MAD

PROJECT ID: 1161-02-61

WITH: 1161-02-63 & 1161-02-66

COUNTY: COLUMBIA

JUNE 2017

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 = 278

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1161-02-61	WISC 2017310	1
1161-02-63	WISC 2017311	1
1161 - 02 - 66	WISC 2017312	1

MADISON - PACKWAUKEE

CANADIAN PACIFIC RR BRGS B-11-58/59

IH 39

COLUMBIA COUNTY

STATE PROJECT NUMBER 1161-02-61

MADISON - PACKWAUKEE

WISCONSIN RIVER BRIDGES B-11-55/56

IH 39

COLUMBIA COUNTY

STATE PROJECT NUMBER 1161-02-63

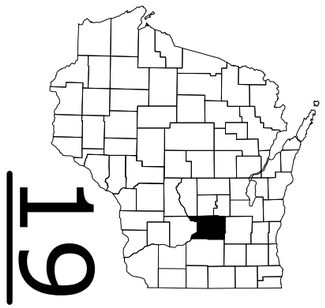
PORTAGE - PACKWAUKEE

STH 16 INTERCHANGE AREA

IH 39

COLUMBIA COUNTY

STATE PROJECT NUMBER 1161-02-66



N

DESIGN DESIGNATION 1161-02-61/63/66

A.A.D.T.	2017	=	20,500
A.A.D.T.	2037	=	24,600
D.H.V.		=	2854
D.D.		=	60/40
T.		=	16.8%
DESIGN SPEED		=	70 MPH
ESALS		=	

CONVENTIONAL SYMBOLS

PLAN

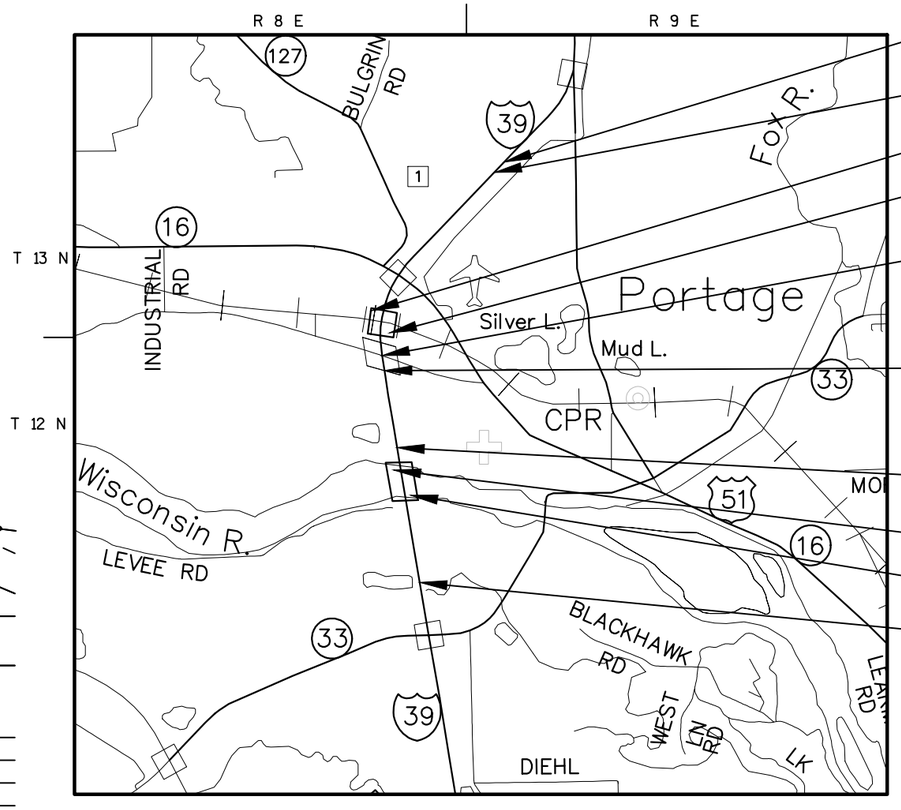
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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



LAYOUT

SCALE 0 1 MI.

1161-02-61 TOTAL NET LENGTH OF CENTERLINE - 0.000 MI.
1163-02-63 TOTAL NET LENGTH OF CENTERLINE - 0.000 MI.
1166-02-66 TOTAL NET LENGTH OF CENTERLINE - 0.000 MI.
TOTAL - 0.000 MI.

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

ORIGINAL PLANS PREPARED BY

Michael Baker INTERNATIONAL

WISCONSIN SUSAN C. BARKER E-27128 MADISON, WI PROFESSIONAL ENGINEER

1/18/2017 (Date) Susan C Barker (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	KL ENGINEERING, INC.
Designer	MICHAEL BAKER INTERNATIONAL
Project Manager	CHRIS HODGES, PE, PLS
Regional Examiner	
Regional Supervisor	KARLA KNORR, PE

APPROVED FOR THE DEPARTMENT

DATE: 1/18/17 (Signature)

E

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER. DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND MULCHED.

THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH THE EXISTING UTILITY FACILITIES.

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

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

THE HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON A UNIT WEIGHT OF 110 LBS/SY/IN.

4" HMA PAVEMENT SHALL BE PLACED IN 2 LAYERS. LOWER LAYER OF 2 INCHES AND UPPER LAYER OF 2 INCHES.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

SUBSURFACE EXPLORATION REPORT, INCLUDING BORING INFORMATION, IS AVAILABLE FROM WISDOT SW REGION PROJECTS SECTION, CHRIS HODGES, PROJECT MANAGER, PHONE 608-246-7911

TEMPORARY SIGNALS TO BE INSTALLED, MAINTAINED AND PHASED FOR PROJECT ID 1161-02-74.

ABBREVIATIONS

ASPH.	ASPHALTIC
CL OR C.L.	CENTER LINE
C.E.	COMMERCIAL ENTRANCE
CONC.	CONCRETE
C.M.C.P.	CORRUGATED METAL CULVERT PIPE
C.M.P.	CORRUGATED METAL PIPE
C.P.	CULVERT PIPE
C.S.C.P.	CORRUGATED STEEL CULVERT PIPE
C.S.P.A.	CORRUGATED STEEL PIPE ARCH
DIA.	DIAMETER
EBS	EXCAVATION BELOW SUBGRADE
EXIST.	EXISTING
F.E.	FIELD ENTRANCE
F.L.	FLOW LINE
LC	LAND CONTRACT
L.H.F.	LEFT HAND FORWARD
HMA	HOT MIX ASPHALT
MED	MEDIAN
MIN.	MINIMUM
PAVT.	PAVEMENT
P.E.	PRIVATE ENTRANCE
P.L.	PROPERTY LINE
R.	RADIUS
R.C.C.P.	REINFORCE CONCRETE CULVERT PIPE
R.C.P.S.S.	REINFORCE CONCRETE PIPE STORM SEWER
R.L.	REFERENCE LINE
R.C.	REINFORCED CONCRETE
REQ'D.	REQUIRED
R.H.F.	RIGHT HAND FORWARD
R.R.	RAILROAD
R/W	RIGHT OF WAY
S.G.S.P.	SUBGRADE SHOULDER POINT
SHLDR.	SHOULDER
S.P.B.G.	STEEL PLATE BEAM GUARD
S.D.	SPECIAL DITCH
S.D.D.	STANDARD DETAIL DRAWING
STA.	STATION
T.L.E.	TEMPORARY LIMITED EASEMENT
TYP.	TYPICAL
V.C.	VERTICAL CURVE
VAR.	VARIES

UTILITIES

ATC MANAGEMENT, INC. - ELECTRIC TRANSMITION
ALEX METZ
5303 FEN OAK DRIVE
MADISON, WI 53714
608-877-7105
AMETZ@ATCLLC.COM

ALLIANT ENERGY - ELECTRIC AND GAS/PETROLEUM
JASON HOGAN
4902 N BILTMORE LANE, STE 1000
MADISON, WI 53718
608-458-4871
JASONHOGAN@ALLIANTENERGY.COM

FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION
JERRY MOORE
2222 WEST WISCONSIN STREET
PORTAGE, WI 53901
608-742-9507
JERALD.R.MOORE@FTR.COM

CHARTER COMMUNICATIONS - COMMUNICATION
BRANDON STORM
2701 DANIELS ST.
MADISON, WI 53718
608-274-3822
BRANDON.STORM@CHARTER.COM

CITY OF PORTAGE UTILITIES - WATER AND SEWER
AARON JAHNCKE
115 WEST PLEASANT ST
PORTAGE, WI 53901
608-742-2176
AARON.JAHNCKE@PORTAGEWI.GOV

ROGERS COMMUNICATIONS CANADA, INC.
VICKIE MORAN
4804 N. 40TH STREET
SHEBOYGAN, WI 53083
920-395-7125
VMORAN@GABES.COM

WINDSTREAM KDL, INC.
NATHAN BECKER
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005
262-792-7938
NATHAN.BECKER@WINDSTREAM.COM

REGION CONTACT

CHRIS HODGES
2101 WRIGHT STREET
MADISON, WI 53704
608-246-7911
CHRIS.HODGES@DOT.WI.GOV

DESIGN CONSULTANT

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7633 GANSER WAY, STE 206
MADISON, WI 53719

SUSAN BARKER
608-821-8712
SUSAN.BARKER@MBAKERINTL.COM

DNR CONTACT

ERIC HEGGELUND
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
608-275-3301
ERIC.HEGGELUND@WISCONSIN.GOV

RAILROAD CONTACT

CANADIAN PACIFIC RAILWAY
JIM KRIEGER
120 SOUTH SIXTH STREET, SUITE 9126
MINNEAPOLIS, MN 55402
(612) 330-4555
JIM_KRIEGER@CPR.CA

ORDER OF SECTION 2 SHEETS

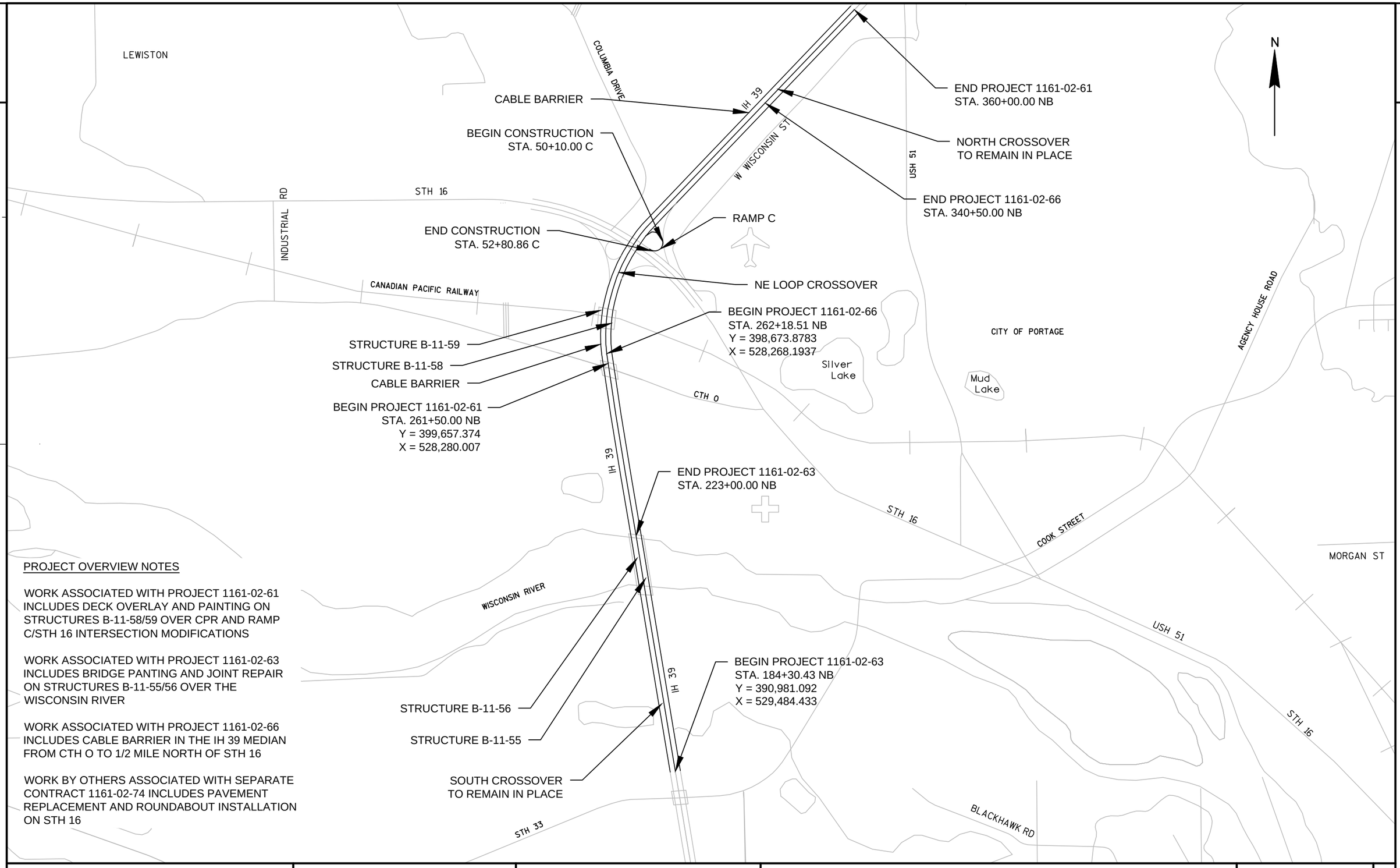
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
EROSION CONTROL
PERMANENT SIGNING
PAVEMENT MARKING
TRAFFIC CONTROL
CONSTRUCTION STAGING
DETOUR
ALIGNMENT

BORING LOG

BORING NO.	STATION	OFFSET	DEPTH	USCS CLASS.	MATERIAL DESCRIPTION
CB-1	262+30 NB	25' LT	0 FT - 10 FT	SP	BROWN FINE, SAND, MOIST, VERY LOOSE TO MEDIUM DENSE
CB-2	271+30 NB	33' LT	0 IN - 1 IN	SC	TOPSOIL
			1 IN - 10 FT	SP	BROWN FINE SAND, MOIST, LOOSE TO DENSE
CB-3	274+80 NB	25' LT	0 IN - 4 IN	SC	TOPSOIL
			4 IN - 3 FT	SC	BROWN CLAYEY SAND, MOIST, MEDIUM DENSE
			3 FT - 10 FT	SP	BROWN FINE SAND, MOIST, MEDIUM DENSE TO DENSE
CB-4	288+20 NB	28' LT	0 IN - 2 IN	SC	TOPSOIL
			2 IN - 3 FT	SM	BROWN SILTY FINE SAND, MOIST, LOOSE
			3 FT - 10 FT	SM	BROWN FINE SAND, TRACE GRAVEL, MOIST, MEDIUM DENSE TO DENSE
CB-5	293+40 NB	28' LT	0 IN - 3 IN	SC	TOPSOIL
			3 IN - 10 FT	SM	BROWN SILTY FINE SAND, TRACE GRAVEL, MOIST, MEDIUM DENSE
CB-6	340+40 NB	25' LT	0 IN - 3 IN	SC	TOPSOIL
			3 IN - 10 FT	SM	BROWN SILTY FINE SAND, MOIST TO WET, MEDIUM DENSE TO VERY LOOSE

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

2



PROJECT OVERVIEW NOTES

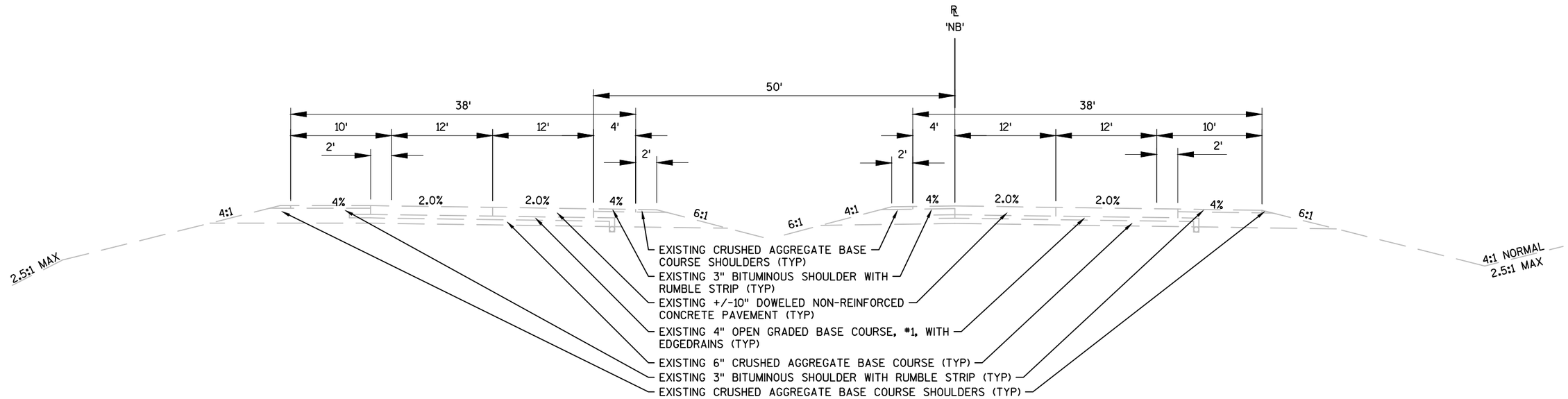
WORK ASSOCIATED WITH PROJECT 1161-02-61 INCLUDES DECK OVERLAY AND PAINTING ON STRUCTURES B-11-58/59 OVER CPR AND RAMP C/STH 16 INTERSECTION MODIFICATIONS

WORK ASSOCIATED WITH PROJECT 1161-02-63 INCLUDES BRIDGE PANTING AND JOINT REPAIR ON STRUCTURES B-11-55/56 OVER THE WISCONSIN RIVER

WORK ASSOCIATED WITH PROJECT 1161-02-66 INCLUDES CABLE BARRIER IN THE IH 39 MEDIAN FROM CTH O TO 1/2 MILE NORTH OF STH 16

WORK BY OTHERS ASSOCIATED WITH SEPARATE CONTRACT 1161-02-74 INCLUDES PAVEMENT REPLACEMENT AND ROUNDABOUT INSTALLATION ON STH 16

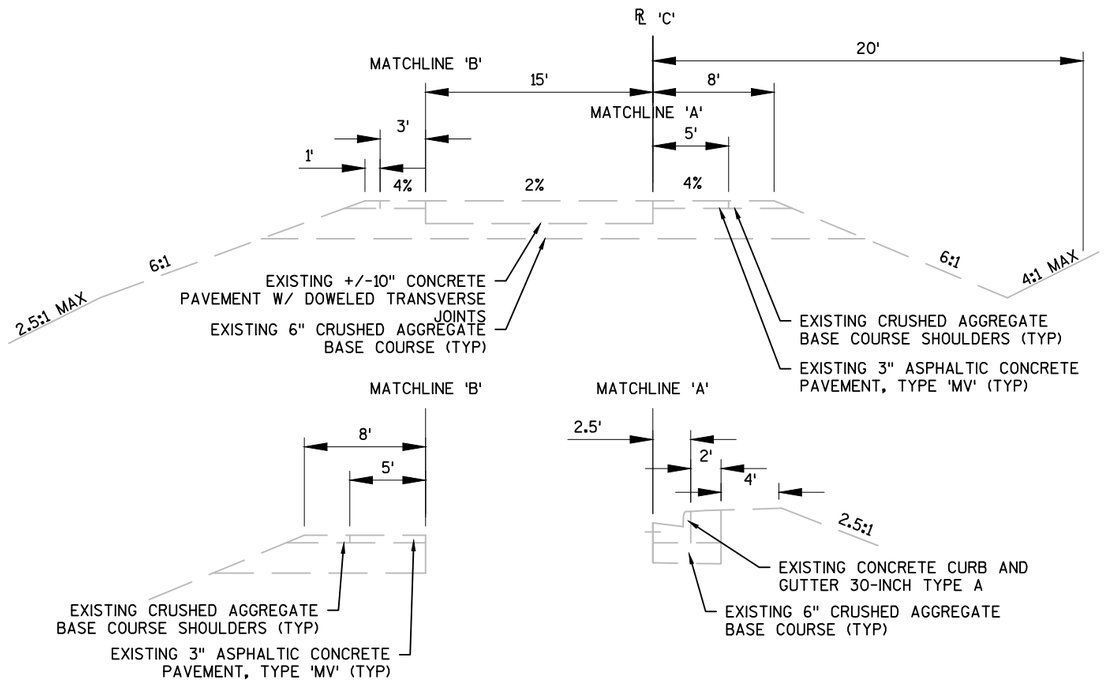
PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION - IH 39

STA 262+18.51 'NB' TO STA 340+50.00 'NB'

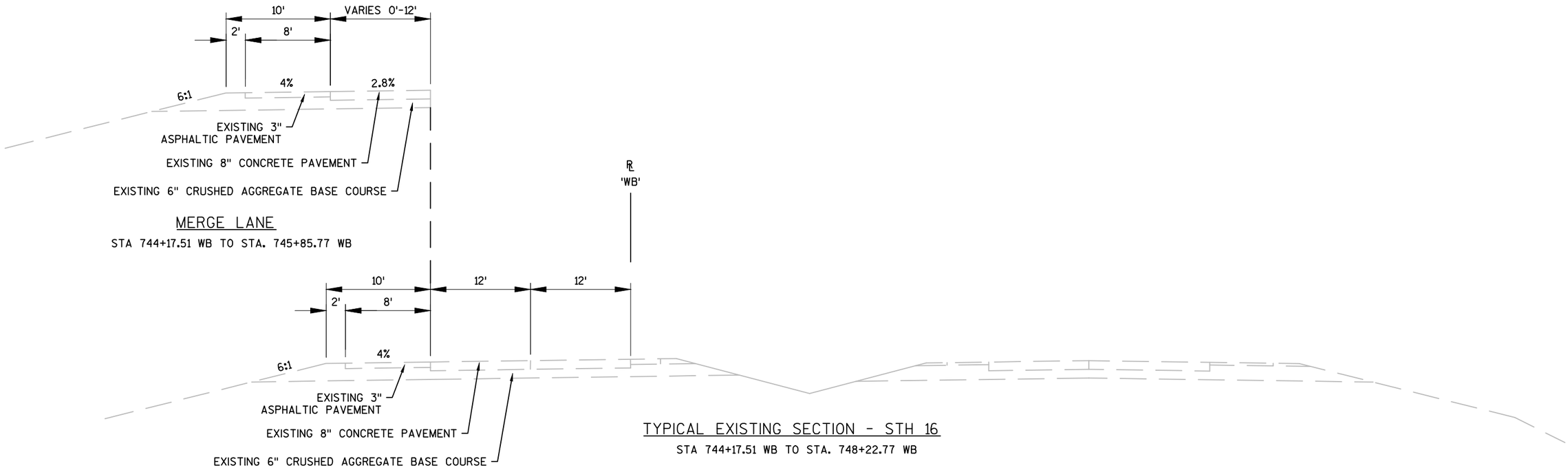
NOTE: SEE PLAN DETAILS FOR BEAM GUARD LOCATIONS.
SEE ALIGNMENT DETAIL FOR HORIZONTAL CURVE LOCATIONS.
THERE ARE NO MEDIAN EDGEDRAINS IN SUPERELEVATED SECTIONS.
B-11-58 AND B-11-59 APPROACH ROADWAY IS SUPERELEVATED.



TYPICAL EXISTING SECTION - RAMP C

STA 50+00.00 'C' TO STA 52+34.00 'C'

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN: TYPICAL SECTIONS	SHEET 4	E



TYPICAL EXISTING SECTION - STH 16

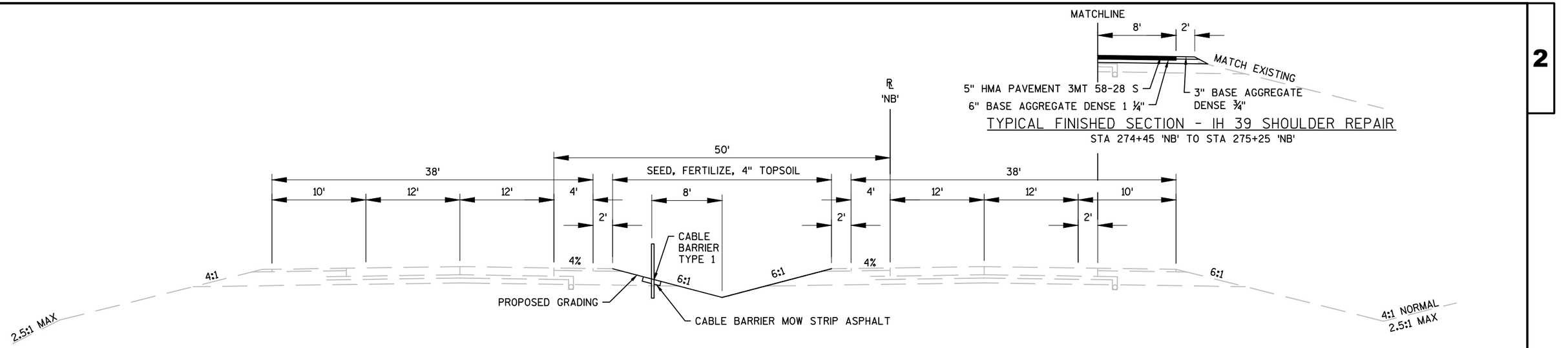
STA 744+17.51 WB TO STA. 748+22.77 WB

2

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN: TYPICAL SECTIONS	SHEET 5	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\SHEETSPLAN\020301_TS.DWG PLOT DATE : 1/16/2017 10:56 AM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42



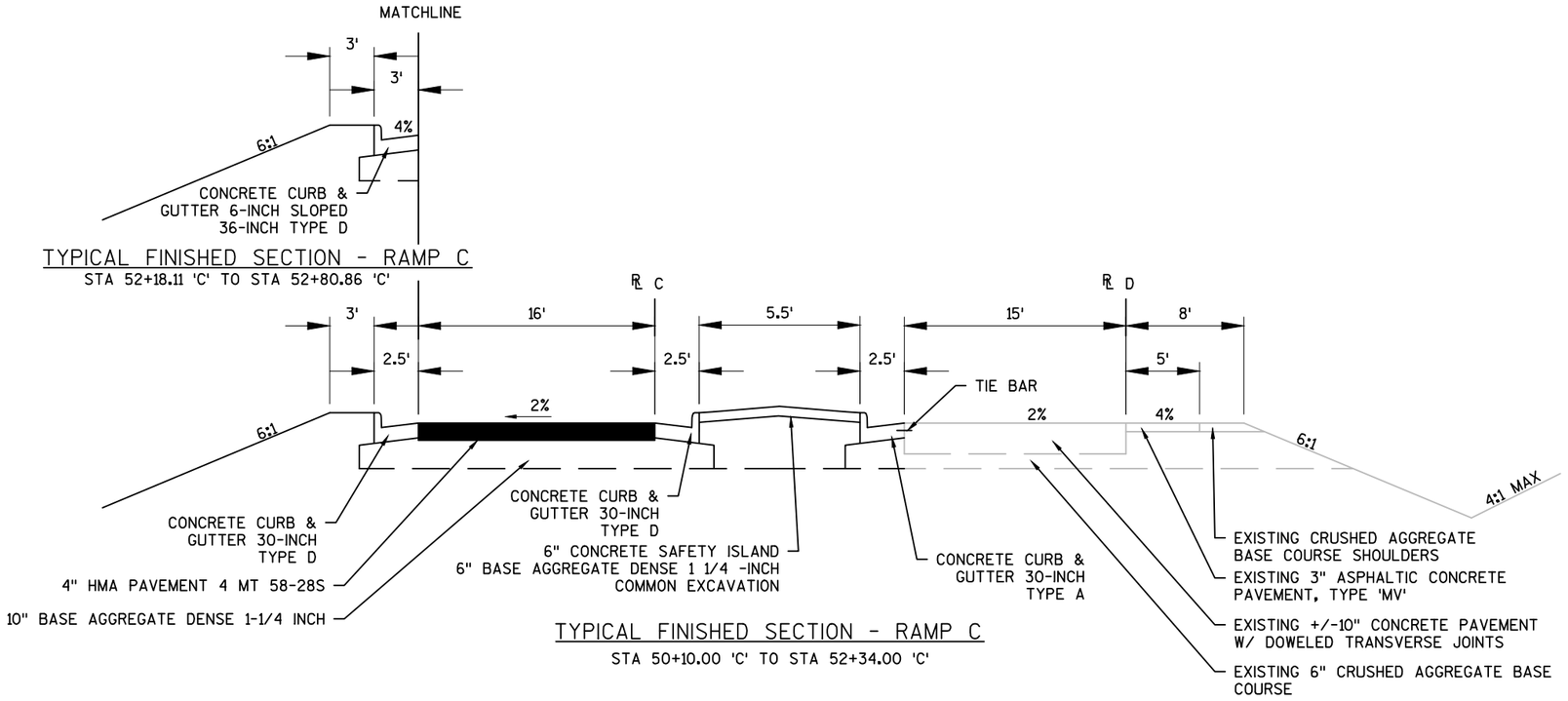
TYPICAL FINISHED SECTION - IH 39 SHOULDER REPAIR

STA 274+45 'NB' TO STA 275+25 'NB'

TYPICAL FINISHED SECTION - IH 39

STA 262+18.51 'NB' TO STA 271+46.52 'NB'
STA 274+47.63 'NB' TO STA 288+39.22 'NB'
STA 293+34.90 'NB' TO STA 340+50.00 'NB'

NOTE: SEE TRAFFIC CONTROL SHEETS FOR STAGING TYPICAL SECTIONS



TYPICAL FINISHED SECTION - RAMP C

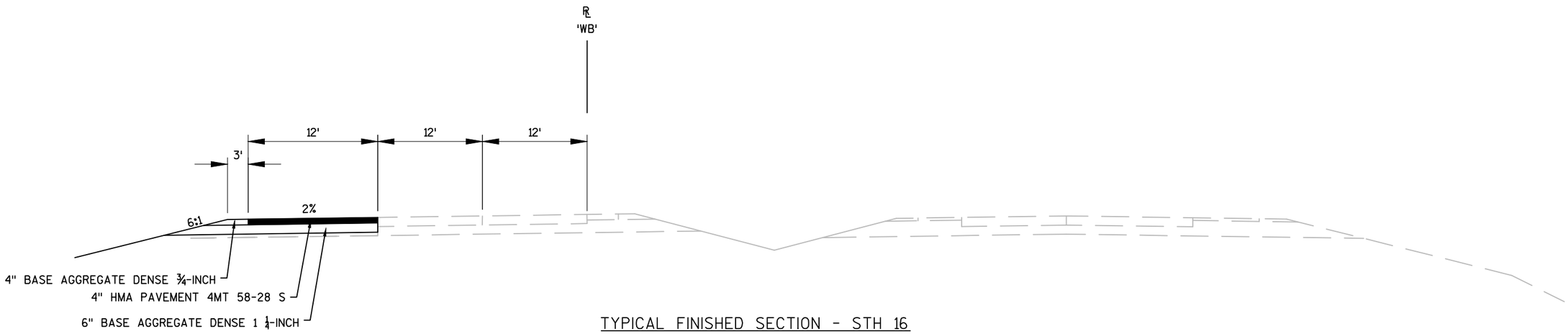
STA 52+18.11 'C' TO STA 52+80.86 'C'

TYPICAL FINISHED SECTION - RAMP C

STA 50+10.00 'C' TO STA 52+34.00 'C'

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN: TYPICAL SECTIONS	SHEET 6	E

2



TYPICAL FINISHED SECTION - STH 16

STA 745+47.00 WB TO STA. 748+22.77 WB

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN: TYPICAL SECTIONS	SHEET 7	E

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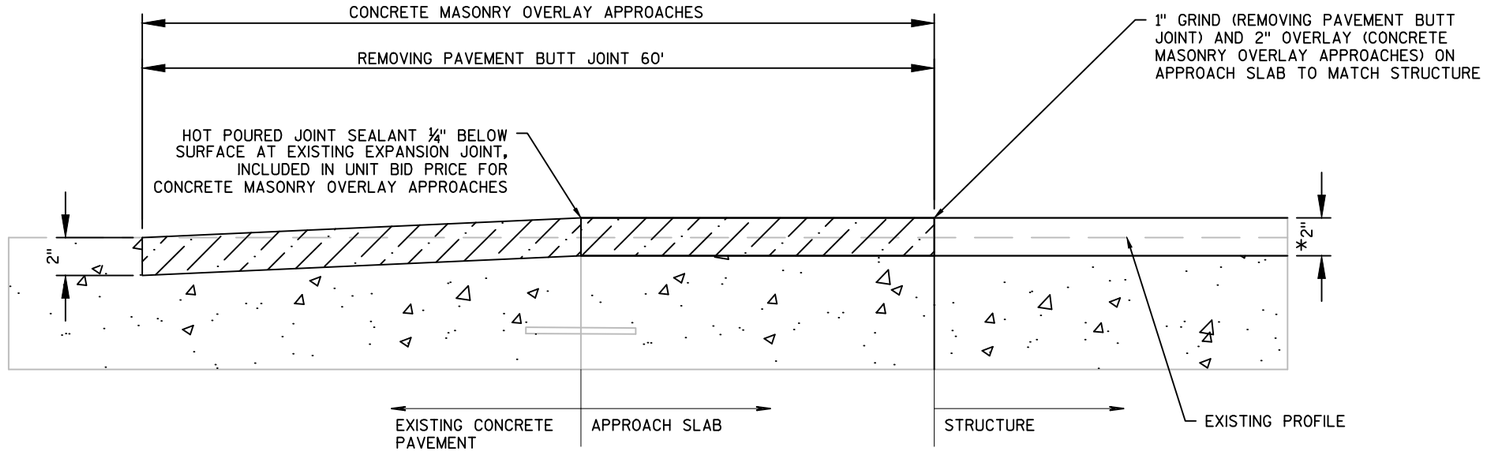
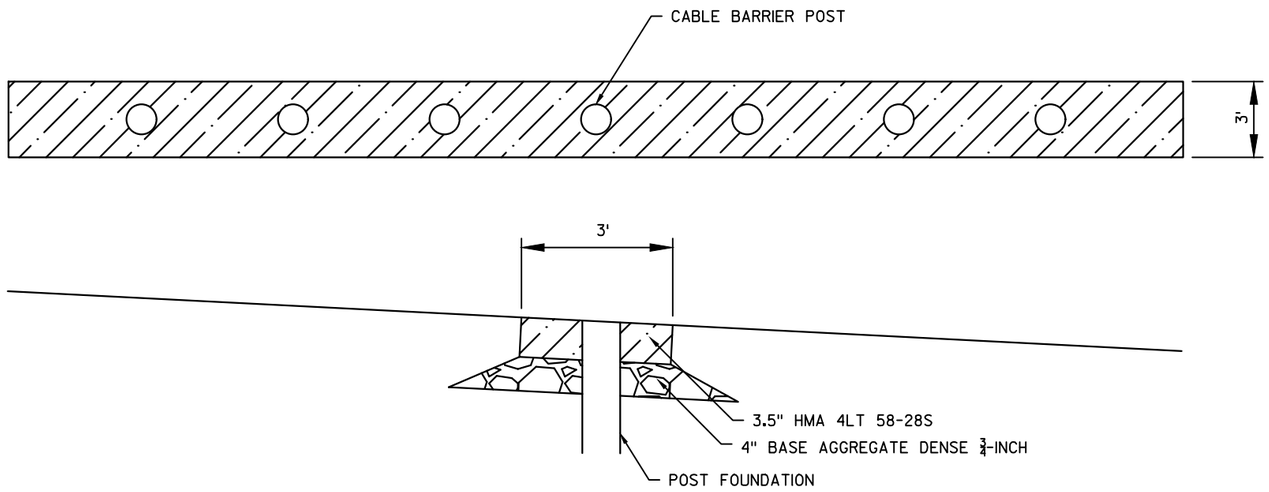
WISDOT/CADDS SHEET 42



BUTT JOINT AND OVERLAY DETAIL

*BRIDGE DECK OVERLAY SEE B-13-58 AND B-13-59

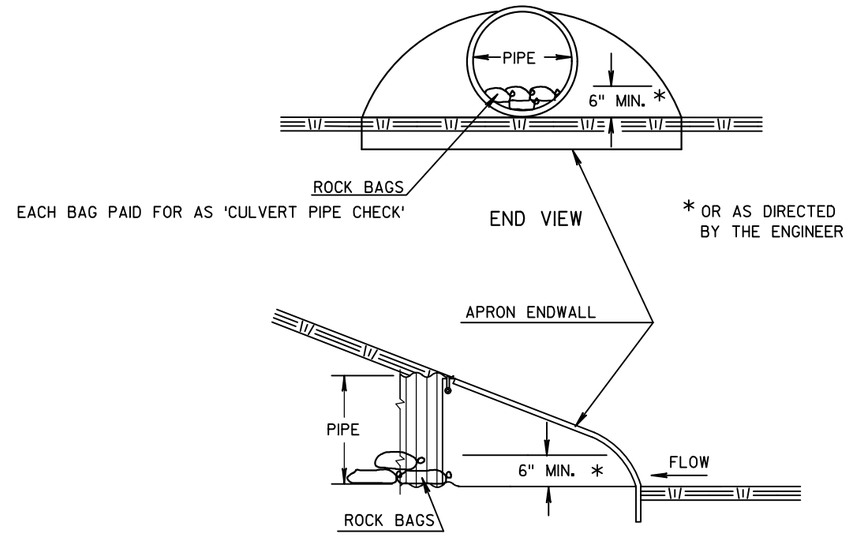


CABLE BARRIER MOW STRIP ASPHALT DETAIL

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN: CONSTRUCTION DETAILS	SHEET 8	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\SHEETSPLAN\021001_CD.DWG PLOT DATE : 1/11/2017 2:46 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2



ESTIMATED BAG SIZE = 24" X 12" X 6"	
PIPE SIZE	ESTIMATED NO. OF BAGS
12"	2
15"	2
18"	2
24"	3
30"	5
48"	10
54"	10
60"	13

CULVERT PIPE CHECK

2

2

N

291+00

744+00'WB'

IH 39 NB

745+00'WB'

746+00'WB'

747+00'WB'

748+00'WB'

749+00'WB'

750+00'WB'

FRONTIER COMMUNICATIONS

STA 52+86 'C', 207.20' RT

SAWING CONCRETE

REMOVING PAVEMENT

STA 51+75 'C', 48' RT
REMOVING SMALL
CULVERT PIPE
58 LF OF 18" CP

STA 747+22 'WB', 22' LT
REMOVING SMALL
CULVERT PIPE
24" RCCP
REMOVE 102 LF OF PIPE

RECONNECT APRON
ENDWALL FOR CULVERT
PIPE SALVAGED 24-INCH

REMOVE ASPHALT SHOULDER
(INCLUDED IN COMMON EXCAVATION)

SAWING CONCRETE

BP: 50+00.00

PT: 50+21.42

STA 50+10 'C', 15.11' LT

51+00'C'

52+00'C'

REMOVING PAVEMENT

SAWING ASPHALT

EP: 52+98.26

RAMP C

RAMP D

RIPRAP

STH 16

IH

INL

SIGN

POST

MP

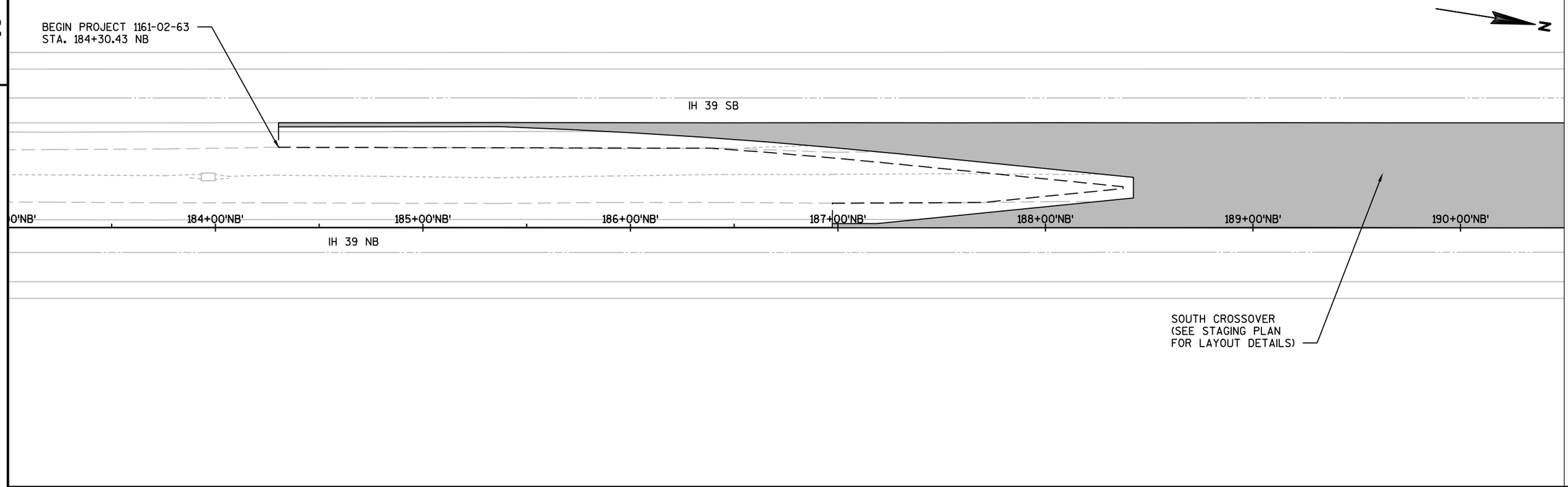
FO

G

OE

XXXX

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CONSTRUCTION DETAIL: REMOVALS	SHEET 10	E



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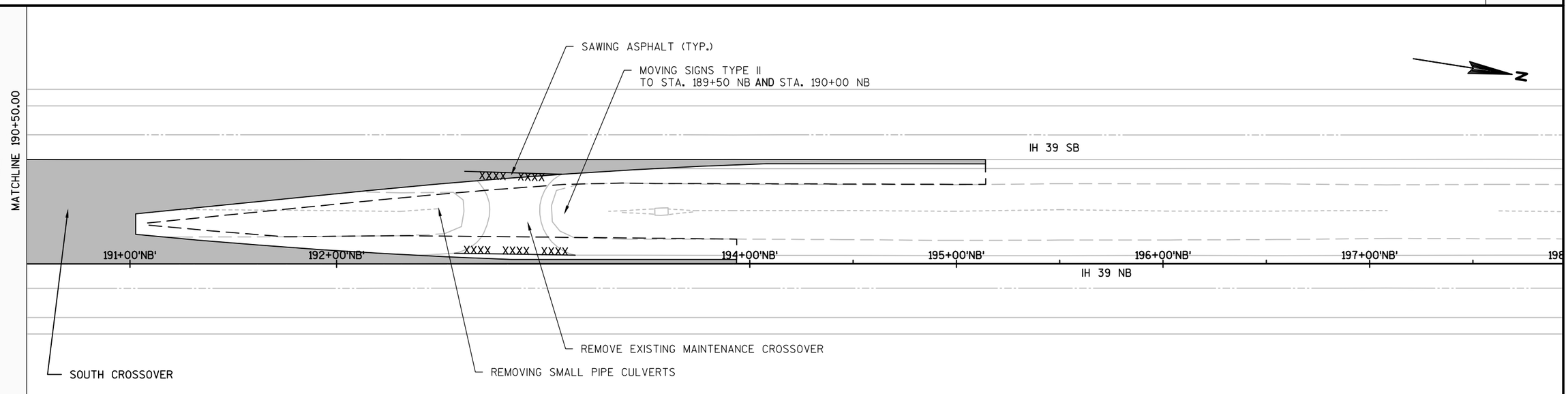
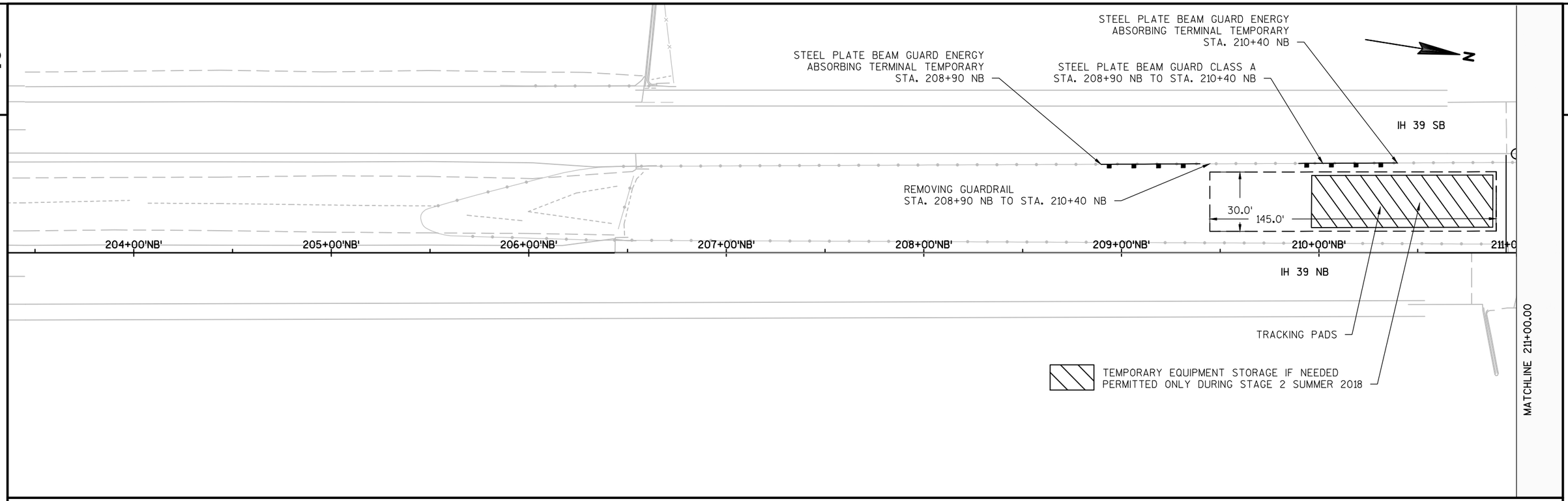


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAIL: IH 39	SHEET 11	E



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETIAL: IH 39	SHEET 12	E

2

BEGIN "A" ALIGNMENT
STA 211+00 "A"
USED ONLY FOR REFERNCE FOR
STRUCTURE B-11-56

BP: 211+00.00

STRUCTURE B-11-56
8 SPAN 60" HAUNCHED
CONTINUOUS WELDED PLATE GIRDER
32' CLEAR ROADWAY
SKEW 13° LHF
STA. 211+19.40 'A' - STA. 222+41.68 'A'

N

MATCHLINE 211+00.00

IH 39 SB

212+00'A' 213+00'A' 214+00'A' 215+00'A' 216+00'A' 217+00'A' 218+

0'NB' 212+00'NB' 213+00'NB' 214+00'NB' 215+00'NB' 216+00'NB' 217+00'NB' 218+0

IH 39 NB

STRUCTURE B-11-55
8 SPAN 60" HAUNCHED
CONTINUOUS WELDED PLATE GIRDER
32' CLEAR ROADWAY
SKEW 13° LHF
STA. 211+07.86 'A' - STA. 222+30.14 'A'

WISCONSIN RIVER

MATCHLINE 218+00.00

STRUCTURE B-11-56
8 SPAN 60" HAUNCHED
CONTINUOUS WELDED PLATE GIRDER
32' CLEAR ROADWAY
SKEW 13° LHF
STA. 211+19.40 'A' - STA. 222+41.68 'A'

EP: 223+00.00

END "A" ALIGNMENT
STA 223+00 "A"
USED ONLY FOR REFERNCE FOR
STRUCTURE B-11-56

N

MATCHLINE 218+00.00

IH 39 SB

00'A' 219+00'A' 220+00'A' 221+00'A' 222+00'A' IH 39 SB

00'NB' 219+00'NB' 220+00'NB' 221+00'NB' 222+00'NB' 223+00'NB' 224+00'NB' 225+00'NB'

IH 39 NB

WISCONSIN RIVER

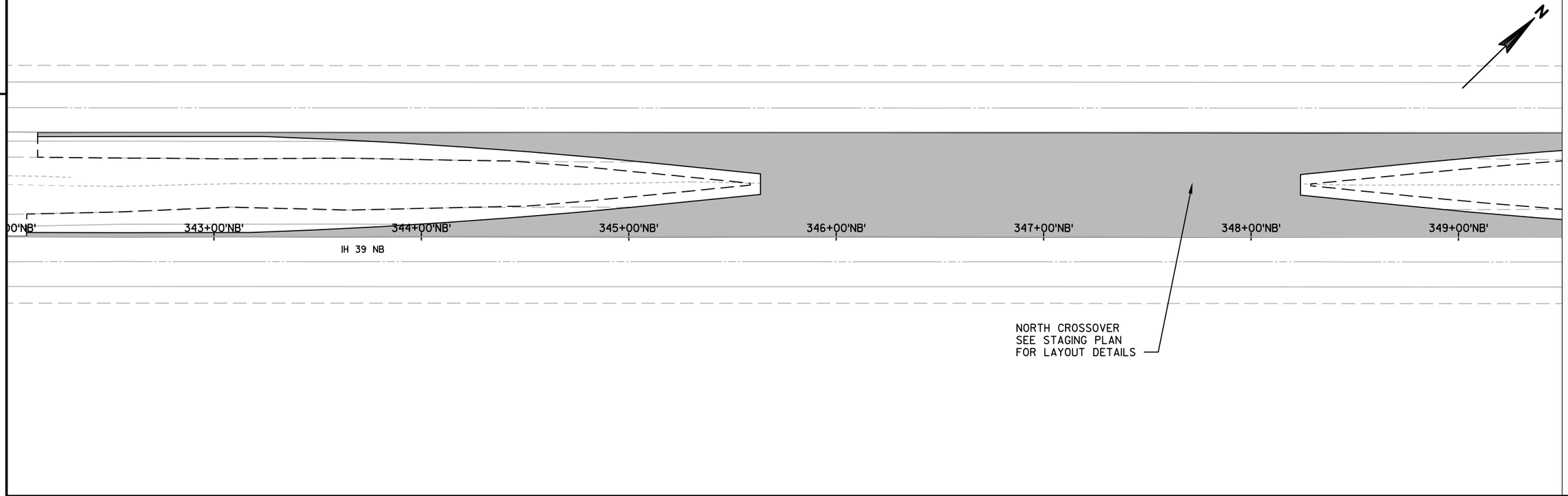
STRUCTURE B-11-55
8 SPAN 60" HAUNCHED
CONTINUOUS WELDED PLATE GIRDER
32' CLEAR ROADWAY
SKEW 13° LHF
STA. 211+07.86 'A' - STA. 222+30.14 'A'

END PROJECT 1161-02-63
STA 223+00 'NB'

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAIL: IH 39	SHEET 13	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 050201_PN - 050202_PN
PLOT DATE : 1/19/2017 3:36 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

2



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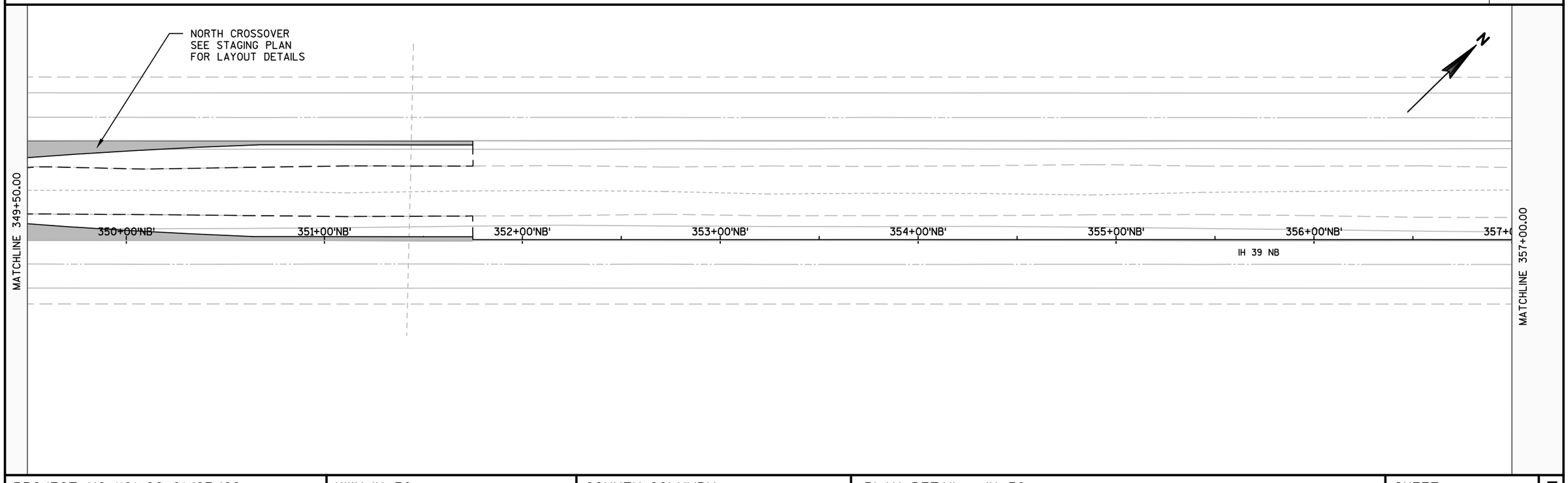
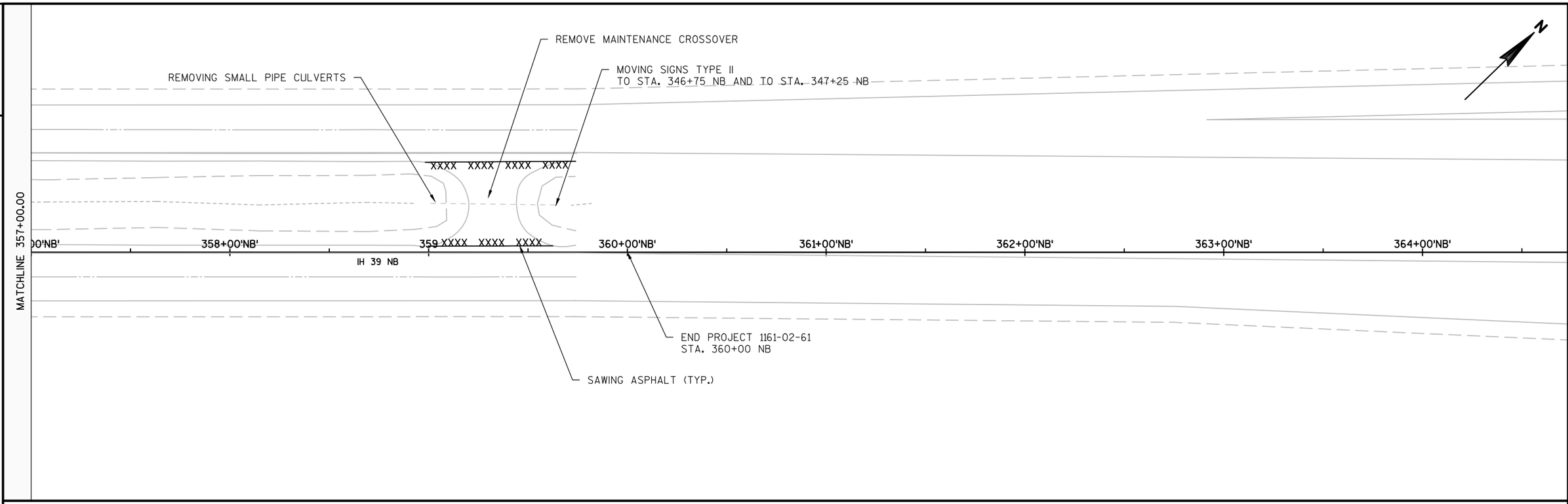


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAIL: IH 39	SHEET 14	E



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PROJECT NO: 1161-02-61/63	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAIL: IH 39	SHEET 15	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 050201_PN - 050205_PN
PLOT DATE : 1/23/2017 1:03 AM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

2

BEGIN PROJECT
1161-02-61
STA 261+50.00 'NB'

CABLE BARRIER END
TERMINAL TYPE 1
STA 262+18.51 NB,
33' LT

CABLE BARRIER TYPE 1

N

IH 39

PC: 261+89.08

5'

33.0'

259+00'NB'

260+00'NB'

261+00'NB'

262+00'NB'

263+00'NB'

264+00'NB'

265+

IH 39

ALLIANT ENERGY GAS

CTH O

BEGIN PROJECT
1161-02-66
STA 262+18.51 'NB'

CAUTION

ALLIANT ENERGY
OVERHEAD ELECTRIC

MATCHLINE 265+00.00

MATCHLINE 265+00.00

CABLE BARRIER TYPE 1

N

REMOVING SIGNS TYPE II

CABLE BARRIER END
TERMINAL TYPE 1 STA
271+46.52 NB, 33' LT

IH 39

5'

33.0'

266+00'NB'

267+00'NB'

268+00'NB'

269+00'NB'

270+00'NB'

271+00'NB'

IH 39

REMOVING SMALL PIPE CULVERTS

REMOVE EXISTING MAINTENANCE CROSSOVER

MATCHLINE 271+50.00

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAIL: IH 39	SHEET 16	E

2

ATC OVERHEAD ELECTRIC
138 KV

STRUCTURE B-11-59
3 SPAN 30" ROLLED STEEL GIRDER
CLEAR ROADWAY VARIES 36'-6"TO 39'-7"
SKEW 0°
STA. 272+87.35 'A' - STA. 274+43.20 'A'

CONCRETE SURFACE DRAINS (TYPE B)

CABLE BARRIER END
TERMINAL TYPE 1
STA 274+47.63 NB,
33' LT

IH 39

MATCHLINE 271+50.00

272+00'A'
273+00'A'
274+00'A'
275+00'A'

33.0'

RIPRAP MEDIUM
AND
GEOTEXTILE FABRIC TYPE HR

272+00'NB'
273+00'NB'
274+00'NB'
275+00'NB'
276+00'NB'
277+00'NB'
278+

IH 39

STA 274+45 'NB' TO 275+25 'NB'
SHOULDER REPAIR (SEE TYPICAL
SECTIONS)

CABLE BARRIER TYPE 1

STRUCTURE B-11-58
3 SPAN 30" ROLLED STEEL GIRDER
32' CLEAR ROADWAY
SKEW 0°
STA. 272+68.48 'NB' - STA. 274+24.33 'NB'

CANADIAN PACIFIC RAILROAD

CONCRETE SURFACE DRAINS
(TYPE B)

RIPRAP MEDIUM
AND
GEOTEXTILE FABRIC TYPE HR

ALLIANT ENERGY
UG ELECTRIC

CITY OF PORTAGE WATER

MATCHLINE 278+00.00

2

MATCHLINE 278+00.00

CABLE BARRIER TYPE 1

IH 39

33.0'

00'NB'
279+00'NB'
280+00'NB'
281+00'NB'
282+00'NB'
283+00'NB'
284+00'NB'

IH 39

NE LOOP RAMP CROSSOVER
SEE STAGING PLAN
INSTALL IN STAGE 1
REMOVE IN STAGE 3

SIGN

MATCHLINE 284+50.00

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAIL: IH 39	SHEET 17	E

2

2

MATCHLINE 284+50.00

CABLE BARRIER TYPE 1

CABLE BARRIER END TERMINAL TYPE 1 STA 288+39.22 NB, 33' LT

IH 39

SIGN

POST

RIPRAP

5'

33.0'

285+00'NB'

286+00'NB'

287+00'NB'

288+00'NB'

289+00'NB'

290+00'NB'

291+0

IH 39

SIGN

RIPRAP

FRONTIER COMMUNICATIONS

ALLIANT ENERGY GAS

STH 16

STH 16

MATCHLINE 291+00.00

MATCHLINE 291+00.00

SIGN

IH 39

CABLE BARRIER END TERMINAL TYPE 1 STA 293+34.90 NB, 33' LT

IH 39

5'

RIPRAP

33.0'

PT: 297+36.80

292+00'NB'

293+00'NB'

294+00'NB'

295+00'NB'

296+00'NB'

297+00'NB'

IH 39

SIGN

CABLE BARRIER TYPE 1

MH

FRONTIER COMMUNICATIONS

EXISTING INLET (TO REMAIN) WITHOUT ADJUSTMENT SPACE LINE POSTS TO AVOID

RIPRAP

MATCHLINE 297+50.00

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAIL: IH 39	SHEET 18	E

2

2

MATCHLINE 297+50.00

SIGN

CITY OF PORTAGE SEWER

CITY OF PORTAGE WATER

CHARTER COMMUNICATIONS

CABLE BARRIER TYPE 1

IH 39

33.0'

298+00'NB' 299+00'NB' 300+00'NB' 301+00'NB' 302+00'NB' 303+00'NB' 304+

IH 39

MATCHLINE 304+00.00

CABLE BARRIER TYPE 1

IH 39

33.0'

00'NB' 305+00'NB' 306+00'NB' 307+00'NB' 308+00'NB' 309+00'NB' 310+00'NB'

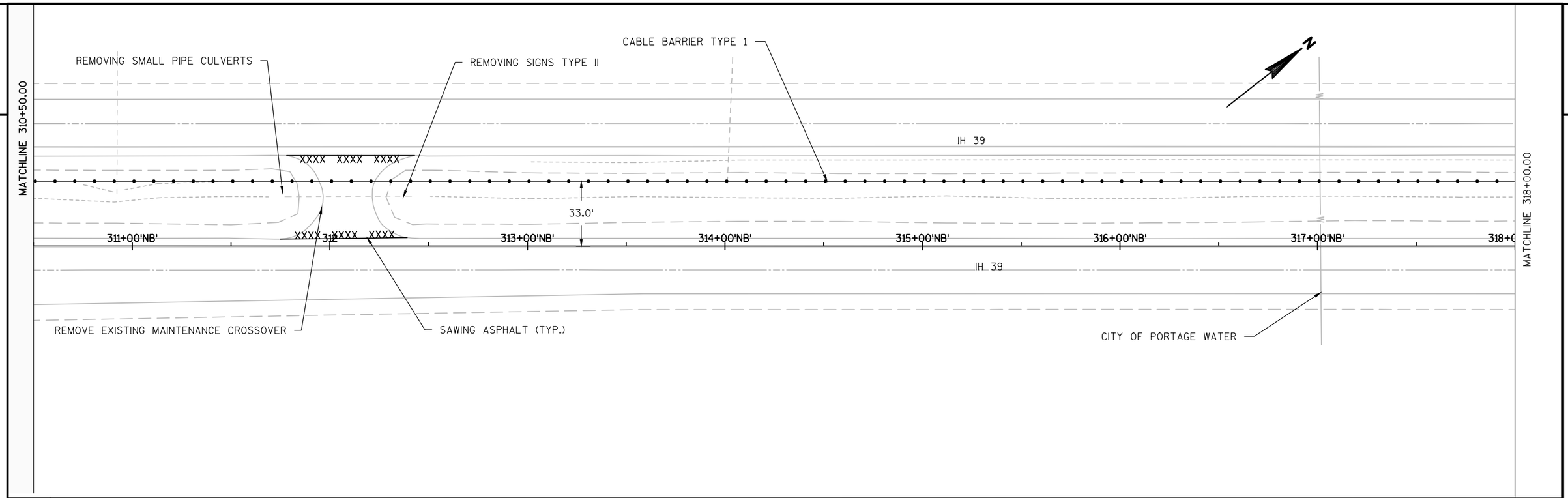
IH 39

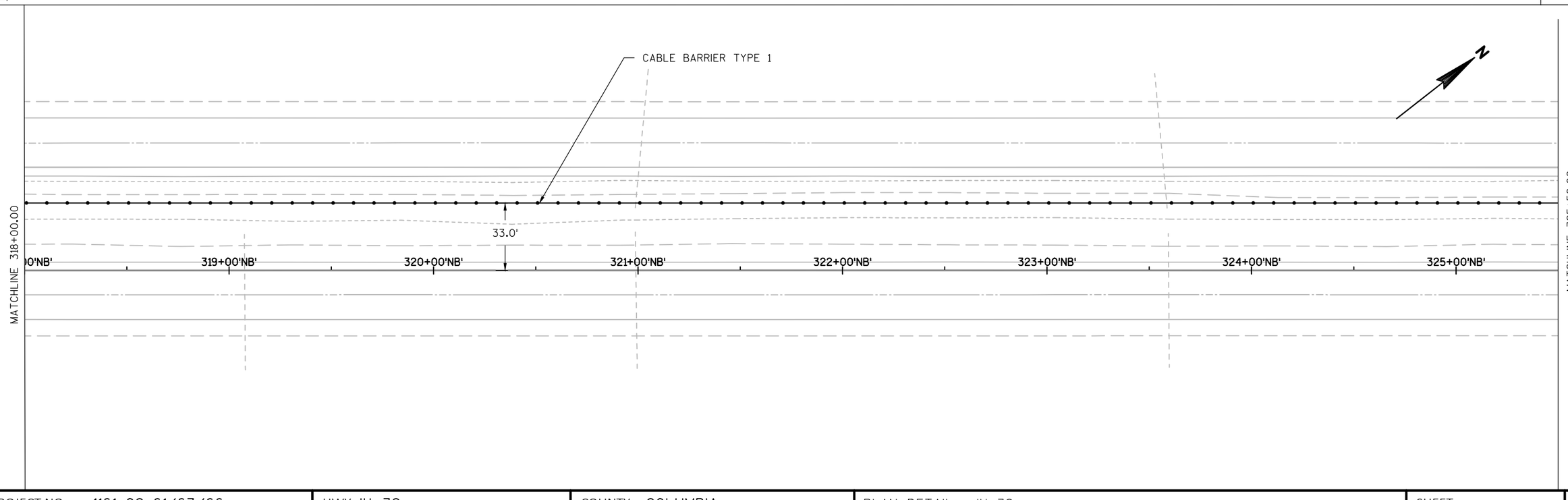
MATCHLINE 310+50.00

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAIL: IH 39	SHEET 19	E

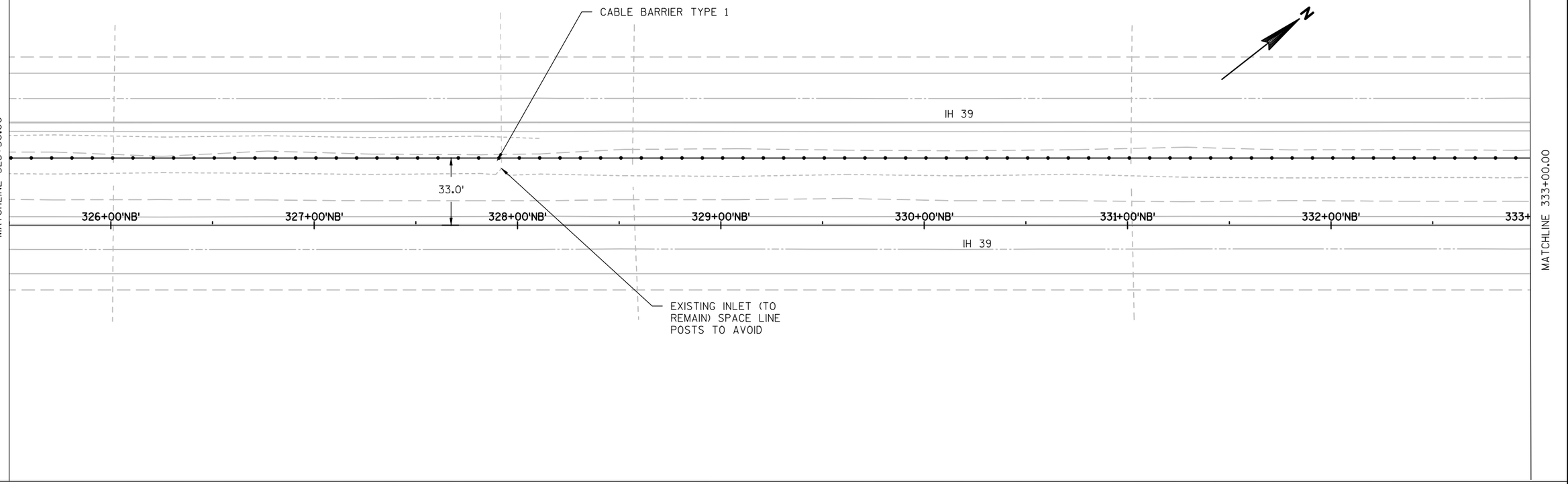
FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\SHEETSPLAN\021201_PD CABLE BARRIER.DWG
LAYOUT NAME - 050217_PN
PLOT DATE : 1/20/2017 8:[illegible] PM
PLOT BY : MCCONNELL, ALICIA
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

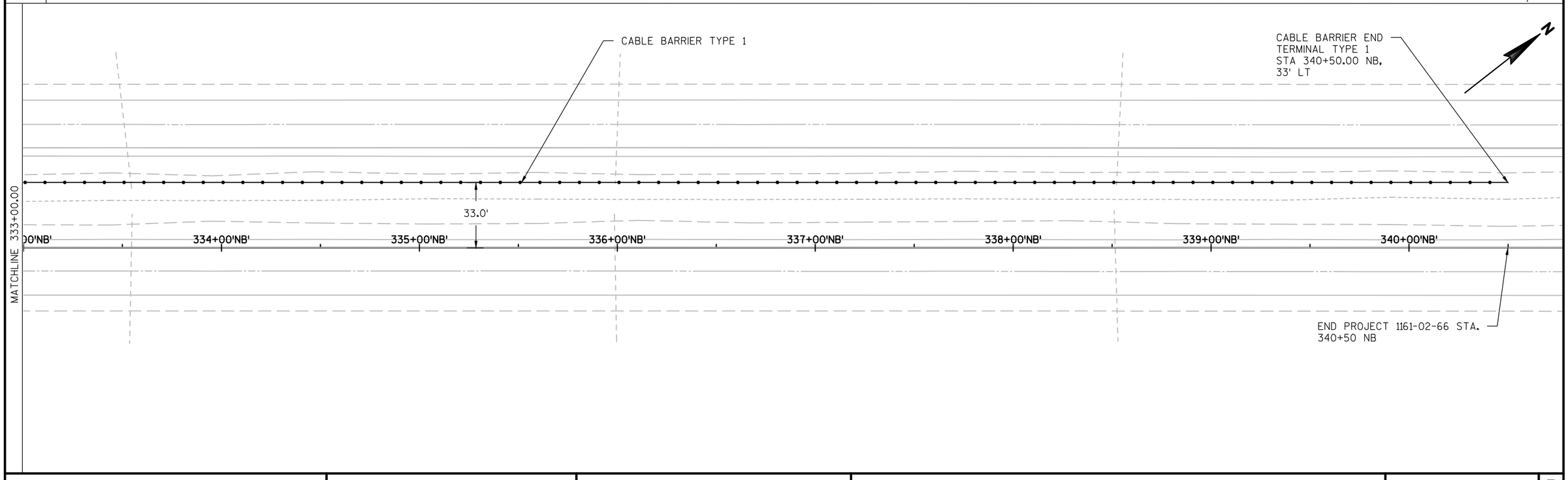
2



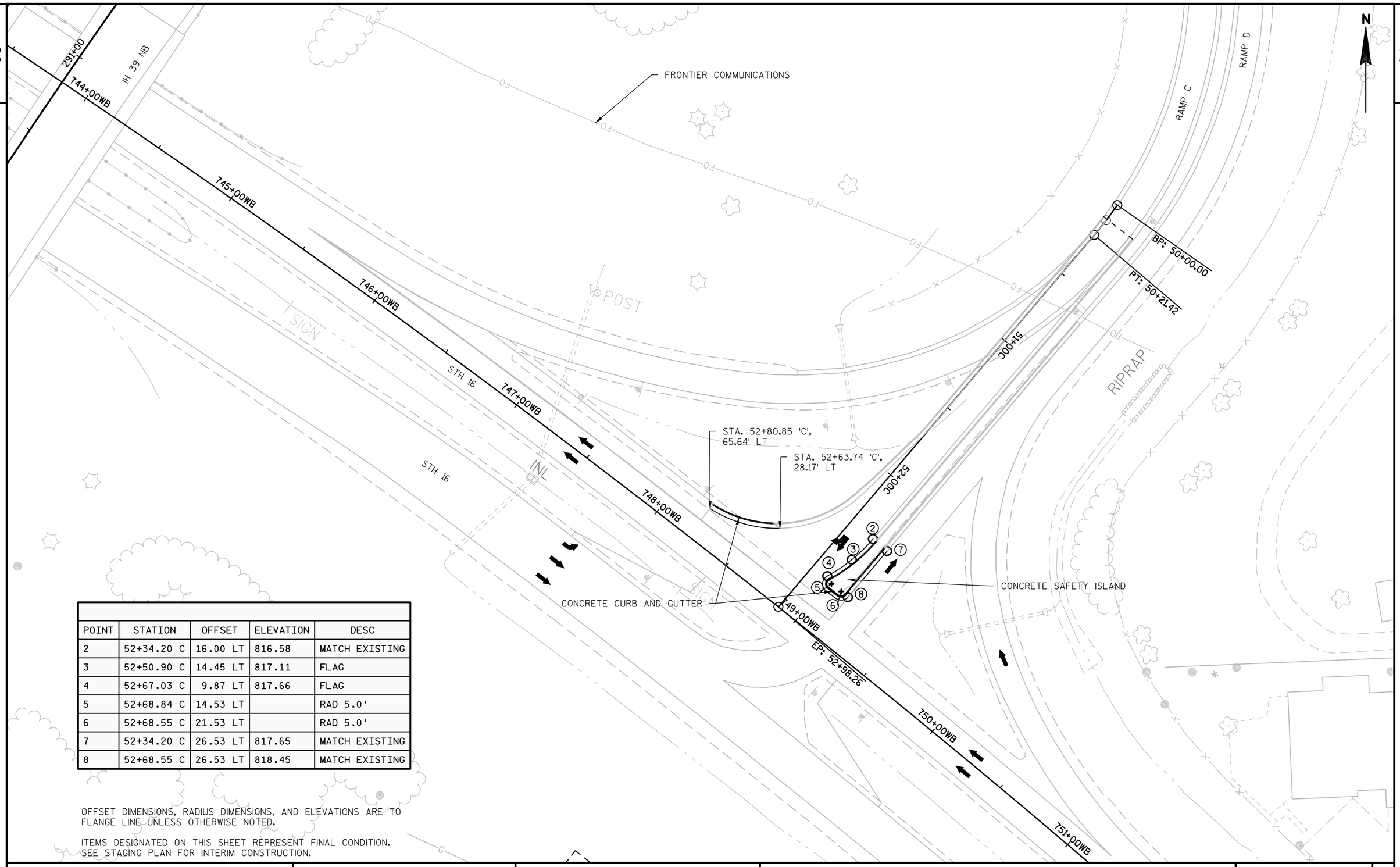


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PLAN DETAIL: IH 39	SHEET 20	E


CABLE BARRIER TYPE 1
N
IH 39
MATCHLINE 325+50.00
33.0'
326+00'NB'
327+00'NB'
328+00'NB'
329+00'NB'
330+00'NB'
331+00'NB'
332+00'NB'
333+
IH 39
MATCHLINE 333+00.00
EXISTING INLET (TO REMAIN) SPACE LINE POSTS TO AVOID


CABLE BARRIER TYPE 1
CABLE BARRIER END TERMINAL TYPE 1 STA 340+50.00 NB, 33' LT
N
MATCHLINE 333+00.00
33.0'
00'NB'
334+00'NB'
335+00'NB'
336+00'NB'
337+00'NB'
338+00'NB'
339+00'NB'
340+00'NB'
END PROJECT 1161-02-66 STA. 340+50 NB

2

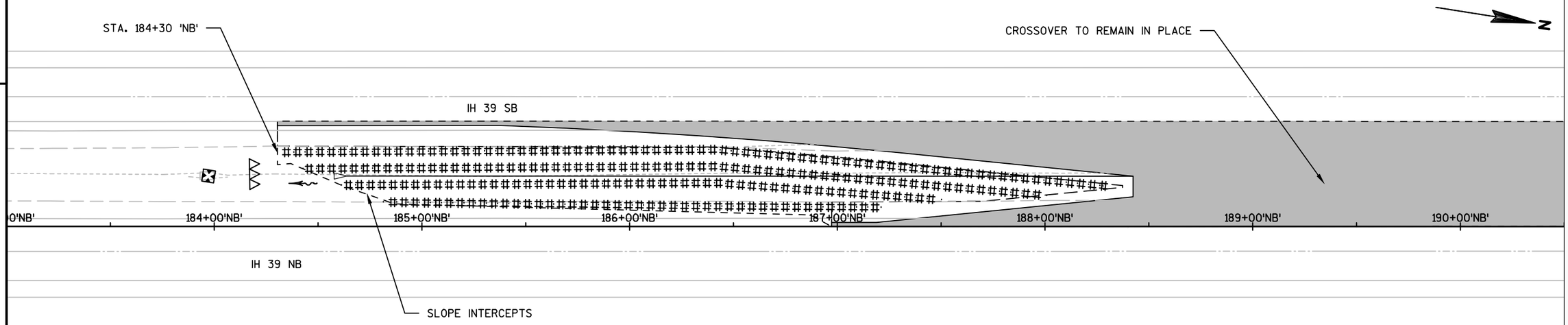


POINT	STATION	OFFSET	ELEVATION	DESC
2	52+34.20 C	16.00 LT	816.58	MATCH EXISTING
3	52+50.90 C	14.45 LT	817.11	FLAG
4	52+67.03 C	9.87 LT	817.66	FLAG
5	52+68.84 C	14.53 LT		RAD 5.0'
6	52+68.55 C	21.53 LT		RAD 5.0'
7	52+34.20 C	26.53 LT	817.65	MATCH EXISTING
8	52+68.55 C	26.53 LT	818.45	MATCH EXISTING

OFFSET DIMENSIONS, RADIUS DIMENSIONS, AND ELEVATIONS ARE TO FLANGE LINE UNLESS OTHERWISE NOTED.

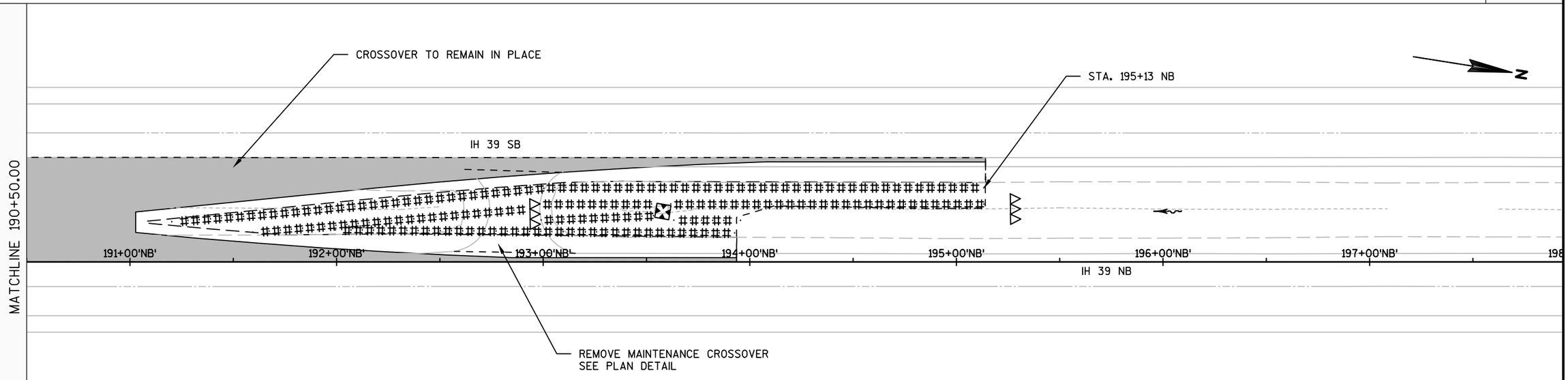
ITEMS DESIGNATED ON THIS SHEET REPRESENT FINAL CONDITION. SEE STAGING PLAN FOR INTERIM CONSTRUCTION.

2



LEGEND

- EROSION MAT CLASS I, TYPE A
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW



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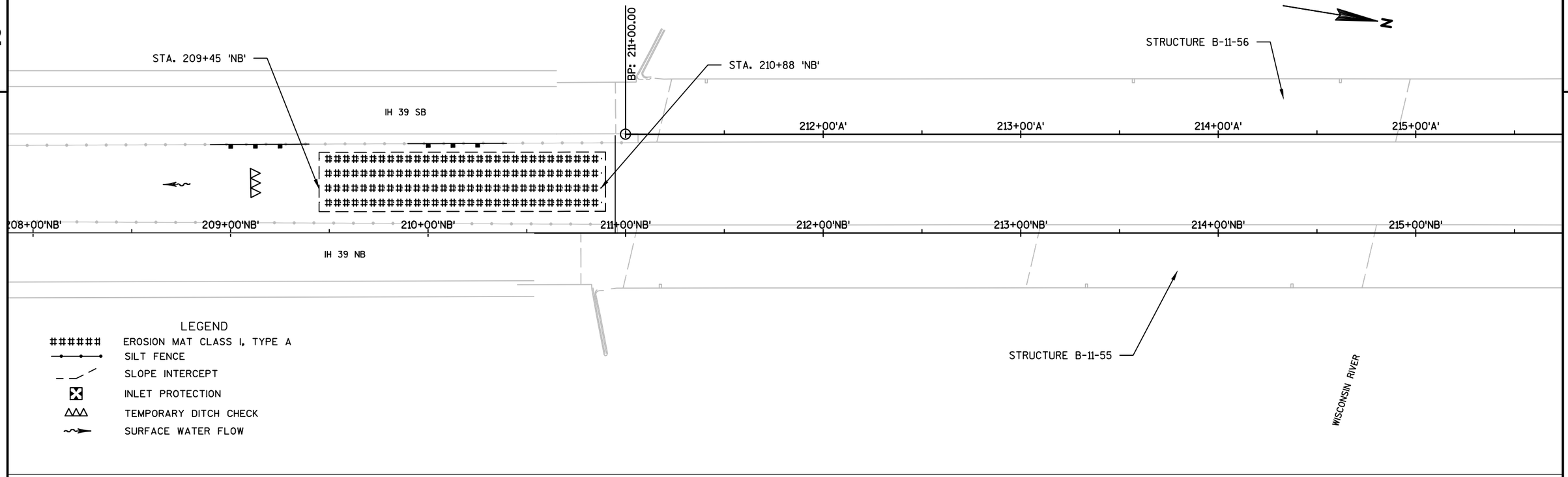
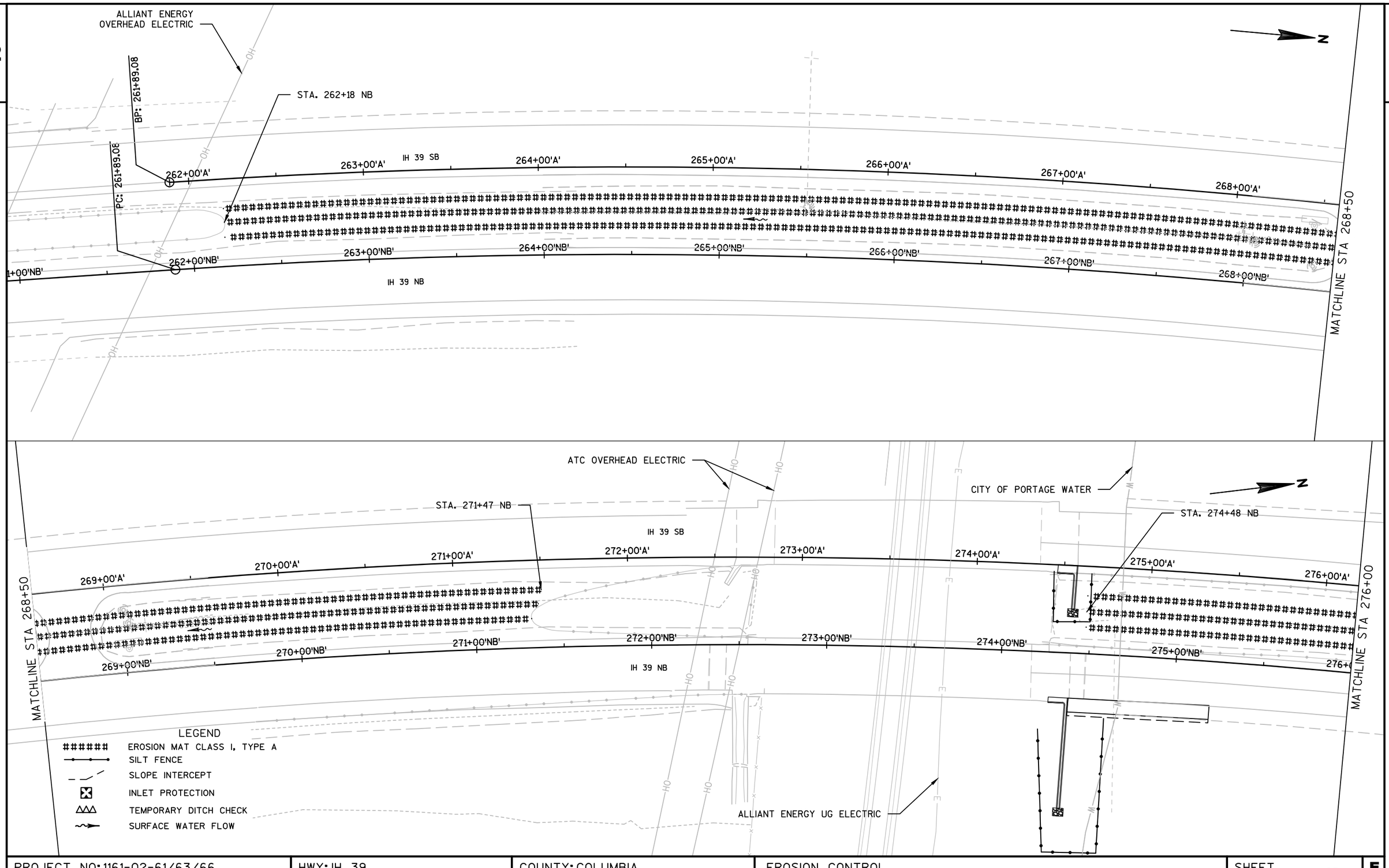
PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	EROSION CONTROL	SHEET 23	E



2

PROJECT NO: 1161-02-61/63	HWY: IH 39	COUNTY: COLUMBIA	EROSION CONTROL	SHEET 24	E

FILE NAME : C:\USERS\ALICIA.MCCONNELL\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 050201_PN - 050202_PN
PLOT DATE : 4/3/2017 8:54 AM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	EROSION CONTROL	SHEET 25	E

LEGEND

- EROSION MAT CLASS I, TYPE A
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

TEMPORARY NORTHEAST LOOP RAMP CROSSOVER

CULVERT PIPE CHECK

MATCHLINE STA 276+00

MATCHLINE STA 283+00

MATCHLINE STA 283+00

MATCHLINE STA 290+00

IH 39 SB

277+00'A' 278+00'A' 279+00'A' 280+00'A' 281+00'A' 282+00'A' 283+00'A'

IH 39 NB

277+00'NB' 278+00'NB' 279+00'NB' 280+00'NB' 281+00'NB' 282+00'NB'

IH 39 SB

284+00'A' 285+00'A' 286+00'A' 287+00'A' 288+00'A' 289+00'A' 290+00'A'

IH 39 NB

284+00'NB' 285+00'NB' 286+00'NB' 287+00'NB' 288+00'NB' 289+00'NB'

STA. 288+75 NB

SIGN

POST

RIPRAP

RIPRAP

ALLIANT ENERGY GAS

FRONTIER COMMUNICATIONS

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	EROSION CONTROL	SHEET 26	E

FILE NAME : C:\USERS\ALICIA.MCCONNELL\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 050201_PN - 050203_PN
PLOT DATE : 4/3/2017 8:54 AM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

2

2

FRONTIER COMMUNICATIONS

STA. 293+75 'NB'

SIGN

IH 39

IH 39 SB

743+00

291+00'A' 292+00'A' 293+00'A' 294+00'A' 295+00'A' 296+00'A' 297+00'A'

RIPRAP

MATCHLINE STA 290+00

MATCHLINE STA 297+00

291+00'NB' 292+00'NB' 293+00'NB' 294+00'NB' 295+00'NB' 296+00'NB'

IH 39 NB

744+00

IH 39

MH

SIGN

LEGEND

- ###### EROSION MAT CLASS I, TYPE A
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

CITY OF PORTAGE SEWER

CITY OF PORTAGE WATER

CHARTER COMMUNICATIONS

SIGN

EP: 297+83.27

PT: 297+36.80

IH 39 SB

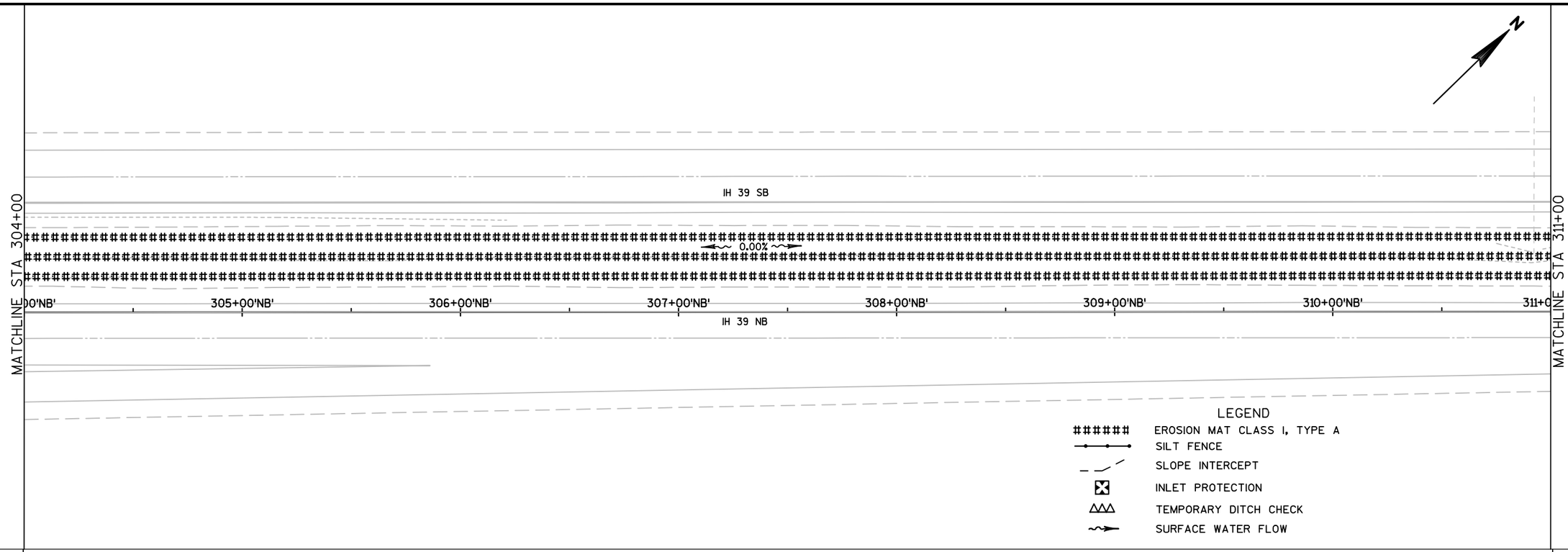
MATCHLINE STA 297+00

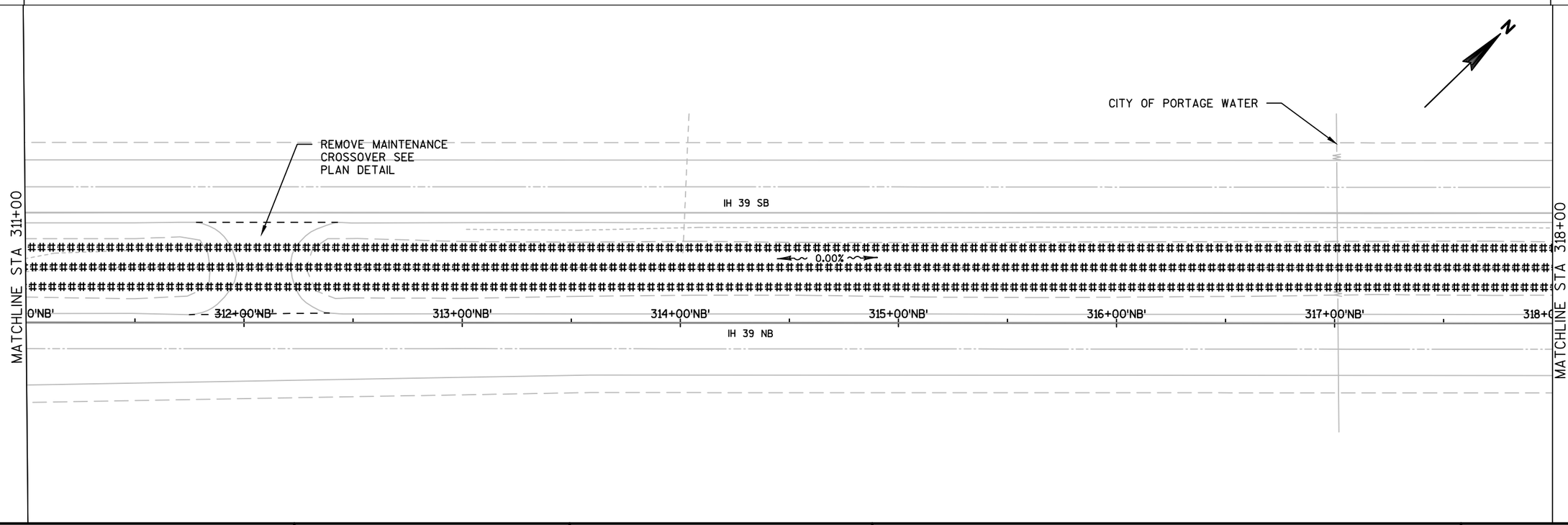
MATCHLINE STA 304+00

298+00'NB' 299+00'NB' 300+00'NB' 301+00'NB' 302+00'NB' 303+00'NB'

IH 39 NB

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	EROSION CONTROL	SHEET 27	E





PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	EROSION CONTROL	SHEET 28	E

FILE NAME : C:\USERS\ALICIA.MCCONNELL\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 050201_PN - 050203_PN
PLOT DATE : 4/3/2017 8:54 AM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

2

LEGEND

EROSION MAT CLASS I, TYPE A

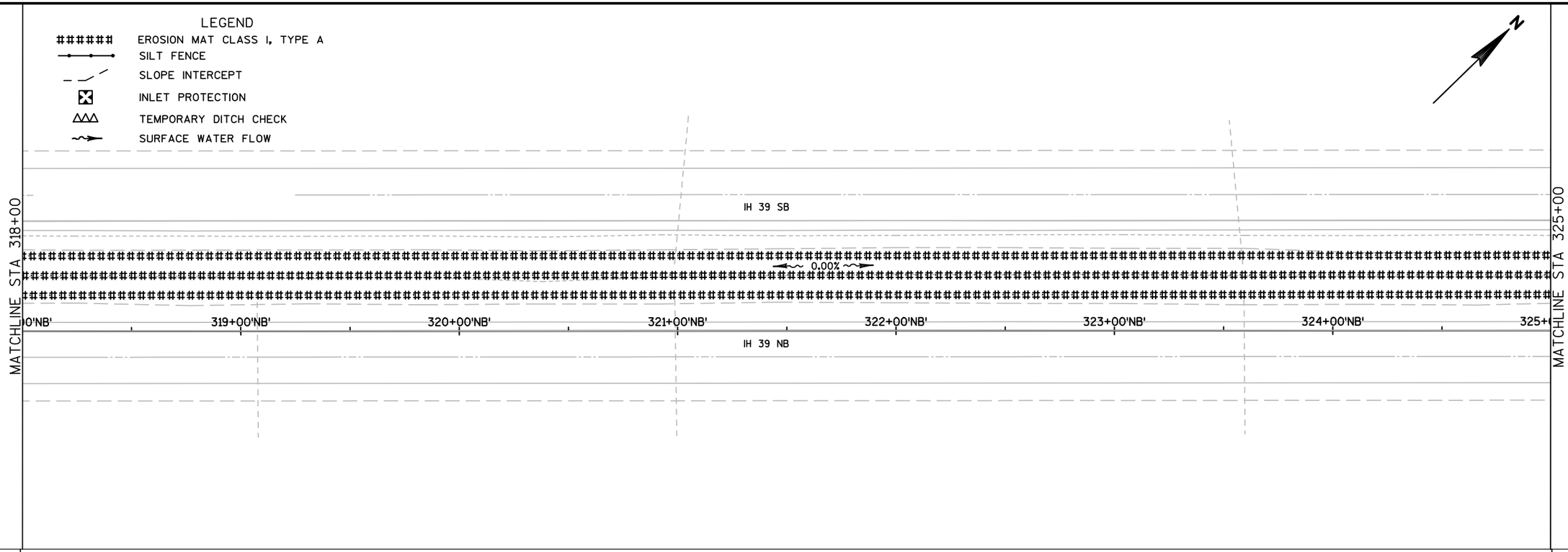
SILT FENCE

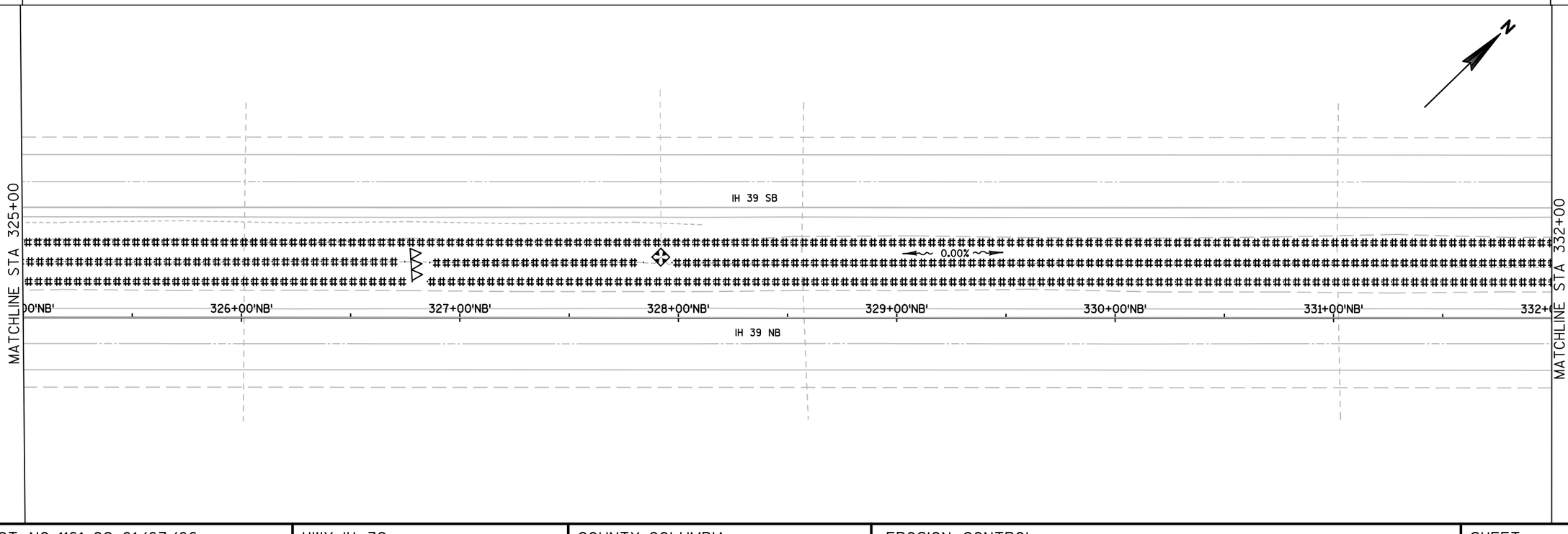
SLOPE INTERCEPT

INLET PROTECTION

TEMPORARY DITCH CHECK

SURFACE WATER FLOW





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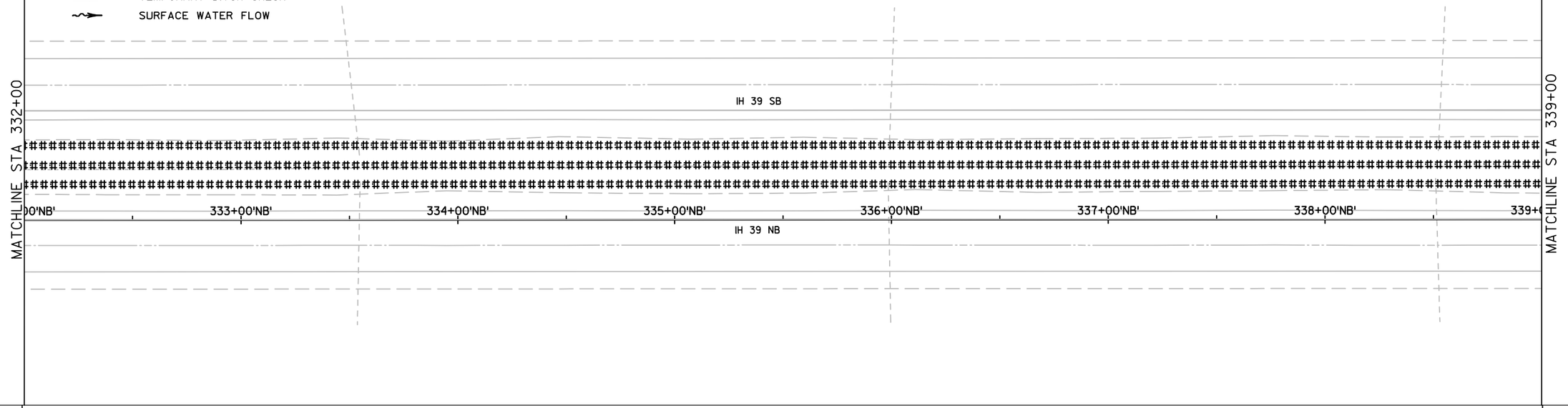
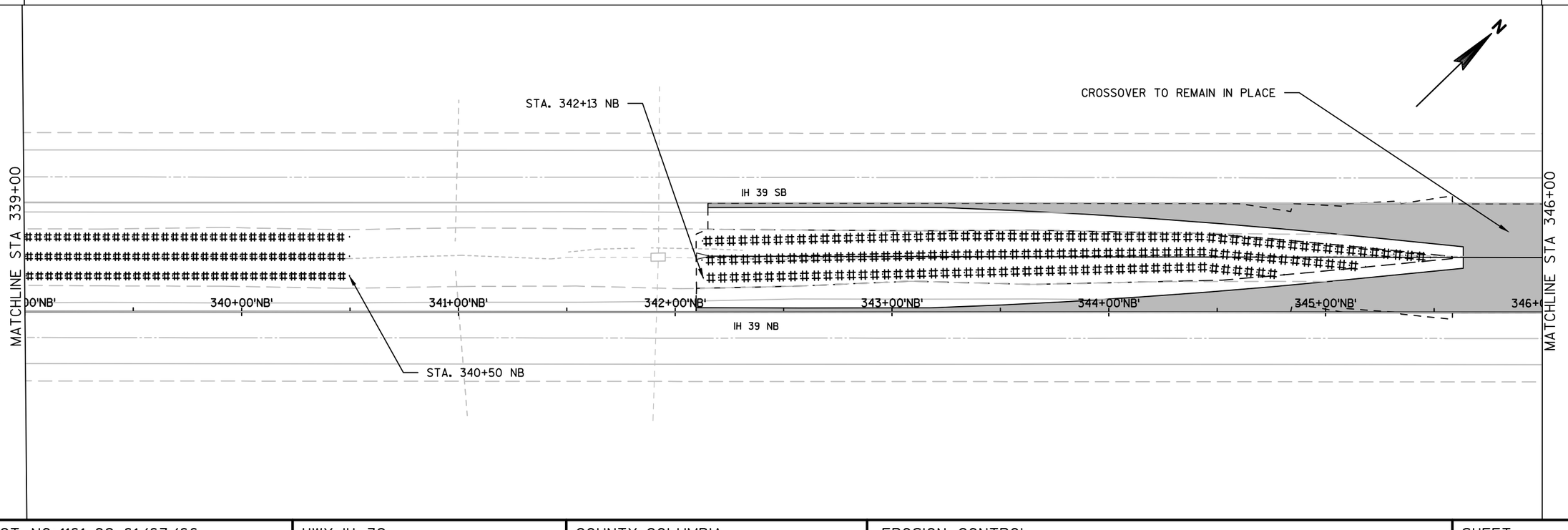
PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	EROSION CONTROL	SHEET 29	E

LEGEND

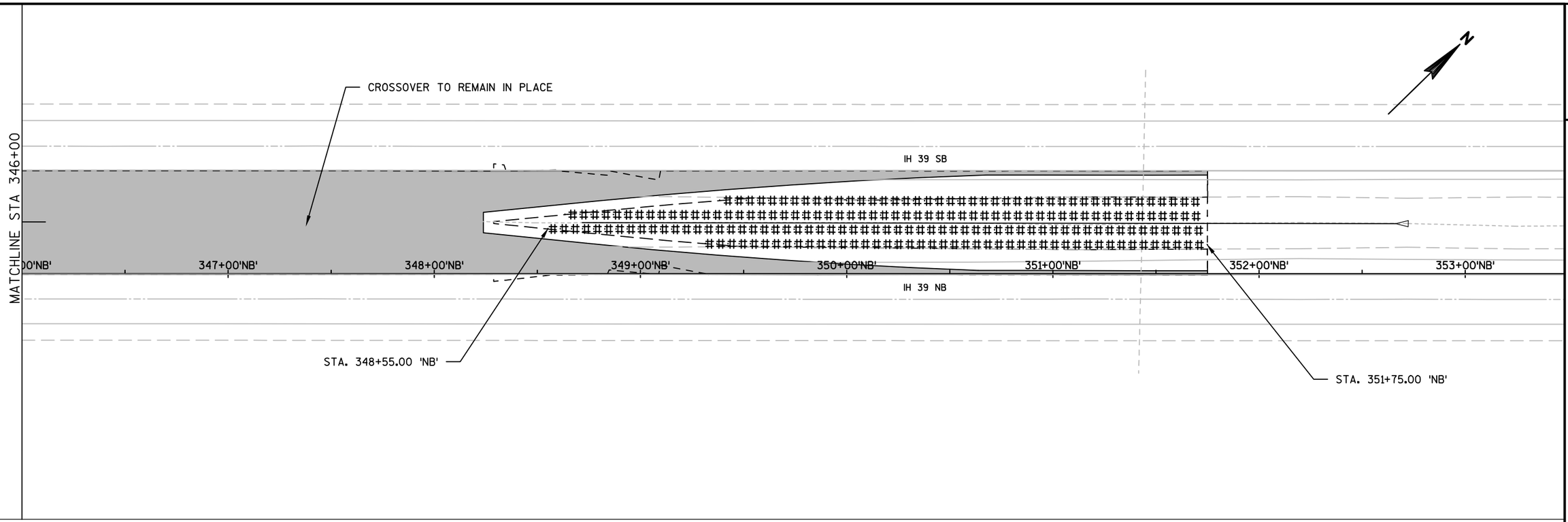
- ###### EROSION MAT CLASS I, TYPE A
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

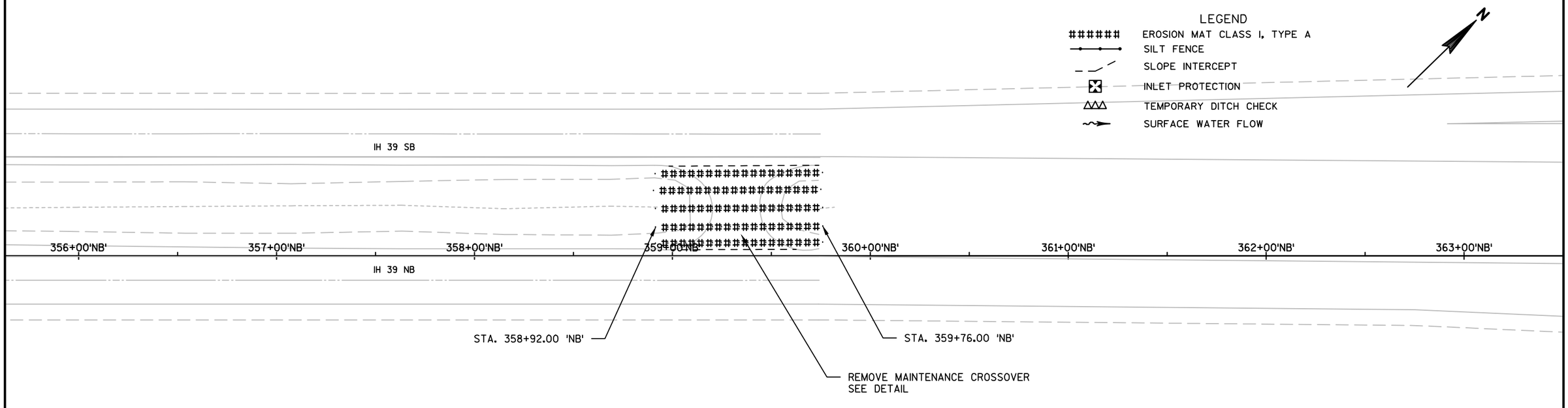




PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	EROSION CONTROL	SHEET 30	E

2





2

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	EROSION CONTROL	SHEET 31	E

2

2

LEGEND

EROSION MAT CLASS I, TYPE A

SILT FENCE

SLOPE INTERCEPT

INLET PROTECTION

TEMPORARY DITCH CHECK

SURFACE WATER FLOW

N

FRONTIER COMMUNICATIONS

STA 746+82'16WB'

STA 50+01 RAMP C

BP: 50+00.00

PT: 50+21.42

STA 52+63 RAMP C

EP: 52+98.26

FRONTIER COMMUNICATIONS

ALLIANT ENERGY GAS

TH 39

IH 39 NB

STH 16

SIGN

RIPRAP

291+00'A'

291+00'NB'

290+00'NB'

744+00

745+00

746+00

747+00

748+00

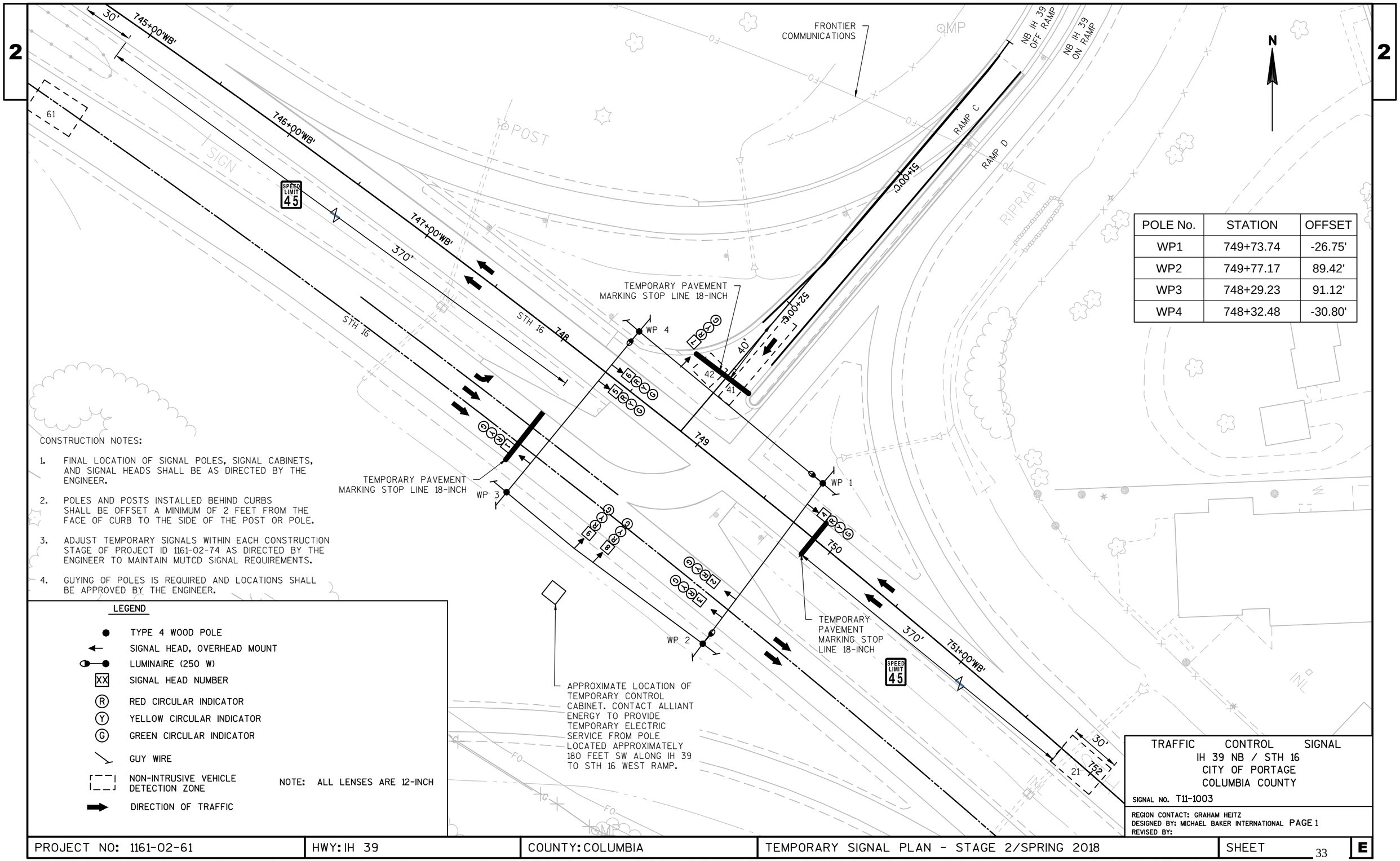
749+00

750+00

51+00

52+00

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	EROSION CONTROL	SHEET 32	E



POLE No.	STATION	OFFSET
WP1	749+73.74	-26.75'
WP2	749+77.17	89.42'
WP3	748+29.23	91.12'
WP4	748+32.48	-30.80'

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINETS, AND SIGNAL HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
3. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE OF PROJECT ID 1161-02-74 AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
4. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.

