-4½"
V3	171°-30'	3'-2½"
V4	171°-25'	3'-1½"
V5	171°-15'	3'-0"
V6	171°-15'	2'-11"
V7	171°-20'	2'-10½"
V8	171°-10'	2'-9½"
V9	171°-10'	2'-9"
V10	171°-05'	2'-8½"
V11	171°-10'	2'-8"



BAR BENDING DETAIL
FOR BARS V1 - V11

BAR CHART
SECTIONS V12 - V13

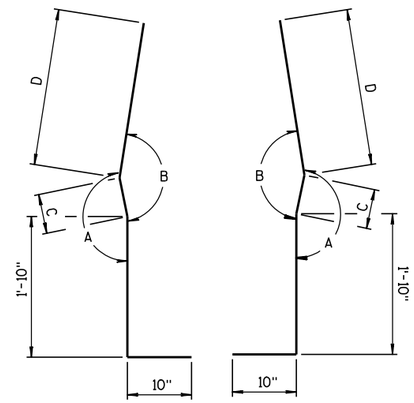
BAR	A	B	C
V12	2'-2"	171°-15'	2'-3½"
V13	2'-7"	171°-05'	1'-10"



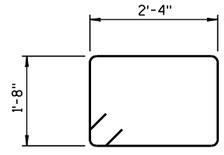
BAR BENDING DETAIL
FOR BARS V12 - V13

BAR CHART
SECTIONS V14 - V16

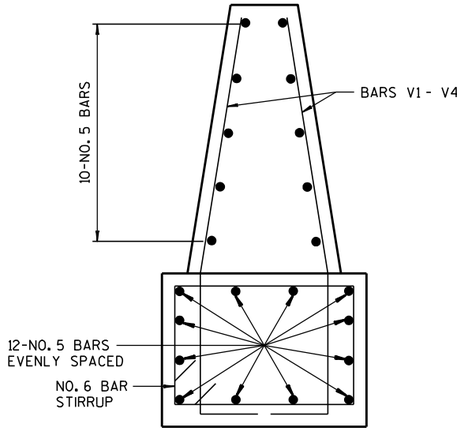
BAR	A	B	C	D
V14	168°-15'	159°-15'	6"	2'-0"
V15	169°-20'	161°-00'	8"	1'-10"
V16	168°-40'	160°-10'	10"	1'-8"



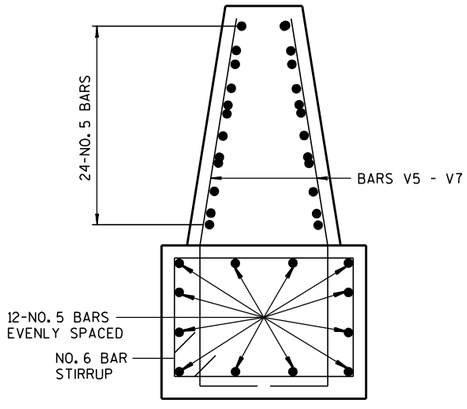
BAR BENDING DETAIL
FOR BARS V14 - V16



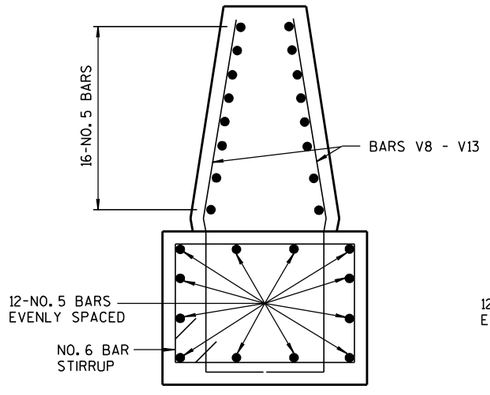
STIRRUP BAR
BENDING DETAIL



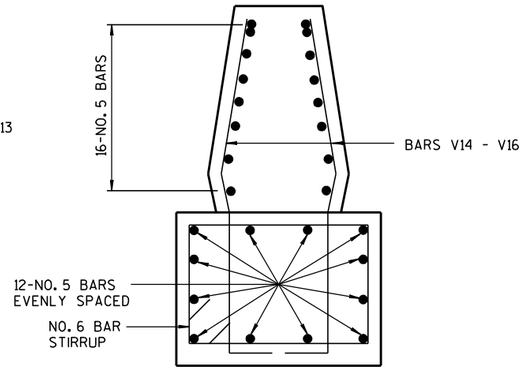
BAR DETAIL
SECTIONS V1 - V4



BAR DETAIL
SECTIONS V5 - V7



BAR DETAIL
SECTIONS V8 - V13



BAR DETAIL
SECTIONS V14 - V16

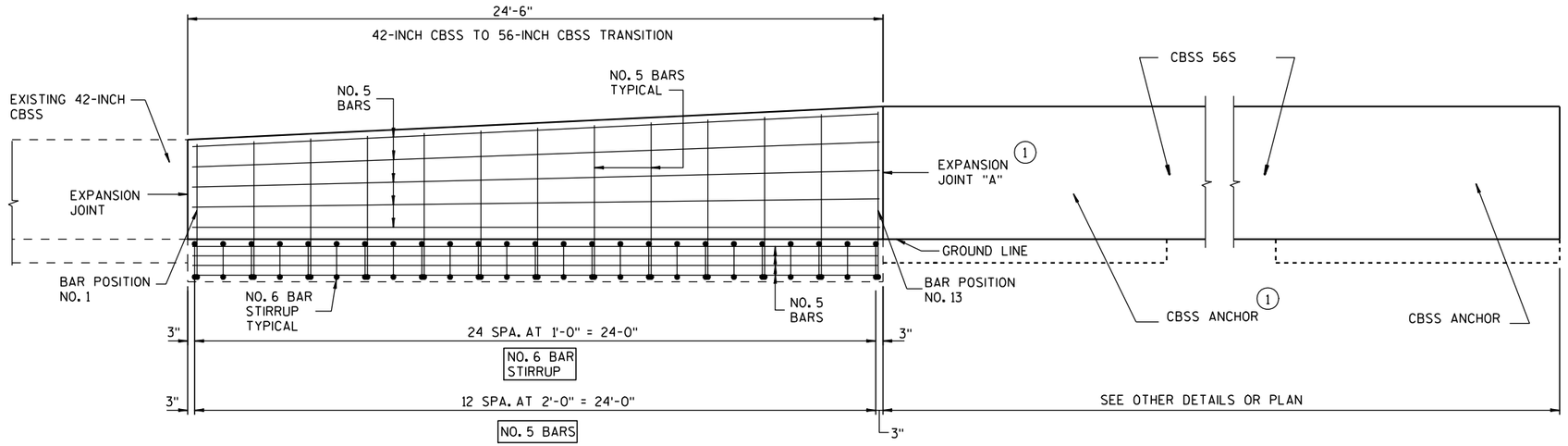
CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

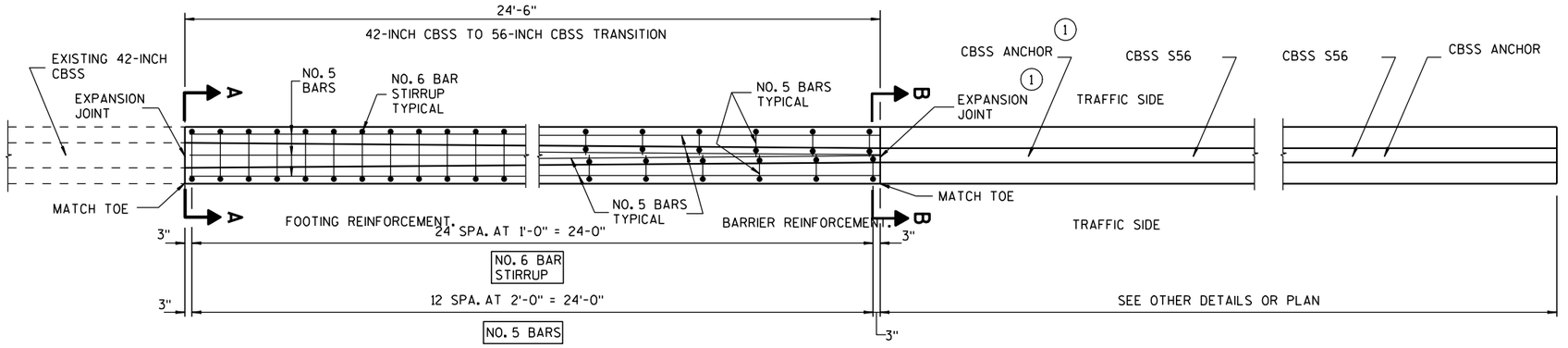
APPROVED
6-3-2010 DATE
/S/ Jerry H. Z--- ROADWAY STANDARDS ENGINEER
335 ENT
FHWA

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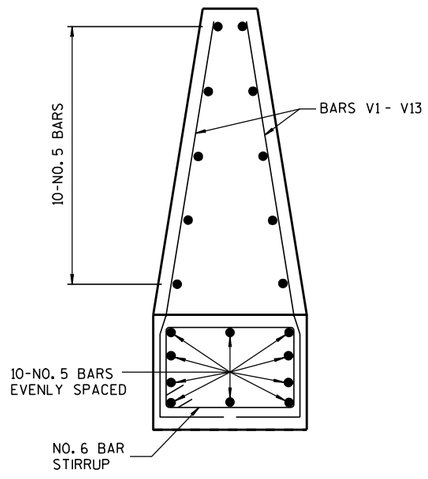
S.D.D. 14 B 33-1h



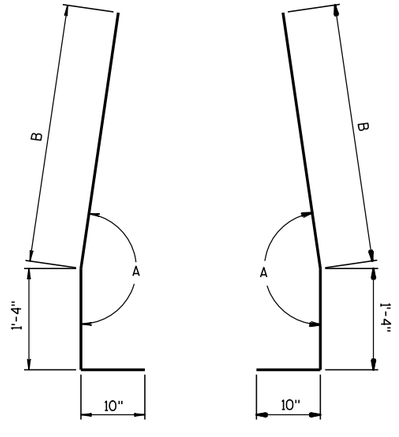
ELEVATION VIEW



PLAN VIEW



BAR DETAIL
BAR POSITION NO. 1 - NO. 13



BAR BENDING DETAIL
FOR BARS V1 - V13

BAR CHART SECTIONS V1 - V13

BAR	A	B
V1	170°-50'	3'-4½"
V2	170°-50'	3'-6"
V3	170°-55'	3'-7"
V4	171°	3'-8"
V5	170°-55'	3'-9½"
V6	170°-50'	3'-10½"
V7	170°-50'	3'-11½"

BAR	A	B
V8	170°-55'	4'-0½"
V9	170°-50'	4'-2"
V10	170°-50'	4'-3"
V11	170°-50'	4'-4½"
V12	170°-55'	4'-5½"
V13	170°-50'	4'-6½"

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

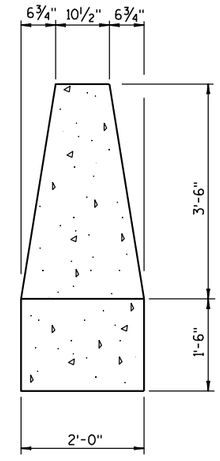
4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

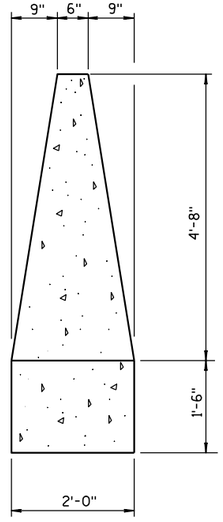
THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

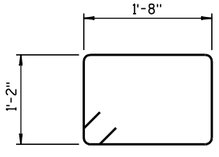
(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.



SECTION A-A



SECTION B-B



STIRRUP BAR
BENDING DETAIL

42-INCH SINGLE SLOPE CONCRETE BARRIER TO 56-INCH SINGLE SLOPE CONCRETE BARRIER HEIGHT TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

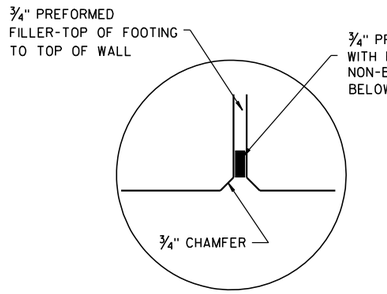
APPROVED
6-3-2010 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
336
FHWA

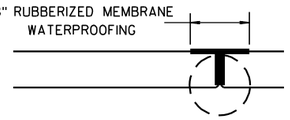
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S.D.D. 14 B 39-1e

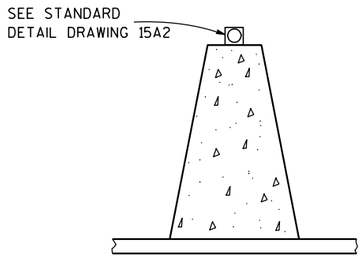
6

S.D.D. 14 B 39-1e





VERTICAL EXPANSION JOINT



DELINEATION

SPACING FOR DELINEATORS ON HORIZONTAL CURVES

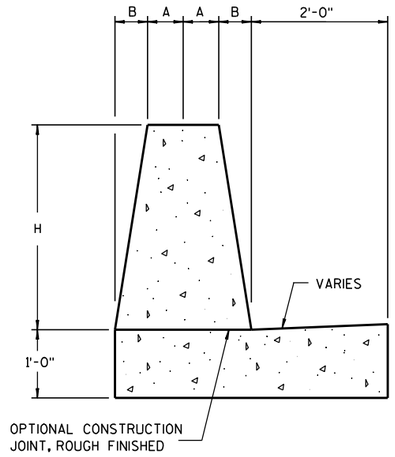
RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

GENERAL NOTES

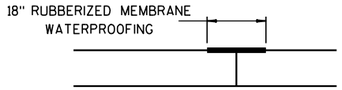
PROVIDE EXPANSION JOINTS WHERE EXISTING EXPANSION JOINTS OR AT THE END OF EACH POUR.

NO HORIZONTAL STEEL CROSSES EXPANSION JOINTS.

CONSTRUCT PER STANDARD SPECIFICATION 603.
SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASETENED TOGETHER UNLESS NOTED OTHERWISES.
4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.
USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.
2" CLEAR COVER (TYP.)

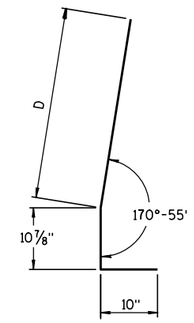


ROADSIDE RETAINING WALL

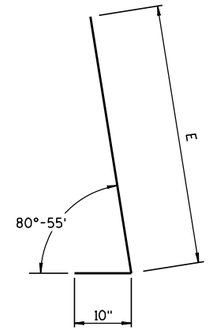


CONSTRUCTION JOINT

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11



V1 BAR BENDING DETAIL



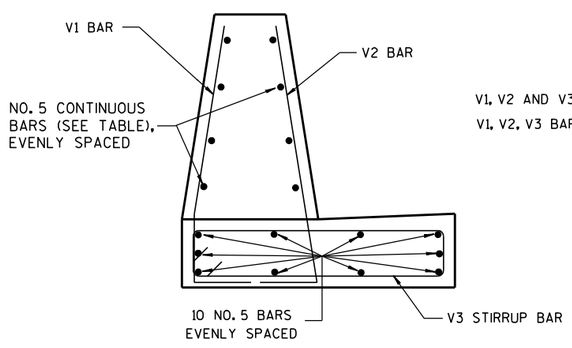
V2 BAR BENDING DETAIL

REFLECTOR SPACING

	LENGTH OF BARRIER	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2	3

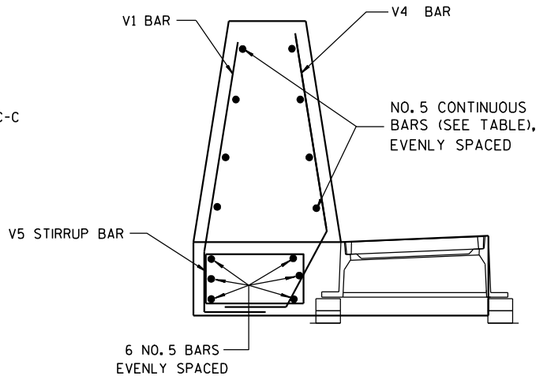
BAR CHART ROADSIDE RETAINING WALL

BARRIER HEIGHT	V1 BAR D	V2 BAR E	V4 BAR F
36"	2'-9⅝"	3'-9¾"	2'-8"
42"	3'-3⅝"	4'-2⅝"	3'-2⅛"
56"	4'-7½"	5'-6½"	4'-4⅜"

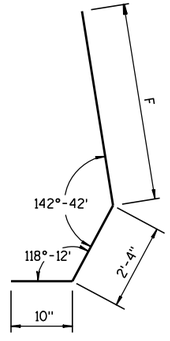


V1, V2 AND V3 ARE SPACED 18" C-C
V1, V2, V3 BARS ARE NO. 5 BARS

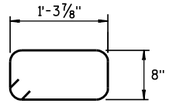
ROADSIDE RETAINING WALL NORMAL BAR PLACEMENT



ROADSIDE RETAINING WALL BAR PLACEMENT NEAR INLET



V4 BAR BENDING DETAIL



V5 STIRRUP BAR BENDING DETAIL



V3 STIRRUP BAR BENDING DETAIL

SINGLE SLOPE ROADSIDE RETAINING WALL

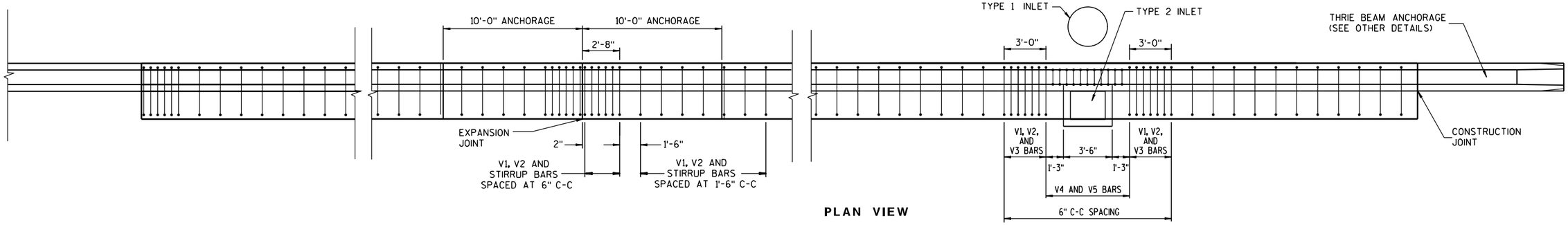
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 41-1a

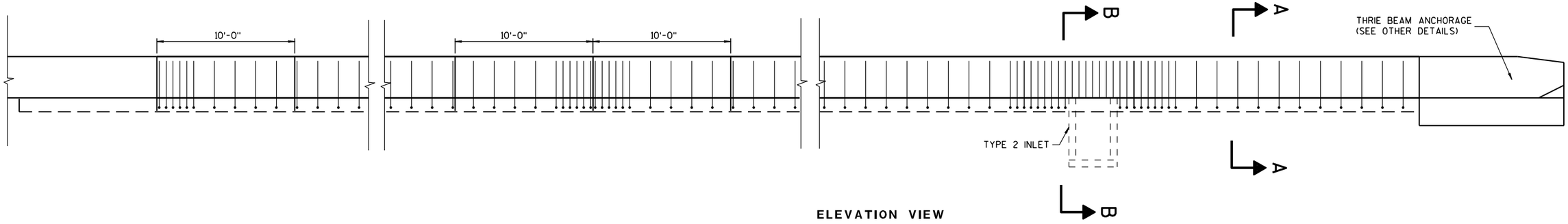
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S.D.D. 14 B 41-1a



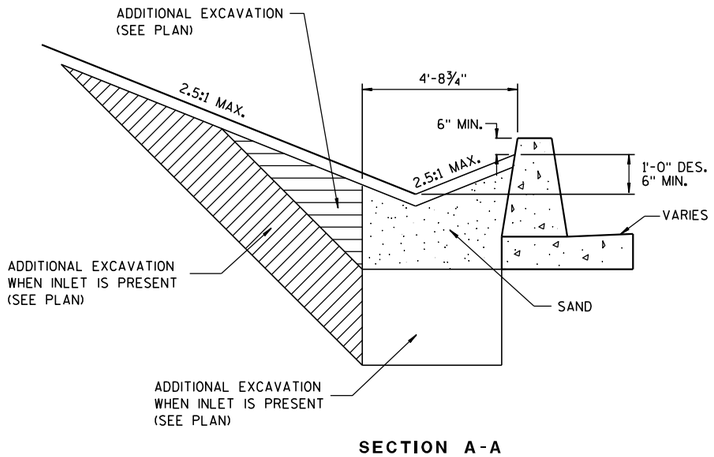
PLAN VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN
SEE OTHER DETAILS FOR HORIZONTAL BARS.

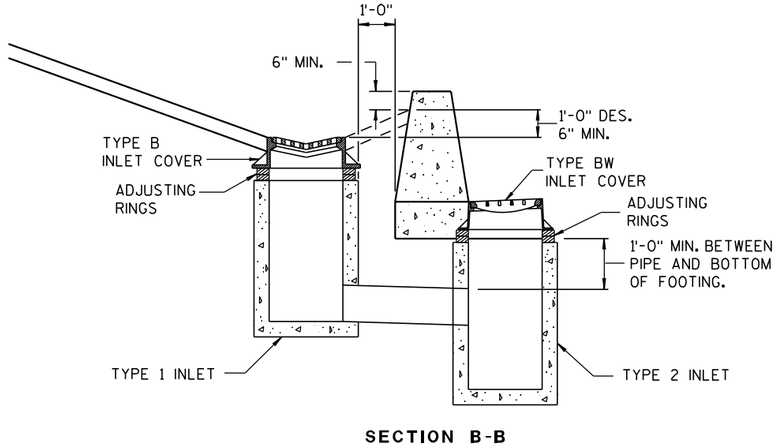


ELEVATION VIEW

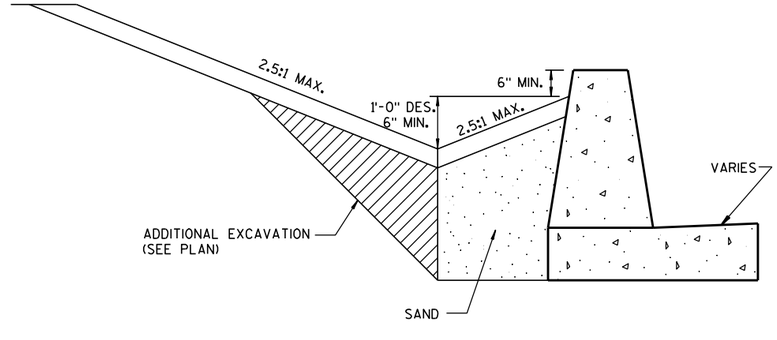
NOTE: HORIZONTAL BARS ARE NOT SHOWN
SEE OTHER DETAILS FOR HORIZONTAL BARS.



SECTION A-A



SECTION B-B



MINIMUM DESIGN OF EARTH WORK

MINIMUM DESIGN OF EARTH WORK FOR INLET

SINGLE SLOPE ROADSIDE RETAINING WALL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/13/2011
DATE
FHWA

/S/ Jerry H. Zaaa
ROADWAY STANDARDS ENGINEER

ENT

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S.D.D. 14 B 41-1b

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S.D.D. 14 B 41-1b

GENERAL NOTES

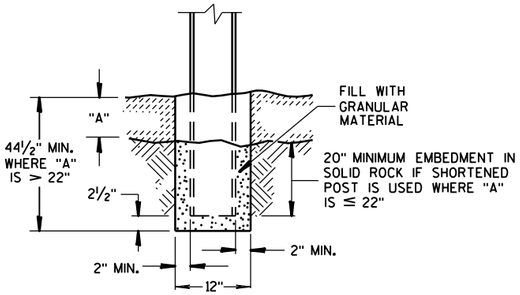
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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

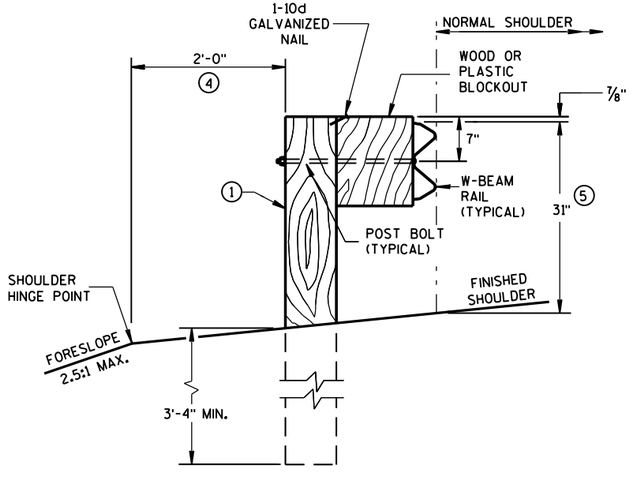
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO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

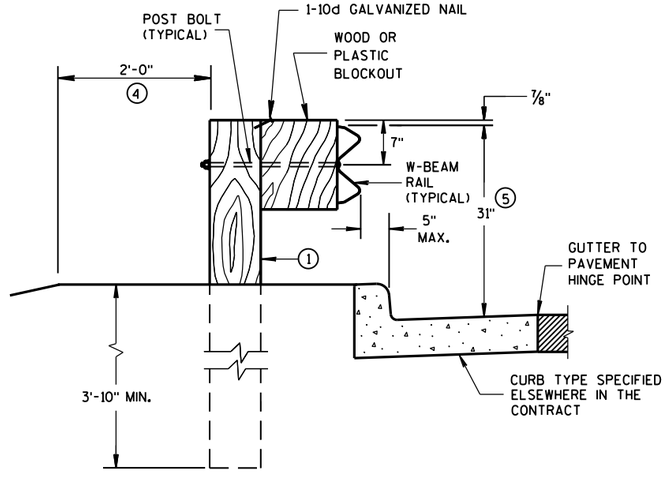


END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



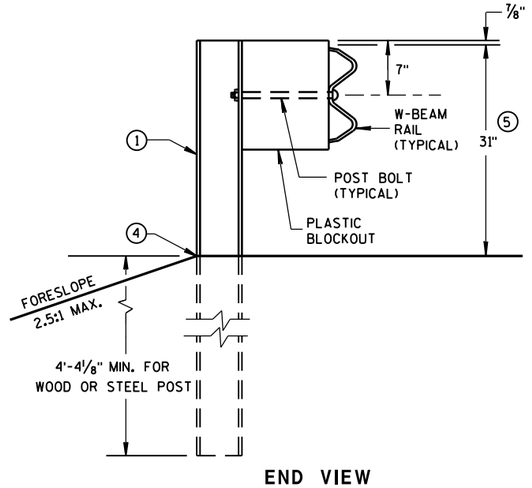
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



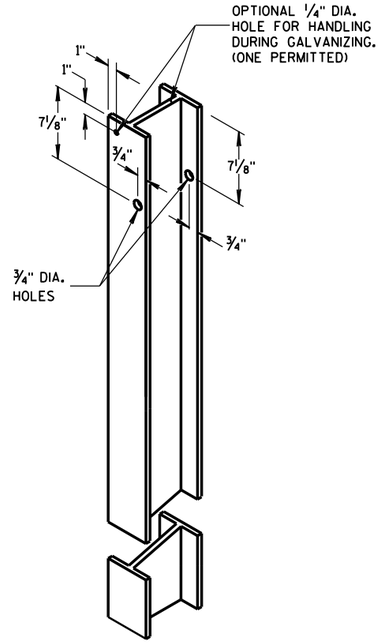
END VIEW

LOCATED ALONG A CURBED ROADWAY

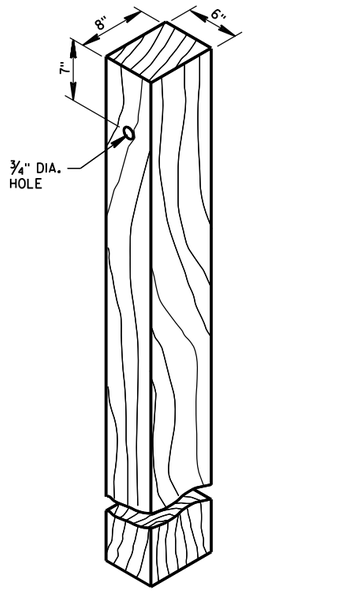


END VIEW

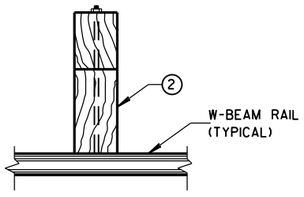
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



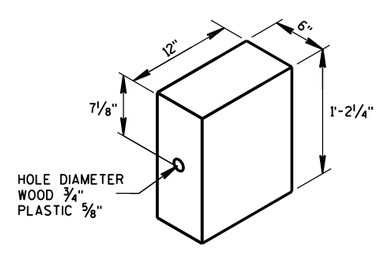
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



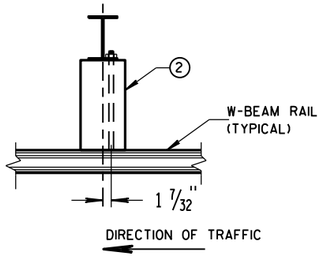
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

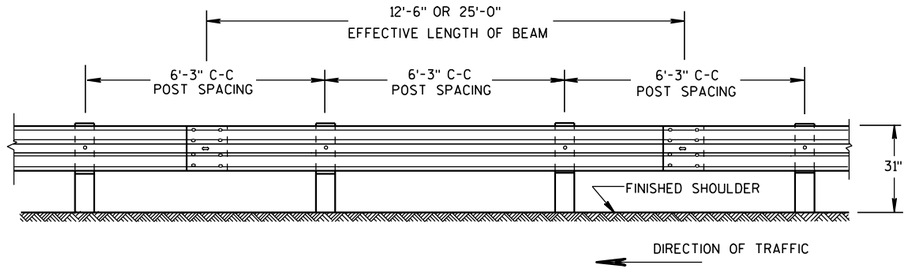


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

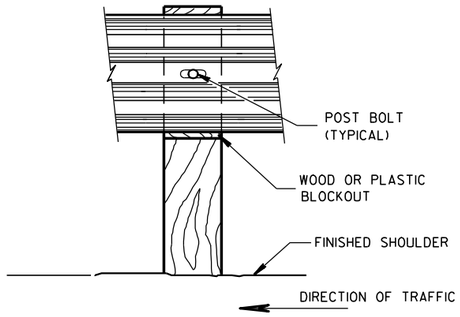
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 42-2a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



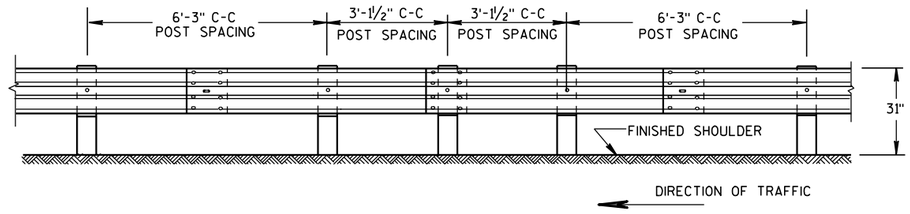
FRONT VIEW AT WOOD POST

GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. 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.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

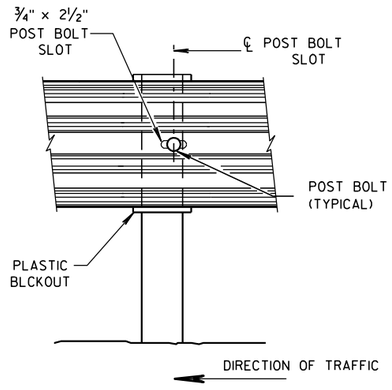
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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.

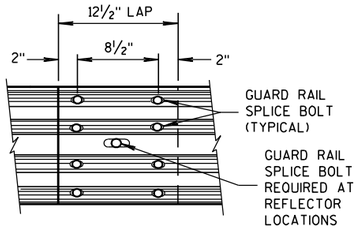


FRONT VIEW

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

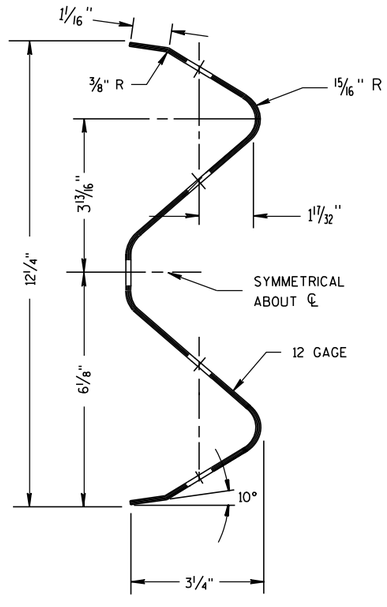


FRONT VIEW AT STEEL POST

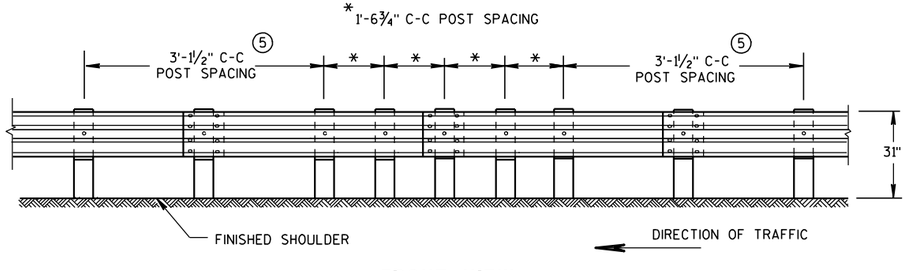


FRONT VIEW

MID-SPAN BEAM SPLICE

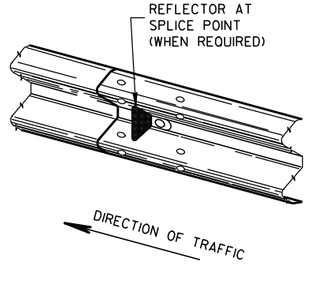


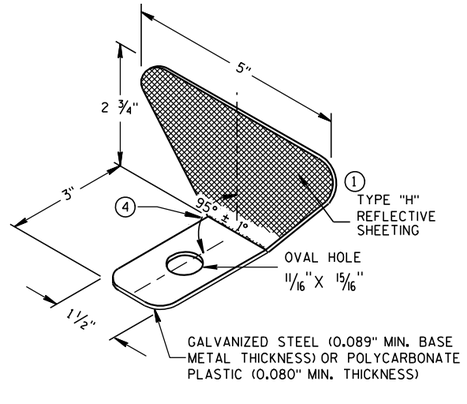
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

REFLECTOR SPACING (2)

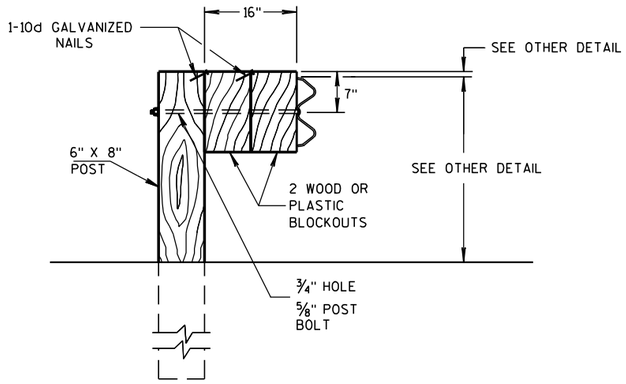
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 1 (3)	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 (4)	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

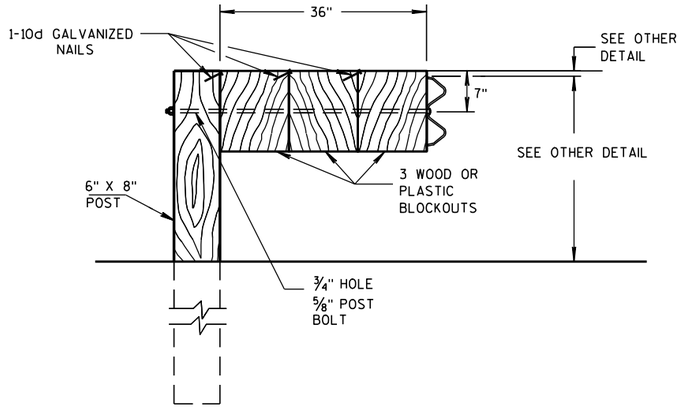
S.D.D. 14 B 42-2b

S.D.D. 14 B 42-2b



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.

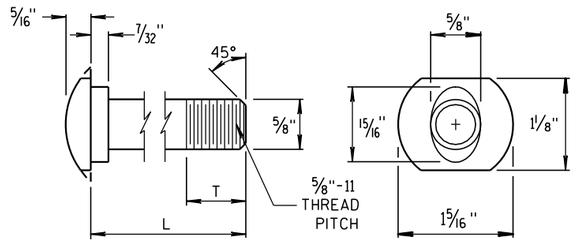


DETAIL FOR 36" BLOCKOUT DEPTH

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.

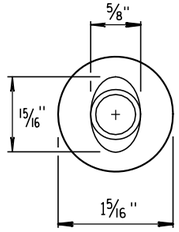
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

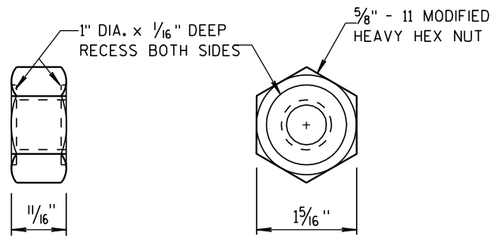


POST BOLT TABLE

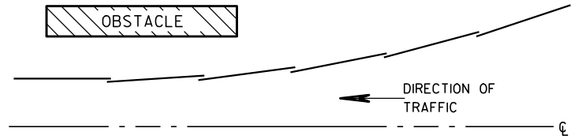
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

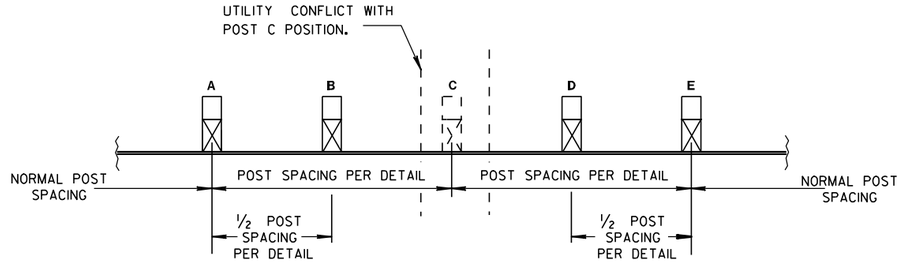


POST BOLT AND RECESS NUT

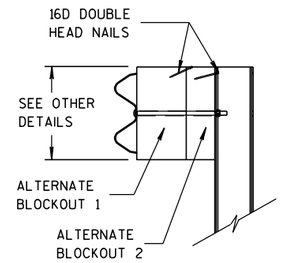


PLAN VIEW

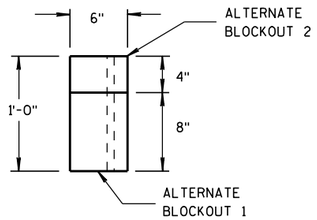
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

ENT

6

S.D.D. 14 B 42-2c

GENERAL NOTES

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

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

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

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

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

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

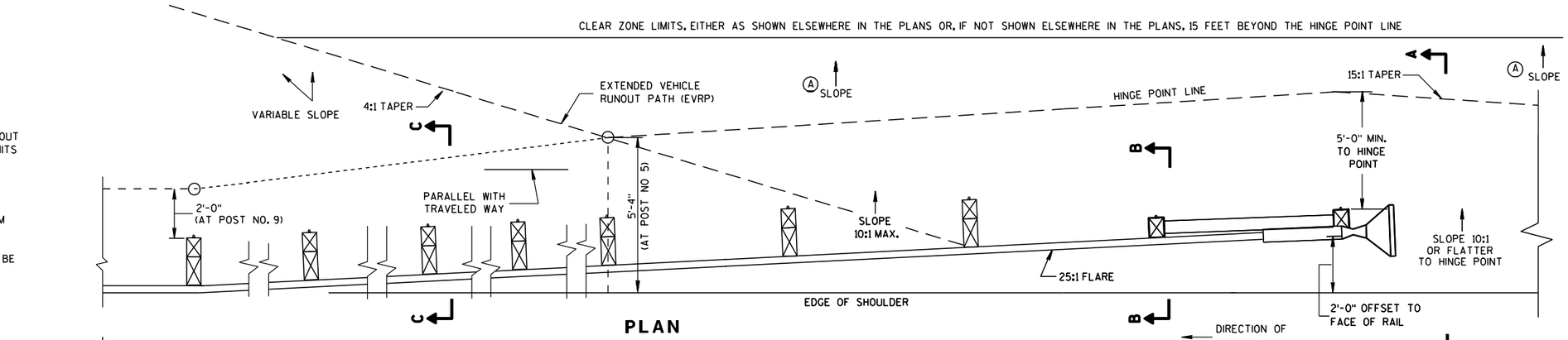
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

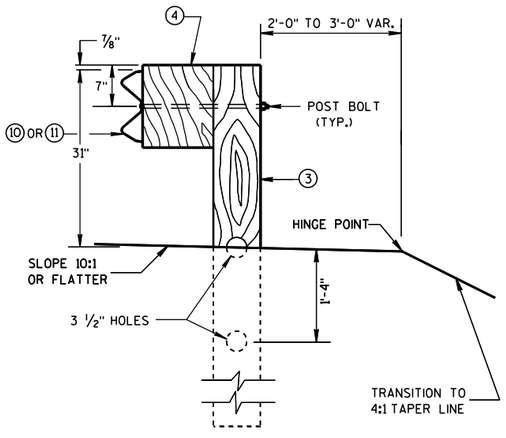
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

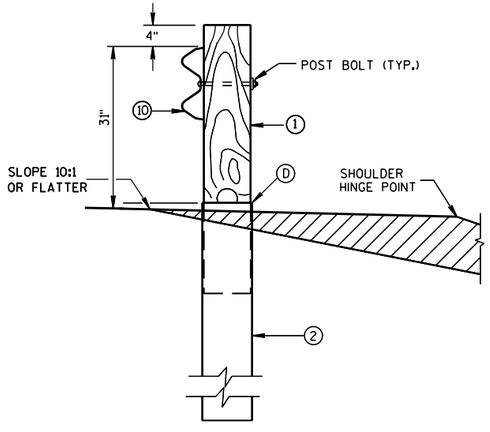
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

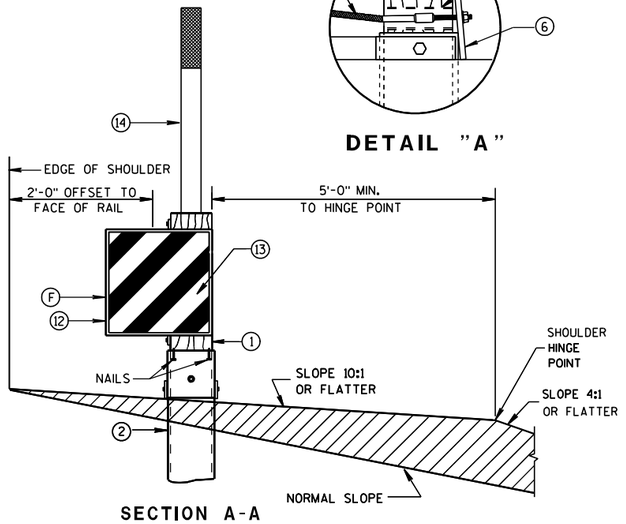




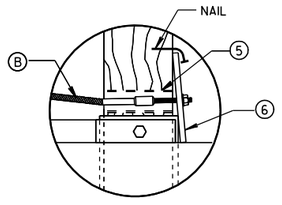
SECTION C-C
TYPICAL AT POST NOS. 3-9



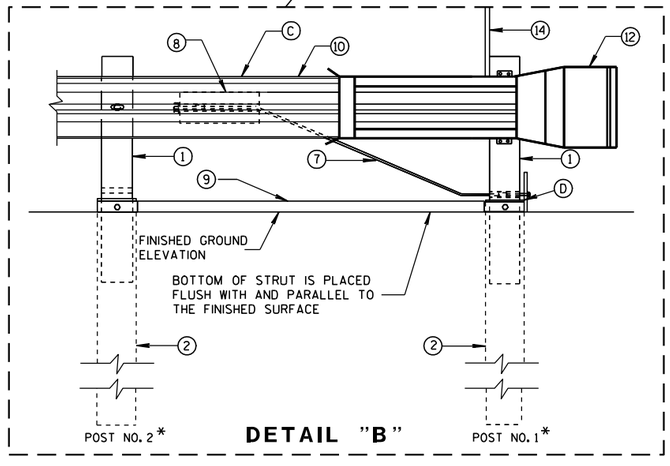
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"

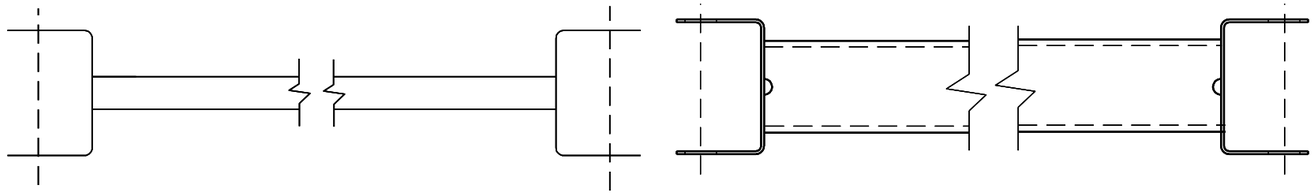


DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

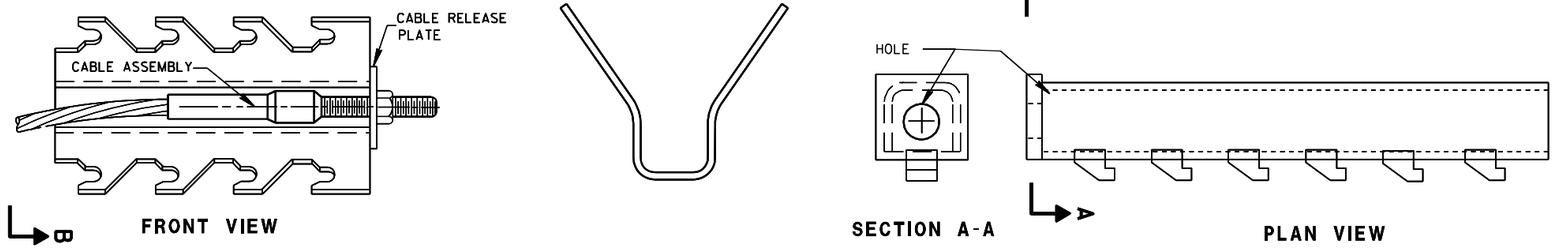
6
S.D.D. 14 B 44-1a



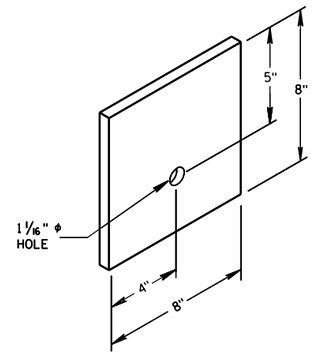
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



GENERIC ANCHOR CABLE BOX (8) (H)



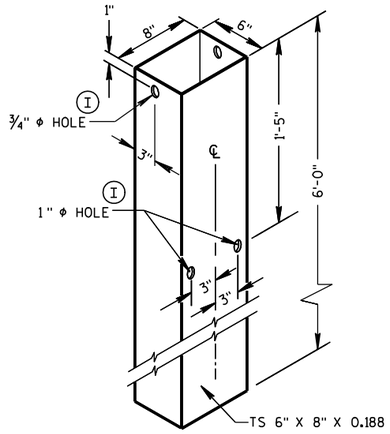
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

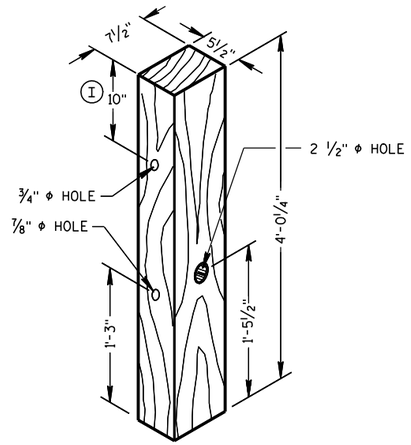
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1b

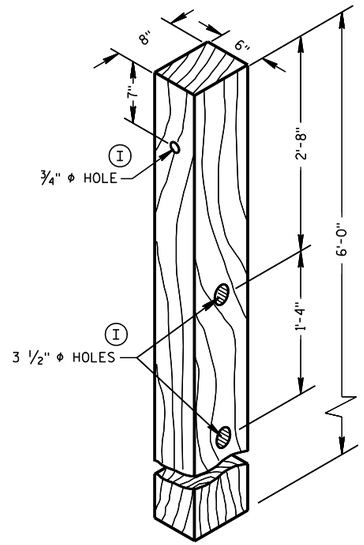


FOUNDATION TUBE (2)



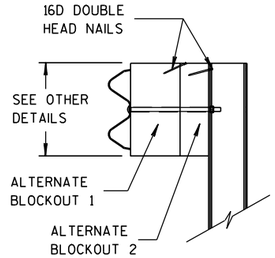
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

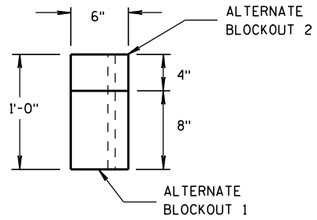


POSTS NUMBER 3-9

WOOD CRT POST (3)

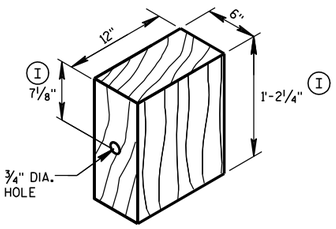


SIDE VIEW



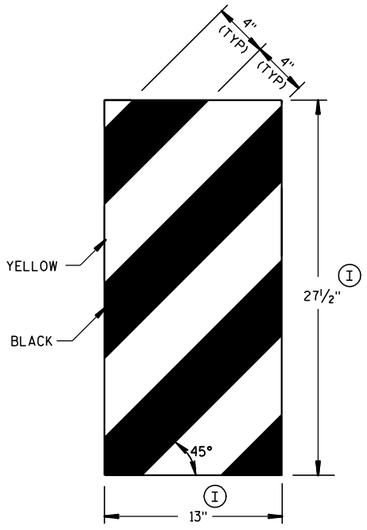
TOP VIEW

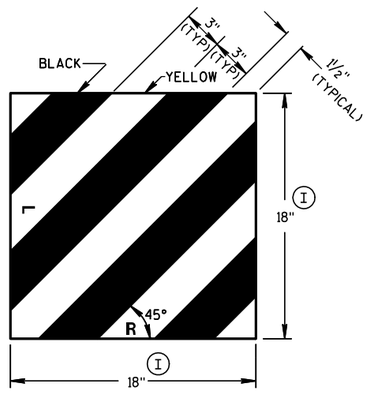
ALTERNATE WOOD BLOCKOUT DETAIL



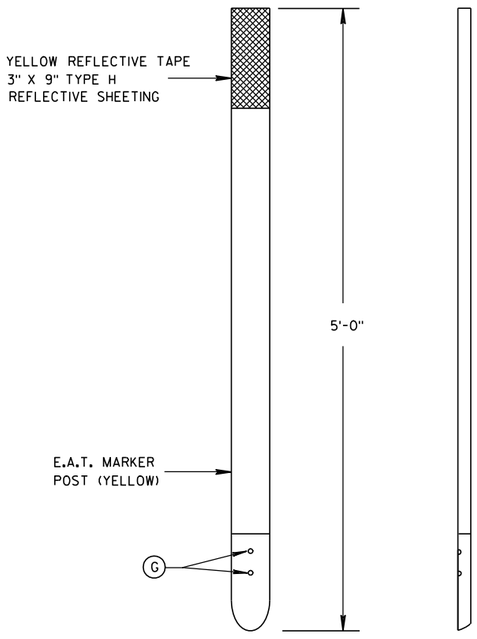
WOOD BLOCKOUT (4)

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





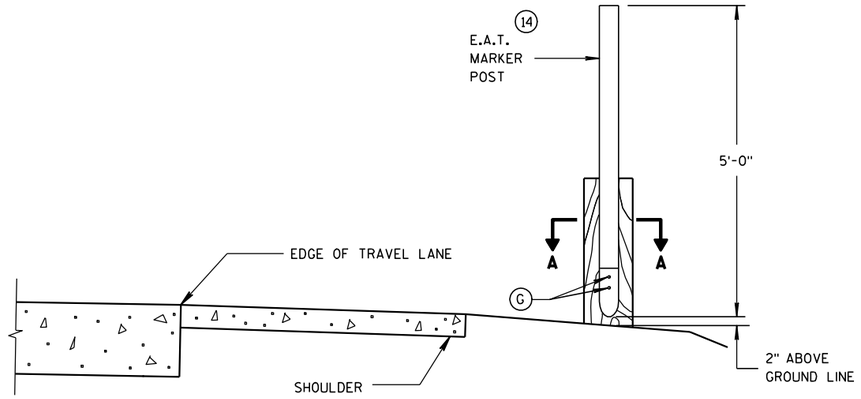
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

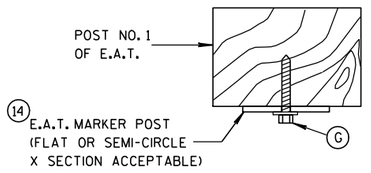
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

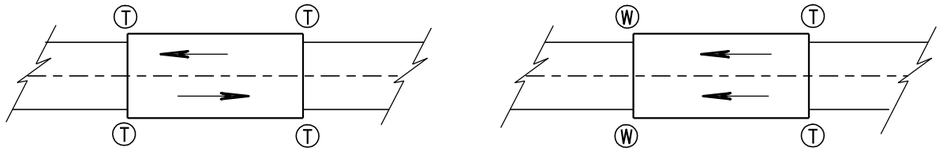
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 44-1c



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

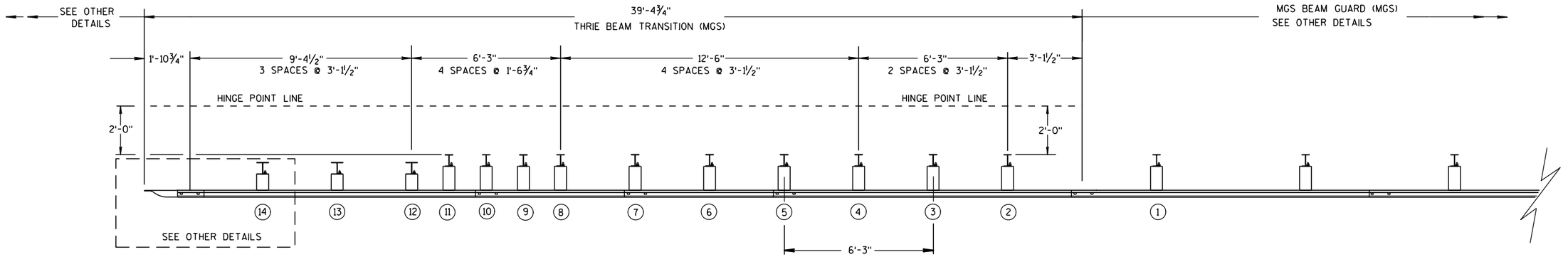
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

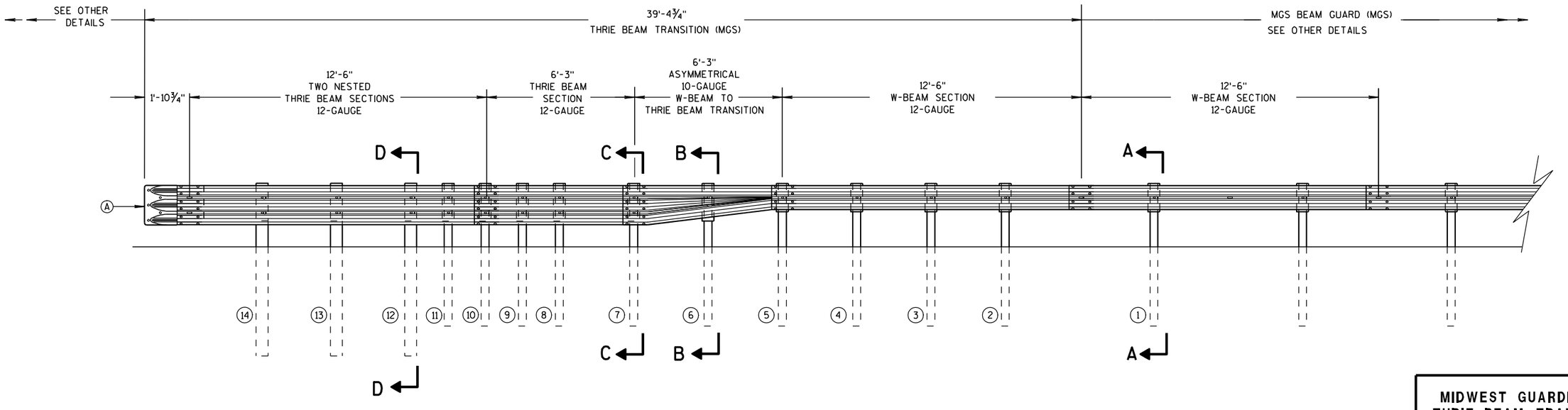
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

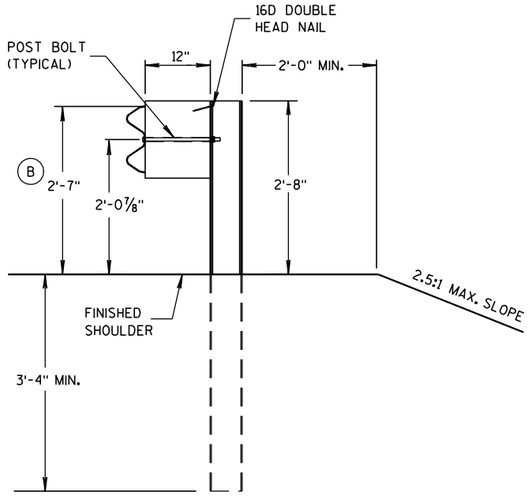
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 45-3a

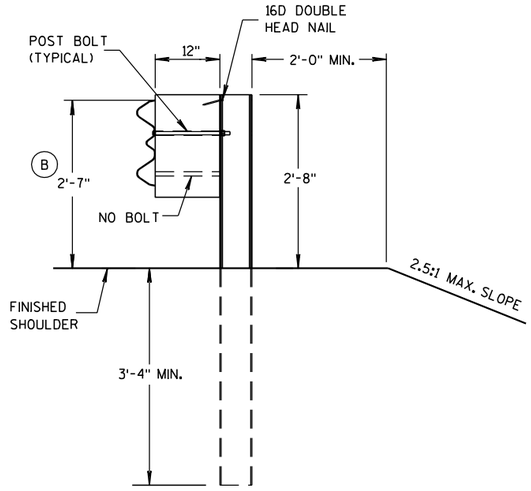
GENERAL NOTES

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



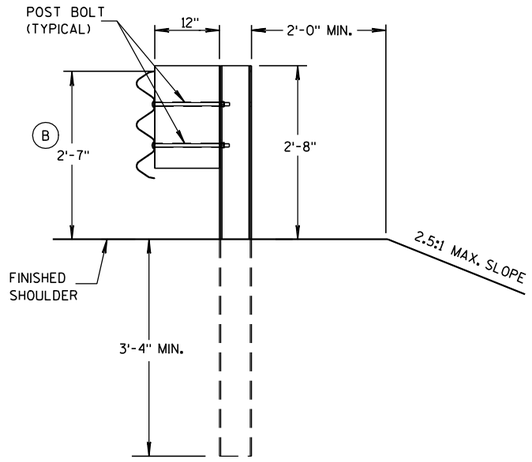
SECTION A-A

POSTS 1-5



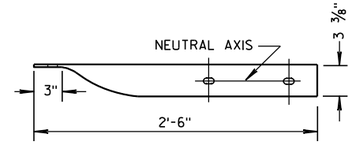
SECTION B-B

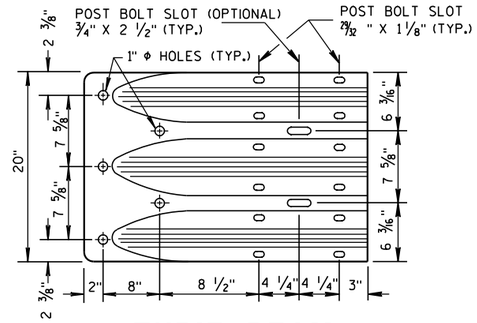
POST 6



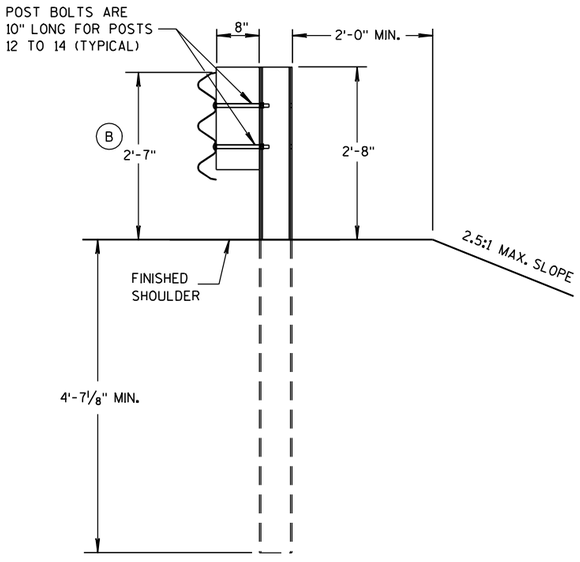
SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14

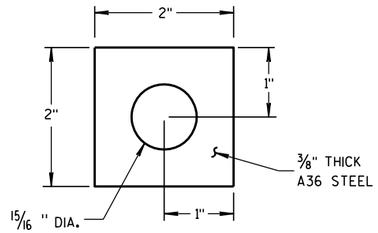
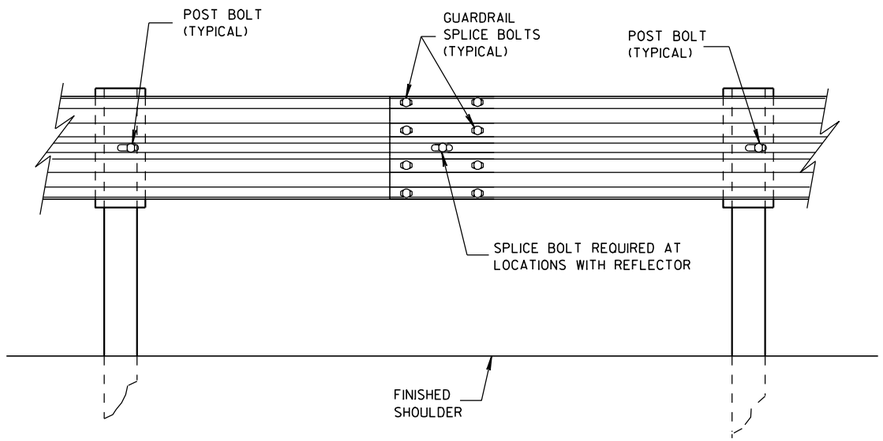
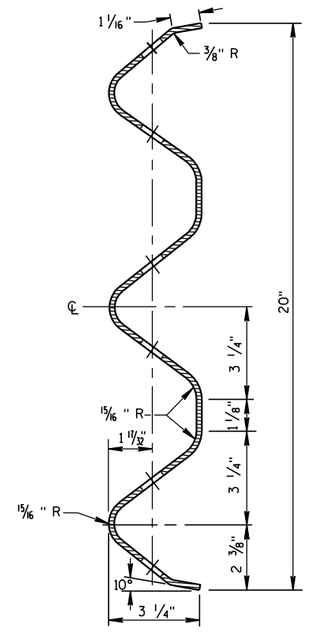


PLATE WASHER DETAIL



SPLICE DETAIL



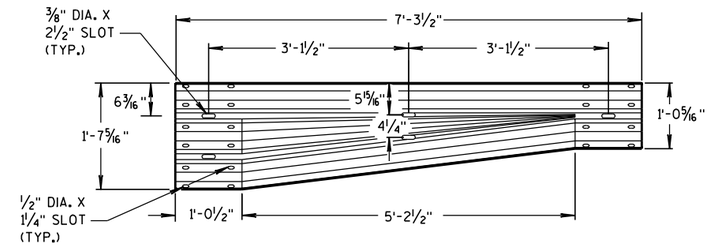
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

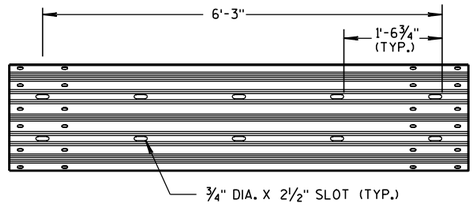
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

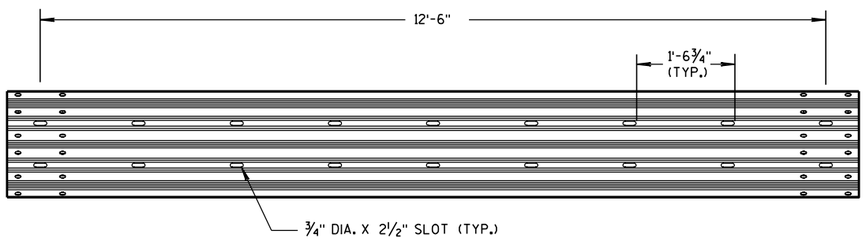
S.D.D. 14 B 45-3b



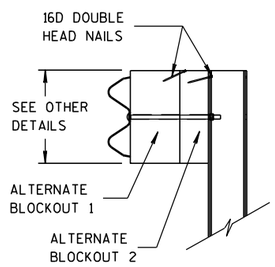
W-BEAM TO THRIE BEAM TRANSITION SECTION



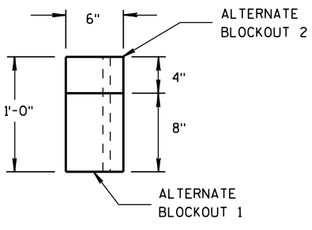
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

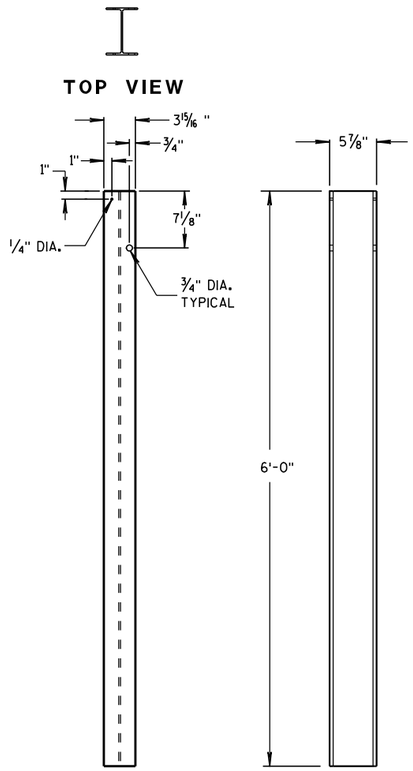


SIDE VIEW

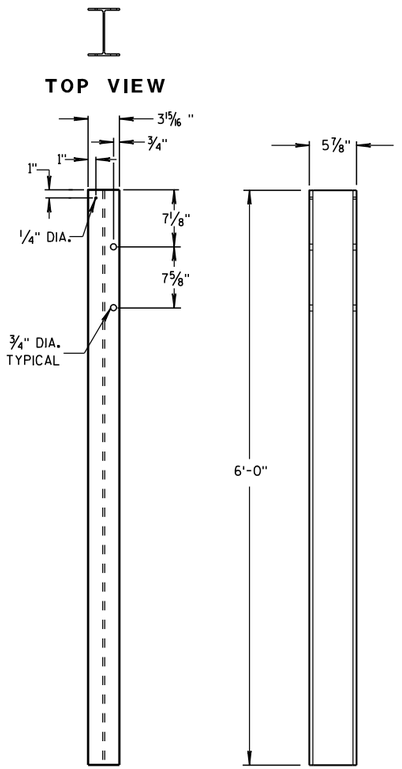


TOP VIEW

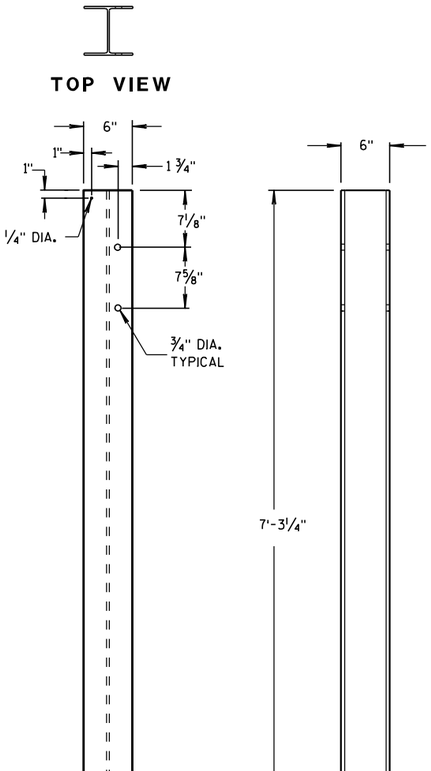
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

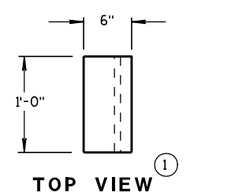


STEEL POSTS 6-11

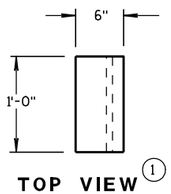


STEEL POSTS 12-14

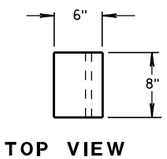
① WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



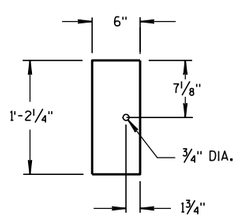
TOP VIEW ①



TOP VIEW ①

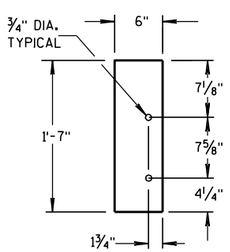


TOP VIEW



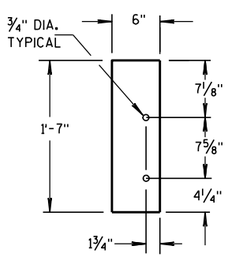
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

STEEL POST SIZES

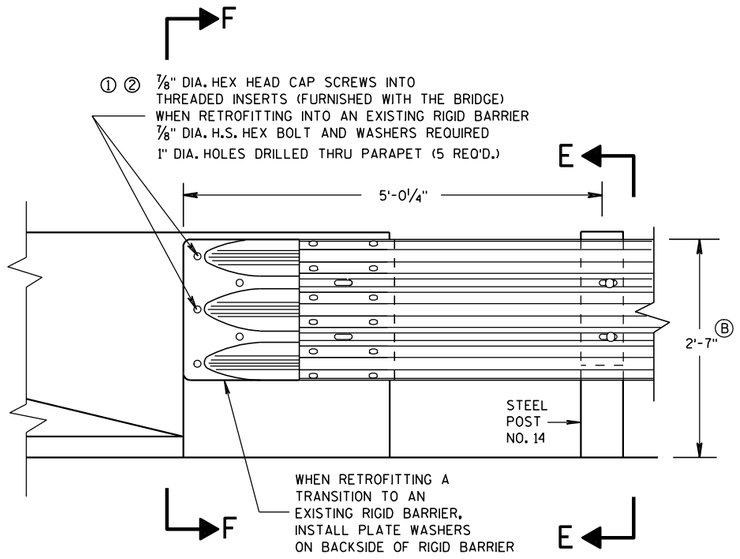
POST NUMBER	SECTION TYPE	LENGTH
①	W6x9	72"
②	W6x9	72"
③	W6x9	72"
④	W6x9	72"
⑤	W6x9	72"
⑥	W6x9	72"
⑦	W6x9	72"
⑧	W6x9	72"
⑨	W6x9	72"
⑩	W6x9	72"
⑪	W6x9	72"
⑫	W6x15	87 1/8"
⑬	W6x15	87 1/8"
⑭	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

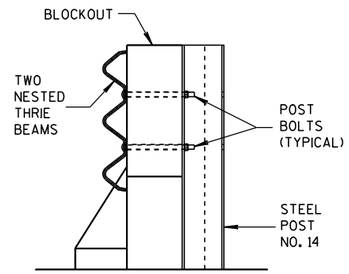
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 45-3c



FRONT VIEW



SECTION E-E

GENERAL NOTES

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

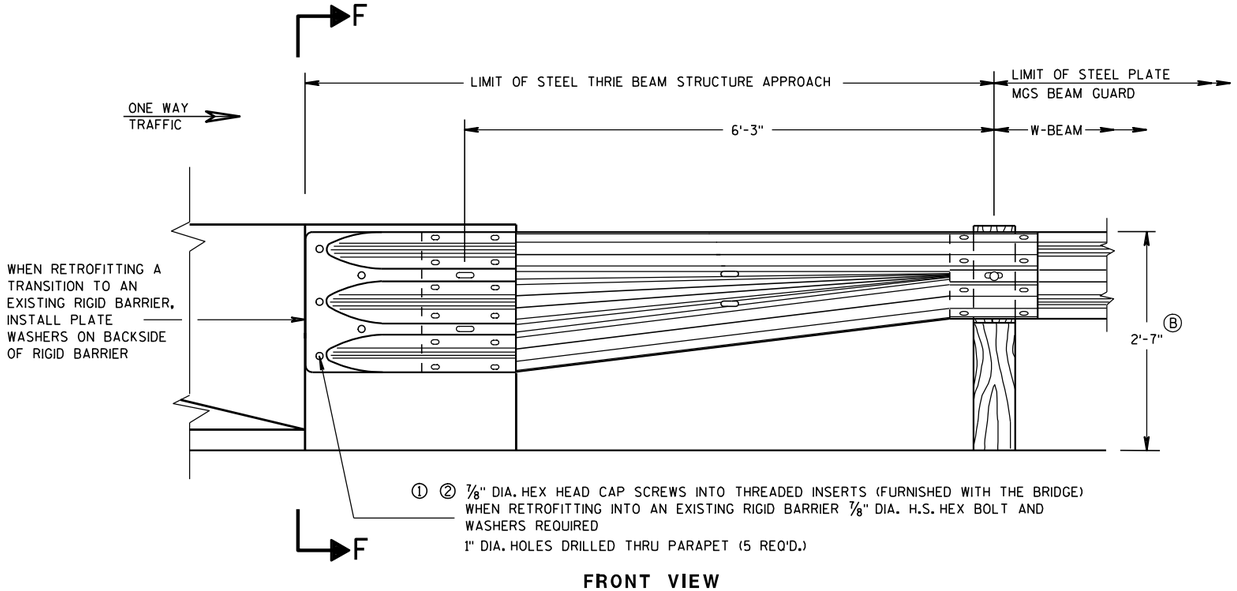
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM 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.

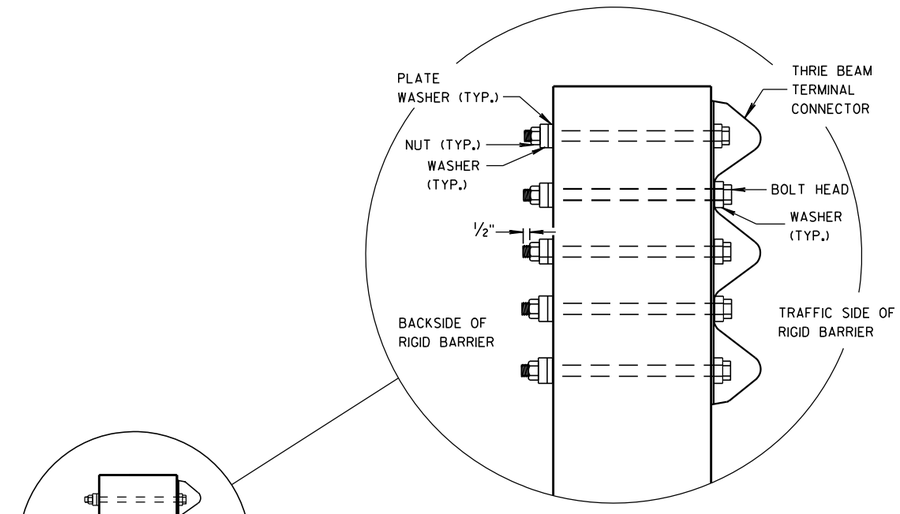
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

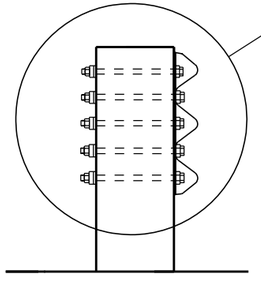
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW





SECTION F-F

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

8/31/2012 — DATE

/S/ Jerry H. [illegible] — ROADWAY STANDARDS [illegible] ENGINEER

FHWA

6

S.D.D. 14 B 45-3d

6

S.D.D. 14 B 45-3d

GENERAL NOTES

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

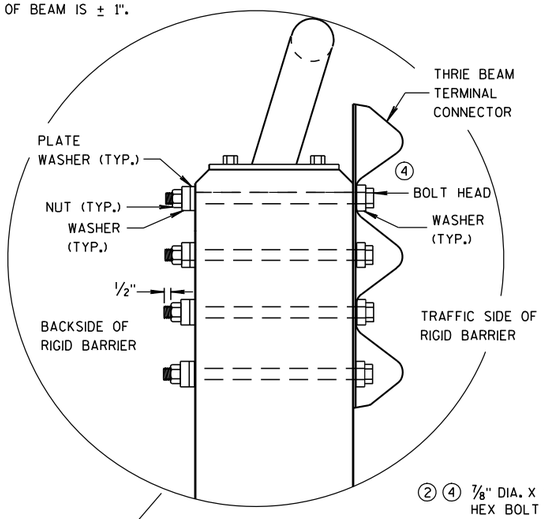
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

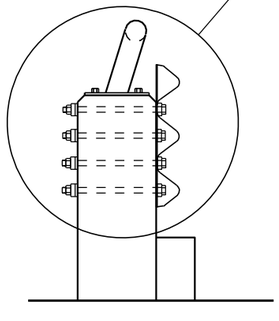
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③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2". BLOCK IS INCIDENTAL TO THE CONTRACT.

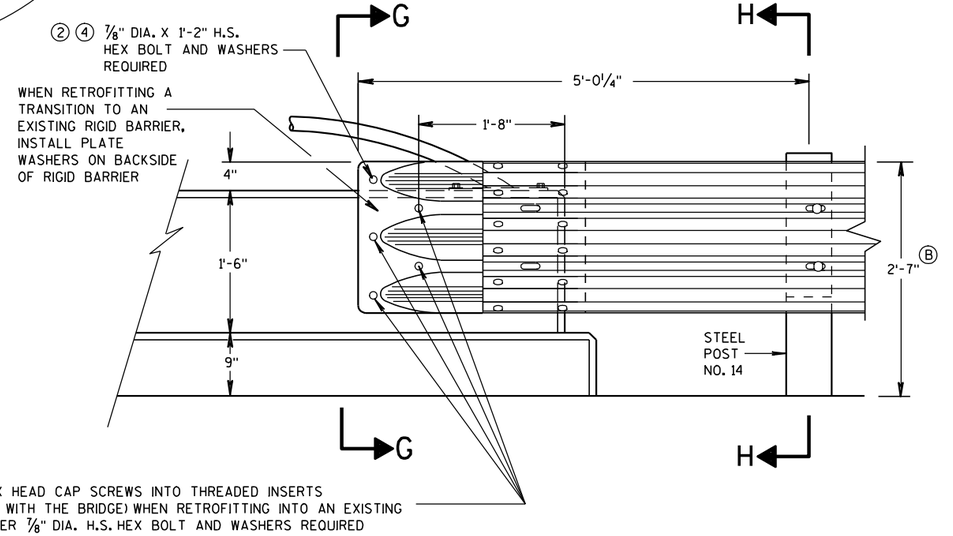
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

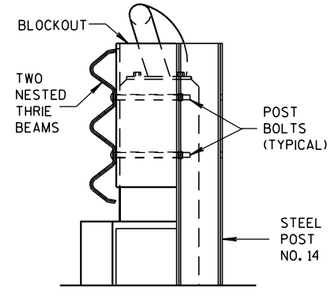




SECTION G-G

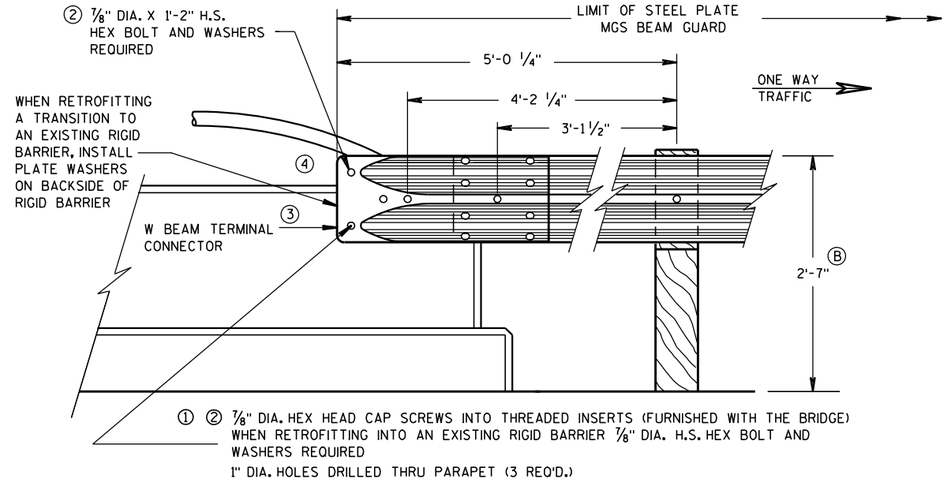


FRONT VIEW



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)

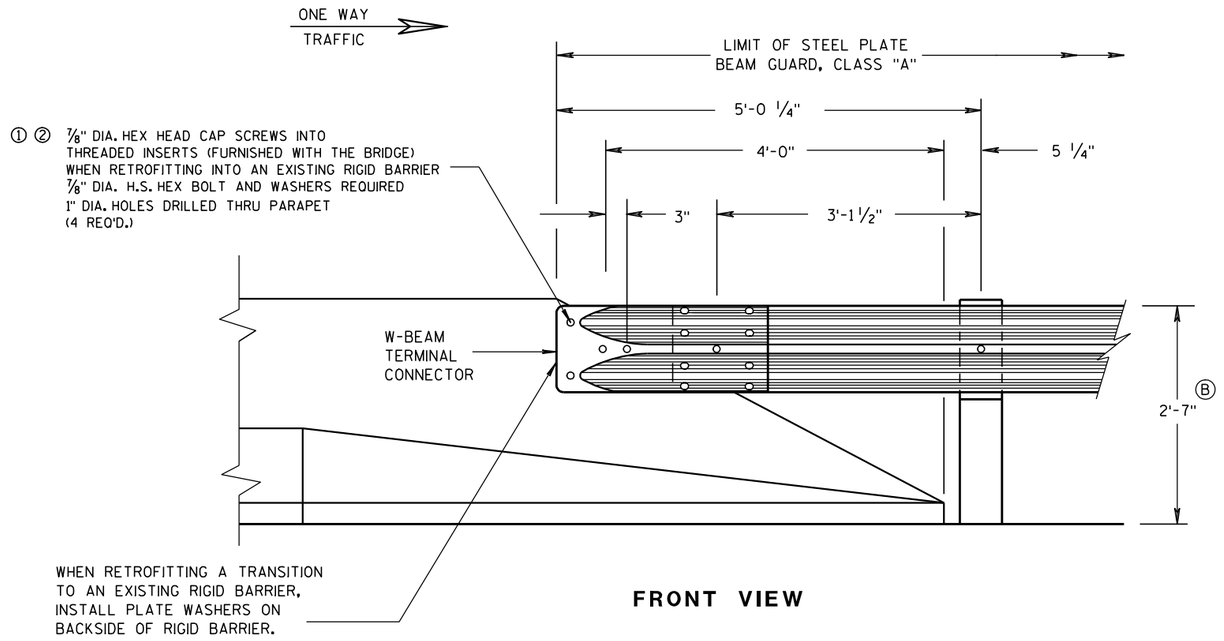
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

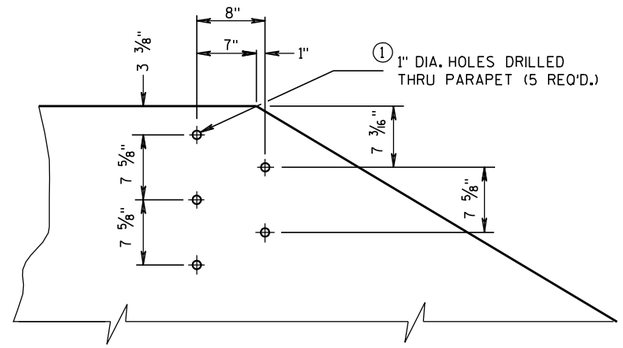
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

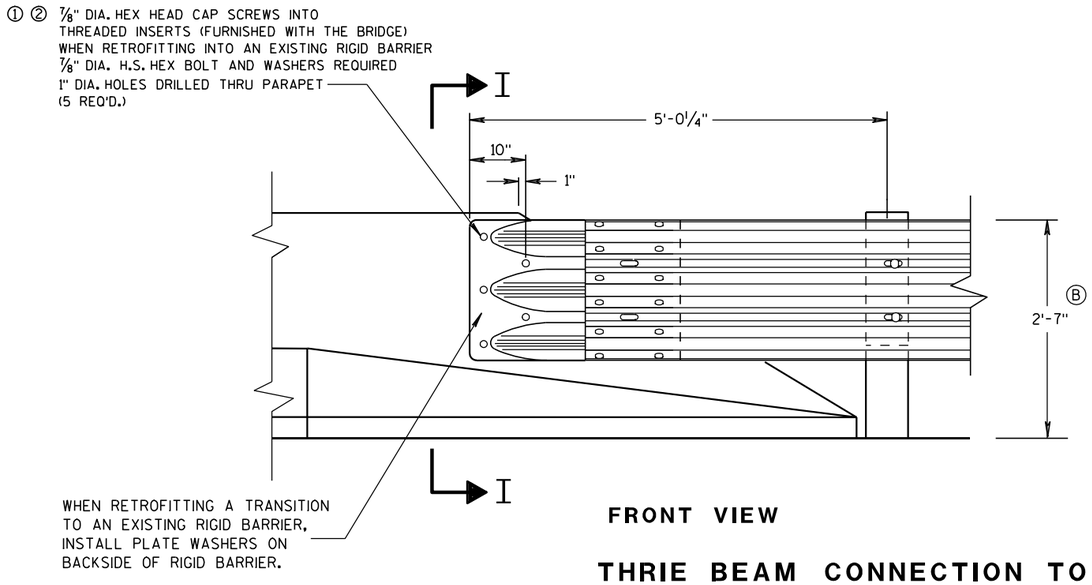
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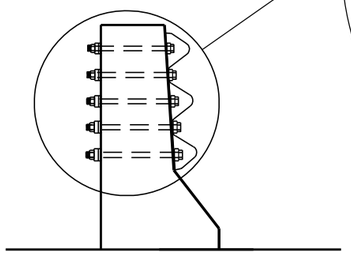
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



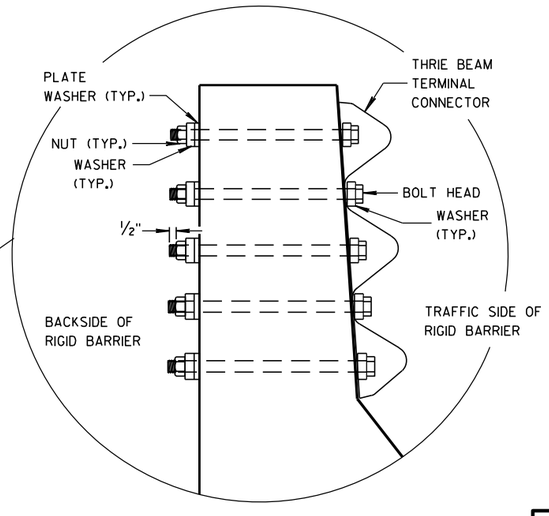
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



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

8/31/2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

350 — ENT

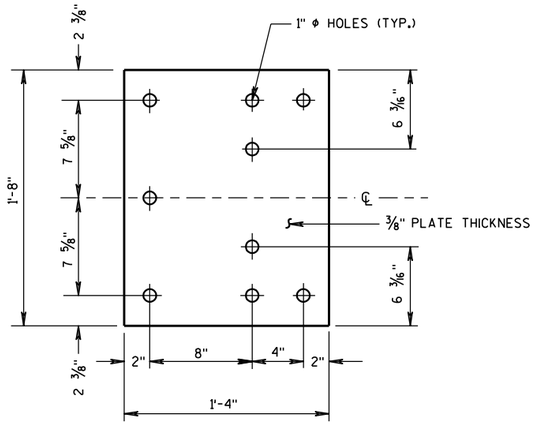
FHWA

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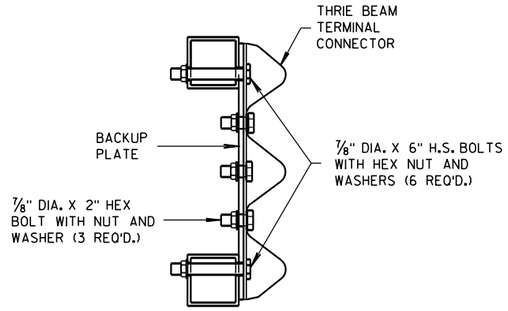
S.D.D. 14 B 45-3f

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S.D.D. 14 B 45-3f



BACK-UP PLATE DETAIL

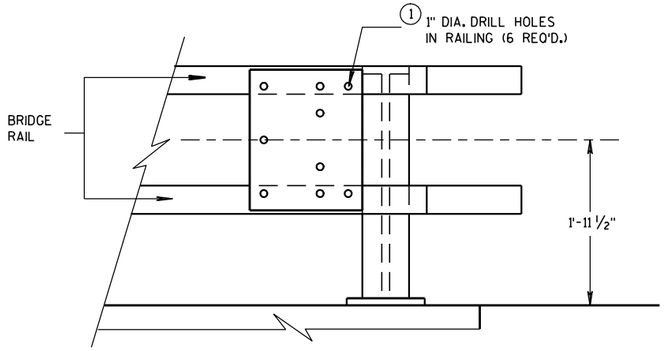


SECTION J-J

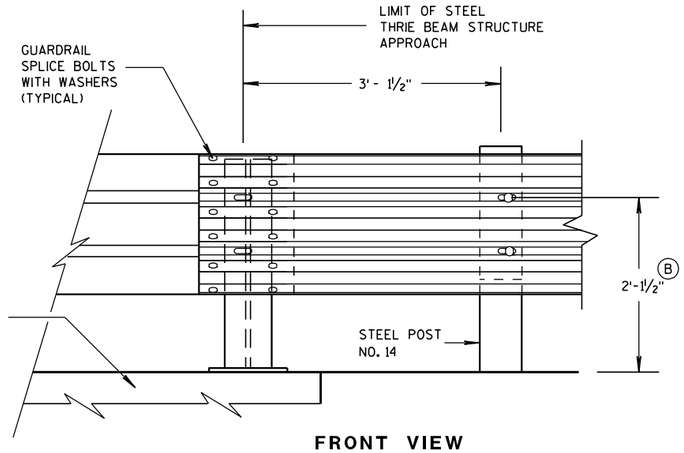
GENERAL NOTES

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

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

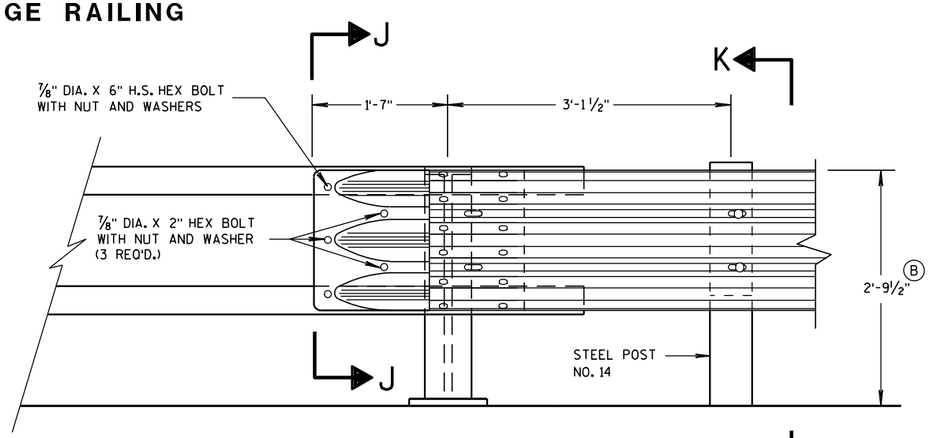


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

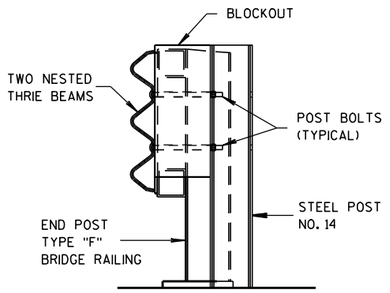


FRONT VIEW

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
8/31/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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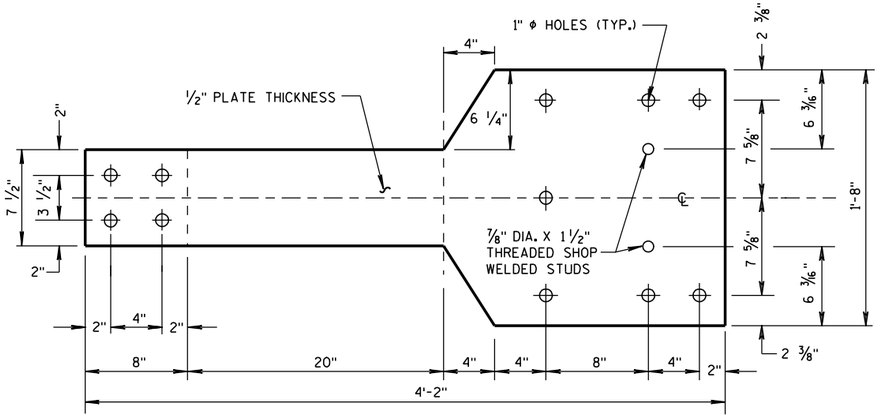
S.D.D. 14 B 45-3g

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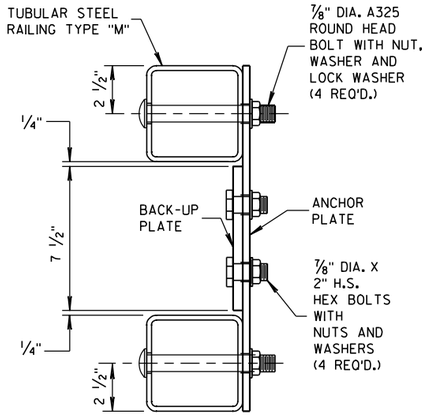
S.D.D. 14 B 45-3g

GENERAL NOTES

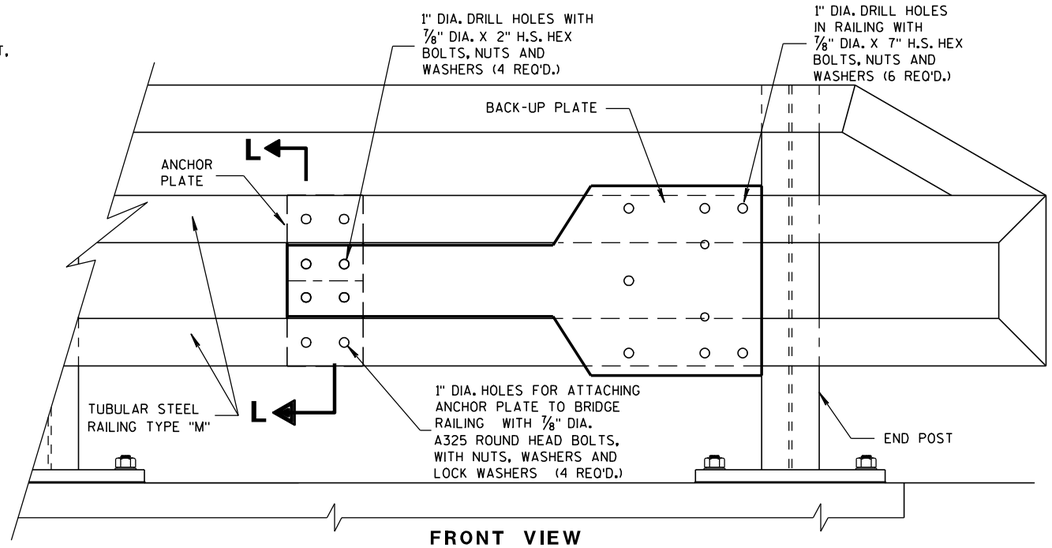
(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

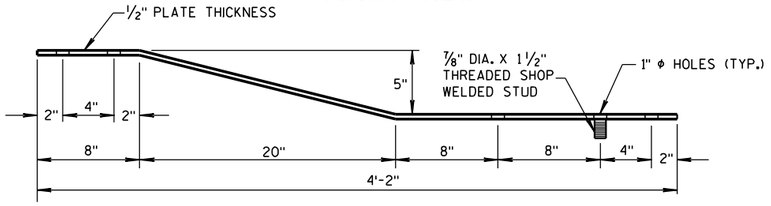


SECTION L-L



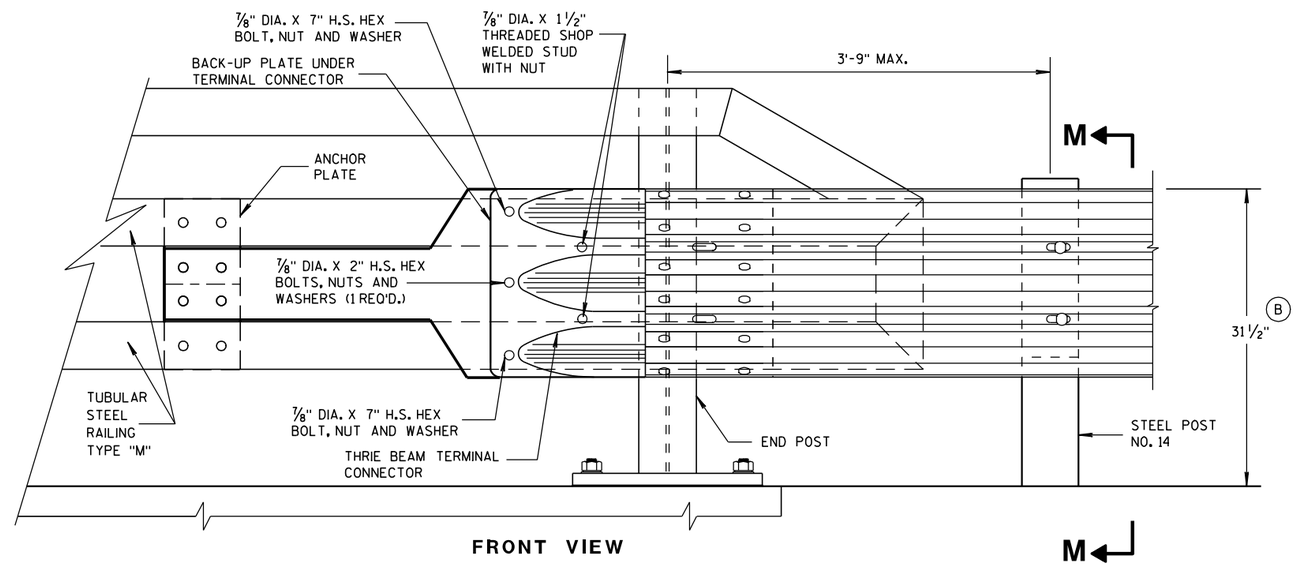
FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"

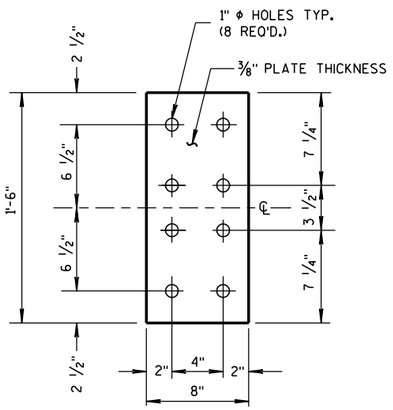


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

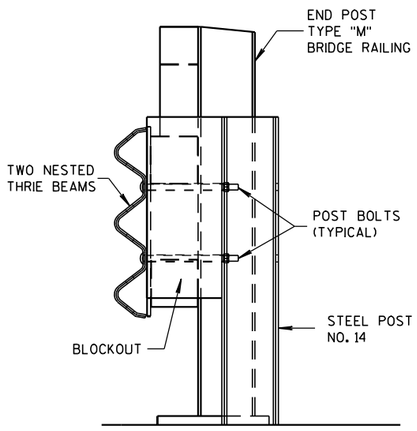


FRONT VIEW

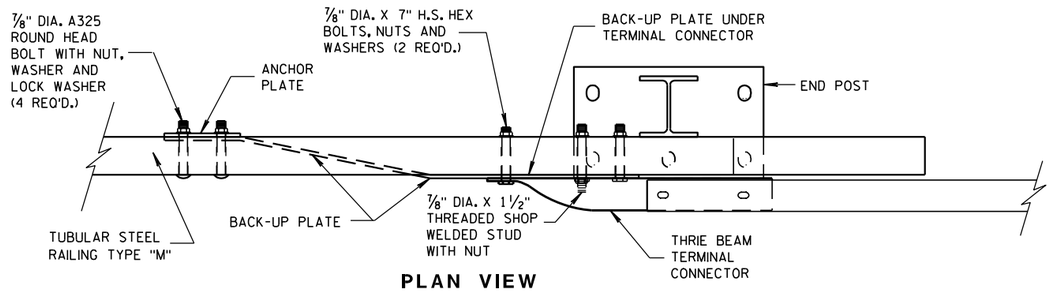


FRONT VIEW

ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



PLAN VIEW

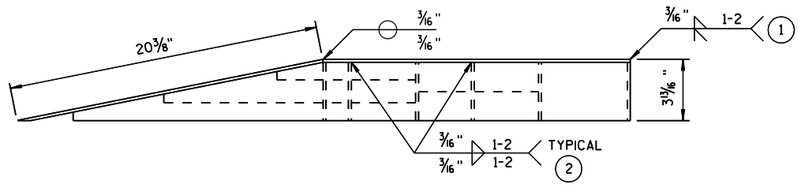
THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

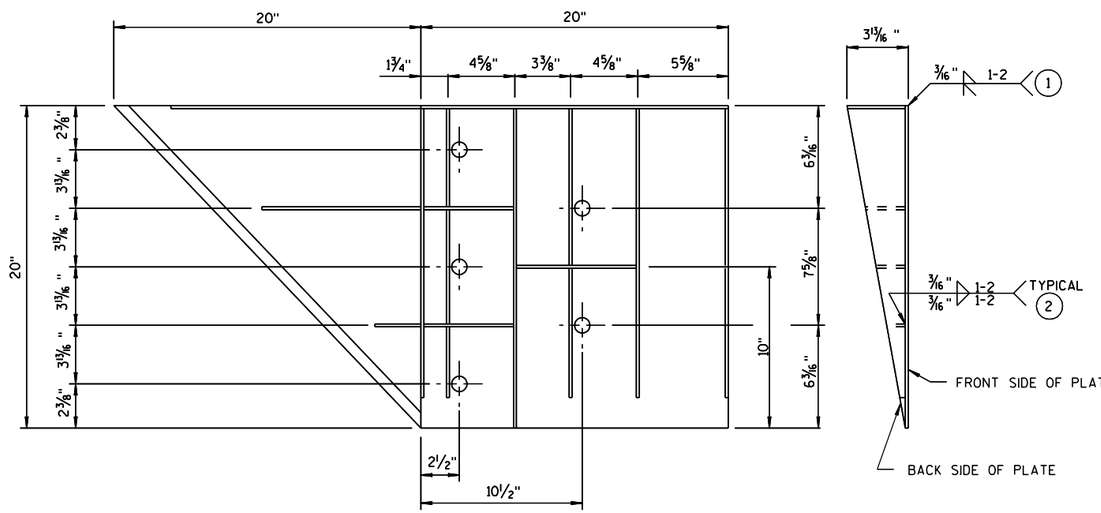
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-31-2012 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

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S.D. 14 B 45-3h





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.

(1) 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.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

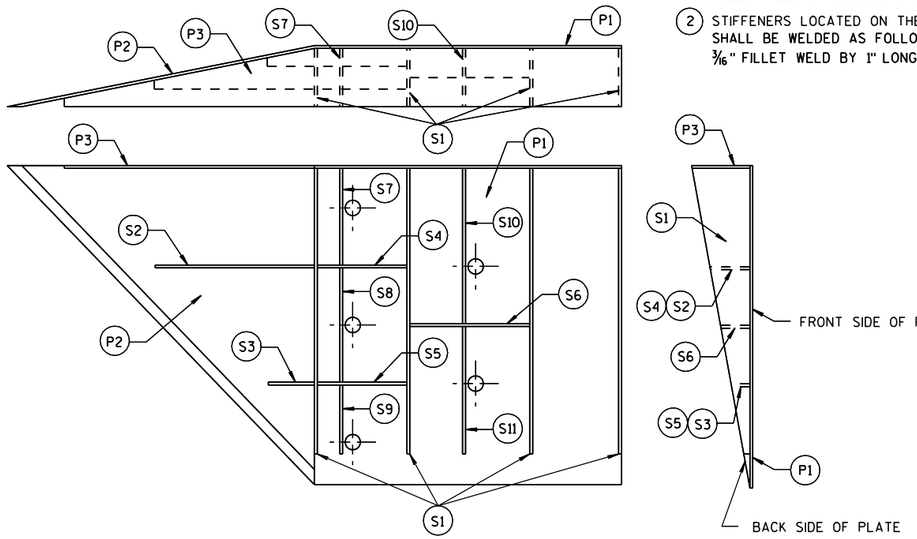


PLATE AND STIFFENER IDENTIFICATION

(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 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

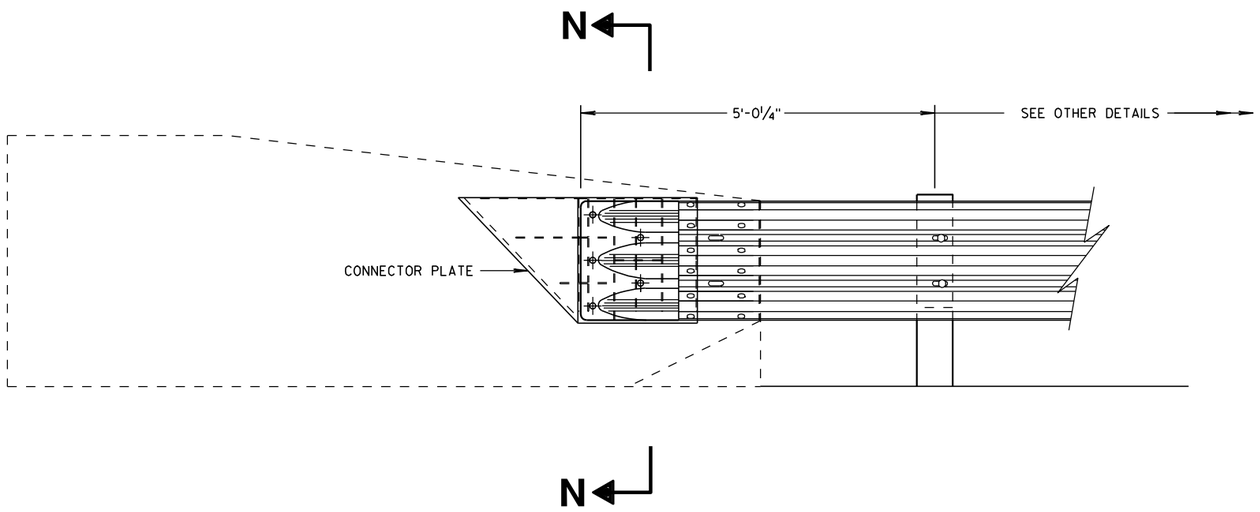
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8/31/2012
DATE
/S/ Jerry H ...
ROADWAY STANDARDS 353
ENGINEER
...MENT
FHWA

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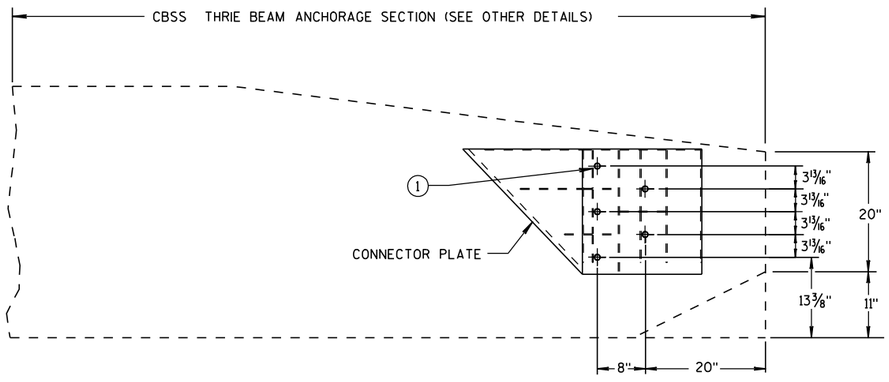
S.D.D. 14 B 45-3i

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S.D.D. 14 B 45-3i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

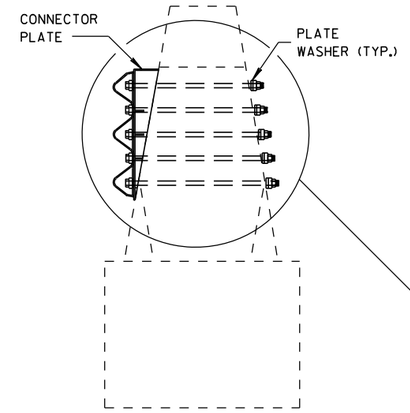


SINGLE SLOPE CONNECTION PLATE PLACEMENT

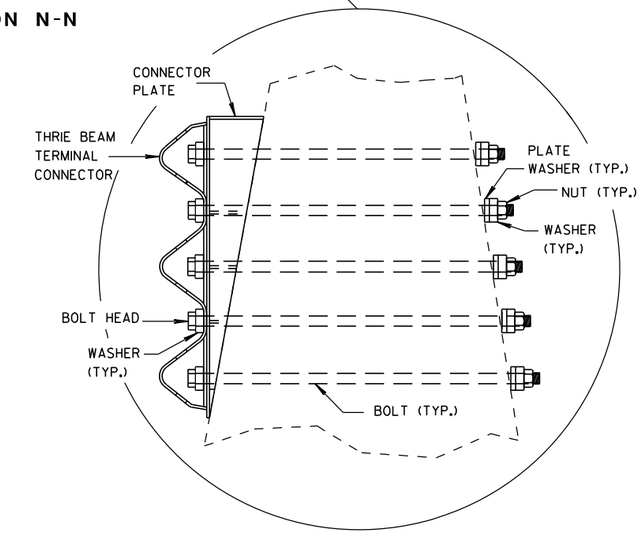
GENERAL NOTES

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SECTION N-N

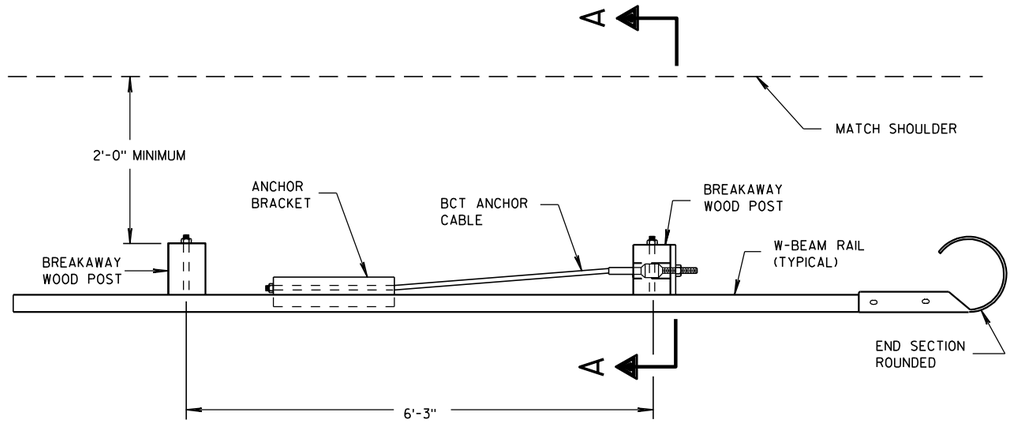


MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

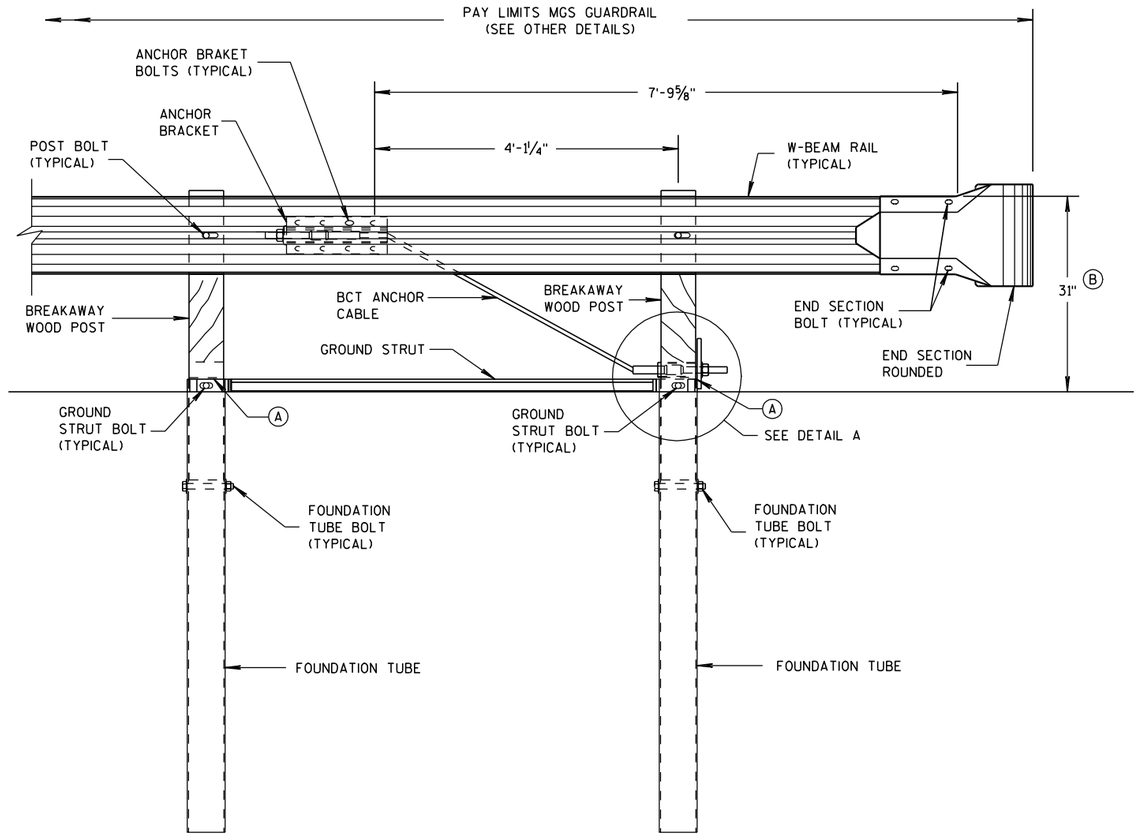
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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8/31/2012 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 45-3j

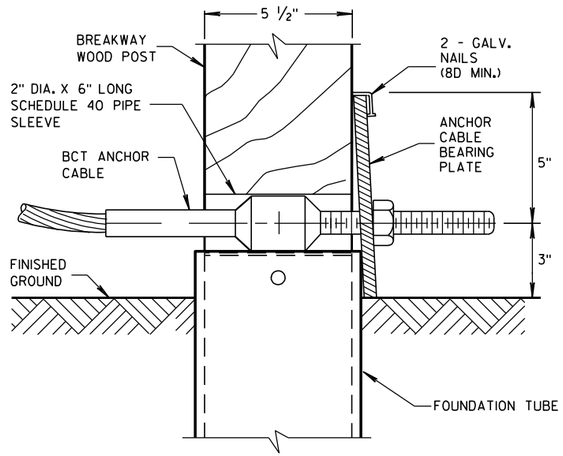


PLAN VIEW



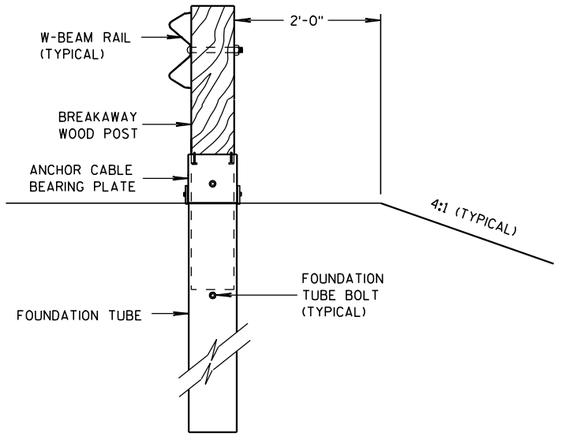
FRONT VIEW

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.

POST BOLTS ARE A ⅝" DIAMETER X 10" LONG GUARDRAIL BOLT. A POST BOLT REQUIRES A ⅝" DIAMETER DH MODIFIED (RECESSED) HEAVY HEX NUT AND ⅝" DIAMETER FLAT WASHER.

FOUNDATION TUBE BOLTS ARE A ⅞" DIAMETER X 7½" LONG HEAVY HEX HEAD BOLT. A FOUNDATION TUBE BOLT REQUIRES A ⅞" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

GROUND STRUT BOLTS ARE A ⅝" DIAMETER X 10" LONG HEAVY HEX HEAD BOLT. A GROUND STRUT BOLT REQUIRES A ⅝" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

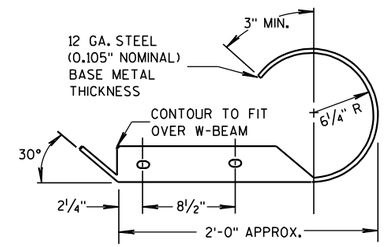
ANCHOR BRAKET BOLTS ARE A ⅝" DIAMETER X 1½" LONG HEAVY HEX HEAD BOLT. AN ANCHOR BRAKET BOLT REQUIRES A ⅝" DIAMETER DH HEAVY HEX NUT AND A FLAT WASHER.

END SECTION BOLTS ARE A ⅝" DIAMETER X 1½" HEAVY HEX HEAD BOLT. AN END SECTION BOLT REQUIRES ⅝" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

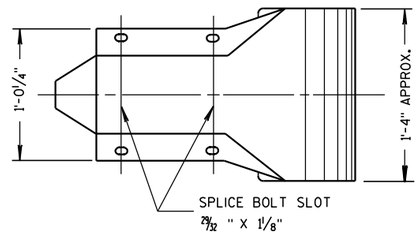
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(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

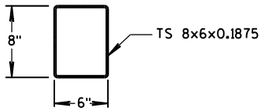
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

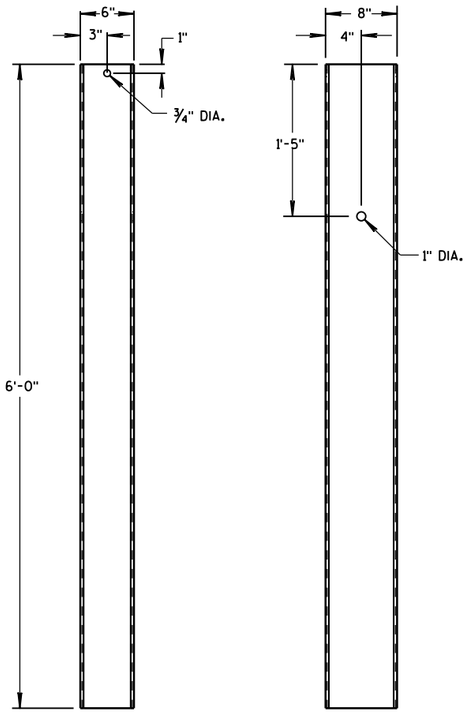
S.D.D. 14 B 47-1a

6

S.D.D. 14 B 47-1a

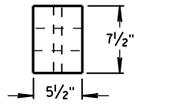


PLAN VIEW

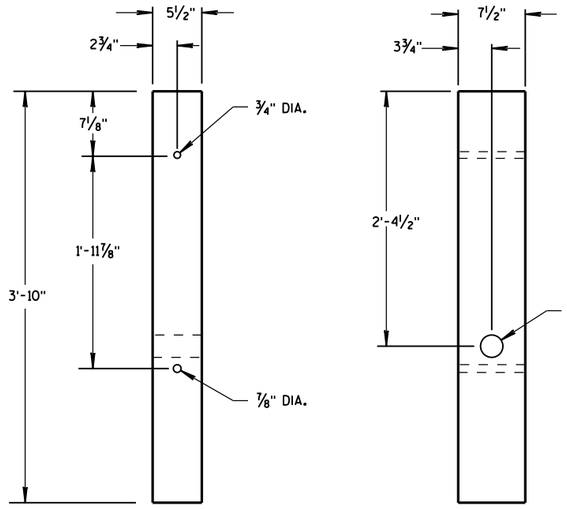


FRONT VIEW SIDE VIEW

FOUNDATION TUBE



PLAN VIEW



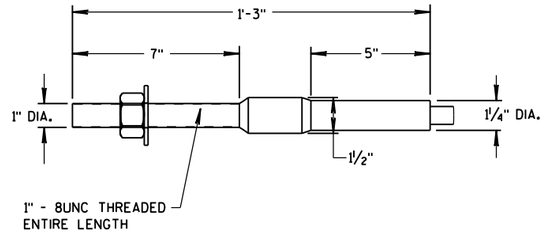
FRONT VIEW SIDE VIEW

BREAKAWAY WOOD POST

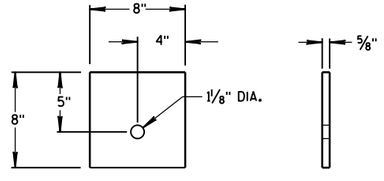
GENERAL NOTES

BCT ANCHOR CABLE IS A ⅜" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. THE END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. THE TREADED STUD SHOULD CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



SIDE VIEW FRONT VIEW

ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

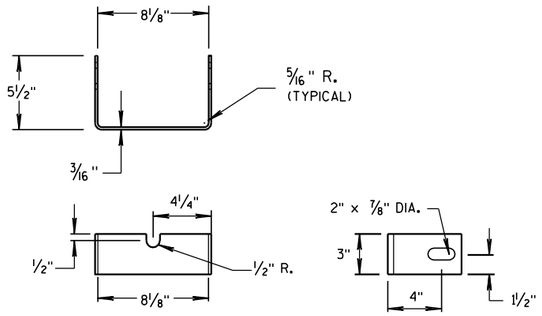
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

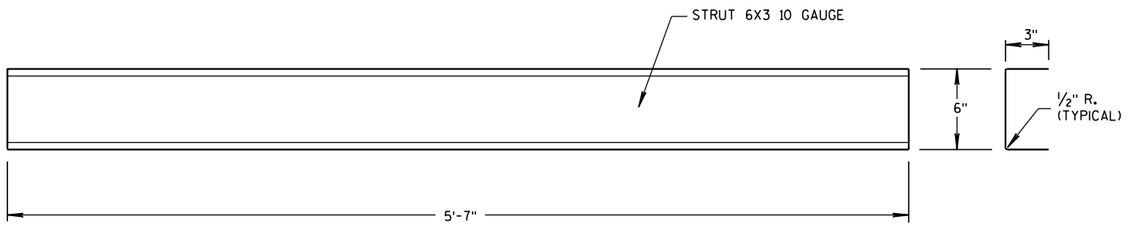
S.D.D. 14 B 47-1b

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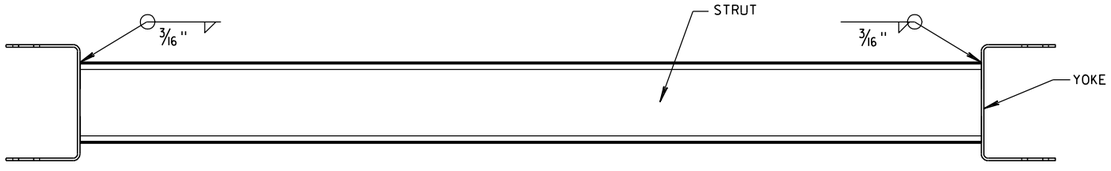
S.D.D. 14 B 47-1b



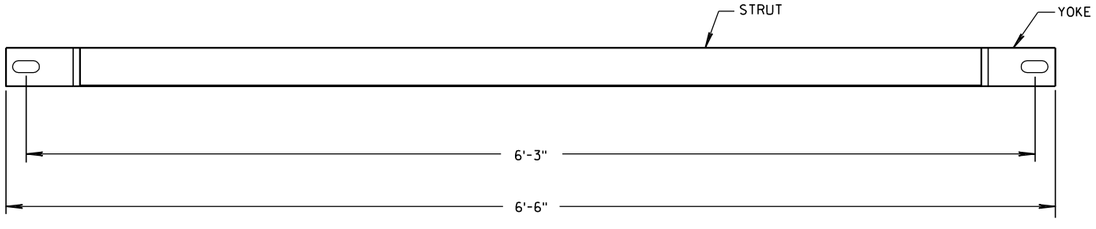
YOKE DETAIL



STRUT DETAIL

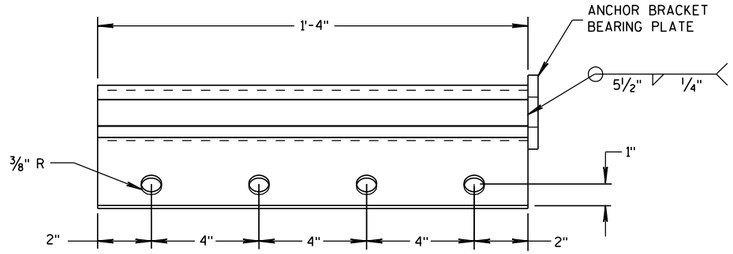


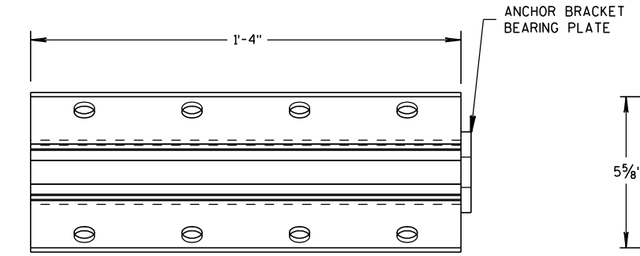
PLAN VIEW

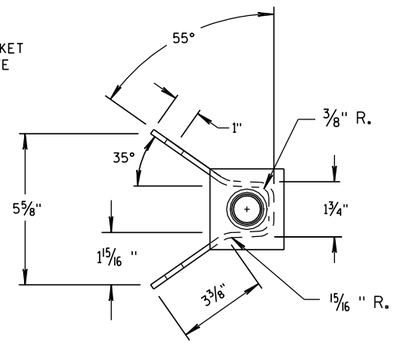


FRONT VIEW

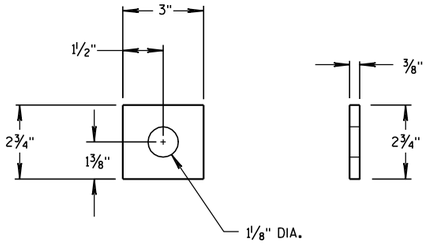
GROUND STRUT DETAIL







ANCHOR BRACKET



ANCHOR BRACKET BEARING PLATE

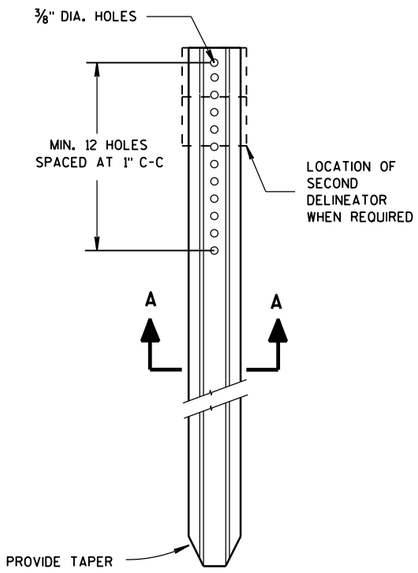
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

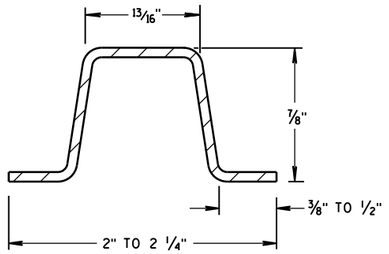
APPROVED
5/23/2011
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 47-1c

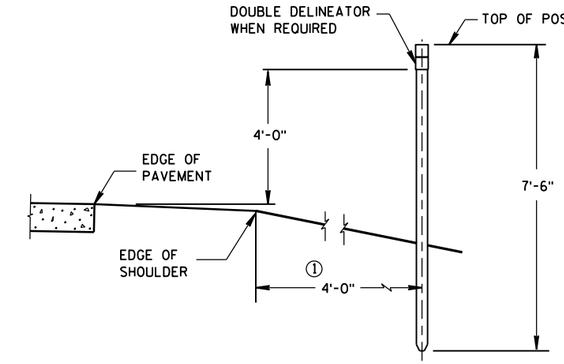


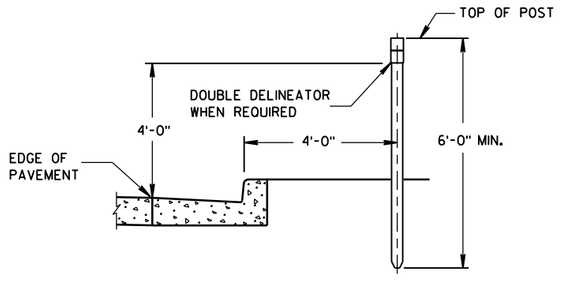
DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.



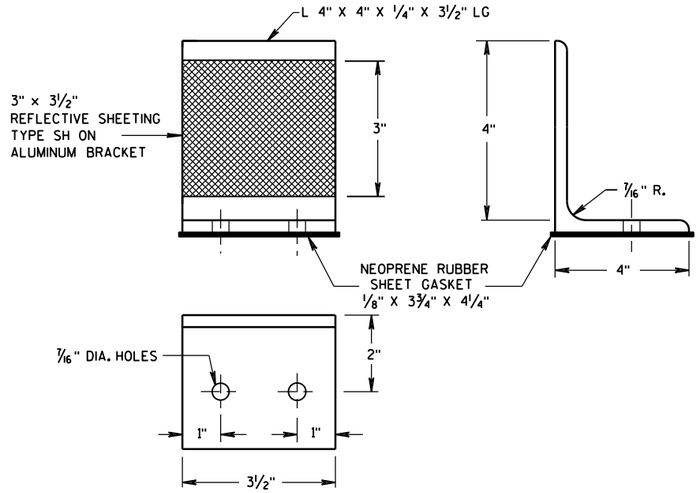


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

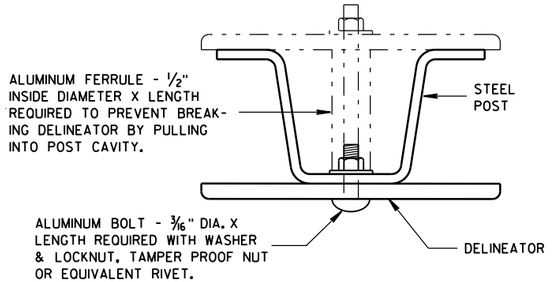
GENERAL NOTES

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

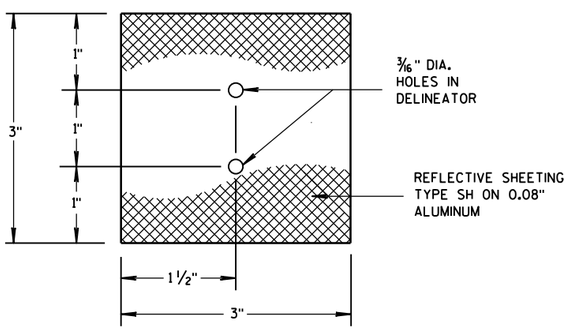
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



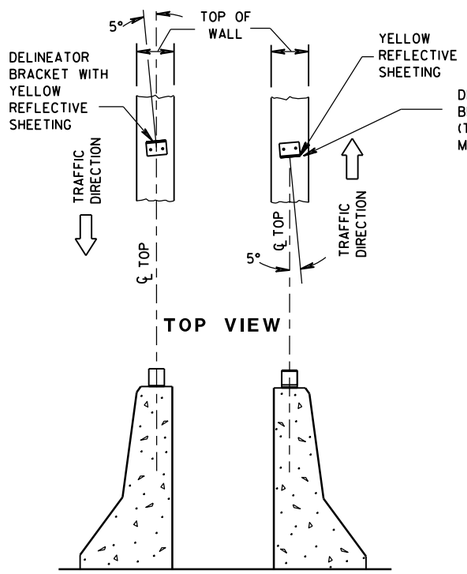
DELINEATOR BRACKET



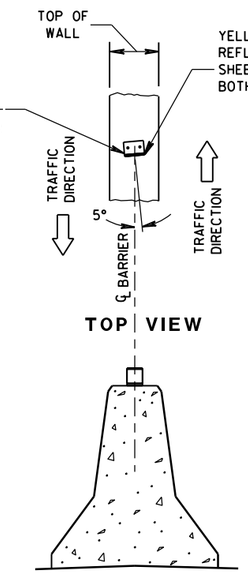
MOUNTING DETAIL FOR DELINEATOR



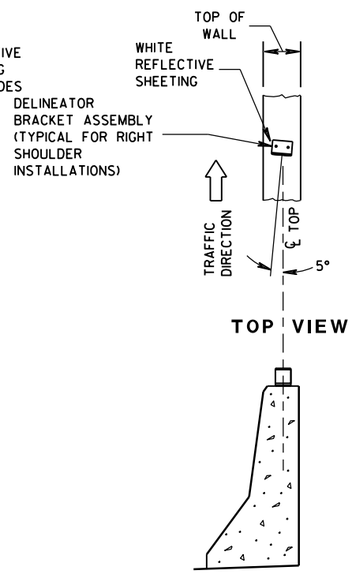
3"x 3" DELINEATOR



DOUBLE BARRIERS IN MEDIAN

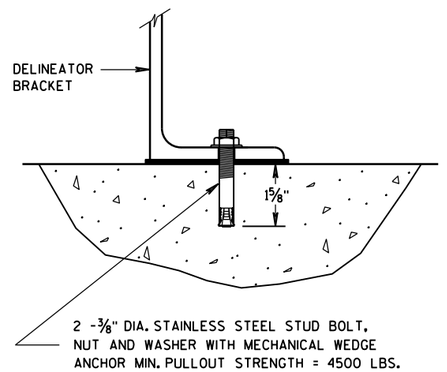


MEDIAN BARRIER



BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

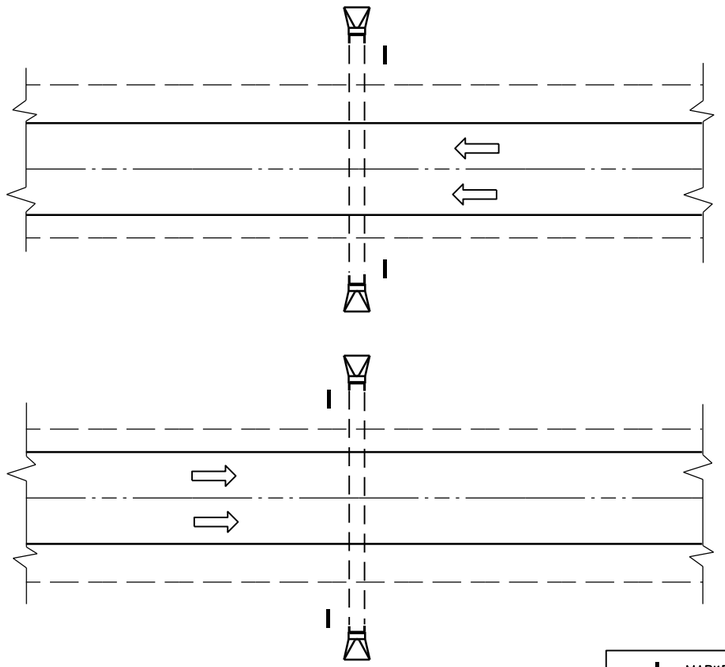
APPROVED
7/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC E
FHWA

6

S.D.D. 15 A 2-8

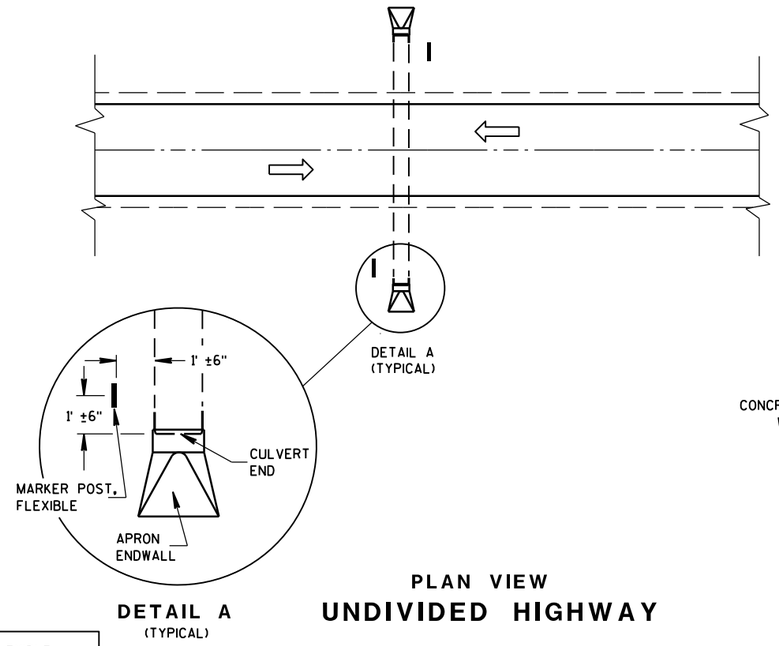
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S.D.D. 15 A 2-8



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

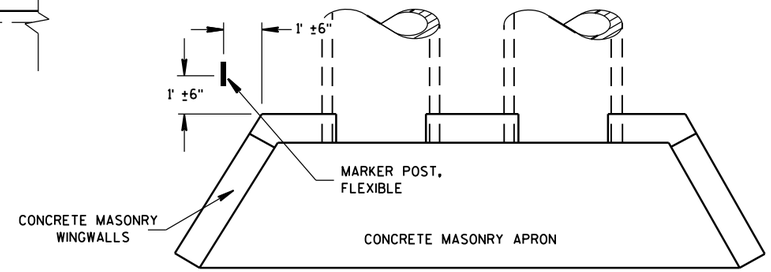
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

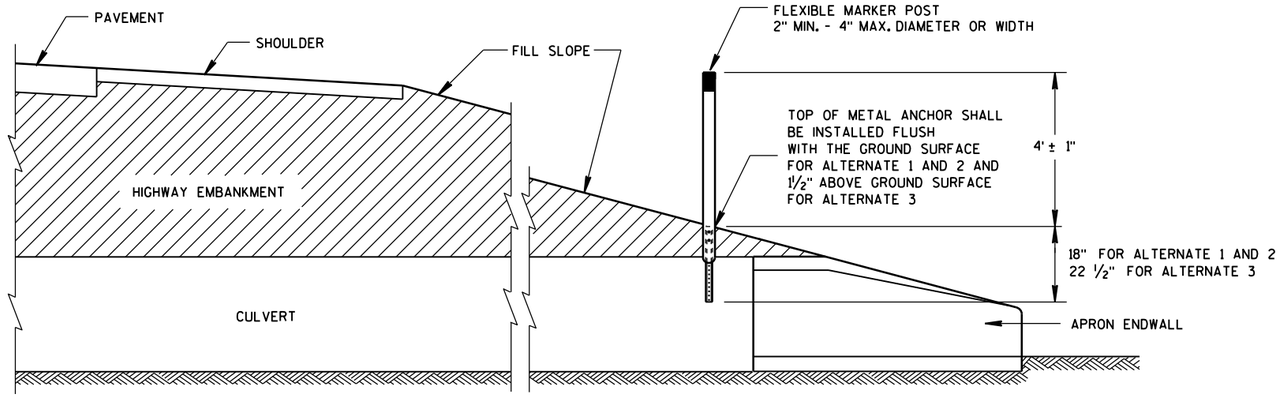
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

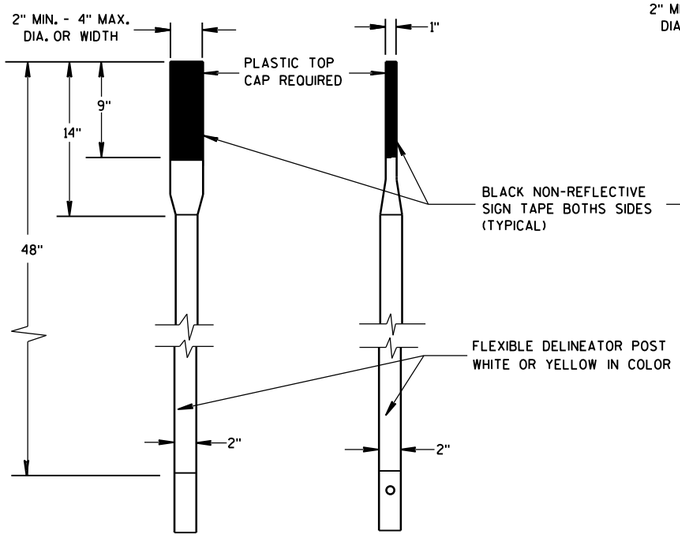
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

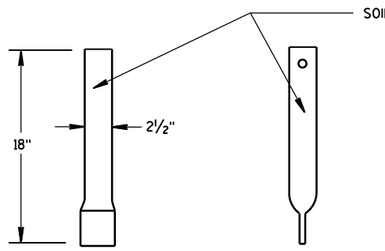
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S.D.D. 15 A 3-2a

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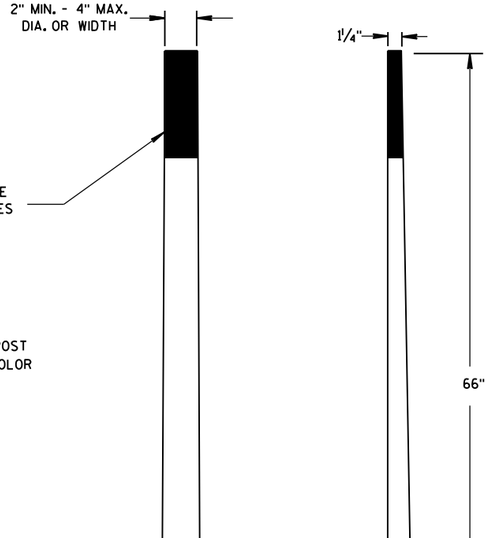
S.D.D. 15 A 3-2a





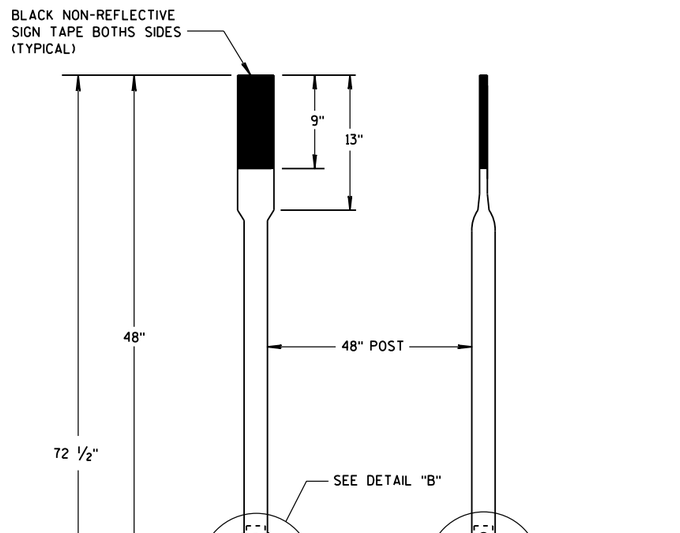
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

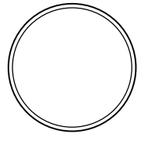
ALTERNATE 2



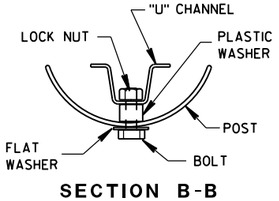
FRONT VIEW SIDE VIEW

ALTERNATE 3

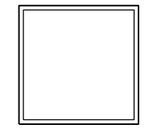
FLEXIBLE MARKER POSTS



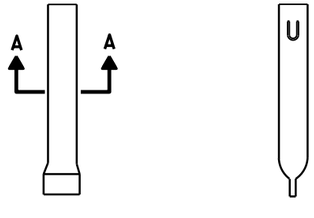
SECTION A-A



SECTION B-B

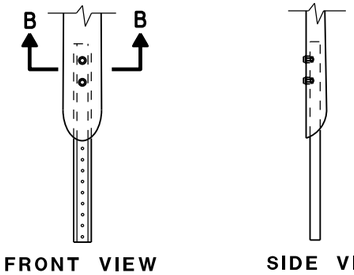


SECTION C-C



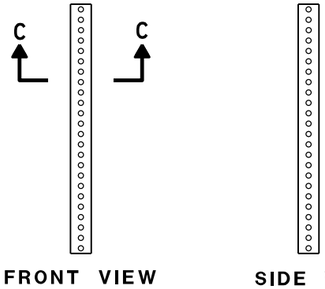
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

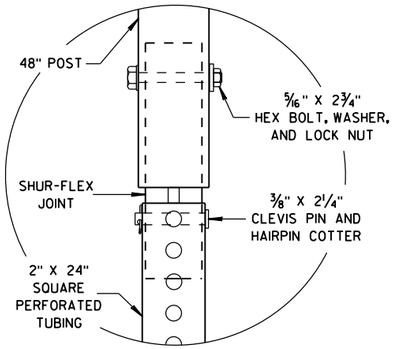
ALTERNATE 2



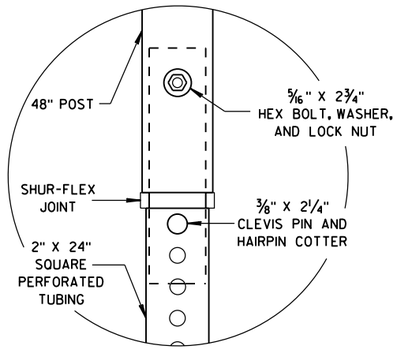
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

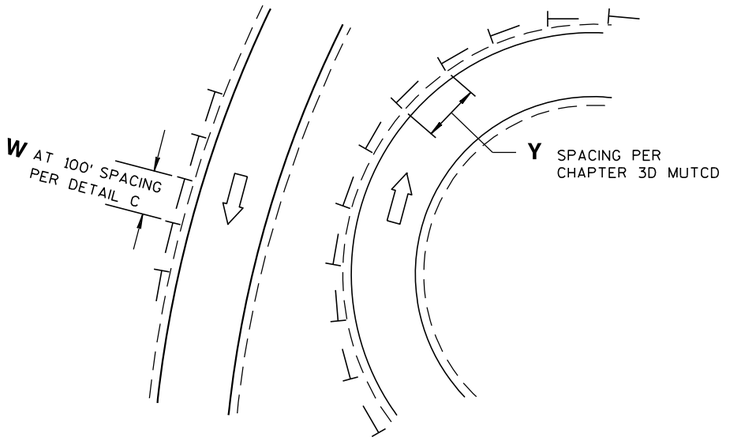
S.D.D. 15 A 3-2b

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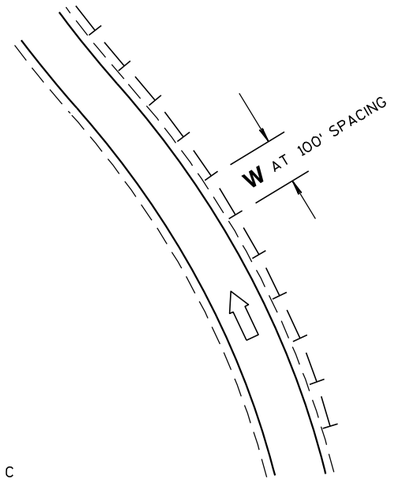
S.D.D. 15 A 3-2b

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



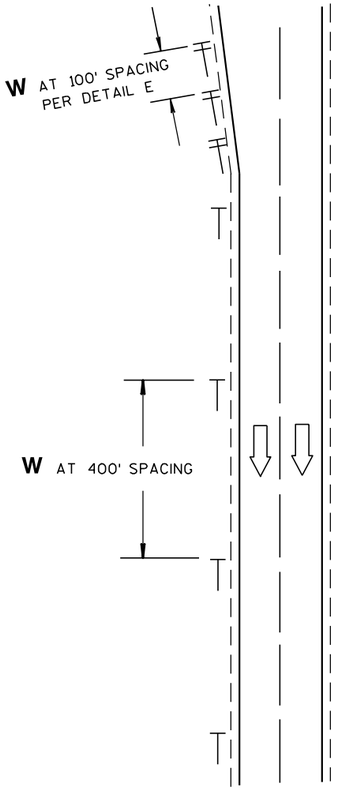
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



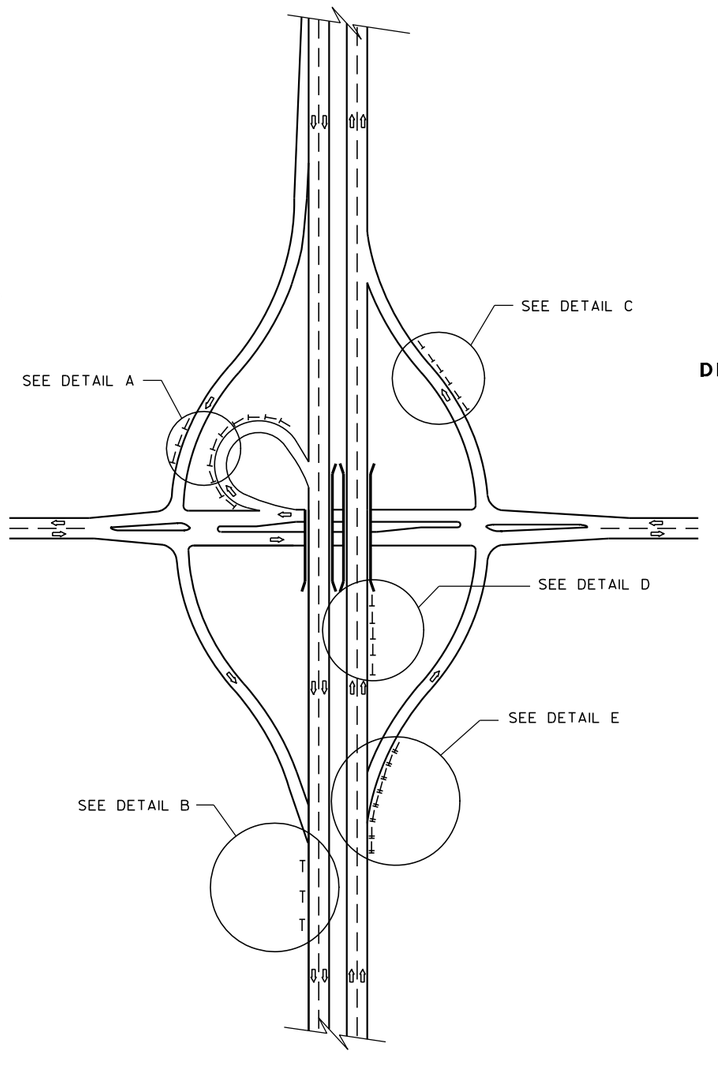
DETAIL C
DELINEATOR LAYOUT ALONG RAMP

LEGEND

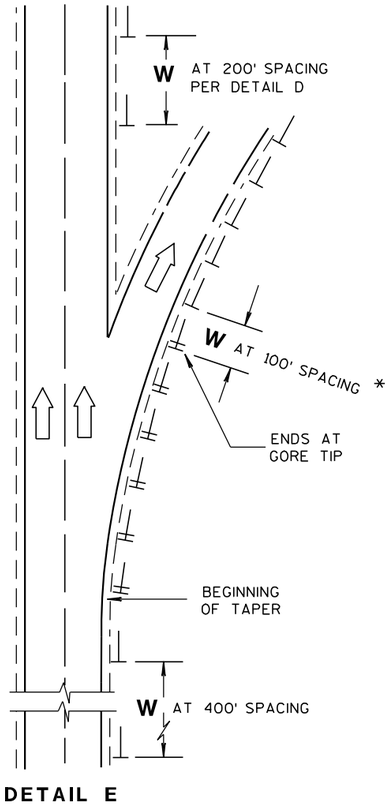
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



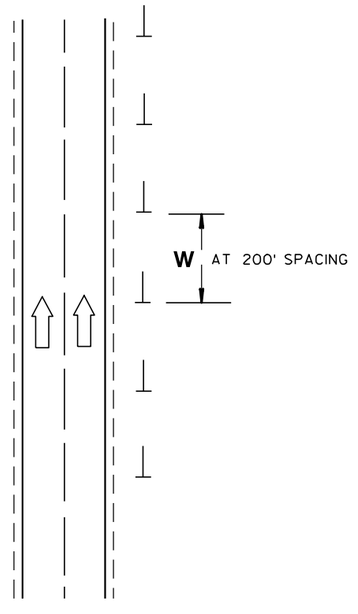
DETAIL B
DELINEATOR LAYOUT ALONG MAINLINE



DELINEATOR LAYOUT



DETAIL E
DELINEATOR LAYOUT FOR ACCELERATION - DECELERATION LANES AND TAPERS AT RAMPS



DETAIL D
DELINEATOR LAYOUT BETWEEN INTERCHANGE RAMPS

DELINEATOR LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

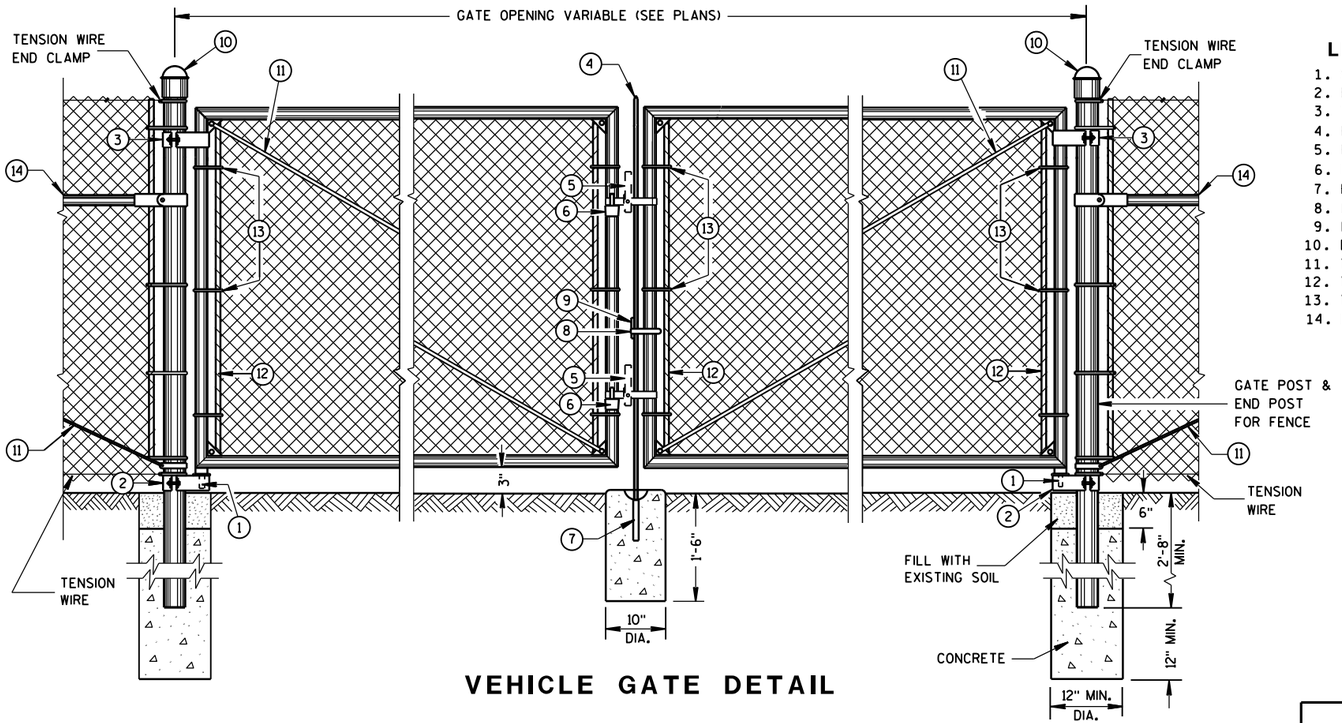
APPROVED
2/5/09 DATE
/S/ Thomas N. Nothdurft STATE TRAFFIC ENGINEER
FHWA

6

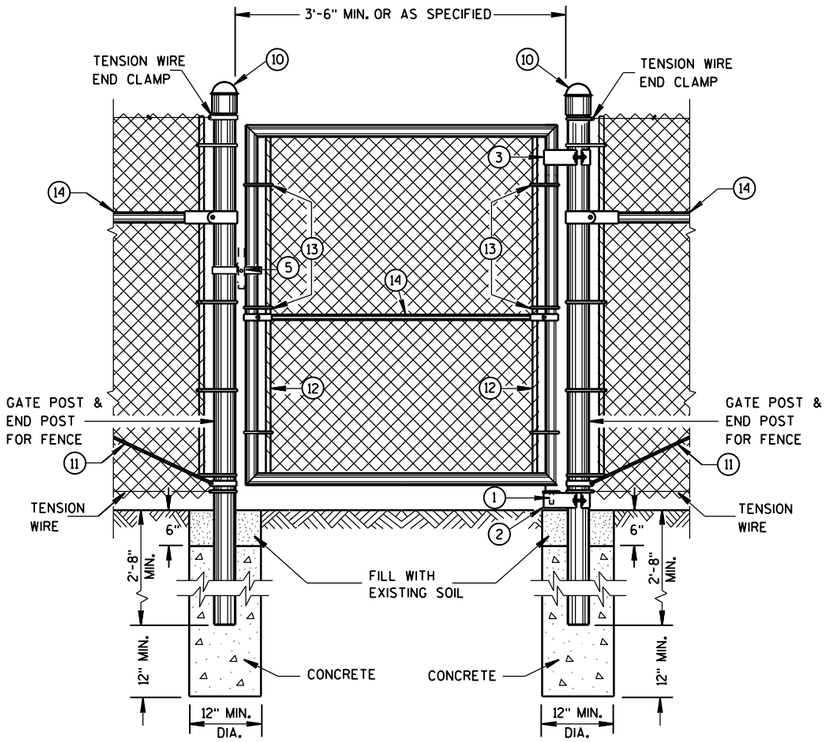
S.D.D. 15 A 6-2

6

S.D.D. 15 A 6-2



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

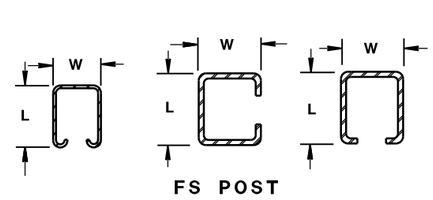
FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

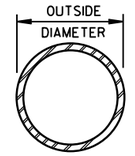
FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.



FS POST



SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FORMED STEEL FENCE POST

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR ROUND STEEL FENCE POST

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

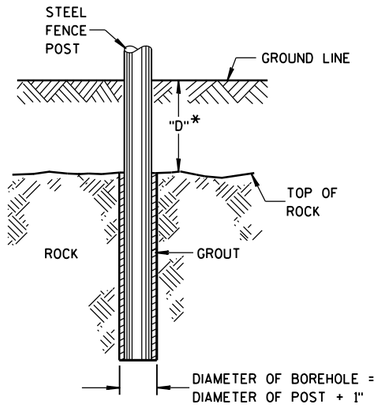
USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

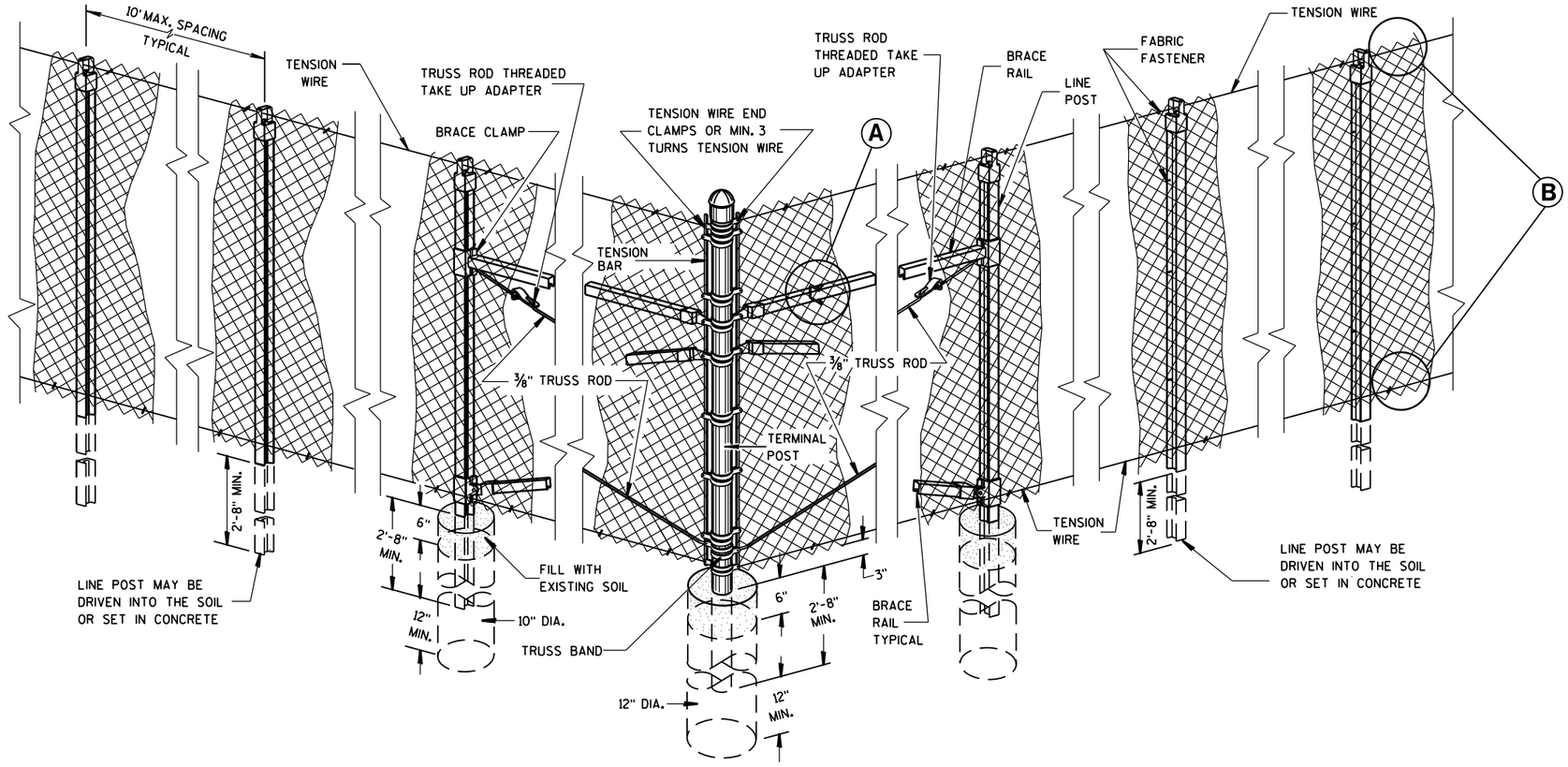
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 15 B 3-13a

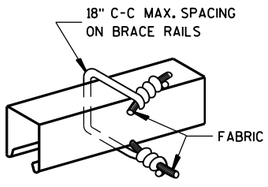


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



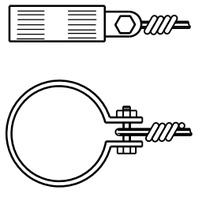
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



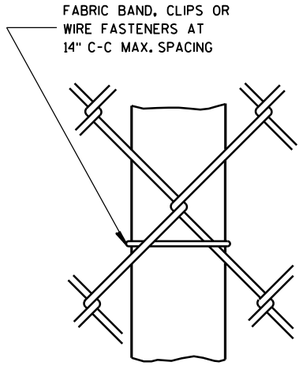
BRACE RAIL

FABRIC FASTENER

Ⓐ



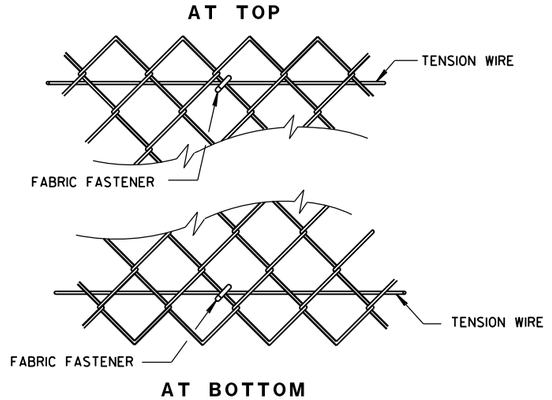
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

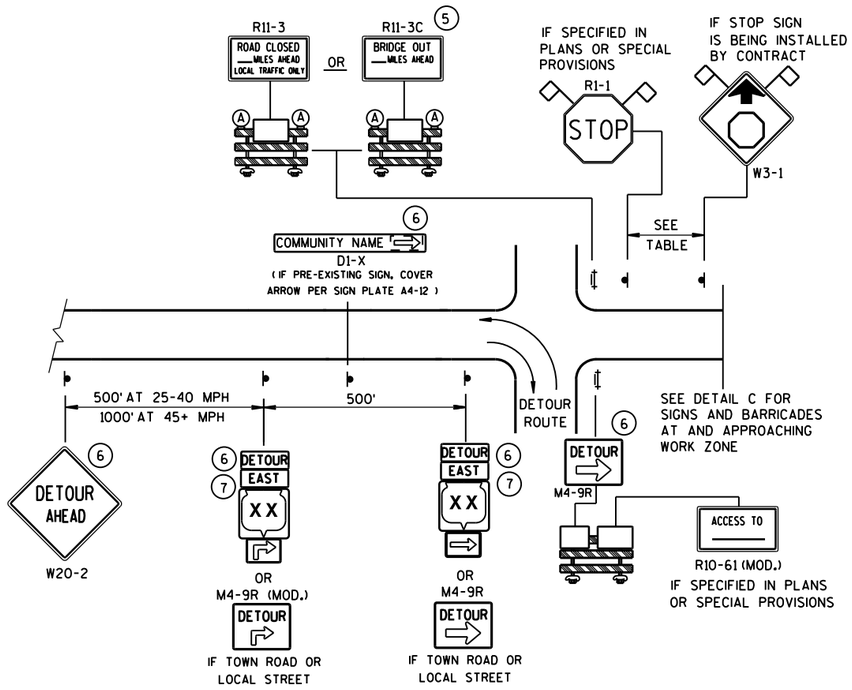
APPROVED
7/16/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 3-13b

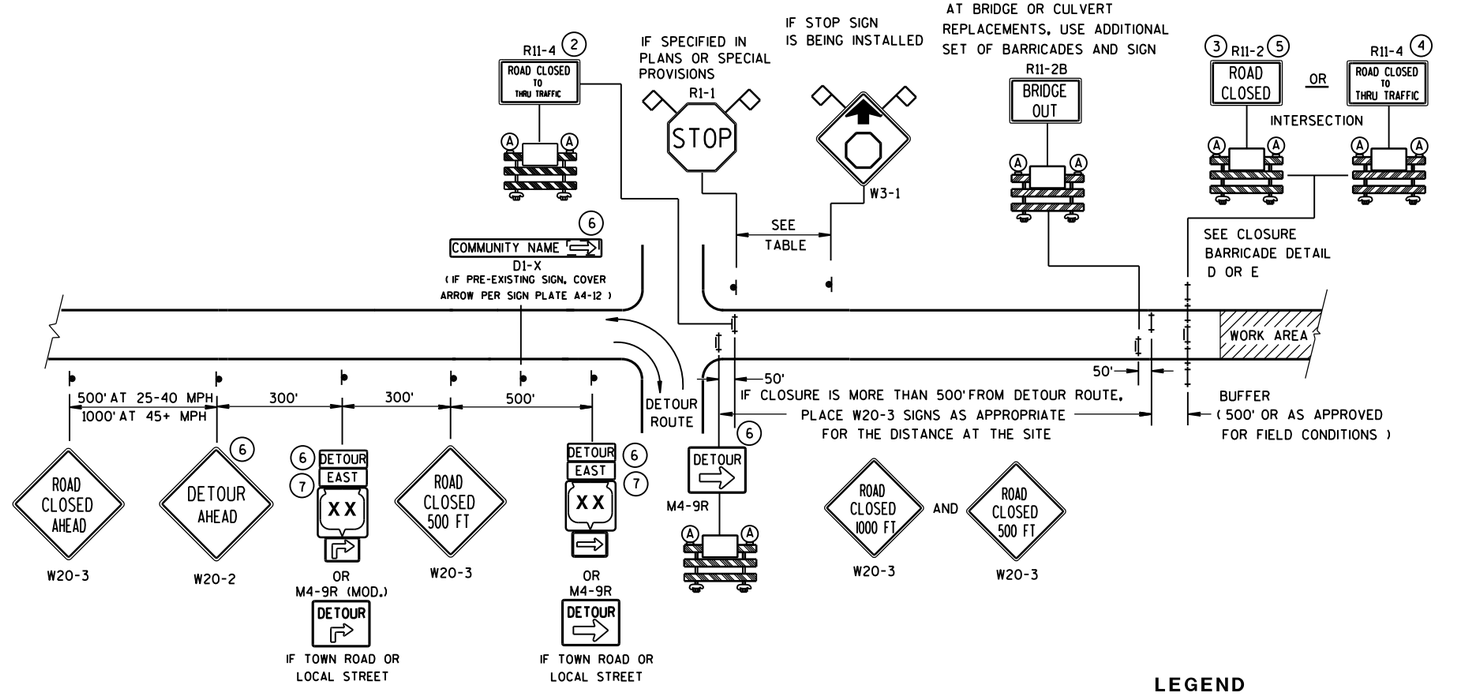
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S.D.D. 15 B 3-13b



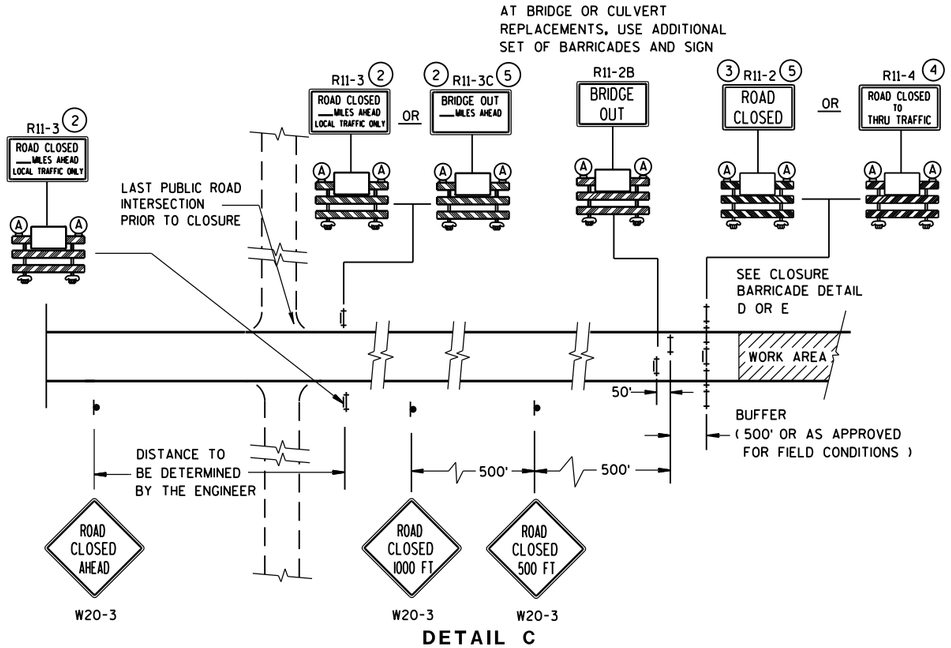
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

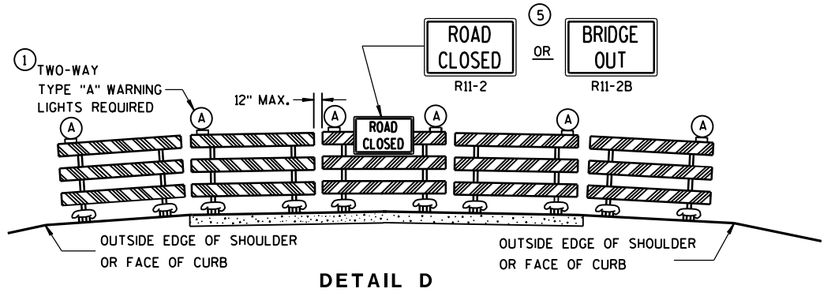
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

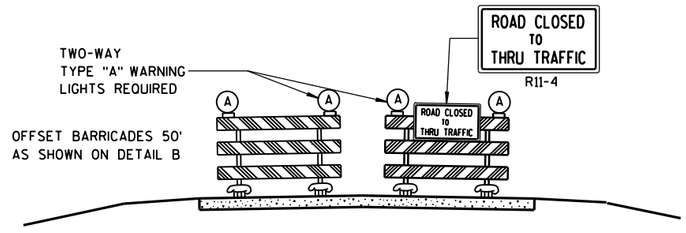
S.D.D. 15 C 2-5a



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

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 2-5b

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

GENERAL NOTES

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

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

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

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

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

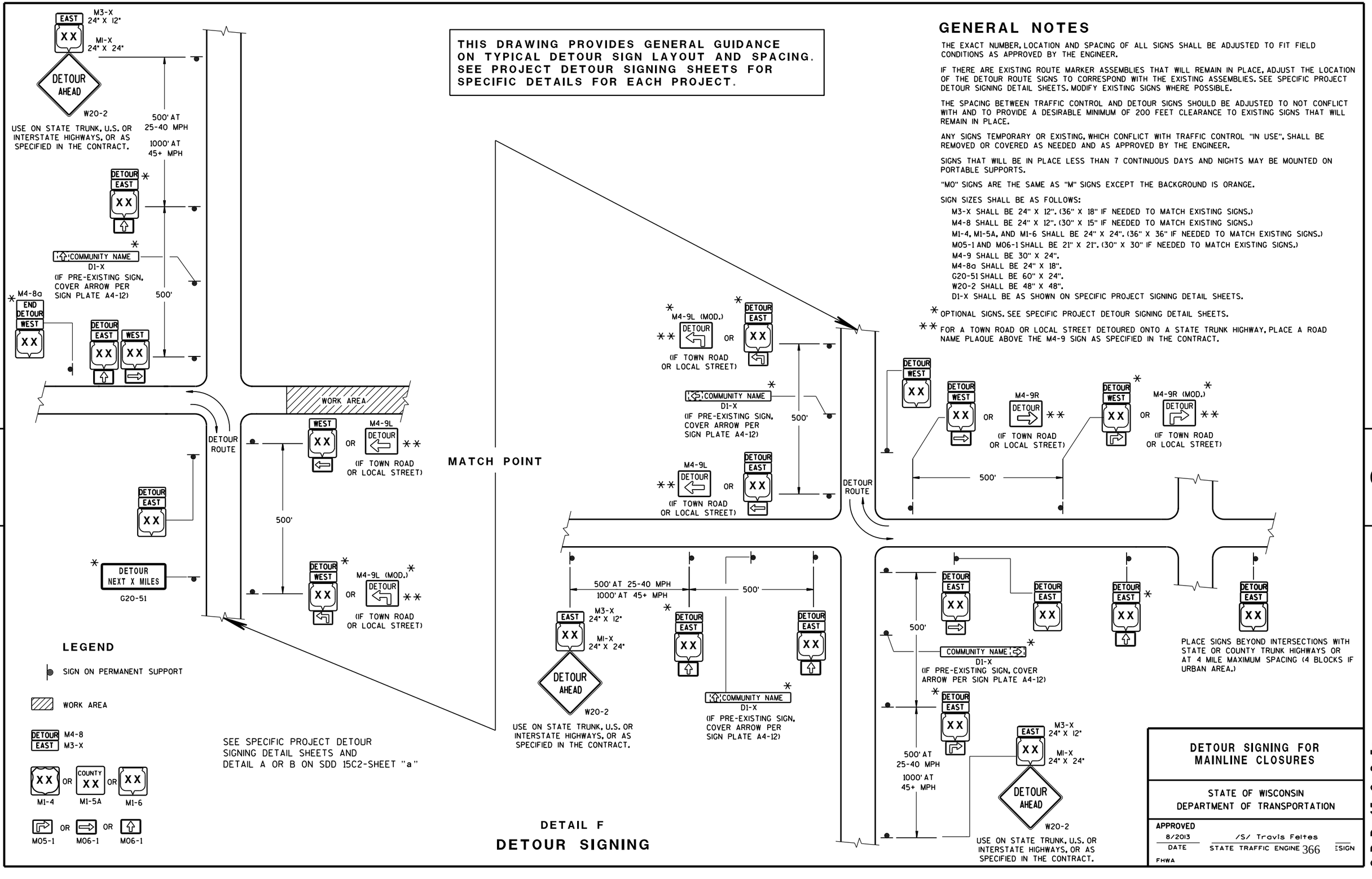
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

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

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



LEGEND

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

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

DETAIL F

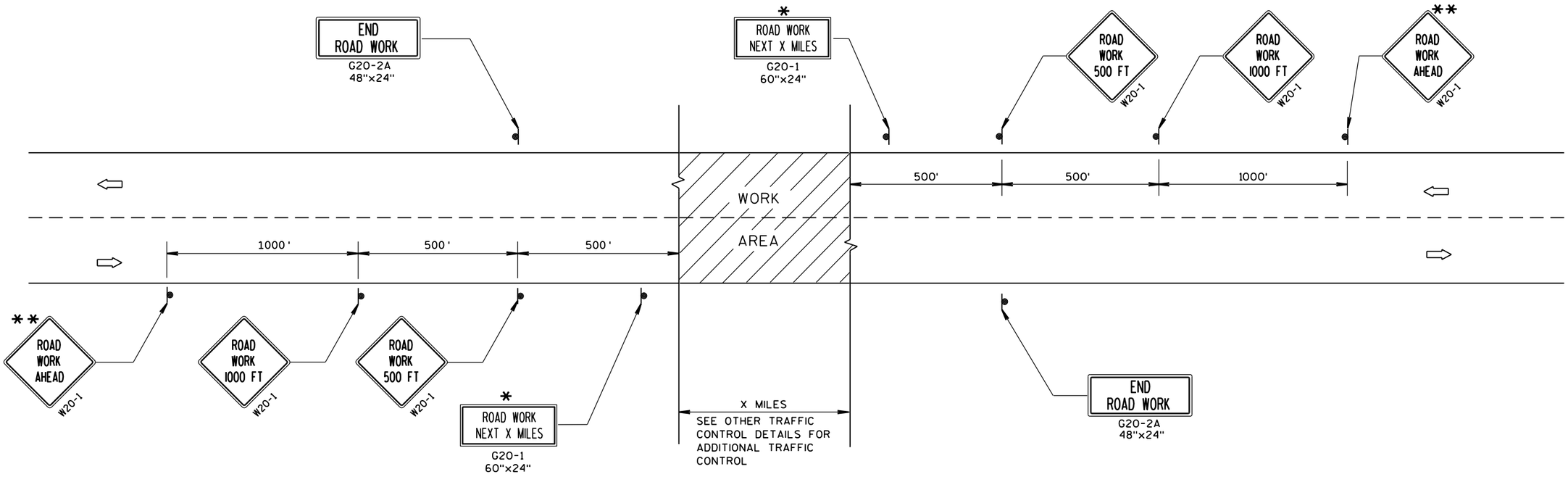
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6
S.D.D. 15 C 2-5c



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

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.

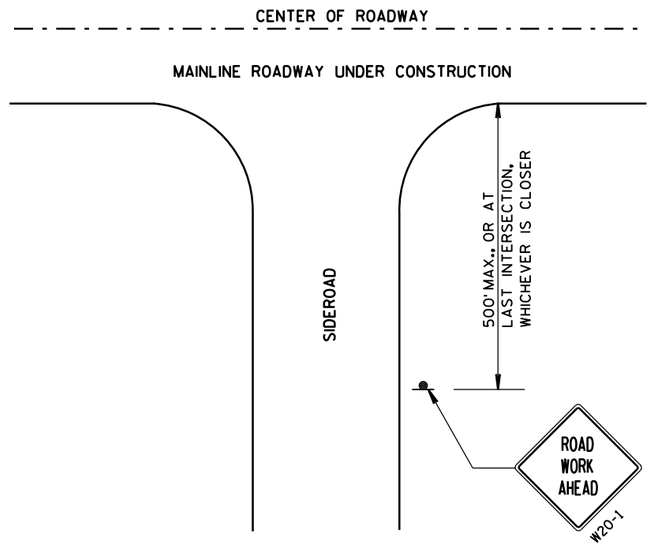
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

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

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



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

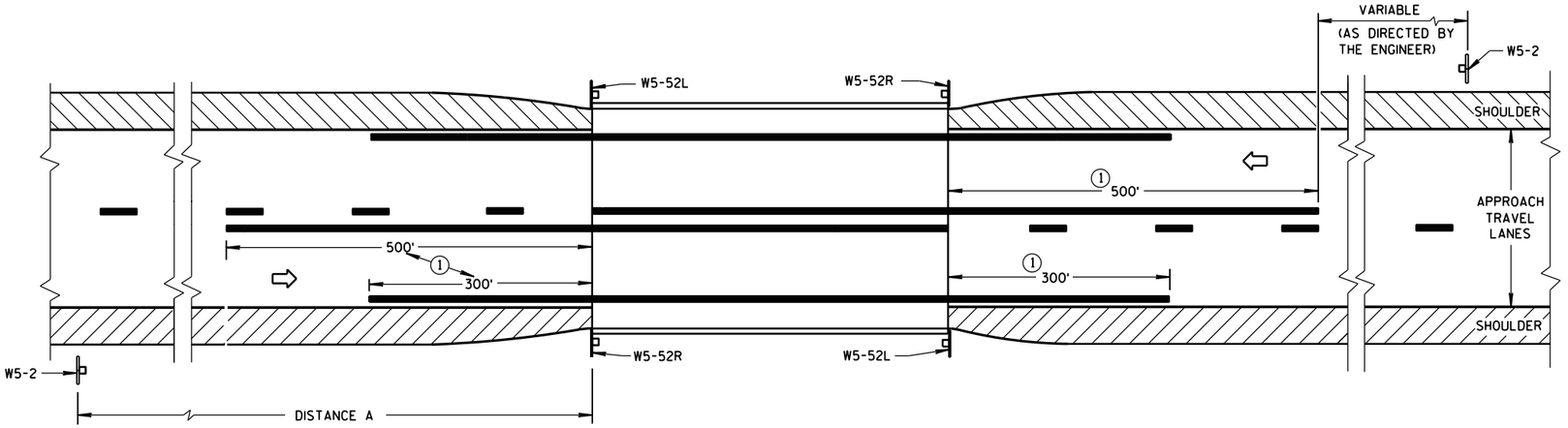
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

SIGN

6

S.D.D. 15 C 4-2



GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

PAVEMENT MARKING SHOWN ON THIS DRAWING IS NOT REQUIRED UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. WHEN SPECIFIED, PAVEMENT MARKING SHALL CONFORM TO THIS DRAWING AND OTHER CONTRACT REQUIREMENTS.

(1) MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.

(2) FACE OF OBJECT MARKERS W5-52R, AND W5-52L SHALL BE COVERED WITH TYPE F REFLECTIVE SHEETING.

(3) LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.

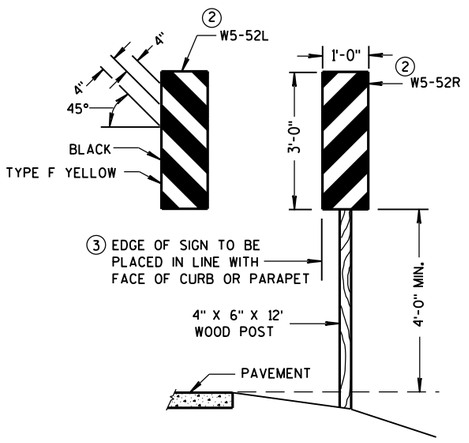
DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

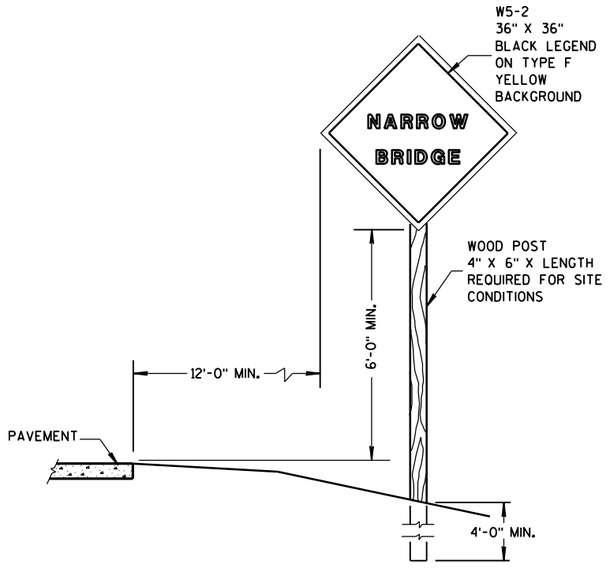
SITUATION 1

WARRANTING CRITERIA:

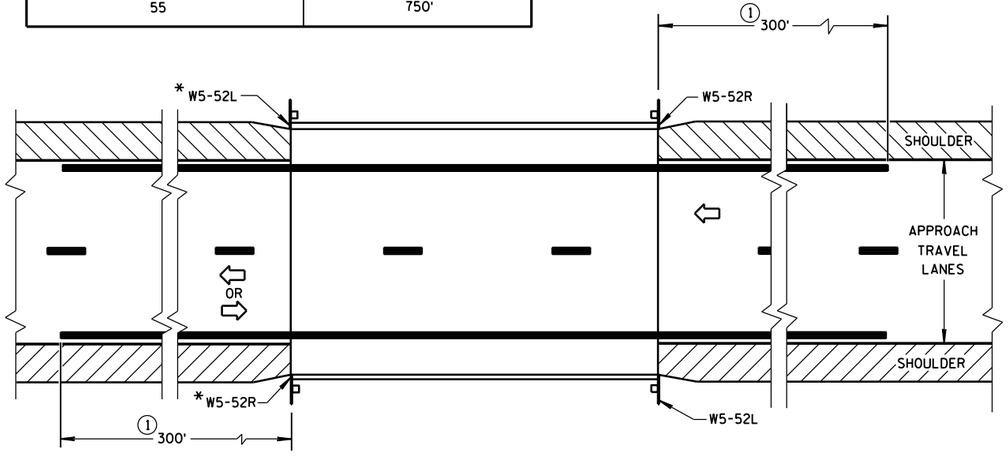
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET



OBJECT MARKER PLACEMENT



SIGN PLACEMENT



*OMIT ON ONE-WAY TRAVELLED WAYS

SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND

2. BRIDGE IS LESS THAN 6 FEET WIDER (ON EACH SIDE) THAN APPROACH TRAVEL LANES.

SIGNING & MARKING
FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

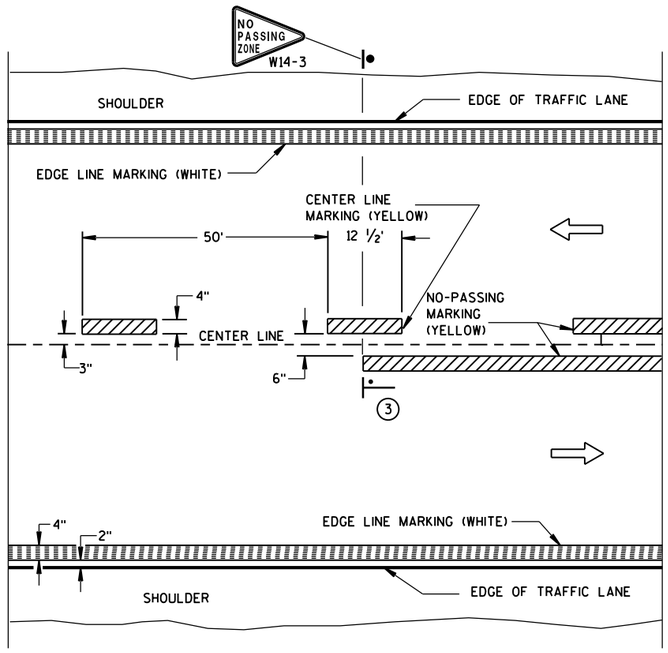
3-2014 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

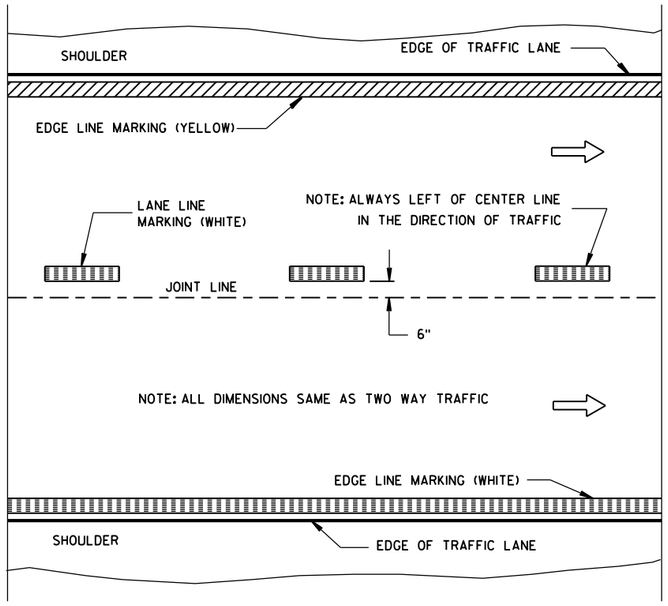
FHWA

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S.D.D. 15 C 6-7

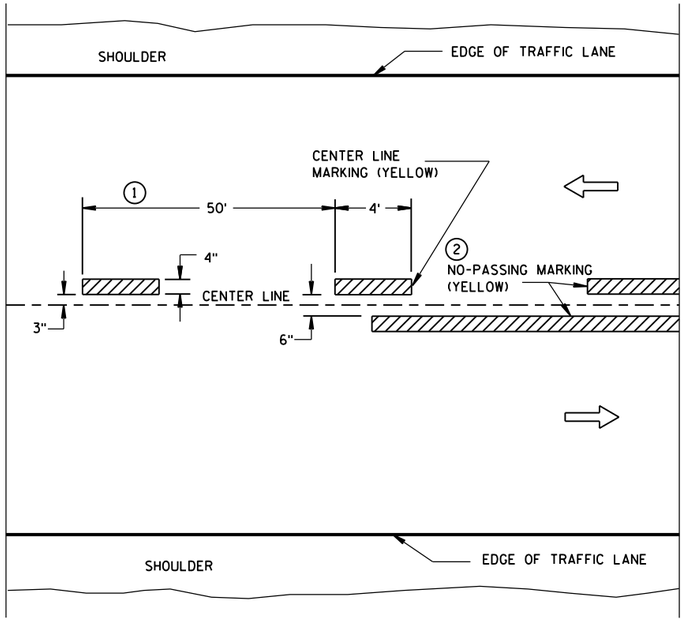


TWO WAY TRAFFIC

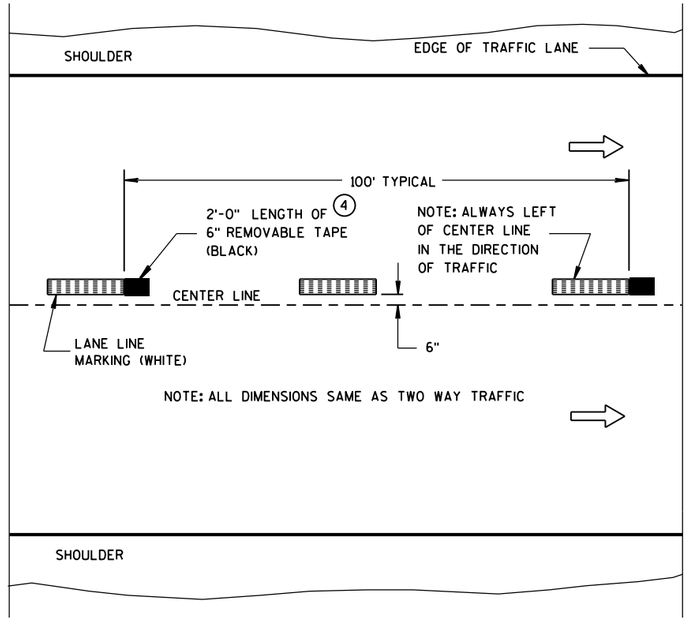


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

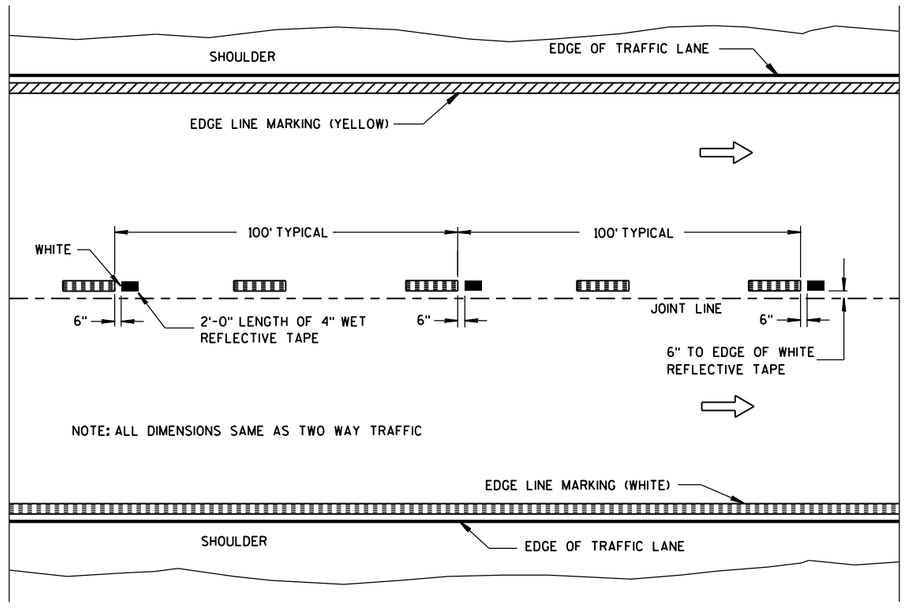
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

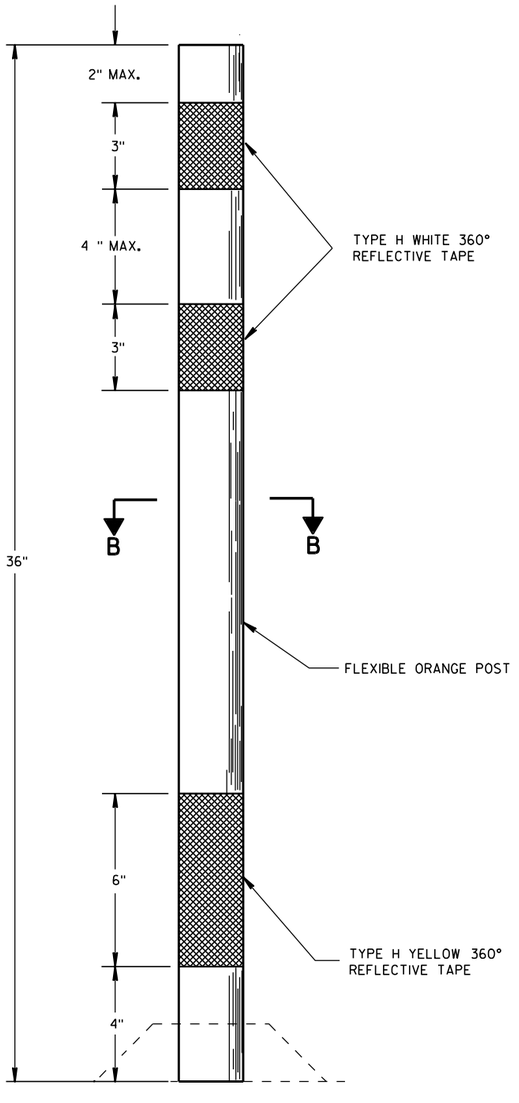
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

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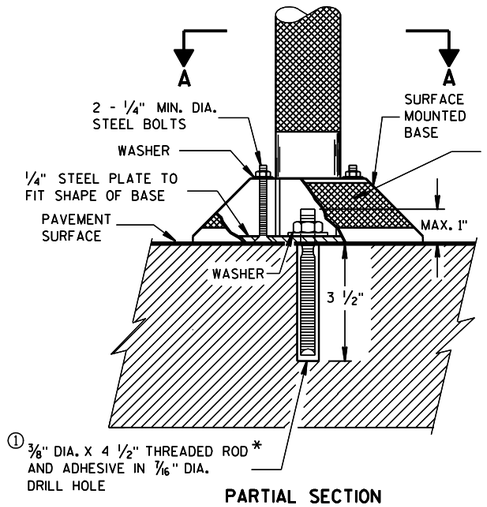
S.D.D. 15 C 8-16a

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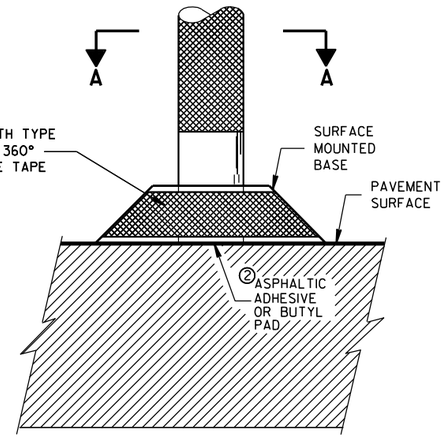
S.D.D. 15 C 8-16a



FLEXIBLE TUBULAR MARKER POST



PARTIAL SECTION TO SHOW BOLTS



POST BASES ON NEW OR EXISTING PAVEMENT

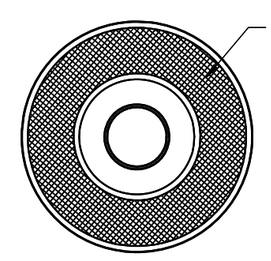
GENERAL NOTES

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.

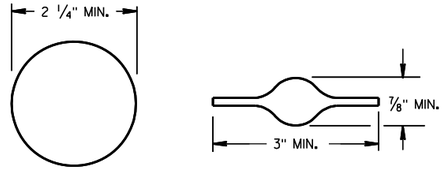
① THREADED ROD SHALL BE MACHINED DOWN TO 0.280 INCH DIA. 1 1/4 INCHES FROM THE TOP.

② THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



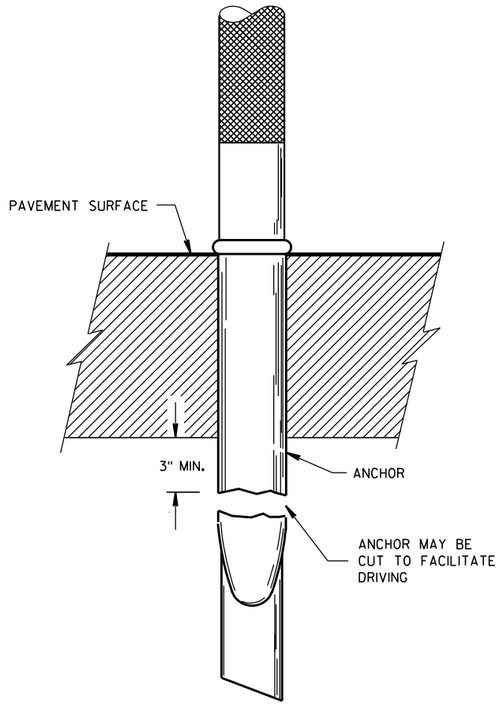
SECTION A-A

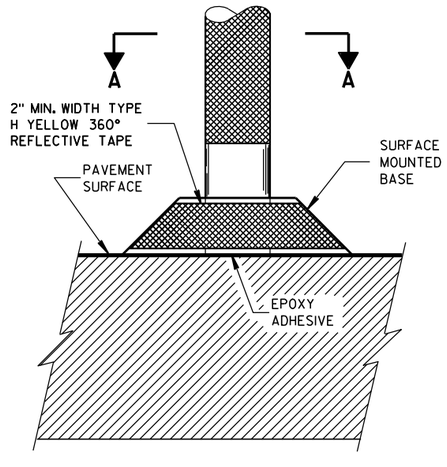
SURFACE MOUNTED BASE



SECTION B-B

ALTERNATIVE SHAPES





POST ANCHOR AND BASE ON PAVEMENT WHICH WILL BE REMOVED

FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2/17/94 DATE

/S/ Chester J. [illegible] DIRECTOR, OFFICE O

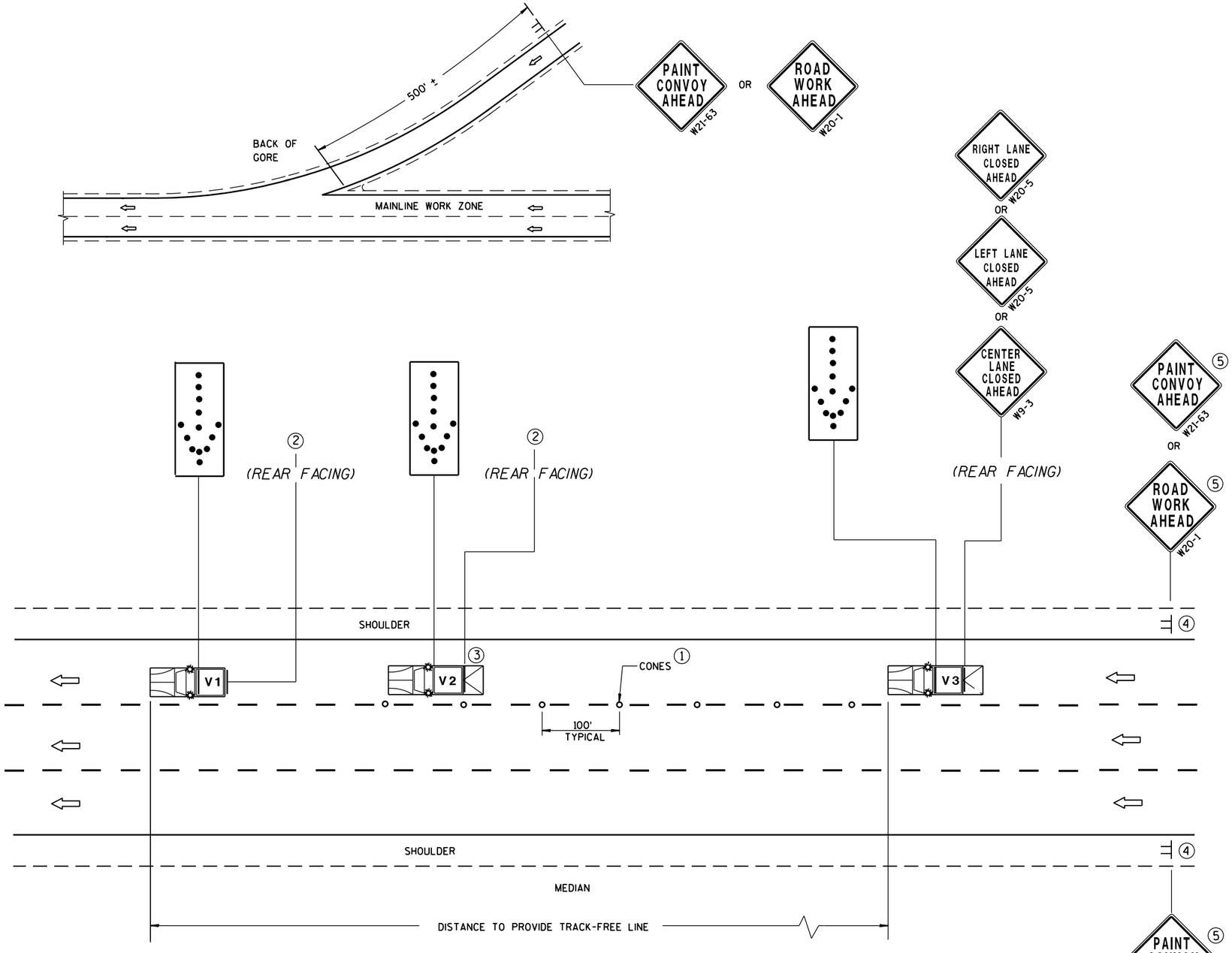
FHWA

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S.D.D. 15 C 11-5

6

S.D.D. 15 C 11-5



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 OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

⑤ 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

5/3/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC EN

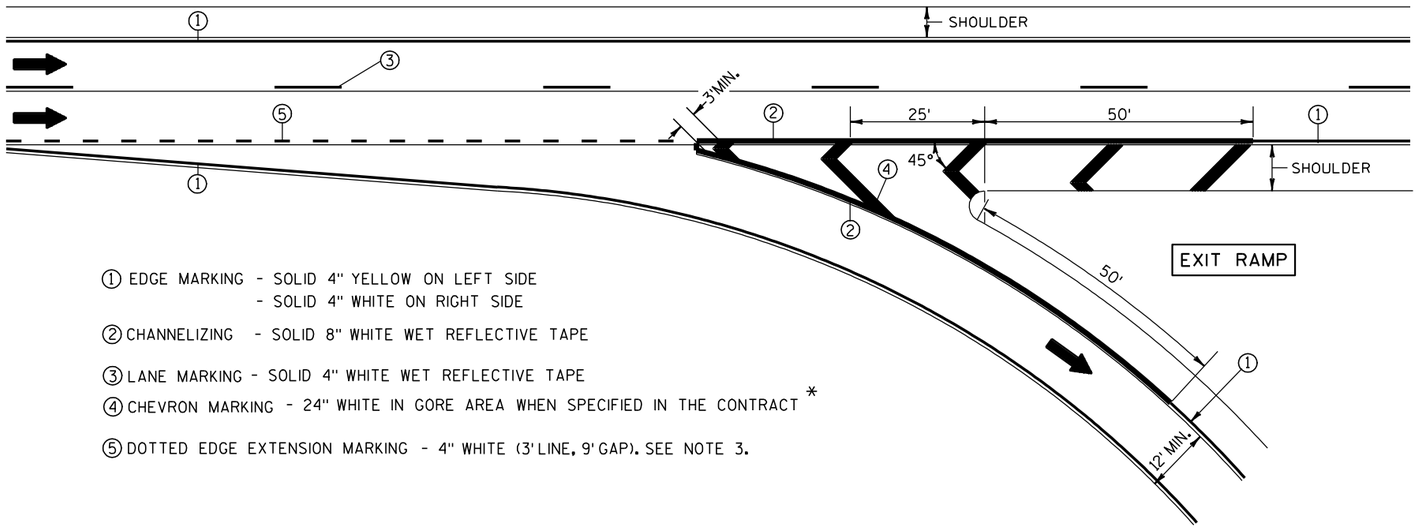
FHWA

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S.D.D. 15 C 19-2c

6

S.D.D. 15 C 19-2c



① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE

② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE

③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE

④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *

⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

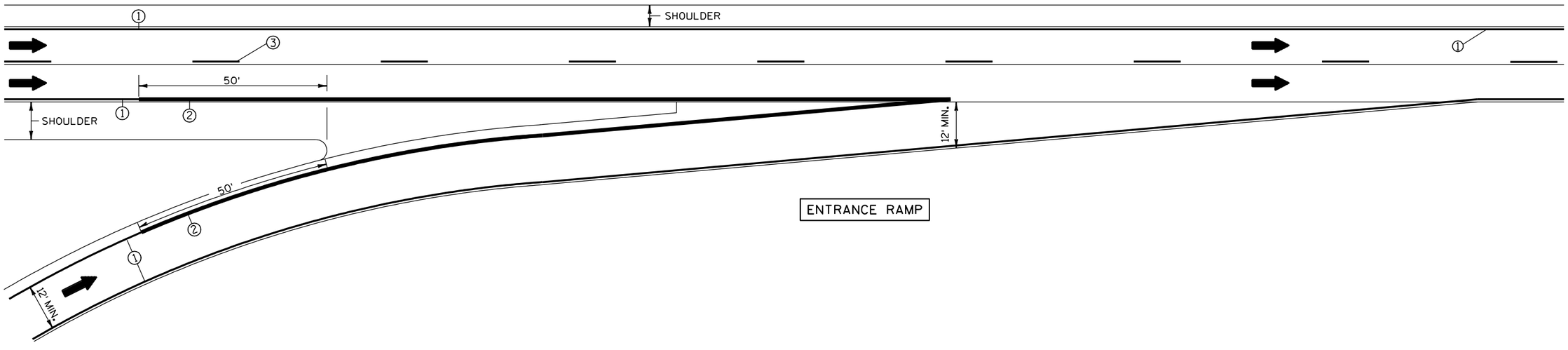
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

3. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.



6

6

S.D.D. 15 C 31-1a

S.D.D. 15 C 31-1a

PAVEMENT MARKING
(RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

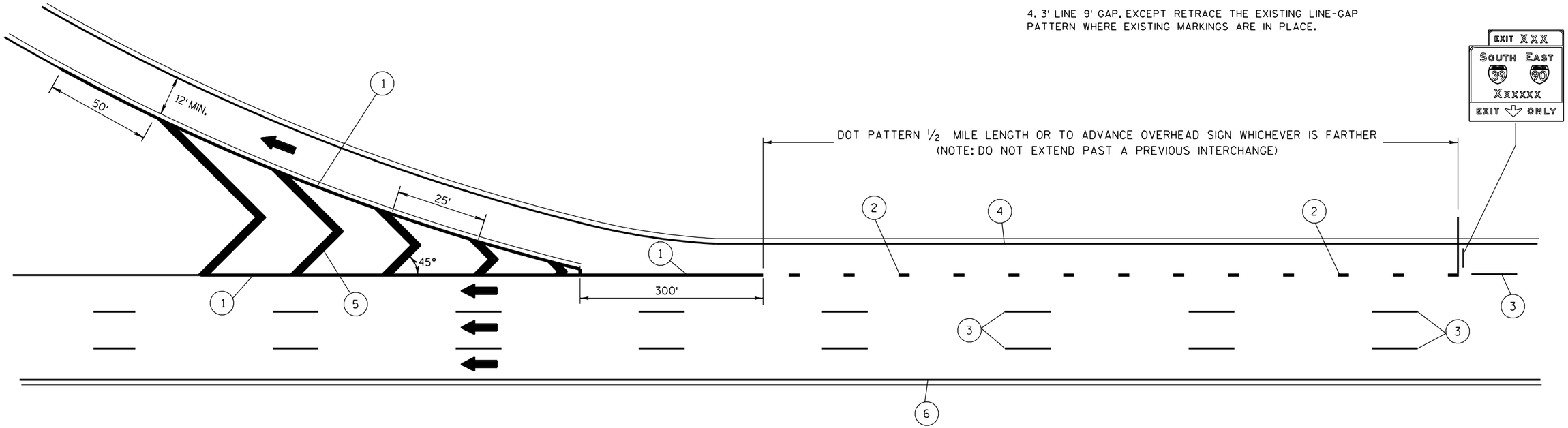
NOTES:

1. SEE STANDARD DETAIL DRAWING 15 C 10 FOR SPRAYED OR NON WET REFLECTIVE LINE SEGMENTS.

2. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

3. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

4. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.



1. CHANNELIZING - SOLID 8" WHITE WET RELECTIVE TAPE
2. 3' LINE, 9' GAP SOLID 8" WHITE WET REFLECTIVE TAPE. SEE NOTE 4.
3. SOLID 4" WHITE WET REFLECTIVE TAPE
4. 4" WHITE EDGELINE
5. CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT
6. 4" YELLOW EDGELINE

LANE DROP
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

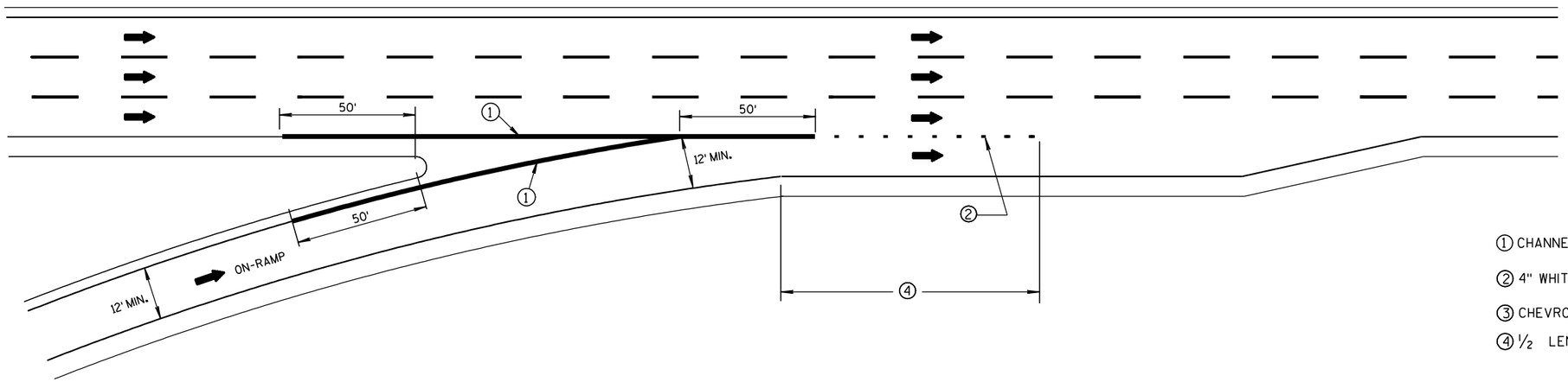
S.D.D. 15 C 31-1b

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S.D.D. 15 C 31-1b

NOTES:

1. AHEAD ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.
3. RETRACE EXISTING DIAGONAL MARKINGS.



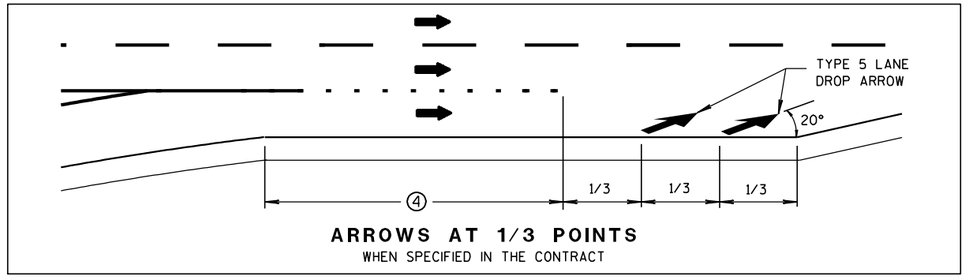
① CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE IN GORE AREA.

② 4" WHITE (3' LINE, 9' GAP).

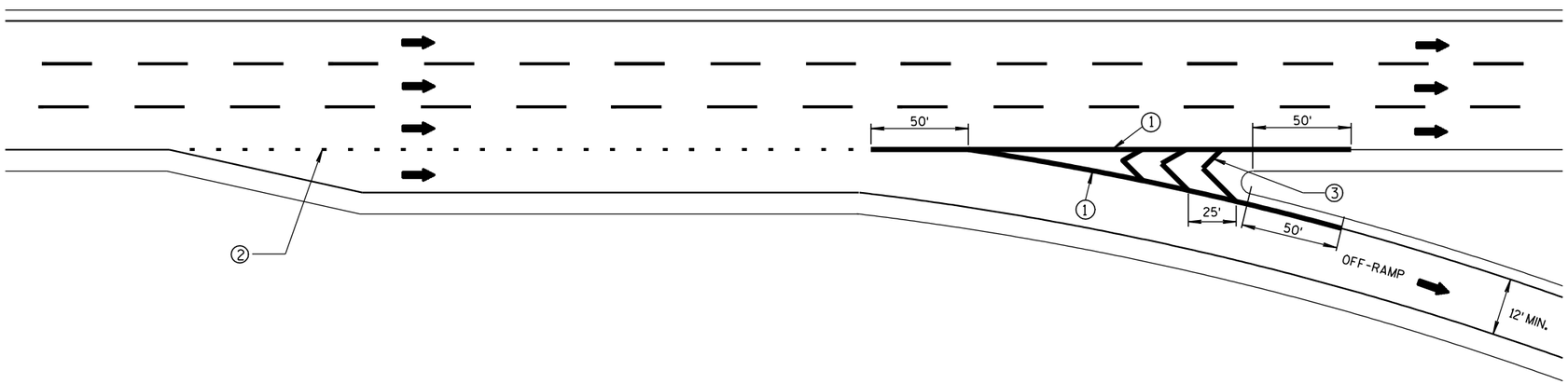
③ CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT.

④ ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP



ARROWS AT 1/3 POINTS
WHEN SPECIFIED IN THE CONTRACT



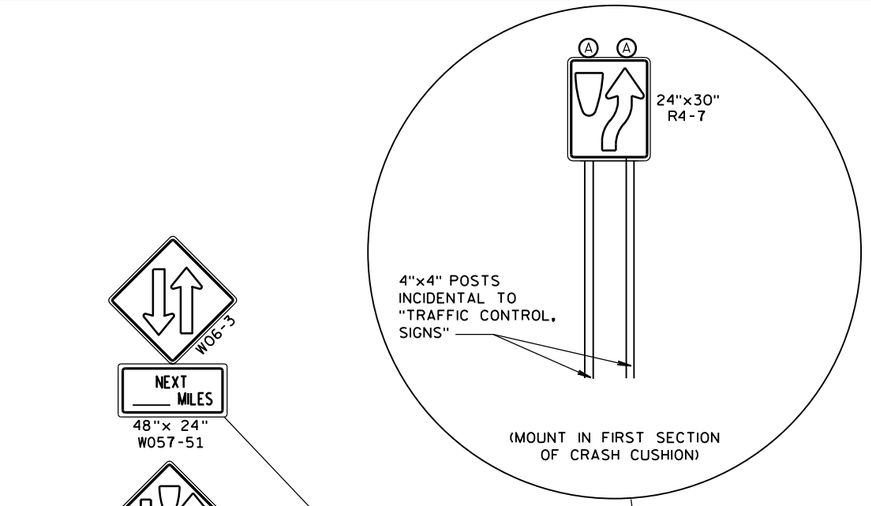
SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/23/2011 DATE
/S/ Thomas N. Nothem
STATE TRAFFIC ENGINE 374 SIGN
FHWA

6
S.D.D. 15 C 31-1d



** NOTE: SEE SDD 15 D 12 FOR LANE CLOSURE DETAILS.

GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

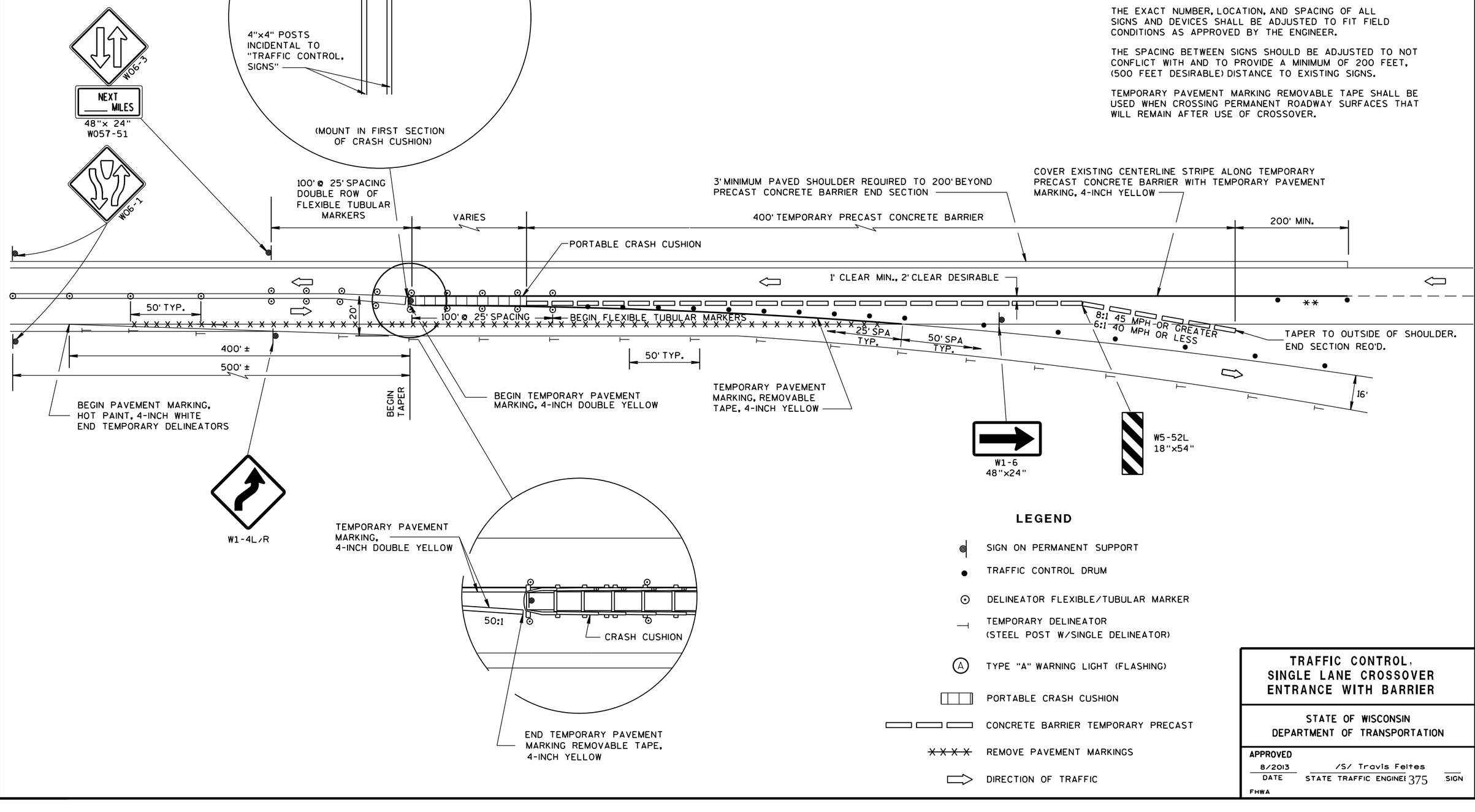
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

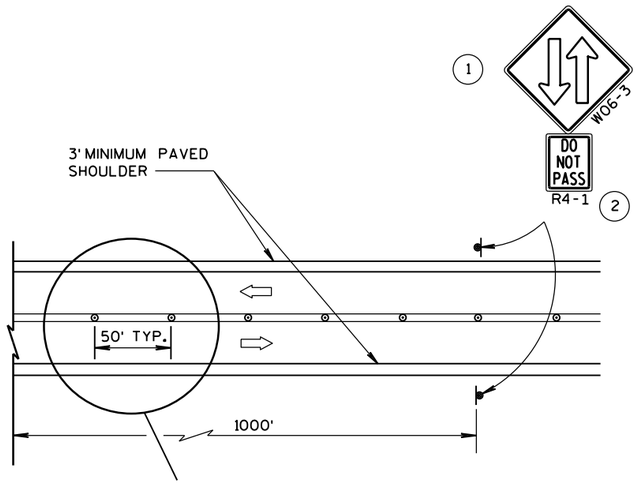
TRAFFIC CONTROL, SINGLE LANE CROSSOVER ENTRANCE WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

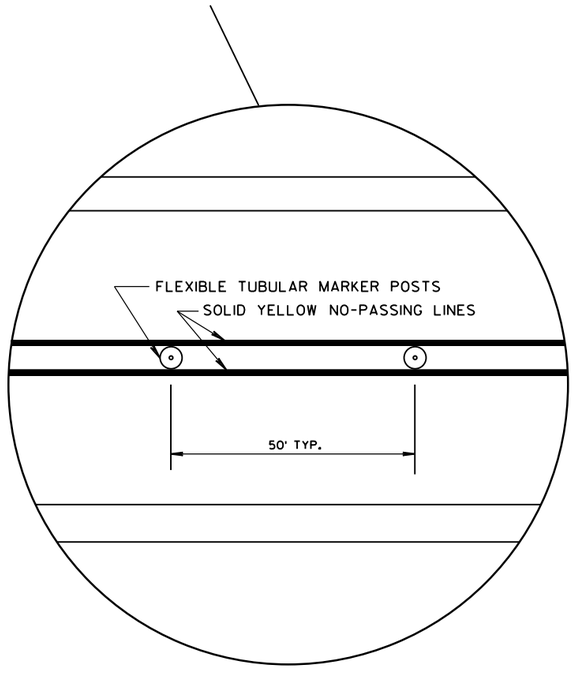
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

S.D.D. 15 D 5-3

S.D.D. 15 D 5-3



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.

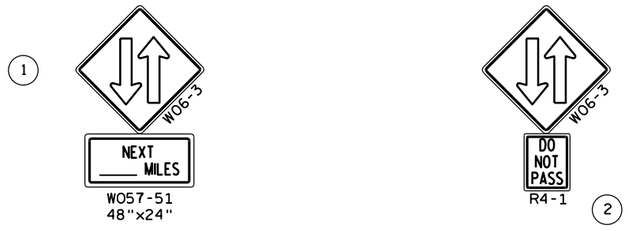
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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.



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"

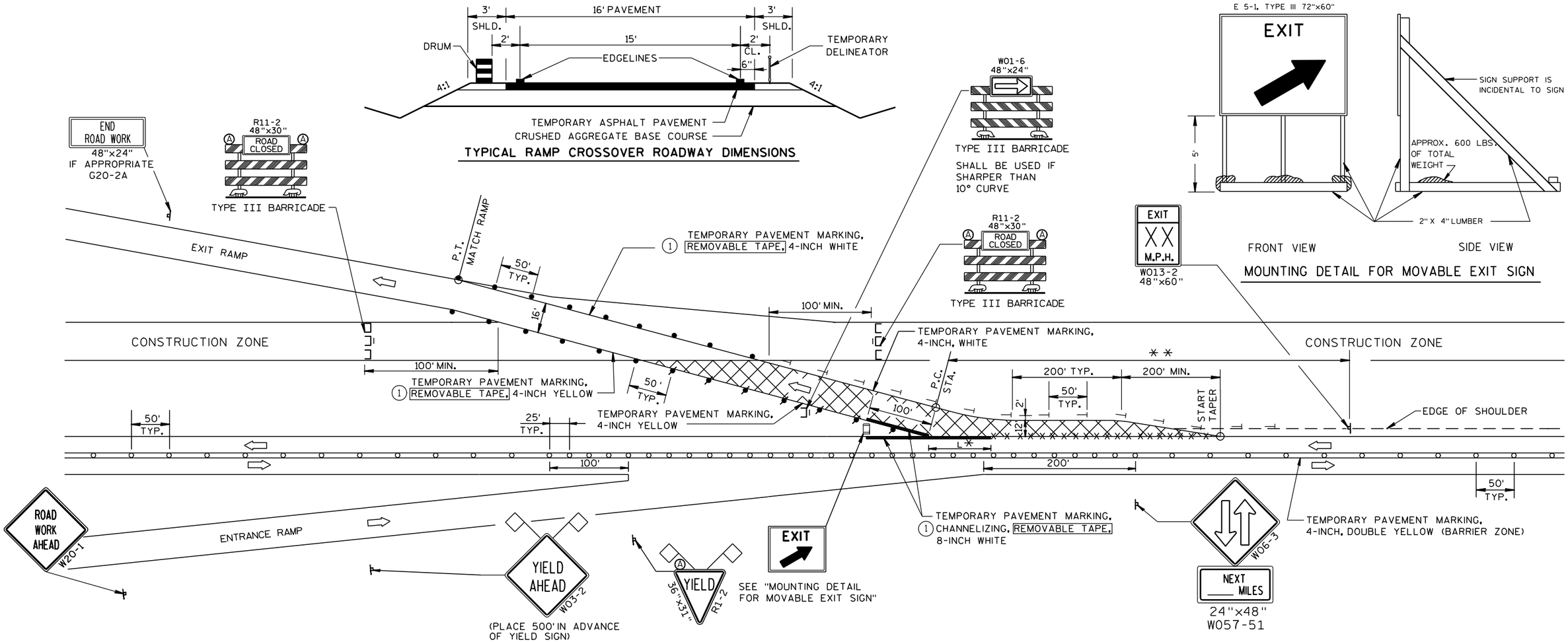
TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 DATE
/S/ Travis Feltes STATE TRAFFIC ENGINEER SIGN
FHWA

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S.D.D. 15 D 6-3



LEGEND

- 8' TYPE III BARRICADE WITHOUT/WITH ATTACHED SIGN
- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- TEMPORARY DELINEATOR - WHITE (STEEL POST W/SINGLE DELINEATOR)
- (A) WARNING LIGHT, TYPE A
- TEMPORARY CROSSOVER ASPHALTIC PAVEMENT
- REMOVING PAVEMENT MARKINGS
- FLEXIBLE TUBULAR MARKER POST AND BASE
- FLAGS, 12" X 12", RED
- DIRECTION OF TRAFFIC

GENERAL NOTES :

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

(1) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER. OTHERWISE TEMPORARY PAVEMENT MARKING MAY BE USED.

TRAFFIC CONTROL FOR RAMP CROSSOVERS ARE TYPICAL FOR ALL CONSTRUCTION PHASES.

* LENGTH L SHALL BE REQUIRED WHEN TANGENT LENGTH OF EXIT RAMP PARALLEL TO MAINLINE EXCEEDS 300'. LENGTH SHALL BE EQUAL TO THE EXIT RAMP TANGENT LENGTH MINUS 300' OR AS APPROVED BY THE ENGINEER AND SHALL CHANGE TO ACCOMODATE PAVING GAPS.

** ADJUST EXIT RAMP SPEED AS NEEDED IN THE FIELD. DISTANCE TO SIGN LOCATION SHALL ALSO BE PLACED ACCORDING TO TABLE.

WORK ALONG EDGES OF RAMP SHALL MAINTAIN A 10 FOOT AREA CLEAR OF PHYSICAL OBSTRUCTIONS SUCH AS DROP OFFS FROM PAVEMENT REMOVAL OR BROKEN CONCRETE CHUNKS DURING PAVEMENT REMOVAL. THESE AREAS SHALL BE LEVELED WITH TEMPORARY FILL TO PROTECT THE TRAVELING PUBLIC WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE CROSSOVER.

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.

** TABLE FOR ADVANCE WARNING SIGN PLACEMENT DISTANCE

POSTED SPEED MPH	DESIRED SPEED AT CONDITION (MPH)				
	10	20	30	40	50
45	350	300	250		
50	425	400	325	225	
55	500	475	400	300	
60	575	550	500	400	300
65	650	625	575	500	375

TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

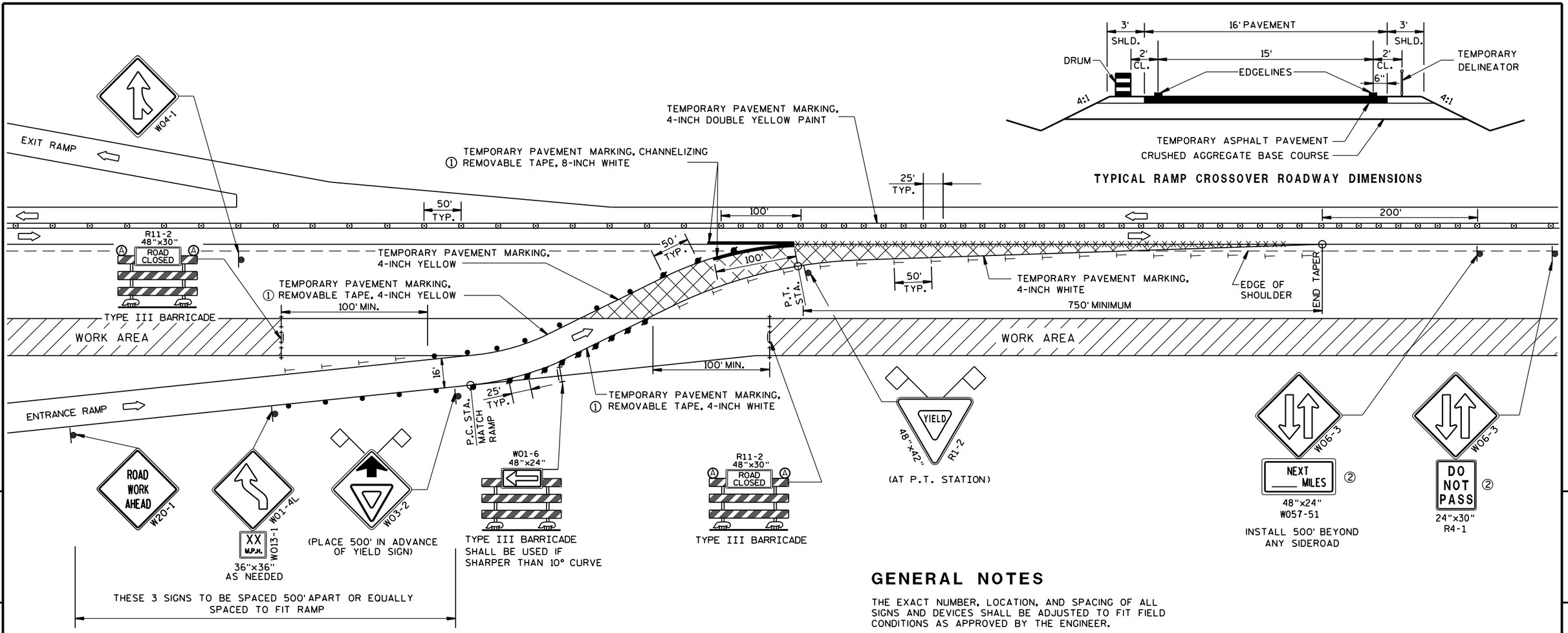
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12-4-95 DATE
/S/ Chester J. [illegible]
DIRECTOR, OFFICE O 377 C
FHWA

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S.D.D. 15 D 7-3



TYPICAL RAMP CROSSOVER ROADWAY DIMENSIONS

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TEMPORARY DELINEATOR - WHITE (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY CROSSOVER ASPHALTIC PAVEMENT
- ×××× REMOVING PAVEMENT MARKINGS
- ⊙ DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLAGS, 16" X 16" MIN., (ORANGE)
- 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 PERMANENT SIGNS AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER.

② INSTALL THE W06-3 SIGN WITH THE R4-1 SIGN 1000 FEET BEYOND THE W06-3 SIGN WITH THE W057-51 SIGN AND ALTERNATE THE SEQUENCE OF THESE SIGNS EVERY 1 MILE.

TRAFFIC CONTROL FOR RAMP CROSSOVERS ARE TYPICAL FOR ALL CONSTRUCTION PHASES.

WORK ALONG EDGES OF RAMP SHALL MAINTAIN A 10-FOOT AREA CLEAR OF PHYSICAL OBSTRUCTIONS SUCH AS DROP OFFS FROM PAVEMENT REMOVAL OR BROKEN CONCRETE CHUNKS DURING PAVEMENT REMOVAL. THESE AREAS SHALL BE LEVELED WITH TEMPORARY FILL TO PROTECT THE TRAVELING PUBLIC WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE CROSSOVER.

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 COVERED OR REMOVED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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8/2013 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — SIGN

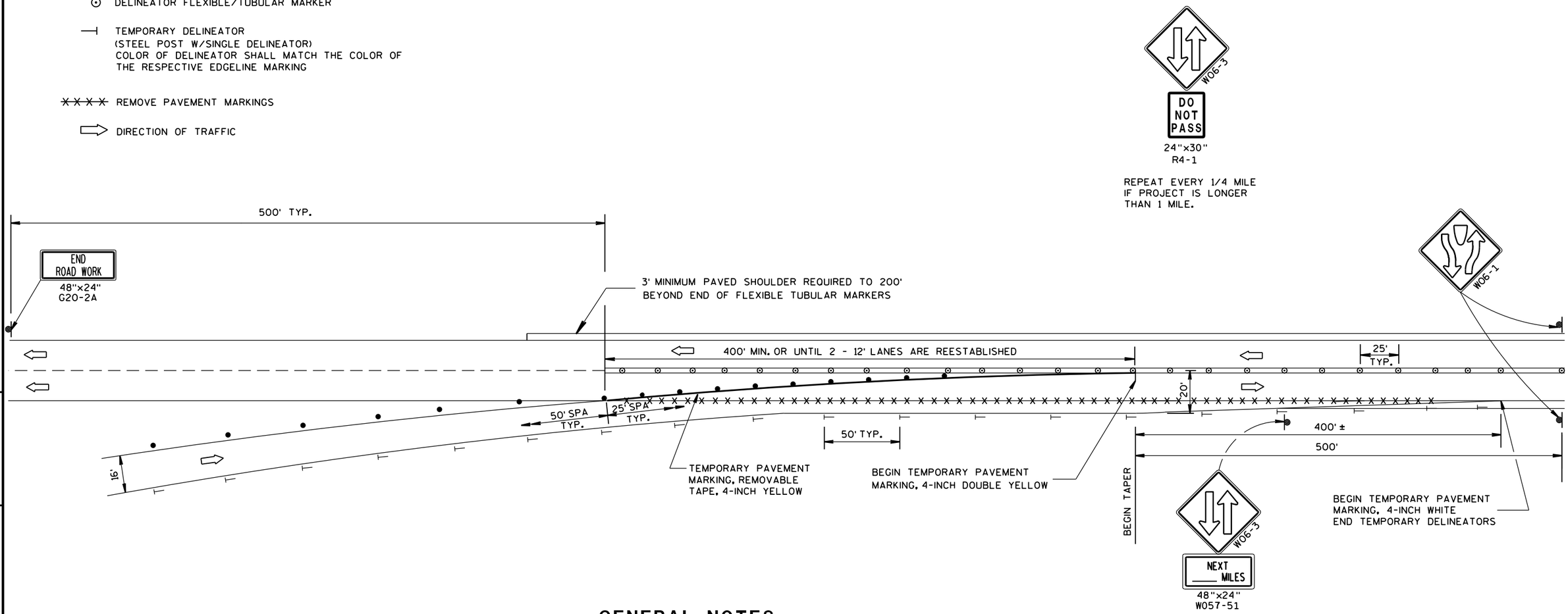
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LEGEND

- SIGN ON PERMANEMT 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
- 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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

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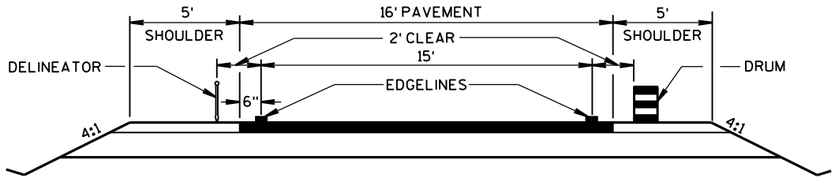
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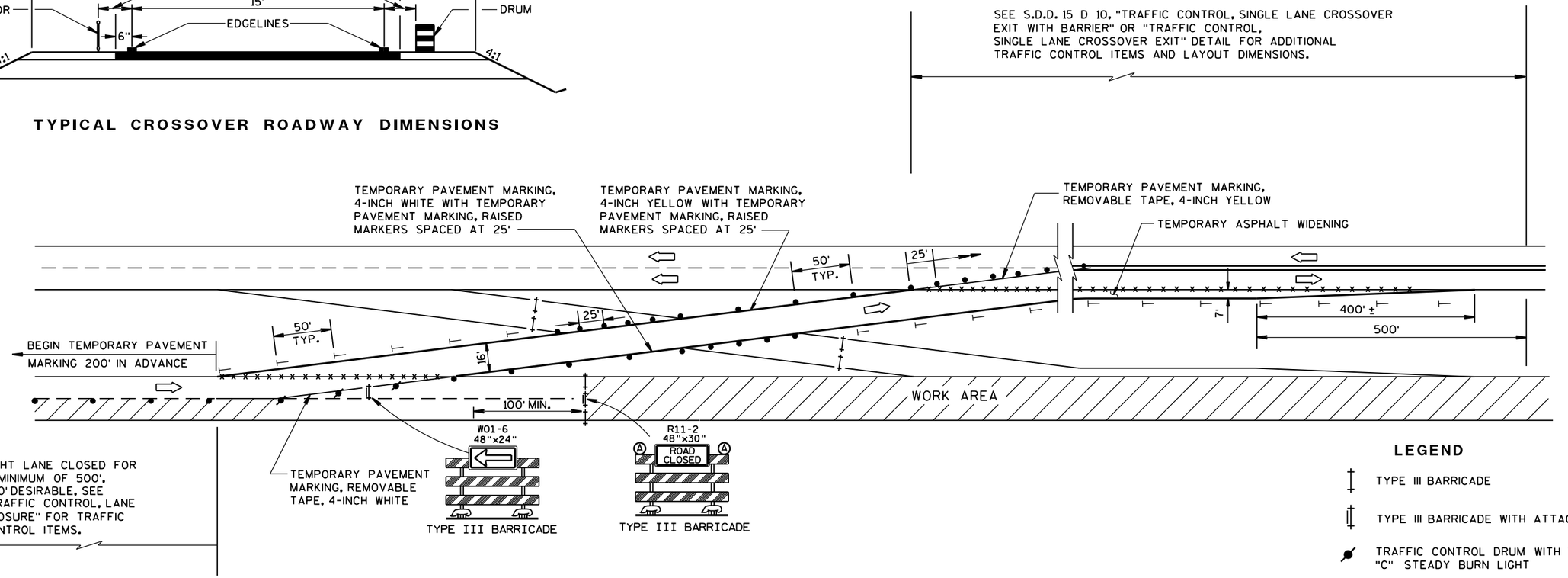
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S.D.D. 15 D 9-3



TYPICAL CROSSOVER ROADWAY DIMENSIONS



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
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR (DOUBLE SIDED)
- REMOVING PAVEMENT MARKINGS
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- 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 PROPOSED SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

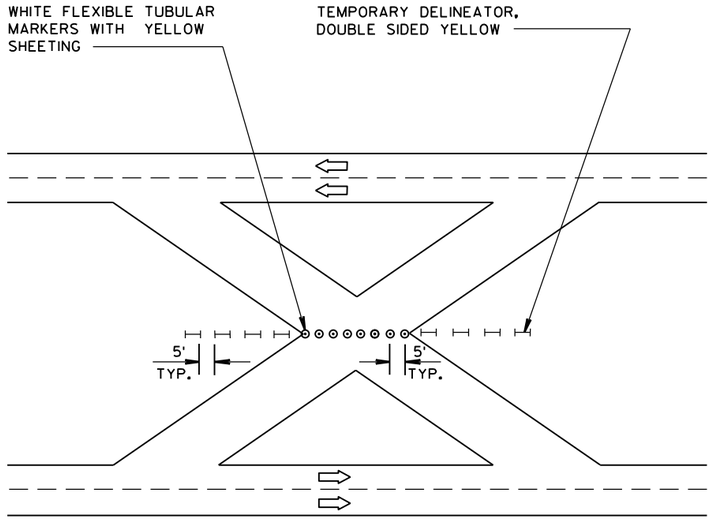
TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER AND TEMPORARY PAVEMENT MARKING WHERE USED.

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.



PROTECTION OF CROSSOVER NOT IN USE WHEN CONSTRUCTION IS NOT TAKING PLACE

TRAFFIC CONTROL, SINGLE LANE CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
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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.

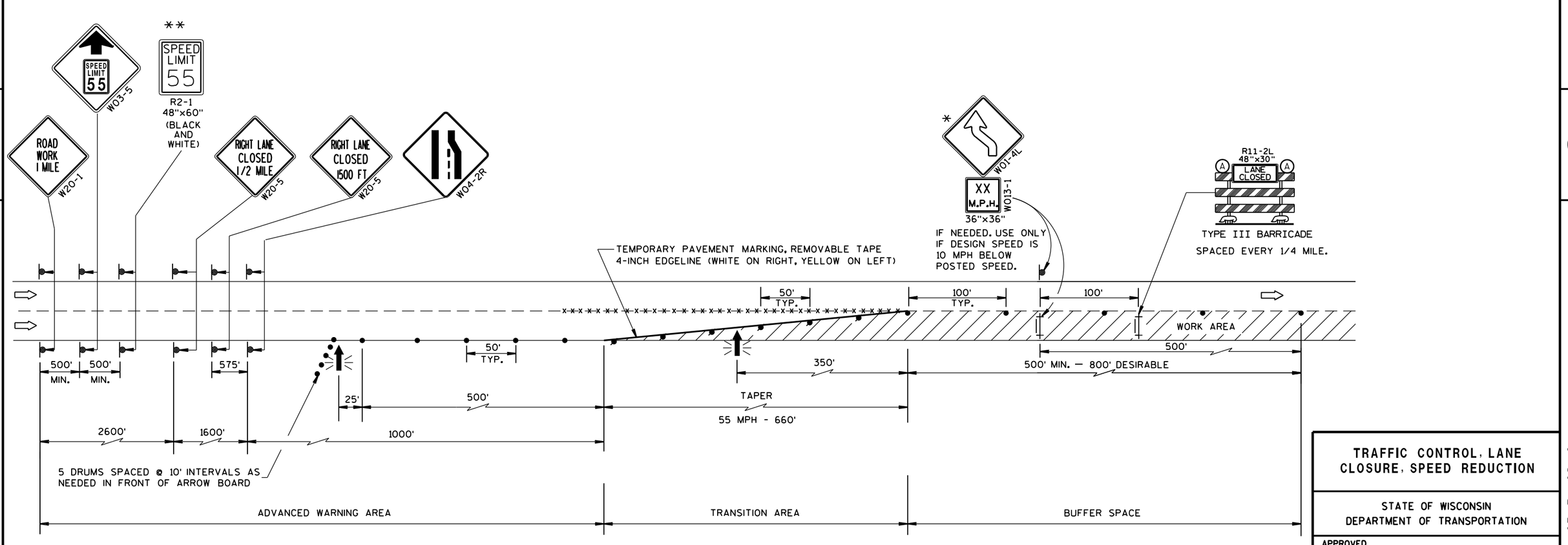
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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 65 MPH 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

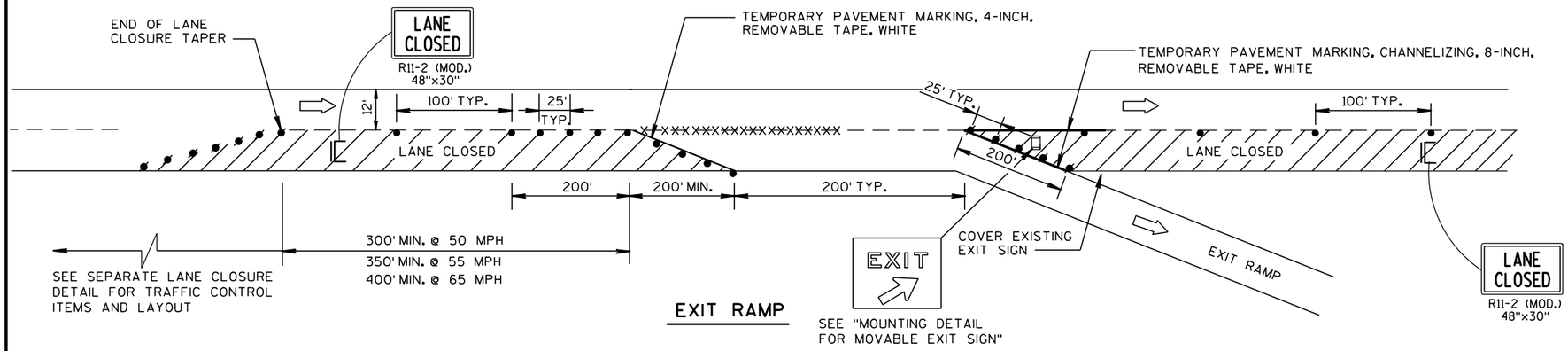
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3-2014 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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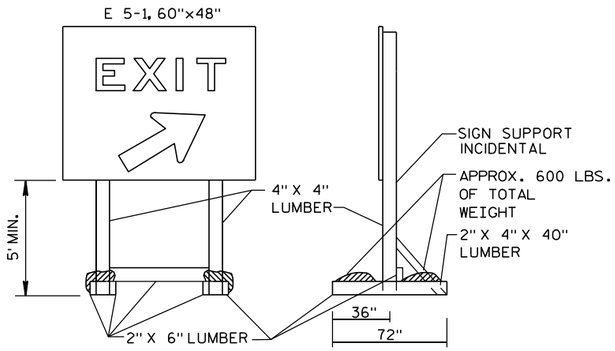
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S.D.D. 15 D 12-4

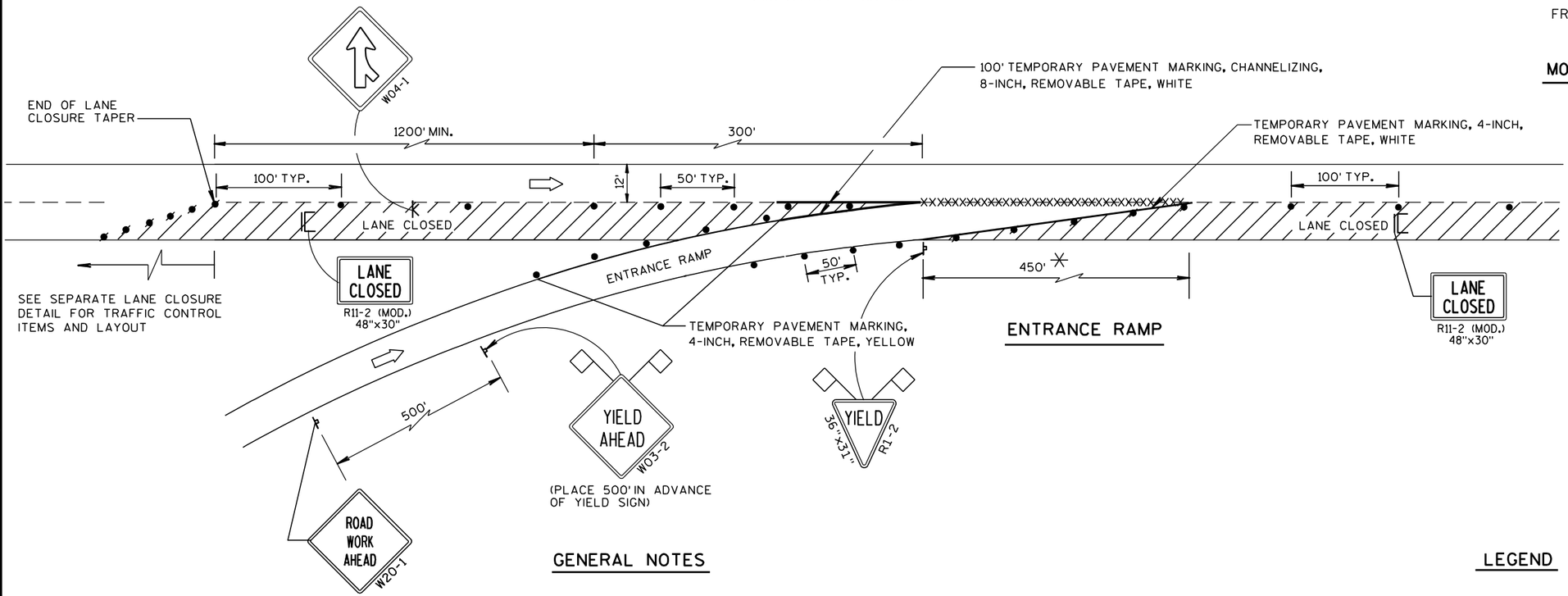


EXIT RAMP



NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL

MOUNTING DETAIL FOR MOVABLE EXIT SIGN



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 R11-2 (MOD.) "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 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

✳ LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT
- TRAFFIC CONTROL, DRUM
- TRAFFIC CONTROL, DRUM WITH WARNING LIGHT, TYPE C (STEADY-BURN)
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE (8' EQUIVALENT) WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/24/2000
DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKINGS ENGINEER
FHWA

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S.D.D. 15 D 15-1

LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

SIGN ON PERMANENT SUPPORT

TYPE "A" WARNING LIGHT (FLASHING)

DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

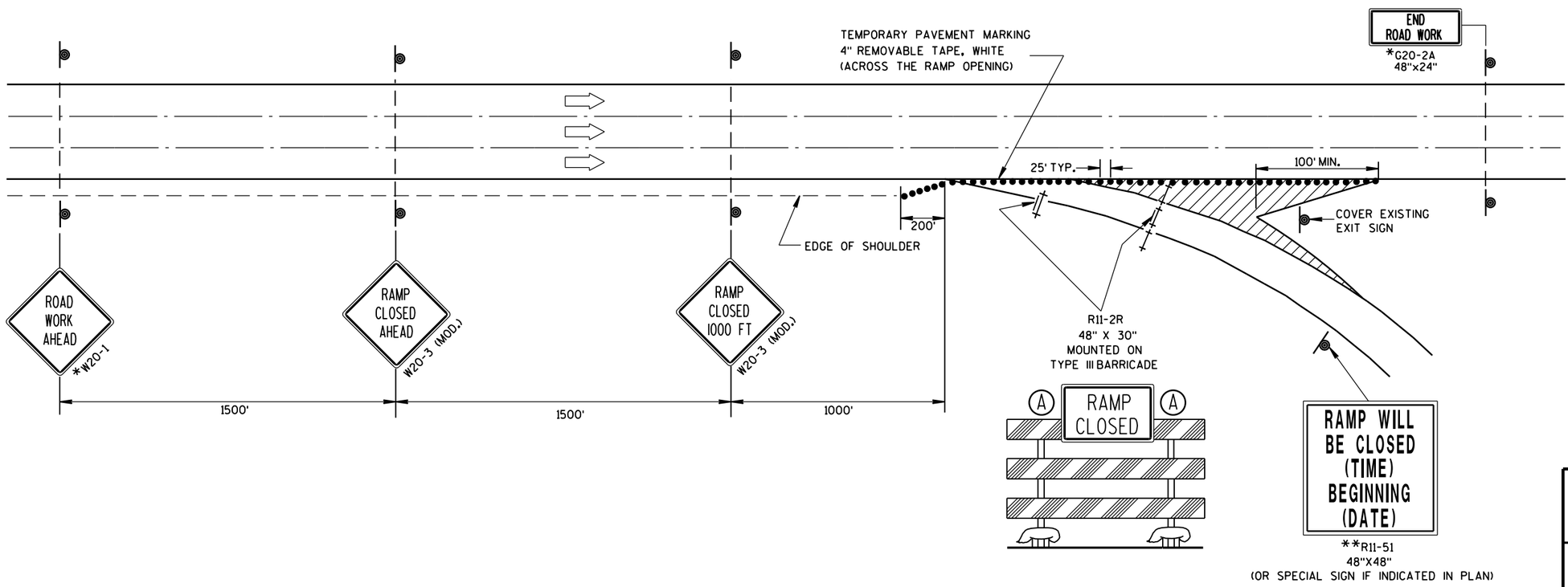
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

*W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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8/2013
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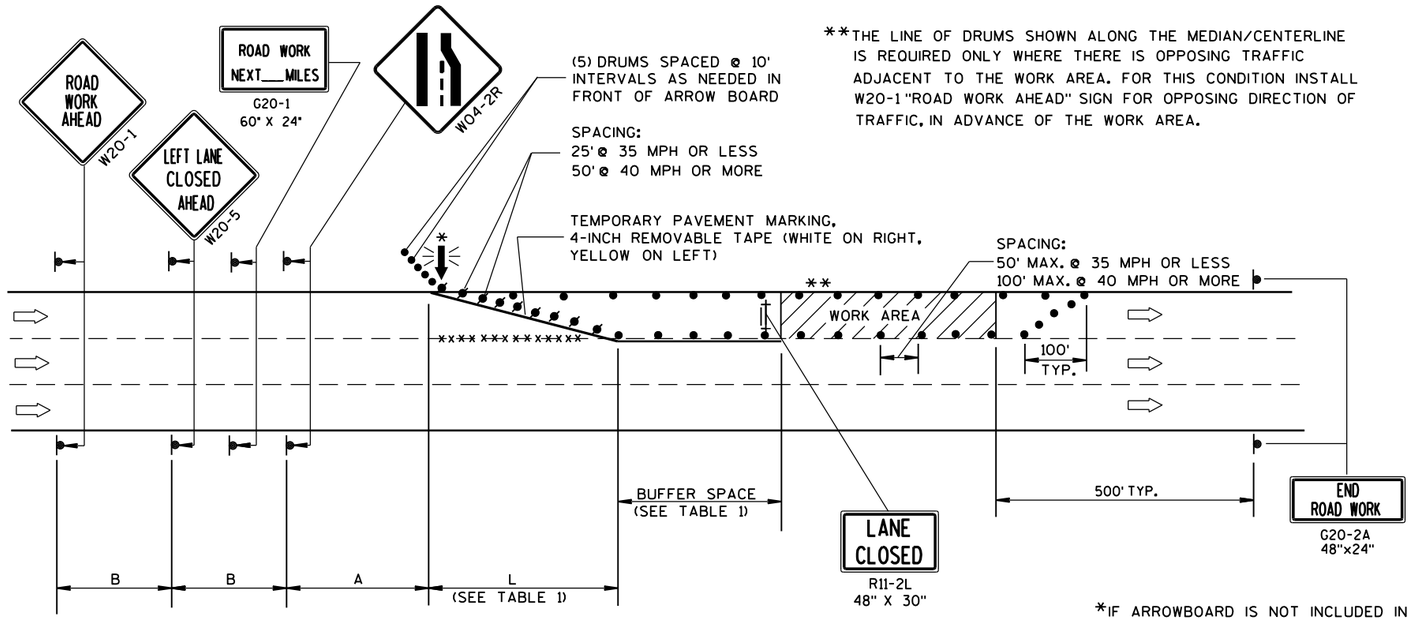
/S/ Travis Feltes
STATE TRAFFIC ENGINEER

DESIGN

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S.D.D. 15 D 16-2



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

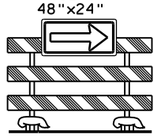


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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 DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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.

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.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE 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.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 20-2

6

S.D.D. 15 D 20-2

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

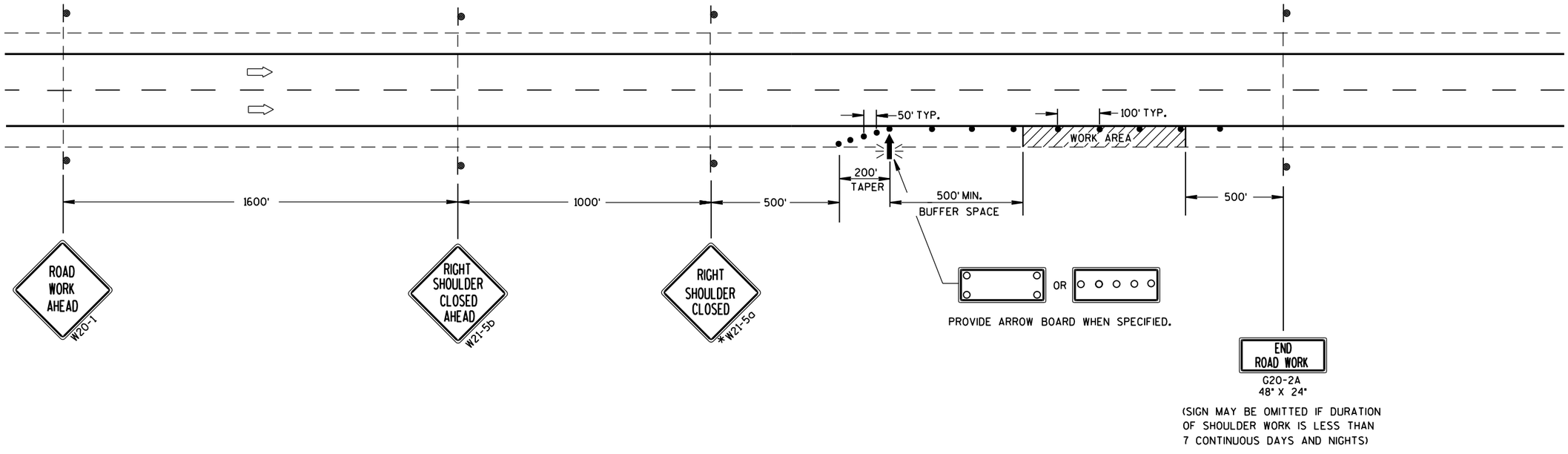
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

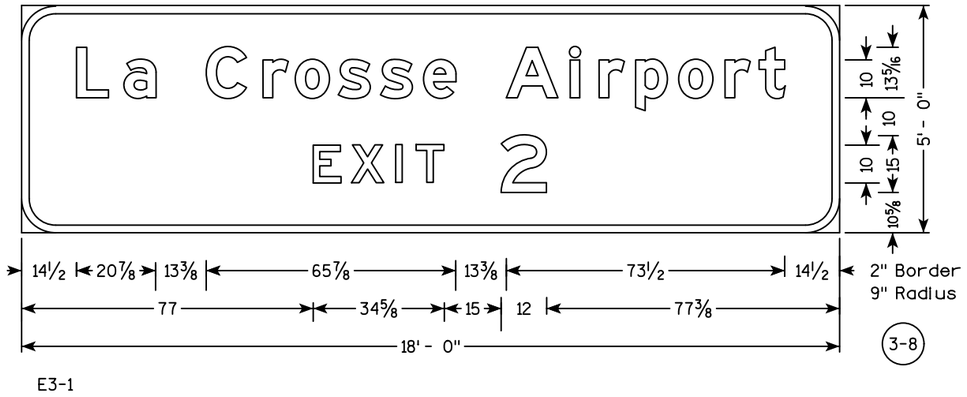
FHWA

6

S.D.D. 15 D 27-2

6

S.D.D. 15 D 27-2



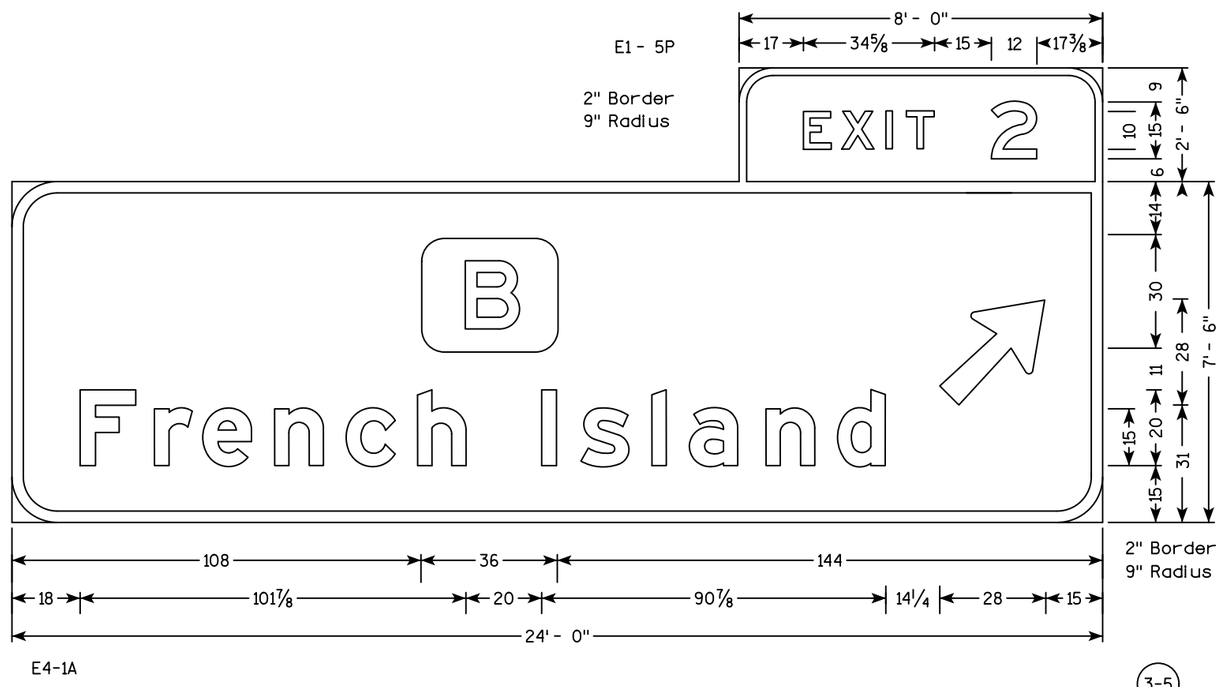
E3-1

NOTES

1. All Signs are Type 1 - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green except as Shown
   Message - White
3. Message Series - E Modified except all CAP Words are Series E

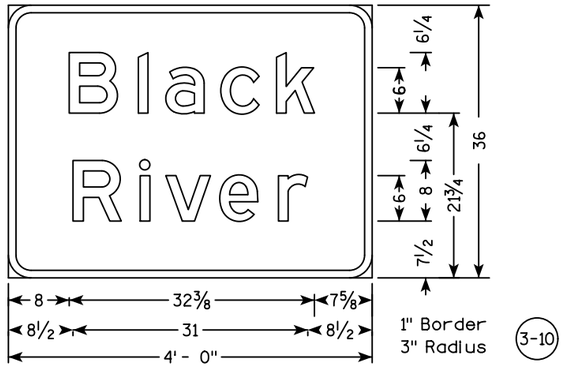


E3-1



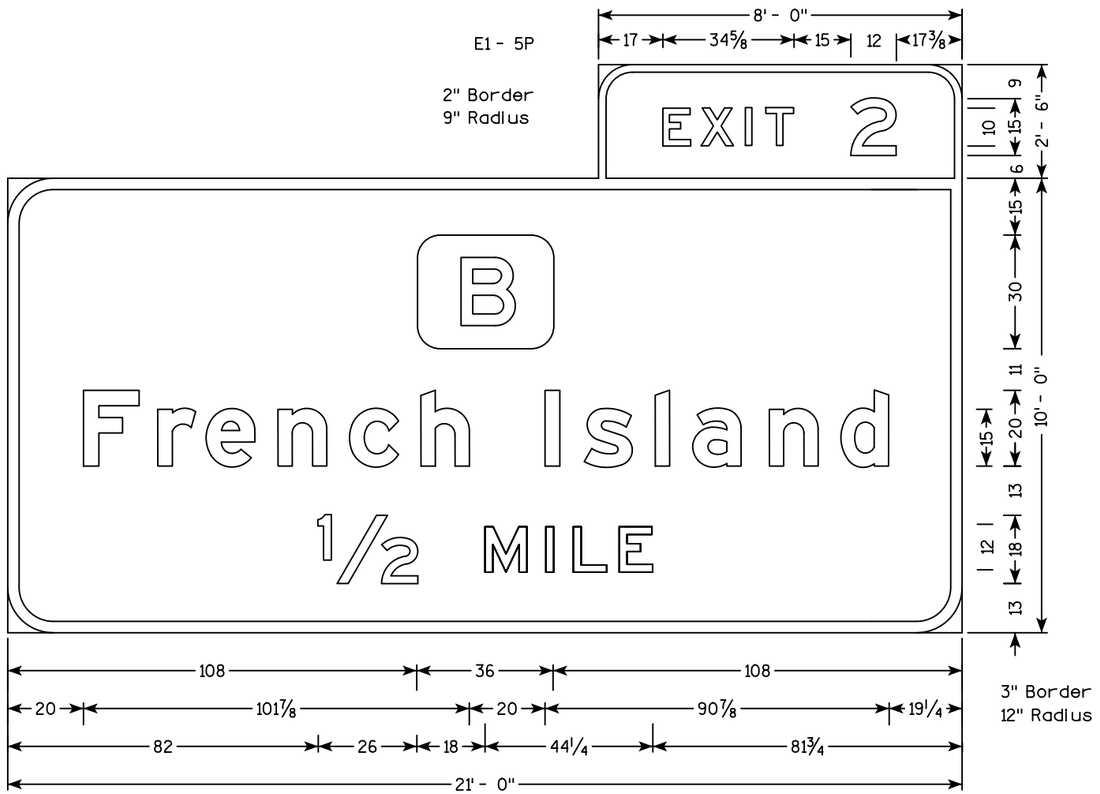
E4-1A

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	SIGNING DETAIL - TYPE 1 SIGNS	SHEET 386	E



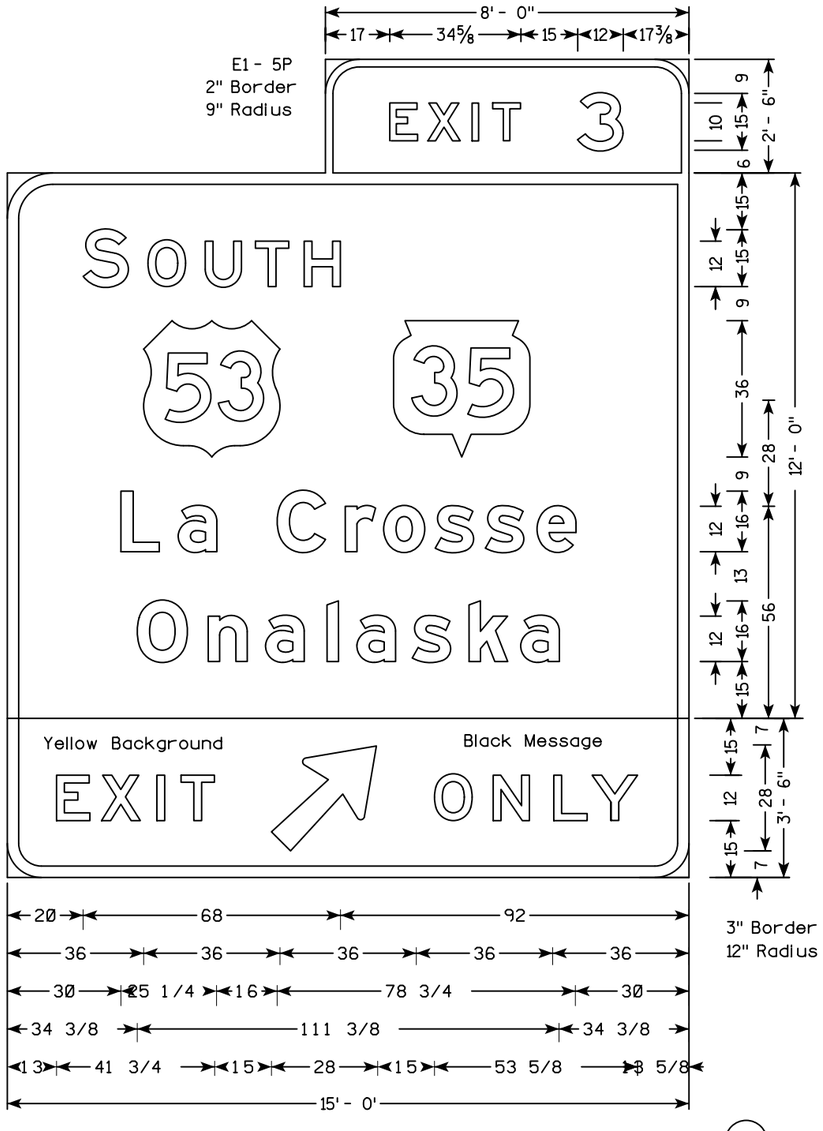
I3-1

3-10



E1-1A

4-2



E6-51

4-9

NOTES

1. All Signs are Type 1- Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green except as Shown
   Message - White
3. Message Series - E Modified except all CAP Words are Series E

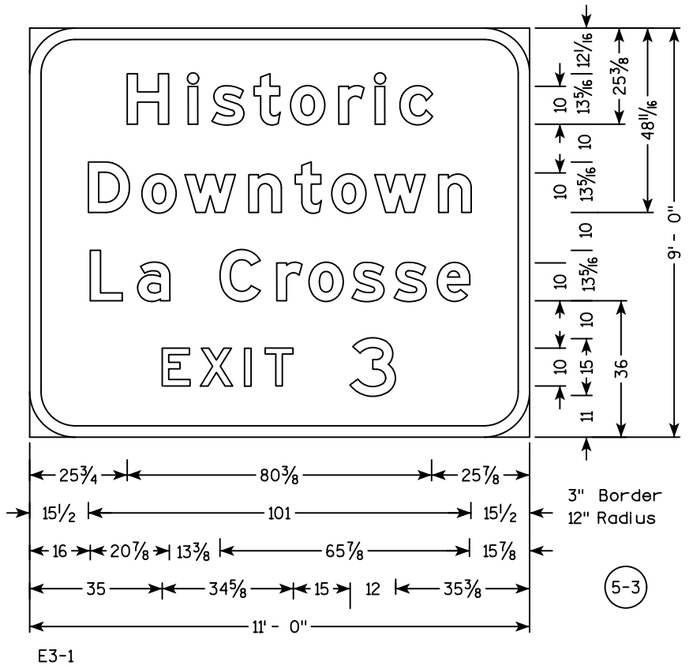
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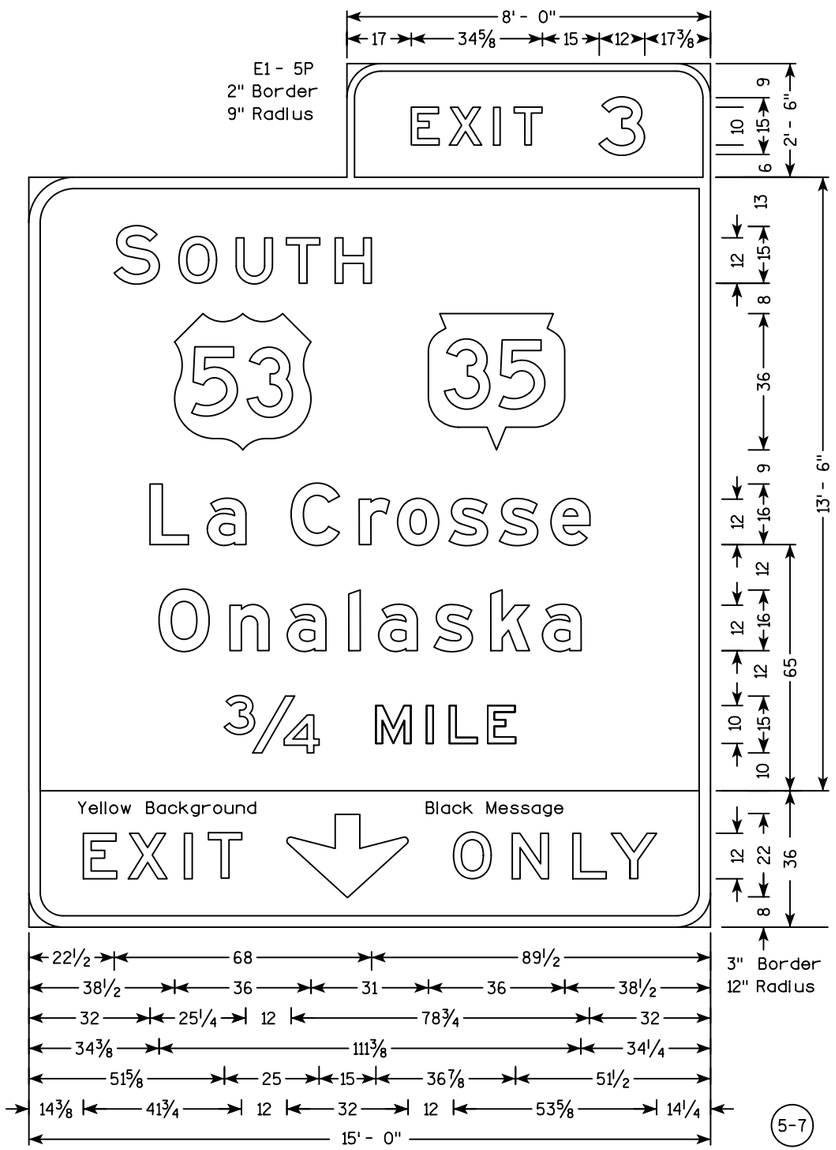
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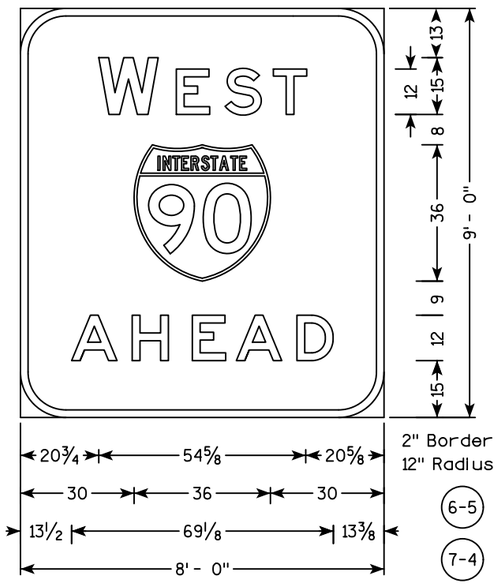
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	SIGNING DETAIL - TYPE 1 SIGNS	SHEET 387	E

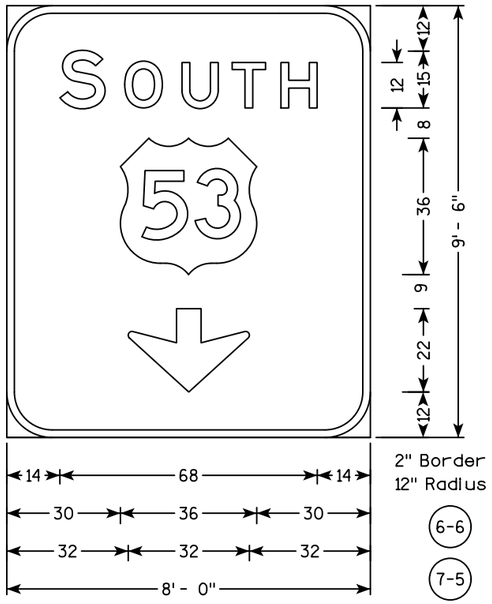
NOTES

1. All Signs are Type 1- Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green except as Shown
   Message - White
3. Message Series - E Modifed except all CAP Words are Series E





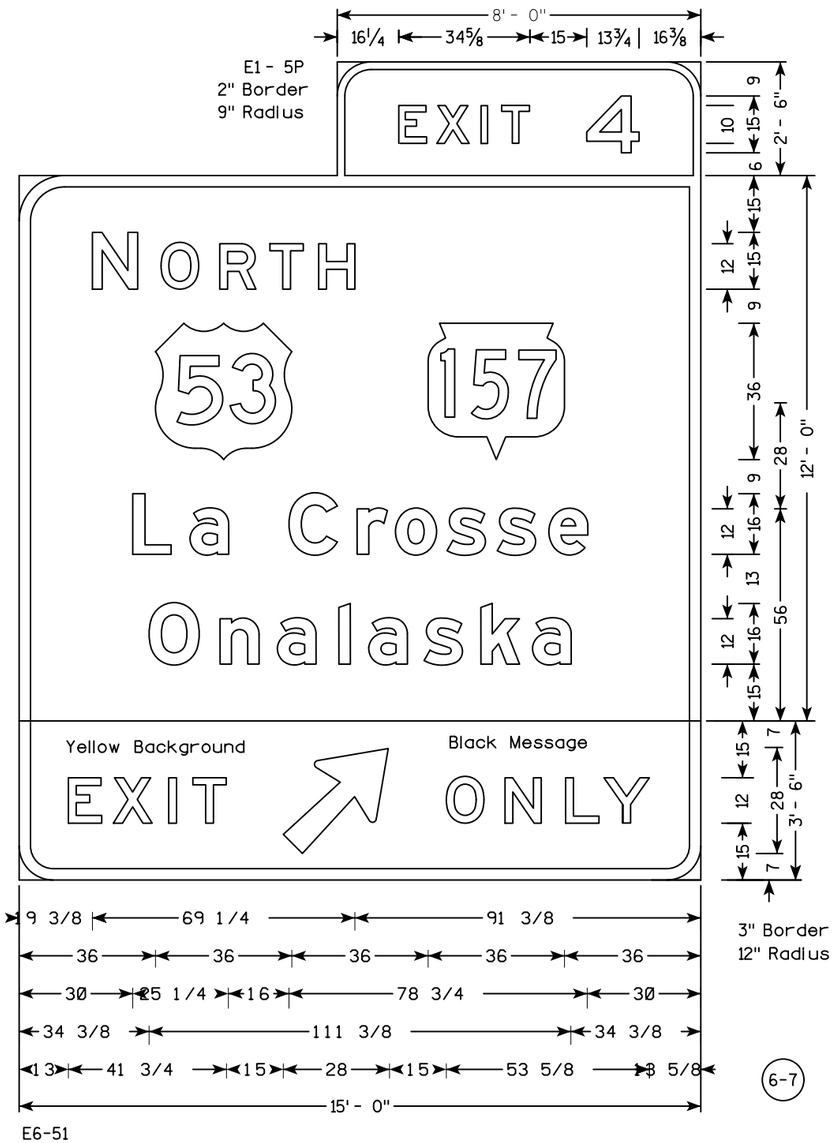


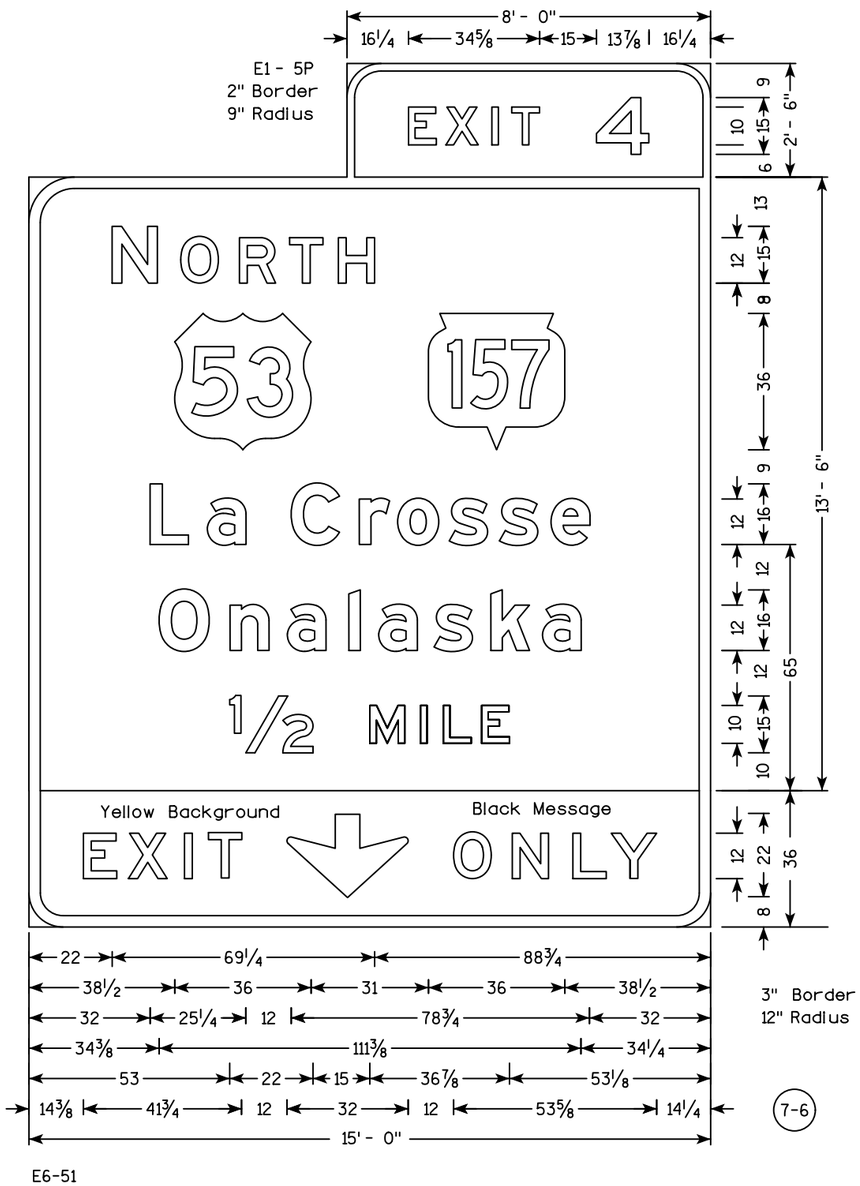


PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	SIGNING DETAIL - TYPE 1 SIGNS	SHEET 388	E

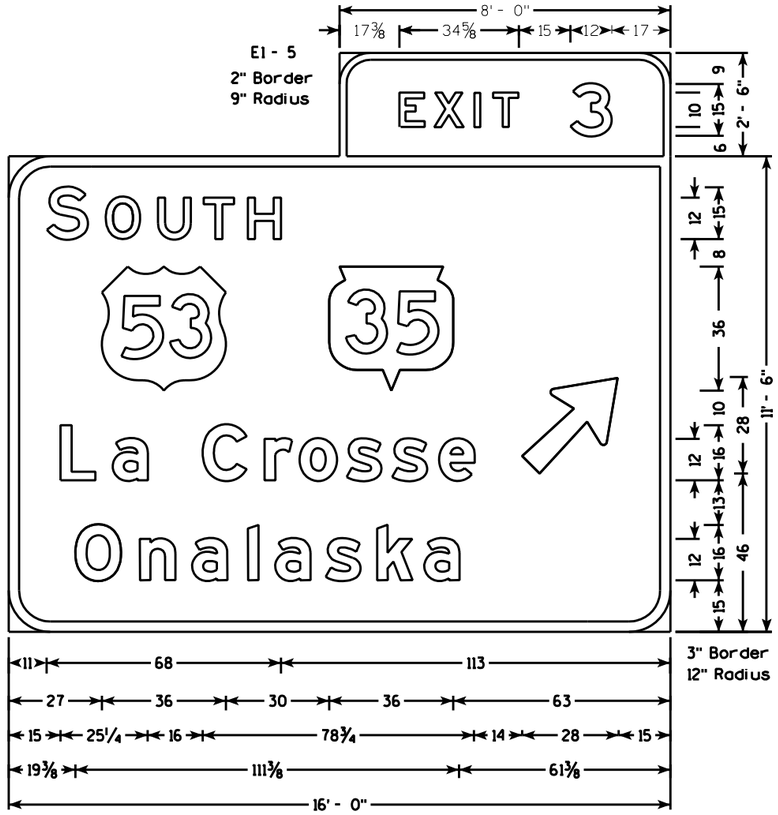
NOTES

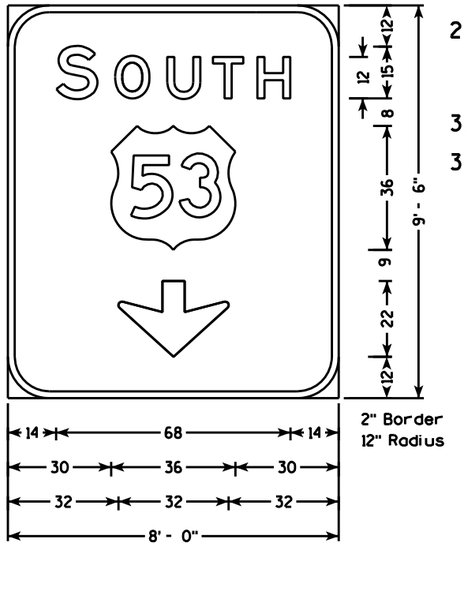
1. All Signs are Type 1- Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green except as Shown
   Message - White
3. Message Series - E Modified except all CAP Words are Series E





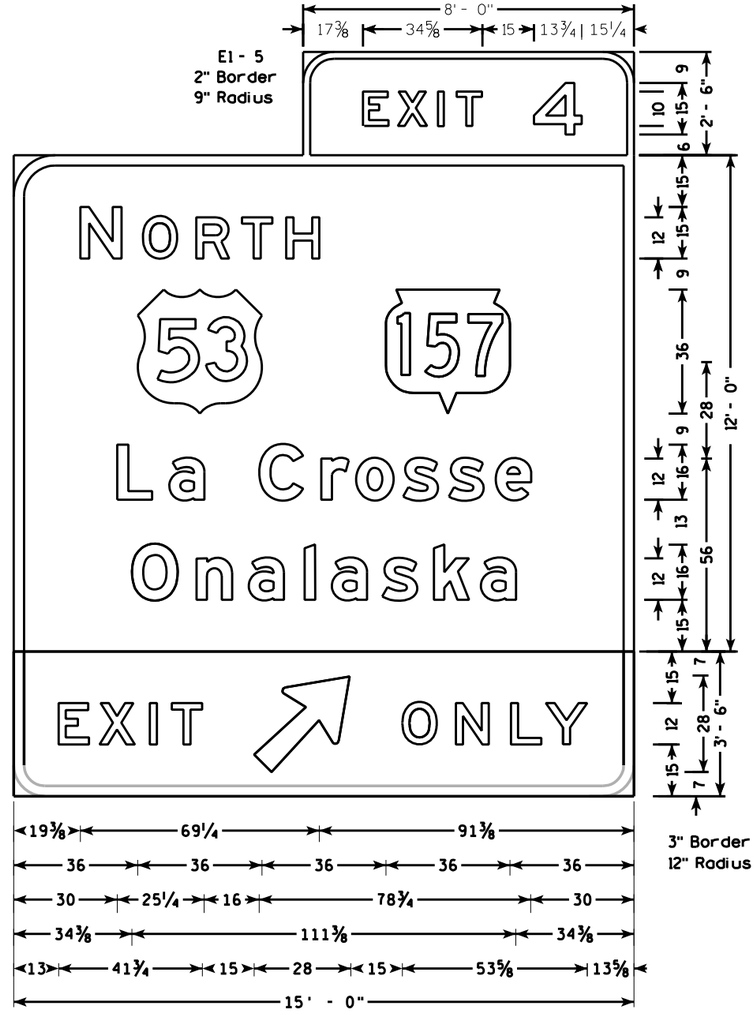
PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	SIGNING DETAIL - TYPE 1 SIGNS	SHEET 389	E

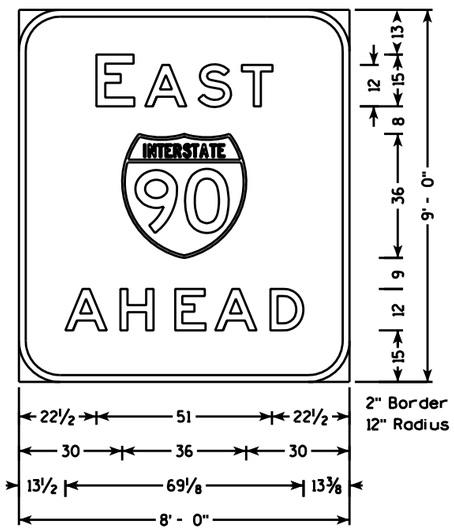


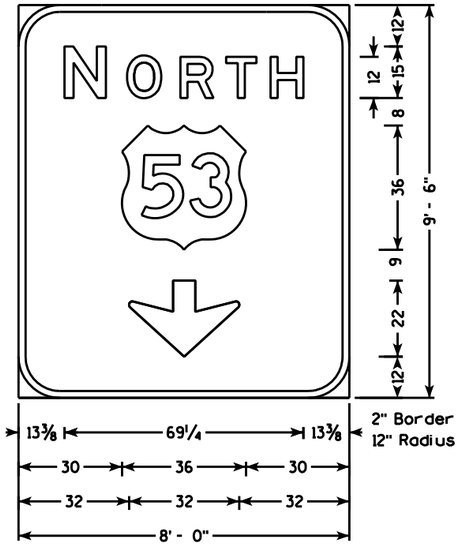


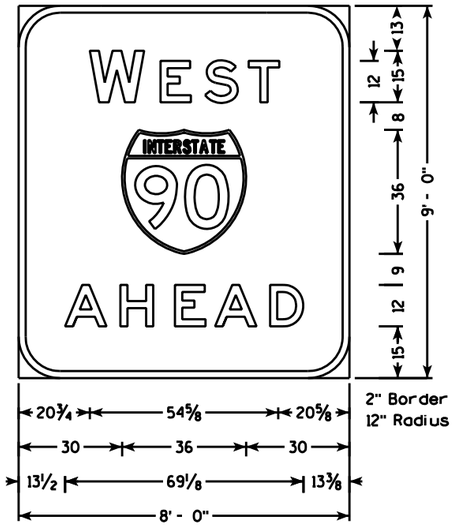
NOTES

1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green except see Note 4
   Message - White except see Note 4
3. Message Series - E Modified except CAP Words Series E
3. Exit Only Plaque is Type F Reflective Background with Black Message









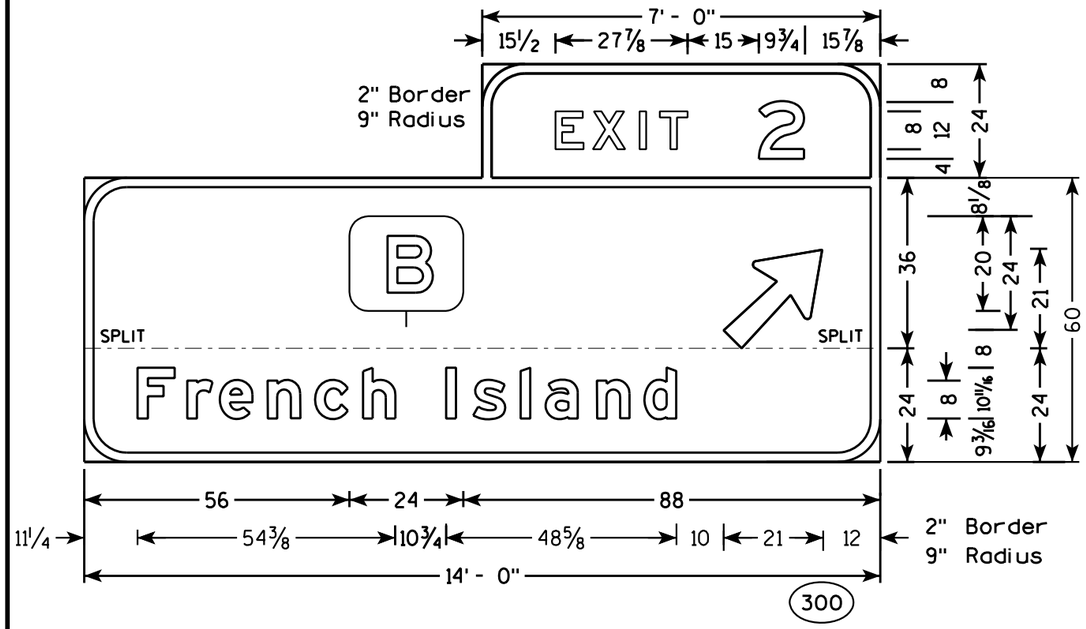
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	SPECIAL SIGN DETAILS	SHEET NO: 390	E

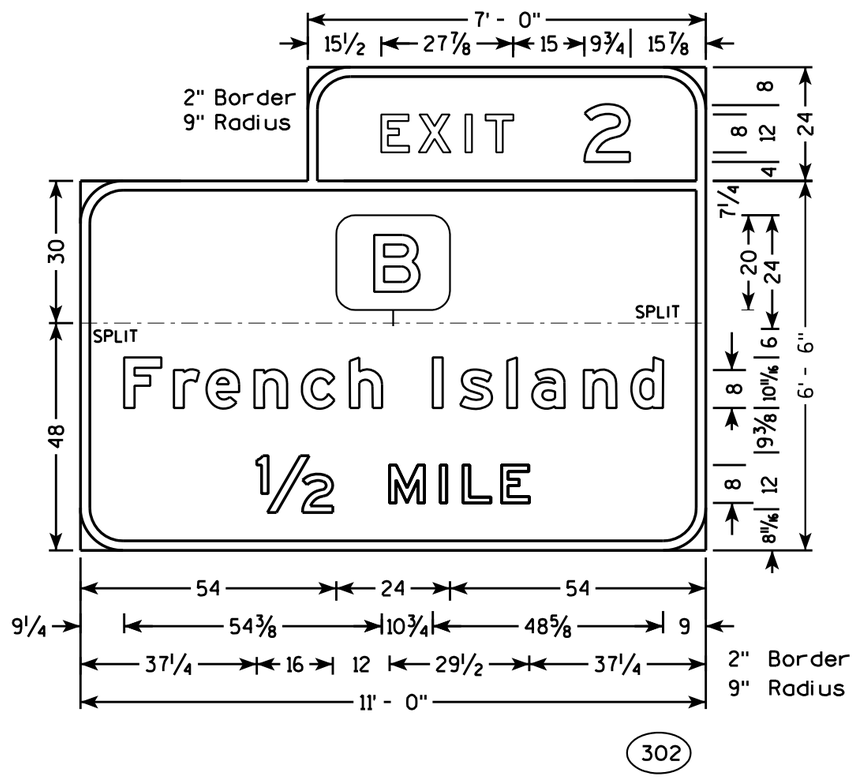
FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\da_0677_070101_sd.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:43.9725

WISDOT/CADDS SHEET 42

7

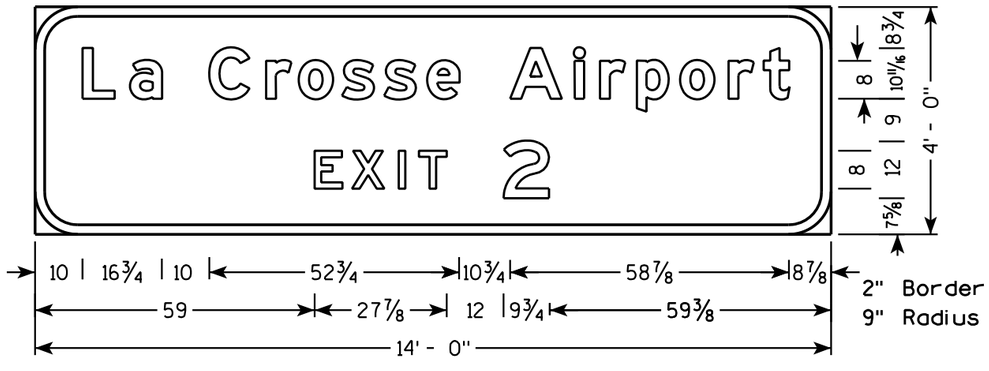
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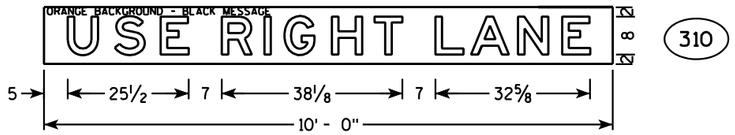


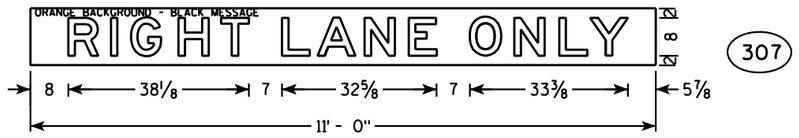


NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E Modified except all cap words are Series E







PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TEMPORARY SIGNING	SHEET NO: 391	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\da_0677_070102_sd.dgn PLOT DATE : 8/27/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:31.98

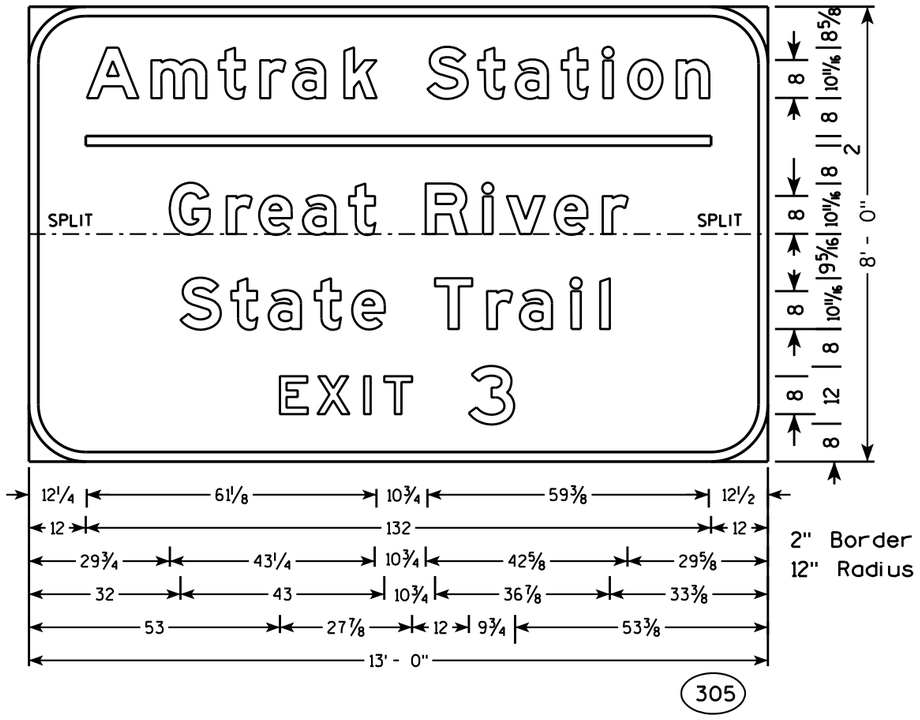
WISDOT/CADDS SHEET 42

7

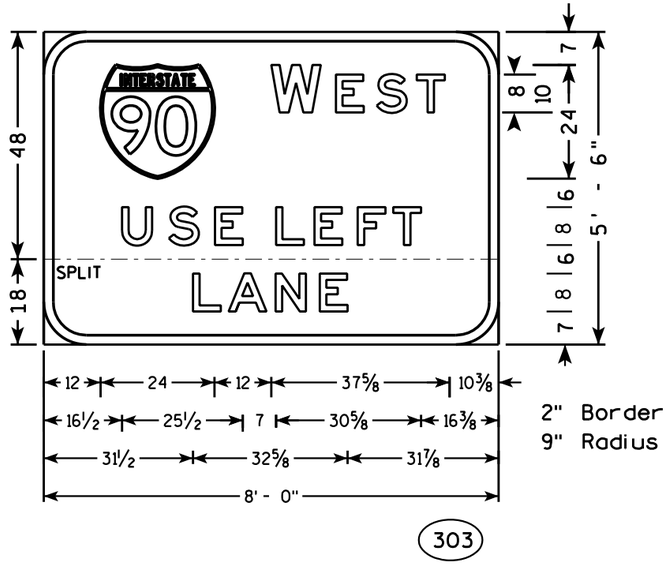
7

NOTES

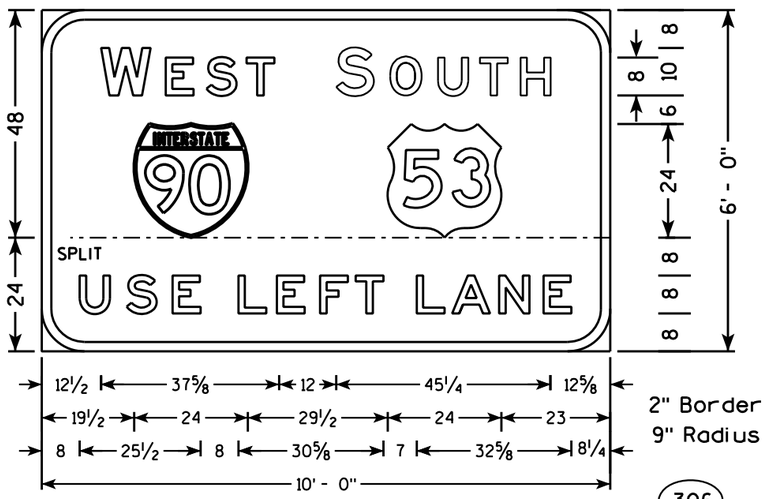
1. All Signs Type II - Type H Reflective
2. Color:
   Background - GREEN except as Shown
   Message - WHITE except as Shown
3. Message Series - E Modified except all cap words are Series E



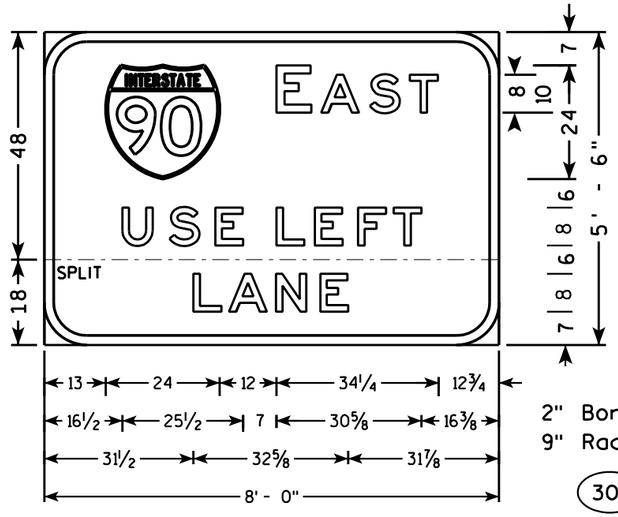
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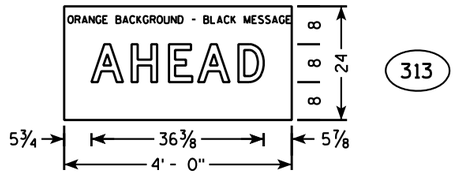
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306

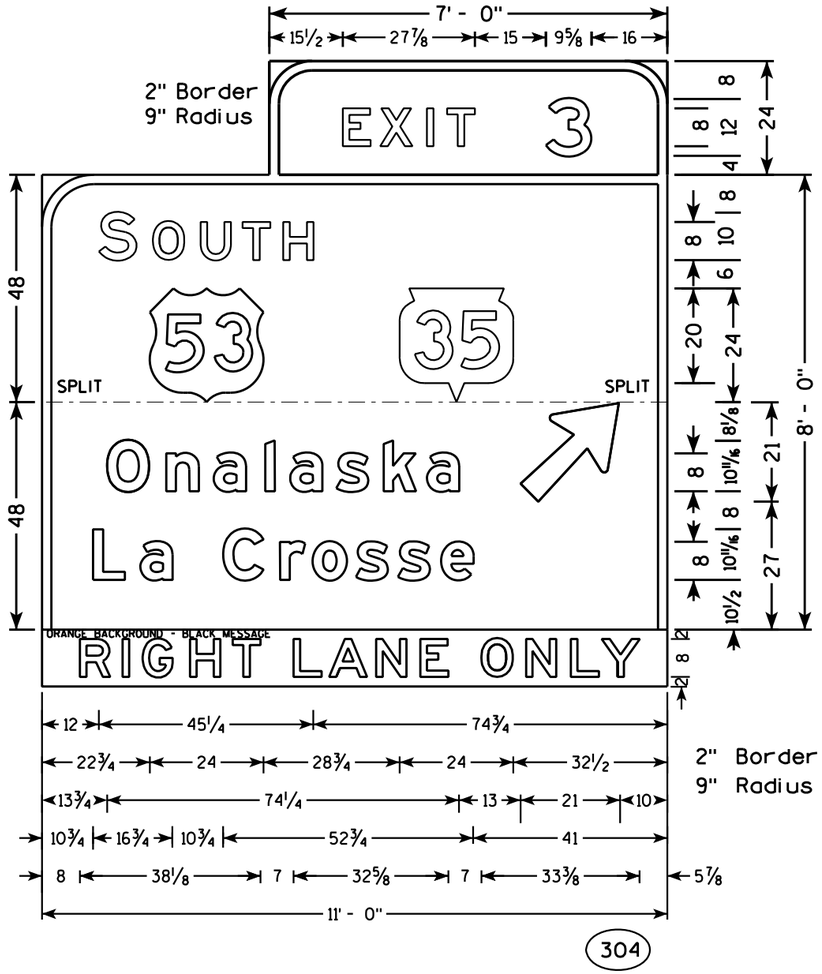


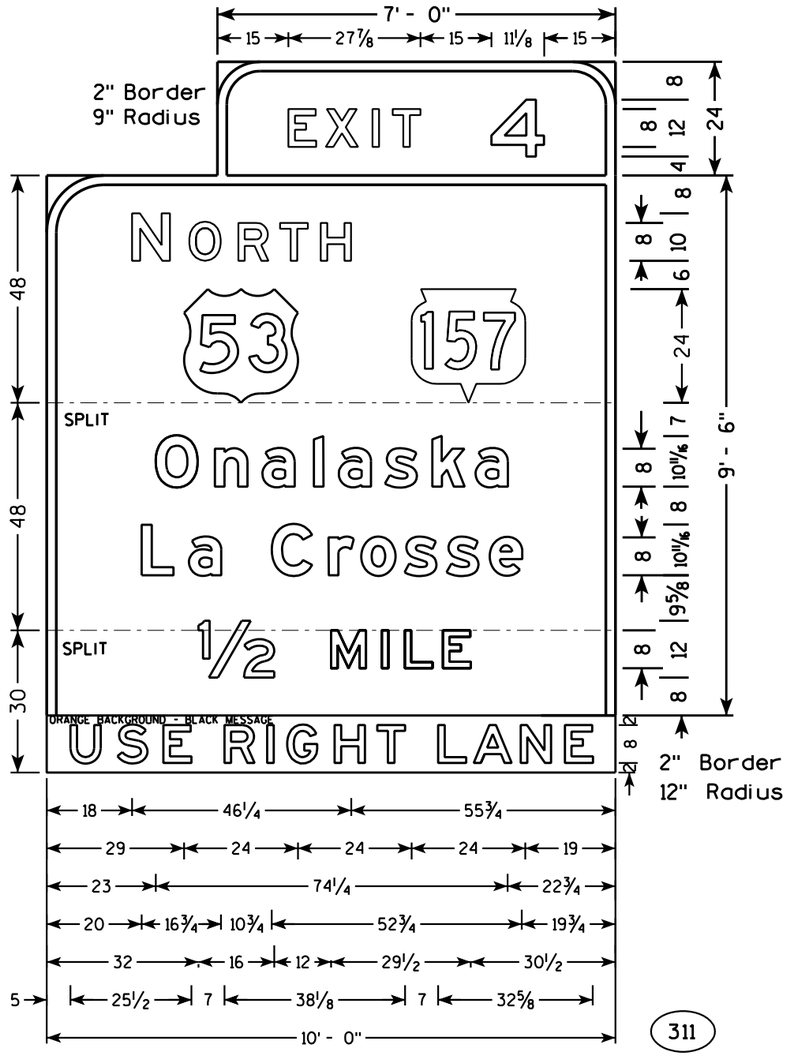
309



NOTES

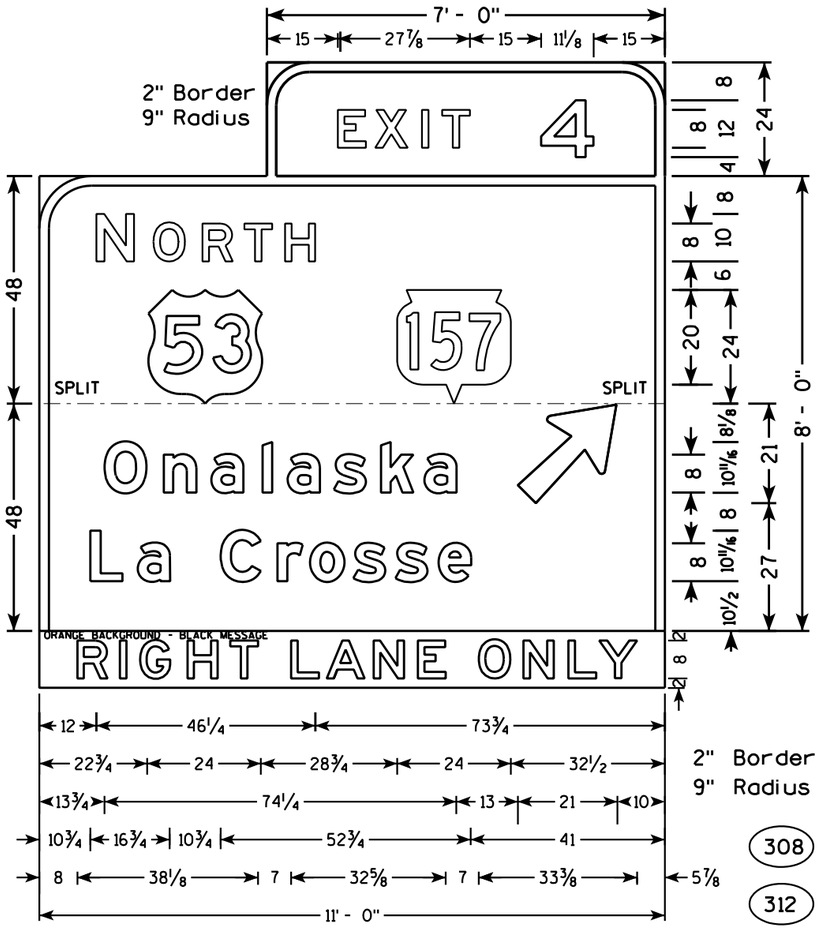
1. All Signs Type II - Type H Reflective
2. Color:
   Background - GREEN except as Shown
   Message - WHITE except as Shown
3. Message Series - E Modified except all cap words are Series E





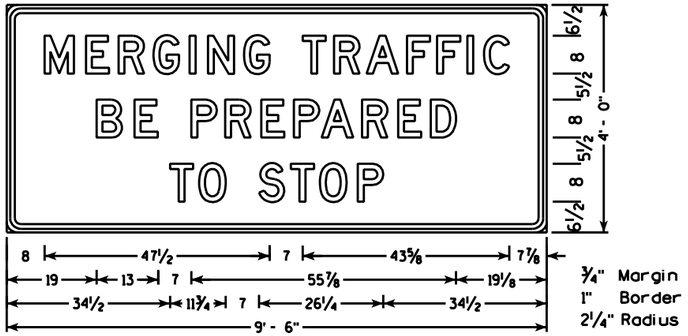
NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - GREEN except as Shown
   Message - WHITE except as Shown
3. Message Series - E Modified except all cap words are Series E



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - ORANGE
   Message - BLACK
3. Message Series - D



314 318
315 319
316 320
317 321

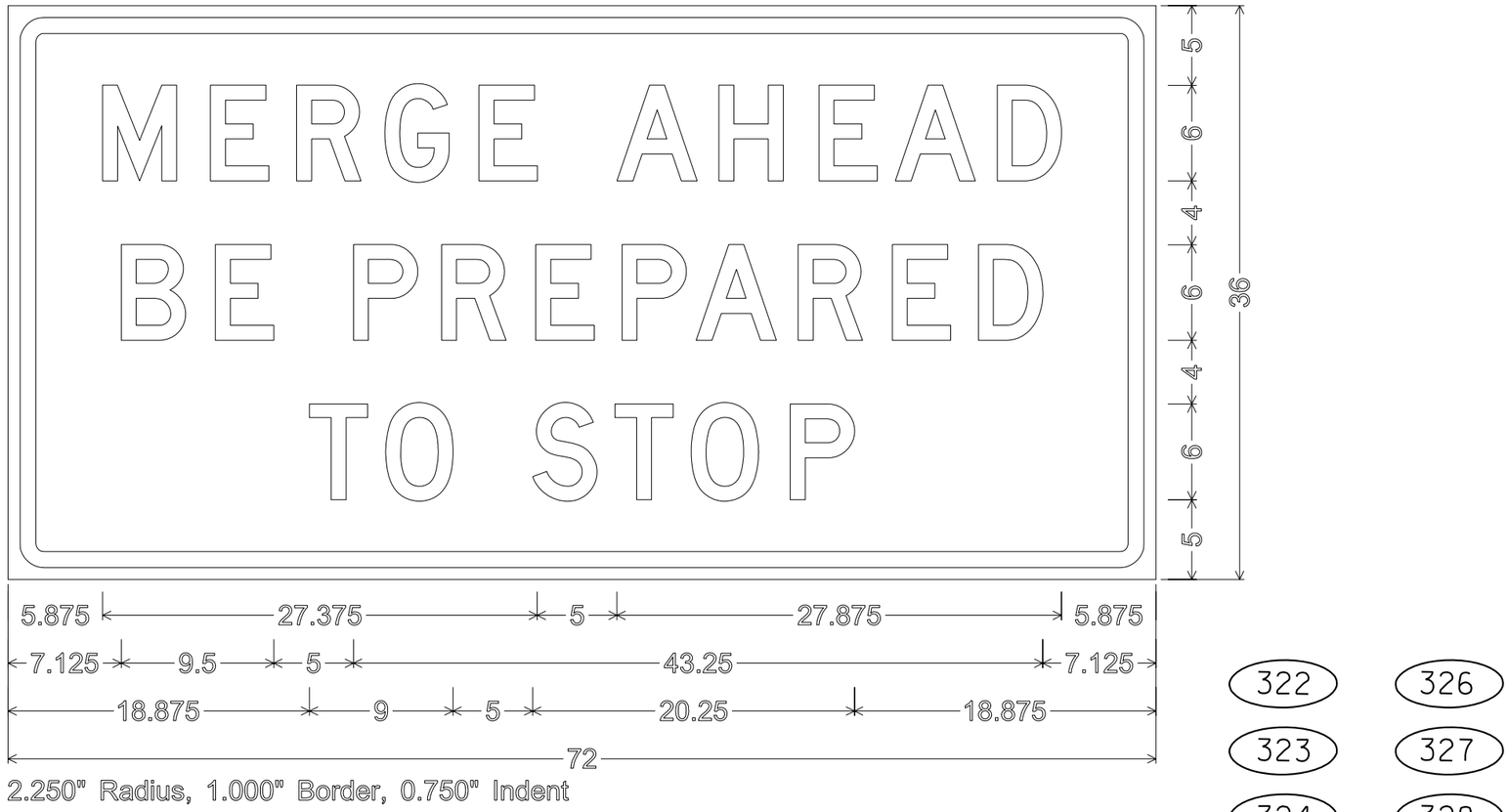
7

7

PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TEMPORARY SIGNING	SHEET NO: 394	E

NOTES

1. All Signs are Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D



2.250" Radius, 1.000" Border, 0.750" Indent

322 326
323 327
324 328
325

7

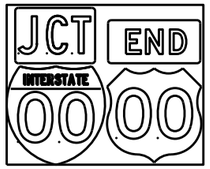
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PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	TEMPORARY SIGNING	SHEET NO: 395	E

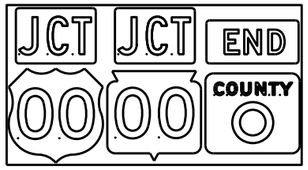
TYPICAL ASSEMBLIES



J1-1



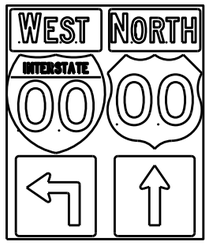
J1-2



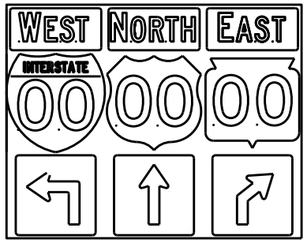
J1-3



J2-1



J2-2

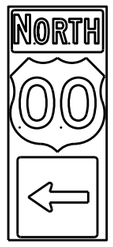


J2-3

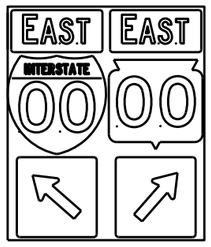


JV

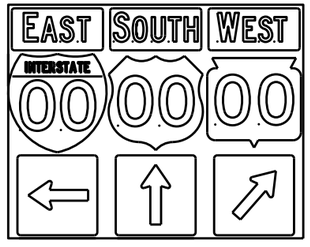
(Typical Vertical J-Assembly
See Note 10 and 11)



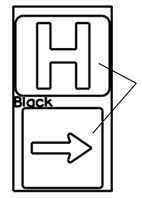
J3-1



J3-2



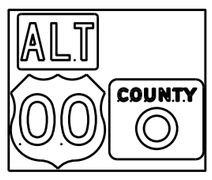
J3-3



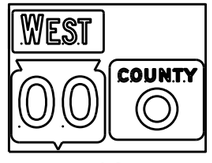
JH-1



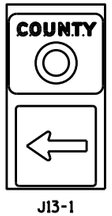
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

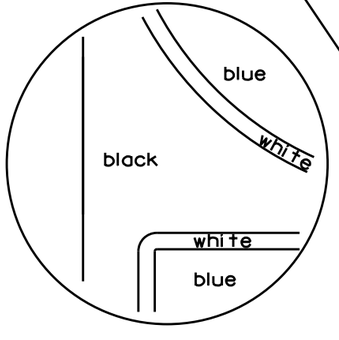


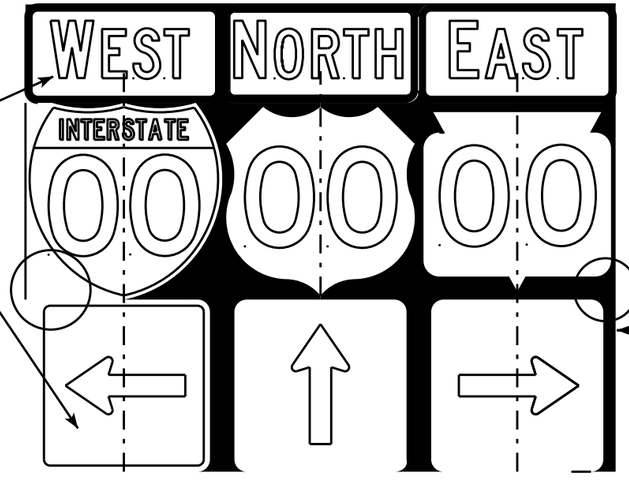
J23-1

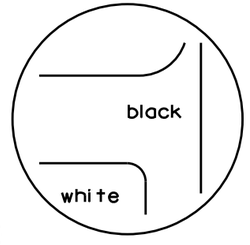


J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

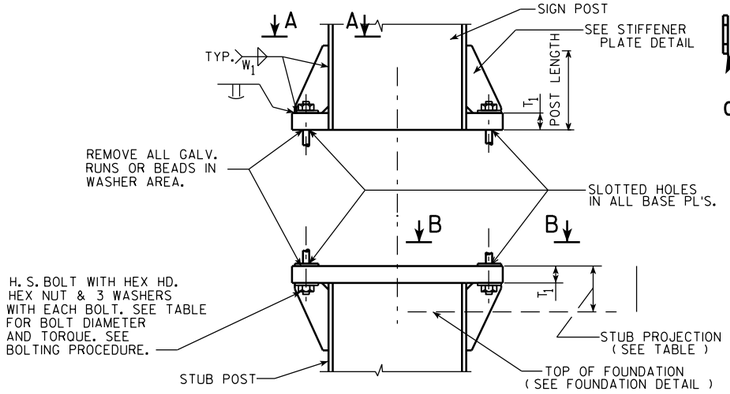
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

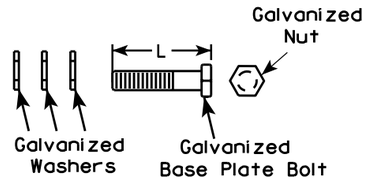
PROJECT NO: | SHEET NO: E

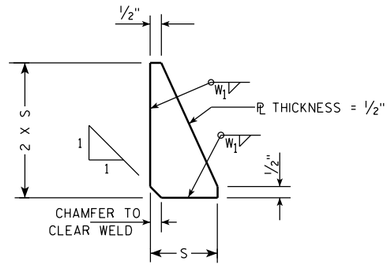
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42



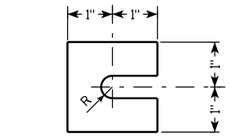
SIGN POST AND STUB POST ELEVATION





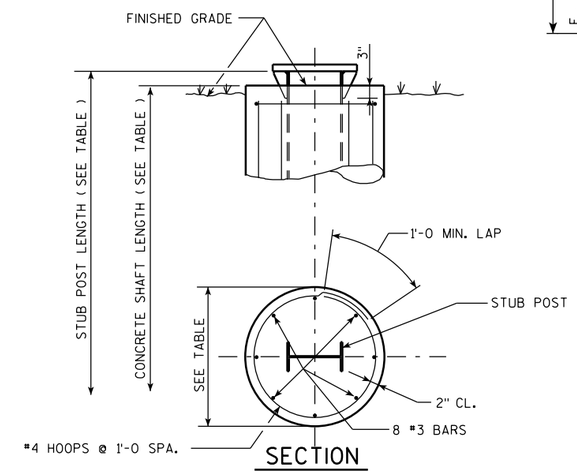
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)

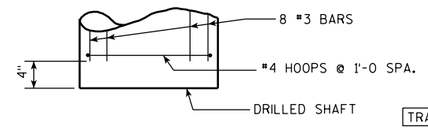


FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

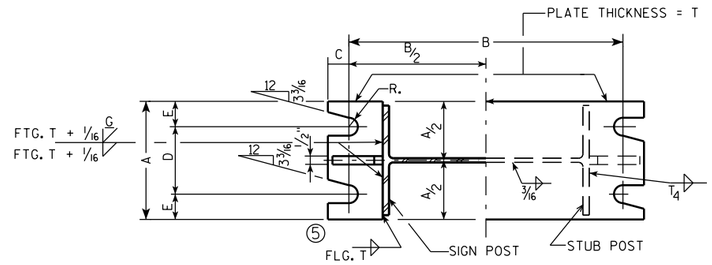
SHIM DETAIL



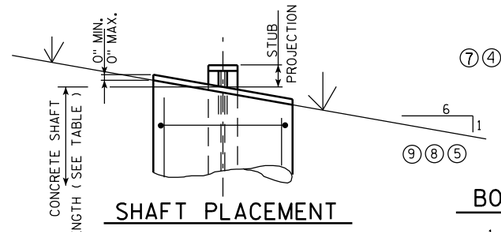
SECTION



FOUNDATION DETAIL



SECTION A-A SECTION B-B



SHAFT PLACEMENT

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & ½ WIND[4]	140

[4] 25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1½T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

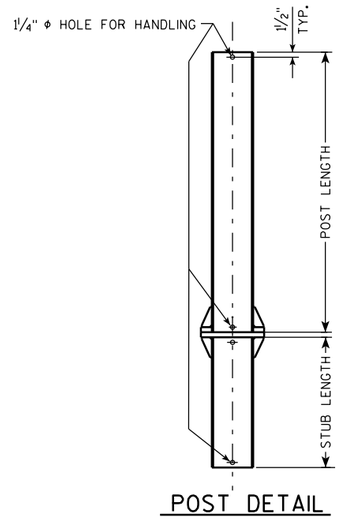
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50.
(9) THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
H.S. BOLTS, WASHERS & NUTS SHALL BE A325 GALVANIZED WHEN POSTS, POST STUBS AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.