LEGEND

- TYPE 4 WOOD POLE
- SIGNAL HEAD, OVERHEAD MOUNT
- LUMINAIRE (250 W)
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- GUY WIRE
- NON-INTRUSIVE VEHICLE DETECTION ZONE

NOTE: ALL LENSES ARE 12-INCH

- DIRECTION OF TRAFFIC

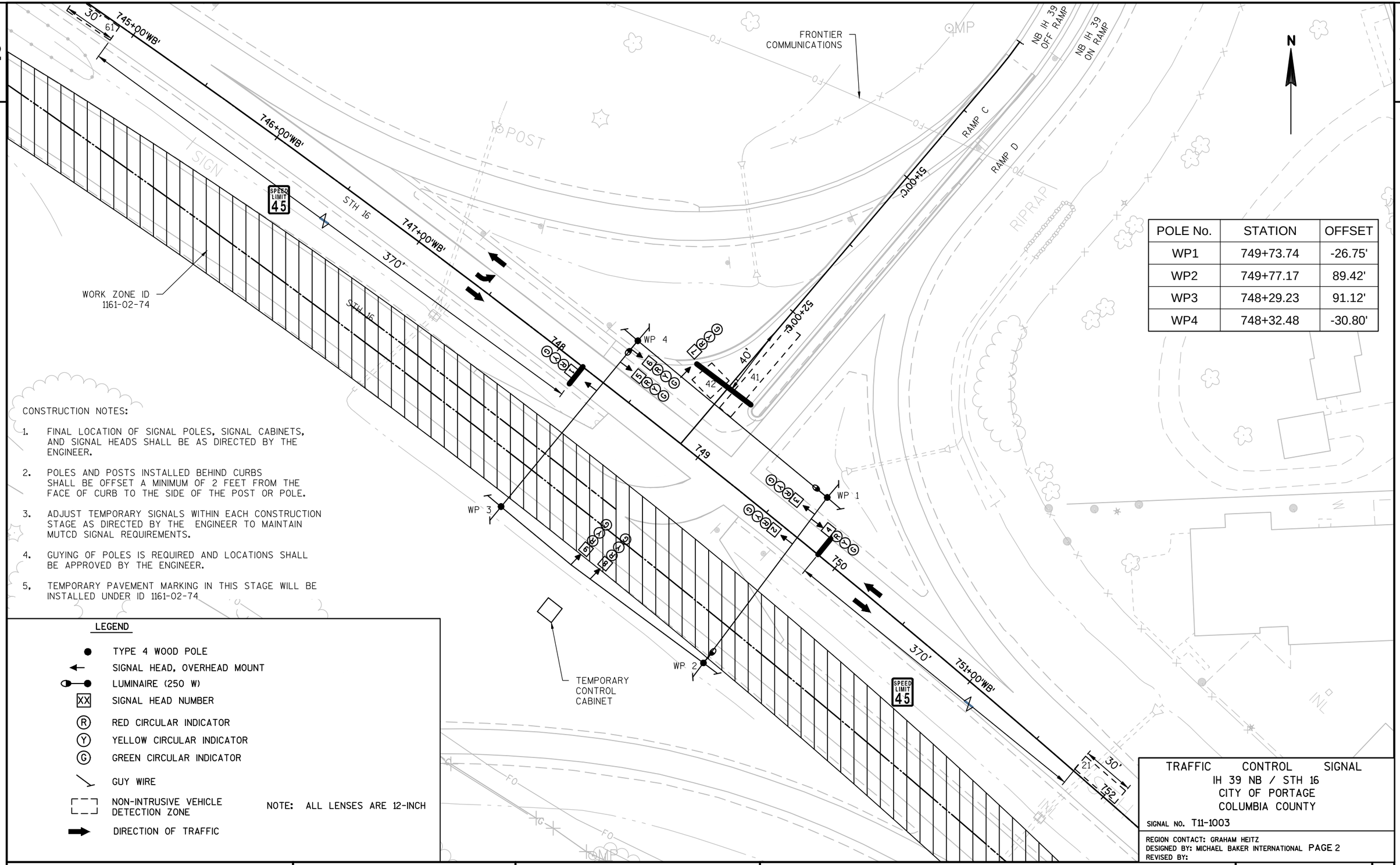
TRAFFIC CONTROL SIGNAL
IH 39 NB / STH 16
CITY OF PORTAGE
COLUMBIA COUNTY

SIGNAL NO. T11-1003

REGION CONTACT: GRAHAM HEITZ
DESIGNED BY: MICHAEL BAKER INTERNATIONAL PAGE 1
REVISED BY:

PROJECT NO: 1161-02-61	HWY: IH 39	COUNTY: COLUMBIA	TEMPORARY SIGNAL PLAN - STAGE 2/SPRING 2018	SHEET 33	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\SHEETSPLAN\024001_SP-TEMP SIGNAL PLAN.DWG
LAYOUT NAME - SHEET - (10)
PLOT DATE : 1/23/2017 11:55 AM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:50 FT



POLE No.	STATION	OFFSET
WP1	749+73.74	-26.75'
WP2	749+77.17	89.42'
WP3	748+29.23	91.12'
WP4	748+32.48	-30.80'

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINETS, AND SIGNAL HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
3. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
4. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
5. TEMPORARY PAVEMENT MARKING IN THIS STAGE WILL BE INSTALLED UNDER ID 1161-02-74

LEGEND

- TYPE 4 WOOD POLE
- SIGNAL HEAD, OVERHEAD MOUNT
- LUMINAIRE (250 W)
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- GUY WIRE
- NON-INTRUSIVE VEHICLE DETECTION ZONE

NOTE: ALL LENSES ARE 12-INCH

- DIRECTION OF TRAFFIC

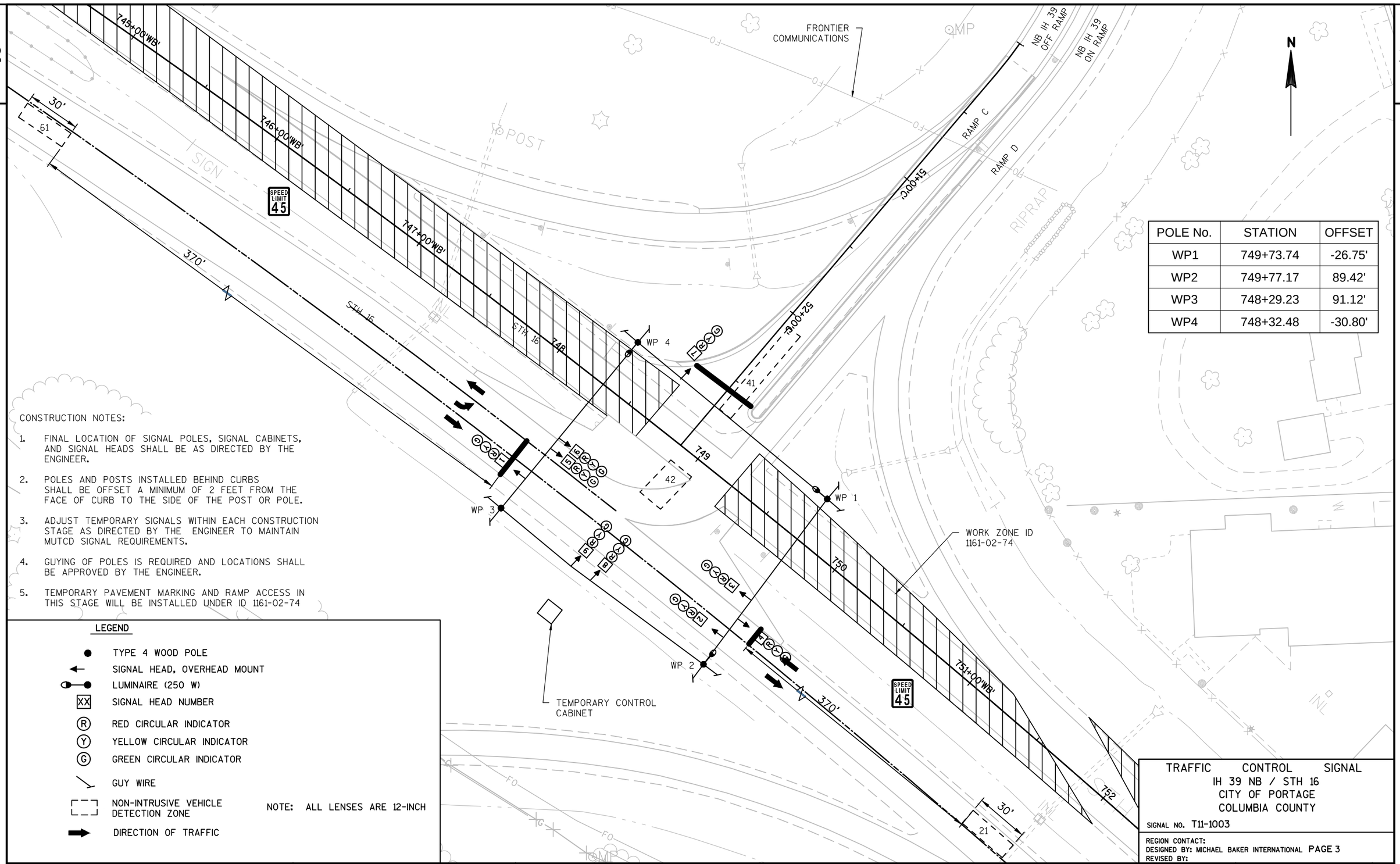
TRAFFIC CONTROL SIGNAL
IH 39 NB / STH 16
CITY OF PORTAGE
COLUMBIA COUNTY

SIGNAL NO. T11-1003

REGION CONTACT: GRAHAM HEITZ
DESIGNED BY: MICHAEL BAKER INTERNATIONAL PAGE 2
REVISED BY:

PROJECT NO: 1161-02-61	HWY: IH 39	COUNTY: COLUMBIA	TEMPORARY SIGNAL PLAN - STAGE 2/EARLY SUMMER 2018	SHEET 34	E

2



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3. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
4. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
5. TEMPORARY PAVEMENT MARKING AND RAMP ACCESS IN THIS STAGE WILL BE INSTALLED UNDER ID 1161-02-74

LEGEND

- TYPE 4 WOOD POLE
- SIGNAL HEAD, OVERHEAD MOUNT
- LUMINAIRE (250 W)
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- GUY WIRE
- NON-INTRUSIVE VEHICLE DETECTION ZONE

NOTE: ALL LENSES ARE 12-INCH

- DIRECTION OF TRAFFIC

TRAFFIC CONTROL SIGNAL
IH 39 NB / STH 16
CITY OF PORTAGE
COLUMBIA COUNTY

SIGNAL NO. T11-1003

REGION CONTACT:
DESIGNED BY: MICHAEL BAKER INTERNATIONAL PAGE 3
REVISED BY:

PROJECT NO: 1161-02-61	HWY: IH 39	COUNTY: COLUMBIA	TEMPORARY SIGNAL PLAN - STAGE 2/LATE SUMMER 2018	SHEET 35	E

2

SEQUENCE OF OPERATION

NOT USED | ← | NOT USED | ↳

	HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø2 R/W	Ø2 CLEAR TO **	Ø3 R/W	Ø3 CLEAR TO **	Ø4 R/W	Ø4 CLEAR TO **	FLASH
01										–
02	4, 5, 6			G	Y R			R	R R	R
03										
04	7, 8, 9			R	R R			G	Y R	R
RING 1 05										
06	1,2,3			R	R R			R	R R	R
07										
08										
02P										
04P										
05P										
08P										
O.L.A										

NOT USED | → | NOT USED | NOT USED

	HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø6 R/W	Ø6 CLEAR TO **	Ø7 R/W	Ø7 CLEAR TO **	Ø8 R/W	Ø8 CLEAR TO **
01									
02	4, 5, 6			R	R R				
03									
04	7, 8, 9			R	R R				
RING 2 05									
06	1,2,3			G	Y R				
07									
08									
02P									
04P									
05P									
08P									
O.L.A									

BARRIER

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1		
2	6	4
3		
4		2, 6
5		
6	2	4
7		
8		

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
21		X			2	2					
41		X			4	4					
42		X						12 *			
61		X			6	6					

* REMOVE DELAY IN STAGE 2 LATE SUMMER WHEN TRAFFIC IS ON EASTBOUND LANES

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN.	X
3				
4	X	-	-	X
5				
6	X	2	MIN.	X
7				
8				

SPECIAL OVERLAPS

	PROTECTED	PERMITTED
O.L. "A" =		
O.L. "B" =		
O.L. "C" =		
O.L. "D" =		

TYPE OF INTERCONNECT COMMUNICATION	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC	
RADIO	
*LOCATION OF MASTER CONTROLLER NO: S-____	
SIGNAL SYSTEM #: SS-__-__	

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
3M	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT.)

TRAFFIC CONTROL SIGNAL
IH 39 / STH 16
CITY OF PORTAGE
COLUMBIA COUNTY

SIGNAL NO. T11-1003
CONTROLLER TYPE: TEMP
DATE
PAGE 4 OF 4

PROJECT NO: 1161-02-61 | HWY: IH-39 | COUNTY: COLUMBIA | TEMPORARY SEQUENCE OF OPERATIONS - ALL STAGES | SHEET 36 | E

FILE NAME | PLOT DATE : | PLOT BY :

WISDOT/CADDS SHEET 42

2

SEE SDD PAVEMENT MARKING (MAINLINE)

NOTE: PERMANENT SIGNING ON IH 39
FOUND ON PLAN DETAIL SHEETS

N

BEGIN PAVEMENT MARKING
STA. 137+00 NB, 62' LT
PAVEMENT MARKING EPOXY 4-INCH,
WHITE (SKIP-DASH)
STA. 137+00 NB, 50' LT
PAVEMENT MARKING EPOXY 4-INCH,
YELLOW (SOLID)

BEGIN PAVEMENT MARKING
STA. 137+00 NB, 0.0'
PAVEMENT MARKING EPOXY 4-INCH,
YELLOW (SOLID)
STA. 137+00 NB, 12' RT
PAVEMENT MARKING EPOXY 4-INCH,
WHITE (SKIP-DASH)

STRUCTURE B-11-56

STRUCTURE B-11-55

STRUCTURE B-11-58

STRUCTURE B-11-59

END PAVEMENT MARKING
STA. 374+00 NB, 62' LT
PAVEMENT MARKING EPOXY 4-INCH,
WHITE (SKIP-DASH)
STA. 374+00 NB, 50' LT
PAVEMENT MARKING EPOXY 4-INCH,
YELLOW (SOLID)

END PAVEMENT MARKING
STA. 374+00 NB, 0.0'
PAVEMENT MARKING EPOXY 4-INCH,
YELLOW (SOLID)
STA. 374+00 NB, 12' RT
PAVEMENT MARKING EPOXY 4-INCH,
WHITE (SKIP-DASH)

IH 39

STH 33

CASCADE

CANADIAN PACIFIC RAILWAY

STH 16

COLUMBIA DRIVE

BULGRIN RD

W WISCONSIN ST

WISCONSIN RIVER

Silver Lake

Mud Lake

USH 51

STH 16

COOK STREET

BLACKHAWK RD

WEST LN RD

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 37	E

LEGEND
- (X) REMOVING SIGNS TYPE II
- SIGN MOUNTED ON POST
- REMOVING PAVEMENT MARKING
- 16' X 16' ORANGE FLAGS (INCIDENTAL TO SIGNS TYPE II BID ITEM)

291+00

744+00'WB'

STA. 744+18 WB

MOVING SIGNS TYPE II

PAVEMENT MARKING EPOXY 4-INCH, WHITE STA. 744+18 WB TO STA. 748+23 WB

745+00'WB'

STH 16

STA. 746+80 WB

746+00'WB'

747+00'WB'

FRONTIER COMMUNICATIONS

PAVEMENT MARKING EPOXY 4-INCH, WHITE STA. 50+00 C TO STA. 52+18 C

PAVEMENT MARKING EPOXY 4-INCH, YELLOW STA. 50+00 C TO STA. 52+34 C

BP: 50+00.00

PT: 50+21.42

51+00C

52+00C

EXIT 25 MPH
W12-2A
48"X30"

WEST WEST
2
J12-2
48"X27"

ONE WAY
R6-1-R
24"X18"

STOP
R1-1
36"X36"

W12-1
48"X48"

N

MOVING SIGNS TYPE II

748+00'WB'

PAVEMENT MARKING STOP LINE EPOXY 18-INCH

PAVEMENT MARKING CURB EPOXY, YELLOW

R4-7
24"X30"

ONE WAY
R6-2R
30"X12"

749+00'WB' FP- 52+98.26

DO NOT ENTER
R5-1
24"X24"

750+00'WB'

751+00'WB'

FRONTIER COMMUNICATIONS

ALLIANT ENERGY GAS

PAVEMENT MARKING EPOXY 4-INCH, YELLOW STA. 748+88 WB TO STA. 750+03 WB

MOVING SIGNS TYPE II

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 38	E

2

2

MB -TRAFFIC CONTROL SIGNS PCMS

SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION"

N

80NB 85NB 90NB 95NB 100NB SB IH-39 105NB 110NB 115NB 120NB 125NB

NB IH-39

MB

CASCADE MOUNTAIN ROAD

ROAD WORK 1 MILE
W20-1-F

SPEED LIMIT 55
W03-5
48"X48"

LEFT LANE CLOSED 1/2 MILE
W20-55-G

CTH U

SPEED LIMIT 55
R2-1
48"X60"

LEFT LANE CLOSED 1500 FT
W20-55-B

IH 39 SOUTH CROSSOVER

N

SPEED LIMIT 70
R2-1
48"X60"

END ROAD WORK
G20-2A
48"X24"

125NB 130NB 135NB 140NB 145NB 150NB 155NB 160NB 165NB 170NB SB IH-39 175NB 180NB 185NB 190NB 195NB 200N

NB IH-39

660' Transition Area (Taper)

800' Buffer Space

500'

W04-2L

ROAD WORK AHEAD
W20-1-A

W03-2

YIELD
R1-2
48"X42"

SPEED LIMIT 55
R2-1
48"X60"

STH 33

SEE SDD "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE"

CTH U

*COVER EXISTING SPEED LIMIT SIGNS

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL ADVANCED WARNING (NORTHBOUND)	SHEET 39	E

FILE NAME : G:\MICHAEL BAKER\15004-000 (1161-02-31 RR BRIDGE)\CIVIL 3D\SHEETSPLAN\025001_TC_ADV WARNING.DWG PLOT DATE : 1/23/2017 11:15 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:500 FT

2

2

MB

MB -TRAFFIC CONTROL SIGNS PCMS

LEFT LANE CLOSED 1/2 MILE
W20-55-G

ROAD WORK 1 MILE
W20-1-F

SPEED LIMIT 55
W03-5
48"X48"

SPEED LIMIT 55
R2-1
48"X60"

LEFT LANE CLOSED 1500 FT
W20-55-B

W04-2L

ROAD WORK AHEAD
W20-1-A

660' Transition Area (Taper)

SEE SDD "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE"

SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION"

IH 39 NORTH CROSSOVER

1600' Buffer Space

~~345NB~~ ~~350NB~~ 355NB SB IH 39 360NB 365NB 367NB
NB IH 39

END ROAD WORK
G20-2A
48"X24"

SPEED LIMIT 70
R2-1
48"X60"

USH 51

CTH CX

*COVER EXISTING SPEED LIMIT SIGNS

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL ADVANCED WARNING (SOUTHBOUND) STAGE 1-2, 4	SHEET 40	E

FILE NAME : G:\MICHAEL BAKER\15004-000 (1161-02-31 RR BRIDGE)\CIVIL 3D\SHEETSPLAN\025001_TC_ADV WARNING.DWG PLOT DATE : 1/23/2017 11:15 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:500 FT

2

2

N

MB -TRAFFIC CONTROL SIGNS PCMS

MB

RIGHT LANE CLOSED 1/2 MILE
W20-5-G

ROAD WORK 1 MILE
W20-1-F

SPEED LIMIT 55
W03-5
48"X48"

SPEED LIMIT 55
R2-1
48"X60"

RIGHT LANE CLOSED 1500 FT
W20-5-B

W04-2R

ROAD WORK AHEAD
W20-1-A

660' Transition Area (Taper)

SEE SDD "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE"

IH 39 NORTH CROSSOVER

SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION"

1600' Buffer Space

~~345NB~~ ~~350NB~~ 355NB SB IH 39 360NB 365NB 367NB
NB IH 39

SEE STAGE 3
ENTRANCE RAMP DETAIL

END ROAD WORK
G20-2A
48"X24"

SPEED LIMIT 70
R2-1
48"X60"

USH 51

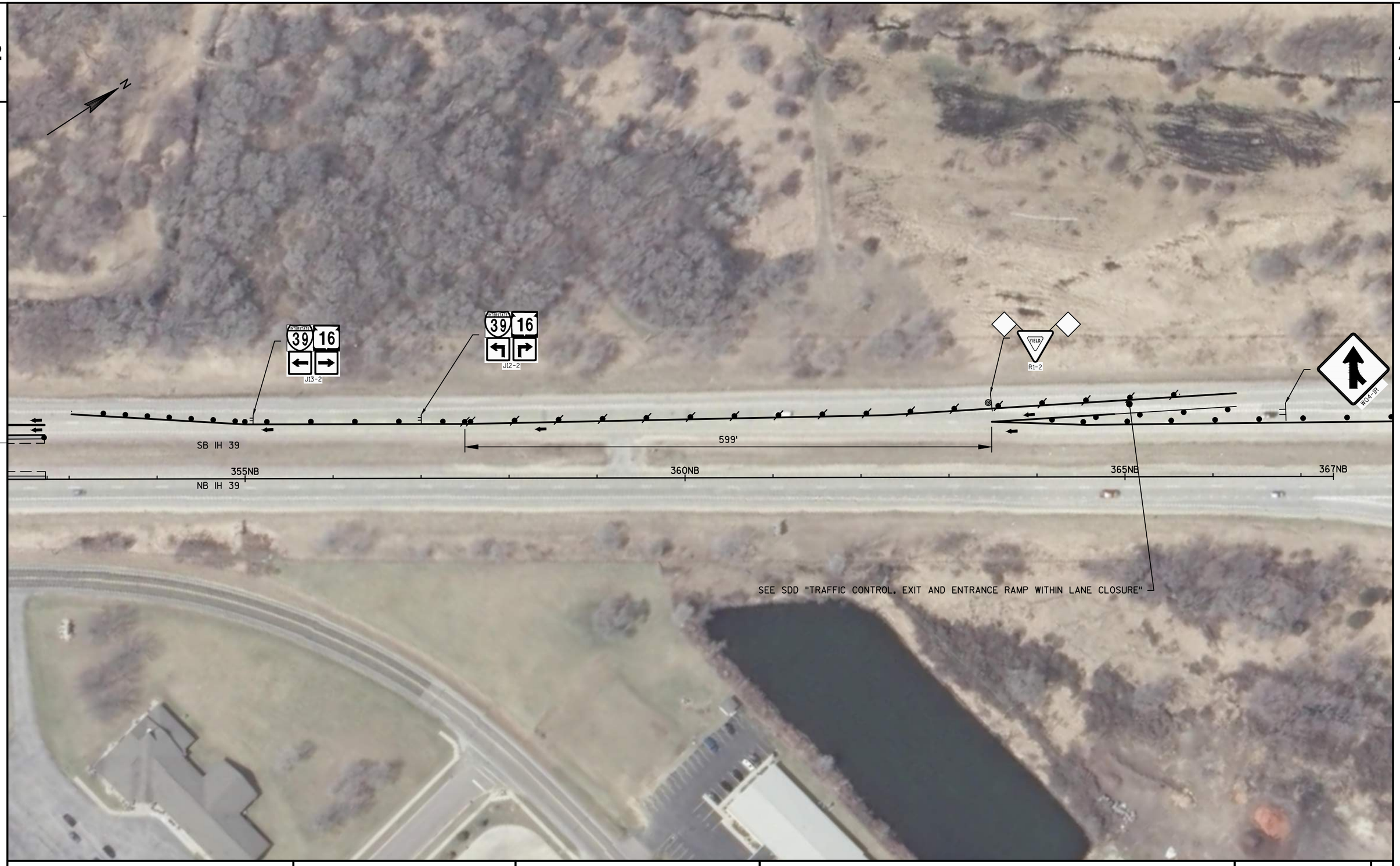
CTH CX

*COVER EXISTING SPEED LIMIT SIGNS

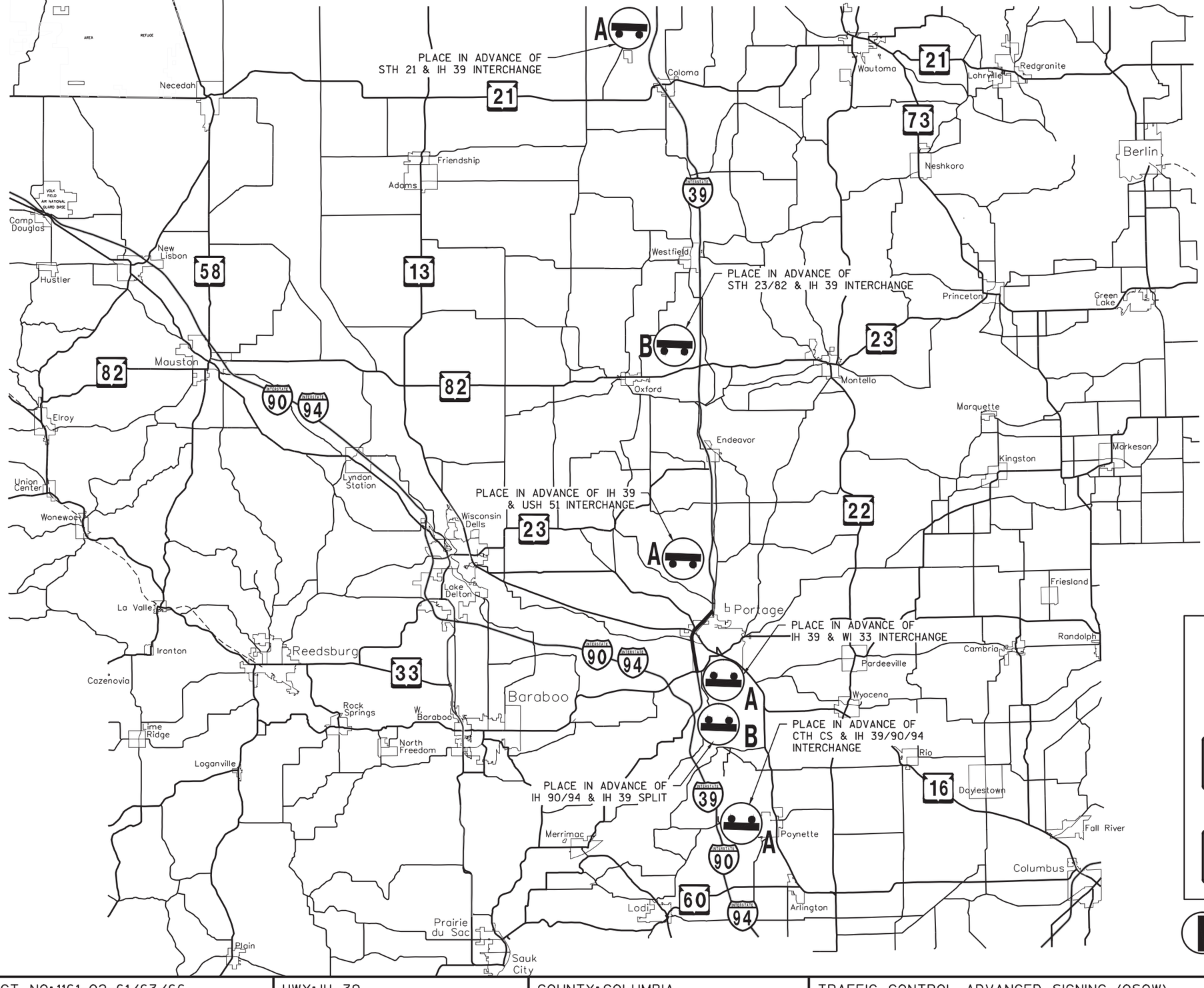
PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL ADVANCED WARNING (SOUTHBOUND) STAGE 3	SHEET 41	E

FILE NAME : G:\MICHAEL BAKER\15004-000 (1161-02-31 RR BRIDGE)\CIVIL 3D\SHEETSPLAN\025001_TC_ADV WARNING.DWG PLOT DATE : 1/23/2017 11:16 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:500 FT

2



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL STAGE 3 ENTRANCE RAMP DETAIL	SHEET 42	E



NOTES

- ALL SIGNS SHALL BE INSTALLED AT THE BEGINNING OF THE PROJECT EXCEPT AS NOTED ON THE PLANS.
- THE EXACT LOCATION AND SPACING OF THE SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

A

NORTH OR SOUTH	MB3-1 OR MB3-3 36"X18"
INTERSTATE 39	M1-1 36"X36"
MAX. 15' WIDTH	W012-52 48"X48"
XX MILES AHEAD	W057-52 48"X24"

B

NORTH OR SOUTH	MB3-1 OR MB3-3 36"X18"
INTERSTATE 39	M1-1 36"X36"
WIDE LOADS EXCEEDING 15 FT	R12-70B 114"X42"
OR	
WIDE LOADS EXCEEDING 15 FT	R12-70B (MOD) 114"X42"

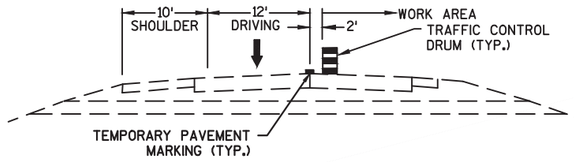
SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL ADVANCED SIGNING (OSOW)	SHEET 43	E

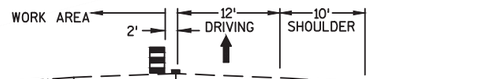
2

TRAFFIC CONTROL TYPICAL SECTION

SB IH 39



NB IH 39



IH 39 - STAGE 1
(SOUTH CROSSOVER - NORTH CROSSOVER)

N

LEGEND
WORK ZONE
DIRECTION OF TRAFFIC

16

SEE S.D.D. "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

SW ON-RAMP

SW LOOP OFF-RAMP

SB IH 39
LEFT LANE CLOSED

B-11-0058
B-11-0059

CANADIAN PACIFIC RR

WORK ZONE
STH 16 NE LOOP RAMP CROSSOVER
(SEE DETAIL)

SB IH 39
LEFT LANE CLOSED

INTERSTATE 39

B-11-0055
B-11-0056

NB IH 39
LEFT LANE CLOSED

CEMETERY ROAD

SE OFF-RAMP

NE ON-RAMP

NE LOOP
OFF-RAMP

WORK ZONE
IH 39 NORTH CROSSOVER
(SEE DETAIL)

WORK ZONE
IH 39 SOUTH CROSSOVER
(SEE DETAIL)

RIVER ROAD

WISCONSIN RIVER

WORK ZONE STH 16 NE LOOP
RAMP INTERSECTION (SEE DETAIL)

16

INTERSTATE 39

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION"

NB IH 39
LEFT LANE CLOSED

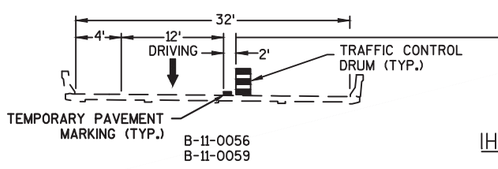
CONSTRUCTION OPERATIONS
- CONSTRUCT IH 39 SOUTH CROSSOVER (STA 260+00 - STA 268+00)
- CONSTRUCT STH 16 RAMP CROSSOVER (STA 352+00 - STA 360+00)
- CONSTRUCT IH 39 NORTH CROSSOVER (STA 386+00 - STA 394+00)
- NE LOOP OFF RAMP & STH 16 INTERSECTION IMPROVEMENTS

TRAFFIC OPERATIONS
NB IH 39
- REDUCE TRAFFIC TO SINGLE LANE & SHIFT TO OUTSIDE LANE
SB IH 39
- REDUCE TRAFFIC TO SINGLE LANE & SHIFT TO OUTSIDE LANE
STH 16 NE LOOP OFF-RAMP
- CLOSED TO TRAFFIC FOR 7 DAYS (SEE STH 16 NW OFF-RAMP DETOUR)

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION"

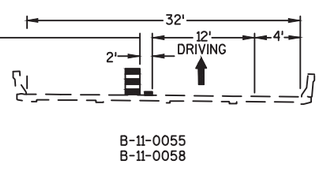
TRAFFIC CONTROL TYPICAL SECTION

SB IH 39



WORK AREA

NB IH 39

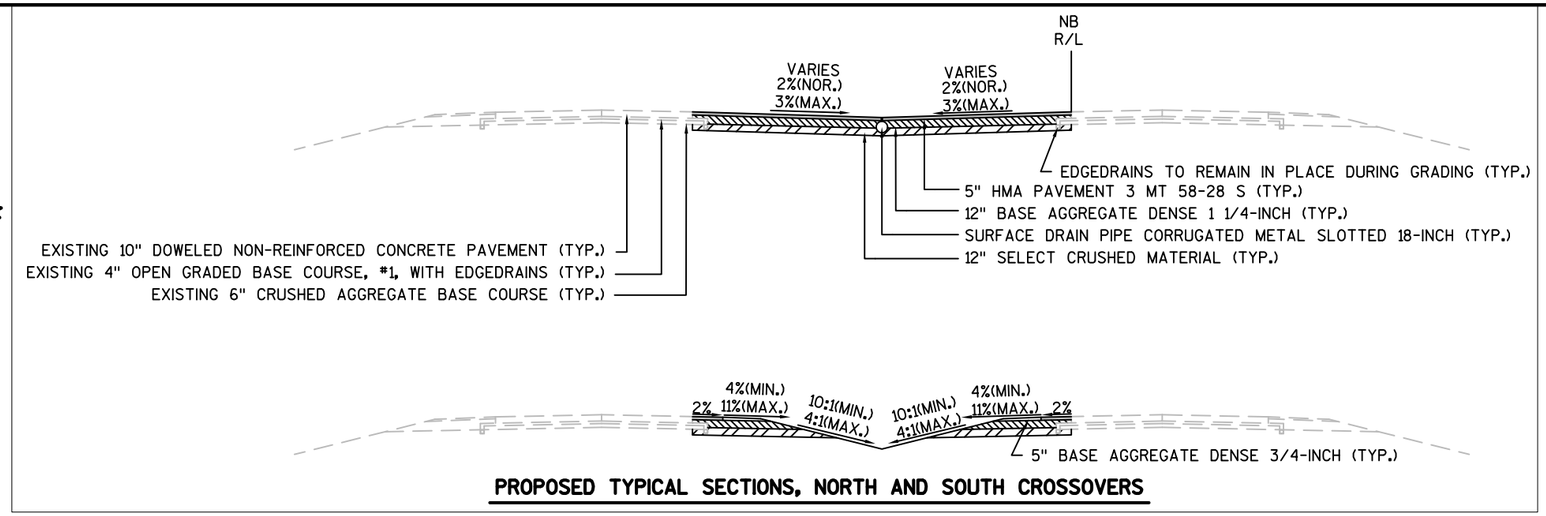


IH 39 - STAGE 1

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL OVERVIEW (STAGE 1)	SHEET 44	E

FILE NAME : G:\MICHAEL BAKER\15004-000 (1161-02-31 RR BRIDGE)\CIVIL 3D\SHEETSPLAN\025001_TC.DWG
LAYOUT NAME - SHEET - (1)

PLOT DATE : 1/23/2017 9:24 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:1000 FT



PROPOSED TYPICAL SECTIONS, NORTH AND SOUTH CROSSOVERS

TRAFFIC CONTROL PLANS PREPARED BY

KL Engineering
[A] Better Experience

WISCONSIN
JOSHUA P. MELBY
43963-6
MADISON, WI
PROFESSIONAL ENGINEER

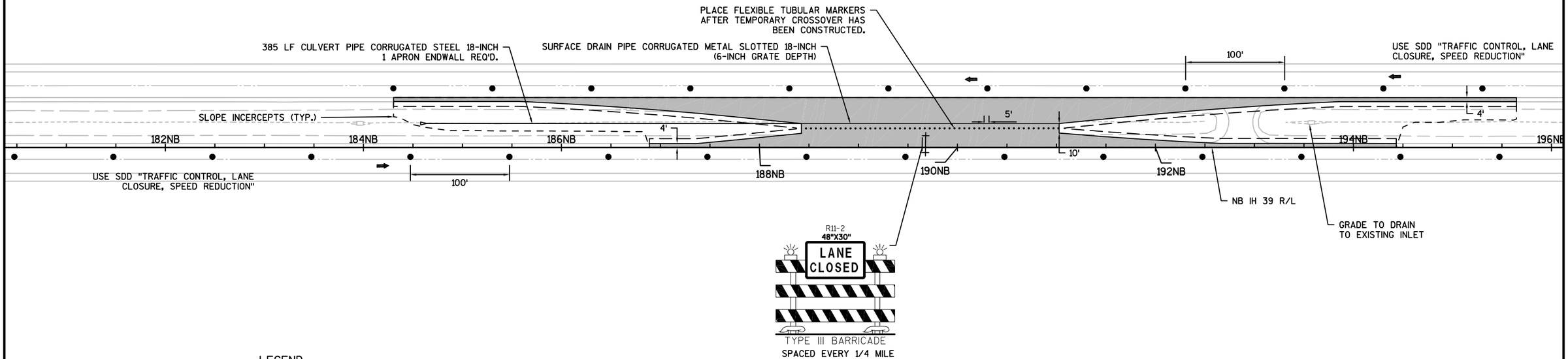
1-23-17
(Date)

(Signature)

2

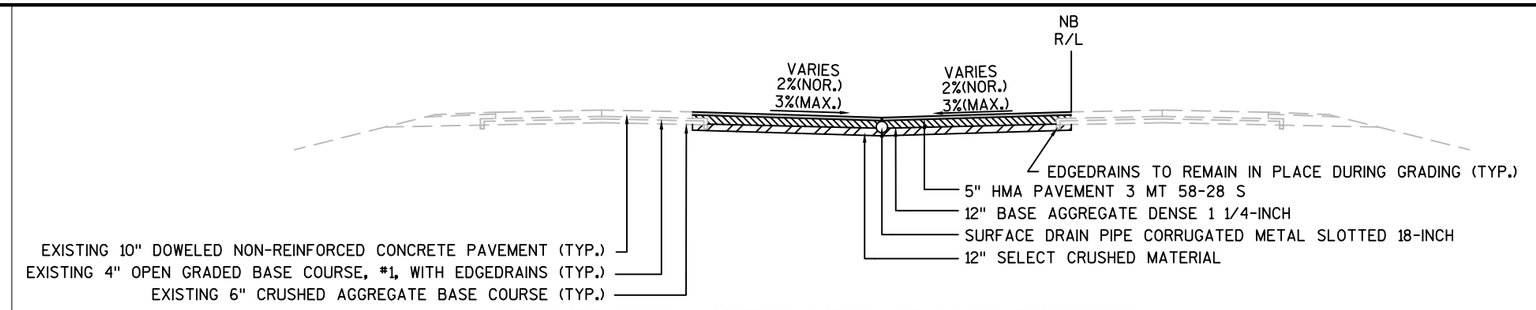
TRAFFIC

TRAFFIC TRAVEL ON OUTSIDE LANES OF IH 39 NB & SB LANES FROM STA 194+00NB - 342+00NB



LEGEND

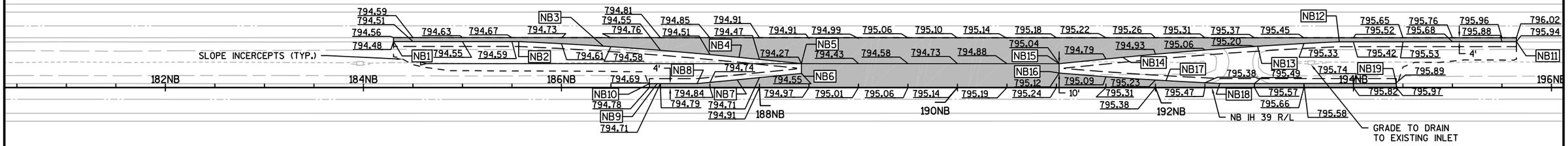
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLEXIBLE TUBULAR MARKER
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHIONS TEMPORARY
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS
- SIGN ON TEMPORARY SUPPORT



PROPOSED TYPICAL SECTION, NORTH AND SOUTH CROSSOVERS

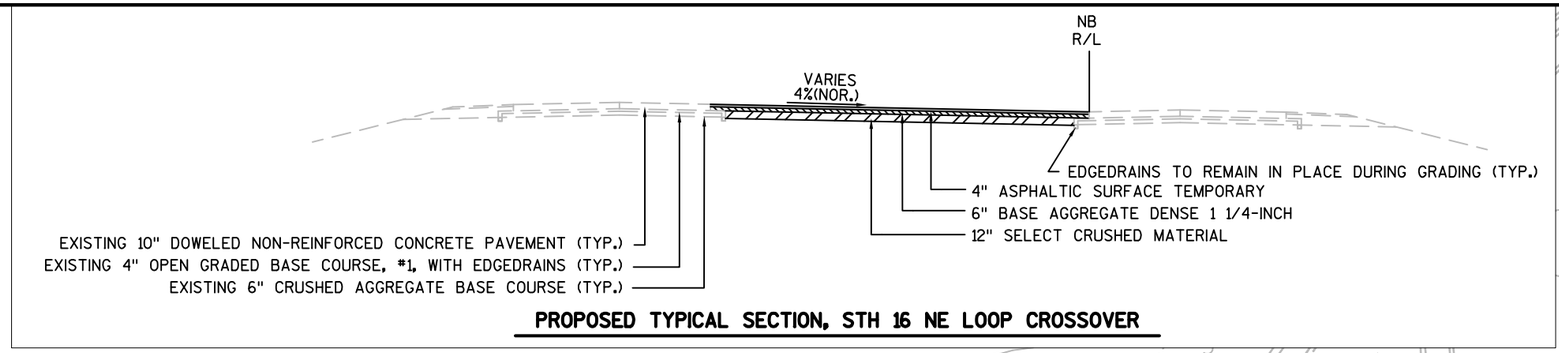
TRAFFIC

TRAFFIC TRAVEL ON OUTSIDE LANES OF IH 39 NB & SB LANES FROM STA 194+00NB - 342+00NB



POINT	STATION	OFFSET	COMMENT
NB1	184+30.42 NB	46.56' LT	BEGIN 4 PAVED SHOULDER
NB2	185+56.96 NB	46.62' LT	BEGIN 3,999.5 RADIUS
NB3	186+42.25 NB	41.94' LT	CENTER OF CURVE (3,999.5 RADIUS)
NB4	187+79.39 NB	30.57' LT	END 3,999.5 RADIUS
NB5	188+42.40 NB	24.25' LT	END GRAVEL SHOULDER
NB6	188+42.40 NB	14.30' LT	END GRAVEL SHOULDER
NB7	187+77.55 NB	7.83' LT	BEGIN 3,999.5 RADIUS
NB8	187+36.99 NB	3.99' LT	CENTER OF CURVE (3,999.5 RADIUS)
NB9	186+96.69 NB	3.98' LT	END 3,999.5 RADIUS
NB10	186+88.82 NB	3.96' LT	BEGIN 4 PAVED SHOULDER
NB11	195+64.68 NB	46.39' LT	END 4 PAVED SHOULDER
NB12	193+85.76 NB	46.37' LT	END 3,999.5 RADIUS
NB13	193+03.14 NB	41.83' LT	CENTER OF CURVE (3,999.5 RADIUS)
NB14	191+67.01 NB	30.60' LT	BEGIN 3,999.5 RADIUS
NB15	191+02.76 NB	24.19' LT	BEGIN GRAVEL SHOULDER
NB16	191+02.77 NB	14.66' LT	BEGIN 3,999.5 RADIUS
NB17	192+10.64 NB	6.92' LT	CENTER OF CURVE (3,999.5 RADIUS)
NB18	192+65.00 NB	4.13' LT	END 3,999.5 RADIUS
NB19	194+43.26 NB	4.07' LT	END 4 PAVED SHOULDER

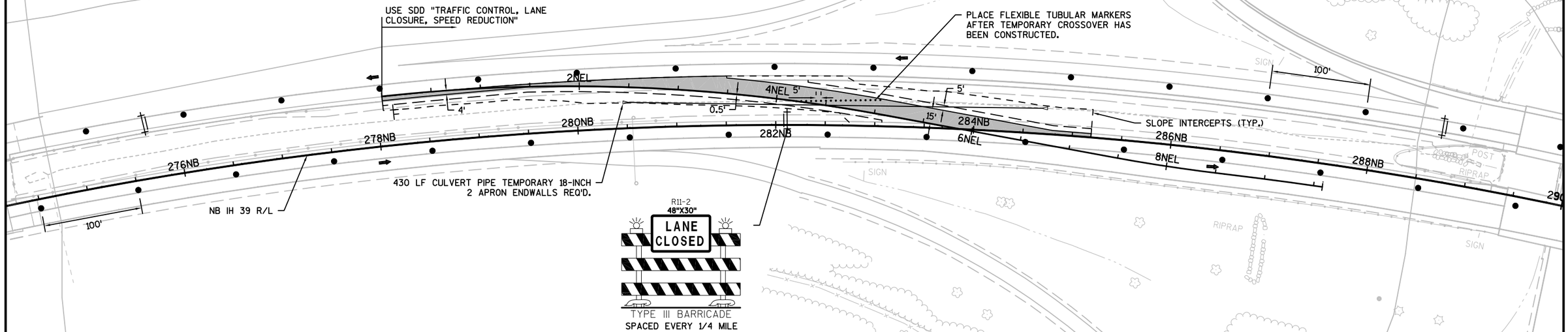
2



PROPOSED TYPICAL SECTION, STH 16 NE LOOP CROSSOVER

TRAFFIC

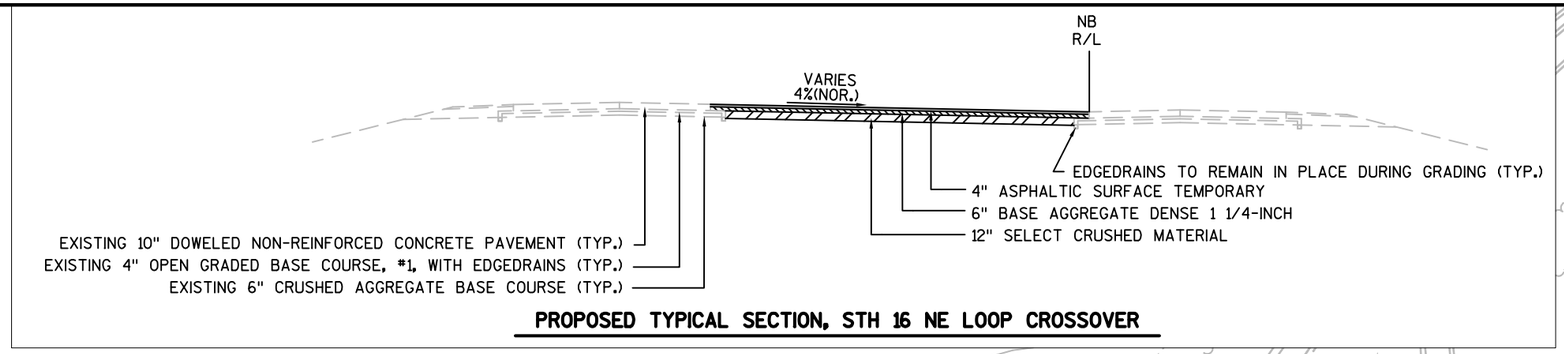
TRAFFIC TRAVEL ON OUTSIDE LANES OF IH 39 NB & SB LANES FROM STA 194+00NB - 342+00NB



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLEXIBLE TUBULAR MARKER
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHIONS TEMPORARY
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS
- SIGN ON TEMPORARY SUPPORT

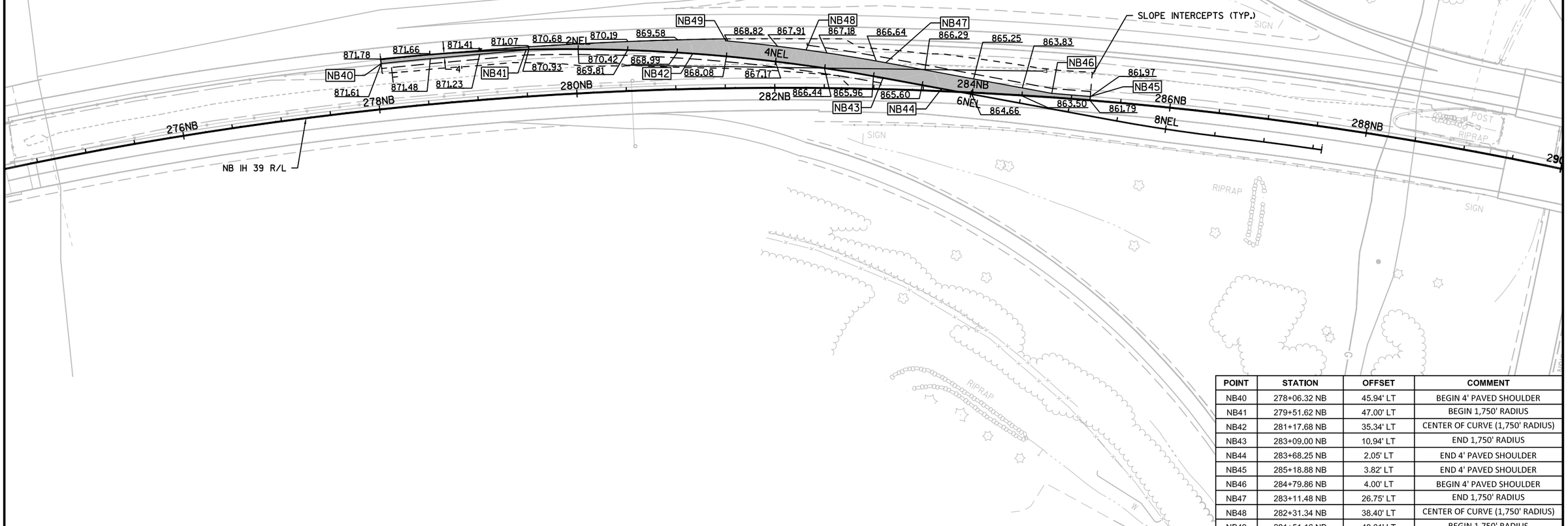
PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	STAGE 1 STH 16 NE LOOP EXIT CROSSOVER TRAFFIC CONTROL	SHEET 47	E



PROPOSED TYPICAL SECTION, STH 16 NE LOOP CROSSOVER

TRAFFIC

TRAFFIC TRAVEL ON OUTSIDE LANES OF IH 39 NB & SB LANES FROM STA 194+00NB - 342+00NB



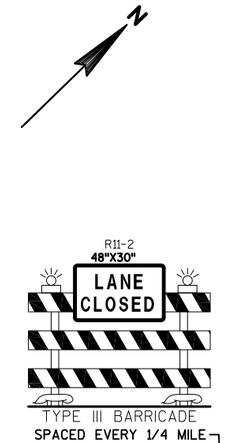
POINT	STATION	OFFSET	COMMENT
NB40	278+06.32 NB	45.94' LT	BEGIN 4' PAVED SHOULDER
NB41	279+51.62 NB	47.00' LT	BEGIN 1,750' RADIUS
NB42	281+17.68 NB	35.34' LT	CENTER OF CURVE (1,750' RADIUS)
NB43	283+09.00 NB	10.94' LT	END 1,750' RADIUS
NB44	283+68.25 NB	2.05' LT	END 4' PAVED SHOULDER
NB45	285+18.88 NB	3.82' LT	END 4' PAVED SHOULDER
NB46	284+79.86 NB	4.00' LT	BEGIN 4' PAVED SHOULDER
NB47	283+11.48 NB	26.75' LT	END 1,750' RADIUS
NB48	282+31.34 NB	38.40' LT	CENTER OF CURVE (1,750' RADIUS)
NB49	281+51.16 NB	48.01' LT	BEGIN 1,750' RADIUS

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	STAGE 1 STH 16 NE LOOP EXIT CROSSOVER GRADES	SHEET 48	E

2

TRAFFIC

TRAFFIC TRAVEL ON OUTSIDE LANES OF IH 39
NB & SB LANES FROM STA 194+00NB -
342+00NB



LEGEND

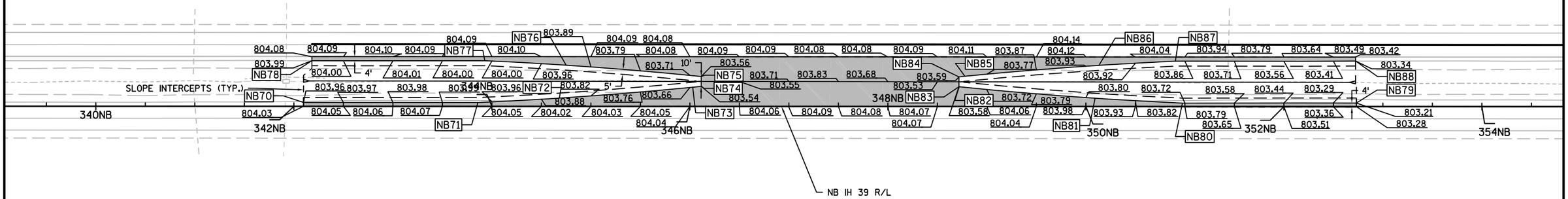
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLEXIBLE TUBULAR MARKER
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHIONS TEMPORARY
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS
- SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	STAGE 1 IH 39 NORTH CROSSOVER TRAFFIC CONTROL	SHEET 49	E

2

TRAFFIC

TRAFFIC TRAVEL ON OUTSIDE LANES OF IH 39
NB & SB LANES FROM STA 194+00NB -
342+00NB



POINT	STATION	OFFSET	COMMENT
NB70	342+09.81 NB	3.94' LT	BEGIN 4' PAVED SHOULDER
NB71	343+85.87 NB	3.90' LT	BEGIN 3,999.5' RADIUS
NB72	344+68.23 NB	8.38' LT	CENTER OF CURVE (3,999.5' RADIUS)
NB73	346+02.84 NB	19.38' LT	END 3,999.5' RADIUS
NB74	346+11.42 NB	20.23' LT	END GRAVEL SHOULDER
NB75	346+11.43 NB	30.18' LT	END 3,999.5' RADIUS
NB76	344+74.90 NB	41.53' LT	CENTER OF CURVE (3,999.5' RADIUS)
NB77	343+92.83 NB	46.09' LT	BEGIN 3,999.5' RADIUS
NB78	342+18.17 NB	45.99' LT	BEGIN 4' PAVED SHOULDER
NB79	352+73.20 NB	3.60' LT	END 4' PAVED SHOULDER
NB80	350+97.45 NB	3.47' LT	END 3,999.5' RADIUS
NB81	350+09.24 NB	8.37' LT	CENTER OF CURVE (3,999.5' RADIUS)
NB82	348+71.99 NB	19.88' LT	BEGIN 3,999.5' RADIUS
NB83	348+71.72 NB	19.91' LT	END GRAVEL SHOULDER
NB84	348+71.73 NB	29.86' LT	END GRAVEL SHOULDER
NB85	348+77.76 NB	30.45' LT	BEGIN 3,999.5' RADIUS
NB86	350+13.19 NB	41.51' LT	CENTER OF CURVE (3,999.5' RADIUS)
NB87	350+90.43 NB	45.74' LT	END 3,999.5' RADIUS
NB88	352+72.40 NB	45.89' LT	END 4' PAVED SHOULDER

LEGEND

- (X) REMOVING SIGNS TYPE II
- SIGN MOUNTED ON POST
- SIGN MOUNTED ON 2 POSTS
- 16' X 16' ORANGE FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGN BID ITEM)

N

END CONSTRUCTION

IH 39 NB

291+00

744+00WB

745+00WB

746+00WB

747+00WB

748+00WB

749+00WB

750+00WB

751+00 WB

752+00WB

753+00WB

EAST | WEST | WEST
16 | 16 | 127
JPEG 72"X57"

WEST
JPEG 36"X36"

FRONTIER COMMUNICATIONS LINE

SLOPE INTERCEPTS

BP: 50+00.00

PT: 50+21.42

BEGIN CONSTRUCTION
STA. 50+10.00 C

WIDENING
WILL REMAIN IN PLACE
IN FINAL CONDITION

12.0'

3.0'

RAMP C

RAMP D

RIPRAP

CONCRETE SAFETY ISLAND

300+15

300+25

REMOVE

POINT	STATION	OFFSET	ELEVATION	
2	52+34.20 C	16.00 LT	816.58	
3	52+80.85 C	65.64 RT	816.58	MATCH EXISTING
4	52+60.00 C	21.27 LT		RAD 5.3'
5	52+11.44 C	74.69 RT		RAD 70.0'
6	52+60.19 C	24.46 RT	816.57	
7	52+18.41 C	5.04 RT	815.68	
8	51+68.66 C	0.00	814.75	
9	51+68.66 C	16.00 LT	814.57	
10	51+50.00 C	0.00	814.18	
11	51+50.00 C	16.00 LT	814.00	
12	51+00.00 C	0.00	812.64	
13	51+00.00 C	16.00 LT	812.46	
14	50+50.00 C	0.00	811.11	
15	50+50.00 C	16.00 LT	811.30	
16	50+21.42 C	0.00	810.23	
17	50+21.42 C	16.00 LT	810.69	
18	50+10.00 C	0.00	809.88	MATCH EXISTING
19	50+10.00 C	16.00 LT	810.35	MATCH EXISTING
20	52+60.00 C	26.53 LT	818.18	
21	52+85.35 C	26.72 LT		MATCH EXISTING
22	52+93.79 C	164.87 RT		MATCH EXISTING
23	50+65.02 C	26.51 LT	813.44	

OFFSET DIMENSIONS, RADIUS DIMENSIONS, AND ELEVATIONS ARE TO FLANGE LINE UNLESS OTHERWISE NOTED

STH 16

747+70.12, 37.40' RT
747+69.79, 40.59' RT

748+43.05, 24.48' RT
748+44.63, 11.83' RT

749+04.28, 11.86' RT
R50.5'

749+28.30, 11.95' RT
R58.5'

748+88.75, 52.10' RT
R6.8'

EP: 52+98.26

749+39.15, 11.83' RT
749+39.09, 28.82' RT

750+03.49, 49.69' RT
750+03.49, 52.56' RT

4" HMA 4MT 58-28S PAVEMENT
OVER 6" BASE AGGREGATE DENSE 1 ¼"
WILL REMAIN IN PLACE IN FINAL CONDITION

4" HMA 4MT 58-28S PAVEMENT
OVER 6" BASE AGGREGATE DENSE 1 ¼"
WILL REMAIN IN PLACE IN FINAL CONDITION

MATCHLINE STA. 751+00 WB

MATCHLINE STA. 751+00 WB

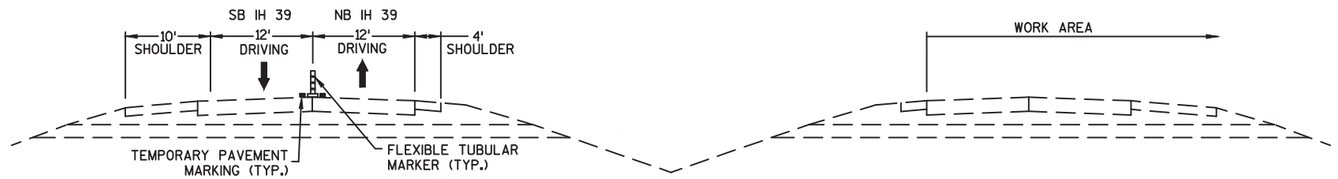
PCC

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	STAGE 1: IH 39 / STH 16 INTERCHANGE	SHEET	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\SHEETSPLAN\021202_PD-RAMP_STAGE.DWG
LAYOUT NAME - SHEET - (10)
PLOT DATE : 1/23/2017 4:19 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

TRAFFIC CONTROL TYPICAL SECTION



IH 39 - STAGE 2
(SOUTH CROSSOVER - NORTH CROSSOVER)

- SEE S.D.D. "TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT WITH BARRIER"
- SEE S.D.D. "TRAFFIC CONTROL, SINGLE LANE CROSSOVER

SB IH 39
TWO WAY TRAFFIC

IH 39 SOUTH CROSSOVER
(SEE DETAIL)

NB IH 39
BOTH LANES CLOSED

WORK ZONE
WISCONSIN RIVER
BRIDGE (B-11-0055)

WISCONSIN RIVER

RIVER ROAD

SEE S.D.D. "TRAFFIC CONTROL,
LANE CLOSURE, SPEED REDUCTION"

SEE S.D.D. "BARRICADES AND
SIGNS FOR MAINLINE CLOSURE"

WORK ZONE
CPR BRIDGE (B-11-0058)

SE OFF-RAMP

SEE S.D.D. "TRAFFIC CONTROL,
TWO LANE TWO WAY OPERATION"

CEMETERY ROAD

SEE S.D.D. "TRAFFIC CONTROL,
EXIT AND ENTRANCE RAMP
WITHIN LANE CLOSURE

STH 16 NE LOOP RAMP CROSSOVER
(SEE DETAIL)

SW ON-RAMP

SW LOOP OFF-RAMP

- SEE S.D.D. "TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT WITH BARRIER"
- SEE S.D.D. "TRAFFIC CONTROL, SINGLE LANE CROSSOVER

SB IH 39
TWO WAY TRAFFIC

NE ON-RAMP

NE LOOP
OFF-RAMP

NB IH 39
LEFT LANE CLOSED

STAGE 1 WILL MODIFY RAMP TERMINAL INTERSECTION TO ALLOW
EASTBOUND LEFT AND WESTBOUND RIGHT TURNS ONTO STH 16

IH 39 NORTH CROSSOVER
(SEE DETAIL)

SEE S.D.D. "TRAFFIC CONTROL,
LANE CLOSURE, SPEED REDUCTION"

LEGEND
- WORK ZONE
- CROSSOVER
- RAMP CLOSED
- DIRECTION OF TRAFFIC

CONSTRUCTION OPERATIONS
NB IH 39
(B-11-0055) - BRIDGE PAINTING AND JOINT REPAIR
(B-11-0058) - BRIDGE PAINTING AND DECK OVERLAY
NE LOOP OFF-RAMP
INSTALL TEMPORARY TRAFFIC SIGNALS

TRAFFIC OPERATIONS
NB IH 39
- REDUCE TRAFFIC TO SINGLE LANE AND CROSSOVER TO RUN BI-DIRECTIONAL ON SB MEDIAN LANE

SB IH 39
- REDUCE TRAFFIC TO SINGLE LANE & SHIFT TO OUTSIDE LANE

SE OFF-RAMP
- CLOSED TO TRAFFIC (USE TRAFFIC CROSSOVER TO NE LOOP OFF-RAMP)

NE LOOP OFF-RAMP
- OPEN TO TRAFFIC (USE TRAFFIC CROSSOVER)

NE ON-RAMP
- OPEN TO TRAFFIC (MERGE WITH IH 39 AFTER NORTH CROSSOVER)

STH 16 (WISDOT ID 1161-02-74)
- TRAFFIC REDUCED TO ONE LANE IN EACH DIRECTION

TRAFFIC CONTROL TYPICAL SECTION

IH 39 - STAGE 2

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL OVERVIEW (STAGE 2)	SHEET 52	E

2

2

LEGEND

EXISTING SIGN TO BE COVERED

** PAID FOR AS TRAFFIC CONTROL SIGNS FIXED MESSAGE

N

WISCONSIN RIVER

INTERSTATE 39

CEMETERY ROAD

EXIT 89A-B
TO
16 127
Portage
Wis Dells
1 MILE

EXIT 89B
WEST TO
16 127
Wis Dells
1/4 MI
Portage
**

EXIT 89B
EAST TO
16 127
Portage

EXIT 89B
WEST TO
16 127
Wis Dells
Portage
**

16

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL OVERVIEW (STAGE 2) EXIT SIGNAGE	SHEET 53	E

FILE NAME : G:\MICHAEL BAKER\15004-000 (1161-02-31 RR BRIDGE)\CIVIL 3D\SHEETSPLAN\025001_TC.DWG
LAYOUT NAME - SHEET - (1)

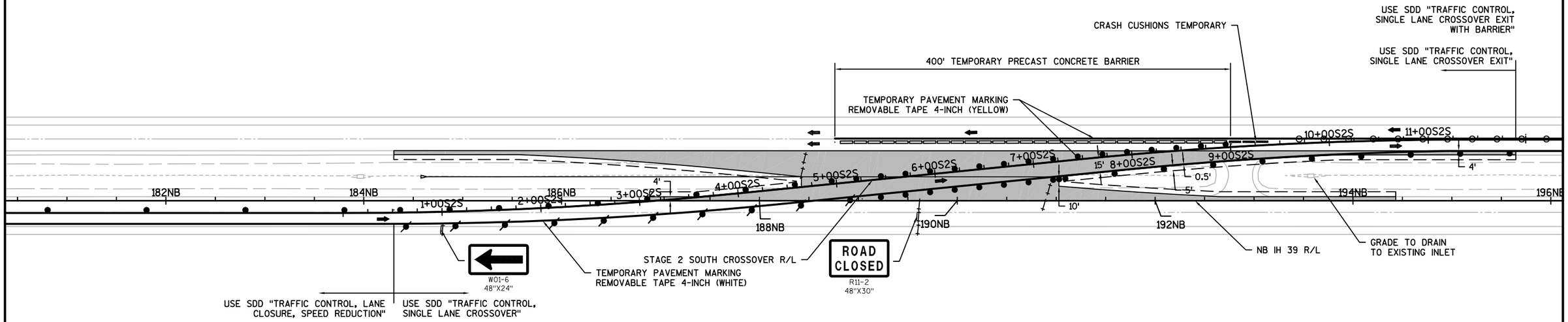
PLOT DATE : 1/23/2017 9:24 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:500 FT

2

TRAFFIC

BI-DIRECTIONAL TRAFFIC ON IH 39 SB LANES
FROM STA 194+00NB - 342+00NB

N



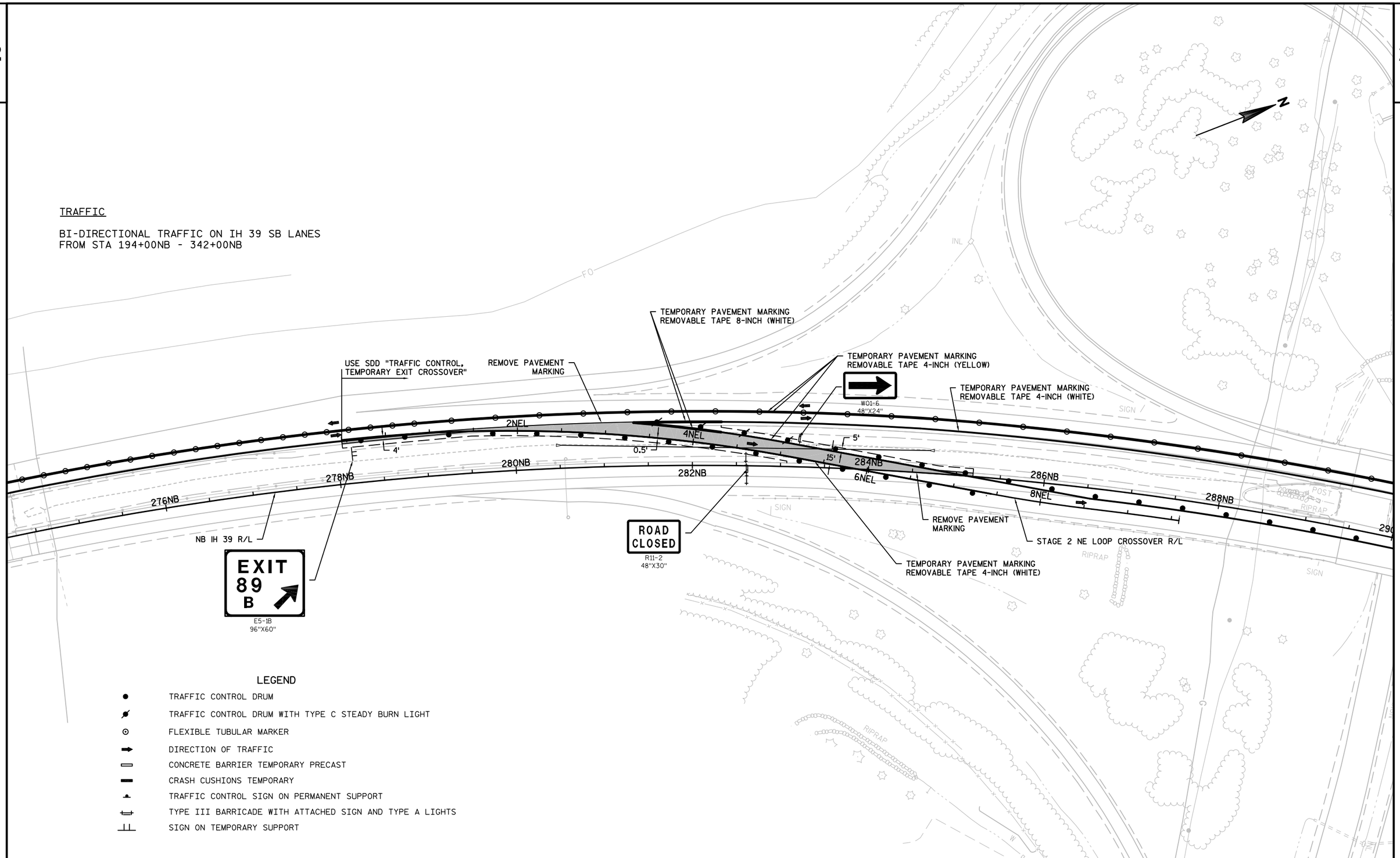
LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLEXIBLE TUBULAR MARKER
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHIONS TEMPORARY
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS
- SIGN ON TEMPORARY SUPPORT

2

TRAFFIC

BI-DIRECTIONAL TRAFFIC ON IH 39 SB LANES
FROM STA 194+00NB - 342+00NB



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLEXIBLE TUBULAR MARKER
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHIONS TEMPORARY
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS
- SIGN ON TEMPORARY SUPPORT

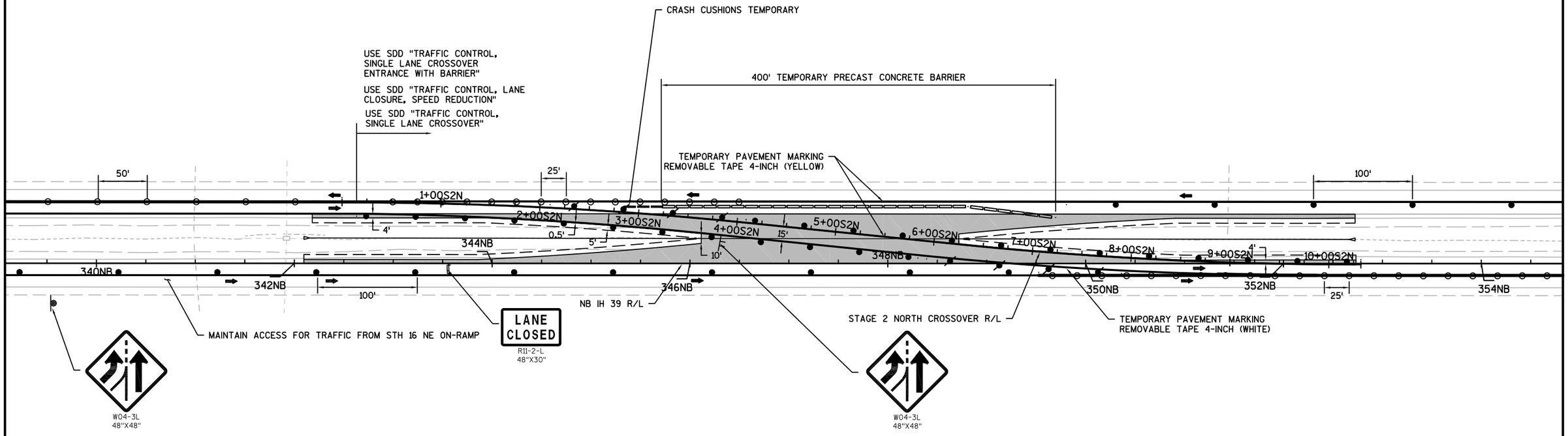
PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	STAGE 2 STH 16 NE LOOP EXIT CROSSOVER	SHEET 55	E

2

2

TRAFFIC

BI-DIRECTIONAL TRAFFIC ON IH 39 SB LANES
FROM STA 194+00NB - 342+00NB



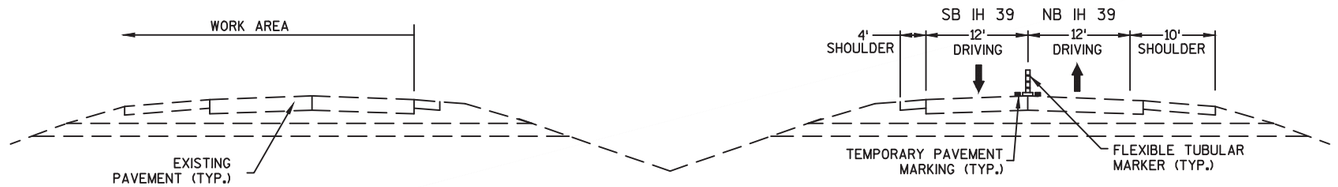
LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLEXIBLE TUBULAR MARKER
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHIONS TEMPORARY
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS
- SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	STAGE 2 IH 39 NORTH CROSSOVER	SHEET 56	E

2

TRAFFIC CONTROL TYPICAL SECTION



IH 39 - STAGE 3
(SOUTH CROSSOVER - NORTH CROSSOVER)

2

N

LEGEND
- WORK ZONE
- CROSSOVER
- RAMP CLOSED
- DIRECTION OF TRAFFIC

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"

SW ON-RAMP

SW LOOP OFF-RAMP

SB IH 39
BOTH LANES CLOSED

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION"

WORK ZONE
CPR BRIDGE (B-11-0059)

WORK ZONE
STH 16 NE LOOP RAMP CROSSOVER

SEE S.D.D. "TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION"

CANADIAN PACIFIC RR

SE OFF-RAMP

NE ON-RAMP

NE LOOP OFF-RAMP

SB IH 39
LEFT LANE CLOSED

WORK ZONE
WISCONSIN RIVER BRIDGE (B-11-0056)

WISCONSIN RIVER

RIVER ROAD

NB IH 39
TWO WAY TRAFFIC

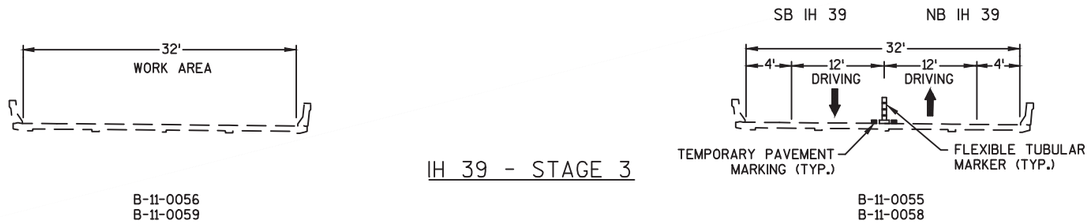
CEMETERY ROAD

NB IH 39
TWO WAY TRAFFIC

IH 39 SOUTH CROSSOVER
(SEE DETAIL)

- SEE S.D.D. "TRAFFIC CONTROL, SINGLE LANE CROSSOVER ENTRANCE WITH BARRIER"
- SEE S.D.D. "TRAFFIC CONTROL, SINGLE LANE CROSSOVER"

TRAFFIC CONTROL TYPICAL SECTION



IH 39 - STAGE 3

B-11-0056
B-11-0059

B-11-0055
B-11-0058

CONSTRUCTION OPERATIONS
SB IH 39
(B-11-0056) - BRIDGE PAINTING AND JOINT REPAIR
(B-11-0059) - BRIDGE PAINTING AND DECK OVERLAY
REMOVE STH 16 NE LOOP RAMP CROSSOVER (STA 278+00 - STA 286+00)

TRAFFIC OPERATIONS
NB IH 39
- REDUCE TRAFFIC TO SINGLE LANE & SHIFT TO OUTSIDE LANE

SB IH 39
- REDUCE TRAFFIC TO SINGLE LANE AND CROSSOVER TO RUN BI-DIRECTIONAL ON NB MEDIAN LANE

SW LOOP OFF-RAMP
- OPEN TO TRAFFIC (EXIT FROM IH 39 AT IH 39 NORTH CROSSOVER)

STH 16 SW ON-RAMP
- CLOSED TO TRAFFIC (STH 16 ON-RAMP DETOUR)

IH 39 NORTH CROSSOVER
(SEE DETAIL)

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION"

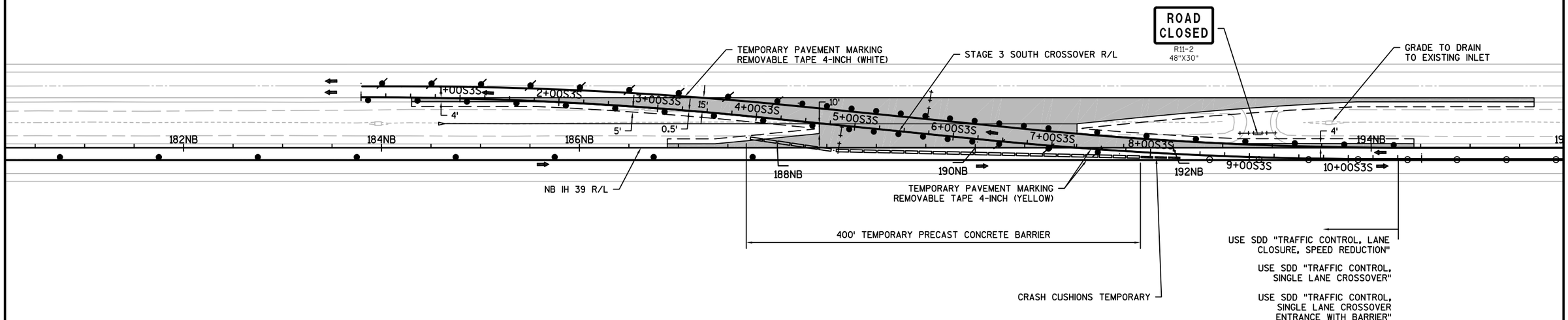
PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL OVERVIEW (STAGE 3)	SHEET 57	E

FILE NAME : G:\MICHAEL BAKER\15004-000 (1161-02-31 RR BRIDGE)\CIVIL 3D\SHEETSPLAN\025001_TC.DWG
LAYOUT NAME - SHEET - (1)
PLOT DATE : 1/23/2017 9:24 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:1000 FT
WISDOT/CADDS SHEET 42

2

TRAFFIC

BI-DIRECTIONAL TRAFFIC ON IH 39 NB LANES
FROM STA 194+00NB - 342+00NB



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLEXIBLE TUBULAR MARKER
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHIONS TEMPORARY
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS
- SIGN ON TEMPORARY SUPPORT

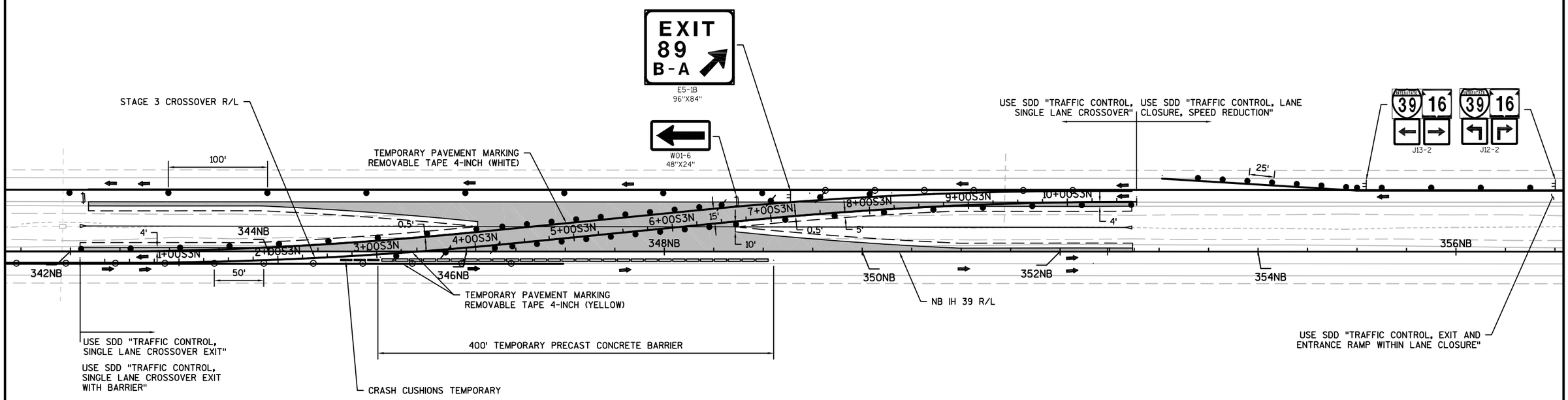
PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	STAGE 3 IH 39 SOUTH CROSSOVER	SHEET 58	E

2

2

TRAFFIC

BI-DIRECTIONAL TRAFFIC ON IH 39 NB LANES
FROM STA 194+00NB - 342+00NB



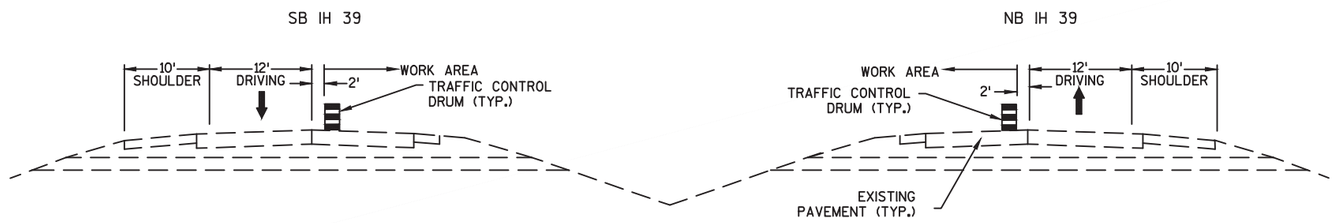
LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLEXIBLE TUBULAR MARKER
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHIONS TEMPORARY
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS
- SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	STAGE 3 IH 39 NORTH CROSSOVER	SHEET 59	E

2

TRAFFIC CONTROL TYPICAL SECTION



IH 39 - STAGE 4
(SOUTH CROSSOVER - NORTH CROSSOVER)

N

LEGEND
WORK ZONE
DIRECTION OF TRAFFIC

SEE S.D.D. "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

SB IH 39
LEFT LANE CLOSED

B-11-0058
B-11-0059

CANADIAN PACIFIC RR

B-11-0055
B-11-0056

NB IH 39
LEFT LANE CLOSED

WISCONSIN RIVER

RIVER ROAD

CEMETERY ROAD

SB IH 39
LEFT LANE CLOSED

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION"

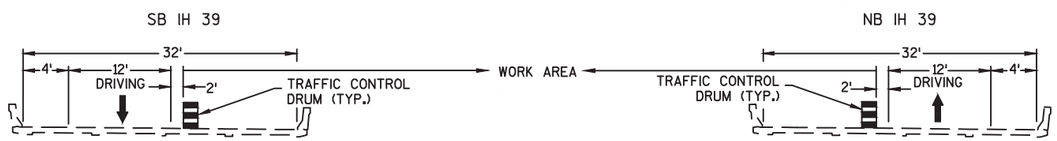
NB IH 39
LEFT LANE CLOSED

CONSTRUCTION OPERATIONS
- INSTALL CABLE BARRIER IN IH 39 MEDIAN
- REMOVE TEMPORARY TRAFFIC SIGNALS

TRAFFIC OPERATIONS
NB IH 39
- REDUCE TRAFFIC TO SINGLE LANE & SHIFT TO OUTSIDE LANE
SB IH 39
- REDUCE TRAFFIC TO SINGLE LANE & SHIFT TO OUTSIDE LANE

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION"

TRAFFIC CONTROL TYPICAL SECTION



B-11-0056
B-11-0059

IH 39 - STAGE 4

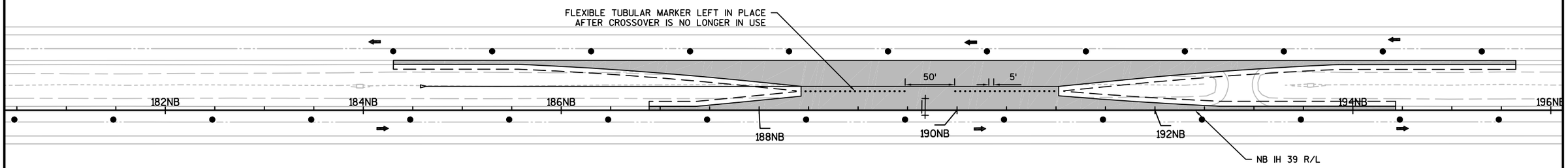
B-11-0055
B-11-0058

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	TRAFFIC CONTROL OVERVIEW (STAGE 4)	SHEET 60	E

FILE NAME : G:\MICHAEL BAKER\15004-000 (1161-02-31 RR BRIDGE)\CIVIL 3D\SHEETSPLAN\025001_TC.DWG
LAYOUT NAME - SHEET - (1)
PLOT DATE : 1/23/2017 9:24 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:1000 FT

2

N

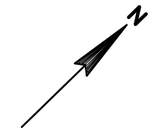


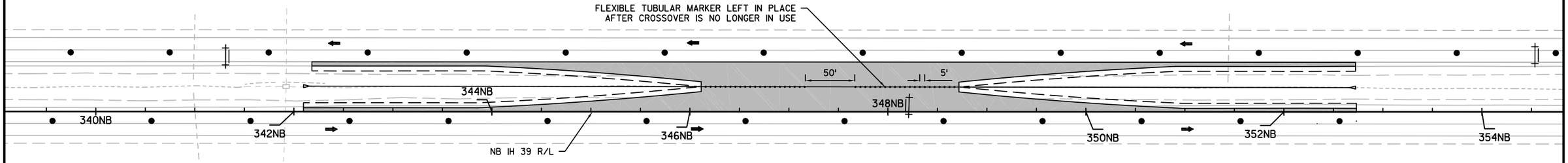
LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLEXIBLE TUBULAR MARKER LEFT IN PLACE
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHIONS TEMPORARY
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS
- SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	STAGE 4 IH 39 SOUTH CROSSOVER	SHEET 61	E

2





LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLEXIBLE TUBULAR MARKER LEFT IN PLACE
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHIONS TEMPORARY
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS
- SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	STAGE 4 IH 39 NORTH CROSSOVER	SHEET 62	E

SEE S.D.D. "DETOUR SIGNING FOR MAINLINE CLOSURES"

ALL SIGNS SHOWN ON DETOUR SHEET SHALL BE PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS UNLESS OTHERWISE INDICATED

**TRAFFIC CONTROL SIGNS FIXED MESSAGE

N

STH 16 SW ON-RAMP

B-11-0058
B-11-0059

EXISTING SIGN TO BE COVERED

EXISTING SIGN TO BE COVERED

CANADIAN PACIFIC RR

LEGEND

SW ON-RAMP CLOSED

SW ON-RAMP DETOUR ROUTE (IH 39 - USH 51)

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

M1-1	36"X36" *24"X24"		M4-8A	30"X24"	
M1-6	36"X36" *24"X24"		M05-1L/ M05-1R	30"X30" *21"X21"	
M3-3	36"X18" *24"X12"		M05-2L/ M05-2R	30"X30"	
M4-8	36"X18" *24"X12"		M06-1/ M06-2	30"X30" *21"X21"	
			W20-2-A	48"X48"	

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	STH 16 ON-RAMP DETOUR (STAGE 3)	SHEET 63	E

FILE NAME : G:\MICHAEL BAKER\15004-000 (1161-02-31 RR BRIDGE)\CIVIL 3D\SHEETSPLAN\025001_TC.DWG
LAYOUT NAME - SHEET - (1)

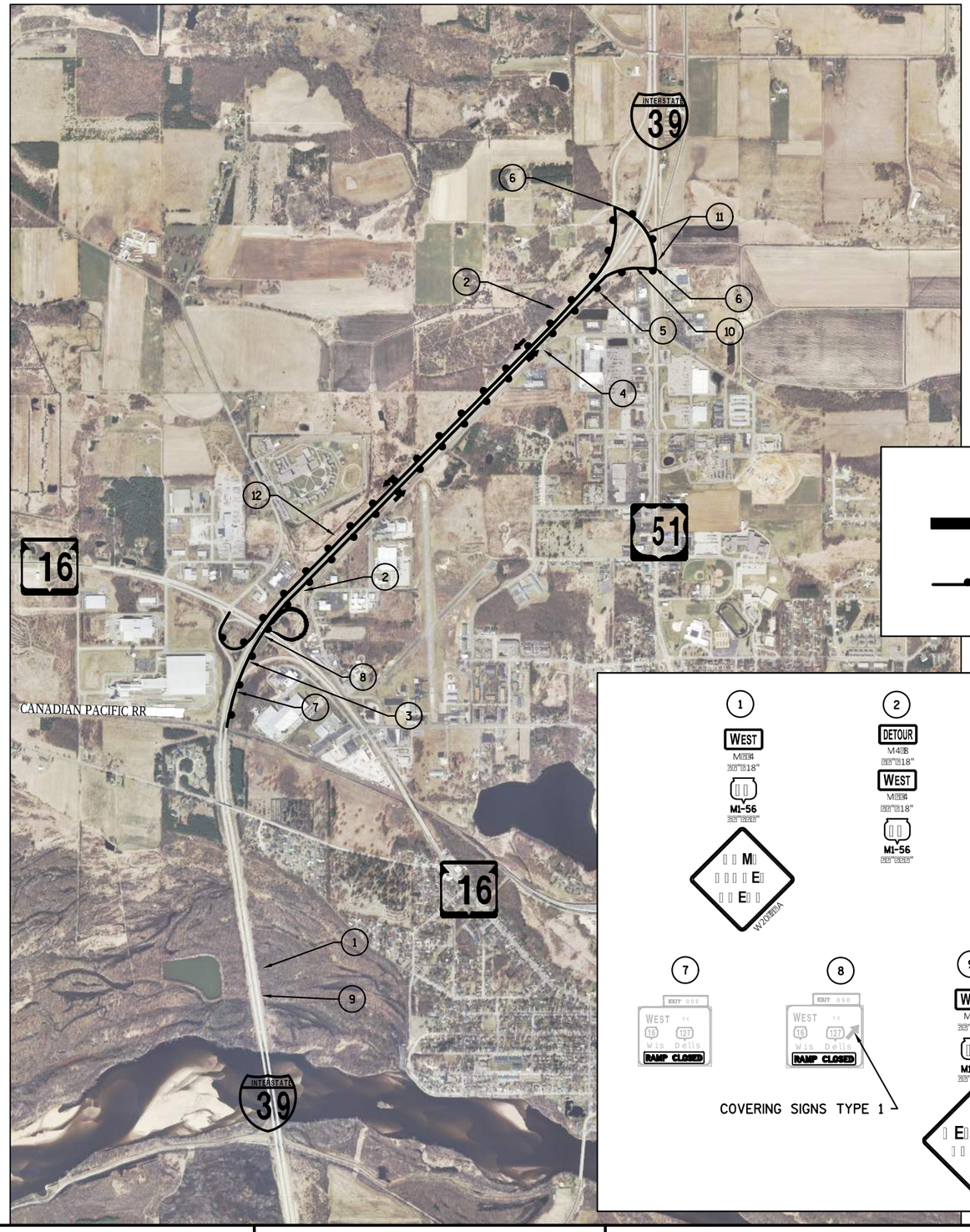
PLOT DATE : 1/23/2017 9:24 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:1000 FT

2

N

ALL SIGNS SHOWN ON DETOUR SHEET SHALL BE PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS UNLESS OTHERWISE INDICATED.

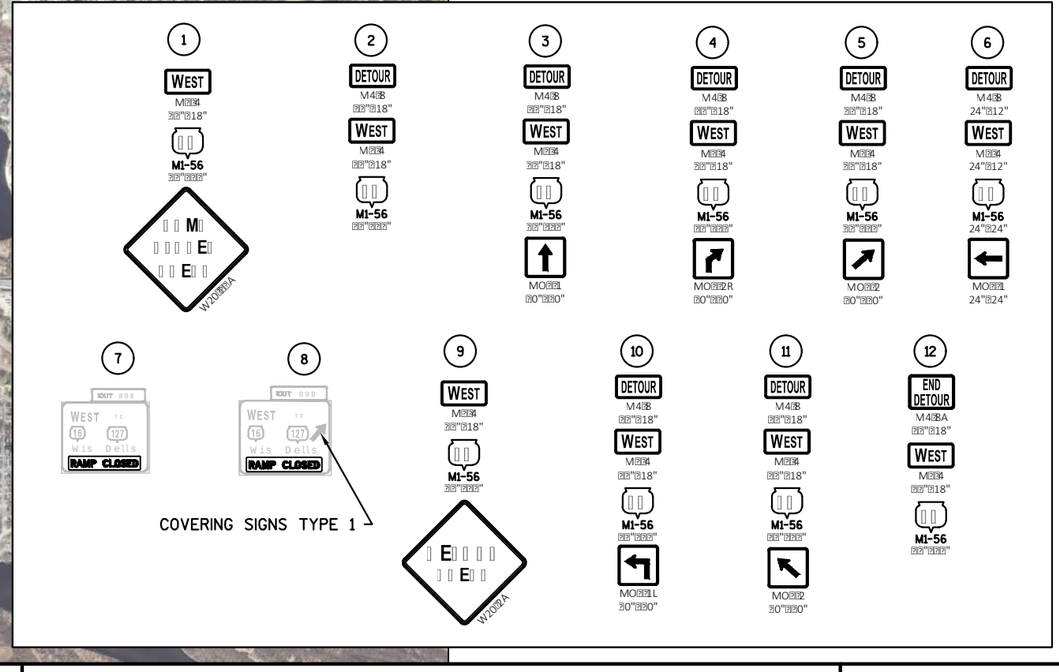
SEE SDD TRAFFIC CONTROL, EXIT RAMP CLOSURE FOR RAMP CLOSURE DETAILS



LEGEND

NB OFF RAMP CLOSED

IH 39 TO WB STH 16 DETOUR ROUTE (IH 39 - USH 51)



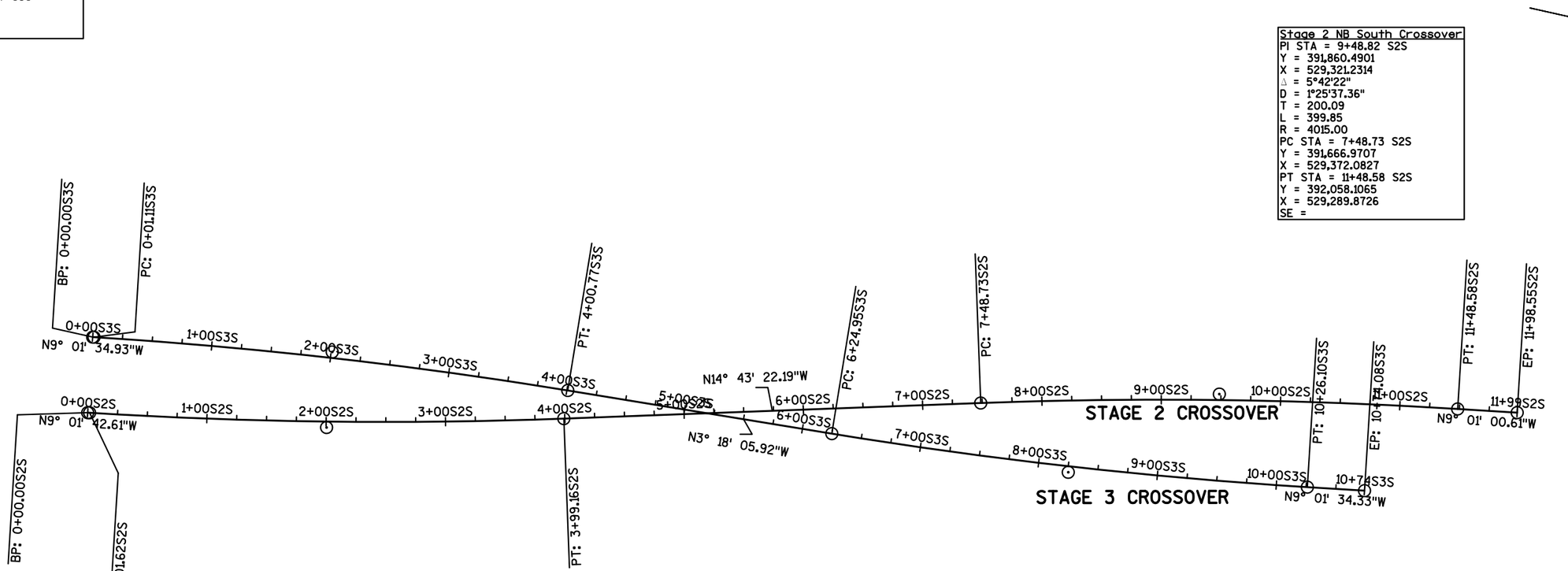
COVERING SIGNS TYPE 1

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	DETOUR ROUTE - NB OFF RAMP CLOSURE	SHEET 64	E

2

Stage 3 SB South Crossover
PI STA = 2+01.10 S3S
Y = 391,127.3168
X = 529,448.7150
Δ = 5°43'29"
D = 1°25'56.62"
T = 200.00
L = 399.66
R = 4000.00
PC STA = 0+01.11 S3S
Y = 390,929.7965
X = 529,480.0924
PT STA = 4+00.77 S3S
Y = 391,326.9819
X = 529,437.1967
SE =

Stage 2 NB South Crossover
PI STA = 9+48.82 S2S
Y = 391,860.4901
X = 529,321.2314
Δ = 5°42'22"
D = 1°25'37.36"
T = 200.09
L = 399.85
R = 4015.00
PC STA = 7+48.73 S2S
Y = 391,666.9707
X = 529,372.0827
PT STA = 11+48.58 S2S
Y = 392,058.1065
X = 529,289.8726
SE =



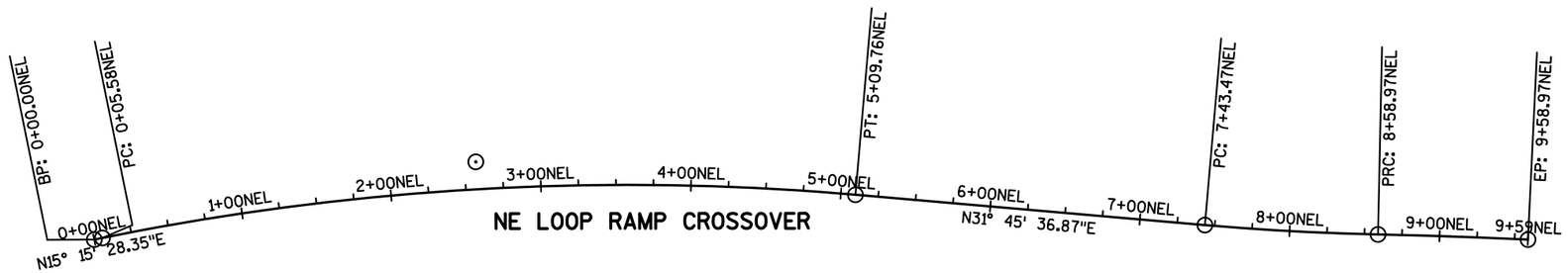
Stage 2 NB South Crossover
PI STA = 2+00.56 S2S
Y = 391,136.4795
X = 529,511.4804
Δ = 5°41'40"
D = 1°25'56.62"
T = 198.93
L = 397.54
R = 4000.00
PC STA = 0+01.62 S2S
Y = 390,940.0109
X = 529,542.6982
PT STA = 3+99.16 S2S
Y = 391,328.8811
X = 529,460.9229
SE =

Stage 3 SB South Crossover
PI STA = 8+25.69 S3S
Y = 391,751.1992
X = 529,412.7243
Δ = 5°43'28"
D = 1°25'37.36"
T = 200.74
L = 401.15
R = 4015.00
PC STA = 6+24.95 S3S
Y = 391,550.7912
X = 529,424.2855
PT STA = 10+26.10 S3S
Y = 391,949.4545
X = 529,381.2308
SE =

PROJECT NO: 1161-02-61/63	HWY: IH 39	COUNTY: COLUMBIA	ALIGNMENT DIAGRAM	SHEET 65	E

2

Stage 2 NE Loop Crossover
PI STA = 2+59.42 NEL
Y = 400,516.0832
X = 528,412.0385
Δ = 16°30'09"
D = 3°16'23.19"
T = 253.85
L = 504.18
R = 1750.50
PC STA = 0+05.58 NEL
Y = 400,271.1837
X = 528,345.2351
PT STA = 5+09.76 NEL
Y = 400,731.9190
X = 528,545.6551
SE =



Stage 2 NE Loop Crossover
PI STA = 8+01.24 NEL
Y = 400,979.7594
X = 528,699.0846
Δ = 3°44'20"
D = 3°14'13.38"
T = 57.77
L = 115.50
R = 1770.00
PC STA = 7+43.47 NEL
Y = 400,930.6395
X = 528,668.6762
PT STA = 8+58.97 NEL
Y = 401,030.7575
X = 528,726.2253
SE =

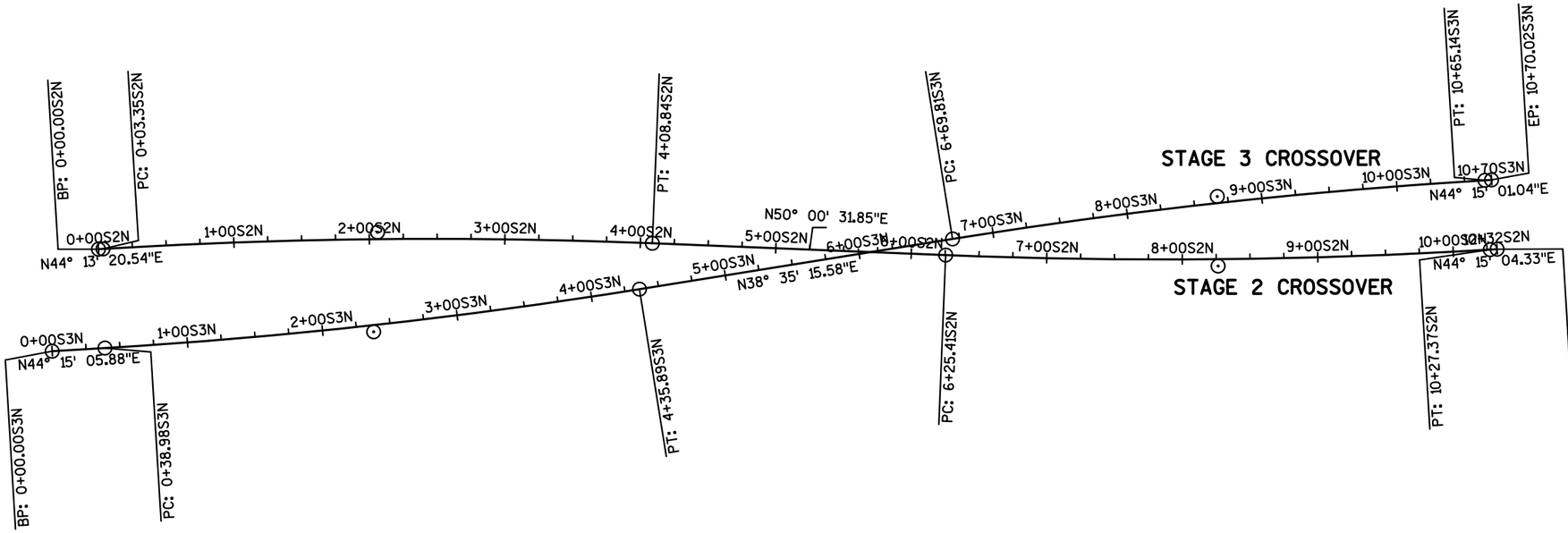
Stage 2 NE Loop Crossover
PI STA = 9+08.98 NEL
Y = 401,074.8987
X = 528,749.7168
Δ = 1°30'54"
D = 1°30'53.86"
T = 50.00
L = 100.00
R = 3782.00
PC STA = 8+58.97 NEL
Y = 401,030.7575
X = 528,726.2253
PT STA = 9+58.97 NEL
Y = 401,118.4034
X = 528,774.3671
SE =

PROJECT NO: 1161-02-61/63	HWY: IH 39	COUNTY: COLUMBIA	ALIGNMENT DIAGRAM	SHEET 66	E

2

Stage 2 NB North Crossover
PI STA = 2+06.27 S2N
Y = 405,334.6414
X = 532,586.3425
Δ = 5°47'11"
D = 1°25'37.36"
T = 202.92
L = 405.49
R = 4015.00
PC STA = 0+03.35 S2N
Y = 405,189.2240
X = 532,444.8198
PT STA = 4+08.84 S2N
Y = 405,465.0493
X = 532,741.8054
SE =

Stage 3 SB North Crossover
PI STA = 8+67.64 S3N
Y = 405,771.0718
X = 533,026.8566
Δ = 5°39'45"
D = 1°25'56.62"
T = 197.82
L = 395.33
R = 4000.00
PC STA = 6+69.81 S3N
Y = 405,616.4417
X = 532,903.4715
PT STA = 10+65.14 S3N
Y = 405,912.7729
X = 533,164.8971
SE =



Stage 3 SB North Crossover
PI STA = 2+37.60 S3N
Y = 405,278.3429
X = 532,633.6900
Δ = 5°39'50"
D = 1°25'37.36"
T = 198.61
L = 396.90
R = 4015.00
PC STA = 0+38.98 S3N
Y = 405,136.0799
X = 532,495.0956
PT STA = 4+35.89 S3N
Y = 405,433.5897
X = 532,757.5672
SE =

Stage 2 NB North Crossover
PI STA = 8+26.56 S2N
Y = 405,733.5075
X = 533,061.8417
Δ = 5°45'28"
D = 1°25'56.62"
T = 201.15
L = 401.96
R = 4000.00
PC STA = 6+25.41 S2N
Y = 405,604.2352
X = 532,907.7327
PT STA = 10+27.37 S2N
Y = 405,877.5879
X = 533,202.2046
SE =

PROJECT NO: 1161-02-61/63	HWY: IH 39	COUNTY: COLUMBIA	ALIGNMENT DIAGRAM	SHEET 67	E

Estimate Of Quantities

					1161-02-61	1161-02-63	1161-02-66
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
0010	203.0100	Removing Small Pipe Culverts	EACH	7.000	6.000	1.000	
0020	203.0225.S	Debris Containment (structure) 01. B-11-58	LS	1.000	1.000		
0030	203.0225.S	Debris Containment (structure) 02. B-11-59	LS	1.000	1.000		
0040	203.0700.S	Removing Old Structure Over Waterway With Debris Capture System (station) 01. 216+70 'NB'	LS	1.000		1.000	
0050	203.0700.S	Removing Old Structure Over Waterway With Debris Capture System (station) 02. 216+80 'A'	LS	1.000		1.000	
0060	204.0100	Removing Pavement	SY	1,018.000	1,018.000		
0070	204.0105	Removing Pavement Butt Joints	SY	640.000	640.000		
0080	204.0165	Removing Guardrail	LF	150.000		150.000	
0090	205.0100	Excavation Common	CY	13,106.000	5,966.000	2,493.000	4,647.000
0100	213.0100	Finishing Roadway (project) 01. 1161-02-61	EACH	1.000	1.000		
0110	213.0100	Finishing Roadway (project) 02. 1161-02-63	EACH	1.000		1.000	
0120	213.0100	Finishing Roadway (project) 03. 1161-02-66	EACH	1.000			1.000
0130	305.0110	Base Aggregate Dense 3/4-Inch	TON	756.000	531.000	225.000	
0140	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	6,354.000	3,954.000	2,400.000	
0150	312.0110	Select Crushed Material	TON	5,100.000	3,000.000	2,100.000	
0160	416.0610	Drilled Tie Bars	EACH	6.000	6.000		
0170	416.1010	Concrete Surface Drains	CY	8.300	8.300		
0180	455.0605	Tack Coat	GAL	492.000	296.000	196.000	
0190	460.2000	Incentive Density HMA Pavement	DOL	1,040.000	520.000	520.000	
0200	460.6223	HMA Pavement 3 MT 58-28 S	TON	1,622.000	822.000	800.000	
0210	460.6224	HMA Pavement 4 MT 58-28 S	TON	366.000	366.000		
0220	465.0110	Asphaltic Surface Patching	TON	20.000		20.000	
0230	465.0125	Asphaltic Surface Temporary	TON	250.000	250.000		
0240	465.0400	Asphaltic Shoulder Rumble Strips	LF	725.000	725.000		
0250	502.3100	Expansion Device (structure) 01. B-11-58	LS	1.000	1.000		
0260	502.3100	Expansion Device (structure) 02. B-11-59	LS	1.000	1.000		
0270	502.3100	Expansion Device (structure) 03. B-11-55	LS	1.000		1.000	
0280	502.3100	Expansion Device (structure) 04. B-11-56	LS	1.000		1.000	
0290	502.3200	Protective Surface Treatment	SY	1,367.000	1,213.000	154.000	
0300	502.3210	Pigmented Surface Sealer	SY	312.000	276.000	36.000	
0310	502.4205	Adhesive Anchors No. 5 Bar	EACH	225.000	153.000	72.000	
0320	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	20,070.000	6,110.000	13,960.000	
0330	506.5000	Bearing Assemblies Fixed (structure) 01. B-11-58	EACH	5.000	5.000		
0340	506.5000	Bearing Assemblies Fixed (structure) 02. B-11-59	EACH	6.000	6.000		
0350	506.6000	Bearing Assemblies Expansion (structure) 01. B-11-58	EACH	5.000	5.000		
0360	506.6000	Bearing Assemblies Expansion (structure) 02. B-11-59	EACH	6.000	6.000		
0370	506.6000	Bearing Assemblies Expansion (structure) 03. B-11-55	EACH	1.000		1.000	
0380	506.7050.S	Removing Bearings (structure) 01. B-11-58	EACH	10.000	10.000		

					1161-02-61	1161-02-63	1161-02-66
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
0390	506.7050.S	Removing Bearings (structure) 02. B-11-59	EACH	12.000	12.000		
0400	506.7050.S	Removing Bearings (structure) 03. B-11-55	EACH	1.000		1.000	
0410	509.0301	Preparation Decks Type 1	SY	60.000	60.000		
0420	509.0302	Preparation Decks Type 2	SY	24.000	24.000		
0430	509.0500	Cleaning Decks	SY	1,143.000	1,143.000		
0440	509.1000	Joint Repair	SY	241.000	74.000	167.000	
0450	509.1500	Concrete Surface Repair	SF	201.000	161.000	40.000	
0460	509.2000	Full-Depth Deck Repair	SY	2.000	2.000		
0470	509.2500	Concrete Masonry Overlay Decks	CY	156.000	92.000	64.000	
0480	509.2600	Concrete Masonry Overlay Approaches	CY	36.000	36.000		
0490	509.9020.S	Epoxy Crack Sealing	LF	40.000	40.000		
0500	509.9050.S	Cleaning Parapets	LF	653.000	653.000		
0510	517.1800.S	Structure Repainting Recycled Abrasive (structure) 01. B-11-58	LS	1.000	1.000		
0520	517.1800.S	Structure Repainting Recycled Abrasive (structure) 02. B-11-59	LS	1.000	1.000		
0530	517.1800.S	Structure Repainting Recycled Abrasive (structure) 03. B-11-55	LS	1.000		1.000	
0540	517.1800.S	Structure Repainting Recycled Abrasive (structure) 04. B-11-56	LS	1.000		1.000	
0550	517.4500.S	Negative Pressure Containment and Collection of Waste Materials (structure) 01. B-11-58	LS	1.000	1.000		
0560	517.4500.S	Negative Pressure Containment and Collection of Waste Materials (structure) 02. B-11-59	LS	1.000	1.000		
0570	517.4500.S	Negative Pressure Containment and Collection of Waste Materials (structure) 03. B-11-55	LS	1.000		1.000	
0580	517.4500.S	Negative Pressure Containment and Collection of Waste Materials (structure) 04. B-11-56	LS	1.000		1.000	
0590	517.6001.S	Portable Decontamination Facility	EACH	2.000	1.000	1.000	
0600	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	2.000	2.000		
0610	520.2018	Culvert Pipe Temporary 18-Inch	LF	430.000	430.000		
0620	521.0118	Culvert Pipe Corrugated Steel 18-Inch	LF	1,188.000	803.000	385.000	
0630	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	3.000	2.000	1.000	
0640	521.2005.S	Surface Drain Pipe Corrugated Metal Slotted (inch) 01. 18-Inch	LF	520.000	260.000	260.000	
0650	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	1,023.000	1,023.000		
0660	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	91.000	91.000		
0670	602.2400	Concrete Safety Islands	SF	1,361.000	1,361.000		
0680	603.8000	Concrete Barrier Temporary Precast Delivered	LF	1,600.000	800.000	800.000	
0690	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,600.000	800.000	800.000	
0700	604.0500	Slope Paving Crushed Aggregate	SY	849.000	849.000		

					1161-02-61	1161-02-63	1161-02-66
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
0710	606.0200	Riprap Medium	CY	2.000	2.000		
0720	613.1100.S	Cable Barrier Type 1	LF	7,036.000			7,036.000
0730	613.1200.S	Cable Barrier End Terminal Type 1	EACH	6.000			6.000
0740	614.0305	Steel Plate Beam Guard Class A	LF	150.000		150.000	
0750	614.0380	Steel Plate Beam Guard Energy Absorbing Terminal Temporary	EACH	2.000		2.000	
0760	614.0905	Crash Cushions Temporary	EACH	4.000	2.000	2.000	
0770	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1161-02-61	EACH	1.000	1.000		
0780	618.0100	Maintenance And Repair of Haul Roads (project) 02. 1161-02-63	EACH	1.000		1.000	
0790	618.0100	Maintenance And Repair of Haul Roads (project) 03. 1161-02-66	EACH	1.000			1.000
0800	619.1000	Mobilization	EACH	1.000	0.350	0.550	0.100
0810	624.0100	Water	MGAL	48.000	24.000	16.000	8.000
0820	625.0500	Salvaged Topsoil	SY	19,176.000	4,297.000	2,662.000	12,217.000
0830	628.1504	Silt Fence	LF	1,113.000	813.000	100.000	200.000
0840	628.1520	Silt Fence Maintenance	LF	1,113.000	813.000	100.000	200.000
0850	628.1905	Mobilizations Erosion Control	EACH	15.000	5.000	5.000	5.000
0860	628.1910	Mobilizations Emergency Erosion Control	EACH	15.000	5.000	5.000	5.000
0870	628.2002	Erosion Mat Class I Type A	SY	37,193.000	4,797.000	2,962.000	29,434.000
0880	628.7005	Inlet Protection Type A	EACH	23.000	9.000	7.000	7.000
0890	628.7504	Temporary Ditch Checks	LF	975.000	300.000	300.000	375.000
0900	628.7555	Culvert Pipe Checks	EACH	6.000	4.000	2.000	
0910	628.7560	Tracking Pads	EACH	1.000		1.000	
0920	629.0205	Fertilizer Type A	CWT	12.100	2.700	1.700	7.700
0930	630.0130	Seeding Mixture No. 30	LB	346.000	78.000	48.000	220.000
0940	630.0200	Seeding Temporary	LB	518.000	116.000	72.000	330.000
0950	633.0100	Delineator Posts Steel	EACH	2.000	2.000		
0960	633.0500	Delineator Reflectors	EACH	2.000	2.000		
0970	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	9.000	8.000	1.000	
0980	637.2210	Signs Type II Reflective H	SF	52.000	52.000		
0990	637.2230	Signs Type II Reflective F	SF	39.000	39.000		
1000	638.2102	Moving Signs Type II	EACH	9.000	7.000	2.000	
1010	638.2602	Removing Signs Type II	EACH	10.000	10.000		
1020	638.3000	Removing Small Sign Supports	EACH	8.000	8.000		
1030	642.5001	Field Office Type B	EACH	1.000	1.000		
1040	643.0200.S	Traffic Control Surveillance and Maintenance (project) 01. 1161-02-61	DAY	270.000	270.000		
1050	643.0200.S	Traffic Control Surveillance and Maintenance (project) 02. 1161-02-63	DAY	270.000		270.000	

					1161-02-61	1161-02-63	1161-02-66
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
1060	643.0200.S	Traffic Control Surveillance and Maintenance (project) 03. 1161-02-66	DAY	62.000			62.000
1070	643.0300	Traffic Control Drums	DAY	109,422.000	72,052.000	37,370.000	
1080	643.0420	Traffic Control Barricades Type III	DAY	8,700.000	5,767.000	2,933.000	
1090	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	1,077.000	687.000	390.000	
1100	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	1,077.000	687.000	390.000	
1110	643.0705	Traffic Control Warning Lights Type A	DAY	17,400.000	11,534.000	5,866.000	
1120	643.0715	Traffic Control Warning Lights Type C	DAY	13,228.000	8,294.000	4,934.000	
1130	643.0800	Traffic Control Arrow Boards	DAY	1,570.000	1,006.000	564.000	
1140	643.0900	Traffic Control Signs	DAY	14,673.000	10,603.000	4,070.000	
1150	643.0910	Traffic Control Covering Signs Type I	EACH	5.000	5.000		
1160	643.0920	Traffic Control Covering Signs Type II	EACH	21.000	21.000		
1170	643.1000	Traffic Control Signs Fixed Message	SF	88.000	88.000		
1180	643.1050	Traffic Control Signs PCMS	DAY	52.000	52.000		
1190	643.1051	Traffic Control Signs PCMS with Cellular Communications	DAY	564.000	282.000	282.000	
1200	643.2000	Traffic Control Detour (project) 01. 1161-02-61	EACH	1.000	1.000		
1210	643.3000	Traffic Control Detour Signs	DAY	5,899.000	5,899.000		
1220	645.0120	Geotextile Type HR	SY	54.000	54.000		
1230	646.0106	Pavement Marking Epoxy 4-Inch	LF	64,914.000	35,391.000	29,523.000	
1240	646.0600	Removing Pavement Markings	LF	64,770.000	35,247.000	29,523.000	
1250	647.0456	Pavement Marking Curb Epoxy	LF	23.000	23.000		
1260	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	44.000	44.000		
1270	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	197,931.000	128,081.000	69,850.000	
1280	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	200.000	200.000		
1290	649.1100	Temporary Pavement Marking Stop Line 18-Inch	LF	156.000	156.000		
1300	650.4500	Construction Staking Subgrade	LF	3,265.000	2,130.000	1,135.000	
1310	650.5000	Construction Staking Base	LF	3,980.000	2,845.000	1,135.000	
1320	650.6000	Construction Staking Pipe Culverts	EACH	6.000	4.000	2.000	
1330	650.6500	Construction Staking Structure Layout (structure) 01. B-11-58	LS	1.000	1.000		
1340	650.6500	Construction Staking Structure Layout (structure) 02. B-11-59	LS	1.000	1.000		
1350	650.6500	Construction Staking Structure Layout (structure) 03. B-11-55	LS	1.000		1.000	
1360	650.6500	Construction Staking Structure Layout (structure) 04. B-11-56	LS	1.000		1.000	
1370	650.9910	Construction Staking Supplemental Control (project) 01. 1161-02-61	LS	1.000	1.000		
1380	650.9910	Construction Staking Supplemental Control (project) 02. 1161-02-63	LS	1.000		1.000	

					1161-02-61	1161-02-63	1161-02-66
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
1390	650.9910	Construction Staking Supplemental Control (project) 03. 1161-02-66	LS	1.000			1.000
1400	650.9920	Construction Staking Slope Stakes	LF	10,301.000	2,130.000	1,135.000	7,036.000
1410	690.0150	Sawing Asphalt	LF	1,261.000	1,135.000	126.000	
1420	690.0250	Sawing Concrete	LF	51.000	51.000		
1430	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,000.000	1,000.000		
1440	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	900.000	900.000		
1450	SPV.0060	Special 01. Traffic Control Flexible Tubular Marker Bases Left-in-Place	EACH	84.000	42.000	42.000	
1460	SPV.0060	Special 02. Traffic Control Flexible Tubular Marker Posts Left-in-Place	EACH	84.000	42.000	42.000	
1470	SPV.0060	Special 03. Moving Temporary Traffic Signal	EACH	2.000	2.000		
1480	SPV.0060	Special 04. Asphaltic Surface Patching Mobilization	EACH	4.000		4.000	
1490	SPV.0090	Special 01. Construction Staking Cable Barrier Type I	LF	7,036.000			7,036.000
1500	SPV.0180	Special 01. Cable Barrier Mow Strip Asphalt	SY	2,352.000			2,352.000

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AGGREGATE ITEMS

PROJECT ID	CATEGORY	STAGE	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON
1161-02-61	1000	STAGE 1	IH 39	460	2,550	2,200
			NE LOOP CROSSOVER		450	800
			RAMP C		567	
			STH 16 WB	18	342	
		STAGE 2	IH 39 NB	4	34	
		STAGE 3	NE LOOP CROSSOVER	50		
		STAGE 4	RAMP C		11	
1161-02-61 Total				**531**	**3,954**	**3,000**
1161-02-63	1000	STAGE 1	IH 39		2,400	2,100
		STAGE 3	IH 39	225		
1161-02-63 Total				**225**	**2,400**	**2,100**
PROJECT TOTAL				**756**	**6,354**	**5,100**

HMA ITEMS

PROJECT ID	CATEGORY	STAGE	LOCATION	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS LF	SPV.0060.04 ASPHALTIC SURFACE PATCHING MOBILIZATION EACH
1161-02-61	1000	STAGE 1	IH 39	191	800					
			NE LOOP CROSSOVER					250		
			RAMP C	44		161				
			STH 16 WB	56		205				
		STAGE 2	IH 39 NB	5	22					
		STAGE 3	NE LOOP CROSSOVER						725	
1161-02-61 Total				**296**	**822**	**366**		**250**	**725**	
1161-02-63	1000	STAGE 1	IH 39	191	800					
		STAGE 2	UNDISTRIBUTED	5			20			4
1161-02-63 Total				**196**	**800**		**20**			**4**
PROJECT TOTAL				**492**	**1,622**	**366**	**20**	**250**	**725**	**4**

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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CULVERT ITEMS

PROJECT ID	CATEGORY	STAGE	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH	520.2018 CULVERT PIPE TEMPORARY 18-INCH LF	521.0118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH	521.2005.S SURFACE DRAIN PIPE CORRUGATED METAL SLOTTED 18-INCH LF
1161-02-61	1000	STAGE 1	IH 39				803	2	260
			NE LOOP CROSSOVER		2	430			
			STH 16 WB	2					
		STAGE 2	IH 39 NB	2					
		STAGE 3	NE LOOP CROSSOVER	1					
		STAGE 4	IH 39 NB	1					
1161-02-61 Total				**6**	**2**	**430**	**803**	**2**	**260**
1161-02-63	1000	STAGE 1	IH 39	1			385	1	260
1161-02-63 Total				**1**			**385**	**1**	**260**
PROJECT TOTAL				**7**	**2**	**430**	**1,188**	**3**	**520**

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SAWING ITEMS

PROJECT ID	CATEGORY	STAGE	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
1161-02-61	1000	STAGE 1	IH 39	20	
			NE LOOP CROSSOVER	20	
			RAMP C		51
		STAGE 3	NE LOOP CROSSOVER	725	
		STAGE 4	IH 39 NB	279	
			RAMP C	91	
1161-02-61 Total				**1,135**	**51**
1161-02-63	1000	STAGE 1	IH 39	20	
			IH 39 NB	106	
1161-02-63 Total				**126**	
PROJECT TOTAL				**1,261**	**51**

CURB & GUTTER

PROJECT ID	CATEGORY	STAGE	LOCATION	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF
1161-02-61	1000	STAGE 1	RAMP C	936	53
		STAGE 4	RAMP C	87	37
1161-02-61 Total				**1,023**	**91**
PROJECT TOTAL				**1,023**	**91**

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

FLEXIBLE TUBULAR MARKERS

PROJECT ID	CATEGORY	STAGE	LOCATION	SPV.0060.01 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES LEFT-IN-PLACE EACH	SPV.0060.02 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS LEFT-IN-PLACE EACH
1161-02-61	1000	STAGE 4	IH 39	42	42
1161-02-61 Total				**42**	**42**
1161-02-63	1000	STAGE 4	IH 39	42	42
1161-02-63 Total				**42**	**42**
PROJECT TOTAL				**84**	**84**

CONCRETE ITEMS

PROJECT ID	CATEGORY	STAGE	LOCATION	204.0100 REMOVING PAVEMENT SY	204.0105 REMOVING PAVEMENT BUTT JOINTS SY	416.0610 DRILLED TIE BARS EACH	416.1010 CONCRETE SURFACE DRAINS CY	509.2600 CONCRETE MASONRY OVERLAY APPROACHES CY	602.2400 CONCRETE SAFETY ISLANDS SF
1161-02-61	1000	STAGE 1	RAMP C	961					1,068
		STAGE 2	IH 39 NB		640	6	8.3	36	
		STAGE 4	RAMP C	57					293
1161-02-61 Total				**1,018**	**640**	**6**	**8.3**	**36**	**1,361**
PROJECT TOTAL				**1,018**	**640**	**6**	**8.3**	**36**	**1,361**

EROSION CONTROL ITEMS

PROJECT ID	CATEGORY	LOCATION	606.0200 RIPRAP MEDIUM CY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2002 EROSION MAT CLASS I TYPE A SY	628.7005 INLET PROTECTION TYPE A EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7560 TRACKING PADS EACH	645.0120 GEOTEXTILE FABRIC TYPE HR SY
1161-02-61	1000	IH 39									2		
		NE LOOP CROSSOVER									2		
		IH 39 NB	2	256	256	5	5	1,599	3	75			54
		RAMP C		357	357			2,698	3	150			
		UNDISTRIBUTED		200	200			500	3	75			
1161-02-61 Total			**2**	**813**	**813**	**5**	**5**	**4,797**	**9**	**300**	**4**		**54**
1161-02-63	1000	IH 39									2		
		IH 39 NB				5	5	2,662	4	225		1	
		UNDISTRIBUTED		100	100			300	3	75			
1161-02-63 Total				**100**	**100**	**5**	**5**	**2,962**	**7**	**300**	**2**	**1**	
1161-02-66	1000	IH 39 NB				5	5	24,434	4	300			
		UNDISTRIBUTED		200	200			5,000	3	75			
1161-02-66 Total				**200**	**200**	**5**	**5**	**29,434**	**7**	**375**			
PROJECT TOTAL			**2**	**1,113**	**1,113**	**15**	**15**	**37,192**	**23**	**975**	**6**	**1**	**54**

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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PROJECT ID	CATEGORY	STAGE	LOCATION	646.0600 REMOVING PAVEMENT MARKINGS LF
1161-02-61	1000	STAGE 1	STH 16 WB	682
		STAGE 2	IH 39	2,200
			NE LOOP CROSSOVER	500
			IH 39 NB	15,901
		STAGE 3	IH 39 NB	15,964
1161-02-61 Total				**35,247**
1161-02-63	1000	STAGE 2	IH 39	1,900
			IH 39 NB	13,813
		STAGE 3	IH 39 NB	13,810
1161-02-63 Total				**29,523**
PROJECT TOTAL				**64,769**

CABLE BARRIER ITEMS

PROJECT ID	CATEGORY	STAGE	LOCATION	613.1100.S CABLE BARRIER TYPE 1 LF	613.1200.S CABLE BARRIER END TERMINAL TYPE 1 EACH	SPV.0180.01 CABLE BARRIER MOW STRIP ASPHALT SY
1161-02-66	1000	STAGE 3	IH 39 NB	7,036	6	2,352
1161-02-66 Total				**7,036**	**6**	**2,352**
PROJECT TOTAL				**7,036**	**6**	**2,352**

BEAM GUARD ITEMS

PROJECT ID	CATEGORY	STAGE	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.0305 STEEL PLATE BEAM GUARD CLASS A LF	614.0380 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL TEMPORARY EACH
1161-02-63	1000	STAGE 1	IH 39 NB	150	150	2
1161-02-63 Total				**150**	**150**	**2**
PROJECT TOTAL				**150**	**150**	**2**

PAVEMENT MARKINGS

				646.0106 PAVEMENT MARKING EPOXY 4-INCH		647.0456 PAVEMENT MARKING CURB EPOXY	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH
PROJECT ID	CATEGORY	STAGE	LOCATION	White LF	Yellow LF	Yellow LF	LF
1161-02-61	1000	STAGE 2	IH 39 NB	3,178	12,723		
		STAGE 3	IH 39 NB	3,195	12,769		
		STAGE 4	IH 39		2,200		
			NE LOOP CROSSOVER		500		
			RAMP C	487	339	23	44
1161-02-61 Total				**6,860**	**28,531**	**23**	**44**
1161-02-63	1000	STAGE 2	IH 39 NB	2,763	11,050		
		STAGE 3	IH 39 NB	2,762	11,048		
		STAGE 4	IH 39		1,900		
1161-02-63 Total				**5,525**	**23,998**		
PROJECT TOTAL				**12,385**	**52,529**	**23**	**44**

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

TEMPORARY PAVEMENT MARKINGS

PROJECT ID	CATEGORY	STAGE	LOCATION	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH White LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH Yellow LF	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH White LF	649.1100 TEMPORARY PAVEMENT MARKING STOP LINE 18-INCH White LF
1161-02-61	1000	STAGE 1	IH 39		23,500		
			RAMP C	562	539		38
			STH 16 WB				117
		STAGE 2	IH 39	10,900	29,100	200	
		STAGE 3	IH 39	11,500	26,800		
		STAGE 4	IH 39		23,500		
			IH 39 NB		1,680		
1161-02-61 Total				**22,962**	**105,119**	**200**	**156**
1161-02-63	1000	STAGE 1	IH 39		14,100		
		STAGE 2	IH 39	7,150	14,150		
		STAGE 3	IH 39	6,400	13,950		
		STAGE 4	IH 39		14,100		
1161-02-63 Total				**13,550**	**56,300**		
PROJECT ID TOTAL				**36,512**	**161,419**	**200**	**156**

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LANDSCAPING ITEMS

PROJECT ID	CATEGORY	LOCATION	625.0500 SALVAGED TOPSOIL SY	629.0205 FERTILIZER TYPE A CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB
1161-02-61	1000	IH 39 NB	1,599	1.0	29	43
		RAMP C	2,698	1.7	49	73
1161-02-61 Total			**4,297**	**2.7**	**78**	**116**
1161-02-63	1000	IH 39 NB	2,662	1.7	48	72
1161-02-63 Total			**2,662**	**1.7**	**48**	**72**
1161-02-66	1000	IH 39 NB	12,217	7.7	220	330
1161-02-66 Total			**12,217**	**7.7**	**220**	**330**
PROJECT TOTAL			**19,175**	**12.1**	**345**	**518**

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

TRAFFIC CONTROL ITEMS

PROJECT ID	CATEGORY	STAGE	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY
1161-02-61	1000	STAGE 1	IH 39				17,149	1,206	81	81	2,412	1,008	134
			IH 39 NB										
			STH 16 WB				7,599	201			402	2,078	402
		STAGE 2	IH 39	400	400	1	10,247	1,464	289	289	2,928	1,595	122
			RAMP C										
			STH 16 WB										
		STAGE 2-SUMMER	IH 39				23,548	1,656	81	81	3,312	1,385	184
		STAGE 3	IH 39	400	400	1	10,061	1,040	236	236	2,080	1,742	104
		STAGE 4	IH 39				2,560	180			360	150	20
			IH 39 NB				888	20			40	336	40
1161-02-61 Total				**800**	**800**	**2**	**72,052**	**5,767**	**687**	**687**	**11,534**	**8,294**	**1,006**
1161-02-63	1000	STAGE 1	IH 39				10,894	670	60	60	1,340	885	134
		STAGE 2	IH 39	400	400	1	5,513	671	143	143	1,342	1,281	122
		STAGE 2-SUMMER	IH 39				14,959	920	60	60	1,840	1,215	184
		STAGE 3	IH 39	400	400	1	4,378	572	127	127	1,144	1,421	104
		STAGE 4	IH 39				1,626	100			200	132	20
1161-02-63 Total				**800**	**800**	**2**	**37,370**	**2,933**	**390**	**390**	**5,866**	**4,934**	**564**
PROJECT TOTAL				**1,600**	**1,600**	**4**	**109,422**	**8,700**	**1,077**	**1,077**	**17,400**	**13,228**	**1,570**

TRAFFIC CONTROL ITEMS

PROJECT ID	CATEGORY	STAGE	LOCATION	643.0900 TRAFFIC CONTROL SIGNS DAY	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	643.1051 TRAFFIC CONTROL SIGNS PCMS WITH CELLULAR COMMUNICATIONS DAY	643.2000.01 TRAFFIC CONTROL DETOUR 1161-02-61 EACH	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAY	SPV.0060.03 MOVING TEMPORARY TRAFFIC SIGNAL EACH
1161-02-61	1000	STAGE 1	IH 39	1,474					67			
			IH 39 NB		1	1				1	3,283	
			STH 16 WB	2,278								
		STAGE 2	IH 39	2,196	4		88		61			
			RAMP C	23								
			STH 16 WB									2
		STAGE 2-SUMMER	IH 39	2,024					92			
		STAGE 3	IH 39	2,208		20		52	52		2,616	
		STAGE 4	IH 39	220					10			
			IH 39 NB	180								
1161-02-61 Total				**10,603**	**5**	**21**	**88**	**52**	**282**	**1**	**5,899**	**2**
1161-02-63	1000	STAGE 1	IH 39	938					67			
		STAGE 2	IH 39	976					61			
		STAGE 2-SUMMER	IH 39	1,288					92			
		STAGE 3	IH 39	728					52			
		STAGE 4	IH 39	140					10			
1161-02-63 Total				**4,070**					**282**			
PROJECT TOTAL				**14,673**	**5**	**21**	**88**	**52**	**564**	**1**	**5,899**	**2**

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

LOCATION	624.0100 WATER MGAL
PROJECT 1161-02-61	
UNDISTRIBUTED	24
PROJECT 1161-02-61 TOTAL	**24**
PROJECT 1161-02-63	
UNDISTRIBUTED	16
PROJECT 1161-02-63 TOTAL	**16**
PROJECT 1161-02-66	
UNDISTRIBUTED	8
PROJECT 1161-02-66 TOTAL	**8**
PROJECT TOTAL	**48**

REMOVING SIGNS

STATION	OFFSET / LOCATION	SIGN WORDING & PICTORIALS	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
50+50 'C'	MEDIAN	(CHEVRON RIGHT)	1	1
51+45 'C'	LEFT	(CHEVRON RIGHT)	1	1
52+00 'C'	LEFT	(CHEVRON RIGHT)	1	1
52+50 'C'	LEFT	(CHEVRON RIGHT)	1	1
52+55 'C'	LEFT	(RIGHT LANE MERGES)	1	1
289+50 'NB'	RIGHT	EXIT 25 MPH	1	1
267+40 'NB'	LEFT	(NO U-TURN SYMBOL)	2	1
312+30 'NB'	LEFT	(NO U-TURN SYMBOL)	2	1
		TOTAL FOR PROJECT 1161-02-61	**10**	**8**
		PROJECT TOTAL	**10**	**8**

PERMANENT SIGNS

STATION	OFFSET / LOCATION	SIGN FACES	SIGN WORDING & PICTORIALS	CODE	SIGN WIDTH (IN)	SIGN HEIGHT (IN)	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	634.0616 POSTS WOOD 4x6-IN x 16-FT EACH	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS EACH
PROJECT 1161-02-61												
52+40 'C'	RIGHT	N	STOP	R1-1	30	30	5.18			1		
49+00 'C'	RIGHT	N	(STOP AHEAD)	W3-1	36	36		9.00		1		
52+40 'C'	RIGHT	N	ONE WAY	R6-1-R	54	18	6.75			1		
52+60 'C'	MEDIAN	S	(DIVIDED HIGHWAY RIGHT)	R4-7	24	30	5.00			1		
52+60 'C'	RIGHT	E	WEST 16/WEST 127	J3-2	48	57	19.00			1		
52+60 'C'	LEFT	W	DO NOT ENTER	R5-1	36	36	9.00			1		
745+80 'WB'	LEFT	E	WEST 16/WEST 127	J3-2					1			
748+57 'WB'	RIGHT	N	ONE WAY	R6-2-R	30	36	7.50			1		
747+25 'WB'	LEFT	E	127	M1-56-A					1			
747+25 'WB'	LEFT	E	JCT	M2-1					1			
748+20 'WB'	RIGHT	E	DO NOT ENTER	R5-1					1			
749+40 'WB'	RIGHT	W	YIELD	R1-2					1			
289+50 'NB'	RIGHT	S	EXIT 25 MPH	W13-2A	48	90		30.00				
359+75 'NB'	LEFT	N/S	(NO U-TURN SYMBOL)	R3-4B					2	1	2	2
PROJECT 1161-02-63												
193+10 'NB'	LEFT	N/S	(NO U-TURN SYMBOL)	R3-4B					2	1		
				TOTAL FOR PROJECT 1161-02-61			**52**	**39**	**7**	**8**	**2**	**2**
				TOTAL FOR PROJECT 1161-02-63					**2**	**1**		
				PROJECT TOTAL			**52**	**39**	**9**	**9**	**2**	**2**

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

3

CONSTRUCTION STAKING

PROJECT ID	CATEGORY	STAGE	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	SPV.0090.01 CONSTRUCTION STAKING CABLE BARRIER TYPE 1 LF
1161-02-61	1000	STAGE 1	IH 39	1,065	1,065	3	1,065	
			NE LOOP CROSSOVER	715	715	1	715	
			RAMP C	350	350		350	
		STAGE 3	NE LOOP CROSSOVER		715			
1161-02-61 Total				**2,130**	**2,845**	**4**	**2,130**	
1161-02-63	1000	STAGE 1	IH 39	1,135	1,135	2	1,135	
1161-02-63 Total				**1,135**	**1,135**	**2**	**1,135**	
1161-02-66	1000	STAGE 3	IH 39 NB				7,036	7,036
1161-02-66 Total							**7,036**	**7,036**
PROJECT TOTAL				**3,265**	**3,980**	**6**	**10,301**	**7,036**

LUMP SUM AND EACH BID ITEMS

PROJECT	CATEGORY	ITEM NUMBER	DESCRIPTION	UNIT	TOTAL QUANTITY
1161-02-61	0010	213.0100.01	FINISHING ROADWAY 1161-02-61	EACH	1
1161-02-63	0010	213.0100.02	FINISHING ROADWAY 1161-02-63	EACH	1
1161-02-66	0010	213.0100.03	FINISHING ROADWAY 1161-02-66	EACH	1
1161-02-61	0010	618.0100.01	MAINTENANCE AND REPAIR OF HAUL ROADS 1161-02-61	EACH	1
1161-02-63	0010	618.0100.02	MAINTENANCE AND REPAIR OF HAUL ROADS 1161-02-63	EACH	1
1161-02-66	0010	618.0100.03	MAINTENANCE AND REPAIR OF HAUL ROADS 1161-02-66	EACH	1
1161-02-61	0010	643.0200.S.01	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE 1161-02-61	DAY	270
1161-02-63	0010	643.0200.S.02	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE 1161-02-63	DAY	270
1161-02-66	0010	643.0200.S.03	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE 1161-02-66	DAY	62
1161-02-61	0010	650.6500.01	CONSTRUCTION STAKING STRUCTURE LAYOUT B-11-58	LS	1
1161-02-61	0010	650.6500.02	CONSTRUCTION STAKING STRUCTURE LAYOUT B-11-59	LS	1
1161-02-63	0010	650.6500.03	CONSTRUCTION STAKING STRUCTURE LAYOUT B-11-55	LS	1
1161-02-63	0010	650.6500.04	CONSTRUCTION STAKING STRUCTURE LAYOUT B-11-56	LS	1
1121-02-61	0010	650.9910.01	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 1161-02-61	LS	1
1161-02-63	0010	650.9910.02	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 1161-02-63	LS	1
1161-02-66	0010	650.9910.03	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 1161-02-66	LS	1

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

EARTHWORK

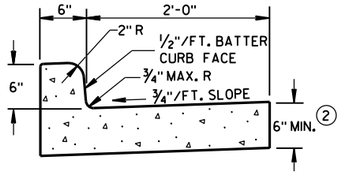
CATEGORY	STAGE	DIVISION	PROJECT	LOCATION	STATION TO STATION	205.0100 Common Excavation (1) Cut (2) (CY)	205.0100 Common Excavation (1) EBS Excavation (3) (CY)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Marsh Excavation (6) (CY)	Reduced Marsh in Fill (7) Factor 0.60	Reduced EBS in Fill (8) Factor 0.80	Expanded Marsh Backfill (9) Factor 1.50	Unexpanded Fill	Expanded Fill (10) Factor 1.25	Mass Ordinate +/- (11)	Waste	208.0100 Borrow (CY)
0010	1	1	1161-02-63	IH 39	184+30NB - 195+14NB	2,493	0	0	2,493	0	0	0	0	165	207	2,286	2,286	
			1161-02-61	IH 39	342+10NB - 351+75NB	3,399	0	0	3,399	0	0	0	0	43	54	3,345	3,345	
			1161-02-66	IH 39 MEDIAN	262+18NB - 359+75NB	4,647	0	0	4,647	0	0	0	0	852	1,065	3,583	3,583	
			1161-02-61	RAMP C INTERSECTION	50+10 C - 52+83 C	1,026	0	0	1,026	1	1	0	2	1030	1,287	-261	0	
			1161-02-61	NE LOOP CROSSOVER	0+00 NEL - 7+17 NEL	548	0	0	548	0	0	0	0	148	185	363	363	
			1161-02-61	UNDISTRIBUTED		250												
	4	1	1161-02-61	NE LOOP CROSSOVER	278+06NB - 285+19NB	743	0	0	743	0	0	0	0	21	26	717	717	
PROJECT 1161-02-61 TOTALS						5,966	0											
PROJECT 1161-02-63 TOTALS						2,493	0											
PROJECT 1161-02-66 TOTALS						4,647	0											
GRAND TOTALS						13,106	0	0	12,856	1	1	0	2	2,259	2,823	10,032	10,294	0
TOTAL COMMON EXCAVATION						13,106												

ALL ITEMS ARE CATEGORY 0010 UNLESS
OTHERWISE NOTED

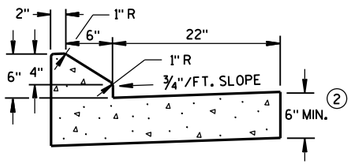
Standard Detail Drawing List

08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09G01-04A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B15-08A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-08B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-08C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B24-08A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B52-01A	CABLE BARRIER TYPE 1 LAYOUT
14B52-01B	CABLE BARRIER TYPE 1 LAYOUT
15A02-09	DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C08-17B	PAVEMENT MARKING (TURN LANES)
15C08-17C	PAVEMENT MARKING (ISLANDS)
15C11-06	FLEXIBLE TUBULAR MARKER POST
15C31-02A	PAVEMENT MARKING (RAMPS AND GORES)
15C35-01A	PAVEMENT MARKING (INTERSECTIONS)
15D06-03	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D10-04	TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT WITH BARRIER
15D11-06	TRAFFIC CONTROL, SINGLE LANE CROSSOVER
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D12-06B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-02	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-03	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS

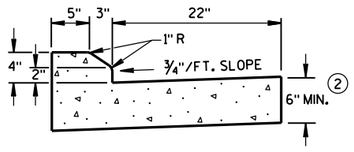
6



TYPES A & D ①

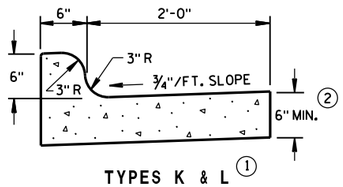


6" SLOPED CURB TYPES G & J ①

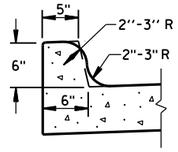


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

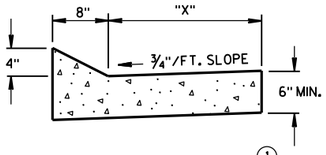


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

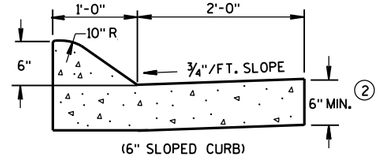
CONCRETE CURB & GUTTER 30"



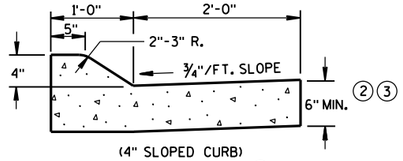
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

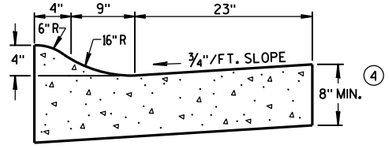


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

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, R AND TBTT.

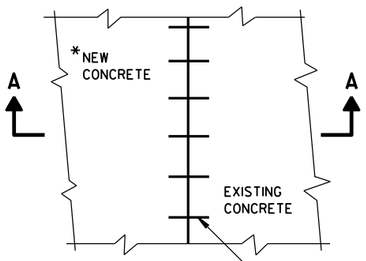
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

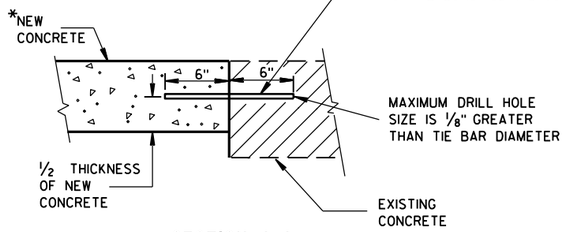
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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



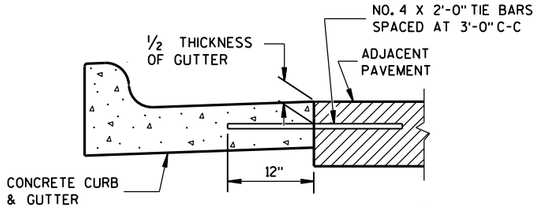
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

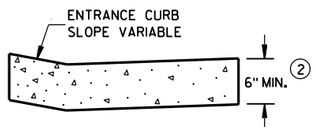


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

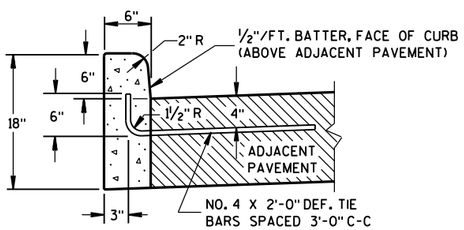


TYPICAL TIE BAR LOCATION ①

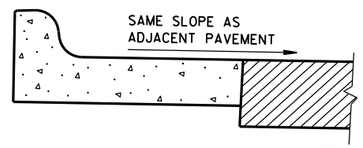


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

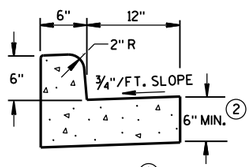


① TYPES A & D



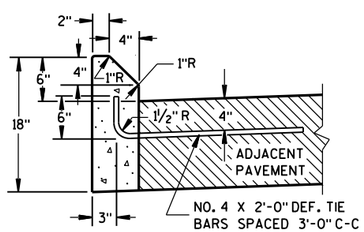
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



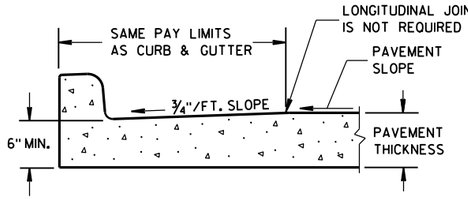
① TYPES A & D

CONCRETE CURB & GUTTER 18"

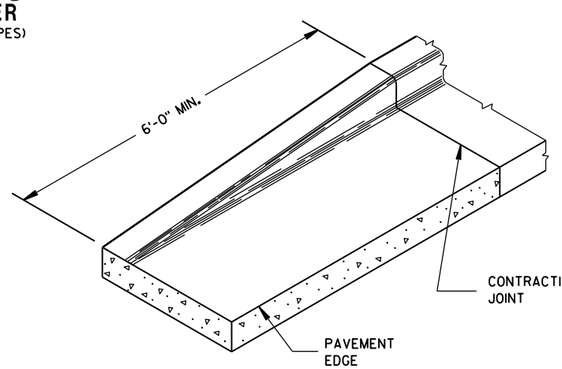


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2016 — DATE

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

FHWA

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S.D.D. 8 D 1-19

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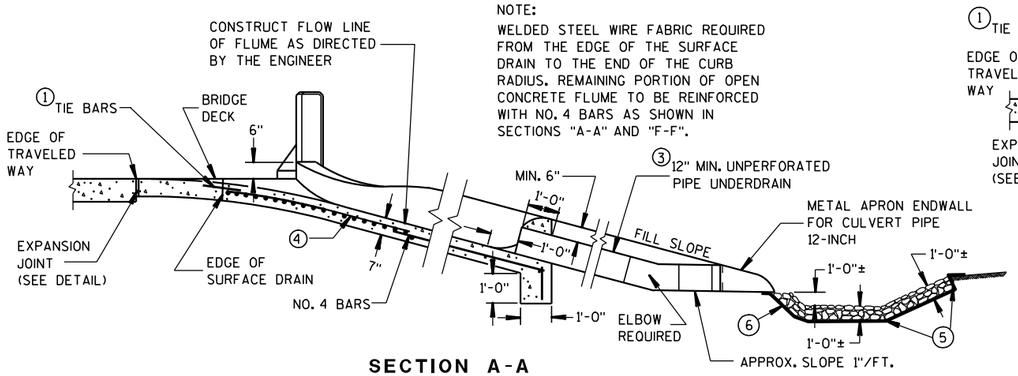
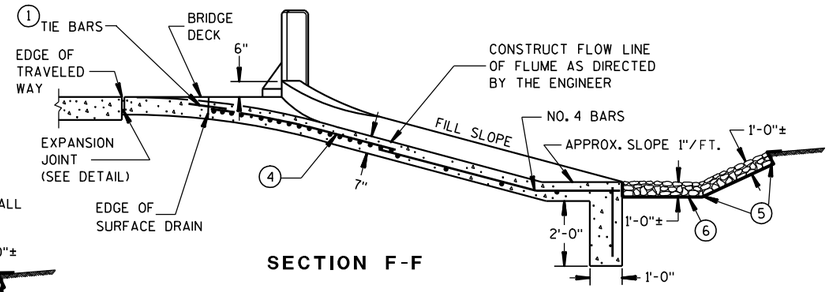
S.D.D. 8 D 1-19



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.

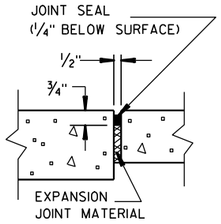
(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

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

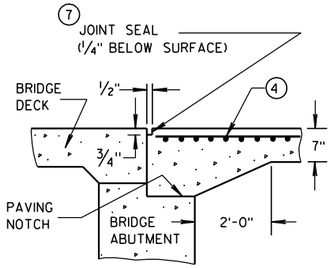
(6) GEOTEXTILE FABRIC, TYPE 'R"

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

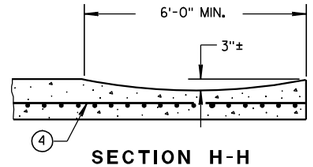
(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



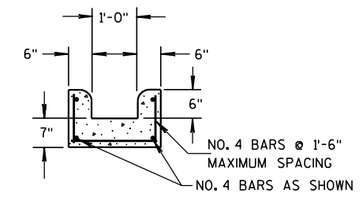
EXPANSION JOINT DETAIL



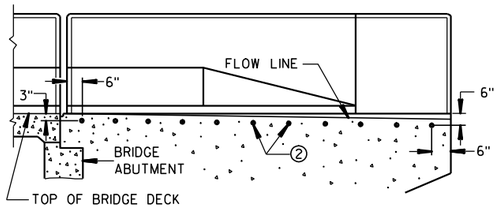
SECTION D-D



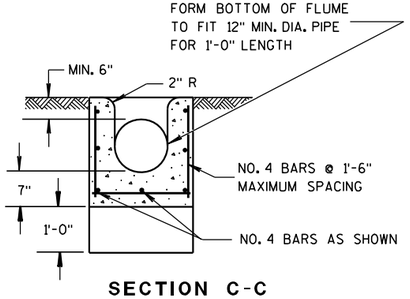
SECTION H-H



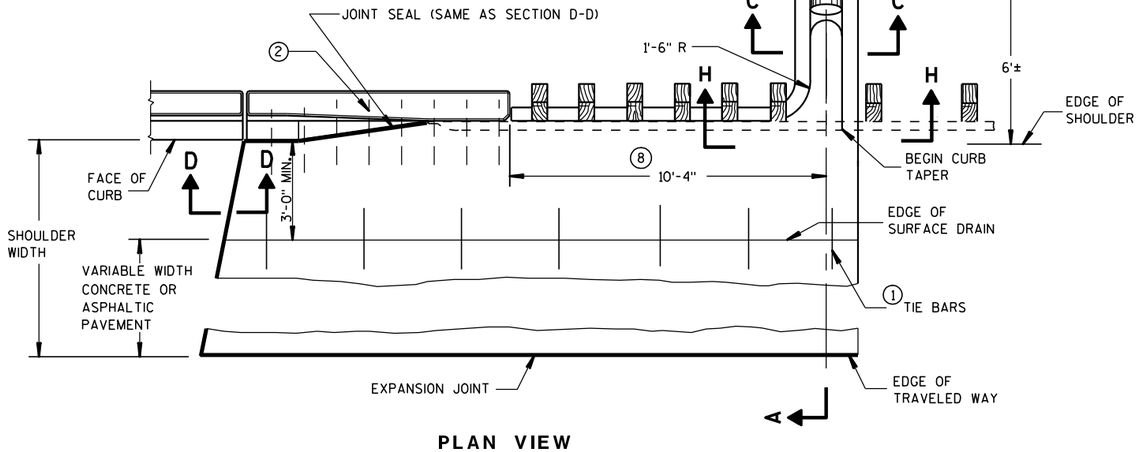
SECTION E-E



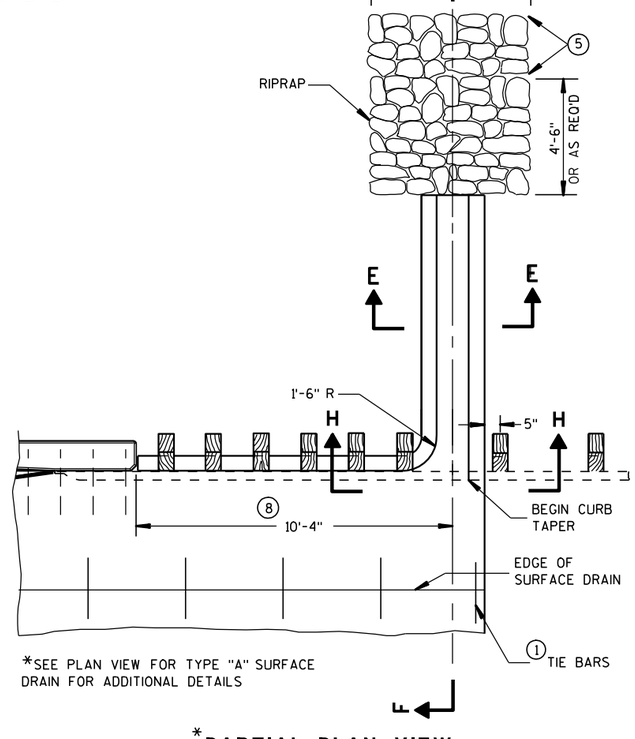
LOCATION OF TIE BARS IN WINGWALL



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
FHWA	84

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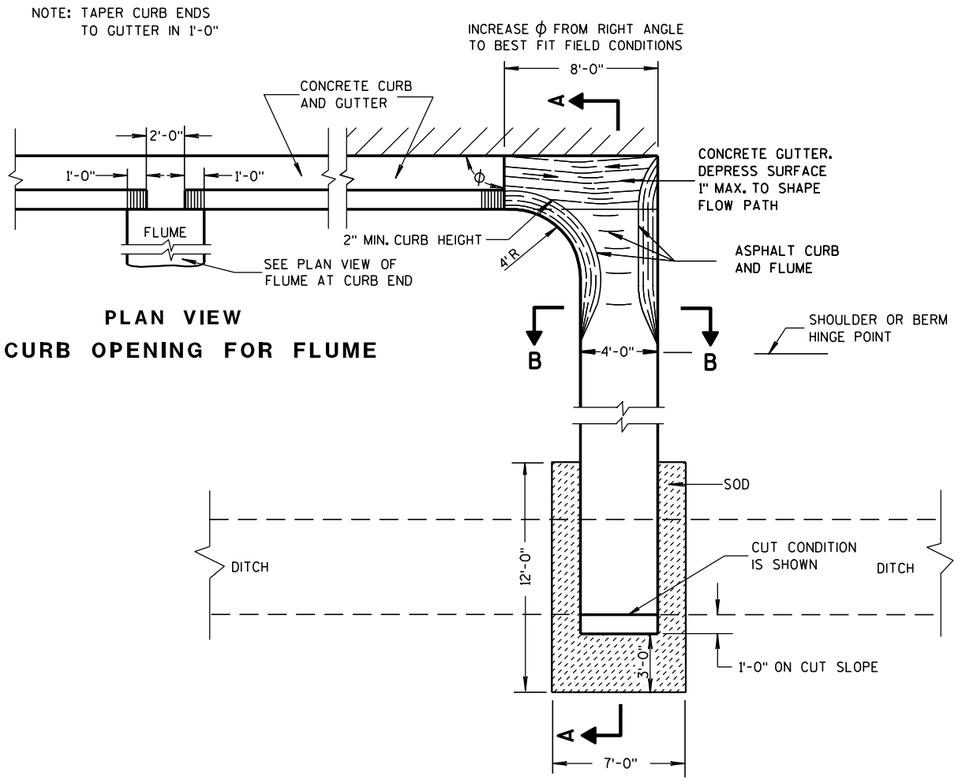
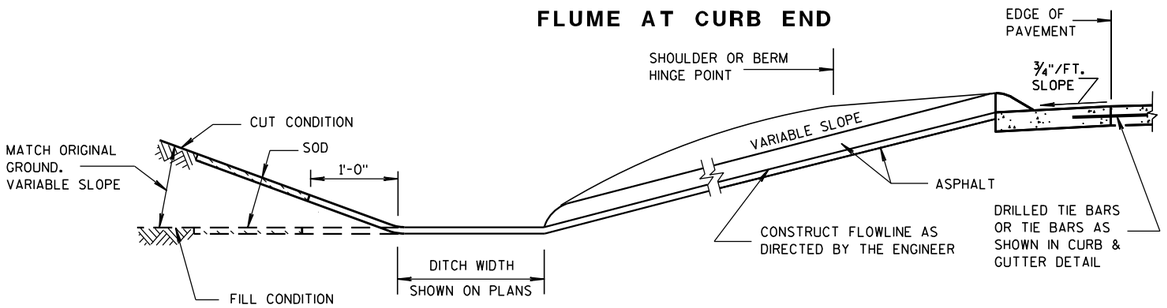
ASPHALTIC FLUME

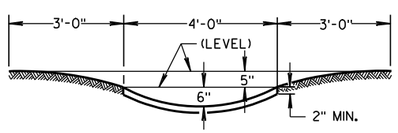


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

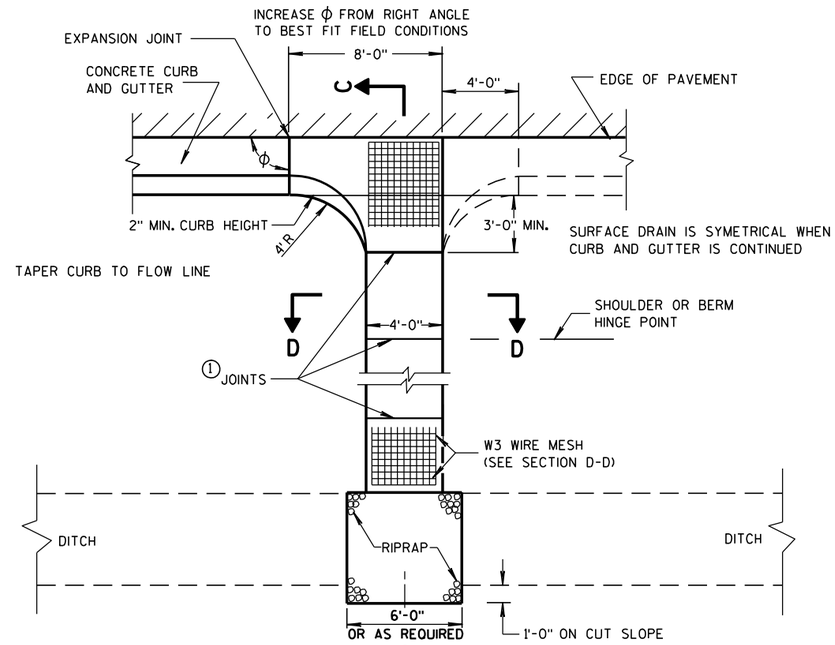
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

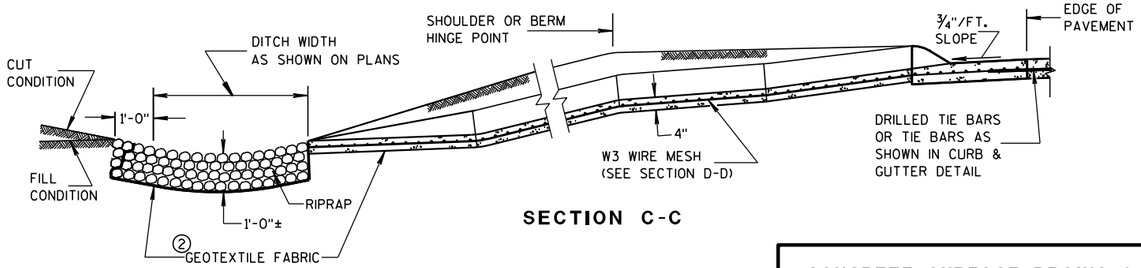
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

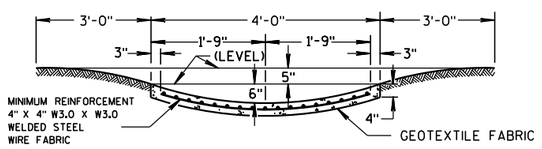
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

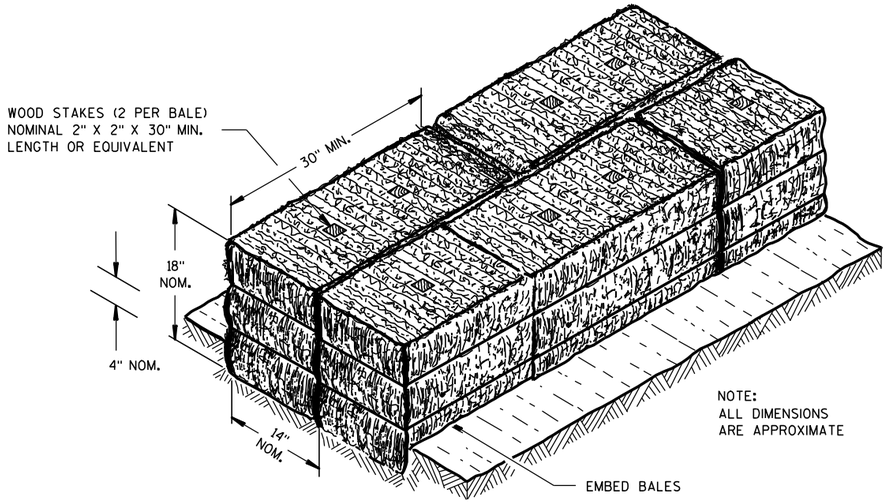
CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

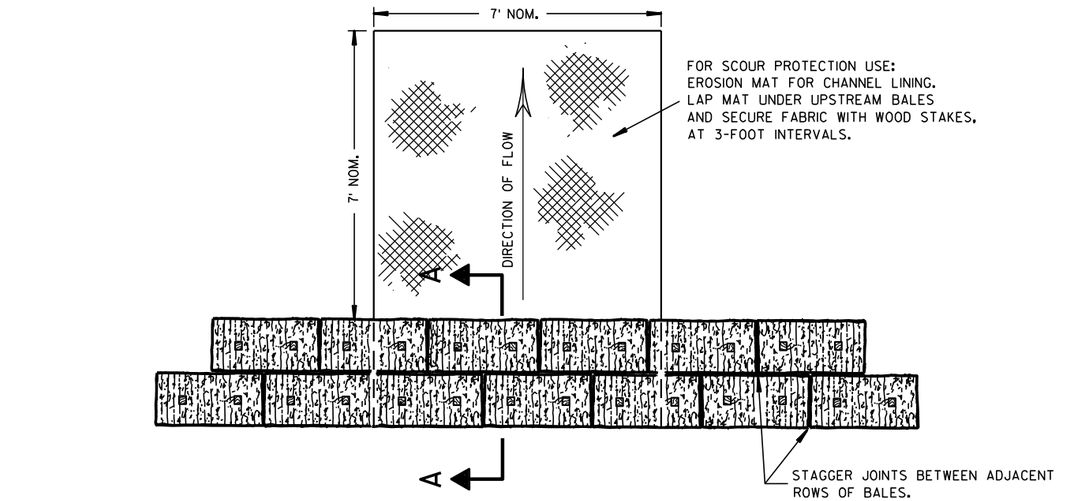
APPROVED

9-4-08 DATE — /S/ Jerry H. Zogg ROADWAY STANDARDS ENGINEER — MENT

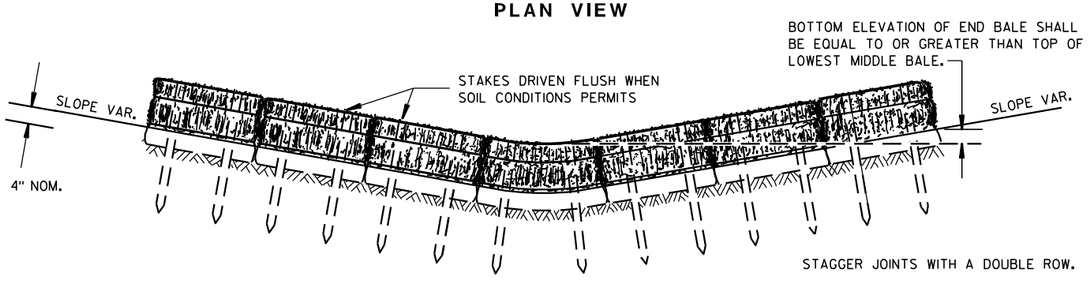
FHWA



SECTION A-A



PLAN VIEW



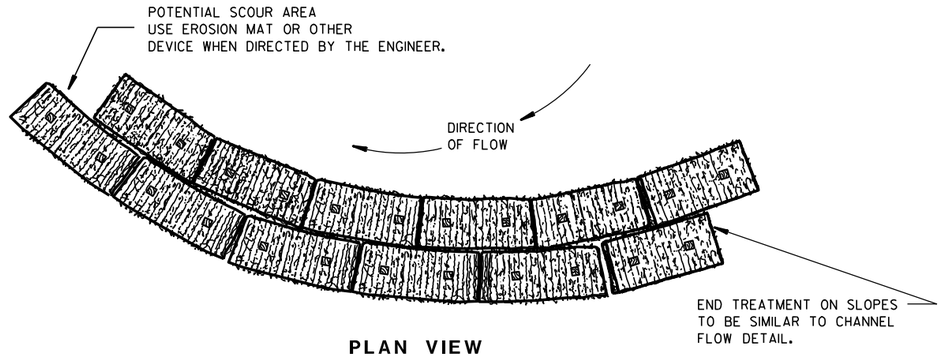
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

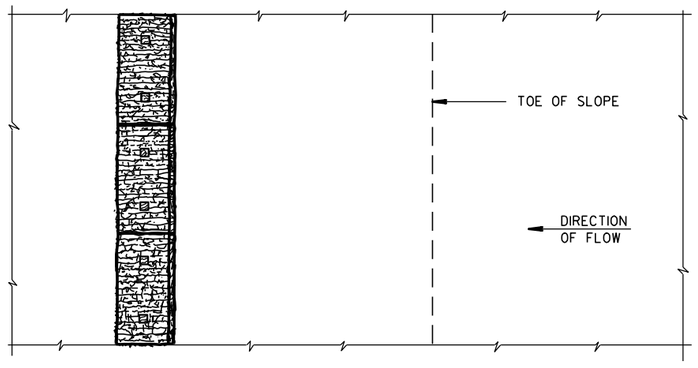
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

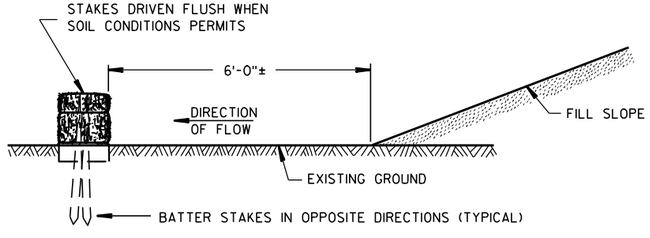


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

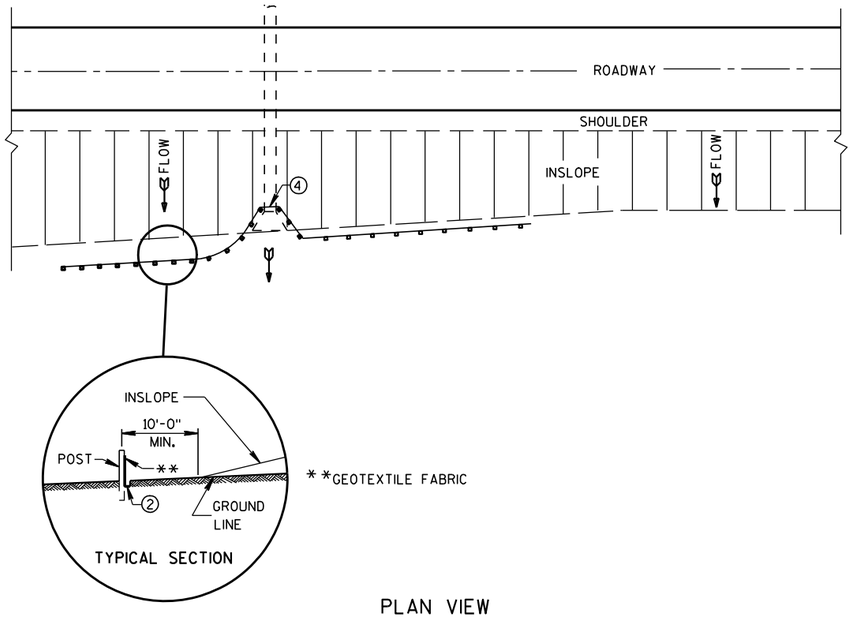
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

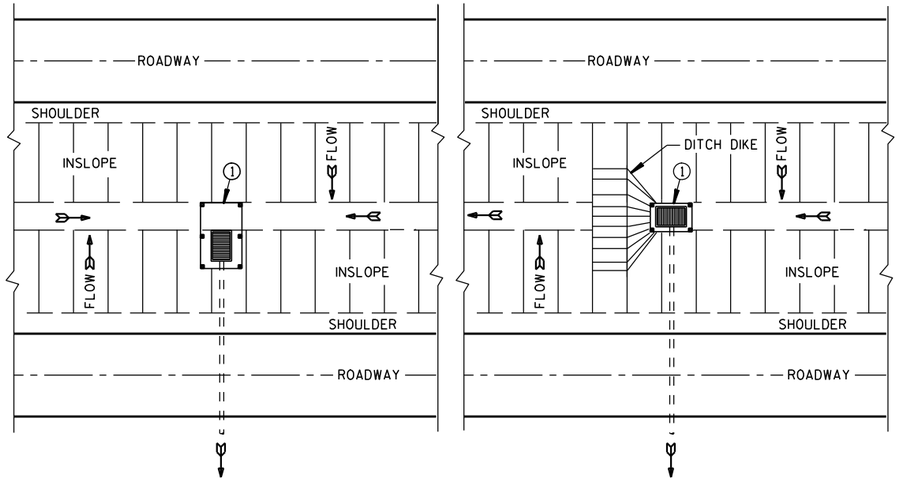
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



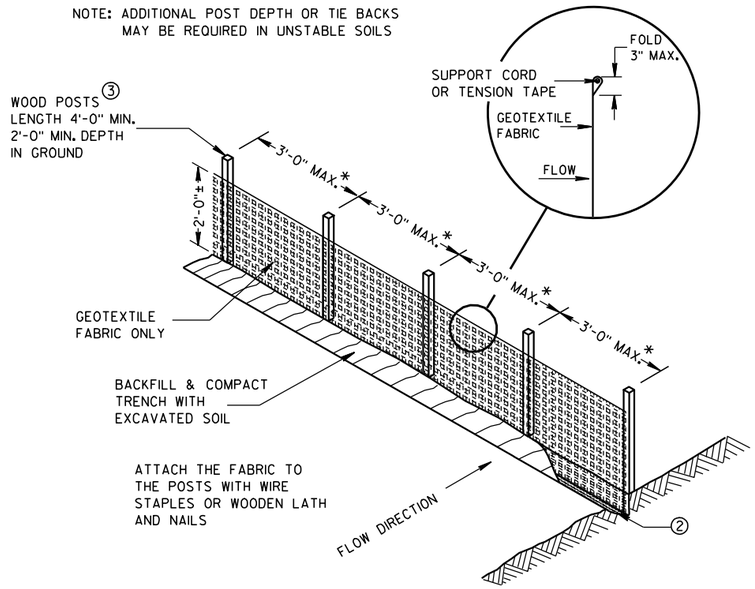
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



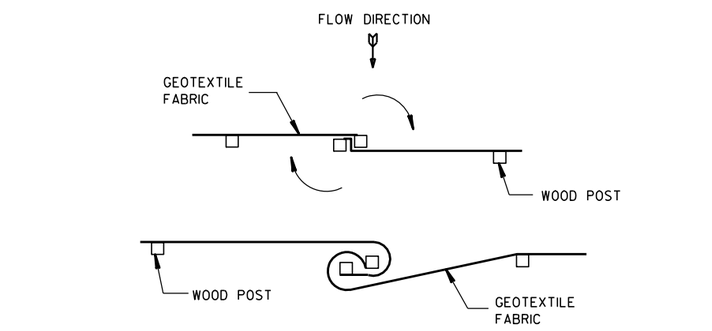
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

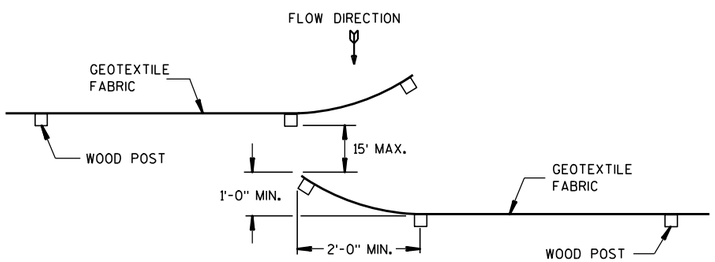


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE



TWIST METHOD



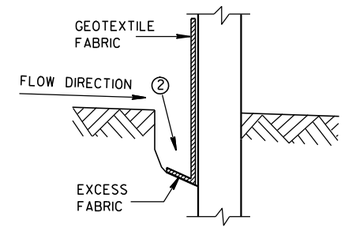
HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5

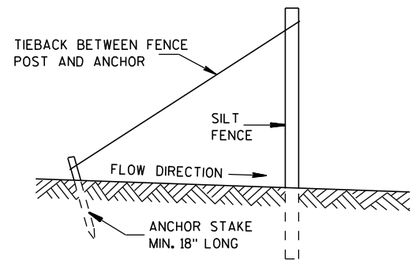
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE 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

S.D.D. 8 E 9-6

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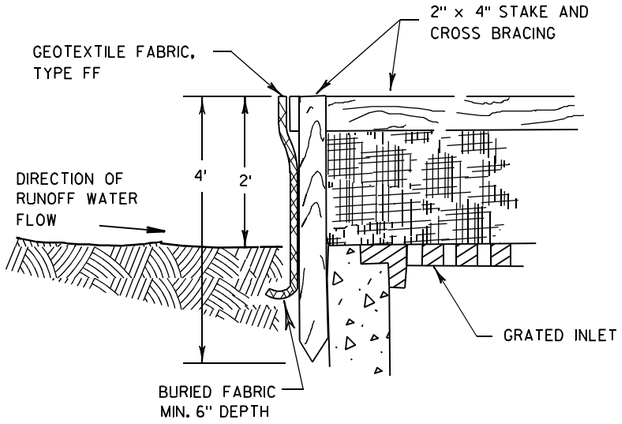
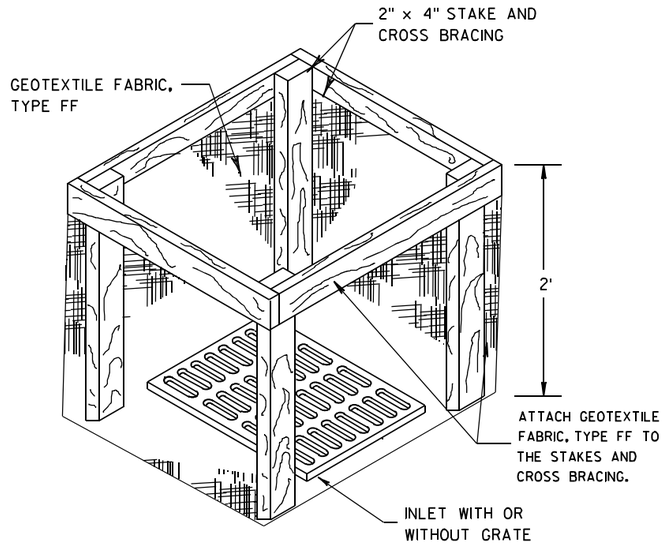
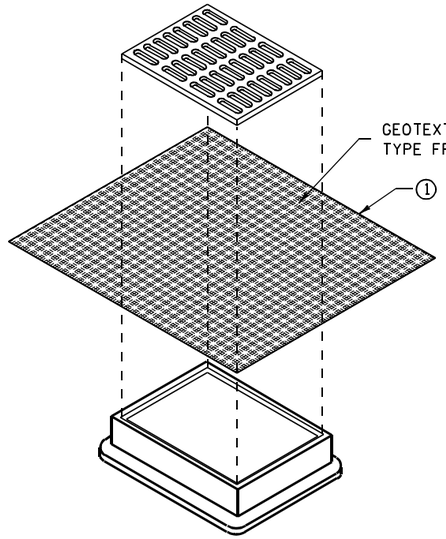


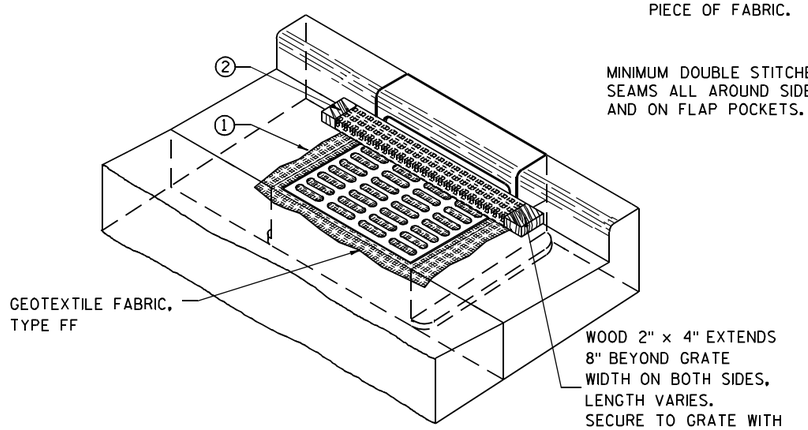


INLET PROTECTION, TYPE A

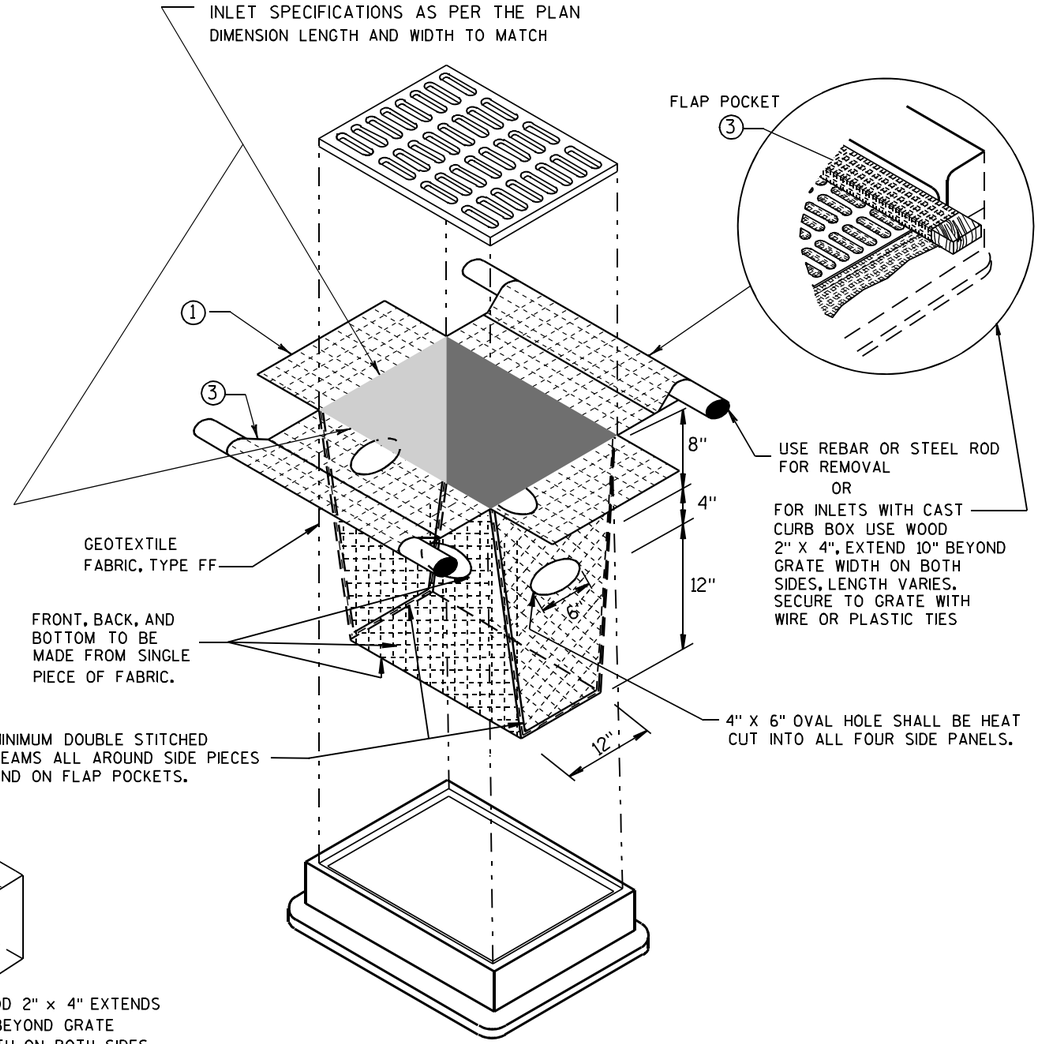


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

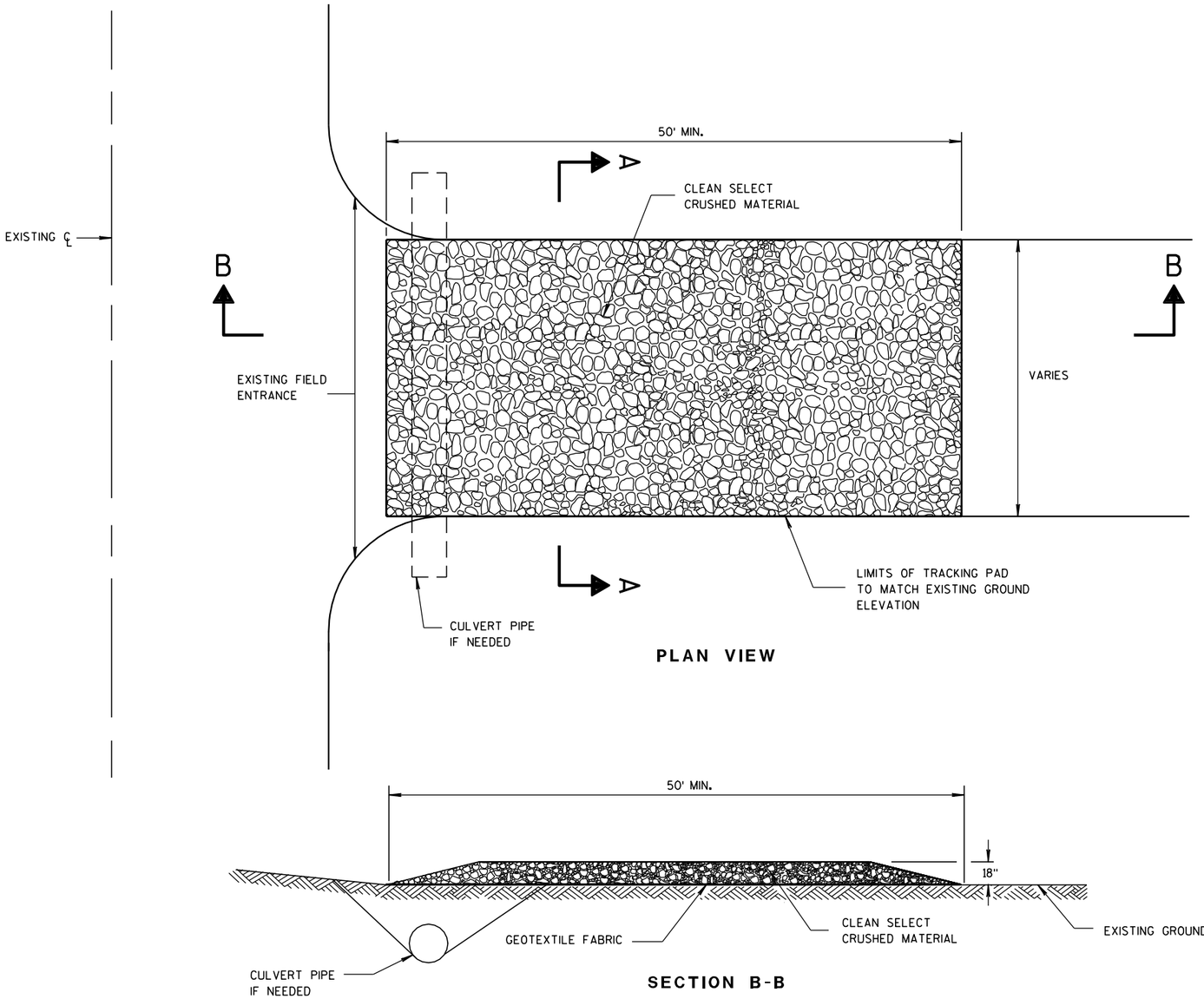
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



PLAN VIEW

SECTION B-B

GENERAL NOTES

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

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

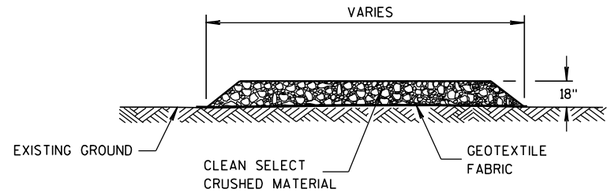
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A-A

TRACKING PAD

6

S.D.D. 8 E 14-1

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

FHWA

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

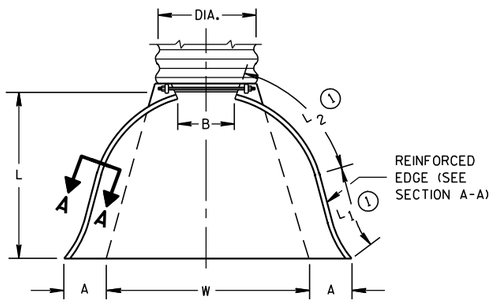
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

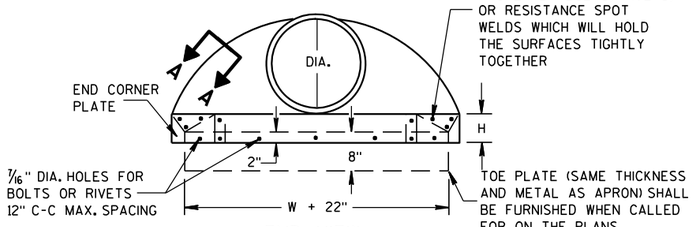
REINFORCED CONCRETE APRON ENDWALLS

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

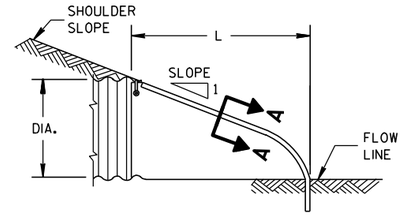
*MINIMUM
**MAXIMUM



PLAN VIEW

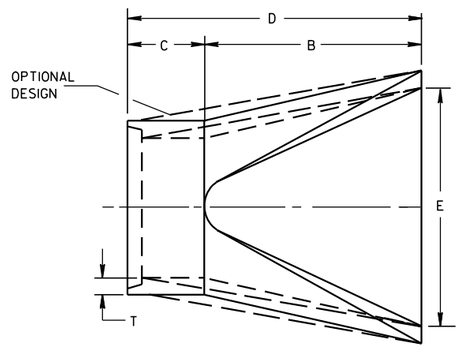


END VIEW

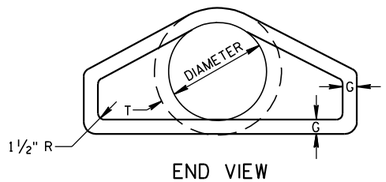


SIDE ELEVATION

METAL ENDWALLS



PLAN



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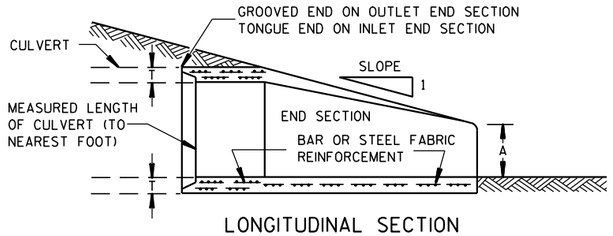
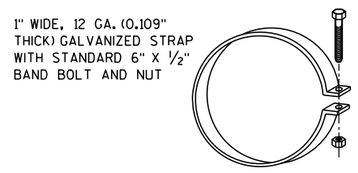


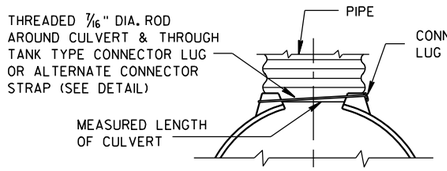
LONGITUDINAL SECTION

CONCRETE ENDWALLS

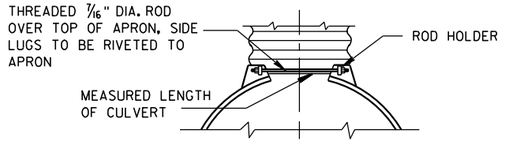


ALTERNATE FOR TYPE 1 CONNECTION

END SECTION CONNECTOR STRAP

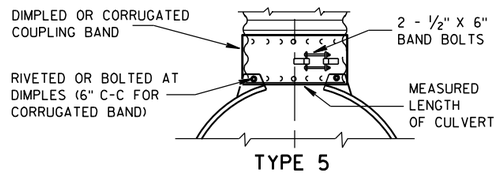


TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE

TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

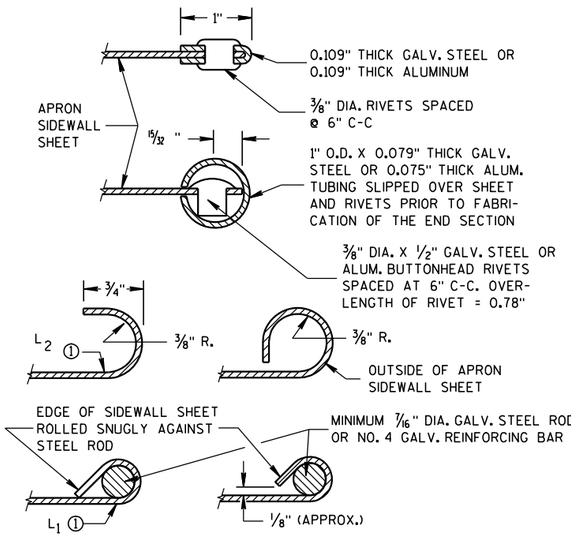
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 F 1-11

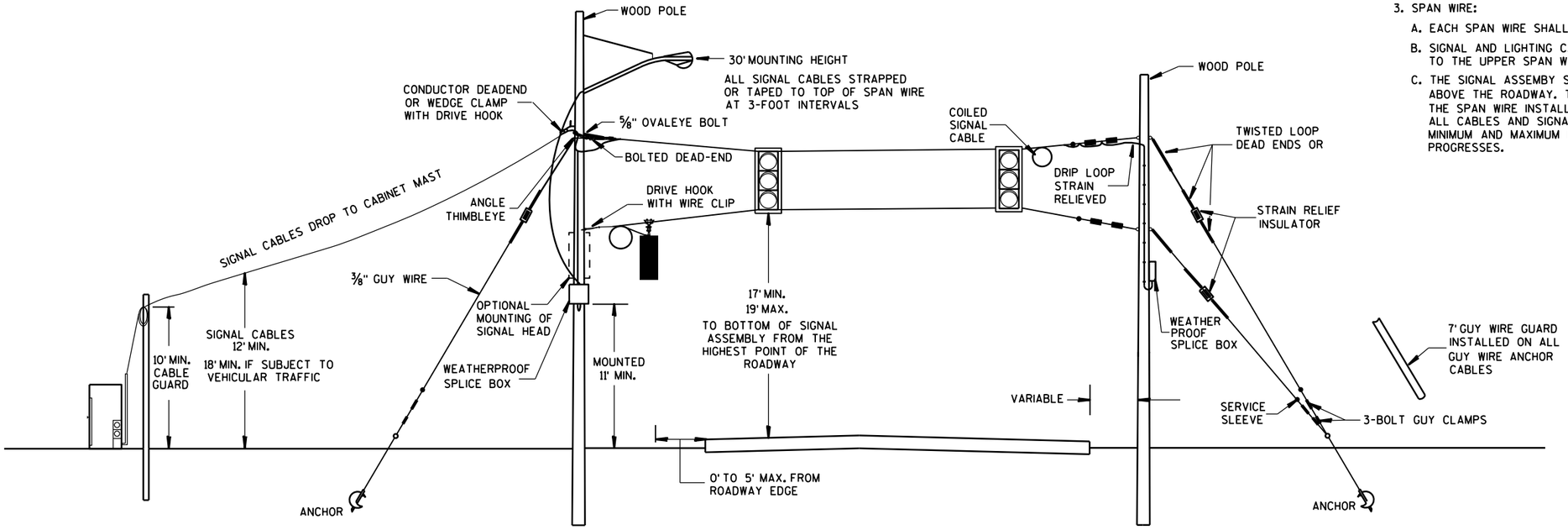
GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.

3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS

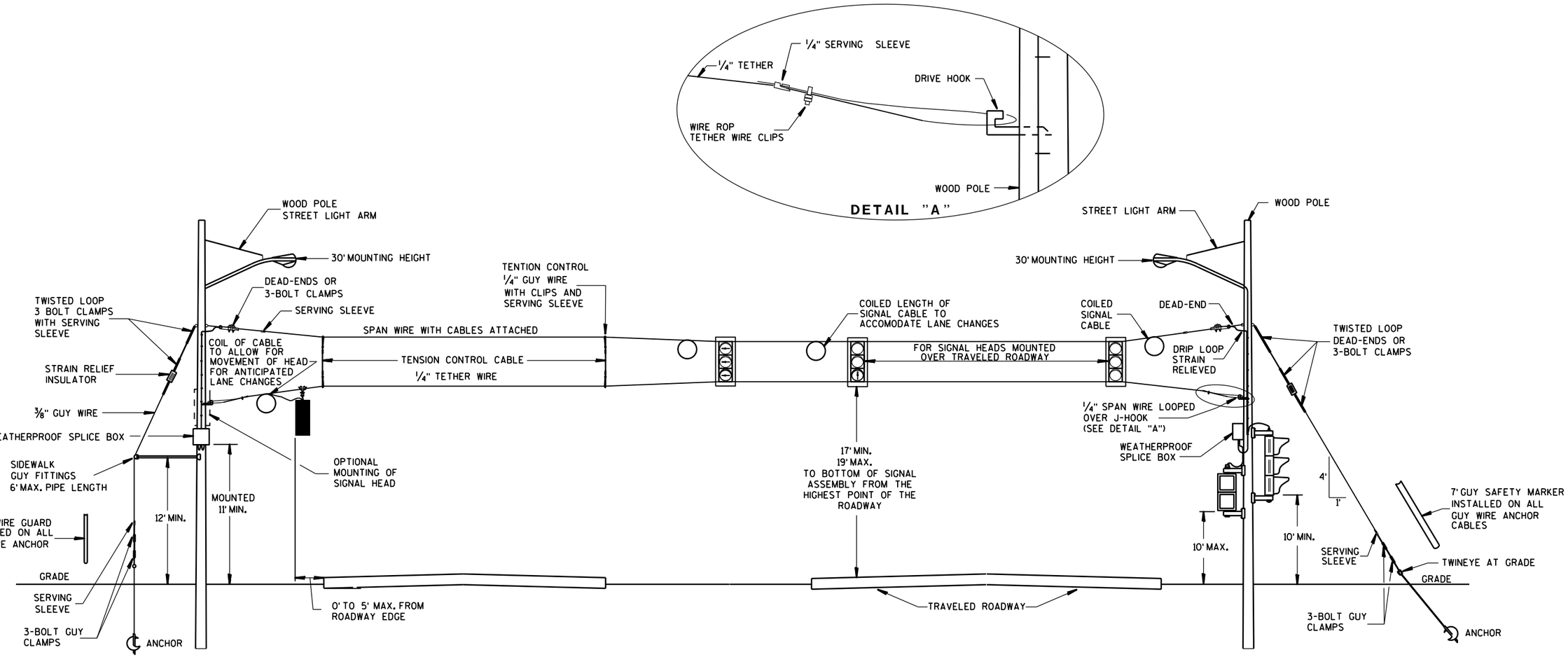
MINIMUM POLE LENGTHS	POLE BURIEL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 9 G 1-4a



GENERAL NOTES

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

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   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

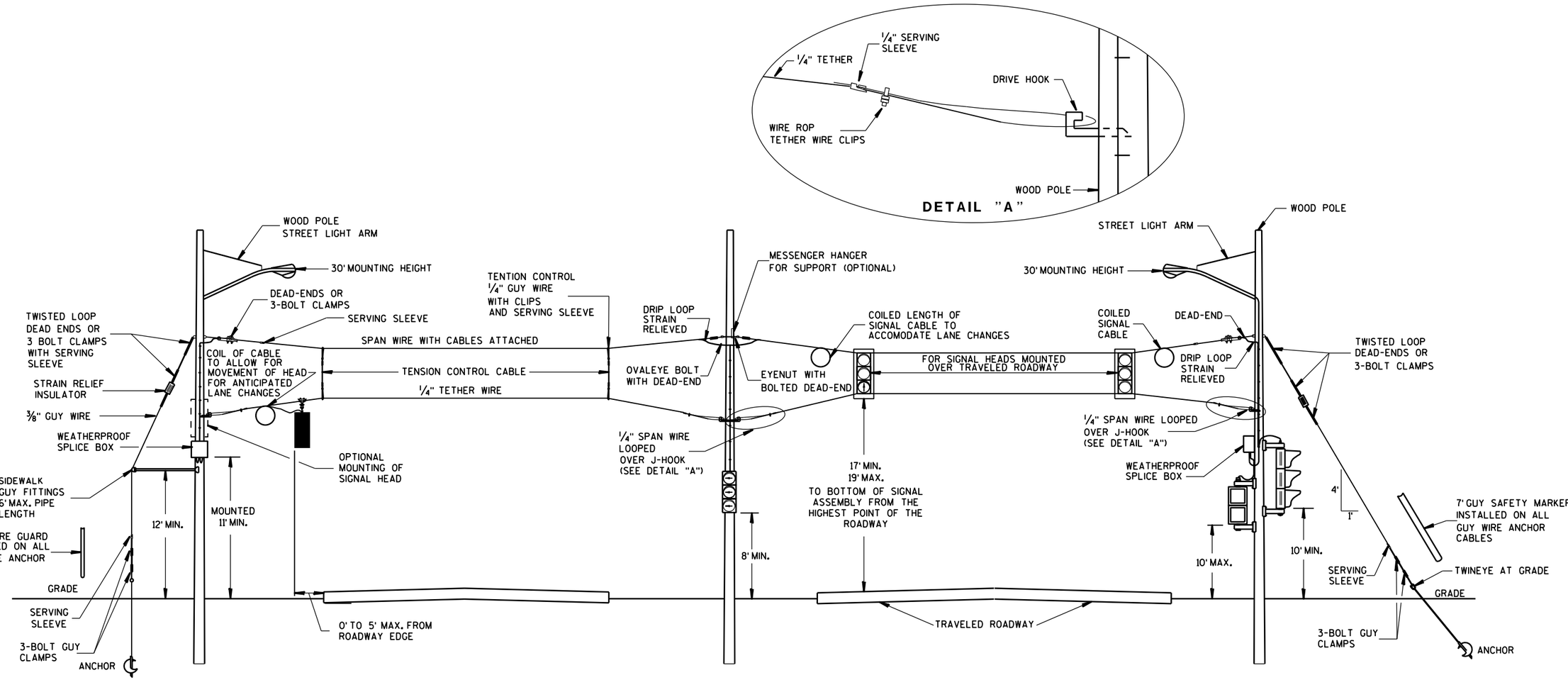
SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 9 G 1-4b



SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.

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   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

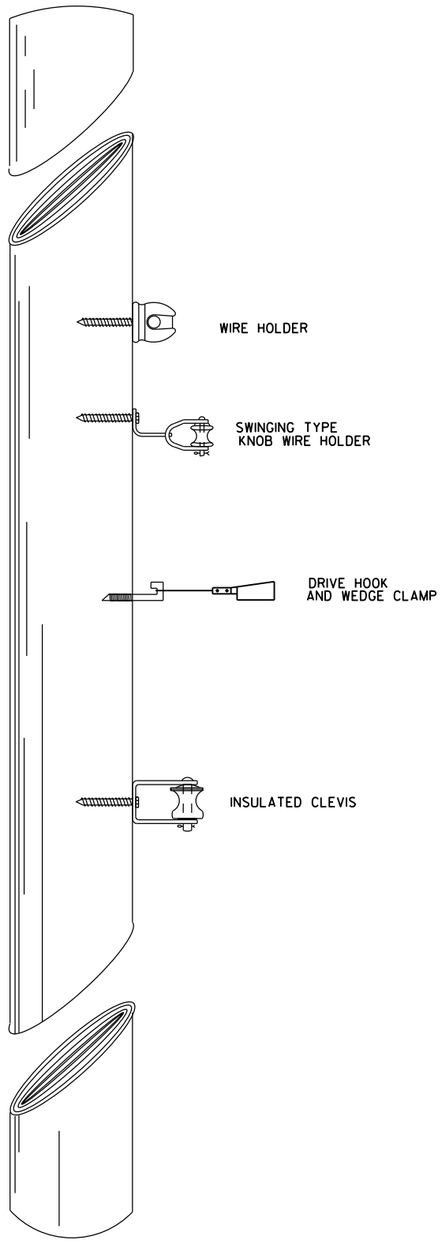
SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

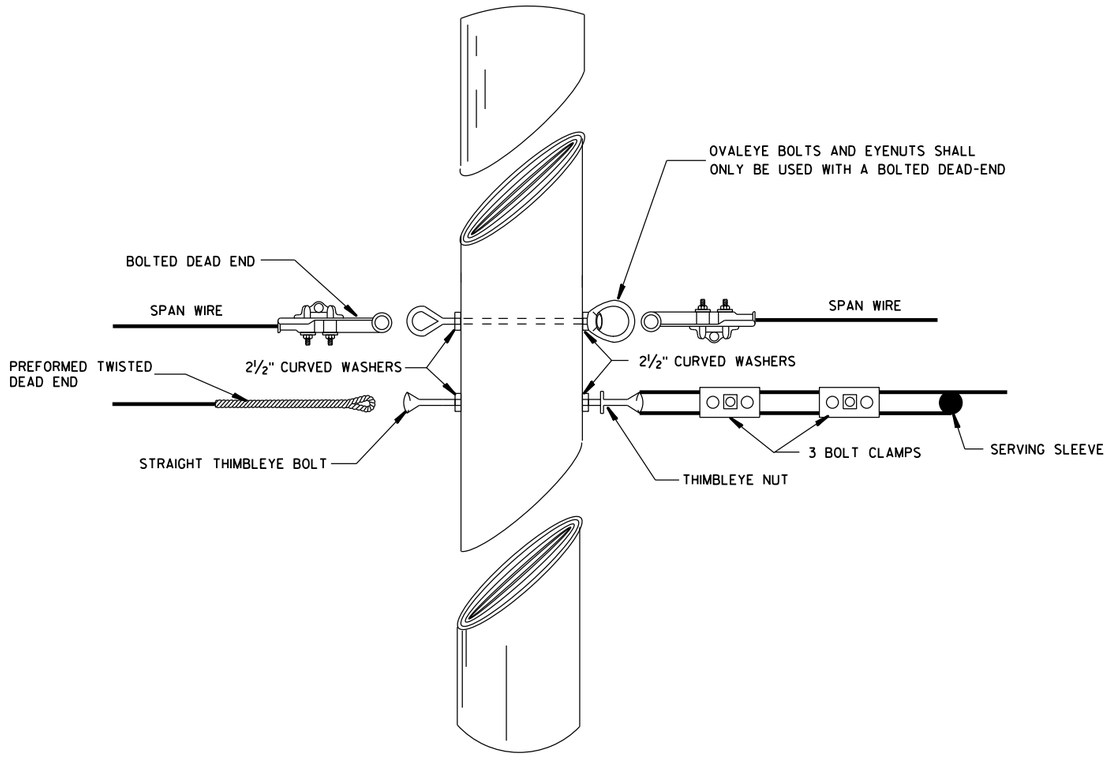
APPROVED
June. 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 G 1-4c



TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

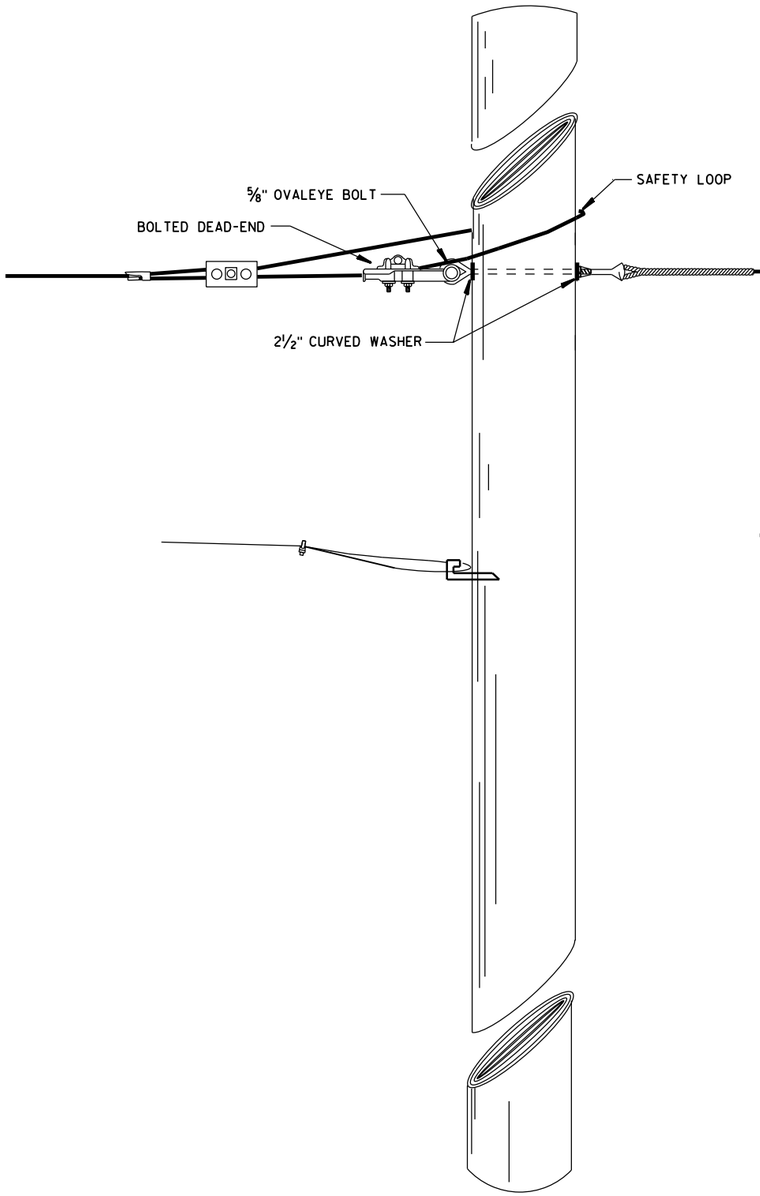
S.D.D. 9 G 1-4d

6

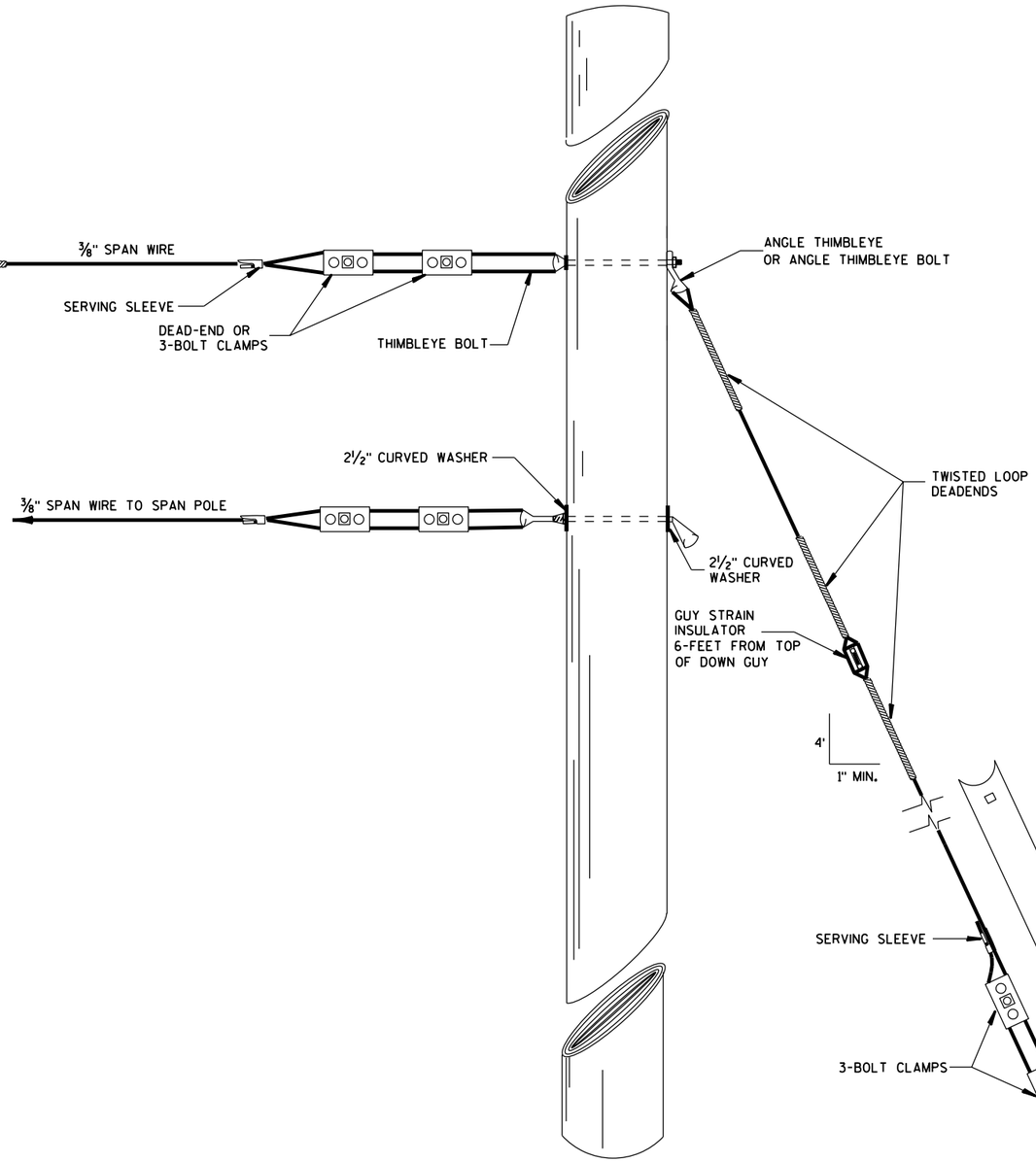
S.D.D. 9 G 1-4d

GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE HOLE FOR ⅝" BOLTS.
2. SAFTY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



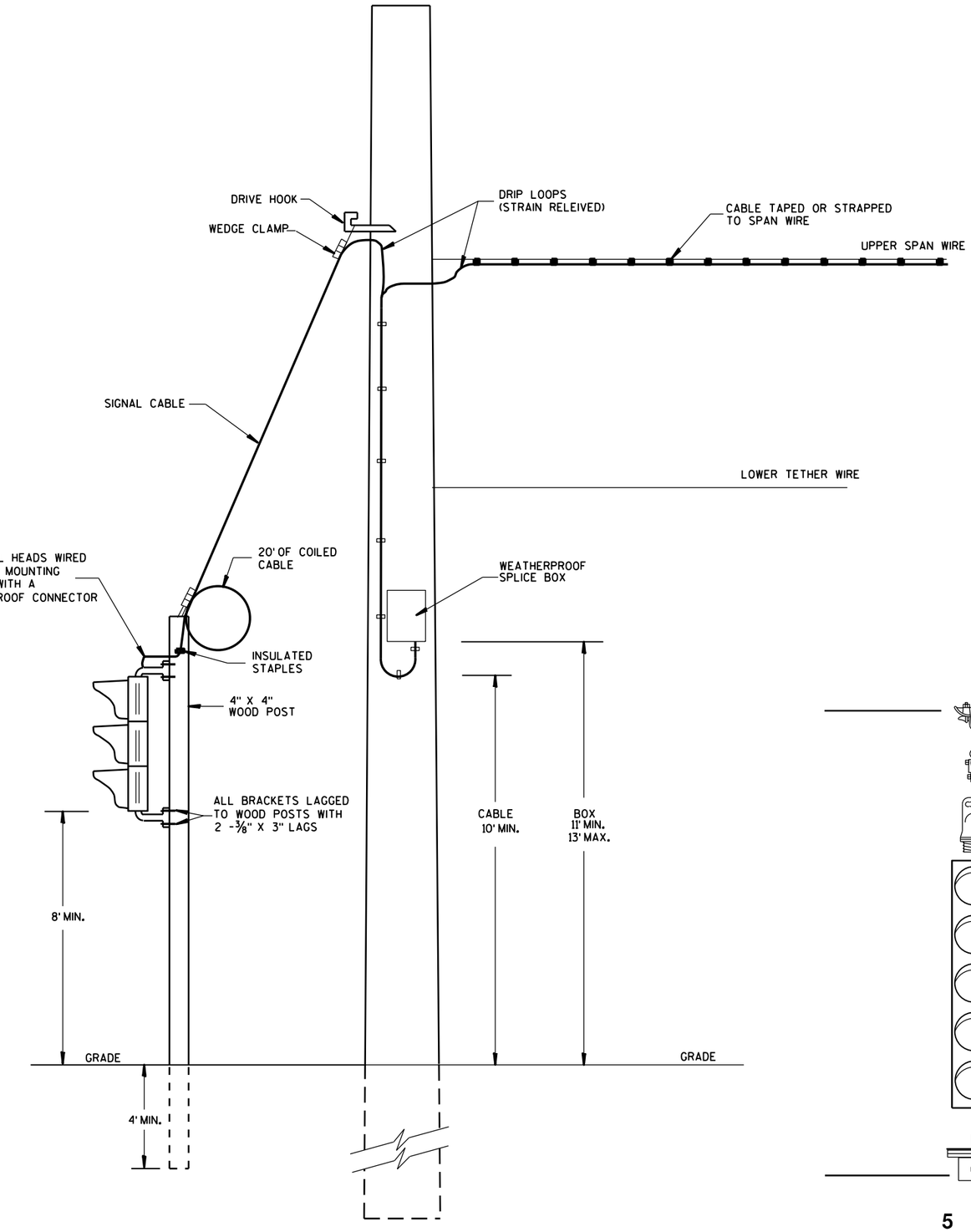
SPAN WIRE POLE



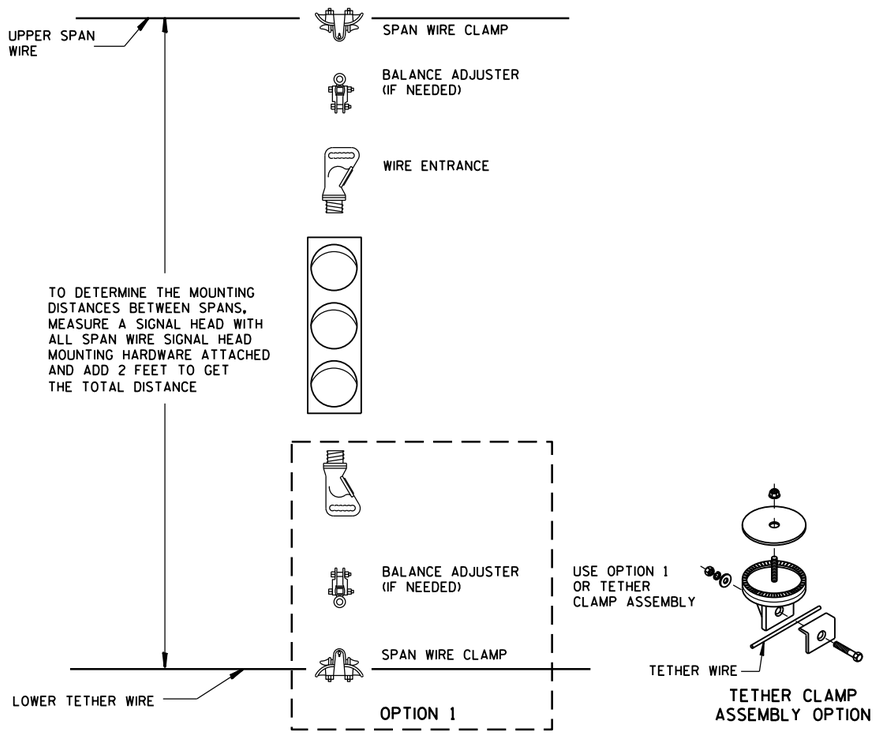
GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED June. 2015 (DATE) — /S/ Ahmet Demirbilek (STATE ELECTRICAL)
FHWA

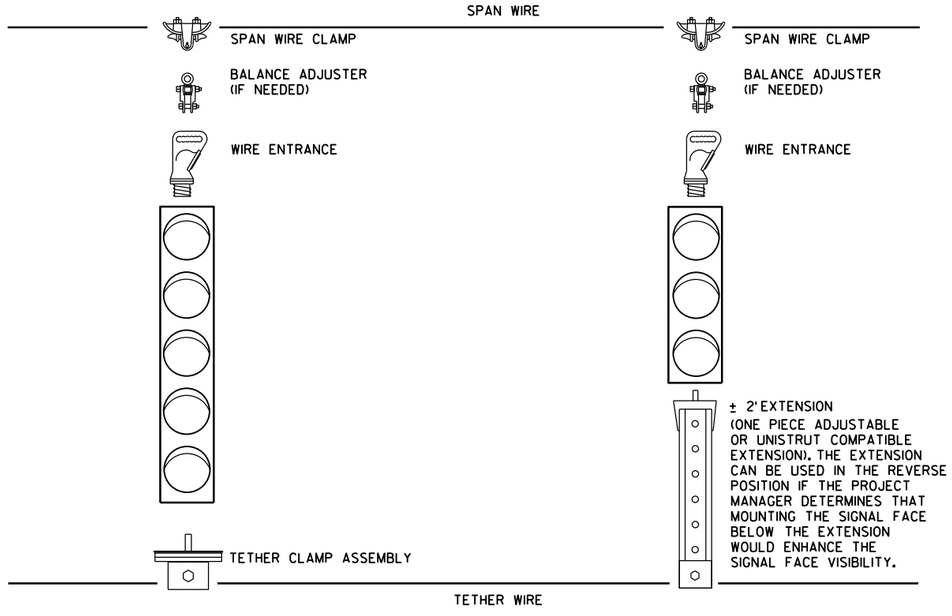


TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TETHER CLAMP ASSEMBLY OPTION

TYPICAL SPAN WIRE MOUNTING HARDWARE



5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

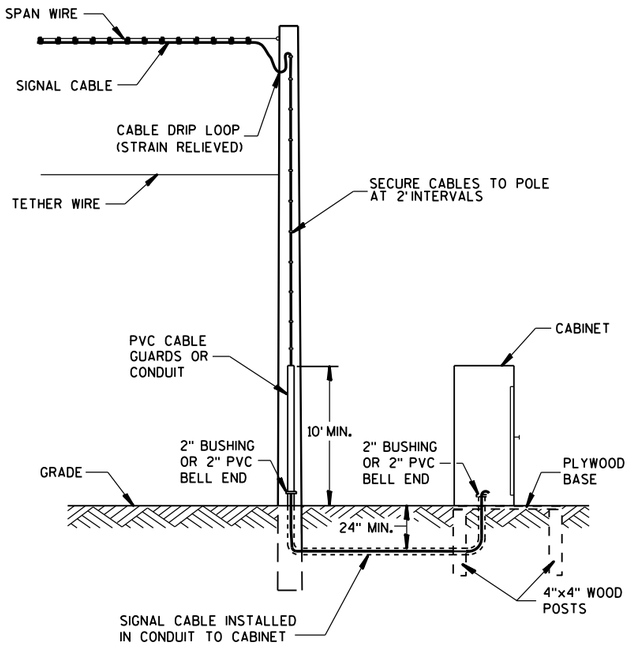
APPROVED
June. 2015
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

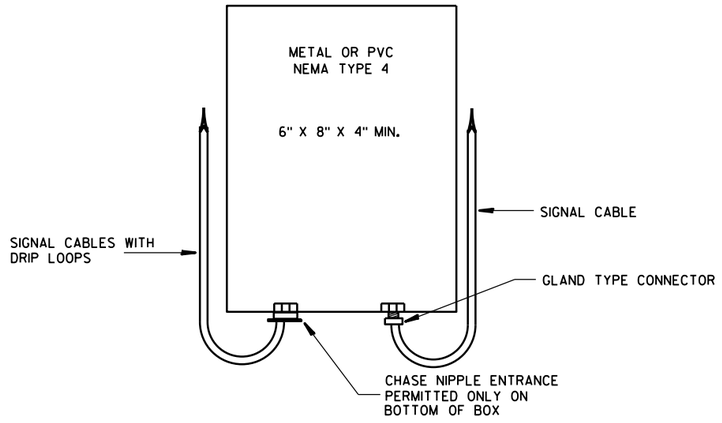
6

S.D.D. 9 G 1-4f

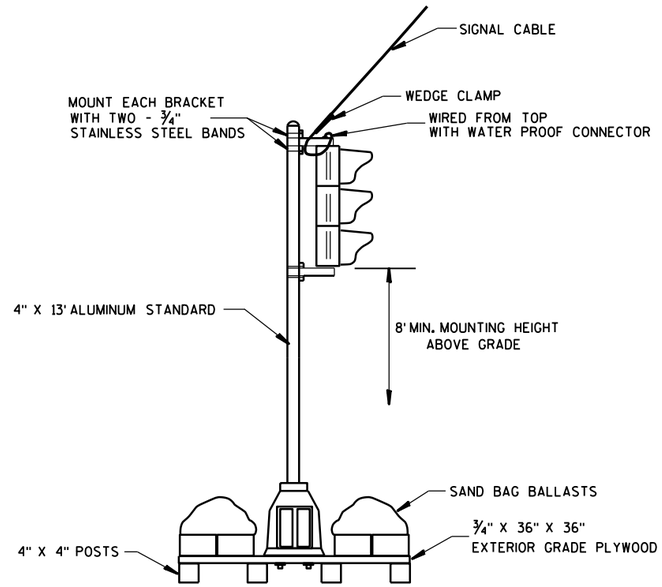
6

S.D.D. 9 G 1-4f

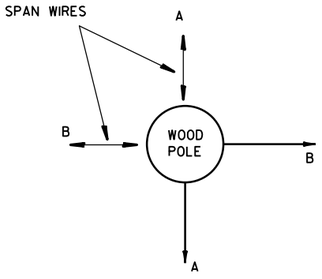




SPLICE BOX

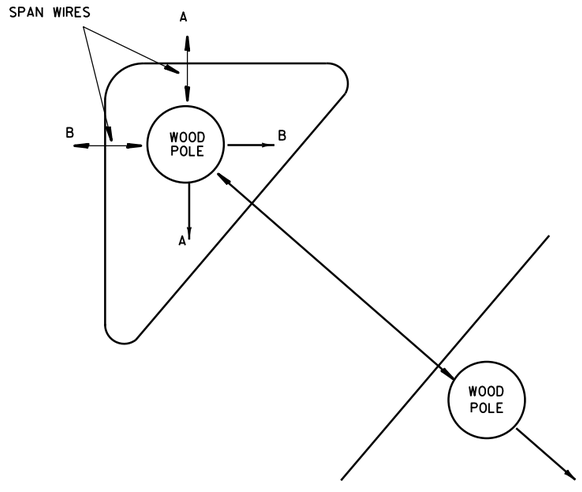


TYPICAL SKID TYPE TEMPORARY

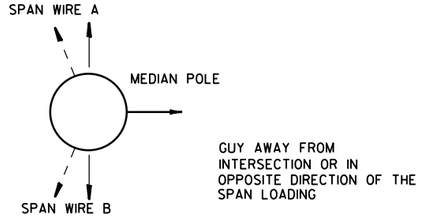


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES



MEDIAN POLES

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

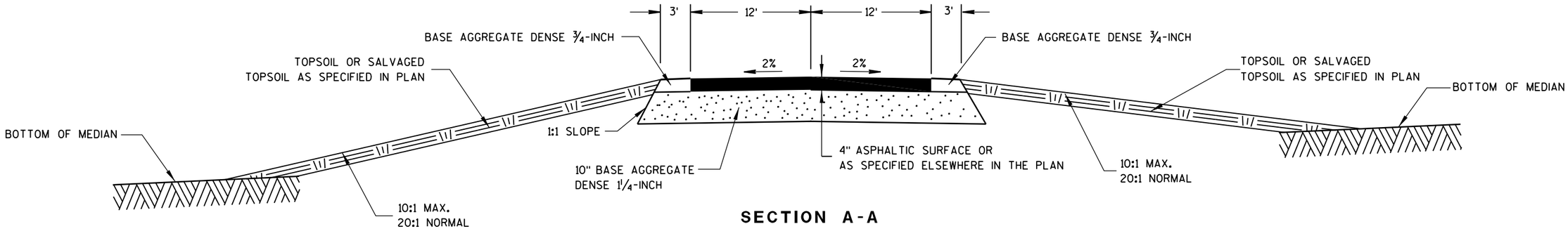
97

6

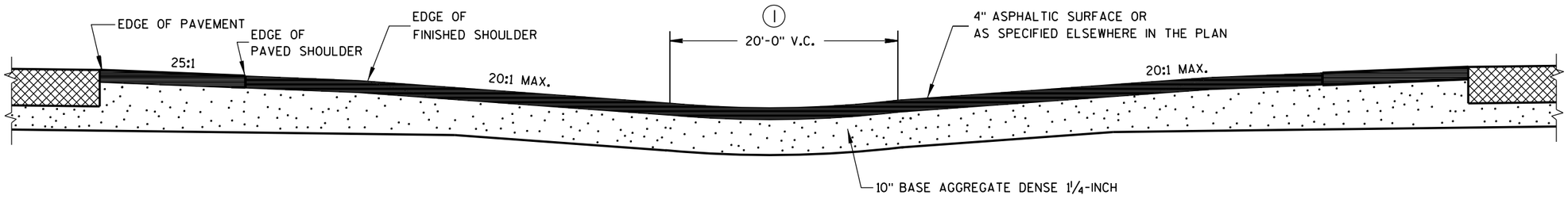
S.D.D. 9 G 1-4g

6

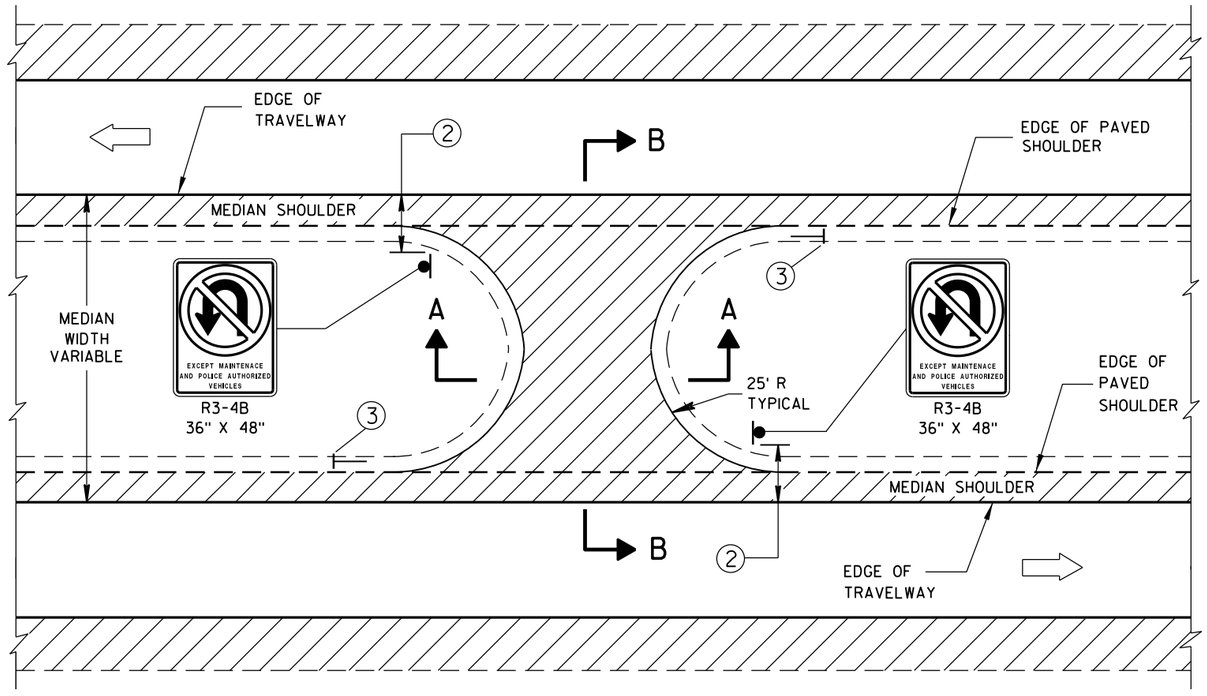
S.D.D. 9 G 1-4g



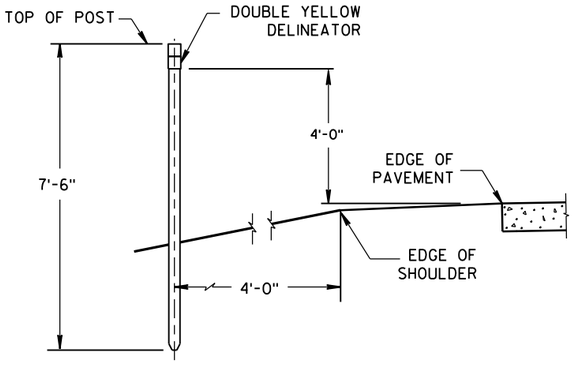
SECTION A-A



SECTION B-B



PLAN VIEW



DOUBLE YELLOW DELINEATOR INSTALLATION

GENERAL NOTES

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

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

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

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

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

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

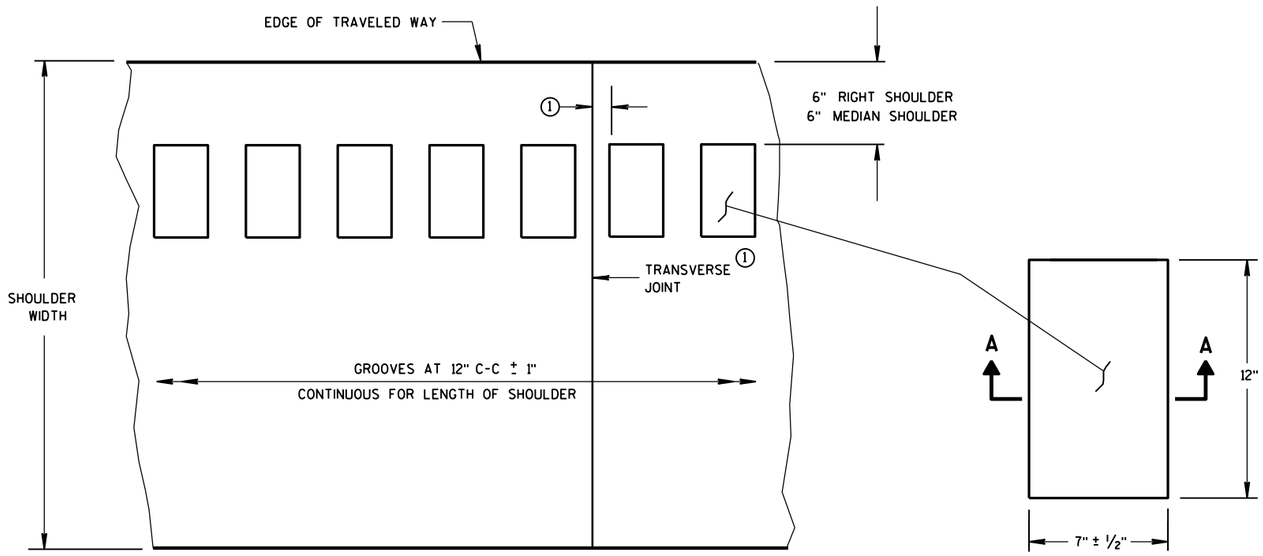
FHWA

6

S.D.D. 11 A 1-5

6

S.D.D. 11 A 1-5



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

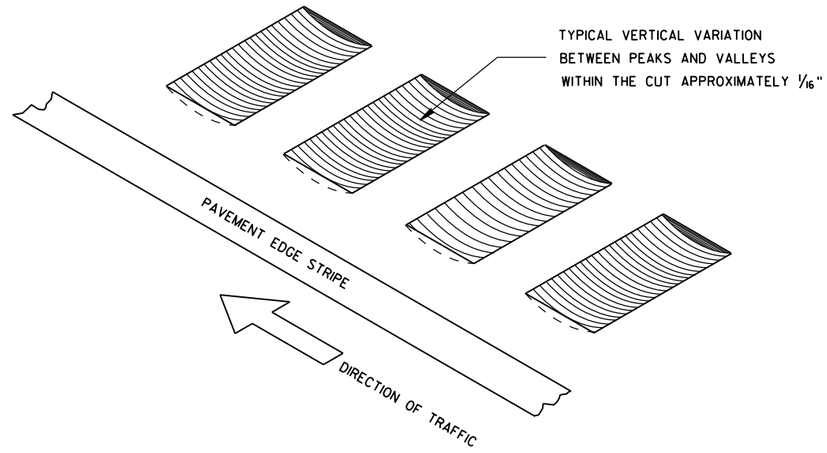
GENERAL NOTES

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

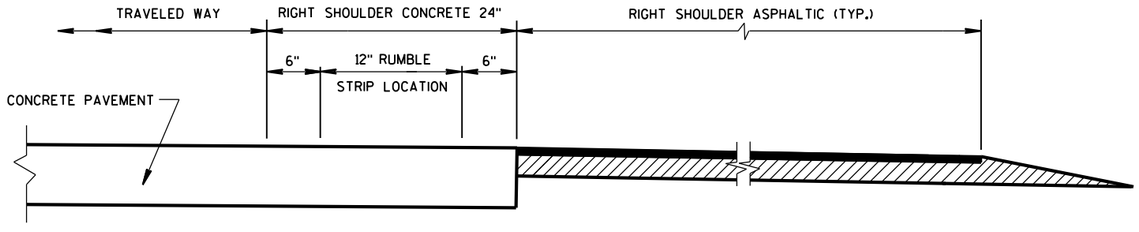
RUMBLE STRIPS ON EXPRESSWAYS

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

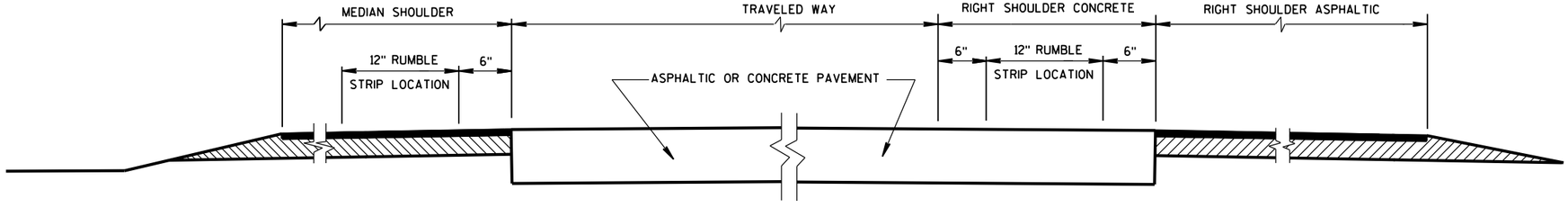
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



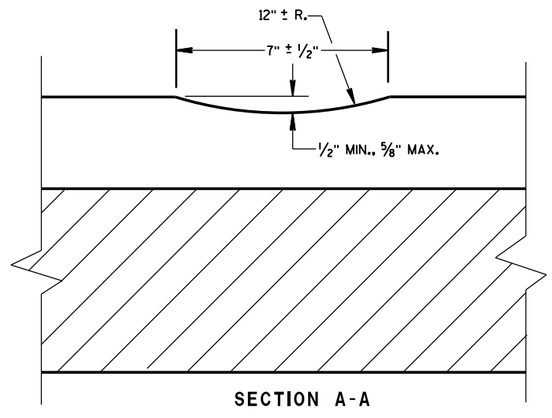
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

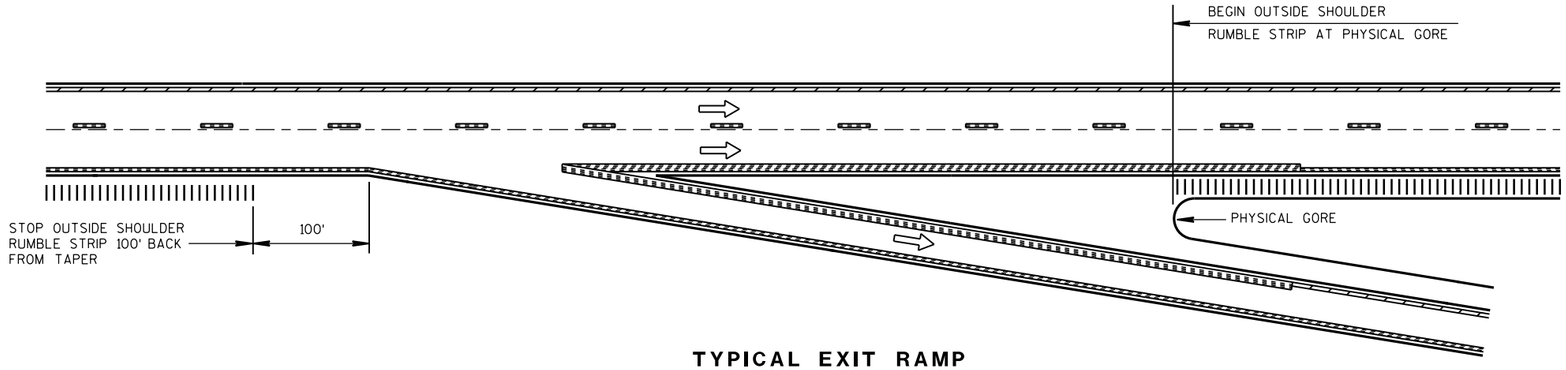
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

6

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



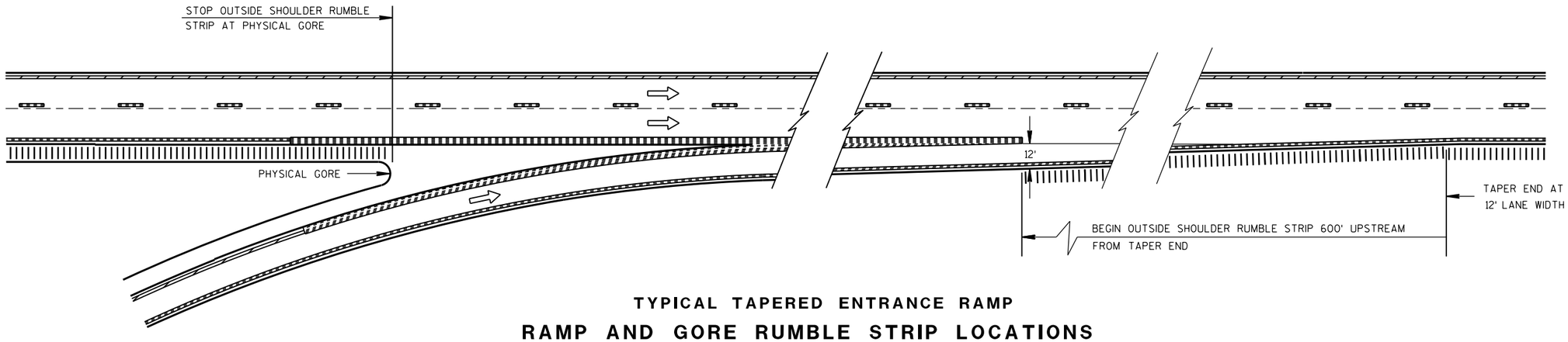
TYPICAL EXIT RAMP

NOTES:

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

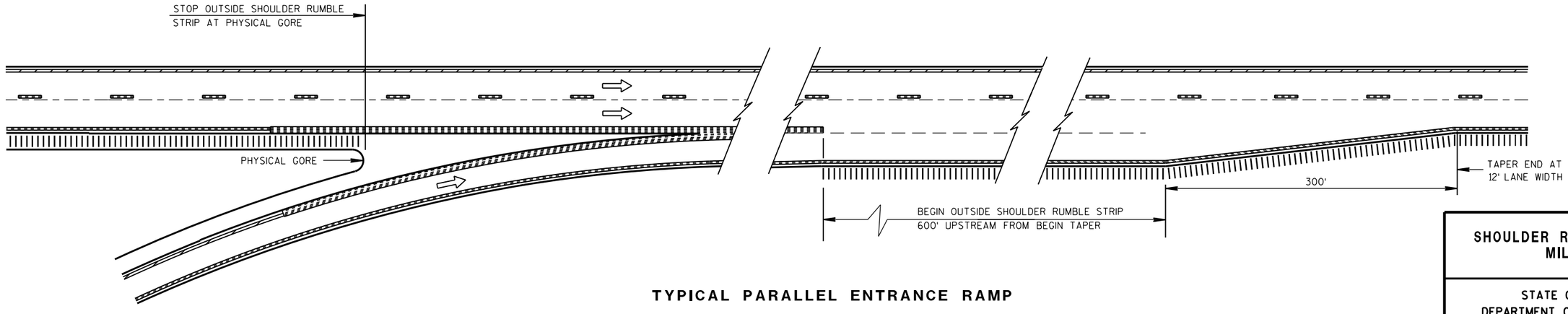
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/2012
DATE

/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER

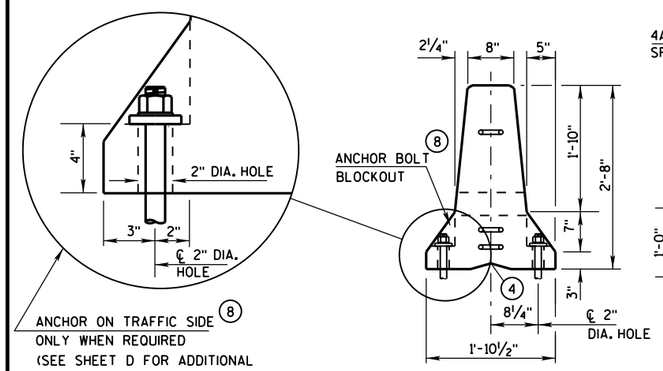
FHWA

6

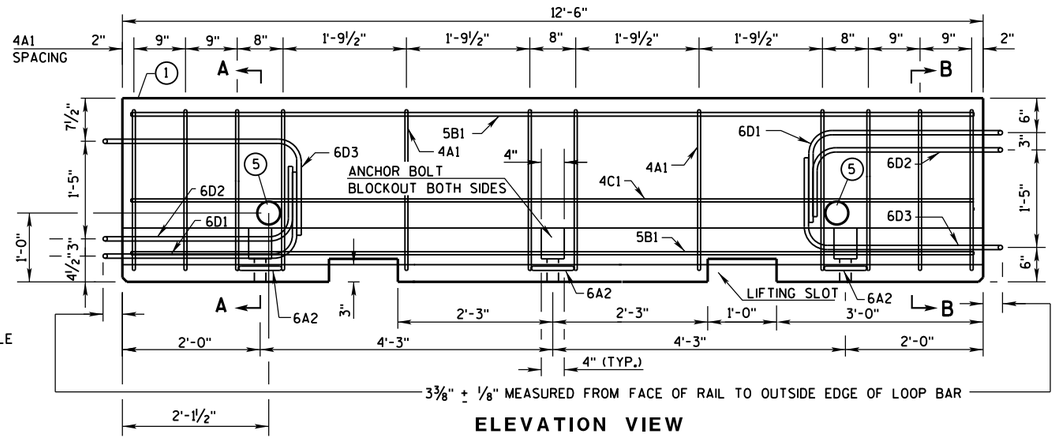
S.D.D. 13 A 5-5b

6

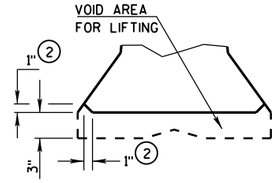
S.D.D. 13 A 5-5b



END VIEW



ELEVATION VIEW



DETAIL "B"
LIFTING SLOT DETAIL

GENERAL NOTES

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

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

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

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

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

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

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

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

(2) 1" CHAMFER TO PREVENT SPALLING.