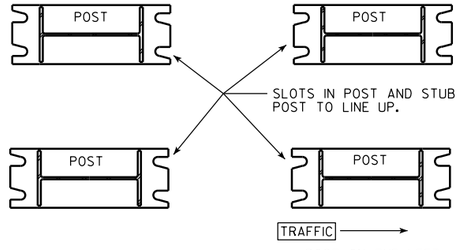
POST DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
E	1.0	62

(7)

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
	E	8 @ 7'-11	9 @ 6'-3

(7)



POST SLOT ORIENTATION (7)

L	X	TYPE	DIMENSION / POST SIZE	BASE CONNECTION DATA TABLE: BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	FOUNDATION DATA: STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	(2) K
3 ¾	(4)	A	W10"X12.0 #/FT.	¾" Φ @ 75#-FT.	5¼"	1'-0⅜"	⅞"	3½"	⅞"	1"	3/16"	5/16"	13/32"	2⅛"	3'-6	3"	2'-0 Φ	5'-0	76.0# (4)
4 ¾	(4)	B	W12"X16.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1¼"	¼"	5/16"	15/32"	3"	5'-6	3"	2'-0 Φ	7'-0	146.5# (4)
5		C	W12"X19.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	5/16"	5/16"	15/32"	3"	6'-0	3"	2'-0 Φ	7'-6	182.1#
5		D	W12"X22.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	⅜"	5/16"	15/32"	3"	6'-6	3"	2'-0 Φ	8'-0	210.5#
5	(3)	E	W12"X26.0 #/FT.	1" Φ @ 90#-FT.	7"	1'-4¼"	1¼"	4"	1½"	1½"	⅜"	5/16"	11/32"	3"	7'-0	3"	2'-0 Φ	8'-6	293.0# (3)

(1) (6) (1)

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/30/14 PLATE NO. A3-1.15

(10)	1-21-14	LUBRICATION OF BASE BOLTS
(9)	4-26-11	REMOVE NON-GALVANIZED
(8)	10-30-96	NOT GALVANIZED/GALVANIZED
(7)	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
(6)	8-24-87	BASE CONN. WELD
(5)	10-13-81	BASE CONN. WELD & FUSE PL WASHERS
(4)	10-19-79	POST A & B, A572 GR. 50, & K
(2)	11-28-78	"K" (3) 4-23-79 TYPE "E"
(1)	5-4-78	T_1 , T_2 & W_1
NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

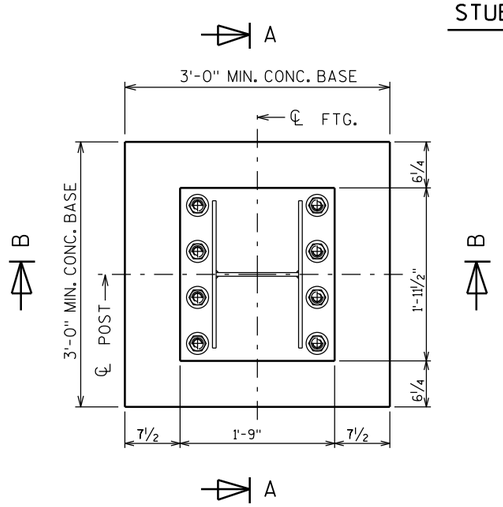
CONST. SPEC.	DRAWN BY	PLANS CK'D.
2011	JPH	

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

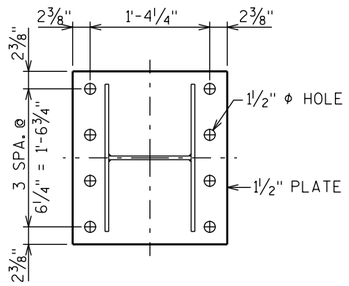
SHEET 397

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

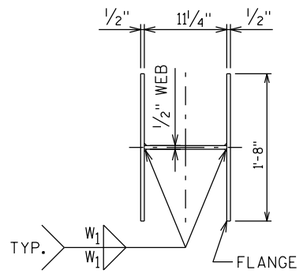
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



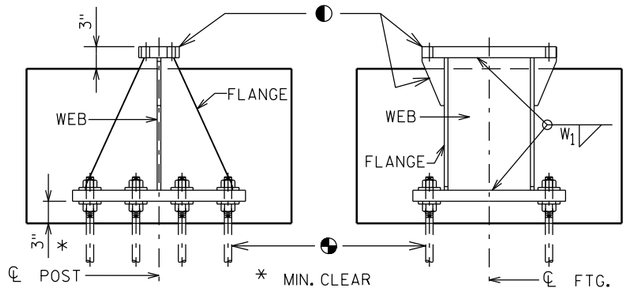
BASE PLATE



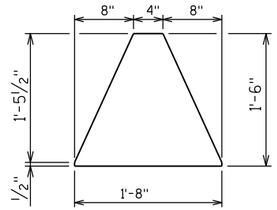
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



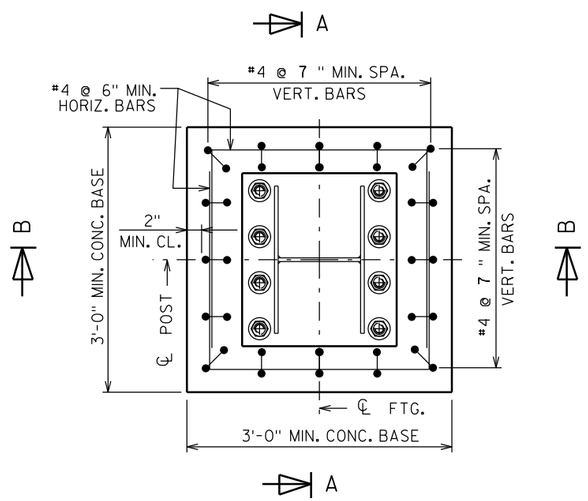
FLANGE

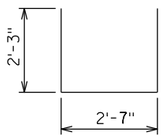
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

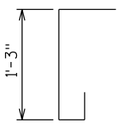
CONCRETE BASE SECTION





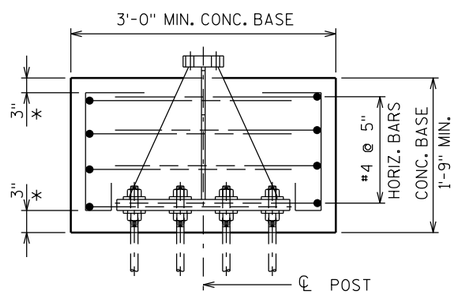
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



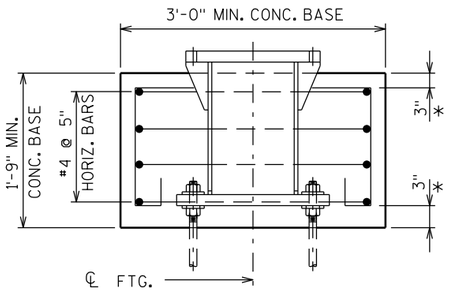
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

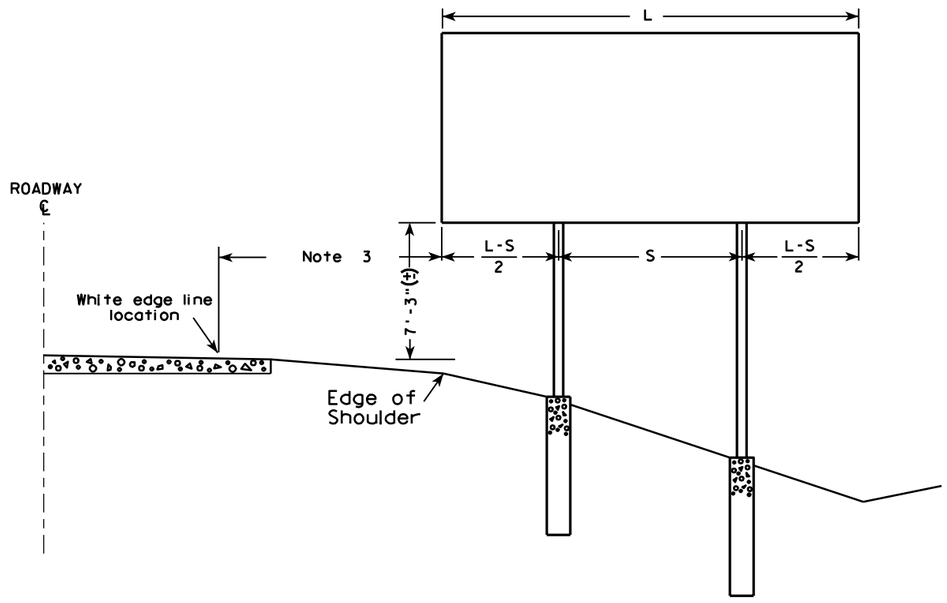
APPROVED Matthew R Rauch for State Traffic Engineer

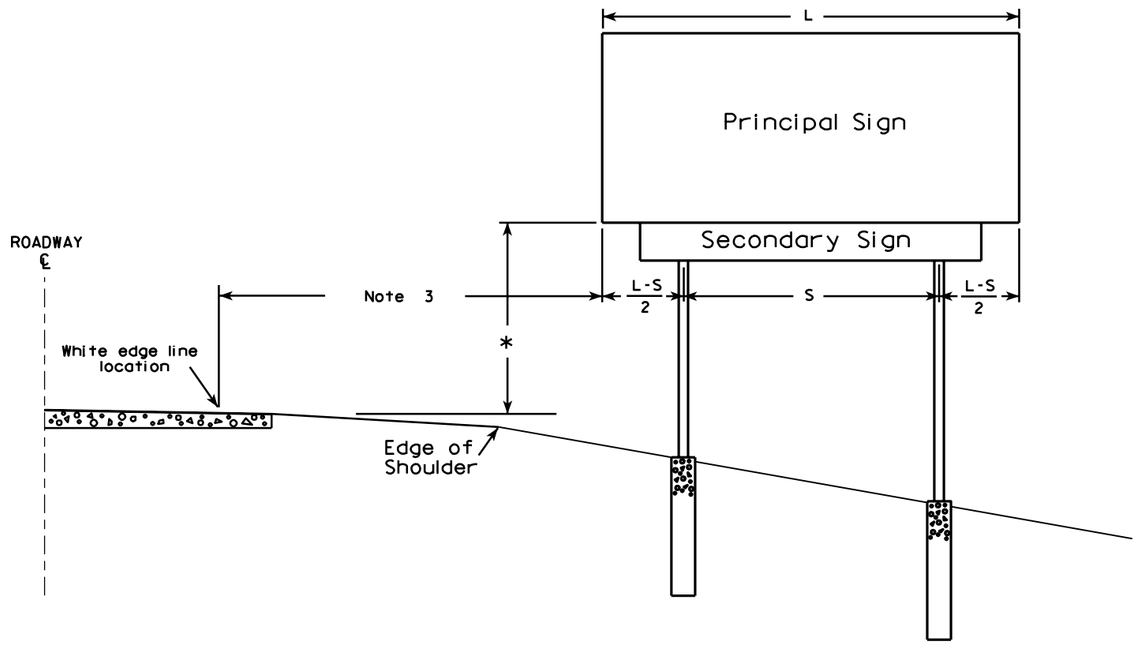
DATE 2/06/2014 PLATE A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31M.DGN PLOT DATE : 10-MAR-2014 15:16 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.556674:1.000000

WISDOT/CADDS SHEET 42





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

7

TYPICAL INSTALLATION
OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

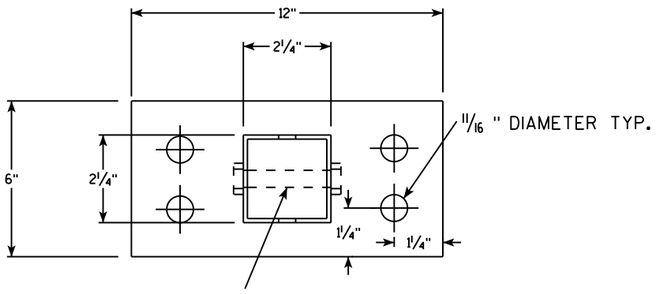
DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:				SHEET NO: 399	E

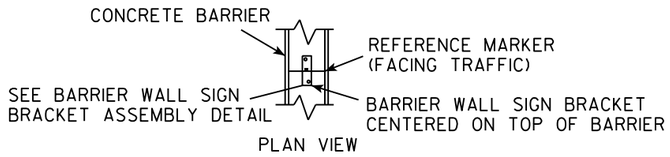
TYPICAL BARRIER WALL SIGN PLACEMENT DETAILS

TYPICAL REFERENCE MARKER MOUNTING DETAILS

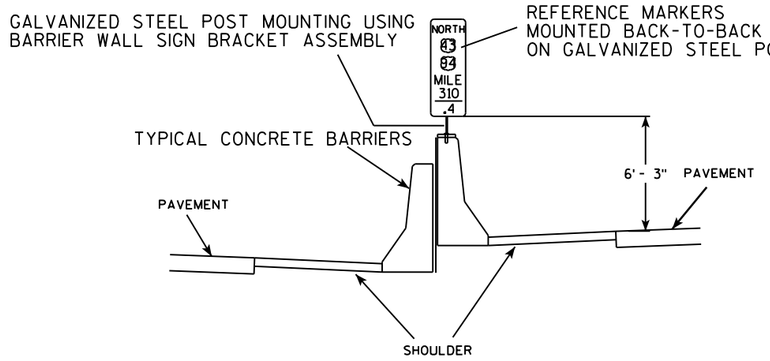
BARRIER WALL SIGN BRACKET ASSEMBLY
NOT TO SCALE



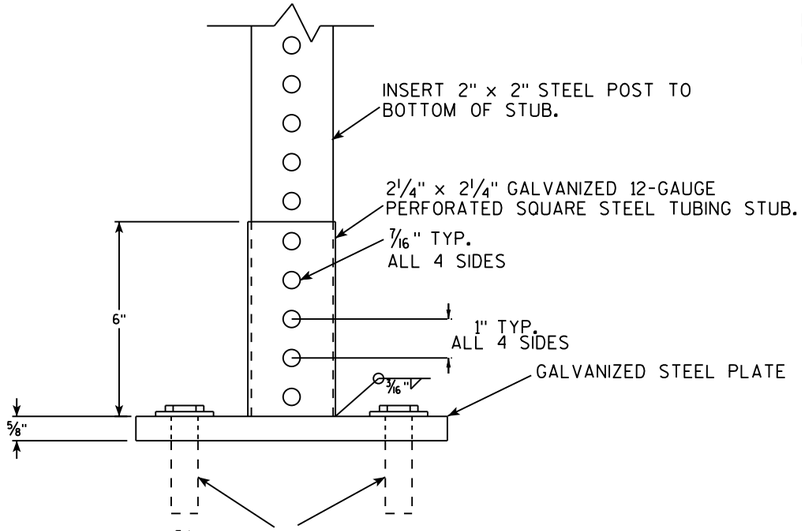
3½" X ⅜" GALVANIZED STEEL BOLT & HARDWARE
PLAN VIEW



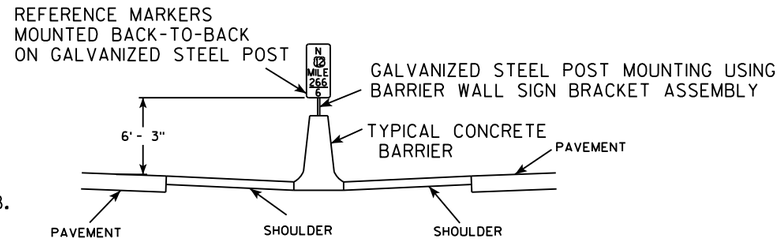
MEDIAN BARRIER MOUNTING DETAIL



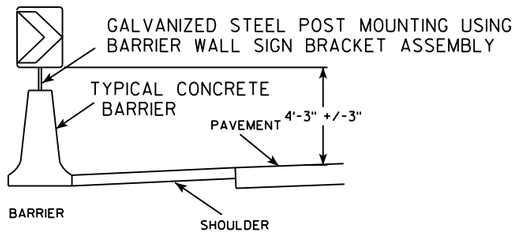
TYPICAL ENHANCED REFERENCE
MARKER PLACEMENT ON DOUBLE MEDIAN BARRIER



SIDE VIEW



TYPICAL ENHANCED REFERENCE
MARKER PLACEMENT ON SINGLE MEDIAN BARRIER



TYPICAL CHEVRON MARKER PLACEMENT

NOTES

1) ALL MATERIAL TO BE APPROVED BY ENGINEER BEFORE INSTALLATION
2) SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS.

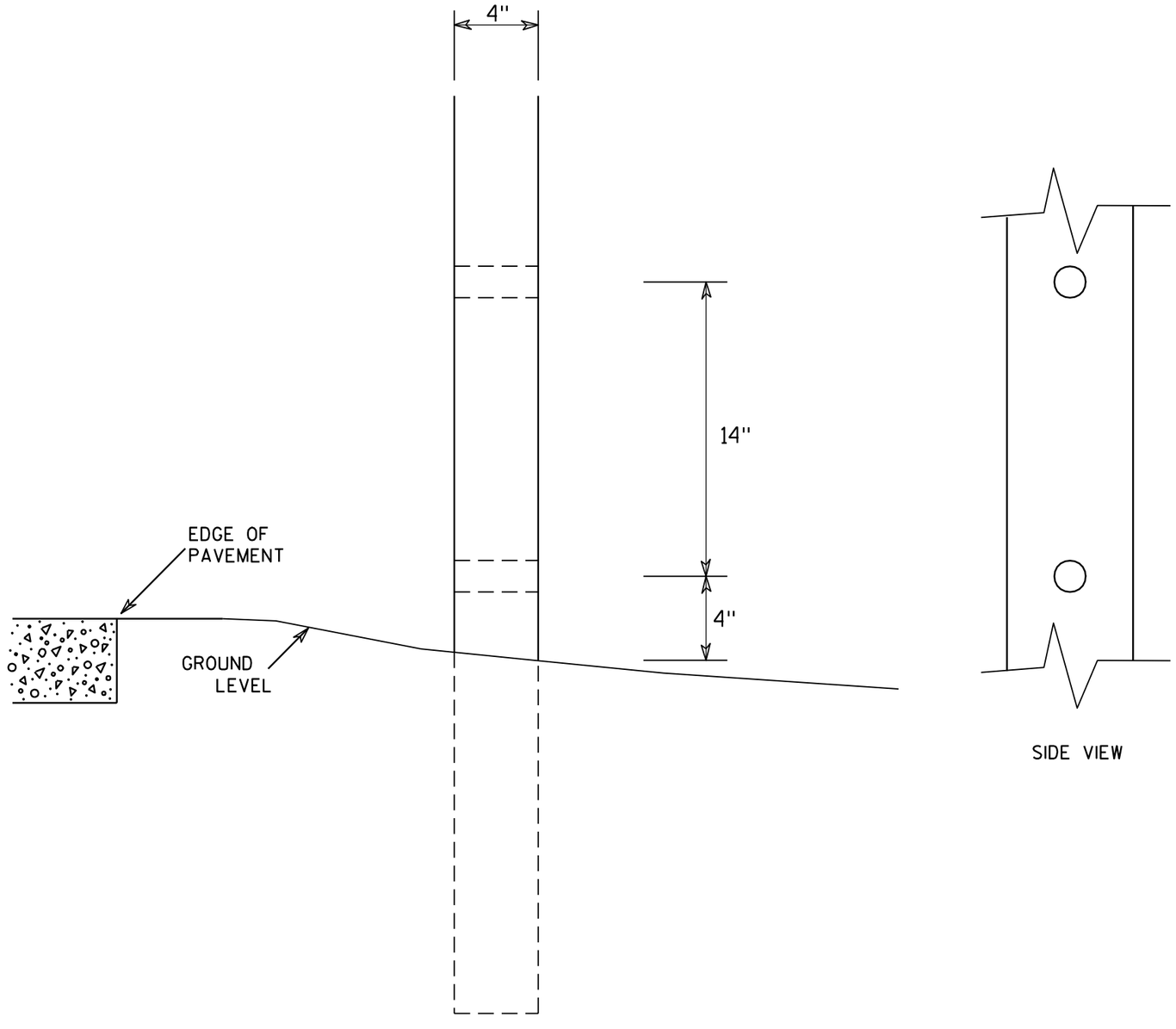
SIGN MOUNTING ON BARRIER WALL

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE 400 A4-10.3

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

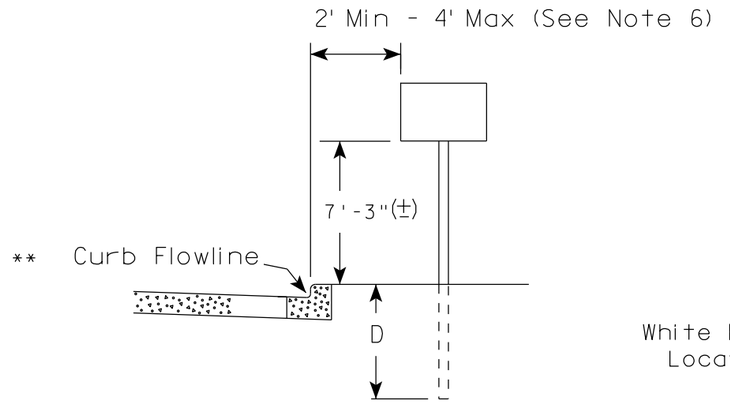
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

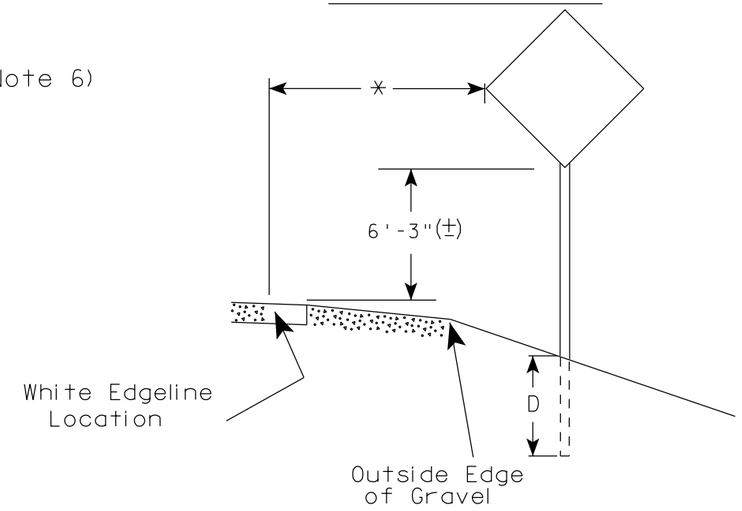
DATE 3/27/97 PLATE NO. A4-11.2

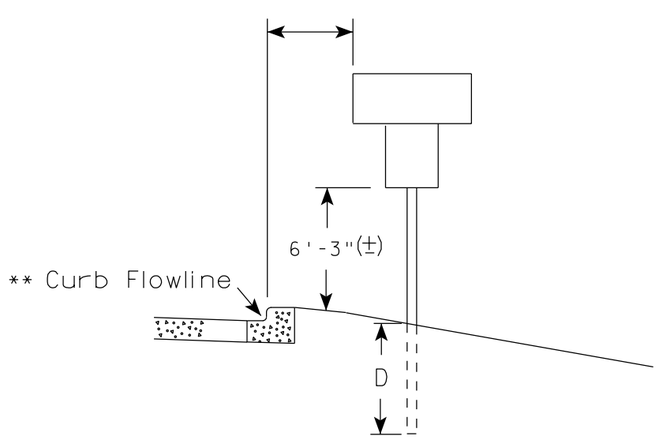
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 401	E

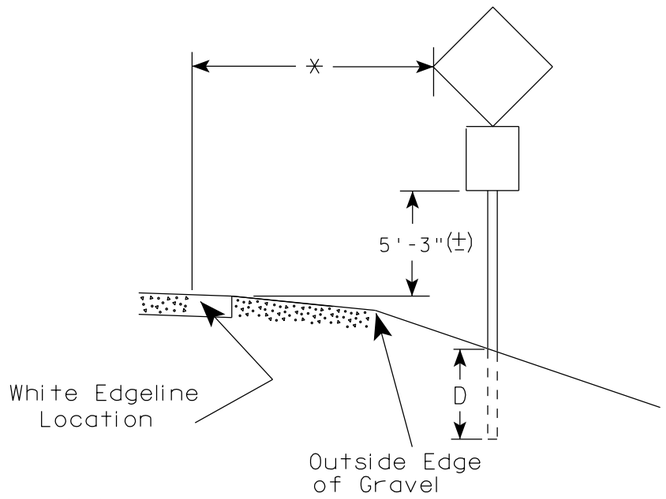
URBAN AREA



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.

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed 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) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

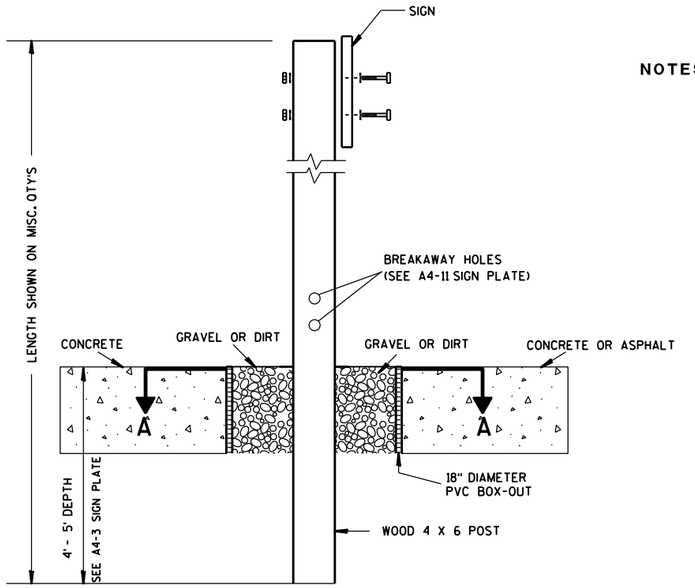
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

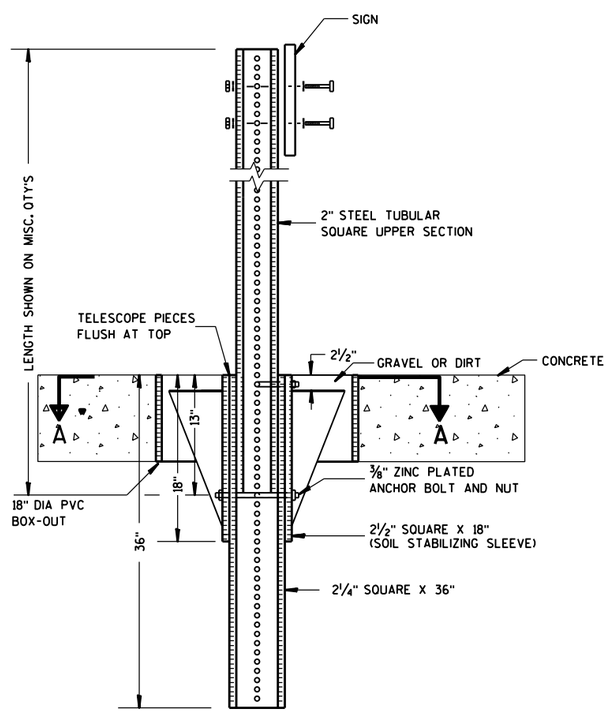
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 30-SEP-2013 13:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42



ELEVATION VIEW

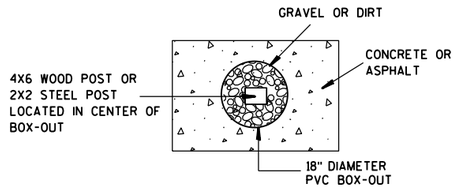
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

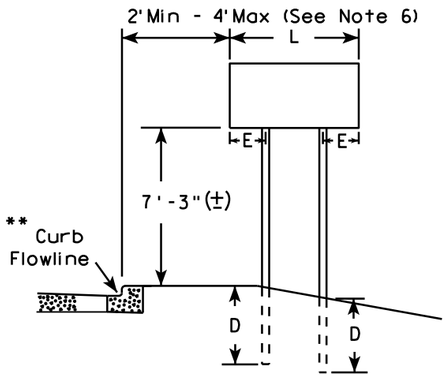
APPROVED Matthew R Rauch
for State Traffic Engineer

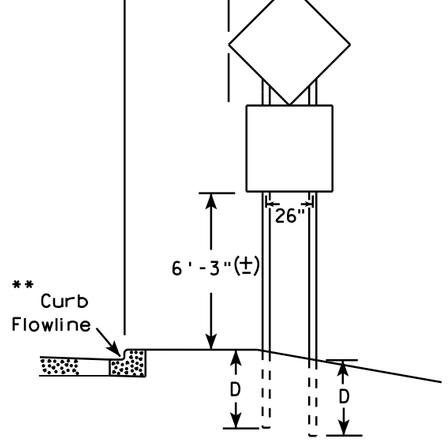
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

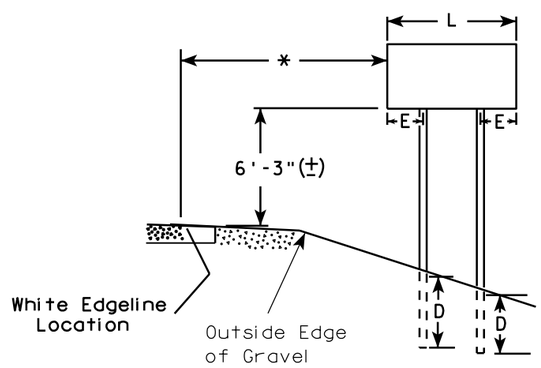
URBAN AREA

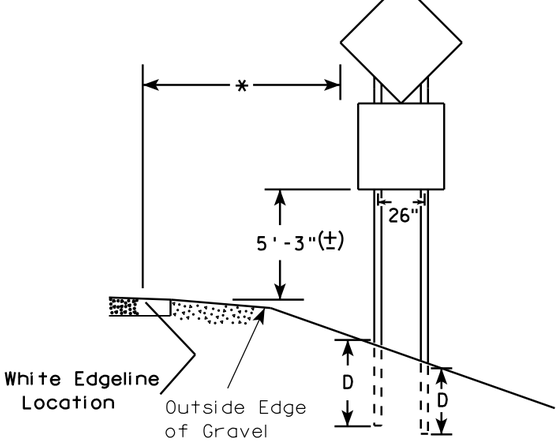




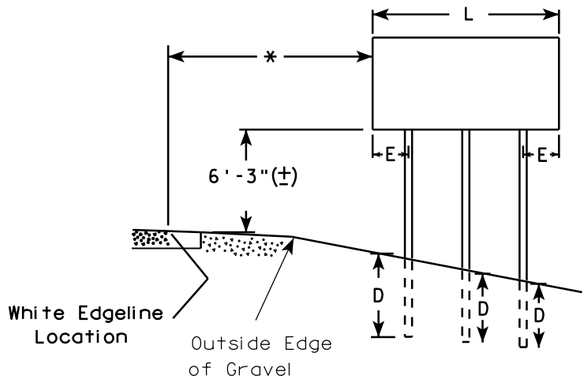
48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN



GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) 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) & End of Road Markers (W5-56 & W5-56A) 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 or less than 20 S.F. in area.

***

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

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

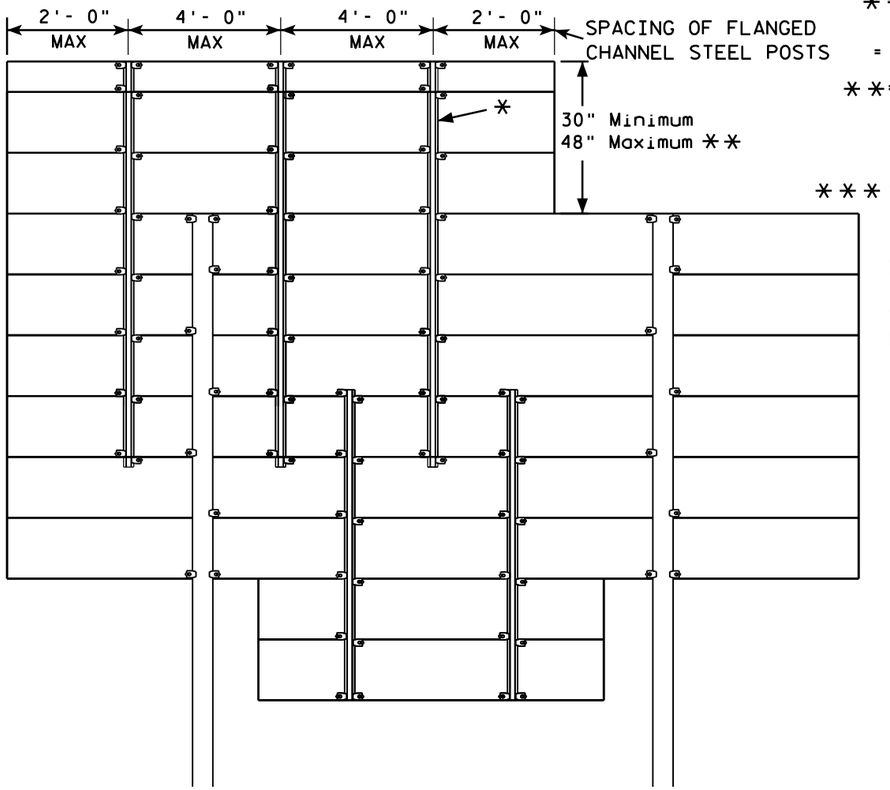
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/29/14 PLATE NO. A4-4 13
404

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 30-APR-2014 13:10 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 107.021305:1.000000

GROUND MOUNTED SIGN

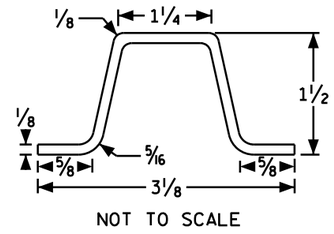


* =2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

** =FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

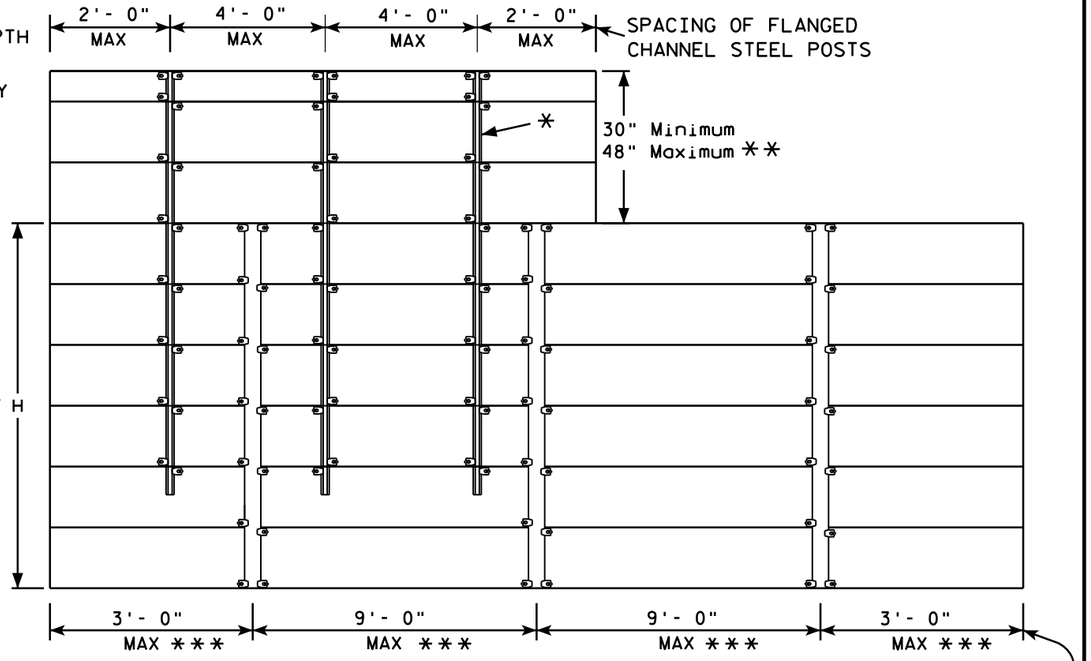
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

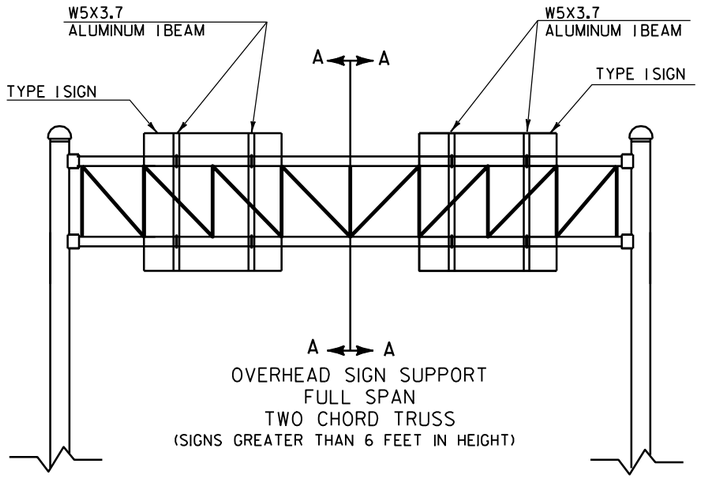
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

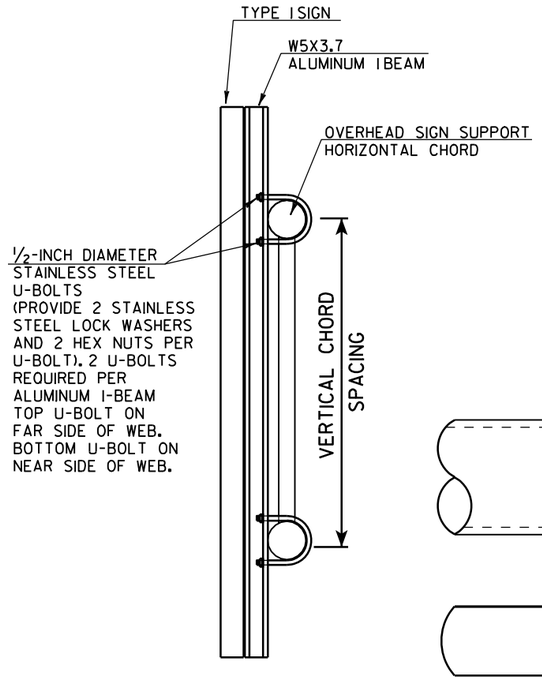
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 405 A4-6.12

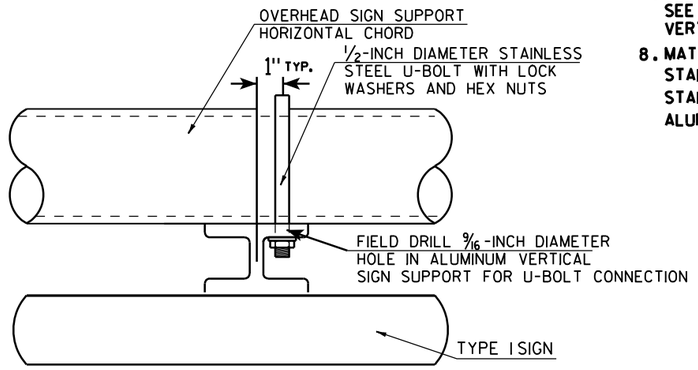
PROJECT NO: | SHEET NO: E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



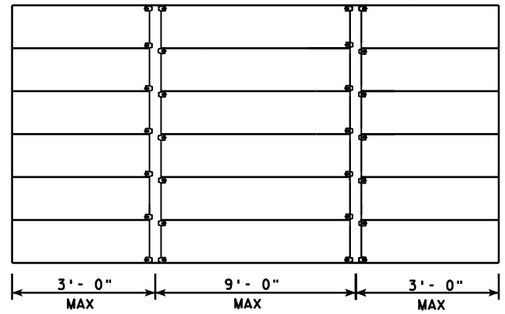
CUT SECTION A-A



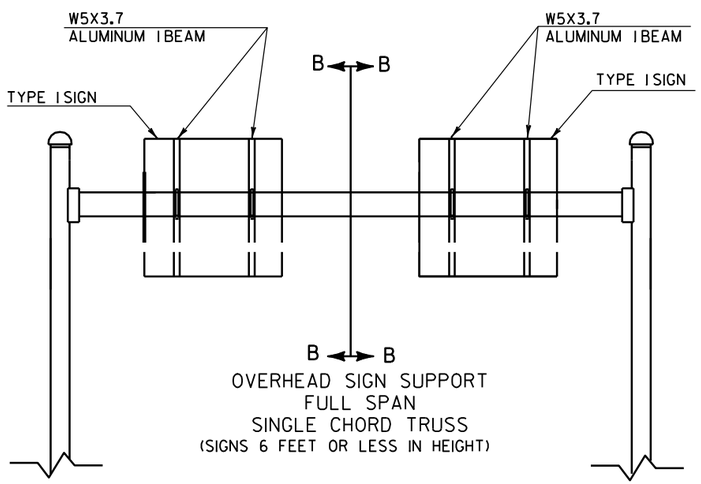
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

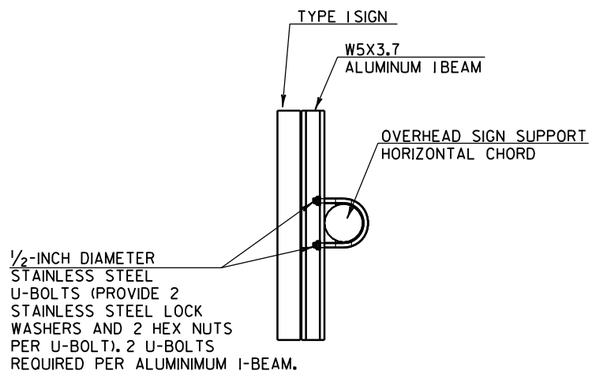
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.



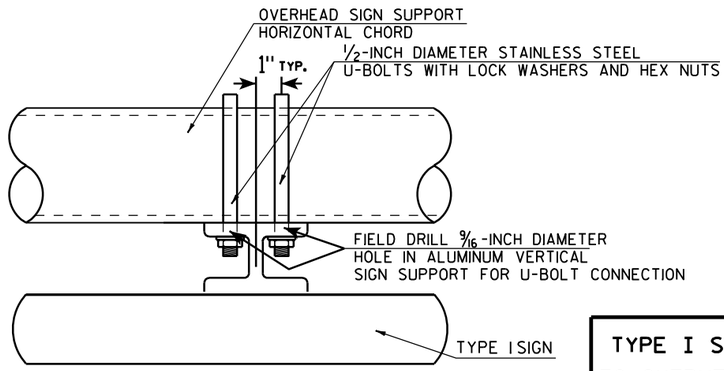
SPACING OF W5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

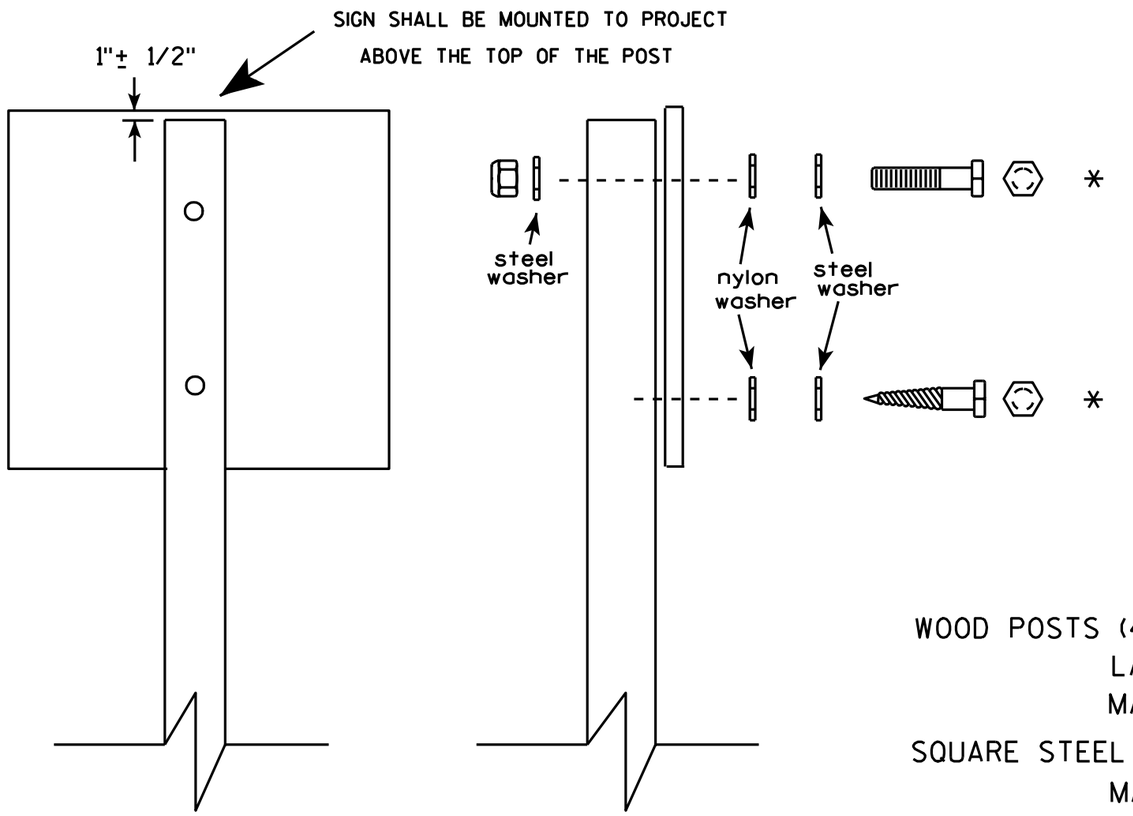
TYPE I SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/12 PLATE NO. A4-7.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 406	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

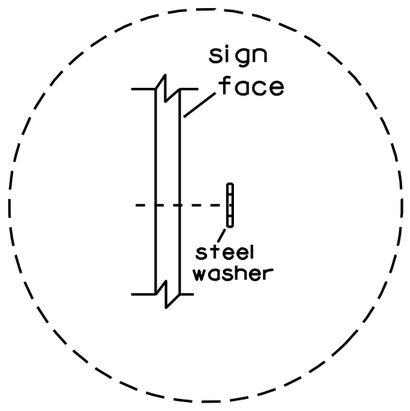
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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.

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.



Washer Placement when Sign Has Other Than Type H or Type F Face

* 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 3/23/10 PLATE NO. A4-8.7

7

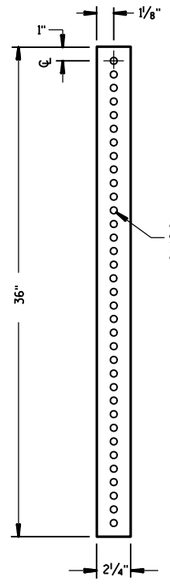
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PROJECT NO:

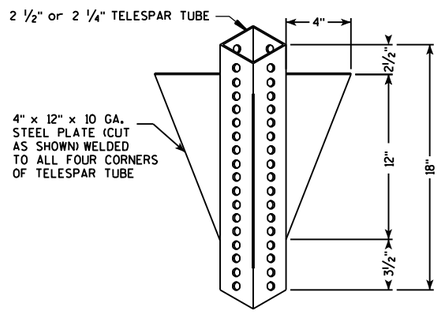
SHEET NO: 407 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

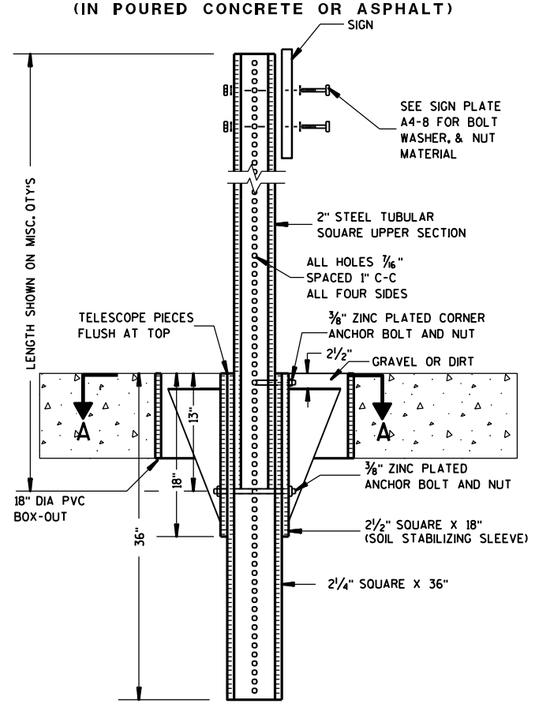
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



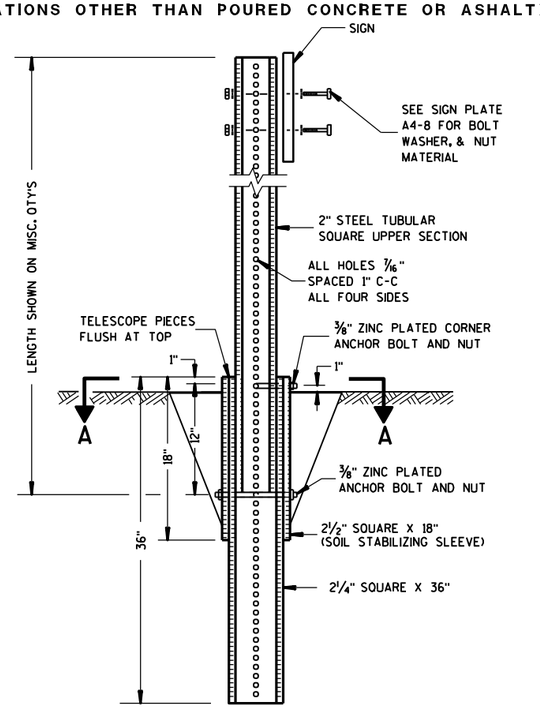
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

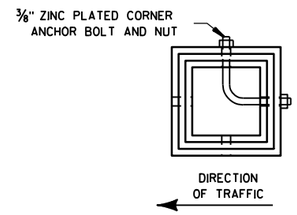


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASHALT)





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

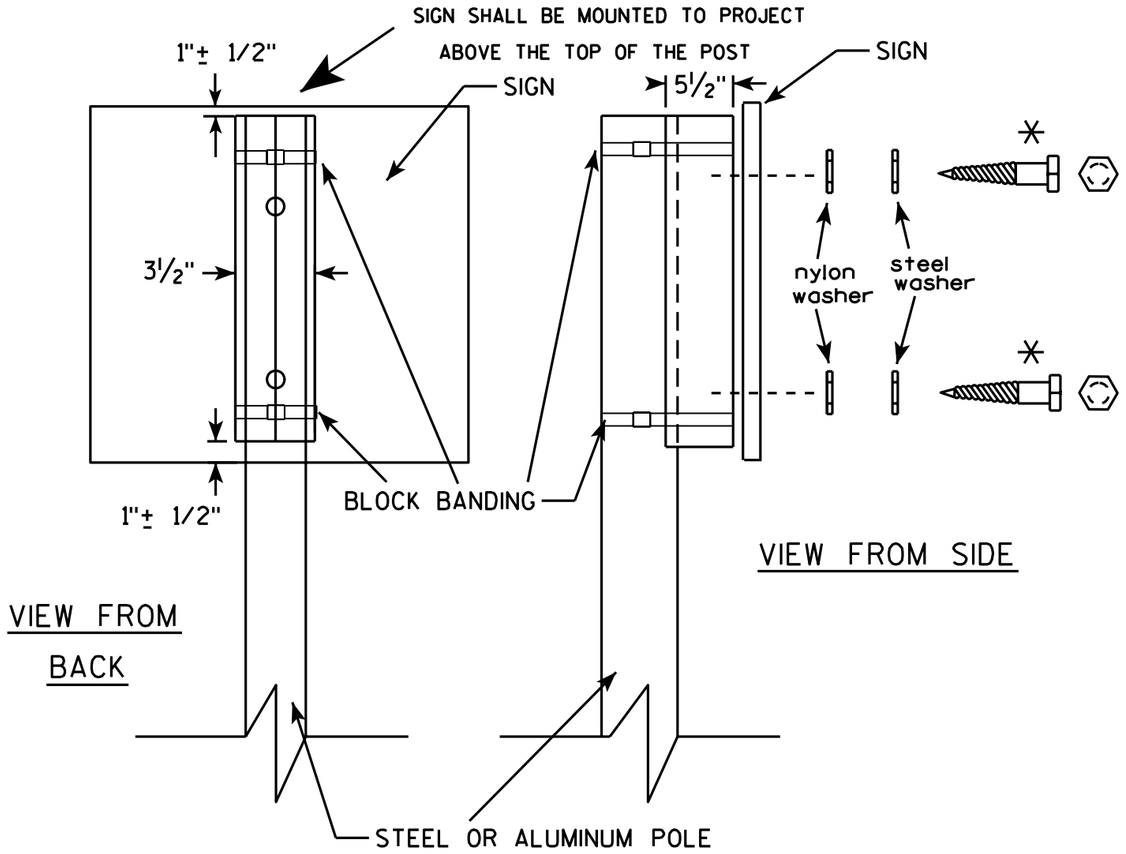
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

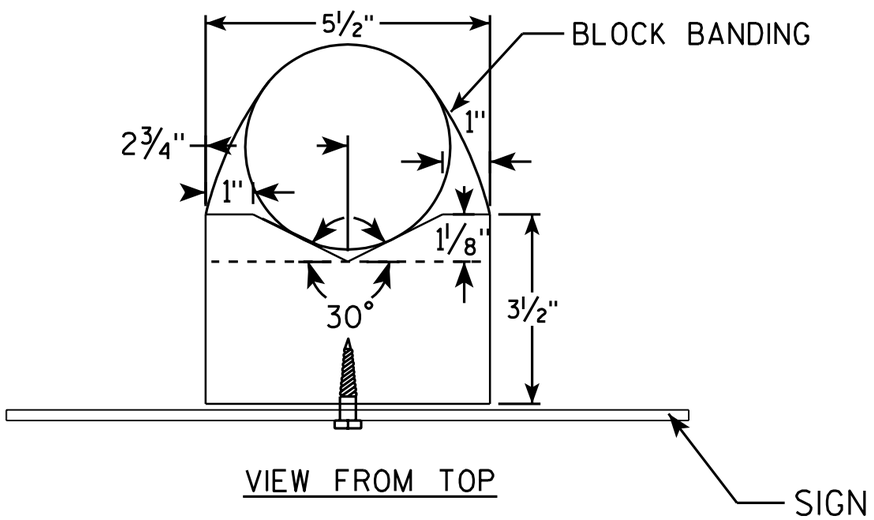
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 5/30/12 PLATE NO. A4-9.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 408	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

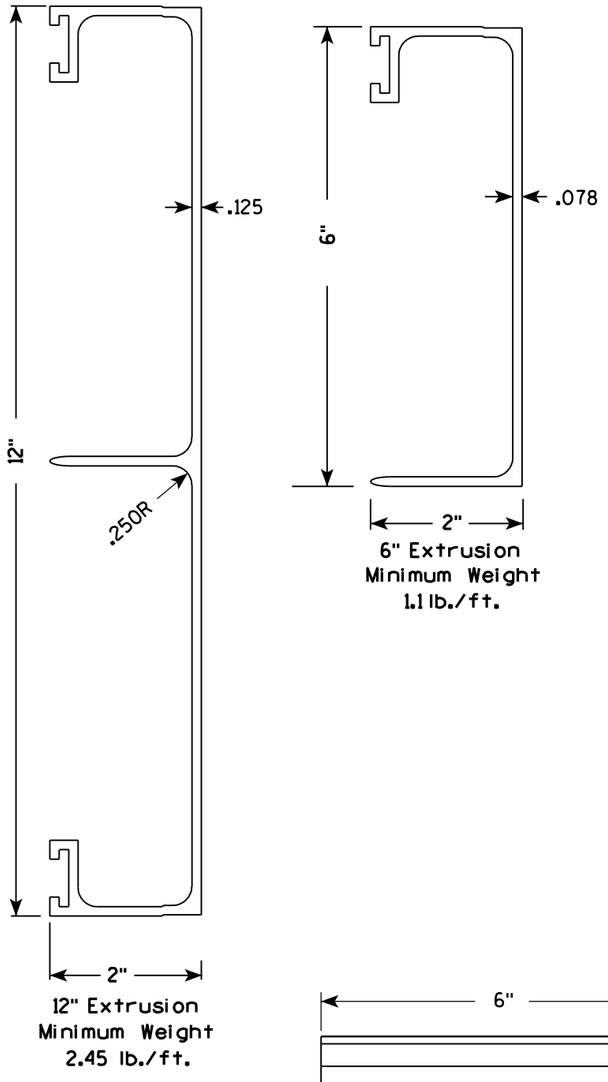
APPROVED Matthew R Rauch
for State Traffic Engineer

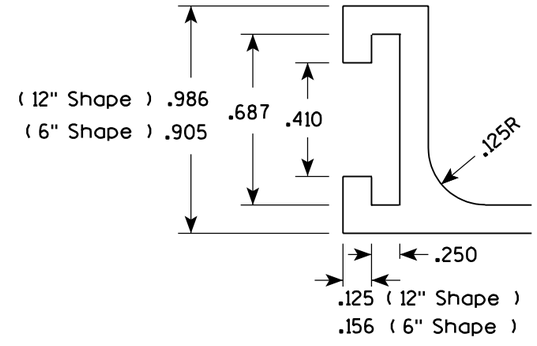
DATE 7/12/07 PLATE NO. A5-10.1

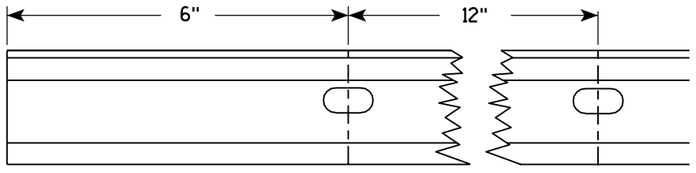
PROJECT NO:

SHEET NO: 409 E

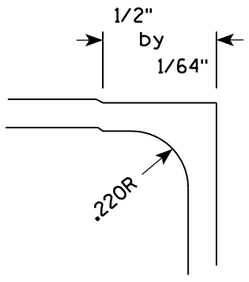
Extruded Shape







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

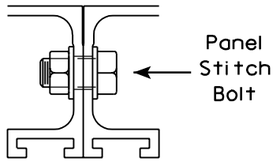


Hardware

STITCH BOLT, WASHER & NUT

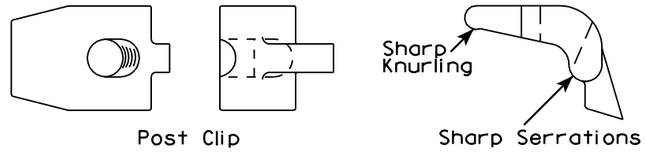
The hardware includes:

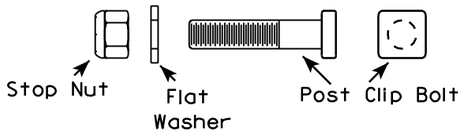
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

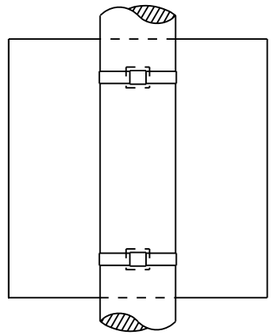
DATE 11/18/99 PLATE NO. A5-2.9

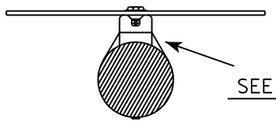
PROJECT NO:

SHEET NO: 410 E

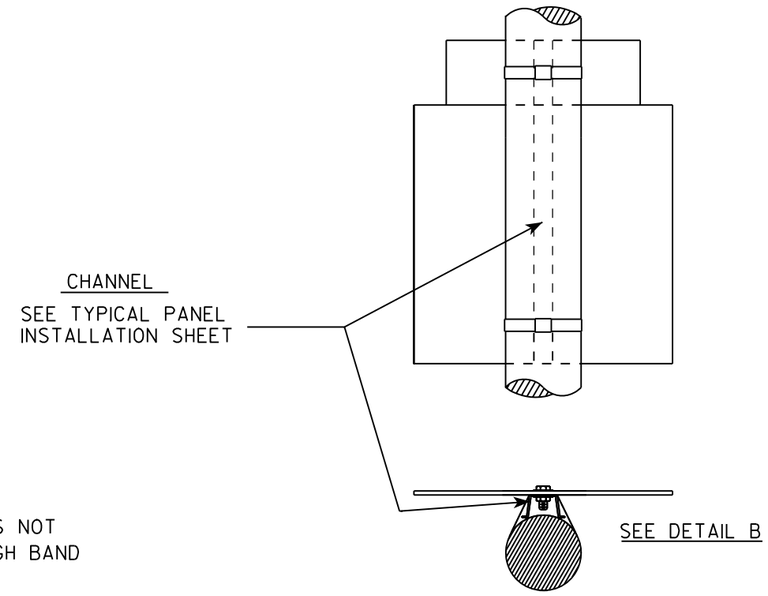
BANDING

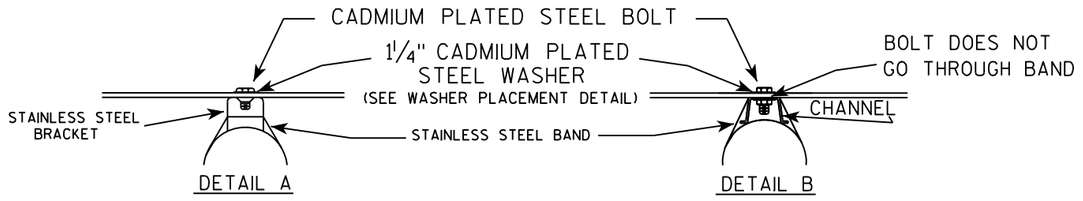
SINGLE SIGN



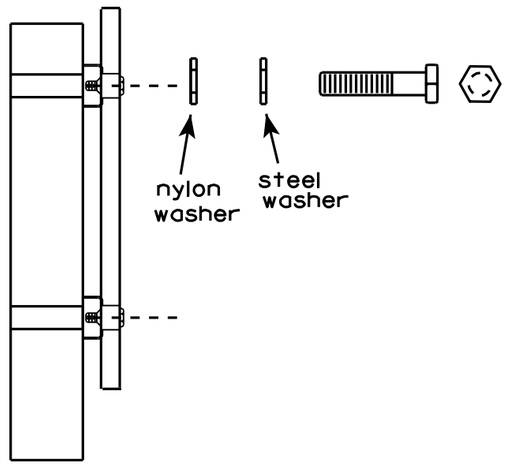


"J" ASSEMBLY





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 3/4" in width and 0.025" thickness.

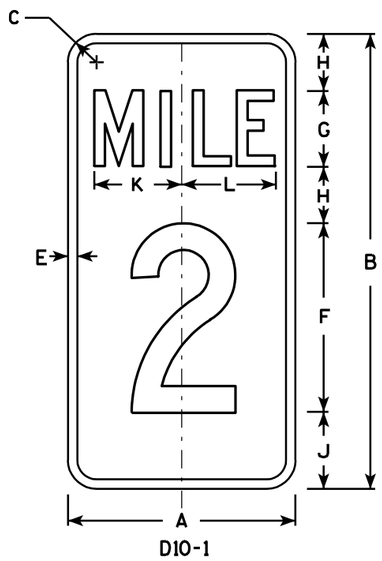
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

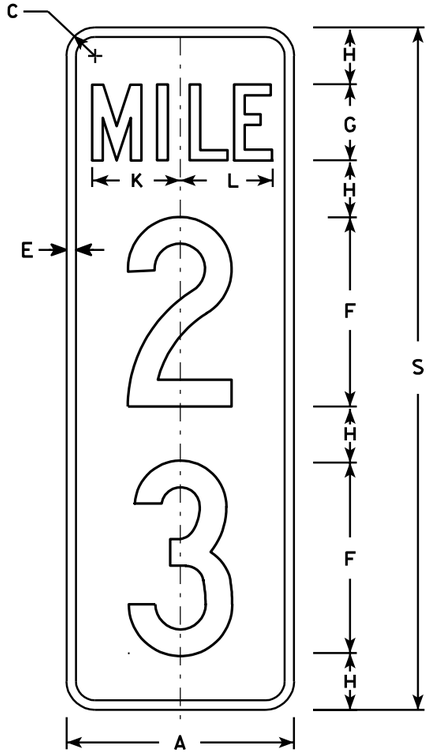
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

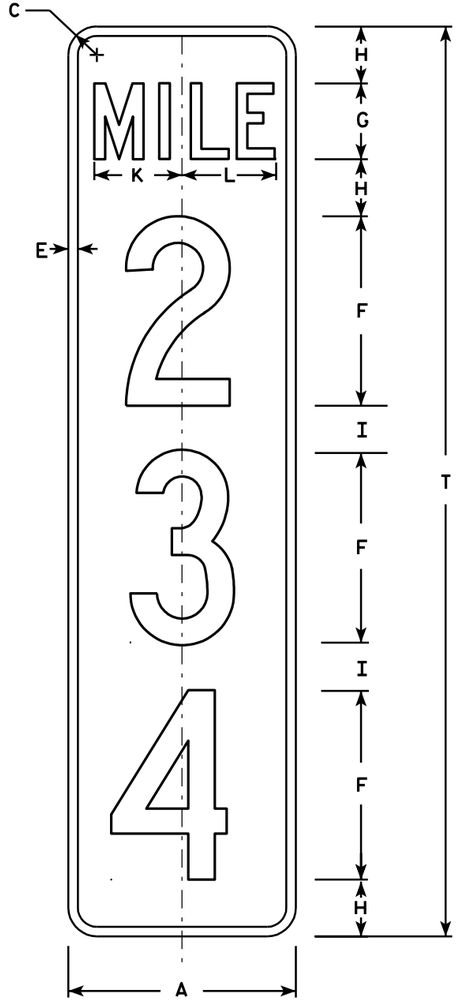
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 411	E



D10-1



D10-2



D10-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Optically adjust numerals about the centerline of the sign to achieve proper balance.

Metric equivalent for this sign is:

PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1																										
2																										
3																										
4	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						
5	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						

D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m2	Area m2	Area m2
.19	.28	.38

STANDARD SIGN
D10-1 , D10-2 & D10-3

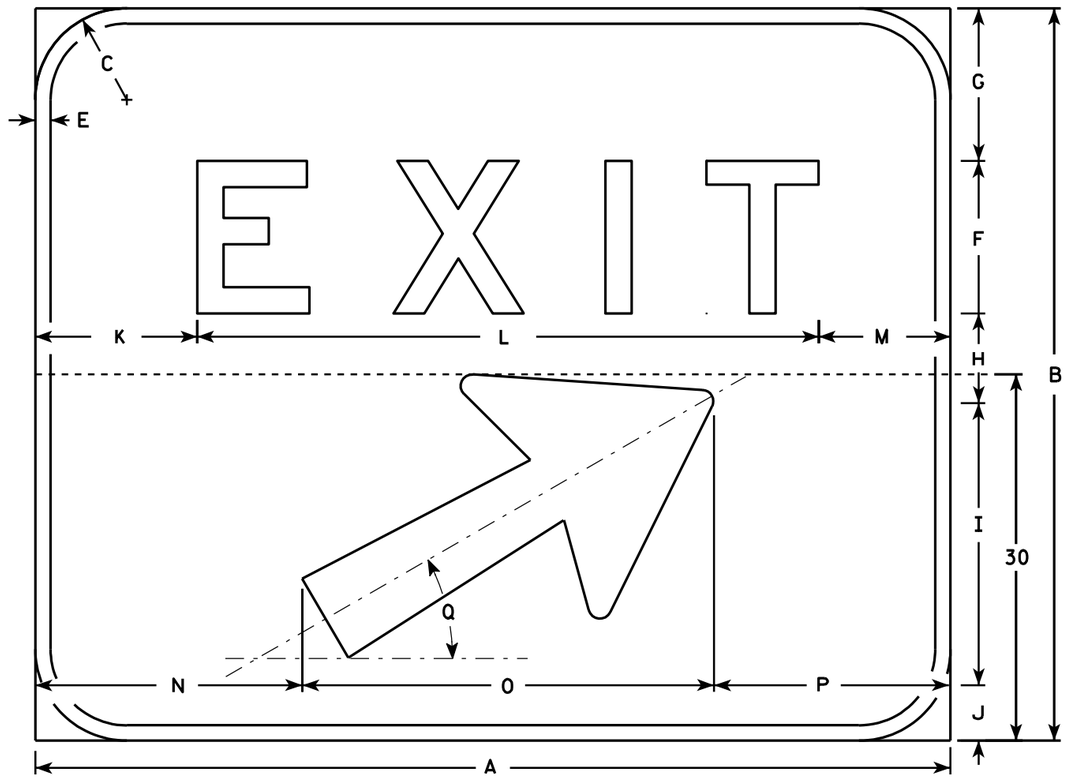
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for Director, Office of Traffic

DATE 1/16/02 PLATE NO. D10-3.2

PROJECT NO:

SHEET NO: 412 E



E5-1

NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but borders shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces for the 72 x 60 size as shown on the detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. As per the Standard Spec's, this sign shall not have a vertical joint.

Metric equivalent for this sign is:

SIZE	
1	
2	
3	
4	1500 mm X 1200 mm
5	1800 mm X 1500 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2																												
3																												
4	60	48	6		1	10	10	5 7/8	18 1/2	3 5/8	10 5/8	40 3/4	8 5/8	17 1/2	27	15 1/2	30°										20.0	1.80
5	72	60	6		1	12	12	10	18 1/2	7 1/2	13 1/4	48 1/2	10 1/4	23 1/2	27	21 1/2	30°										30.0	2.70

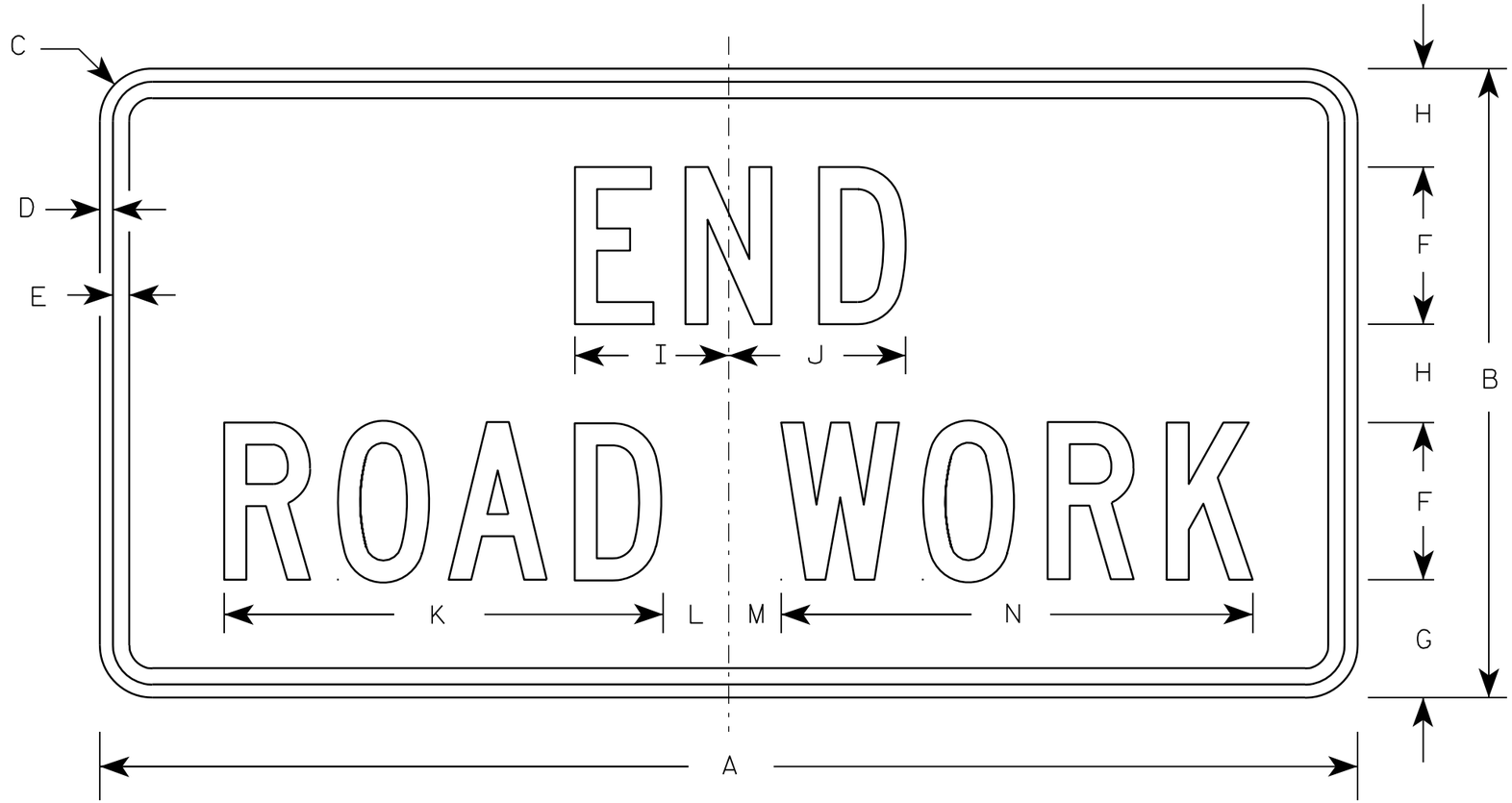
STANDARD SIGN
E5 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 6/22/00 PLATE NO. E5-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 413	E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

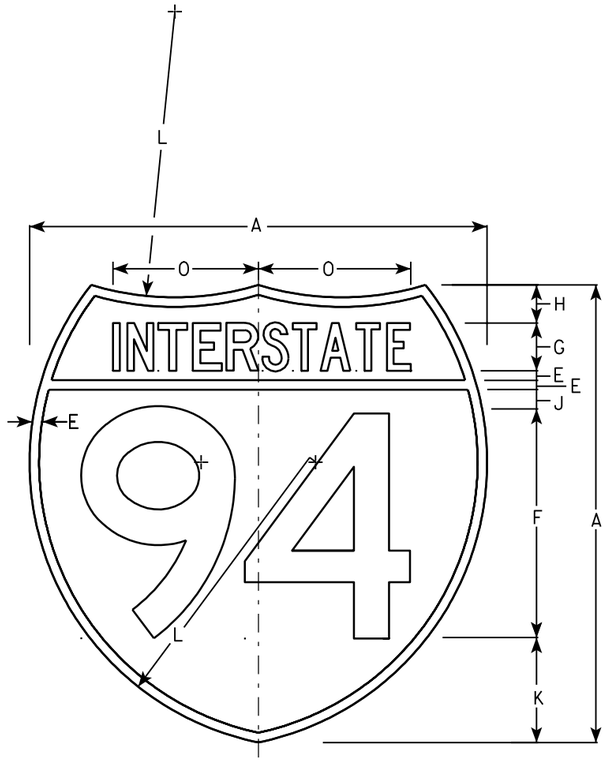
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

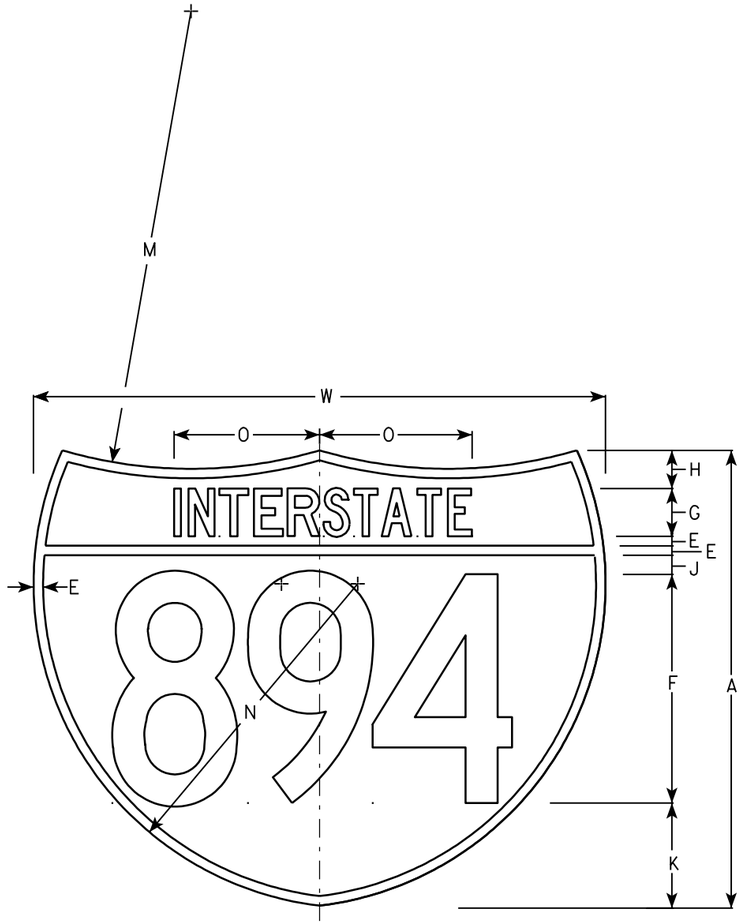
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 414	E



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

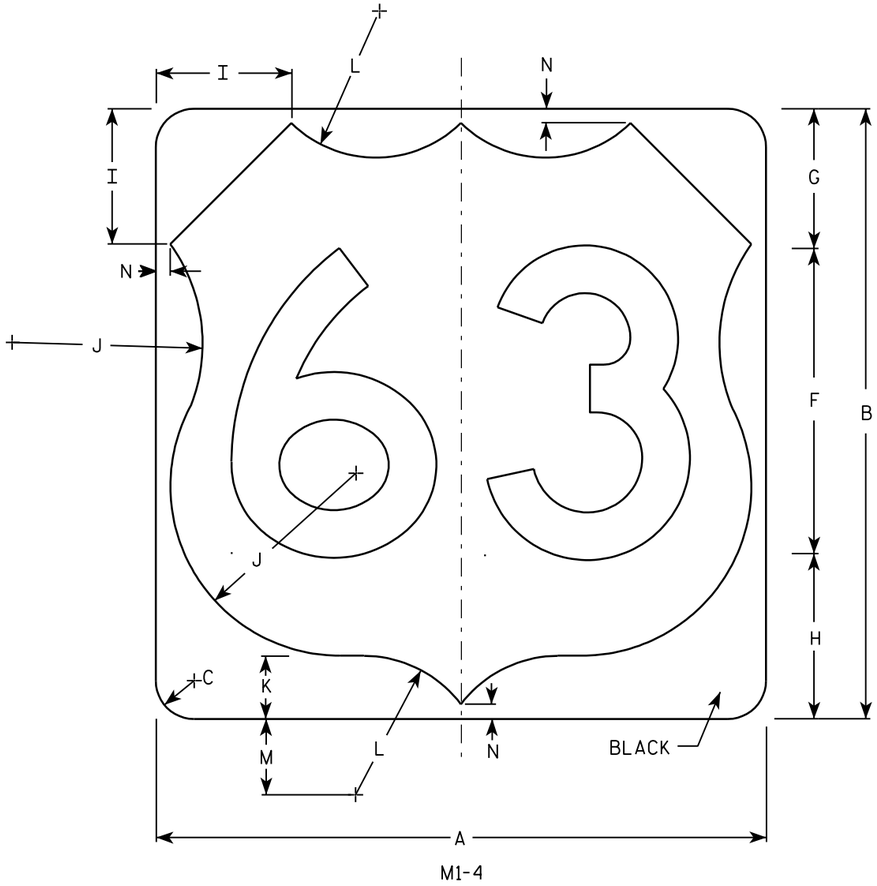
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

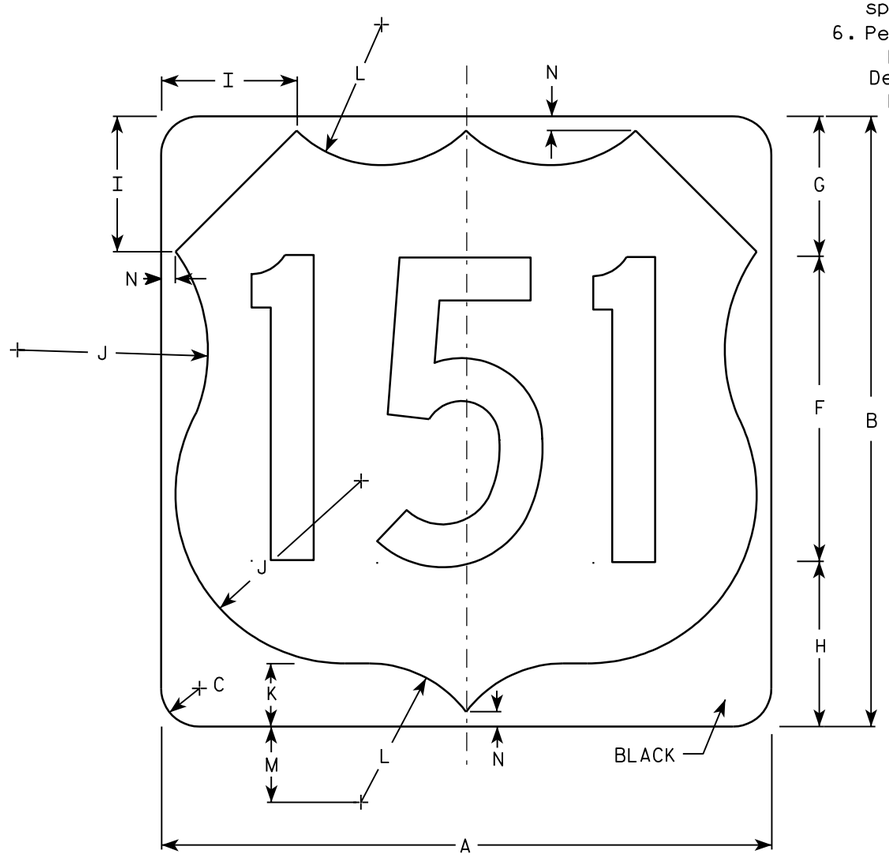
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 415	E

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   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. Substitute appropriate numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective



M1-4



M1-4

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

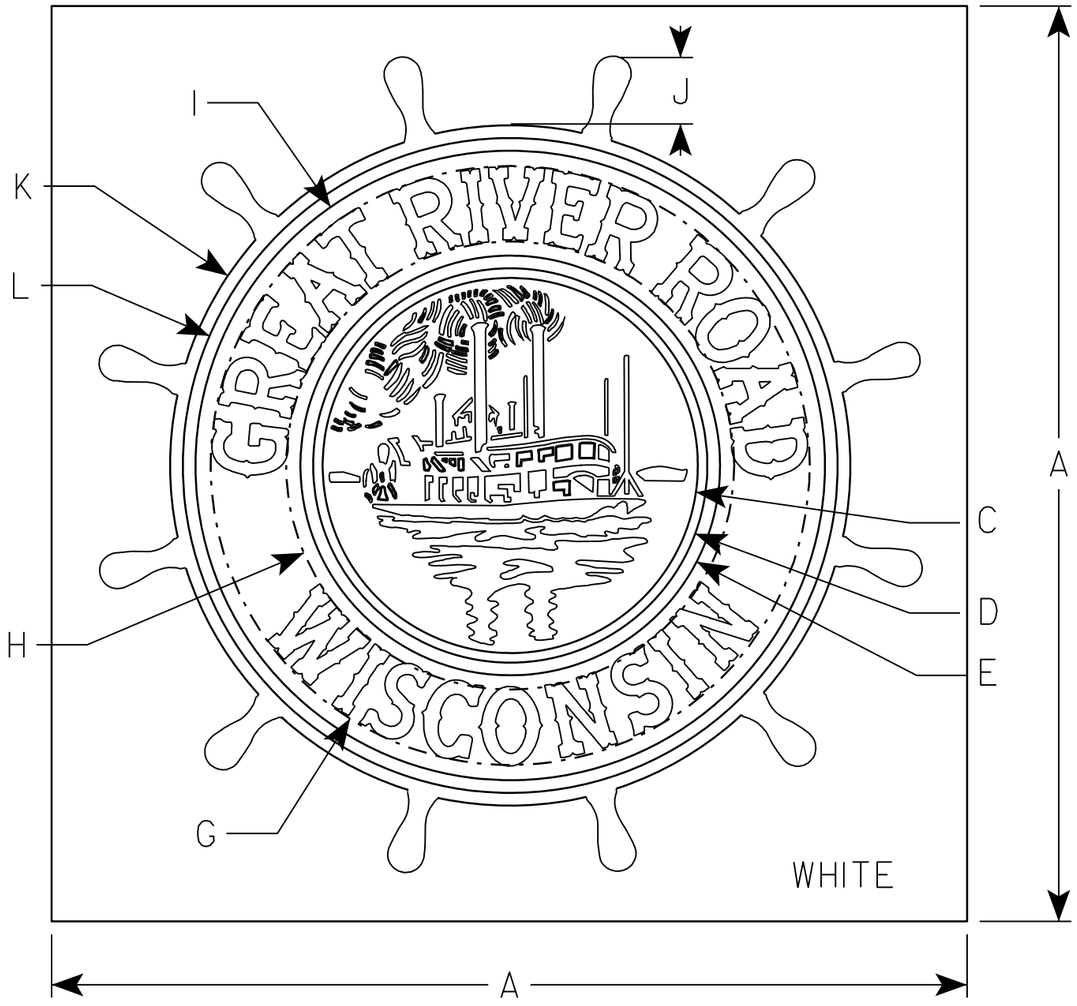
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

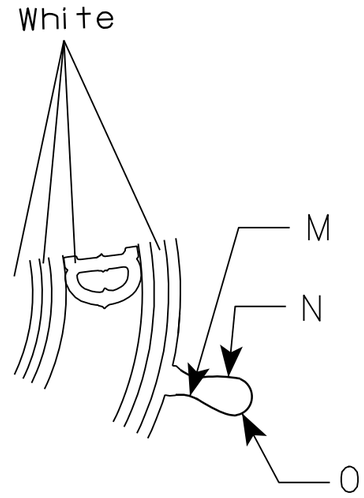
DATE 08/25/05 PLATE NO. M1-4.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 416 | E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Words - White - Graphics - Green
3. Message Series - Special
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		R 5	R 5 1/4	R 5 1/2		R 7 1/8	R 5 1/8	R 8 1/2	1 3/4	R 4 1/2	R 8 1/2	R 7/8	R 3 1/2	R 1/2												4.0
3																											
4	36		R 7 3/8	R 7 3/4	R 8 1/4		R 11 3/4	R 8 3/4	R 12 3/8	2 5/8	R 13 3/8	R 12 7/8	R 1 3/8	R 5 1/4	R 3/4												9.0
5																											

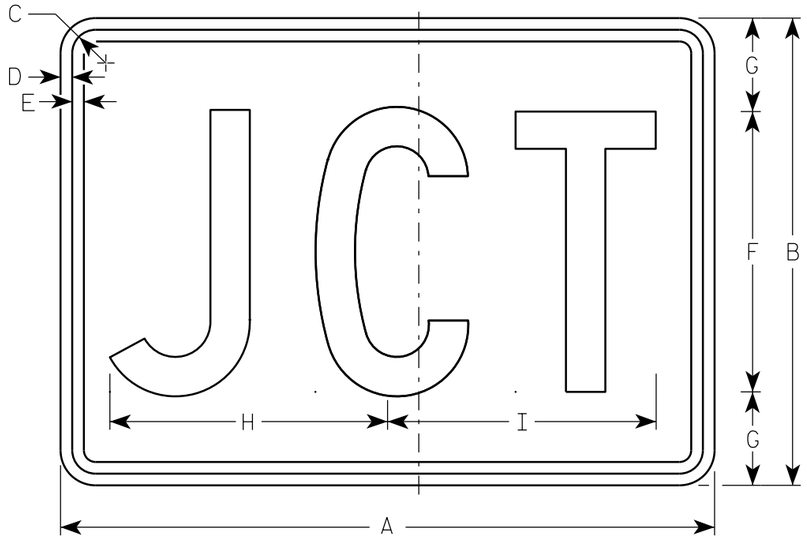
STANDARD SIGN
M1-96

WISCONSIN DEPT OF TRANSPORTATION

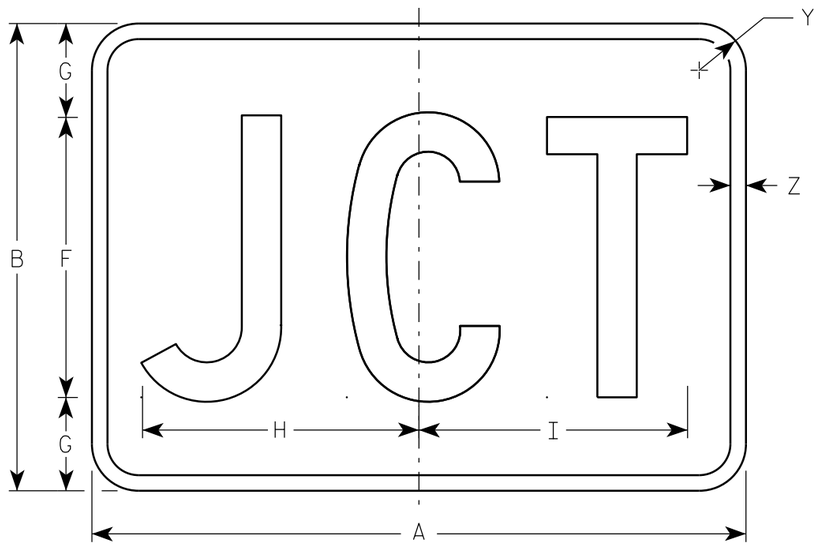
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/23/10 PLATE NO. M1-96.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 417	E



M2-1
MK2-1
MM2-1
MN2-1
MR2-1



MB2-1

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

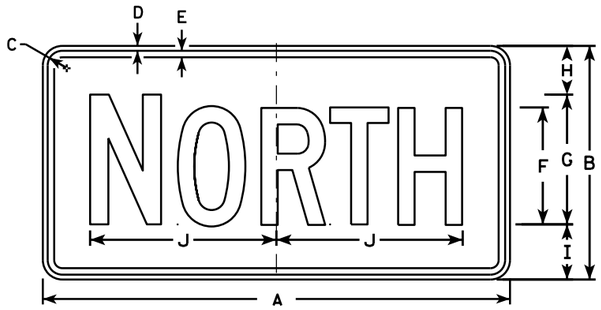
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

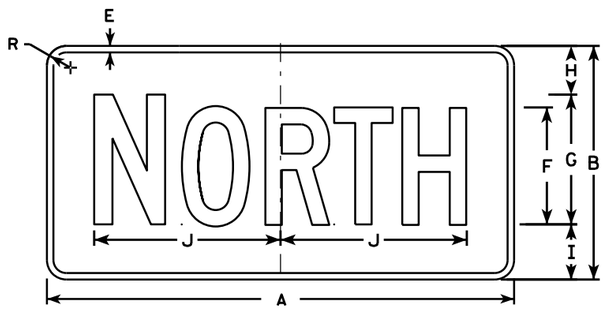
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/30/14 PLATE 418 12-1.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



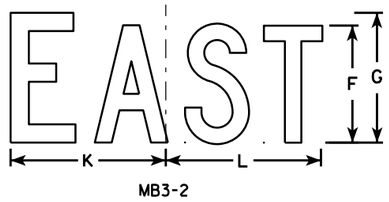
M3-1
MK3-1
MM3-1
MN3-1



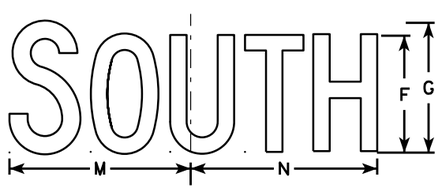
MB3-1



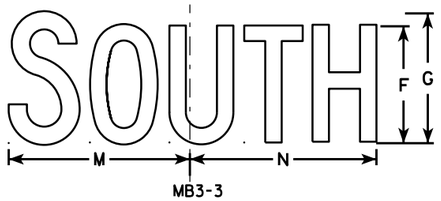
M3-2
MK3-2
MM3-2
MN3-2



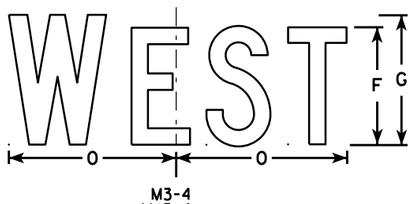
MB3-2



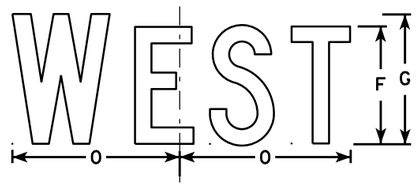
M3-3
MK3-3
MM3-3
MN3-3



MB3-3



M3-4
MK3-4
MM3-4
MN3-4



MB3-4

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
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

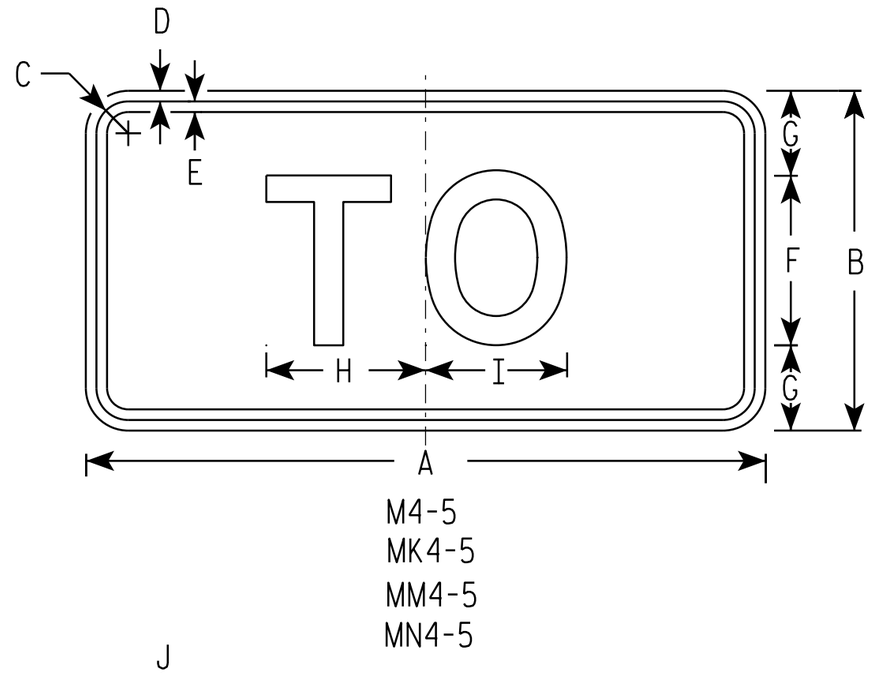
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

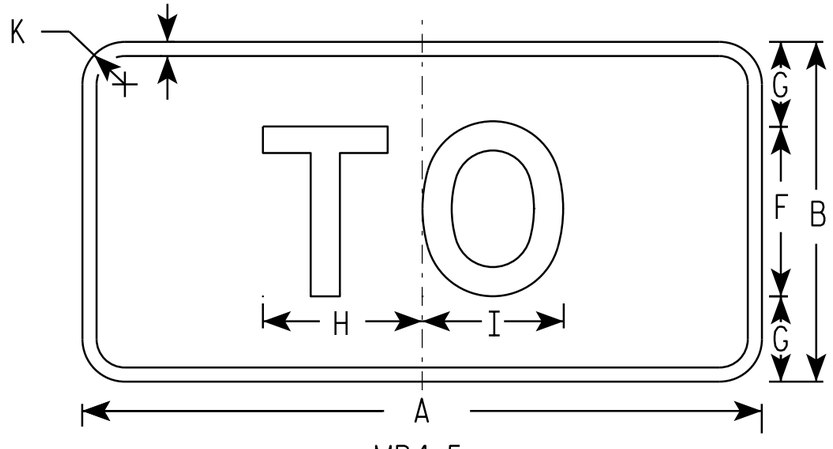
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/30/14 PLATE NO M3-1.13

PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E



M4-5
MK4-5
MM4-5
MN4-5



MB4-5

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-5

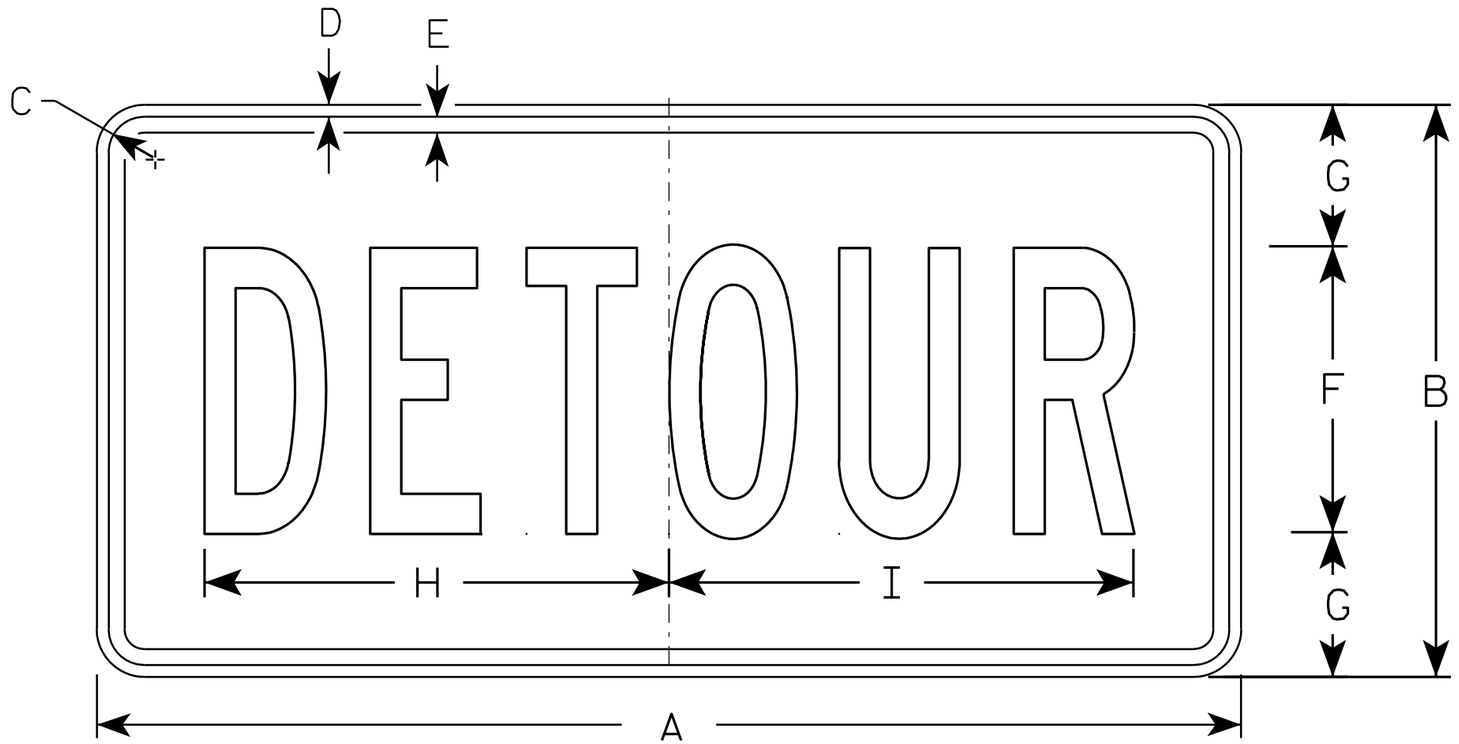
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE M4-5.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M45.DGN PLOT DATE : 30-JUN-2014 12:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.351066:1.000000
WISDOT/CADDS SHEET 42



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

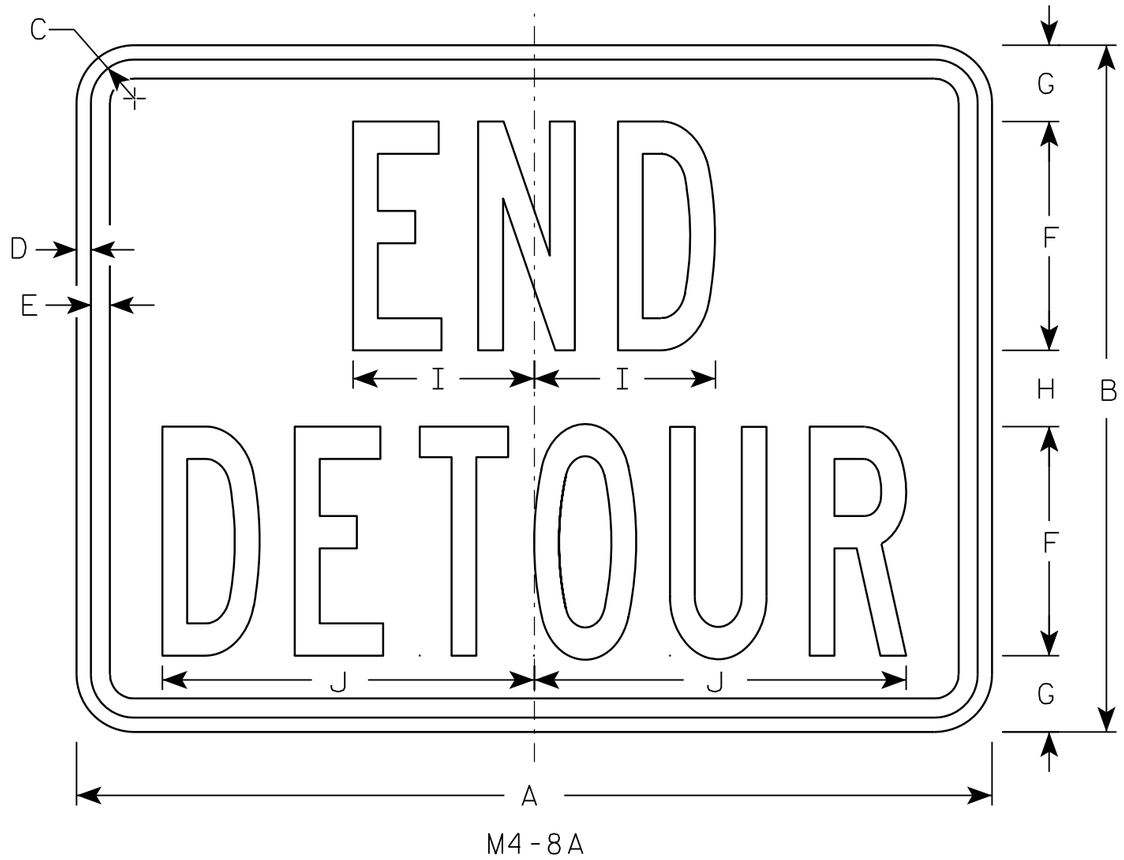
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 421	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

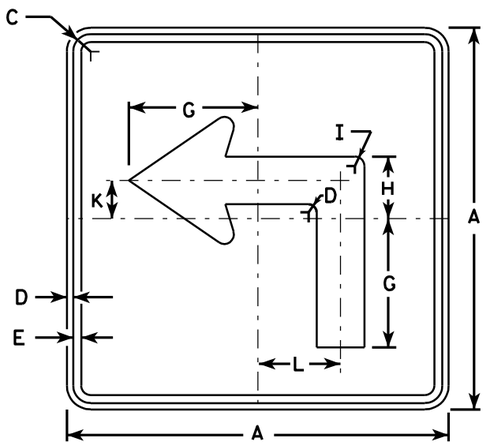
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

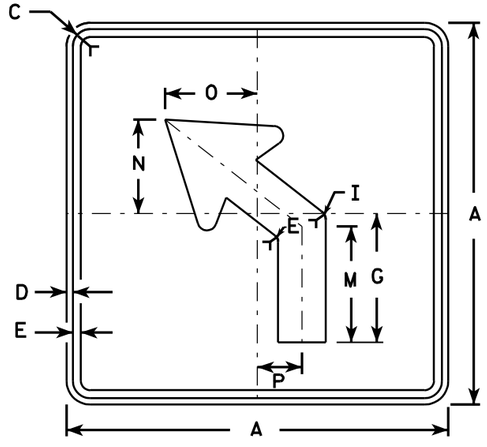
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

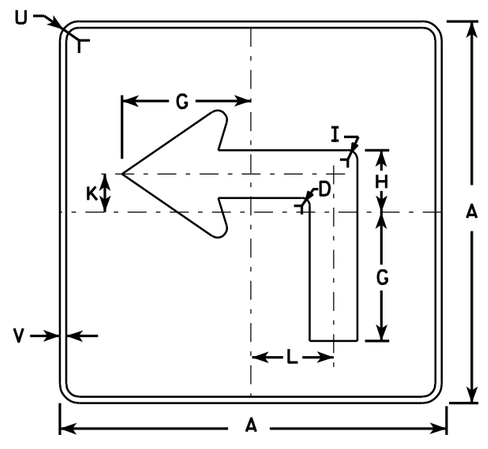
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 422	E



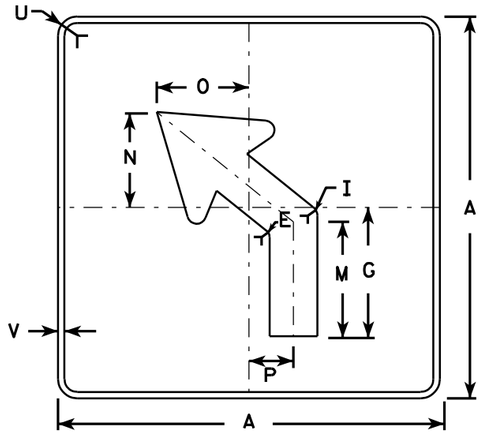
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



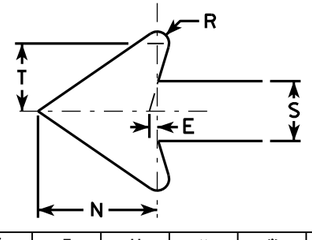
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White - Type H Reflective
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H Reflective
   MG5-1 and MG5-2 Background - Green
   Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green
   Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White - Type H Reflective
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

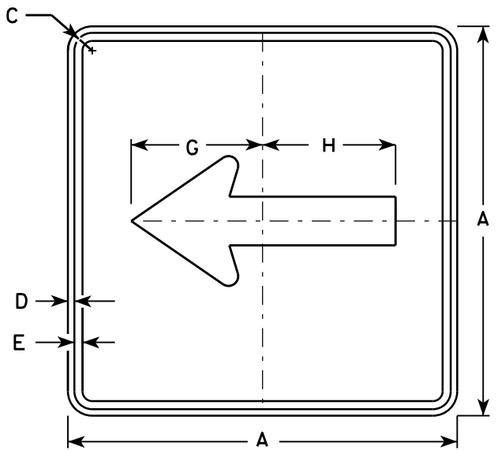
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

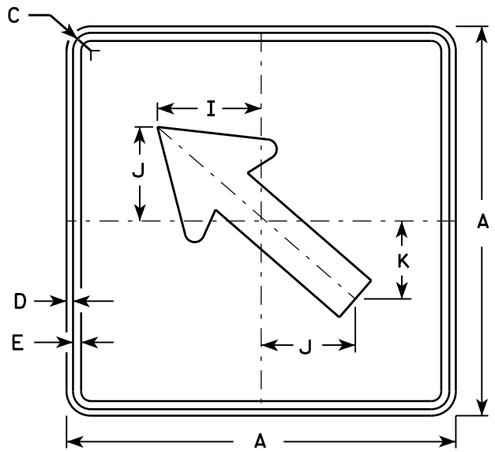
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 423	E



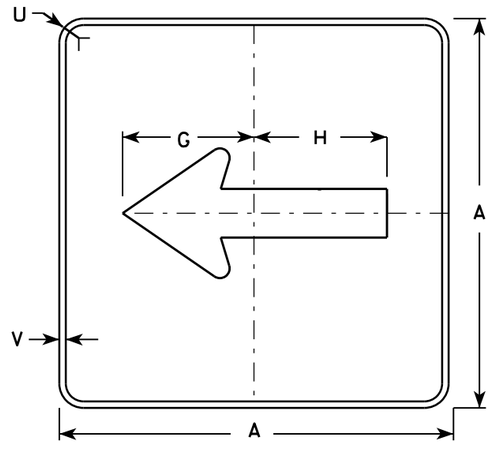
M6-1
MK6-1
MM6-1
MN6-1
MO6-1
MP6-1
MR6-1



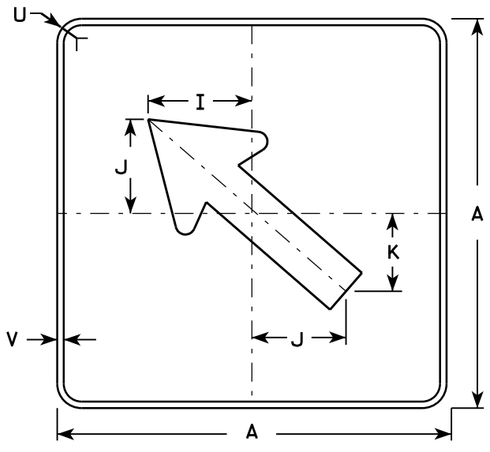
M6-2
MK6-2
MM6-2
MN6-2
MO6-2
MP6-2
MR6-2

NOTES

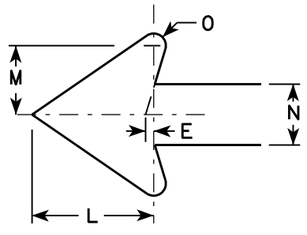
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MG6-1 and MG6-2 Background - Green
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1



MB6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

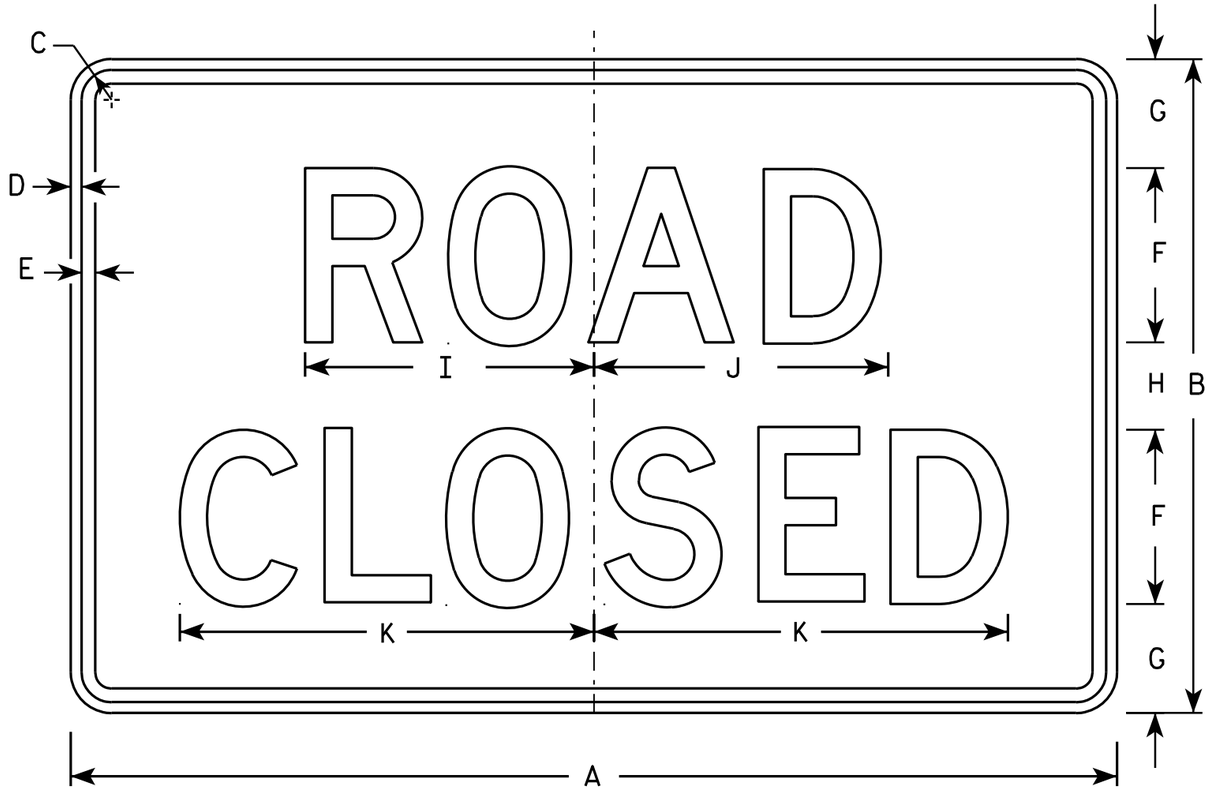
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/03/14 PLATE 424 M6-1.14

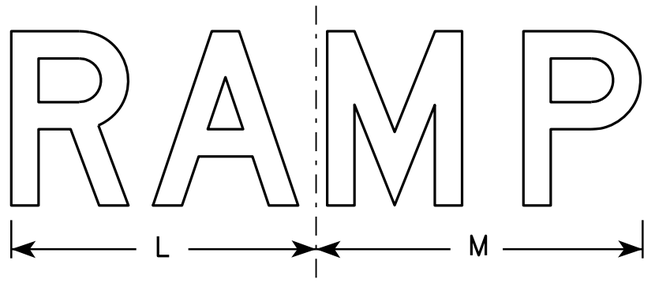
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



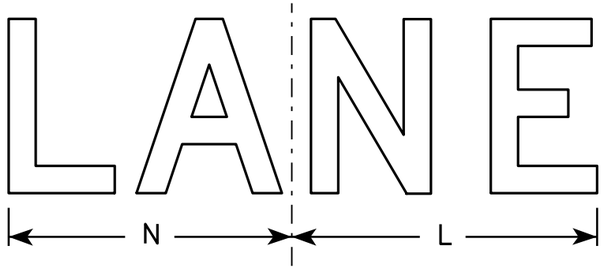
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

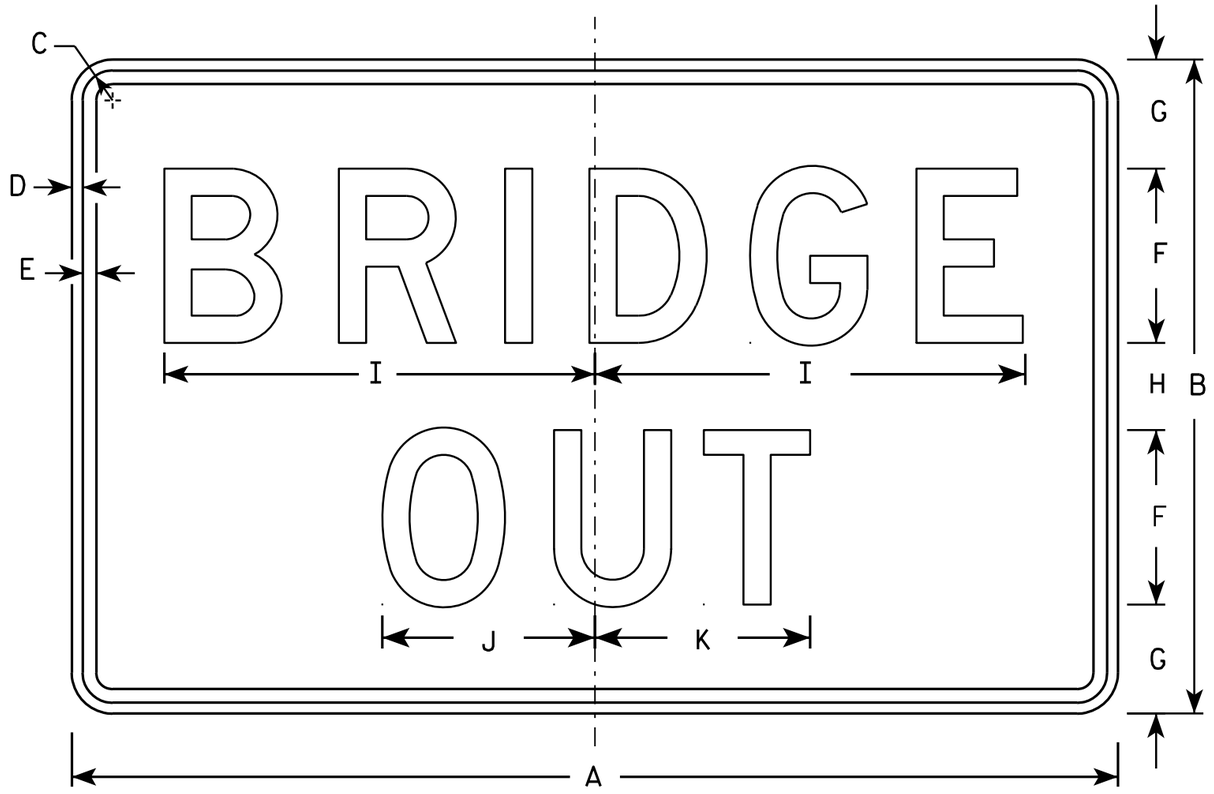
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 425	E



R11-2B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

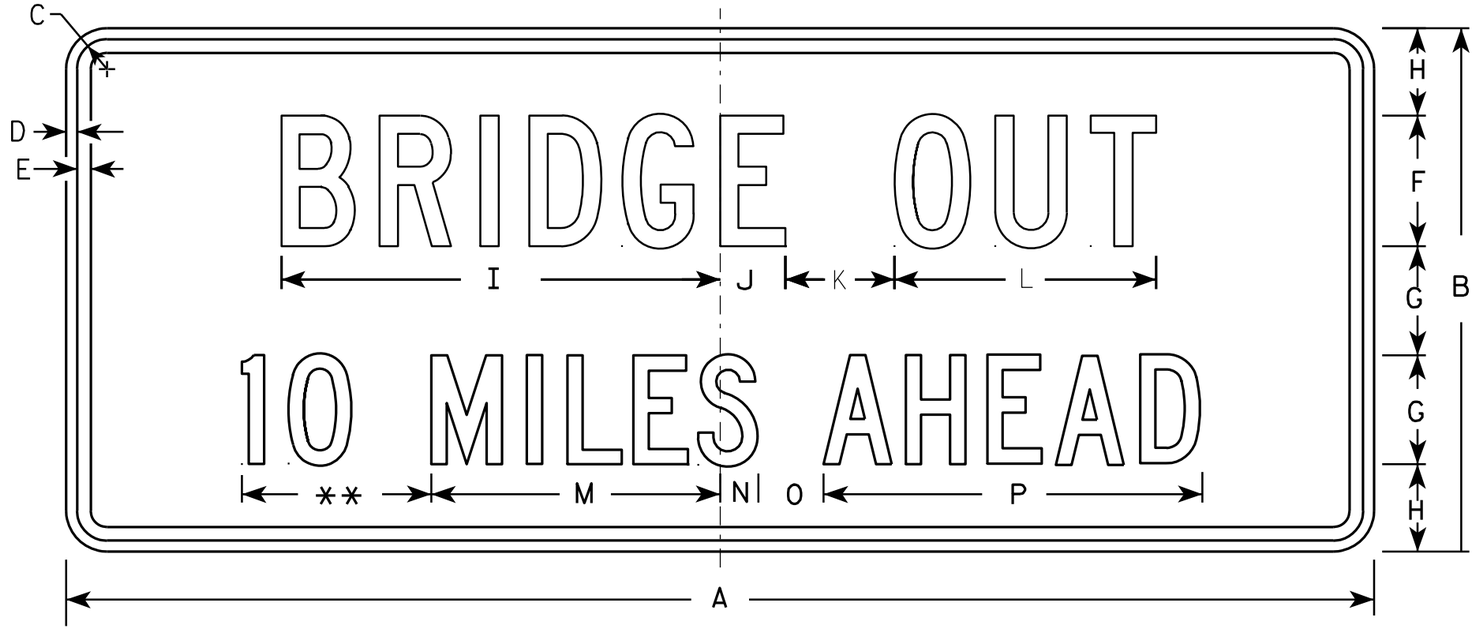
DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO:

SHEET NO: 426 E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112B.DGN PLOT DATE : 01-APR-2011 14:23 PLOT BY : mscj9h



R11-3C

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - 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 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	15	1 3/8	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4											3.75
2S	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8											10.0
2M	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8											10.0
3																											
4																											
5																											

STANDARD SIGN
R11-3C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-3C.2

PROJECT NO:

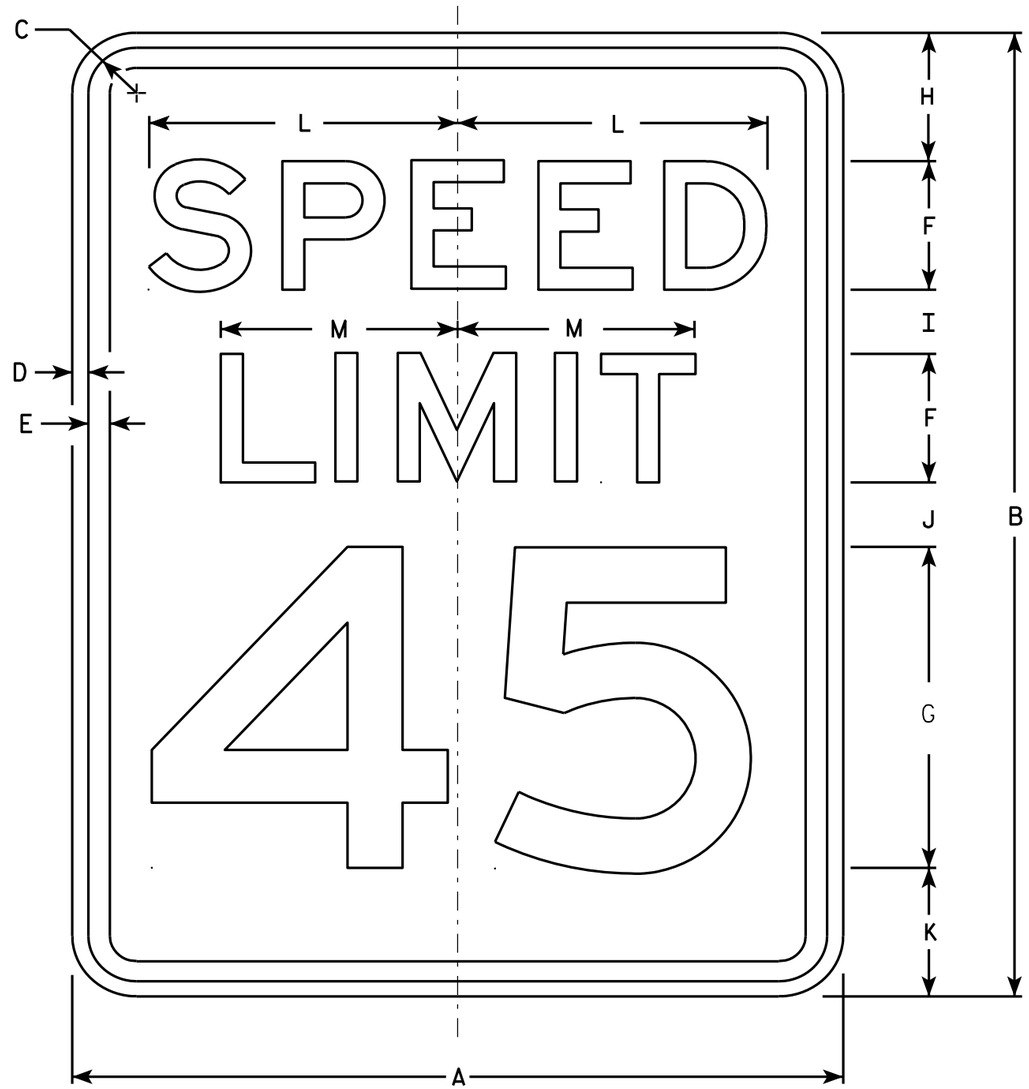
SHEET NO: 427 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R113C.DGN PLOT DATE : 01-APR-2011 14:15 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

7

7



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

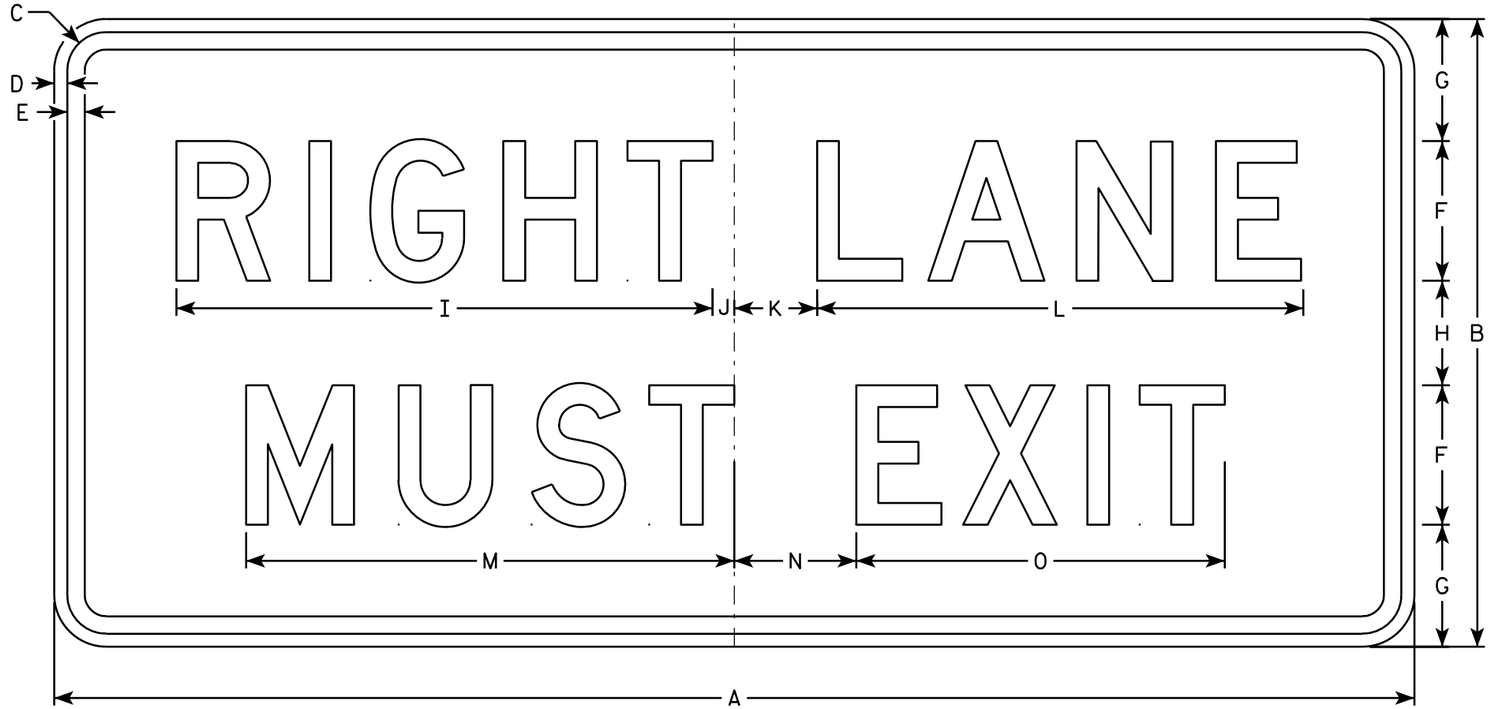
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

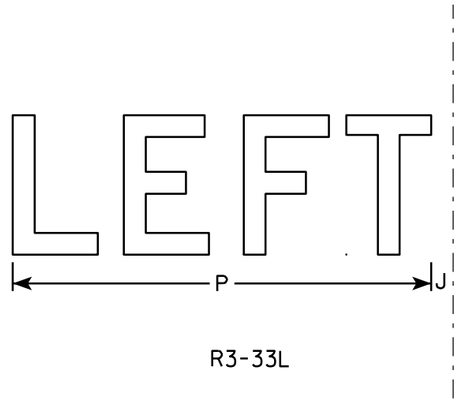
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 428 | E



R3-33R



R3-33L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	78	36	2 1/4	3/4	1	8	7	6	30 3/4	1 1/4	4 3/4	27 7/8	28	7	21 1/8	24											19.5
5	78	36	2 1/4	3/4	1	8	7	6	30 3/4	1 1/4	4 3/4	27 7/8	28	7	21 1/8	24											19.5

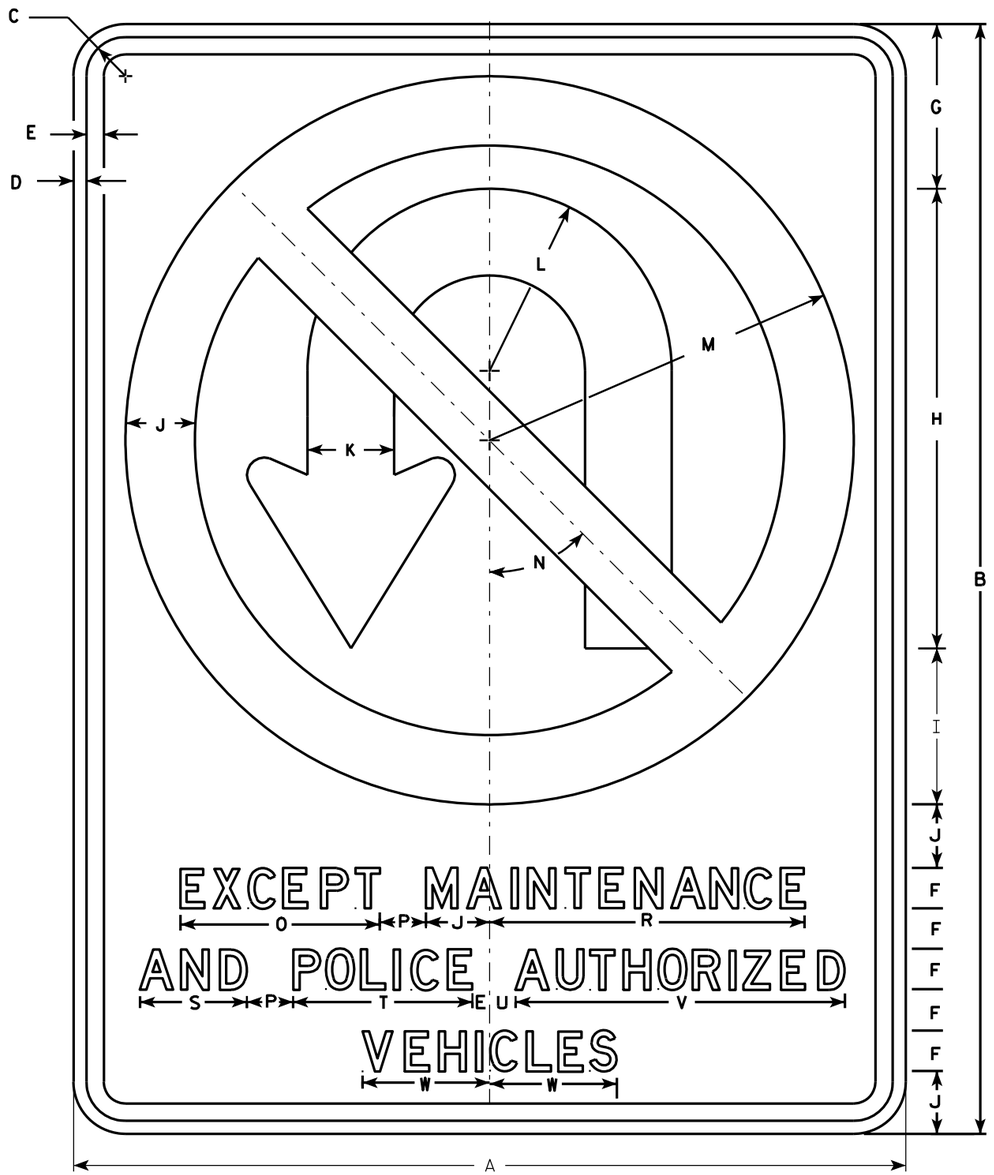
STANDARD SIGN
R3-33

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/7/10 PLATE NO. R3-33.1

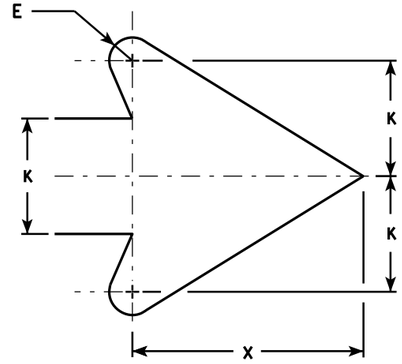
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 429 | E



R3-4B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0
5	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0

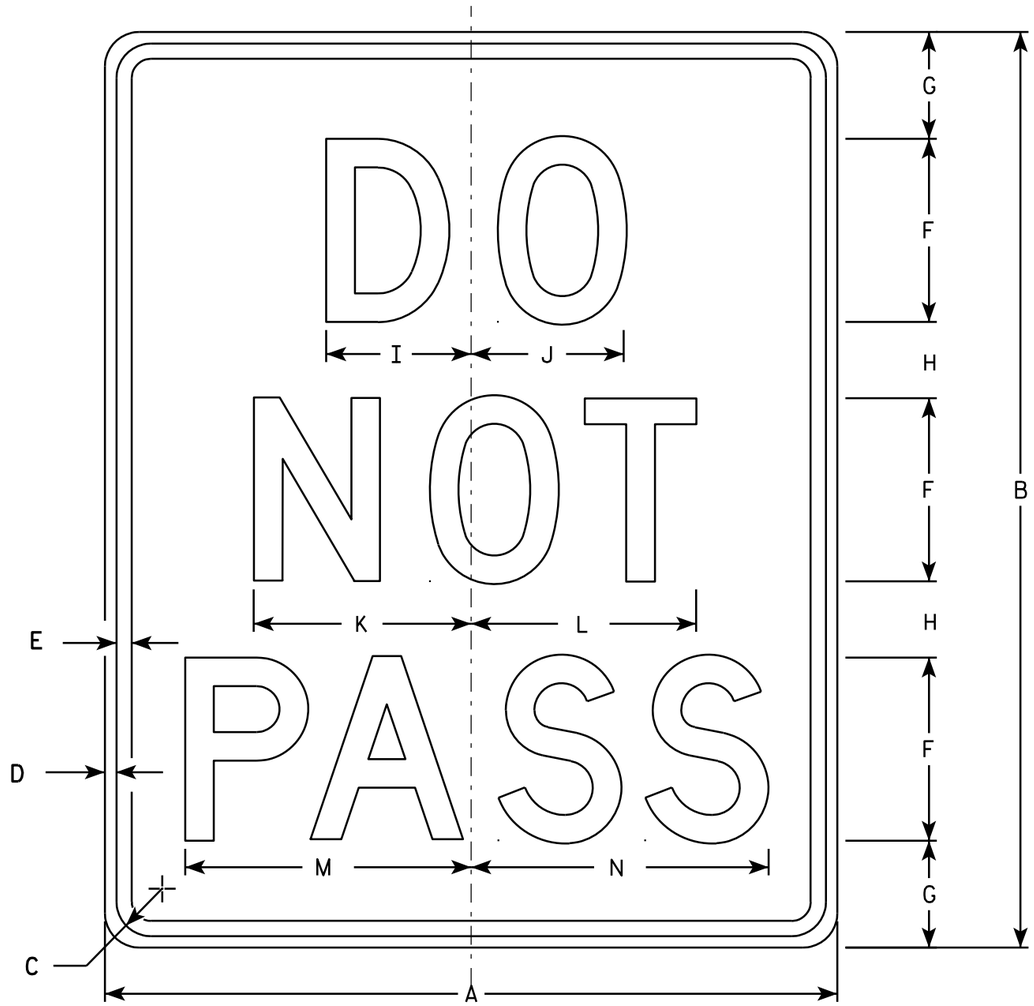
STANDARD SIGN
R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 430	E



R4-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 1/8	3 1/4	4 3/4	4 7/8	6 1/4	6 1/2													3.0
2S	24	30	1 1/8	3/8	1/2	6	3 1/2	2 1/2	4 3/4	5	7 1/8	7 3/8	9 3/8	9 3/4													5.0
2M	24	30	1 1/8	3/8	1/2	6	3 1/2	2 1/2	4 3/4	5	7 1/8	7 3/8	9 3/8	9 3/4													5.0
3																											
4	36	48	1 5/8	5/8	3/4	8	7	5	6 1/4	6 5/8	9 1/2	9 3/4	12 1/2	13													12.0
5	48	60	2 1/4	3/4	1	10	8	7	7 3/4	8 3/8	11 7/8	12 1/4	15 5/8	16 1/4													20.0

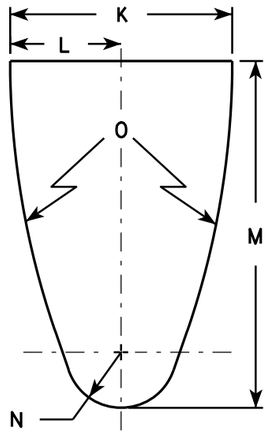
STANDARD SIGN
R4-1

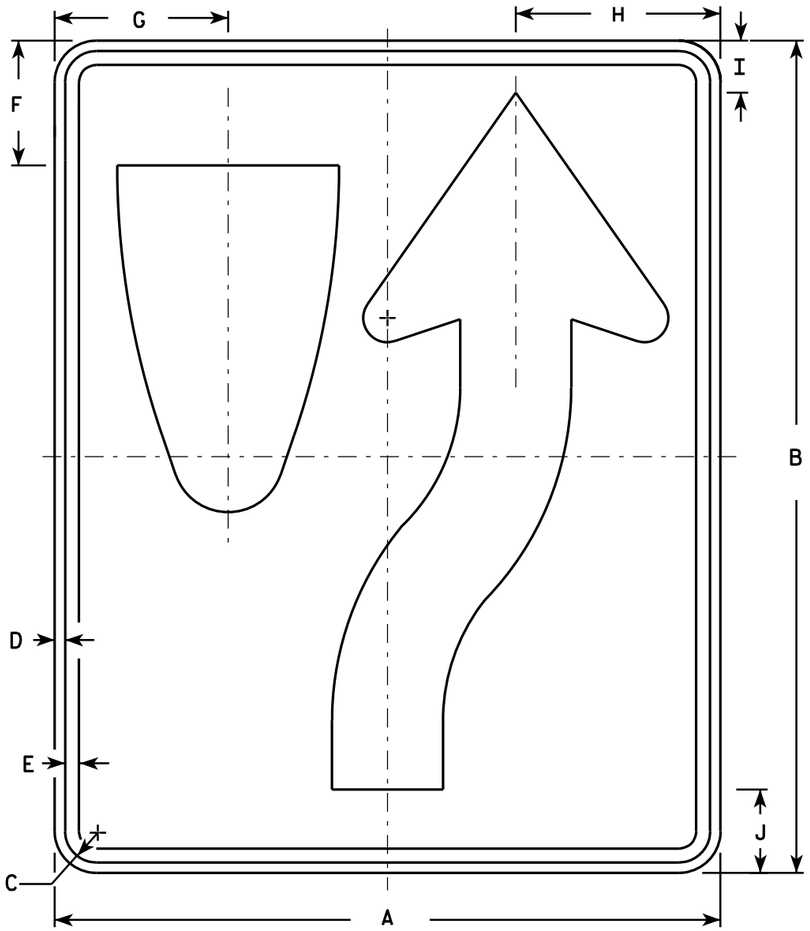
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-1.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 431 | E

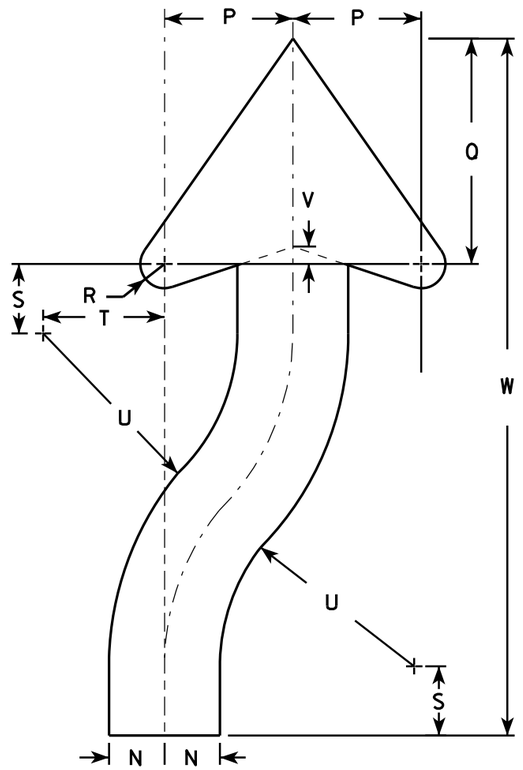




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



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	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

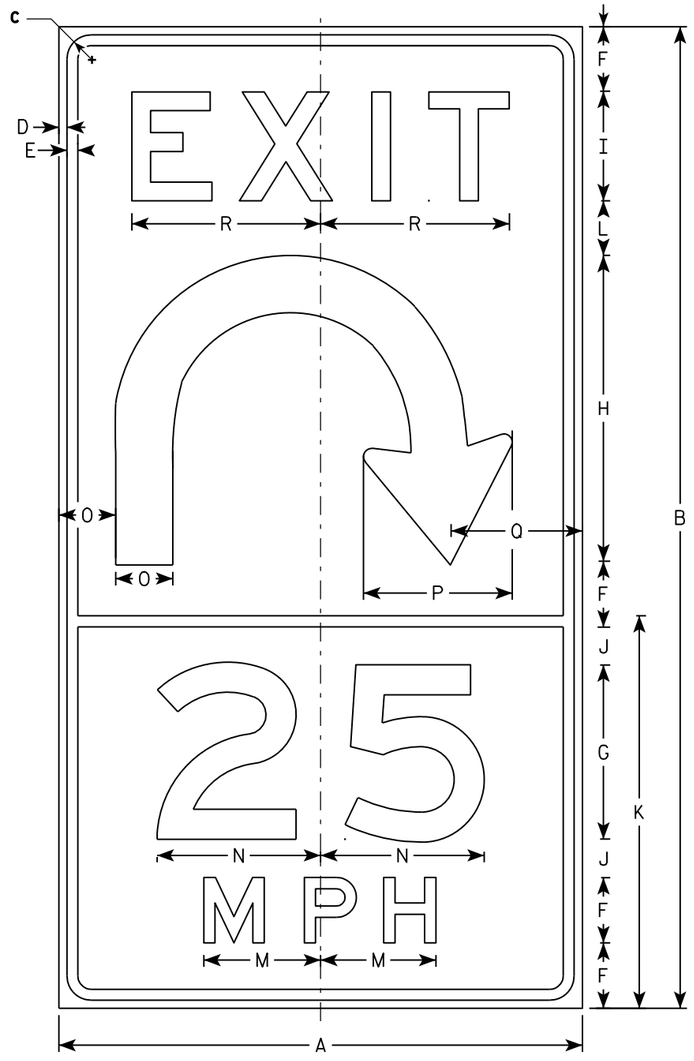
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 432	E



W13-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	90	2 1/4	3/4	1	6	16	28	10	3 1/2	36	5	10 3/4	15	5 1/4	13 5/8	12	17 3/8									30
2M	48	90	2 1/4	3/4	1	6	16	28	10	3 1/2	36	5	10 3/4	15	5 1/4	13 5/8	12	17 3/8									30
3																											
4																											
5																											

STANDARD SIGN
W13-2A

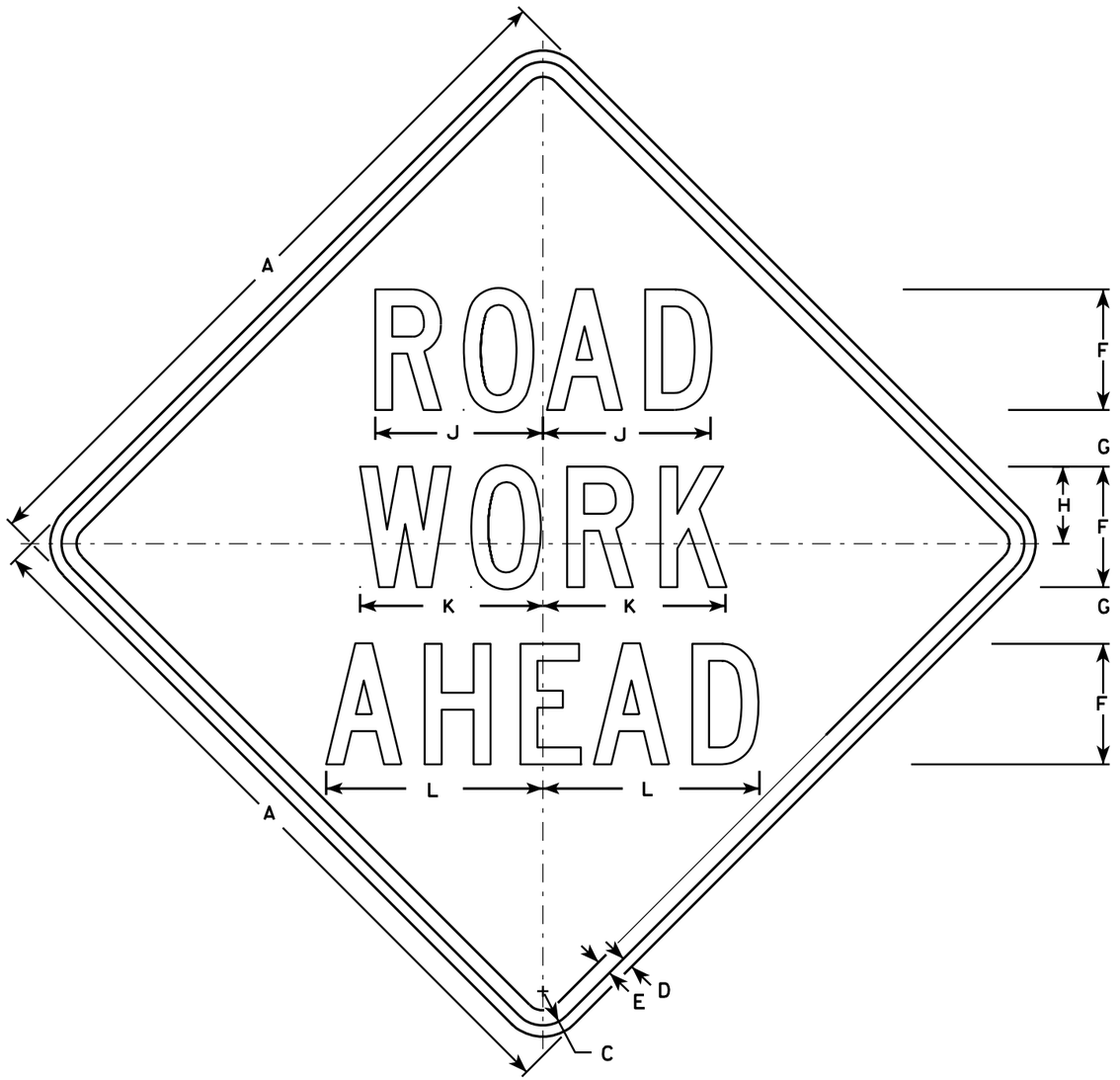
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

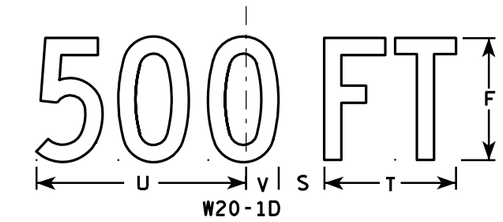
DATE 5/31/12 PLATE NO. W13-2A.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 433	E

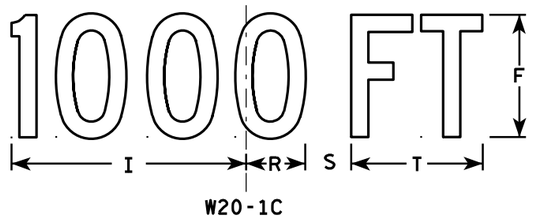
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W132A.DGN PLOT DATE : 31-MAY-2012 11:45 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.893311:1.000000 WISDOT/CADDS SHEET 42



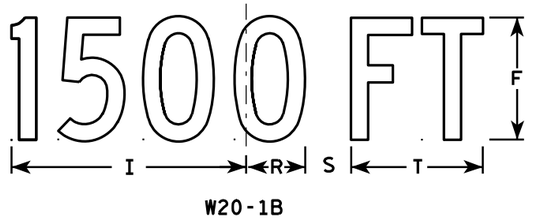
W20-1A



W20-1D



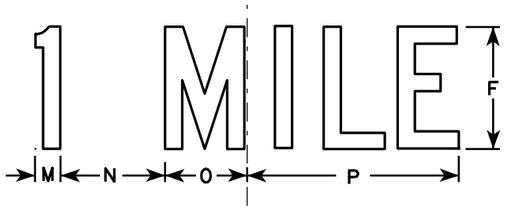
W20-1C



W20-1B



W20-1G



W20-1F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	1 7/8	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-1.9

PROJECT NO:

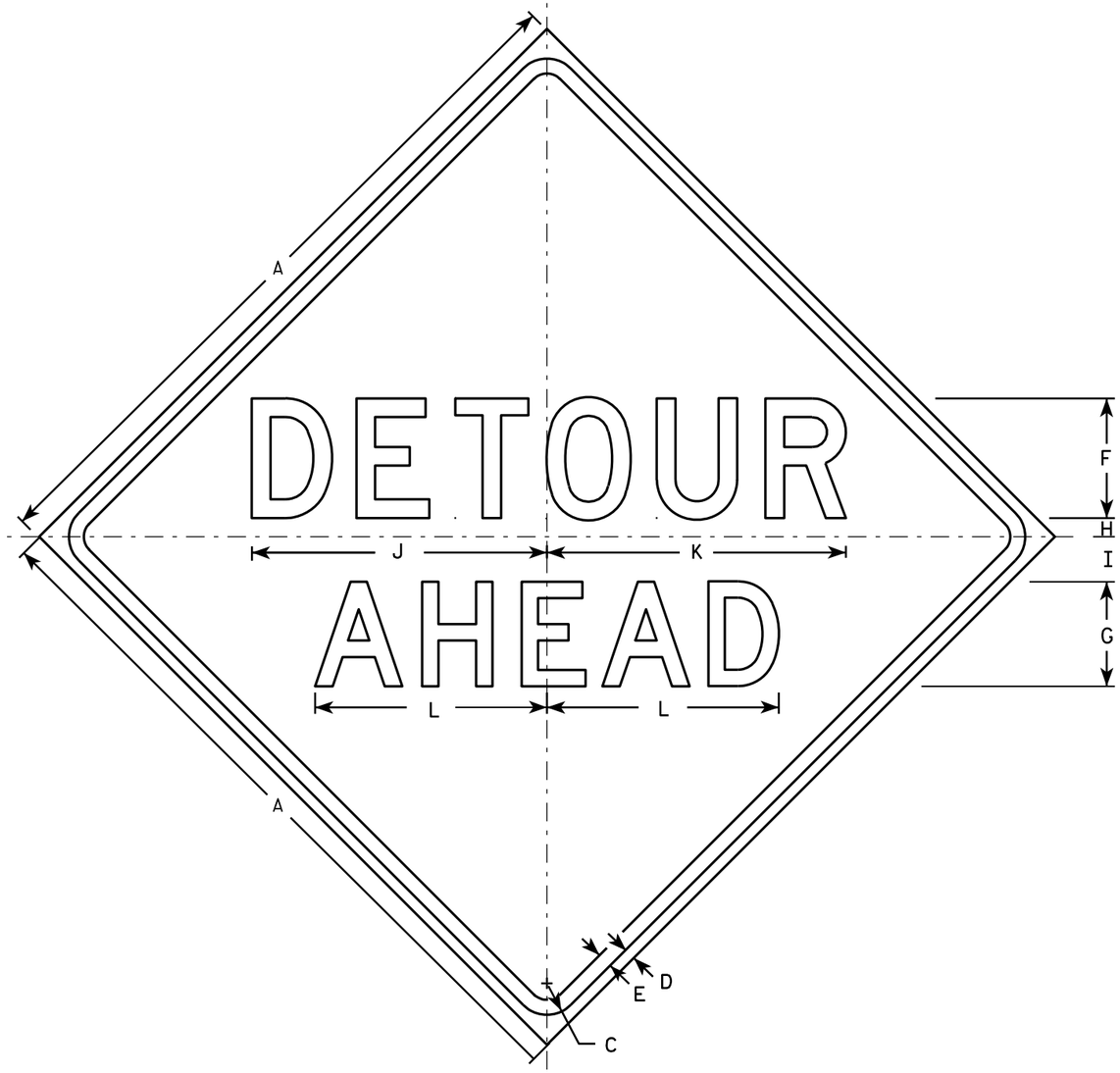
SHEET NO: 434 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W201.DGN PLOT DATE : 18-MAR-2011 09:56 PLOT BY : mscj9h

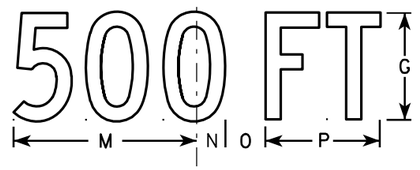
WISDOT/CADDS SHEET 42

7

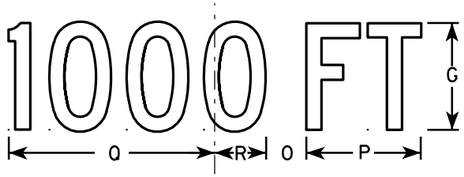
7



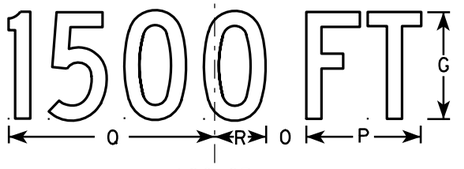
W20-2A



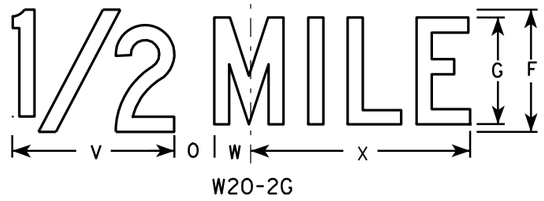
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

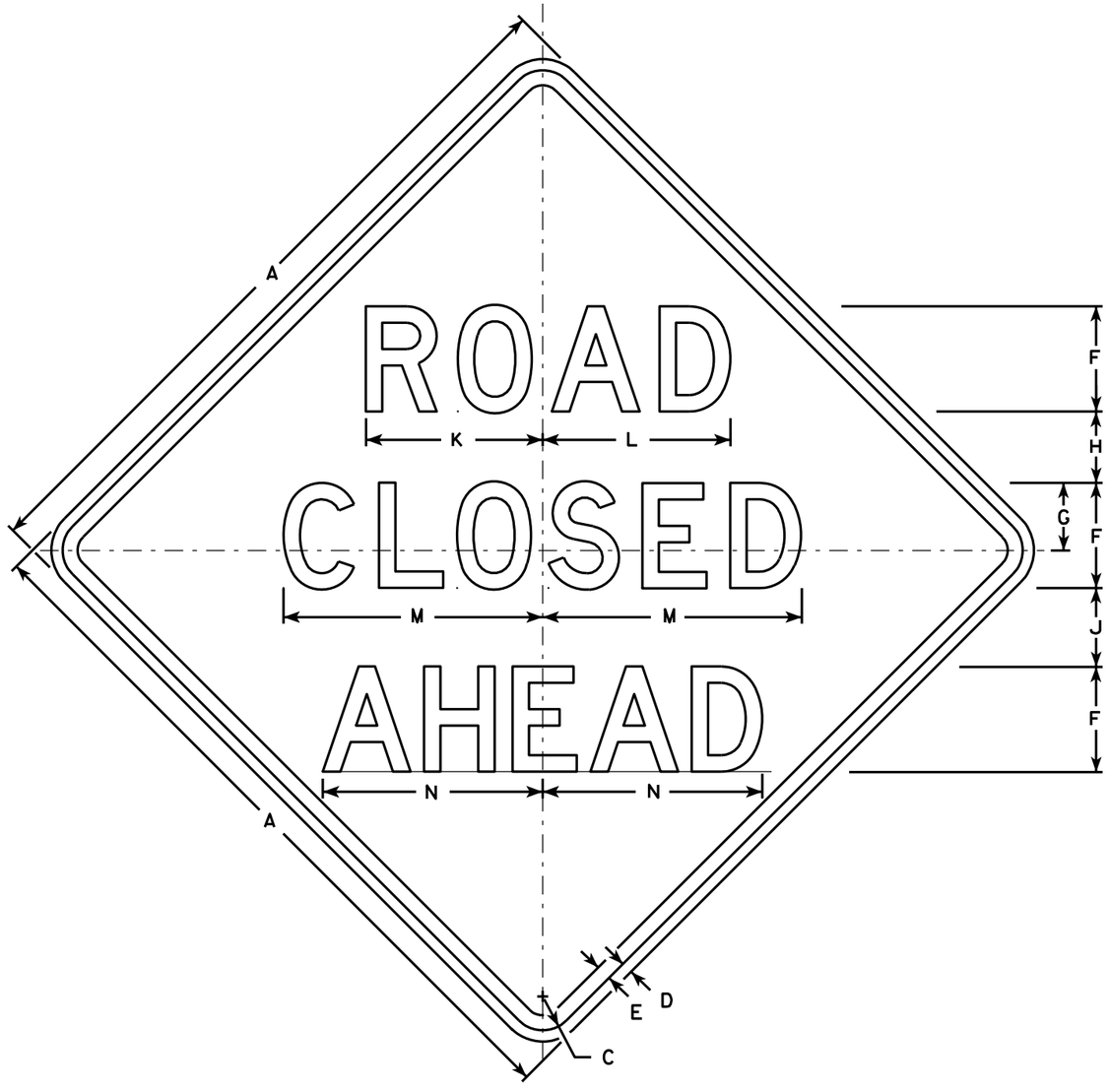
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

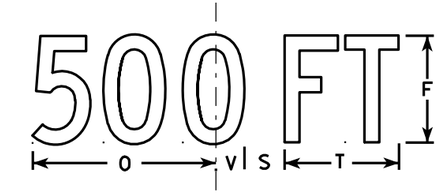
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

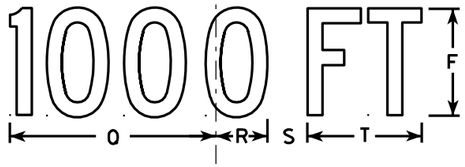
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 435 | E



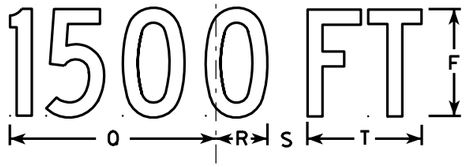
W20-3A



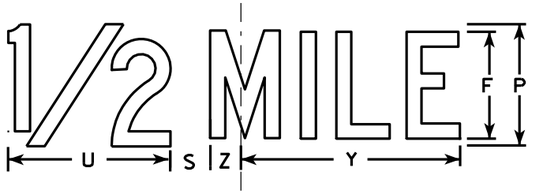
W20-3D



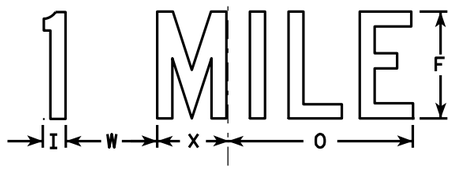
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

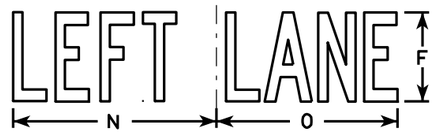
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

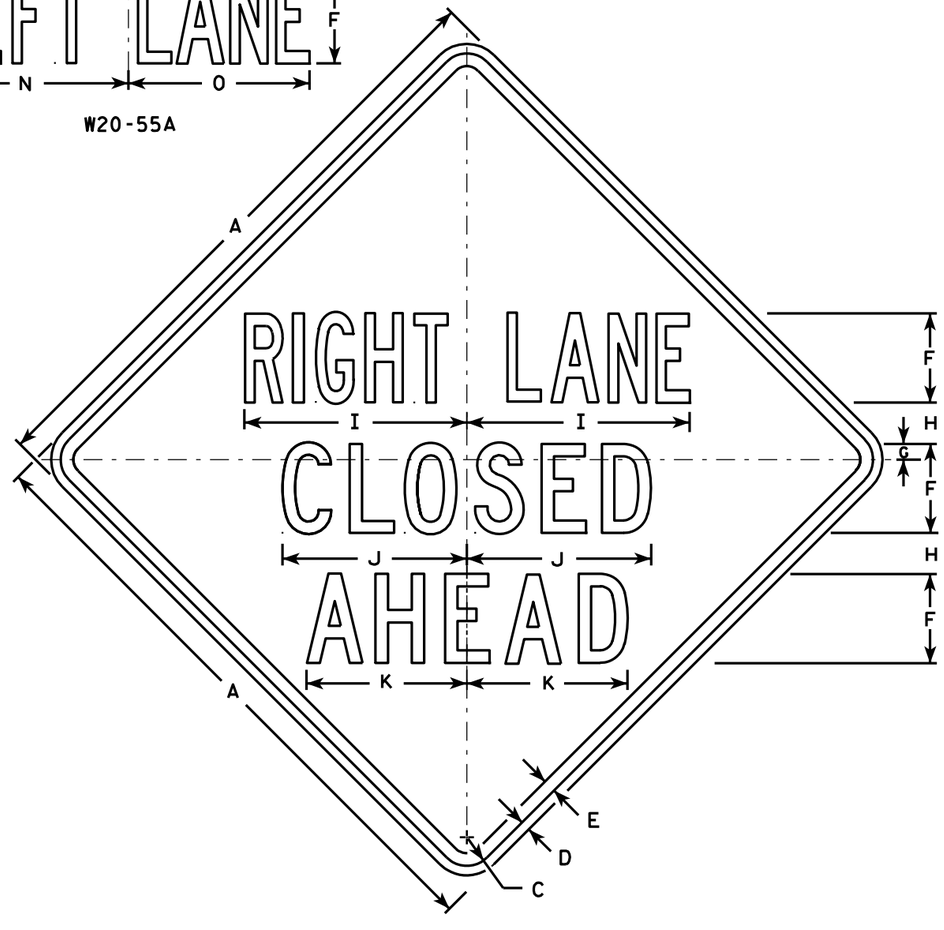
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 436 | E



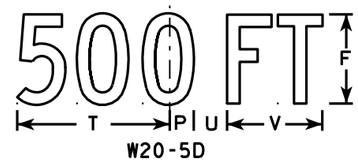
W20-56A



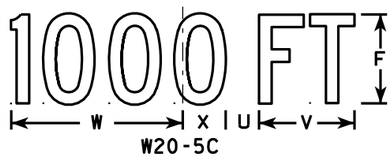
W20-55A



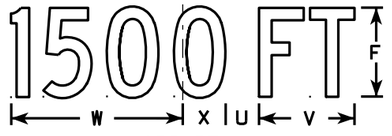
W20-5A



W20-5D



W20-5C



W20-5B



W20-5G



W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

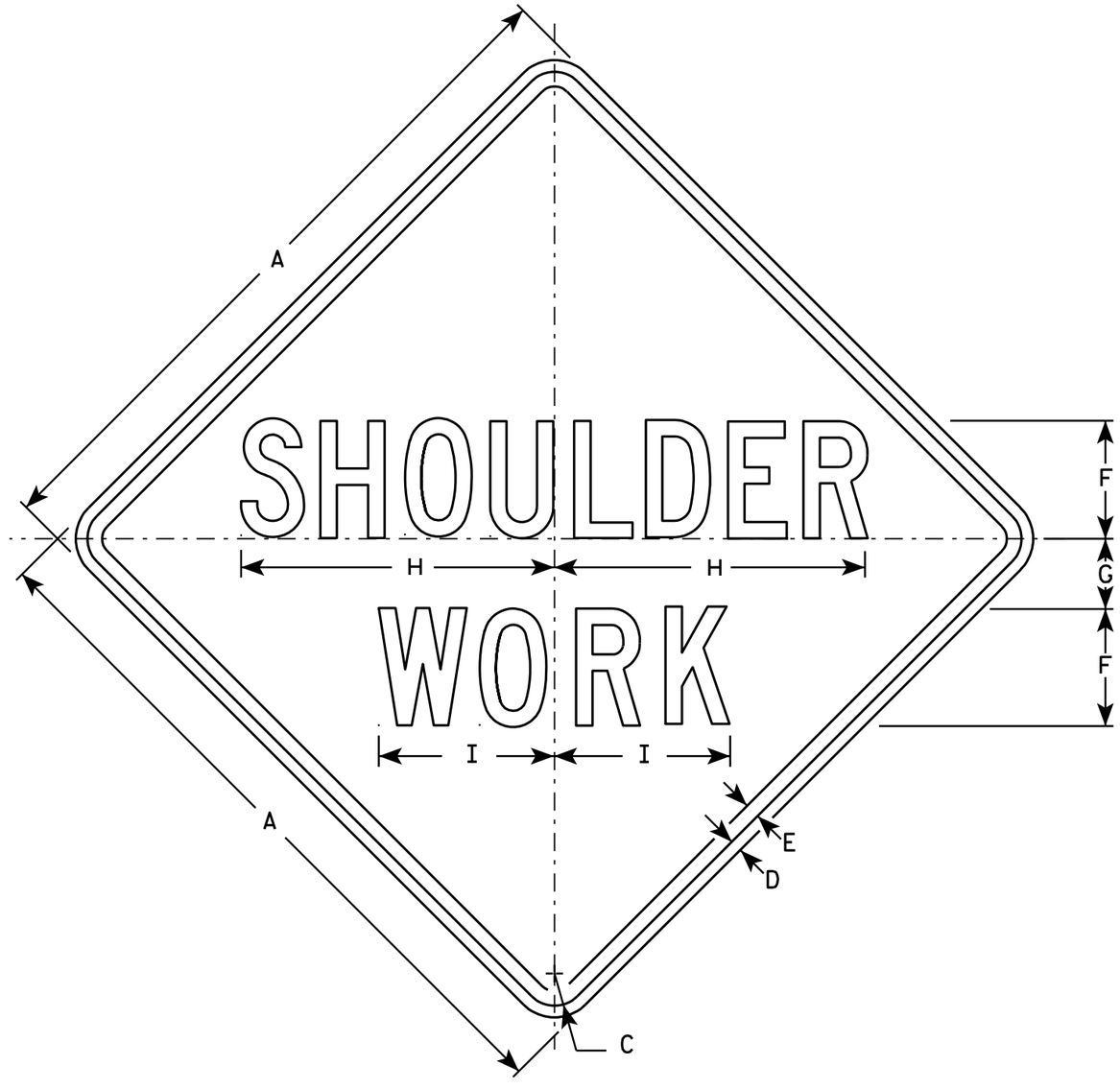
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 437	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



W21-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2 1/2	10 3/4	6																		4.0
2S	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

STANDARD SIGN
W21-5

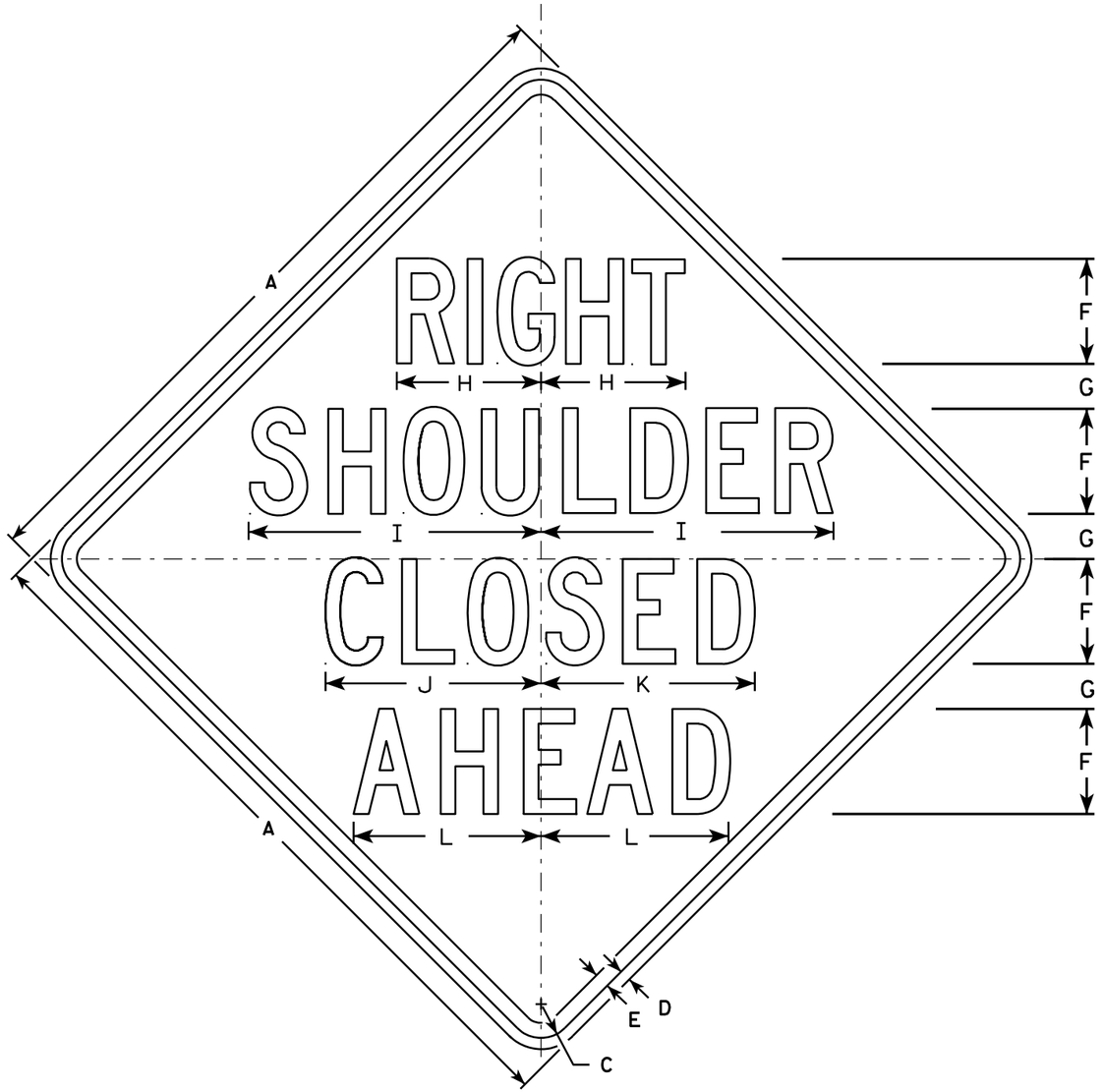
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

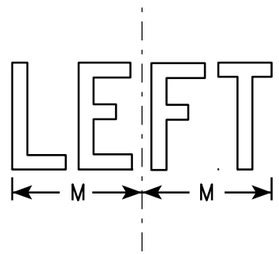
DATE 3/21/11 PLATE NO. W21-5.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 438 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W215.DGN PLOT DATE : 21-MAR-2011 08:01 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.207338:1.000000
WISDOT/CADDS SHEET 42



W21-5B



W21-5BL

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 1/4	7 3/8	14 1/4	10 1/4	10 1/8	8 7/8	6 1/4														9.0
2S	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0
2M	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0
3	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0
4	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0
5	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0

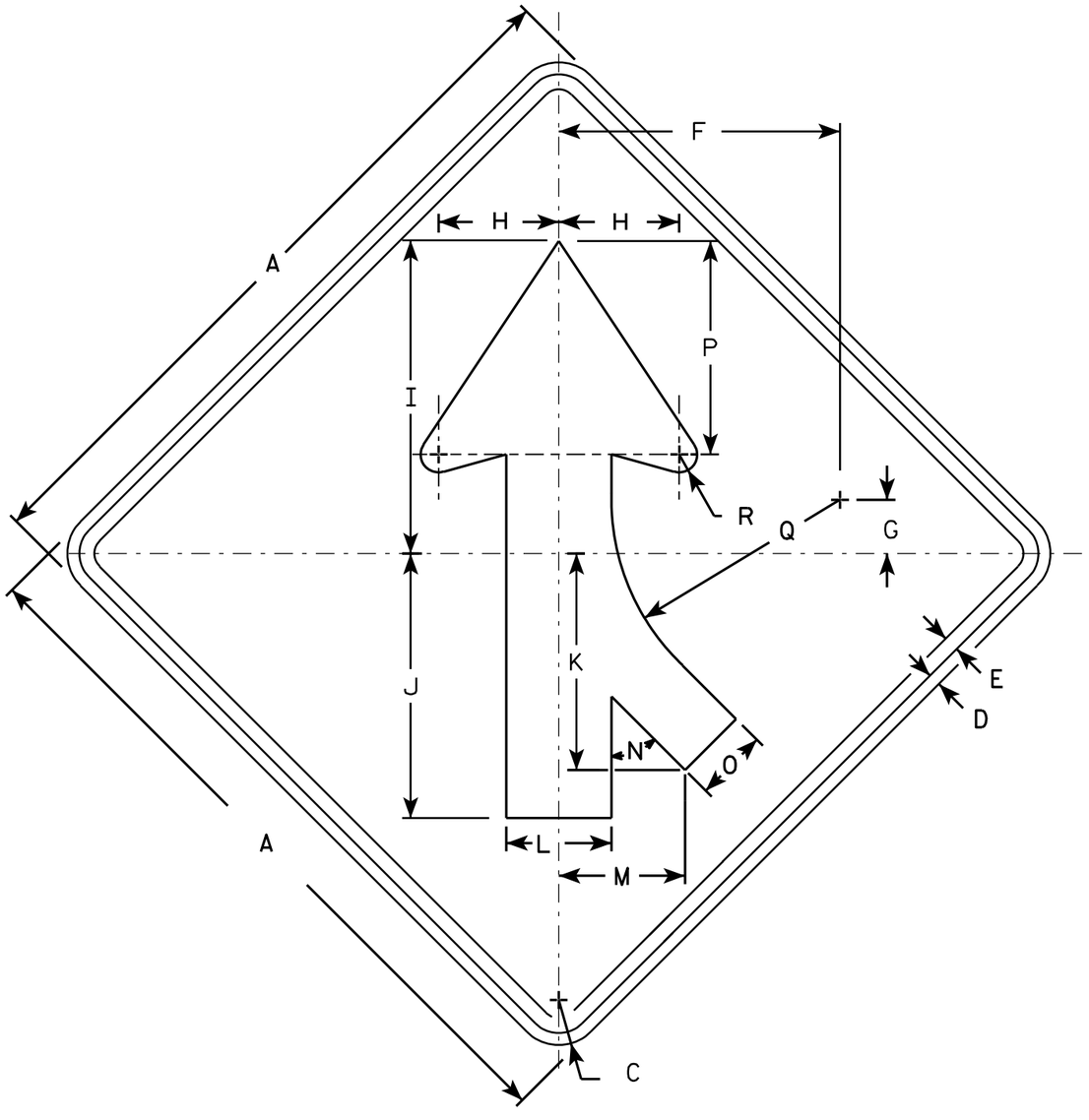
STANDARD SIGN
W21-5B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5B.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 439	E



W4-1 R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

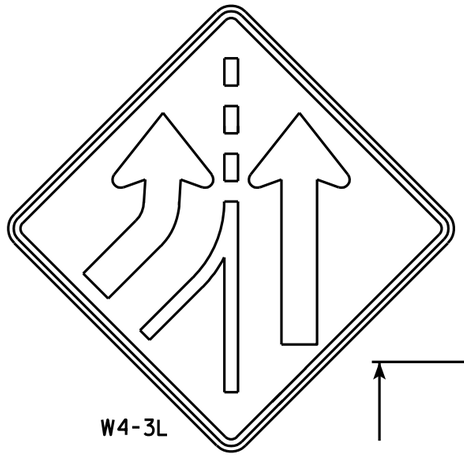
STANDARD SIGN
W4-1

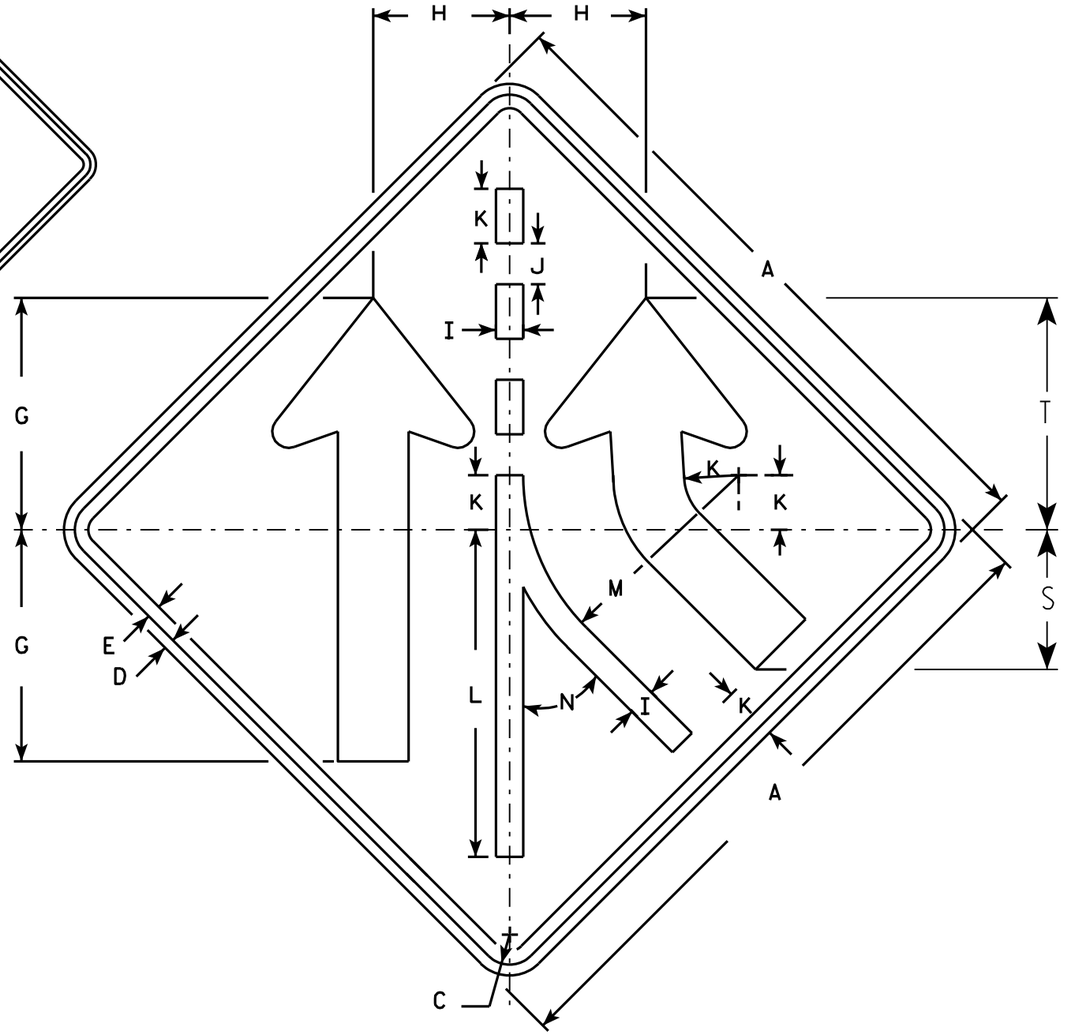
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rausch for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 440	E

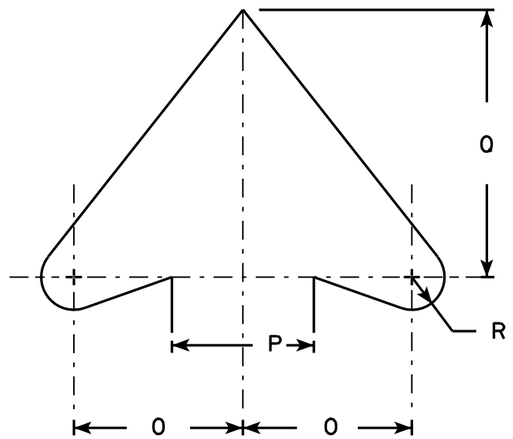




W4-3R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-3 L is the same as W4-3 R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		10 5/8	6 1/4	1 1/4	1 7/8	2 1/2	15	9 7/8	45°	3 7/8	3 1/4	6 1/8	3/4	6 3/8	10 5/8							6.25
2S	36		1 5/8	5/8	3/4		12 3/4	7 1/2	1 1/2	2 1/4	3	18	11 7/8	45°	4 5/8	4	7 3/8	7/8	7 3/4	12 3/4							9.0
2M	36		1 5/8	5/8	3/4		12 3/4	7 1/2	1 1/2	2 1/4	3	18	11 7/8	45°	4 5/8	4	7 3/8	7/8	7 3/4	12 3/4							9.0
3																											
4	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
5	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0

STANDARD SIGN
W4-3

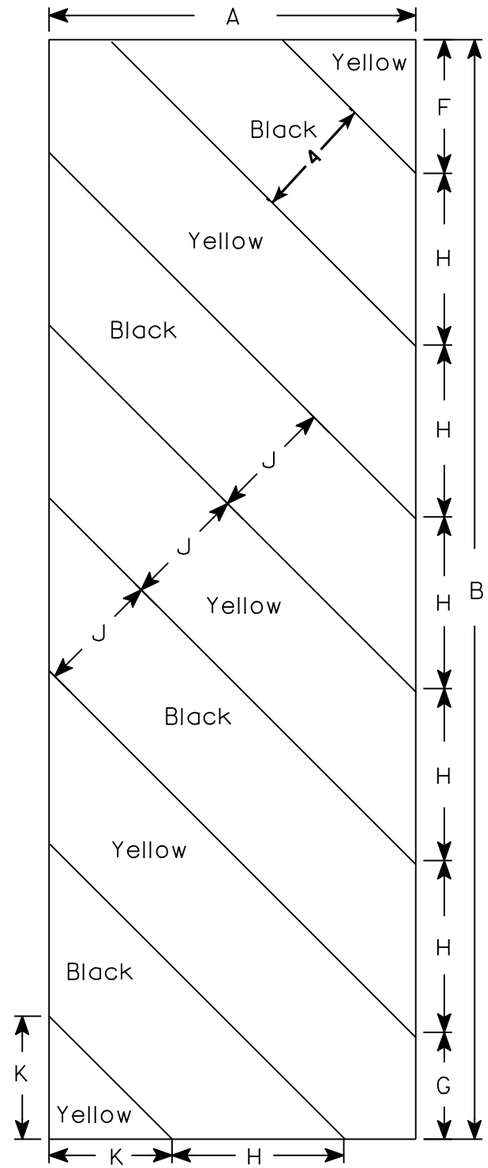
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

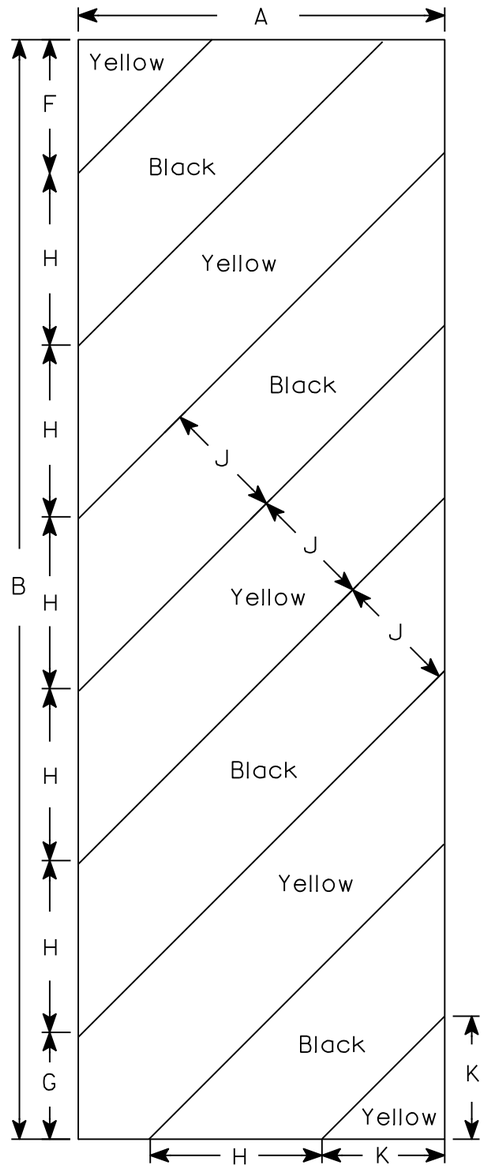
DATE 03/12/13 PLATE NO. W4-3.8

PROJECT NO:

SHEET NO: 441 E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

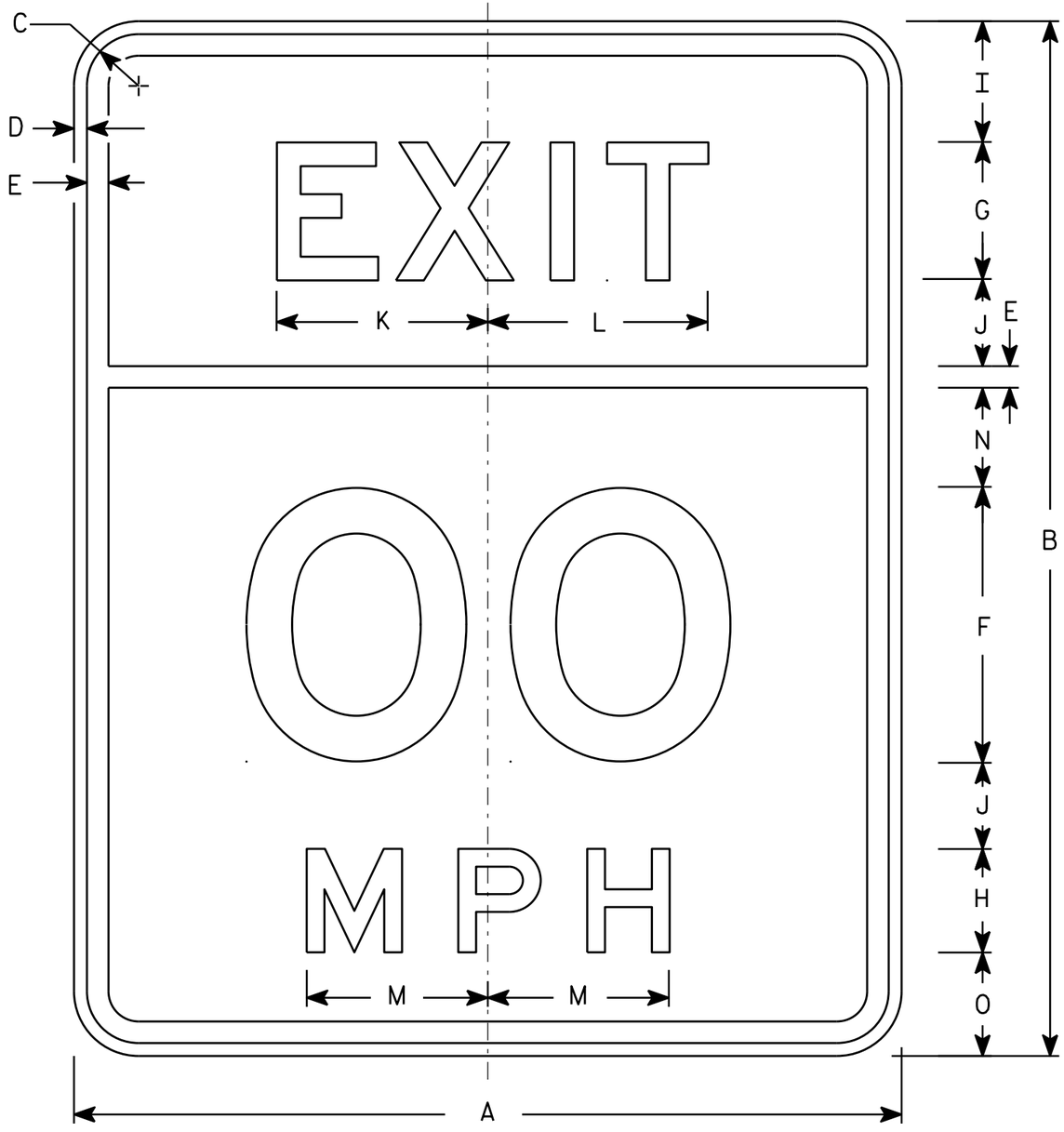
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 442	E



W013-2

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/2	3/8	5/8	8	4	3	3 1/2	2 1/2	6 1/8	6 3/8	5 1/4	2 7/8	3												5.0
2M	24	30	1 1/2	3/8	5/8	8	4	3	3 1/2	2 1/2	6 1/8	6 3/8	5 1/4	2 7/8	3												5.0
3	36	48	2 1/4	5/8	7/8	12	6	4	6	4	9 1/4	9 1/2	7 1/8	5 1/8	6												12.0
4	36	48	2 1/4	5/8	7/8	12	6	4	6	4	9 1/4	9 1/2	7 1/8	5 1/8	6												12.0
5	48	60	2 1/4	3/4	1	16	8	6	7	5	12 1/4	12 3/4	10 5/8	5 3/4	6												20.0

STANDARD SIGN
W013-2

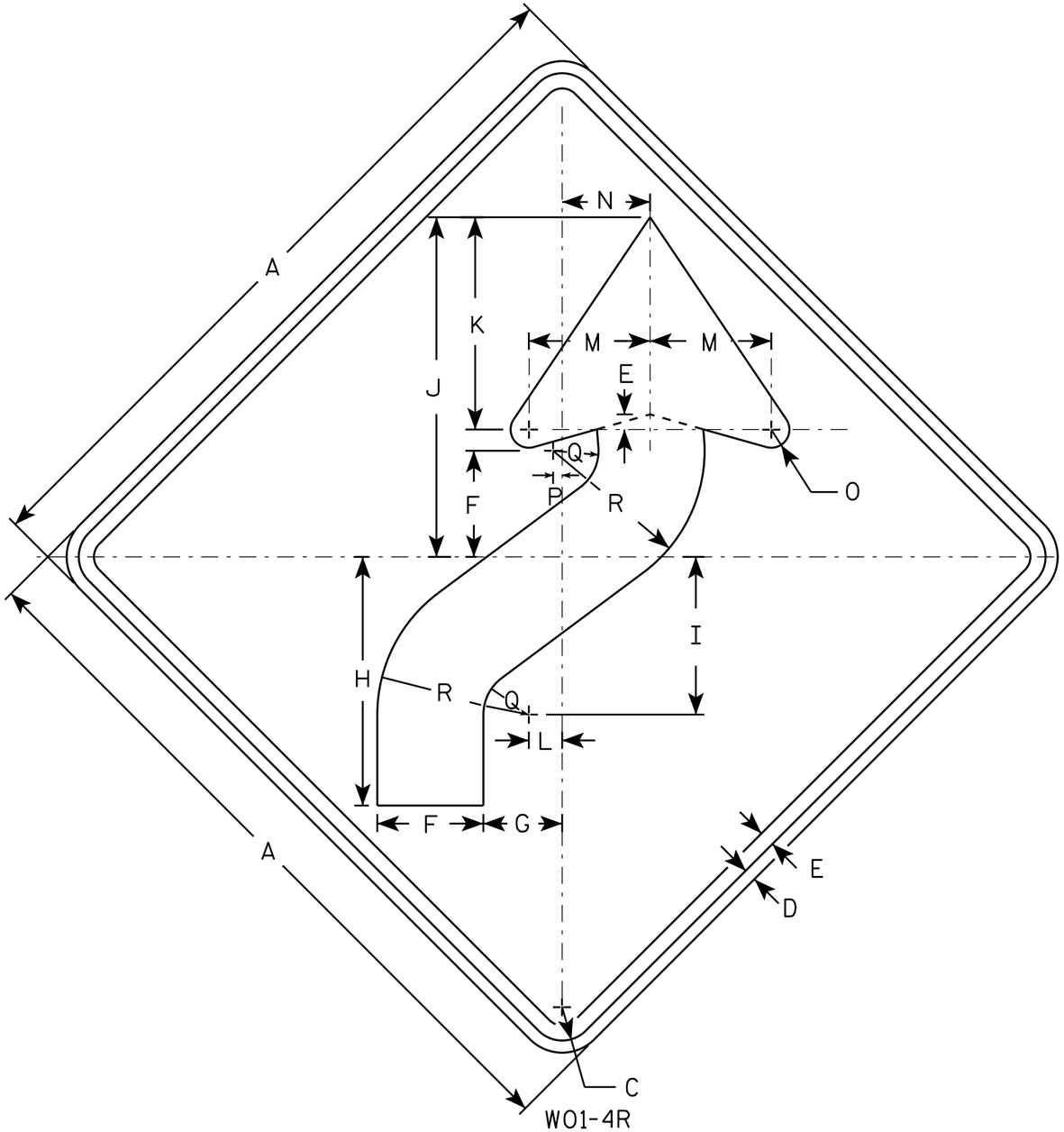
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/10/14 PLATE W013-2.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W0132.DGN PLOT DATE : 10-MAR-2014 13:35 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.086268:1.000000
WISDOT/CADDS SHEET 42



WO1-4R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. WO1-4L is the same as WO1-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
WO1-4

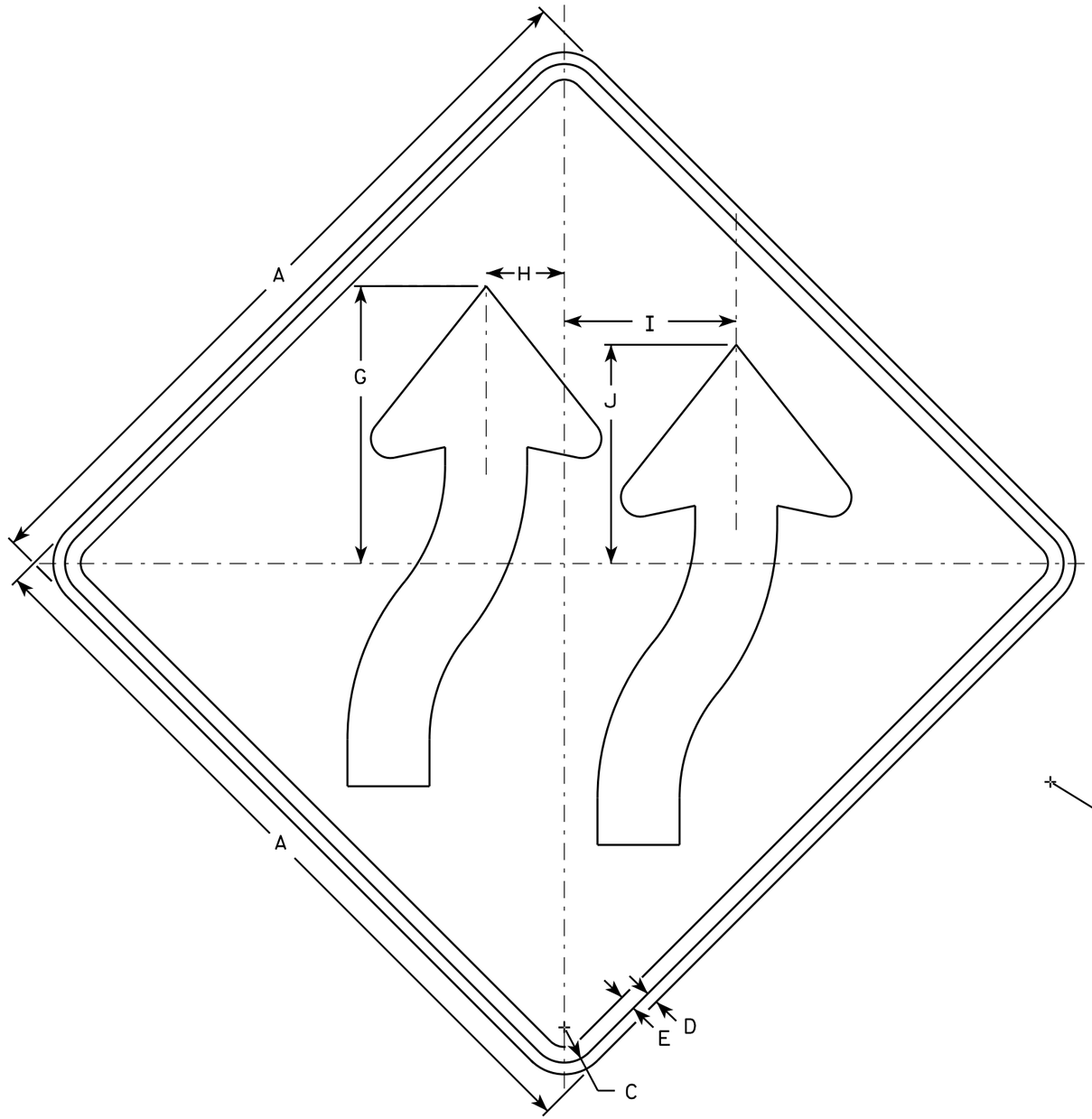
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

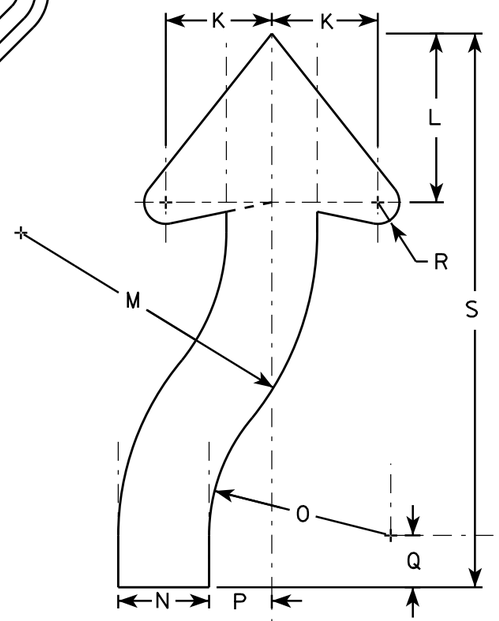
DATE 11/18/13 PLATE NO WO1-4.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\WO14.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.755110:1.000000
WISDOT/CADDS SHEET 42



W01-4bR



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4bL is the same as W014-bR exept arrows are reversed along the vertical centerline

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

STANDARD SIGN
W01-4b

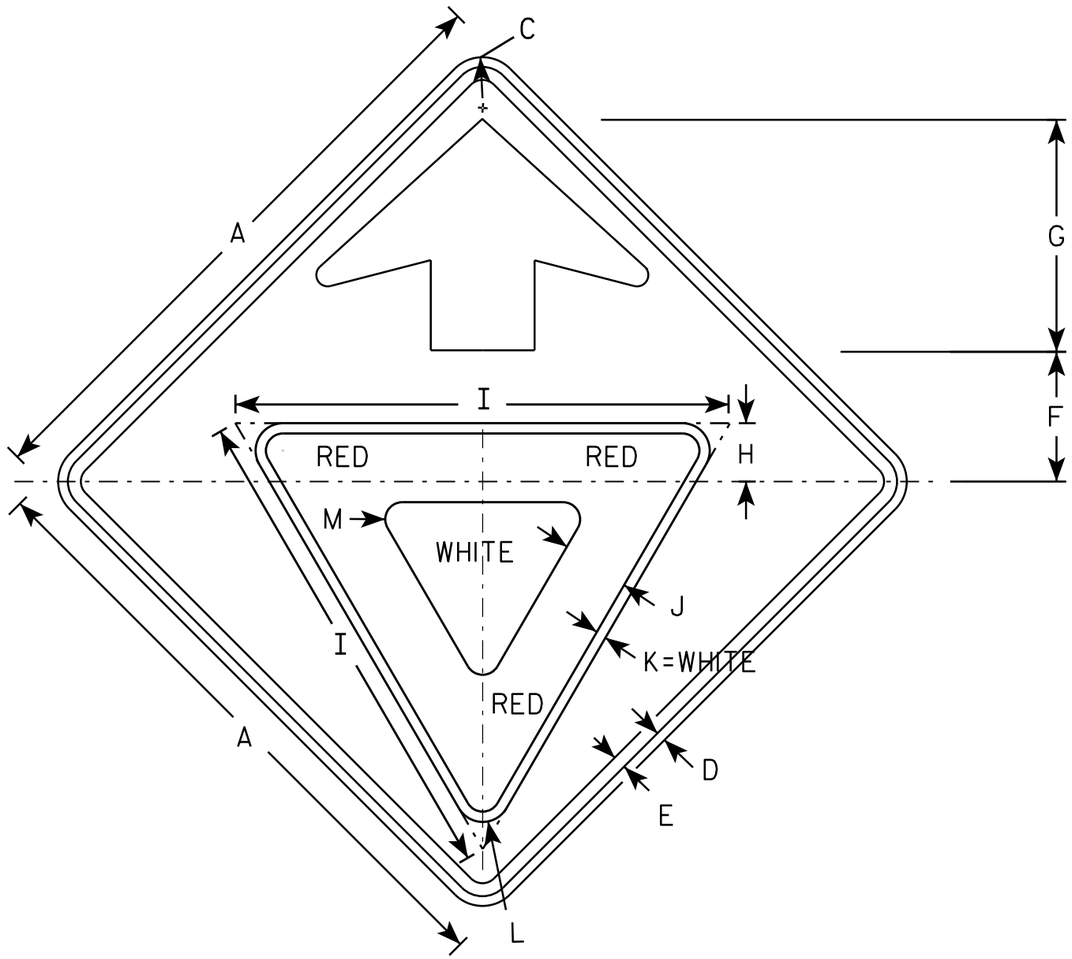
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

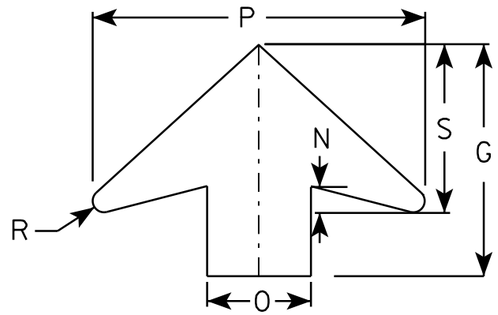
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014B.DGN PLOT DATE : 28-FEB-2014 11:36 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 8.756290:1.000000
WISDOT/CADDS SHEET 42



W03-2

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - ORANGE
   Arrow & Border - BLACK
   Yield Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2S	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
2M	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
3	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

STANDARD SIGN
W03-2

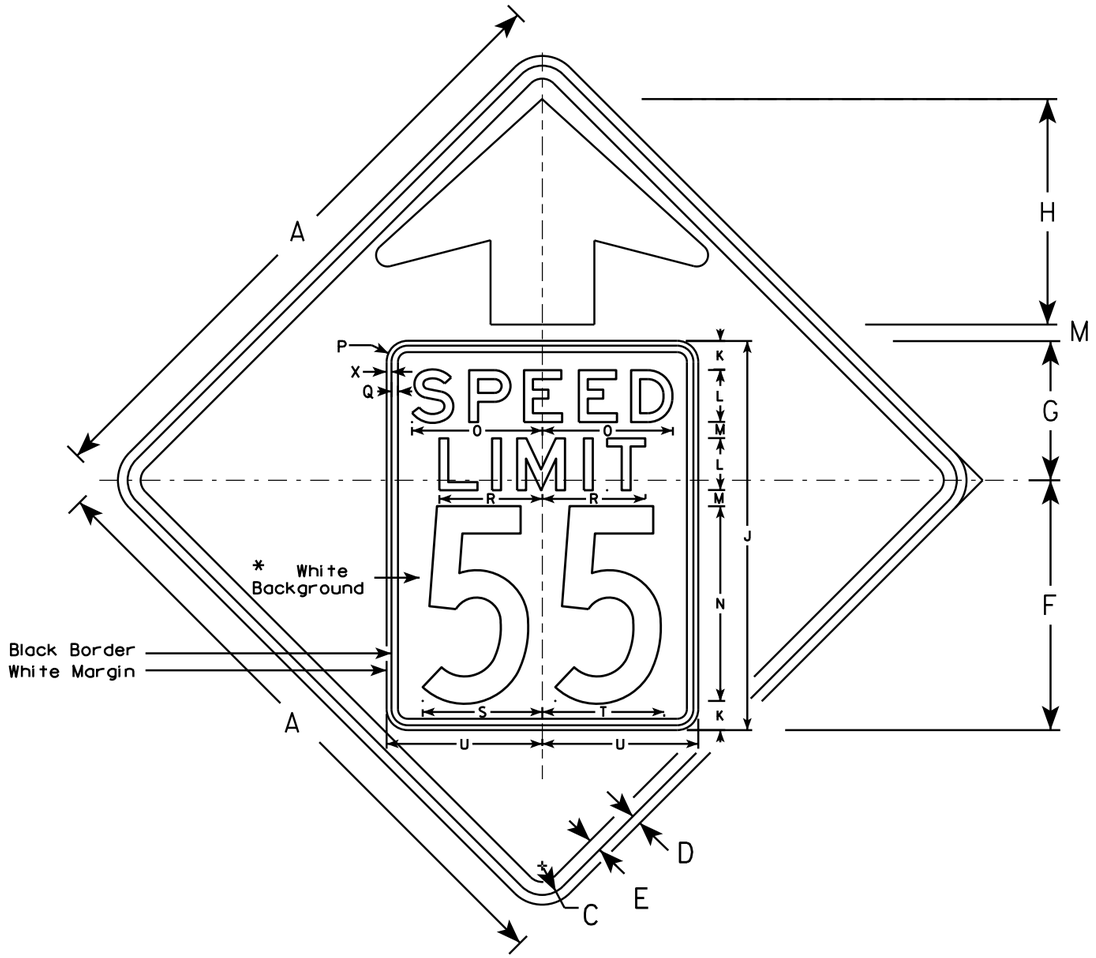
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W03-2.1

PROJECT NO:

SHEET NO: E

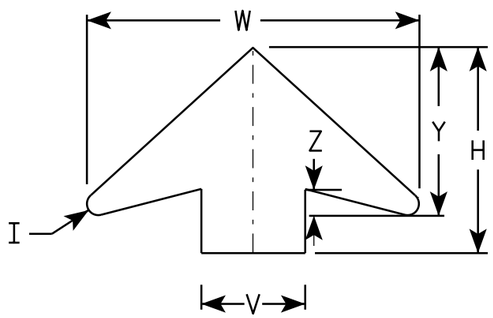


W03-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: *
   Background - ORANGE*
   Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2S	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
2M	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
3	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W03-5

WISCONSIN DEPT OF TRANSPORTATION

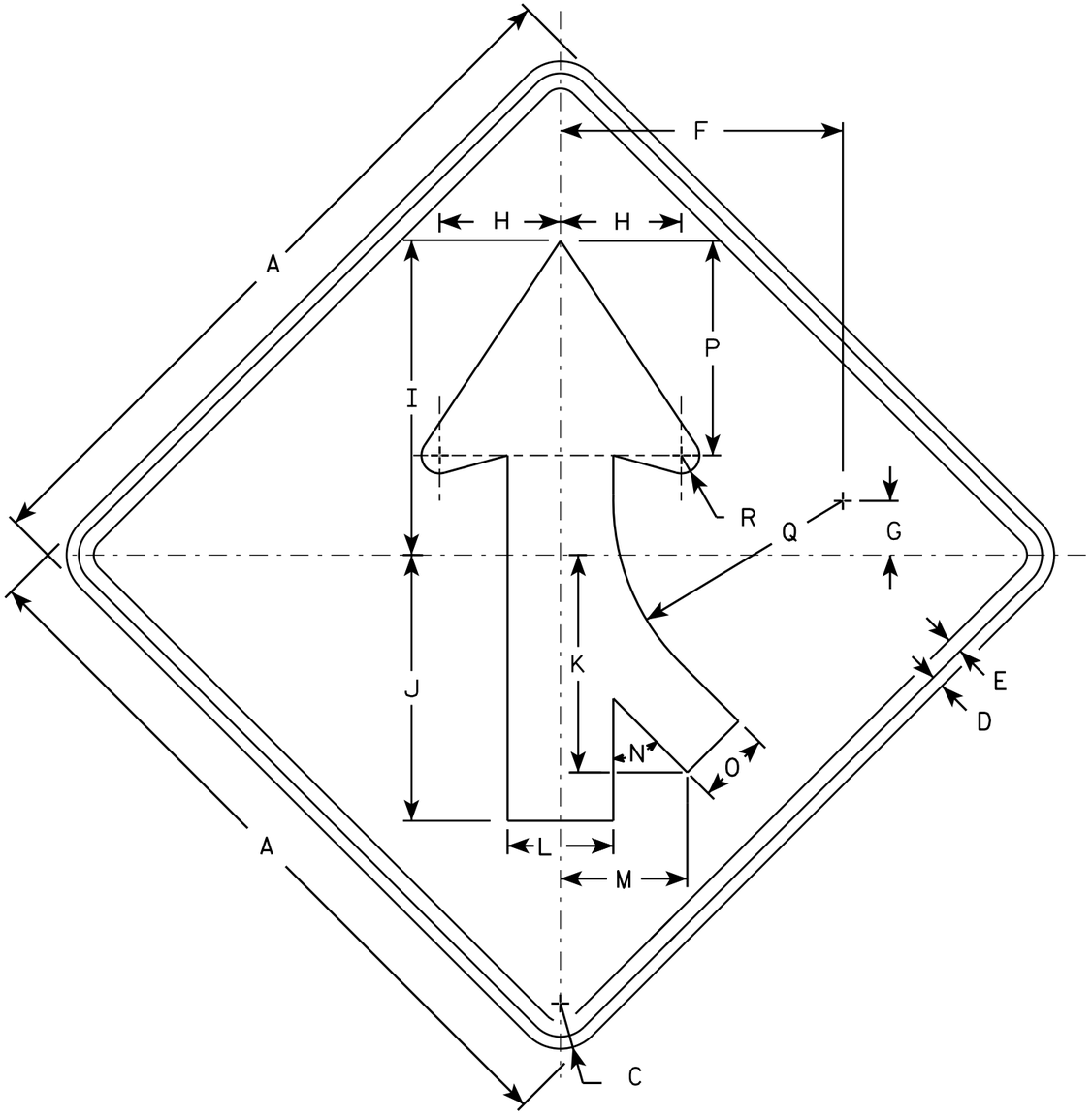
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W03-5.1

PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W035.DGN PLOT DATE : 20-NOV-2013 11:32 PLOT BY : mscsja

WISDOT/CADDS SHEET 42



W04-1R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2S	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
2M	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
3	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

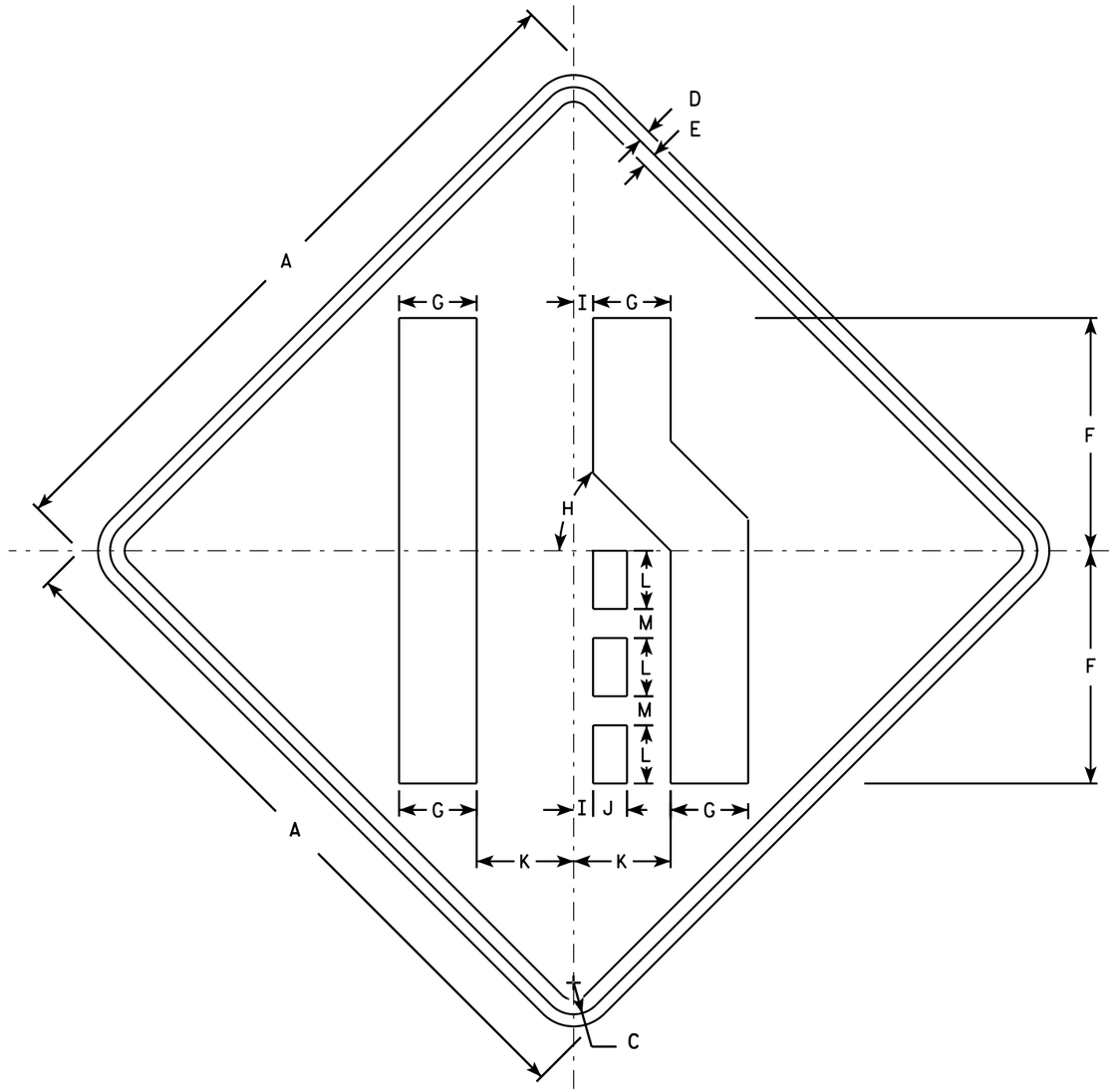
STANDARD SIGN
W04-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W04-1.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

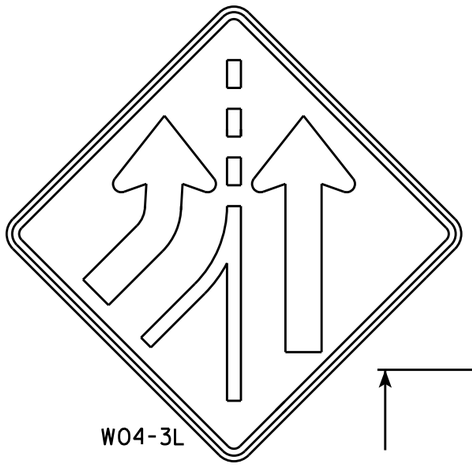
STANDARD SIGN
W04-2

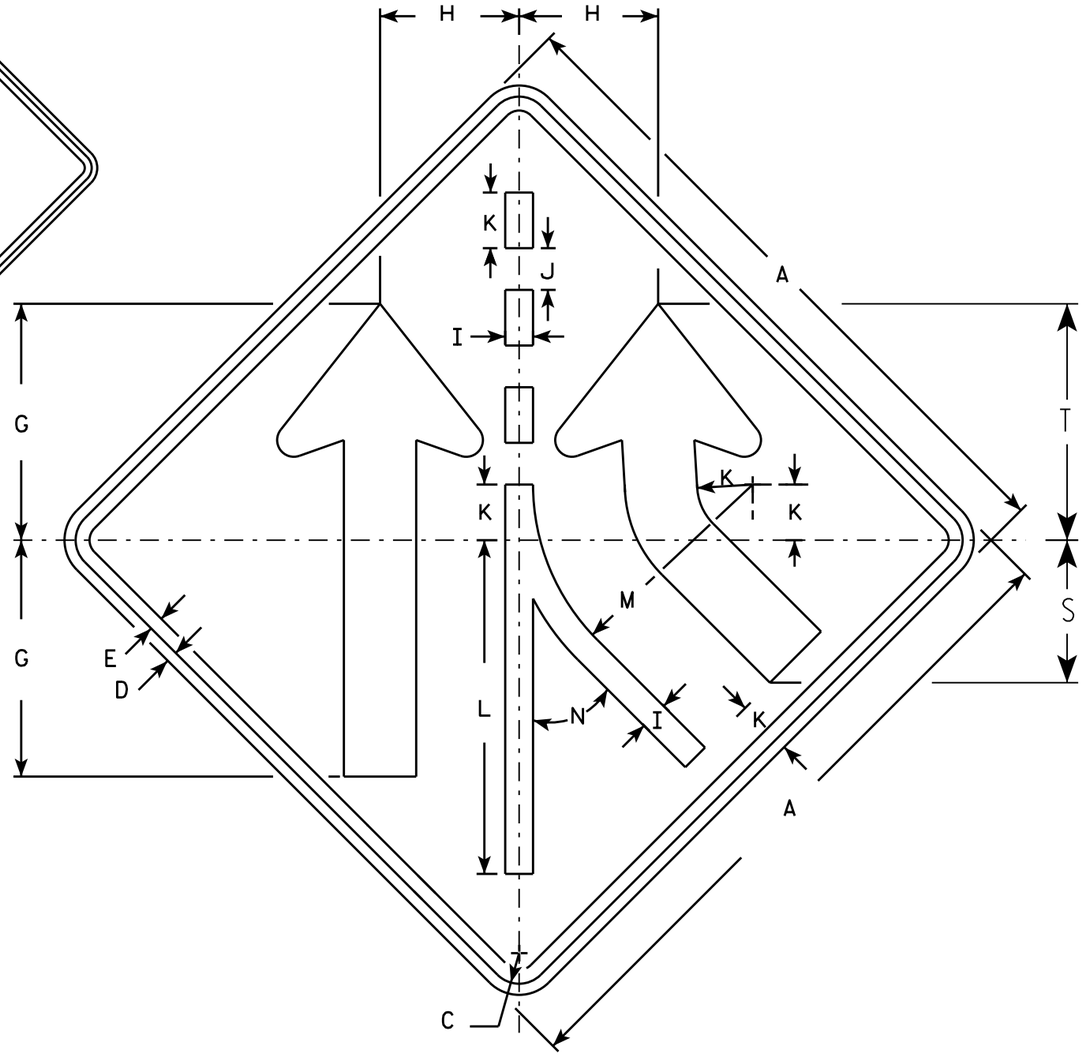
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 449 W04-2.1

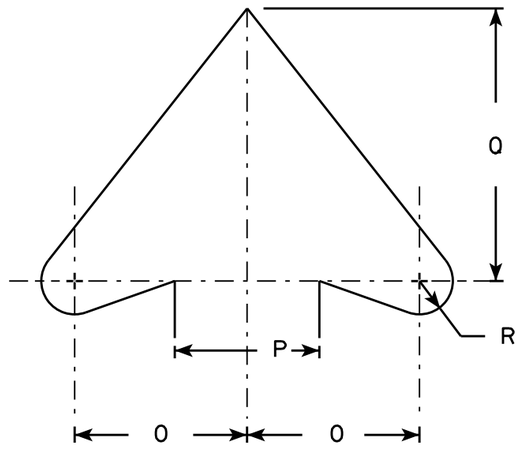
PROJECT NO: | SHEET NO: E





NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-3 L is the same as W04-3 R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		12 3/4	7 1/2	1 1/2	2 1/4	3	18	11 7/8	45°	4 5/8	4	7 3/8	7/8	7 3/4	12 3/4							9.0
2S	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
2M	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
3	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
4	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
5	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0

STANDARD SIGN

W0433

WISCONSIN DEPT OF TRANSPORTATION

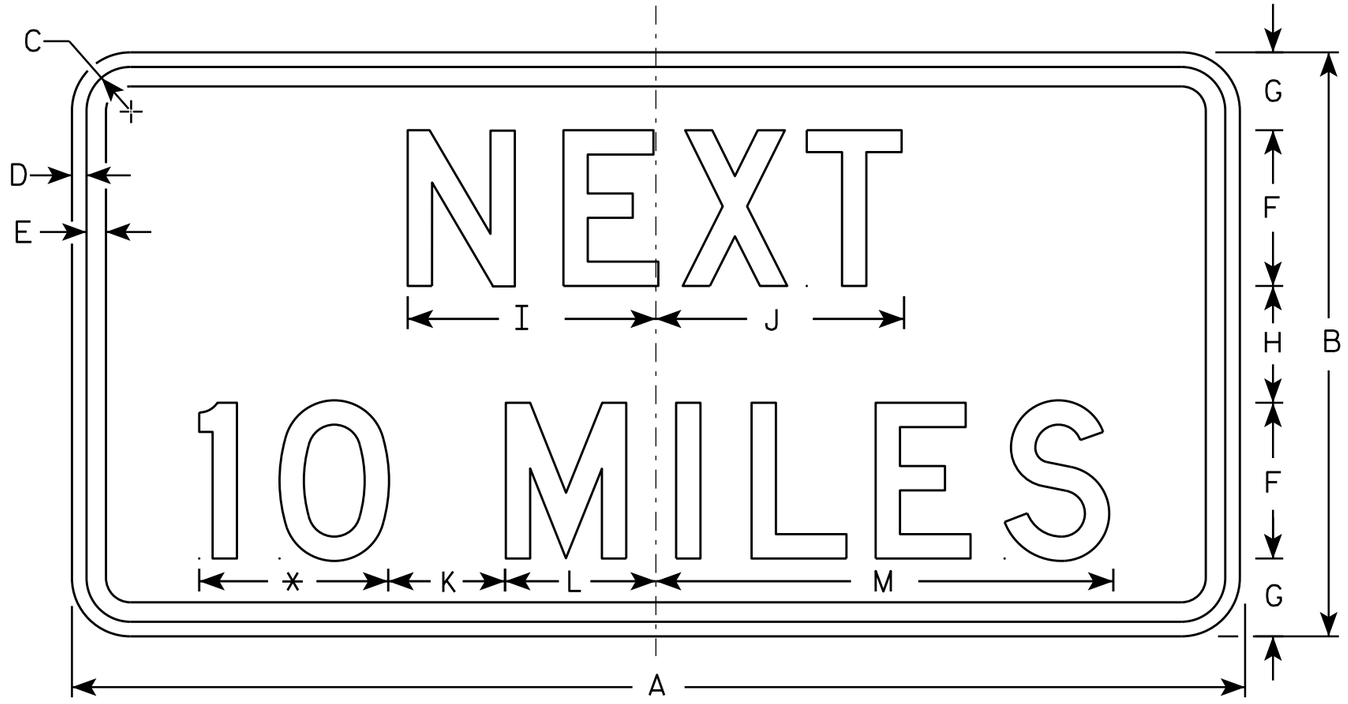
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W04-3.1

PROJECT NO:

SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W043.DGN PLOT DATE : 20-NOV-2013 11:49 PLOT BY : mscsja 6.810449:1.000000
WISDOT/CADDS SHEET 42



W057-51

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 - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals 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	18	1 1/8	3/8	1/2	5	2 5/8	2 3/4	7 7/8	8	5	4 1/8	15 3/8														4.5
2S	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0
2M	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0
3	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0
4	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0
5	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0

STANDARD SIGN
W057-51

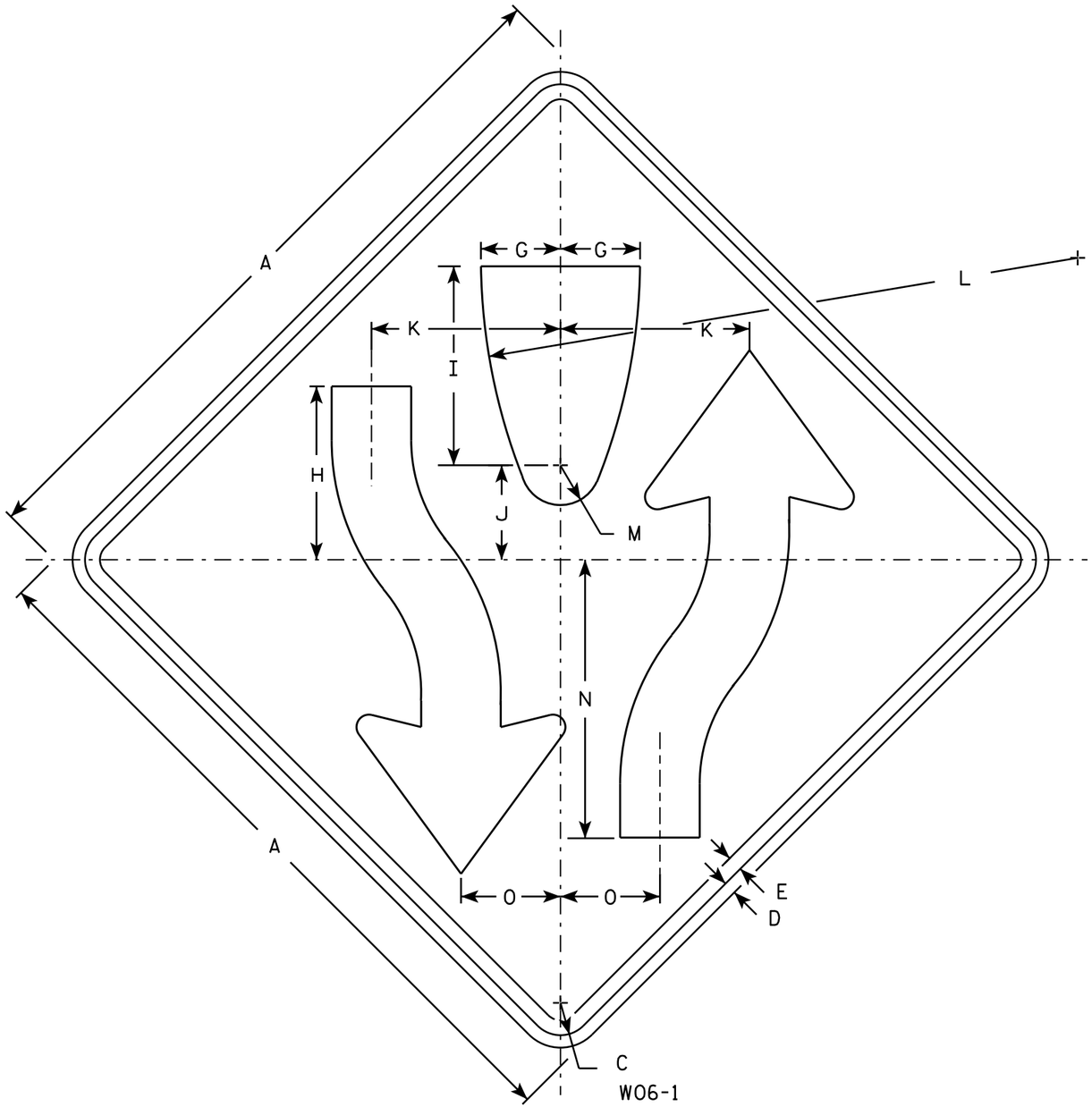
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew L Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W057-51.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

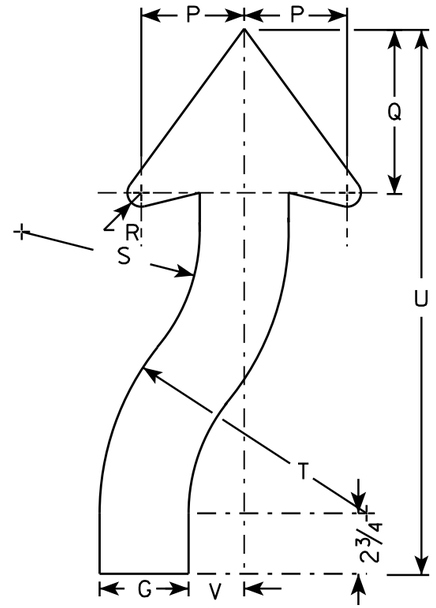
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W05751.DGN PLOT DATE : 28-FEB-2014 11:42 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 3.891684:1.000000
WISDOT/CADDS SHEET 42



W06-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W06-2 same as W06-1 but is rotated 180° when mounted.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2S	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
2M	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
3	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

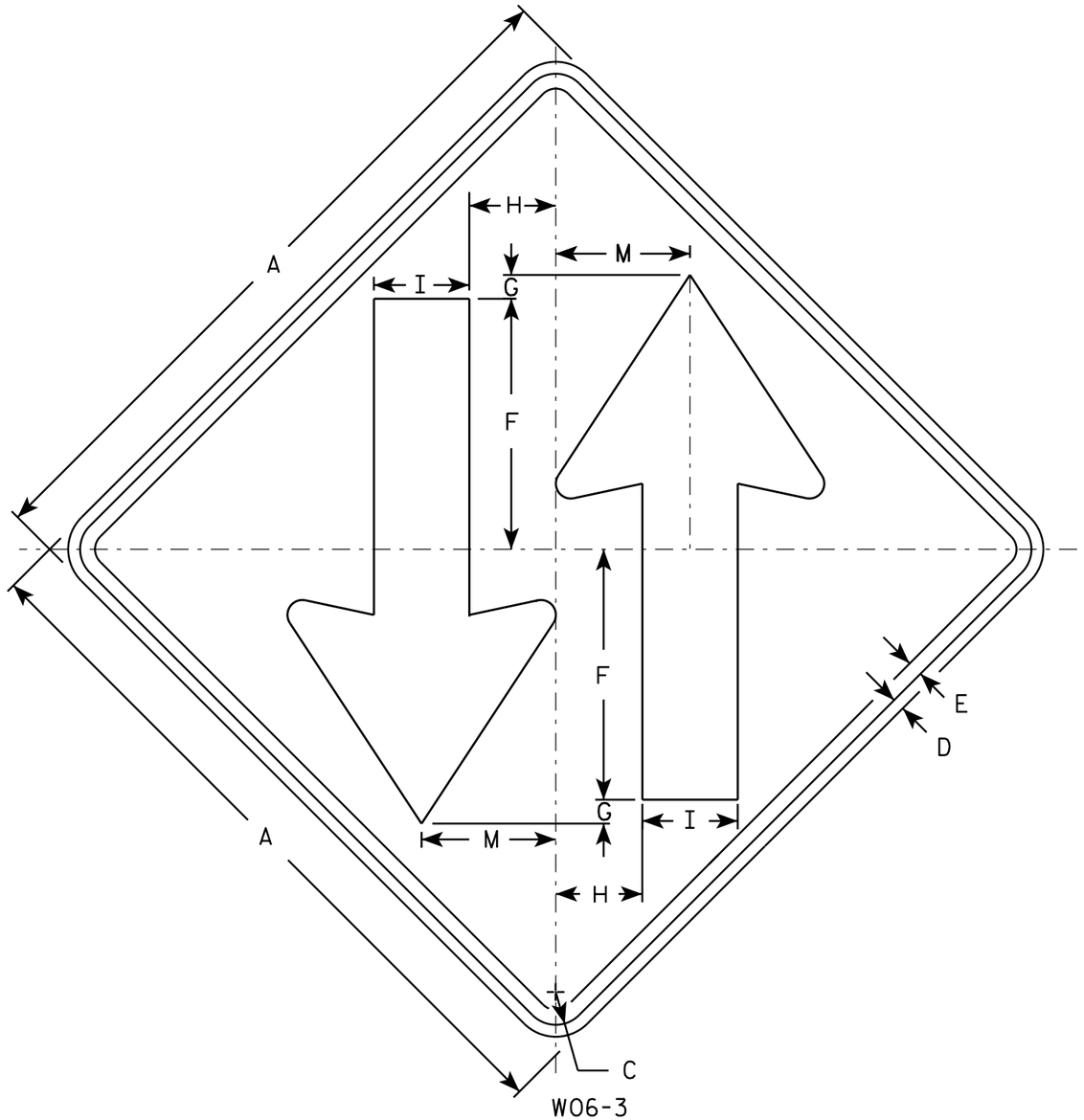
STANDARD SIGN
W06-1 & W06-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO W06-1.1

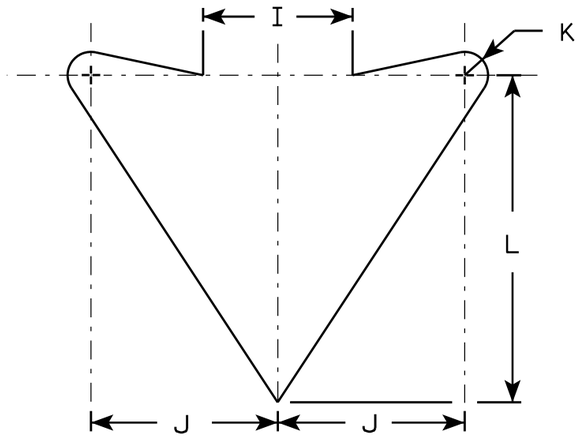
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



W06-3

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
2S	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
2M	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
3	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
4	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
5	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0

STANDARD SIGN
W06-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

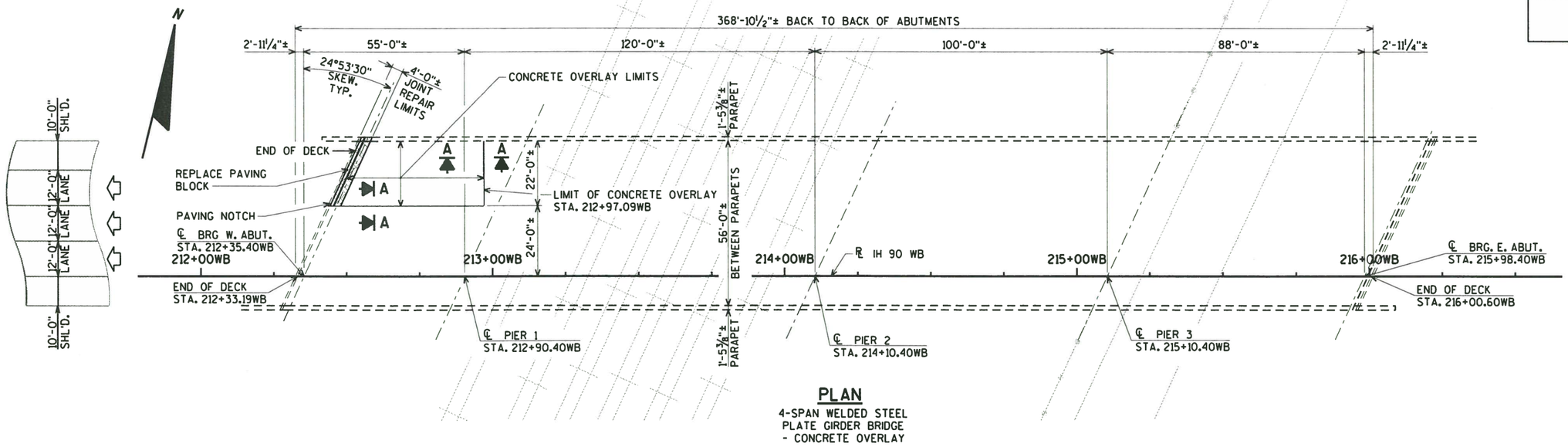
DATE 11/20/13 PLATE 453 W06-3.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

$PRFNAME$
U:±41-0627.00 - LaCrosse County, IH90±B-32-40 IH 90 over Oak Street±BRIDGE±FINAL (7-16-14)±B-32-4
DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

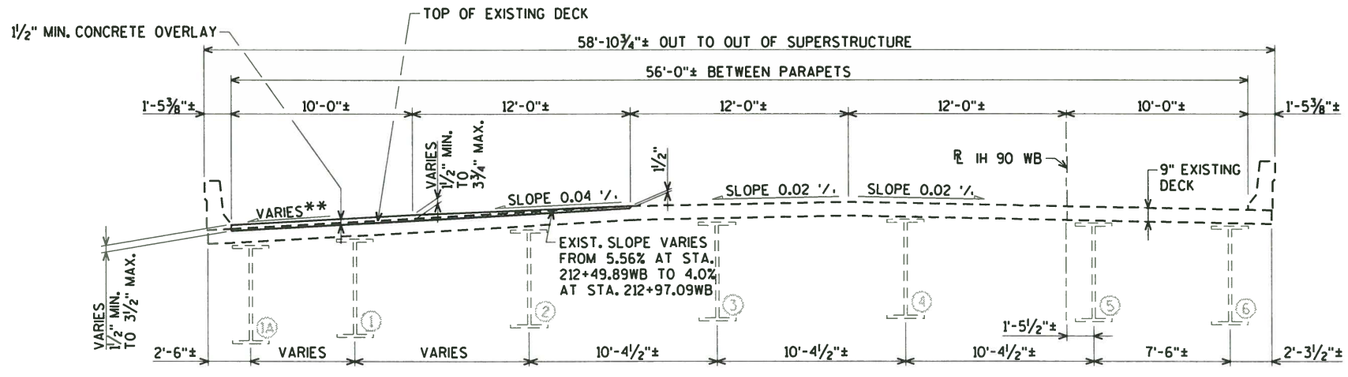
STATE PROJECT NUMBER

1071-06-78



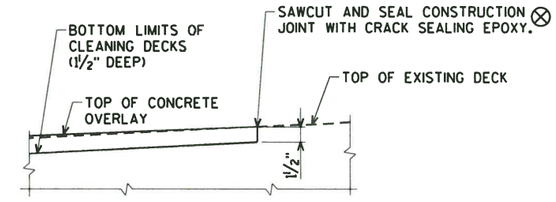
PLAN

4-SPAN WELDED STEEL PLATE GIRDER BRIDGE - CONCRETE OVERLAY



CROSS SECTION THRU DECK LOOKING EAST

** STA. 212+49.89WB, SLOPE 5.62%
STA. 212+97.09WB, SLOPE 4.0%



SECTION A

⊗ 1½" DEEP SAWCUT IS INCLUDED IN THE BID PRICE FOR CLEANING DECKS.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-19
OPERATING RATING: HS-32
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 190 KIPS

ULTIMATE DESIGN STRESSES:

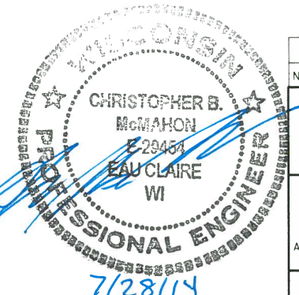
CONCRETE MASONRY _____ f'_c = 4,000 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)____ f_y = 60,000 p.s.i.

TRAFFIC DATA:

A.D.T. = 43,700 (2016)
A.D.T. = 56,700 (2036)
R.D.S. = 70 MPH

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES AND GENERAL NOTES
3. STRIP SEAL EXPANSION JOINT DETAILS
4. STRIP SEAL EXPANSION JOINT DETAILS
5. PARAPET REINFORCEMENT DETAILS



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/05/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-32-40

IH 90 WB OVER OAK STREET & RAILROAD

COUNTY	TOWN/CITY/VILLAGE
LA CROSSE	LA CROSSE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CBM	JCK	JCK	CBM

GENERAL PLAN

SHE 454 = 5

8

8

STATE PROJECT NUMBER

1071-06-78

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
502.0100	CONCRETE MASONRY BRIDGES	CY	6
502.0717.S	CRACK SEALING EPOXY	LF	75
502.3100	EXPANSION DEVICE B-32-40	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	120
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	25
502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	2
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	870
509.0500	CLEANING DECKS	SY	115
509.1000	JOINT REPAIR	SY	12
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	8

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL PLANS.

THE FIRST DIGIT OF A THREE DIGIT BAR NO. OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1½" DEEP SAW CUT.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP OF THE OVERLAY AND THE TOPS AND SIDES OF THE PARAPET IN THE JOINT REPAIR AREA PER MANUFACTURERS RECOMMENDATIONS.

PROFILE GRADE LINE IN THE CONCRETE OVERLAY AREA SHALL BE DETERMINED BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER CLEANING AS SHOWN. EXPECTED AVERAGE OVERLAY THICKNESS IS 2½". VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

1½" OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK IN THE CONCRETE OVERLAY AREA UNDER THE BID ITEM, "CLEANING DECKS".

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY OR PAVING BLOCK AT THE ABUTMENT IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO THE NEW WORK.

THE CONCRETE APPROACH SLABS WILL NEED TO BE 1'0"± MIN. TO 1'-2"± MAX. THICK AT THE ABUTMENT.

LONGITUDINAL CONSTRUCTION JOINTS IN THE CONCRETE OVERLAY NEED TO BE PLACED AT THE EDGE OF THE LANE LINES.

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-40 IH 90 over Oak Street\BRIDGE\FINAL (7-16-14)\B-32-40_GP.dgn

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-40

DRAWN BY JCK | PLANS CK'D. CBM

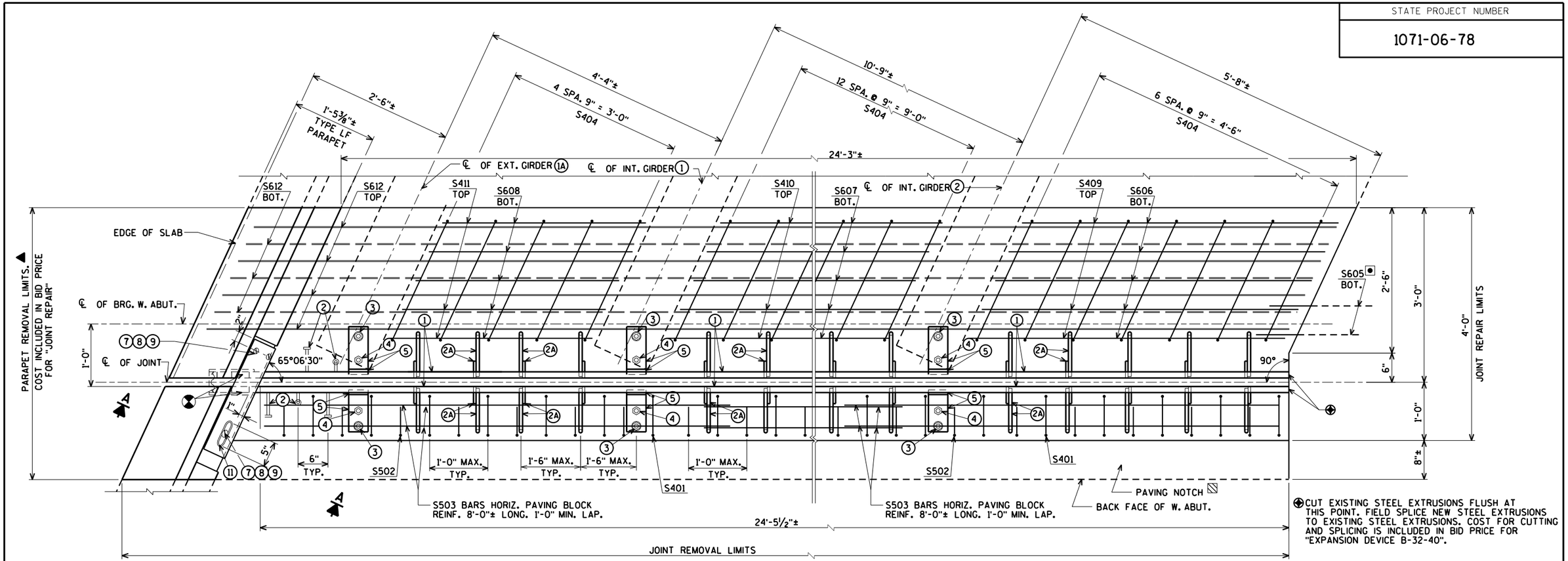
QUANTITIES AND GENERAL NOTES

SHEET 2 OF 5
455

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE PROJECT NUMBER

1071-06-78



⊙ CUT EXISTING STEEL EXTRUSIONS FLUSH AT THIS POINT. FIELD SPLICE NEW STEEL EXTRUSIONS TO EXISTING STEEL EXTRUSIONS. COST FOR CUTTING AND SPLICING IS INCLUDED IN BID PRICE FOR "EXPANSION DEVICE B-32-40".

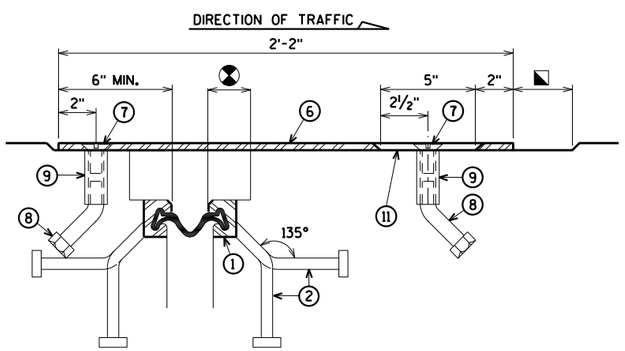
PART PLAN AT JOINT

⊙ MASONRY ANCHORS TYPE L NO. 6 BARS

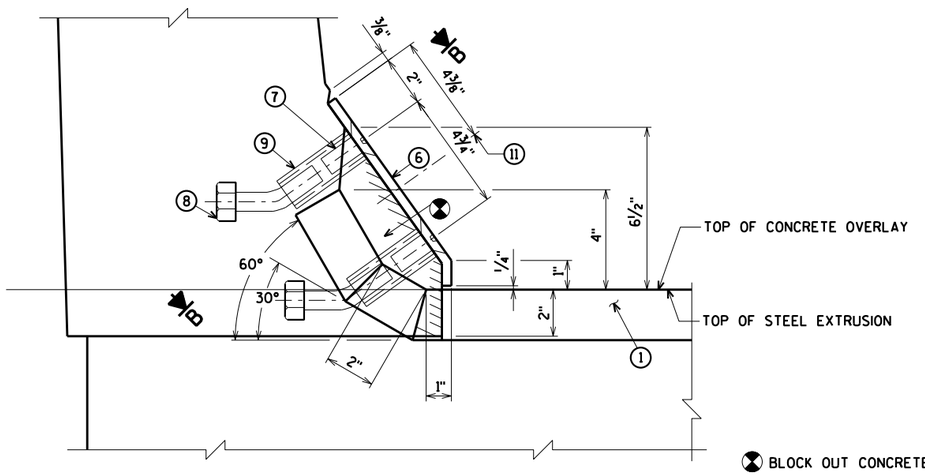
▲ UTILIZE EXISTING VERTICAL BAR STEEL FOR PARAPET REMOVAL LIMITS OUTSIDE OF THE "JOINT REPAIR" LIMITS.

▨ THE CONCRETE APPROACH SLAB WILL VARY FROM 1'-0"± MIN. TO 1'-2" MAX. THICK AT THE PAVING NOTCH.

● THE EXISTING NEOPRENE STRIP SEAL WILL BE REPLACED WHEN THE NEW NEOPRENE STRIP SEAL IS INSTALLED. NO SPLICING WILL BE PERMITTED IN THE NEW NEOPRENE STRIP SEAL. COST OF FURNISHING, INSTALLING AND REMOVING THE EXISTING NEOPRENE STRIP SEAL (4-INCH) IS INCIDENTAL TO THE BID ITEM "EXPANSION DEVICE B-32-40".

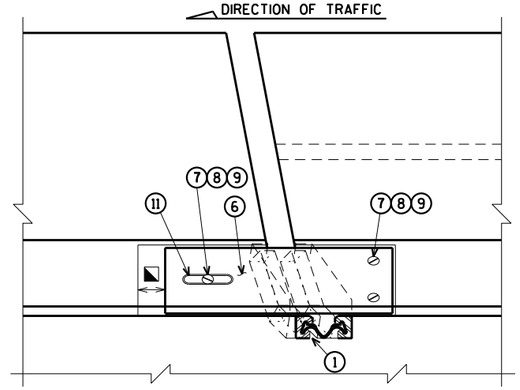


SECTION B



SECTION A

TYPE LF PARAPET



VIEW OF PARAPET PLATE FROM ROADWAY

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

◪ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

WORK THIS SHEET WITH SHEETS 4 & 5.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-40

DRAWN BY JCK | PLANS CK'D. CBM

STRIP SEAL EXPANSION JOINT DETAILS

SHEET 3 OF 5
456

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

ecpdf.plt
41-0627 EXPJT ss.dgn

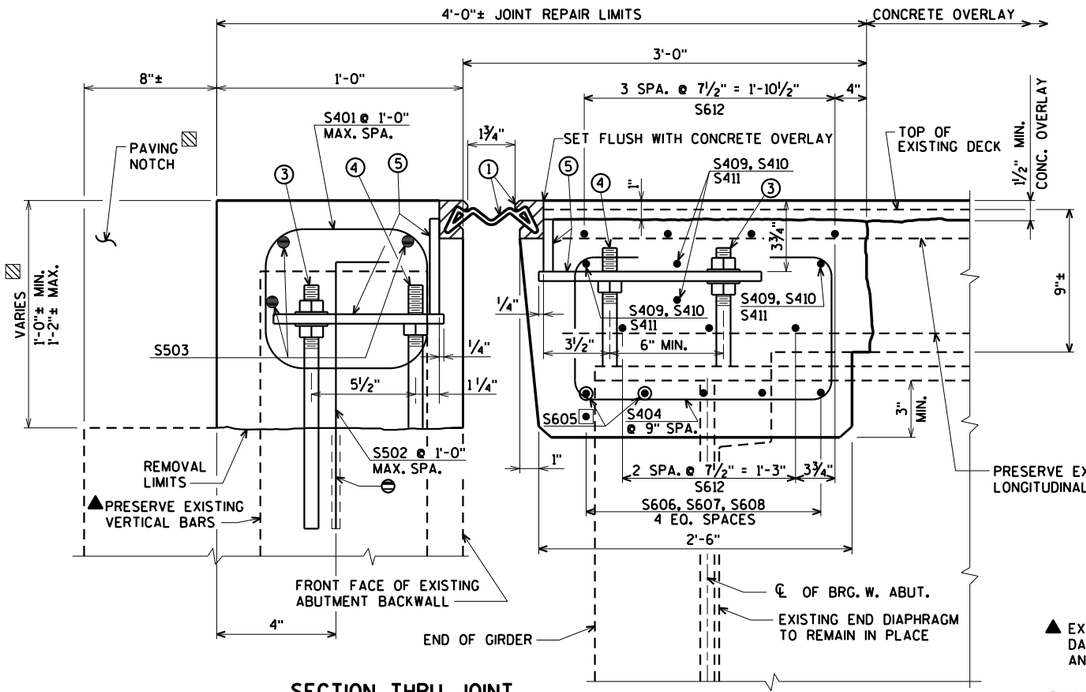
8

8

black.tbl

STATE PROJECT NUMBER

1071-06-78



SECTION THRU JOINT

DIMENSIONS ARE NORMAL TO ℄ OF SUBSTRUCTURE UNIT

*PRESERVE AND INCORPORATE 1'-6" MIN. OF EXISTING TRANSVERSE BARS ALSO.

NOTES

ONE FIELD SPLICE PERMITTED IN NEW STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING, OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

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

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

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

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

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-32-40".

LEGEND

- ● (1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.
- (2) STUDS ⅝" DIA. X 6¾" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- (2A) ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
- (3) ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
- (4) ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
- (5) FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
- (6) GALVANIZED PLATE ⅜" X 9" X 2'-2" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
- (7) ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
- (8) ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- (9) ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.
- (11) 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

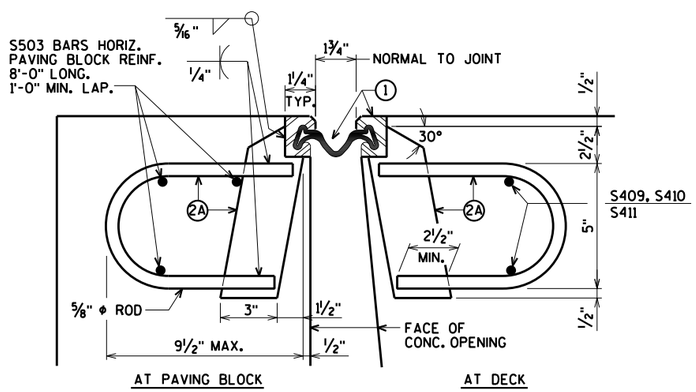
▲ EXISTING BARS LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL.

⊖ MASONRY ANCHORS TYPE L NO. 5 BARS MIN. SPACE AT 1'-0" MAX. TURN 10" LEG AS NECESSARY TO FIT.

⊡ MASONRY ANCHORS TYPE L NO. 6 BARS

▨ THE CONCRETE APPROACH SLAB WILL VARY FROM 1'-0"± MIN. TO 1'-2"± MAX. THICK AT THE PAVING NOTCH.

● THE EXISTING NEOPRENE STRIP SEAL WILL BE REPLACED WHEN THE NEW NEOPRENE STRIP SEAL IS INSTALLED. NO SPLICING WILL BE PERMITTED IN THE NEW NEOPRENE STRIP SEAL. COST OF FURNISHING, INSTALLING AND REMOVING THE EXISTING NEOPRENE STRIP SEAL (4-INCH) IS INCIDENTAL TO THE BID ITEM "EXPANSION DEVICE B-32-40".

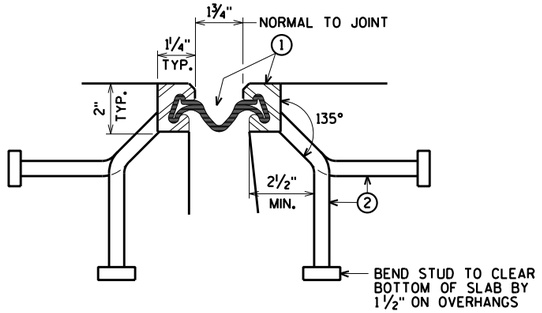


SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

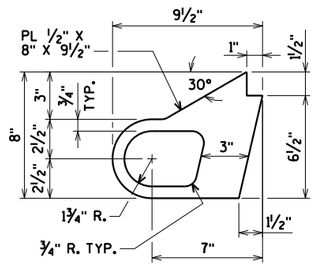
SYM. ABOUT ℄ JOINT UNLESS OTHERWISE SHOWN OR NOTED

DS BROWN SSA2 FRAME RAIL
WITH A2R SERIES STRIP SEAL USED



SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPET



ALTERNATE STRIP SEAL ANCHOR

WORK THIS SHEET WITH SHEETS 3 & 5

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-40

DRAWN BY JCK | PLANS CK'D. CBM

STRIP SEAL EXPANSION JOINT DETAILS

SHEET 4 OF 5
457

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

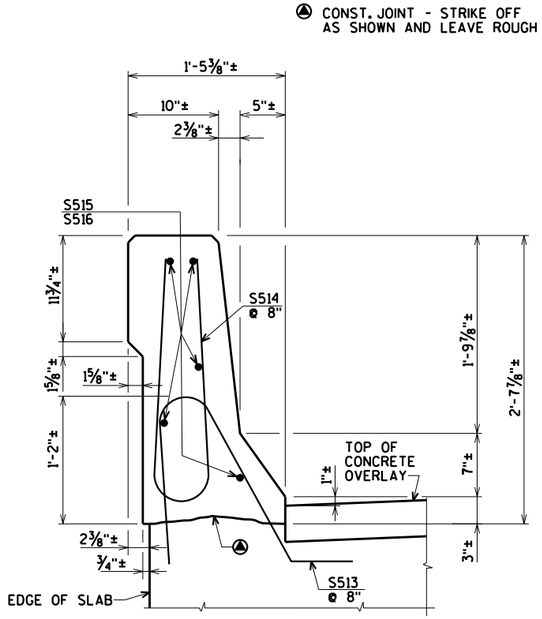
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SECTION THRU PARAPET

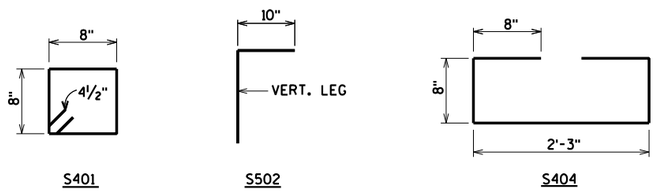
BILL OF BARS

	BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	870* COATED LOCATION
	S401	X	25	3-2	X			W. ABUT. PAVING BLOCK VERT.
●	S502	X	25	2-5	X			W. ABUT. PAVING BLOCK VERT.
	S503	X	15	8-0				W. ABUT. PAVING BLOCK HORIZ.
	S404	X	25	4-7	X			DIAPH. VERT.
◉	S605	X	2	4-11				DIAPH. BOT. HORIZ.
	S606	X	5	5-3				DIAPH. BOT. HORIZ.
	S607	X	5	10-4				DIAPH. BOT. HORIZ.
	S608	X	5	3-3				DIAPH. BOT. HORIZ.
	S409	X	4	5-3				DIAPH. HORIZ.
	S410	X	4	10-4				DIAPH. HORIZ.
	S411	X	4	3-3				DIAPH. HORIZ.
	S612	X	7	25-2				TRANSVERSE TOP & BOT.
	S513	X	5	4-3	X			PARAPET VERTICAL
	S514	X	8	4-10	X			PARAPET VERTICAL
	S515	X	5	1-3				PARAPET HORIZONTAL - WING
	S516	X	5	2-9				PARAPET HORIZONTAL

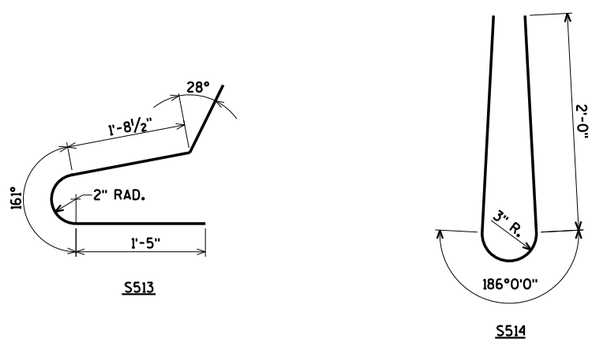
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

● CONCRETE MASONRY ANCHORS TYPE L No. 5 BARS

◉ CONCRETE MASONRY ANCHORS TYPE L No. 6 BARS



S401 S502 S404



S513 S514

NOTES:

UTILIZE EXISTING VERTICAL STEEL FOR PARAPET REMOVAL LIMITS OUTSIDE OF THE "JOINT REPAIR" LIMITS INDICATED IN THE PLANS.

PRESERVE AND INCORPORATE AS MUCH EXISTING LONGITUDINAL PARAPET REBAR AS PRACTICAL AND INCORPORATE IT INTO THE NEW WORK.

WORK THIS SHEET WITH SHEETS 3 & 4.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-40

DRAWN BY JCK | PLANS CK'D. CBM

PARAPET REINFORCEMENT DETAILS

SHEET 5 OF 5
458

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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41-0627 EXPJT bill of bars.dgn

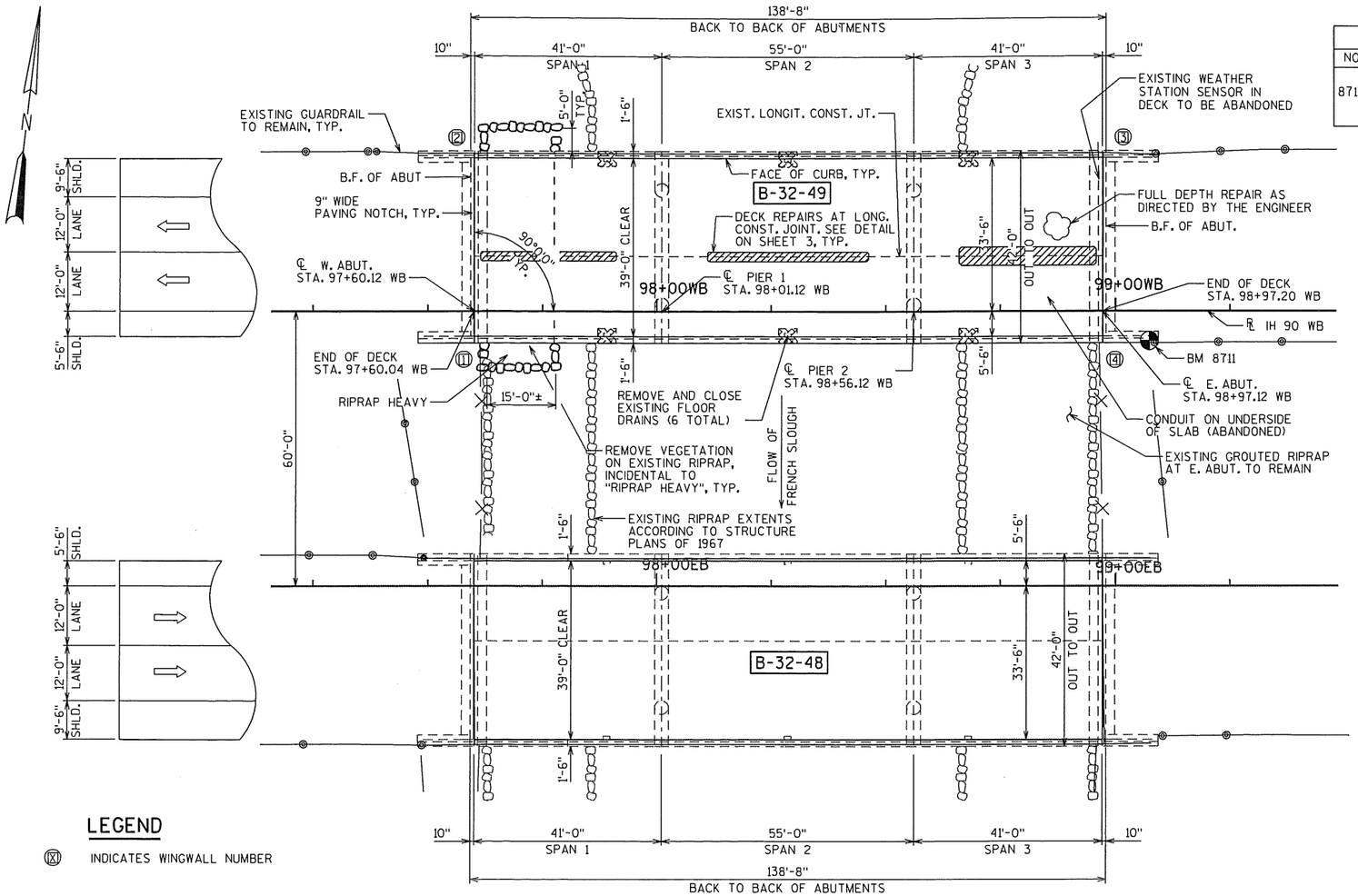
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STATE PROJECT NUMBER
1071-06-77

BENCHMARKS

NO.	STATION	DESCRIPTION	ELEV.
8711	STA. 99+07.38 WB, 6.49' RT OFFSET	CHISELED "+" ON TOP OF SE BOLT OF RAILING AT SE CORNER OF PARAPET	655.51

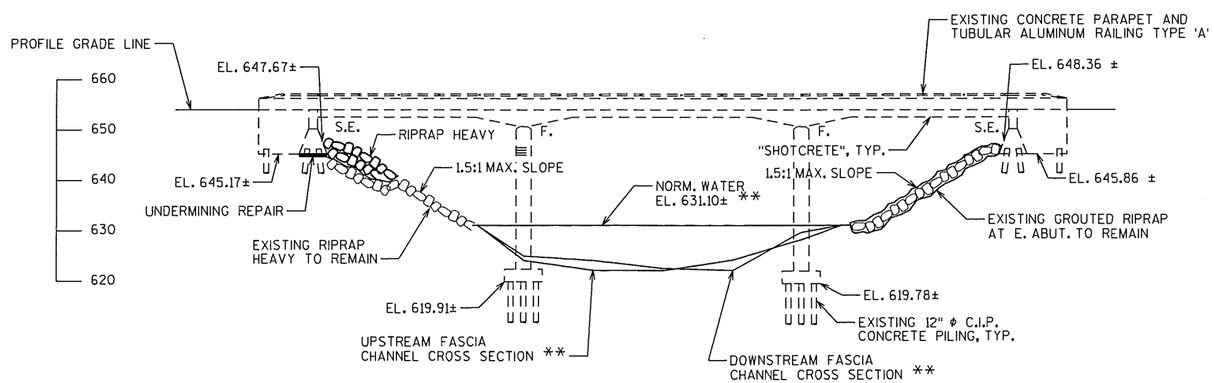


LEGEND

(X) INDICATES WINGWALL NUMBER

PLAN B-32-49

CONCRETE OVERLAY OF 3 SPAN HAUNCHED SLAB



ELEVATION

NORMAL TO FRENCH SLOUGH

** ACCORDING TO UW-DIVE INSPECTION REPORT DATED 2011-09-20. 'CHANNEL BOTTOM MATERIAL CONSISTED OF 2 FT DIAMETER AND SMALLER RIPRAP.'

DESIGN DATA

LIVE LOAD:
DESIGN LOADING = HS20
INVENTORY RATING = HS20
OPERATING RATING = HS34
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV) RATING = 170 KIPS

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY, OVERLAY DECKS---f'c = 4,000 P.S.I.
CONCRETE MASONRY, ALL OTHER--------f'c = 3,500 P.S.I.

TRAFFIC DATA IH 90

A.D.T. = 26,400 (2016)
= 34,600 (2036)

R.D.S. = 70 MPH

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. CROSS SECTIONS & QUANTITIES
3. SHOTCRETE DETAILS

WISCONSIN
JOHN F. RUBLEIN
E-38700
MADISON, WI
PROFESSIONAL ENGINEER
8/4/14

STRUCTURES DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489

CONSULTANT CONTACT:
JOHN RUBLEIN, P.E. (262) 821-1171

NO.	DATE	REVISION	BY

KSA K. Singh & Associates, Inc.
Engineers, Scientists and Environmental Consultants

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-32-49

IH 90 WB OVER FRENCH SLOUGH

COUNTY	TOWN/~~CITY/VILLAGE~~
LA CROSSE	CAMPBELL

DESIGN SPEC. REHABILITATION N/A

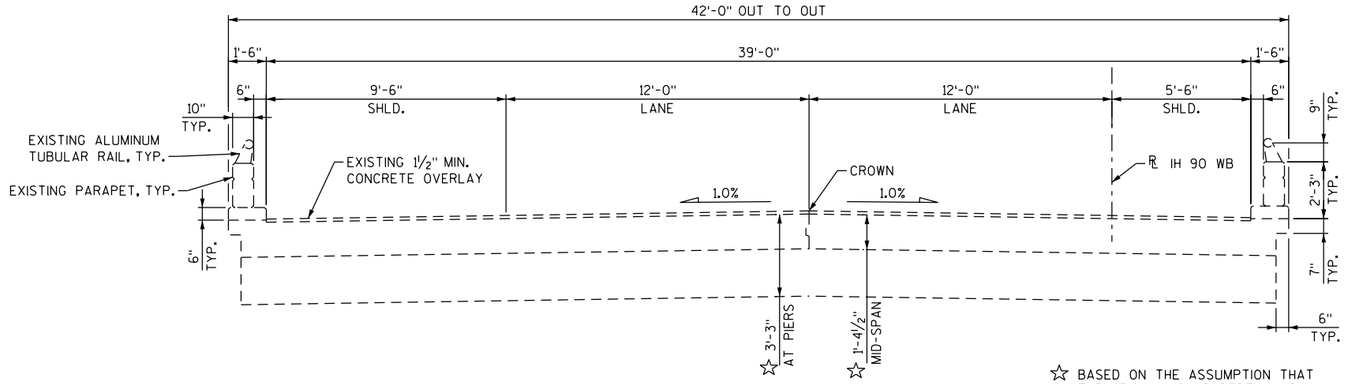
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
YC	JFR	YC	JFR

GENERAL PLAN & ELEVATION

SHEET 1 OF 3
459

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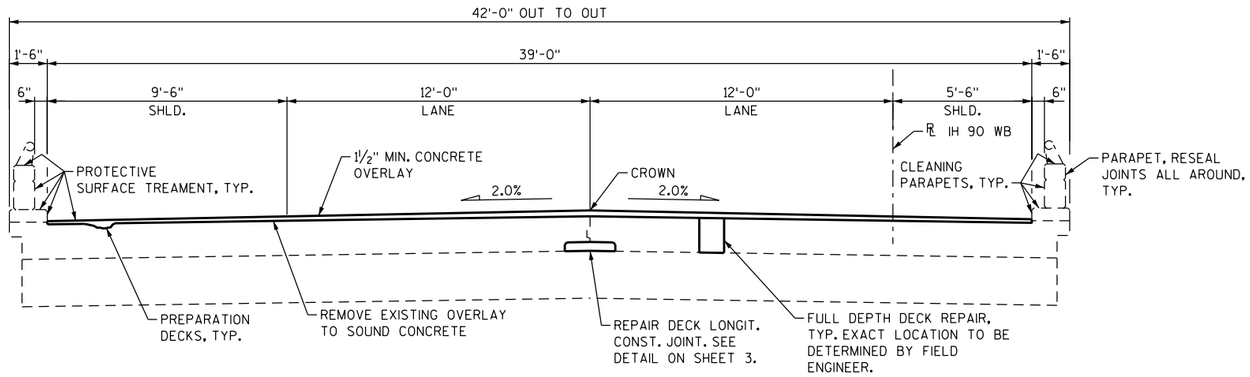
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CROSS SECTION THRU EXISTING BRIDGE

(LOOKING EAST)

☆ BASED ON THE ASSUMPTION THAT THE ORIGINAL SLAB DEPTH WAS REDUCED BY 1" DURING PLACEMENT OF PREVIOUS OVERLAY.



CROSS SECTION THRU BRIDGE

(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES

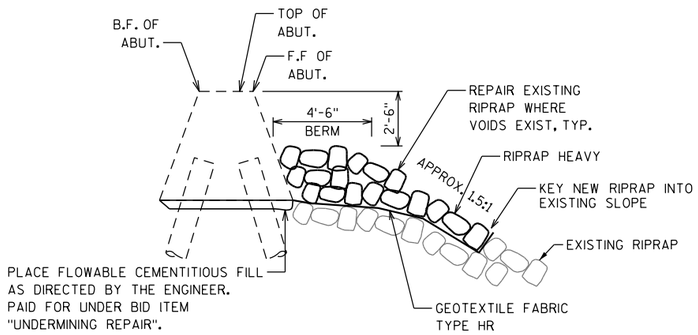
	BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-32-49	LS	1
	203.0225.S	DEBRIS CONTAINMENT B-32-49	LS	1
	502.0717.S	CRACK SEALING EPOXY	LF	1900
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	730
#	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	1
	509.0301	PREPARATION DECKS TYPE 1	SY	100
	509.0302	PREPARATION DECKS TYPE 2	SY	65
*	509.1500	CONCRETE SURFACE REPAIR	SF	10
	509.2000	FULL-DEPTH DECK REPAIR	SY	20
	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	75
	509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY B-32-49	SY	600
	509.9050.S	CLEANING PARAPETS	LF	320
	606.0300	RIPRAP HEAVY	CY	75
	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	110
	SPV.0105.10	UNDERMINING REPAIR	LS	1
**	SPV.0165.02	SHOTCRETE	SF	310

* REPAIR APPLIES TO PARAPETS, ABUTMENTS, AND/OR PIERS.

** REPAIR APPLIES TO UNDERSIDE OF DECK SLAB.

THIS IS A NOMINAL QUANTITY. TO BE DETERMINED BY THE FIELD ENGINEER.

ALL ITEMS ARE CATEGORY 0020.



SECTION AT WEST ABUTMENT

STATE PROJECT NUMBER

1071-06-77

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURAL PLANS.

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

ALL PREVIOUS PATCHES SHALL BE REMOVED UNDER THE BID ITEM "PREPARATION DECKS TYPE 1" AND "PREPARATION DECKS TYPE 2".

EXISTING LONGITUDINAL AND TRANSVERSE CRACKS SHALL BE CLEANED AND FILLED WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER. WORK SHALL BE PAID FOR UNDER BID ITEM, "CRACK SEALING EPOXY".

BID ITEMS "PREPARATION DECKS TYPE 1", "PREPARATION DECKS TYPE 2", "FULL-DEPTH DECK REPAIR", "CONCRETE SURFACE REPAIR", AND "SHOTCRETE" SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3". IF THE EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

APPLY PROTECTIVE SURFACE TREATMENT TO TOP OF OVERLAY, THE CURB, INSIDE FACES AND TOPS OF PARAPETS, INCLUDING PARAPETS ON ABUTMENT WINGS. WORK SHALL BE PAID FOR UNDER BID ITEM, "PROTECTIVE SURFACE TREATMENT".

PLACE FLOWABLE CEMENTITIOUS FILL UNDERNEATH ABUTMENT(S) AT LOCATIONS OF UNDERMINING AS DETERMINED BY THE ENGINEER. PLACE FILL PRIOR TO PLACING HEAVY RIPRAP. WORK SHALL BE PAID FOR UNDER BID ITEM "UNDERMINING REPAIR". SEE SPECIAL PROVISIONS FOR DETAILS.

EXTENTS OF RIPRAP HEAVY AT WEST ABUTMENT SHALL BE AS DIRECTED BY THE FIELD ENGINEER.

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY AT ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

REMOVAL AND CLOSING OF FLOOR DRAINS SHALL BE INCLUDED IN BID ITEM "FULL-DEPTH DECK REPAIR".

CONDUIT LOCATED ON THE UNDERSIDE OF THE SLAB MAY BE REMOVED, IF REQUIRED FOR CONSTRUCTION.

ANY EXISTING IN-PAVEMENT WEATHER SENSORS TO BE ABANDONED.

SEE ROADWAY PLANS FOR APPROACH SLAB REPLACEMENT.

LAPS IN WELDED WIRE MESH SHALL BE MADE SO THAT THE OVERLAP, MEASURED BETWEEN OUTERMOST CROSS WIRES ON EACH SHEET IS NOT LESS THAN THE SPACING ON CROSS WIRES PLUS 2 INCHES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-49

DRAWN BY VJD | PLANS CK'D. JFR

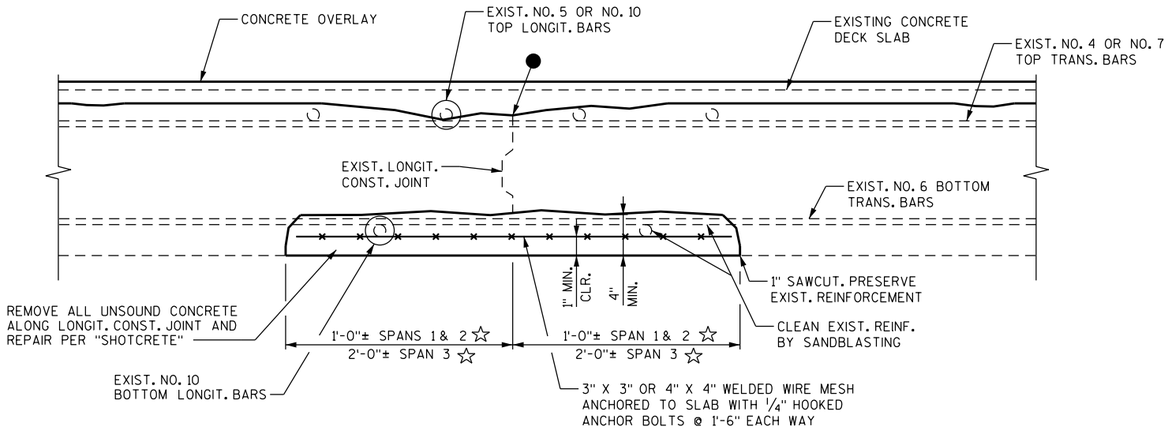
CROSS SECTION & QUANTITIES

SHEET 2 OF 3
460

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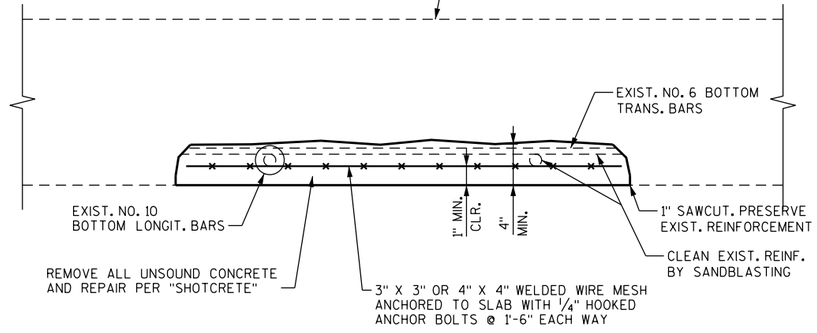
STATE PROJECT NUMBER
1071-06-77



DECK REPAIRS AT LONGITUDINAL CONSTRUCTION JOINT

● SEAL LONGITUDINAL CONSTRUCTION JOINT WITH CRACK SEALER. INCLUDED IN "CRACKING SEALING EPOXY".

☆ SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.



SHOTCRETE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-49

DRAWN BY VJD | PLANS CK'D. JFR

SHOTCRETE DETAILS

SHEET 3 OF 3

461

STATE PROJECT NUMBER

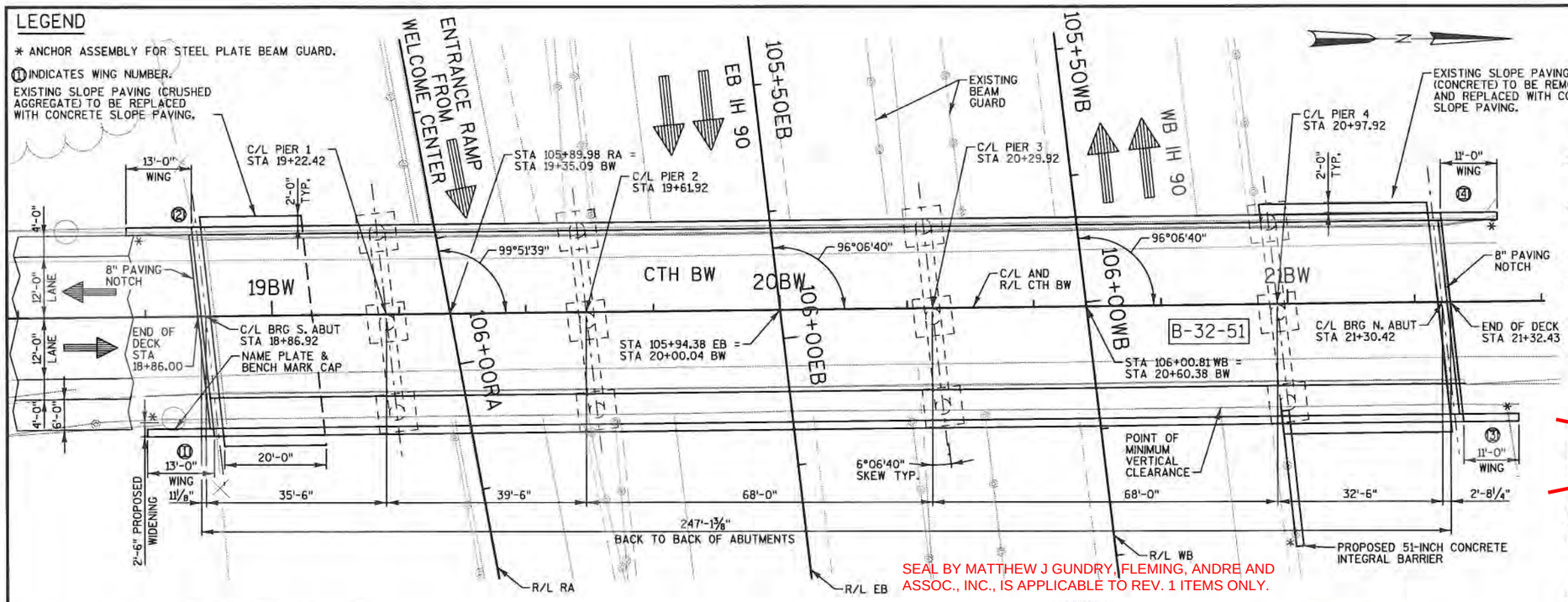
1071-06-77

LEGEND

* ANCHOR ASSEMBLY FOR STEEL PLATE BEAM GUARD.

(11) INDICATES WING NUMBER.

EXISTING SLOPE PAVING (CRUSHED AGGREGATE) TO BE REPLACED WITH CONCRETE SLOPE PAVING.



SEAL BY MATTHEW J GUNDRY, FLEMING, ANDRE AND ASSOC., INC., IS APPLICABLE TO REV. 1 ITEMS ONLY.

BRIDGE REHABILITATION NOTES:

1. REMOVE EXISTING PARAPETS, SIDEWALK, DECK, GIRDERS, CONCRETE DIAPHRAGMS, NORTH ABUTMENT BACKWALL AND WING WALLS DOWN TO ABUTMENT BODY.
2. ADD CONCRETE TO TOP OF PIERS AND ABUTMENTS TO RAISE THE PGL TO INCREASE THE MINIMUM VERTICAL CLEARANCE OVER IH 90 WB LANES. SET ~~EXISTING GIRDERS AND~~ NEW GIRDERS.
3. DRIVE PILES AT ABUTMENTS. WIDEN ABUTMENTS.
4. PLACE NEW DIAPHRAGMS, DECK, SIDEWALK, PARAPETS, AND ORNAMENTAL PROTECTIVE SCREENING.
5. EXISTING GIRDERS ~~TO BE FRP STRENGTHENED. SPANS 3 AND 4 GIRDER 8~~ TO BE REPLACED.
6. STAIN ABUTMENTS, PIERS, PARAPETS, OUTSIDE EDGE OF DECK, UNDERSIDE OF DECK OVERHANG, OUTSIDE FACE AND UNDERSIDE OF BOTTOM FLANGE OF EXTERIOR GIRDERS.

DESIGN DATA

~~LIVE LOAD:~~
~~REHABILITATION DESIGN LOADING: HS-20~~
~~INVENTORY RATING: HS-20~~
~~OPERATING RATING: HS-33~~
~~WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 200 KIPS~~

ULTIMATE DESIGN STRESSES - PROPOSED WORK:

CONCRETE MASONRY	f'c = 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.

FOUNDATION DATA

EXISTING ABUTMENTS ARE SUPPORTED ON TREATED TIMBER PILING WITH A MINIMUM BEARING CAPACITY OF 20 TONS/PILE. ESTIMATED EXISTING PILE LENGTH = 35 FEET.

EXISTING PIERS 2, 3, AND 4 ARE SUPPORTED ON TREATED TIMBER PILING WITH A MINIMUM BEARING CAPACITY OF 24 TONS/PILE. ESTIMATED EXISTING PILE LENGTH = 50 FEET.

EXISTING PIER 1 IS SUPPORTED ON SPREAD FOOTINGS WITH A MINIMUM ALLOWABLE SOIL BEARING PRESSURE OF 4000 PSF.

PROPOSED ABUTMENT WIDENING TO BE SUPPORTED ON 10¾-INCH x 0.25-INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 60'-0" LONG.

*THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTION & GENERAL NOTES
3. PROFILE GRADE LINES
4. SOUTH ABUTMENT PLAN
5. SOUTH ABUTMENT ELEVATION
6. SOUTH ABUTMENT DETAILS
7. NORTH ABUTMENT PLAN
8. NORTH ABUTMENT ELEVATION
9. NORTH ABUTMENT DETAILS
10. PIER 1
11. PIER 2
12. PIER 3
13. PIER 4
14. PIER 4 INTEGRAL BARRIER
15. INTEGRAL BARRIER DETAILS
16. FRP PIER DETAILS
17. PRESTRESSED GIRDER STRENGTHENING
18. STEEL DIAPHRAGM
19. EXISTING 36" PRESTRESSED GIRDER DETAILS
20. 36" PRESTRESSED GIRDER DETAILS
21. SUPERSTRUCTURE 1 OF 2
22. SUPERSTRUCTURE 2 OF 2
23. SUPERSTRUCTURE CROSS SECTION
24. SUPERSTRUCTURE DETAILS
25. SUPERSTRUCTURE BILL OF BARS
26. DECK ELEVATIONS
27. SINGLE SLOPE PARAPET 32SS (MODIFIED)
28. VERTICAL FACE PARAPET 'A' (MODIFIED)
29. ORNAMENTAL PROTECTIVE SCREENING
30. SLOPE PAVING (CONCRETE CAST-IN-PLACE)
31. SUBSURFACE EXPLORATION
32. 36" PRESTRESSED GIRDER DETAILS
33. 36" PRESTRESSED GIRDER DETAILS
34. STEEL DIAPHRAGM

PLAN

5 SPAN 36" PRESTRESSED GIRDERS

LIVE LOAD:
REHABILITATION DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.00
OPERATING RATING FACTOR: RF = 1.30
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV) = 231 KIPS
DESIGN LOADING AND RATING APPLIES TO SUPERSTRUCTURE ONLY

TRAFFIC VOLUME

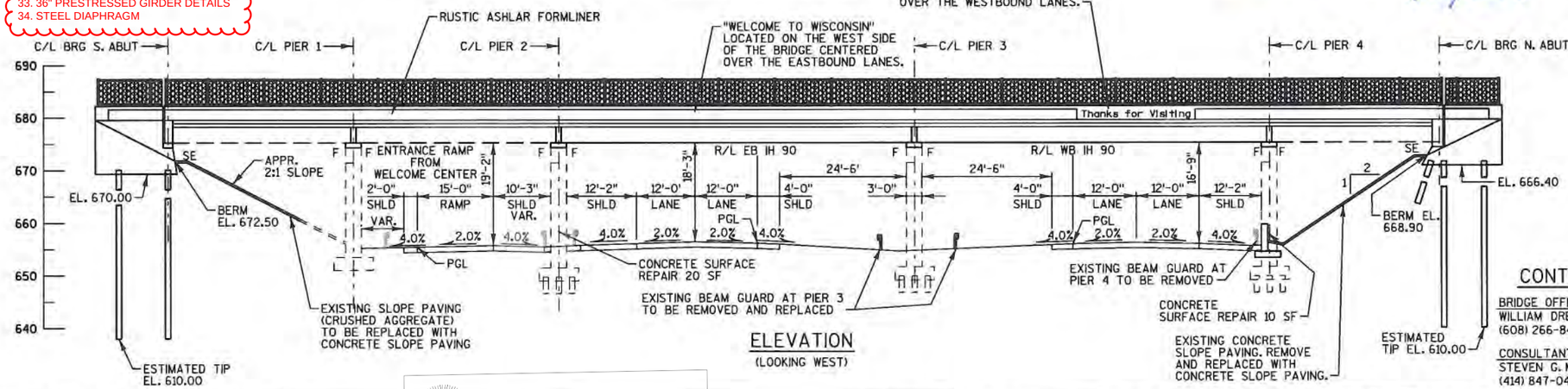
CTH BW

A.D.T. (2016).....3,600
A.D.T. (2035).....3,900
R.D.S.....35 M.P.H.

WISCONSIN MATTHEW J. GUNDRY 35517 EAU CLAIRE WI PROFESSIONAL ENGINEER 4-2-15

WISCONSIN STEVEN G. MILLER E-26710 MILWAUKEE, WI PROFESSIONAL ENGINEER 7/31/2014

"THANKS FOR VISITING" LOCATED ON THE EAST SIDE OF THE BRIDGE CENTERED OVER THE WESTBOUND LANES.



ELEVATION

(LOOKING WEST)

CONTACTS

BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE.
(608) 266-8489

CONSULTANT CONTACT
STEVEN G. MILLER, PE.
(414) 847-0480

NO.	DATE	REVISION	BY
1	2-APR	UPDATE RATINGS, NOTES, AND PAGES	MJG

CH2MHILL
MILWAUKEE, WISCONSIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/08/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-32-51

CTH BW OVER IH 90

COUNTY: LA CROSSE
TOWN/~~CITY/VILLAGE~~: CAMPBELL
DESIGN SPEC.: BRIDGE REHABILITATION - N/A

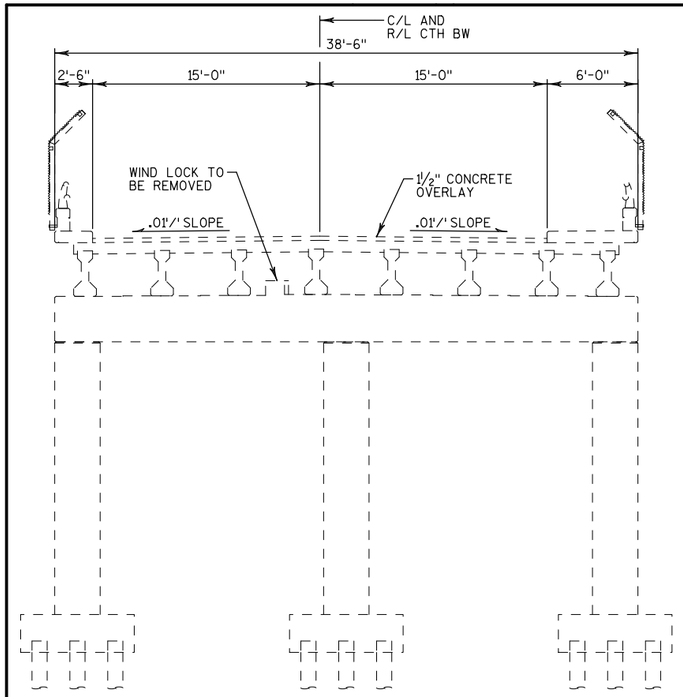
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
SGM	KES	JAP	KES

GENERAL PLAN & ELEVATION

SHEET 1 OF 31

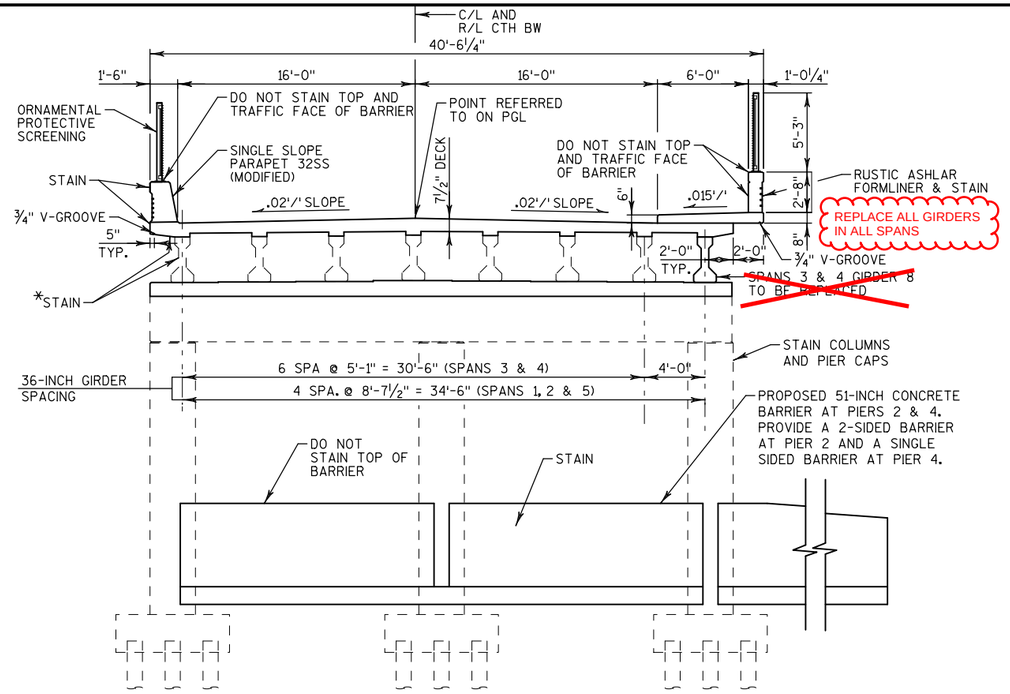
Plan Sheet Accepted By WISDOT BUREAU OF STRUCTURES

FILE NAME : Final_Design_B-32-51_08100.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08100 PLOT SCALE : 25:1



EXISTING CROSS SECTION

(LOOKING NORTH)



*STAIN OUTSIDE AND BOTTOM OF EXTERIOR GIRDERS.

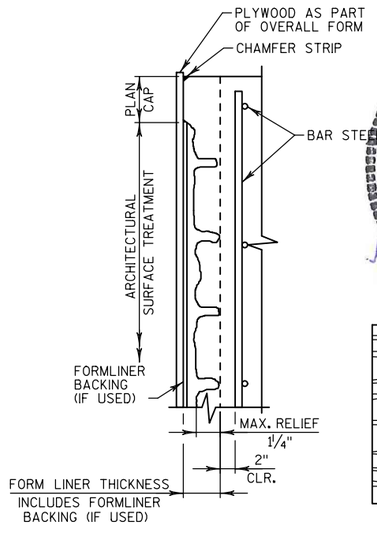
PROPOSED CROSS SECTION

(LOOKING NORTH)

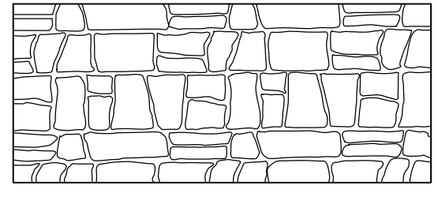
51-INCH CONCRETE BARRIER SHOWN FOR PIER 4

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SOUTH ABUT.	PIER 1	PIER 2	PIER 3	PIER 4	NORTH ABUT.	SUPER-STRUCT.	TOTAL
203.0200	REMOVING OLD STRUCTURE (STATION 18'BW'+85)	LS	-	-	-	-	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-32-51	LS	-	-	-	-	-	-	-	1
210.0100	BACKFILL STRUCTURE	CY	67	-	-	-	-	67	-	134
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	-	-	-	-	20	-	-	20
312.0110	SELECT CRUSHED MATERIAL	TON	-	-	-	-	28	-	-	28
502.0100	CONCRETE MASONRY BRIDGES	CY	20	5	4	4	29	22	414	498
502.3200	PROTECTIVE SURFACE TREATMENT	SY	23	-	-	-	-	20	1,277	1,320
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	106	72	72	72	72	100	-	494
502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	24	-	-	-	30	23	-	77
502.5015	MASONRY ANCHORS TYPE L NO. 7 BARS	EACH	5	-	-	-	-	5	-	10
503.0136	PRESTRESSED GIRDER TYPE I 36-INCH	LF	-	-	-	-	-	-	136	136
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	2,870	1,040	1,050	1,010	4,890	2,710	113,800	127,370
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	5	10	13	16	13	5	-	62
506.4000	STEEL DIAPHRAGMS B-32-51	EACH	-	-	-	-	-	-	26	26
506.7060.S	BRIDGE JACKING B-32-51	LS	-	-	-	-	-	-	-	1
509.1500	CONCRETE SURFACE REPAIR	SF	-	-	20	-	10	-	2	32
513.4090	RAILING TUBULAR SCREENING B-32-51	LS	-	-	-	-	-	-	-	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18	-	-	-	-	18	-	36
517.1010.S	CONCRETE STAINING B-32-51	SF	370	860	870	890	930	360	4,480	8,760
517.1015.S	CONCRETE STAINING MULTI-COLOR B-32-51	SF	42	-	-	-	-	34	930	1,006
517.1050.S	ARCHITECTURAL SURFACE TREATMENT B-32-51	SF	42	-	-	-	-	34	989	1,065
550.2104	PILING CIP CONCRETE 10 3/4 X 0.25-INCH	LF	120	-	-	-	-	180	-	300
604.0400	SLOPE PAVING CONCRETE	SY	111	-	-	-	-	168	-	279
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	150	-	-	-	-	150	-	300
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-	-	-	1	2	-	5
SPV.0165.10	FIBER WRAP REINFORCING	SF	-	29	264	203	186	-	4,460	5,220
	NON-BID ITEMS									
	FILLER	SIZE	½",¾"	¾"	¾"	¾"	¾"	½", 1"		½",¾", 1"



SECTION THRU FORMLINER



RUSTIC ASHLAR

FORMLINER THICKNESS = 2⅜"
SIZE = 8" TO 25"
MAX. RELIEF = 1¼"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

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 BACK FILLED WITH STRUCTURE BACKFILL.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES AT THE ABUTMENTS SHALL BE THE BOTTOM OF SLOPE PROTECTION.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING CONCRETE TO THE EXTENT SHOWN ON THE SLOPE PAVING DETAIL SHEET.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP OF THE DECK AND SIDEWALK, FACE OF CURB, AND TO THE TOP AND TRAFFIC FACE OF THE TRAFFIC BARRIERS.

THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES. ADDITIONAL UTILITIES NOT SHOWN ON THIS PLAN MAY BE PRESENT.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE DEPTH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET, AND IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

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

VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

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

EXISTING STRUCTURE B-32-51 IS A 5-SPAN 36" PRESTRESSED GIRDER BRIDGE CONSTRUCTED IN 1967.

A FIBER-REINFORCED POLYMER (FRP) STRENGTHENING SYSTEM SHALL BE DESIGNED AND APPLIED TO PORTIONS OF THE ~~EXISTING GIRDERS AND~~ PIER CAPS AS SHOWN IN THESE PLANS AND IN ACCORDANCE WITH THE "FIBER WRAP REINFORCING" SPECIAL PROVISIONS.

CONCRETE SURFACE REPAIR SHALL BE PERFORMED AT PIERS 2 AND 4, ~~ON THE END OF GIRDER 1 AT THE NORTH ABUTMENT~~, AND AS DIRECTED BY THE FIELD ENGINEER.

STAIN SHALL BE APPLIED TO ALL SURFACES AS CALLED FOR ON PLANS. STAIN COLOR SHALL BE MEDIUM TAN, FEDERAL NO. 33446.

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
100	21+37BW, 16.5'LT	CHISELED "X" ON PARAPET	677.56



SEAL BY MATTHEW J GUNDRY, FLEMING, ANDRE AND ASSOC., INC., IS APPLICABLE TO REV. 1 ITEMS ONLY.

BUREAU OF STRUCTURES
WISDOT
Plan Sheet Accepted by

NO.	DATE	REVISION	BY
1	2-APR	UPDATE NOTES AND SECTION VIEW	MJG

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY JAP | PLANS CK'D. KES

TYPICAL SECTION & GENERAL NOTES

SHEET 2 OF 31

STATE PROJECT NUMBER

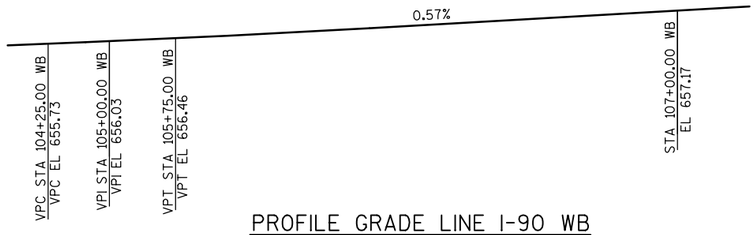
1071-06-77

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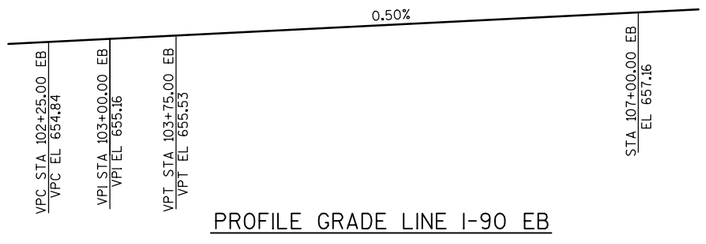
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STATE PROJECT NUMBER

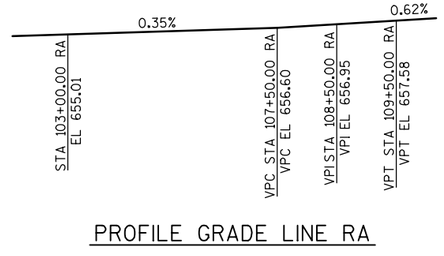
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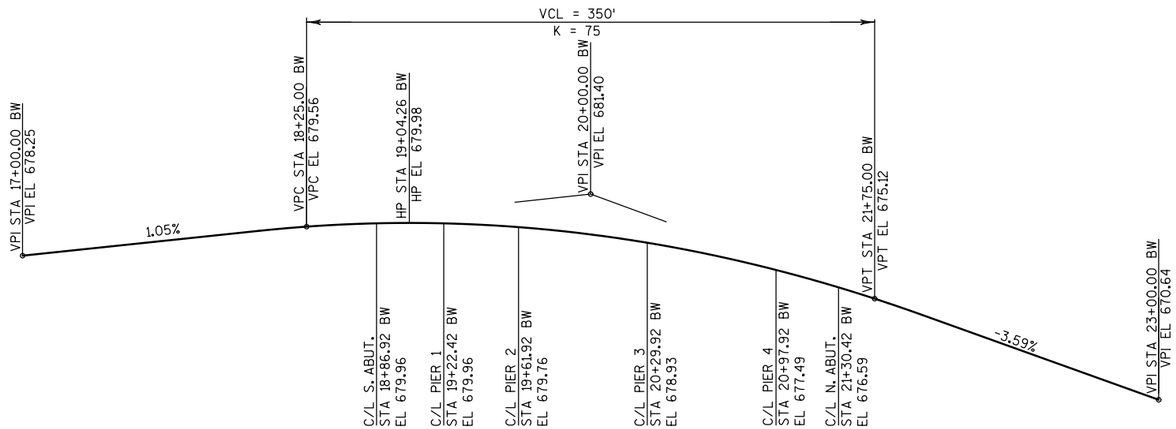
PROFILE GRADE LINE I-90 WB



PROFILE GRADE LINE I-90 EB



PROFILE GRADE LINE RA



PROFILE GRADE LINE CTH BW

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

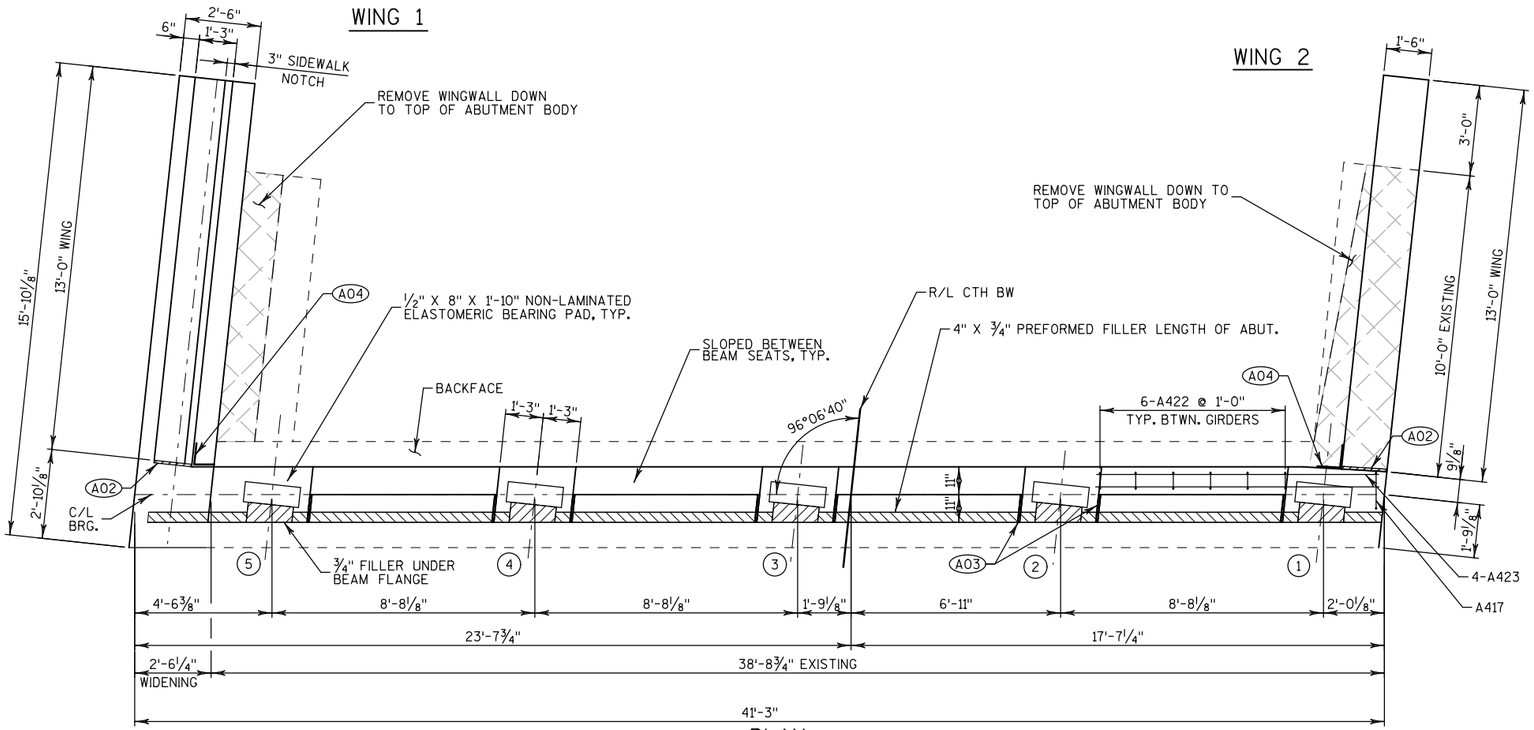
DRAWN BY JAP | PLANS CK'D. KES

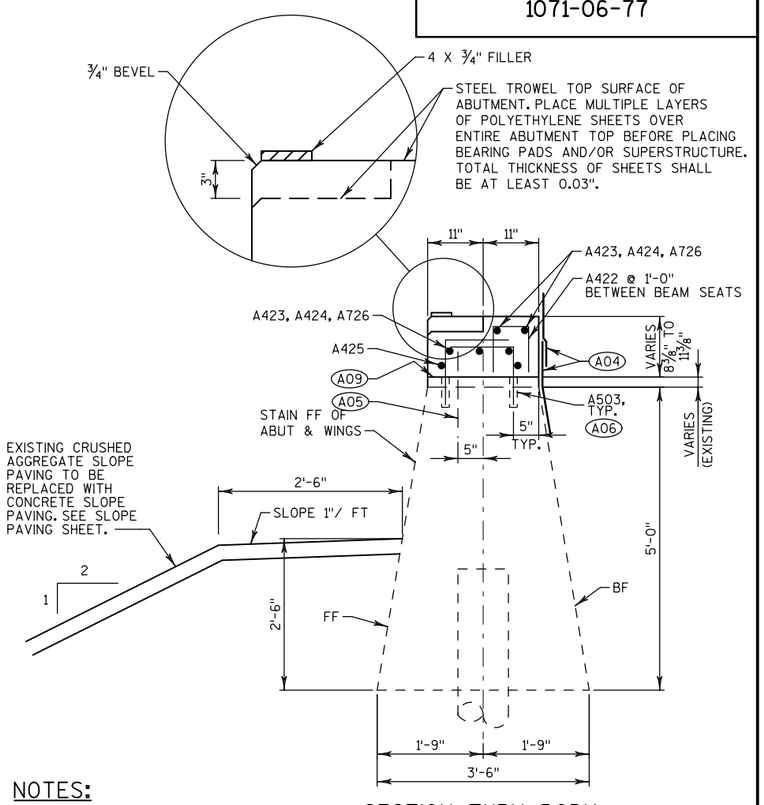
PROFILE GRADE LINES

SHEET 3 OF 31

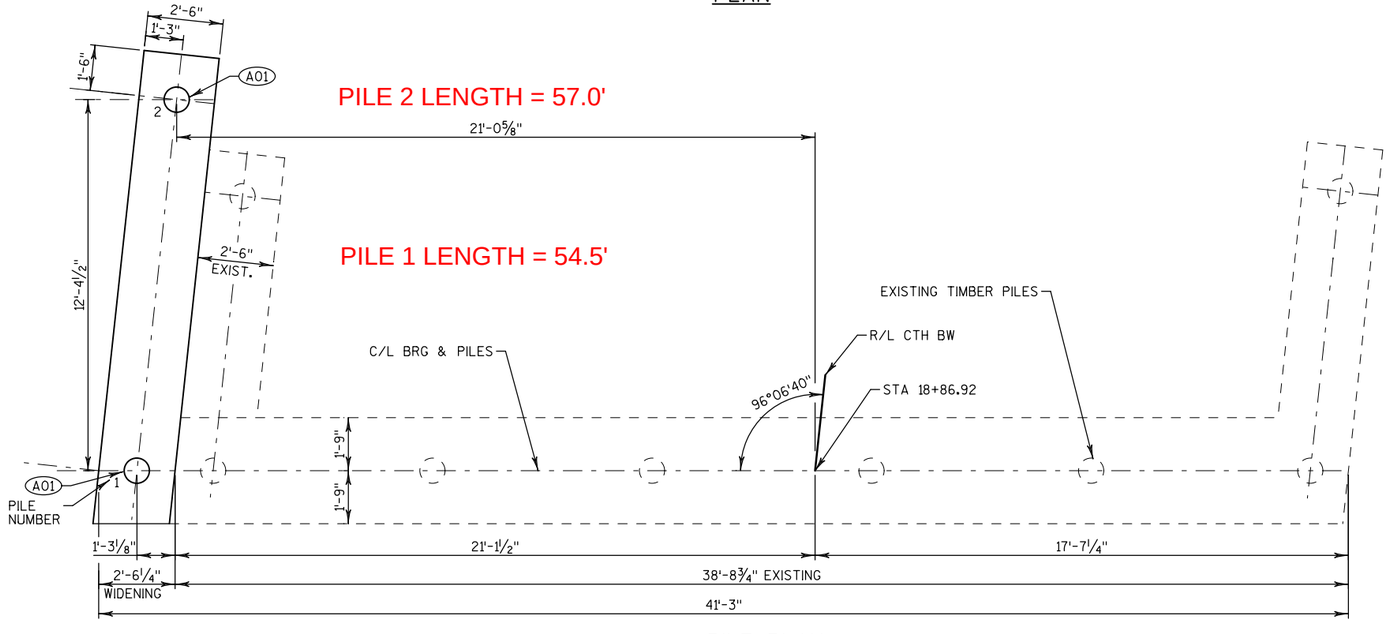
FILE NAME : Final_Design_B-32-51_08102.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08102 PLOT SCALE : 40:1

STATE PROJECT NUMBER
1071-06-77





SECTION THRU BODY
EXISTING



PILE PLAN

NOTES:

FF = FRONT FACE
BF = BACK FACE

(A01) PROPOSED ABUTMENT WIDENING TO BE SUPPORTED ON 10¾"x0.25-INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 80 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 50'-0" LONG.

(A02) ½" FILLER (INCLUDED IN WING LENGTH) TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET. SEAL ALL EXPOSED HORIZ & VERT SURFACES OF ½" FILLER WITH NON-STAINING NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE OR STAIN.

(A03) ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER, TYP.

(A04) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

(A05) EXISTING #5 DOWELS AT 1'-0" BETWEEN BEAM SEATS (24 BARS TOTAL). INCORPORATE INTO NEW WORK. CUT BARS 2" BELOW PROPOSED ABUTMENT SEAT ELEVATIONS.

(A06) MASONRY ANCHORS TYPE L NO. 5 BARS EMBED 7" IN CONCRETE.

(A09) ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY	JAP	PLANS CK'D.	KES

SOUTH ABUTMENT PLAN

SHEET 4 OF 31

8

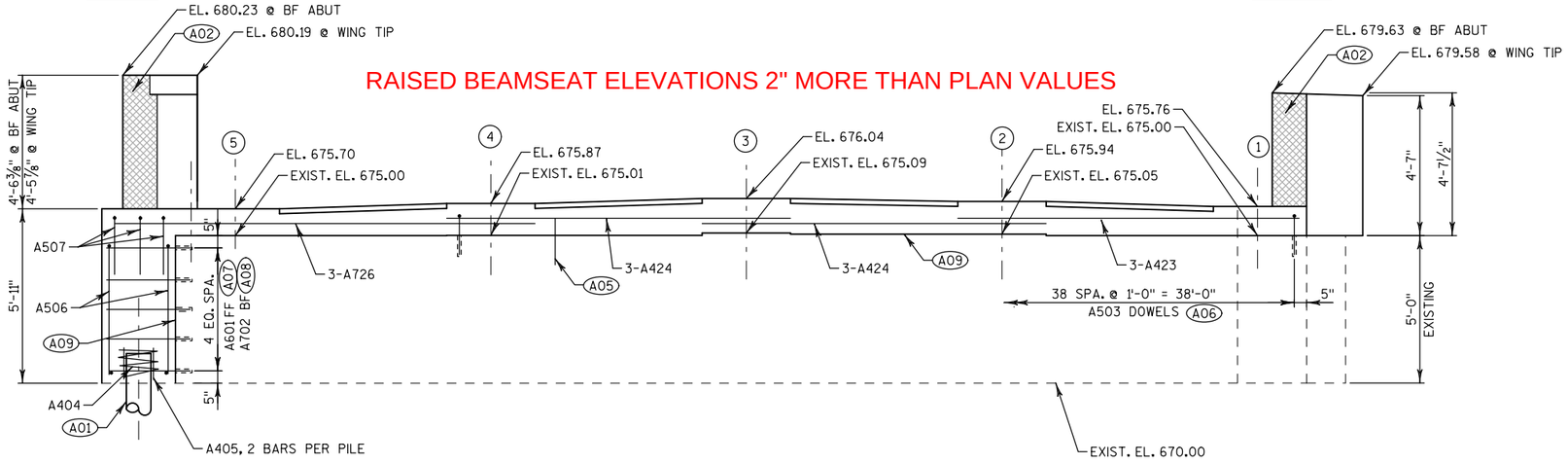
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STATE PROJECT NUMBER
1071-06-77

WING 1

WING 2

RAISED BEAMSEAT ELEVATIONS 2" MORE THAN PLAN VALUES



ELEVATION
(LOOKING SOUTH)

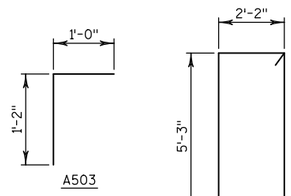
BILL OF BARS - SOUTH ABUTMENT

2,280 LB COATED

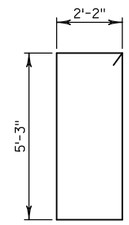
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A601	X	24	2'-9"		ABUT BODY & WING 1 DOWELS
A702	X	5	2'-10"		ABUT BODY AT WING 1 DOWELS
A503	X	78	2'-1"	X	ABUT BODY DOWELS
A404	X	2	28'-0"	X	ABUT PILE - 1 PER PILE - 5 WRAP SPIRAL
A405	X	4	2'-3"		ABUT PILE - 2 PER PILE - VERTICAL
A506	X	4	8'-0"	X	ABUT BODY STIRRUPS
A507	X	3	5'-9"	X	ABUT BODY TOP AT WING 1
A508	X	16	15'-4"	X	WING 1 STIRRUP
A509	X	7	14'-6"		WING 1 - HORIZONTAL - FRONT FACE
A710	X	9	14'-6"		WING 1 - HORIZONTAL - BACK FACE
A511	X	18	12'-8"	X	WING 1 - VERTICAL
A412	X	18	6'-6"	X	WING 1 - VERTICAL
A413	X	12	12'-7"		WING 1 - HORIZONTAL
A614	X	2	12'-7"		WING 1 - HORIZONTAL - TOP
A515	X	28	3'-4"		WING 2 - DOWELS
A516	X	18	9'-7"	X	WING 2 - VERTICAL
A417	X	12	12'-7"		WING 2 - HORIZONTAL
A618	X	2	12'-7"		WING 2 - HORIZONTAL - TOP
A419	X	14	2'-0"		SURFACE DRAIN ANCHORS - WING 2
A420	X	4	3'-0"		WING 2 - HORIZONTAL INTO BEAM SEAT
A422	X	24	1'-5"	X	ABUT BODY - VERTICAL
A423	X	5	11'-7"		ABUT BODY - HORIZONTAL
A424	X	10	10'-10"		ABUT BODY - HORIZONTAL
A425	X	2	40'-10"		ABUT BODY - HORIZONTAL
A726	X	5	14'-4"		ABUT BODY - HORIZONTAL

NOTES:
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.

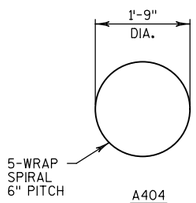
ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.



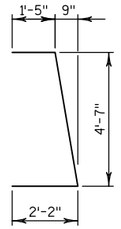
A503



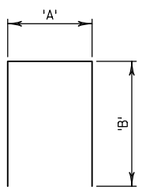
A508



A404



A506



BAR MARK	DIM 'A'	DIM 'B'
A507	1'-6"	2'-5"
A511	11"	5'-9"
A412	8"	2'-0"
A516	1'-2"	4'-4"
A422	7"	6"

NOTES:

FF = FRONT FACE
BF = BACK FACE

(A01) PROPOSED ABUTMENT WIDENING TO BE SUPPORTED ON 10¾" X 0.25-INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 80 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 50'-0" LONG.

(A02) ½" FILLER (INCLUDED IN WING LENGTH) TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET. SEAL ALL EXPOSED HORIZ & VERT SURFACES OF ½" FILLER WITH NON-STAINING NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE OR STAIN.

(A03) ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER, TYP.

(A04) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

(A05) EXISTING #5 DOWELS AT 1'-0" BETWEEN BEAM SEATS (24 BARS TOTAL). INCORPORATE INTO NEW WORK. CUT BARS 2" BELOW PROPOSED ABUTMENT SEAT ELEVATIONS.

(A06) MASONRY ANCHORS TYPE L NO. 5 BARS EMBED 7" IN CONCRETE.

(A07) MASONRY ANCHORS TYPE L NO. 6 BARS EMBED 8" IN CONCRETE.

(A08) MASONRY ANCHORS TYPE L NO. 7 BARS EMBED 9" IN CONCRETE.

(A09) ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTRACT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY JAP | PLANS CK'D. KES

SOUTH ABUTMENT ELEVATION

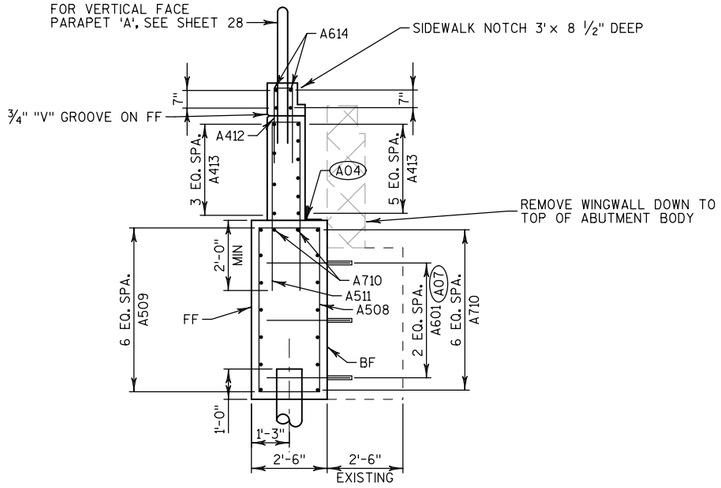
SHEET 5 OF 31

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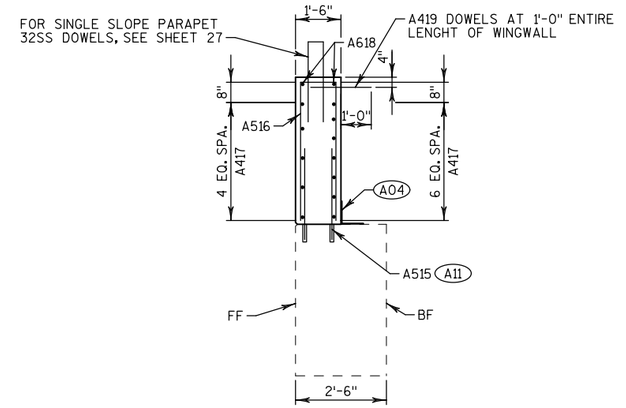
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STATE PROJECT NUMBER

1071-06-77



WING 1 SECTION



WING 2 SECTION

NOTES:

FF = FRONT FACE
BF = BACK FACE

(A01) PROPOSED ABUTMENT WIDENING TO BE SUPPORTED ON 10 3/4" X 0.25-INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 80 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 50'-0" LONG.

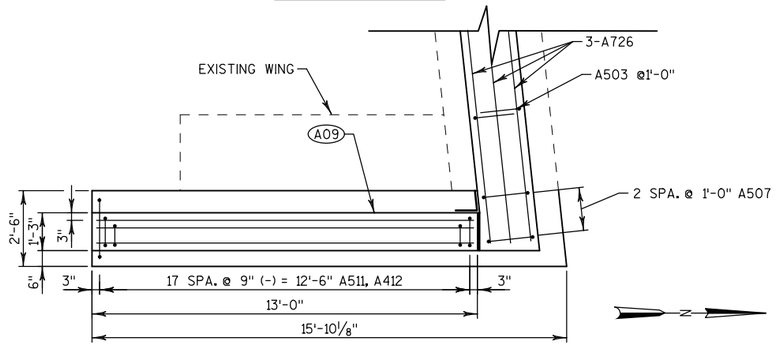
(A04) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

(A07) MASONRY ANCHORS TYPE L NO. 6 BARS EMBED 8" IN CONCRETE.

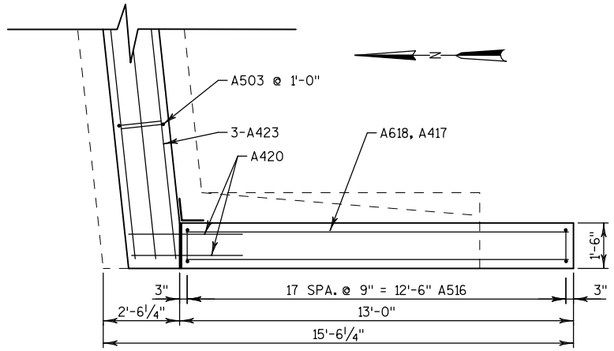
(A08) MASONRY ANCHORS TYPE L NO. 7 BARS EMBED 9" IN CONCRETE

(A09) ROUGHEN SURFACE OF CONCRETE 1/4" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTRACT.

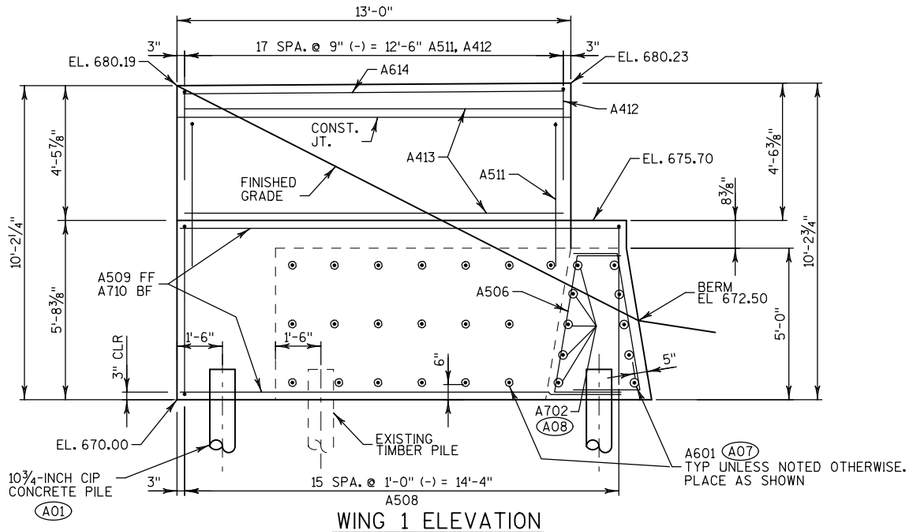
(A11) MASONRY ANCHORS TYPE L NO. 5 BARS EMBED 7" IN CONCRETE.



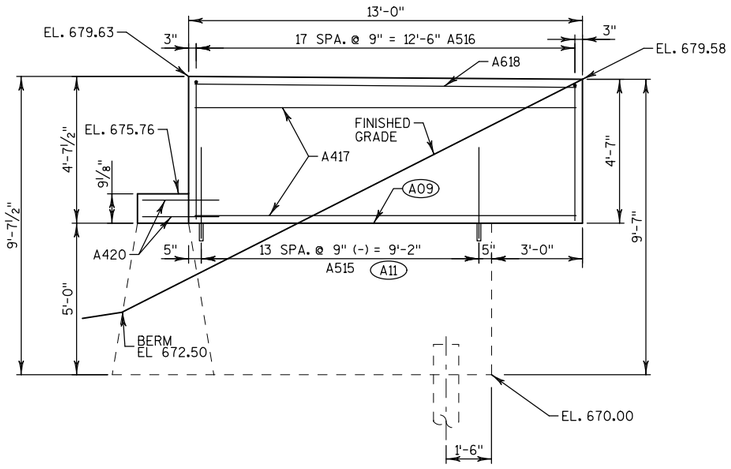
WING 1 PLAN



WING 2 PLAN



WING 1 ELEVATION



WING 2 ELEVATION
(FRONT FACE)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

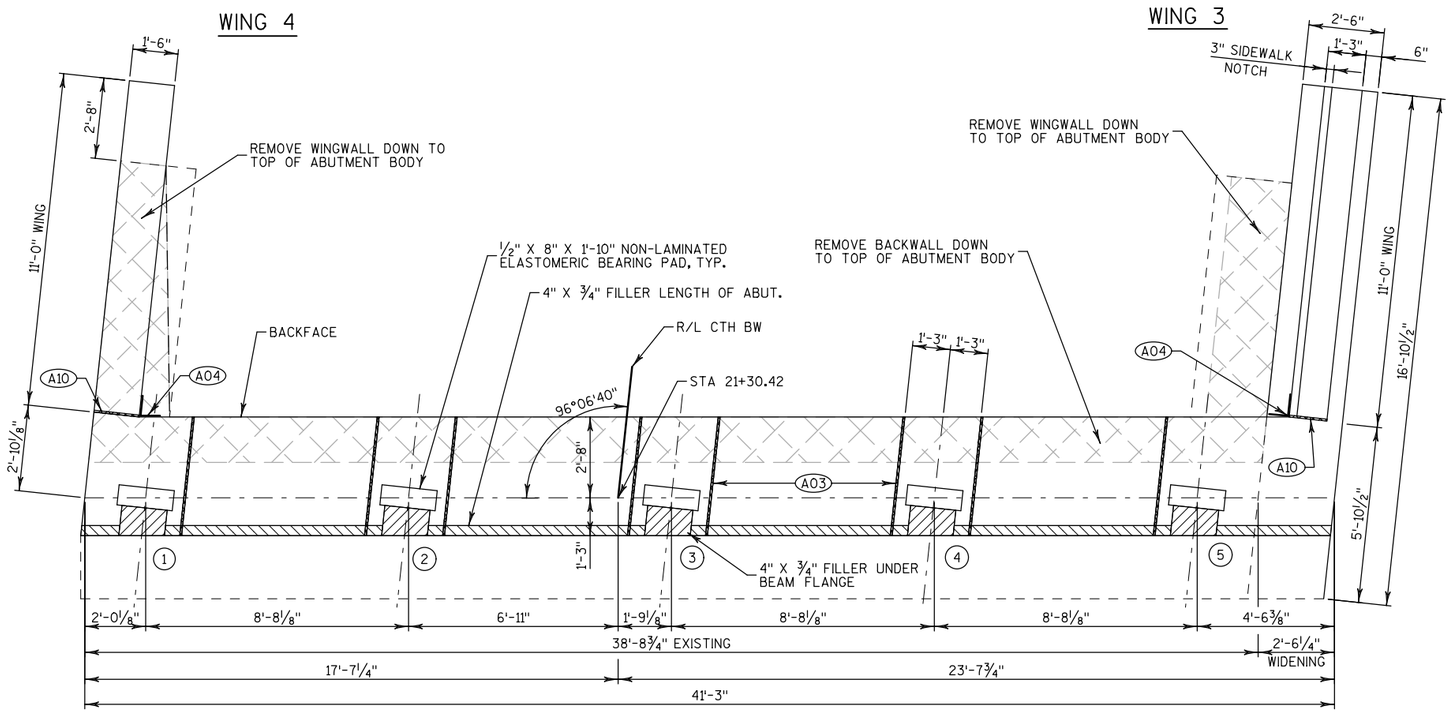
DRAWN BY JAP | PLANS CK'D. KES

SOUTH ABUTMENT DETAILS

SHEET 6 OF 31

8

8



NOTES:

FF = FRONT FACE
BF = BACK FACE

(A01) PROPOSED ABUTMENT WIDENING TO BE SUPPORTED ON 10¾" X 0.25-INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 80 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 50'-0" LONG.

(A03) ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER, TYP.

(A04) 18" RUBBERIZED MEMBRANE WATER PROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

(A06) MASONRY ANCHORS TYPE L NO. 5 BARS EMBED 7" IN CONCRETE.

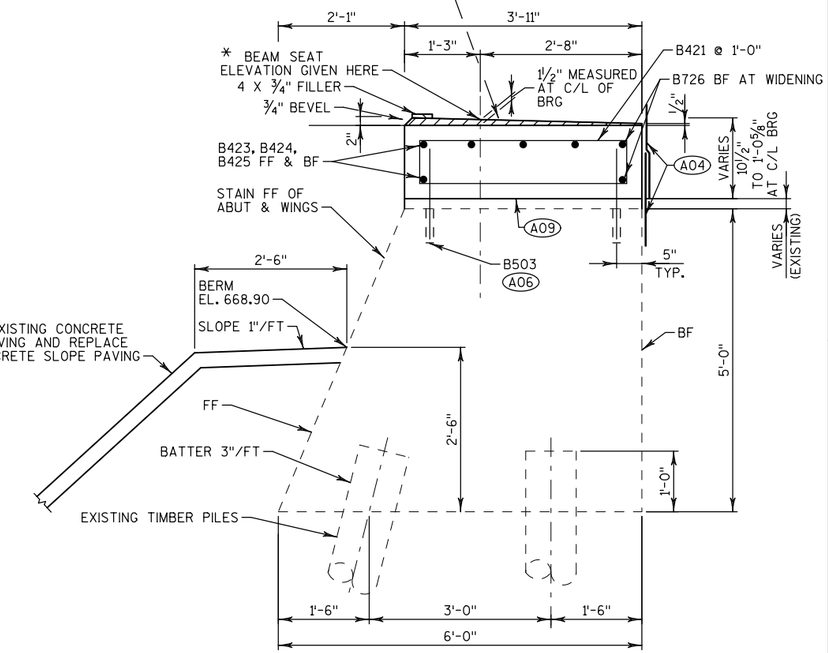
(A07) MASONRY ANCHORS TYPE L NO. 6 BARS EMBED 8" IN CONCRETE.

(A08) MASONRY ANCHORS TYPE L NO. 7 BARS EMBED 9" IN CONCRETE.

(A09) ROUGHEN SURFACE OF CONCRETE ½" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

(A10) 1" CORK FILLER (INCLUDED IN WING LENGTH) TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1" CORK FILLER WITH NON-STAINING NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE OR STAIN.

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND/OR SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".



SECTION THRU BODY
EXISTING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY JAP | PLANS CK'D. KES

NORTH ABUTMENT PLAN

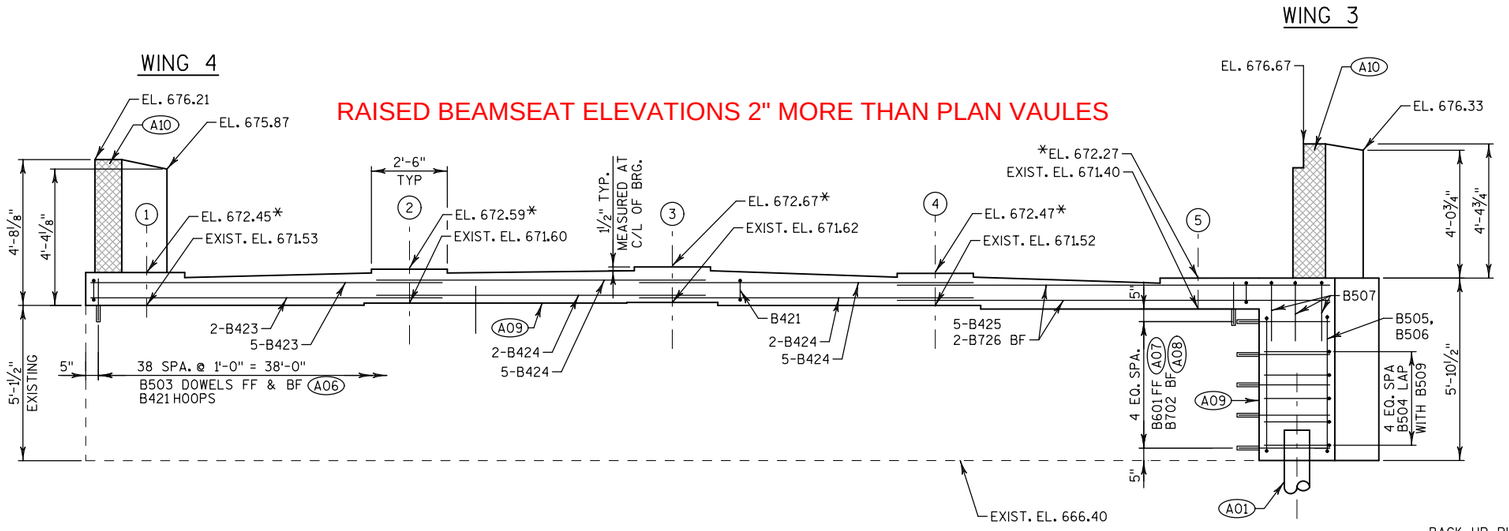
SHEET 7 OF 31

STATE PROJECT NUMBER
1071-06-77

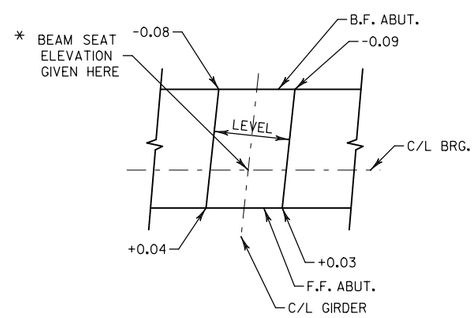
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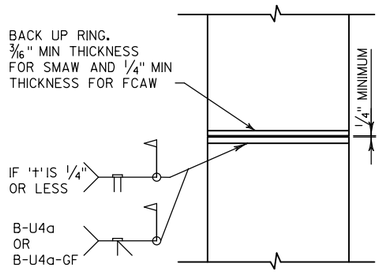
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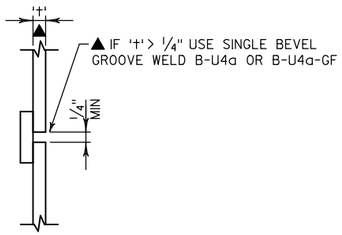


ELEVATION
(LOOKING NORTH)



SLOPED BEAM SEAT DETAIL





CAST-IN-PLACE 'PIPE PILE'

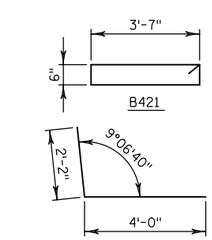
CIP PILE WELD DETAIL

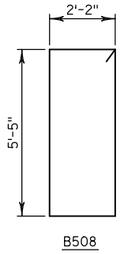
BILL OF BARS

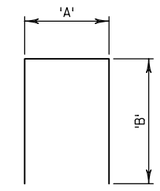
2,190 LB COATED

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B601	X	23	2'-9"		ABUT BODY & WING 3 DOWELS
B702	X	5	2'-10"		ABUT BODY AT WING 3 DOWELS
B503	X	78	1'-3"		ABUT BODY DOWELS
B504	X	5	6'-1"	X	ABUT BODY - HORIZONTAL
B505	X	2	13'-8"	X	ABUT BODY STIRRUPS
B506	X	2	9'-4"	X	ABUT BODY STIRRUPS
B507	X	3	7'-10"	X	ABUT BODY TOP AT WING 3
B508	X	16	15'-8"	X	WING 3 STIRRUP
B509	X	7	14'-7"		WING 3 - HORIZONTAL - FRONT FACE
B710	X	9	14'-7"		WING 3 - HORIZONTAL - BACK FACE
B511	X	15	12'-0"	X	WING 3 - VERTICAL
B412	X	15	4'-7"	X	WING 3 - VERTICAL
B413	X	12	10'-7"		WING 3 - HORIZONTAL
B614	X	2	10'-7"		WING 3 - HORIZONTAL - TOP
B515	X	22	3'-4"		WING 4 - DOWELS
B516	X	15	9'-7"	X	WING 4 - VERTICAL
B417	X	12	10'-7"		WING 4 - HORIZONTAL
B618	X	2	10'-7"		WING 4 - HORIZONTAL - TOP
B419	X	11	2'-0"		SURFACE DRAIN ANCHORS
B420	X	4	5'-1"		WING 4 - HORIZONTAL INTO BEAM SEAT
B421	X	39	9'-3"	X	ABUT BODY - HOOPS
B423	X	7	11'-7"		ABUT BODY - HORIZONTAL
B424	X	14	10'-10"		ABUT BODY - HORIZONTAL
B425	X	5	14'-4"		ABUT BODY - HORIZONTAL
B726	X	2	14'-4"		ABUT BODY - HORIZONTAL

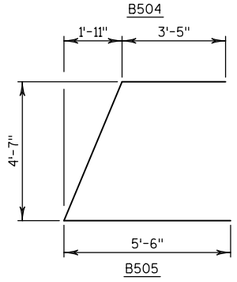
NOTES:
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

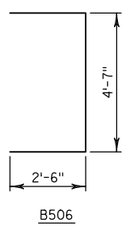






BAR MARK	DIM 'A'	DIM 'B'
B507	3'-7"	2'-3"
B511	11"	5'-8"
B412	8"	2'-0"
B516	1'-2"	4'-2"





B504

NOTES:

(A01) PROPOSED ABUTMENT WIDENING TO BE SUPPORTED ON 10¾"×0.25-INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 80 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 50'-0" LONG.

(A06) MASONRY ANCHORS TYPE L NO. 5 BARS EMBED 7" IN CONCRETE.

(A07) MASONRY ANCHORS TYPE L NO. 6 BARS EMBED 8" IN CONCRETE.

(A08) MASONRY ANCHORS TYPE L NO. 7 BARS EMBED 9" IN CONCRETE.

(A09) ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

(A10) 1" CORK FILLER (INCLUDED IN WING LENGTH) TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1" CORK FILLER WITH NON-STAINING NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE OR STAIN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

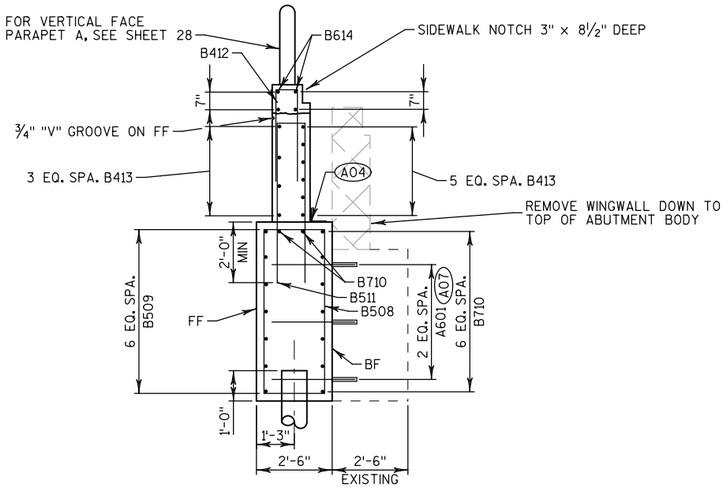
DRAWN BY JAP | PLANS CK'D. KES

NORTH ABUTMENT ELEVATION

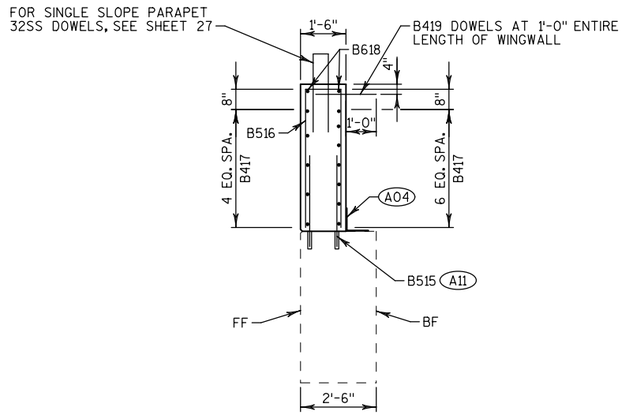
SHEET 8 OF 31

8

8



WING 3 SECTION



WING 4 SECTION

NOTES:

(A01) PROPOSED ABUTMENT WIDENING TO BE SUPPORTED ON 10¾"x0.25-INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 80 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 50'-0" LONG.

(A04) 18" RUBBERIZED MEMBRANE WATER PROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

(A06) MASONRY ANCHORS TYPE L NO. 5 BARS EMBED 7" IN CONCRETE.

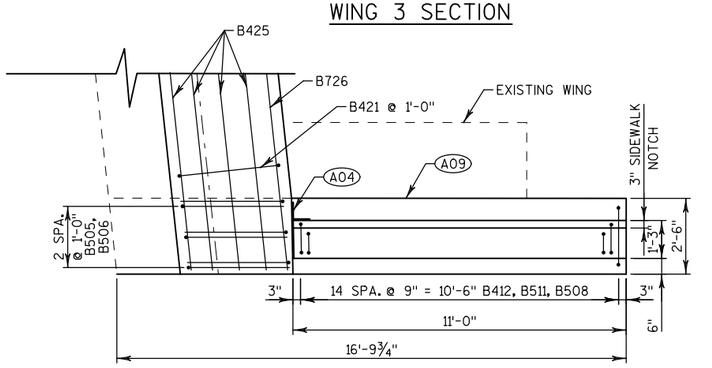
(A07) MASONRY ANCHORS TYPE L NO. 6 BARS EMBED 8" IN CONCRETE.

(A08) MASONRY ANCHORS TYPE L NO. 7 BARS EMBED 9" IN CONCRETE.

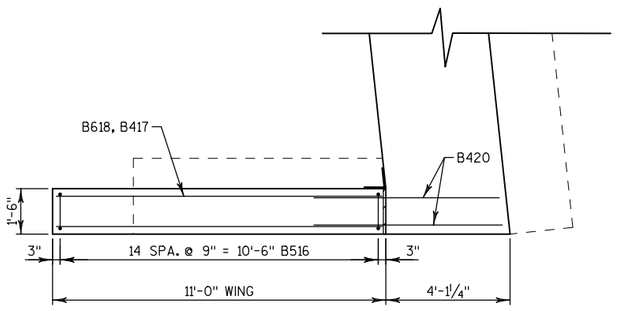
(A09) ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

(A10) 1" CORK FILLER (INCLUDED IN WING LENGTH) TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE OR STAIN.

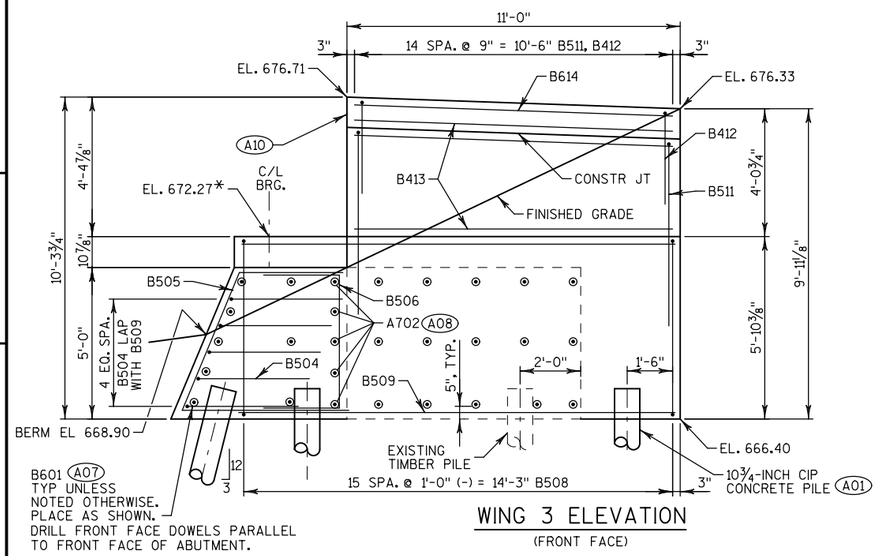
(A11) MASONRY ANCHORS TYPE L NO. 5 BARS EMBED 7" IN CONCRETE.



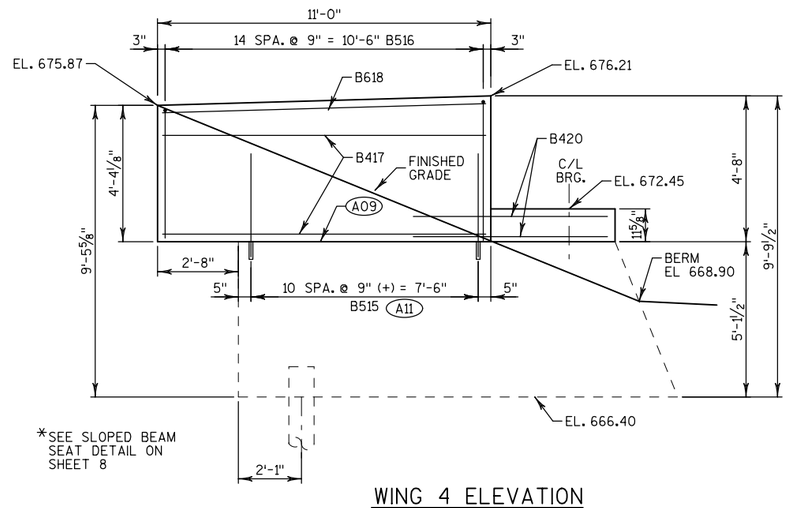
WING 3 PLAN



WING 4 PLAN



WING 3 ELEVATION
(FRONT FACE)



WING 4 ELEVATION
(FRONT FACE)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY JAP | PLANS CK'D. KES

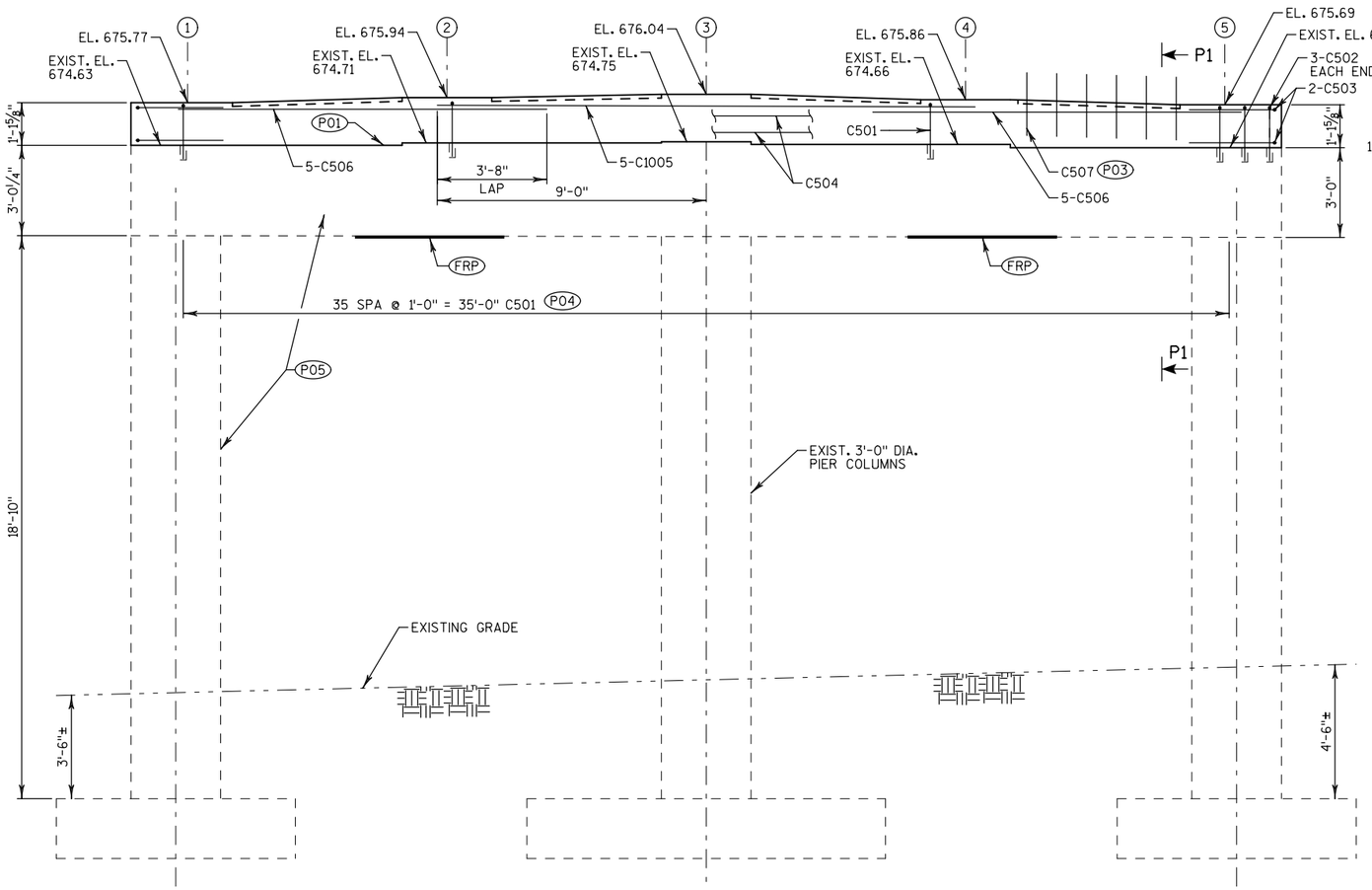
NORTH ABUTMENT DETAILS

SHEET 9 OF 31

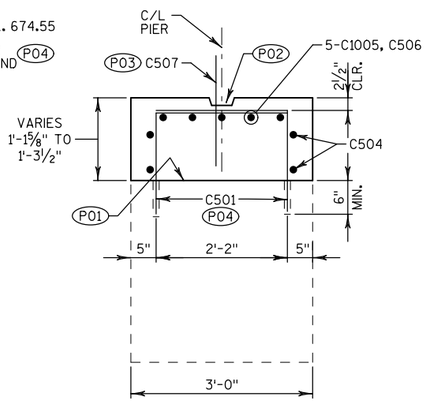
RAISED BEAMSEAT ELEVATIONS 2" MORE THAN PLAN VAULES

STATE PROJECT NUMBER

1071-06-77



ELEVATION
(LOOKING NORTH)



SECTION P1

NOTES:

(P01) ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

(P02) KEYED CONST. JOINT BETWEEN GIRDERS FORMED BY BEVELED 2"x6".

(P03) DOWEL BARS. PLACE 6 BARS BETWEEN EACH GIRDER. EMBED 1'-0". PLACE BARS BEFORE CONCRETE HAS TAKEN INITIAL SET.

(P04) MASONRY ANCHORS TYPE L NO. 5 BARS. EMBED 7" MIN. IN CONCRETE.

(P05) STAIN ALL EXPOSED SURFACES OF PIER CAP AND COLUMNS.

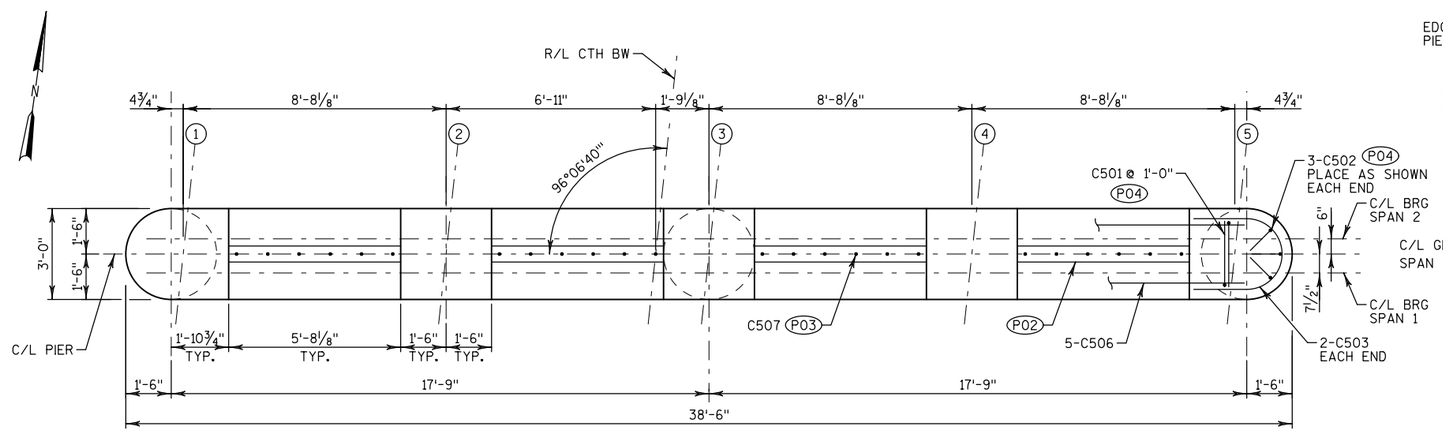
(FRP) FRP STRENGTHENING, SEE SHEET 16 FOR DETAILS.

BILL OF BARS

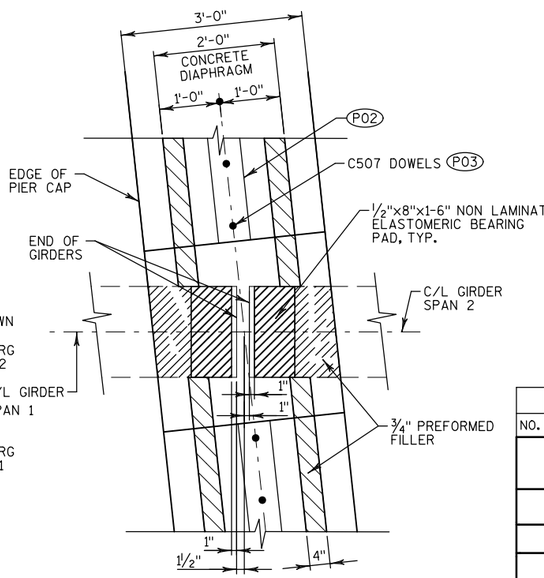
1,040 LB COATED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
C501	X	72	3'-9"	X	CAP - DOWELS INTO EXISTING
C502	X	6	2'-7"	X	CAP - DOWELS INTO EXISTING AT ENDS
C503	X	4	7'-4"	X	CAP - HORIZONTAL AT ENDS
C504	X	4	35'-6"		CAP - HORIZONTAL
C1005	X	5	18'-0"		CAP - HORIZONTAL TOP
C506	X	10	12'-5"		CAP - HORIZONTAL TOP
C507	X	24	2'-0"		CAP - DIAPHRAGM DOWELS

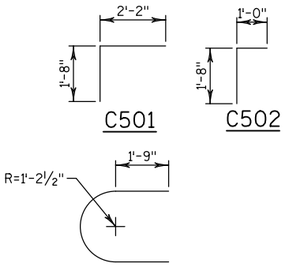
NOTES:
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.



CAP PLAN



BEARING PAD DETAIL



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY MHM | PLANS CK'D. KES

PIER 1

SHEET 10 OF 31

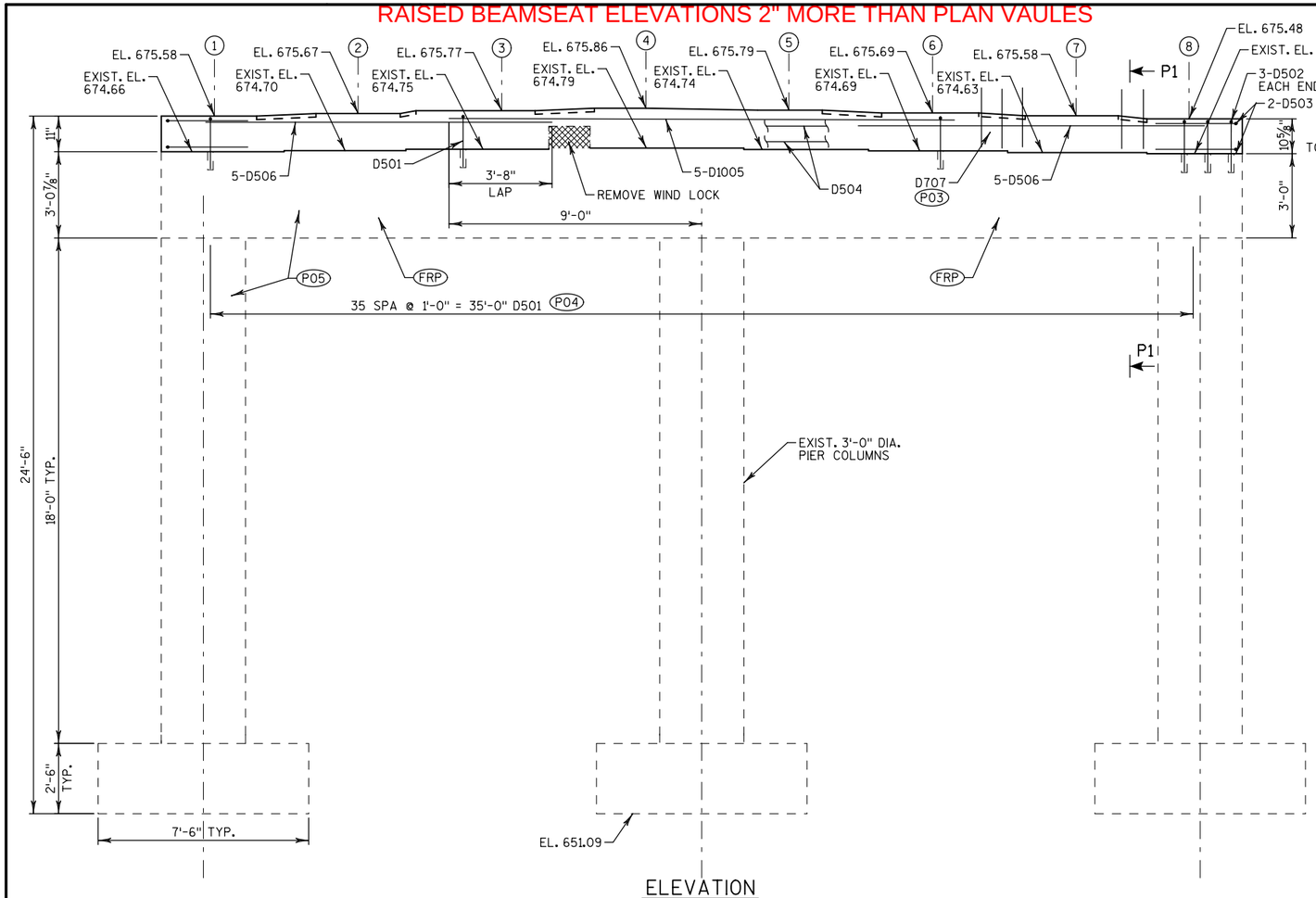
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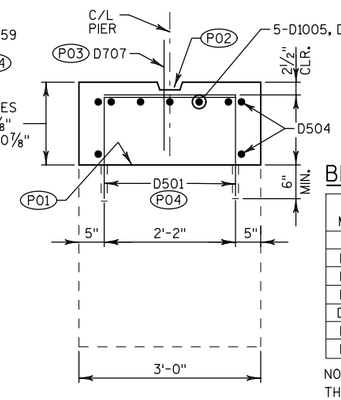
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RAISED BEAMSEAT ELEVATIONS 2" MORE THAN PLAN VAULES

STATE PROJECT NUMBER
1071-06-77



ELEVATION
(LOOKING NORTH)



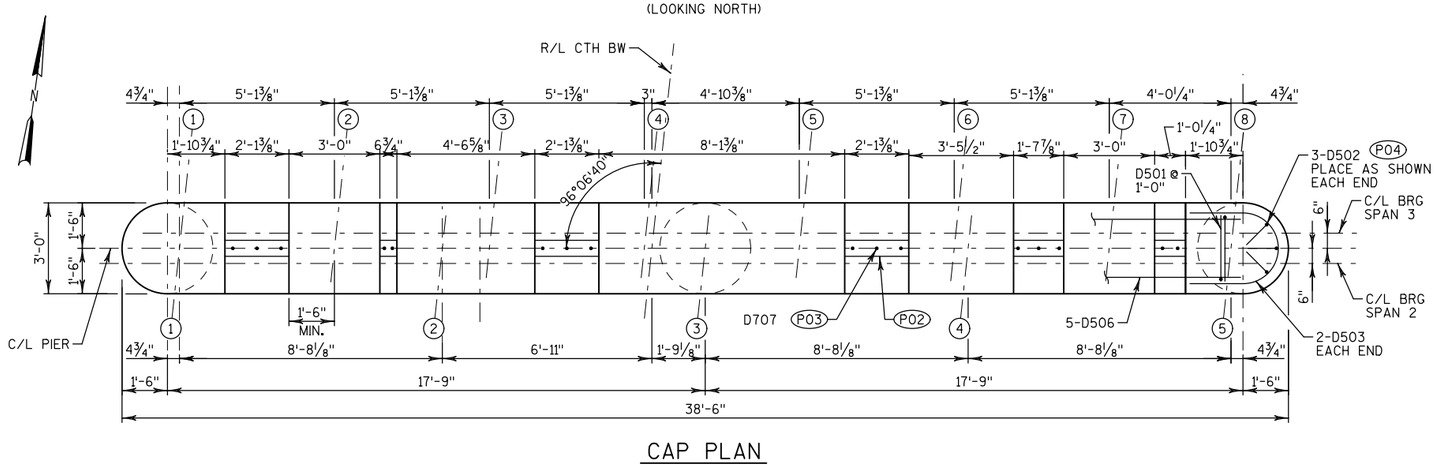
SECTION P1

BILL OF BARS

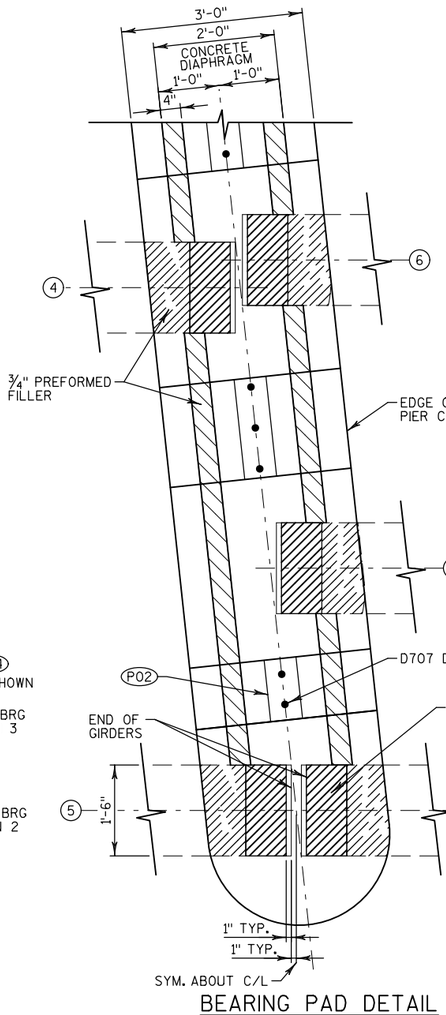
1,050 LB COATED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
D501	X	72	3'-7"	X	CAP - DOWELS INTO EXISTING
D502	X	6	2'-3"	X	CAP - DOWELS INTO EXISTING AT ENDS
D503	X	4	7'-4"	X	CAP - HORIZONTAL AT ENDS
D504	X	4	35'-6"		CAP - HORIZONTAL
D1005	X	5	18'-0"		CAP - HORIZONTAL TOP
D506	X	10	12'-5"		CAP - HORIZONTAL TOP
D707	X	16	2'-0"		CAP - DIAPHRAGM DOWELS

NOTES:
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.



CAP PLAN



BEARING PAD DETAIL

NOTES:

(P01) ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

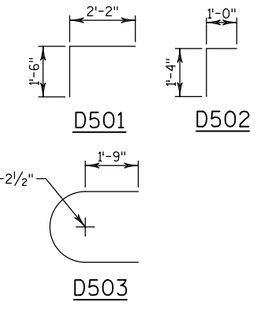
(P02) KEYED CONST. JOINT BETWEEN GIRDERS FORMED BY BEVELED 2"x6".

(P03) DOWEL BARS. PLACE AS SHOWN BETWEEN GIRDERS. EMBED 1'-0". PLACE BARS BEFORE CONCRETE HAS TAKEN INITIAL SET.

(P04) MASONRY ANCHORS TYPE L NO. 5 BARS. EMBED 7" MIN. IN CONCRETE.

(P05) STAIN ALL EXPOSED SURFACES OF PIER CAP AND COLUMNS. STAIN VERTICAL FACES OF BARRIER. DO NOT STAIN TOP OF BARRIER.

(FRP) FRP STRENGTHENING, SEE SHEET 16 FOR DETAILS.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

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PIER 2

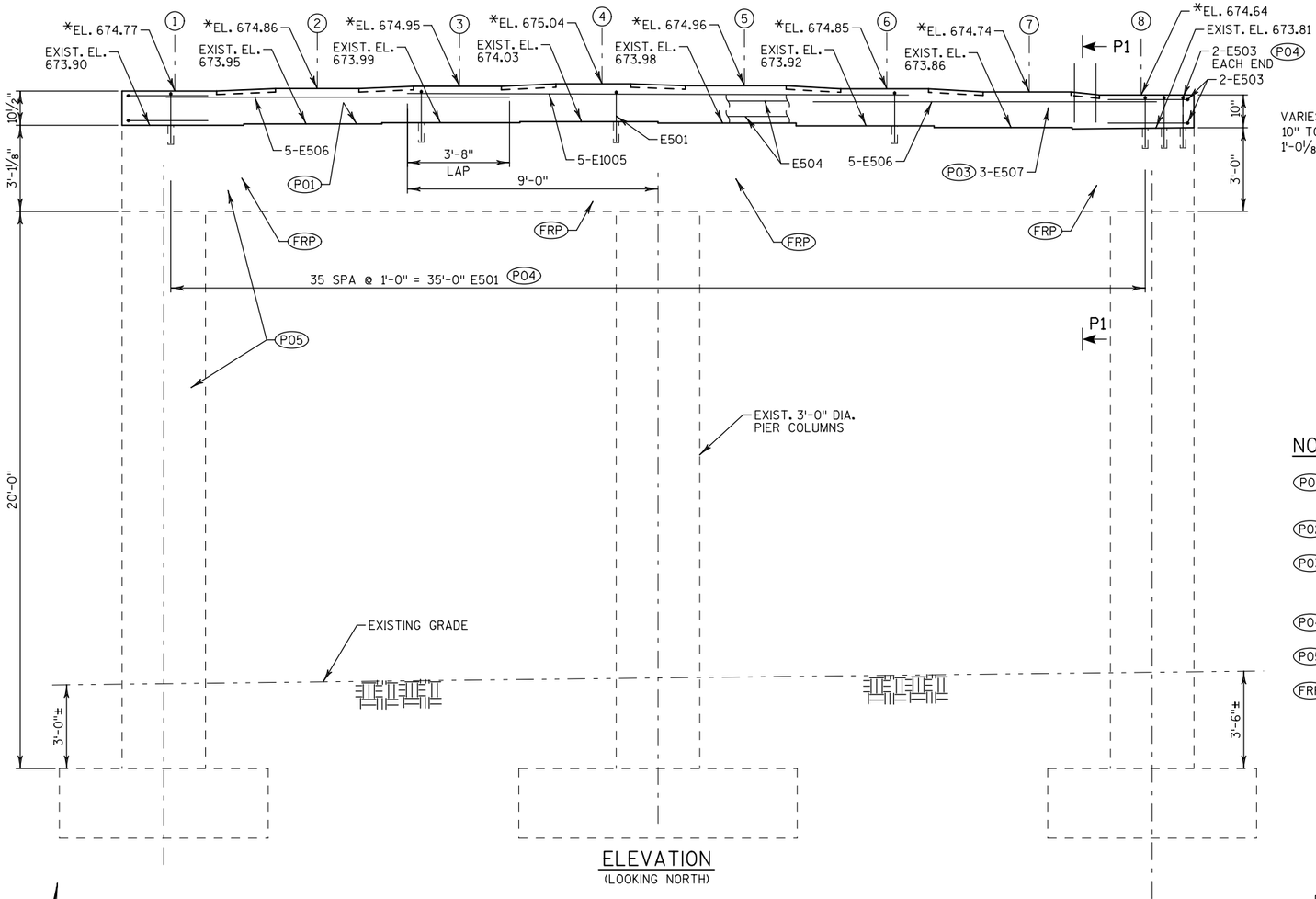
SHEET 11 OF 31

8

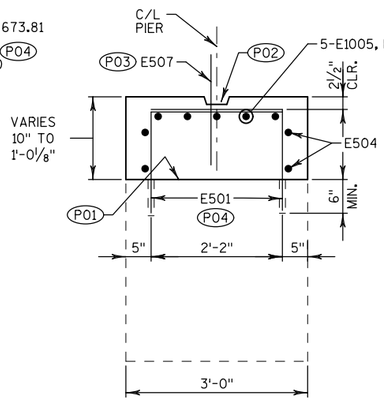
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FILE NAME : Final_Design_B-32-51_08110.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08110 PLOT SCALE : 5:1

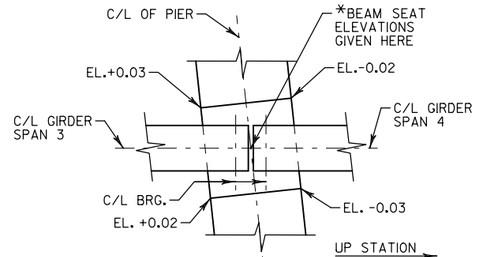
RAISED BEAMSEAT ELEVATIONS 2" MORE THAN PLAN VAULES



ELEVATION
(LOOKING NORTH)



SECTION P1



SLOPING BEAM SEAT DETAILS

NOTES:

(P01) ROUGHEN SURFACE OF CONCRETE ¼" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

(P02) KEYED CONST. JOINT BETWEEN GIRDERS FORMED BY BEVELED 2"x6".

(P03) DOWEL BARS. PLACE 3 BARS BETWEEN EACH GIRDER. EMBED 1'-0". PLACE BARS BEFORE CONCRETE HAS TAKEN INITIAL SET.

(P04) MASONRY ANCHORS TYPE L NO. 5 BARS. EMBED 6" MIN. IN CONCRETE.

(P05) STAIN ALL EXPOSED SURFACES OF PIER CAP AND COLUMNS.

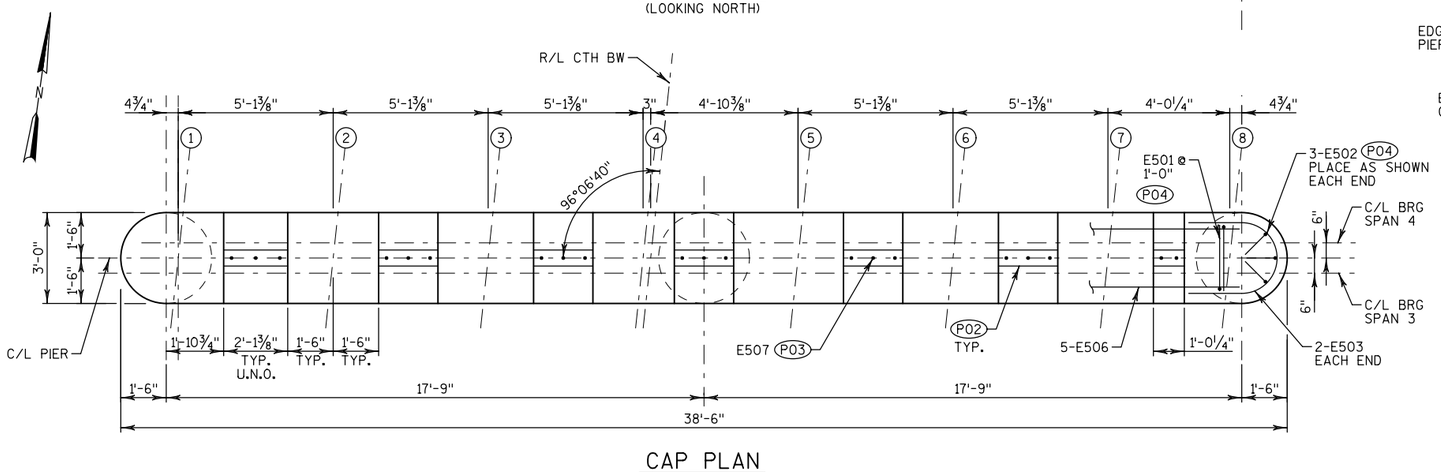
(FRP) FRP STRENGTHENING. SEE SHEET 16 FOR DETAILS.

BILL OF BARS

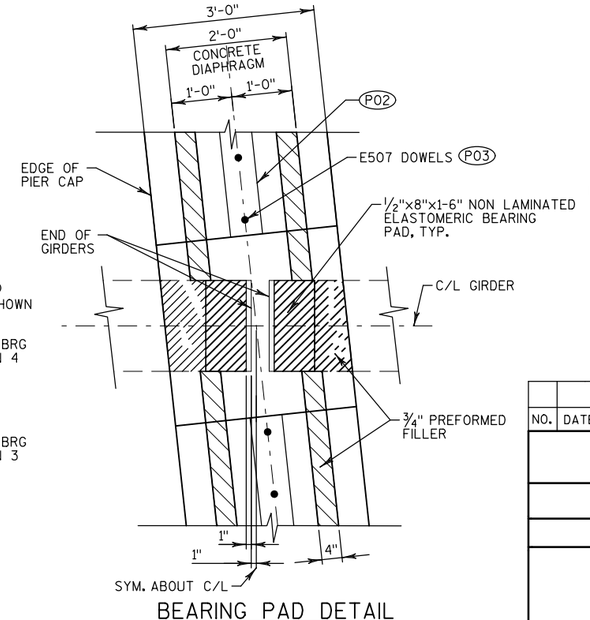
1,010 LB COATED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
E501	X	72	3'-6"	X	CAP - DOWELS INTO EXISTING
E502	X	6	2'-3"	X	CAP - DOWELS INTO EXISTING AT ENDS
E503	X	4	7'-4"	X	CAP - HORIZONTAL AT ENDS
E504	X	4	35'-6"		CAP - HORIZONTAL
E1005	X	5	18'-0"		CAP - HORIZONTAL TOP
E506	X	10	12'-5"		CAP - HORIZONTAL TOP
E507	X	20	2'-0"		CAP - DIAPHRAGM DOWELS

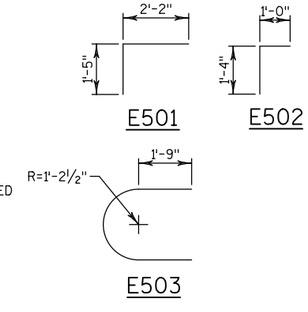
NOTES:
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.



CAP PLAN



BEARING PAD DETAIL



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

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PIER 3

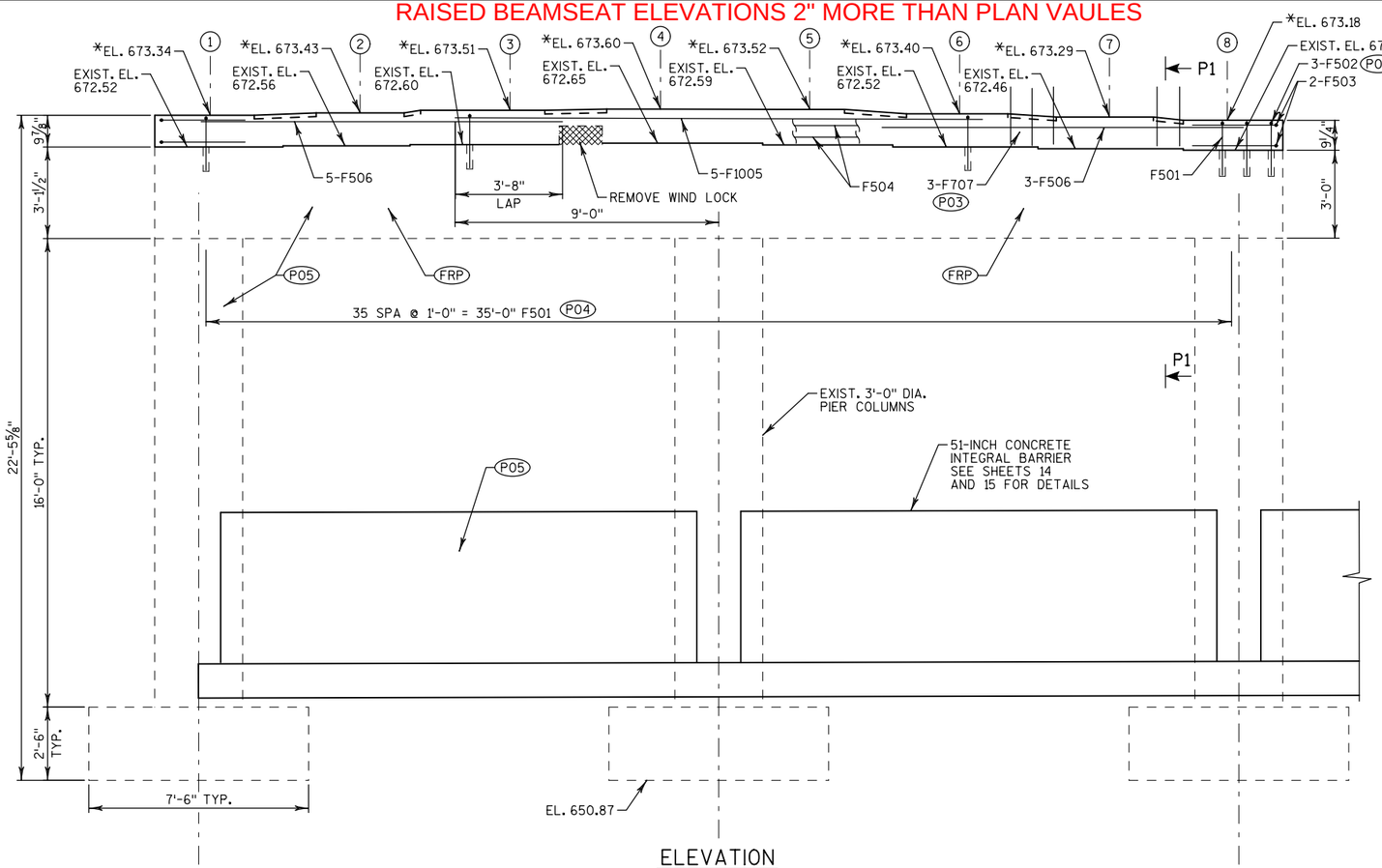
SHEET 12 OF 31

STATE PROJECT NUMBER
1071-06-77

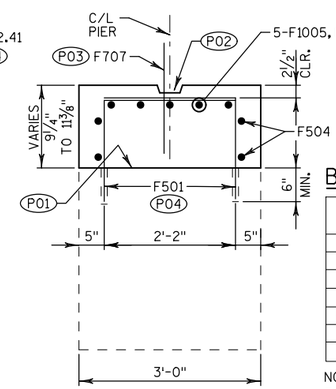
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8

RAISED BEAMSEAT ELEVATIONS 2" MORE THAN PLAN VAULES



ELEVATION
(LOOKING NORTH)



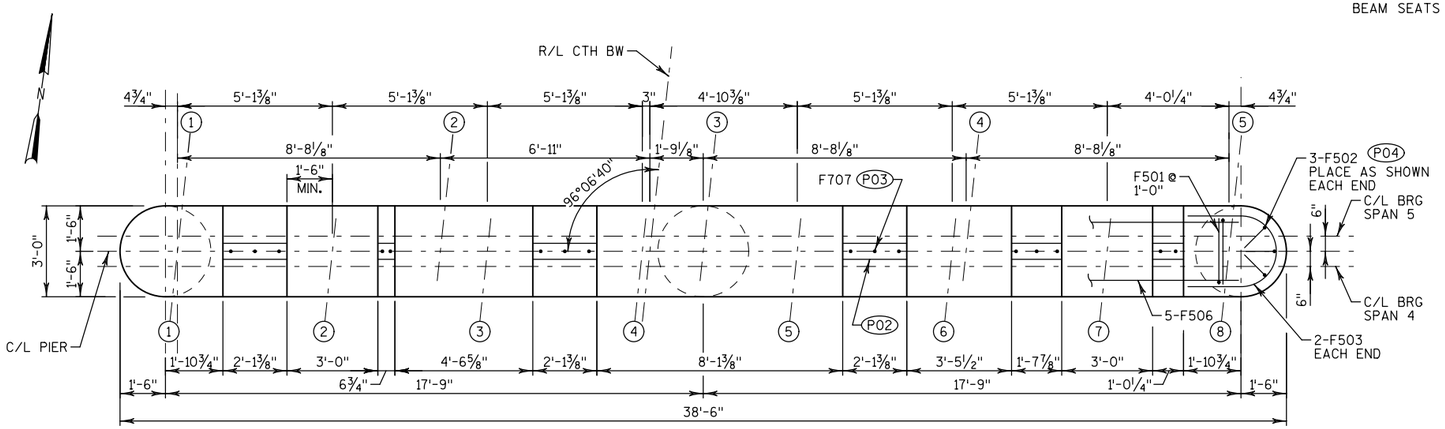
SECTION P1

BILL OF BARS

1,030 LB COATED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
F501	X	72	3'-5"	X	CAP - DOWELS INTO EXISTING
F502	X	6	2'-1"	X	CAP - DOWELS INTO EXISTING AT ENDS
F503	X	4	7'-4"	X	CAP - HORIZONTAL AT ENDS
F504	X	4	35'-6"		CAP - HORIZONTAL
F1005	X	5	18'-0"		CAP - HORIZONTAL TOP
F506	X	10	12'-5"		CAP - HORIZONTAL TOP
F707	X	16	2'-0"		CAP - DIAPHRAGM DOWELS

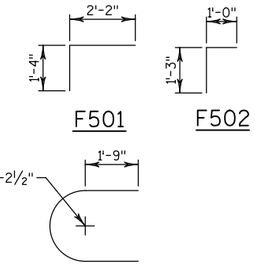
NOTES:
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.



CAP PLAN

BEARING PAD DETAIL
(SLOPE BEAM SEATS)

** TYPICAL ALL BEAM SEATS



NOTES:

(P01) ROUGHEN SURFACE OF CONCRETE 1/4" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

(P02) KEYED CONST. JOINT BETWEEN GIRDERS FORMED BY BEVELED 2"x6".

(P03) DOWEL BARS. PLACE AS SHOWN BETWEEN GIRDERS. EMBED 1'-0". PLACE BARS BEFORE CONCRETE HAS TAKEN INITIAL SET.

(P04) MASONRY ANCHORS TYPE L NO. 5 BARS. EMBED 7" MIN. IN CONCRETE.

(P05) STAIN ALL EXPOSED SURFACES OF PIER CAP AND COLUMNS. STAIN TRAFFIC FACE OF BARRIER AND ENDS OF BARRIER. DO NOT STAIN TOP AND BACK OF BARRIER.

(FRP) FRP STRENGTHENING, SEE SHEET 16 FOR DETAILS.

STATE PROJECT NUMBER
1071-06-77

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

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PIER 4

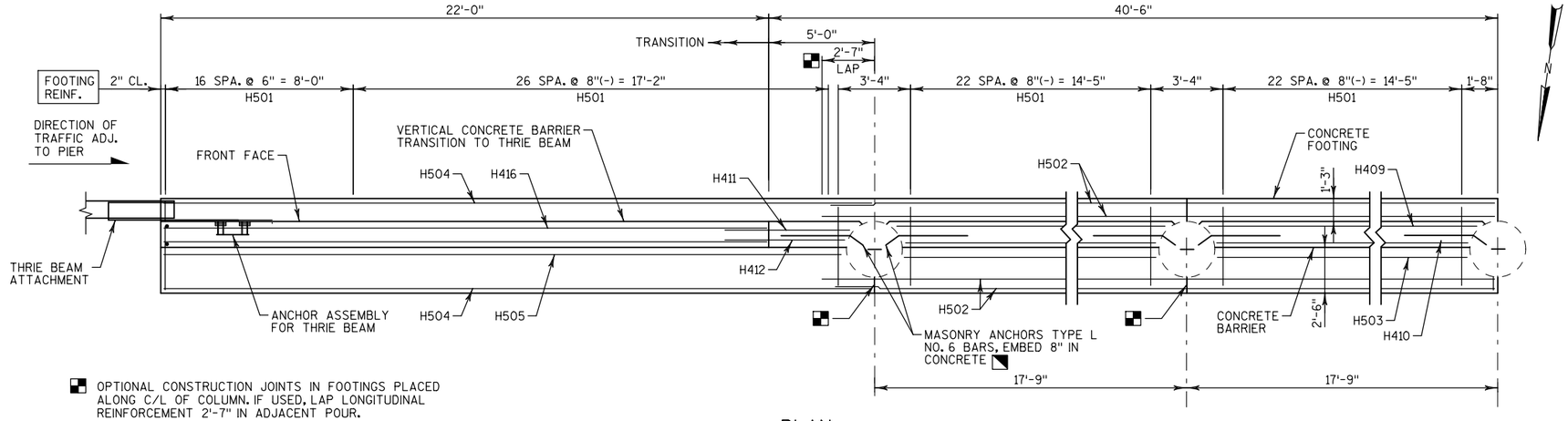
SHEET 13 OF 31

8

8

STATE PROJECT NUMBER

1071-06-77



OPTIONAL CONSTRUCTION JOINTS IN FOOTINGS PLACED ALONG C/L OF COLUMN. IF USED, LAP LONGITUDINAL REINFORCEMENT 2'-7" IN ADJACENT POUR.

PLAN

NOTES

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

BARRIER AND FOOTING SHALL CONSTIST OF CAST IN PLACE CONSTRUCTION. NO JOINTS SHALL BE ALLOWED IN THE BARRIER. CONSTRUCTION JOINTS WILL ONLY BE ALLOWED IN THE FOOTING AT LOCATIONS SHOWN IN THE "PLAN VIEW".

DO NOT CUT OR DRILL INTO EXISTING COLUMN BAR STEEL.

ALL REINFORCEMENT SHALL BE EPOXY-COATED.

USE 2-INCH MINIMUM BAR CLEARANCE, EXCEPT AT FOOTINGS PROVIDE 3-INCH BAR CLEARANCE FROM BOTTOM OF FOOTING TO BOTTOM TRANSVERSE REINFORCEMENT.

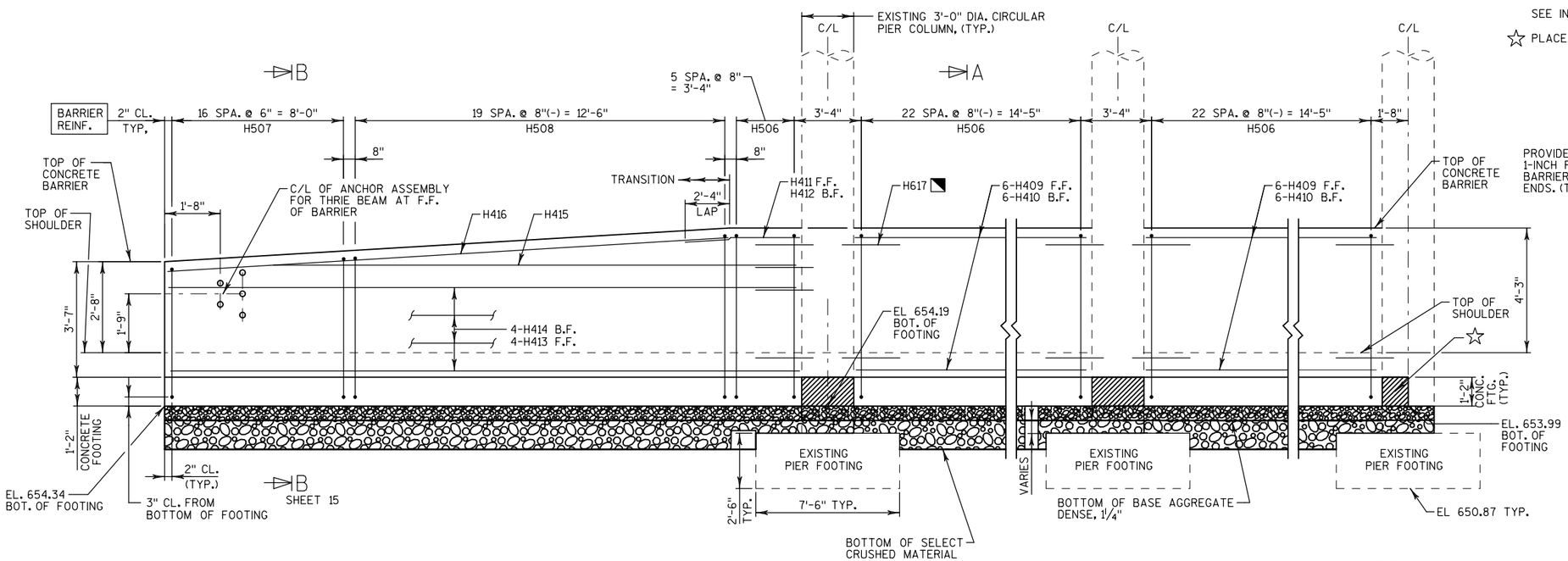
PLACE REINFORCEMENT SUCH THAT IT WILL NOT CONFLICT WITH THE ANCHOR ASSSEMBLY FOR THRIE BEAM ATTACHMENT.

PROVIDE ¾" BEVEL OR 1-INCH RADIUS ON BARRIER EDGES, TOP AND ENDS.

F.F. = FRONT FACE
B.F. = BACK FACE

SEE INTEGRAL BARRIER DETAILS SHEET FOR SECTIONS A AND B.

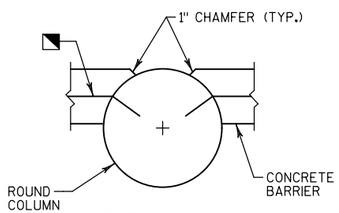
☆ PLACE ½" FILLER BETWEEN COLUMN AND CONCRETE FOOTING, (TYP.)



ELEVATION

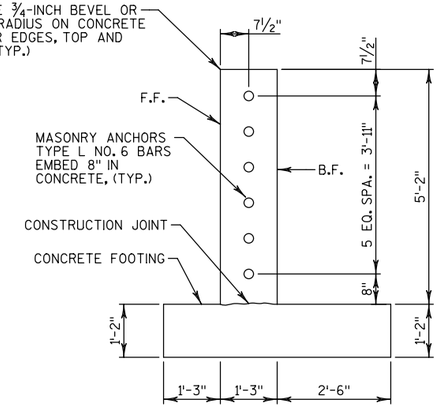
LOOKING AT B.F. OF BARRIER
LOOKING SOUTH

A
SHEET 15



DETAIL A

F.F. OF BARRIER IS FLUSH WITH FACE OF COLUMN



MASONRY ANCHOR, TYPE L LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

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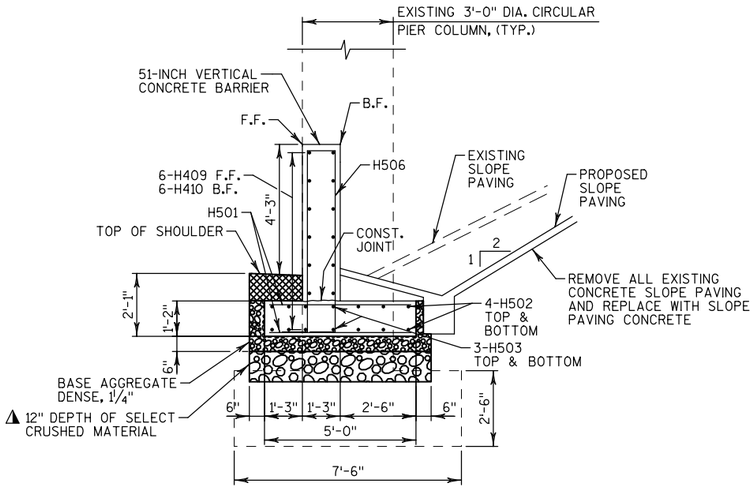
PIER 4
INTEGRAL BARRIER

SHEET 14 OF 31

8

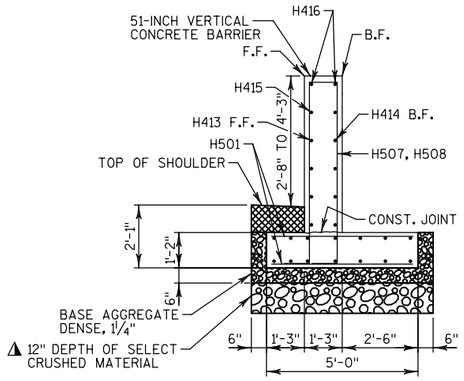
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FILE NAME : Final_Design_B-32-51_08114.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08114 PLOT SCALE : 5:1



PIER 4 SECTION A-A

BETWEEN COLUMNS

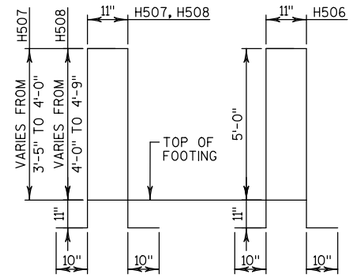


PIER 4 SECTION B-B

TRANSITION REGION

△ 12" SELECT CRUSHED MATERIAL MAY BE ELIMINATED IF IT IS DETERMINED BY THE ENGINEER THAT THE EXISTING MATERIAL IS COMPACTED, GRANULAR MATERIAL.

F.F. = FRONT FACE
B.F. = BACK FACE

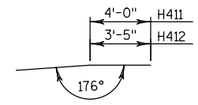


H507, H508

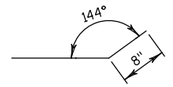
BARRIER REINF. IN TRANSITION REGION

H506

BARRIER REINF. BETWEEN COLUMNS



H411, H412



H617

MASONRY ANCHOR TYPE L NO. 6 BARS EMBED 8" IN CONCRETE.

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
H507	1 SERIES OF 17	10'-9" TO 11'-11"
H508	1 SERIES OF 20	11'-11" TO 13'-5"

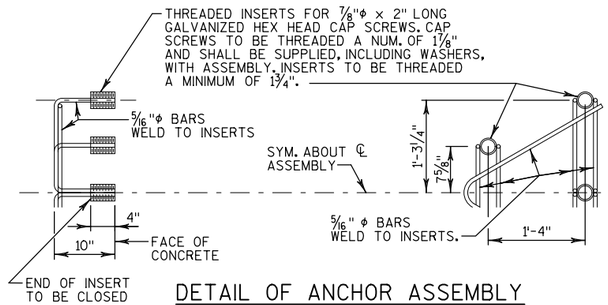
BILL OF BARS

3,860 LB COATED

BAR MARK	COAT	NO. REQ'D PIER 4	LENGTH	BENT	BAR SERIES	LOCATION
H501	X	178	4'-8"			FOOTING - TRANSVERSE
H502	X	16	38'-1"			FOOTING - LONGITUDINAL BETWEEN COLUMNS
H503	X	12	14'-5"			FOOTING - LONGITUDINAL BETWEEN COLUMNS
H504	X	8	26'-8"			FOOTING - LONGITUDINAL
H505	X	6	25'-2"			FOOTING - LONGITUDINAL
H506	X	52	13'-11"	X		FOOTING - DOWELS BETWEEN COLUMNS
H507	X	17	11'-4"	X	△	FOOTING - DOWELS IN TRANSITION REGION
H508	X	20	12'-8"	X	△	FOOTING - DOWELS IN TRANSITION REGION
H409	X	12	15'-9"			WALL - HORIZONTAL BETWEEN COLUMNS
H410	X	12	14'-6"			WALL - HORIZONTAL BETWEEN COLUMNS
H411	X	1	6'-6"	X		WALL - HORIZONTAL IN TRANSITION REGION
H412	X	1	5'-11"	X		WALL - HORIZONTAL IN TRANSITION REGION
H413	X	4	25'-10"			WALL - HORIZONTAL IN TRANSITION REGION
H414	X	4	25'-2"			WALL - HORIZONTAL IN TRANSITION REGION
H415	X	2	16'-2"			WALL - HORIZONTAL IN TRANSITION REGION
H416	X	2	21'-11"			WALL - HORIZONTAL IN TRANSITION REGION - TOP
H617	X	30	3'-2"	X		COLUMN - TYPE L MASONRY ANCHOR

NOTES:
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.

ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.
△ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



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.

STATE PROJECT NUMBER

1071-06-77

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

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INTEGRAL BARRIER DETAILS

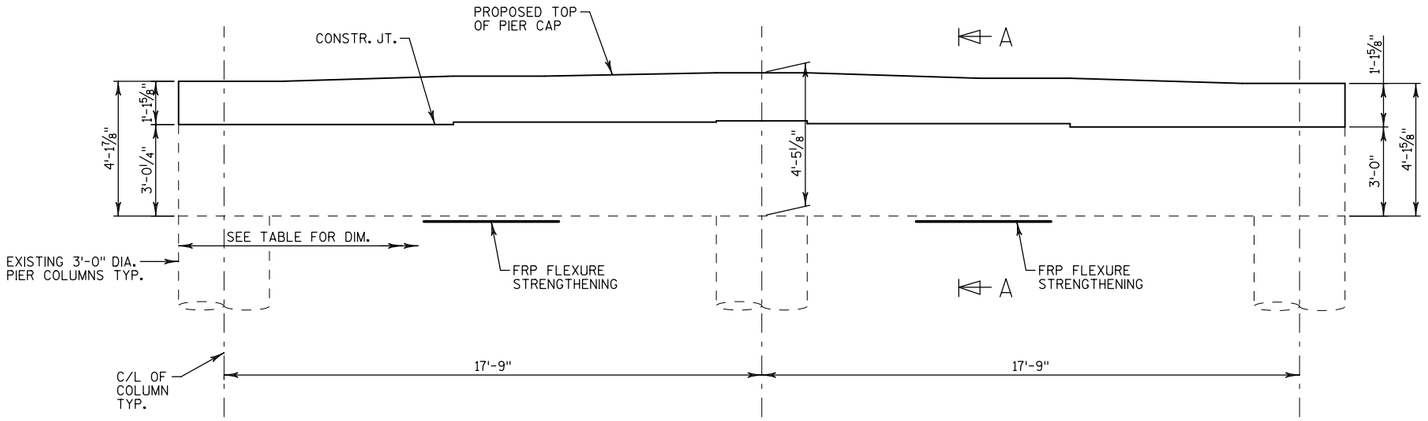
SHEET 15 OF 31

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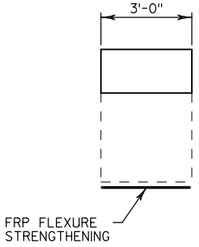
STATE PROJECT NUMBER

1071-06-77



ELEVATION - PIER 1 CAP

LOOKING NORTH



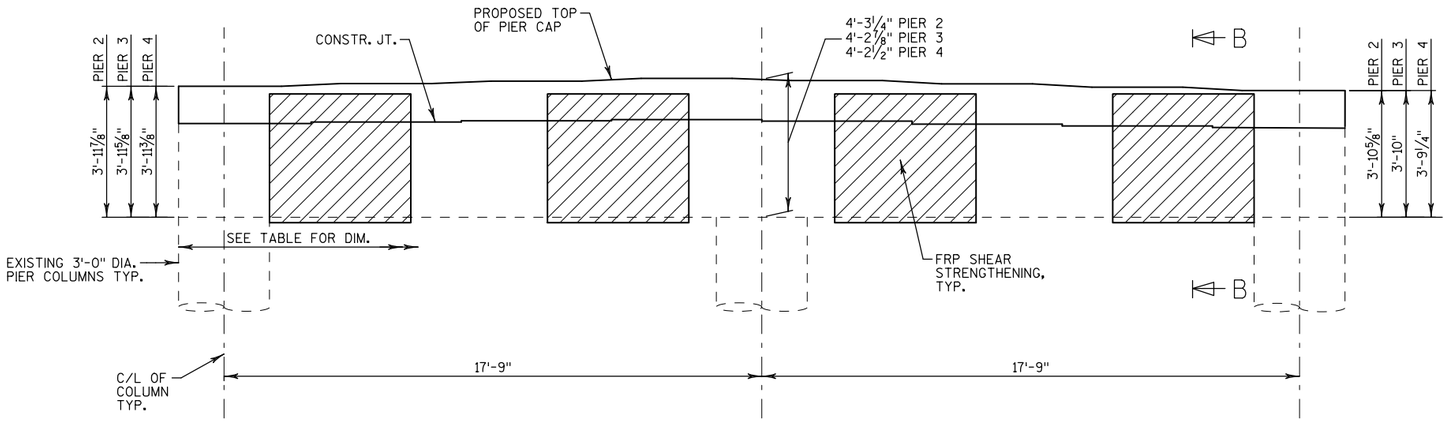
SECTION A

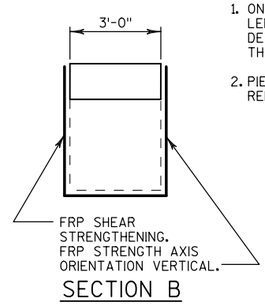
SUMMARY OF REQUIRED FLEXURAL TENSION FORCE FOR FIBER REINFORCED POLYMER FABRIC

PIER	LOCATION MEASURED FROM WEST END OF CAP	Asb reqd (In²/ft)	Asb prvd (In²/ft)	FRP REINFORCEMENT. ADDITIONAL LONGITUDINAL GRADE 60 REBAR AREA FOR FLEXURE REQUIRED (In²)
PIER 1	7'-6"	3.10	3.16	0.00
	8'-6"	3.78	3.16	0.62
	9'-6"	4.45	3.16	1.29
	10'-7"	5.13	3.16	1.97
	11'-6"	4.18	3.16	1.02
	12'-6"	3.14	3.16	0.00
PIER 1	26'-0"	3.14	3.16	0.00
	27'-0"	4.18	3.16	1.02
	27'-11"	5.13	3.16	1.97
	29'-0"	4.45	3.16	1.29
	30'-0"	3.78	3.16	0.62
	31'-0"	3.10	3.16	0.00

NOTES:

1. ONLY THEORETICAL LIMITS OF FRP REPAIR ARE GIVEN. ANY ADDITIONAL FRP LENGTH FOR CONSTRUCTABILITY, DEVELOPMENT, OR OFFSET IS TO BE DETERMINED BY THE FRP MANUFACTURER. THE FRP IS TO BE PLACED ON THE UNDERSIDE OF THE PIER CAP.
2. PIER 1 EXISTING MATERIAL STRENGTHS: CONCRETE f'c = 3.5 ksi, REINFORCING STEEL fy = 60 ksi.





SECTION B

ELEVATION - PIER 2, 3 & 4 CAP

LOOKING NORTH

SUMMARY OF REQUIRED SHEAR FOR FIBER REINFORCED POLYMER FABRIC

PIER	LOCATION MEASURED FROM WEST END OF CAP	REQUIRED FACTORED SHEAR CAPACITY (KIPS)	EXISTING FACTORED SHEAR CAPACITY (KIPS)	ADDITIONAL FACTORED SHEAR CAPACITY REQ'D (KIPS)
PIERS 2 & 4	3'-0" TO 11'-0"	139.3	118.8	20.5
	11'-0" TO 16'-0"	197.6	162.2	35.4
	22'-6" TO 27'-6"	197.6	162.2	35.4
	27'-6" TO 35'-6"	139.3	118.8	20.5
PIER 3	3'-0" TO 8'-0"	209.9	143.6	66.3
	11'-0" TO 16'-0"	276.9	189.3	87.6
	22'-6" TO 27'-6"	276.9	189.3	87.6
	30'-6" TO 35'-6"	209.9	143.6	66.3

NOTES:

1. ONLY THE THEORETICAL LIMITS OF FRP REPAIR ARE GIVEN. ANY ADDITIONAL FRP LENGTH FOR CONSTRUCTABILITY, DEVELOPMENT, OR OFFSET IS TO BE DETERMINED BY THE FRP MANUFACTURER. THE FRP IS TO BE UNIFORMLY DISTRIBUTED ON THE PIER CAP SIDES.
2. THE ADDITIONAL FACTORED SHEAR CAPACITY REQUIRED SHOWN IN THE TABLE IS THE FACTORED SHEAR FORCE, IN KIPS, TO BE PROVIDED BY THE FRP FABRIC INSTALLATION.
3. PIERS 2, 3 & 4 EXISTING MATERIAL STRENGTHS: CONCRETE f'c = 3.5 ksi, REINFORCING STEEL fy = 40 ksi.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY MHM | PLANS CK'D. KES

FRP PIER DETAILS

SHEET 16 OF 31

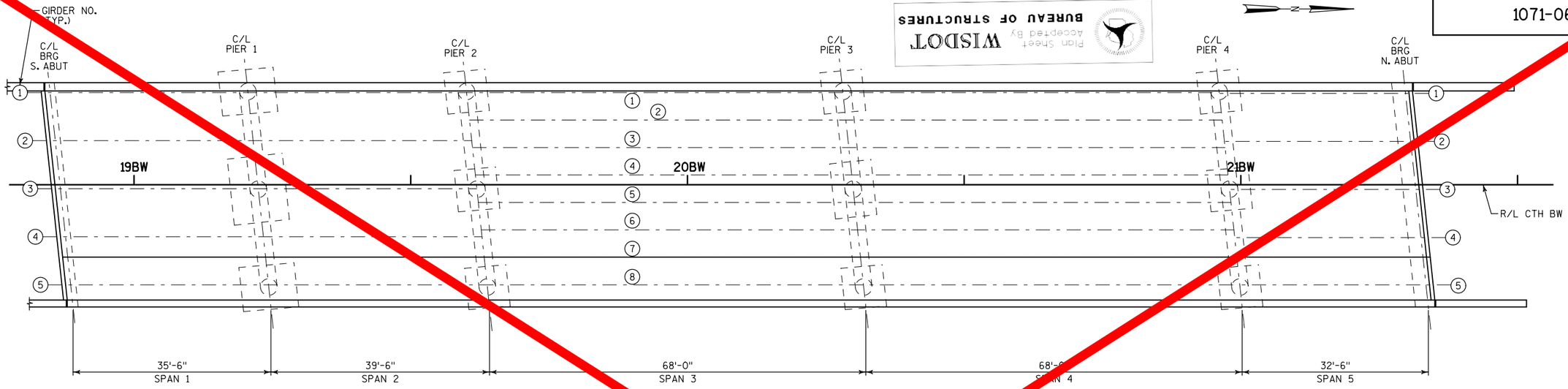
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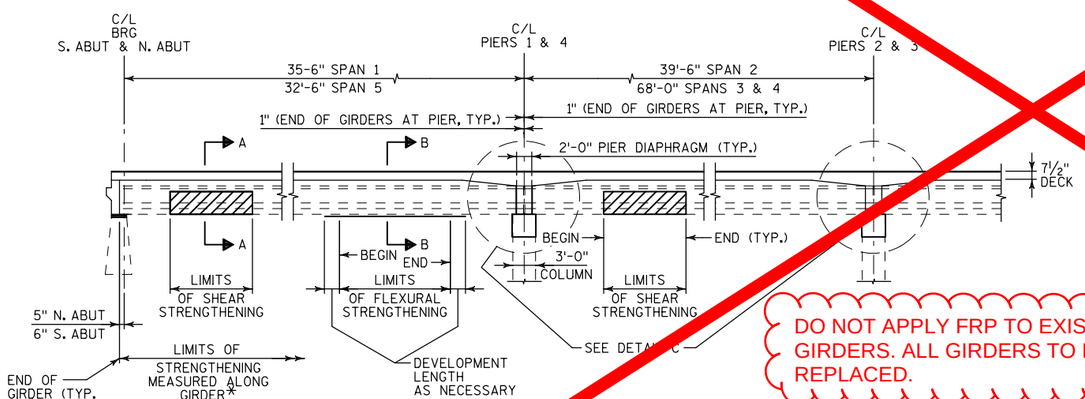
STATE PROJECT NUMBER

1071-06-77

WISDOT Plan Sheet Accepted by BUREAU OF STRUCTURES



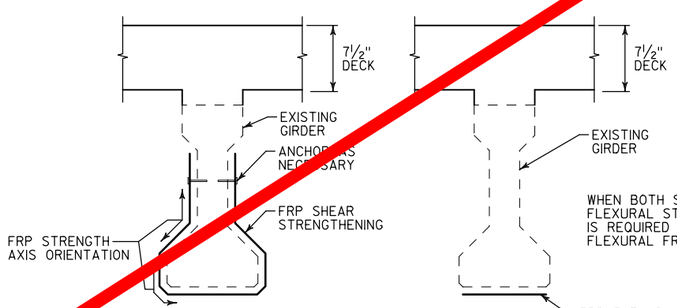
FRAMING PLAN



DO NOT APPLY FRP TO EXISTING GIRDERS. ALL GIRDERS TO BE REPLACED.

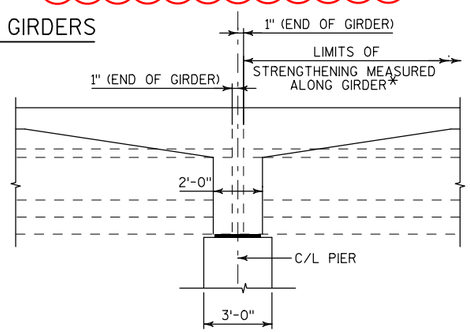
HALF LONGITUDINAL SECTION OF EXISTING GIRDERS

*LIMITS OF STRENGTHENING MEASURED FROM SOUTH END OF GIRDER FOR ALL SPANS.



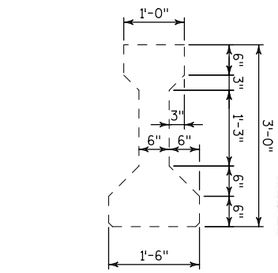
SECTION A

SECTION B



DETAIL C

*LIMITS OF STRENGTHENING MEASURED FROM SOUTH END OF GIRDER FOR ALL SPANS.



EXISTING GIRDER SECTION

FRP SHEAR STRENGTHENING

SPAN	GIRDER NO.	* BEGIN (FT)	END (FT)	EXIST. FACTORED SHEAR CAPACITY (KIPS)	MIN. ADD. FACTORED SHEAR CAPACITY REQ'D (KIPS)
2	1	1.00	6.00	93.7	10.0
	2 THRU 5	1.00	5.00	111.6	58.0
		5.00	19.00	79.3	27.0
		25.00	38.33	107.5	34.0
3	1	58.84	66.84	90.5	11.0
	2 THRU 7	12.00	23.00	78.0	5.0
		37.00	51.00	71.1	12.0
		55.84	66.84	110.4	31.0
4	1	1.00	9.00	90.5	11.0
	2 THRU 7	1.00	12.00	110.4	28.0
		18.84	30.84	71.1	12.0
		44.84	55.84	78.0	5.0
5	2 THRU 5	1.00	7.00	104.5	32.0
		25.84	31.84	104.5	32.0

FRP FLEXURAL STRENGTHENING

SPAN	GIRDER NO.	* BEGIN (FT)	END (FT)	EXIST. FACTORED MOMENT CAPACITY (FT-KIPS)	MIN. ADD. FACTORED MOMENT CAPACITY REQ'D (FT-KIPS)
1	2 THRU 5	1.00	8.50	298.0	100.0
2	2 THRU 5	32.00	38.33	505.0	30.0
3	2 THRU 7	24.00	37.00	2319.0	50.0
4	2 THRU 7	31.00	44.00	2319.0	50.0
5	2 THRU 5	1.00	11.00	592.0	105.0
		21.84	31.84	592.0	105.0

NOTES:

* LIMITS OF STRENGTHENING MEASURED FROM SOUTH END OF GIRDER

FRP = FIBER REINFORCED POLYMER

FRP STRENGTHENING TO BE IN ACCORDANCE WITH THE "FIBER WRAP REINFORCING SPECIAL PROVISION.

SPAN 1 EXISTING GIRDER MATERIAL STRENGTHS:
CONCRETE f'c = 6.0 KSI
REINFORCING STEEL fy = 60 KSI

SPANS 2, 3, 4 AND 5 EXISTING GIRDER MATERIAL STRENGTHS:
CONCRETE f'c = 5.0 KSI
REINFORCING STEEL fy = 40 KSI

SEAL BY MATTHEW J GUNDRY, FLEMING, ANDRE AND ASSOC., INC., IS APPLICABLE TO REV. 1 ITEMS ONLY.

NO.	DATE	REVISION	BY
1	2-APR	ELIMINATE FRP TO EXISTING GIRDERS	MJG

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY	MHM	PLANS CK'D.	KES

PRESTRESSED GIRDER STRENGTHENING

SHEET 17 OF 31

WISCONSIN MATTHEW J. GUNDRY 38517 EAU CLAIRE WI 4-2-15 PROFESSIONAL ENGINEER

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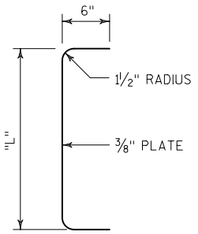
FILE NAME : Final_Design_B-32-51_08117.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08117 PLOT SCALE : 20:1

STATE PROJECT NUMBER

1071-06-77

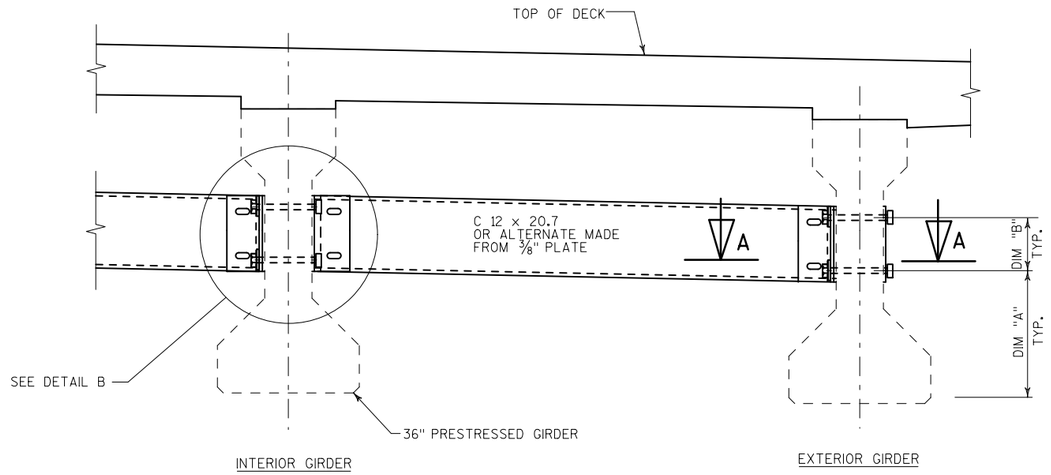
TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	* DIM. "X"
36"	1'-2⅞"	9⅞"	1'-1½"	3¼"



SECTION THRU ALTERNATE DIAPHRAGM

*DIM "X" = 2½" FOR ALTERNATE PLATE DIAPHRAGM



PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

ALL DIAPHRAGM MATERIAL AND DRILLING OF HOLES THROUGH THE EXISTING GRIDER WEBS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-32-51", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

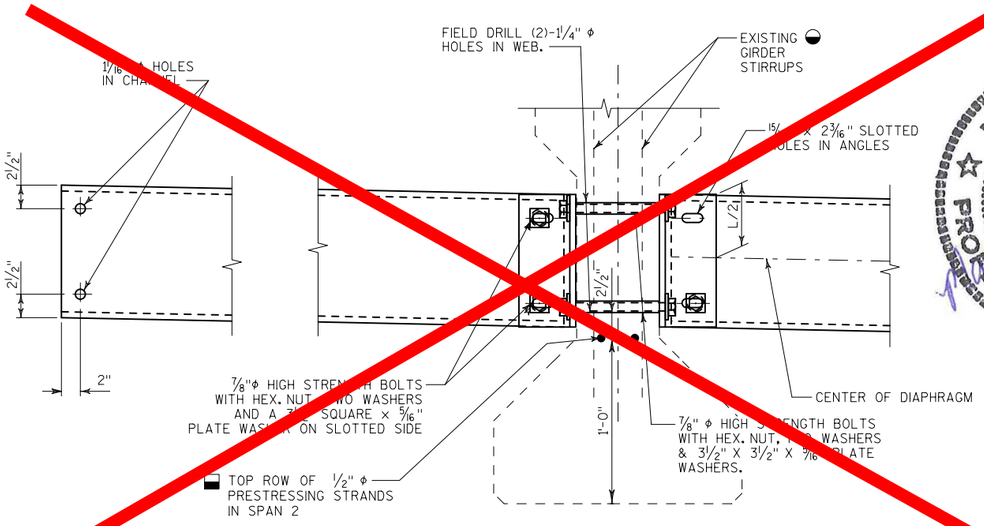
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

LOCATE DIAPHRAGMS IN A CONTINUOUS LINE NEAR MIDSPAN OF EACH SPAN.

◒ EXISTING GIRDER STIRRUP SPACING AT MIDSPAN IS 10½" FOR SPAN 1, AND 1'-8" FOR SPANS 2, 3, AND 5. THE CONTRACTOR SHALL LOCATE THE STIRRUPS BY A NDT METHOD BEFORE DRILLING THROUGH THE GIRDER WEB AND SHALL NOT DRILL THROUGH THE STIRRUPS. OFFSET THE DIAPHRAGM LINE SLIGHTLY, IF NECESSARY, TO MISS THE STIRRUPS.

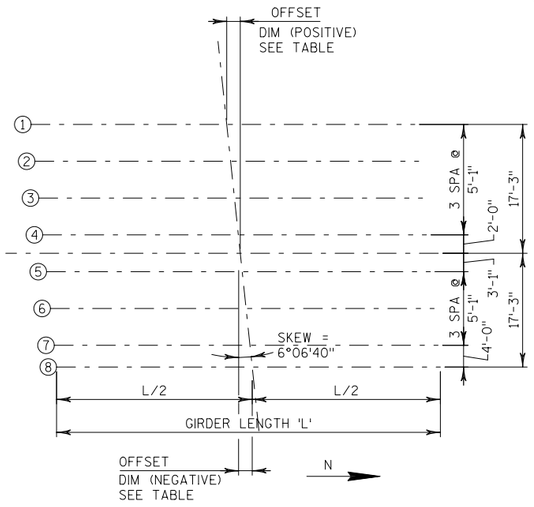
⬓ THE EXISTING GIRDER IN SPAN 2 USE AN UNDRAPED PRESTRESSING STRAND PATTERN. THE TOP 2 STRANDS ARE LOCATED 12" ABOVE THE UNDERSIDE OF THE BOTTOM FLANGE. THE CONTRACTOR SHALL LOCATE THESE 2 STRANDS BY A NDT METHOD, AND FIELD DRILL THE 1¼" DIA. HOLES THROUGH THE GIRDER 2" CLEAR MIN. FROM THE STRANDS.

SEE SHEET 34 FOR DIAPHRAGM CONNECTION DETAIL FOR NEW GIRDERS



FOR CONTINUOUS LINE OF DIAPHRAGMS

DETAIL B



DIAPHRAGM LAYOUT PLAN

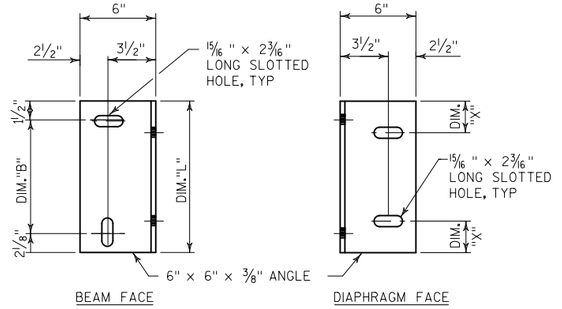
SPANS 3 & 4 SHOWN
SPANS 1, 2, & 5 SIMILIAR

STEEL DIAPHRAGM OFFSET TABLES

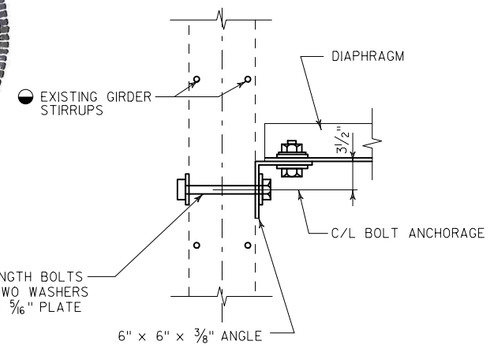
SPANS 1, 2 & 5 GIRDER NO.	OFFSET DIM. (FT.)
1	1.85
2	0.92
3	0.00
4	-0.92
5	-1.85

GIRDER SPA = 8'-7½"

SPANS 3 & 4 GIRDER NO.	OFFSET DIM. (FT.)
1	1.85
2	1.30
3	0.76
4	0.21
5	-0.33
6	-0.87
7	-1.42
8	-1.85



DIAPHRAGM SUPPORT



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



SEAL BY MATTHEW J GUNDRY, FLEMING, ANDRE AND ASSOC., INC., IS APPLICABLE TO REV. 1 ITEMS ONLY.

NO.	DATE	REVISION	BY
1	2-APR	REMOVE DET. B FOR EXIST. GIRDERS	MJG

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY MHM | PLANS CK'D. KES

STEEL DIAPHRAGM

SHEET 18 OF 31

BUREAU OF STRUCTURES
Plan Sheet Accepted by
WISDOT

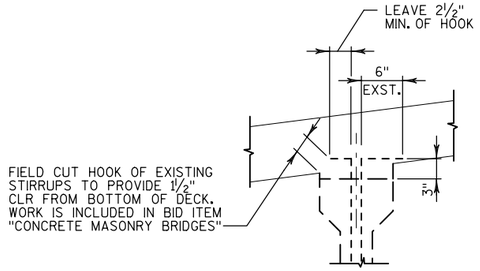
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8

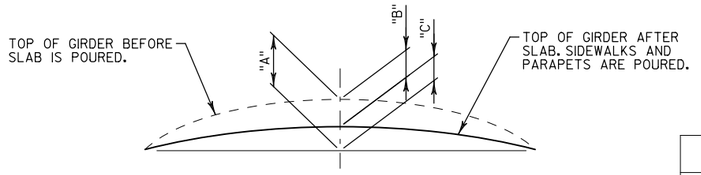
FILE NAME : Final_Design_B-32-51_08118.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08118 PLOT SCALE : 2:1

STATE PROJECT NUMBER

1071-06-77



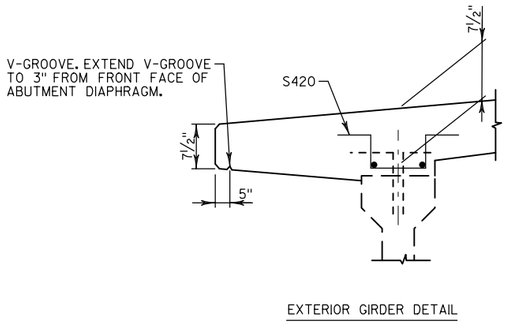
EXISTING GIRDER STIRRUP MODIFICATION DETAIL



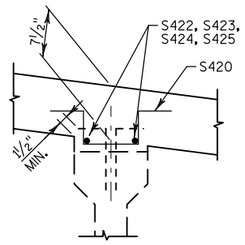
CAMBER & DEFLECTION DIAGRAM

DEFLECTION DATA

CAMBER & DEFLECTION	SPANS 1, 2 & 5	SPANS 3 & 4
A = PRESTRESS CAMBER	1/4"	1¾"
B = DEAD LOAD DEFLECTION	1/8"	¾"
C = RESIDUAL CAMBER	1/8"	1"



EXTERIOR GIRDER DETAIL



INTERIOR GIRDER DETAIL

S420 "HAT BARS" REQUIRED

SPAN	NO. REQ'D PER GIRDER	SPAN TOTAL
1	48	240
2	41	205
3	GIRDER 1 THRU 7: 71 GIRDER 8: 0	497
4	GIRDER 1 THRU 7: 71 GIRDER 8: 0	497
5	35	175

PLACE S420 "HAT BARS" AT EXISTING SHEAR CONNECTOR SPACING. WHEN EXISTING SHEAR CONNECTOR SPACING IS GREATER THAN 1'-0" PLACE S420 BARS AT 1'-0" MAX.

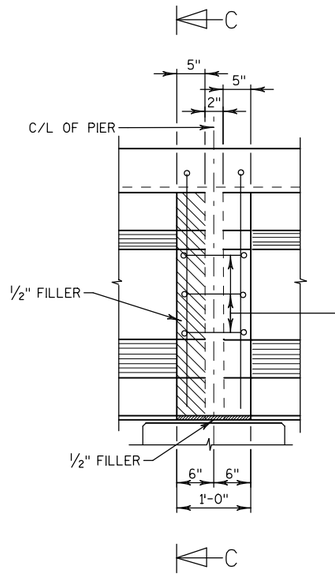
SLAB HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2".

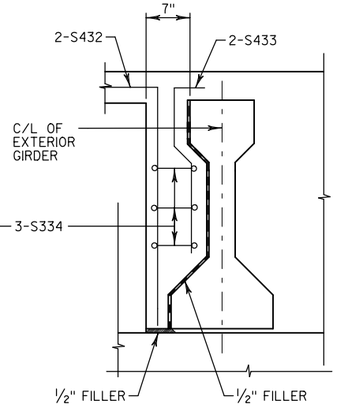
TO DETERMINE 'T', ELEVATION OF TOP OF GIRDERS AT C/L OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN, TOP OF GIRDER ELEVATIONS SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF GIRDER ELEVATION
= DEAD LOAD DEFLECTION
\- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH (T') OF 2½" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



PILASTER DETAIL AT PIERS



SECTION C-C

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY MHM | PLANS CK'D. KES

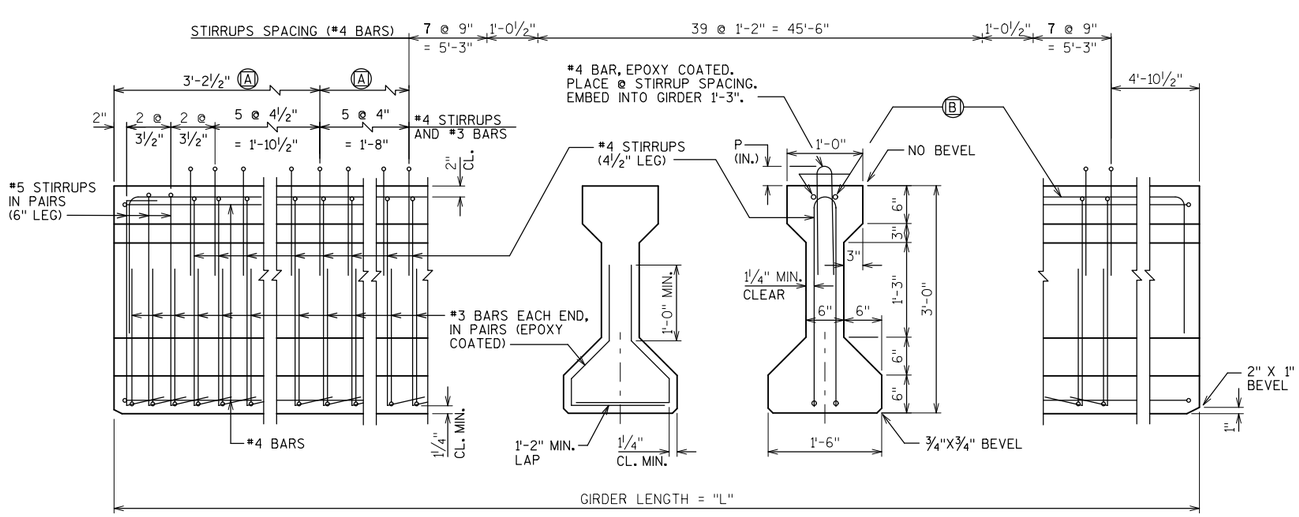
EXISTING 36" PRESTRESSED GIRDER DETAILS

SHEET 19 OF 31

FILE NAME : Final_Design_B-32-51_08119.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08119 PLOT SCALE : 4:1

STATE PROJECT NUMBER

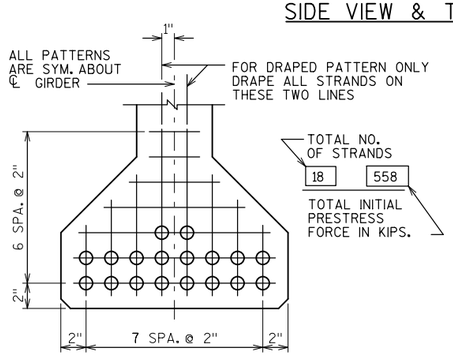
1071-06-77



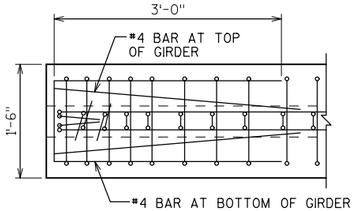
SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

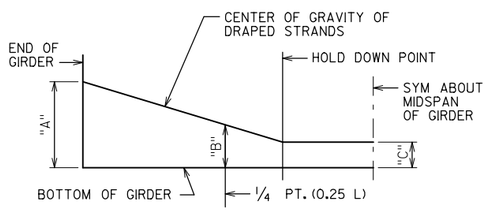
Ⓑ 2-NO. 5 BARS, FULL LENGTH. BEND DOWN 16 BAR DIA. AT ENDS, LAP = 2'-5"



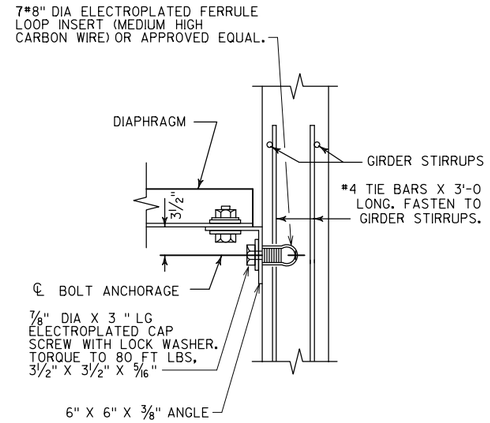
TYP. STRAND PATTERN



TOP VIEW OF GIRDER ENDS

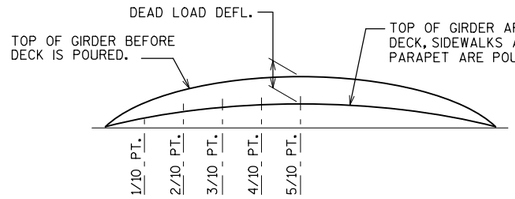


DRAPED STRAND PROFILE



FERRULE LOOP DETAIL INSERT

(FOR EXTERIOR ATTACHMENT)



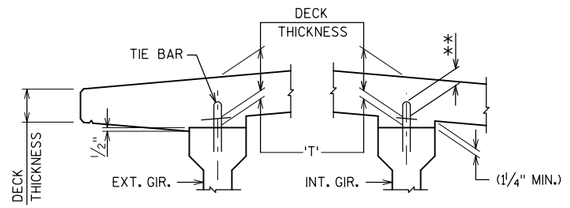
DEAD LOAD DEFLECTION DIAGRAM

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
3	1½
4	1½

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DECK HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF GIRDER ELEVATION
\+ DEAD LOAD DEFLECTION
\- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2½" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE,

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING. THE EXTERIOR FACE OF THE GIRDERS AND UNDERSIDE OF THE BOTTOM FLANGE ARE TO BE STAINED.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE 0.5" DIA. 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

BEND EACH END OF #4 STIRRUPS 4½" AND #5 STIRRUPS 6".

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	CONC. STRGTH. f'c (p.s.i.)	"P" (IN)	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
3 & 4	8	67'-10"	0.23	0.45	0.64	0.76	0.81	8,000	6	0.5	18	5,000	26"	9½"	12½"	4	———	———

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY JAP | PLANS CK'D. KES

36" PRESTRESSED GIRDER DETAILS

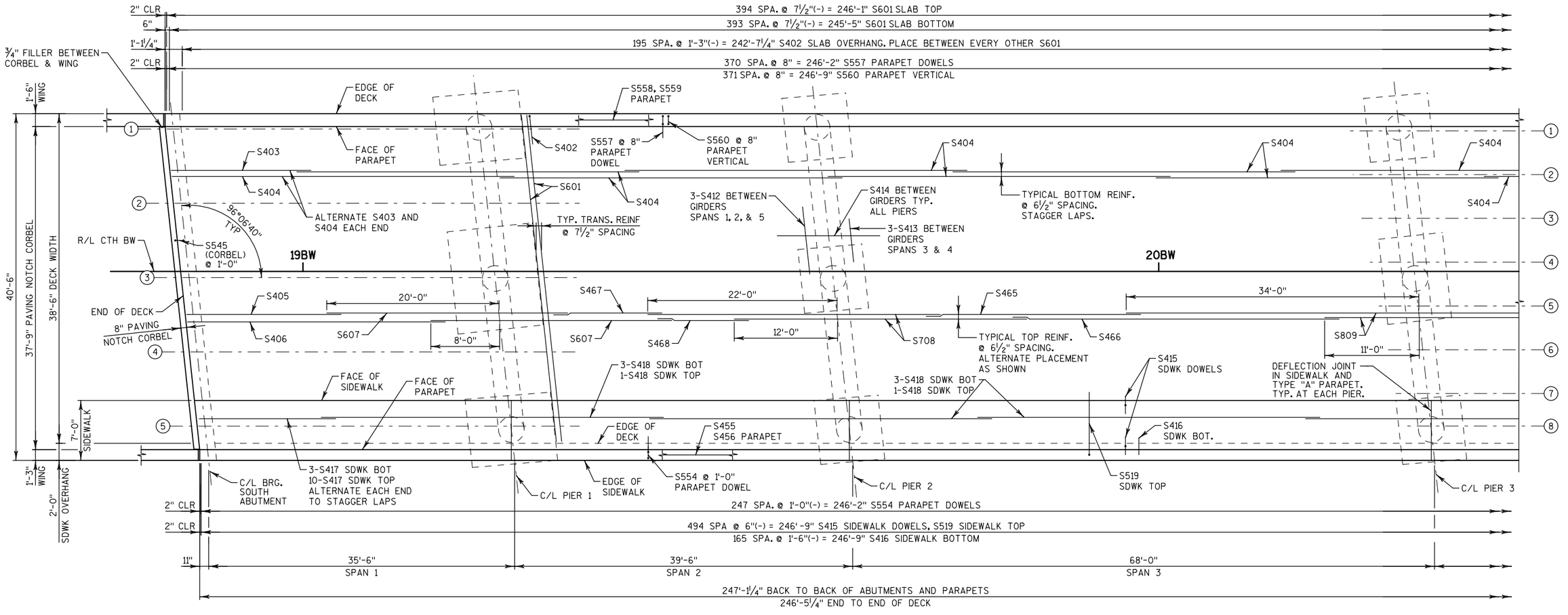
SHEET 20 OF 31

8

8

STATE PROJECT NUMBER

1071-06-77



DECK REINFORCEMENT PLAN

DECK BAR LAP LENGTH

BAR SIZE	MIN LAP LENGTH
#4	1'-8"

SMALLER BAR DETERMINES LAP LENGTH.

PARAPET BAR LAP LENGTH

BAR SIZE	MIN LAP LENGTH
#4	2'-4"
#5	2'-11"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY MHM | PLANS CK'D. EKM

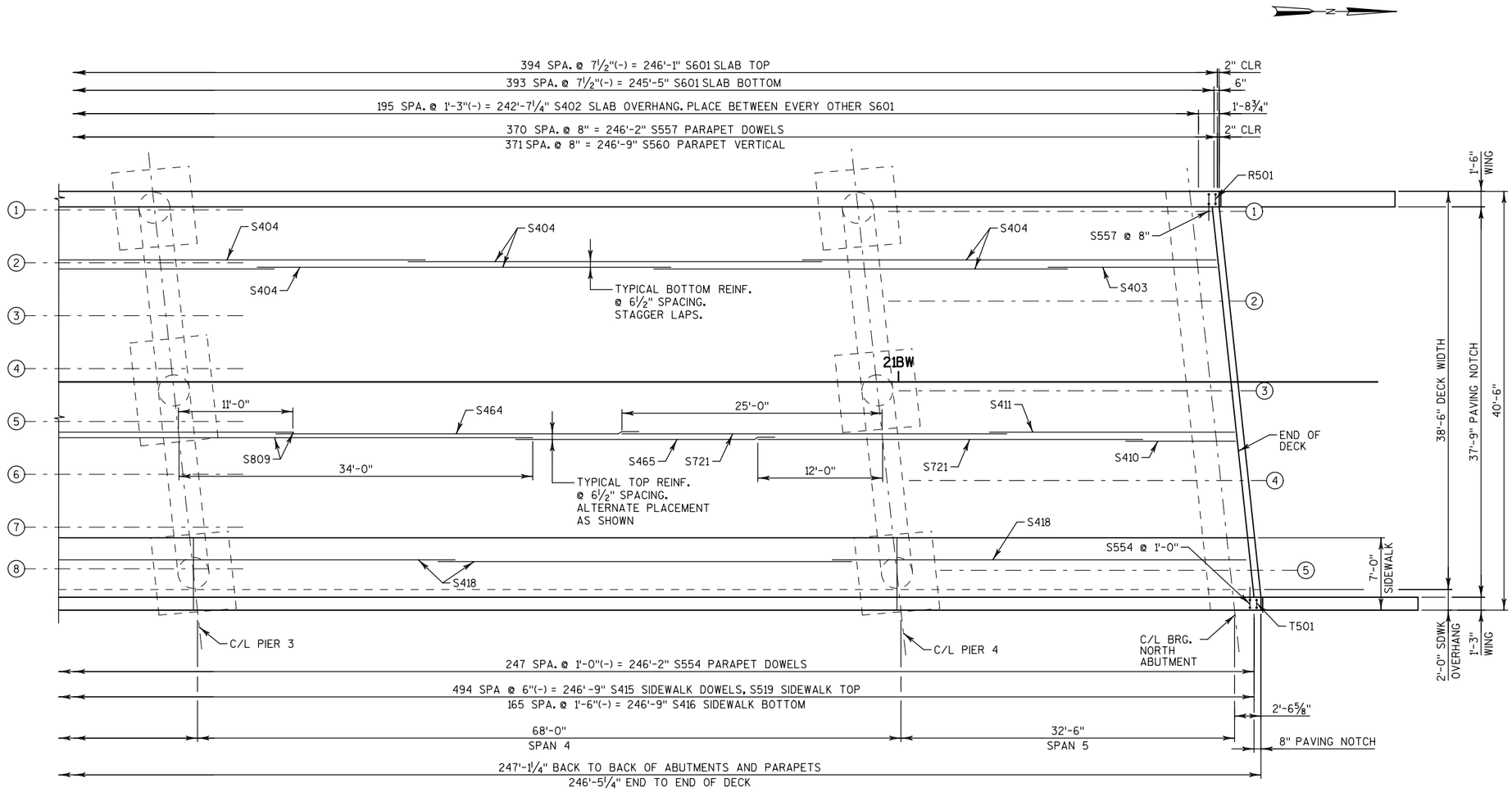
SUPERSTRUCTURE 1 OF 2

SHEET 21 OF 31

FILE NAME : Final_Design_B-32-51_08122.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08122 PLOT SCALE : 12:1

STATE PROJECT NUMBER

1071-06-77



DECK REINFORCEMENT PLAN

8

8

DECK BAR LAP LENGTH

BAR SIZE	MIN LAP LENGTH
#4	1'-8"

SMALLER BAR DETERMINES LAP LENGTH.

PARAPET BAR LAP LENGTH

BAR SIZE	MIN LAP LENGTH
#4	2'-4"
#5	2'-11"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY MHM | PLANS CK'D. EKM

SUPERSTRUCTURE
2 OF 2

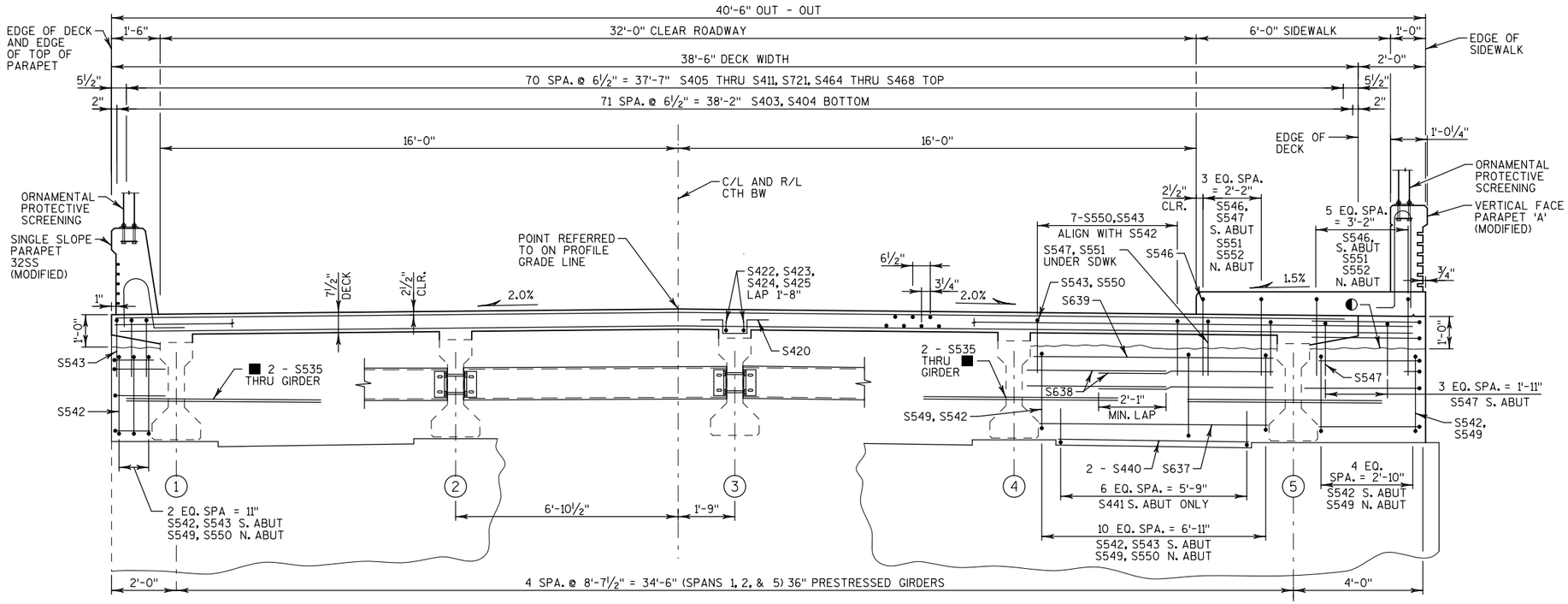
SHEET 22 OF 31

FILE NAME : Final_Design_B-32-51_08123.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08123 PLOT SCALE : 12:1

STATE PROJECT NUMBER
1071-06-77

◐ OPTIONAL CONSTRUCTION JOINT. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

■ FIELD DRILL (1) - 1½" DIA. HOLE IN ABUT. END OF GIRDERS IN SPANS 1 & 5. PLACE 2 - S535 BARS SYMETRICAL ABOUT C/L OF GIRDERS. FIELD BEND BARS ALONG SKEW.



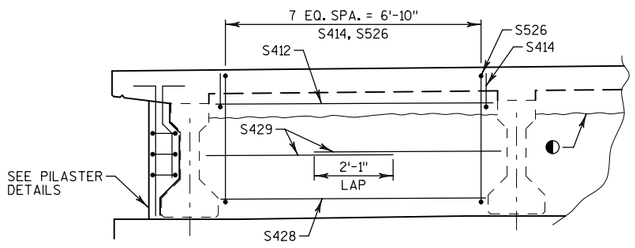
CONCRETE DIAPHRAGM AT ABUTMENT

IN SPAN DIAPHRAGM

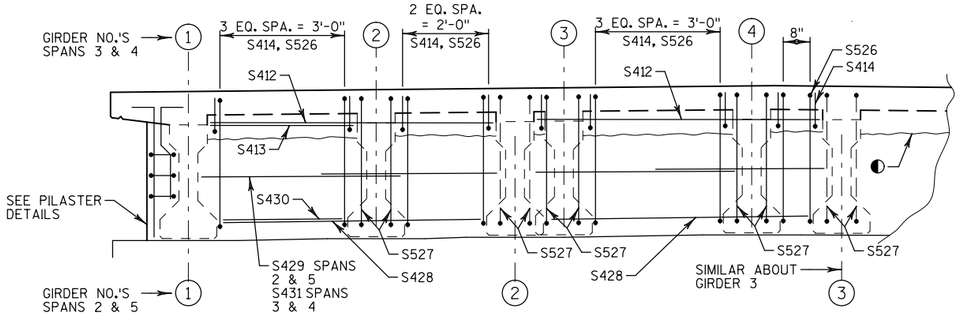
CONCRETE DIAPHRAGM AT ABUTMENT

CROSS SECTION THRU SUPERSTRUCTURE

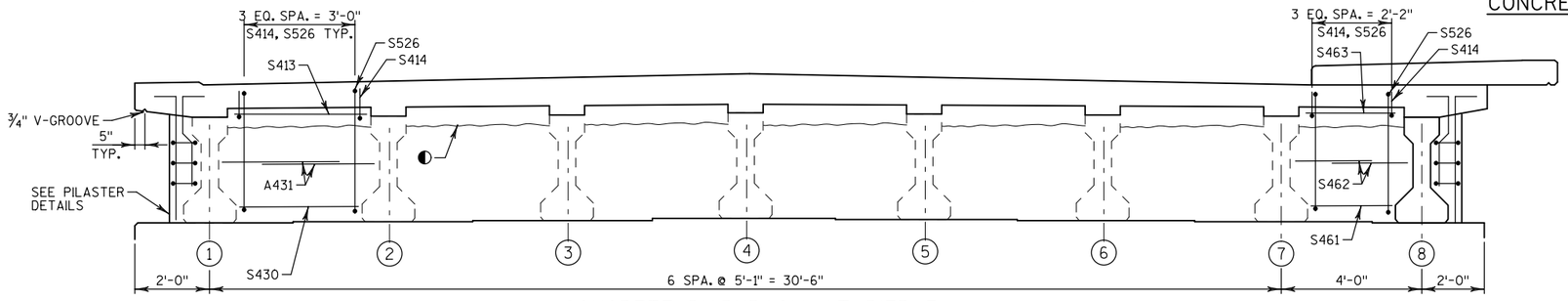
(LOOKING NORTH)



CONCRETE DIAPHRAGM AT PIER 1



CONCRETE DIAPHRAGM AT PIERS 2 & 4



CONCRETE DIAPHRAGM AT PIER 3

(LOOKING NORTH)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

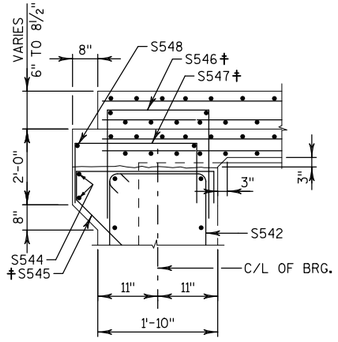
DRAWN BY MHM | PLANS CK'D. EKM

SUPERSTRUCTURE CROSS SECTION

SHEET 23 OF 31

8

8



AT SOUTH ABUTMENT
WITH RAISED SIDEWALK

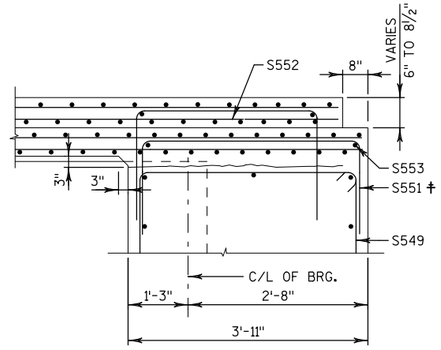
NOTES:

‡ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO C/L OF GIRDERS.

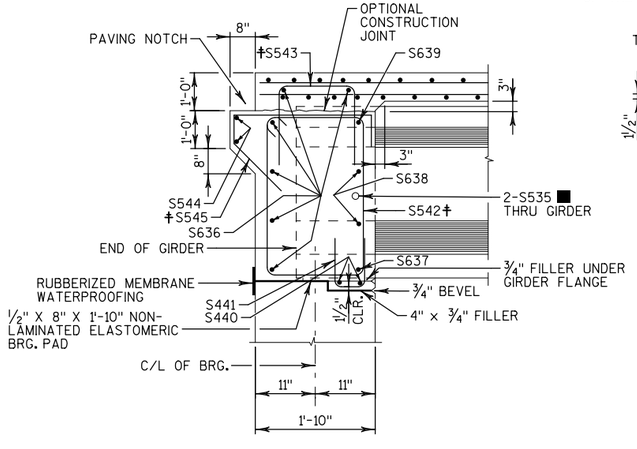
◪ DIMENSION IS TAKEN PARALLEL TO C/L GIRDER

⁎ DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNITS

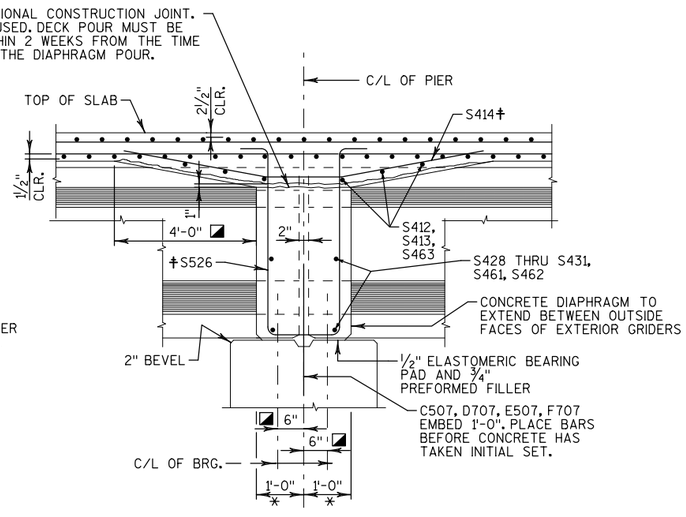
■ FIELD DRILL (1) - 1½" DIA. HOLE IN ABUTMENT END OF GIRDER IN SPANS 1 & 5, 1'-0" FROM END OF GIRDER AND 1'-7" ABOVE UNDERSIDE OF BOTTOM FLANGE. PLACE 2-S535 BARS SYMMETRICAL ABOUT C/L OF GIRDERS. FIELD BEND BARS ALONG SKEW.



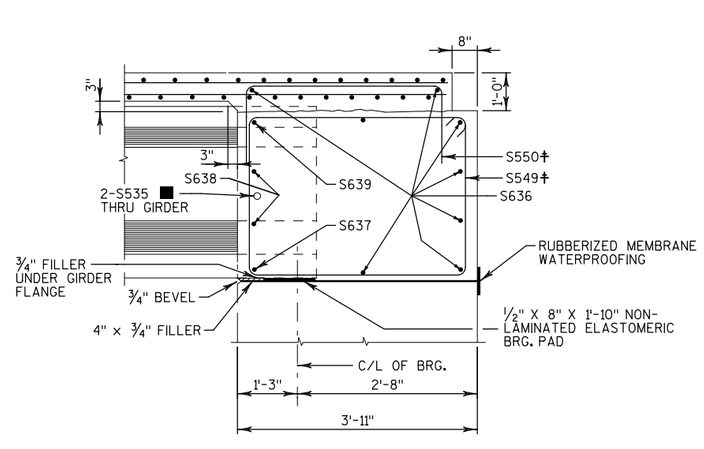
AT NORTH ABUTMENT
WITH RAISED SIDEWALK



AT SOUTH ABUTMENT



AT PIER DIAPHRAGM



AT NORTH ABUTMENT

PARTIAL LONGITUDINAL SECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY MHM | PLANS CK'D. EKM

SUPERSTRUCTURE DETAILS

SHEET 24 OF 31

8

8

BILL OF BARS

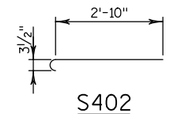
113,800 LB COATED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
S601	X	789	38'-4"		SLAB TRANSVERSE TOP & BOTTOM
S402	X	196	3'-5"	X	SLAB TRANSVERSE TOP AT OVERHANG
S403	X	72	16'-4"		SLAB LONGITUDINAL BOTTOM
S404	X	432	40'-0"		SLAB LONGITUDINAL BOTTOM
S405	X	35	18'-0"		SLAB LONGITUDINAL TOP SPAN 1
S406	X	36	30'-0"		SLAB LONGITUDINAL TOP SPAN 1
S607	X	71	28'-0"		SLAB LONGITUDINAL TOP AT PIER 1
S708	X	71	34'-0"		SLAB LONGITUDINAL TOP AT PIER 2
S809	X	71	45'-0"		SLAB LONGITUDINAL AT PIER 3
S410	X	35	11'-1"		SLAB LONGITUDINAL TOP SPAN 5
S411	X	36	24'-1"		SLAB LONGITUDINAL TOP SPAN 5
S412	X	48	7'-4"		SLAB TRANSVERSE BOTTOM OVER PIERS 1, 2, & 4
S413	X	72	3'-9"		SLAB TRANSVERSE BOTTOM OVER PIERS 2, 3, & 4
S414	X	112	12'-2"	X	SLAB LONGITUDINAL BOTTOM OVER PIERS
S415	X	495	2'-5"	X	SLAB SIDEWALK DOWELS
S416	X	166	2'-10"		SIDEWALK TRANSVERSE BOTTOM
S417	X	13	16'-4"		SIDEWALK LONGITUDINAL
S418	X	78	40'-0"		SIDEWALK LONGITUDINAL
S519	X	495	7'-4"	X	SIDEWALK TRANSVERSE TOP
S420	X	1614	2'-7"	X	SLAB GIRDER HAUNCH HAT BARS
S721	X	71	37'-0"		SLAB LONGITUDINAL TOP AT PIER 4
S422	X	10	37'-10"		SLAB GIRDER HAUNCH LONGITUDINAL SPAN 1
S423	X	10	39'-6"		SLAB GIRDER HAUNCH LONGITUDINAL SPAN 2
S424	X	56	35'-3"		SLAB GIRDER HAUNCH LONGITUDINAL SPANS 3 & 4
S425	X	10	34'-3"		SLAB GIRDER HAUNCH LONGITUDINAL SPAN 5
S526	X	112	9'-4"	X	PIER DIAPHRAGM VERTICAL
S527	X	36	8'-5"	X	PIER DIAPHRAGM VERTICAL PIERS 2 & 4
S428	X	16	6'-9"		PIER DIAPHRAGM HORIZONTAL PIERS 1, 2, & 4
S429	X	32	5'-0"		PIER DIAPHRAGM HORIZONTAL PIERS 1, 2, & 4
S430	X	24	3'-4"		PIER DIAPHRAGM HORIZONTAL PIERS 2, 3, & 4
S431	X	48	3'-4"		PIER DIAPHRAGM HORIZONTAL PIERS 2, 3, & 4
S432	X	16	3'-10"	X	PIER PILASTER VERTICAL
S433	X	16	3'-0"	X	PIER PILASTER VERTICAL
S334	X	24	3'-0"	X	PIER PILASTER HORIZONTAL
S535	X	20	6'-0"		ABUT DIAPHRAGM HORZ THRU GIRDER WEBS
S636	X	13	40'-11"		ABUT DIAPHRAGM HORZ BACK FACE
S637	X	8	6'-10"		ABUT DIAPHRAGM HORZ FRONT FACE
S638	X	32	5'-0"		ABUT DIAPHRAGM HORZ FRONT FACE
S639	X	8	7'-4"		ABUT DIAPHRAGM HORZ FRONT FACE
S440	X	16	5'-9"		S ABUT DIAPHRAGM HORZ BTWN BEAM SEATS
S441	X	28	3'-6"	X	S ABUT DIAPHRAGM HORZ BTWN BEAM SEATS
S542	X	52	8'-11"	X	S ABUT DIAPHRAGM VERTICAL
S543	X	43	5'-9"	X	S ABUT DIAPHRAGM VERTICAL TOP
S544	X	2	37'-6"		S ABUT CORBEL HORZ
S545	X	39	5'-3"	X	S ABUT CORBEL VERTICAL
S546	X	10	7'-1"	X	S ABUT DIAPHRAGM VERTICAL UNDER SIDEWALK
S547	X	8	5'-1"	X	S ABUT DIAPHRAGM VERTICAL UNDER SIDEWALK
S548	X	1	5'-4"		S ABUT CORBEL HORZ UNDER SIDEWALK
S549	X	52	13'-1"	X	N ABUT DIAPHRAGM VERTICAL
S550	X	43	7'-2"	X	N ABUT DIAPHRAGM VERTICAL TOP
S551	X	10	9'-2"	X	N ABUT DIAPHRAGM VERTICAL UNDER SIDEWALK
S552	X	10	8'-6"	X	N ABUT DIAPHRAGM VERTICAL UNDER SIDEWALK
S553	X	1	6'-7"		N ABUT DIAPHRAGM HORZ UNDER SIDEWALK
S554	X	248	6'-8"	X	VERTICAL FACE PARPAET 'A' DOWEL
S455	X	6	16'-4"		VERTICAL FACE PARAPET 'A' HORIZONTAL
S456	X	36	40'-0"		VERTICAL FACE PARAPET 'A' HORIZONTAL
S557	X	371	4'-5"	X	SINGLE SLOPE PARAPET 32SS DOWEL
S558	X	6	24'-6"		SINGLE SLOPE PARAPET 32SS HORZ
S559	X	36	40'-0"		SINGLE SLOPE PARAPET 32SS HORZ
S560	X	372	5'-0"	X	SINGLE SLOPE PARAPET 32SS VERTICAL
S461	X	4	2'-2"		PIER DIAPHRAGM HORZ. PIERS 2, 3, &4
S462	X	8	2'-4"		PIER DIAPHRAGM HORZ. PIERS 2, 3, &4
S463	X	12	2'-9"		SLAB TRANSVERSE BOTTOM OVER PIERS 2, 3, & 4

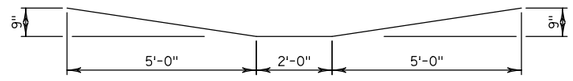
NOTE:
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

BILL OF BARS (CONT.)

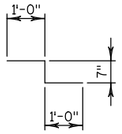
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
S464	X	35	35'-4"		SLAB LONGITUDINAL TOP SPAN 4
S465	X	71	25'-4"		SLAB LONGITUDINAL TOP SPANS 3 & 4
S466	X	36	38'-4"		SLAB LONGITUDINAL TOP SPAN 3
S467	X	35	12'-10"		SLAB LONGITUDINAL TOP SPAN 2
S468	X	36	10'-10"		SLAB LONGITUDINAL TOP SPAN 2



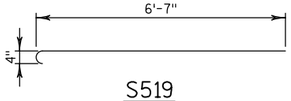
S402



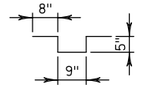
S414



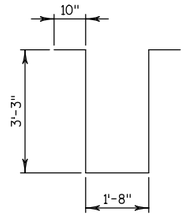
S415



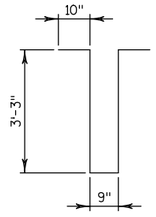
S519



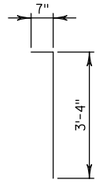
S420



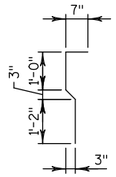
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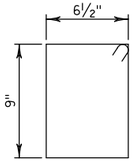
S527



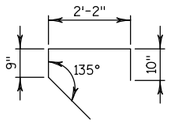
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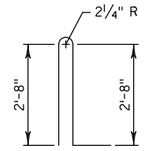
S433



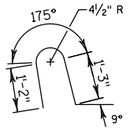
S334



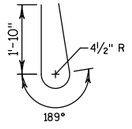
S545



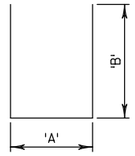
S554



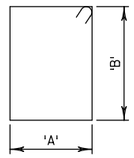
S557



S560



BAR MARK	DIM. 'A'	DIM. 'B'
S441	0'-8"	1'-6"
S543	1'-6"	2'-3"
S546	1'-6"	2'-11"
S547	2'-2"	1'-7"
S550	2'-11"	2'-3"
S551	3'-7"	2'-11"
S552	2'-11"	2'-11"



BAR MARK	DIM. 'A'	DIM. 'B'
S542	1'-6"	2'-8"
S549	3'-7"	2'-8"

STATE PROJECT NUMBER

1071-06-77

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY MHM | PLANS CK'D. SGM

SUPERSTRUCTURE BILL OF BARS

SHEET 25 OF 31

8

8

STATE PROJECT NUMBER

1071-06-77

TOP OF DECK ELEVATIONS

LOCATION	S. ABUT	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	PIER 1	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	PIER 2
LEFT EDGE OF DECK	679.63	679.64	679.65	679.65	679.66	679.66	679.66	679.65	679.65	679.65	679.64	679.63	679.62	679.60	679.59	679.57	679.55	679.53	679.50	679.48	679.45
LEFT GUTTER LINE	679.63	679.64	679.65	679.65	679.66	679.66	679.66	679.65	679.65	679.65	679.64	679.63	679.62	679.60	679.59	679.57	679.55	679.53	679.50	679.48	679.45
GIRDER 1	679.64	679.65	679.66	679.66	679.67	679.67	679.67	679.66	679.66	679.66	679.65	679.64	679.63	679.61	679.60	679.58	679.56	679.54	679.51	679.49	679.46
GIRDER 2	679.82	679.83	679.83	679.84	679.84	679.84	679.84	679.84	679.83	679.83	679.82	679.81	679.80	679.78	679.77	679.75	679.73	679.71	679.68	679.65	679.63
GIRDER 3	679.92	679.93	679.94	679.94	679.94	679.94	679.94	679.94	679.93	679.93	679.92	679.91	679.90	679.88	679.86	679.85	679.83	679.80	679.78	679.75	679.72
GIRDER 4	679.75	679.76	679.76	679.77	679.77	679.77	679.77	679.76	679.76	679.75	679.74	679.73	679.72	679.71	679.69	679.67	679.65	679.62	679.60	679.57	679.54
RIGHT GUTTER LINE	679.64	679.65	679.65	679.66	679.66	679.66	679.65	679.65	679.65	679.64	679.63	679.62	679.61	679.59	679.57	679.55	679.53	679.51	679.48	679.45	679.42
TOP OF SIDEWALK AT GUTTER LINE	680.14	680.15	680.15	680.16	680.16	680.16	680.15	680.15	680.15	680.14	680.13	680.12	680.11	680.09	680.07	680.05	680.03	680.01	679.98	679.95	679.92
GIRDER 5	679.58	679.59	679.59	679.60	679.60	679.60	679.59	679.59	679.59	679.58	679.57	679.56	679.54	679.53	679.51	679.49	679.47	679.45	679.42	679.39	679.36
RIGHT EDGE OF DECK	679.54	679.55	679.55	679.56	679.56	679.56	679.55	679.55	679.55	679.54	679.53	679.52	679.50	679.49	679.47	679.45	679.43	679.40	679.38	679.35	679.32
TOP OF SIDEWALK AT FRONT FACE OF PARAPET	680.23	680.23	680.24	680.24	680.24	680.24	680.24	680.24	680.23	680.23	680.22	680.21	680.19	680.18	680.16	680.14	680.12	680.09	680.07	680.04	680.01
TOP OF SIDEWALK AT BACK FACE OF PARAPET	680.23	680.23	680.24	680.24	680.24	680.24	680.24	680.24	680.23	680.23	680.22	680.21	680.19	680.18	680.16	680.14	680.12	680.09	680.07	680.04	680.01

LOCATION	PIER 2	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	PIER 3	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	PIER 4
LEFT EDGE OF DECK	679.45	679.40	679.34	679.27	679.20	679.12	679.04	678.95	678.85	678.75	678.64	678.52	678.40	678.28	678.14	678.00	677.86	677.71	677.55	677.39	677.22
LEFT GUTTER LINE	679.45	679.40	679.34	679.27	679.20	679.12	679.04	678.95	678.85	678.75	678.64	678.52	678.40	678.28	678.14	678.00	677.86	677.71	677.55	677.39	677.22
GIRDER 1	679.46	679.41	679.35	679.28	679.21	679.13	679.05	678.96	678.86	678.76	678.65	678.53	678.41	678.29	678.15	678.01	677.87	677.72	677.56	677.39	677.22
GIRDER 2	679.56	679.50	679.44	679.38	679.30	679.23	679.14	679.05	678.95	678.85	678.74	678.63	678.50	678.38	678.24	678.10	677.96	677.81	677.65	677.48	677.31
GIRDER 3	679.65	679.60	679.54	679.47	679.40	679.32	679.24	679.14	679.05	678.94	678.83	678.72	678.60	678.47	678.33	678.19	678.05	677.89	677.74	677.57	677.40
GIRDER 4	679.75	679.70	679.64	679.57	679.50	679.42	679.33	679.24	679.14	679.04	678.93	678.81	678.69	678.56	678.42	678.28	678.14	677.98	677.82	677.66	677.49
GIRDER 5	679.66	679.60	679.54	679.47	679.40	679.32	679.23	679.14	679.04	678.94	678.83	678.71	678.59	678.46	678.32	678.18	678.03	677.88	677.72	677.55	677.38
GIRDER 6	679.55	679.49	679.43	679.36	679.29	679.21	679.12	679.03	678.93	678.83	678.72	678.60	678.47	678.34	678.21	678.07	677.92	677.77	677.61	677.44	677.27
GIRDER 7	679.44	679.39	679.33	679.26	679.18	679.10	679.01	678.92	678.82	678.72	678.60	678.49	678.36	678.23	678.10	677.95	677.81	677.65	677.49	677.32	677.15
RIGHT GUTTER LINE	679.42	679.37	679.30	679.24	679.16	679.08	678.99	678.90	678.80	678.69	678.58	678.46	678.34	678.21	678.07	677.93	677.78	677.63	677.47	677.30	677.13
TOP OF SIDEWALK AT GUTTER LINE	679.92	679.87	679.80	679.74	679.66	679.58	679.49	679.40	679.30	679.19	679.08	678.96	678.84	678.71	678.57	678.43	678.28	678.13	677.97	677.80	677.63
GIRDER 8	679.36	679.30	679.24	679.17	679.10	679.02	678.93	678.83	678.73	678.63	678.52	678.40	678.27	678.14	678.01	677.86	677.72	677.56	677.40	677.23	677.06
RIGHT EDGE OF DECK	679.32	679.26	679.20	679.13	679.05	678.97	678.89	678.79	678.69	678.59	678.47	678.36	678.23	678.10	677.96	677.82	677.67	677.52	677.36	677.19	677.01
TOP OF SIDEWALK AT FRONT FACE OF PARAPET	680.01	679.95	679.89	679.82	679.75	679.67	679.58	679.49	679.39	679.28	679.17	679.05	678.93	678.80	678.66	678.52	678.37	678.21	678.05	677.89	677.71
TOP OF SIDEWALK AT BACK FACE OF PARAPET	680.01	679.95	679.89	679.82	679.75	679.67	679.58	679.49	679.39	679.28	679.17	679.05	678.93	678.80	678.66	678.52	678.37	678.21	678.05	677.89	677.71

LOCATION	PIER 4	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	N. ABUT
LEFT EDGE OF DECK	677.22	677.13	677.05	676.96	676.87	676.79	676.69	676.60	676.51	676.42	676.32
LEFT GUTTER LINE	677.22	677.13	677.05	676.96	676.87	676.79	676.69	676.60	676.51	676.42	676.32
GIRDER 1	677.22	677.14	677.06	676.97	676.88	676.79	676.70	676.61	676.52	676.42	676.33
GIRDER 2	677.37	677.29	677.20	677.12	677.03	676.94	676.85	676.76	676.66	676.57	676.47
GIRDER 3	677.45	677.37	677.28	677.20	677.11	677.02	676.93	676.83	676.74	676.64	676.55
GIRDER 4	677.26	677.17	677.09	677.00	676.91	676.82	676.73	676.63	676.54	676.44	676.35
RIGHT GUTTER LINE	677.13	677.04	676.96	676.87	676.78	676.69	676.60	676.50	676.41	676.31	676.22
TOP OF SIDEWALK AT GUTTER LINE	677.63	677.54	677.46	677.37	677.28	677.19	677.10	677.00	676.91	676.81	676.72
GIRDER 5	677.06	676.97	676.89	676.80	676.71	676.62	676.53	676.44	676.34	676.24	676.15
RIGHT EDGE OF DECK	677.01	676.93	676.84	676.75	676.67	676.57	676.48	676.39	676.29	676.20	676.10
TOP OF SIDEWALK AT FRONT FACE OF PARAPET	677.71	677.63	677.54	677.46	677.37	677.28	677.18	677.09	677.00	676.90	676.80
TOP OF SIDEWALK AT BACK FACE OF PARAPET	677.71	677.63	677.54	677.46	677.37	677.28	677.18	677.09	677.00	676.90	676.80

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY MHM | PLANS CK'D. EKM

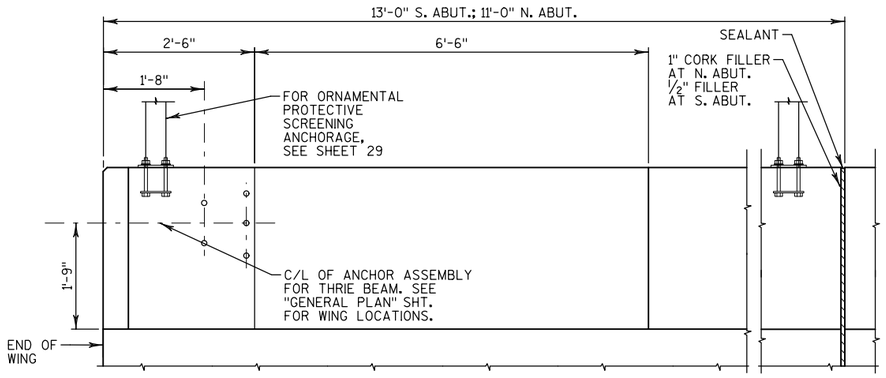
DECK ELEVATIONS

SHEET 26 OF 31

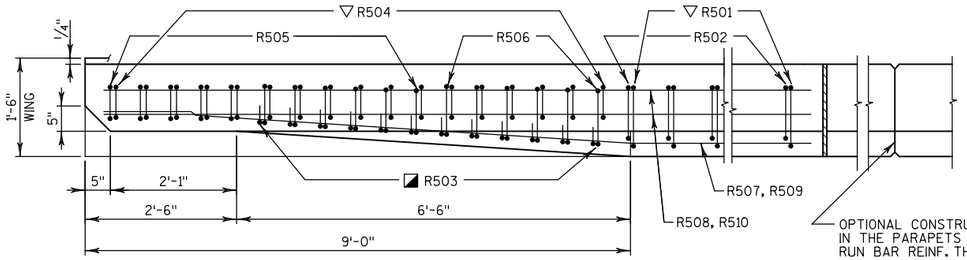
FILE NAME : Final_Design_B-32-51_08127.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08127 PLOT SCALE : 5:1

STATE PROJECT NUMBER

1071-06-77

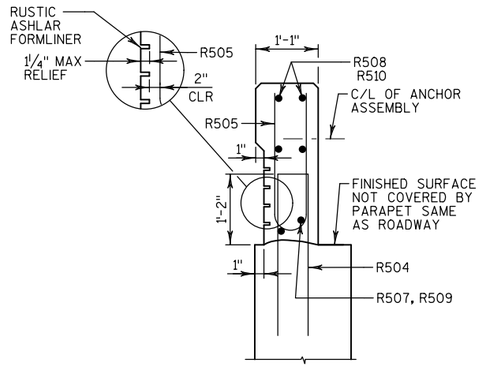


INSIDE ELEVATION

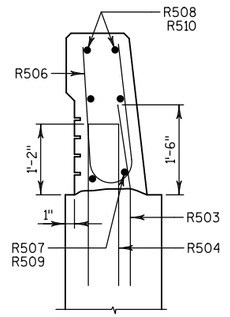


PLAN

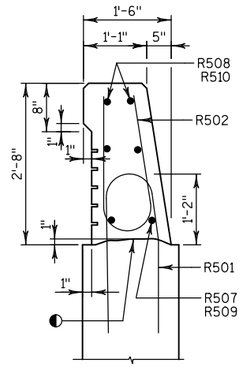
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 2'-11". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.



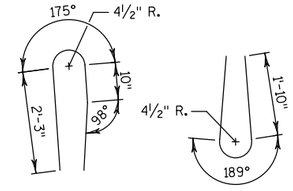
SECTION A



SECTION B



SECTION C



R501 R502

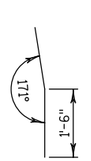
BILL OF BARS

710 LB COATED

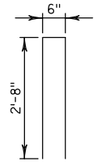
BAR MARK	COAT	NO. REQ'D S. ABUT	NO. REQ'D N.ABUT	NO. REQ'D TOTAL	LENGTH	BENT	LOCATION
R501	X	7	4	11	5'-10"	X	PARAPET - VERTICAL
R502	X	7	4	11	5'-0"	X	PARAPET - VERTICAL
R503	X	12	12	24	3'-0"	X	PARAPET - VERTICAL
R504	X	17	17	34	5'-7"	X	PARAPET - VERTICAL
R505	X	11	11	22	4'-9"	X	PARAPET - VERTICAL
R506	X	6	6	12	4'-10"	X	PARAPET - VERTICAL
R507	X	1	-	1	12'-5"	X	PARAPET - HORIZONTAL
R508	X	5	-	5	12'-5"		PARAPET - HORIZONTAL
R509	X	-	1	1	10'-5"	X	PARAPET - HORIZONTAL
R510	X	-	5	5	10'-5"		PARAPET - HORIZONTAL

NOTES:
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.

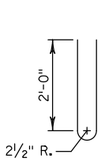
ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.



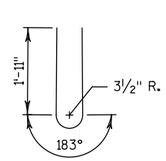
R503



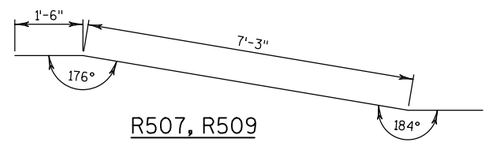
R504



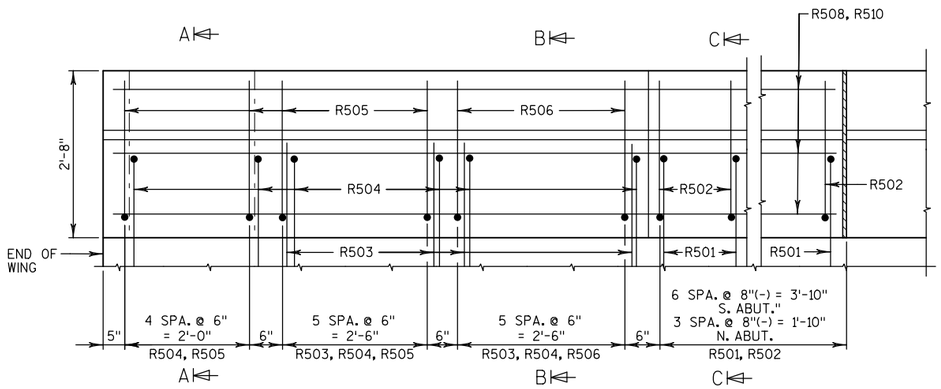
R505



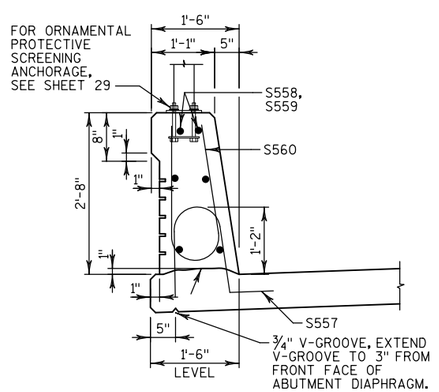
R506



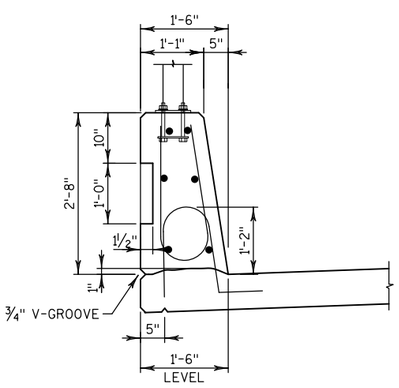
R507, R509



OUTSIDE ELEVATION

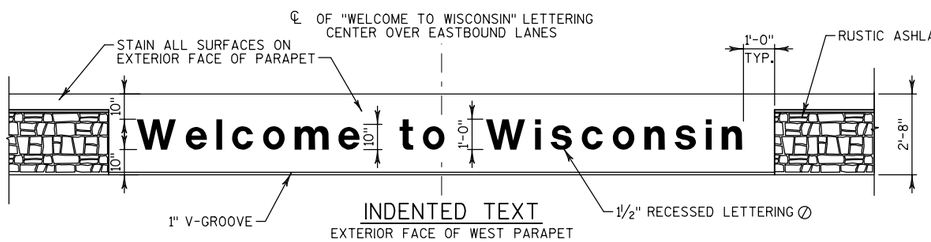


SECTION THRU PARAPET ON BRIDGE



SECTION THRU INDENTED TEXT

SHOWN @ A CAPITAL LETTER FOR REINFORCING CALLOUTS, SEE SECTION THRU PARAPET ON BRIDGE



INDENTED TEXT
EXTERIOR FACE OF WEST PARAPET

Ø LETTERING SHALL BE HELVETICA, 12" UPPER CASE AND 10" LOWER CASE. LETTERING IS ON THE EXTERIOR FACE OF THE WEST PARAPET, CENTER OVER THE EASTBOUND LANES. LETTERING IS STAINED BLACK.

◐ CONSTR. JOINT - STRIKE OFF AS SHOWN

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY MHM | PLANS CK'D. SGM

SINGLE SLOPE PARAPET 32SS (MODIFIED)

SHEET 27 OF 31

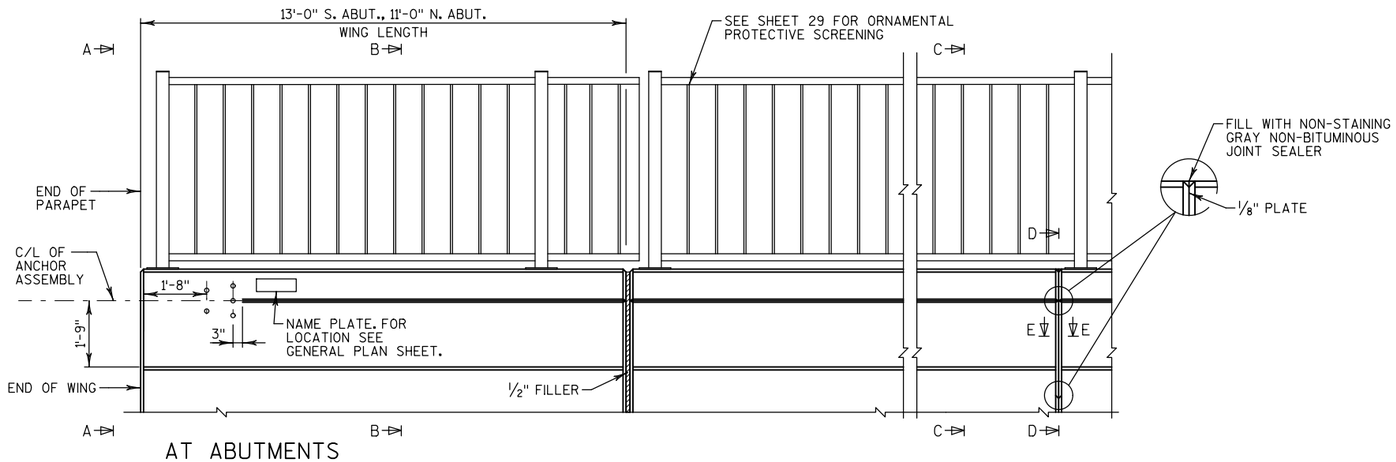
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8

FILE NAME : Final_Design_B-32-51_08128.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08128 PLOT SCALE : 5:1

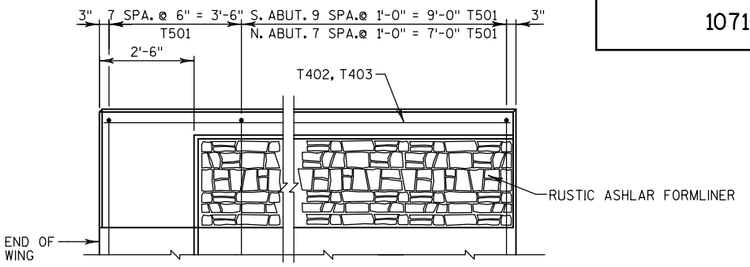
STATE PROJECT NUMBER

1071-06-77



AT ABUTMENTS

PART ELEVATION OF PARAPET - INSIDE FACE



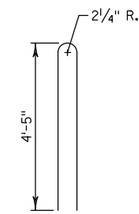
VIEW SHOWING OUTSIDE FACE OF PARAPET & REINF.

BILL OF BARS

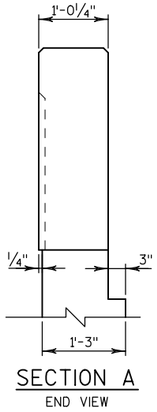
410 LB COATED

BAR MARK	COAT	NO. REQ'D S. ABUT.	NO. REQ'D N. ABUT.	LENGTH	BENT	LOCATION
T501	X	17	15	9'-5"	X	PARAPET VERTICAL
T402	X	6	-	12'-6"		PARAPET HORZ SOUTH ABUT
T403	X	-	6	10'-6"		PARAPET HORZ NORTH ABUT

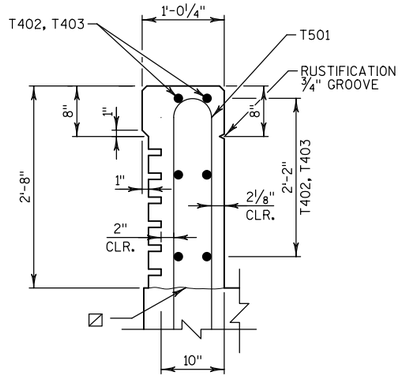
NOTES:
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL DIMENSIONS IN THE BAR TENDS ARE OUT TO OUT.



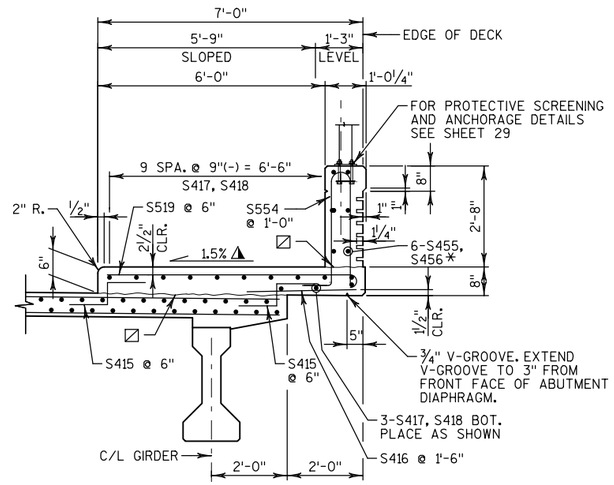
T501



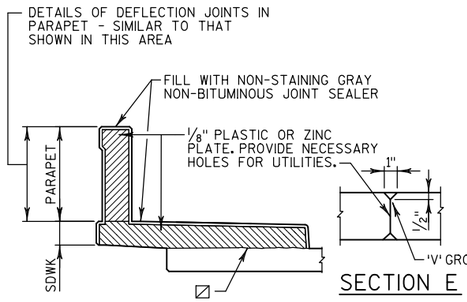
SECTION A
END VIEW



SECTION B

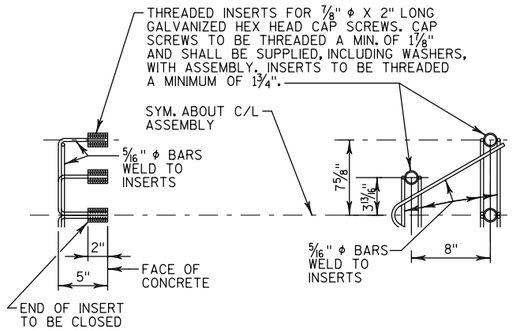


SECTION C - THRU SIDEWALK



SECTION D

SECTION E



DETAIL OF ANCHOR ASSEMBLY

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

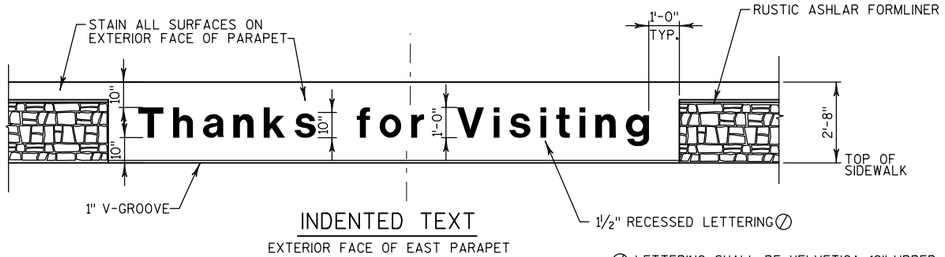
ASSEMBLY BID ITEM SHALL BE "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

DEFLECTION JOINT DETAIL

A DEFLECTION JOINT SHALL BE PROVIDED IN THE SIDEWALK AND PARAPET ON THE SIDEWALK OVER EACH PIER.

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR PLASTIC PLATE CUT AS SHOWN IN THE "DEFLECTION JOINT DETAIL". IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

℄ OF "THANKS FOR VISITING" LETTERING CENTER OVER WESTBOUND LANES



INDENTED TEXT

EXTERIOR FACE OF EAST PARAPET

Ⓓ LETTERING SHALL BE HELVETICA, 12" UPPER CASE AND 10" LOWER CASE. LETTERING IS ON THE EXTERIOR FACE OF THE EAST PARAPET, CENTER OVER THE WESTBOUND LANES. LETTERING IS STAINED BLACK.

☒ CONSTRUCTION JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE CROSS SLOPE.

⚠ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

* OPTIONAL CONSTRUCTION JOINTS IN THE PARAPET MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-5". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY MHM | PLANS CK'D. EKM

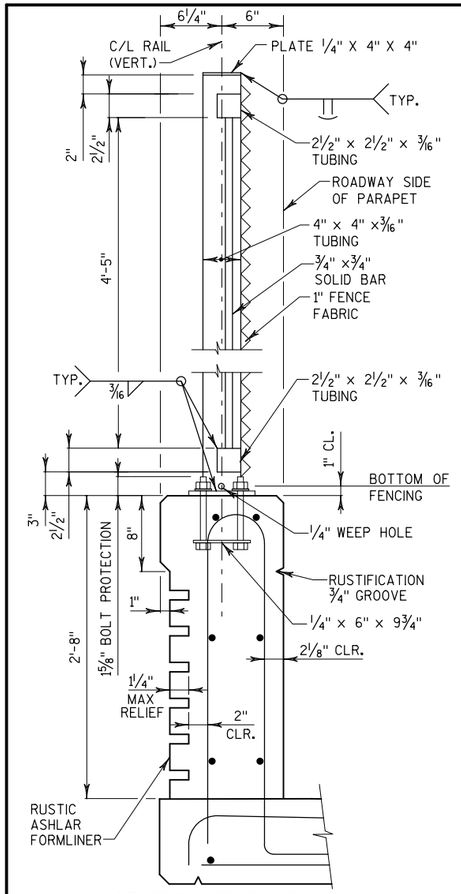
VERTICAL FACE PARAPET 'A' (MODIFIED)

SHEET 28 OF 31

8

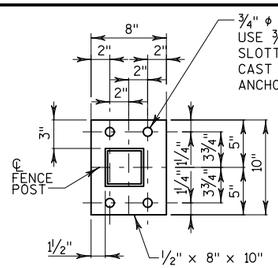
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FILE NAME : Final_Design_B-32-51_08129.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08129 PLOT SCALE : 4:1

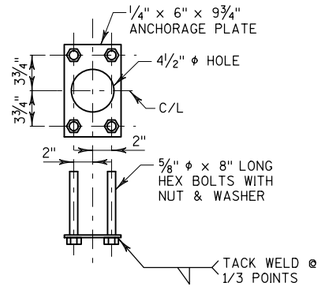


SECTION THRU RAILING

VERTICAL FACE PARAPET 'A' SHOWN
32SS PARAPET SIMILAR

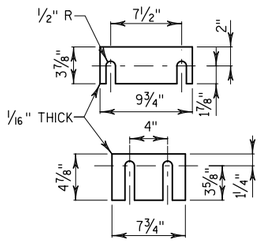


BASE PLATE



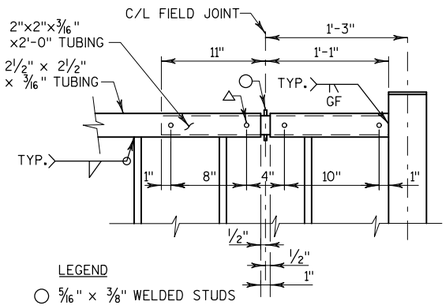
ANCHORAGE DETAIL

⅝" CAST-IN-PLACE ANCHOR BOLTS. MASONRY ANCHORS MAY BE SUBSTITUTED FOR ⅝" CAST IN PLACE ANCHOR BOLTS. ANCHORAGE PLATE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED. MASONRY ANCHOR TYPE S ⅝-INCH. EMBED 7" IN CONCRETE.



SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST

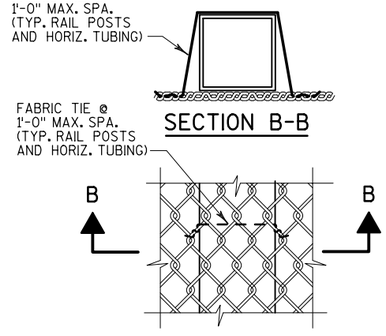


LEGEND

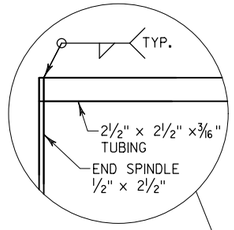
○ 5/16" × ⅜" WELDED STUDS

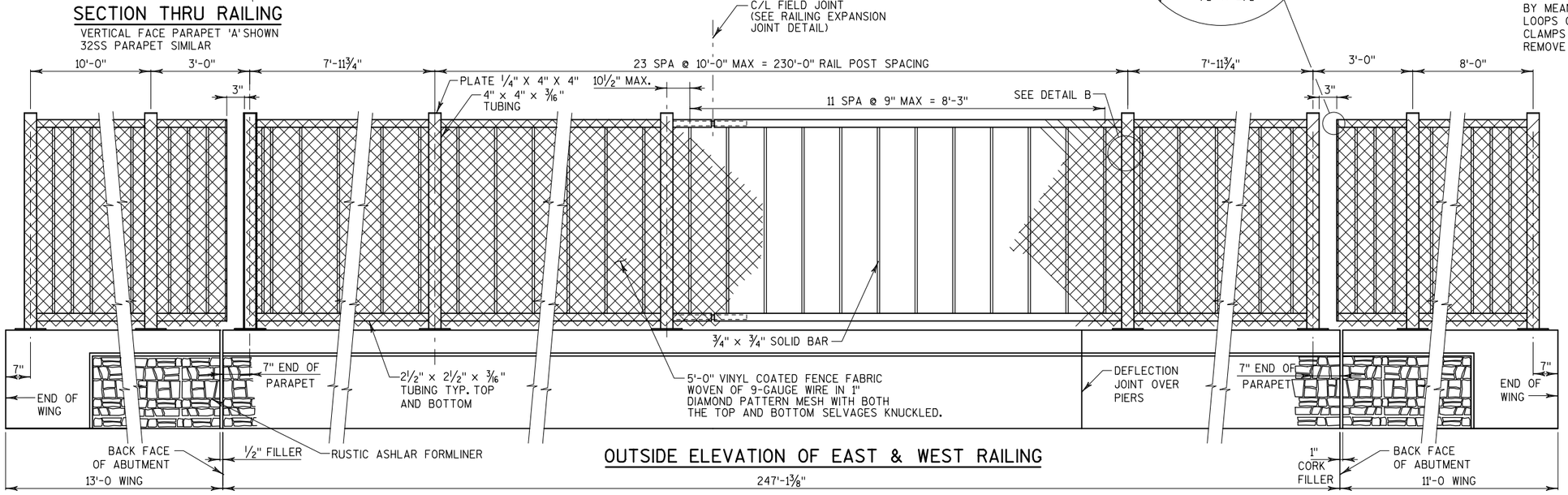
△ WELD BEAD ON EACH SIDE OF TUBE. GRIND BEADS SO THAT SLEEVE FITS FREELY INSIDE THE 2½" X 2½" TUBE.

RAILING EXPANSION JOINT DETAIL



THE END OF THE FABRIC SHALL BE ATTACHED TO THE POST BY MEANS OF A TENSION BAR THREADED THROUGH THE END LOOPS OF THE FABRIC AND SECURED TO THE POST WITH CLAMPS & BOLT. THE FABRIC SHALL BE STRETCHED TO REMOVE ALL SLACK.





OUTSIDE ELEVATION OF EAST & WEST RAILING

NOTES

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

RAILS AND POSTS TO BE A.S.T.M. A500, GRADE B. BASE PLATES AND SHIMS TO BE A.S.T.M. A709, GRADE 36. ALL GALVANIZED AFTER FABRICATION.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPA. ARE TAKEN HORIZ. ALONG CENTER LINE OF RAILING AT BASE OF POST.

SHIMS SHALL BE USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

RAILING TO BE PAINTED AND FENCE FABRIC AND TIES TO BE VINYL COATED. FEDERAL COLOR NO. 27038 (BLACK).

THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING B-32-51" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING ALL STEEL RAILING POSTS AND STEEL TUBING SHALL BE GIVEN A #6 BLAST CLEANING BY SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH APPROVED TIE COAT AND TOPCOAT.

THE END OF THE FABRIC SHALL BE ATTACHEDTO THE POST BY MEANS OF A TENSION BAR THREADED THROUGH THE END LOOPS OF THE FABRIC AND SECURED TO THE POST WITH CLAMPS & BOLTS. THE FABRIC SHALL BE STRETCHED TO REMOVE ALL SLACK.

STATE PROJECT NUMBER
1071-06-77

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

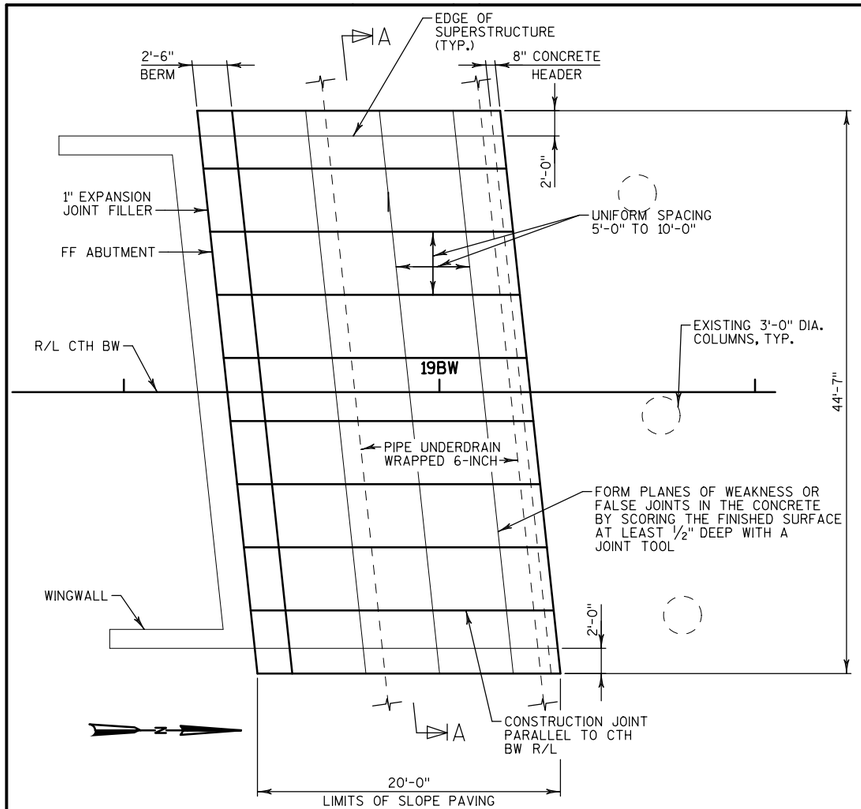
DRAWN BY MHM | PLANS CK'D. EKM

ORNAMENTAL PROTECTIVE SCREENING

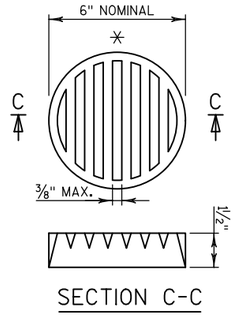
SHEET 29 OF 31

8

8



SLOPE PAVING PLAN AT SOUTH ABUTMENT



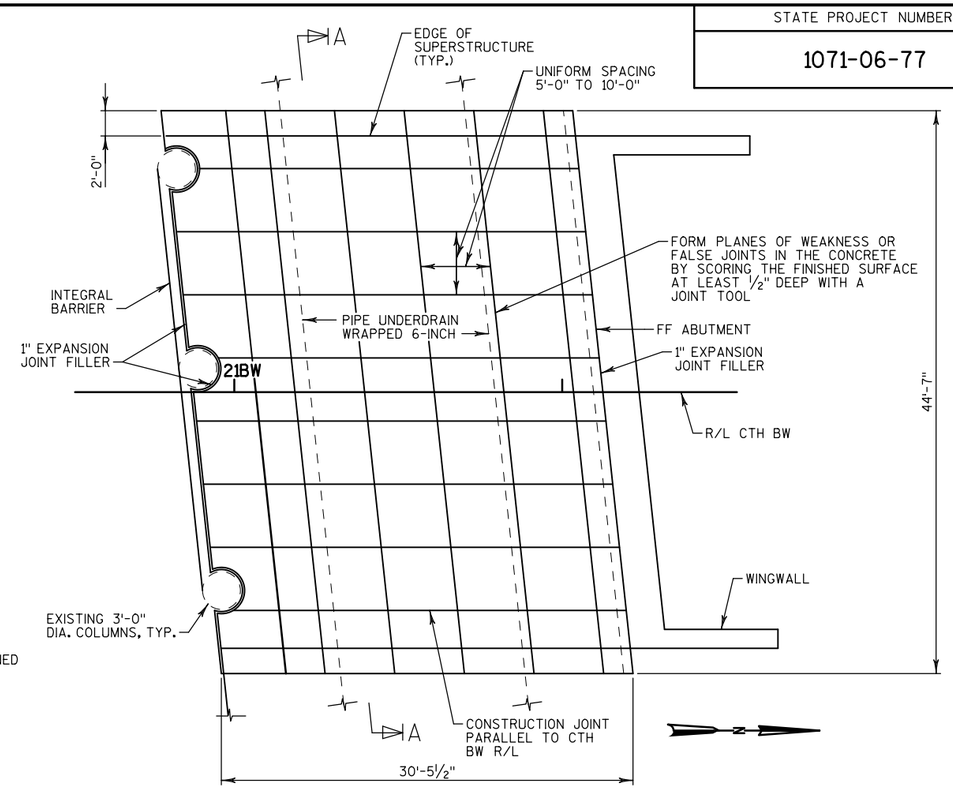
SECTION C-C

RODENT SCREEN DETAIL

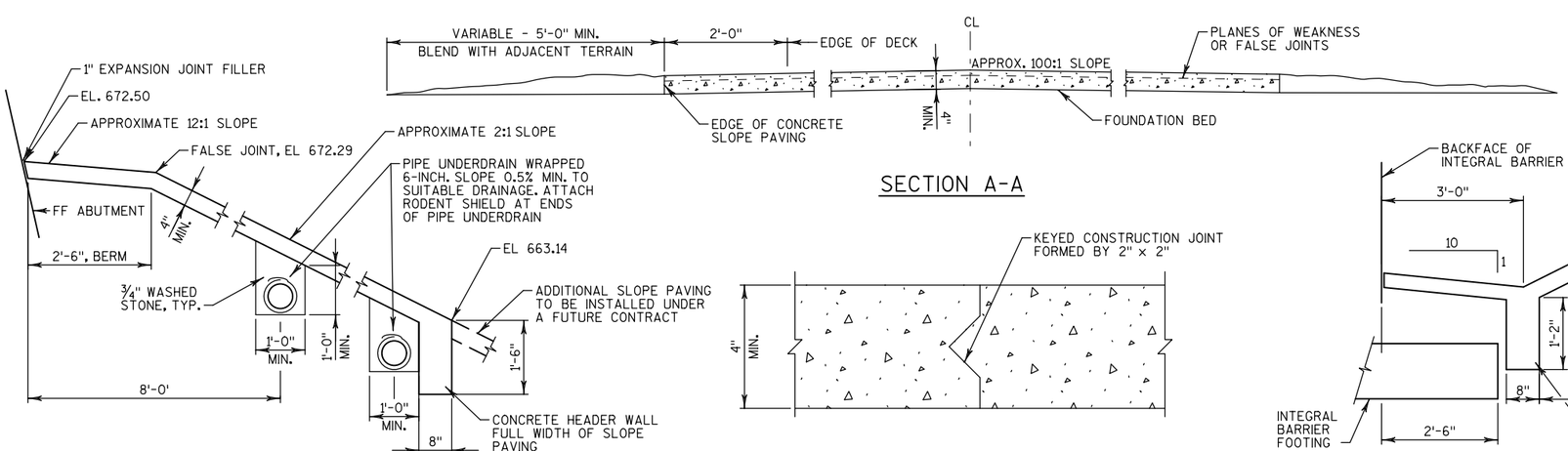
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN 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 SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH SHEET METAL SCREWS.



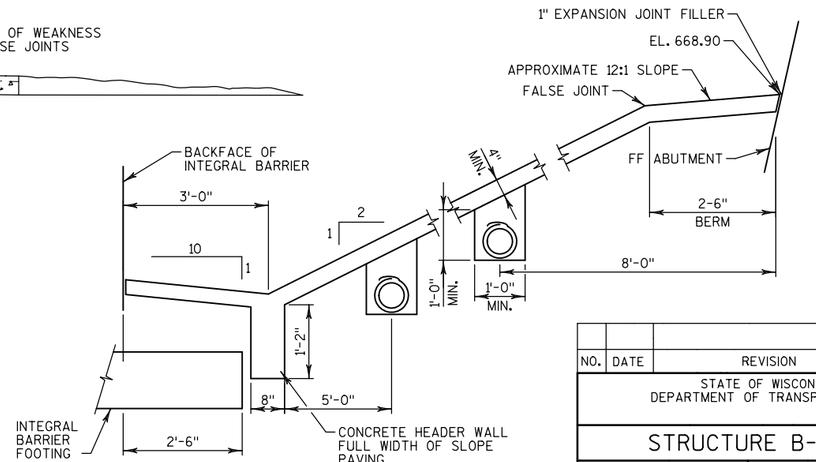
SLOPE PAVING PLAN AT NORTH ABUTMENT



SECTION A-A

TYPICAL SECTION AT SOUTH ABUTMENT

CONSTRUCTION JOINT DETAIL



TYPICAL SECTION AT NORTH ABUTMENT

STATE PROJECT NUMBER

1071-06-77

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY PAK | PLANS CK'D. KES

SLOPE PAVING (CONCRETE CAST-IN-PLACE)

SHEET 30 OF 31

8

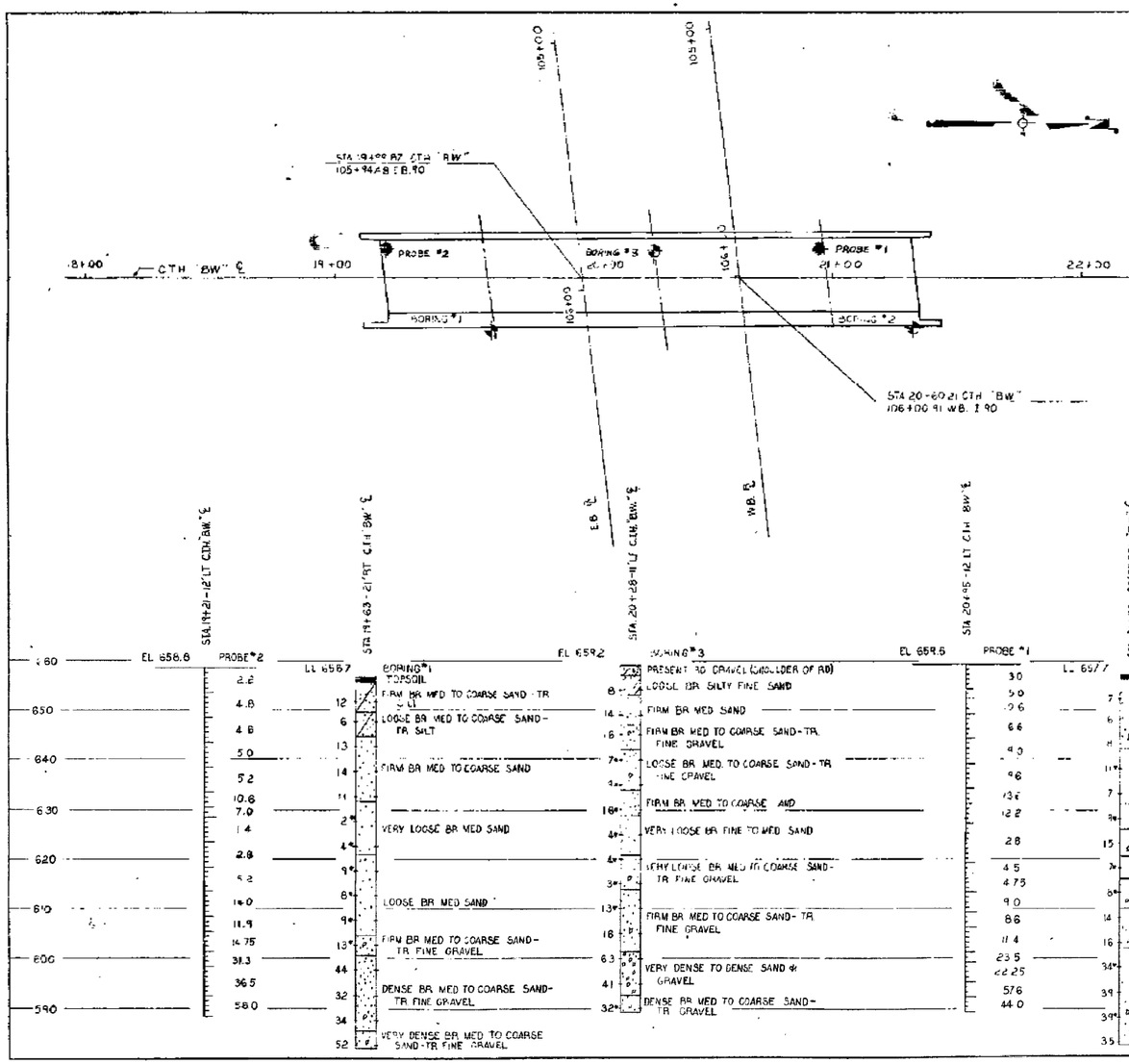
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STATE PROJECT NUMBER

1071-06-77

30-OCT-1997 15:34

FED.	PROJECT	SHEET	TOTAL
4	F-90-1(15)30	31	65



SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN

FOR THE DESIGN OF THE STRUCTURE FOUNDATION, TO OBTAIN RELIABLE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING WITH THE LOG OF SUCH EXPLORATION DATA AS INTERPRETED FOR SUCH DESIGN PURPOSE AS SHOWN. THE EXPLORATIONS WERE MADE BY ORDINARY AND CONVENTIONAL METHODS AND CARE DEEMED ADEQUATE FOR SUCH PURPOSE. HOWEVER, SINCE IT IS A MATTER OF COMMON KNOWLEDGE THAT THE EXACT CHARACTER OF ANY MATERIAL AND ITS REACTION IS DIFFICULT TO DETERMINE FROM SUCH SUBSURFACE EXPLORATION, AND THAT THE KIND AND CHARACTER OF MATERIAL AT THE SITE WHERE THE FOUNDATIONS ARE BUILT MAY VARY SUBSTANTIALLY FROM THAT INDICATED BY THE LOG THEY ARE MADE AVAILABLE TO THE BIDDERS SIMPLY FOR WHAT THEY ARE WORTH, WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED THAT THE MATERIAL TO BE ENCOUNTERED IN BUILDING THE FOUNDATION WILL CONFORM THEREWITH. IF THE LOG IS USED BY THE CONTRACTOR IN MAKING HIS BID, IT IS HEREBY EXPRESSLY STIPULATED THAT THE COMMISSION ACCEPTS NO RESPONSIBILITY FOR SAID USE.

UNLESS OTHERWISE SPECIFIED THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" OD x 1 3/8" ID SPLIT SPOON SAMPLER WITH A 140 LB. HAMMER HAVING A FREE FALL OF 30 INCHES. THE BLOW AMOUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE

THE INFORMATION PROVIDED ON THIS SHEET IS FROM THE 1967 BRIDGE PLANS.

X28079

ScreenScan

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-51

DRAWN BY JAP | PLANS CK'D. KES

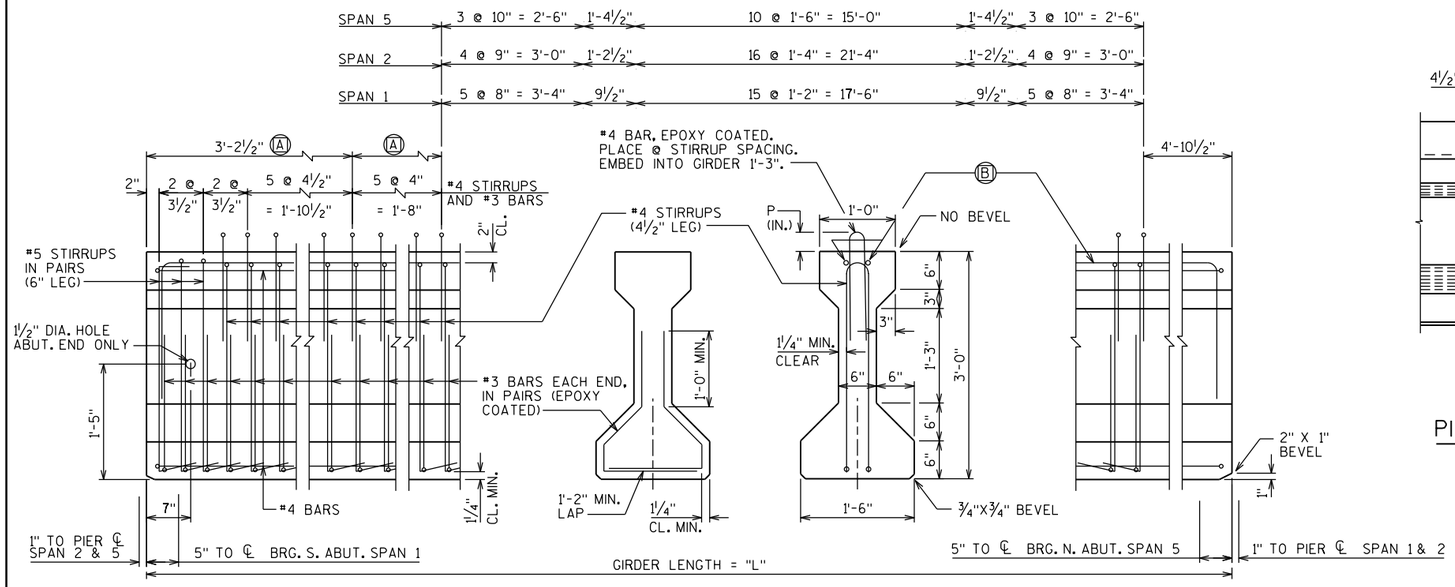
SUBSURFACE EXPLORATION

SHEET 31 OF 31

FILE NAME : Final_Design_B-32-51_08132.dgn PLOT DATE : 30-JUL-2014 PLOT BY : jpieroni Final_Design_B-32-51_08132 PLOT SCALE : 12:1

STATE PROJECT NUMBER

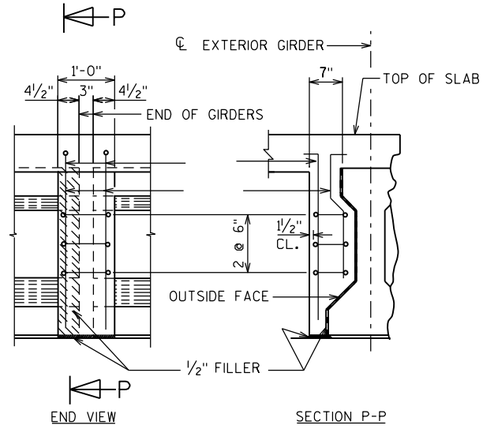
1071-06-77



SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 2-NO. 5 BARS FULL LENGTH BEND DOWN 16 BAR DIA. AT ENDS



PILASTER DETAILS AT PIERS

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

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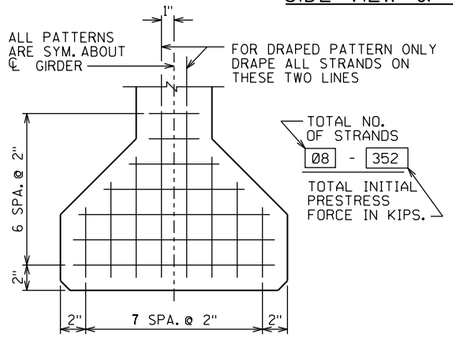
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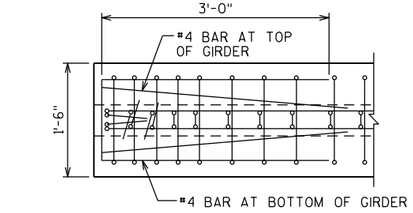
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BEND EACH END OF #4 STIRRUPS 4½" AND #5 STIRRUPS 6".

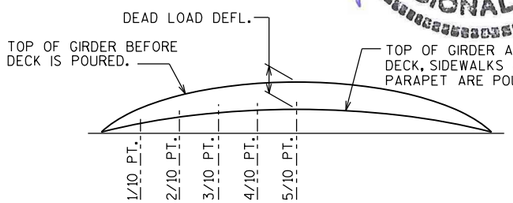
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



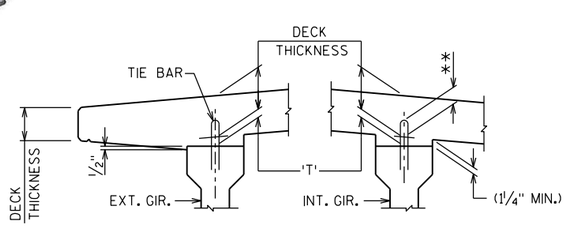
TYP. STRAND PATTERN



TOP VIEW OF GIRDER ENDS



DEAD LOAD DEFLECTION DIAGRAM



DECK HAUNCH DETAIL

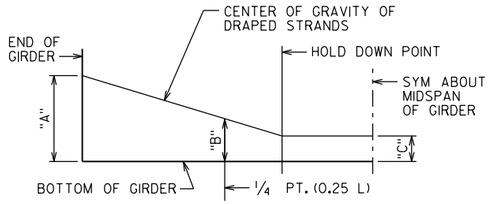
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2½" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



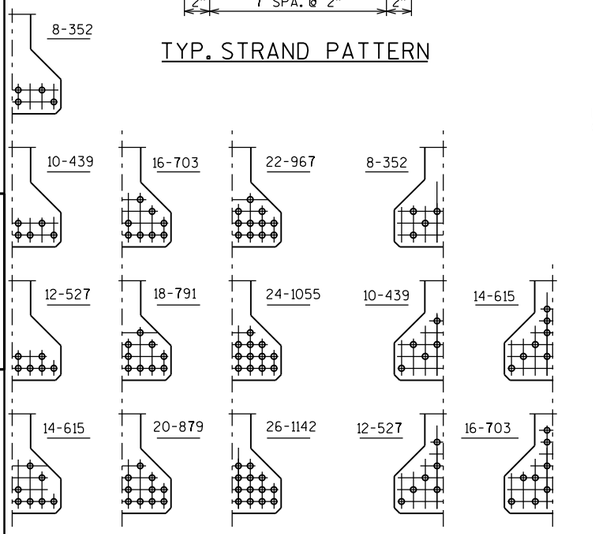
DRAPED STRAND PROFILE

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	¼
2	¼
5	¼

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T'. USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DRAPED PATTERN

0.6"Φ STRANDS

UNDRAPED PATTERN

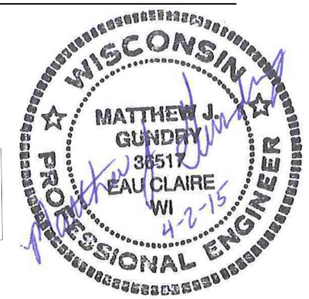
0.6"Φ STRANDS

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
1	1 - 5	35'-10"	0.04	0.075	0.102	0.120	0.126	0.120	0.102	0.075	0.04	8,000	6"	6"	6"	0.6	--	--	--	--	--	--	8	6,800
2	1 - 5	39'-4"	0.061	0.114	0.157	0.184	0.193	0.184	0.157	0.114	0.061	8,000	6"	6"	6"	0.6	--	--	--	--	--	--	8	6,800
5	1 - 5	32'-10"	0.028	0.053	0.072	0.084	0.088	0.084	0.072	0.053	0.028	8,000	6"	6"	6"	0.6	--	--	--	--	--	--	8	6,800

Plan Sheet Accepted By WISDOT
BUREAU OF STRUCTURES



SEAL BY MATTHEW J GUNDRY, FLEMING, ANDRE AND ASSOC., INC., IS APPLICABLE TO REV. 1 ITEMS ONLY.

NO.	DATE	REVISION	BY
1	2-APR	ADD SHEET 32 FOR SPANS 1, 2, & 5	MJG

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-32-51

DRAWN BY MJG | PLANS CK'D.

36" PRESTRESSED GIRDER DETAILS

SHEET 32 OF 34

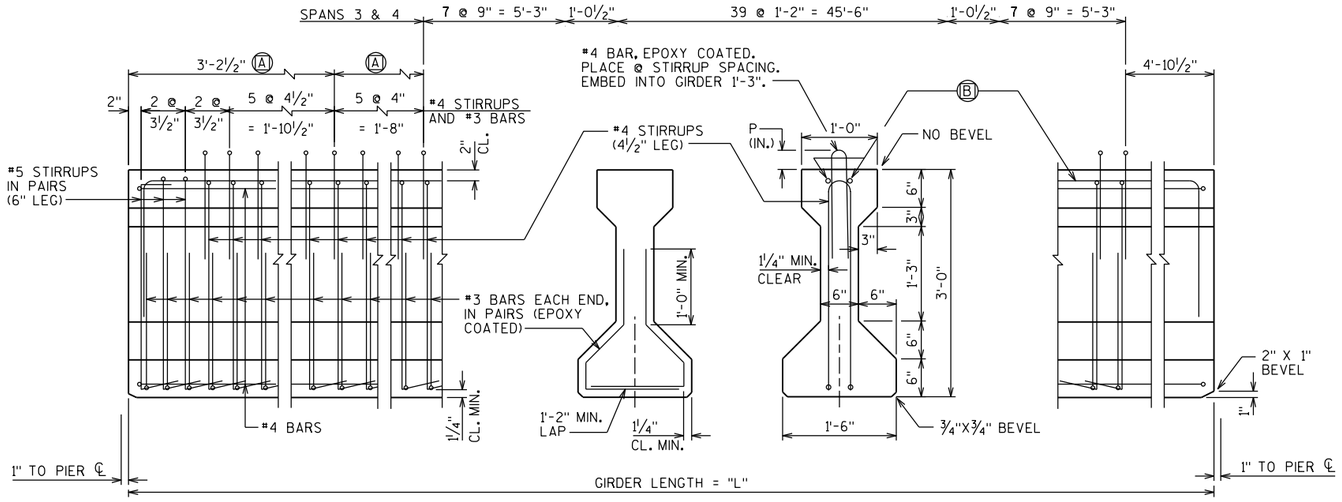
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LV = 1 2 3 5 7 9

SCALE =

G36
7-13

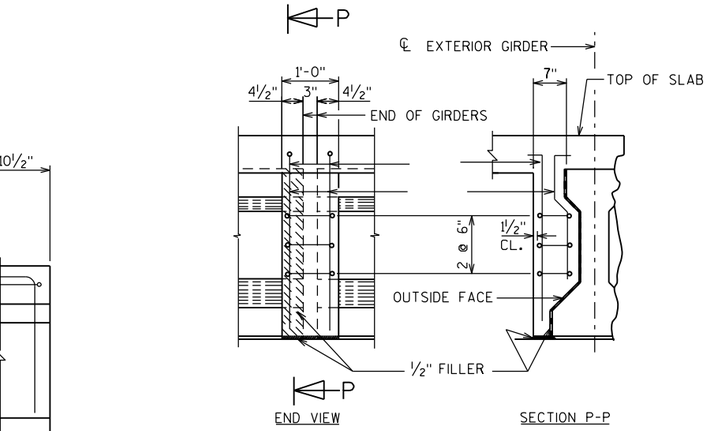
STATE PROJECT NUMBER
1071-06-77



SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 2-NO. 5 BARS FULL LENGTH BEND DOWN 16 BAR DIA. AT ENDS, LAP = 2'-5"



PILASTER DETAILS AT PIERS

NOTES

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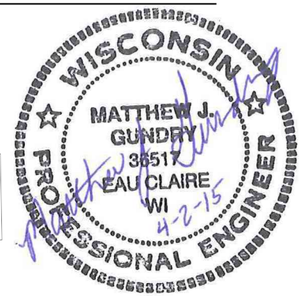
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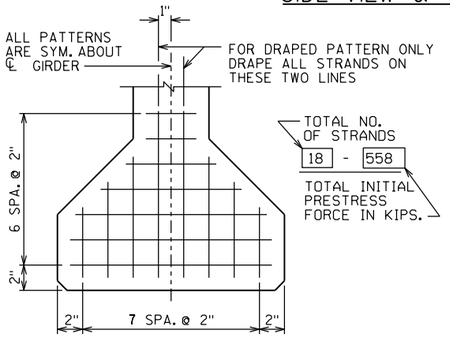
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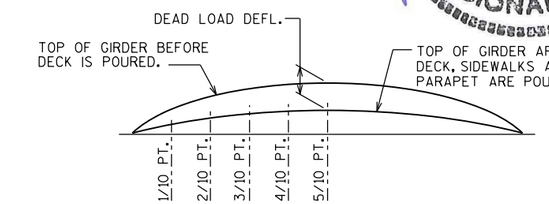
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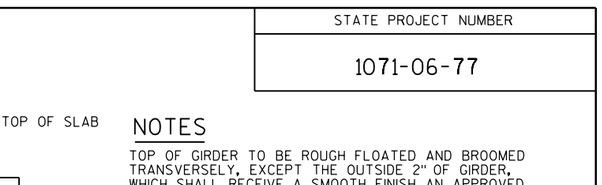
Plan Sheet Accepted By WISDOT
BUREAU OF STRUCTURES



TYP. STRAND PATTERN



DEAD LOAD DEFLECTION DIAGRAM



DECK HAUNCH DETAIL

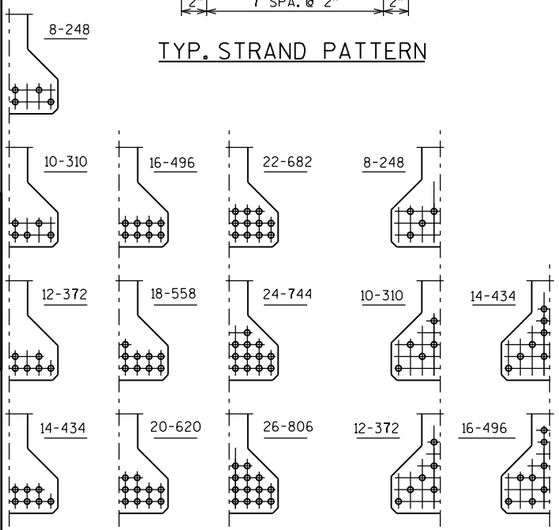
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- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2½" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

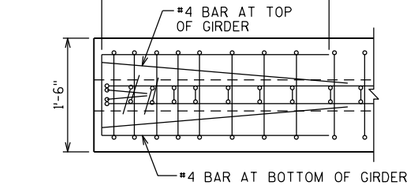


DRAPED PATTERN

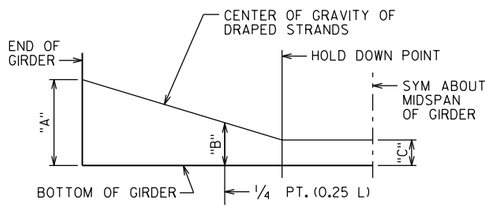
0.5"Φ STRANDS

UNDRAPED PATTERN

0.5"Φ STRANDS



TOP VIEW OF GIRDER ENDS



DRAPED STRAND PROFILE

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
3&4	1⅛

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) (SYM. ABOUT PIER 3) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
3&4	1 - 7	67'-10"	0.27	0.52	0.72	0.85	0.88	0.84	0.70	0.50	0.25	8,000	6"	6"	6"	0.5	18	5,000	26	9½	12½	4	--	--

NO.	DATE	REVISION	BY
1	2-APR	ADD SHEET 33 FOR SPANS 3 & 4	MJG

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-32-51

DRAWN BY MJG | PLANS CK'D.

36" PRESTRESSED GIRDER DETAILS

SHEET 33 OF 34

SEAL BY MATTHEW J GUNDRY, FLEMING, ANDRE AND ASSOC., INC., IS APPLICABLE TO REV. 1 ITEMS ONLY.

8

LV = 1234 78

SCALE =

G36
7-13

STATE PROJECT NUMBER
1071-06-77

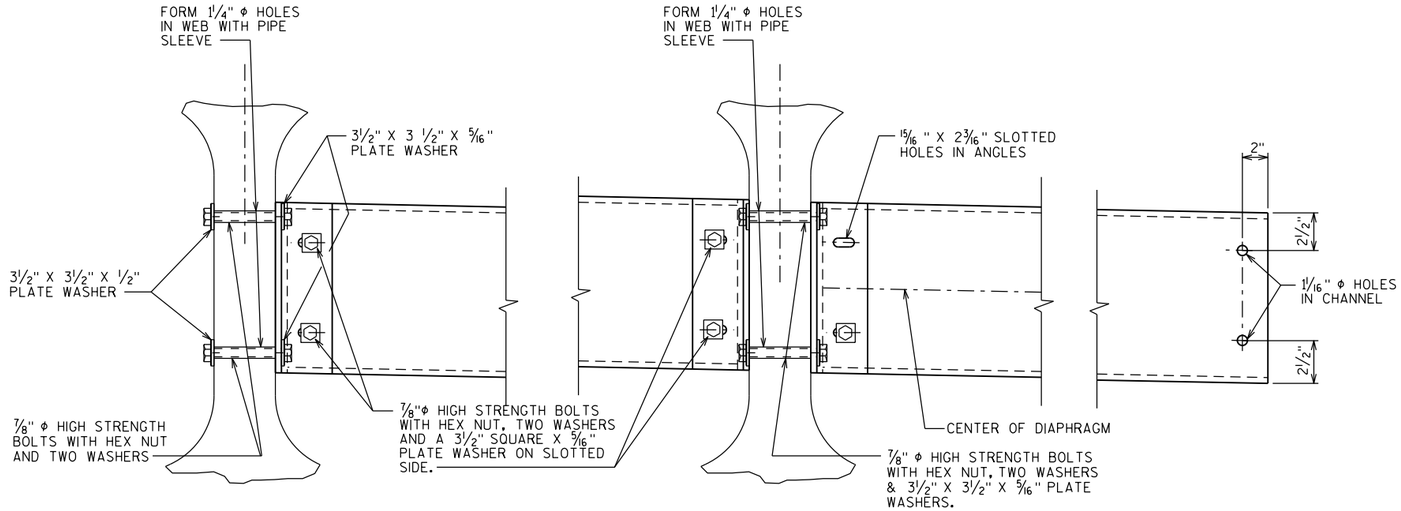
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-32-51", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



(FOR STAGGERED DIAPHRAGM)

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

Plan Sheet Accepted By WISDOT
BUREAU OF STRUCTURES

WISCONSIN
MATTHEW J. GUNDRY
38517
EAU CLAIRE
WI
4-2-15
PROFESSIONAL ENGINEER

SEAL BY MATTHEW J GUNDRY, FLEMING, ANDRE AND ASSOC., INC., IS APPLICABLE TO REV. 1 ITEMS ONLY.

NO.	DATE	REVISION	BY
1	2-APR	ADD SHEET 34 FOR DIAPHRAGM DET.	MJG

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-32-51

DRAWN BY MJG | PLANS CK'D.

STEEL DIAPHRAGM

SHEET 34 OF 34

SCALE =

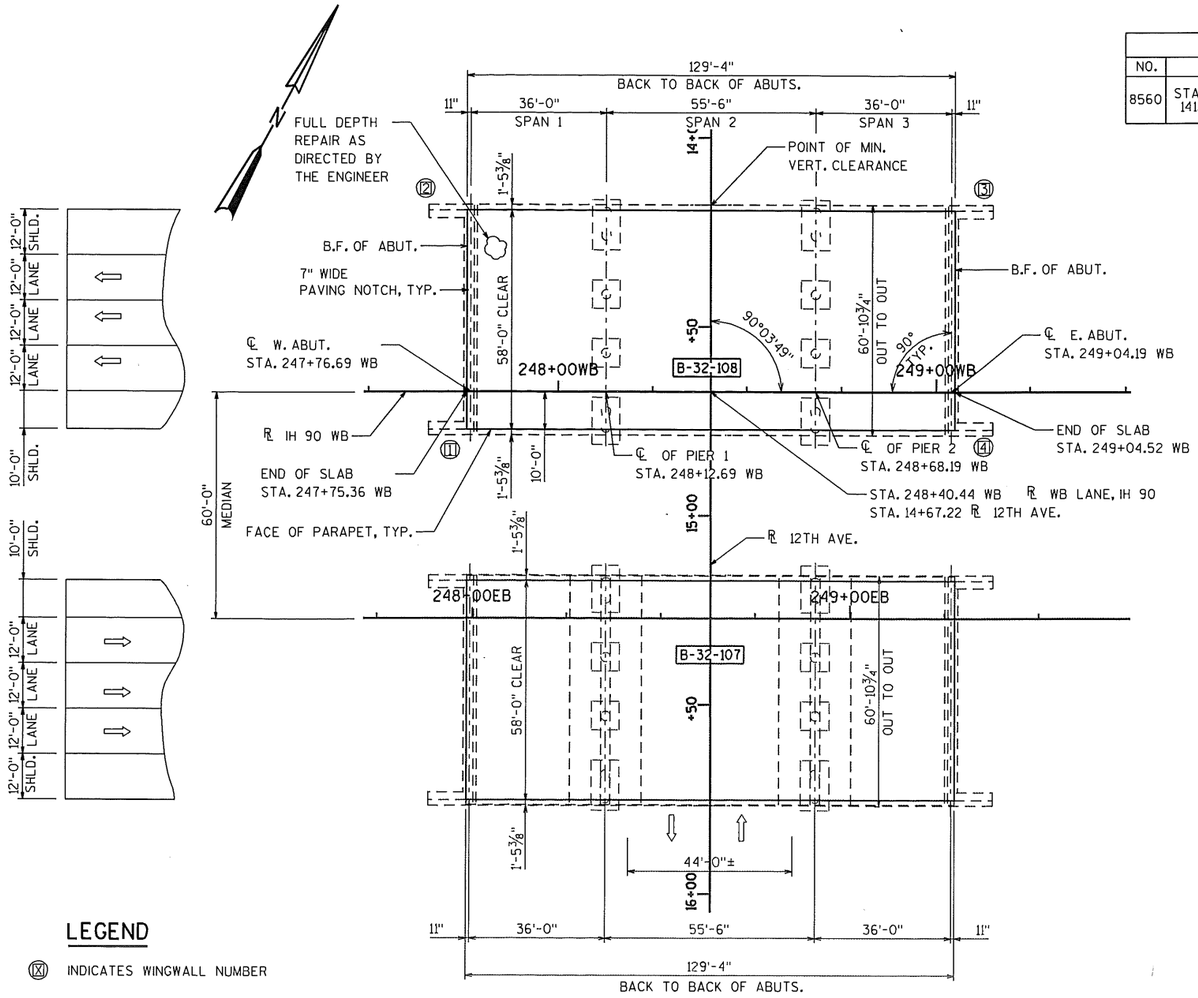
GSTDIA
7-13

8

8

STATE PROJECT NUMBER
1071-06-78

BENCHMARK ⊕			
NO.	STATION	DESCRIPTION	ELEV.
8560	STA. 274+08.13 WB, 141.68' RT OFFSET	CHISELED "□" ON TOP OF PARAPET WALL, S.E. CORNER B-32-56	730.26

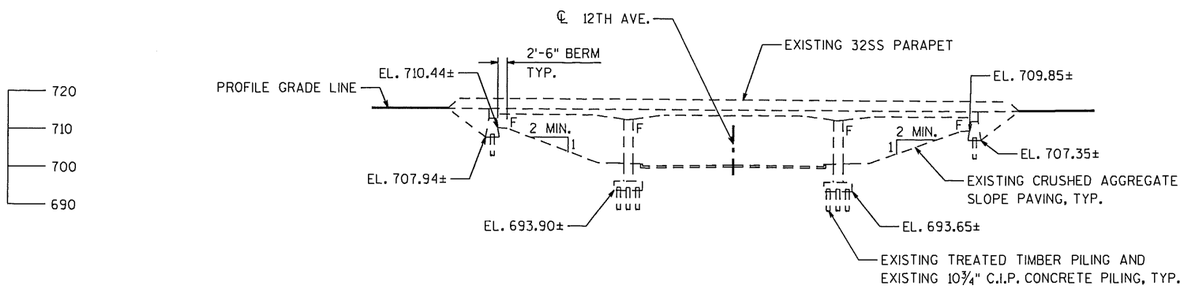


LEGEND

(X) INDICATES WINGWALL NUMBER

PLAN

CONCRETE OVERLAY OF 3 SPAN HAUNCHED SLAB



ELEVATION

NORMAL TO 12TH AVE.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING = HS20
INVENTORY RATING = HS20
OPERATING RATING = HS33
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV) RATING = 230 KIPS

ULTIMATE DESIGN STRESSES (NEW WORK):

CONCRETE MASONRY, OVERLAY DECKS----f'c = 4,000 P.S.I.

TRAFFIC DATA IH 90

A.D.T. = 43,700 (2016)
= 56,700 (2036)

R.D.S. = 70 MPH

WISCONSIN
YOON-MOON CHUN
E-39076
WHITEFISH BAY
WIS.
PROFESSIONAL ENGINEER

Yoon-Moon Chun
2014-08-04

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. CROSS SECTION & QUANTITIES

STRUCTURES DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
JOHN RUBLEIN (262) 821-1171

NO.	DATE	REVISION	BY

KSA K. Singh & Associates, Inc.
Engineers, Scientists and Environmental Consultants

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-32-108

IH 90 WB OVER 12TH AVE.

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
LA CROSSE	ONALASKA

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
YC	VJD	VJD	YC

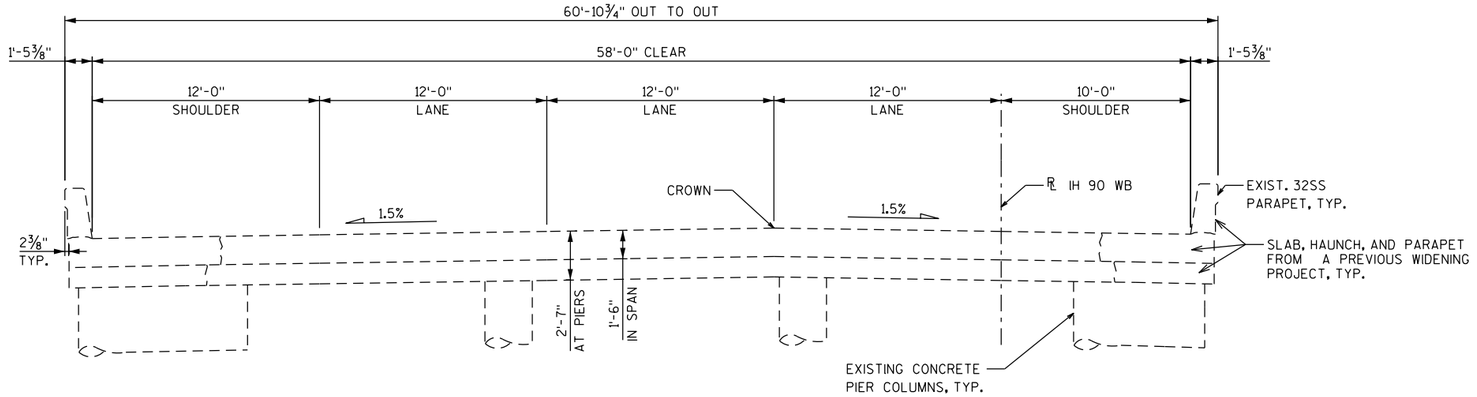
GENERAL PLAN & ELEVATION

SHEET 1 OF 2
493

8

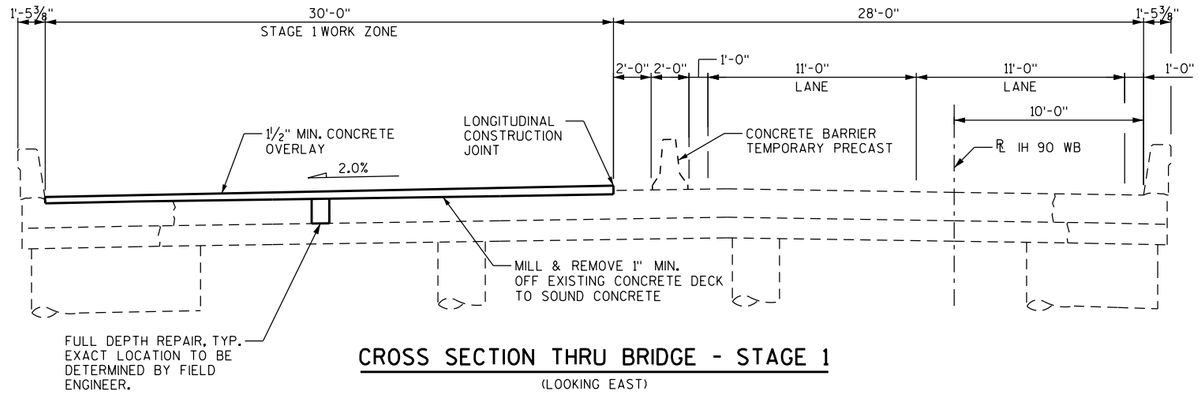
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STATE PROJECT NUMBER
1071-06-78



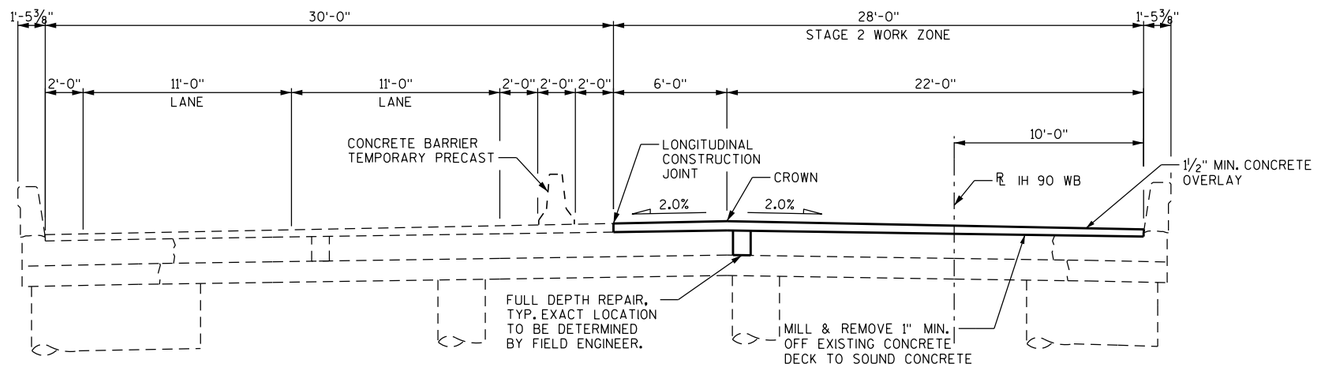
CROSS SECTION THRU EXISTING BRIDGE

(LOOKING EAST)



CROSS SECTION THRU BRIDGE - STAGE 1

(LOOKING EAST)



CROSS SECTION THRU BRIDGE - STAGE 2

(LOOKING EAST)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURAL PLANS.

A MINIMUM OF 1" OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

ALL PREVIOUS PATCHES SHALL BE REMOVED UNDER THE BID ITEMS "PREPARATION DECKS TYPE 1" AND "PREPARATION DECKS TYPE 2".

EXISTING LONGITUDINAL AND TRANSVERSE CRACKS SHALL BE CLEANED AND FILLED WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER. WORK SHALL BE PAID FOR UNDER BID ITEM, "CRACK SEALING EPOXY".

BID ITEMS "PREPARATION DECKS TYPE 1", "PREPARATION DECKS TYPE 2" AND "FULL DEPTH DECK REPAIR" SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 2¾". IF THE EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

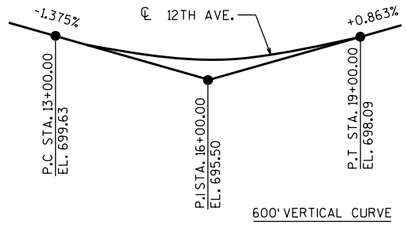
APPLY PROTECTIVE SURFACE TREATMENT TO TOP OF OVERLAY. WORK SHALL BE PAID FOR UNDER BID ITEM, "PROTECTIVE SURFACE TREATMENT".

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY AT ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECK"

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
203.0225.S	DEBRIS CONTAINMENT B-32-108	LS	1
502.0717.S	CRACK SEALING EPOXY	LF	600
502.3200	PROTECTIVE SURFACE TREATMENT	SY	830
509.0301	PREPARATION DECKS TYPE 1	SY	85
509.0302	PREPARATION DECKS TYPE 2	SY	35
509.0500	CLEANING DECKS	SY	830
509.2000	FULL-DEPTH DECK REPAIR	SY	5
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	84

ALL ITEMS ARE CATEGORY 0030.



PROFILE GRADE LINE 12TH AVE.

EXISTING PROFILE GRADE LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-108

DRAWN BY VJD | PLANS CK'D. YC

CROSS SECTION & QUANTITIES

SHEET 2 OF 2
494

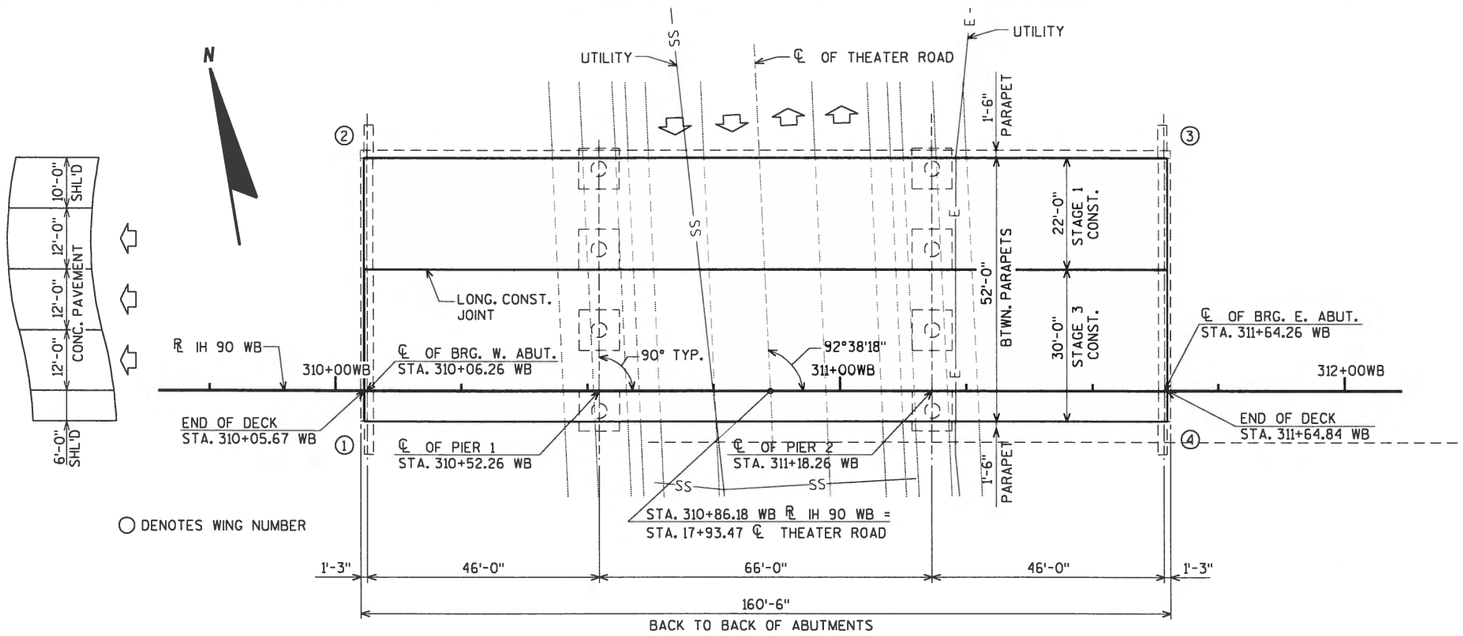
8

8

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-190 IH 90 WB over Theater Road\B-32-190 gp.dgn
DATE:
DRAWN BY:
DATE:
CHECKED BY:
DATE:
BACK CHECKED BY:
CORRECTED BY:

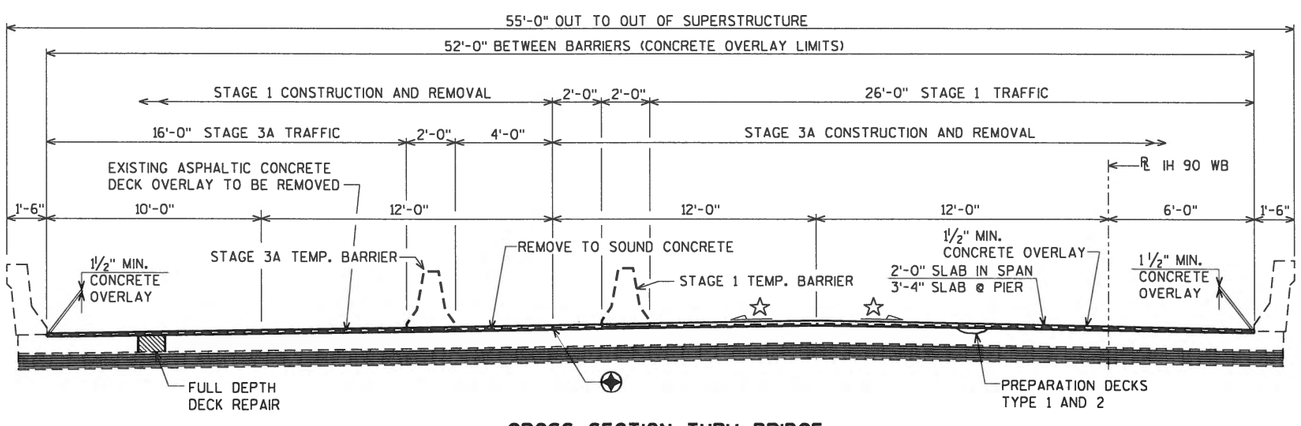
STATE PROJECT NUMBER

1071-06-78



PLAN

3-SPAN HAUNCHED SLAB BRIDGE



CROSS SECTION THRU BRIDGE

(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
203.0225.S	DEBRIS CONTAINMENT B-32-190	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	920
509.0301	PREPARATION DECKS TYPE 1	SY	50
509.0302	PREPARATION DECKS TYPE 2	SY	20
509.0500	CLEANING DECKS	SY	920
509.1500	CONCRETE SURFACE REPAIR	SF	10
509.2000	FULL-DEPTH DECK REPAIR	SY	10
△ 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	63
509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY B-32-190	SY	920

△ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"

LIST OF DRAWINGS

1. GENERAL PLAN

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY IS CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½ INCH PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED OVERLAY THICKNESS IS 2 INCHES. IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½ INCH, CONTACT THE STRUCTURES DESIGN SECTION.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-21
OPERATING RATING: HS-36
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 240 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY OVERLAY DECKS _____ f'_c = 4,000 p.s.i.

TRAFFIC DATA:

IH 90	THEATER ROAD
A.D.T. = 36,100 (2016)	A.D.T. = 9,200 (2011)
A.D.T. = 46,800 (2036)	R.D.S. = 25 M.P.H.
R.D.S. = 70 M.P.H.	

◈ LONG. CONST. JOINT
SEAL WITH CRACK SEALER PER SECTION 502.3.13 OF STD. SPEC.

☆ NEW CONCRETE OVERLAY SLOPE = 0.02 ⅊
CURRENT CONCRETE DECK SLOPE = 0.02 ⅊

WISCONSIN
DANIEL N. SYDOW
E-38363
WI
PROFESSIONAL ENGINEER
7/28/2014

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-32-190

IH 90 WB OVER THEATER ROAD

COUNTY LA CROSSE | ~~TOWN/CITY/VILLAGE~~ ONALASKA

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
DRJ	DNS	CLS	DNS

GENERAL PLAN

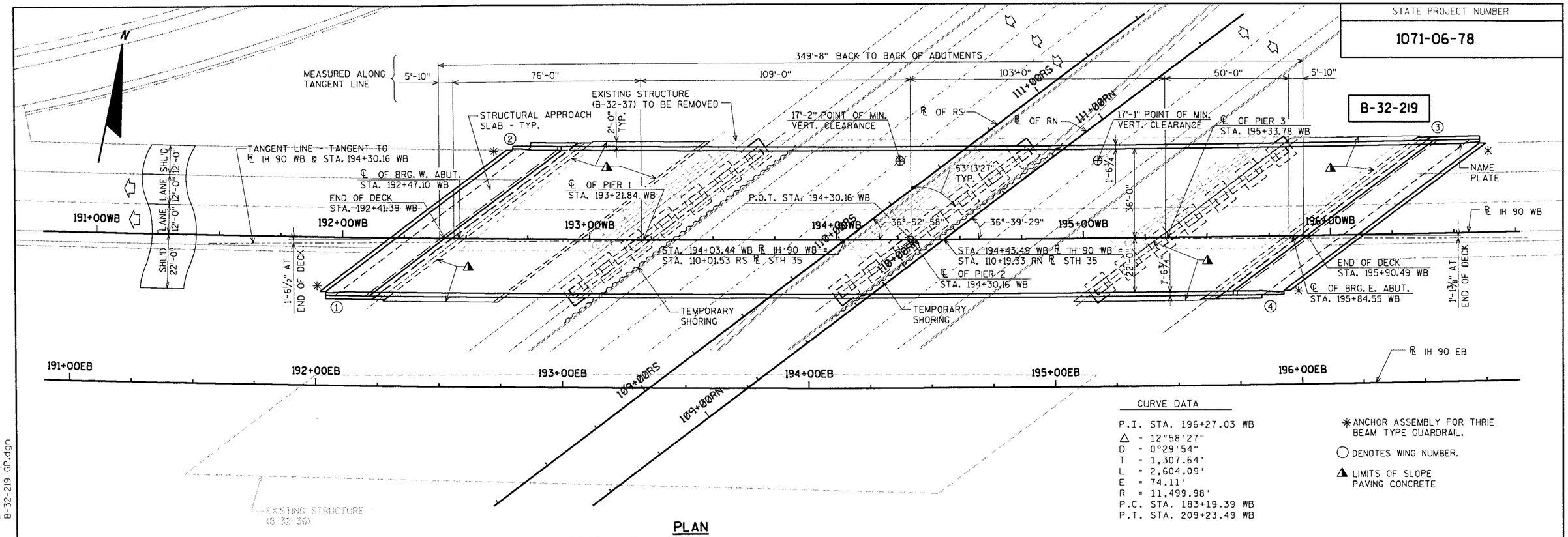
SHEET 495 OF 1

8

STATE PROJECT NUMBER

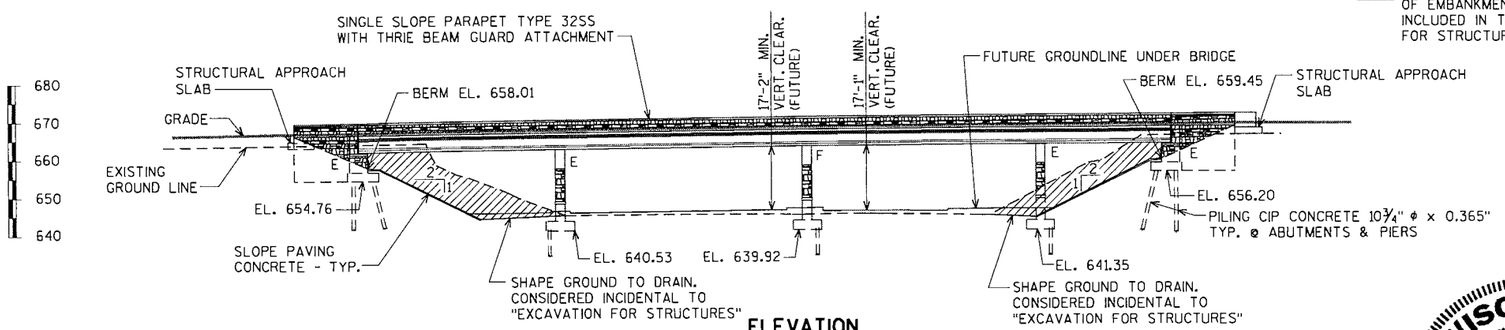
1071-06-78

B-32-219



PLAN

FOUR-SPAN 45W" PRESTRESSED CONCRETE GIRDER BRIDGE



ELEVATION

(TAKEN NORMAL TO ℄ OF STH 35)
(LOOKING NORTH)

CURVE DATA

P.I. STA. 196+27.03 WB
△ = 12°58'27"
D = 0°29'54"
T = 1,307.64'
L = 2,604.09'
E = 74.11'
R = 11,499.98'
P.C. STA. 183+19.39 WB
P.T. STA. 209+23.49 WB

✳ ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

○ DENOTES WING NUMBER.

▲ LIMITS OF SLOPE PAVING CONCRETE

▨ COST OF EXCAVATION IN THE HATCHED AREAS AND SHAPING OF EMBANKMENT BETWEEN B-32-36 AND B-32-219 SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-32-219".

FOR DESIGN DATA, QUANTITIES, AND GENERAL NOTES, SEE SHEET 3

LISTS OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTIONS & PROFILE GRADE LINES
3. QUANTITIES AND NOTES
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT
6. WEST ABUTMENT FOOTING LAYOUT
7. WEST ABUTMENT WING 1 DETAILS
8. WEST ABUTMENT WING 2 DETAILS
9. WEST ABUTMENT DETAILS AND BILL OF BARS
10. EAST ABUTMENT
11. EAST ABUTMENT FOOTING LAYOUT
12. EAST ABUTMENT WING 3 DETAILS
13. EAST ABUTMENT WING 4 DETAILS
14. EAST ABUTMENT DETAILS AND BILL OF BARS
15. PIER 1
16. PIER 1 PLAN AND FOOTING
17. PIER 1 DETAILS AND BILL OF BARS
18. PIER 2
19. PIER 2 PLAN AND FOOTING
20. PIER 2 DETAILS AND BILL OF BARS
21. PIER 3
22. PIER 3 PLAN AND FOOTING
23. PIER 3 DETAILS AND BILL OF BARS
24. ALTERNATE CONSTRUCTION JOINT
25. BEARING DETAILS
26. 45W" PRESTRESSED GIRDER DETAILS
27. 45W" PRESTRESSED GIRDER DETAILS
28. STEEL DIAPHRAGM DETAILS
29. SUPERSTRUCTURE GIRDER LAYOUT
30. TOP OF DECK ELEVATIONS
31. SUPERSTRUCTURE
32. LONGITUDINAL SLAB STEEL LAYOUT
33. TRANSVERSE SLAB STEEL LAYOUT
34. SUPERSTRUCTURE DETAILS
35. DIAPHRAGM DETAILS
36. DIAPHRAGM DETAILS
37. SUPERSTRUCTURE BILL OF BARS
38. EXPANSION DEVICE
39. EXPANSION DEVICE
40. WEST STRUCTURAL APPROACH SLAB
41. EAST STRUCTURAL APPROACH SLAB
42. STRUCTURAL APPROACH SLAB DETAILS
43. SINGLE SLOPE PARAPET 32SS MODIFIED
44. SLOPE PAVING
45. ARCHITECTURAL SURFACE TREATMENT

WISCONSIN ★ DANIEL N. SYDOW E-38363 WI ★ PROFESSIONAL ENGINEER

8/29/2014

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 09/02/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-32-219

IH 90 WB OVER STH 35/USH 53/ROSE ST.

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
LA CROSSE	LA CROSSE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AEB	CJM	CLS	DWS

GENERAL PLAN

SHEET 1 OF 45
496

I.D.

DATE:

11X17-5200.plt
B-32-219 GP.dgn

DATE:
DATE:
DATE:

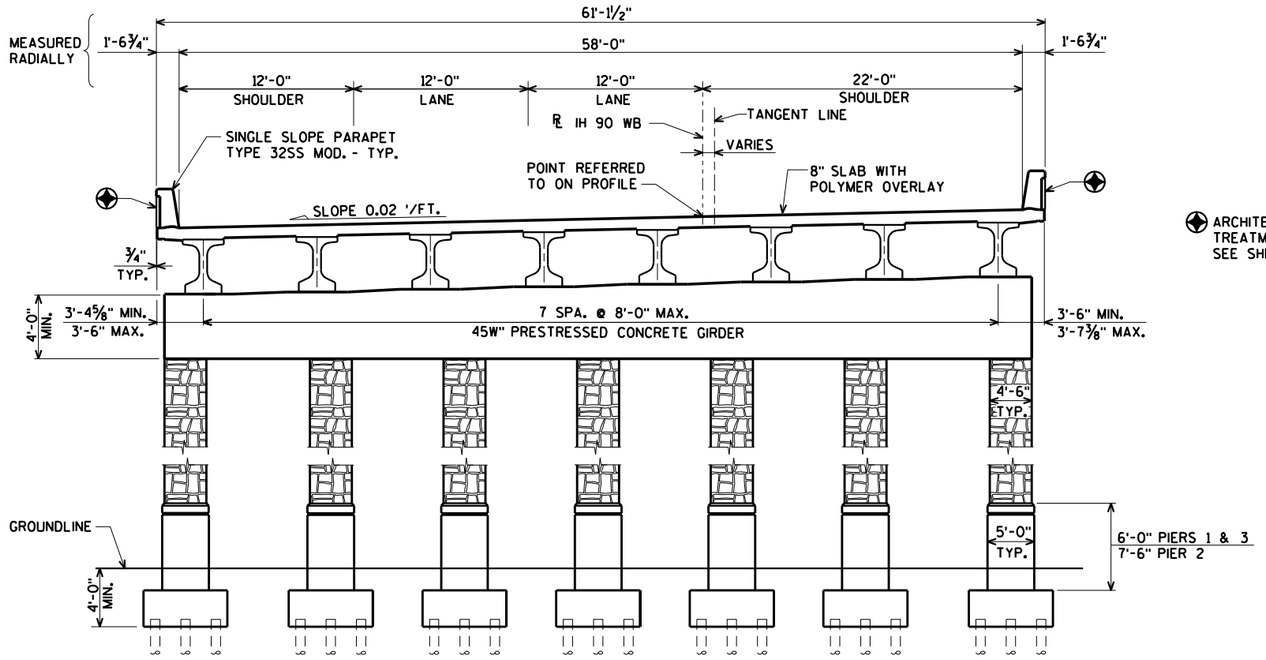
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

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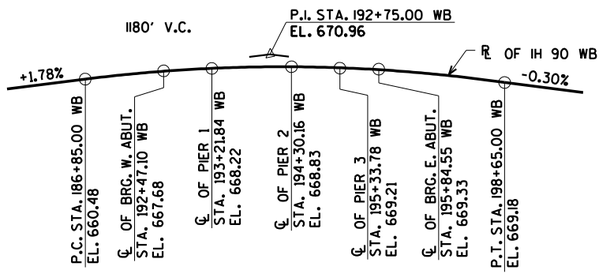
8/29/2014

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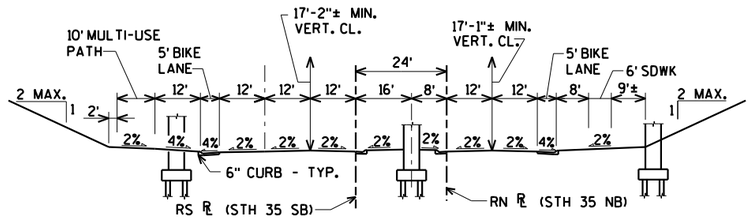
ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

TYPICAL SECTION THRU BRIDGE
(LOOKING EAST)

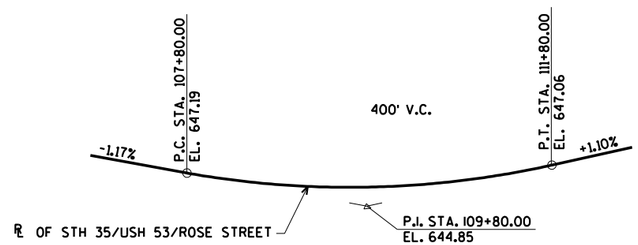


PROFILE GRADE LINE
(IH 90 WB)

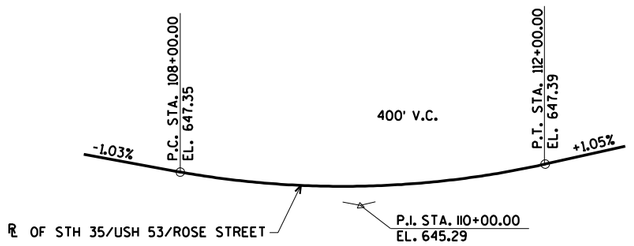
BENCH MARK:
CP 1900
STA. 195+76.78 EB, 23' LT. OF ℄
EL. 665.49



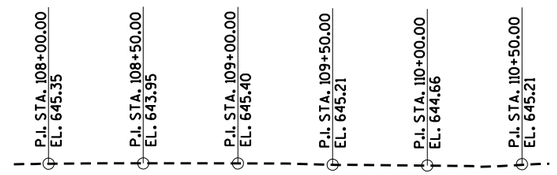
FUTURE TYPICAL FINISHED SECTION STH 35
ALLOWANCE FOR POTENTIAL FUTURE EXPANSION
(LOOKING NORTH)



PROFILE GRADE LINE
(FUTURE STH 35/USH 53/ROSE STREET)



PROFILE GRADE LINE
(FUTURE STH 35/USH 53/ROSE STREET)



PROFILE GRADE LINE
(EXISTING STH 35/USH 53/ROSE STREET)



PROFILE GRADE LINE
(EXISTING STH 35/USH 53/ROSE STREET)

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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TYPICAL SECTIONS & PROFILE GRADE LINES

SHEET 2 OF 45
497

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AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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STATE PROJECT NUMBER

1071-06-78

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	W. STR. APP. SLAB	W. ABUT.	PIER 1	PIER 2	PIER 3	E. ABUT.	E. STR. APP. SLAB	SUPER.	TOTAL
203.0200	REMOVING OLD STRUCTURE STATION 194+08.38 WB	LS	-----	-----	-----	-----	-----	-----	-----	-----	1
203.0210.S.01	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-32-37	LS	-----	-----	-----	-----	-----	-----	-----	-----	1
203.0225.S	DEBRIS CONTAINMENT B-32-37	LS	-----	-----	-----	-----	-----	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-32-219	LS	-----	-----	-----	-----	-----	-----	-----	-----	1
206.6000.S	TEMPORARY SHORING	SF	-----	-----	575	575	-----	-----	-----	-----	1,150
210.0100	BACKFILL STRUCTURE	CY	-----	620	-----	-----	-----	660	-----	-----	1,280
502.0100	CONCRETE MASONRY BRIDGES	CY	111	233	185	193	187	244	115	839	2,107
502.3100	EXPANSION DEVICE B-32-219	LS	-----	-----	-----	-----	-----	-----	-----	-----	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	22	26	-----	-----	-----	27	22	293	390
503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	-----	-----	-----	-----	-----	-----	-----	2,700	2,700
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	-----	9,380	4,420	5,290	4,420	9,750	-----	-----	33,260
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	25,840	7,820	28,560	31,240	28,760	7,680	26,760	213,040	369,700
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	-----	-----	16	-----	-----	-----	-----	16
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	-----	8	16	-----	16	8	-----	-----	48
506.4000	STEEL DIAPHRAGMS B-32-219	EACH	-----	-----	-----	-----	-----	-----	-----	42	42
509.5100.S	POLYMER OVERLAY	SY	168	-----	-----	-----	-----	-----	168	2,254	2,590
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-----	22	-----	-----	-----	22	-----	-----	44
517.1010.S	CONCRETE STAINING B-32-219	SF	30	120	2,330	2,530	2,350	150	30	5,810	13,350
517.1015.S	CONCRETE STAINING MULTI-COLOR B-32-219	SF	120	660	1,040	1,030	1,040	680	120	1,500	6,190
517.1050.S	ARCHITECTURAL SURFACE TREATMENT B-32-219	SF	120	660	1,040	1,030	1,040	680	120	1,500	6,190
550.2106	PILING CIP CONCRETE 10¾ x 0.365 INCH	LF	-----	2,550	5,390	6,160	5,390	3,000	-----	-----	22,490
604.0400	SLOPE PAVING CONCRETE	SY	-----	380	-----	-----	-----	420	-----	-----	800
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-----	445	-----	-----	-----	445	-----	-----	890
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-----	-----	-----	-----	-----	2	-----	4
SPV.0085.01	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	1,050	-----	-----	-----	-----	-----	1,050	-----	2,100
	NON-BID ITEMS										
	FILLER	SIZE		-----	-----	-----	-----	-----		-----	½" & ¾"

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.01
OPERATING RATING FACTOR: 1.36
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 220 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY { SUPERSTRUCTURE ____ f'c = 4,000 p.s.i.
CONCRETE MASONRY { ALL OTHER ____ f'c = 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) ____ fy = 60,000 p.s.i.

45W" PRESTRESSED GIRDER
CONCRETE MASONRY ____ f'c = 8,000 p.s.i.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF = 270,000 p.s.i.

FOUNDATION DATA:

WEST ABUTMENT TO BE SUPPORTED ON 10¾" Φ x 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 85'-0".

PIERS TO BE SUPPORTED ON 10¾" Φ x 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 110'-0".

EAST ABUTMENT TO BE SUPPORTED ON 10¾" Φ x 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 135 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 100'-0".

ǂ THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA:

IH 90	STH 35 / USH 53 / ROSE STREET
A.D.T. = 43,700 (2016)	A.D.T. = 24,400 (2016)
A.D.T. = 56,700 (2036)	A.D.T. = 29,500 (2036)
R.D.S. = 70 M.P.H.	R.D.S. = 45 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP AND INSIDE FACE OF PARAPETS AND PAVING NOTCH AT ABUTMENTS.

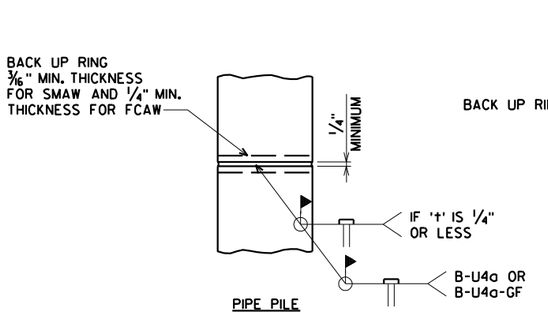
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

THE EXISTING BRIDGE, B-32-37, IS A FOUR SPAN STEEL DECK GIRDER BRIDGE, 331.5 FEET LONG AND HAS A CLEAR ROADWAY WIDTH OF 40.1 FEET MAX.

THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH DEPTH SHOWN ON THE TOP OF DECK ELEVATIONS SHEET, WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

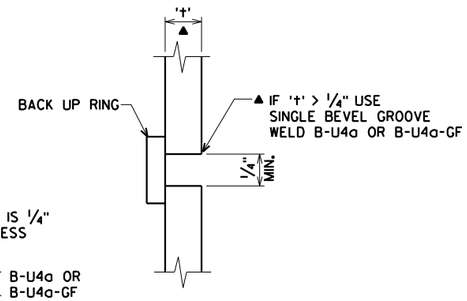
AT THE BACK FACE OF ABUTMENT, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.



PILE SPLICE DETAIL

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

GRINDING MAY BE USED IN LIEU OF BACKGOUGING.



CIP PILE WELD DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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QUANTITIES AND NOTES

SHEET 3 OF 45
498

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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Eau Claire, WI 54701
www.AyresAssociates.com

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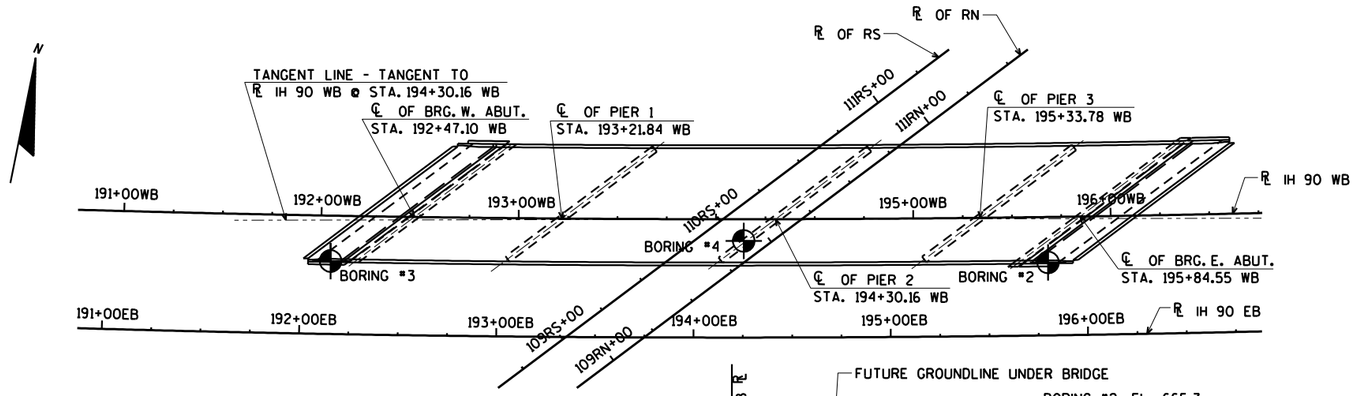
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8/29/2014

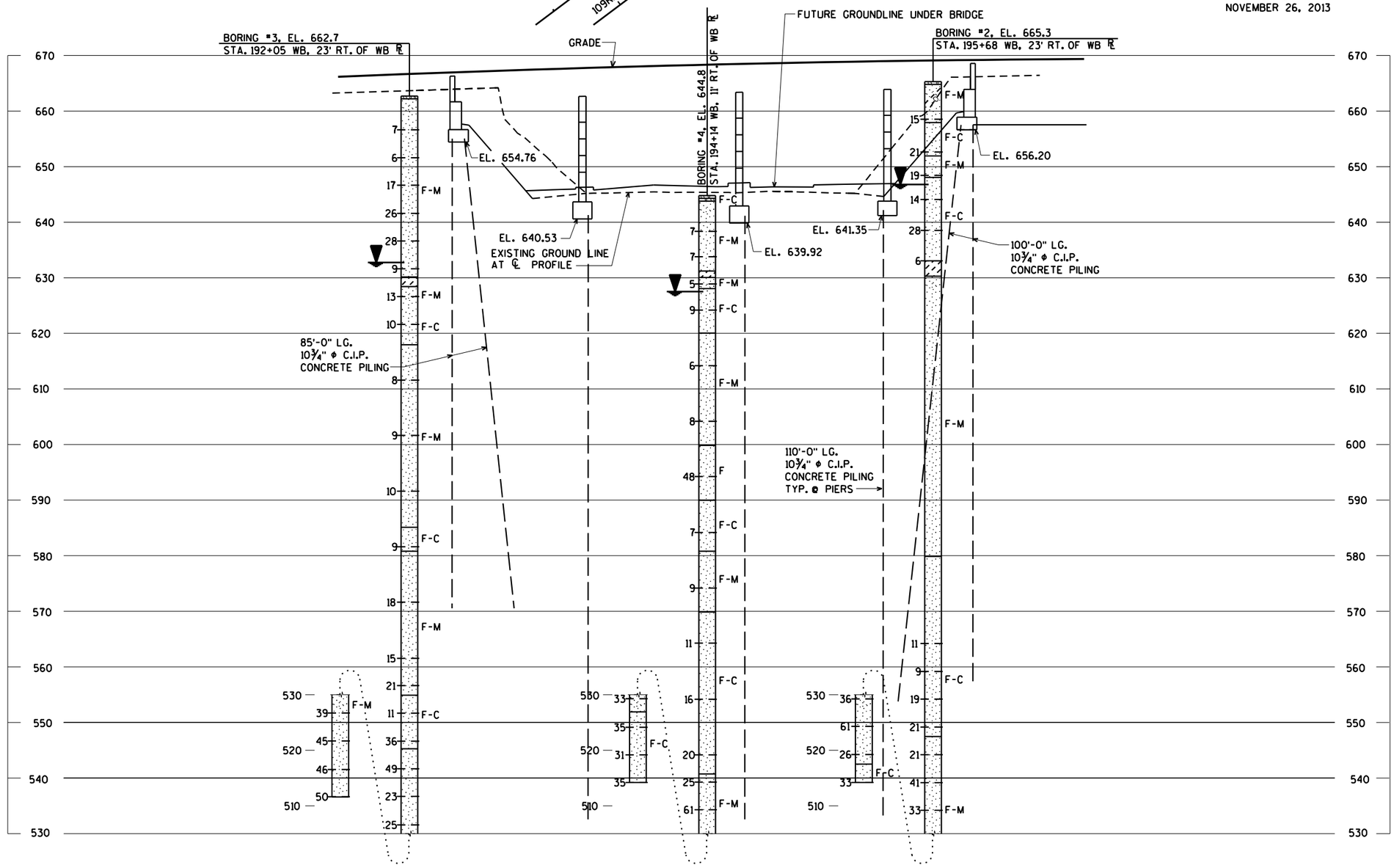
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BORINGS TAKEN BY:
WISCONSIN DOT
JULY 2013

GEOTECHNICAL REPORT BY:
WISCONSIN DOT
NOVEMBER 26, 2013



STATE PROJECT NUMBER

1071-06-78

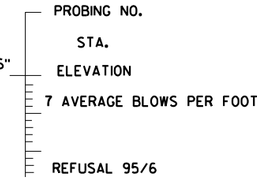
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

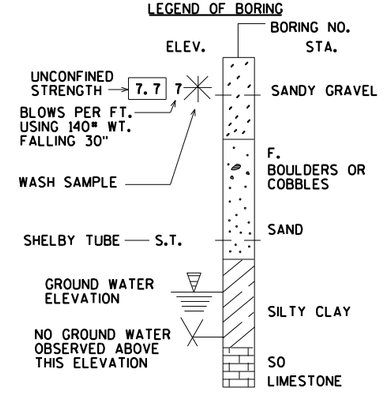
TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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SUBSURFACE EXPLORATION

SHEET 4 OF 45
499

8

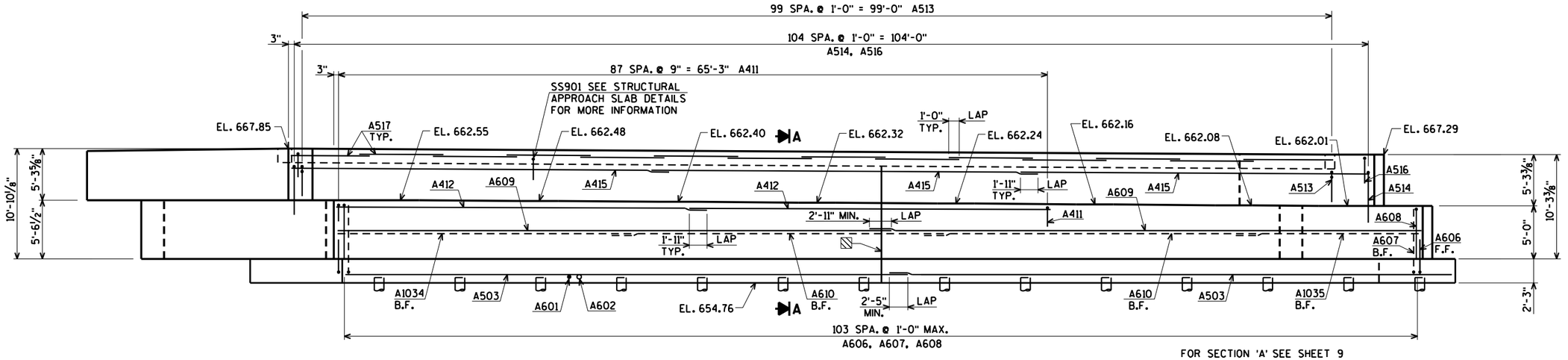
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6/2/2014

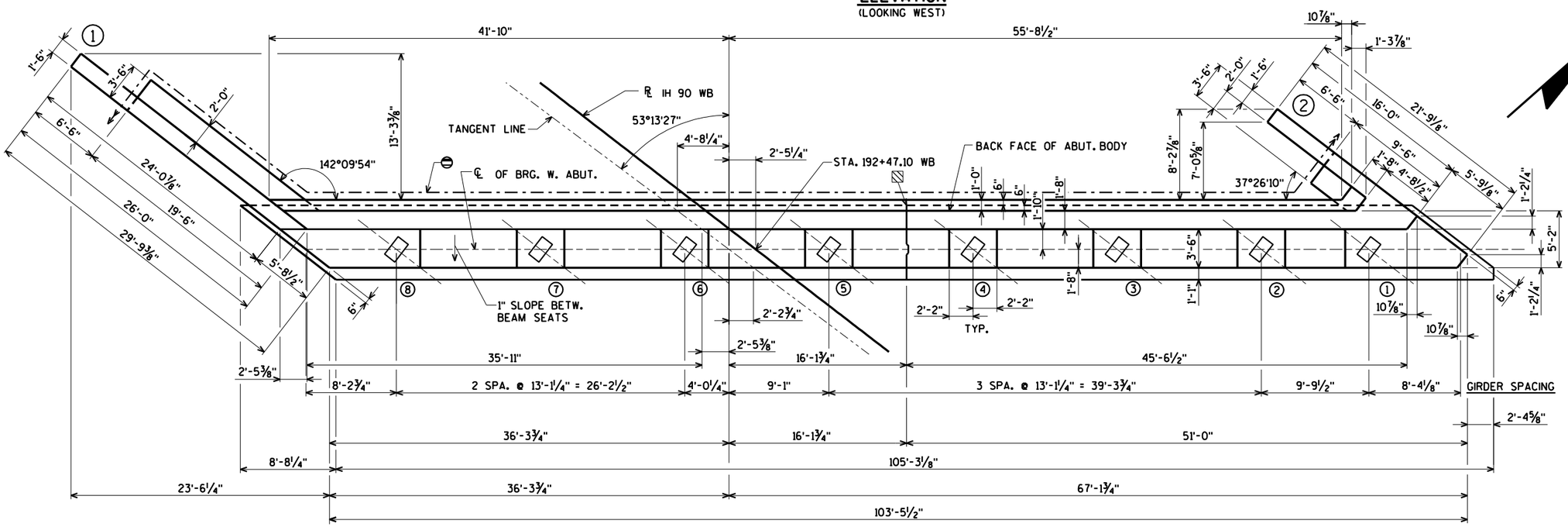
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STATE PROJECT NUMBER

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ELEVATION
(LOOKING WEST)



PLAN

⊖ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR DETAILS SEE SHEET 9.

▨ VERT. CONST. JT. - KEYWAY FORMED BY A BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 24. SEAL JOINT AT BACK FACE WITH 18" RUBBERIZED MEMBRANE WATERPROOFING

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 3.

ORIGINAL PLANS PREPARED BY
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STATE OF WISCONSIN
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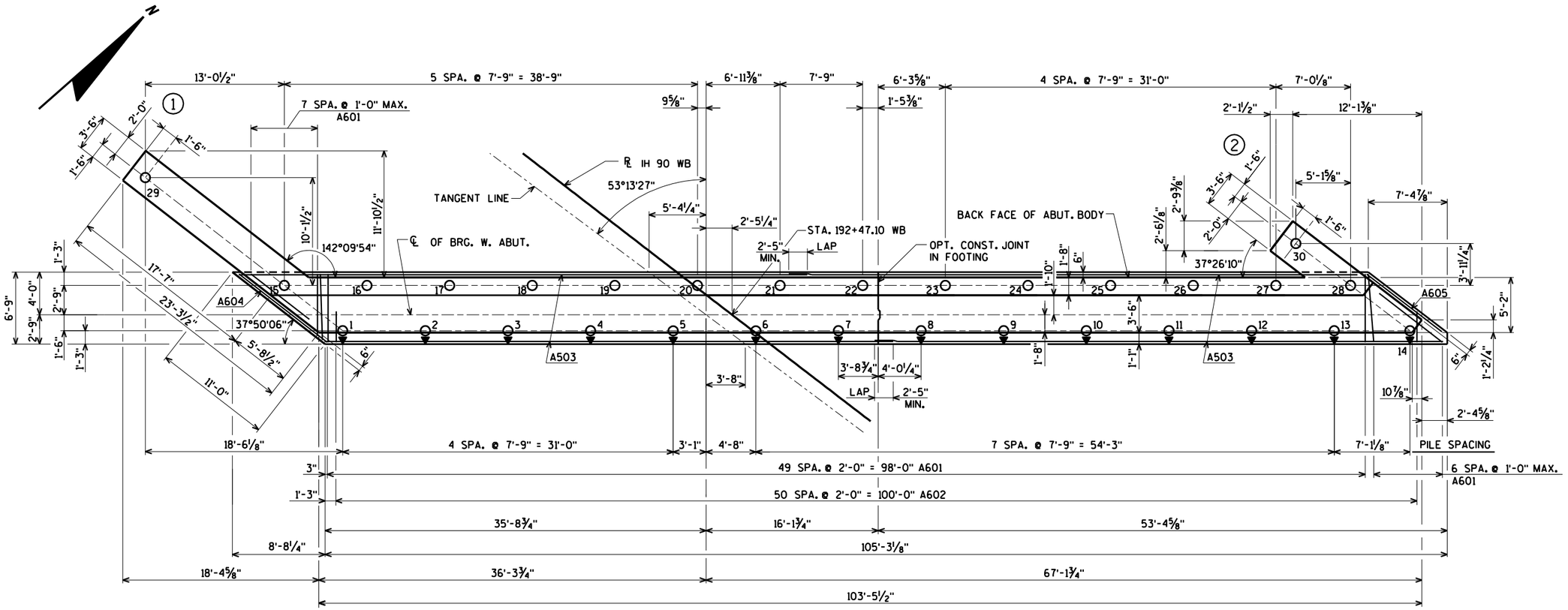
STRUCTURE B-32-219

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WEST ABUTMENT

SHEET 5 OF 45
500

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FOOTING LAYOUT

PILE LENGTH 103.1' - 115.7'

DENOTES BATTERED PILES. BATTER 3" PER FOOT IN DIRECTION SHOWN.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-32-219

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WEST ABUTMENT FOOTING LAYOUT

SHEET 6 OF 45
501

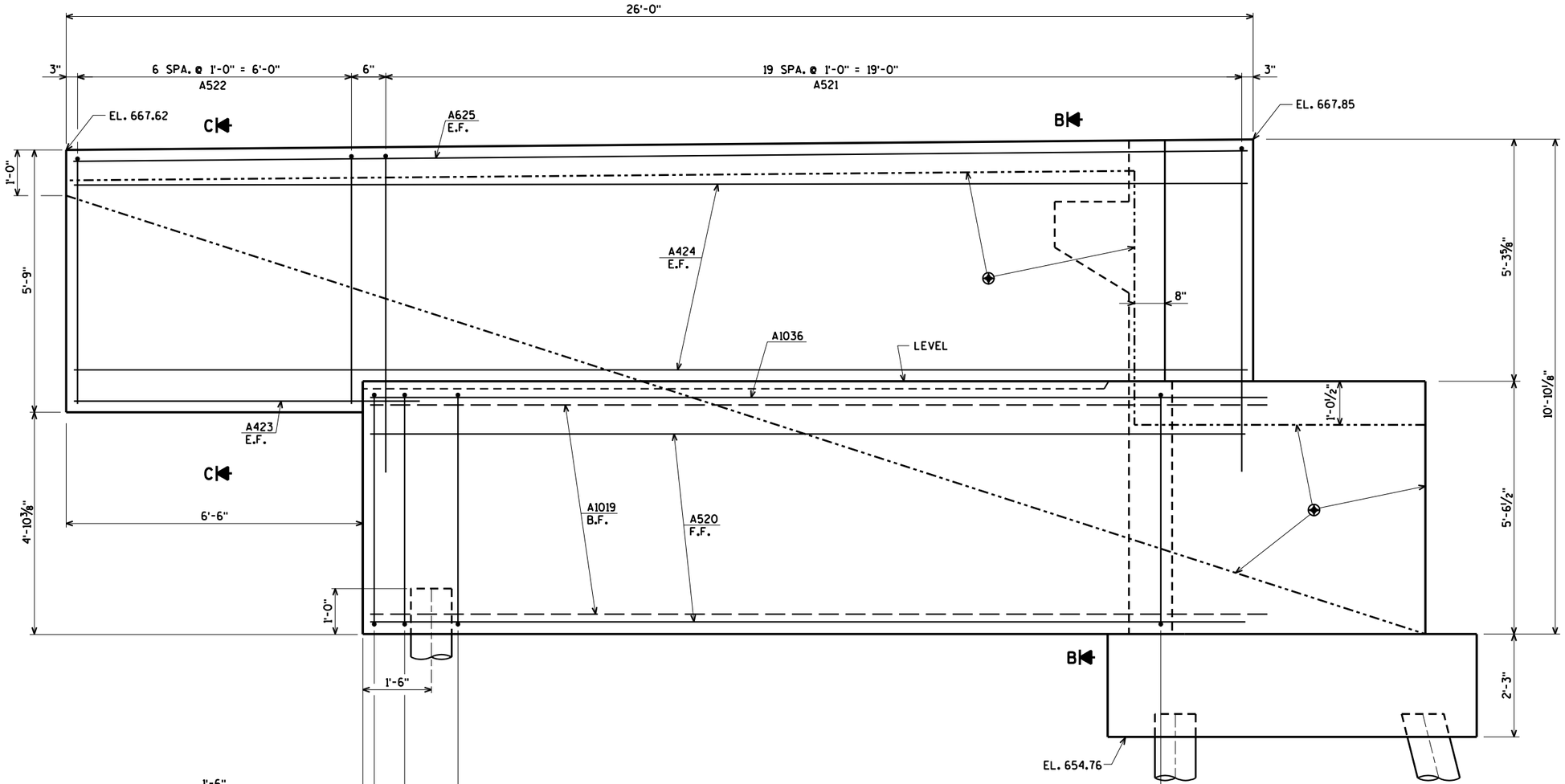
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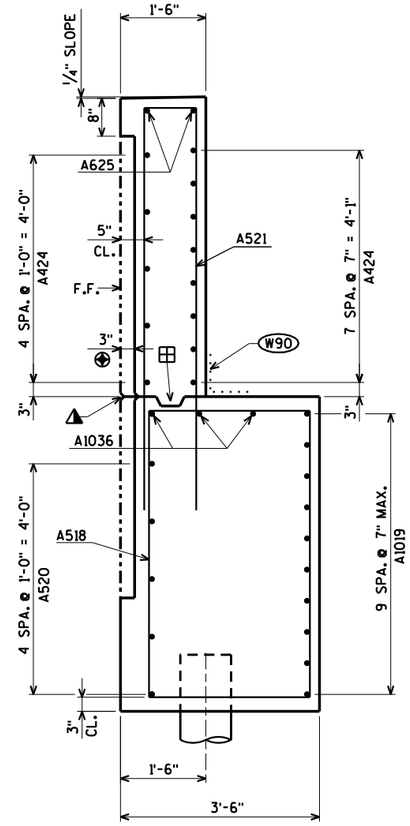
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STATE PROJECT NUMBER

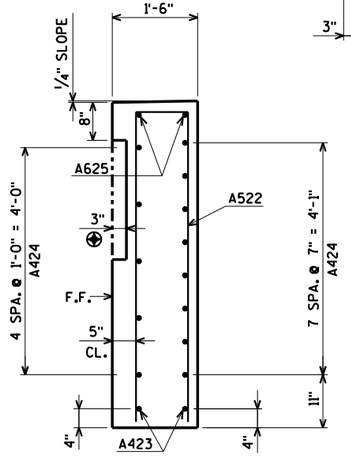
1071-06-78



ELEVATION WING 1



SECTION B



SECTION C

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

¾" 'V' GROOVE ON F.F. OF WINGWALL. OMIT IF CONST. JOINT NOT USED.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

LIMITS OF ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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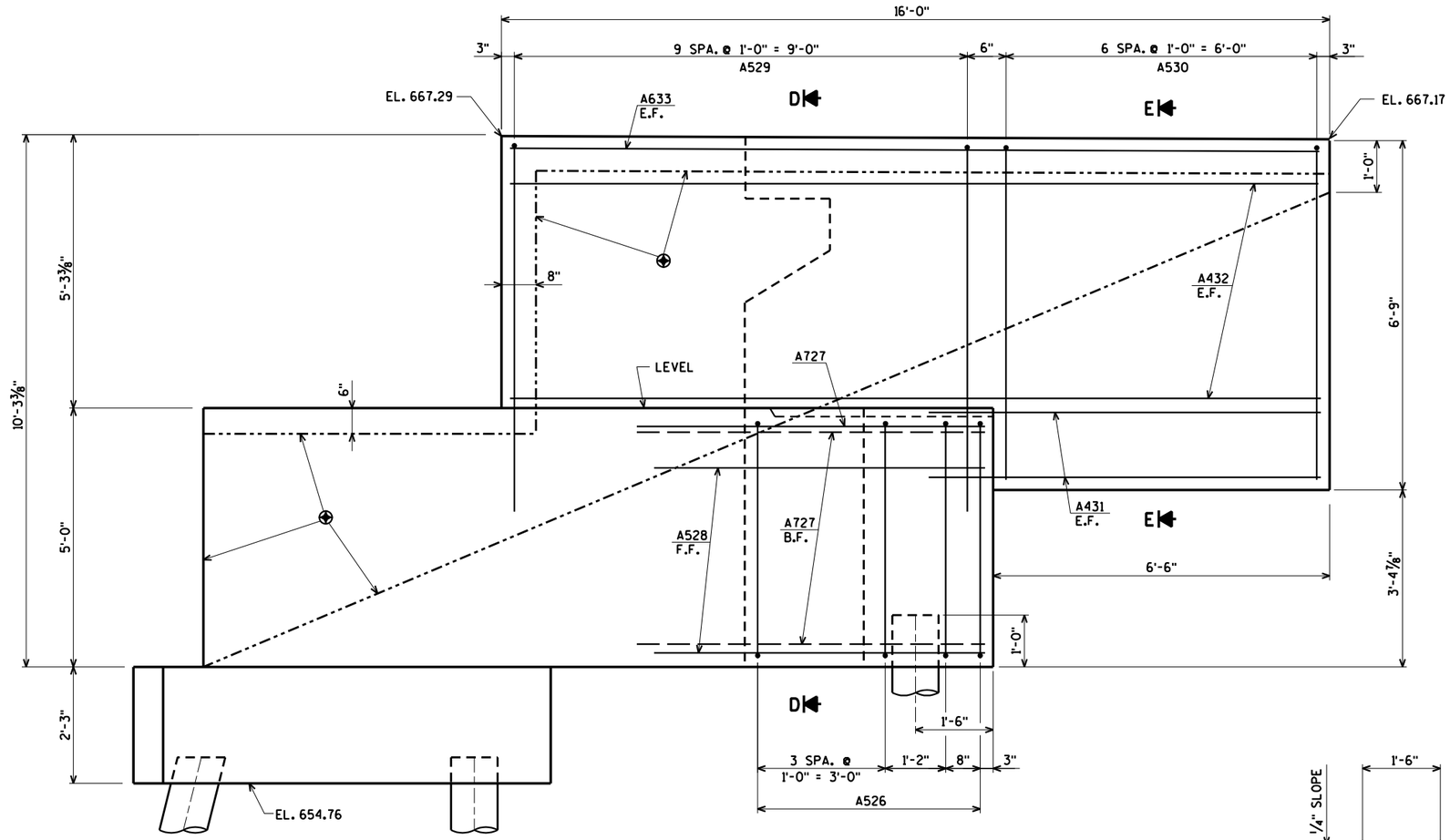
STRUCTURE B-32-219

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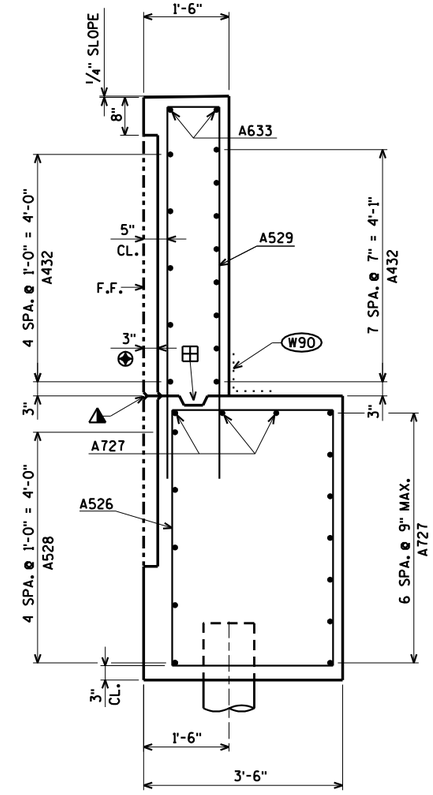
WEST ABUTMENT WING 1 DETAILS

SHEET 7 OF 45
502

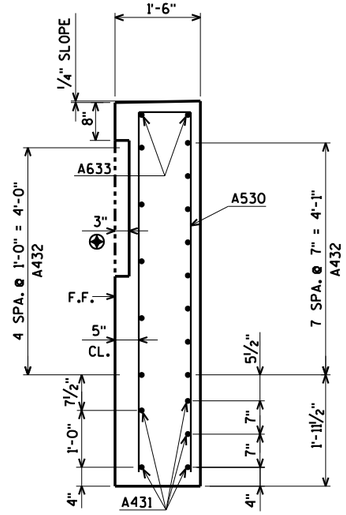
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Eau Claire, WI 54701
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ELEVATION WING 2



SECTION D



SECTION E

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

⊞ OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

⚠ ¾" 'V' GROOVE ON F.F. OF WINGWALL. OMIT IF CONST. JOINT NOT USED.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊕ LIMITS OF ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

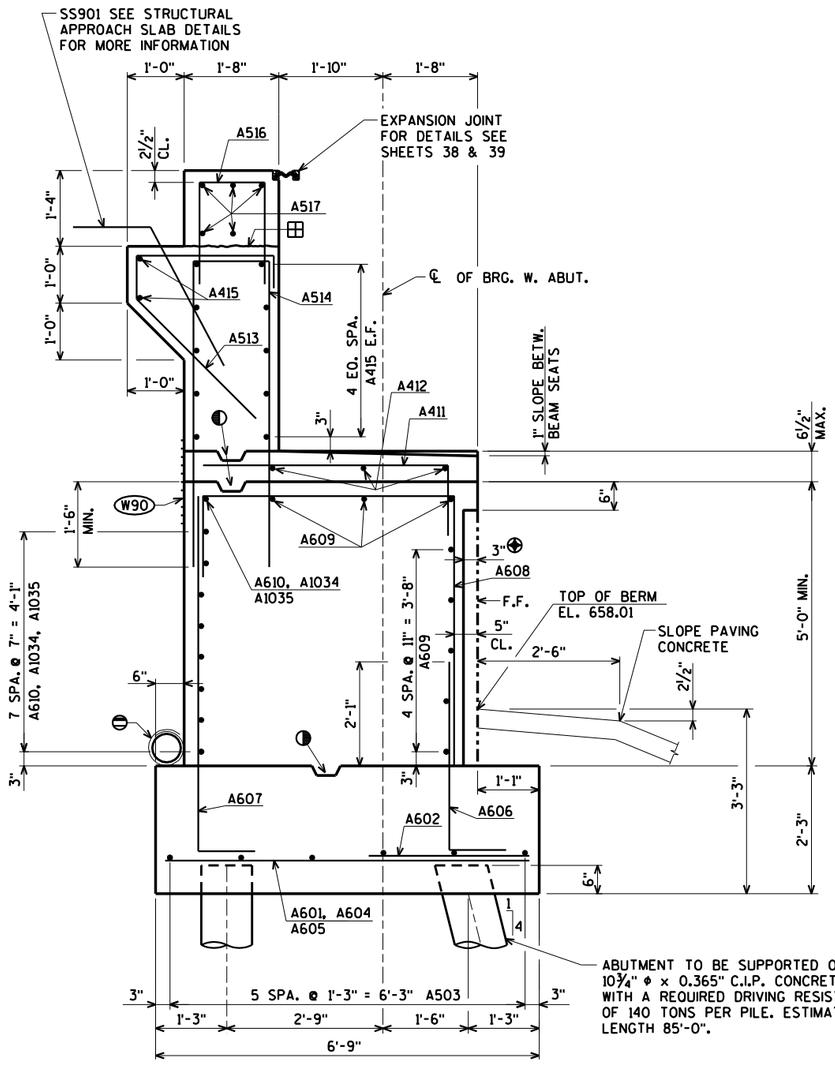
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WEST ABUTMENT WING 2 DETAILS

SHEET 8 OF 45
503

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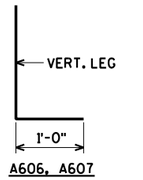


ABUTMENT TO BE SUPPORTED ON 10¾" ϕ x 0.365" C.I.P. CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE. ESTIMATED LENGTH 85'-0".

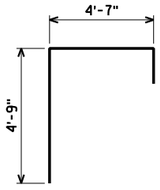
EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

TYPICAL SECTION THRU BODY SECTION A

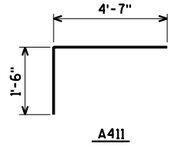
FOR LOCATION OF SECTION 'A' SEE SHEET 5



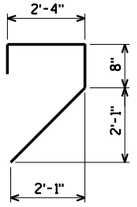
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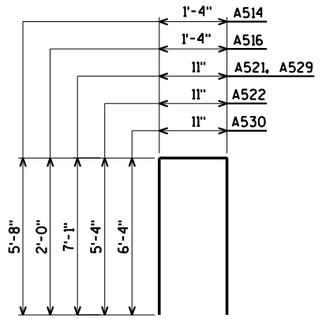
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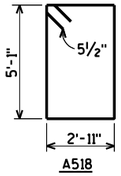


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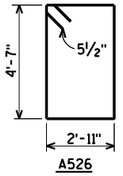


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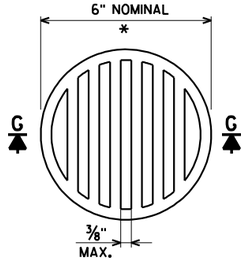


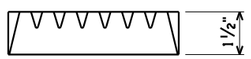
A526

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	7,700# COATED 9,380# UNCOATED LOCATION
A601		65	6-5			FOOTING
A602		51	2-5			FOOTING
A503		12	54-4			FOOTING
A604		1	10-5			FOOTING
A605		1	8-10			FOOTING
A606		104	4-6	X		FOOTING DOWELS F.F.
A607		104	7-3	X		FOOTING DOWELS B.F.
A608		104	10-6	X		BODY VERT.
A609		16	54-2			BODY HORIZ.
A610		18	35-8			BODY HORIZ. B.F.
A411		88	6-0	X		BODY VERT.
A412		6	34-0			BODY HORIZ.
A513	X	100	6-6	X		BACKWALL VERT.
A514	X	105	12-5	X		BACKWALL VERT.
A415	X	36	36-2			BACKWALL HORIZ.
A516	X	105	5-1	X		PAVING BLOCK VERT.
A517	X	75	8-0			PAVING BLOCK HORIZ.
A518	X	19	16-6	X		WING 1 VERT.
A1019	X	13	25-6			WING 1 HORIZ. B.F. & TOP
A520	X	5	22-11			WING 1 HORIZ. F.F.
A521	X	20	14-10	X		WING 1 VERT.
A522	X	7	11-4	X		WING 1 VERT.
A423	X	2	7-11			WING 1 HORIZ. E.F.
A424	X	13	23-9			WING 1 HORIZ. E.F.
A625	X	2	23-9			WING 1 HORIZ. E.F.
A526	X	6	15-6	X		WING 2 VERT.
A727	X	10	8-0			WING 2 HORIZ. B.F. & TOP
A528	X	5	8-0			WING 2 HORIZ. F.F.
A529	X	10	14-10	X		WING 2 VERT.
A530	X	7	13-4	X		WING 2 VERT.
A431	X	5	7-11			WING 2 HORIZ. E.F.
A432	X	13	15-8			WING 2 HORIZ. E.F.
A633	X	2	15-8			WING 2 HORIZ. E.F.
A1034		9	26-0			BODY HORIZ. B.F.
A1035		9	16-0			BODY HORIZ. B.F.
A1036	X	3	22-11			WING 1 HORIZ. TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.





SECTION G-G

* 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 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 SHEET METAL SCREWS.

RODENT SHIELD DETAIL

⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

⊖ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F. AT BACKWALL.

⊞ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

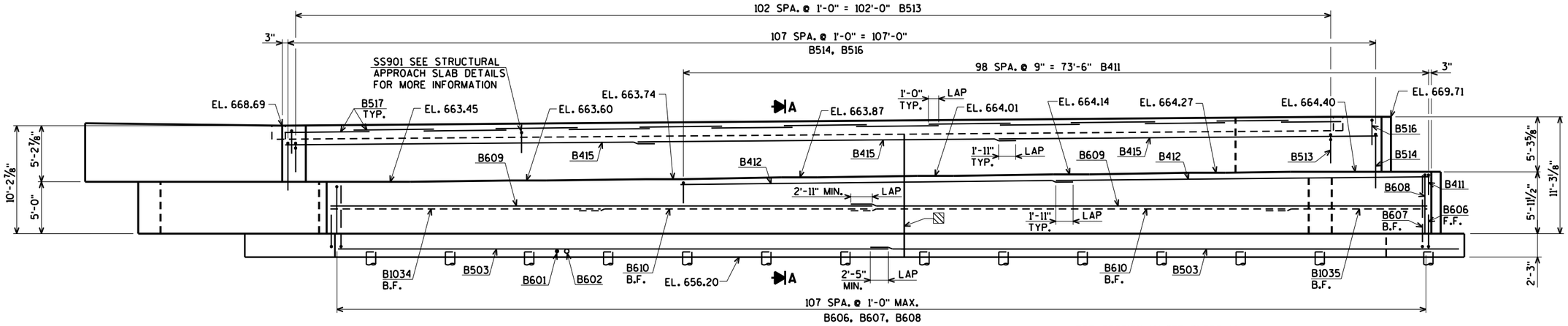
DRAWN BY CLS | PLANS CK'D. DNS

WEST ABUTMENT DETAILS AND BILL OF BARS

SHEET 9 OF 45
504

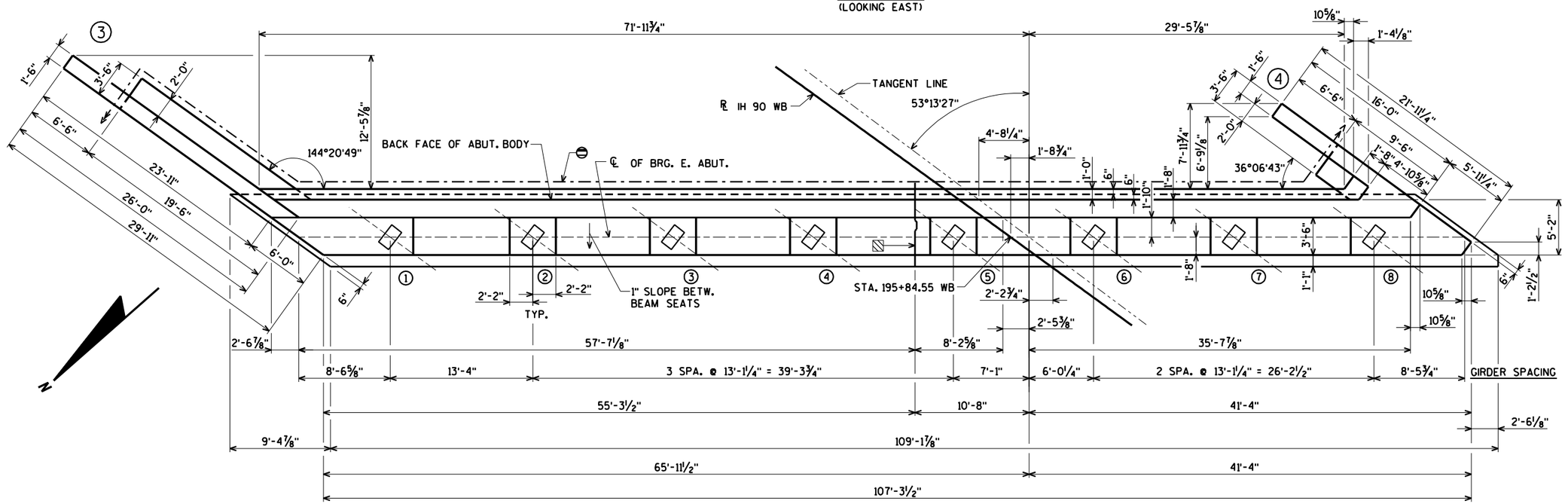
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-219 I90 WB over STH 35\BRIDGE\B-32-219 wa.dgn



FOR SECTION 'A' SEE SHEET 14

ELEVATION
(LOOKING EAST)



PLAN

⊖ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR DETAILS SEE SHEET 14.