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

(4) "V" NOTCH IS OPTIONAL.

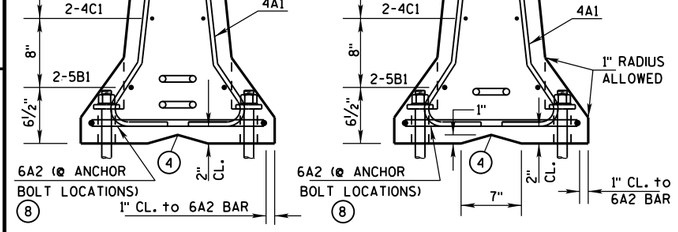
(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

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

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

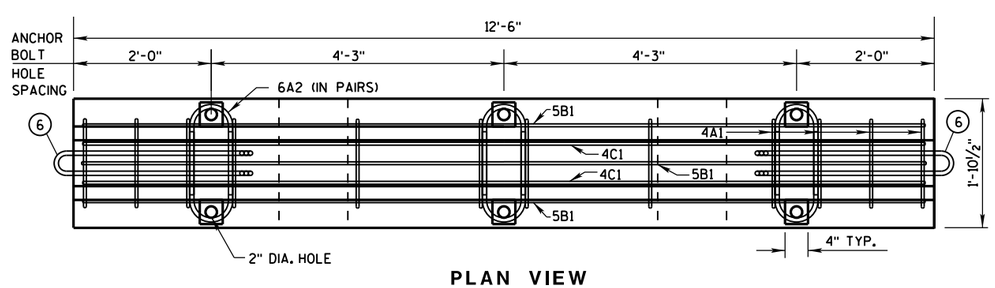
(8) SEE SHEET D FOR ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.



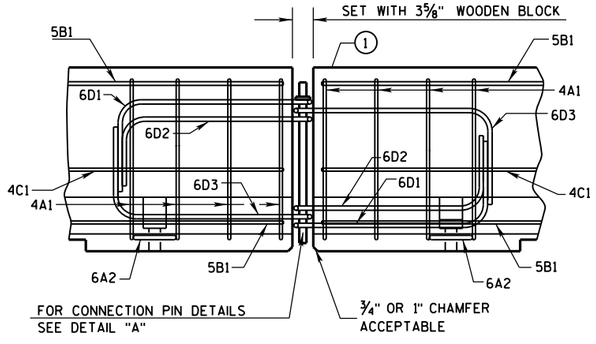
SECTION A-A
(STIRRUP PLACEMENT)

SECTION B-B
(STIRRUP PLACEMENT)

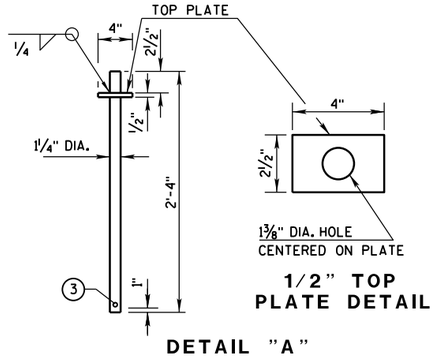


PLAN VIEW

DETAILS OF BARRIER SECTION

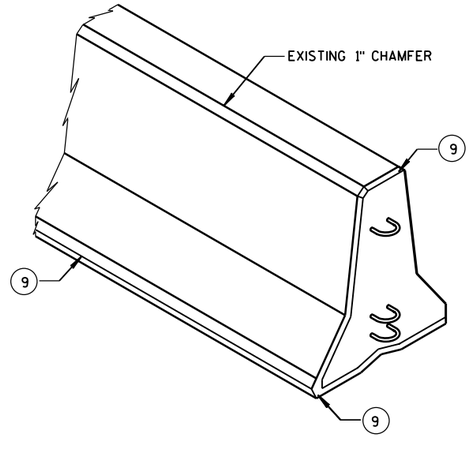


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

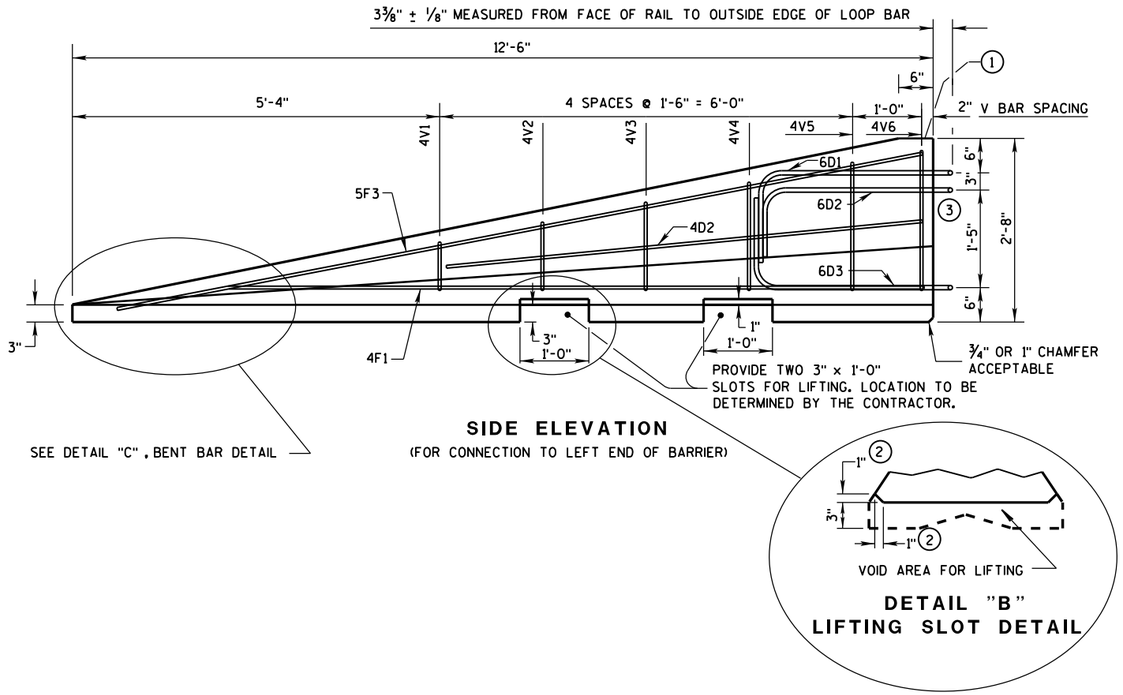
DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))

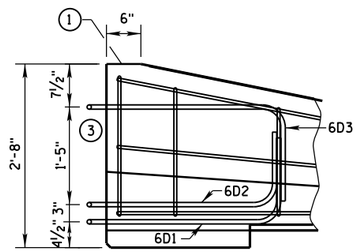


CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

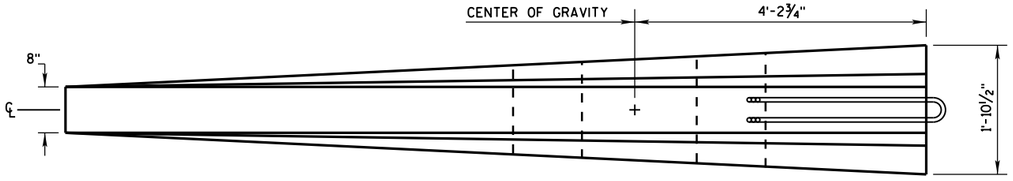
6
S.D.D. 14 B 7-14a

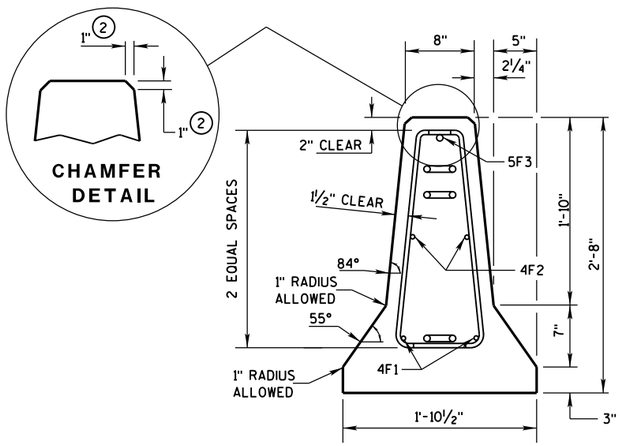


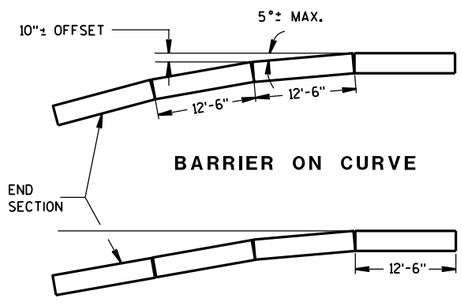


GENERAL NOTES

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







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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

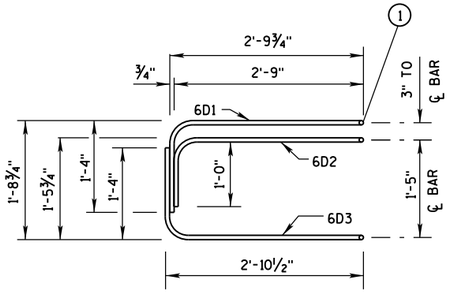
6

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

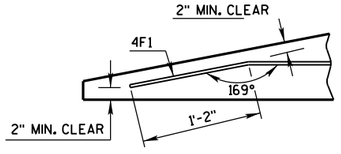
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

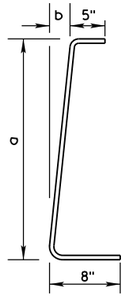
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

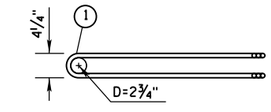
GENERAL NOTES

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

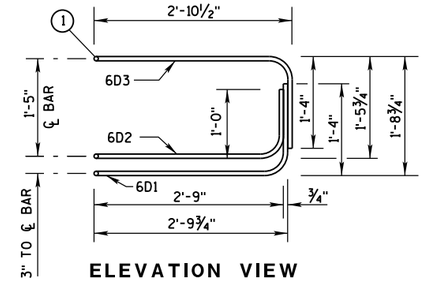
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

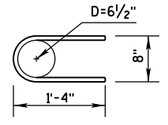
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



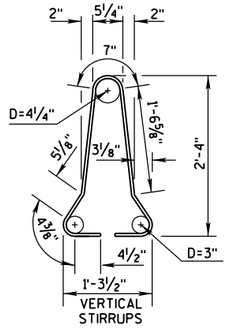
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2



4A1

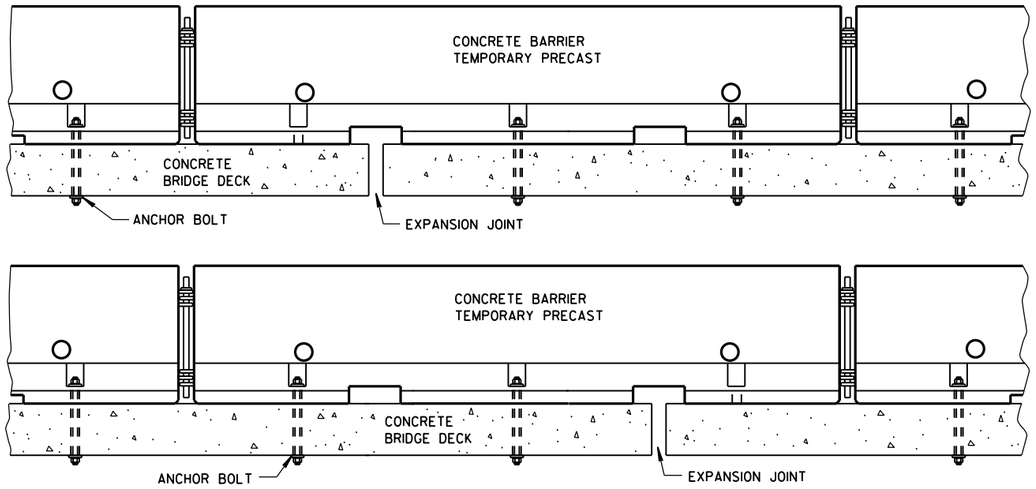
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

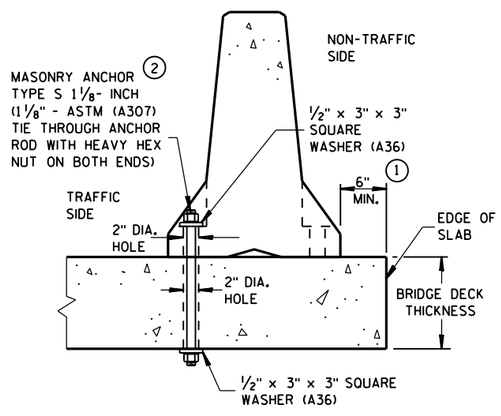
6

S.D.D. 14 B 7-14c



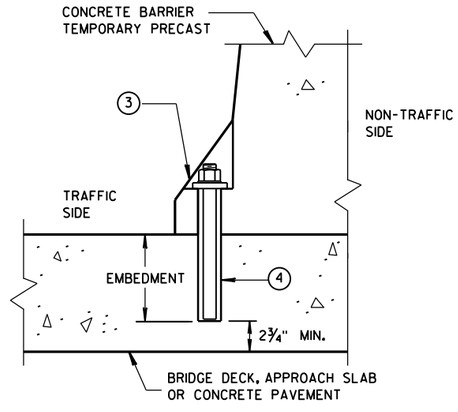
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



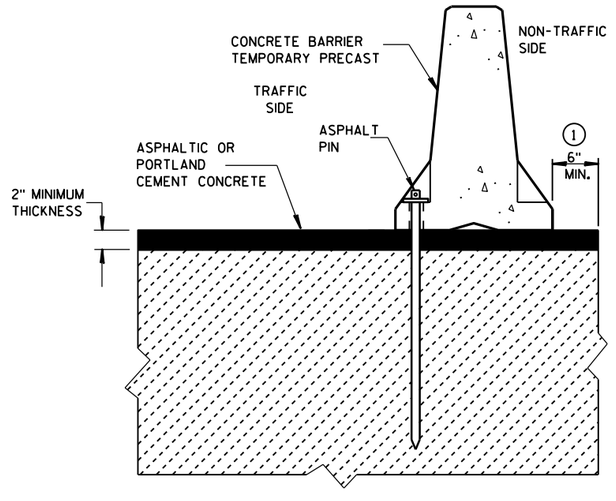
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



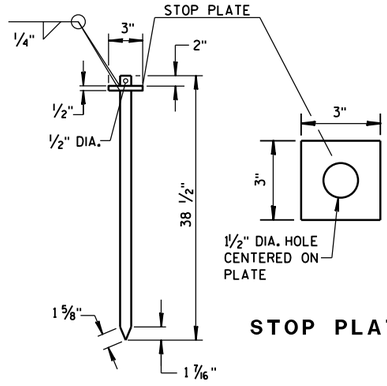
REMOVABLE ADHESIVE BONDED ANCHOR ② INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

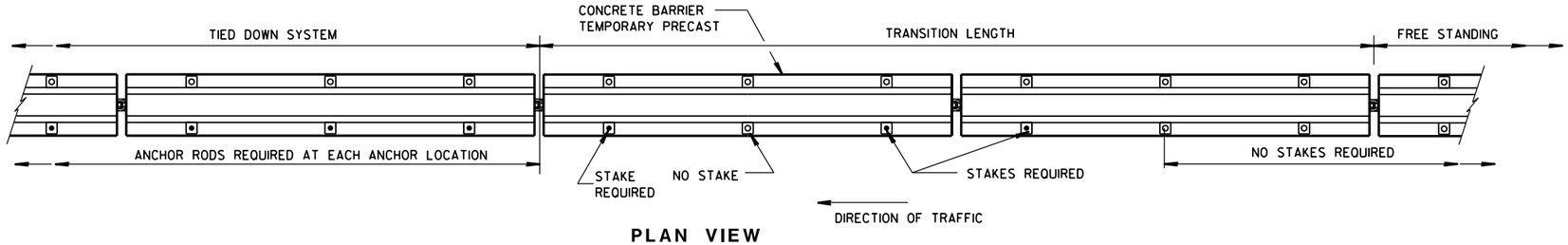
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



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.)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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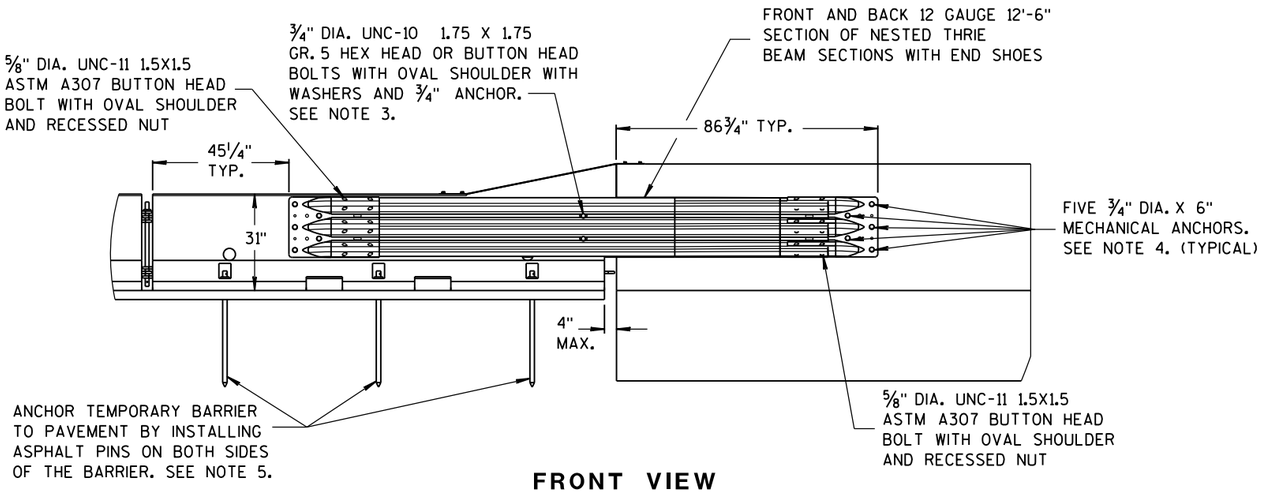
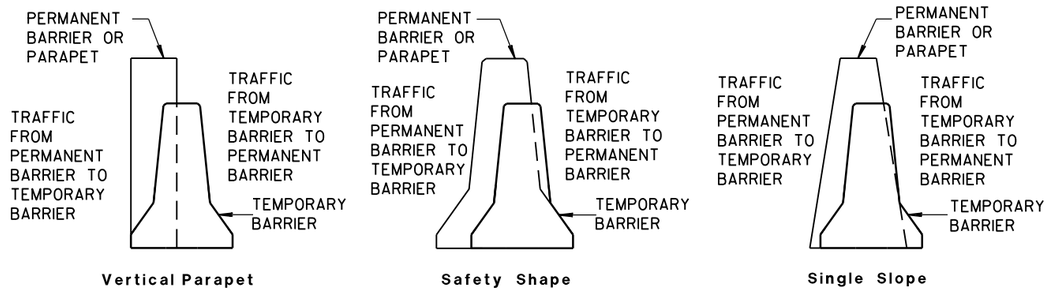
S.D.D. 14 B 7-14d



FRONT VIEW

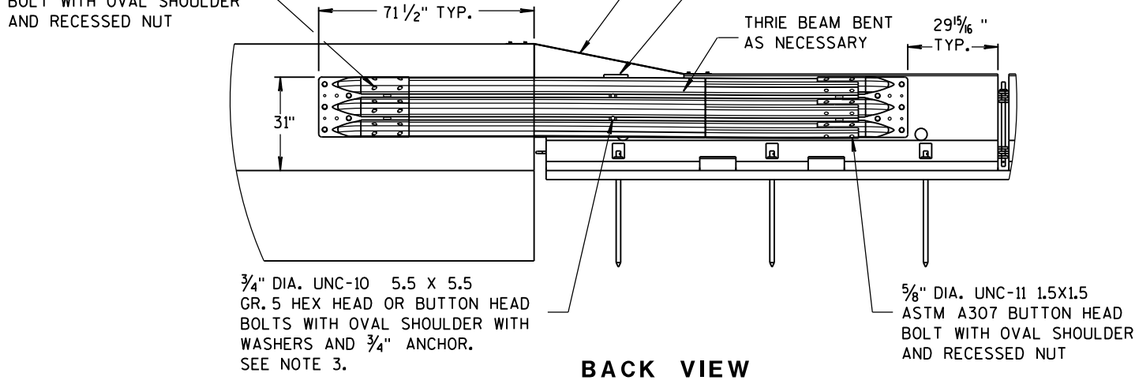


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

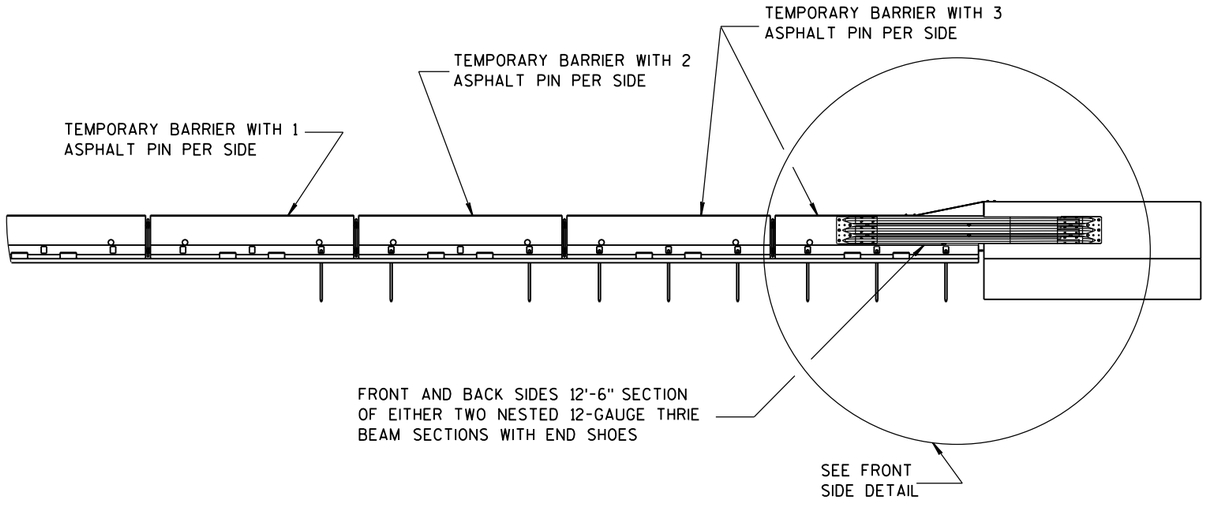
NOTES

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

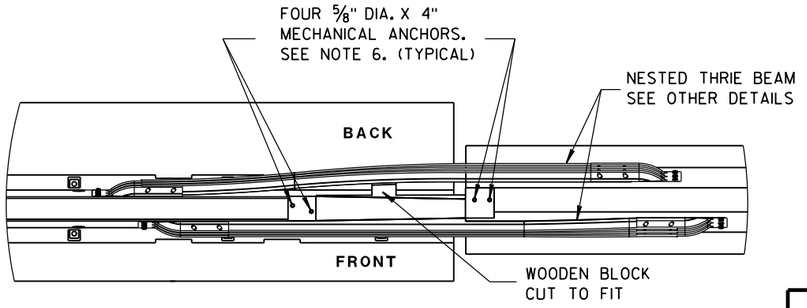
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD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



BACK VIEW



FRONT VIEW



PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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

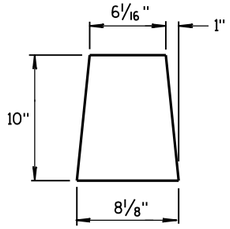
GUSSET 1

GUSSET 2

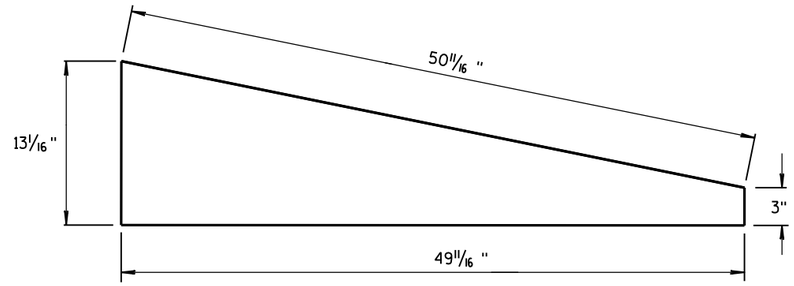
GUSSET 3

GUSSET 4

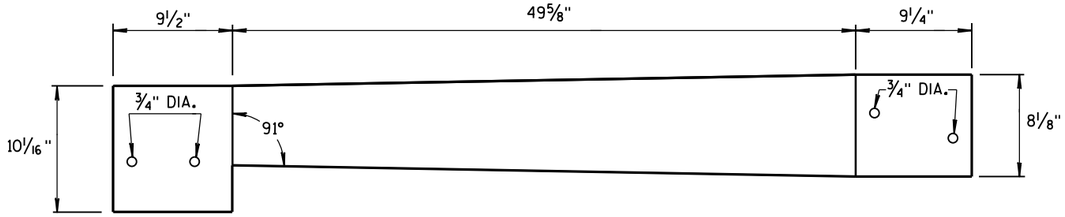
GUSSETS

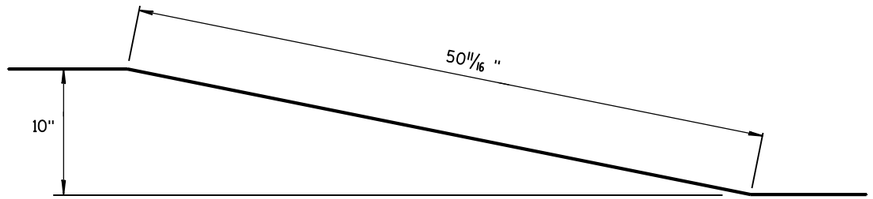


END PLATE

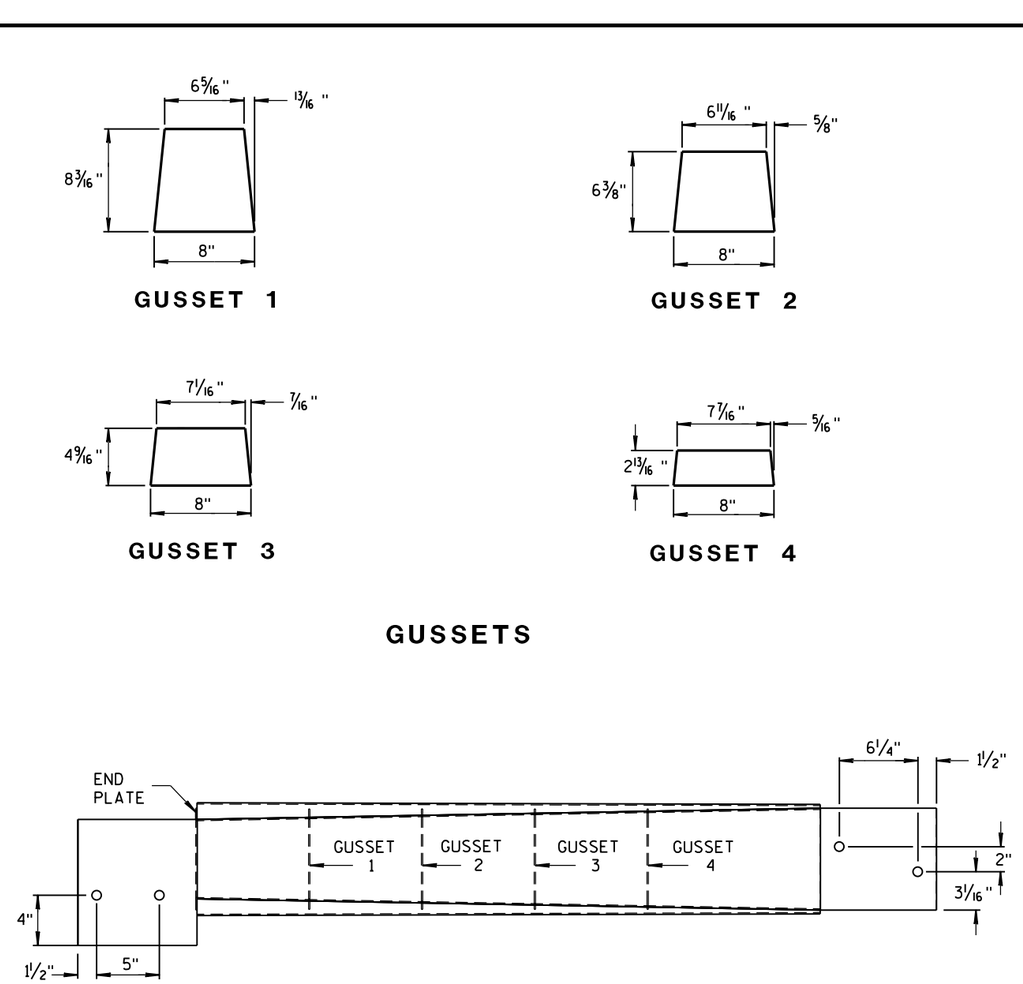


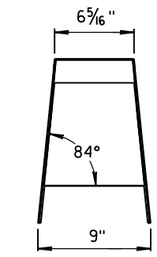
SIDE PLATE





TOP PLATE





SECTION C-C

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.

NOTES

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

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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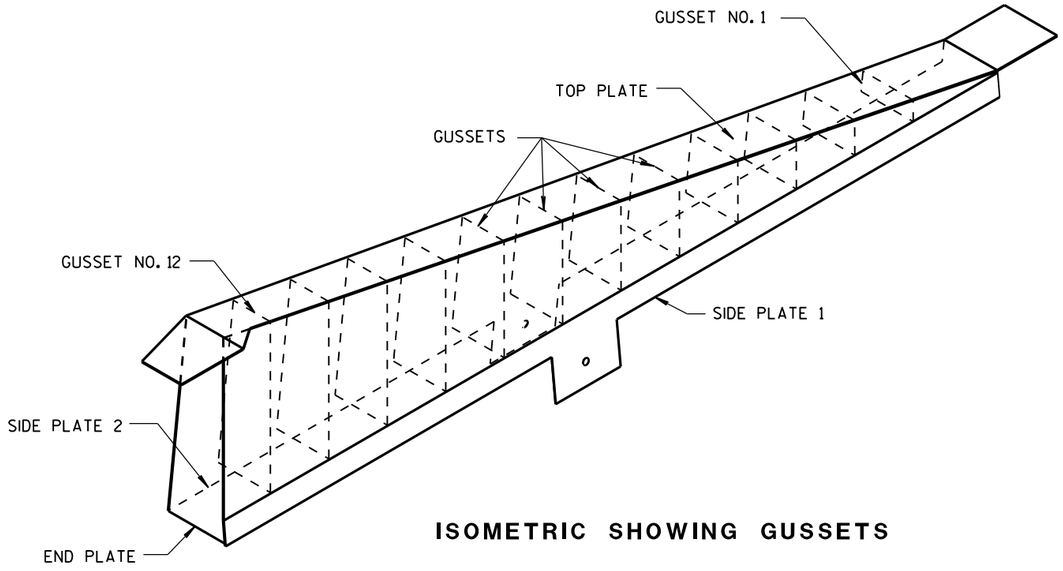
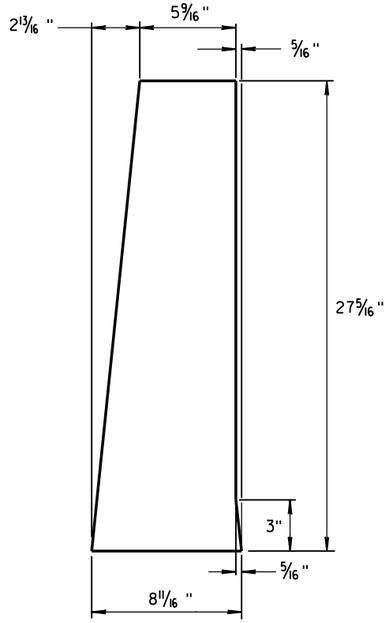
S.D.D. 14 B 7-14f

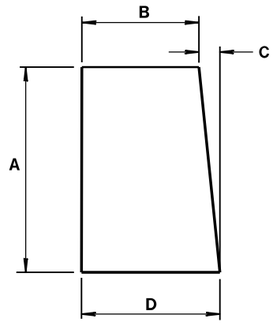


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



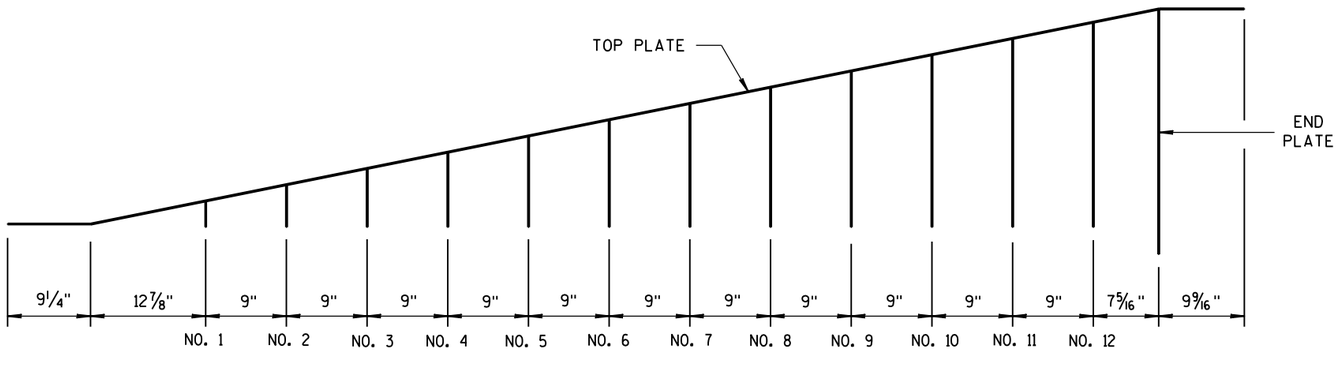
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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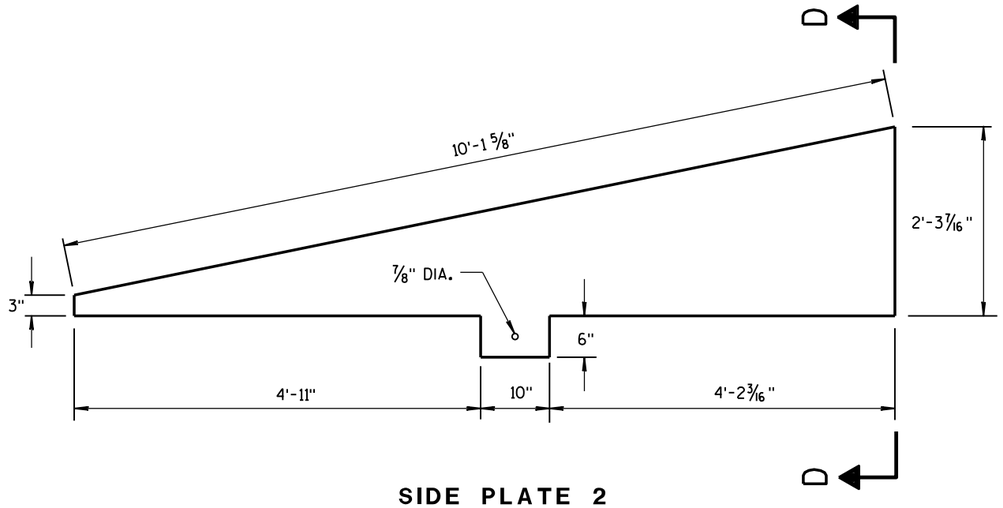
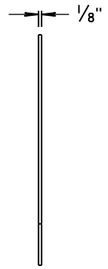
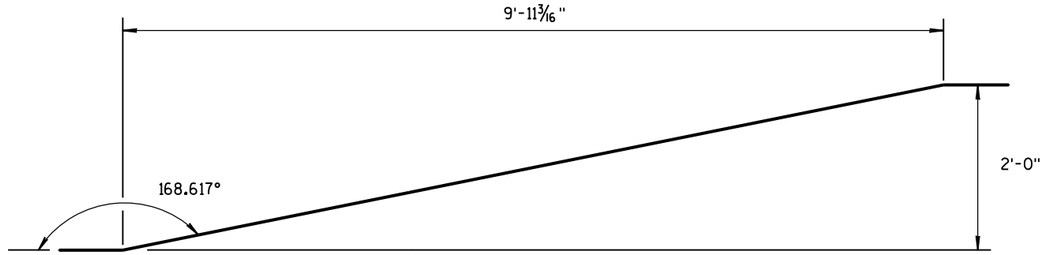
S.D.D. 14 B 7-14g



SIDE PLATE 2

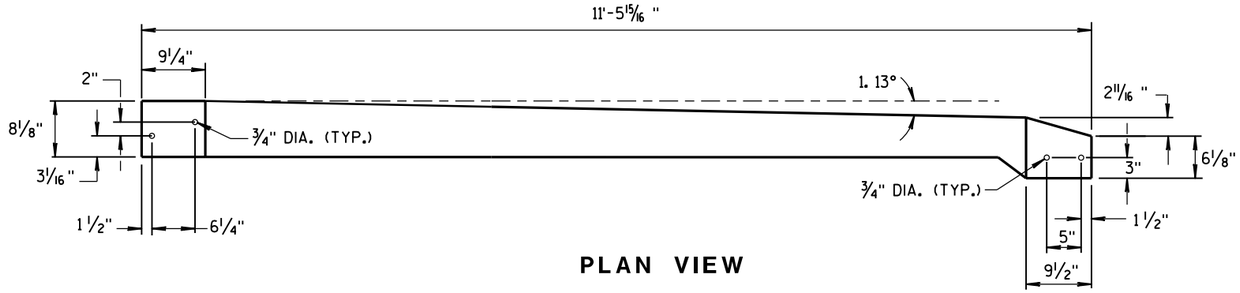


END VIEW



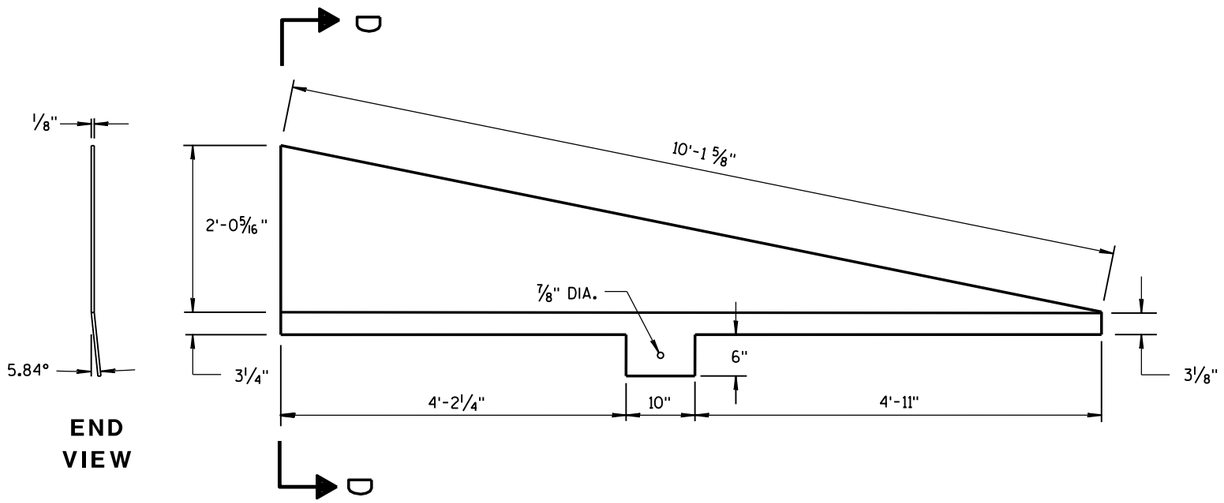
SIDE VIEW

TOP PLATE



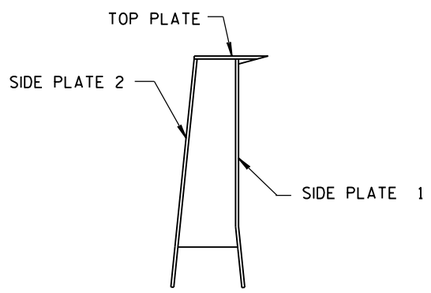
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

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

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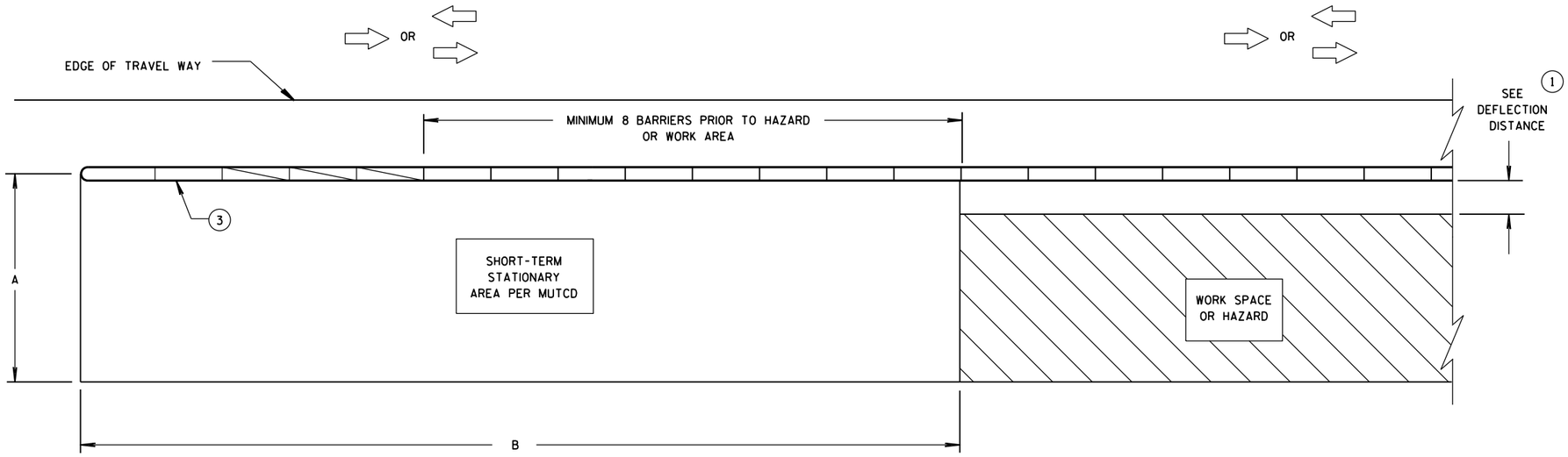
S.D.D. 14 B 7-14h



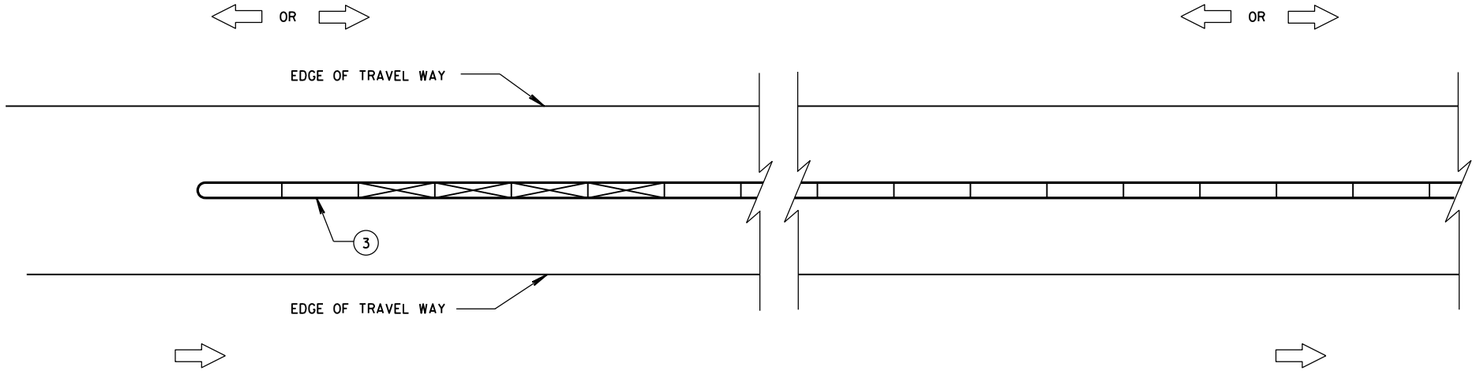
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

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

DIMENSION B TABLE (2)

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



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

LEGEND

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

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

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

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

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

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

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

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

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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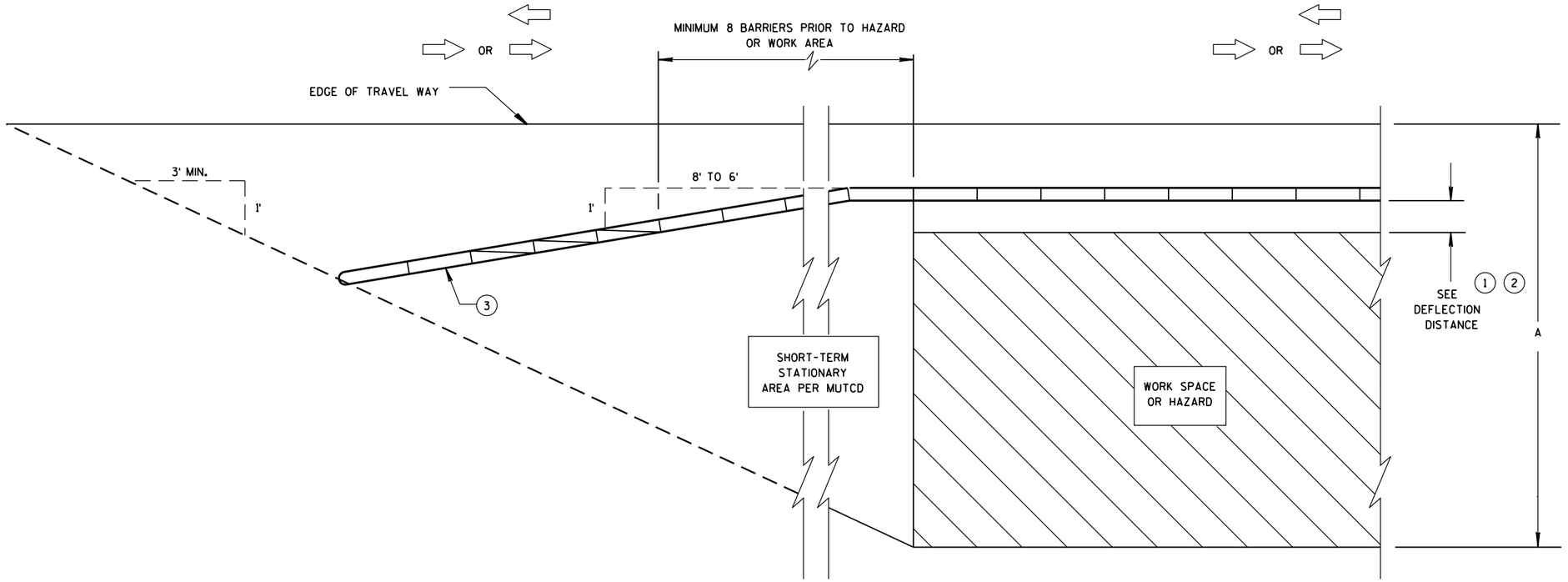
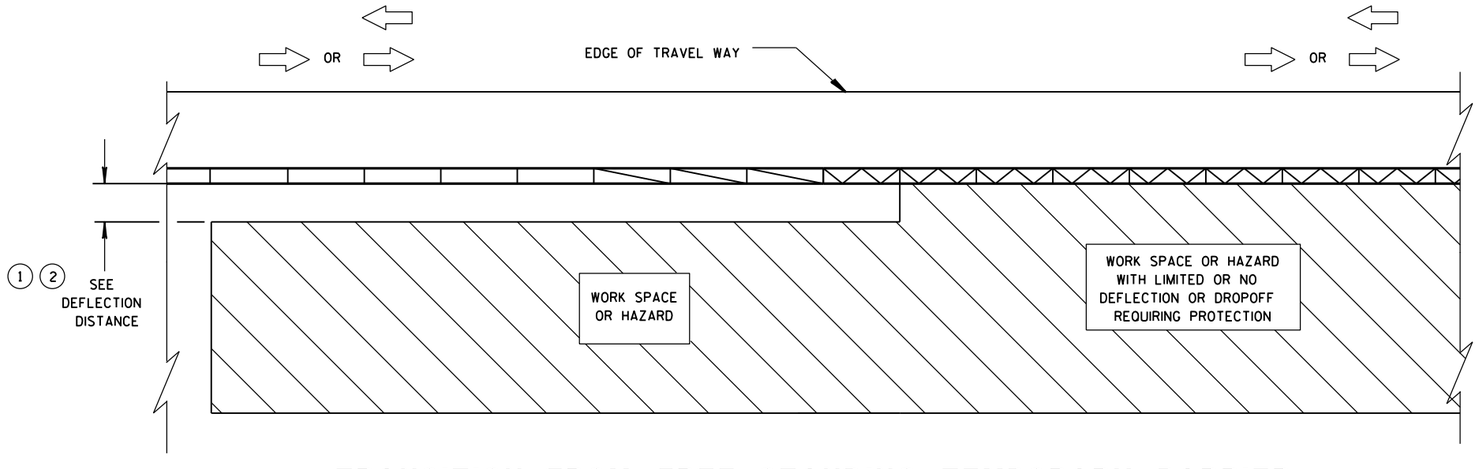


CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



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
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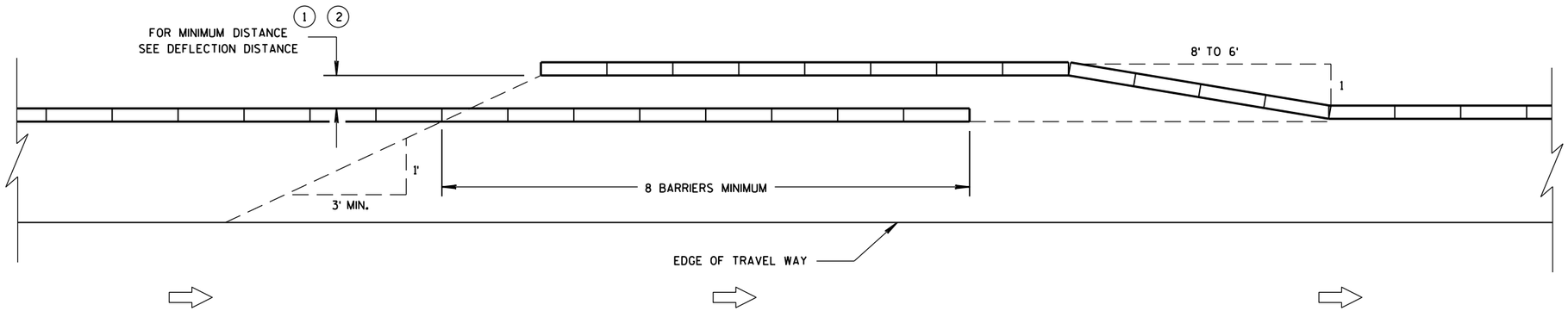
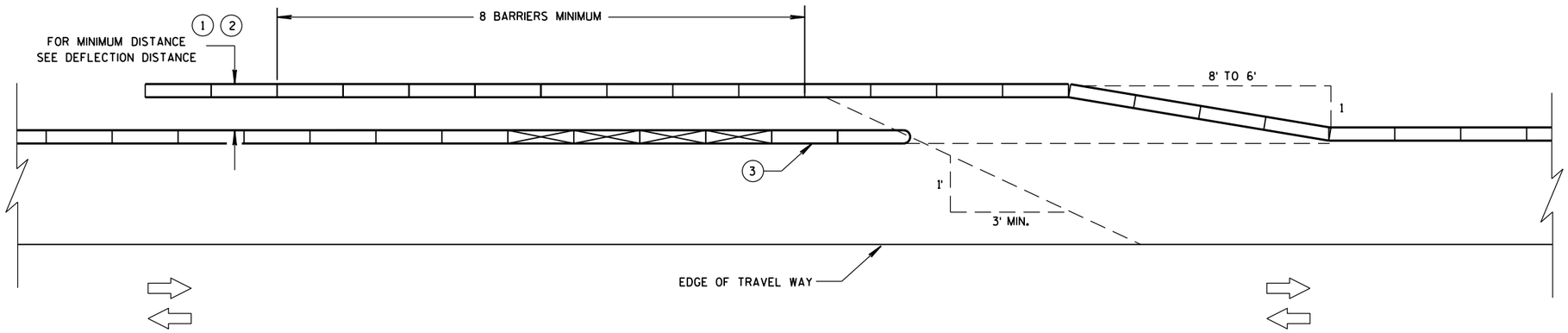
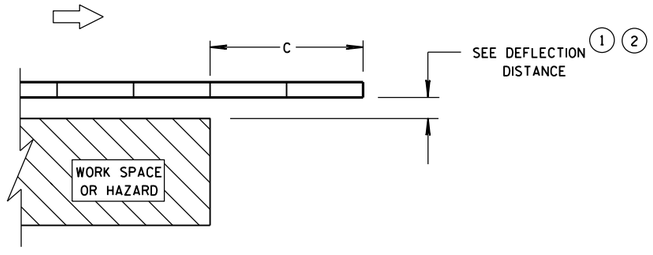


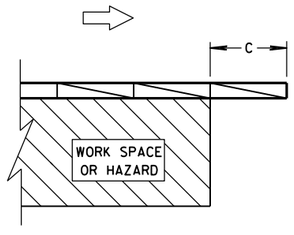
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



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
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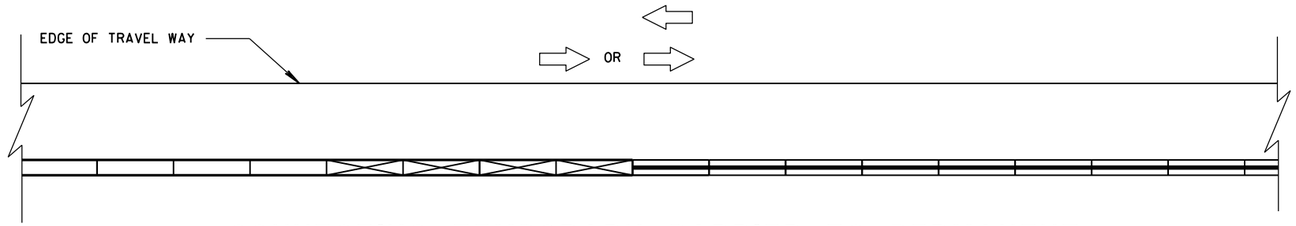
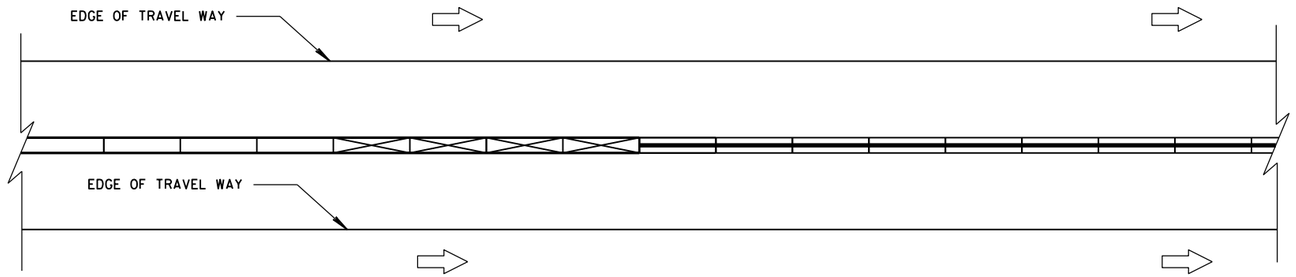


CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

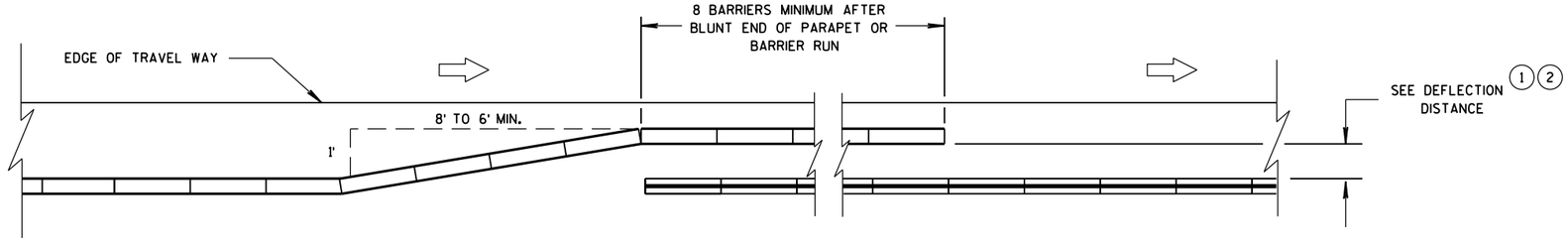
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

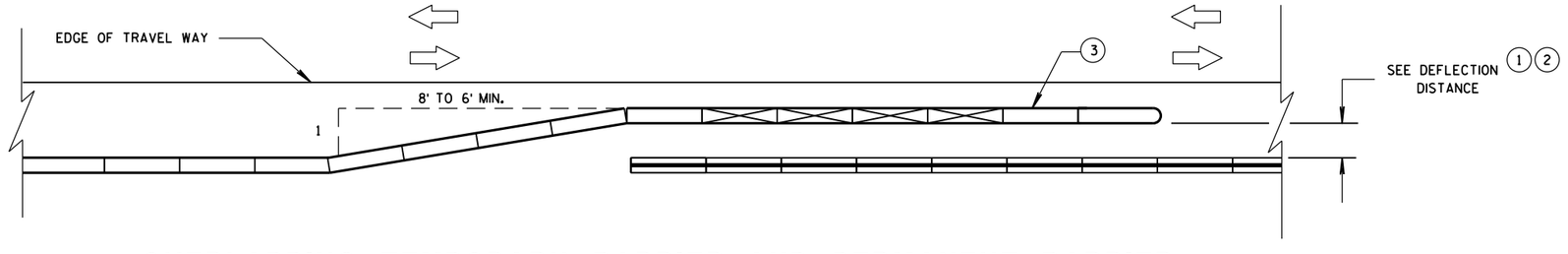
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

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
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LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

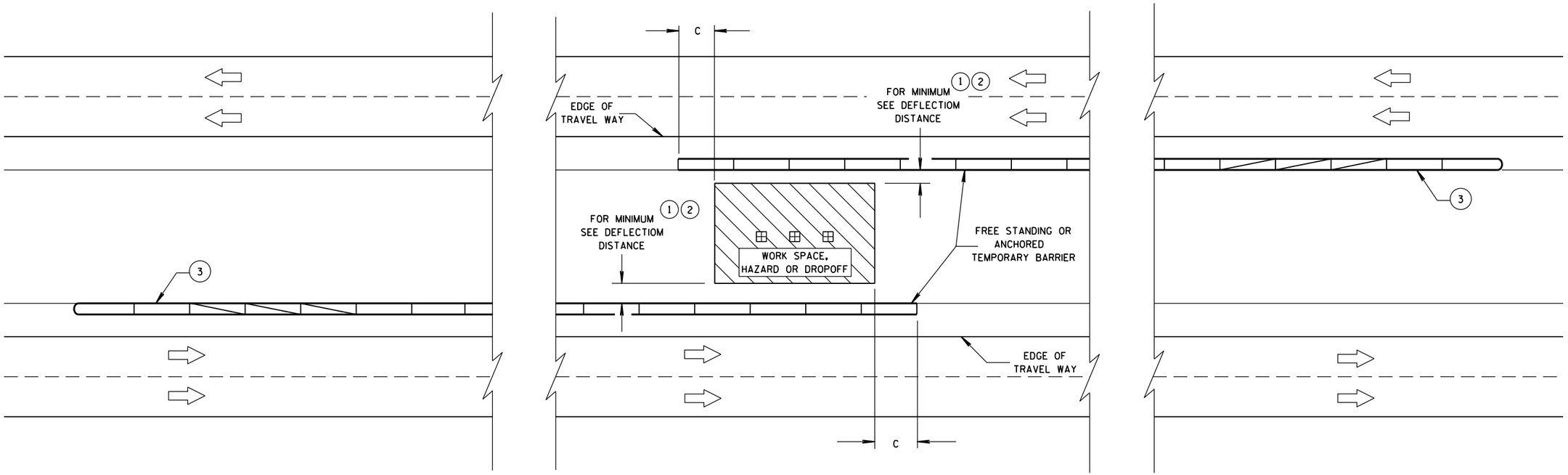
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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

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.

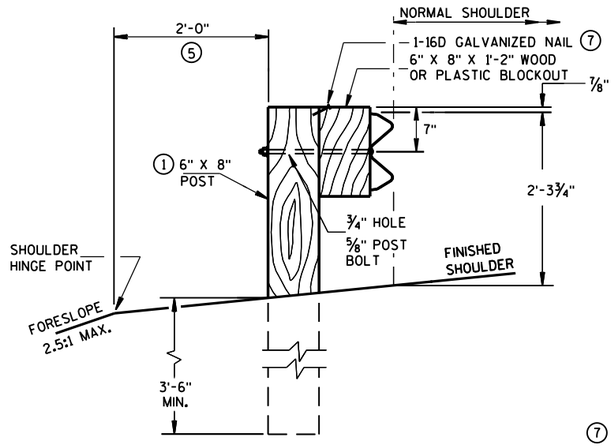
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(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.

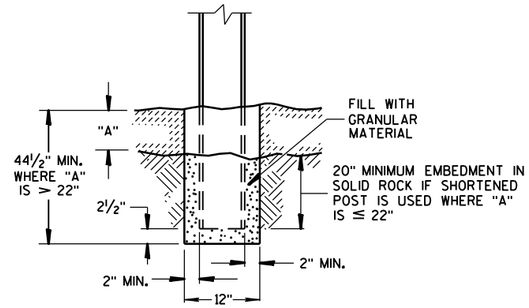
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

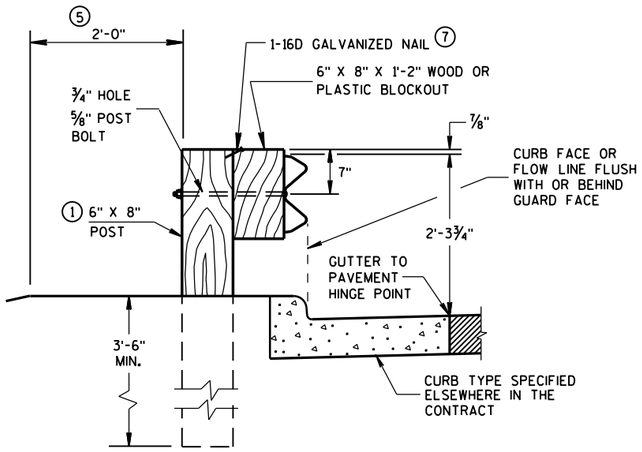
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



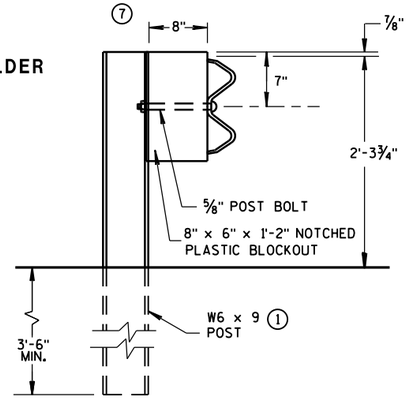
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



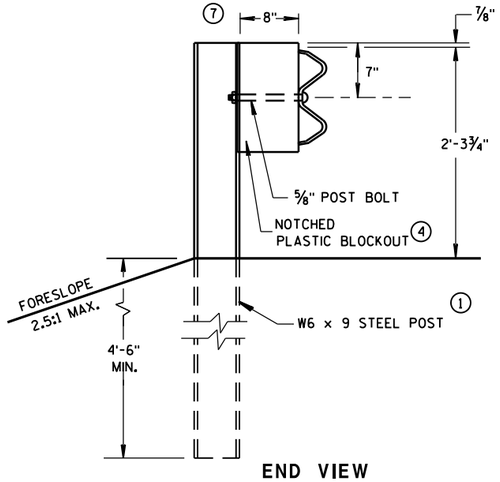
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



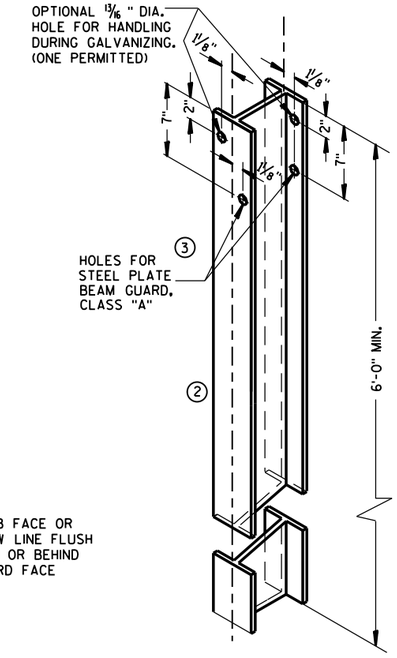
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION

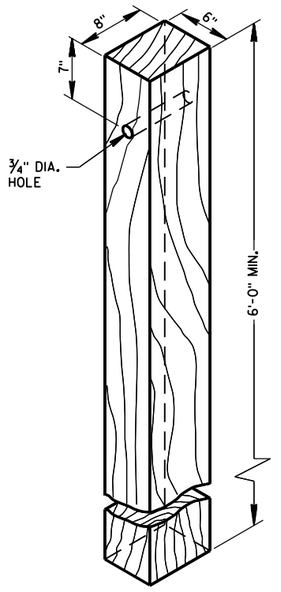


END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

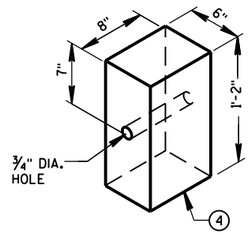


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

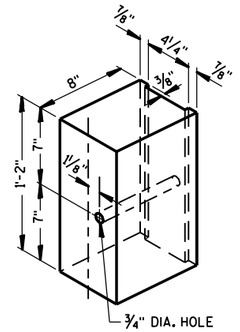
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



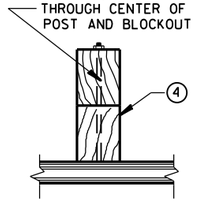
WOOD POST
(6"X8") NOMINAL



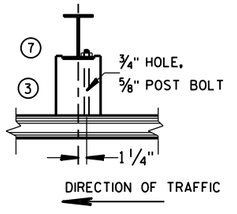
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



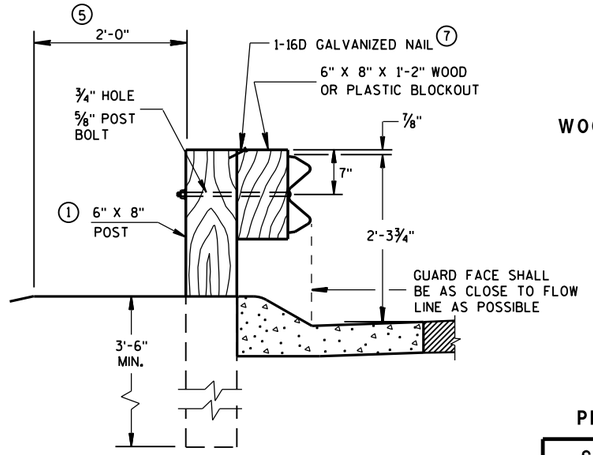
TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

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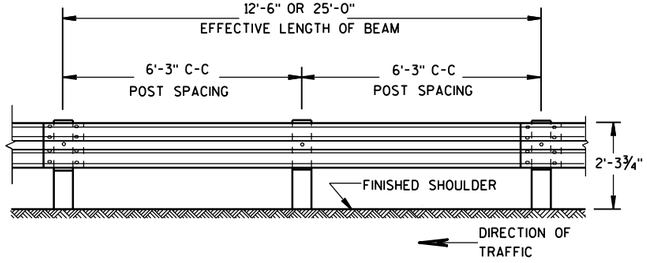
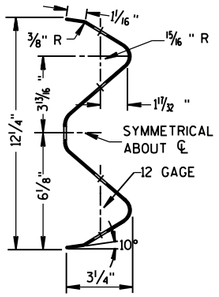
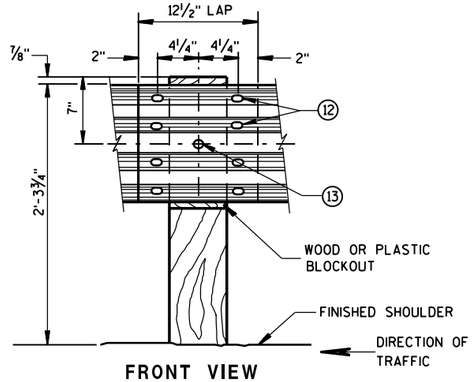


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

(8) PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

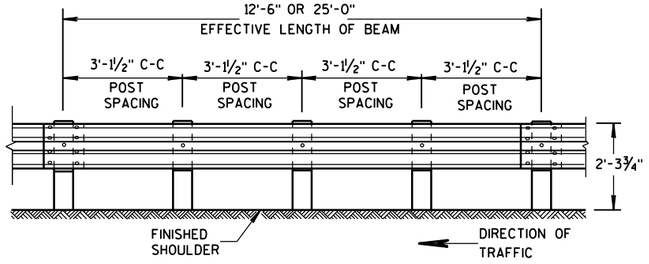
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

(10) REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

(11) PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

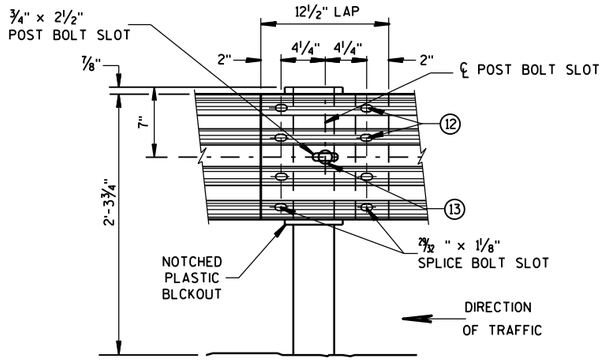
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

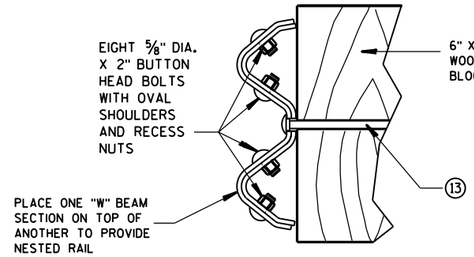
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

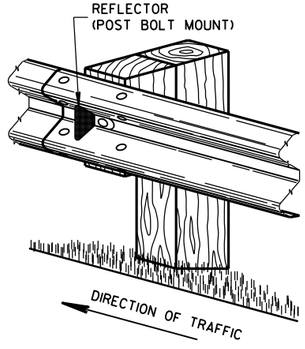


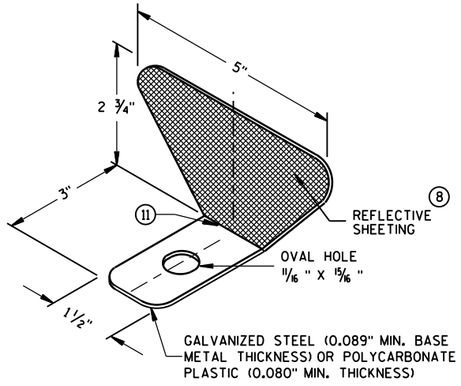
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING (9)

	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 (10)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 (11)	3
	> 200'	100' C-C	2	





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (8)

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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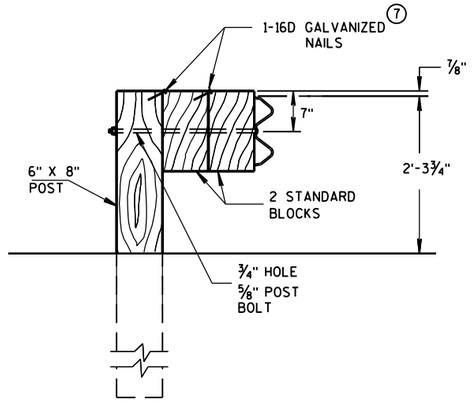
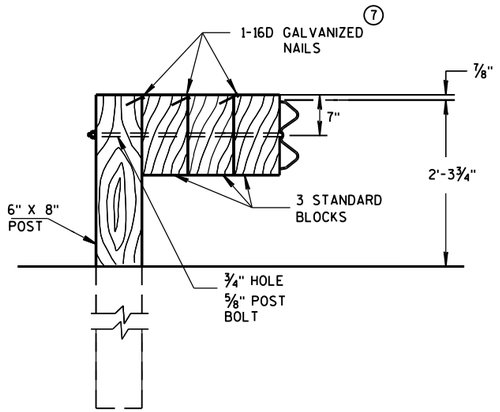


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

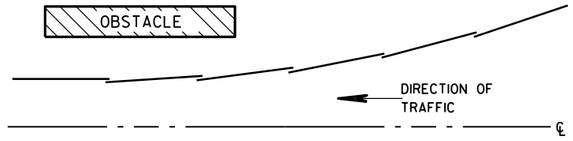


DETAIL FOR TRIPLE BLOCKS

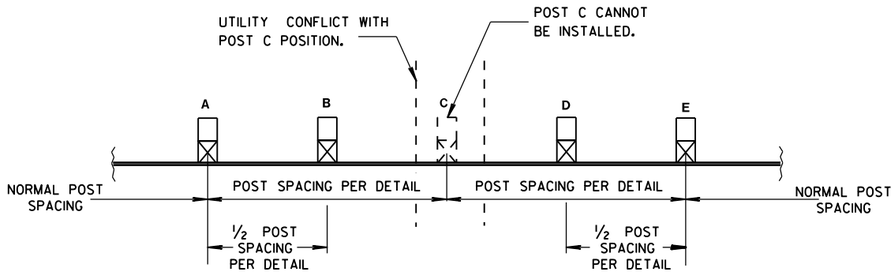
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

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.



PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

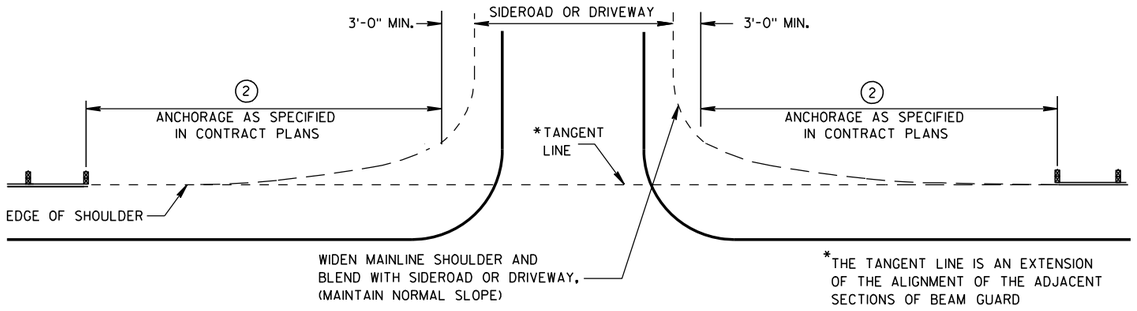
STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

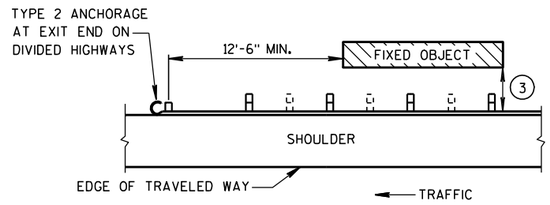
APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 15-8c



BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH 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.

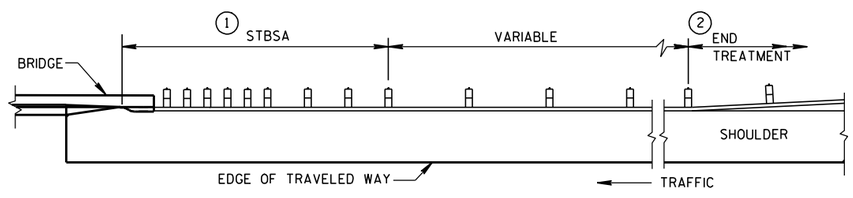
THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

(1) STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.

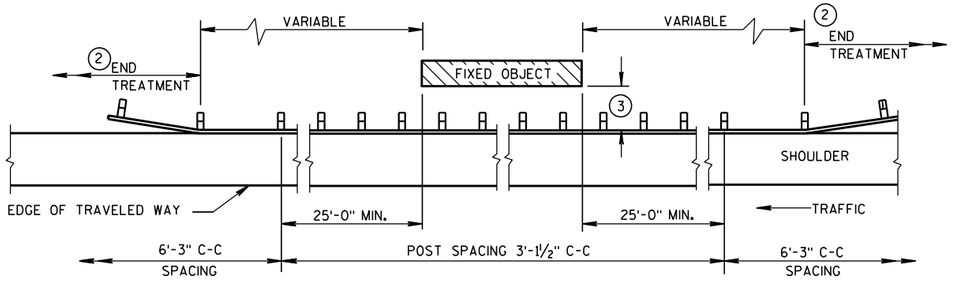
(2) USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

(3)

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1½"
4'-6"	6' - 3"

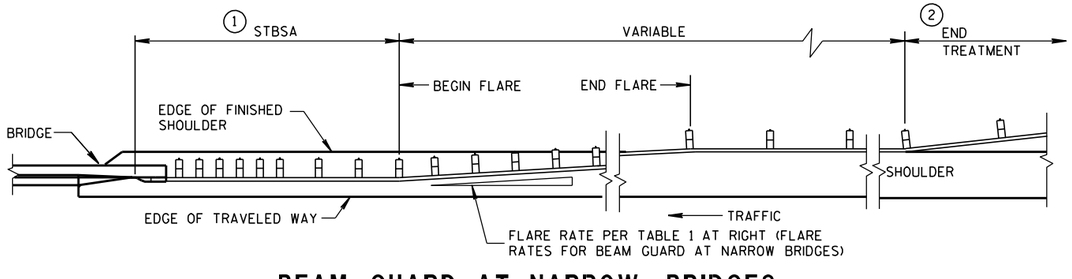


BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")



BEAM GUARD AT NARROW BRIDGES
(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

TABLE 1
FLARE RATES FOR BEAM GUARD AT NARROW BRIDGES

POSTED SPEED (MPH)	FLARE RATE
25	13:1
30	15:1
35	16:1
40	18:1
45	21:1
50	24:1
55	26:1
65	30:1

STEEL PLATE BEAM GUARD CLASS "A" AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-21-07 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 14 B 18-6a

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	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(15)	1	E.A.T. MARKER POST

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL ⅝" ø X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

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

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

(C) 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.

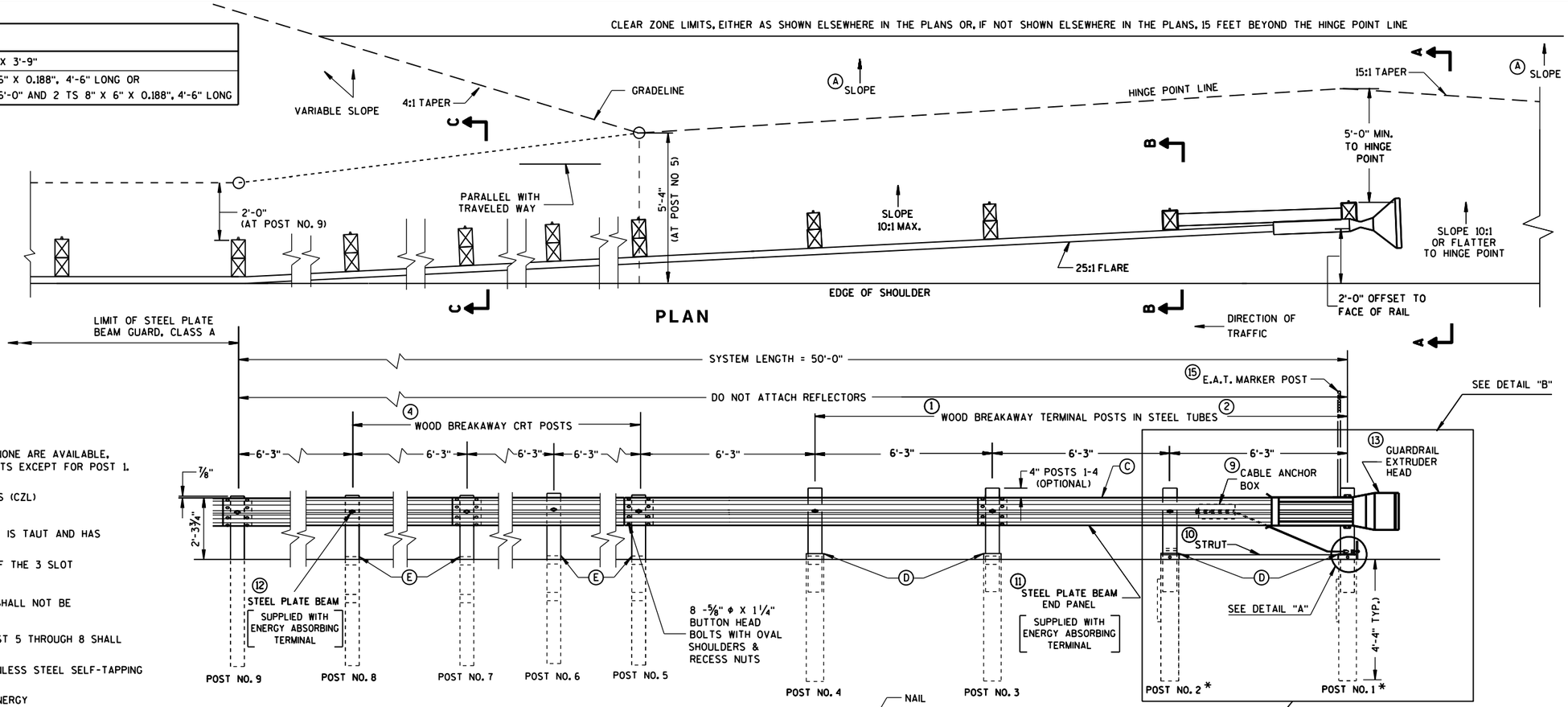
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

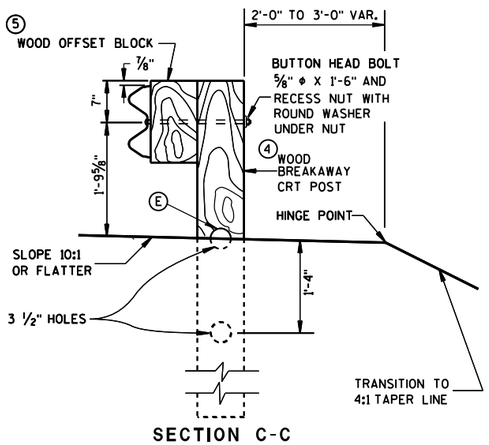
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

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

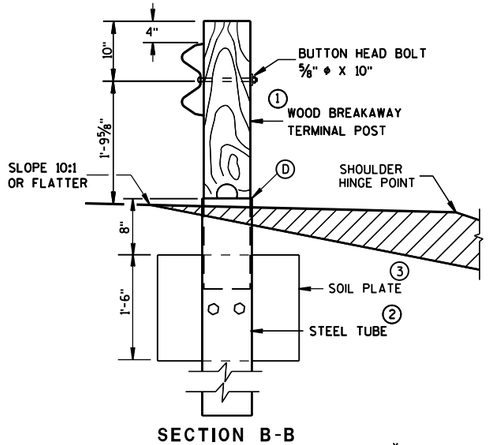
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

** 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.

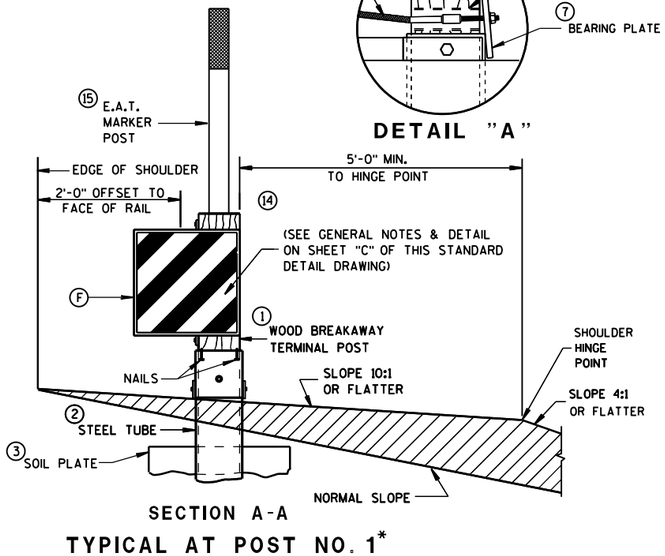




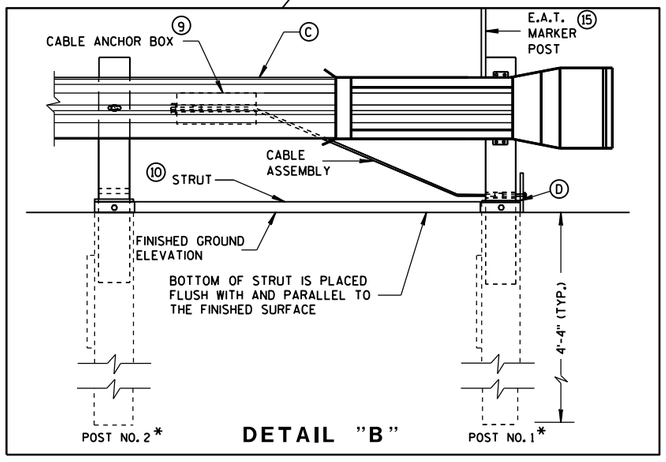
SECTION C-C
TYPICAL AT POST NOS. 6, 8



SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*

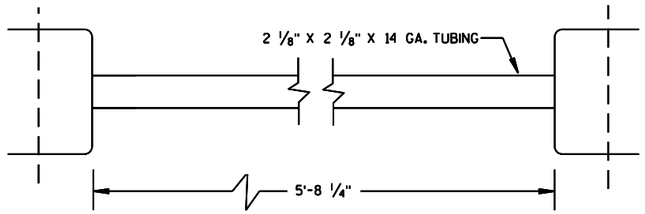


DETAIL "B"

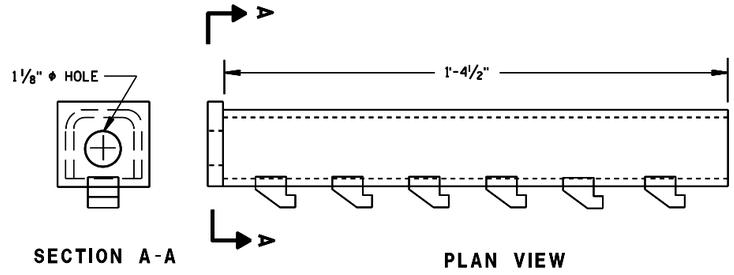
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

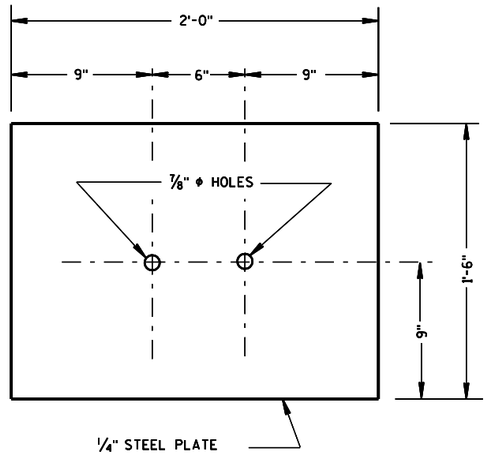
6
S.D.D. 14 B 24-8a



⑩ STRUT DETAIL (SKT-350)

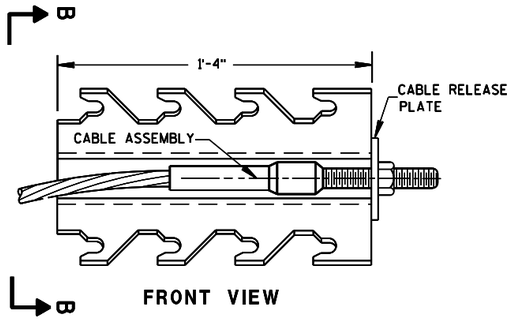


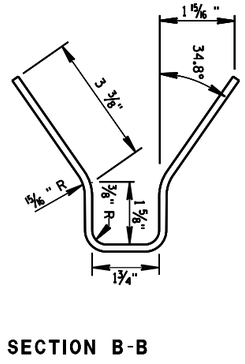
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



③ SOIL PLATE

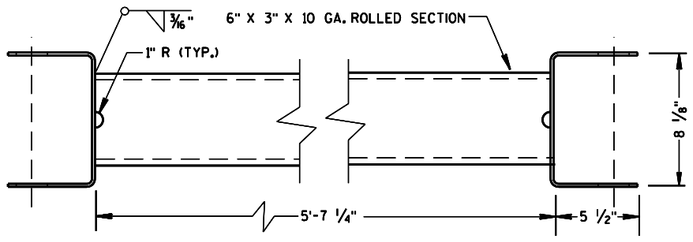
(SKT-350, ET-2000/ET-2000 PLUS)





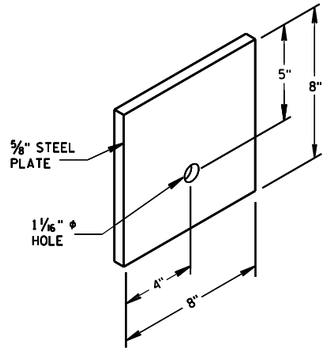
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



⑦ STEEL BEARING PLATE

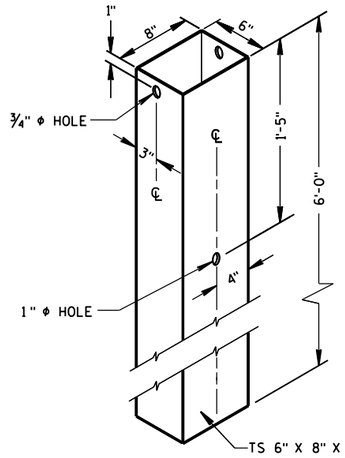
(SKT-350, ET-2000/ET-2000 PLUS)

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

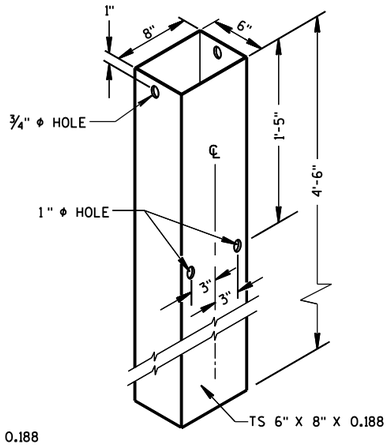
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

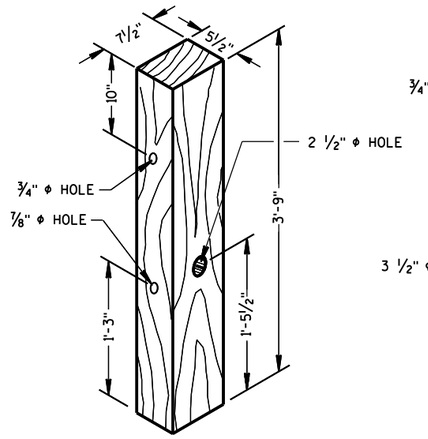
S.D.D. 14 B 24-8b



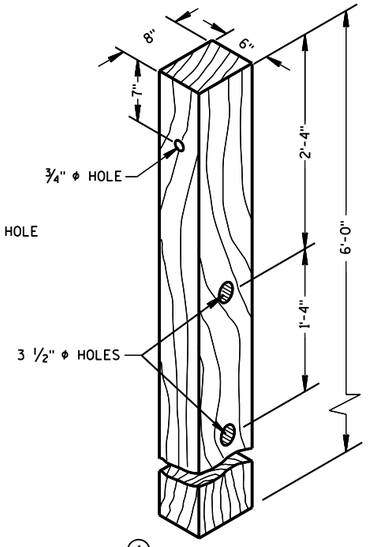
② 72" STEEL TUBE
(POSTS NO. 1-4



② 54" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST
(POSTS NO. 1-4



④ CRT POST
(POSTS NO'S 5-8

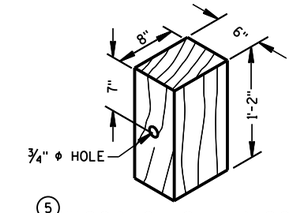
WOOD BREAKAWAY POSTS

GENERAL NOTES

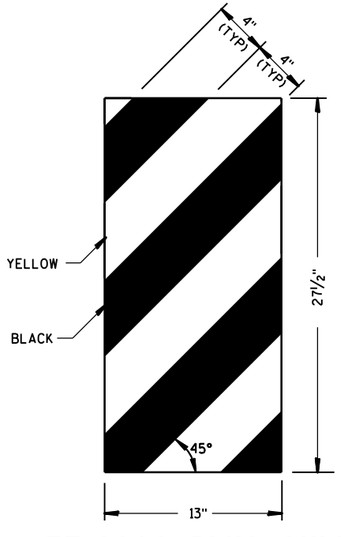
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, 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.

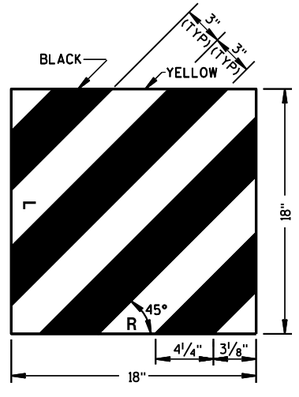
(G) ½" DIA. X 3" LAG BOLT WITH WASHER.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

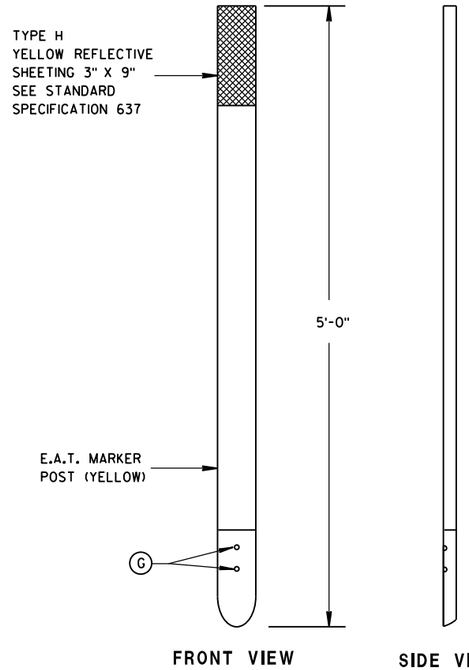


ET-2000 PLUS ONLY



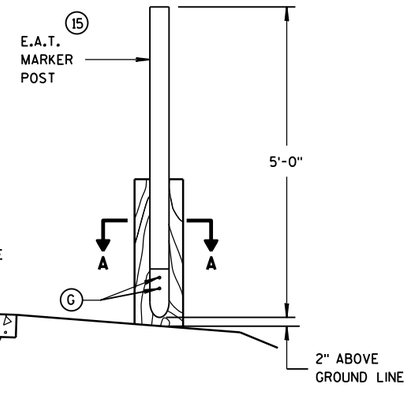
ET-2000 AND SKT-350

⑭ REFLECTIVE SHEETING DETAILS

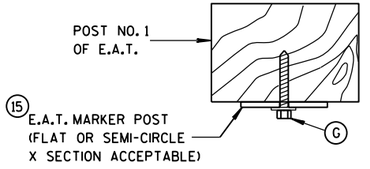


FRONT VIEW SIDE VIEW

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

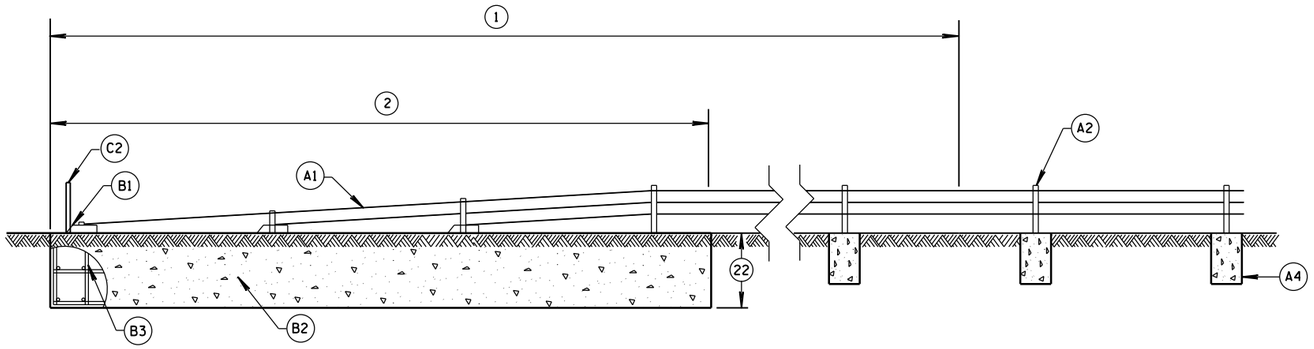
APPROVED
June 2014
DATE
/S/ Jerry H. Zoda
ROADWAY STANDARDS ENGINEER
FHWA

6

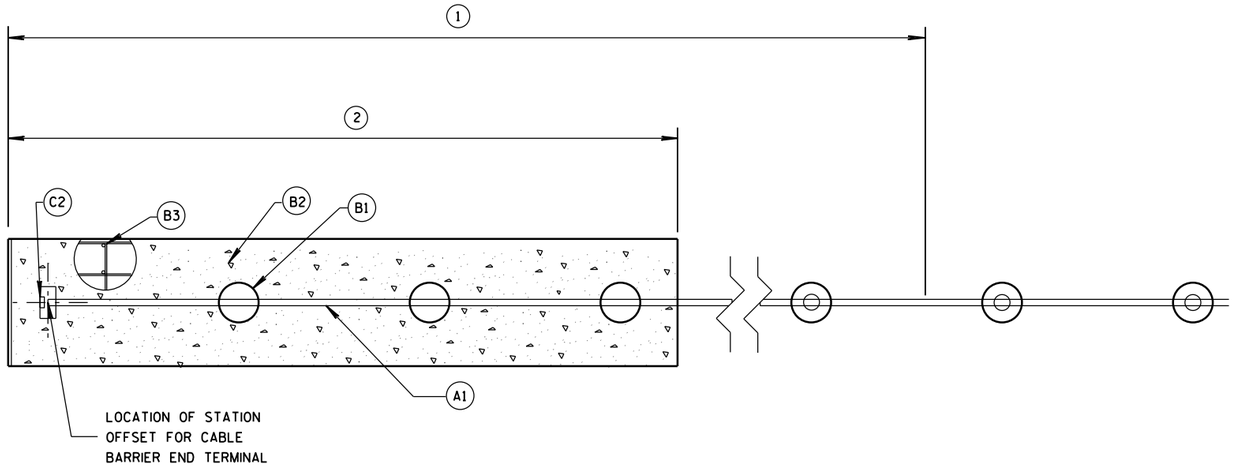
S.D.D. 14 B 24-8c

6

S.D.D. 14 B 24-8c

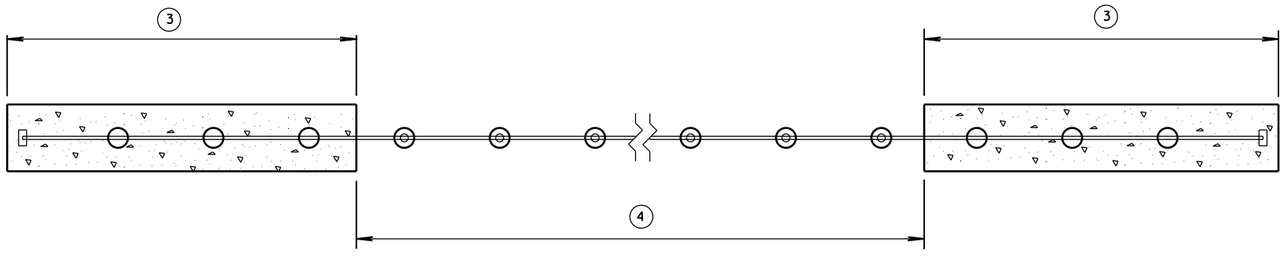


PROFILE VIEW



PLAN VIEW

TRANSITION FROM CABLE BARRIER TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW

GENERAL NOTES

DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.

PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.

INSTALL LINE POST PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.

PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.

PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICTED IN PLAN.

PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.

PROVIDE A WISCONSIN PROFESSIONAL ENGINEERS STAMPED ANALYSIS THAT THE LINE POST AND CABLE BARRIER END TERMINAL FOOTINGS ARE DESIGNED FOR THE SOIL CONDITIONS PRESENT. THE WISCONSIN P.E. STAMP ANALYSIS IS TO INCLUDE, BUT IS NOT LIMITED TO: DESIGN IMPACT LOADS, FOUNDATION DEISGN METHODOLOGY USED, FACTORS OF SAFETY, SOIL TYPE, SOIL CONDITIONS, AND TEMPERATURE RANGES.

DESIGN LINE POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A TL-3 SMALL CAR.

BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
(A1)	3 OR 4	3/4" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	ASTM A741 MIN. BREAKING STRENGTH 39,000 LBS.
			AASHTO M30 TYPE 1 CLASS A (GALVANIATION).
			MINIMUM WIRE ROPE MODULUS OF ELASTICITY OF 19,000 PSI ACCORDING TO ISO 12067-202 WIRE ROPE MODULUS OF ELASTICITY "INITIAL" (AS MANUFACTURED), WITH NO BEDDING OR PRESTRECHING OF THE ROPE PERMITTED DURING TESTING.
(A2)	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A3)	1 PER LINE POST	GALVANIZED METAL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A4)	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES.
			STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
			SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
(A5)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(A6)	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
			MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE.
			TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS.
(B1)	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
(B2)	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2.
			STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
(B3)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(C1)	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST YELLOW.
(C2)	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN.