▨ VERT. CONST. JT. - KEYWAY FORMED BY A BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 24. SEAL JOINT AT BACK FACE WITH 18" RUBBERIZED MEMBRANE WATERPROOFING

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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EAST ABUTMENT

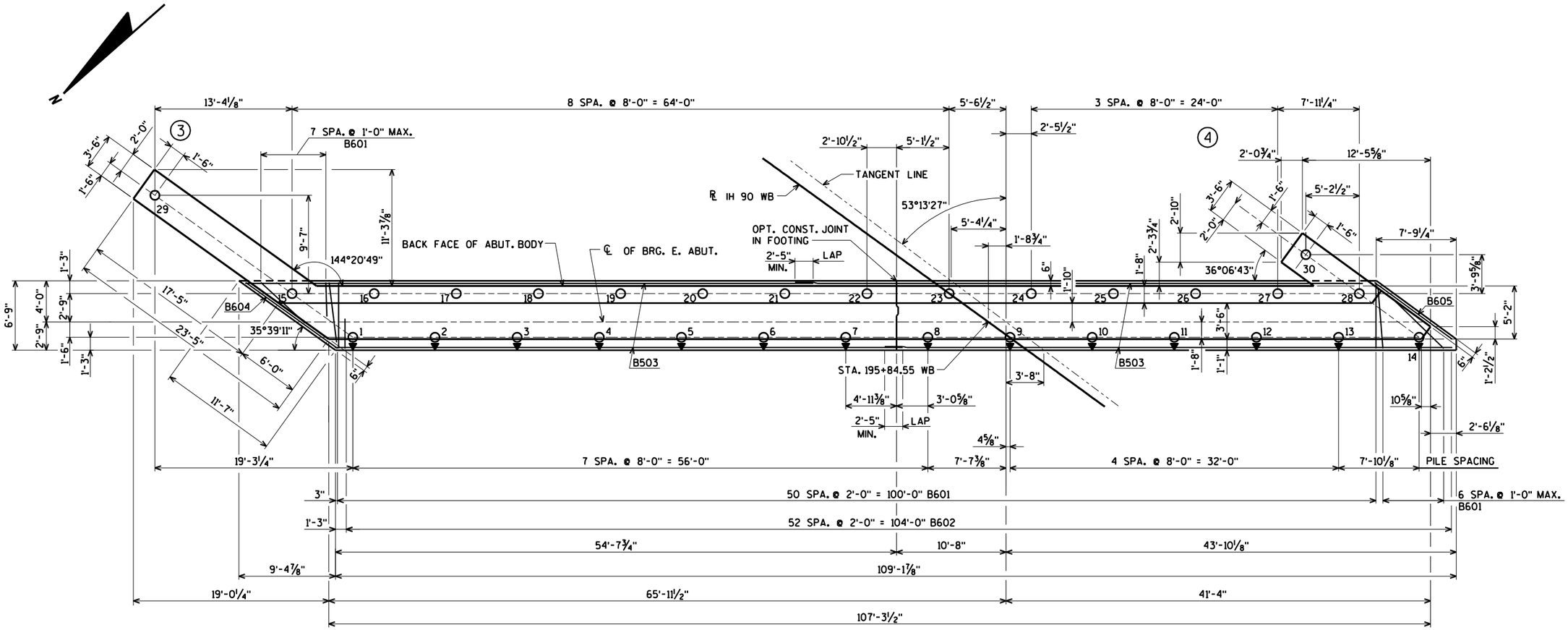
SHEET 10 OF 45
505

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STATE PROJECT NUMBER

1071-06-78



FOOTING LAYOUT

PILE LENGTH 77.1' - 112.5'

DENOTES BATTERED PILES. BATTER 3" PER FOOT IN DIRECTION SHOWN.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

DRAWN BY CLS | PLANS CK'D. DNS

EAST ABUTMENT FOOTING LAYOUT

SHEET 11 OF 45
506

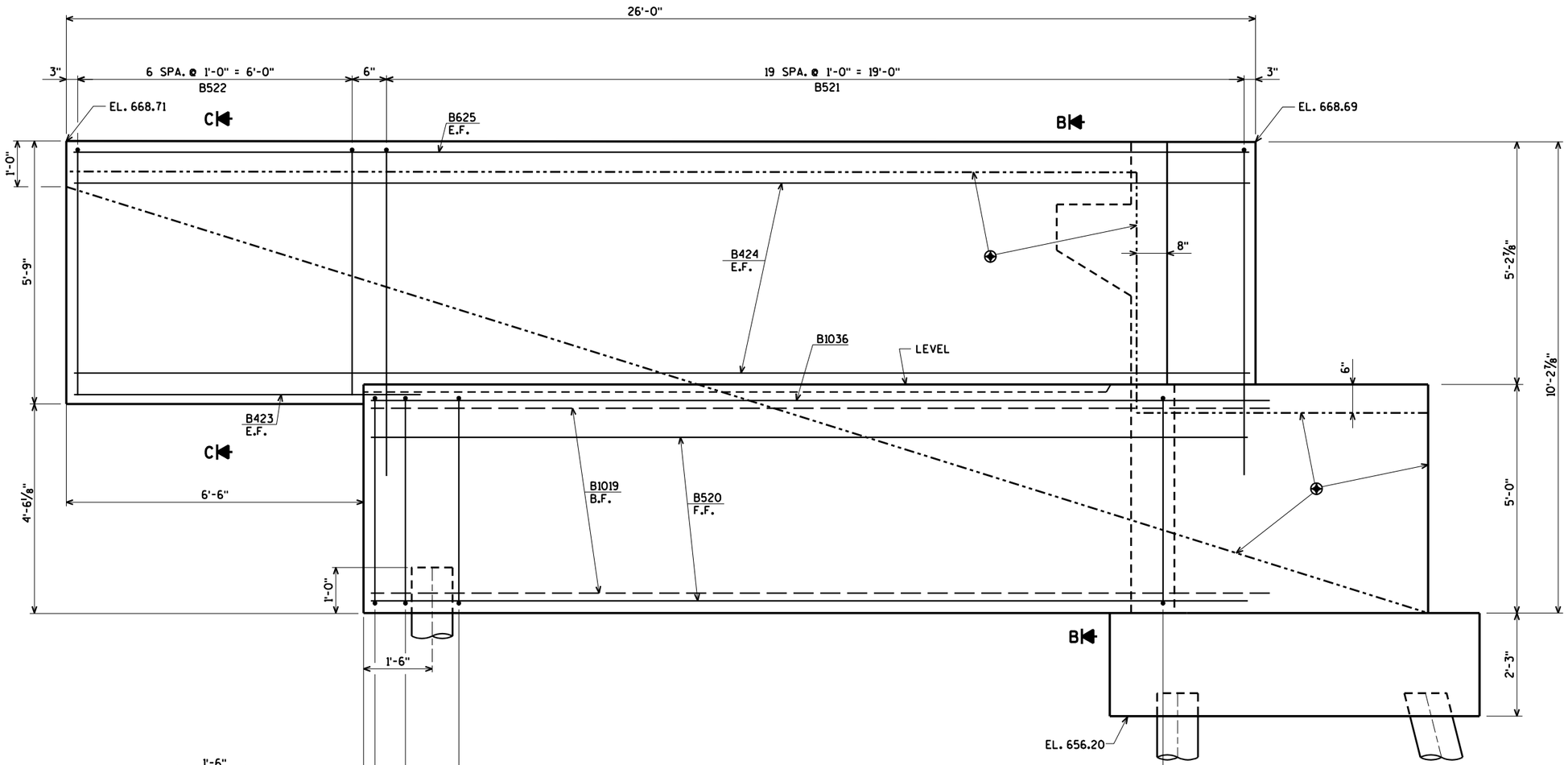
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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Eau Claire, WI 54701
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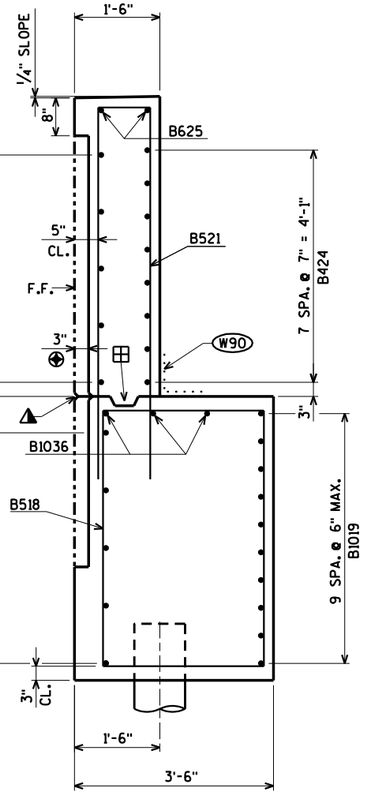
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STATE PROJECT NUMBER

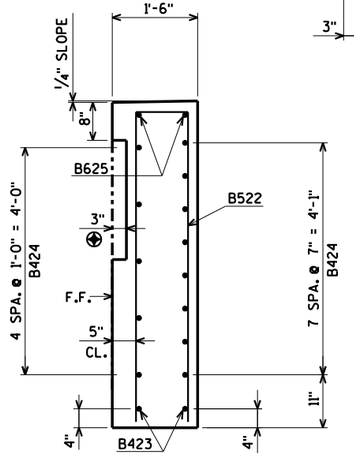
1071-06-78



ELEVATION WING 3



SECTION B



SECTION C

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

⊞ OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

⚠ ¾" 'V' GROOVE ON F.F. OF WINGWALL. OMIT IF CONST. JOINT NOT USED.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊕ LIMITS OF ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

DRAWN BY CLS | PLANS CK'D. DNS

EAST ABUTMENT WING 3 DETAILS

SHEET 12 OF 45
507

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6/2/2014

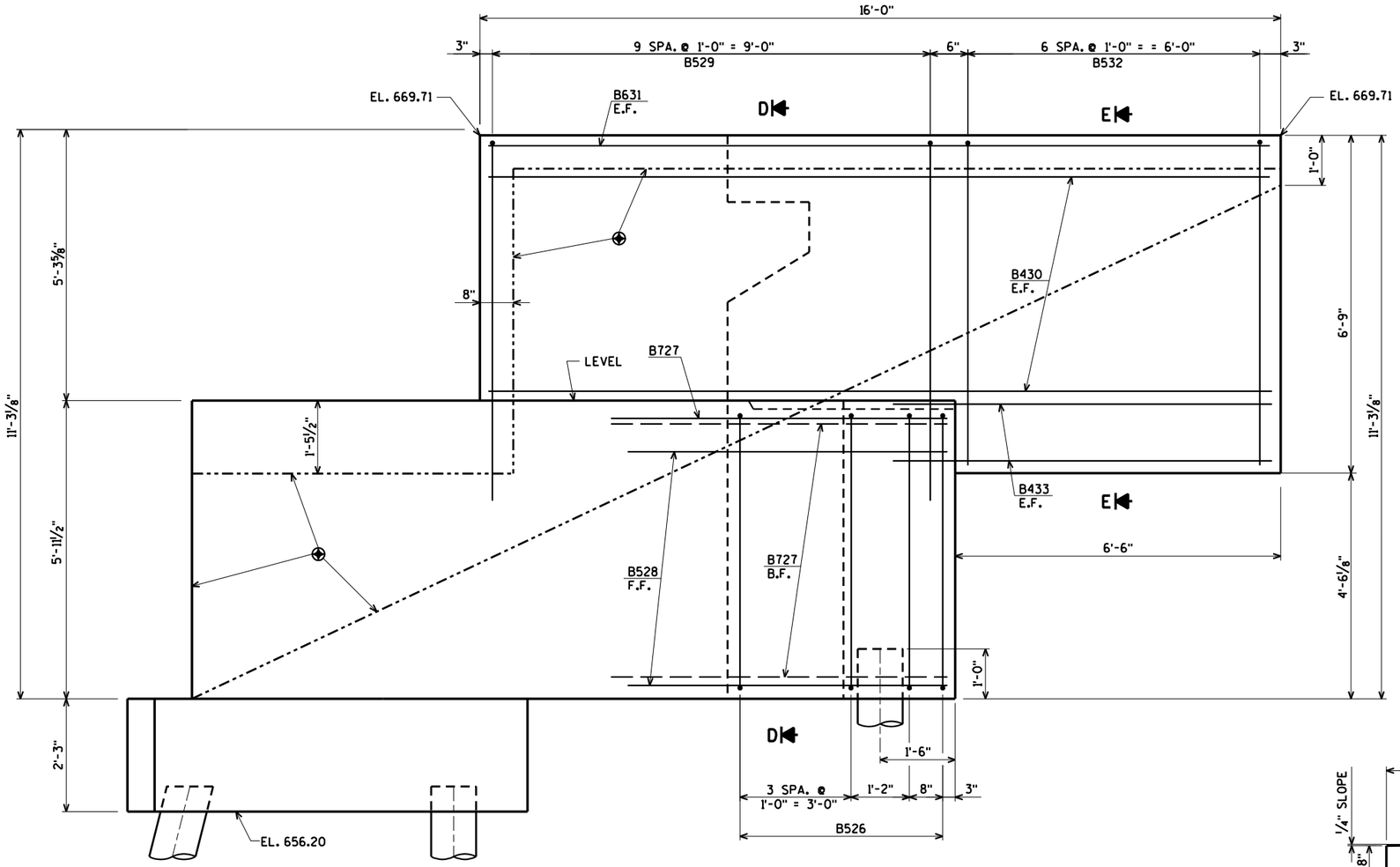
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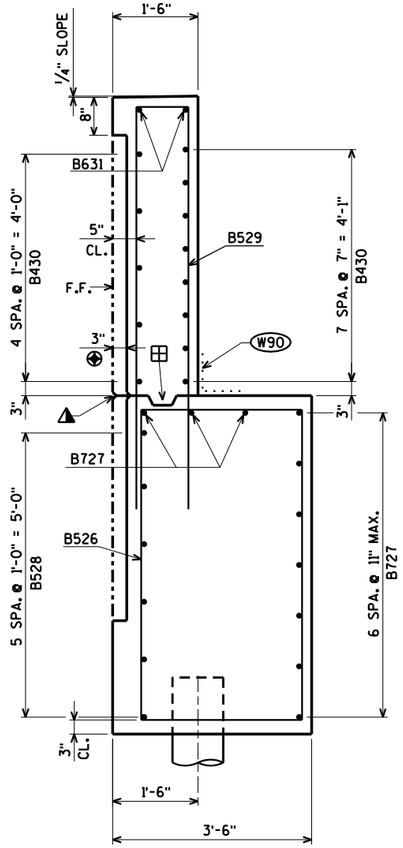
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STATE PROJECT NUMBER

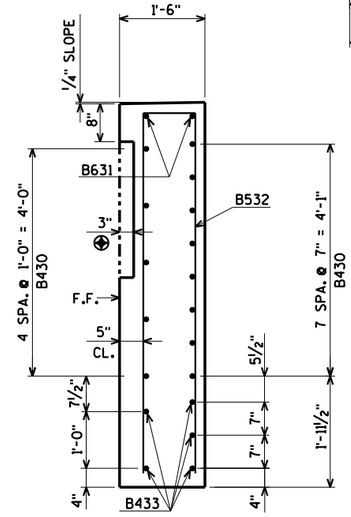
1071-06-78



ELEVATION WING 4



SECTION D



SECTION E

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

⊞ OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

⚠ ¾" 'V' GROOVE ON F.F. OF WINGWALL. OMIT IF CONST. JOINT NOT USED.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊕ LIMITS OF ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

DRAWN BY CLS | PLANS CK'D. DNS

EAST ABUTMENT WING 4 DETAILS

SHEET 13 OF 45
508

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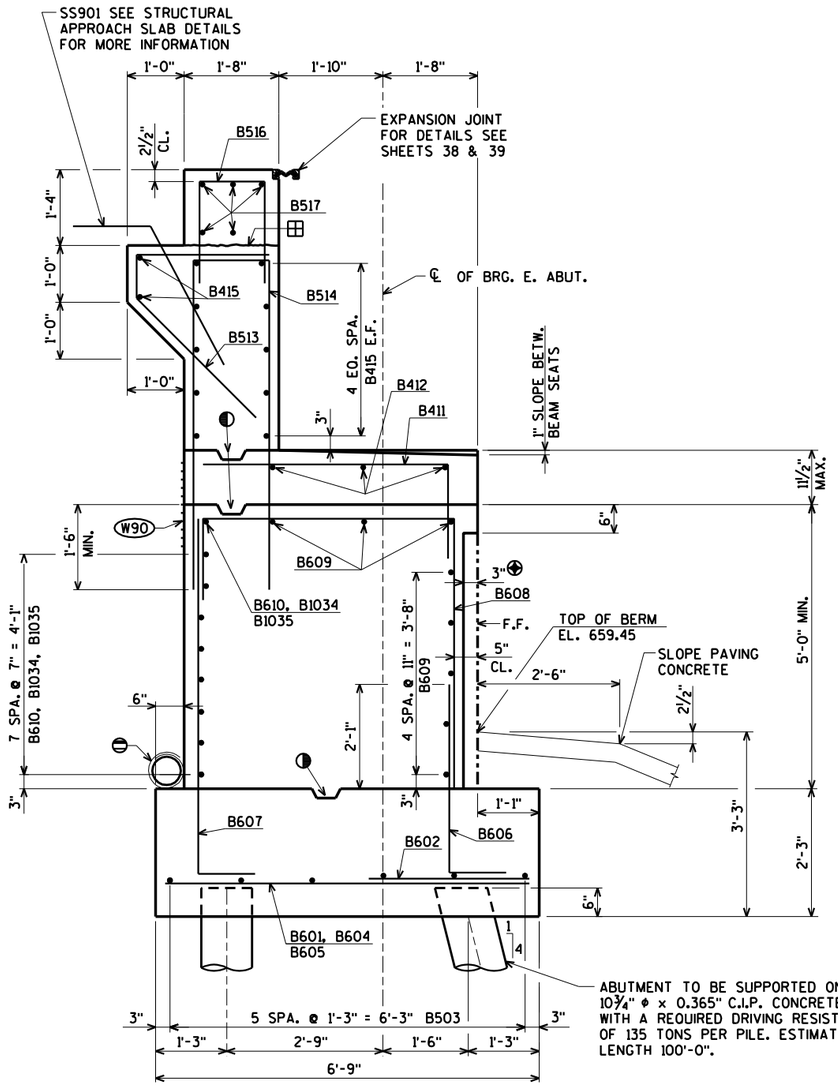
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U:±41-0627.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 ea.dgn

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6/2/2014

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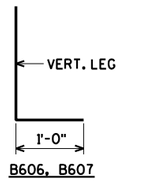


ABUTMENT TO BE SUPPORTED ON 10¾" ø x 0.365" C.I.P. CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 135 TONS PER PILE. ESTIMATED LENGTH 100'-0".

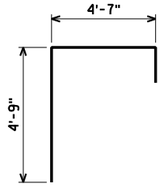
EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

TYPICAL SECTION THRU BODY SECTION A

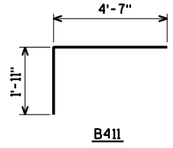
FOR LOCATION OF SECTION 'A' SEE SHEET 10



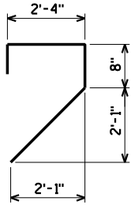
B606, B607



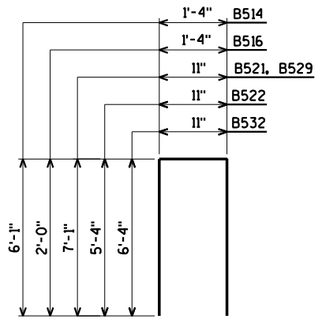
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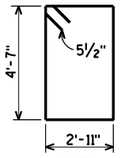


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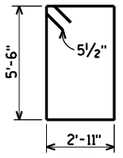


B513





B518

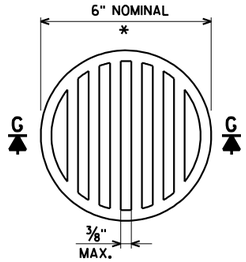


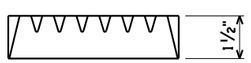
B526

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	7,560# COATED 9,750# UNCOATED LOCATION
B601		66	6-5				FOOTING
B602		53	2-5				FOOTING
B503		12	56-6				FOOTING
B604		1	11-0				FOOTING
B605		1	9-4				FOOTING
B606		108	4-6	X			FOOTING DOWELS F.F.
B607		108	7-3	X			FOOTING DOWELS B.F.
B608		108	10-6	X			BODY VERT.
B609		16	55-11				BODY HORIZ.
B610		18	37-11				BODY HORIZ. B.F.
B411		99	6-5	X			BODY VERT.
B412		6	38-0				BODY HORIZ.
B513	X	103	6-6	X			BACKWALL VERT.
B514	X	108	13-3	X			BACKWALL VERT.
B415	X	36	37-0				BACKWALL HORIZ.
B516	X	108	5-1	X			PAVING BLOCK VERT.
B517	X	75	8-0				PAVING BLOCK HORIZ.
B518	X	19	15-6	X			WING 3 VERT.
B1019	X	10	25-6				WING 3 HORIZ. B.F.
B520	X	5	22-11				WING 3 HORIZ. F.F.
B521	X	20	14-10	X			WING 3 VERT.
B522	X	7	11-4	X			WING 3 VERT.
B423	X	2	7-11				WING 3 HORIZ. E.F.
B424	X	13	23-9				WING 3 HORIZ. E.F.
B625	X	2	23-9				WING 3 HORIZ. E.F.
B526	X	6	17-4	X			WING 4 VERT.
B727	X	10	8-0				WING 4 HORIZ. B.F. & TOP
B528	X	6	8-0				WING 4 HORIZ. F.F.
B529	X	10	14-10	X			WING 4 VERT.
B430	X	13	15-8				WING 4 HORIZ. E.F.
B631	X	2	15-8				WING 4 HORIZ. E.F.
B532	X	7	13-4	X			WING 4 VERT.
B433	X	4	7-11				WING 4 HORIZ.
B1034		9	26-0				BODY HORIZ. B.F.
B1035		9	16-0				BODY HORIZ. B.F.
B1036	X	3	22-11				WING 3 HORIZ. TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.





SECTION G-G

* 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 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 SHEET METAL SCREWS.

RODENT SHIELD DETAIL

⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

⊖ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F. AT BACKWALL.

⊞ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

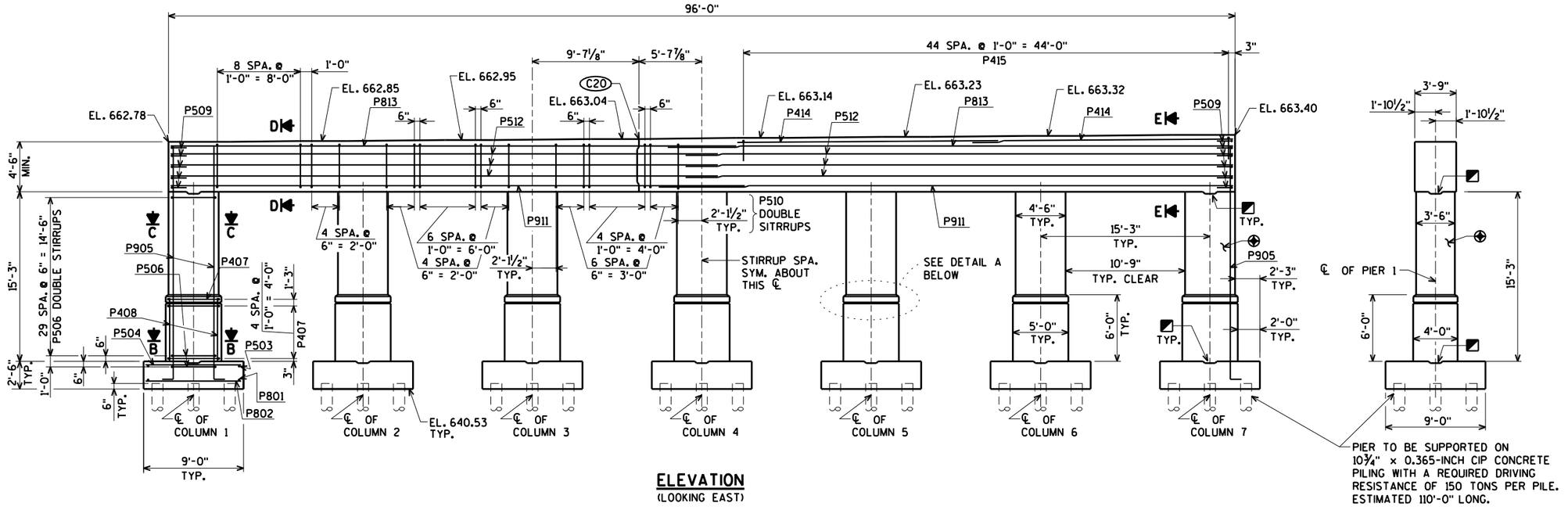
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EAST ABUTMENT DETAILS AND BILL OF BARS

SHEET 14 OF 45
509

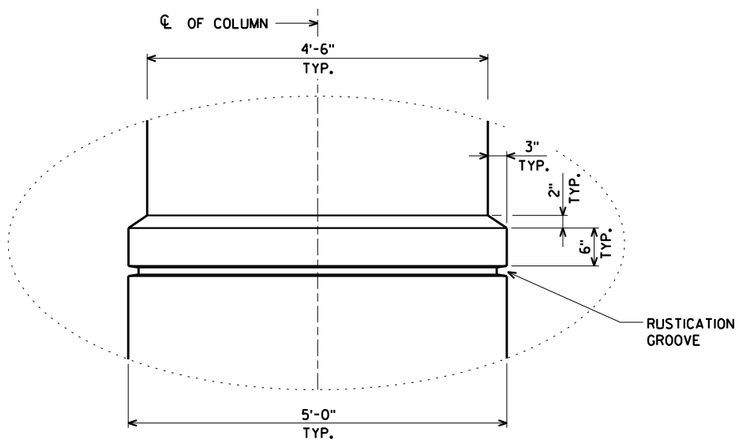
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 ea.dgn

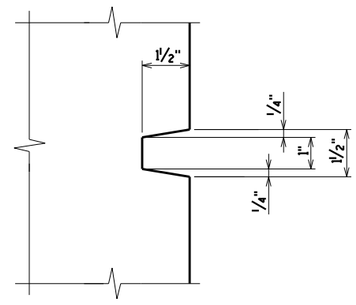


ELEVATION
(LOOKING EAST)

END VIEW
(LOOKING NORTH)



DETAIL A



RUSTICATION GROOVE DETAIL

RUSTICATION GROOVES SHALL BE LEVEL.

COST OF RUSTICATION GROOVES IN THE PIER AS SHOWN IS INCIDENTAL TO THE COST FOR "CONCRETE MASONRY BRIDGES".

(C20) VERT. CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONSTRUCTION JOINT DETAIL SEE SHEET 24.

⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

◪ 1'-3" x 2'-0" x 4" CONST. JOINT FORMED BY BEVELED KEYWAY.

FOR DETAIL OF SECTIONS B, C, D & E SEE SHEET 17

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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PIER 1

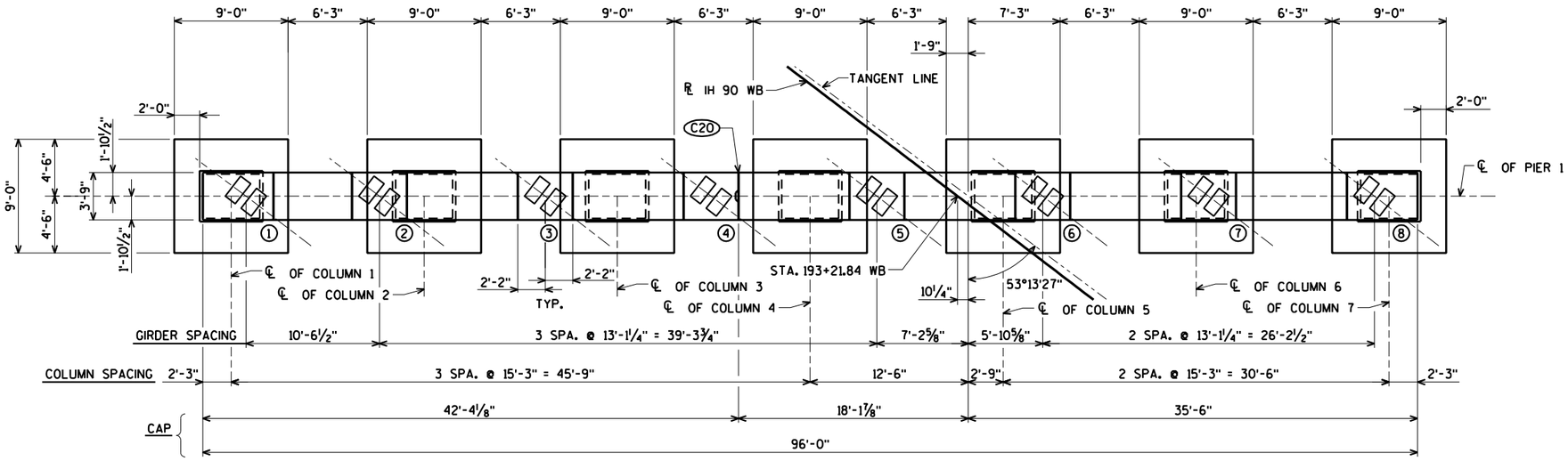
SHEET 15 OF 45
510

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www.AyresAssociates.com

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-219 I90 WB over STH 35\BRIDGE\B-32-219 pier 1.dgn

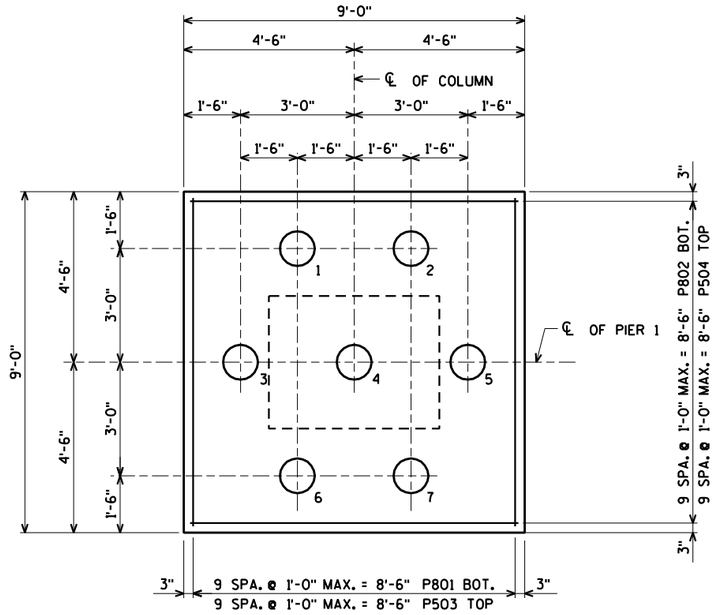
STATE PROJECT NUMBER

1071-06-78



PLAN

PILE LENGTH 90.4 - 115.9'



FOOTING PLAN

C20 VERT. CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONSTRUCTION JOINT DETAIL SEE SHEET 24.

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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PIER 1 PLAN AND FOOTING

SHEET 16 OF 45
511

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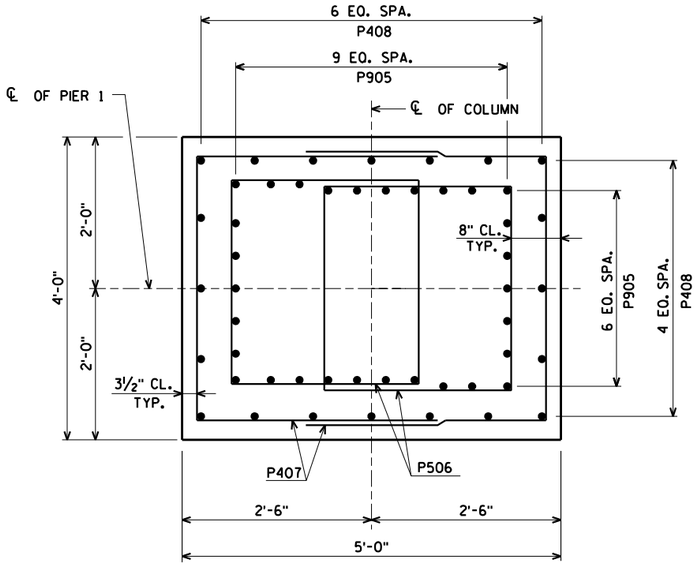
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8

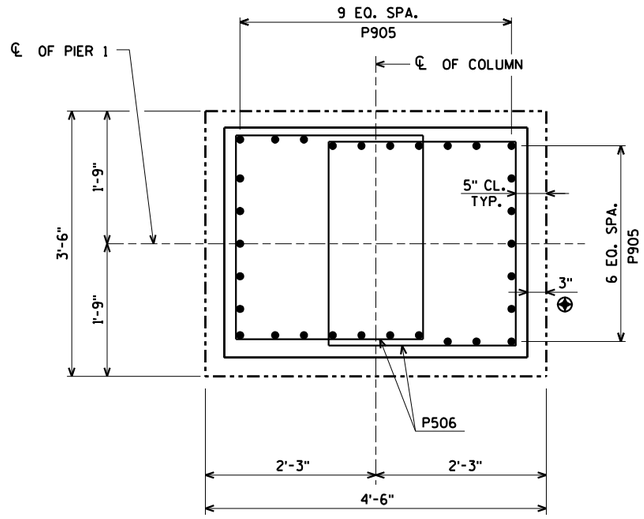
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6/2/2014

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SECTION B



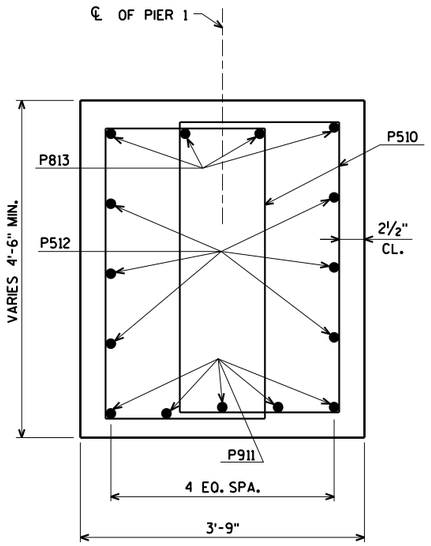
SECTION C

FOR LOCATIONS OF SECTIONS
B, C, D & E SEE SHEET 15

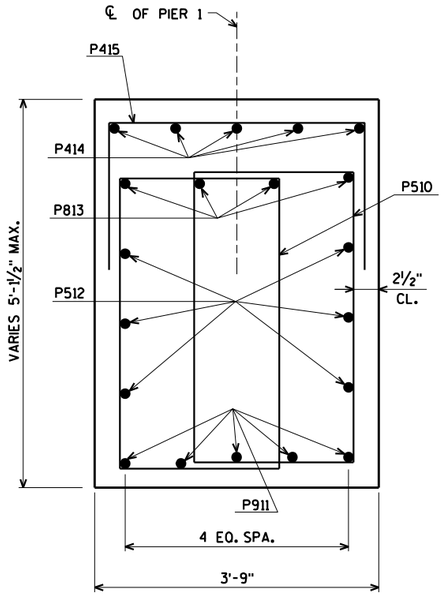
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	28,560# COATED 4,420# UNCOATED LOCATION
P801		70	8-6			FOOTING BOT.
P802		70	8-6			FOOTING BOT.
P503		70	8-6			FOOTING TOP
P504		70	8-6			FOOTING TOP
P905	X	210	22-5	X		FOOTING & COLUMN VERT.
P506	X	434	10-10	X		FOOTING & COLUMN STIRRUPS HORIZ.
P407	X	84	10-1	X		COLUMN STIRRUPS HORIZ.
P408	X	140	5-6			COLUMN VERT.
P509	X	11	6-5	X		CAP HORIZ. ℄ ENDS
P510	X	200	12-10	X		CAP STIRRUPS VERT.
P911	X	10	51-3			CAP HORIZ. BOT.
P512	X	12	49-7			CAP HORIZ. SIDES
P813	X	8	50-11			CAP HORIZ. TOP
P414	X	10	23-6			CAP HORIZ. TOP
P415	X	45	7-2	X		CAP VERT. TOP

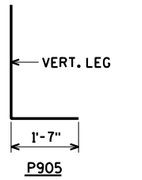
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



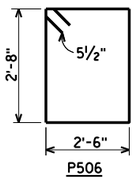
SECTION D



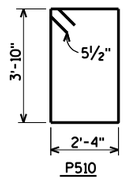
SECTION E



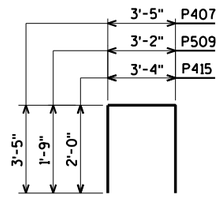
P905



P506



P510



⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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PIER 1
DETAILS AND
BILL OF BARS

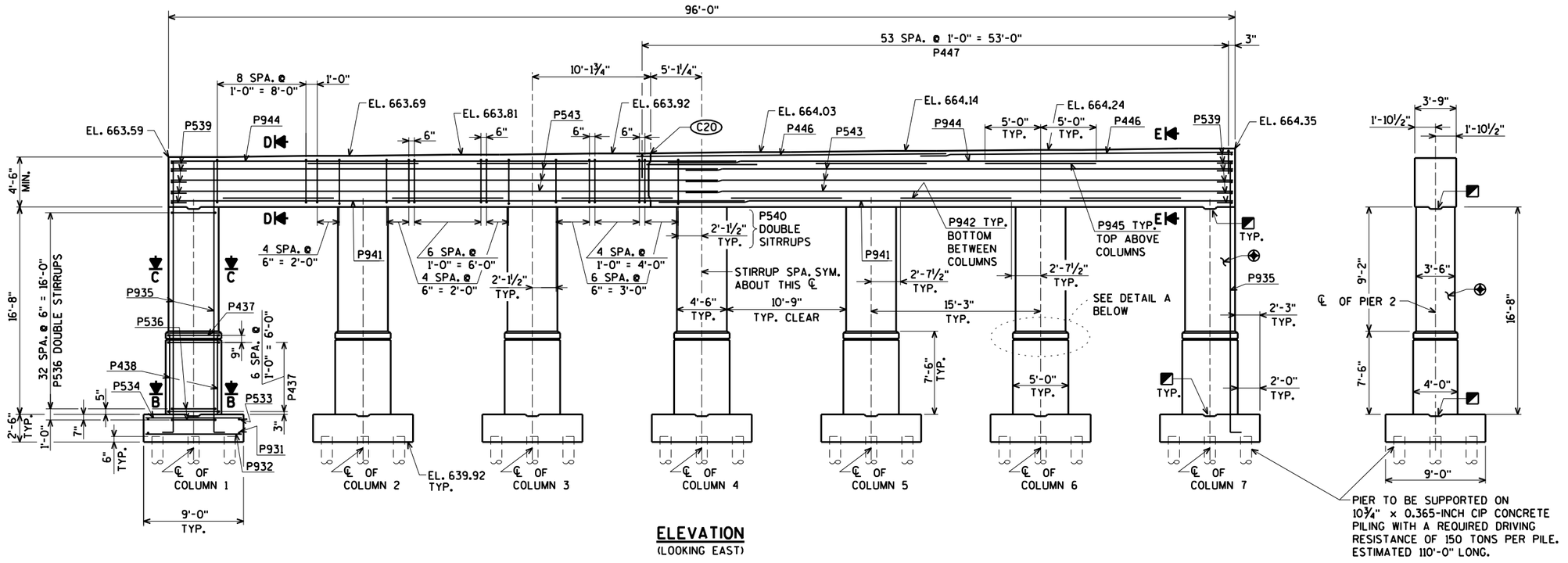
SHEET 17 OF 45
512

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Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-219 I90 WB over STH 35\BRIDGE\B-32-219 pier 1.dgn

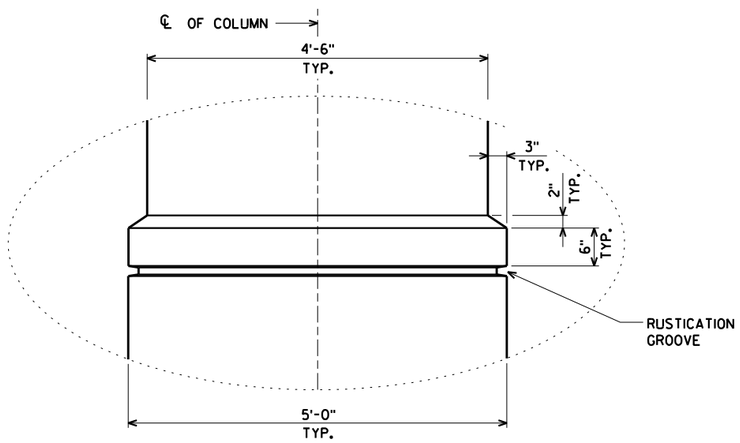
STATE PROJECT NUMBER

1071-06-78

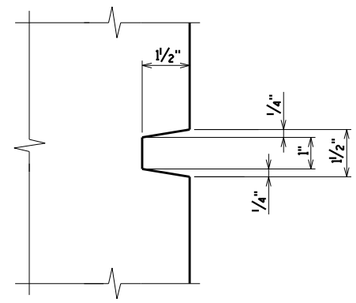


ELEVATION
(LOOKING EAST)

END VIEW
(LOOKING NORTH)



DETAIL A



RUSTICATION GROOVE DETAIL

RUSTICATION GROOVES SHALL BE LEVEL.

COST OF RUSTICATION GROOVES IN THE PIER AS SHOWN IS INCIDENTAL TO THE COST FOR "CONCRETE MASONRY BRIDGES".

(C20) VERT. CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONSTRUCTION JOINT DETAIL SEE SHEET 24.

⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

◪ 1'-3" x 2'-0" x 4" CONST. JOINT FORMED BY BEVELED KEYWAY.

FOR DETAIL OF SECTIONS B, C, D & E SEE SHEET 20

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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PIER 2

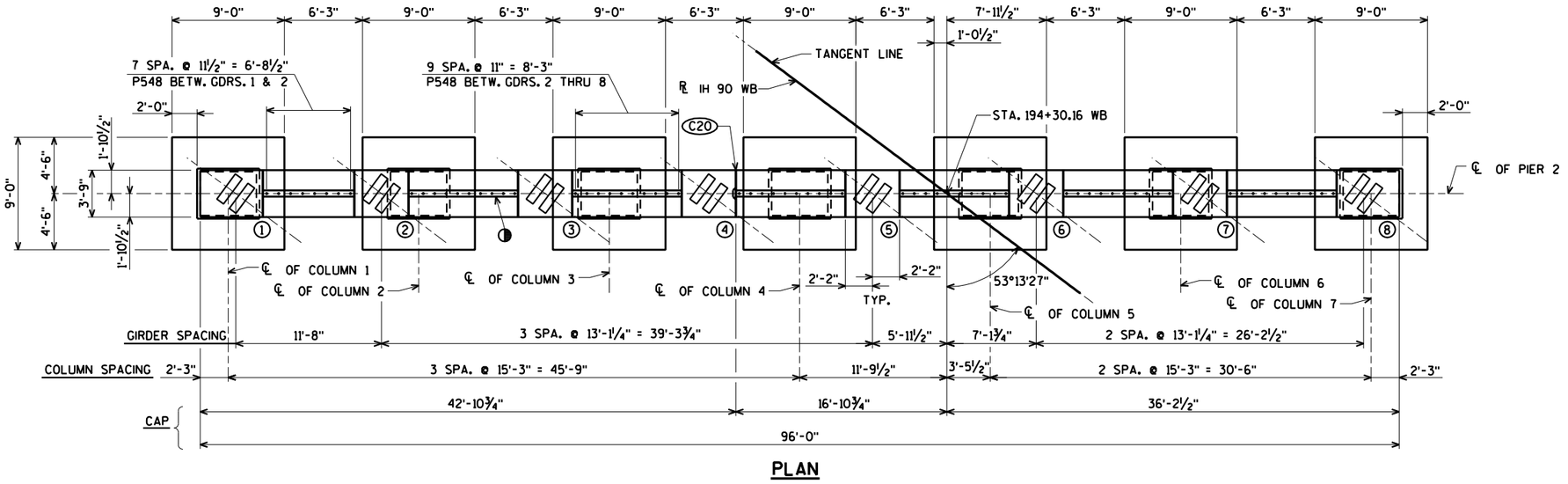
SHEET 18 OF 45
513

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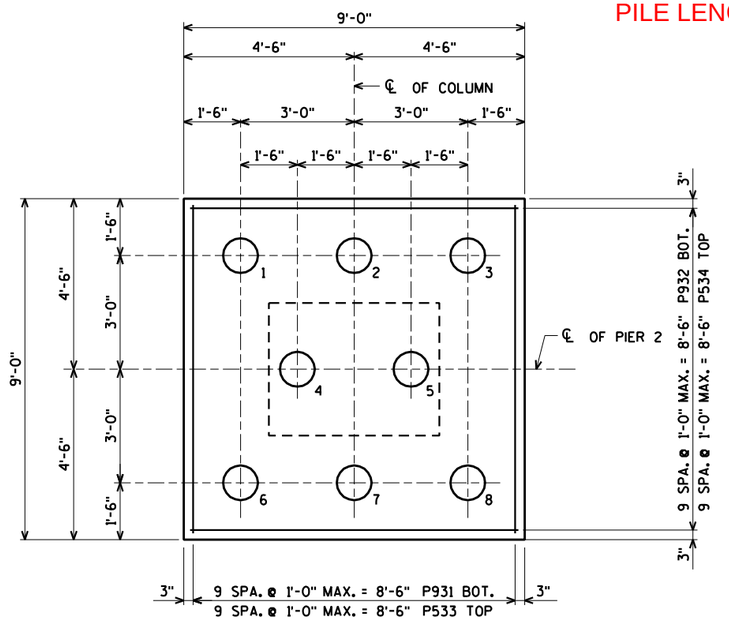
STATE PROJECT NUMBER

1071-06-78



PLAN

PILE LENGTH 89.6 - 102.5'



FOOTING PLAN

C20 VERT. CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONSTRUCTION JOINT DETAIL SEE SHEET 24.

◑ KEYED COST. JOINT - FORMED BY A SURFACE BEVELED 2" x 6".

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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PIER 2 PLAN AND FOOTING

SHEET 19 OF 45
514

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8

8

$PRFNAME$
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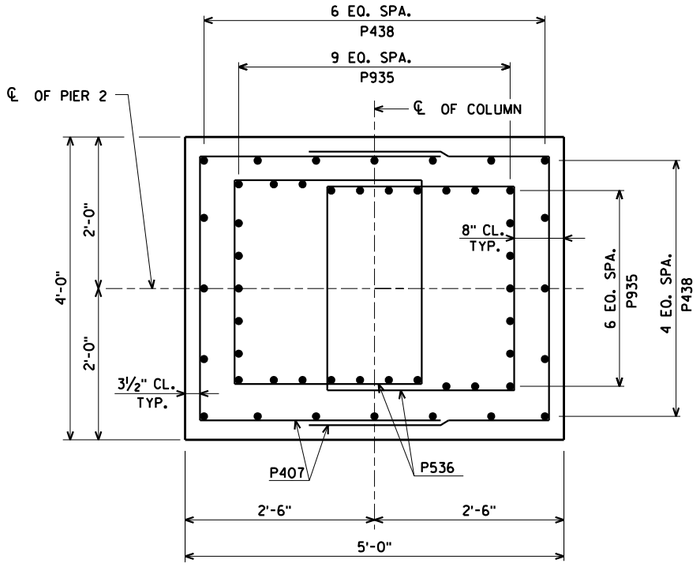
6/2/2014

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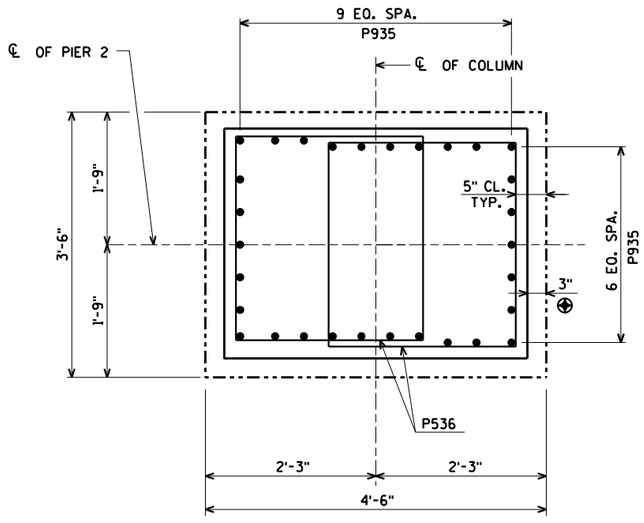
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STATE PROJECT NUMBER

1071-06-78



SECTION B



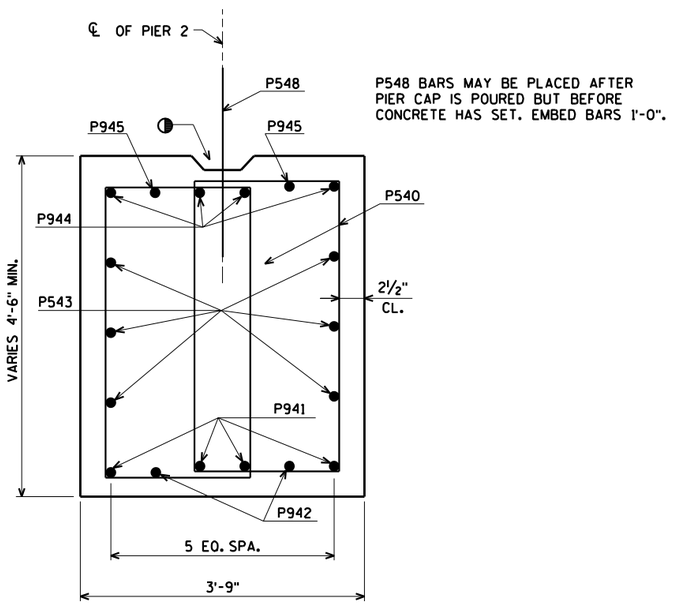
SECTION C

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	31,240# COATED 5,290# UNCOATED LOCATION
P931		70	8-6			FOOTING BOT.
P932		70	8-6			FOOTING BOT.
P533		70	8-6			FOOTING TOP
P534		70	8-6			FOOTING TOP
P935	X	210	23-10	X		FOOTING & COLUMN VERT.
P536	X	476	10-10	X		FOOTING & COLUMN STIRRUPS HORIZ.
P437	X	112	10-1	X		COLUMN STIRRUPS HORIZ.
P438	X	140	7-0			COLUMN VERT.
P539	X	11	6-5	X		CAP HORIZ. @ ENDS
P540	X	200	12-6	X		CAP STIRRUPS VERT.
P941	X	8	51-3			CAP HORIZ. BOT.
P942	X	12	10-0			CAP HORIZ. BOT.
P543	X	12	49-7			CAP HORIZ. SIDES
P944	X	8	51-8			CAP HORIZ. TOP
P945	X	10	10-0			CAP HORIZ. TOP
P446	X	10	28-1			CAP HORIZ. TOP
P447	X	54	7-2	X		CAP VERT. TOP
P548	X	68	2-0			CAP DOWELS

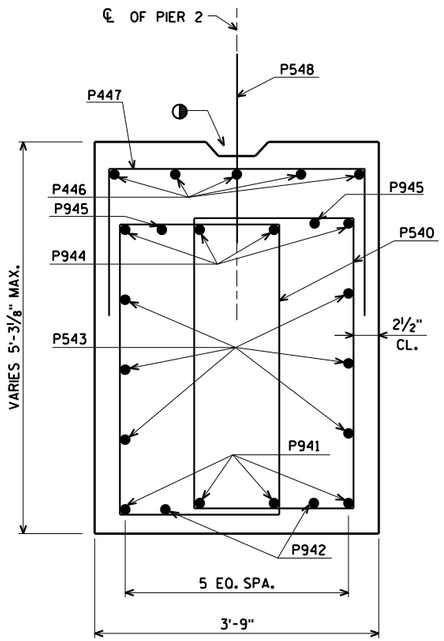
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

FOR LOCATIONS OF SECTIONS
B, C, D & E SEE SHEET 18

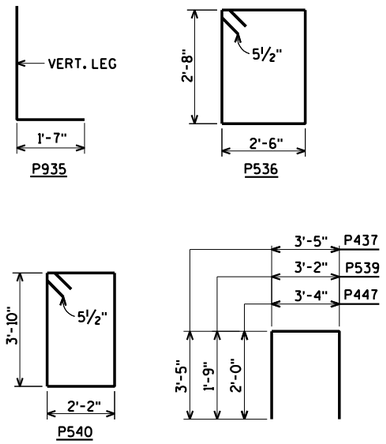


P548 BARS MAY BE PLACED AFTER PIER CAP IS POURED BUT BEFORE CONCRETE HAS SET. EMBED BARS 1'-0".

SECTION D



SECTION E



ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

KEYED CONST. JOINT BETWEEN GIRDERS - FORMED BY A SURFACE BEVELED 2" x 6".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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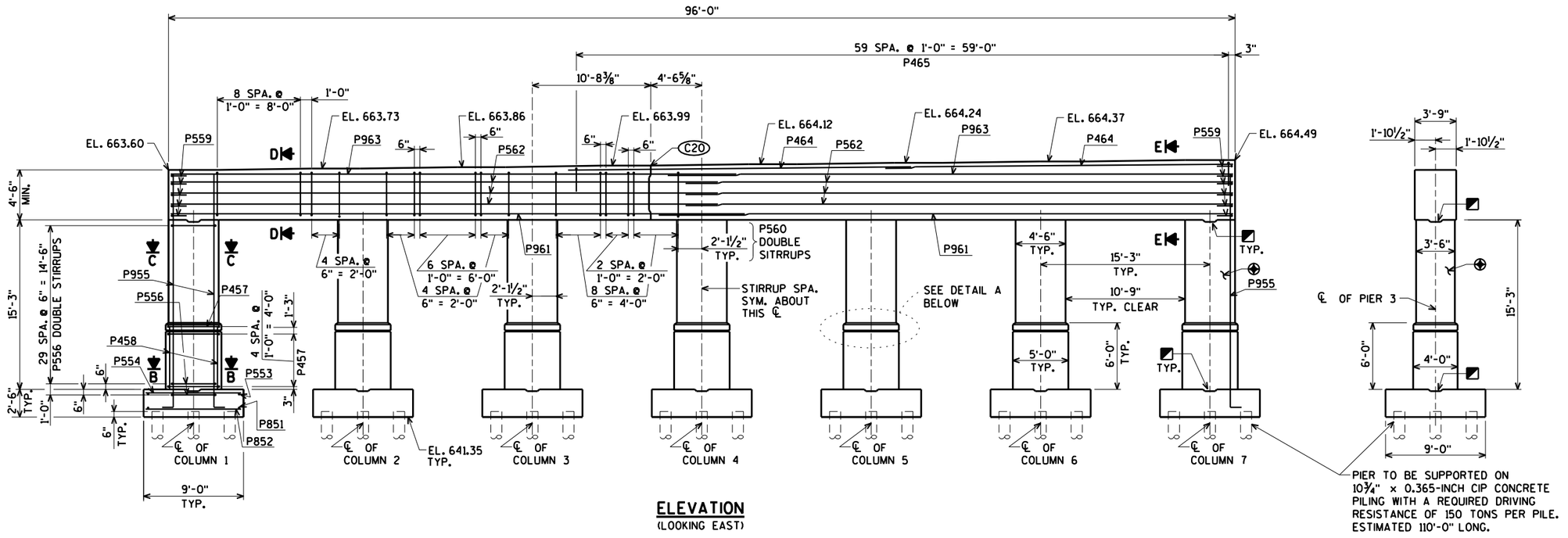
PIER 2
DETAILS AND
BILL OF BARS

SHEET 20 OF 45
515

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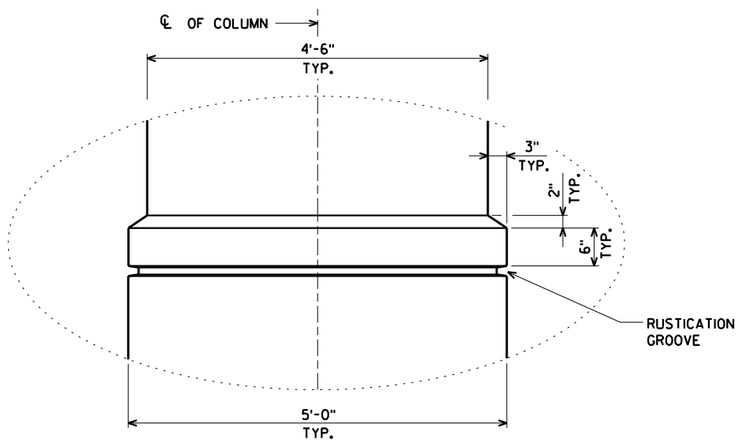
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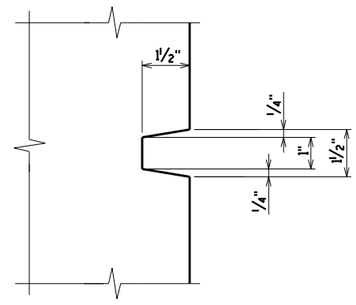


ELEVATION
(LOOKING EAST)

END VIEW
(LOOKING NORTH)



DETAIL A



RUSTICATION GROOVE DETAIL

RUSTICATION GROOVES SHALL BE LEVEL.

COST OF RUSTICATION GROOVES IN THE PIER AS SHOWN IS INCIDENTAL TO THE COST FOR "CONCRETE MASONRY BRIDGES".

(C20) VERT. CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONSTRUCTION JOINT DETAIL SEE SHEET 24.

⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

◪ 1'-3" x 2'-0" x 4" CONST. JOINT FORMED BY BEVELED KEYWAY.

FOR DETAIL OF SECTIONS B, C, D & E SEE SHEET 23

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

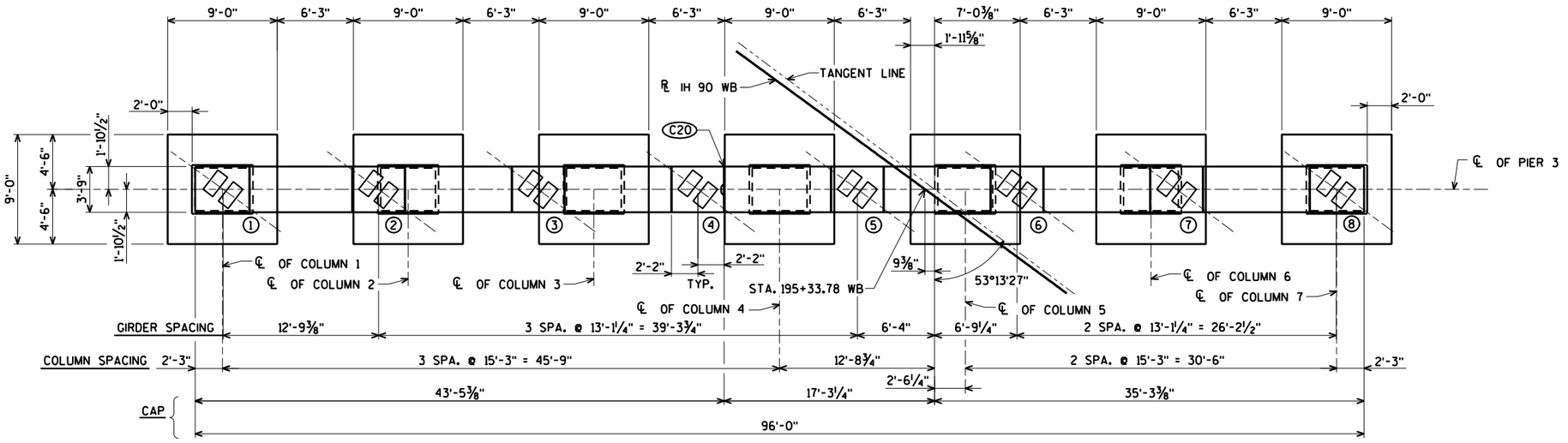
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PIER 3

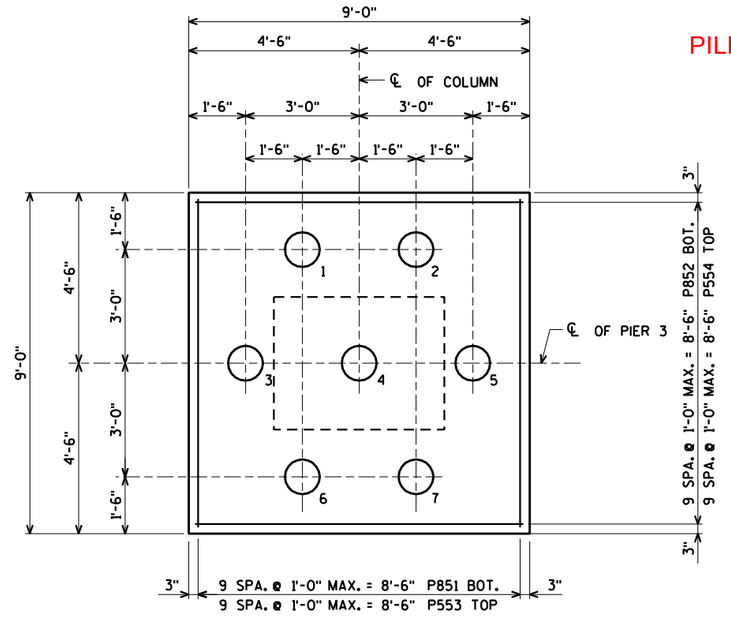
SHEET 21 OF 45
516

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PLAN



FOOTING PLAN

PILE LENGTH 95.1' - 106.3'

(C20) VERT. CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONSTRUCTION JOINT DETAIL SEE SHEET 24.

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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PIER 3 PLAN AND FOOTING

SHEET 22 OF 45
517

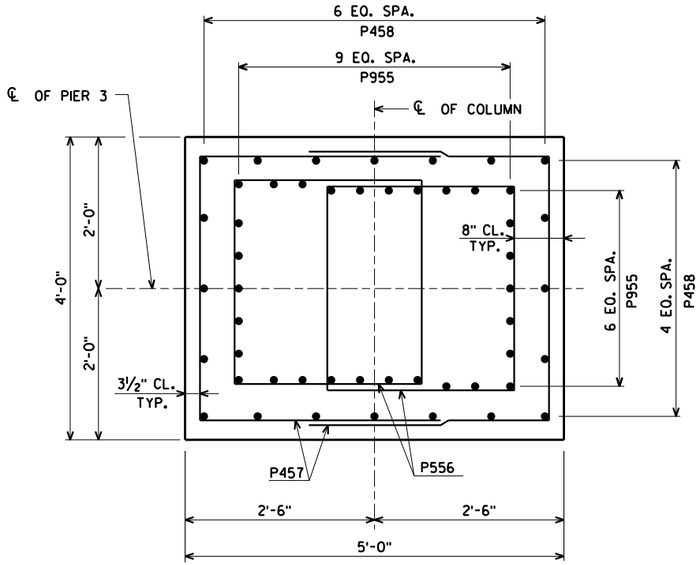
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$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-219 190 WB over STH 35\BRIDGE\B-32-219 pier 3.dgn

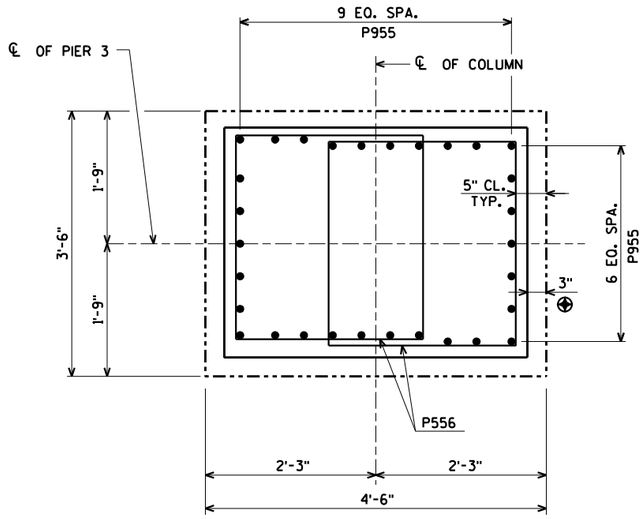
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$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-219 I90 WB over STH 35\BRIDGE\B-32-219 pier 3.dgn



SECTION B



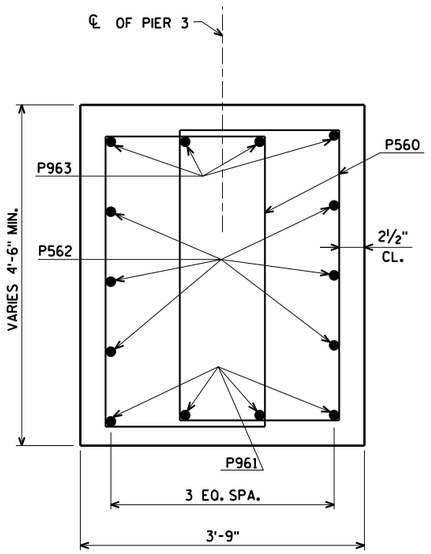
SECTION C

FOR LOCATIONS OF SECTIONS
B, C, D & E SEE SHEET 21

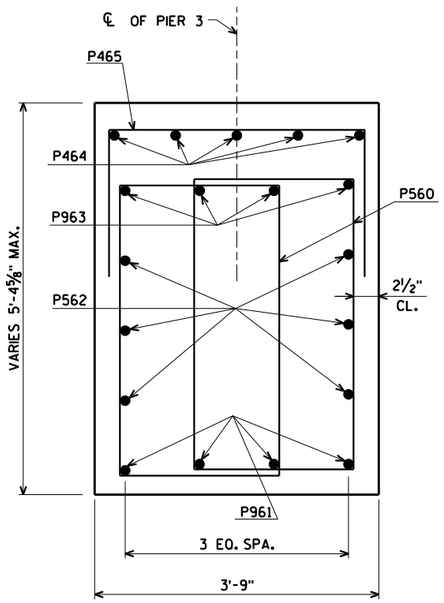
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	28,760# COATED 4,420# UNCOATED LOCATION
P851		70	8-6			FOOTING BOT.
P852		70	8-6			FOOTING BOT.
P553		70	8-6			FOOTING TOP
P554		70	8-6			FOOTING TOP
P955	X	210	22-5	X		FOOTING & COLUMN VERT.
P556	X	434	10-10	X		FOOTING & COLUMN STIRRUPS HORIZ.
P457	X	84	10-1	X		COLUMN STIRRUPS HORIZ.
P458	X	140	5-6			COLUMN VERT.
P559	X	11	6-5	X		CAP HORIZ. ℄ ENDS
P560	X	208	12-10	X		CAP STIRRUPS VERT.
P961	X	8	51-3			CAP HORIZ. BOT.
P562	X	12	49-7			CAP HORIZ. SIDES
P963	X	8	51-8			CAP HORIZ. TOP
P464	X	10	31-2			CAP HORIZ. TOP
P465	X	60	7-2	X		CAP VERT. TOP

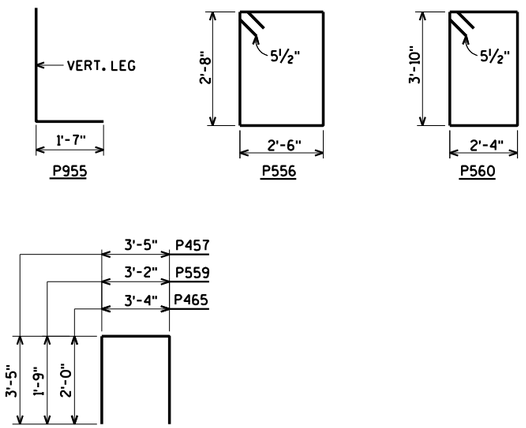
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



SECTION D



SECTION E



⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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PIER 3
DETAILS AND
BILL OF BARS

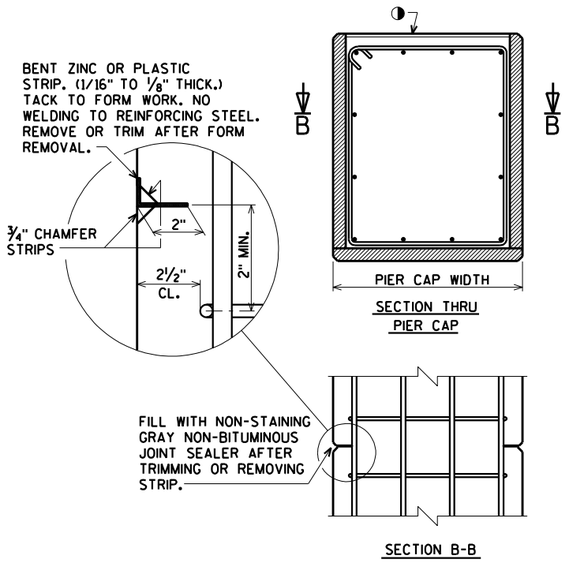
SHEET 23 OF 45
518

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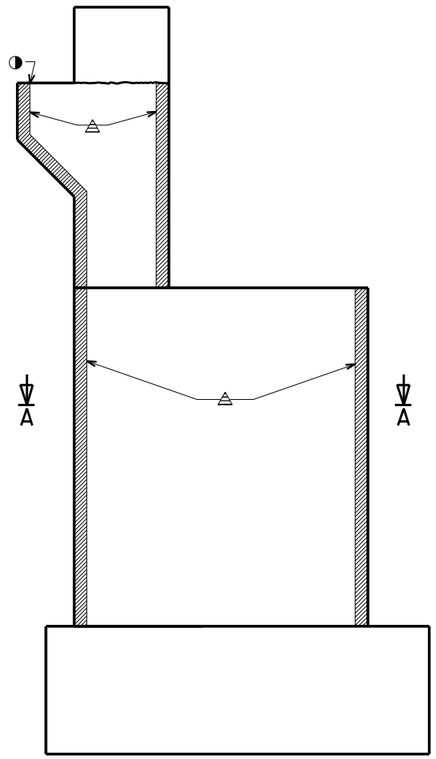
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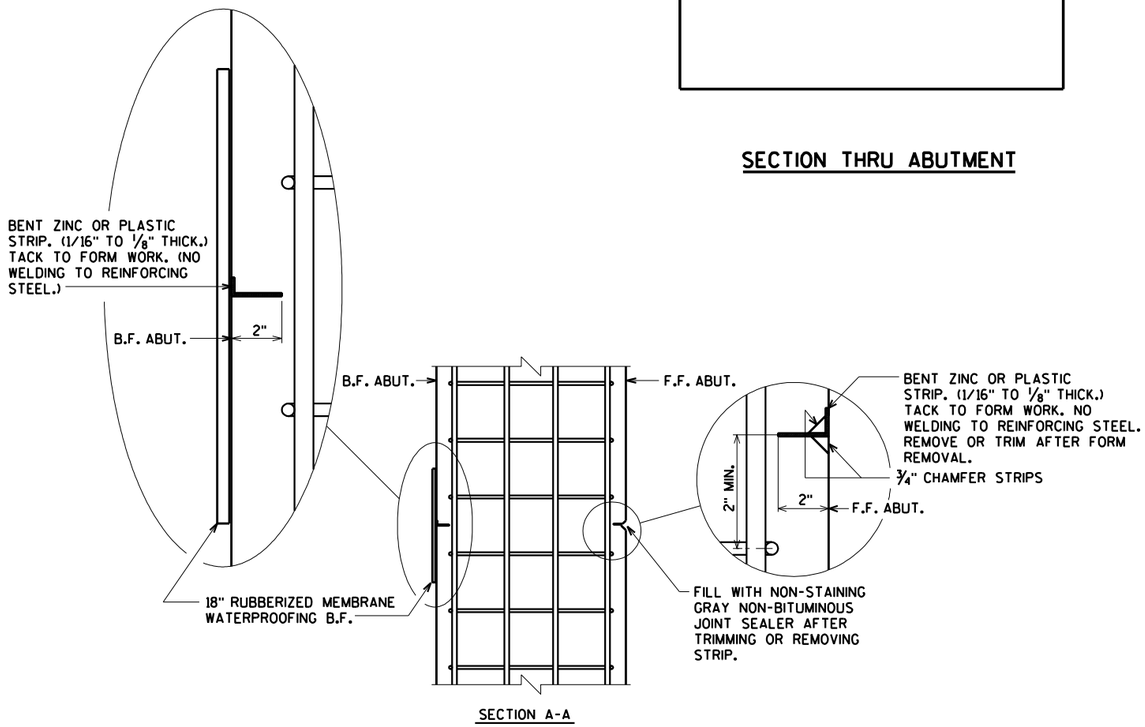
$PRFNAME$
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ALTERNATE CONSTRUCTION JOINT AT PIER CAP



SECTION THRU ABUTMENT



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.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

△ BENT ZINC OR PLASTIC STRIP.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

NO.	DATE	REVISION	BY

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STRUCTURE B-32-219

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ALTERNATE CONSTRUCTION JOINT

SHEET 24 OF 45
519

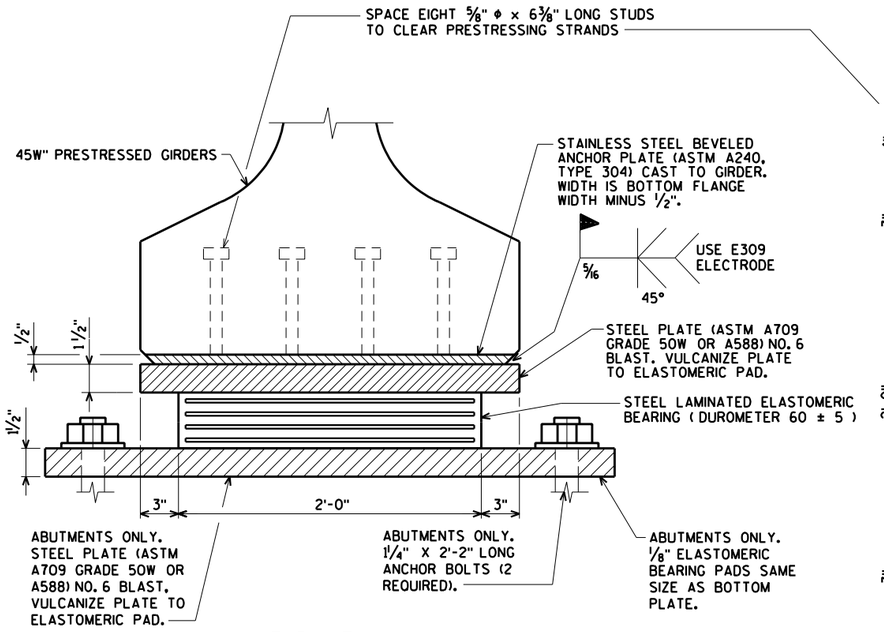
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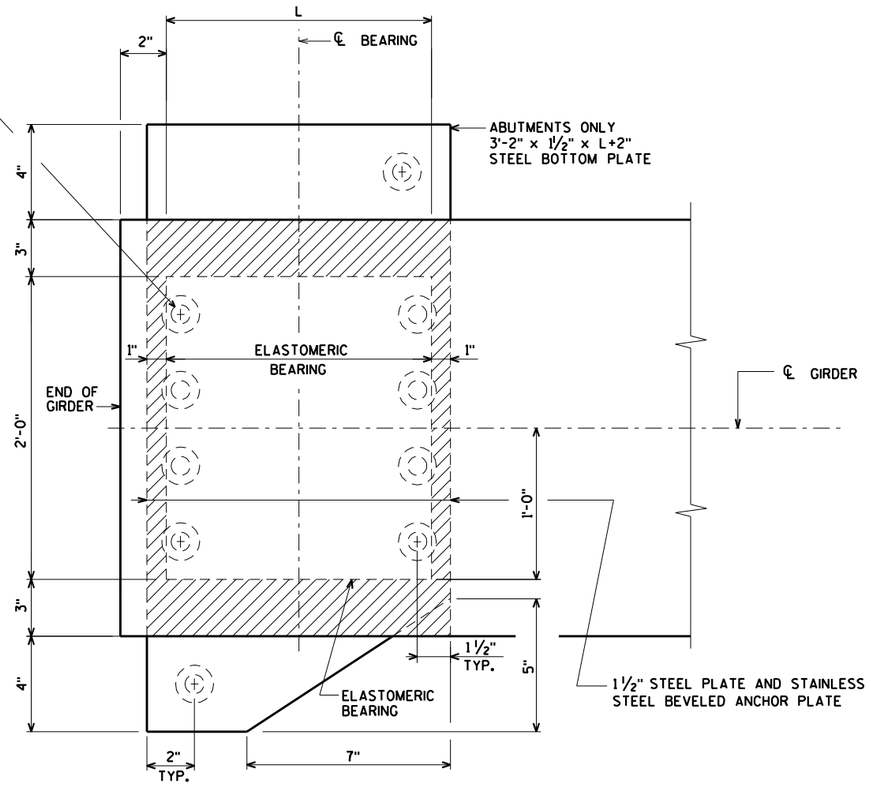
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6/2/2014

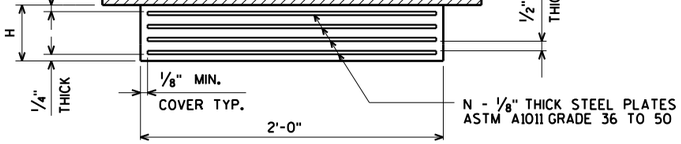
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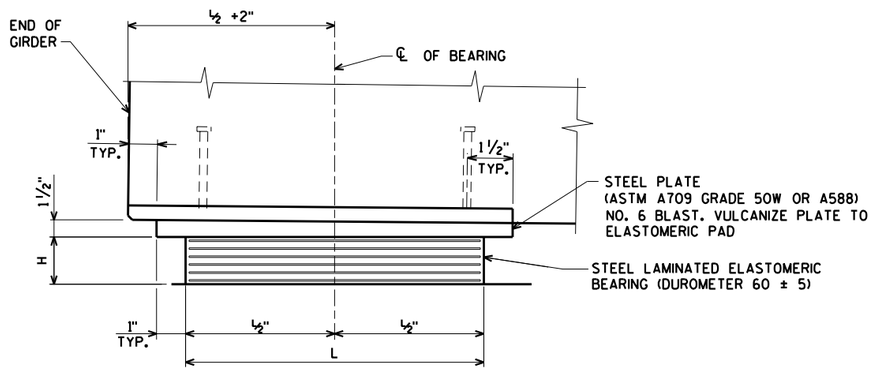
END VIEW



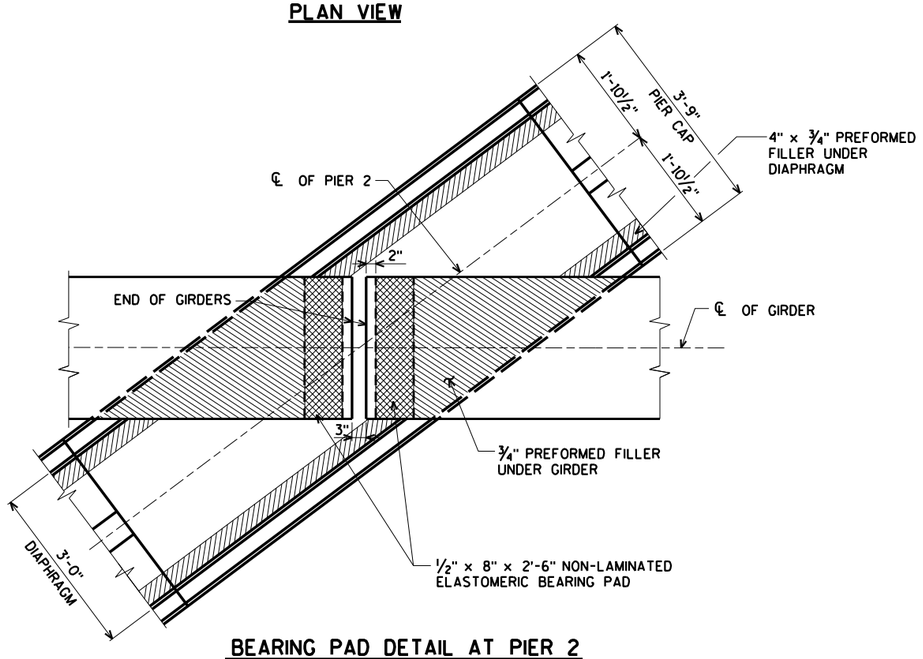
PLAN VIEW



SECTION THRU ELASTOMERIC BEARING



SIDE VIEW



BEARING PAD DETAIL AT PIER 2

ELASTOMERIC LAMINATED BEARING PAD TABLE

LOCATION	L	H	N
W. ABUT	1'-2"	4 3/8"	7"
PIER 1 SPAN 1	12"	2 1/2"	4"
PIER 1 SPAN 2	12"	2 1/2"	4"
PIER 3 SPAN 3	12"	2 1/2"	4"
PIER 3 SPAN 4	10"	2 1/2"	4"
E. ABUT.	1'-0"	3 3/4"	6"

BEARING NOTES

BEARING PADS ELASTOMERIC LAMINATED SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85° F.

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS 2 1/4" ABOVE TOP OF ANCHOR PLATE.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQULIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C. ALL PLATES SHALL BE SHOP PAINTED AFTER BEARING FABRICATION.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN BOTTOM PLATE SHALL HAVE A DIAMETER 3/8" LARGER THAN ANCHOR BOLT.

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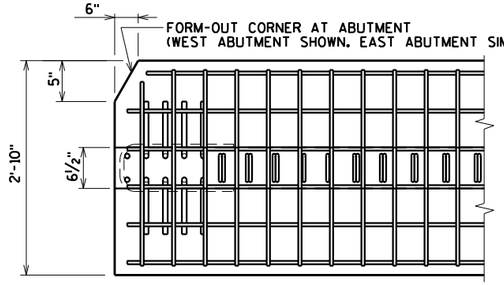
STRUCTURE B-32-219

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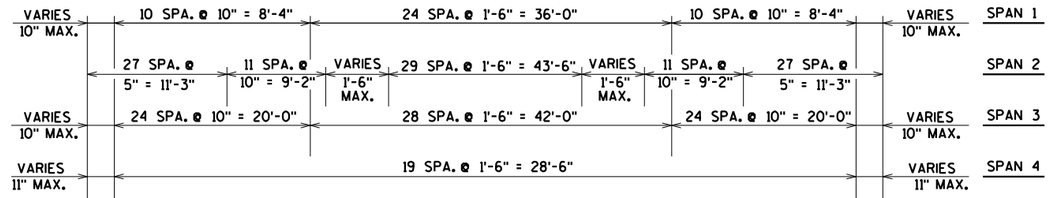
BEARING DETAILS

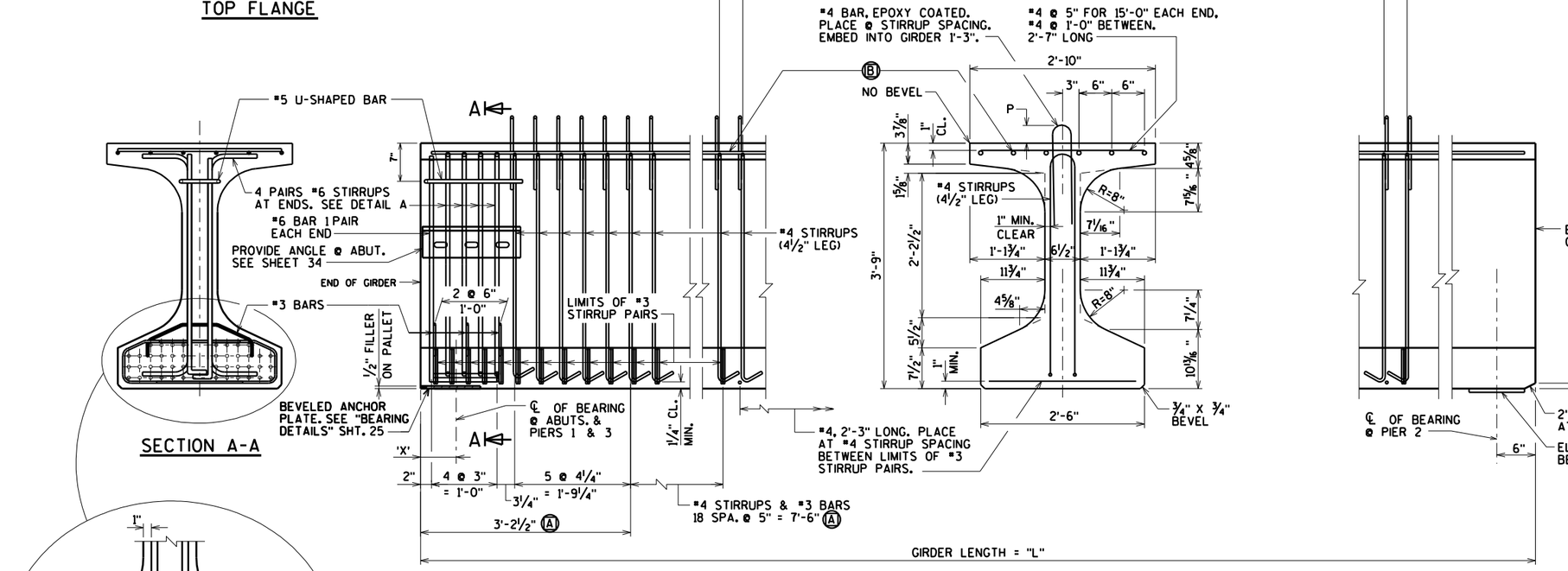
SHEET 25 OF 45
520

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TOP FLANGE





SECTION A-A

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO APPLICATION OF THE SEALER.

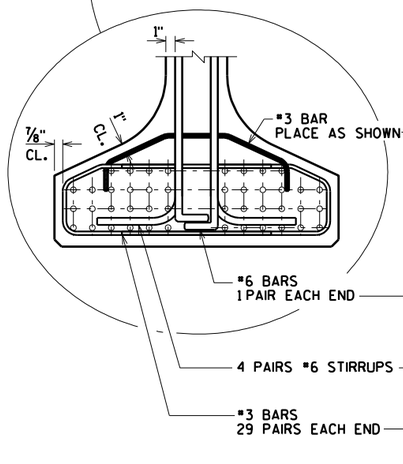
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

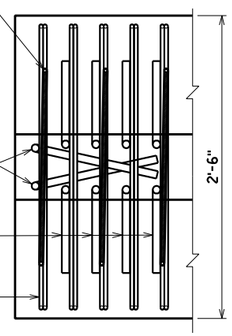
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT CHIEF, (608)266-5161.

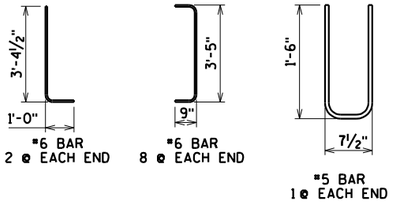
PRESTRESSING STRANDS SHALL BE 0.6"ϕ -7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.





DETAIL A
BOTTOM FLANGE



DIMENSION 'X' TABLE	
LOCATION	'X' DIMENSION
W. ABUT.	9"
PIER 1, SPAN 1	8"
PIER 1, SPAN 2	8"
PIER 3, SPAN 3	8"
PIER 3, SPAN 4	7"
E. ABUT.	8"

SIDE VIEW & TYP. SECTION IN SPAN

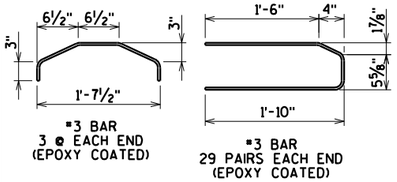
Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 2'-4"

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	DRAPED PATTERN f'ci (P.S.I.) *	DRAPED PATTERN (IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	UNDRAPED PATTERN f'ci (P.S.I.) *
1	1	75'-8⅞"	0.1	0.3	0.4	0.5	0.5	0.5	0.4	0.3	0.1	8,000	8	7	8	0.6	18	6,400	40	13	16	4	-----	---
1	2, 8	75'-1¾"	0.2	0.3	0.4	0.5	0.5	0.5	0.4	0.3	0.2	8,000	8	7	8	0.6	18	6,400	40	13	16	4	-----	---
1	3-7	75'-1¾"	0.2	0.3	0.5	0.5	0.6	0.5	0.5	0.3	0.2	8,000	8	7	8	0.6	18	6,400	40	13	16	4	-----	---
2	1	108'-7⅝"	0.6	1.1	1.6	1.9	2.0	1.9	1.6	1.1	0.6	8,000	8	7	8	0.6	36	6,400	39	13.5	16.5	5	-----	---
2	2, 8	107'-8⅞"	0.6	1.2	1.7	1.9	2.0	1.9	1.7	1.2	0.6	8,000	8	7	8	0.6	36	6,400	39	13.5	16.5	5	-----	---
2	3-7	107'-8⅞"	0.7	1.3	1.8	2.1	2.2	2.1	1.8	1.3	0.7	8,000	8	7	8	0.6	36	6,400	39	13.5	16.5	5	-----	---
3	1	103'-11¼"	0.5	0.9	1.3	1.5	1.6	1.5	1.3	0.9	0.5	8,000	8	7	8	0.6	30	6,400	40	13	16	4	-----	---
3	2, 8	103'-0⅝"	0.5	1.0	1.3	1.6	1.7	1.6	1.3	1.0	0.5	8,000	8	7	8	0.6	30	6,400	40	13	16	4	-----	---
3	3-7	103'-0⅝"	0.5	1.0	1.4	1.7	1.7	1.7	1.4	1.0	0.5	8,000	8	7	8	0.6	30	6,400	40	13	16	4	-----	---
4	1	51'-7⅛"	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	8,000	8	7	8	0.6	18	6,400	32	11	14	4	-----	---
4	2-8	51'-1¾"	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	8,000	8	7	8	0.6	18	6,400	32	11	14	4	-----	---



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STRUCTURE B-32-219

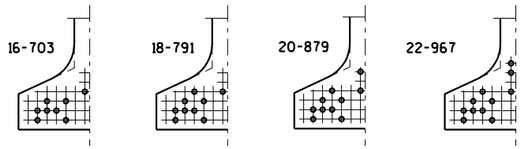
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45W" PRESTRESSED GIRDER DETAILS

SHEET 26 OF 45
521

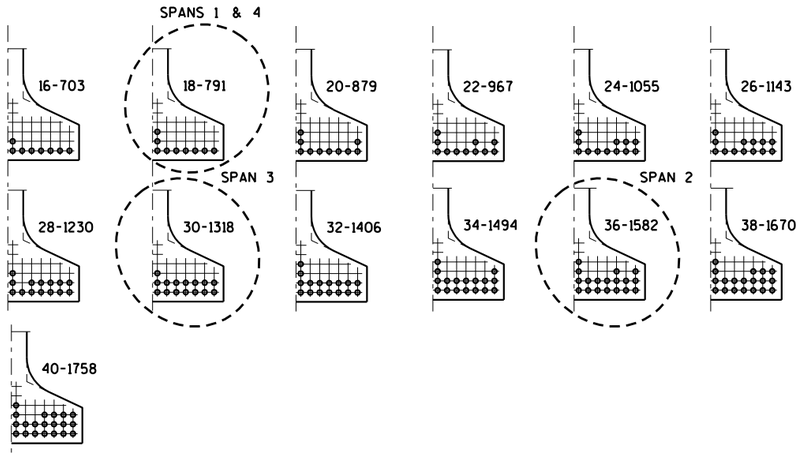
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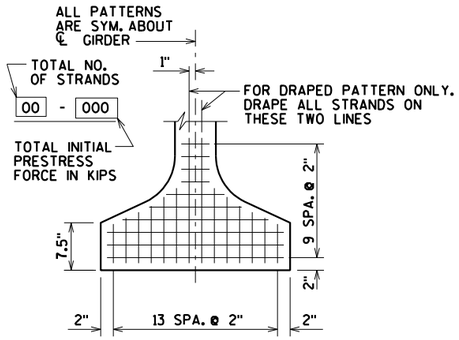
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"ϕ STRANDS

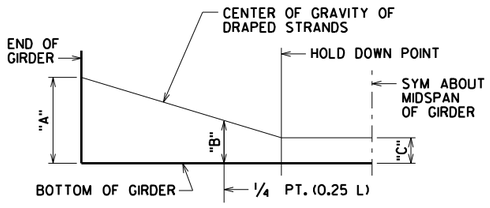


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"ϕ STRANDS



TYP. STRAND PATTERN



DRAPED STRAND PROFILE

THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN

SPAN	CAMBER (IN.)
1	1.2
2	4.5
3	3.5
4	0.7

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T'. USE ACTUAL GIRDER SHOTS. THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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STRUCTURE B-32-219

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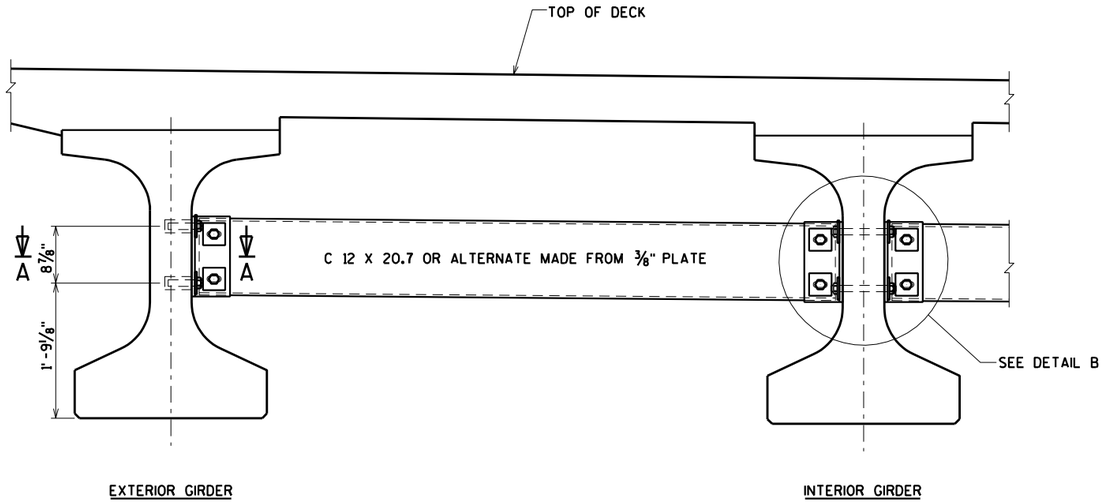
45W" PRESTRESSED GIRDER DETAILS

SHEET 27 OF 45
522

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$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-219 190 WB over STH 35\BRIDGE\B-32-219 45wDIA.DGN



PART TRANSVERSE SECTION AT DIAPHRAGM

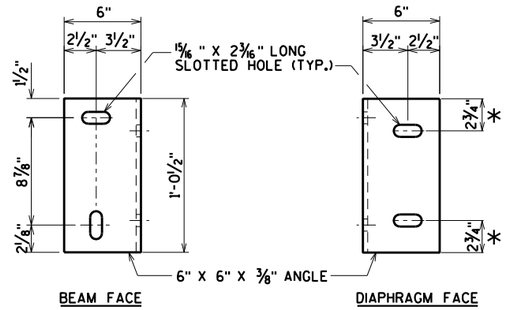
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-32-219", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

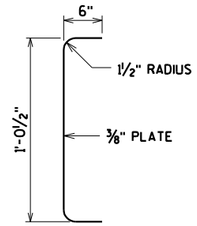
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

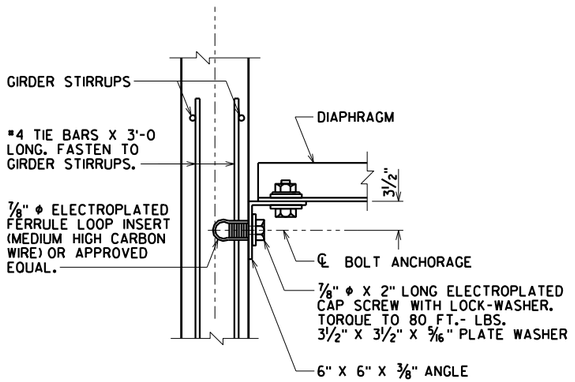


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

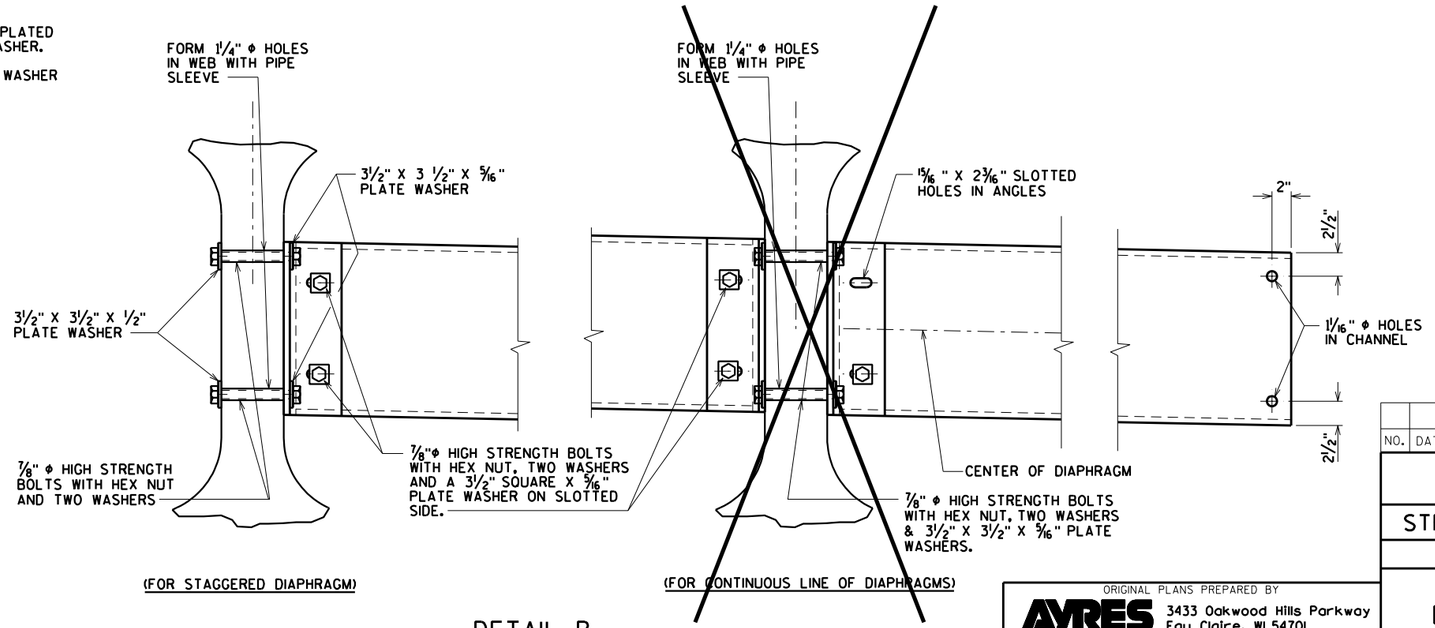


SECTION THRU ALTERNATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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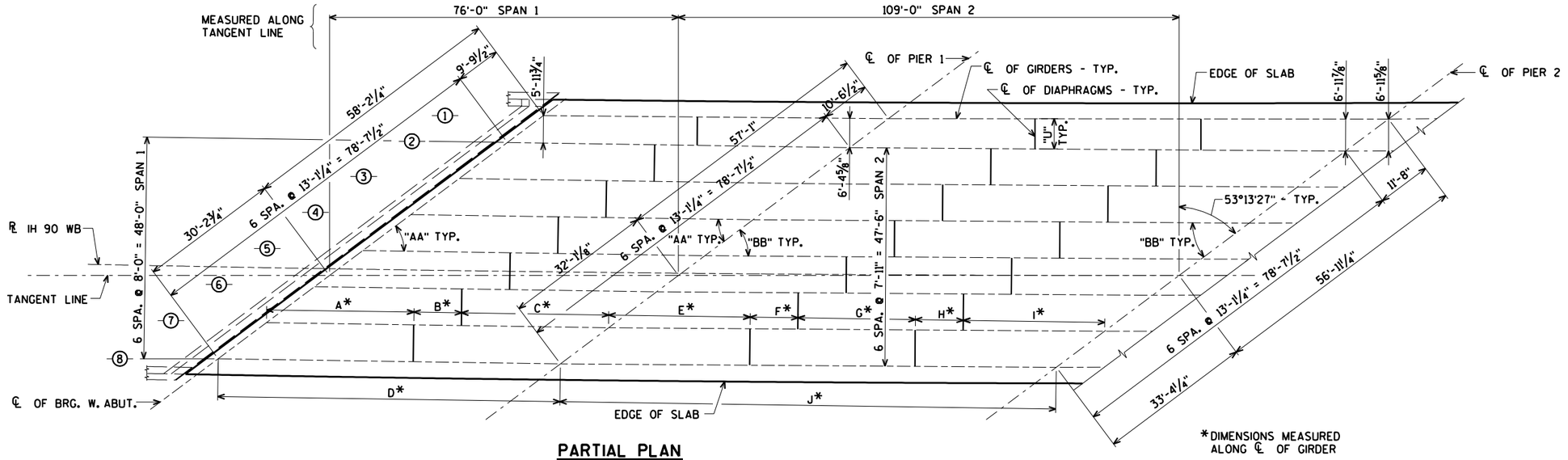
STEEL DIAPHRAGM DETAILS

SHEET 28 OF 45
523

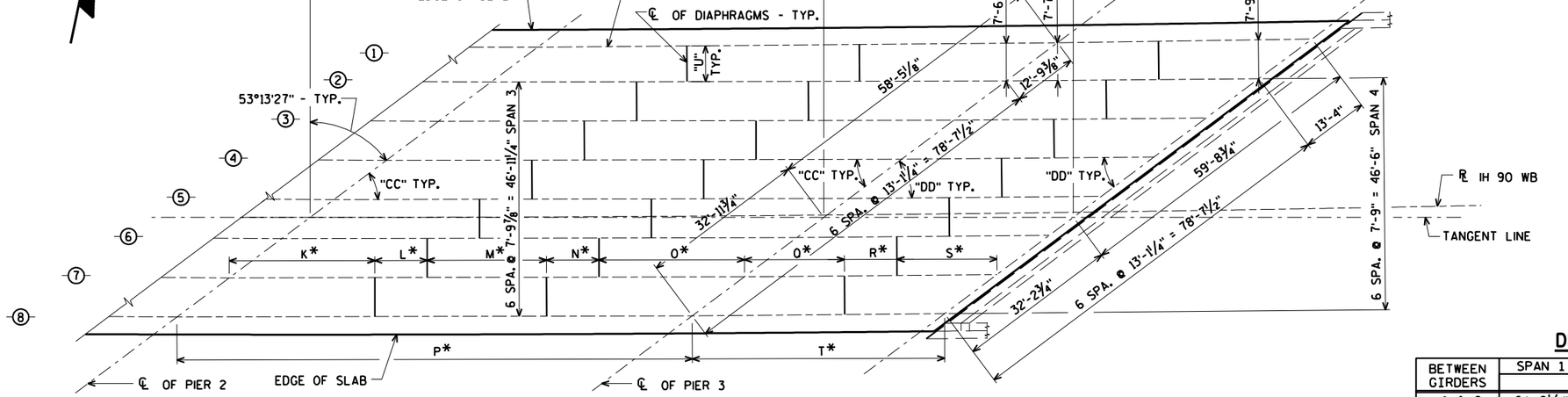
ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
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STATE PROJECT NUMBER

1071-06-78



PARTIAL PLAN



PARTIAL PLAN

GIRDER ANGLES

GIRDER	"AA"	"BB"	"CC"	"DD"
1	37°16'47"	36°49'12"	36°17'15"	35°53'59"
2-8	37°37'53"	37°10'38"	36°39'07"	36°16'09"

DIAPHRAGM LENGTH "U"

BETWEEN GIRDERS	SPAN 1	SPAN 2		SPAN 3		SPAN 4
		WEST	EAST	WEST	EAST	
1 & 2	6'-2¼"	6'-6⅞"	6'-9½"	7'-1⅞"	7'-4½"	7'-8¼"
2 & 3	8'-0"	7'-11"	7'-11"	7'-9⅞"	7'-9⅞"	7'-9"
3 & 4	8'-0"	7'-11"	7'-11"	7'-9⅞"	7'-9⅞"	7'-9"
4 & 5	8'-0"	7'-11"	7'-11"	7'-9⅞"	7'-9⅞"	7'-9"
5 & 6	8'-0"	7'-11"	7'-11"	7'-9⅞"	7'-9⅞"	7'-9"
6 & 7	8'-0"	7'-11"	7'-11"	7'-9⅞"	7'-9⅞"	7'-9"
7 & 8	8'-0"	7'-11"	7'-11"	7'-9⅞"	7'-9⅞"	7'-9"

GIRDER AND DIAPHRAGM DIMENSIONS

GIRDER	SPAN 1				SPAN 2						SPAN 3						SPAN 4			
	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"	DIM. "E"	DIM. "F"	DIM. "G"	DIM. "H"	DIM. "I"	DIM. "J"	DIM. "K"	DIM. "L"	DIM. "M"	DIM. "N"	DIM. "O"	DIM. "P"	DIM. "Q"	DIM. "R"	DIM. "S"	DIM. "T"
1	33'-6"	-----	41'-7⅜"	75'-1⅜"	31'-11⅛"	-----	36'-1¾"	-----	40'-9¾"	108'-10⅝"	29'-10½"	-----	34'-7"	-----	39'-8¾"	104'-2¼"	20'-2⅞"	-----	30'-9¾"	51'-0⅝"
2	32'-0⅞"	9'-2¾"	33'-2¾"	74'-6¼"	30'-9¼"	9'-7⅛"	26'-4⅞"	9'-8⅞"	31'-5¾"	107'-11⅞"	29'-2⅛"	10'-1¼"	24'-3⅞"	10'-3⅛"	29'-5⅛"	103'-3⅝"	20'-0¼"	10'-6⅞"	20'-0⅛"	50'-7¼"
3	32'-0⅞"	10'-4½"	32'-0⅞"	74'-6¼"	30'-9¼"	10'-5¼"	25'-6⅝"	10'-5¼"	30'-9⅜"	107'-11⅞"	29'-2⅛"	10'-6⅛"	23'-11"	10'-6⅛"	29'-2⅛"	103'-3⅝"	20'-0¼"	10'-6¾"	20'-0¼"	50'-7¼"
4	32'-0⅞"	10'-4½"	32'-0⅞"	74'-6¼"	30'-9¼"	10'-5¼"	25'-6⅝"	10'-5¼"	30'-9⅜"	107'-11⅞"	29'-2⅛"	10'-6⅛"	23'-11"	10'-6⅛"	29'-2⅛"	103'-3⅝"	20'-0¼"	10'-6¾"	20'-0¼"	50'-7¼"
5	32'-0⅞"	10'-4½"	32'-0⅞"	74'-6¼"	30'-9¼"	10'-5¼"	25'-6⅝"	10'-5¼"	30'-9⅜"	107'-11⅞"	29'-2⅛"	10'-6⅛"	23'-11"	10'-6⅛"	29'-2⅛"	103'-3⅝"	20'-0¼"	10'-6¾"	20'-0¼"	50'-7¼"
6	32'-0⅞"	10'-4½"	32'-0⅞"	74'-6¼"	30'-9¼"	10'-5¼"	25'-6⅝"	10'-5¼"	30'-9⅜"	107'-11⅞"	29'-2⅛"	10'-6⅛"	23'-11"	10'-6⅛"	29'-2⅛"	103'-3⅝"	20'-0¼"	10'-6¾"	20'-0¼"	50'-7¼"
7	32'-0⅞"	10'-4½"	32'-0⅞"	74'-6¼"	30'-9¼"	10'-5¼"	25'-6⅝"	10'-5¼"	30'-9⅜"	107'-11⅞"	29'-2⅛"	10'-6⅛"	23'-11"	10'-6⅛"	29'-2⅛"	103'-3⅝"	20'-0¼"	10'-6¾"	20'-0¼"	50'-7¼"
8	42'-5⅜"	-----	32'-0⅞"	74'-6¼"	41'-2⅝"	-----	36'-0"	-----	30'-9⅜"	107'-11⅞"	39'-8¼"	-----	34'-5¼"	-----	29'-2⅛"	103'-3⅝"	30'-7"	-----	20'-0¼"	50'-7¼"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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SUPERSTRUCTURE GIRDER LAYOUT

SHEET 29 OF 45
524

8

8

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-219 190 WB over STH 35\BRIDGE\B-32-219 gdr layout.dgn

7/17/2014

PENTABLE:BReau_shd_util.tbl

$PRFNAME$
Un+41-0627.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 deck elev.dgn

STATE PROJECT NUMBER

1071-06-78

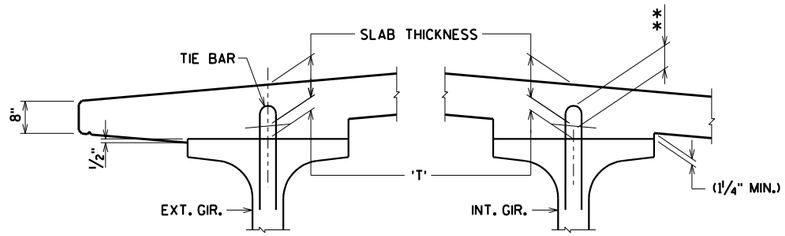
TOP OF DECK ELEVATIONS

SPAN 1										
LOCATION	℄ BRG. W. ABUT.	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.
LT. EDGE	667.31	667.36	667.42	667.47	667.52	667.56	667.61	667.66	667.70	667.75
GIRDER 1	667.33	667.39	667.44	667.49	667.54	667.59	667.63	667.68	667.73	667.77
GIRDER 2	667.40	667.45	667.50	667.56	667.61	667.66	667.71	667.75	667.80	667.85
GIRDER 3	667.48	667.53	667.59	667.64	667.69	667.75	667.80	667.85	667.90	667.94
GIRDER 4	667.56	667.62	667.67	667.73	667.78	667.83	667.89	667.94	667.99	668.04
GIRDER 5	667.64	667.70	667.76	667.81	667.87	667.92	667.97	668.03	668.08	668.13
RL I-90 WB	667.68	667.74	667.80	667.85	667.91	667.96	668.02	668.07	668.12	668.17
GIRDER 6	667.72	667.78	667.84	667.89	667.95	668.00	668.06	668.11	668.16	668.22
GIRDER 7	667.80	667.86	667.92	667.97	668.03	668.09	668.14	668.20	668.25	668.30
GIRDER 8	667.87	667.93	667.99	668.05	668.11	668.17	668.23	668.28	668.34	668.39
RT. EDGE	667.89	667.95	668.01	668.07	668.13	668.19	668.25	668.30	668.36	668.41

SPAN 2										
LOCATION	℄ PIER 1	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.
LT. EDGE	667.79	667.85	667.91	667.97	668.02	668.08	668.13	668.18	668.22	668.27
GIRDER 1	667.82	667.88	667.94	667.99	668.05	668.10	668.15	668.20	668.25	668.30
GIRDER 2	667.89	667.96	668.02	668.08	668.14	668.19	668.25	668.30	668.35	668.40
GIRDER 3	667.99	668.06	668.12	668.18	668.24	668.30	668.35	668.41	668.46	668.51
GIRDER 4	668.08	668.15	668.22	668.28	668.34	668.40	668.46	668.51	668.57	668.62
GIRDER 5	668.18	668.24	668.31	668.38	668.44	668.50	668.56	668.62	668.67	668.73
RL I-90 WB	668.22	668.29	668.36	668.42	668.49	668.55	668.61	668.67	668.72	668.77
GIRDER 6	668.27	668.34	668.41	668.47	668.54	668.60	668.66	668.72	668.78	668.83
GIRDER 7	668.36	668.43	668.50	668.57	668.63	668.70	668.76	668.82	668.88	668.94
GIRDER 8	668.44	668.52	668.59	668.66	668.73	668.79	668.86	668.92	668.98	669.04
RT. EDGE	668.47	668.54	668.61	668.68	668.75	668.82	668.88	668.95	669.01	669.07

SPAN 3										
LOCATION	℄ PIER 2	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.
LT. EDGE	668.31	668.35	668.39	668.42	668.45	668.48	668.51	668.54	668.57	668.59
GIRDER 1	668.34	668.38	668.41	668.45	668.48	668.51	668.54	668.57	668.60	668.62
GIRDER 2	668.44	668.48	668.52	668.56	668.60	668.63	668.66	668.69	668.72	668.75
GIRDER 3	668.56	668.60	668.64	668.68	668.72	668.75	668.78	668.82	668.85	668.88
GIRDER 4	668.67	668.71	668.75	668.79	668.83	668.87	668.91	668.94	668.97	669.00
GIRDER 5	668.78	668.82	668.87	668.91	668.95	668.99	669.03	669.06	669.10	669.13
RL I-90 WB	668.83	668.87	668.92	668.96	669.00	669.04	669.08	669.12	669.15	669.18
GIRDER 6	668.89	668.93	668.98	669.02	669.07	669.11	669.15	669.18	669.22	669.25
GIRDER 7	668.99	669.04	669.09	669.13	669.18	669.22	669.26	669.30	669.34	669.37
GIRDER 8	669.10	669.15	669.20	669.24	669.29	669.33	669.38	669.42	669.46	669.49
RT. EDGE	669.12	669.17	669.22	669.27	669.32	669.36	669.41	669.45	669.49	669.53

SPAN 4											
LOCATION	℄ PIER 3	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	℄ BRG. E. ABUT.
LT. EDGE	668.61	668.62	668.63	668.64	668.65	668.65	668.66	668.67	668.67	668.68	668.69
GIRDER 1	668.64	668.65	668.66	668.67	668.68	668.69	668.70	668.70	668.71	668.72	668.72
GIRDER 2	668.77	668.78	668.80	668.81	668.82	668.83	668.83	668.84	668.85	668.86	668.87
GIRDER 3	668.90	668.92	668.93	668.94	668.95	668.96	668.97	668.98	668.99	669.00	669.01
GIRDER 4	669.03	669.05	669.06	669.07	669.08	669.09	669.10	669.11	669.12	669.13	669.14
GIRDER 5	669.16	669.17	669.19	669.20	669.21	669.22	669.24	669.25	669.26	669.27	669.28
RL I-90 WB	669.21	669.23	669.24	669.25	669.27	669.28	669.29	669.30	669.31	669.32	669.33
GIRDER 6	669.28	669.30	669.31	669.33	669.34	669.35	669.37	669.38	669.39	669.40	669.41
GIRDER 7	669.41	669.42	669.44	669.45	669.47	669.48	669.49	669.51	669.52	669.53	669.54
GIRDER 8	669.53	669.55	669.56	669.58	669.59	669.61	669.62	669.63	669.65	669.66	669.67
RT. EDGE	669.56	669.58	669.59	669.61	669.62	669.64	669.65	669.67	669.68	669.69	669.71



SLAB HAUNCH DETAIL

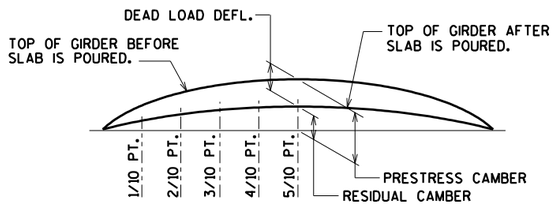
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

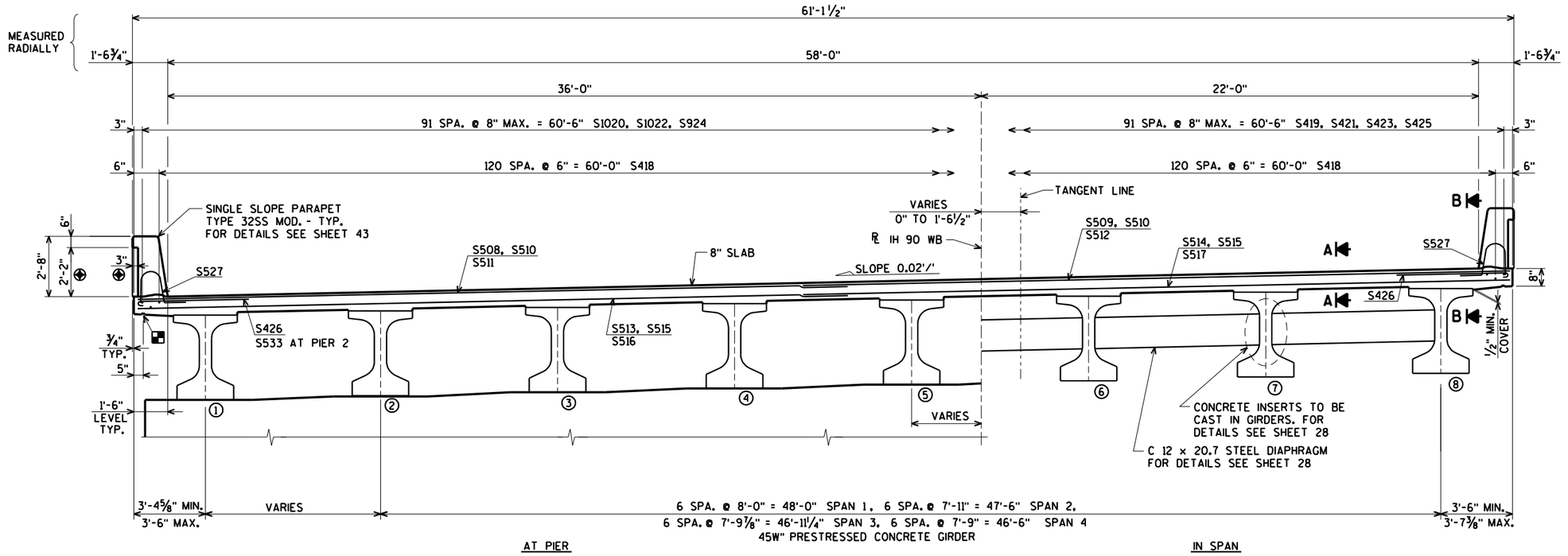
STRUCTURE B-32-219

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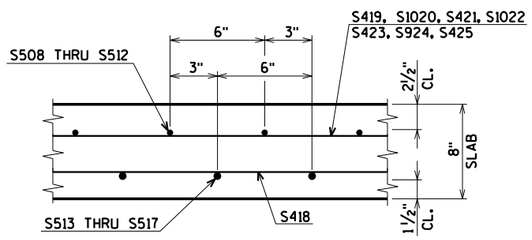
TOP OF DECK ELEVATIONS

SHEET 30 OF 45
525

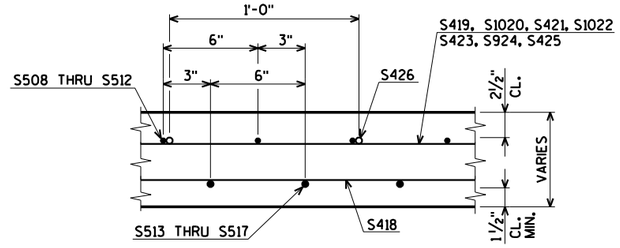
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TYPICAL CROSS SECTION THRU DECK
(LOOKING EAST)



SECTION A



SECTION B

¾" CONT. DRIP GROOVE TERMINATE 2'-0" FROM ABUTMENTS - TYP.

ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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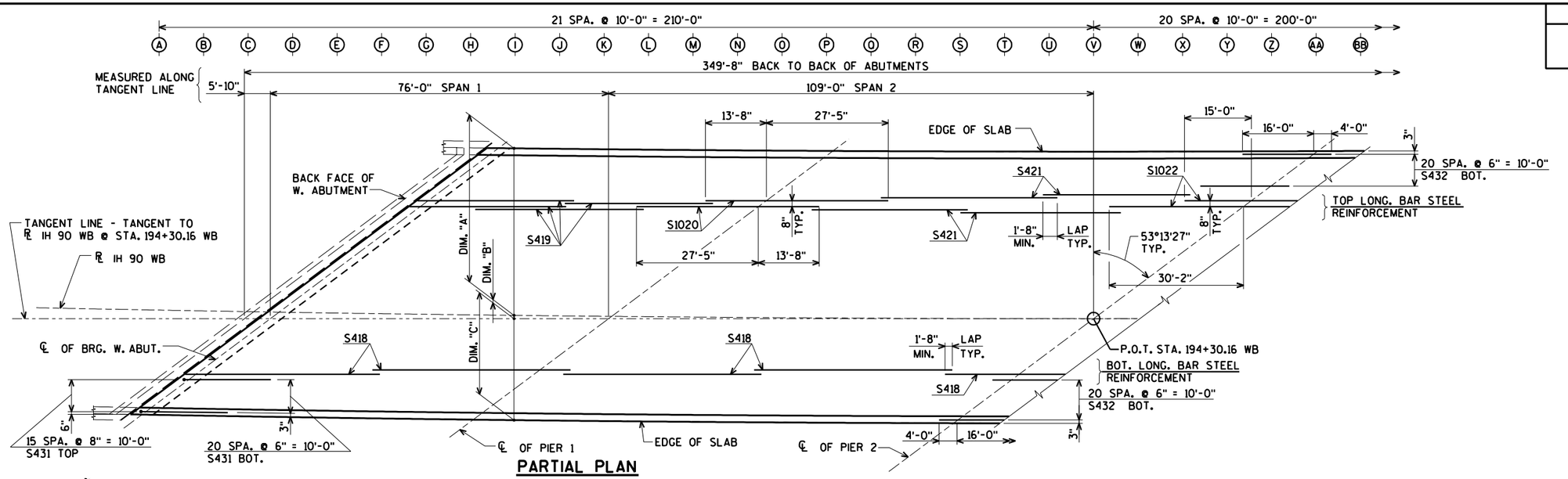
SUPERSTRUCTURE

SHEET 31 OF 45
526

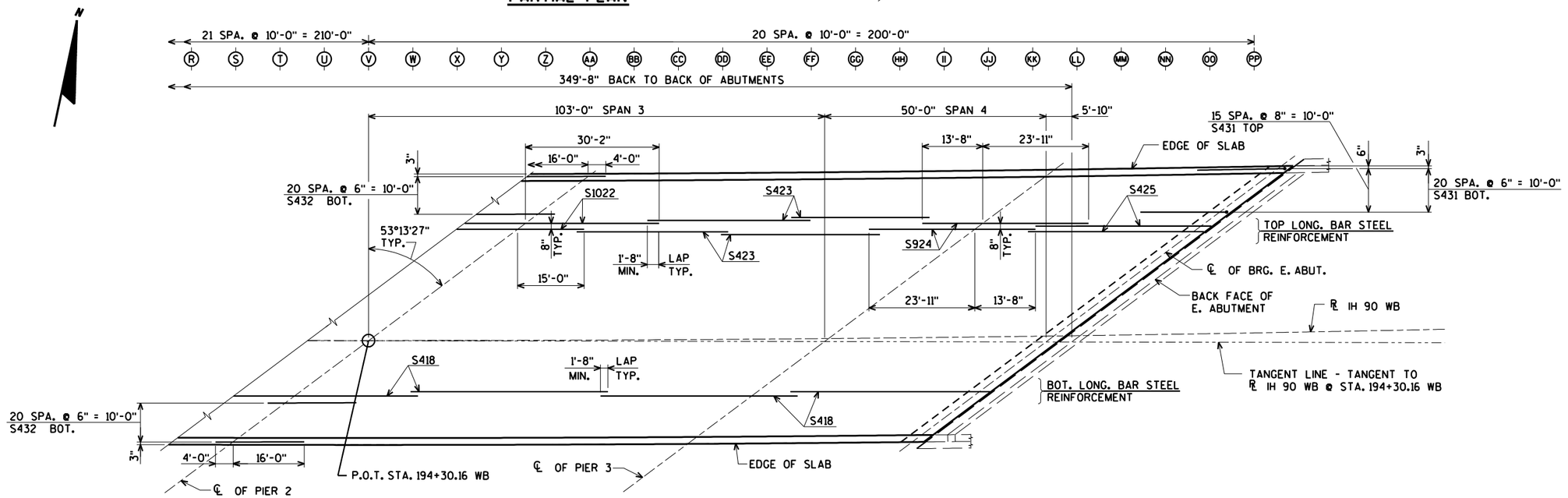
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Eau Claire, WI 54701
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$PRFNAME$
U:±41-0627.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 sup.dgn

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-219 IH90 WB over STH 35\BRIDGE\B-32-219 sup.dgn



PARTIAL PLAN



PARTIAL PLAN

EDGE OF DECK OFFSETS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
DIM. "A"	------	------	------	------	------	------	------	------	38'-2⅞"	38'-1½"	38'-0⅜"	37'-11¼"	37'-10¼"	37'-9⅜"	37'-8⅝"	37'-7⅞"	37'-7¼"	37'-6⅞"	37'-6½"
DIM. "B"	1'-11"	1'-8⅞"	1'-6⅞"	1'-4⅞"	1'-3⅛"	1'-1⅜"	11¾"	10¼"	8⅛"	7½"	6⅜"	5¼"	4¼"	3⅜"	2½"	1⅞"	1¼"	⅞"	½"
DIM. "C"	21'-7"	21'-9⅛"	21'-11¼"	22'-1⅛"	22'-3"	22'-4⅝"	22'-6¼"	22'-7¾"	22'-9¼"	22'-10½"	22'-11¾"	23'-0¾"	23'-1¾"	23'-2⅝"	23'-3½"	23'-4⅛"	23'-4¾"	23'-5⅛"	23'-5½"

	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL
DIM. "A"	37'-6¼"	37'-6"	37'-6"	37'-6"	37'-6¼"	37'-6½"	37'-6⅞"	37'-7¼"	37'-7⅞"	37'-8⅝"	37'-9⅜"	37'-10¼"	37'-11¼"	38'-0⅜"	38'-1½"	38'-2⅞"	38'-4¼"	38'-5¾"	38'-7⅜"
DIM. "B"	¼"	0"	0"	0"	¼"	½"	⅞"	1¼"	1⅞"	2½"	3⅜"	4¼"	5¼"	6⅜"	7½"	8⅞"	10¼"	11¾"	1'-1⅜"
DIM. "C"	23'-5¾"	23'-6"	23'-6"	23'-6"	23'-5¾"	23'-5½"	23'-5⅛"	23'-4¾"	23'-4⅛"	23'-3½"	23'-2⅝"	23'-1¾"	23'-0¾"	22'-11¾"	22'-10½"	------	------	------	------

	MM	NN	OO	PP
DIM. "A"	38'-9⅛"	38'-11"	39'-0⅞"	39'-3"
DIM. "B"	1'-3⅛"	1'-4⅞"	1'-6⅞"	1'-8⅞"
DIM. "C"	------	------	------	------

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-32-219

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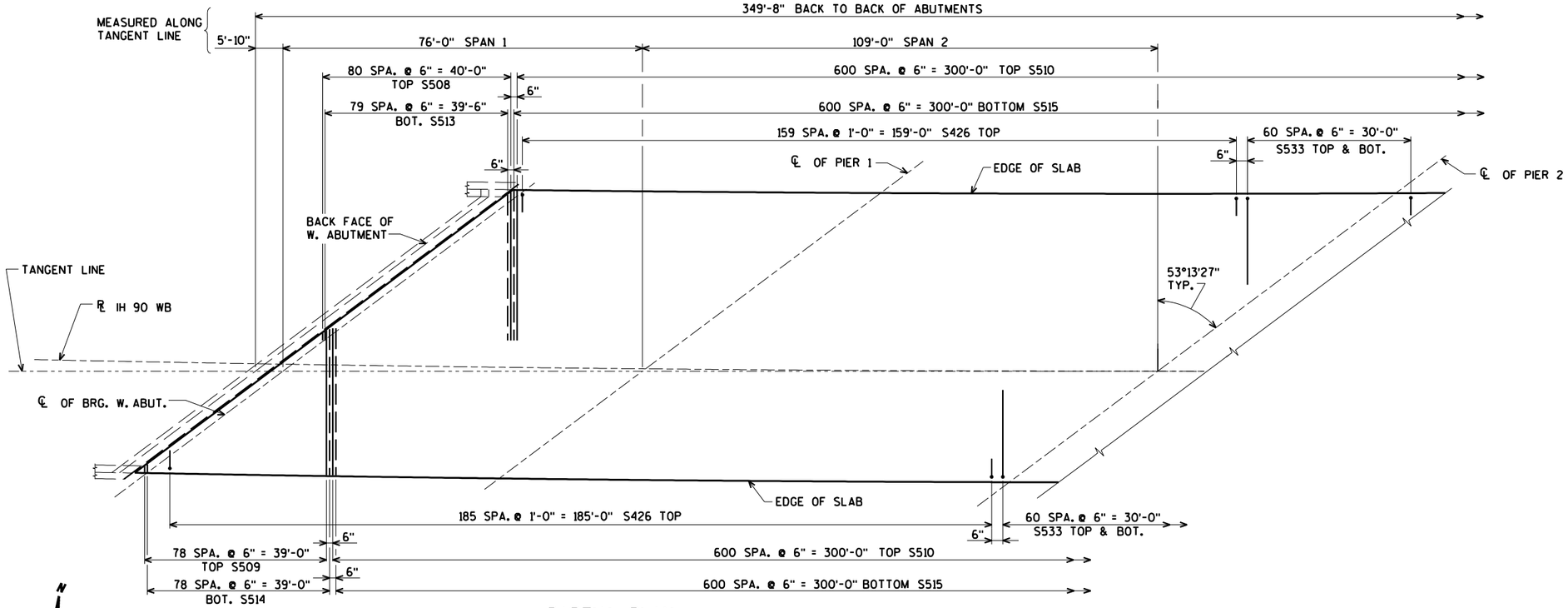
LONGITUDINAL SLAB STEEL LAYOUT

SHEET 32 OF 45
527

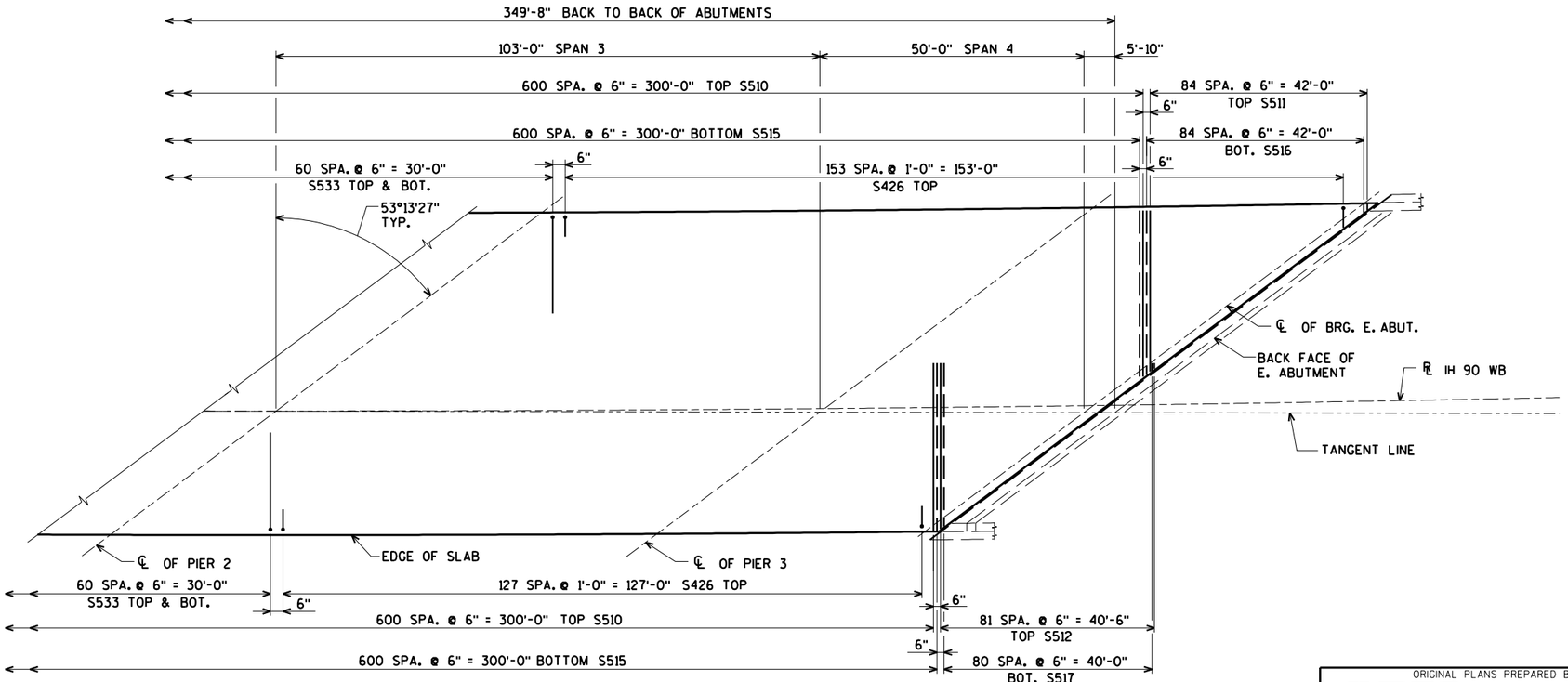
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PARTIAL PLAN



PARTIAL PLAN

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TRANSVERSE SLAB STEEL LAYOUT

SHEET 33 OF 45
528

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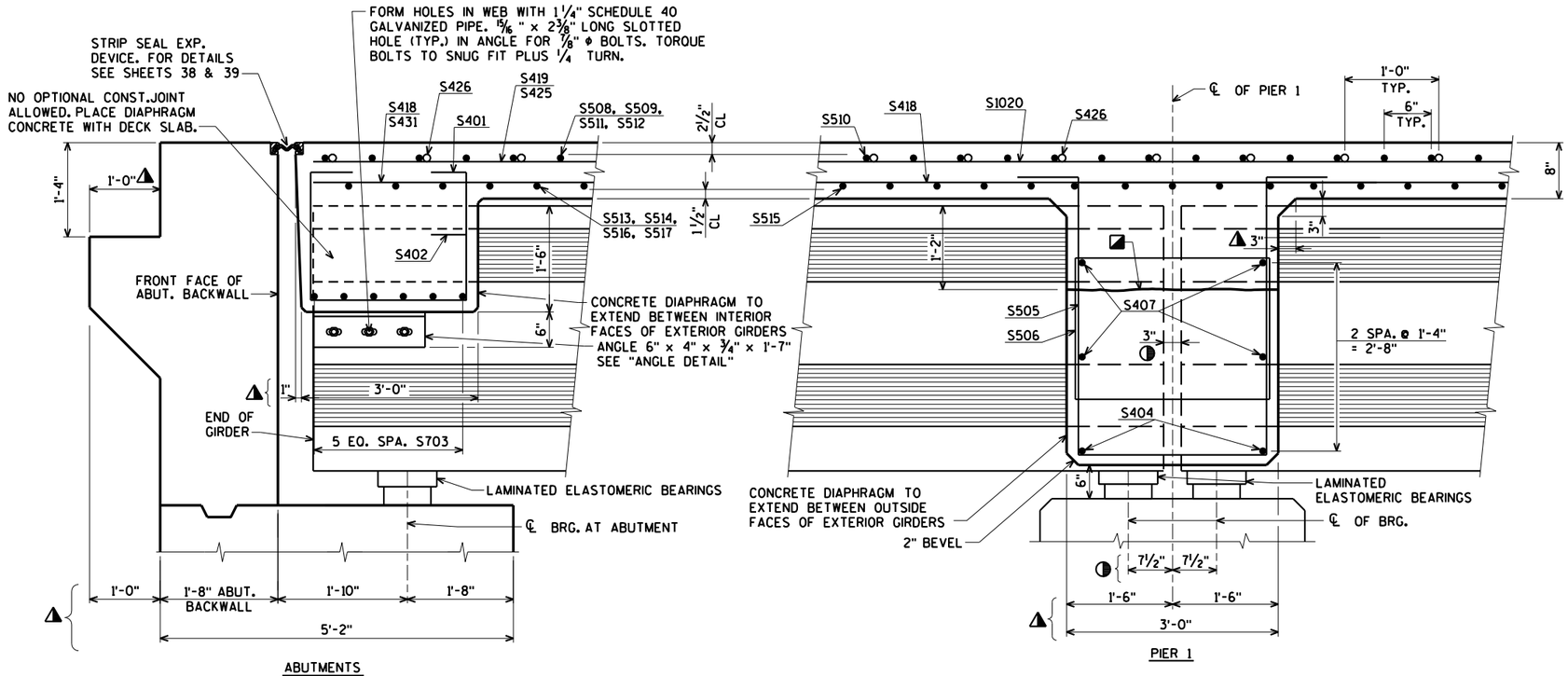
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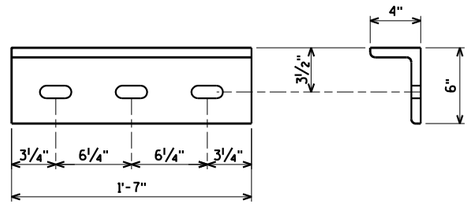
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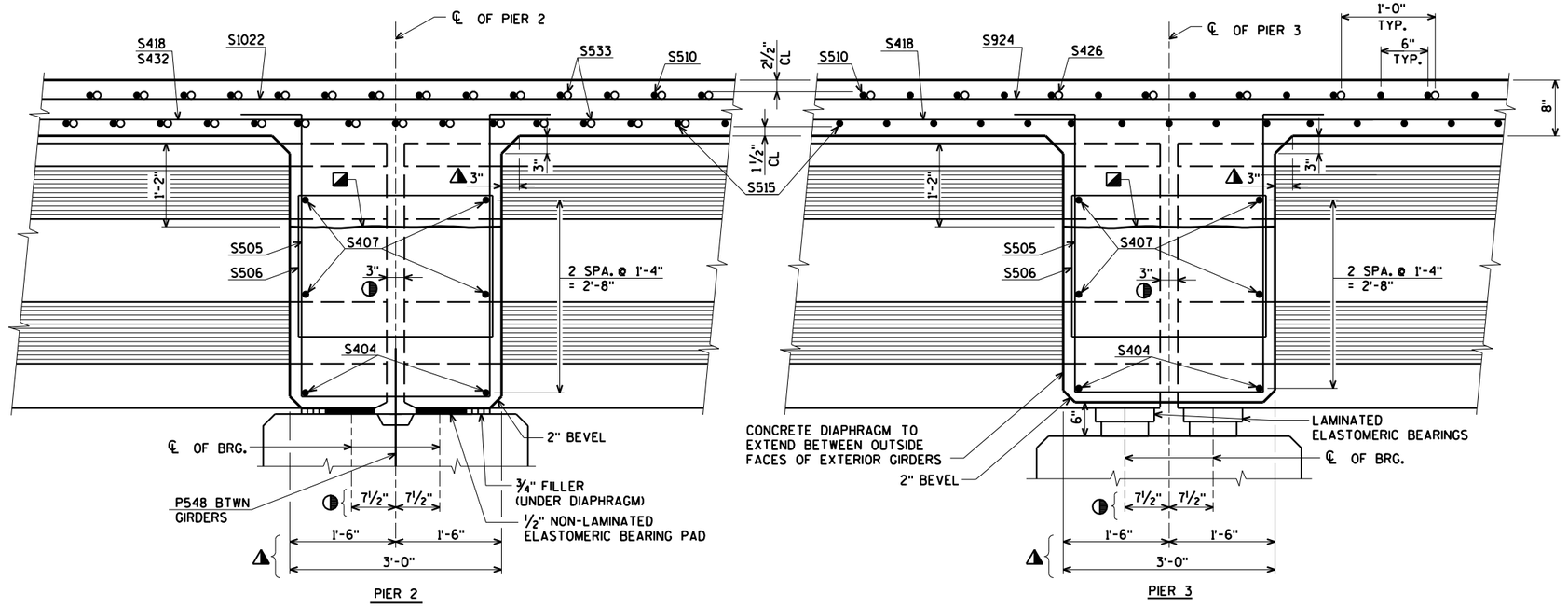


ANGLE DETAIL

DIAPHRAGM SUPPORT ANGLES SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL SUPPORT ANGELS SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM 153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.

ALL DIAPHRAM SUPPORT HARDWARE SHALL BE INCIDENTAL TO "CONCRETE MASONRY BRIDGES".



PART LONGITUDINAL SECTION

▲ DIMENSIONS MEASURED NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

◑ DIMENSIONS MEASURED ALONG ℄ OF GIRDER.

◪ OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

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SUPERSTRUCTURE DETAILS

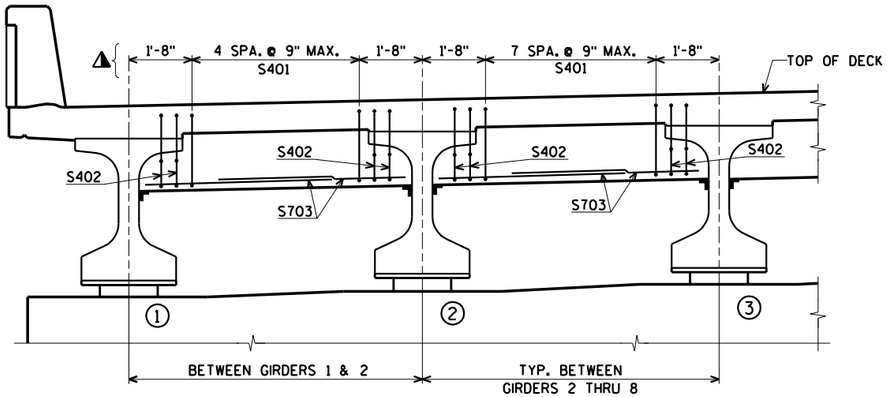
SHEET 34 OF 45
529

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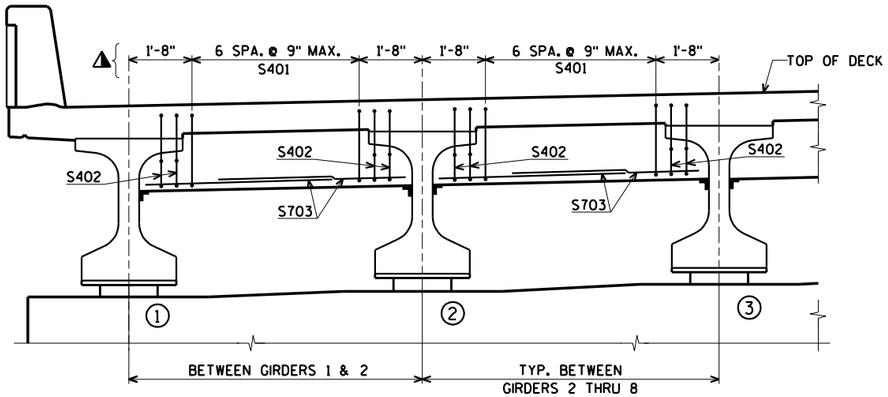
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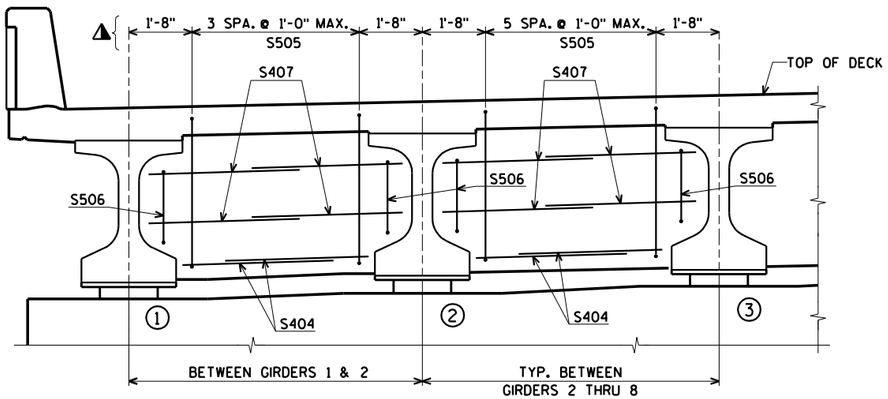
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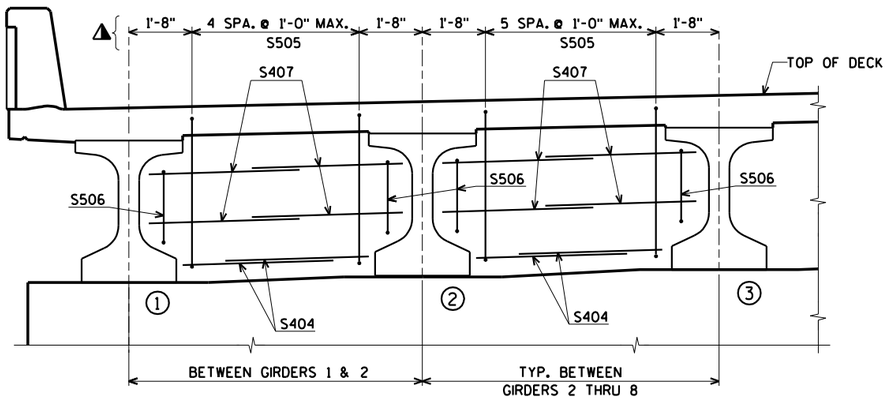
DIAPHRAGM DETAIL AT WEST ABUTMENT



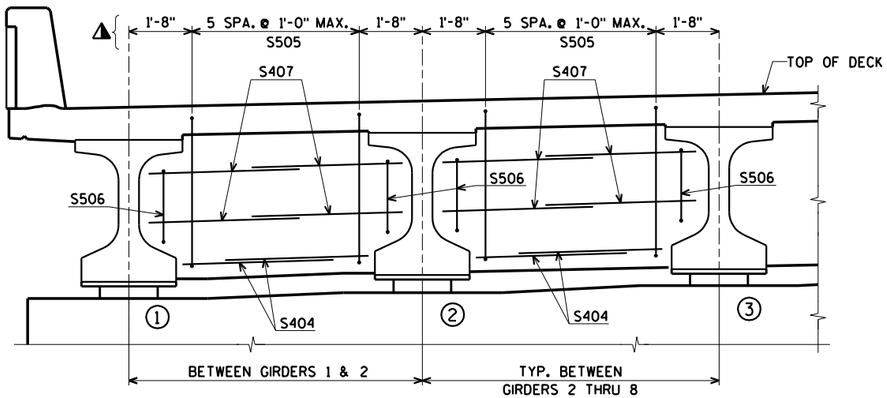
DIAPHRAGM DETAIL AT EAST ABUTMENT



DIAPHRAGM DETAIL AT PIER 1



DIAPHRAGM DETAIL AT PIER 2



DIAPHRAGM DETAIL AT PIER 3

⚠ DIMENSIONS MEASURED NORMAL TO GIRDERS

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DIAPHRAGM DETAILS

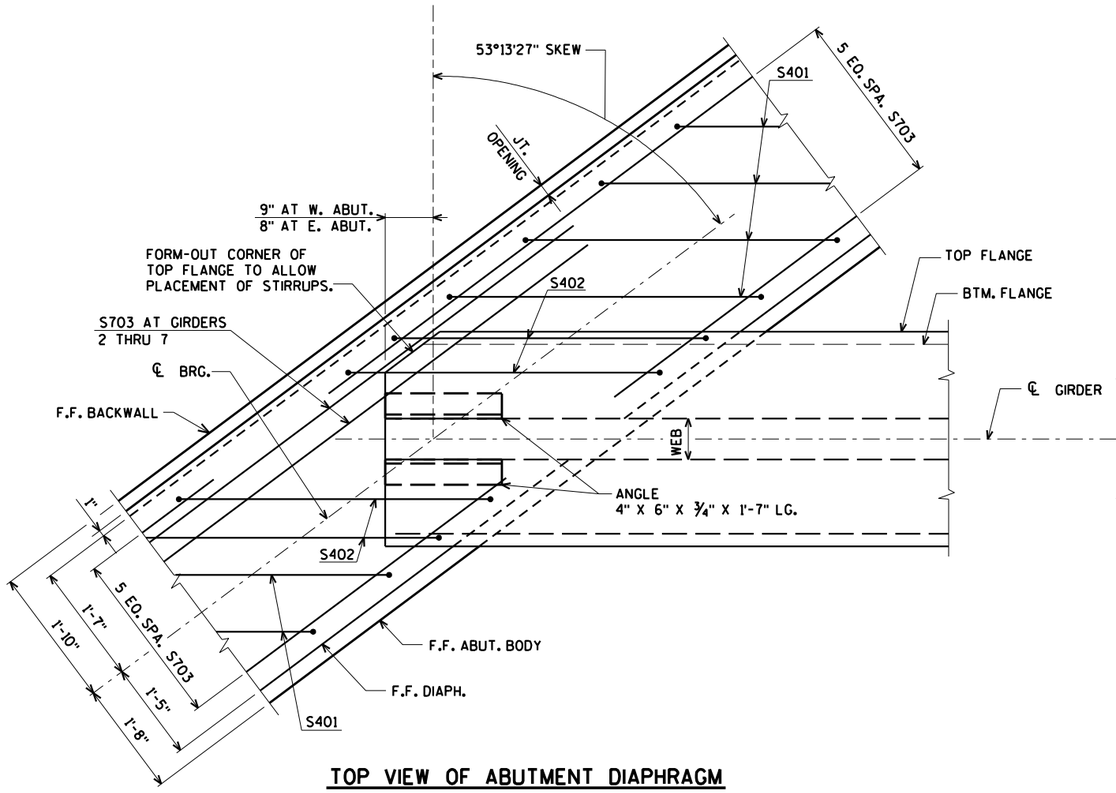
SHEET 35 OF 45
530

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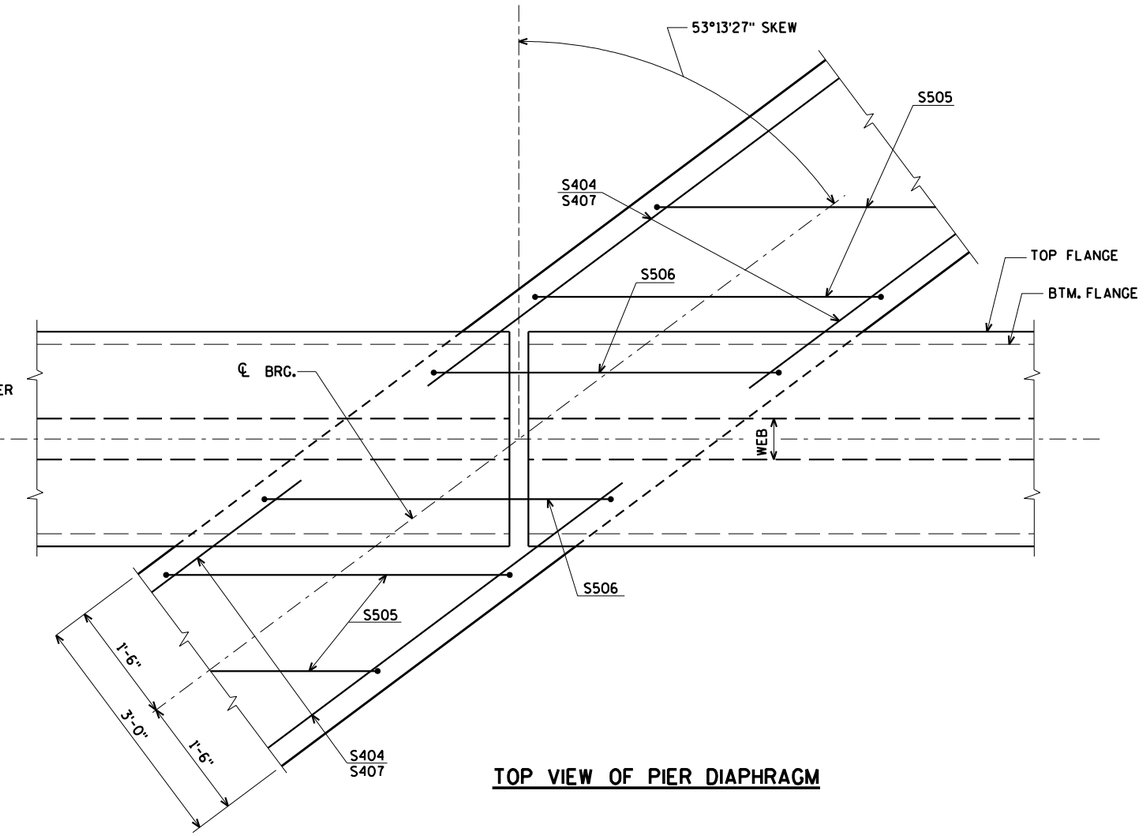
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TOP VIEW OF ABUTMENT DIAPHRAGM



TOP VIEW OF PIER DIAPHRAGM

8

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DIAPHRAGM DETAILS

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531

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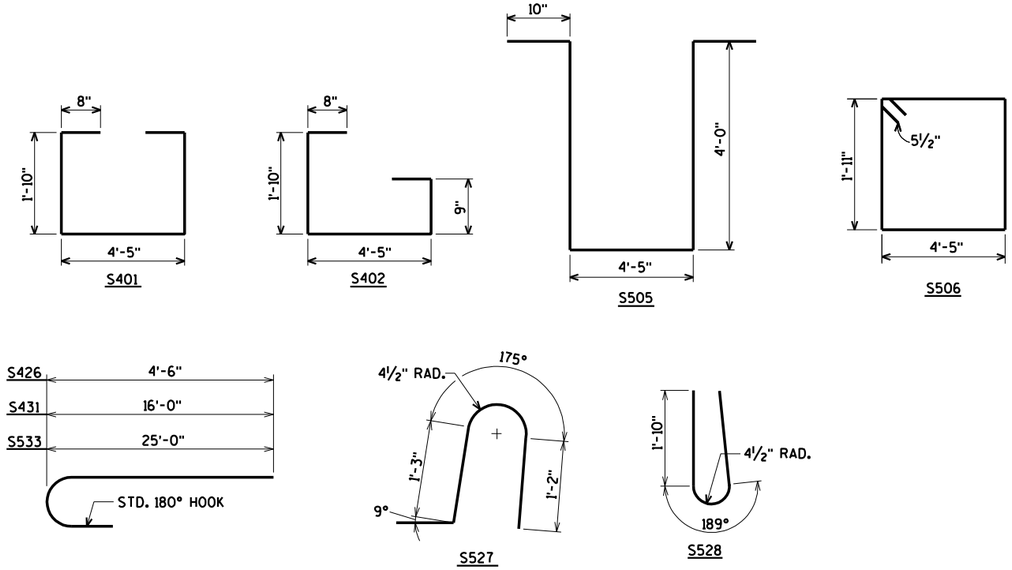
1071-06-78

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	213,040# COATED LOCATION
S401	X	102	9-1	X			DIAPH. @ ABUT. VERT.
S402	X	56	8-0	X			DIAPH. @ ABUT. VERT.
S703	X	192	7-10				DIAPH. @ ABUT. HORIZ.
S404	X	84	5-2				DIAPH. @ PIERS HORIZ.
S505	X	123	13-7	X			DIAPH. @ PIERS VERT.
S506	X	42	13-3	X			DIAPH. @ PIERS VERT.
S407	X	168	7-2				DIAPH. @ PIERS HORIZ.
S508	X	81	16-8			⊗	SLAB TRANS. TOP SPAN 1
S509	X	79	15-10			⊗	SLAB TRANS. TOP SPAN 1
S510	X	1202	31-10				SLAB TRANS. TOP
S511	X	85	16-4			⊗	SLAB TRANS. TOP SPAN 4
S512	X	82	16-8			⊗	SLAB TRANS. TOP SPAN 4
S513	X	80	16-6			⊗	SLAB TRANS. BOT. SPAN 1
S514	X	79	16-2			⊗	SLAB TRANS. BOT. SPAN 1
S515	X	1202	31-8				SLAB TRANS. BOT.
S516	X	85	16-7			⊗	SLAB TRANS. BOT. SPAN 4
S517	X	81	16-6			⊗	SLAB TRANS. BOT. SPAN 4
S418	X	968	44-7				SLAB LONG. BOT.
S419	X	184	34-2				SLAB LONG. TOP SPAN 1
S1020	X	92	41-1				SLAB LONG. TOP PIER 1
S421	X	184	35-10				SLAB LONG. TOP SPAN 2
S1022	X	92	45-2				SLAB LONG. TOP PIER 2
S423	X	184	34-8				SLAB LONG. TOP SPAN 3
S924	X	92	37-7				SLAB LONG. TOP PIER 3
S425	X	92	40-7				SLAB LONG. TOP SPAN 4
S426	X	628	5-0	X			SLAB TRANS. TOP @ PARAPET
S527	X	1032	4-5	X			PARAPETS VERT.
S528	X	1032	5-0	X			PARAPETS VERT.
S529	X	72	59-0				PARAPETS HORIZ.
S430	X	28	12-0				EXP. JOINT HORIZ.
S431	X	74	16-6	X			SLAB LONG. CORNERS TOP & BOT.
S432	X	42	20-0				SLAB LONG. BOT. PIER 2
S533	X	244	25-7	X			SLAB TRANS. TOP & BOT. PIER 2

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

⊗ 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
S508	1 SERIES OF 81	1'-9" TO 31'-7"
S509	1 SERIES OF 79	1'-1" TO 30'-7"
S511	1 SERIES OF 85	1'-0" TO 31'-8"
S512	1 SERIES OF 82	1'-5" TO 31'-11
S513	1 SERIES OF 80	1'-9" TO 31'-3"
S514	1 SERIES OF 79	1'-5" TO 30'-11
S516	1 SERIES OF 85	1'-3" TO 31'-11
S517	1 SERIES OF 81	1'-7" TO 31'-5"

BUNDLE AND TAG EACH SERIES SEPARATELY.

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SUPERSTRUCTURE
BILL OF BARS

SHEET 37 OF 45
532

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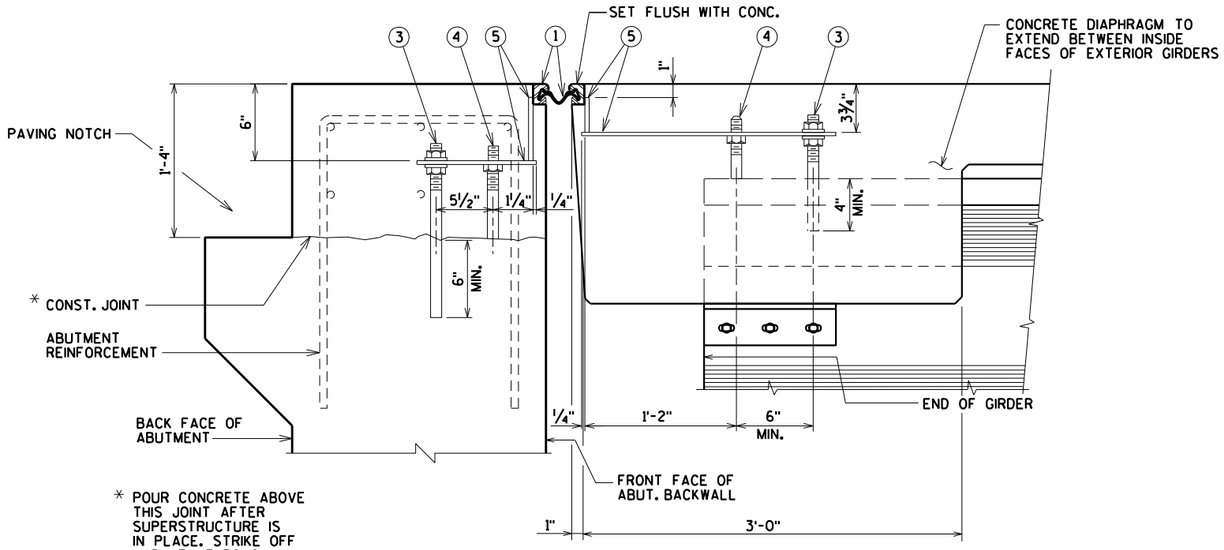
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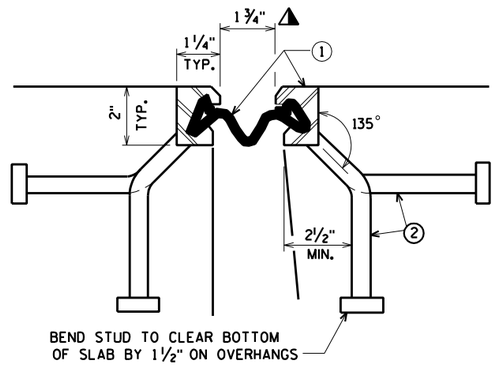
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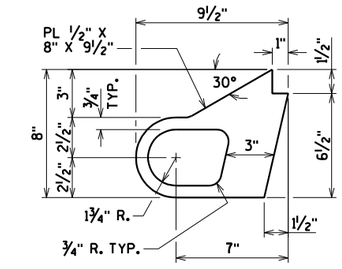
SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

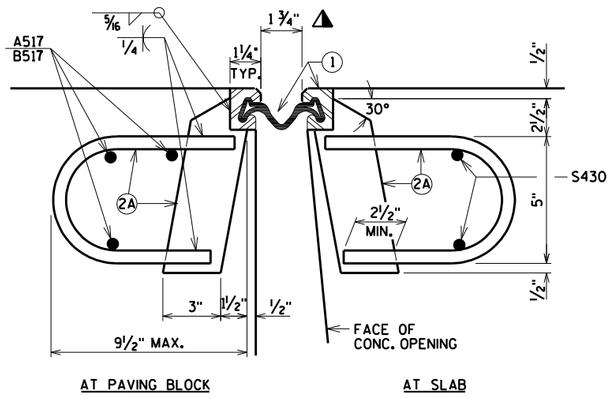


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF SLAB



ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

DS BROWN SSA2 FRAME RAIL WITH
A2R SERIES STRIP SEAL USED

LEGEND

1. NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.
2. STUDS 5/8"ϕ X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH 5/8"ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER AND ABUTMENT BACKWALL AS SHOWN.
4. ¾"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" x 10" x 3'-0" LONG WITH HOLES FOR #7.
7. ¾" ϕ x 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLES. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" ϕ x 4" GALV. HEX HEAD BOLT. BEND 45°.
9. ¾" ϕ x 2 ¼" GALV. THREADED COUPLING.
10. 1" x 5" SLOTTED CSK. HOLE FOR #7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

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

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

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

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-37-219".

ANCHOR SYSTEM #8 & #9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

⚠ DIMENSION MEASURED NORMAL TO JOINT.

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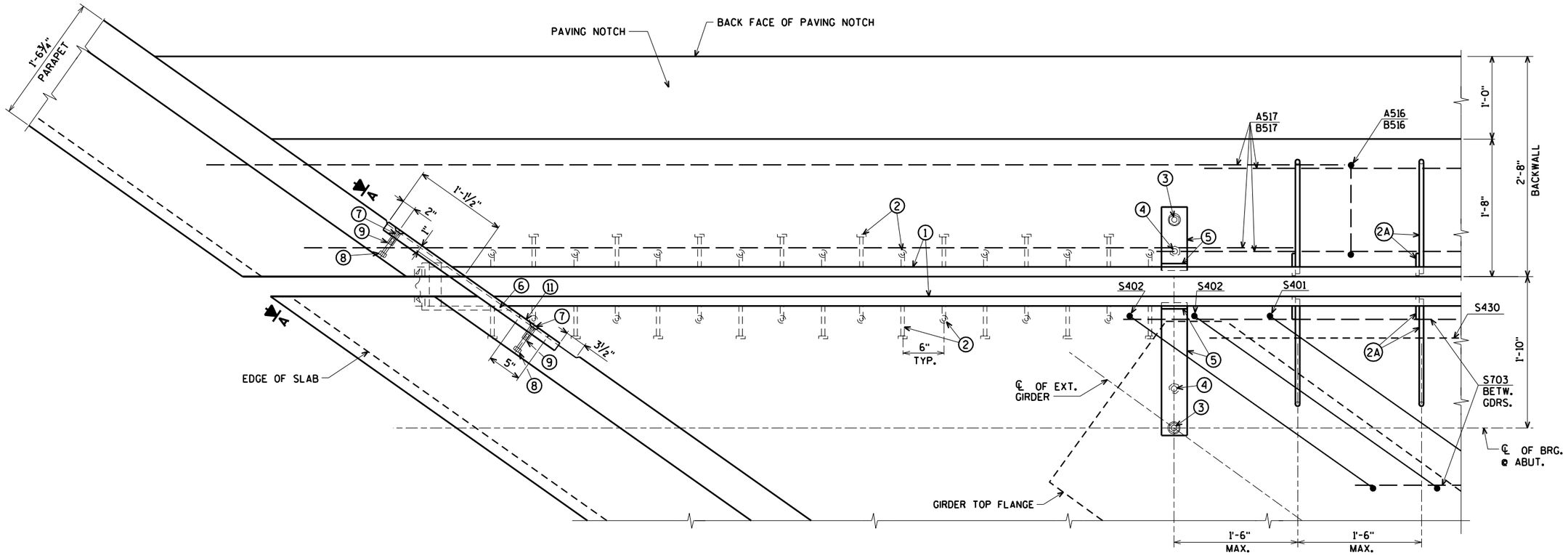
EXPANSION DEVICE

SHEET 38 OF 45
533

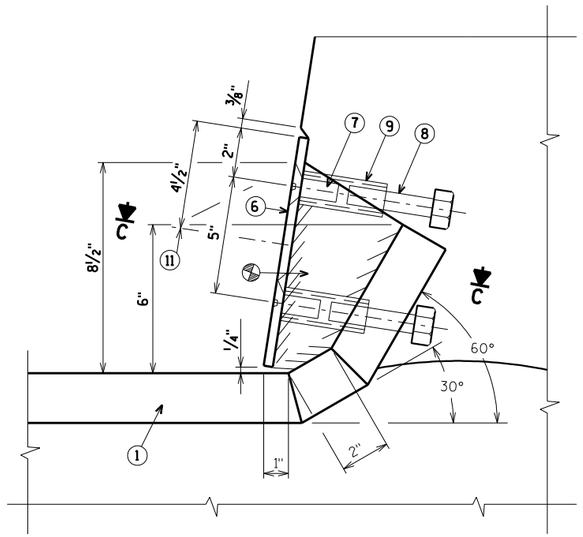
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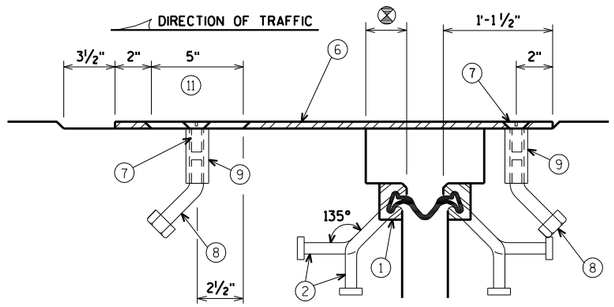
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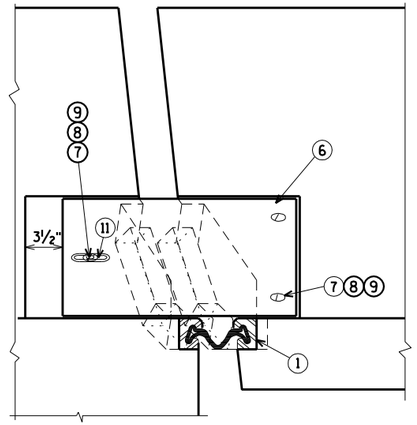
PART PLAN



SECTION A



SECTION C



VIEW OF PARAPET PLATES FROM ROADWAY

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING

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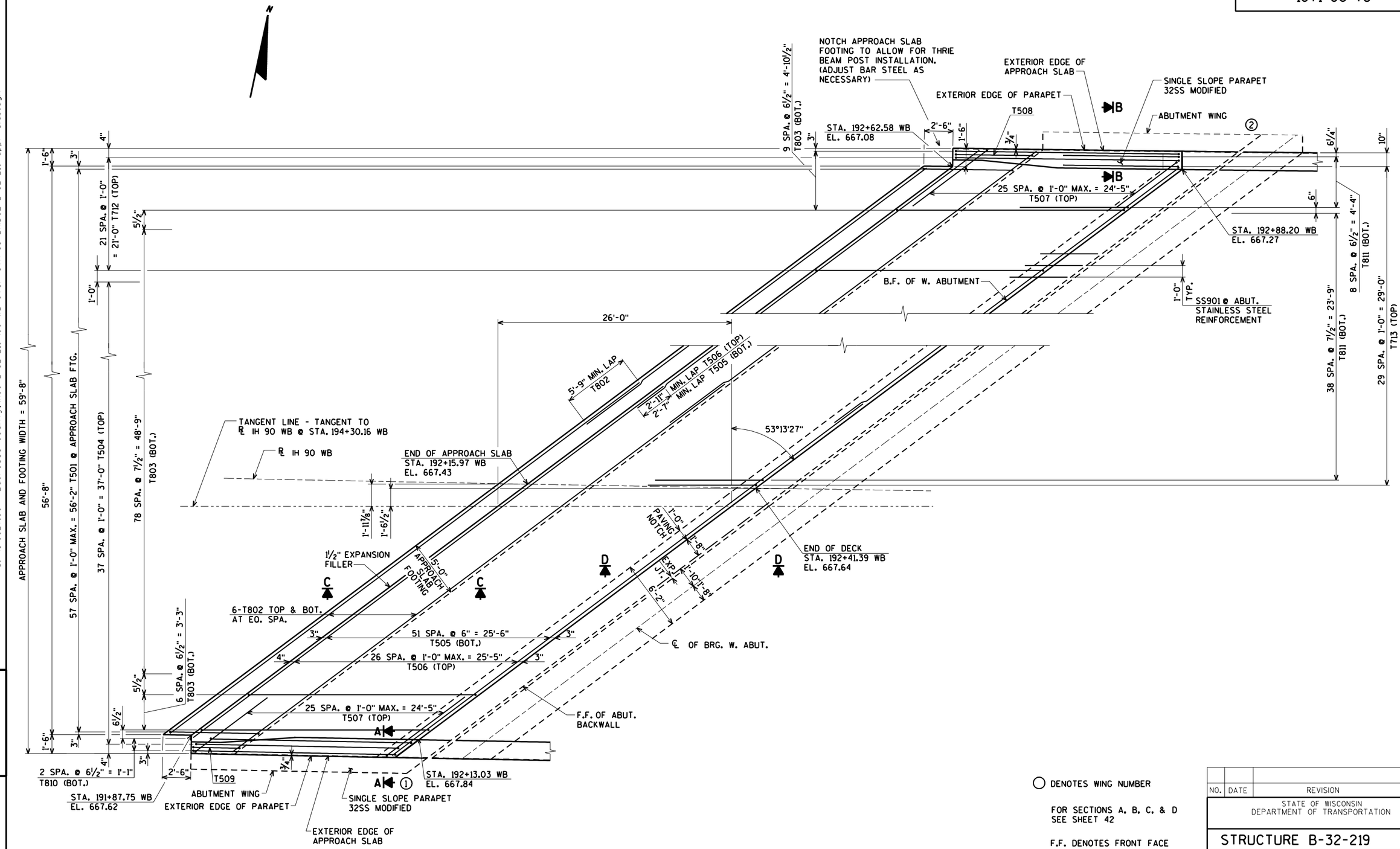
EXPANSION DEVICE

SHEET 39 OF 45
534

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WEST APPROACH SLAB

○ DENOTES WING NUMBER

FOR SECTIONS A, B, C, & D SEE SHEET 42

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

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WEST STRUCTURAL APPROACH SLAB

SHEET 40 OF 45
535

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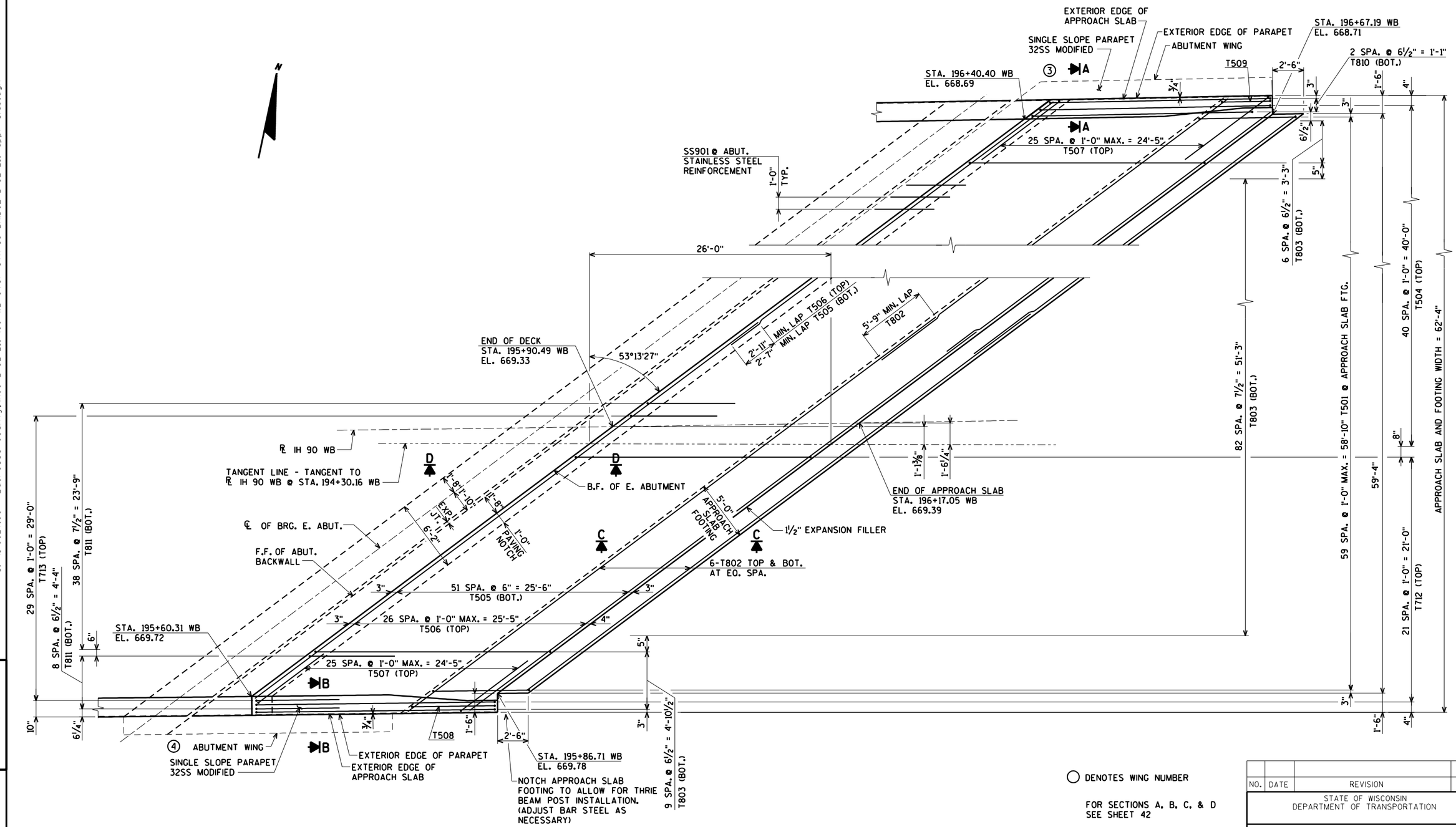
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6/2/2014

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EAST APPROACH SLAB

○ DENOTES WING NUMBER

FOR SECTIONS A, B, C, & D SEE SHEET 42

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

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EAST STRUCTURAL APPROACH SLAB

SHEET 41 OF 45
536

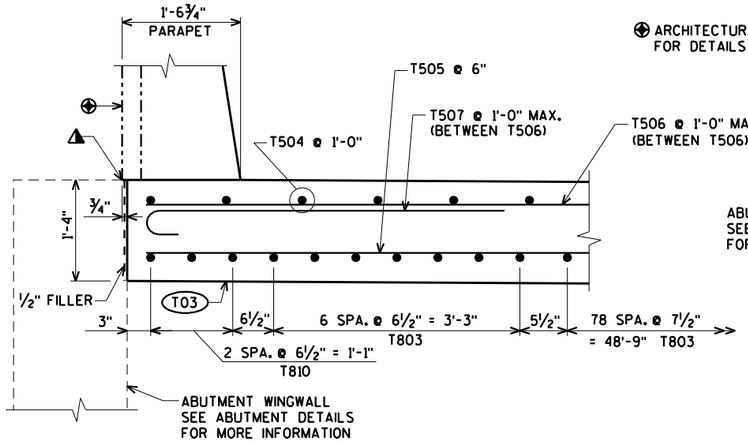
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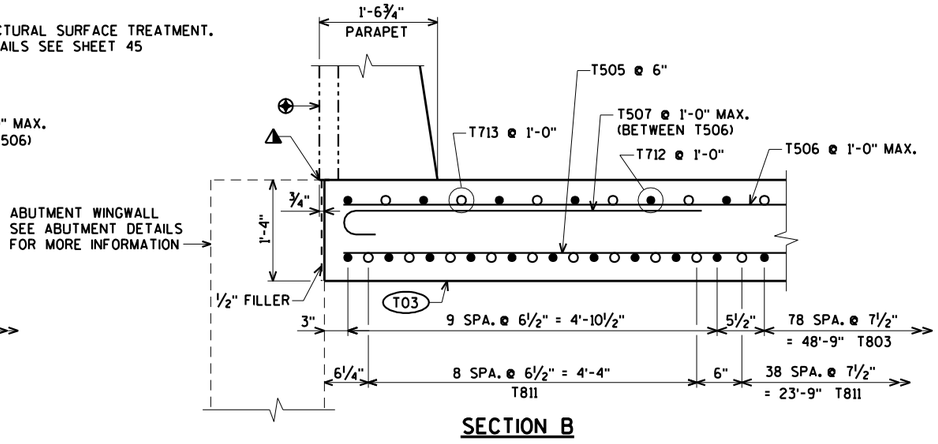
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SECTION A

ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SHEET 45



SECTION B

FOR LOCATIONS OF SECTIONS A, B, C, AND D SEE SHEETS 40 & 41

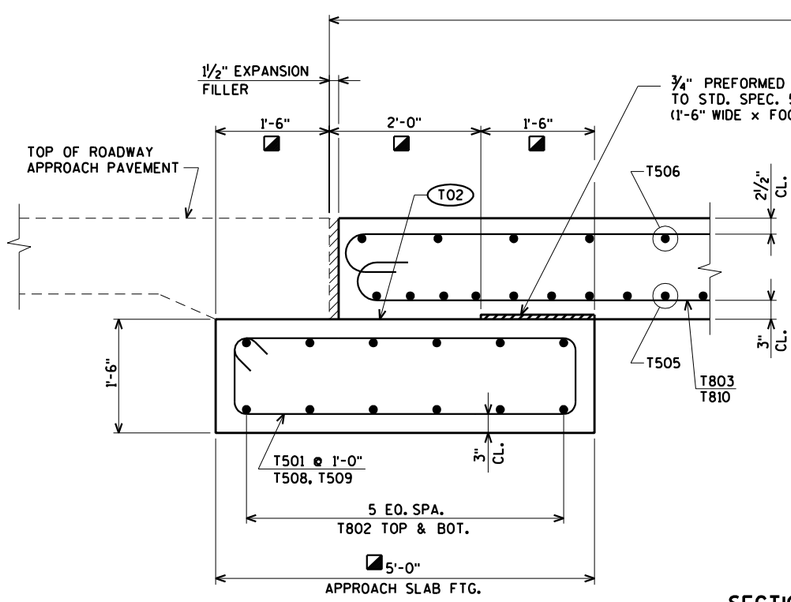
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1,050* STAINLESS STEEL (PER APPROACH SLAB) LOCATION
SS901		62	5-0	X		CONC. BACKWALL TO APPROACH SLAB

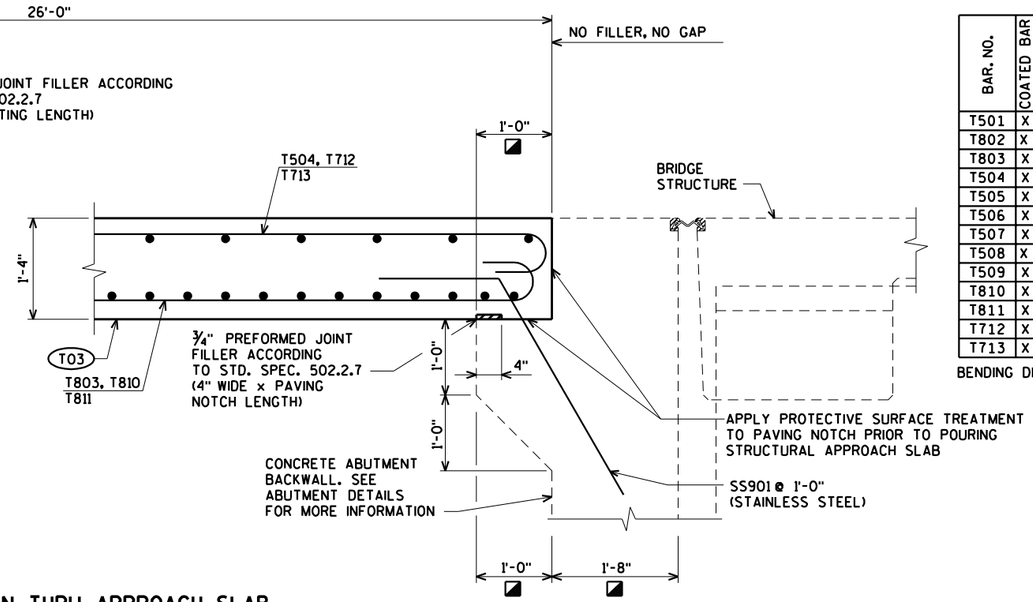
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	24,630* COATED (WEST APPROACH SLAB) LOCATION
T501	X	58	17-8	X		APPROACH SLAB FTG. - STIRRUP
T802	X	24	52-6			APPROACH SLAB FTG. - TRANS.
T803	X	96	27-4	X		APPROACH SLAB - LONG. - BOT.
T504	X	38	26-8	X		APPROACH SLAB - LONG - TOP
T505	X	104	50-11			APPROACH SLAB - TRANS. - BOT.
T506	X	54	51-1			APPROACH SLAB - TRANS. - TOP
T507	X	52	4-1	X		APPROACH SLAB - TRANS. - TOP
T508	X	1	15-4	X		APPROACH SLAB FTG. - STIRRUP
T509	X	1	10-0	X		APPROACH SLAB FTG. - STIRRUP
T810	X	3	25-4	X		APPROACH SLAB - LONG. - BOT.
T811	X	48	10-11	X		APPROACH SLAB - LONG. - BOT.
T712	X	22	27-2	X		APPROACH SLAB - LONG. - TOP
T713	X	30	10-10	X		APPROACH SLAB - LONG. - TOP

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	25,550* COATED (EAST APPROACH SLAB) LOCATION
T501	X	60	17-8	X		APPROACH SLAB FTG. - STIRRUP
T802	X	24	54-9			APPROACH SLAB FTG. - TRANS.
T803	X	100	27-4	X		APPROACH SLAB - LONG. - BOT.
T504	X	41	26-8	x		APPROACH SLAB - LONG - TOP
T505	X	104	53-1			APPROACH SLAB - TRANS. - BOT.
T506	X	54	53-3			APPROACH SLAB - TRANS. - TOP
T507	X	52	4-1	X		APPROACH SLAB - TRANS. - TOP
T508	X	1	15-4	X		APPROACH SLAB FTG. - STIRRUP
T509	X	1	10-0	X		APPROACH SLAB FTG. - STIRRUP
T810	X	3	25-4	X		APPROACH SLAB - LONG. - BOT.
T811	X	48	10-11	X		APPROACH SLAB - LONG. - BOT.
T712	X	22	27-2	X		APPROACH SLAB - LONG. - TOP
T713	X	30	10-10	X		APPROACH SLAB - LONG. - TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



SECTION C



SECTION D

SECTION THRU APPROACH SLAB

◪ MEASURED NORMAL TO ABUTMENT

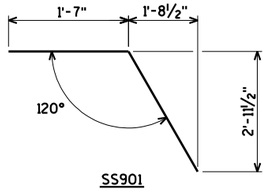
▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

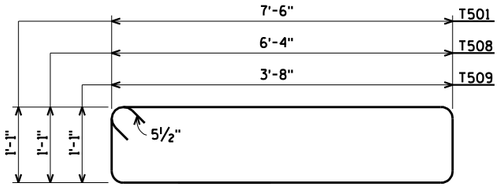
(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

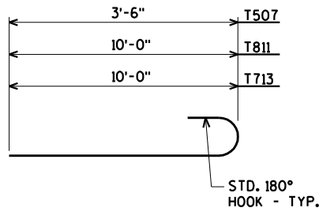
(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE.

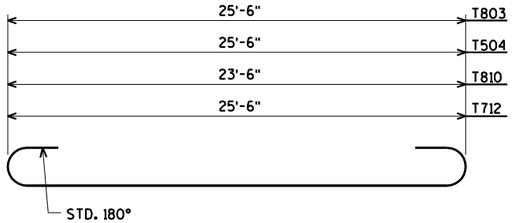
POLYETHYLENE SHEETS ARE INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

ALL STRUCTURAL APPROACH SLAB CONCRETE PAID FOR UNDER "CONCRETE MASONRY BRIDGES".









NO.	DATE	REVISION	BY

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STRUCTURE B-32-219

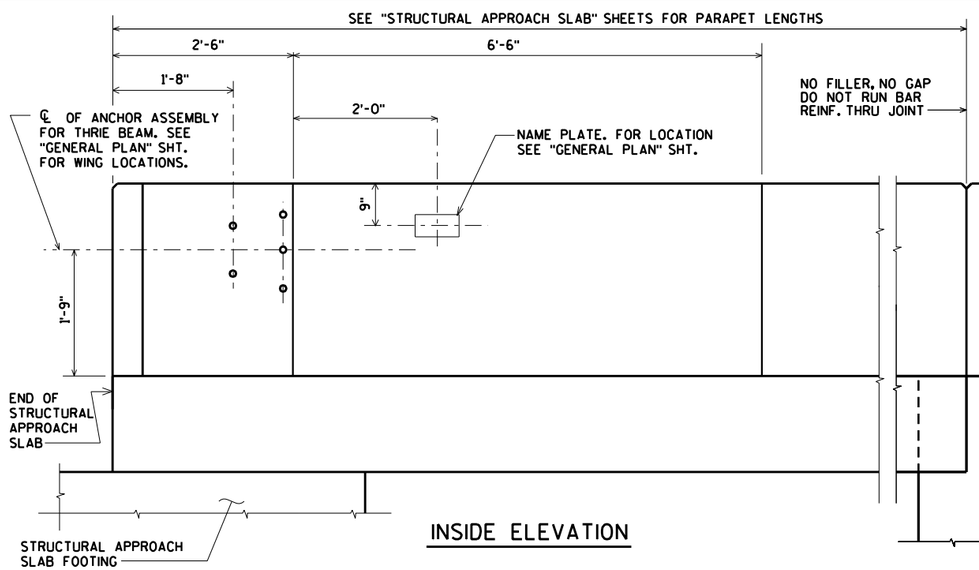
DRAWN BY CLS | PLANS CK'D. DNS

STRUCTURAL APPROACH SLAB DETAILS

SHEET 42 OF 45
537

ORIGINAL PLANS PREPARED BY
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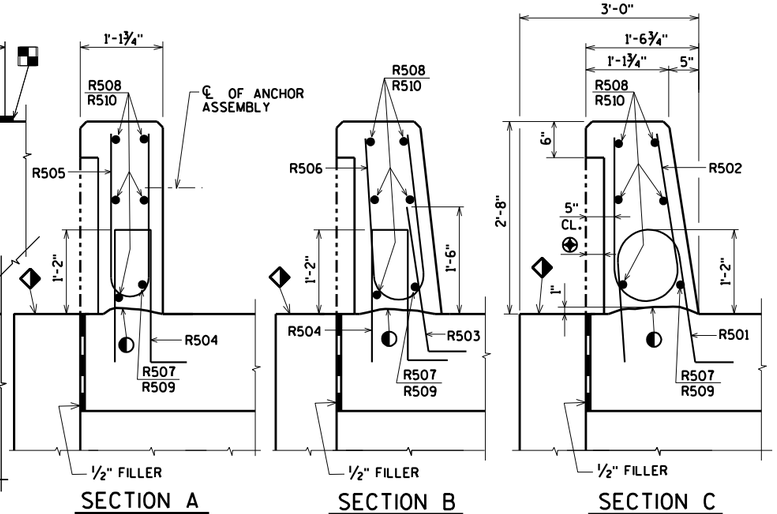
$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 appr slab.dgn



INSIDE ELEVATION

BENCH MARK CAP (WHEN SUPPLIED).

NO FILLER, NO CAP DO NOT RUN BAR REINF. THRU JOINT



SECTION A

SECTION B

SECTION C

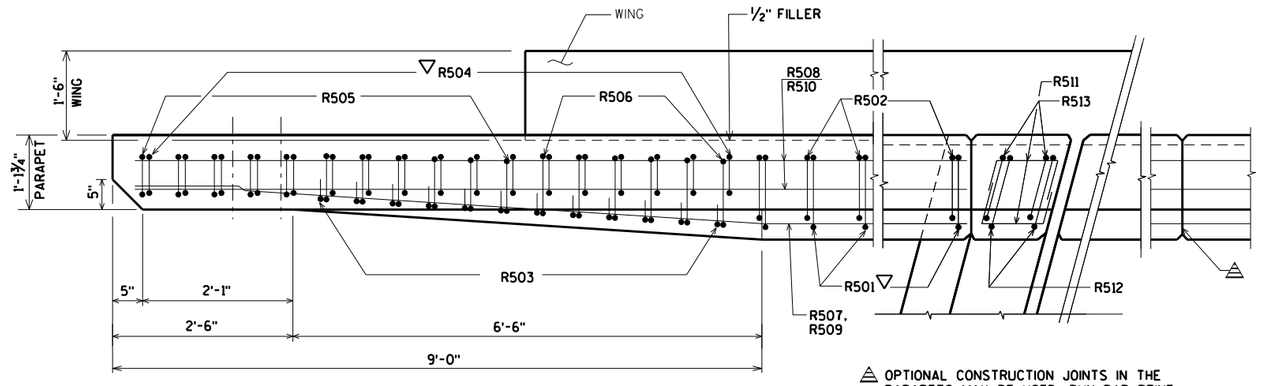
1,210* COATED WEST APPROACH SLAB
1,210* COATED EAST APPROACH SLAB
120* COATED WEST ABUTMENT
120* COATED EAST ABUTMENT

BILL OF BARS

FOR STRUCTURAL APPROACH SLAB PARAPETS

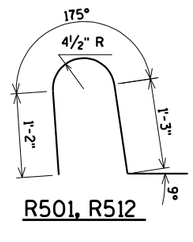
BAR MARK	COAT	W. ABUT.	E. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	52	52	4-5	X		PARAPET VERT.
R502	X	52	52	5-0	X		PARAPET VERT.
R503	X	24	24	2-9	X		PARAPET VERT.
R504	**X**	34	34	4-4	X		PARAPET VERT.
R505	**X**	22	22	4-9	X		PARAPET VERT.
R506	X	12	12	4-10	X		PARAPET VERT.
R507	X	1	1	25-2	X		PARAPET HORIZ.◨
R508	X	5	5	22-4			PARAPET HORIZ.◨
R509	X	1	1	25-4	X		PARAPET HORIZ ▲
R510	X	5	5	25-4			PARAPET HORIZ ▲
FOR ABUTMENT BACKWALL PARAPETS							
R511	X	12	12	3-7	X		PARAPET HORIZ
R512	X	8	8	4-5	X		PARAPET VERT.
R513	X	8	8	5-0	X		PARAPET VERT.

◨ FOR WINGS 1 & 3
▲ FOR WINGS 2 & 4

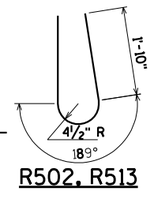


PLAN

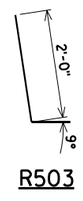
△ OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



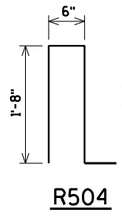
R501, R512



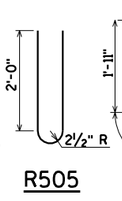
R502, R513



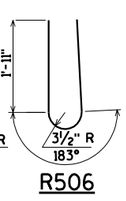
R503



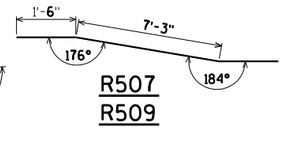
R504



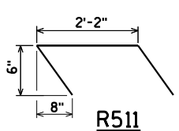
R505



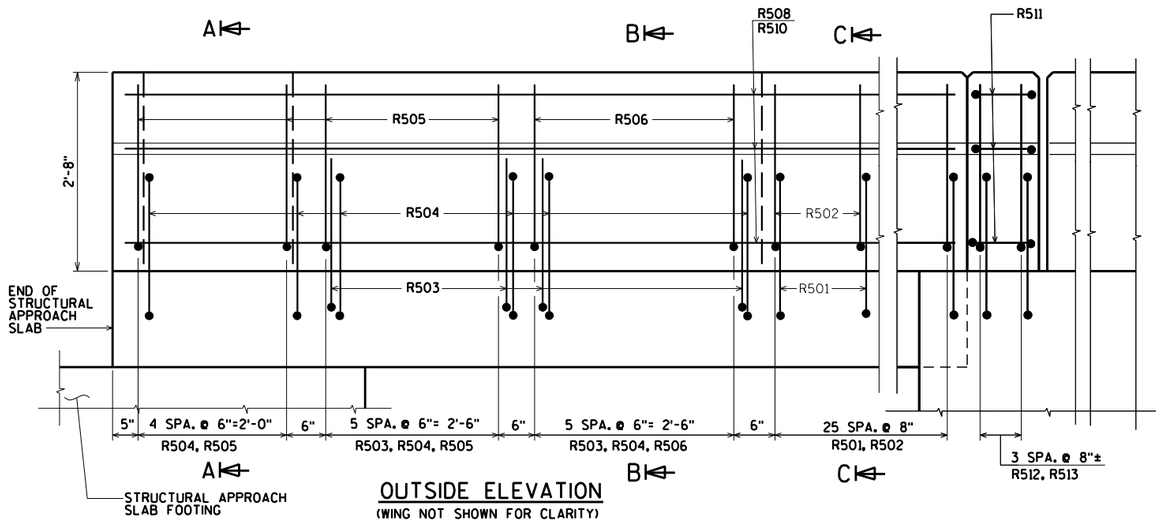
R506



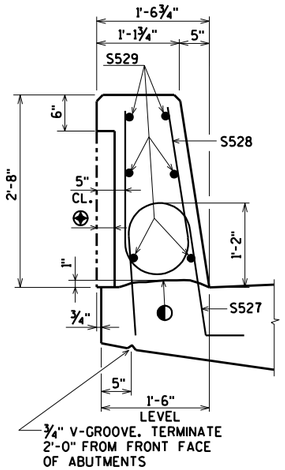
R507
R509



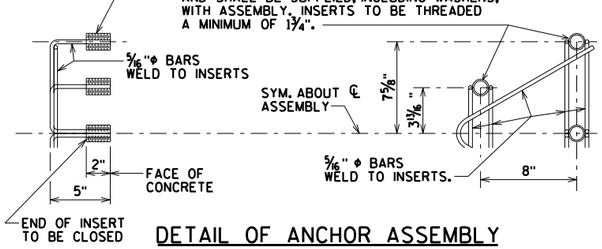
R511



OUTSIDE ELEVATION
(WING NOT SHOWN FOR CLARITY)



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

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

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

⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

◆ SLOPE FOR DRAINAGE

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

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STATE OF WISCONSIN
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STRUCTURE B-32-219

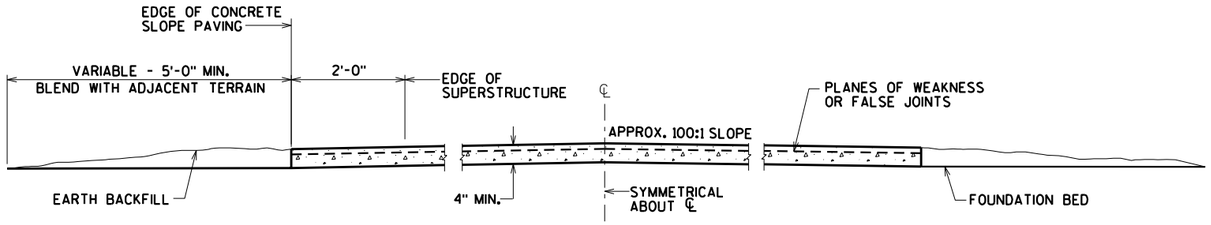
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SINGLE SLOPE PARAPET 32SS MODIFIED

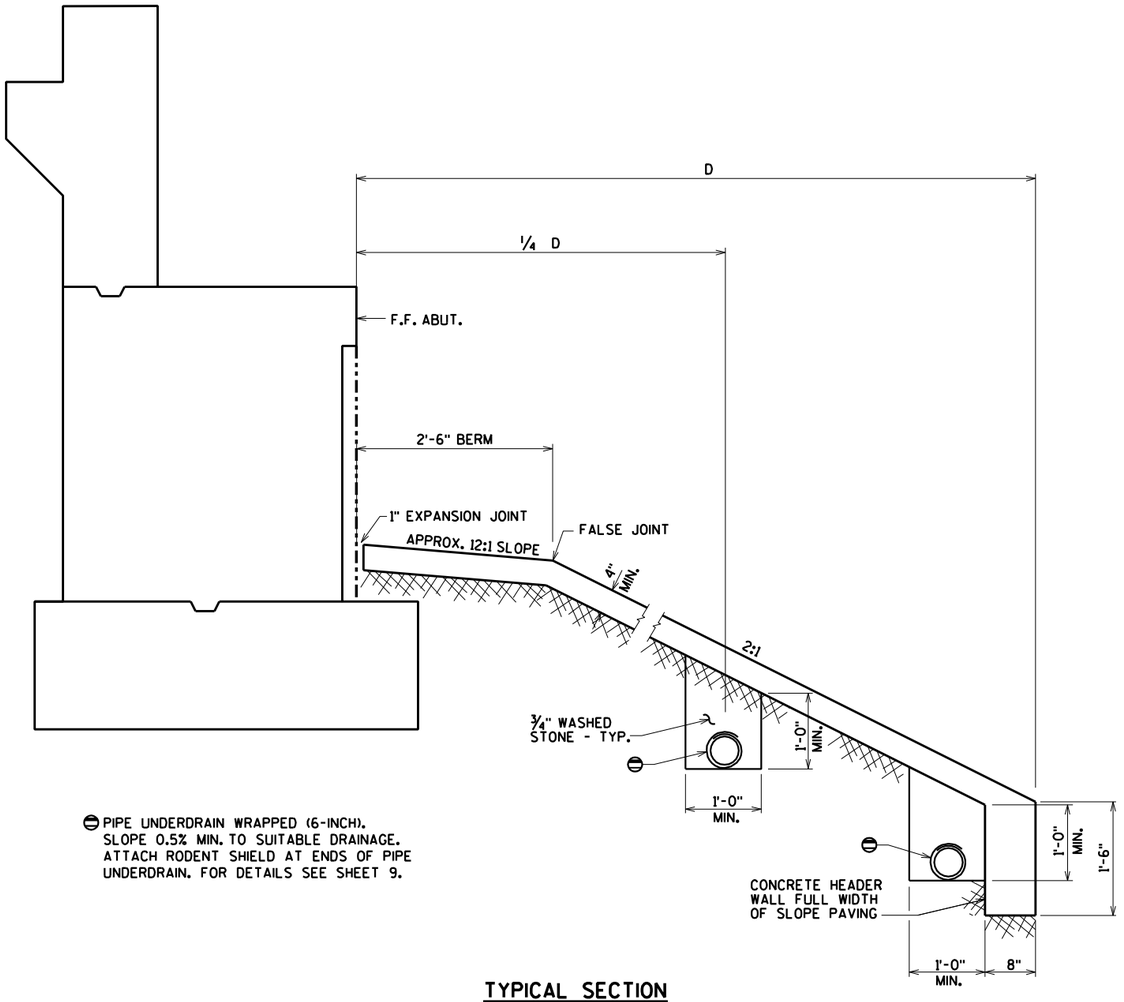
SHEET 43 OF 45
538

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$PRFNAME$
19 U:±41-9927.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 32ss.dgn
16
1 2 3 4 7 9
8
8
6/2/2014
PENTABLE:BReau_shd_util.tbl
SS32APP
1-14

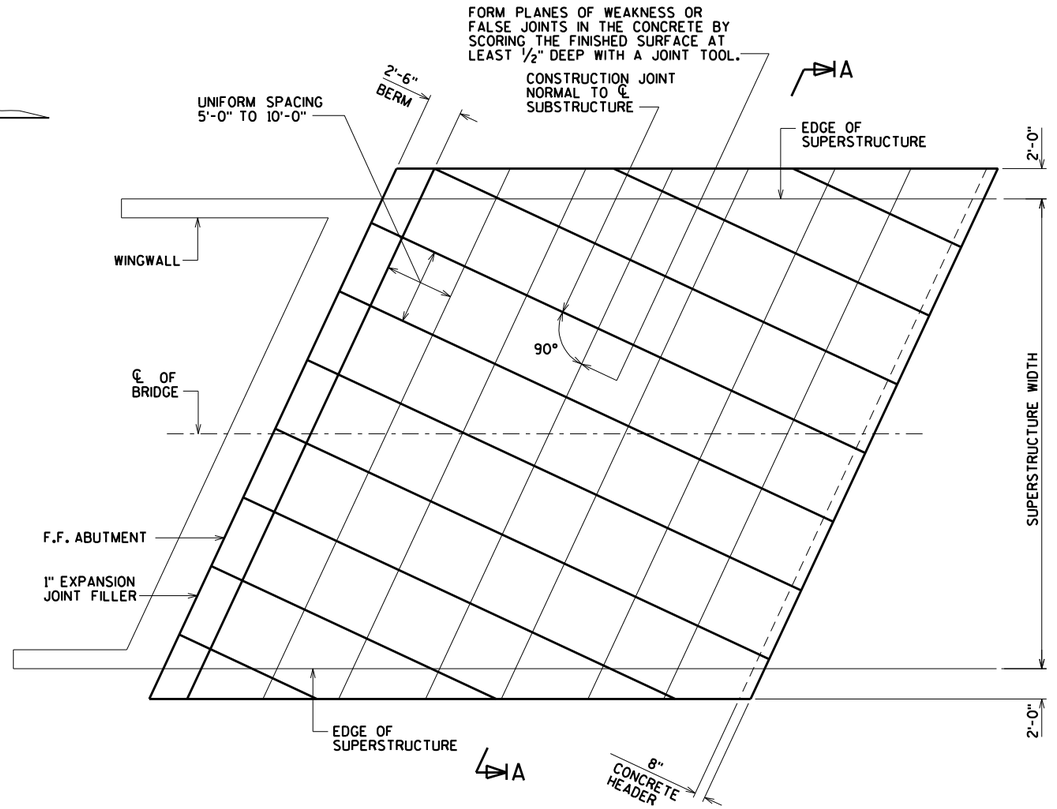


SECTION A-A

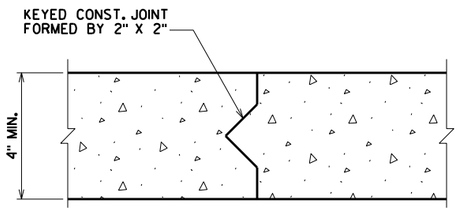


⊖ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR DETAILS SEE SHEET 9.

TYPICAL SECTION



PLAN



CONSTRUCTION JOINT

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN HEREON SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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SLOPE PAVING

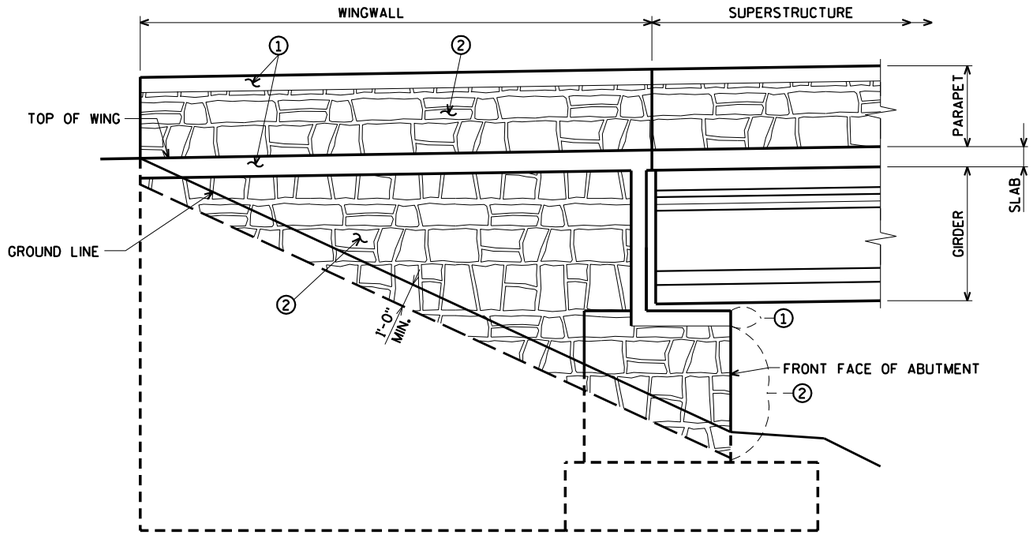
SHEET 44 OF 45
539

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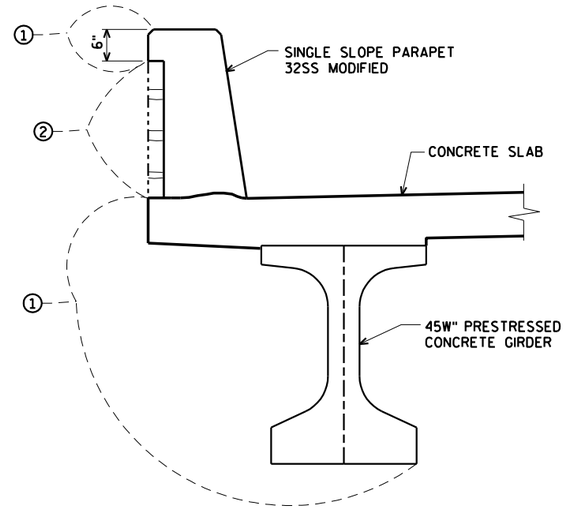
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U:±41-0627.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 arch tr.dgn

STATE PROJECT NUMBER

1071-06-78

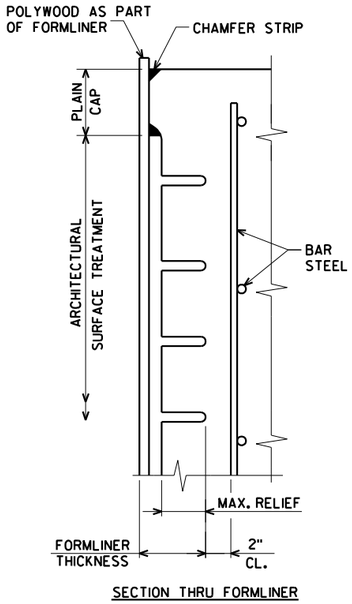


ARCHITECTURAL SURFACE TREATMENT AT ABUTMENT WINGWALLS

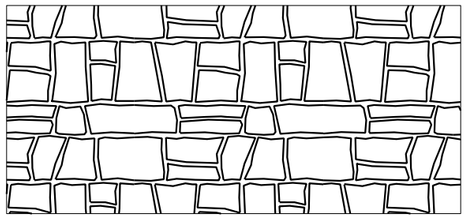


ARCHITECTURAL SURFACE TREATMENT AT SUPERSTRUCTURE

(TYPICAL BOTH SIDES OF SUPERSTRUCTURE)



SECTION THRU FORMLINER



RUSTIC ASHLAR

FORMLINER THICKNESS = 3"
SIZE = 8" TO 32"
MAX. RELIEF = 2"

ABUTMENT NOTES

FORMLINER COURSING ON ABUTMENTS AND WINGS SHALL BE LEVEL.

THE FORMLINER COURSING ON THE WINGS SHALL BE VERTICALLY ALIGNED WITH THE FORMLINER COURSING ON THE FRONT OF THE ABUTMENT.

THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS.

WRAPAROUND/MATCH FORMLINER PATTERN AT CORNERS.

PIER NOTES

FORMLINER COURSING ON PIERS SHALL BE LEVEL.

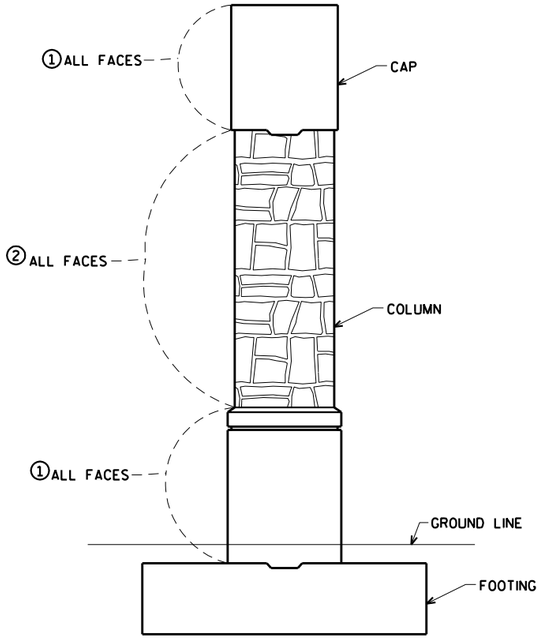
THE FORMLINER COURSING ON ALL FACES OF EACH COLUMN SHALL BE VERTICALLY ALIGNED.

THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS.

WRAPAROUND/MATCH FORMLINER PATTERN AT CORNERS.

PARAPET NOTES

THE FORMLINER COURSING ON PARAPETS SHALL BE PARALLEL TO THE TOP OF PARAPET.



ARCHITECTURAL SURFACE TREATMENT AT PIER

1 LIMITS OF CONCRETE STAINING. FEDERAL STANDARD COLOR NUMBER 33446 (MEDIUM TAN).

2 LIMITS OF CONCRETE STAINING MULTI-COLOR

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STRUCTURE B-32-219

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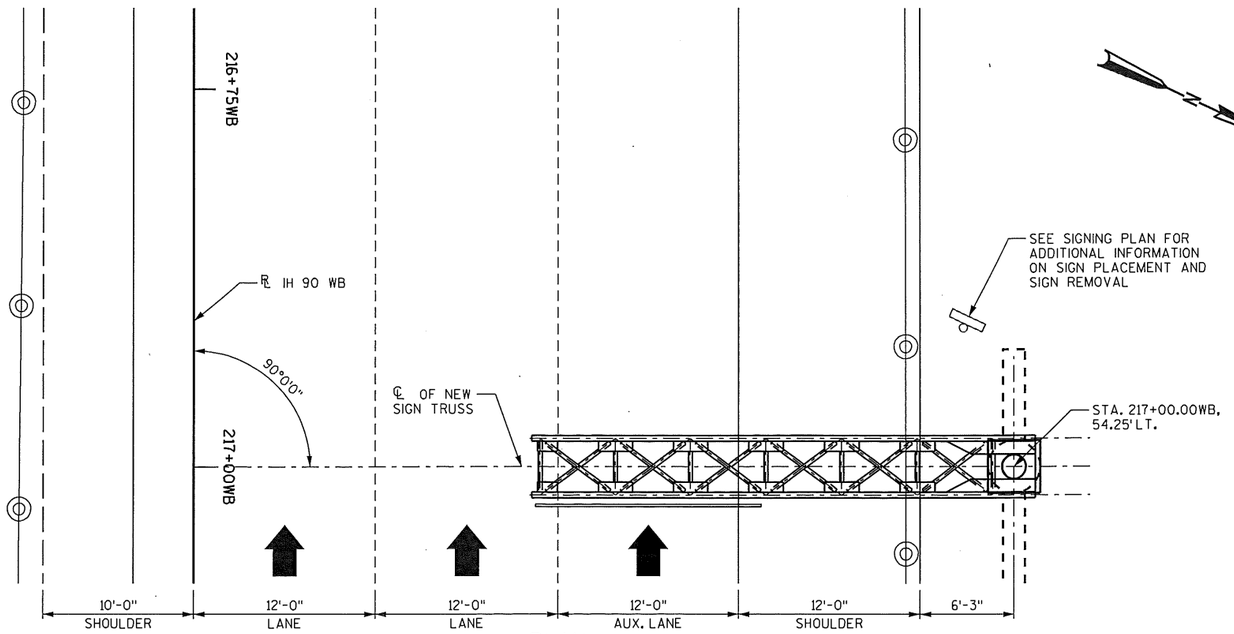
ARCHITECTURAL SURFACE TREATMENT

SHEET 45 OF 45
540

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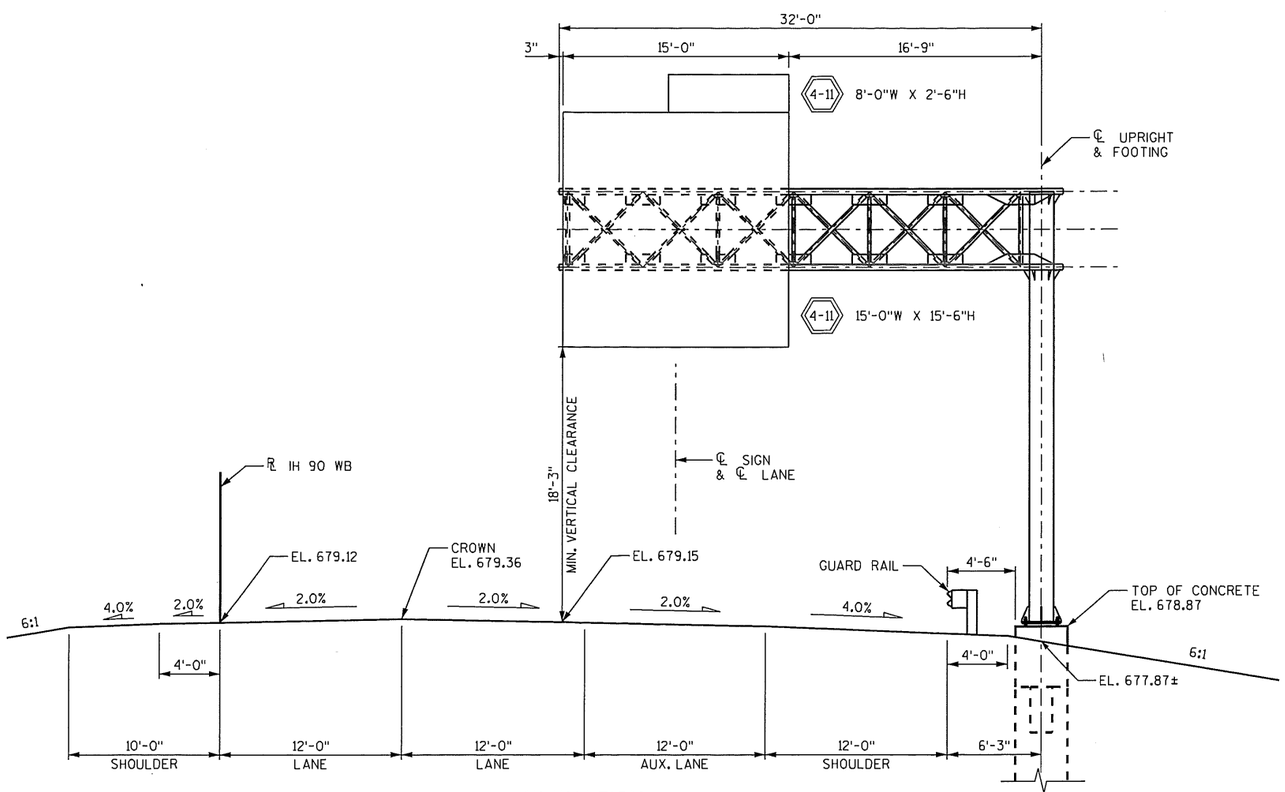
8

8



PLAN

4-CHORD CANTILEVER SIGN STRUCTURE



ELEVATION

LOOKING WEST AT FRONT FACE OF SIGN
STA. 217+00.00WB

SIGN NUMBER APPLIES TO BOTH PANELS, SEE SIGN PLAN.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

CENTER SIGNS VERTICALLY ON TRUSS.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

HANDHOLES ARE NOT REQUIRED.

ALL SIGNS ARE TYPE I.

STATE PROJECT NUMBER

1071-06-78

DESIGN DATA

DESIGN SIGN AREA = 264 SF
MAX. SIGN DEPTH = 15'-6"

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND VELOCITY - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½ (WIND*)	133

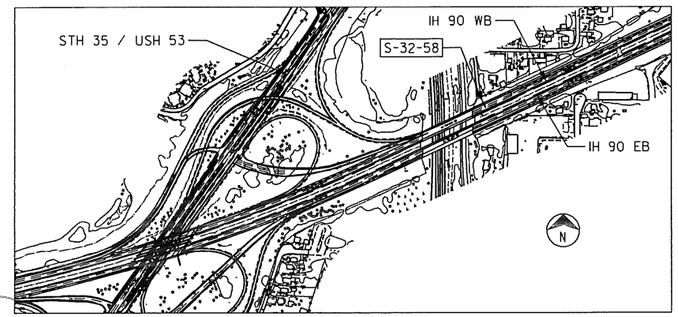
* MIN. VALUE OF 25 PSF FOR GROUP 3.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GALVANIZED STEEL CANTILEVER SIGN TRUSS
3. GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS
4. CANTILEVER TRUSS FOOTING
5. SUBSURFACE EXPLORATION

WISCONSIN
JOHN F. RUBLEIN
E-38700
MADISON, WI
PROFESSIONAL ENGINEER

8/4/14



LOCATION MAP

SOIL DESIGN PARAMETERS

FRICTION ANGLE = 30 DEGREES
SOIL UNIT WEIGHT = 115 PCF

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	8
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	1,380
641.1200	SIGN BRIDGE CANTILEVERED S-32-58	LS	1

ALL ITEMS ARE CATEGORY 0040

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JOHN RUBLEIN, P.E. (262) 821-1171

NO.	DATE	REVISION	BY

KSA K. Singh & Associates, Inc.
Engineers, Scientists and Environmental Consultants

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Duchu KAR 08/12/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-32-58

IH 90 WB

COUNTY	CITY
LA CROSSE	ONALASKA

DESIGN SPEC. AASHTO STANDARD SPECIFICATIONS

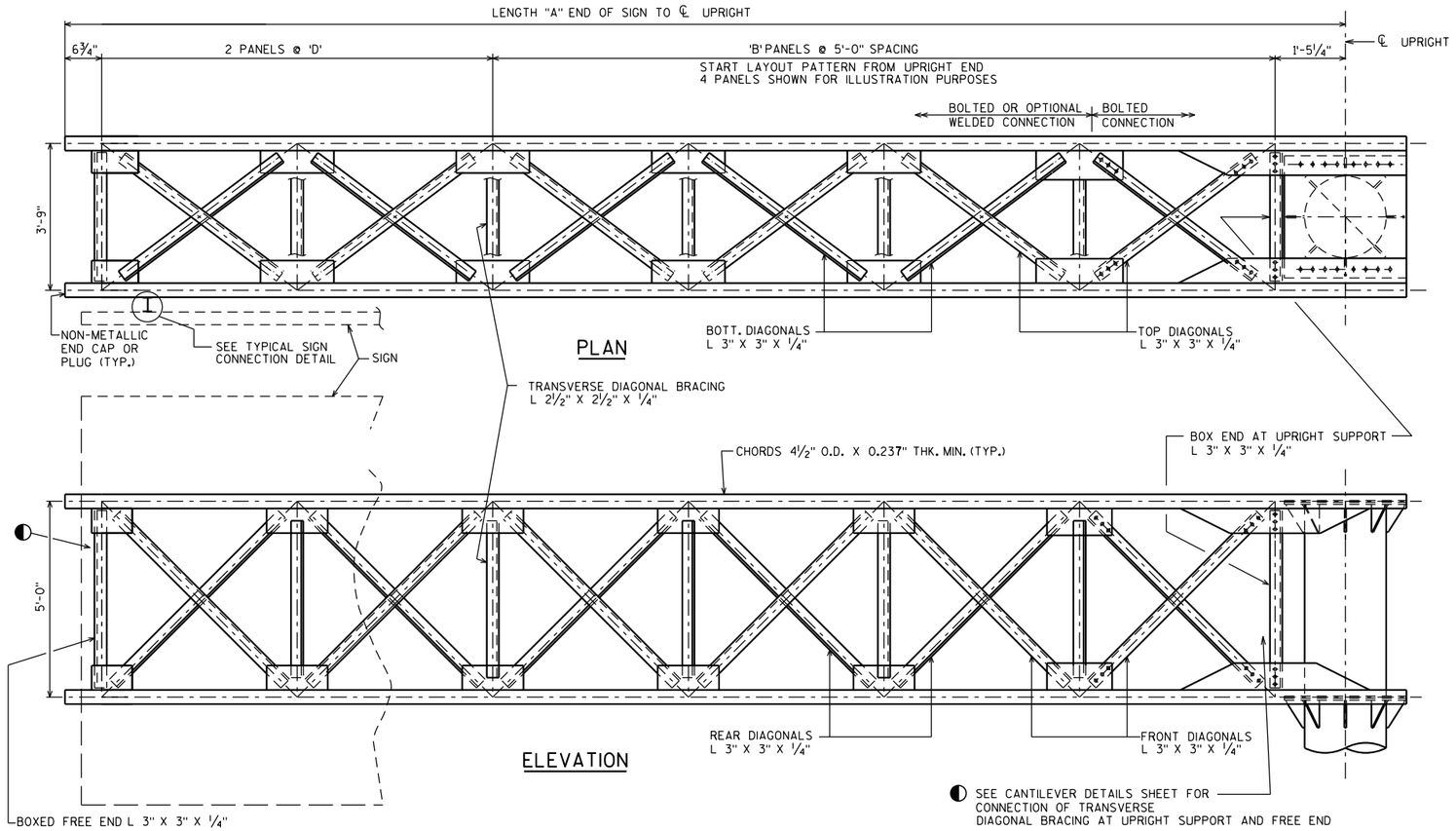
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
VJD	YC	VJD	JFR

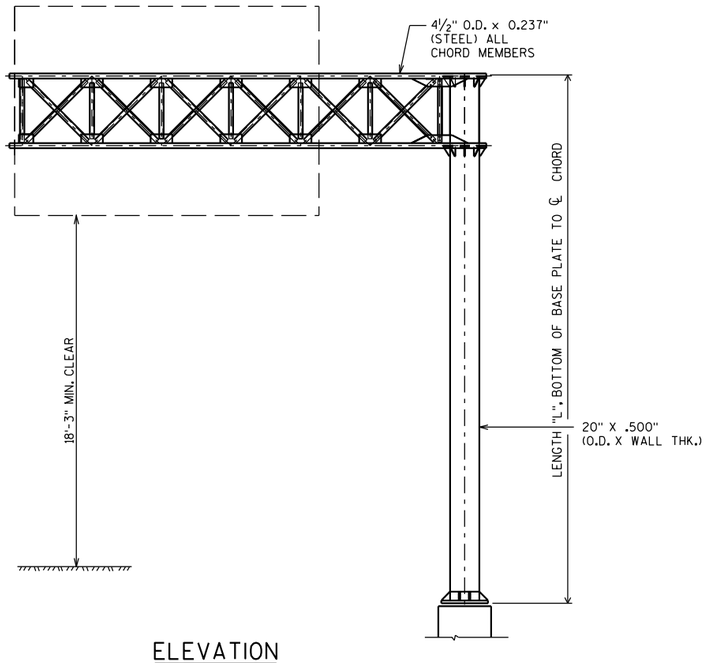
GENERAL PLAN AND ELEVATION

SHEET 1 OF 5
541

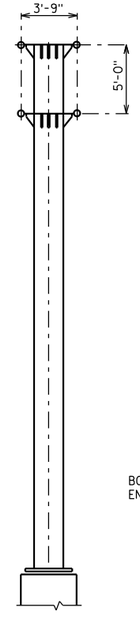
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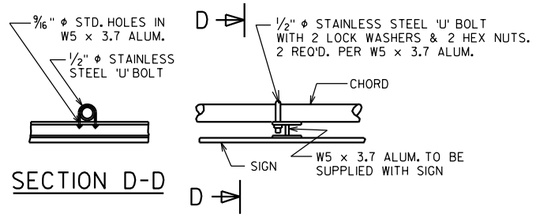




ELEVATION

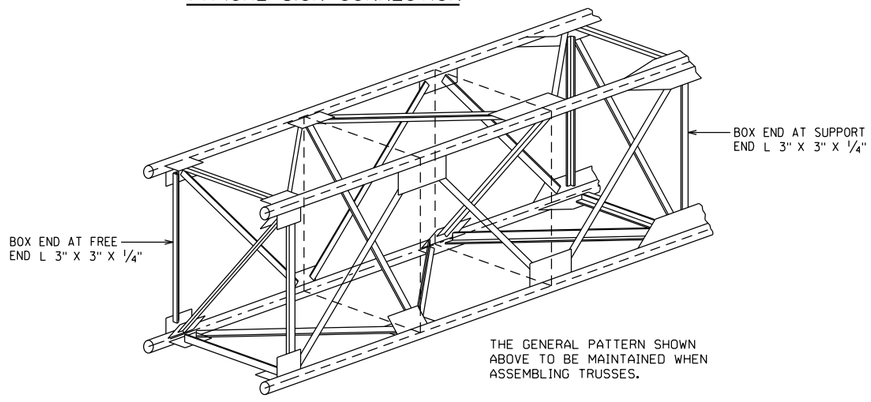


END VIEW



SECTION D-D

TYPICAL SIGN CONNECTION



TYPICAL TRUSS SECTION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS. LUMINARIES AND TRAFFIC SIGNALS"

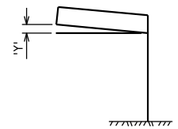
WIND VELOCITY = 90 MPH (3-SECOND GUST SPEED)

PREFABRICATE CAMBER INTO THE HORIZONTAL SUPPORT PROVIDING AN AMOUNT "Y" AT END OF TRUSS SHOWN IN "CAMBER DIAGRAM". DO NOT RAKE VERTICAL UPRIGHT BY ADJUSTMENT OF LEVELING NUTS.

ALLOWABLE DESIGN STRESSES

CHORDS & COLUMN — API-5L-X42 — fy=42,000 P.S.I.
STRUCTURAL ANGLES — A.S.T.M. A709 GRADE 36 — fy=36,000 P.S.I.
PLATES & BARS — A.S.T.M. A709 GRADE 36 — fy=36,000 P.S.I.
ANCHOR BOLTS — A.A.S.H.T.O. M314 — fy=55,000 P.S.I.
HIGH STRENGTH BOLTS-A325 — fy=92,000 P.S.I.
STRUCTURAL MEMBERS GALVANIZED A123
HARDWARE GALVANIZED — A153 CLASS C

STRUCTURE	"A"	"L"	"B"	"D"	"Y"
S-32-58	32'-0"	28'-7"	4	5'-0"	2⅞"



CAMBER DIAGRAM

STATE PROJECT NUMBER

1071-06-78

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-58

DRAWN BY VJD | PLANS CK'D. JFR

GALVANIZED STEEL CANTILEVER SIGN TRUSS

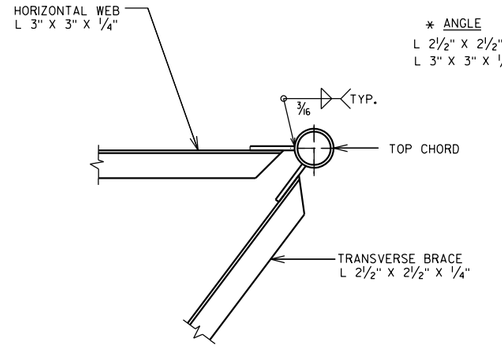
SHEET 2 OF 5
542

8

8

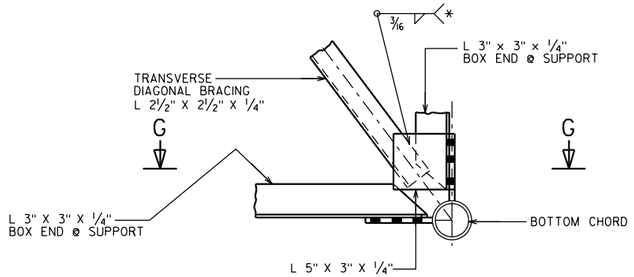
STATE PROJECT NUMBER

1071-06-78

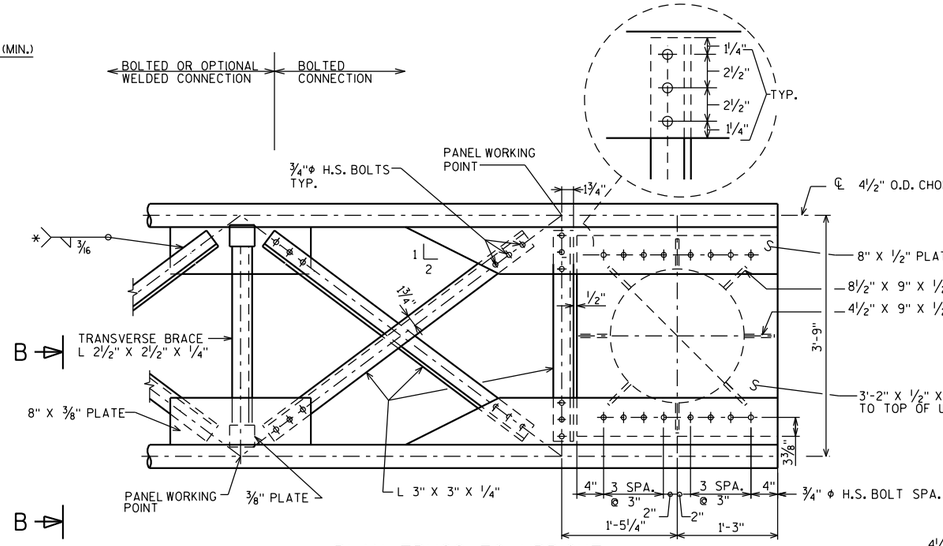


* ANGLE	WELD LENGTH (MIN.)
L 2 1/2" X 2 1/2" X 1/4"	7"
L 3" X 3" X 1/4"	8"

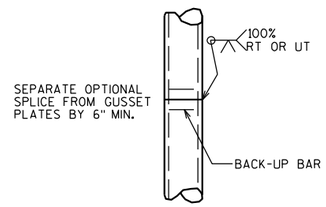
SECTION B-B



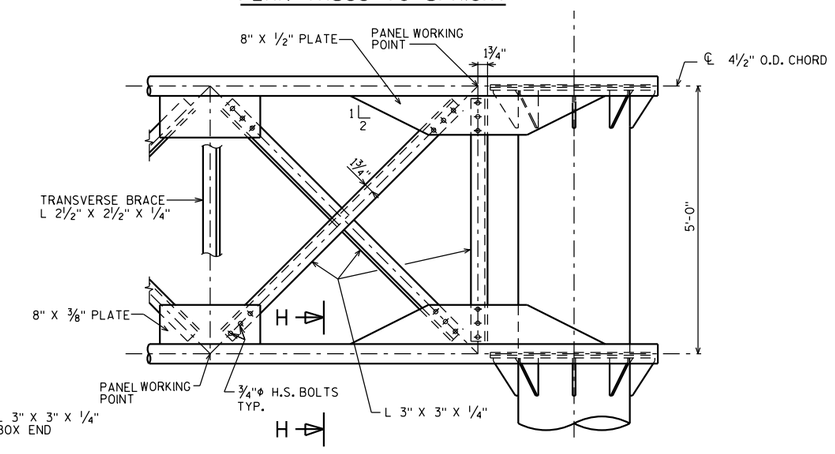
SECTION H-H



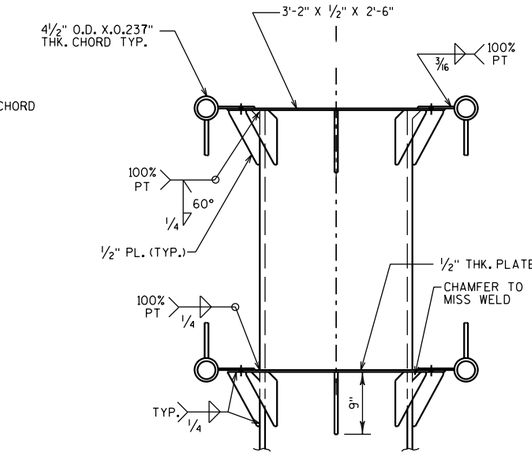
PLAN TRUSS TO UPRIGHT



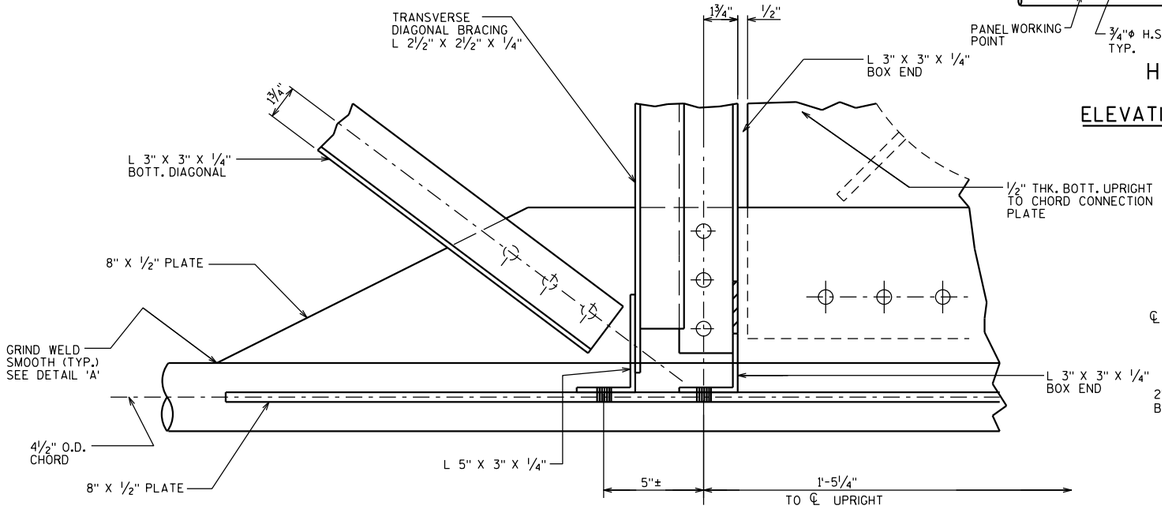
OPTIONAL COLUMN OR CHORD SPLICE DETAIL



ELEVATION TRUSS TO UPRIGHT

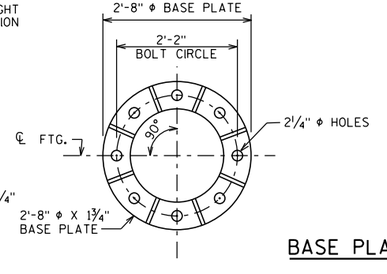


END VIEW
TRUSS TO UPRIGHT

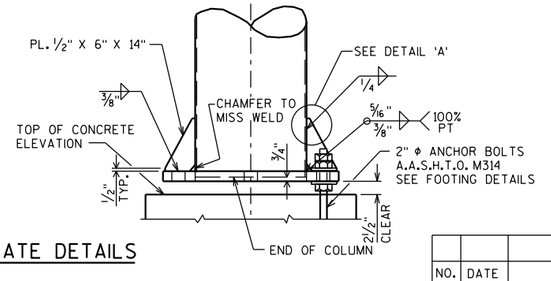


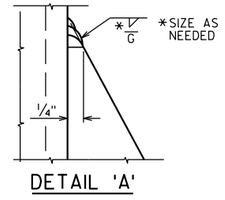
SECTION G-G

(LOOKING DOWN @ BOTT. HORIZ. PLANE @ FRONT CHORD)



BASE PLATE DETAILS





DETAIL 'A'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-58

DRAWN BY VJD | PLANS CK'D. JFR

GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS

SHEET 3 OF 5

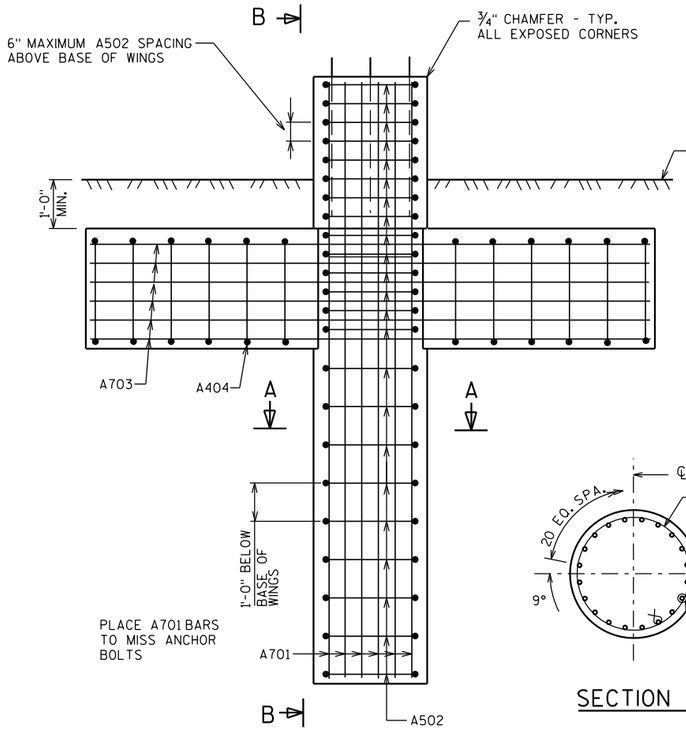
543

8

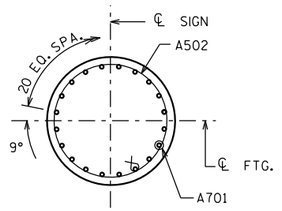
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FILE NAME : P:\8384 I90_53_35 Interchange\Structural\Sign Structures\CADD\S-32-58\S-32-58_03.dgn PLOT DATE : 8/4/2014 PLOT BY : ychun PLOT NAME : $FILE$ PLOT SCALE : 1:40.0001

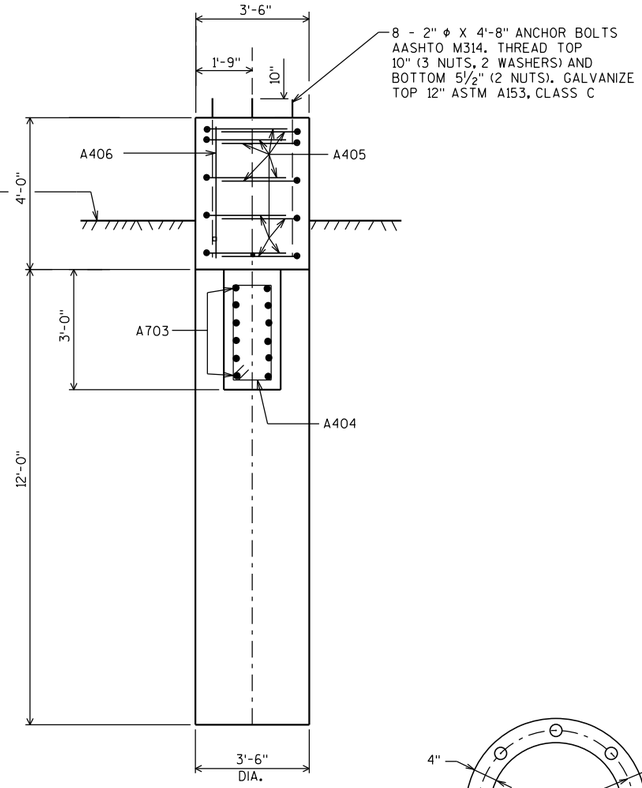
STATE PROJECT NUMBER
1071-06-78



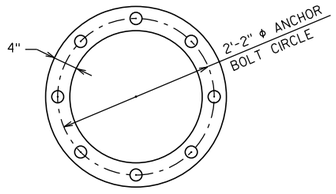
ELEVATION
(8 CY)



SECTION A



SECTION B

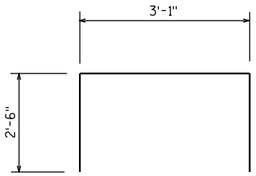


TOP VIEW OF TOP & BOTTOM TEMPLATES

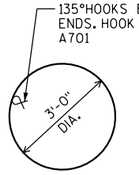
BILL OF BARS

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.
BAR DIMENSIONS ARE OUT TO OUT OF BAR. 1,380 LB

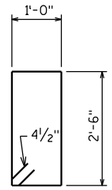
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
A701		20	15'-6"				FOOTING - COLUMN/TOP
A502		23	10'-6"	X			FOOTING - COLUMN/TOP
A703		12	15'-0"				FOOTING - WINGS
A404		12	7'-6"	X			FOOTING - WINGS
A405		10	7'-11"	X			FOOTING - TOP
A406		4	3'-6"				FOOTING - TOP - COLUMNS



A405



A502



A404
(STIRRUP)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

ALLOWABLE DESIGN STRESSES

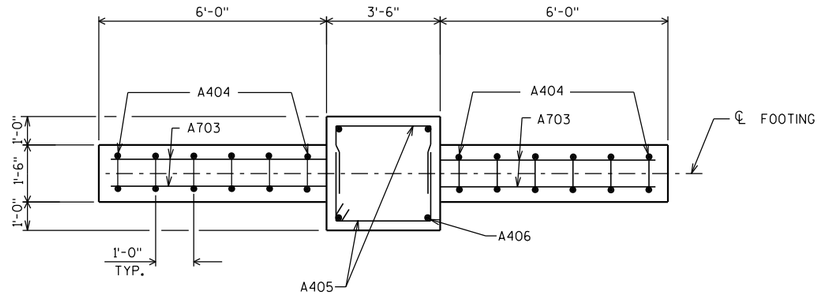
CONCRETE MASONRY ——— f'c=3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— fy=60,000 PSI
ANCHOR BOLTS AASHTO M314 ——— fy=55,000 PSI

FOUNDATION DATA

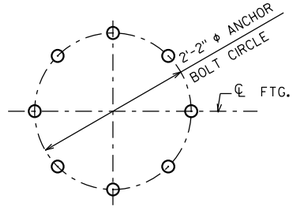
ALLOWABLE SOIL BEARING PRESSURE = 2.0T/SQ. FT.

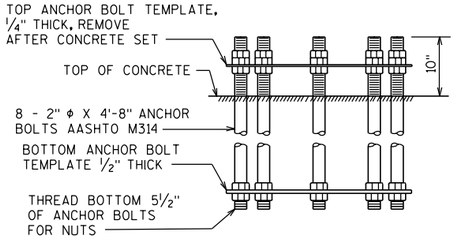
TOTAL ESTIMATED QUANTITIES (1 FTG.)

SIGN SUPPORTS CONCRETE MASONRY ——— 8 CY
SIGN SUPPORTS STEEL REINFORCEMENT HS ——— 1,380 LB



PLAN





ANCHOR BOLT DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-58

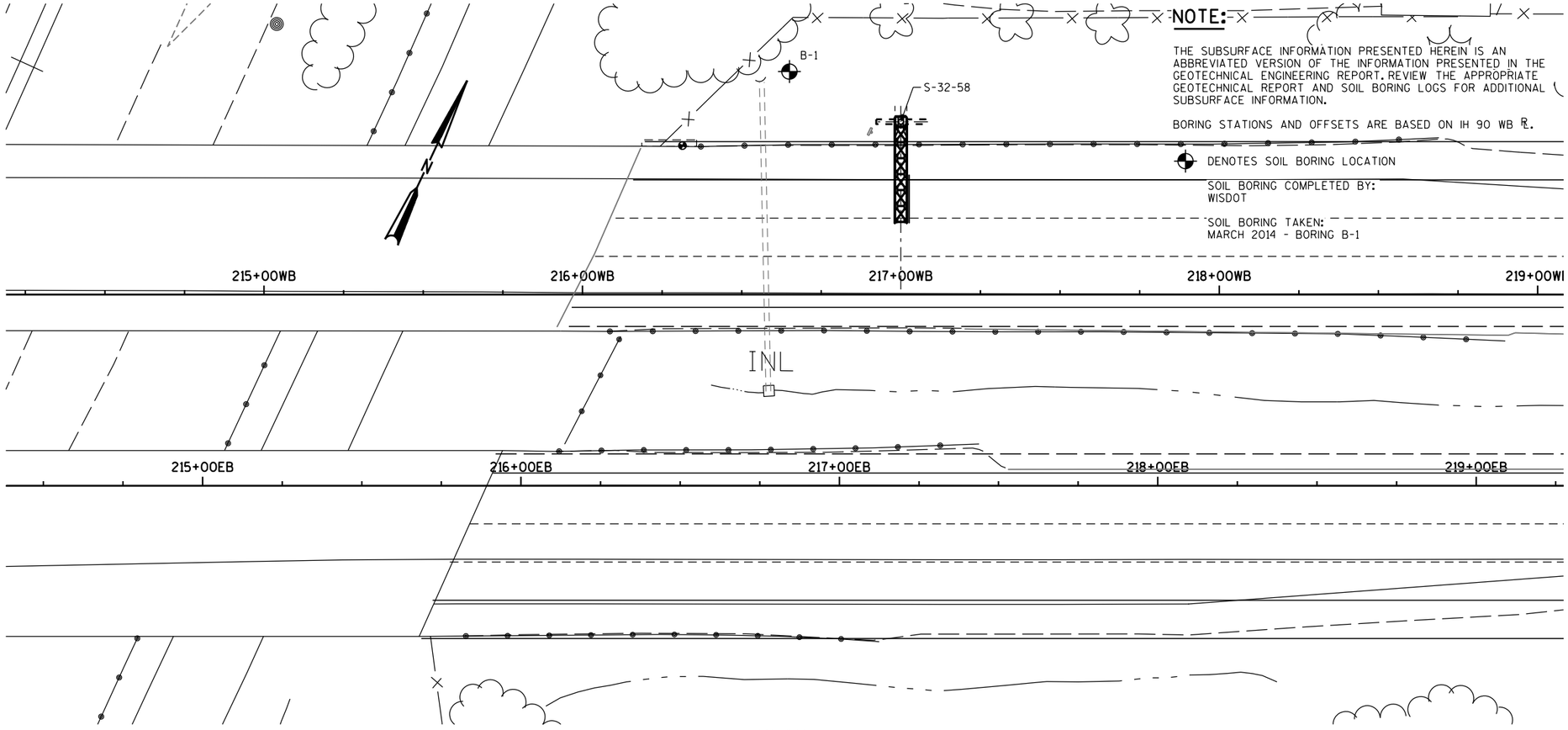
DRAWN BY VJD | PLANS CK'D. JFR

CANTILEVER TRUSS FOOTING

SHEET 4 OF 5
544

8

8



PLAN

NOTE:

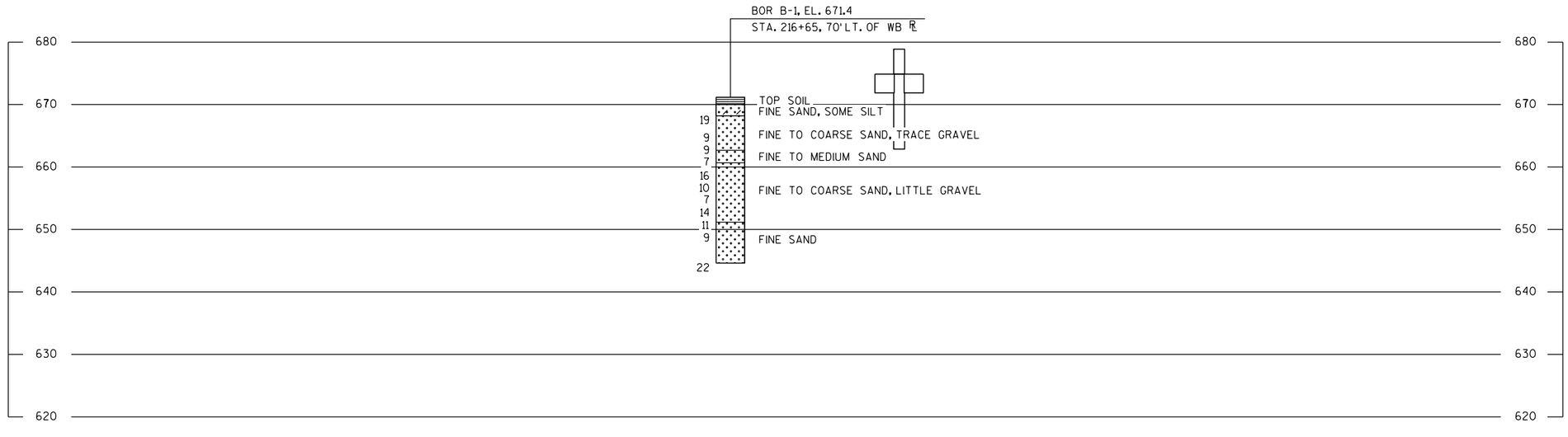
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON IH 90 WB ℄.

DENOTES SOIL BORING LOCATION

SOIL BORING COMPLETED BY:
WISDOT

SOIL BORING TAKEN:
MARCH 2014 - BORING B-1



STATE PROJECT NUMBER

1071-06-78

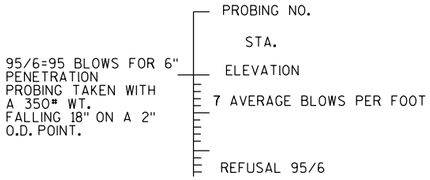
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

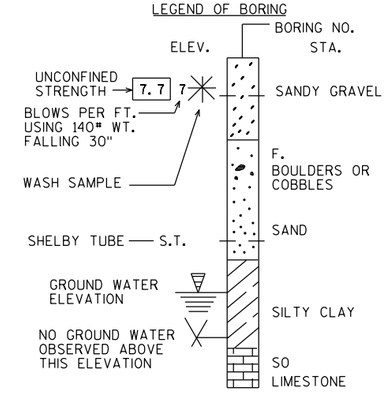
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-58

DRAWN BY YC | PLANS CK'D. JFR

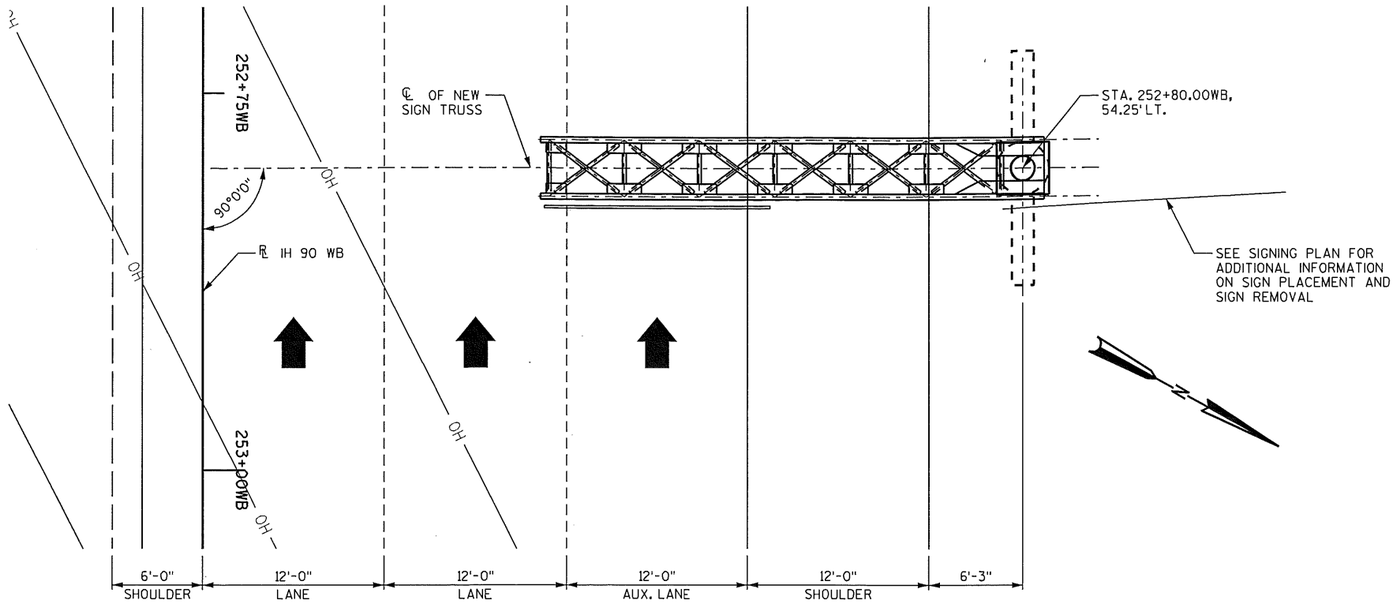
SUBSURFACE EXPLORATION

SHEET 5 OF 5
545

8

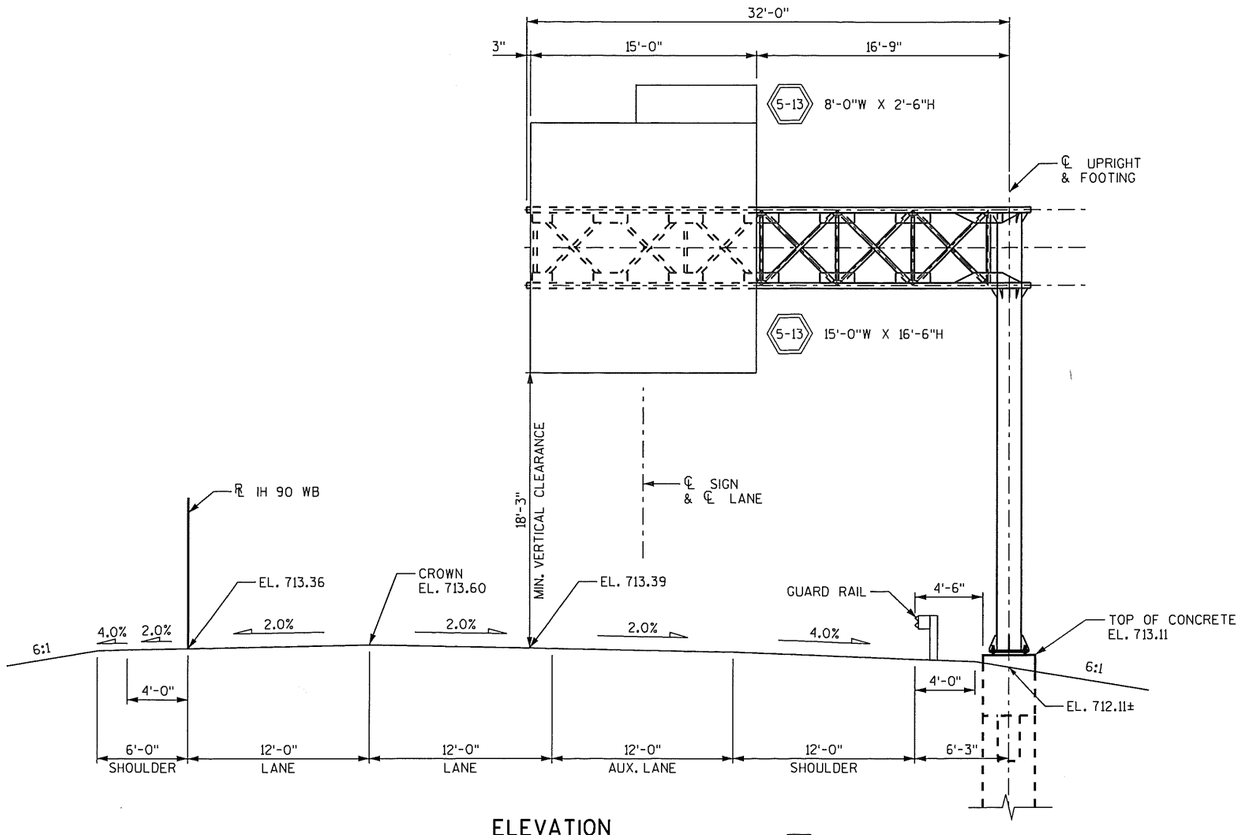
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FILE NAME : P:\8384 I90_53_35 Interchange\Structural\Sign Structures\CADD\S-32-58\S-32-58_05_subsurface.dgn PLOT DATE : 8/4/2014 1:32:49 PM PLOT BY : ychun PLOT NAME : S-32-58_05_subsurface.dgn PLOT SCALE : 1:40



PLAN

4-CHORD CANTILEVER SIGN STRUCTURE



ELEVATION

LOOKING WEST AT FRONT FACE OF SIGN
STA. 252+80.00WB

5-13 SIGN NUMBER APPLIES TO BOTH PANELS, SEE SIGN PLAN.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

CENTER SIGNS VERTICALLY ON TRUSS.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

HANDHOLES ARE NOT REQUIRED.

ALL SIGNS ARE TYPE I.

DESIGN DATA

DESIGN SIGN AREA = 268 SF
MAX. SIGN DEPTH = 16'-6"

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND VELOCITY - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

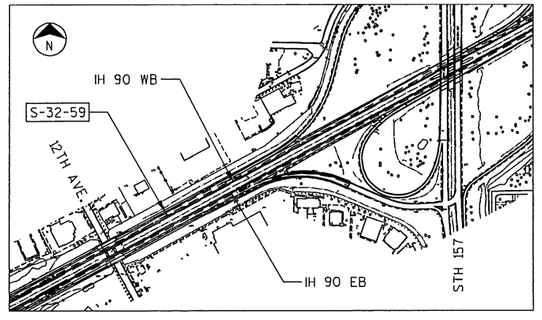
GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½ (WIND*)	133

* MIN. VALUE OF 25 PSF FOR GROUP 3.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GALVANIZED STEEL CANTILEVER SIGN TRUSS
3. GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS
4. CANTILEVER TRUSS FOOTING
5. SUBSURFACE EXPLORATION

WISCONSIN
JOHN F. RUBLEIN
E-38700
MADISON, WI
PROFESSIONAL ENGINEER
8/9/14



LOCATION MAP

SOIL DESIGN PARAMETERS

FRICTION ANGLE = 30 DEGREES
SOIL UNIT WEIGHT = 115 PCF

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	8
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	1,380
641.1200	SIGN BRIDGE CANTILEVERED S-32-59	LS	1

ALL ITEMS ARE CATEGORY 0060

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JOHN RUBLEIN, P.E. (262) 821-1171

NO.	DATE	REVISION	BY

KSA K. Singh & Associates, Inc.
Engineers, Scientists and Environmental Consultants

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/12/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-32-59

IH 90 WB

COUNTY	CITY
LA CROSSE	ONALASKA

DESIGN SPEC.
AASHTO STANDARD SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
VJD	YC	VJD	JFR

GENERAL PLAN AND ELEVATION

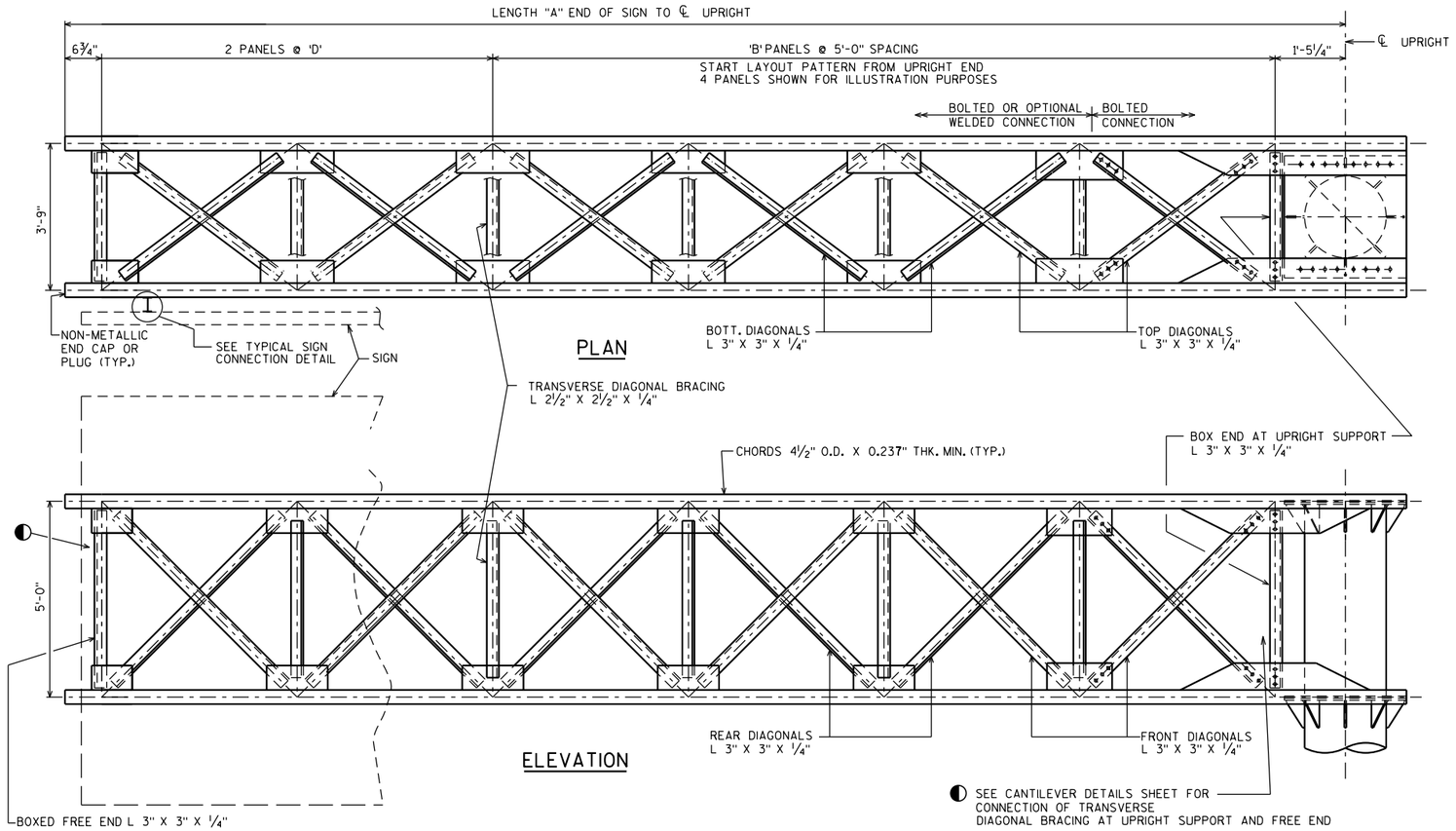
SHEET 1 OF 5
546

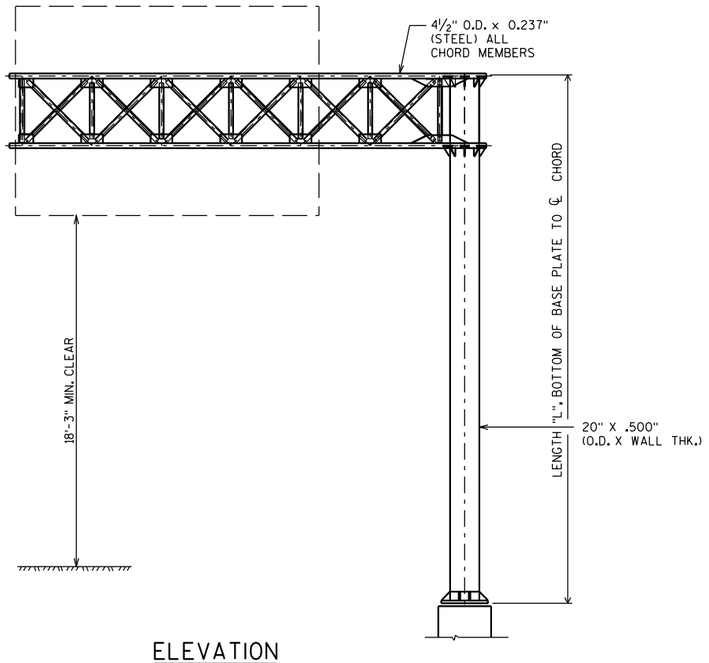
STATE PROJECT NUMBER
1071-06-78

8

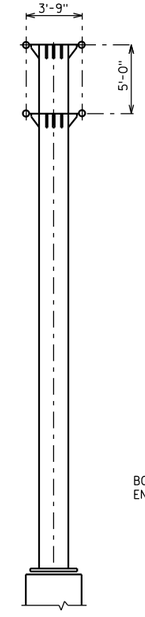
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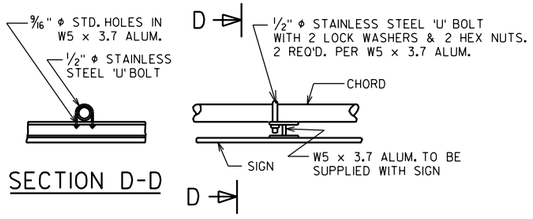




ELEVATION

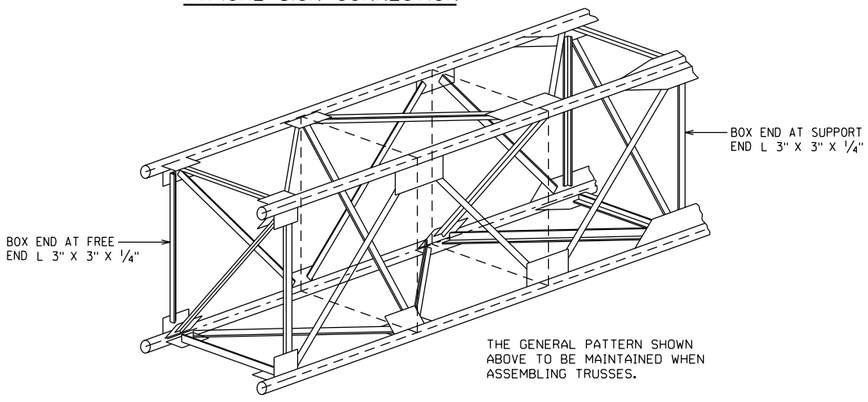


END VIEW



SECTION D-D

TYPICAL SIGN CONNECTION



TYPICAL TRUSS SECTION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS. LUMINARIES AND TRAFFIC SIGNALS"

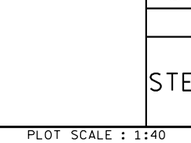
WIND VELOCITY = 90 MPH (3-SECOND GUST SPEED)

PREFABRICATE CAMBER INTO THE HORIZONTAL SUPPORT PROVIDING AN AMOUNT "Y" AT END OF TRUSS SHOWN IN "CAMBER DIAGRAM". DO NOT RAKE VERTICAL UPRIGHT BY ADJUSTMENT OF LEVELING NUTS.

ALLOWABLE DESIGN STRESSES

CHORDS & COLUMN — API-5L-X42 — fy=42,000 P.S.I.
STRUCTURAL ANGLES — A.S.T.M. A709 GRADE 36 — fy=36,000 P.S.I.
PLATES & BARS — A.S.T.M. A709 GRADE 36 — fy=36,000 P.S.I.
ANCHOR BOLTS — A.A.S.H.T.O. M314 — fy=55,000 P.S.I.
HIGH STRENGTH BOLTS- A325 — fy=92,000 P.S.I.
STRUCTURAL MEMBERS GALVANIZED A123
HARDWARE GALVANIZED — A153 CLASS C

STRUCTURE	"A"	"L"	"B"	"D"	"Y"
S-32-59	32'-0"	29'-1"	4	5'-0"	2⅞"



CAMBER DIAGRAM

STATE PROJECT NUMBER

1071-06-78

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-59

DRAWN BY VJD | PLANS CK'D. JFR

GALVANIZED STEEL CANTILEVER SIGN TRUSS

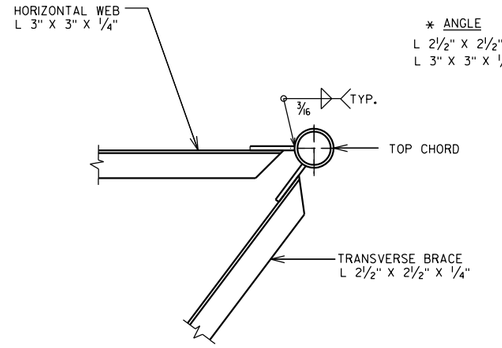
SHEET 2 OF 5
547

8

8

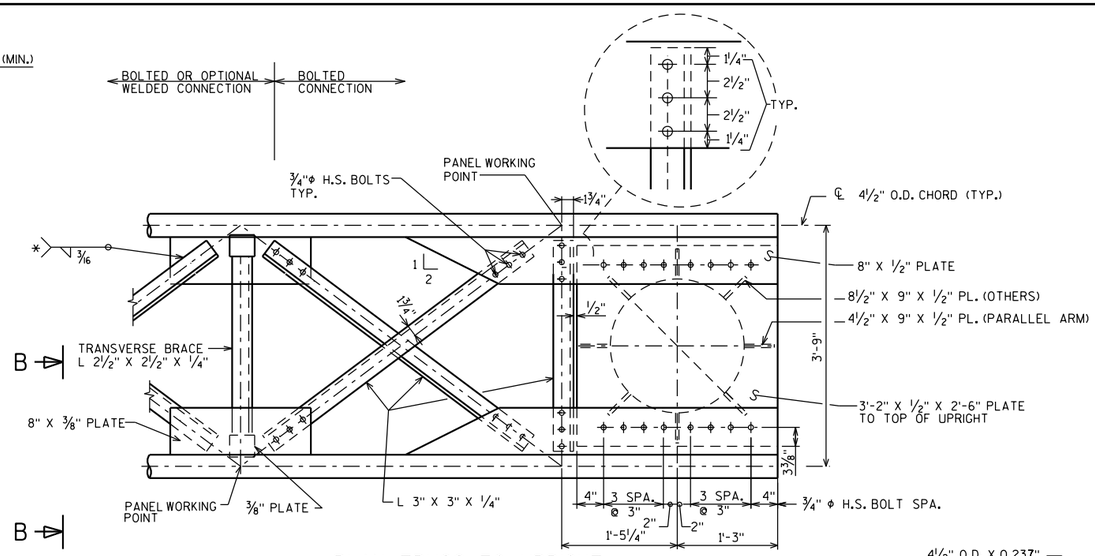
STATE PROJECT NUMBER

1071-06-78

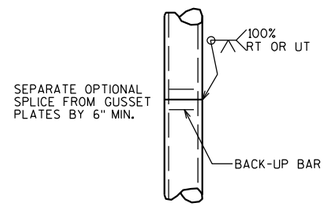


* ANGLE	WELD LENGTH (MIN.)
L 2 1/2" X 2 1/2" X 1/4"	7"
L 3" X 3" X 1/4"	8"

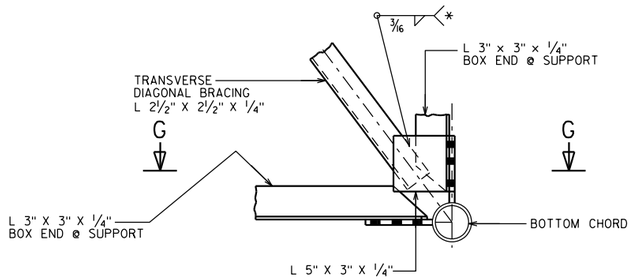
SECTION B-B



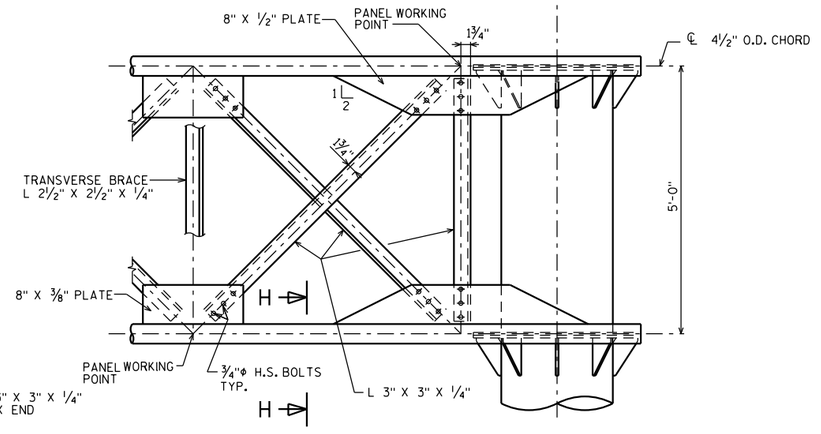
PLAN TRUSS TO UPRIGHT



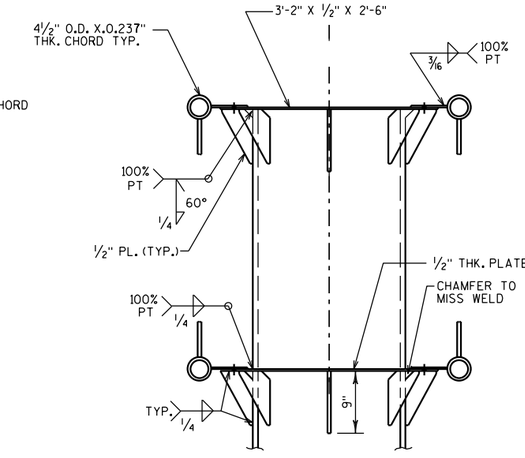
OPTIONAL COLUMN OR CHORD SPLICE DETAIL



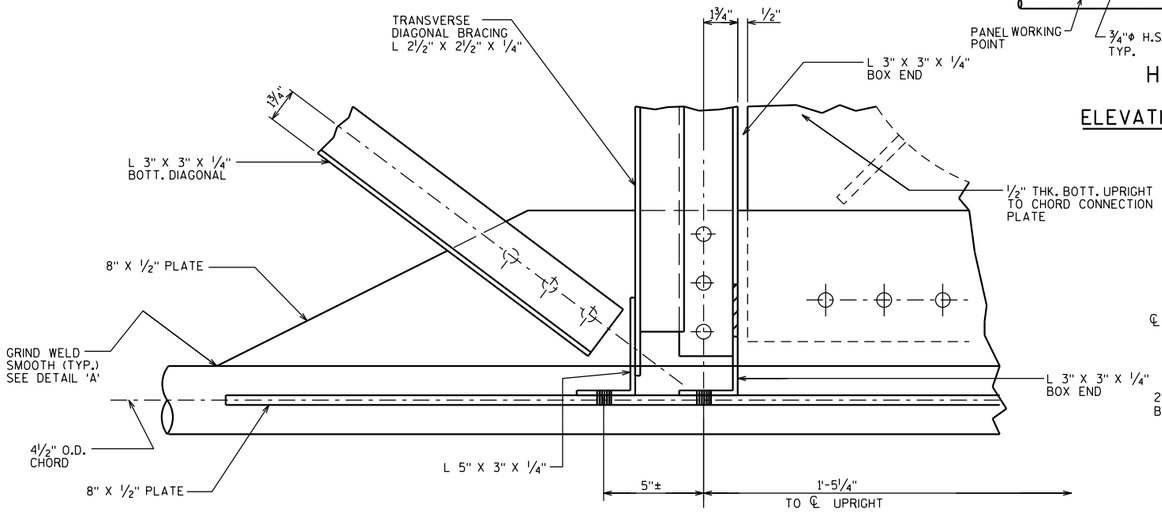
SECTION H-H



ELEVATION TRUSS TO UPRIGHT

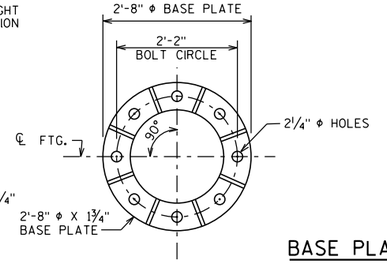


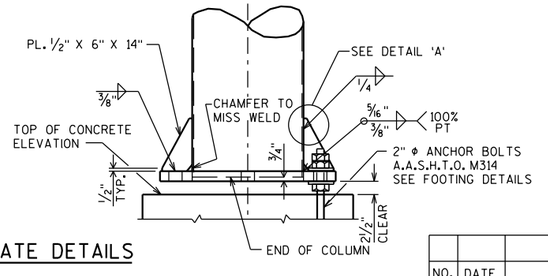
END VIEW
TRUSS TO UPRIGHT



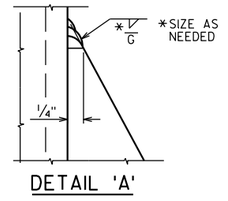
SECTION G-G

(LOOKING DOWN @ BOTT. HORIZ. PLANE @ FRONT CHORD)





BASE PLATE DETAILS



DETAIL 'A'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-59

DRAWN BY VJD | PLANS CK'D. JFR

GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS

SHEET 3 OF 5

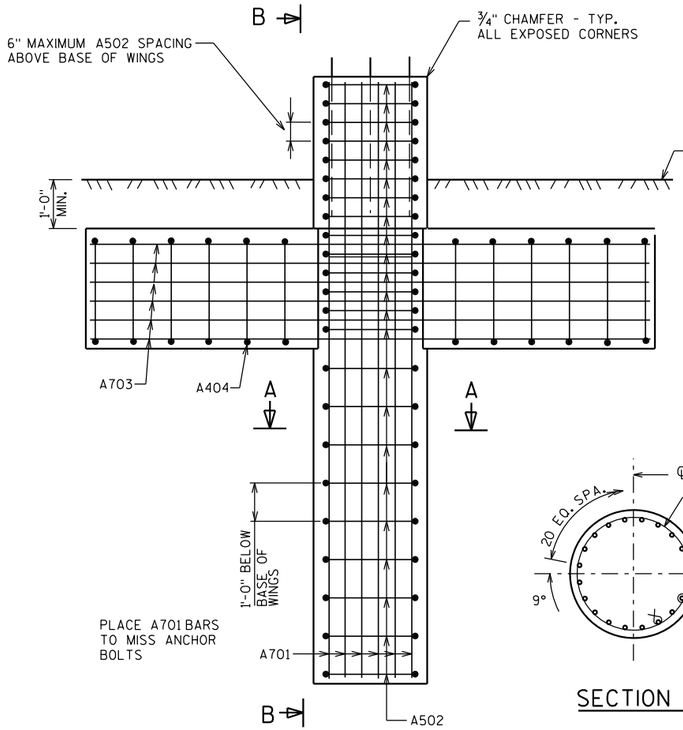
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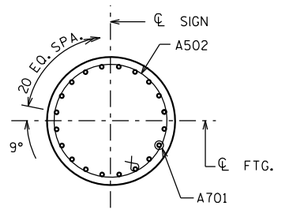
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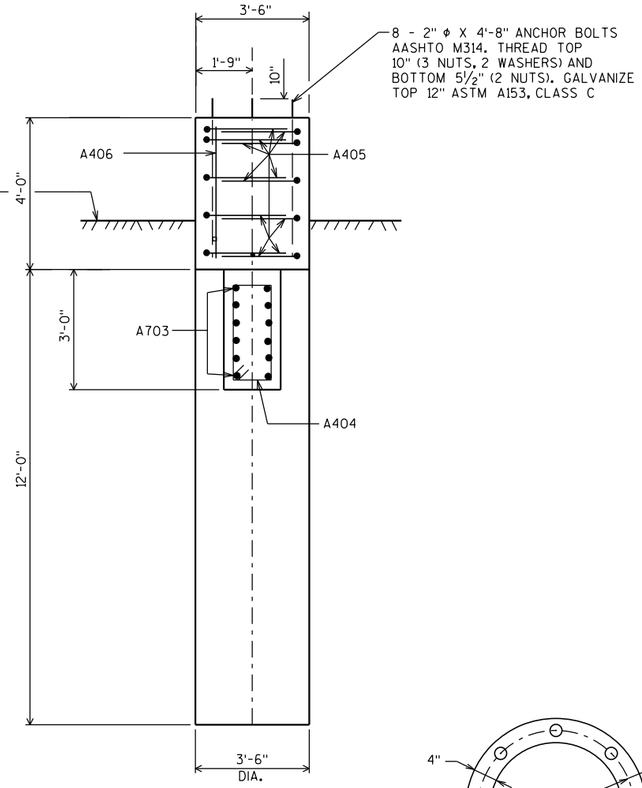
STATE PROJECT NUMBER
1071-06-78



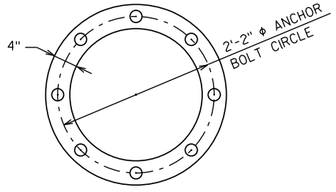
ELEVATION
(8 CY)



SECTION A



SECTION B



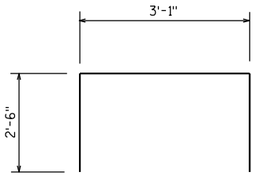
TOP VIEW OF TOP & BOTTOM TEMPLATES

BILL OF BARS

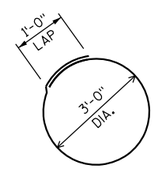
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.
BAR DIMENSIONS ARE OUT TO OUT OF BAR.

1,380 LB

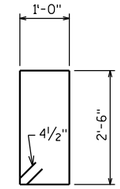
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
A701		20	15'-6"				FOOTING - COLUMN/TOP
A502		23	10'-6"	X			FOOTING - COLUMN/TOP
A703		12	15'-0"				FOOTING - WINGS
A404		12	7'-6"	X			FOOTING - WINGS
A405		10	7'-11"	X			FOOTING - TOP
A406		4	3'-6"				FOOTING - TOP - COLUMNS



A405



A502



A404
(STIRRUP)

GENERAL NOTES

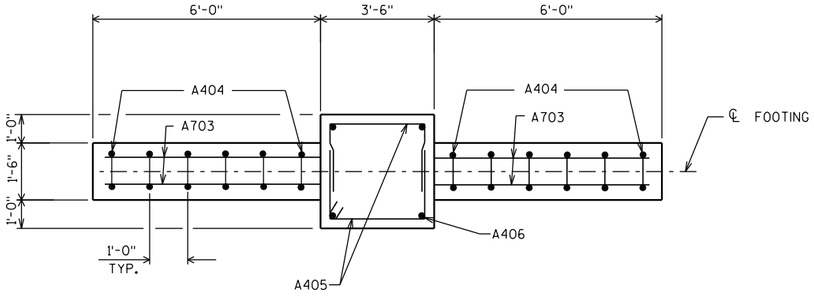
DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

ALLOWABLE DESIGN STRESSES

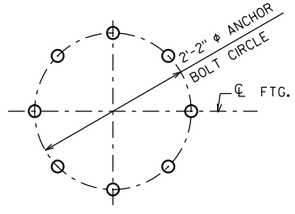
CONCRETE MASONRY — f'c=3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 — fy=60,000 PSI
ANCHOR BOLTS AASHTO M314 — fy=55,000 PSI

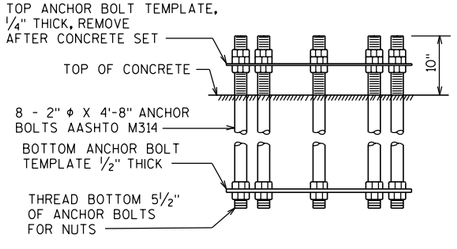
FOUNDATION DATA

ALLOWABLE SOIL BEARING PRESSURE = 2.0T/SQ. FT.



PLAN





ANCHOR BOLT DETAILS

TOTAL ESTIMATED QUANTITIES (1 FTG.)

SIGN SUPPORTS CONCRETE MASONRY — 8 CY
SIGN SUPPORTS STEEL REINFORCEMENT HS — 1,380 LB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-59

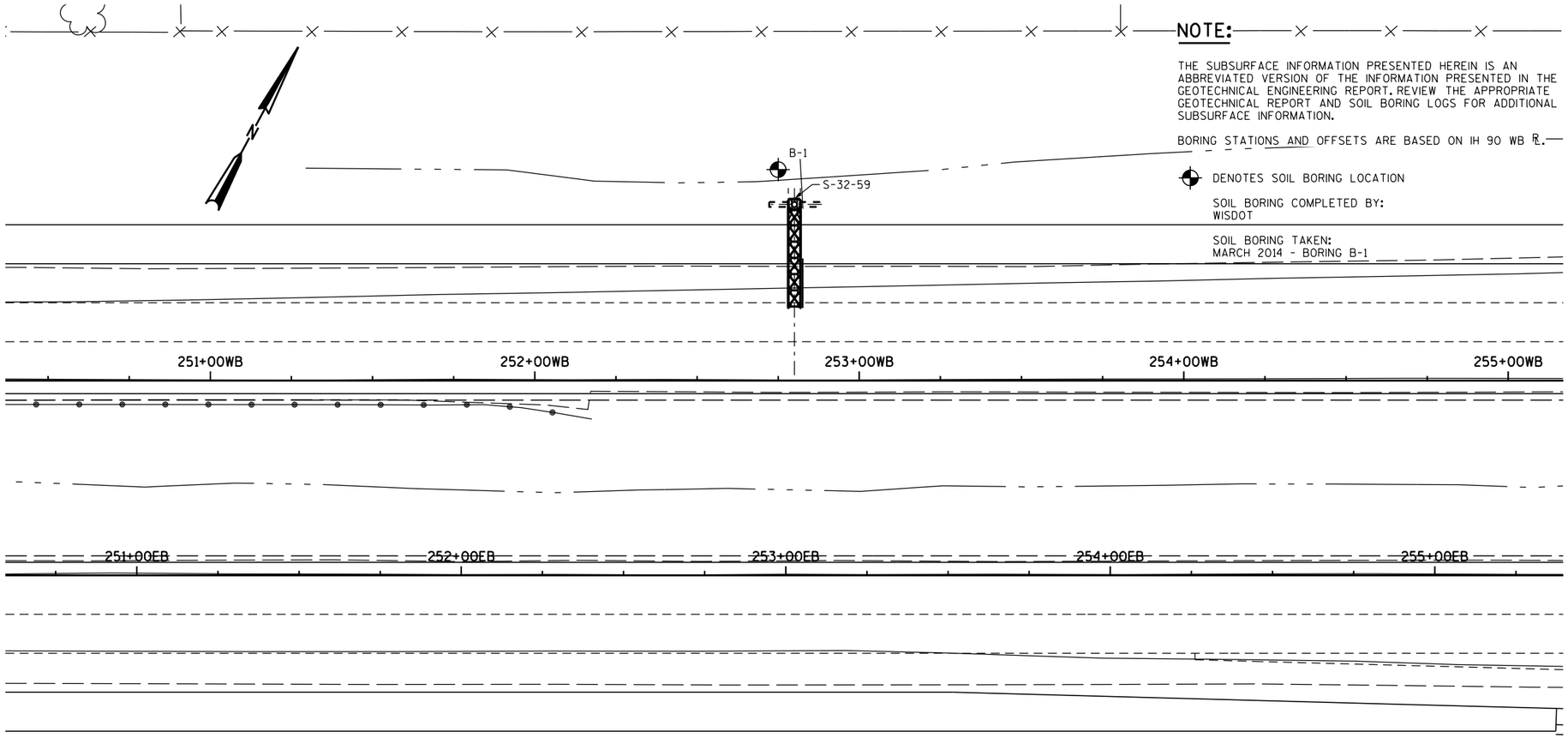
DRAWN BY VJD | PLANS CK'D. JFR

CANTILEVER TRUSS FOOTING

SHEET 4 OF 5
549

8

8



NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

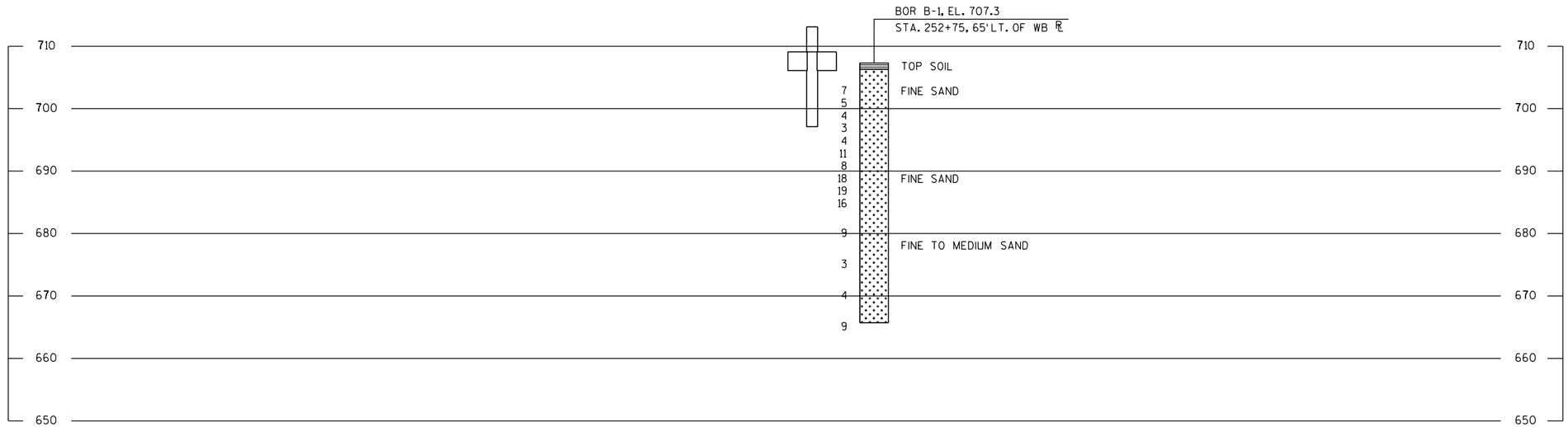
BORING STATIONS AND OFFSETS ARE BASED ON IH 90 WB ℄.

DENOTES SOIL BORING LOCATION

SOIL BORING COMPLETED BY:
WISDOT

SOIL BORING TAKEN:
MARCH 2014 - BORING B-1

PLAN



STATE PROJECT NUMBER

1071-06-78

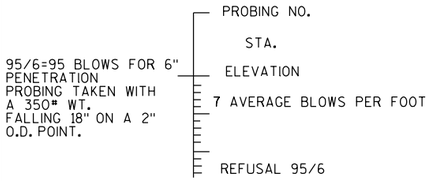
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

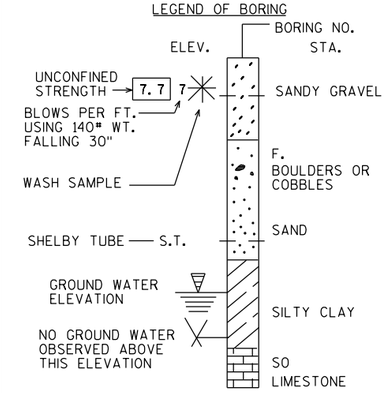
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-59

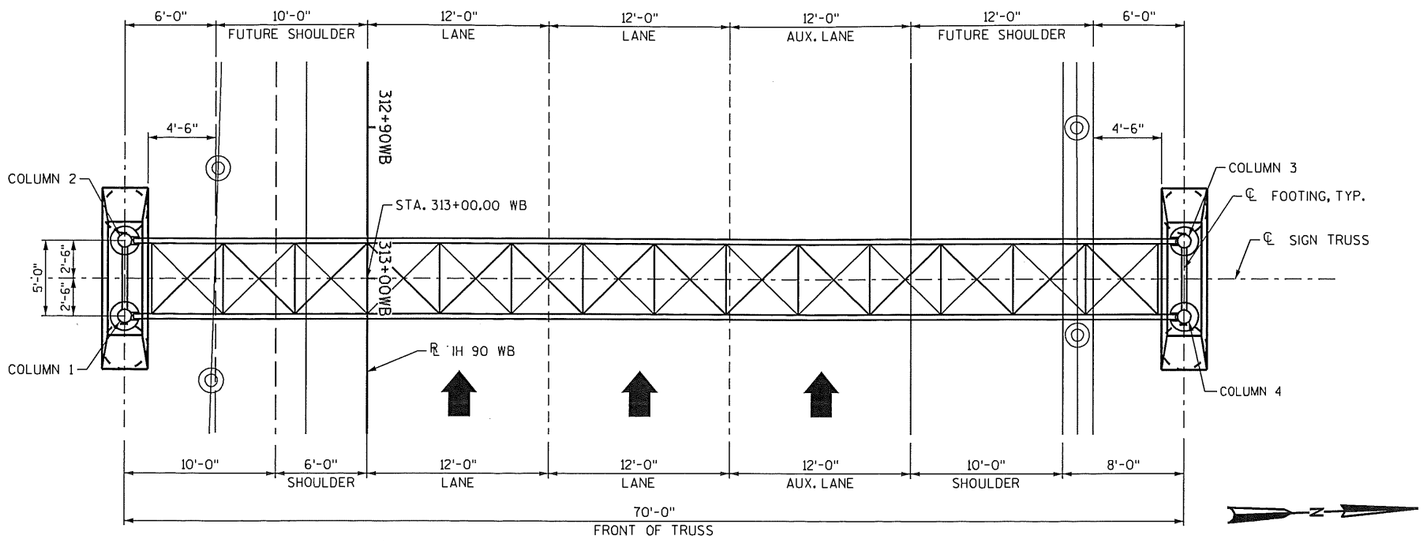
DRAWN BY YC | PLANS CK'D. JFB

SUBSURFACE EXPLORATION

SHEET 5 OF 5
550

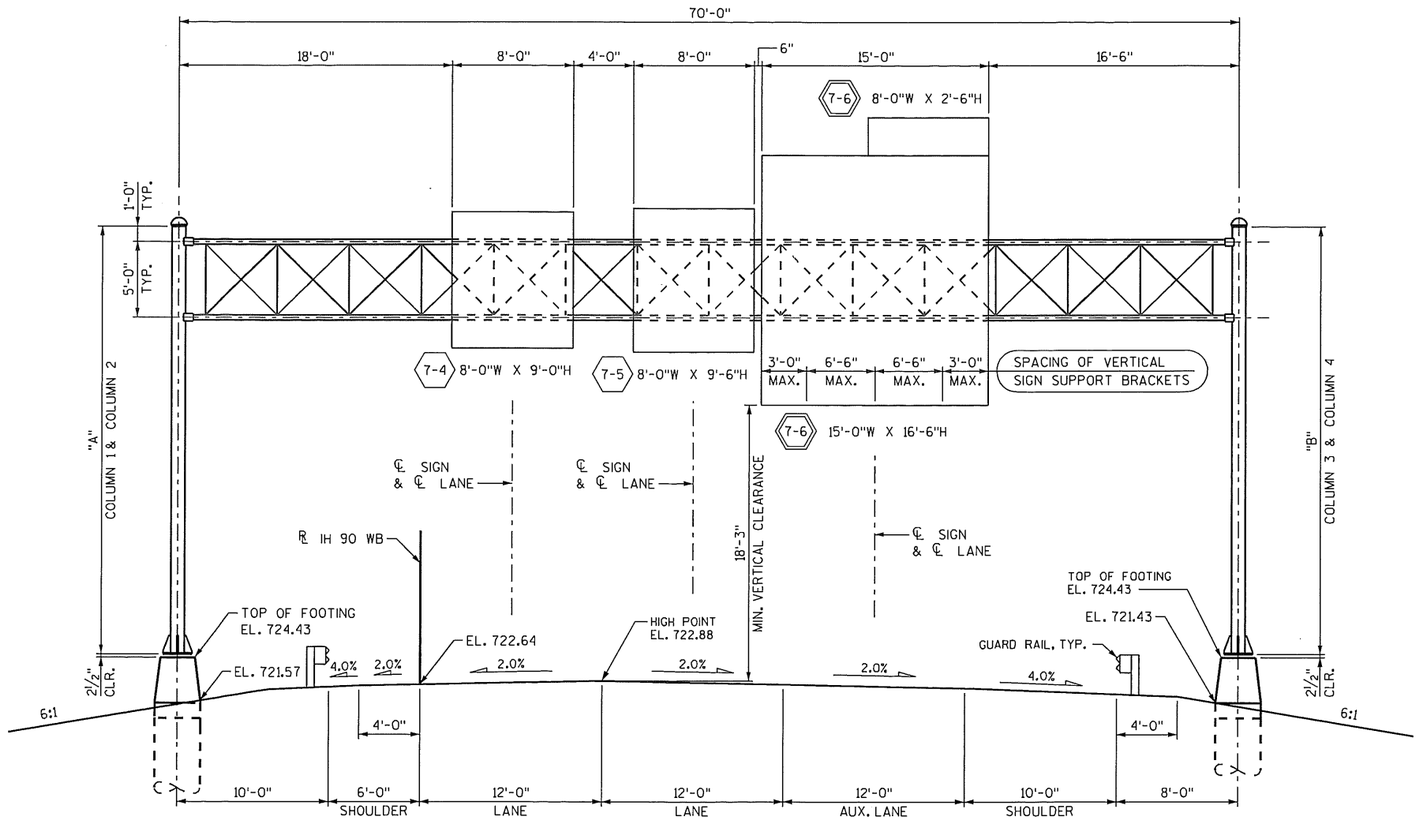
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8



PLAN

4-CHORD FULL-SPAN SIGN STRUCTURE



ELEVATION

LOOKING WEST AT FRONT FACE OF SIGN
STA. 313+00.00 WB

7-6 SIGN NUMBER

7-6 SIGN NUMBER APPLIES TO BOTH PANELS, SEE SIGN PLAN.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

CENTER SIGNS VERTICALLY ON TRUSS.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

HANDHOLES ARE NOT REQUIRED.

ALL SIGNS ARE TYPE I.

STATE PROJECT NUMBER

1071-06-78

DESIGN DATA

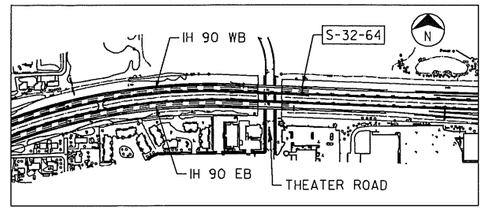
DESIGN SIGN AREA = 792 SF
MAX. SIGN DEPTH = 16'-6"

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND VELOCITY - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½ (WIND*)	133

* MIN. VALUE OF 25 PSF FOR GROUP 3.



LOCATION MAP

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	28
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	3,470
641.6600	SIGN BRIDGE S-32-64	LS	1

ALL ITEMS ARE CATEGORY 0070

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. 4-CHORD GALVANIZED STEEL SIGN BRIDGE
3. 4-CHORD SIGN BRIDGE DETAILS
4. SIGN BRIDGE TRUSS FOOTING
5. SUBSURFACE EXPLORATION

WISCONSIN
JOHN F. RUBLEIN
E-38700
MADISON, WI
PROFESSIONAL ENGINEER
8/1/14

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JOHN RUBLEIN, P.E. (262) 821-1171

NO.	DATE	REVISION	BY

KSA K. Singh & Associates, Inc.
Engineers, Scientists and Environmental Consultants

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/12/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-32-64

IH 90 WB EAST OF THEATER ROAD

COUNTY LA CROSSE | CITY ONALASKA

DESIGN SPEC. AASHTO STANDARD SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
VJD	YC	VJD	JFR

GENERAL PLAN & ELEVATION

SHEET 1 OF 5
551

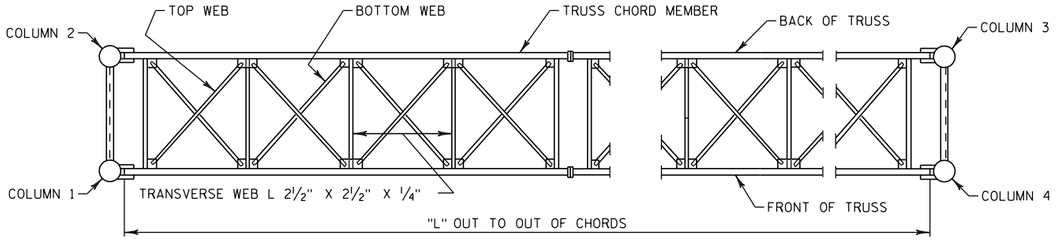
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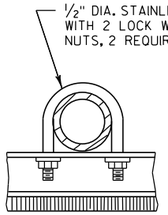
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STATE PROJECT NUMBER

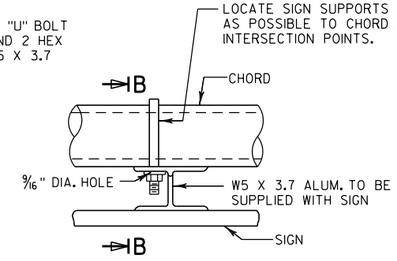
1071-06-78



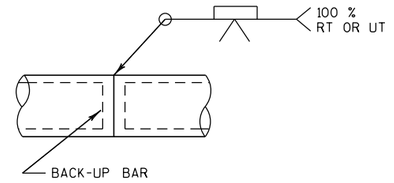
PLAN



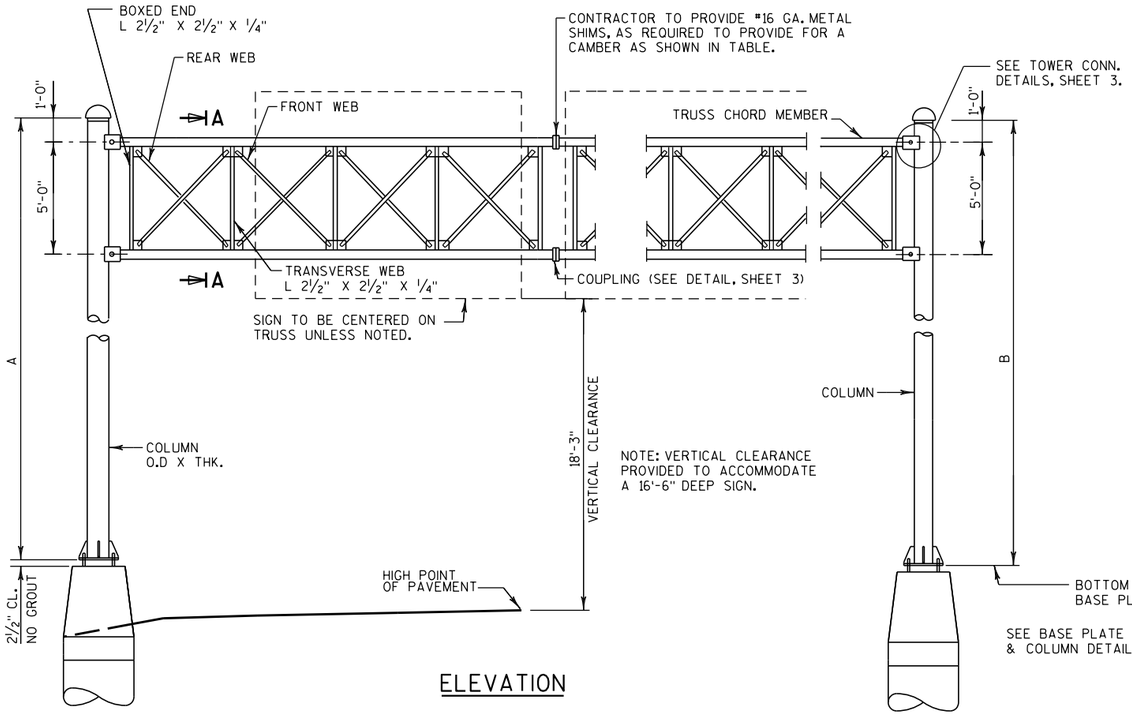
SECTION B



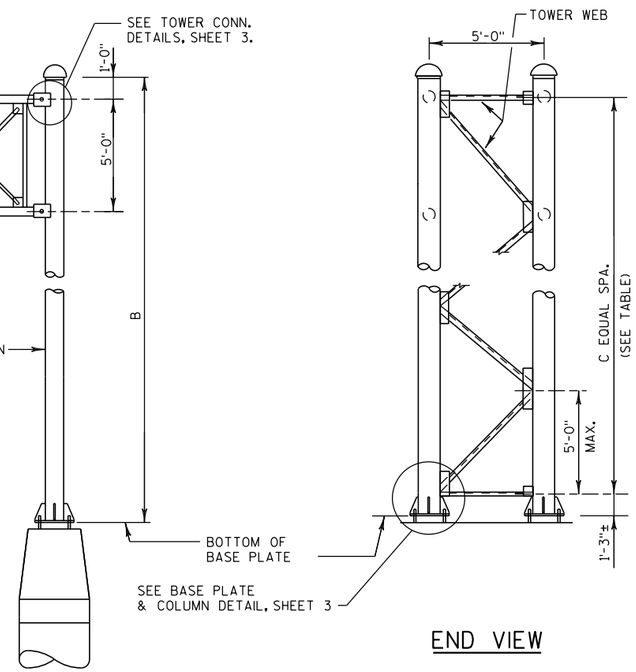
TYPICAL SIGN CONNECTION



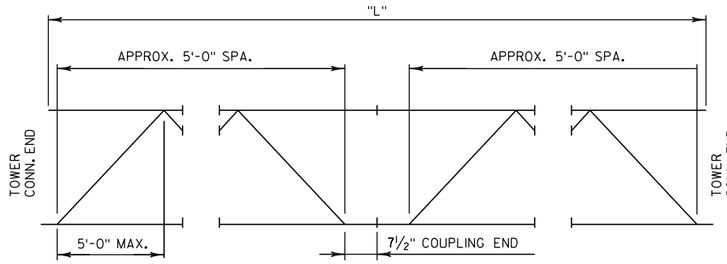
CHORD SPLICE



ELEVATION

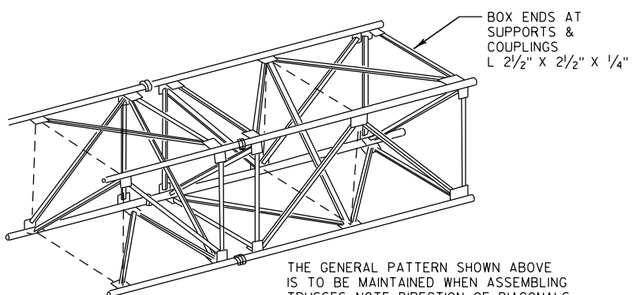


END VIEW



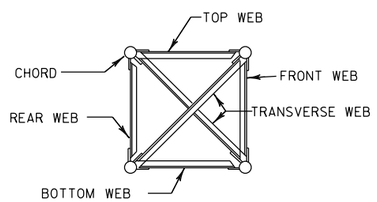
TRUSS ARRANGEMENT

FABRICATOR MAY MAKE TRUSSES ANY LENGTH KEEPING A SECTION A MINIMUM OF 20'-0" & A MULTPLE OF 5'-0". CHORD FIELD SPLICES SHALL BE MADE WITH COUPLINGS. CHORD SHOP SPLICE SHALL BE THE WELDED SPLICE SHOWN ABOVE.



THE GENERAL PATTERN SHOWN ABOVE IS TO BE MAINTAINED WHEN ASSEMBLING TRUSSES. NOTE DIRECTION OF DIAGONALS AT JOINTS.

TYPICAL TRUSS SECTION



SECTION A

NOTES

DRAWINGS SHALL NOT BE SCALED.

STEEL COLUMN PIPE SHALL BE API SPEC. 5L GRADE X42 Fy = 42,000 PSI.
ALL STEEL PIPE MEMBERS OF TRUSS SHALL BE API SPEC. 5L GRADE X42 Fy = 42,000 PSI.
PLATES, BARS, STRUCTURAL ANGLES SHALL BE ASTM A709 GRADE 36 Fy = 36,000 PSI.
ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.
ALL BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA. A325 BOLTS, GALVANIZED ASTM A153, CLASS C.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF UNIT CAN BE GALVANIZED IN ONE PIECE.

STEEL ANCHOR BOLTS SHALL BE AASHTO M314-90 GRADE 55. Fy = 55,000 PSI.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERRECTION. BLANKS SHALL BE ¼ THE LENGTH OF THE BRIDGE. 2'-0" DEEPER THAN C TO C OF CHORDS & SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED IN PLANS.

THE UPPER 12" ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE AASHTO SPECIFICATION AS STATED IN SECTION 641. OF THE WISDOT STANDARD SPECIFICATIONS.

WELD TEST AS PER AWS D1.1.

STRUCTURE	A	B	C	CHORD O.D. X THK.	TOP & BOTTOM WEB	FRONT & REAR WEB	COUPLING PLATE "D1" & "T"	BOLT CIRCLE DIA. "D2"	NO. OF BOLTS IN COUPLING	CAMBER	COLUMN O.D. X THK.	TOWER WEB	"L"
S-32-64	28'-3"	28'-3"	6 NORTH TOWER 6 SOUTH TOWER	4.5"X0.237"	3"X3"X¼"	3"X3"X¼"	10" & 1"	7½"	6	1⅛"	10.75"X0.250"	4"X4"X⅜"	68'-10¼"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-64

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4-CHORD GALVANIZED STEEL SIGN BRIDGE

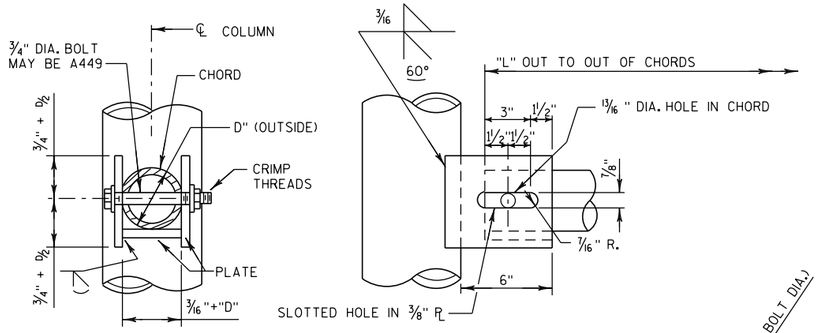
SHEET 2 OF 5
552

8

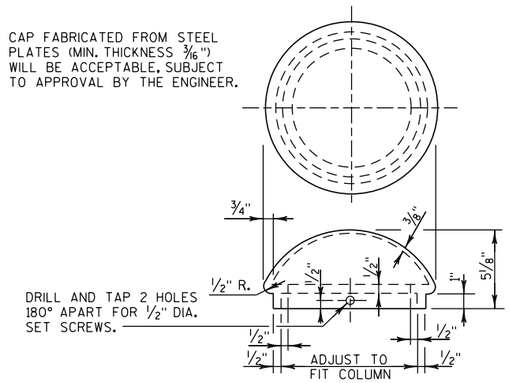
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STATE PROJECT NUMBER

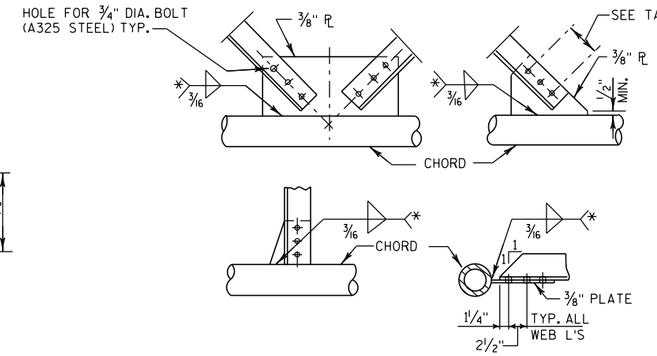
1071-06-78



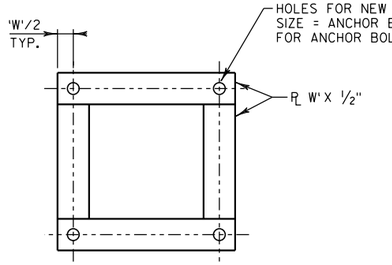
TOWER CONNECTION DETAIL



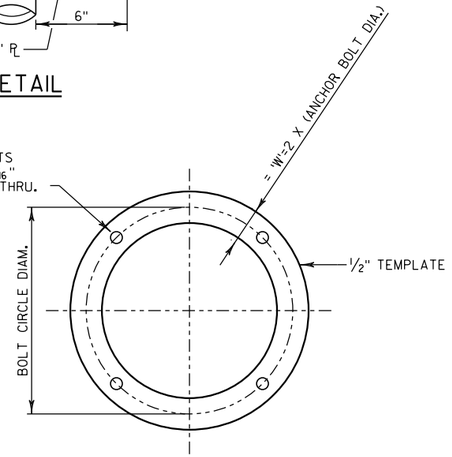
TOWER CAP DETAIL



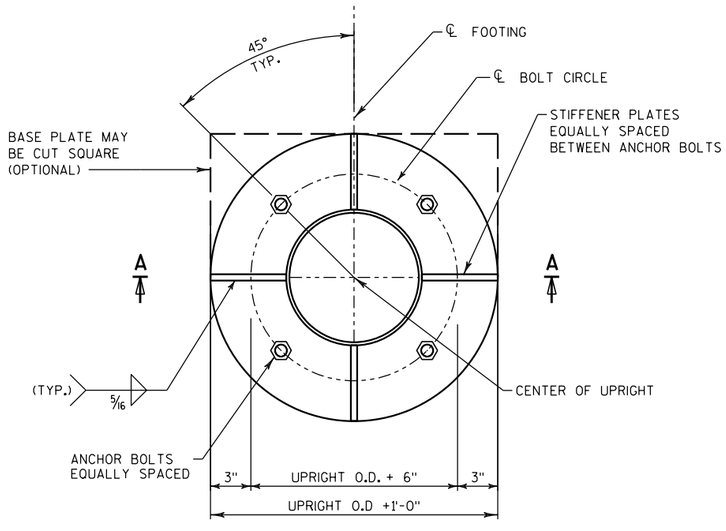
TYPICAL TRUSS CONNECTION DETAILS



ALTERNATE TEMPLATE PLAN

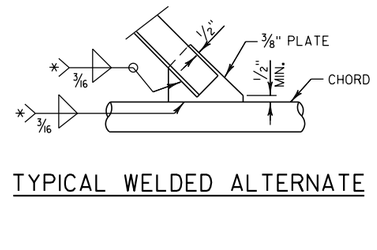


TEMPLATE PLAN



PLAN VIEW

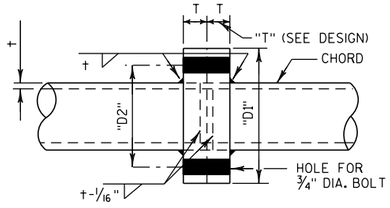
(BASE PLATE)



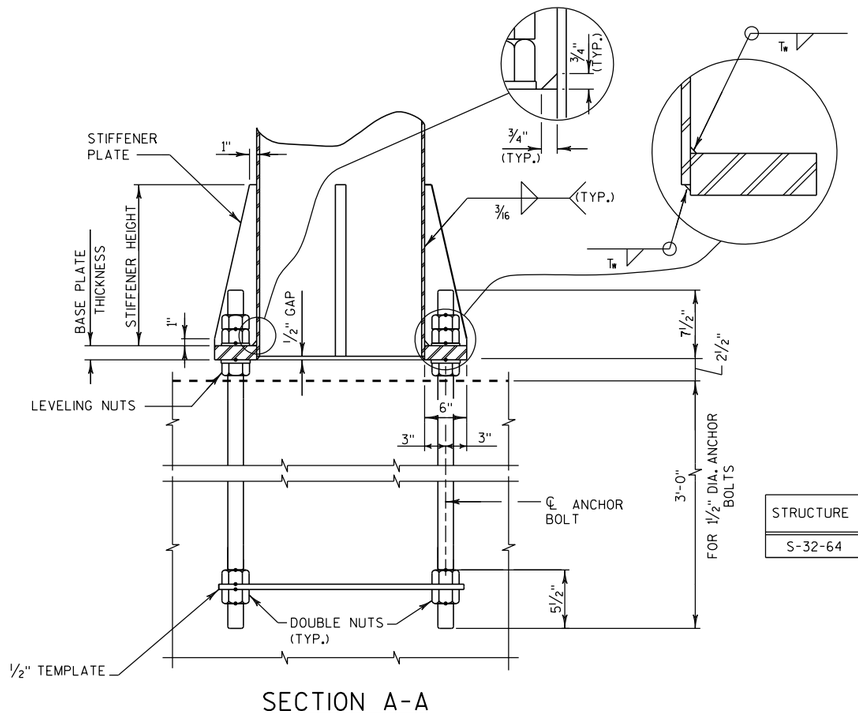
TYPICAL WELDED ALTERNATE

*ANGLE	WELD LENGTH	NO. OF BOLTS
● 2½"x2½"x¼"	11"	3
3"x3"x3/16"	10"	3
3"x3"x¼"	13"	4
3"x3"x5/16"	16½"	5
3"x3"x⅜"	19½"	6
4"x4"x¼"	18"	5
4"x4"x5/16"	22"	6
4"x4"x⅜"	26"	8
4"x4"x7/16"	30"	9
4"x4"x½"	34"	10

● ONLY USED FOR BOXED END AND TRANSVERSE BRACING.



COUPLING DETAIL



SECTION A-A

STRUCTURE	COLUMN O.D. X THK.	ANCHOR BOLTS DIAMETER	BASE PLATE THICKNESS (IN.)	STIFFENER PLATE THICKNESS (IN.)	STIFFENER PLATE HEIGHT (IN.)	Tw (IN.)
S-32-64	10.75"X0.250"	1½"	1½"	½"	10"	¼"

NOTE:

PRIOR TO INSTALLATION, ANCHOR BOLTS SHALL BE RIGIDLY HELD IN POSITION DURING CONCRETE PLACEMENT USING STEEL ANCHOR PLATE AND TOP TEMPLATE. REMOVE TOP TEMPLATE (NOT SHOWN AFTER CONCRETE SETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-64

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4-CHORD SIGN BRIDGE DETAILS

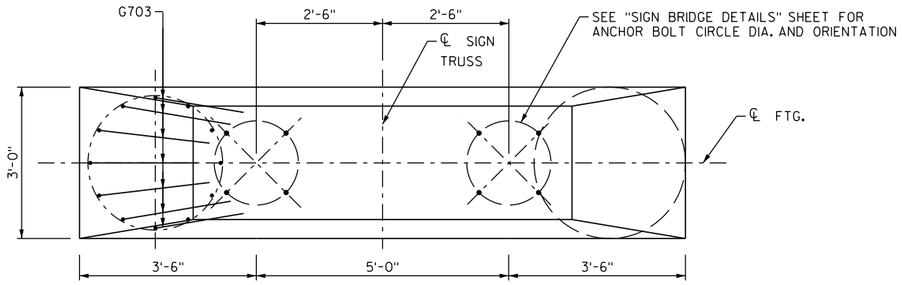
SHEET 3 OF 5
553

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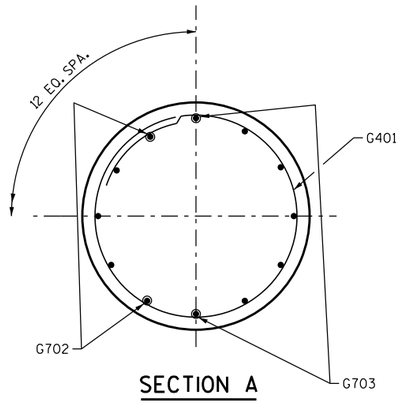
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STATE PROJECT NUMBER

1071-06-78



PLAN



SECTION A

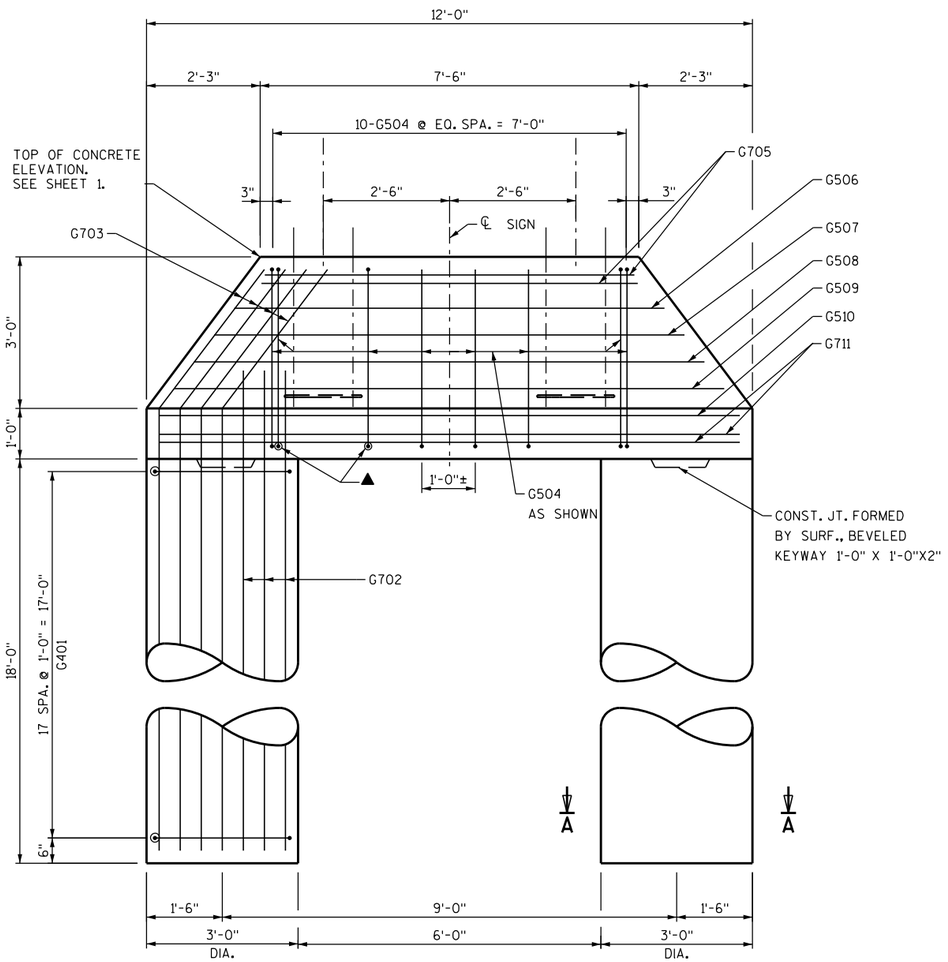
BILL OF BARS

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
BAR DIMENSIONS ARE OUT TO OUT OF BAR.