(1) LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(2) PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

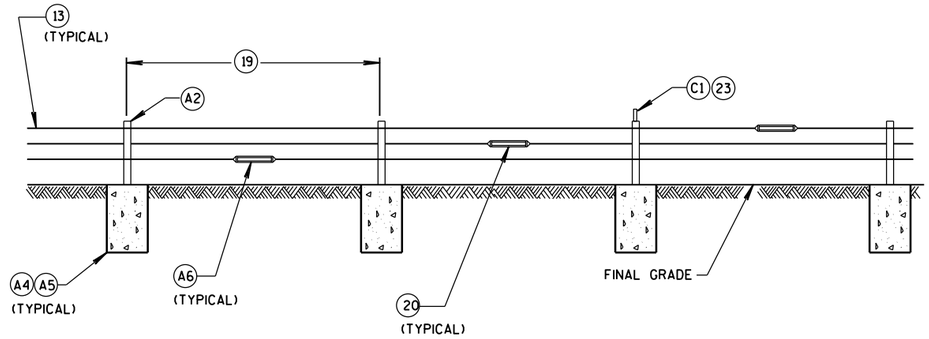
(3) CABLE BARRIER END TERMINAL

(4) CABLE BARRIER AND LINE POSTS

CABLE BARRIER TYPE 1 LAYOUT

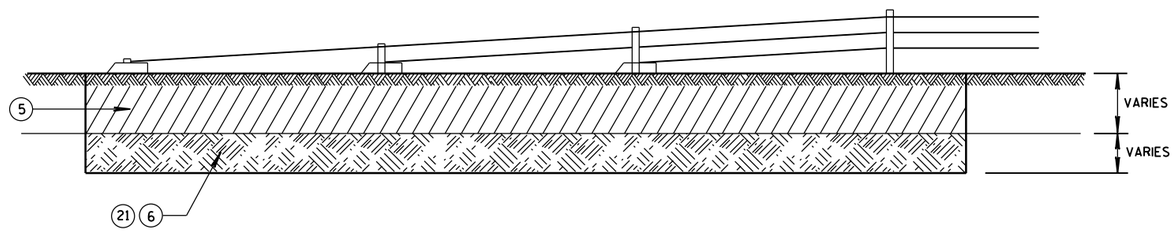
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 52-1a



PROFILE VIEW

LINE POST INSTALLATION



CABLE BARRIER END TERMINAL ROCK EXCAVATION DETAIL

(5) SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).

(6) ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).

(7) SOIL TO BE EXCAVATED FOR LINE POST (VARIES).

(8) ROCK TO BE EXCAVATED FOR LINE POST (VARIES).

(9) EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.

(10) 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.

(11) DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURER'S INFORMATION.

(12) MINIMUM DEPTH OF LINE POST FOOTING IS 48 INCHES IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.

(13) NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURER'S INFORMATION.

(14) LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURER'S INFORMATION.

(15) LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.

(16) PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

(17) GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

(18) CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.

(19) MAXIMUM POST SPACING IS 15 FEET.

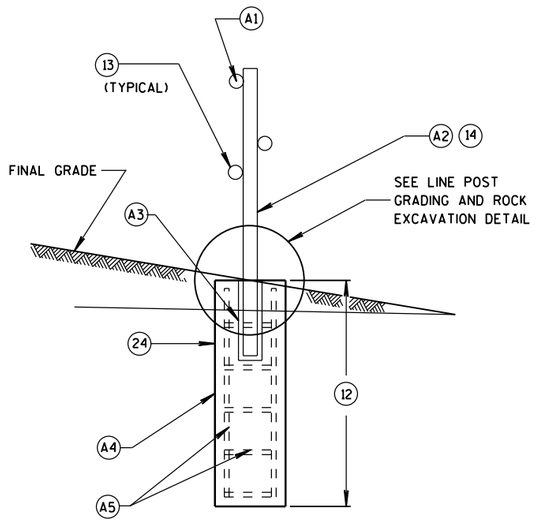
(20) STAGGER TURNBUCKLES (TYPICAL).

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

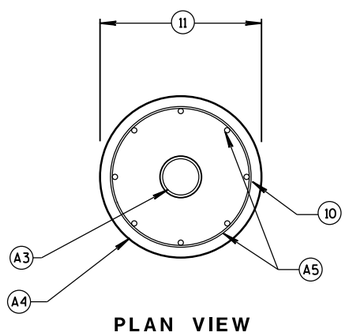
(22) IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENATION ARE ACCEPTABLE.

(23) LINE POST DELINEATOR SPACING IS 100 FEET.

(24) LINE POST FOOTINGS ARE REQUIRED TO HAVE LESS THAN 1 INCH OF MOVEMENT WHEN LINE POST IS IMPACTED BY A NCHRP 350 SMALL CAR UNDER TL-3 TEST CONDITIONS.

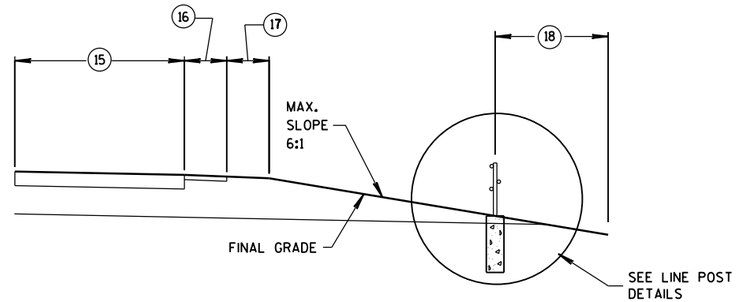


CROSS SECTION

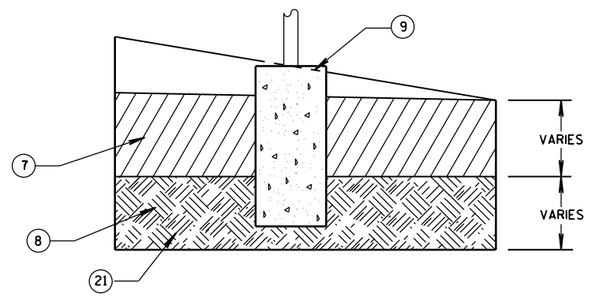


PLAN VIEW
(LINE POST AND CABLES NOT SHOWN)

LINE POST DETAILS



CABLE BARRIER OFFSET FROM DITCH LINE



LINE POST GRADING AND ROCK EXCAVATION DETAIL

CABLE BARRIER TYPE 1
LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

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

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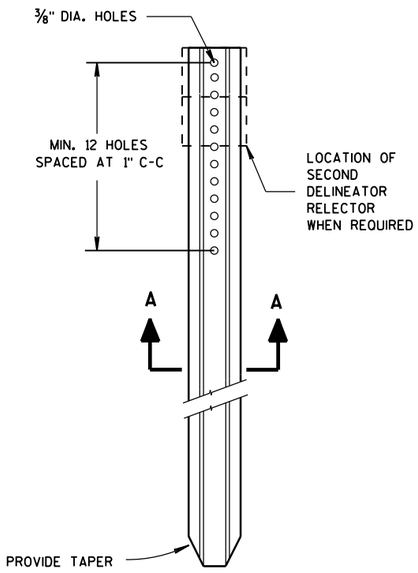
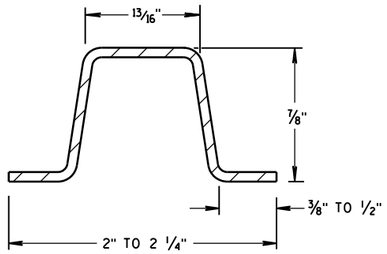
S.D.D. 14 B 52-1b

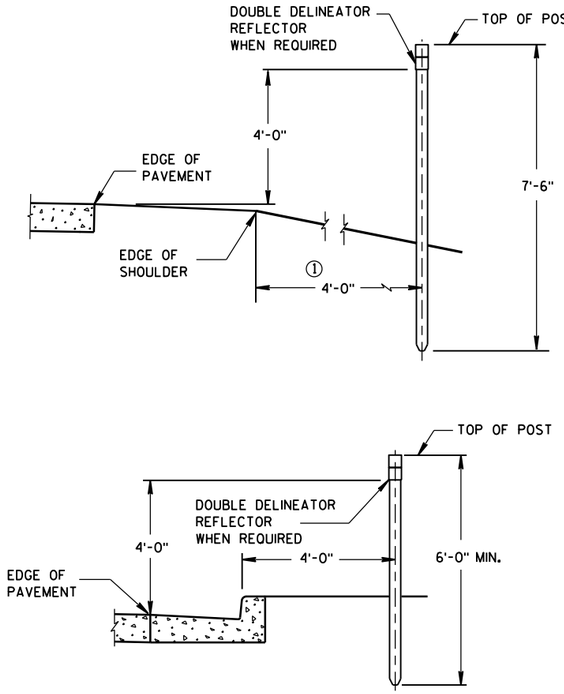


DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

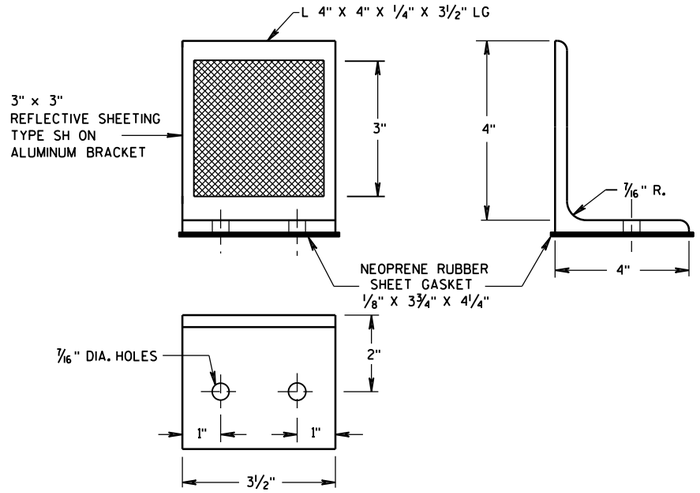


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

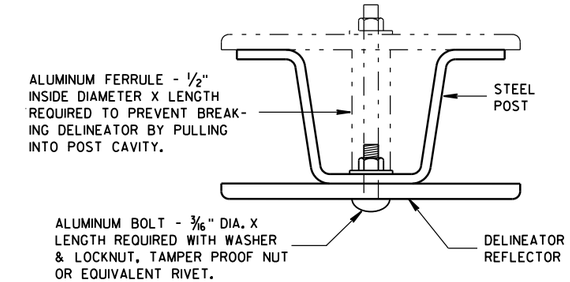
GENERAL NOTES

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

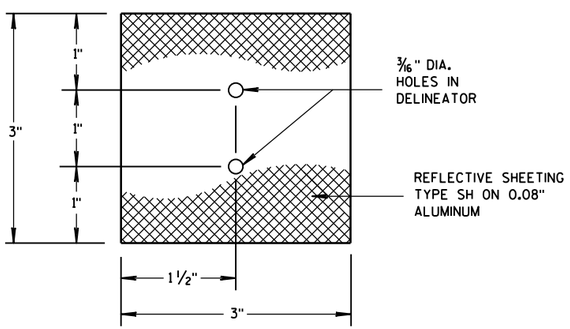
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



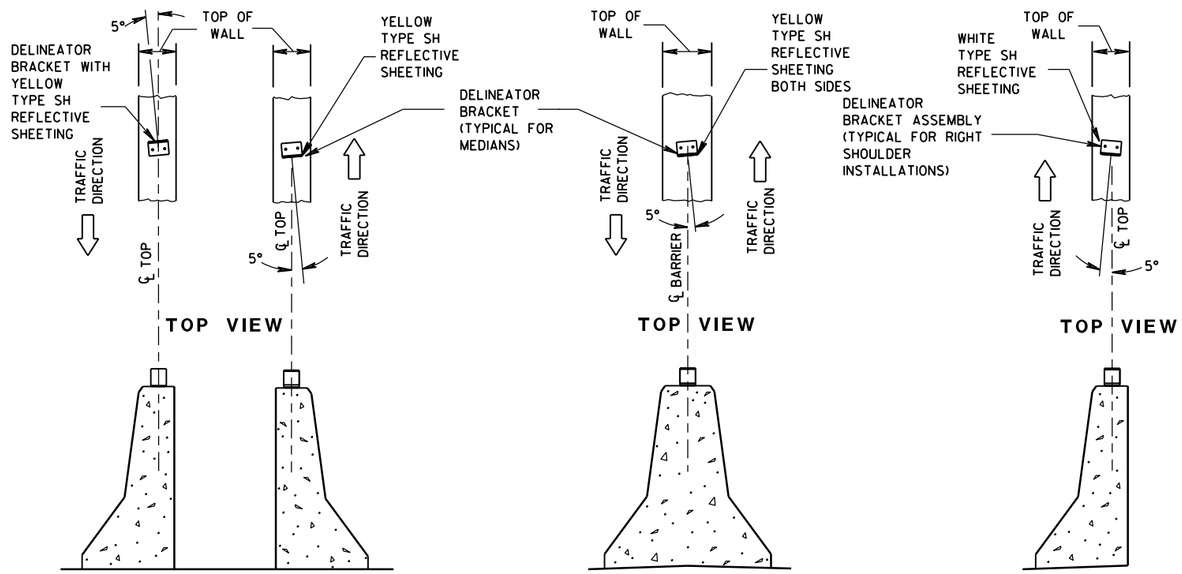
DELINEATOR BRACKET



MOUNTING DETAIL FOR DELINEATOR REFLECTOR

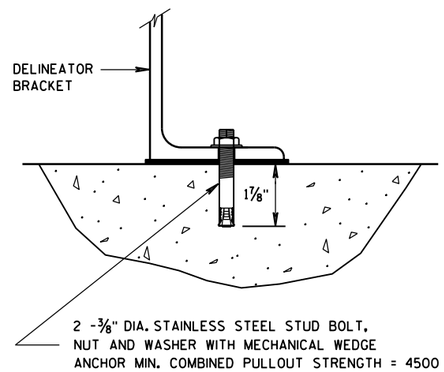


3"x 3" DELINEATOR REFLECTOR



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 REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible] GINEER
FHWA

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S.D.D. 15 A 2-9

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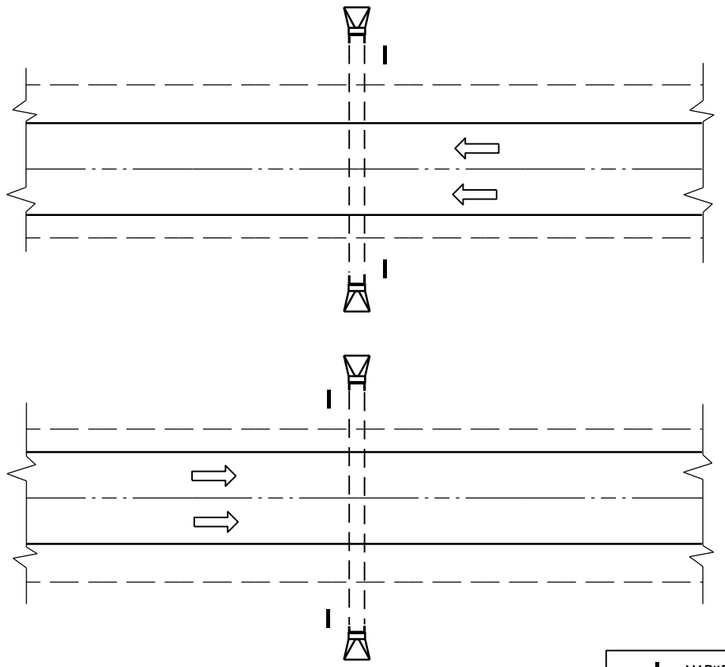
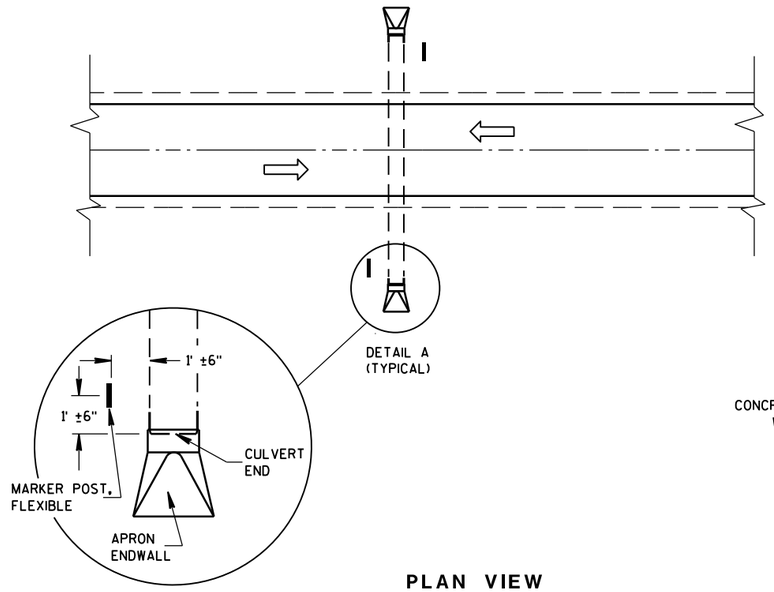
S.D.D. 15 A 2-9



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

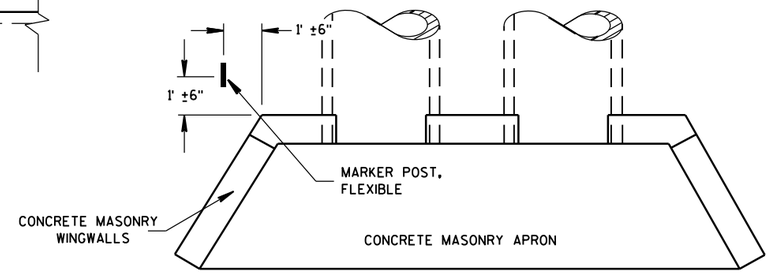
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

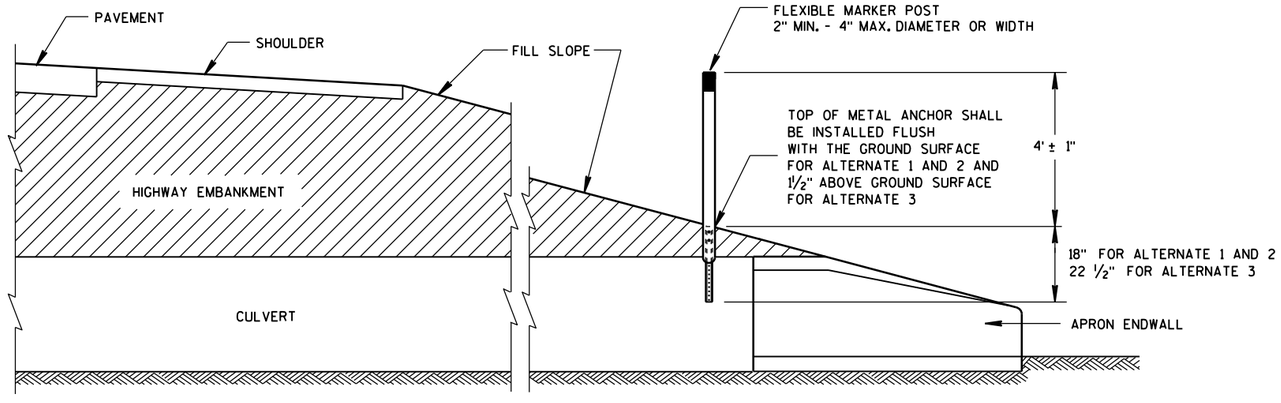
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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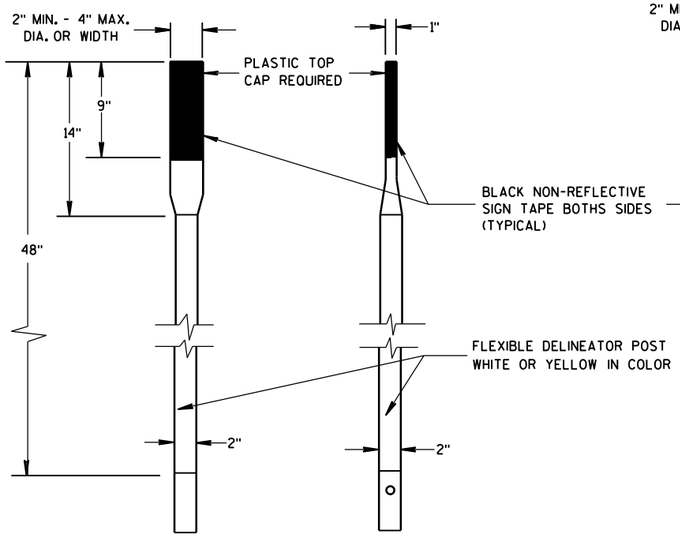
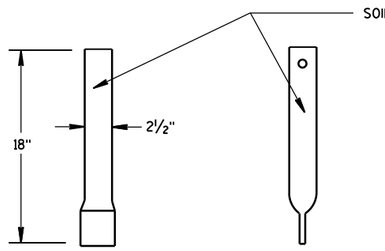
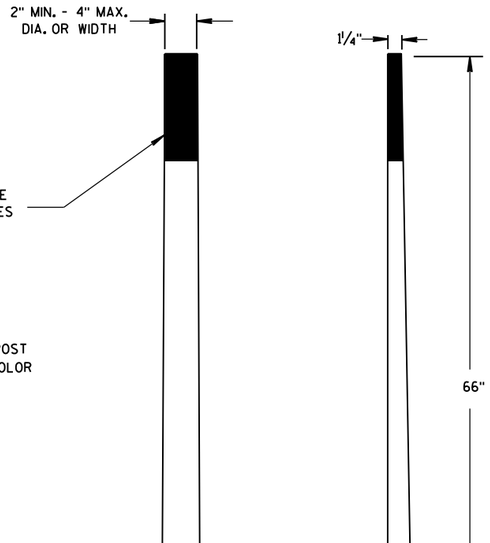
S.D.D. 15 A 3-2a





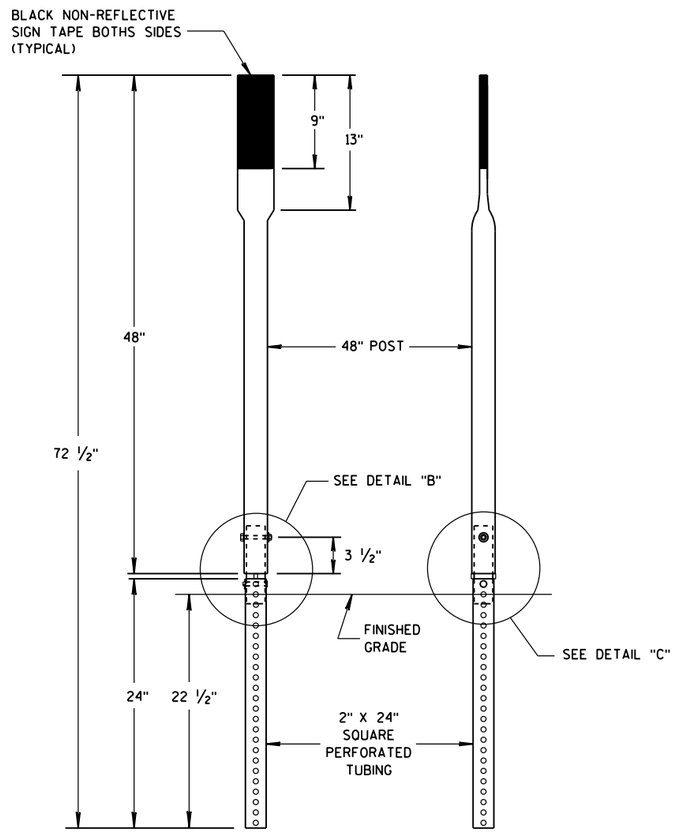
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

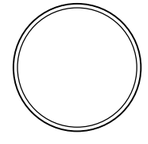
ALTERNATE 2



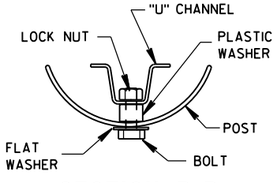
FRONT VIEW SIDE VIEW

ALTERNATE 3

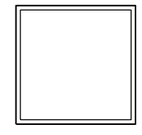
FLEXIBLE MARKER POSTS



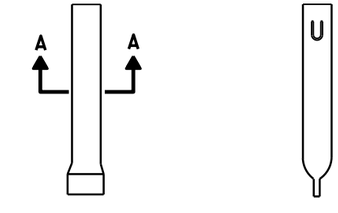
SECTION A-A



SECTION B-B

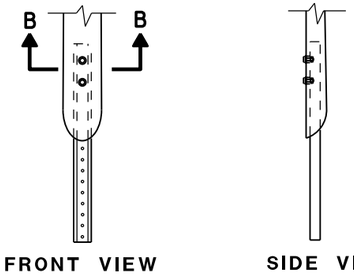


SECTION C-C



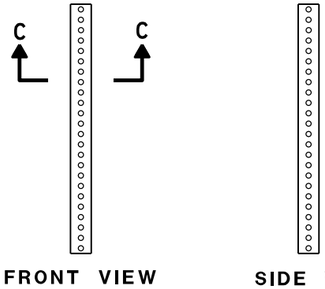
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

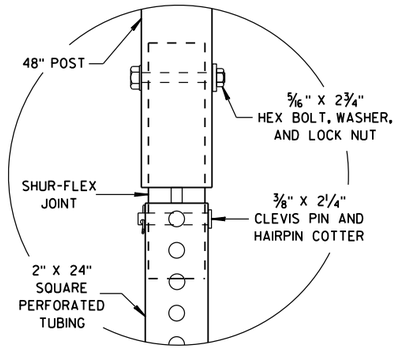
ALTERNATE 2



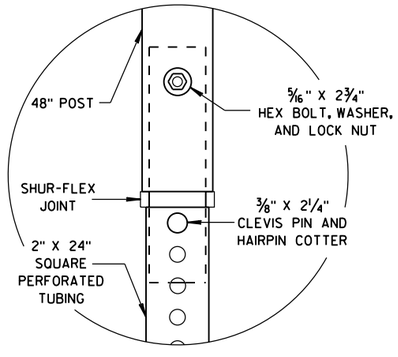
FRONT VIEW SIDE VIEW

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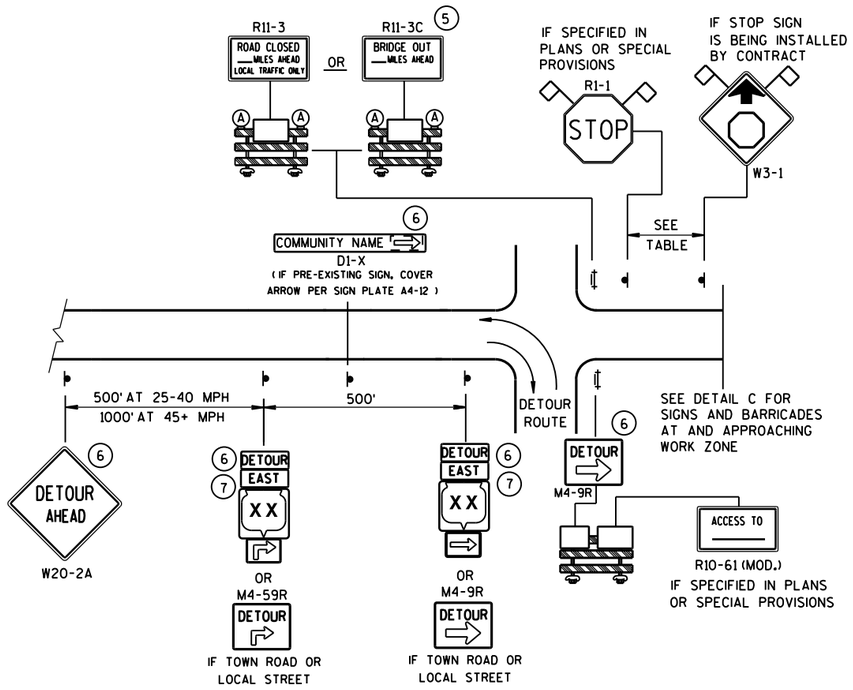
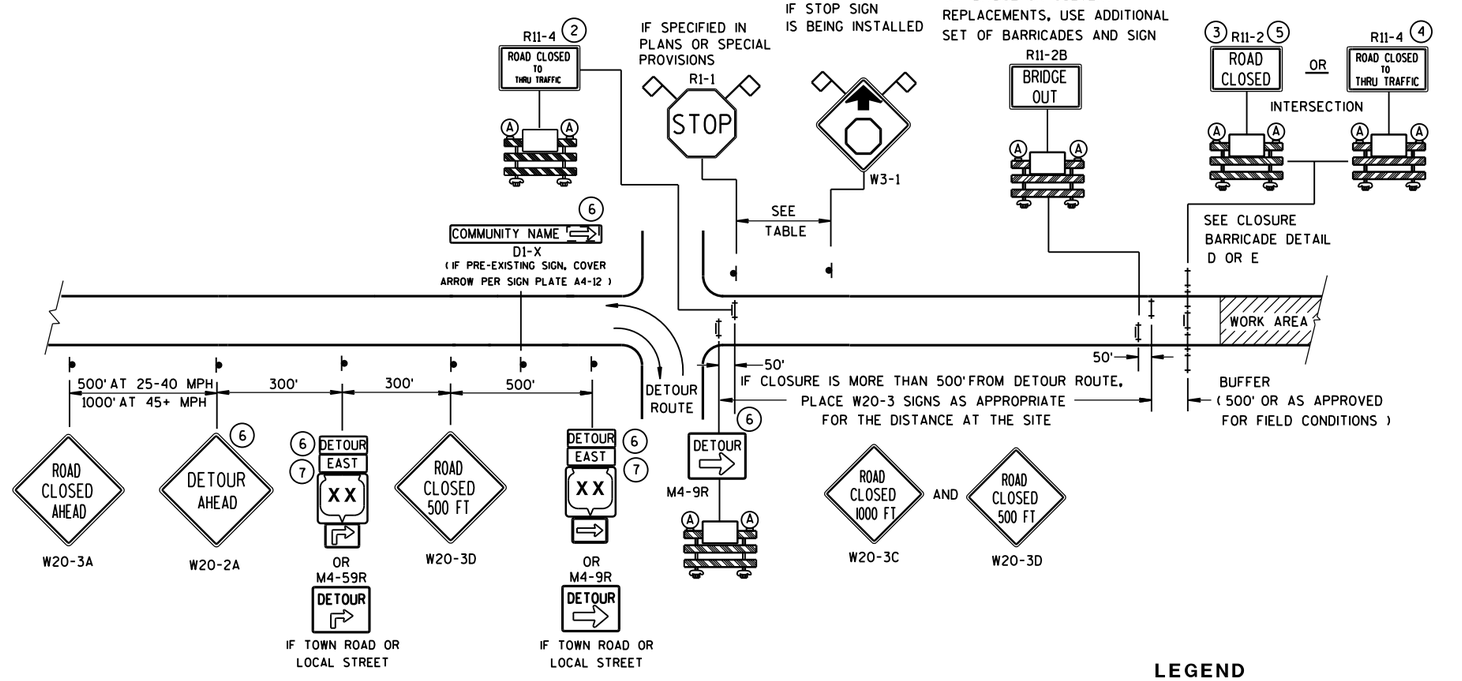
S.D.D. 15 A 3-2b



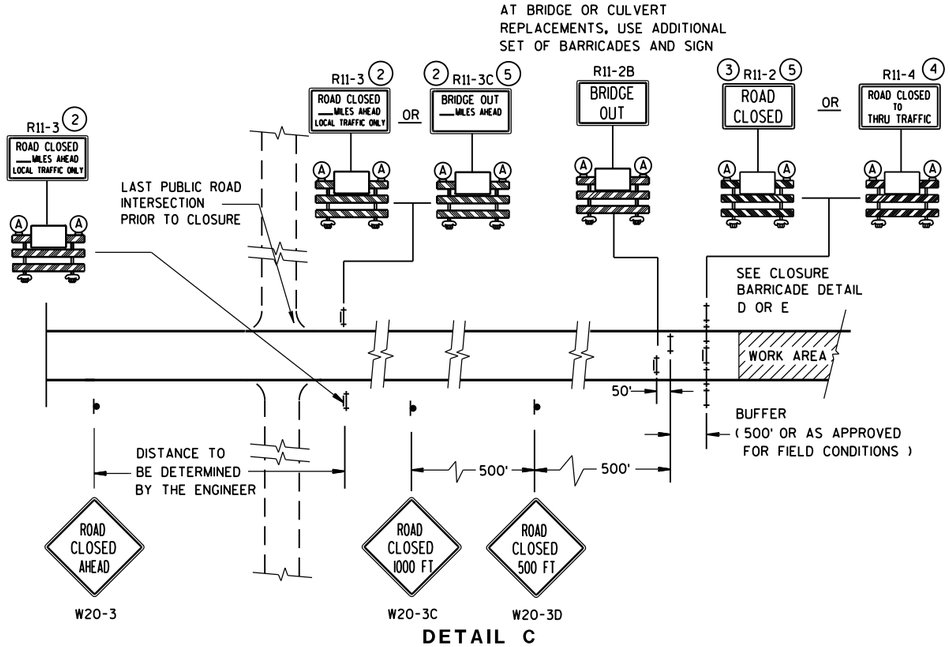
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

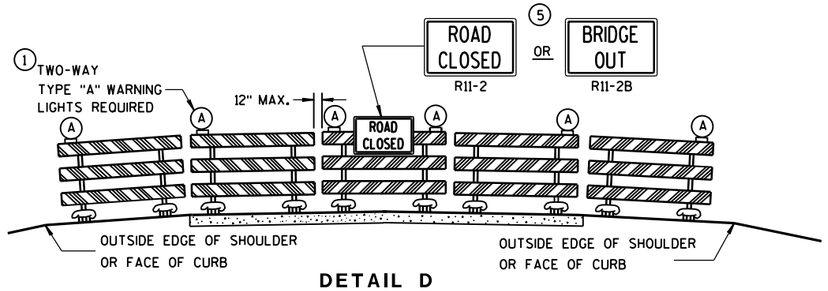
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

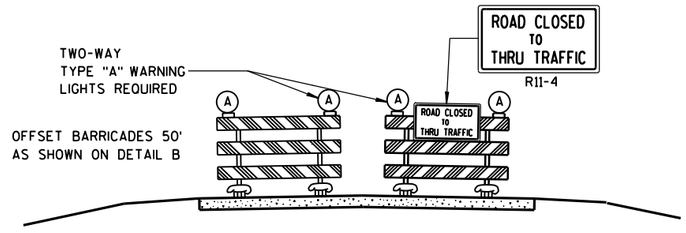
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FIC

FHWA

6

S.D.D. 15 C 2-6b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

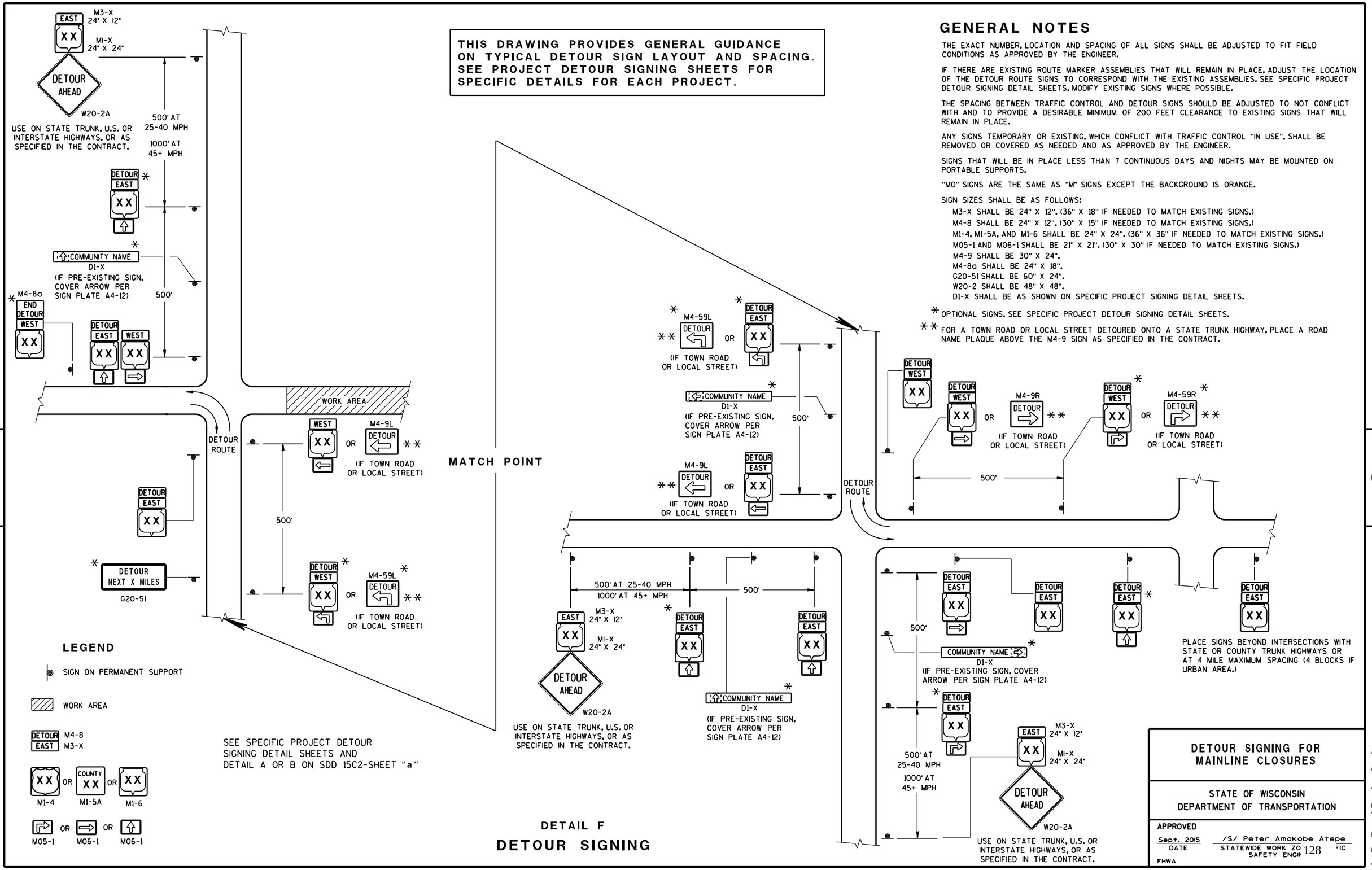
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- MO5-1 AND MO6-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

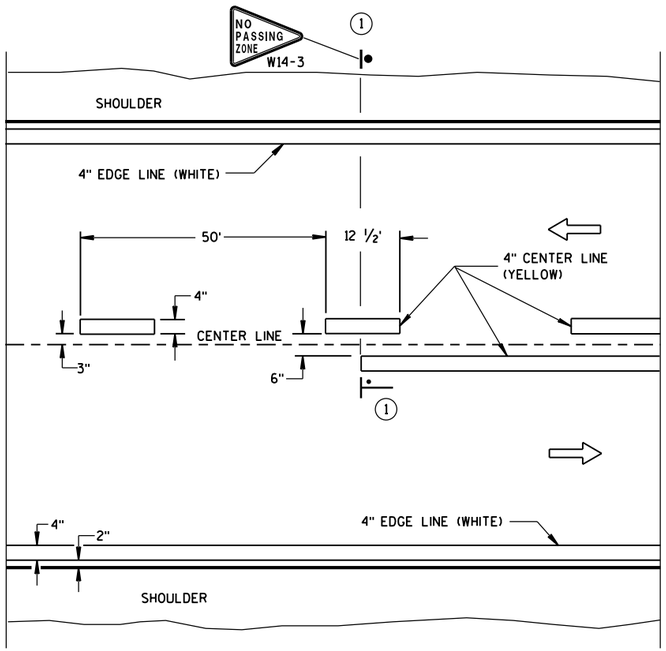
Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI FIC

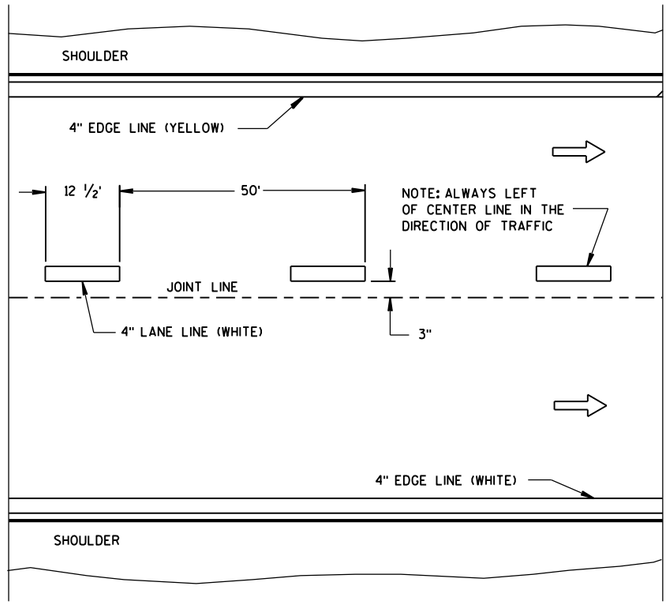
FHWA

S.D.D. 15 C 2-6c

6



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

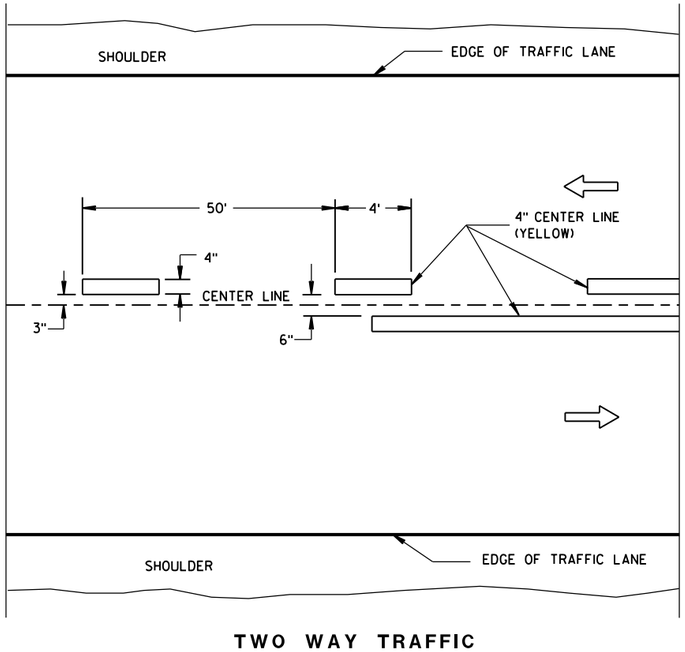
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

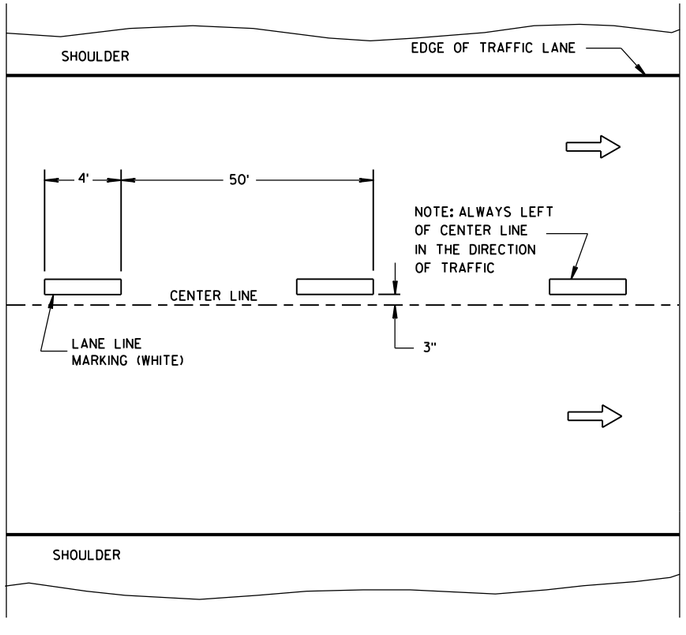
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

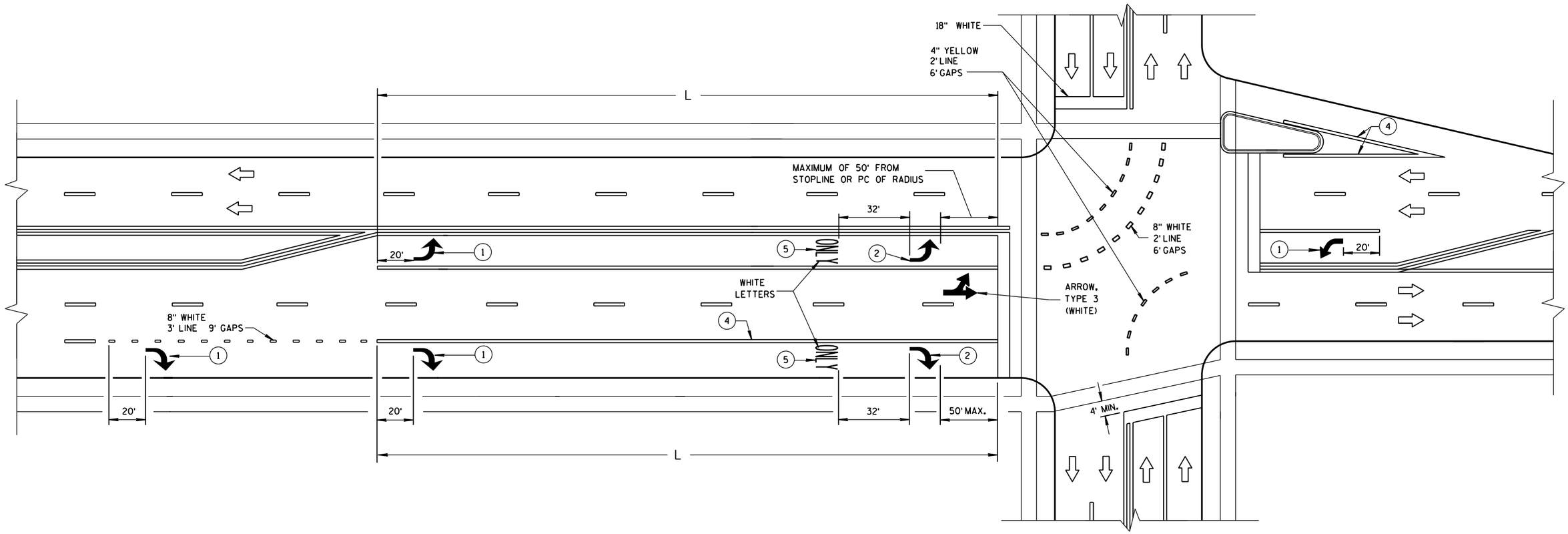
APPROVED
Sept., 2016 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]INEER
FHWA

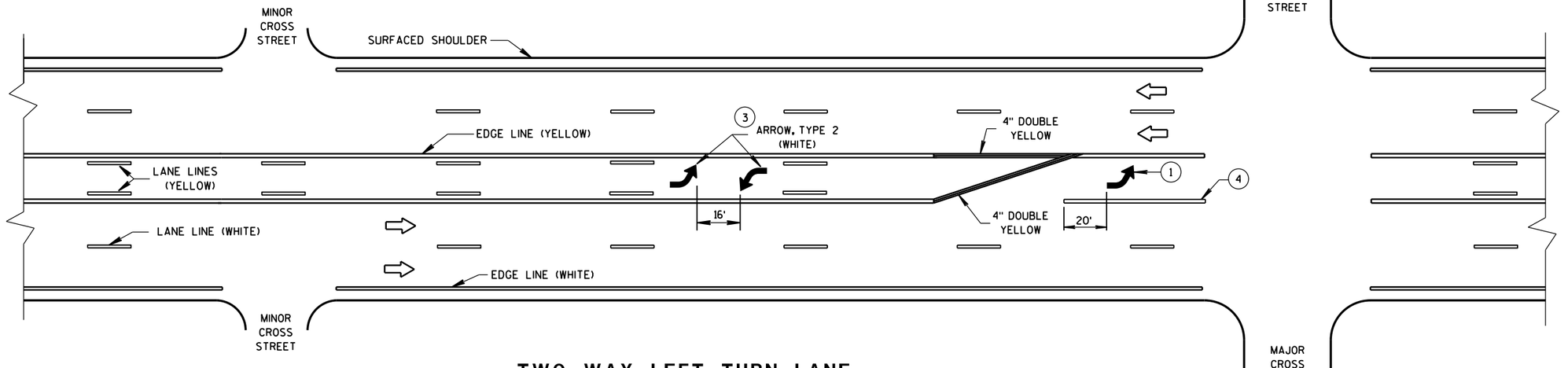
6

S.D.D. 15 C 8-17a

6

S.D.D. 15 C 8-17a





GENERAL NOTES

(1) REQUIRED ARROW, TYPE 2 (WHITE).

(2) REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.

(3) A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

(4) 8" WHITE

(5) REQUIRED WORD ONLY WHEN L IS GREATER THAN 166 FEET.

TWO WAY LEFT TURN LANE

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL

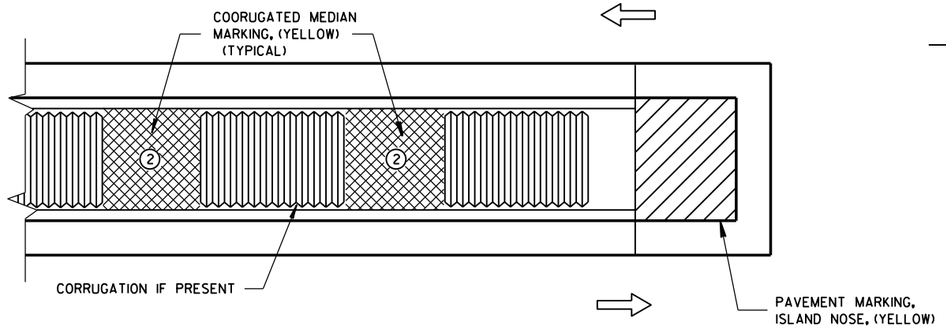
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

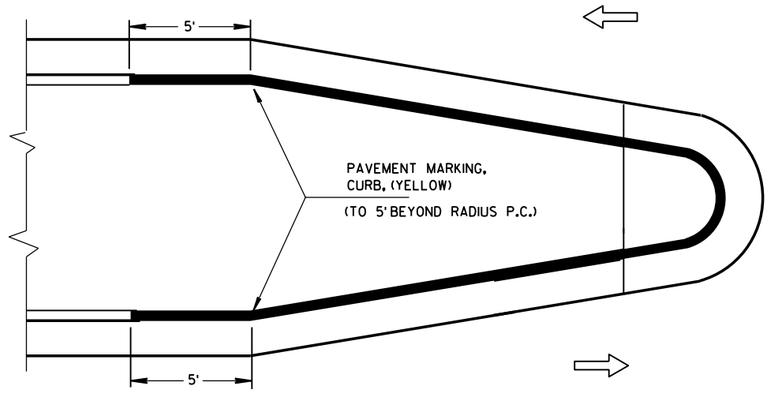
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

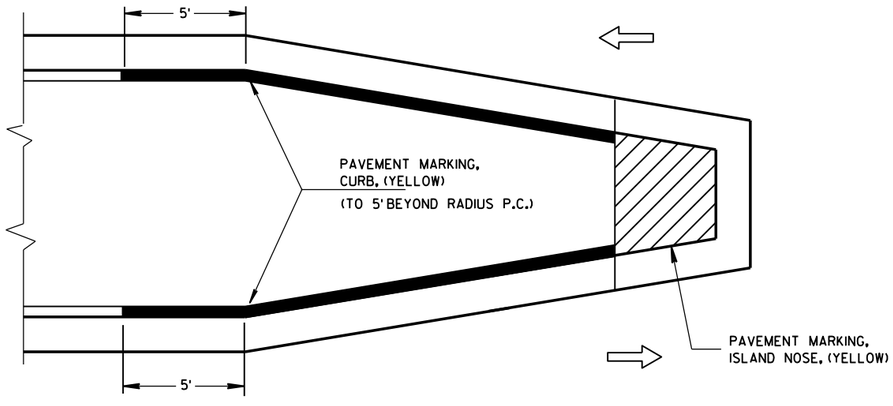
S.D.D. 15 C 8-17b



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

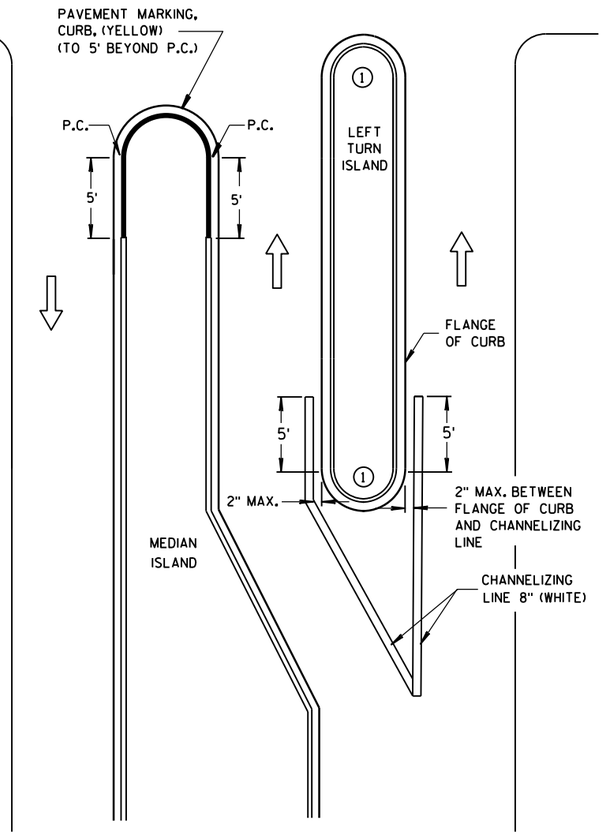


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

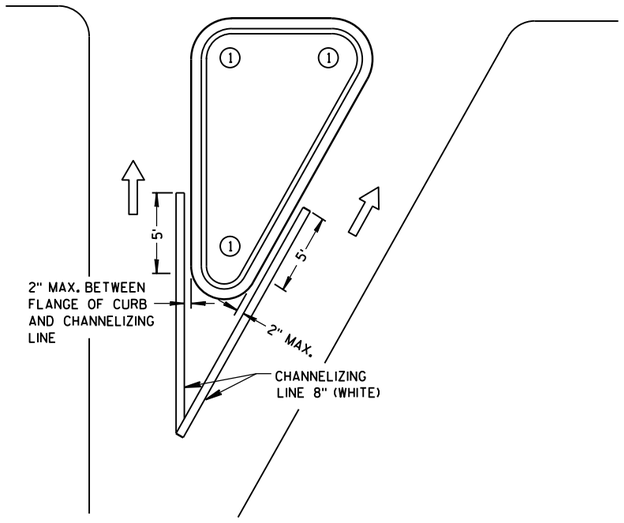


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

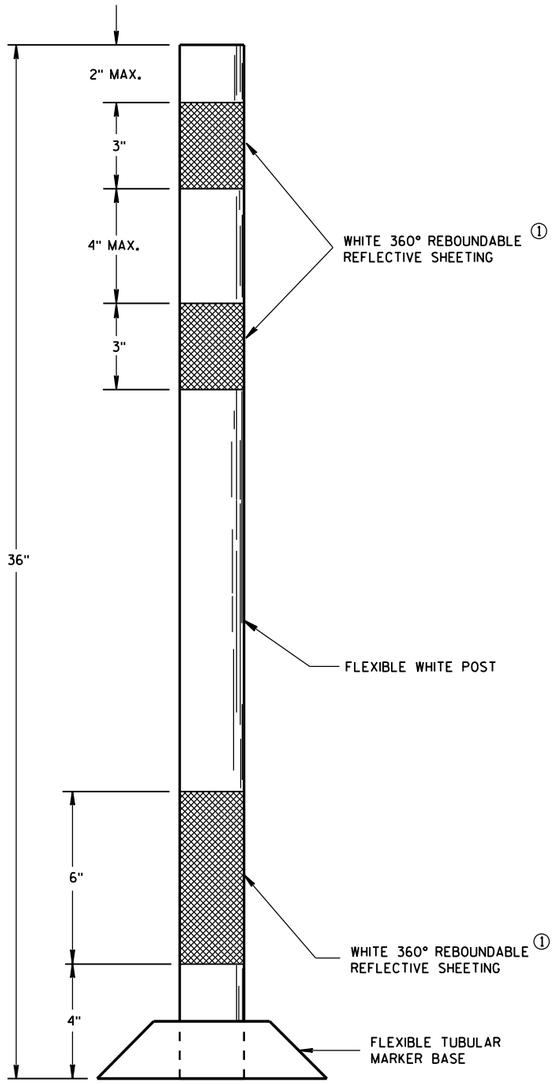
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

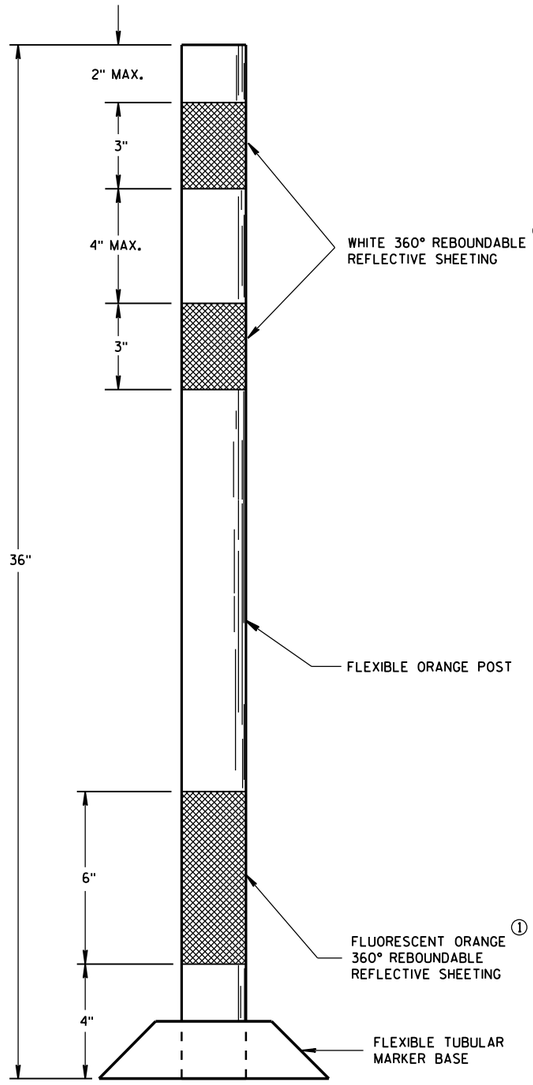
S.D.D. 15 C 8-17c

6

S.D.D. 15 C 8-17c



FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER



FLEXIBLE
TUBULAR MARKER POST
WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

6

6

S.D.D. 15 C 11-6

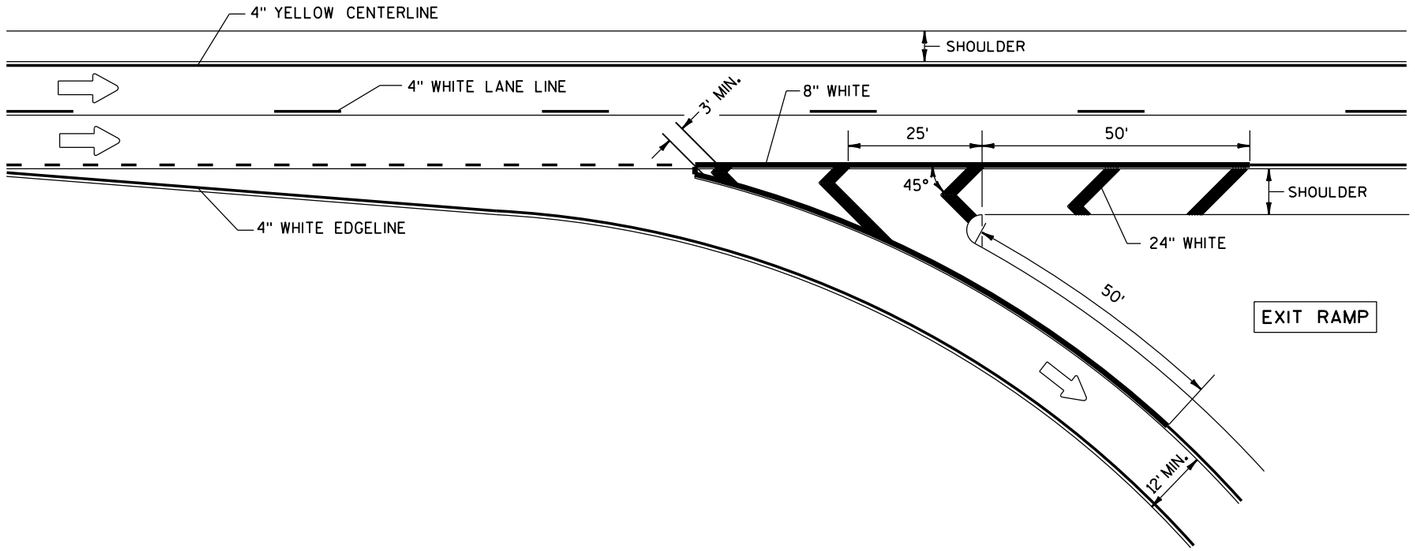
S.D.D. 15 C 11-6

FLEXIBLE TUBULAR MARKER POST

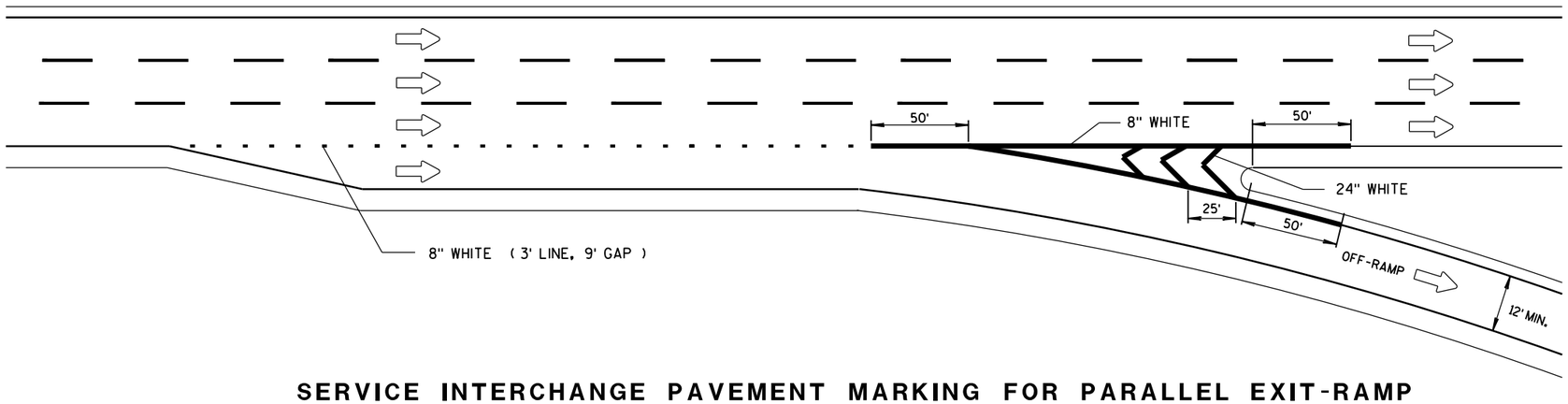
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-16-2015
DATE
FHWA

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZON
SAFETY ENGINE



PAVEMENT MARKING FOR EXIT RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

DIRECTION OF TRAVEL

6

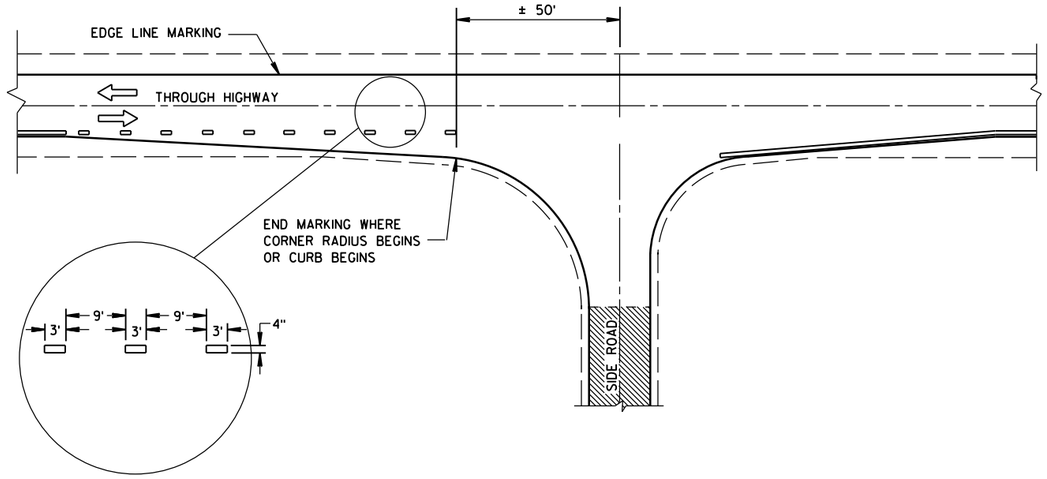
S.D.D. 15 C 31-2a

PAVEMENT MARKING
(RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 C 31-2a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

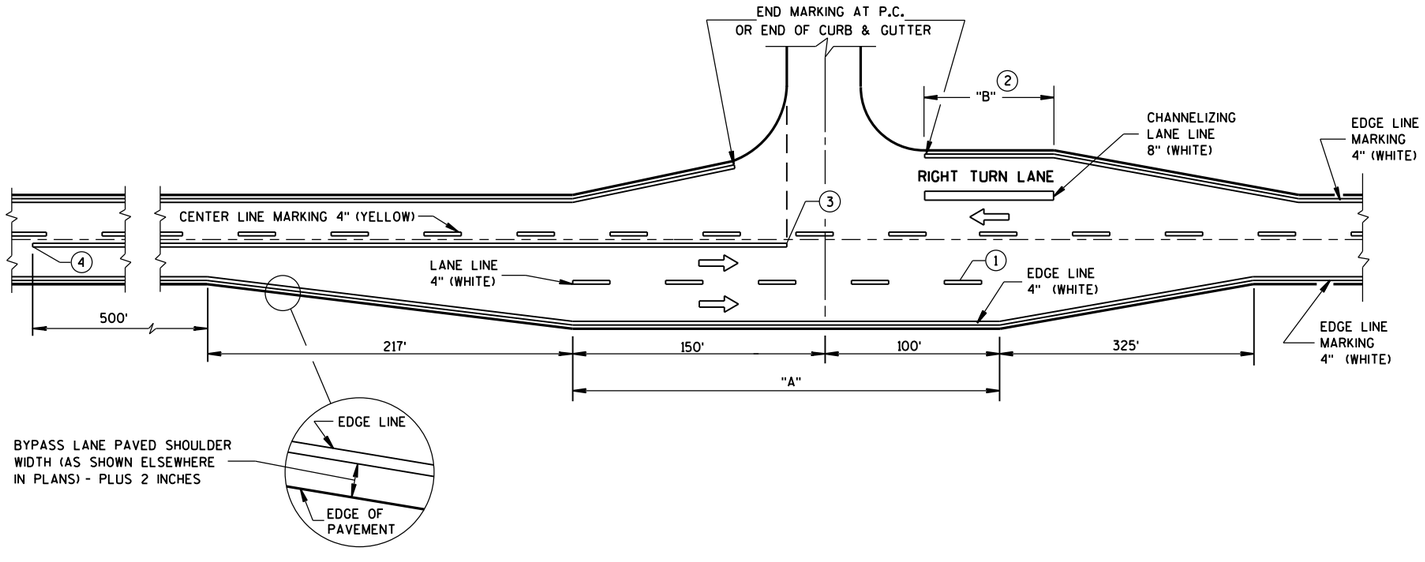
(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(4) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



MAJOR INTERSECTIONS

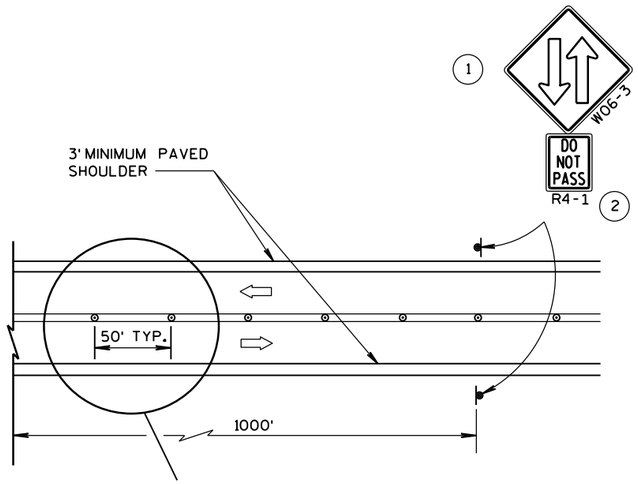
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)

PAVEMENT MARKING
(INTERSECTIONS)

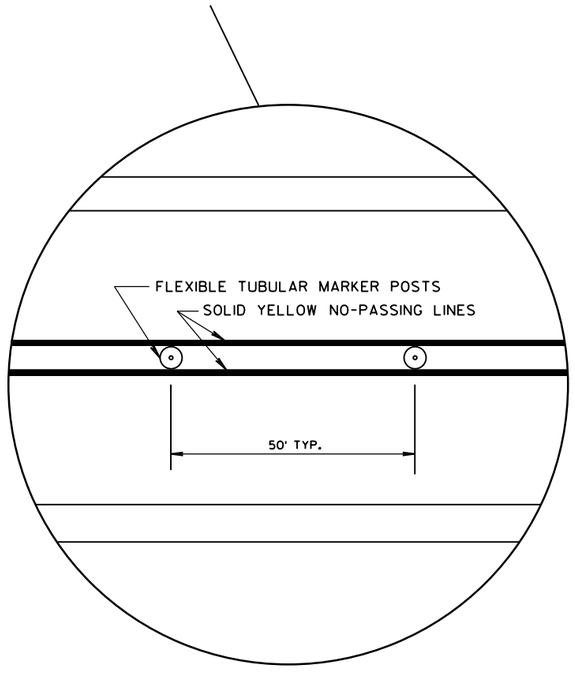
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 C 35-1a



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

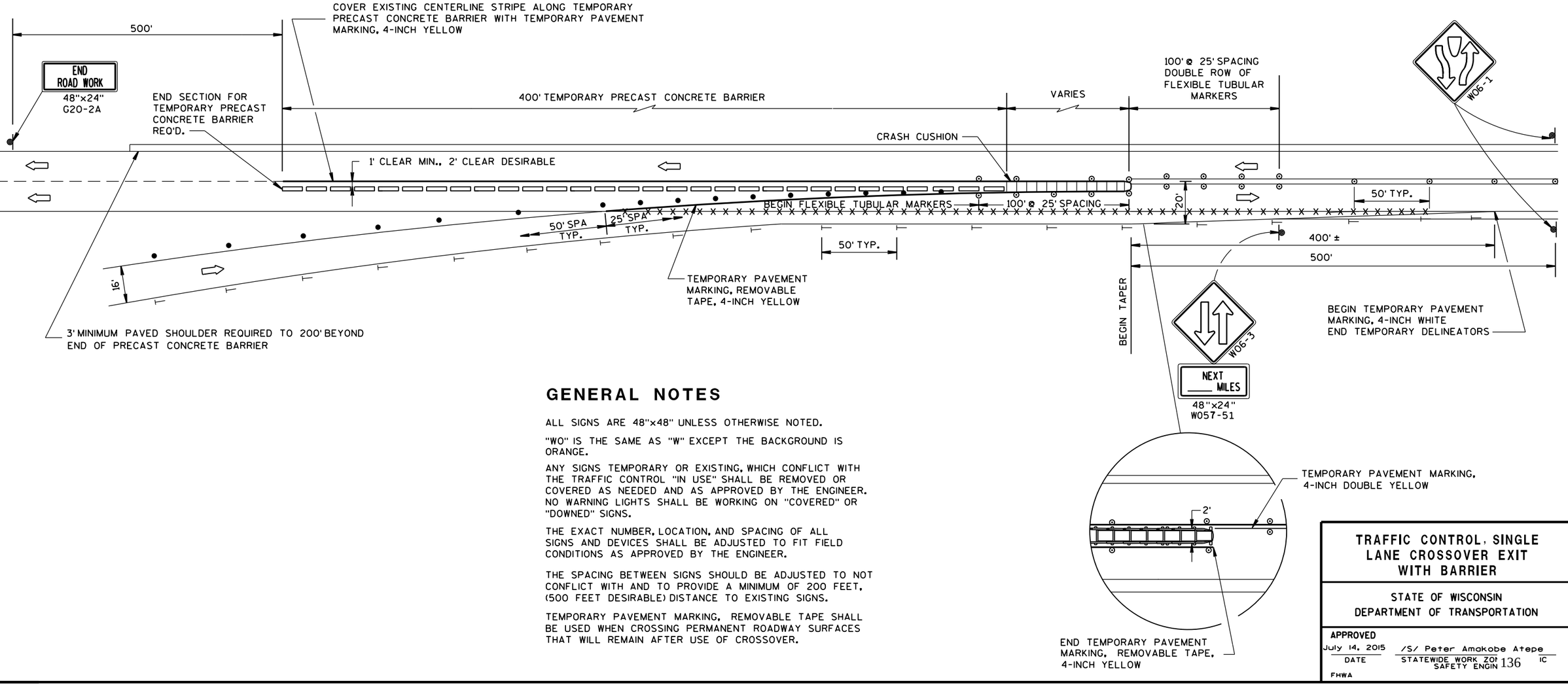
APPROVED
8/2013 DATE
/S/ Travis Feltes STATE TRAFFIC ENGINEE SIGN
FHWA

6

S.D.D. 15 D 6-3

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- PORTABLE CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- ~~XXXX~~ REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC



GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER.

TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

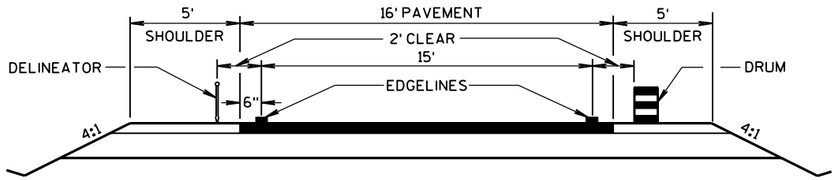
APPROVED
July 14, 2015
DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 10-4

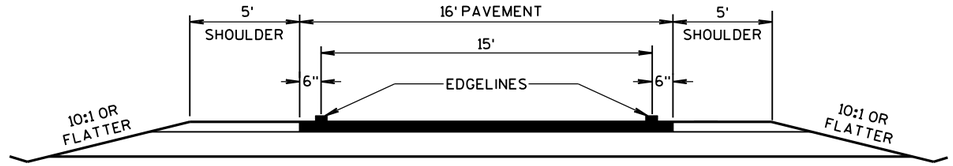
6

S.D.D. 15 D 10-4



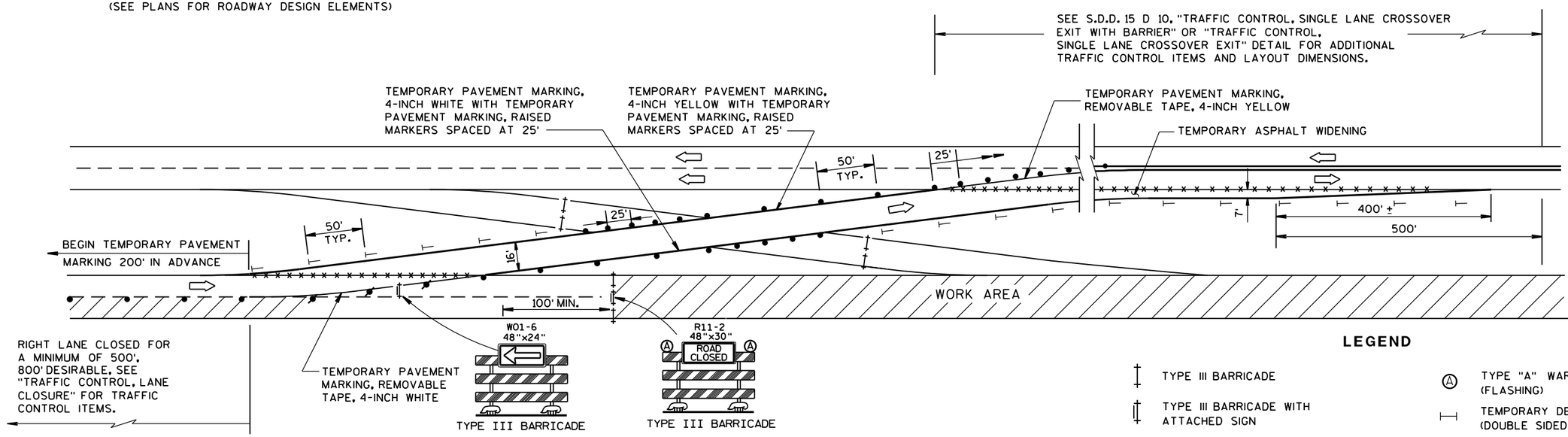
TYPICAL TEMPORARY CROSSOVER ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



TYPICAL CROSSOVER TO REMAIN IN PLACE ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR (DOUBLE SIDED)
- REMOVING PAVEMENT MARKINGS
- DELINEATOR FLEXIBLE/ TUBULAR MARKER
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

THE SPACING BETWEEN PROPOSED SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER AND TEMPORARY PAVEMENT MARKING WHERE USED.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

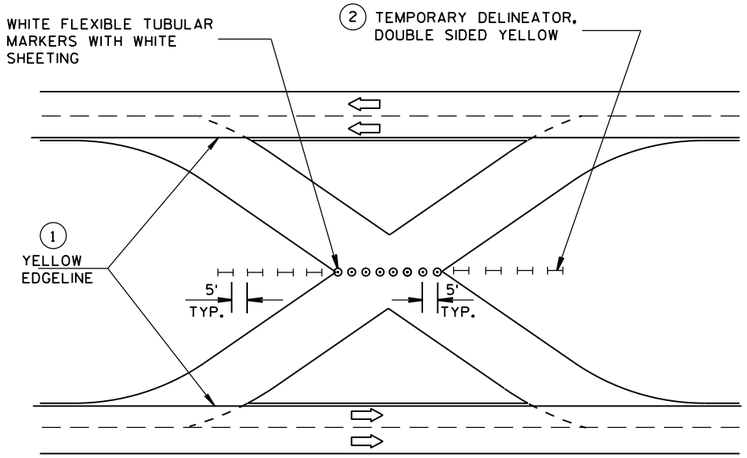
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

REVERSE DEVICES WHEN OTHER LEG OF CROSSOVER IS IN USE.

(1) FOR PERMANENT CROSSOVER, PAVEMENT MARKING SHOULD CONFORM TO SECTION 646 OF THE STANDARD SPECIFICATIONS.

(2) FOR PERMANENT CROSSOVER, INSTALL PERMANENT DELINEATORS ACCORDING TO SECTION 633 OF THE STANDARD SPECIFICATIONS.



TRAFFIC CONTROL FOR CROSSOVER THAT IS NOT IN USE

TRAFFIC CONTROL, SINGLE LANE CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-16-2015 DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZON SAFETY ENGIN IC
FHWA

6

S.D.D. 15 D 11-6

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"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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.

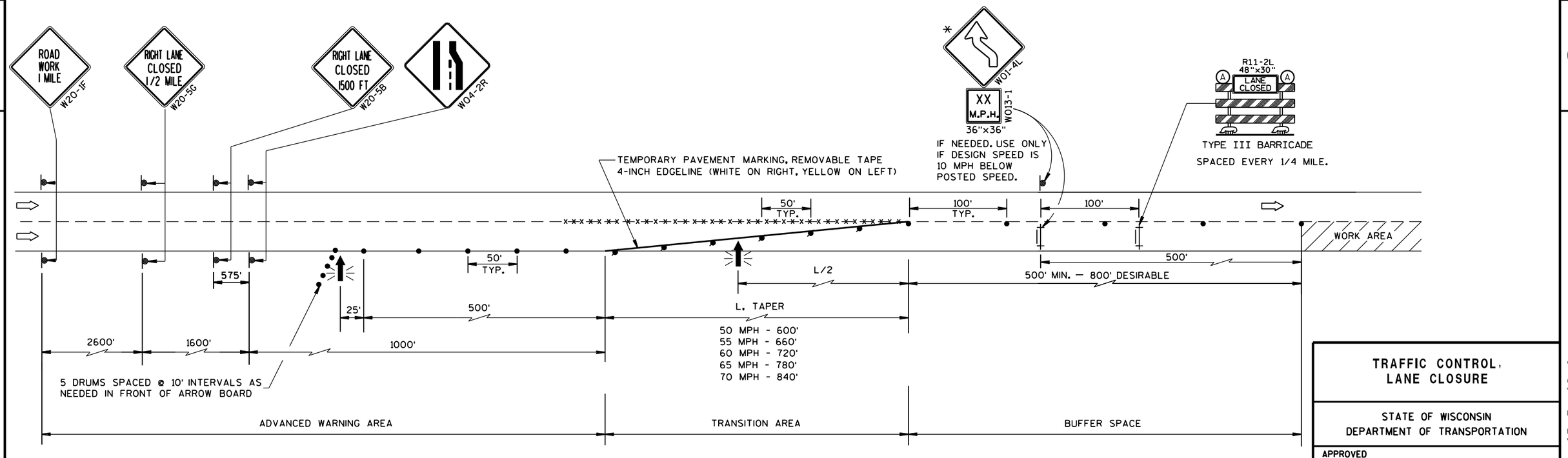
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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 (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 12-6a

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

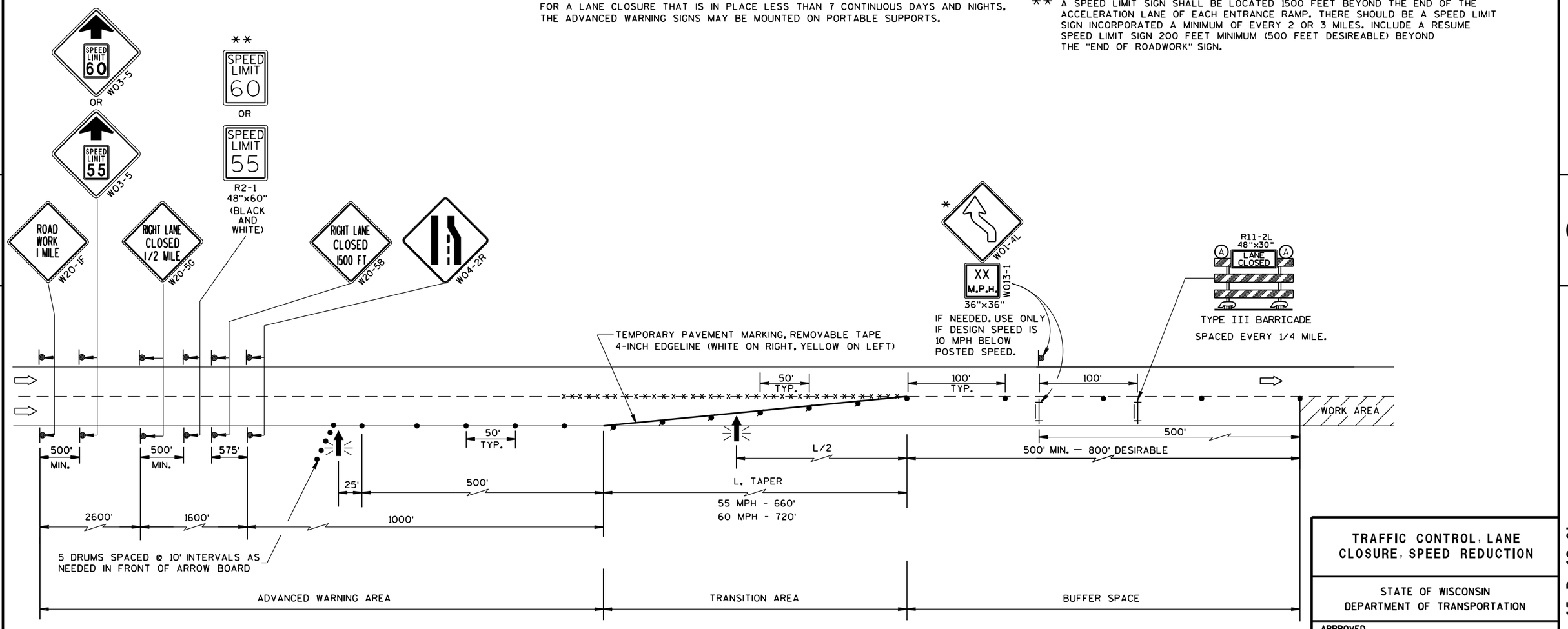
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC ENGINEER
FHWA

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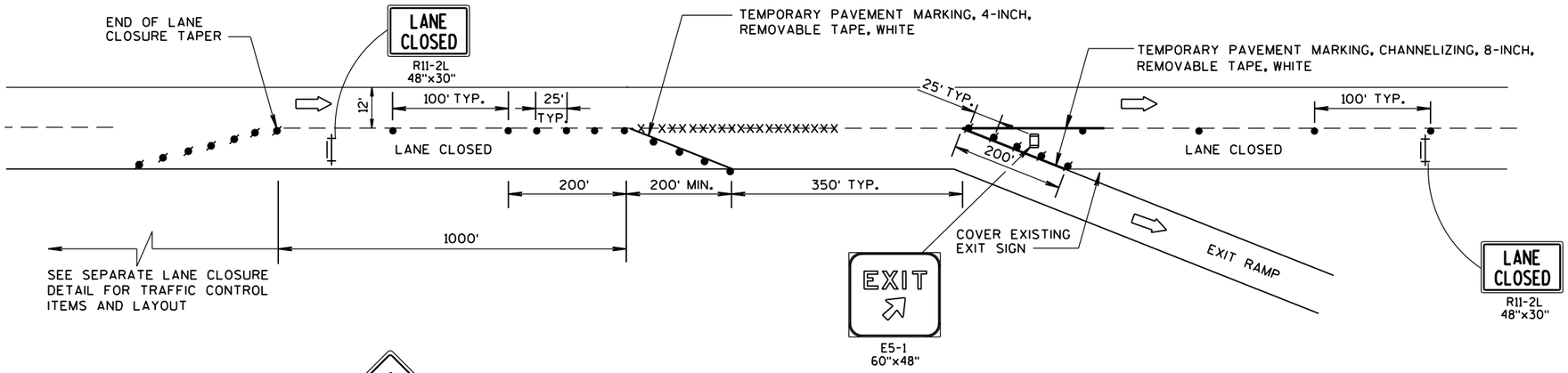
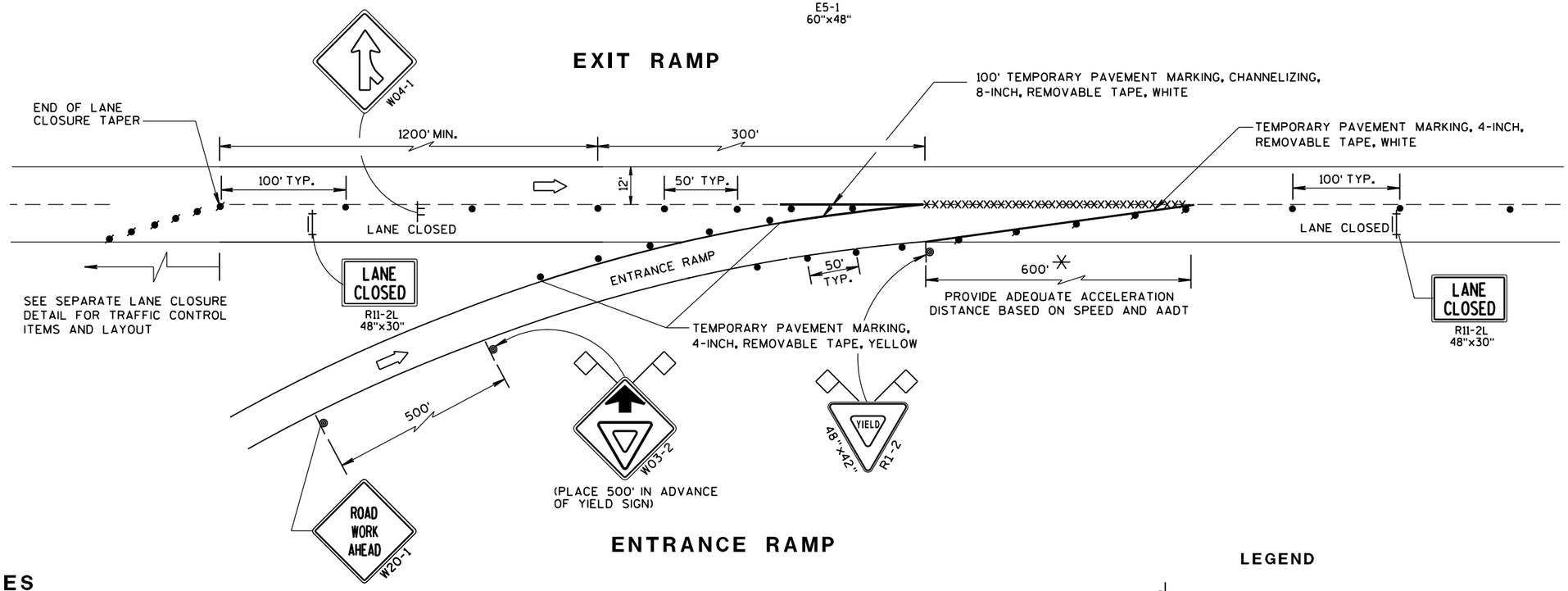
S.D.D. 15 D 12-6b



EXIT RAMP



ENTRANCE RAMP

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

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

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGS, 16" x 16" MIN., (ORANGE)
- DIRECTION OF TRAFFIC

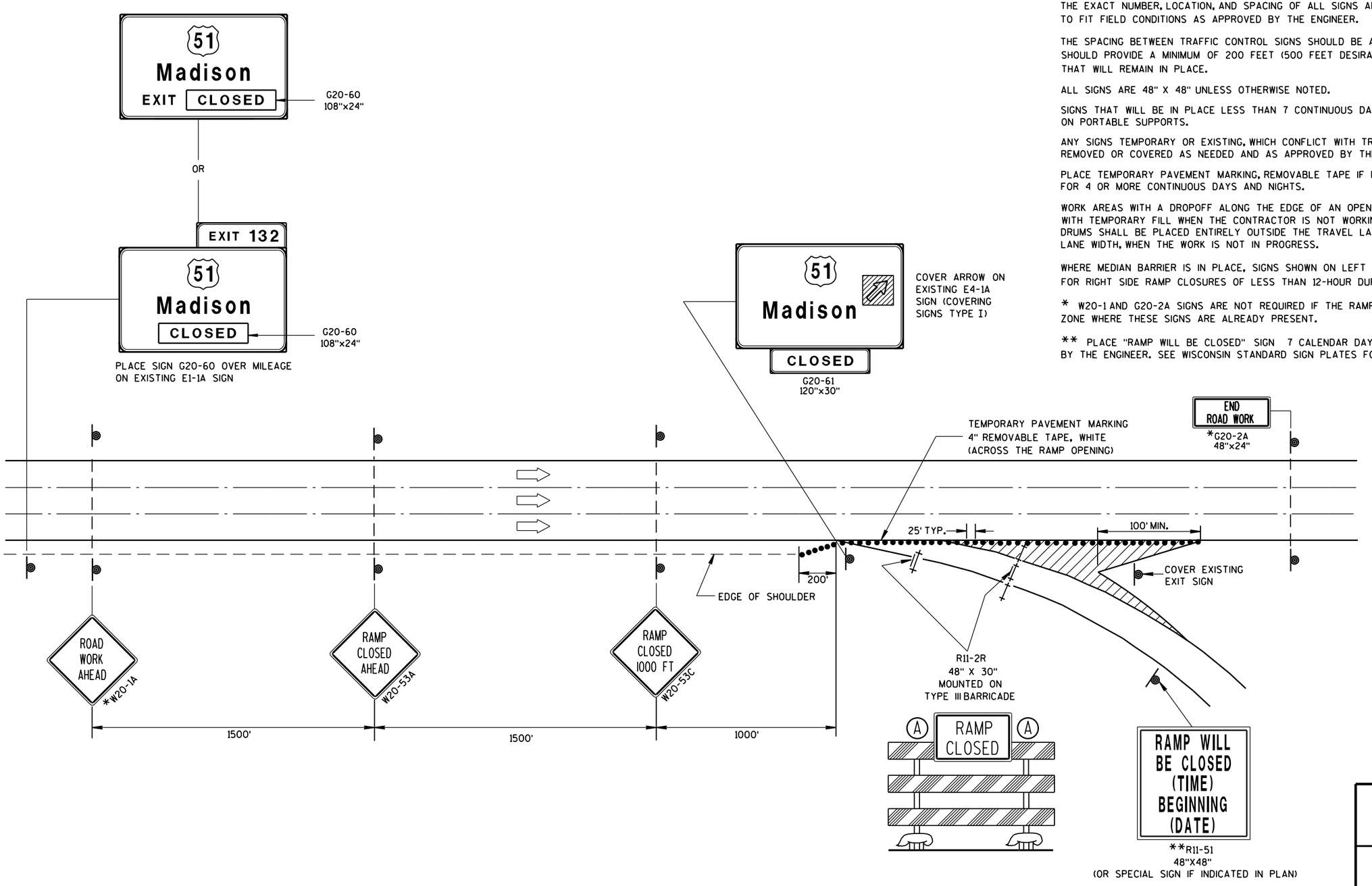
TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

S.D.D. 15 D 15-2

S.D.D. 15 D 15-2



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 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGII — FIC
FHWA

6

S.D.D. 15 D 16-3

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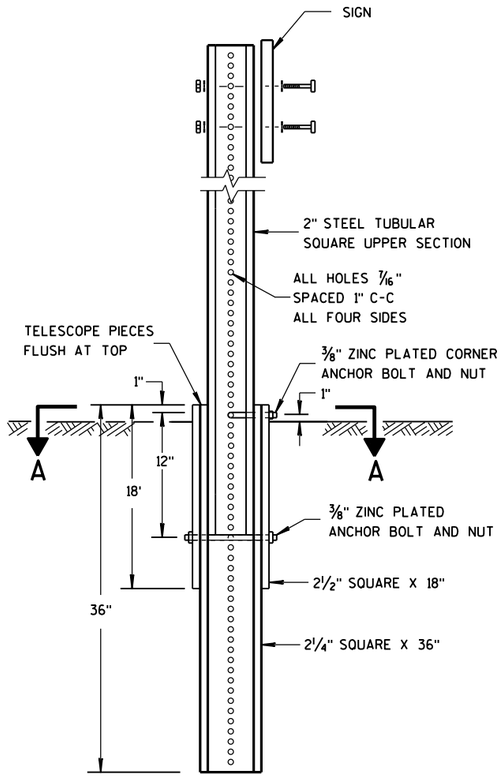
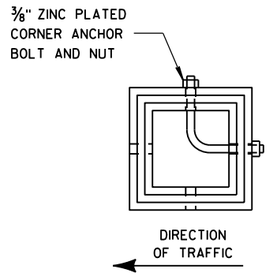
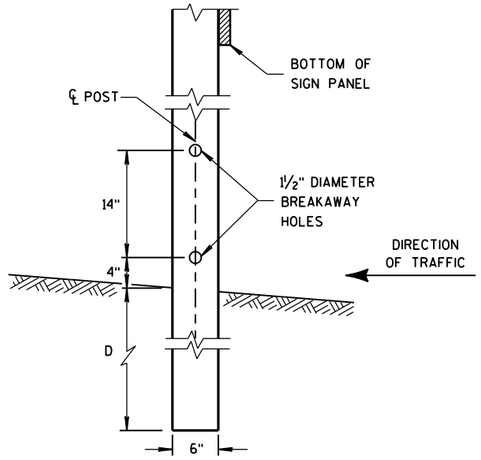
S.D.D. 15 D 16-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



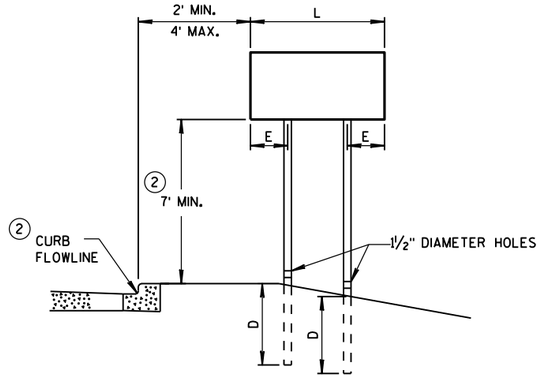
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

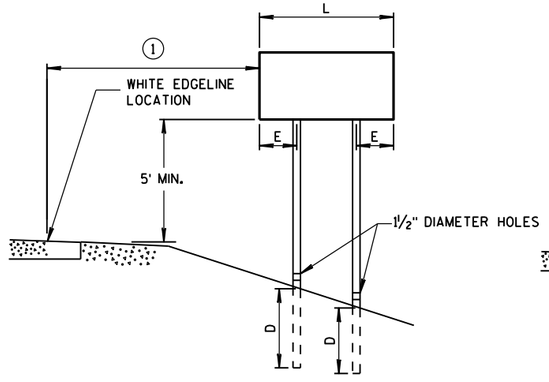
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

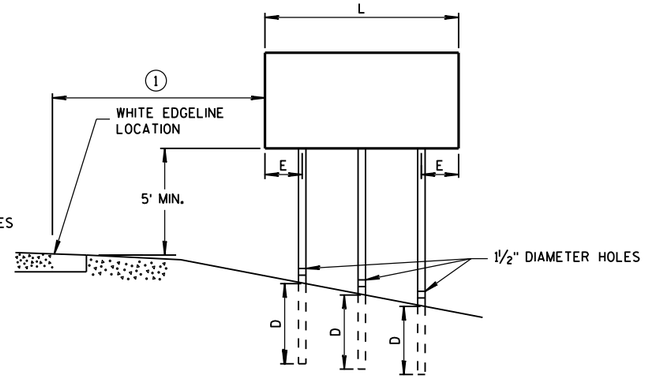
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

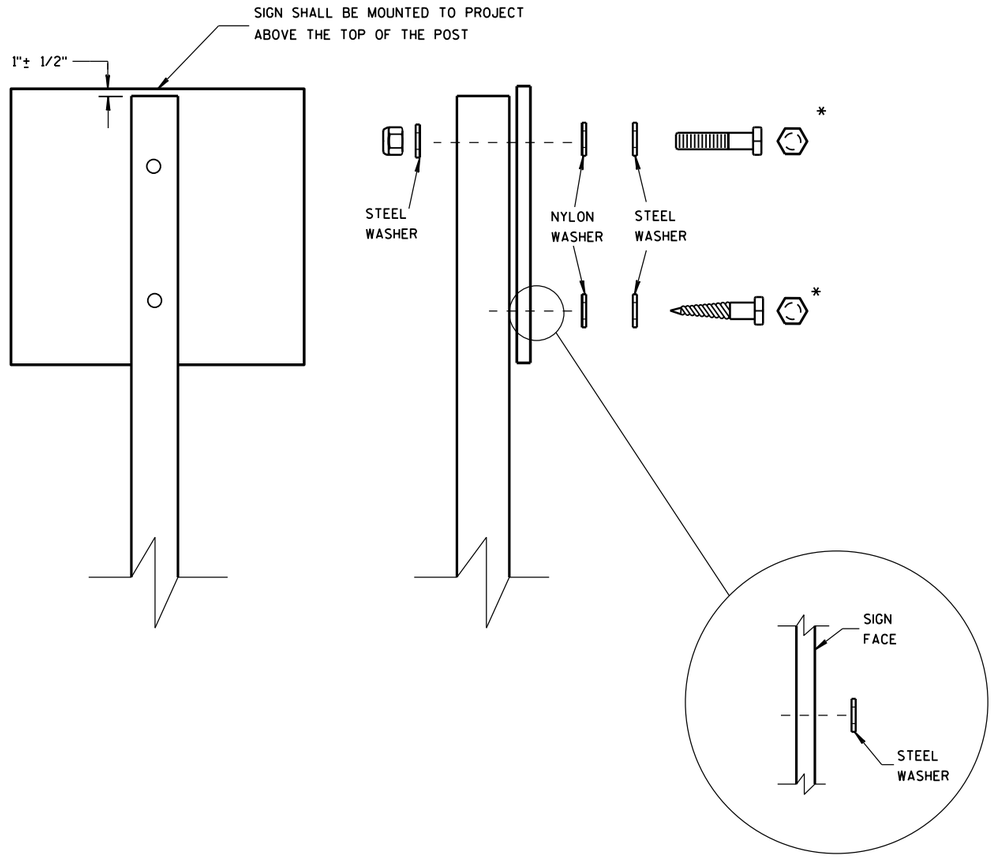
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 38-1a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-1b

S.D.D. 15 D 38-1b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Feb. 2015 — DATE

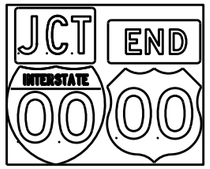
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

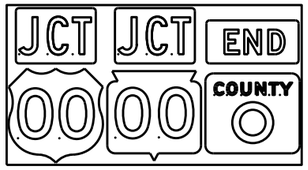
SIGN

TYPICAL ASSEMBLIES

J1-1

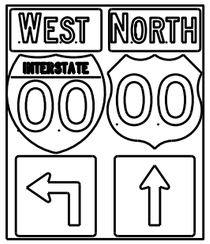


J1-2

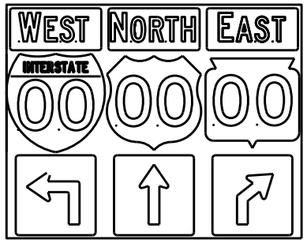


J1-3

J2-1



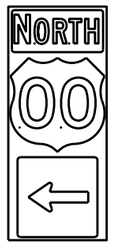
J2-2



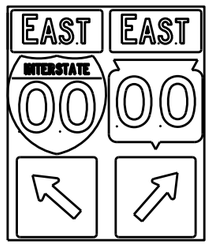
J2-3

JV

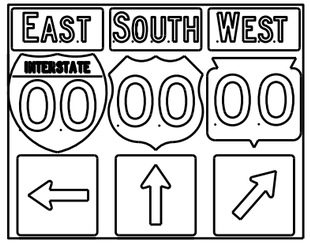
(Typical Vertical J-Assembly
See Note 10 and 11)



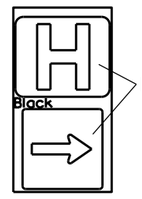
J3-1



J3-2

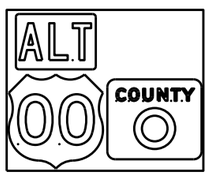


J3-3

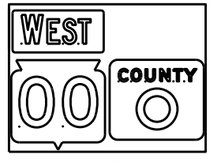


JH-1

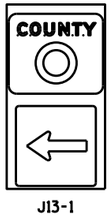
J4-1



J4-2



J4-2



J13-1

J12-1

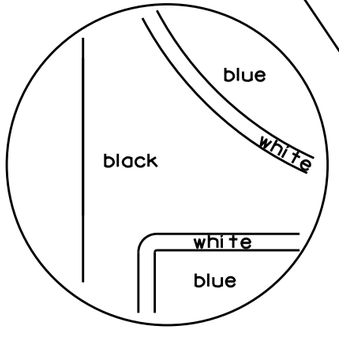
J32-1

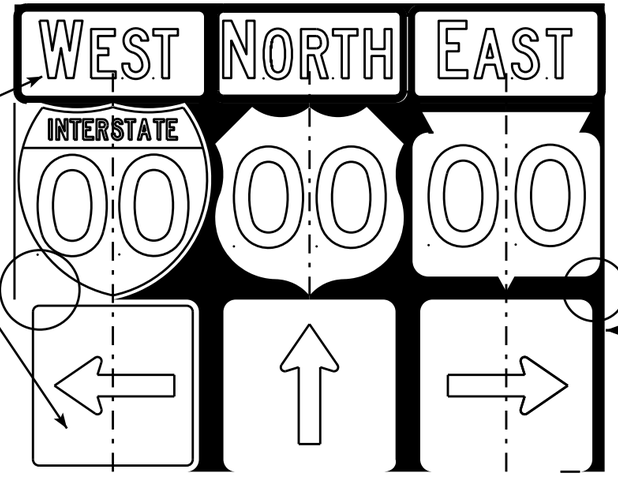
J33-1

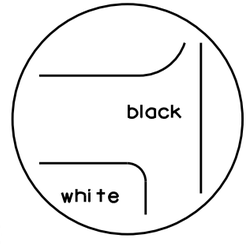
J23-1

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.

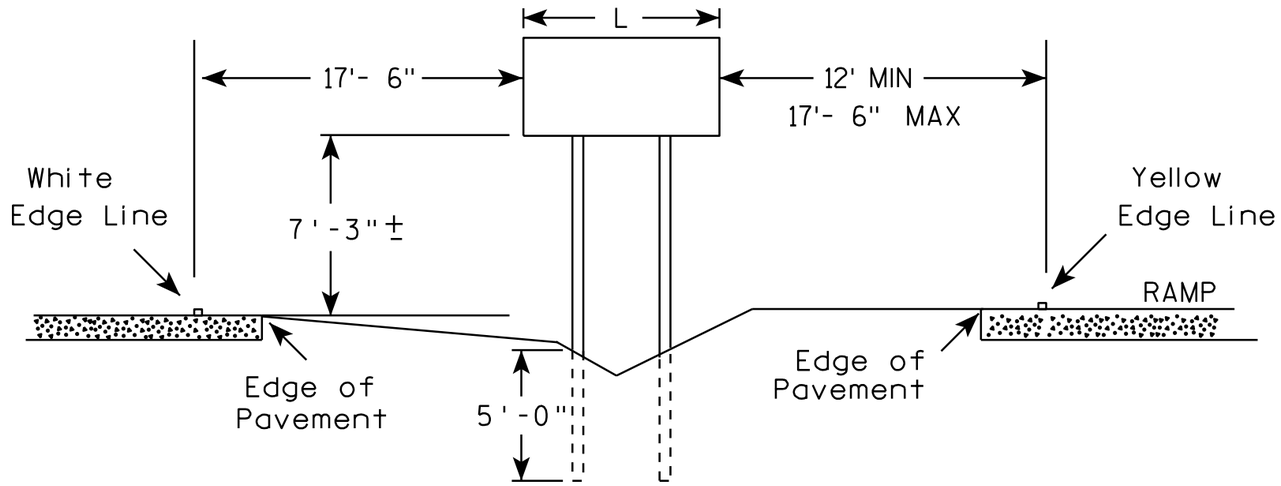
ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

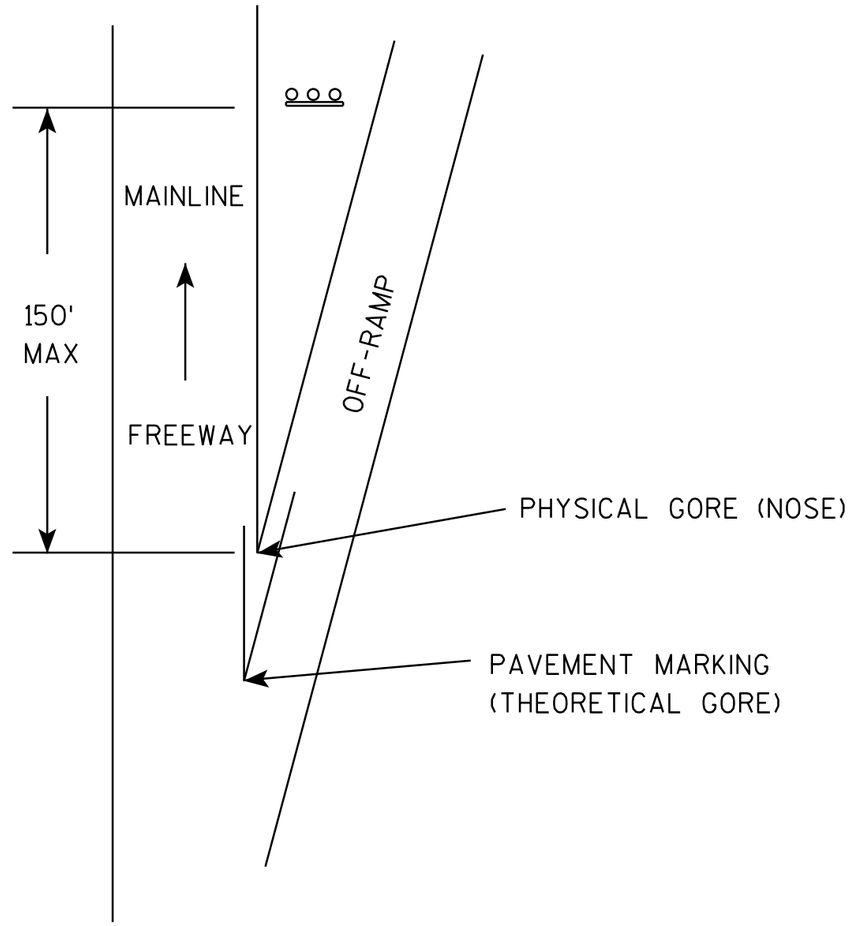
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

PROJECT NO: | SHEET NO: E





GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The (∓) tolerance for the mounting height is 3 inches.