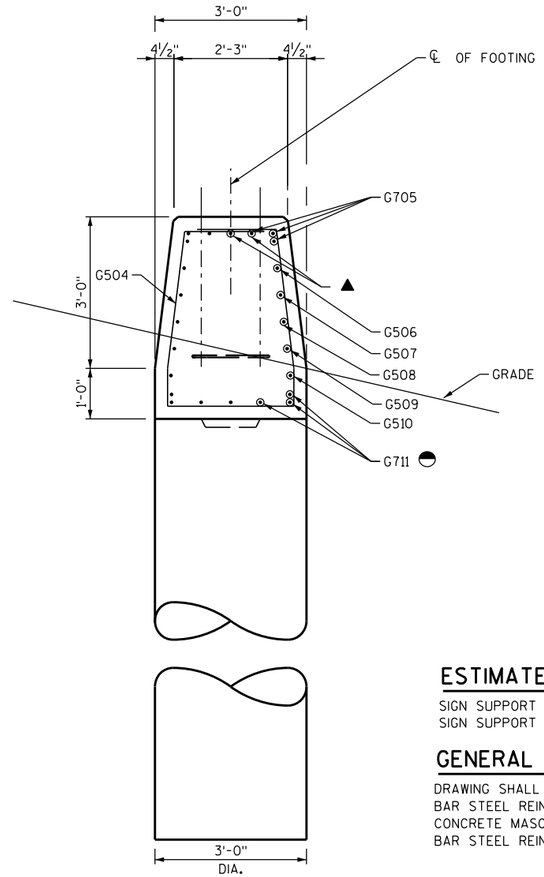
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
G401		36	8'-11"	X		FOOTING-HOOPS
G702		10	20'-0"			FOOTING-VERTICAL
G703		14	22'-2"	X		FOOTING-VERTICAL
G504		8	12'-5"	X		FOOTING-STIRRUPS
G705		7	7'-4"			FOOTING-HORIZONTAL
G506		2	8'-4"			FOOTING-HORIZONTAL
G507		2	9'-2"			FOOTING-HORIZONTAL
G508		2	9'-11"			FOOTING-HORIZONTAL
G509		2	10'-9"			FOOTING-HORIZONTAL
G510		2	11'-6"			FOOTING-HORIZONTAL
G711		7	11'-6"			FOOTING-HORIZONTAL

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

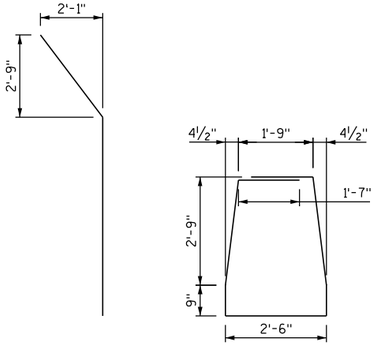
QUANTITY OF BARS IN TABLE IS FOR ONE FOOTING.



ELEVATION
(ONE FTG.)

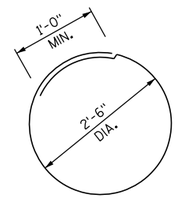


END VIEW



G703

G504



G401

SOIL DESIGN PARAMETERS

FRICTION ANGLE = 31 DEGREES
SOIL UNIT WEIGHT = 115 PCF

ESTIMATED QUANTITIES (ONE FOOTING)

SIGN SUPPORT CONCRETE MASONRY---------- 14 CY
SIGN SUPPORT STEEL REINFORCEMENT HS ---------- 1,735 LB

GENERAL NOTES

DRAWING SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CL.
CONCRETE MASONRY---------- fc'= 3,500 PSI
BAR STEEL REINF. -----GRADE 60 fy = 60,000 PSI

◓ SPACE TO MISS VERT. SHAFT REINF.
▲ SPACE TO MISS ANCHOR BOLTS. TIE IN PLACE AFTER ANCHOR BOLT ASSEMBLY LOCATED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-64

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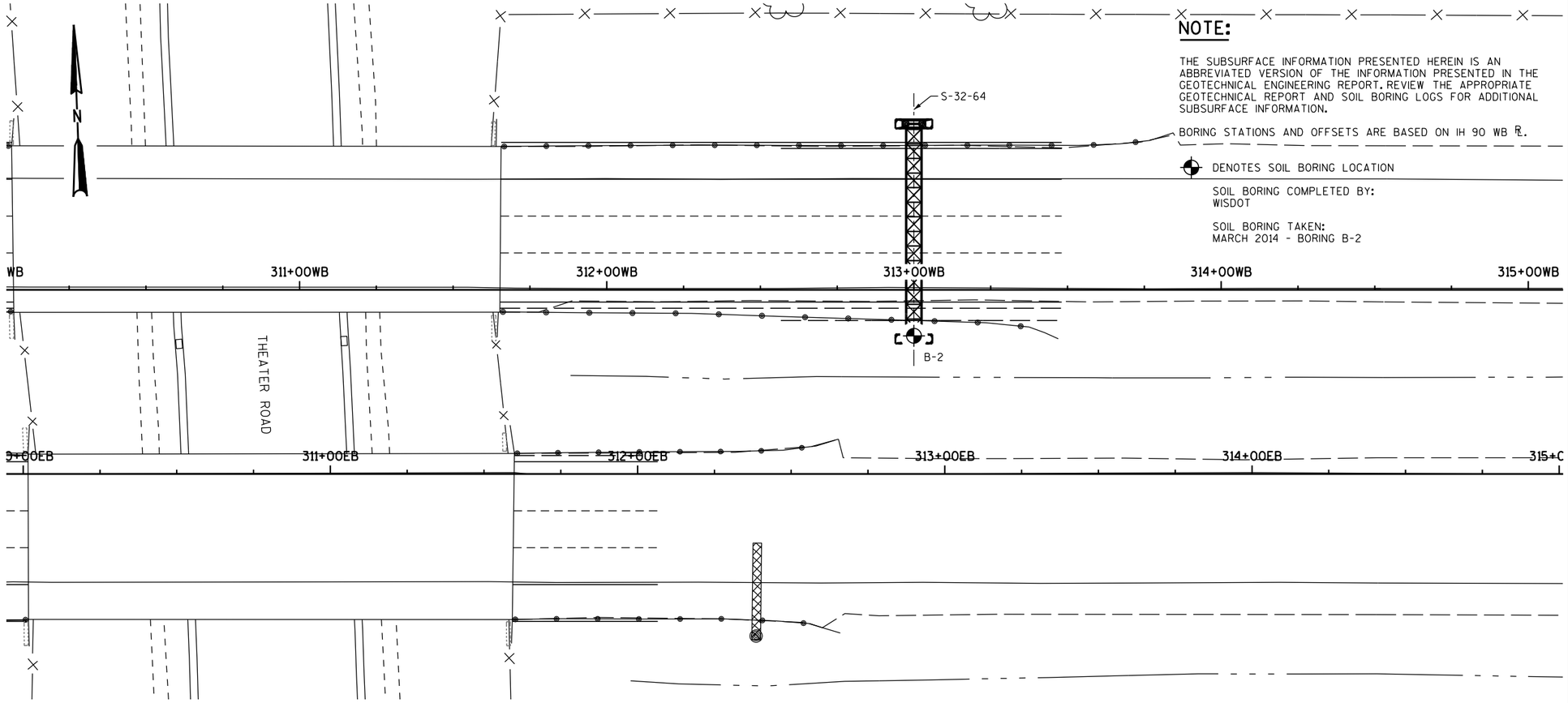
SIGN BRIDGE TRUSS FOOTING

SHEET 4 OF 5
554

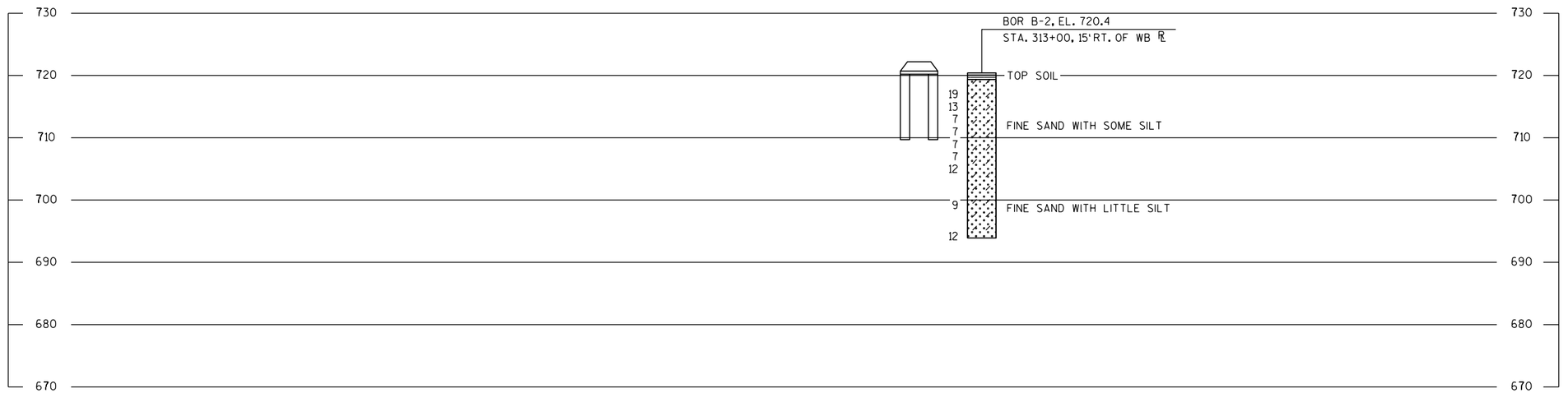
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PLAN



NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON IH 90 WB ℄.

DENOTES SOIL BORING LOCATION

SOIL BORING COMPLETED BY:
WISDOT

SOIL BORING TAKEN:
MARCH 2014 - BORING B-2

STATE PROJECT NUMBER

1071-06-78

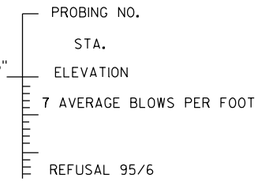
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

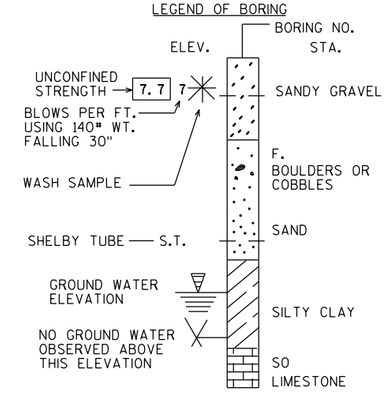
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-64

DRAWN BY YC | PLANS CK'D. JFR

SUBSURFACE EXPLORATION

SHEET 5 OF 5
555

8

8

EARTHWORK DATA - IH 90 WESTBOUND

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
72+69.46	92.14	0.00	0.00	0.00	0.00	0.00	0.00
72+97.45	78.05	0.17	88.22	0.09	88.22	0.10	88.11
73+00.00	77.43	0.25	7.33	0.02	95.55	0.13	95.42
73+89.46	84.27	5.01	267.89	8.71	363.44	10.14	353.30
74+00.00	88.09	5.03	33.64	1.96	397.08	12.39	384.69
74+73.00	92.38	4.97	243.98	13.51	641.06	27.93	613.13
74+98.00	91.48	5.32	85.12	4.76	726.18	33.41	692.77
75+00.00	90.76	2.50	6.75	0.29	732.93	33.74	699.19
75+23.00	84.90	4.51	74.82	2.99	807.75	37.18	770.57
76+00.00	67.45	3.65	217.25	11.64	1024.99	50.57	974.42
76+43.00	59.43	5.21	101.03	7.05	1126.03	58.68	1067.35
77+00.00	55.56	3.85	121.37	9.56	1247.40	69.67	1177.73
78+00.00	55.84	2.59	206.29	11.93	1453.69	83.39	1370.30
79+00.00	39.23	14.09	176.04	30.89	1629.73	118.91	1510.82
80+00.00	45.09	7.04	156.15	39.12	1785.88	163.90	1621.98
81+00.00	42.45	6.82	162.10	25.67	1947.99	193.41	1754.57
82+00.00	53.16	3.82	177.05	19.71	2125.03	216.08	1908.95
83+00.00	41.30	24.12	174.93	51.74	2299.96	275.58	2024.38
84+00.00	41.61	17.38	153.54	76.85	2453.50	363.96	2089.55
84+98.53	38.02	29.29	145.30	85.15	2598.80	461.88	2136.92
85+00.00	38.03	29.05	2.06	1.58	2600.87	463.70	2137.16
86+00.00	46.01	7.18	155.62	67.09	2756.49	540.86	2215.63
87+00.00	46.67	7.24	171.63	26.70	2928.12	571.56	2356.56
88+00.00	54.36	6.41	187.10	25.28	3115.23	600.63	2514.60
89+00.00	56.15	6.67	204.64	24.22	3319.87	628.49	2691.38
90+00.00	82.14	9.60	256.08	30.14	3575.95	663.15	2912.81
90+97.71	82.81	11.65	298.47	38.46	3874.42	707.38	3167.05
91+00.00	82.66	10.35	7.02	0.93	3881.44	708.45	3172.99
92+00.00	83.23	4.31	307.20	27.15	4188.64	739.67	3448.97
93+00.00	94.27	0.39	328.70	8.70	4517.34	749.68	3767.66
93+12.00	93.47	0.00	41.72	0.09	4559.06	749.78	3809.28
94+00.00	91.42	2.00	301.29	3.26	4860.35	753.52	4106.83
94+32.00	94.48	2.24	110.16	2.51	4970.51	756.41	4214.10
94+57.00	95.15	0.72	87.79	1.37	5058.31	757.98	4300.32
94+82.00	93.54	0.72	87.35	0.67	5145.66	758.75	4386.91
95+00.00	91.42	1.26	61.65	0.66	5207.32	759.51	4447.80
96+00.00	105.60	0.00	364.85	2.34	5572.17	762.20	4809.97
96+70.55	107.29	0.00	278.15	0.00	5850.32	762.20	5088.12
96+85.55	106.59	0.00	59.41	0.00	5909.73	762.20	5147.53
97+00.00	101.64	0.17	55.71	0.04	5965.44	762.25	5203.19
97+60.22	64.13	0.00	184.85	0.18	6150.29	762.46	5387.83
			STRUCTURE B-32-49				

EARTHWORK DATA - IH 90 WESTBOUND

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
			STRUCTURE B-32-49				
98+97.39	64.13	0.00	0.00	0.00	0.00	0.00	0.00
99+72.00	85.87	0.95	207.23	1.31	207.23	1.51	205.73
99+87.06	68.16	5.93	42.98	1.92	250.21	3.71	246.50
100+00.00	65.66	8.55	32.06	3.47	282.27	7.70	274.57
100+17.22	66.07	14.55	42.01	7.37	324.28	16.18	308.10
100+30.77	63.80	13.78	32.58	7.11	356.87	24.35	332.51
101+00.00	240.63	3.16	390.28	21.72	747.15	49.32	697.83
101+38.00	219.74	3.70	323.96	4.83	1071.11	54.87	1016.24
101+63.00	217.65	4.55	202.50	3.82	1273.61	59.26	1214.34
101+88.00	228.21	3.81	206.42	3.87	1480.02	63.71	1416.31
102+00.00	212.61	3.49	97.96	1.62	1577.98	65.58	1512.40
103+00.00	123.76	3.34	622.92	12.65	2200.90	80.13	2120.77
103+08.00	119.31	3.27	36.01	0.98	2236.91	81.26	2155.66
104+00.00	118.28	1.28	404.79	7.75	2641.70	90.17	2551.53
104+11.00	120.07	0.27	48.55	0.32	2690.25	90.53	2599.72
105+00.00	92.87	1.10	350.96	2.25	3041.21	93.12	2948.09
105+40.00	112.95	0.00	152.45	0.81	3193.67	94.05	3099.61
106+00.00	80.51	9.21	214.95	10.23	3408.62	105.82	3302.80
106+97.10	115.09	0.00	351.74	16.56	3760.35	124.86	3635.49
107+00.00	112.26	0.00	12.19	0.00	3772.54	124.86	3647.68
107+62.00	222.10	0.00	383.89	0.00	4156.43	124.86	4031.57
108+00.00	238.36	0.00	324.03	0.00	4480.46	124.86	4355.60
108+88.00	171.98	0.00	668.72	0.00	5149.17	124.86	5024.31
109+00.00	168.43	0.00	75.65	0.00	5224.82	124.86	5099.96
109+13.00	165.12	0.00	80.30	0.00	5305.12	124.86	5180.26
109+38.00	160.87	0.01	150.92	0.00	5456.05	124.87	5331.18
109+67.00	151.81	0.00	167.92	0.00	5623.97	124.87	5499.10
109+92.00	147.71	0.00	138.67	0.00	5762.64	124.87	5637.76
110+00.00	150.87	0.00	44.23	0.00	5806.87	124.87	5682.00
110+17.00	156.00	0.00	96.61	0.00	5903.48	124.87	5778.61
110+58.00	166.26	0.00	244.68	0.00	6148.15	124.87	6023.28
111+00.00	141.58	0.00	239.43	0.00	6387.59	124.87	6262.72
111+37.00	106.12	0.00	169.72	0.00	6557.31	124.87	6432.43
112+00.00	112.16	0.00	254.66	0.00	6811.96	124.87	6687.09
113+00.00	102.26	0.08	397.07	0.15	7209.03	125.04	7083.99
114+00.00	103.13	0.01	380.35	0.16	7589.38	125.23	7464.16
115+00.00	107.40	0.00	389.87	0.02	7979.25	125.25	7854.01
116+00.00	76.55	6.16	340.63	11.40	8319.89	138.36	8181.53
117+00.00	87.24	26.25	303.32	60.02	8623.21	207.39	8415.82
118+00.00	77.35	39.18	304.80	121.17	8928.00	346.73	8581.27
119+00.00	80.68	43.30	292.65	152.74	9220.66	522.38	8698.27
119+10.00	81.13	39.58	29.97	15.35	9250.62	540.03	8710.59
120+00.00	82.83	54.27	273.26	156.40	9523.88	719.89	8803.99
121+00.00	87.71	52.95	315.81	198.54	9839.69	948.22	8891.47
122+00.00	92.73	21.00	334.15	136.94	10173.84	1105.69	9068.14
123+00.00	92.76	3.57	343.50	45.50	10517.33	1158.02	9359.32
124+00.00	123.83	0.44	401.10	7.42	10918.43	1166.55	9751.88

EARTHWORK DATA - IH 90 WESTBOUND

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
125+00.00	128.49	0.00	467.26	0.81	11385.69	1167.49	10218.20
126+00.00	132.01	0.00	482.40	0.00	11868.09	1167.49	10700.60
127+00.00	146.88	0.00	516.45	0.00	12384.54	1167.49	11217.05
128+00.00	148.38	0.00	546.77	0.00	12931.30	1167.49	11763.81
129+00.00	123.34	0.55	503.18	1.01	13434.48	1168.66	12265.82
130+00.00	101.58	4.32	416.52	9.01	13851.00	1179.02	12671.98
131+00.00	130.71	0.00	430.17	8.00	14281.17	1188.21	13092.95
132+00.00	116.65	0.00	458.07	0.00	14739.23	1188.21	13551.02
133+00.00	97.09	0.00	395.81	0.00	15135.04	1188.21	13946.83
134+00.00	58.69	0.00	288.48	0.00	15423.52	1188.21	14235.31
135+00.00	108.75	0.00	310.08	0.00	15733.60	1188.21	14545.39
136+00.00	122.27	0.00	427.82	0.00	16161.42	1188.21	14973.21
137+00.00	150.31	0.00	504.77	0.00	16666.19	1188.21	15477.98
138+00.00	98.72	0.40	461.17	0.74	17127.36	1189.07	15938.30
139+00.00	103.28	0.00	374.08	0.74	17501.45	1189.92	16311.52
140+00.00	92.99	0.06	363.47	0.11	17864.91	1190.05	16674.86
140+94.70	111.85	0.35	359.24	0.72	18224.15	1190.88	17033.27
141+00.00	115.17	0.12	22.28	0.05	18246.43	1190.93	17055.50
142+00.00	127.49	0.16	449.37	0.52	18695.80	1191.53	17504.28
142+44.70	72.54	1.48	165.58	1.36	18861.38	1193.09	17668.29
142+97.00	74.26	8.52	142.18	9.68	19003.56	1204.22	17799.34
143+00.00	74.26	5.29	8.25	0.77	19011.81	1205.10	17806.71
143+08.03	75.04	10.31	22.20	2.32	19034.01	1207.77	17826.24
143+20.53	76.31	8.80	35.03	4.42	19069.05	1212.86	17856.19
144+00.00	65.53	0.62	208.74	13.85	19277.79	1228.78	18049.01
144+04.73	65.63	0.43	11.49	0.09	19289.28	1228.89	18060.39
144+86.18	133.03	1.76	299.65	3.31	19588.93	1232.69	18356.24
144+98.68	132.65	2.20	61.50	0.92	19650.43	1233.74	18416.68
145+00.00	132.69	2.25	6.49	0.11	19656.91	1233.87	18423.04
145+62.01	128.58	7.03	300.03	10.65	19956.95	1246.12	18710.83
145+70.04	128.47	1.98	38.25	1.34	19995.19	1247.66	18747.53
146+00.00	134.89	1.08	146.09	1.70	20141.29	1249.61	18891.67
147+00.00	102.92	2.48	440.38	6.60	20581.67	1257.20	19324.47
147+12.01	100.25	2.72	45.19	1.16	20626.86	1258.54	19368.32
148+00.00	80.47	10.90	294.47	22.20	20921.33	1284.07	19637.26
149+00.00	105.19	32.02	343.81	79.48	21265.14	1375.47	19889.67
150+00.00	85.81	29.57	353.71	114.04	21618.84	1506.61	20112.23
150+71.76	75.66	41.19	214.59	94.03	21833.44	1614.75	20218.68
151+00.00	73.73	45.46	78.11	45.31	21911.55	1666.86	20244.69
152+00.00	66.18	28.43	259.09	136.84	22170.64	1824.22	20346.42
152+50.52	53.33	22.72	111.81	47.86	22282.45	1879.26	20403.19
153+00.00	58.70	54.60	102.66	70.85	22385.11	1960.74	20424.37
154+00.00	54.26	43.81	209.20	182.25	22594.31	2170.32	20423.98
155+00.00	66.53	25.88	223.69	129.07	22818.00	2318.75	20499.24
156+00.00	141.95	24.41	386.08	93.14	23204.07	2425.87	20778.21
157+00.00	121.31	14.12	487.52	71.35	23691.59	2507.92	21183.67
158+00.00	105.11	33.72	419.29	88.59	24110.89	2609.80	21501.09
159+00.00	112.25	33.95	402.51	125.31	24513.40	2753.90	21759.49

EARTHWORK DATA - IH 90 WESTBOUND

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
160+00.00	133.85	37.62	455.74	132.53	24969.14	2906.32	22062.82
161+00.00	121.86	54.74	473.54	171.03	25442.68	3103.01	22339.67
162+00.00	122.41	11.89	452.35	123.38	25895.03	3244.89	22650.14
163+00.00	96.24	0.40	404.91	22.75	26299.94	3271.05	23028.89
164+00.00	66.32	2.36	301.04	5.10	26600.98	3276.92	23324.06
165+00.00	50.42	13.93	216.19	30.17	26817.16	3311.61	23505.55
165+13.84	50.07	19.81	25.76	8.65	26842.93	3321.56	23521.36
165+77.00	58.70	26.76	127.20	54.47	26970.13	3384.21	23585.92
166+00.00	63.90	18.40	52.22	19.23	27022.35	3406.33	23616.02
166+02.00	64.17	17.85	4.74	1.34	27027.09	3407.87	23619.22
166+27.00	67.78	11.52	61.09	13.60	27088.18	3423.51	23664.67
166+34.76	69.11	10.64	19.67	3.18	27107.84	3427.17	23680.67
167+00.00	78.44	2.36	178.27	15.71	27286.12	3445.24	23840.88
168+00.00	84.00	1.53	300.83	7.20	27586.95	3453.52	24133.43
168+14.76	82.32	2.01	45.46	0.97	27632.40	3454.63	24177.77
168+77.55	59.63	0.00	165.06	2.34	27797.47	3457.32	24340.15

STRUCTURE B-32-35

EARTHWORK DATA - IH 90 WESTBOUND

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
STRUCTURE B-32-35							
174+40.02	59.63	0.00	0.00	0.00	0.00	0.00	0.00
174+90.00	61.36	2.11	111.98	1.96	111.98	2.25	109.73
175+00.00	62.83	2.83	23.00	0.92	134.98	3.30	131.67
175+11.78	64.27	3.33	27.73	1.34	162.70	4.85	157.85
176+00.00	69.72	11.83	218.91	24.77	381.62	33.33	348.28
177+00.00	79.73	65.90	276.75	143.96	658.37	198.89	459.48
177+15.00	80.99	75.56	44.64	39.30	703.01	244.08	458.93
177+40.00	85.52	84.00	77.09	73.87	780.10	329.03	451.07
177+65.00	91.18	105.38	81.80	87.67	861.90	429.85	432.05
178+00.00	112.08	125.08	131.74	149.37	993.64	601.63	392.01
179+00.00	144.12	138.91	474.43	488.87	1468.07	1163.83	304.24
180+00.00	144.41	109.02	534.30	459.12	2002.38	1691.82	310.56
181+00.00	165.22	54.88	573.39	303.52	2575.77	2040.87	534.90
182+00.00	233.61	4.28	738.58	109.56	3314.34	2166.86	1147.49
183+00.00	172.88	0.00	752.75	7.92	4067.09	2175.97	1891.12
183+90.00	194.15	0.00	611.71	0.00	4678.80	2175.97	2502.83
184+00.00	203.25	0.04	73.59	0.01	4752.39	2175.98	2576.41
184+47.75	190.75	0.00	348.41	0.03	5100.80	2176.02	2924.78
185+00.00	157.89	4.90	337.34	4.74	5438.13	2181.47	3256.66
185+67.69	112.33	20.86	338.73	32.29	5776.86	2218.60	3558.26
185+92.60	95.93	29.67	96.05	23.30	5872.91	2245.40	3627.51
186+00.00	91.64	30.71	25.72	8.28	5898.63	2254.92	3643.71
186+17.59	80.51	40.00	56.07	23.03	5954.70	2281.41	3673.29
187+00.00	50.56	76.13	200.02	177.22	6154.73	2485.22	3669.51

EARTHWORK DATA - IH 90 WESTBOUND

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
188+00.00	0.00	191.80	93.63	496.18	6248.36	3055.82	3192.54
189+00.00	2.15	89.26	3.98	520.49	6252.33	3654.39	2597.95
190+00.00	4.46	144.52	12.24	432.93	6264.57	4152.25	2112.32
191+00.00	1.10	186.43	10.31	612.88	6274.88	4857.06	1417.82
192+00.00	0.00	192.39	2.05	701.53	6276.92	5663.82	613.10
192+13.27	0.00	192.39	0.00	94.56	6276.92	5772.56	504.36
			STRUCTURE B-32-219				
196+28.06	0.00	205.67	0.00	0.00	0.00	0.00	0.00
197+00.00	0.00	205.67	0.00	547.99	0.00	630.19	-630.19
197+35.00	0.16	169.56	0.10	243.20	0.10	909.87	-909.77
198+00.00	0.40	132.06	0.67	363.06	0.77	1327.40	-1326.62
198+64.00	0.06	574.21	0.54	837.06	1.31	2290.01	-2288.70
198+89.00	6.81	498.04	3.18	496.37	4.49	2860.84	-2856.34
199+00.00	5.16	483.59	2.44	200.00	6.93	3090.84	-3083.91
199+14.00	4.48	480.87	2.50	250.05	9.43	3378.39	-3368.97
200+00.00	14.34	67.15	29.98	872.78	39.41	4382.09	-4342.68
200+44.61	25.68	62.57	33.06	107.18	72.47	4505.34	-4432.87
200+69.60	31.15	63.84	26.29	58.48	98.76	4572.59	-4473.83
200+94.57	38.74	66.05	32.32	60.07	131.09	4641.67	-4510.59
201+00.00	41.02	65.31	8.02	13.21	139.10	4656.86	-4517.75
202+00.00	46.55	40.88	162.17	196.64	301.27	4883.00	-4581.73
202+14.47	48.60	37.29	25.49	20.95	326.76	4907.09	-4580.32
203+00.00	55.12	0.00	164.28	59.07	491.05	4975.02	-4483.97
204+00.00	84.48	28.96	258.53	53.63	749.58	5036.70	-4287.12
205+00.00	77.74	47.86	300.42	142.27	1050.00	5200.31	-4150.31
205+90.00	72.42	54.41	250.27	170.45	1300.27	5396.33	-4096.06
206+00.00	72.14	63.92	26.77	21.91	1327.04	5421.53	-4094.49
207+00.00	75.24	86.26	272.92	278.12	1599.96	5741.36	-4141.40
207+76.00	75.68	64.56	212.41	212.27	1812.37	5985.47	-4173.10
208+00.00	78.87	48.24	68.69	50.13	1881.06	6043.12	-4162.06
208+96.00	43.77	38.45	218.04	154.11	2099.10	6220.35	-4121.25
209+00.00	43.69	37.89	6.48	5.65	2105.58	6226.86	-4121.28
209+21.02	43.68	34.91	34.01	28.34	2139.58	6259.44	-4119.86
209+46.08	42.22	32.53	39.87	31.30	2179.45	6295.44	-4115.99
210+00.00	43.22	18.54	85.31	50.99	2264.77	6354.08	-4089.31
211+00.00	56.48	1.33	184.63	36.79	2449.39	6396.39	-3947.00
212+00.00	127.27	0.00	340.27	2.46	2789.67	6399.22	-3609.56
212+33.22	127.27	0.00	156.59	0.00	2946.25	6399.22	-3452.97
			STRUCTURE B-32-40				
215+98.46	107.27	1.55	0.00	0.00	0.00	0.00	0.00
216+70.00	107.27	1.55	284.23	4.10	284.23	4.71	279.51
217+00.00	104.27	14.03	117.52	8.65	401.75	14.66	387.08
218+00.00	121.96	1.12	418.94	28.06	820.69	46.93	773.75
218+39.91	128.17	0.64	184.88	1.30	1005.57	48.43	957.14
218+64.91	130.86	0.64	119.92	0.59	1125.49	49.11	1076.38
218+89.91	92.79	38.57	103.54	18.15	1229.03	69.99	1159.04
219+00.00	83.05	43.71	32.84	15.37	1261.87	87.66	1174.21
220+00.00	63.28	61.22	270.99	194.32	1532.86	311.13	1221.73

EARTHWORK DATA - IH 90 WESTBOUND

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
220+64.00	67.62	64.93	155.14	149.51	1688.00	483.07	1204.93
220+89.00	64.50	66.28	61.17	60.75	1749.17	552.93	1196.24
221+00.00	62.89	68.42	25.95	27.44	1775.12	584.48	1190.63
221+14.00	60.03	71.39	31.87	36.25	1806.99	626.17	1180.82
222+00.00	60.77	30.96	192.38	163.00	1999.37	813.61	1185.76
223+00.00	112.36	1.64	320.60	60.37	2319.97	883.04	1436.92
224+00.00	74.72	42.88	346.44	82.45	2666.40	977.86	1688.54
225+00.00	69.30	118.01	266.70	297.94	2933.11	1320.49	1612.62
226+00.00	69.08	177.18	256.25	546.65	3189.36	1949.14	1240.22
226+80.00	111.98	241.32	268.23	620.00	3457.59	2662.14	795.45
227+00.00	92.64	273.68	75.79	190.74	3533.38	2881.49	651.89
228+00.00	127.83	313.04	408.30	1086.51	3941.68	4130.98	-189.30
229+00.00	109.10	388.78	438.77	1299.67	4380.45	5625.60	-1245.15
229+41.74	112.63	416.91	171.40	622.81	4551.85	6341.83	-1789.98
230+00.00	110.19	437.28	240.40	921.55	4792.25	7401.61	-2609.36
230+50.00	101.39	460.37	195.91	831.16	4988.16	8357.44	-3369.28
230+74.99	103.60	470.53	94.86	430.80	5083.02	8852.86	-3769.84
231+00.00	99.41	479.91	94.02	440.19	5177.05	9359.08	-4182.04
232+00.00	84.50	559.53	340.59	1924.88	5517.63	11572.70	-6055.06
232+40.00	81.41	570.37	122.90	836.96	5640.53	12535.20	-6894.66
233+00.00	0.00	1746.63	90.46	2574.45	5730.99	15495.81	-9764.82
233+50.00	0.00	3596.92	0.00	4947.74	5730.99	21185.71	-15454.72
234+00.00	0.00	1496.23	0.00	4715.88	5730.99	26608.97	-20877.98
234+90.00	89.18	439.70	148.64	3226.55	5879.63	30319.51	-24439.88
235+00.00	100.87	433.14	35.19	161.64	5914.82	30505.39	-24590.57
235+50.00	73.23	731.76	161.20	1078.61	6076.03	31745.80	-25669.77
235+74.98	73.55	796.95	67.91	707.29	6143.94	32559.18	-26415.24
236+00.00	65.70	785.90	64.51	733.26	6208.45	33402.43	-27193.98
236+24.99	81.87	693.40	68.28	684.52	6276.74	34189.63	-27912.89
236+50.00	81.04	722.52	75.46	655.85	6352.20	34943.86	-28591.66
237+00.00	78.40	549.77	147.63	1178.05	6499.83	36298.61	-29798.79
237+20.00	76.86	453.03	57.51	371.48	6557.34	36725.81	-30168.47
237+69.96	73.10	297.44	138.73	694.26	6696.07	37524.21	-30828.15
238+00.00	68.23	226.98	78.62	291.74	6774.69	37859.71	-31085.02
239+00.00	97.12	14.45	306.19	447.08	7080.88	38373.85	-31292.97
240+00.00	173.68	4.60	501.47	35.28	7582.35	38414.42	-30832.07
241+00.00	388.57	2.91	1041.19	13.90	8623.54	38430.41	-29806.87
242+00.00	657.84	4.36	1937.80	13.46	10561.34	38445.89	-27884.55
243+00.00	580.38	2.43	2293.01	12.58	12854.35	38460.36	-25606.01
243+80.00	255.23	3.81	1237.94	9.25	14092.29	38471.00	-24378.71
244+00.00	189.15	9.74	164.59	5.02	14256.88	38476.77	-24219.89
245+00.00	91.78	120.22	520.24	240.65	14777.12	38753.53	-23976.41
245+25.00	87.04	54.61	82.79	80.94	14859.90	38846.61	-23986.70
245+50.00	90.27	40.60	82.09	44.08	14941.99	38897.30	-23955.30
246+00.00	95.92	33.87	172.40	68.96	15114.39	38976.59	-23862.20
247+00.00	98.28	56.85	359.62	168.00	15474.01	39169.80	-23695.79
247+76.72	98.28	56.85	279.26	161.54	15753.26	39355.56	-23602.30
			STRUCTURE B-32-108				

EARTHWORK DATA - IH 90 WESTBOUND

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
			STRUCTURE B-32-108				
249+06.05	80.71	6.65	0.00	0.00	0.00	0.00	0.00
250+00.00	80.71	6.65	280.84	23.13	280.84	26.60	254.24
251+00.00	75.10	9.04	288.53	29.06	569.37	60.02	509.35
252+00.00	52.84	26.34	236.93	65.53	806.29	135.38	670.91
253+00.00	72.91	49.30	232.88	140.08	1039.17	296.47	742.70
254+00.00	63.61	61.28	252.82	204.77	1292.00	531.95	760.05
254+44.00	66.23	63.72	105.79	101.85	1397.79	649.08	748.71
254+94.00	86.56	59.11	141.47	113.74	1539.26	779.88	759.38
255+00.00	88.40	59.25	19.44	13.15	1558.70	795.00	763.69
255+19.00	94.35	58.61	64.30	41.47	1623.00	842.69	780.31
255+44.00	96.12	59.40	88.18	54.63	1711.18	905.52	805.66
256+00.00	90.52	49.67	193.55	113.11	1904.73	1035.60	869.13
256+64.00	87.41	34.70	210.87	99.99	2115.60	1150.59	965.01
257+00.00	97.94	28.54	123.57	42.16	2239.17	1199.08	1040.10
258+00.00	83.00	19.40	335.09	88.77	2574.26	1301.17	1273.09
259+00.00	84.98	10.70	311.08	55.74	2885.35	1365.27	1520.08
260+00.00	118.80	13.56	377.37	44.93	3262.71	1416.94	1845.77
261+00.00	68.03	0.00	345.97	25.11	3608.68	1445.82	2162.87
262+00.00	61.01	0.00	238.95	0.00	3847.64	1445.82	2401.82
263+00.00	54.11	0.00	213.18	0.00	4060.82	1445.82	2615.00
264+00.00	72.85	1.06	235.11	1.95	4295.92	1448.07	2847.86
264+73.65	52.40	5.55	170.82	9.01	4466.74	1458.43	3008.31
265+00.00	53.19	10.66	51.53	7.91	4518.27	1467.53	3050.74
266+00.00	72.09	15.33	231.99	48.13	4750.26	1522.88	3227.38
267+00.00	63.79	19.86	251.63	65.18	5001.89	1597.83	3404.05
268+00.00	97.74	24.40	299.14	81.97	5301.02	1692.10	3608.93
269+00.00	102.41	21.23	370.65	84.50	5671.67	1789.28	3882.40
269+65.00	103.95	29.71	248.39	61.32	5920.06	1859.79	4060.27
270+00.00	112.35	14.63	140.19	28.74	6060.26	1892.84	4167.42
270+30.00	126.85	6.30	132.89	11.63	6193.15	1906.21	4286.94
271+00.00	134.04	0.40	338.19	8.68	6531.34	1916.20	4615.14
271+80.00	139.64	1.92	405.45	3.44	6936.79	1920.15	5016.64
272+00.00	140.83	3.23	103.88	1.91	7040.67	1922.35	5118.32
272+43.32	149.24	3.22	232.70	5.18	7273.37	1928.30	5345.07
272+55.82	146.53	3.21	68.47	1.49	7341.84	1930.01	5411.83
273+00.00	242.12	0.00	317.97	2.63	7659.81	1933.04	5726.77
273+38.06	184.05	2.57	300.37	1.81	7960.18	1935.12	6025.07
274+00.00	165.25	0.21	400.67	3.18	8360.85	1938.78	6422.07
274+40.68	157.36	1.75	243.04	1.48	8603.88	1940.47	6663.41
275+00.00	157.68	0.80	346.08	2.81	8949.96	1943.71	7006.25
275+19.78	173.33	0.51	121.25	0.48	9071.21	1944.26	7126.95
275+32.28	164.27	1.53	78.15	0.47	9149.35	1944.80	7204.55
275+95.61	66.09	0.00	270.16	1.79	9419.51	1946.86	7472.65
276+00.00	61.57	0.10	10.38	0.01	9429.89	1946.87	7483.02
277+00.00	69.70	0.00	243.09	0.18	9672.98	1947.08	7725.90
277+45.61	73.66	0.00	121.08	0.00	9794.06	1947.08	7846.98
278+00.00	76.18	0.00	150.92	0.00	9944.98	1947.08	7997.90

EARTHWORK DATA - IH 90 WESTBOUND

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
279+00.00	82.12	0.00	293.15	0.00	10238.14	1947.08	8291.06
280+00.00	106.93	0.00	350.10	0.00	10588.23	1947.08	8641.15
281+00.00	115.93	0.00	412.71	0.00	11000.94	1947.08	9053.86
282+00.00	104.37	3.09	407.96	5.72	11408.90	1953.65	9455.25
283+00.00	89.10	37.29	358.27	74.77	11767.17	2039.64	9727.53
283+04.00	87.46	38.67	13.08	5.63	11780.25	2046.11	9734.14
284+00.00	102.71	86.85	338.08	223.16	12118.33	2302.75	9815.58
285+00.00	92.28	99.89	361.09	345.83	12479.42	2700.46	9778.96
286+00.00	44.90	34.28	254.03	248.46	12733.45	2986.19	9747.26
287+00.00	60.30	0.00	194.82	63.47	12928.27	3059.19	9869.08
288+00.00	105.50	0.00	307.04	0.00	13235.31	3059.19	10176.12
289+00.00	36.18	0.00	262.38	0.00	13497.69	3059.19	10438.50
290+00.00	53.56	27.08	166.20	50.15	13663.88	3116.86	10547.03
291+00.00	56.85	91.23	204.47	219.09	13868.36	3368.80	10499.55
291+28.00	102.12	127.97	82.43	113.66	13950.79	3499.51	10451.28
291+53.00	89.50	52.05	88.72	83.34	14039.50	3595.36	10444.15
291+75.00	83.67	53.39	70.55	42.95	14110.05	3644.75	10465.30
291+78.00	83.23	50.95	9.27	5.80	14119.33	3651.42	10467.91
292+00.00	80.08	19.46	66.53	28.68	14185.86	3684.41	10501.45
293+00.00	89.26	2.42	313.59	40.51	14499.45	3731.00	10768.45
293+94.00	97.62	0.17	325.31	4.52	14824.76	3736.19	11088.57
294+00.00	97.97	0.14	21.73	0.04	14846.49	3736.23	11110.26
294+19.00	99.94	0.06	69.64	0.07	14916.13	3736.31	11179.82
294+44.00	94.81	0.05	90.16	0.05	15006.29	3736.37	11269.92
295+00.00	84.13	1.14	185.56	1.23	15191.85	3737.79	11454.06
295+64.00	82.61	0.50	197.61	1.95	15389.46	3740.03	11649.43
296+00.00	80.84	0.96	108.96	0.98	15498.42	3741.15	11757.27
296+75.00	178.37	1.24	360.01	3.05	15858.44	3744.66	12113.77
297+00.00	135.07	1.79	145.11	1.40	16003.54	3746.28	12257.27
298+00.00	67.81	2.56	375.69	8.05	16379.24	3755.53	12623.70
299+00.00	61.26	4.48	239.01	13.03	16618.24	3770.52	12847.73
299+67.00	57.88	5.52	147.81	12.41	16766.06	3784.79	12981.27
300+00.00	71.76	3.86	79.22	5.73	16845.28	3791.38	13053.90
301+00.00	66.85	2.80	256.68	12.34	17101.96	3805.57	13296.39
302+00.00	68.13	2.64	249.97	10.08	17351.92	3817.16	13534.77
303+00.00	72.14	0.50	259.76	5.82	17611.69	3823.85	13787.84
304+00.00	74.32	0.88	271.21	2.56	17882.90	3826.80	14056.10
305+00.00	76.03	1.19	278.42	3.83	18161.32	3831.20	14330.11
305+70.06	39.98	3.97	150.51	6.69	18311.83	3838.90	14472.93
306+00.00	32.73	6.47	40.31	5.79	18352.14	3845.56	14506.58
306+90.00	24.86	18.79	95.98	42.10	18448.12	3893.97	14554.15
307+00.00	22.96	19.35	8.86	7.06	18456.97	3902.09	14554.88
307+15.00	18.34	20.36	11.47	11.03	18468.44	3914.78	14553.67
307+40.00	14.94	25.22	15.41	21.10	18483.85	3939.04	14544.81
308+00.00	19.15	21.37	37.88	51.77	18521.73	3998.58	14523.15
308+40.00	27.45	18.11	34.52	29.25	18556.25	4032.21	14524.04
309+00.00	36.13	17.43	70.64	39.50	18626.89	4077.63	14549.26
310+00.00	68.11	18.05	193.04	65.71	18819.94	4153.20	14666.73
310+06.91	83.63	0.00	19.42	2.31	18839.35	4155.86	14683.49

EARTHWORK DATA - IH 90 WESTBOUND

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
			STRUCTURE B-32-190				
311+65.28	83.63	0.00	0.00	0.00	0.00	0.00	0.00
312+00.00	126.16	0.00	134.88	0.00	134.88	0.00	134.88
313+00.00	108.76	2.19	435.02	4.06	569.90	4.66	565.24
314+00.00	35.97	0.00	268.01	4.06	837.91	9.33	828.58
315+00.00	54.55	0.00	167.63	0.00	1005.54	9.33	996.22
315+43.00	48.66	0.00	82.19	0.00	1087.73	9.33	1078.40
315+68.00	44.80	0.00	43.27	0.00	1131.00	9.33	1121.67
315+93.00	37.74	0.00	38.21	0.00	1169.22	9.33	1159.89
316+00.00	40.02	0.00	10.08	0.00	1179.30	9.33	1169.97
317+00.00	50.43	0.00	167.49	0.00	1346.79	9.33	1337.46
317+13.00	60.65	0.00	26.74	0.00	1373.53	9.33	1364.20
318+00.00	44.21	0.00	168.95	0.00	1542.48	9.33	1533.15

EARTHWORK DATA - C RAMP

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
140+50.00	8.41	5.20	0.00	0.00	0.00	0.00	0.00
140+77.93	43.04	72.37	26.61	40.11	26.61	46.13	-19.52
141+00.00	70.13	45.21	46.26	48.06	72.87	101.40	-28.53
141+50.00	74.08	43.92	133.52	82.53	206.39	196.31	10.09
142+00.00	82.70	42.63	145.16	80.13	351.55	288.46	63.09
142+50.00	117.41	13.87	185.28	52.31	536.83	348.61	188.21
143+00.00	138.09	0.00	236.57	12.84	773.40	363.38	410.02
143+50.00	64.96	0.97	188.00	0.90	961.40	364.41	596.98
144+00.00	88.93	0.00	142.49	0.90	1103.88	365.45	738.44

EARTHWORK DATA - G RAMP

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
209+00.00	40.93	95.75	0.00	0.00	0.00	0.00	0.00
209+50.00	78.70	2.61	110.77	91.07	110.77	104.73	6.03
210+00.00	65.20	0.00	133.24	2.42	244.01	107.51	136.50
210+50.00	44.65	0.00	101.71	0.00	345.72	107.51	238.21
211+00.00	31.24	0.00	70.26	0.00	415.98	107.51	308.47
211+50.00	28.20	0.00	55.03	0.00	471.01	107.51	363.50

EARTHWORK DATA - D RAMP

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
134+00.00	71.06	0.00	0.00	0.00	0.00	0.00	0.00
134+50.00	75.51	0.00	135.71	0.00	135.71	0.00	135.71
135+00.00	78.24	0.30	142.35	0.28	278.06	0.32	277.74
135+50.00	94.27	1.90	159.73	2.04	437.79	2.67	435.12
136+00.00	48.01	1.24	131.74	2.91	569.54	6.02	563.52
136+50.00	50.96	0.33	91.64	1.46	661.17	7.69	653.48
137+00.00	65.28	9.78	107.63	9.36	768.80	18.46	750.34
137+50.00	128.37	0.82	179.31	9.82	948.11	29.75	918.36
138+00.00	84.99	1.44	197.55	2.10	1,145.67	32.16	1,113.51
138+05.00	77.71	2.62	15.06	0.38	1,160.73	32.59	1,128.14
138+50.00	120.14	0.00	164.88	2.18	1,325.61	35.10	1,290.51
139+00.00	31.62	0.00	140.52	0.00	1,466.13	35.10	1,431.03
139+50.00	10.17	0.00	38.69	0.00	1,504.82	35.10	1,469.72

EARTHWORK DATA - H RAMP

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
189+00.00	0.00	518.58	0.00	0.00	0.00	0.00	0.00
189+50.00	0.00	577.65	0.00	1015.02	0.00	1167.27	-1167.27
190+00.00	0.00	654.20	0.00	1140.60	0.00	2478.96	-2478.96
190+50.00	0.00	711.73	0.00	1264.75	0.00	3933.42	-3933.42
191+00.00	0.00	747.32	0.00	1350.97	0.00	5487.03	-5487.03
191+50.00	0.00	766.09	0.00	1401.31	0.00	7098.54	-7098.54
192+00.00	30.90	796.56	28.61	1446.90	28.61	8762.48	-8733.86
192+50.00	66.04	801.95	89.76	1480.10	118.37	10464.59	-10346.22
193+00.00	110.70	731.84	163.64	1420.18	282.02	12097.80	-11815.78
193+50.00	125.69	674.94	218.88	1302.58	500.90	13595.76	-13094.87
194+00.00	145.41	616.95	251.02	1196.20	751.91	14971.39	-14219.48
194+50.00	161.08	565.81	283.78	1095.15	1035.70	16230.82	-15195.12
195+00.00	172.00	519.79	308.40	1005.19	1344.10	17386.78	-16042.68
195+50.00	176.68	497.91	322.85	942.32	1666.95	18470.45	-16803.49
196+00.00	183.79	510.81	333.77	934.01	2000.72	19544.55	-17543.83
196+26.00	167.07	477.76	168.93	475.98	2169.65	20091.93	-17922.28
196+50.00	142.83	495.57	137.74	432.59	2307.39	20589.41	-18282.02
197+00.00	142.83	470.90	264.51	894.88	2571.90	21618.53	-19046.63
197+50.00	7.23	451.56	138.95	854.13	2710.84	22600.78	-19889.94
198+00.00	8.11	409.82	14.21	797.58	2725.05	23518.00	-20792.94

EARTHWORK DATA - L RAMP

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
284+00.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00
284+50.00	11.96	0.00	24.31	0.00	24.31	0.00	24.31
285+00.00	17.72	0.00	27.48	0.00	51.79	0.00	51.79
285+50.00	35.95	11.95	49.69	11.06	101.49	12.72	88.76
286+00.00	75.76	32.73	103.44	41.37	204.92	60.30	144.63
286+50.00	66.88	35.64	132.08	63.30	337.00	133.10	203.91
287+00.00	32.68	52.42	92.19	81.54	429.19	226.86	202.33
287+50.00	58.68	78.80	84.59	121.50	513.78	366.59	147.19
288+00.00	47.96	70.98	98.74	138.68	612.52	526.08	86.44
288+50.00	79.30	42.04	117.83	104.65	730.36	646.42	83.93
289+00.00	82.74	33.93	150.03	70.35	880.39	727.32	153.07
289+50.00	47.05	24.56	120.18	54.16	1000.57	789.61	210.96

EARTHWORK DATA - M RAMP

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
261+00.00	51.37	0.00	0.00	0.00	0.00	0.00	0.00
261+50.00	49.49	0.35	93.38	0.32	93.38	0.37	93.01
262+00.00	53.04	3.85	94.93	3.89	188.31	4.84	183.46
262+50.00	71.02	1.94	114.87	5.36	303.17	11.01	292.16
263+00.00	26.45	5.06	90.25	6.48	393.43	18.46	374.97
263+50.00	51.51	6.45	72.19	10.65	465.62	30.71	434.90
264+00.00	53.89	9.51	97.59	14.78	563.21	47.71	515.50
264+50.00	32.07	0.00	79.59	8.81	642.79	57.84	584.95
264+56.75	28.76	0.00	7.60	0.00	650.40	57.84	592.56
265+00.00	41.12	0.00	55.96	0.00	706.36	57.84	648.52
265+50.00	25.34	0.00	61.53	0.00	767.89	57.84	710.05
266+00.00	17.35	1.85	39.53	1.71	807.43	59.81	747.62
266+50.00	15.90	4.60	30.79	5.97	838.22	66.68	771.53
267+00.00	15.85	6.82	29.40	10.58	867.62	78.84	788.77

EARTHWORK DATA - P RAMP

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
275+50.00	52.12	5.19	0.00	0.00	0.00	0.00	0.00
276+00.00	53.03	0.73	97.36	5.48	97.36	6.30	91.06
276+50.00	49.68	2.64	95.10	3.12	192.46	9.89	182.57
277+00.00	52.60	0.09	94.70	2.54	287.16	12.80	274.36
277+50.00	50.89	0.42	95.82	0.48	382.98	13.35	369.63
278+00.00	57.21	0.00	100.09	0.39	483.08	13.81	469.27
278+50.00	61.95	0.00	110.33	0.00	593.40	13.81	579.60
278+79.54	72.55	0.00	73.58	0.00	666.99	13.81	653.18
279+00.00	77.31	0.00	56.77	0.00	723.76	13.81	709.95
279+04.53	77.33	0.00	12.97	0.00	736.73	13.81	722.93
279+29.58	82.17	0.14	73.98	0.07	810.71	13.88	796.83
279+50.00	70.73	1.97	57.83	0.80	868.54	14.80	853.74

EARTHWORK DATA - AT TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
132+50.00	28.00	0.00	0.00	0.00	0.00	0.00	0.00
133+00.00	53.39	0.00	75.36	0.00	75.36	0.00	75.36
133+50.00	30.53	3.54	77.70	3.28	153.07	3.77	149.30
134+00.00	29.13	7.24	55.23	9.98	208.30	15.25	193.05
134+37.75	59.81	0.00	62.18	5.06	270.48	21.07	249.42
134+50.00	72.30	0.00	29.96	0.00	300.44	21.07	279.38

EARTHWORK DATA - AU TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
128+50.00	12.12	0.47	0.00	0.00	0.00	0.00	0.00
129+00.00	34.53	0.88	43.20	1.25	43.20	1.44	41.75
129+50.00	42.16	0.96	71.01	1.70	114.20	3.40	110.80
130+00.00	46.15	0.22	81.77	1.09	195.97	4.65	191.32
130+50.00	14.57	3.58	56.22	3.52	252.19	8.69	243.50

EARTHWORK DATA - BU TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
147+00.00	30.07	0.00	0.00	0.00	0.00	0.00	0.00
147+50.00	48.56	1.04	72.81	0.96	72.81	1.11	71.70
148+00.00	40.48	14.13	82.45	14.04	155.26	17.26	138.01
148+50.00	33.27	20.69	68.29	32.24	223.55	54.33	169.22

EARTHWORK DATA - ET TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
182+50.00	74.29	0.00	0.00	0.00	0.00	0.00	0.00
183+00.00	52.17	0.45	117.10	0.41	117.10	0.48	116.62
183+50.00	39.18	3.44	84.58	3.60	201.68	4.62	197.07
183+79.64	67.96	0.74	58.81	2.29	260.49	7.25	253.23
184+00.00	69.23	0.00	51.73	0.28	312.21	7.57	304.64
184+50.00	40.46	0.60	101.56	0.56	413.78	8.22	405.56
185+00.00	0.00	167.03	37.46	155.22	451.24	186.72	264.52
185+50.00	1.66	328.13	1.54	458.48	452.78	713.97	-261.19
186+00.00	12.52	311.36	13.13	592.13	465.91	1394.92	-929.01
186+50.00	14.92	186.98	25.40	461.43	491.31	1925.56	-1434.25
186+75.00	14.90	168.07	13.80	164.37	505.11	2114.59	-1609.48
187+00.00	15.38	91.59	14.02	120.21	519.13	2252.84	-1733.70

EARTHWORK DATA - GW TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
202+50.00	11.21	0.00	0.00	0.00	0.00	0.00	0.00
203+00.00	10.82	0.00	20.39	0.00	20.39	0.00	20.39
203+50.00	11.62	0.00	20.77	0.00	41.16	0.00	41.16
204+00.00	13.06	0.00	22.84	0.00	64.00	0.00	64.00
204+50.00	18.88	0.00	29.57	0.00	93.57	0.00	93.57
205+00.00	23.41	0.00	39.15	0.00	132.72	0.00	132.72
205+50.00	35.95	0.00	54.96	0.00	187.69	0.00	187.69
206+00.00	82.61	1.41	109.78	1.30	297.47	1.50	295.97
206+50.00	65.51	13.86	137.15	14.13	434.61	17.75	416.86
207+00.00	76.67	22.18	131.65	33.37	566.26	56.13	510.14
207+32.60	20.50	14.80	58.66	22.32	624.92	81.79	543.13
207+50.00	25.52	6.75	14.83	6.94	639.75	89.78	549.97
208+00.00	14.80	10.86	37.33	16.31	677.09	108.54	568.55
208+50.00	11.88	6.12	24.71	15.72	701.79	126.61	575.18
209+00.00	12.30	2.41	22.39	7.89	724.19	135.69	588.50

EARTHWORK DATA - DU TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
131+00.00	21.78	0.00	0.00	0.00	0.00	0.00	0.00
131+50.00	12.19	0.00	31.46	0.00	31.46	0.00	31.46

EARTHWORK DATA - EU TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
179+50.00	26.08	0.00	0.00	0.00	0.00	0.00	0.00
180+00.00	33.69	0.00	55.35	0.00	55.35	0.00	55.35
180+50.00	36.11	0.00	64.63	0.00	119.98	0.00	119.98
181+00.00	33.53	0.00	64.48	0.00	184.46	0.00	184.46

EARTHWORK DATA - FU TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
198+00.00	13.20	0.05	0.00	0.00	0.00	0.00	0.00
198+50.00	11.56	0.61	22.93	0.61	22.93	0.70	22.23
199+00.00	12.57	5.01	22.35	5.20	45.28	6.69	38.59
199+50.00	13.75	57.17	24.37	57.57	69.65	72.90	-3.25
200+00.00	0.22	140.36	12.94	182.90	82.59	283.24	-200.65
200+50.00	0.00	99.55	0.21	222.15	82.80	538.70	-455.91
201+00.00	21.25	0.00	19.68	92.18	102.47	644.71	-542.23
201+50.00	27.34	0.05	44.99	0.04	147.47	644.76	-497.29
202+00.00	6.56	44.21	31.39	40.98	178.86	691.88	-513.02
202+50.00	10.25	60.34	15.57	96.80	194.43	803.21	-608.78
203+00.00	10.37	49.65	19.10	101.84	213.53	920.32	-706.80

EARTHWORK DATA - GU TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
210+00.00	102.45	457.44	0.00	0.00	0.00	0.00	0.00
210+50.00	131.22	506.37	216.36	892.42	216.36	1026.28	-809.92
211+00.00	73.47	503.42	189.52	934.99	405.88	2101.52	-1695.64
211+50.00	55.24	472.92	119.18	904.02	525.06	3141.14	-2616.08
212+00.00	23.50	511.69	72.91	911.67	597.97	4189.56	-3591.60
212+50.00	11.10	689.74	32.03	1112.44	630.00	5468.86	-4838.87
213+00.00	8.39	787.04	18.05	1367.39	648.05	7041.37	-6393.32
213+50.00	11.28	843.10	18.21	1509.39	666.26	8777.16	-8110.90

EARTHWORK DATA - HV TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
185+00.00	12.20	31.82	0.00	0.00	0.00	0.00	0.00
185+50.00	0.49	15.65	11.75	43.95	11.75	50.54	-38.79

EARTHWORK DATA - HW TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
201+00.00	14.46	0.00	0.00	0.00	0.00	0.00	0.00
201+50.00	26.45	0.00	37.88	0.00	37.88	0.00	37.88
202+00.00	24.21	0.00	46.91	0.00	84.79	0.00	84.79
202+50.00	16.55	0.18	37.74	0.16	122.53	0.19	122.35
203+00.00	29.55	0.43	42.68	0.56	165.22	0.83	164.38
203+50.00	54.09	0.00	77.44	0.40	242.66	1.29	241.37
204+00.00	73.20	0.00	117.86	0.00	360.52	1.29	359.23
204+50.00	75.76	46.47	137.93	43.03	498.45	50.78	447.67
205+00.00	90.88	113.33	154.30	147.97	652.74	220.94	431.80
205+50.00	83.88	120.80	161.82	216.79	814.56	470.25	344.31
206+00.00	62.13	51.11	135.20	159.18	949.76	653.31	296.45
206+50.00	55.95	5.42	109.34	52.34	1059.10	713.50	345.59
207+00.00	275.47	0.00	306.87	5.01	1365.97	719.27	646.70
207+50.00	137.29	0.00	382.19	0.00	1748.16	719.27	1028.89

EARTHWORK DATA - JU TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
260+00.00	8.51	3.83	0.00	0.00	0.00	0.00	0.00
260+50.00	14.49	3.08	21.30	6.40	21.30	7.36	13.94
261+00.00	14.76	4.24	27.09	6.78	48.38	15.15	33.23
261+50.00	15.13	1.20	27.68	5.03	76.07	20.94	55.12
262+00.00	13.33	0.01	26.35	1.12	102.42	22.23	80.19
262+50.00	12.40	0.03	23.82	0.04	126.24	22.28	103.96
263+00.00	11.98	0.28	22.58	0.29	148.82	22.62	126.20
263+50.00	11.94	1.19	22.15	1.36	170.97	24.18	146.78
264+00.00	12.34	1.93	22.48	2.89	193.45	27.51	165.94
264+50.00	25.57	0.00	35.10	1.79	228.56	29.57	198.99
264+65.66	19.57	0.00	13.09	0.00	241.65	29.57	212.08

EARTHWORK DATA - JV TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
258+00.00	25.57	4.13	0.00	0.00	0.00	0.00	0.00
258+50.00	28.04	4.18	49.64	7.69	49.64	8.84	40.79
258+70.00	21.52	6.01	18.35	3.77	67.99	13.18	54.81
259+00.00	19.57	11.01	22.83	9.46	90.82	24.06	66.76
259+50.00	19.97	11.10	36.61	20.47	127.43	47.60	79.83

EARTHWORK DATA - KT TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
278+50.00	13.72	4.69	0.00	0.00	0.00	0.00	0.00
279+00.00	13.79	0.02	25.47	4.36	25.47	5.02	20.46
279+50.00	13.11	5.78	24.91	5.38	50.38	11.20	39.18
279+81.08	11.55	22.93	14.19	16.52	64.57	30.20	34.37
280+00.00	12.02	26.92	8.26	17.46	72.83	50.28	22.54
280+34.63	14.12	40.16	16.76	43.01	89.58	99.75	-10.17
280+50.00	14.67	47.89	8.19	25.06	97.78	128.57	-30.79
281+00.00	10.47	65.99	23.27	105.44	121.05	249.83	-128.78
281+50.00	0.17	35.72	9.85	94.18	130.90	358.13	-227.23
282+00.00	14.14	6.73	13.25	39.31	144.15	403.34	-259.19
283+00.00	49.88	0.22	118.55	12.88	262.70	418.16	-155.45
283+50.00	39.75	1.90	82.99	1.96	345.69	420.41	-74.72
284+00.00	32.86	1.03	67.23	2.70	412.92	423.52	-10.60
284+50.00	37.37	0.00	65.03	0.95	477.96	424.62	53.34
285+00.00	50.97	0.00	81.80	0.00	559.75	424.62	135.14
285+50.00	59.05	0.00	101.87	0.00	661.62	424.62	237.01

EARTHWORK DATA - KU TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
289+00.00	34.63	0.61	0.00	0.00	0.00	0.00	0.00
289+50.00	38.85	0.00	68.03	0.56	68.03	0.64	67.39
290+00.00	41.22	0.00	74.14	0.00	142.17	0.64	141.53
290+50.00	50.39	0.00	84.83	0.00	227.00	0.64	226.36
291+00.00	40.68	0.00	84.32	0.00	311.33	0.64	310.68

EARTHWORK DATA - TE CROSSOVER

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
313+50.00	31.17	0.01	0.00	0.00	0.00	0.00	0.00
314+00.00	28.67	0.14	55.41	0.14	55.41	0.16	55.25
314+50.00	26.11	0.00	50.72	0.13	106.13	0.31	105.83
315+00.00	26.40	3.76	48.62	3.48	154.75	4.31	150.45
315+25.00	29.46	4.63	25.86	3.88	180.61	8.77	171.84
315+50.00	33.18	0.77	29.00	2.50	209.61	11.64	197.97
316+00.00	28.84	1.94	57.43	2.50	267.05	14.52	252.53
316+50.00	29.15	5.19	53.69	6.60	320.74	22.10	298.64
317+00.00	29.04	14.39	53.88	18.13	374.62	42.96	331.66
317+50.00	18.42	17.41	43.94	29.45	418.57	76.83	341.74
318+00.00	12.65	16.97	28.77	31.83	447.33	113.43	333.90
318+50.00	14.06	14.71	24.73	29.33	472.07	147.17	324.90
319+00.00	16.56	9.74	28.35	22.65	500.42	173.21	327.21
319+50.00	11.86	6.28	26.32	14.84	526.75	190.27	336.48
320+00.00	10.67	4.57	20.86	10.04	547.61	201.82	345.79
320+50.00	12.06	1.50	21.04	5.61	568.65	208.28	360.37
321+00.00	12.78	1.14	23.00	2.45	591.65	211.09	380.56
321+50.00	13.09	0.02	23.95	1.07	615.59	212.33	403.27

EARTHWORK DATA - TN TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
104+35.50	25.13	0.00	0.00	0.00	0.00	0.00	0.00
104+50.00	22.69	0.00	12.84	0.00	12.84	0.00	12.84
105+00.00	17.87	0.23	37.56	0.21	50.40	0.24	50.16
105+50.00	19.29	1.28	34.41	1.40	84.81	1.85	82.97
105+64.40	21.06	0.98	10.76	0.60	95.57	2.54	93.03
105+89.40	20.22	0.39	19.11	0.64	114.69	3.27	111.41
106+00.00	20.41	0.23	7.98	0.12	122.66	3.41	119.25
106+14.40	20.19	0.02	10.83	0.06	133.49	3.49	130.00
106+50.00	19.86	0.00	26.41	0.01	159.90	3.50	156.40
107+00.00	19.68	0.00	36.61	0.00	196.51	3.50	193.01
107+50.00	12.02	0.03	29.35	0.03	225.86	3.53	222.33
108+00.00	12.10	0.09	22.33	0.11	248.19	3.65	244.54
108+01.35	12.19	0.05	0.61	0.00	248.79	3.66	245.14
108+50.00	23.12	0.00	31.81	0.05	280.61	3.71	276.90
109+00.00	22.53	0.00	42.26	0.00	322.87	3.71	319.16
109+50.00	19.06	0.00	38.51	0.00	361.38	3.71	357.67
110+00.00	23.29	0.00	39.21	0.00	400.59	3.71	396.88
110+50.00	22.73	0.00	42.61	0.00	443.20	3.71	439.49
111+00.00	19.87	0.00	39.45	0.00	482.66	3.71	478.94
111+50.00	16.92	0.00	34.07	0.00	516.73	3.71	513.01

EARTHWORK DATA - TS TEMPORARY

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
107+50.00	15.75	0.00	0.00	0.00	0.00	0.00	0.00
108+00.00	15.84	0.00	29.25	0.00	29.25	0.00	29.25
108+50.00	16.46	0.00	29.90	0.00	59.15	0.00	59.15
109+00.00	23.36	0.00	36.87	0.00	96.02	0.00	96.02
109+50.00	20.03	0.00	40.17	0.00	136.19	0.00	136.19
110+00.00	19.58	0.00	36.68	0.00	172.87	0.00	172.87
110+50.00	23.72	0.00	40.10	0.00	212.97	0.00	212.97
111+00.00	20.65	0.00	41.09	0.00	254.06	0.00	254.06
111+50.00	18.29	0.00	36.05	0.00	290.11	0.00	290.11
112+00.00	18.17	0.01	33.76	0.01	323.87	0.01	323.86
112+50.00	12.68	0.93	28.57	0.86	352.44	1.00	351.44
113+00.00	11.21	7.04	22.12	7.38	374.56	9.48	365.08
113+17.15	11.04	4.92	7.06	3.80	381.63	13.85	367.78
113+25.65	11.05	4.11	3.48	1.42	385.11	15.49	369.62
113+50.00	12.65	0.95	10.69	2.28	395.79	18.11	377.68
113+51.25	11.96	1.36	0.57	0.05	396.36	18.18	378.19
113+76.85	21.89	3.66	16.05	2.38	412.41	20.92	391.49
114+00.00	21.74	1.43	18.70	2.18	431.11	23.43	407.68
114+50.00	15.77	0.00	34.73	1.32	465.84	24.95	440.89
114+71.08	15.95	0.00	12.38	0.00	478.22	24.95	453.27
115+00.00	16.85	0.00	17.57	0.00	495.78	24.95	470.84
115+50.00	18.57	0.00	32.80	0.00	528.58	24.95	503.63
116+00.00	18.52	0.00	34.34	0.00	562.92	24.95	537.97
116+50.00	16.81	0.00	32.72	0.00	595.64	24.95	570.69

EARTHWORK DATA - UE TEMPORARY

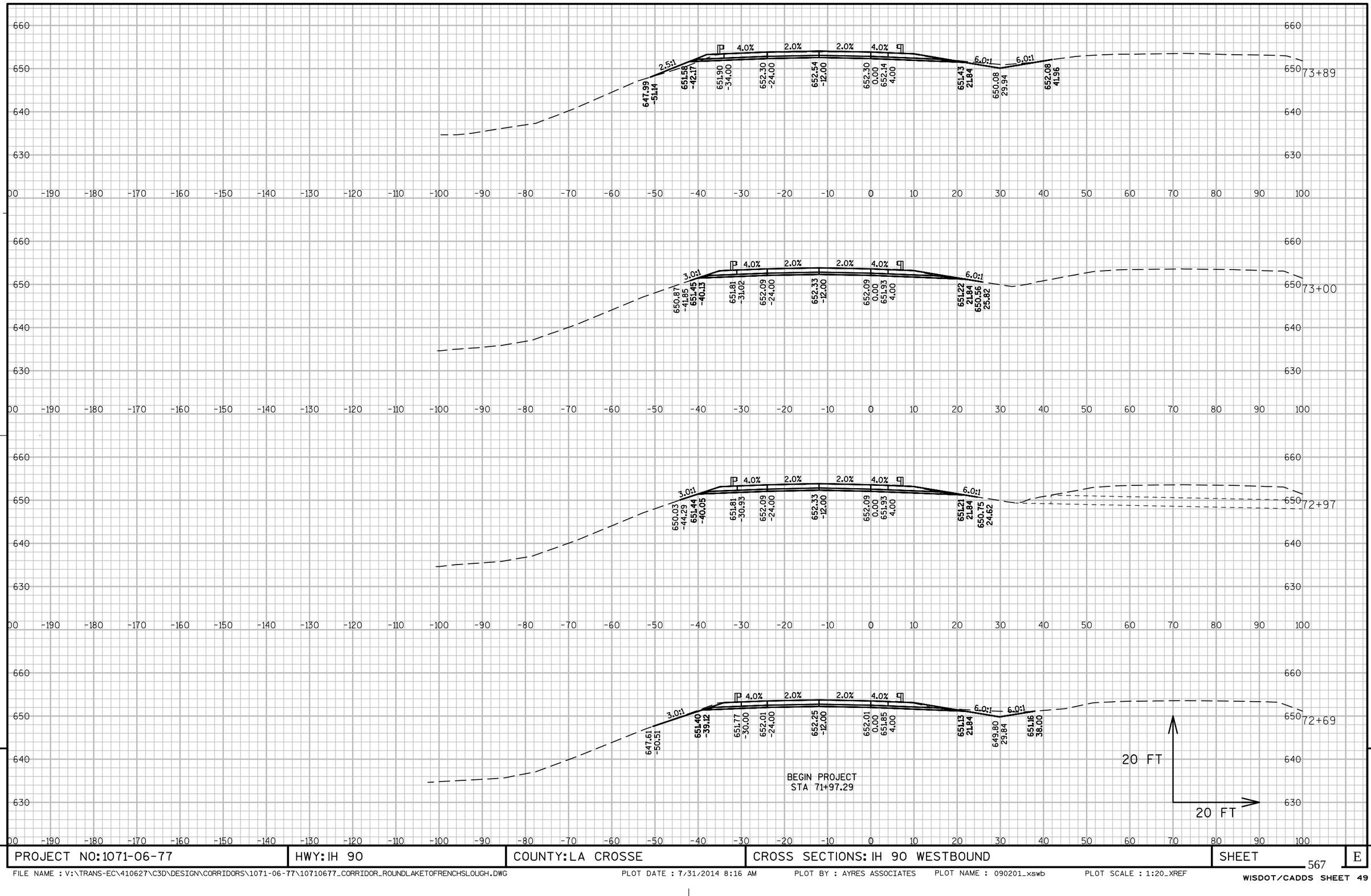
STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.15	MASS ORDINATE
155+50.00	11.10	0.91	0.00	0.00	0.00	0.00	0.00
156+00.00	48.06	0.00	54.78	0.84	54.78	0.97	53.81
156+50.00	20.20	0.00	63.20	0.00	117.98	0.97	117.01
157+00.00	15.07	0.43	32.66	0.40	150.63	1.43	149.20
157+07.56	14.78	0.51	4.18	0.13	154.81	1.59	153.23
157+50.00	8.06	0.51	17.95	0.81	172.76	2.51	170.25
158+00.00	6.05	2.69	13.07	2.97	185.83	5.93	179.90
158+50.00	6.70	6.92	11.81	8.90	197.64	16.17	181.47
159+00.00	1.90	10.28	7.97	15.93	205.60	34.49	171.11
159+50.00	15.75	0.00	16.35	9.53	221.95	45.44	176.51

EARTHWORK DATA - UW TEMPORARY

STATION	AREA (SF)		INCR. VOL (CY)		CUMULATIVE VOL (CY)		
	CUT	FILL	CUT	FILL	CUT 1.00	EXP. FILL 1.15	MASS ORDINATE
225+50	0.00	0.05	0.00	0.00	0.00	0.00	0.00
226+00	0.00	2.03	0.00	1.92	0.00	2.21	-2.21
226+50	0.00	8.19	0.00	9.46	0.00	13.09	-13.09
227+00	0.00	23.79	0.00	29.61	0.00	47.14	-47.14
227+50	0.00	55.16	0.00	73.10	0.00	131.20	-131.20
228+00	0.00	85.76	0.00	130.48	0.00	281.26	-281.26
228+50	0.00	110.02	0.00	181.28	0.00	489.73	-489.73
229+00	0.00	128.04	0.00	220.43	0.00	743.22	-743.22
229+50	0.00	141.70	0.00	249.76	0.00	1030.45	-1030.45
230+00	0.00	147.20	0.00	267.50	0.00	1338.08	-1338.08
230+50	0.00	148.63	0.00	273.92	0.00	1653.08	-1653.08
231+00	0.00	155.97	0.00	282.04	0.00	1977.42	-1977.42
231+50	0.00	159.93	0.00	292.50	0.00	2313.80	-2313.80
232+00	0.00	162.98	0.00	298.99	0.00	2657.65	-2657.65
232+50	10.67	150.13	9.88	289.92	9.88	2991.05	-2981.17
233+00	9.36	129.39	18.55	258.81	28.43	3288.69	-3260.26
233+50	0.00	64.82	8.67	179.83	37.09	3495.49	-3458.39
234+00	0.00	109.62	0.00	161.52	37.09	3681.24	-3644.14
234+50	0.00	110.91	0.00	204.20	37.09	3916.06	-3878.97
235+00	13.24	292.68	12.26	373.70	49.35	4345.82	-4296.47
235+50	11.63	271.94	23.03	522.80	72.38	4947.04	-4874.66
236+00	8.53	77.68	18.67	323.73	91.05	5319.33	-5228.28
236+50	0.00	48.48	7.89	116.82	98.94	5453.67	-5354.73
237+00	0.00	40.74	0.00	82.61	98.94	5548.67	-5449.73
237+50	0.00	62.41	0.00	95.51	98.94	5658.51	-5559.57
238+00	0.00	74.90	0.00	127.14	98.94	5804.73	-5705.78
238+50	0.00	67.01	0.00	131.39	98.94	5955.83	-5856.89
239+00	0.00	15.76	0.00	76.63	98.94	6043.96	-5945.02
239+50	18.98	0.00	17.57	14.59	116.51	6060.74	-5944.23
240+00	18.98	0.00	35.14	0.00	151.66	6060.74	-5909.08
240+50	52.93	0.00	66.58	0.00	218.24	6060.74	-5842.50
241+00	65.34	0.00	109.51	0.00	327.74	6060.74	-5733.00
241+50	69.83	0.00	125.15	0.00	452.89	6060.74	-5607.85
242+00	65.01	0.00	124.85	0.00	577.74	6060.74	-5483.00
242+50	61.82	0.00	117.43	0.00	695.17	6060.74	-5365.57
243+00	37.96	0.00	92.39	0.00	787.56	6060.74	-5273.18
243+50	21.40	0.00	54.97	0.00	842.53	6060.74	-5218.21
244+00	1.49	0.00	21.19	0.00	863.72	6060.74	-5197.02
244+50	0.00	11.46	1.38	10.61	865.10	6072.94	-5207.85
245+00	0.00	5.12	0.00	15.35	865.10	6090.59	-5225.49
245+50	0.00	1.56	0.00	6.19	865.10	6097.70	-5232.61
246+00	0.00	0.20	0.00	1.64	865.10	6099.59	-5234.49
246+50	0.00	0.00	0.00	0.19	865.10	6099.80	-5234.71
247+00	0.00	0.00	0.00	0.00	865.10	6099.80	-5234.71
247+50	0.00	0.00	0.00	0.00	865.10	6099.80	-5234.71

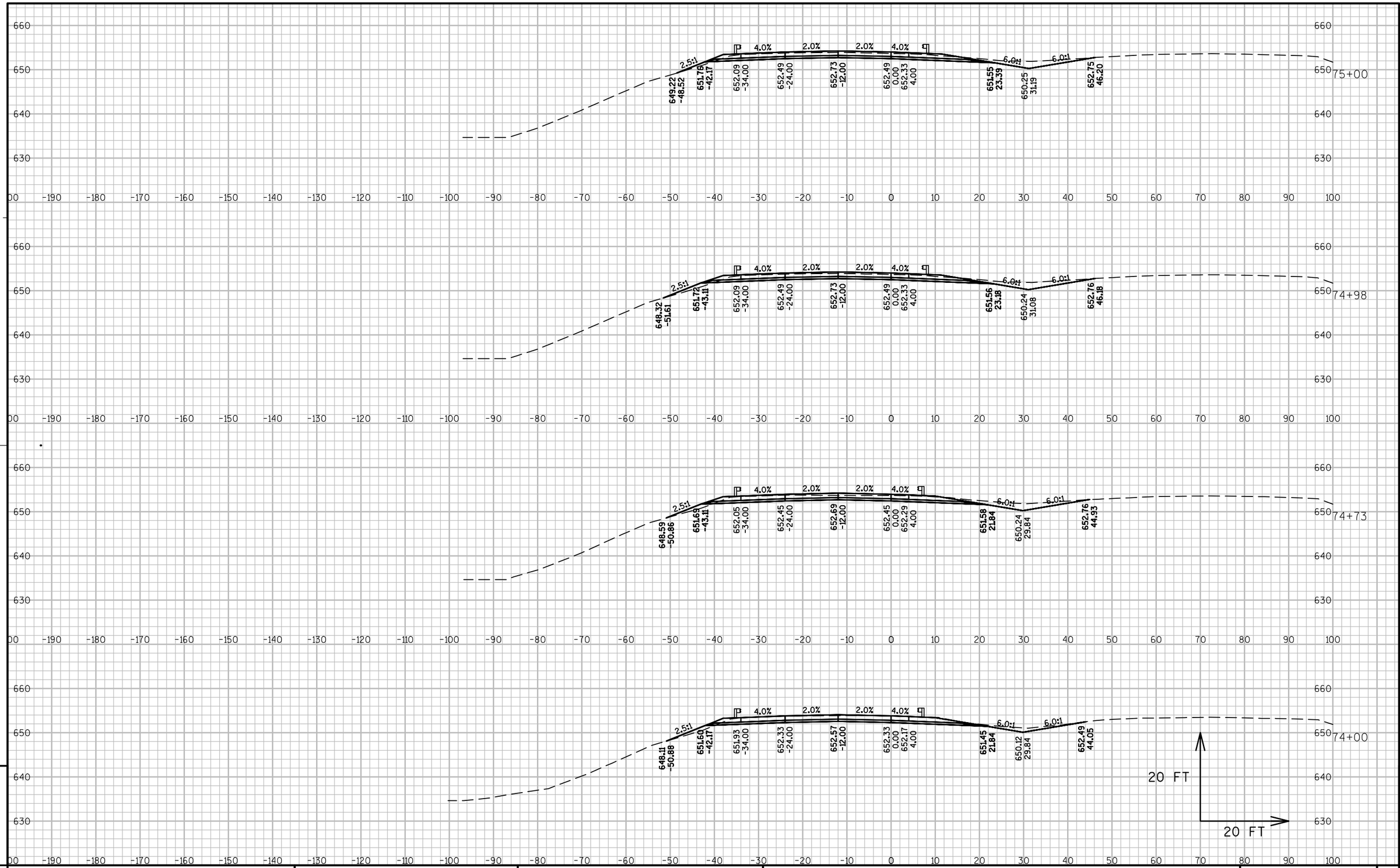
EARTHWORK DATA - CTH BW

STATION	AREA (SF) Cut	AREA (SF) Fill	INCR VOL (CY) Cut	INCR VOL (CY) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
15+72	3	2	0	0	0	0	0
16+00	7	46	5	25	5	31	-26
16+50	6	86	12	122	17	184	-167
17+00	69	79	70	152	87	374	-287
17+50	77	130	135	193	222	615	-393
17+66	77	131	45	77	268	712	-444
17+91	83	73	74	94	342	830	-488
18+00	73	97	26	28	368	865	-497
18+20	64	69	51	62	418	942	-524
18+50	45	62	60	73	479	1033	-554
18+86	13	49	39	74	518	1125	-607
21+32	9	37	0	0	0	0	0
21+50	28	36	12	24	12	30	-18
22+00	47	32	69	63	81	109	-28
22+25	49	54	44	40	125	160	-34
22+50	54.1	51.4	48	49	173	221	-48
23+00	77.0	25.0	121	71	294	309	-15
23+50	28.4	0.0	98	23	392	338	54
23+75	31.7	0.0	28	0	420	338	82



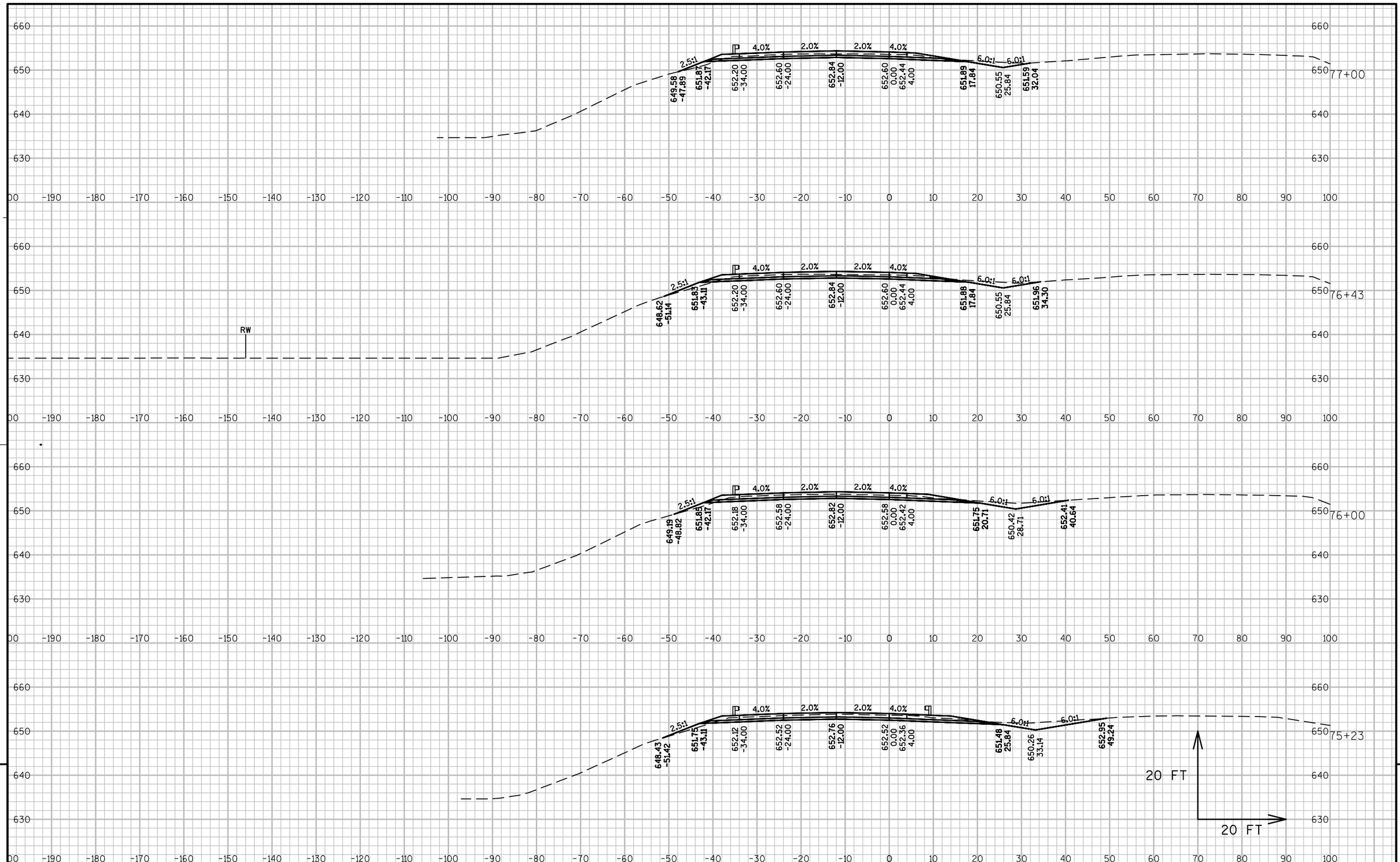
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_ROUNDLAKETOFRENCHSLOUGH.DWG PLOT DATE : 7/31/2014 8:16 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xswb PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_ROUNDLAKETOFRENCHSLOUGH.DWG PLOT DATE : 7/31/2014 8:17 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xswb PLOT SCALE : 1:20_XREF



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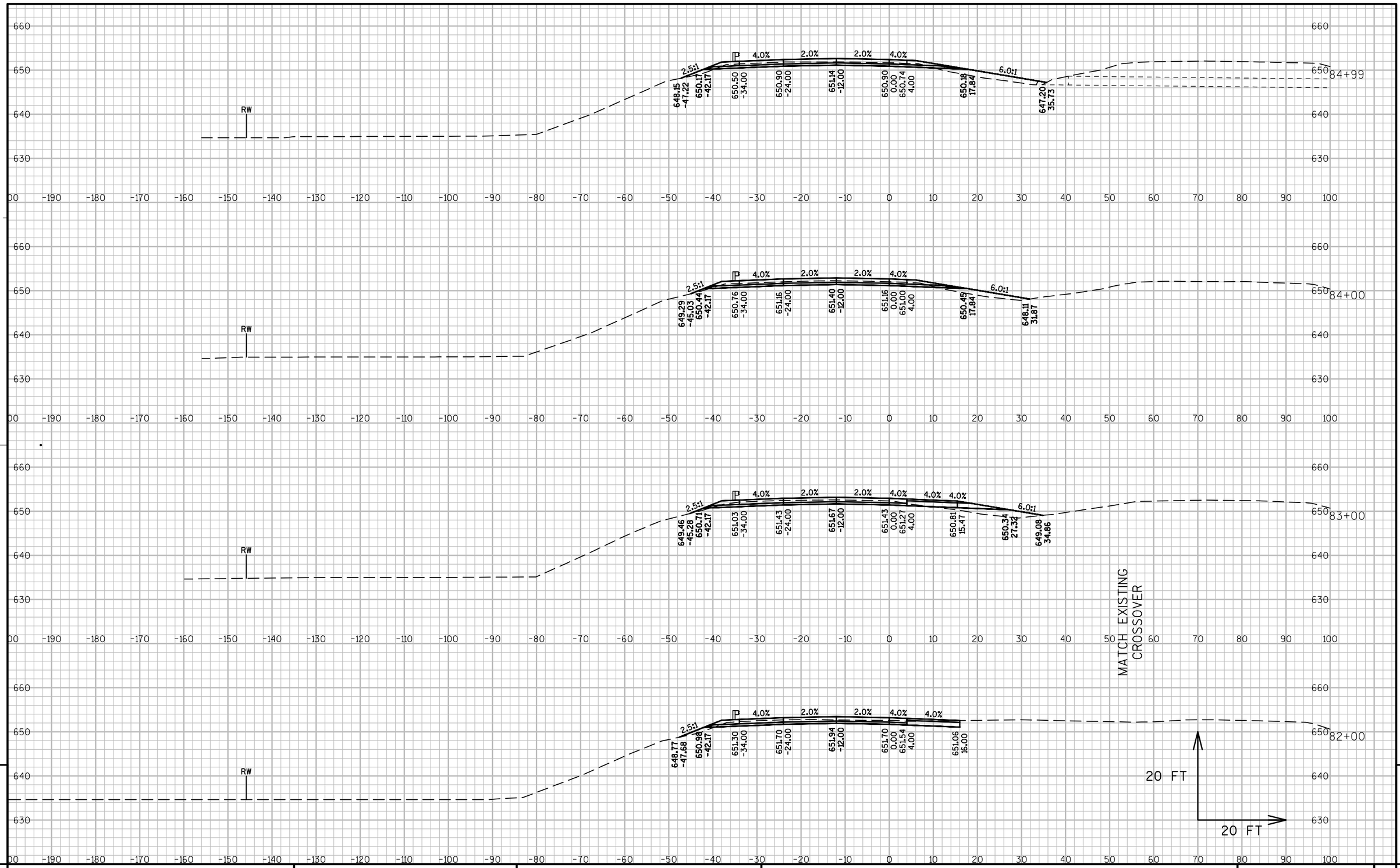
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_ROUNDLAKETOFRENCHSLOUGH.DWG PLOT DATE : 7/31/2014 8:17 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xswb PLOT SCALE : 1:20_XREF



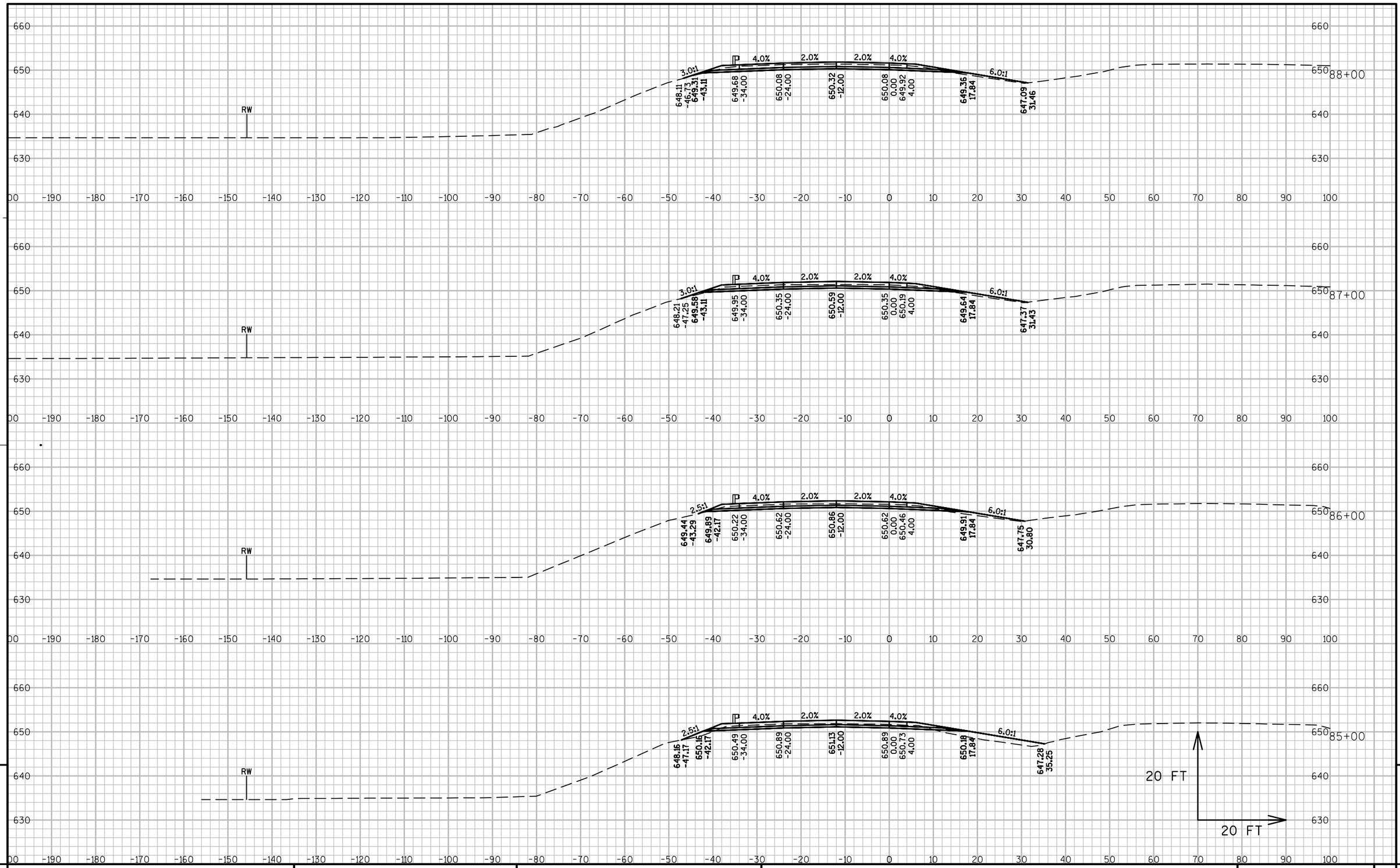
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_ROUNDLAKETOFRENCHSLOUGH.DWG PLOT DATE : 7/31/2014 8:18 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090204_xswb PLOT SCALE : 1:20_XREF



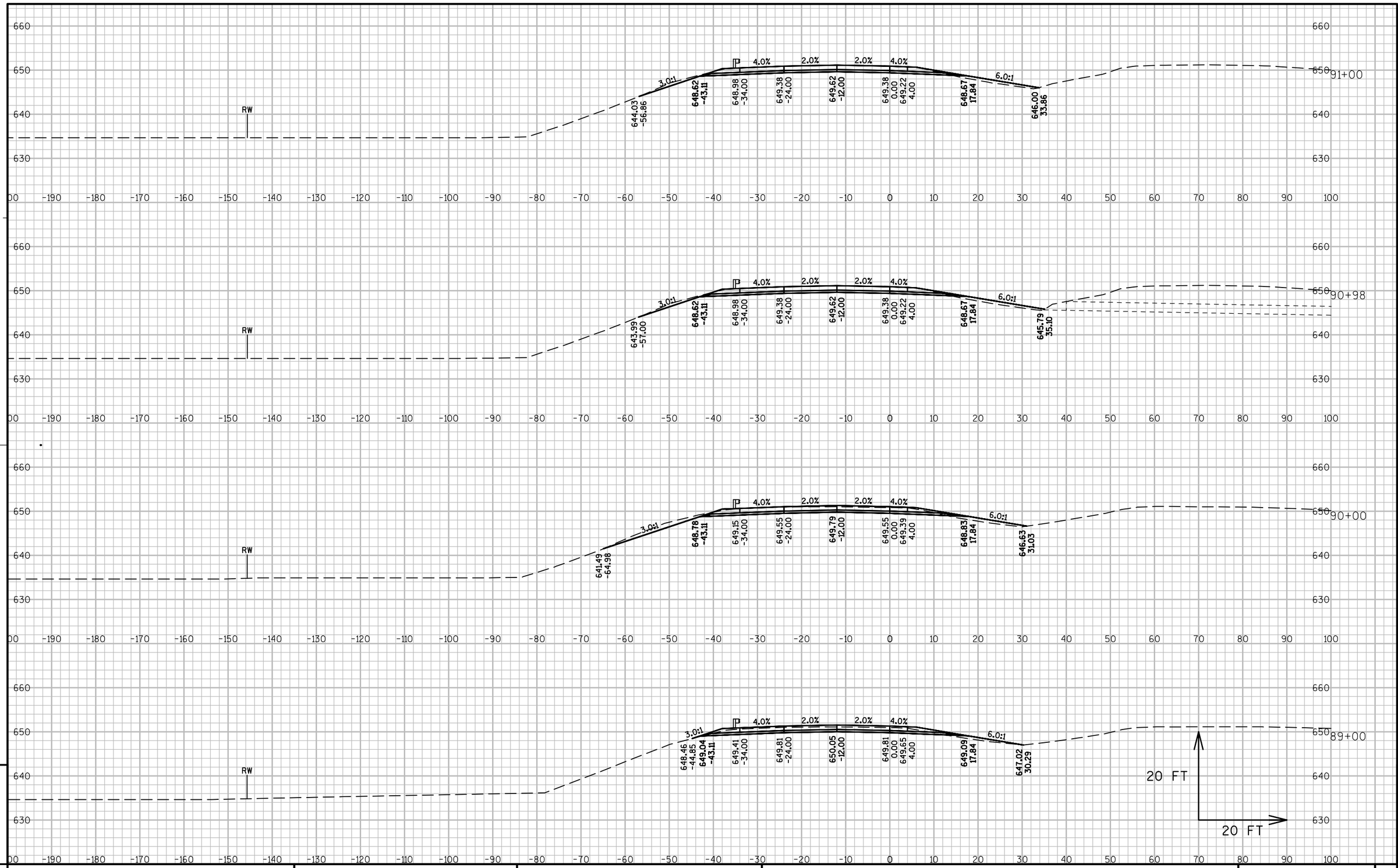
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 571	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_ROUNDLAKETOFRENCHSLOUGH.DWG PLOT DATE : 7/31/2014 8:18 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090205_xswb PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49



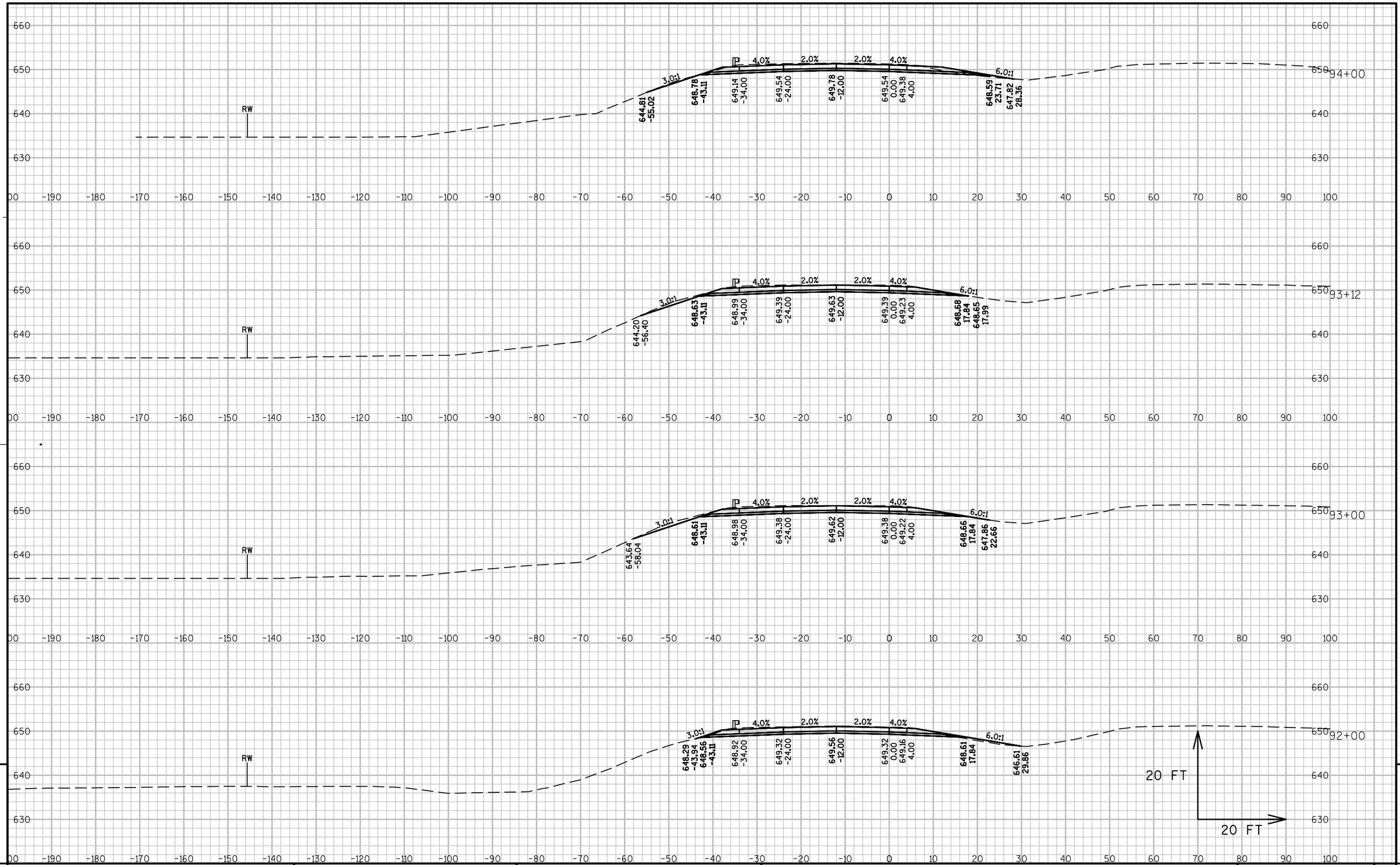
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_ROUNDLAKETOFRENCHSLOUGH.DWG PLOT DATE : 7/31/2014 8:19 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090206_xswb PLOT SCALE : 1:20_XREF



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_ROUNDLAKETOFRENCHSLOUGH.DWG PLOT DATE : 7/31/2014 8:19 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090207_xswb PLOT SCALE : 1:20_XREF

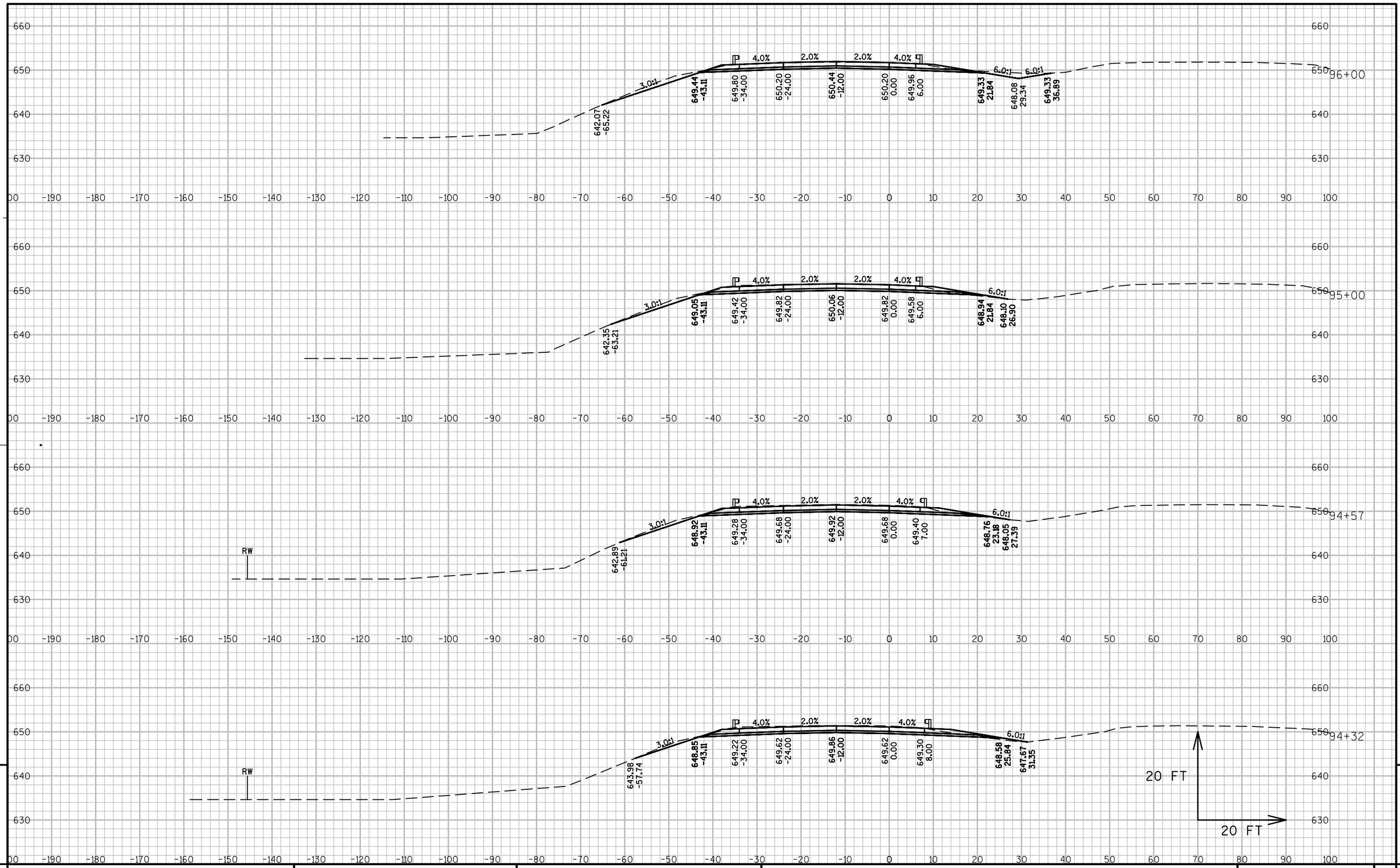


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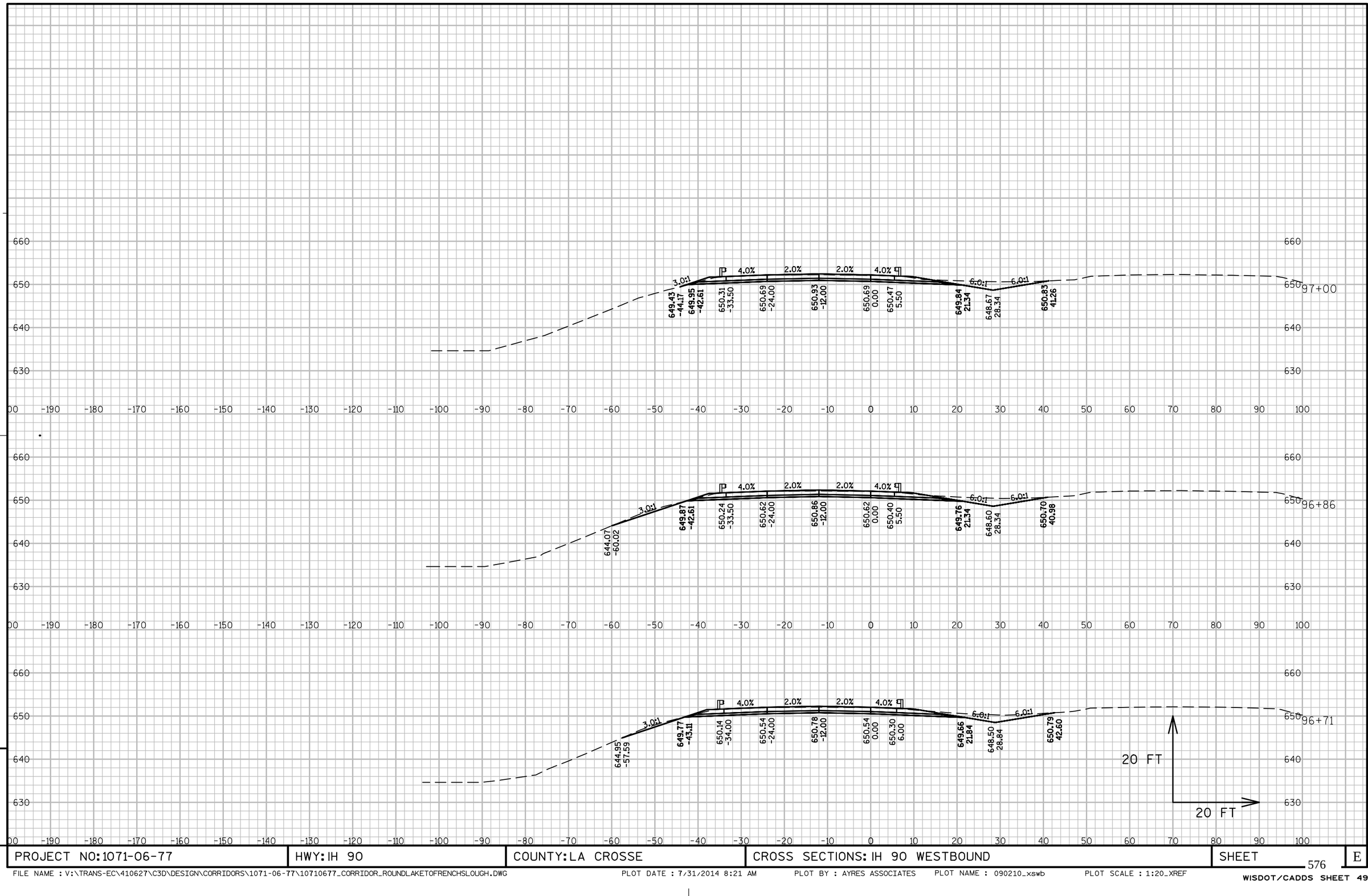
PROJECT NO:1071-06-77	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS:IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_ROUNDLAKETOFRENCHSLOUGH.DWG PLOT DATE : 7/31/2014 8:20 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090208_xswb PLOT SCALE : 1:20_XREF



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_ROUNDLAKETOFRENCHSLOUGH.DWG PLOT DATE : 7/31/2014 8:20 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090209_xswb PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_ROUNDLAKETOFRENCHSLOUGH.DWG PLOT DATE : 7/31/2014 8:21 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090210_xswb PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49

100+00

RW

647.93

ELEC

4.0% 2.0% 2.0% 4.0%

4.0:1 6.0:1 6.0:1

650.79 -48.37
651.60 -45.14
652.05 -34.00
652.45 -24.00
652.69 -12.00
652.45 0.00
651.57 21.84
649.91 31.84
651.96 44.16

99+87

RW

646.89

ELEC

4.0% 2.0% 2.0% 4.0%

4.0:1 6.0:1 6.0:1

649.76 -52.22
651.53 -45.14
651.98 -34.00
652.38 -24.00
652.62 -12.00
652.38 0.00
651.51 21.84
650.01 30.84
651.97 42.61

STA 99+87 WB - STA 100+31 WB
1-24"x58' CPRC CL. III
2-APRON ENDWALL REQ'D

99+72

RW

ELEC

4.0% 2.0% 2.0% 4.0%

3.0:1 6.0:1 6.0:1

649.55 -48.62
651.55 -42.61
651.92 -33.50
652.30 -24.00
652.54 -12.00
652.30 0.00
651.45 21.34
650.11 29.34
652.15 41.59

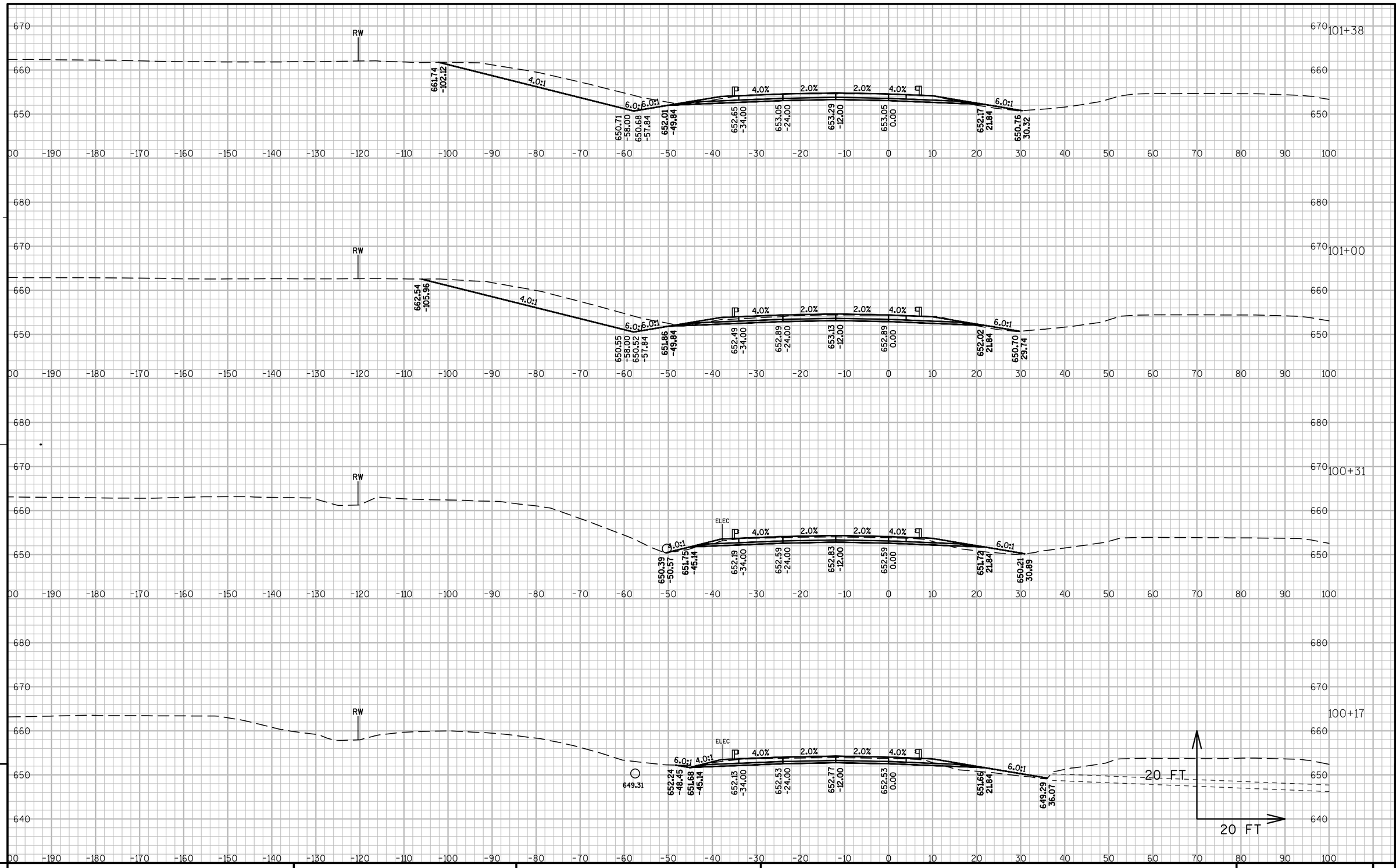
20 FT
20 FT

680 670 660 650 640

-200 -190 -180 -170 -160 -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

9 9

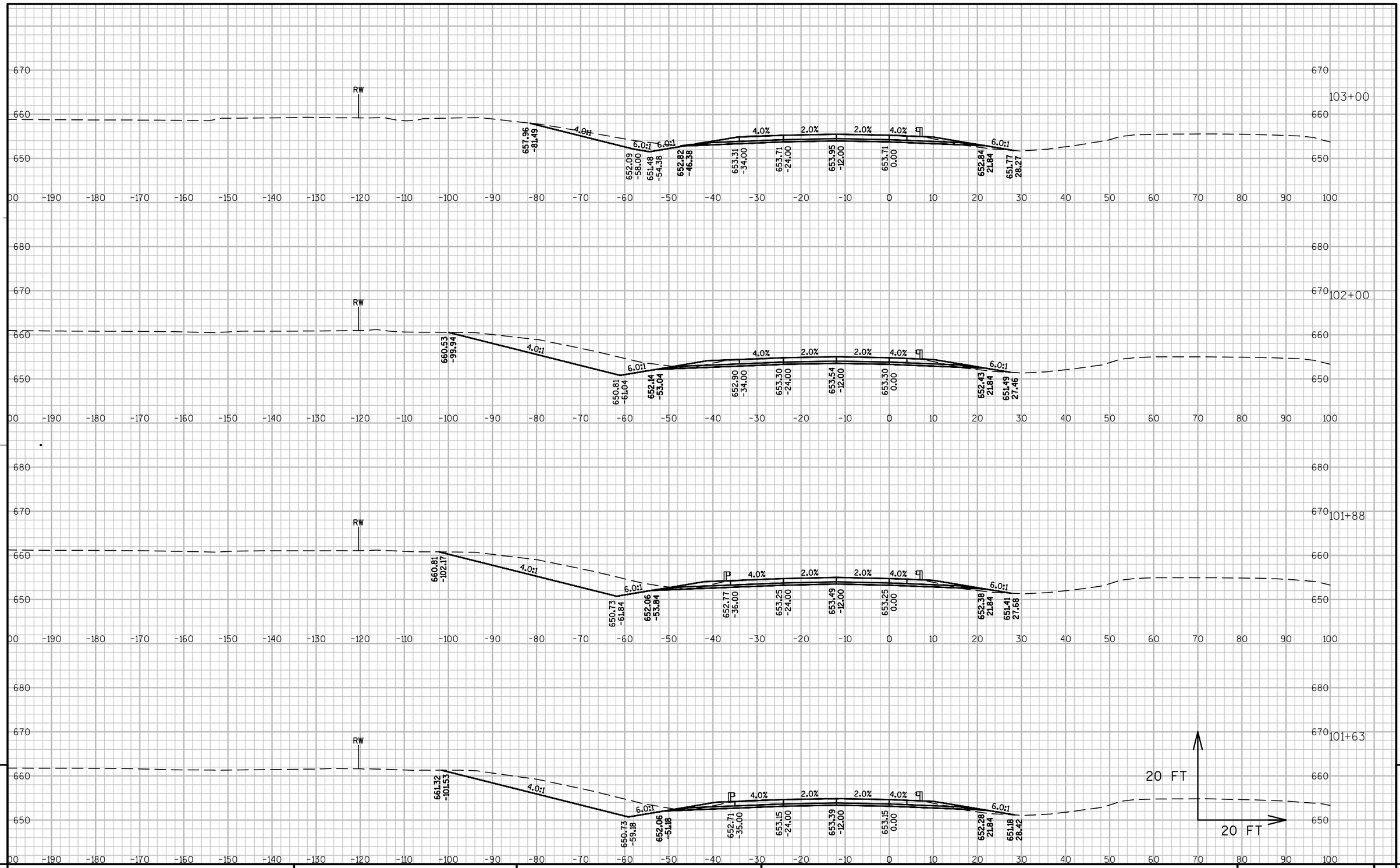
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 577	E



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 578	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:23 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090212_xswb PLOT SCALE : 1:20_XREF

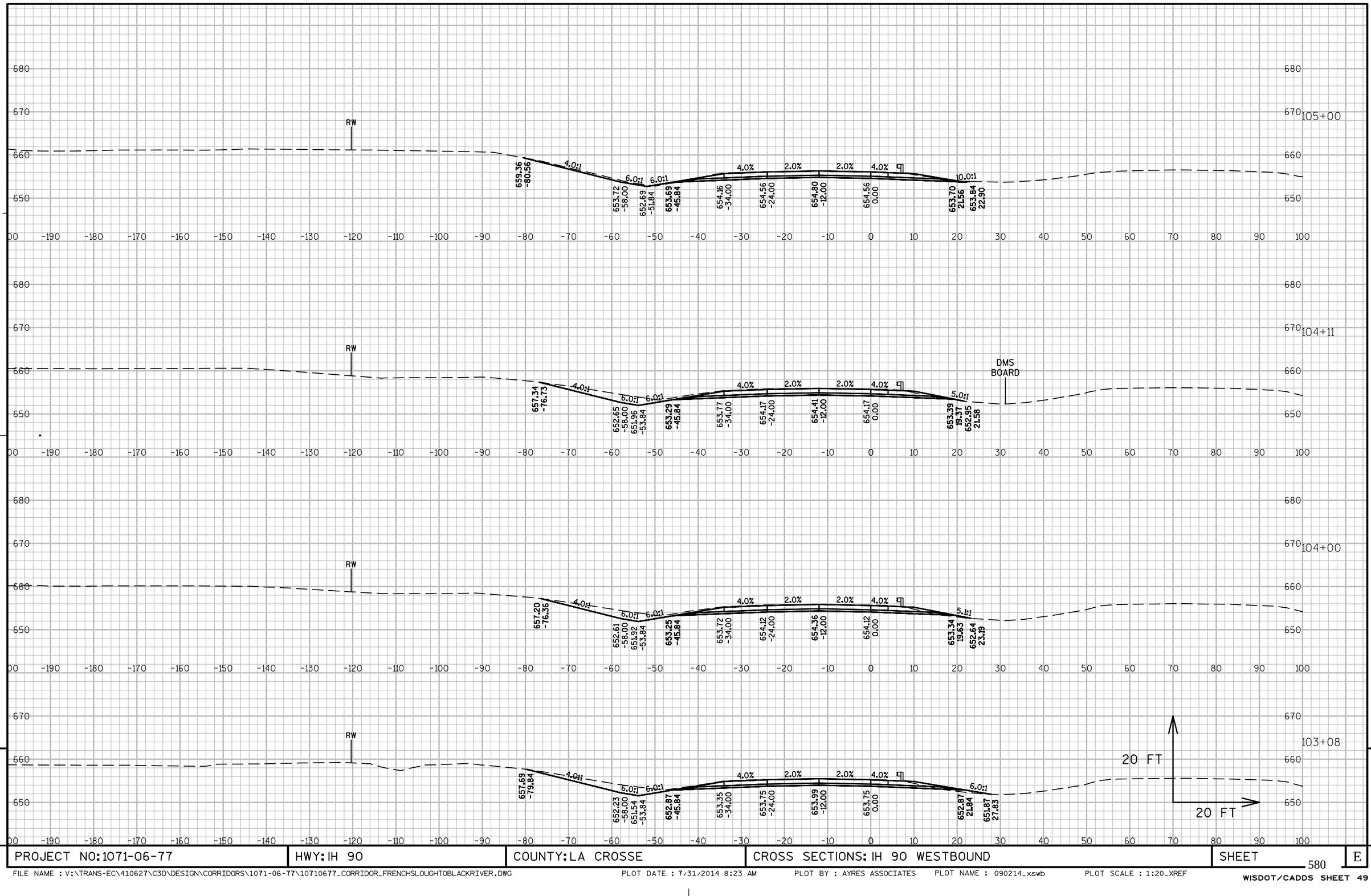
WISDOT/CADDS SHEET 49



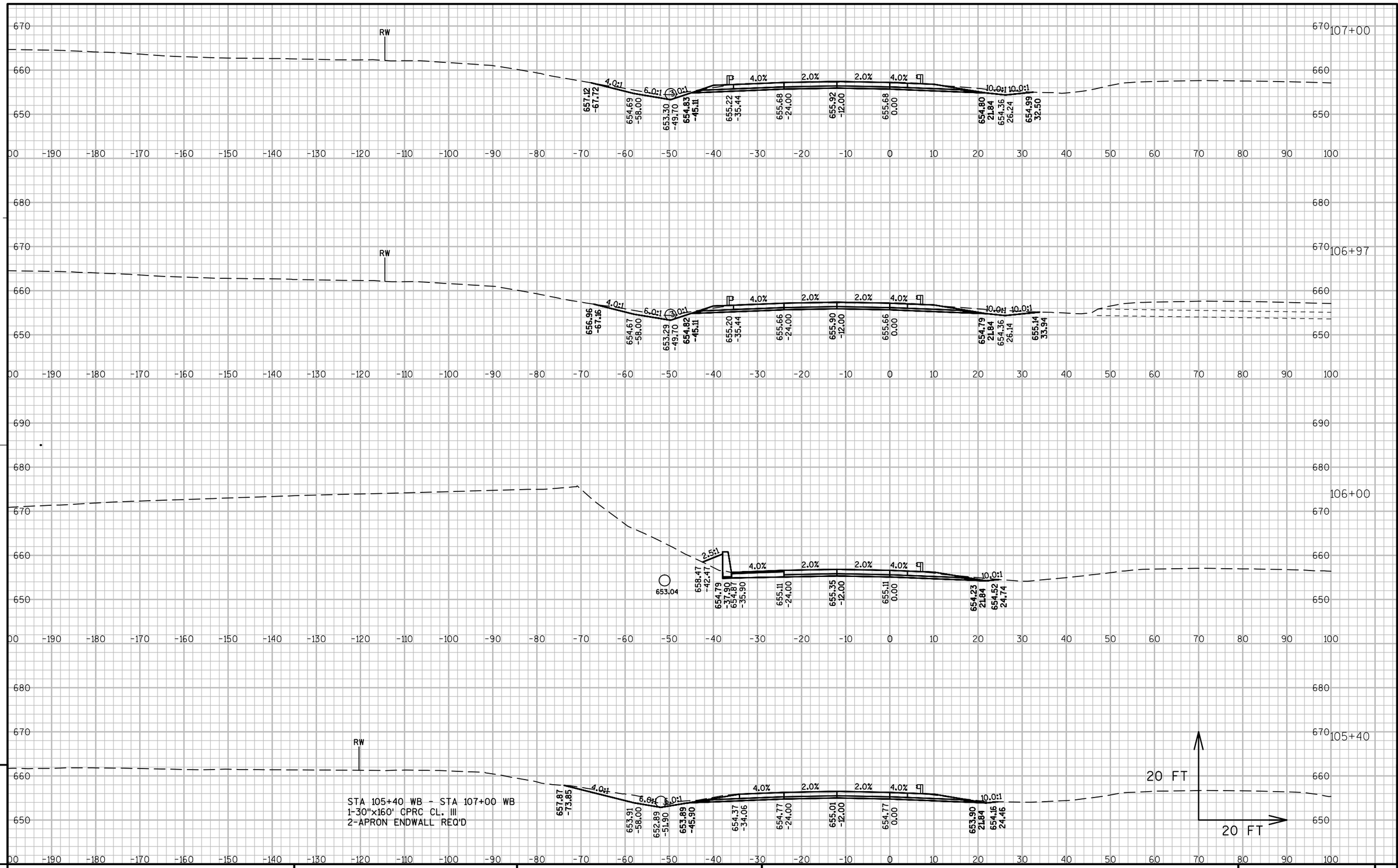
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 579	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:23 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090213_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



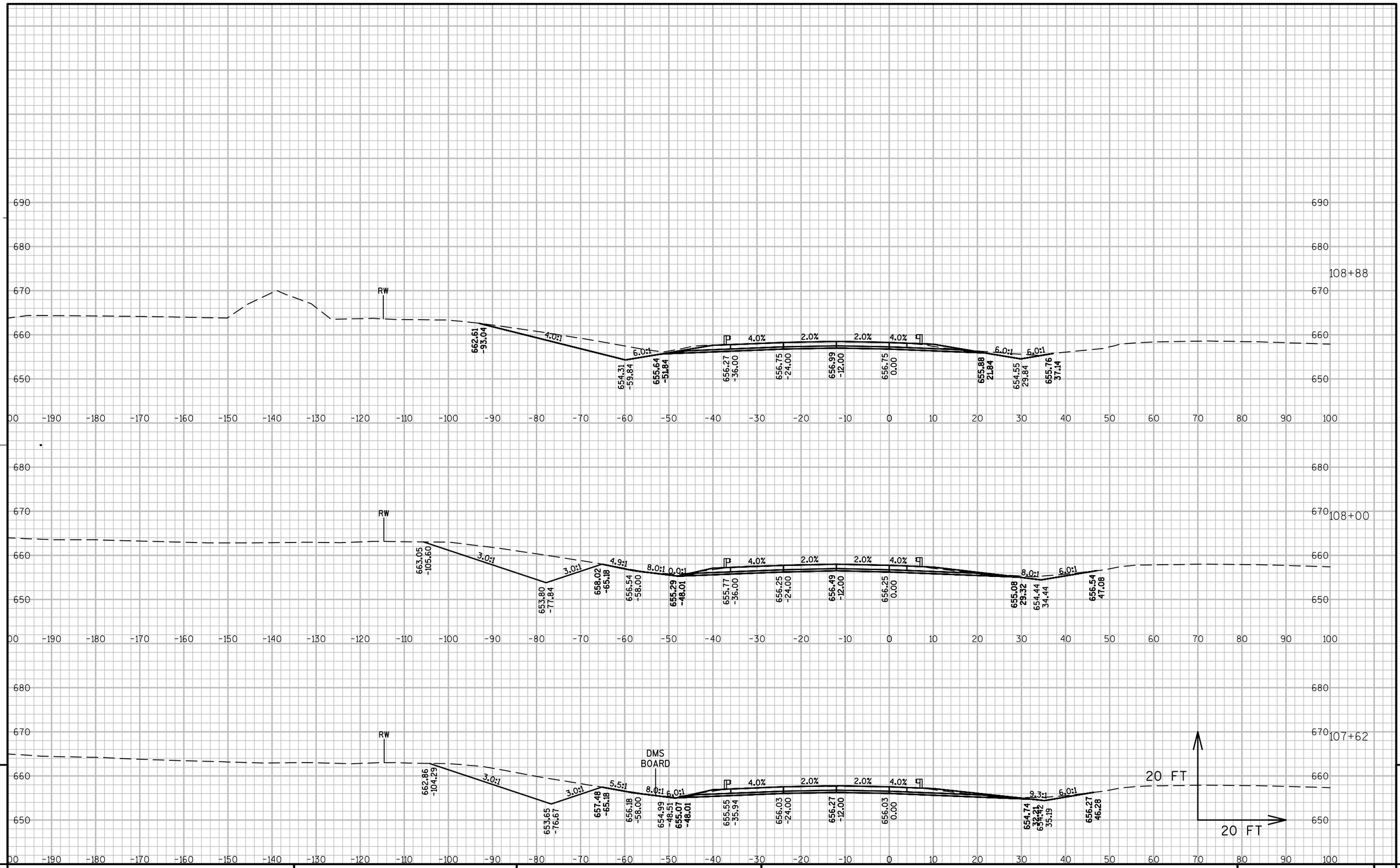
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 580	E



9

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PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 581	E



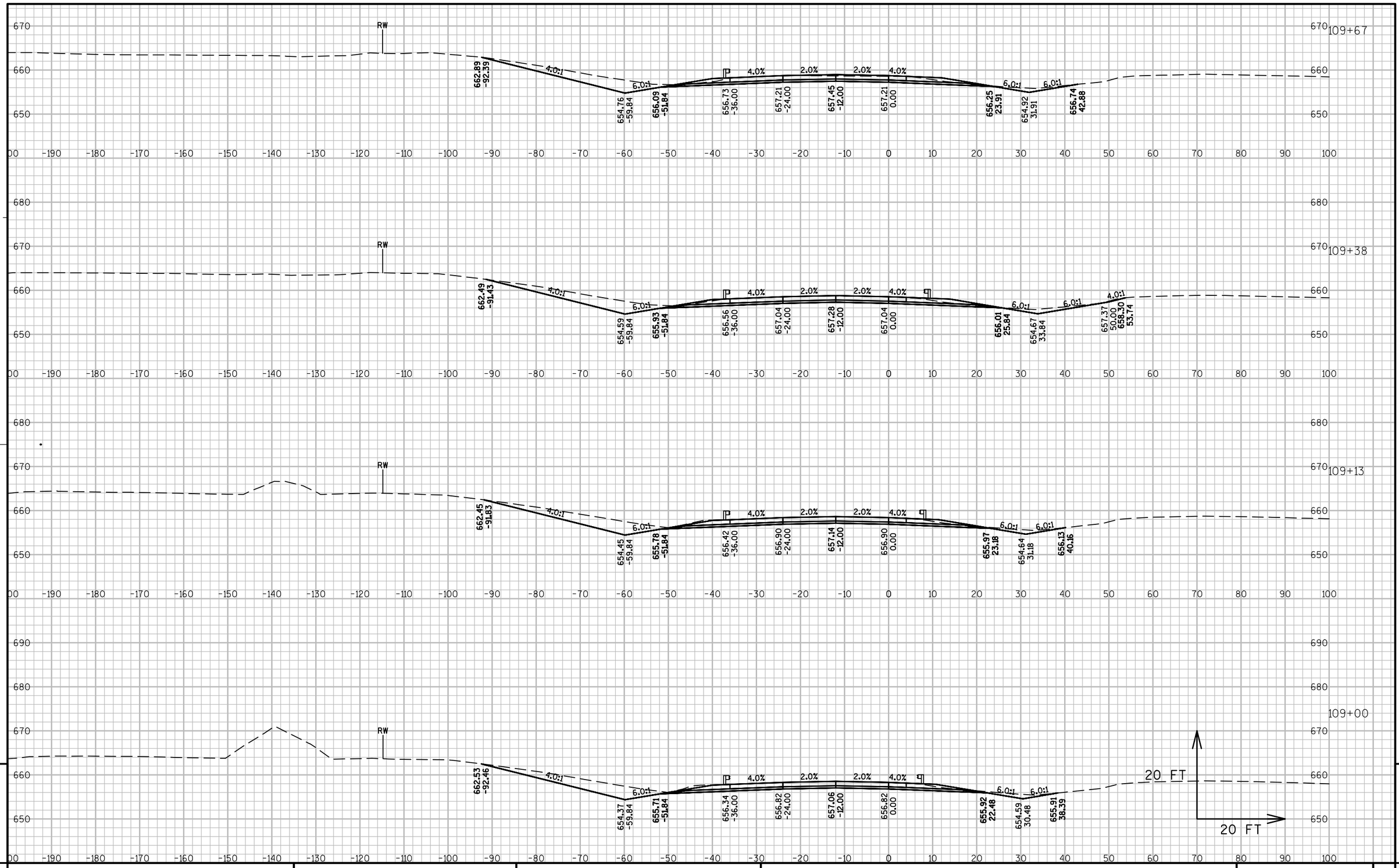
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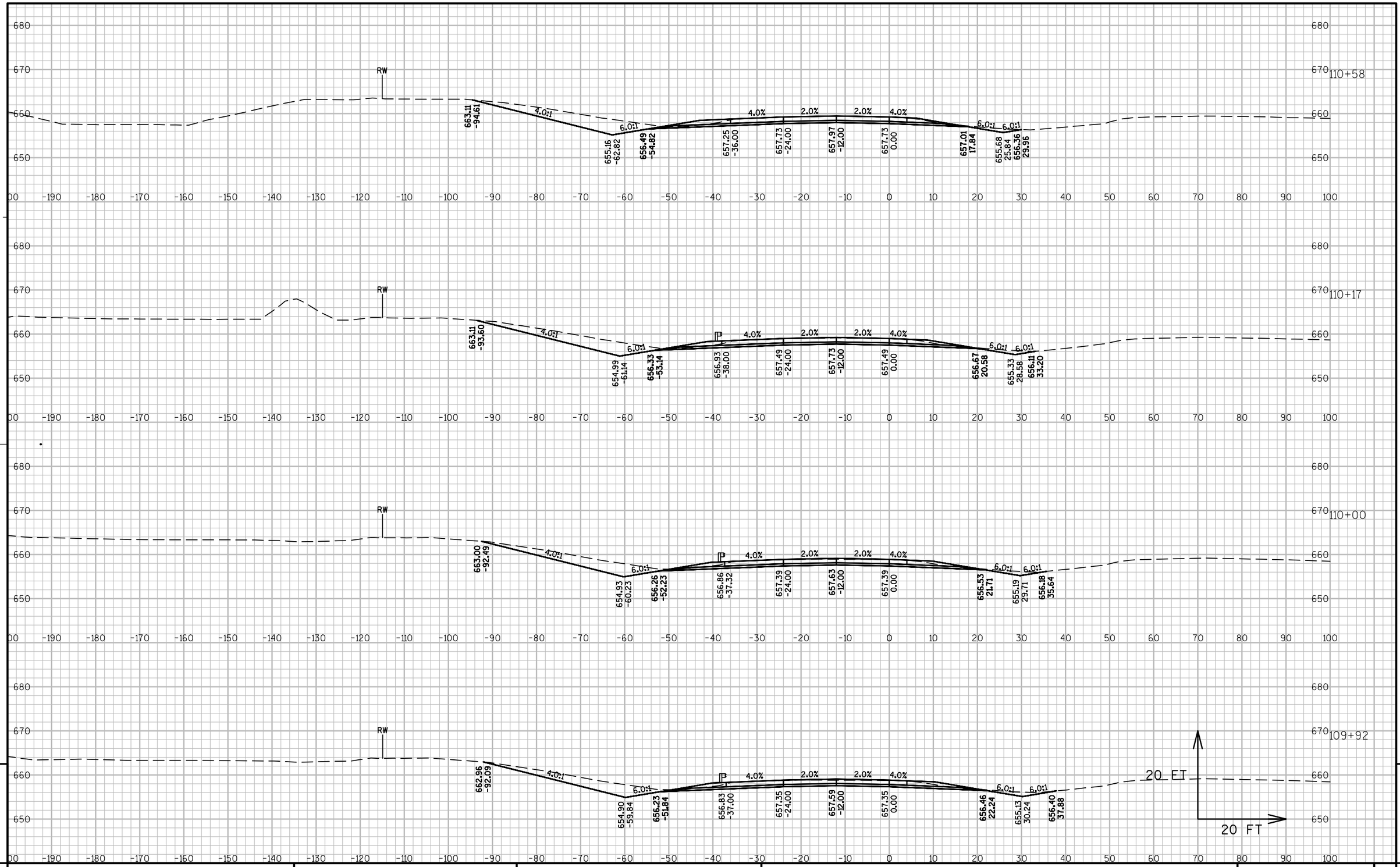
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:24 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090216_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

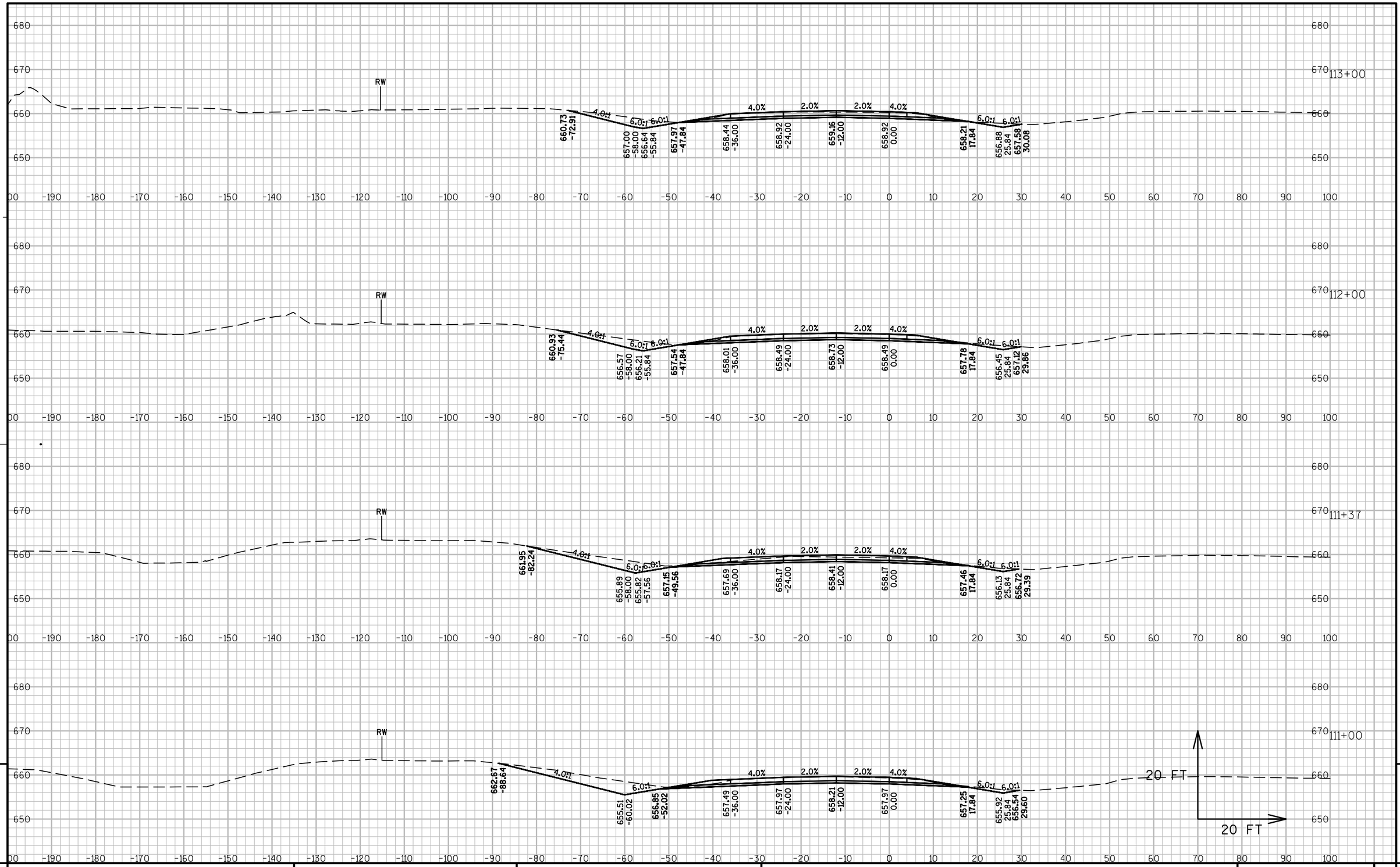


PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 583	E



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:24 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090218_xswb PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49



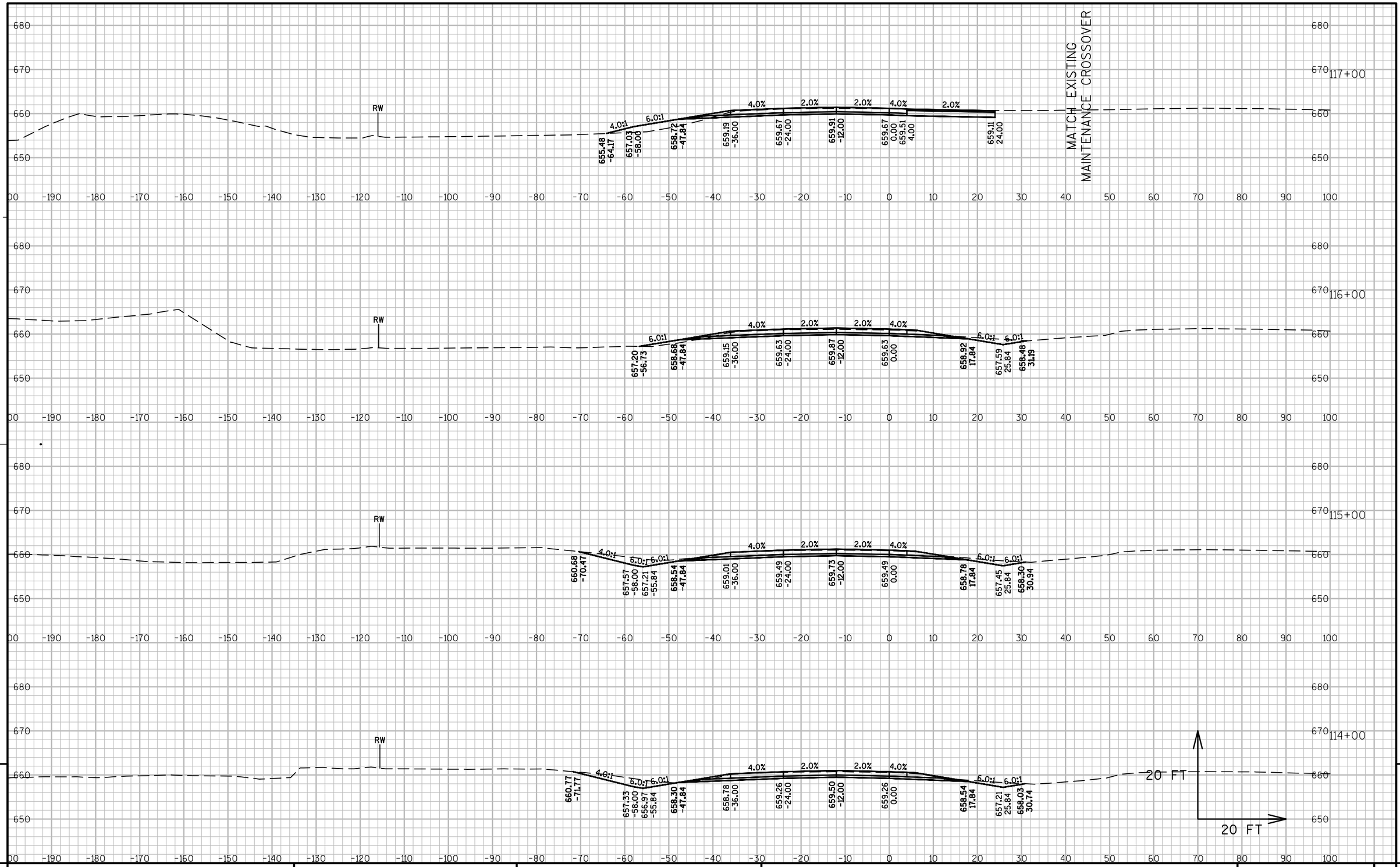
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PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:25 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090219_xswb PLOT SCALE : 1:20_XREF

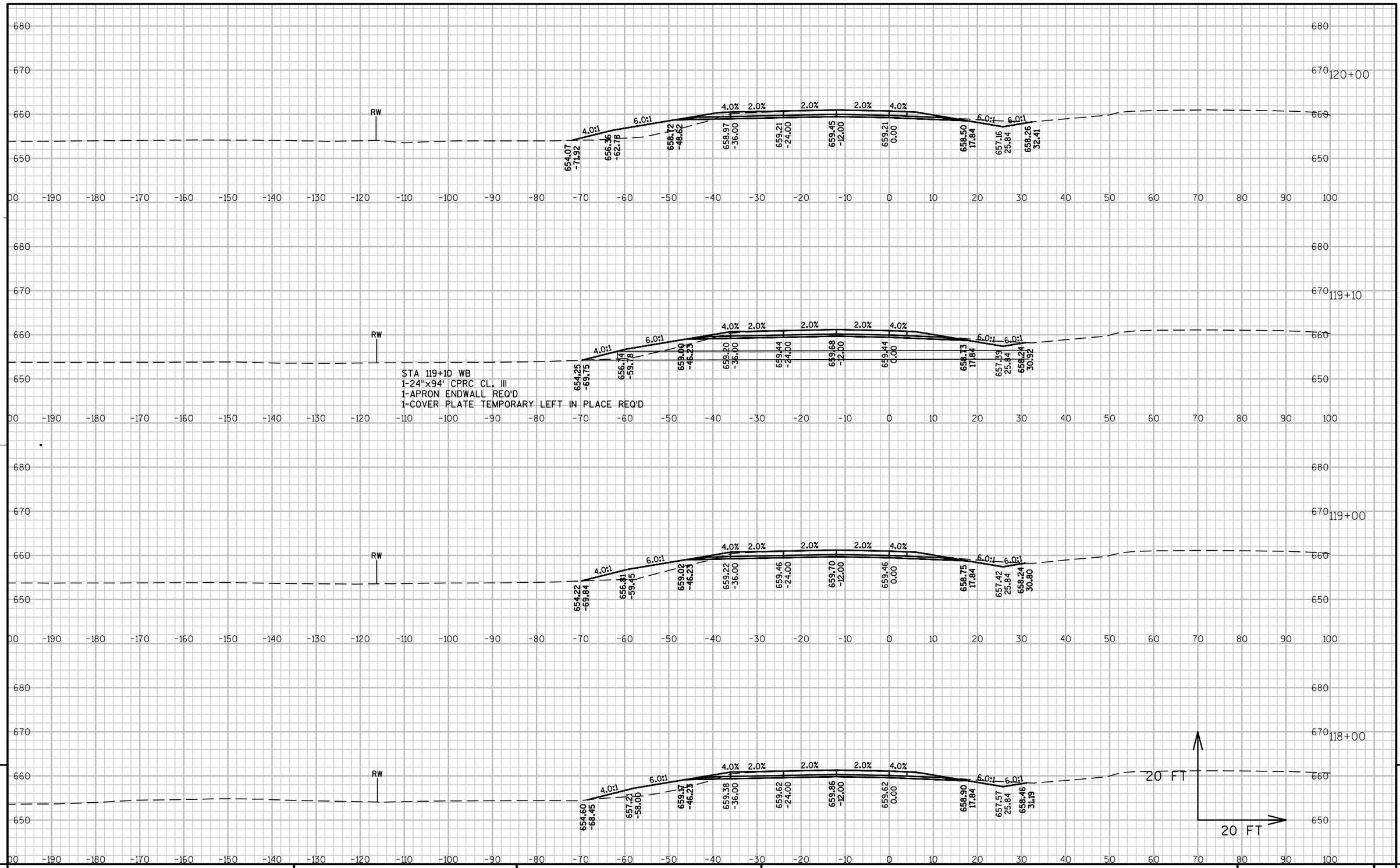
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:25 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090220_xswb PLOT SCALE : 1:20_XREF

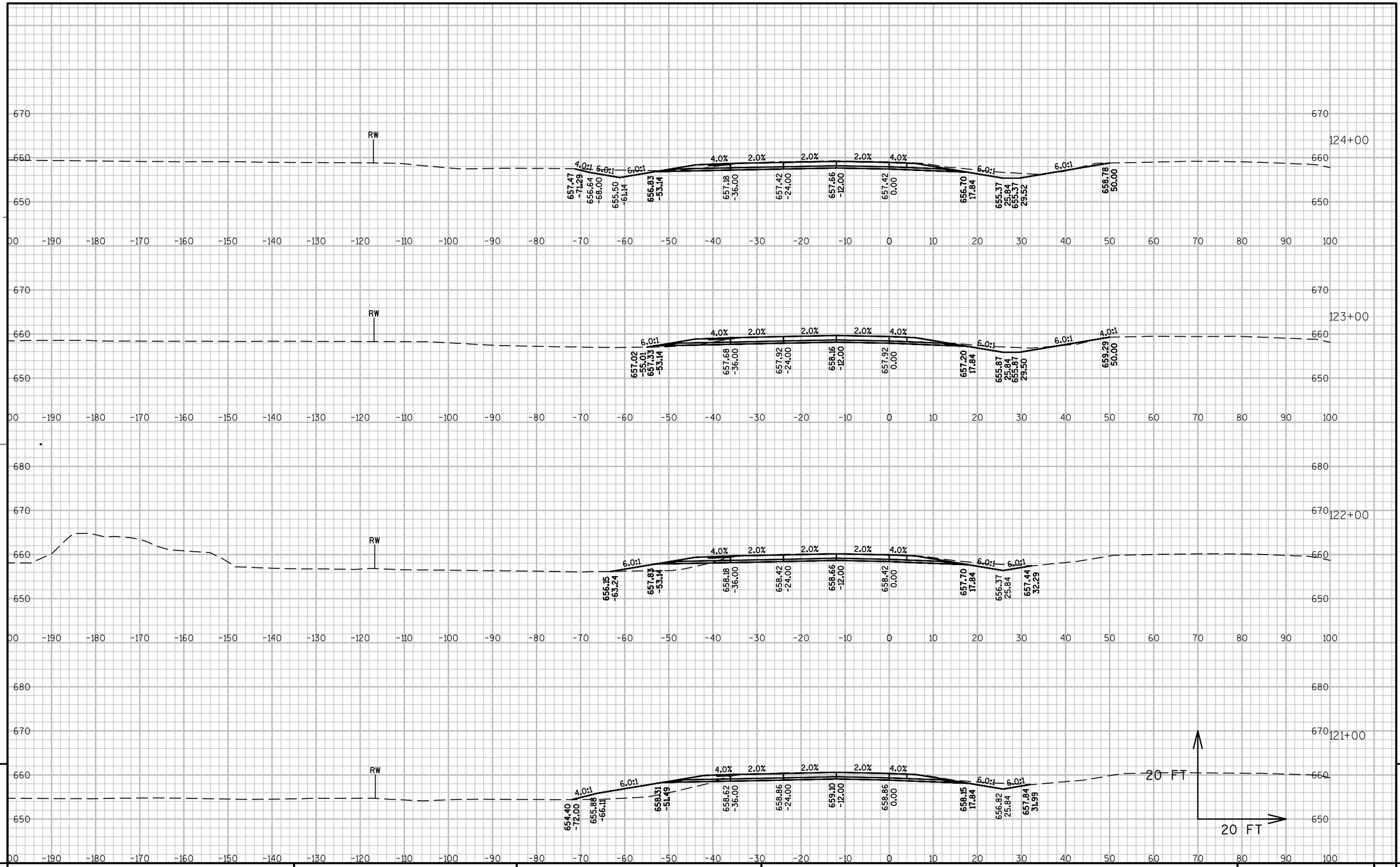
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:25 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090221_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



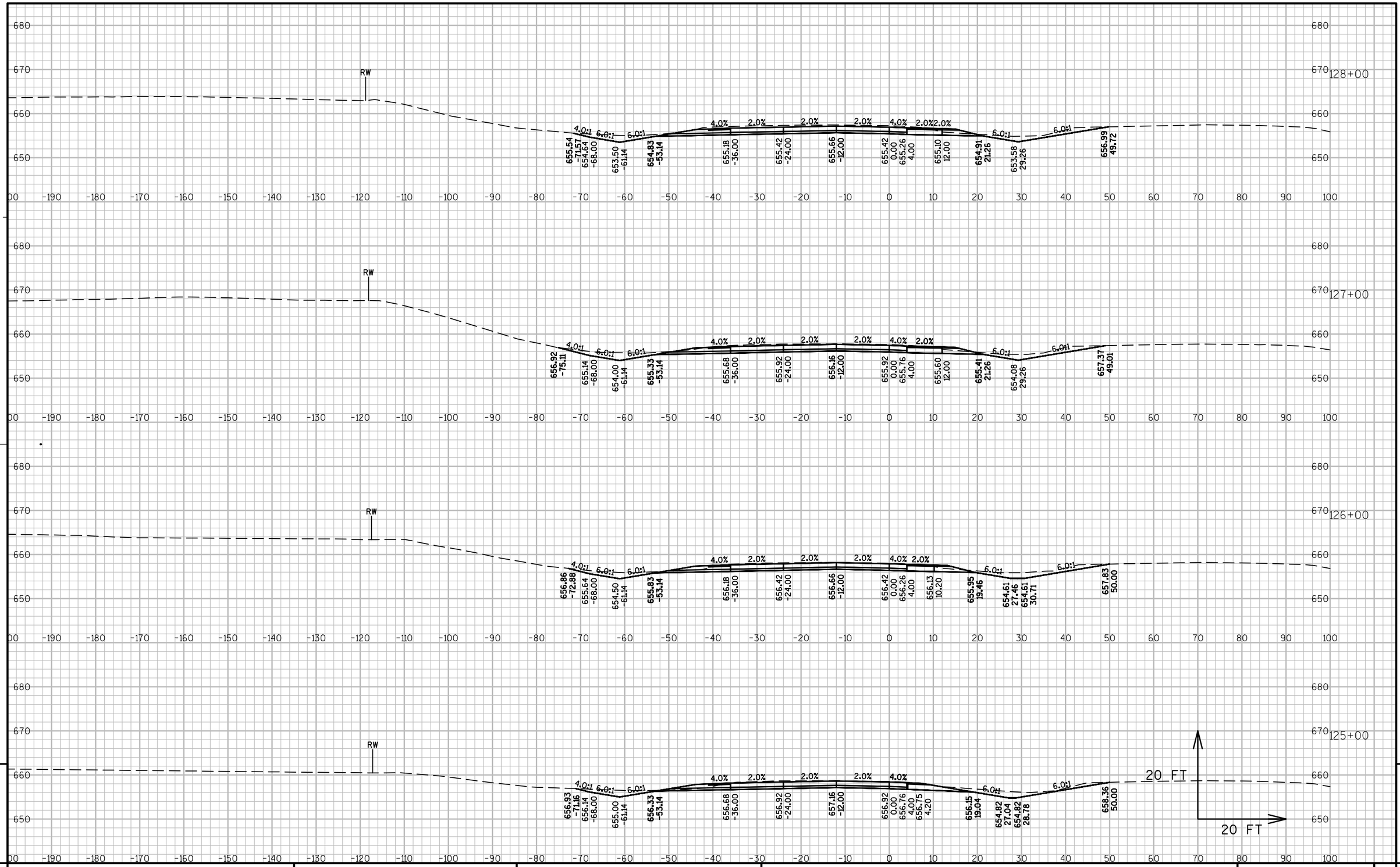
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PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

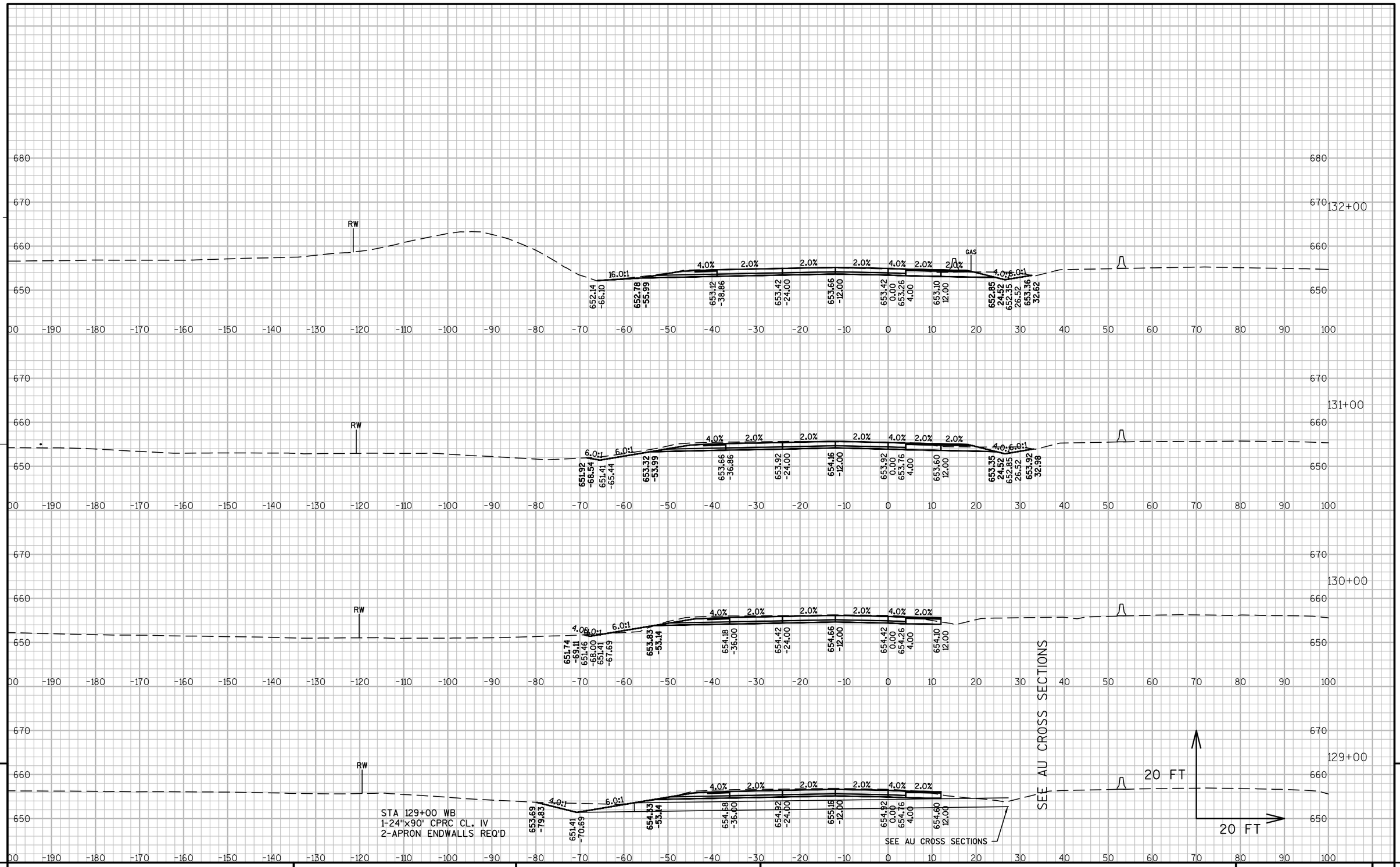
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:26 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090222_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

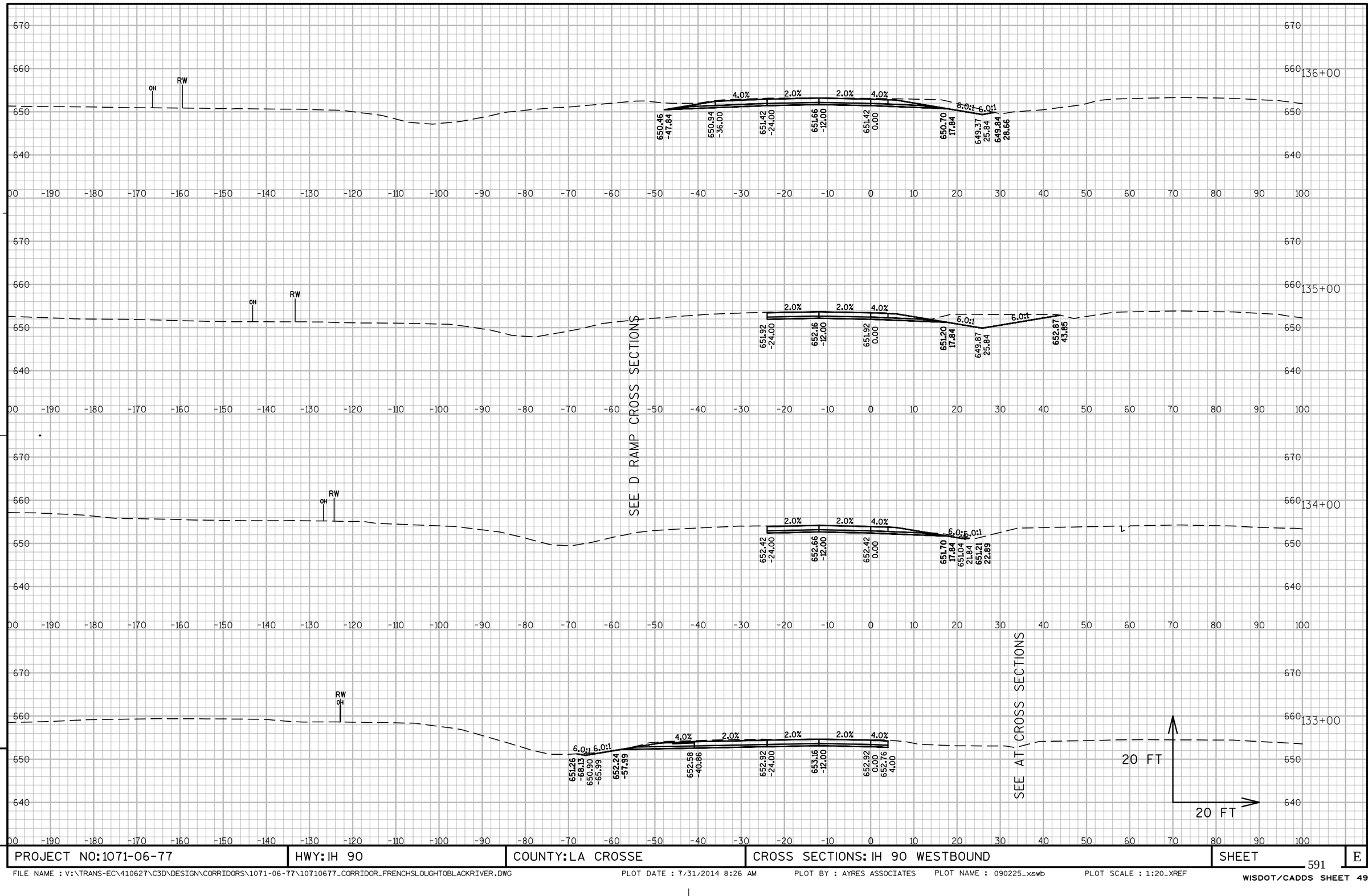
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:26 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090223_xswb PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49



9

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PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 590	E



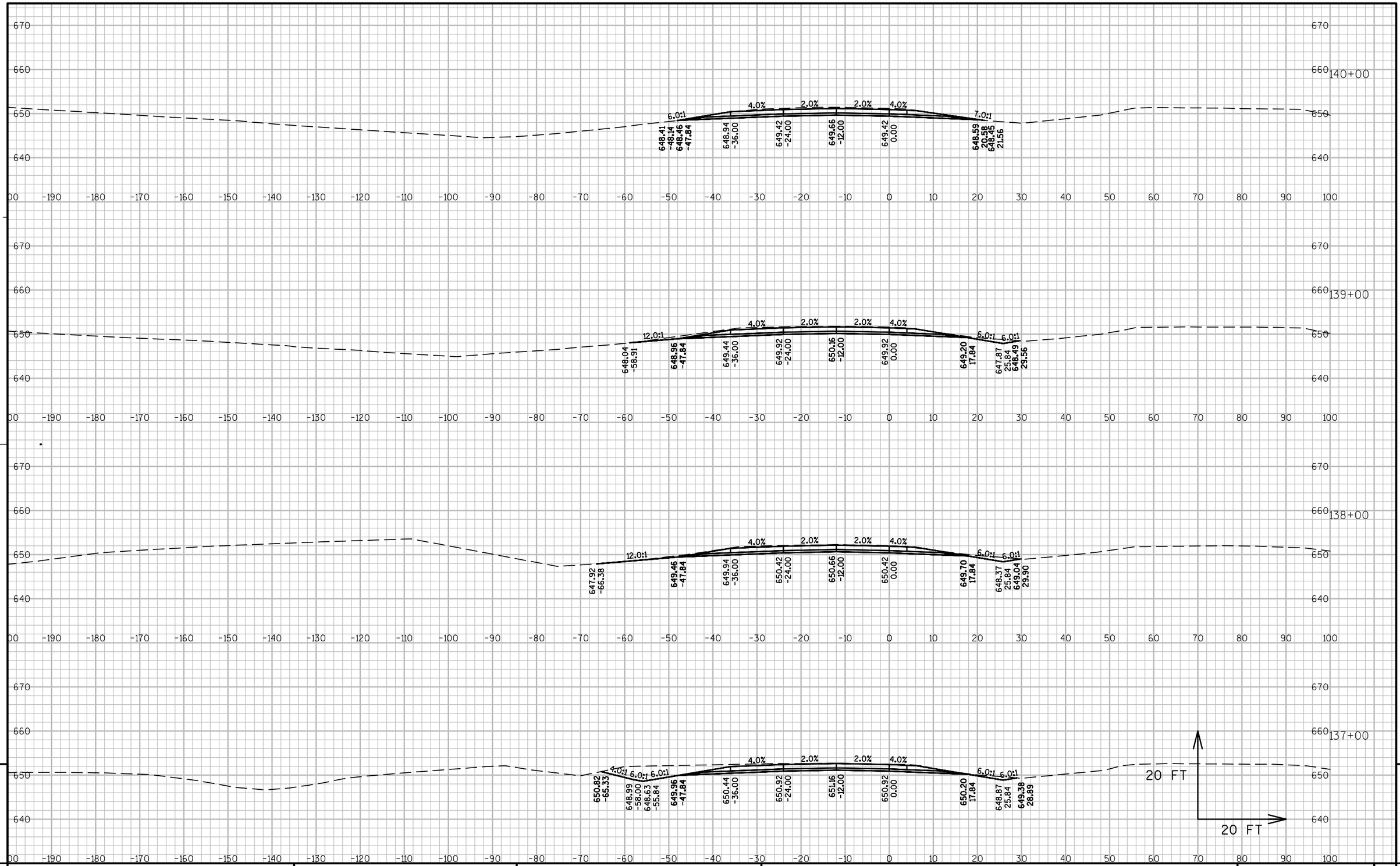
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PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:26 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090225_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:27 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090226_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

SEE C RAMP CROSS SECTIONS

142+45

2.0% 0.7% 0.7% 10.0:1

648.25 -24.00 | 648.49 -12.00 | 648.41 0.00 | 648.26 22.11 | 647.57 29.01

STA 142+45 WB
1-36"x140' CPRC CL. III
1-APRON ENDWALL REQ'D
1-INLET MEDIAN 2 GRATE
2-INLET COVER TYPE MS

142+00

4.0% 2.0% 1.7% 1.7% 8.8:1

647.56 -47.84 | 648.04 -36.00 | 648.52 -24.00 | 648.76 -12.00 | 648.56 0.00 | 648.18 22.07 | 648.01 23.56

141+00

6.0:1 6.0:1 4.0% 2.0% 2.0% 3.9% 8.0:1 8.0:1

647.00 -57.89 | 646.65 -55.84 | 647.99 -47.84 | 648.46 -36.00 | 648.94 -24.00 | 649.18 -12.00 | 648.94 0.00 | 648.02 23.65 | 647.70 26.21 | 647.70 32.21 | 648.47 38.36

140+95

6.0:1 6.0:1 4.0% 2.0% 2.0% 4.0% 8.0:1 8.0:1

646.93 -57.34 | 646.68 -55.84 | 648.01 -47.84 | 648.48 -36.00 | 648.96 -24.00 | 649.20 -12.00 | 648.96 0.00 | 648.02 23.65 | 647.70 26.21 | 647.70 32.21 | 648.55 39.02

20 FT
20 FT

9 9

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:27 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090227_xswb PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49

SEE C RAMP CROSS SECTIONS

143+08

2.0% 0.7% 0.7%

10.0:1

647.91	648.15	648.24	648.39	647.53	649.52
-24.00	-12.00	0.00	20.84	30.00	49.90

143+00

2.0% 0.5% 0.5%

10.0:1 15.0:1

647.96	648.20	648.26	648.37	647.53	648.29
-24.00	-12.00	0.00	20.58	29.00	40.40

142+97

2.0% 0.5% 0.5%

10.0:1 15.0:1

647.97	648.21	648.27	648.36	647.54	648.34
-24.00	-12.00	0.00	20.32	28.60	40.60

20 FT

STA 142+97 WB
RECONSTRUCTING INLETS
RAISE TO MEET PROPOSED GRADE

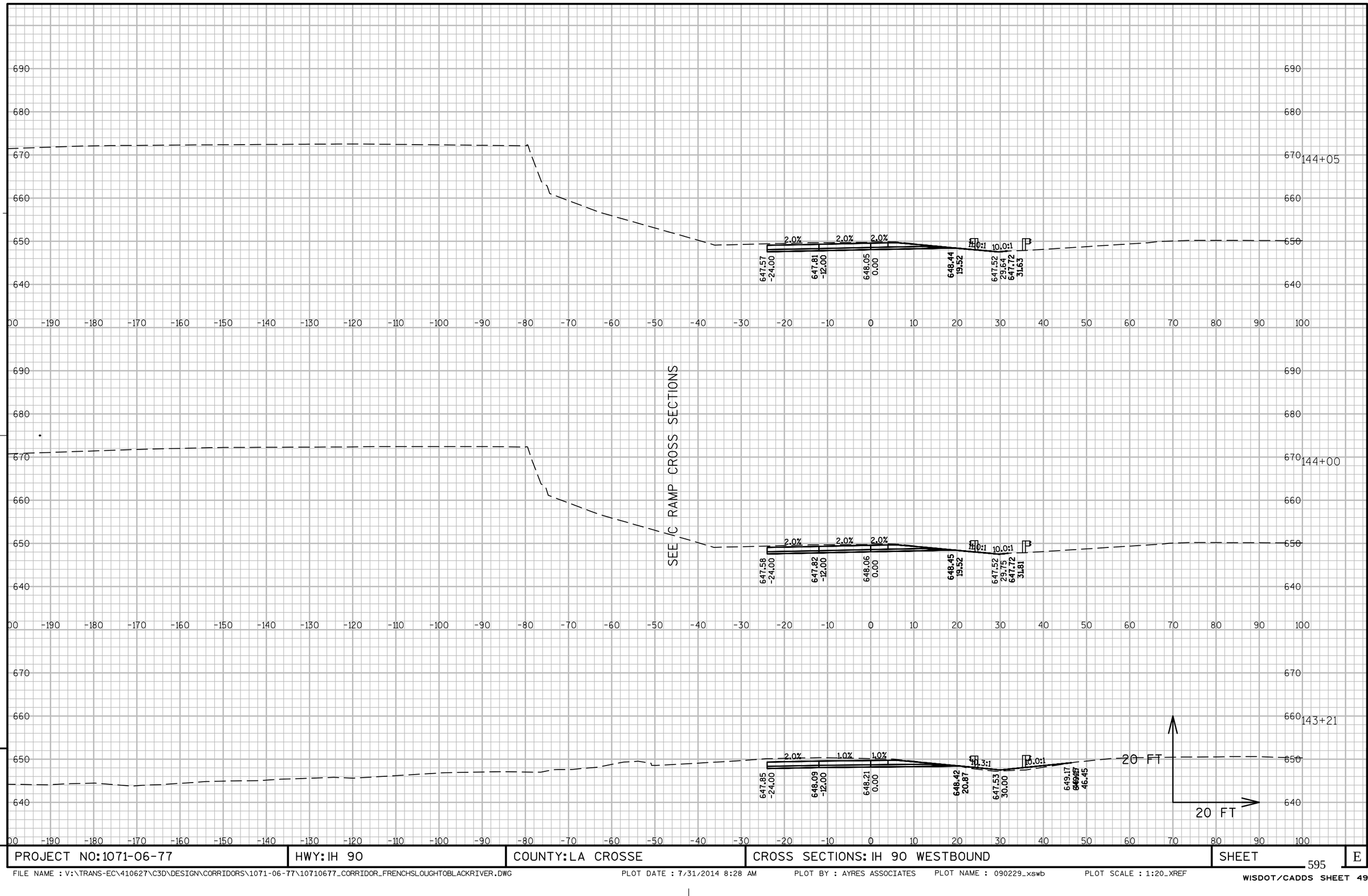
20 FT

9 9

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 594	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:27 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090228_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

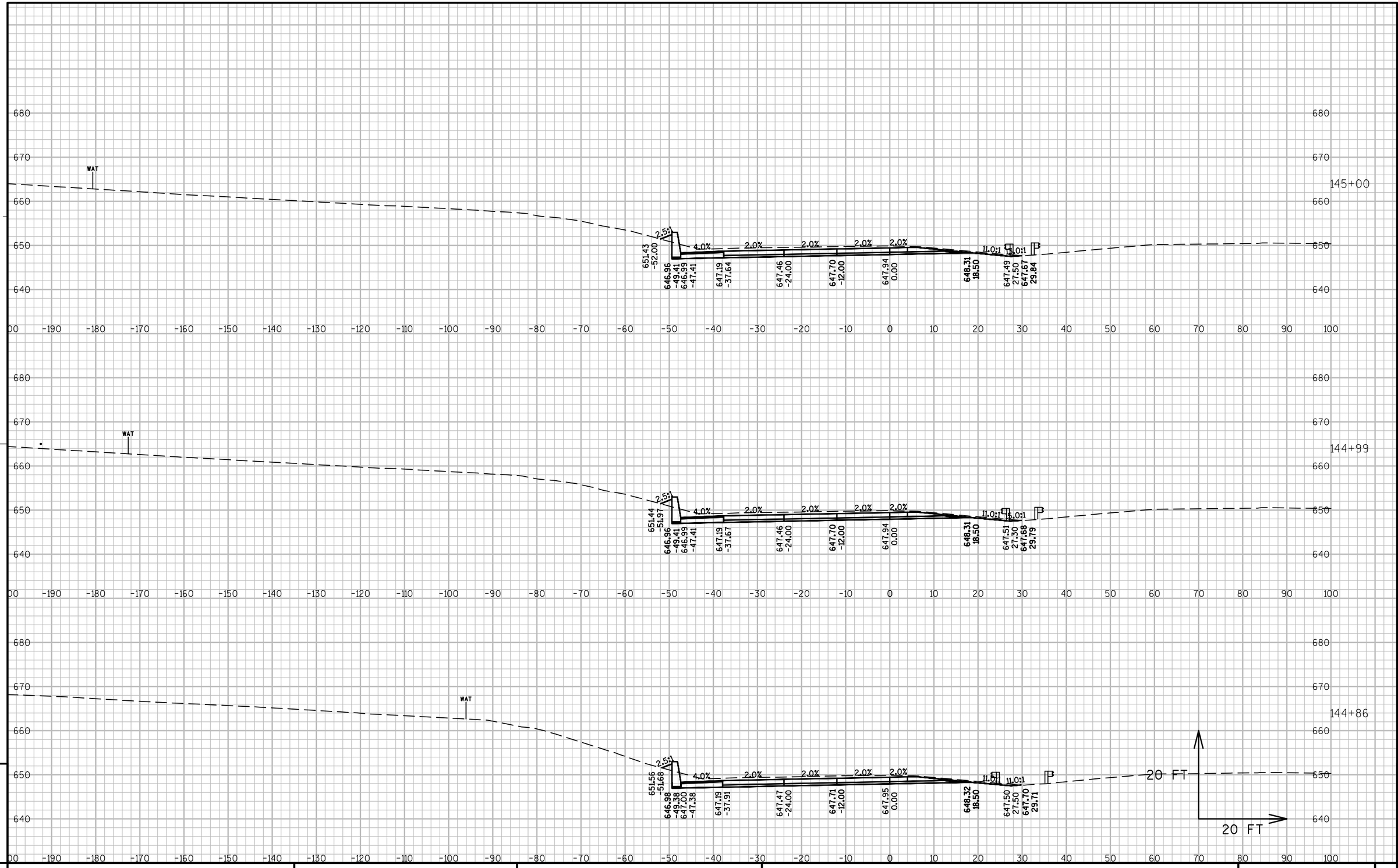


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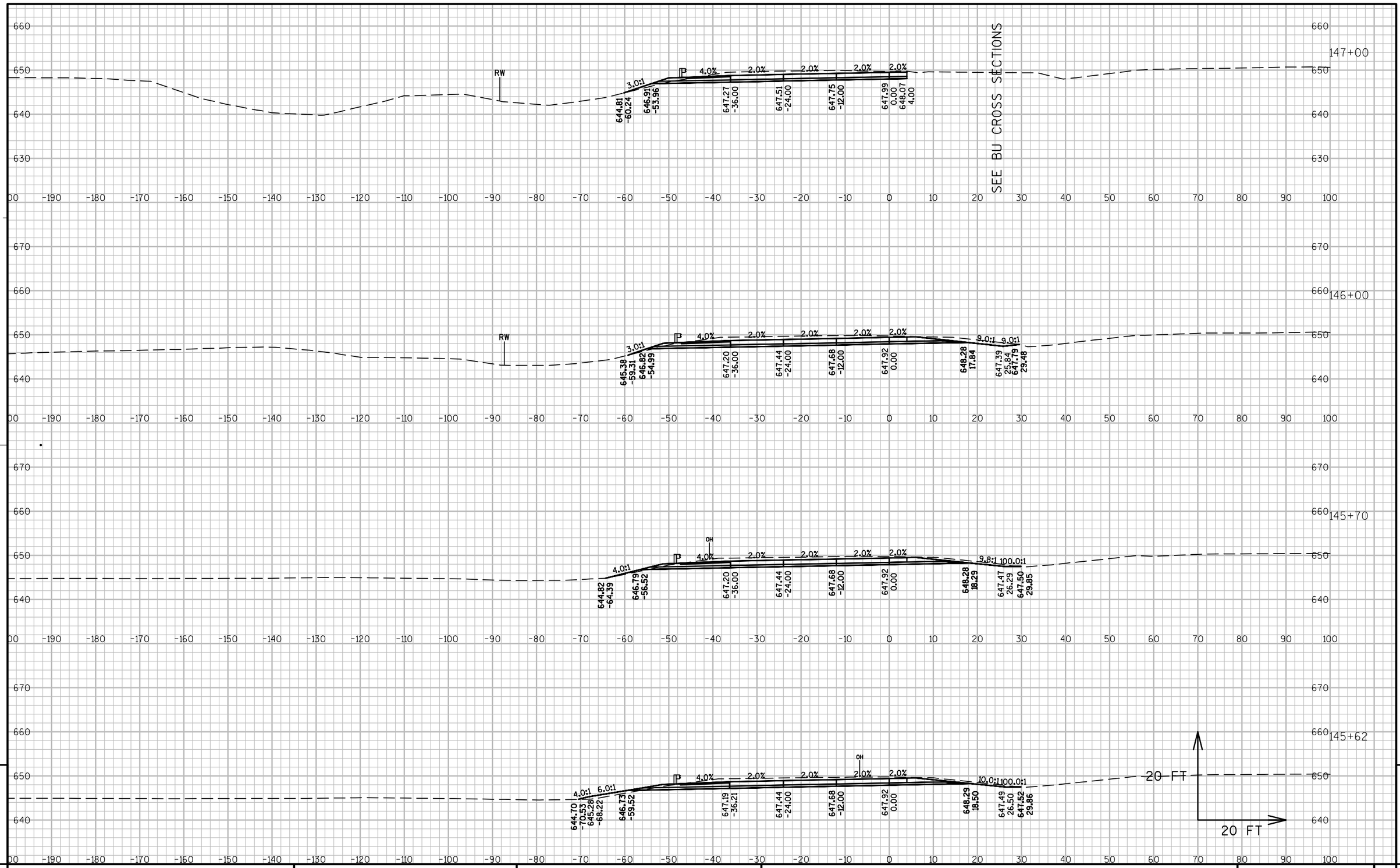
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 595	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:28 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090229_xswb PLOT SCALE : 1:20_XREF



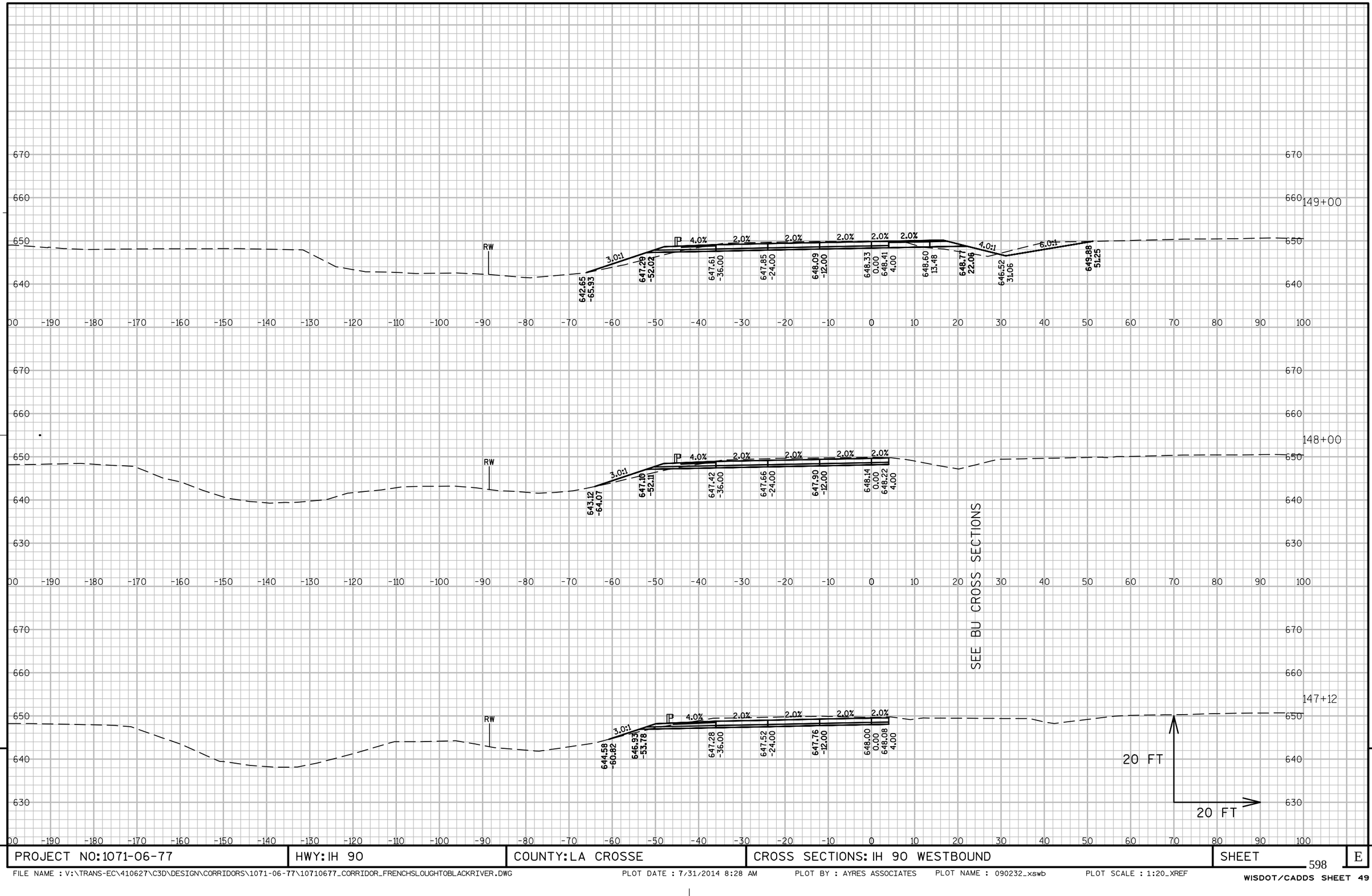
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:28 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090230_xswb PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49



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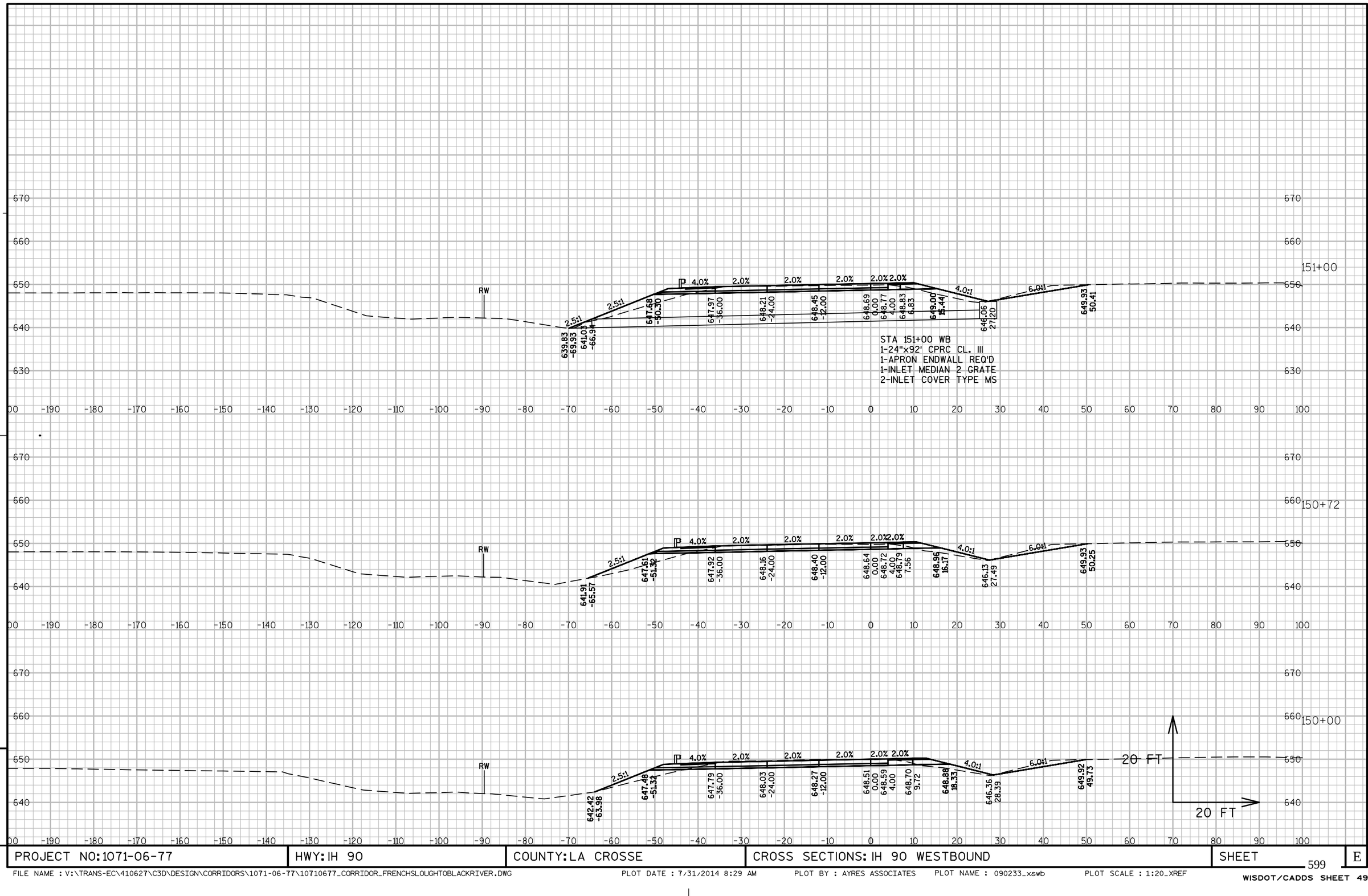
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 597	E



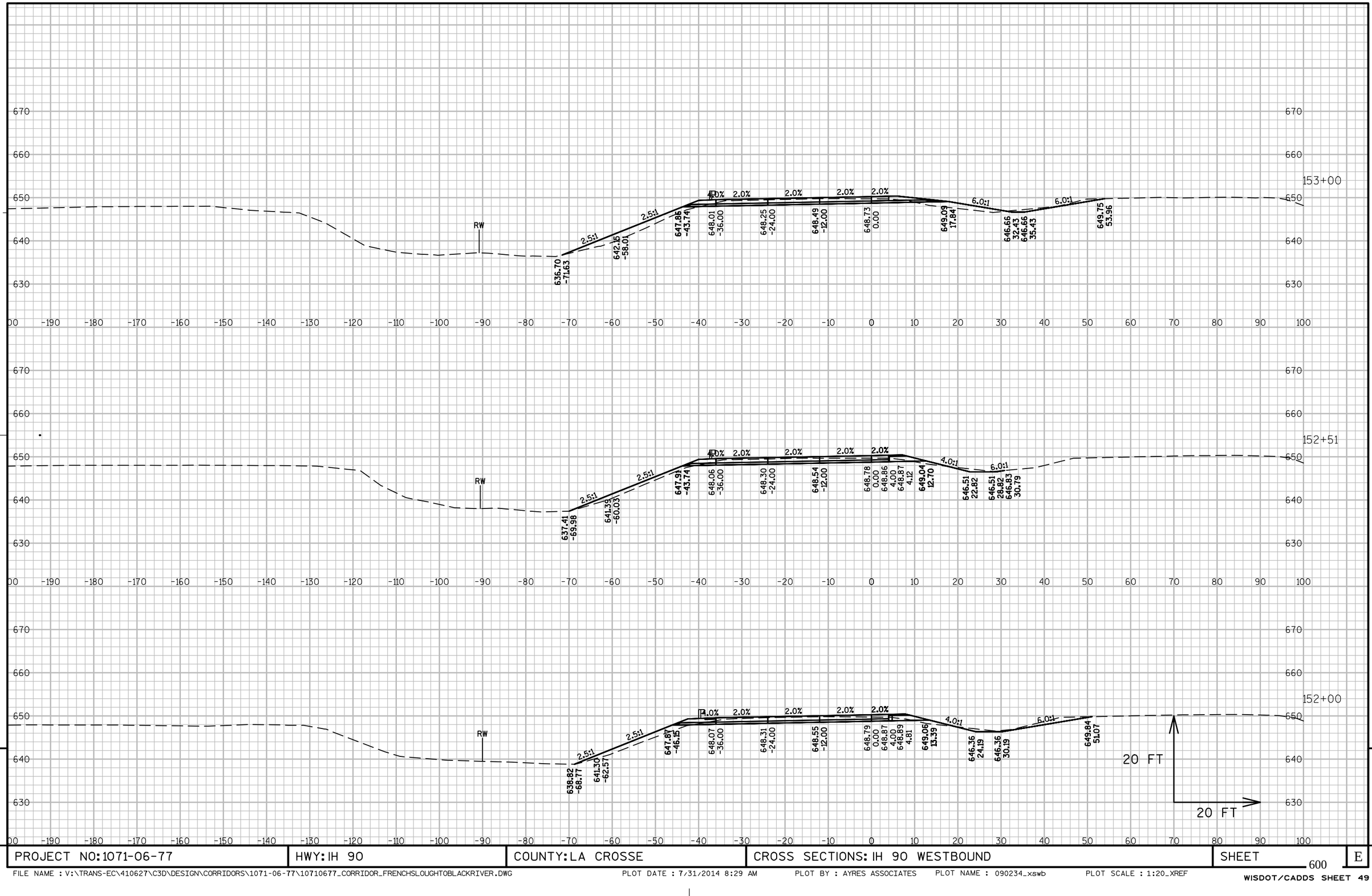
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 598	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:28 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090232_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 599	E

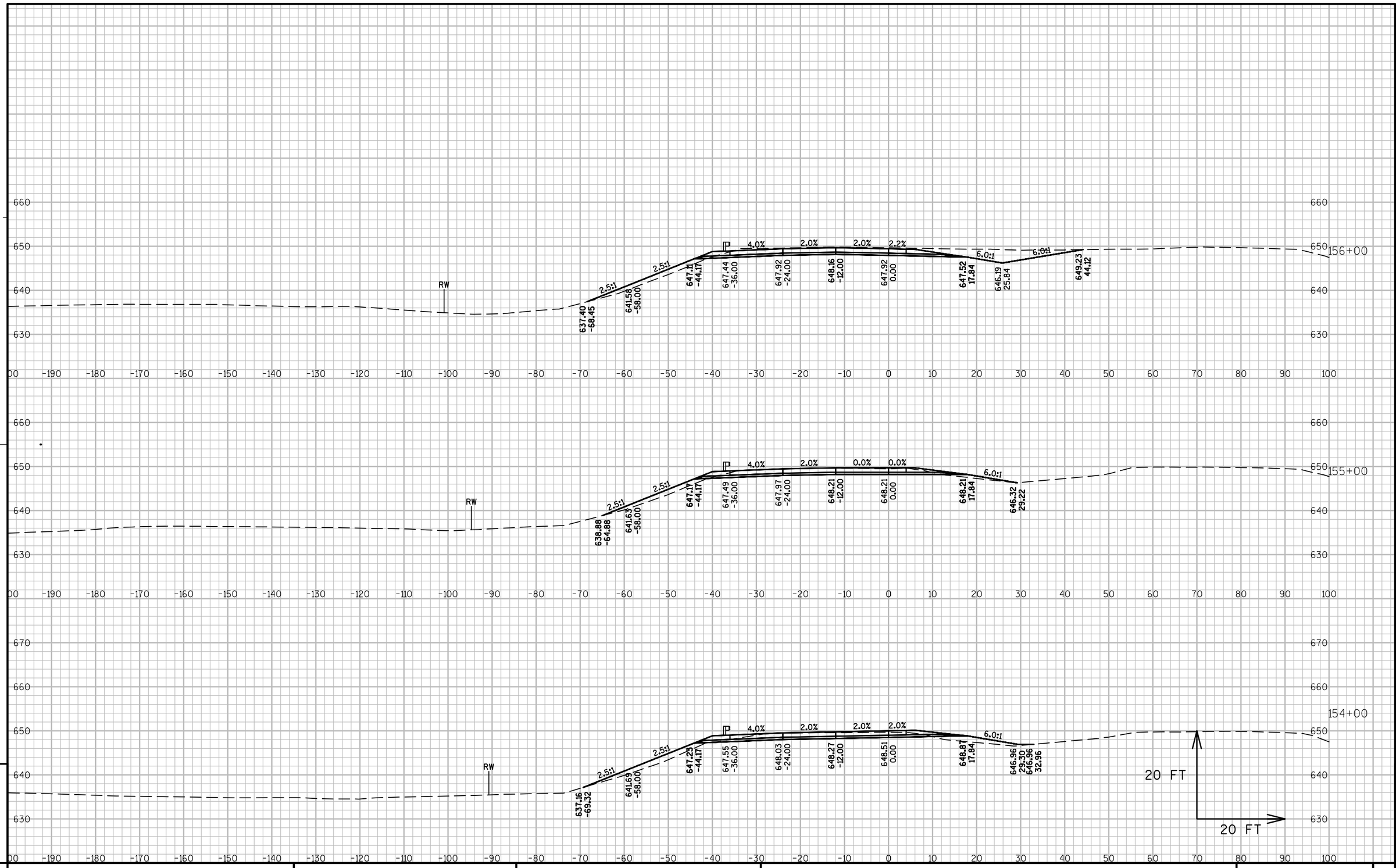


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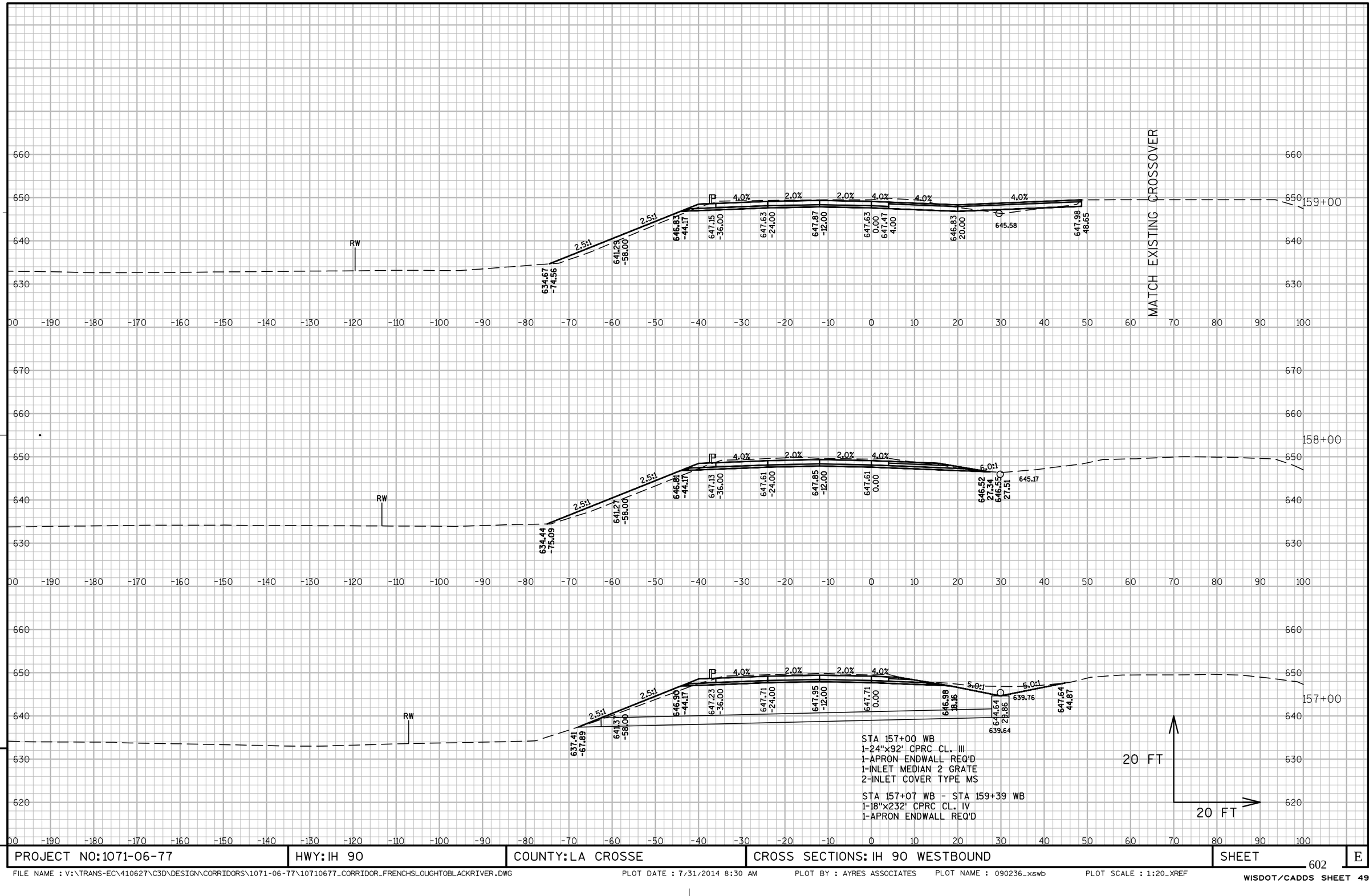
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PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 600	E

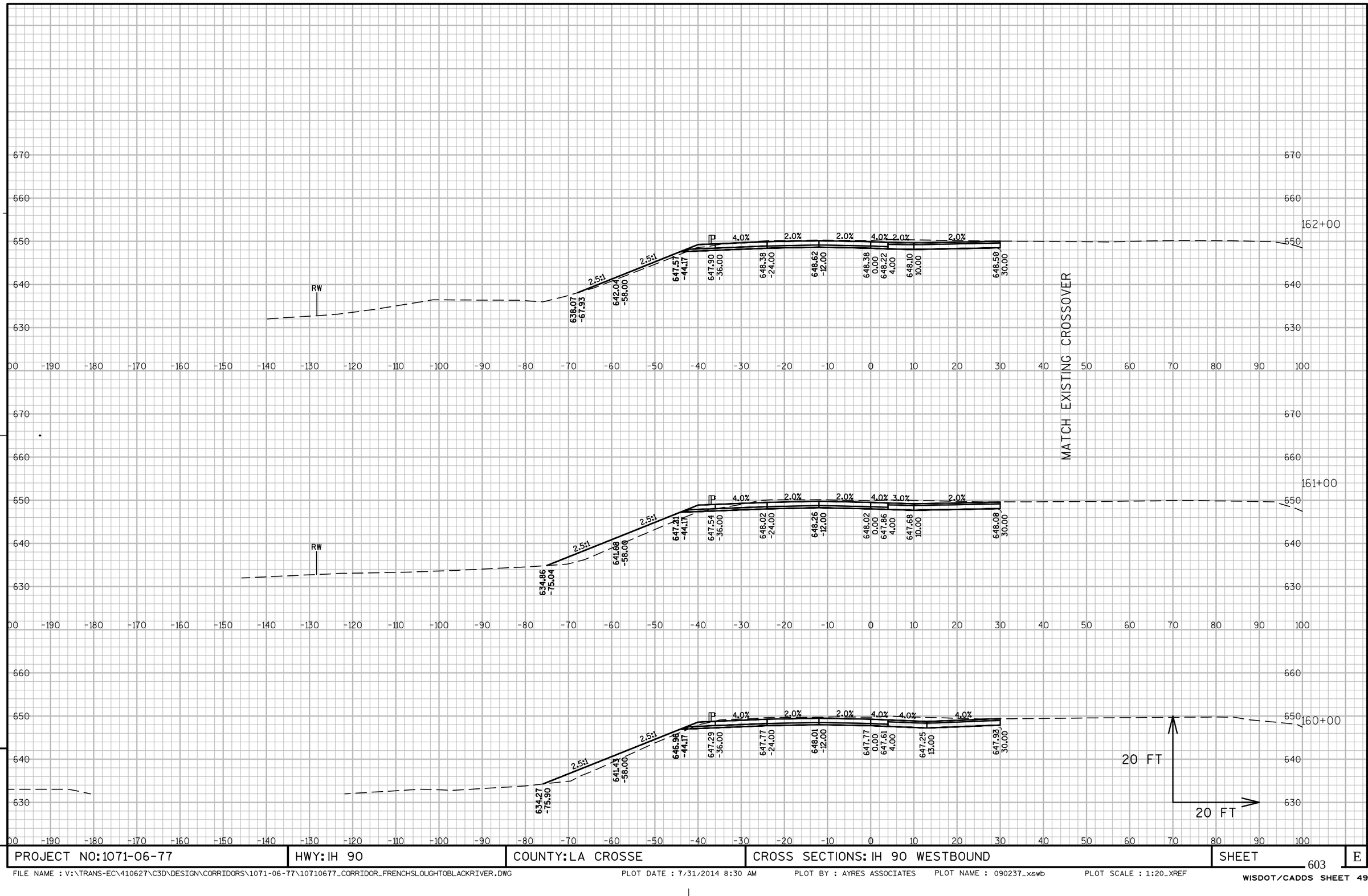
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PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 601	E

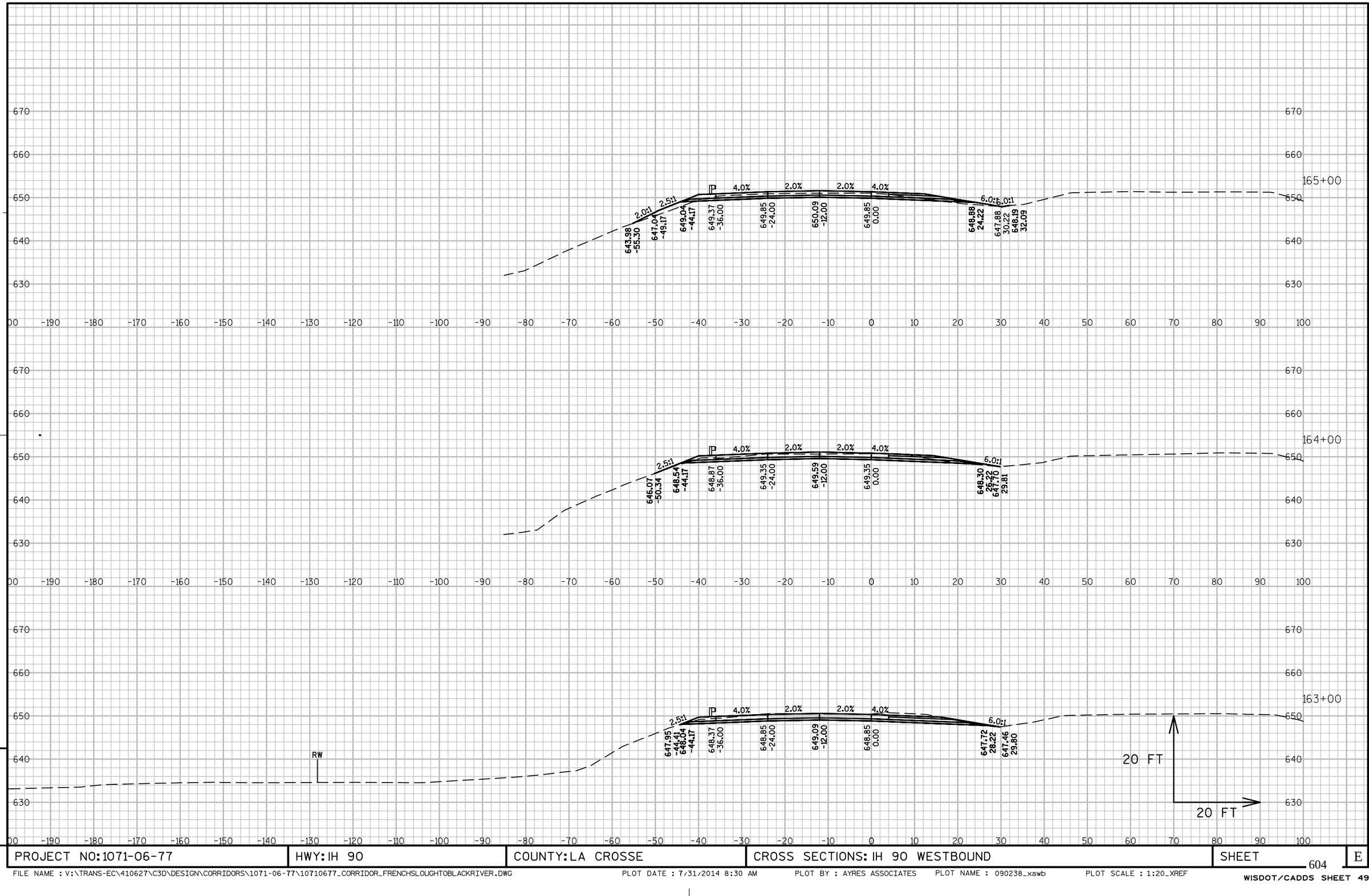


PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 602	E



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 603	E

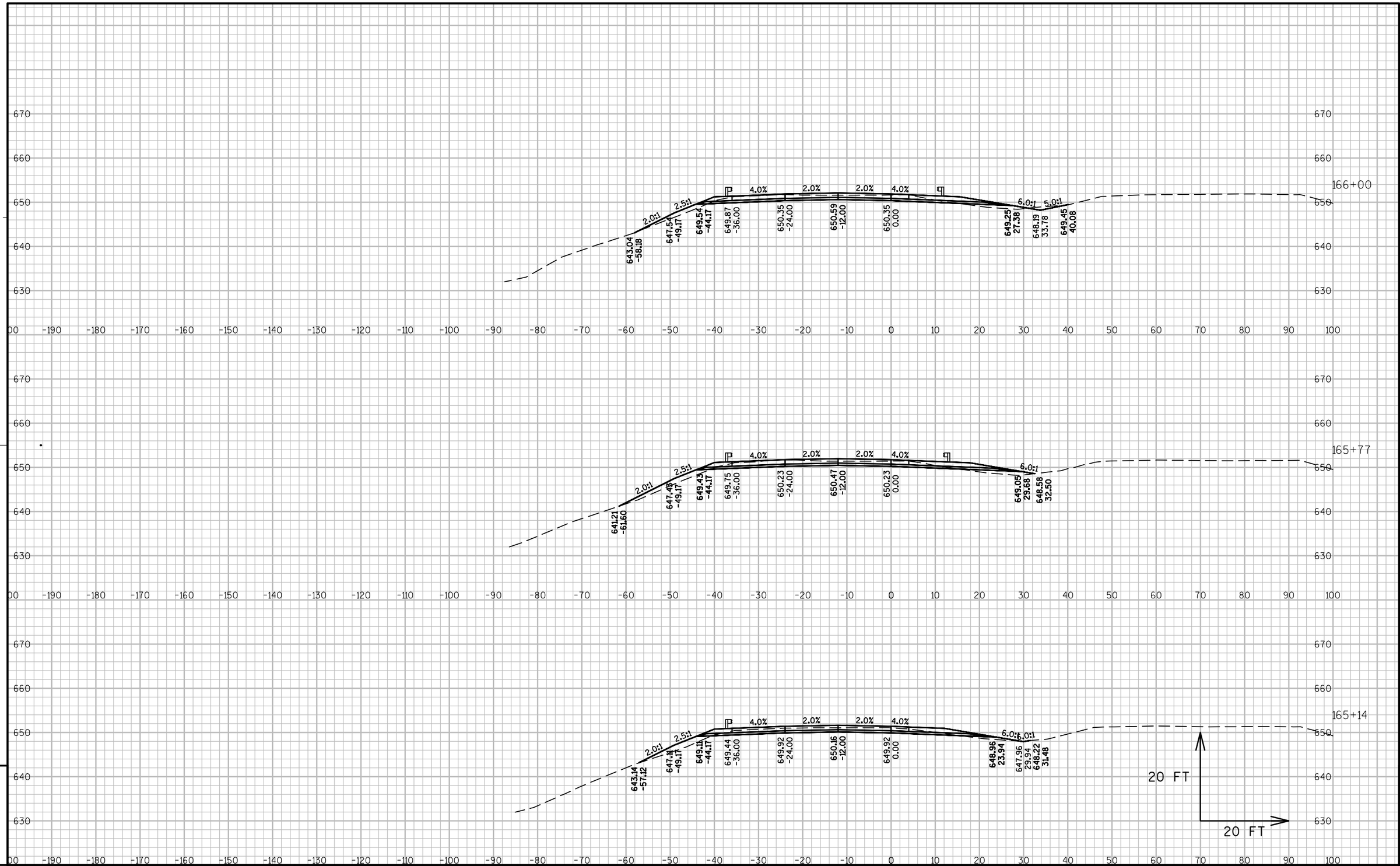
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:30 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090237_xswb PLOT SCALE : 1:20_XREF



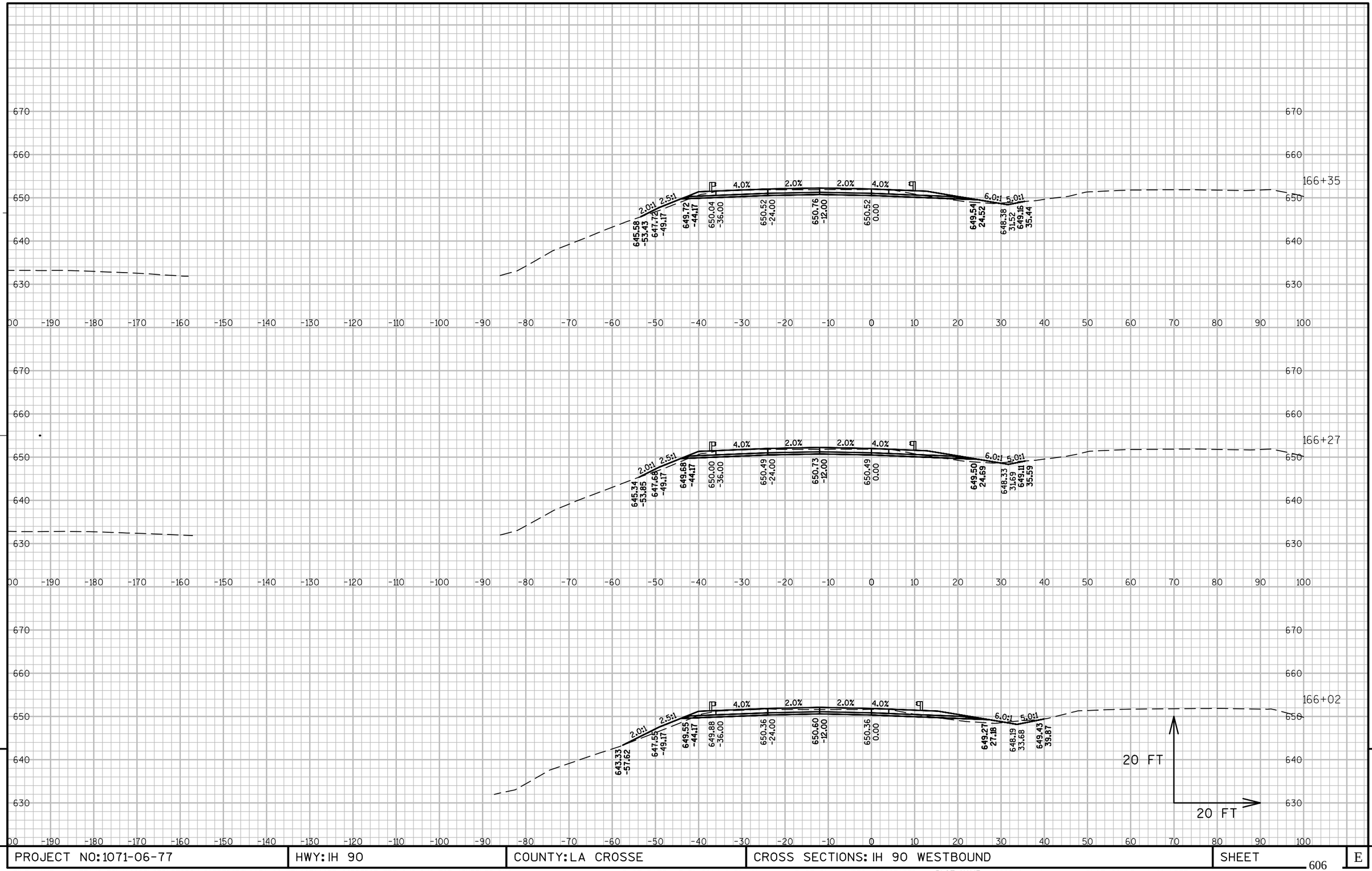
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 604	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:30 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090238_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

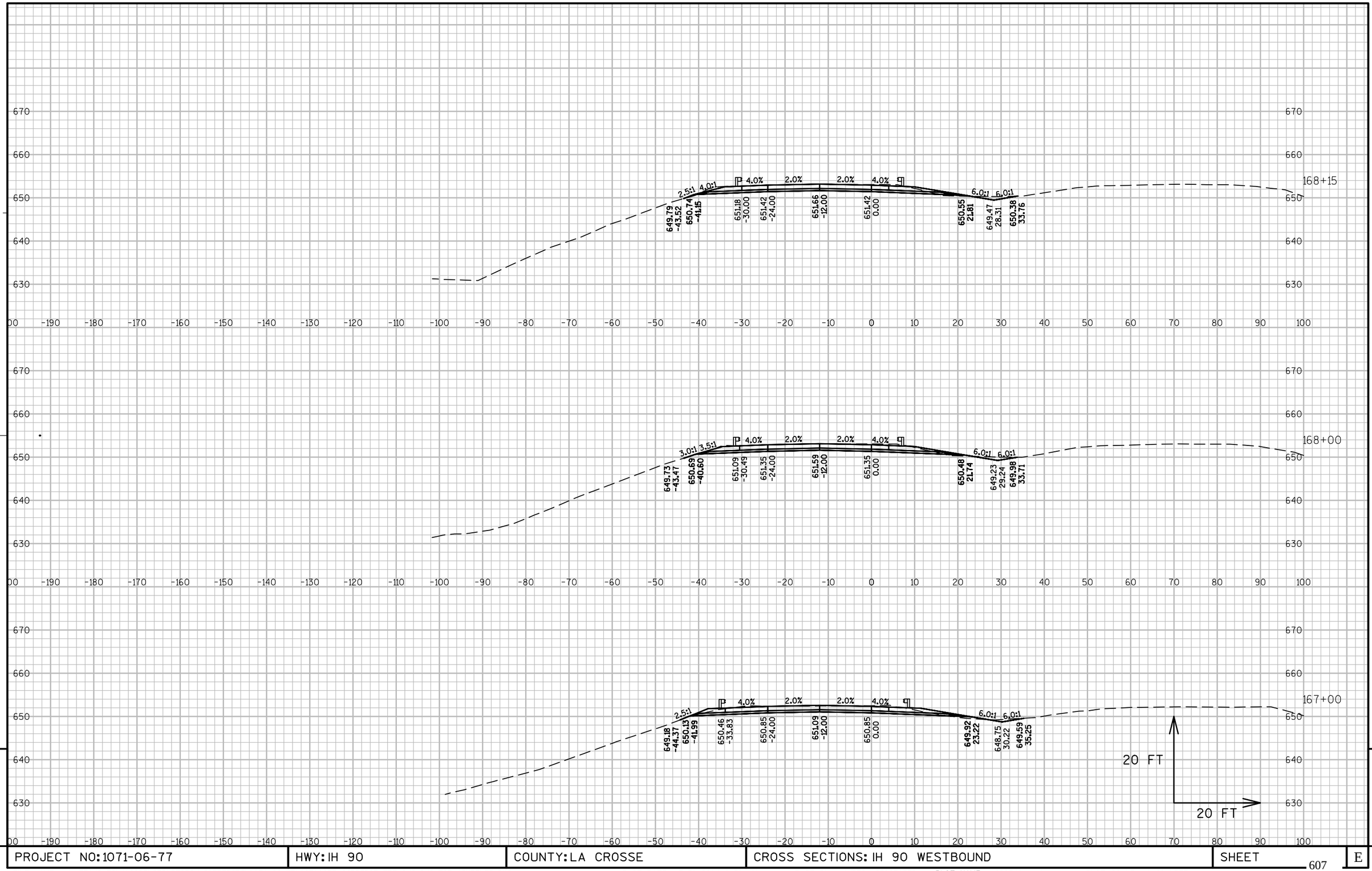


PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 605	E

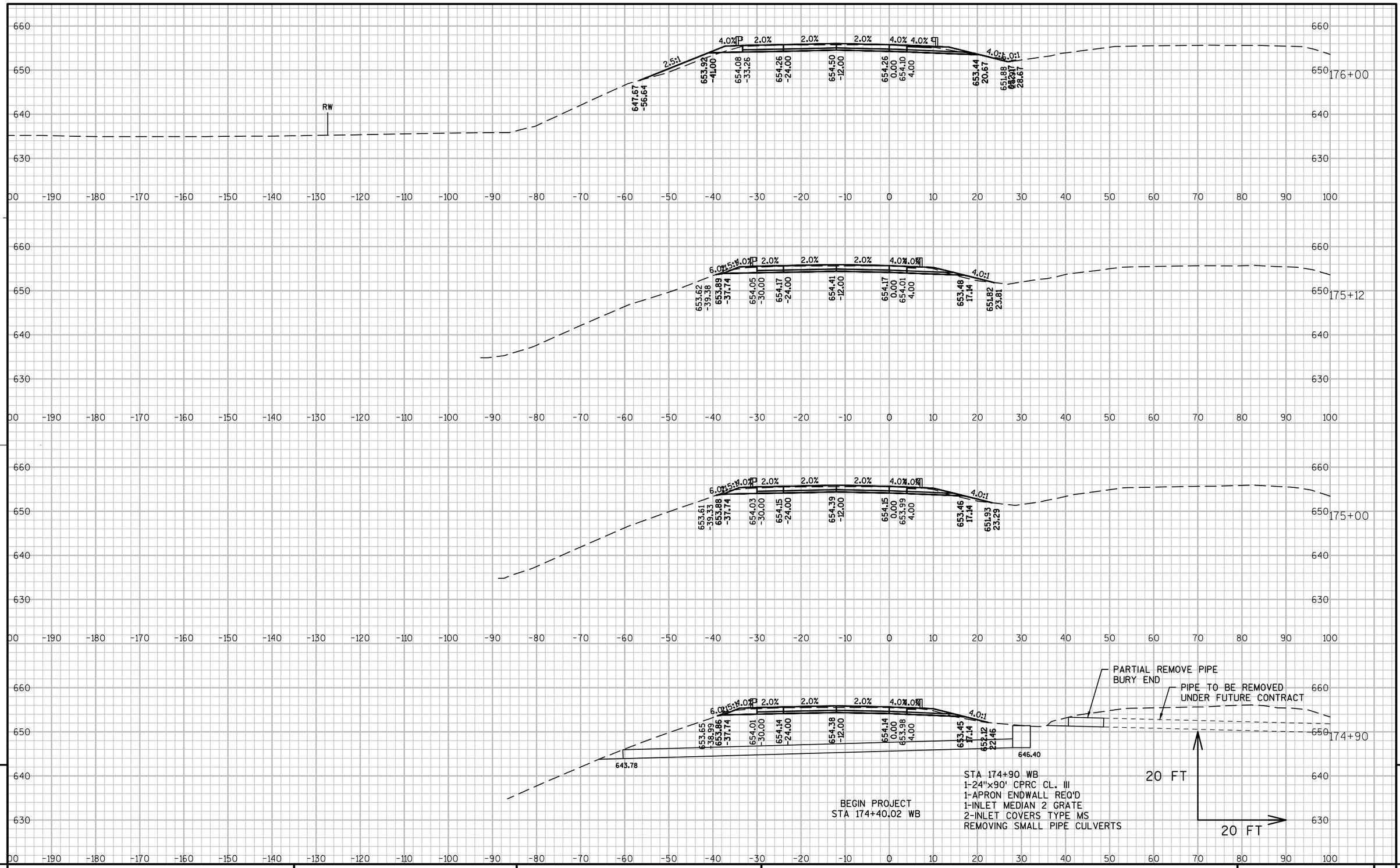


PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 606	E

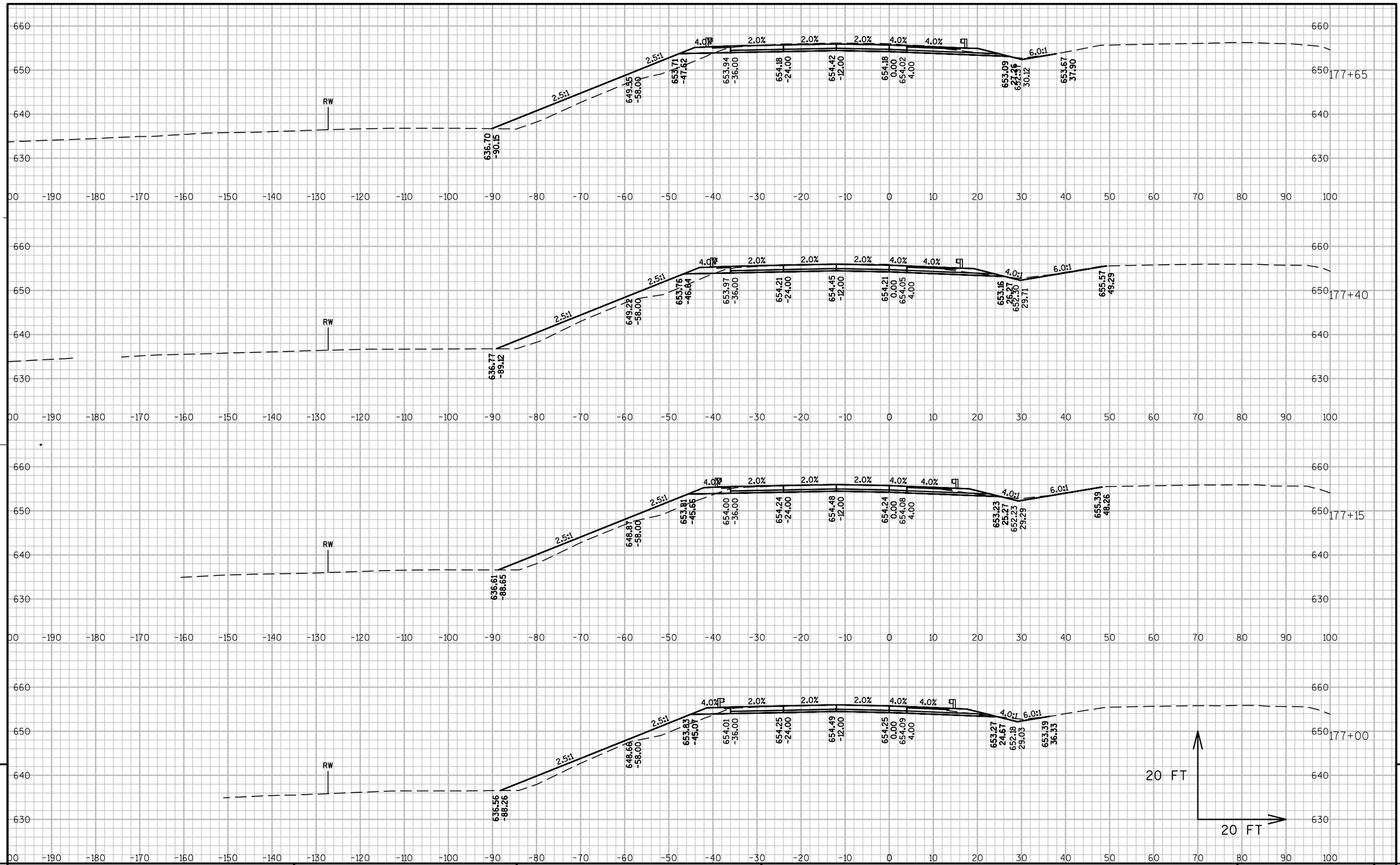
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:31 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090240_xswb PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49



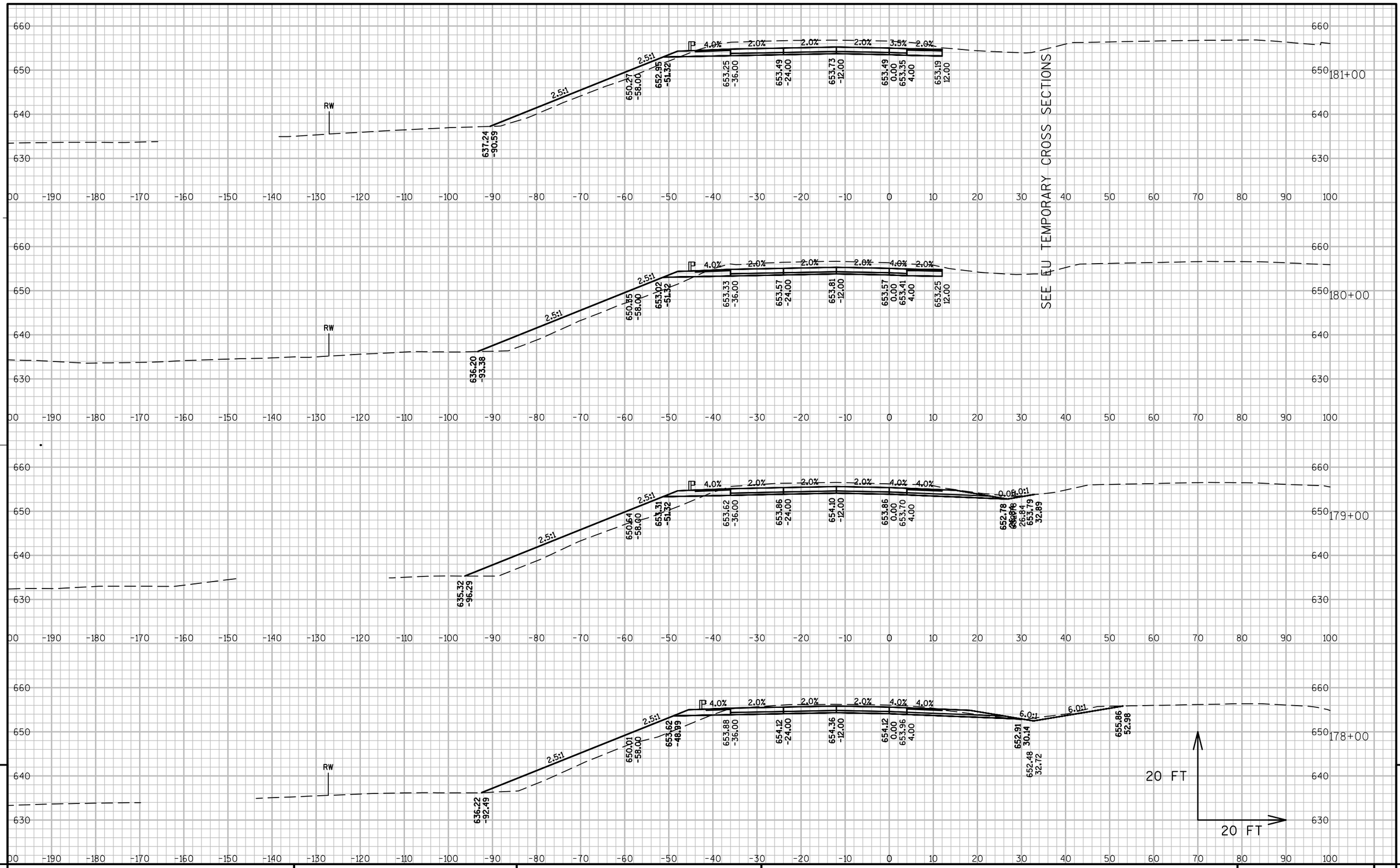
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 607	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 608	E



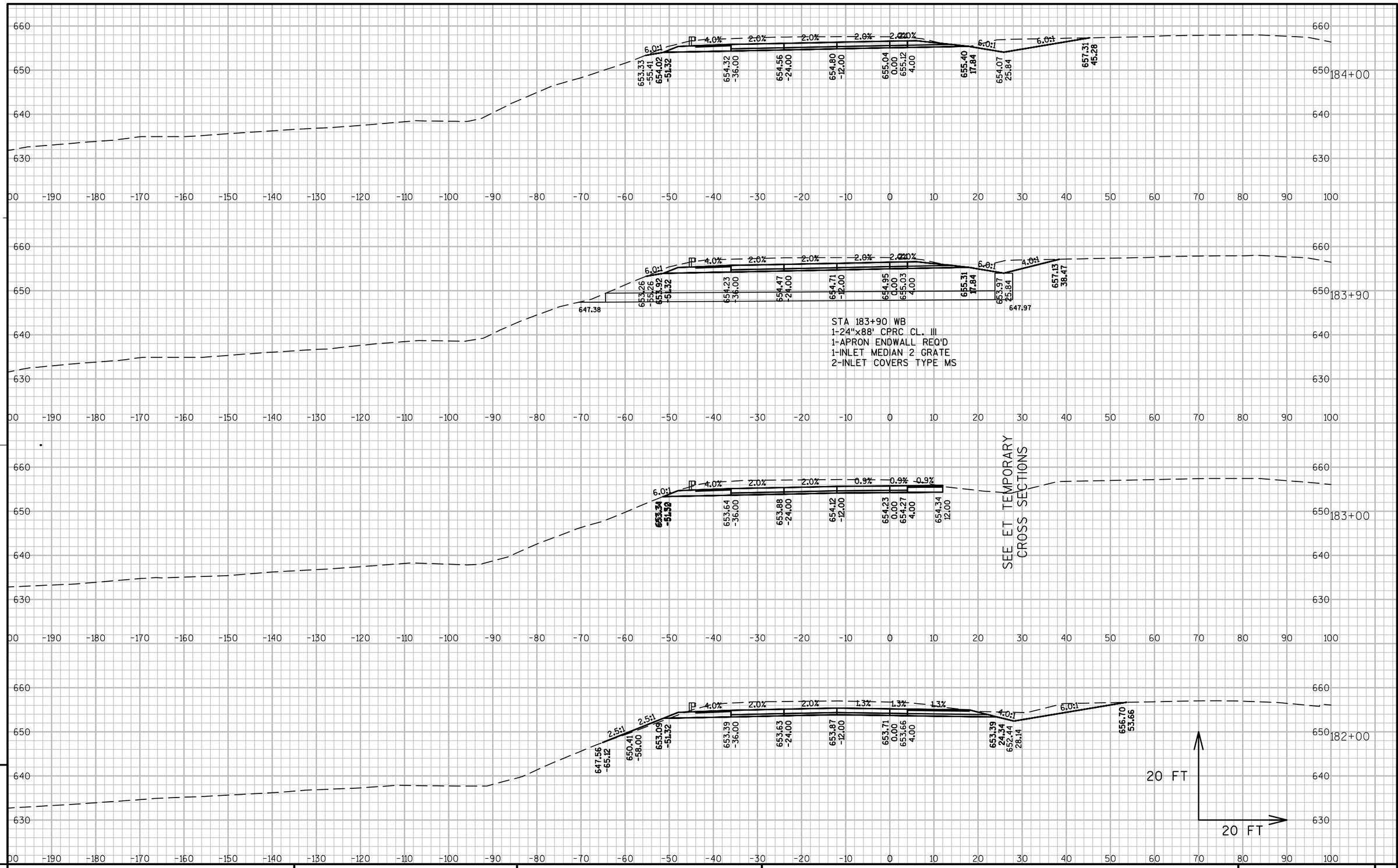
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 610	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:34 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xswb PLOT SCALE : 1:20_XREF

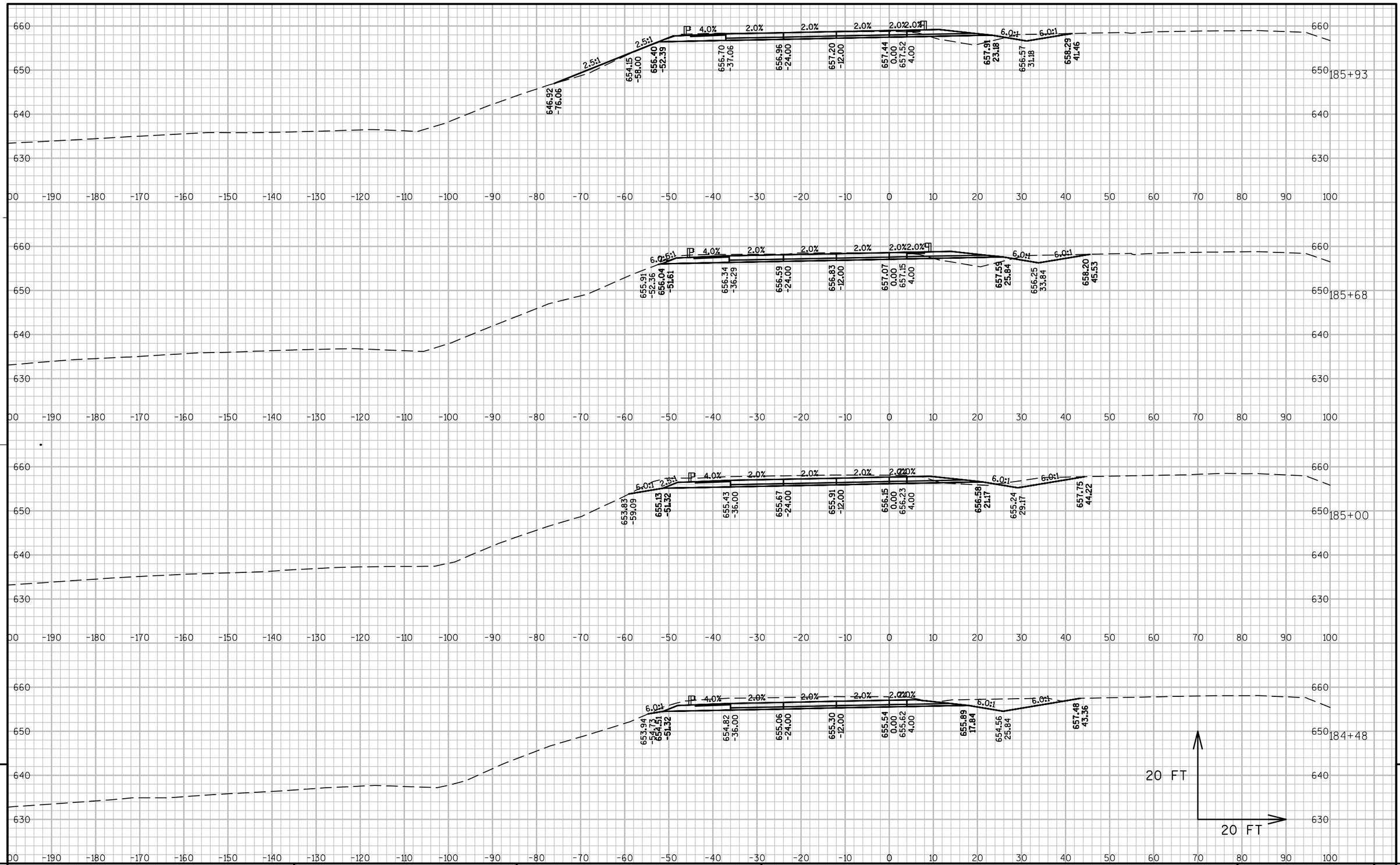
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 611	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:35 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090204_xswb PLOT SCALE : 1:20_XREF

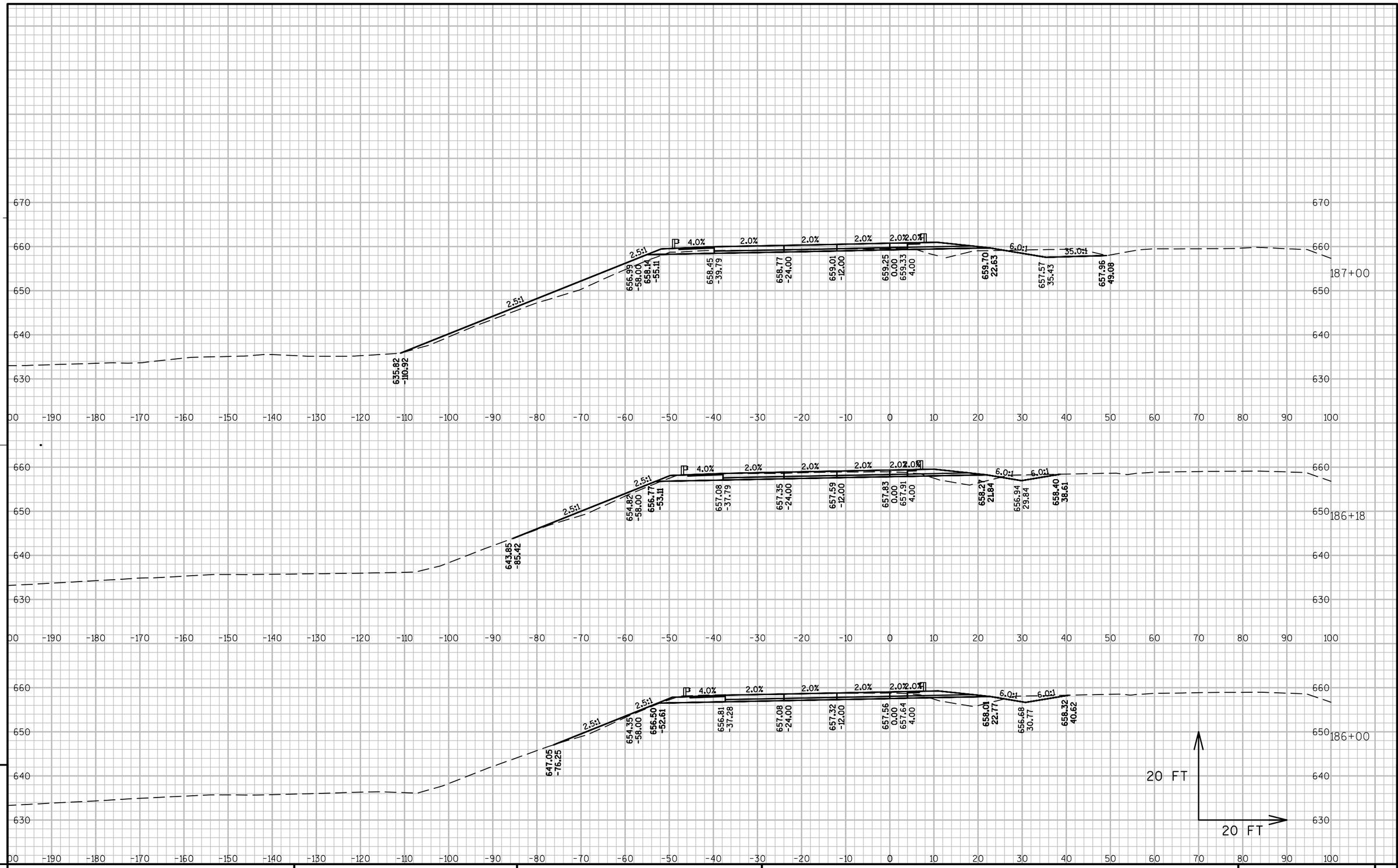
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 612	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:35 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090205_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 613	E

SEE H RAMP CROSS SECTIONS

190+00

2.0% 2.0% 2.0%
663.22 -24.00
663.48 -12.00
663.70 0.00
664.21 25.54
4.0:1
660.20 41.59
6.0:1
662.20 53.58

189+00

2.0% 2.0% 2.0%
661.91 -24.00
662.15 -12.00
662.39 0.00
662.82 21.50
4.0:1
658.30 39.72
6.0:1
659.52 47.09

188+00

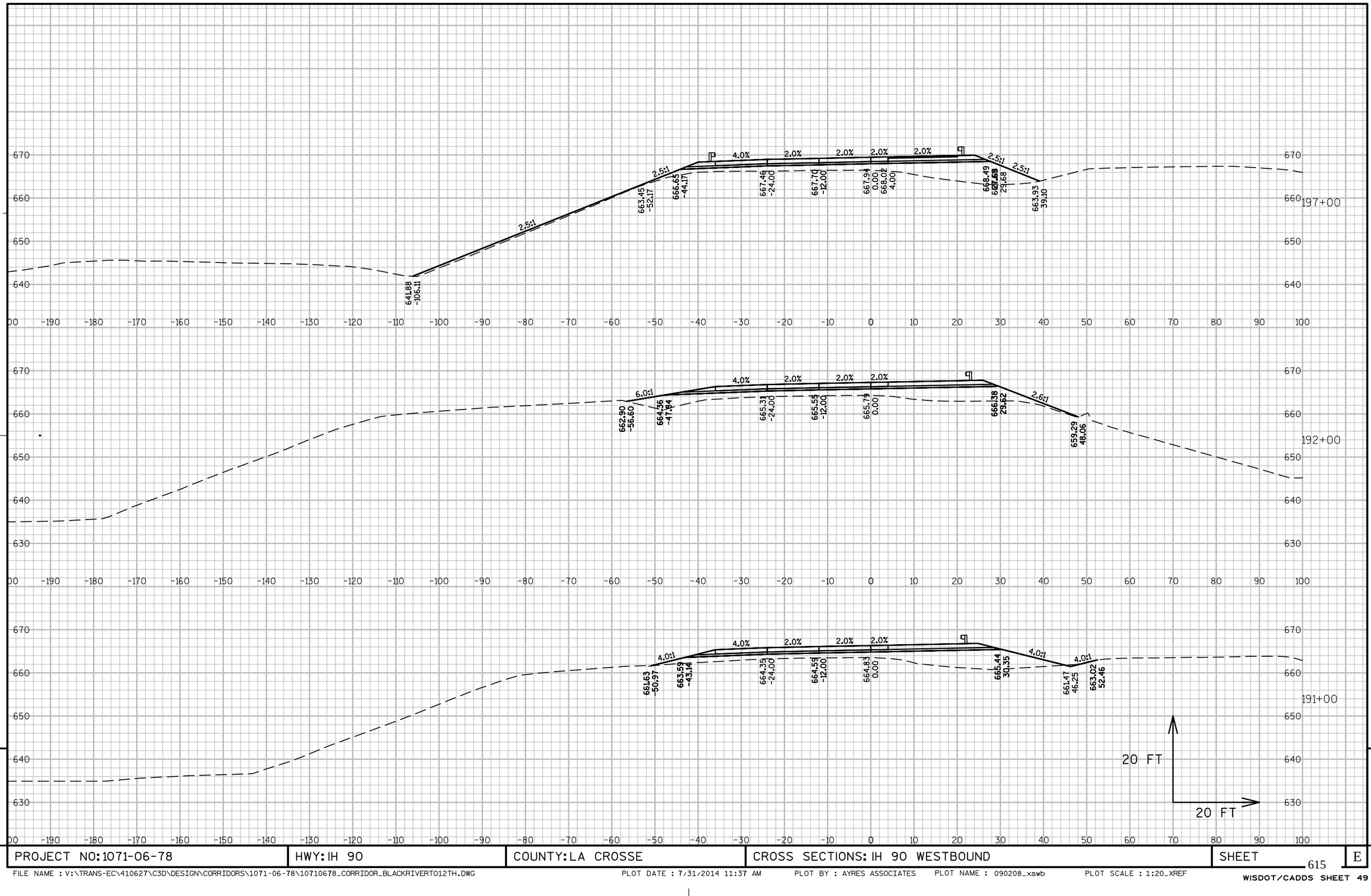
635.60 -117.19
2.5:1
659.27 -58.00
659.77 -56.75
2.5:1
4.0%
2.0%
660.08 -41.43
2.0%
660.43 -24.00
2.0%
660.67 -12.00
2.0%
660.91 0.00
2.0%
660.99 4.00
661.40 24.82
6.0:1
658.09 44.74

20 FT
20 FT

9 9

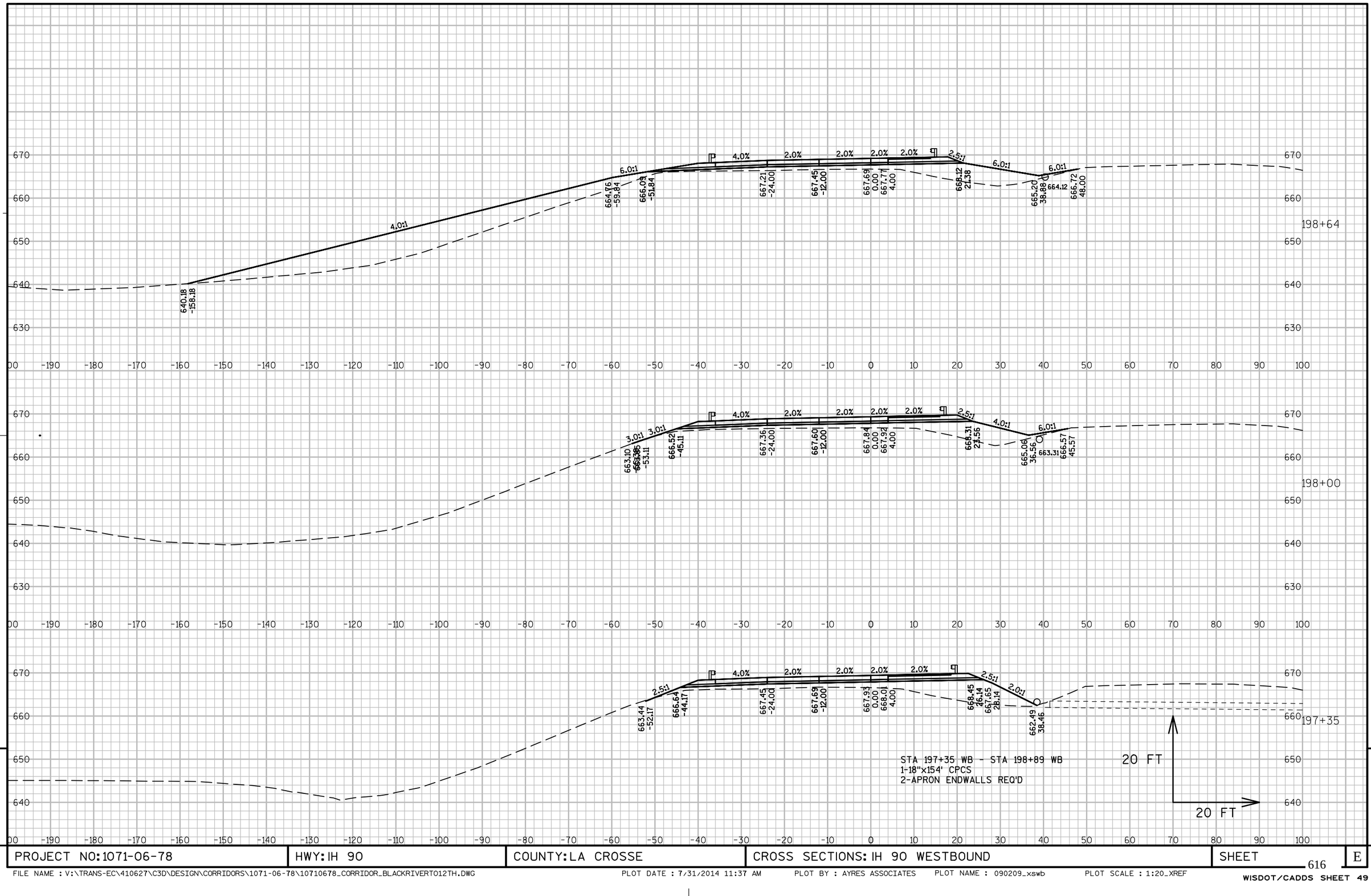
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 614	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:36 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090207_xswb PLOT SCALE : 1:20_XREF



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:37 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090208_xswb PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49

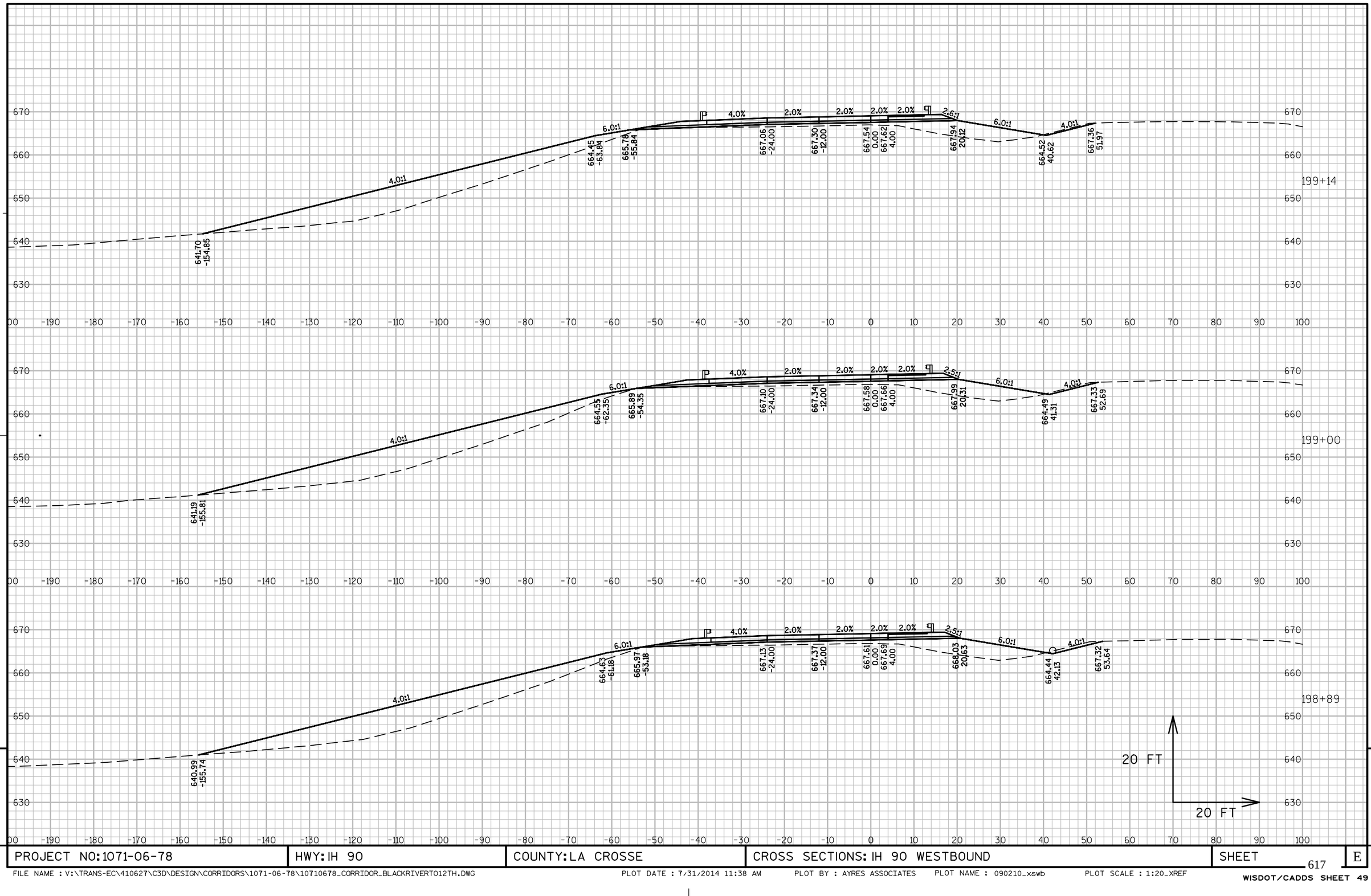


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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 616	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:37 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090209_xswb PLOT SCALE : 1:20_XREF

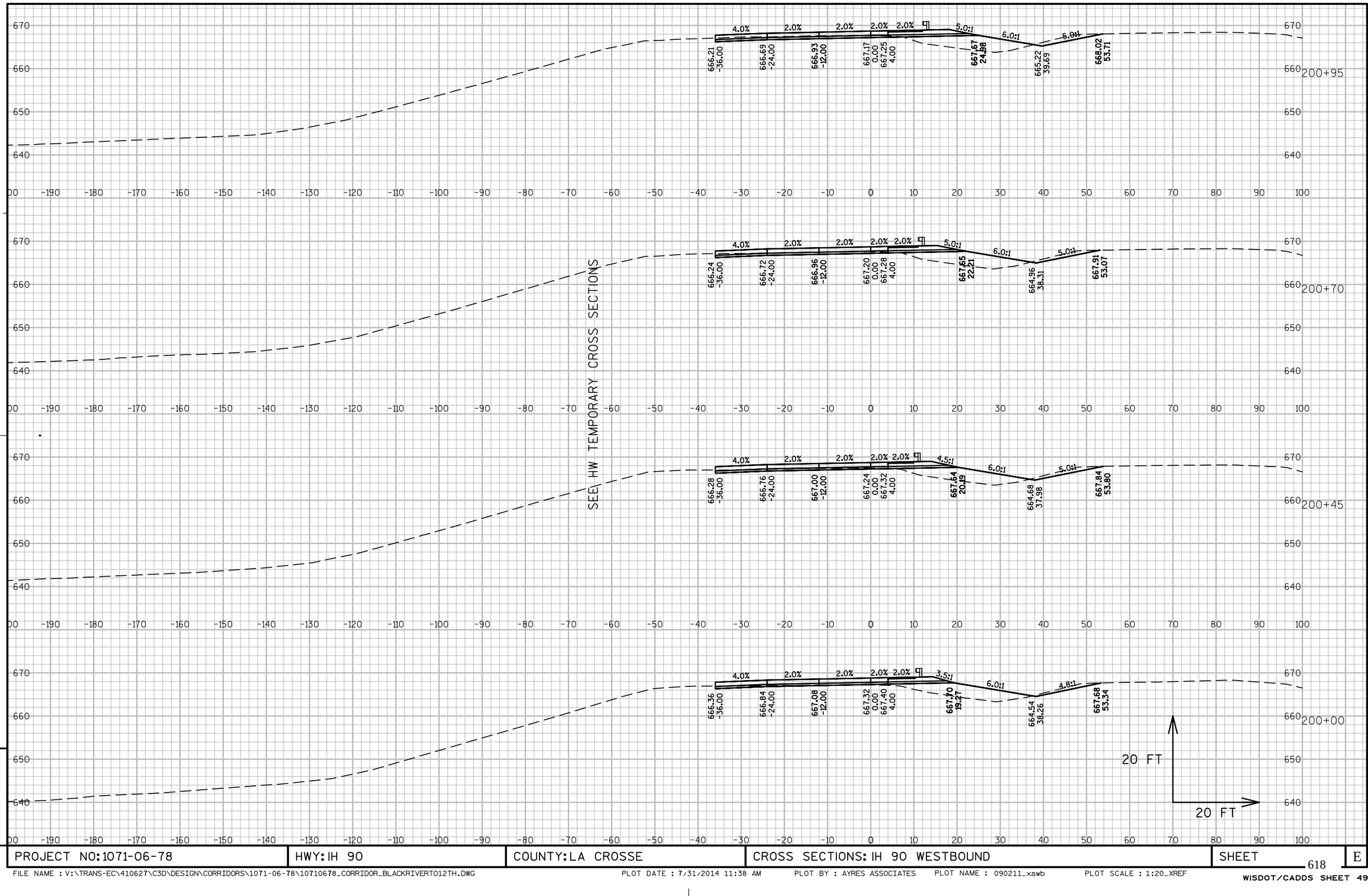


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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 617	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:38 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090210_xswb PLOT SCALE : 1:20_XREF

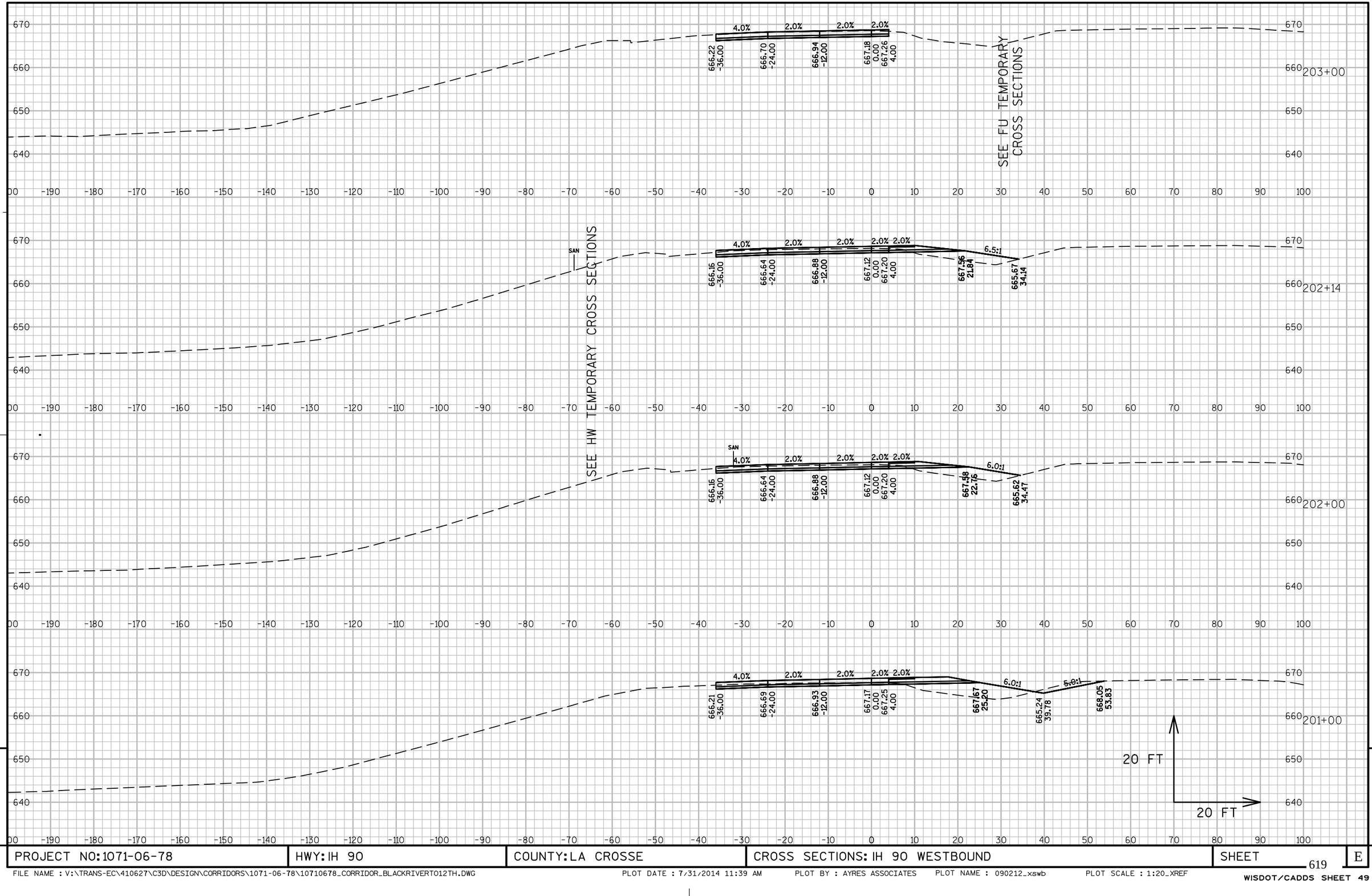
SEE HW TEMPORARY CROSS SECTIONS



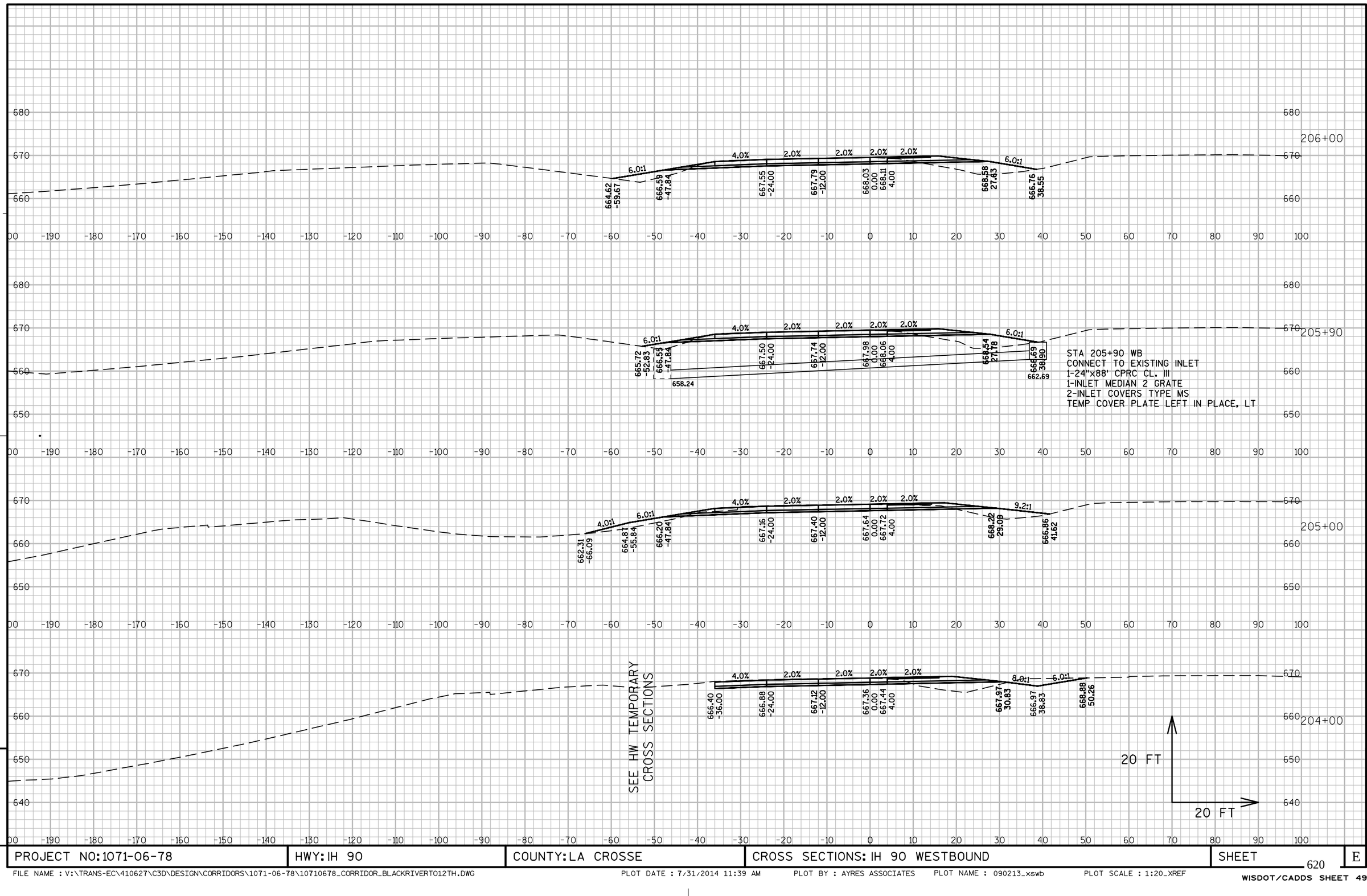
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 618	E

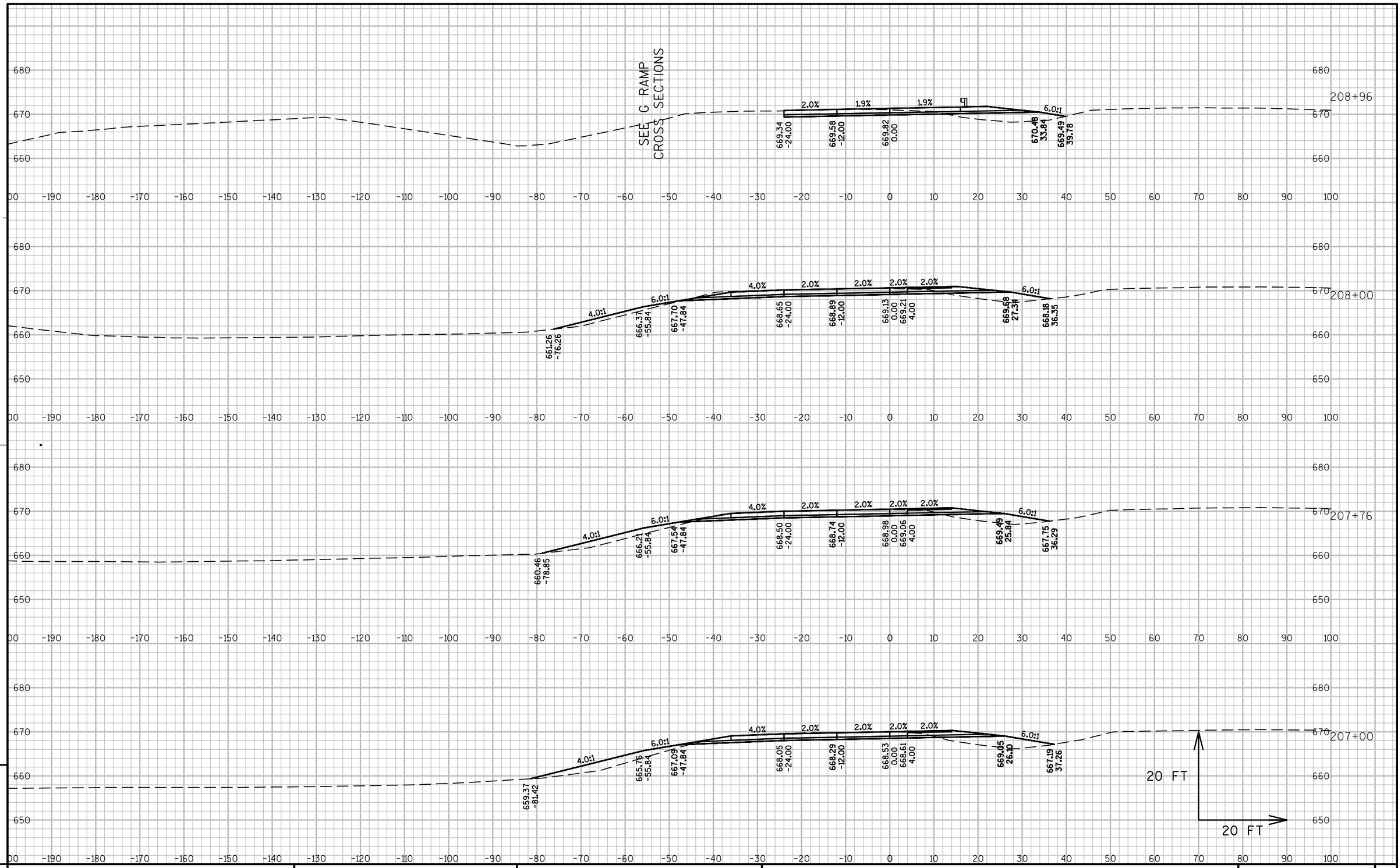
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 619	E

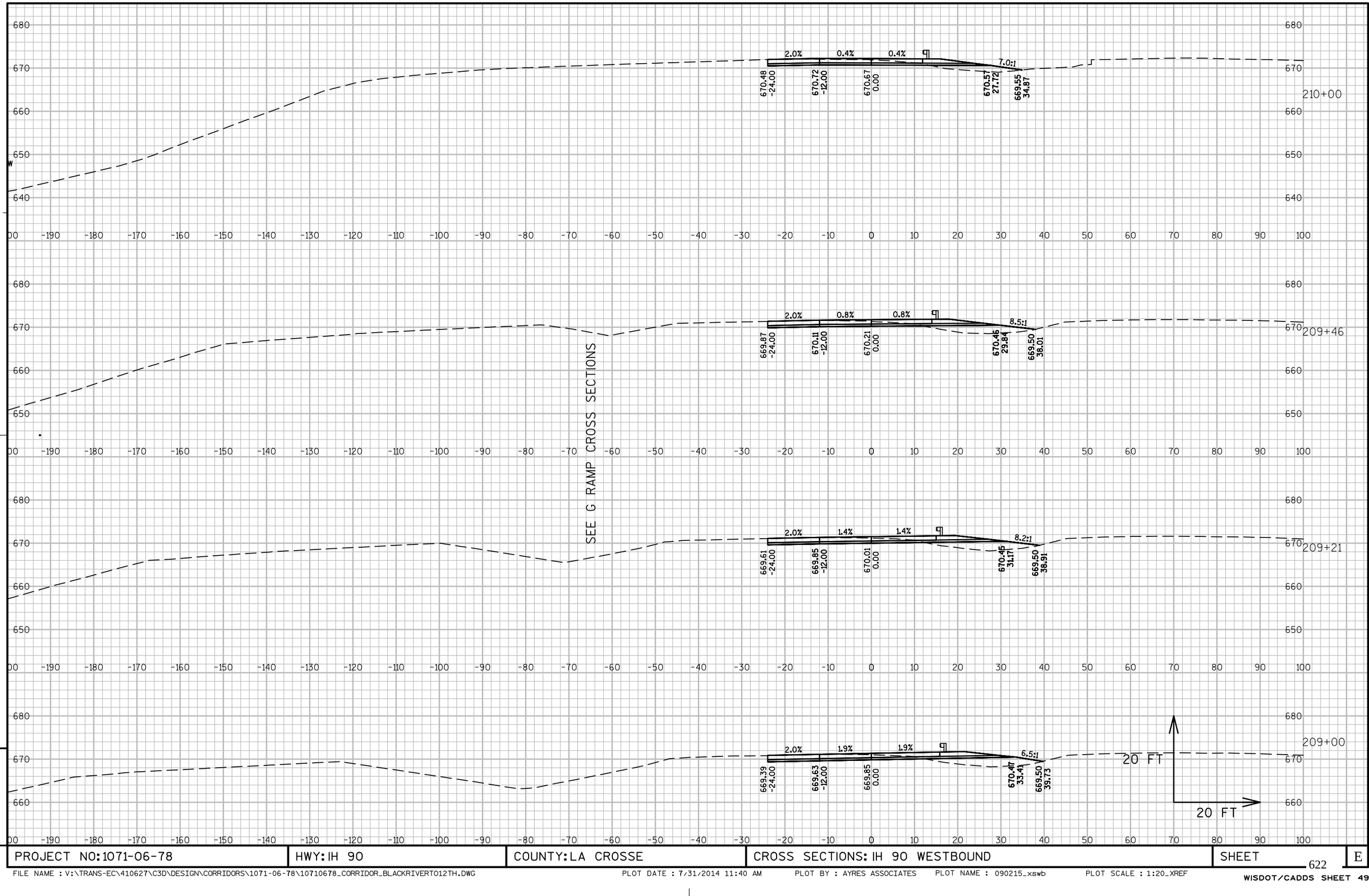


PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 620	E



PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS:IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:40 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090214_xswb PLOT SCALE : 1:20_XREF



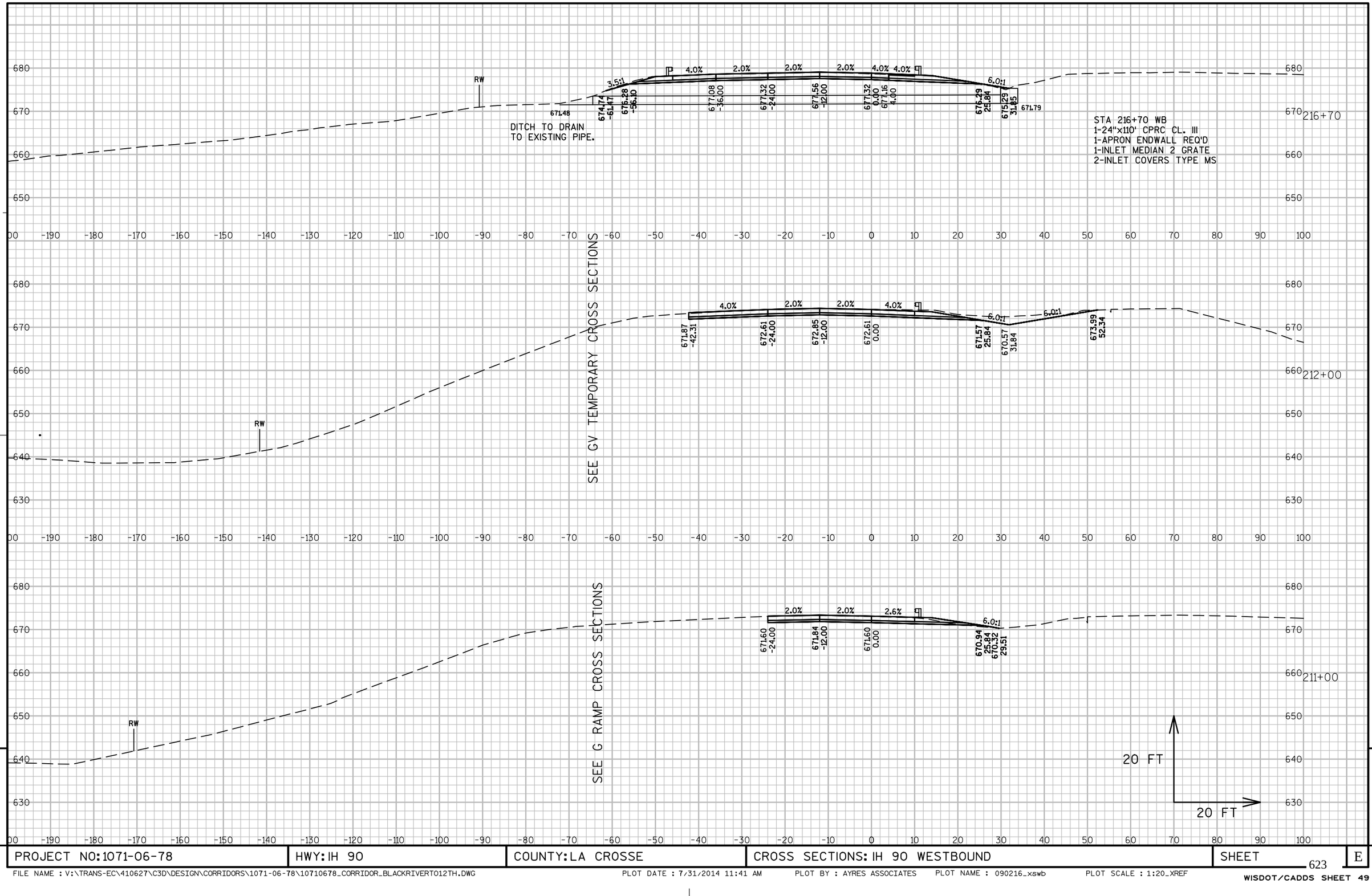
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 622	E

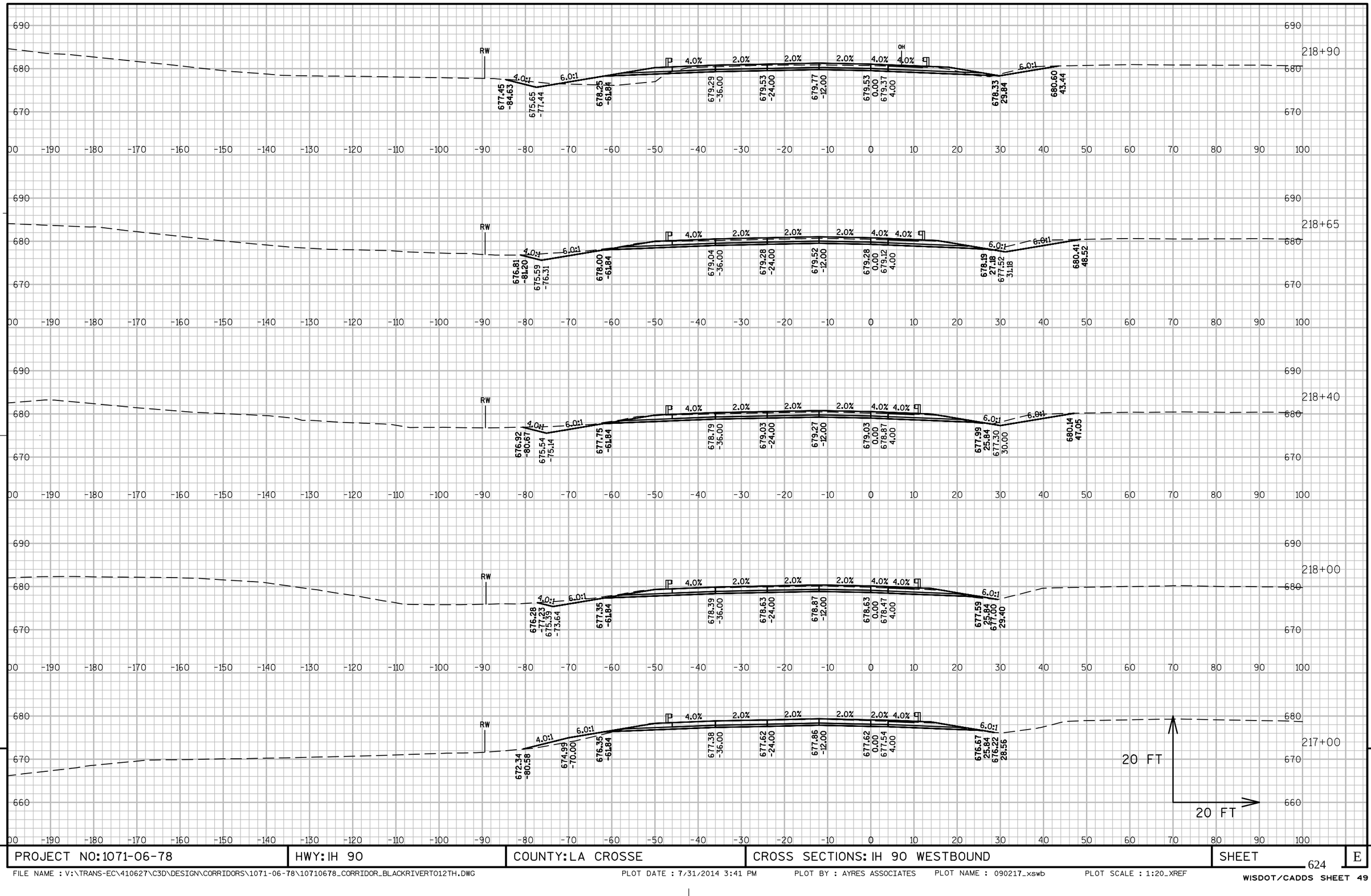
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WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 623	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:41 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090216_xswb PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49



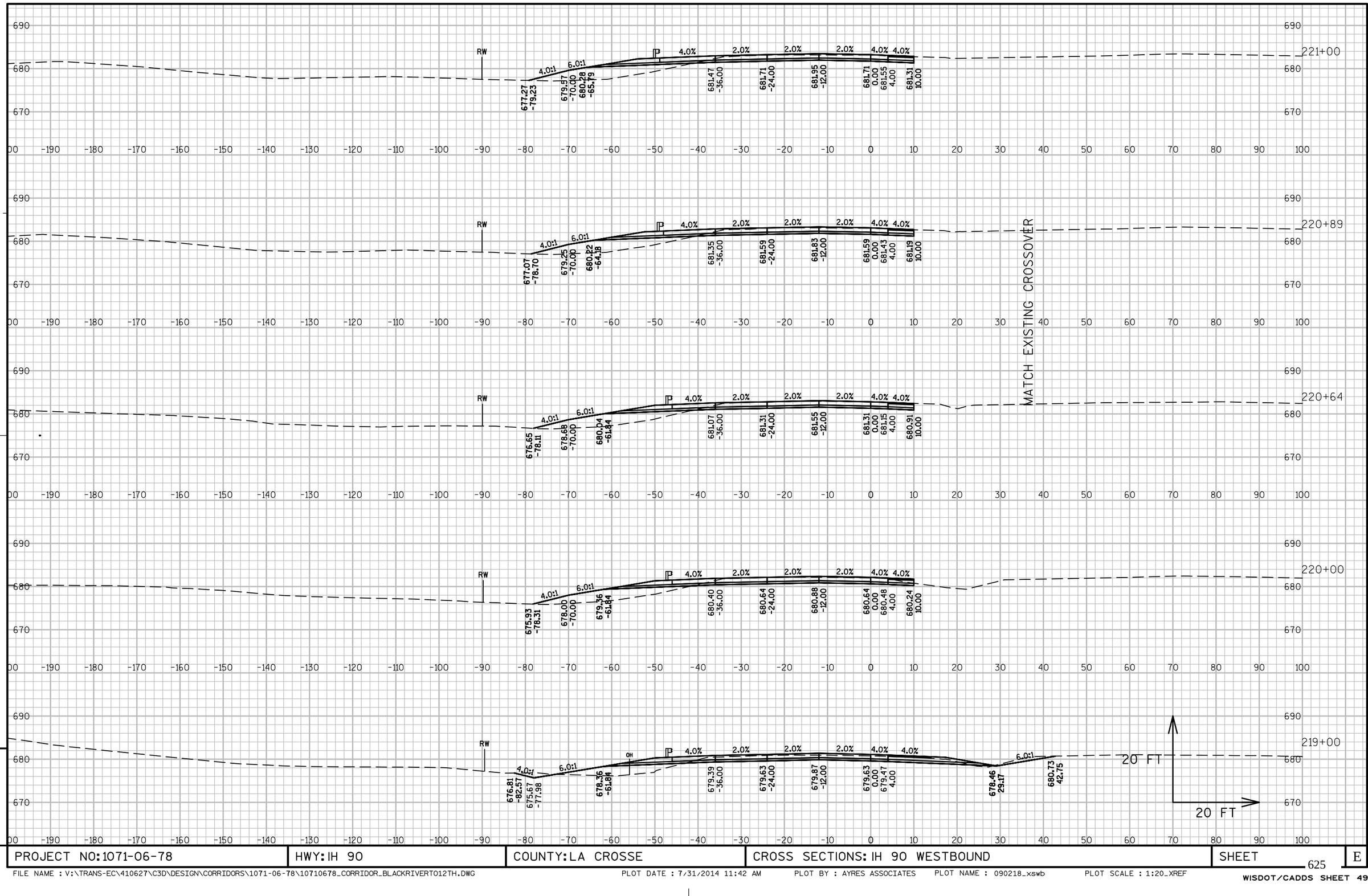
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 624	E

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WISDOT/CADDS SHEET 49



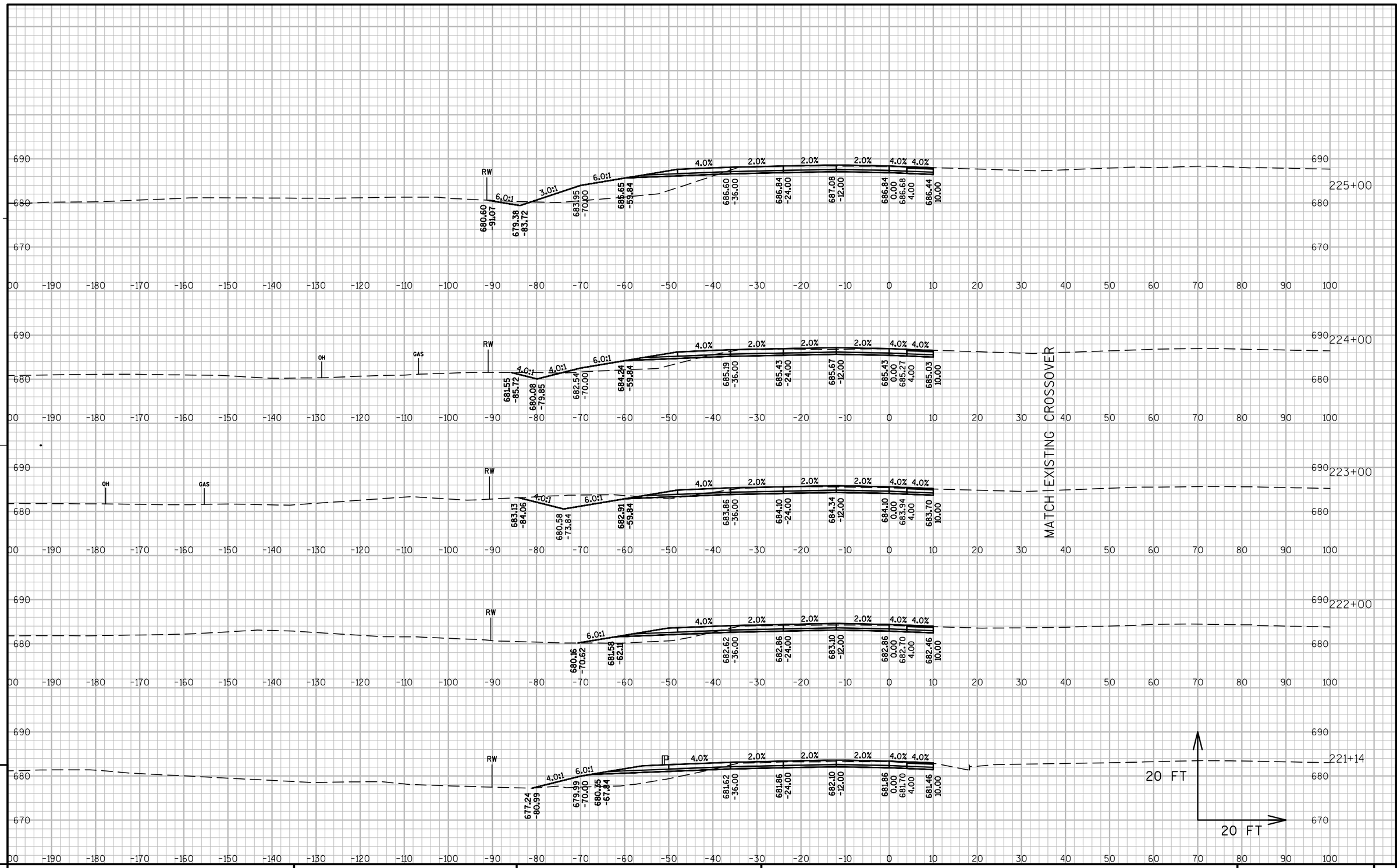
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 625	E

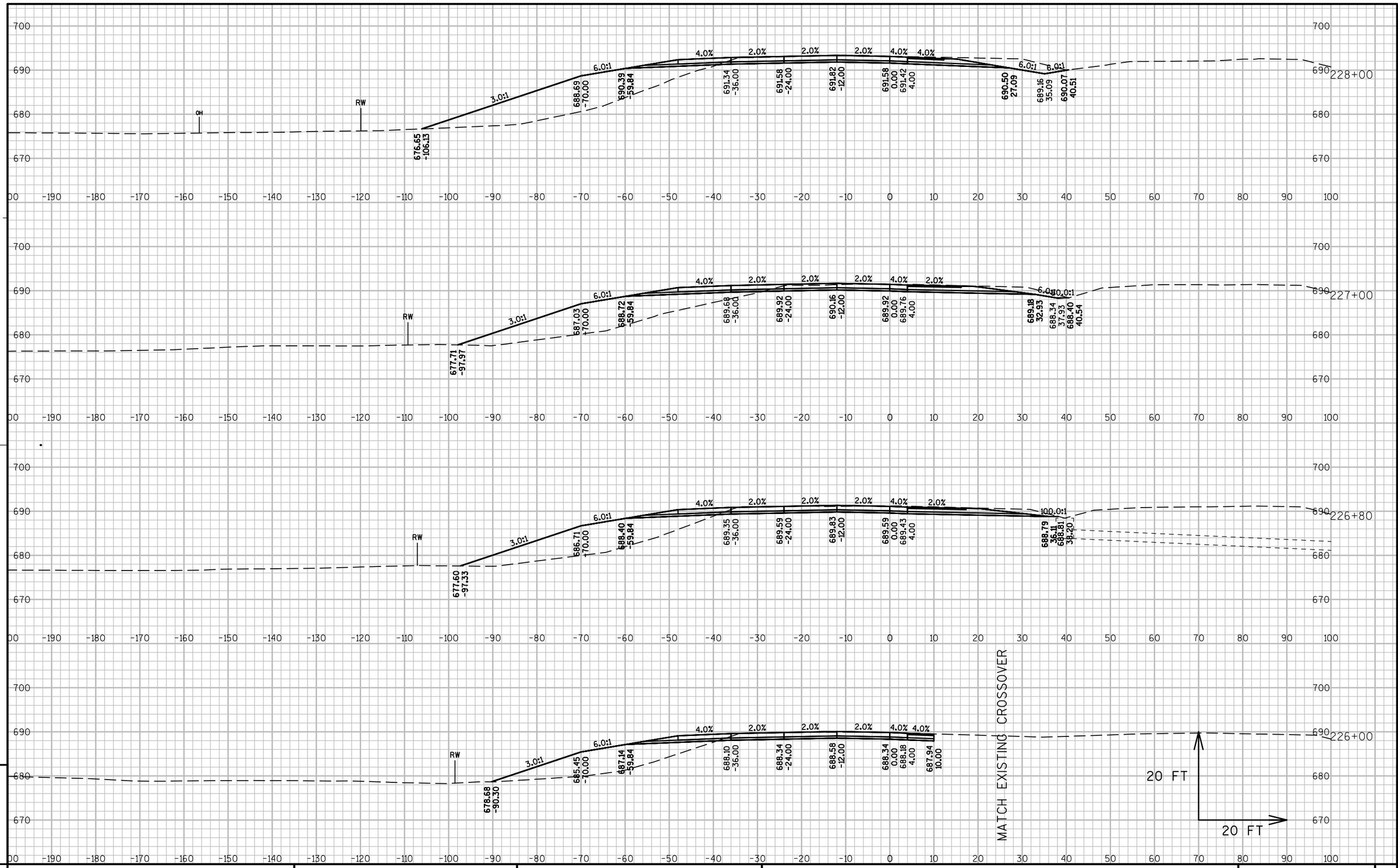
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WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 626	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:42 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090219_xswb PLOT SCALE : 1:20_XREF

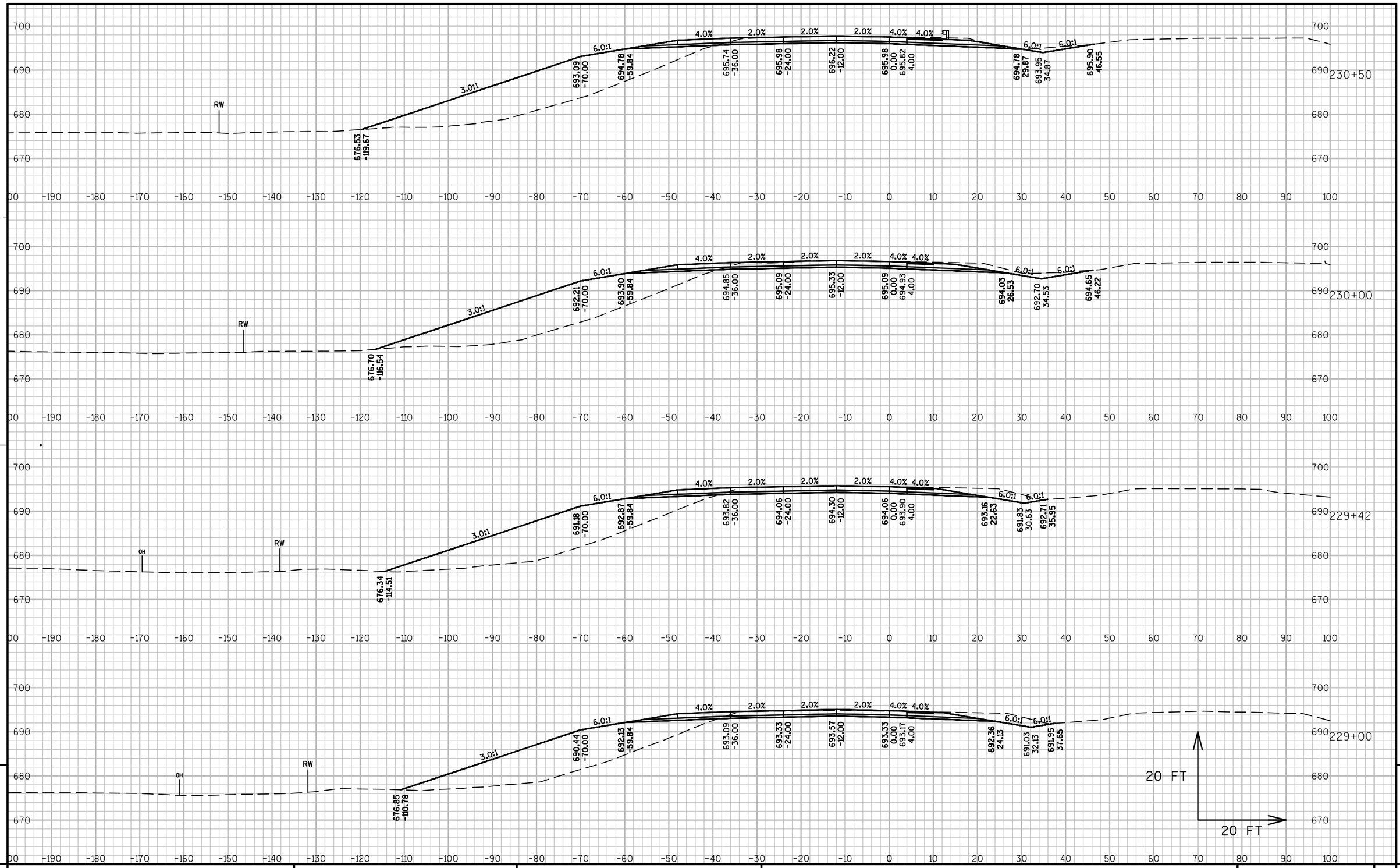


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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 627	E

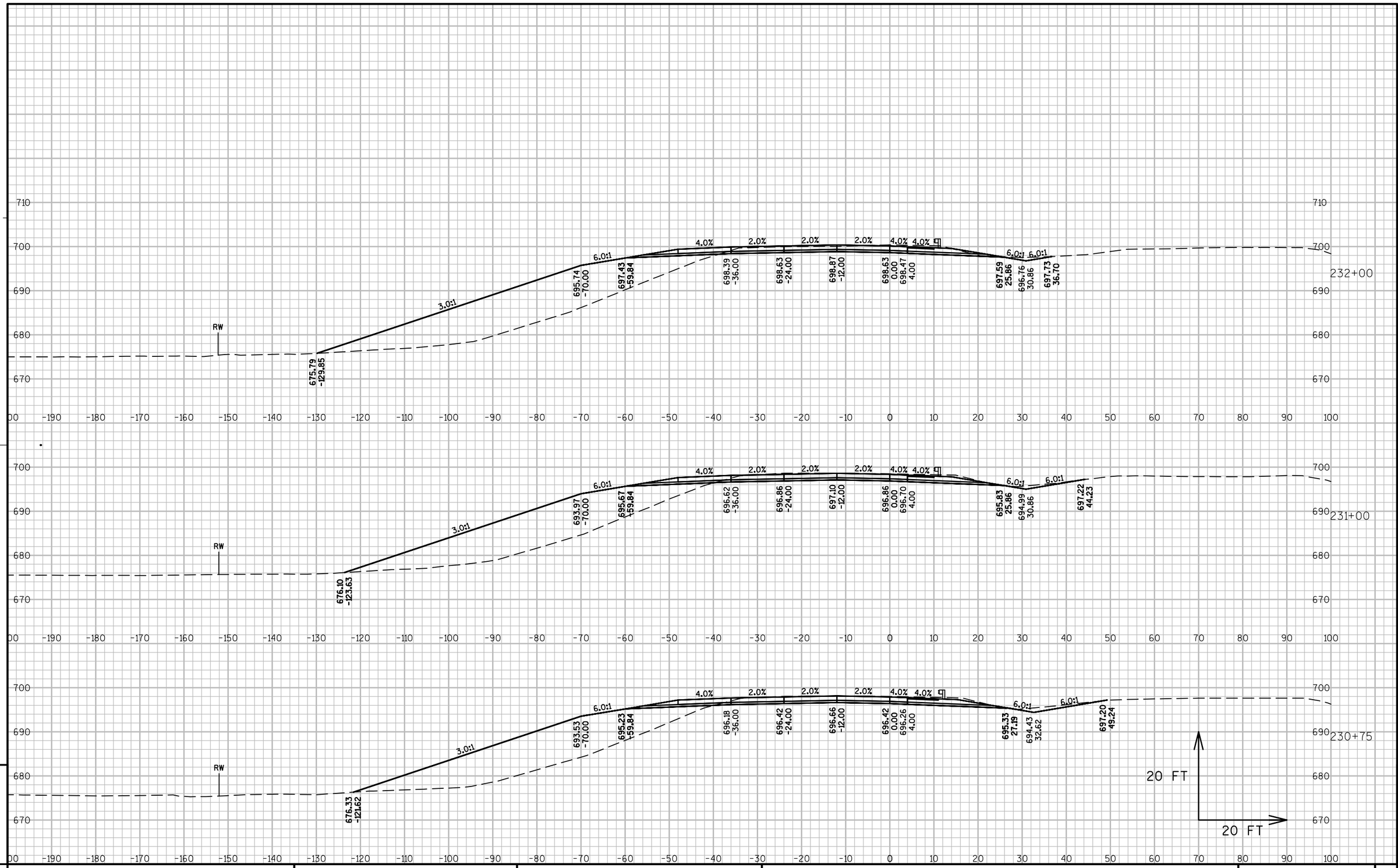
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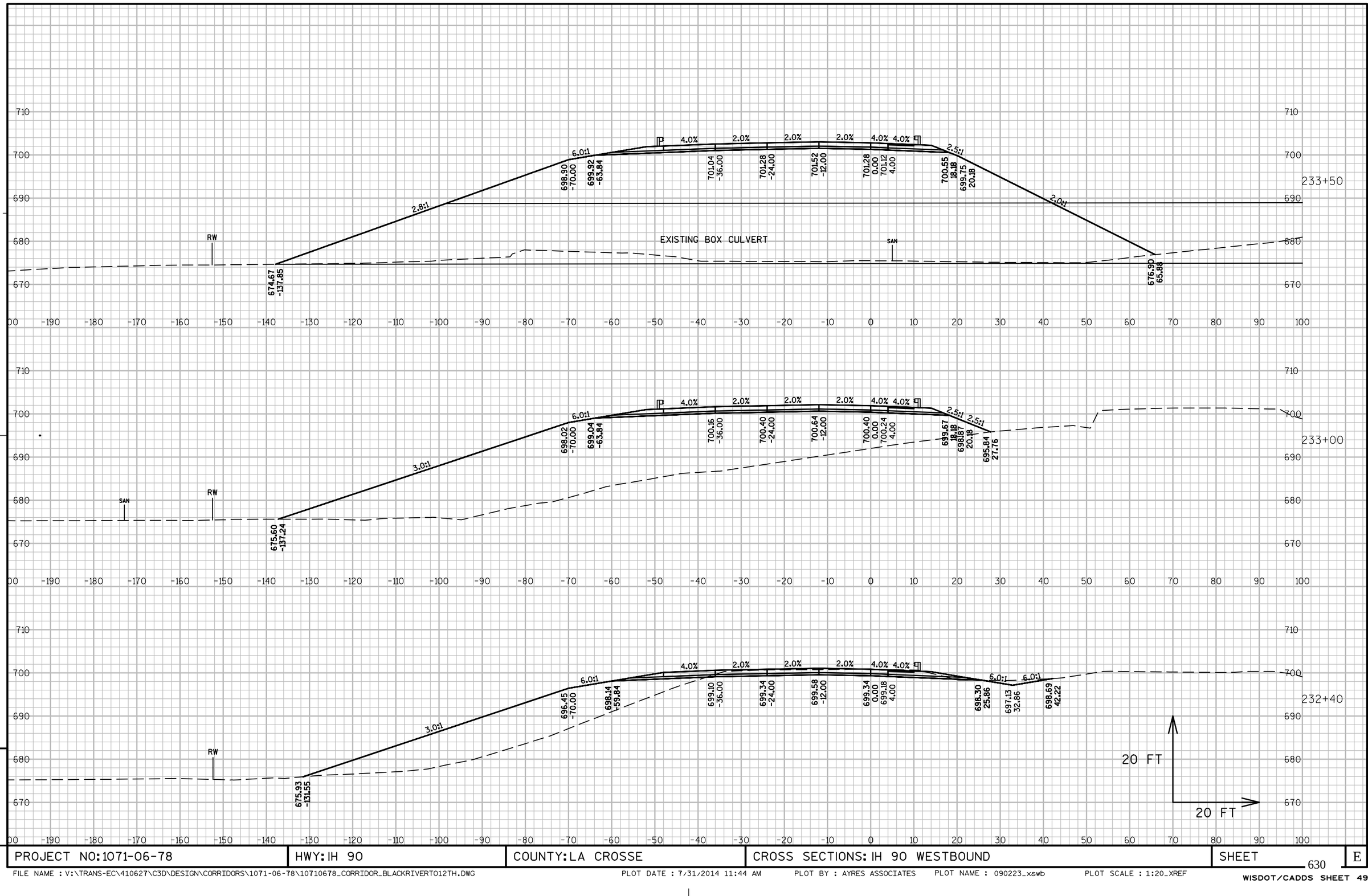
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FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:43 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090221_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 629	E



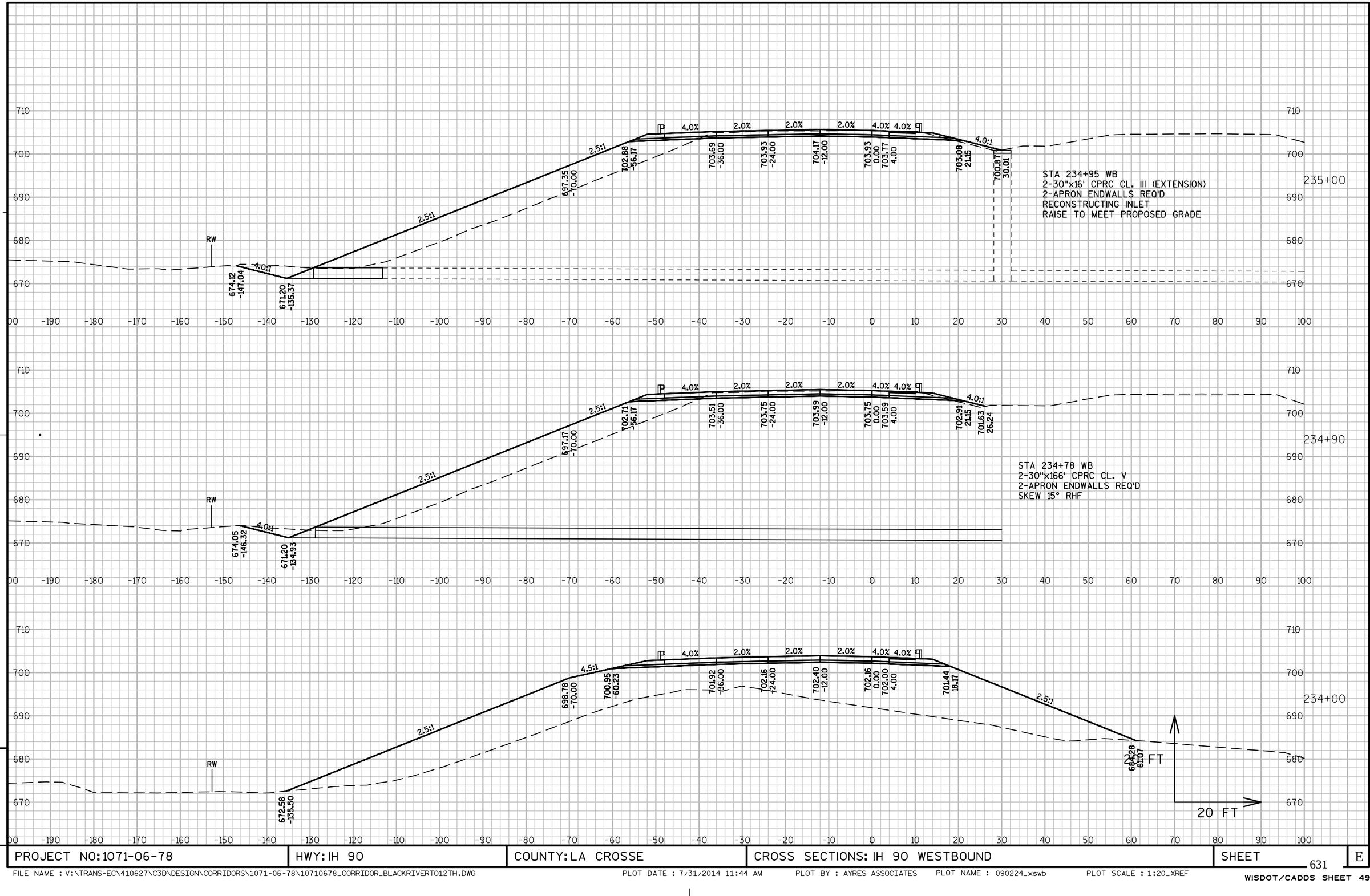
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 630	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:44 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090223_xswb PLOT SCALE : 1:20_XREF

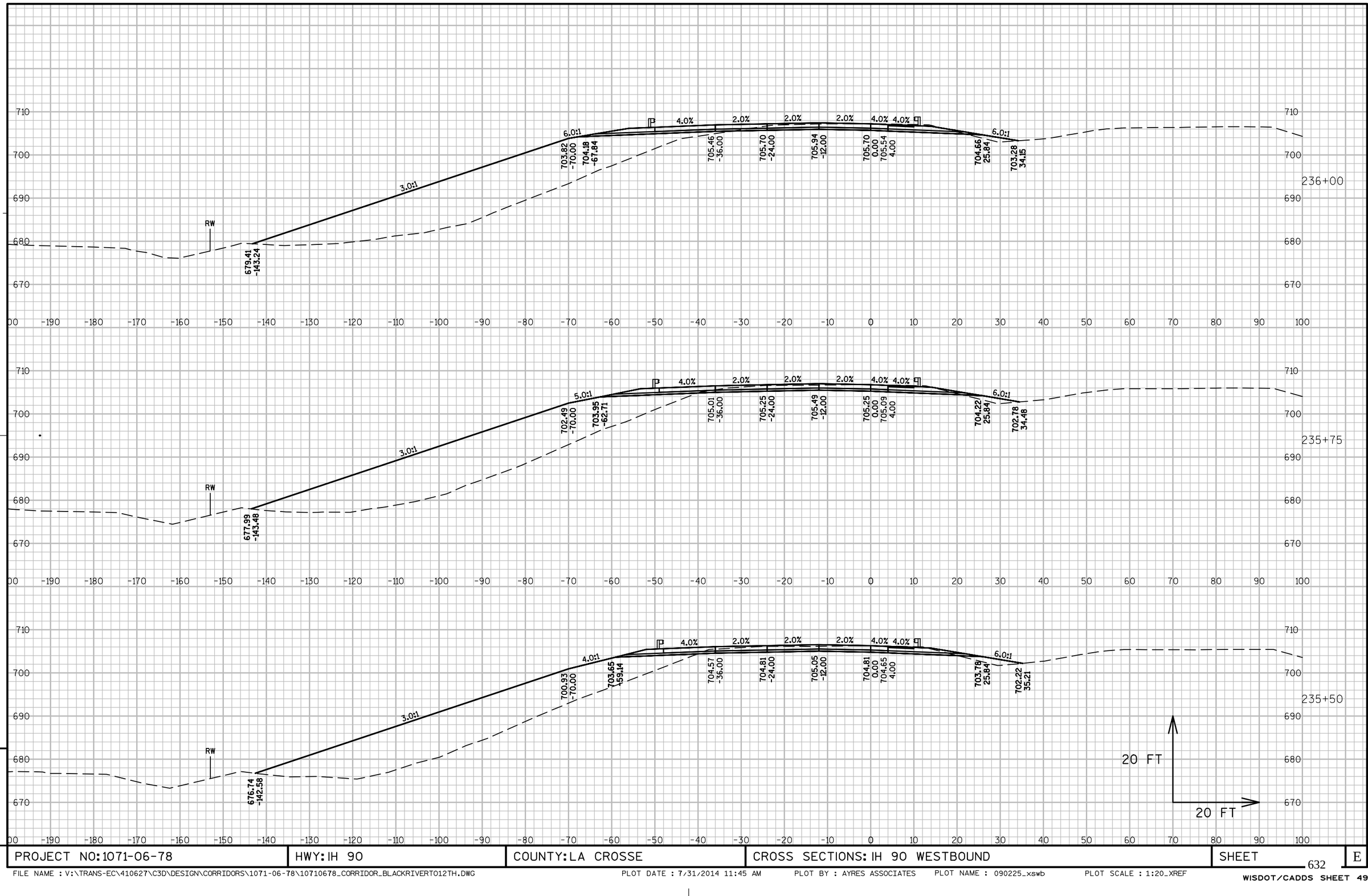
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 631	E

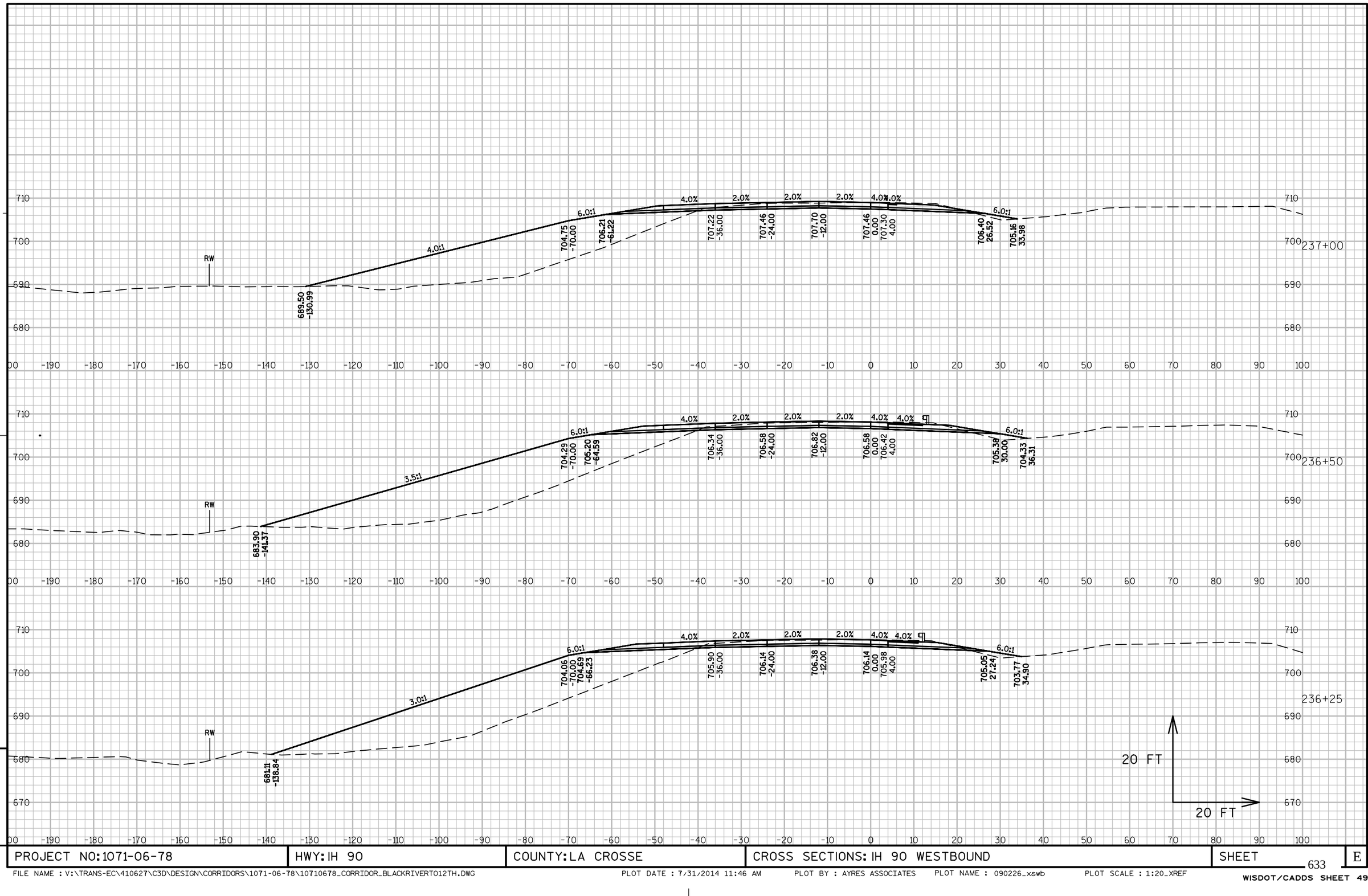
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WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