7

7

TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

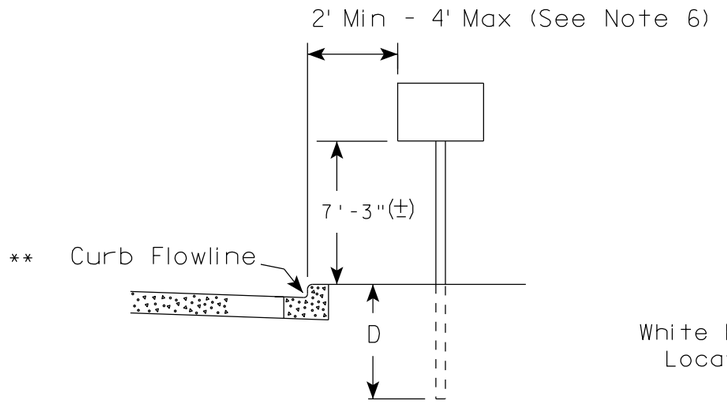
DATE 2/06/14 PLA A4-2.3

PROJECT NO: | SHEET NO: E

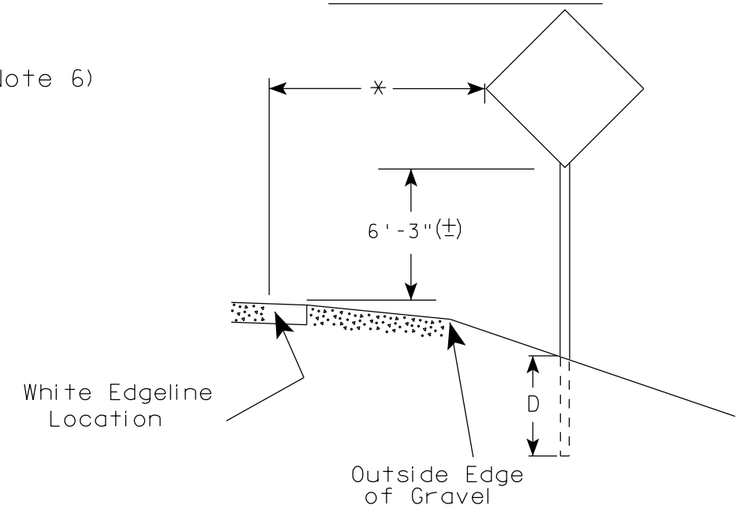
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A42.DGN PLOT DATE : 06-FEB-2014 12:36 PLOT BY : mscsja

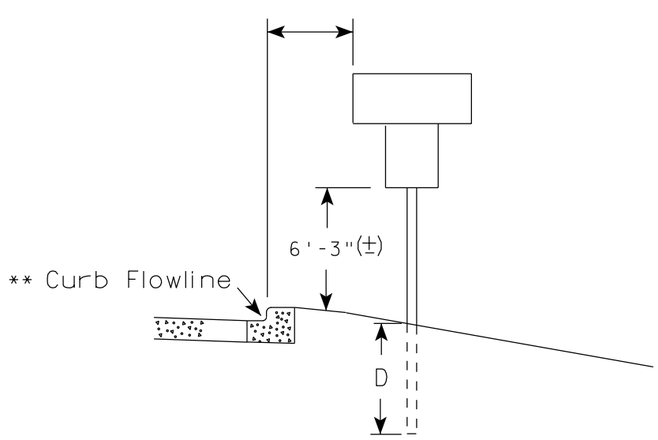
WISDOT/CADDS SHEET 42

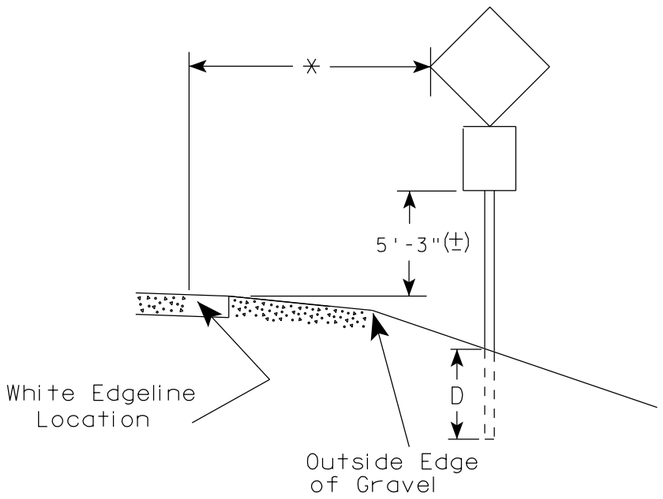
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

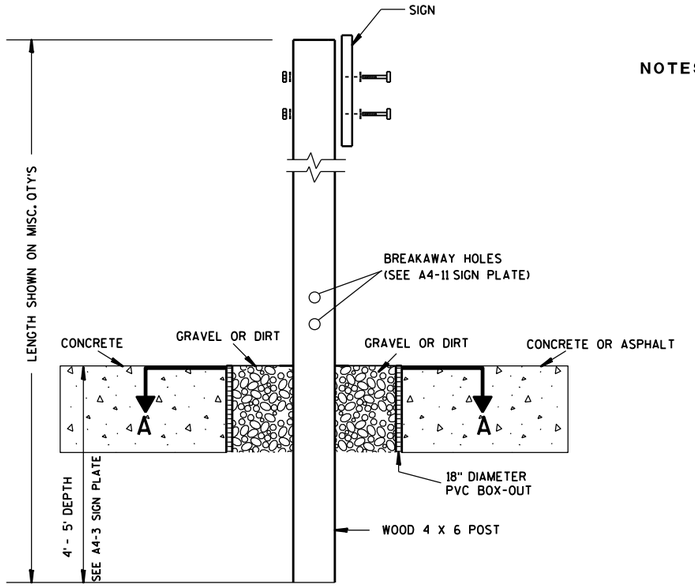
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

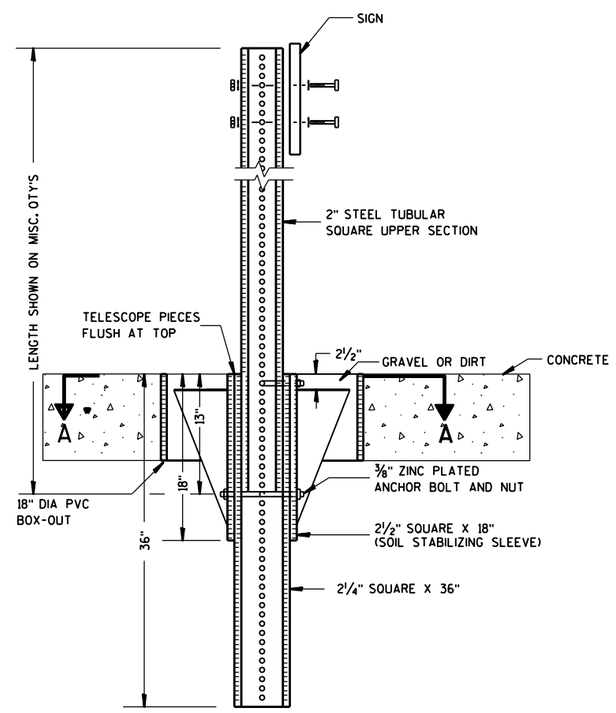
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 23-JUL-2015 15:21 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42



ELEVATION VIEW

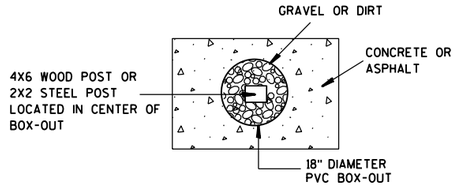
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

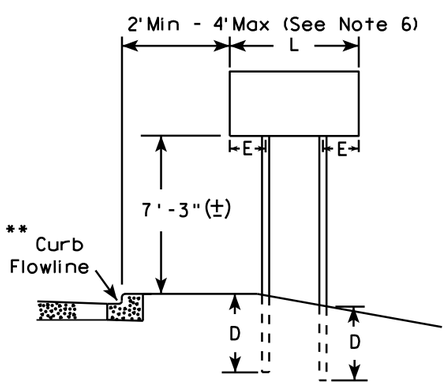
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

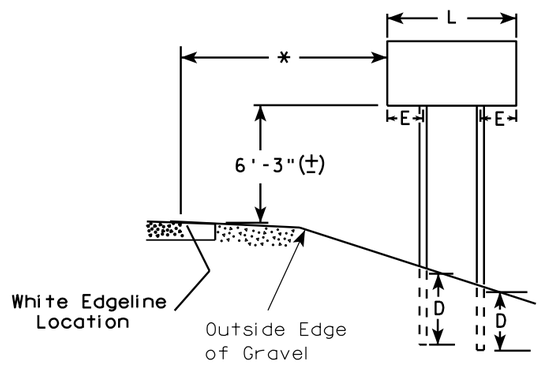
DATE 1/27/14 PLATE NO. A4-3B.1

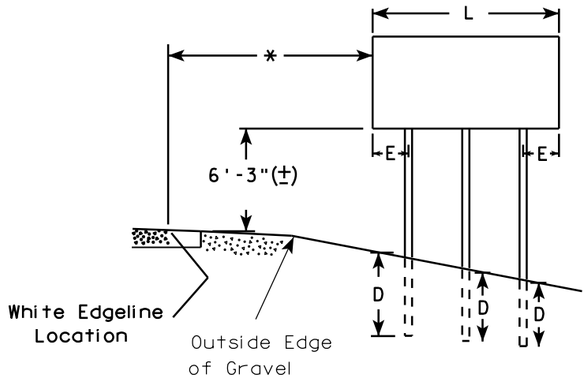
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

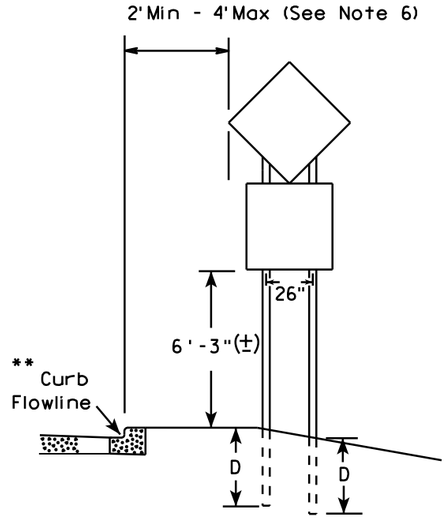
URBAN AREA



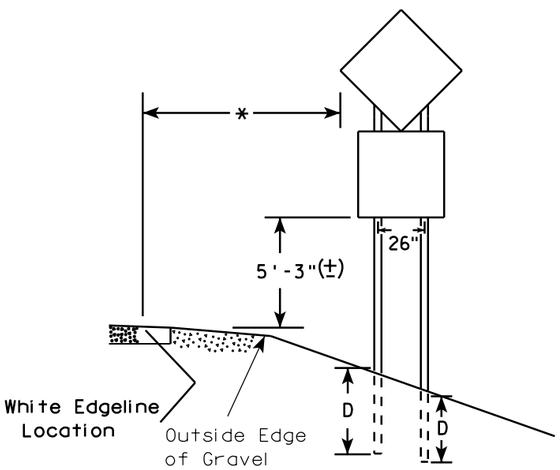
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



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 (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

***

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

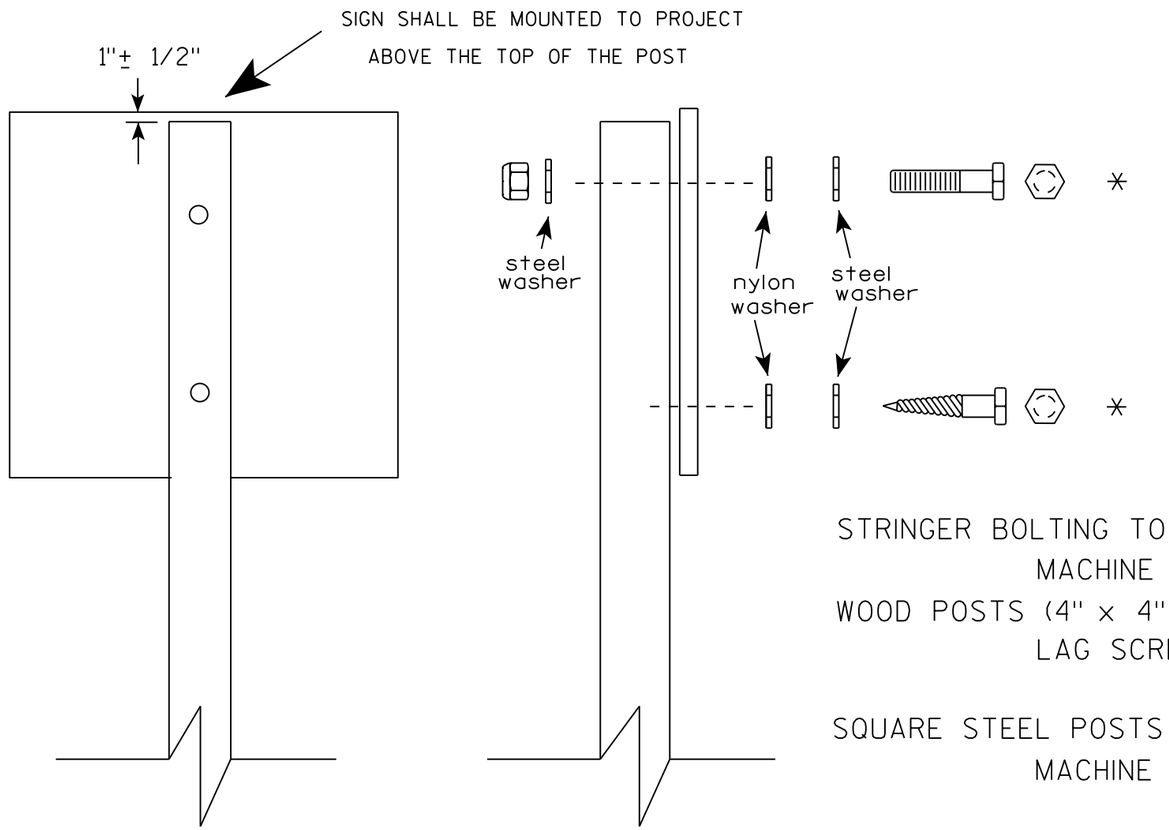
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 23-JUL-2015 15:23 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 107.021305:1.000000 WISDOT/CADDS SHEET 42



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)
SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

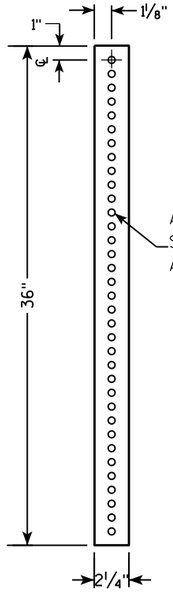
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

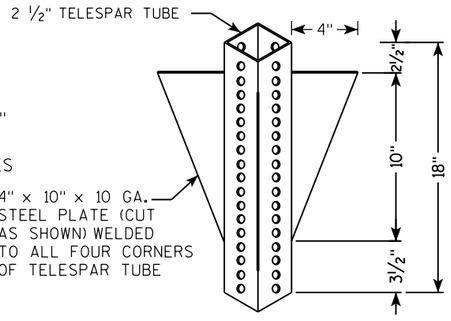
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

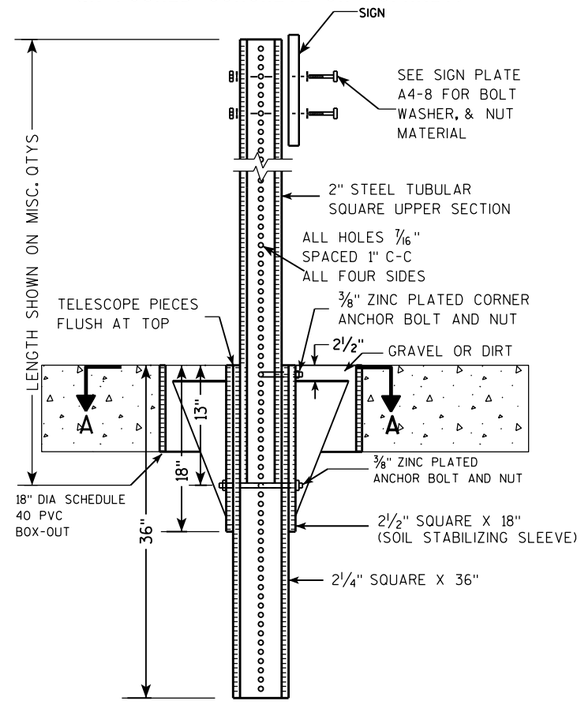
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



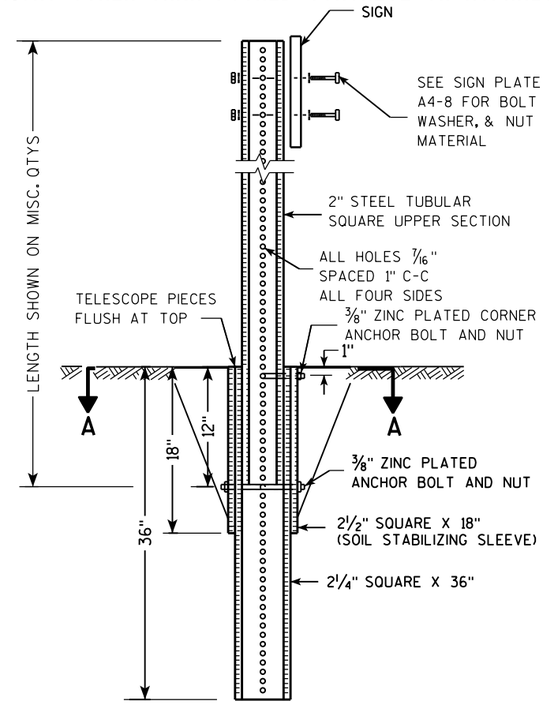
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

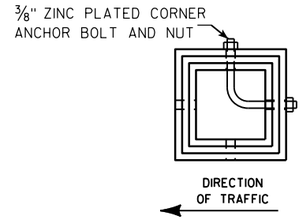


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

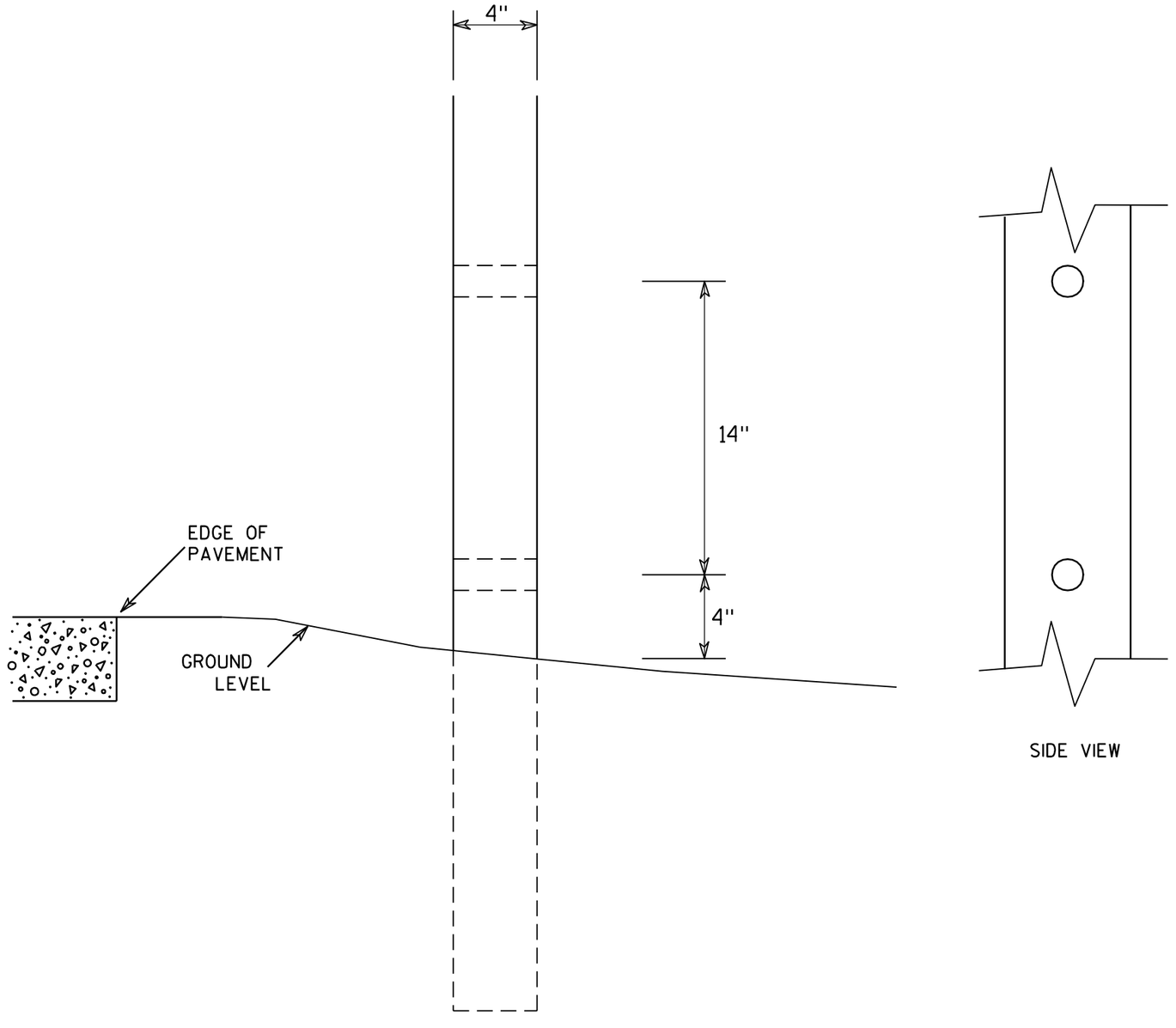
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 150 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

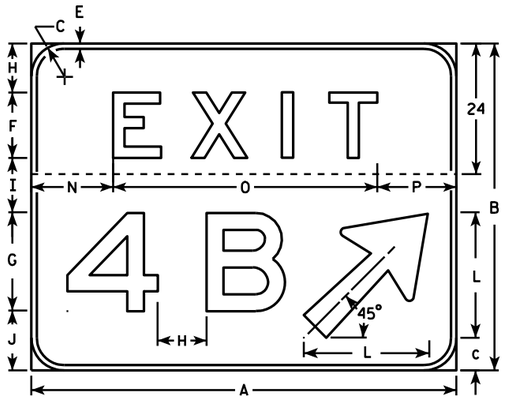
4 X 6 WOOD POST MODIFICATIONS

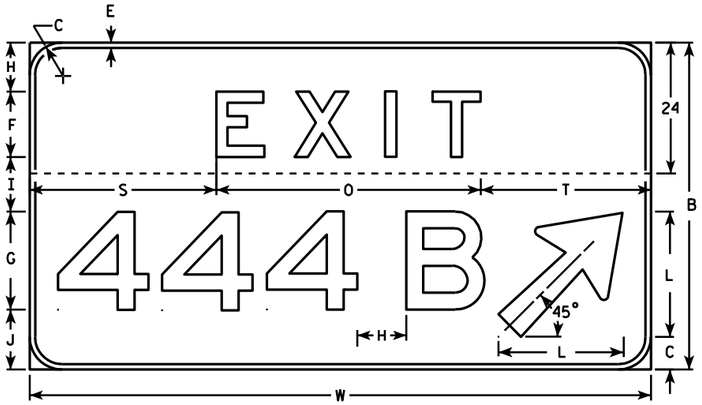
WISCONSIN DEPT OF TRANSPORTATION

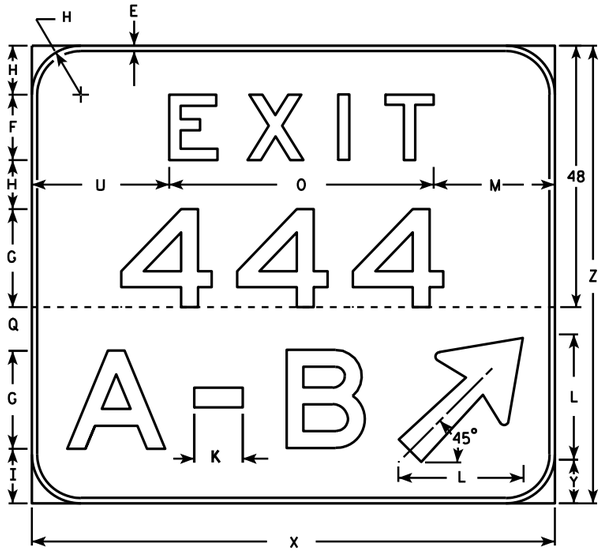
APPROVED Chester J Spang for State Traffic Engineer

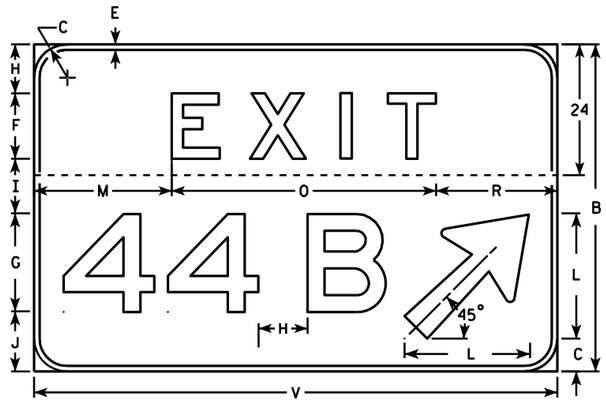
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 151	E

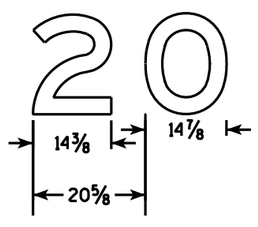








EXAMPLE FOR USING SPACING CHART



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 the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces as shown on each detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. When two letters are hyphenated, the distance between them should be equal to two letter heights and the hyphen is spaced optically between them.
9. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8	19 7/8	22 1/8	22 1/8
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14	9 7/8	14	14
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8	20 1/4	21 1/8	21 1/8
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4	20 1/4	21 1/8	21 1/8
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8	22 1/2	25 1/2	23 3/8
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8	19 1/4	20 5/8	20 5/8
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8	18	20 3/4	20 3/4
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/4	21 1/2	21 1/2
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18	21 3/4	21 3/4
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2																										
3																										
4																										
5	78	60	6		1	12	18	9	10	11	8 7/8	23	25 1/4	15	48 1/2	14 1/2	8	22 1/4	34 1/4	31 1/4	25 1/4	96	114	96	7 1/2	84

2 Digit Bid Area	3 Digit Bid Area	4 Digit Bid Area	5 Digit Bid Area
Sq. Ft.			
32.5	40.0	47.5	56.0

STANDARD SIGN
E5-1B

WISCONSIN DEPT OF TRANSPORTATION

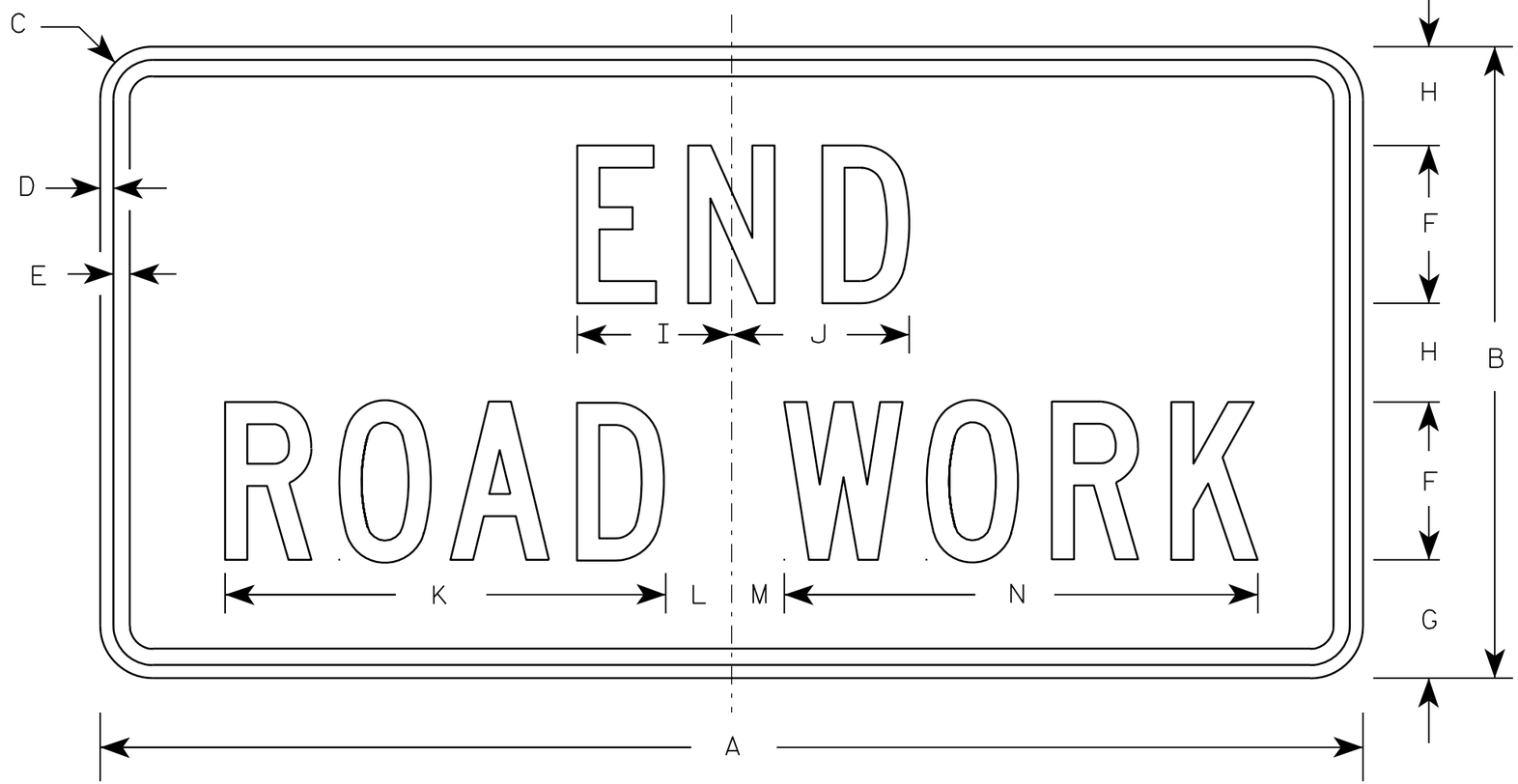
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/8/10 PLATE NO. E5-1B.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 152 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\E51B.DGN PLOT DATE : 08-JUN-2010 12:42 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 27.808870:1.000000
WISDOT/CADDS SHEET 42



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

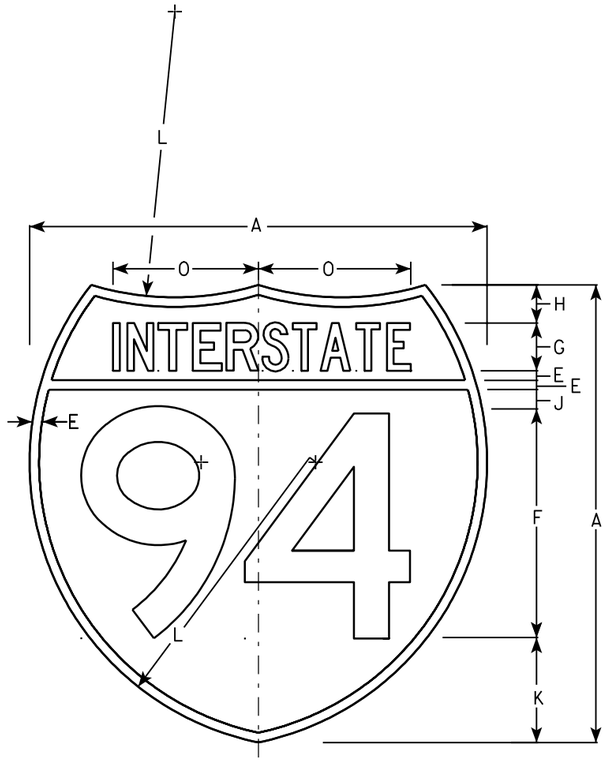
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

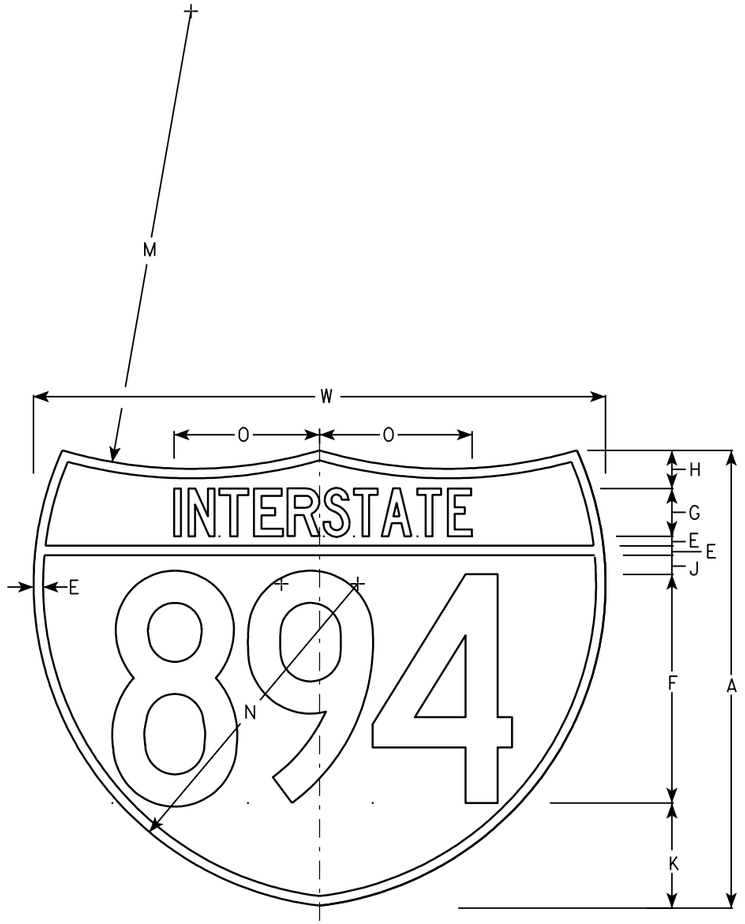
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 153	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

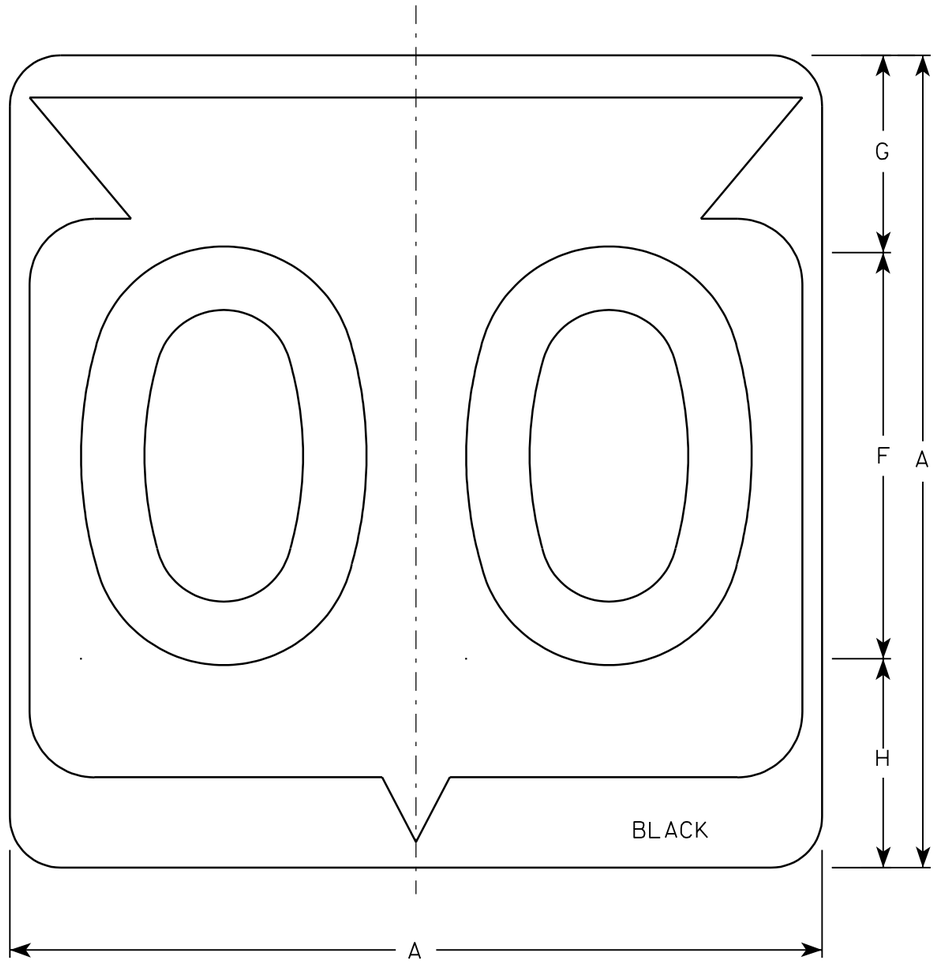
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

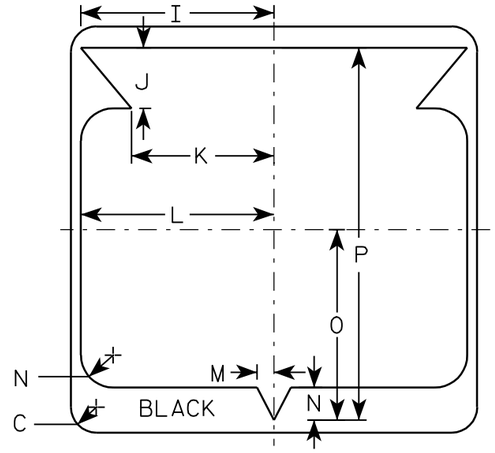
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 154	E



M1-6

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 Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



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		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

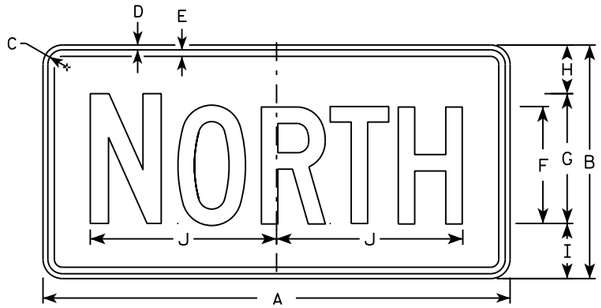
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

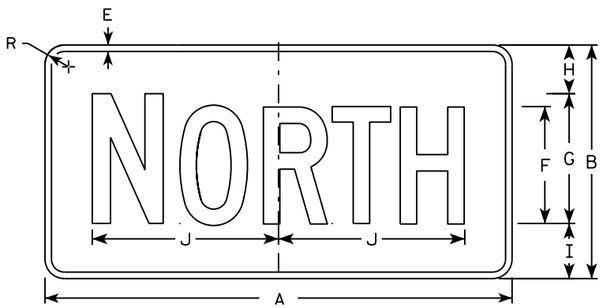
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 155	E



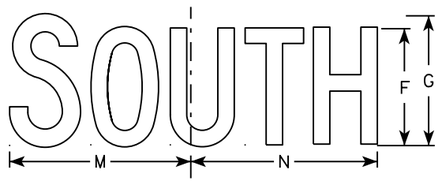
M3-1
MM3-1
MP3-1



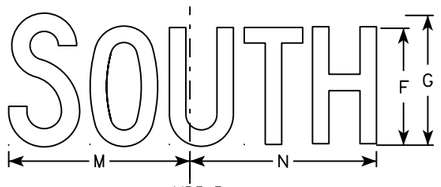
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

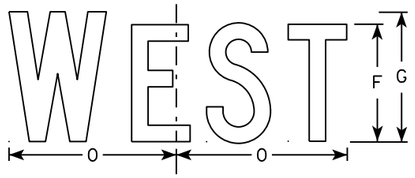
MB3-2
MK3-2
MN3-2



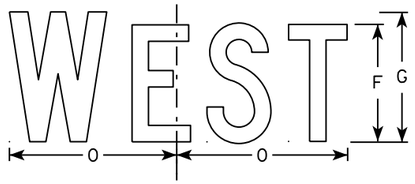
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

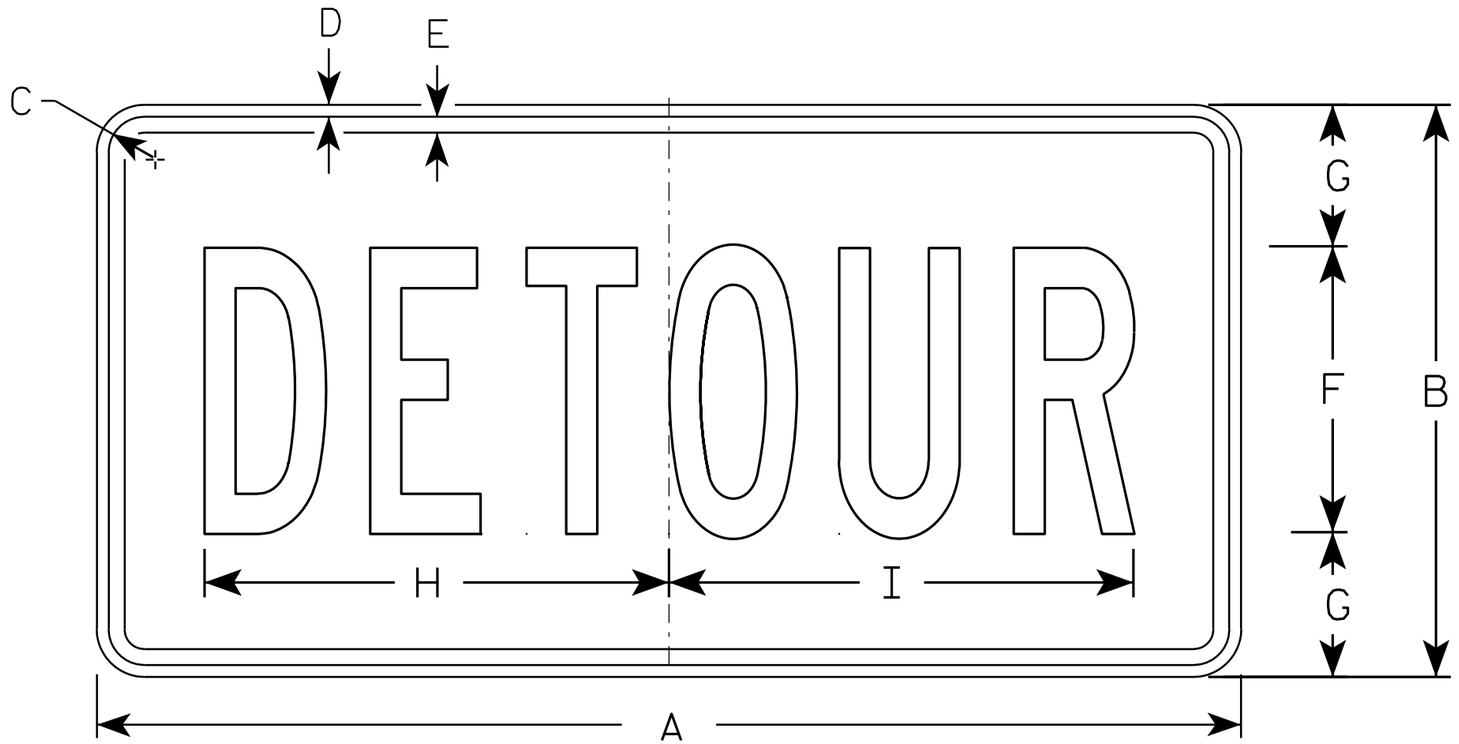
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



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																											

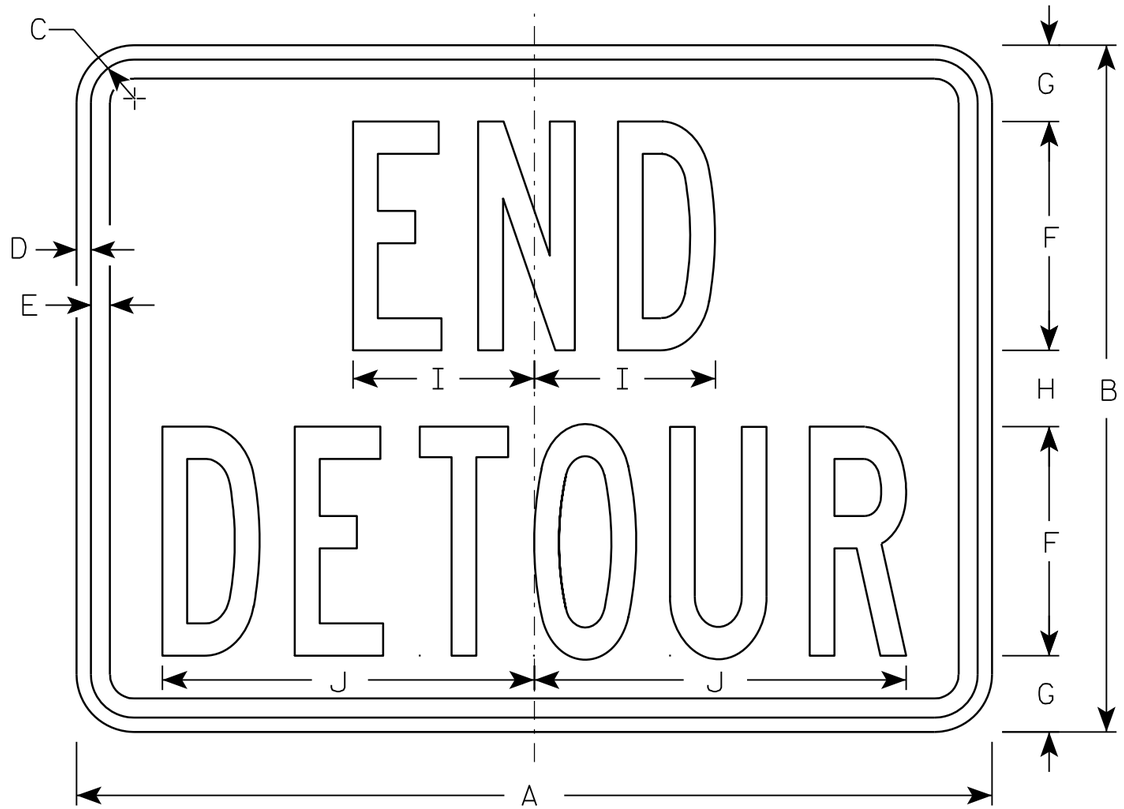
STANDARD SIGN
M4-8

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: 157	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																											

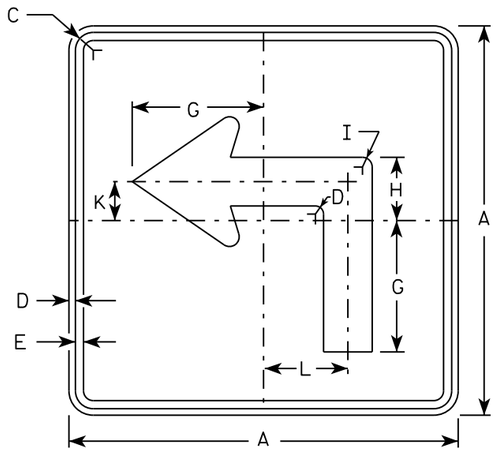
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

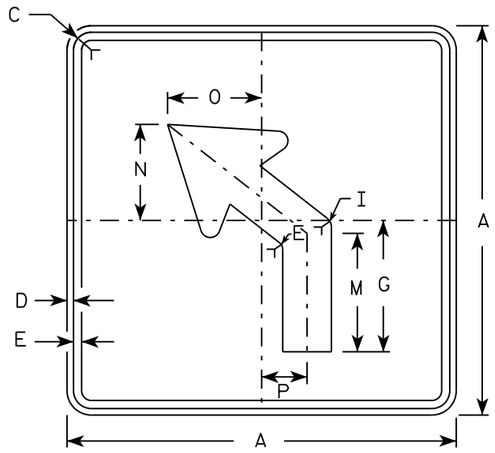
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

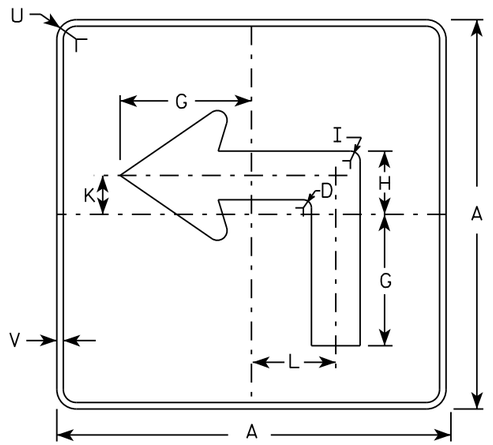
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 158	E



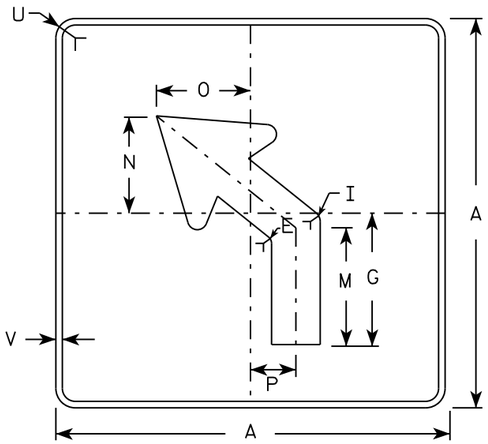
M5-1L
MM5-1L
MO5-1L
MP5-1L



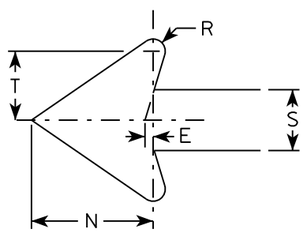
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

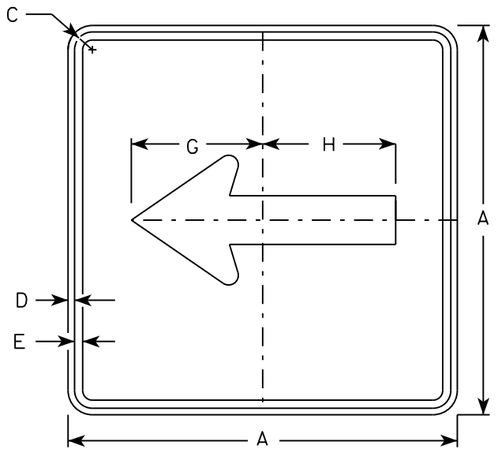
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

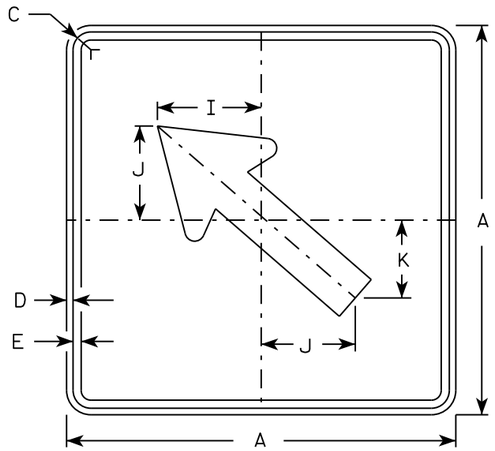
DATE 10/15/15 PLATE NO. M5-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



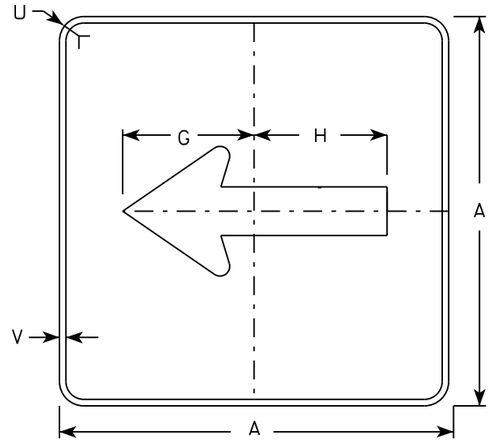
M6-1
MM6-1
MO6-1
MP6-1



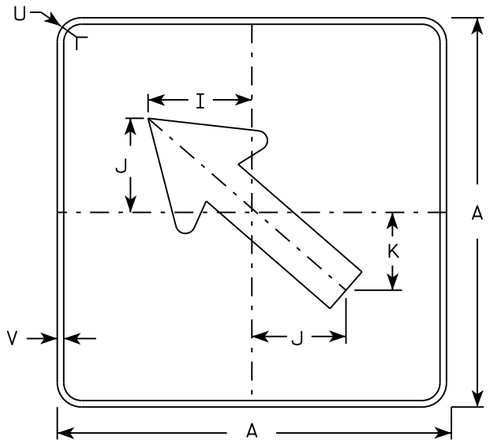
M6-2
MM6-2
MO6-2
MP6-2

NOTES

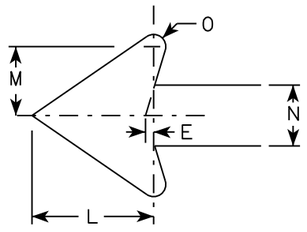
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

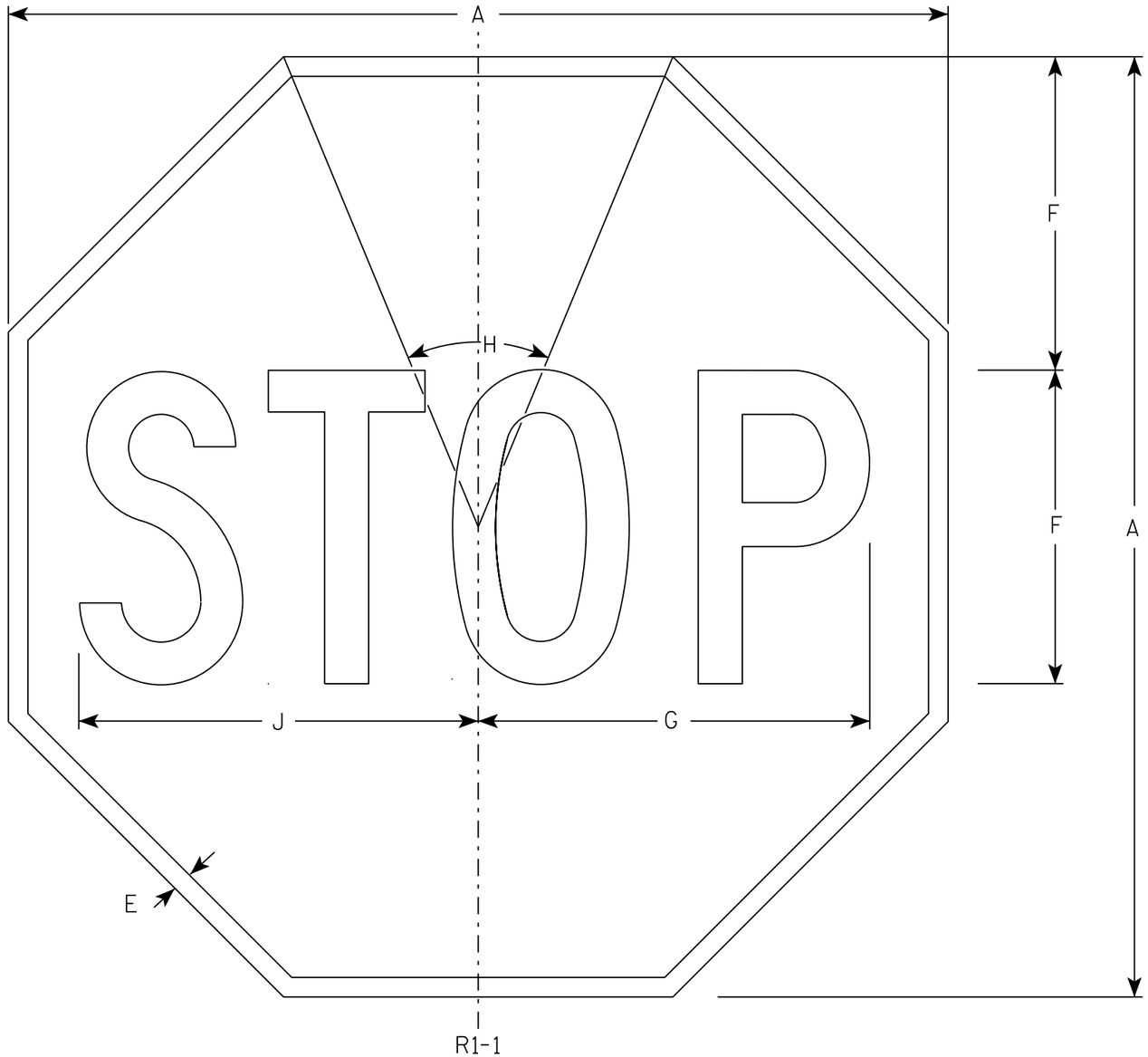
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 160 M6-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



R1-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message 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	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1-1

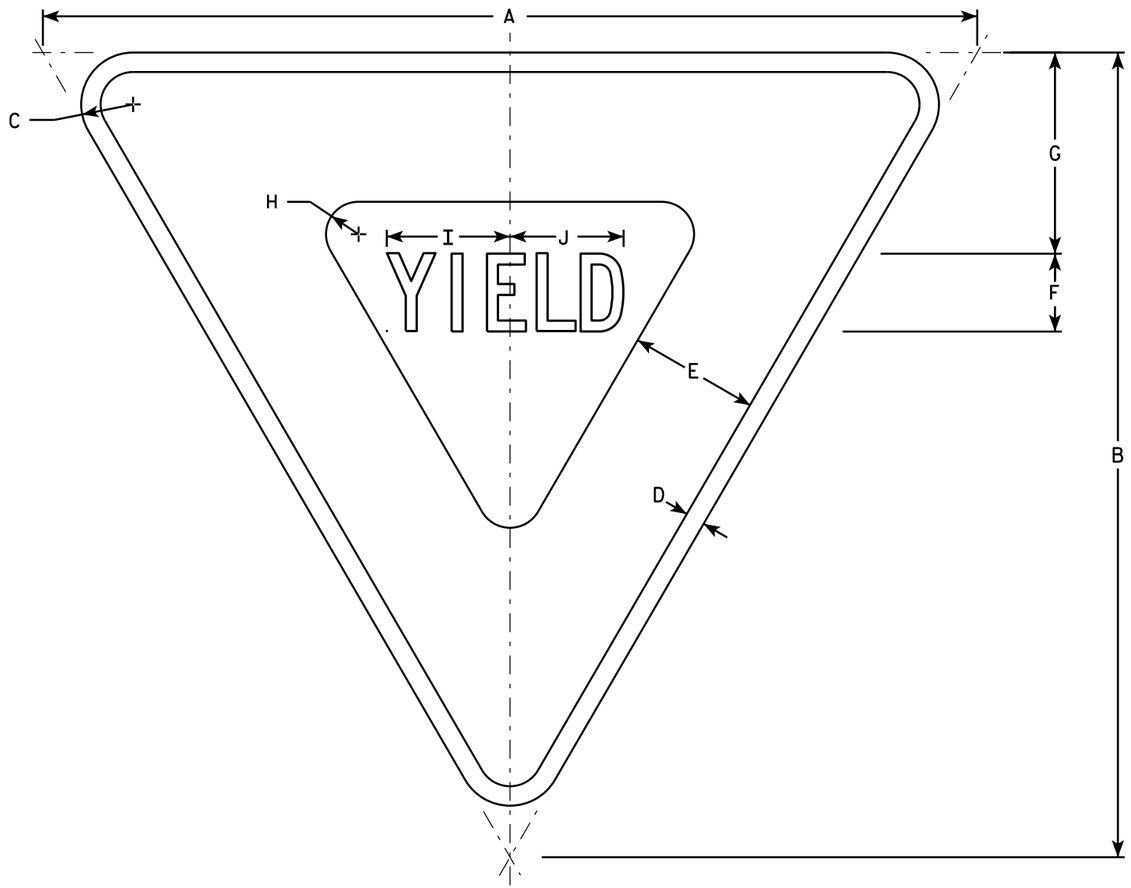
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R11.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.378143:1.000000



R1-2

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 - 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. The border strip and word message are reflectorized red.

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	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

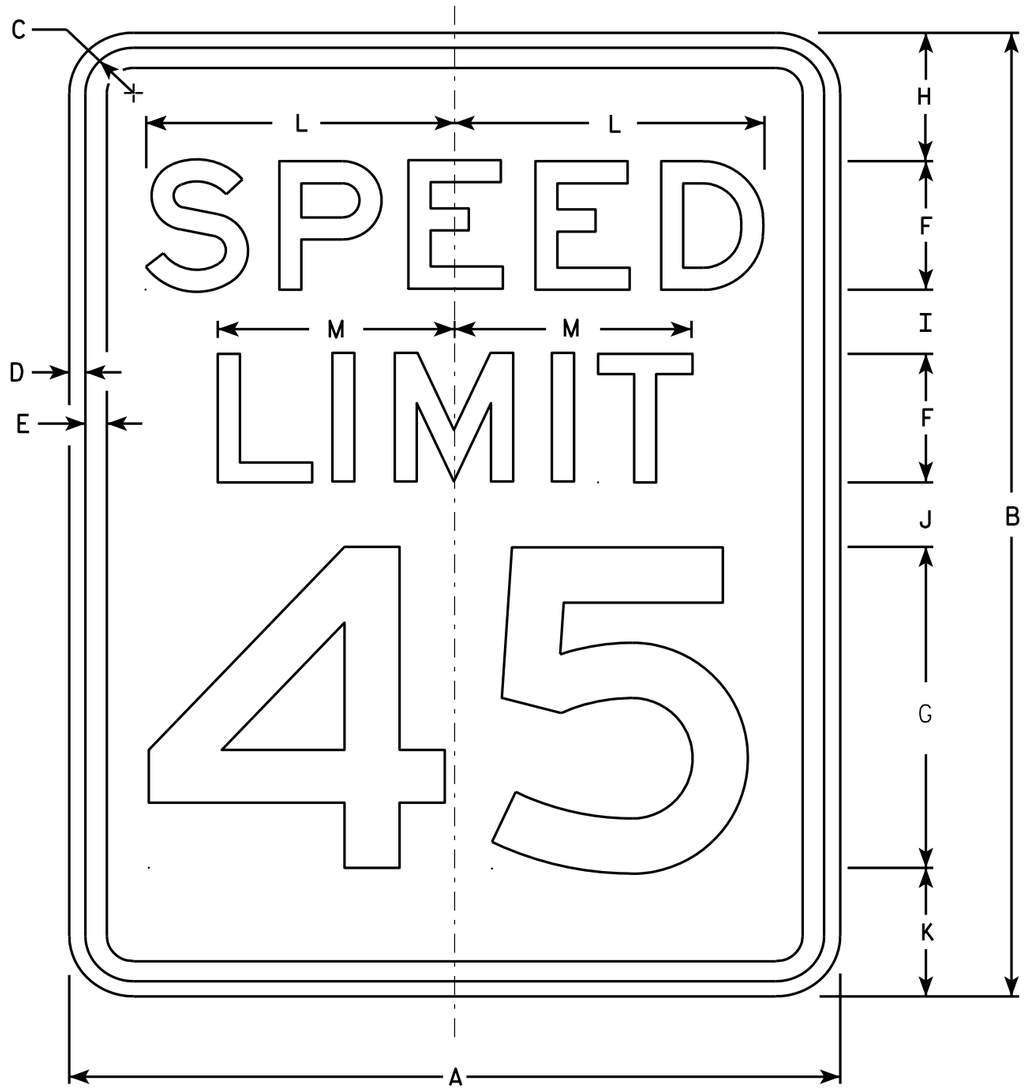
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



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

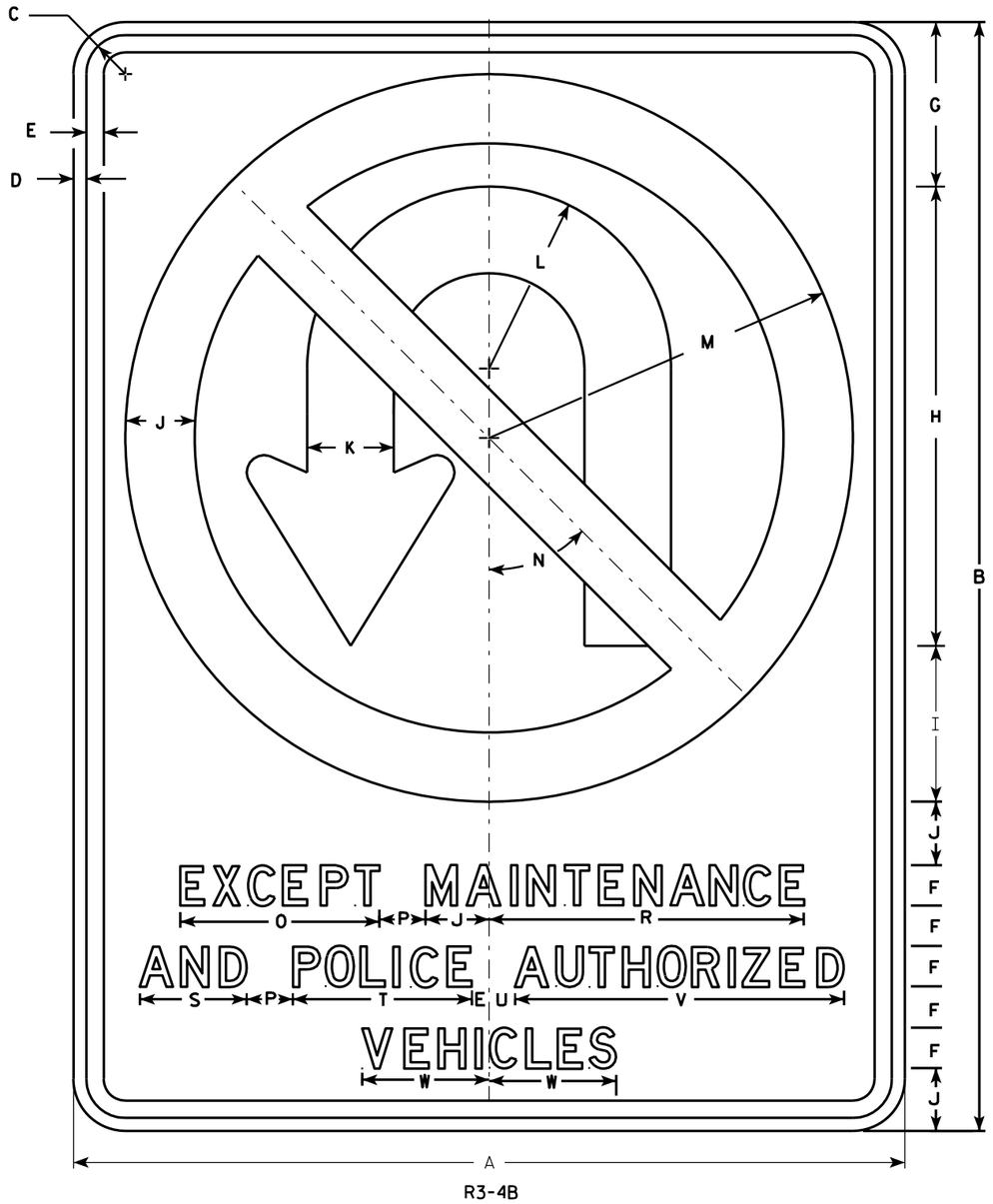
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 163 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R21.DGN PLOT DATE : 28-MAY-2010 08:32 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 4.717577:1.000000

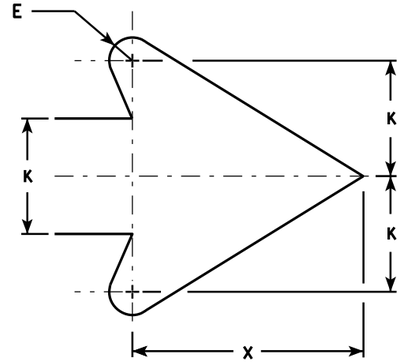
WISDOT/CADDS SHEET 42



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

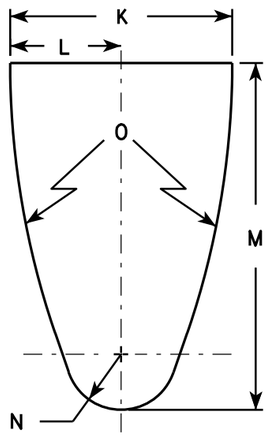
STANDARD SIGN
R3-4B

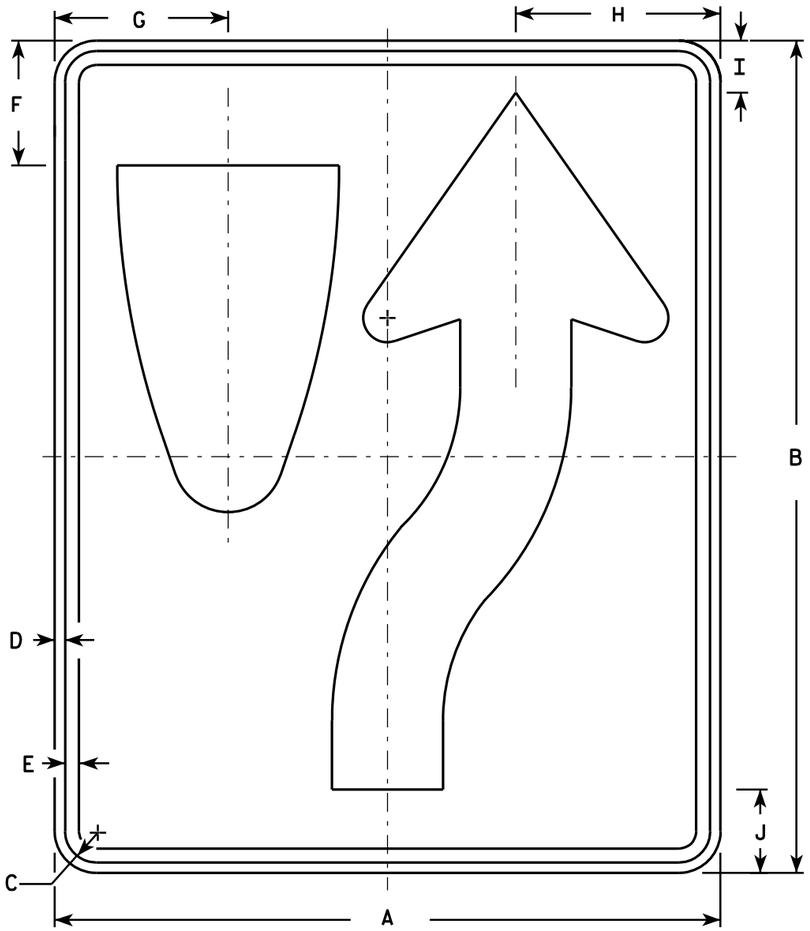
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 164	E

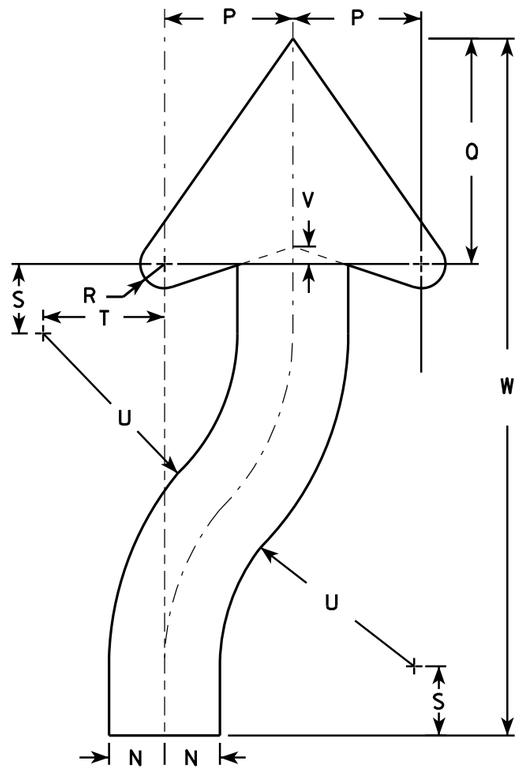




R4-7

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

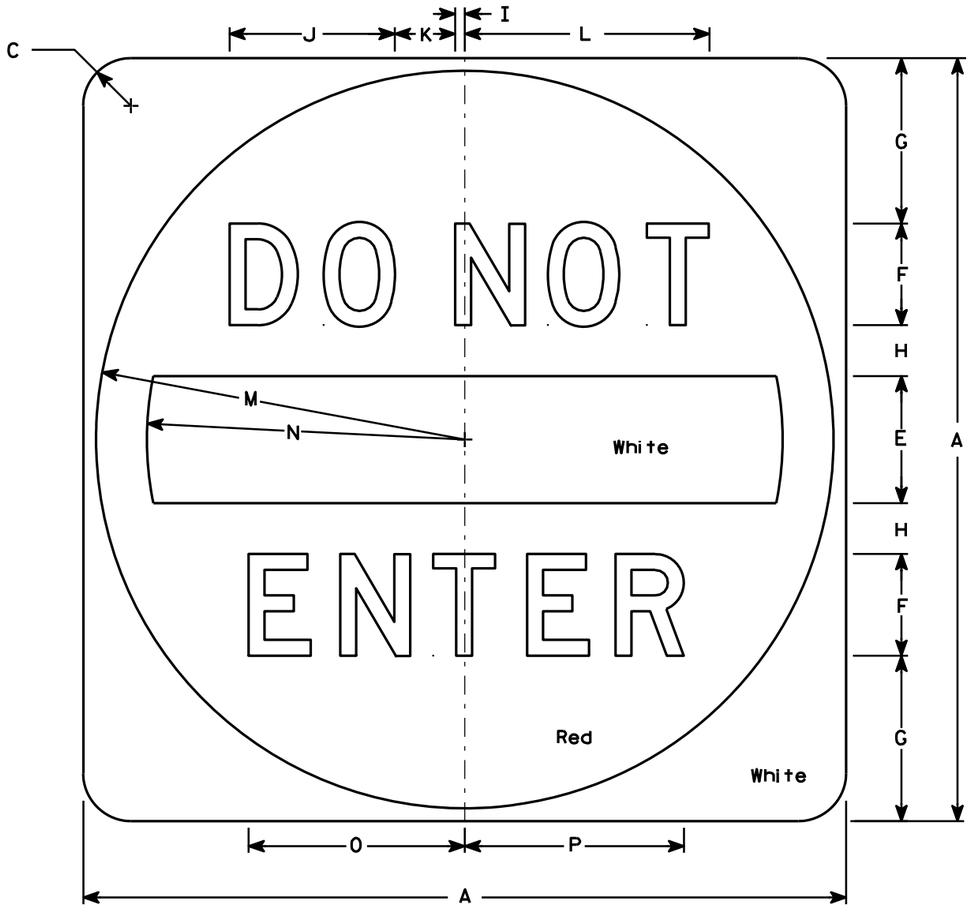
STANDARD SIGN
R4-7 & R4-8

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: 165	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors 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	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

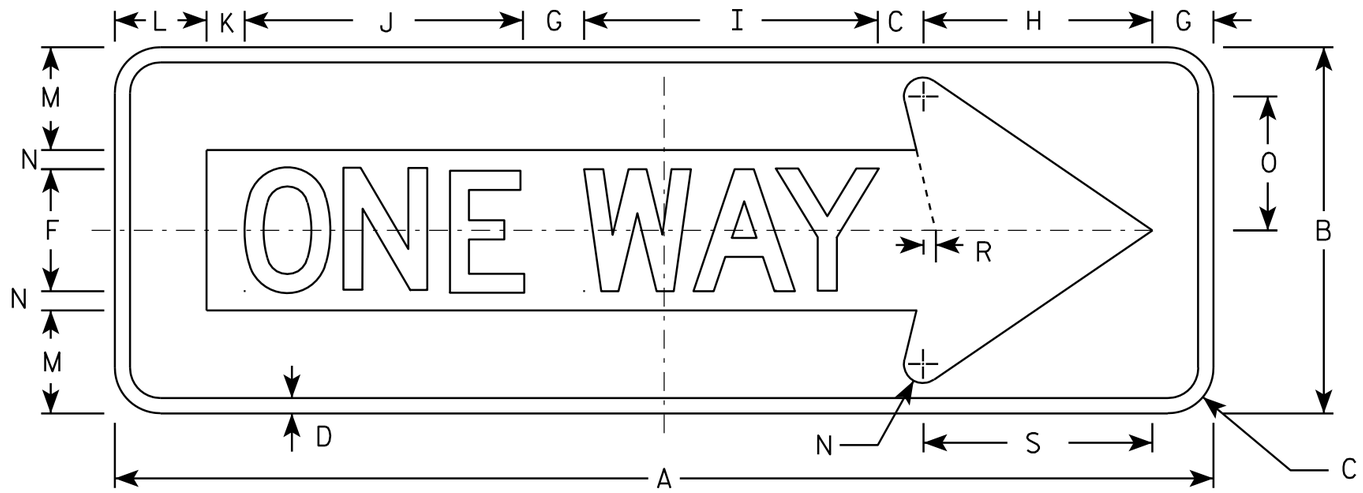
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

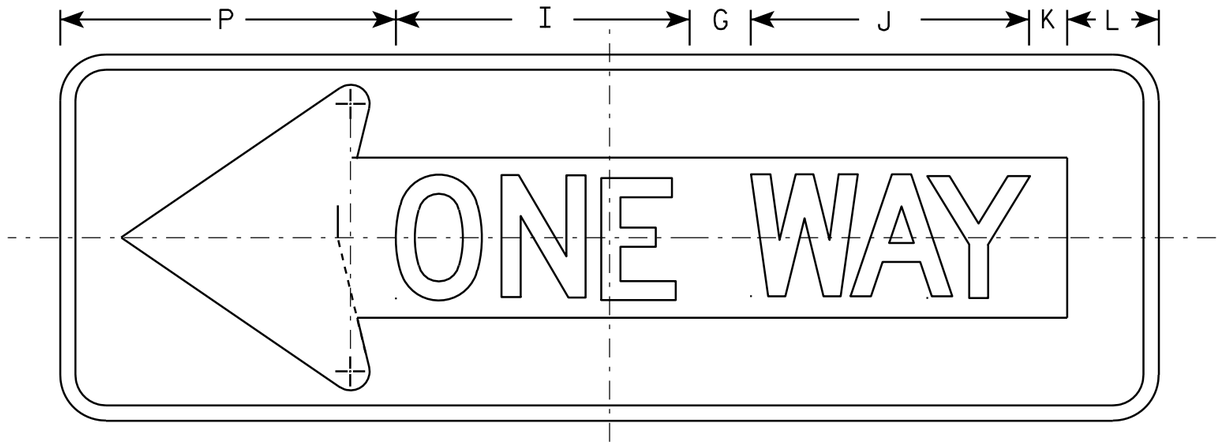
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 166 | E



R6-1R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - BLACK
   Message - BLACK LEGEND & WHITE ARROW & BORDER
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R6-1L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	12	1 ½	½		4	2	7 ½	9 ⅝	9 ⅛	1 ¼	3	3 ⅜	⅝	4 ⅜	11		⅜	7 ½								3.0
2M	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
3	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
4	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
5																											

STANDARD SIGN
R6-1 L & R

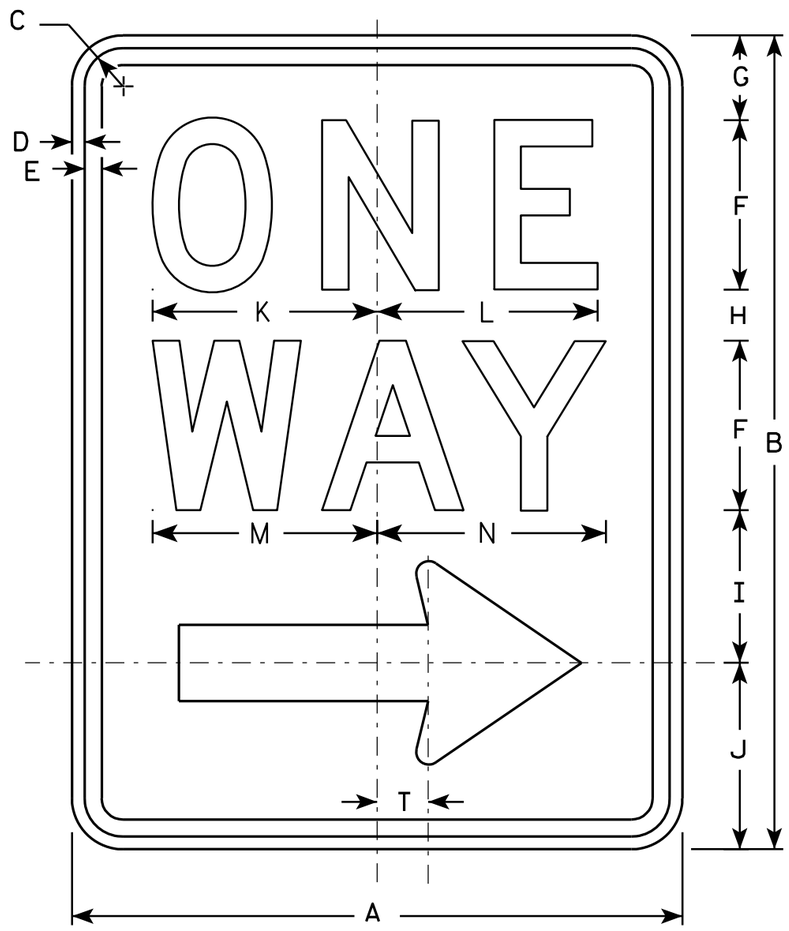
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

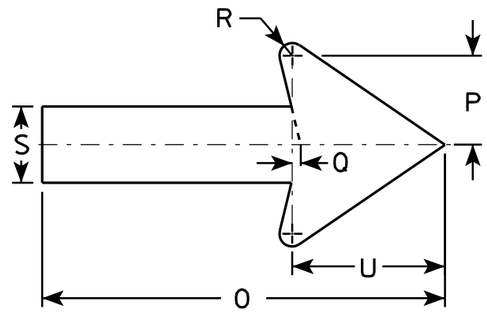
SHEET NO: 167 E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

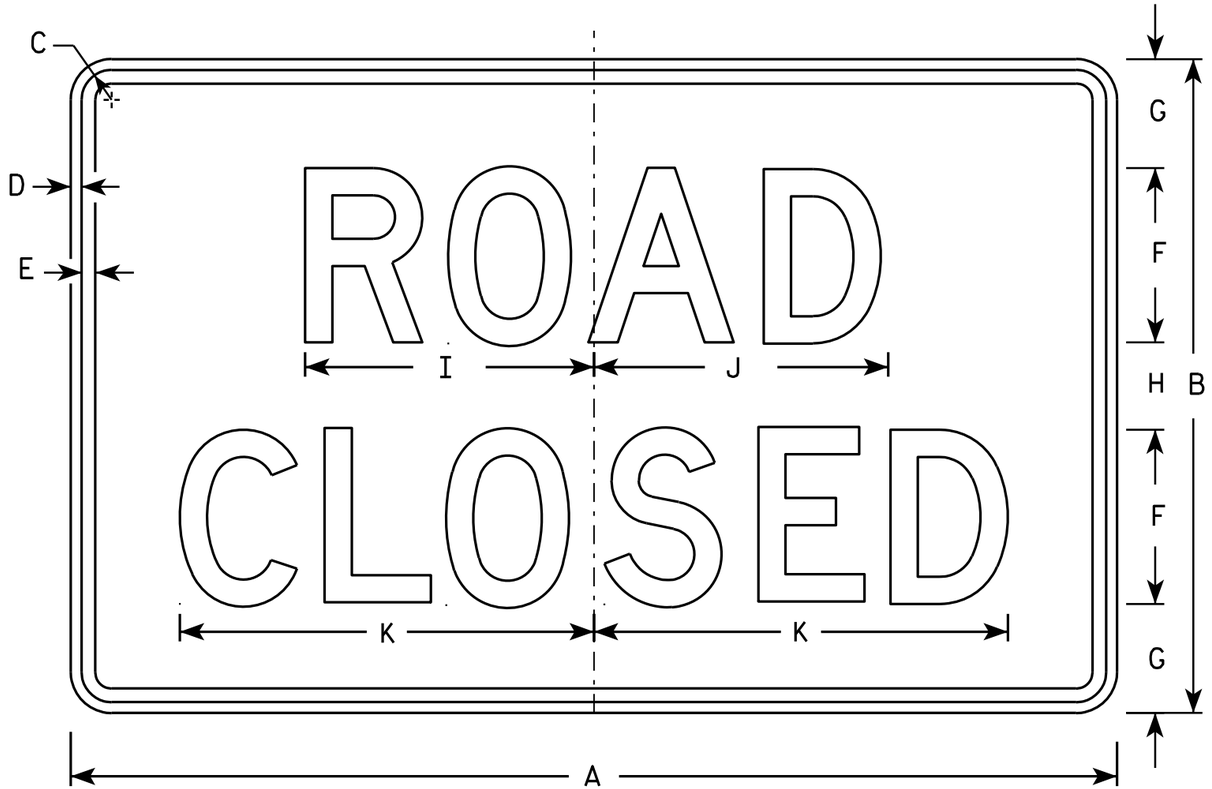
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

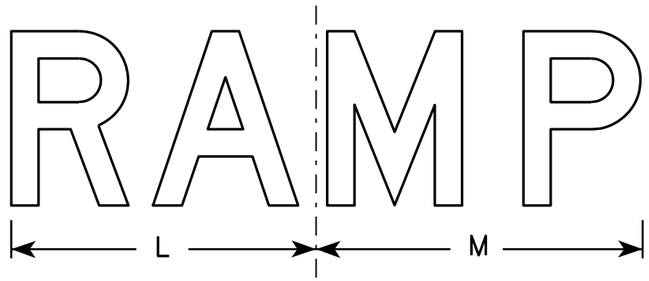
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 168	E



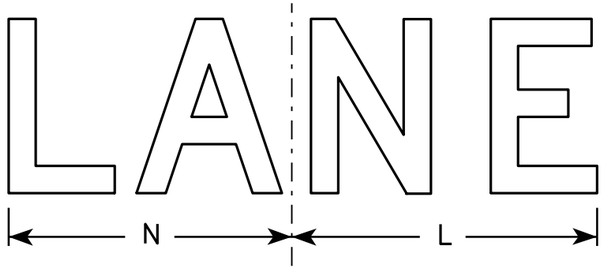
R11-2

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

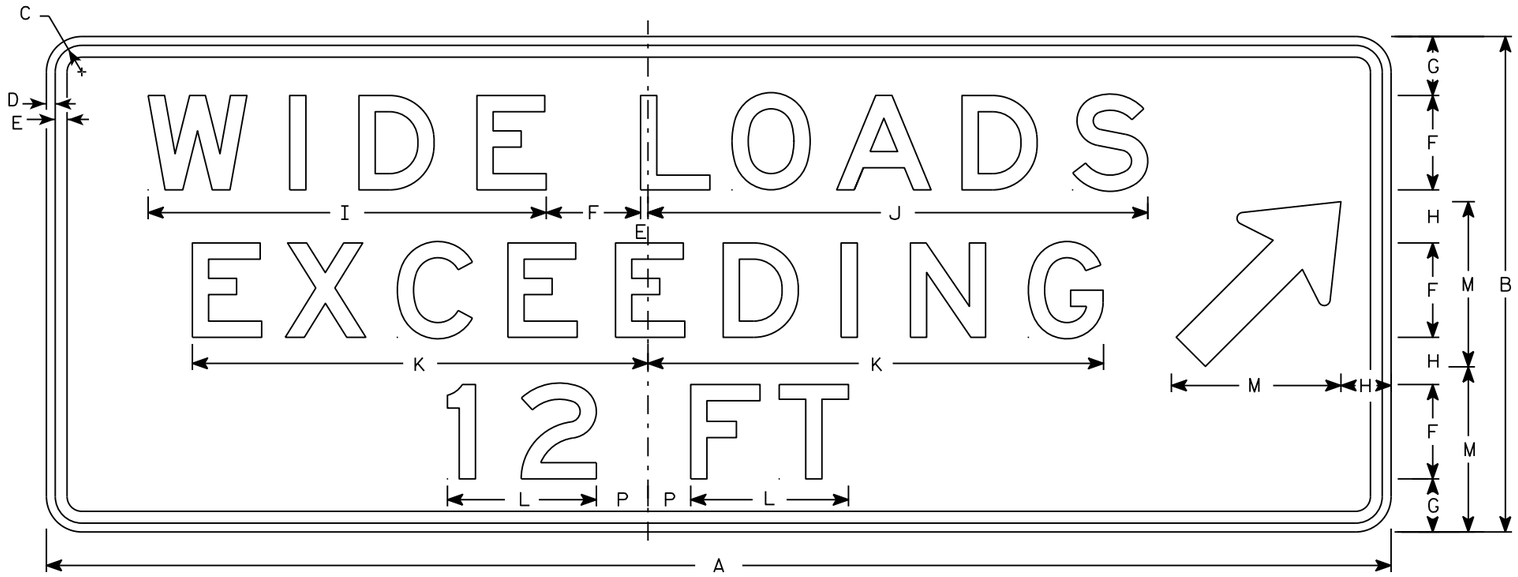
STANDARD SIGN
R11-2

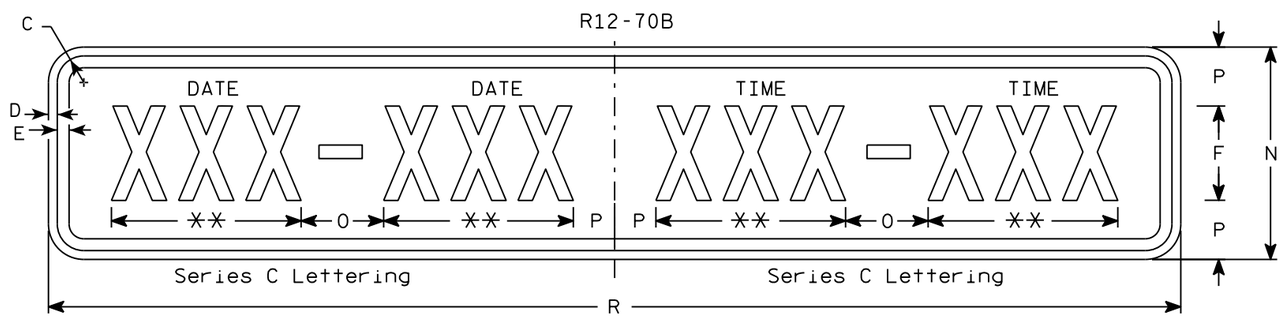
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 169 | E





R12-70C

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	R12-70 Area sq. ft.	R12-70C Area sq. ft.
1																												
2S	90	36	2 1/4	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
2M	90	36	2 1/4	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
3																												
4	114	42	2 1/4	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0
5	114	42	2 1/4	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0

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 except as noted
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.

** Substitute appropriate message, optically center message

TYPICAL SIGN
R12-70B

WISCONSIN DEPT OF TRANSPORTATION

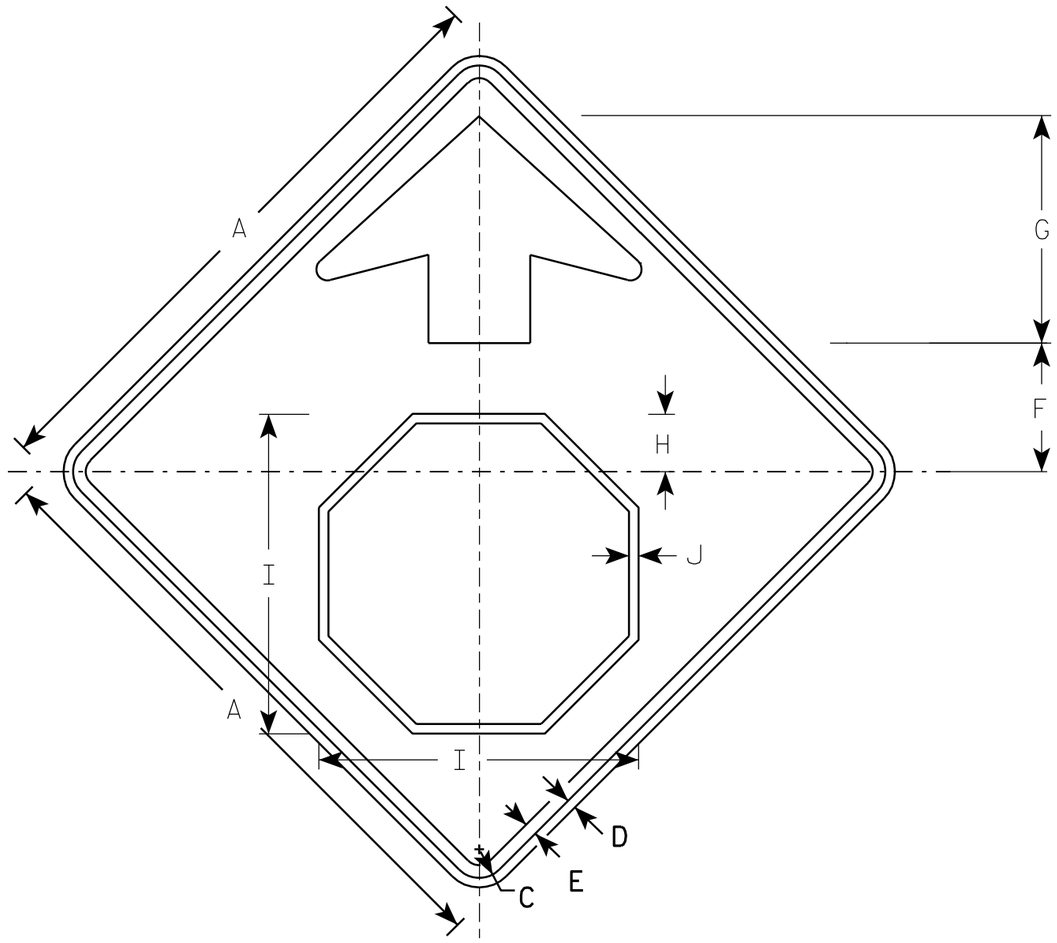
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/15 PLATE NO R12-70B.3

170

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

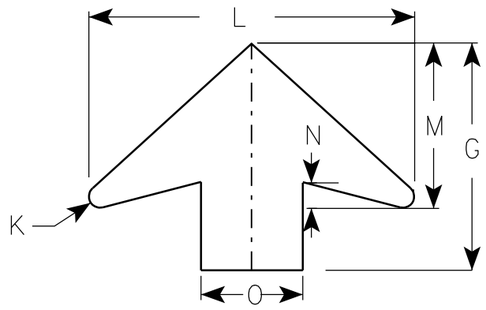
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R1270B.DGN PLOT DATE : 01-DEC-2015 18:10 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 12.842555:1.000000



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

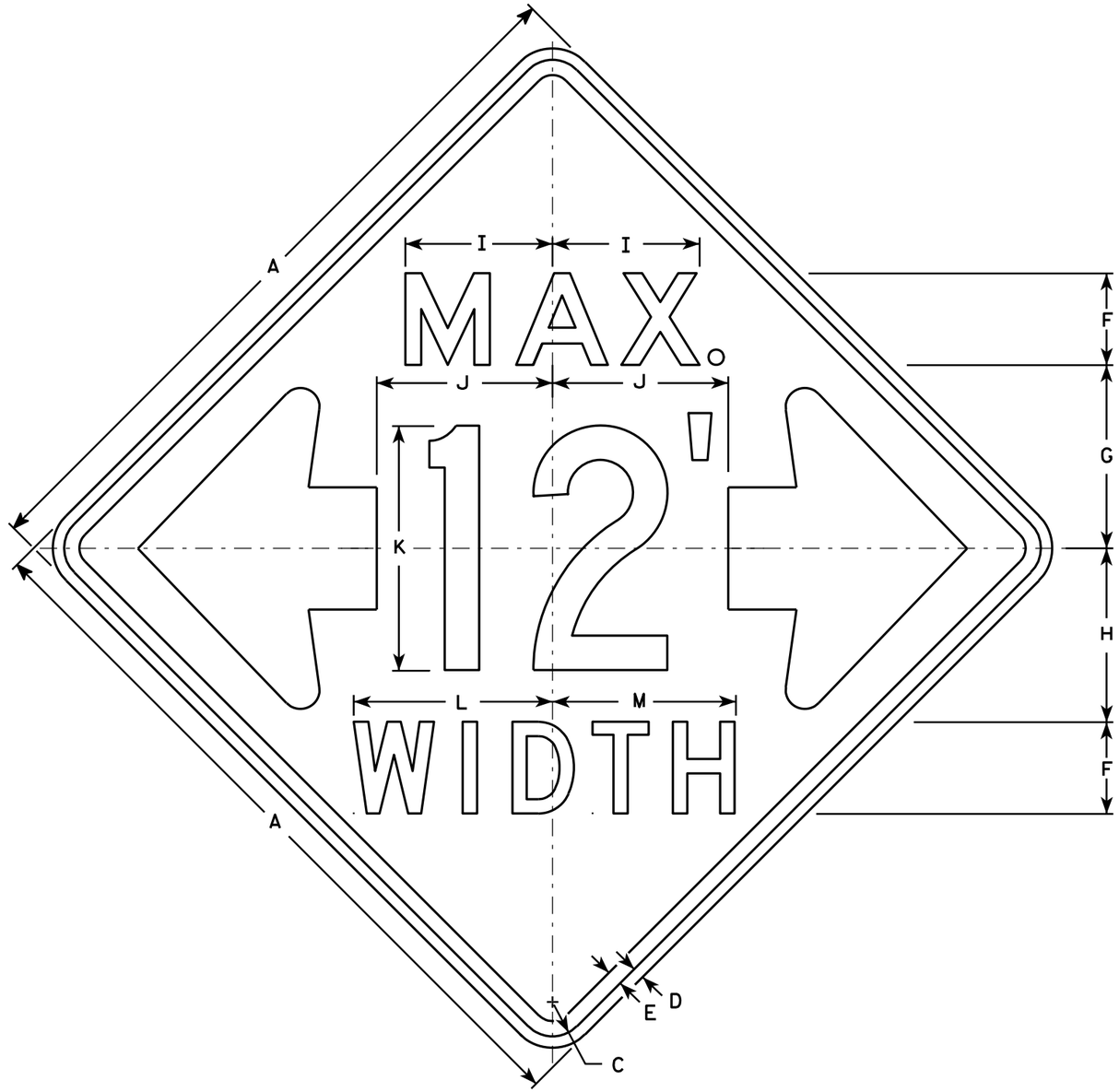
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

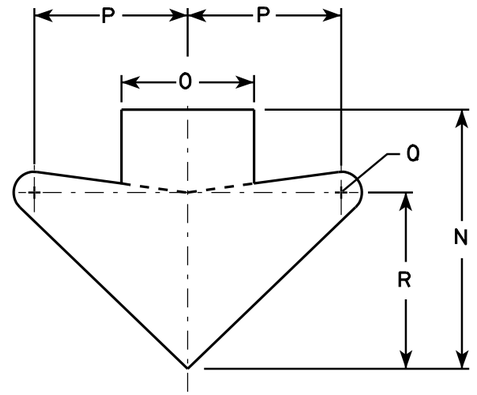
SHEET NO: 171 E



W12-52

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

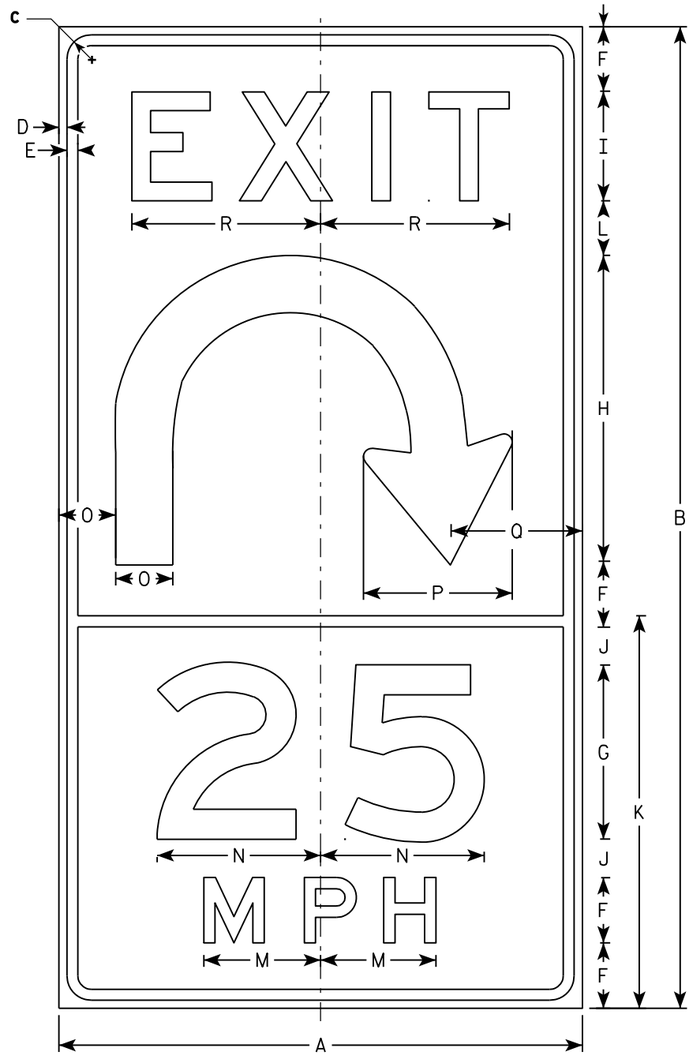
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 172 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000
WISDOT/CADDS SHEET 42



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	Q	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																											

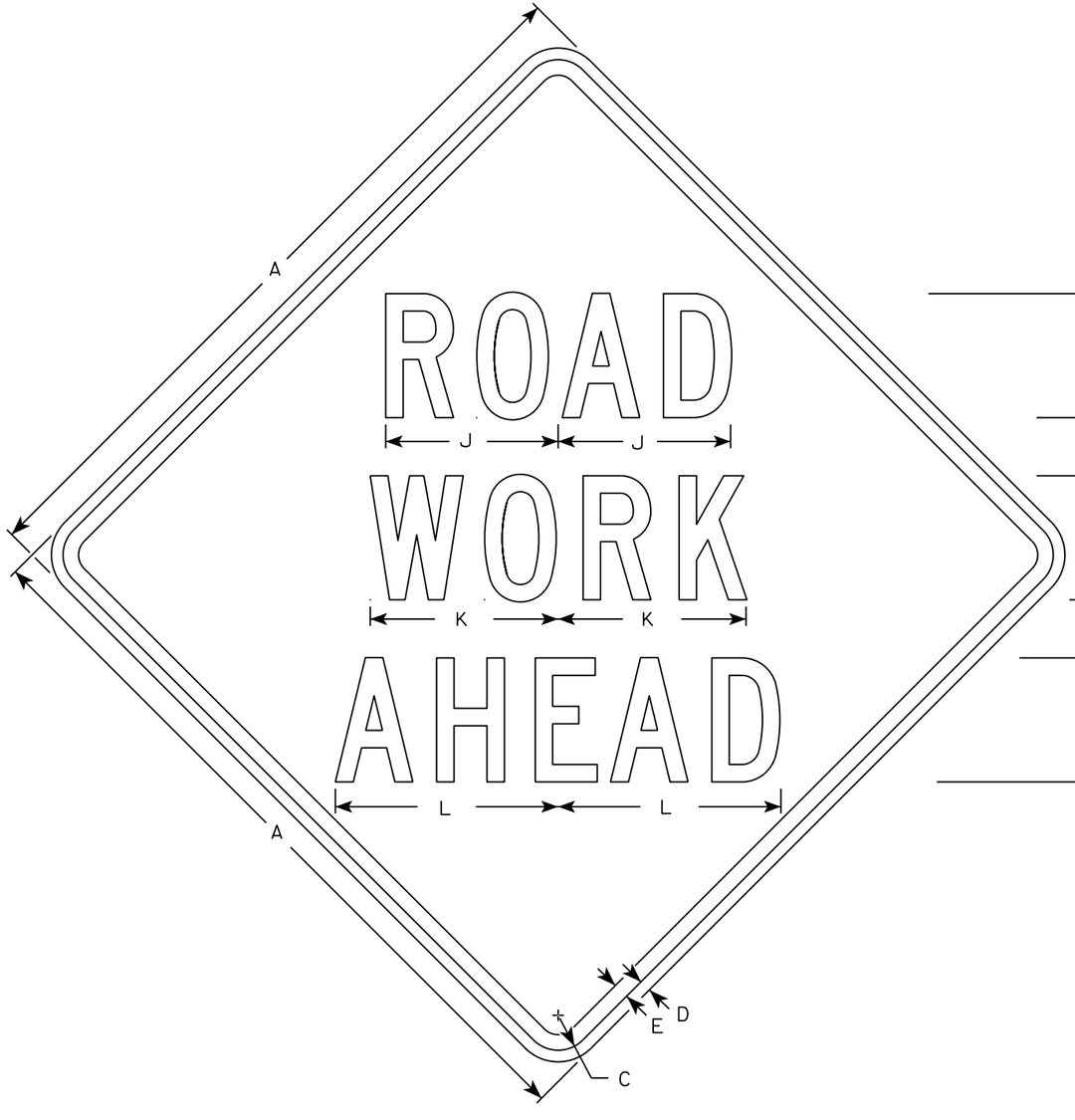
STANDARD SIGN
W13-2A

WISCONSIN DEPT OF TRANSPORTATION

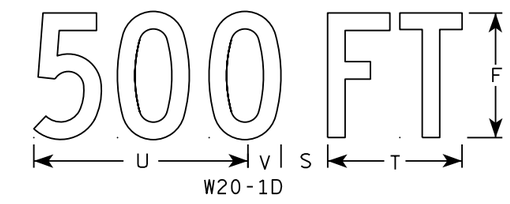
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-2A.3

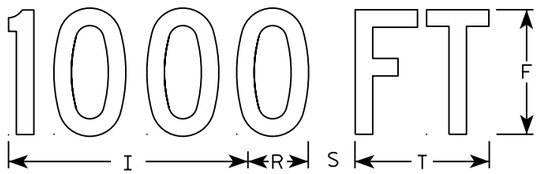
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 173 | E



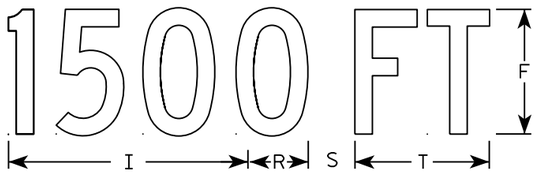
W20-1A



W20-1D

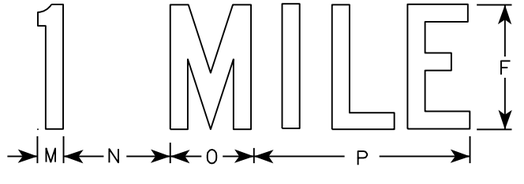


W20-1C

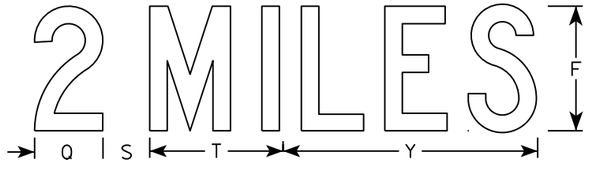


W20-1B

W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

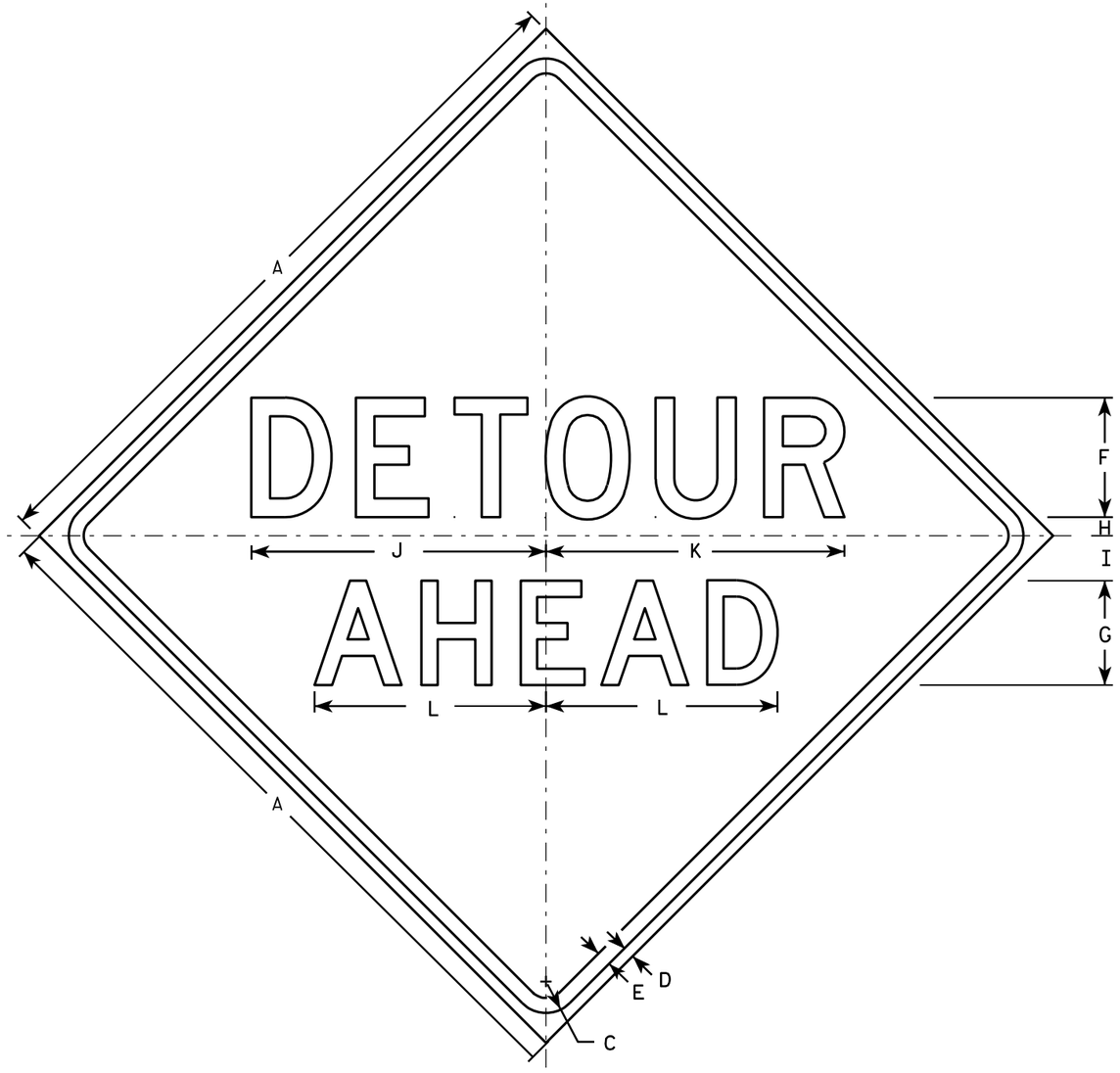
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

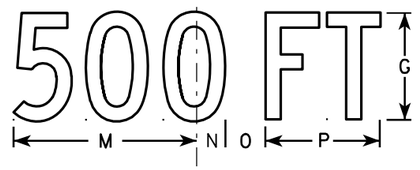
PROJECT NO:

SHEET NO: E

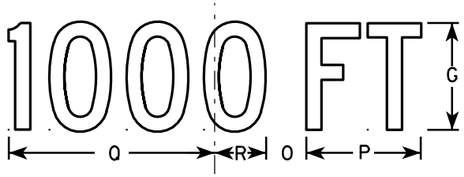
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



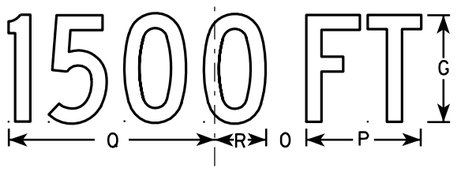
W20-2A



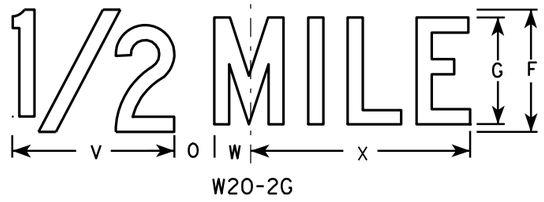
W20-2D



W20-2C



W20-2B



W20-2G

W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	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

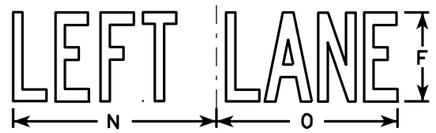
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

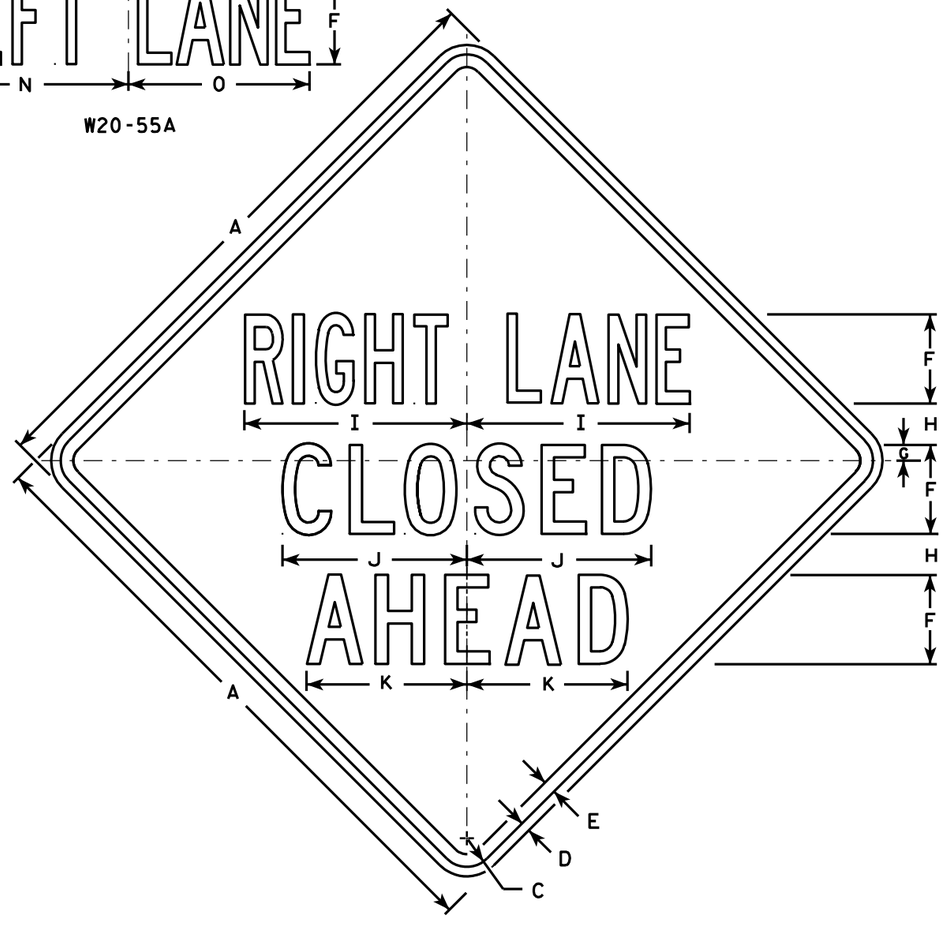
DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 175	E

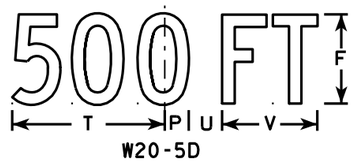
W20-56A



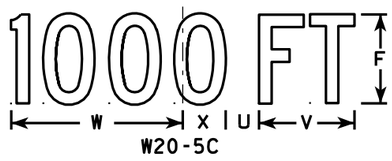
W20-55A



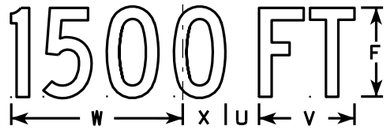
W20-5A



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

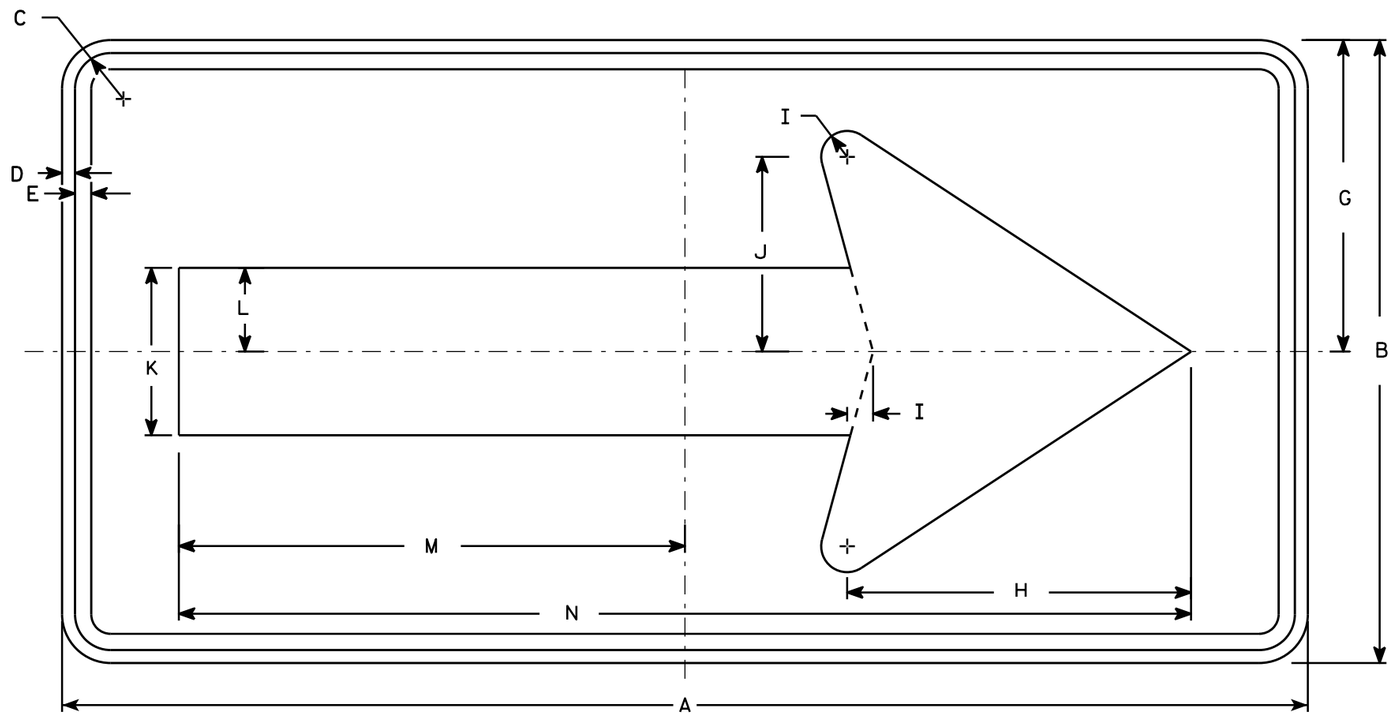
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 176 | 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



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

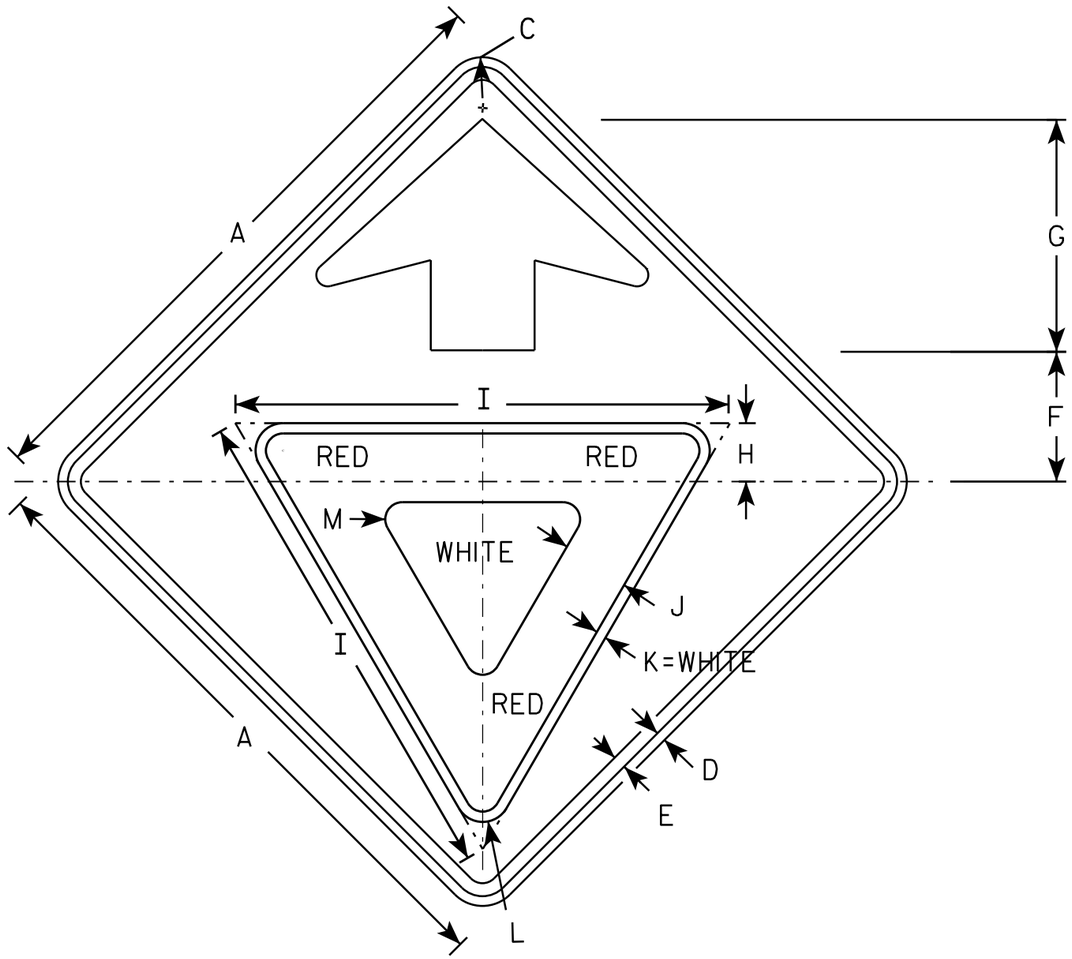
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