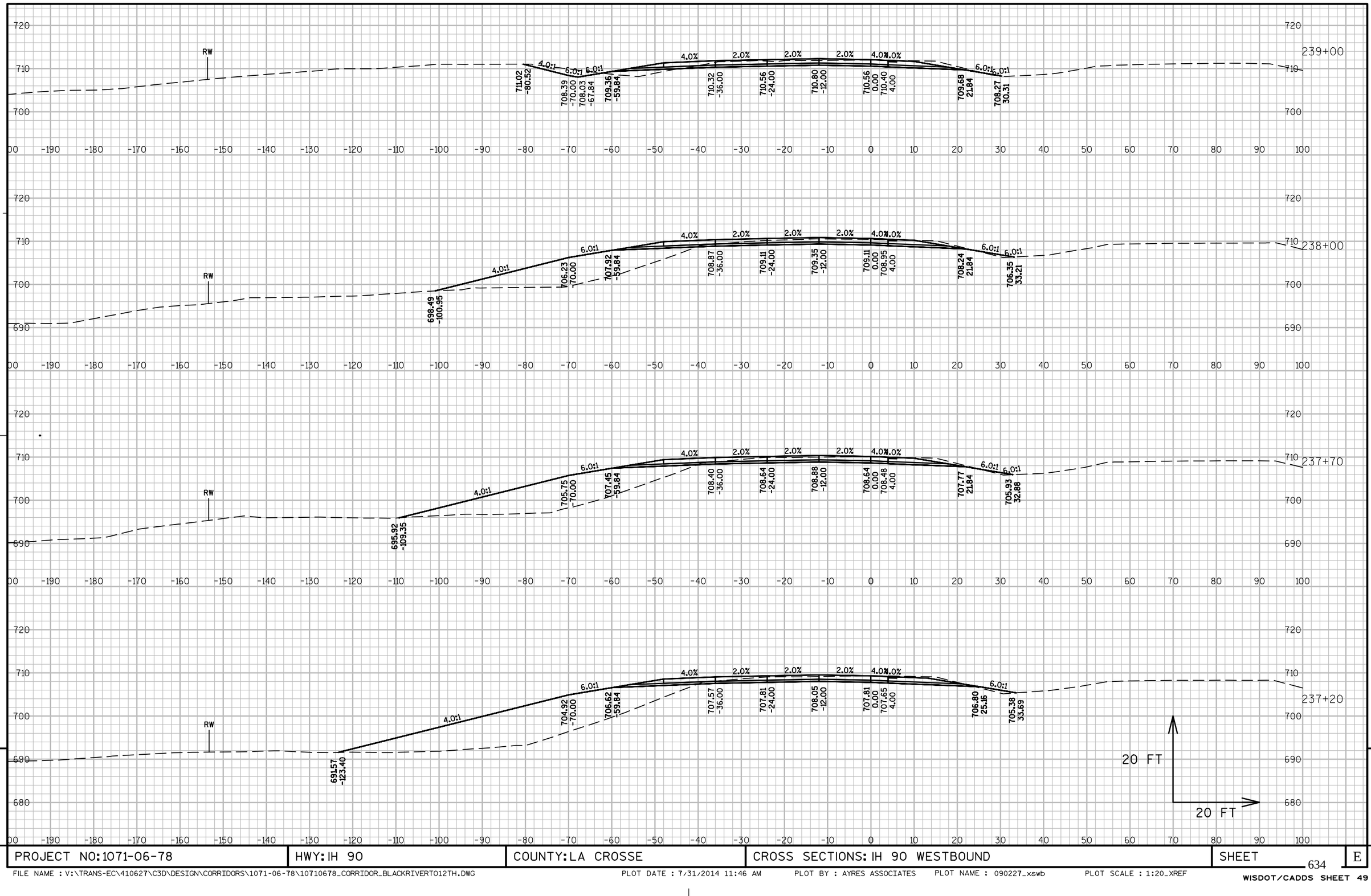
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WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 633	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:46 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090226_xswb PLOT SCALE : 1:20_XREF

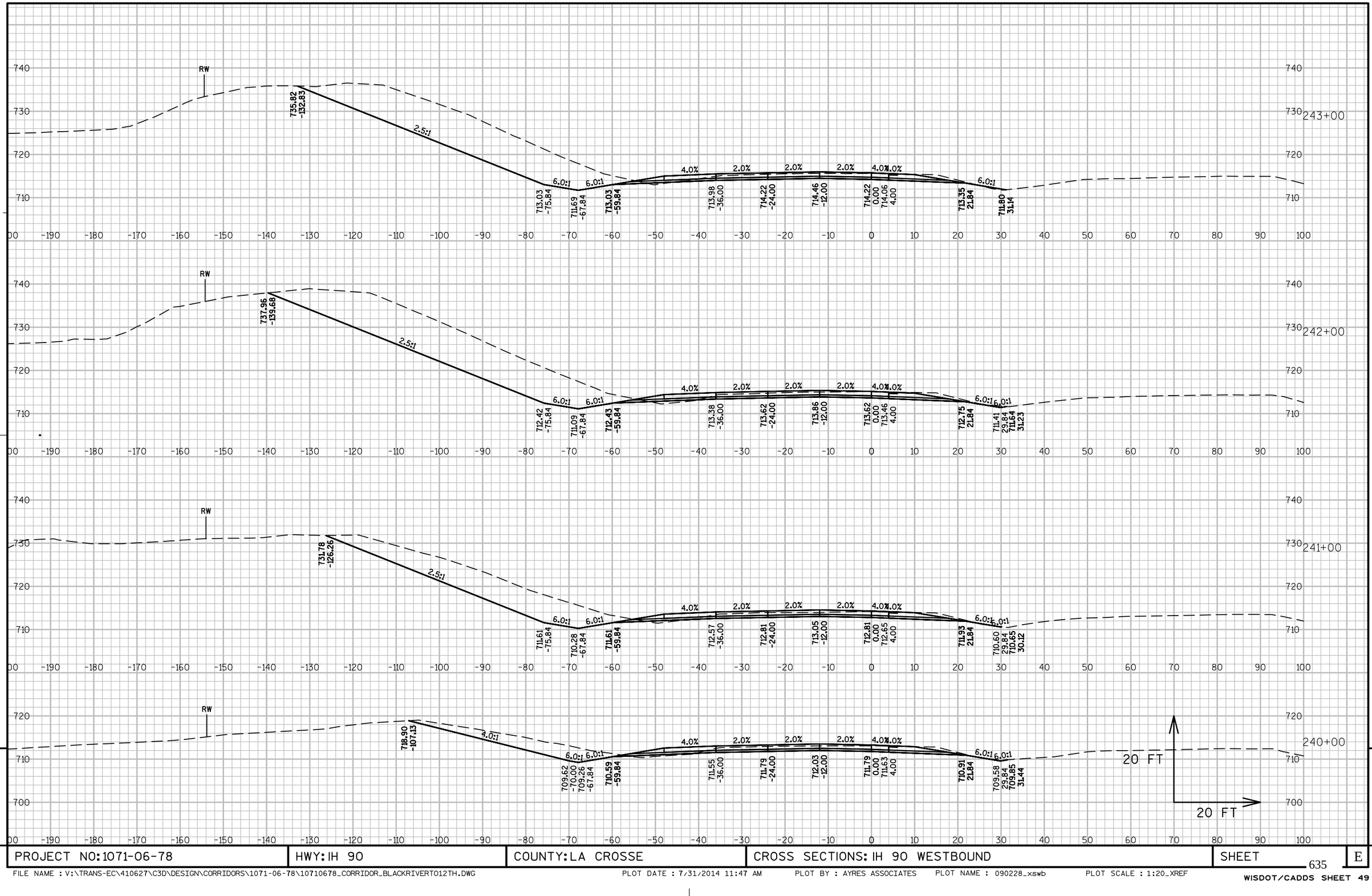
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 634	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:46 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090227_xswb PLOT SCALE : 1:20_XREF

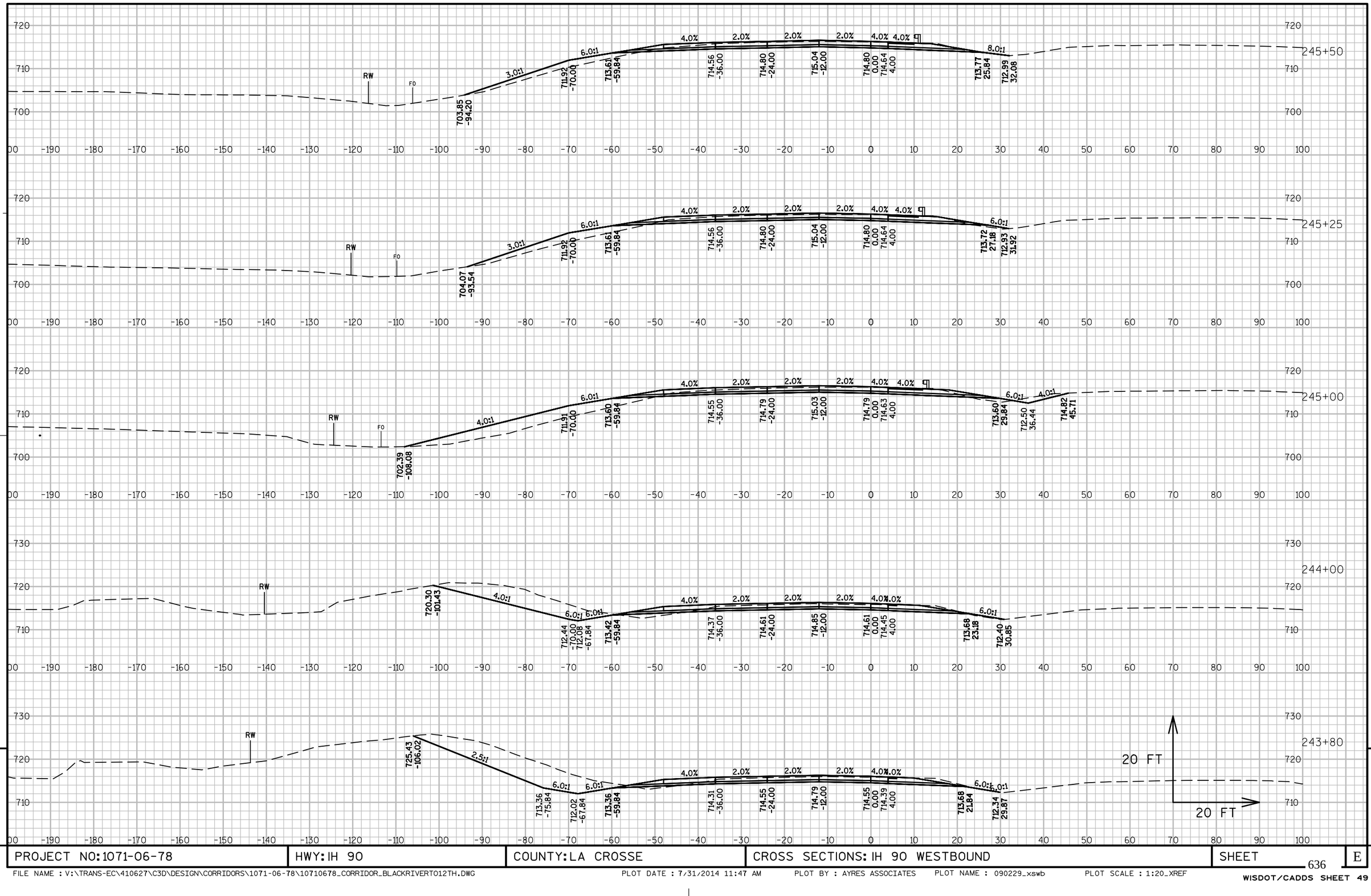
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 635	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:47 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090228_xswb PLOT SCALE : 1:20_XREF

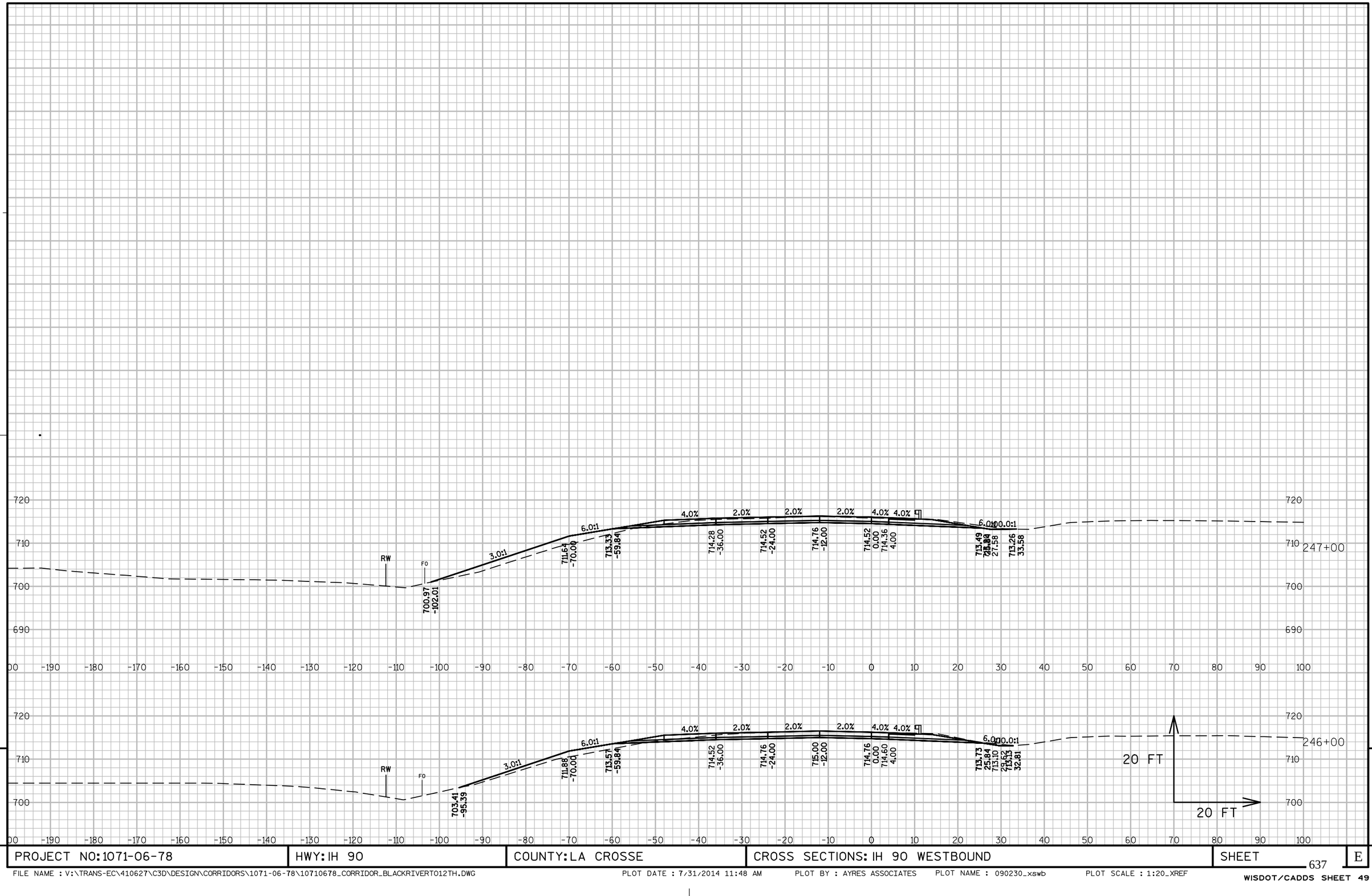
WISDOT/CADDS SHEET 49



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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 636	E



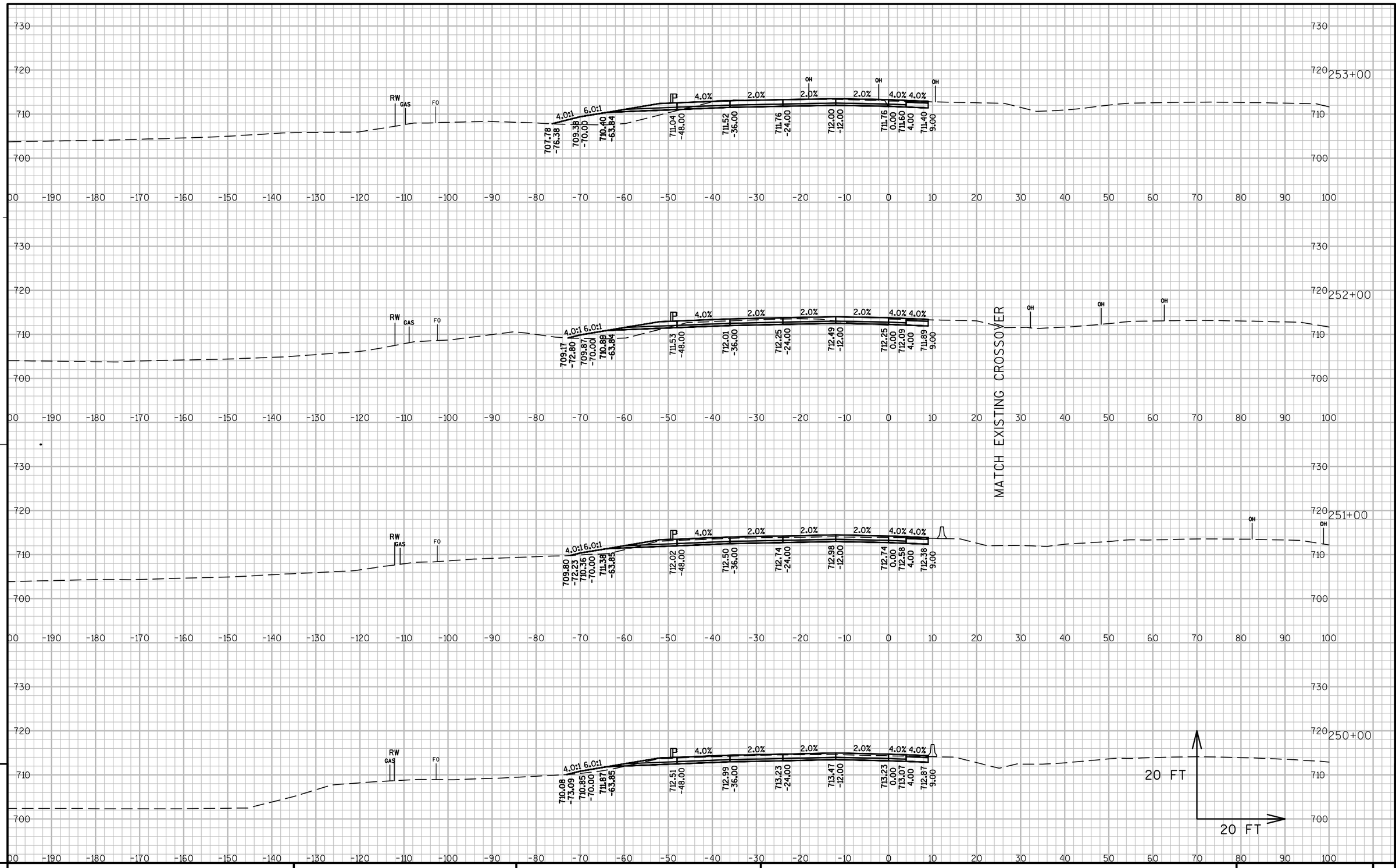
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_BLACKRIVERTO12TH.DWG PLOT DATE : 7/31/2014 11:48 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090230_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

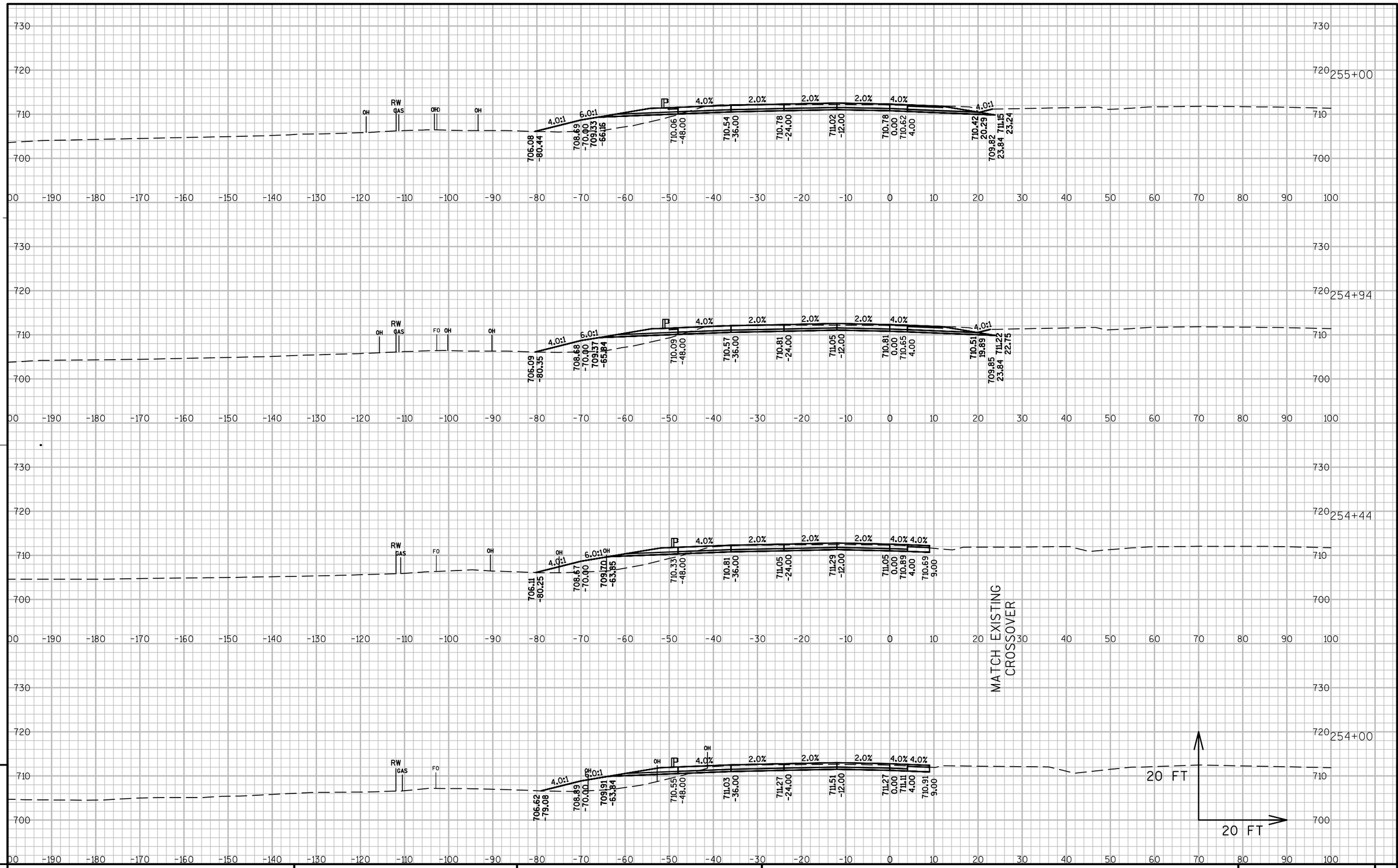


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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 638	E

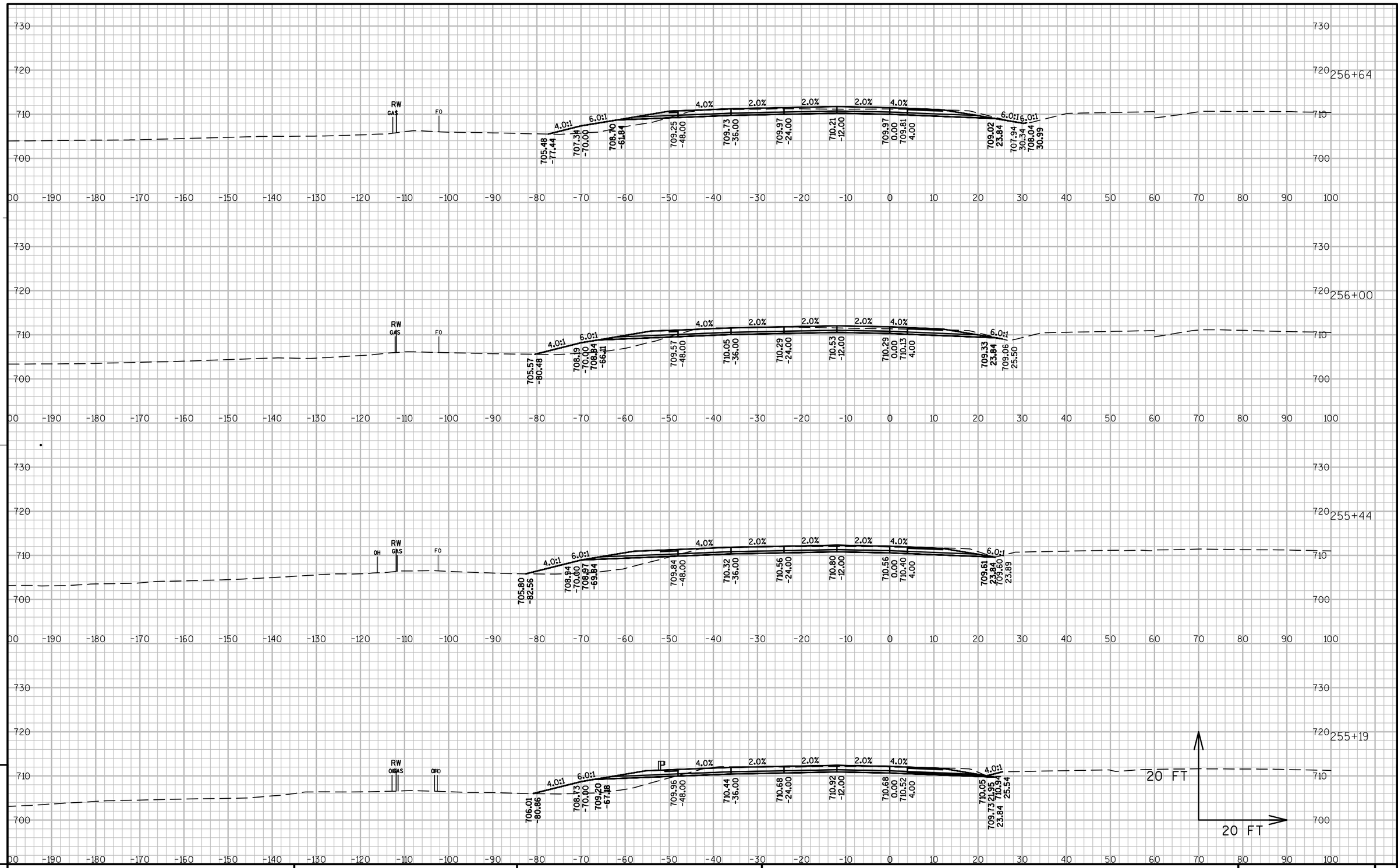
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:07 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090231_xswb PLOT SCALE : 1:20_XREF



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 639	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:07 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090232_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



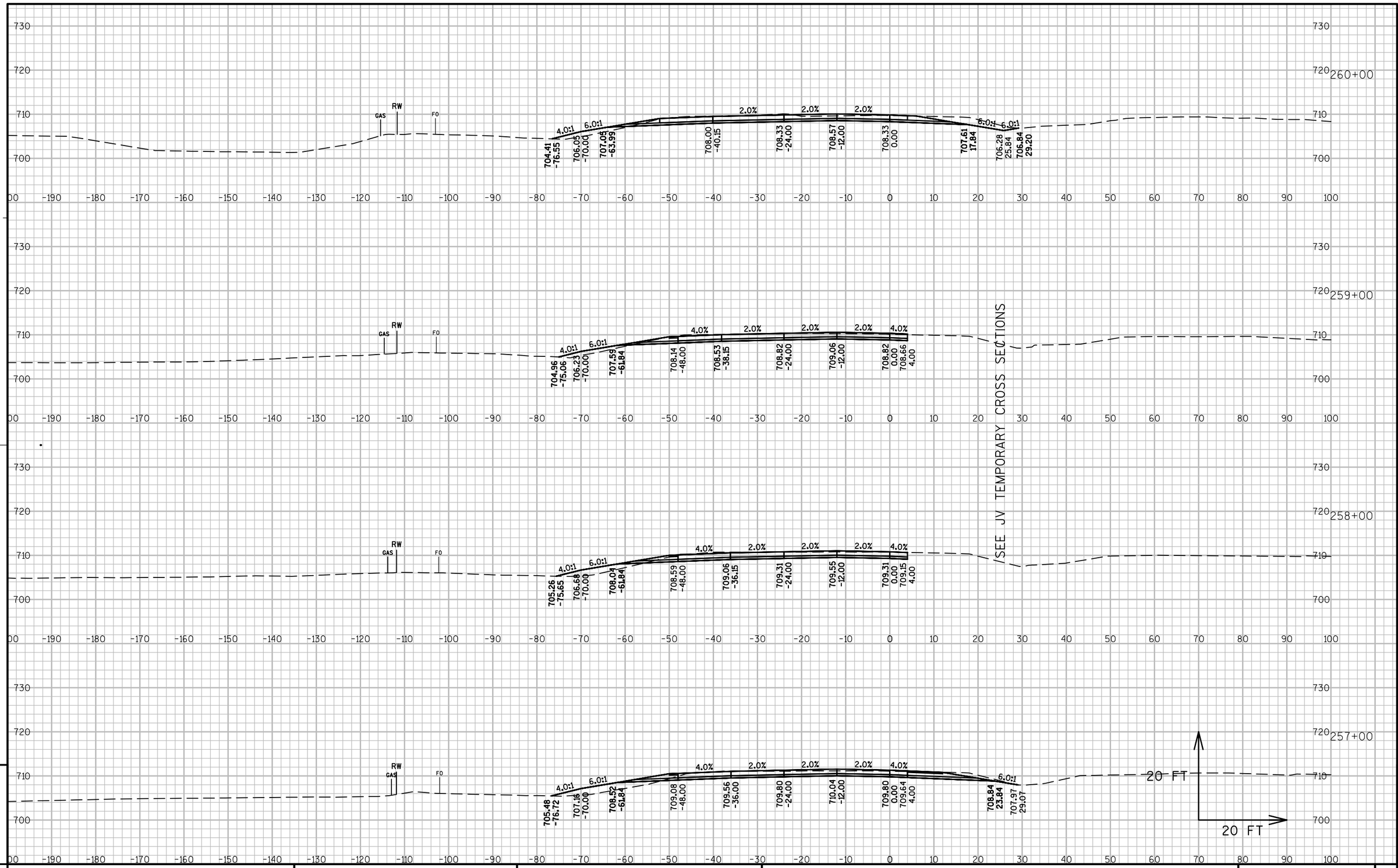
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 640	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:07 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090233_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

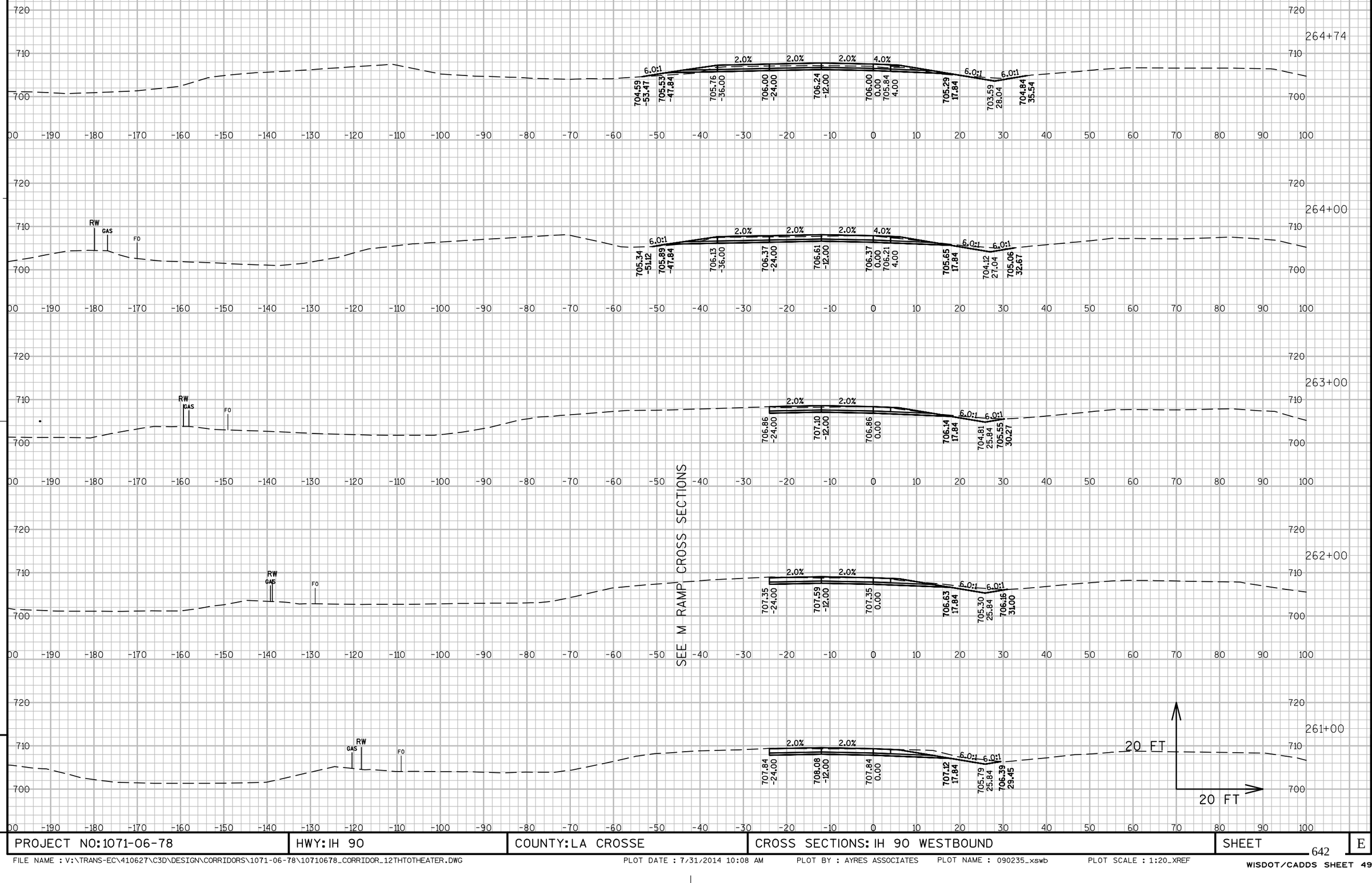


PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 641	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:08 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090234_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

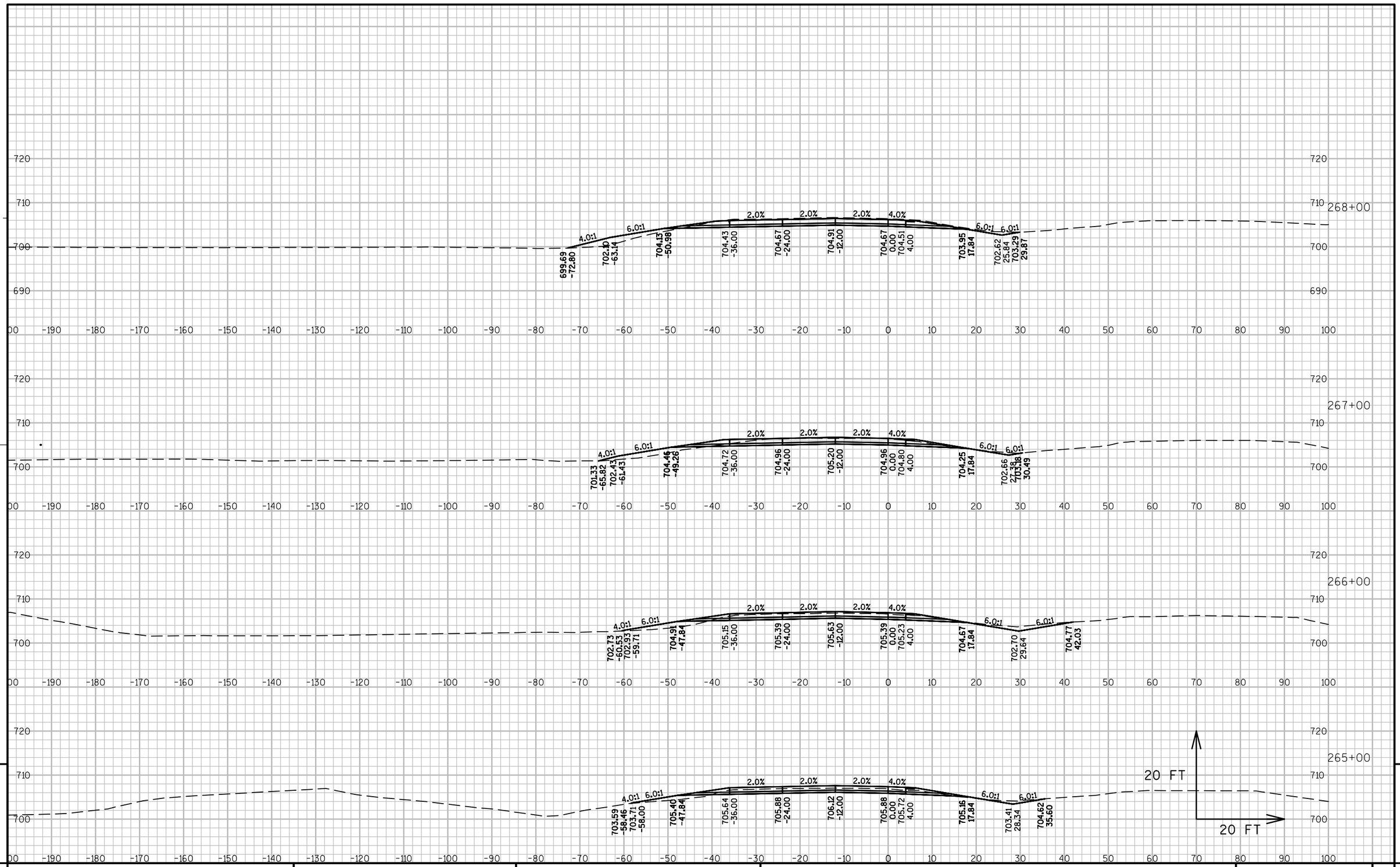
SEE M RAMP CROSS SECTIONS



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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 642	E

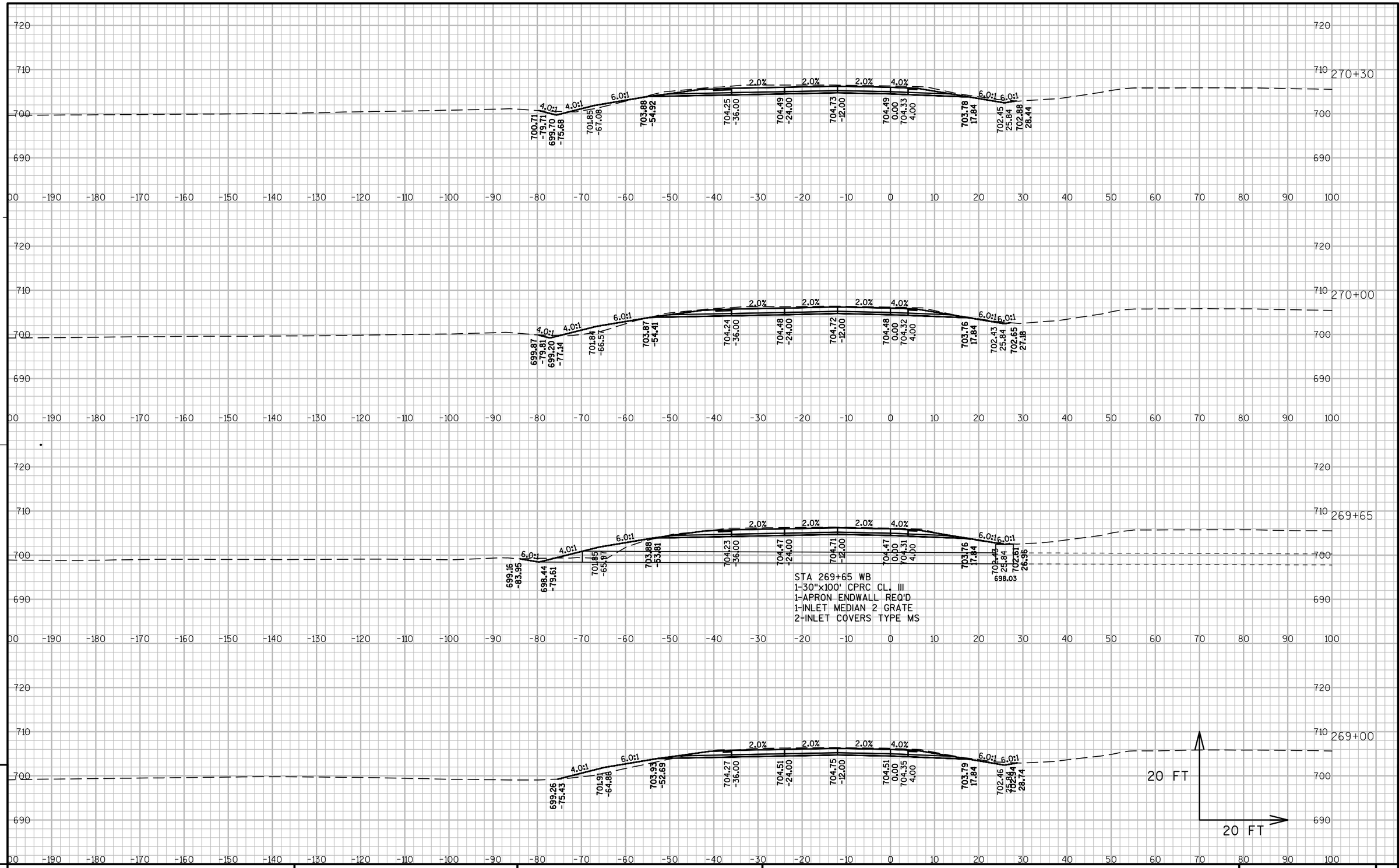
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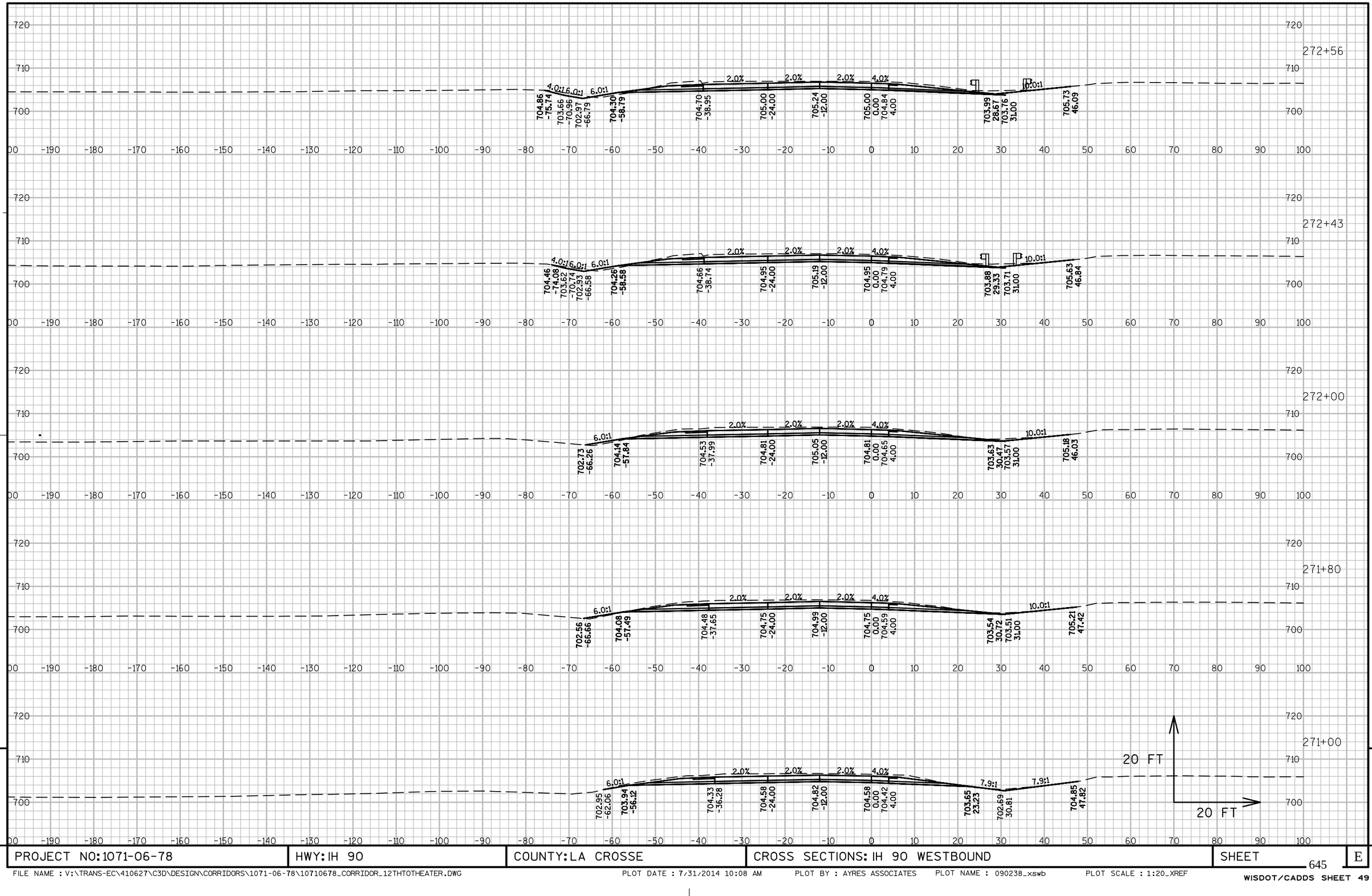
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 643	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:08 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090236_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



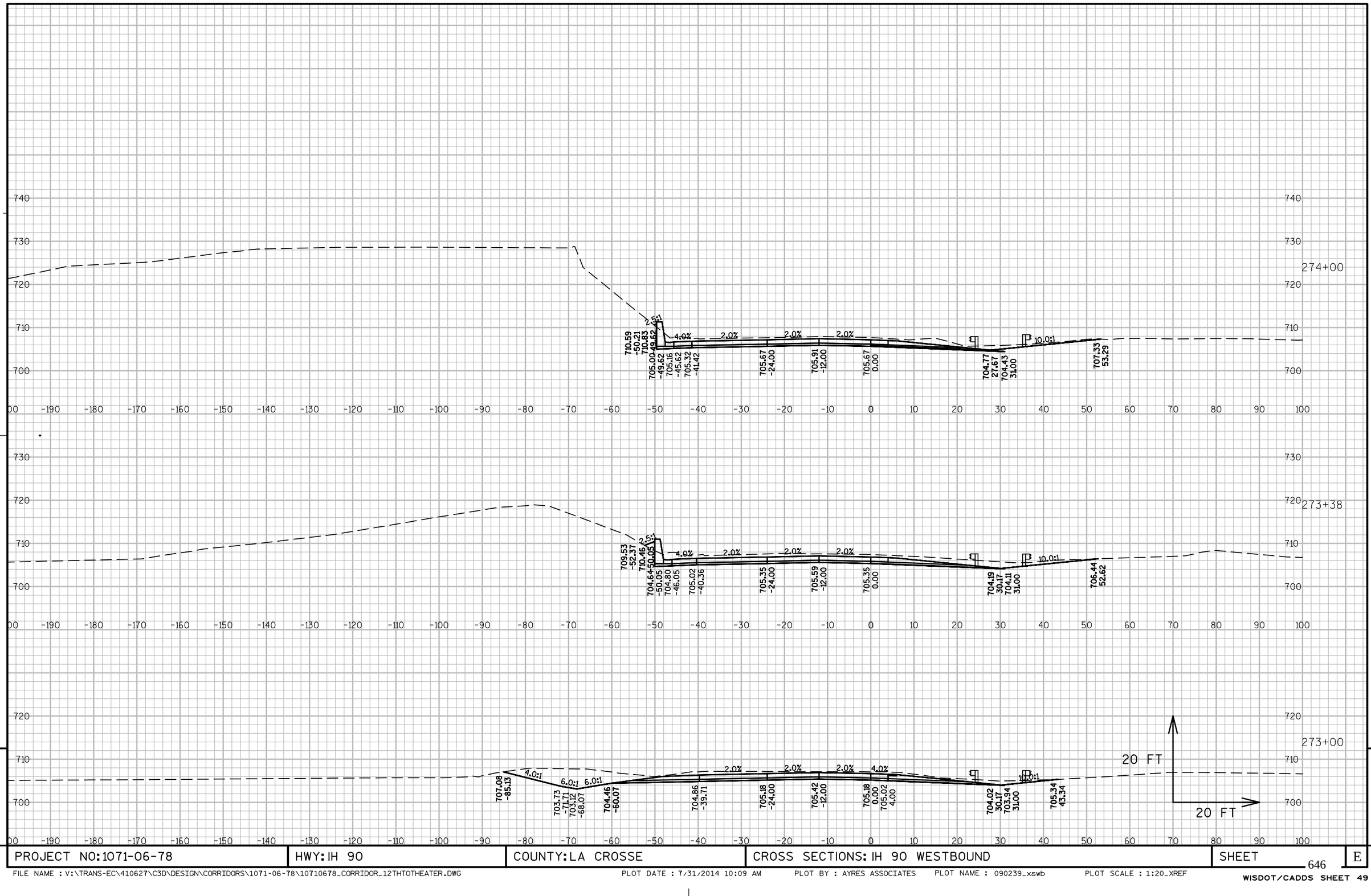
PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS:IH 90 WESTBOUND	SHEET 644	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 645	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:08 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090238_xswb PLOT SCALE : 1:20_XREF

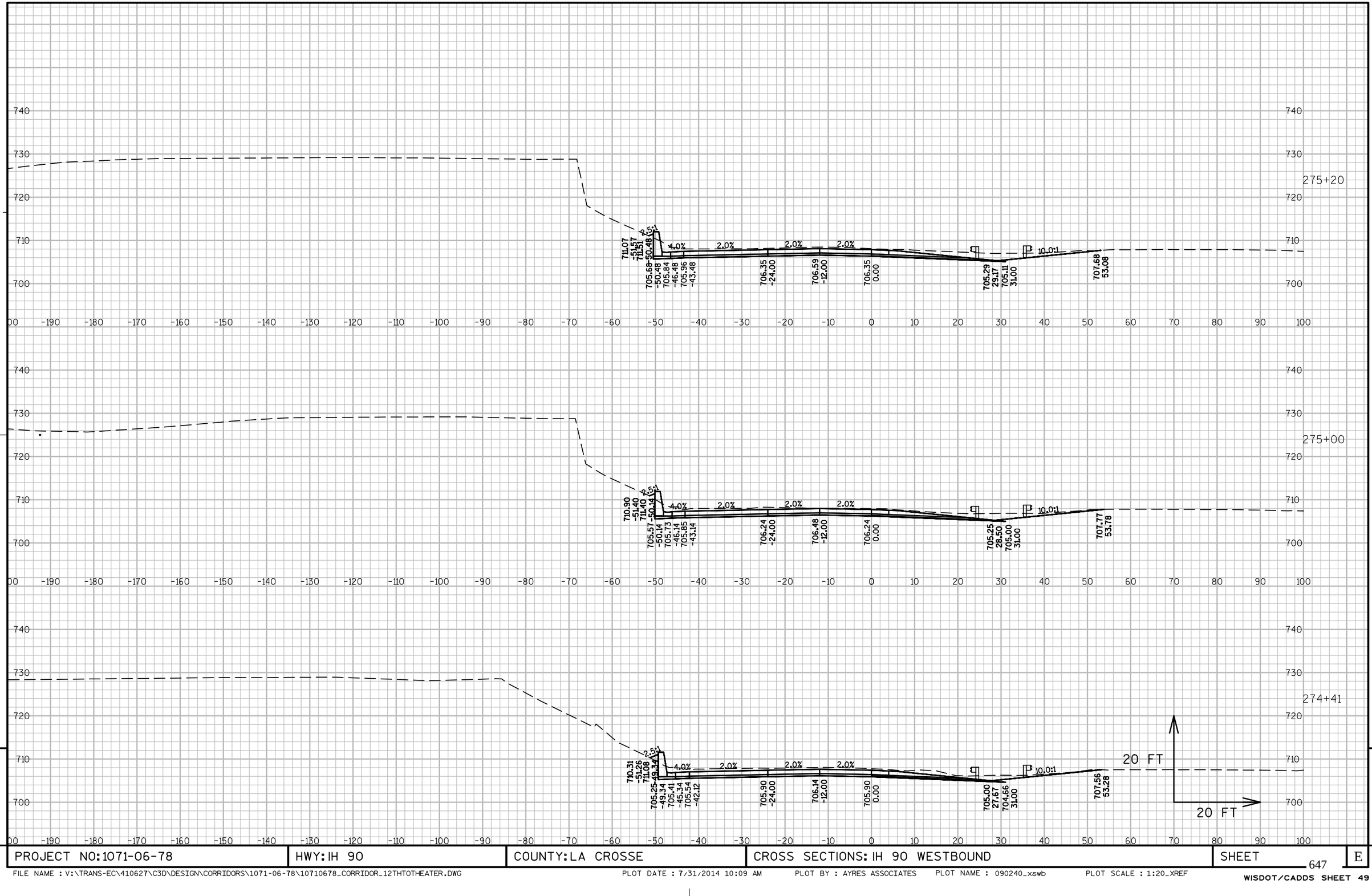
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 646 E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:09 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090239_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 647	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:09 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090240_xswb PLOT SCALE : 1:20_XREF

SEE P RAMP CROSS SECTIONS

276+00

2.0% 2.0% 9.9:1

706.80 -24.00 | 707.04 -12.00 | 706.80 0.00 | 705.58 30.50 | 705.71 31.83

275+96

2.0% 2.0% 10.0:1

706.77 -24.00 | 707.01 -12.00 | 706.77 0.00 | 705.57 30.67 | 705.53 31.00 | 707.69 51.95

275+32

710.86 -52.47 | 711.57 -50.69 | 705.74 -50.69 | 705.90 -46.69 | 706.02 -43.69 | 4.0% | 2.0% | 2.0% | 2.0% | 706.42 -24.00 | 706.66 -12.00 | 706.42 0.00 | 705.34 29.33 | 705.18 31.00 | 10.0:1 | 707.48 50.72

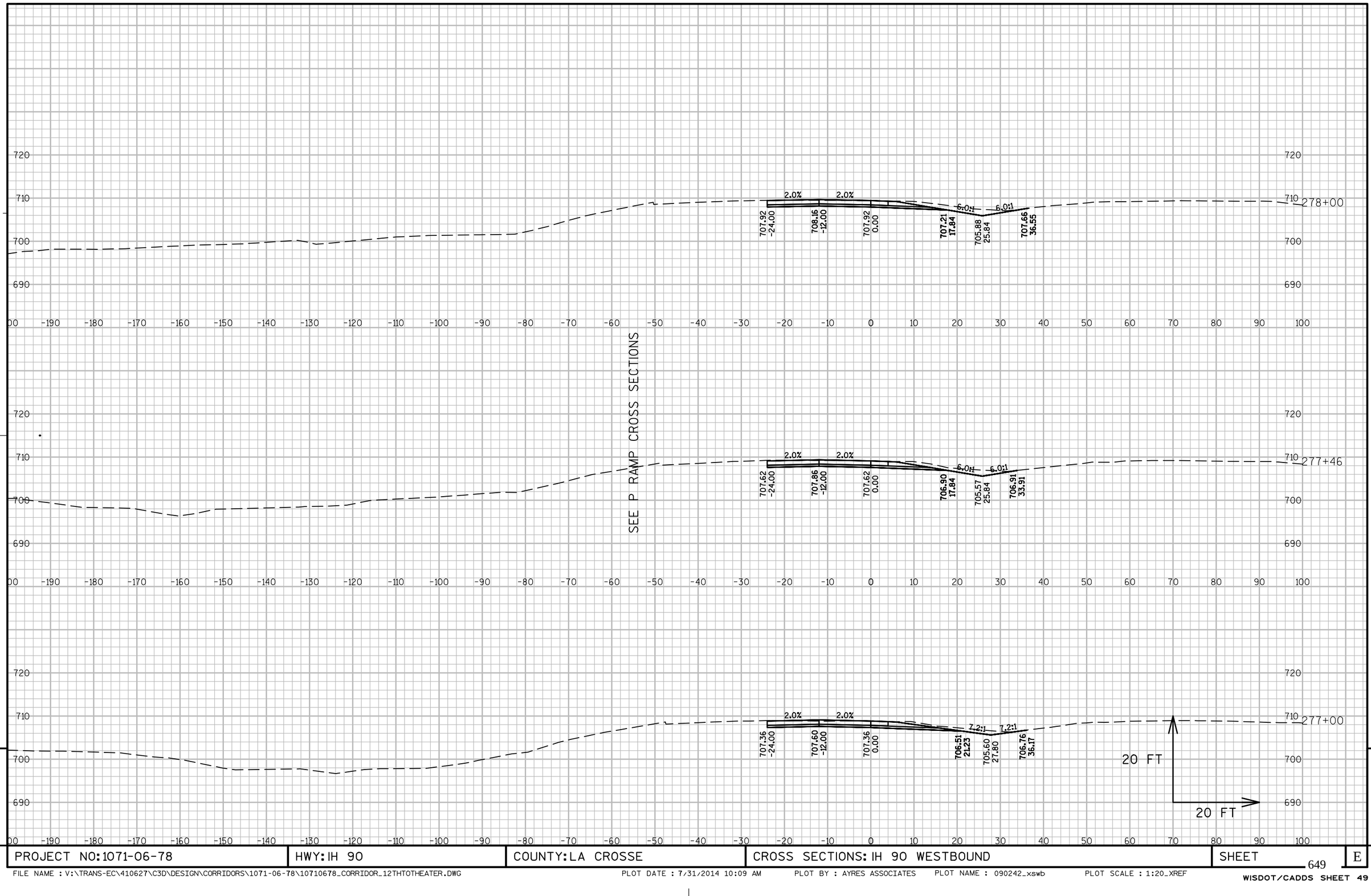
20 FT

20 FT

9

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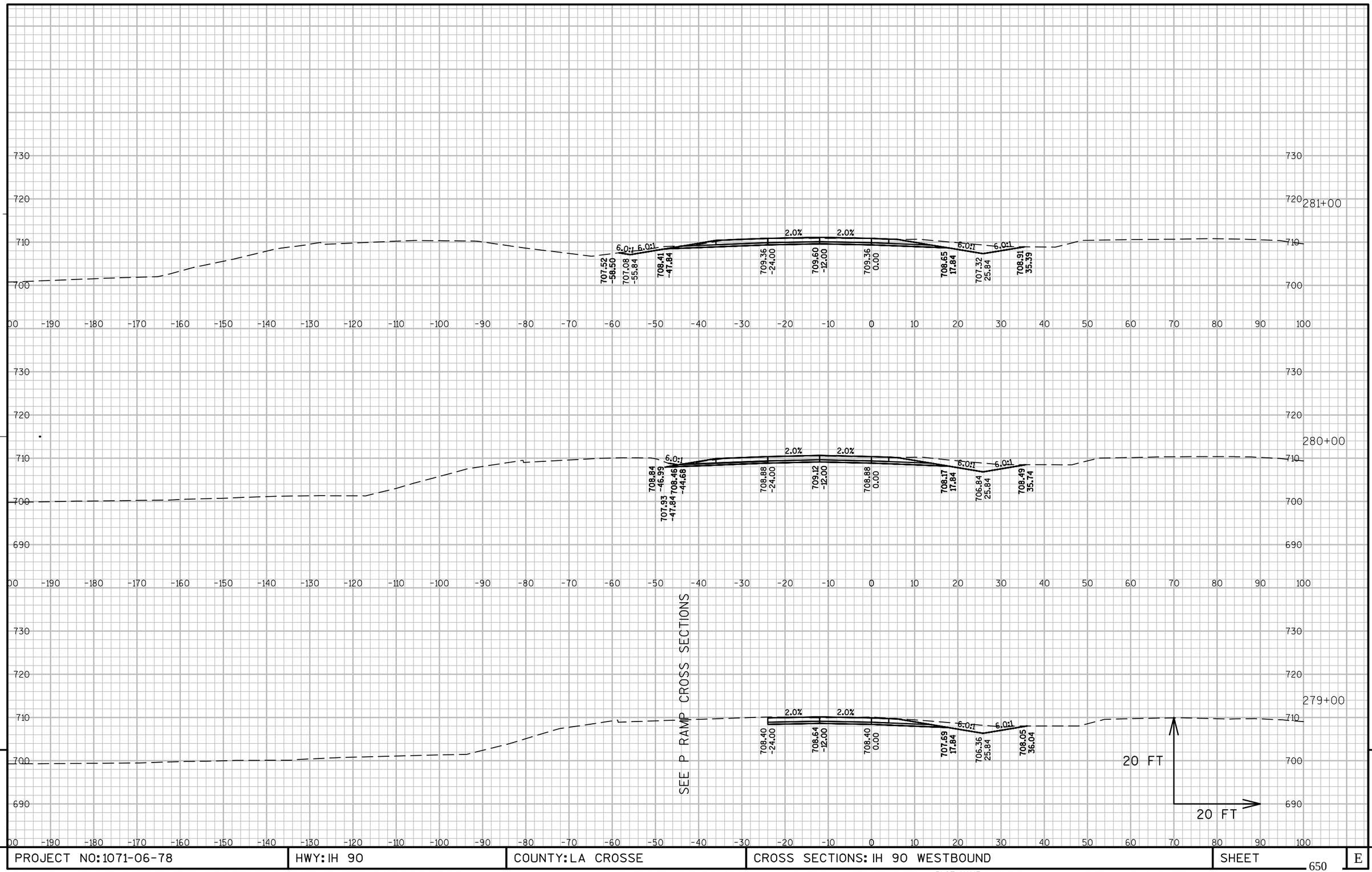
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 648	E



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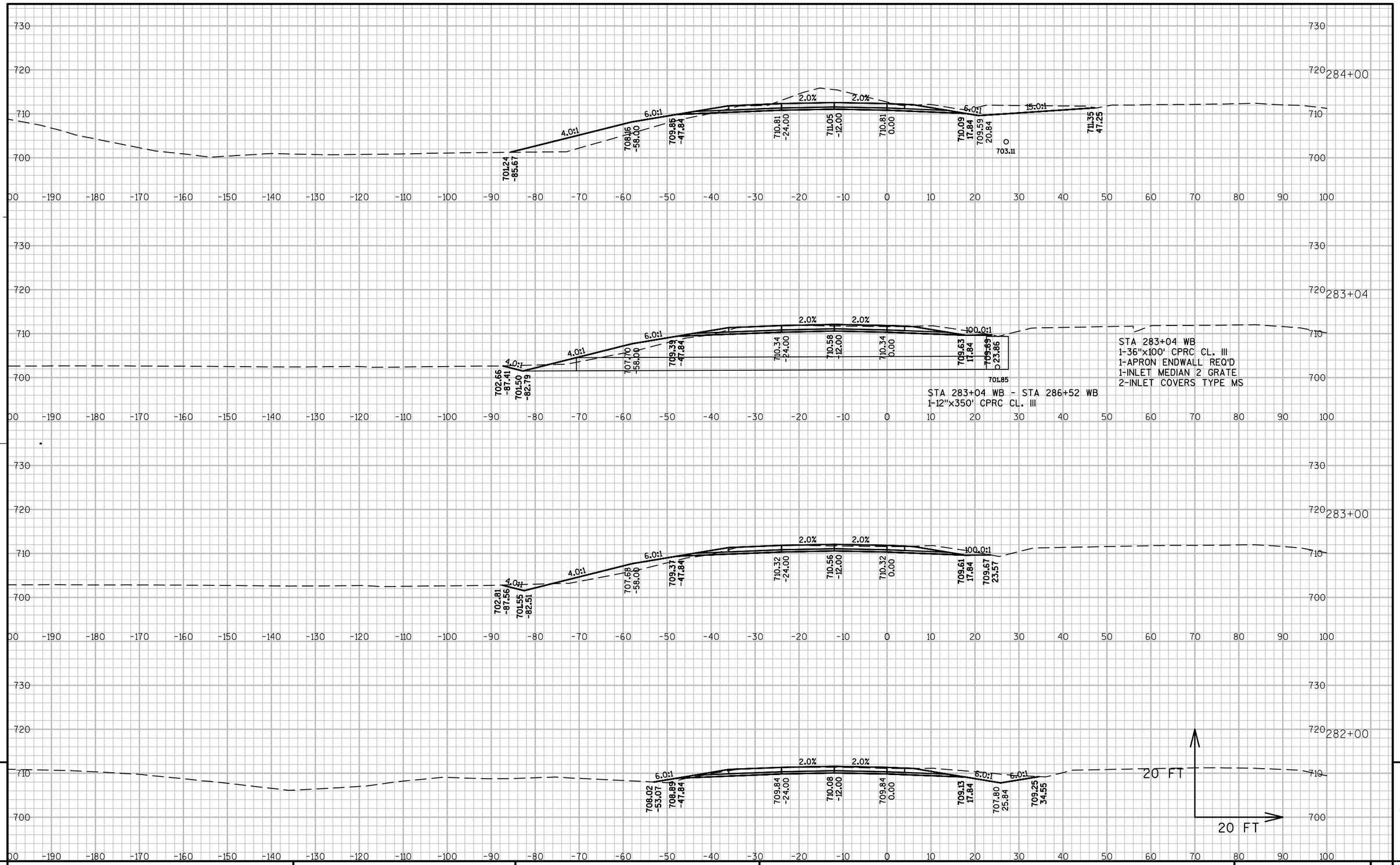
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 649	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 650	E

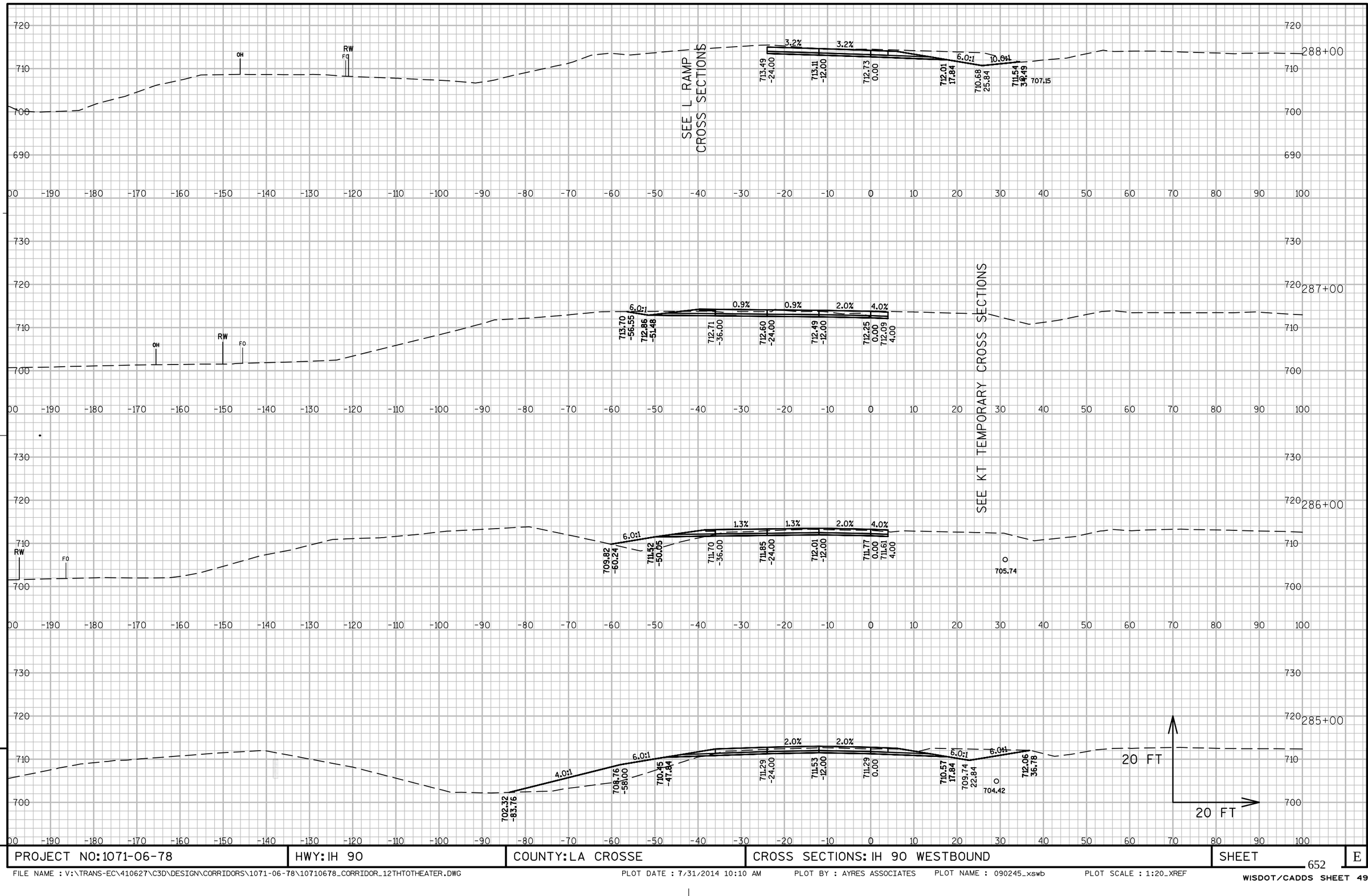
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 651	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:10 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090244_xswb PLOT SCALE : 1:20_XREF

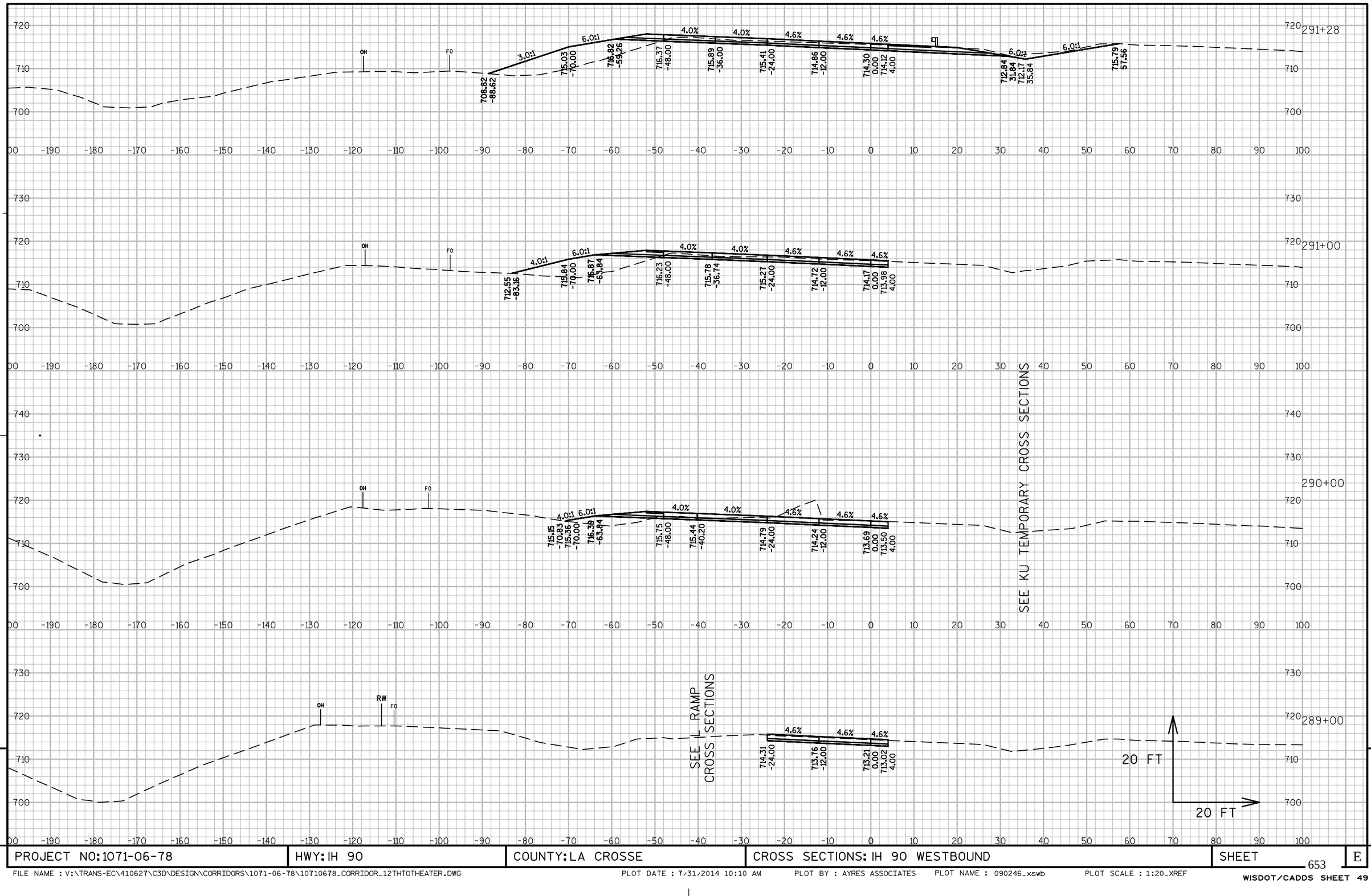
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 652	E

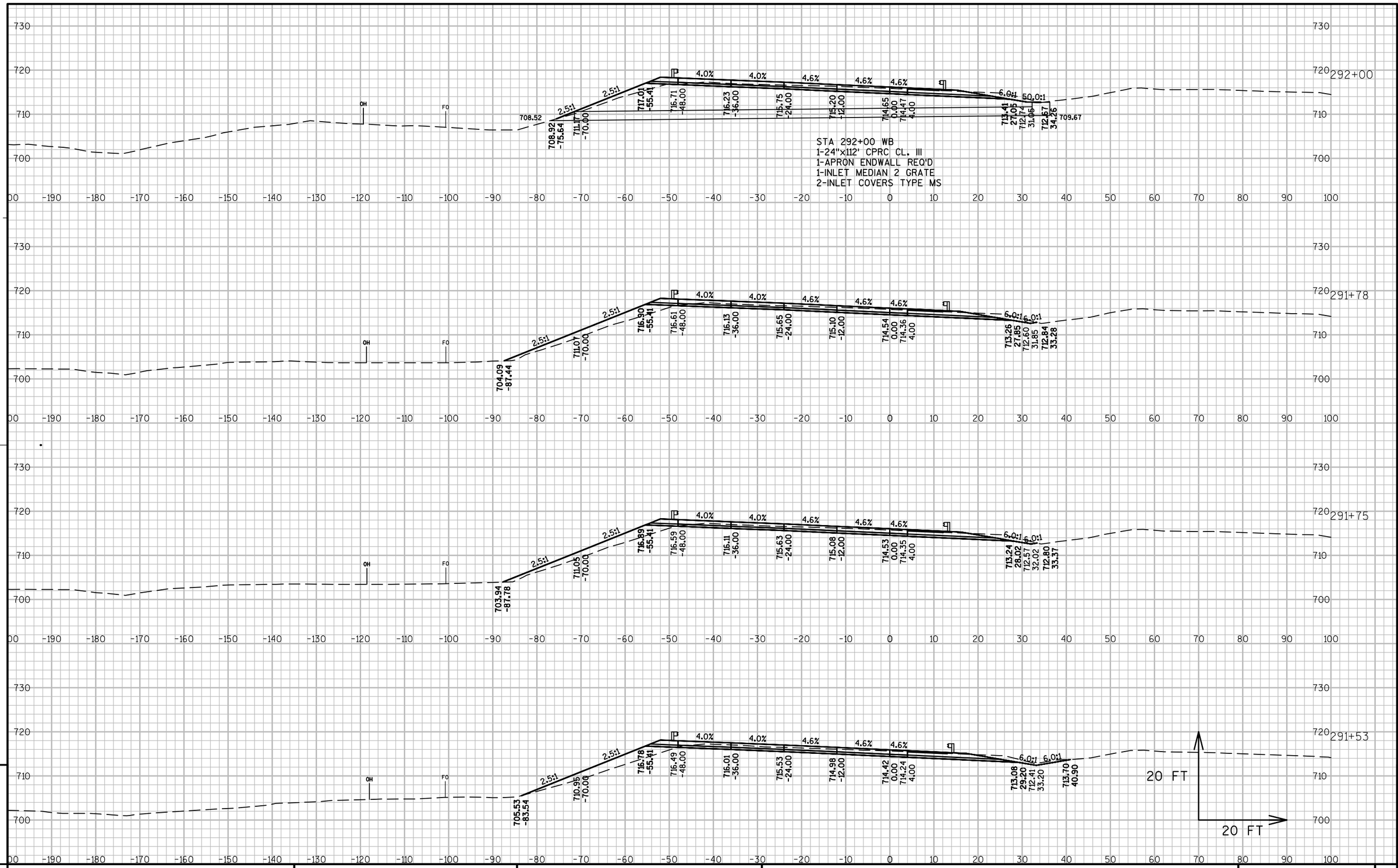
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WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 653	E

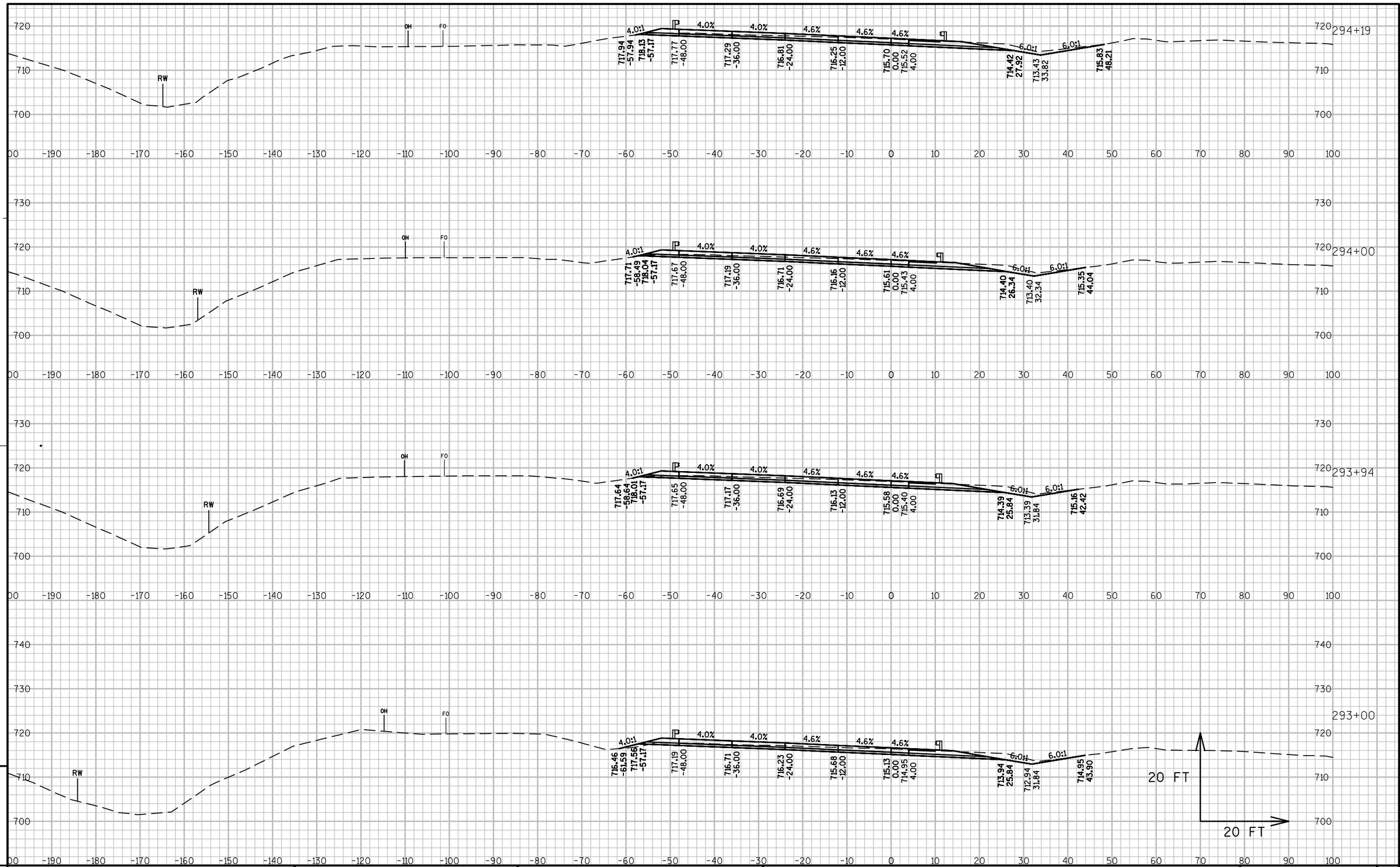
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:10 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090246_xswb PLOT SCALE : 1:20_XREF



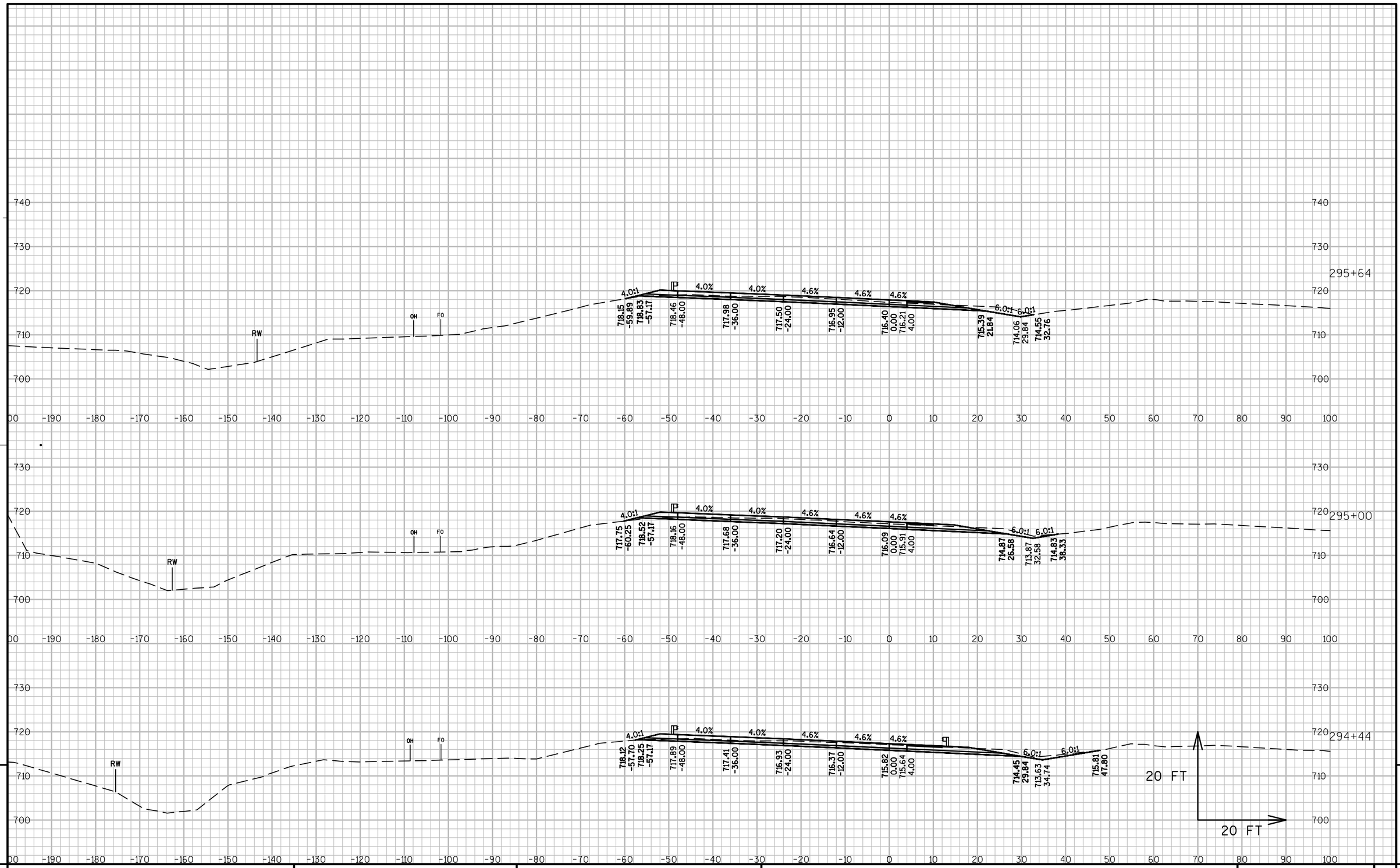
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 654	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:10 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090247_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



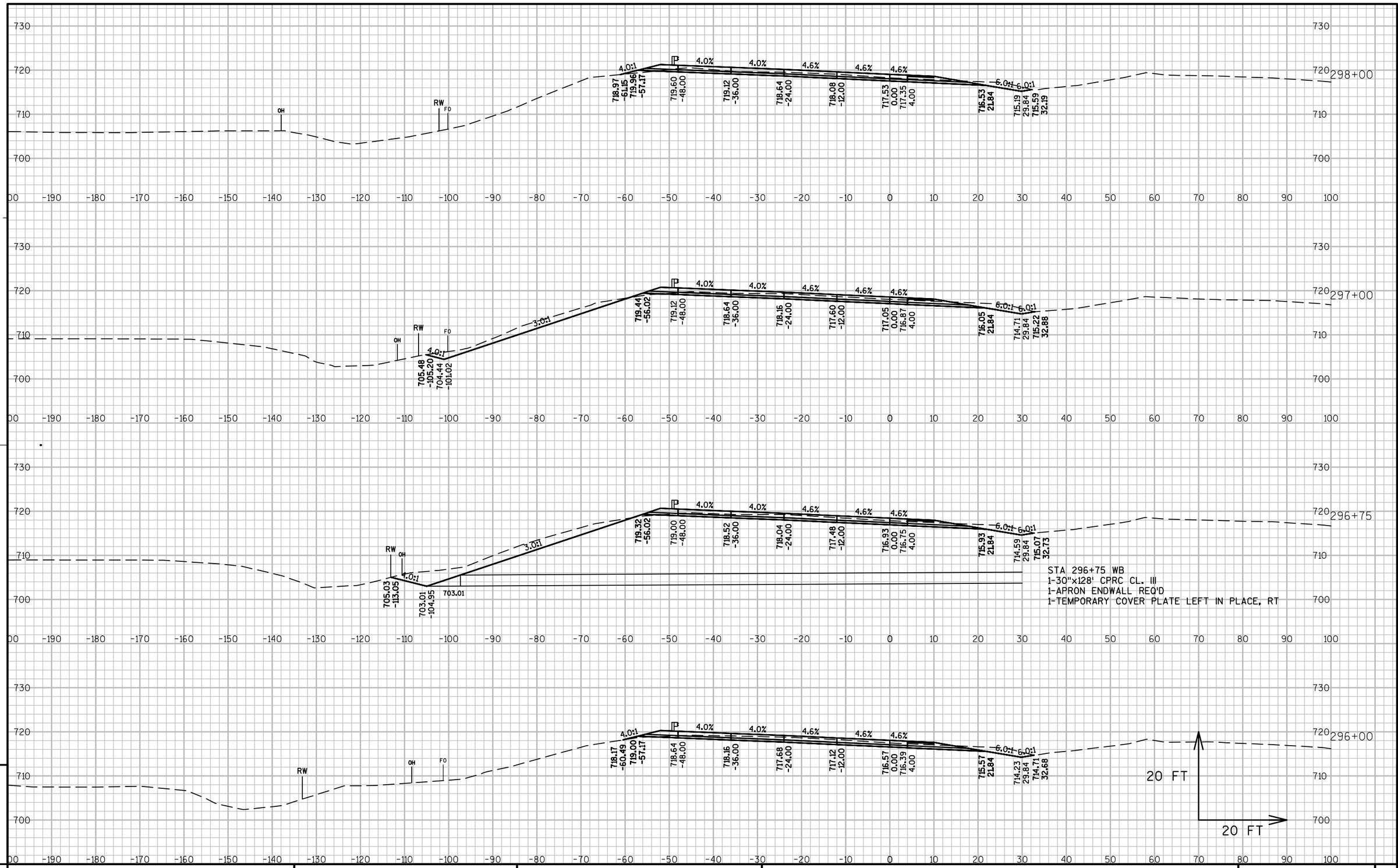
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 655	E



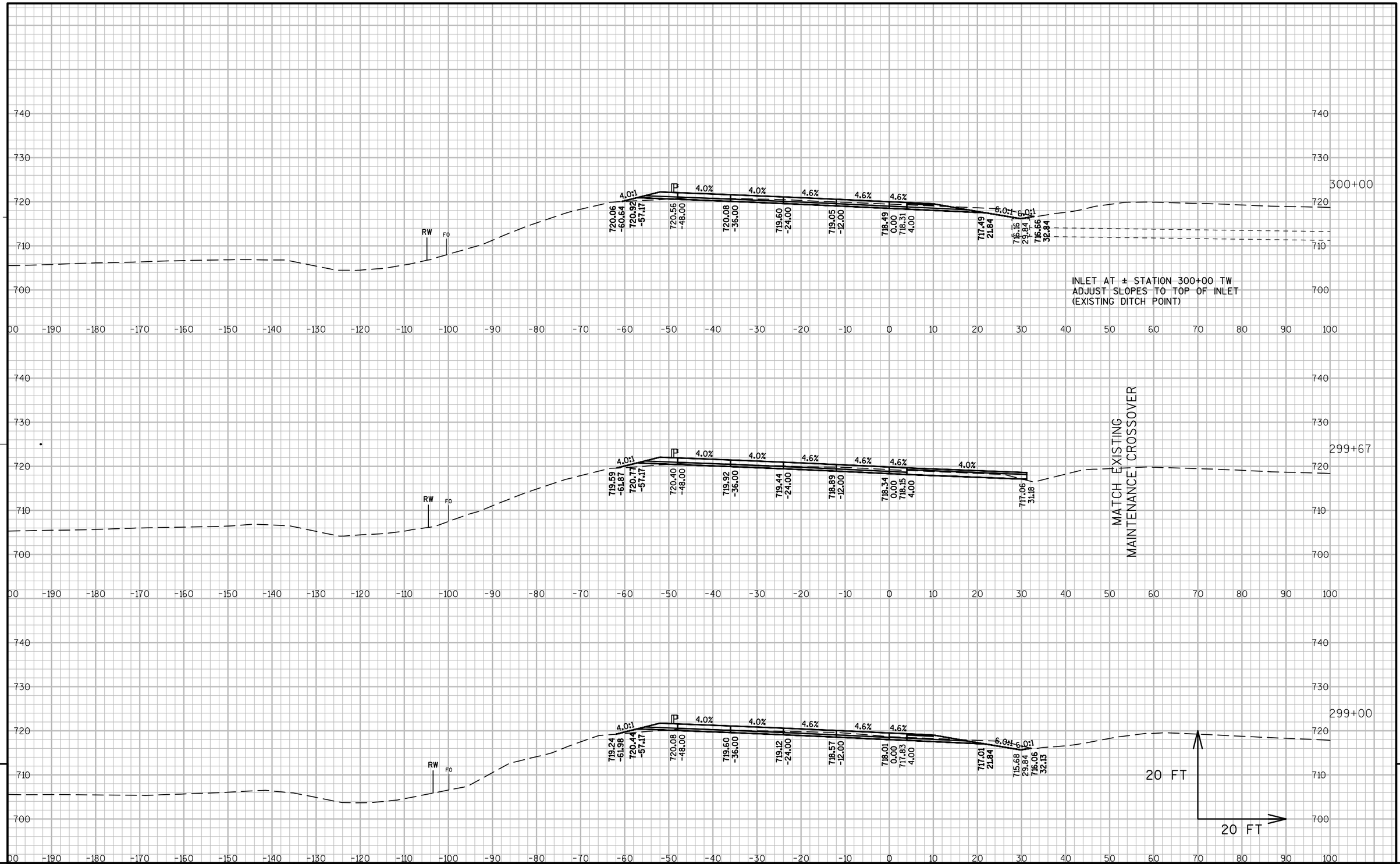
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 656	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:11 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090249_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

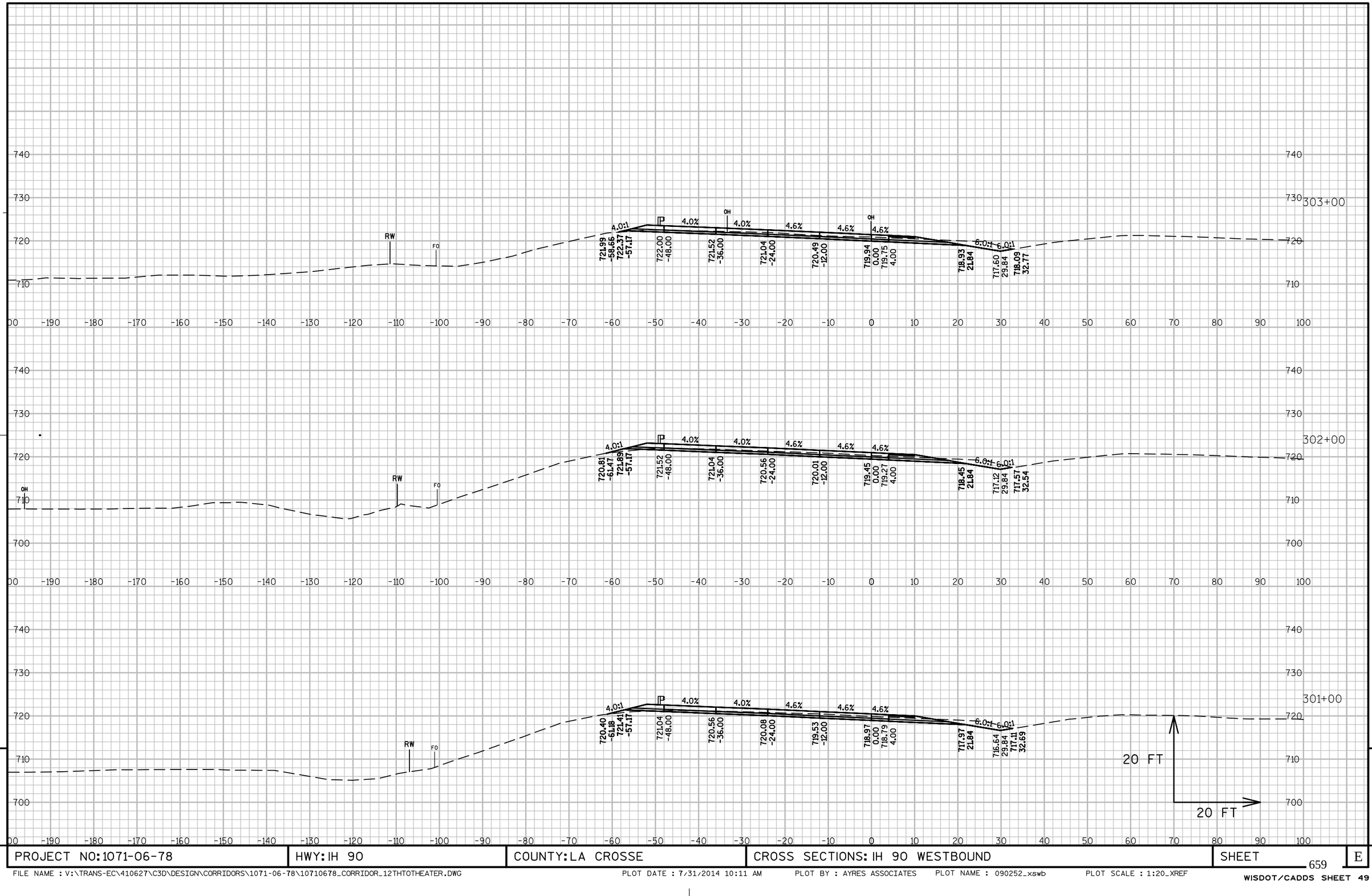


PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS:IH 90 WESTBOUND	SHEET 657	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 658	E

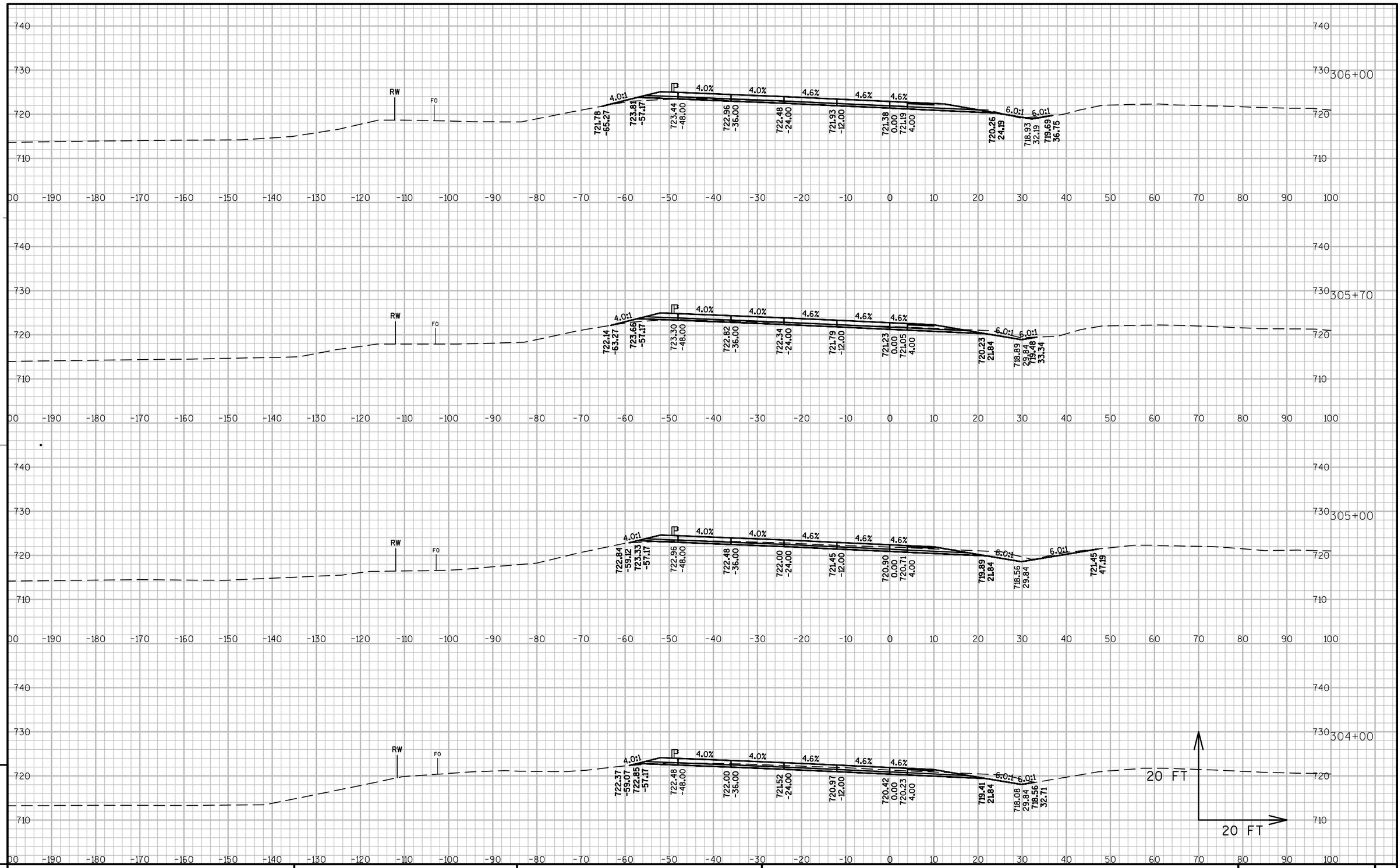
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 659	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:11 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090252_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



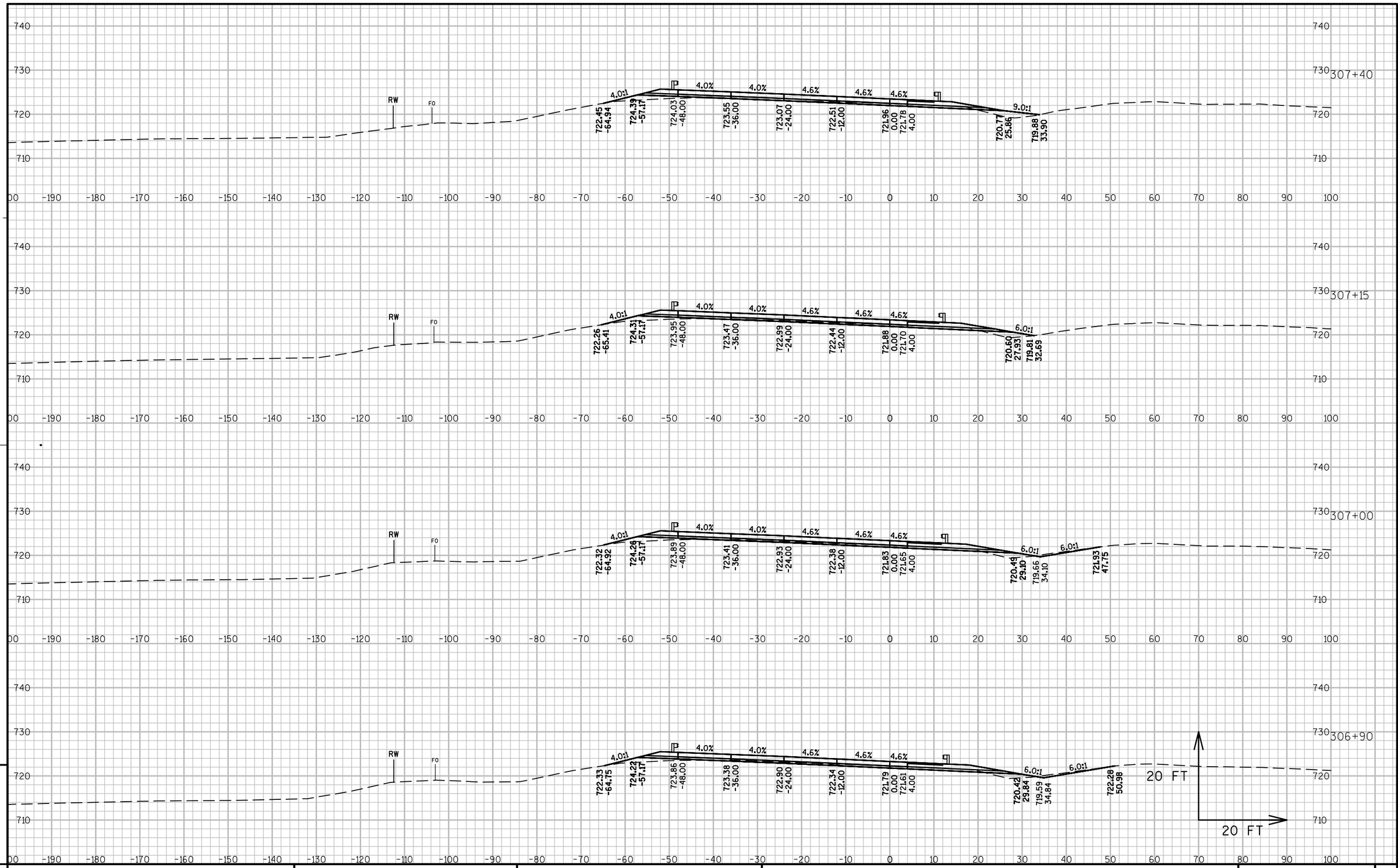
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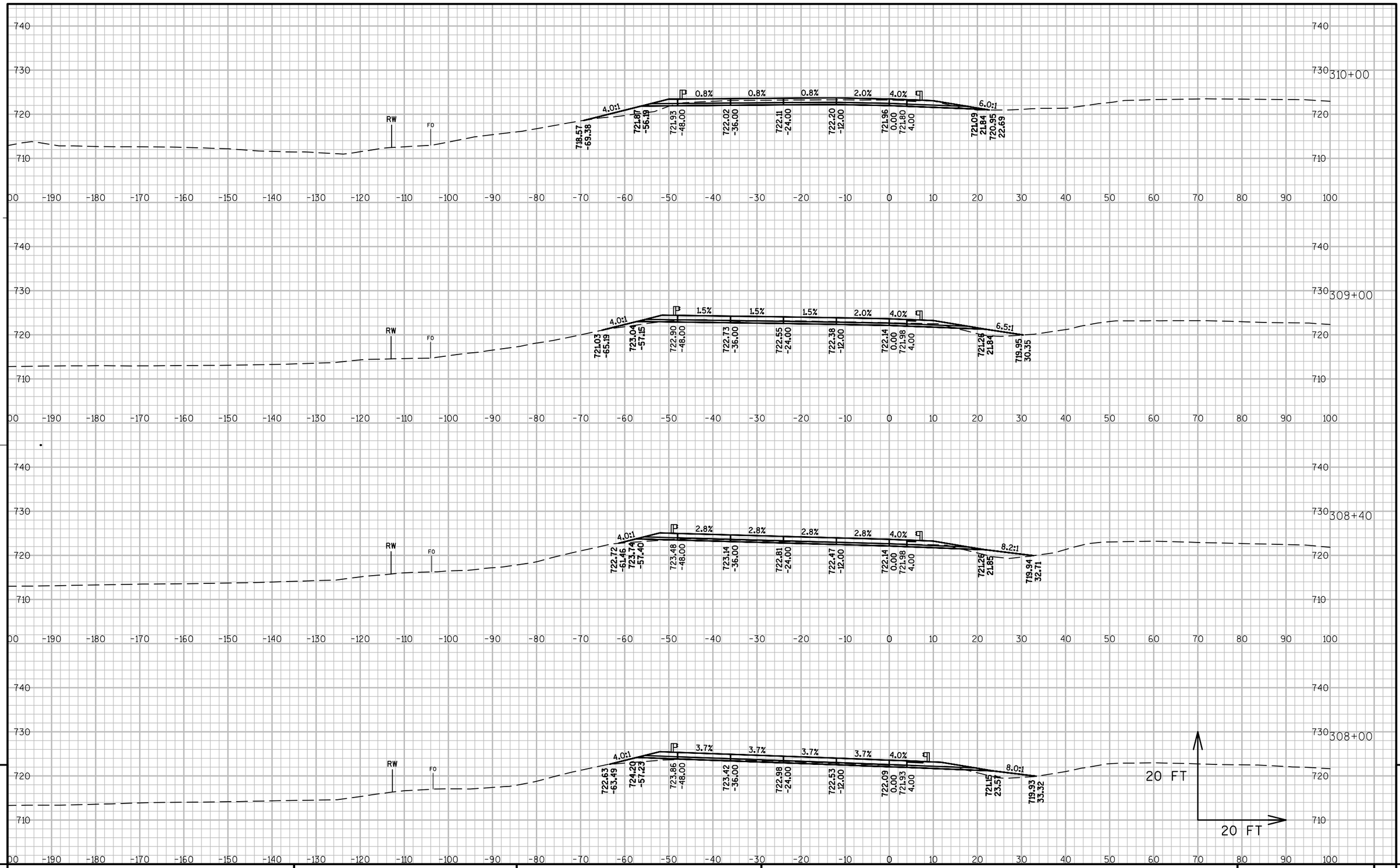
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 660	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:12 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090253_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



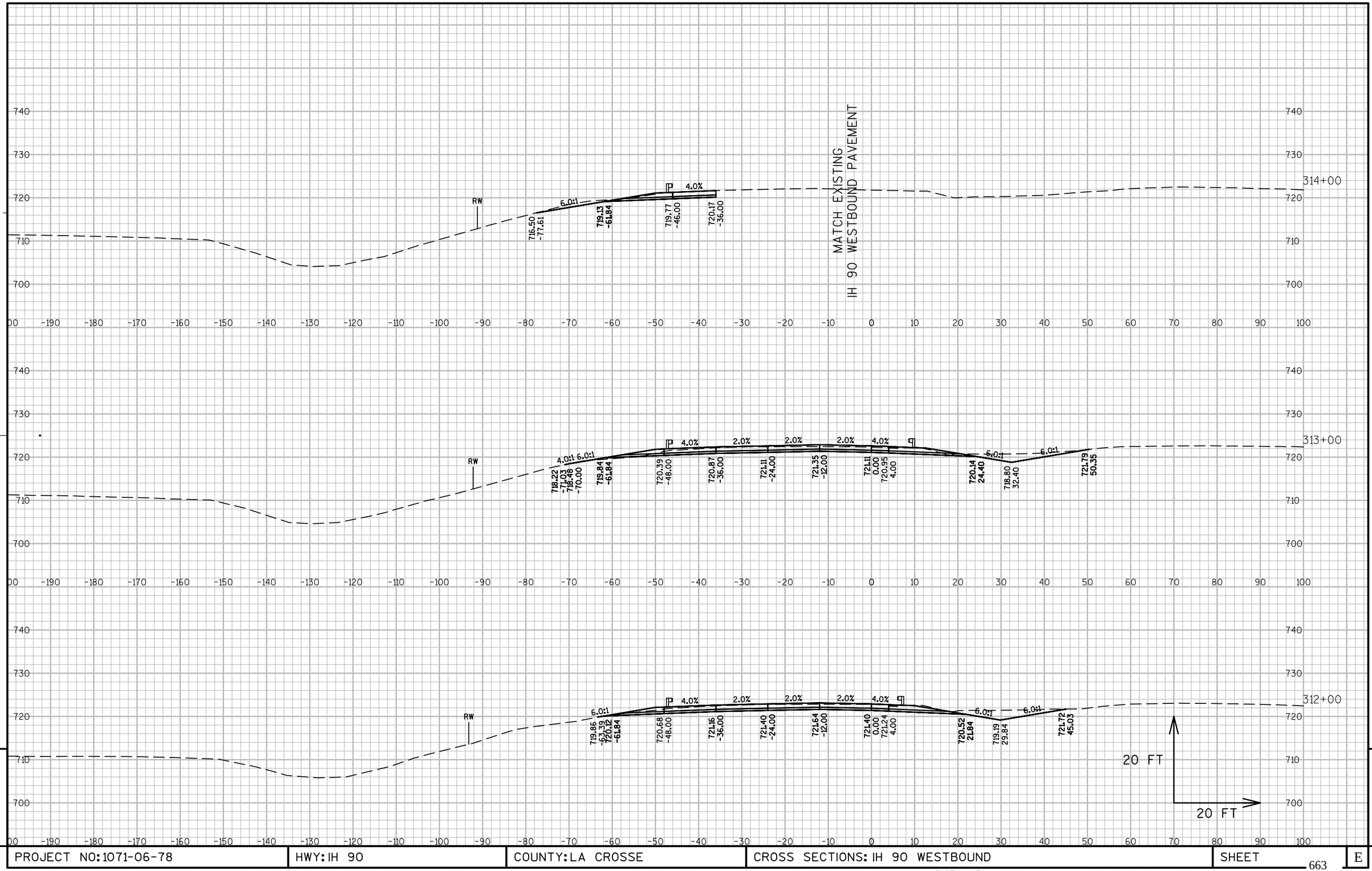
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 661	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 662	E

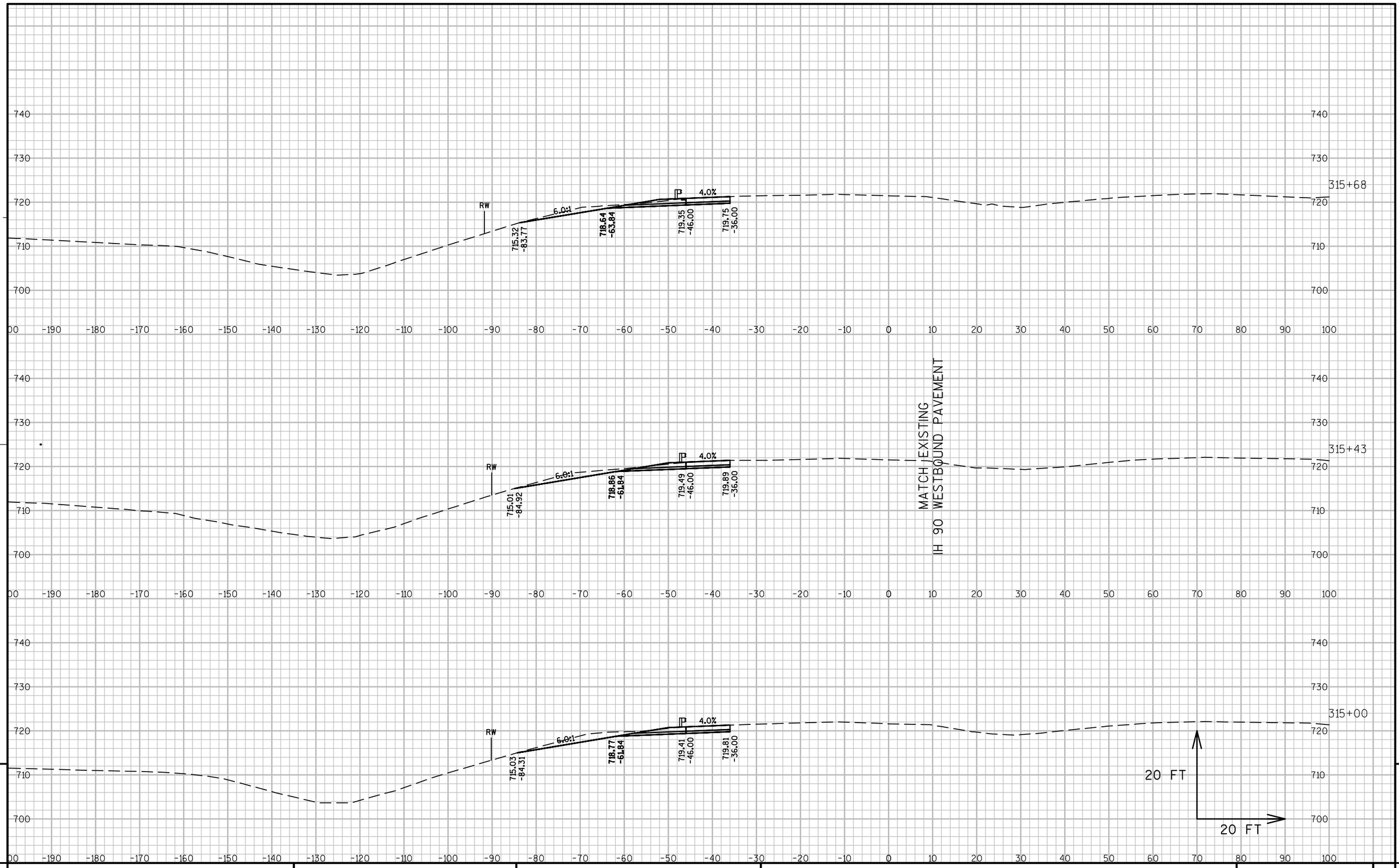
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:12 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090255_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 663	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:12 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090256_xswb PLOT SCALE : 1:20_XREF



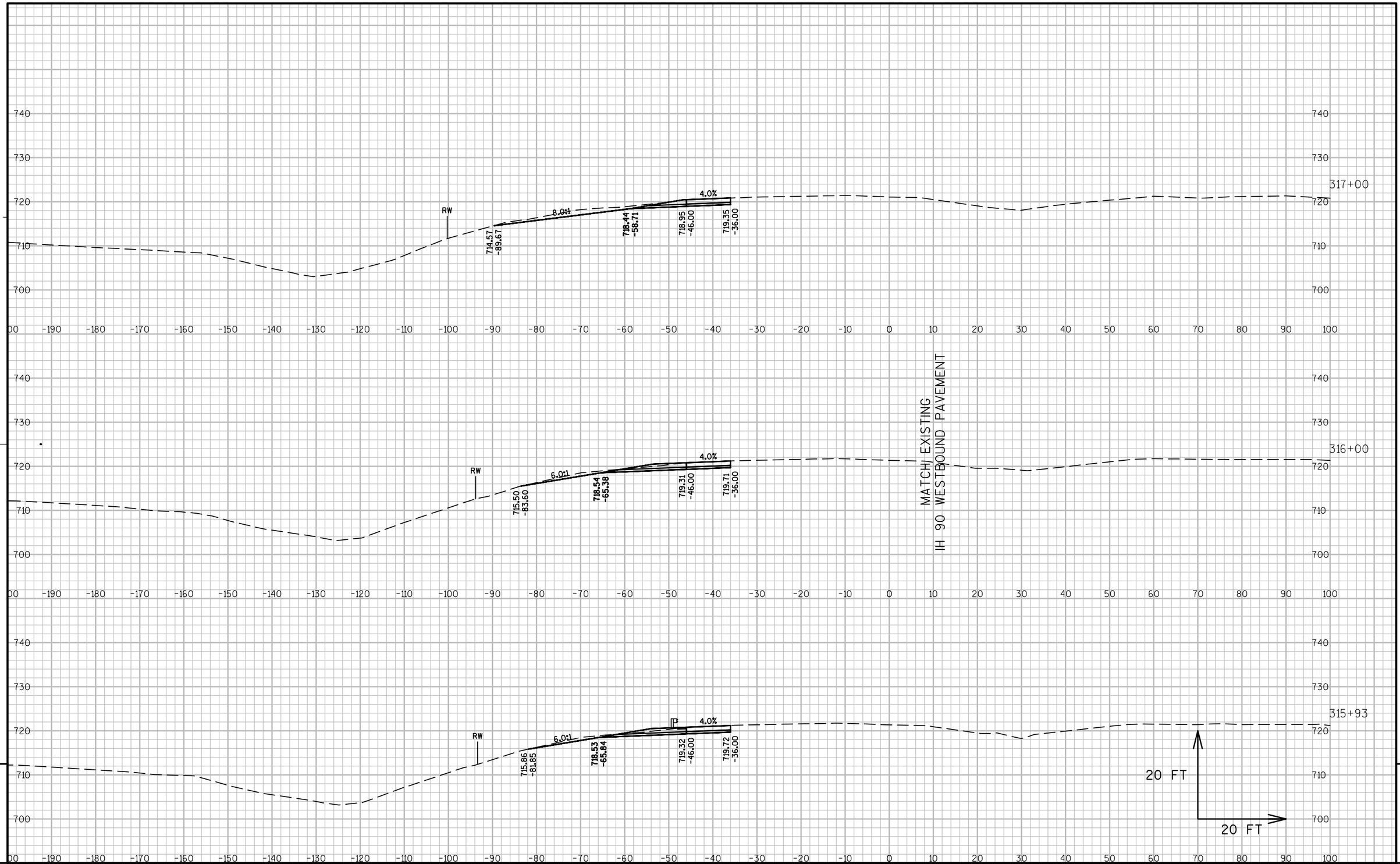
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 664	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:12 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090257_xswb PLOT SCALE : 1:20_XREF

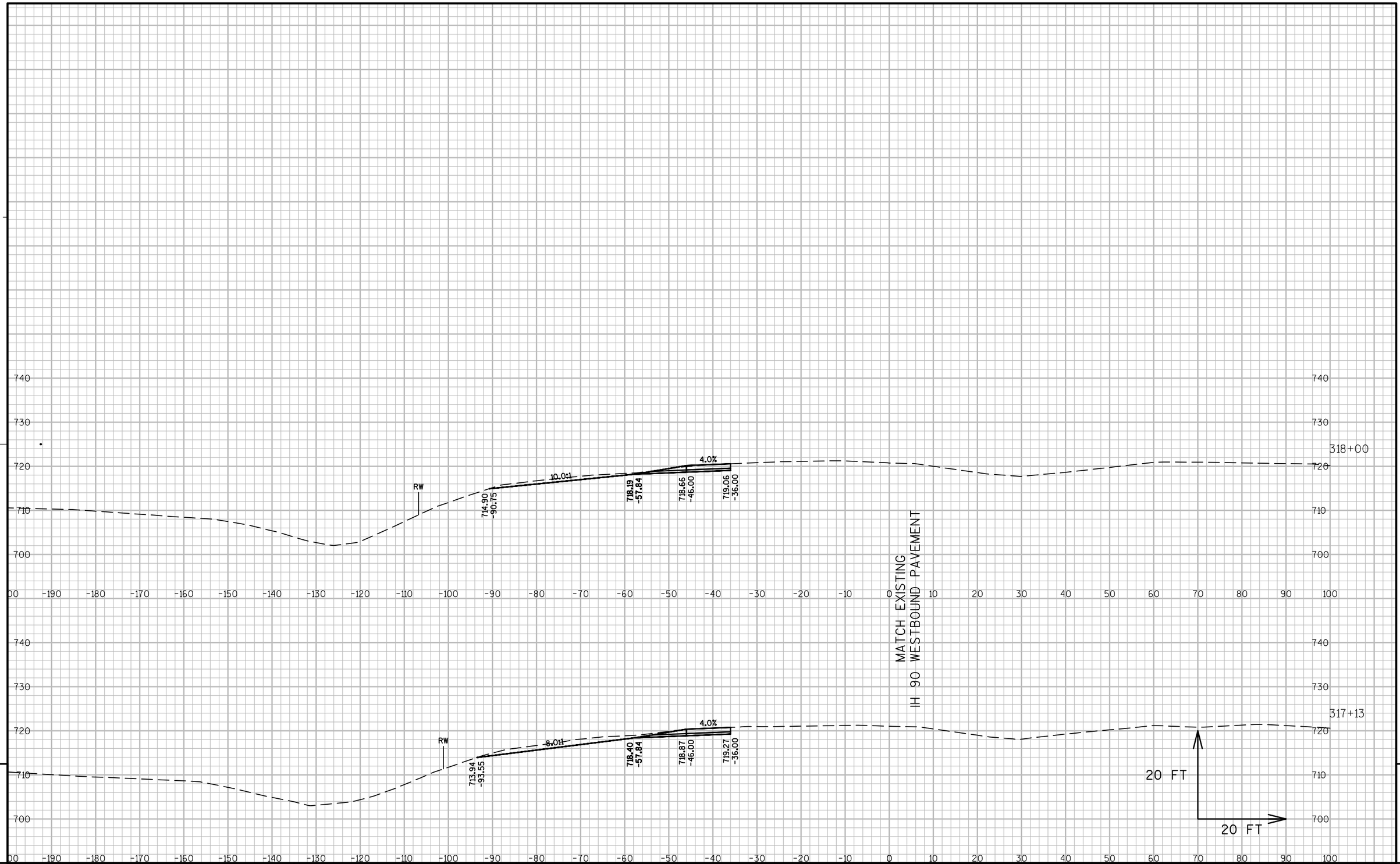
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 665	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:13 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090258_xswb PLOT SCALE : 1:20_XREF

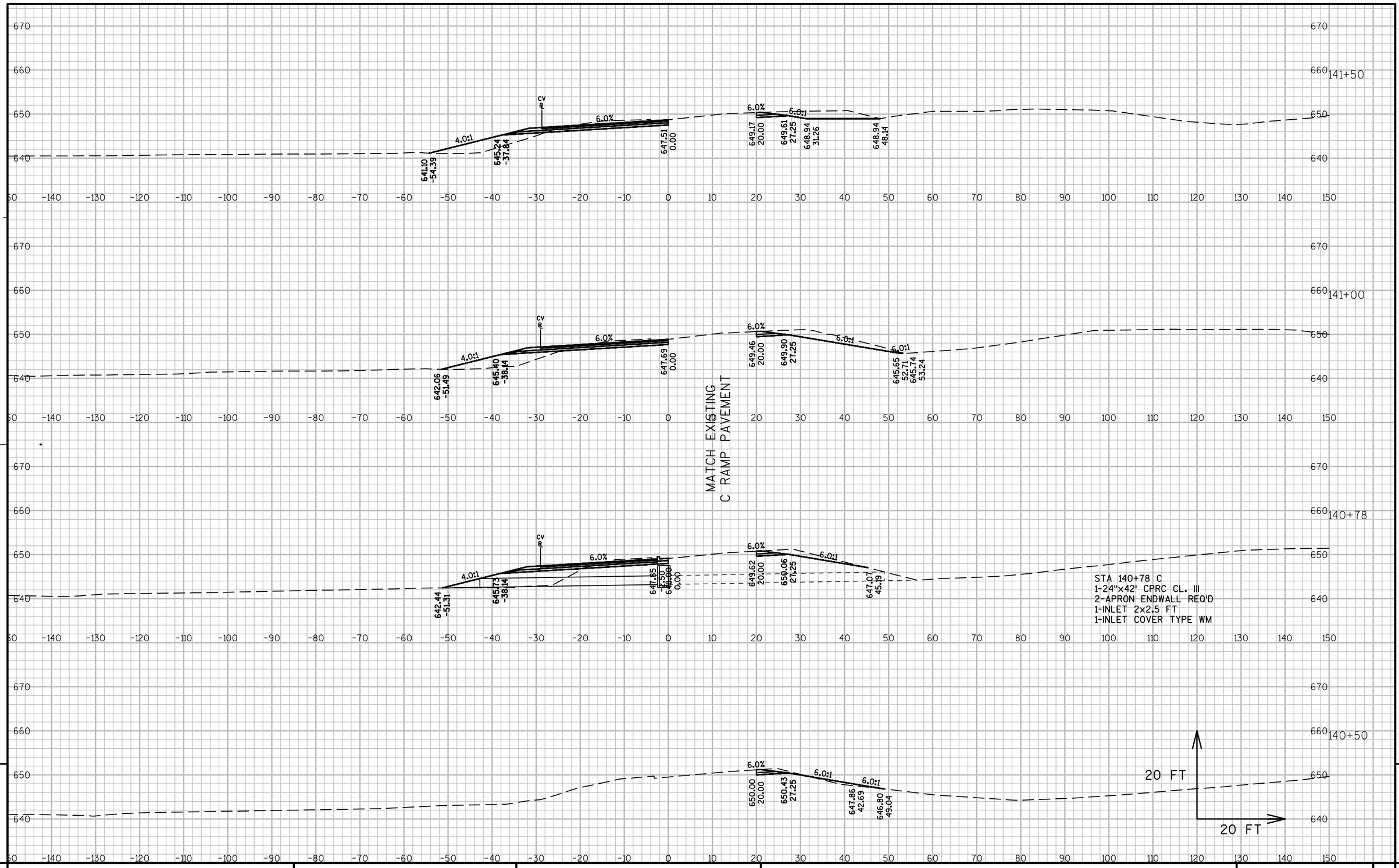
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: IH 90 WESTBOUND	SHEET 666	E

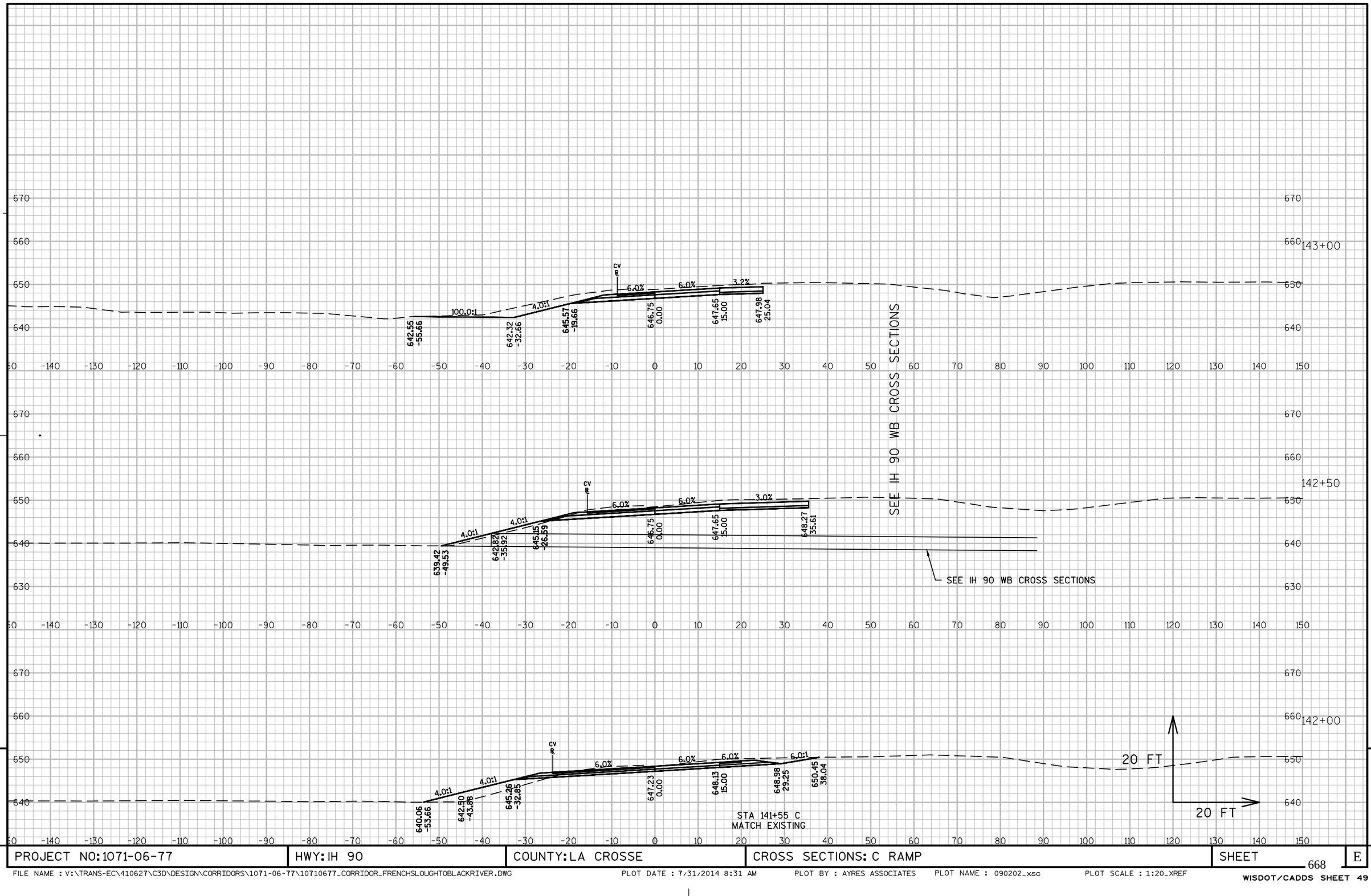
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_12THTOTHEATER.DWG PLOT DATE : 7/31/2014 10:13 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090259_xswb PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



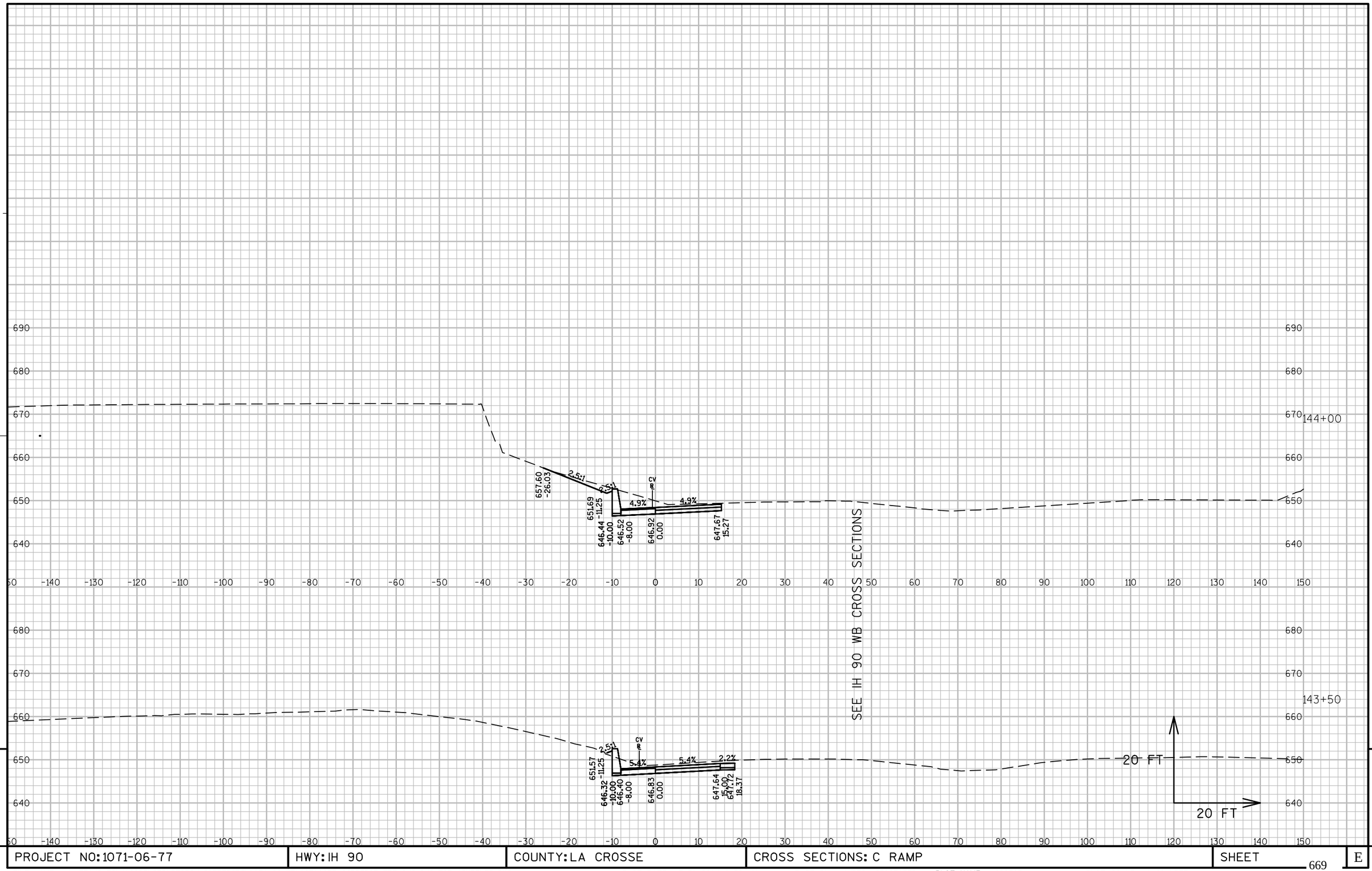
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: C RAMP	SHEET 667	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:31 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsc PLOT SCALE : 1:20_XREF



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: C RAMP	SHEET 668	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:31 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xsc PLOT SCALE : 1:20_XREF

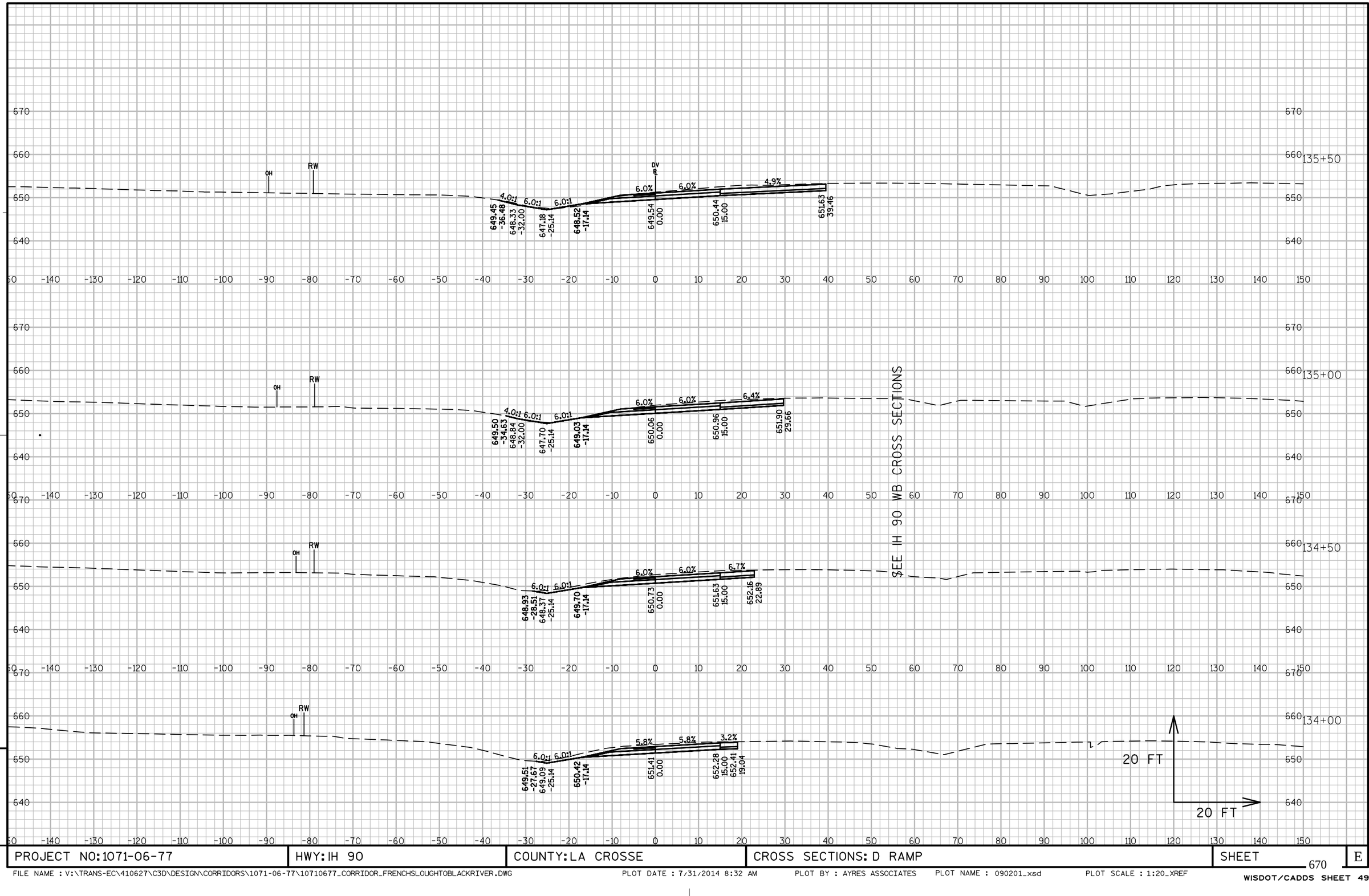


9

9

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: C RAMP	SHEET 669	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:32 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xsc PLOT SCALE : 1:20_XREF

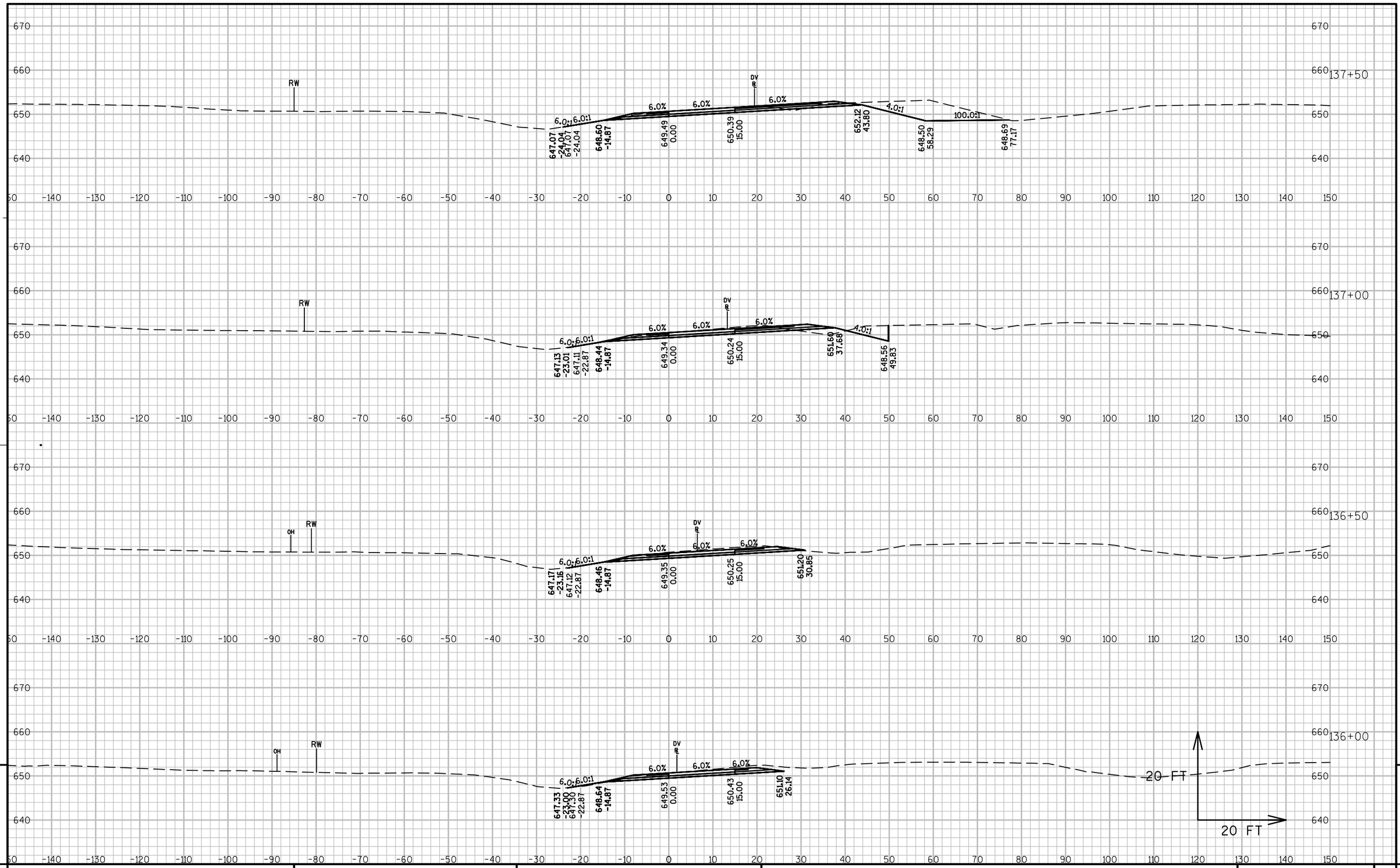


9

9

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: D RAMP	SHEET 670	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:32 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsd PLOT SCALE : 1:20_XREF



9

9

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: D RAMP	SHEET 671	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:32 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xsd PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

MATCH EXISTING
D RAMP PAVEMENT

139+00

RW

DV
R

6.0%

6.0:1

100.0:1

651.86
18.00

652.29
25.25

650.84
33.94

650.76
42.17

138+50

RW

DV
R

6.0%

6.0:1

100.0:1

651.35
18.00

651.78
25.25

647.44
51.29

647.24
71.54

STA 138+25 D
MATCH EXISTING

138+05

RW

DV
R

6.0%

6.0%

6.0%

6.0%

4.0:1

6.0:1

6.0:1

4.0:1

6.0:1

649.00
-40.41

646.89
-32.00

646.50
-29.69

648.97
-14.87

649.86
0.00

650.76
15.00

652.83
49.39

646.00
76.69

646.26
78.25

STA 138+05 D
1-24"x86' CPRC CL. III
2-APRON ENDWALLS REQ'D

138+00

RW

DV
R

6.0%

6.0%

6.0%

6.0%

4.0:1

6.0:1

6.0:1

4.0:1

6.0:1

648.23
-36.42

647.12
-32.00

648.93
-14.87

649.82
0.00

650.72
15.00

652.76
48.93

646.10
75.56

646.52
78.08

20 FT

20 FT

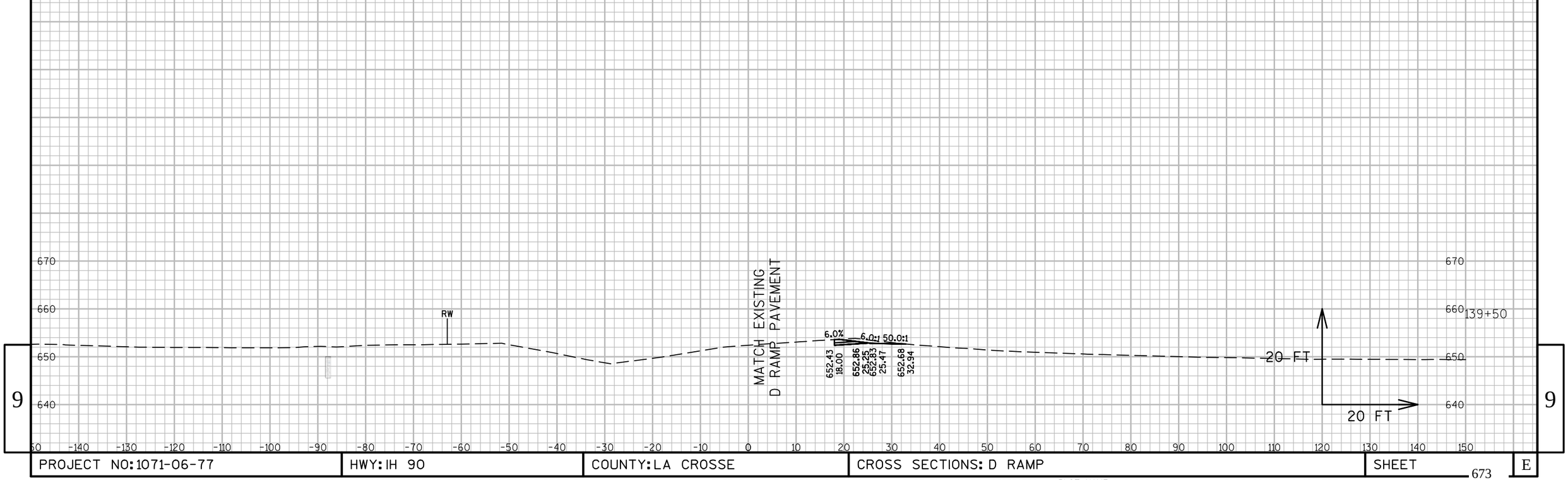
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PROJECT NO:1071-06-77	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS:D RAMP	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:33 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xsd PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

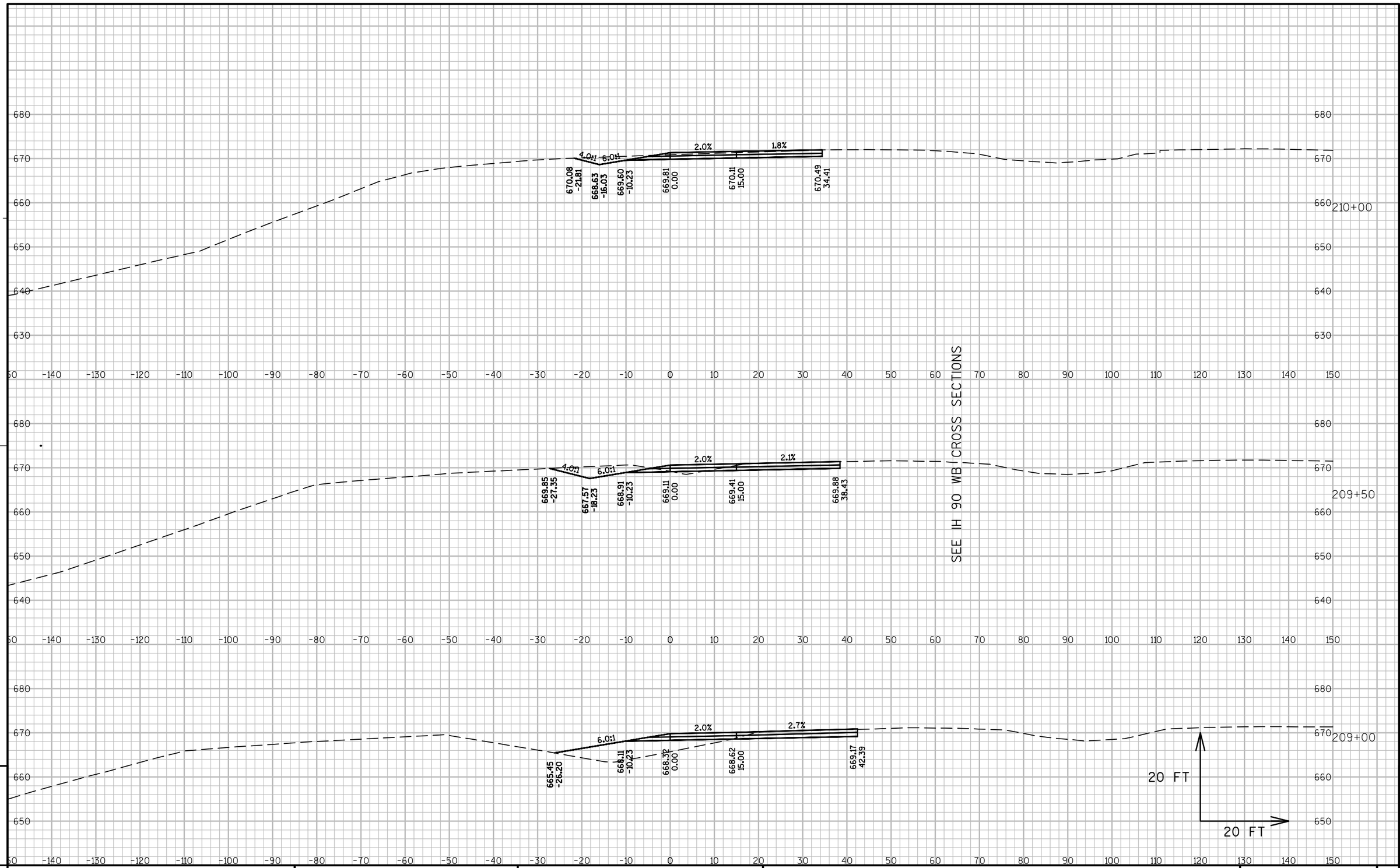


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PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: D RAMP	SHEET 673	E

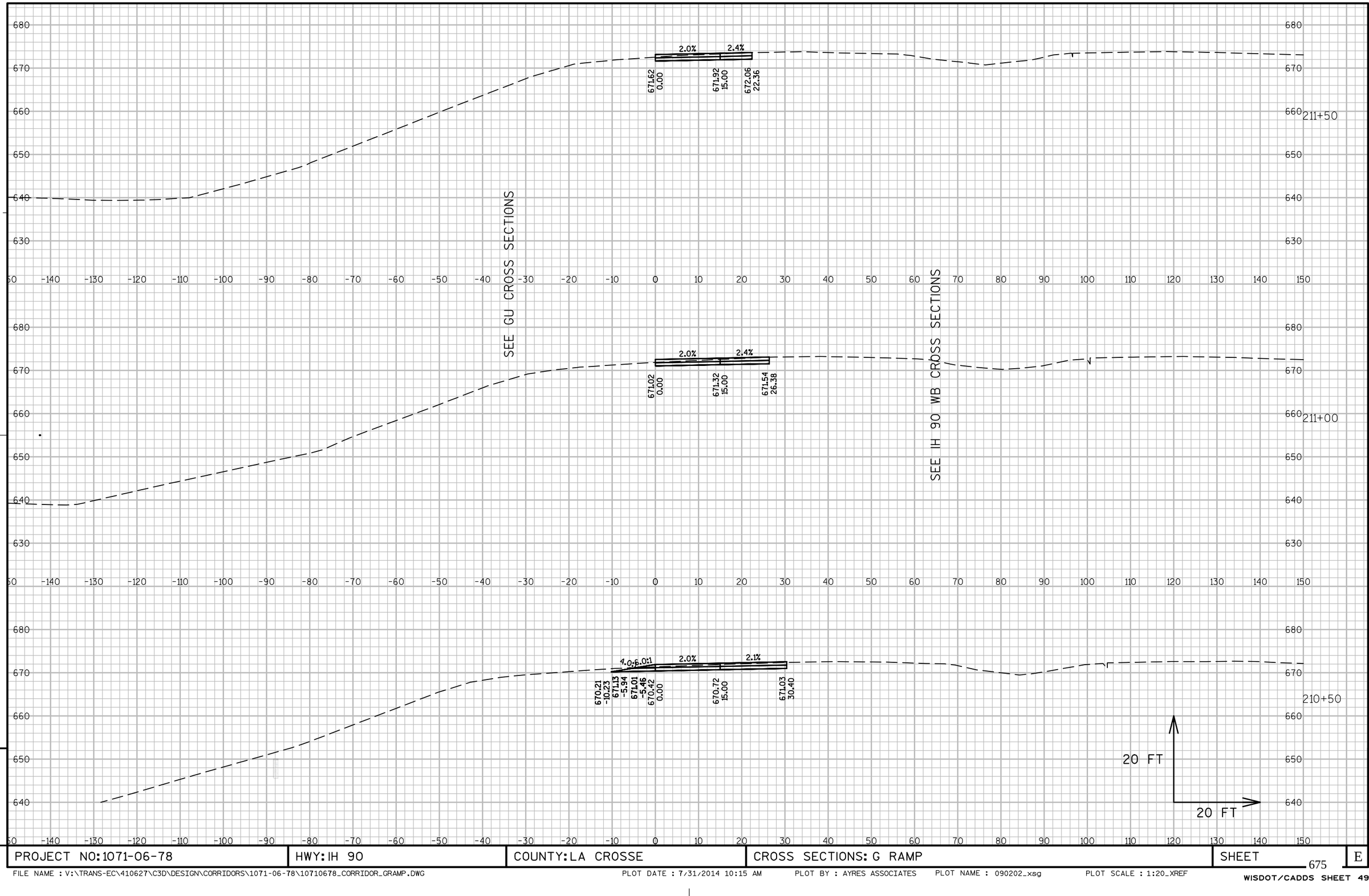
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_FRENCHSLOUGHTOBLACKRIVER.DWG PLOT DATE : 7/31/2014 8:33 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090204_xsd PLOT SCALE : 1:20_XREF



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: G RAMP	SHEET 674	E

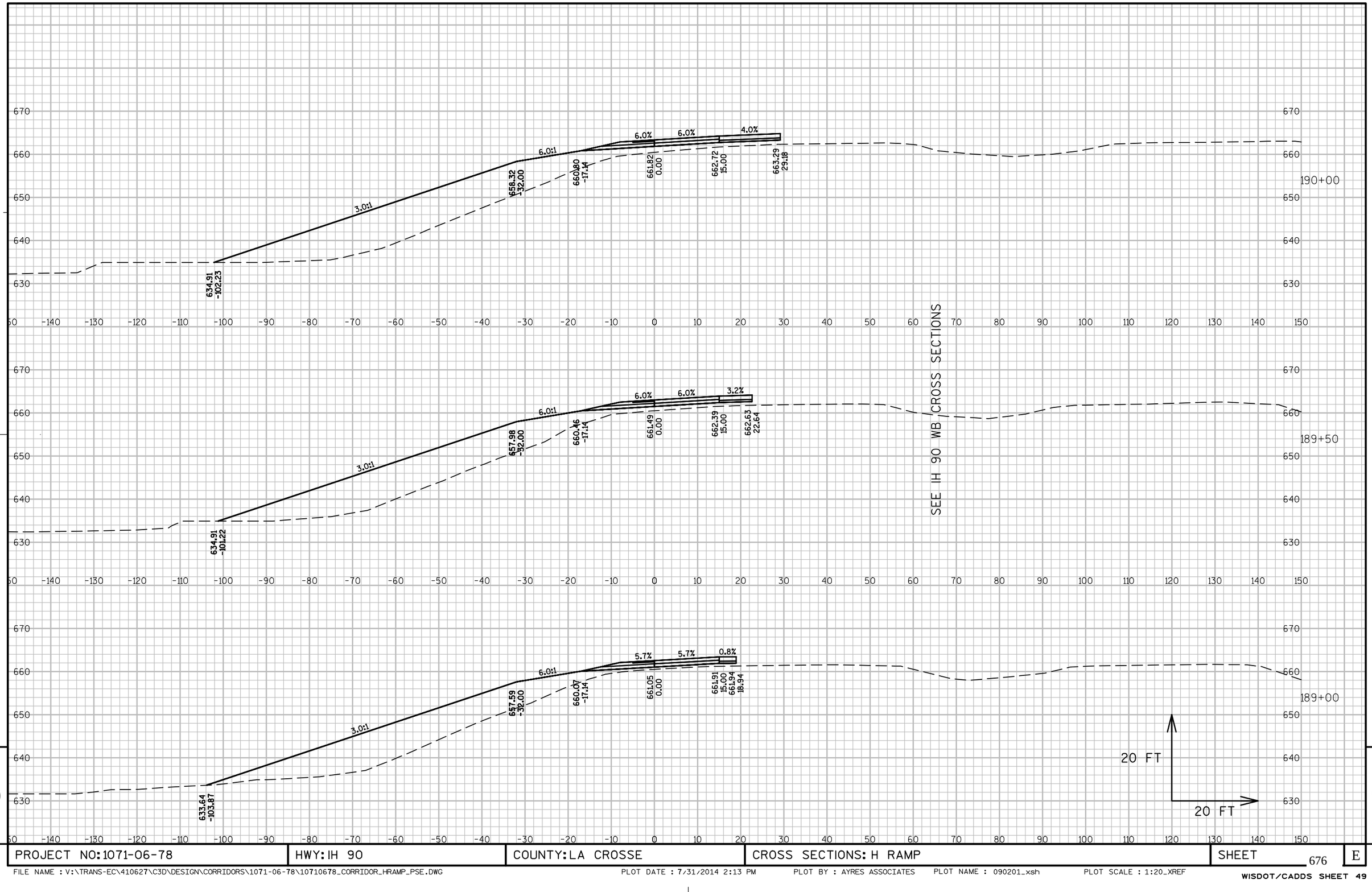
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_GRAMP.DWG PLOT DATE : 7/31/2014 10:15 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsg PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: G RAMP	SHEET 675	E

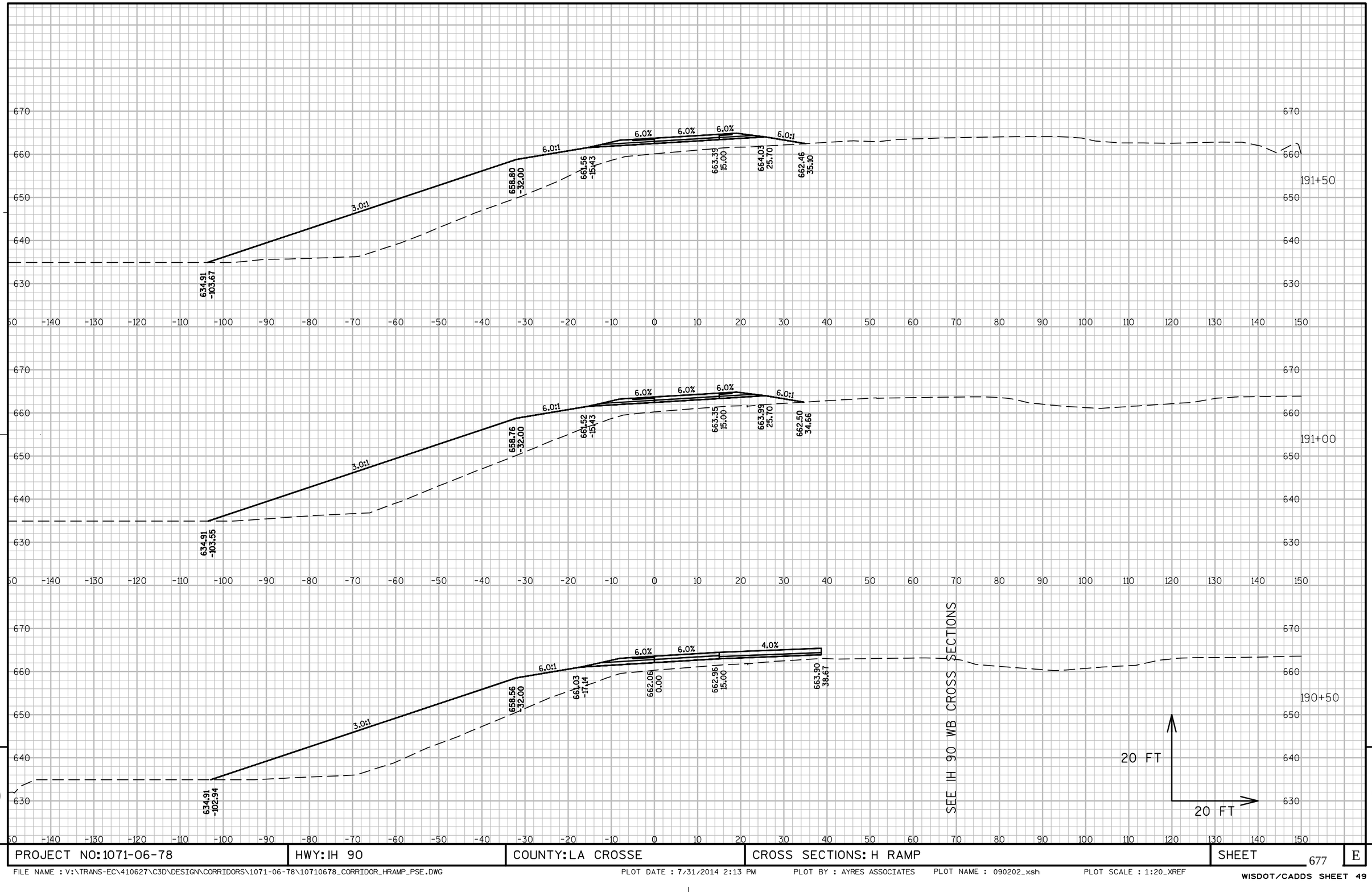
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_GRAMP.DWG PLOT DATE : 7/31/2014 10:15 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xsg PLOT SCALE : 1:20_XREF



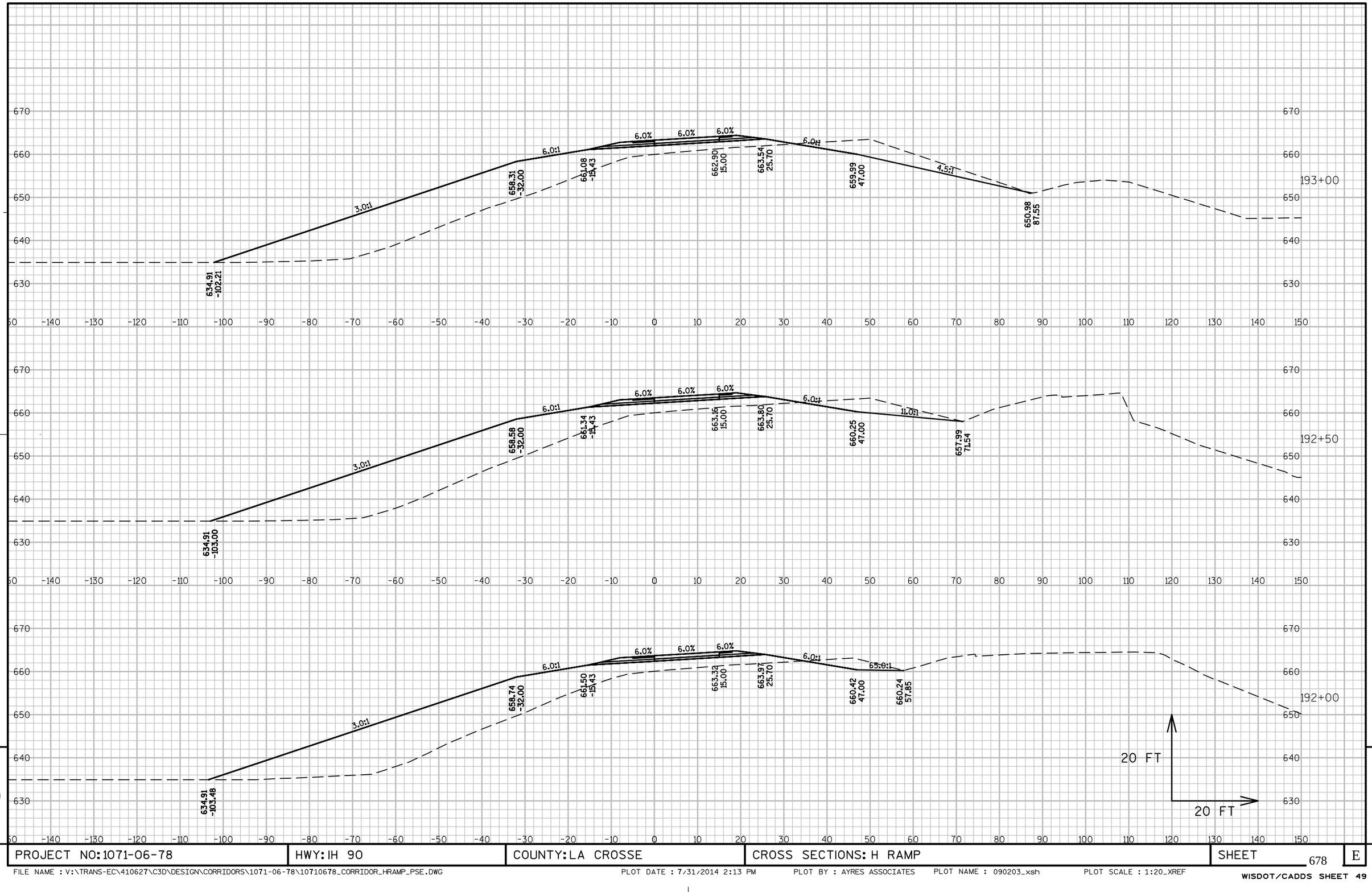
9 9

PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS: H RAMP	SHEET 676	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_HRAMP_PSE.DWG PLOT DATE : 7/31/2014 2:13 PM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsh PLOT SCALE : 1:20_XREF



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: H RAMP	SHEET 677	E

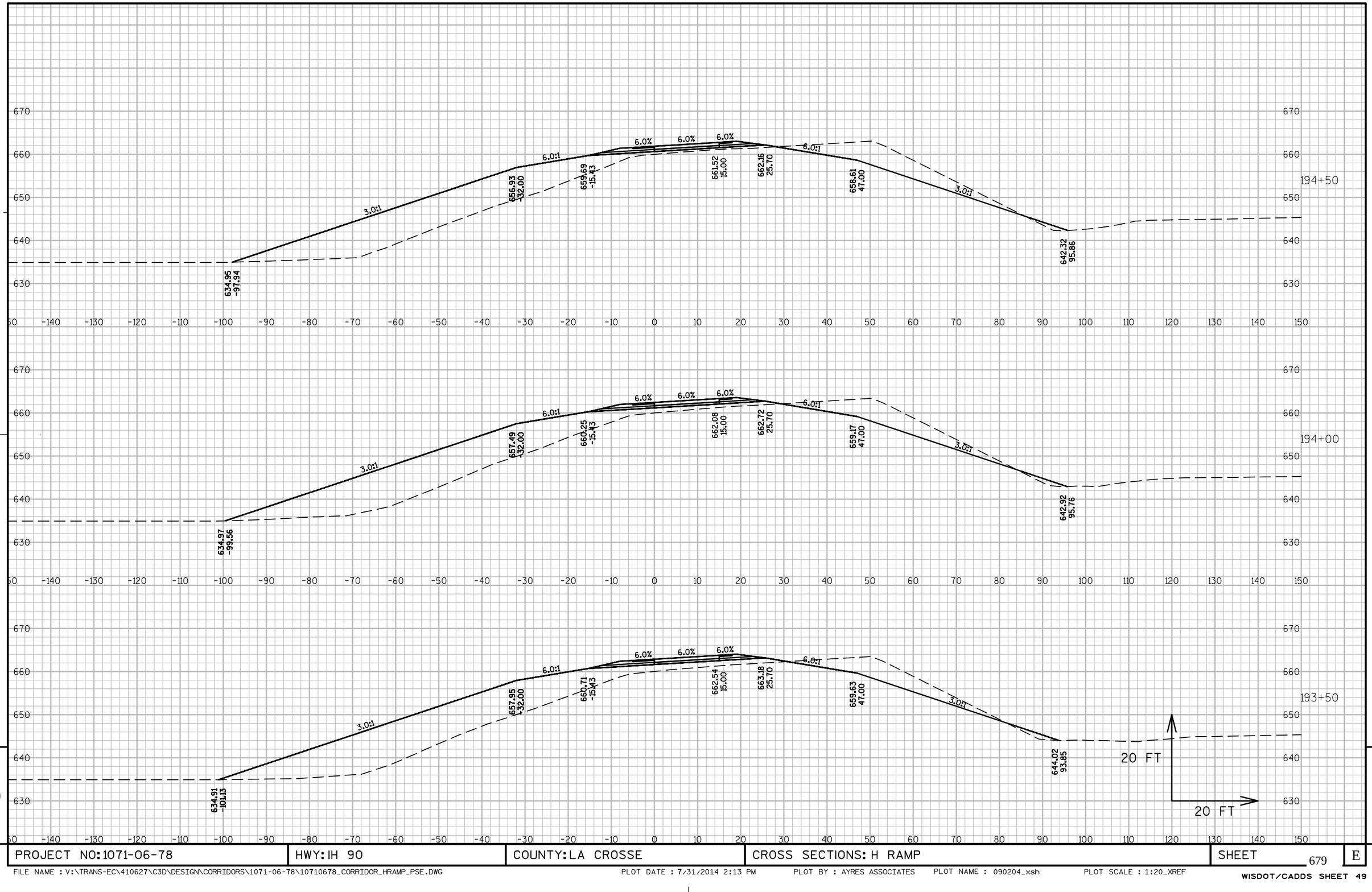


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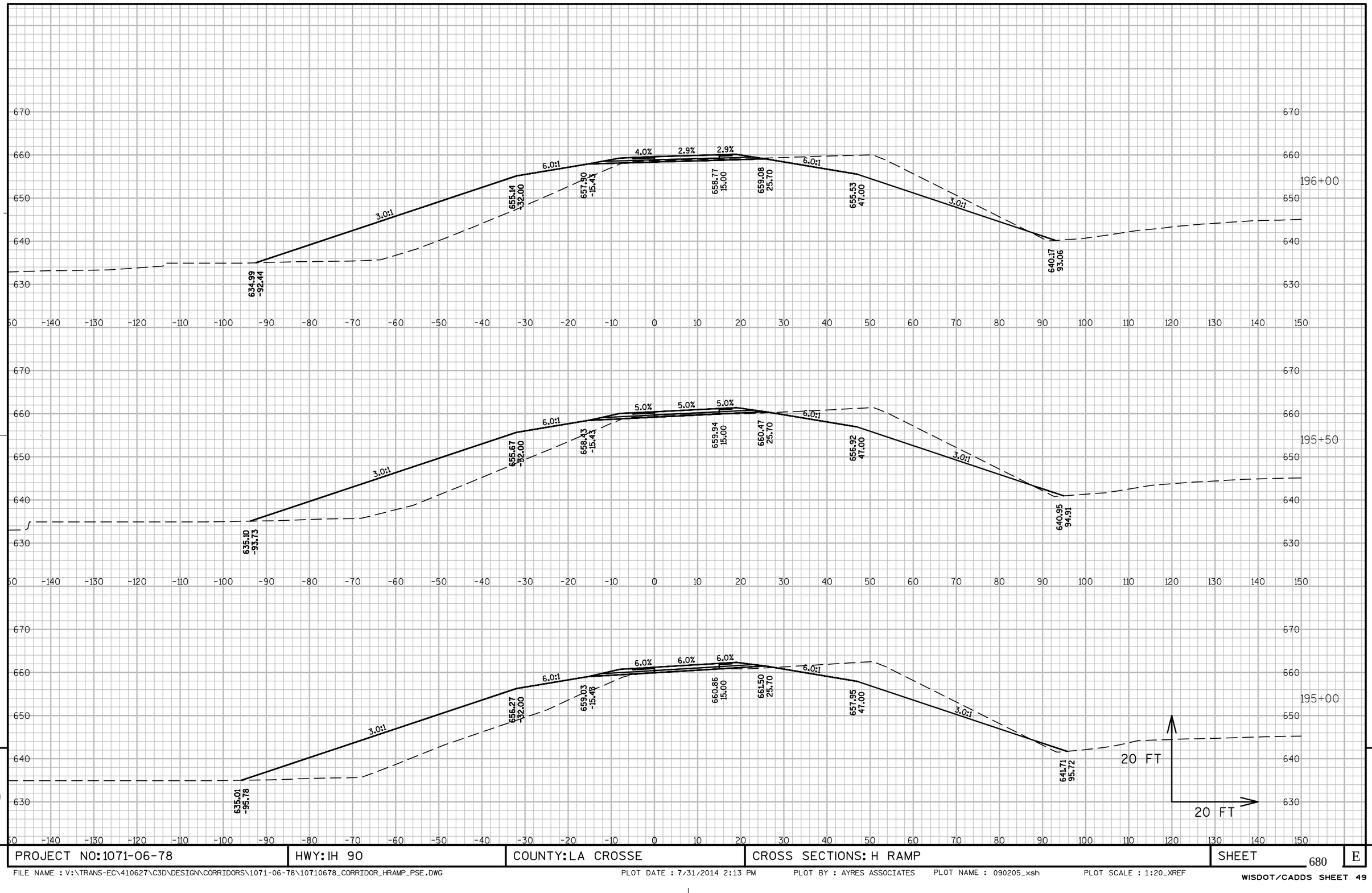
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: H RAMP	SHEET 678	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_HRAMP_PSE.DWG PLOT DATE : 7/31/2014 2:13 PM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xsh PLOT SCALE : 1:20_XREF



PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS: H RAMP	SHEET 679	E

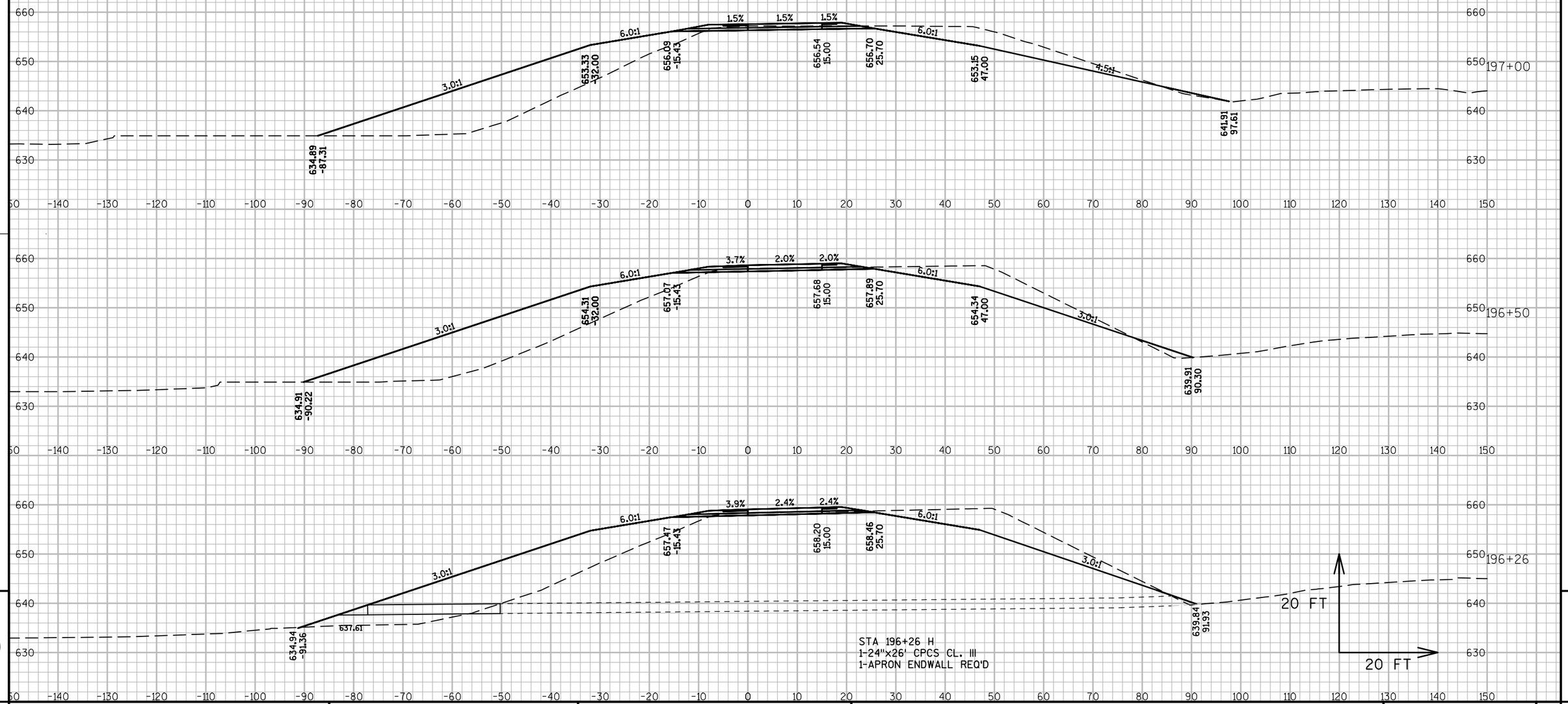


9

9

PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS:H RAMP	SHEET 680	E

MATCH EXISTING
STA 197+25

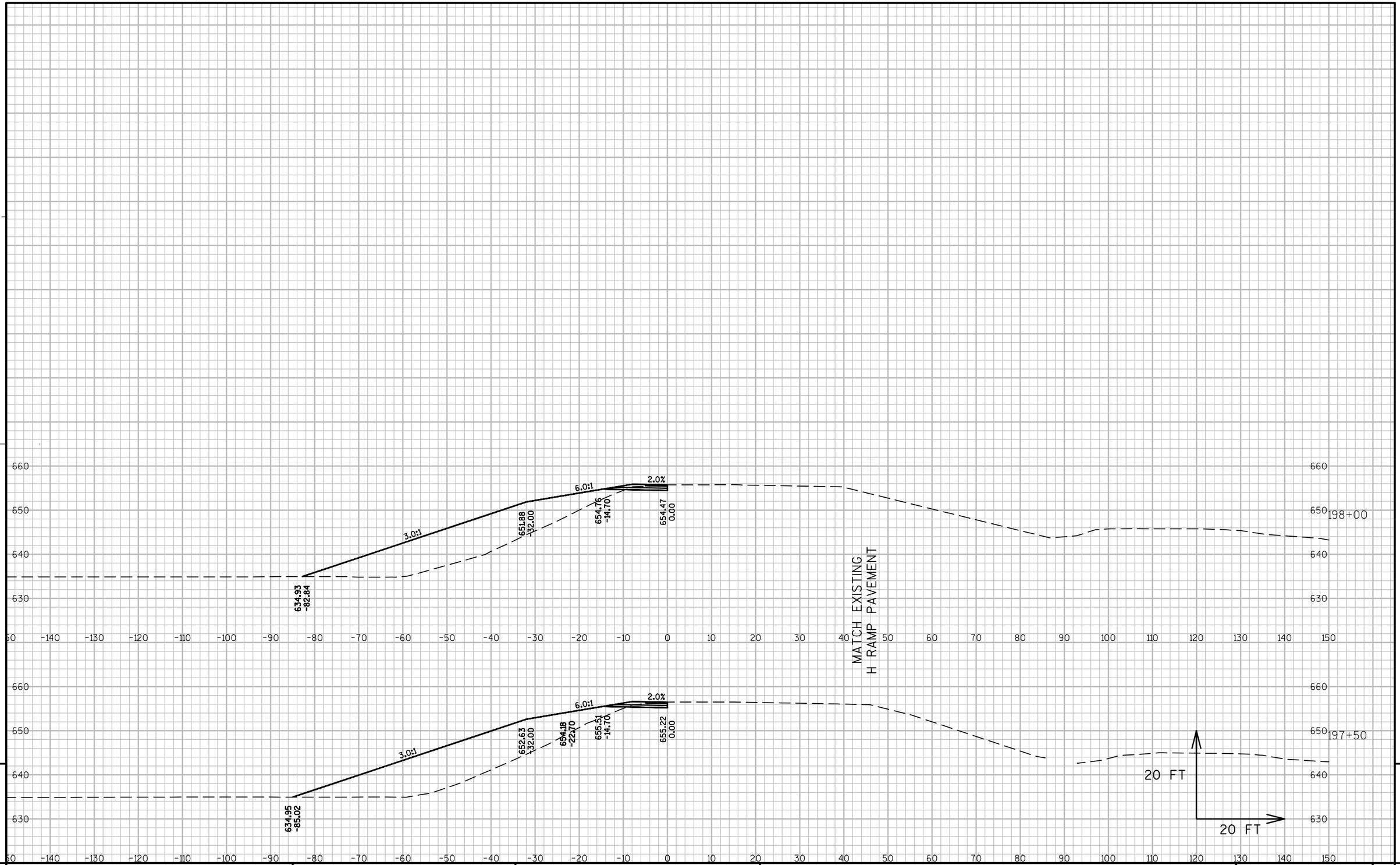


STA 196+26 H
1-24"x26' CPCS CL. III
1-APRON ENDWALL REQ'D

PROJECT NO:1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: H RAMP	SHEET 681	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_HRAMP_PSE.DWG PLOT DATE : 7/31/2014 2:13 PM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090206_xsh PLOT SCALE : 1:20_XREF

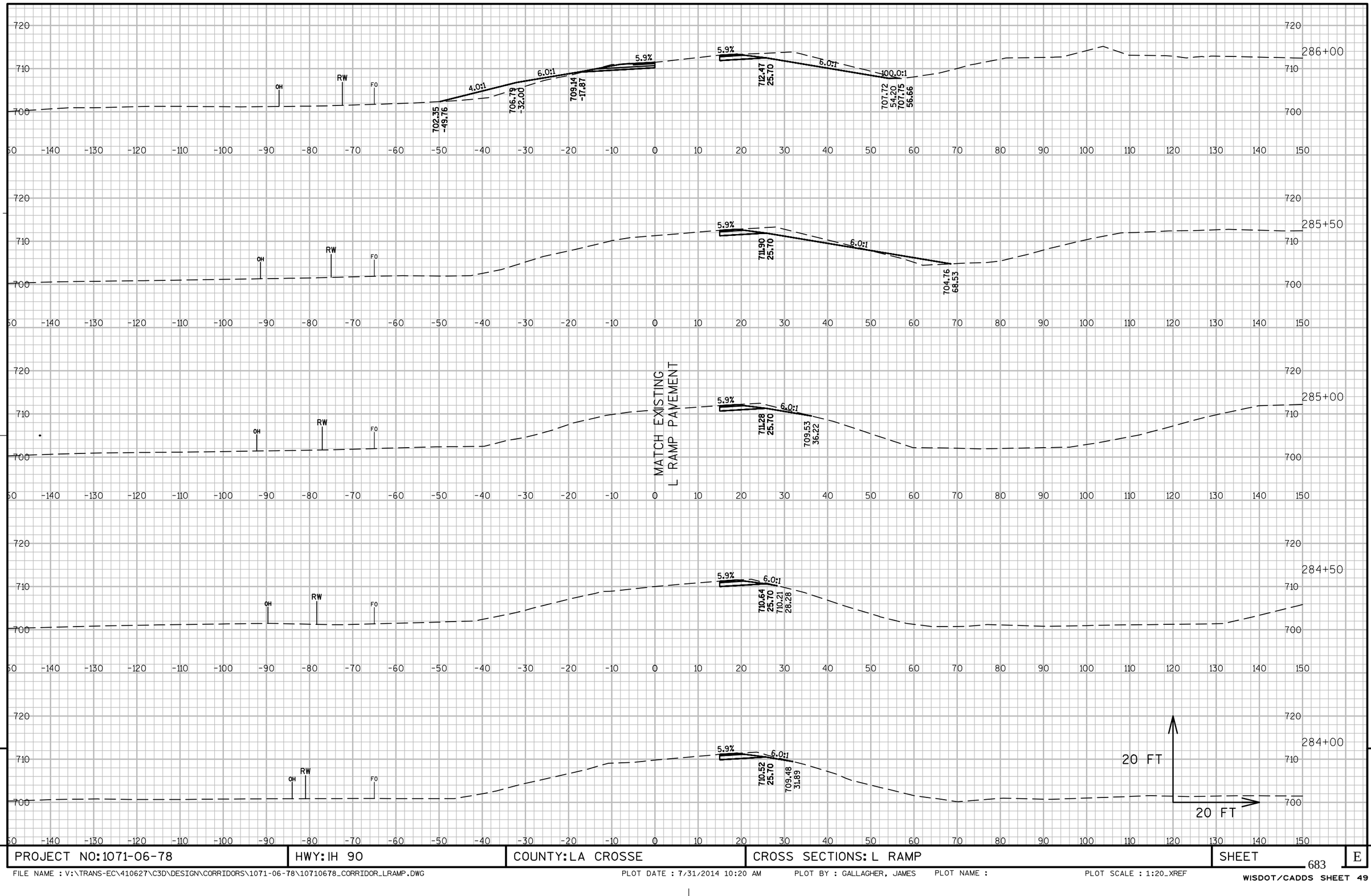
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: H RAMP	SHEET 682	E



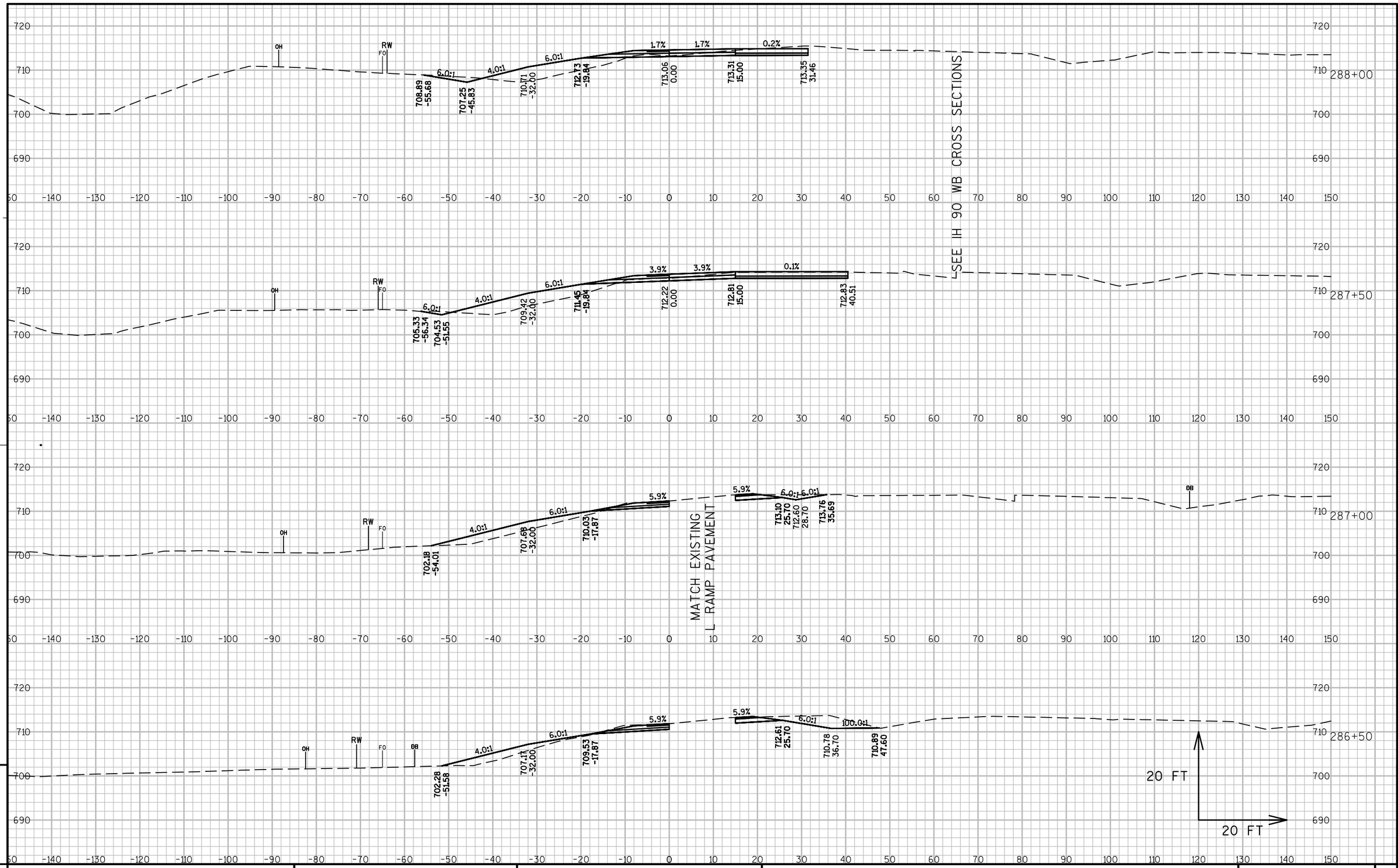
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9

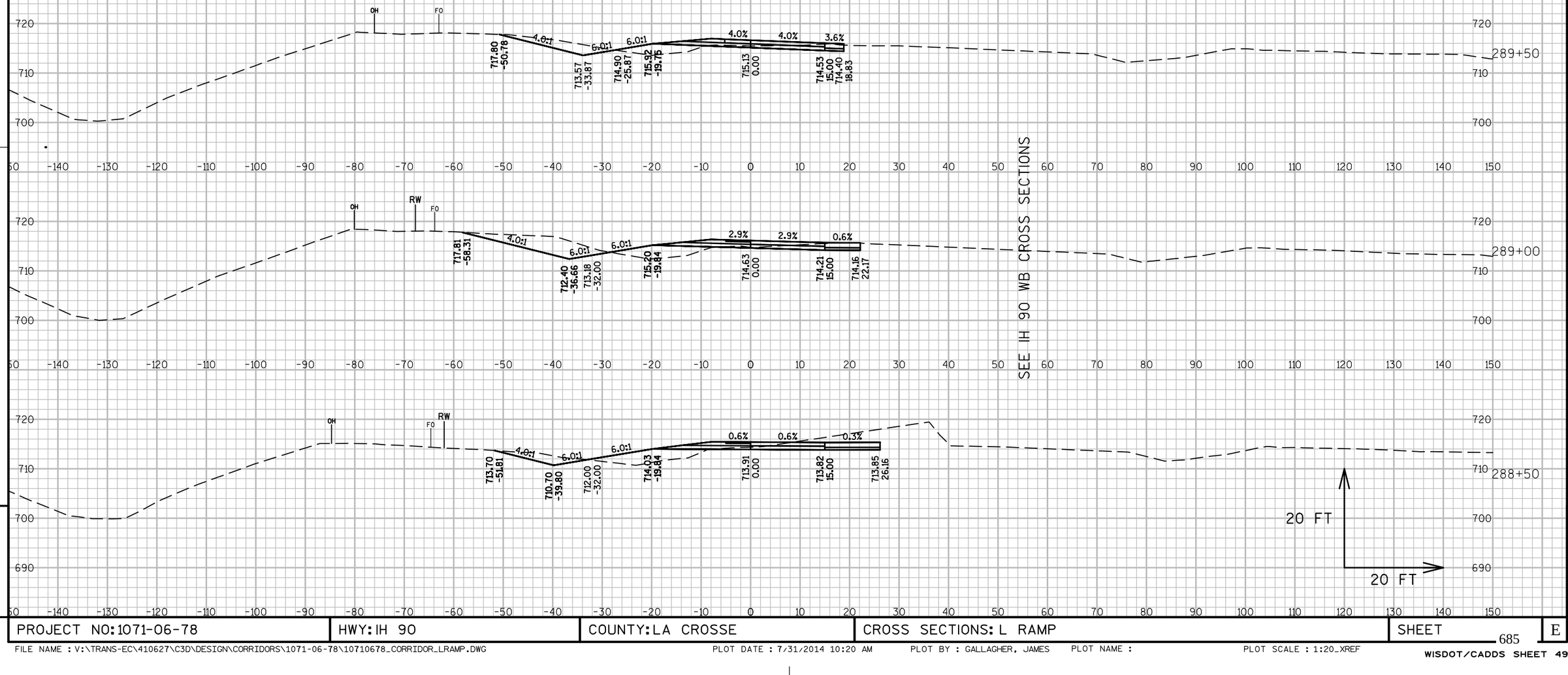
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: L RAMP	SHEET 683	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_LRAMP.DWG PLOT DATE : 7/31/2014 10:20 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



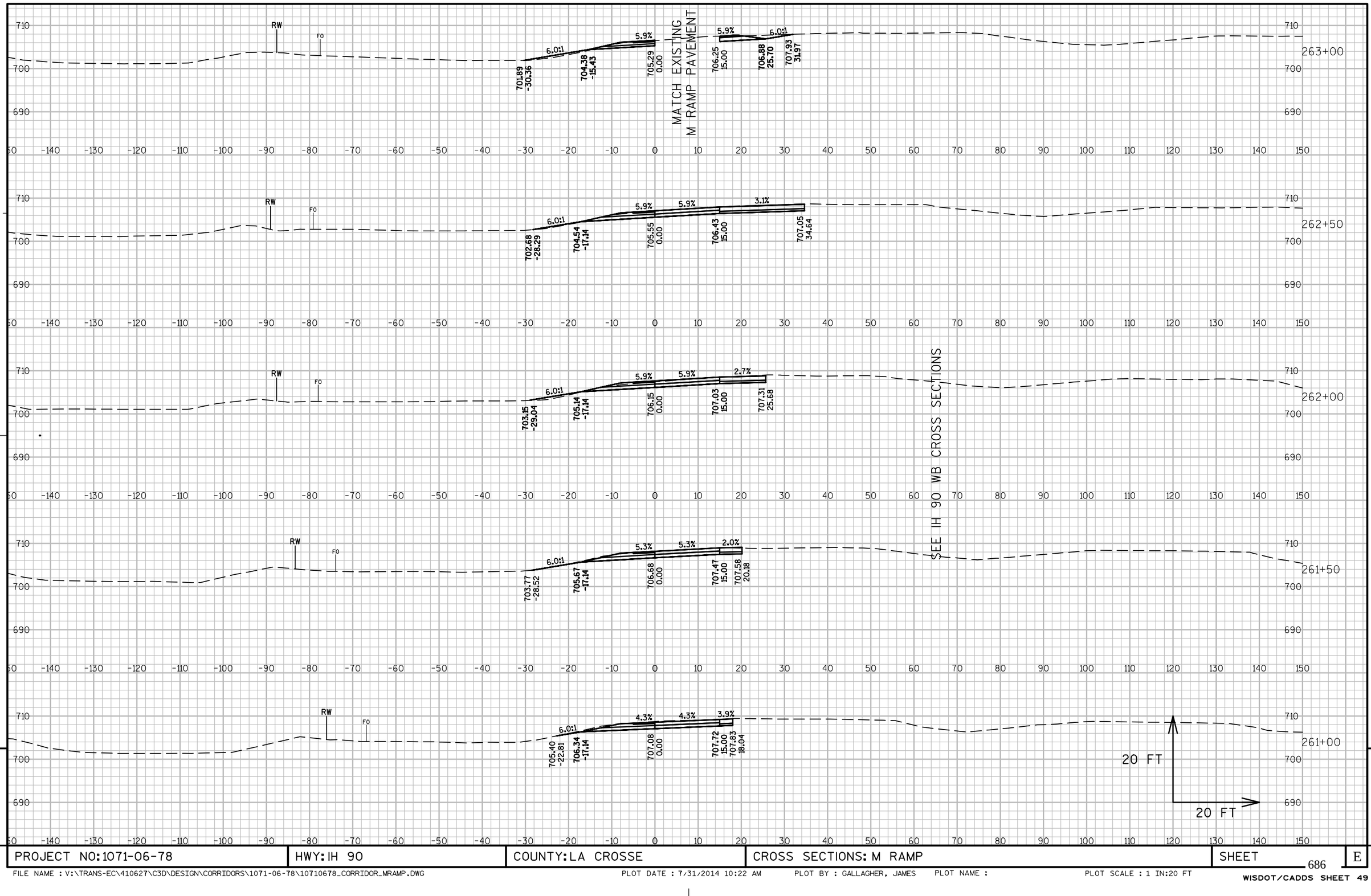
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: L RAMP	SHEET 684	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: L RAMP	SHEET 685	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_LRAMP.DWG PLOT DATE : 7/31/2014 10:20 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

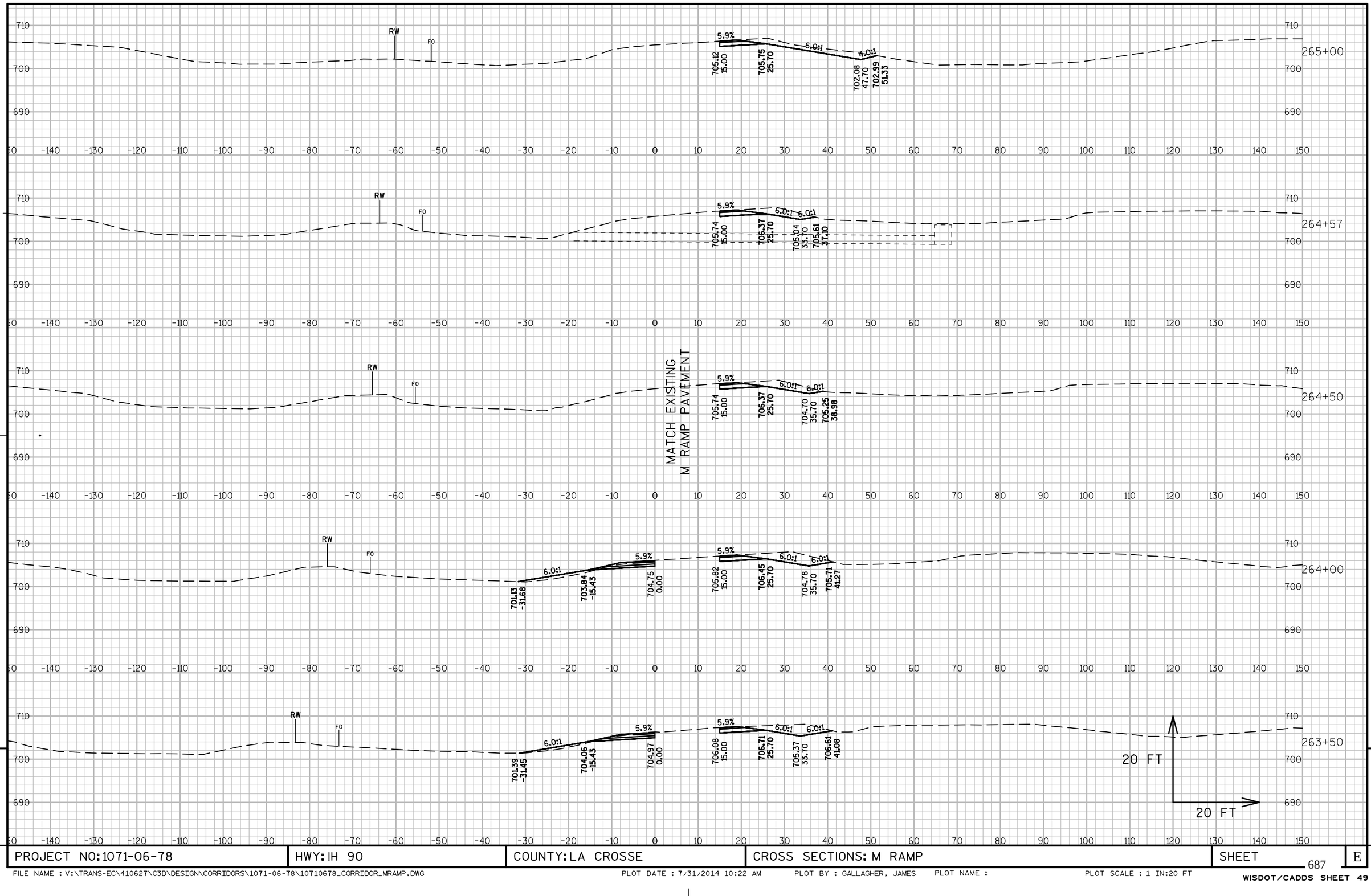


9

9

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: M RAMP	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_MRAMP.DWG PLOT DATE : 7/31/2014 10:22 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT

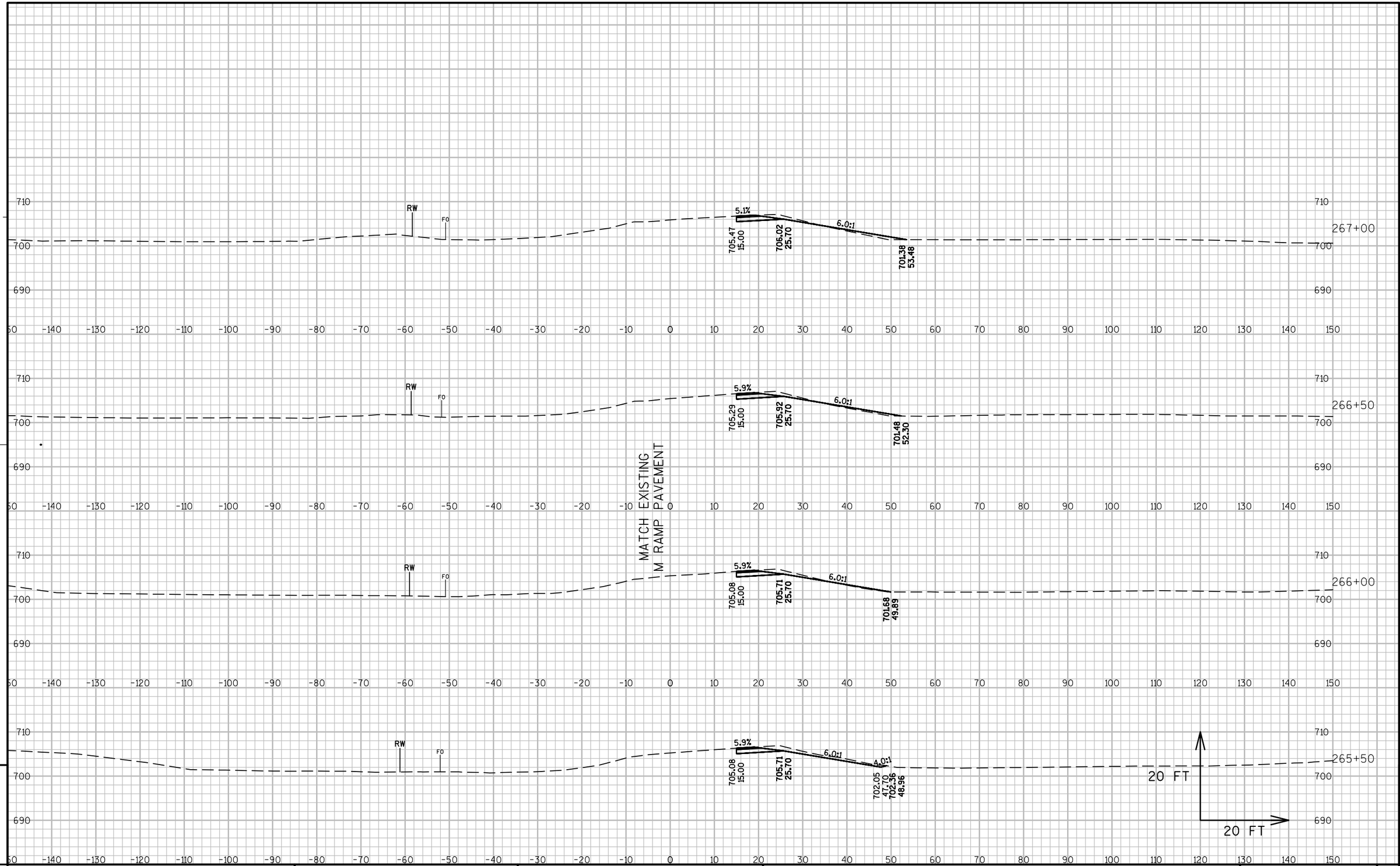


9

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: M RAMP	SHEET 687	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_MRAMP.DWG PLOT DATE : 7/31/2014 10:22 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT

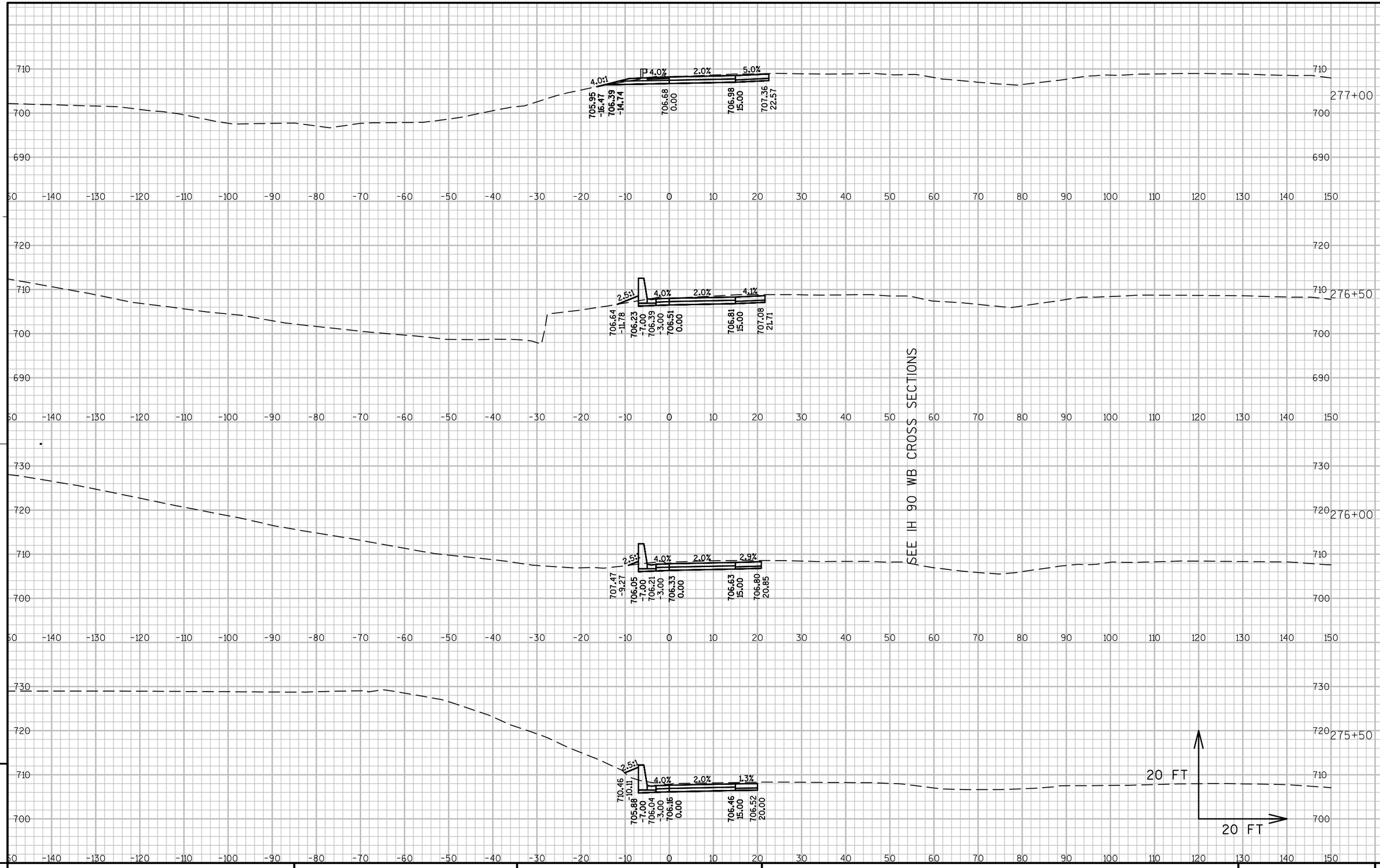
WISDOT/CADDS SHEET 49



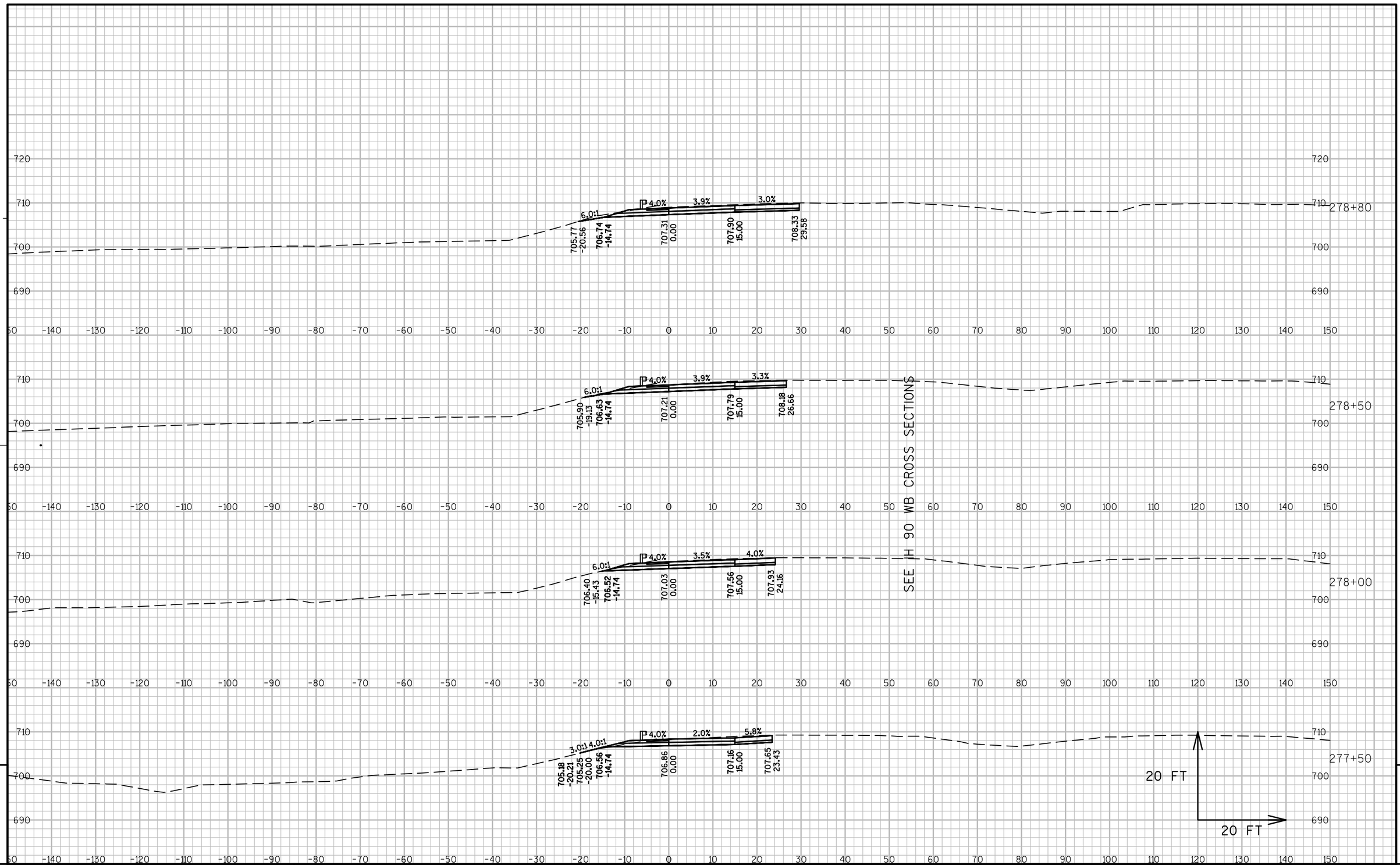
PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS: M RAMP	SHEET 688	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_MRAMP.DWG PLOT DATE : 7/31/2014 10:22 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

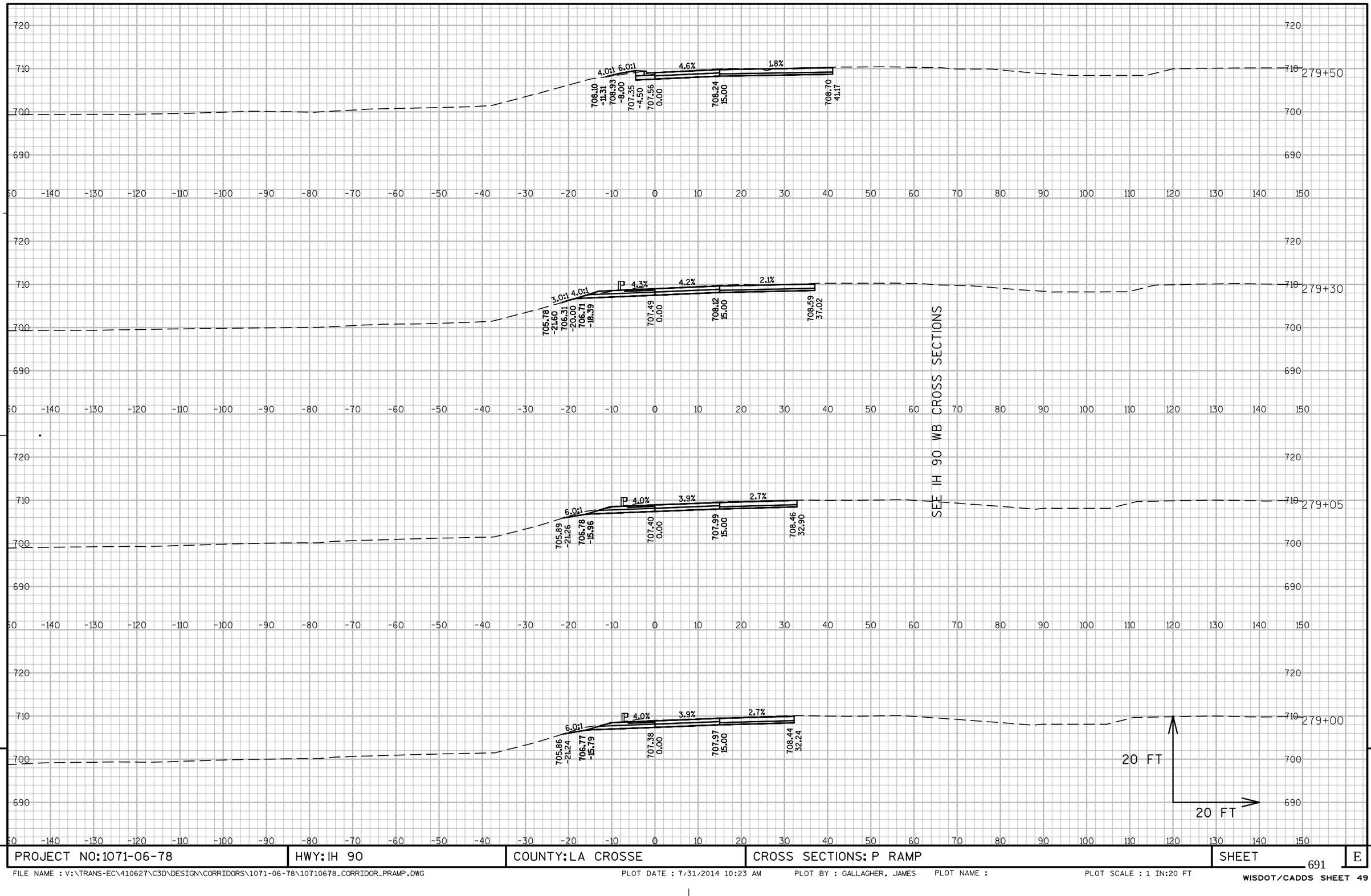


PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: P RAMP	SHEET 689	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: P RAMP	SHEET 690	E

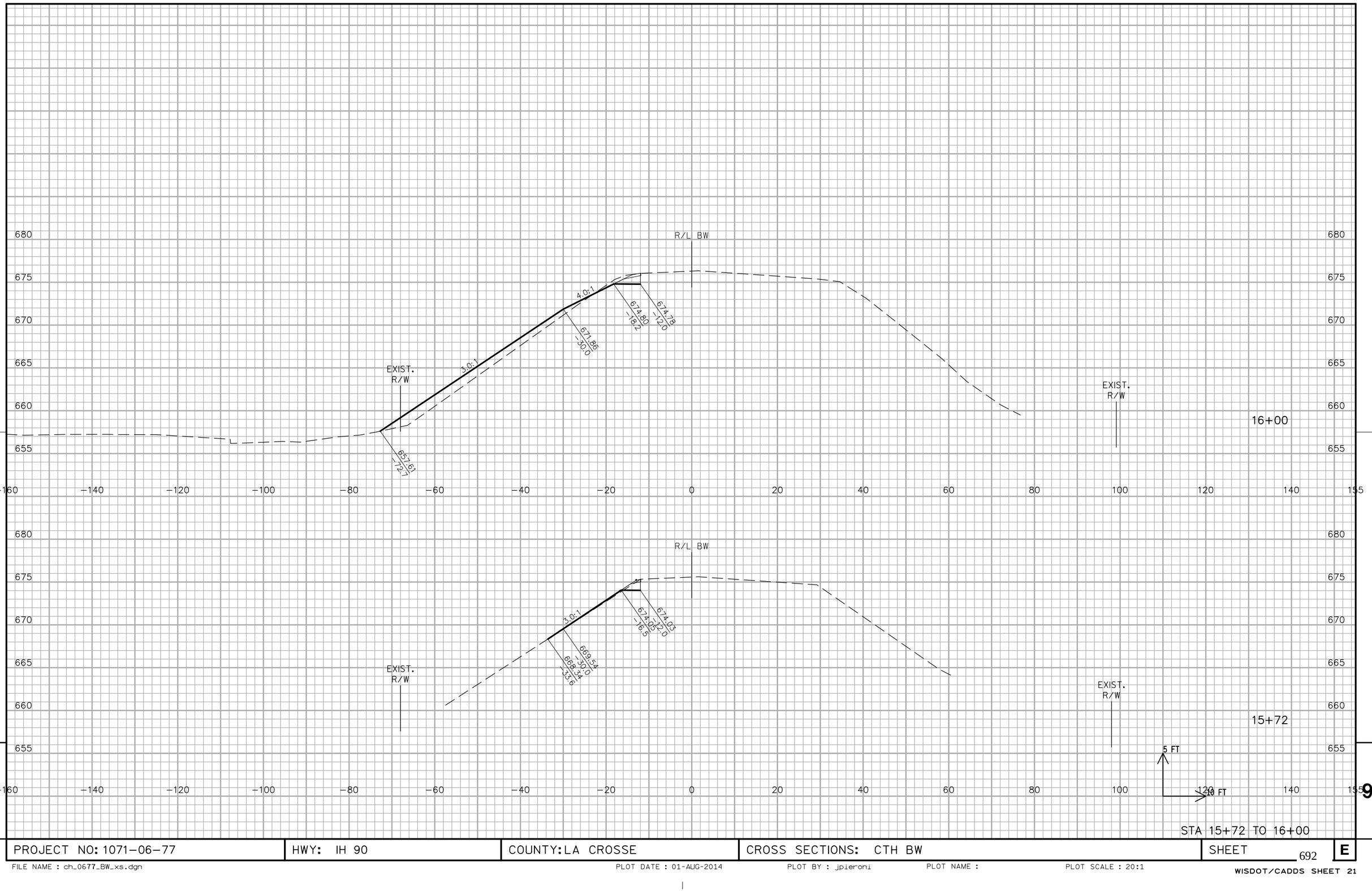
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_PRAMP.DWG PLOT DATE : 7/31/2014 10:23 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: P RAMP	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_PRAMP.DWG PLOT DATE : 7/31/2014 10:23 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

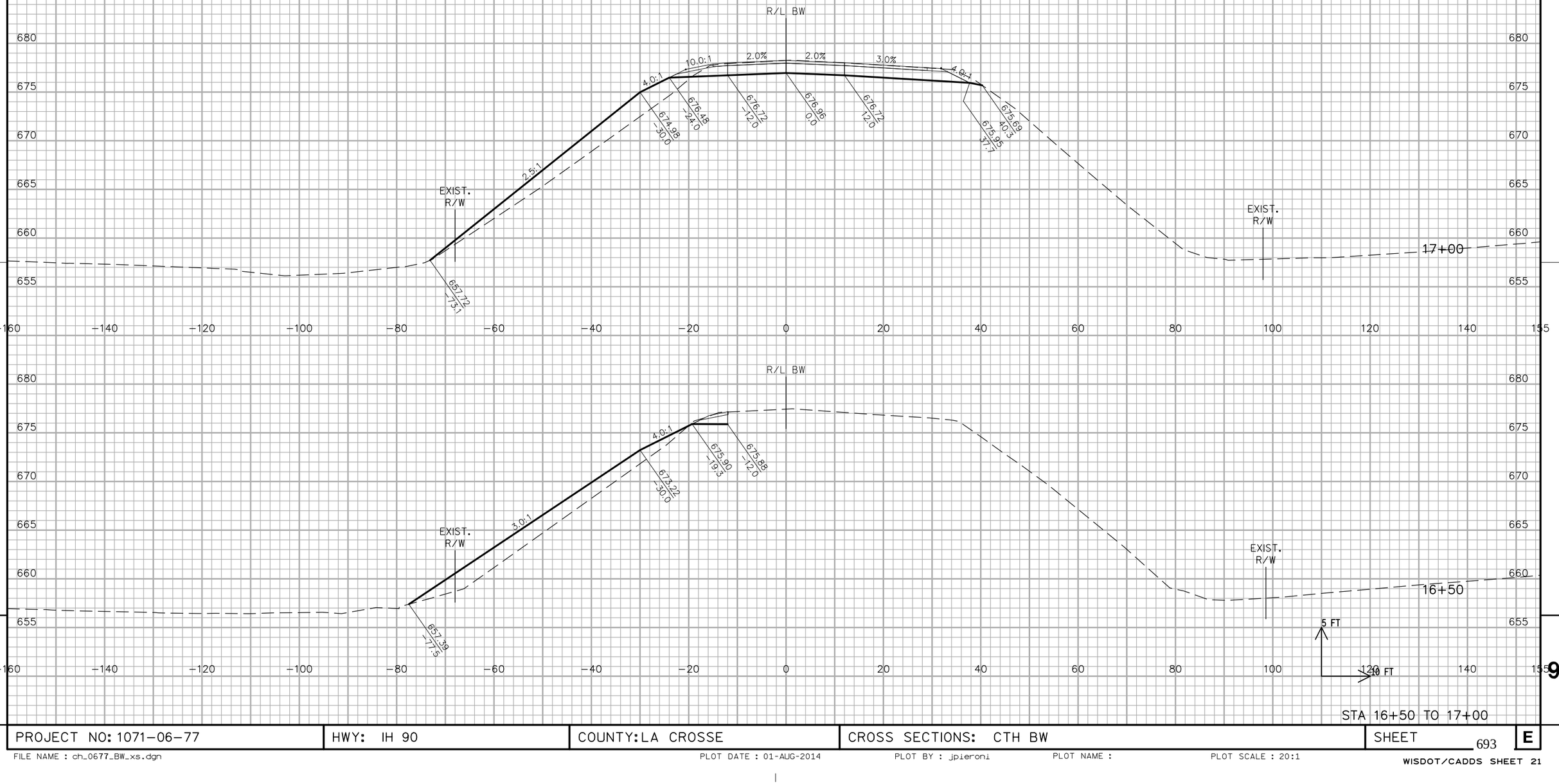


STA 15+72 TO 16+00

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: CTH BW	SHEET 692	E

FILE NAME : ch_0677_BW_xs.dgn PLOT DATE : 01-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

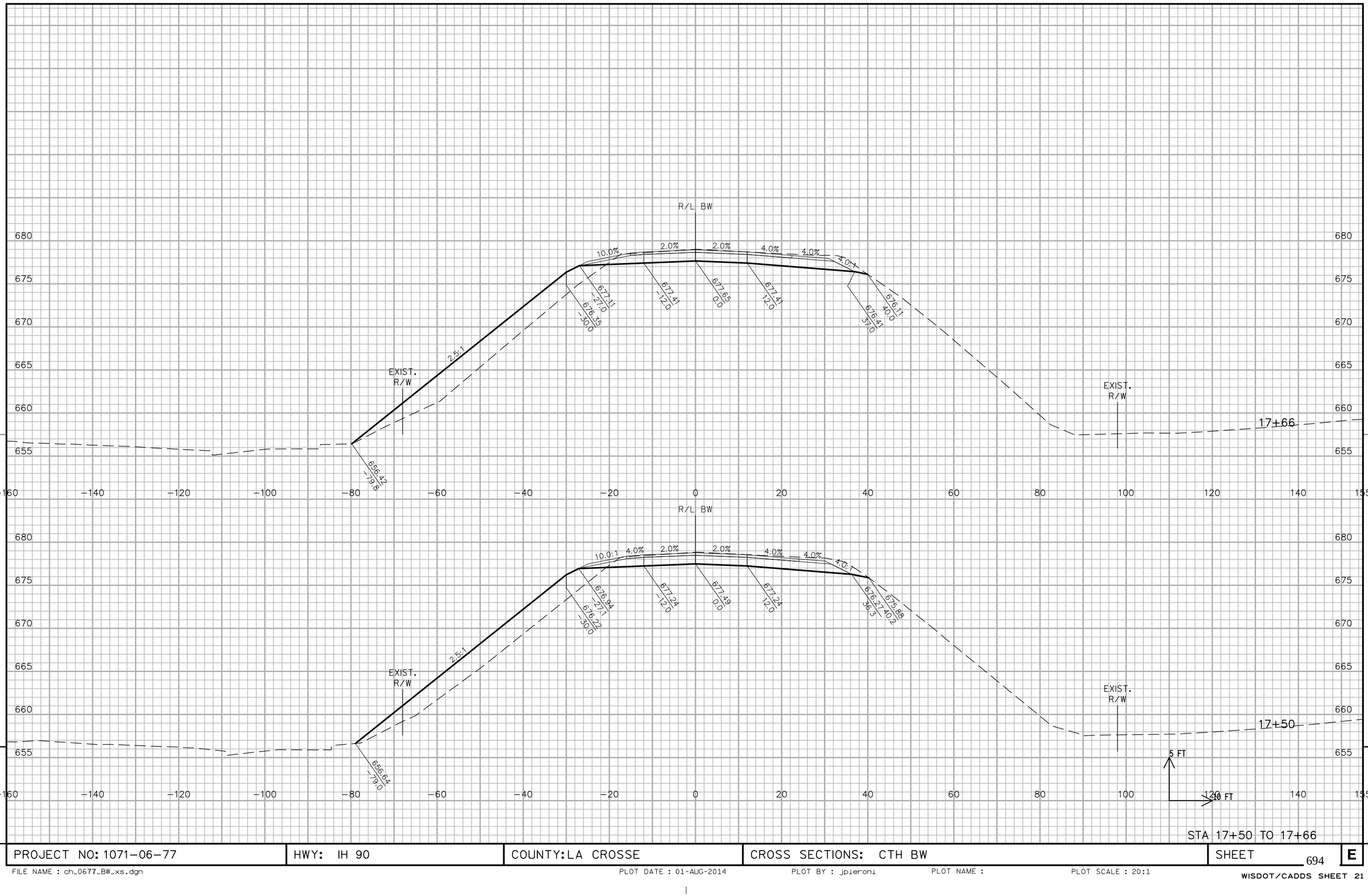


STA 16+50 TO 17+00

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: CTH BW	SHEET 693	E

FILE NAME : ch_0677_BW_xs.dgn PLOT DATE : 01-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

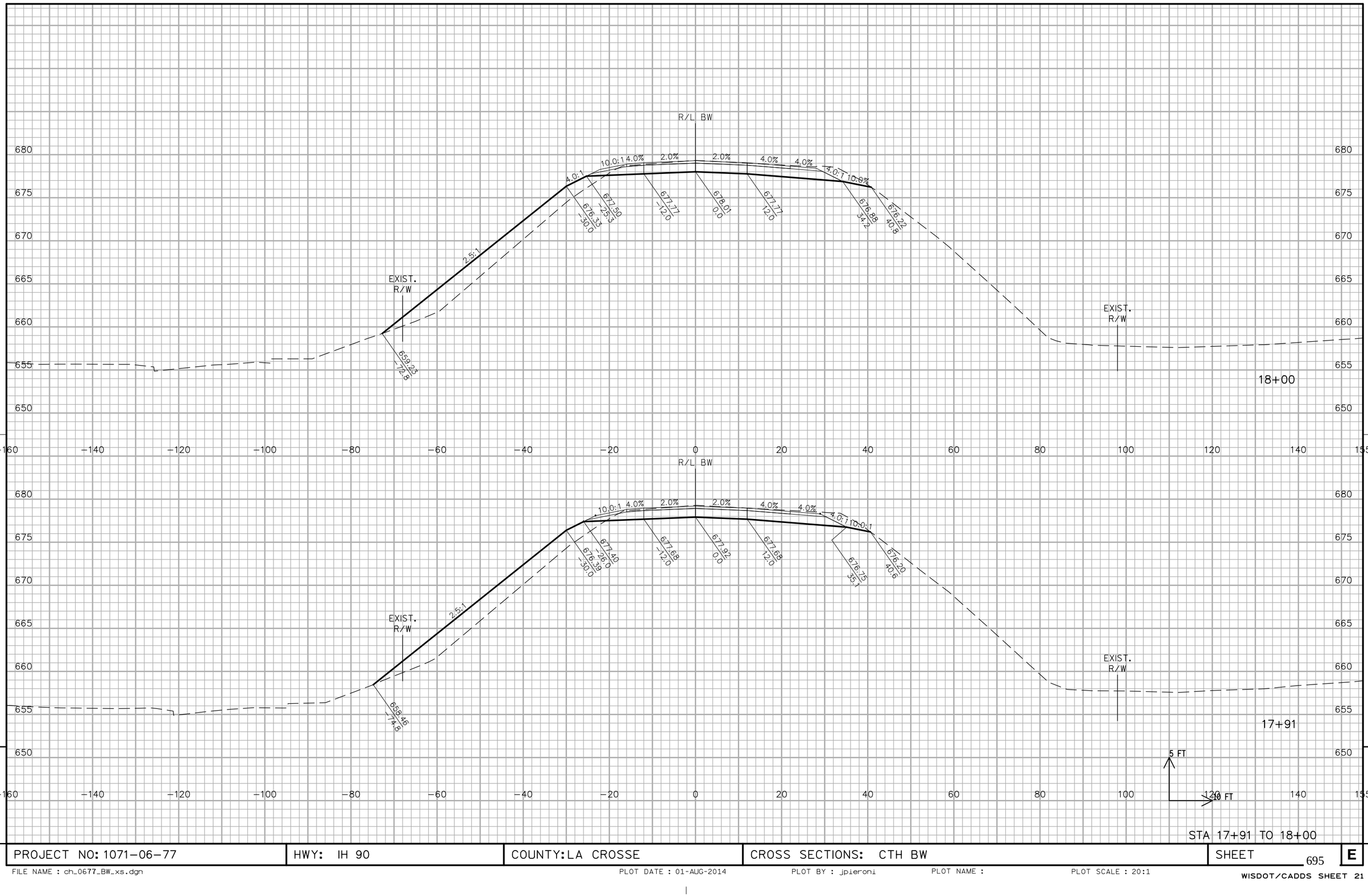


STA 17+50 TO 17+66

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: CTH BW	SHEET 694	E

FILE NAME : ch_0677_BW_xs.dgn PLOT DATE : 01-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

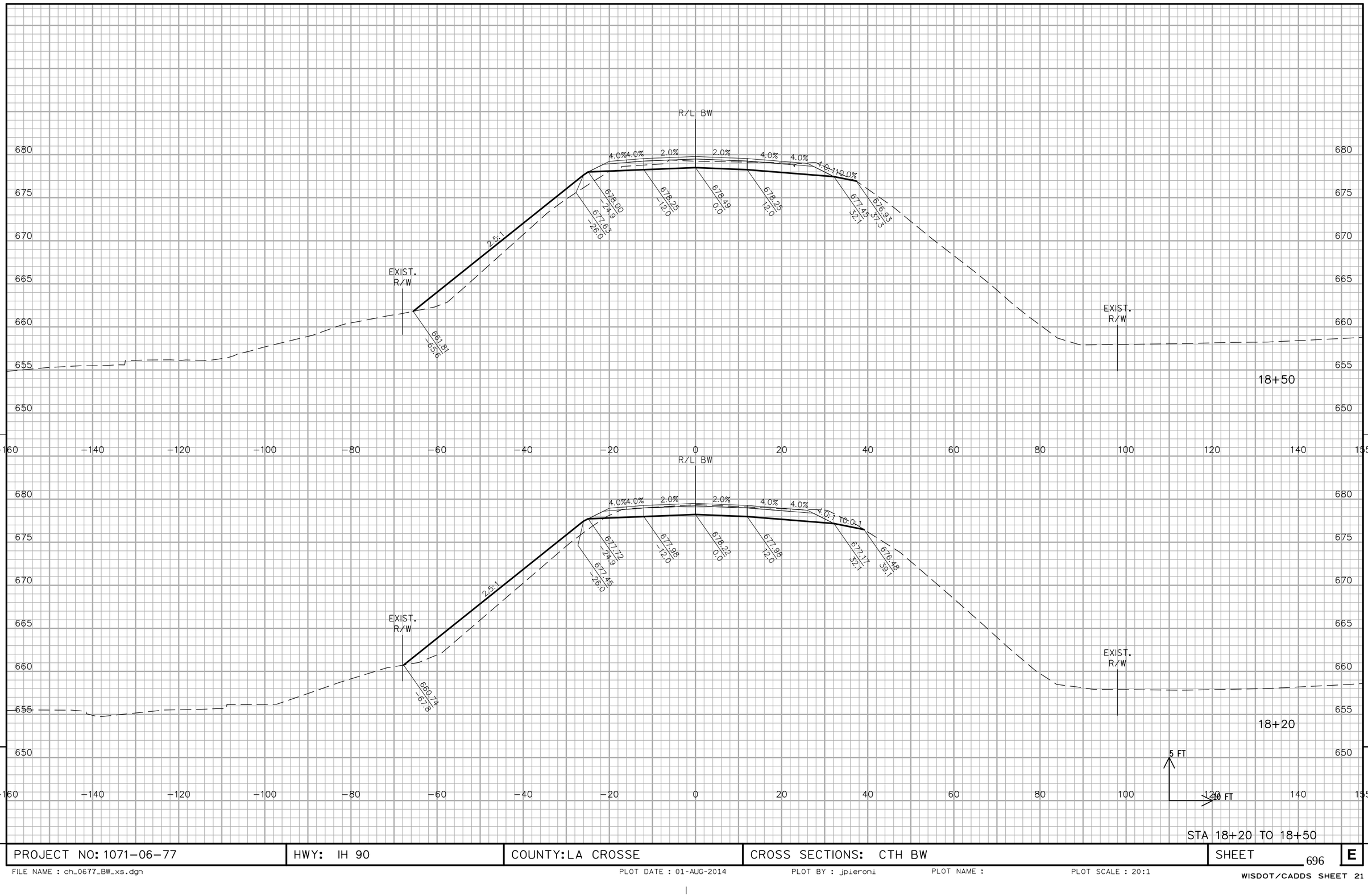


STA 17+91 TO 18+00

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: CTH BW	SHEET 695	E

FILE NAME : ch_0677_BW_xs.dgn PLOT DATE : 01-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

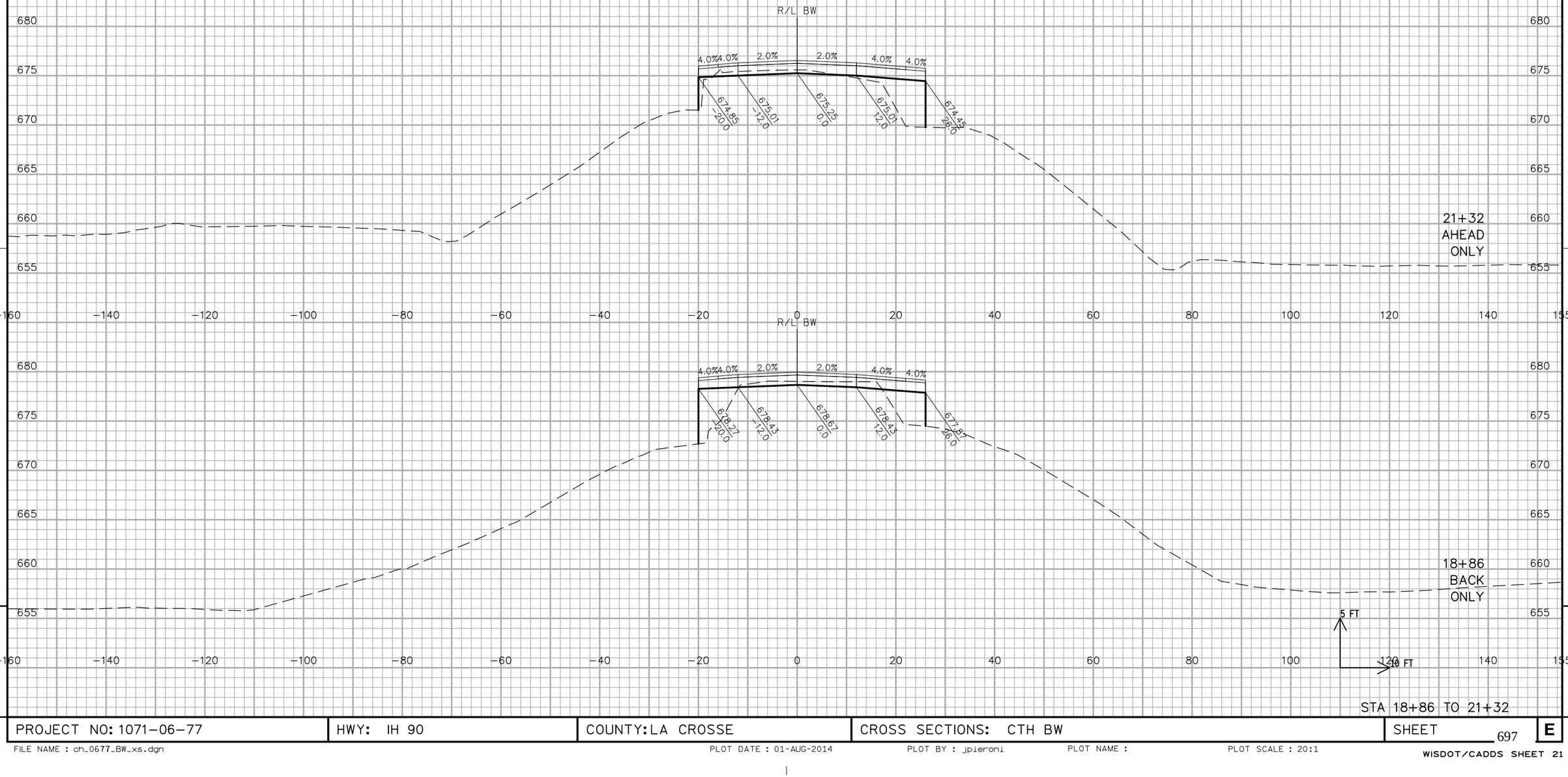


STA 18+20 TO 18+50

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: CTH BW	SHEET 696	E

FILE NAME : ch_0677_BW_xs.dgn PLOT DATE : 01-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

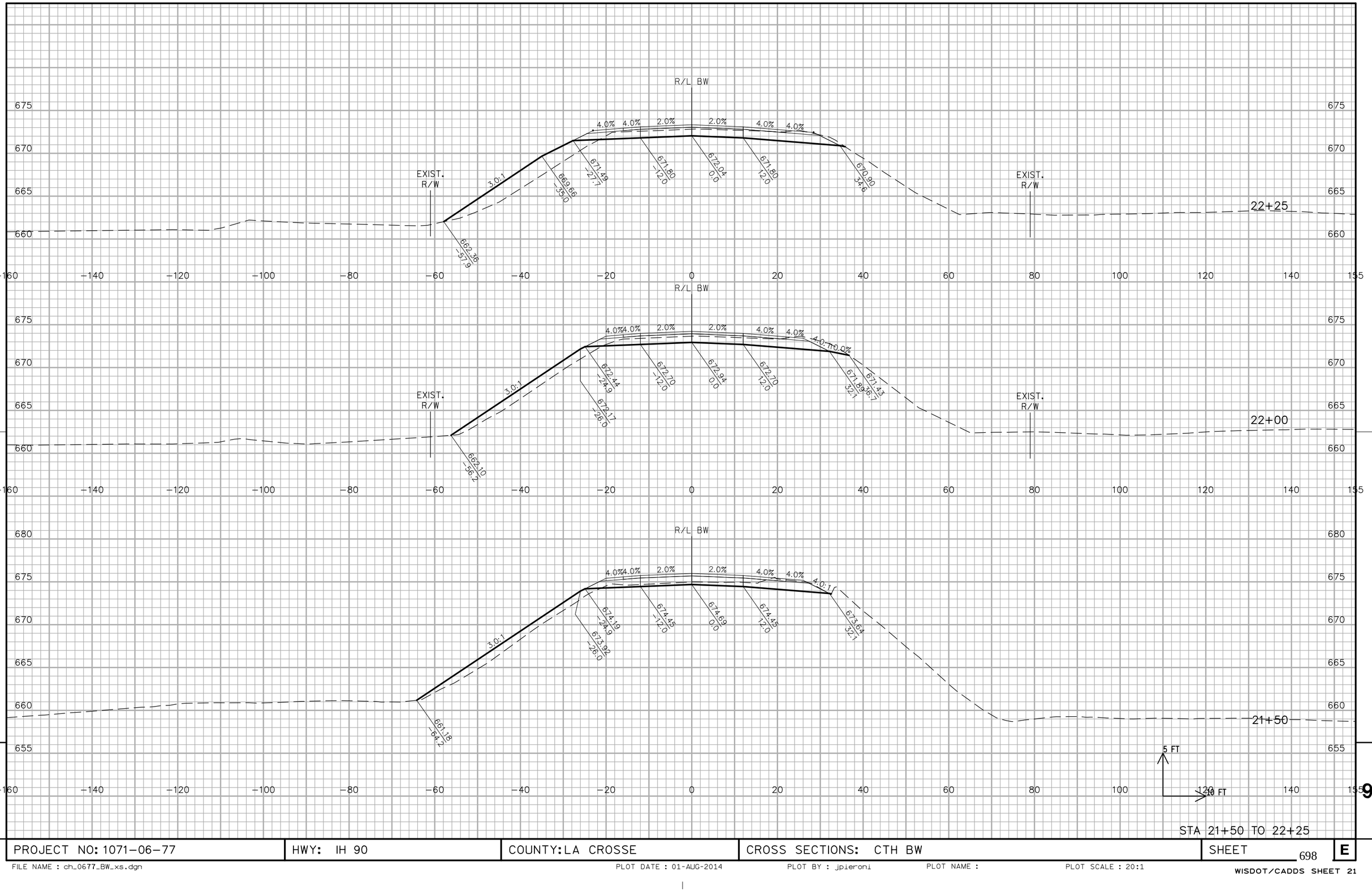


STA 18+86 TO 21+32

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: CTH BW	SHEET 697	E

FILE NAME : ch_0677_BW_xs.dgn PLOT DATE : 01-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

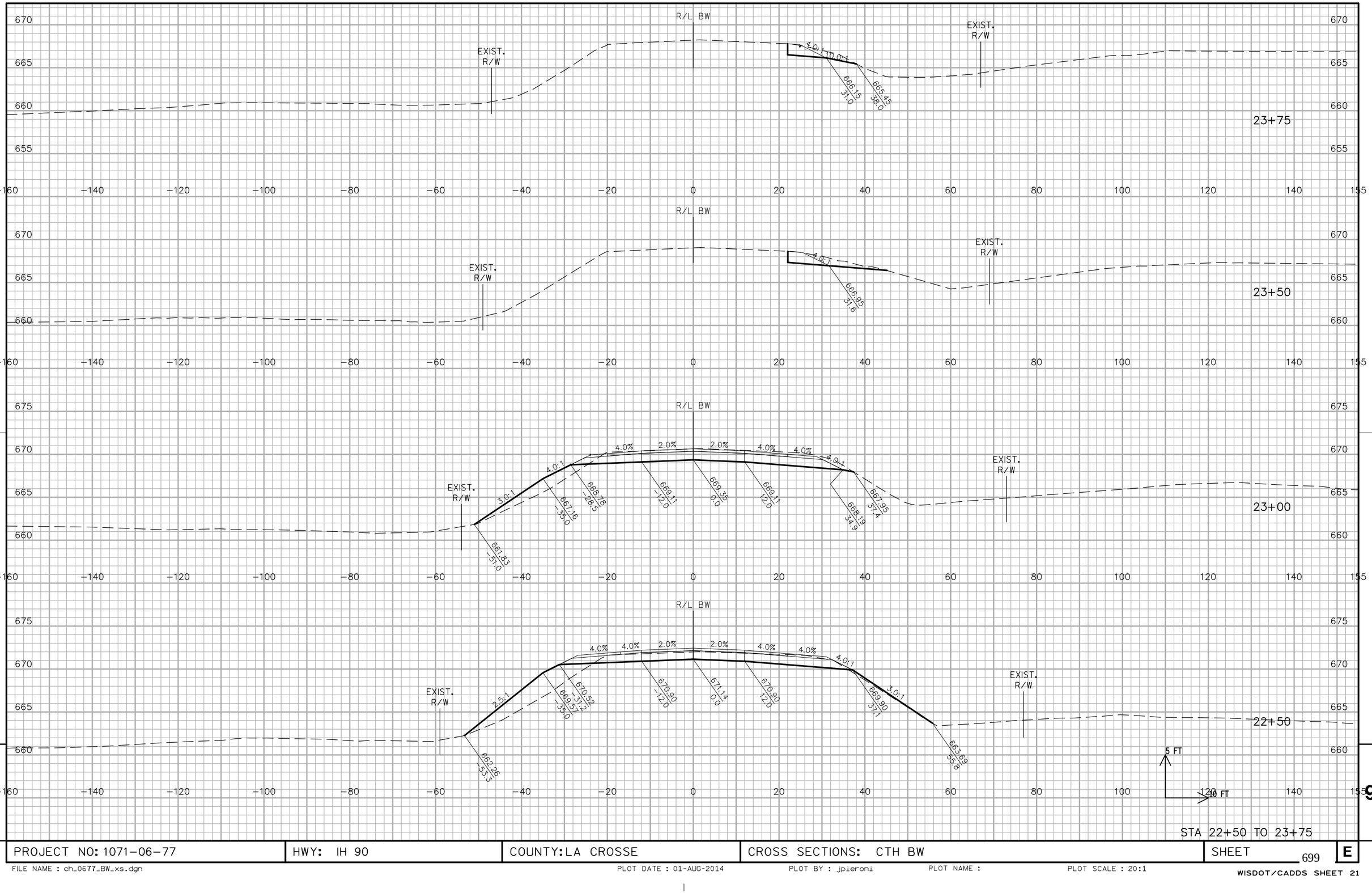


STA 21+50 TO 22+25

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: CTH BW	SHEET 698	E

FILE NAME : ch_0677_BW_xs.dgn PLOT DATE : 01-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

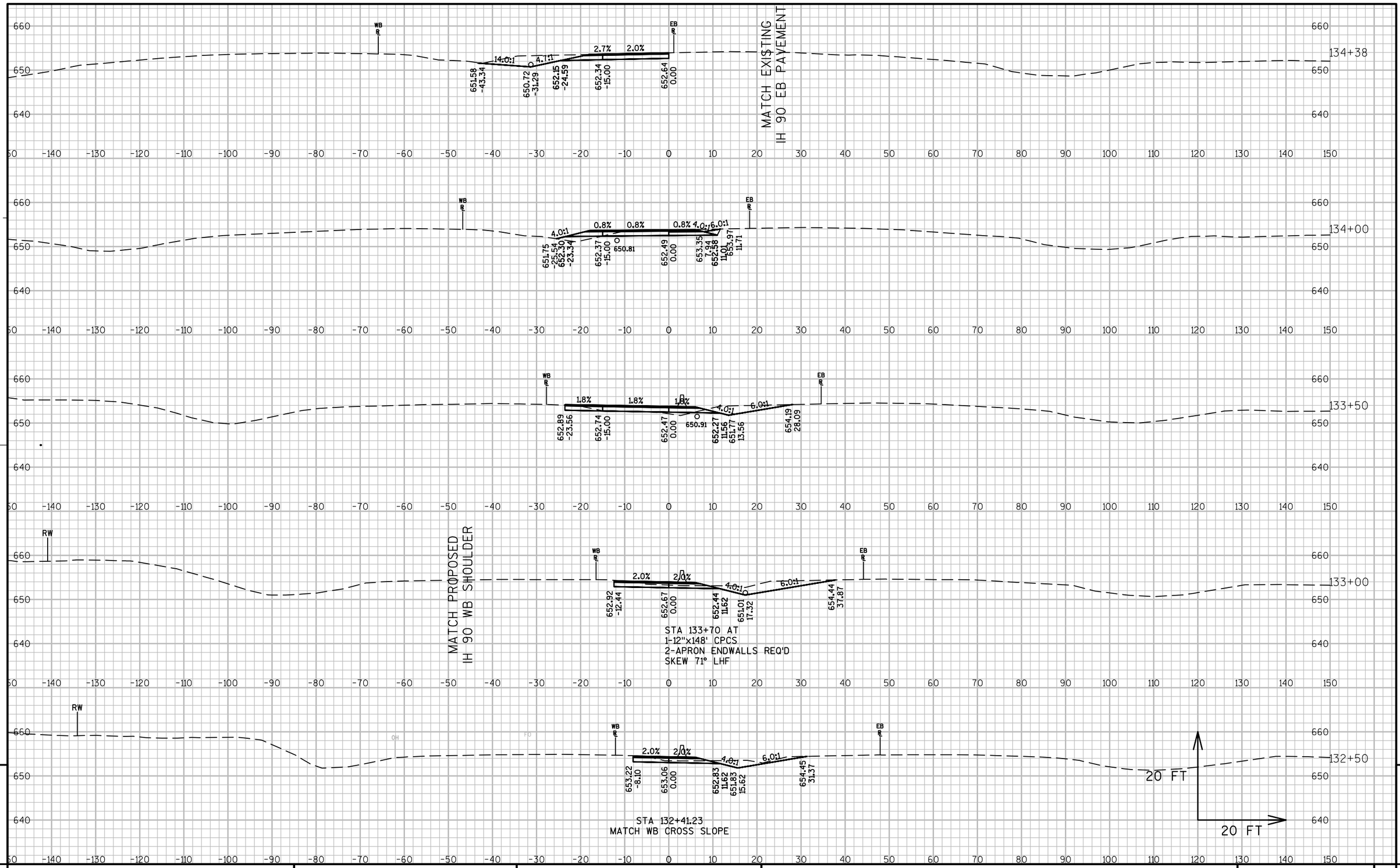


STA 22+50 TO 23+75

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: CTH BW	SHEET 699	E

FILE NAME : ch_0677_BW_xs.dgn PLOT DATE : 01-AUG-2014 PLOT BY : jpieroni PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



9

9

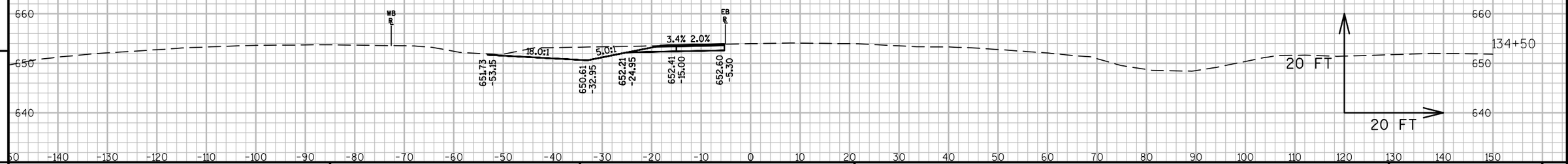
PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: AT TEMPORARY	SHEET 700	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORIDOR_TEMPATRAMP.DWG PLOT DATE : 7/31/2014 8:37 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsat PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

STA 134+64.85
MATCH EB CROSS SLOPE

MATCH EXISTING
IH 90 EB PAVEMENT



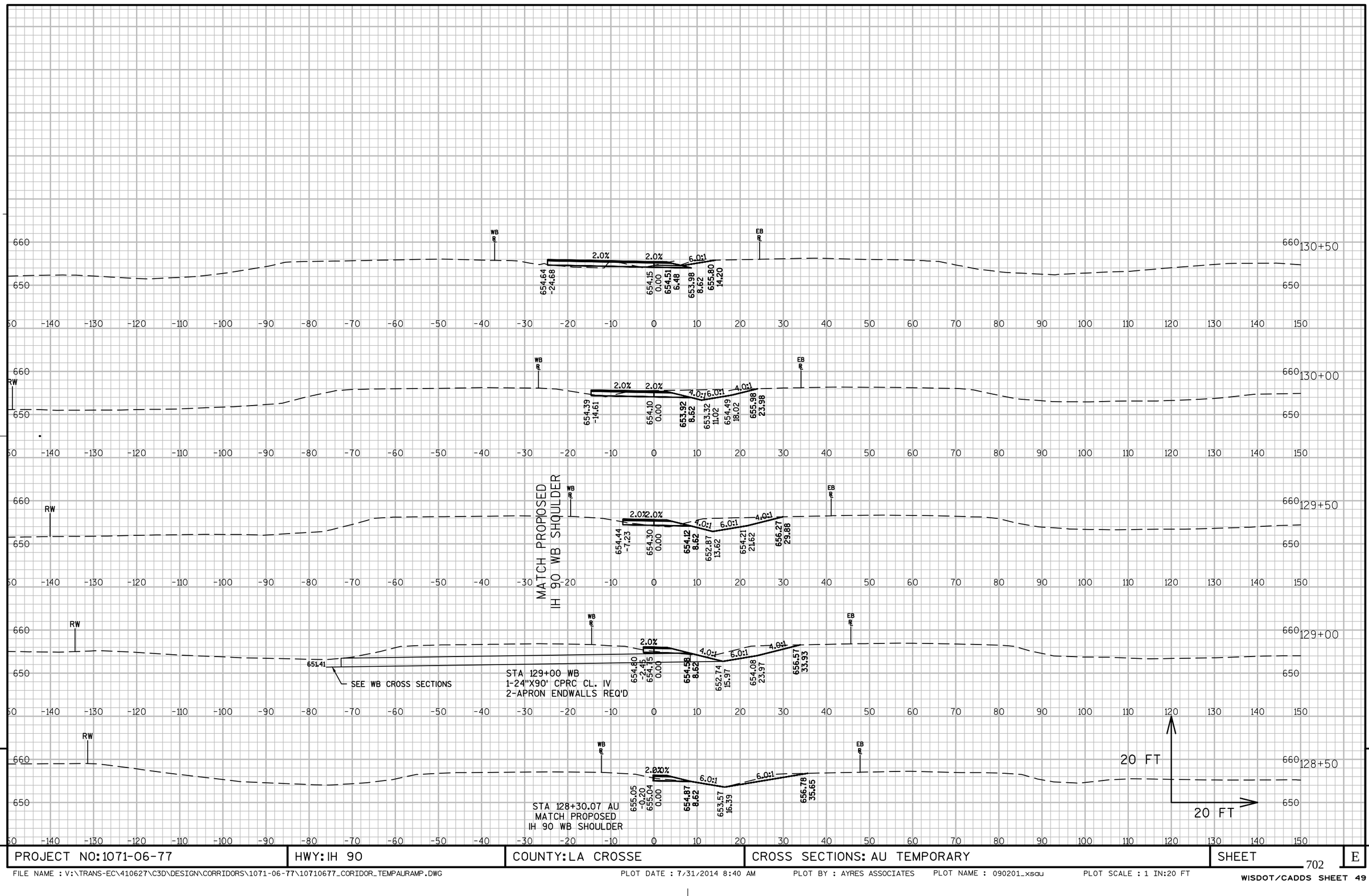
9

9

PROJECT NO:1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: AT TEMPORARY	SHEET 701	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORIDOR_TEMPATRAMP.DWG PLOT DATE : 7/31/2014 8:38 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xsat PLOT SCALE : 1 IN:20 FT

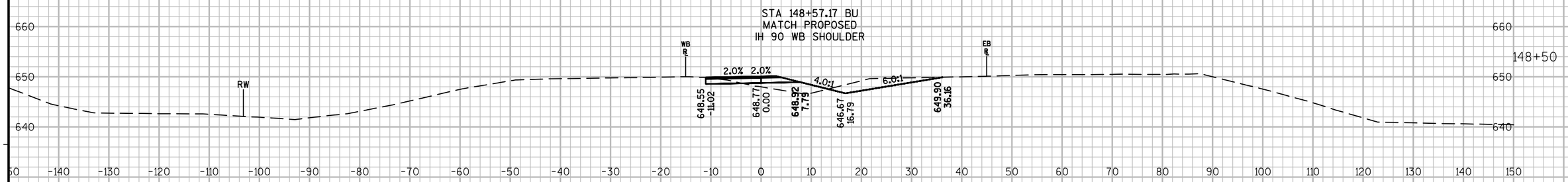
WISDOT/CADDS SHEET 49



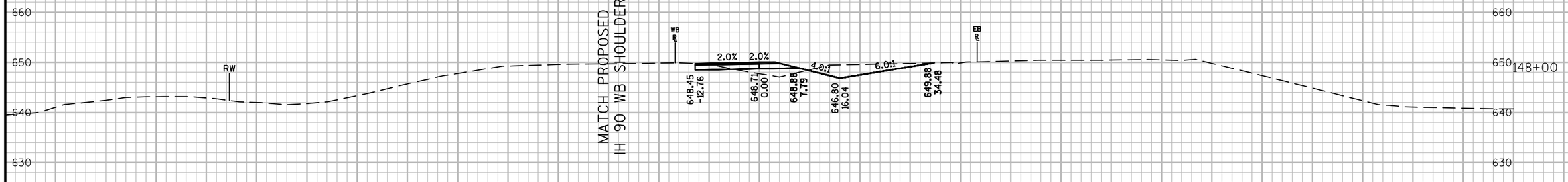
PROJECT NO:1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: AU TEMPORARY	SHEET	E

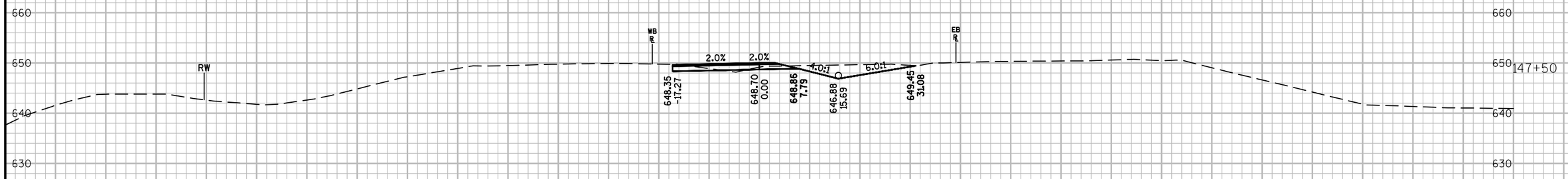
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORIDOR_TEMPAURAMP.DWG PLOT DATE : 7/31/2014 8:40 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsau PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

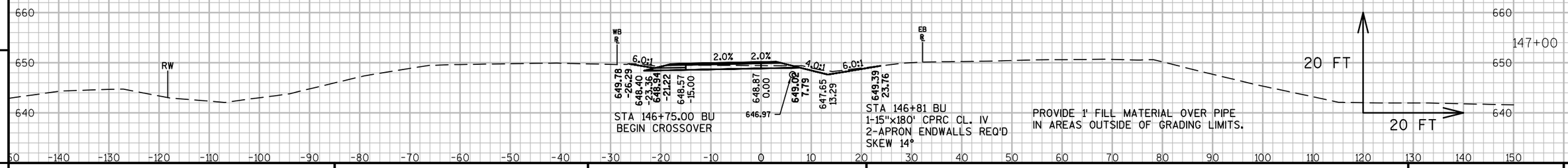
STA 148+57.17 BU
MATCH PROPOSED
IH 90 WB SHOULDER



MATCH PROPOSED
IH 90 WB SHOULDER







STA 146+75.00 BU
BEGIN CROSSOVER

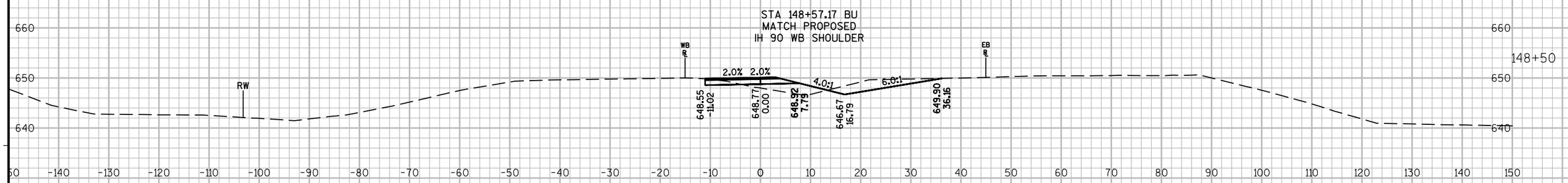
STA 146+81 BU
1-15"x180' CPRC CL. IV
2-APRON ENDWALLS REQ'D
SKEW 14°

PROVIDE 1' FILL MATERIAL OVER PIPE
IN AREAS OUTSIDE OF GRADING LIMITS.

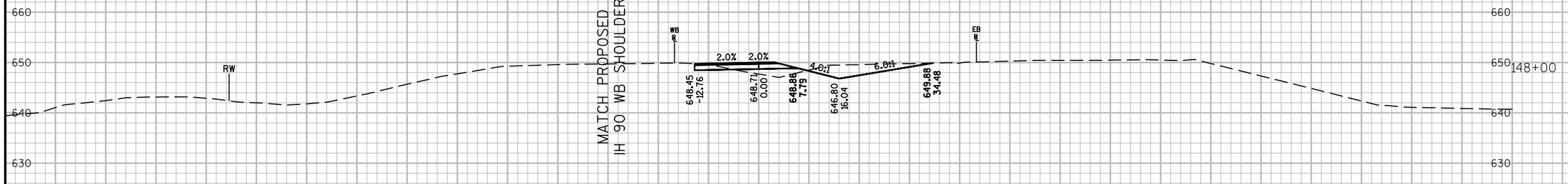
PROJECT NO:1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: BU TEMPORARY	SHEET	E

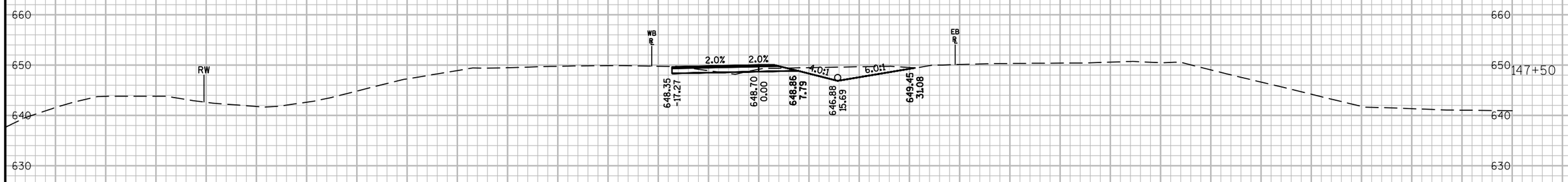
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_TEMPBURAMP.DWG PLOT DATE : 7/31/2014 8:42 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsbu PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

STA 148+57.17 BU
MATCH PROPOSED
IH 90 WB SHOULDER



MATCH PROPOSED
IH 90 WB SHOULDER







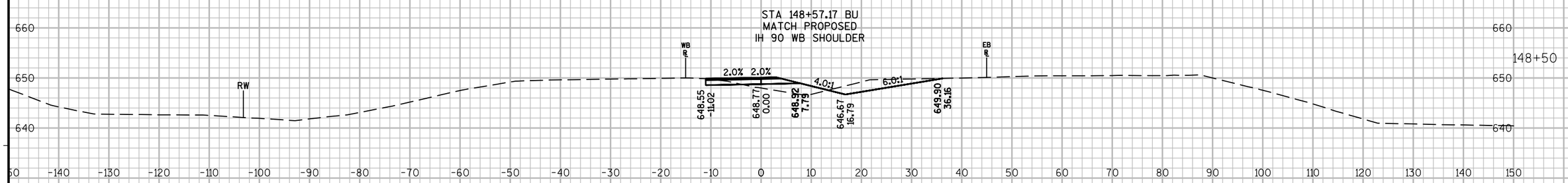
STA 146+75.00 BU
BEGIN CROSSOVER

STA 146+81 BU
1-15"x178' CPRC CL. IV
2-APRON ENDWALLS REQ'D
SKEW 75°

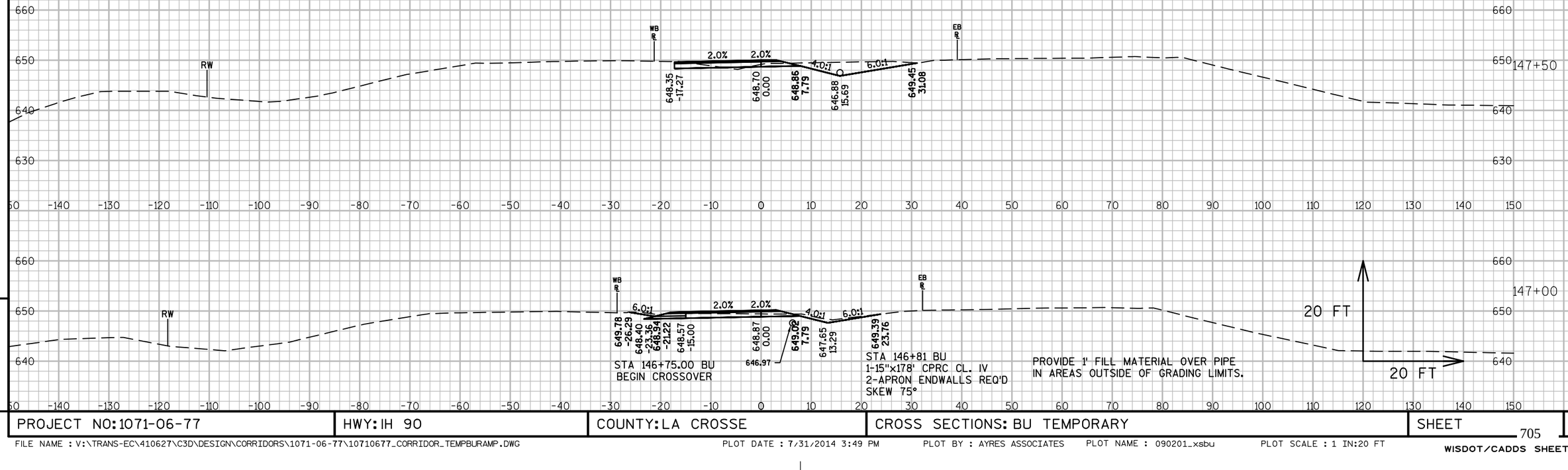
PROVIDE 1' FILL MATERIAL OVER PIPE
IN AREAS OUTSIDE OF GRADING LIMITS.

PROJECT NO:1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: BU TEMPORARY	SHEET 704	E

STA 148+57.17 BU
MATCH PROPOSED
IH 90 WB SHOULDER



MATCH PROPOSED
IH 90 WB SHOULDER



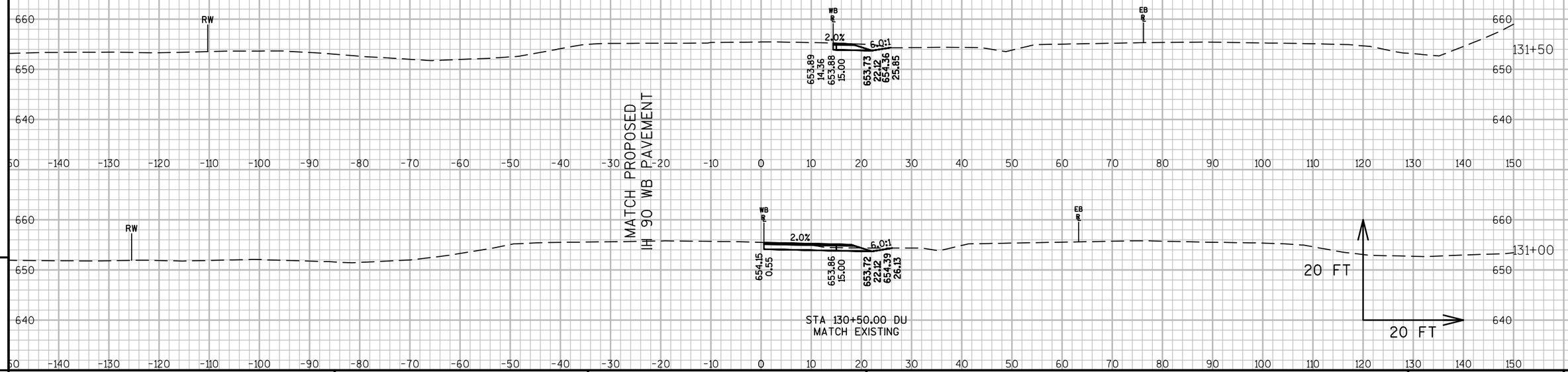
STA 146+75.00 BU
BEGIN CROSSOVER

STA 146+81 BU
1-15"x178' CPRC CL. IV
2-APRON ENDWALLS REQ'D
SKEW 75°

PROVIDE 1' FILL MATERIAL OVER PIPE
IN AREAS OUTSIDE OF GRADING LIMITS.