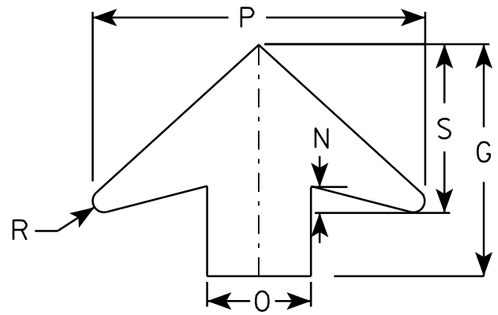
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W03-2

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

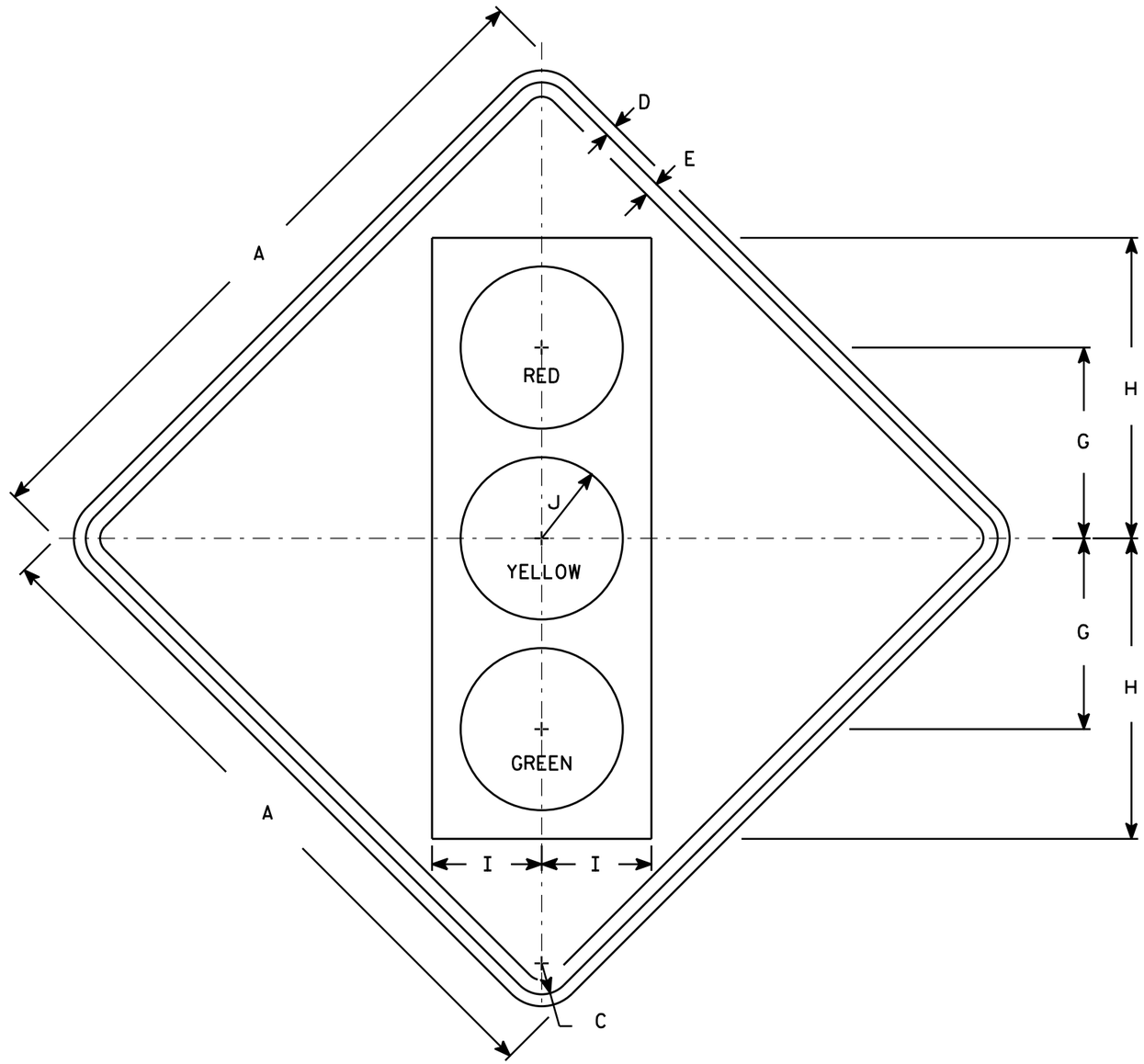
STANDARD SIGN
W03-2

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



W03-3

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 - 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. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

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		10	15 3/4	5 3/4	4 1/4																	9.0
2S	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
2M	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
3	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

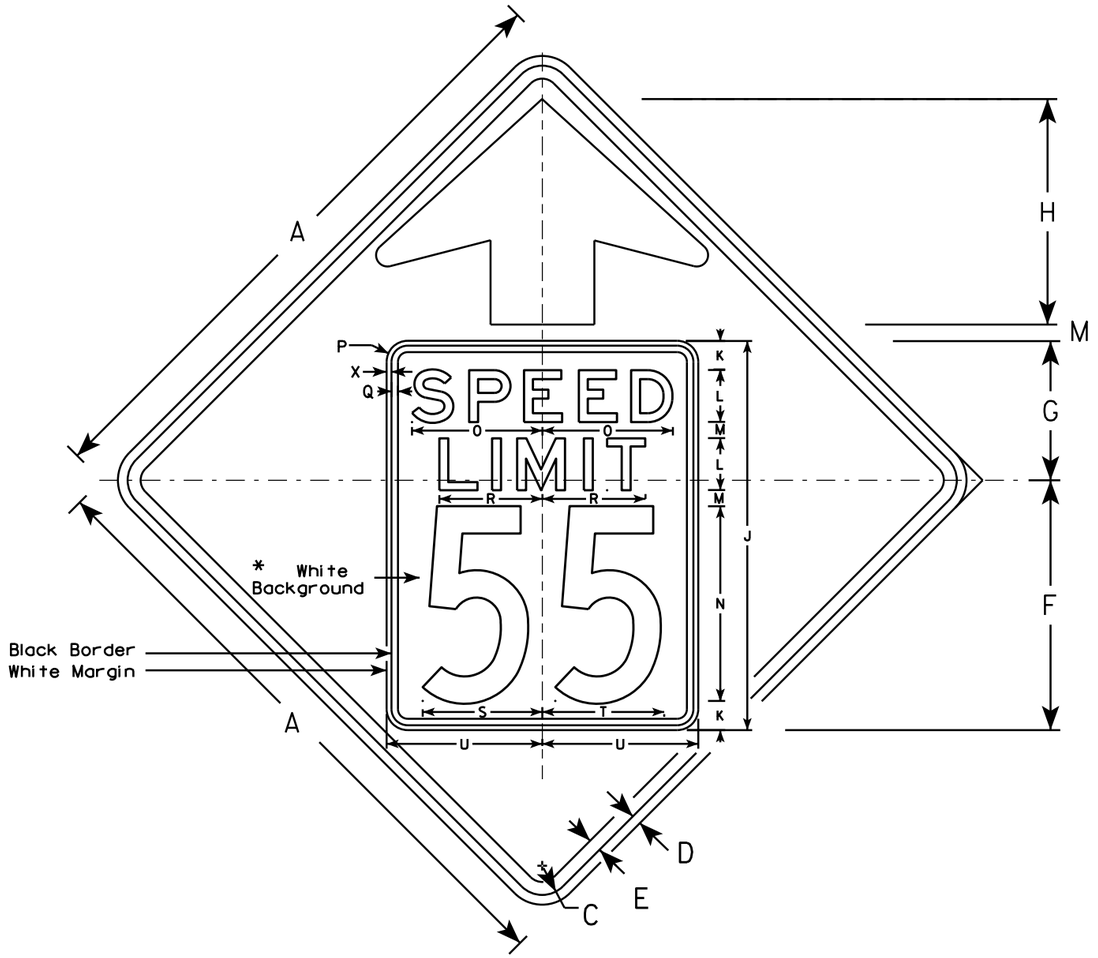
STANDARD SIGN
W03-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 179 W03-3.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

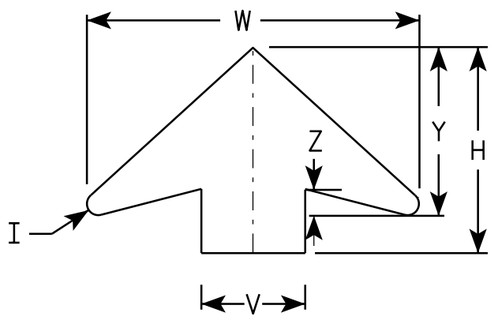


W03-5

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

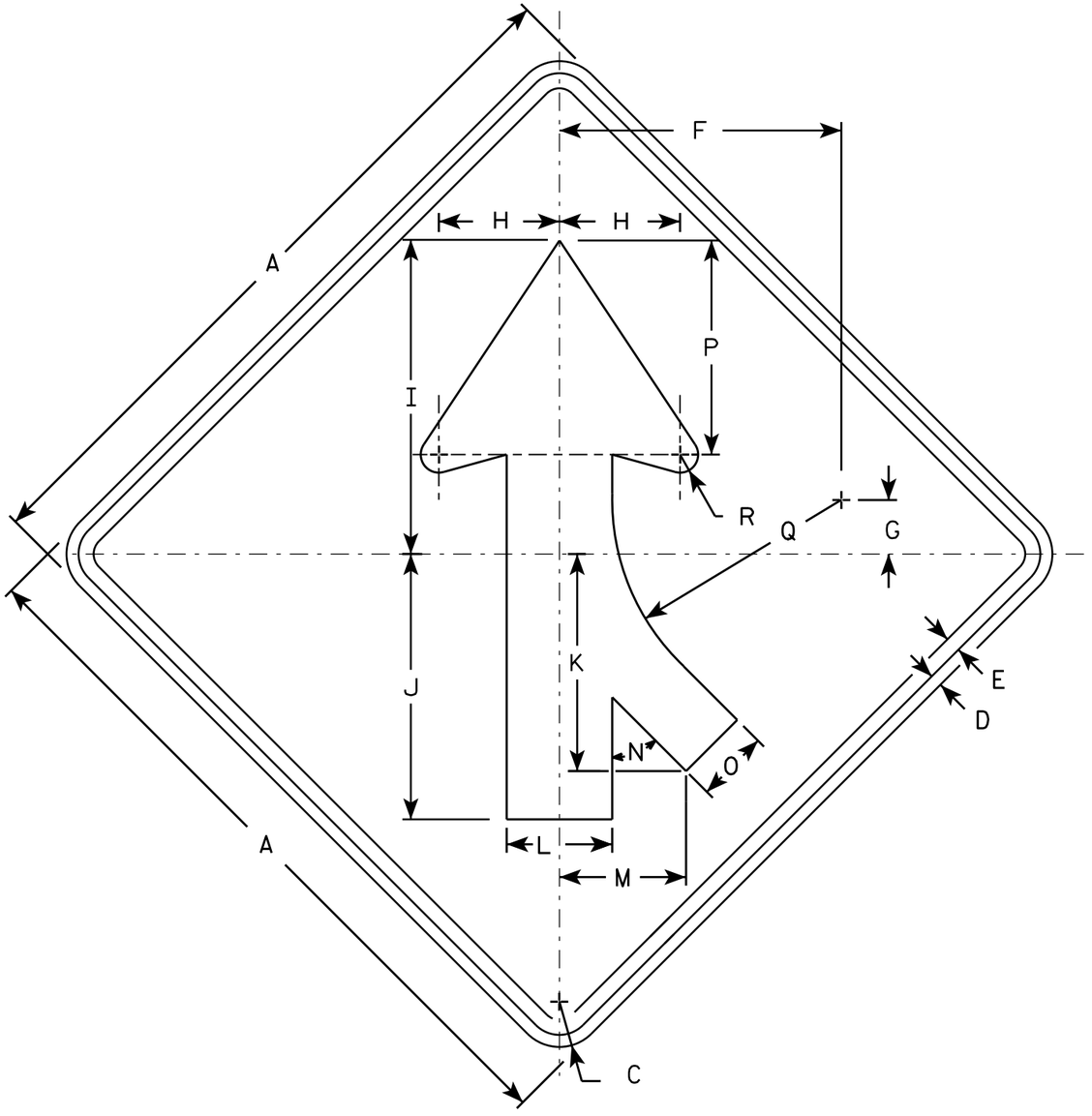
APPROVED Matthew R Rauch
for State Traffic Engineer

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

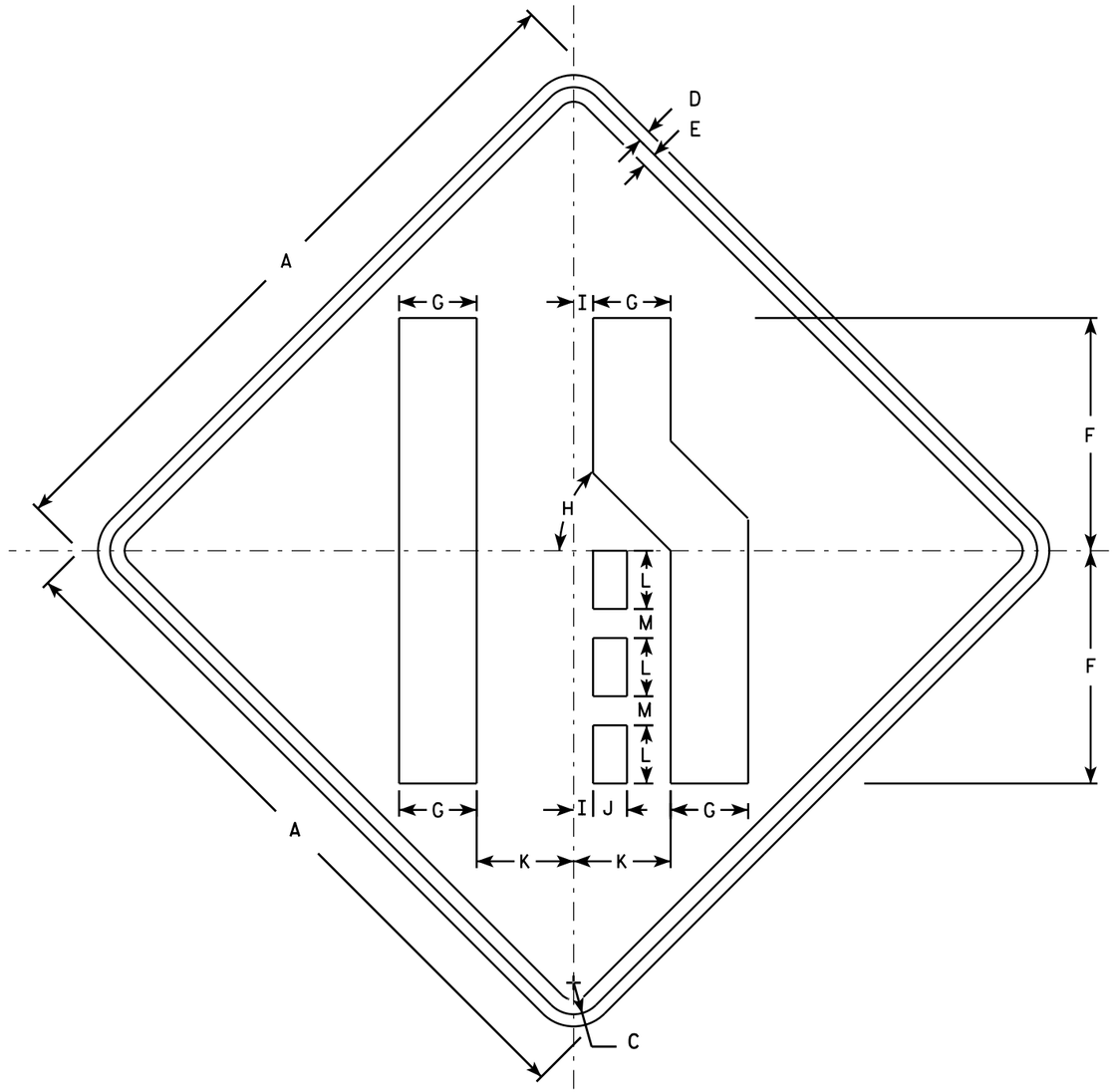
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew L Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO W04-1.1

PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W041.DGN PLOT DATE : 20-NOV-2013 11:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.080757:1.000000
WISDOT/CADDS SHEET 42



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

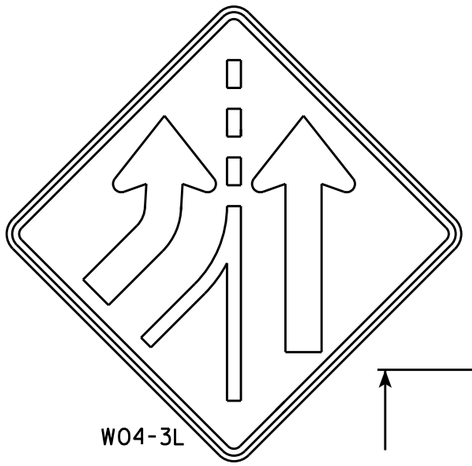
STANDARD SIGN
W04-2

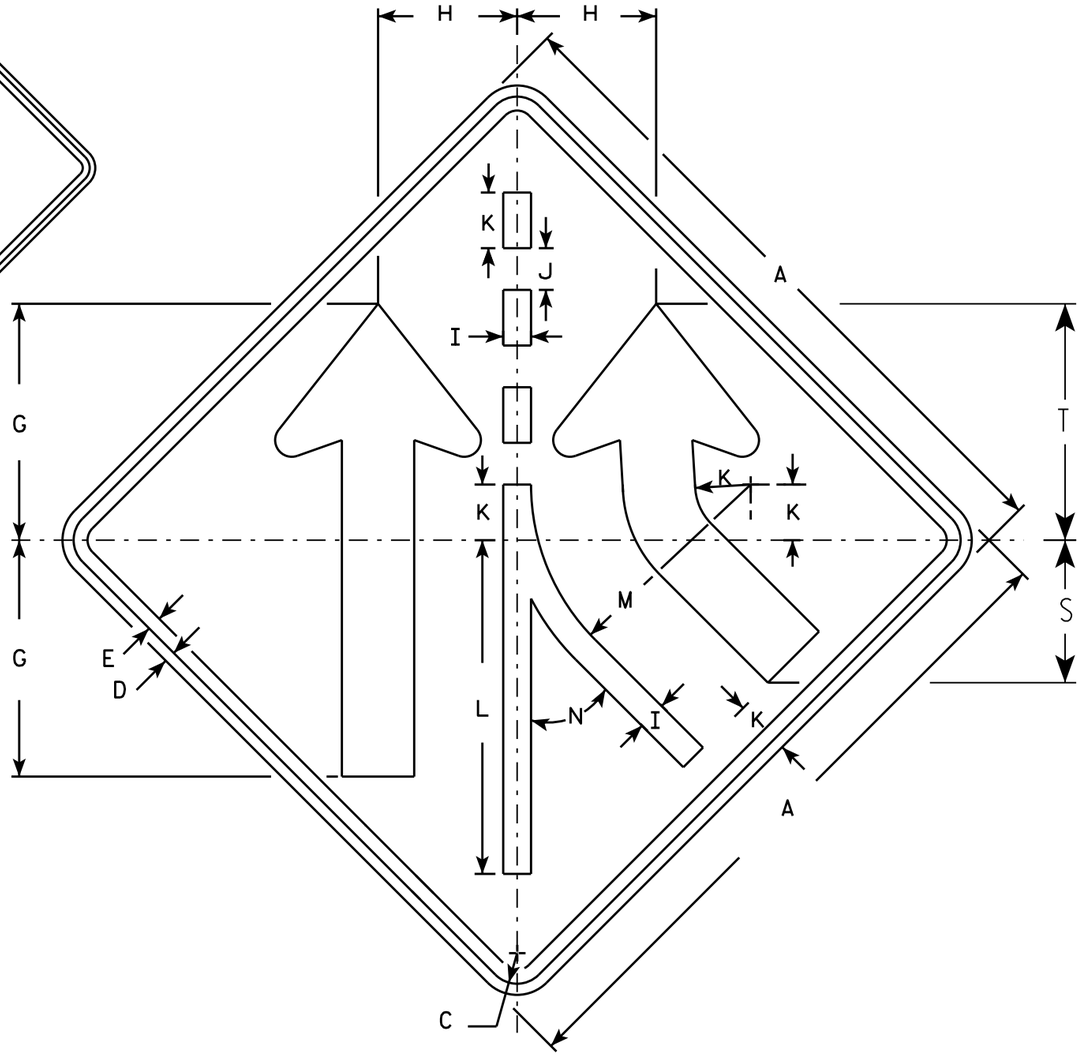
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 182 W04-2.1

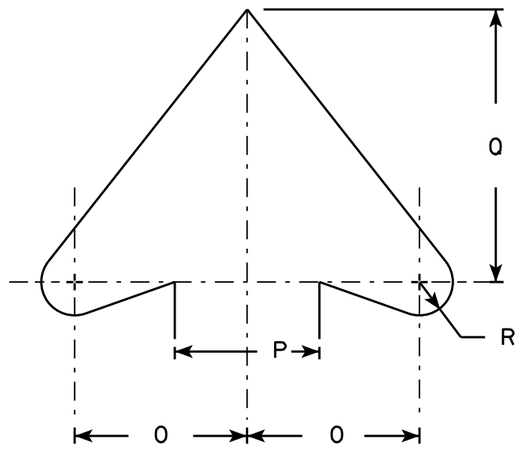
PROJECT NO: | SHEET NO: E





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

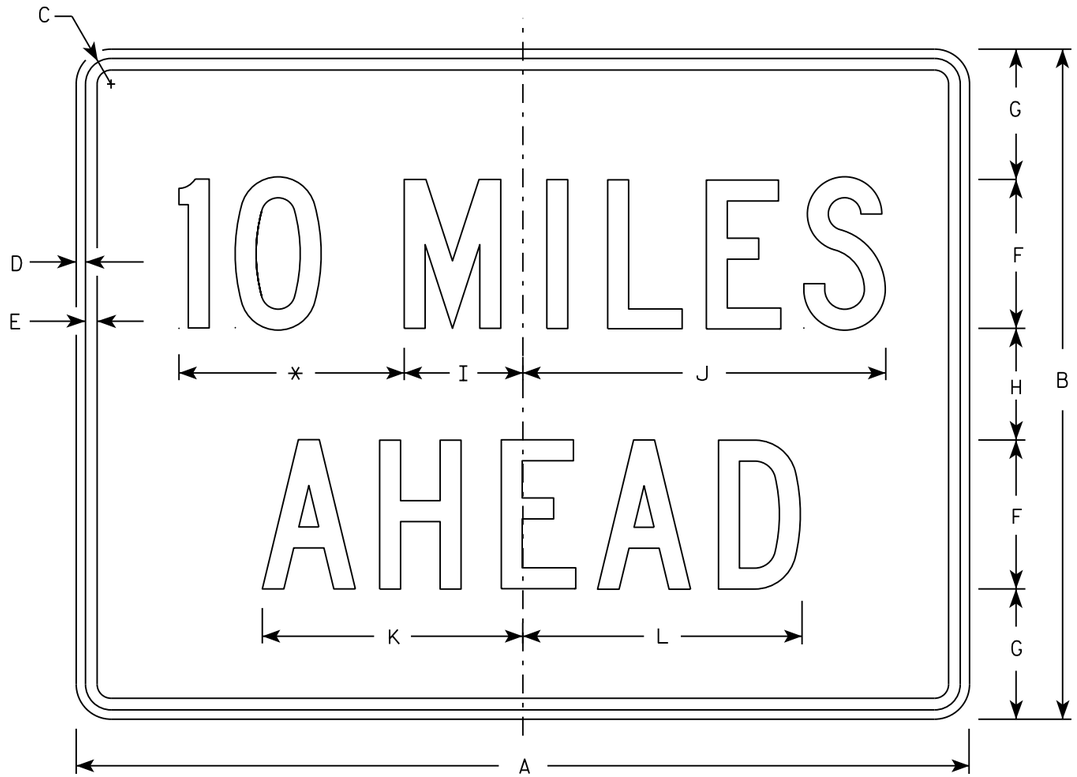
DATE 11/20/13 PLATE W04-3.1

PROJECT NO:

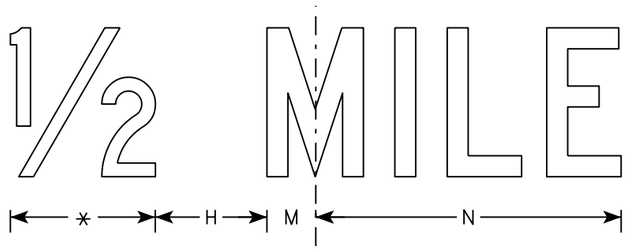
SHEET NO: E

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



W057-52



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.

* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN
W057-52

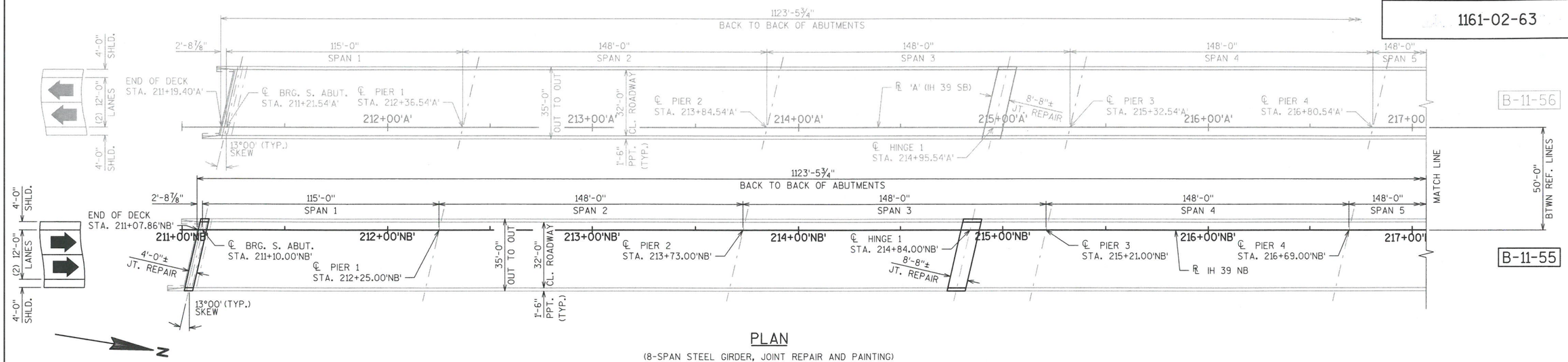
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W057-52.2

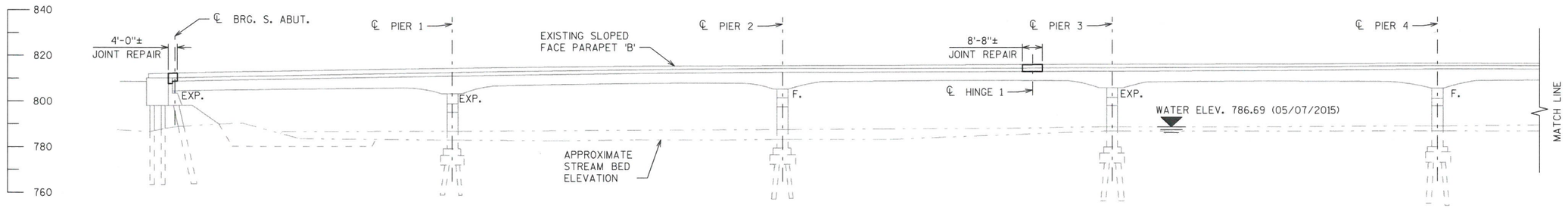
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 184	E

STATE PROJECT NUMBER
1161-02-63



PLAN

(8-SPAN STEEL GIRDER, JOINT REPAIR AND PAINTING)



ELEVATION

(LOOKING WEST

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS-20 (TAKEN FROM HSI, 07/14/2016)
INVENTORY RATING: HS-17 (TAKEN FROM HSI, 07/14/2016)
OPERATING RATING: HS-29 (TAKEN FROM HSI, 07/14/2016)
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 180 KIPS (TAKEN FROM HSI, 07/14/2016)

MATERIAL PROPERTIES:
CONCRETE MASONRY OVERLAY DECKS.....f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT
HIGH STRENGTH, GRADE 60.....fy = 60,000 P.S.I.

TRAFFIC DATA

IH 39
A.D.T. = 20,500 (2017)
A.D.T. = 24,600 (2037)
RDS = 70 MPH

BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
6	210+94.50'NB'	29.13' RT	WISDOT DISK TOP PARAPET SE QUAD B-11-55	812.87
8	222+30.04'NB'	5.58' LT	WISDOT DISK TOP PARAPET NW QUAD B-11-55	811.03
9	222+47.11'NB'	79.27' LT	WISDOT DISK TOP PARAPET NW QUAD B-11-56	810.47

LIST OF DRAWINGS

1. GENERAL PLAN 1
2. GENERAL PLAN 2
3. CROSS SECTION, NOTES AND QUANTITIES
4. REMOVAL DETAILS
5. BEARING DETAIL
6. N. ABUT. GIRDER 3 JACKING
7. ABUTMENT EXPANSION DEVICE
8. HINGE EXPANSION DEVICE
9. COVER PLATE DETAILS
10. ABUTMENT PARAPET DETAILS
11. HINGE PARAPET DETAILS
12. BILL OF BARS

NOTE

STATIONING REFERENCES THE ORIGINAL STRUCTURE PLANS.

WISCONSIN PROFESSIONAL ENGINEER
LINDA M. KRUEGER
E-41427
MADISON, WI

Linda Krueger
10/19/16

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
LINDA KRUEGER (608) 821-8700

NO.	DATE	REVISION	BY

Michael Baker INTERNATIONAL
MICHAEL BAKER INTERNATIONAL
7633 GANSER WAY, SUITE 206
MADISON, WI 53719
www.mbakerintl.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/21/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-11-55

IH 39 NB OVER WISCONSIN RIVER

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
COLUMBIA	PORTAGE

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
DRH	LMK	ABP	LMK

GENERAL PLAN 1

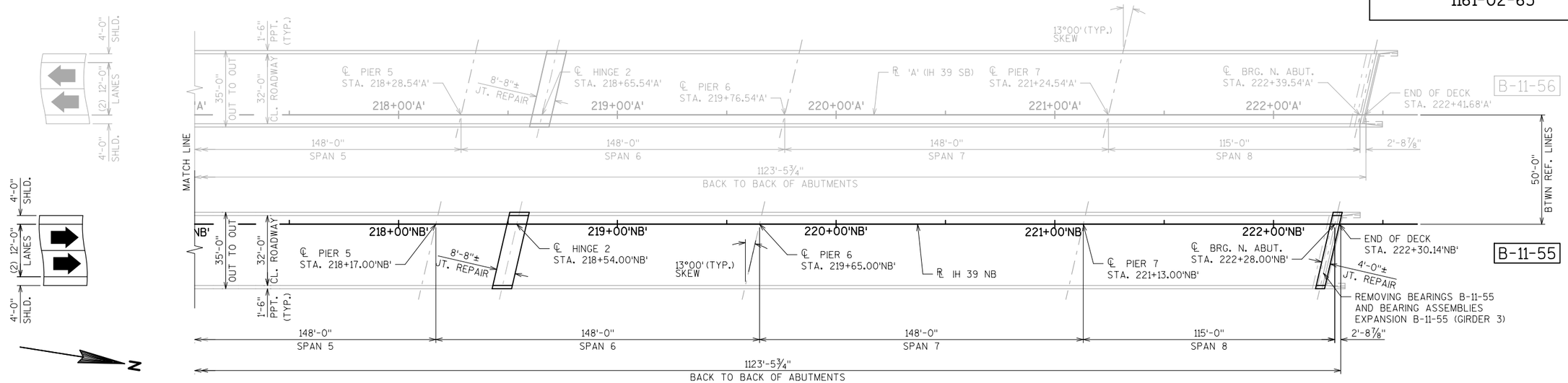
SHEET 185 OF 12

8

8

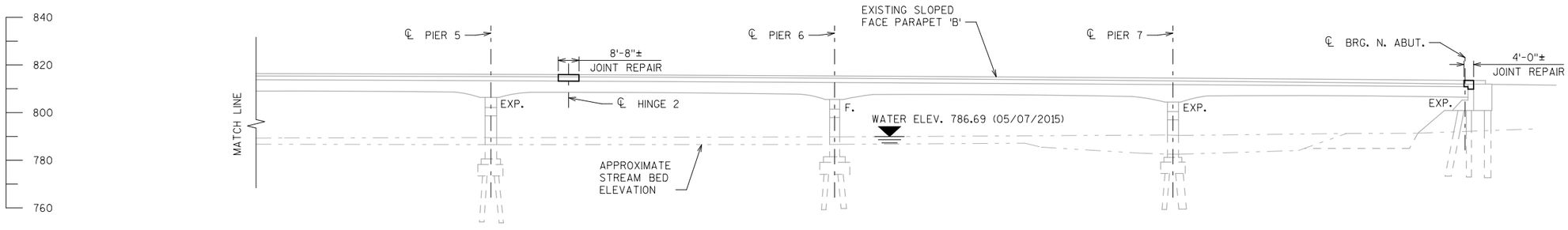
STATE PROJECT NUMBER

1161-02-63



PLAN

(8-SPAN STEEL GIRDER, JOINT REPAIR AND PAINTING)



ELEVATION

(LOOKING WEST

NOTE

STATIONING REFERENCES THE ORIGINAL STRUCTURE PLANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-55

DRAWN BY ABP | PLANS CK'D. LMK

GENERAL PLAN 2

SHEET 2 OF 12

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8

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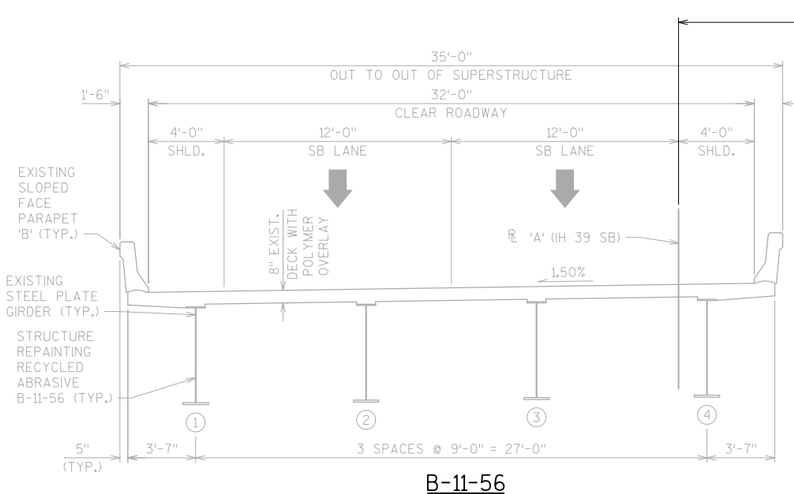
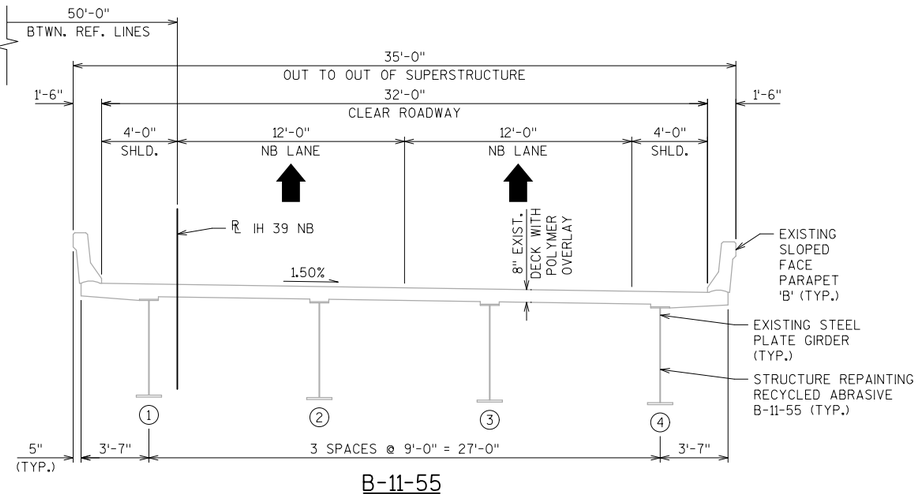
STATE PROJECT NUMBER
1161-02-63



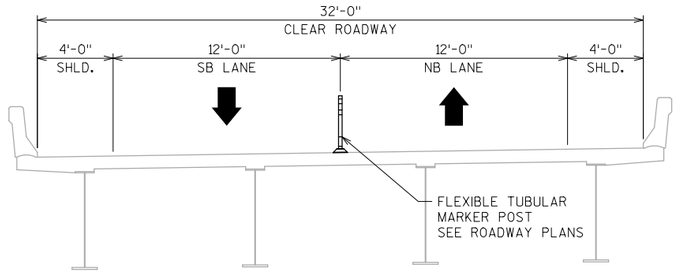
B-11-56



B-11-55

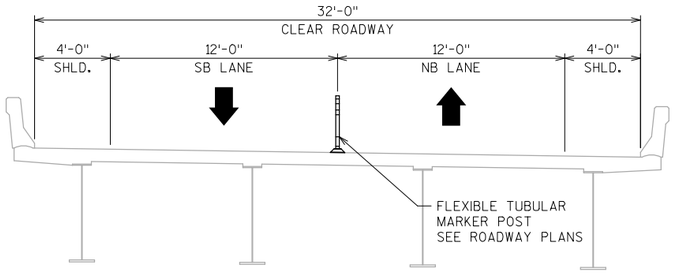
CROSS SECTION

LOOKING NORTH



STAGE 2 - B-11-56

NOTE: B-11-55 WILL BE CLOSED TO TRAFFIC DURING STAGE 2



STAGE 3 - B-11-55

NOTE: B-11-56 WILL BE CLOSED TO TRAFFIC DURING STAGE 3

STAGING DETAILS

LOOKING NORTH

NOTE: SEE ROADWAY PLANS FOR ADDITIONAL STAGING DETAILS

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	S. ABUT.	N. ABUT.	SUPER.	TOTAL
203.0700.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH DEBRIS CAPTURE SYSTEM STA 216+70'NB'	LS	---	---	---	1
502.3100.03	EXPANSION DEVICE B-11-55	LS	---	---	---	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	91	91
502.3210	PIGMENTED SURFACE SEALER	SY	---	---	21	21
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	36	36	---	72
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	375	375	7,640	8,390
506.6000.03	BEARING ASSEMBLIES EXPANSION B-11-55	EACH	---	1	---	1
506.7050.S.03	REMOVING BEARINGS B-11-55	EACH	---	1	---	1
509.1000	JOINT REPAIR	SY	---	---	99	99
509.1500	CONCRETE SURFACE REPAIR	SF	10	10	---	20
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	---	---	37	37
517.1800.S.03	STRUCTURE REPAINTING RECYCLED ABRASIVE B-11-55	LS	---	---	---	1
517.4500.S.03	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-11-55	LS	---	---	---	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	---	---	---	1

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

THE TOP LAYER OF BAR STEEL REINFORCEMENT IN THE DECK AT JOINT REPAIR AREAS SHALL BE PLACED WITH 2½" OF CLEAR COVER.

THE COLOR OF THE FINISH TOP COAT ON THE STEEL GIRDERS SHALL BE MEDIUM SKY BLUE TONE, (FEDERAL STANDARD COLOR NO. 25240).

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP OF DECK AND PAVING BLOCK SURFACE IN THE JOINT REPAIR AREAS. PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE TOP AND ROADWAY FACE OF THE PARAPET IN THE JOINT REPAIR AREAS.

THE BID ITEM "STRUCTURE REPAINTING RECYCLED ABRASIVE B-11-55" INCLUDES CLEANING AND PAINTING ALL STRUCTURAL METAL SURFACES, CLEANING AND PAINTING ALL BEARINGS, AND CLEANING AND PAINTING PIN AND HANGER JOINTS.

THE JOINT REPAIR AREAS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS."

ANY EXCAVATION NECESSARY TO COMPLETE THE JOINT REPAIR AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-11-55".

THE EXISTING STRUCTURE, B-11-55, IS AN 8-SPAN STEEL GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 35'-0" AND AN OVERALL LENGTH BETWEEN BACK OF ABUTMENTS OF 1123'-5¾". ALL EXPOSED STEEL SURFACES SHALL BE PAINTED. 4 EXPANSION JOINTS SHALL BE REPLACED, AND ONE BEARING SHALL BE REPLACED (SEE PLANS FOR DETAILS).

PROTECT HANGER BUSHING FROM BLASTING AND PAINTING.

PERFORM "CONCRETE SURFACE REPAIR" AS DIRECTED BY THE FIELD ENGINEER. QUANTITIES SHOWN ON THE PLANS ARE APPROXIMATE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-55

DRAWN BY ABP | PLANS CK'D. LMK

CROSS SECTION, NOTES AND QUANTITIES

SHEET 3 OF 12

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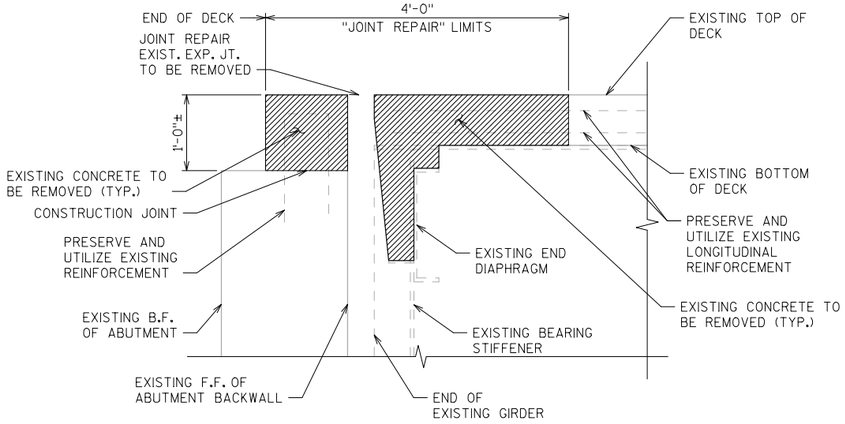
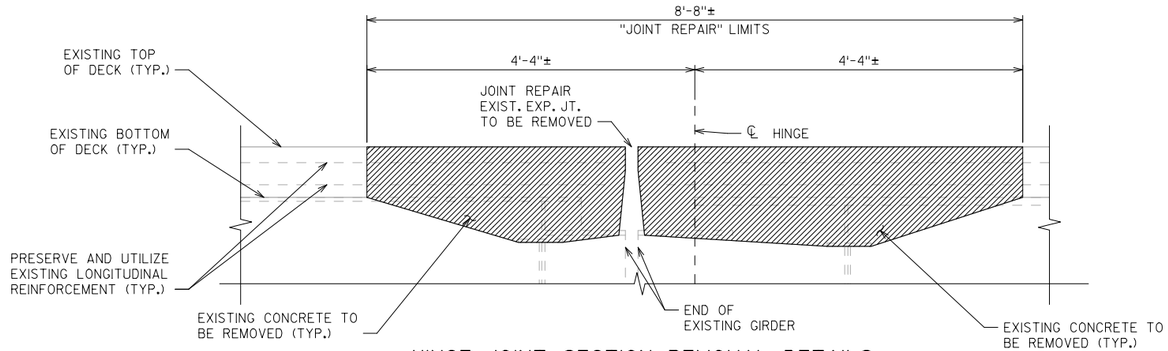
STATE PROJECT NUMBER

1161-02-63



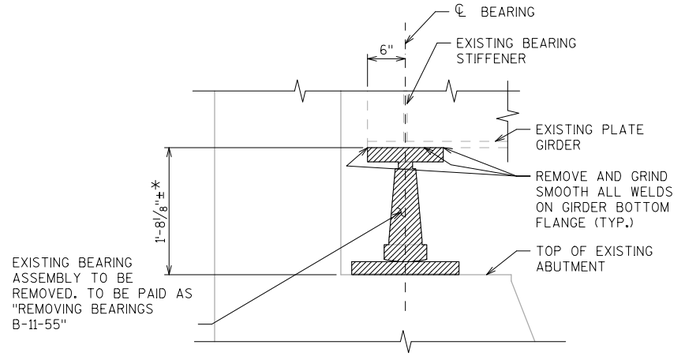
PAVING BLOCK AND END OF DECK REMOVAL DETAILS

NORMAL TO ℄ SUBSTRUCTURE
TYPICAL ABUTMENTS



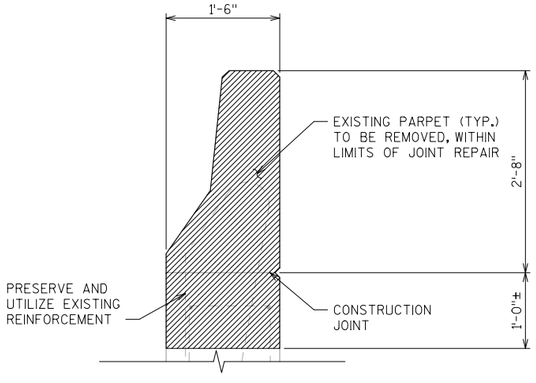
HINGE JOINT SECTION REMOVAL DETAILS

NORMAL TO ℄ HINGE
TYPICAL HINGES



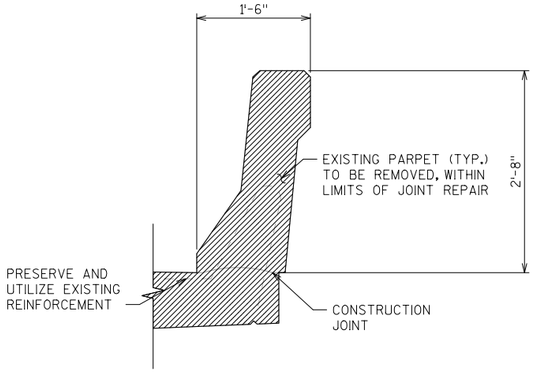
BEARING REMOVAL ELEVATION

NORTH ABUTMENT, GIRDER 3



SECTION THRU PARAPET ON WING

TYPICAL AT WING LOCATIONS



SECTION THRU PARAPET ON DECK

TYPICAL AT ABUTMENT LOCATIONS
TYPICAL AT HINGE LOCATIONS

LEGEND

* DIMENSION BASED ON EXISTING STRUCTURE PLANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-55

DRAWN BY DRH | PLANS CK'D. LMK

REMOVAL DETAILS

SHEET 4 OF 12

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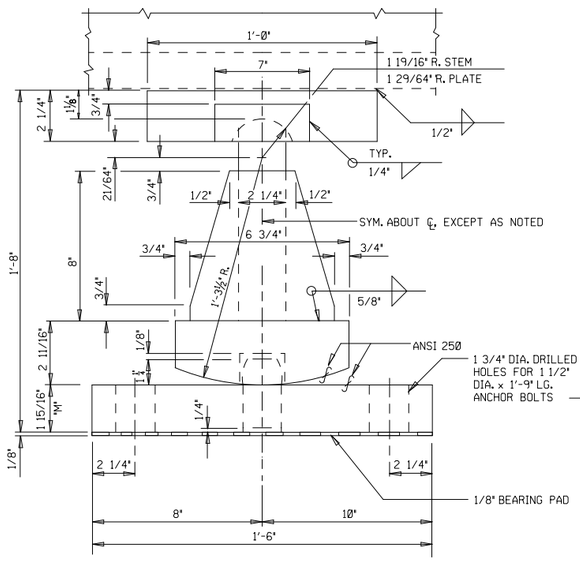
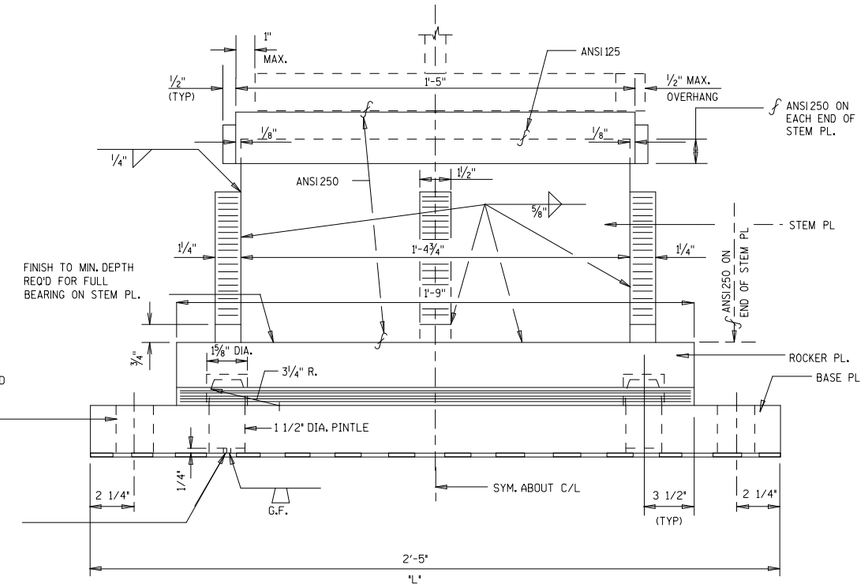


END VIEW

FACING EAST

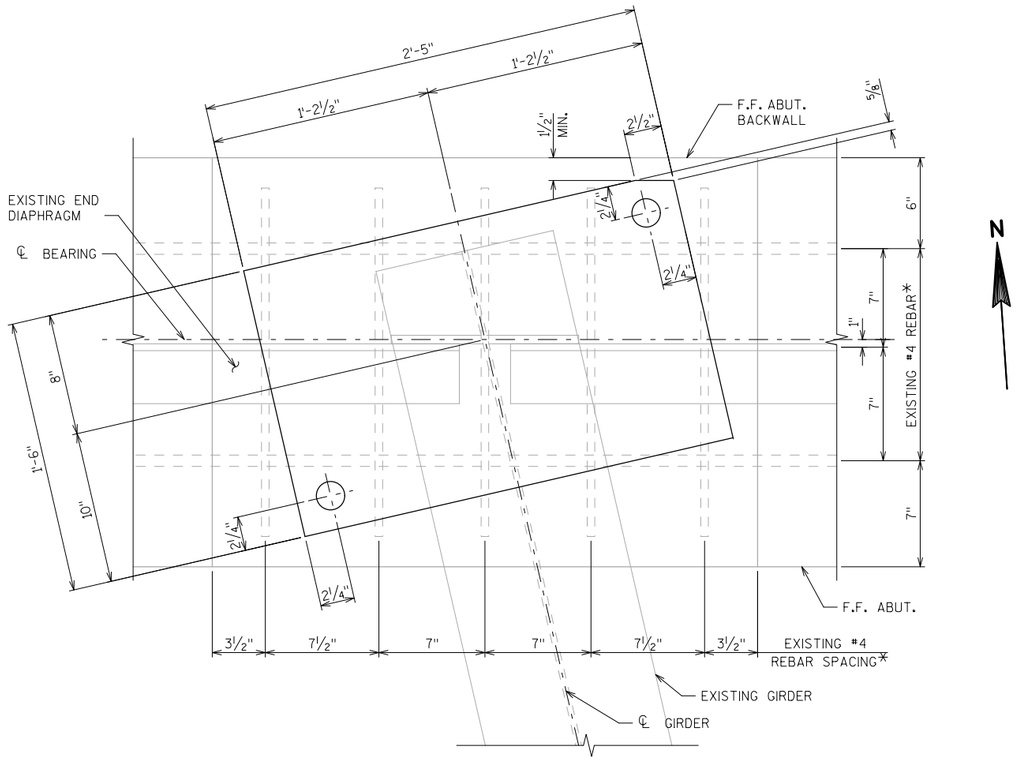


FRONT VIEW

ROCKER BEARING - EXPANSION

TEMP. AT TIME OF SETTING (°F)	N. ABUT.
120°	1/16"
100°	5/8"
80°	1/4"
60°	-1/4"
40°	-5/8"
20°	-1 1/16"
0°	-1 7/16"
-20°	-1 7/8"

(+) INDICATES ROCKERS TOWARD B.F. ABUTMEMT
NOTE: ROCKER SETTING DATA IS TAKEN FROM EXISTING PLANS



PLAN VIEW

N

GENERAL NOTES

FABRICATOR MAY INCREASE 'BASE PLATE' THICKNESS AS AN ALTERNATE TO SHIMS.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES 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. ON WELDED BEARINGS, FINAL MACHINING CAN BE PERFORMED BEFORE WELDING IS COMPLETE.

ALL MATERIAL IN TYPE 'B' ROCKER BEARINGS, INCLUDING SHIMS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-11-55".

ALL MATERIALS FOR BEARINGS INCLUDING SHIMS BUT EXCLUDING PINTLES, ANCHOR BOLTS, NUTS, AND WASHERS SHALL CONFORM TO ASTM SPECIFICATION TYPE A709 GRADE 50W STEEL.

PINTLES SHALL CONFORM TO ASTM SPECIFICATION TYPE A449 ● STEEL. PINTLES SHALL BE MACHINED TO A DRIVING FIT.

ALL ANCHOR BOLTS, NUTS, AND WASHERS SHALL CONFORM TO ASTM SPECIFICATION TYPE A709 GRADE 36 ● STEEL. ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS "M" PLATE THICKNESS + 2¼" ABOVE TOP OF CONCRETE MASONRY. CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

RADIAL SURFACES ON ROCKER SHALL BE MACHINE FINISHED AFTER WELDING.

ALL SURFACES MARKED "𝒻" SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS. THE CONTACT AREA OF BOTTOM SURFACE OF THE GIRDER FLANGE SHALL BE MACHINE FINISHED.

ANCHOR BOLT EDGE DISTANCE ALONG "L" MAY BE INCREASED FROM MINIMUM SHOWN WHEN A COMMON GRID DETAIL IS DESIRED FOR SEVERAL BEARINGS.

FOR UNPAINTED STRUCTURES THE UPPER 6" OF ANCHOR BOLTS. NUTS AND WASHERS SHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS C OR B633.

PROVIDE A 1/8" THICK BEARING PAD SAME SIZE AS THE BASE PLATE FOR EACH BEARING.

LEGEND

● OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

✳ EXISTING REBAR LOCATIONS ARE APPROXIMATE AND ARE BASED ON EXISTING PLANS.

STATE PROJECT NUMBER

1161-02-63

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-55

DRAWN BY DRH | PLANS CK'D. LMK

BEARING DETAIL

SHEET 5 OF 12

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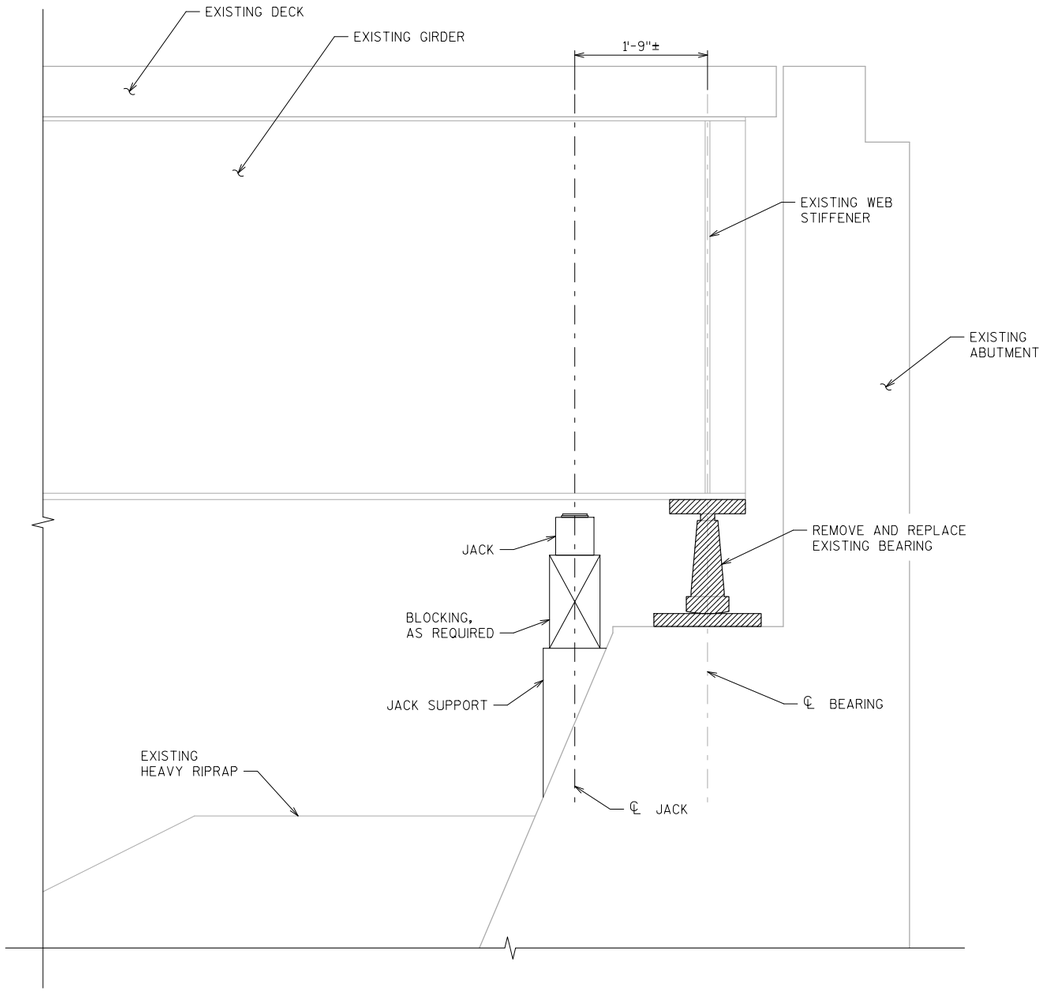
8

8

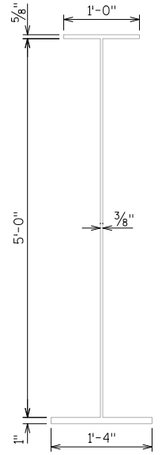
STATE PROJECT NUMBER

1161-02-63



ELEVATION

END DIAPHRAGM NOT SHOWN FOR CLARITY



GIRDER SECTION

(AT ABUTMENT JOINT REPAIR, FOR REFERENCE ONLY)

NOTES

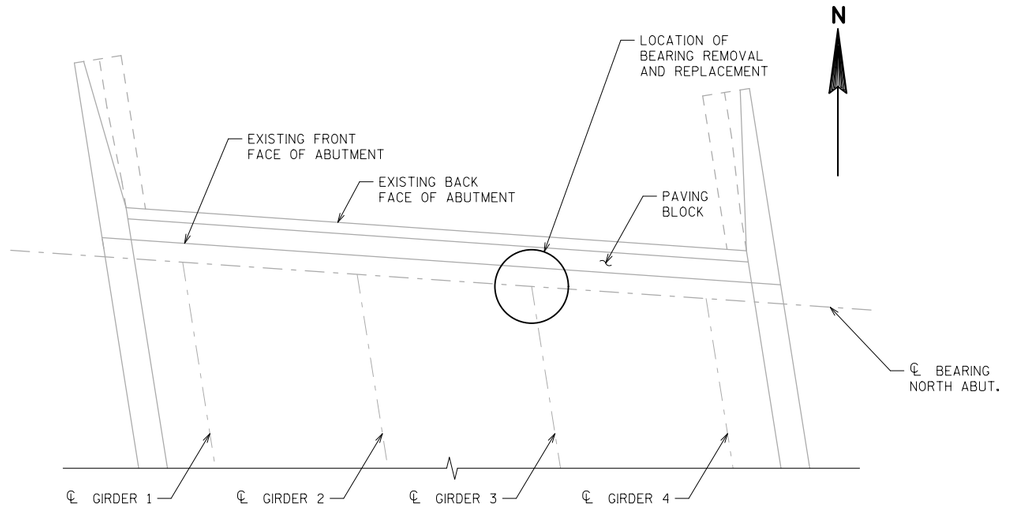
RAISE GIRDER 3 NO MORE THAN 1/4" AND THE ADJACENT GIRDERS ONE-HALF THE AMOUNT THAT GIRDER 3 IS RAISED.

CONTRACTOR RESPONSIBLE FOR GIRDER FLANGE AND WEB STABILITY DURING JACKING.

ANY CONCRETE REPAIR REQUIRED DURING BEARING REMOVAL AND REPLACEMENT IS INCLUDED IN BID ITEM "CONCRETE SURFACE REPAIR"

JACKING DETAILS SHOWN ARE CONCEPTUAL. CONTRACTOR SHALL PROVIDE ALL DETAILS FOR APPROVED METHOD OF JACKING AND SUPPORTING THE GIRDERS. ALL ITEMS SHALL BE REMOVED UPON COMPLETION OF THE WORK.

ALL ITEMS REQUIRED FOR RAISING THE GIRDER AND REMOVING THE EXISTING BEARING ARE INCLUDED IN BID ITEM "REMOVING BEARINGS B-11-55".



PLAN

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-55

DRAWN BY DRH | PLANS CK'D. LMK

N. ABUT.
GIRDER 3
JACKING

SHEET 6 OF 12

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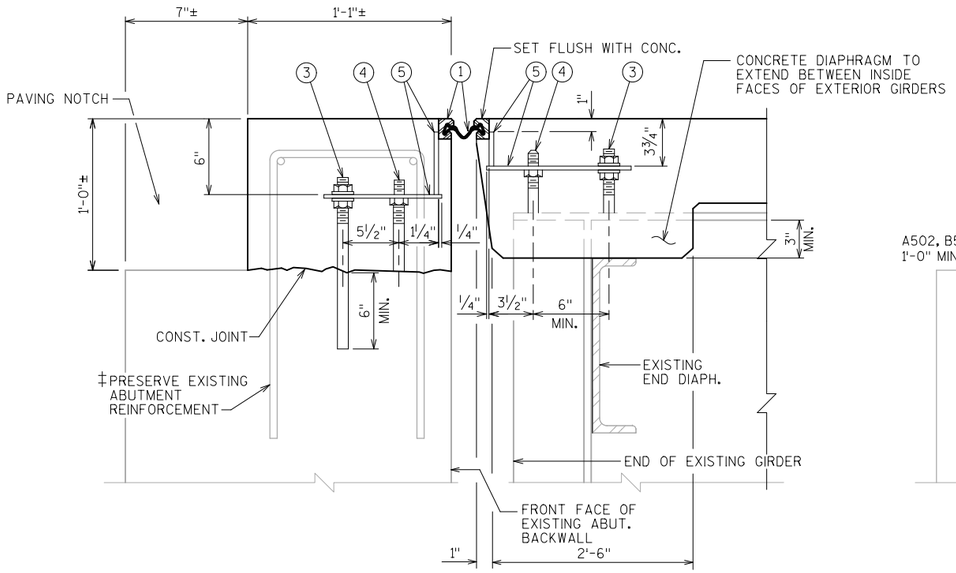
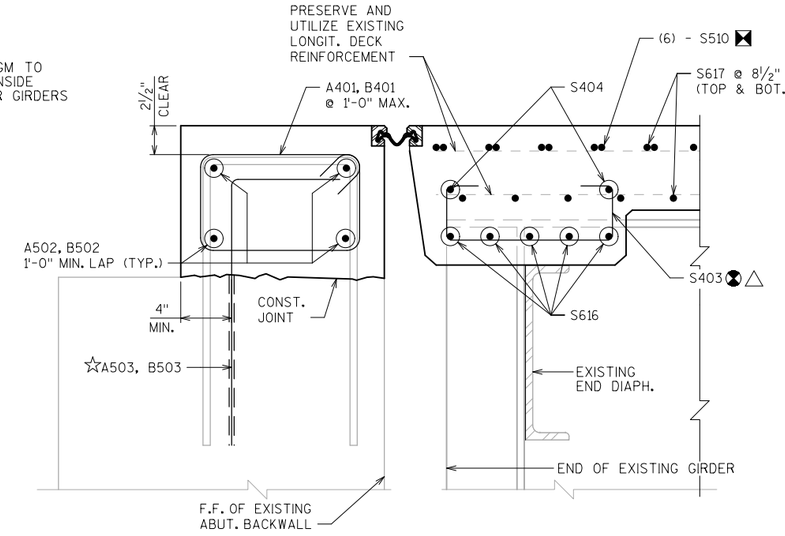
STATE PROJECT NUMBER
1161-02-63



SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE
(SHOWING REINFORCEMENT)

LEGEND

(1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

(2) STUDS ⅝"Φ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝"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. 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"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. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" Φ HOLE FOR NO. 3 AND 1" Φ HOLE FOR NO. 4.

(6) GALVANIZED PLATE ⅜" X 1'-2" x 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

(7) ¾"Φ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) ¾"Φ X 2¼" GALVANIZED THREADED COUPLING.

(10) 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

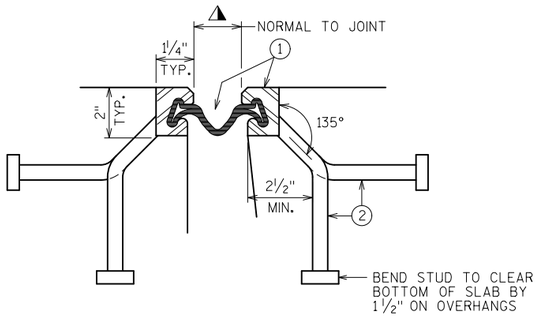
‡ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ☆.

☆ ADHESIVE ANCHORS NO. 5 BARS. EMBED 1'-6" IN CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.

⊠ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ℄ OF GIRDERS. SPACING BETWEEN TOP FLANGE OF GIRDERS.

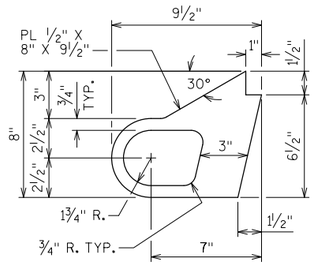
△ 11 SPA @ 9" MAX = 7'-8" - BETWEEN GIRDERS 1 AND 4

⊠ BARS BUNDLED TO TOP TRANSVERSE DECK BARS. TYPICAL AT BOTH SIDES OF ABUTMENT AT EXTERIOR GIRDER OVERHANG.



SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS

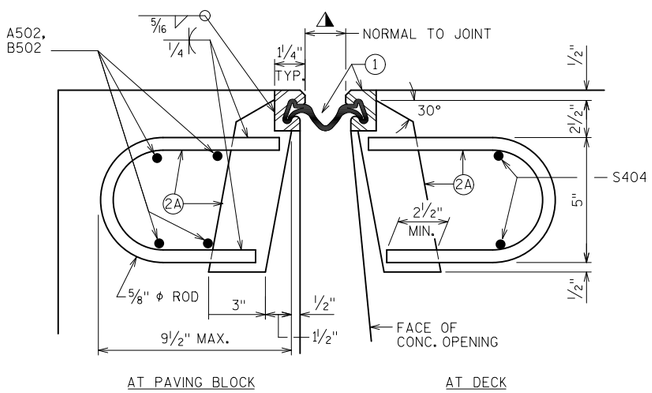


ALTERNATE STRIP SEAL ANCHOR

⚠ TEMPERATURE TABLE

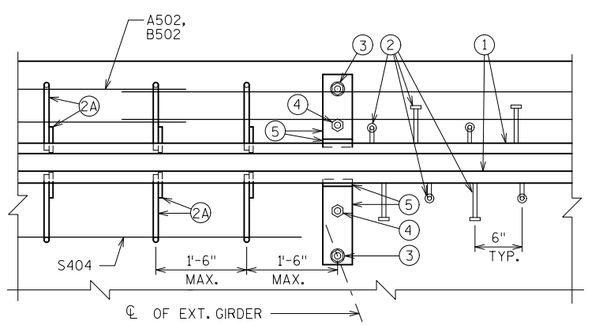
SHADED UNDERSIDE DECK TEMP. (°F)	JOINT OPENING (NORMAL TO JT.)
85°	1½"
75°	1⅝"
65°	1⅞"
55°	2"
45°	2¼"
35°	2½"
25°	2⅝"
15°	2⅞"
5°	3"

A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.
SYM. ABOUT ℄ JOINT UNLESS OTHERWISE SHOWN OR NOTED



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN 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, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 & 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-11-55".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-55

DRAWN BY DRH | PLANS CK'D. LMK

ABUTMENT EXPANSION DEVICE

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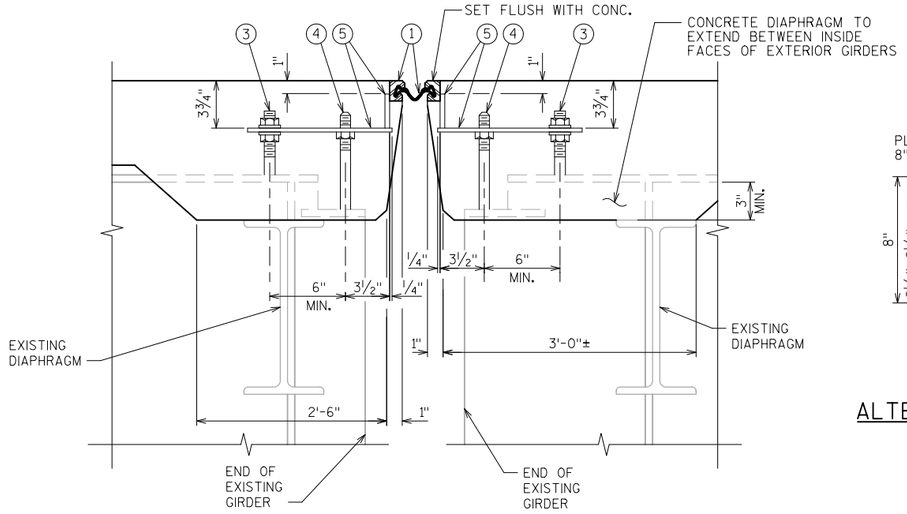
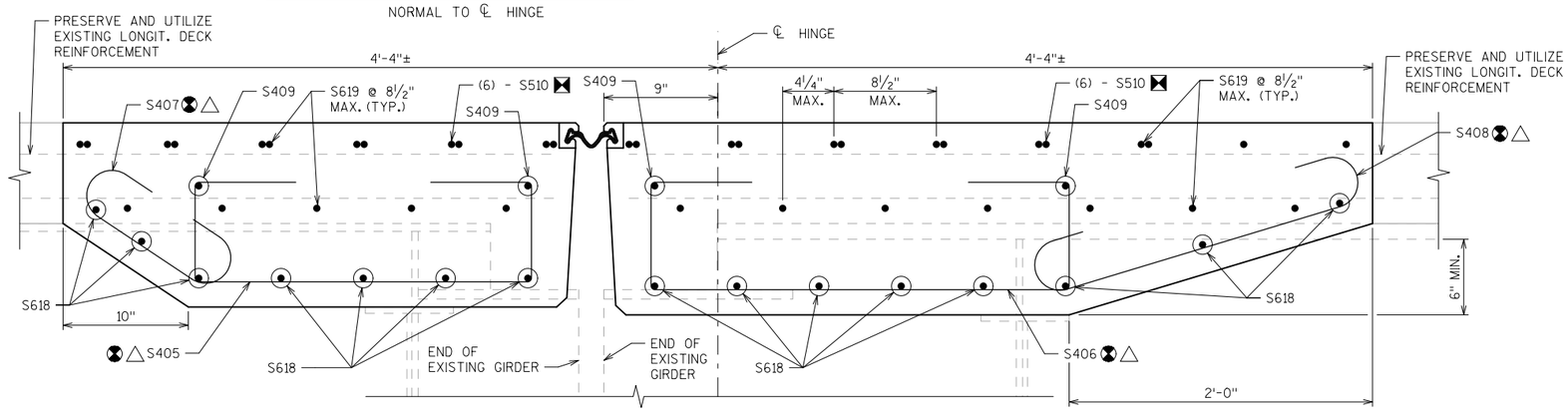
STATE PROJECT NUMBER

1161-02-63



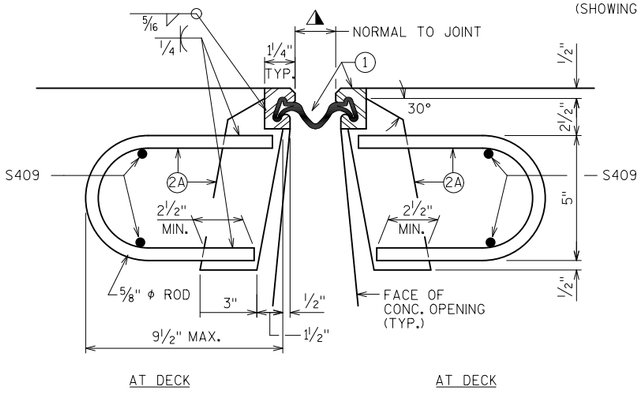
SECTION THRU JOINT AT HINGE

NORMAL TO ℄ HINGE



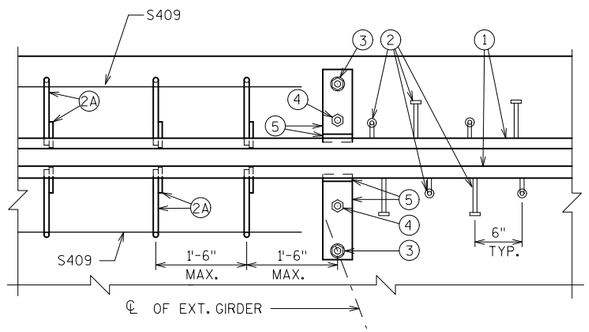
SECTION THRU JOINT AT HINGE

NORMAL TO ℄ HINGE
(SHOWING REINFORCEMENT)

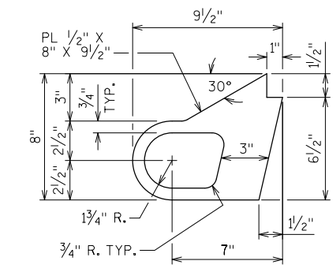


SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.
SYM. ABOUT ℄ JOINT UNLESS OTHERWISE SHOWN OR NOTED



PART PLAN



ALTERNATE STRIP SEAL ANCHOR

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25°	2¾"
15°	3"
5°	3¼

A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.

LEGEND

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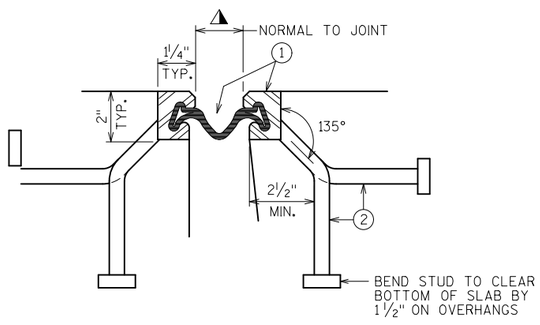

SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS

NOTES

ONE FIELD SPLICE PERMITTED IN 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.

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STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-11-55".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-55

DRAWN BY DRH | PLANS CK'D. LMK

HINGE EXPANSION DEVICE

SHEET 8 OF 12

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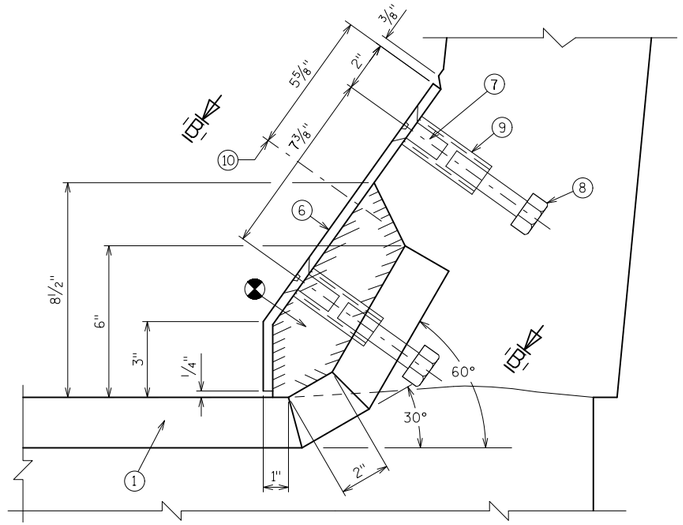
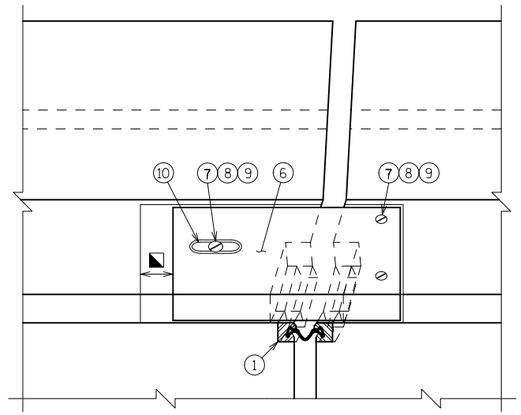
STATE PROJECT NUMBER

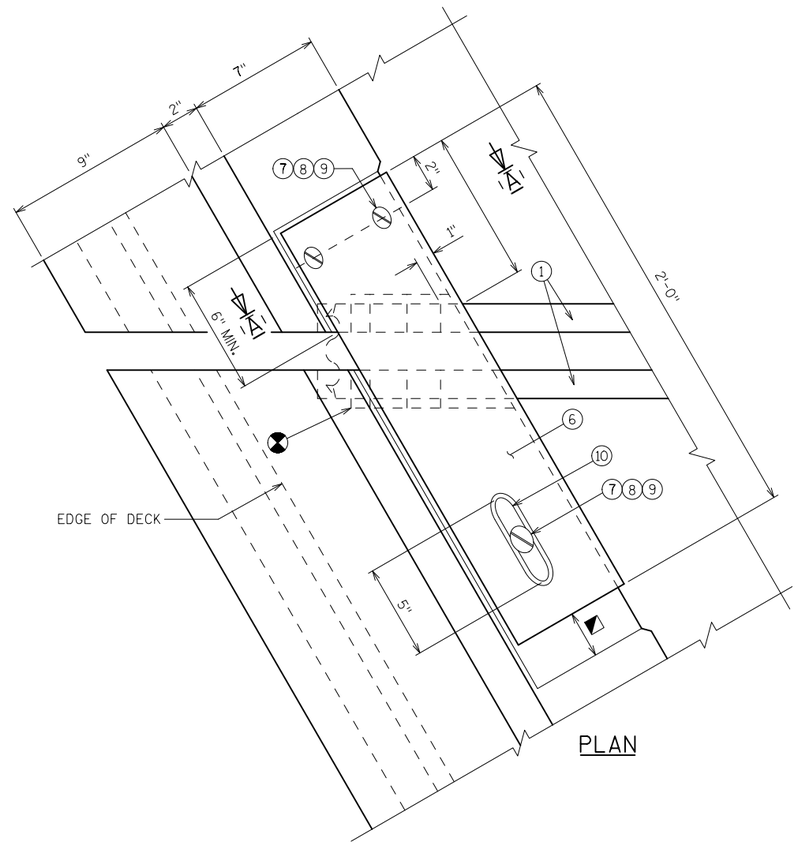
1161-02-63



SECTION A-A



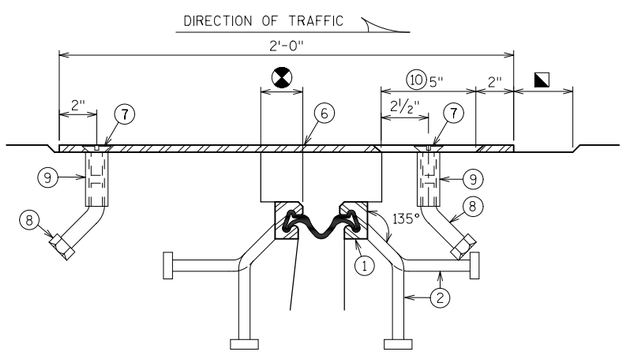
VIEW OF PARAPET PLATE FROM ROADWAY



PLAN

SECTION B-B

(AT SOUTH ABUT. AND HINGES)



SECTION B-B

(AT NORTH ABUT.)

LEGEND

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-55

DRAWN BY DRH | PLANS CK'D. LMK

COVER PLATE DETAILS

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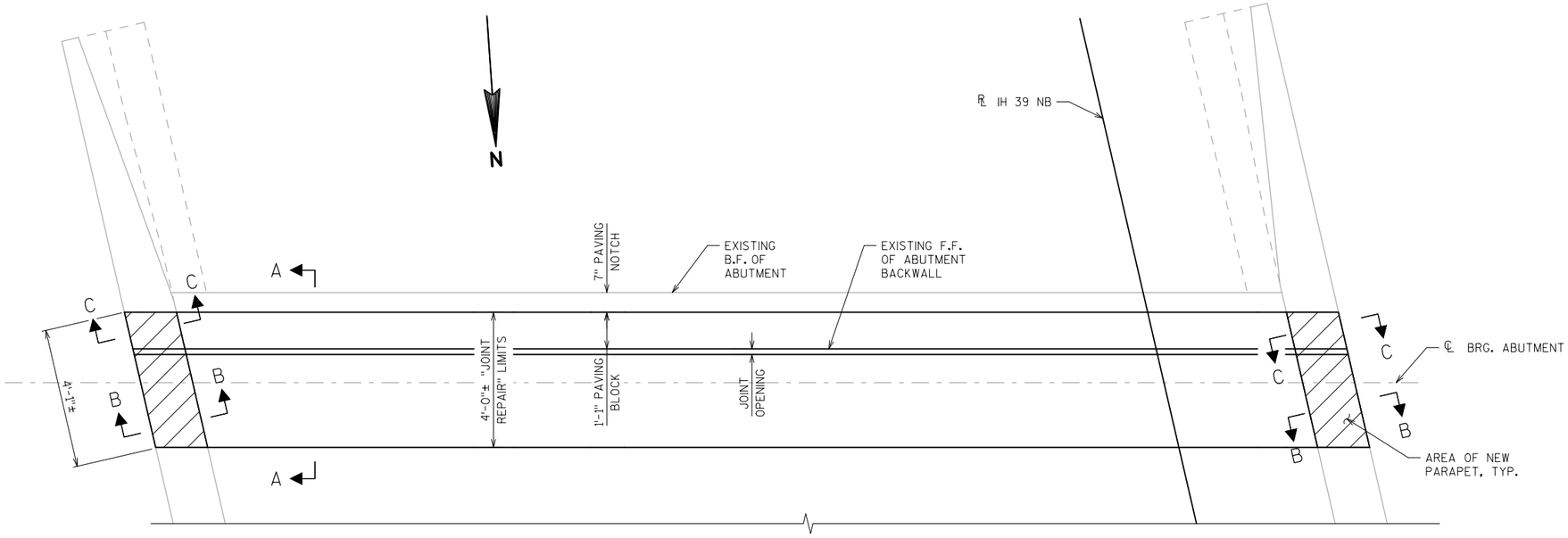
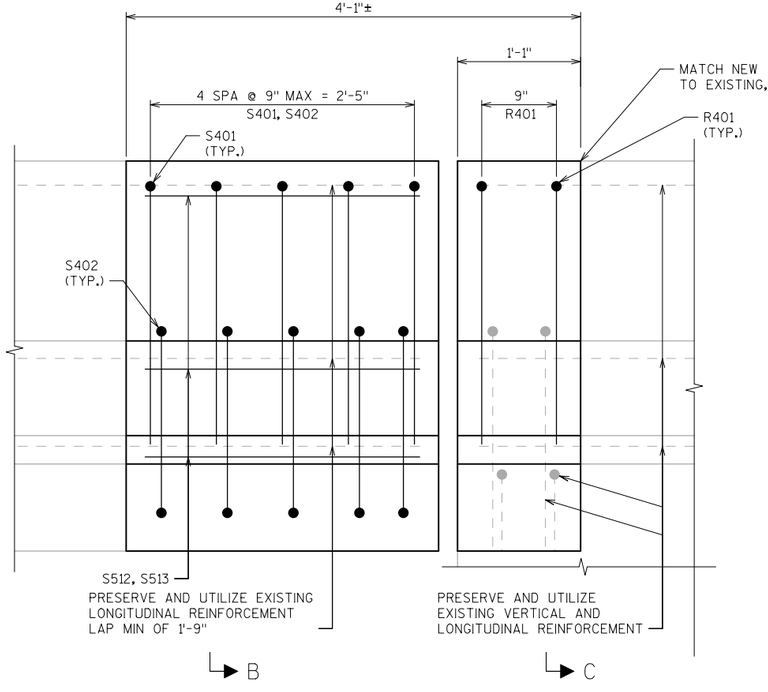
STATE PROJECT NUMBER
1161-02-63

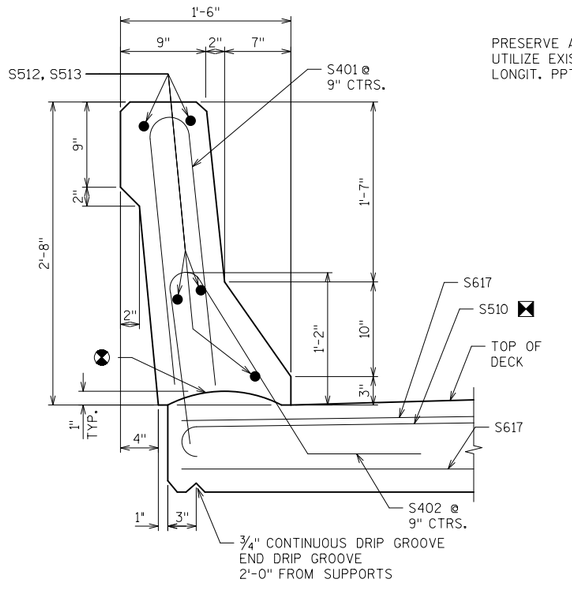


PLAN

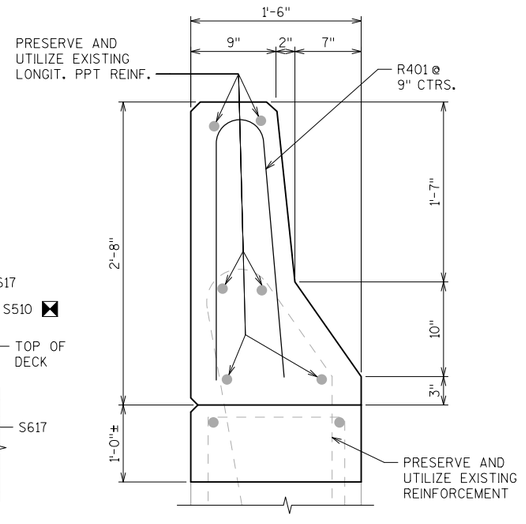
SOUTH ABUTMENT SHOWN
NORTH ABUTMENT SIMILAR



ELEVATION A-A



SECTION B-B



SECTION C-C

LEGEND

- CONST. JOINT - STRIKE OFF AS SHOWN.
- BARS BUNDLED TO TOP TRANSVERSE DECK BARS. TYPICAL AT BOTH SIDES OF ABUTMENT AT EXTERIOR GIRDER OVERHANG.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-55

DRAWN BY: DRH | PLANS CK'D.: LMK

ABUTMENT PARAPET DETAILS

SHEET 10 OF 12
194

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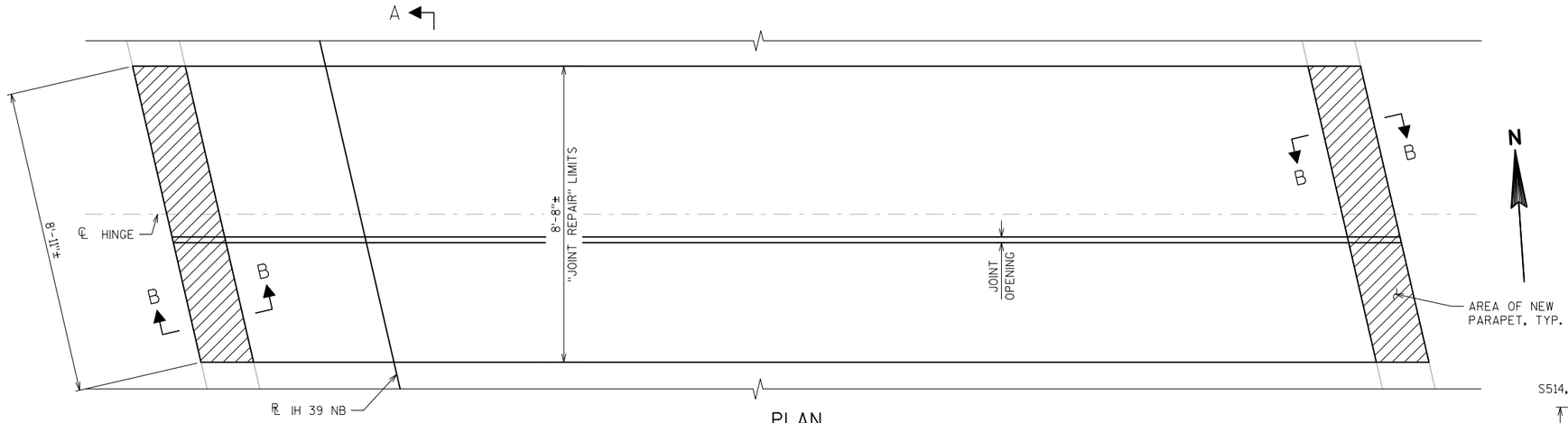
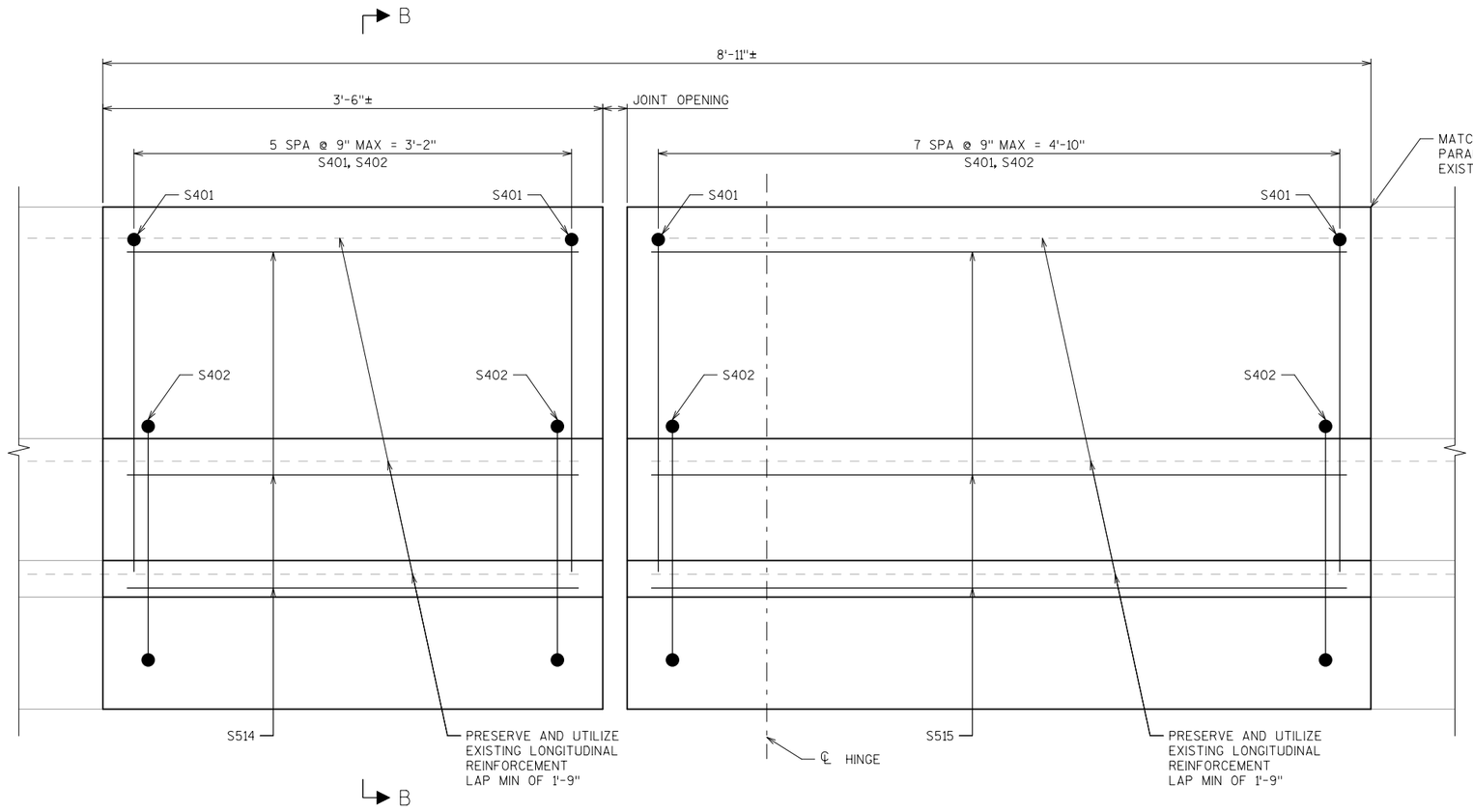
STATE PROJECT NUMBER
1161-02-63



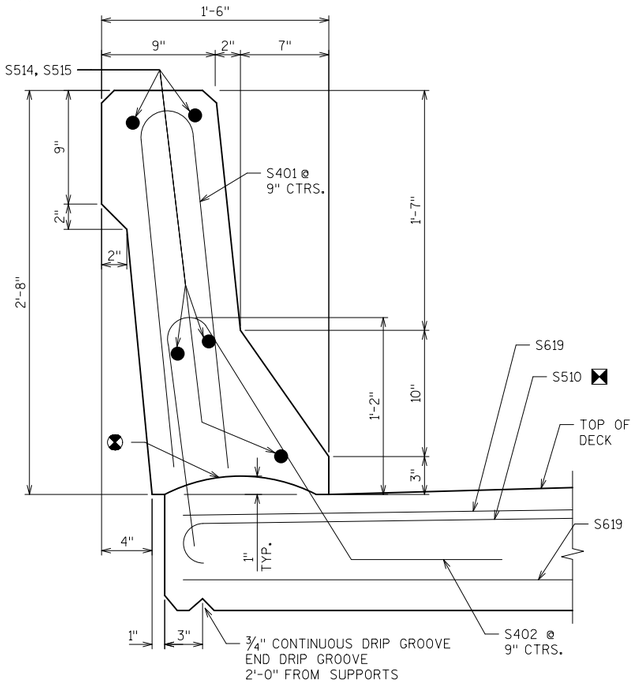
PLAN

HINGE 1 SHOWN, HINGE 2 SIMILAR



ELEVATION A-A

HINGE 1 SHOWN, HINGE 2 SYMMETRIC



SECTION B-B

LEGEND

- CONST. JOINT - STRIKE OFF AS SHOWN.
- BARS BUNDLED TO TOP TRANSVERSE DECK BARS. TYPICAL AT BOTH SIDES OF HINGE AT EXTERIOR GIRDER OVERHANG.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-55

DRAWN BY DRH | PLANS CK'D. LMK

HINGE PARAPET DETAILS

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STATE PROJECT NUMBER

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S. ABUT. - BILL OF BARS — TOTAL COATED = 360 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
A401	36	3'-3"	X	X	PAVING BLOCK - STIRRUP
A502	20	8'-0"	X		PAVING BLOCK - HORIZONTAL
☆ A503	36	3'-0"	X	X	PAVING BLOCK - VERTICAL

N. ABUT. - BILL OF BARS — TOTAL COATED = 360 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
B401	36	3'-3"	X	X	PAVING BLOCK - STIRRUP
B502	20	8'-0"	X		PAVING BLOCK - HORIZONTAL
☆ B503	36	3'-0"	X	X	PAVING BLOCK - VERTICAL

PPT ON WINGS - BILL OF BARS — TOTAL COATED = 30 LBS

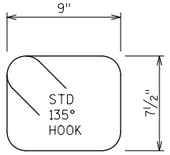
BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
R401	8	4'-9"	X	X	PARAPET - VERTICAL

SUPER. - BILL OF BARS — TOTAL COATED = 7,640 LBS

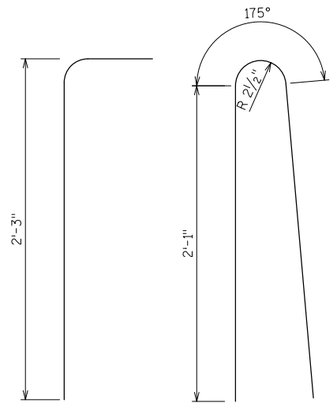
BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
S401	76	4'-10"	X	X	PARAPET - VERT.
S402	76	4'-3"	X	X	PARAPET - VERT.
S403	72	3'-11"	X	X	END DIA. - LONGIT. - ABUTMENTS
S404	24	7'-10"	X		END DIA. - TRAN. - ABUTMENTS
S405	72	4'-0"	X	X	END DIA. - LONGIT. - HINGES
S406	72	4'-6"	X	X	END DIA. - LONGIT. - HINGES
S407	72	2'-1"	X	X	END DIA. - LONGIT. - HINGES
S408	72	3'-2"	X	X	END DIA. - LONGIT. - HINGES
S409	48	7'-10"	X		END DIA. - TRAN. - HINGES
● S510	72	7'-7"	X	X	DECK - TRAN. - ADD'L OVERHANG REINF.
S512	10	2'-5"	X		PARAPET - HORIZ. - S. ABUT.
S513	10	2'-5"	X		PARAPET - HORIZ. - N. ABUT.
S514	20	3'-2"	X		PARAPET - HORIZ. - HINGES
S515	20	4'-10"	X		PARAPET - HORIZ. - HINGES
S616	30	7'-10"	X		END DIA. - TRAN. - ABUTMENTS
S617	20	34'-8"	X		DECK - TRAN. - ABUTMENTS
S618	90	7'-10"	X		END DIA. - TRAN. - HINGES
S619	52	34'-8"	X		DECK - TRAN. - HINGES

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.



A401, B401



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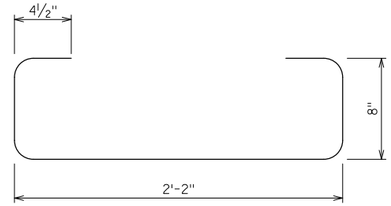
R401



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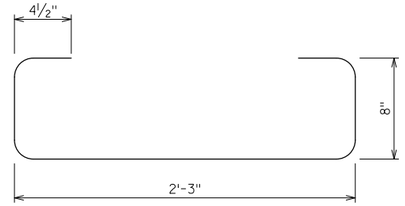

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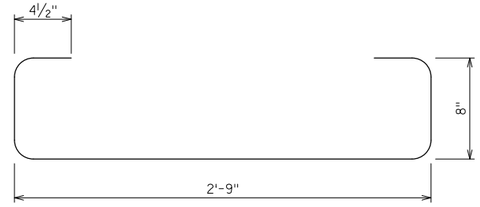

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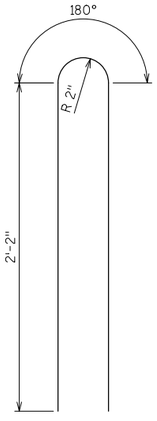

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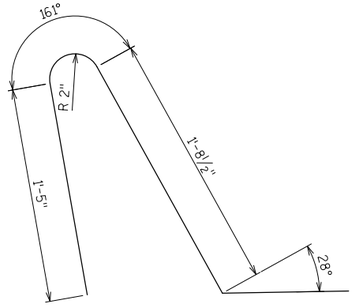

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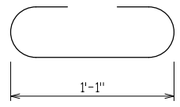

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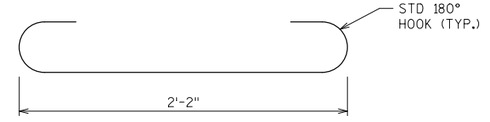

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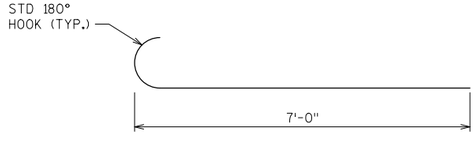

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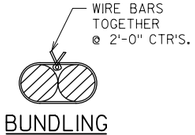

BUNDLING DETAIL

LEGEND

☆ ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-6" IN CONCRETE.

● SEE BUNDLE DETAIL THIS SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-55

DRAWN BY DRH | PLANS CK'D. LMK

BILL OF BARS

SHEET 12 OF 12

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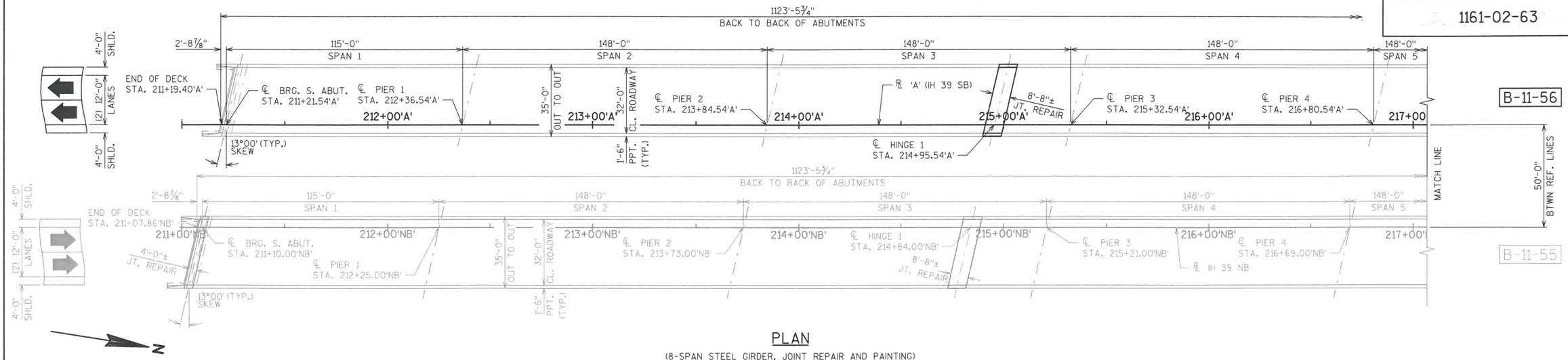
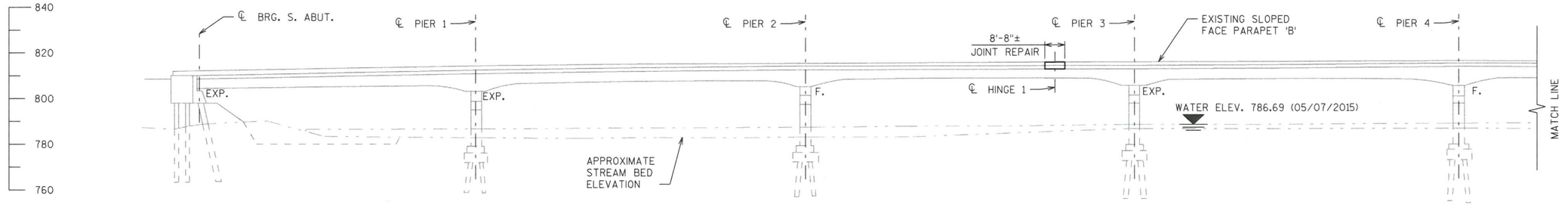
STATE PROJECT NUMBER

1161-02-63



PLAN

(8-SPAN STEEL GIRDER, JOINT REPAIR AND PAINTING)



ELEVATION

(LOOKING WEST)

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS-20 (TAKEN FROM HSI, 07/14/2016)
INVENTORY RATING: HS-17 (TAKEN FROM HSI, 07/14/2016)
OPERATING RATING: HS-29 (TAKEN FROM HSI, 07/14/2016)
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 180 KIPS (TAKEN FROM HSI, 07/14/2016)

MATERIAL PROPERTIES:
CONCRETE MASONRY OVERLAY DECKS.....f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT
HIGH STRENGTH, GRADE 60.....fy = 60,000 P.S.I.

TRAFFIC DATA

IH 39
A.D.T. = 20,500 (2017)
A.D.T. = 24,600 (2037)
RDS = 70 MPH

BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
6	210+94.50'NB'	29.13' RT	WISDOT DISK TOP PARAPET SE QUAD B-11-55	812.87
8	222+30.04'NB'	5.58' LT	WISDOT DISK TOP PARAPET NW QUAD B-11-55	811.03
9	222+47.11'NB'	79.27' LT	WISDOT DISK TOP PARAPET NW QUAD B-11-56	810.47

LIST OF DRAWINGS

1. GENERAL PLAN 1
2. GENERAL PLAN 2
3. CROSS SECTION, NOTES AND QUANTITIES
4. REMOVAL DETAILS
5. HINGE EXPANSION DEVICE
6. COVER PLATE DETAILS
7. HINGE PARAPET DETAILS
8. BILL OF BARS

NOTE

STATIONING REFERENCES THE ORIGINAL STRUCTURE PLANS.

WISCONSIN PROFESSIONAL ENGINEER
LINDA M. KRUEGER
E-41427
MADISON, WI

Linda Krueger
10/19/16

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
LINDA KRUEGER (608) 821-8700

NO.	DATE	REVISION	BY

Michael Baker INTERNATIONAL
MICHAEL BAKER INTERNATIONAL
7633 GANSER WAY, SUITE 206
MADISON, WI 53719
www.mbakerintl.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/21/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-11-56

IH 39 SB OVER WISCONSIN RIVER

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
COLUMBIA	PORTAGE

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
DRH	LMK	ABP	LMK

GENERAL PLAN 1

SHEET 197 OF 8

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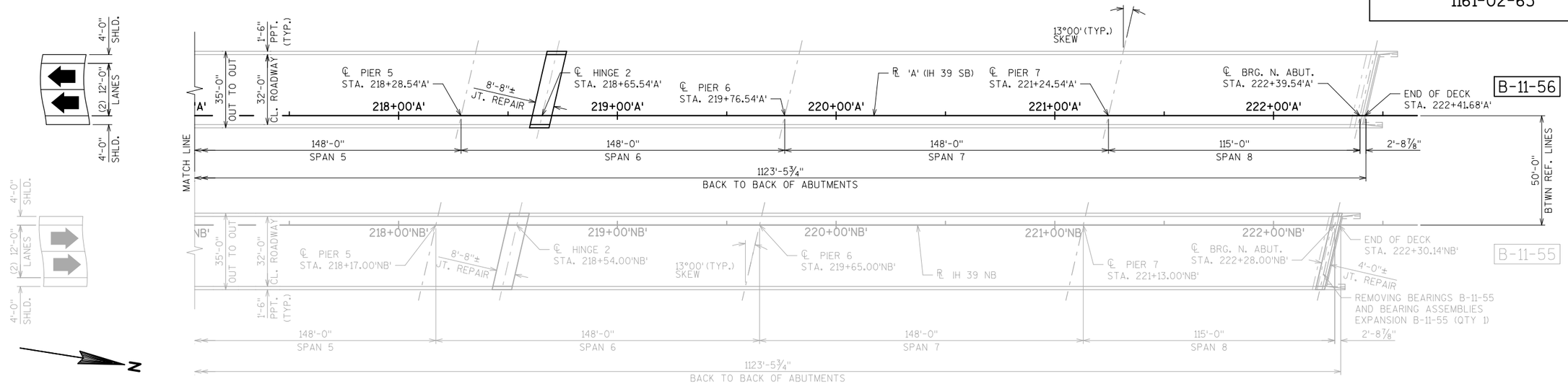
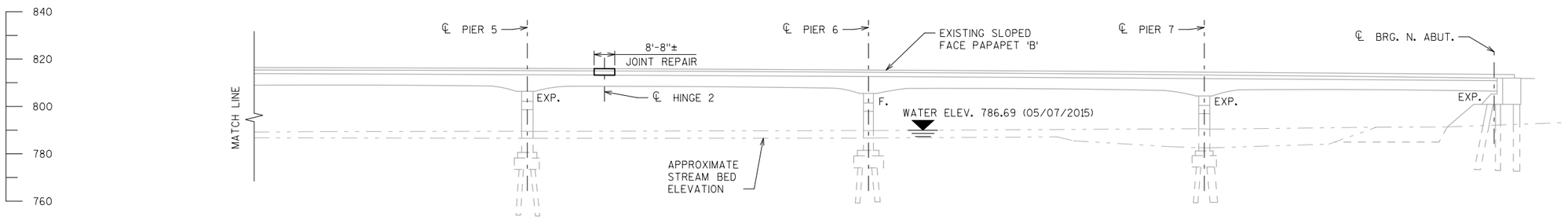


PLAN

(8-SPAN STEEL GIRDER, JOINT REPAIR AND PAINTING)



ELEVATION

(LOOKING WEST)

NOTE

STATIONING REFERENCES THE ORIGINAL STRUCTURE PLANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-56

DRAWN BY ABP | PLANS CK'D. LMK

GENERAL PLAN 2

SHEET 2 OF 8

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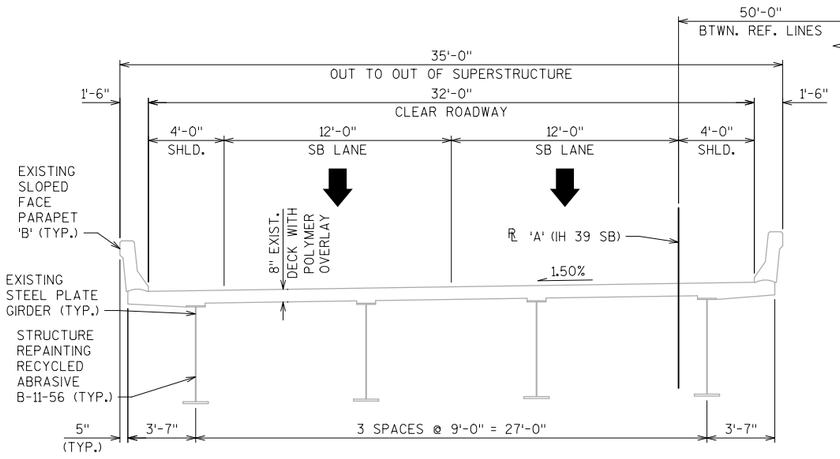
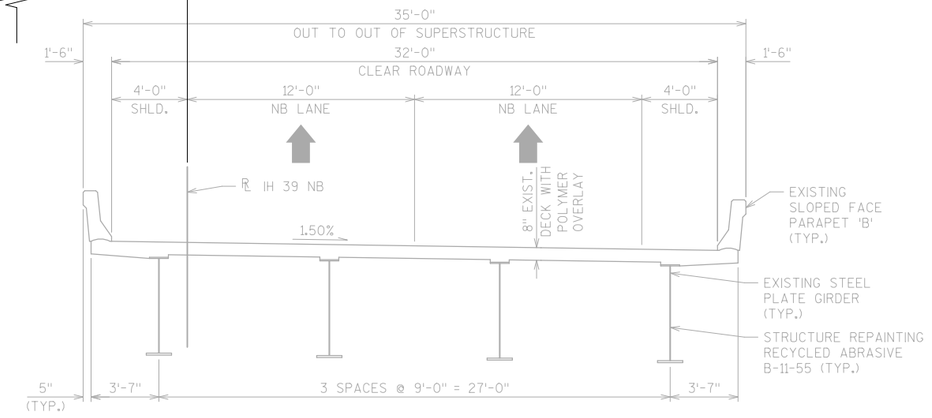


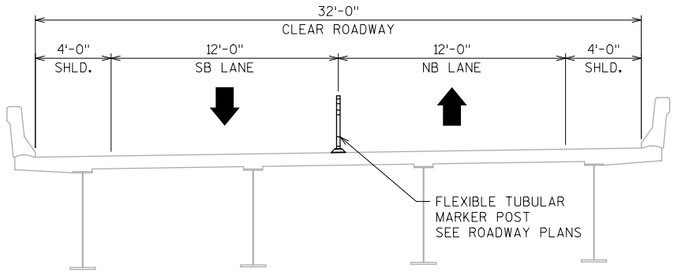
B-11-56



B-11-55

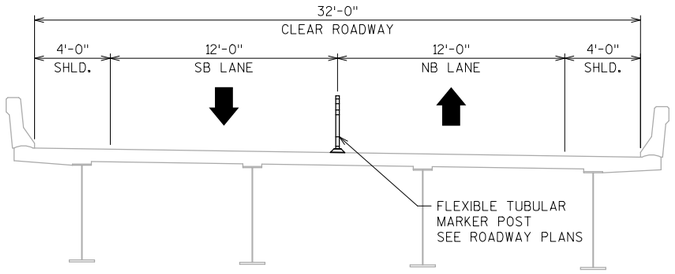
CROSS SECTION

LOOKING NORTH



STAGE 2 - B-11-56

NOTE: B-11-55 WILL BE CLOSED TO TRAFFIC DURING STAGE 2



STAGE 3 - B-11-55

NOTE: B-11-56 WILL BE CLOSED TO TRAFFIC DURING STAGE 3

STAGING DETAILS

LOOKING NORTH

NOTE: SEE ROADWAY PLANS FOR ADDITIONAL STAGING DETAILS

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	S. ABUT.	N. ABUT.	SUPER.	TOTAL
203.0700.S.02	REMOVING OLD STRUCTURE OVER WATERWAY WITH DEBRIS CAPTURE SYSTEM STA 216+80'A'	LS	---	---	---	1
502.3100.04	EXPANSION DEVICE B-11-56	LS	---	---	---	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	63	63
502.3210	PIGMENTED SURFACE SEALER	SY	---	---	15	15
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	---	---	5,570	5,570
509.1000	JOINT REPAIR	SY	---	---	68	68
509.1500	CONCRETE SURFACE REPAIR	SF	10	10	---	20
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	---	---	27	27
517.1800.S.04	STRUCTURE REPAINTING RECYCLED ABRASIVE B-11-56	LS	---	---	---	1
517.4500.S.04	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-11-56	LS	---	---	---	1

NOTE: PORTABLE DECONTAMINATION FACILITY IS PAID FOR AS PART OF B-11-55

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

THE TOP LAYER OF BAR STEEL REINFORCEMENT IN THE DECK AT JOINT REPAIR AREAS SHALL BE PLACED WITH 2½" OF CLEAR COVER.

THE COLOR OF THE FINISH TOP COAT ON THE STEEL GIRDERS SHALL BE MEDIUM SKY BLUE TONE, (FEDERAL STANDARD COLOR NO. 25240).

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE IN THE JOINT REPAIR AREAS. PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE TOP AND ROADWAY FACE OF THE PARAPET IN THE JOINT REPAIR AREAS.

THE BID ITEM "STRUCTURE REPAINTING RECYCLED ABRASIVE B-11-56" INCLUDES CLEANING AND PAINTING ALL STRUCTURAL METAL SURFACES, CLEANING AND PAINTING ALL BEARINGS, AND CLEANING AND PAINTING PIN AND HANGER JOINTS.

THE JOINT REPAIR AREAS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS."

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-11-56".

THE EXISTING STRUCTURE, B-11-56, IS AN 8-SPAN STEEL GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 35'-0" AND AN OVERALL LENGTH BETWEEN BACK OF ABUTMENTS OF 1123'-5¾". ALL EXPOSED STEEL SURFACES SHALL BE PAINTED. 2 EXPANSION JOINTS AT THE HINGES SHALL BE REPLACED (SEE PLANS FOR DETAILS).

PROTECT HANGER BUSHING FROM BLASTING AND PAINTING.