PROJECT NO:1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: BU TEMPORARY	SHEET 705	E

STA 131+47.79 DU
MATCH EXISTING



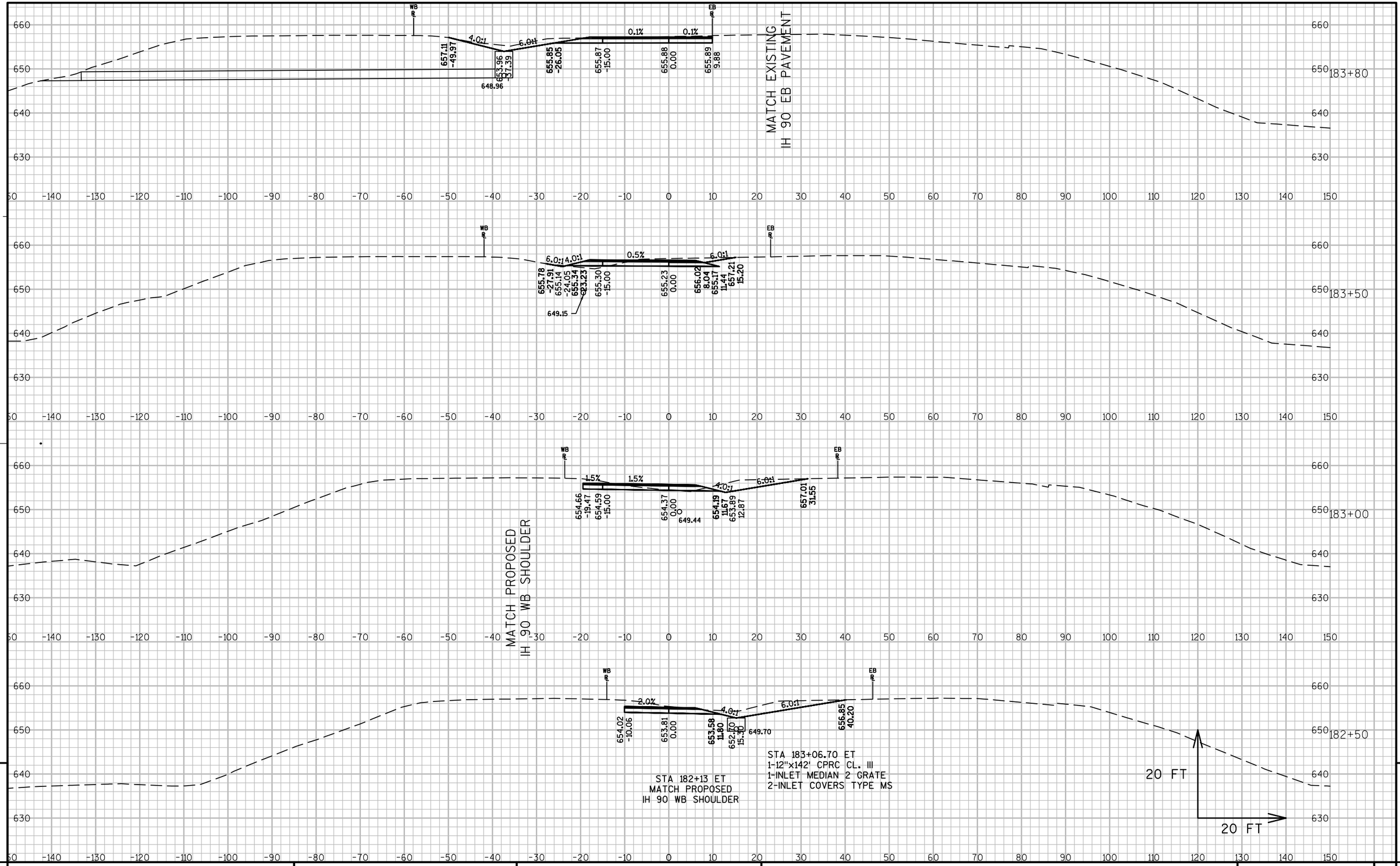
MATCH PROPOSED
IH 90 WB PAVEMENT

STA 130+50.00 DU
MATCH EXISTING

9 9

PROJECT NO:1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: DU TEMPORARY	SHEET	E

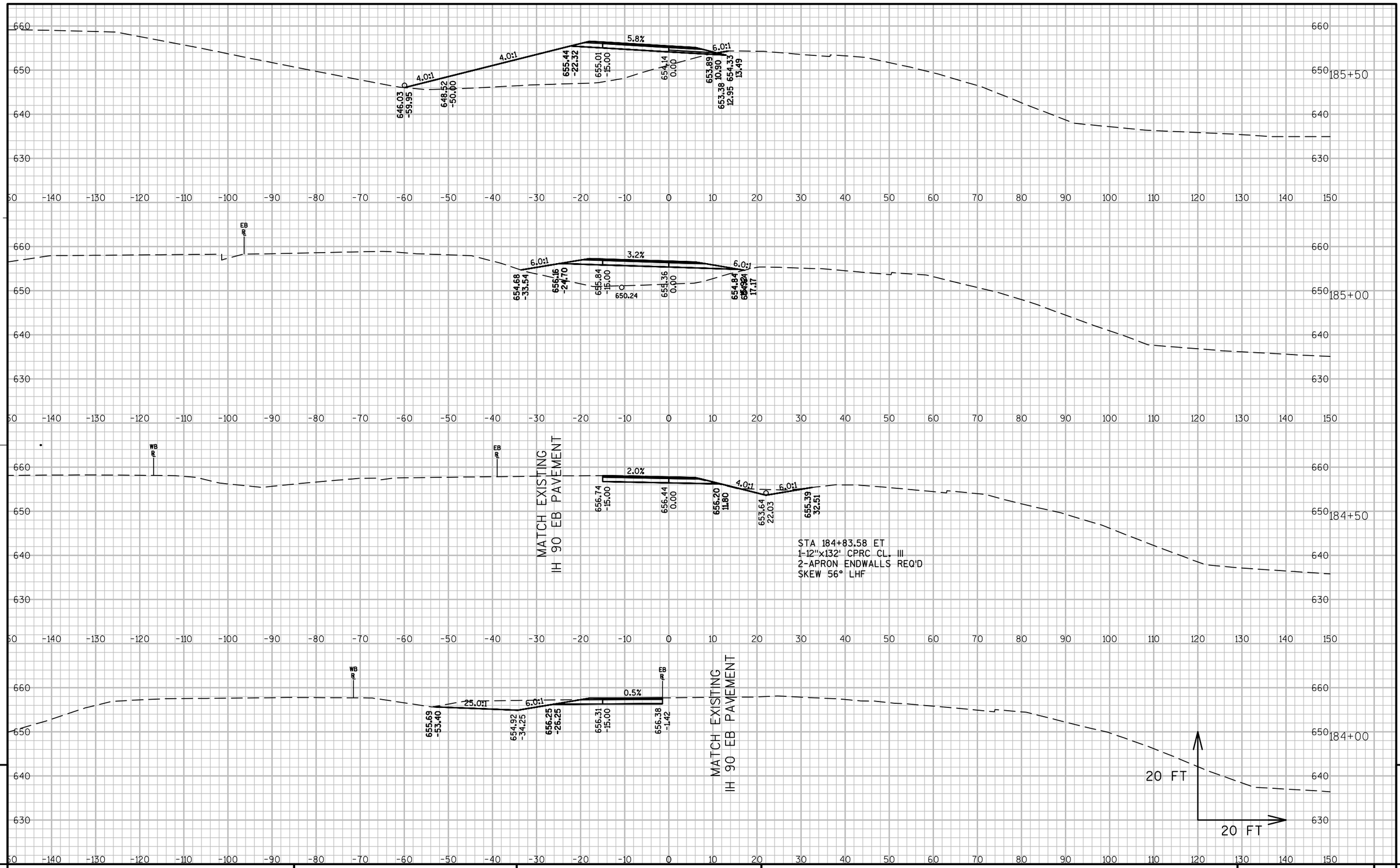
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_TEMPDURAMP.DWG PLOT DATE : 7/31/2014 8:44 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsdu PLOT SCALE : 1 IN:20 FT



PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS:ET TEMPORARY	SHEET 707	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPETRAMP.DWG PLOT DATE : 7/31/2014 10:26 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xset PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: ET TEMPORARY	SHEET 708	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPETRAMP.DWG PLOT DATE : 7/31/2014 10:26 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xset PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

STA 187+22.30
MATCH EXISTING

4.0:1
4.0:1
6.0%
639.73
-74.75
645.91
-50.00
651.25
-28.65
650.79
-21.01
650.24
-11.73
187+00

4.0:1
4.0:1
6.0%
640.22
-77.57
647.11
-50.00
652.04
-30.30
651.42
-20.02
650.75
-8.94
186+75

4.0:1
4.0:1
6.0%
640.95
-72.35
646.53
-50.00
652.52
-26.05
651.86
-15.00
651.21
-4.17
186+50

MATCH EXISTING
E RAMP PAVEMENT

4.0:1
4.0:1
6.0%
6.0%
642.34
-68.77
647.03
-50.00
653.96
-22.30
653.52
-15.00
652.62
0.00
652.12
8.34
186+00

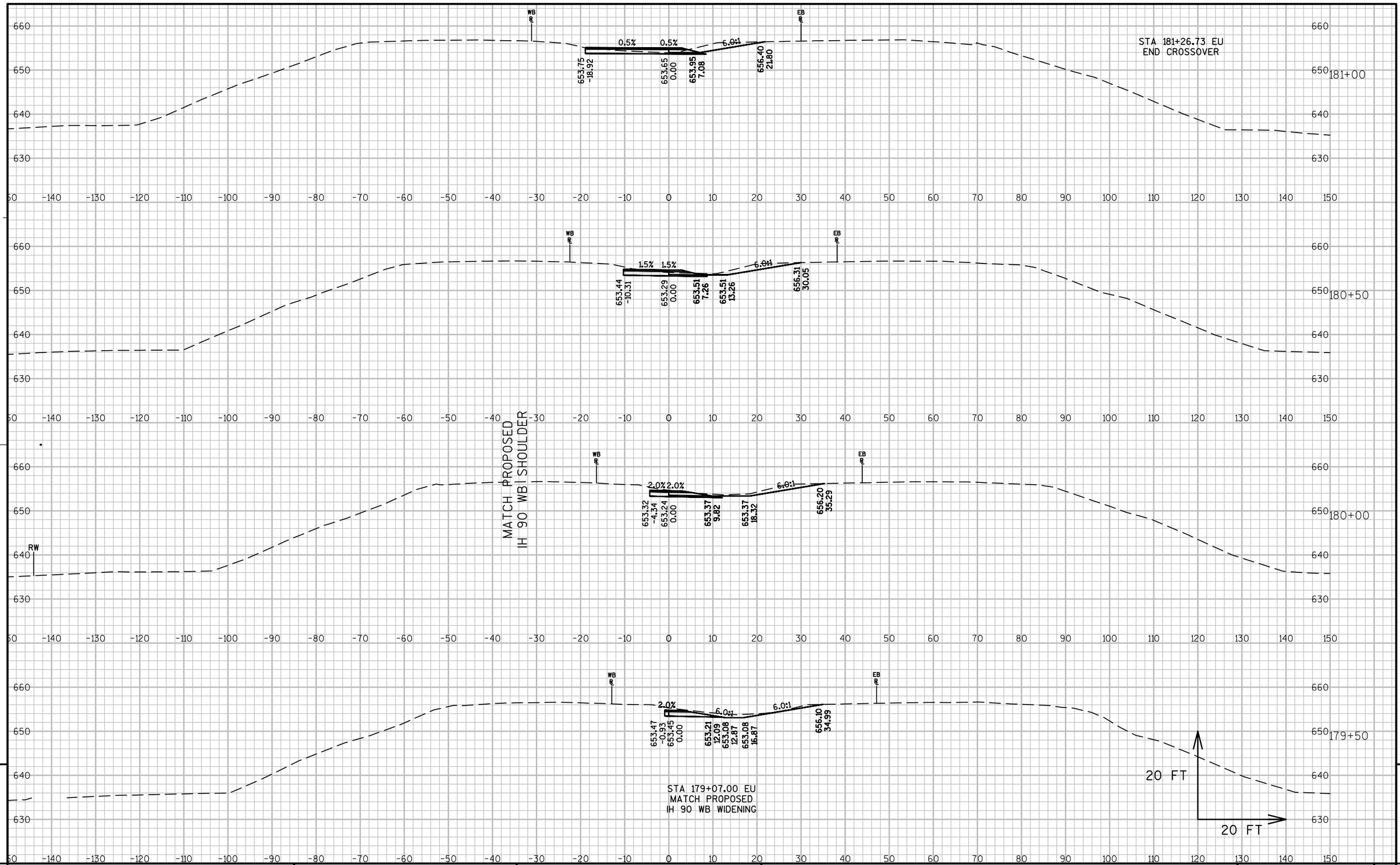
20 FT
20 FT

9

9

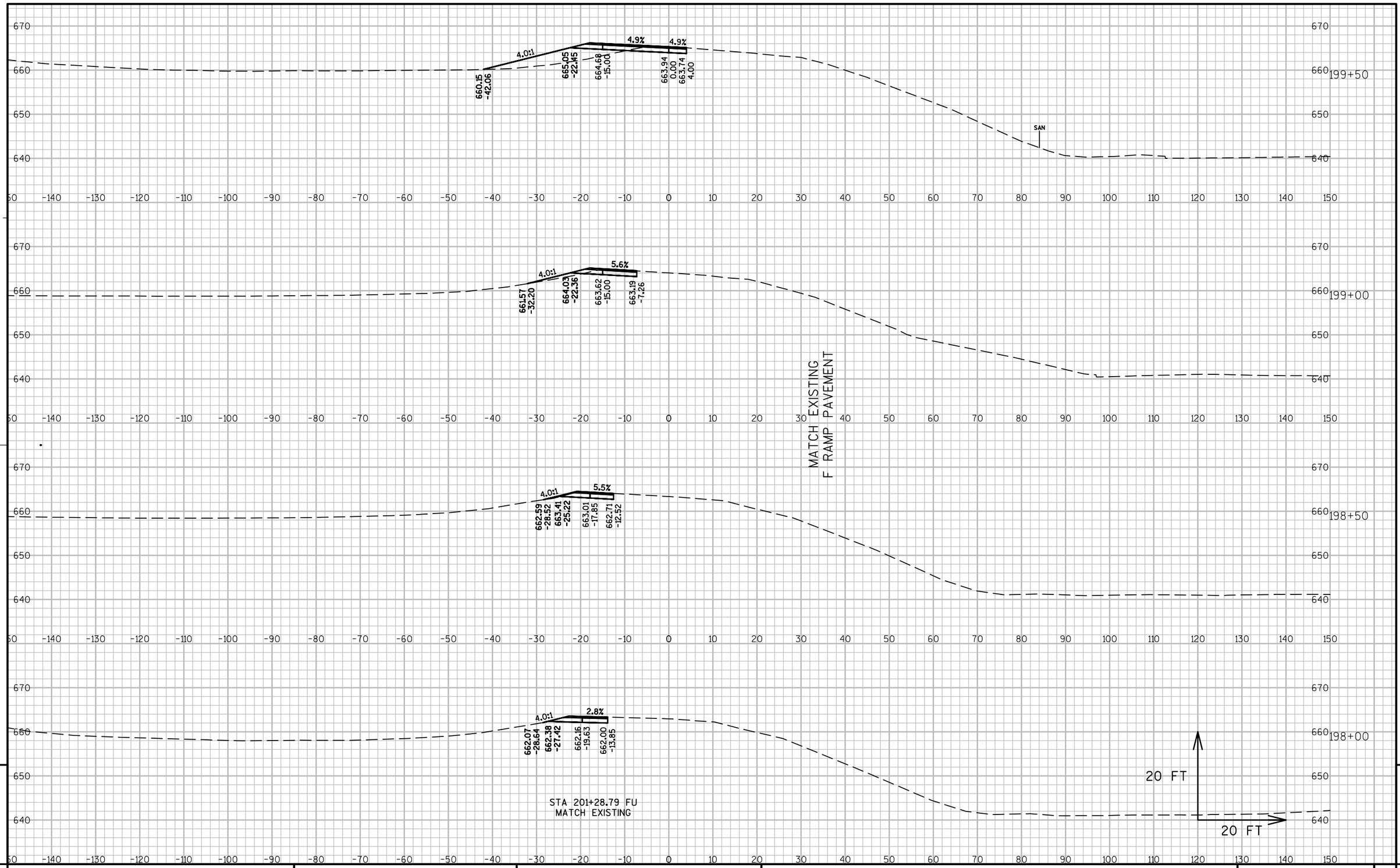
PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS:ET TEMPORARY	SHEET 709	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPETRAMP.DWG PLOT DATE : 7/31/2014 10:26 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xset PLOT SCALE : 1 IN:20 FT



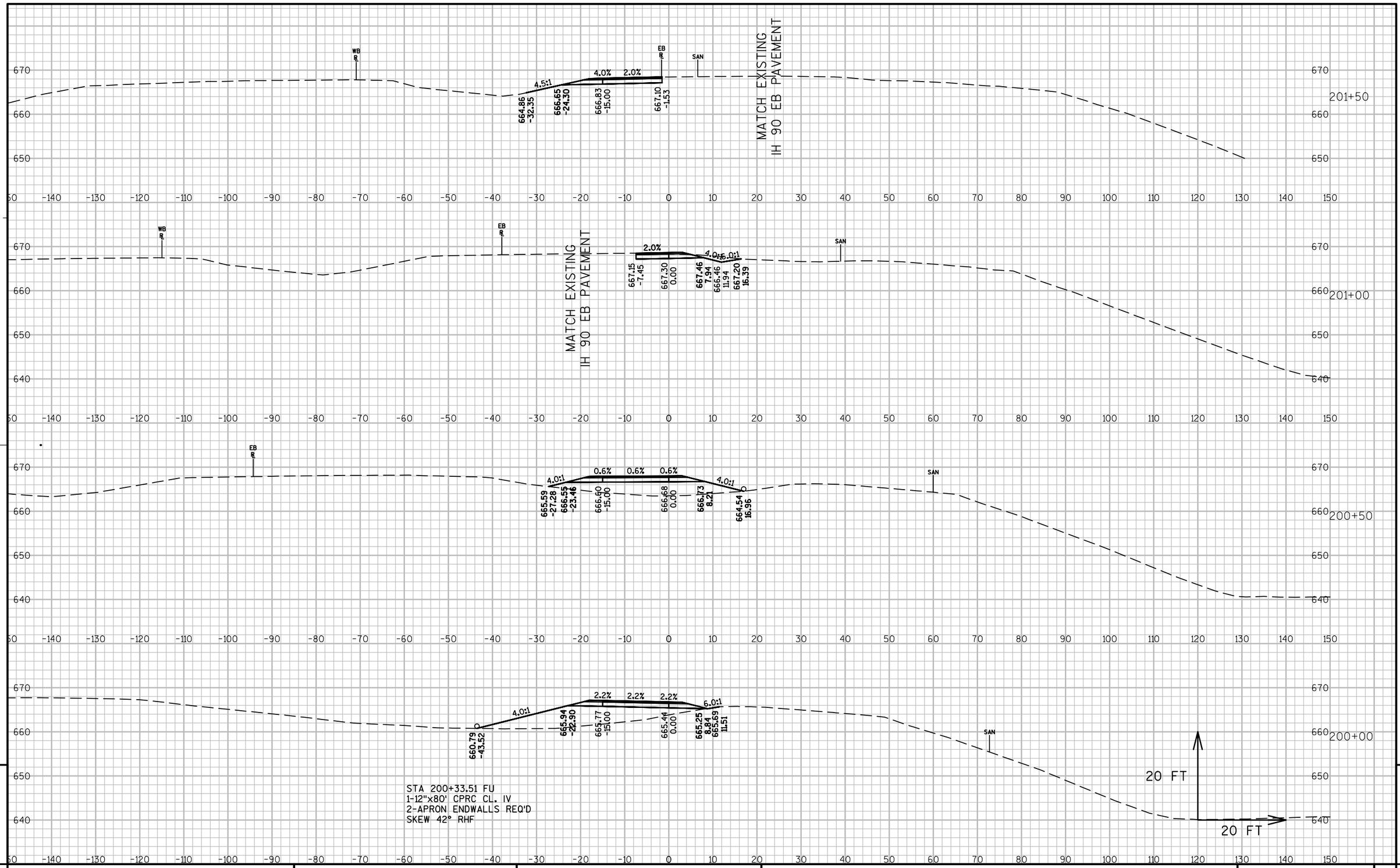
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: EU TEMPORARY	SHEET 710	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPEURAMP.DWG PLOT DATE : 7/31/2014 10:28 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xseu PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: FU TEMPORARY	SHEET 711	E

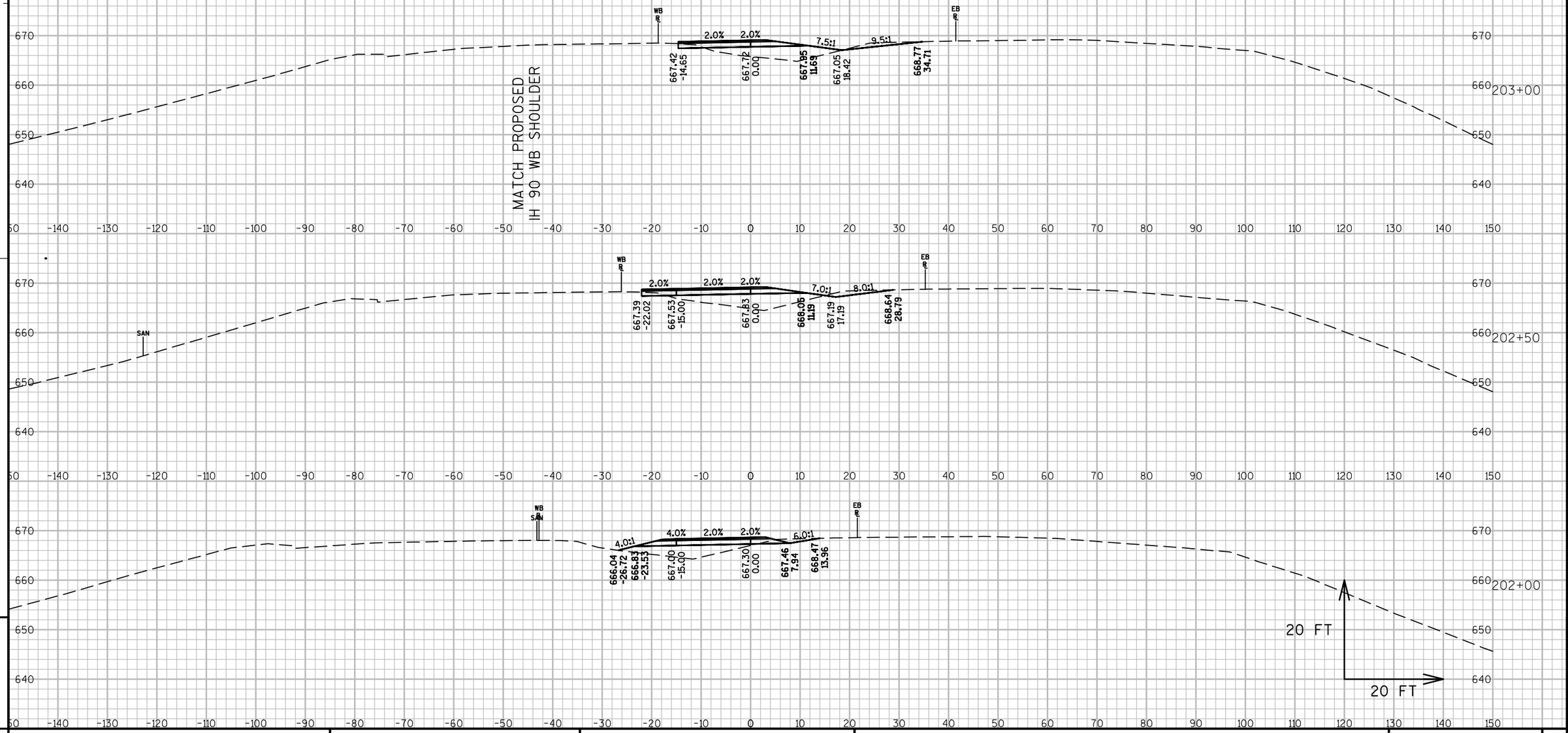
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPFURAMP.DWG PLOT DATE : 7/31/2014 10:30 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsfu PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: FU TEMPORARY	SHEET 712	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPFURAMP.DWG PLOT DATE : 7/31/2014 10:30 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xsfu PLOT SCALE : 1 IN:20 FT

STA 203+20.09 FU
MATCH PROPOSED
IH 90 WB SHOULDER



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: FU TEMPORARY	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPFURAMP.DWG PLOT DATE : 7/31/2014 10:30 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xsfu PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

PROPOSED G RAMP (TYPICAL)

4.0:1
6.0%
4.0:1
6.0:1

638.58
-120.14

663.61
-20.00
664.86
-15.02
665.76
0.00
666.66
15.00
667.40
27.30
665.40
35.30
668.56
54.24

210+50

637.30
-123.42

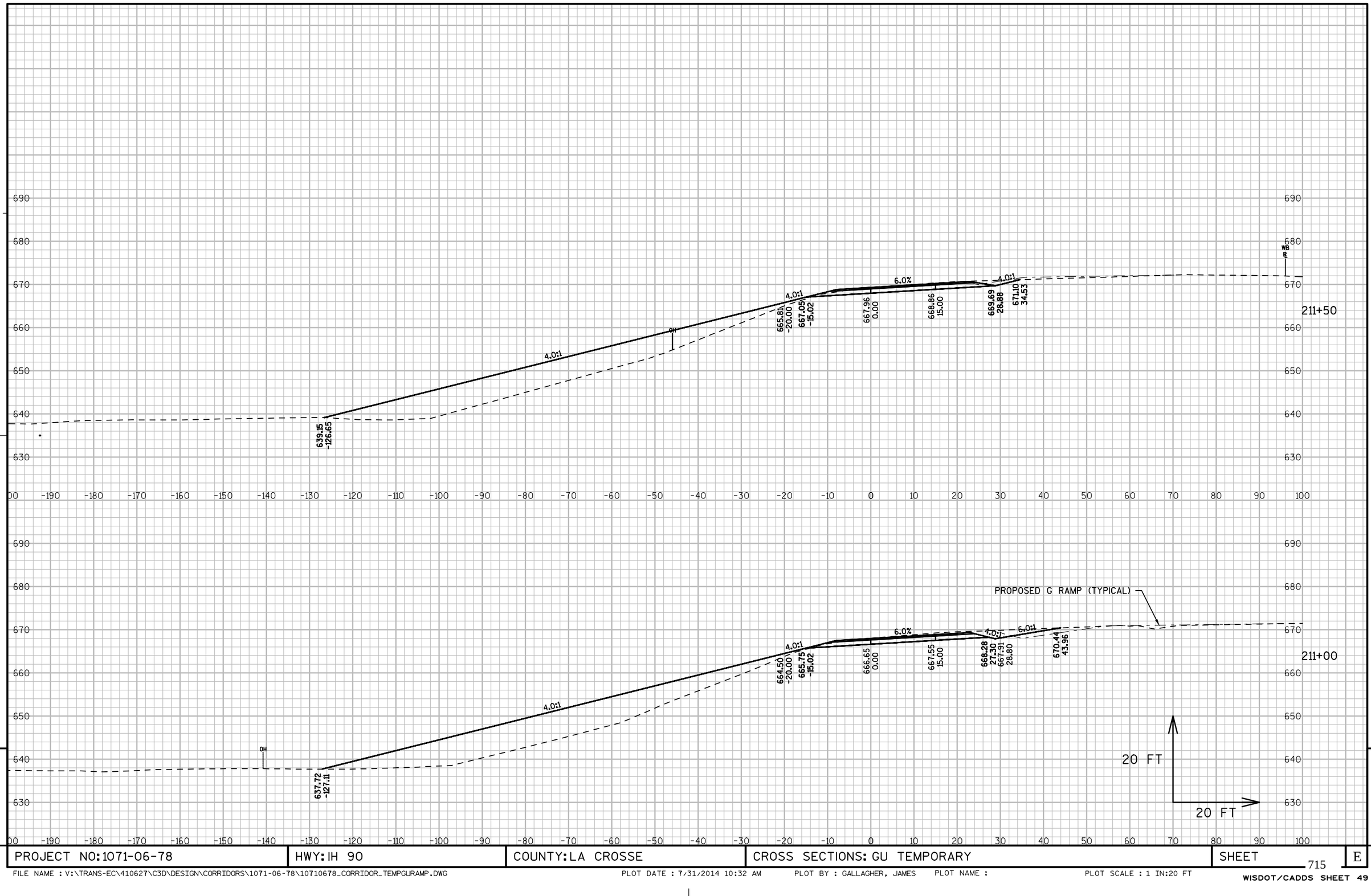
663.15
-20.00
664.40
-15.02
665.30
0.00
666.20
15.00
666.94
27.30
664.94
35.30
666.57
45.13

210+00

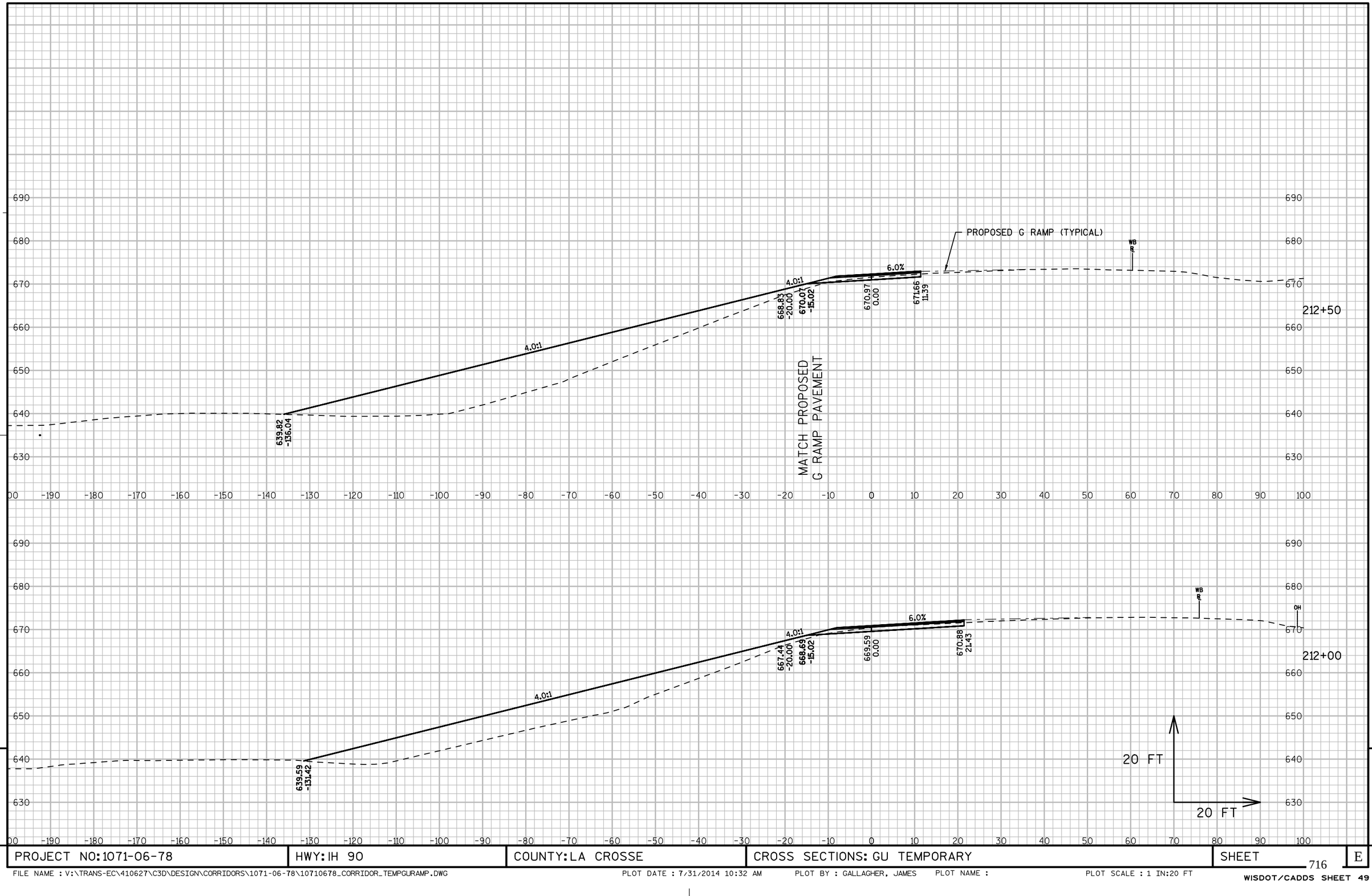
20 FT
20 FT

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: GU TEMPORARY	SHEET 714	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPGURAMP.DWG PLOT DATE : 7/31/2014 10:32 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT

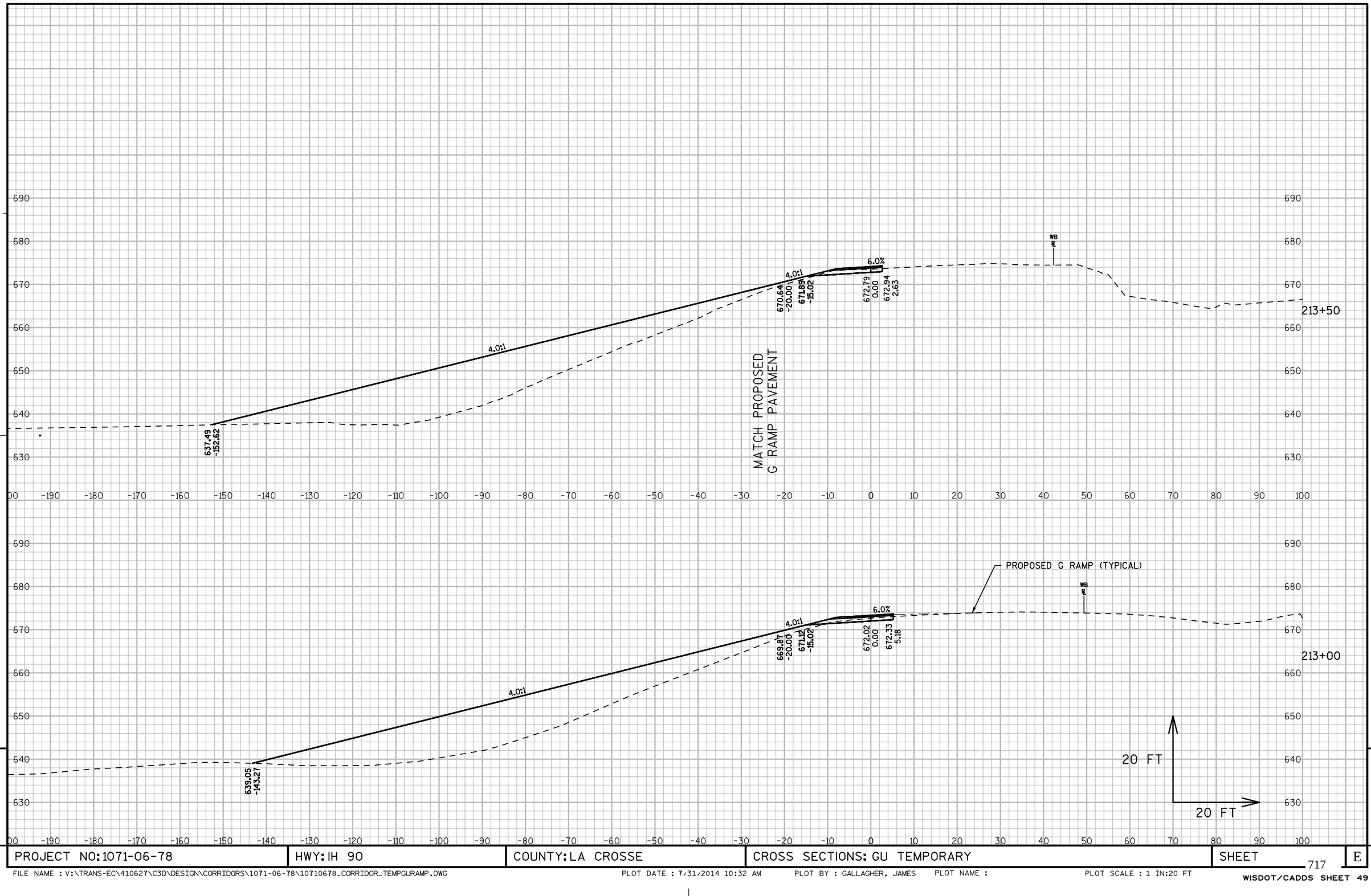


PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: GU TEMPORARY	SHEET	E



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: GU TEMPORARY	SHEET 716	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPGURAMP.DWG PLOT DATE : 7/31/2014 10:32 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT



9 9

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: GU TEMPORARY	SHEET 717	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPGURAMP.DWG PLOT DATE : 7/31/2014 10:32 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT

204+00

RS

2.0% 2.0%

643.56
-7.67

643.72
0.00

643.77
2.63

MATCH EXISTING
FLYOVER RAMP

203+50

RS

2.0% 2.0%

643.60
-7.59

643.75
0.00

643.78
1.47

MATCH EXISTING
ROSE STREET SB PAVEMENT

203+00

RS

2.0%2.0%

643.62
-7.85

643.78
0.00

643.79
0.31

202+50

RS

2.0%

643.65
-8.15

643.81
0.00

STA 202+40.68 GW
MATCH EXISTING

20 FT

20 FT

9

9

PROJECT NO:1071-06-78	HWY: IH 90	COUNTY:LA CROSSE	CROSS SECTIONS: GW TEMPORARY	SHEET 718	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPGWRAMP.DWG PLOT DATE : 7/31/2014 10:33 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsgw PLOT SCALE : 1 IN:20 FT

206+00

642.35
-54.21

50.01

643.17
-13.10

1.0%

643.30
0.00

643.57
26.89

RS

205+50

642.80
-16.25

2.0%

643.23
0.00

2.0%

643.49
13.29

RS

MATCH EXISTING
ROSE STREET SB PAVEMENT

205+00

643.42
-11.72

2.0%

643.65
0.00

2.0%

643.77
5.91

RS

MATCH EXISTING
FLYOVER RAMP

204+50

643.47
-10.42

2.0%

643.68
0.00

2.0%

643.76
3.79

RS

20 FT

20 FT

9

9

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: GW TEMPORARY	SHEET 719	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPGWRAMP.DWG PLOT DATE : 7/31/2014 10:34 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xsgw PLOT SCALE : 1 IN:20 FT

MATCH EXISTING
FLYOVER RAMP

207+33

1.7% 1.7% 4.0:1 4.0:1

646.47 -4.00 646.40 0.00 646.15 15.00 646.00 23.72 643.18 35.00 638.85 48.32

207+50

2.0% 2.0% 4.0:1

647.06 -4.00 646.98 0.00 646.68 15.00 646.50 23.80 644.26 32.75

207+00

25.0:1 1.0% 4.0:1 4.0:1

643.65 -51.91 645.40 -8.11 645.32 0.00 645.17 15.00 645.08 23.55 642.22 35.00 641.34 38.51

206+50

51.0:1 0.0% 4.0:1

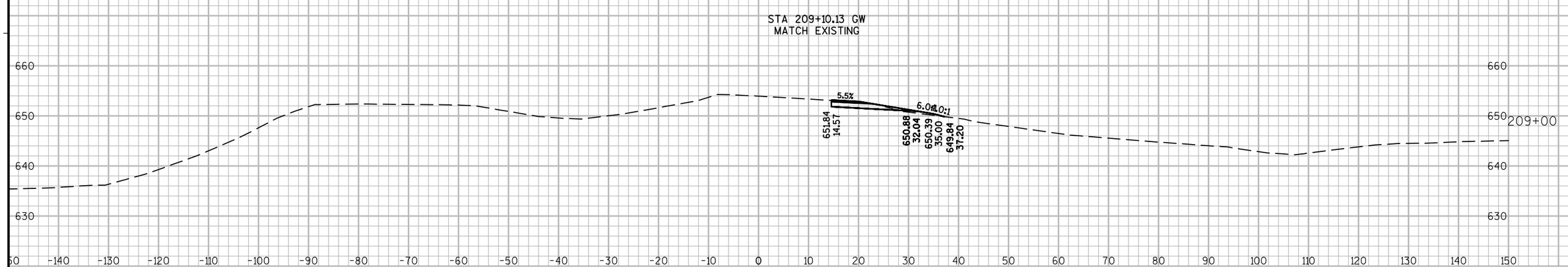
643.13 -51.13 643.95 -9.54 643.95 0.00 643.95 14.70 643.95 23.03 643.50 24.80

RS RS RS RS

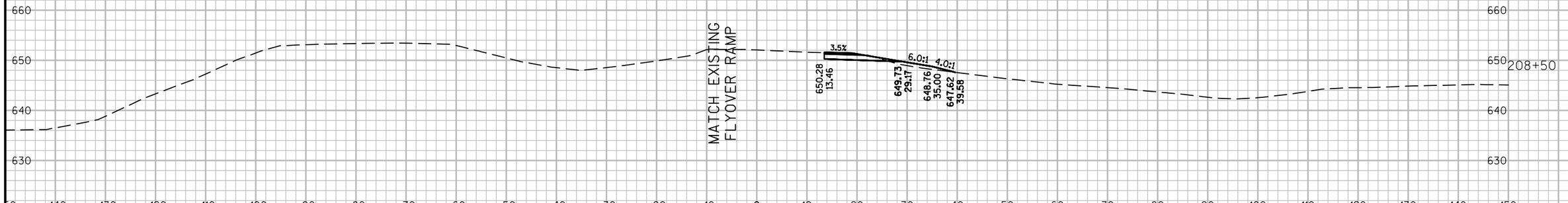
20 FT
20 FT

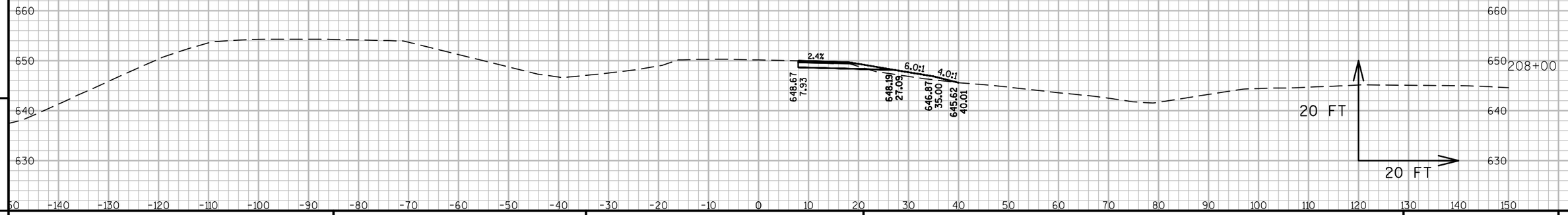
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: GW TEMPORARY	SHEET 720	E

STA 209+10.13 GW
MATCH EXISTING



MATCH EXISTING
FLYOVER RAMP





9

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PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS:GW TEMPORARY	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPGWRAMP.DWG PLOT DATE : 7/31/2014 10:34 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090204_xsgw PLOT SCALE : 1 IN:20 FT

STA 185+84.52 HV
END CROSSOVER

MATCH PROPOSED
IH 90 WB PAVEMENT

WB
PL

EB
PL

2.0%

4.0:1

656.85
6.59

657.01
14.89

657.18
23.43

655.64
29.62

660
650
640
630

185+50

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

WB
PL

EB
PL

0.8%

2.0%

4.0:1

4.0:1

656.18
-6.93

656.23
0.00

656.53
15.00

656.70
23.53

655.70
27.53

657.57
35.00

657.68
35.45

660
650
640
630

185+00

20 FT

20 FT

STA 184+75.00 HV
BEGIN CROSSOVER

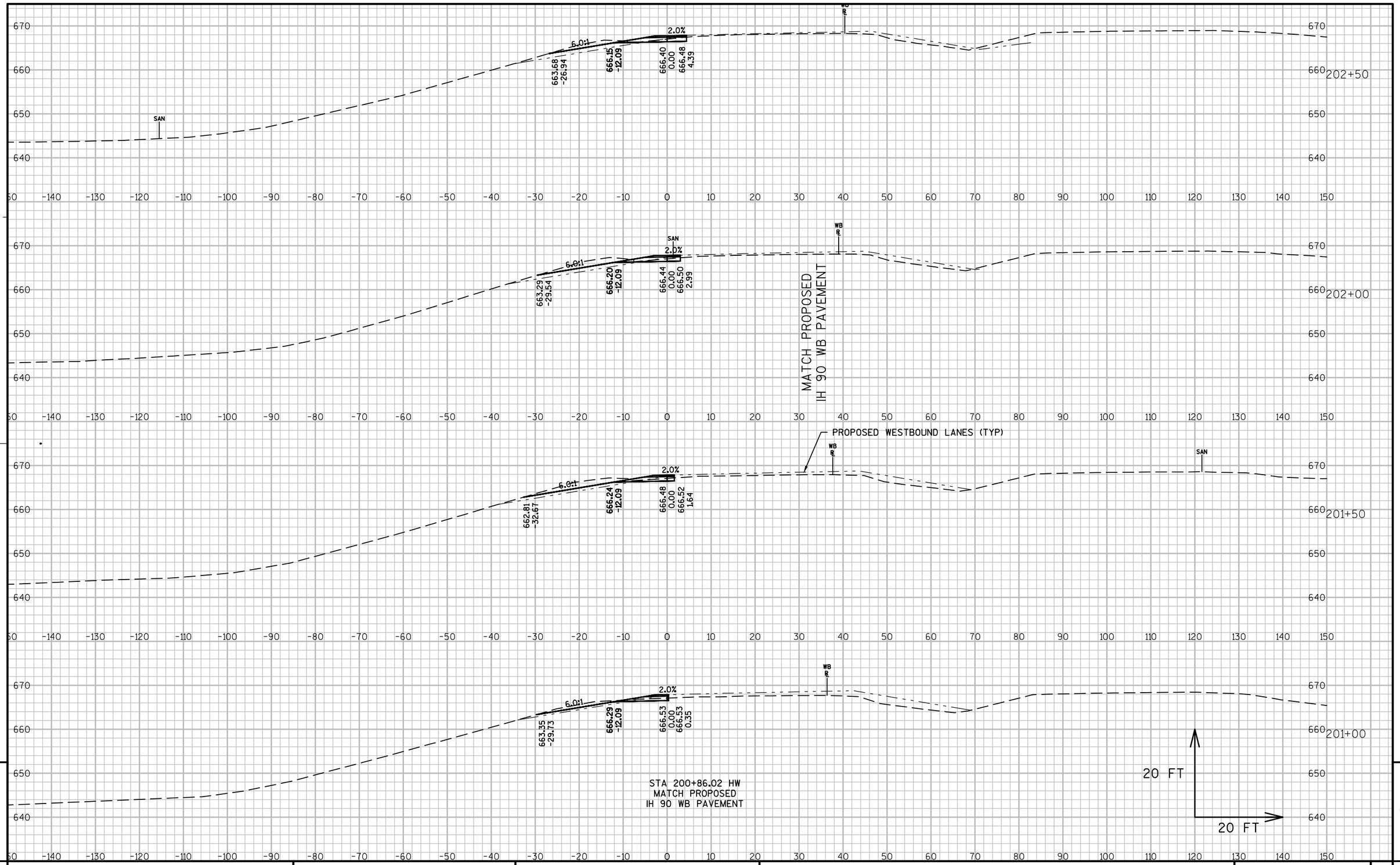
-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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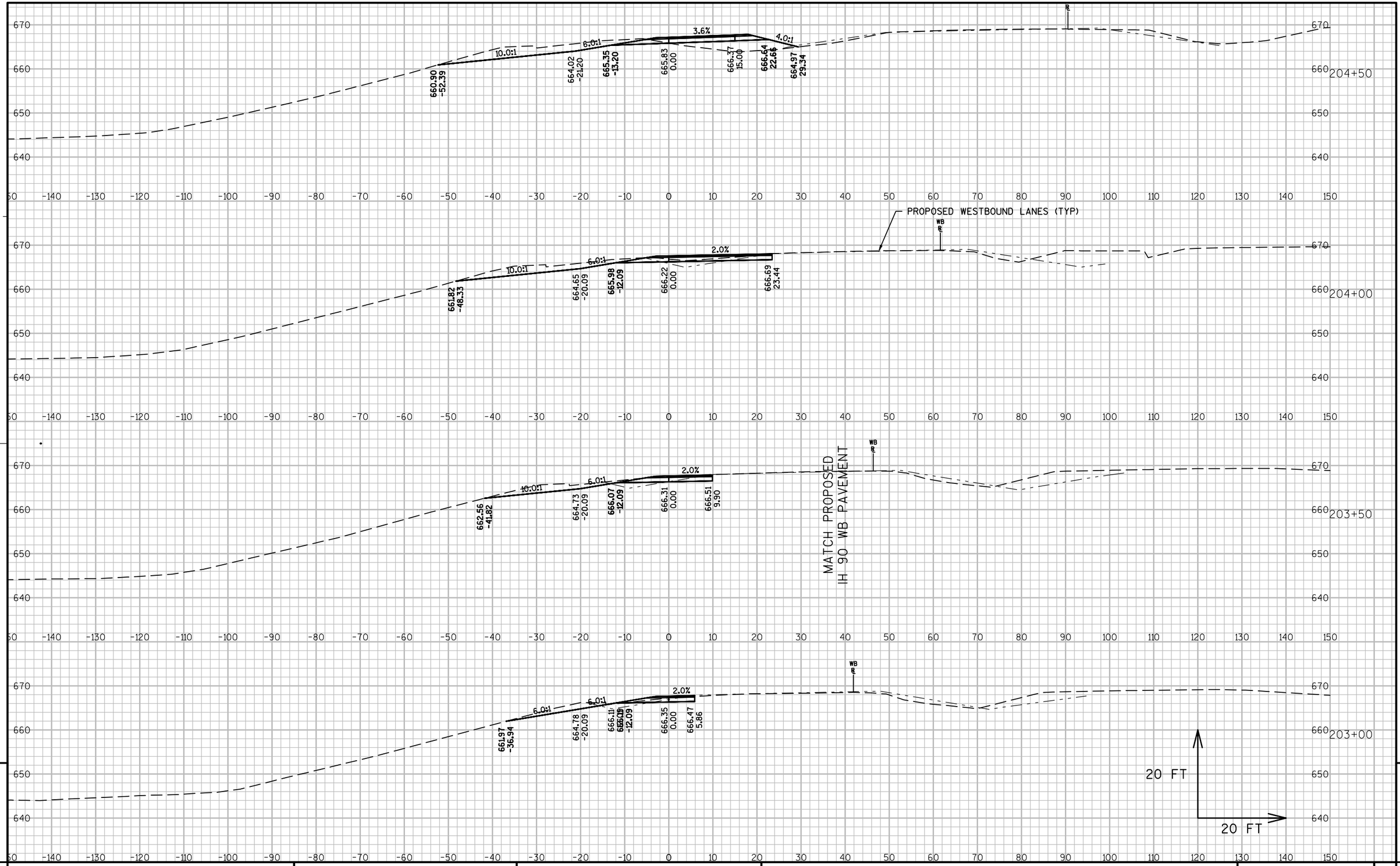
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: HV TEMPORARY	SHEET 722	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPHVRAMP.DWG PLOT DATE : 7/31/2014 10:36 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS:HW TEMPORARY	SHEET	E

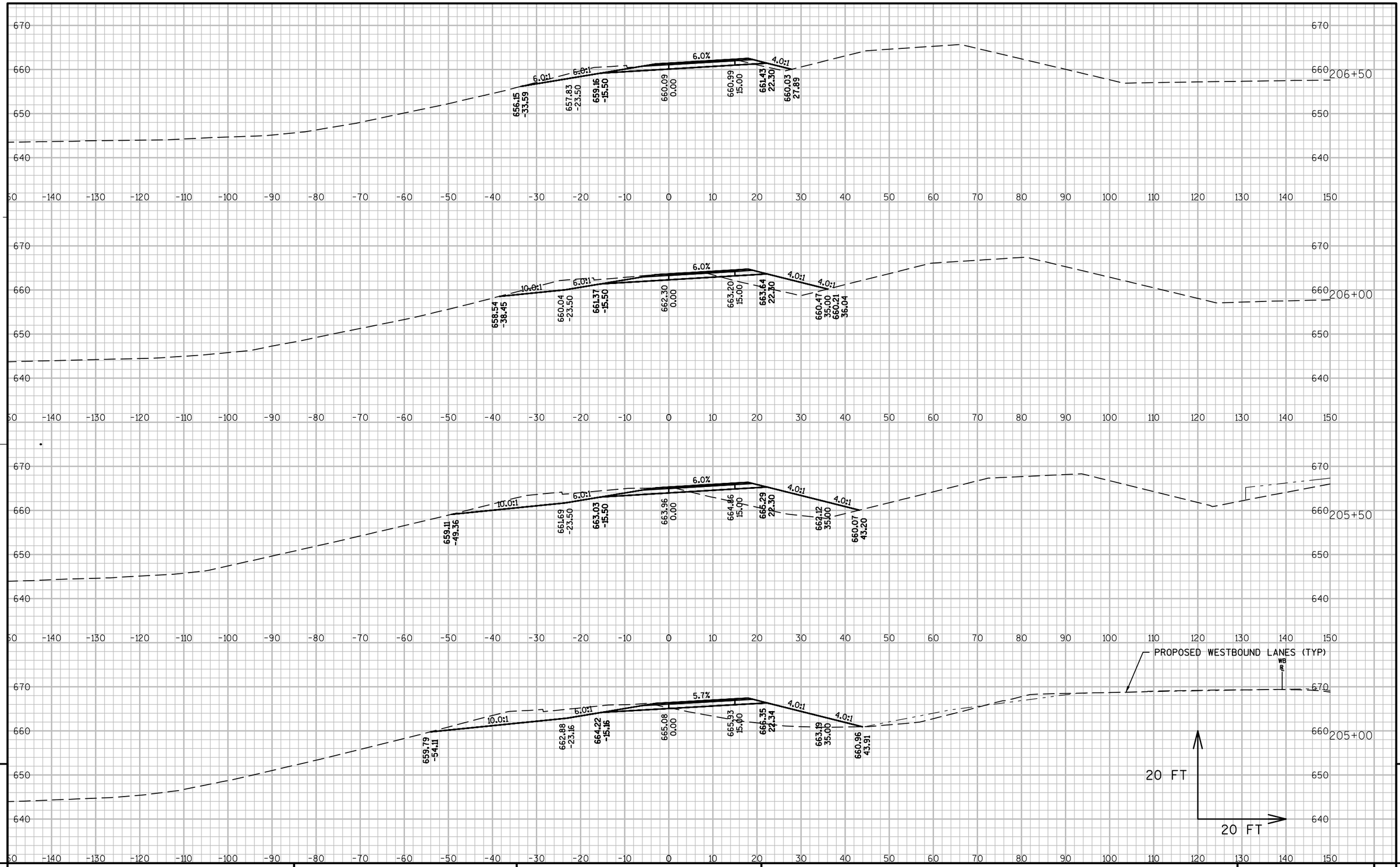
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPHWRAMP.DWG PLOT DATE : 7/31/2014 10:37 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: HW TEMPORARY	SHEET 724	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPHWRAMP.DWG PLOT DATE : 7/31/2014 10:38 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT

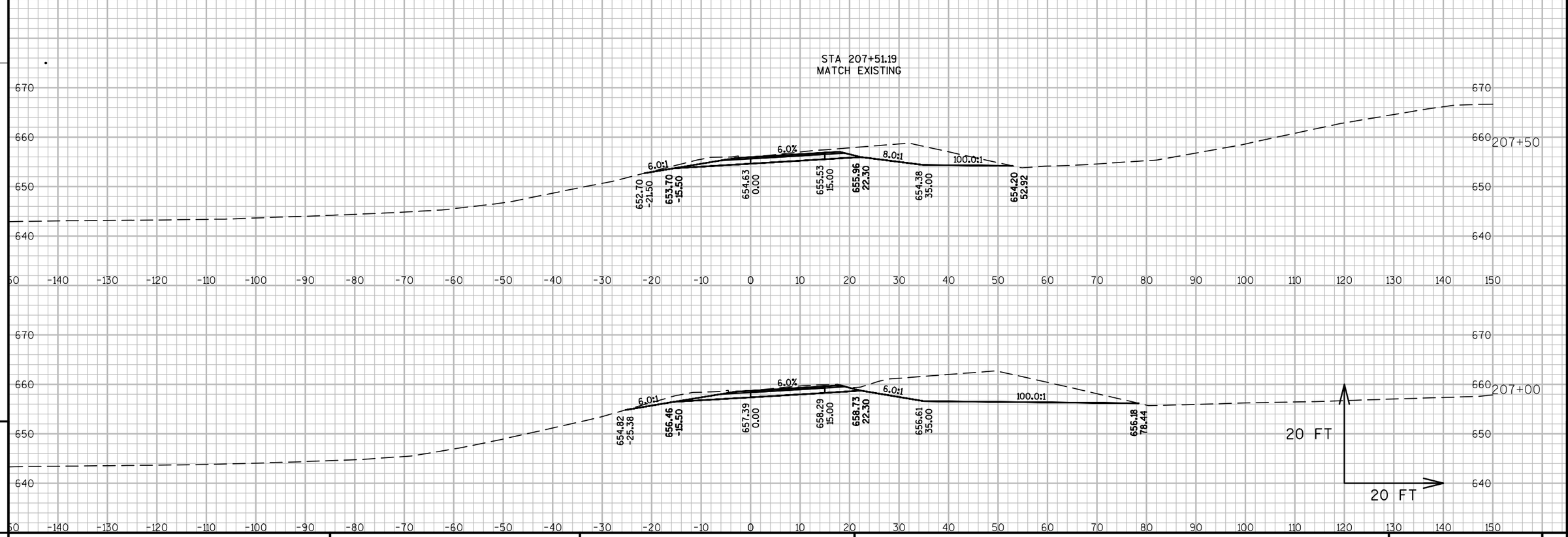
WISDOT/CADDS SHEET 49



PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS:HW TEMPORARY	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPHWRAMP.DWG PLOT DATE : 7/31/2014 10:38 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT

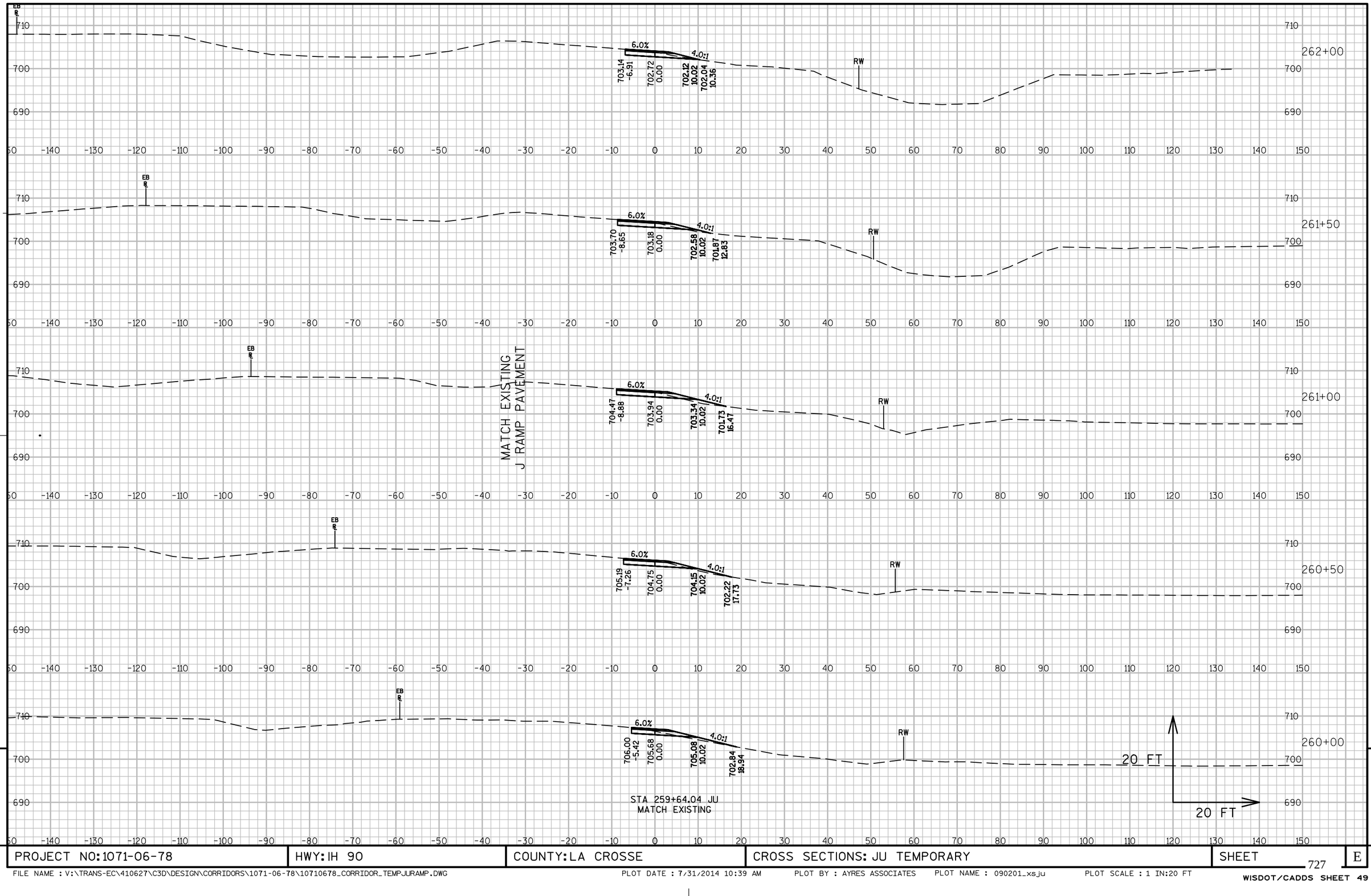
STA 207+51.19
MATCH EXISTING



9 9

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: HW TEMPORARY	SHEET	E

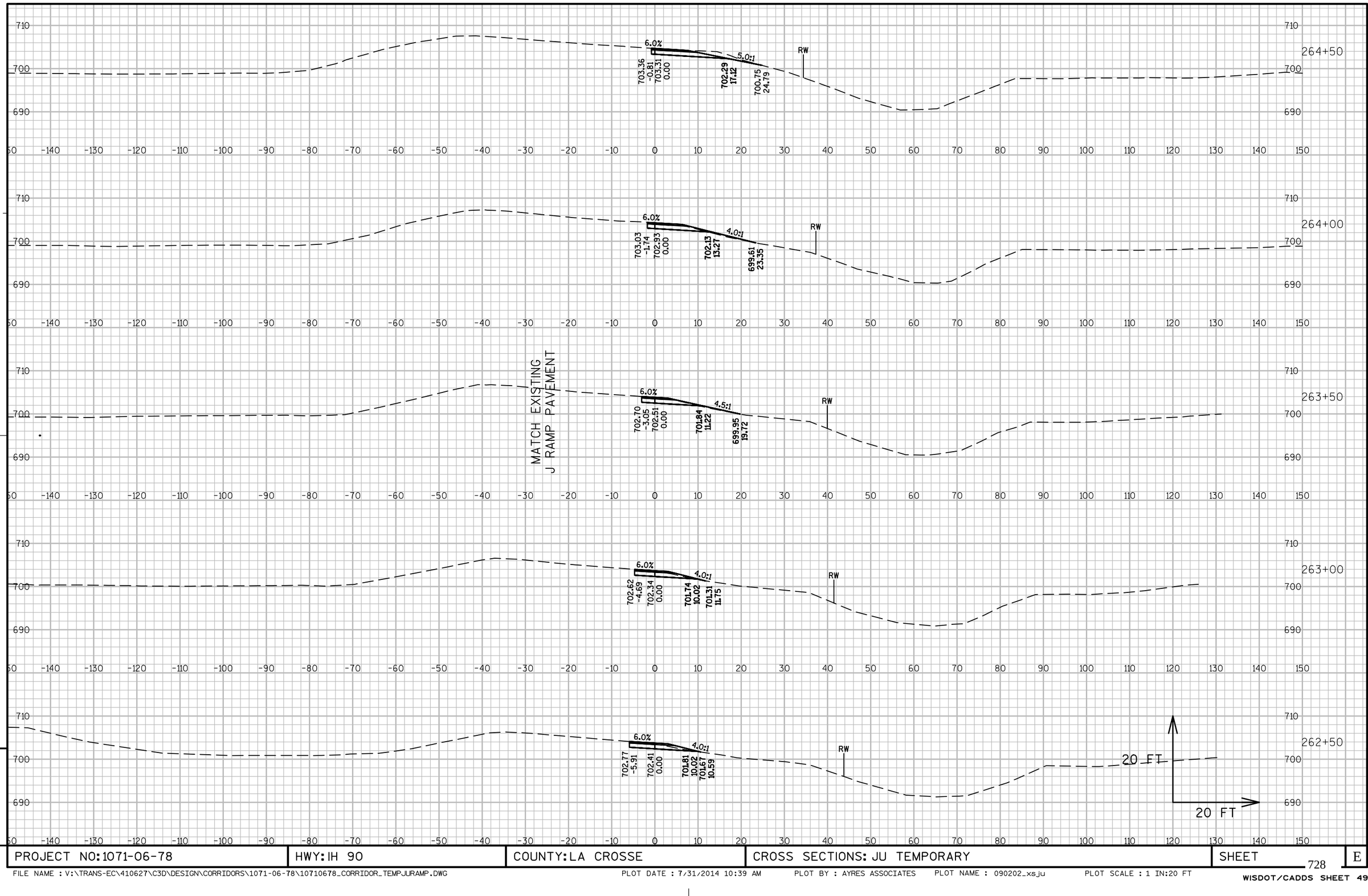
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPHWRAMP.DWG PLOT DATE : 7/31/2014 10:38 AM PLOT BY : GALLAGHER, JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: JU TEMPORARY	SHEET 727	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPJURAMP.DWG PLOT DATE : 7/31/2014 10:39 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsju PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

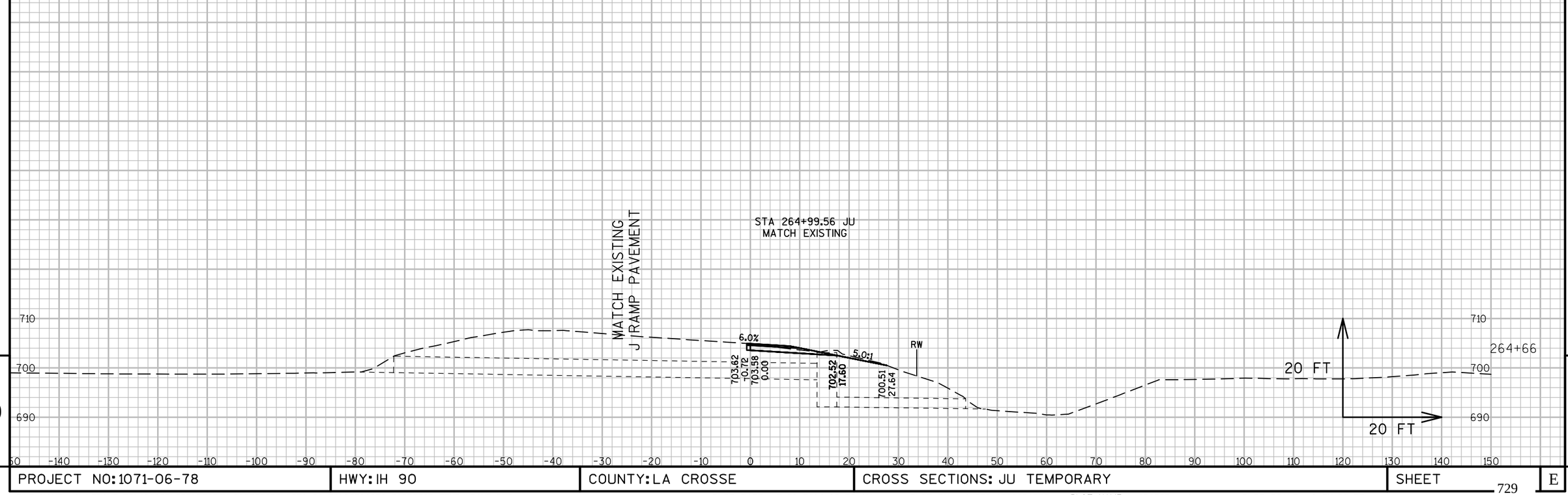


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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: JU TEMPORARY	SHEET 728	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPJURAMP.DWG PLOT DATE : 7/31/2014 10:39 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xsju PLOT SCALE : 1 IN:20 FT

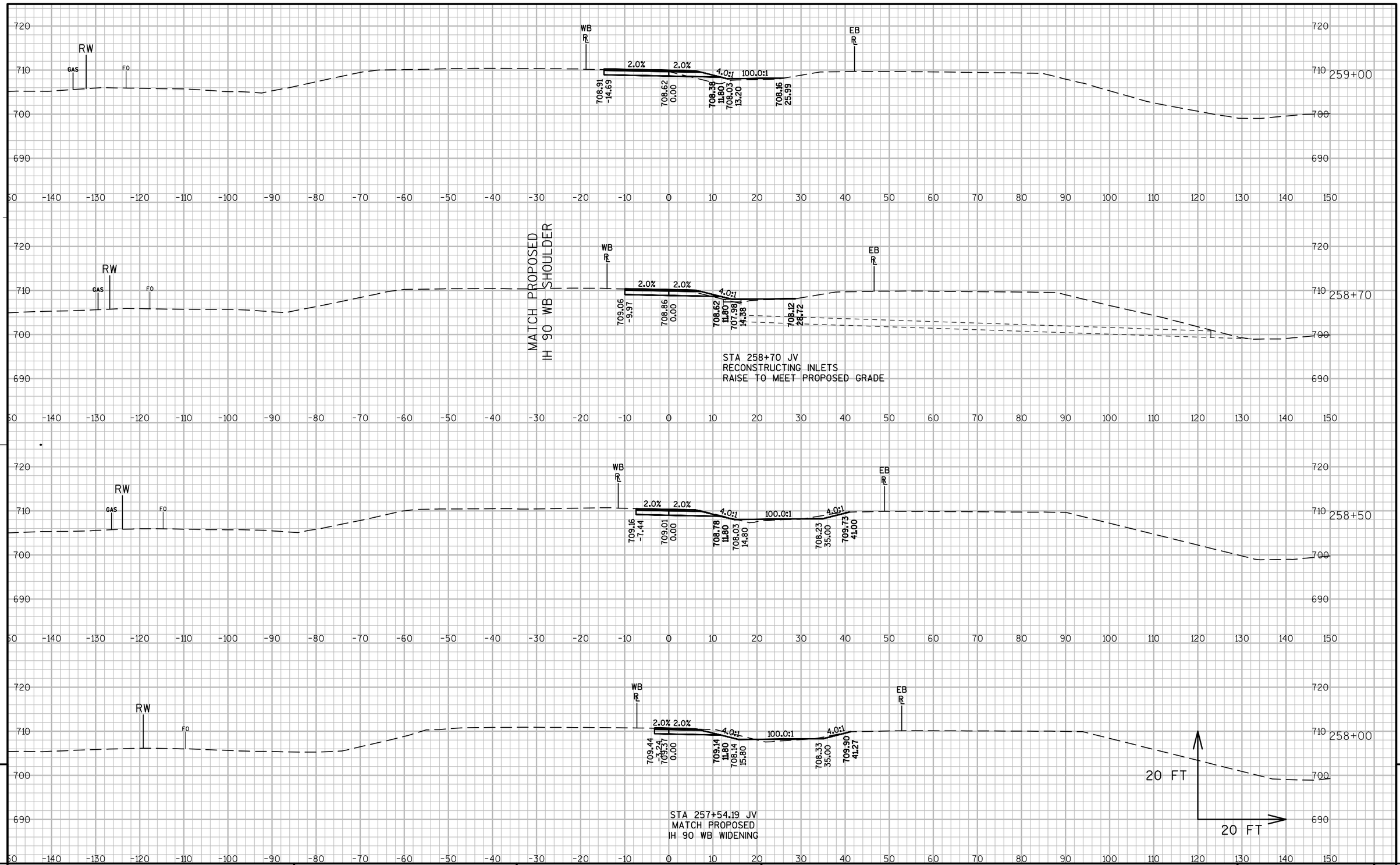


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PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS: JU TEMPORARY	SHEET 729	E

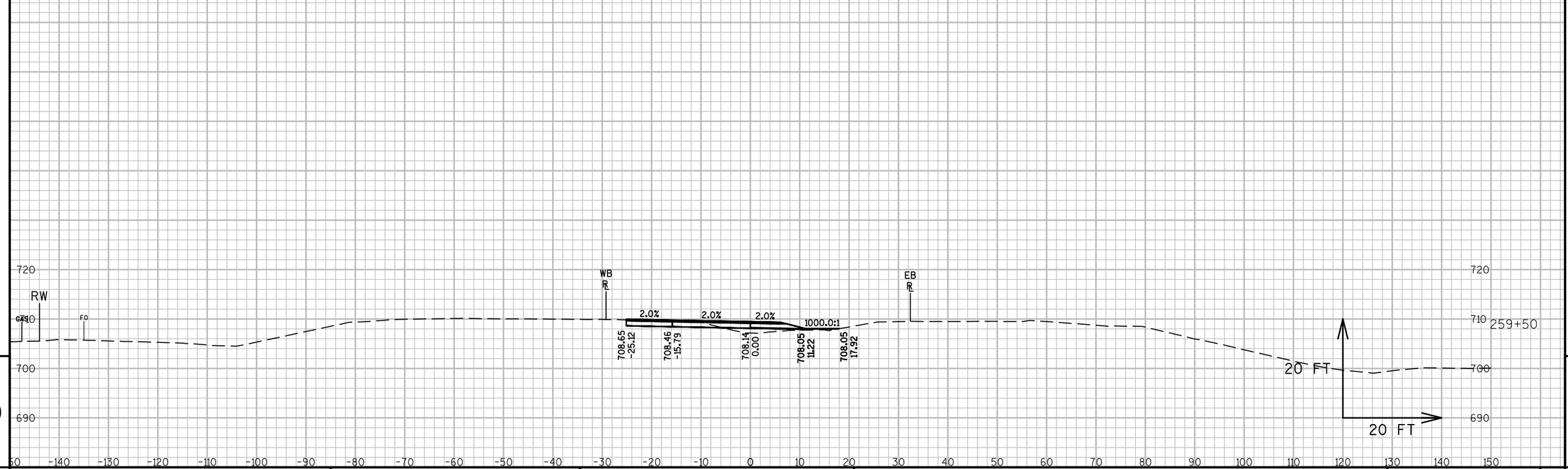
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPJURAMP.DWG PLOT DATE : 7/31/2014 10:39 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xsju PLOT SCALE : 1 IN:20 FT



PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS: JV TEMPORARY	SHEET 730	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPJVRAMP.DWG PLOT DATE : 7/31/2014 10:42 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsjv PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



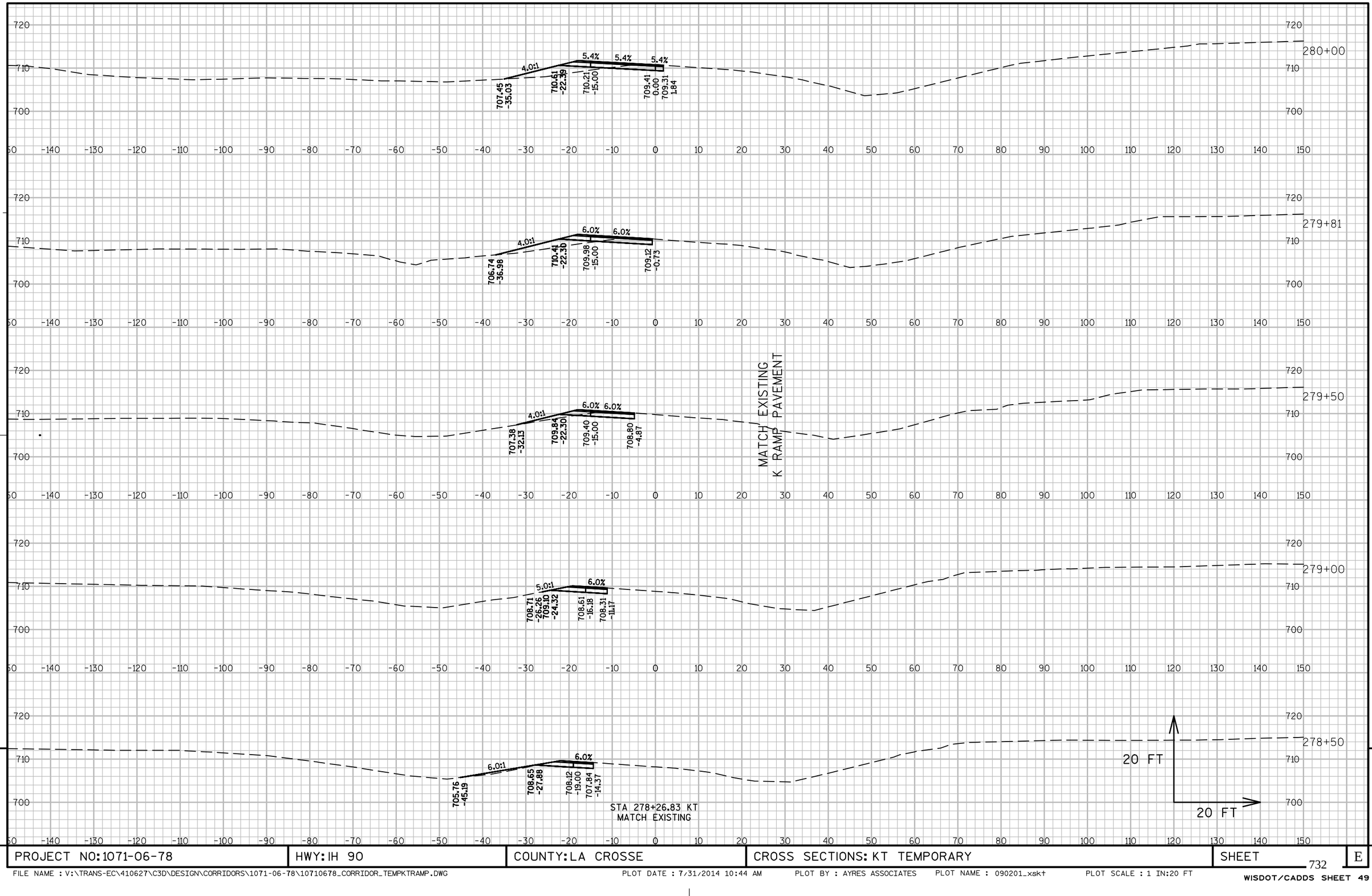
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PROJECT NO:1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: JV TEMPORARY	SHEET 731	E

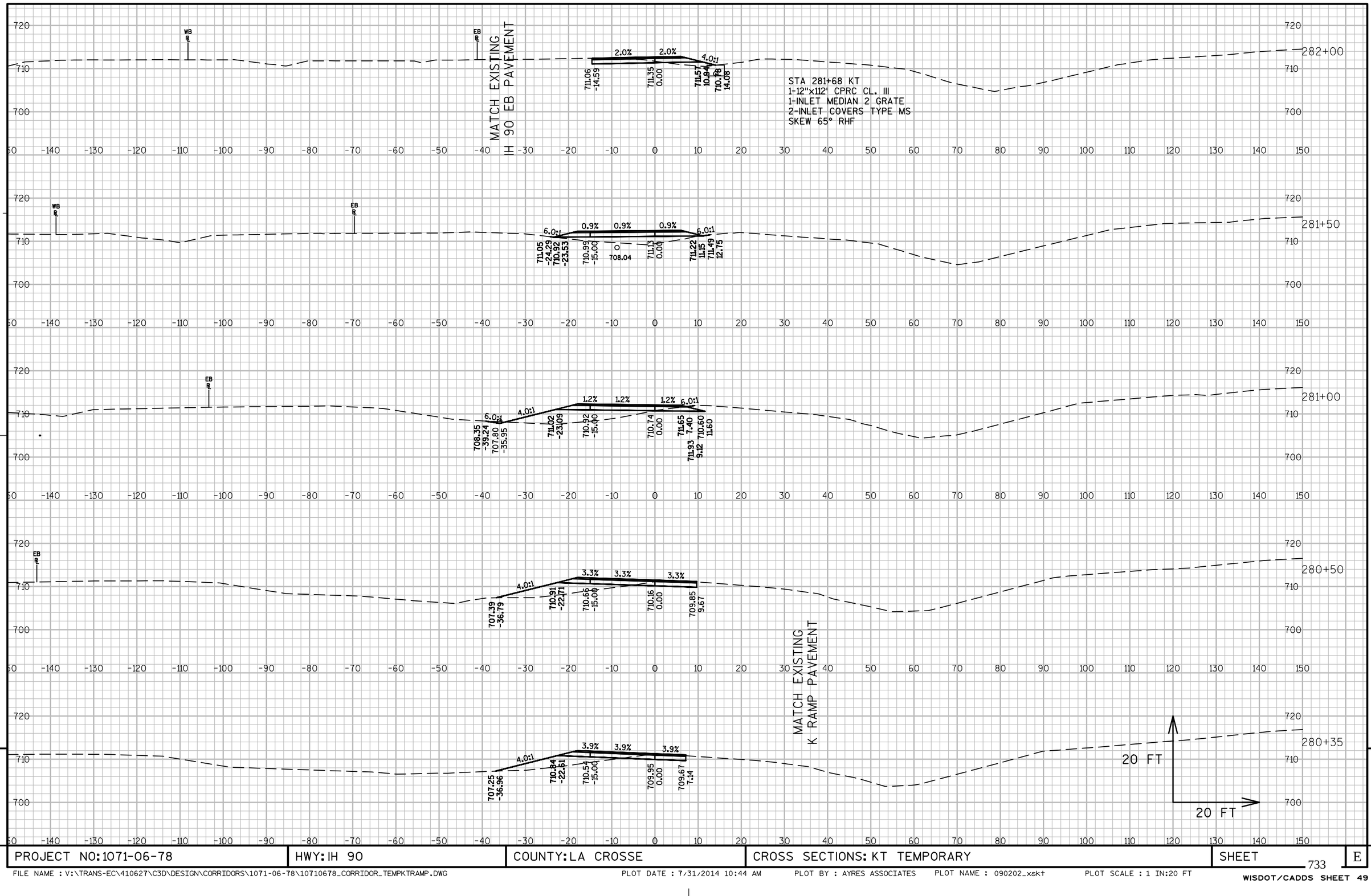
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPJVRAMP.DWG PLOT DATE : 7/31/2014 10:42 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xsjv PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

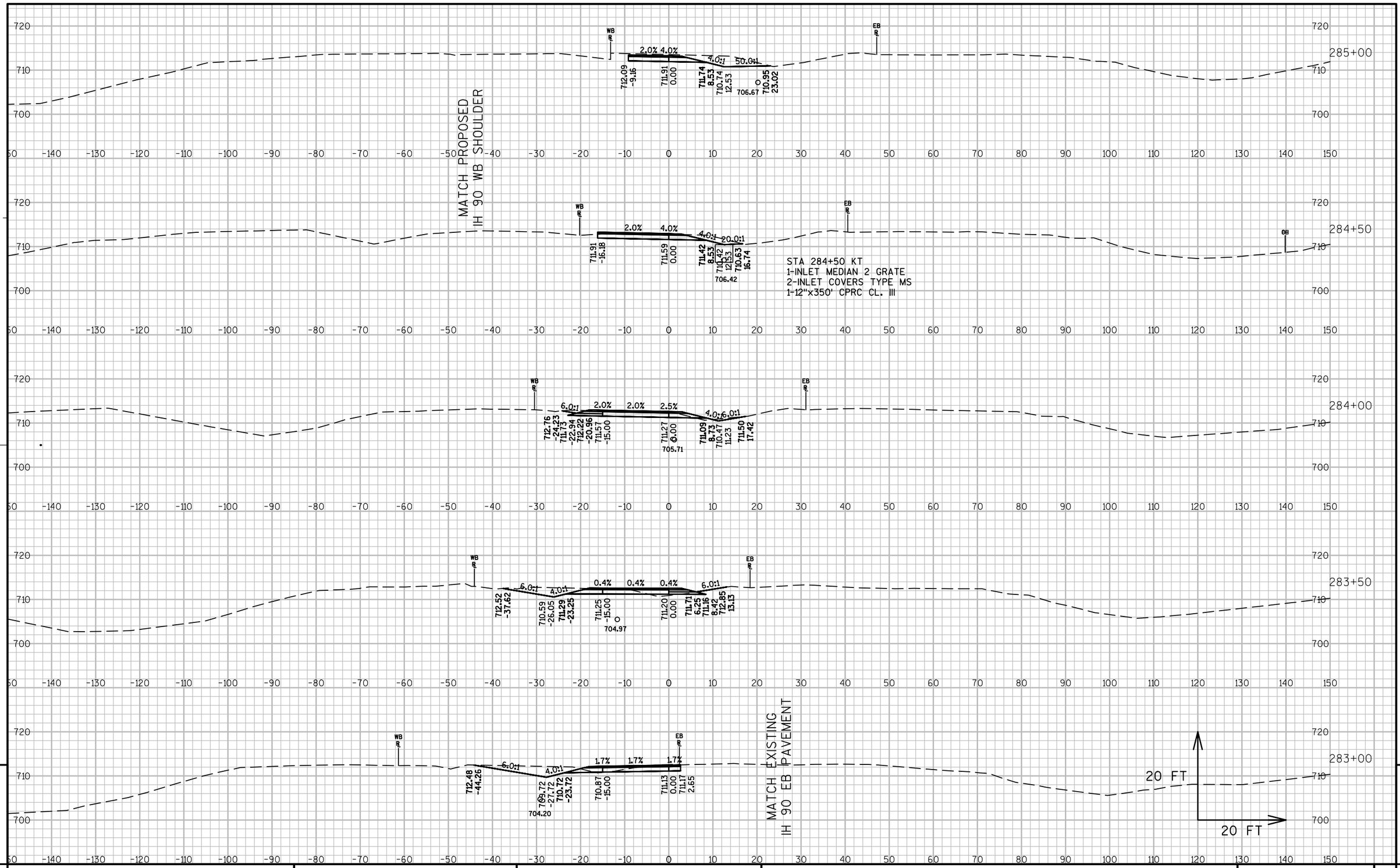


PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: KT TEMPORARY	SHEET 732	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPKTRAMP.DWG PLOT DATE : 7/31/2014 10:44 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsk† PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: KT TEMPORARY	SHEET 733	E



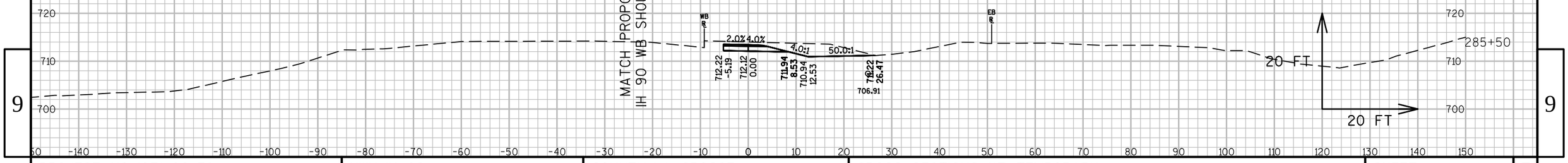
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: KT TEMPORARY	SHEET 734	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPKTRAMP.DWG PLOT DATE : 7/31/2014 10:45 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xsk+ PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

STA 285+79.64 KT
MATCH PROPOSED
IH 90 WB SHOULDER

MATCH PROPOSED
IH 90 WB SHOULDER



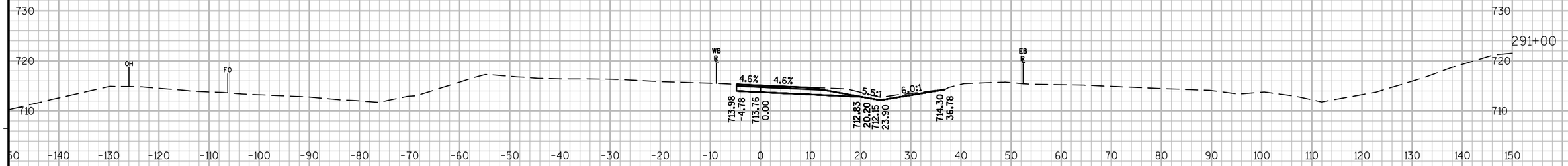
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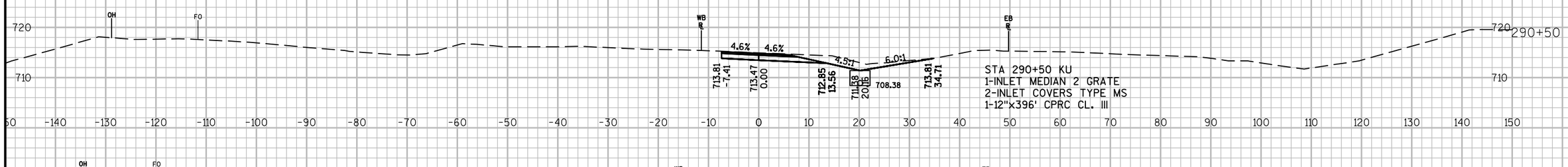
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PROJECT NO:1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: KT TEMPORARY	SHEET 735	E

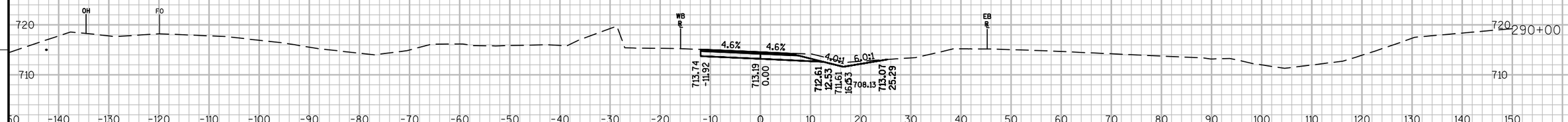
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPKTRAMP.DWG PLOT DATE : 7/31/2014 10:45 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090204_xsk+ PLOT SCALE : 1 IN:20 FT

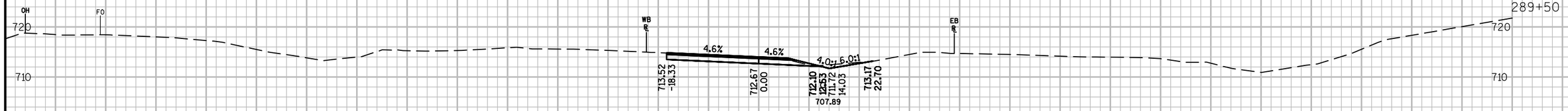
STA 291+45.93 KU
MATCH PROPOSED
IH 90 WB SHOULDER





STA 290+50 KU
1-INLET MEDIAN 2 GRATE
2-INLET COVERS TYPE MS
1-12"x396' CPRC CL. III



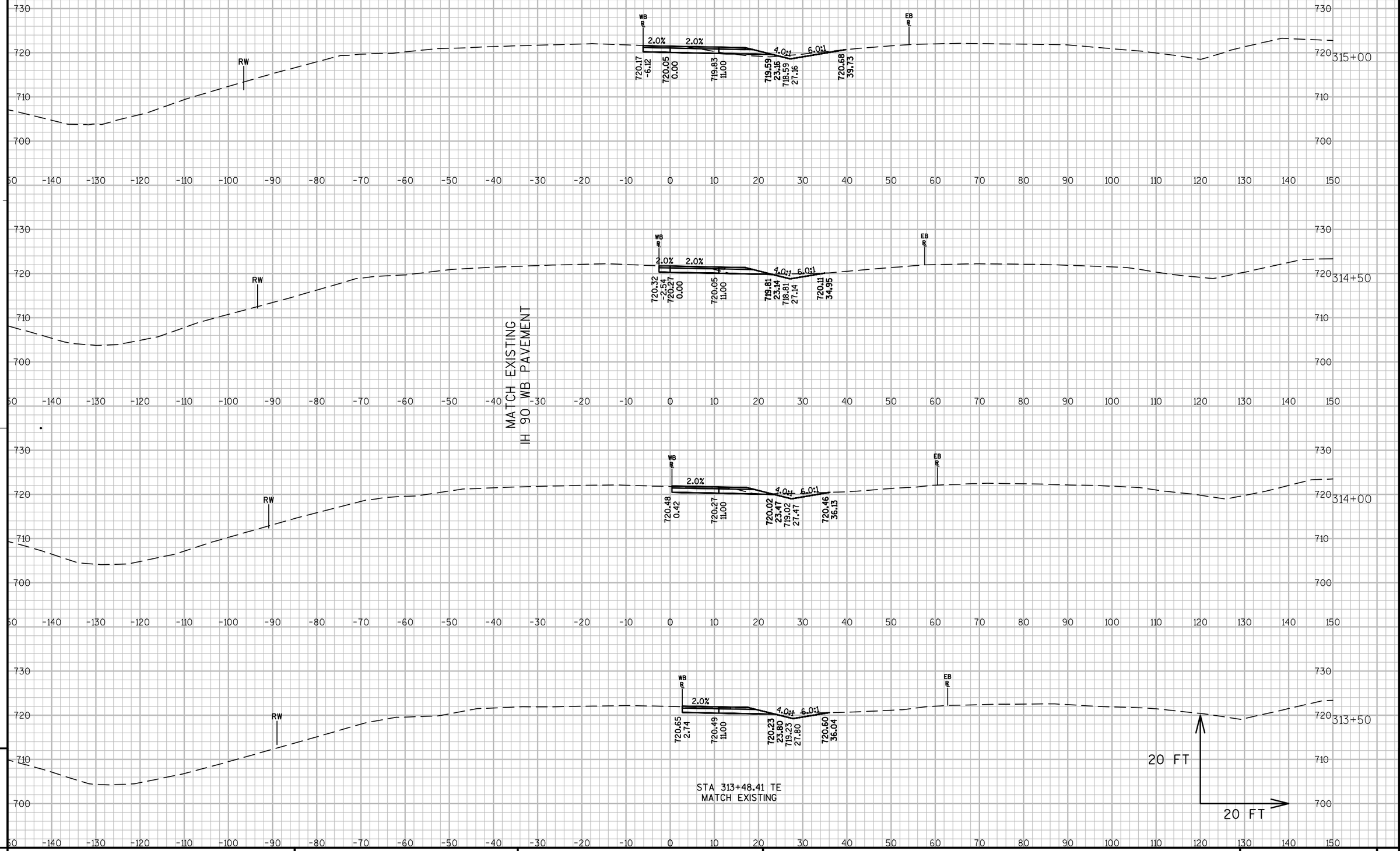




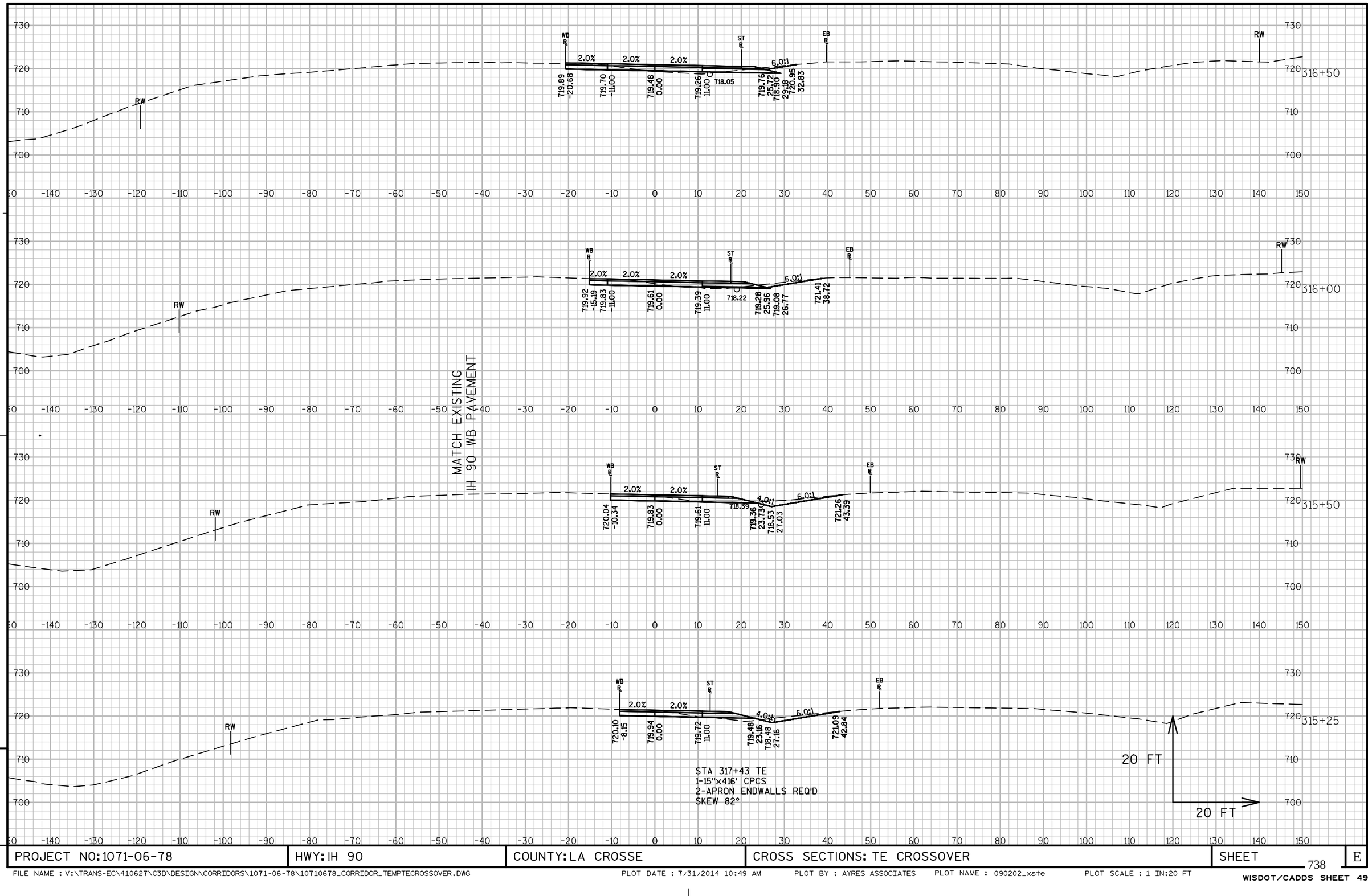
STA 288+70.80 KU
BEGIN CROSSOVER

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: KU TEMPORARY	SHEET 736	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPKURAMP.DWG PLOT DATE : 7/31/2014 10:47 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsku PLOT SCALE : 1:20_XREF



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: TE CROSSOVER	SHEET 737	E

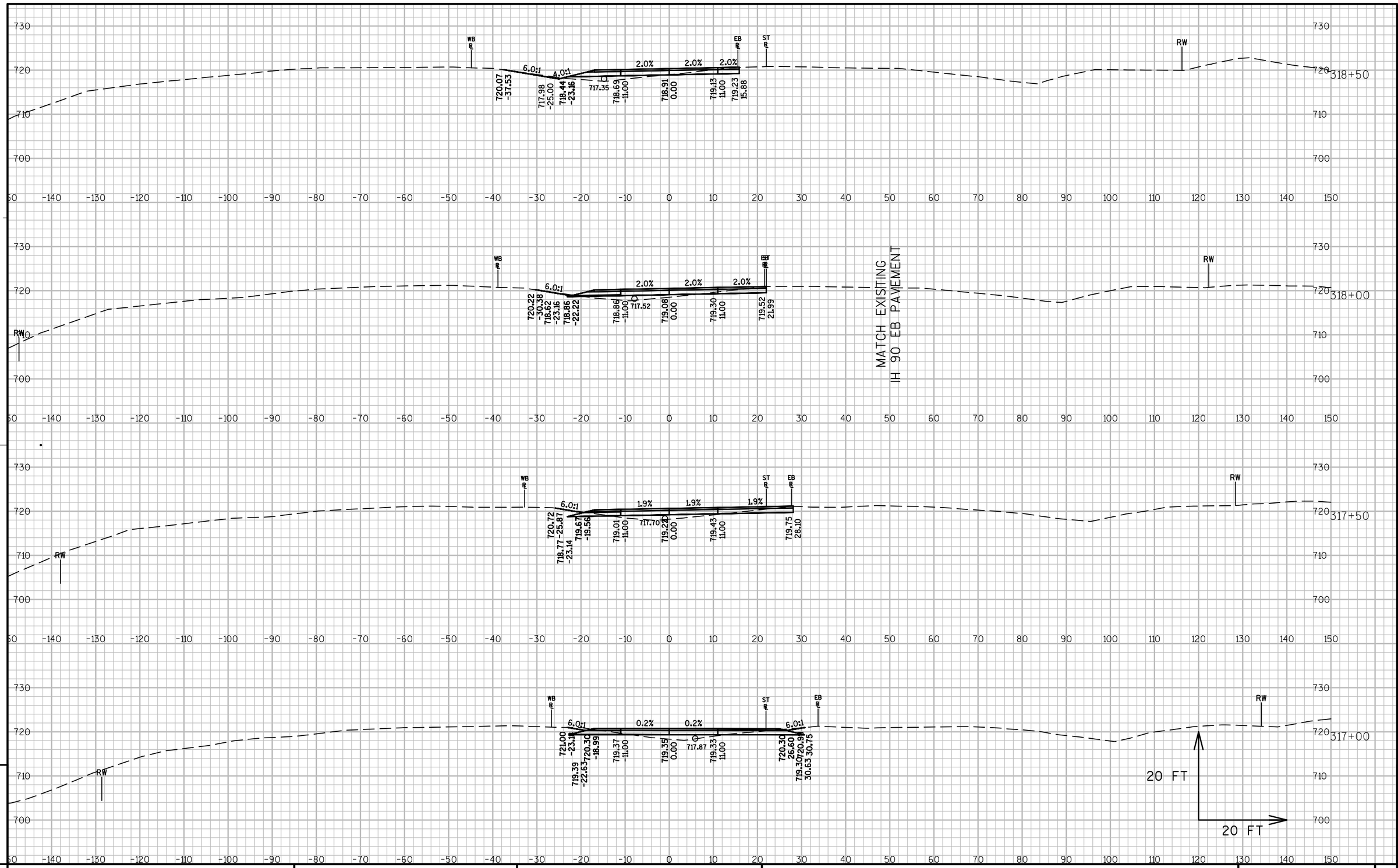


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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: TE CROSSOVER	SHEET 738	E

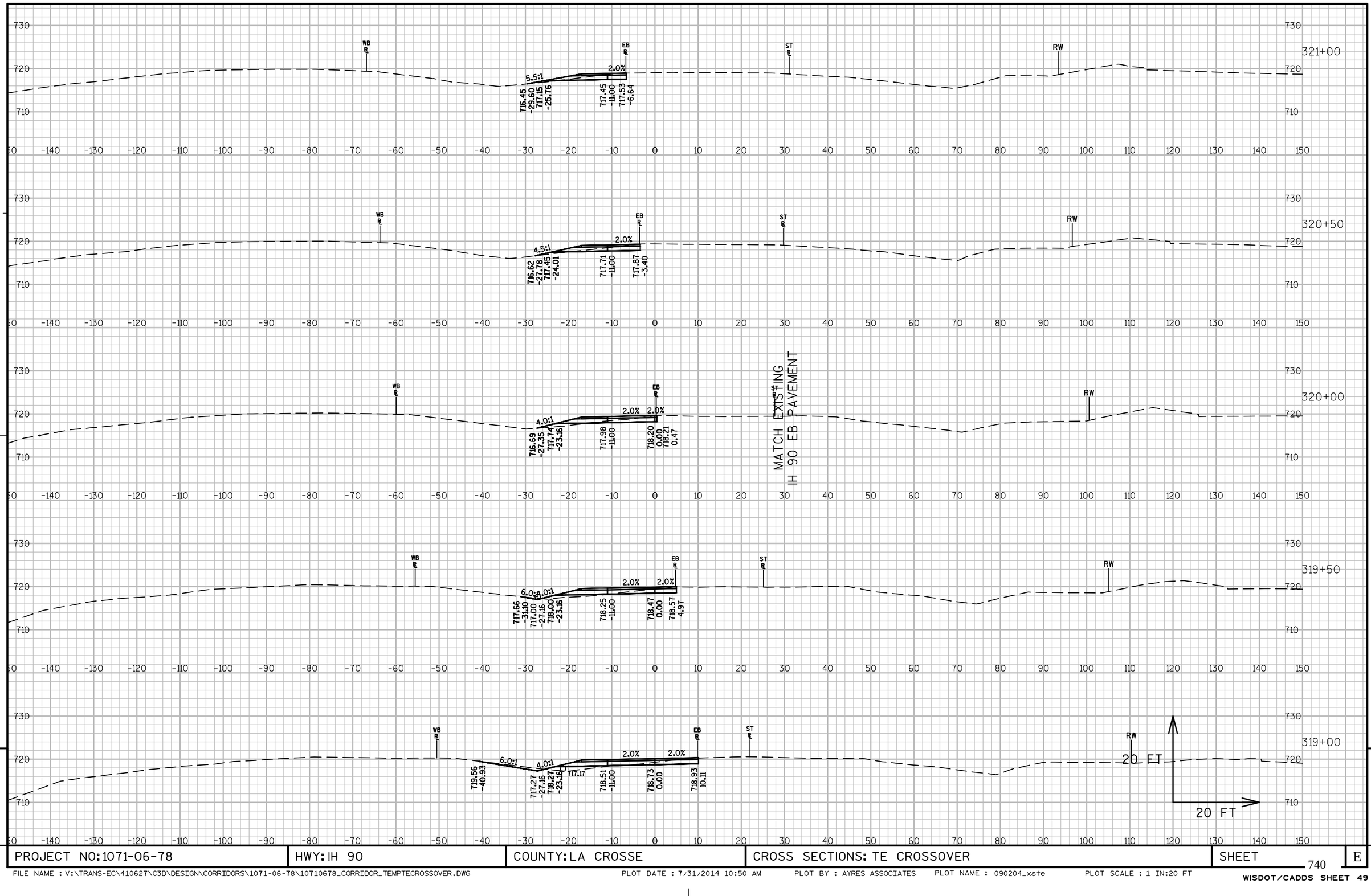
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPTECROSSOVER.DWG PLOT DATE : 7/31/2014 10:49 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xste PLOT SCALE : 1 IN:20 FT



PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS: TE CROSSOVER	SHEET 739	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPTECROSSOVER.DWG PLOT DATE : 7/31/2014 10:50 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xste PLOT SCALE : 1 IN:20 FT

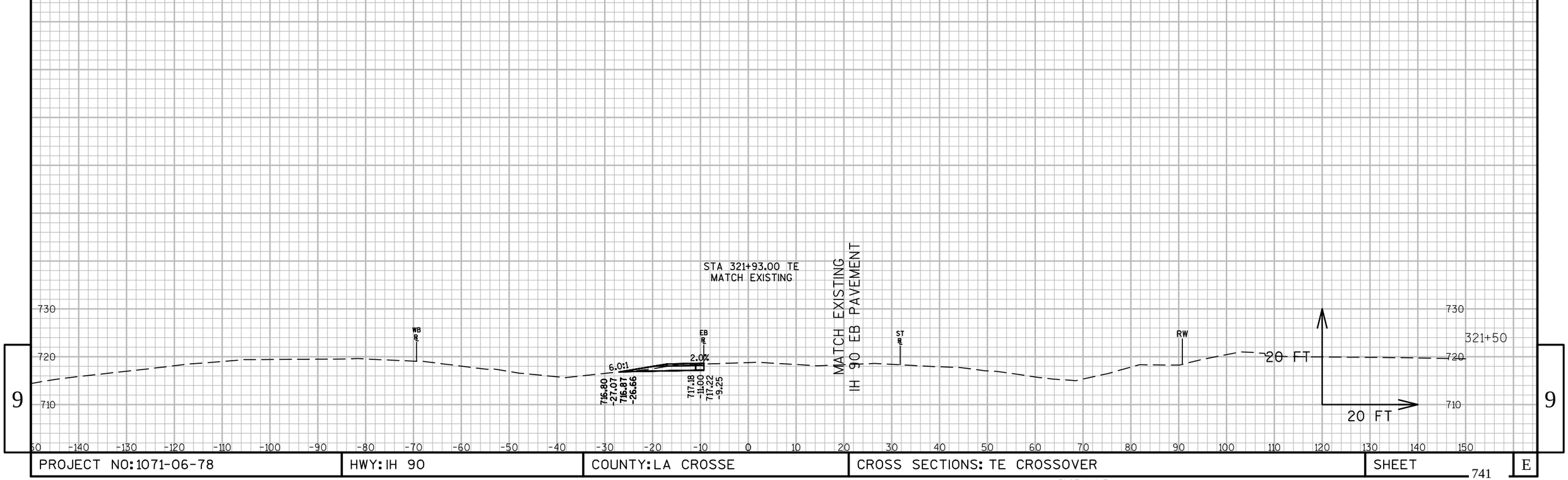
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: TE CROSSOVER	SHEET 740	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPTECROSSOVER.DWG PLOT DATE : 7/31/2014 10:50 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090204_xste PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

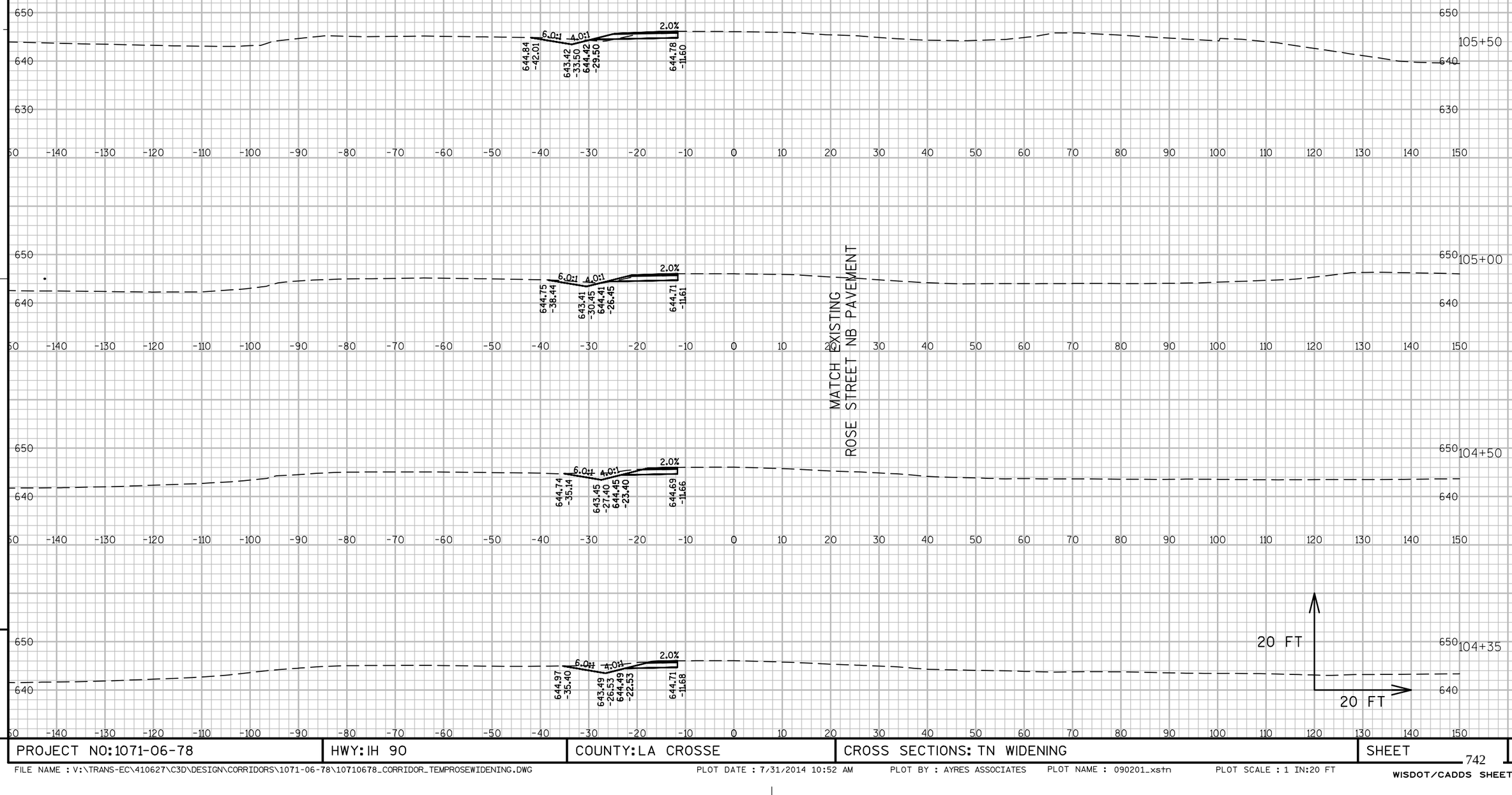


9

9

PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS: TE CROSSOVER	SHEET 741	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPTECROSSOVER.DWG PLOT DATE : 7/31/2014 10:50 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090205_xste PLOT SCALE : 1 IN:20 FT

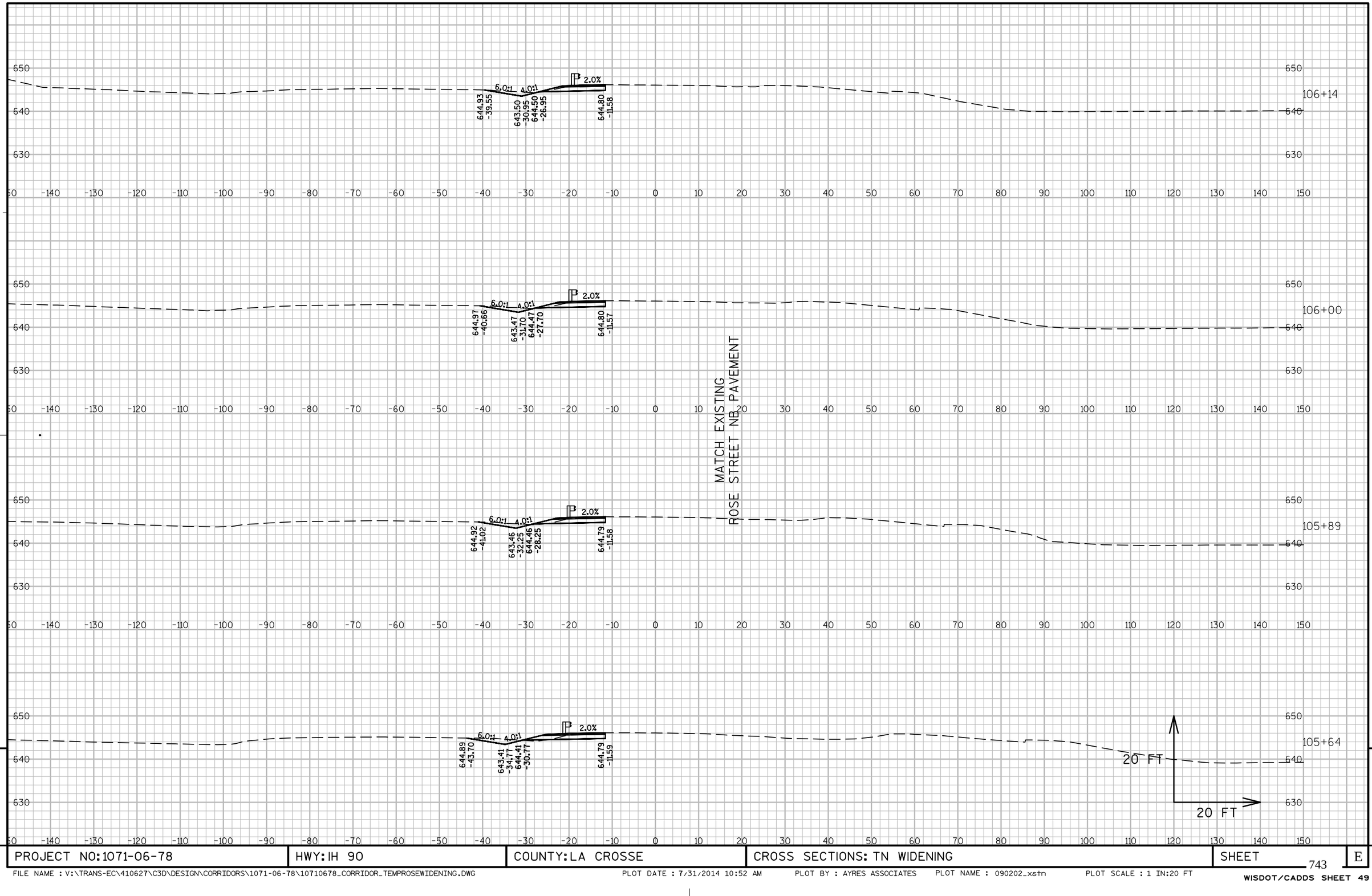


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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: TN WIDENING	SHEET 742	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPROSEWIDENING.DWG PLOT DATE : 7/31/2014 10:52 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xstn PLOT SCALE : 1 IN:20 FT

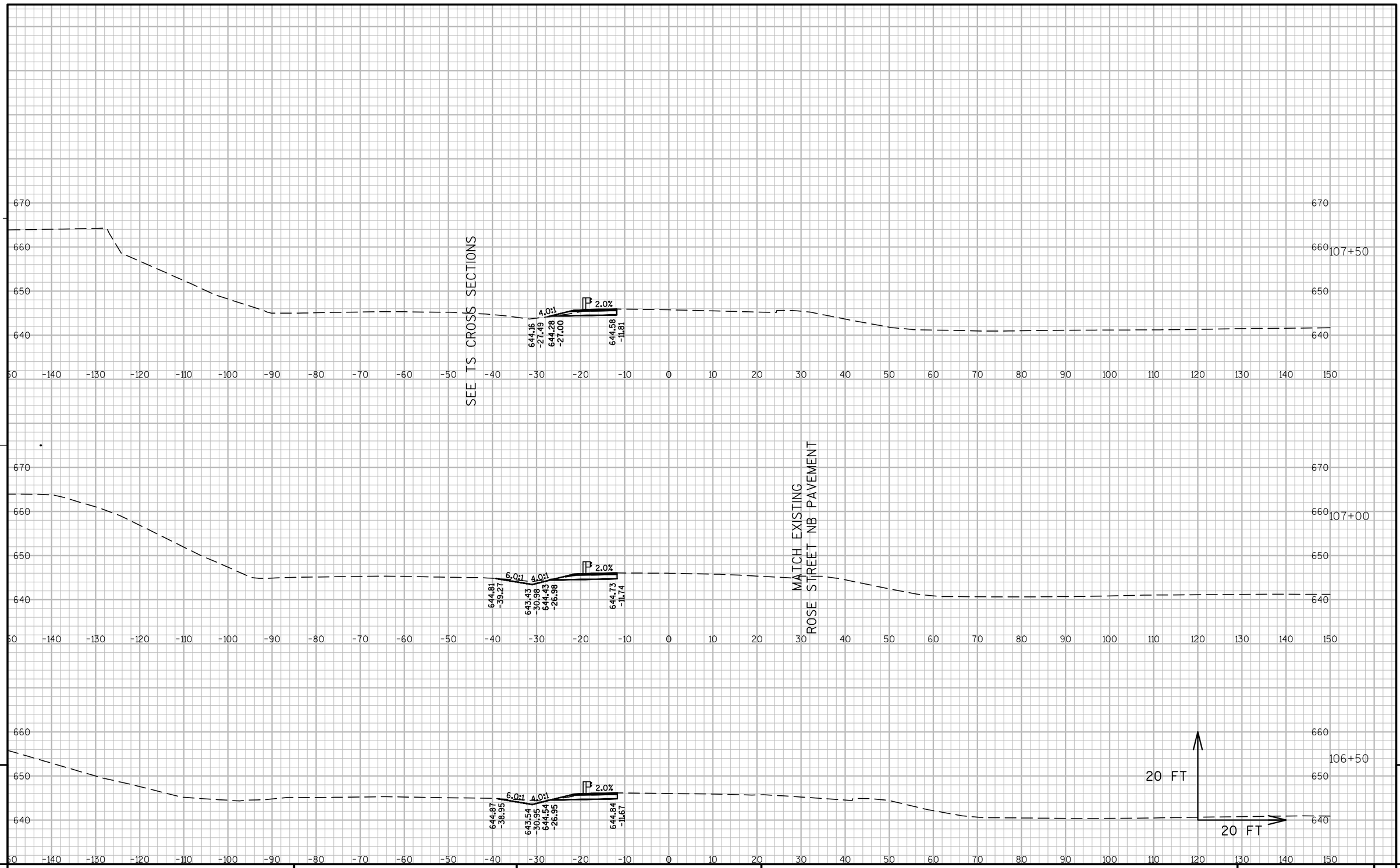


9

9

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: TN WIDENING	SHEET 743	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPROSEWIDENING.DWG PLOT DATE : 7/31/2014 10:52 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xstn PLOT SCALE : 1 IN:20 FT

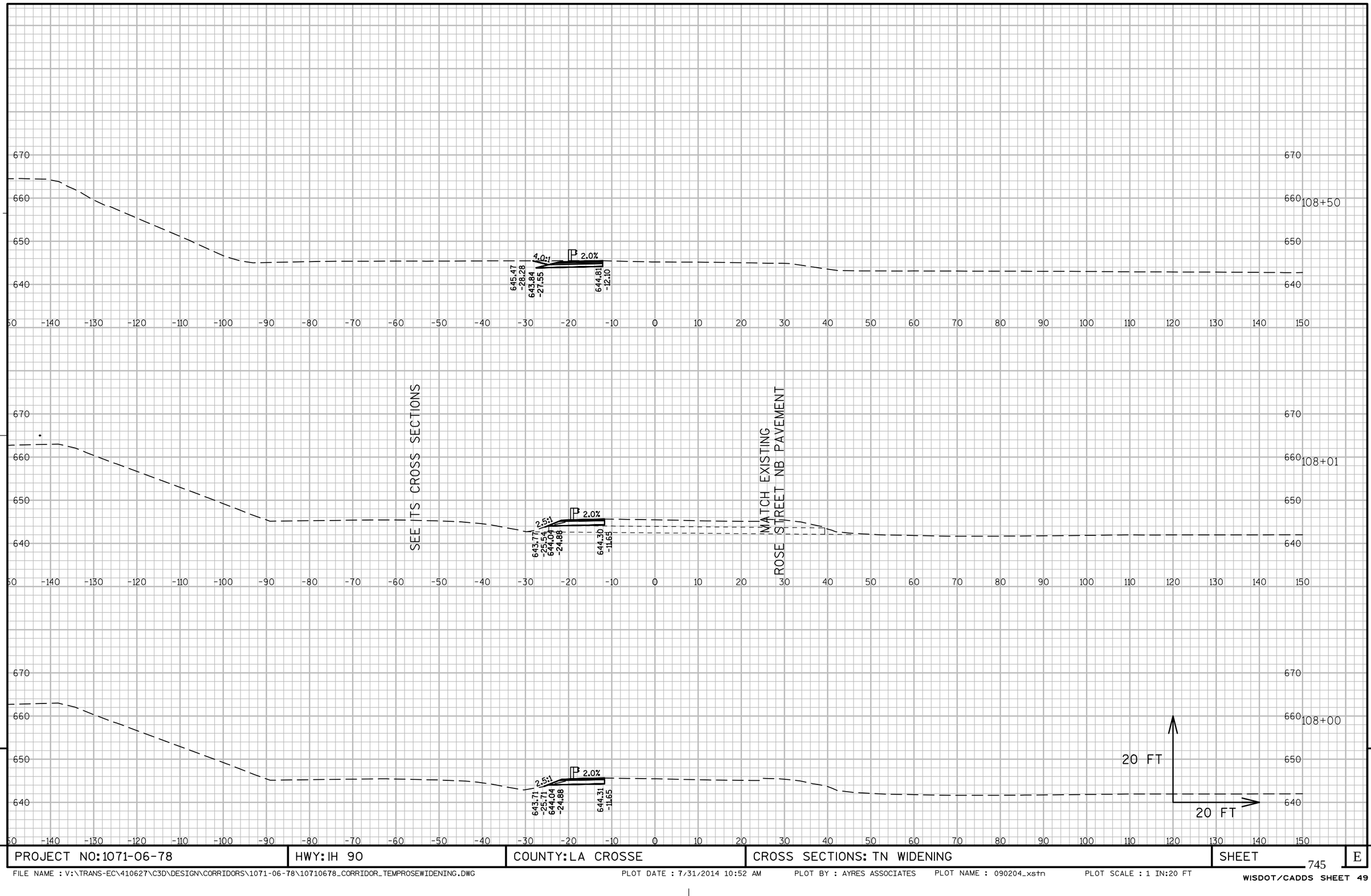


9

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: TN WIDENING	SHEET 744	E

9

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPROSEWIDENING.DWG PLOT DATE : 7/31/2014 10:52 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xstn PLOT SCALE : 1 IN:20 FT



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9

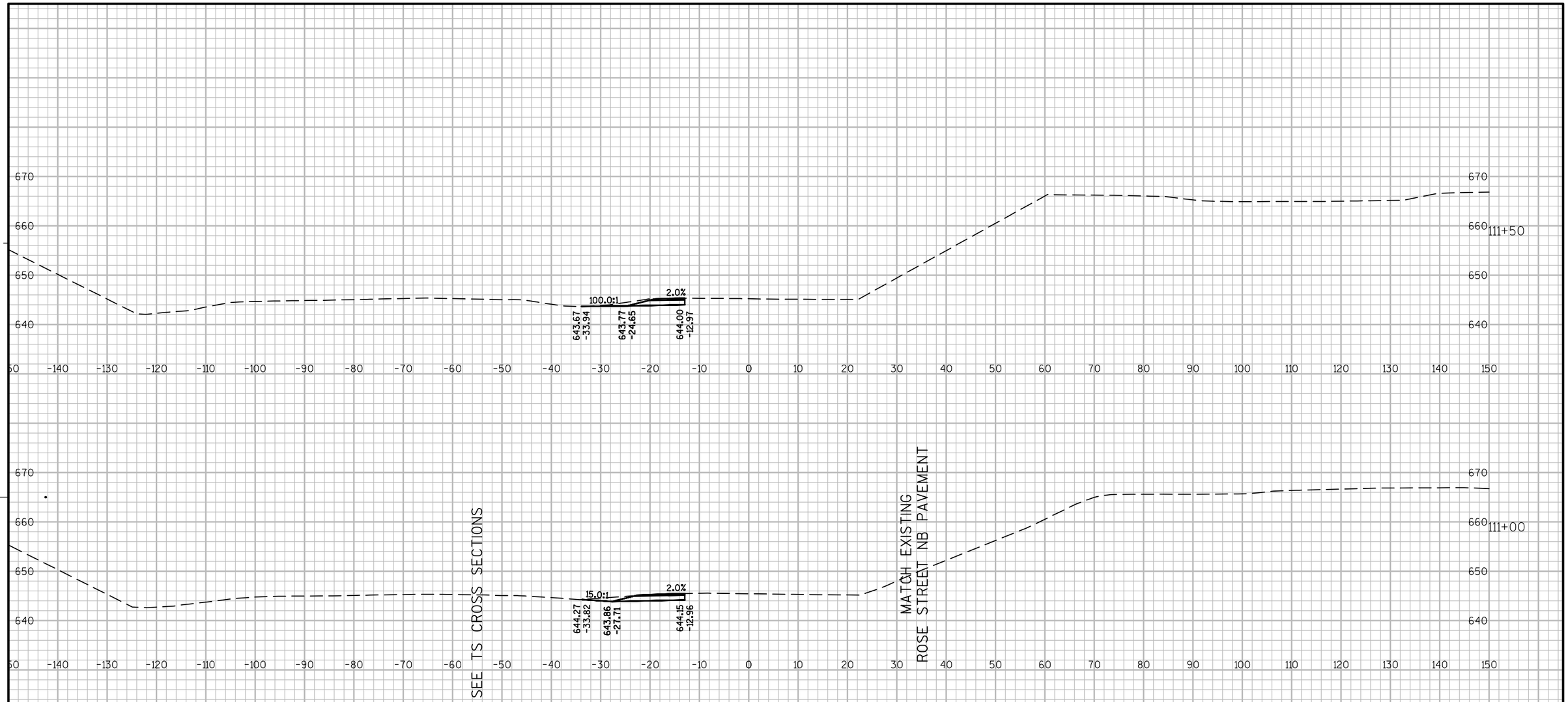
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: TN WIDENING	SHEET 745	E

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: TN WIDENING	SHEET	E

746

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPROSEWIDENING.DWG PLOT DATE : 7/31/2014 10:53 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090205_xstn PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: TN WIDENING	SHEET 747	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPROSEWIDENING.DWG PLOT DATE : 7/31/2014 10:53 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090206_xstn PLOT SCALE : 1 IN:20 FT

MATCH EXISTING ROSE STREET SB PAVEMENT

SEE TN CROSS SECTIONS

109+00

644.69 7.02 | 2.0% | 643.71 22.45 | 4.0:1 | 645.40 23.40

108+50

644.69 7.19 | 2.0% | 643.72 22.45 | 4.0:1 | 645.09 22.11

108+00

643.93 7.60 | 2.0% | 643.64 21.87 | 18.0:1 | 643.28 28.42

107+50

643.85 12.01 | 2.0% | 643.62 23.41 | 20.0:1 | 643.88 28.69

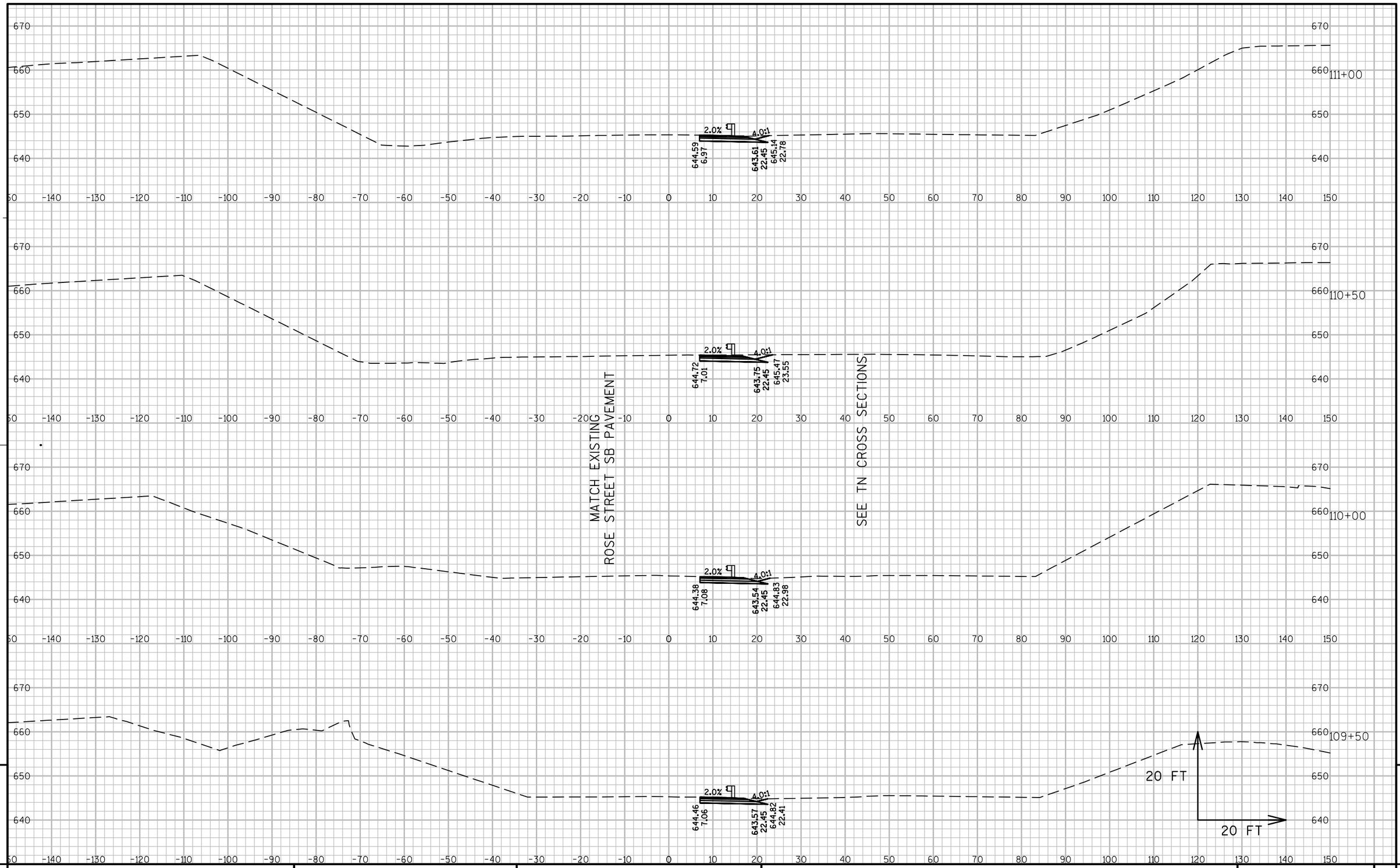
20 FT

20 FT

9

9

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: TS WIDENING	SHEET 748	E



PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS: TS WIDENING	SHEET 749	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPROSEWIDENING.DWG PLOT DATE : 7/31/2014 10:54 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xsts PLOT SCALE : 1 IN:20 FT

113+00

2.0%
4.0:1
6.0:1
643.73
7.02
643.42
22.45
642.42
26.45
644.33
37.92

112+50

2.0%
4.0:1
6.0:1
643.74
7.06
643.43
22.45
642.43
26.45
642.50
26.84

MATCH EXISTING ROSE STREET SB PAVEMENT

112+00

2.0%
4.0:1
6.0:1
643.79
6.99
643.48
22.45
642.48
26.45
645.13
42.36

SEE TYP CROSS SECTIONS

111+50

2.0%
10.0:1
643.80
7.01
643.49
22.45
643.86
26.11

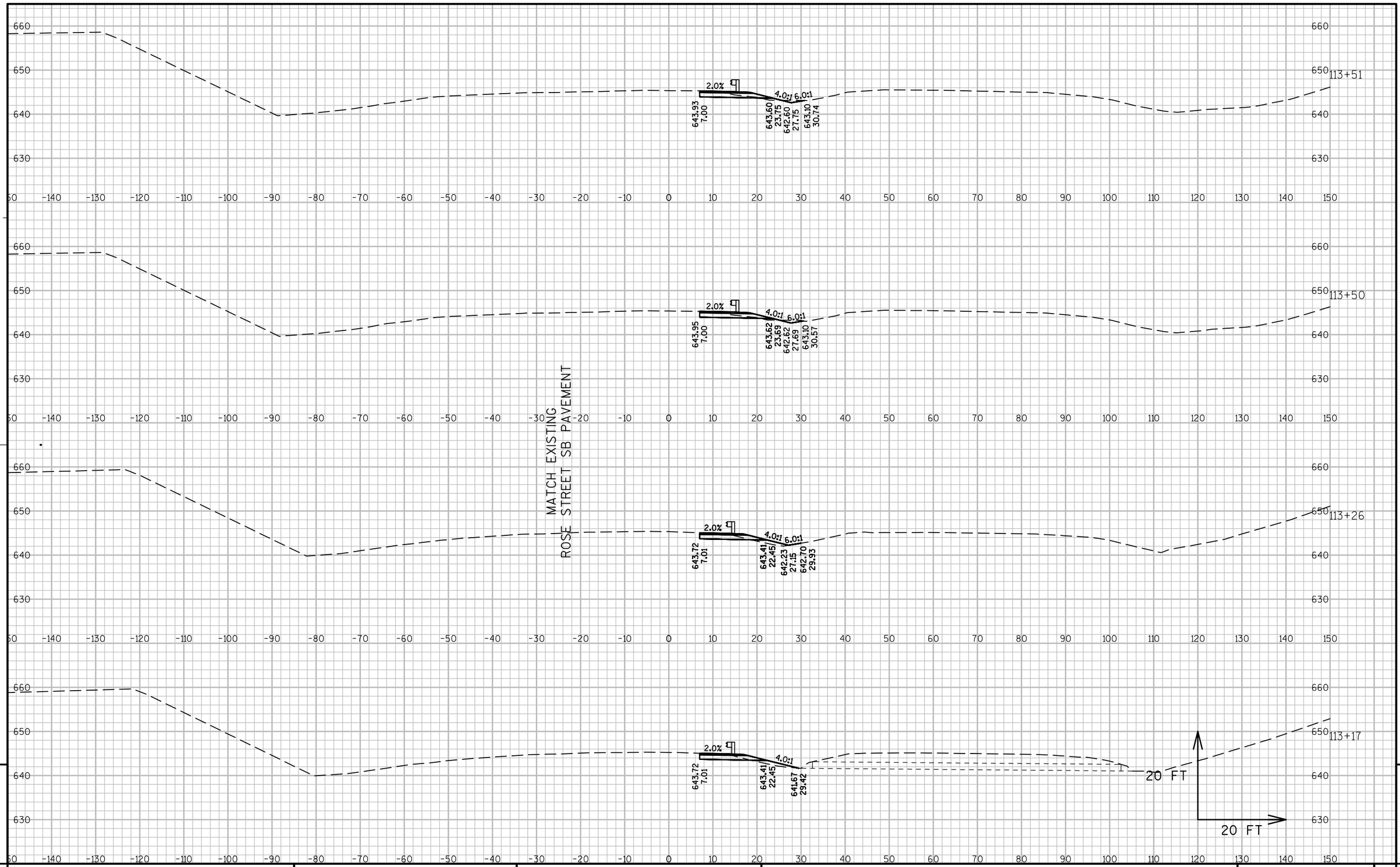
20 FT
20 FT

9

9

PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS: TS WIDENING	SHEET 750	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPROSEWIDENING.DWG PLOT DATE : 7/31/2014 10:54 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xsts PLOT SCALE : 1 IN:20 FT

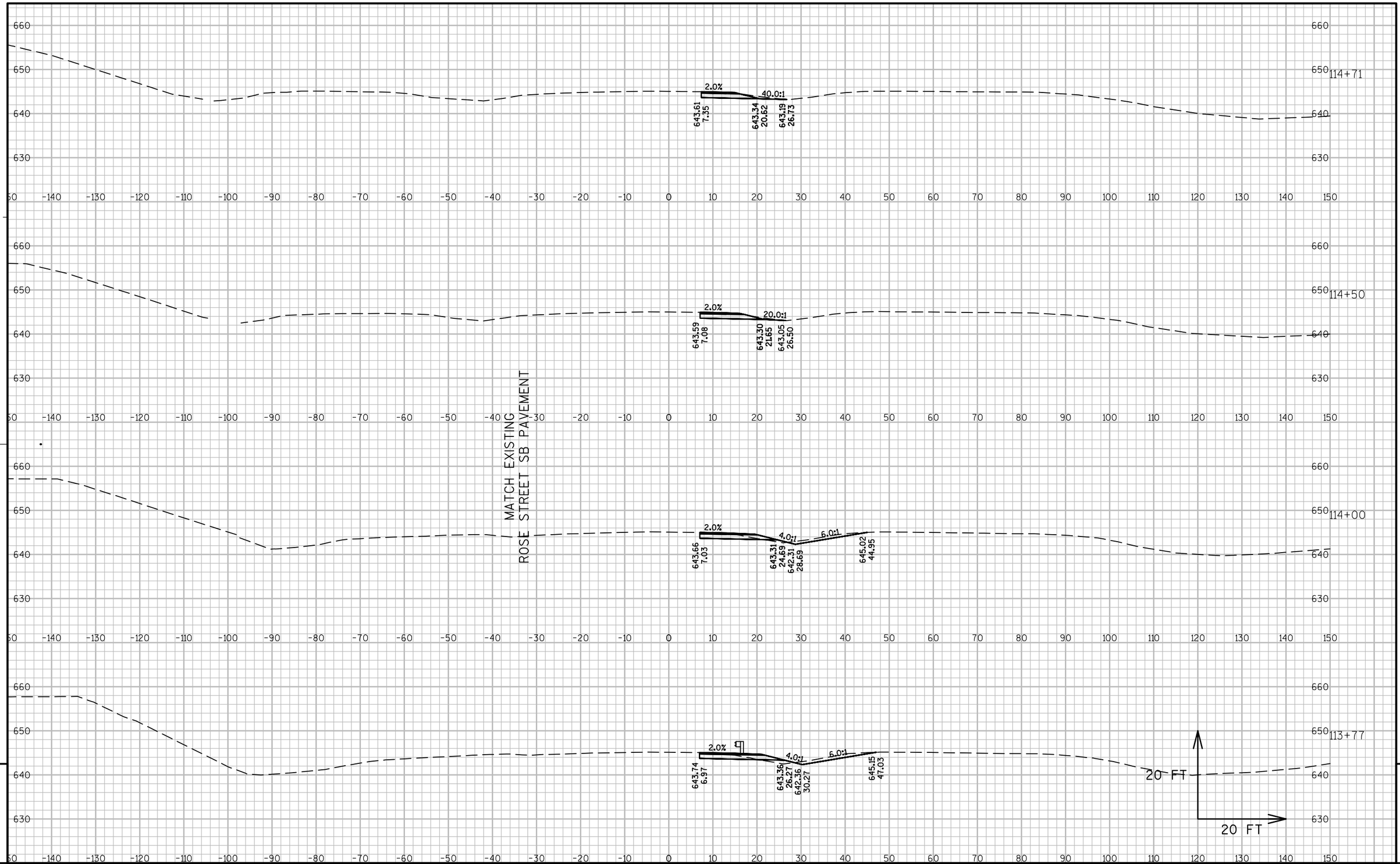


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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: TS WIDENING	SHEET 751	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPROSEWIDENING.DWG PLOT DATE : 7/31/2014 10:54 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090204_xsts PLOT SCALE : 1 IN:20 FT



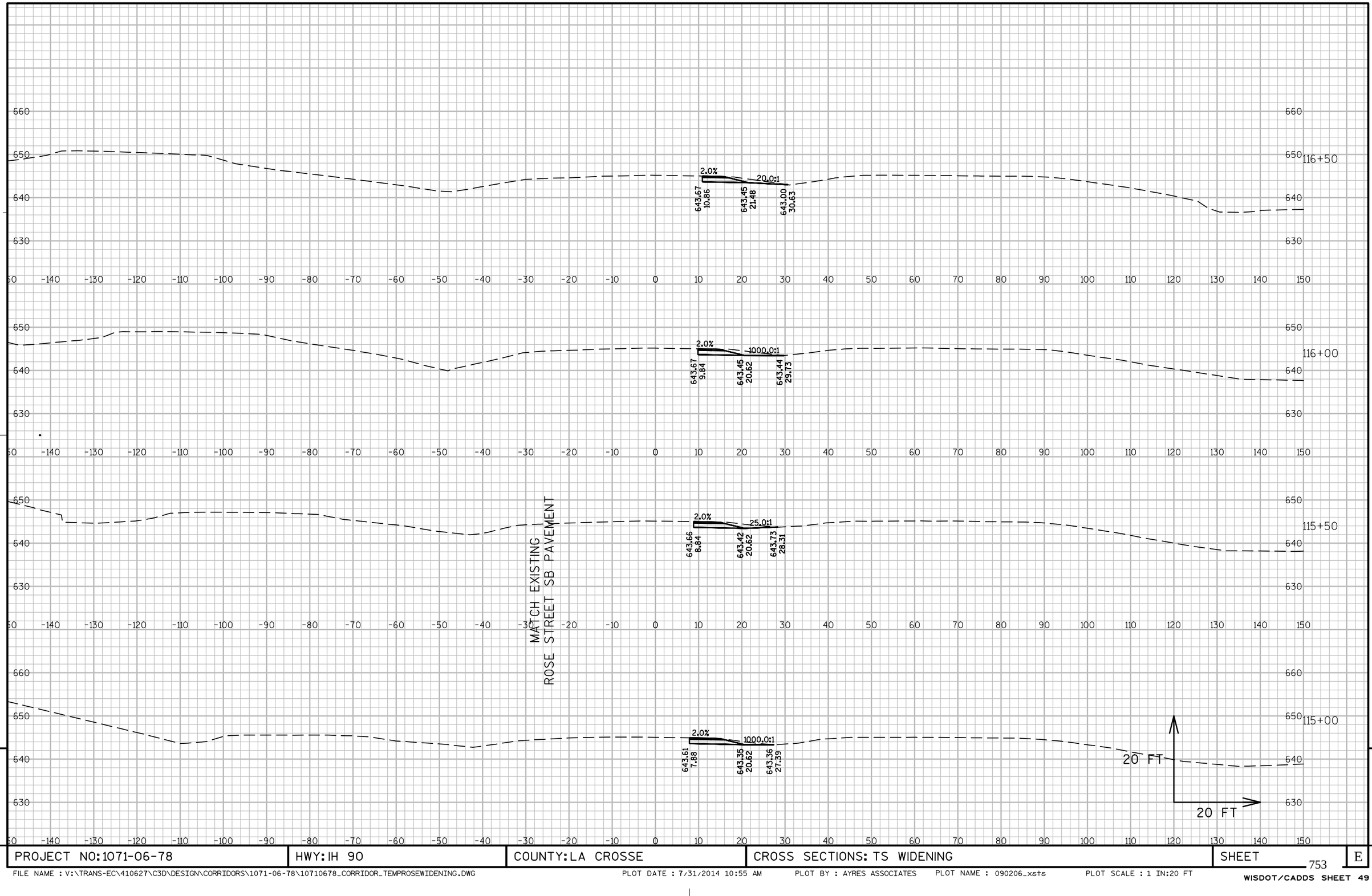
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: TS WIDENING	SHEET 752	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPROSEWIDENING.DWG PLOT DATE : 7/31/2014 10:55 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090205_xsts PLOT SCALE : 1 IN:20 FT

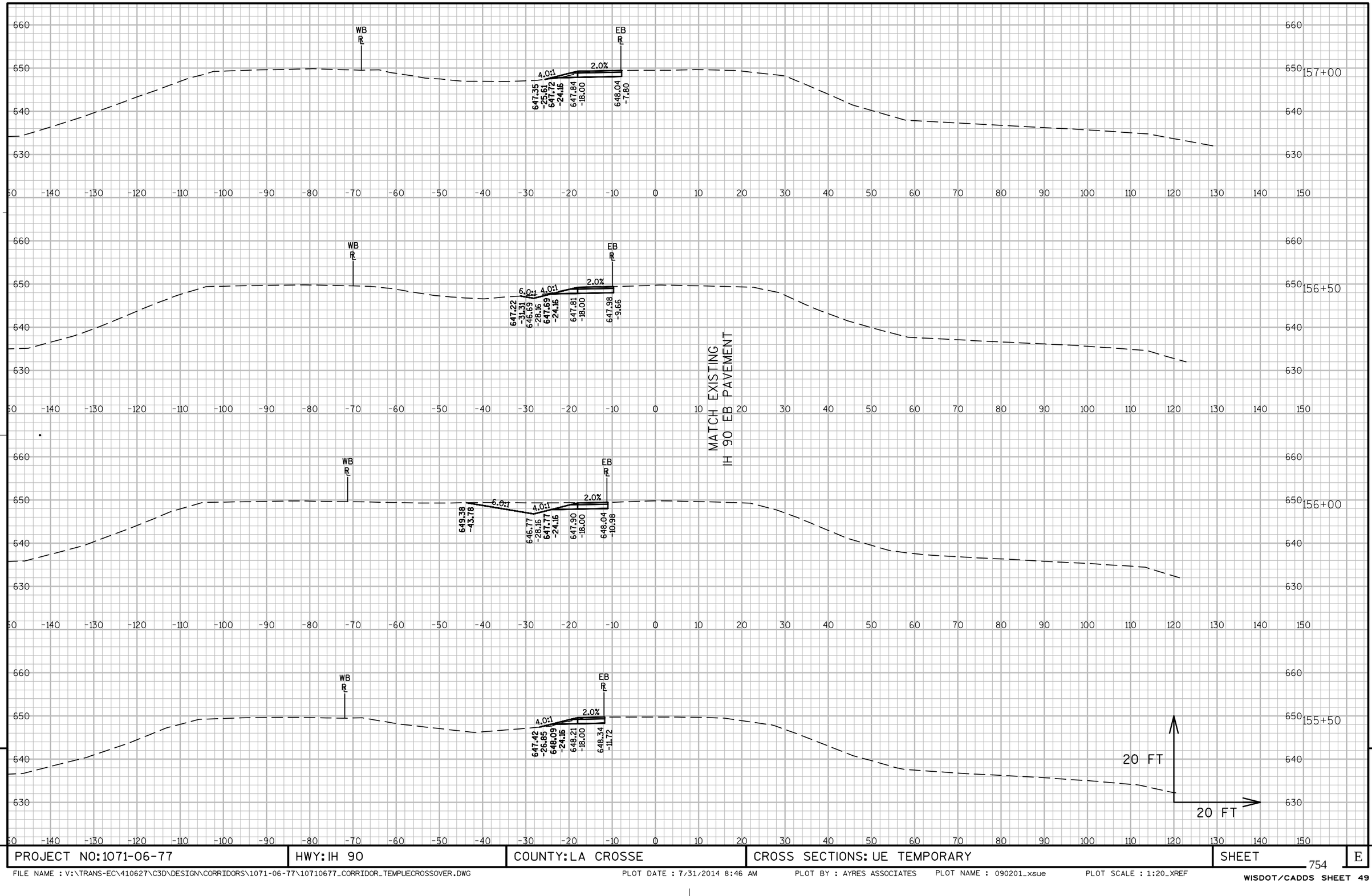
WISDOT/CADDS SHEET 49



PROJECT NO:1071-06-78	HWY:IH 90	COUNTY:LA CROSSE	CROSS SECTIONS: TS WIDENING	SHEET 753	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPROSEWIDENING.DWG PLOT DATE : 7/31/2014 10:55 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090206_xsts PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



MATCH EXISTING IH 90 EB PAVEMENT

20 FT

20 FT

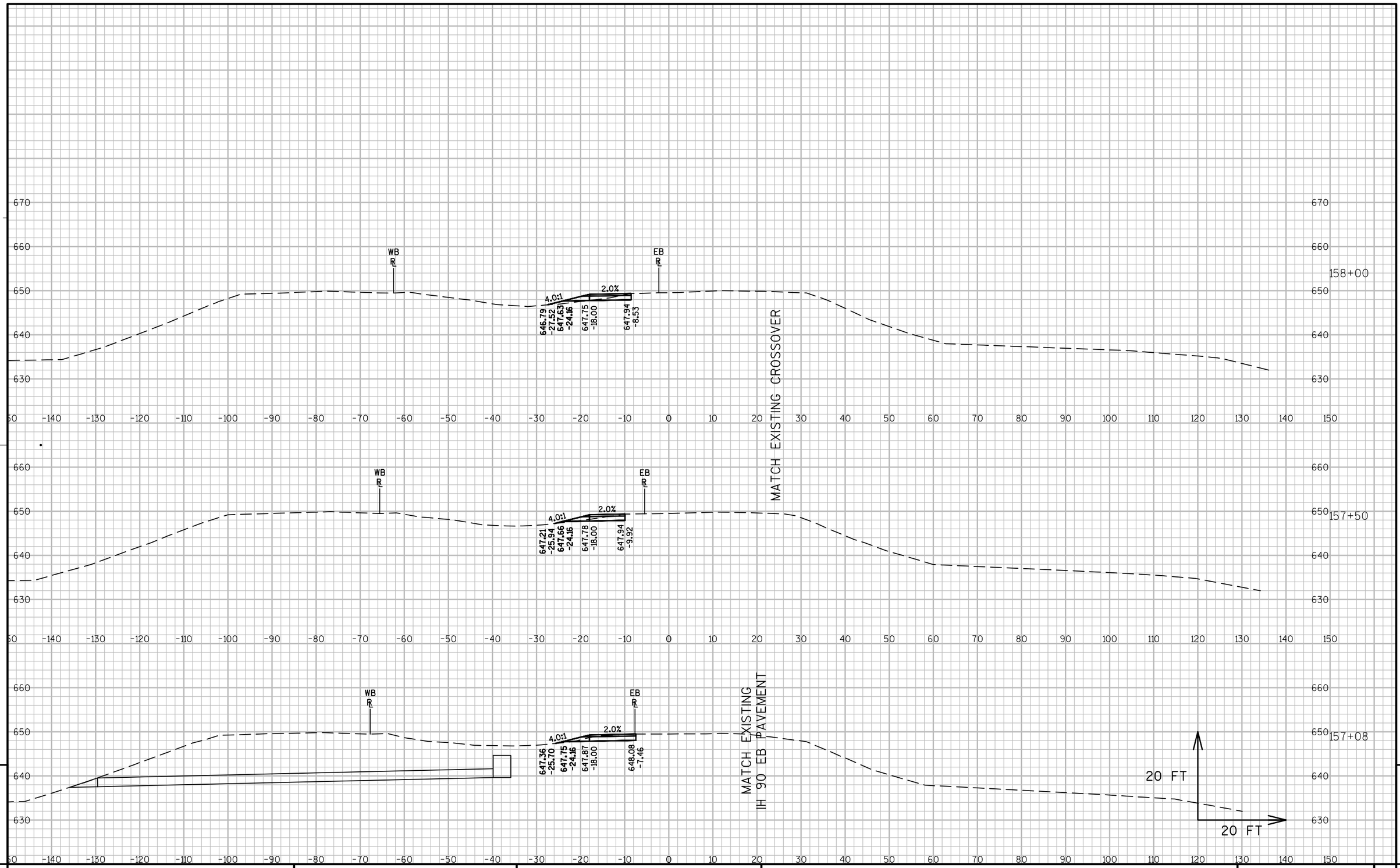
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9

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UE TEMPORARY	SHEET 754	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_TEMPUECROSSOVER.DWG PLOT DATE : 7/31/2014 8:46 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsue PLOT SCALE : 1:20_XREF

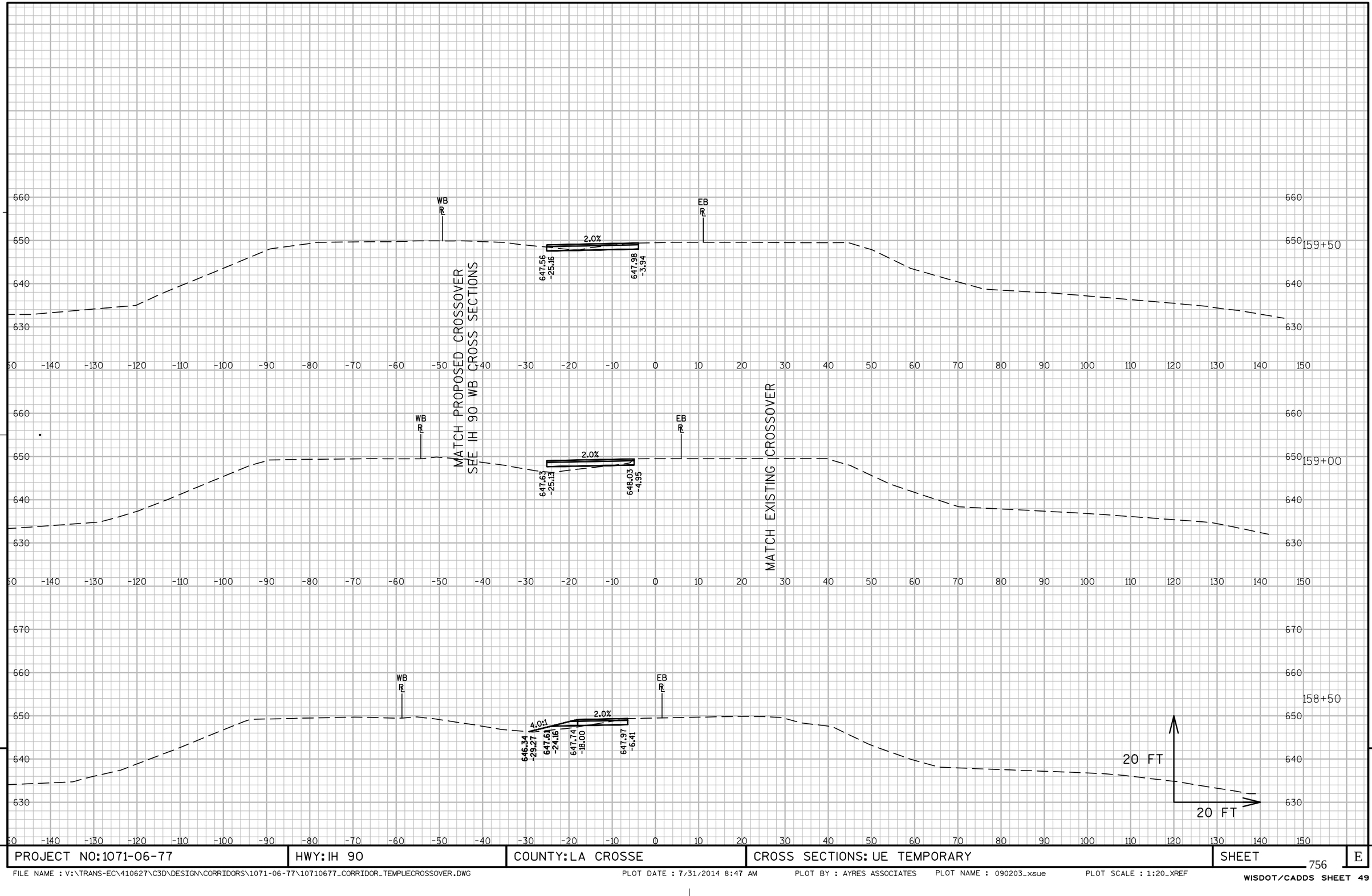
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UE TEMPORARY	SHEET 755	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-77\10710677_CORRIDOR_TEMPUECROSSOVER.DWG PLOT DATE : 7/31/2014 8:46 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xsue PLOT SCALE : 1:20_XREF

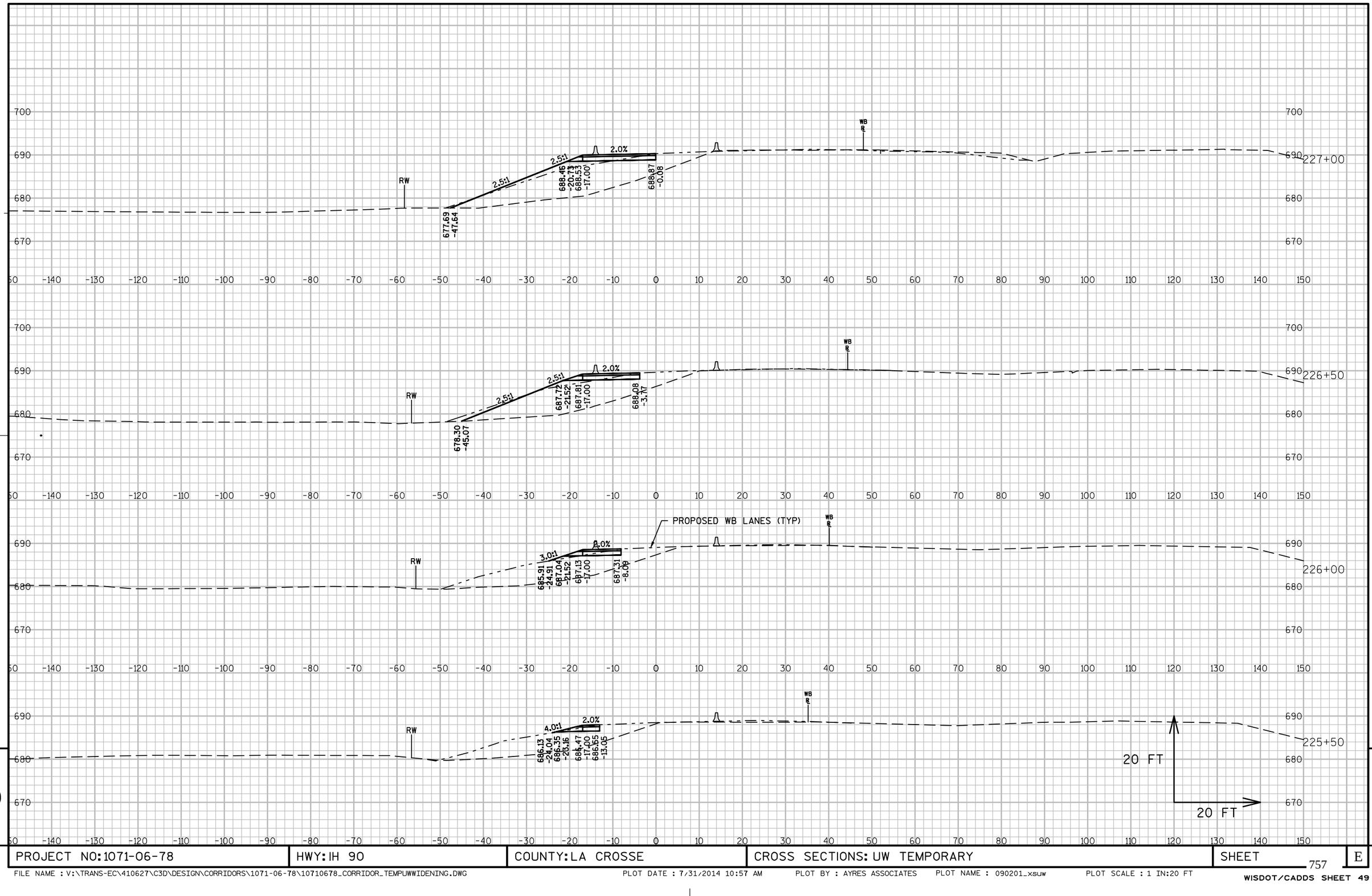
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1071-06-77	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UE TEMPORARY	SHEET 756	E

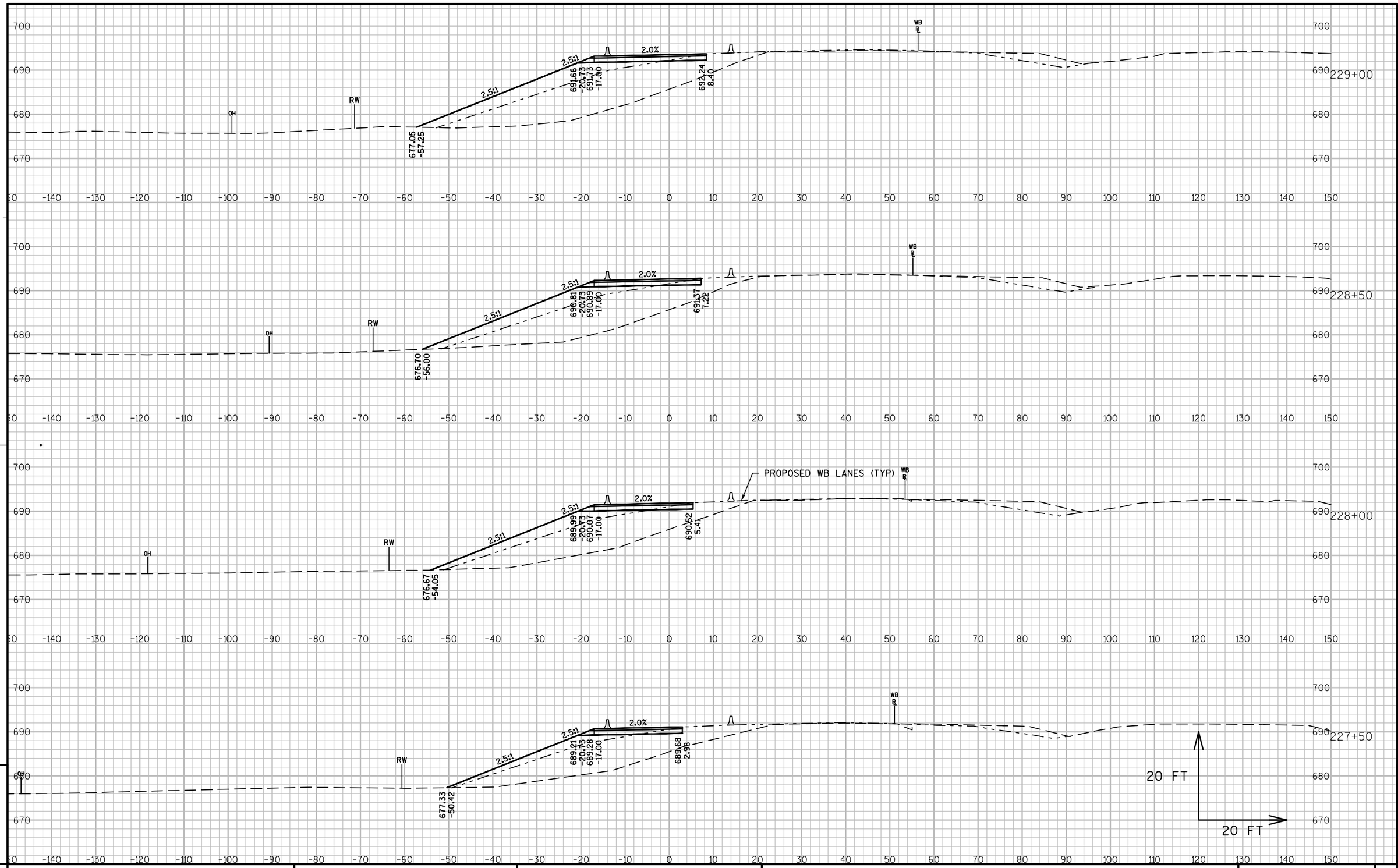


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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET 757	E

9

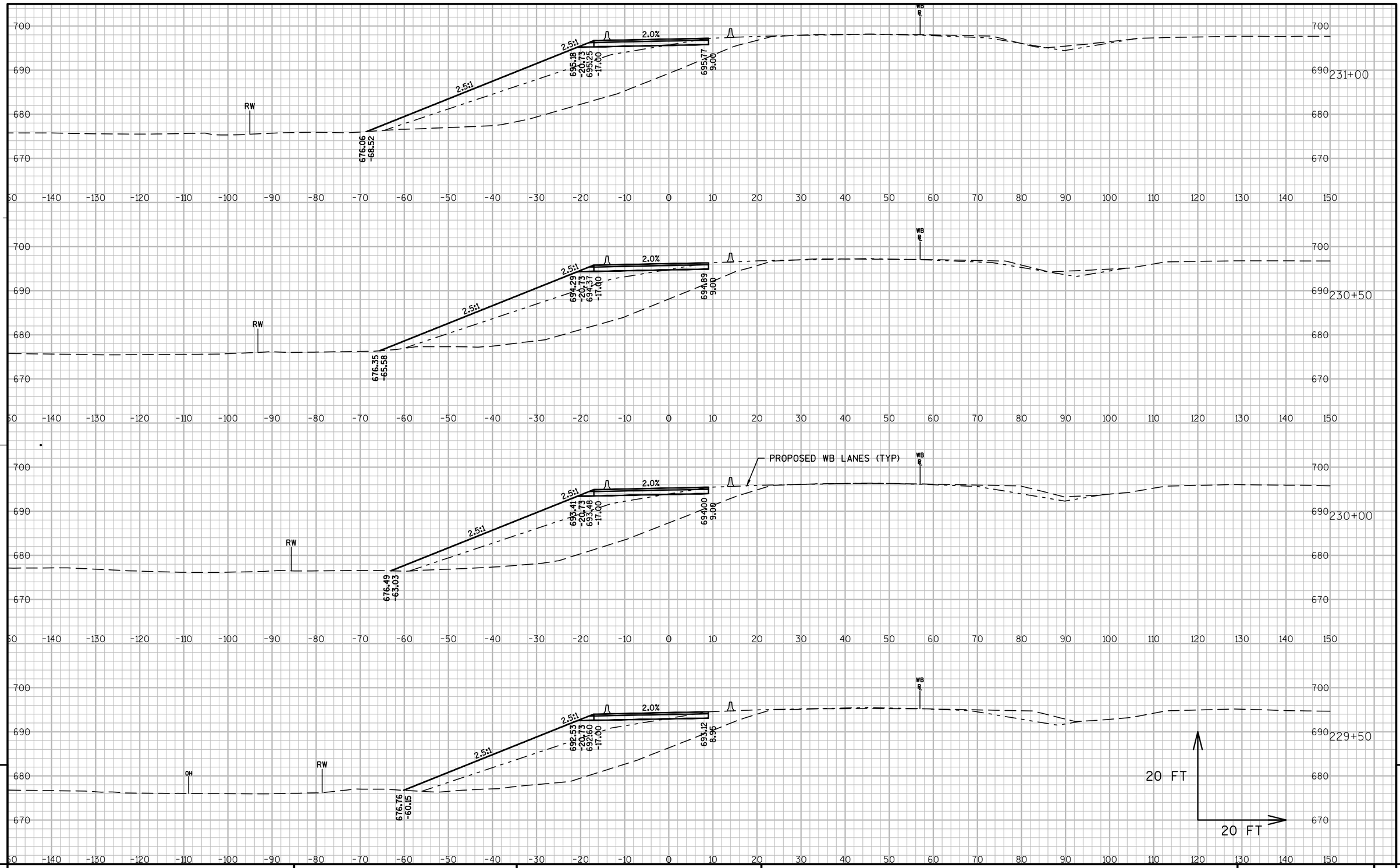
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPUWWIDENING.DWG PLOT DATE : 7/31/2014 10:57 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090201_xsuw PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET 758	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPUWWIDENING.DWG PLOT DATE : 7/31/2014 10:57 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090202_xsuw PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



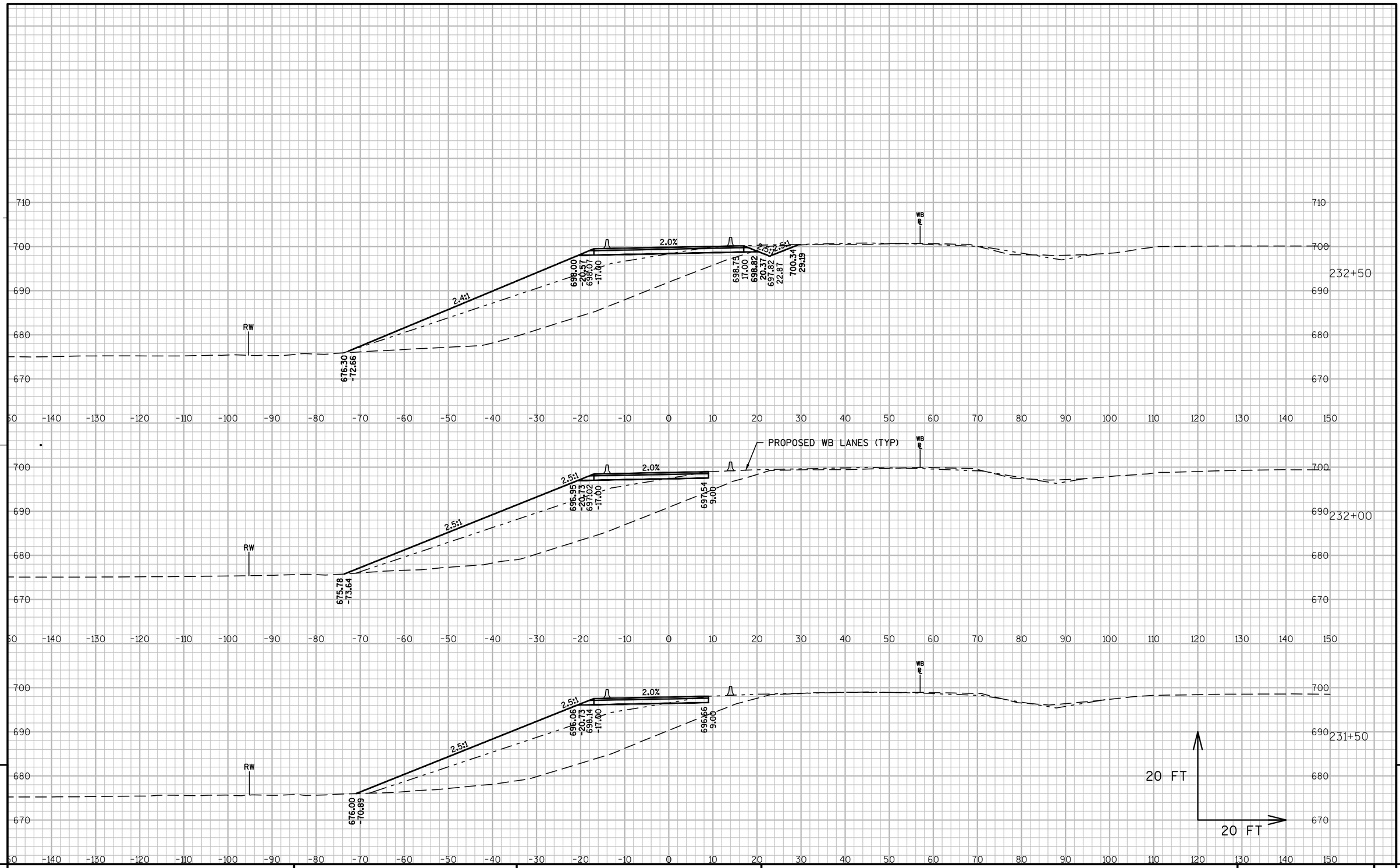
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET 759	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPUWWIDENING.DWG PLOT DATE : 7/31/2014 10:57 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090203_xsuw PLOT SCALE : 1 IN:20 FT

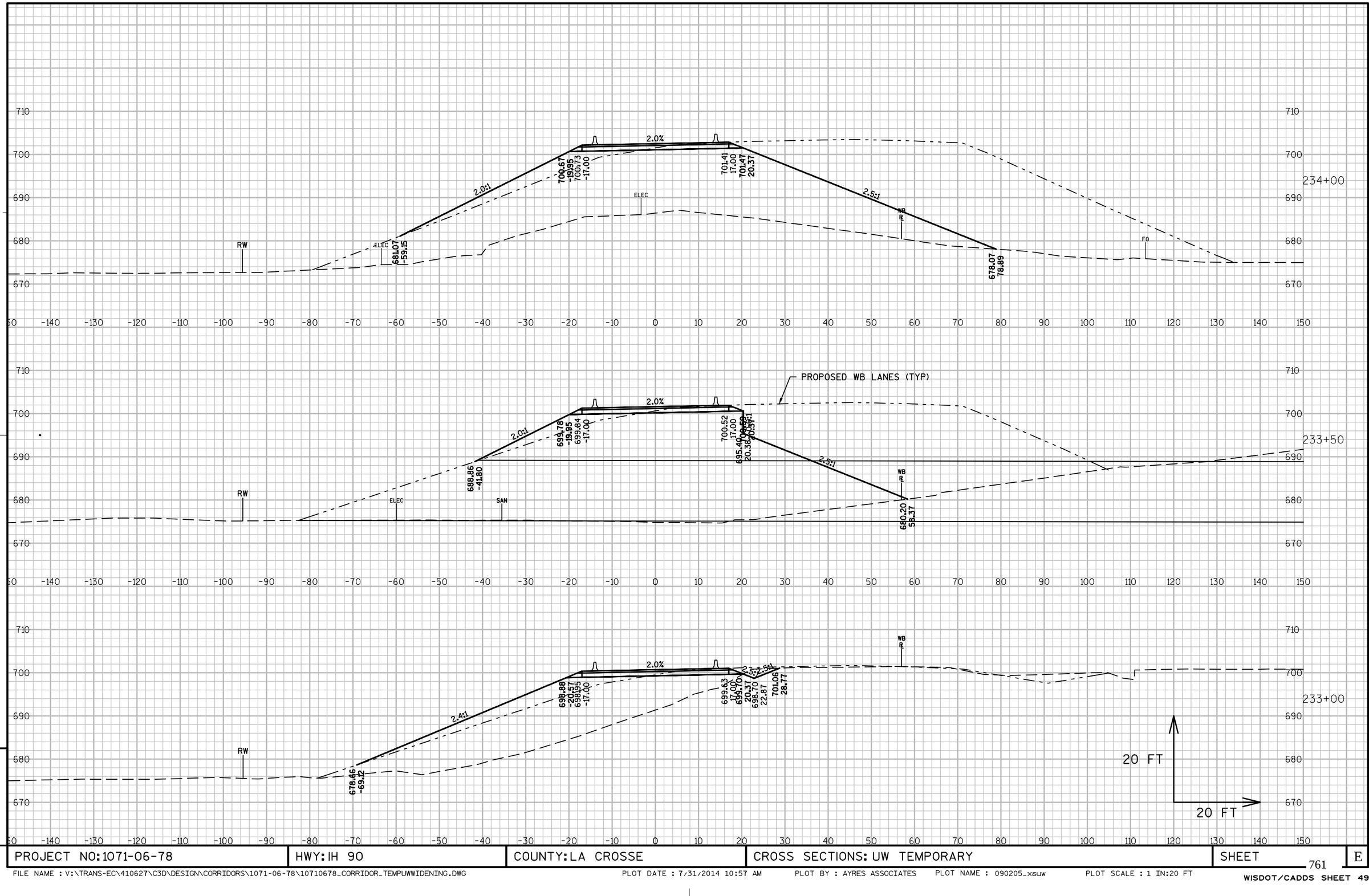
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET 760	E

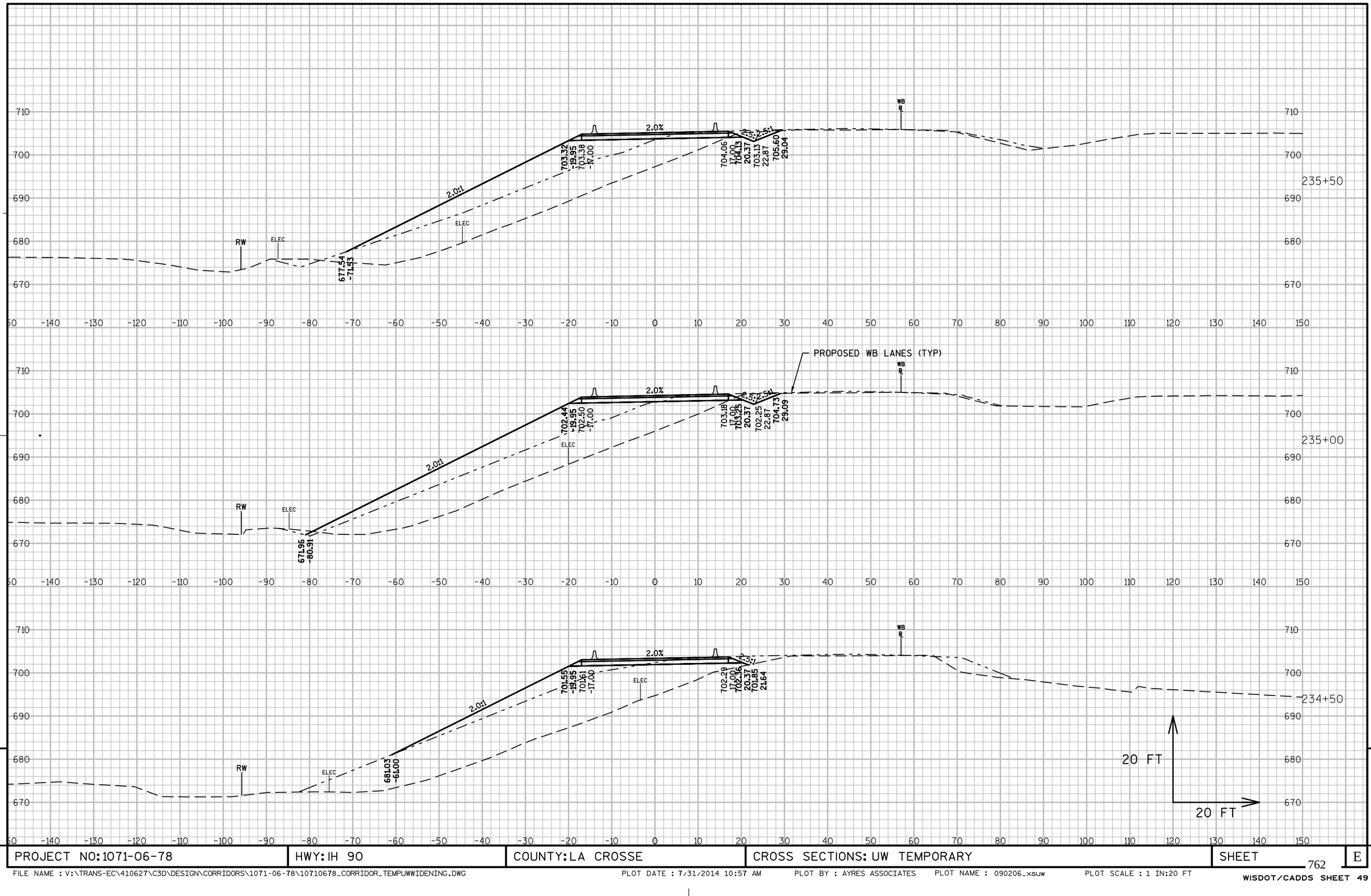
FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPUWWIDENING.DWG PLOT DATE : 7/31/2014 10:57 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090204_xsuw PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPUWWIDENING.DWG PLOT DATE : 7/31/2014 10:57 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090205_xsuw PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



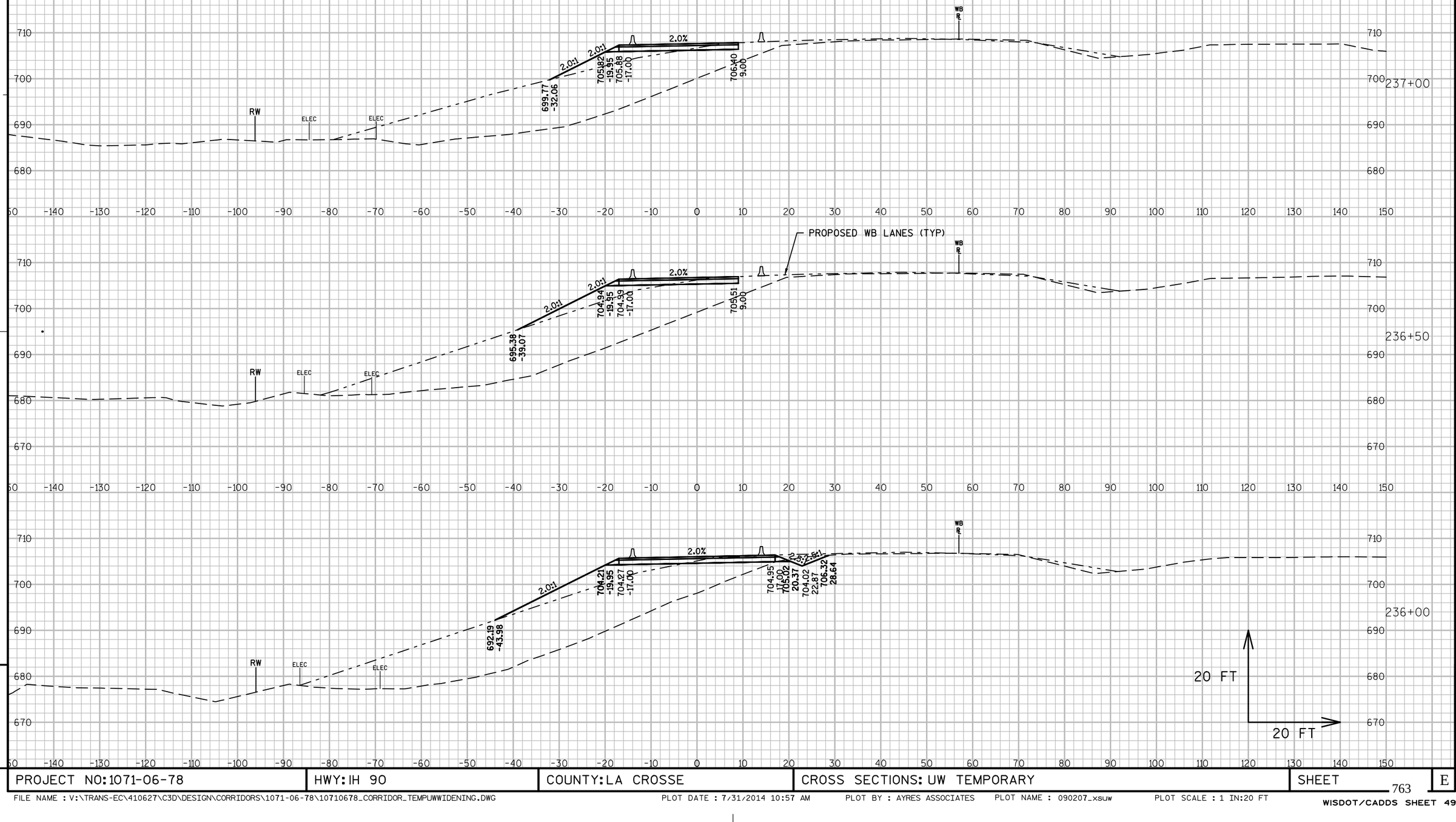
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET 762	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPUWWIDENING.DWG PLOT DATE : 7/31/2014 10:57 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090206_xsuw PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



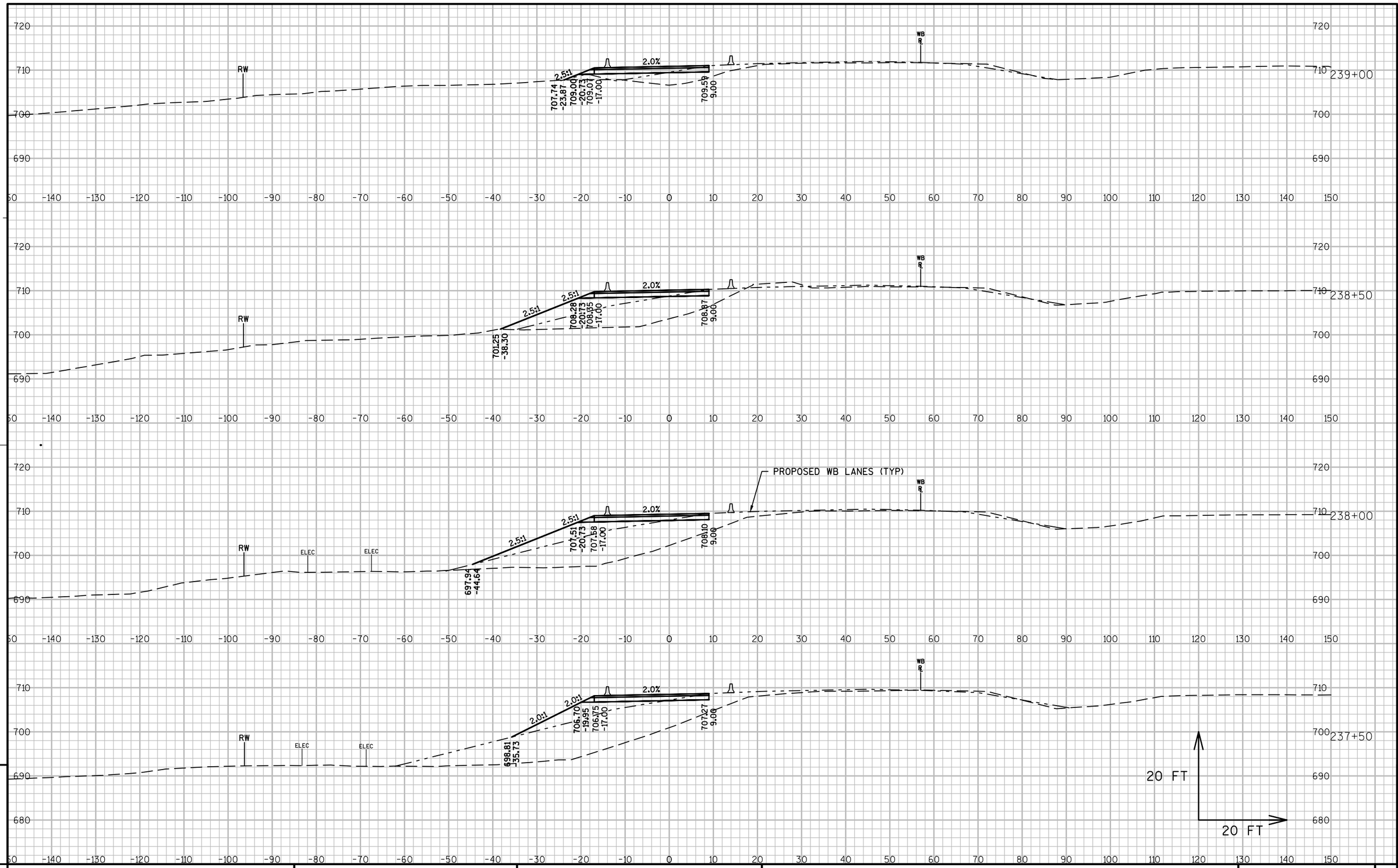
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PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET 763	E

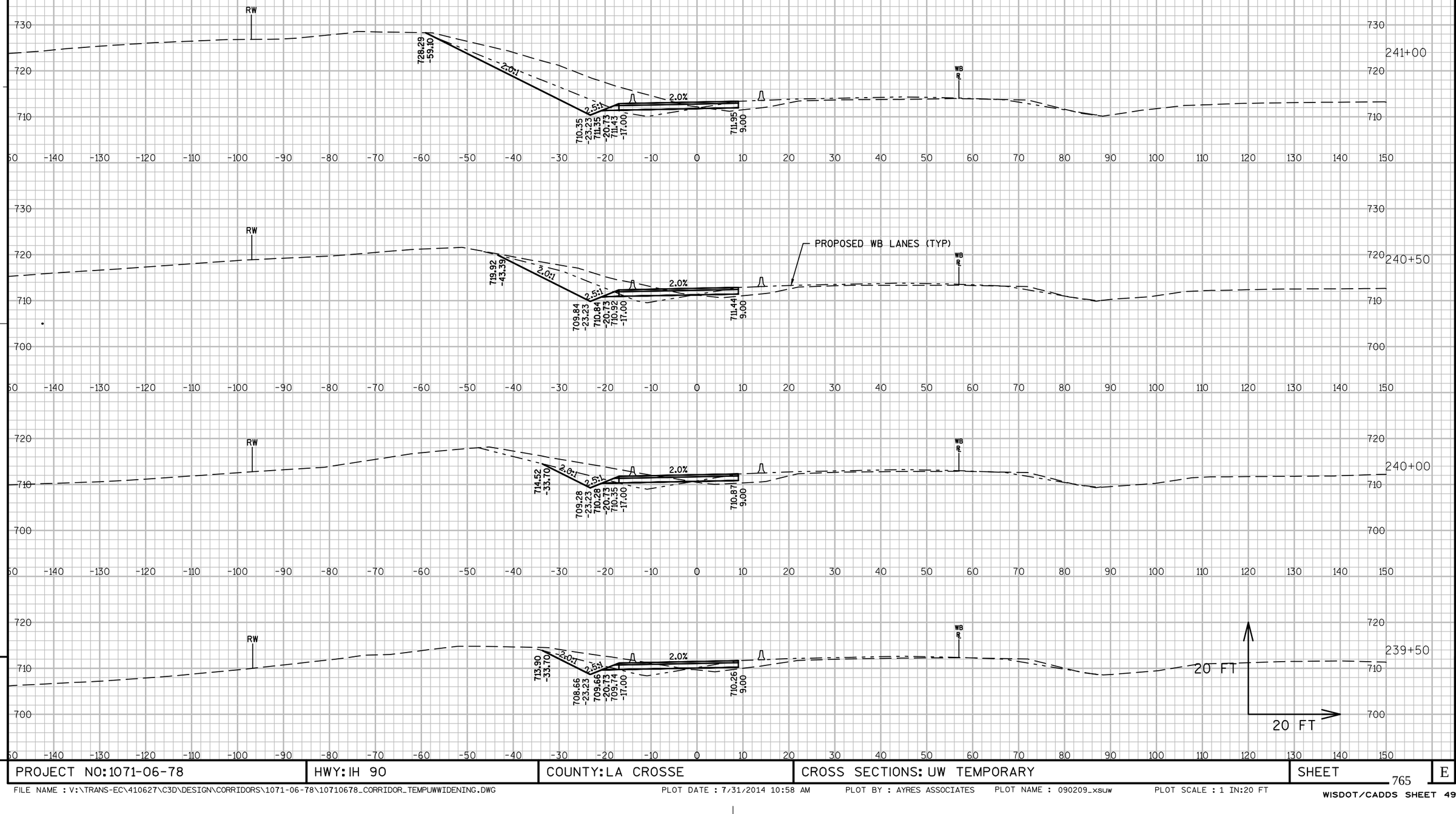
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WISDOT/CADDS SHEET 49



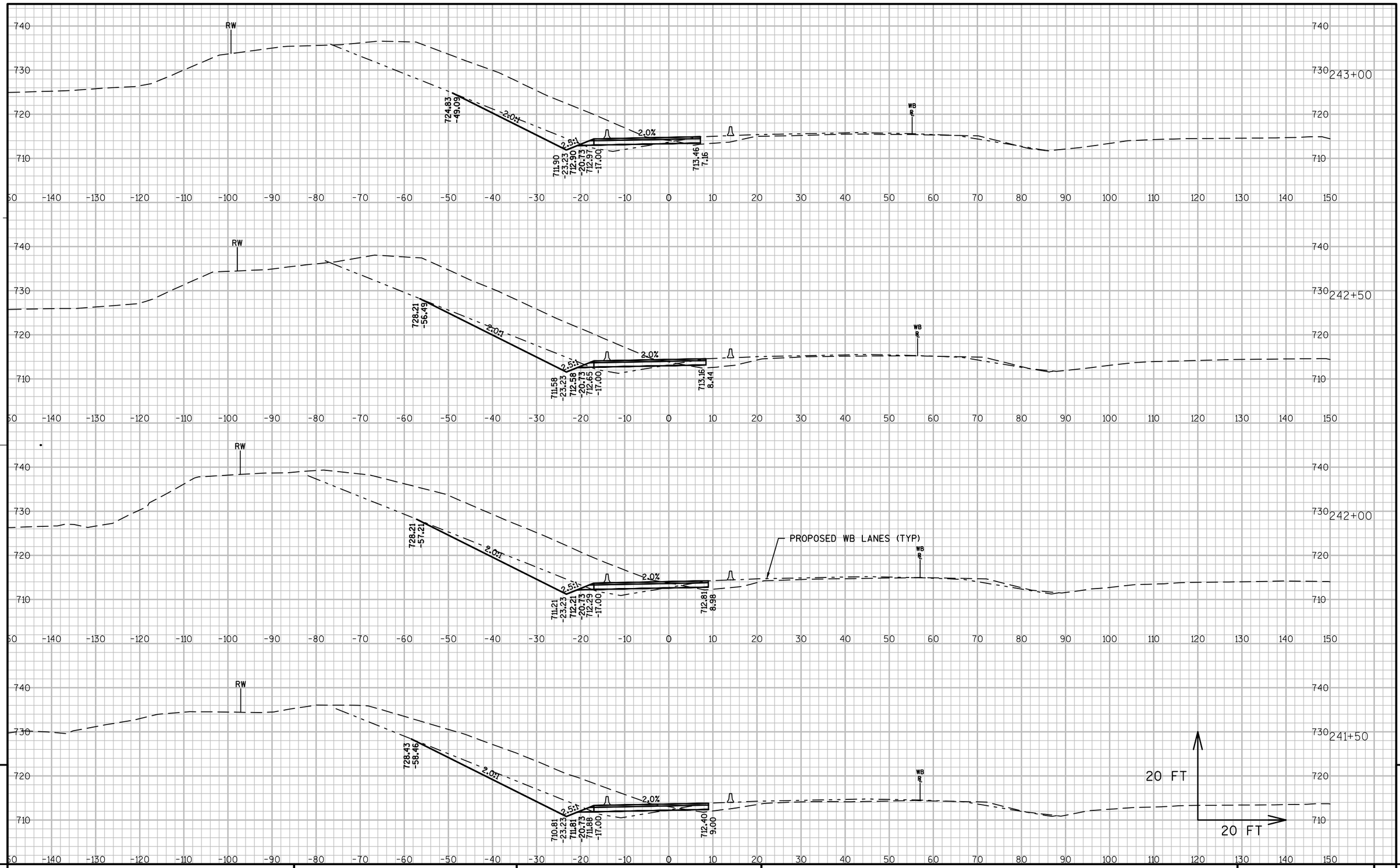
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET 764	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPUWWIDENING.DWG PLOT DATE : 7/31/2014 10:58 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090208_xsuw PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET 765	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPUWWIDENING.DWG PLOT DATE : 7/31/2014 10:58 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090209_xsuw PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

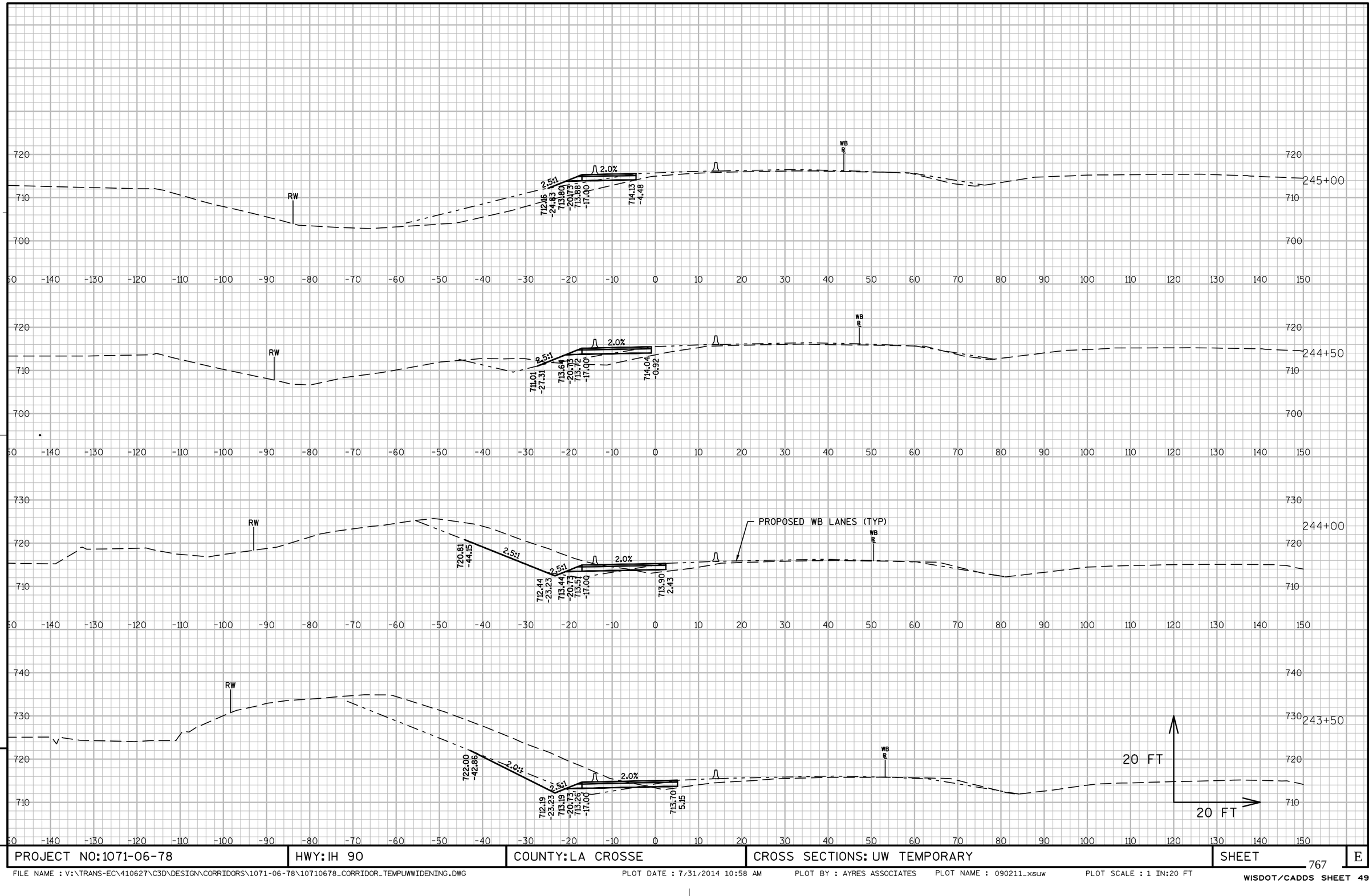


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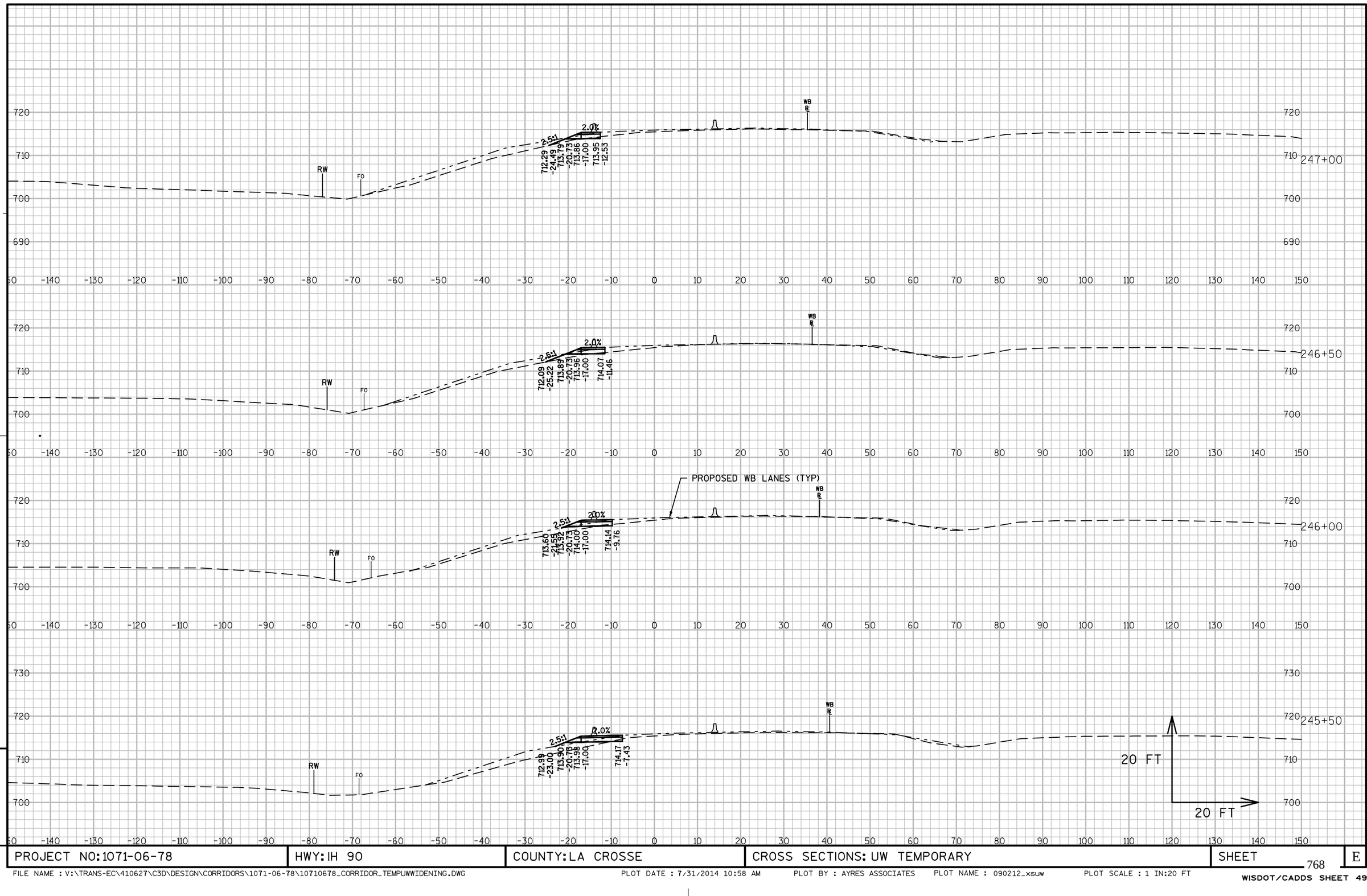
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPUWWIDENING.DWG PLOT DATE : 7/31/2014 10:58 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090210_xsuw PLOT SCALE : 1 IN:20 FT



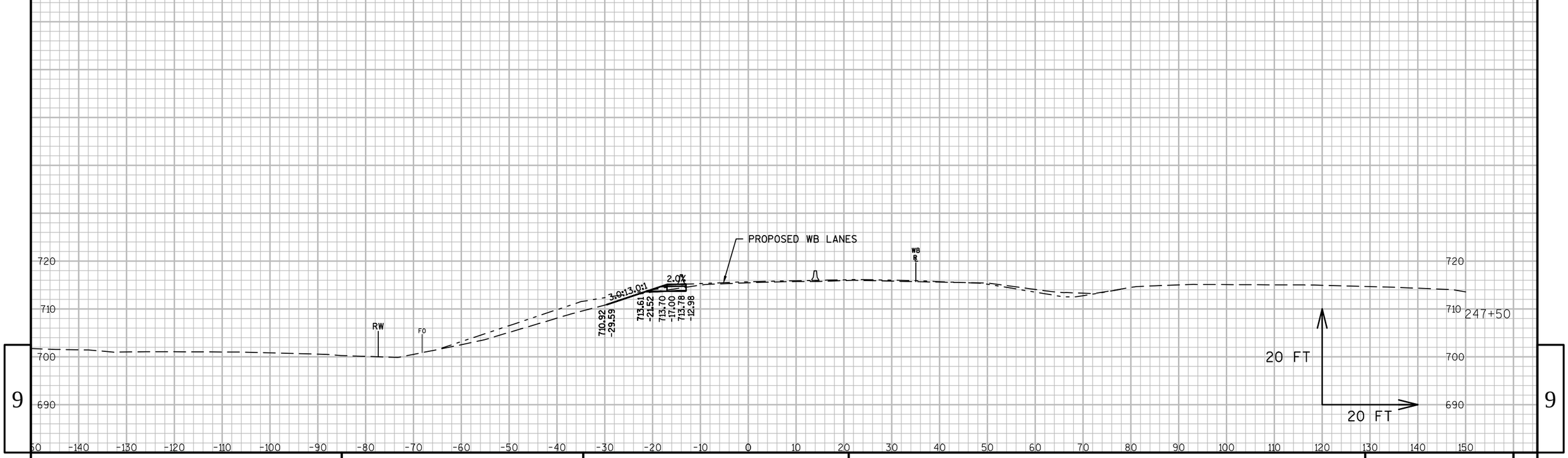
PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET 767	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPUWWIDENING.DWG PLOT DATE : 7/31/2014 10:58 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090211_xsuw PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET 768	E

FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPUWWIDENING.DWG PLOT DATE : 7/31/2014 10:58 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090212_xsuw PLOT SCALE : 1 IN:20 FT



9

PROJECT NO: 1071-06-78	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: UW TEMPORARY	SHEET 769	E

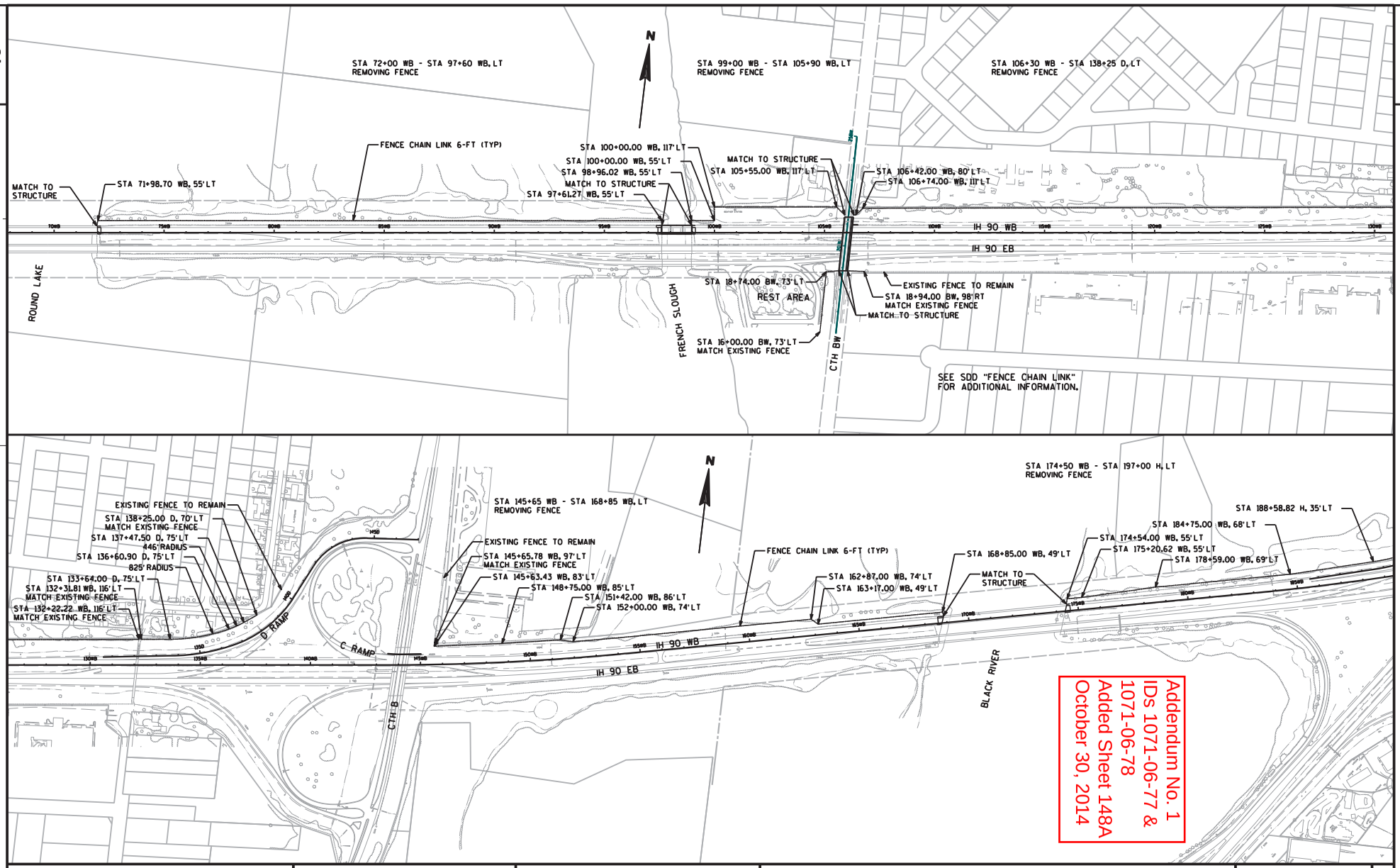
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FILE NAME : V:\TRANS-EC\410627\C3D\DESIGN\CORRIDORS\1071-06-78\10710678_CORRIDOR_TEMPUWWIDENING.DWG PLOT DATE : 7/31/2014 10:58 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : 090213_xsuw PLOT SCALE : 1 IN:20 FT

Wisconsin Department of Transportation

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through innovation and exceptional service.

http://www.dot.wisconsin.gov



PROJECT NO: 1071-06-77/78	HWY: IH 90	COUNTY: LA CROSSE	FENCING DETAIL	SHEET 148A	E

FILE NAME : T:\410627\DGN-DWG\2_0677_WB_ORANGE\oa_0677_027101_fn.dgn PLOT DATE : 10/22/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:400

WISDOT/CADDS SHEET 42

EARTHWORK SUMMARY

DIVISION	PROJECT	STATION TO STATION	LOCATION	205.0100 EXCAVATION COMMON CUT CY	205.0100 EXCAVATION COMMON EBS (8) CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL CY	(6) AVAILABLE MATERIAL CY	(9) EXPANDED EBS BACKFILL CY	(1) REDUCED EBS IN FILL CY	UNEXPANDED FILL CY	(2) (4) EXPANDED FILL CY	(5) MASS ORDINATE +/- CY	(3) 208.1100 SELECT BORROW CY
	1071-06-77	71+97 WB - 97+60 WB	WB LANES	6150	1900	2300	3850	2470	1520	663	1484	2366	---
	1071-06-77	98+97 WB - 168+78 WB	WB LANES	27797	7800	6300	21497	10140	6240	3006	6421	15076	---
	1071-06-77	141+60 C - 144+20 C	C RAMP	1104	100	600	504	130	80	318	404	100	---
	1071-06-77	133+57 D - 138+25 D	D RAMP	1505	200	250	1255	260	160	31	112	1143	---
	1071-06-77	15+72 BW - 18+86 BW	CTH BW	518	---	---	518	---	---	900	1035	-517	---
	1071-06-77	21+32 BW - 23+75 BW	CTH BW	420	---	---	420	---	---	270	311	110	---
	1071-06-77	132+41 AT - 134+65 AT	AT RAMP	300	---	---	300	---	---	18	21	279	---
	1071-06-77	128+30 AU - 130+56 AU	AU RAMP	252	---	---	252	---	---	8	9	243	---
	1071-06-77	146+75 BU - 148+57 BU	BU RAMP	224	---	---	224	---	---	47	54	170	---
	1071-06-77	136+16 DU - 138+32 DU	DU RAMP	31	---	---	31	---	---	---	---	31	---
	1071-06-77	155+21 UE - 159+64 UE	UE CROSSOVER	222	---	---	222	---	---	40	46	176	---
	1071-06-78	174+40 WB - 192+13 WB	WB LANES	6277	3675	1575	4702	4778	2940	5020	7170	-2468	---
	1071-06-78	196+28 WB - 212+33 WB	WB LANES	2946	3400	1425	1521	4420	2720	5565	7692	-6171	---
	1071-06-78	215+98 WB - 247+77 WB	WB LANES	15753	6525	2825	12928	8483	5220	34222	41835	-28907	---
	1071-06-78	249+06 WB - 310+07 WB	WB LANES	18839	9120	5425	13414	11856	7296	3614	7622	5792	---
	1071-06-78	311+65 WB - 318+00 WB	WB LANES	1542	380	175	1367	494	304	8	154	1213	---
	1071-06-78	208+79 G - 212+79 G	G RAMP	471	300	150	321	390	240	93	221	100	---
	1071-06-78	188+59 H - 197+25 H	H RAMP	2725	3500	800	1925	4550	2800	20450	24848	-22923	---
	1071-06-78	287+33 L - 291+50 L	L RAMP	1001	300	200	801	390	240	687	904	-103	---
	1071-06-78	260+93 M - 262+82 M	M RAMP	868	100	450	418	130	80	69	117	301	---
	1071-06-78	277+83 P - 279+65 P	P RAMP	869	100	550	319	130	80	13	53	266	---
	1071-06-78	182+13 ET - 184+21 ET	ET RAMP	519	---	---	519	---	---	1959	2253	-1734	---
	1071-06-78	179+07 EU - 181+27 EU	EU RAMP	184	---	---	184	---	---	---	---	184	---
	1071-06-78	201+29 FU - 203+20 FU	FU RAMP	214	---	---	214	---	---	800	920	-706	---
	1071-06-78	209+50 GU - 213+30 GU	GU RAMP	666	---	---	666	---	---	7632	8777	-8111	---
	1071-06-78	200+00 GW - 209+10 GW	GW RAMP	724	---	---	724	---	---	118	136	588	---
	1071-06-78	184+50 HV - 185+11 HV	HV RAMP	12	---	---	12	---	---	44	51	-39	---
	1071-06-78	203+13 HW - 207+51 HW	HW RAMP	1748	---	550	1198	---	---	625	719	479	---
	1071-06-78	259+64 JU - 265+00 JU	JU RAMP	242	---	---	242	---	---	26	30	212	---
	1071-06-78	257+54 JV - 259+50 JV	JV RAMP	127	---	---	127	---	---	41	47	80	---
	1071-06-78	311+88 TE - 322+00 TE	TE CROSSOVER	616	---	---	616	---	---	185	213	403	---
	1071-06-78	104+38 TN - 111+26 TN	TN WIDENING	517	---	---	517	---	---	3	3	514	---
	1071-06-78	107+35 TS - 116+57 TS	TS WIDENING	596	---	---	596	---	---	22	25	571	---
	1071-06-78	225+58 UW - 248+00 UW	UW WIDENING	865	---	---	865	---	---	5304	6100	-5235	---
	1071-06-78	282+55 KT - 285+80 KT	KT RAMP	662	---	---	662	---	---	369	424	238	---
	1071-06-78	288+71 KU - 291+46 KU	KU RAMP	311	---	---	311	---	---	1	1	310	---
DIVISION 1 SUBTOTAL				97817	37400	23575	74242	48620	29920	92171	120209	-45967	45967
		UNDISTRIBUTED (7)											20000
PROJECT ID 1071-06-77 SUMMARY				**48523**									**5000**
PROJECT ID 1071-06-78 SUMMARY				**86694**									**60967**
PROJECT TOTALS				**135217**									**65967**

(1) REDUCED EBS IN FILL IS EXCAVATED EBS MATERIAL THAT IS USUABLE OUTSIDE THE 1:1 SLOPES. EBS IN FILL REDUCTION FACTOR = 0.8
(2) EXPANSION FACTOR = 1.15
(3) SELECT BORROW = EXPANDED FILL - EXCAVATION COMMON
(4) EXPANDED FILL = (UNEXPANDED FILL - REDUCED EBS)* EXPANSION FACTOR + EXPANDED EBS BACKFILL
(5) 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.
(6) AVAILABLE MATERIAL = COMMON EXCAVATION - SALVAGED/UNUSABLE MATERIAL
(7) UNDISTRIBUTED SELECT BORROW IS INCLUDED TO ACCOUNT FOR LACK OF AVAILABILITY OF MATERIALS DURING STAGING AND POTENTIAL UNUSABLE MATERIALS WITHIN THE PROJECT DURING THE EARLY STAGES OF CONSTRUCTION.
(8) EBS QUANTITY IS BASED ON OBSERVED TOPSOIL IN EXCESS OF 1' IN SOME AREAS. QUANTITIES SHOWN ARE UNDISTRIBUTED. VOLUMES LOCATED ALONG TEMPORARY ALIGNMENTS ARE INCLUDED WITHIN THE VOLUMES FOR PERMANENT ALIGNMENTS. EBS IS NOT INCLUDED IN THE EARTHWORK DATA TABLE.
(9) EXPANDED EBS BACKFILL 1.3

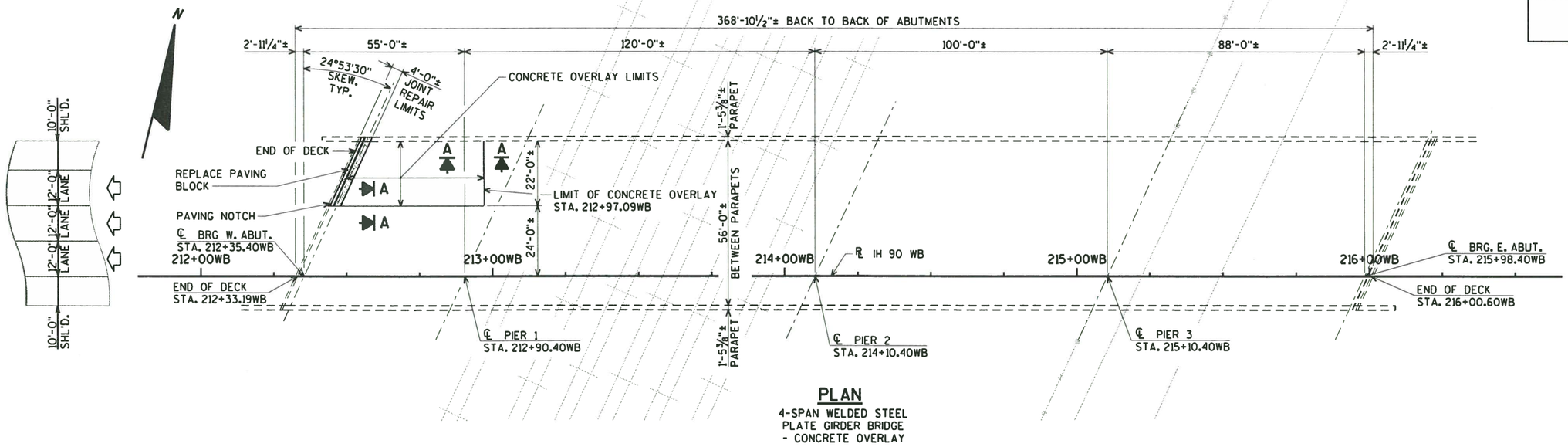
Addendum No. 1
IDs 1071-06-77 &
1071-06-78
Revised Sheet 168
October 30, 2014

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

$PRFNAME$
U:±41-0627.00 - LaCrosse County, IH90±B-32-40 IH 90 over Oak Street±BRIDGE±FINAL (7-16-14)±B-32-4
DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

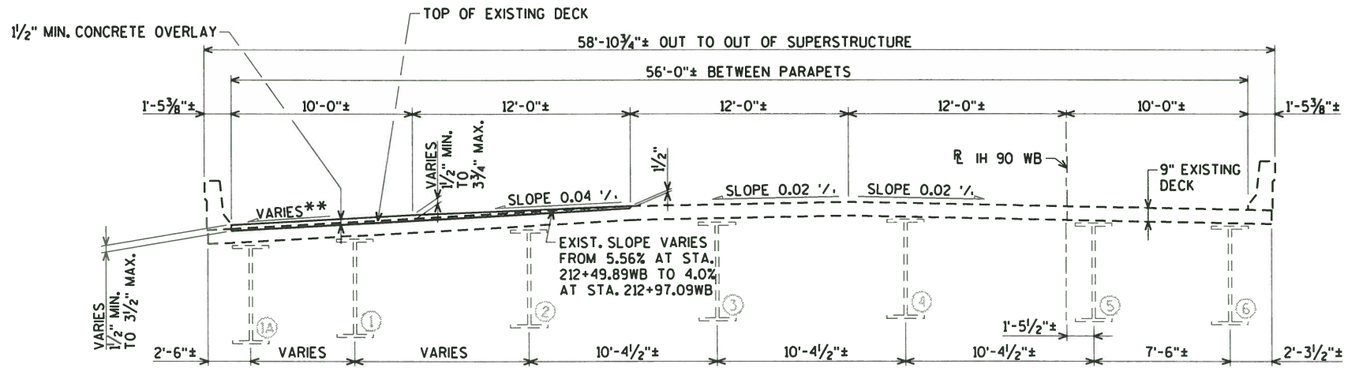
STATE PROJECT NUMBER

1071-06-78



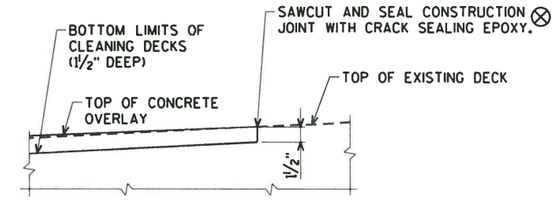
PLAN

4-SPAN WELDED STEEL PLATE GIRDER BRIDGE - CONCRETE OVERLAY



CROSS SECTION THRU DECK LOOKING EAST

** STA. 212+49.89WB, SLOPE 5.62%
STA. 212+97.09WB, SLOPE 4.0%



SECTION A

⊗ 1½" DEEP SAWCUT IS INCLUDED IN THE BID PRICE FOR CLEANING DECKS.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-19
OPERATING RATING: HS-32
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 190 KIPS

ULTIMATE DESIGN STRESSES:

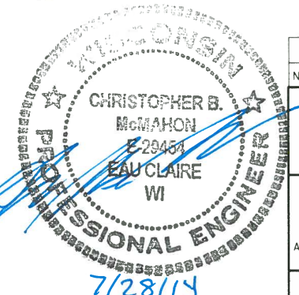
CONCRETE MASONRY _____ f'_c = 4,000 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)____ f_y = 60,000 p.s.i.

TRAFFIC DATA:

A.D.T. = 43,700 (2016)
A.D.T. = 56,700 (2036)
R.D.S. = 70 MPH

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES AND GENERAL NOTES
3. STRIP SEAL EXPANSION JOINT DETAILS
4. STRIP SEAL EXPANSION JOINT DETAILS
5. PARAPET REINFORCEMENT DETAILS



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/05/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-32-40

IH 90 WB OVER OAK STREET & RAILROAD

COUNTY	TOWN/CITY/VILLAGE
LA CROSSE	LA CROSSE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CBM	JCK	JCK	CBM

GENERAL PLAN

SHE 454 = 5

8

8

STATE PROJECT NUMBER

1071-06-78

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
502.0100	CONCRETE MASONRY BRIDGES	CY	6
502.0717.S	CRACK SEALING EPOXY	LF	75
502.3100	EXPANSION DEVICE B-32-40	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	120
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	25
502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	2
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	870
509.0500	CLEANING DECKS	SY	115
509.1000	JOINT REPAIR	SY	12
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	8

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL PLANS.

THE FIRST DIGIT OF A THREE DIGIT BAR NO. OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1½" DEEP SAW CUT.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP OF THE OVERLAY AND THE TOPS AND SIDES OF THE PARAPET IN THE JOINT REPAIR AREA PER MANUFACTURERS RECOMMENDATIONS.

PROFILE GRADE LINE IN THE CONCRETE OVERLAY AREA SHALL BE DETERMINED BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER CLEANING AS SHOWN. EXPECTED AVERAGE OVERLAY THICKNESS IS 2½". VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

1½" OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK IN THE CONCRETE OVERLAY AREA UNDER THE BID ITEM, "CLEANING DECKS".

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY OR PAVING BLOCK AT THE ABUTMENT IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO THE NEW WORK.

THE CONCRETE APPROACH SLABS WILL NEED TO BE 1'0"± MIN. TO 1'-2"± MAX. THICK AT THE ABUTMENT.

LONGITUDINAL CONSTRUCTION JOINTS IN THE CONCRETE OVERLAY NEED TO BE PLACED AT THE EDGE OF THE LANE LINES.

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-40 IH 90 over Oak Street\BRIDGE\FINAL (7-16-14)\B-32-40_GP.dgn

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-40

DRAWN BY JCK | PLANS CK'D. CBM

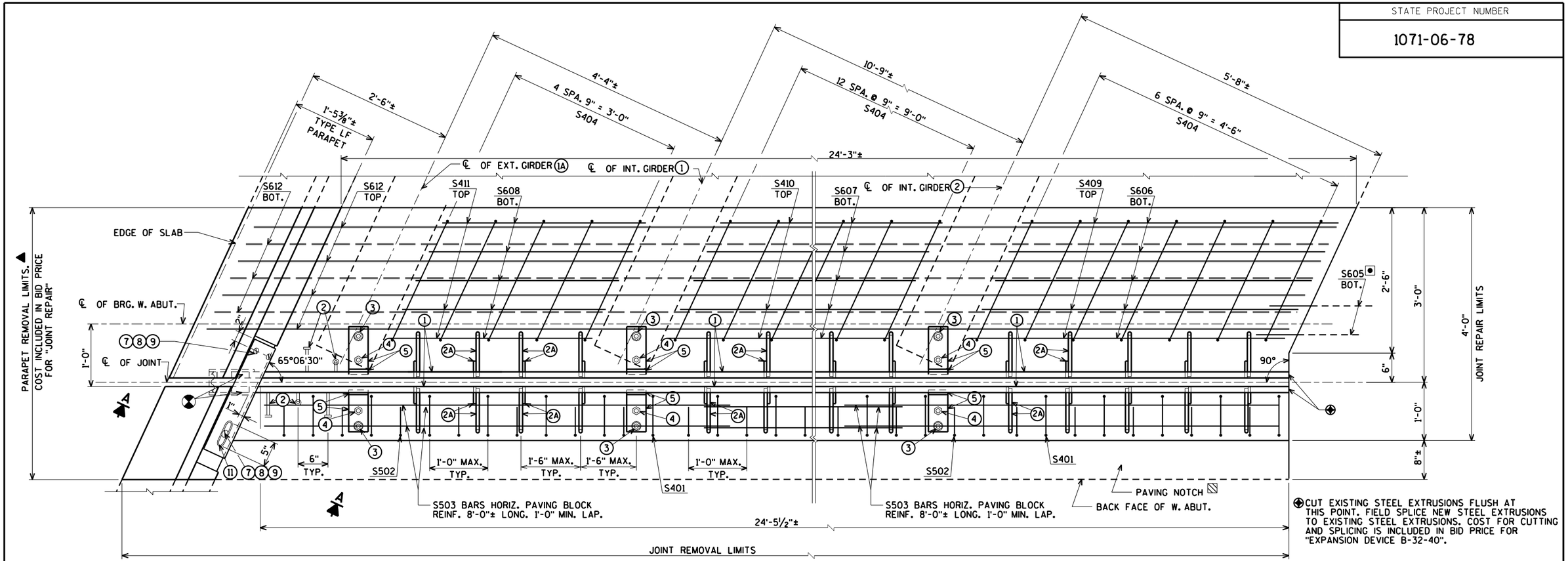
QUANTITIES AND GENERAL NOTES

SHEET 2 OF 5
455

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE PROJECT NUMBER

1071-06-78



⊙ CUT EXISTING STEEL EXTRUSIONS FLUSH AT THIS POINT. FIELD SPLICE NEW STEEL EXTRUSIONS TO EXISTING STEEL EXTRUSIONS. COST FOR CUTTING AND SPLICING IS INCLUDED IN BID PRICE FOR "EXPANSION DEVICE B-32-40".

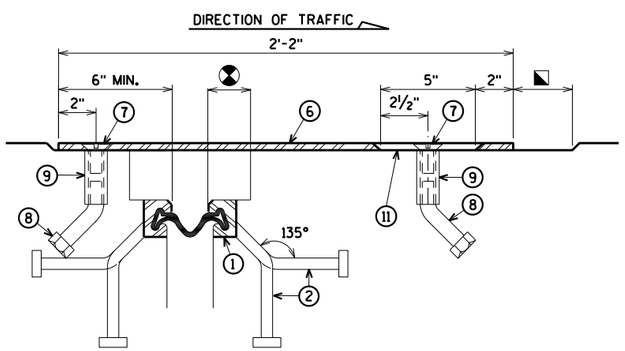
PART PLAN AT JOINT

⊙ MASONRY ANCHORS TYPE L NO. 6 BARS

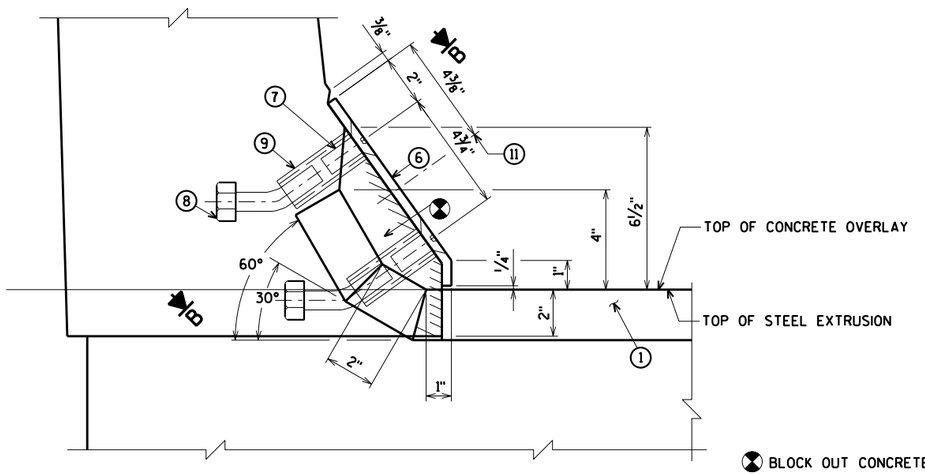
▲ UTILIZE EXISTING VERTICAL BAR STEEL FOR PARAPET REMOVAL LIMITS OUTSIDE OF THE "JOINT REPAIR" LIMITS.

▨ THE CONCRETE APPROACH SLAB WILL VARY FROM 1'-0"± MIN. TO 1'-2" MAX. THICK AT THE PAVING NOTCH.

● THE EXISTING NEOPRENE STRIP SEAL WILL BE REPLACED WHEN THE NEW NEOPRENE STRIP SEAL IS INSTALLED. NO SPLICING WILL BE PERMITTED IN THE NEW NEOPRENE STRIP SEAL. COST OF FURNISHING, INSTALLING AND REMOVING THE EXISTING NEOPRENE STRIP SEAL (4-INCH) IS INCIDENTAL TO THE BID ITEM "EXPANSION DEVICE B-32-40".

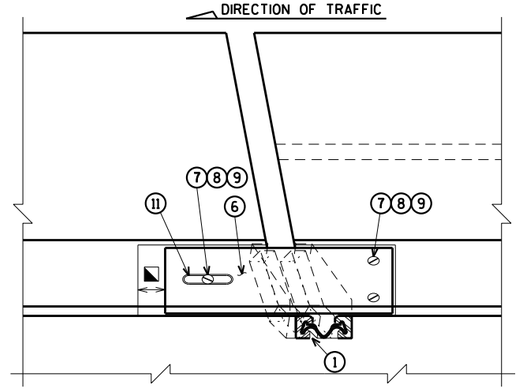


SECTION B



SECTION A

TYPE LF PARAPET



VIEW OF PARAPET PLATE FROM ROADWAY

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

◪ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

WORK THIS SHEET WITH SHEETS 4 & 5.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-40

DRAWN BY JCK | PLANS CK'D. CBM

STRIP SEAL EXPANSION JOINT DETAILS

SHEET 3 OF 5
456

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

ecpdf.plt
41-0627 EXPJT ss.dgn

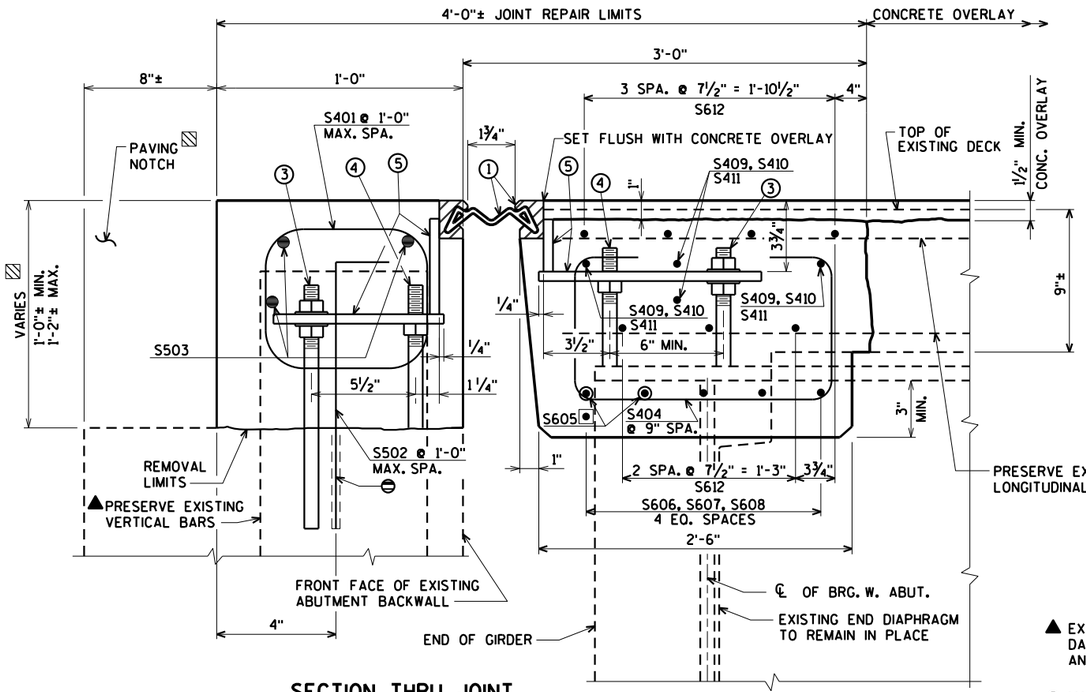
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STATE PROJECT NUMBER

1071-06-78



SECTION THRU JOINT

DIMENSIONS ARE NORMAL TO ℄ OF SUBSTRUCTURE UNIT

*PRESERVE AND INCORPORATE 1'-6" MIN. OF EXISTING TRANSVERSE BARS ALSO.

NOTES

ONE FIELD SPLICE PERMITTED IN NEW STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING, OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

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

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

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

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

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-32-40".

LEGEND

- ● (1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.
- (2) STUDS ⅝" DIA. X 6¾" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- (2A) ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
- (3) ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
- (4) ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
- (5) FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
- (6) GALVANIZED PLATE ⅜" X 9" X 2'-2" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
- (7) ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
- (8) ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- (9) ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.
- (11) 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

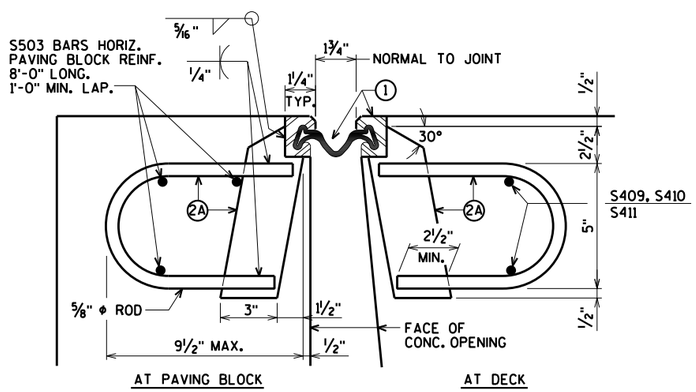
▲ EXISTING BARS LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL.

⊖ MASONRY ANCHORS TYPE L NO. 5 BARS MIN. SPACE AT 1'-0" MAX. TURN 10" LEG AS NECESSARY TO FIT.

⊡ MASONRY ANCHORS TYPE L NO. 6 BARS

▨ THE CONCRETE APPROACH SLAB WILL VARY FROM 1'-0"± MIN. TO 1'-2"± MAX. THICK AT THE PAVING NOTCH.

● THE EXISTING NEOPRENE STRIP SEAL WILL BE REPLACED WHEN THE NEW NEOPRENE STRIP SEAL IS INSTALLED. NO SPLICING WILL BE PERMITTED IN THE NEW NEOPRENE STRIP SEAL. COST OF FURNISHING, INSTALLING AND REMOVING THE EXISTING NEOPRENE STRIP SEAL (4-INCH) IS INCIDENTAL TO THE BID ITEM "EXPANSION DEVICE B-32-40".

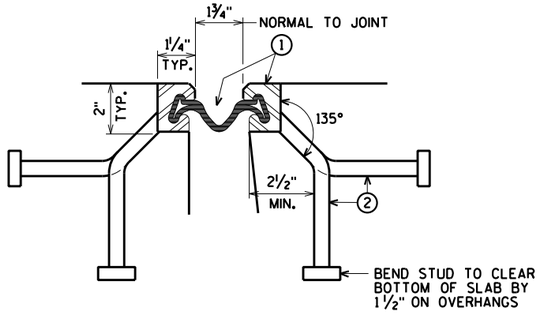


SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

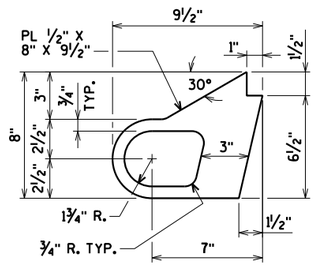
SYM. ABOUT ℄ JOINT UNLESS OTHERWISE SHOWN OR NOTED

DS BROWN SSA2 FRAME RAIL
WITH A2R SERIES STRIP SEAL USED



SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPET



ALTERNATE STRIP SEAL ANCHOR

WORK THIS SHEET WITH SHEETS 3 & 5

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-40

DRAWN BY JCK | PLANS CK'D. CBM

STRIP SEAL EXPANSION JOINT DETAILS

SHEET 4 OF 5
457

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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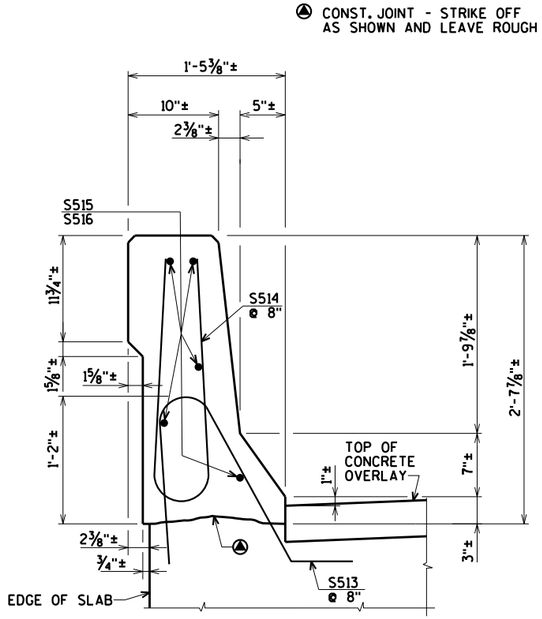
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6/2/2014

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SECTION THRU PARAPET

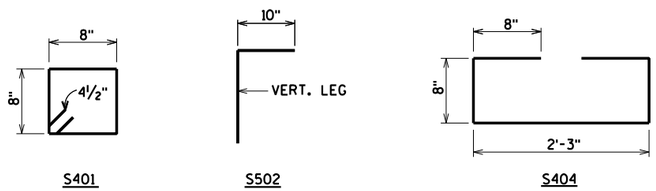
BILL OF BARS

	BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	870* COATED LOCATION
	S401	X	25	3-2	X			W. ABUT. PAVING BLOCK VERT.
●	S502	X	25	2-5	X			W. ABUT. PAVING BLOCK VERT.
	S503	X	15	8-0				W. ABUT. PAVING BLOCK HORIZ.
	S404	X	25	4-7	X			DIAPH. VERT.
◉	S605	X	2	4-11				DIAPH. BOT. HORIZ.
	S606	X	5	5-3				DIAPH. BOT. HORIZ.
	S607	X	5	10-4				DIAPH. BOT. HORIZ.
	S608	X	5	3-3				DIAPH. BOT. HORIZ.
	S409	X	4	5-3				DIAPH. HORIZ.
	S410	X	4	10-4				DIAPH. HORIZ.
	S411	X	4	3-3				DIAPH. HORIZ.
	S612	X	7	25-2				TRANSVERSE TOP & BOT.
	S513	X	5	4-3	X			PARAPET VERTICAL
	S514	X	8	4-10	X			PARAPET VERTICAL
	S515	X	5	1-3				PARAPET HORIZONTAL - WING
	S516	X	5	2-9				PARAPET HORIZONTAL

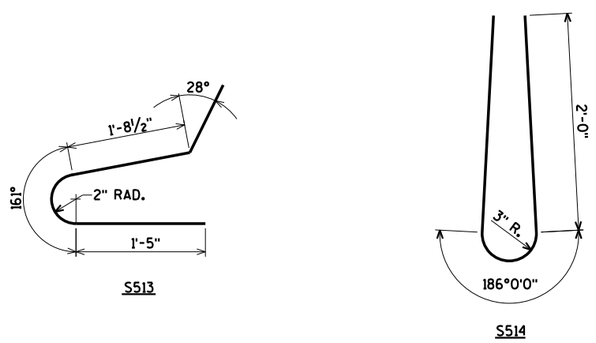
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

● CONCRETE MASONRY ANCHORS TYPE L No. 5 BARS

◉ CONCRETE MASONRY ANCHORS TYPE L No. 6 BARS



S401 S502 S404



S513 S514

NOTES:

UTILIZE EXISTING VERTICAL STEEL FOR PARAPET REMOVAL LIMITS OUTSIDE OF THE "JOINT REPAIR" LIMITS INDICATED IN THE PLANS.

PRESERVE AND INCORPORATE AS MUCH EXISTING LONGITUDINAL PARAPET REBAR AS PRACTICAL AND INCORPORATE IT INTO THE NEW WORK.

WORK THIS SHEET WITH SHEETS 3 & 4.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-40

DRAWN BY JCK | PLANS CK'D. CBM

PARAPET REINFORCEMENT DETAILS

SHEET 5 OF 5
458

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8

8

ecpdf.plt
41-0627 EXPJT bill of bars.dgn

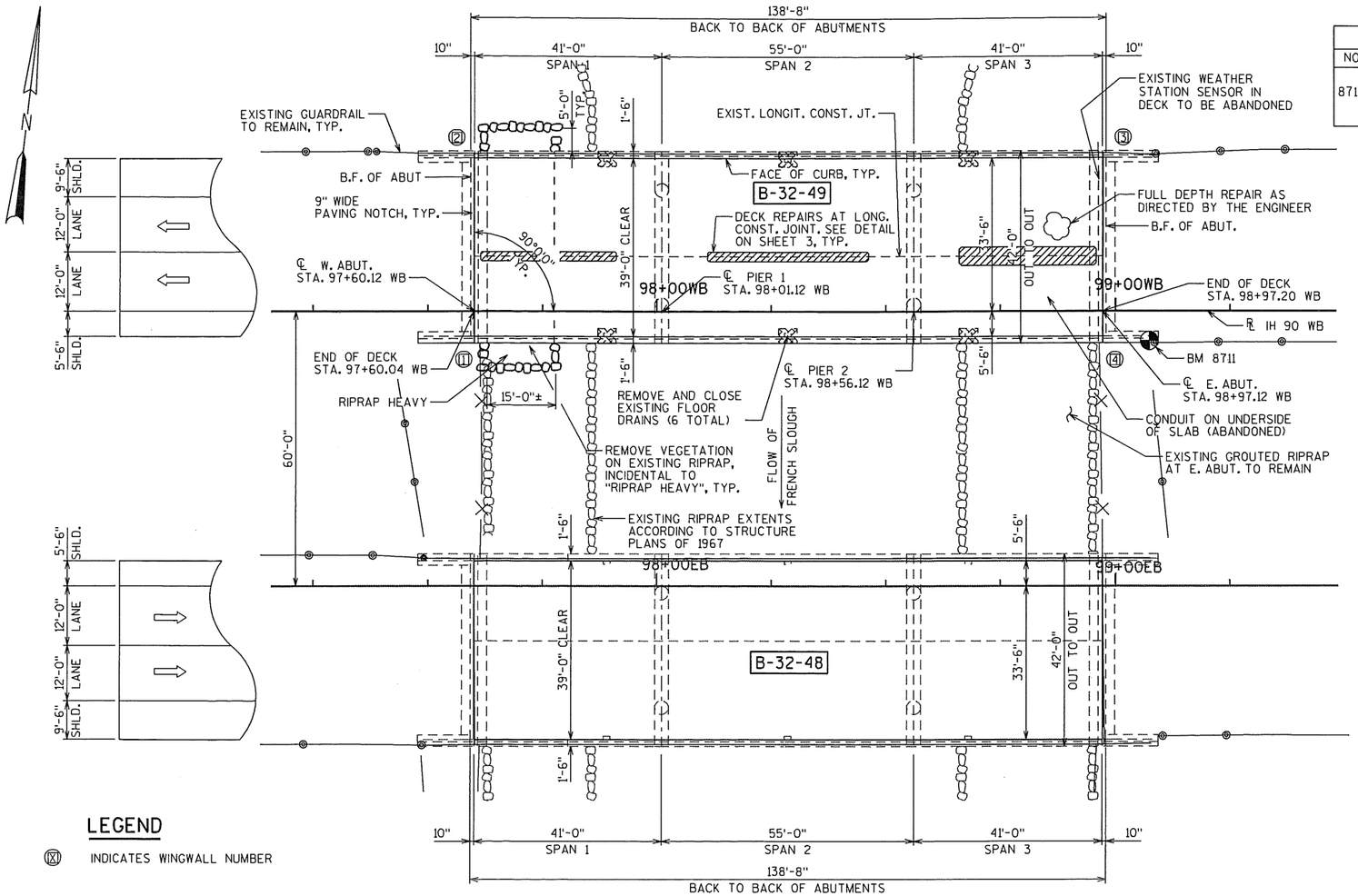
6/2/2014

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STATE PROJECT NUMBER
1071-06-77

BENCHMARKS

NO.	STATION	DESCRIPTION	ELEV.
8711	STA. 99+07.38 WB, 6.49' RT OFFSET	CHISELED "+" ON TOP OF SE BOLT OF RAILING AT SE CORNER OF PARAPET	655.51

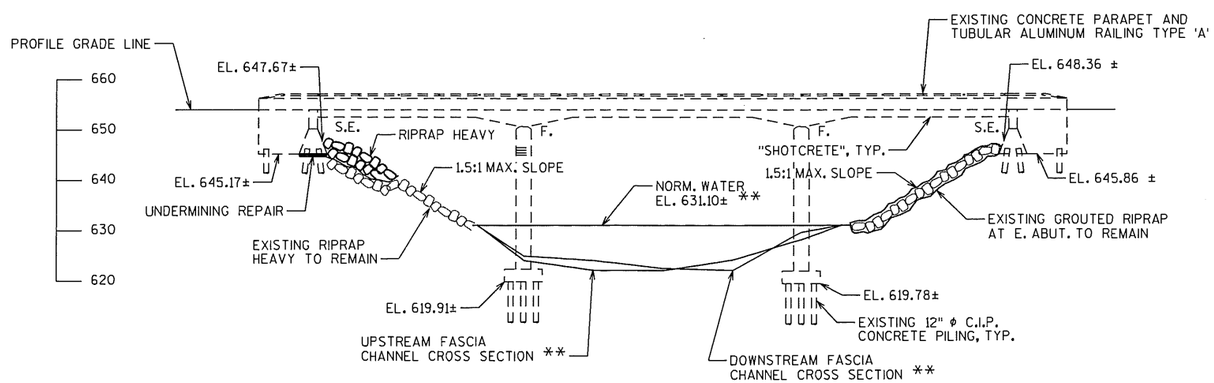


LEGEND

(X) INDICATES WINGWALL NUMBER

PLAN B-32-49

CONCRETE OVERLAY OF 3 SPAN HAUNCHED SLAB



ELEVATION

NORMAL TO FRENCH SLOUGH

** ACCORDING TO UW-DIVE INSPECTION REPORT DATED 2011-09-20. 'CHANNEL BOTTOM MATERIAL CONSISTED OF 2 FT DIAMETER AND SMALLER RIPRAP.'

DESIGN DATA

LIVE LOAD:
DESIGN LOADING = HS20
INVENTORY RATING = HS20
OPERATING RATING = HS34
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV) RATING = 170 KIPS

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY, OVERLAY DECKS---f'c = 4,000 P.S.I.
CONCRETE MASONRY, ALL OTHER--------f'c = 3,500 P.S.I.

TRAFFIC DATA IH 90

A.D.T. = 26,400 (2016)
= 34,600 (2036)

R.D.S. = 70 MPH

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. CROSS SECTIONS & QUANTITIES
3. SHOTCRETE DETAILS

WISCONSIN
JOHN F. RUBLEIN
E-38700
MADISON, WI
PROFESSIONAL ENGINEER
8/4/14

STRUCTURES DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489

CONSULTANT CONTACT:
JOHN RUBLEIN, P.E. (262) 821-1171

NO.	DATE	REVISION	BY

KSA K. Singh & Associates, Inc.
Engineers, Scientists and Environmental Consultants

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-32-49

IH 90 WB OVER FRENCH SLOUGH

COUNTY	TOWN/~~CITY/VILLAGE~~
LA CROSSE	CAMPBELL

DESIGN SPEC. REHABILITATION N/A

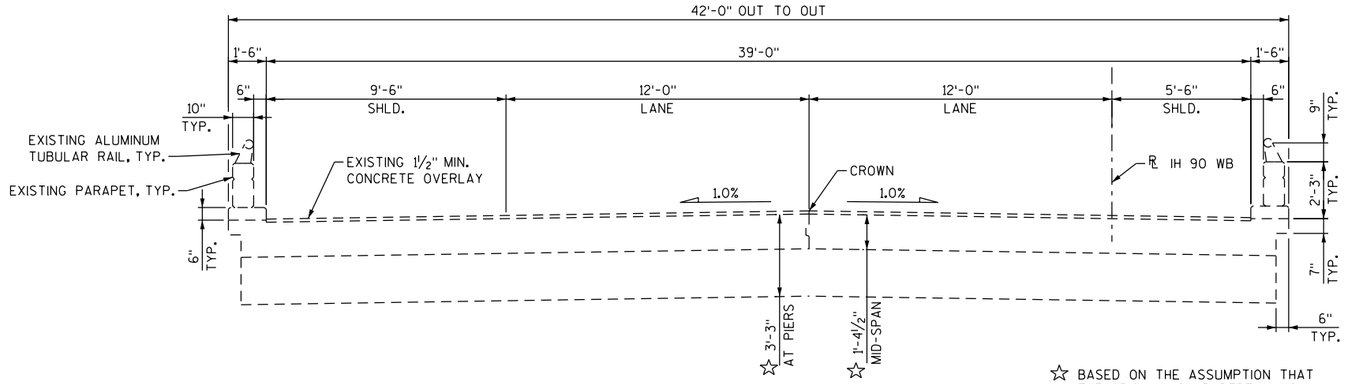
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
YC	JFR	YC	JFR

GENERAL PLAN & ELEVATION

SHEET 1 OF 3
459

8

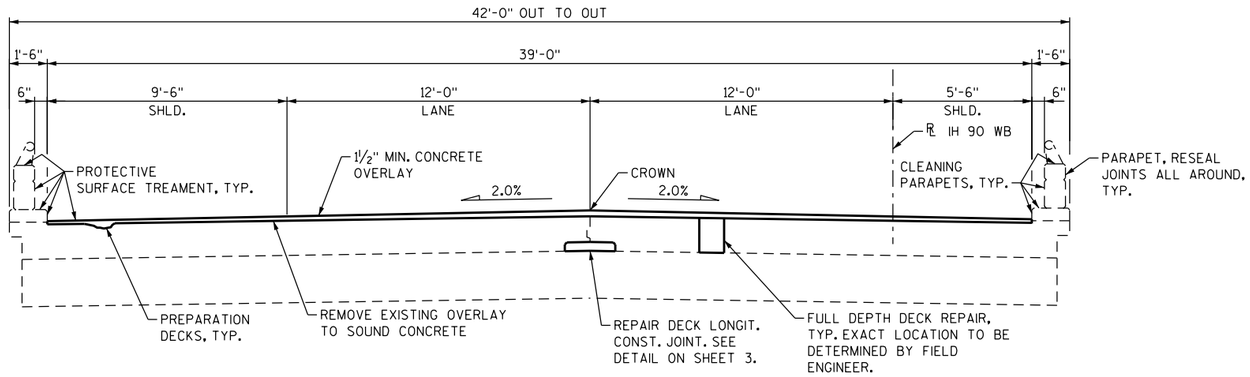
8



CROSS SECTION THRU EXISTING BRIDGE

(LOOKING EAST)

☆ BASED ON THE ASSUMPTION THAT THE ORIGINAL SLAB DEPTH WAS REDUCED BY 1" DURING PLACEMENT OF PREVIOUS OVERLAY.



CROSS SECTION THRU BRIDGE

(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES

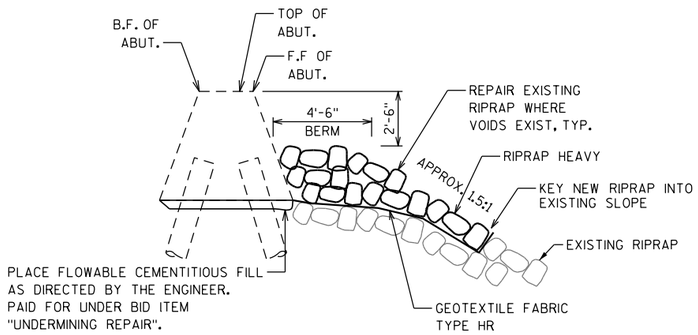
	BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-32-49	LS	1
	203.0225.S	DEBRIS CONTAINMENT B-32-49	LS	1
	502.0717.S	CRACK SEALING EPOXY	LF	1900
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	730
#	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	1
	509.0301	PREPARATION DECKS TYPE 1	SY	100
	509.0302	PREPARATION DECKS TYPE 2	SY	65
*	509.1500	CONCRETE SURFACE REPAIR	SF	10
	509.2000	FULL-DEPTH DECK REPAIR	SY	20
	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	75
	509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY B-32-49	SY	600
	509.9050.S	CLEANING PARAPETS	LF	320
	606.0300	RIPRAP HEAVY	CY	75
	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	110
	SPV.0105.10	UNDERMINING REPAIR	LS	1
**	SPV.0165.02	SHOTCRETE	SF	310

* REPAIR APPLIES TO PARAPETS, ABUTMENTS, AND/OR PIERS.

** REPAIR APPLIES TO UNDERSIDE OF DECK SLAB.

THIS IS A NOMINAL QUANTITY. TO BE DETERMINED BY THE FIELD ENGINEER.

ALL ITEMS ARE CATEGORY 0020.



SECTION AT WEST ABUTMENT

STATE PROJECT NUMBER

1071-06-77

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURAL PLANS.

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

ALL PREVIOUS PATCHES SHALL BE REMOVED UNDER THE BID ITEM "PREPARATION DECKS TYPE 1" AND "PREPARATION DECKS TYPE 2".

EXISTING LONGITUDINAL AND TRANSVERSE CRACKS SHALL BE CLEANED AND FILLED WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER. WORK SHALL BE PAID FOR UNDER BID ITEM, "CRACK SEALING EPOXY".

BID ITEMS "PREPARATION DECKS TYPE 1", "PREPARATION DECKS TYPE 2", "FULL-DEPTH DECK REPAIR", "CONCRETE SURFACE REPAIR", AND "SHOTCRETE" SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 3". IF THE EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

APPLY PROTECTIVE SURFACE TREATMENT TO TOP OF OVERLAY, THE CURB, INSIDE FACES AND TOPS OF PARAPETS, INCLUDING PARAPETS ON ABUTMENT WINGS. WORK SHALL BE PAID FOR UNDER BID ITEM, "PROTECTIVE SURFACE TREATMENT".

PLACE FLOWABLE CEMENTITIOUS FILL UNDERNEATH ABUTMENT(S) AT LOCATIONS OF UNDERMINING AS DETERMINED BY THE ENGINEER. PLACE FILL PRIOR TO PLACING HEAVY RIPRAP. WORK SHALL BE PAID FOR UNDER BID ITEM "UNDERMINING REPAIR". SEE SPECIAL PROVISIONS FOR DETAILS.

EXTENTS OF RIPRAP HEAVY AT WEST ABUTMENT SHALL BE AS DIRECTED BY THE FIELD ENGINEER.

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY AT ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

REMOVAL AND CLOSING OF FLOOR DRAINS SHALL BE INCLUDED IN BID ITEM "FULL-DEPTH DECK REPAIR".

CONDUIT LOCATED ON THE UNDERSIDE OF THE SLAB MAY BE REMOVED, IF REQUIRED FOR CONSTRUCTION.

ANY EXISTING IN-PAVEMENT WEATHER SENSORS TO BE ABANDONED.

SEE ROADWAY PLANS FOR APPROACH SLAB REPLACEMENT.

LAPS IN WELDED WIRE MESH SHALL BE MADE SO THAT THE OVERLAP, MEASURED BETWEEN OUTERMOST CROSS WIRES ON EACH SHEET IS NOT LESS THAN THE SPACING ON CROSS WIRES PLUS 2 INCHES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-49

DRAWN BY VJD | PLANS CK'D. JFR

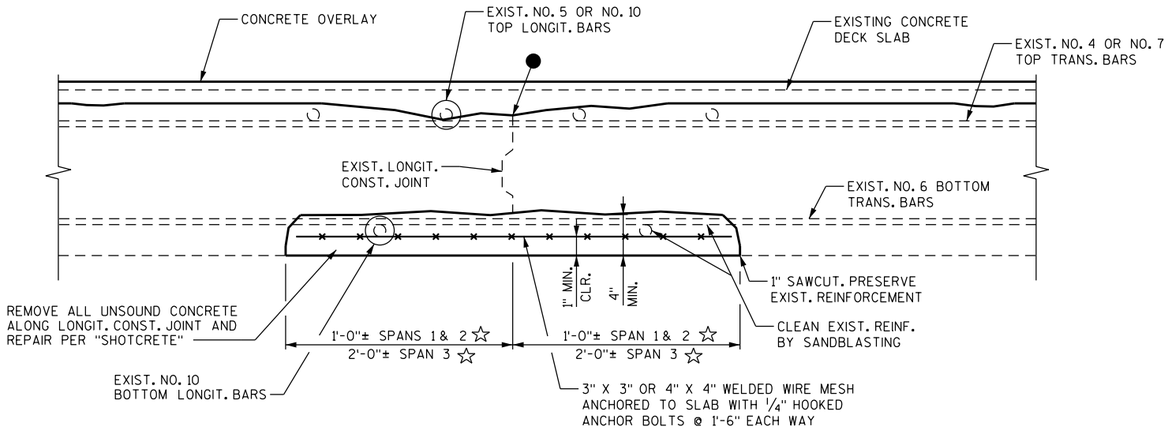
CROSS SECTION & QUANTITIES

SHEET 2 OF 3
460

8

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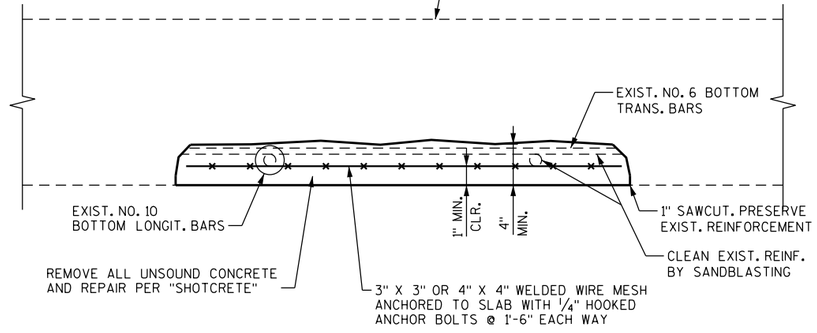
STATE PROJECT NUMBER
1071-06-77



DECK REPAIRS AT LONGITUDINAL CONSTRUCTION JOINT

● SEAL LONGITUDINAL CONSTRUCTION JOINT WITH CRACK SEALER. INCLUDED IN "CRACKING SEALING EPOXY".

☆ SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.



SHOTCRETE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-49

DRAWN BY VJD | PLANS CK'D. JFR

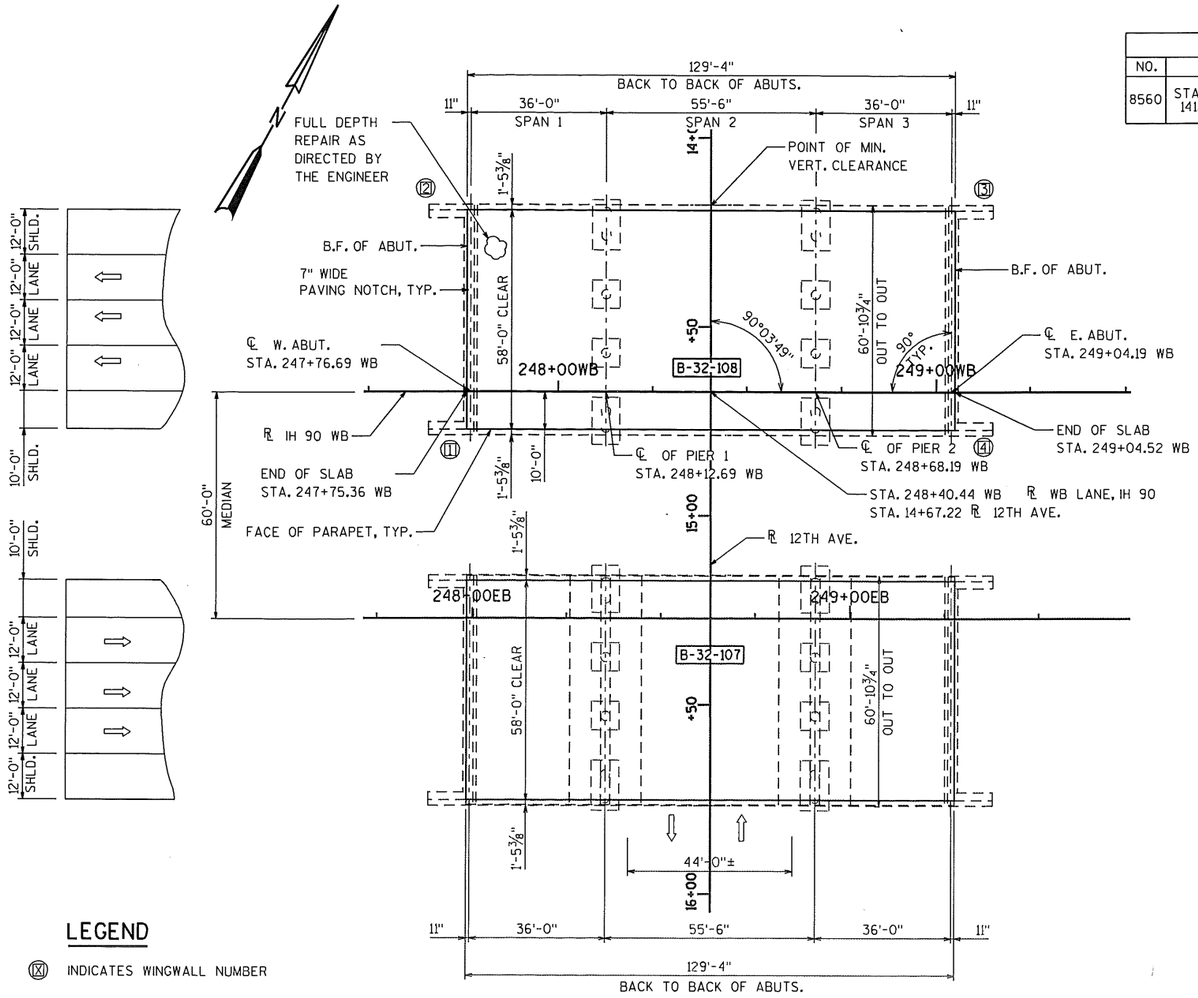
SHOTCRETE DETAILS

SHEET 3 OF 3

461

STATE PROJECT NUMBER
1071-06-78

BENCHMARK ⊕			
NO.	STATION	DESCRIPTION	ELEV.
8560	STA. 274+08.13 WB, 141.68' RT OFFSET	CHISELED "□" ON TOP OF PARAPET WALL, S.E. CORNER B-32-56	730.26

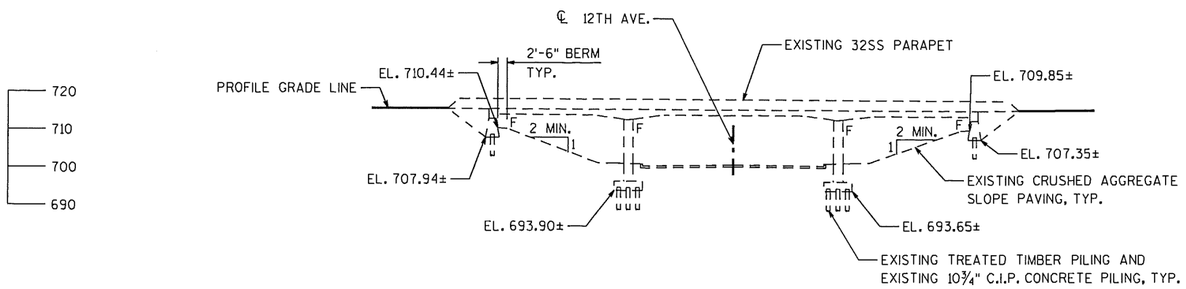


LEGEND

(X) INDICATES WINGWALL NUMBER

PLAN

CONCRETE OVERLAY OF 3 SPAN HAUNCHED SLAB



ELEVATION

NORMAL TO 12TH AVE.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING = HS20
INVENTORY RATING = HS20
OPERATING RATING = HS33
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV) RATING = 230 KIPS

ULTIMATE DESIGN STRESSES (NEW WORK):

CONCRETE MASONRY, OVERLAY DECKS----f'c = 4,000 P.S.I.

TRAFFIC DATA IH 90

A.D.T. = 43,700 (2016)
= 56,700 (2036)

R.D.S. = 70 MPH

WISCONSIN
YOON-MOON CHUN
E-39076
WHITEFISH BAY
WIS.
PROFESSIONAL ENGINEER

Yoon-Moon Chun
2014-08-04

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. CROSS SECTION & QUANTITIES

STRUCTURES DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
JOHN RUBLEIN (262) 821-1171

NO.	DATE	REVISION	BY

KSA K. Singh & Associates, Inc.
Engineers, Scientists and Environmental Consultants

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-32-108

IH 90 WB OVER 12TH AVE.

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
LA CROSSE	ONALASKA

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
YC	VJD	VJD	YC

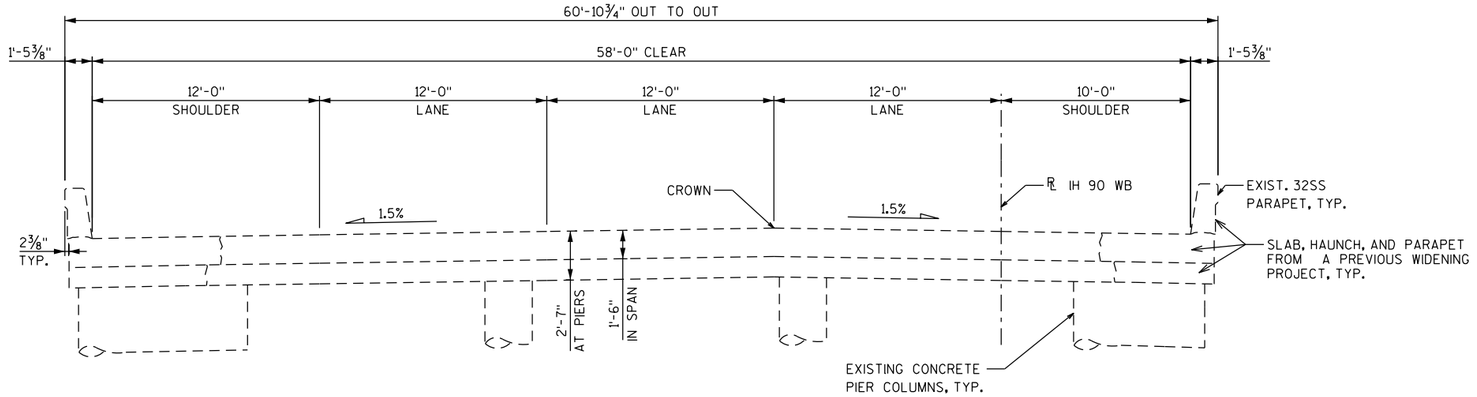
GENERAL PLAN & ELEVATION

SHEET 1 OF 2
493

8

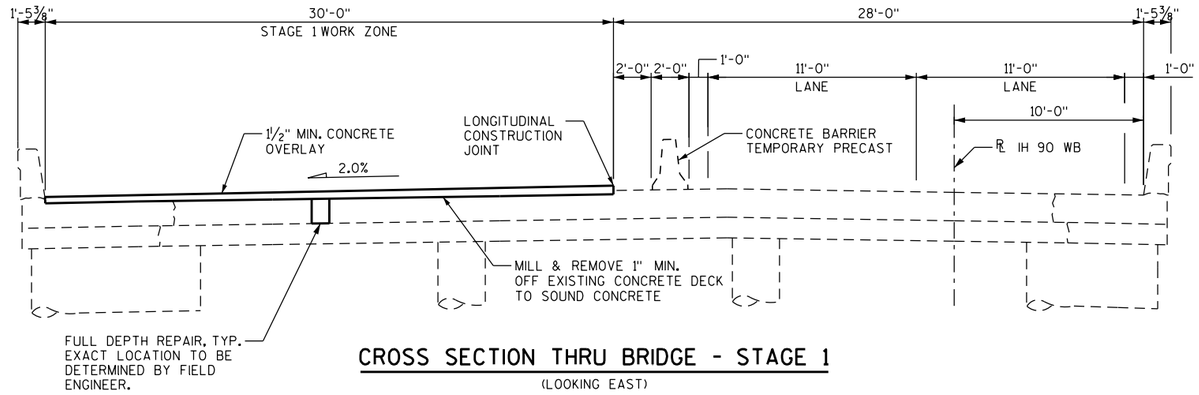
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STATE PROJECT NUMBER
1071-06-78



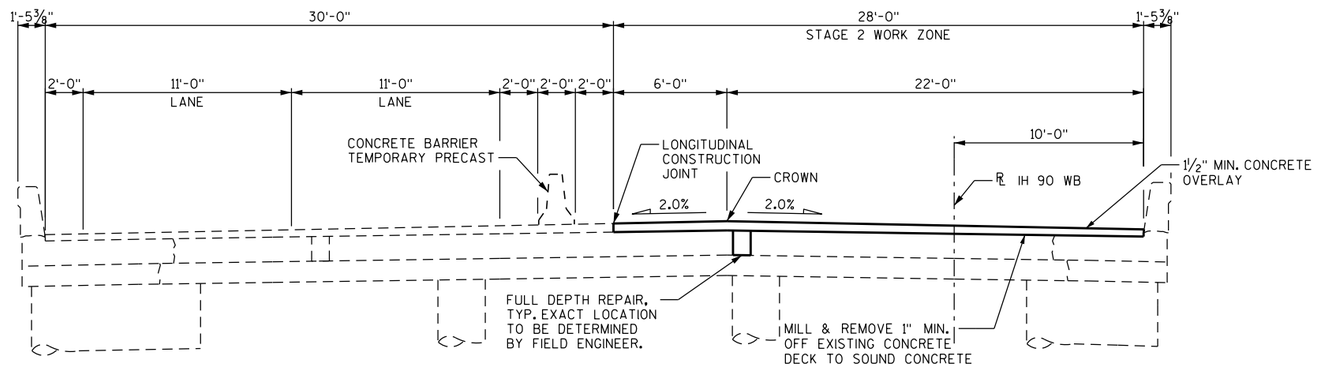
CROSS SECTION THRU EXISTING BRIDGE

(LOOKING EAST)



CROSS SECTION THRU BRIDGE - STAGE 1

(LOOKING EAST)



CROSS SECTION THRU BRIDGE - STAGE 2

(LOOKING EAST)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURAL PLANS.

A MINIMUM OF 1" OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

ALL PREVIOUS PATCHES SHALL BE REMOVED UNDER THE BID ITEMS "PREPARATION DECKS TYPE 1" AND "PREPARATION DECKS TYPE 2".

EXISTING LONGITUDINAL AND TRANSVERSE CRACKS SHALL BE CLEANED AND FILLED WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER. WORK SHALL BE PAID FOR UNDER BID ITEM, "CRACK SEALING EPOXY".

BID ITEMS "PREPARATION DECKS TYPE 1", "PREPARATION DECKS TYPE 2" AND "FULL DEPTH DECK REPAIR" SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED AVERAGE OVERLAY THICKNESS IS 2¾". IF THE EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

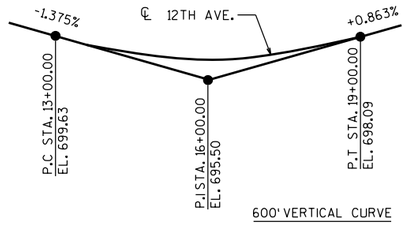
APPLY PROTECTIVE SURFACE TREATMENT TO TOP OF OVERLAY. WORK SHALL BE PAID FOR UNDER BID ITEM, "PROTECTIVE SURFACE TREATMENT".

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY AT ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECK"

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
203.0225.S	DEBRIS CONTAINMENT B-32-108	LS	1
502.0717.S	CRACK SEALING EPOXY	LF	600
502.3200	PROTECTIVE SURFACE TREATMENT	SY	830
509.0301	PREPARATION DECKS TYPE 1	SY	85
509.0302	PREPARATION DECKS TYPE 2	SY	35
509.0500	CLEANING DECKS	SY	830
509.2000	FULL-DEPTH DECK REPAIR	SY	5
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	84

ALL ITEMS ARE CATEGORY 0030.



PROFILE GRADE LINE 12TH AVE.

EXISTING PROFILE GRADE LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-108

DRAWN BY VJD | PLANS CK'D. YC

CROSS SECTION & QUANTITIES

SHEET 2 OF 2
494

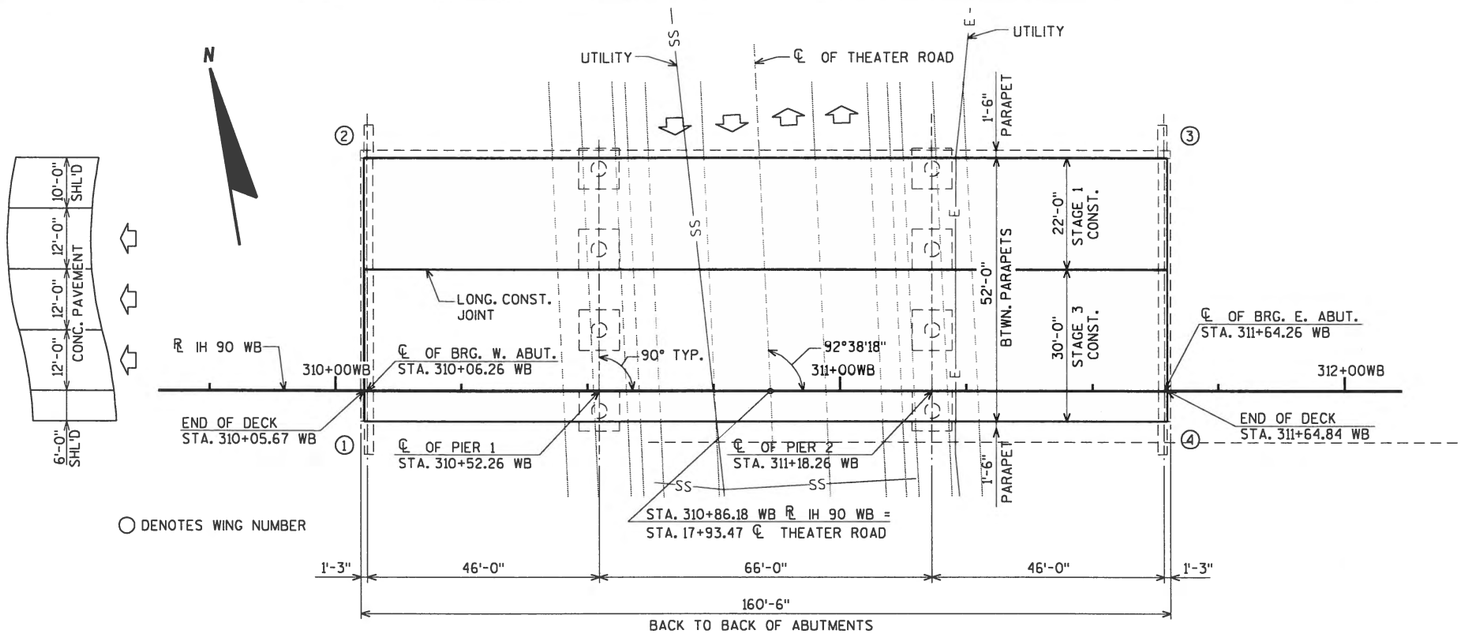
8

8

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-190 IH 90 WB over Theater Road\B-32-190 gp.dgn
DATE:
DRAWN BY:
DATE:
CHECKED BY:
DATE:
BACK CHECKED BY:
CORRECTED BY:

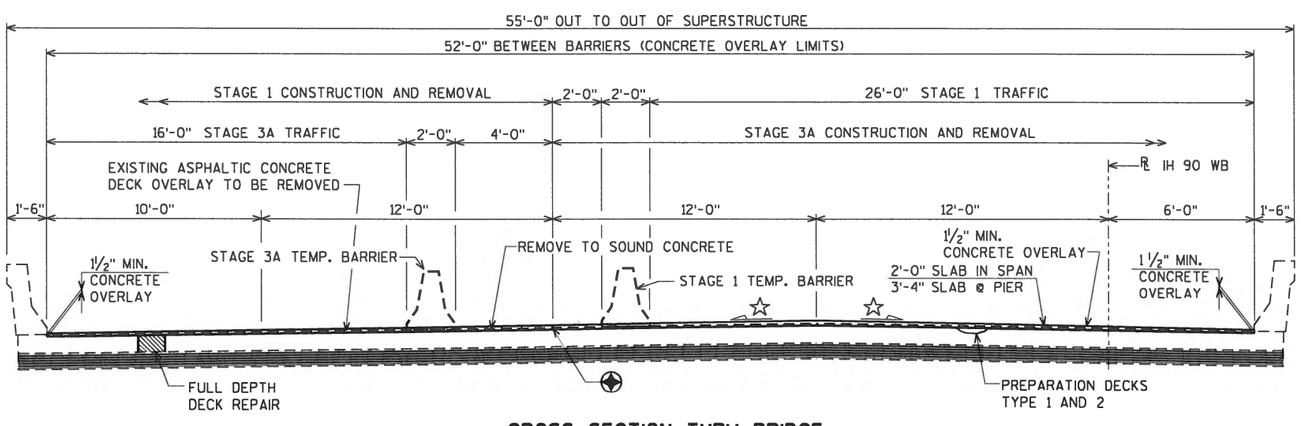
STATE PROJECT NUMBER

1071-06-78



PLAN

3-SPAN HAUNCHED SLAB BRIDGE



CROSS SECTION THRU BRIDGE

(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
203.0225.S	DEBRIS CONTAINMENT B-32-190	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	920
509.0301	PREPARATION DECKS TYPE 1	SY	50
509.0302	PREPARATION DECKS TYPE 2	SY	20
509.0500	CLEANING DECKS	SY	920
509.1500	CONCRETE SURFACE REPAIR	SF	10
509.2000	FULL-DEPTH DECK REPAIR	SY	10
△ 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	63
509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY B-32-190	SY	920

△ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"

LIST OF DRAWINGS

1. GENERAL PLAN

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY IS CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½ INCH PLACED ABOVE THE DECK SURFACE AFTER "CLEANING DECKS". EXPECTED OVERLAY THICKNESS IS 2 INCHES. IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½ INCH, CONTACT THE STRUCTURES DESIGN SECTION.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-21
OPERATING RATING: HS-36
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 240 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY OVERLAY DECKS _____ f'_c = 4,000 p.s.i.

TRAFFIC DATA:

IH 90	THEATER ROAD
A.D.T. = 36,100 (2016)	A.D.T. = 9,200 (2011)
A.D.T. = 46,800 (2036)	R.D.S. = 25 M.P.H.
R.D.S. = 70 M.P.H.	

◈ LONG. CONST. JOINT
SEAL WITH CRACK SEALER PER SECTION 502.3.13 OF STD. SPEC.

☆ NEW CONCRETE OVERLAY SLOPE = 0.02 ⅊
CURRENT CONCRETE DECK SLOPE = 0.02 ⅊

WISCONSIN
DANIEL N. SYDOW
E-38363
WI
PROFESSIONAL ENGINEER
7/28/2014

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/08/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-32-190

IH 90 WB OVER THEATER ROAD

COUNTY LA CROSSE | ~~TOWN/CITY/VILLAGE~~ ONALASKA

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
DRJ	DNS	CLS	DNS

GENERAL PLAN

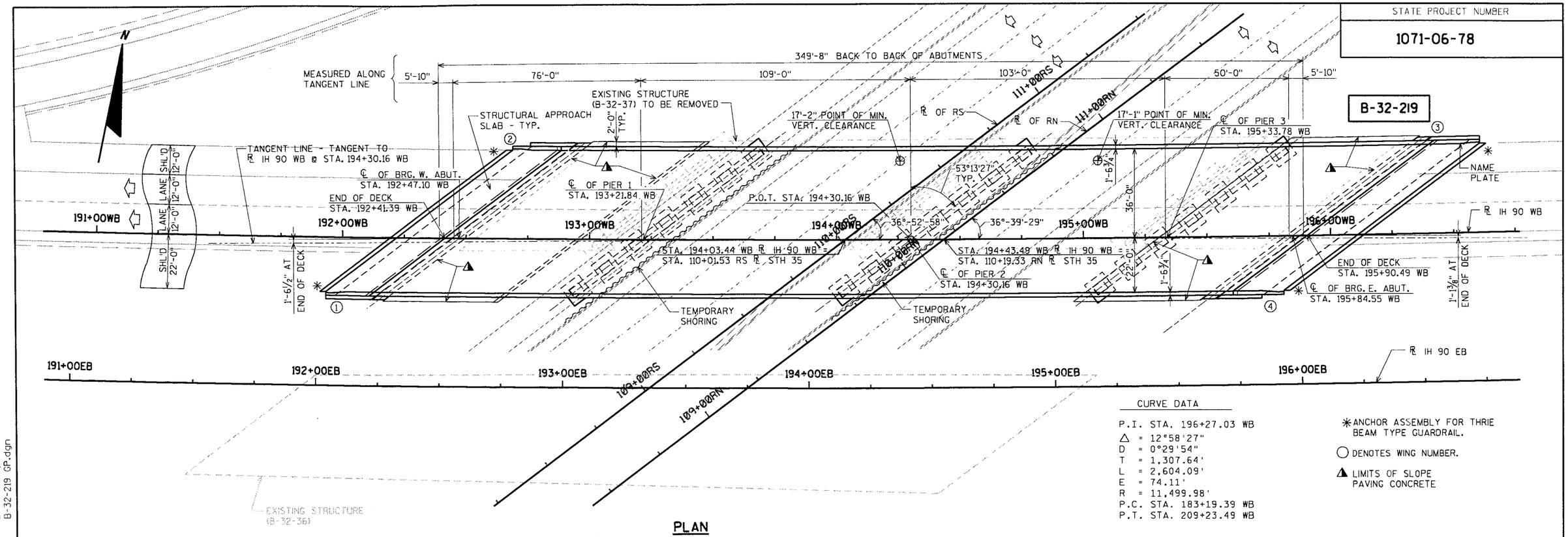
SHEET 495 OF 1

8

STATE PROJECT NUMBER

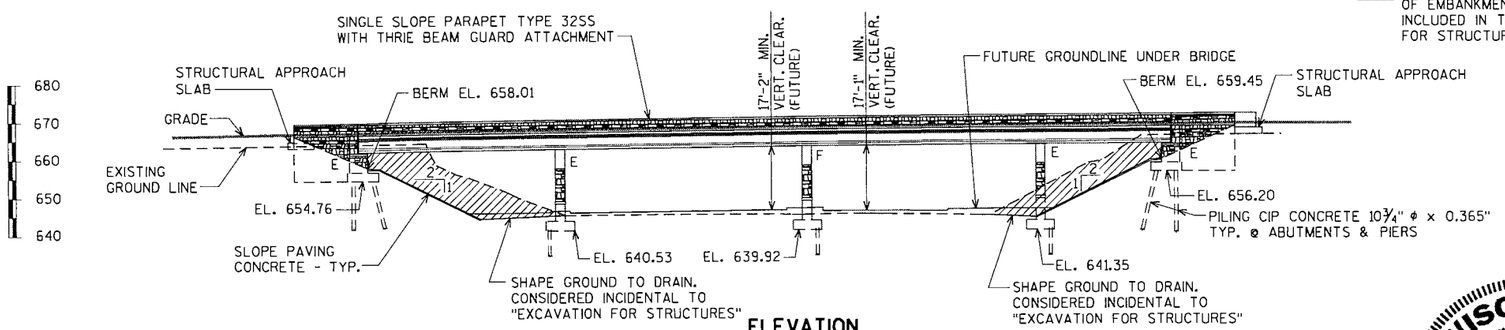
1071-06-78

B-32-219



PLAN

FOUR-SPAN 45W" PRESTRESSED CONCRETE GIRDER BRIDGE



ELEVATION

(TAKEN NORMAL TO ℄ OF STH 35)
(LOOKING NORTH)

CURVE DATA

P.I. STA. 196+27.03 WB
△ = 12°58'27"
D = 0°29'54"
T = 1,307.64'
L = 2,604.09'
E = 74.11'
R = 11,499.98'
P.C. STA. 183+19.39 WB
P.T. STA. 209+23.49 WB

✳ ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

○ DENOTES WING NUMBER.

▲ LIMITS OF SLOPE PAVING CONCRETE

▨ COST OF EXCAVATION IN THE HATCHED AREAS AND SHAPING OF EMBANKMENT BETWEEN B-32-36 AND B-32-219 SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-32-219".

FOR DESIGN DATA, QUANTITIES, AND GENERAL NOTES, SEE SHEET 3

LISTS OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTIONS & PROFILE GRADE LINES
3. QUANTITIES AND NOTES
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT
6. WEST ABUTMENT FOOTING LAYOUT
7. WEST ABUTMENT WING 1 DETAILS
8. WEST ABUTMENT WING 2 DETAILS
9. WEST ABUTMENT DETAILS AND BILL OF BARS
10. EAST ABUTMENT
11. EAST ABUTMENT FOOTING LAYOUT
12. EAST ABUTMENT WING 3 DETAILS
13. EAST ABUTMENT WING 4 DETAILS
14. EAST ABUTMENT DETAILS AND BILL OF BARS
15. PIER 1
16. PIER 1 PLAN AND FOOTING
17. PIER 1 DETAILS AND BILL OF BARS
18. PIER 2
19. PIER 2 PLAN AND FOOTING
20. PIER 2 DETAILS AND BILL OF BARS
21. PIER 3
22. PIER 3 PLAN AND FOOTING
23. PIER 3 DETAILS AND BILL OF BARS
24. ALTERNATE CONSTRUCTION JOINT
25. BEARING DETAILS
26. 45W" PRESTRESSED GIRDER DETAILS
27. 45W" PRESTRESSED GIRDER DETAILS
28. STEEL DIAPHRAGM DETAILS
29. SUPERSTRUCTURE GIRDER LAYOUT
30. TOP OF DECK ELEVATIONS
31. SUPERSTRUCTURE
32. LONGITUDINAL SLAB STEEL LAYOUT
33. TRANSVERSE SLAB STEEL LAYOUT
34. SUPERSTRUCTURE DETAILS
35. DIAPHRAGM DETAILS
36. DIAPHRAGM DETAILS
37. SUPERSTRUCTURE BILL OF BARS
38. EXPANSION DEVICE
39. EXPANSION DEVICE
40. WEST STRUCTURAL APPROACH SLAB
41. EAST STRUCTURAL APPROACH SLAB
42. STRUCTURAL APPROACH SLAB DETAILS
43. SINGLE SLOPE PARAPET 32SS MODIFIED
44. SLOPE PAVING
45. ARCHITECTURAL SURFACE TREATMENT

WISCONSIN ★ DANIEL N. SYDOW E-38363 WI ★ PROFESSIONAL ENGINEER

8/29/2014

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 09/02/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-32-219

IH 90 WB OVER STH 35/USH 53/ROSE ST.

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
LA CROSSE	LA CROSSE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AEB	CJM	CLS	DWS

GENERAL PLAN

SHEET 1 OF 45
496

I.D.

DATE:

11X17-5200.plt
B-32-219 GP.dgn

DATE:
DATE:
DATE:

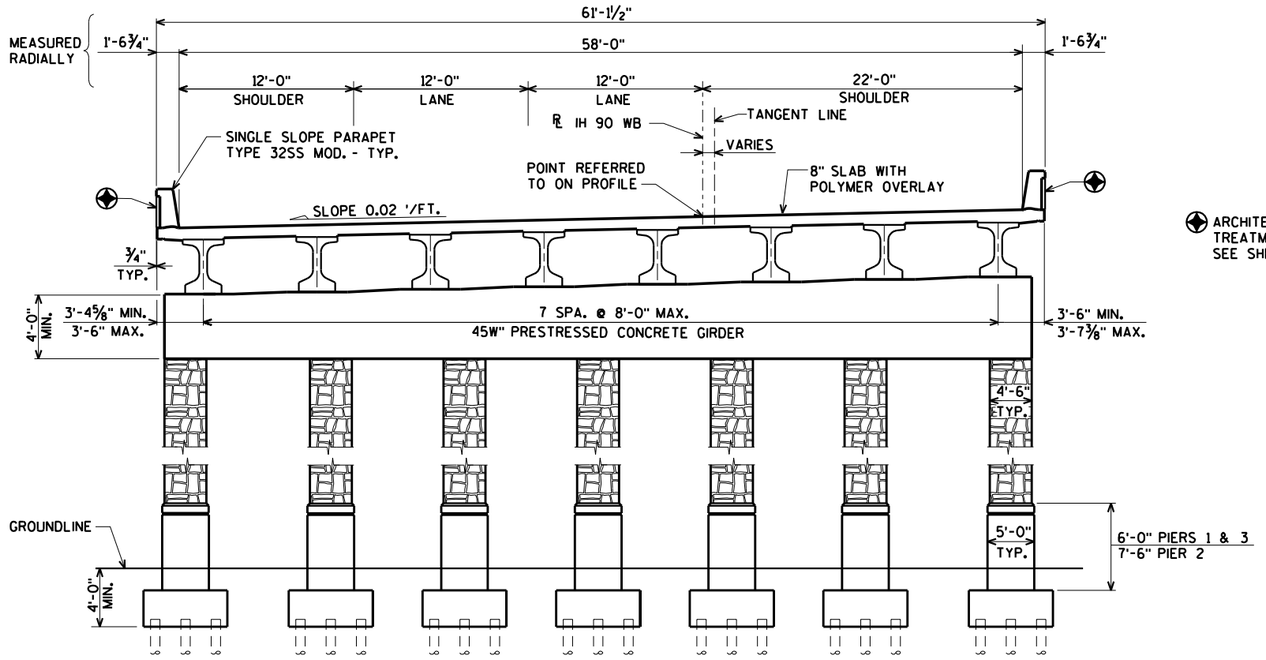
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CORRECTED BY:

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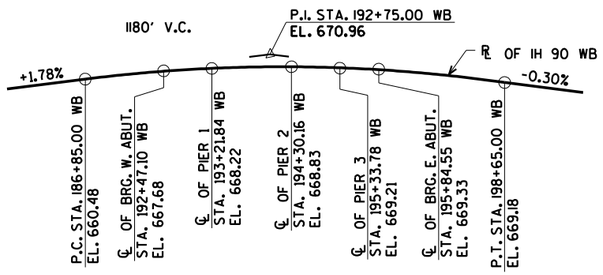
8/29/2014

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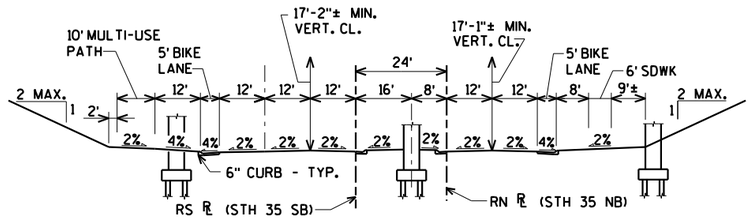
ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

TYPICAL SECTION THRU BRIDGE
(LOOKING EAST)

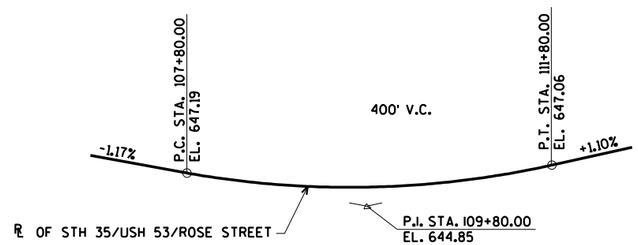


PROFILE GRADE LINE
(IH 90 WB)

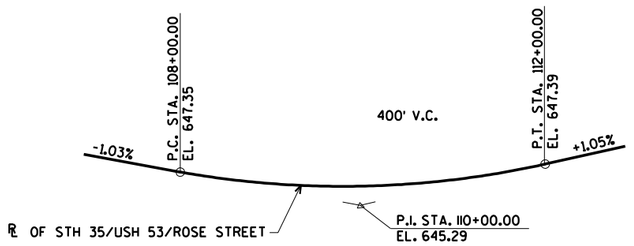
BENCH MARK:
CP 1900
STA. 195+76.78 EB, 23' LT. OF ℄
EL. 665.49



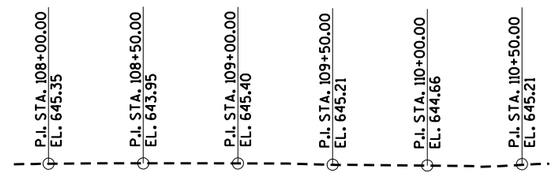
FUTURE TYPICAL FINISHED SECTION STH 35
ALLOWANCE FOR POTENTIAL FUTURE EXPANSION
(LOOKING NORTH)



PROFILE GRADE LINE
(FUTURE STH 35/USH 53/ROSE STREET)



PROFILE GRADE LINE
(FUTURE STH 35/USH 53/ROSE STREET)



PROFILE GRADE LINE
(EXISTING STH 35/USH 53/ROSE STREET)



PROFILE GRADE LINE
(EXISTING STH 35/USH 53/ROSE STREET)

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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TYPICAL SECTIONS & PROFILE GRADE LINES

SHEET 2 OF 45
497

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STATE PROJECT NUMBER

1071-06-78

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	W. STR. APP. SLAB	W. ABUT.	PIER 1	PIER 2	PIER 3	E. ABUT.	E. STR. APP. SLAB	SUPER.	TOTAL
203.0200	REMOVING OLD STRUCTURE STATION 194+08.38 WB	LS	-----	-----	-----	-----	-----	-----	-----	-----	1
203.0210.S.01	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-32-37	LS	-----	-----	-----	-----	-----	-----	-----	-----	1
203.0225.S	DEBRIS CONTAINMENT B-32-37	LS	-----	-----	-----	-----	-----	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-32-219	LS	-----	-----	-----	-----	-----	-----	-----	-----	1
206.6000.S	TEMPORARY SHORING	SF	-----	-----	575	575	-----	-----	-----	-----	1,150
210.0100	BACKFILL STRUCTURE	CY	-----	620	-----	-----	-----	660	-----	-----	1,280
502.0100	CONCRETE MASONRY BRIDGES	CY	111	233	185	193	187	244	115	839	2,107
502.3100	EXPANSION DEVICE B-32-219	LS	-----	-----	-----	-----	-----	-----	-----	-----	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	22	26	-----	-----	-----	27	22	293	390
503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	-----	-----	-----	-----	-----	-----	-----	2,700	2,700
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	-----	9,380	4,420	5,290	4,420	9,750	-----	-----	33,260
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	25,840	7,820	28,560	31,240	28,760	7,680	26,760	213,040	369,700
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	-----	-----	16	-----	-----	-----	-----	16
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	-----	8	16	-----	16	8	-----	-----	48
506.4000	STEEL DIAPHRAGMS B-32-219	EACH	-----	-----	-----	-----	-----	-----	-----	42	42
509.5100.S	POLYMER OVERLAY	SY	168	-----	-----	-----	-----	-----	168	2,254	2,590
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-----	22	-----	-----	-----	22	-----	-----	44
517.1010.S	CONCRETE STAINING B-32-219	SF	30	120	2,330	2,530	2,350	150	30	5,810	13,350
517.1015.S	CONCRETE STAINING MULTI-COLOR B-32-219	SF	120	660	1,040	1,030	1,040	680	120	1,500	6,190
517.1050.S	ARCHITECTURAL SURFACE TREATMENT B-32-219	SF	120	660	1,040	1,030	1,040	680	120	1,500	6,190
550.2106	PILING CIP CONCRETE 10¾ x 0.365 INCH	LF	-----	2,550	5,390	6,160	5,390	3,000	-----	-----	22,490
604.0400	SLOPE PAVING CONCRETE	SY	-----	380	-----	-----	-----	420	-----	-----	800
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-----	445	-----	-----	-----	445	-----	-----	890
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-----	-----	-----	-----	-----	2	-----	4
SPV.0085.01	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	1,050	-----	-----	-----	-----	-----	1,050	-----	2,100
	NON-BID ITEMS										
	FILLER	SIZE		-----	-----	-----	-----	-----		-----	½" & ¾"

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.01
OPERATING RATING FACTOR: 1.36
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 220 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY { SUPERSTRUCTURE ____ f'c = 4,000 p.s.i.
CONCRETE MASONRY { ALL OTHER ____ f'c = 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) ____ fy = 60,000 p.s.i.

45W" PRESTRESSED GIRDER
CONCRETE MASONRY ____ f'c = 8,000 p.s.i.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF = 270,000 p.s.i.

FOUNDATION DATA:

WEST ABUTMENT TO BE SUPPORTED ON 10¾" Φ x 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 85'-0".

PIERS TO BE SUPPORTED ON 10¾" Φ x 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 110'-0".

EAST ABUTMENT TO BE SUPPORTED ON 10¾" Φ x 0.365" C.I.P. CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 135 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 100'-0".

ǂ THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA:

IH 90	STH 35 / USH 53 / ROSE STREET
A.D.T. = 43,700 (2016)	A.D.T. = 24,400 (2016)
A.D.T. = 56,700 (2036)	A.D.T. = 29,500 (2036)
R.D.S. = 70 M.P.H.	R.D.S. = 45 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP AND INSIDE FACE OF PARAPETS AND PAVING NOTCH AT ABUTMENTS.

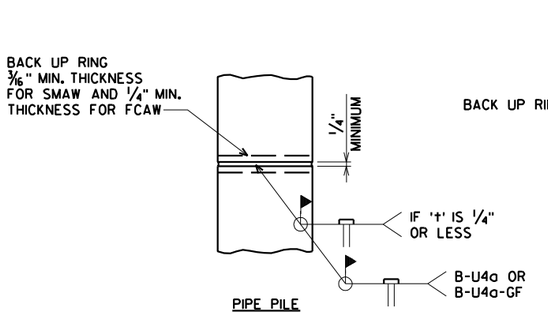
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

THE EXISTING BRIDGE, B-32-37, IS A FOUR SPAN STEEL DECK GIRDER BRIDGE, 331.5 FEET LONG AND HAS A CLEAR ROADWAY WIDTH OF 40.1 FEET MAX.

THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH DEPTH SHOWN ON THE TOP OF DECK ELEVATIONS SHEET, WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

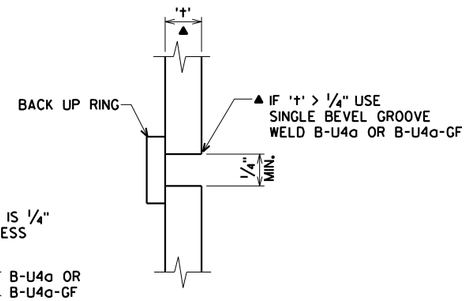
AT THE BACK FACE OF ABUTMENT, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.



PILE SPLICE DETAIL

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

GRINDING MAY BE USED IN LIEU OF BACKGOUGING.



CIP PILE WELD DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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QUANTITIES AND NOTES

SHEET 3 OF 45
498

ORIGINAL PLANS PREPARED BY
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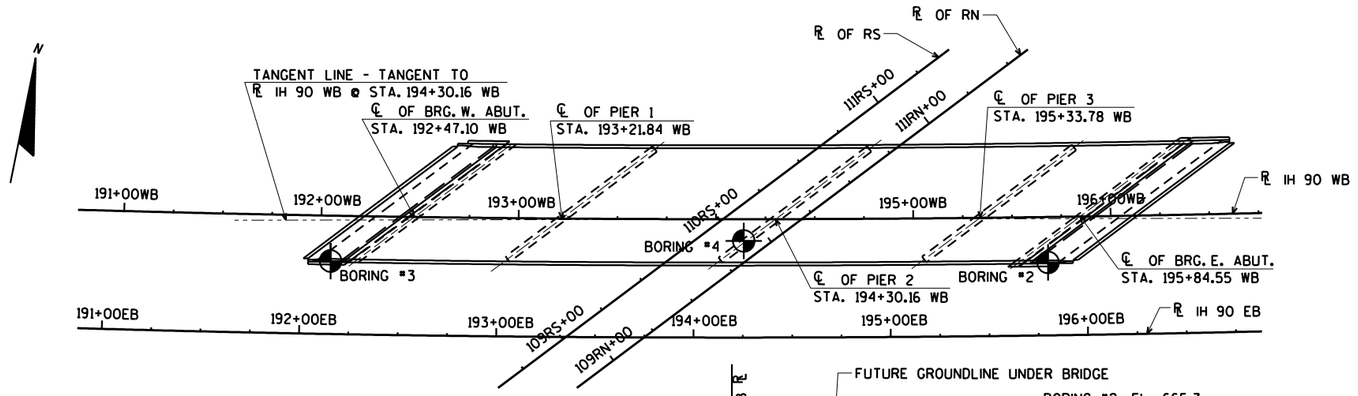
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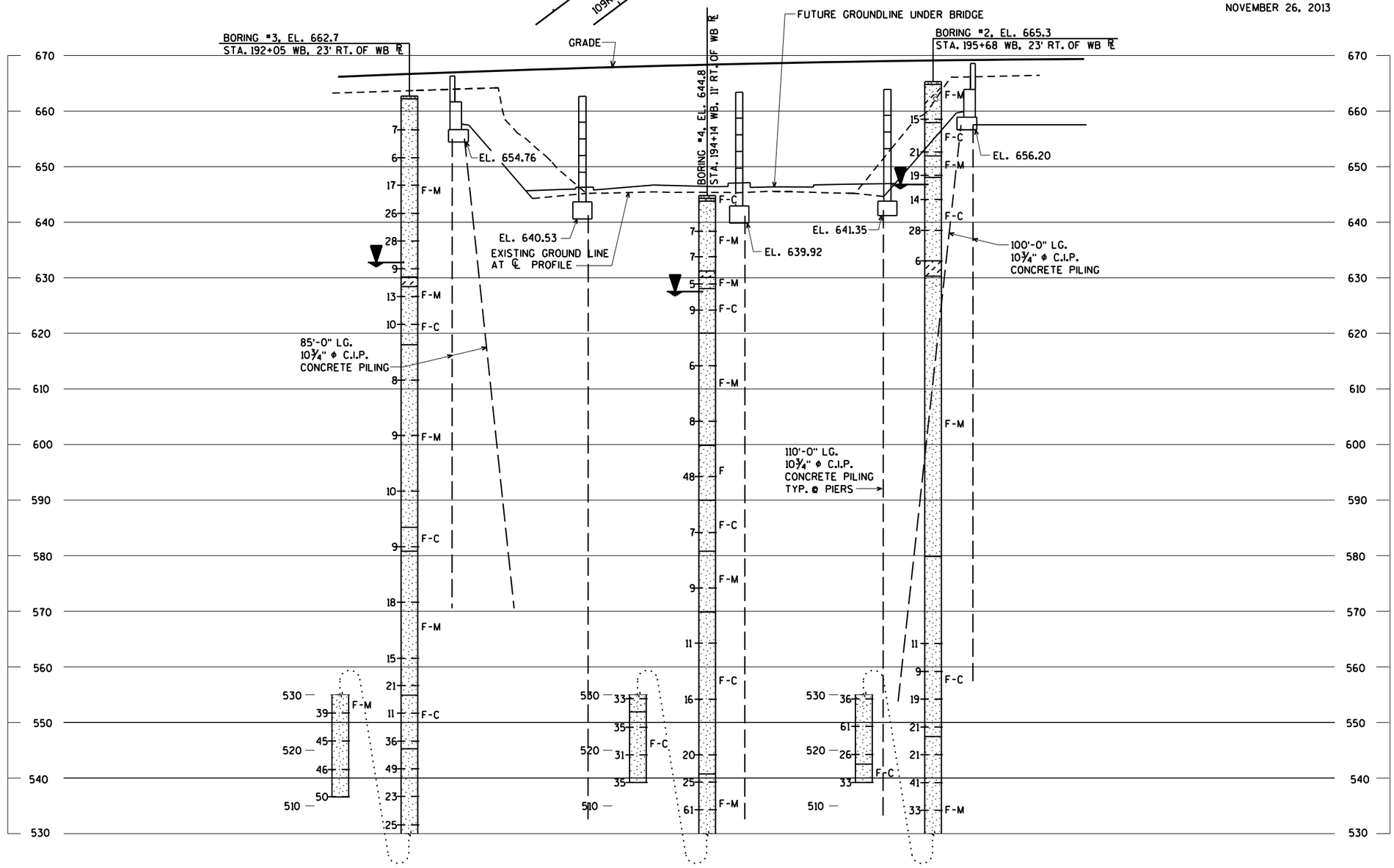
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BORINGS TAKEN BY:
WISCONSIN DOT
JULY 2013

GEOTECHNICAL REPORT BY:
WISCONSIN DOT
NOVEMBER 26, 2013



STATE PROJECT NUMBER

1071-06-78

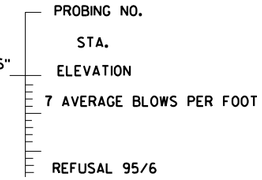
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

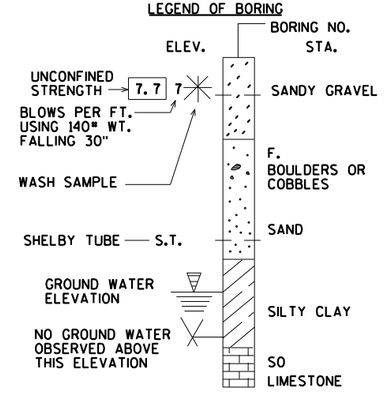
TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

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STATE OF WISCONSIN
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STRUCTURE B-32-219

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SUBSURFACE EXPLORATION

SHEET 4 OF 45
499

8

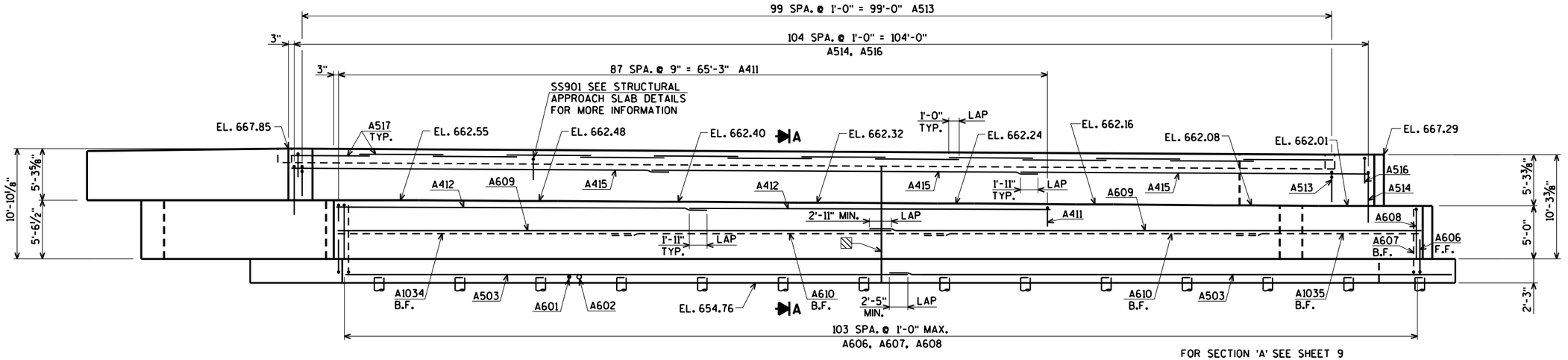
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6/2/2014

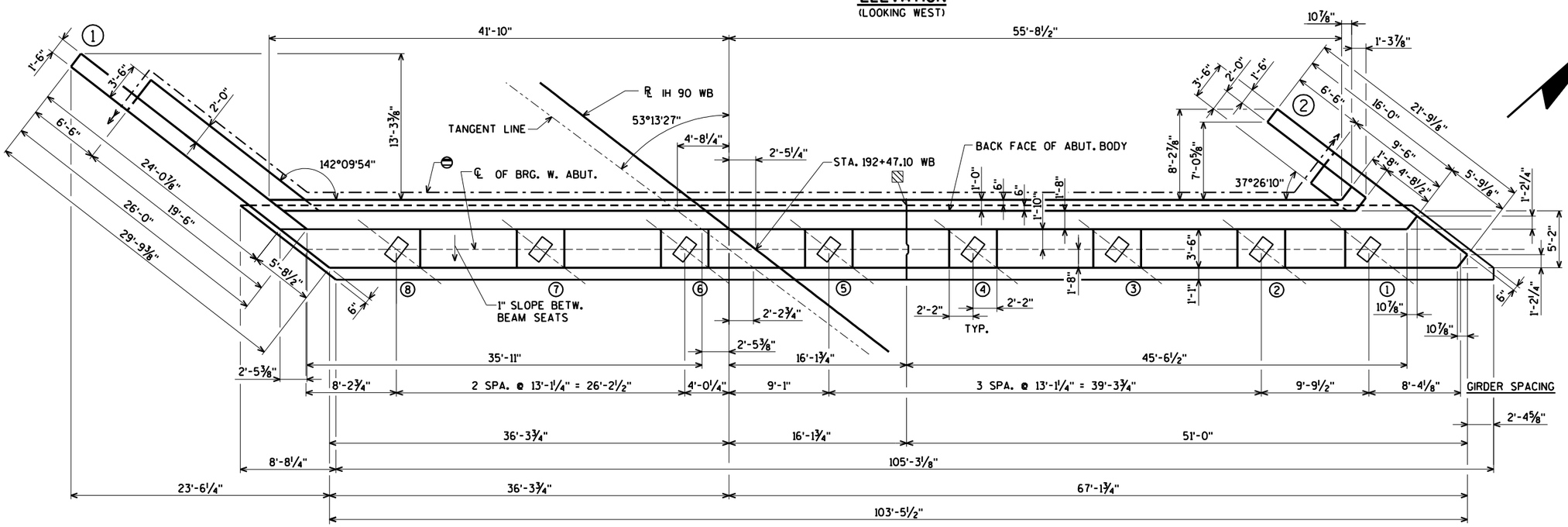
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ELEVATION
(LOOKING WEST)



PLAN

⊖ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR DETAILS SEE SHEET 9.

▨ VERT. CONST. JT. - KEYWAY FORMED BY A BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 24. SEAL JOINT AT BACK FACE WITH 18" RUBBERIZED MEMBRANE WATERPROOFING

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 3.

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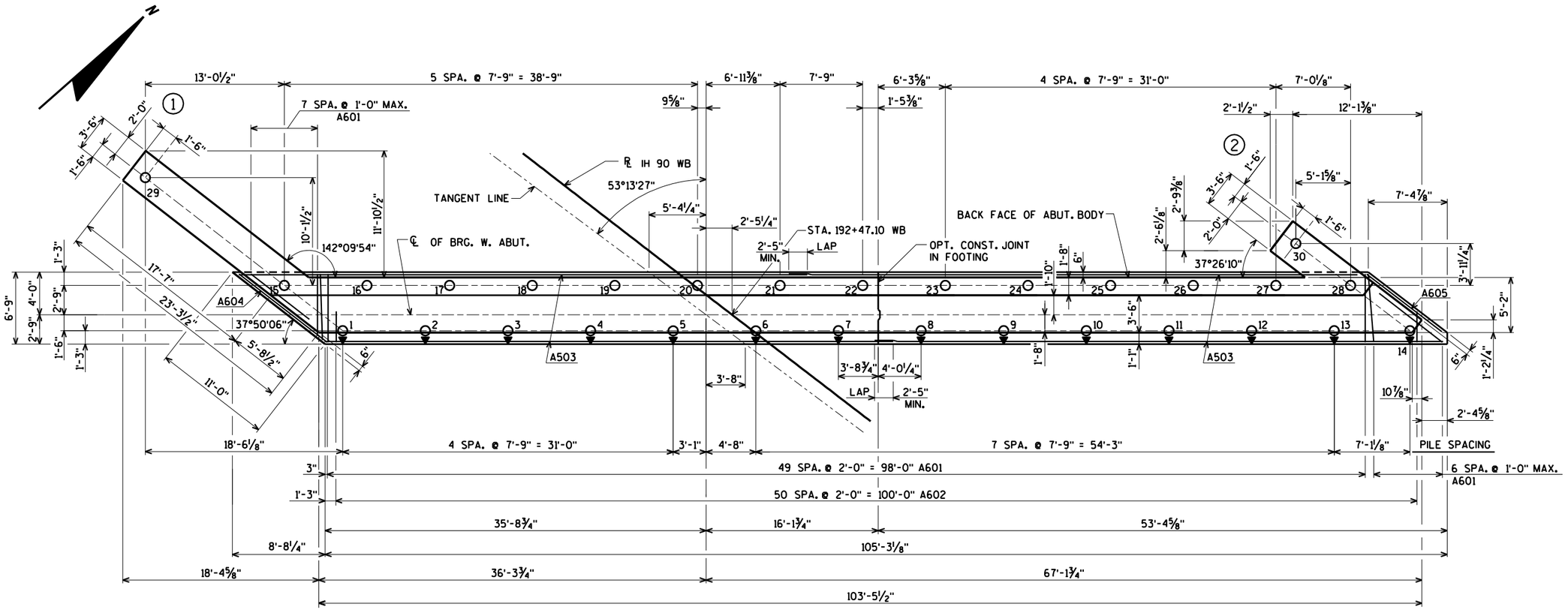
STRUCTURE B-32-219

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WEST ABUTMENT

SHEET 5 OF 45
500

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FOOTING LAYOUT

PILE LENGTH 103.1' - 115.7'

DENOTES BATTERED PILES. BATTER 3" PER FOOT IN DIRECTION SHOWN.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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WEST ABUTMENT FOOTING LAYOUT

SHEET 6 OF 45
501

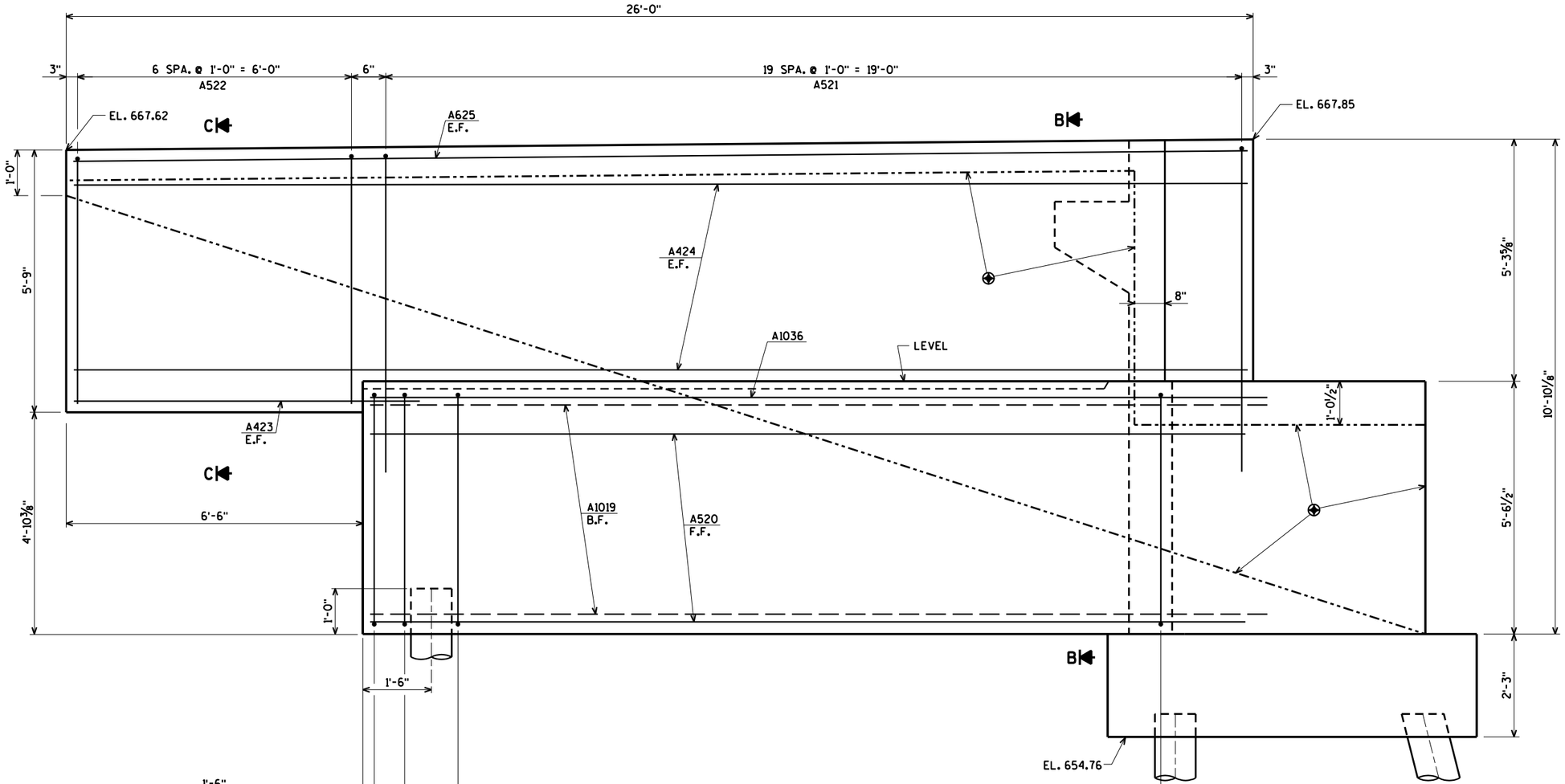
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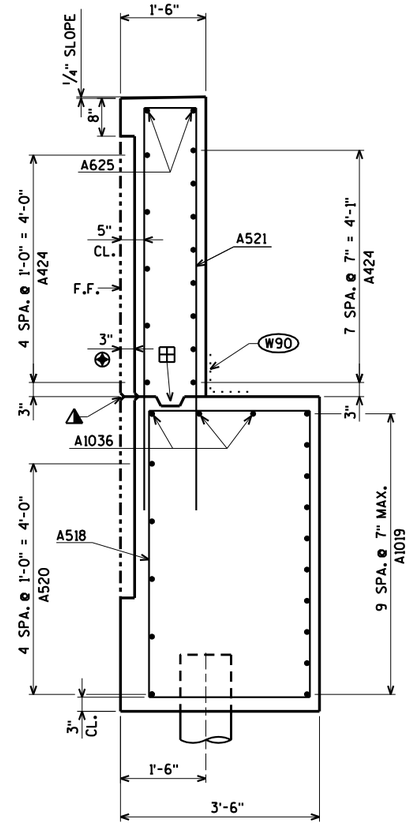
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STATE PROJECT NUMBER

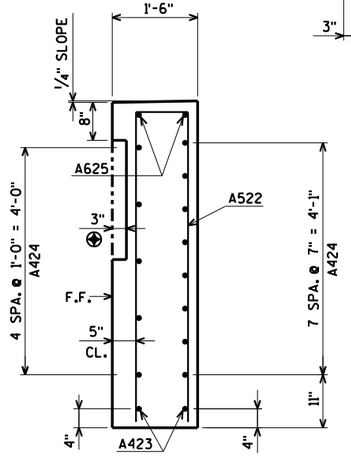
1071-06-78



ELEVATION WING 1



SECTION B



SECTION C

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

¾" 'V' GROOVE ON F.F. OF WINGWALL. OMIT IF CONST. JOINT NOT USED.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

LIMITS OF ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

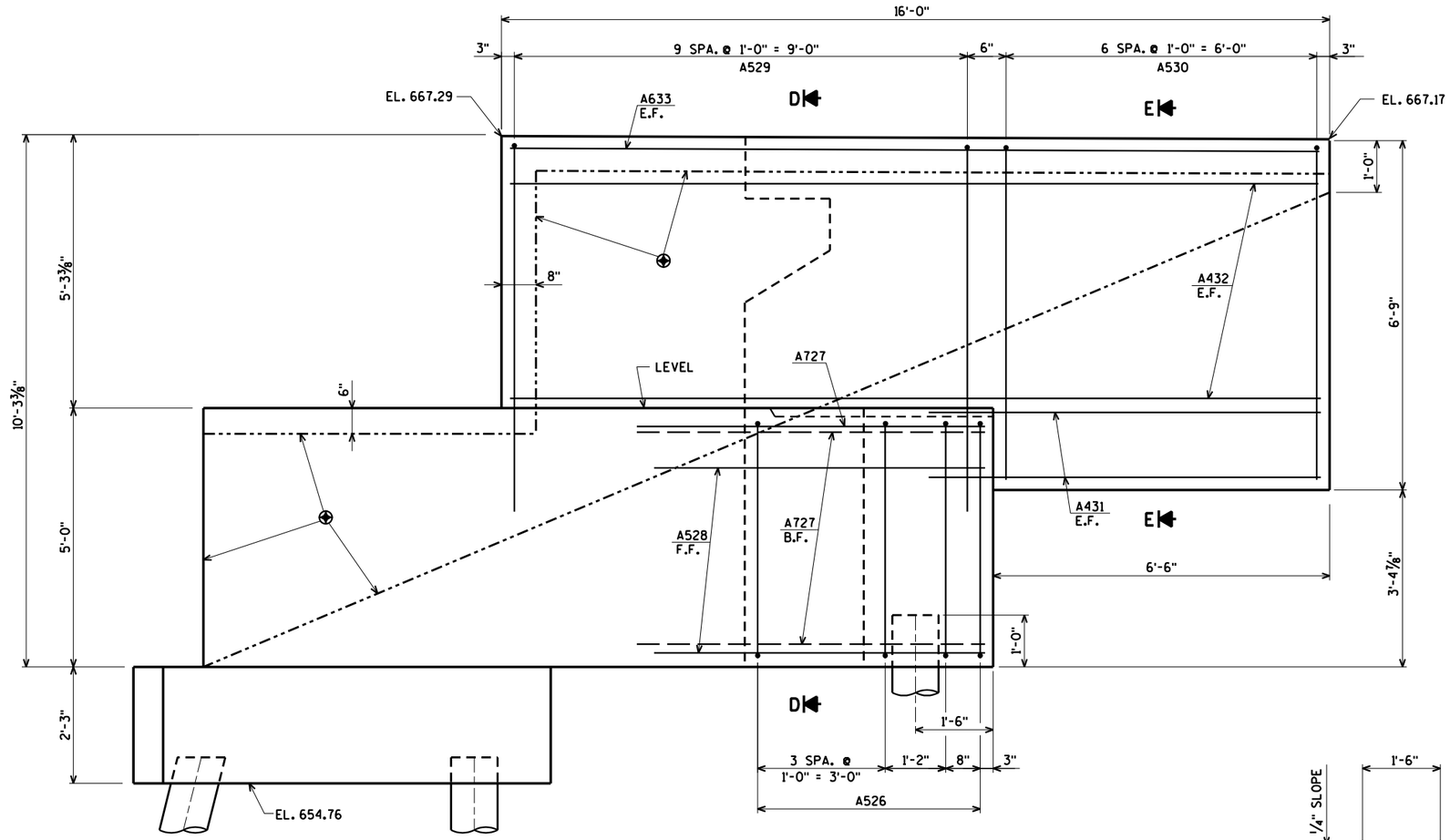
STRUCTURE B-32-219

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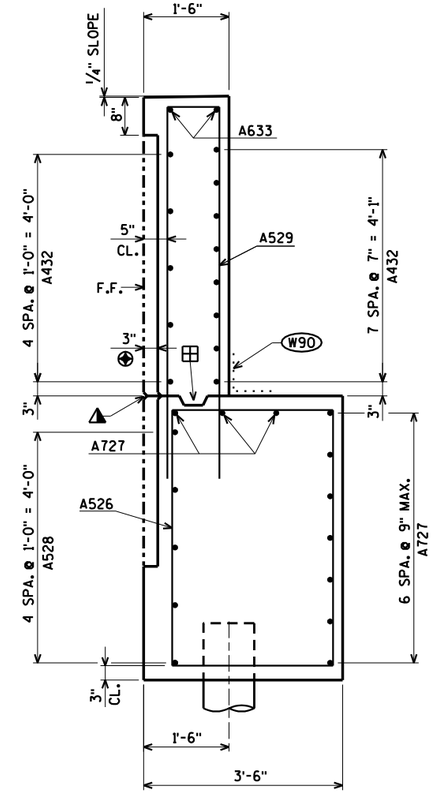
WEST ABUTMENT WING 1 DETAILS

SHEET 7 OF 45
502

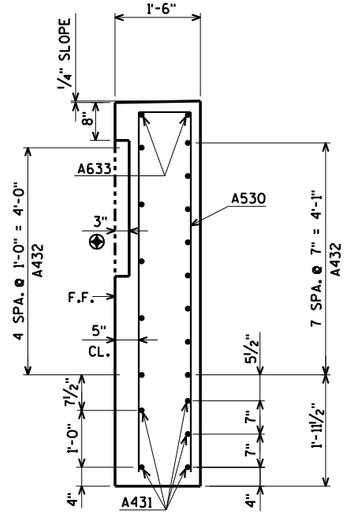
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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Eau Claire, WI 54701
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ELEVATION WING 2



SECTION D



SECTION E

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

⊞ OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

⚠ ¾" 'V' GROOVE ON F.F. OF WINGWALL. OMIT IF CONST. JOINT NOT USED.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊕ LIMITS OF ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

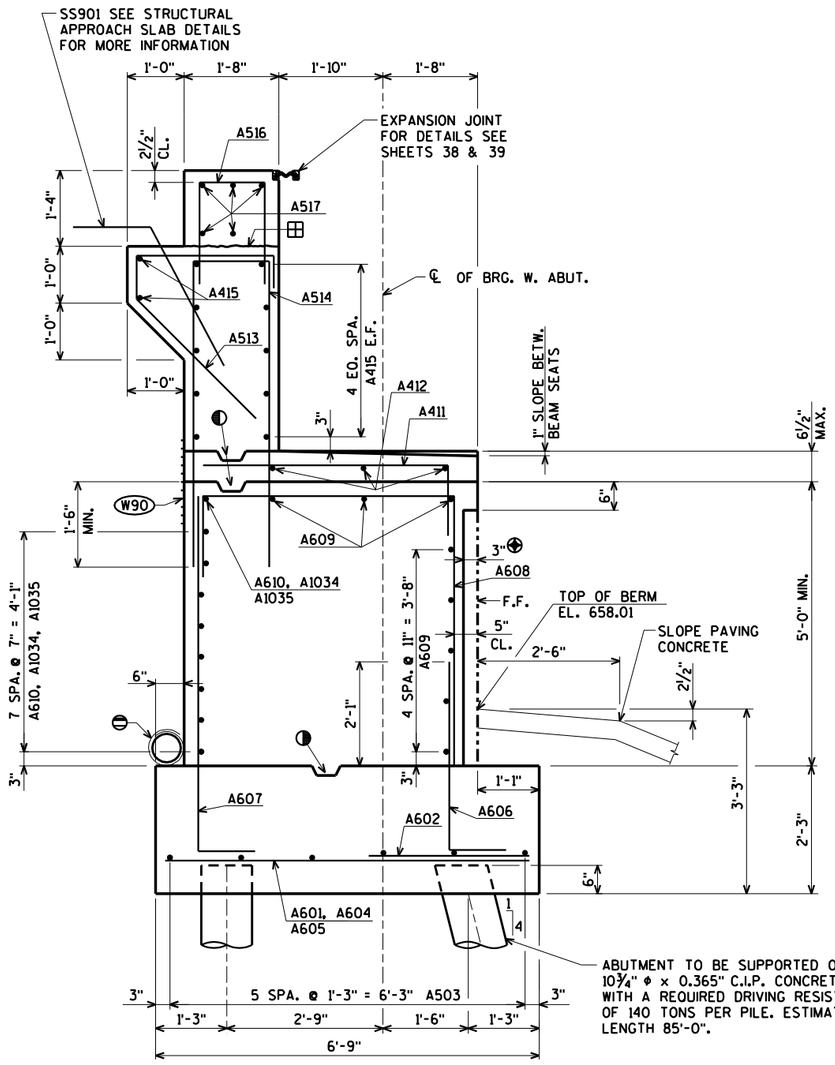
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WEST ABUTMENT WING 2 DETAILS

SHEET 8 OF 45
503

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$PRFNAME$
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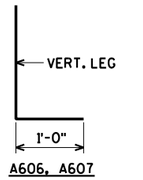


ABUTMENT TO BE SUPPORTED ON 10¾" ϕ x 0.365" C.I.P. CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE. ESTIMATED LENGTH 85'-0".

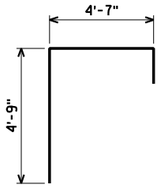
EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

TYPICAL SECTION THRU BODY SECTION A

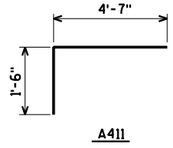
FOR LOCATION OF SECTION 'A' SEE SHEET 5



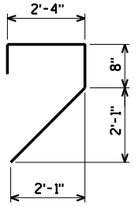
A606, A607



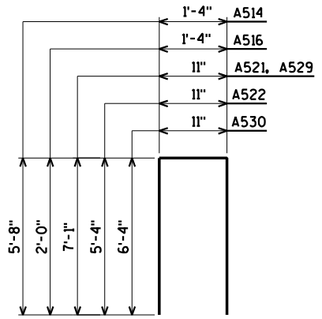
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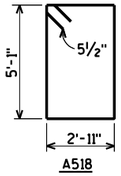


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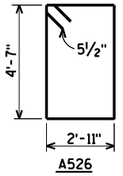


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A518

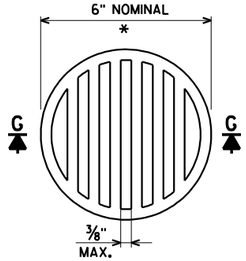


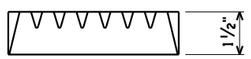
A526

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	7,700# COATED 9,380# UNCOATED LOCATION
A601		65	6-5			FOOTING
A602		51	2-5			FOOTING
A503		12	54-4			FOOTING
A604		1	10-5			FOOTING
A605		1	8-10			FOOTING
A606		104	4-6	X		FOOTING DOWELS F.F.
A607		104	7-3	X		FOOTING DOWELS B.F.
A608		104	10-6	X		BODY VERT.
A609		16	54-2			BODY HORIZ.
A610		18	35-8			BODY HORIZ. B.F.
A411		88	6-0	X		BODY VERT.
A412		6	34-0			BODY HORIZ.
A513	X	100	6-6	X		BACKWALL VERT.
A514	X	105	12-5	X		BACKWALL VERT.
A415	X	36	36-2			BACKWALL HORIZ.
A516	X	105	5-1	X		PAVING BLOCK VERT.
A517	X	75	8-0			PAVING BLOCK HORIZ.
A518	X	19	16-6	X		WING 1 VERT.
A1019	X	13	25-6			WING 1 HORIZ. B.F. & TOP
A520	X	5	22-11			WING 1 HORIZ. F.F.
A521	X	20	14-10	X		WING 1 VERT.
A522	X	7	11-4	X		WING 1 VERT.
A423	X	2	7-11			WING 1 HORIZ. E.F.
A424	X	13	23-9			WING 1 HORIZ. E.F.
A625	X	2	23-9			WING 1 HORIZ. E.F.
A526	X	6	15-6	X		WING 2 VERT.
A727	X	10	8-0			WING 2 HORIZ. B.F. & TOP
A528	X	5	8-0			WING 2 HORIZ. F.F.
A529	X	10	14-10	X		WING 2 VERT.
A530	X	7	13-4	X		WING 2 VERT.
A431	X	5	7-11			WING 2 HORIZ. E.F.
A432	X	13	15-8			WING 2 HORIZ. E.F.
A633	X	2	15-8			WING 2 HORIZ. E.F.
A1034		9	26-0			BODY HORIZ. B.F.
A1035		9	16-0			BODY HORIZ. B.F.
A1036	X	3	22-11			WING 1 HORIZ. TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.





SECTION G-G

* 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 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 SHEET METAL SCREWS.

RODENT SHIELD DETAIL

⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

⊖ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F. AT BACKWALL.

⊞ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

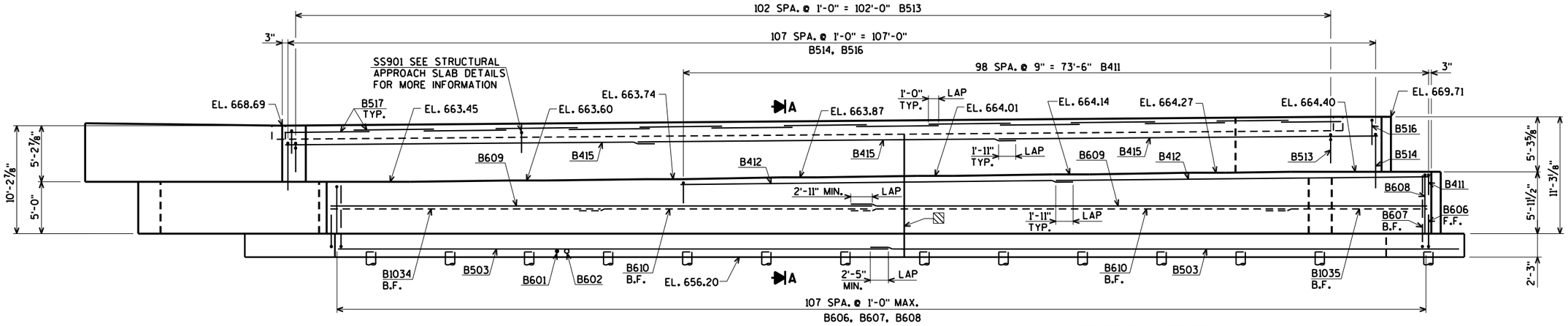
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WEST ABUTMENT DETAILS AND BILL OF BARS

SHEET 9 OF 45
504

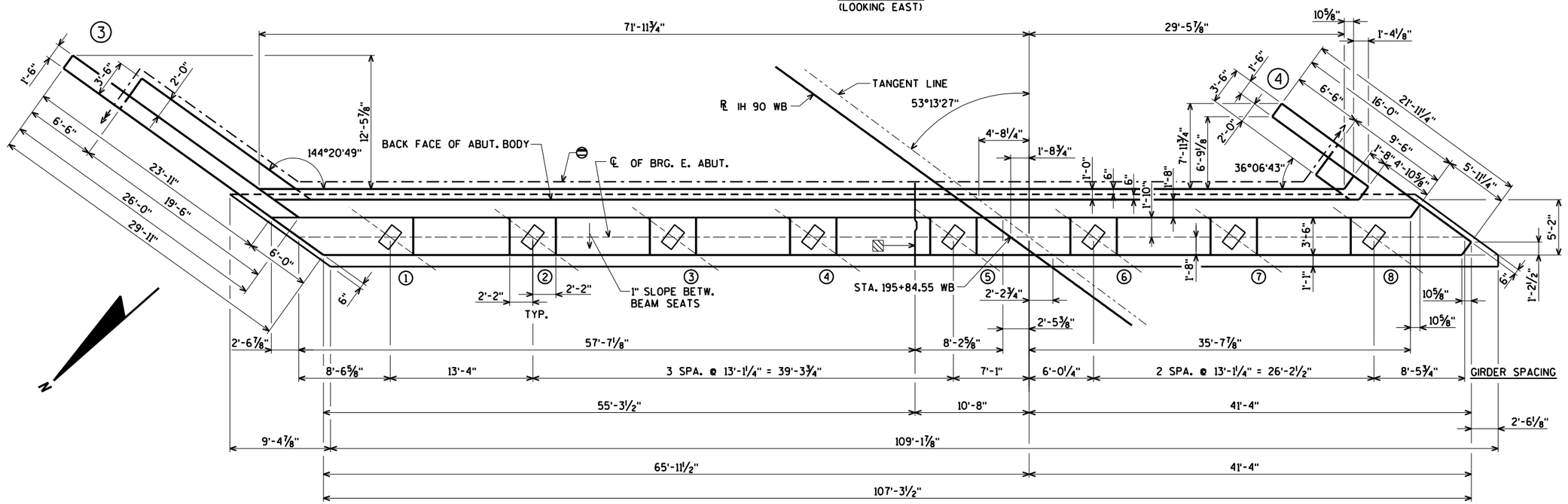
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Eau Claire, WI 54701
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FOR SECTION 'A' SEE SHEET 14

ELEVATION
(LOOKING EAST)



PLAN

⊖ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR DETAILS SEE SHEET 14.

▨ VERT. CONST. JT. - KEYWAY FORMED BY A BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONST. JT. DETAILS SEE SHEET 24. SEAL JOINT AT BACK FACE WITH 18" RUBBERIZED MEMBRANE WATERPROOFING

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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EAST ABUTMENT

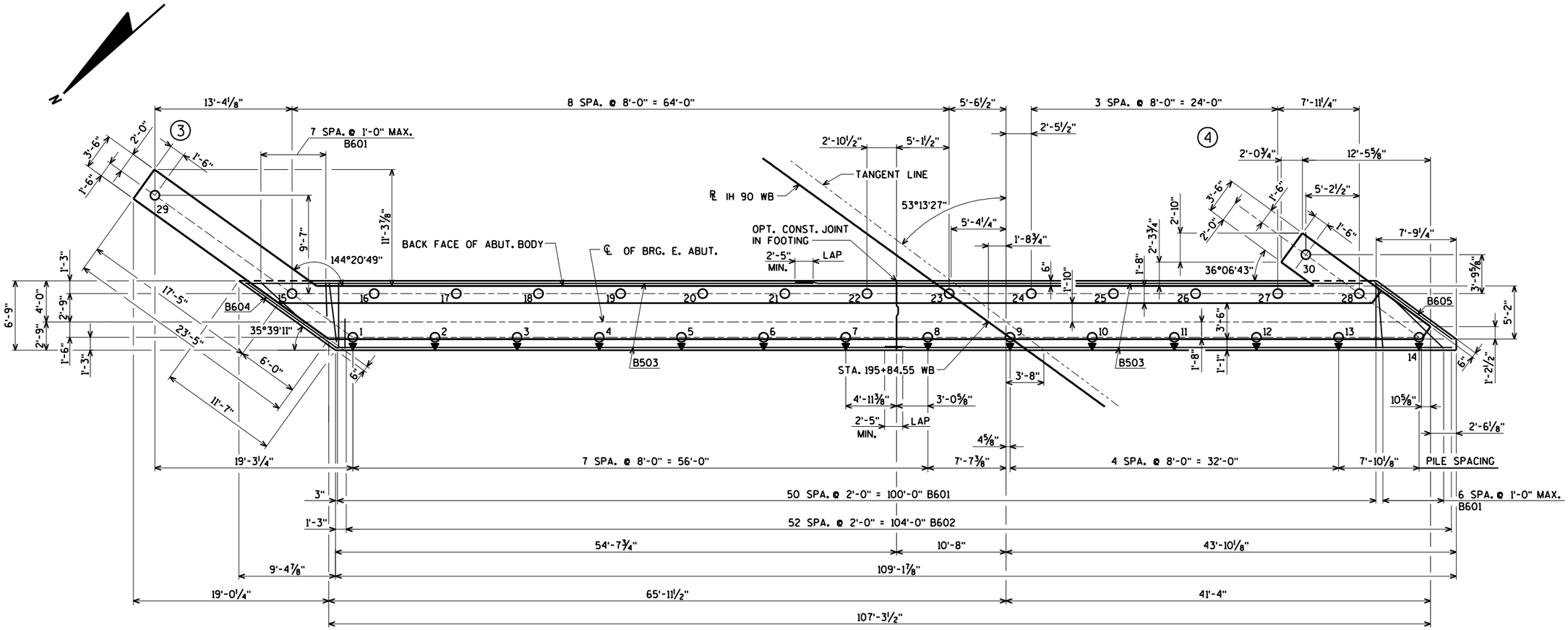
SHEET 10 OF 45
505

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STATE PROJECT NUMBER

1071-06-78



FOOTING LAYOUT

PILE LENGTH 77.1' - 112.5'

DENOTES BATTERED PILES. BATTER 3" PER FOOT IN DIRECTION SHOWN.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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EAST ABUTMENT FOOTING LAYOUT

SHEET 11 OF 45
506

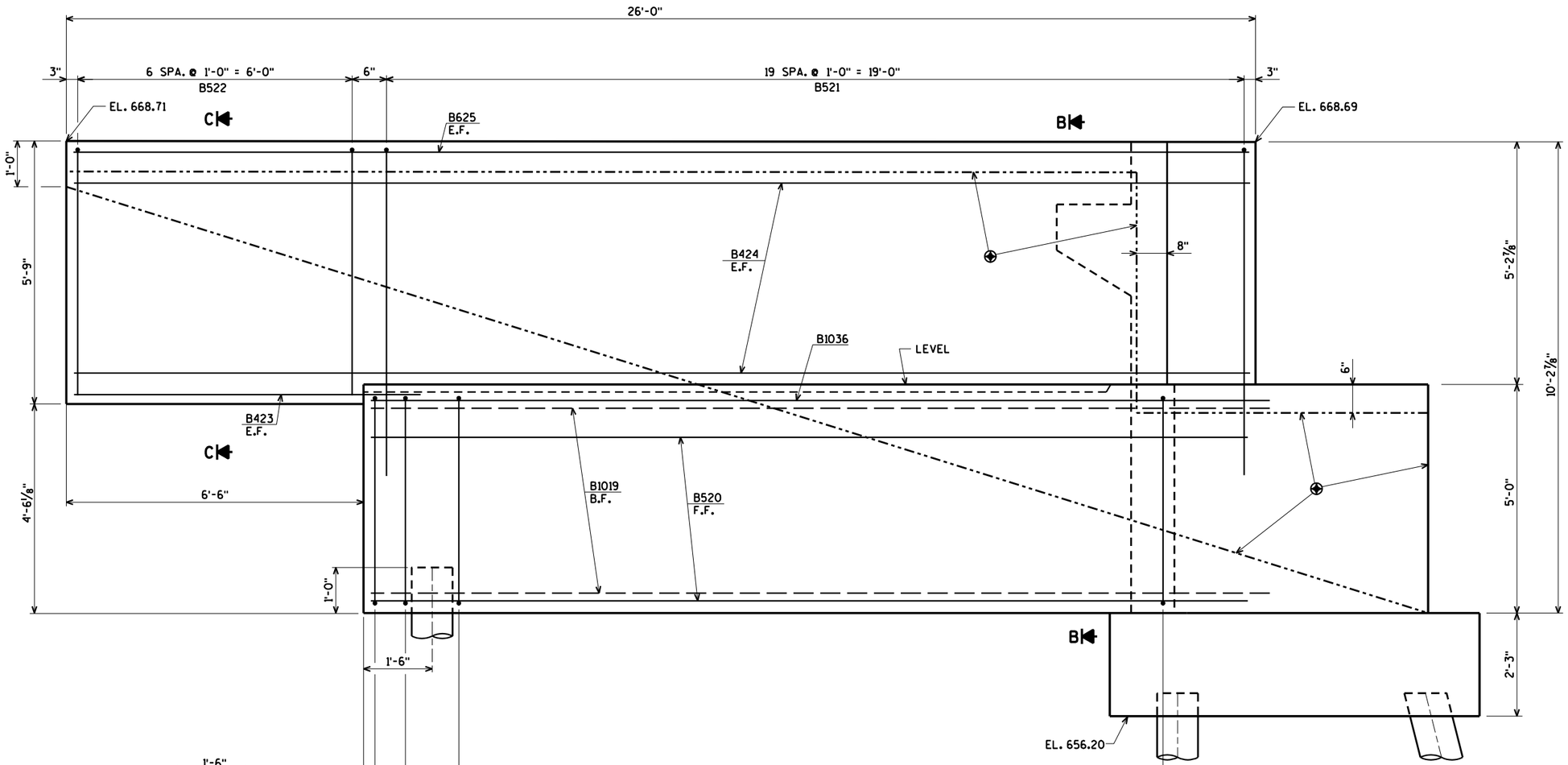
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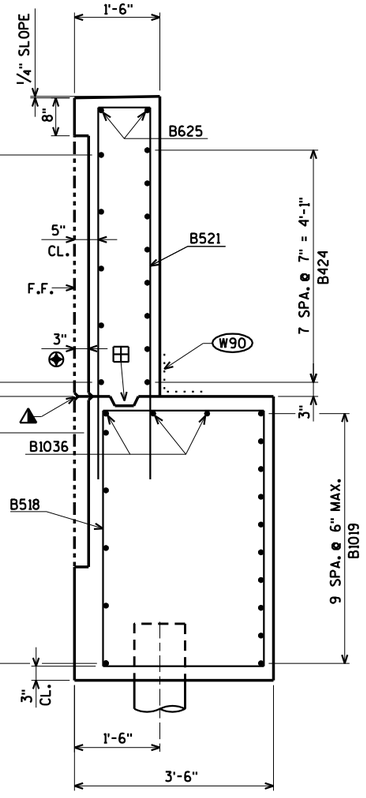
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STATE PROJECT NUMBER

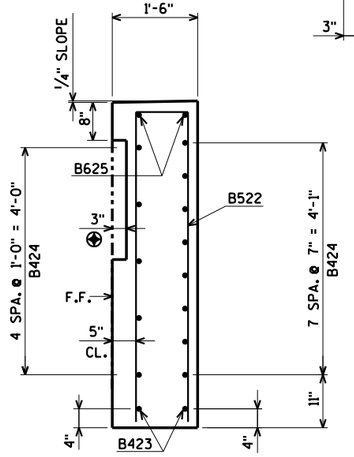
1071-06-78



ELEVATION WING 3



SECTION B



SECTION C

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

⊞ OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

⚠ ¾" 'V' GROOVE ON F.F. OF WINGWALL. OMIT IF CONST. JOINT NOT USED.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊕ LIMITS OF ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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EAST ABUTMENT WING 3 DETAILS

SHEET 12 OF 45
507

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6/2/2014

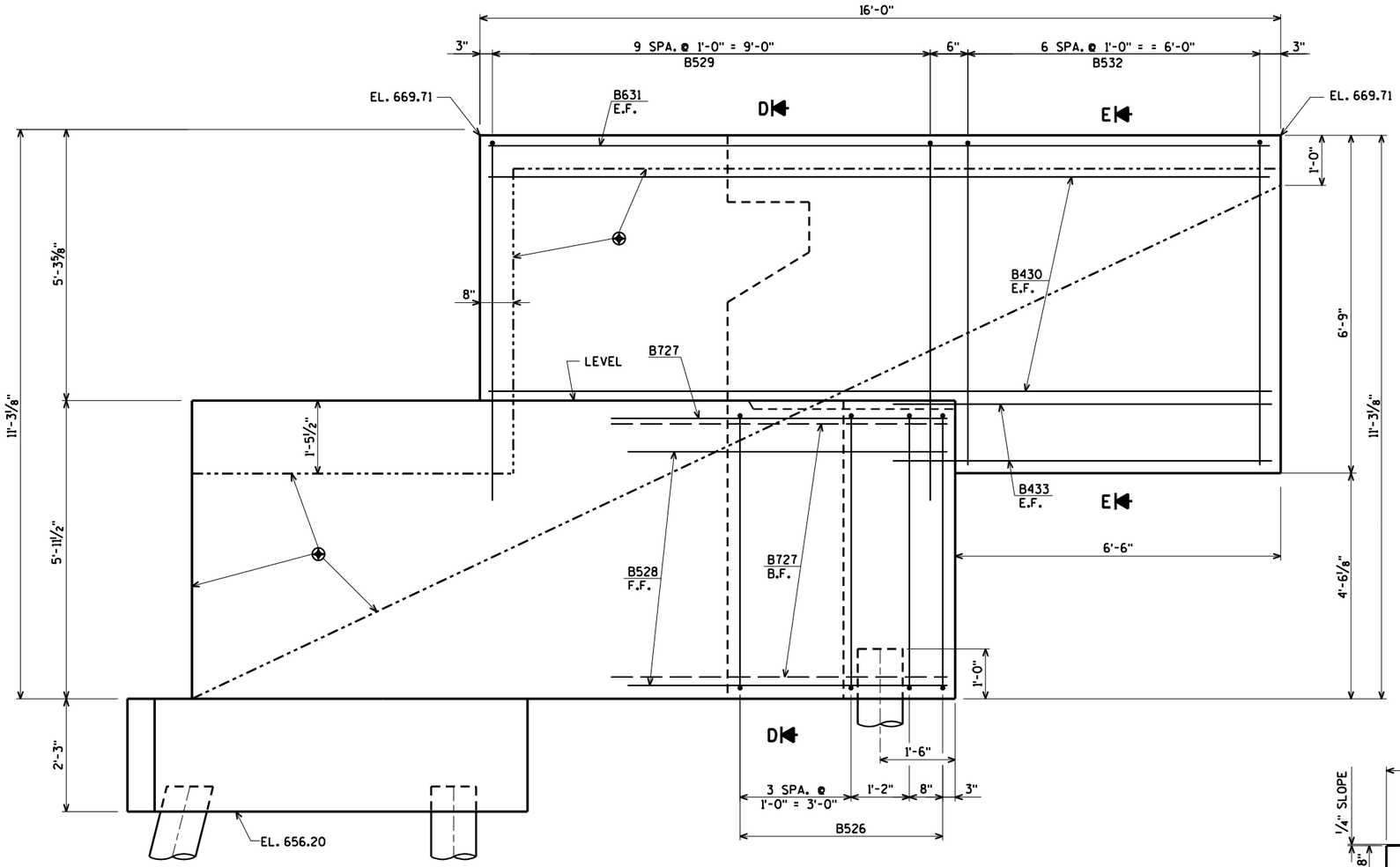
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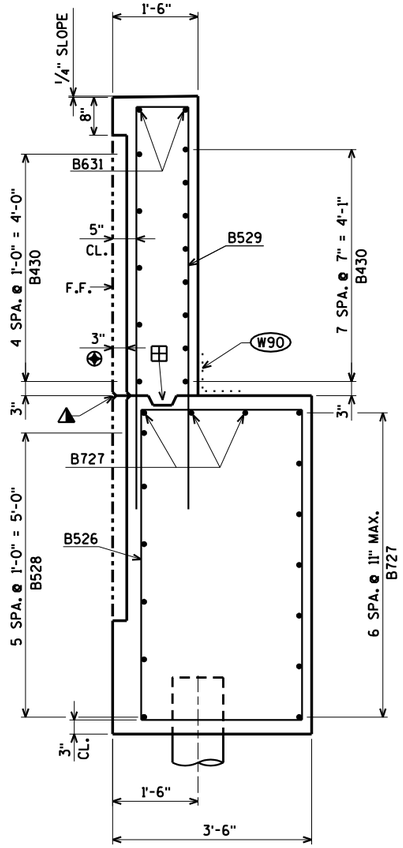
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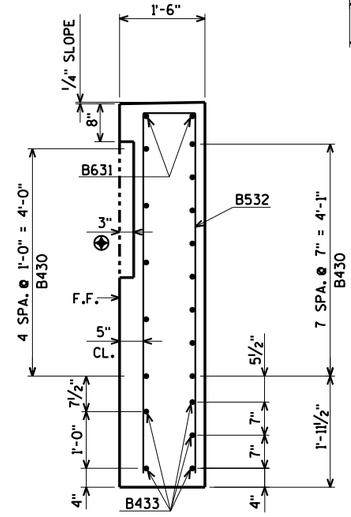
1071-06-78



ELEVATION WING 4



SECTION D



SECTION E

W90 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

⊞ OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

⚠ ¾" 'V' GROOVE ON F.F. OF WINGWALL. OMIT IF CONST. JOINT NOT USED.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

⊕ LIMITS OF ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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EAST ABUTMENT WING 4 DETAILS

SHEET 13 OF 45
508

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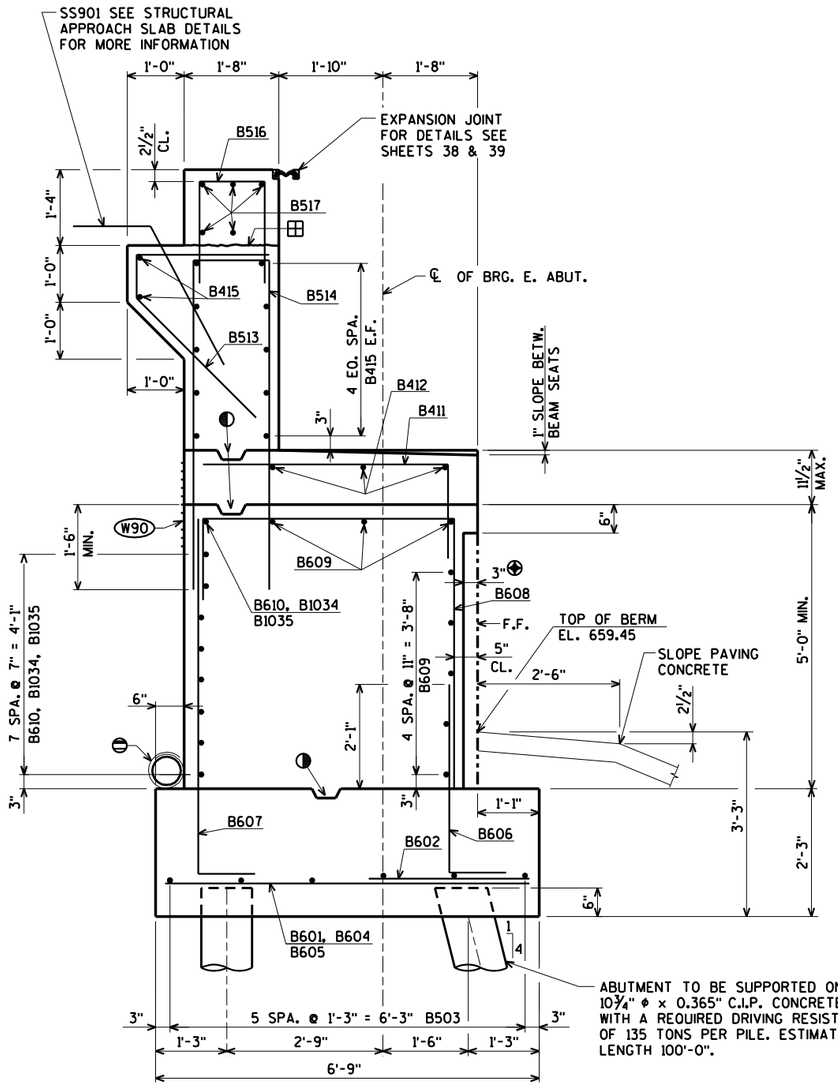
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6/2/2014

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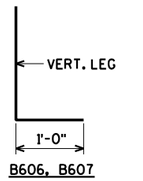


ABUTMENT TO BE SUPPORTED ON 10¾" ø x 0.365" C.I.P. CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 135 TONS PER PILE. ESTIMATED LENGTH 100'-0".

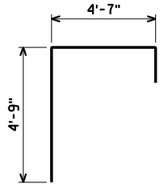
EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

TYPICAL SECTION THRU BODY SECTION A

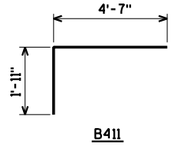
FOR LOCATION OF SECTION 'A' SEE SHEET 10



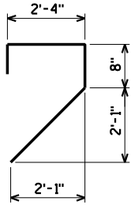
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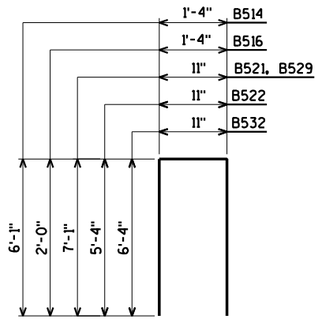
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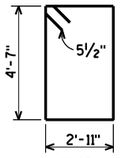


B411

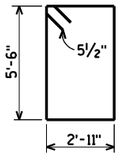


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B518

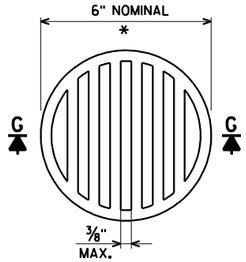


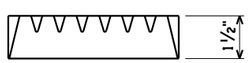
B526

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	7,560# COATED 9,750# UNCOATED LOCATION
B601		66	6-5				FOOTING
B602		53	2-5				FOOTING
B503		12	56-6				FOOTING
B604		1	11-0				FOOTING
B605		1	9-4				FOOTING
B606		108	4-6	X			FOOTING DOWELS F.F.
B607		108	7-3	X			FOOTING DOWELS B.F.
B608		108	10-6	X			BODY VERT.
B609		16	55-11				BODY HORIZ.
B610		18	37-11				BODY HORIZ. B.F.
B411		99	6-5	X			BODY VERT.
B412		6	38-0				BODY HORIZ.
B513	X	103	6-6	X			BACKWALL VERT.
B514	X	108	13-3	X			BACKWALL VERT.
B415	X	36	37-0				BACKWALL HORIZ.
B516	X	108	5-1	X			PAVING BLOCK VERT.
B517	X	75	8-0				PAVING BLOCK HORIZ.
B518	X	19	15-6	X			WING 3 VERT.
B1019	X	10	25-6				WING 3 HORIZ. B.F.
B520	X	5	22-11				WING 3 HORIZ. F.F.
B521	X	20	14-10	X			WING 3 VERT.
B522	X	7	11-4	X			WING 3 VERT.
B423	X	2	7-11				WING 3 HORIZ. E.F.
B424	X	13	23-9				WING 3 HORIZ. E.F.
B625	X	2	23-9				WING 3 HORIZ. E.F.
B526	X	6	17-4	X			WING 4 VERT.
B727	X	10	8-0				WING 4 HORIZ. B.F. & TOP
B528	X	6	8-0				WING 4 HORIZ. F.F.
B529	X	10	14-10	X			WING 4 VERT.
B430	X	13	15-8				WING 4 HORIZ. E.F.
B631	X	2	15-8				WING 4 HORIZ. E.F.
B532	X	7	13-4	X			WING 4 VERT.
B433	X	4	7-11				WING 4 HORIZ.
B1034		9	26-0				BODY HORIZ. B.F.
B1035		9	16-0				BODY HORIZ. B.F.
B1036	X	3	22-11				WING 3 HORIZ. TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.





SECTION G-G

* 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 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 SHEET METAL SCREWS.

RODENT SHIELD DETAIL

⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

⊖ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F. AT BACKWALL.

⊞ CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

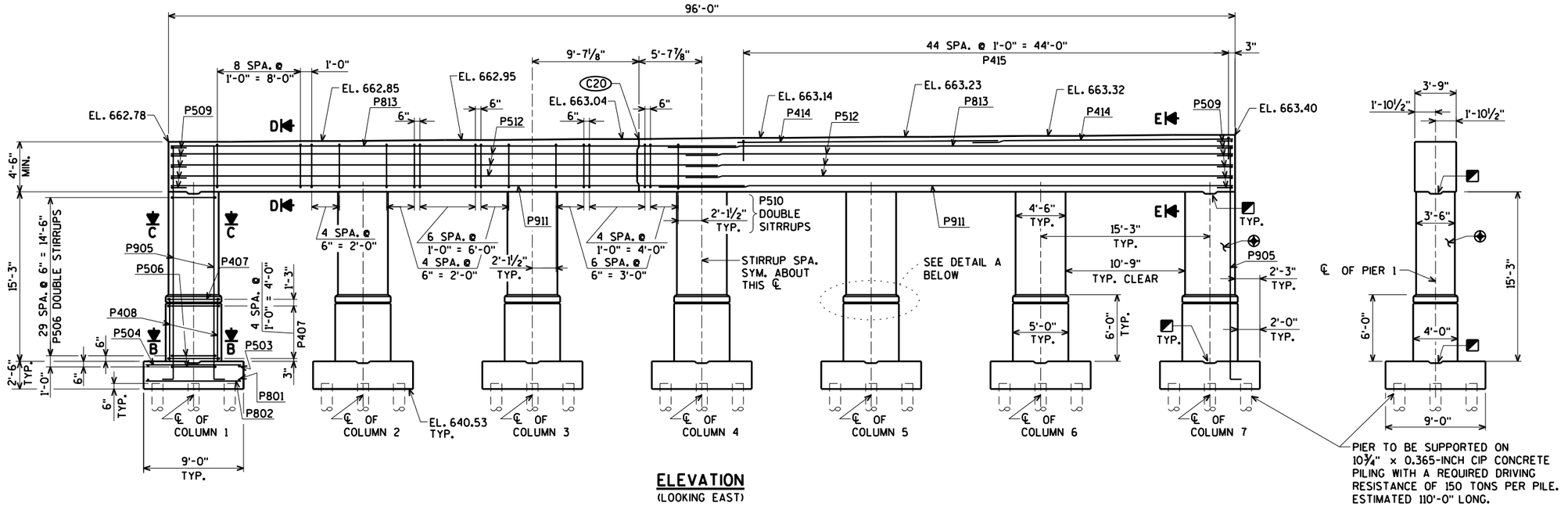
DRAWN BY CLS | PLANS CK'D. DNS

EAST ABUTMENT DETAILS AND BILL OF BARS

SHEET 14 OF 45
509

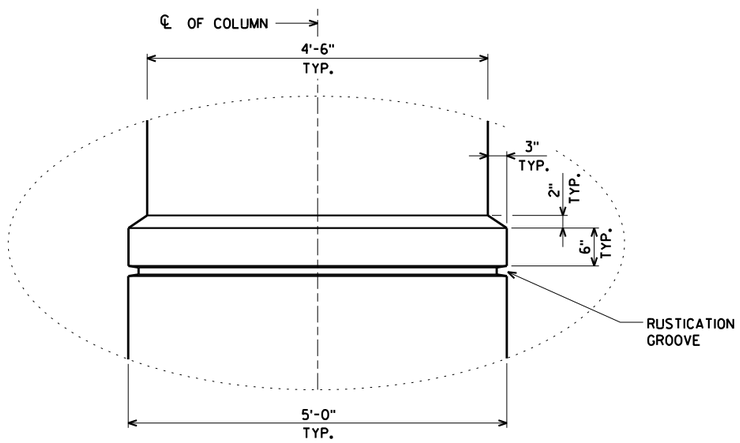
ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 ea.dgn

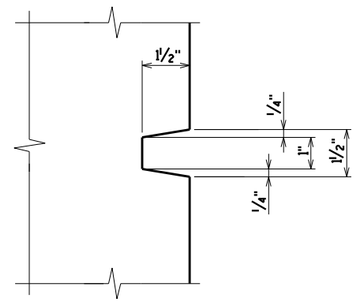


ELEVATION
(LOOKING EAST)

END VIEW
(LOOKING NORTH)



DETAIL A



RUSTICATION GROOVE DETAIL

RUSTICATION GROOVES SHALL BE LEVEL.

COST OF RUSTICATION GROOVES IN THE PIER AS SHOWN IS INCIDENTAL TO THE COST FOR "CONCRETE MASONRY BRIDGES".

(C20) VERT. CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONSTRUCTION JOINT DETAIL SEE SHEET 24.

⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

◪ 1'-3" x 2'-0" x 4" CONST. JOINT FORMED BY BEVELED KEYWAY.

FOR DETAIL OF SECTIONS B, C, D & E SEE SHEET 17

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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PIER 1

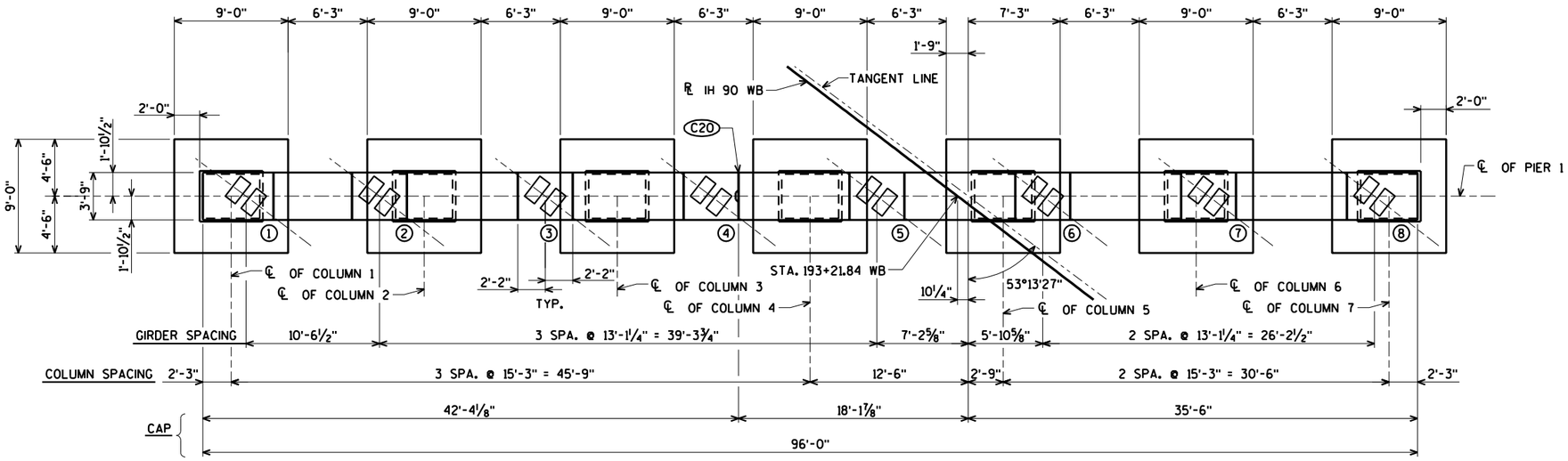
SHEET 15 OF 45
510

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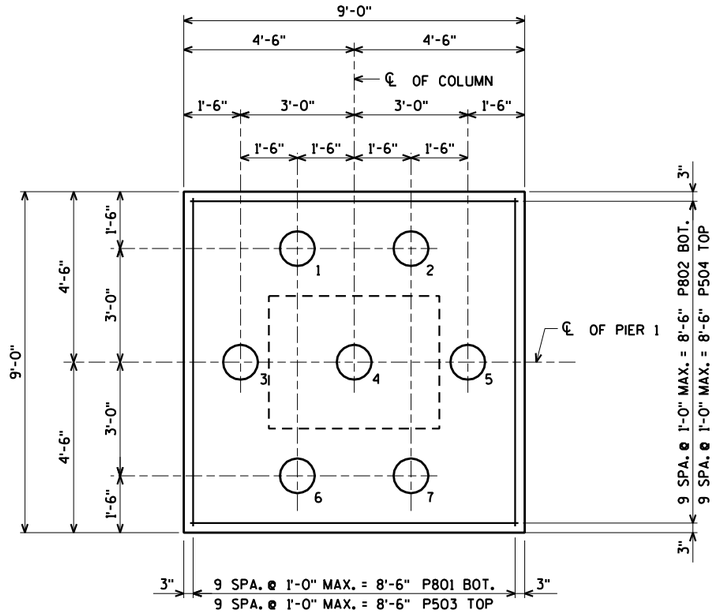
STATE PROJECT NUMBER

1071-06-78



PLAN

PILE LENGTH 90.4 - 115.9'



FOOTING PLAN

C20 VERT. CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONSTRUCTION JOINT DETAIL SEE SHEET 24.

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

DRAWN BY CLS | PLANS CK'D. DNS

PIER 1 PLAN AND FOOTING

SHEET 16 OF 45
511

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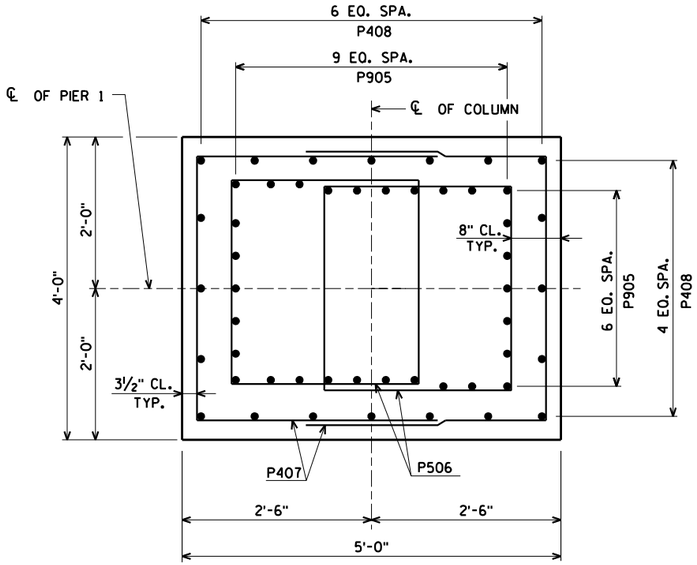
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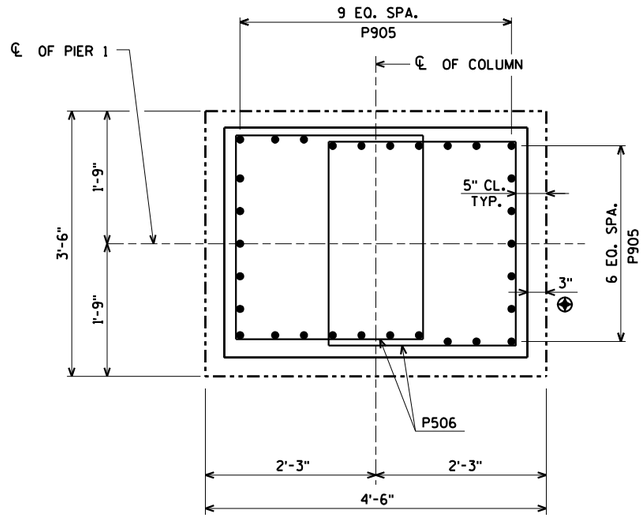
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6/2/2014

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SECTION B



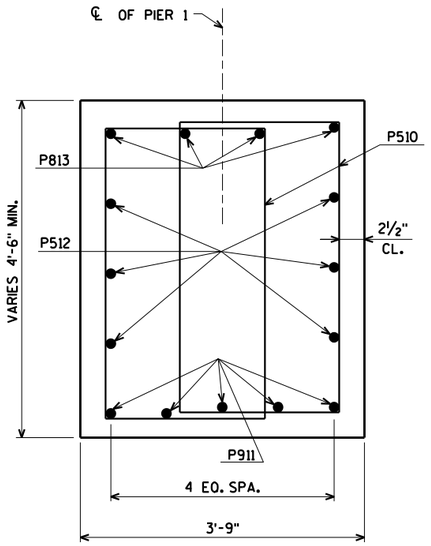
SECTION C

FOR LOCATIONS OF SECTIONS
B, C, D & E SEE SHEET 15

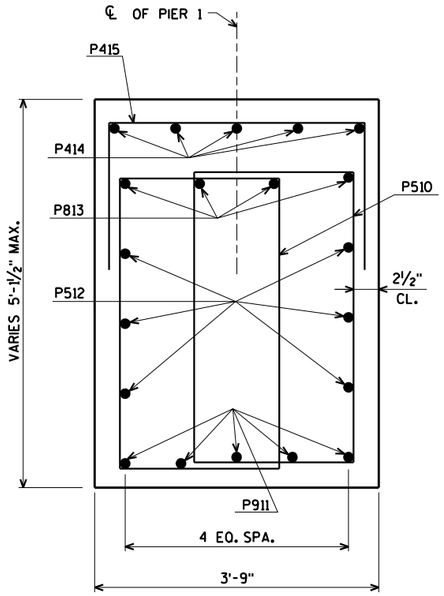
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	28,560# COATED 4,420# UNCOATED LOCATION
P801		70	8-6			FOOTING BOT.
P802		70	8-6			FOOTING BOT.
P503		70	8-6			FOOTING TOP
P504		70	8-6			FOOTING TOP
P905	X	210	22-5	X		FOOTING & COLUMN VERT.
P506	X	434	10-10	X		FOOTING & COLUMN STIRRUPS HORIZ.
P407	X	84	10-1	X		COLUMN STIRRUPS HORIZ.
P408	X	140	5-6			COLUMN VERT.
P509	X	11	6-5	X		CAP HORIZ. ℄ ENDS
P510	X	200	12-10	X		CAP STIRRUPS VERT.
P911	X	10	51-3			CAP HORIZ. BOT.
P512	X	12	49-7			CAP HORIZ. SIDES
P813	X	8	50-11			CAP HORIZ. TOP
P414	X	10	23-6			CAP HORIZ. TOP
P415	X	45	7-2	X		CAP VERT. TOP

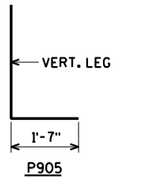
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



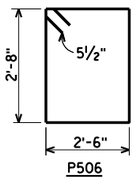
SECTION D



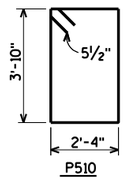
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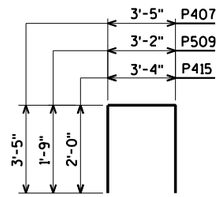
P905



P506



P510



⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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PIER 1
DETAILS AND
BILL OF BARS

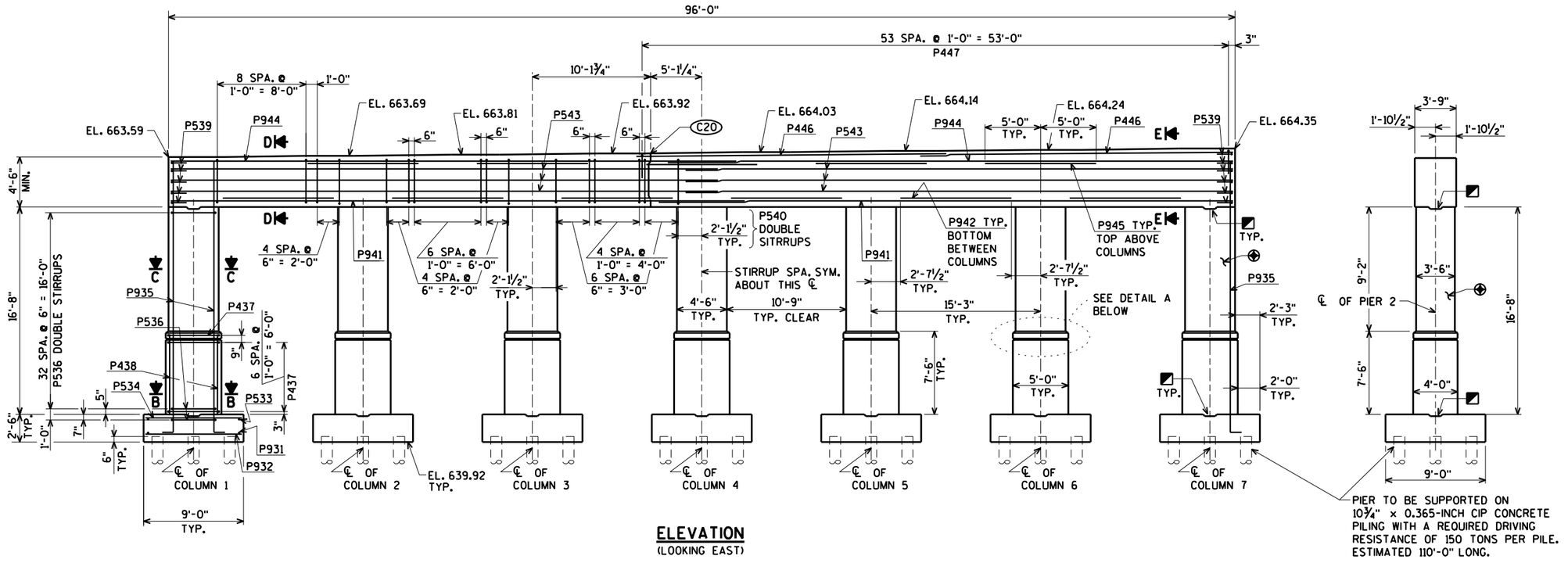
SHEET 17 OF 45
512

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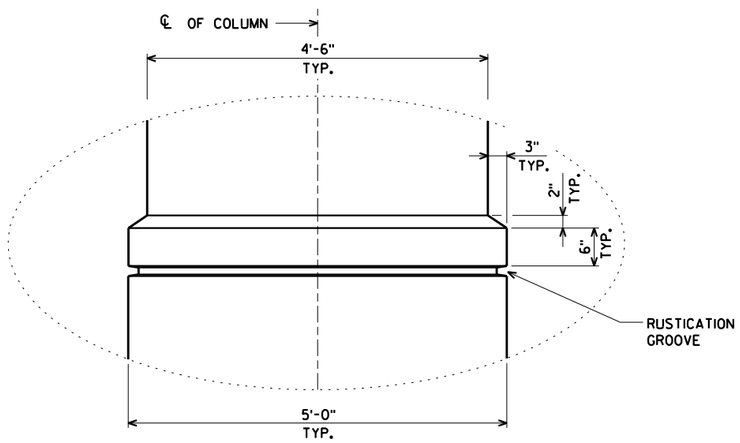
STATE PROJECT NUMBER

1071-06-78

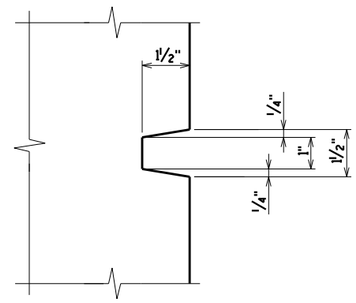


ELEVATION
(LOOKING EAST)

END VIEW
(LOOKING NORTH)



DETAIL A



RUSTICATION GROOVE DETAIL

RUSTICATION GROOVES SHALL BE LEVEL.

COST OF RUSTICATION GROOVES IN THE PIER AS SHOWN IS INCIDENTAL TO THE COST FOR "CONCRETE MASONRY BRIDGES".

(C20) VERT. CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONSTRUCTION JOINT DETAIL SEE SHEET 24.

⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

◪ 1'-3" x 2'-0" x 4" CONST. JOINT FORMED BY BEVELED KEYWAY.

FOR DETAIL OF SECTIONS B, C, D & E SEE SHEET 20

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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PIER 2

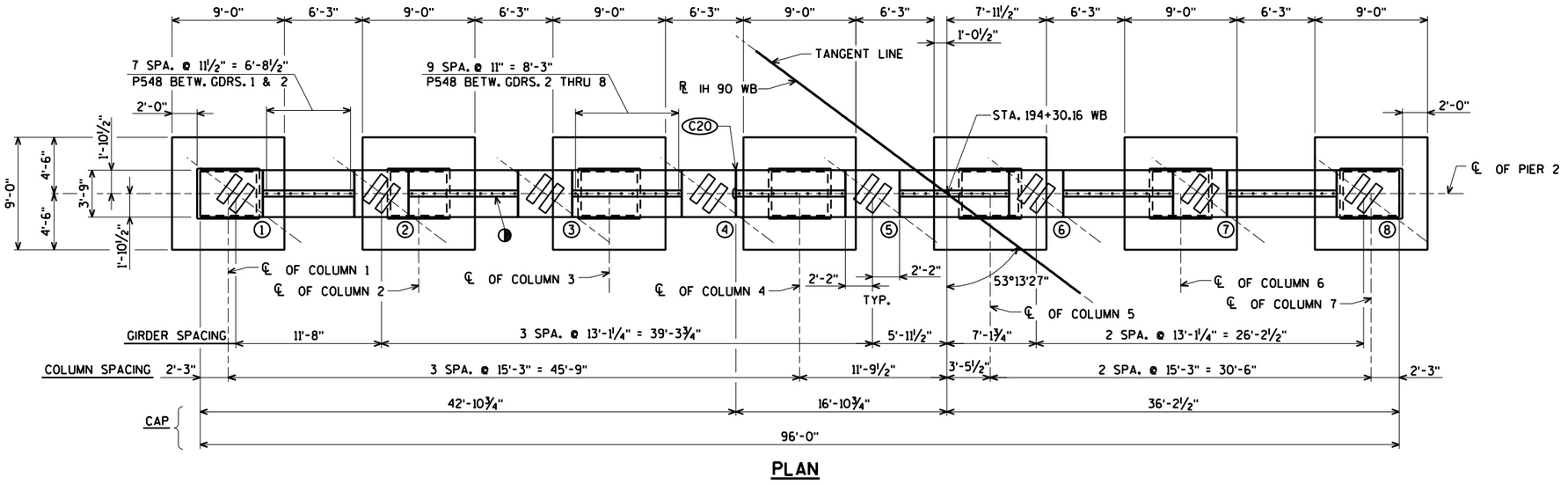
SHEET 18 OF 45
513

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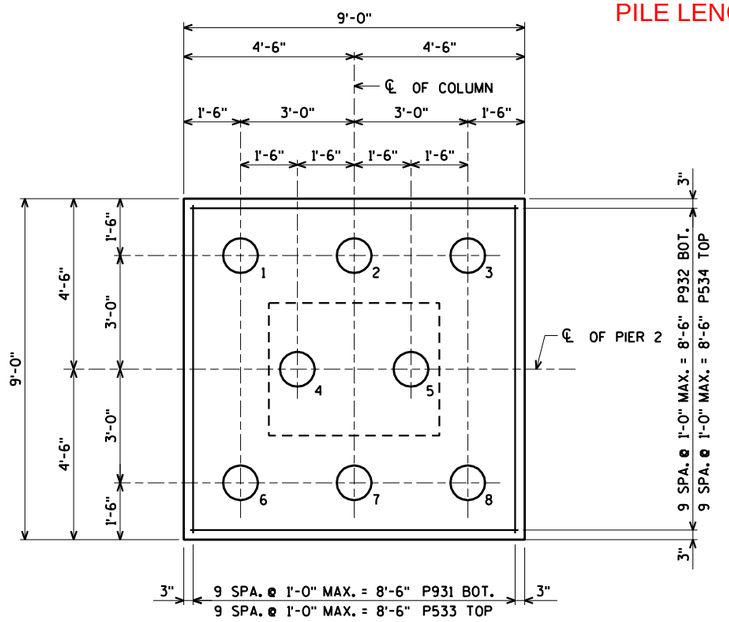
STATE PROJECT NUMBER

1071-06-78



PLAN

PILE LENGTH 89.6 - 102.5'



FOOTING PLAN

C20 VERT. CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONSTRUCTION JOINT DETAIL SEE SHEET 24.

◑ KEYED COST. JOINT - FORMED BY A SURFACE BEVELED 2" x 6".

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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PIER 2 PLAN AND FOOTING

SHEET 19 OF 45
514

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8

8

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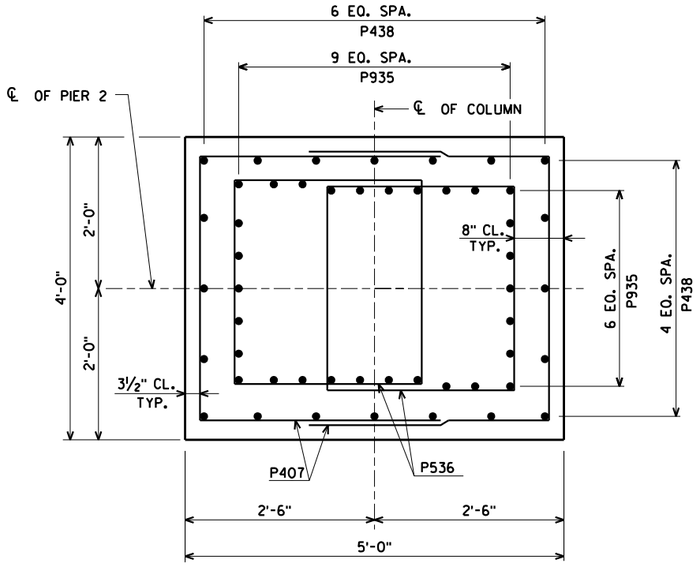
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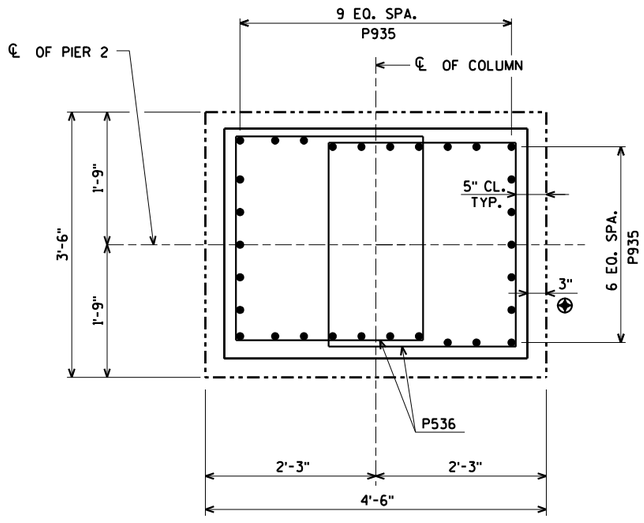
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STATE PROJECT NUMBER

1071-06-78



SECTION B



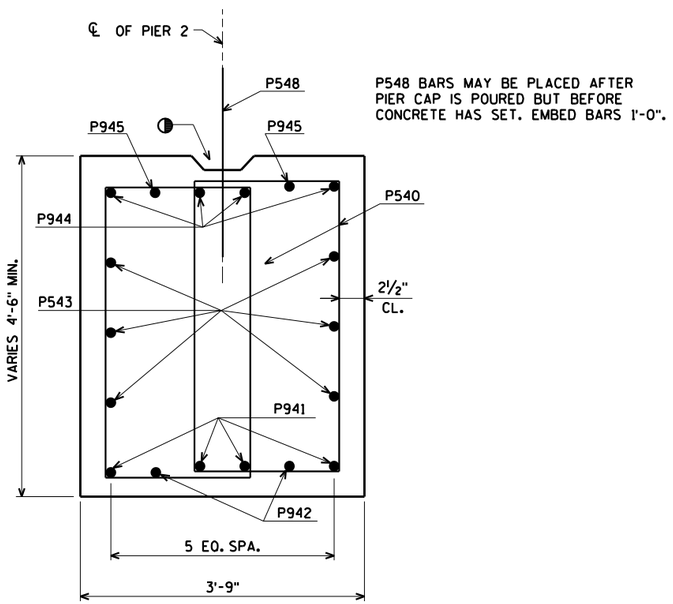
SECTION C

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	31,240# COATED 5,290# UNCOATED LOCATION
P931		70	8-6			FOOTING BOT.
P932		70	8-6			FOOTING BOT.
P533		70	8-6			FOOTING TOP
P534		70	8-6			FOOTING TOP
P935	X	210	23-10	X		FOOTING & COLUMN VERT.
P536	X	476	10-10	X		FOOTING & COLUMN STIRRUPS HORIZ.
P437	X	112	10-1	X		COLUMN STIRRUPS HORIZ.
P438	X	140	7-0			COLUMN VERT.
P539	X	11	6-5	X		CAP HORIZ. @ ENDS
P540	X	200	12-6	X		CAP STIRRUPS VERT.
P941	X	8	51-3			CAP HORIZ. BOT.
P942	X	12	10-0			CAP HORIZ. BOT.
P543	X	12	49-7			CAP HORIZ. SIDES
P944	X	8	51-8			CAP HORIZ. TOP
P945	X	10	10-0			CAP HORIZ. TOP
P446	X	10	28-1			CAP HORIZ. TOP
P447	X	54	7-2	X		CAP VERT. TOP
P548	X	68	2-0			CAP DOWELS

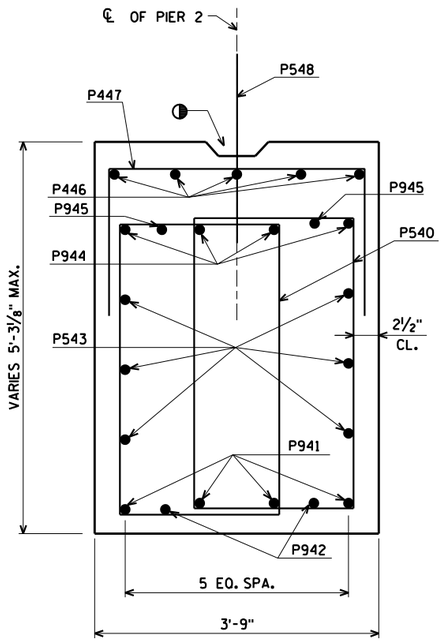
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

FOR LOCATIONS OF SECTIONS
B, C, D & E SEE SHEET 18

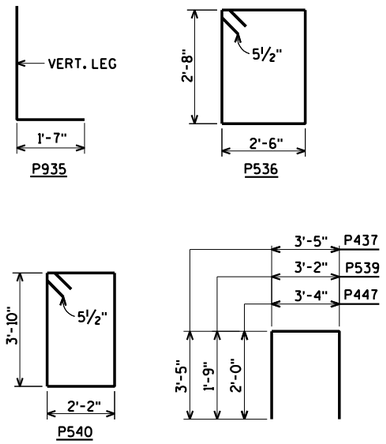


P548 BARS MAY BE PLACED AFTER PIER CAP IS POURED BUT BEFORE CONCRETE HAS SET. EMBED BARS 1'-0".

SECTION D



SECTION E



ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

KEYED CONST. JOINT BETWEEN GIRDERS - FORMED BY A SURFACE BEVELED 2" x 6".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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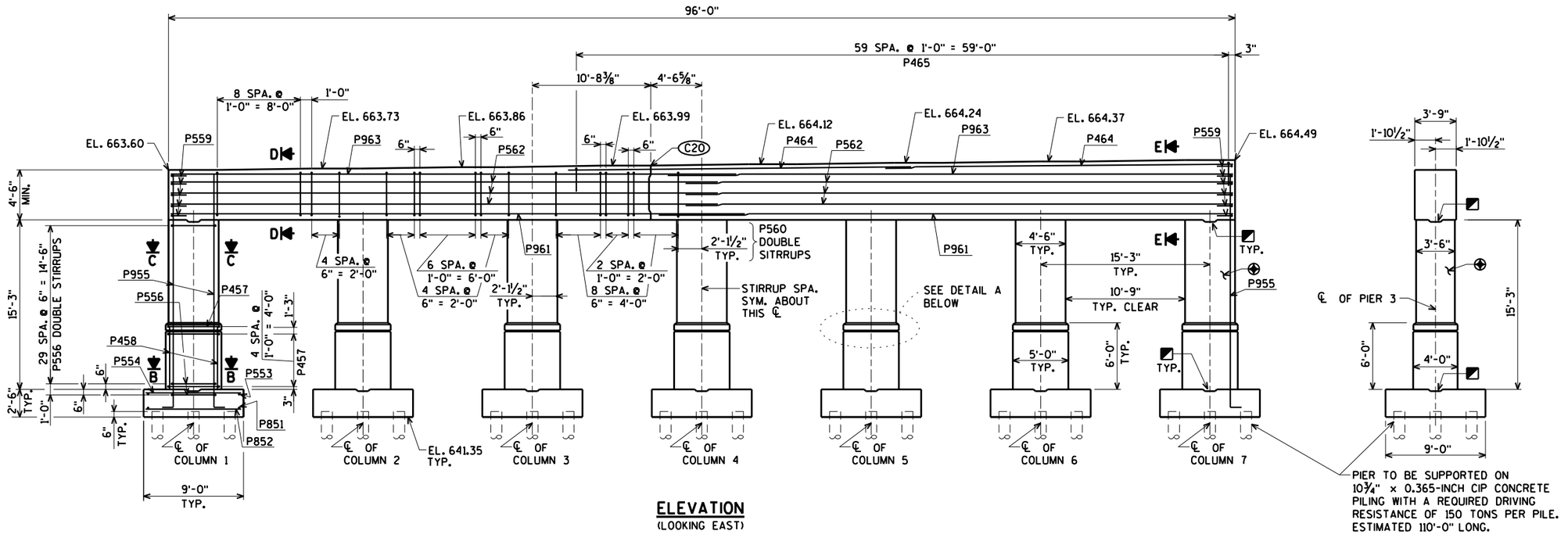
PIER 2
DETAILS AND
BILL OF BARS

SHEET 20 OF 45
515

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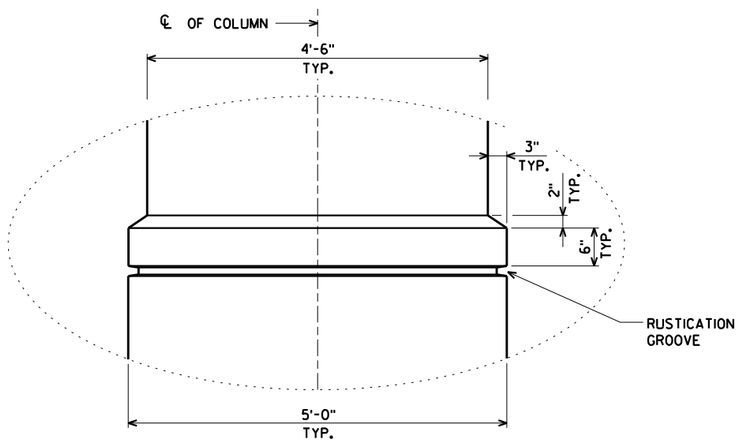
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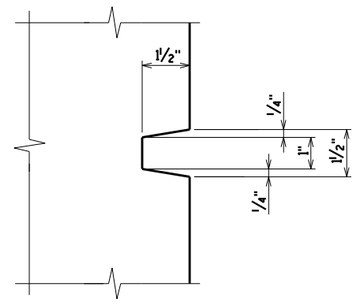


ELEVATION
(LOOKING EAST)

END VIEW
(LOOKING NORTH)



DETAIL A



RUSTICATION GROOVE DETAIL

RUSTICATION GROOVES SHALL BE LEVEL.

COST OF RUSTICATION GROOVES IN THE PIER AS SHOWN IS INCIDENTAL TO THE COST FOR "CONCRETE MASONRY BRIDGES".

(C20) VERT. CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONSTRUCTION JOINT DETAIL SEE SHEET 24.

⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

◪ 1'-3" x 2'-0" x 4" CONST. JOINT FORMED BY BEVELED KEYWAY.

FOR DETAIL OF SECTIONS B, C, D & E SEE SHEET 23

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-32-219

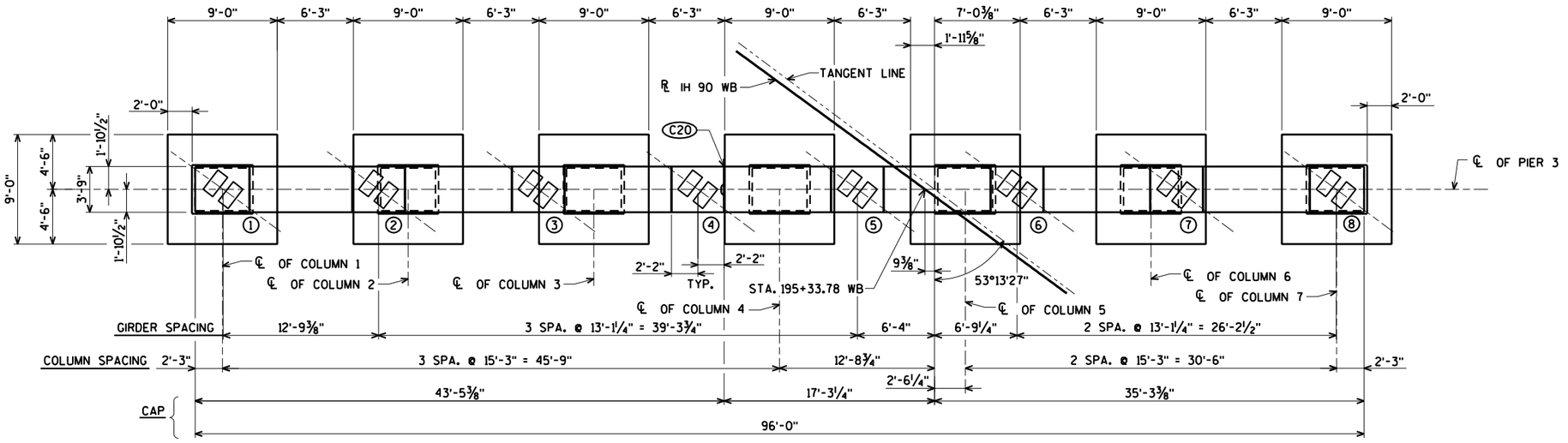
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PIER 3

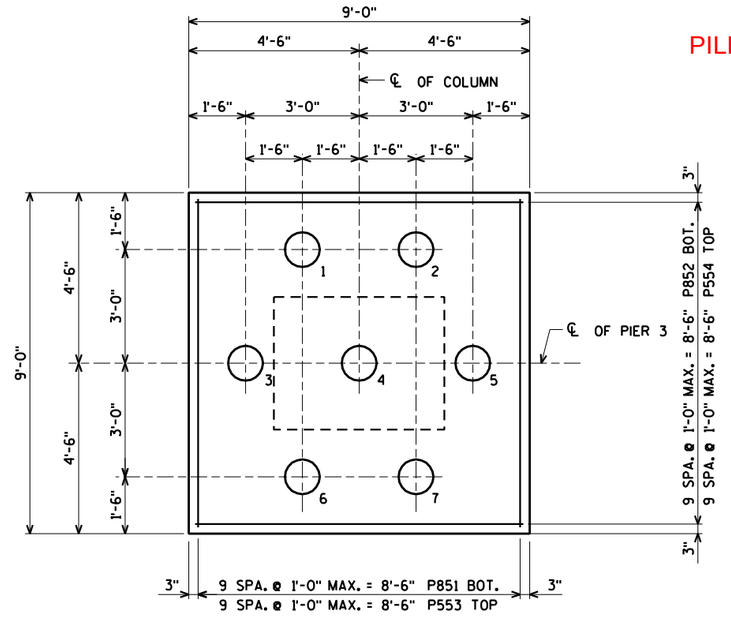
SHEET 21 OF 45
516

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PLAN



FOOTING PLAN

PILE LENGTH 95.1' - 106.3'

(C20) VERT. CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 8". BEVEL EXPOSED EDGES ¾". FOR ALTERNATE CONSTRUCTION JOINT DETAIL SEE SHEET 24.

FOR PILE SPLICE DETAIL SEE SHEET 3.

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PIER 3 PLAN AND FOOTING

SHEET 22 OF 45
517

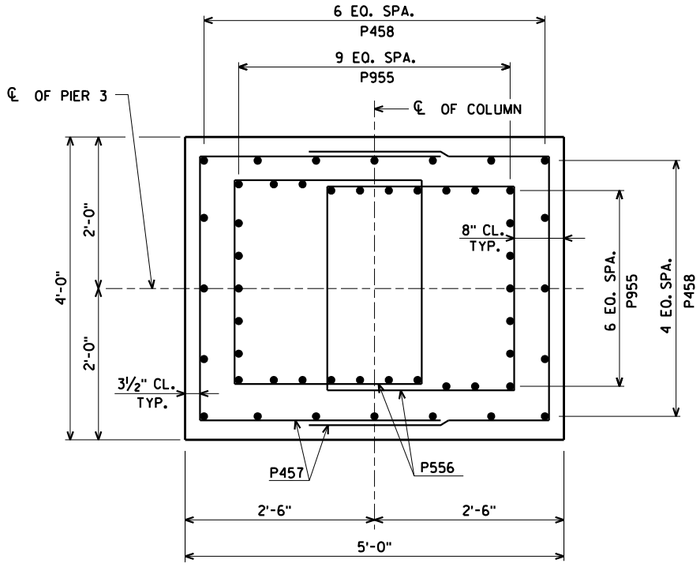
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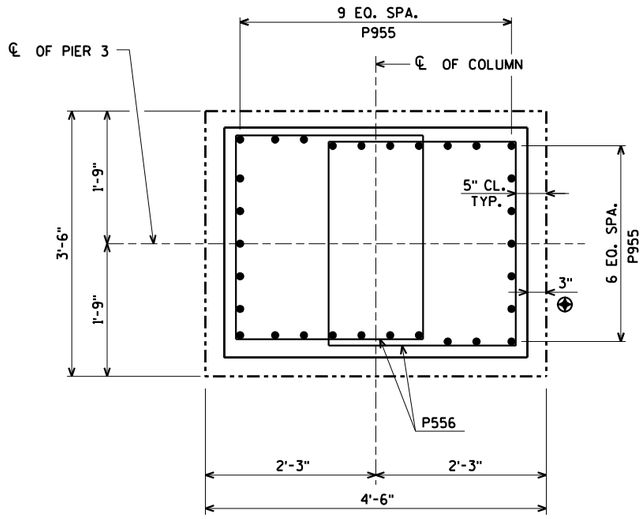
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SECTION B



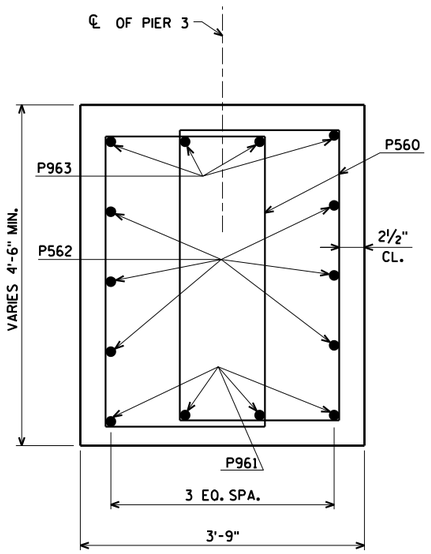
SECTION C

FOR LOCATIONS OF SECTIONS
B, C, D & E SEE SHEET 21

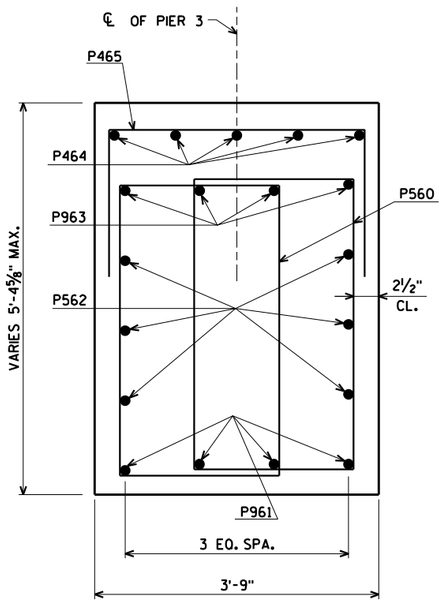
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	28,760# COATED 4,420# UNCOATED LOCATION
P851		70	8-6			FOOTING BOT.
P852		70	8-6			FOOTING BOT.
P553		70	8-6			FOOTING TOP
P554		70	8-6			FOOTING TOP
P955	X	210	22-5	X		FOOTING & COLUMN VERT.
P556	X	434	10-10	X		FOOTING & COLUMN STIRRUPS HORIZ.
P457	X	84	10-1	X		COLUMN STIRRUPS HORIZ.
P458	X	140	5-6			COLUMN VERT.
P559	X	11	6-5	X		CAP HORIZ. ℄ ENDS
P560	X	208	12-10	X		CAP STIRRUPS VERT.
P961	X	8	51-3			CAP HORIZ. BOT.
P562	X	12	49-7			CAP HORIZ. SIDES
P963	X	8	51-8			CAP HORIZ. TOP
P464	X	10	31-2			CAP HORIZ. TOP
P465	X	60	7-2	X		CAP VERT. TOP

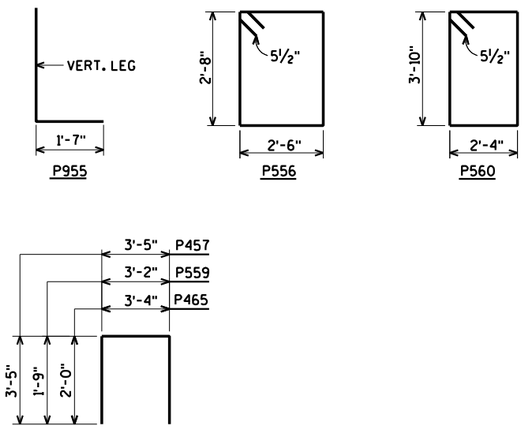
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



SECTION D



SECTION E



⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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PIER 3
DETAILS AND
BILL OF BARS

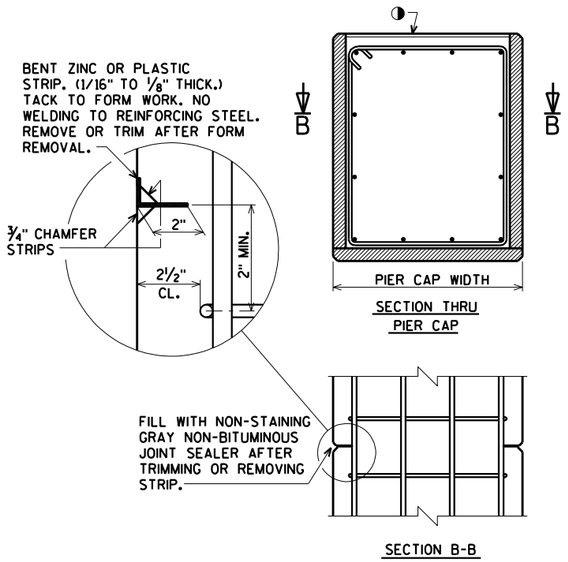
SHEET 23 OF 45
518

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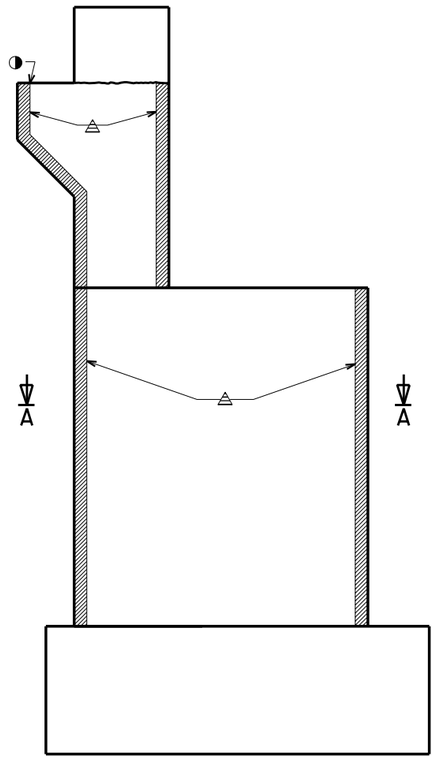
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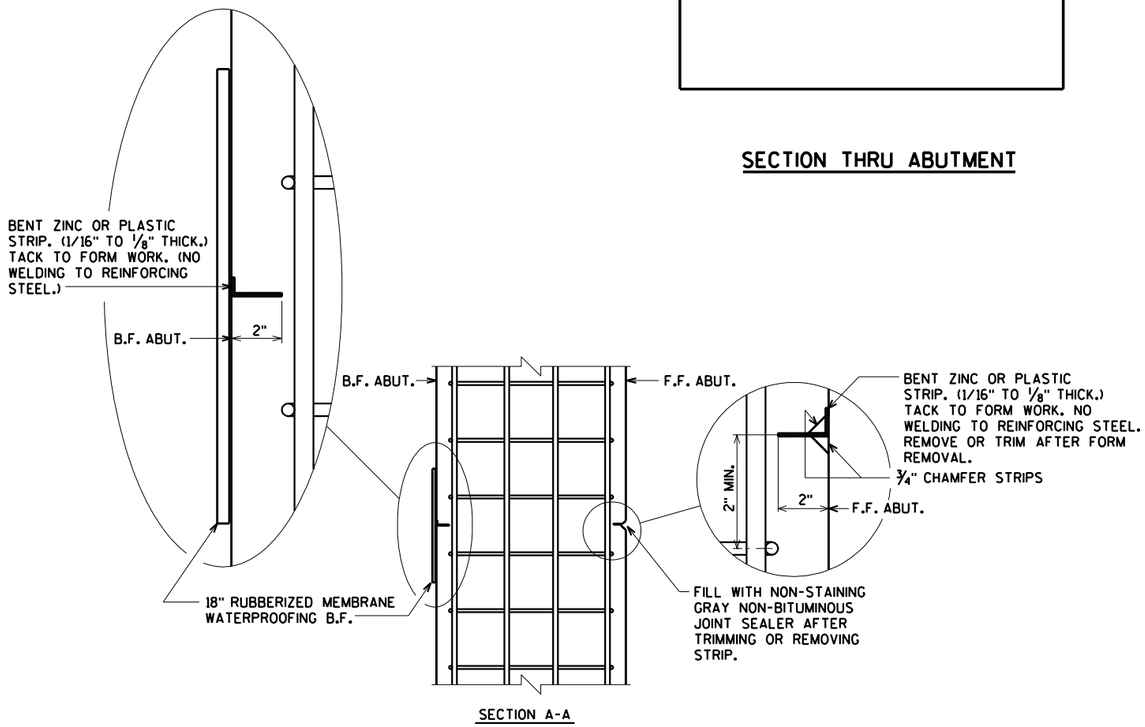
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ALTERNATE CONSTRUCTION JOINT AT PIER CAP



SECTION THRU ABUTMENT



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.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

△ BENT ZINC OR PLASTIC STRIP.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

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ALTERNATE CONSTRUCTION JOINT

SHEET 24 OF 45
519

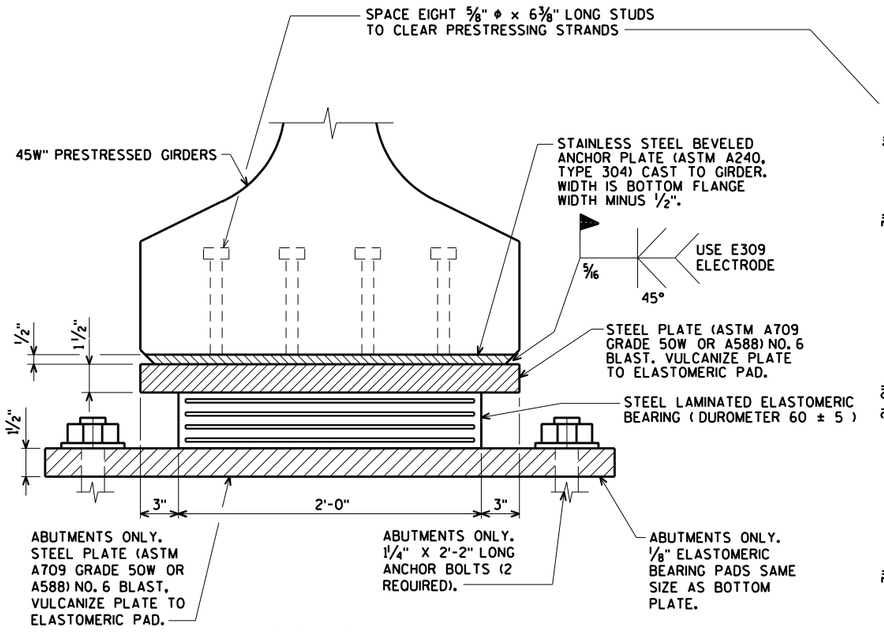
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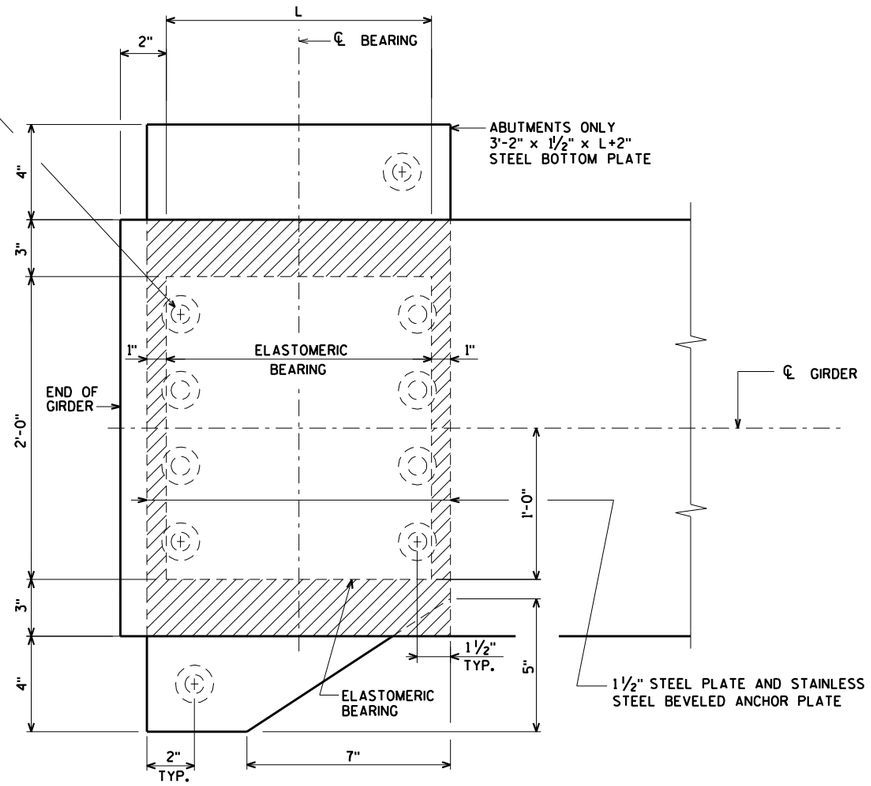
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6/2/2014

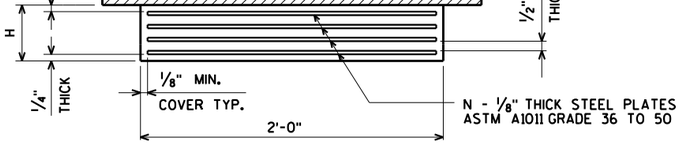
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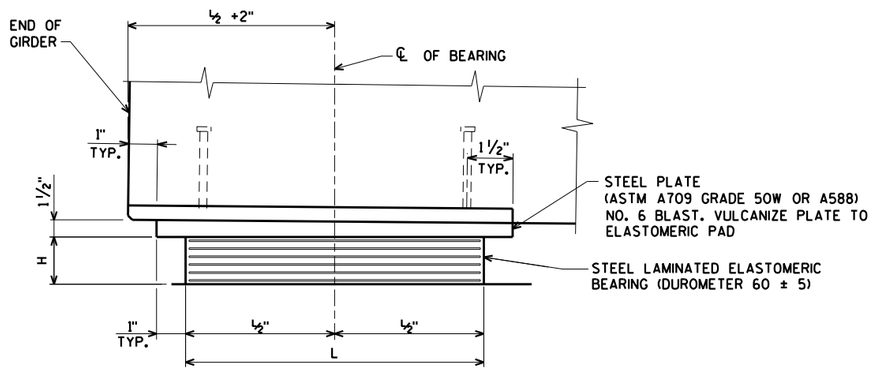
END VIEW



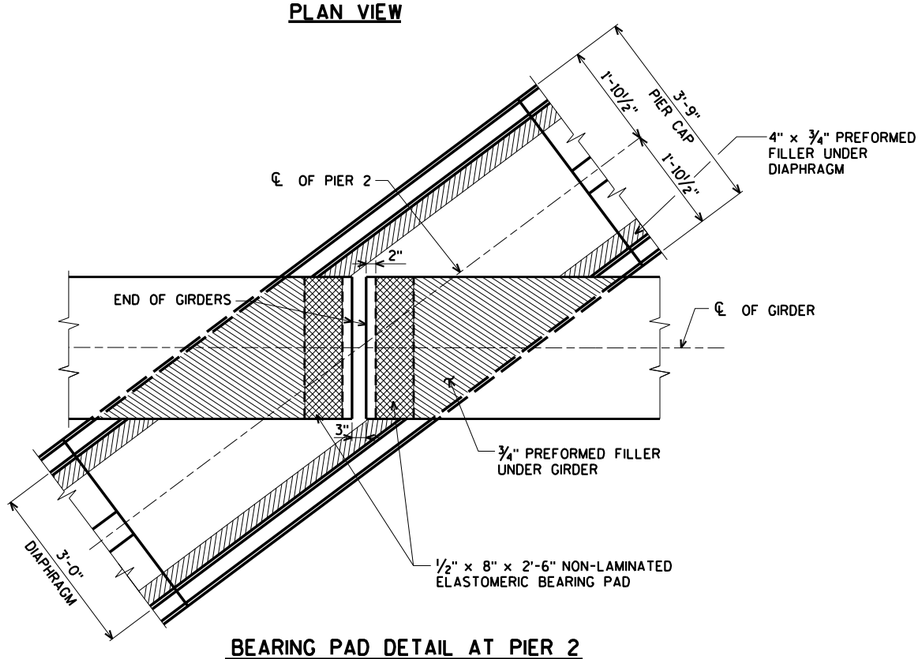
PLAN VIEW



SECTION THRU ELASTOMERIC BEARING



SIDE VIEW



BEARING PAD DETAIL AT PIER 2

ELASTOMERIC LAMINATED BEARING PAD TABLE

LOCATION	L	H	N
W. ABUT	1'-2"	4 3/8"	7"
PIER 1 SPAN 1	12"	2 1/2"	4"
PIER 1 SPAN 2	12"	2 1/2"	4"
PIER 3 SPAN 3	12"	2 1/2"	4"
PIER 3 SPAN 4	10"	2 1/2"	4"
E. ABUT.	1'-0"	3 3/4"	6"

BEARING NOTES

BEARING PADS ELASTOMERIC LAMINATED SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85° F.

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS 2 1/4" ABOVE TOP OF ANCHOR PLATE.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQULIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C. ALL PLATES SHALL BE SHOP PAINTED AFTER BEARING FABRICATION.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN BOTTOM PLATE SHALL HAVE A DIAMETER 3/8" LARGER THAN ANCHOR BOLT.

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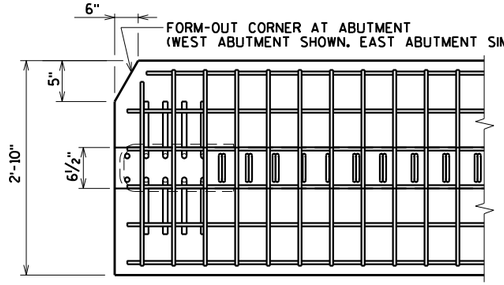
STRUCTURE B-32-219

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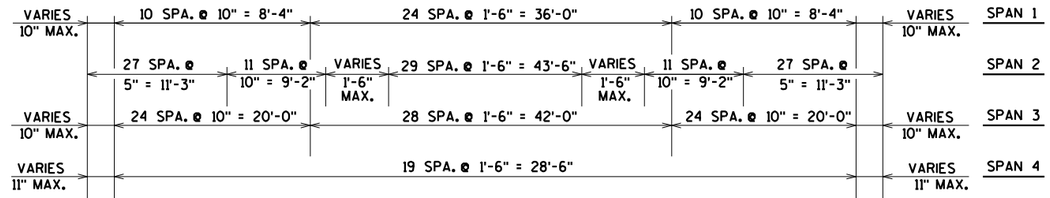
BEARING DETAILS

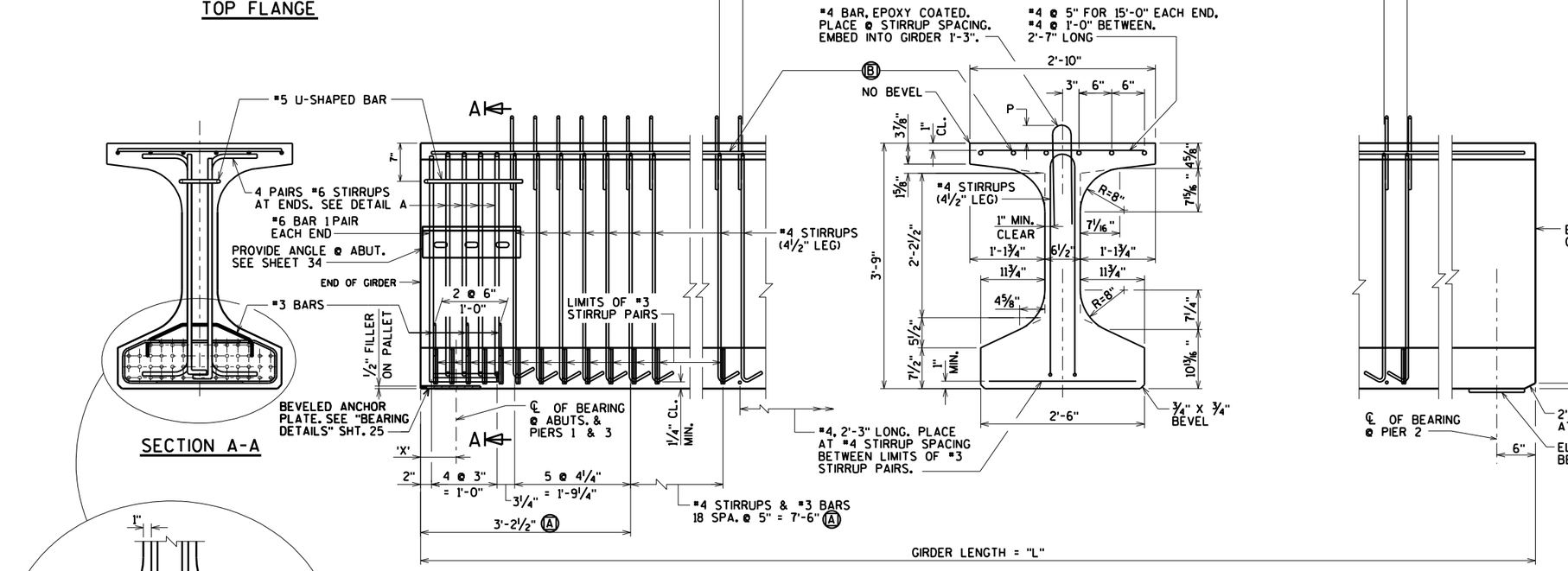
SHEET 25 OF 45
520

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TOP FLANGE





SECTION A-A

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO APPLICATION OF THE SEALER.

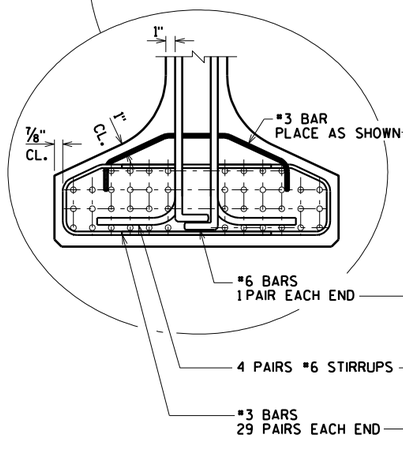
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

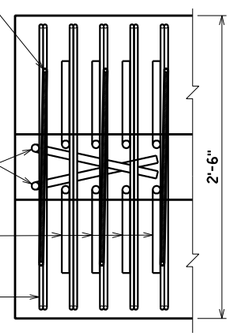
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT CHIEF, (608)266-5161.

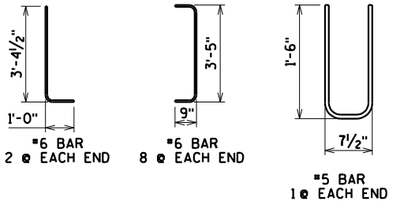
PRESTRESSING STRANDS SHALL BE 0.6"ϕ -7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.





DETAIL A
BOTTOM FLANGE



DIMENSION 'X' TABLE	
LOCATION	'X' DIMENSION
W. ABUT.	9"
PIER 1, SPAN 1	8"
PIER 1, SPAN 2	8"
PIER 3, SPAN 3	8"
PIER 3, SPAN 4	7"
E. ABUT.	8"

SIDE VIEW & TYP. SECTION IN SPAN

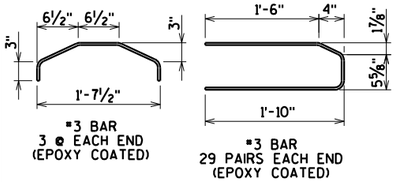
Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 2'-4"

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	DRAPED PATTERN f'ci (P.S.I.) *	DRAPED PATTERN (IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	UNDRAPED PATTERN f'ci (P.S.I.) *
1	1	75'-8⅞"	0.1	0.3	0.4	0.5	0.5	0.5	0.4	0.3	0.1	8,000	8	7	8	0.6	18	6,400	40	13	16	4	-----	---
1	2, 8	75'-1¾"	0.2	0.3	0.4	0.5	0.5	0.5	0.4	0.3	0.2	8,000	8	7	8	0.6	18	6,400	40	13	16	4	-----	---
1	3-7	75'-1¾"	0.2	0.3	0.5	0.5	0.6	0.5	0.5	0.3	0.2	8,000	8	7	8	0.6	18	6,400	40	13	16	4	-----	---
2	1	108'-7⅝"	0.6	1.1	1.6	1.9	2.0	1.9	1.6	1.1	0.6	8,000	8	7	8	0.6	36	6,400	39	13.5	16.5	5	-----	---
2	2, 8	107'-8⅞"	0.6	1.2	1.7	1.9	2.0	1.9	1.7	1.2	0.6	8,000	8	7	8	0.6	36	6,400	39	13.5	16.5	5	-----	---
2	3-7	107'-8⅞"	0.7	1.3	1.8	2.1	2.2	2.1	1.8	1.3	0.7	8,000	8	7	8	0.6	36	6,400	39	13.5	16.5	5	-----	---
3	1	103'-11¼"	0.5	0.9	1.3	1.5	1.6	1.5	1.3	0.9	0.5	8,000	8	7	8	0.6	30	6,400	40	13	16	4	-----	---
3	2, 8	103'-0⅝"	0.5	1.0	1.3	1.6	1.7	1.6	1.3	1.0	0.5	8,000	8	7	8	0.6	30	6,400	40	13	16	4	-----	---
3	3-7	103'-0⅝"	0.5	1.0	1.4	1.7	1.7	1.7	1.4	1.0	0.5	8,000	8	7	8	0.6	30	6,400	40	13	16	4	-----	---
4	1	51'-7⅛"	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	8,000	8	7	8	0.6	18	6,400	32	11	14	4	-----	---
4	2-8	51'-1¾"	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	8,000	8	7	8	0.6	18	6,400	32	11	14	4	-----	---



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STRUCTURE B-32-219

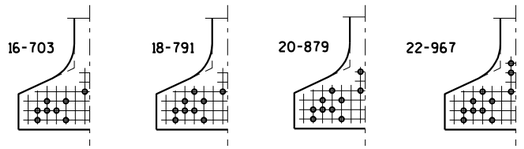
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45W" PRESTRESSED GIRDER DETAILS

SHEET 26 OF 45
521

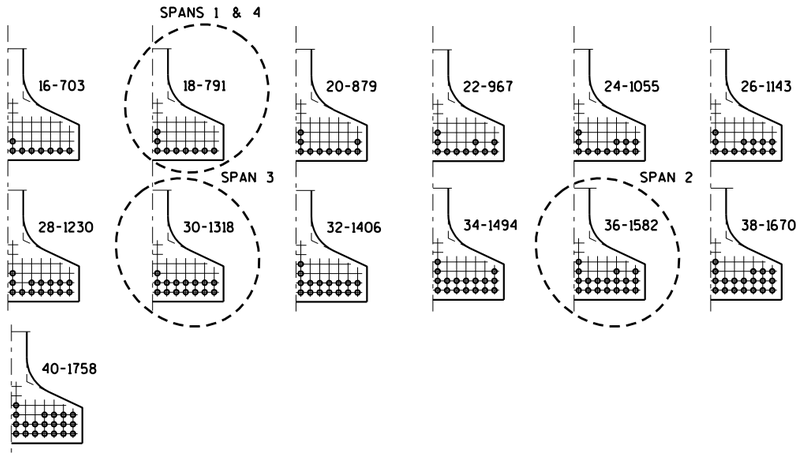
ORIGINAL PLANS PREPARED BY
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$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-219 190 WB over STH 35\BRIDGE\B-32-219 45wGDR.DGN



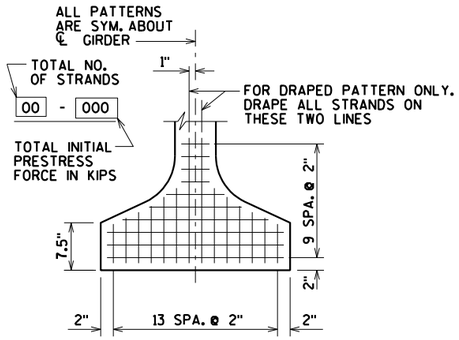
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"ϕ STRANDS

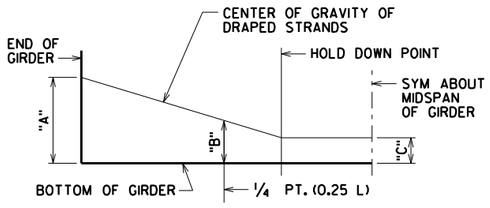


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"ϕ STRANDS



TYP. STRAND PATTERN



DRAPED STRAND PROFILE

THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN

SPAN	CAMBER (IN.)
1	1.2
2	4.5
3	3.5
4	0.7

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T'. USE ACTUAL GIRDER SHOTS. THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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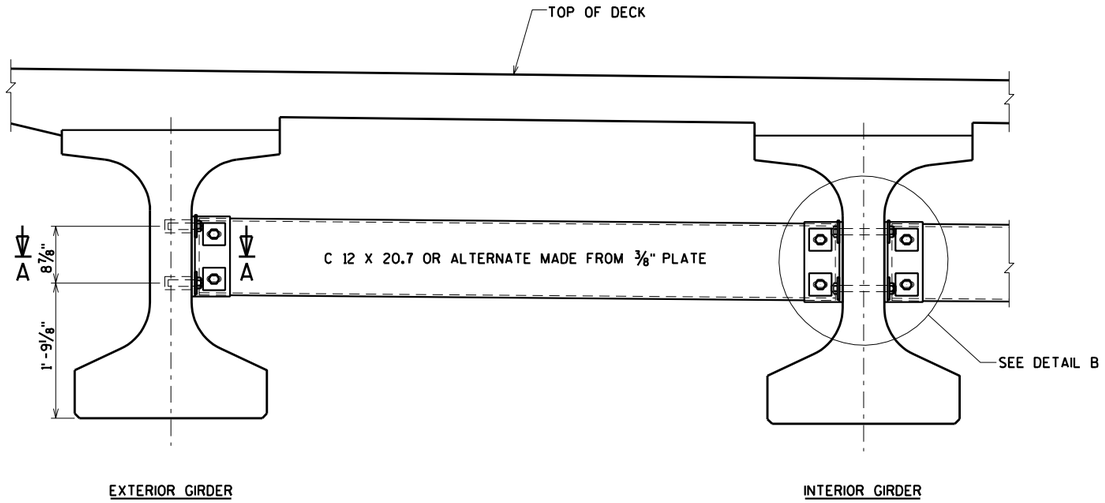
45W" PRESTRESSED GIRDER DETAILS

SHEET 27 OF 45
522

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U:\41-0627.00 - LaCrosse County, IH90\B-32-219 190 WB over STH 35\BRIDGE\B-32-219 45wGDR.DGN

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-219 190 WB over STH 35\BRIDGE\B-32-219 45wDIA.DGN



PART TRANSVERSE SECTION AT DIAPHRAGM

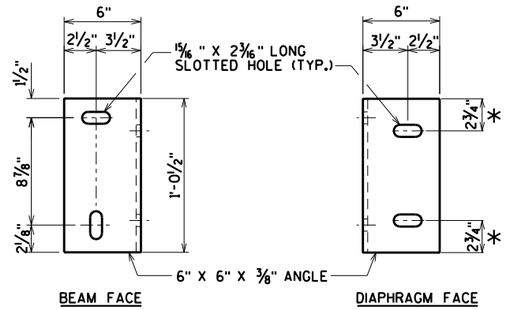
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-32-219", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

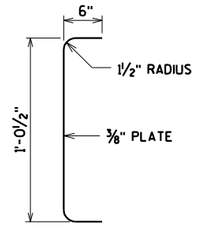
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

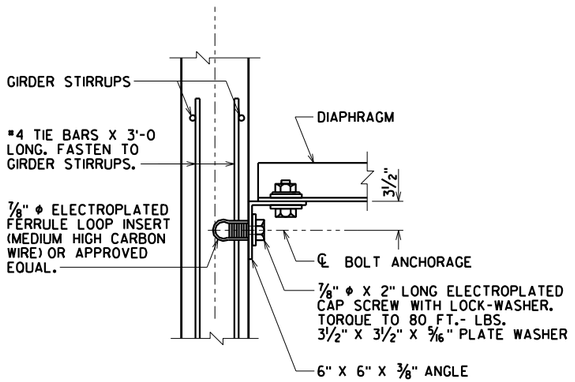


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

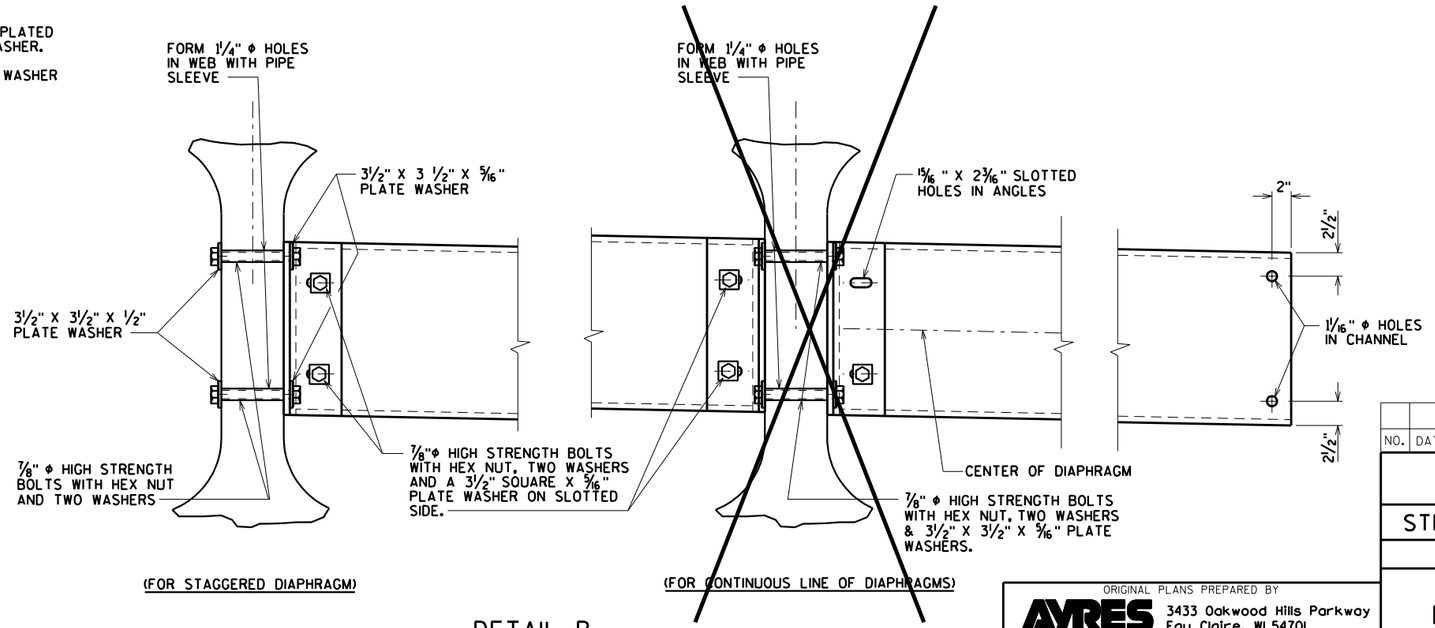


SECTION THRU ALTERNATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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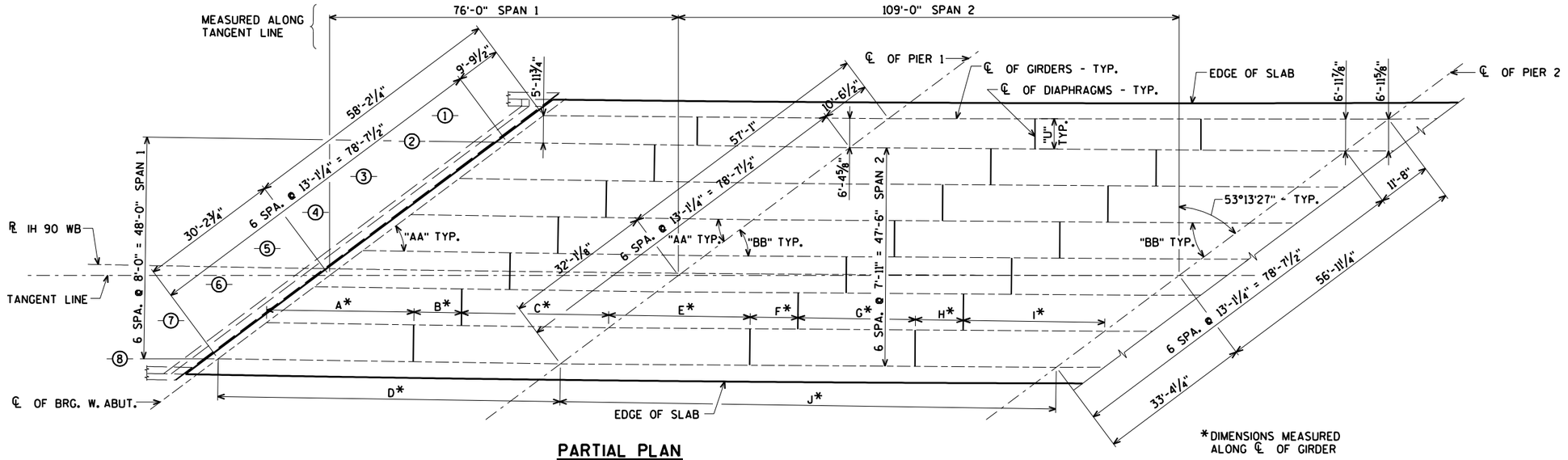
STEEL DIAPHRAGM DETAILS

SHEET 28 OF 45
523

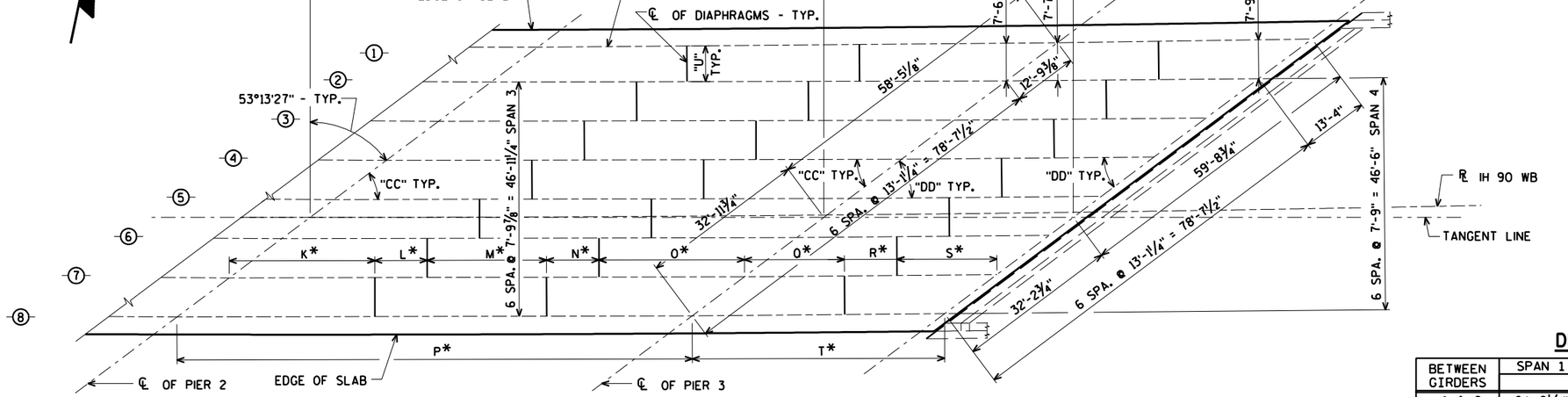
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Eau Claire, WI 54701
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STATE PROJECT NUMBER

1071-06-78



PARTIAL PLAN



PARTIAL PLAN

GIRDER ANGLES

GIRDER	"AA"	"BB"	"CC"	"DD"
1	37°16'47"	36°49'12"	36°17'15"	35°53'59"
2-8	37°37'53"	37°10'38"	36°39'07"	36°16'09"

DIAPHRAGM LENGTH "U"

BETWEEN GIRDERS	SPAN 1	SPAN 2		SPAN 3		SPAN 4
		WEST	EAST	WEST	EAST	
1 & 2	6'-2¼"	6'-6⅞"	6'-9½"	7'-1⅞"	7'-4½"	7'-8¼"
2 & 3	8'-0"	7'-11"	7'-11"	7'-9⅞"	7'-9⅞"	7'-9"
3 & 4	8'-0"	7'-11"	7'-11"	7'-9⅞"	7'-9⅞"	7'-9"
4 & 5	8'-0"	7'-11"	7'-11"	7'-9⅞"	7'-9⅞"	7'-9"
5 & 6	8'-0"	7'-11"	7'-11"	7'-9⅞"	7'-9⅞"	7'-9"
6 & 7	8'-0"	7'-11"	7'-11"	7'-9⅞"	7'-9⅞"	7'-9"
7 & 8	8'-0"	7'-11"	7'-11"	7'-9⅞"	7'-9⅞"	7'-9"

GIRDER AND DIAPHRAGM DIMENSIONS

GIRDER	SPAN 1				SPAN 2						SPAN 3						SPAN 4			
	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"	DIM. "E"	DIM. "F"	DIM. "G"	DIM. "H"	DIM. "I"	DIM. "J"	DIM. "K"	DIM. "L"	DIM. "M"	DIM. "N"	DIM. "O"	DIM. "P"	DIM. "Q"	DIM. "R"	DIM. "S"	DIM. "T"
1	33'-6"	-----	41'-7⅜"	75'-1⅜"	31'-11⅛"	-----	36'-1¾"	-----	40'-9¾"	108'-10⅝"	29'-10½"	-----	34'-7"	-----	39'-8¾"	104'-2¼"	20'-2⅞"	-----	30'-9¾"	51'-0⅝"
2	32'-0⅞"	9'-2¾"	33'-2¾"	74'-6¼"	30'-9¼"	9'-7⅛"	26'-4⅞"	9'-8⅞"	31'-5¾"	107'-11⅞"	29'-2⅛"	10'-1¼"	24'-3⅞"	10'-3⅛"	29'-5⅛"	103'-3⅝"	20'-0¼"	10'-6⅞"	20'-0⅛"	50'-7¼"
3	32'-0⅞"	10'-4½"	32'-0⅞"	74'-6¼"	30'-9¼"	10'-5¼"	25'-6⅝"	10'-5¼"	30'-9⅜"	107'-11⅞"	29'-2⅛"	10'-6⅛"	23'-11"	10'-6⅛"	29'-2⅛"	103'-3⅝"	20'-0¼"	10'-6¾"	20'-0¼"	50'-7¼"
4	32'-0⅞"	10'-4½"	32'-0⅞"	74'-6¼"	30'-9¼"	10'-5¼"	25'-6⅝"	10'-5¼"	30'-9⅜"	107'-11⅞"	29'-2⅛"	10'-6⅛"	23'-11"	10'-6⅛"	29'-2⅛"	103'-3⅝"	20'-0¼"	10'-6¾"	20'-0¼"	50'-7¼"
5	32'-0⅞"	10'-4½"	32'-0⅞"	74'-6¼"	30'-9¼"	10'-5¼"	25'-6⅝"	10'-5¼"	30'-9⅜"	107'-11⅞"	29'-2⅛"	10'-6⅛"	23'-11"	10'-6⅛"	29'-2⅛"	103'-3⅝"	20'-0¼"	10'-6¾"	20'-0¼"	50'-7¼"
6	32'-0⅞"	10'-4½"	32'-0⅞"	74'-6¼"	30'-9¼"	10'-5¼"	25'-6⅝"	10'-5¼"	30'-9⅜"	107'-11⅞"	29'-2⅛"	10'-6⅛"	23'-11"	10'-6⅛"	29'-2⅛"	103'-3⅝"	20'-0¼"	10'-6¾"	20'-0¼"	50'-7¼"
7	32'-0⅞"	10'-4½"	32'-0⅞"	74'-6¼"	30'-9¼"	10'-5¼"	25'-6⅝"	10'-5¼"	30'-9⅜"	107'-11⅞"	29'-2⅛"	10'-6⅛"	23'-11"	10'-6⅛"	29'-2⅛"	103'-3⅝"	20'-0¼"	10'-6¾"	20'-0¼"	50'-7¼"
8	42'-5⅜"	-----	32'-0⅞"	74'-6¼"	41'-2⅝"	-----	36'-0"	-----	30'-9⅜"	107'-11⅞"	39'-8¼"	-----	34'-5¼"	-----	29'-2⅛"	103'-3⅝"	30'-7"	-----	20'-0¼"	50'-7¼"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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Eau Claire, WI 54701
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SUPERSTRUCTURE GIRDER LAYOUT

SHEET 29 OF 45
524

8

8

$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90\B-32-219 190 WB over STH 35\BRIDGE\B-32-219 gdr layout.dgn

7/17/2014

PENTABLE:BReau_shd_util.tbl

$PRFNAME$
Un+41-0627.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 deck elev.dgn

STATE PROJECT NUMBER

1071-06-78

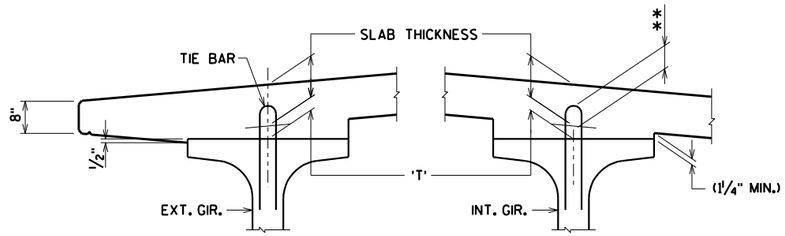
TOP OF DECK ELEVATIONS

SPAN 1										
LOCATION	℄ BRG. W. ABUT.	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.
LT. EDGE	667.31	667.36	667.42	667.47	667.52	667.56	667.61	667.66	667.70	667.75
GIRDER 1	667.33	667.39	667.44	667.49	667.54	667.59	667.63	667.68	667.73	667.77
GIRDER 2	667.40	667.45	667.50	667.56	667.61	667.66	667.71	667.75	667.80	667.85
GIRDER 3	667.48	667.53	667.59	667.64	667.69	667.75	667.80	667.85	667.90	667.94
GIRDER 4	667.56	667.62	667.67	667.73	667.78	667.83	667.89	667.94	667.99	668.04
GIRDER 5	667.64	667.70	667.76	667.81	667.87	667.92	667.97	668.03	668.08	668.13
RL I-90 WB	667.68	667.74	667.80	667.85	667.91	667.96	668.02	668.07	668.12	668.17
GIRDER 6	667.72	667.78	667.84	667.89	667.95	668.00	668.06	668.11	668.16	668.22
GIRDER 7	667.80	667.86	667.92	667.97	668.03	668.09	668.14	668.20	668.25	668.30
GIRDER 8	667.87	667.93	667.99	668.05	668.11	668.17	668.23	668.28	668.34	668.39
RT. EDGE	667.89	667.95	668.01	668.07	668.13	668.19	668.25	668.30	668.36	668.41

SPAN 2										
LOCATION	℄ PIER 1	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.
LT. EDGE	667.79	667.85	667.91	667.97	668.02	668.08	668.13	668.18	668.22	668.27
GIRDER 1	667.82	667.88	667.94	667.99	668.05	668.10	668.15	668.20	668.25	668.30
GIRDER 2	667.89	667.96	668.02	668.08	668.14	668.19	668.25	668.30	668.35	668.40
GIRDER 3	667.99	668.06	668.12	668.18	668.24	668.30	668.35	668.41	668.46	668.51
GIRDER 4	668.08	668.15	668.22	668.28	668.34	668.40	668.46	668.51	668.57	668.62
GIRDER 5	668.18	668.24	668.31	668.38	668.44	668.50	668.56	668.62	668.67	668.73
RL I-90 WB	668.22	668.29	668.36	668.42	668.49	668.55	668.61	668.67	668.72	668.77
GIRDER 6	668.27	668.34	668.41	668.47	668.54	668.60	668.66	668.72	668.78	668.83
GIRDER 7	668.36	668.43	668.50	668.57	668.63	668.70	668.76	668.82	668.88	668.94
GIRDER 8	668.44	668.52	668.59	668.66	668.73	668.79	668.86	668.92	668.98	669.04
RT. EDGE	668.47	668.54	668.61	668.68	668.75	668.82	668.88	668.95	669.01	669.07

SPAN 3										
LOCATION	℄ PIER 2	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.
LT. EDGE	668.31	668.35	668.39	668.42	668.45	668.48	668.51	668.54	668.57	668.59
GIRDER 1	668.34	668.38	668.41	668.45	668.48	668.51	668.54	668.57	668.60	668.62
GIRDER 2	668.44	668.48	668.52	668.56	668.60	668.63	668.66	668.69	668.72	668.75
GIRDER 3	668.56	668.60	668.64	668.68	668.72	668.75	668.78	668.82	668.85	668.88
GIRDER 4	668.67	668.71	668.75	668.79	668.83	668.87	668.91	668.94	668.97	669.00
GIRDER 5	668.78	668.82	668.87	668.91	668.95	668.99	669.03	669.06	669.10	669.13
RL I-90 WB	668.83	668.87	668.92	668.96	669.00	669.04	669.08	669.12	669.15	669.18
GIRDER 6	668.89	668.93	668.98	669.02	669.07	669.11	669.15	669.18	669.22	669.25
GIRDER 7	668.99	669.04	669.09	669.13	669.18	669.22	669.26	669.30	669.34	669.37
GIRDER 8	669.10	669.15	669.20	669.24	669.29	669.33	669.38	669.42	669.46	669.49
RT. EDGE	669.12	669.17	669.22	669.27	669.32	669.36	669.41	669.45	669.49	669.53

SPAN 4											
LOCATION	℄ PIER 3	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	℄ BRG. E. ABUT.
LT. EDGE	668.61	668.62	668.63	668.64	668.65	668.65	668.66	668.67	668.67	668.68	668.69
GIRDER 1	668.64	668.65	668.66	668.67	668.68	668.69	668.70	668.70	668.71	668.72	668.72
GIRDER 2	668.77	668.78	668.80	668.81	668.82	668.83	668.83	668.84	668.85	668.86	668.87
GIRDER 3	668.90	668.92	668.93	668.94	668.95	668.96	668.97	668.98	668.99	669.00	669.01
GIRDER 4	669.03	669.05	669.06	669.07	669.08	669.09	669.10	669.11	669.12	669.13	669.14
GIRDER 5	669.16	669.17	669.19	669.20	669.21	669.22	669.24	669.25	669.26	669.27	669.28
RL I-90 WB	669.21	669.23	669.24	669.25	669.27	669.28	669.29	669.30	669.31	669.32	669.33
GIRDER 6	669.28	669.30	669.31	669.33	669.34	669.35	669.37	669.38	669.39	669.40	669.41
GIRDER 7	669.41	669.42	669.44	669.45	669.47	669.48	669.49	669.51	669.52	669.53	669.54
GIRDER 8	669.53	669.55	669.56	669.58	669.59	669.61	669.62	669.63	669.65	669.66	669.67
RT. EDGE	669.56	669.58	669.59	669.61	669.62	669.64	669.65	669.67	669.68	669.69	669.71



SLAB HAUNCH DETAIL

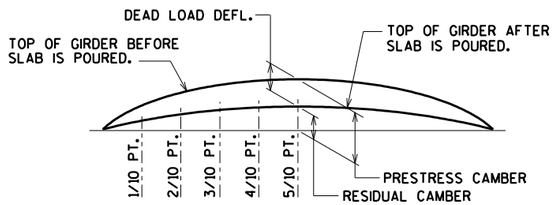
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

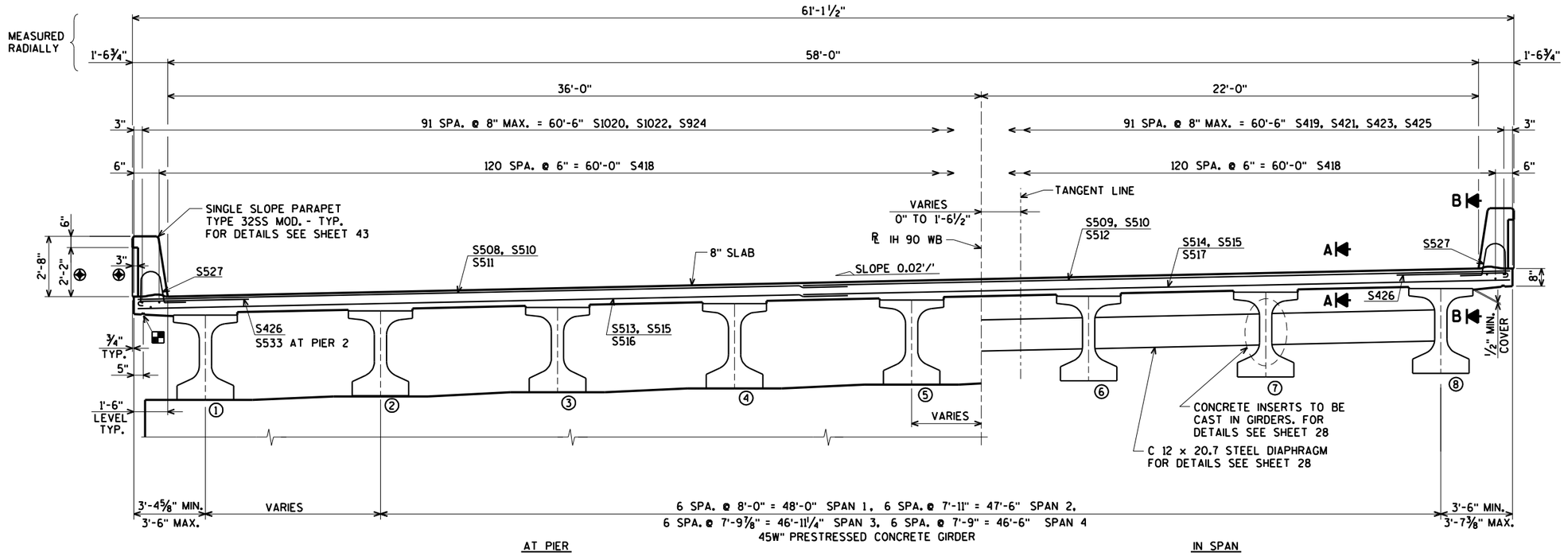
STRUCTURE B-32-219

DRAWN BY IAG | PLANS CK'D. DNS

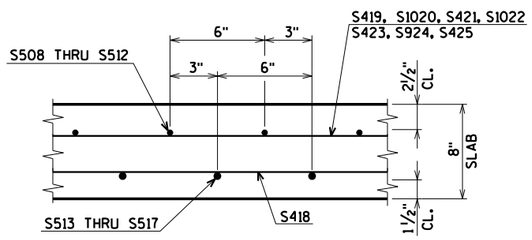
TOP OF DECK ELEVATIONS

SHEET 30 OF 45
525

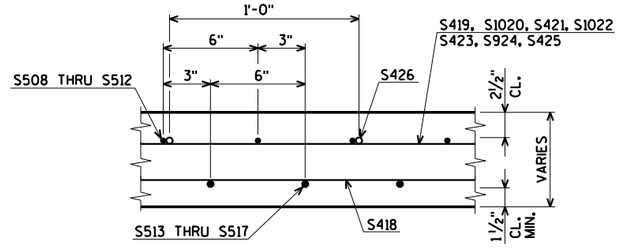
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TYPICAL CROSS SECTION THRU DECK
(LOOKING EAST)



SECTION A



SECTION B

¾" CONT. DRIP GROOVE TERMINATE 2'-0" FROM ABUTMENTS - TYP.

ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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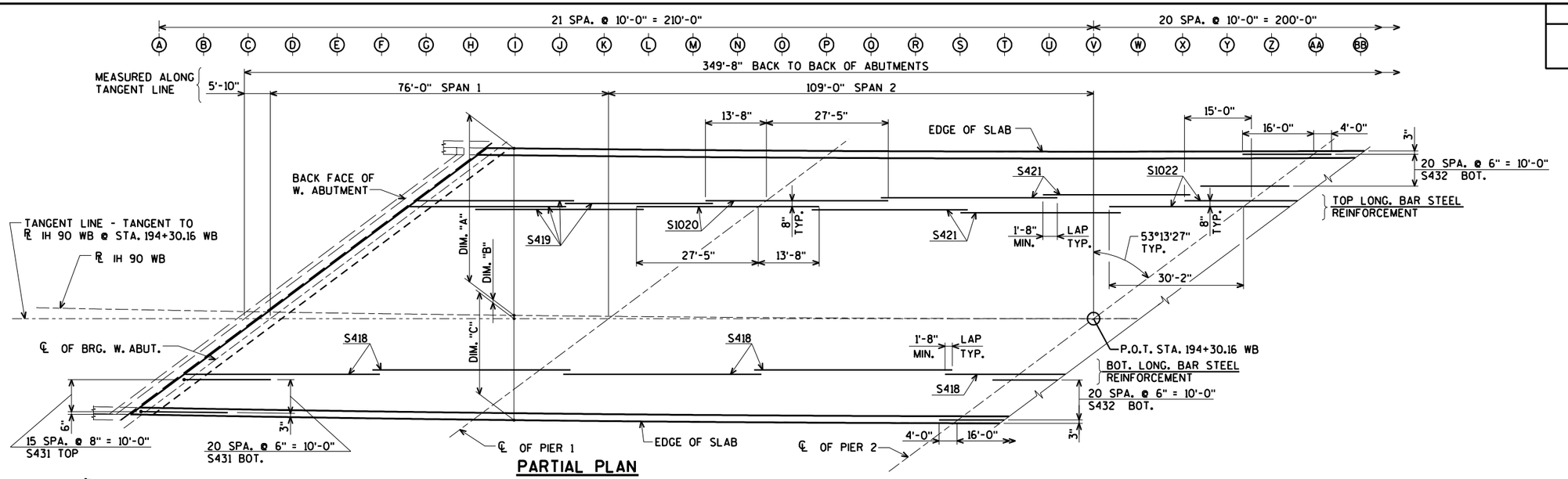
SUPERSTRUCTURE

SHEET 31 OF 45
526

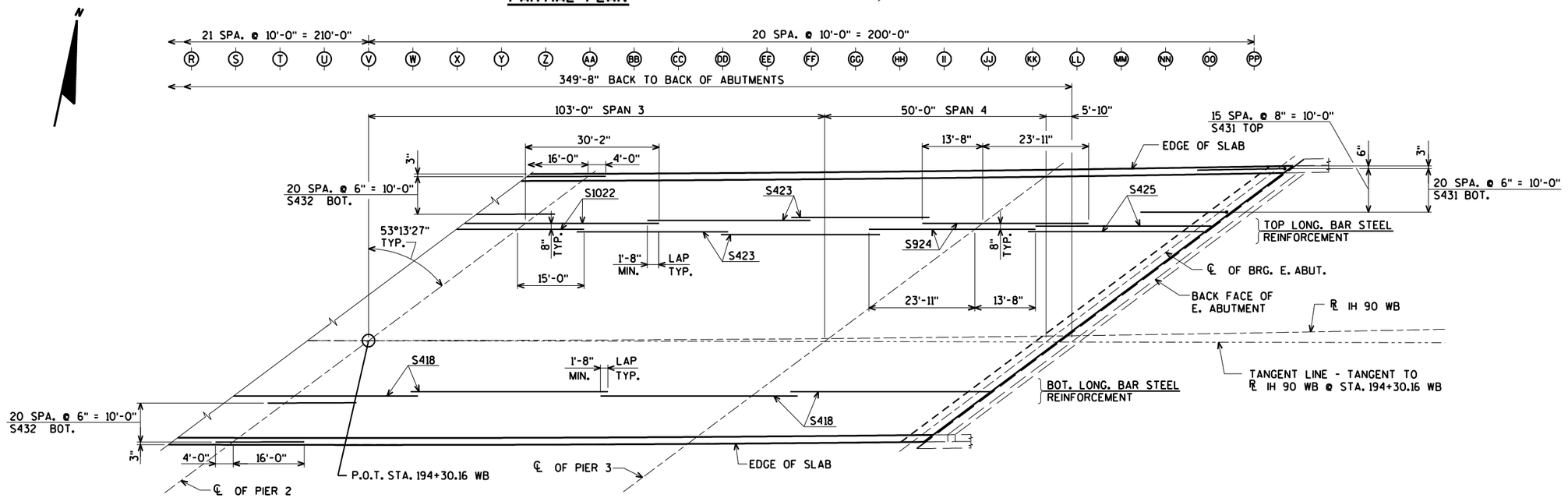
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U:±41-0627.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 sup.dgn

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PARTIAL PLAN



PARTIAL PLAN

EDGE OF DECK OFFSETS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
DIM. "A"	------	------	------	------	------	------	------	------	38'-2⅞"	38'-1½"	38'-0⅜"	37'-11¼"	37'-10¼"	37'-9⅜"	37'-8⅝"	37'-7⅞"	37'-7¼"	37'-6⅞"	37'-6½"
DIM. "B"	1'-11"	1'-8⅞"	1'-6⅞"	1'-4⅞"	1'-3⅛"	1'-1⅜"	11¾"	10¼"	8⅛"	7½"	6⅜"	5¼"	4¼"	3⅜"	2½"	1⅞"	1¼"	⅞"	½"
DIM. "C"	21'-7"	21'-9⅛"	21'-11¼"	22'-1⅛"	22'-3"	22'-4⅝"	22'-6¼"	22'-7¾"	22'-9¼"	22'-10½"	22'-11¾"	23'-0¾"	23'-1¾"	23'-2⅝"	23'-3½"	23'-4⅛"	23'-4¾"	23'-5⅛"	23'-5½"

	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL
DIM. "A"	37'-6¼"	37'-6"	37'-6"	37'-6"	37'-6¼"	37'-6½"	37'-6⅞"	37'-7¼"	37'-7⅞"	37'-8⅝"	37'-9⅜"	37'-10¼"	37'-11¼"	38'-0⅜"	38'-1½"	38'-2⅞"	38'-4¼"	38'-5¾"	38'-7⅜"
DIM. "B"	¼"	0"	0"	0"	¼"	½"	⅞"	1¼"	1⅞"	2½"	3⅜"	4¼"	5¼"	6⅜"	7½"	8⅞"	10¼"	11¾"	1'-1⅜"
DIM. "C"	23'-5¾"	23'-6"	23'-6"	23'-6"	23'-5¾"	23'-5½"	23'-5⅛"	23'-4¾"	23'-4⅛"	23'-3½"	23'-2⅝"	23'-1¾"	23'-0¾"	22'-11¾"	22'-10½"	------	------	------	------

	MM	NN	OO	PP
DIM. "A"	38'-9⅛"	38'-11"	39'-0⅞"	39'-3"
DIM. "B"	1'-3⅛"	1'-4⅞"	1'-6⅞"	1'-8⅞"
DIM. "C"	------	------	------	------

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STRUCTURE B-32-219

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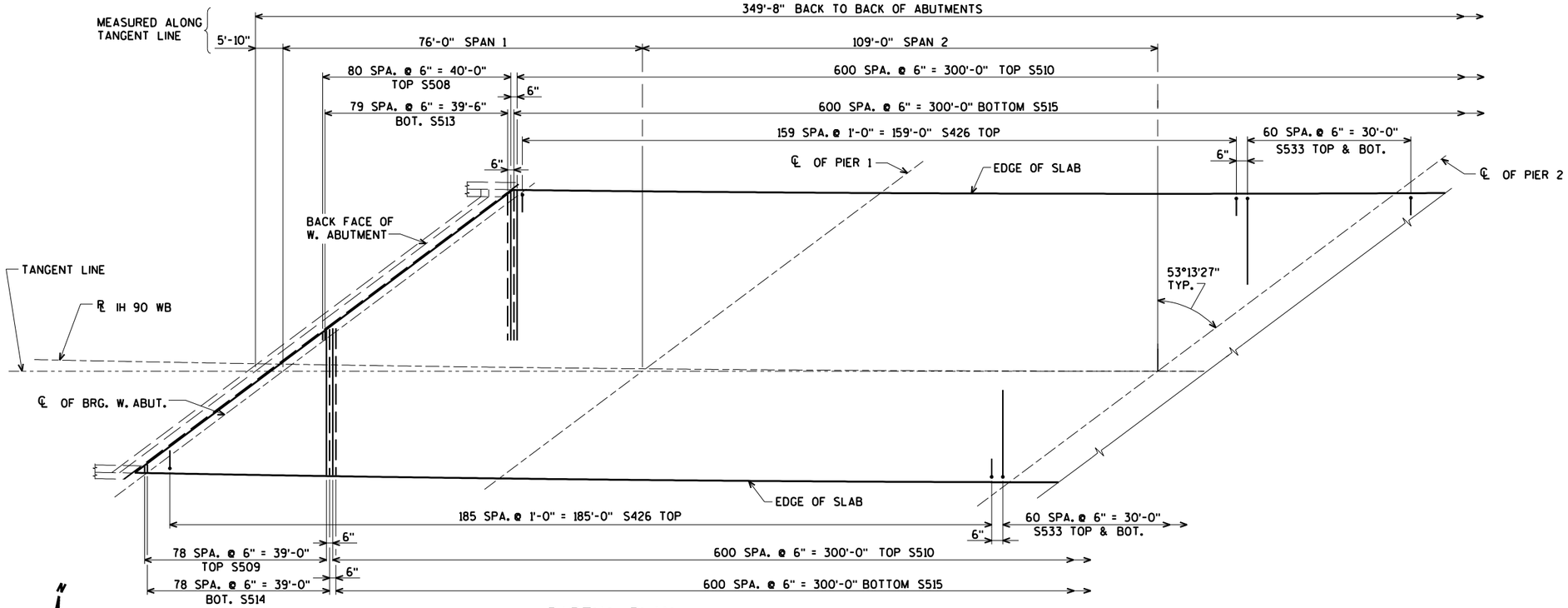
LONGITUDINAL SLAB STEEL LAYOUT

SHEET 32 OF 45
527

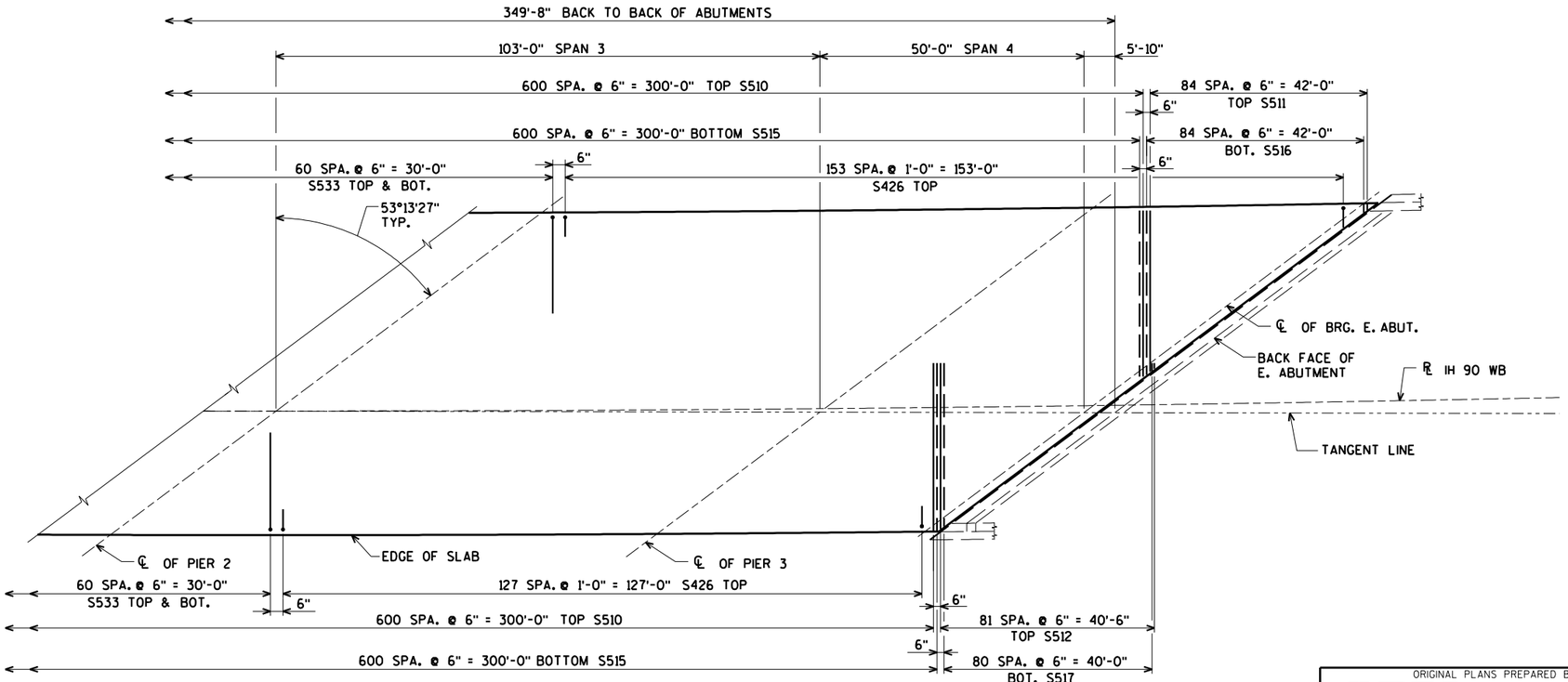
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PARTIAL PLAN



PARTIAL PLAN

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TRANSVERSE SLAB STEEL LAYOUT

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528

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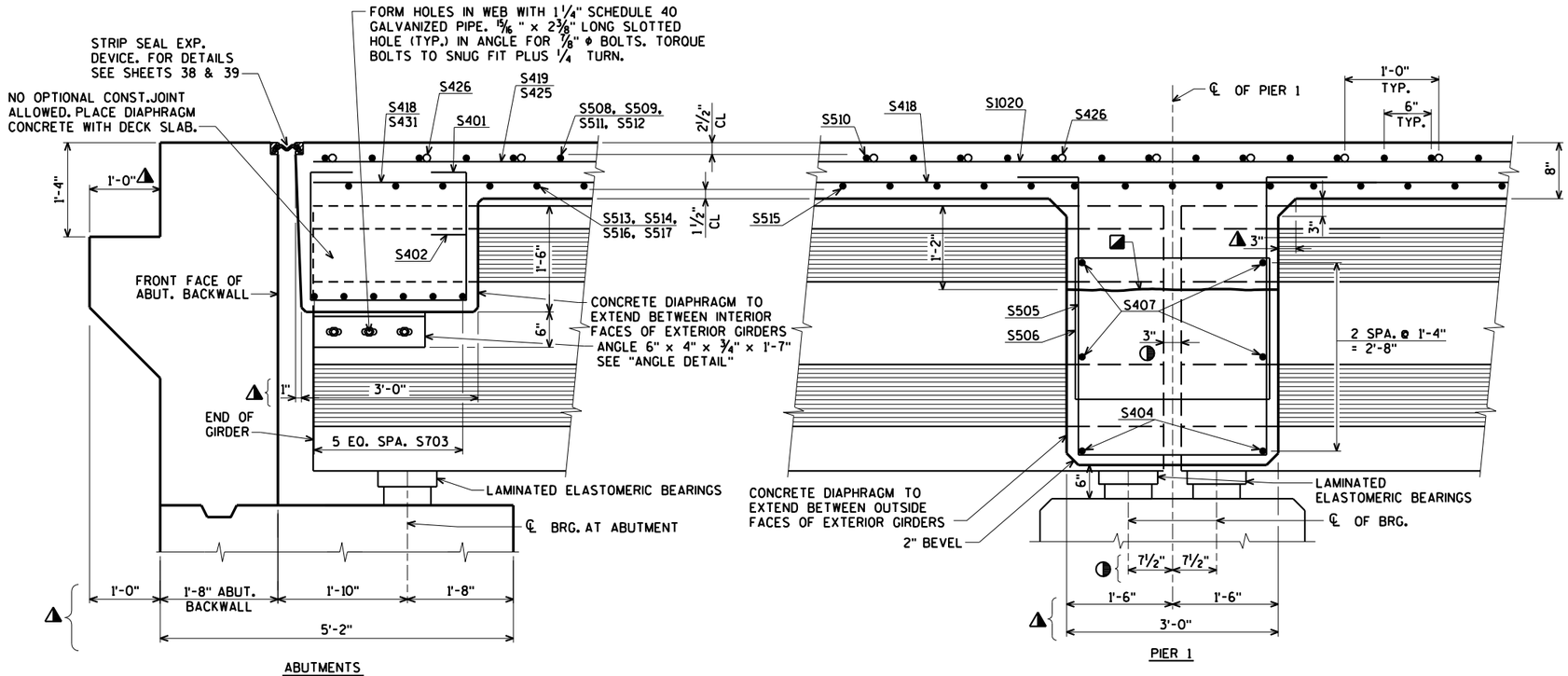
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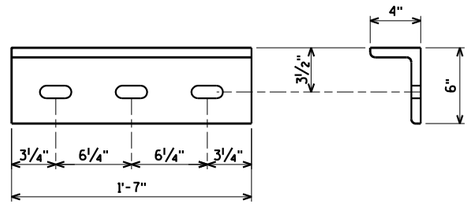
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6/2/2014

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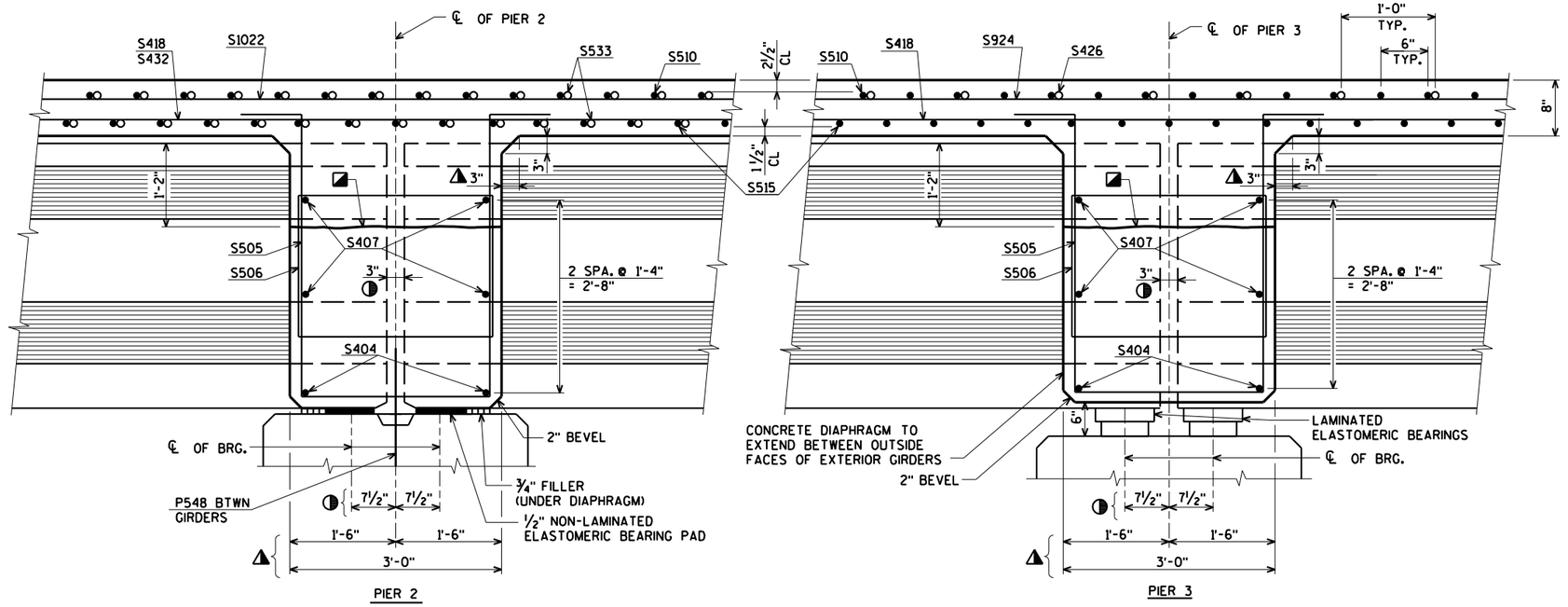


ANGLE DETAIL

DIAPHRAGM SUPPORT ANGLES SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL SUPPORT ANGELS SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM 153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.

ALL DIAPHRAM SUPPORT HARDWARE SHALL BE INCIDENTAL TO "CONCRETE MASONRY BRIDGES".



PART LONGITUDINAL SECTION

▲ DIMENSIONS MEASURED NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

◑ DIMENSIONS MEASURED ALONG ℄ OF GIRDER.

◪ OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

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SUPERSTRUCTURE DETAILS

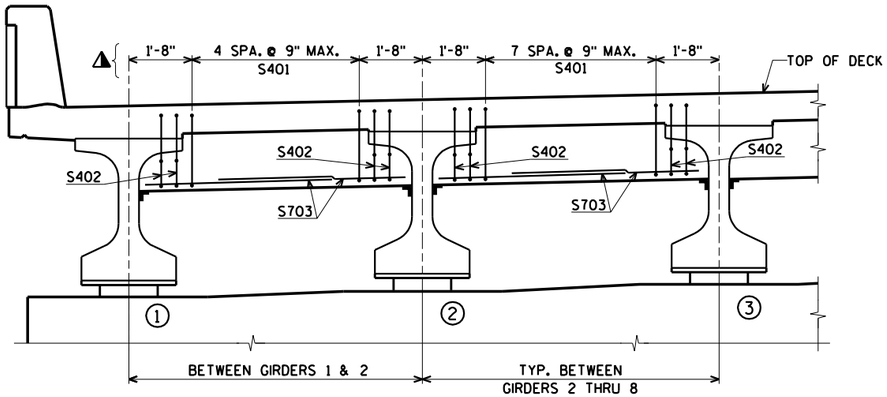
SHEET 34 OF 45
529

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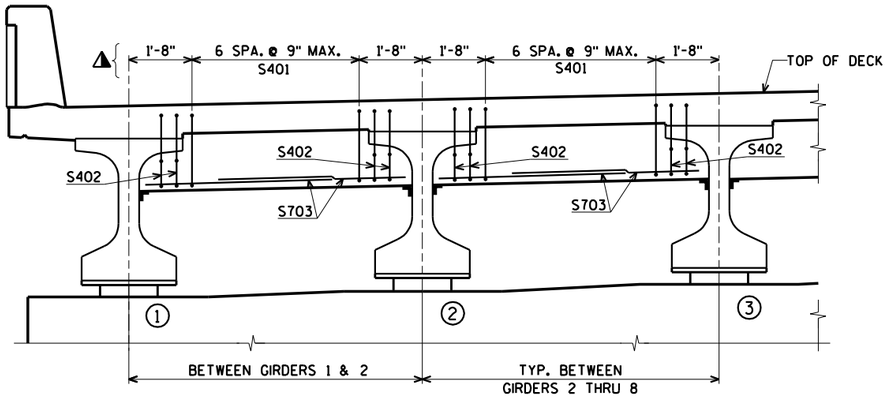
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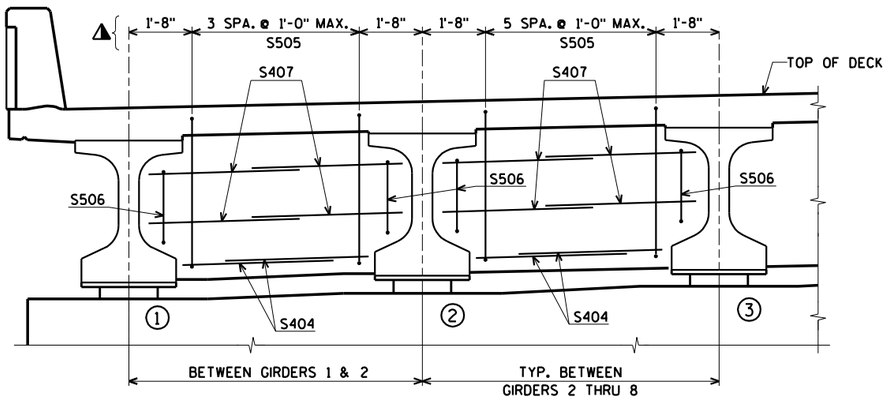
1071-06-78



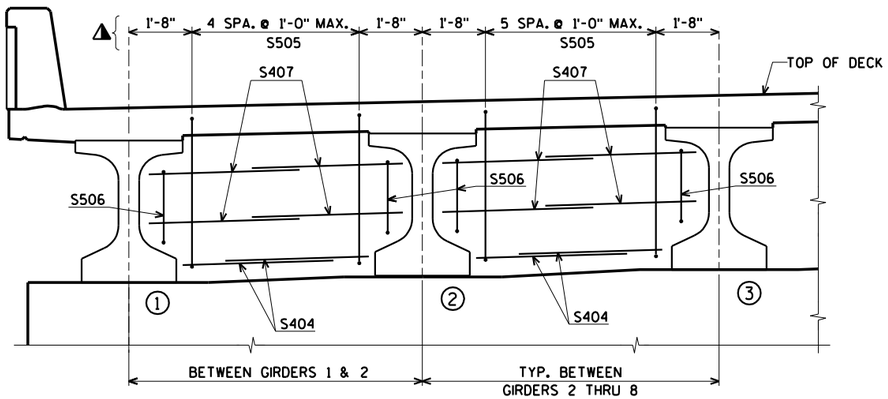
DIAPHRAGM DETAIL AT WEST ABUTMENT



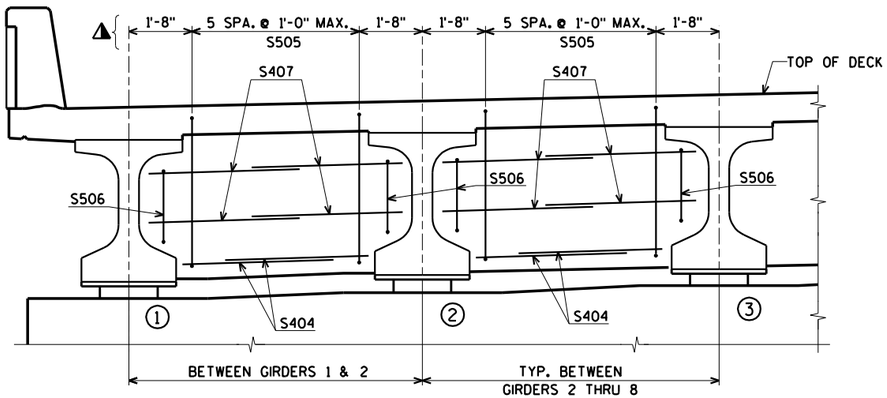
DIAPHRAGM DETAIL AT EAST ABUTMENT



DIAPHRAGM DETAIL AT PIER 1



DIAPHRAGM DETAIL AT PIER 2



DIAPHRAGM DETAIL AT PIER 3

⚠ DIMENSIONS MEASURED NORMAL TO GIRDERS

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STRUCTURE B-32-219

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DIAPHRAGM DETAILS

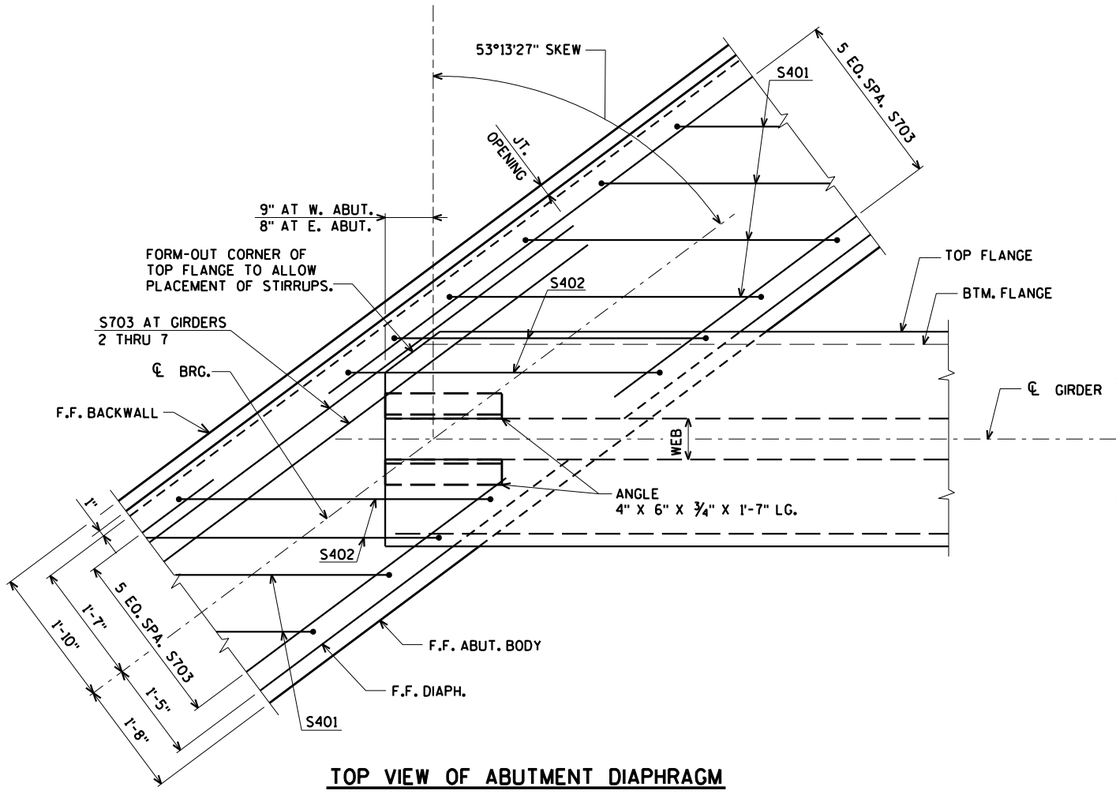
SHEET 35 OF 45
530

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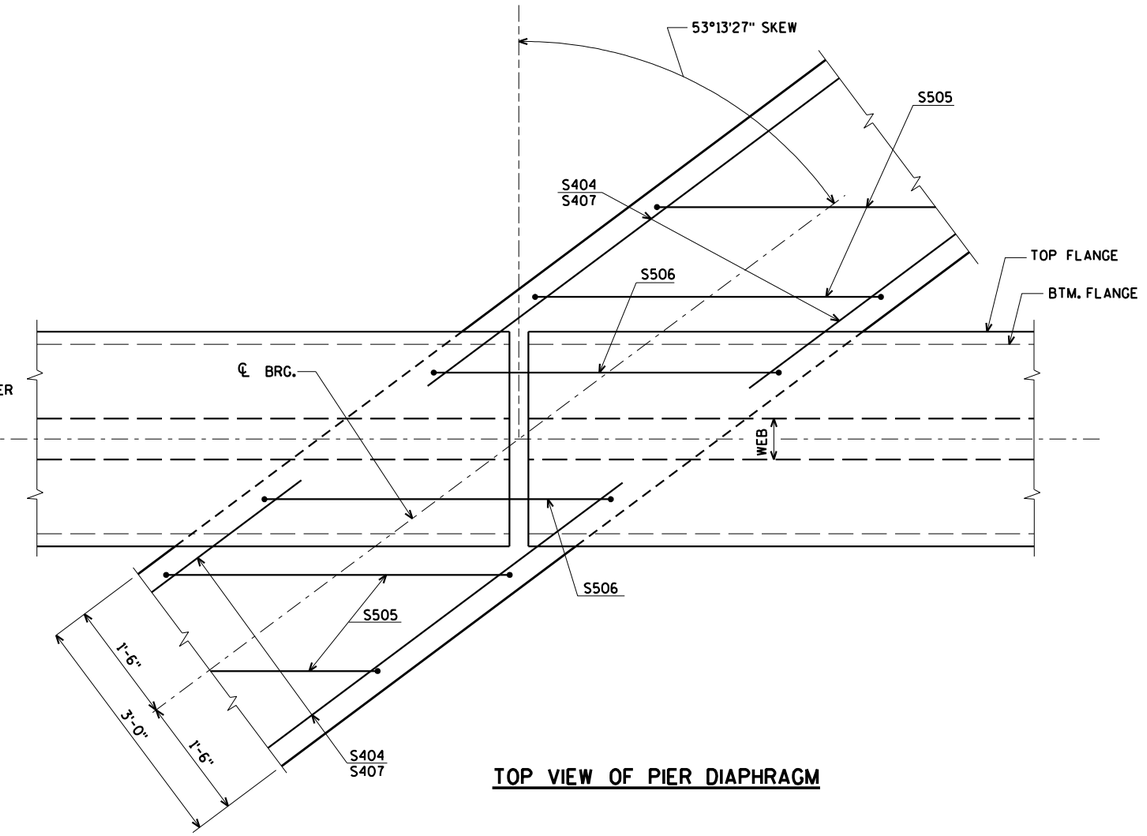
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TOP VIEW OF ABUTMENT DIAPHRAGM



TOP VIEW OF PIER DIAPHRAGM

8

8

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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DIAPHRAGM DETAILS

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531

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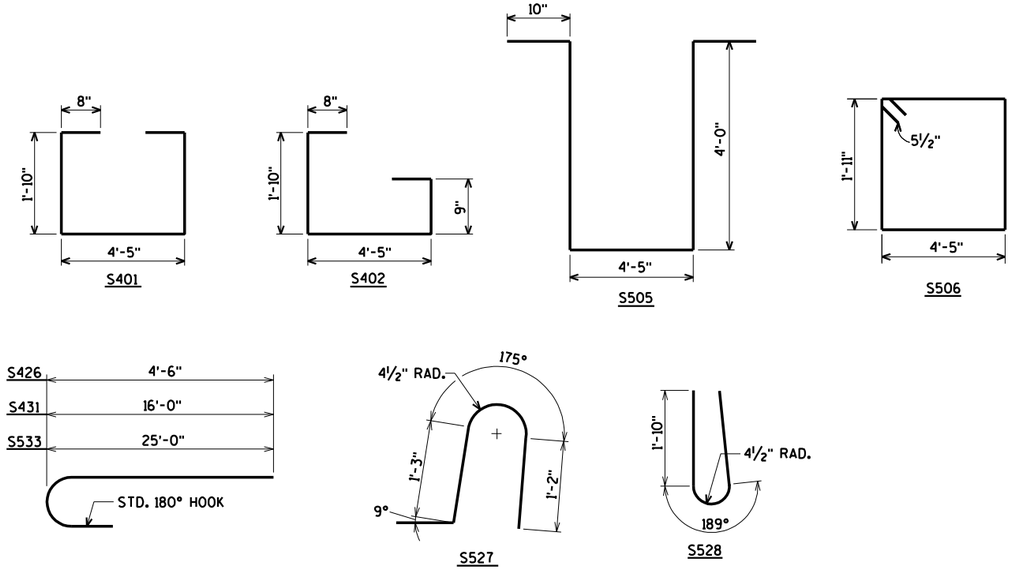
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BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	213,040# COATED LOCATION
S401	X	102	9-1	X			DIAPH. @ ABUT. VERT.
S402	X	56	8-0	X			DIAPH. @ ABUT. VERT.
S703	X	192	7-10				DIAPH. @ ABUT. HORIZ.
S404	X	84	5-2				DIAPH. @ PIERS HORIZ.
S505	X	123	13-7	X			DIAPH. @ PIERS VERT.
S506	X	42	13-3	X			DIAPH. @ PIERS VERT.
S407	X	168	7-2				DIAPH. @ PIERS HORIZ.
S508	X	81	16-8			⊗	SLAB TRANS. TOP SPAN 1
S509	X	79	15-10			⊗	SLAB TRANS. TOP SPAN 1
S510	X	1202	31-10				SLAB TRANS. TOP
S511	X	85	16-4			⊗	SLAB TRANS. TOP SPAN 4
S512	X	82	16-8			⊗	SLAB TRANS. TOP SPAN 4
S513	X	80	16-6			⊗	SLAB TRANS. BOT. SPAN 1
S514	X	79	16-2			⊗	SLAB TRANS. BOT. SPAN 1
S515	X	1202	31-8				SLAB TRANS. BOT.
S516	X	85	16-7			⊗	SLAB TRANS. BOT. SPAN 4
S517	X	81	16-6			⊗	SLAB TRANS. BOT. SPAN 4
S418	X	968	44-7				SLAB LONG. BOT.
S419	X	184	34-2				SLAB LONG. TOP SPAN 1
S1020	X	92	41-1				SLAB LONG. TOP PIER 1
S421	X	184	35-10				SLAB LONG. TOP SPAN 2
S1022	X	92	45-2				SLAB LONG. TOP PIER 2
S423	X	184	34-8				SLAB LONG. TOP SPAN 3
S924	X	92	37-7				SLAB LONG. TOP PIER 3
S425	X	92	40-7				SLAB LONG. TOP SPAN 4
S426	X	628	5-0	X			SLAB TRANS. TOP @ PARAPET
S527	X	1032	4-5	X			PARAPETS VERT.
S528	X	1032	5-0	X			PARAPETS VERT.
S529	X	72	59-0				PARAPETS HORIZ.
S430	X	28	12-0				EXP. JOINT HORIZ.
S431	X	74	16-6	X			SLAB LONG. CORNERS TOP & BOT.
S432	X	42	20-0				SLAB LONG. BOT. PIER 2
S533	X	244	25-7	X			SLAB TRANS. TOP & BOT. PIER 2

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

⊗ 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
S508	1 SERIES OF 81	1'-9" TO 31'-7"
S509	1 SERIES OF 79	1'-1" TO 30'-7"
S511	1 SERIES OF 85	1'-0" TO 31'-8"
S512	1 SERIES OF 82	1'-5" TO 31'-11
S513	1 SERIES OF 80	1'-9" TO 31'-3"
S514	1 SERIES OF 79	1'-5" TO 30'-11
S516	1 SERIES OF 85	1'-3" TO 31'-11
S517	1 SERIES OF 81	1'-7" TO 31'-5"

BUNDLE AND TAG EACH SERIES SEPARATELY.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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SUPERSTRUCTURE
BILL OF BARS

SHEET 37 OF 45
532

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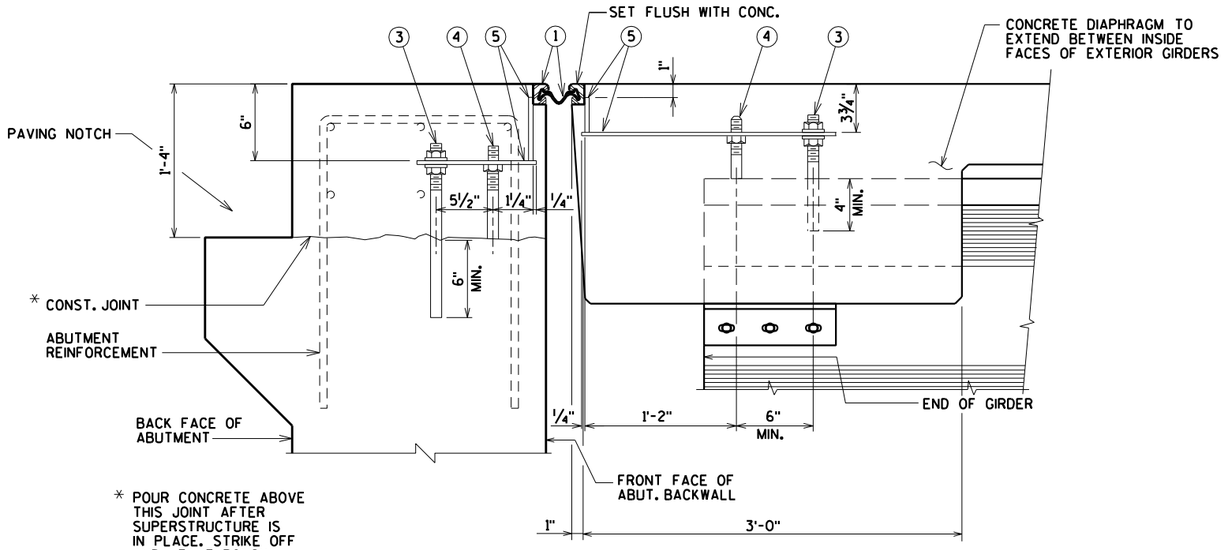
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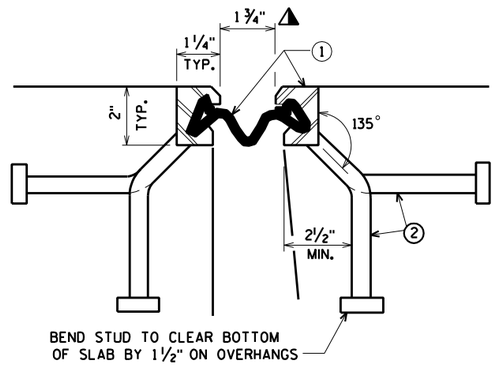
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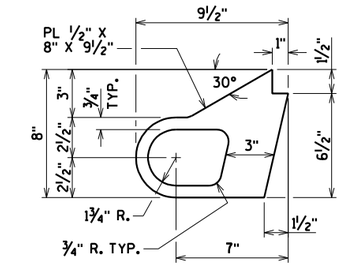
SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

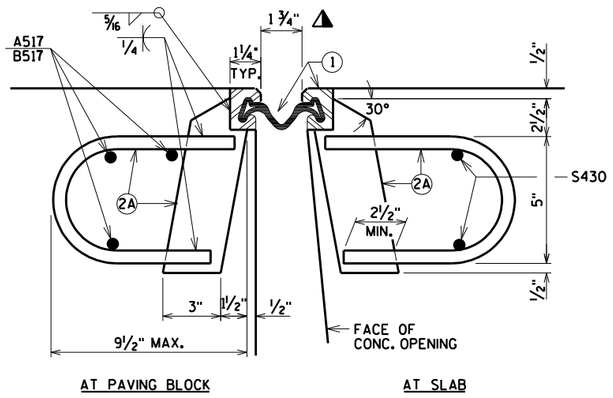


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF SLAB



ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

DS BROWN SSA2 FRAME RAIL WITH
A2R SERIES STRIP SEAL USED

LEGEND

1. NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.
2. STUDS 5/8"ϕ X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH 5/8"ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER AND ABUTMENT BACKWALL AS SHOWN.
4. ¾"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" x 10" x 3'-0" LONG WITH HOLES FOR #7.
7. ¾" ϕ x 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLES. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" ϕ x 4" GALV. HEX HEAD BOLT. BEND 45°.
9. ¾" ϕ x 2 ¼" GALV. THREADED COUPLING.
10. 1" x 5" SLOTTED CSK. HOLE FOR #7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

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

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

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

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-37-219".

ANCHOR SYSTEM #8 & #9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

⚠ DIMENSION MEASURED NORMAL TO JOINT.

8

8

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STRUCTURE B-32-219

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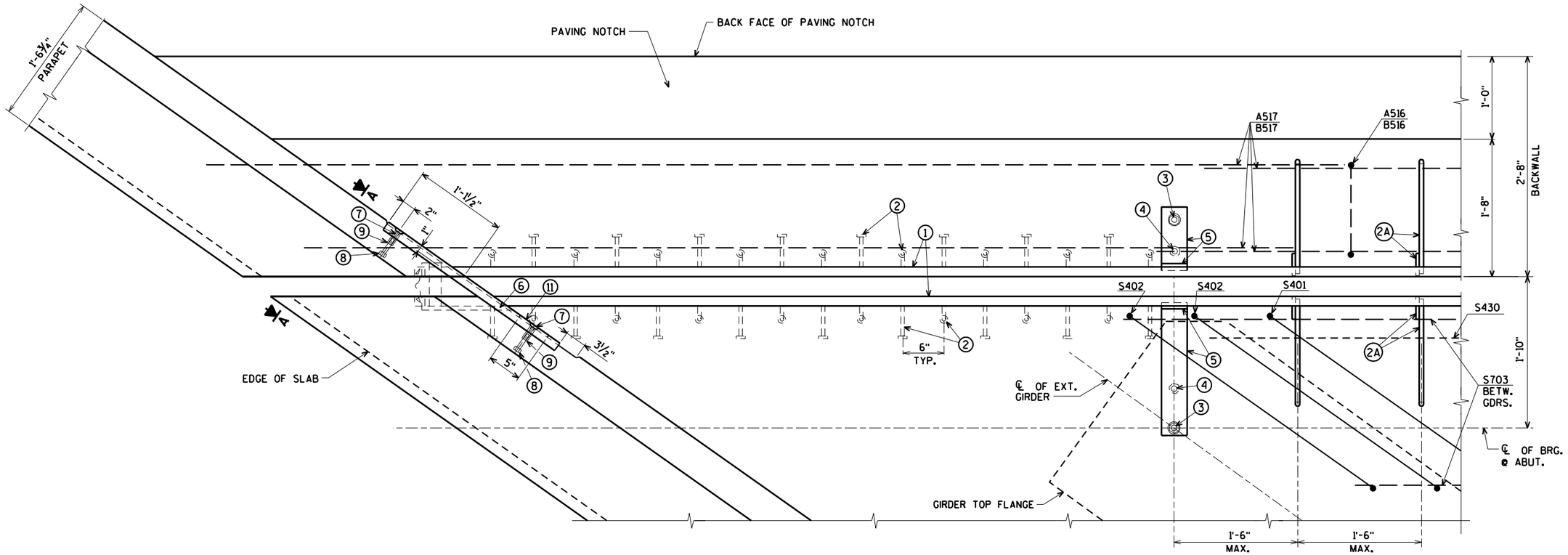
EXPANSION DEVICE

SHEET 38 OF 45
533

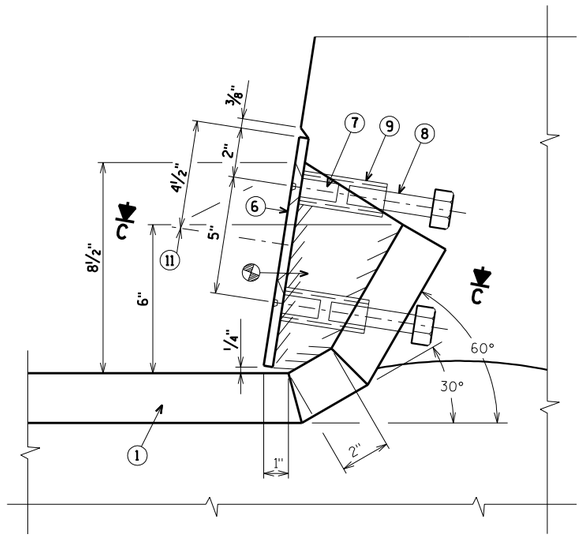
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$PRFNAME$
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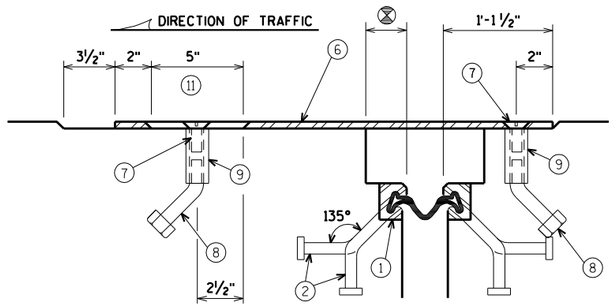
STATE PROJECT NUMBER
1071-06-78



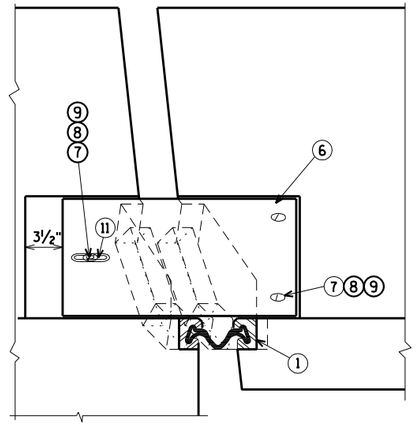
PART PLAN



SECTION A



SECTION C



VIEW OF PARAPET PLATES FROM ROADWAY

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

DRAWN BY CLS | PLANS CK'D. DNS

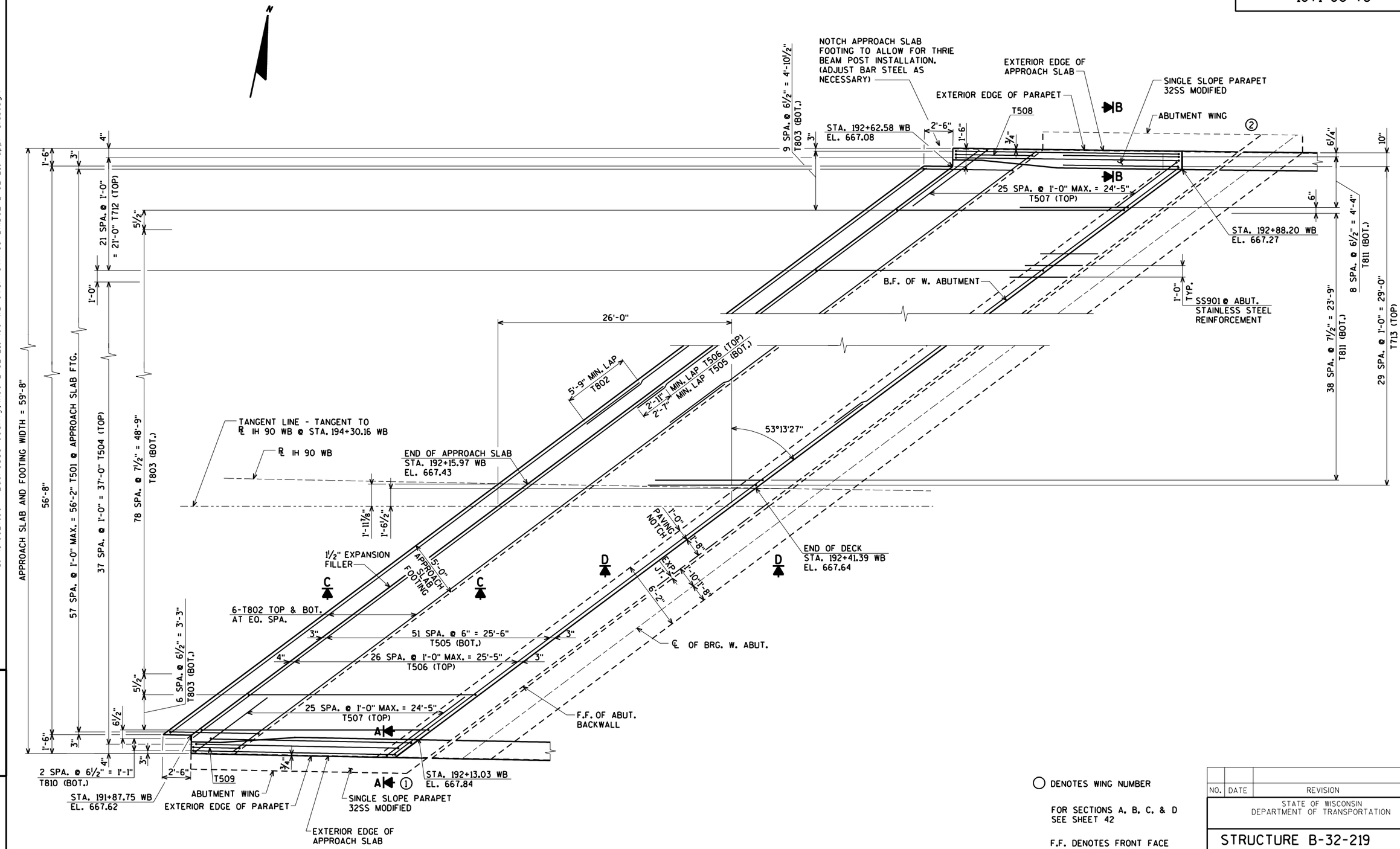
EXPANSION DEVICE

SHEET 39 OF 45
534

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STATE PROJECT NUMBER

1071-06-78



WEST APPROACH SLAB

○ DENOTES WING NUMBER

FOR SECTIONS A, B, C, & D SEE SHEET 42

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

ORIGINAL PLANS PREPARED BY

AYRES ASSOCIATES

3433 Oakwood Hills Parkway
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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

DRAWN BY CLS | PLANS CK'D. DNS

WEST STRUCTURAL APPROACH SLAB

SHEET 40 OF 45
535

8

8

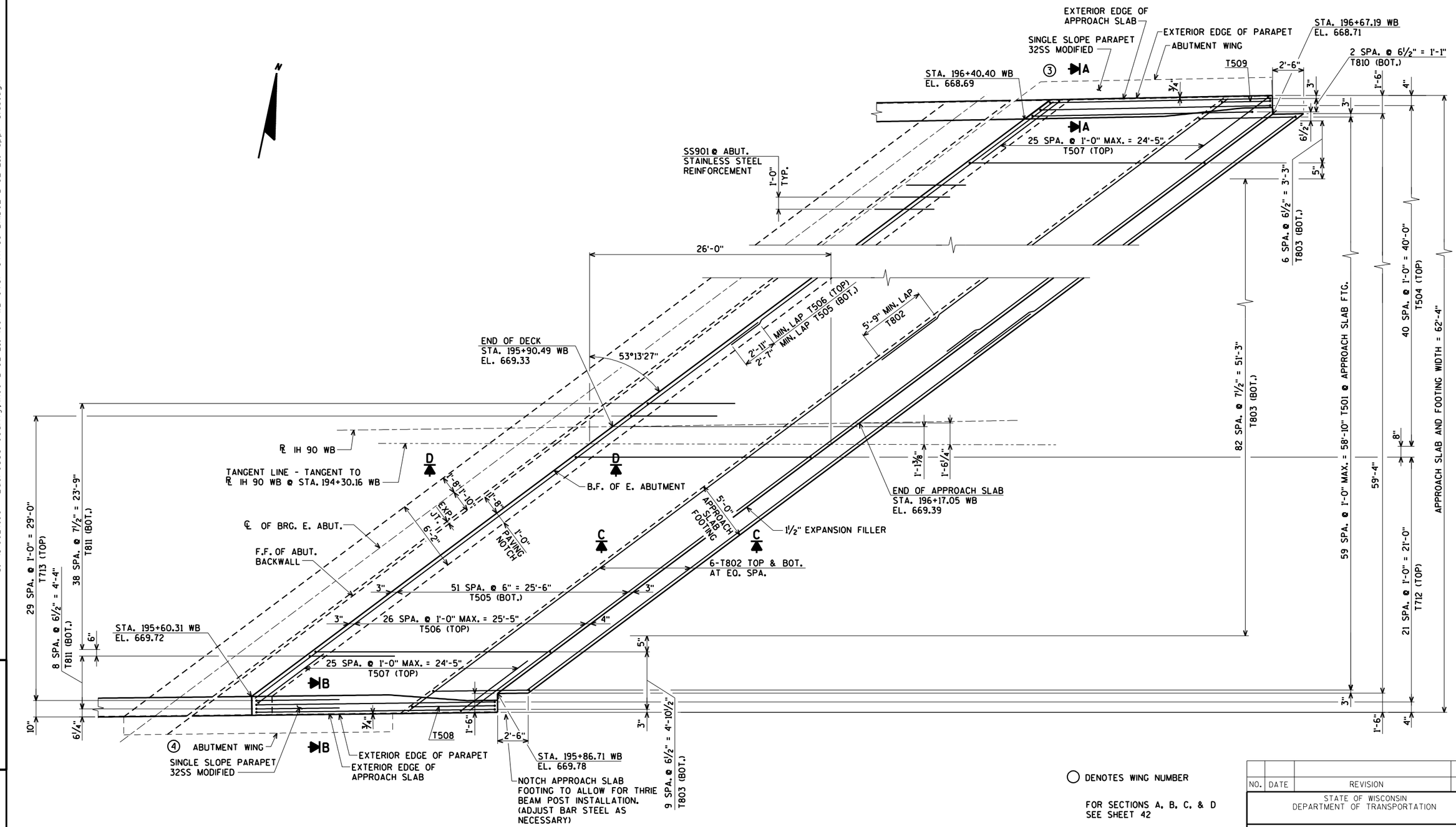
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U:\41-0627.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 appr slab.dgn

6/2/2014

PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER

1071-06-78



EAST APPROACH SLAB

○ DENOTES WING NUMBER

FOR SECTIONS A, B, C, & D SEE SHEET 42

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

ORIGINAL PLANS PREPARED BY

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

DRAWN BY CLS | PLANS CK'D. DNS

EAST STRUCTURAL APPROACH SLAB

SHEET 41 OF 45
536

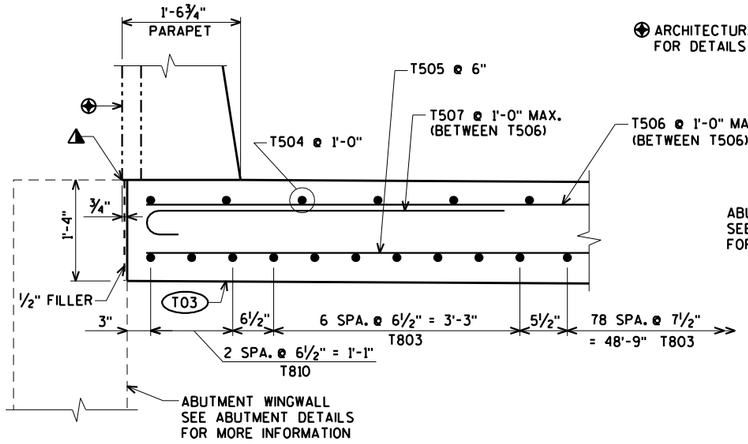
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8

8

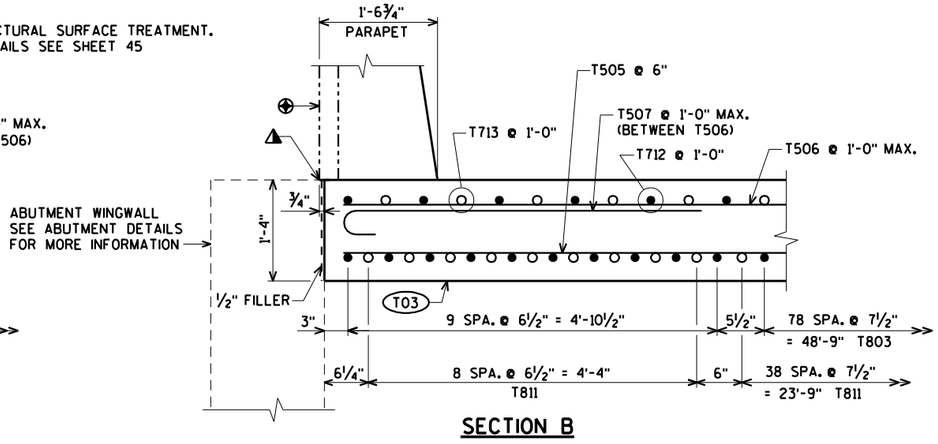
6/2/2014

PENTABLE:BReau_shd_util.tbl



SECTION A

ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SHEET 45



SECTION B

FOR LOCATIONS OF SECTIONS A, B, C, AND D SEE SHEETS 40 & 41

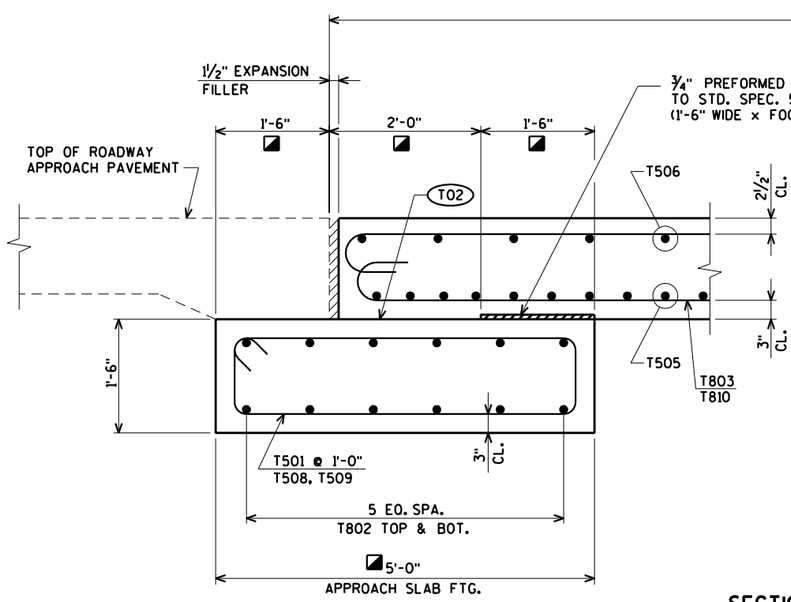
BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1,050* STAINLESS STEEL (PER APPROACH SLAB) LOCATION
SS901		62	5-0	X		CONC. BACKWALL TO APPROACH SLAB

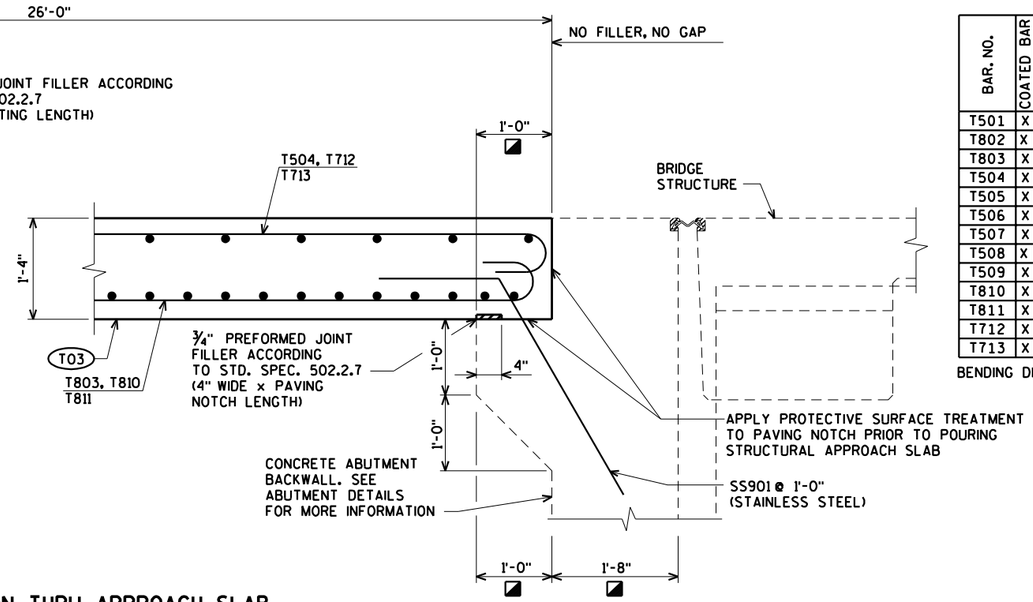
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	24,630* COATED (WEST APPROACH SLAB) LOCATION
T501	X	58	17-8	X		APPROACH SLAB FTG. - STIRRUP
T802	X	24	52-6			APPROACH SLAB FTG. - TRANS.
T803	X	96	27-4	X		APPROACH SLAB - LONG. - BOT.
T504	X	38	26-8	X		APPROACH SLAB - LONG - TOP
T505	X	104	50-11			APPROACH SLAB - TRANS. - BOT.
T506	X	54	51-1			APPROACH SLAB - TRANS. - TOP
T507	X	52	4-1	X		APPROACH SLAB - TRANS. - TOP
T508	X	1	15-4	X		APPROACH SLAB FTG. - STIRRUP
T509	X	1	10-0	X		APPROACH SLAB FTG. - STIRRUP
T810	X	3	25-4	X		APPROACH SLAB - LONG. - BOT.
T811	X	48	10-11	X		APPROACH SLAB - LONG. - BOT.
T712	X	22	27-2	X		APPROACH SLAB - LONG. - TOP
T713	X	30	10-10	X		APPROACH SLAB - LONG. - TOP

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	25,550* COATED (EAST APPROACH SLAB) LOCATION
T501	X	60	17-8	X		APPROACH SLAB FTG. - STIRRUP
T802	X	24	54-9			APPROACH SLAB FTG. - TRANS.
T803	X	100	27-4	X		APPROACH SLAB - LONG. - BOT.
T504	X	41	26-8	x		APPROACH SLAB - LONG - TOP
T505	X	104	53-1			APPROACH SLAB - TRANS. - BOT.
T506	X	54	53-3			APPROACH SLAB - TRANS. - TOP
T507	X	52	4-1	X		APPROACH SLAB - TRANS. - TOP
T508	X	1	15-4	X		APPROACH SLAB FTG. - STIRRUP
T509	X	1	10-0	X		APPROACH SLAB FTG. - STIRRUP
T810	X	3	25-4	X		APPROACH SLAB - LONG. - BOT.
T811	X	48	10-11	X		APPROACH SLAB - LONG. - BOT.
T712	X	22	27-2	X		APPROACH SLAB - LONG. - TOP
T713	X	30	10-10	X		APPROACH SLAB - LONG. - TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



SECTION C



SECTION D

SECTION THRU APPROACH SLAB

◪ MEASURED NORMAL TO ABUTMENT

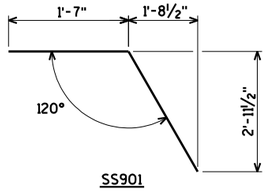
▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

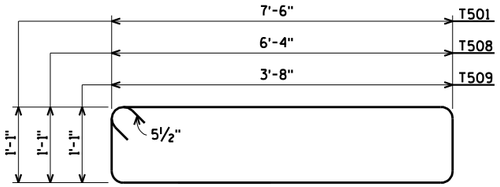
(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

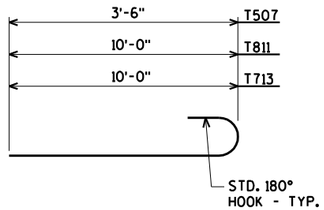
(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE.

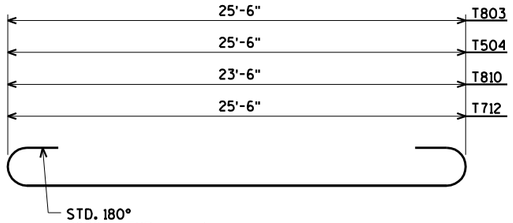
POLYETHYLENE SHEETS ARE INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

ALL STRUCTURAL APPROACH SLAB CONCRETE PAID FOR UNDER "CONCRETE MASONRY BRIDGES".









NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

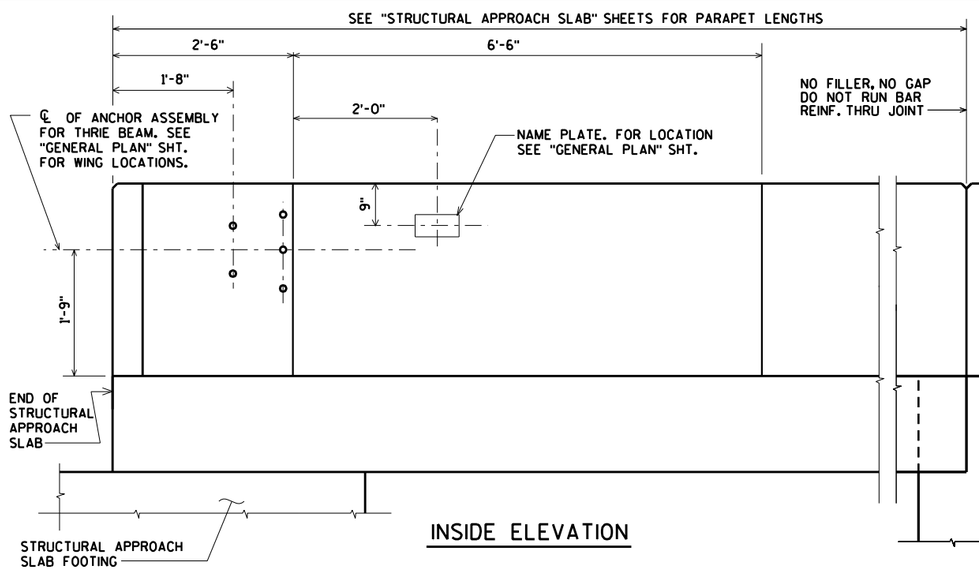
DRAWN BY CLS | PLANS CK'D. DNS

STRUCTURAL APPROACH SLAB DETAILS

SHEET 42 OF 45
537

ORIGINAL PLANS PREPARED BY
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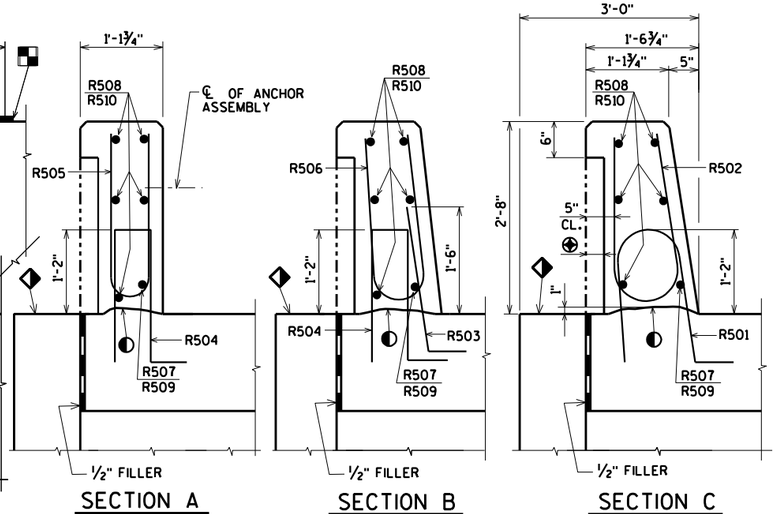
$PRFNAME$
U:\41-0627.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 appr slab.dgn



INSIDE ELEVATION

BENCH MARK CAP (WHEN SUPPLIED).

NO FILLER, NO CAP DO NOT RUN BAR REINF. THRU JOINT



SECTION A

SECTION B

SECTION C

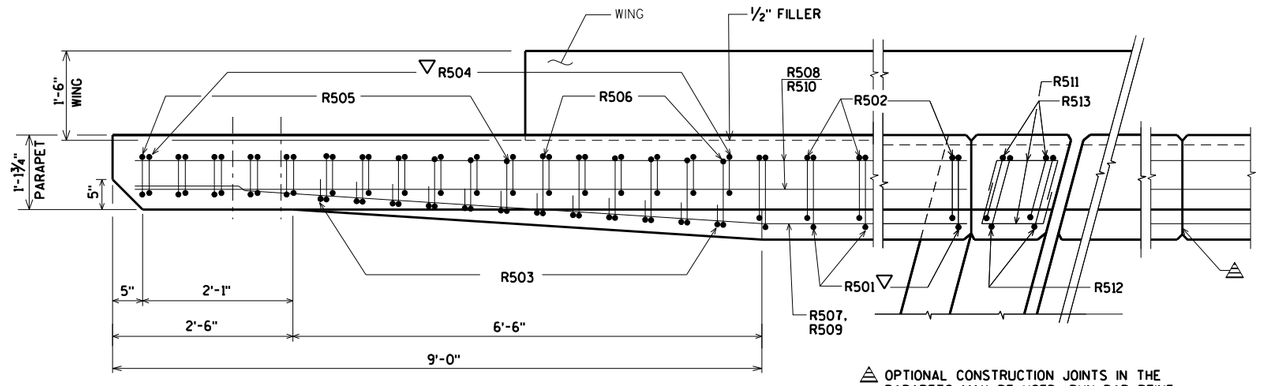
1,210* COATED WEST APPROACH SLAB
1,210* COATED EAST APPROACH SLAB
120* COATED WEST ABUTMENT
120* COATED EAST ABUTMENT

BILL OF BARS

FOR STRUCTURAL APPROACH SLAB PARAPETS

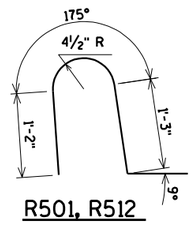
BAR MARK	COAT	W. ABUT.	E. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	52	52	4-5	X		PARAPET VERT.
R502	X	52	52	5-0	X		PARAPET VERT.
R503	X	24	24	2-9	X		PARAPET VERT.
R504	**X**	34	34	4-4	X		PARAPET VERT.
R505	**X**	22	22	4-9	X		PARAPET VERT.
R506	X	12	12	4-10	X		PARAPET VERT.
R507	X	1	1	25-2	X		PARAPET HORIZ.◨
R508	X	5	5	22-4			PARAPET HORIZ.◨
R509	X	1	1	25-4	X		PARAPET HORIZ ▲
R510	X	5	5	25-4			PARAPET HORIZ ▲
FOR ABUTMENT BACKWALL PARAPETS							
R511	X	12	12	3-7	X		PARAPET HORIZ
R512	X	8	8	4-5	X		PARAPET VERT.
R513	X	8	8	5-0	X		PARAPET VERT.

◨ FOR WINGS 1 & 3
▲ FOR WINGS 2 & 4

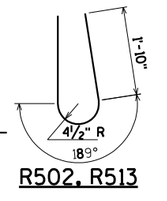


PLAN

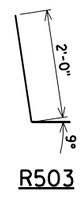
△ OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



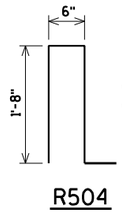
R501, R512



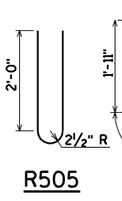
R502, R513



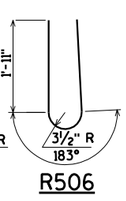
R503



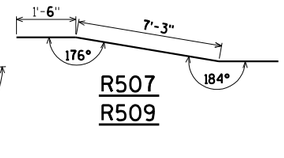
R504



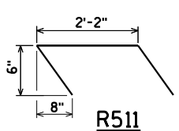
R505



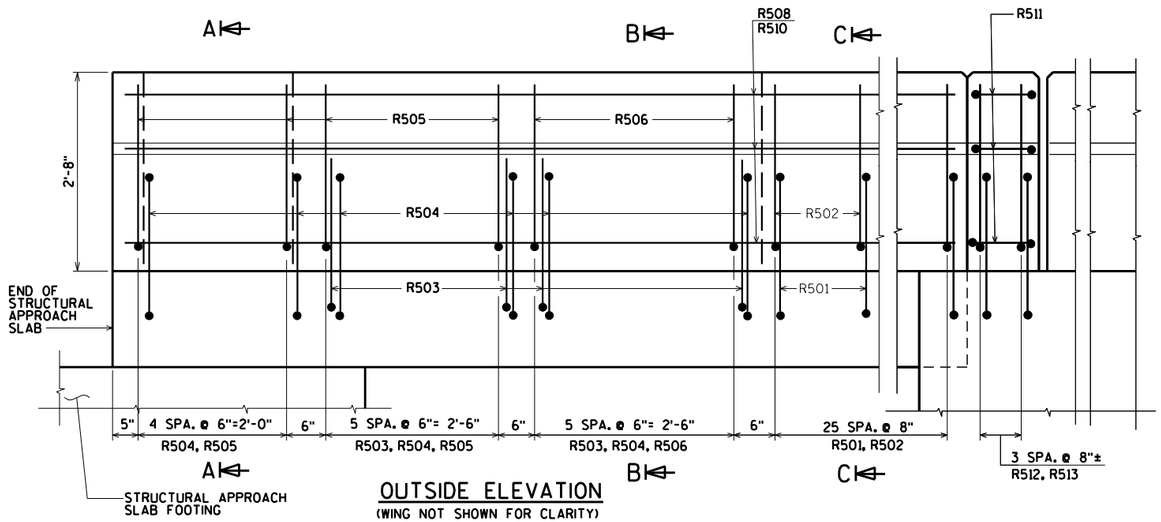
R506



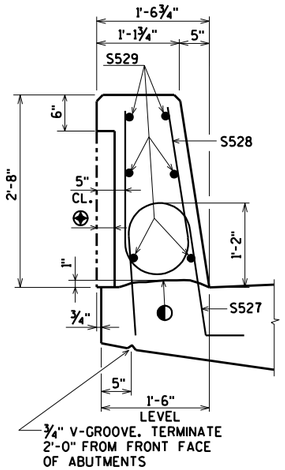
R507
R509



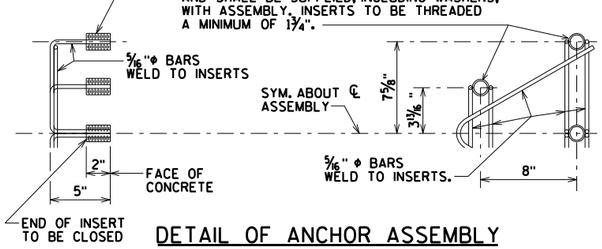
R511



OUTSIDE ELEVATION
(WING NOT SHOWN FOR CLARITY)



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

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

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

⊕ ARCHITECTURAL SURFACE TREATMENT. FOR DETAILS SEE SHEET 45

◆ SLOPE FOR DRAINAGE

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501 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

STRUCTURE B-32-219

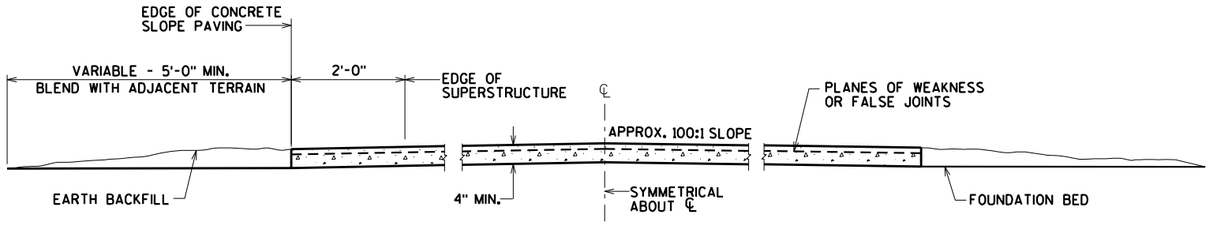
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SINGLE SLOPE PARAPET 32SS MODIFIED

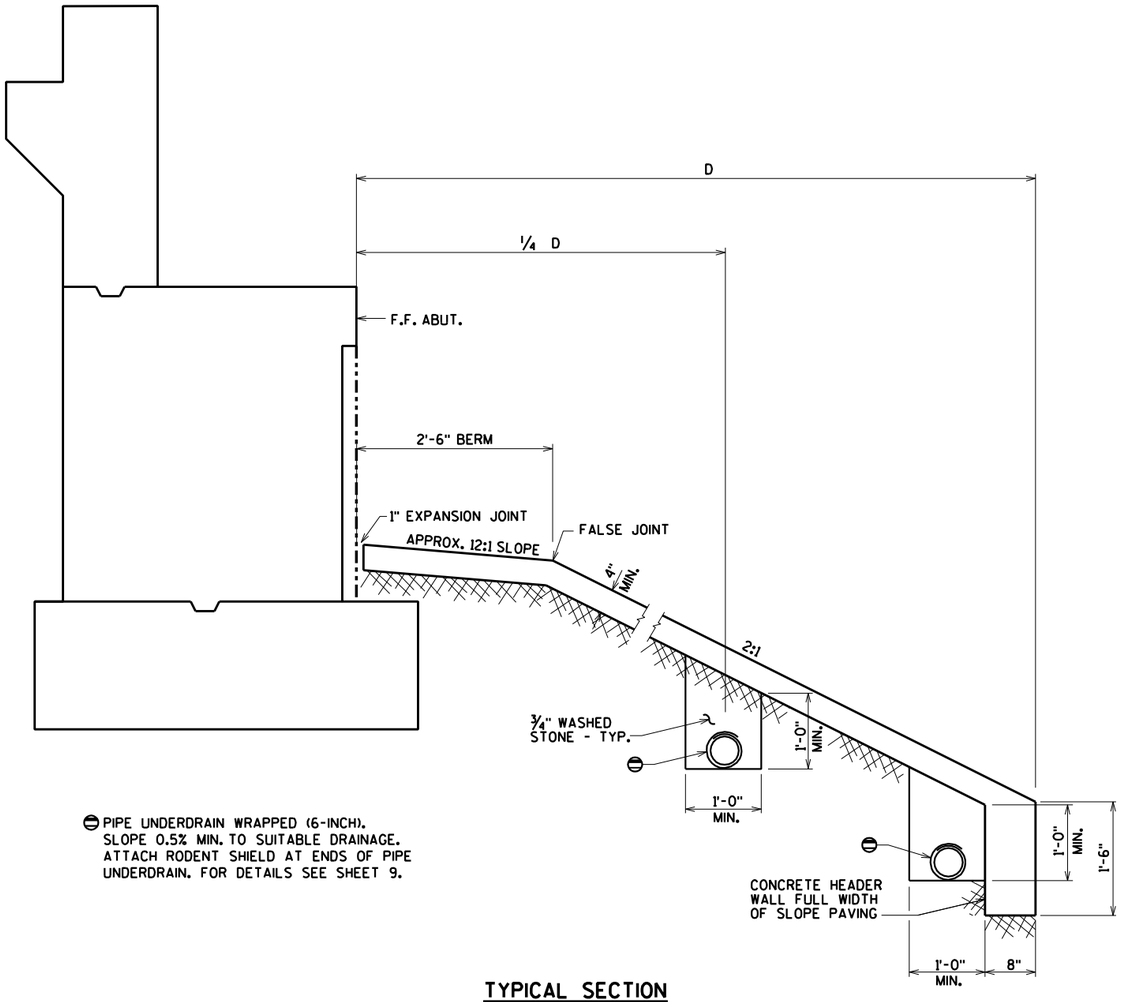
SHEET 43 OF 45
538

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$PRFNAME$
19 U:±41-9927.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 32ss.dgn
16
1 2 3 4 7 9
8
8
6/2/2014
PENTABLE:BReau_shd_util.tbl
SS32APP
1-14

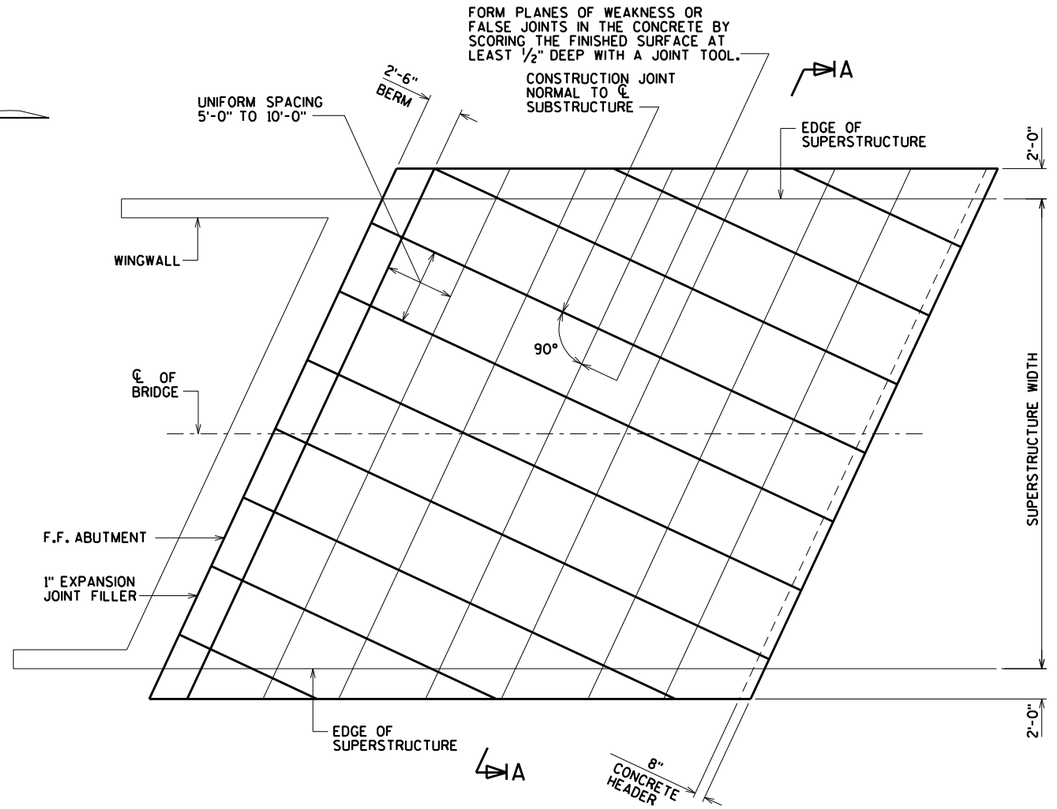


SECTION A-A

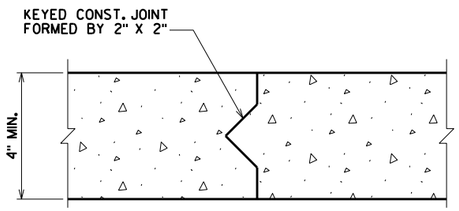


⊖ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR DETAILS SEE SHEET 9.

TYPICAL SECTION



PLAN



CONSTRUCTION JOINT

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN HEREON SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

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SLOPE PAVING

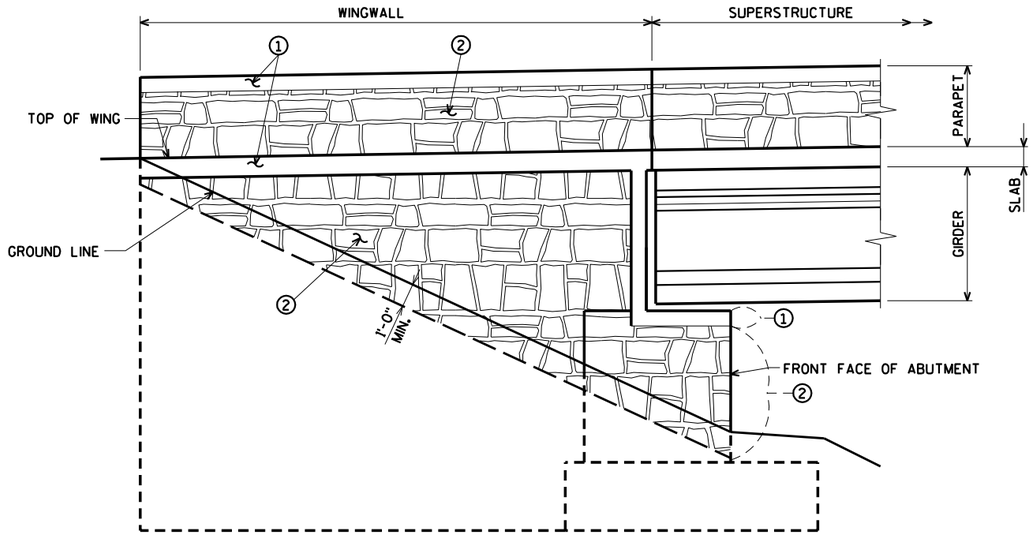
SHEET 44 OF 45
539

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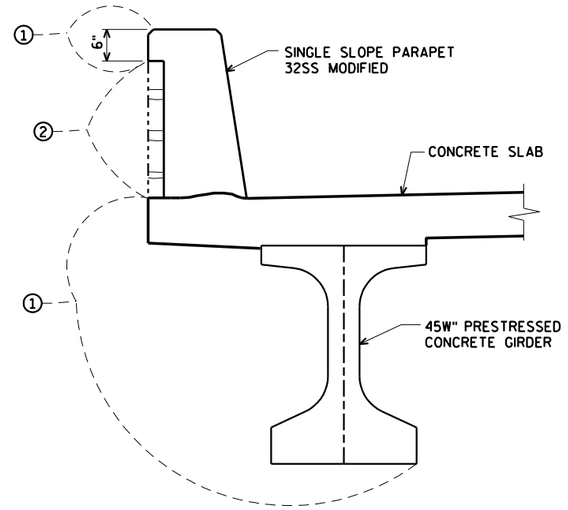
$PRFNAME$
U:±41-0627.00 - LaCrosse County, IH90±B-32-219 190 WB over STH 35±BRIDGE±B-32-219 arch tr.dgn

STATE PROJECT NUMBER

1071-06-78

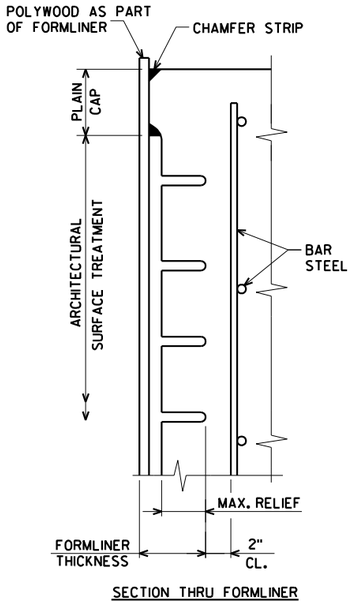


ARCHITECTURAL SURFACE TREATMENT AT ABUTMENT WINGWALLS

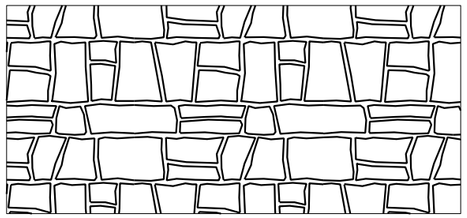


ARCHITECTURAL SURFACE TREATMENT AT SUPERSTRUCTURE

(TYPICAL BOTH SIDES OF SUPERSTRUCTURE)



SECTION THRU FORMLINER



RUSTIC ASHLAR

FORMLINER THICKNESS = 3"
SIZE = 8" TO 32"
MAX. RELIEF = 2"

ABUTMENT NOTES

FORMLINER COURSING ON ABUTMENTS AND WINGS SHALL BE LEVEL.

THE FORMLINER COURSING ON THE WINGS SHALL BE VERTICALLY ALIGNED WITH THE FORMLINER COURSING ON THE FRONT OF THE ABUTMENT.

THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS.

WRAPAROUND/MATCH FORMLINER PATTERN AT CORNERS.

PIER NOTES

FORMLINER COURSING ON PIERS SHALL BE LEVEL.

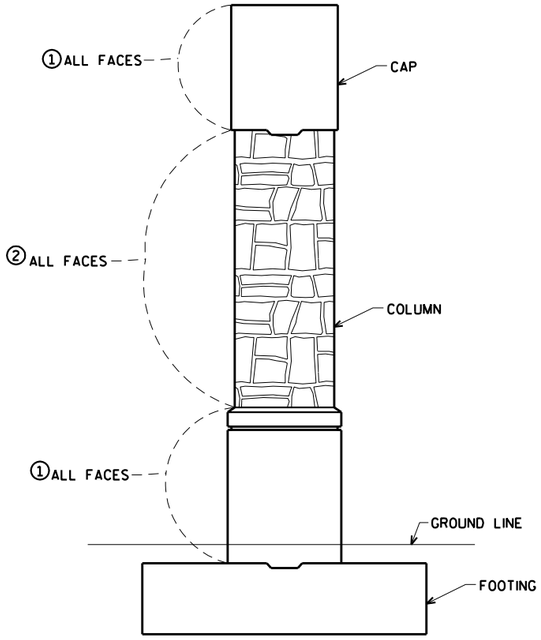
THE FORMLINER COURSING ON ALL FACES OF EACH COLUMN SHALL BE VERTICALLY ALIGNED.

THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS.

WRAPAROUND/MATCH FORMLINER PATTERN AT CORNERS.

PARAPET NOTES

THE FORMLINER COURSING ON PARAPETS SHALL BE PARALLEL TO THE TOP OF PARAPET.



ARCHITECTURAL SURFACE TREATMENT AT PIER

1 LIMITS OF CONCRETE STAINING. FEDERAL STANDARD COLOR NUMBER 33446 (MEDIUM TAN).

2 LIMITS OF CONCRETE STAINING MULTI-COLOR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-219

DRAWN BY CLS | PLANS CK'D. DNS

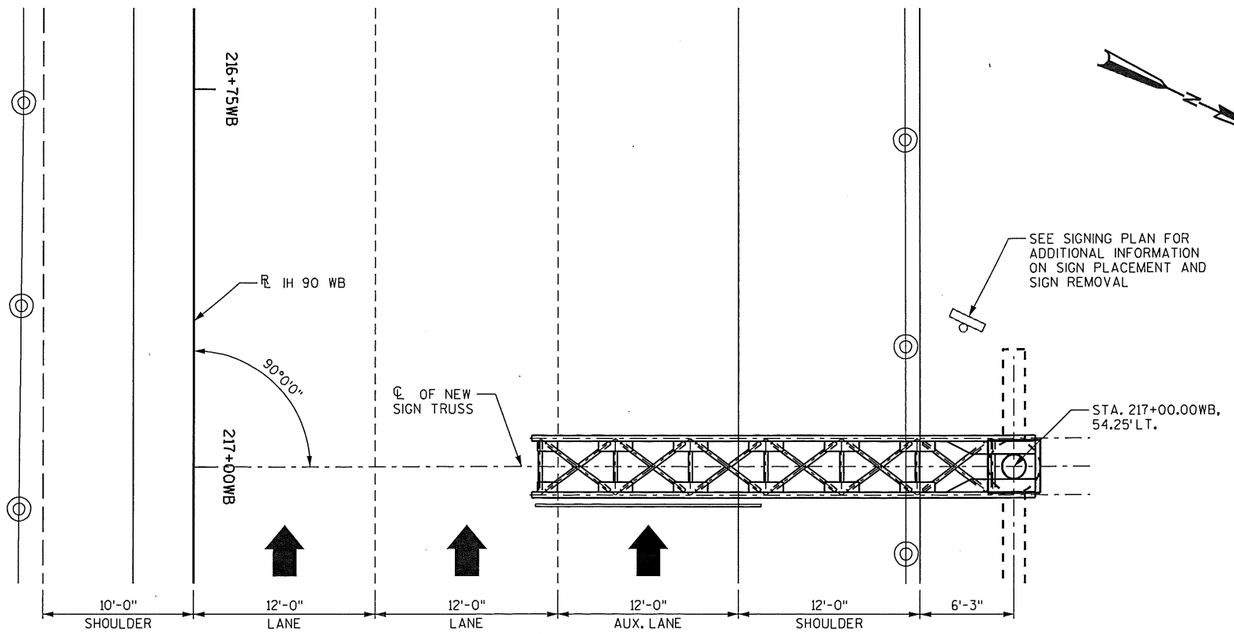
ARCHITECTURAL SURFACE TREATMENT

SHEET 45 OF 45
540

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

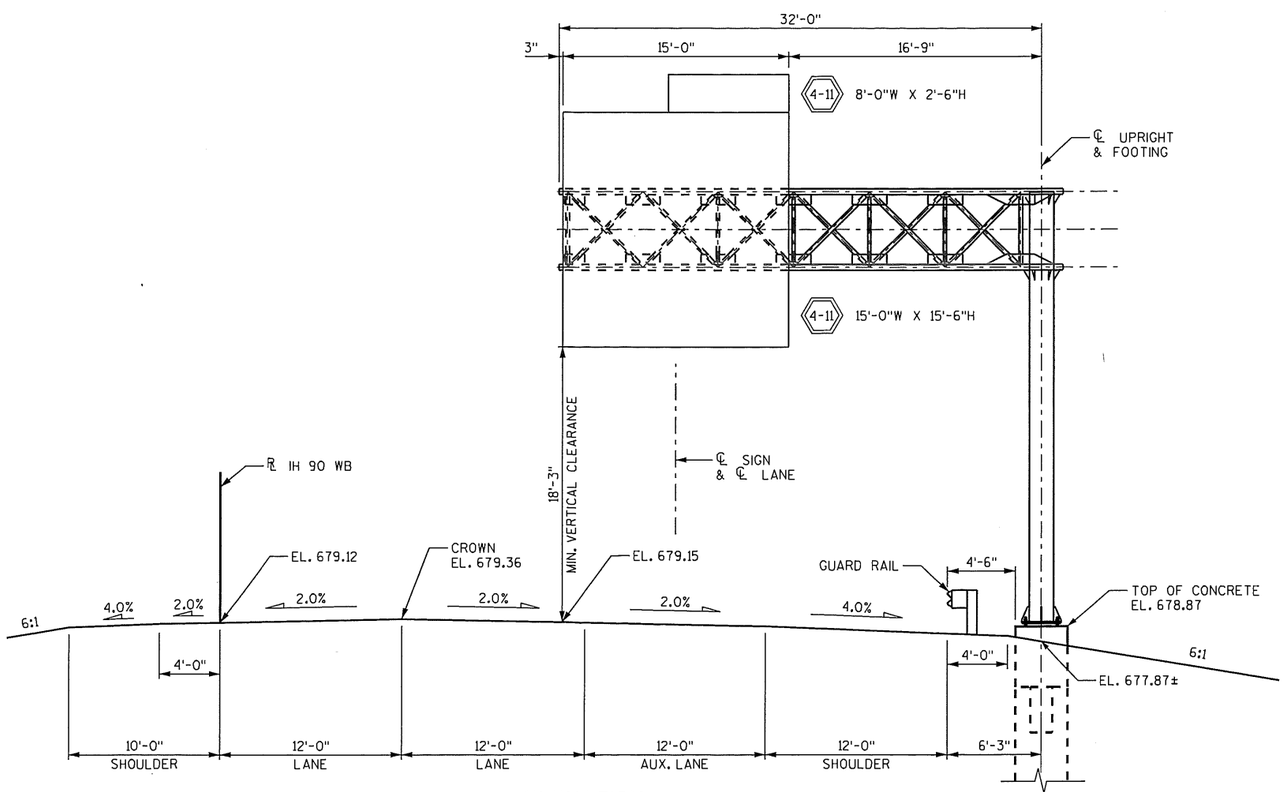
8

8



PLAN

4-CHORD CANTILEVER SIGN STRUCTURE



ELEVATION

LOOKING WEST AT FRONT FACE OF SIGN
STA. 217+00.00WB

SIGN NUMBER APPLIES TO BOTH PANELS, SEE SIGN PLAN.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

CENTER SIGNS VERTICALLY ON TRUSS.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

HANDHOLES ARE NOT REQUIRED.

ALL SIGNS ARE TYPE I.

STATE PROJECT NUMBER

1071-06-78

DESIGN DATA

DESIGN SIGN AREA = 264 SF
MAX. SIGN DEPTH = 15'-6"

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND VELOCITY - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½ (WIND*)	133

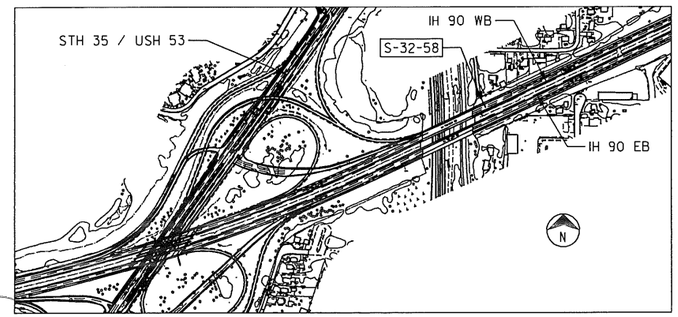
* MIN. VALUE OF 25 PSF FOR GROUP 3.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GALVANIZED STEEL CANTILEVER SIGN TRUSS
3. GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS
4. CANTILEVER TRUSS FOOTING
5. SUBSURFACE EXPLORATION

WISCONSIN
JOHN F. RUBLEIN
E-38700
MADISON, WI
PROFESSIONAL ENGINEER

8/4/14



LOCATION MAP

SOIL DESIGN PARAMETERS

FRICTION ANGLE = 30 DEGREES
SOIL UNIT WEIGHT = 115 PCF

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	8
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	1,380
641.1200	SIGN BRIDGE CANTILEVERED S-32-58	LS	1

ALL ITEMS ARE CATEGORY 0040

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JOHN RUBLEIN, P.E. (262) 821-1171

NO.	DATE	REVISION	BY

KSA K. Singh & Associates, Inc.
Engineers, Scientists and Environmental Consultants

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Duchu KAR 08/12/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-32-58

IH 90 WB

COUNTY	CITY
LA CROSSE	ONALASKA

DESIGN SPEC. AASHTO STANDARD SPECIFICATIONS

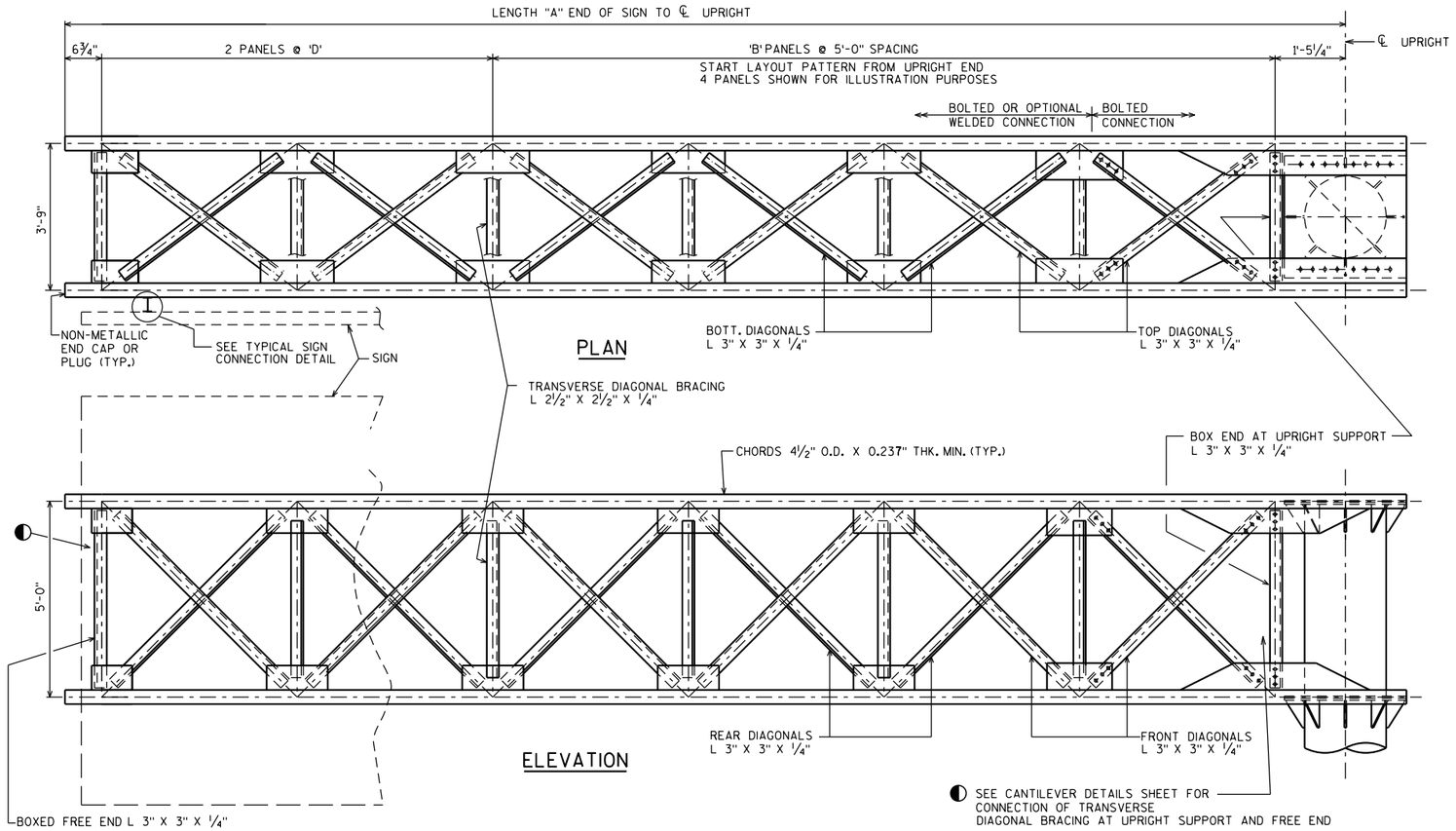
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
VJD	YC	VJD	JFR

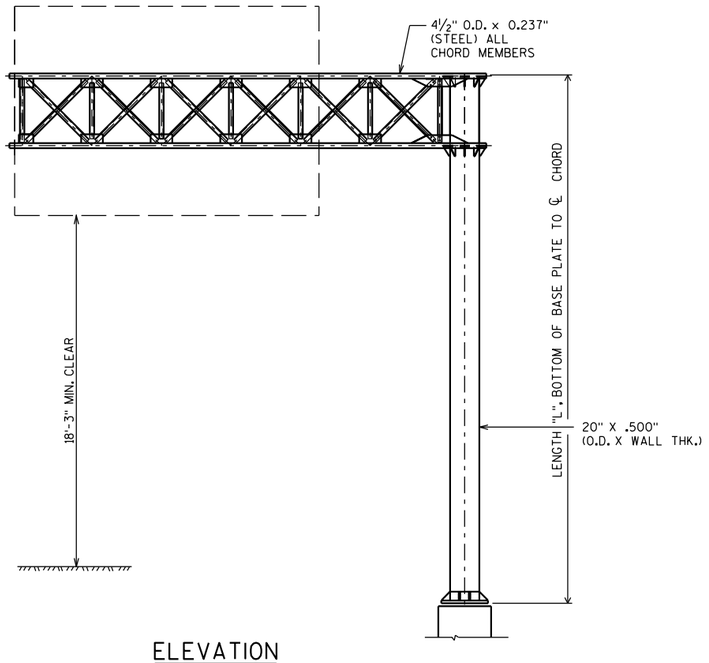
GENERAL PLAN AND ELEVATION

SHEET 1 OF 5
541

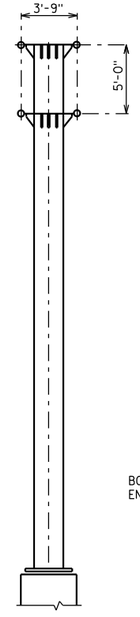
8

8

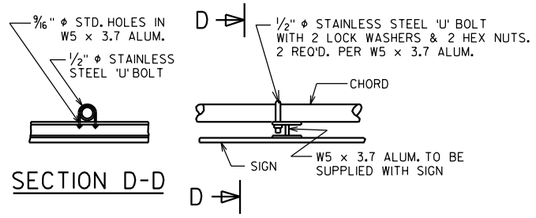




ELEVATION

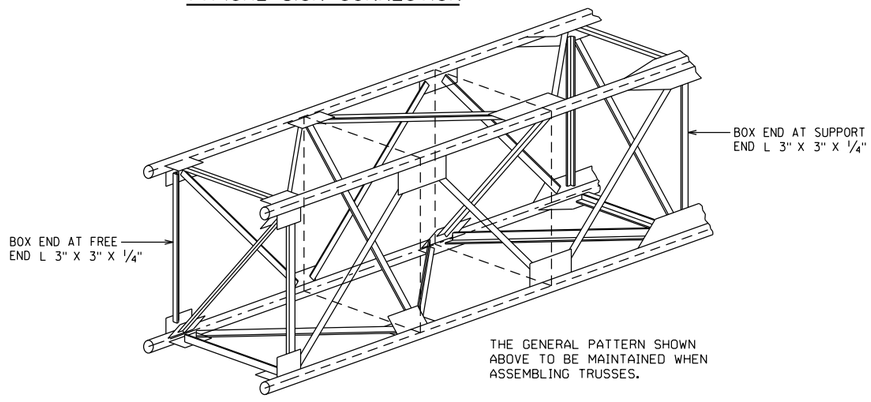


END VIEW



SECTION D-D

TYPICAL SIGN CONNECTION



TYPICAL TRUSS SECTION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS. LUMINARIES AND TRAFFIC SIGNALS"

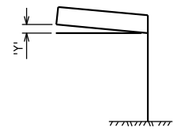
WIND VELOCITY = 90 MPH (3-SECOND GUST SPEED)

PREFABRICATE CAMBER INTO THE HORIZONTAL SUPPORT PROVIDING AN AMOUNT "Y" AT END OF TRUSS SHOWN IN "CAMBER DIAGRAM". DO NOT RAKE VERTICAL UPRIGHT BY ADJUSTMENT OF LEVELING NUTS.

ALLOWABLE DESIGN STRESSES

CHORDS & COLUMN — API-5L-X42 — fy=42,000 P.S.I.
STRUCTURAL ANGLES — A.S.T.M. A709 GRADE 36 — fy=36,000 P.S.I.
PLATES & BARS — A.S.T.M. A709 GRADE 36 — fy=36,000 P.S.I.
ANCHOR BOLTS — A.A.S.H.T.O. M314 — fy=55,000 P.S.I.
HIGH STRENGTH BOLTS-A325 — fy=92,000 P.S.I.
STRUCTURAL MEMBERS GALVANIZED A123
HARDWARE GALVANIZED — A153 CLASS C

STRUCTURE	"A"	"L"	"B"	"D"	"Y"
S-32-58	32'-0"	28'-7"	4	5'-0"	2⅞"



CAMBER DIAGRAM

STATE PROJECT NUMBER

1071-06-78

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-58

DRAWN BY VJD | PLANS CK'D. JFR

GALVANIZED STEEL CANTILEVER SIGN TRUSS

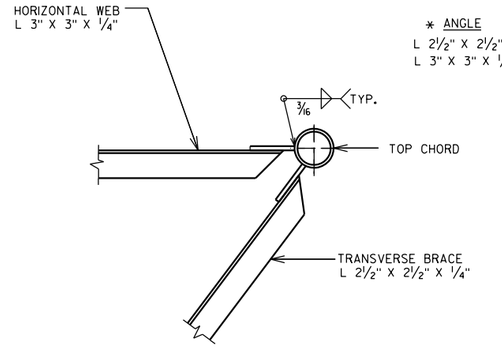
SHEET 2 OF 5
542

8

8

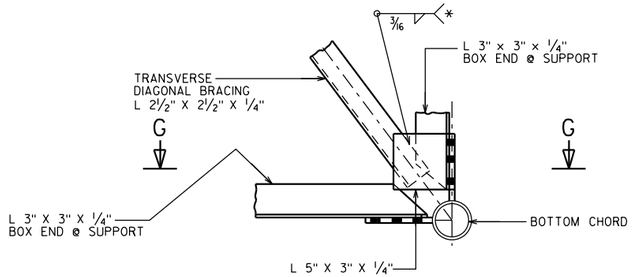
STATE PROJECT NUMBER

1071-06-78

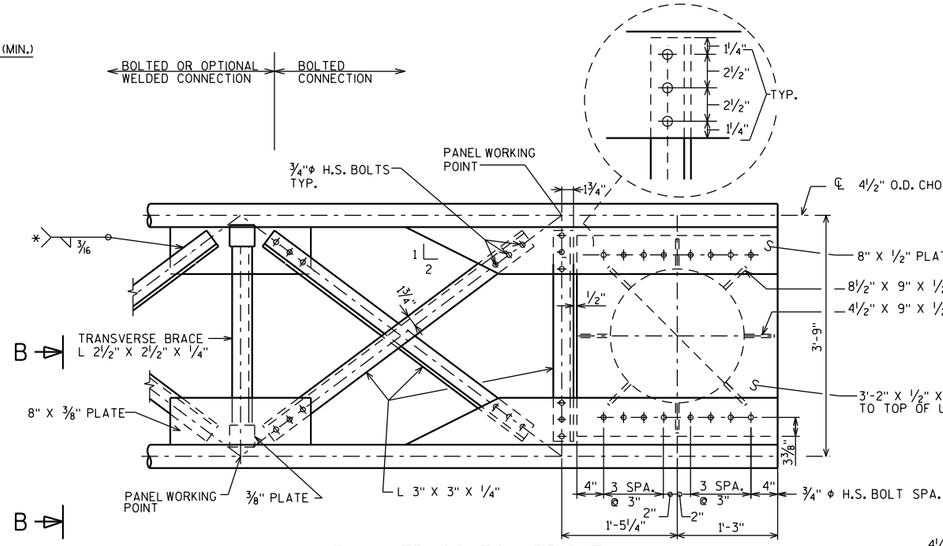


* ANGLE	WELD LENGTH (MIN.)
L 2 1/2" X 2 1/2" X 1/4"	7"
L 3" X 3" X 1/4"	8"

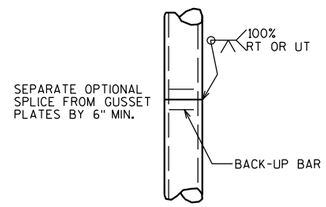
SECTION B-B



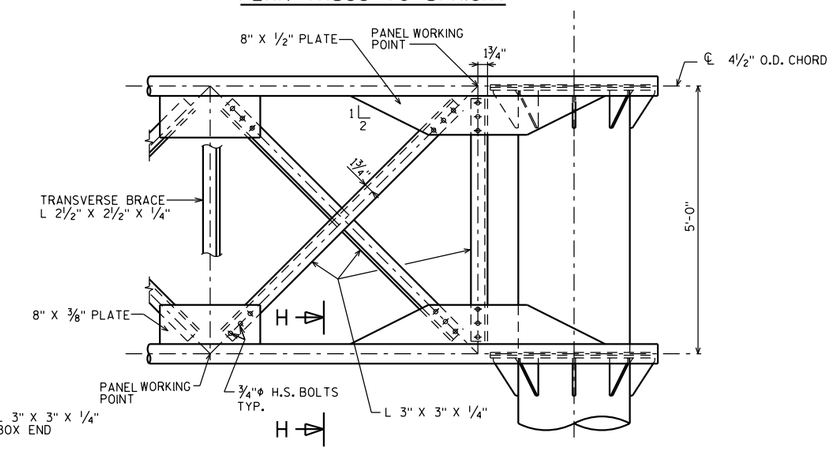
SECTION H-H



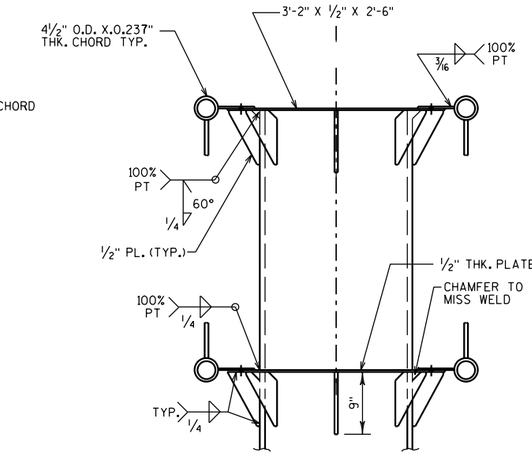
PLAN TRUSS TO UPRIGHT



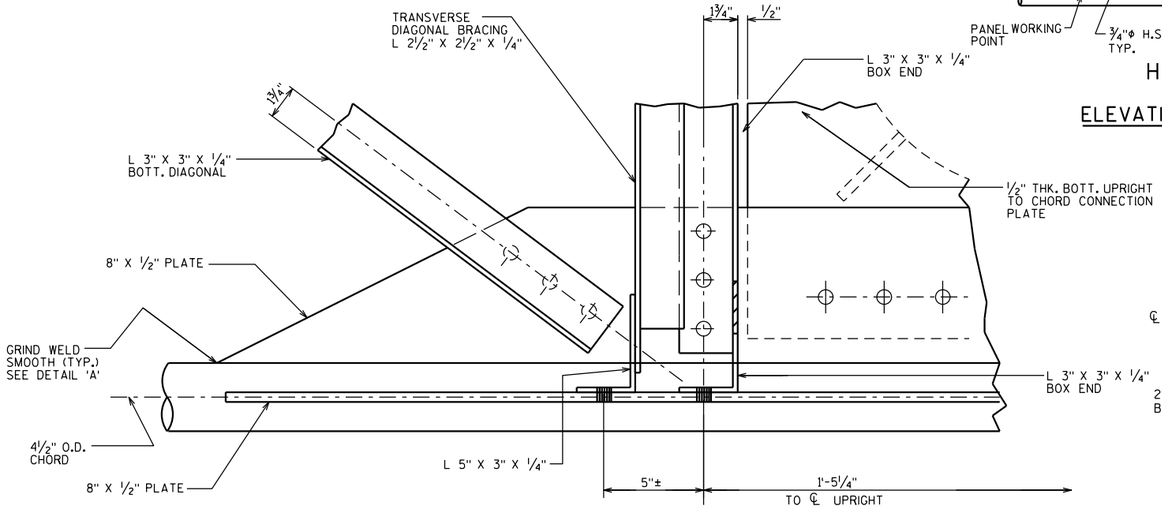
OPTIONAL COLUMN OR CHORD SPLICE DETAIL



ELEVATION TRUSS TO UPRIGHT

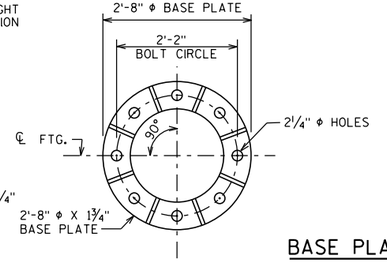


END VIEW
TRUSS TO UPRIGHT

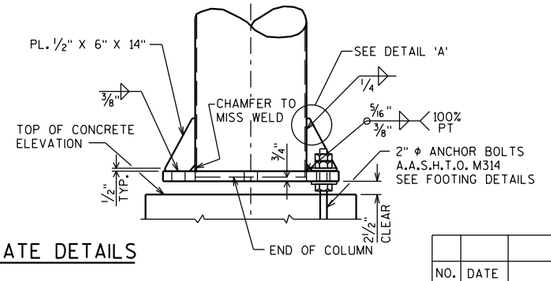


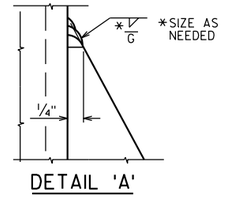
SECTION G-G

(LOOKING DOWN @ BOTT. HORIZ. PLANE @ FRONT CHORD)



BASE PLATE DETAILS





DETAIL 'A'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-58

DRAWN BY VJD | PLANS CK'D. JFR

GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS

SHEET 3 OF 5

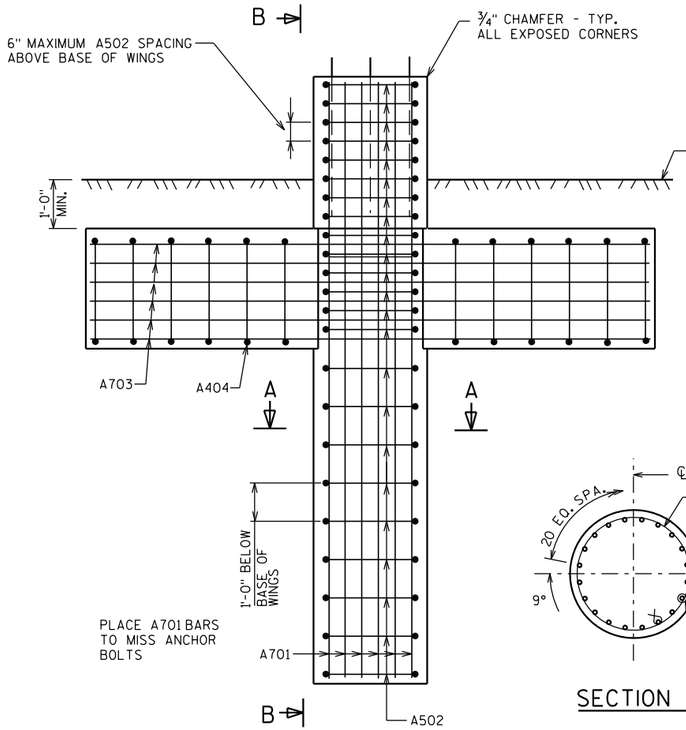
543

8

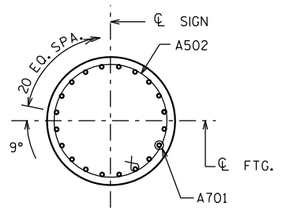
8

FILE NAME : P:\8384 I90_53_35 Interchange\Structural\Sign Structures\CADD\S-32-58\S-32-58_03.dgn PLOT DATE : 8/4/2014 PLOT BY : ychun PLOT NAME : $FILE$ PLOT SCALE : 1:40.0001

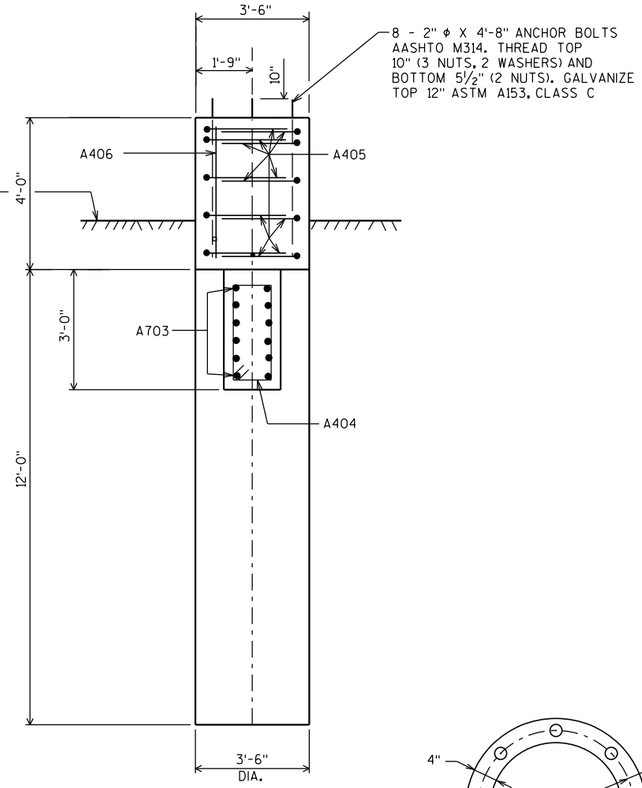
STATE PROJECT NUMBER
1071-06-78



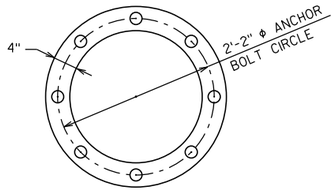
ELEVATION
(8 CY)



SECTION A



SECTION B

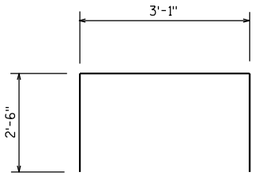


TOP VIEW OF TOP & BOTTOM TEMPLATES

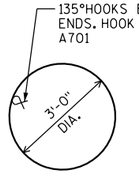
BILL OF BARS

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.
BAR DIMENSIONS ARE OUT TO OUT OF BAR. 1,380 LB

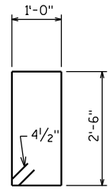
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
A701		20	15'-6"				FOOTING - COLUMN/TOP
A502		23	10'-6"	X			FOOTING - COLUMN/TOP
A703		12	15'-0"				FOOTING - WINGS
A404		12	7'-6"	X			FOOTING - WINGS
A405		10	7'-11"	X			FOOTING - TOP
A406		4	3'-6"				FOOTING - TOP - COLUMNS



A405



A502



A404
(STIRRUP)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

ALLOWABLE DESIGN STRESSES

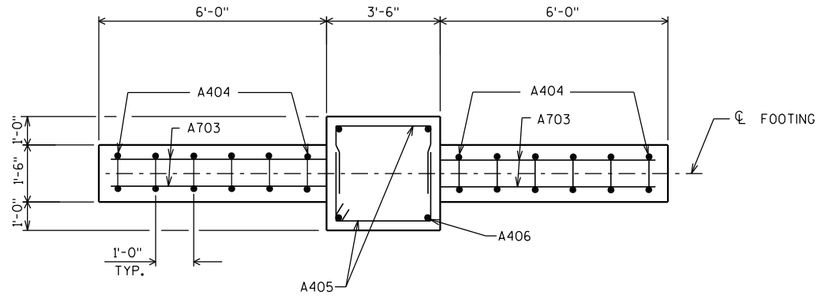
CONCRETE MASONRY ——— f'c=3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— fy=60,000 PSI
ANCHOR BOLTS AASHTO M314 ——— fy=55,000 PSI

FOUNDATION DATA

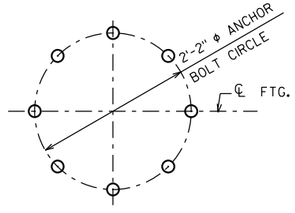
ALLOWABLE SOIL BEARING PRESSURE = 2.0T/SQ. FT.

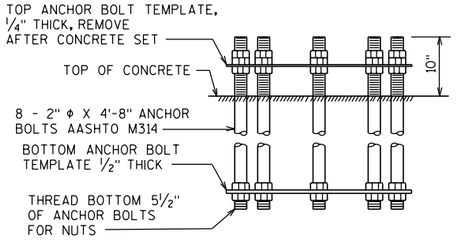
TOTAL ESTIMATED QUANTITIES (1 FTG.)

SIGN SUPPORTS CONCRETE MASONRY ——— 8 CY
SIGN SUPPORTS STEEL REINFORCEMENT HS ——— 1,380 LB



PLAN





ANCHOR BOLT DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-58

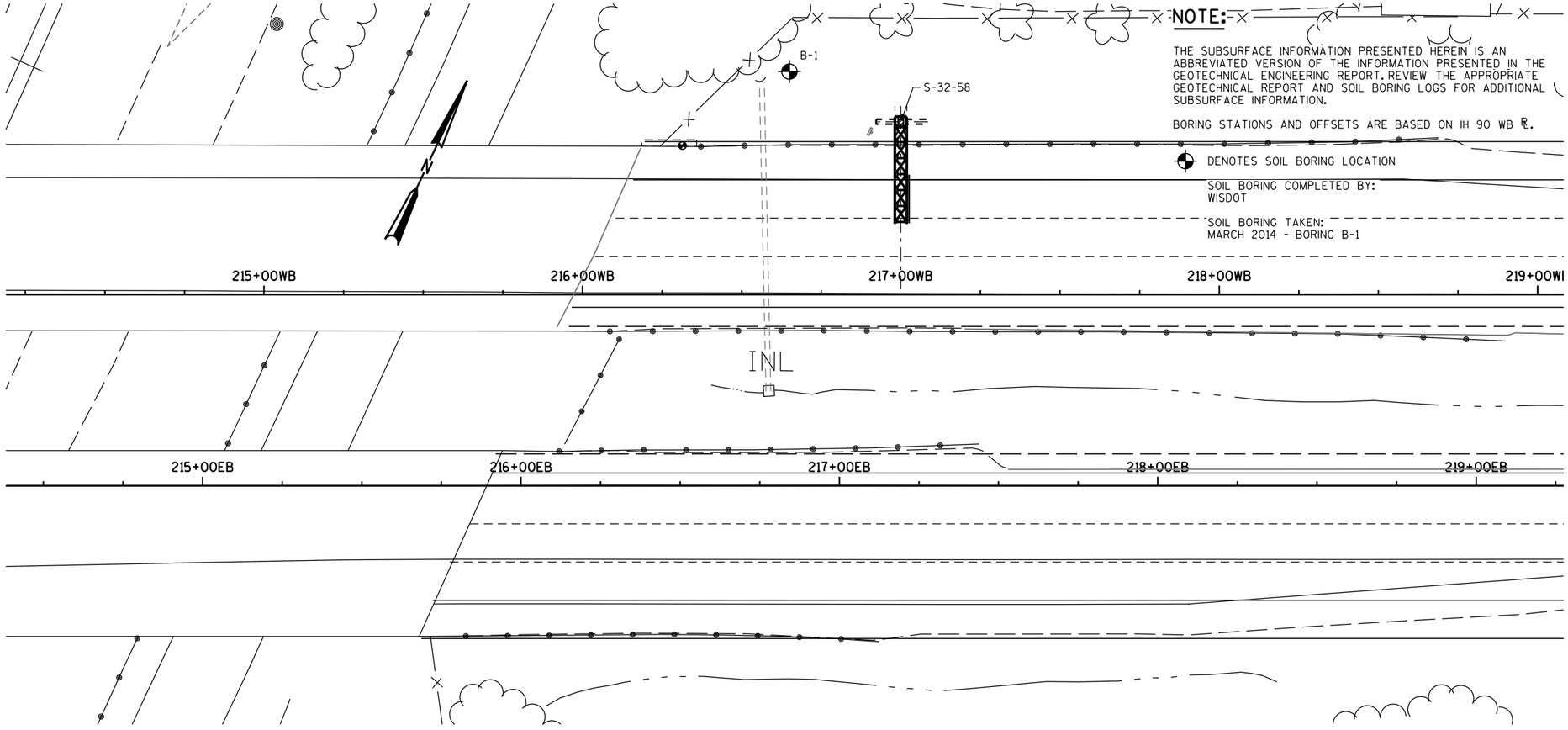
DRAWN BY VJD | PLANS CK'D. JFR

CANTILEVER TRUSS FOOTING

SHEET 4 OF 5
544

8

8



PLAN

NOTE:

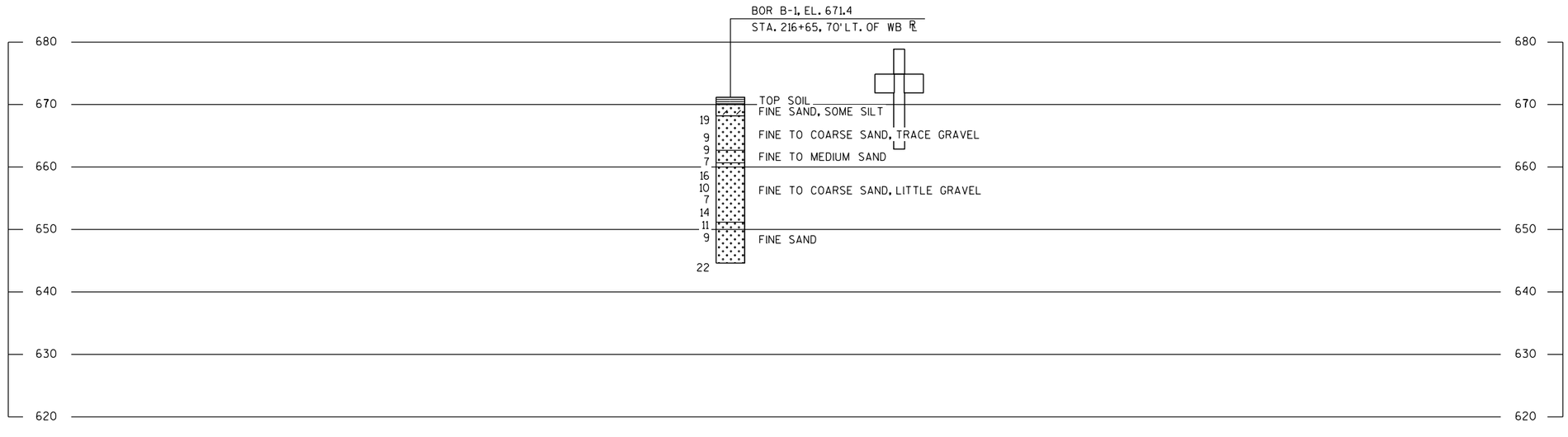
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON IH 90 WB ℄.

DENOTES SOIL BORING LOCATION

SOIL BORING COMPLETED BY:
WISDOT

SOIL BORING TAKEN:
MARCH 2014 - BORING B-1



STATE PROJECT NUMBER

1071-06-78

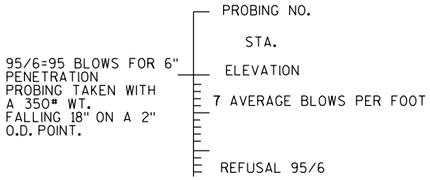
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

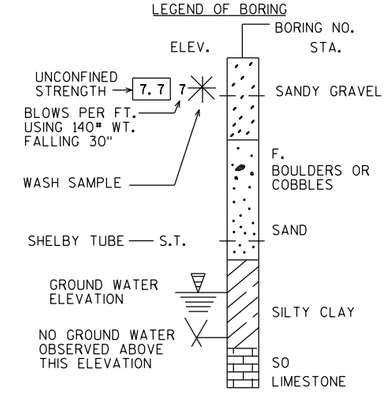
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-58

DRAWN BY YC | PLANS CK'D. JFR

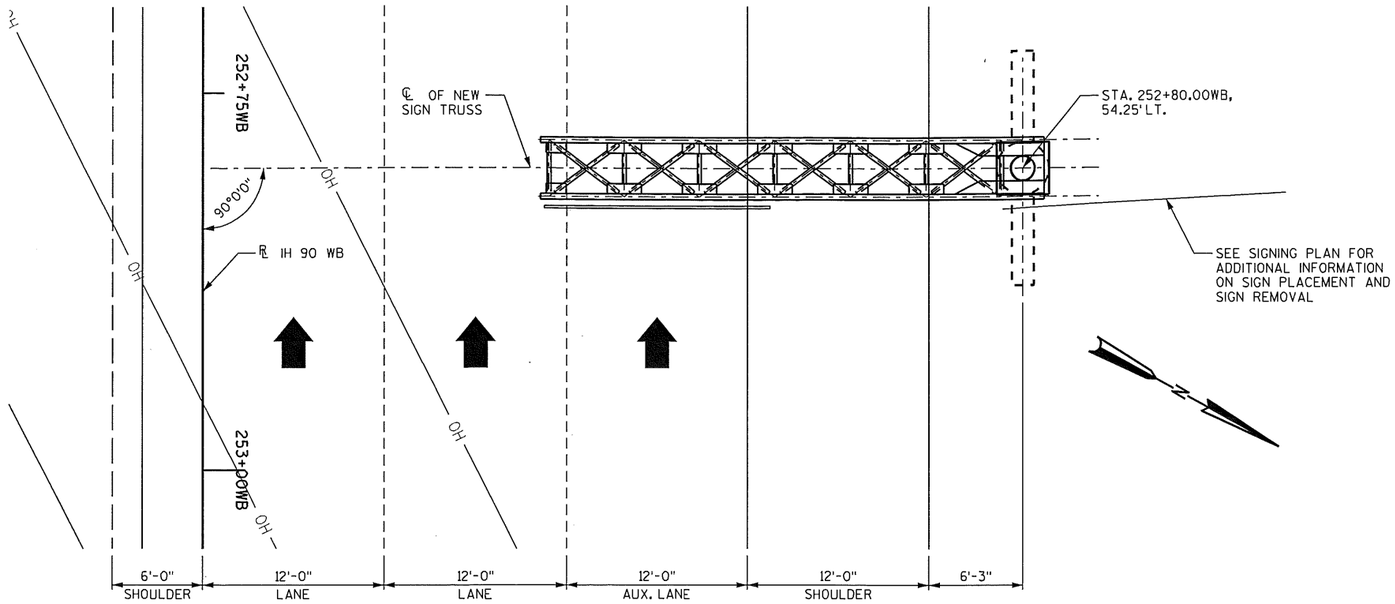
SUBSURFACE EXPLORATION

SHEET 5 OF 5
545

8

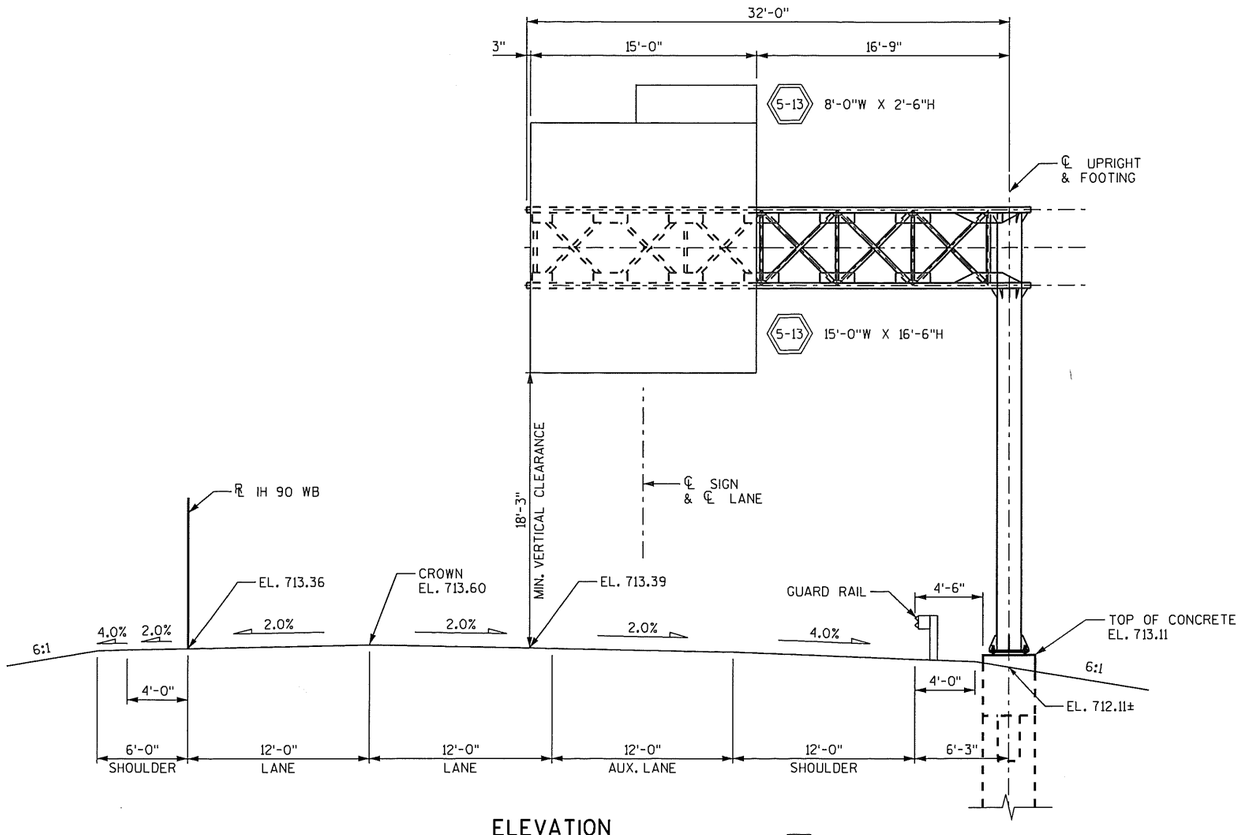
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PLAN

4-CHORD CANTILEVER SIGN STRUCTURE



ELEVATION

LOOKING WEST AT FRONT FACE OF SIGN
STA. 252+80.00WB

5-13 SIGN NUMBER APPLIES TO BOTH PANELS, SEE SIGN PLAN.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

CENTER SIGNS VERTICALLY ON TRUSS.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

HANDHOLES ARE NOT REQUIRED.

ALL SIGNS ARE TYPE I.

DESIGN DATA

DESIGN SIGN AREA = 268 SF
MAX. SIGN DEPTH = 16'-6"

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND VELOCITY - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

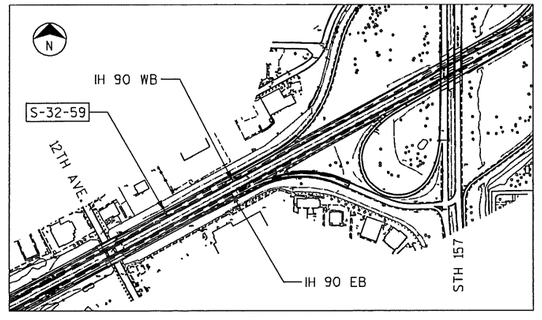
GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½ (WIND*)	133

* MIN. VALUE OF 25 PSF FOR GROUP 3.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GALVANIZED STEEL CANTILEVER SIGN TRUSS
3. GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS
4. CANTILEVER TRUSS FOOTING
5. SUBSURFACE EXPLORATION

WISCONSIN
JOHN F. RUBLEIN
E-38700
MADISON, WI
PROFESSIONAL ENGINEER
8/9/14



LOCATION MAP

SOIL DESIGN PARAMETERS

FRICTION ANGLE = 30 DEGREES
SOIL UNIT WEIGHT = 115 PCF

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	8
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	1,380
641.1200	SIGN BRIDGE CANTILEVERED S-32-59	LS	1

ALL ITEMS ARE CATEGORY 0060

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JOHN RUBLEIN, P.E. (262) 821-1171

NO.	DATE	REVISION	BY

KSA K. Singh & Associates, Inc.
Engineers, Scientists and Environmental Consultants

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/12/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-32-59

IH 90 WB

COUNTY	CITY
LA CROSSE	ONALASKA

DESIGN SPEC.
AASHTO STANDARD SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
VJD	YC	VJD	JFR

GENERAL PLAN AND ELEVATION

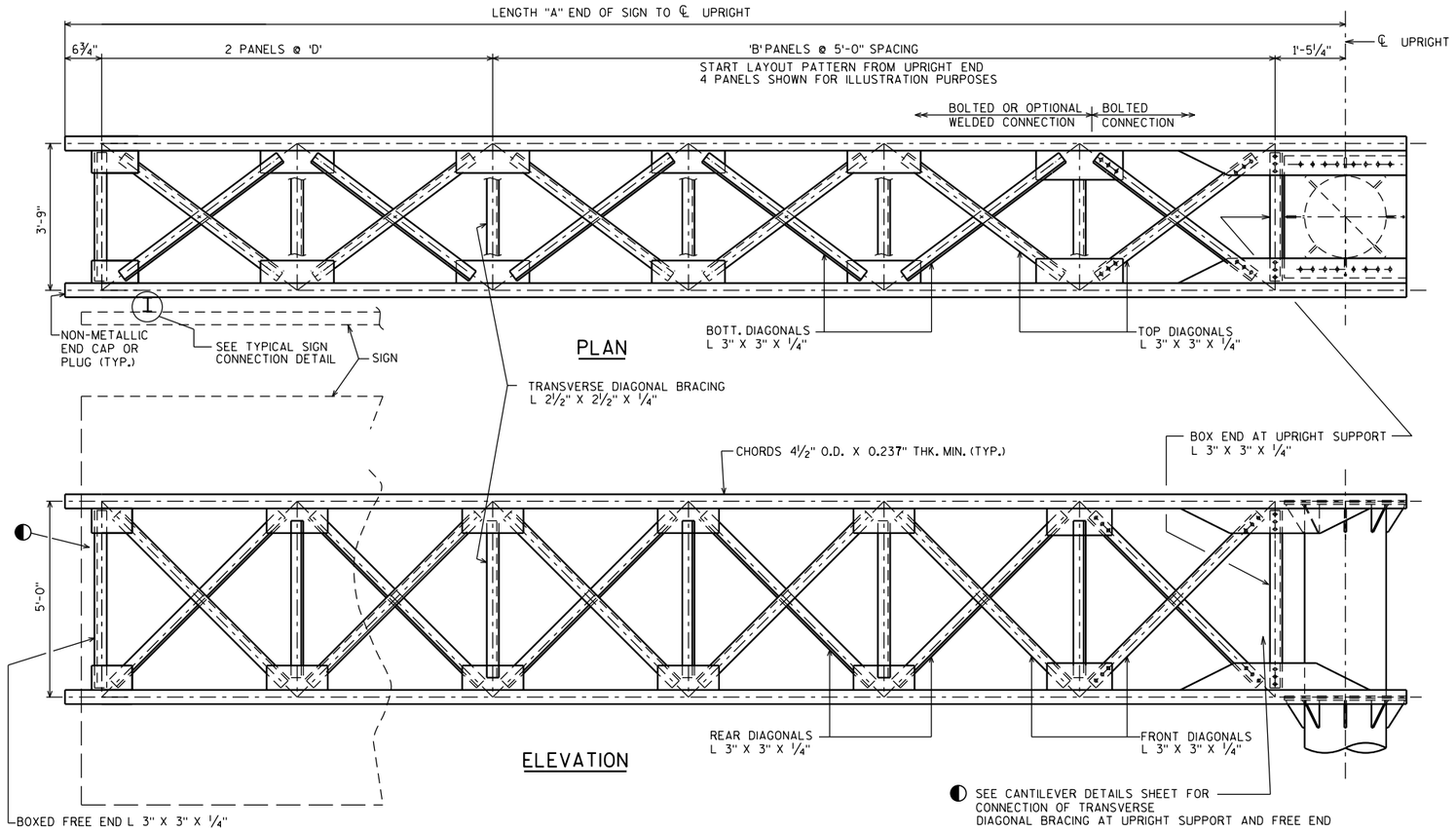
SHEET 1 OF 5
546

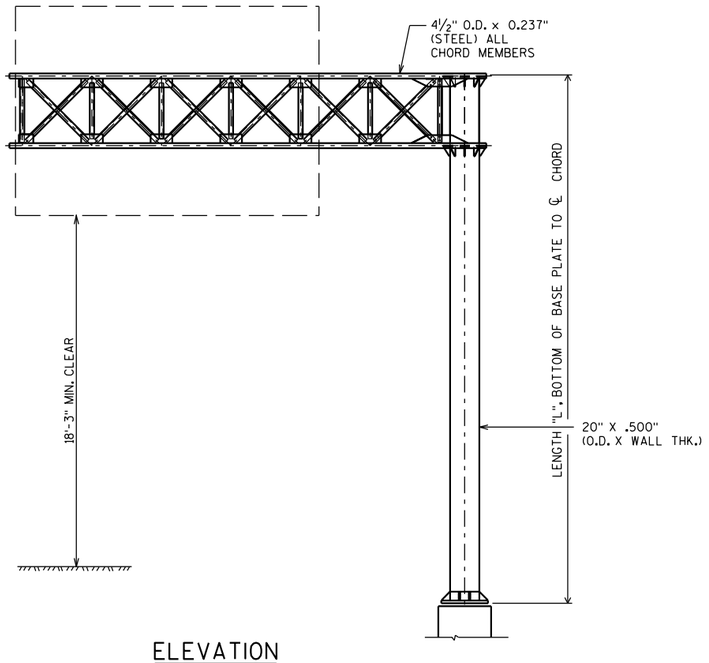
STATE PROJECT NUMBER
1071-06-78

8

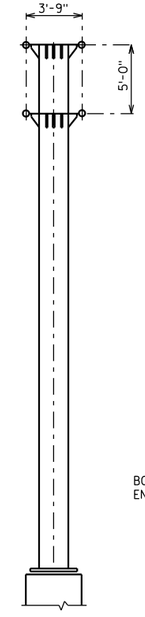
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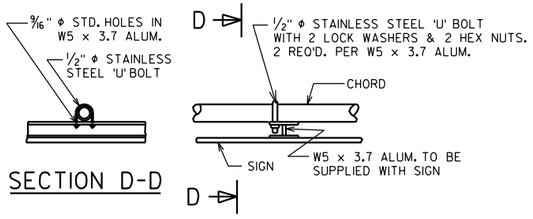




ELEVATION

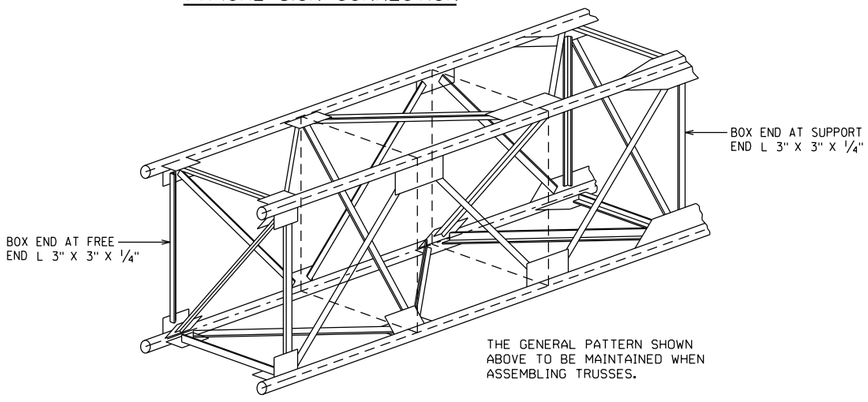


END VIEW



SECTION D-D

TYPICAL SIGN CONNECTION



TYPICAL TRUSS SECTION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS. LUMINARIES AND TRAFFIC SIGNALS"

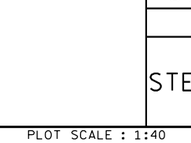
WIND VELOCITY = 90 MPH (3-SECOND GUST SPEED)

PREFABRICATE CAMBER INTO THE HORIZONTAL SUPPORT PROVIDING AN AMOUNT "Y" AT END OF TRUSS SHOWN IN "CAMBER DIAGRAM". DO NOT RAKE VERTICAL UPRIGHT BY ADJUSTMENT OF LEVELING NUTS.

ALLOWABLE DESIGN STRESSES

CHORDS & COLUMN — API-5L-X42 — fy=42,000 P.S.I.
STRUCTURAL ANGLES — A.S.T.M. A709 GRADE 36 — fy=36,000 P.S.I.
PLATES & BARS — A.S.T.M. A709 GRADE 36 — fy=36,000 P.S.I.
ANCHOR BOLTS — A.A.S.H.T.O. M314 — fy=55,000 P.S.I.
HIGH STRENGTH BOLTS- A325 — fy=92,000 P.S.I.
STRUCTURAL MEMBERS GALVANIZED A123
HARDWARE GALVANIZED — A153 CLASS C

STRUCTURE	"A"	"L"	"B"	"D"	"Y"
S-32-59	32'-0"	29'-1"	4	5'-0"	2⅞"



CAMBER DIAGRAM

STATE PROJECT NUMBER

1071-06-78

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-59

DRAWN BY VJD | PLANS CK'D. JFR

GALVANIZED STEEL CANTILEVER SIGN TRUSS

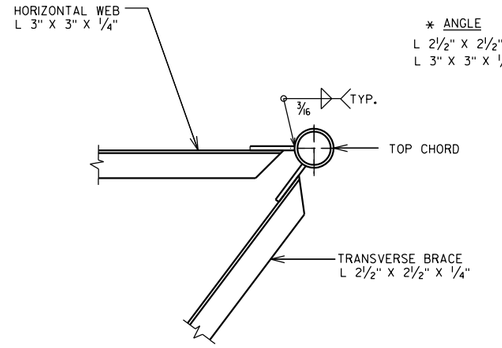
SHEET 2 OF 5
547

8

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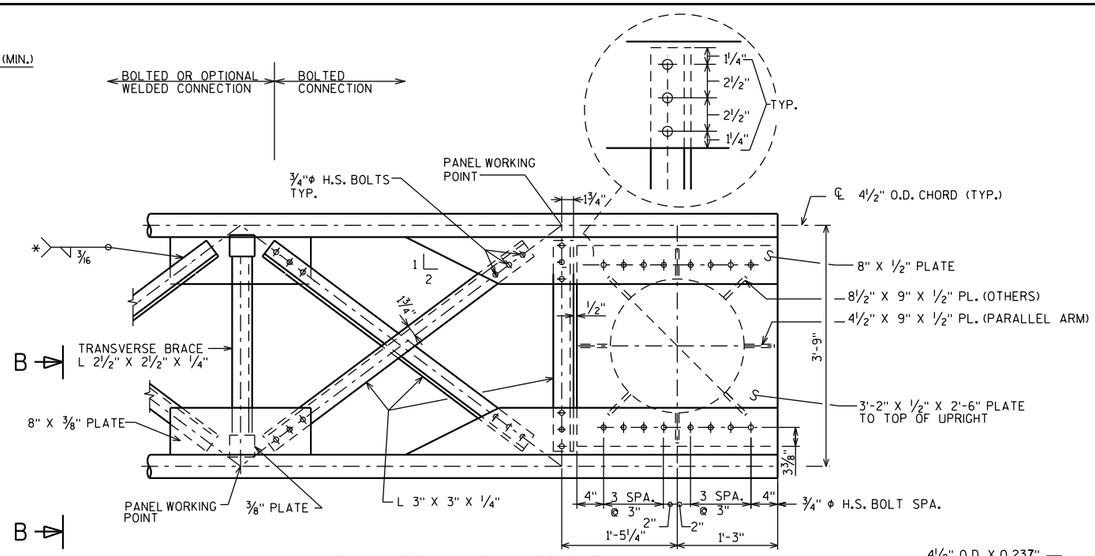
STATE PROJECT NUMBER

1071-06-78

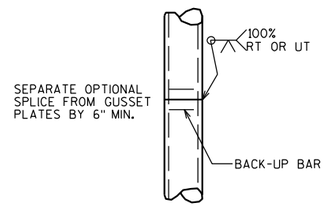


* ANGLE	WELD LENGTH (MIN.)
L 2 1/2" X 2 1/2" X 1/4"	7"
L 3" X 3" X 1/4"	8"

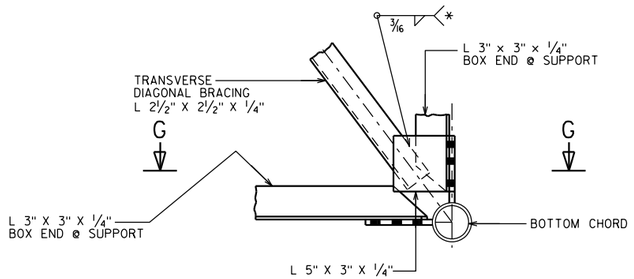
SECTION B-B



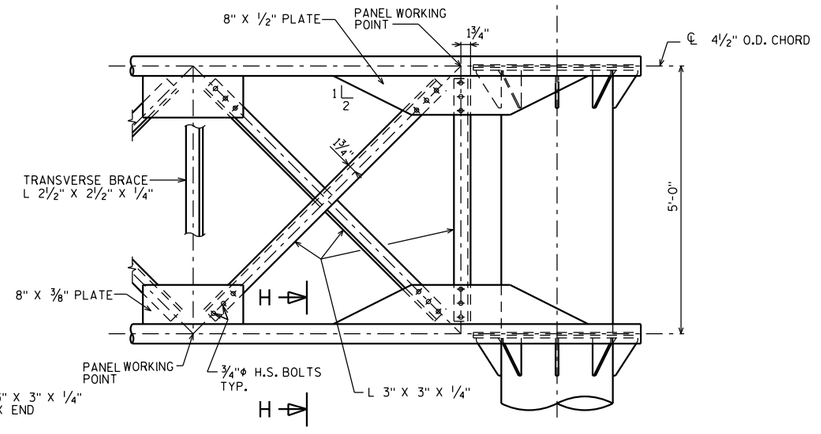
PLAN TRUSS TO UPRIGHT



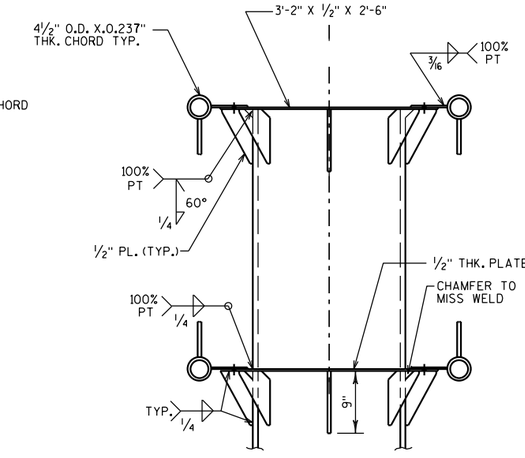
OPTIONAL COLUMN OR CHORD SPLICE DETAIL



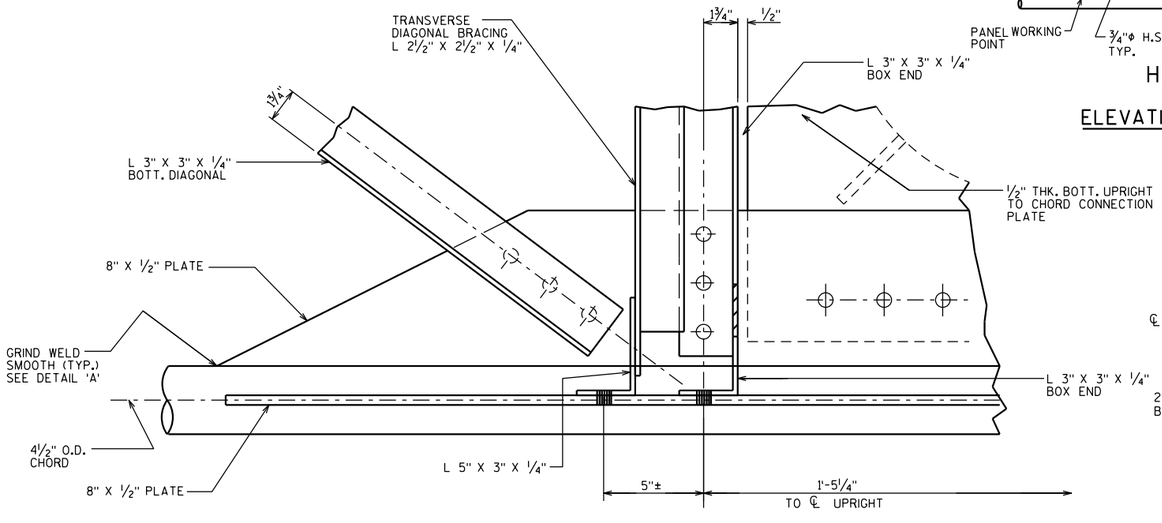
SECTION H-H



ELEVATION TRUSS TO UPRIGHT

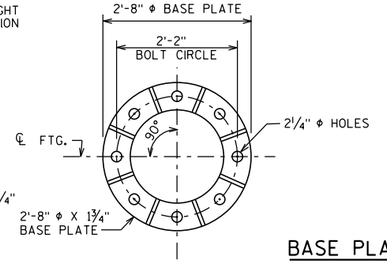


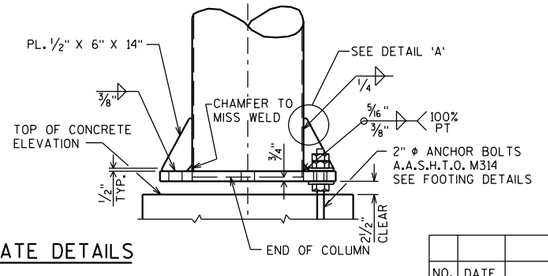
END VIEW
TRUSS TO UPRIGHT



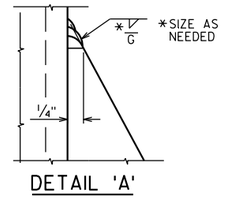
SECTION G-G

(LOOKING DOWN @ BOTT. HORIZ. PLANE @ FRONT CHORD)





BASE PLATE DETAILS



DETAIL 'A'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-59

DRAWN BY VJD | PLANS CK'D. JFR

GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS

SHEET 3 OF 5

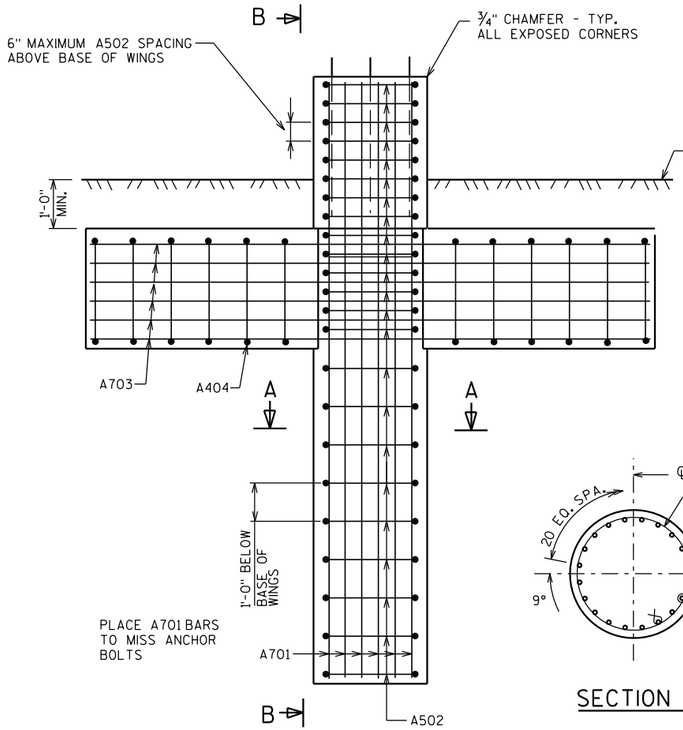
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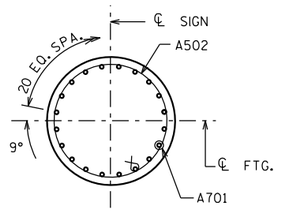
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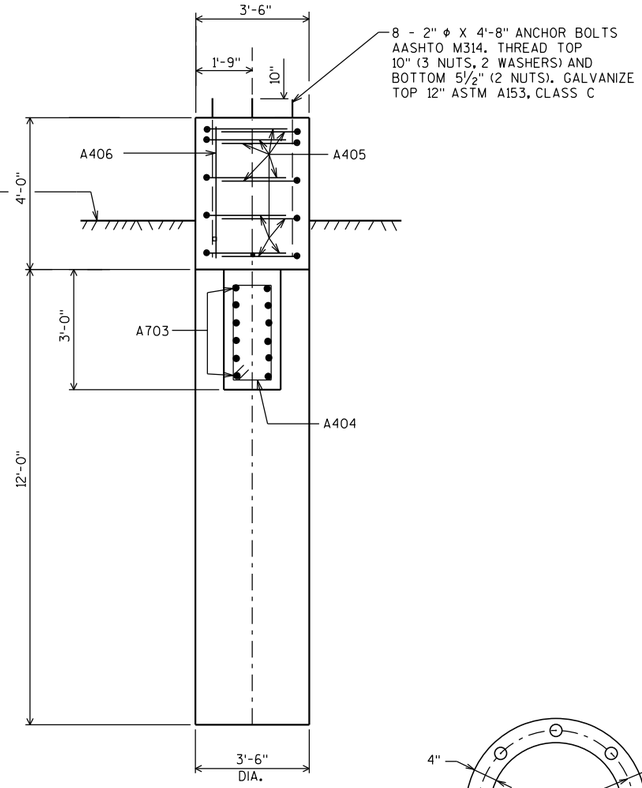
STATE PROJECT NUMBER
1071-06-78



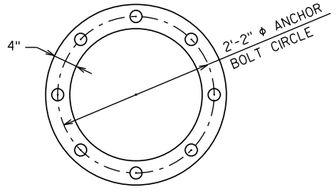
ELEVATION
(8 CY)



SECTION A



SECTION B



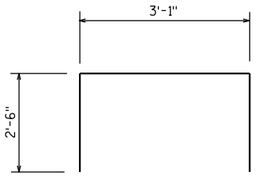
TOP VIEW OF TOP & BOTTOM TEMPLATES

BILL OF BARS

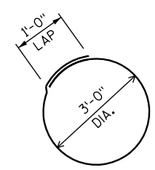
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.
BAR DIMENSIONS ARE OUT TO OUT OF BAR.

1,380 LB

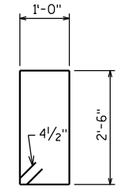
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
A701		20	15'-6"				FOOTING - COLUMN/TOP
A502		23	10'-6"	X			FOOTING - COLUMN/TOP
A703		12	15'-0"				FOOTING - WINGS
A404		12	7'-6"	X			FOOTING - WINGS
A405		10	7'-11"	X			FOOTING - TOP
A406		4	3'-6"				FOOTING - TOP - COLUMNS



A405



A502



A404
(STIRRUP)

GENERAL NOTES

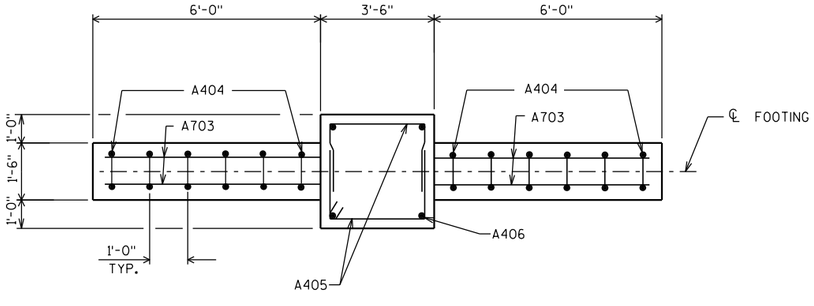
DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

ALLOWABLE DESIGN STRESSES

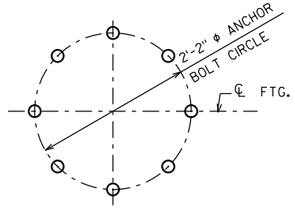
CONCRETE MASONRY — f'c=3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 — fy=60,000 PSI
ANCHOR BOLTS AASHTO M314 — fy=55,000 PSI

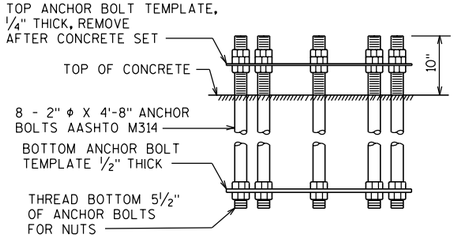
FOUNDATION DATA

ALLOWABLE SOIL BEARING PRESSURE = 2.0T/SQ. FT.



PLAN





ANCHOR BOLT DETAILS

TOTAL ESTIMATED QUANTITIES (1 FTG.)

SIGN SUPPORTS CONCRETE MASONRY — 8 CY
SIGN SUPPORTS STEEL REINFORCEMENT HS — 1,380 LB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-59

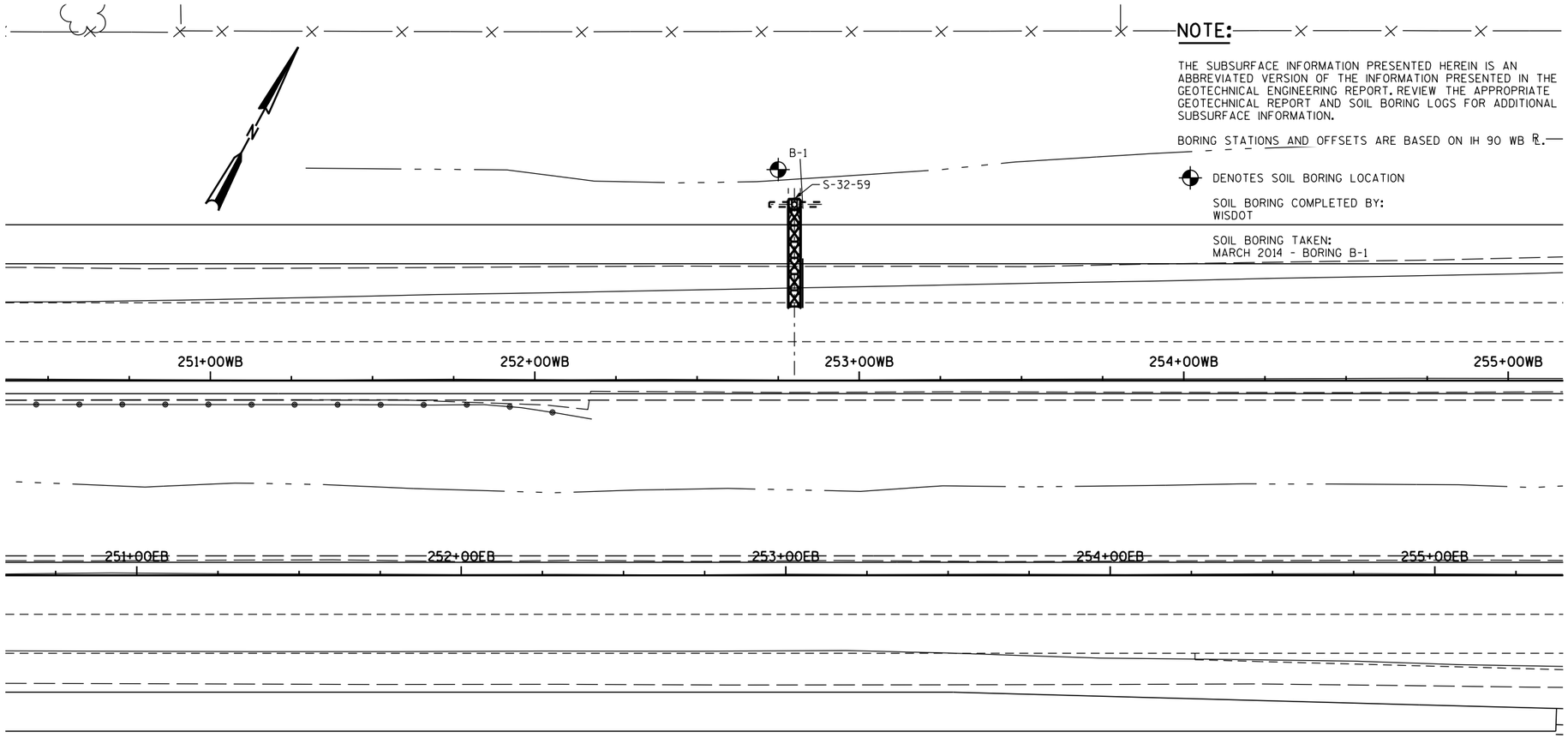
DRAWN BY VJD | PLANS CK'D. JFR

CANTILEVER TRUSS FOOTING

SHEET 4 OF 5
549

8

8



NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

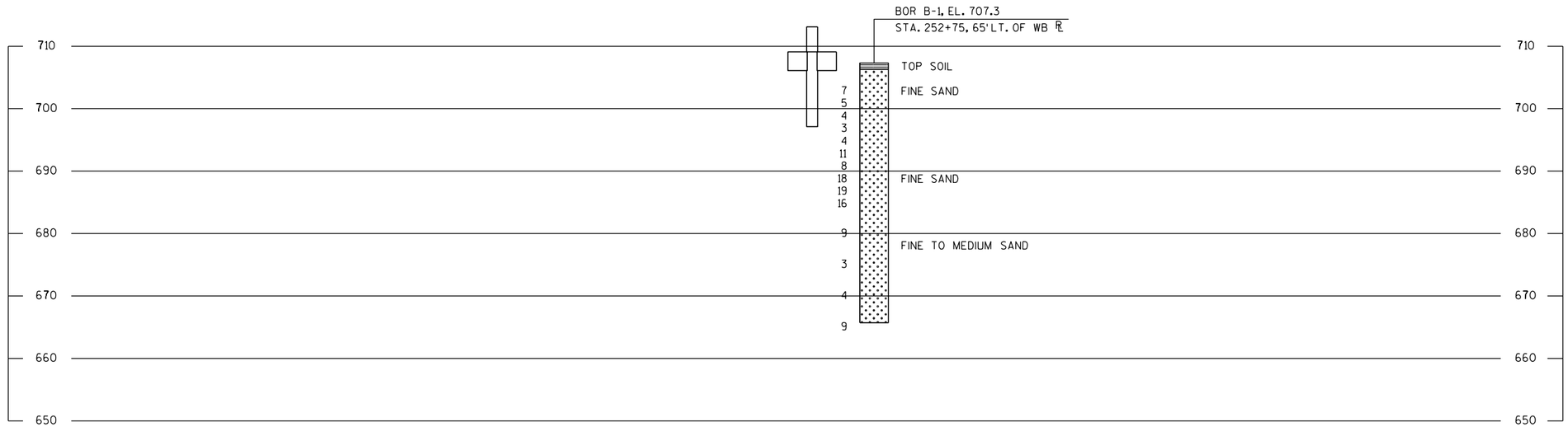
BORING STATIONS AND OFFSETS ARE BASED ON IH 90 WB ℄.

DENOTES SOIL BORING LOCATION

SOIL BORING COMPLETED BY:
WISDOT

SOIL BORING TAKEN:
MARCH 2014 - BORING B-1

PLAN



STATE PROJECT NUMBER

1071-06-78

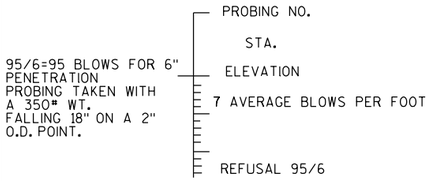
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

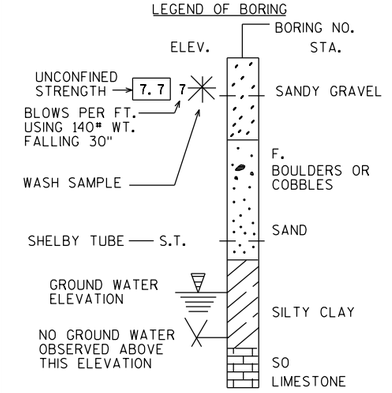
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-59

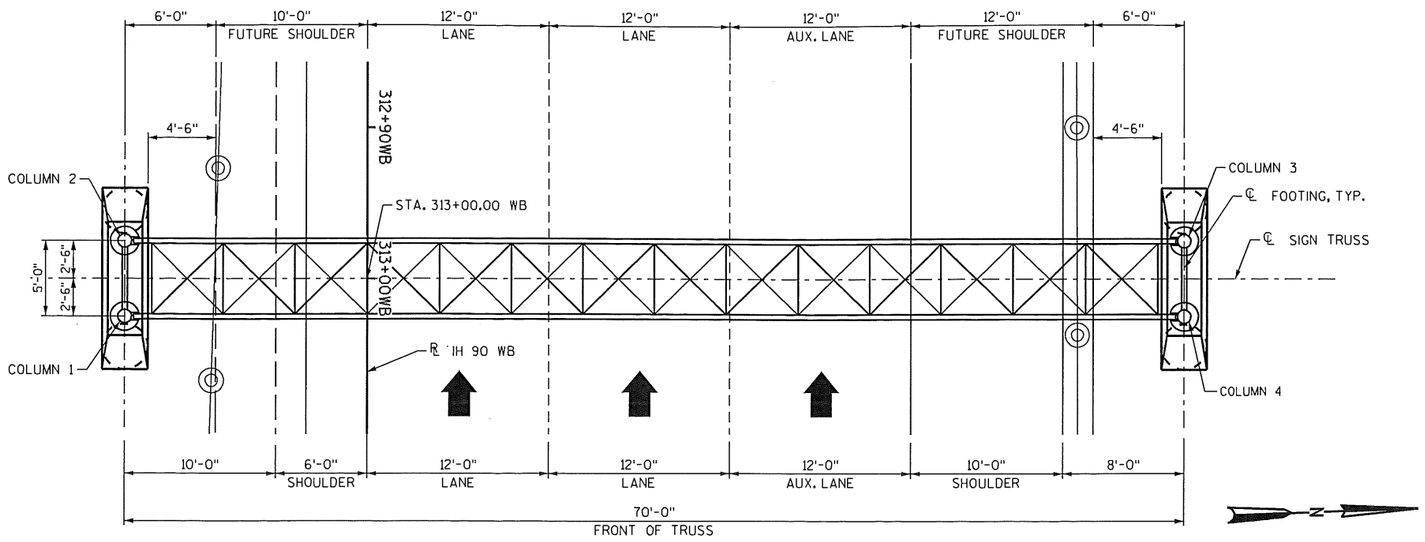
DRAWN BY YC | PLANS CK'D. JFB

SUBSURFACE EXPLORATION

SHEET 5 OF 5
550

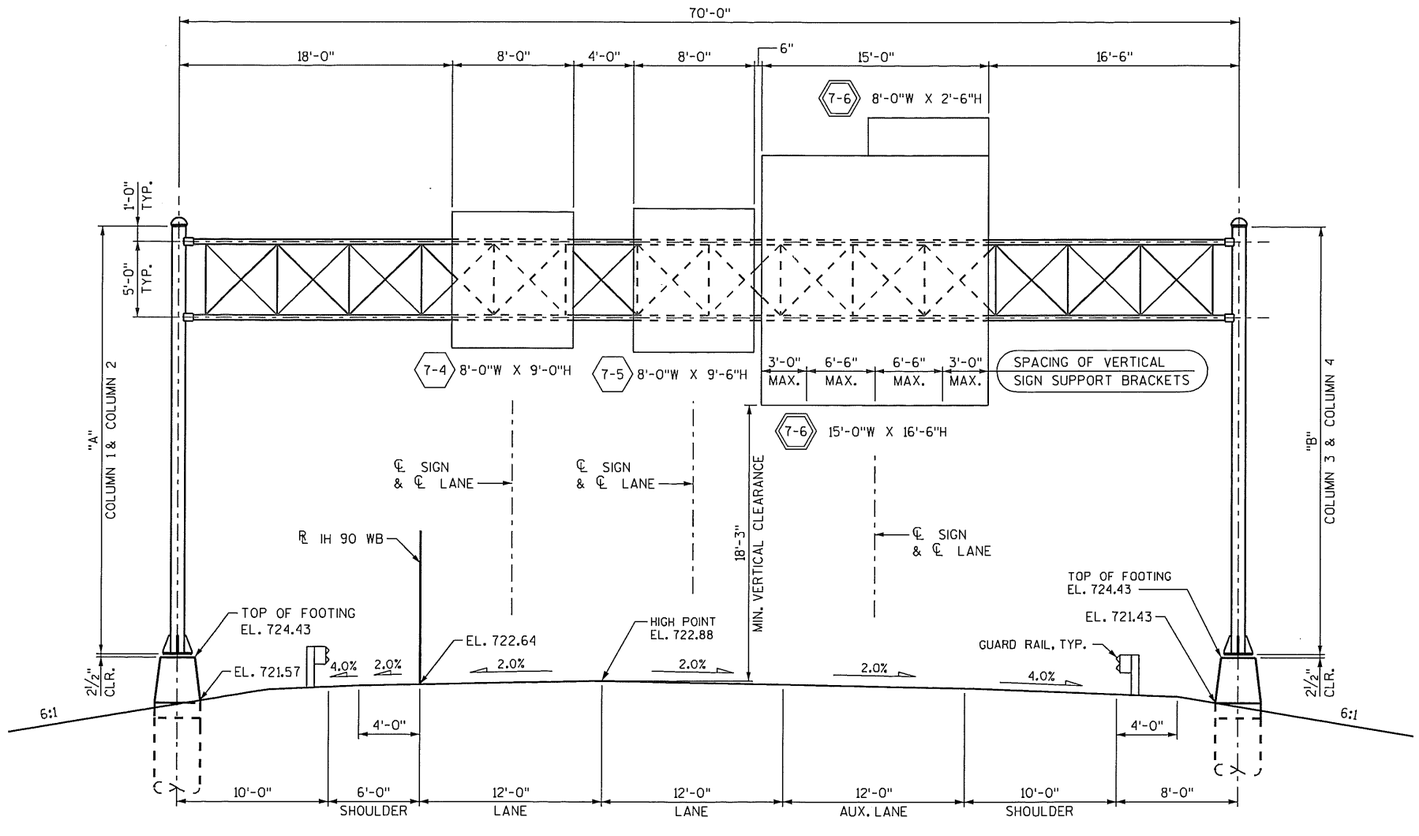
8

8



PLAN

4-CHORD FULL-SPAN SIGN STRUCTURE



ELEVATION

LOOKING WEST AT FRONT FACE OF SIGN
STA. 313+00.00 WB

7-6 SIGN NUMBER

7-6 SIGN NUMBER APPLIES TO BOTH PANELS, SEE SIGN PLAN.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

CENTER SIGNS VERTICALLY ON TRUSS.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

HANDHOLES ARE NOT REQUIRED.

ALL SIGNS ARE TYPE I.

STATE PROJECT NUMBER

1071-06-78

DESIGN DATA

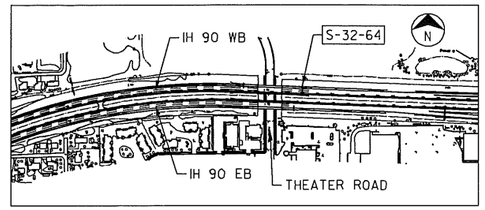
DESIGN SIGN AREA = 792 SF
MAX. SIGN DEPTH = 16'-6"

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND VELOCITY - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½ (WIND*)	133

* MIN. VALUE OF 25 PSF FOR GROUP 3.



LOCATION MAP

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	28
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	3,470
641.6600	SIGN BRIDGE S-32-64	LS	1

ALL ITEMS ARE CATEGORY 0070

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. 4-CHORD GALVANIZED STEEL SIGN BRIDGE
3. 4-CHORD SIGN BRIDGE DETAILS
4. SIGN BRIDGE TRUSS FOOTING
5. SUBSURFACE EXPLORATION

WISCONSIN
JOHN F. RUBLEIN
E-38700
MADISON, WI
PROFESSIONAL ENGINEER
8/1/14

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JOHN RUBLEIN, P.E. (262) 821-1171

NO.	DATE	REVISION	BY

KSA K. Singh & Associates, Inc.
Engineers, Scientists and Environmental Consultants

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/12/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-32-64

IH 90 WB EAST OF THEATER ROAD

COUNTY LA CROSSE | CITY ONALASKA

DESIGN SPEC. AASHTO STANDARD SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
VJD	YC	VJD	JFR

GENERAL PLAN & ELEVATION

SHEET 1 OF 5
551

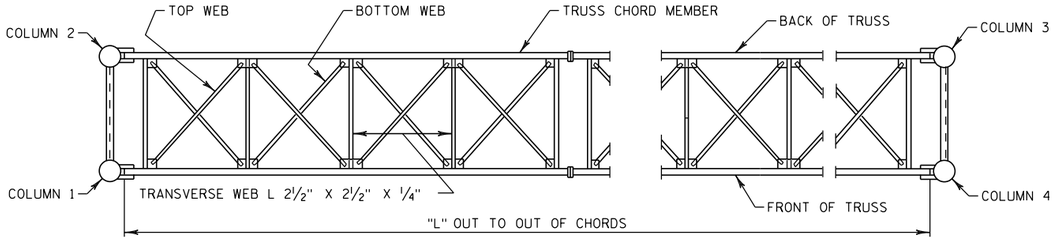
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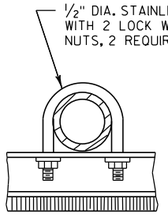
FILE NAME : P:\8384 I90_53_35 Interchange\Structural\Sign Structures\CADD\S-32-64\S-32-64_01.dgn PLOT DATE : 8/1/2014 10:44:02 AM PLOT BY : ychun PLOT NAME : S-32-64_01.dgn PLOT SCALE : 1:10

STATE PROJECT NUMBER

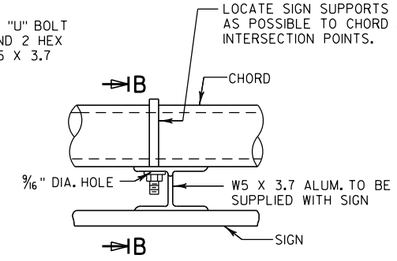
1071-06-78



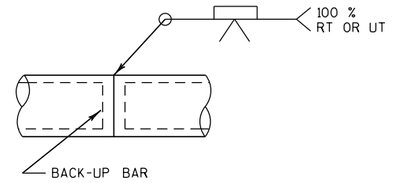
PLAN



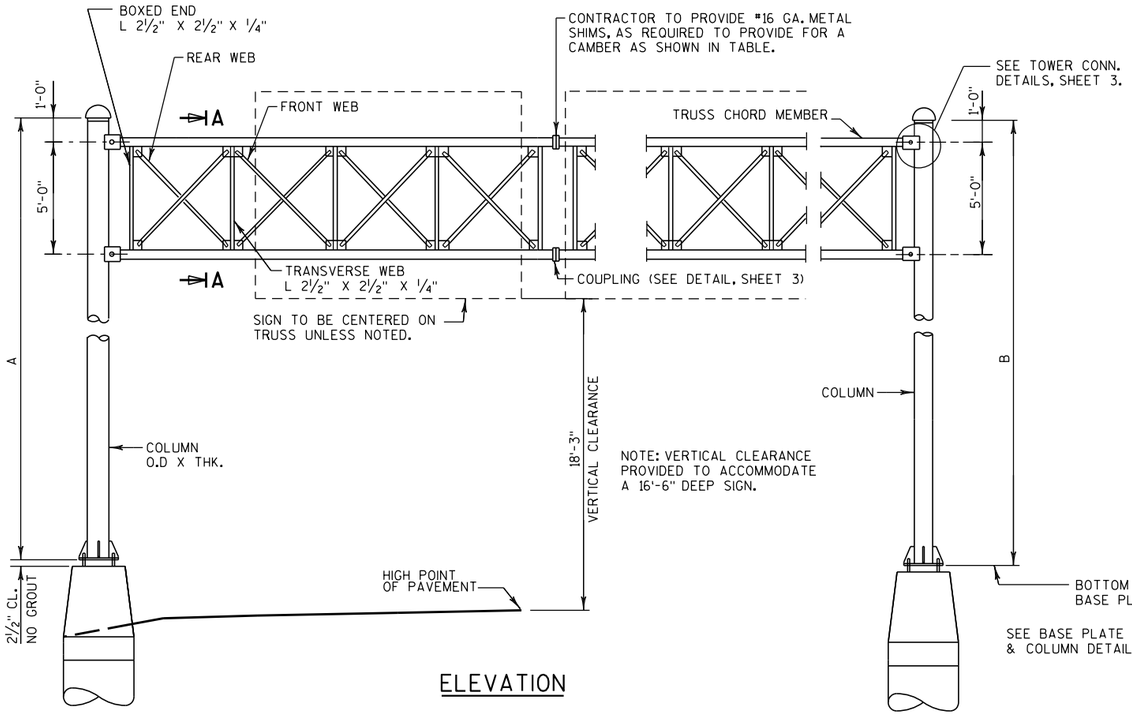
SECTION B



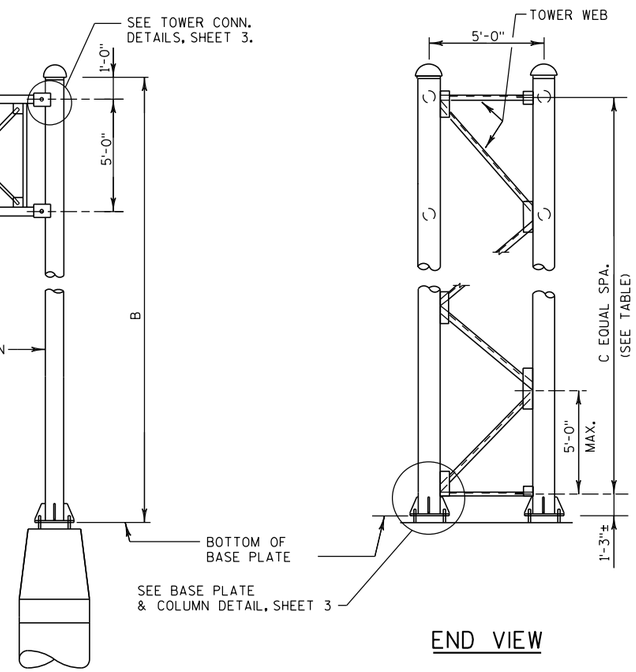
TYPICAL SIGN CONNECTION



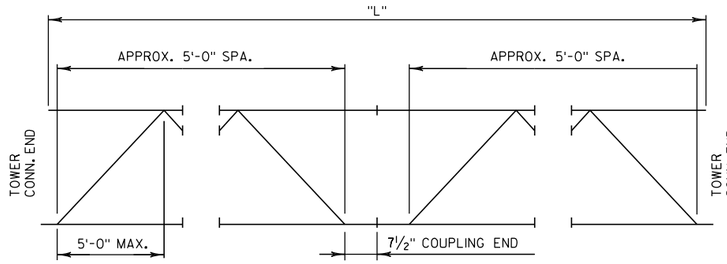
CHORD SPLICE



ELEVATION

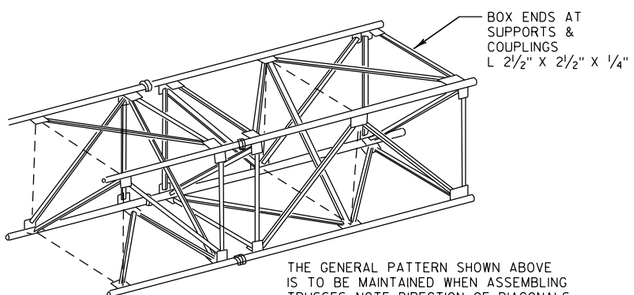


END VIEW



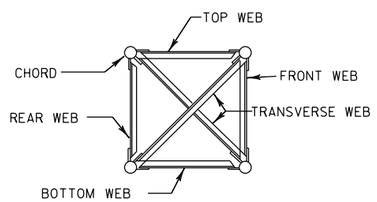
TRUSS ARRANGEMENT

FABRICATOR MAY MAKE TRUSSES ANY LENGTH KEEPING A SECTION A MINIMUM OF 20'-0" & A MULTPLE OF 5'-0". CHORD FIELD SPLICES SHALL BE MADE WITH COUPLINGS. CHORD SHOP SPLICE SHALL BE THE WELDED SPLICE SHOWN ABOVE.



THE GENERAL PATTERN SHOWN ABOVE IS TO BE MAINTAINED WHEN ASSEMBLING TRUSSES. NOTE DIRECTION OF DIAGONALS AT JOINTS.

TYPICAL TRUSS SECTION



SECTION A

NOTES

DRAWINGS SHALL NOT BE SCALED.

STEEL COLUMN PIPE SHALL BE API SPEC. 5L GRADE X42 Fy = 42,000 PSI.
ALL STEEL PIPE MEMBERS OF TRUSS SHALL BE API SPEC. 5L GRADE X42 Fy = 42,000 PSI.
PLATES, BARS, STRUCTURAL ANGLES SHALL BE ASTM A709 GRADE 36 Fy = 36,000 PSI.
ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.
ALL BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA. A325 BOLTS, GALVANIZED ASTM A153, CLASS C.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF UNIT CAN BE GALVANIZED IN ONE PIECE.

STEEL ANCHOR BOLTS SHALL BE AASHTO M314-90 GRADE 55. Fy = 55,000 PSI.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERRECTION. BLANKS SHALL BE ¼ THE LENGTH OF THE BRIDGE. 2'-0" DEEPER THAN C TO C OF CHORDS & SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED IN PLANS.

THE UPPER 12" ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE AASHTO SPECIFICATION AS STATED IN SECTION 641. OF THE WISDOT STANDARD SPECIFICATIONS.

WELD TEST AS PER AWS D1.1.

STRUCTURE	A	B	C	CHORD O.D. X THK.	TOP & BOTTOM WEB	FRONT & REAR WEB	COUPLING PLATE "D1" & "T"	BOLT CIRCLE DIA. "D2"	NO. OF BOLTS IN COUPLING	CAMBER	COLUMN O.D. X THK.	TOWER WEB	"L"
S-32-64	28'-3"	28'-3"	6 NORTH TOWER 6 SOUTH TOWER	4.5"X0.237"	3"X3"X¼"	3"X3"X¼"	10" & 1"	7½"	6	1⅛"	10.75"X0.250"	4"X4"X⅜"	68'-10¼"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-64

DRAWN BY VJD | PLANS CK'D. JFR

4-CHORD GALVANIZED STEEL SIGN BRIDGE

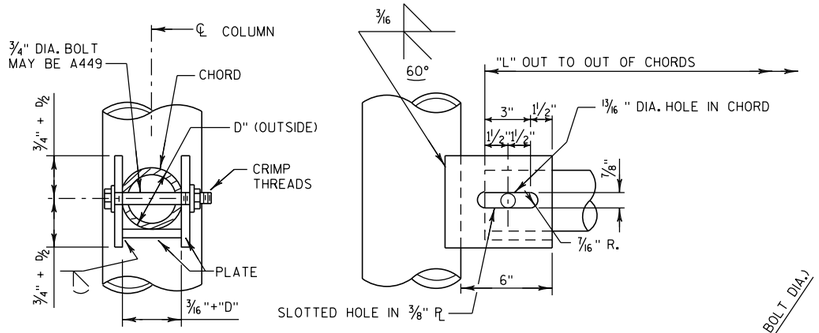
SHEET 2 OF 5
552

8

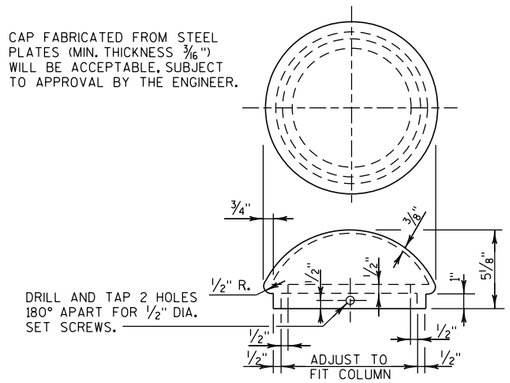
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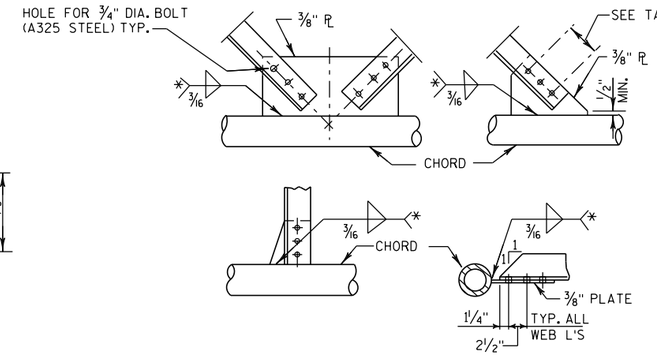
1071-06-78



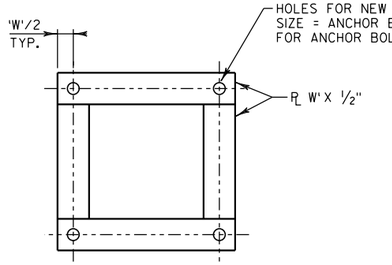
TOWER CONNECTION DETAIL



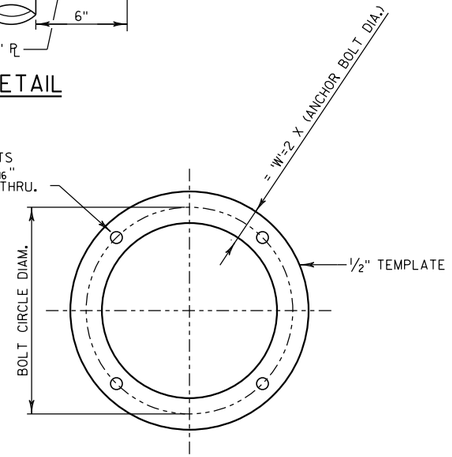
TOWER CAP DETAIL



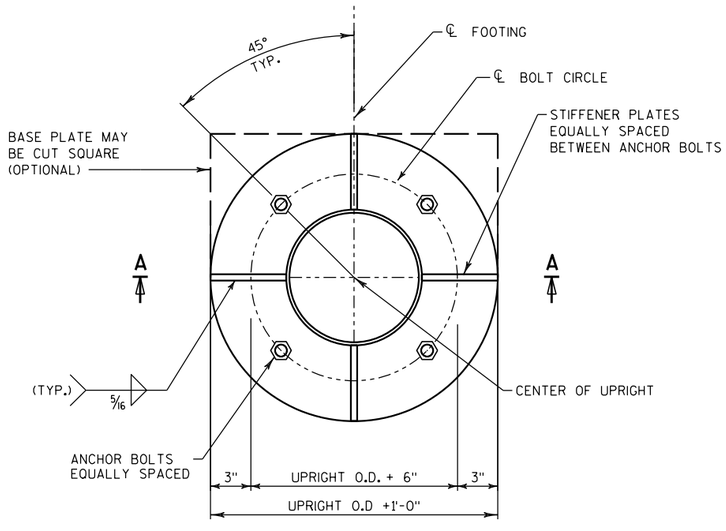
TYPICAL TRUSS CONNECTION DETAILS



ALTERNATE TEMPLATE PLAN

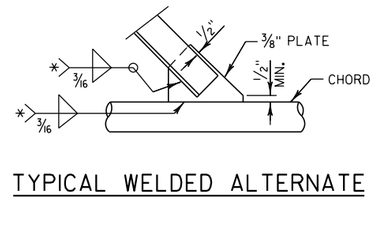


TEMPLATE PLAN



PLAN VIEW

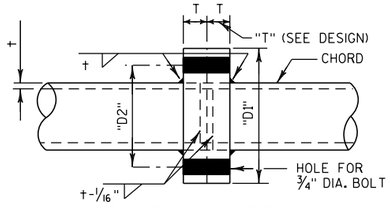
(BASE PLATE)



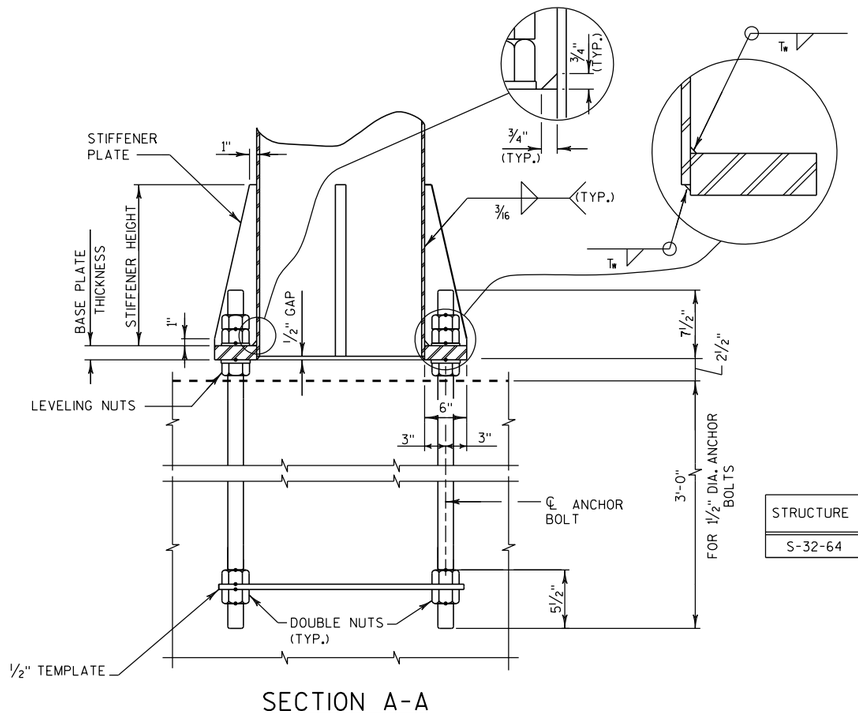
TYPICAL WELDED ALTERNATE

*ANGLE	WELD LENGTH	NO. OF BOLTS
● 2½"x2½"x¼"	11"	3
3"x3"x3/16"	10"	3
3"x3"x¼"	13"	4
3"x3"x5/16"	16½"	5
3"x3"x⅜"	19½"	6
4"x4"x¼"	18"	5
4"x4"x5/16"	22"	6
4"x4"x⅜"	26"	8
4"x4"x7/16"	30"	9
4"x4"x½"	34"	10

● ONLY USED FOR BOXED END AND TRANSVERSE BRACING.



COUPLING DETAIL



SECTION A-A

STRUCTURE	COLUMN O.D. X THK.	ANCHOR BOLTS DIAMETER	BASE PLATE THICKNESS (IN.)	STIFFENER PLATE THICKNESS (IN.)	STIFFENER PLATE HEIGHT (IN.)	Tw (IN.)
S-32-64	10.75"X0.250"	1½"	1½"	½"	10"	¼"

NOTE:

PRIOR TO INSTALLATION, ANCHOR BOLTS SHALL BE RIGIDLY HELD IN POSITION DURING CONCRETE PLACEMENT USING STEEL ANCHOR PLATE AND TOP TEMPLATE. REMOVE TOP TEMPLATE (NOT SHOWN AFTER CONCRETE SETS.

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-64

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4-CHORD SIGN BRIDGE DETAILS

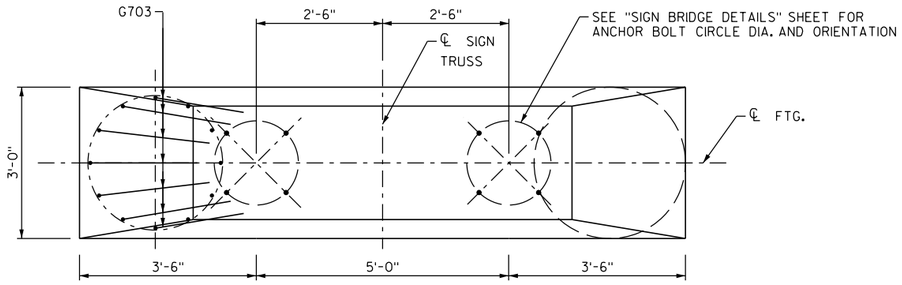
SHEET 3 OF 5
553

8

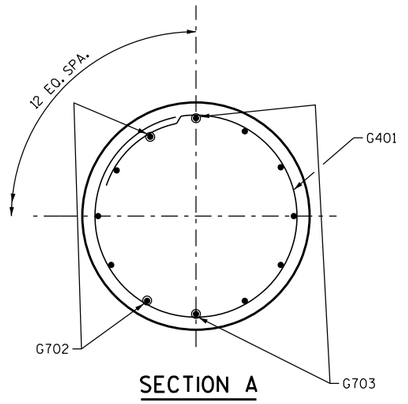
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STATE PROJECT NUMBER

1071-06-78



PLAN



SECTION A

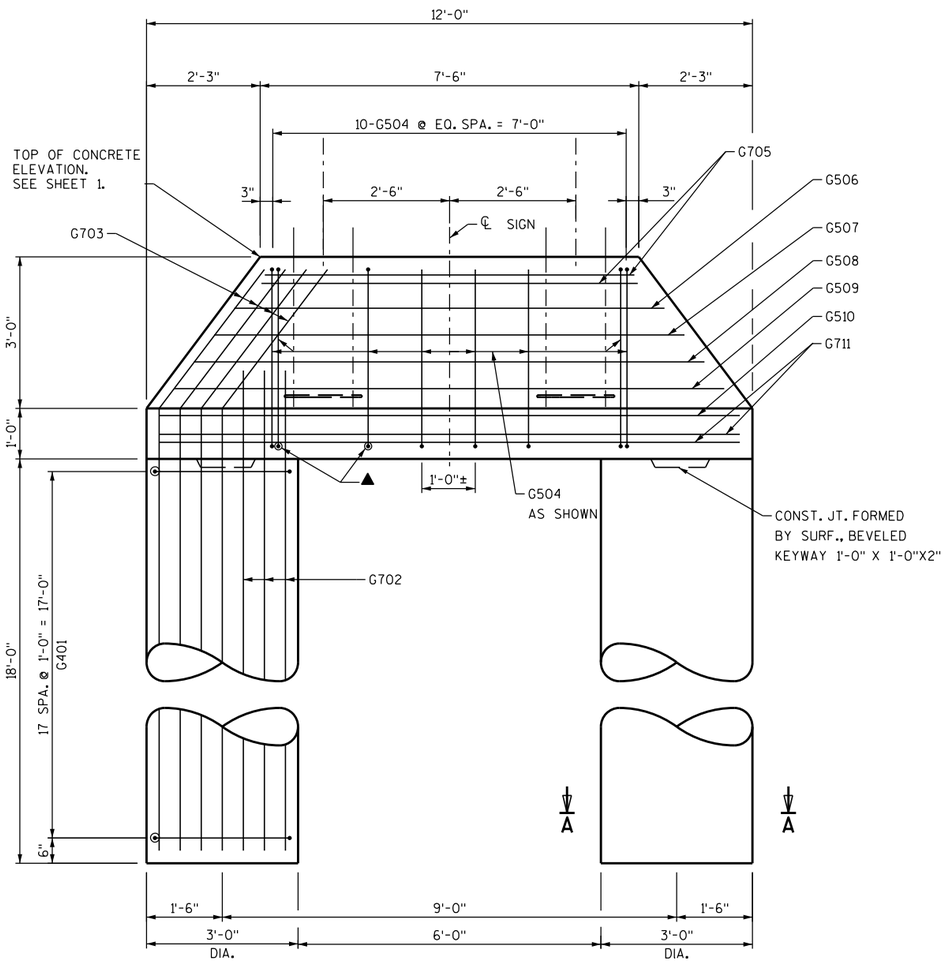
BILL OF BARS

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
BAR DIMENSIONS ARE OUT TO OUT OF BAR.

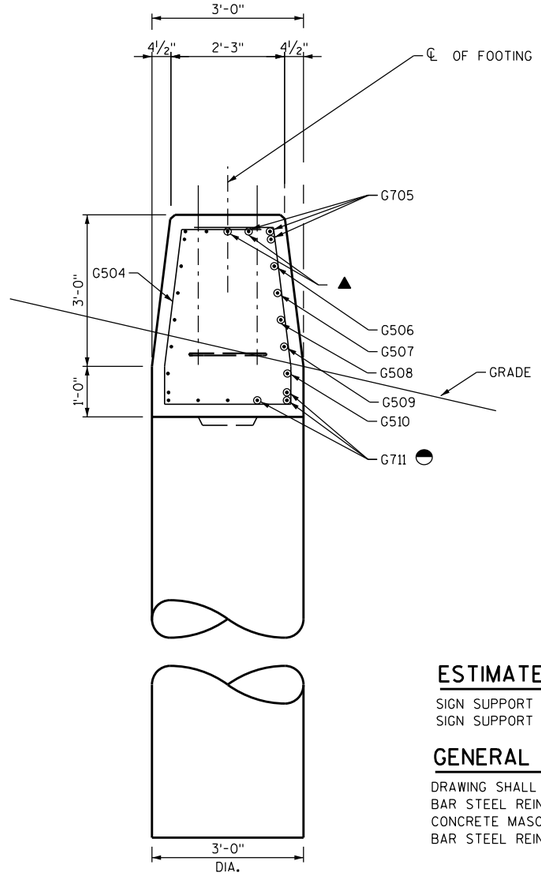
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
G401		36	8'-11"	X		FOOTING-HOOPS
G702		10	20'-0"			FOOTING-VERTICAL
G703		14	22'-2"	X		FOOTING-VERTICAL
G504		8	12'-5"	X		FOOTING-STIRRUPS
G705		7	7'-4"			FOOTING-HORIZONTAL
G506		2	8'-4"			FOOTING-HORIZONTAL
G507		2	9'-2"			FOOTING-HORIZONTAL
G508		2	9'-11"			FOOTING-HORIZONTAL
G509		2	10'-9"			FOOTING-HORIZONTAL
G510		2	11'-6"			FOOTING-HORIZONTAL
G711		7	11'-6"			FOOTING-HORIZONTAL

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

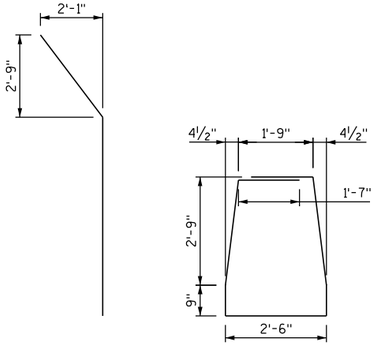
QUANTITY OF BARS IN TABLE IS FOR ONE FOOTING.



ELEVATION
(ONE FTG.)

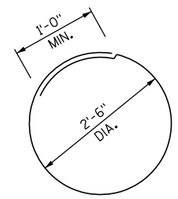


END VIEW



G703

G504



G401

SOIL DESIGN PARAMETERS

FRICTION ANGLE = 31 DEGREES
SOIL UNIT WEIGHT = 115 PCF

ESTIMATED QUANTITIES (ONE FOOTING)

SIGN SUPPORT CONCRETE MASONRY---------- 14 CY
SIGN SUPPORT STEEL REINFORCEMENT HS ---------- 1,735 LB

GENERAL NOTES

DRAWING SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CL.
CONCRETE MASONRY---------- fc'= 3,500 PSI
BAR STEEL REINF. -----GRADE 60 fy = 60,000 PSI

◓ SPACE TO MISS VERT. SHAFT REINF.
▲ SPACE TO MISS ANCHOR BOLTS. TIE IN PLACE AFTER ANCHOR BOLT ASSEMBLY LOCATED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-64

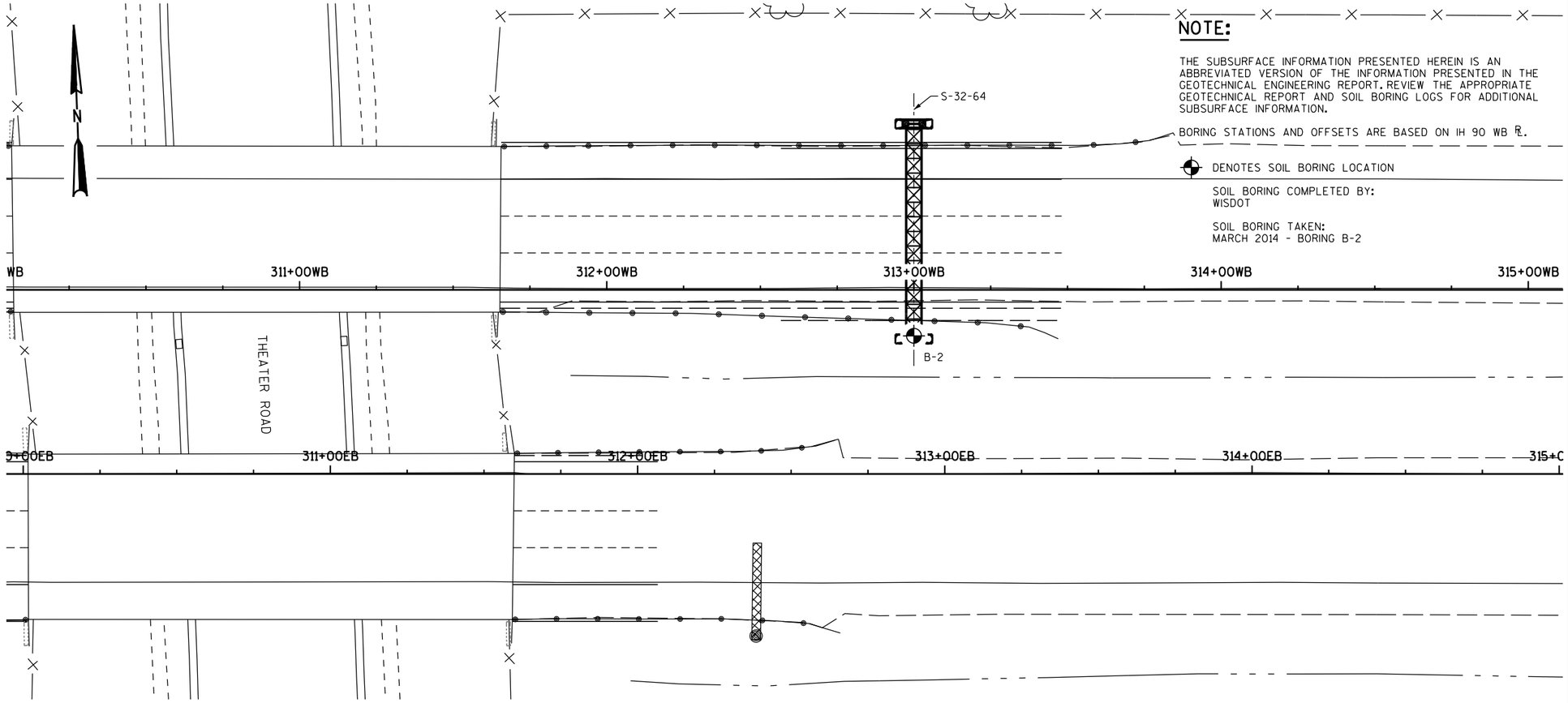
DRAWN BY VJD | PLANS CK'D. JFR

SIGN BRIDGE TRUSS FOOTING

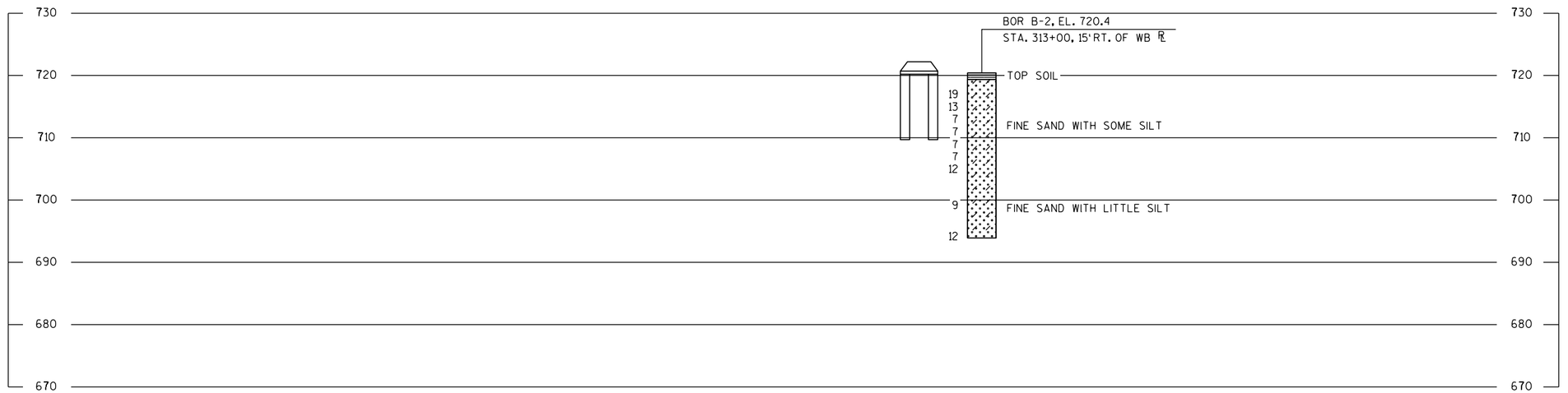
SHEET 4 OF 5
554

8

8



PLAN



NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON IH 90 WB ℄.

DENOTES SOIL BORING LOCATION

SOIL BORING COMPLETED BY:
WISDOT

SOIL BORING TAKEN:
MARCH 2014 - BORING B-2

STATE PROJECT NUMBER

1071-06-78

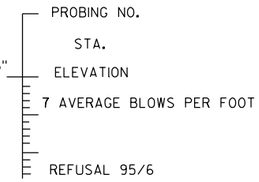
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

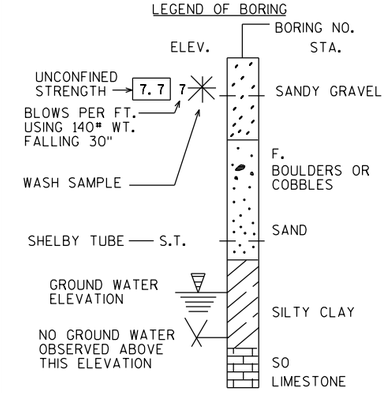
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-32-64

DRAWN BY YC | PLANS CK'D. JFR

SUBSURFACE EXPLORATION

SHEET 5 OF 5
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