PERFORM "CONCRETE SURFACE REPAIR" AS DIRECTED BY THE FIELD ENGINEER. QUANTITIES SHOWN ON THE PLANS ARE APPROXIMATE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-56

DRAWN BY ABP | PLANS CK'D. LMK

CROSS SECTION, NOTES AND QUANTITIES

SHEET 3 OF 8

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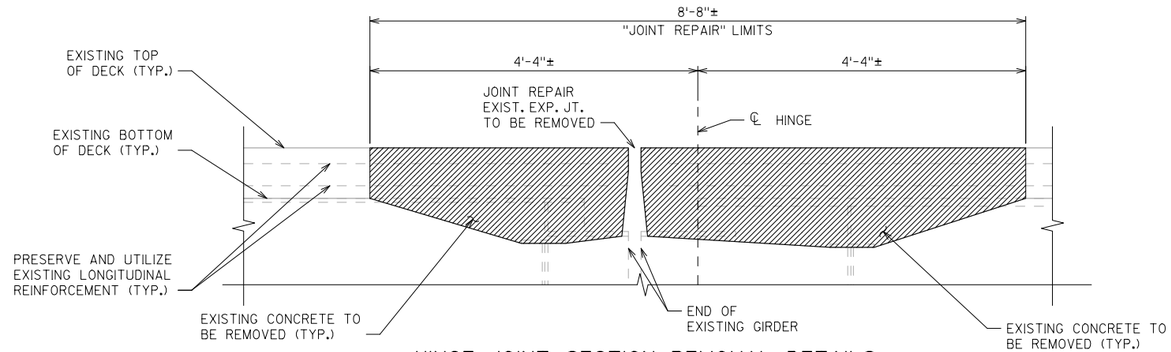
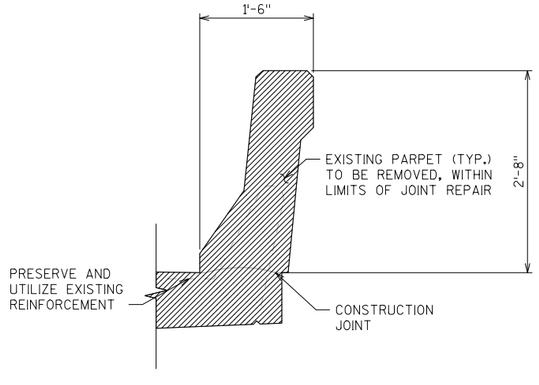
STATE PROJECT NUMBER
1161-02-63



HINGE JOINT SECTION REMOVAL DETAILS

NORMAL TO ℄ HINGE
TYPICAL HINGES



SECTION THRU PARAPET ON DECK

TYPICAL AT HINGE LOCATIONS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-56

DRAWN BY DRH | PLANS CK'D. LMK

REMOVAL DETAILS

SHEET 4 OF 8
200

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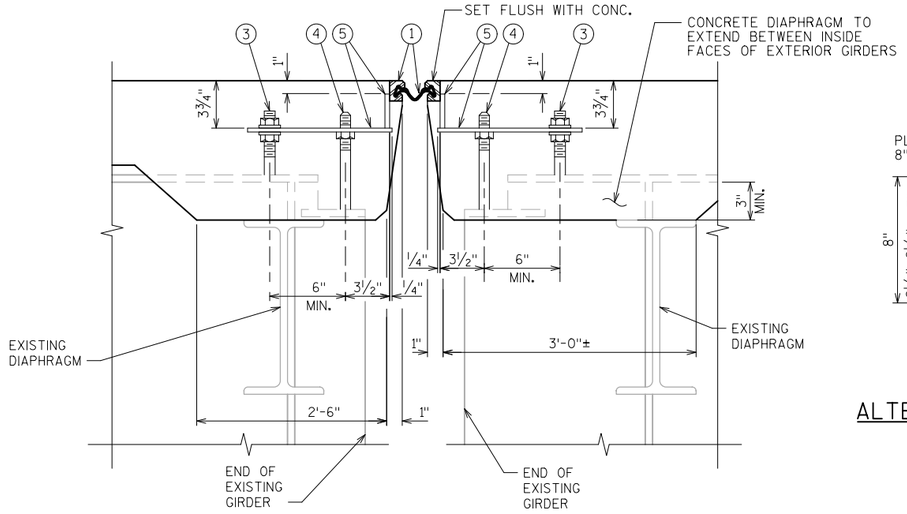
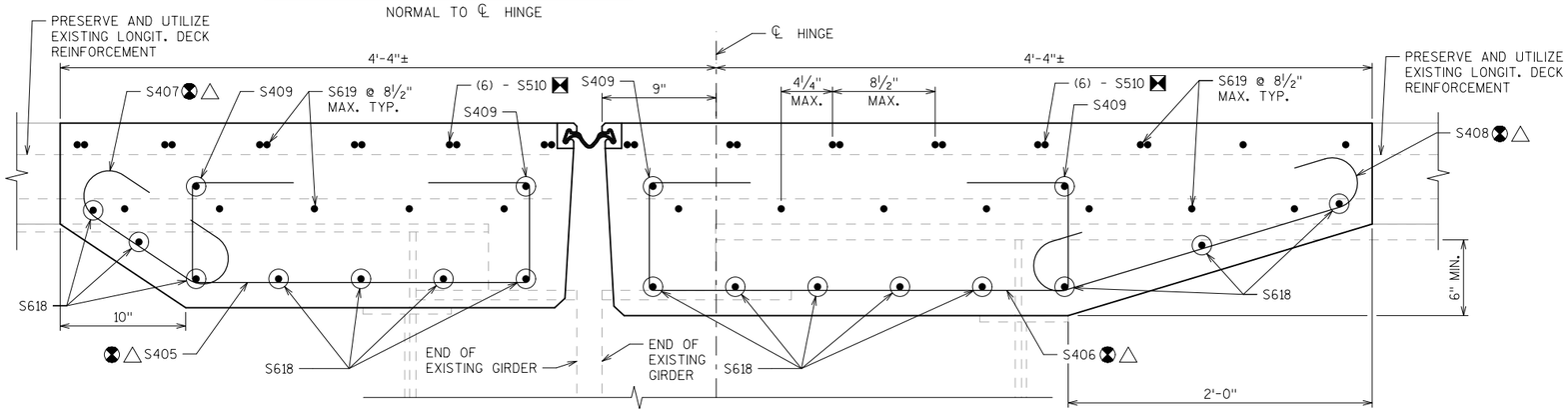


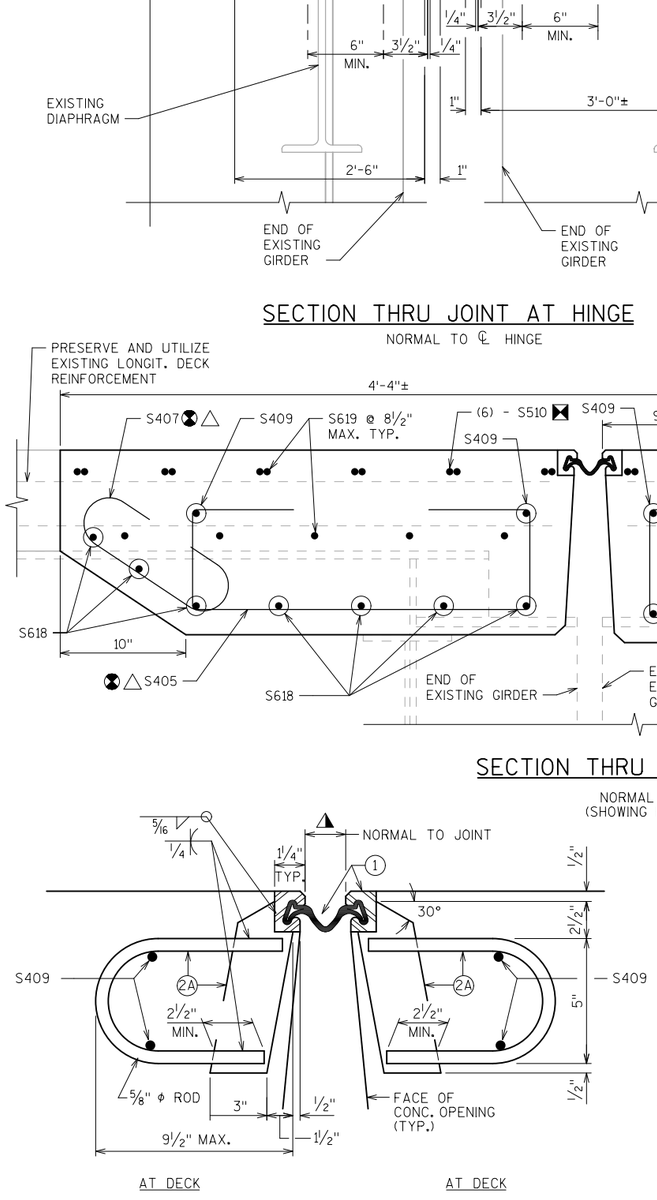
SECTION THRU JOINT AT HINGE

NORMAL TO ℄ HINGE



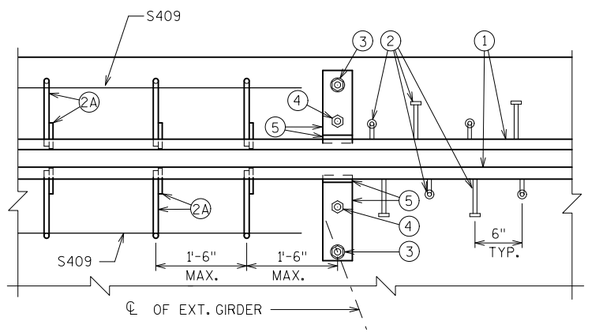
SECTION THRU JOINT AT HINGE

NORMAL TO ℄ HINGE
(SHOWING REINFORCEMENT)

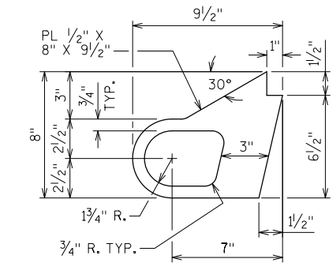


SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.
SYM. ABOUT ℄ JOINT UNLESS OTHERWISE SHOWN OR NOTED



PART PLAN



ALTERNATE STRIP SEAL ANCHOR

⚠ TEMPERATURE TABLE

SHADED UNDERSIDE DECK TEMP. (°F)	JOINT OPENING (NORMAL TO JT.)
85°	1½"
75°	1⅝"
65°	1⅞"
55°	2⅛"
45°	2⅜"
35°	2⅝"
25°	2¾"
15°	3"
5°	3¼"

A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.

LEGEND

(1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

(2) STUDS ⅝"ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝"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. 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"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. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 AND 1" ϕ HOLE FOR NO. 4.

(6) GALVANIZED PLATE ⅜" X 1'-2" x 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

(7) ¾"ϕ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾"ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

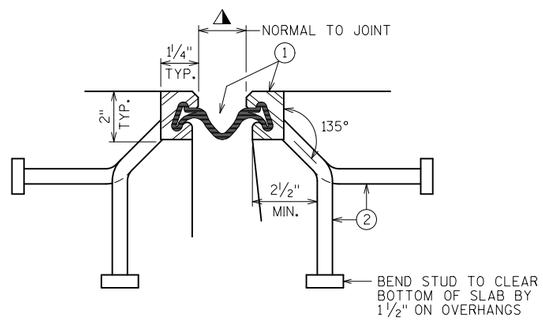
(9) ¾"ϕ X 2¼" GALVANIZED THREADED COUPLING.

(10) 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

⊠ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ℄ OF GIRDERS. SPACING BETWEEN TOP FLANGE OF GIRDERS.

△ 11 SPA @ 9" MAX = 7'-8" - BETWEEN GIRDERS 1 AND 4

⊠ BARS BUNDLED TO TOP TRANSVERSE DECK BARS. TYPICAL AT BOTH SIDES OF HINGE AT EXTERIOR GIRDER OVERHANG.



SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS

NOTES

ONE FIELD SPLICE PERMITTED IN 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, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 & 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-11-56".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-56

DRAWN BY: DRH | PLANS CK'D.: LMK

HINGE EXPANSION DEVICE

SHEET 5 OF 8

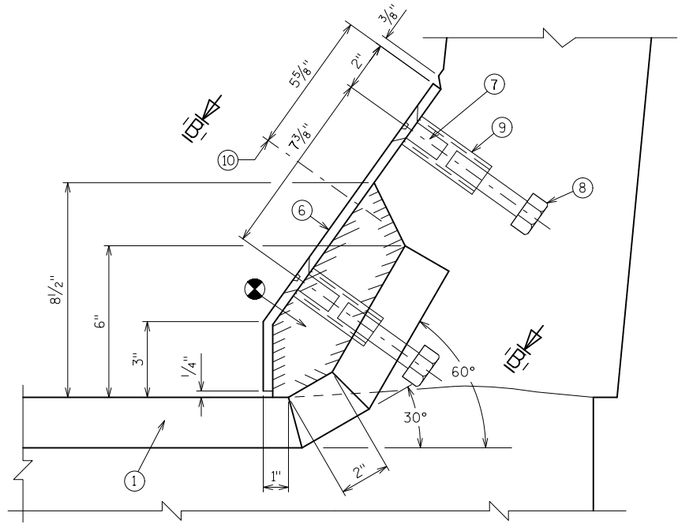
201

8

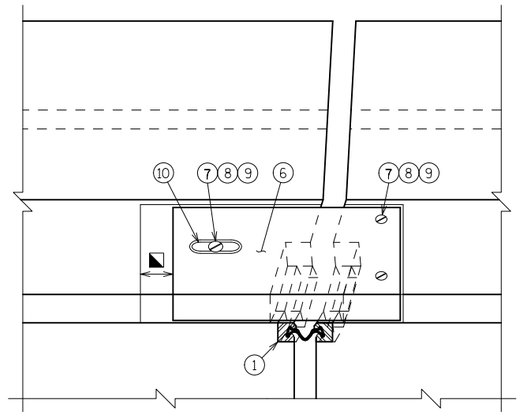
8

STATE PROJECT NUMBER

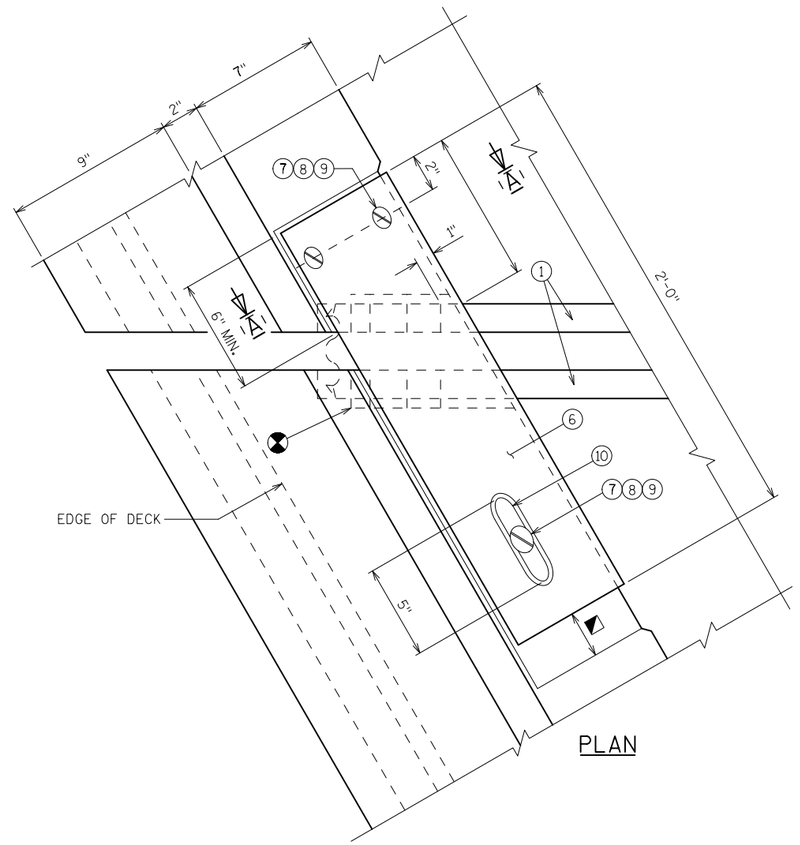
1161-02-63



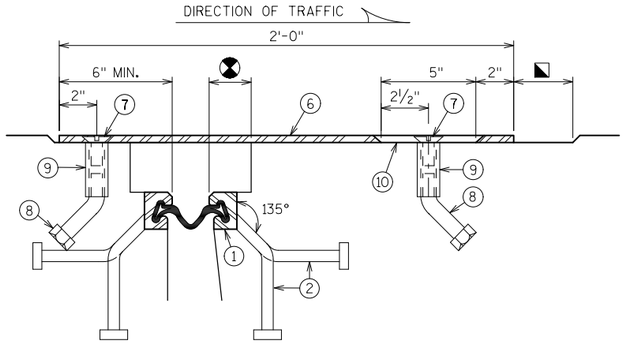
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



PLAN



SECTION B-B

LEGEND

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-56

DRAWN BY DRH | PLANS CK'D. LMK

COVER PLATE DETAILS

SHEET 6 OF 8

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8

8

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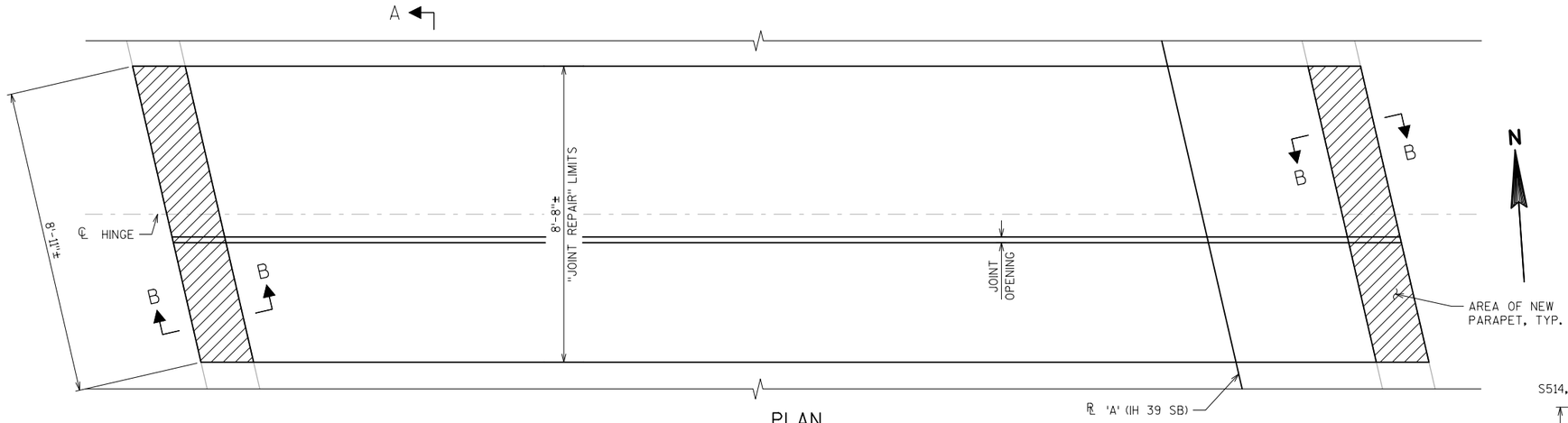
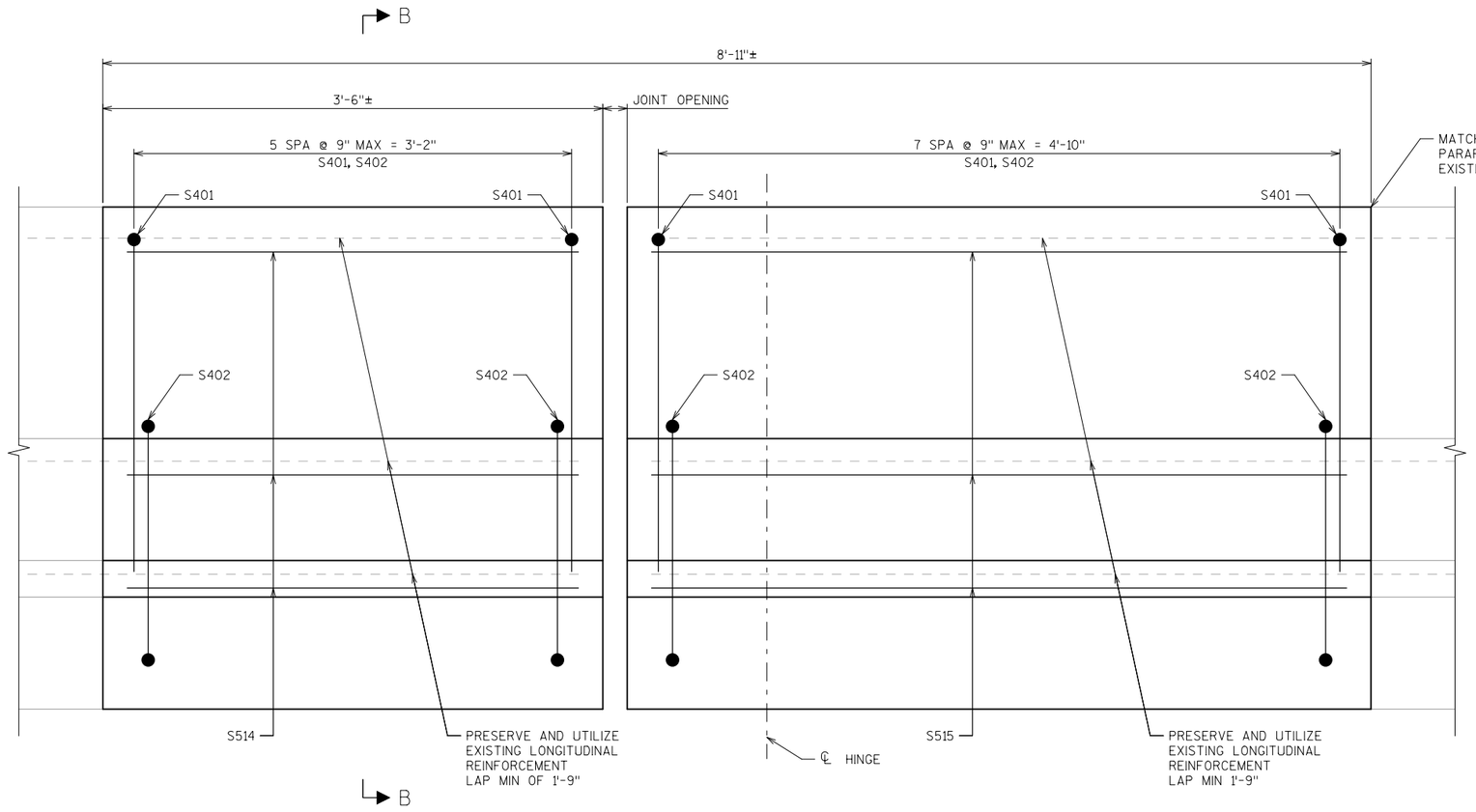
STATE PROJECT NUMBER
1161-02-63



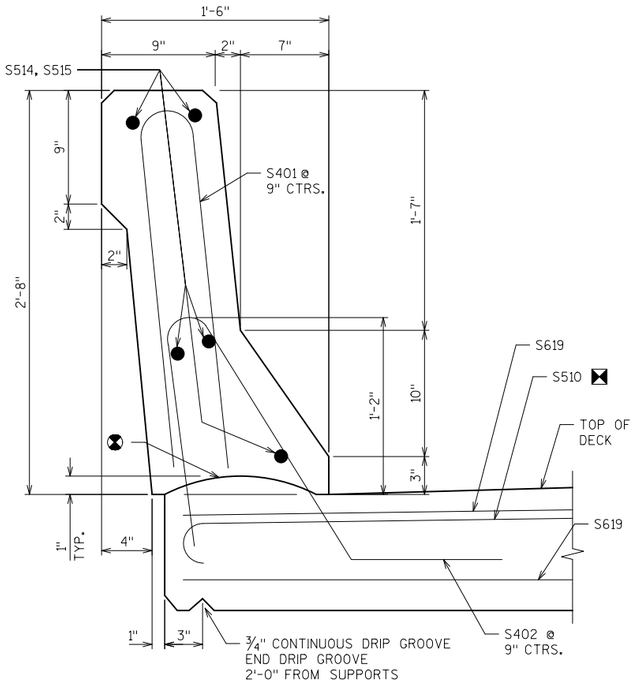
PLAN

HINGE 1 SHOWN, HINGE 2 SIMILAR



ELEVATION A-A

HINGE 1 SHOWN, HINGE 2 SYMMETRIC



SECTION B-B

LEGEND

- CONST. JOINT - STRIKE OFF AS SHOWN.
- BARS BUNDLED TO TOP TRANSVERSE DECK BARS. TYPICAL AT BOTH SIDES OF HINGE AT EXTERIOR GIRDER OVERHANG.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-56

DRAWN BY DRH | PLANS CK'D. LMK

HINGE PARAPET DETAILS

SHEET 7 OF 8
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8

8

STATE PROJECT NUMBER
1161-02-63

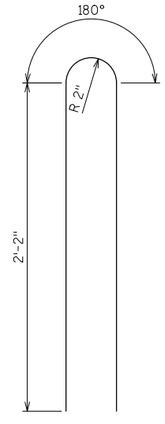
SUPER. - BILL OF BARS

TOTAL COATED = 5,570 LBS

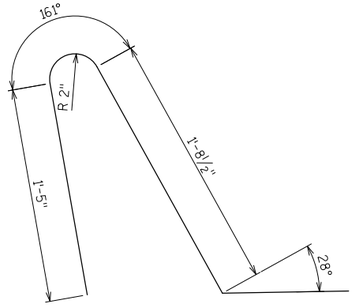
BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
S401	56	4'-10"	X	X	PARAPET - VERT.
S402	56	4'-3"	X	X	PARAPET - VERT.
S405	72	4'-0"	X	X	END DIA. - LONGIT. - HINGES
S406	72	4'-6"	X	X	END DIA. - LONGIT. - HINGES
S407	72	2'-1"	X	X	END DIA. - LONGIT. - HINGES
S408	72	3'-2"	X	X	END DIA. - LONGIT. - HINGES
S409	48	7'-10"	X		END DIA. - TRAN. - HINGES
● S510	48	7'-7"	X	X	DECK - TRAN. - ADD'L OVERHANG REINF.
S514	20	3'-2"	X		PARAPET - HORIZ. - HINGES
S515	20	4'-10"	X		PARAPET - HORIZ. - HINGES
S618	90	7'-10"	X		END DIA. - TRAN. - HINGES
S619	52	34'-8"	X		DECK - TRAN. - HINGES

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.



S401



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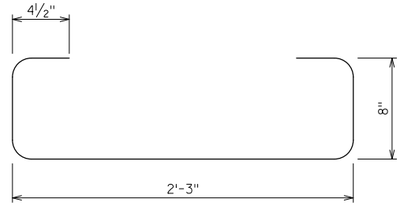

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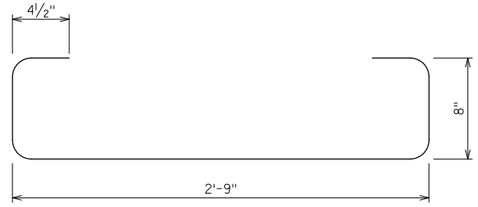

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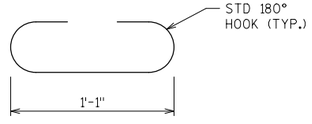

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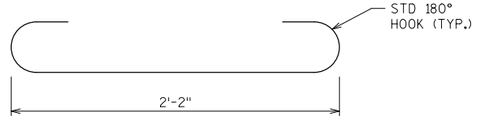

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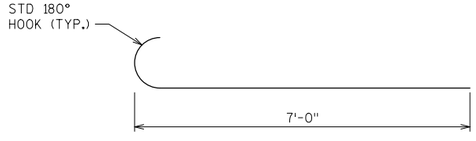
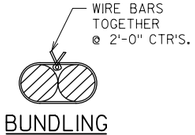


S510



BUNDLING DETAIL

LEGEND

● SEE BUNDLE DETAIL THIS SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-56

DRAWN BY DRH | PLANS CK'D. LMK

BILL OF BARS

SHEET 8 OF 8
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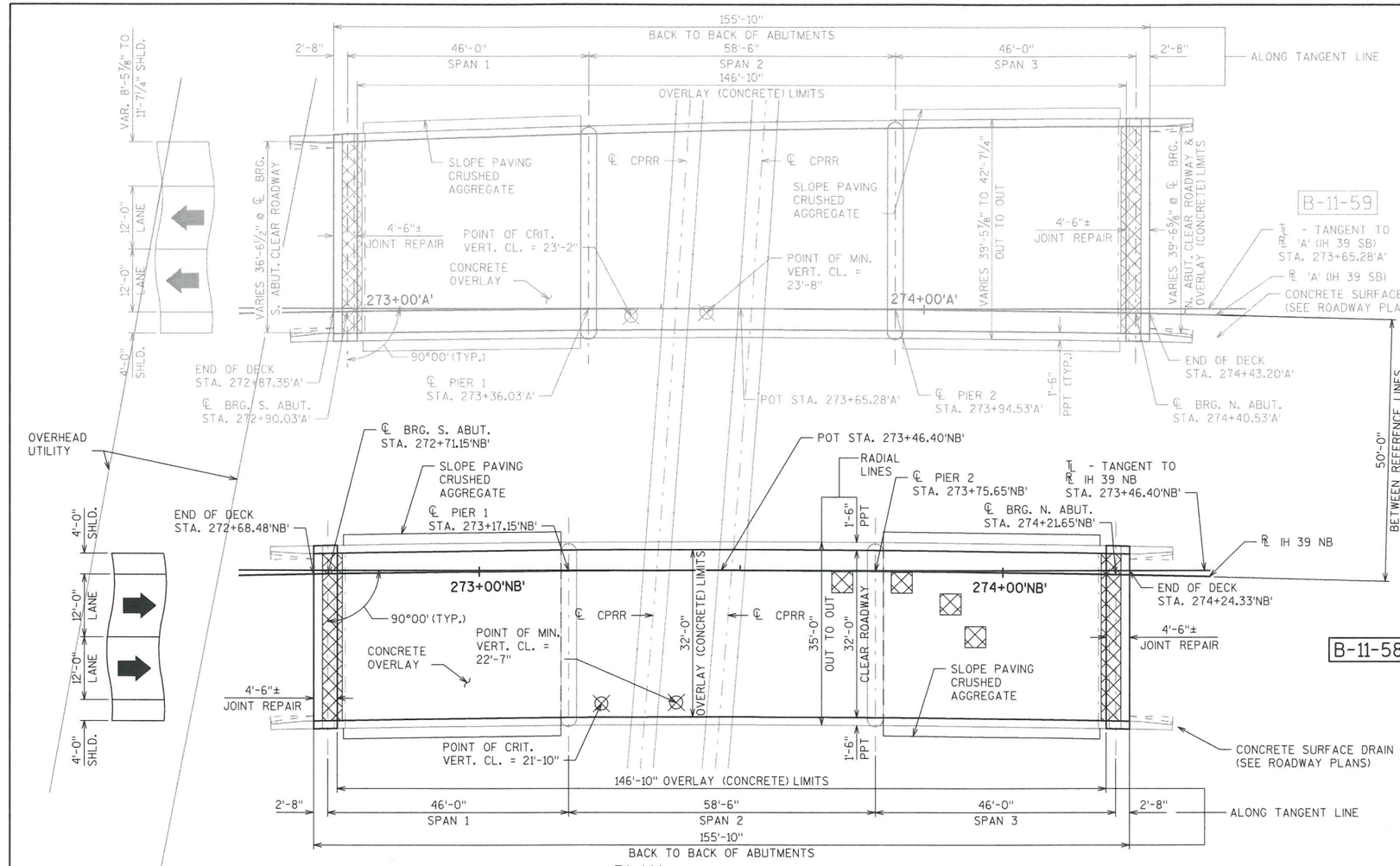
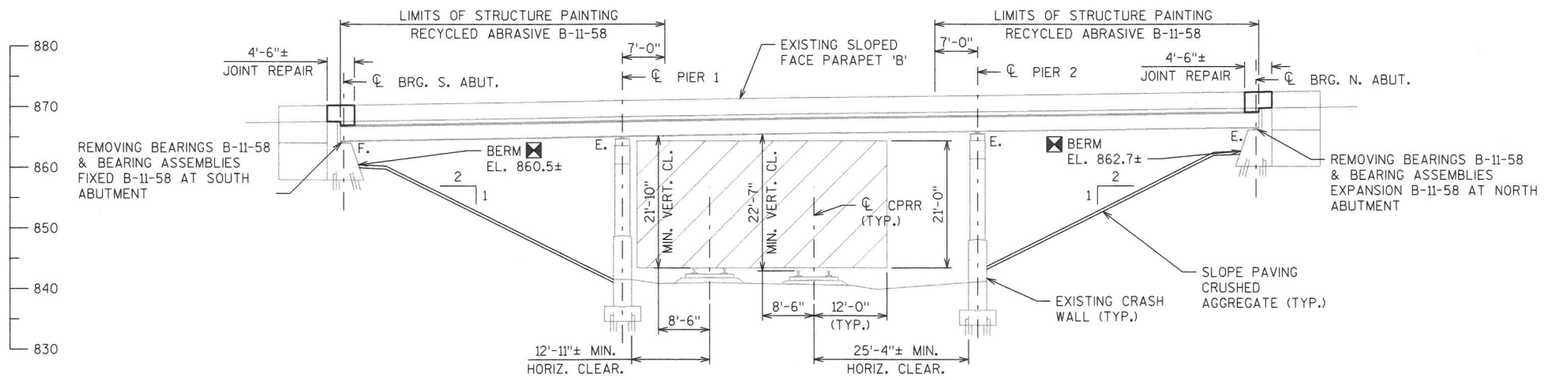


PLAN

(3-SPAN STEEL GIRDER, CONCRETE OVERLAY, JOINT REPAIR, ABUTMENT BEARING REPLACEMENT, AND PARTIAL PAINTING)



ELEVATION

(LOOKING WEST)

BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
11	272+59.95'NB'	29.27' RT	WISDOT DISK TOP PARAPET SE QUAD B-11-58	868.84
12	274+23.57'NB'	86.78' LT	WISDOT DISK TOP PARAPET NW QUAD B-11-59	874.19

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS-20
INVENTORY RATING: HS-16
OPERATING RATING: HS-27
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 200 KIPS

MATERIAL PROPERTIES:
CONCRETE MASONRY OVERLAY DECKS.....f'c = 4,000 P.S.I.
ALL OTHER.....f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT
HIGH STRENGTH, GRADE 60.....fy = 60,000 P.S.I.

TRAFFIC DATA

IH 39
A.D.T. = 20,500 (2017)
A.D.T. = 24,600 (2037)
RDS = 70 MPH

CURVE DATA (FROM EXISTING STRUCTURE PLANS)

IH 39 NB B-11-58	AUXILARY 'A' B-11-59
P.I. = 281'+07.74'NB'	P.I. = 281'+32.80'A'
I = 233°-15'-35"	I = 233°-15'-35"
Δ = 53°-15'-35"	Δ = 53°-15'-35"
D = 1°-30'	D = 1°-28'-50"
T = 1915.28'	T = 1940.34'
L = 3550.65'	L = 3597.12'
E = 453.33'	E = 459.21'
R = 3819.72'	R = 3869.72'
S.E. = 0.042⅓	S.E. = 0.042⅓

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION, NOTES AND QUANTITIES
3. REMOVAL AND PAINTING DETAILS
4. EXPANSION BEARING DETAILS (NORTH ABUT)
5. FIXED BEARING DETAILS (SOUTH ABUT)
6. EXPANSION DEVICE
7. COVER PLATE DETAILS
8. ABUTMENT PARAPET DETAILS
9. BILL OF BARS
10. SLOPE PAVING (CRUSHED AGGREGATE)

NOTE

STATIONING REFERENCES THE ORIGINAL STRUCTURE PLANS.

LEGEND

- REQUIRED CONSTRUCTION CLEARANCE WINDOW FOR RAILROAD
- APPROXIMATE LOCATION OF TYPE 1 DECK REPAIR FROM 05/13/13 THERMOGRAPHY REPORT
- ELEVATION TAKEN FROM EXISTING PLAN

WISCONSIN
LINDA M. KRUEGER
E-41427
MADISON, WI
PROFESSIONAL ENGINEER

Linda Krueger
10/19/16

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
LINDA KRUEGER (608) 821-8700

STATE PROJECT NUMBER
1161-02-61

NO.	DATE	REVISION	BY

Michael Baker INTERNATIONAL
MICHAEL BAKER INTERNATIONAL
7633 GANSER WAY, SUITE 206
MADISON, WI 53719
www.mbakerintl.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/21/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-11-58

IH 39 NB OVER CANADIAN PACIFIC R.R.

COUNTY	TOWN ~~CITY/VILLAGE~~
COLUMBIA	LEWISTON

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
DRH	LMK	ABP	LMK

GENERAL PLAN

SHEET 205 OF 10

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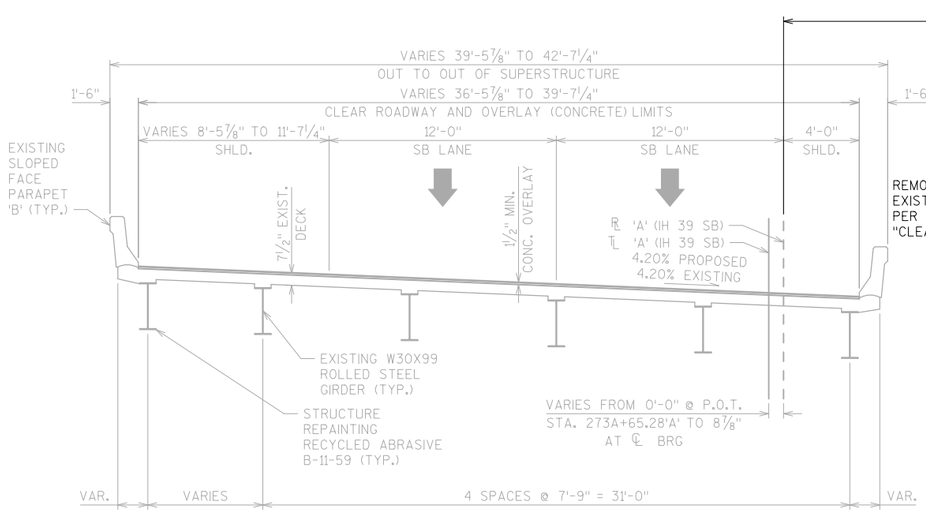
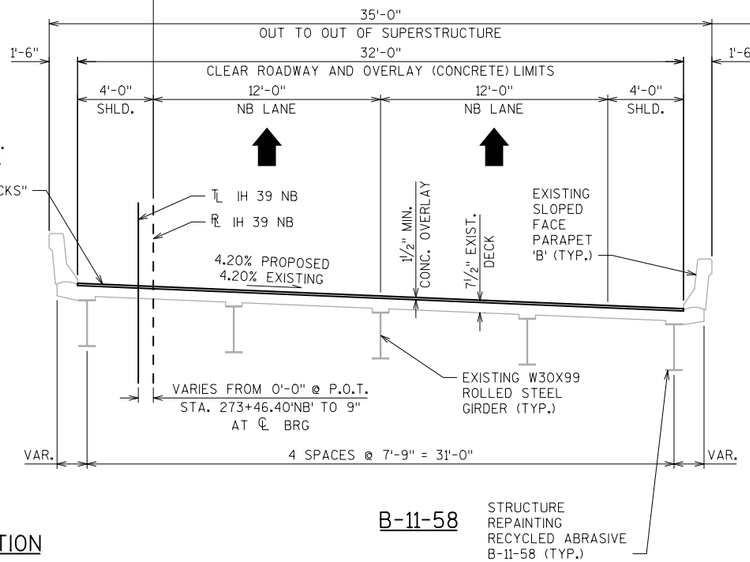
STATE PROJECT NUMBER
1161-02-61



B-11-59

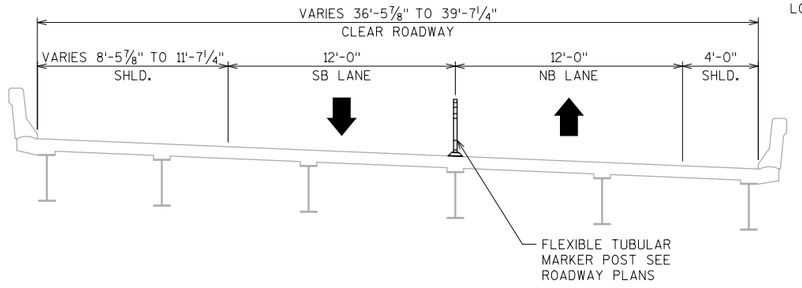


B-11-58

STRUCTURE REPAINTING RECYCLED ABRASIVE B-11-58 (TYP.)

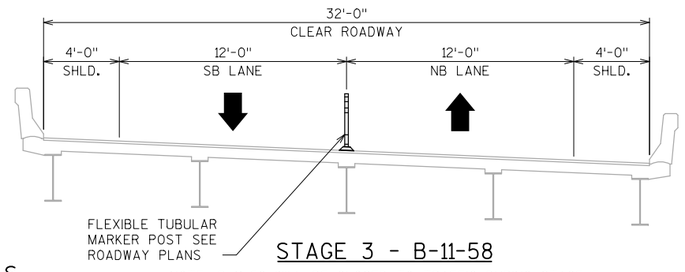
CROSS SECTION

LOOKING NORTH



STAGE 2 - B-11-59

NOTE: B-11-58 WILL BE CLOSED TO TRAFFIC DURING STAGE 2



STAGE 3 - B-11-58

NOTE: B-11-59 WILL BE CLOSED TO TRAFFIC DURING STAGE 3

STAGING DETAILS

LOOKING NORTH

NOTE: SEE ROADWAY PLANS FOR ADDITIONAL STAGING DETAILS

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	S. ABUT.	PIER 1	PIER 2	N. ABUT.	SUPER.	TOTAL
203.0225.S.01	DEBRIS CONTAINMENT B-11-58	LS	---	---	---	---	---	1
502.3100.01	EXPANSION DEVICE B-11-58	LS	---	---	---	---	---	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	---	---	554	554
502.3210	PIGMENTED SURFACE SEALER	SY	---	---	---	---	138	138
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	35	---	---	35	---	70
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	530	---	---	530	1,760	2,820
506.5000.01	BEARING ASSEMBLIES FIXED B-11-58	EACH	5	---	---	---	---	5
506.6000.01	BEARING ASSEMBLIES EXPANSION B-11-58	EACH	---	---	---	5	---	5
506.7050.S.01	REMOVING BEARINGS B-11-58	EACH	5	---	---	5	---	10
509.0301	PREPARATION DECKS TYPE 1	SY	---	---	---	---	50	50
509.0302	PREPARATION DECKS TYPE 2	SY	---	---	---	---	20	20
509.0500	CLEANING DECKS	SY	---	---	---	---	522	522
509.1000	JOINT REPAIR	SY	---	---	---	---	34	34
509.1500	CONCRETE SURFACE REPAIR	SF	10	---	6	60	---	76
509.2000	FULL-DEPTH DECK REPAIR	SY	---	---	---	---	1	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	---	---	---	---	43	43
509.9020.S	EPOXY CRACK SEALING	LF	5	---	---	5	---	10
509.9050.S	CLEANING PARAPETS	LF	---	---	---	---	326	326
517.1800.S.01	STRUCTURE REPAINTING RECYCLED ABRASIVE B-11-58	LS	---	---	---	---	---	1
517.4500.S.01	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-11-58	LS	---	---	---	---	---	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	---	---	---	---	---	1
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	197	---	---	197	---	394

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

THE TOP LAYER OF BAR STEEL REINFORCEMENT IN THE DECK AT JOINT REPAIR AREAS SHALL BE PLACED WITH 2½" CLEAR COVER.

THE COLOR OF THE FINISH TOP COAT ON THE STEEL GIRDERS SHALL BE LIGHT GRAY, (FEDERAL STANDARD COLOR NO. 26293).

"CLEANING PARAPETS" SHALL BE PERFORMED ON ALL TOP AND ROADWAY SURFACES OF EXISTING PARAPETS TO REMAIN.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY AND TO THE ENTIRE TOP OF DECK SURFACE IN THE JOINT REPAIR AREAS. PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE TOP AND ROADWAY FACE OF THE ENTIRE LENGTH PARAPET AFTER "CLEANING PARAPETS" AND PARAPET REPLACEMENT AT JOINT REPAIR AREAS HAS BEEN COMPLETED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

"PREPARATION DECKS TYPE 1", "PREPARATION DECKS TYPE 2", AND "FULL-DEPTH DECK REPAIR" AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION, FULL-DEPTH DECK REPAIRS, AND JOINT REPAIR AREAS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-11-58".

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY OR JOINT REPAIR AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

THE EXISTING STRUCTURE, B-11-58, IS A 3-SPAN STEEL GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 35'-0" AND AN OVERALL LENGTH BETWEEN BACK OF ABUTMENTS OF 155'-10". THE ENTIRE BRIDGE DECK SHALL BE PREPARED FOR A NEW CONCRETE OVERLAY. THE EXPANSION JOINTS SHALL BE REPLACED. THE ABUTMENT BEARINGS SHALL BE REPLACED. THE PIER BEARINGS SHALL BE CLEANED AND PAINTED. CONCRETE SURFACE REPAIRS SHALL BE PERFORMED AS DIRECTED BY THE FIELD ENGINEER, AND THE STRUCTURE SHALL BE PARTIALLY PAINTED AS DETAILED ON THE PLANS.

THE BID ITEM "STRUCTURE REPAINTING RECYCLED ABRASIVE B-11-58" INCLUDES CLEANING AND PAINTING ALL STEEL ELEMENTS (WITHIN THE LIMITS SHOWN ON THE PLANS) INCLUDING GIRDERS, BRACING ELEMENTS, AND NEW BEARINGS.

ALL ERODED AREAS IN THE EXISTING SLOPES BELOW THE STRUCTURE SHALL BE REPAIRED BEFORE PLACING "SLOPE PAVING CRUSHED AGGREGATE". ALL REPAIRS TO THE EXISTING SLOPES SHALL BE INCIDENTAL TO THE BID ITEM "SLOPE PAVING CRUSHED AGGREGATE".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-58

DRAWN BY	ABP	PLANS CK'D.	LMK

CROSS SECTION, NOTES AND QUANTITIES

SHEET 2 OF 10

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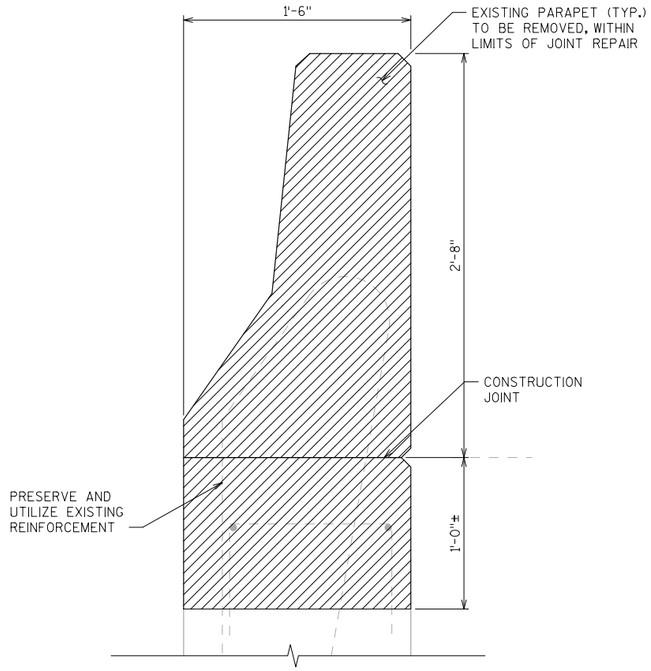
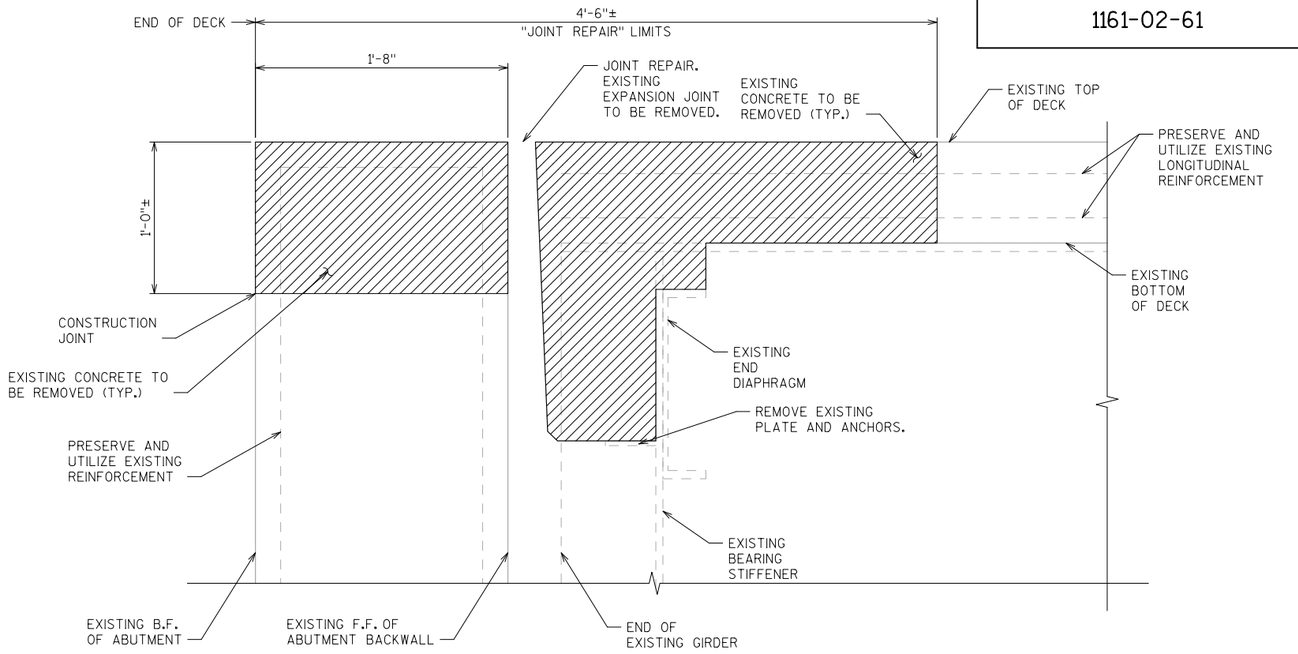


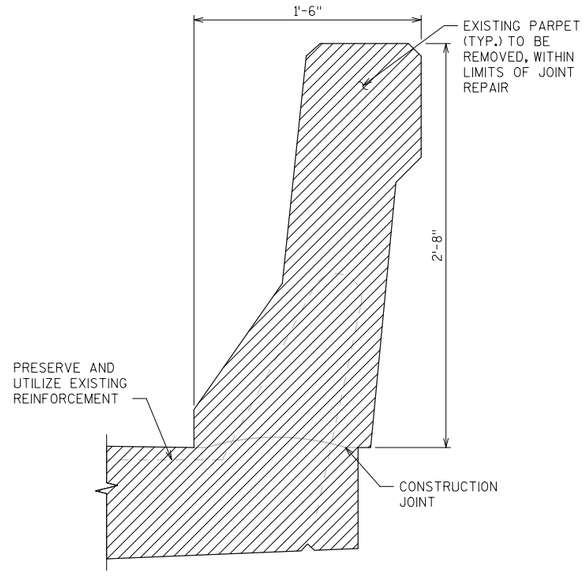
JOINT SECTION THRU PARAPET ON WING

TYPICAL WINGS



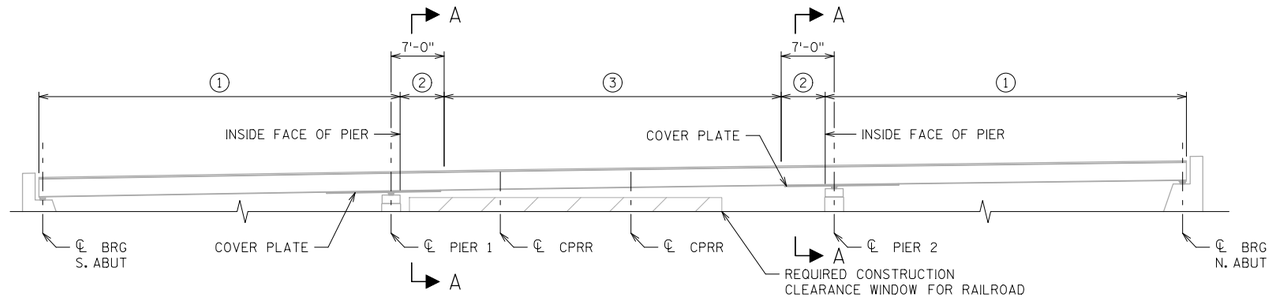
PAVING BLOCK AND END OF DECK REMOVAL DETAILS

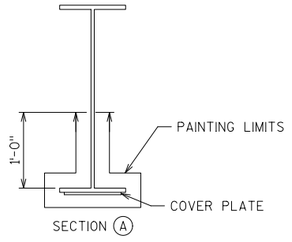
NORMAL TO ℄ SUBSTRUCTURE
TYPICAL ABUTMENTS



JOINT SECTION THRU PARAPET ON DECK

TYPICAL ABUTMENT LOCATIONS





PAINTING DETAILS

NOTE

BEARINGS AT BOTH ABUTMENTS TO BE REMOVED AND REPLACED.

LEGEND

(1) PAINT ALL EXPOSED STEEL ELEMENTS WITHIN THESE LIMITS, INCLUDING GIRDERS, BRACING ELEMENTS, NEW ABUTMENT BEARINGS, AND EXISTING PIER BEARINGS.

(2) PAINT BOTTOM FLANGE, BOTTOM COVER PLATES, AND BOTTOM 1'-0" OF WEB WITHIN THESE LIMITS. SEE SECTION (A) THIS SHEET.

(3) NO PAINTING REQUIRED WITHIN THESE LIMITS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-58

DRAWN BY DRH | PLANS CK'D. LMK

REMOVAL AND PAINTING DETAILS

SHEET 3 OF 10
207

STATE PROJECT NUMBER
1161-02-61

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STATE PROJECT NUMBER

1161-02-61

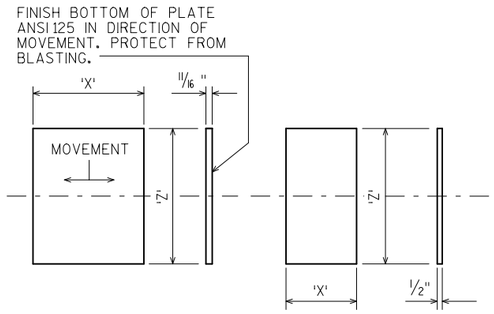
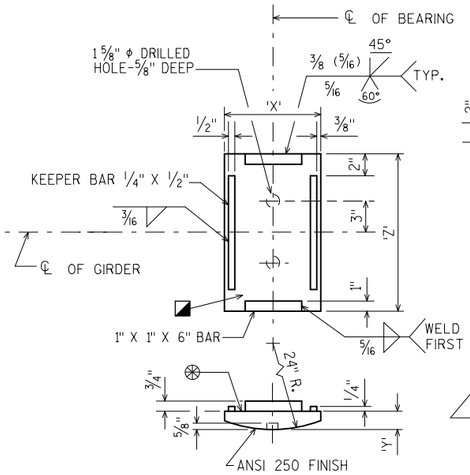


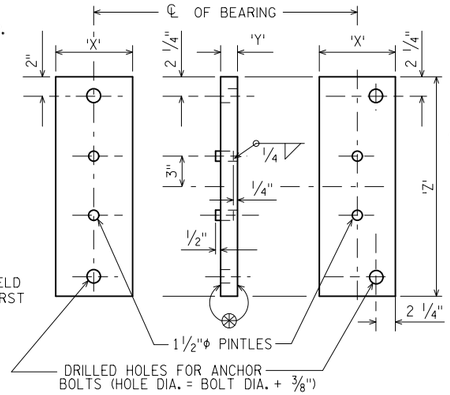
PLATE "A"

PLATE "B"

LUBRICATED BRONZE PLATE.
LUBRICATE TOP SURFACE ONLY.

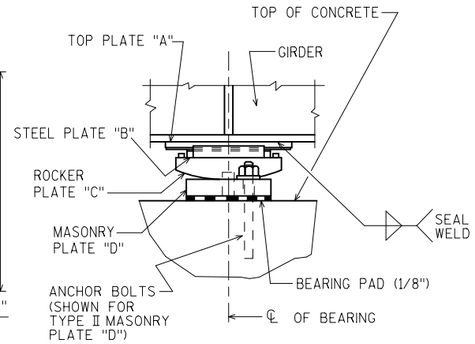


ROCKER PLATE "C"



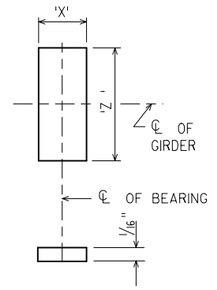
TYPE I TYPE II

MASONRY PLATE "D"

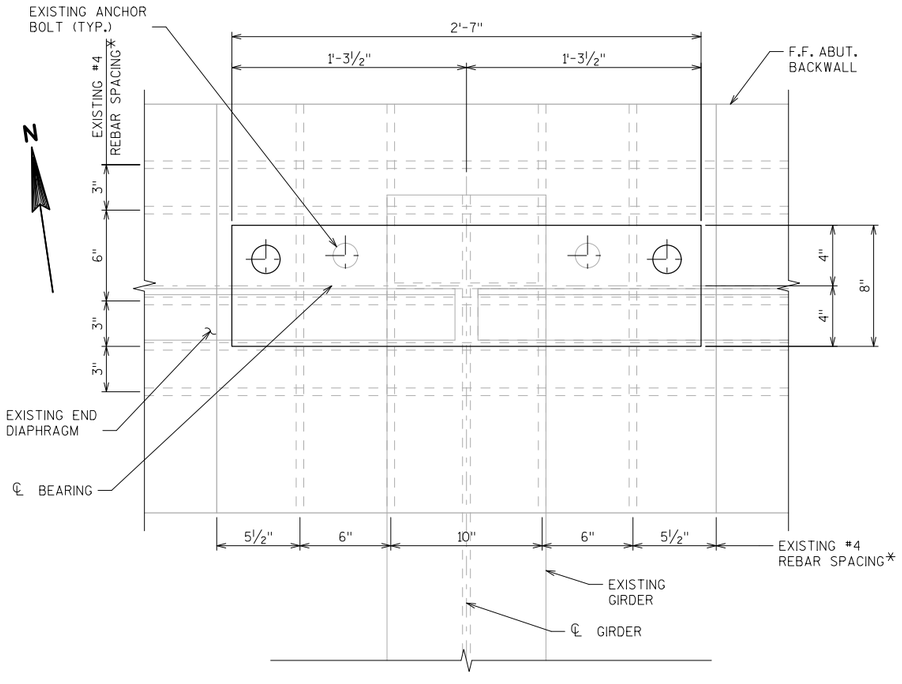


EXPANSION BEARING ASSEMBLY

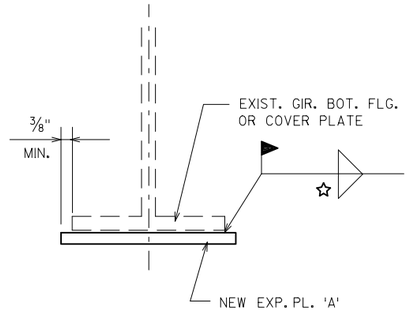
EXPANSION BEARING	PLATE "A"		PLATE "B"		PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
	'X'	'Z'	'X'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'				
	9"	11½"	5"	10"	7"	1 7/16"	1'-0 1/4"	8"	1½"	2'-7"	II	(2) - 1-1/4"ϕ x 1'-5" LONG	5	NORTH ABUTMENT



SHIM PLATE DETAILS



PLAN VIEW



BEARING REPLACEMENT DETAILS

TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	‡ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	△ 5/16"
OVER 1 1/2" TO 2 1/4"	△ 3/8"
OVER 2 1/4" TO 6"	△ 1/2"

‡ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING, UNLESS NOTED.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES 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.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5 FOR 1 1/4" ϕ AND 1'-10 FOR 1 1/2" ϕ BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-11-58", EACH.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A". ROCKER PLATE "C" AND MASONRY PLATE "D" SHALL BE GALVANIZED. DO NOT PAINT STAINLESS STEEL OR TEFLON SURFACES.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER.

TEMPORARILY REMOVE AND REPLACE END DIAPHRAGMS AS REQUIRED TO REPLACE BEARINGS.

LEGEND

⊛ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

◓ IF REQUIRED, PLACE SHIM PLATES BETWEEN BEARING PAD AND MASONRY PLATE "D". PLATES SHALL HAVE "X" AND "Z" DIMENSIONS THAT MATCH MASONRY PLATE "D". PROVIDE 2 PER BEARING.

✳ EXISTING REBAR SPACING IS APPROXIMATE AND IS BASED ON THE EXISTING PLANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-58

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EXPANSION BEARING DETAILS (NORTH ABUT)

SHEET 4 OF 10

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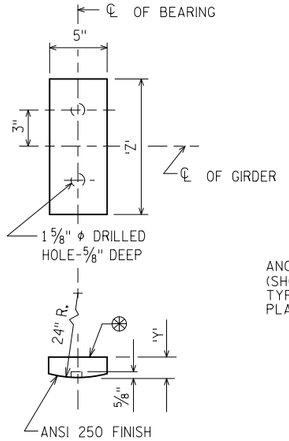
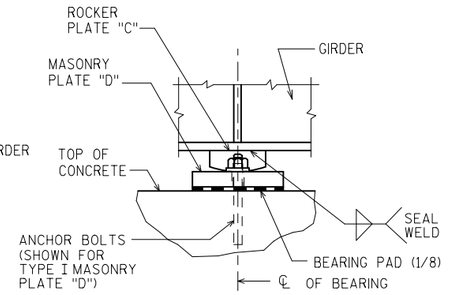
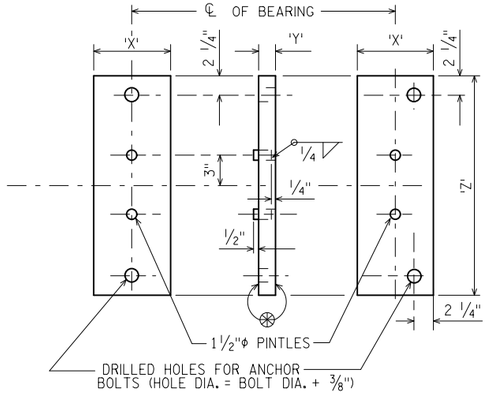


ROCKER PLATE "C"



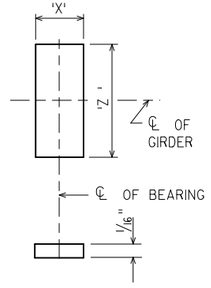
FIXED BEARING ASSEMBLY



TYPE I TYPE II

MASONRY PLATE "D"

FIXED BEARING	PLATE "C"		PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
	'Y'	'Z'	'X'	'Y'	'Z'				
	1 15/16"	11 1/2"	8"	1 1/2"	2'-7"	II	(2) - 1-1/4"ϕ x 1'-5" LONG	5	SOUTH ABUTMENT



SHIM PLATE DETAILS ◓

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING, UNLESS NOTED.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES 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.

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CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5 FOR 1 1/4" ϕ AND 1'-10 FOR 1 1/2" ϕ BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

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ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES FIXED B-11-58", EACH.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

ROCKER PLATE "C" SHALL BE SHOP PAINTED WITH A WELDABLE PRIMER.
MASONRY PLATE "D" SHALL BE GALVANIZED.

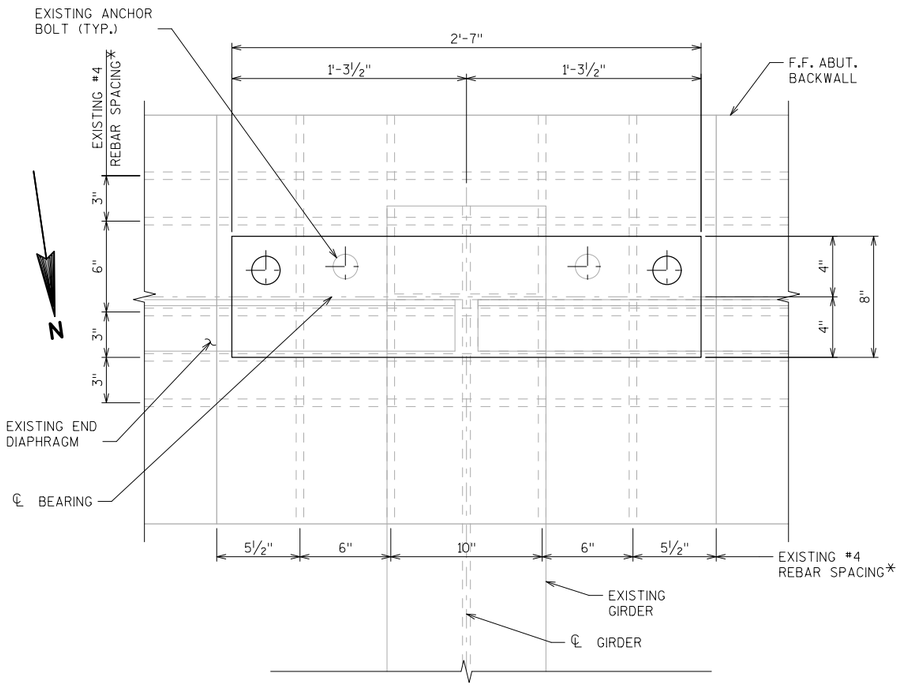
TEMPORARILY REMOVE AND REPLACE END DIAPHRAGMS AS REQUIRED TO REPLACE BEARINGS.

LEGEND

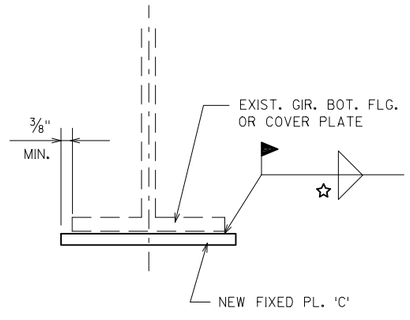
⊛ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

◓ IF REQUIRED, PLACE SHIM PLATES BETWEEN BEARING PAD AND MASONRY PLATE "D". PLATES SHALL HAVE "X" AND "Z" DIMENSIONS THAT MATCH MASONRY PLATE "D". PROVIDE 2 PER BEARING.

✳ EXISTING REBAR SPACING IS APPROXIMATE AND IS BASED ON THE EXISTING PLANS.



PLAN VIEW



BEARING REPLACEMENT DETAILS

☆ TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	‡ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	△ 5/16"
OVER 1 1/2" TO 2 1/4"	△ 3/8"
OVER 2 1/4" TO 6"	△ 1/2"

‡ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-58

DRAWN BY DRH | PLANS CK'D. LMK

FIXED BEARING DETAILS (SOUTH ABUT)

SHEET 5 OF 10
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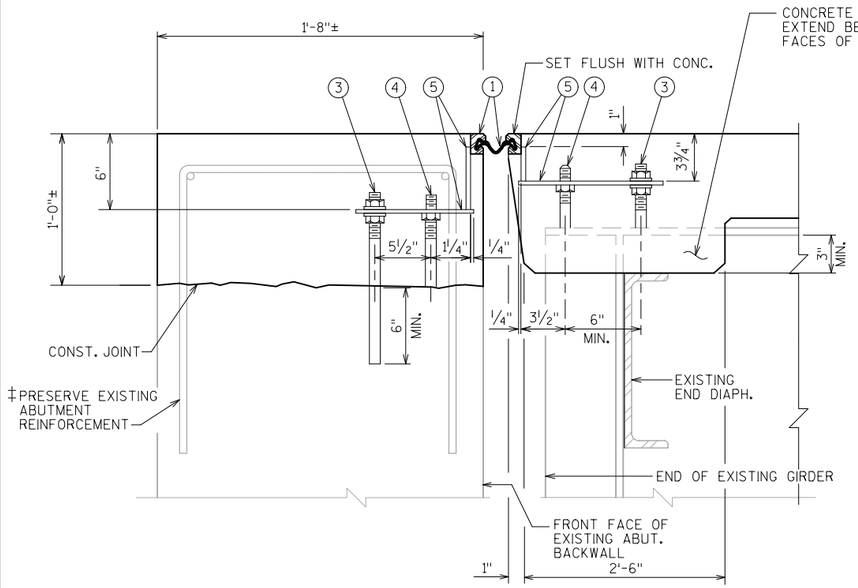
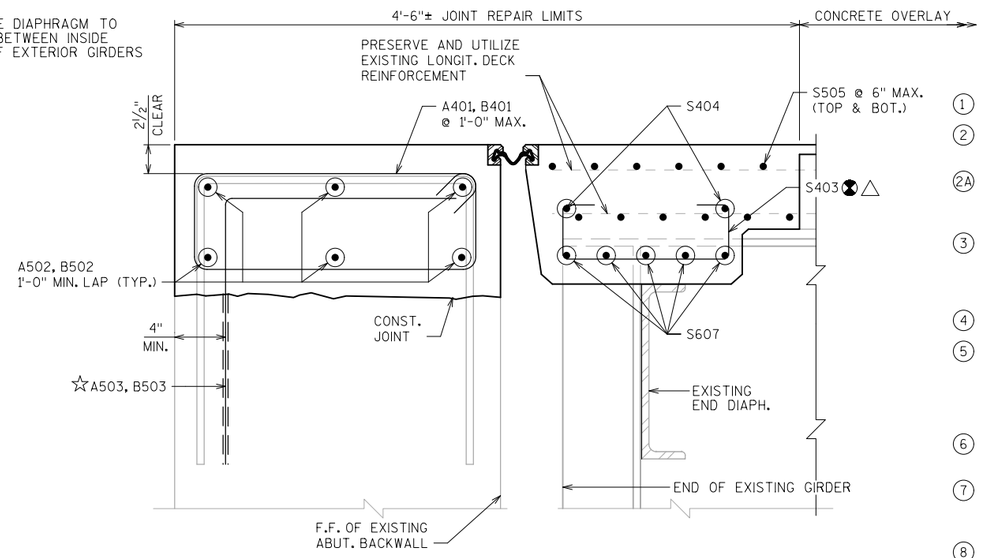


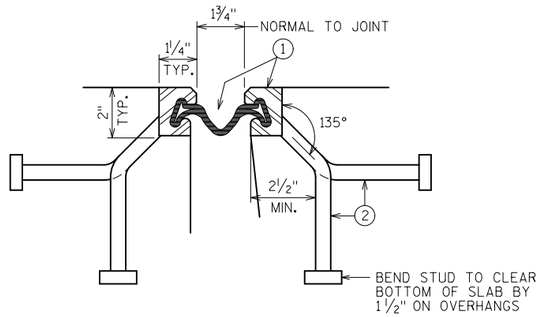
SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



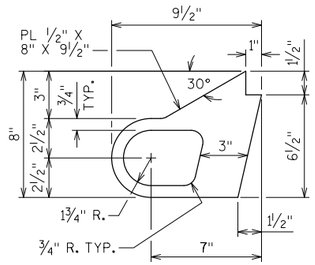
SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE
(SHOWING REINFORCEMENT)

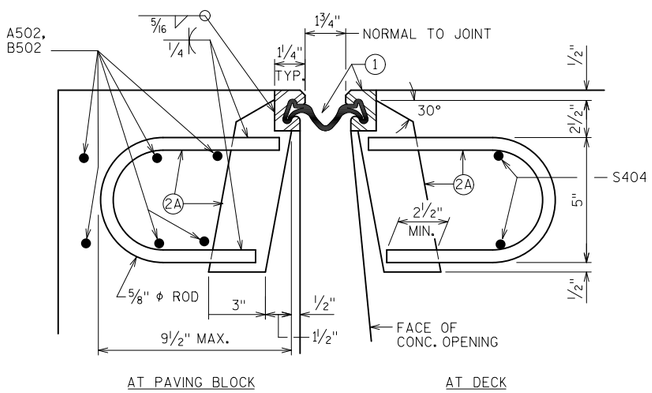


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS

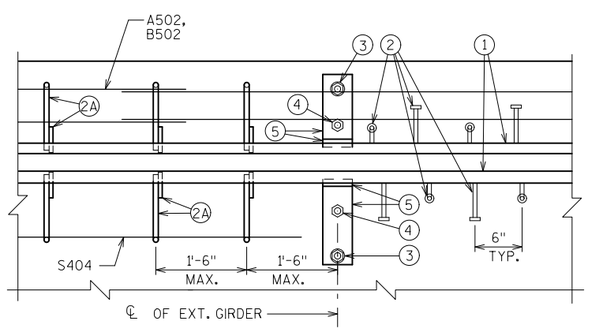


ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.
SYMMETRIC ABOUT ℄ JOINT UNLESS OTHERWISE SHOWN OR NOTED



PART PLAN

LEGEND

(1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

(2) STUDS ⅝"ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝"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. 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"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. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 AND 1" ϕ HOLE FOR NO. 4.

(6) GALVANIZED PLATE ⅜" X 1'-2" x 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

(7) ¾"ϕ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾"ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) ¾"ϕ X 2¼" GALVANIZED THREADED COUPLING.

(10) 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

‡ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ☆ .

☆ ADHESIVE ANCHORS NO. 5 BARS. EMBED 1'-6" IN CONCRETE. SPACE AT 1'-0". TURN 1'-5" LEG AS NECESSARY TO FIT.

⊠ BARS PLACED PARALLEL TO GIRDERS.
SPACING PERPENDICULAR TO ℄ OF GIRDERS.
SPACING BETWEEN TOP FLANGE OF GIRDERS.

△ 9 SPA @ 9" MAX = 6'-6½" - BETWEEN GIRDERS 1 AND 5

NOTES

ONE FIELD SPLICE PERMITTED IN 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, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 & 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-11-58".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-58

DRAWN BY	DRH	PLANS CK'D.	LMK

EXPANSION DEVICE

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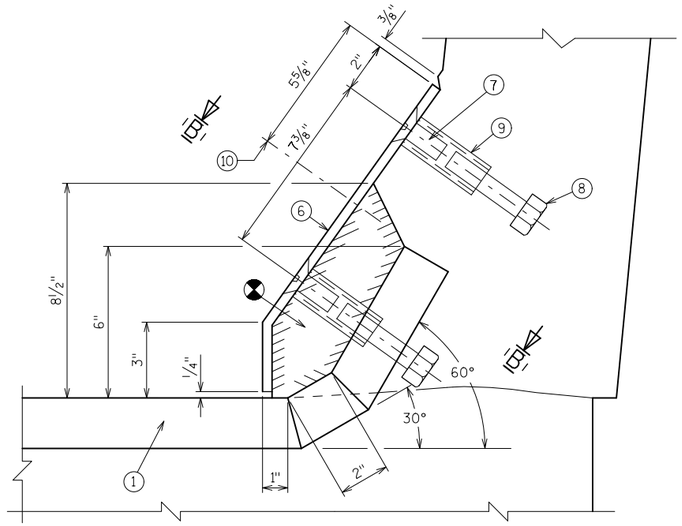
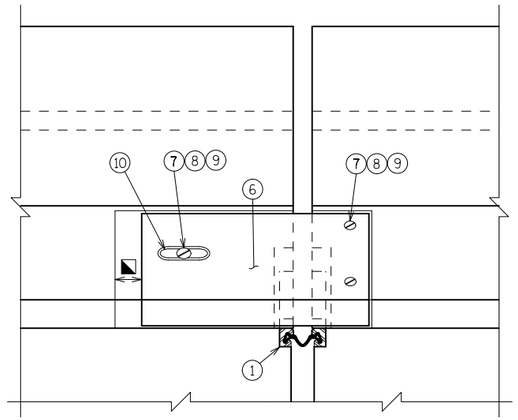
STATE PROJECT NUMBER

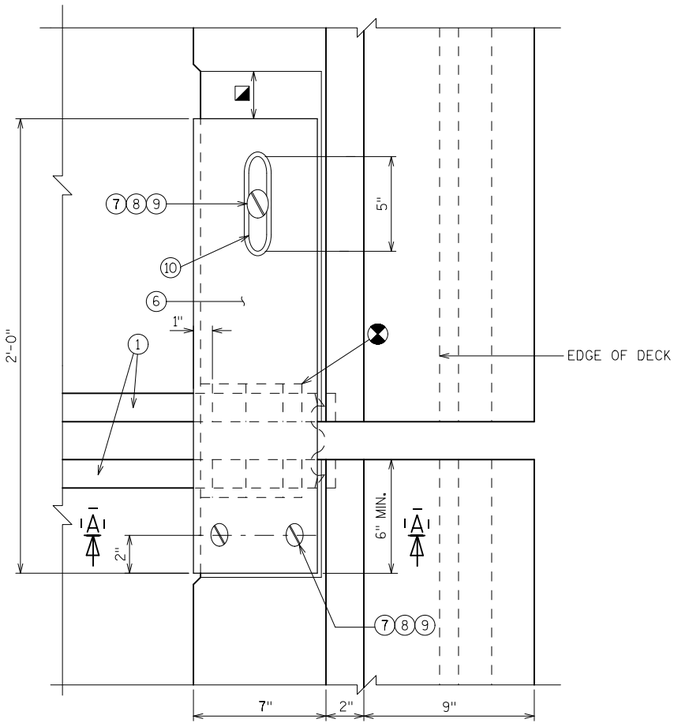
1161-02-61



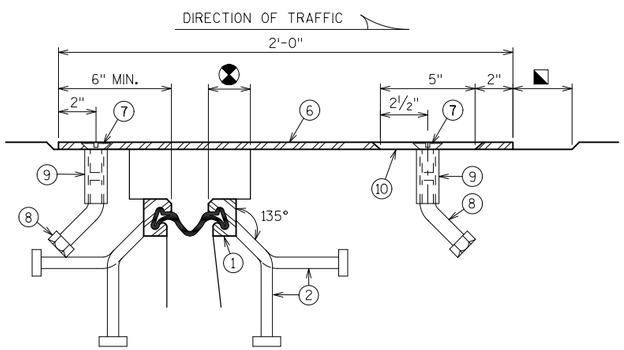
SECTION A-A



VIEW OF PARAPET PLATE
FROM ROADWAY



PLAN



SECTION B-B

LEGEND

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-58

DRAWN BY DRH | PLANS CK'D. LMK

COVER PLATE DETAILS

SHEET 7 OF 10

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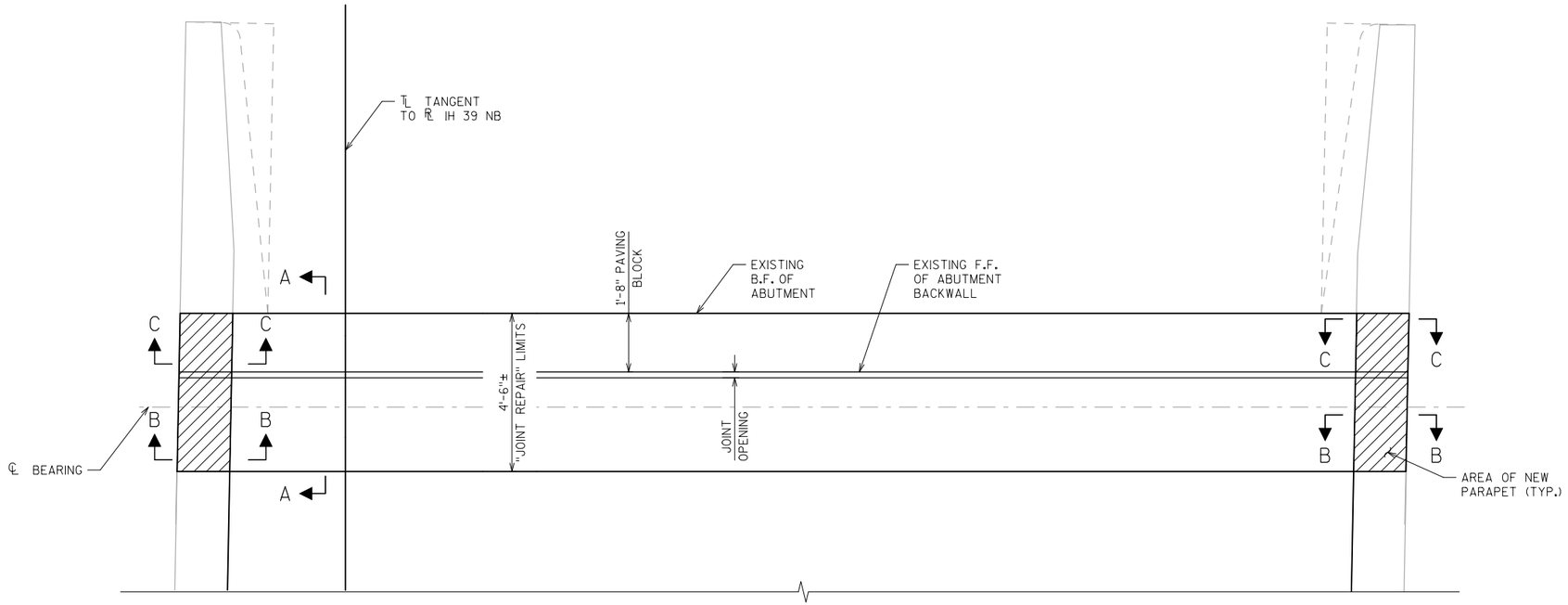
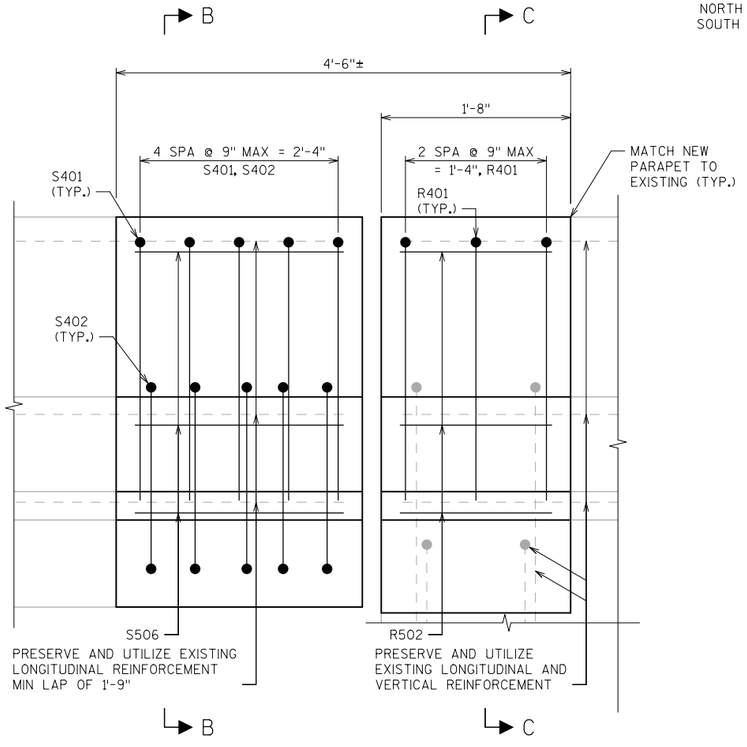
STATE PROJECT NUMBER
1161-02-61

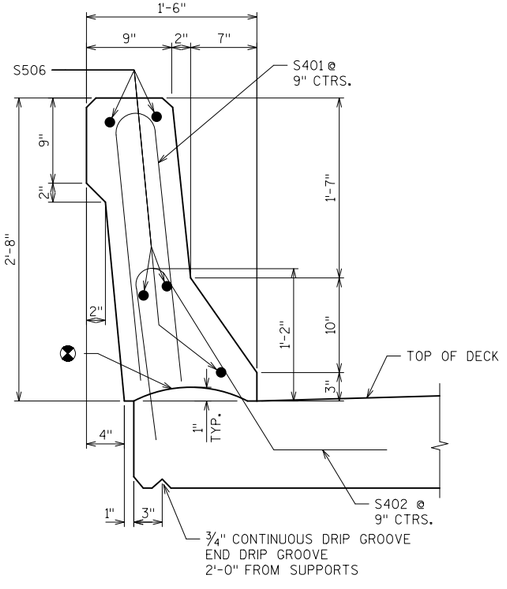


PLAN

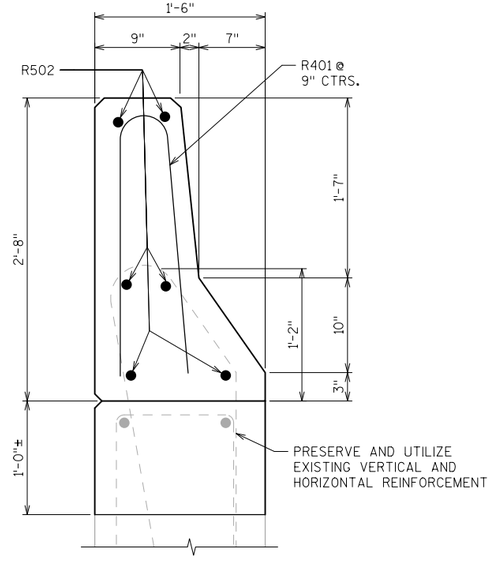
NORTH ABUTMENT SHOWN
SOUTH ABUTMENT SIMILAR



ELEVATION A-A



SECTION B-B



SECTION C-C

LEGEND

⊠ CONST. JOINT - STRIKE OFF AS SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-58

DRAWN BY DRH | PLANS CK'D. LMK

ABUTMENT PARAPET DETAILS

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STATE PROJECT NUMBER
1161-02-61

S. ABUT. - BILL OF BARS — TOTAL COATED = 490 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
A401	35	4'-5"	X	X	PAVING BLOCK - STIRRUP
A502	30	8'-0"	X		PAVING BLOCK - HORIZONTAL
☆ A503	35	3'-7"	X	X	PAVING BLOCK - VERTICAL

N. ABUT. - BILL OF BARS — TOTAL COATED = 490 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
B401	35	4'-5"	X	X	PAVING BLOCK - STIRRUP
B502	30	8'-0"	X		PAVING BLOCK - HORIZONTAL
☆ B503	35	3'-7"	X	X	PAVING BLOCK - VERTICAL

PPT ON WINGS - BILL OF BARS — TOTAL COATED = 80 LBS

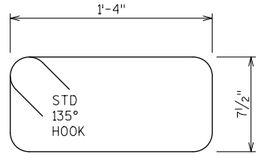
BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
R401	12	4'-9"	X	X	PARAPET - VERTICAL
R502	24	1'-4"	X		PARAPET - HORIZONTAL

SUPER. - BILL OF BARS — TOTAL COATED = 1,760 LBS

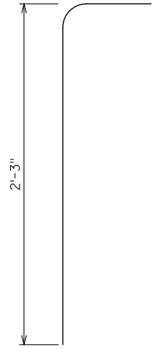
BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
S401	20	4'-10"	X	X	PARAPET - VERTICAL
S402	20	4'-3"	X	X	PARAPET - VERTICAL
S403	80	3'-11"	X	X	END DIAPHRAGM - LONGITUDINAL
S404	32	6'-6"	X		END DIAPHRAGM - TRANSVERSE
S505	24	33'-10"	X		DECK - TRANSVERSE
S506	20	2'-4"	X		PARAPET - HORIZONTAL
S607	40	6'-6"	X		END DIAPHRAGM - TRANSVERSE

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

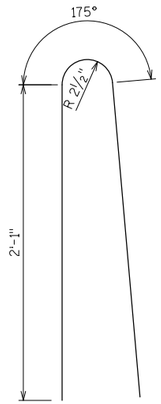
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.



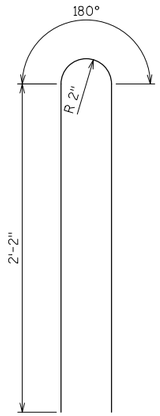
A401, B401



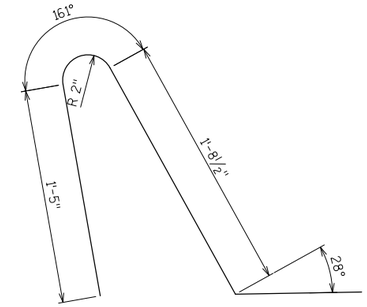
A503, B503



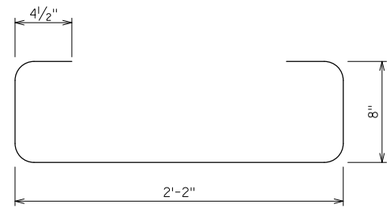
R401



S401



S402



S403

LEGEND

☆ ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-6" IN CONCRETE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-58

DRAWN BY DRH | PLANS CK'D. LMK

BILL OF BARS

SHEET 9 OF 10
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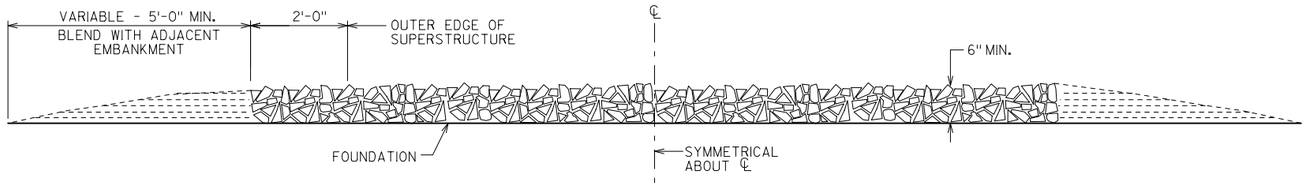
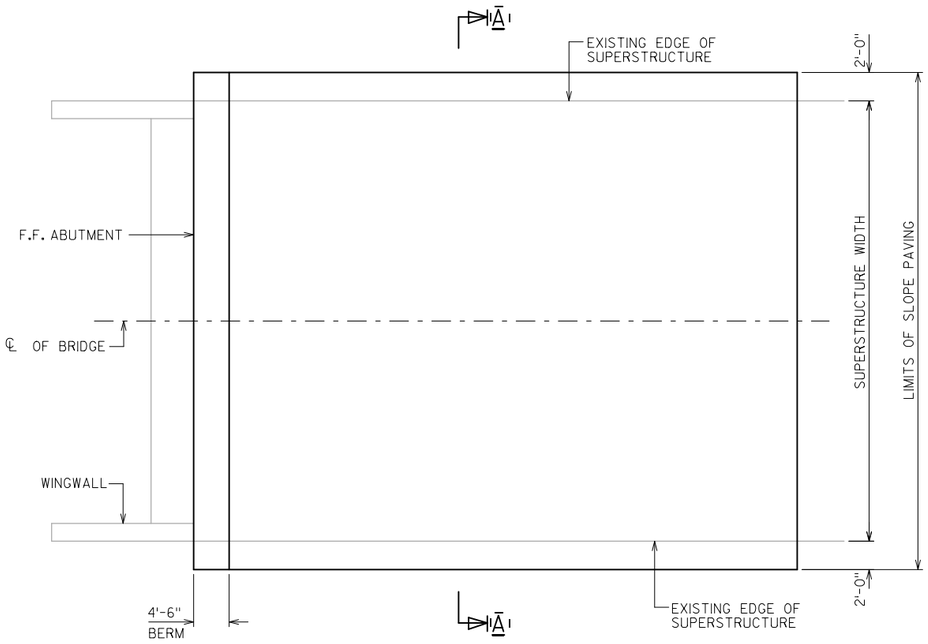
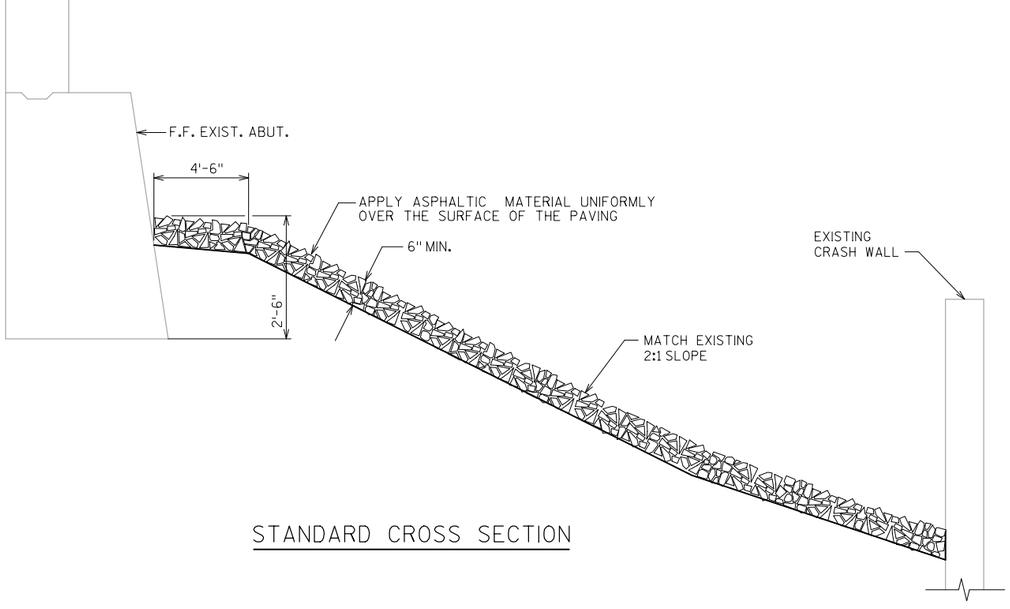
STATE PROJECT NUMBER
1161-02-61



SECTION A-A



PLAN



STANDARD CROSS SECTION

GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

ALL ERODED AREAS IN THE EXISTING SLOPES BELOW THE STRUCTURE SHALL BE REPAIRED BEFORE PLACING "SLOPE PAVING CRUSHED AGGREGATE". ALL REPAIRS TO THE EXISTING SLOPES SHALL BE INCIDENTAL TO THE BID ITEM "SLOPE PAVING CRUSHED AGGREGATE".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-58

DRAWN BY	DRH	PLANS CK'D.	LMK

SLOPE PAVING (CRUSHED AGGREGATE)

SHEET 10 OF 10

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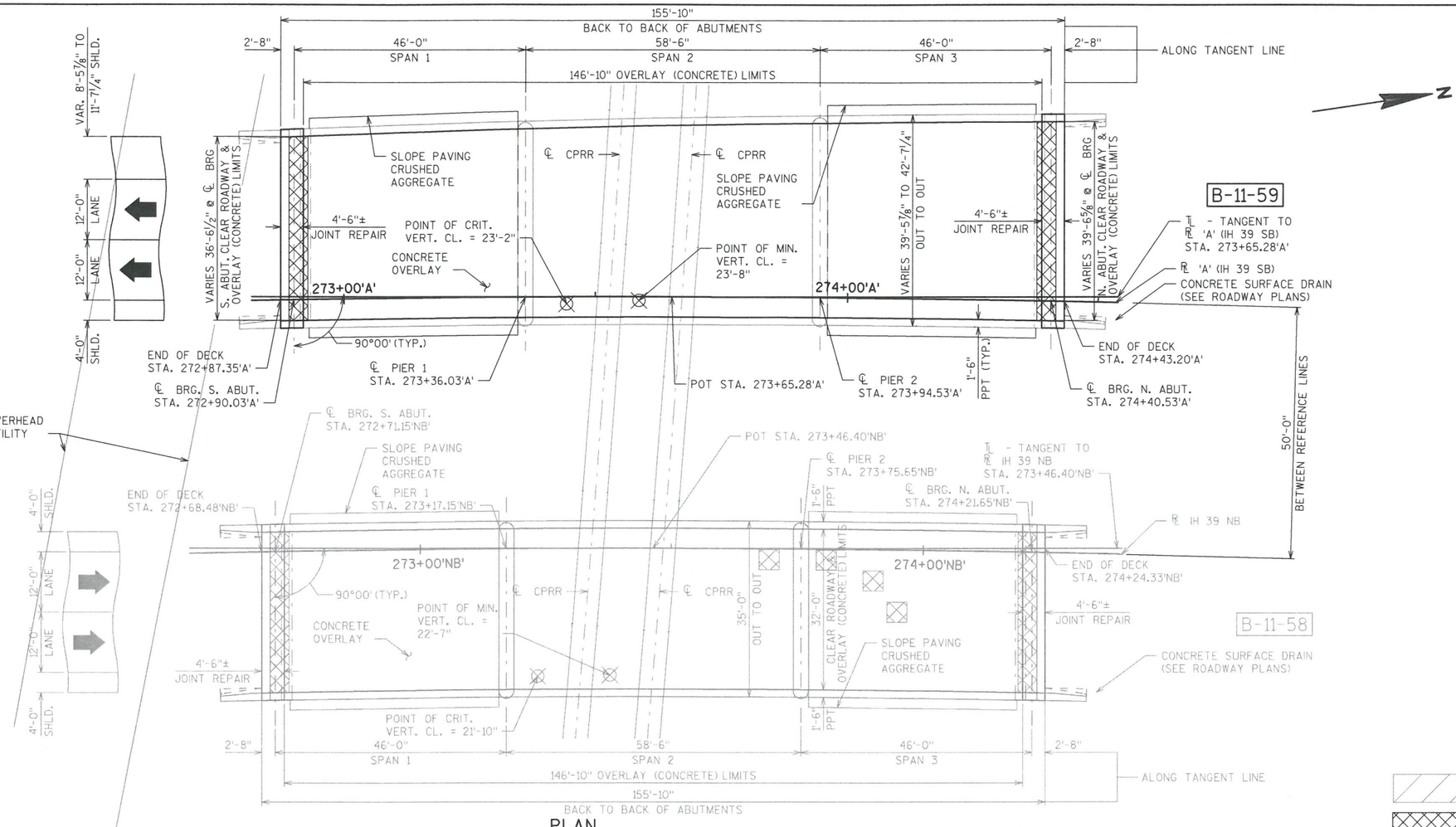
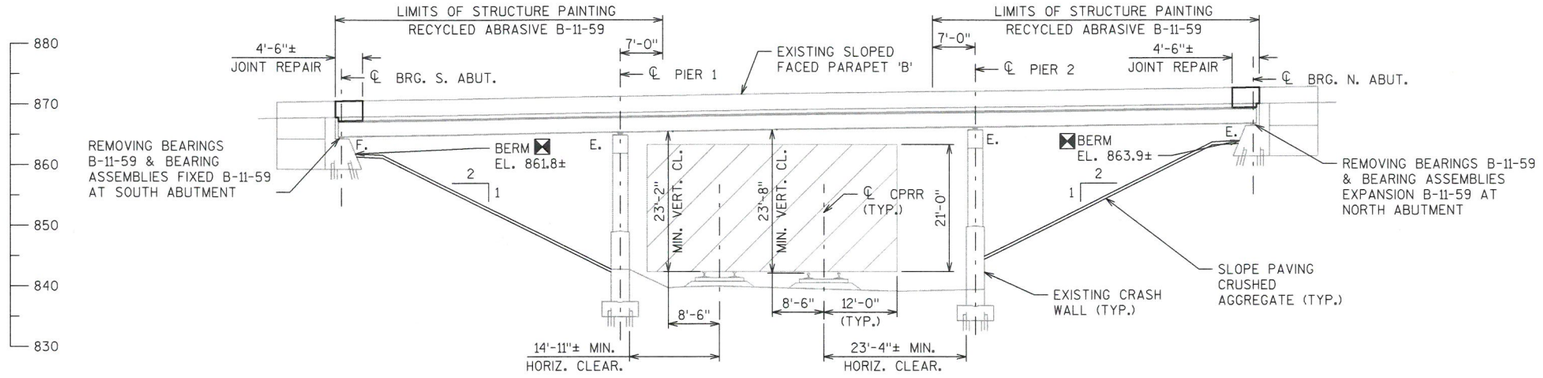


PLAN

(3-SPAN STEEL GIRDER, CONCRETE OVERLAY, JOINT REPAIR, ABUTMENT BEARING REPLACEMENT AND PARTIAL PAINTING)



ELEVATION

(LOOKING WEST)

BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
11	272+59.95'NB'	29.27' RT	WISDOT DISK TOP PARAPET SE QUAD B-11-58	868.84
12	274+23.57'NB'	86.78' LT	WISDOT DISK TOP PARAPET NW QUAD B-11-59	874.19

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS-20
INVENTORY RATING: HS-16
OPERATING RATING: HS-27
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 200 KIPS

MATERIAL PROPERTIES:
CONCRETE MASONRY OVERLAY DECKS.....f'c = 4,000 P.S.I.
ALL OTHER.....f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT
HIGH STRENGTH, GRADE 60.....fy = 60,000 P.S.I.

TRAFFIC DATA

IH 39
A.D.T. = 20,500 (2017)
A.D.T. = 24,600 (2037)
RDS = 70 MPH

CURVE DATA (FROM EXISTING STRUCTURE PLANS)

IH 39 NB B-11-58	AUXILARY 'A' B-11-59
P.I. = 281'+07.74'NB'	P.I. = 281'+32.80'A'
I = 233°-15'-35"	I = 233°-15'-35"
Δ = 53°-15'-35"	Δ = 53°-15'-35"
D = 1°-30'	D = 1°-28'-50"
T = 1915.28'	T = 1940.34'
L = 3550.65'	L = 3597.12'
E = 453.33'	E = 459.21'
R = 3819.72'	R = 3869.72'
S.E. = 0.042⅛	S.E. = 0.042⅛

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION, NOTES AND QUANTITIES
3. REMOVAL AND PAINTING DETAILS
4. EXPANSION BEARING DETAILS (NORTH ABUT)
5. FIXED BEARING DETAILS (SOUTH ABUT)
6. EXPANSION DEVICE
7. COVER PLATE DETAILS
8. ABUTMENT PARAPET DETAILS
9. BILL OF BARS
10. SLOPE PAVING (CRUSHED AGGREGATE)

NOTE

STATIONING REFERENCES THE ORIGINAL STRUCTURE PLANS.

LEGEND

REQUIRED CONSTRUCTION CLEARANCE WINDOW FOR RAILROAD

APPROXIMATE LOCATION OF TYPE 1 DECK REPAIR FROM 05/13/13 THERMOGRAPHY REPORT

ELEVATION TAKEN FROM EXISTING PLAN

WISCONSIN PROFESSIONAL ENGINEER
LINDA M. KRUEGER
E-41427
MADISON, WI

10/19/16

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
LINDA KRUEGER (608) 821-8700

STATE PROJECT NUMBER
1161-02-61

NO.	DATE	REVISION	BY

Michael Baker INTERNATIONAL
MICHAEL BAKER INTERNATIONAL
7633 GANSER WAY, SUITE 206
MADISON, WI 53719
www.mbakerintl.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/21/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-11-59

IH 39 SB OVER CANADIAN PACIFIC R.R.

COUNTY	TOWN ~~CITY/VILLAGE~~
COLUMBIA	LEWISTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
DRH	LMK	ABP	LMK

GENERAL PLAN

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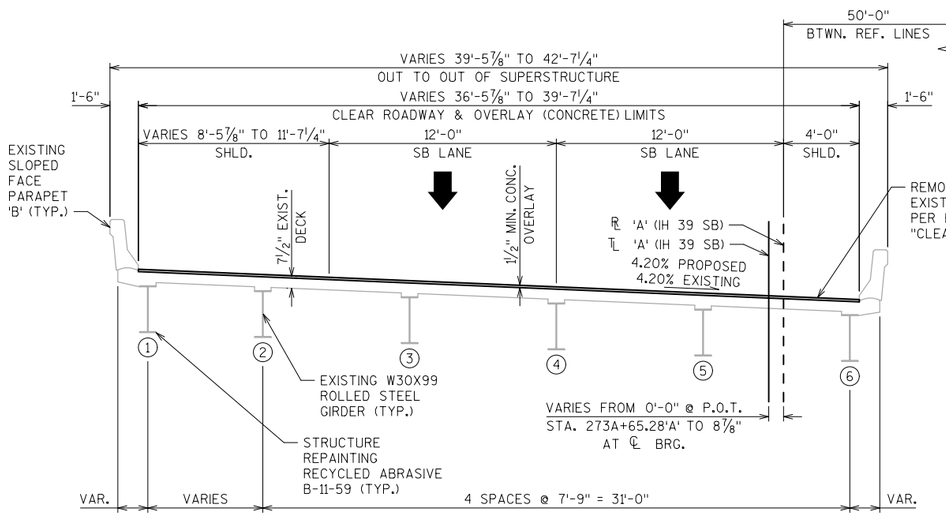
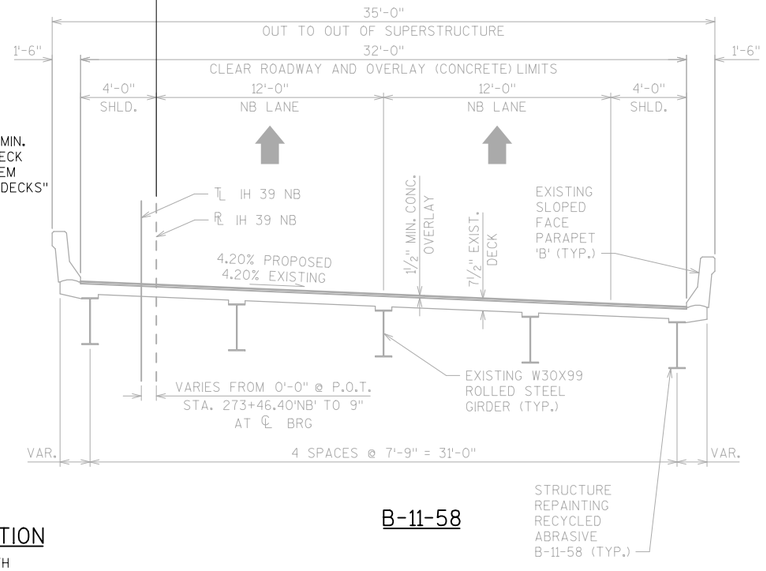
STATE PROJECT NUMBER
1161-02-61



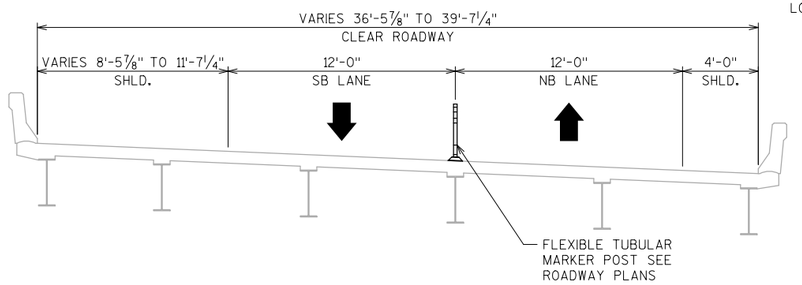
B-11-59



B-11-58

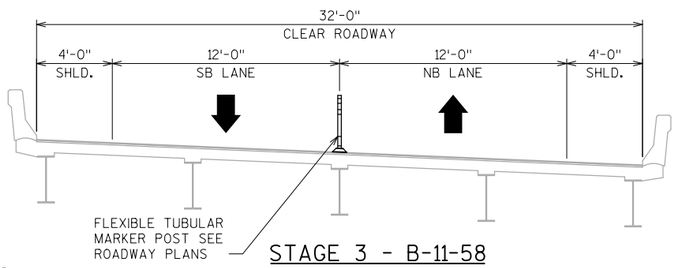
CROSS SECTION

LOOKING NORTH



STAGE 2 - B-11-59

NOTE: B-11-58 WILL BE CLOSED TO TRAFFIC DURING STAGE 2



STAGE 3 - B-11-58

NOTE: B-11-59 WILL BE CLOSED TO TRAFFIC DURING STAGE 3

STAGING DETAILS

LOOKING NORTH

NOTE: SEE ROADWAY PLANS FOR ADDITIONAL STAGING DETAILS

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	S. ABUT.	PIER 1	PIER 2	N. ABUT.	SUPER.	TOTAL
203.0225.S.02	DEBRIS CONTAINMENT B-11-59	LS	---	---	---	---	---	1
502.3100.02	EXPANSION DEVICE B-11-59	LS	---	---	---	---	---	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	---	---	659	659
502.3210	PIGMENTED SURFACE SEALER	SY	---	---	---	---	138	138
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	40	---	---	43	---	83
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	610	---	---	630	2,050	3,290
506.5000.02	BEARING ASSEMBLIES FIXED B-11-59	EACH	6	---	---	---	---	6
506.6000.02	BEARING ASSEMBLIES EXPANSION B-11-59	EACH	---	---	---	6	---	6
506.7050.S.02	REMOVING BEARINGS B-11-59	EACH	6	---	---	6	---	12
509.0301	PREPARATION DECKS TYPE 1	SY	---	---	---	---	10	10
509.0302	PREPARATION DECKS TYPE 2	SY	---	---	---	---	4	4
509.0500	CLEANING DECKS	SY	---	---	---	---	621	621
509.1000	JOINT REPAIR	SY	---	---	---	---	40	40
509.1500	CONCRETE SURFACE REPAIR	SF	15	10	---	60	---	85
509.2000	FULL-DEPTH DECK REPAIR	SY	---	---	---	---	1	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	---	---	---	---	49	49
509.9020.S	EPOXY CRACK SEALING	LF	5	---	20	5	---	30
509.9050.S	CLEANING PARAPETS	LF	---	---	---	---	327	327
517.1800.S.02	STRUCTURE REPAINTING RECYCLED ABRASIVE B-11-59	LS	---	---	---	---	---	1
517.4500.S.02	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-11-59	LS	---	---	---	---	---	1
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	220	---	---	235	---	455

NOTE: PORTABLE DECONTAMINATION FACILITY IS PAID FOR AS PART OF B-11-58

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

THE TOP LAYER OF BAR REINFORCEMENT IN THE DECK AT JOINT REPAIR AREAS SHALL BE PLACED WITH 2½" CLEAR COVER.

THE COLOR OF THE FINISH TOP COAT ON THE STEEL GIRDERS SHALL BE LIGHT GRAY, (FEDERAL STANDARD COLOR NO. 26293).

"CLEANING PARAPETS" SHALL BE PERFORMED ON ALL TOP AND ROADWAY SURFACES OF EXISTING PARAPETS TO REMAIN.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY AND TO THE ENTIRE TOP OF DECK SURFACE IN THE JOINT REPAIR AREAS. PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE TOP AND ROADWAY FACE OF THE ENTIRE LENGTH OF PARAPET AFTER "CLEANING PARAPETS" AND PARAPET REPLACEMENT AT JOINT REPAIR AREAS HAS BEEN COMPLETED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

"PREPARATION DECKS TYPE 1", "PREPARATION DECKS TYPE 2", AND "FULL-DEPTH DECK REPAIR" AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION, FULL-DEPTH DECK REPAIRS, AND JOINT REPAIR AREAS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSIONS DEVICE B-11-59".

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY OR JOINT REPAIR AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

THE EXISTING STRUCTURE, B-11-59, IS A 3-SPAN STEEL GIRDER STRUCTURE WITH AN AVERAGE WIDTH OF 41'± AND AN OVERALL LENGTH BETWEEN BACK OF ABUTMENTS OF 155'-10". THE ENTIRE BRIDGE DECK SHALL BE PREPARED FOR A NEW CONCRETE OVERLAY. THE EXPANSION JOINTS SHALL BE REPLACED. THE ABUTMENT BEARINGS SHALL BE REPLACED. THE PIER BEARINGS SHALL BE CLEANED AND PAINTED. CONCRETE SURFACE REPAIRS SHALL BE PERFORMED AS DIRECTED BY FIELD ENGINEER, AND THE STRUCTURE SHALL BE PARTIALLY PAINTED AS DETAILED ON THE PLANS.

THE BID ITEM "STRUCTURE REPAINTING RECYCLED ABRASIVE B-11-59" INCLUDES CLEANING AND PAINTING ALL STEEL ELEMENTS (WITHIN THE LIMITS SHOWN ON PLANS) INCLUDING GIRDERS, BRACING ELEMENTS, AND NEW BEARINGS.

ALL ERODED AREAS IN THE EXISTING SLOPES BELOW THE STRUCTURE SHALL BE REPAIRED BEFORE PLACING "SLOPE PAVING CRUSHED AGGREGATE". ALL REPAIRS TO THE EXISTING SLOPES SHALL BE INCIDENTAL TO THE BID ITEM "SLOPE PAVING CRUSHED AGGREGATE".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-59

DRAWN BY ABP | PLANS CK'D. LMK

CROSS SECTION, NOTES AND QUANTITIES

SHEET 2 OF 10

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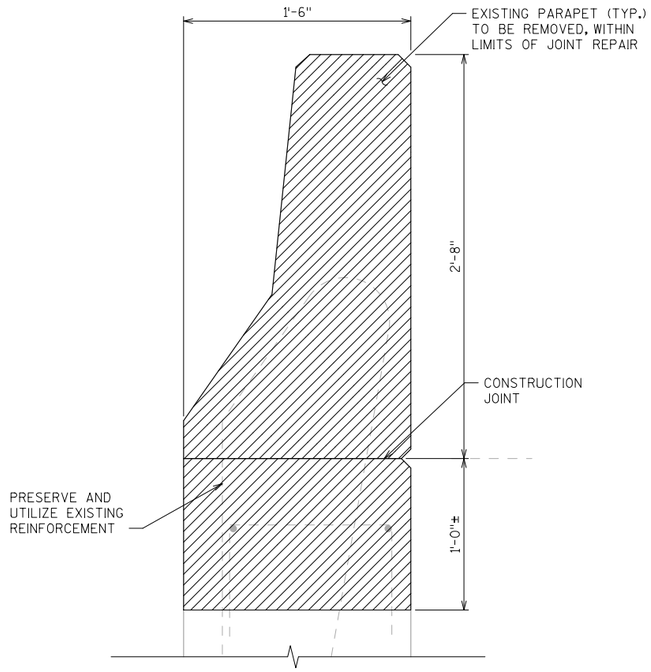
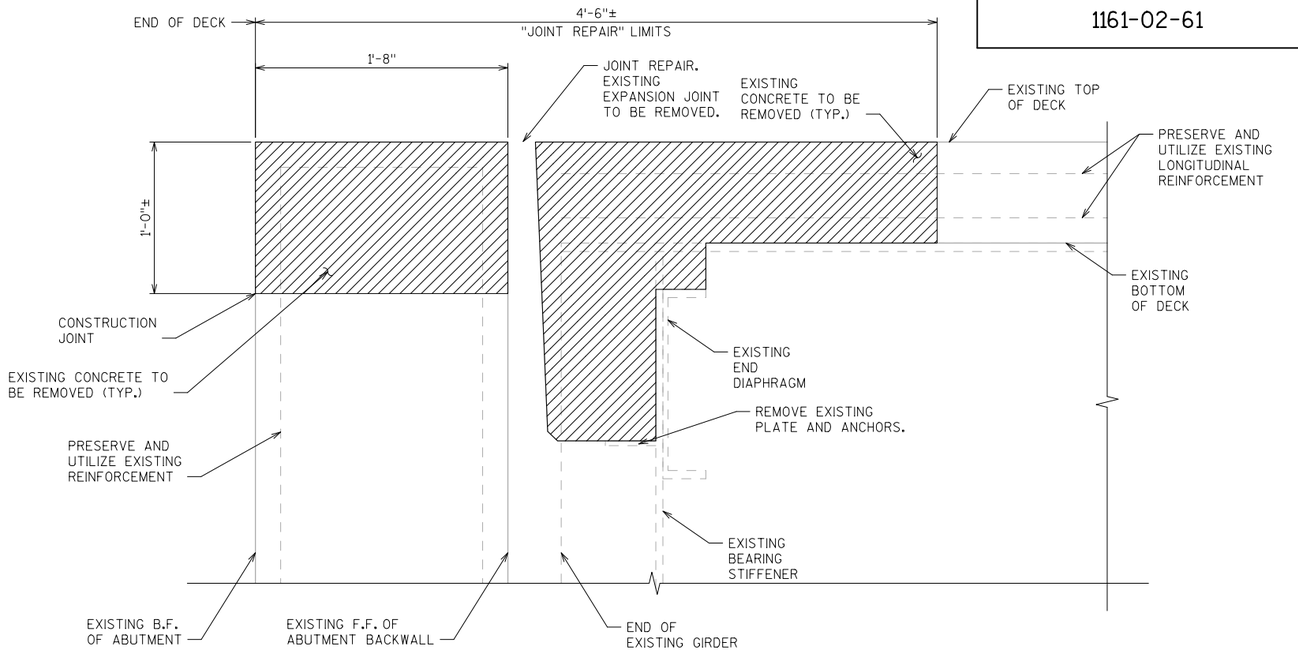


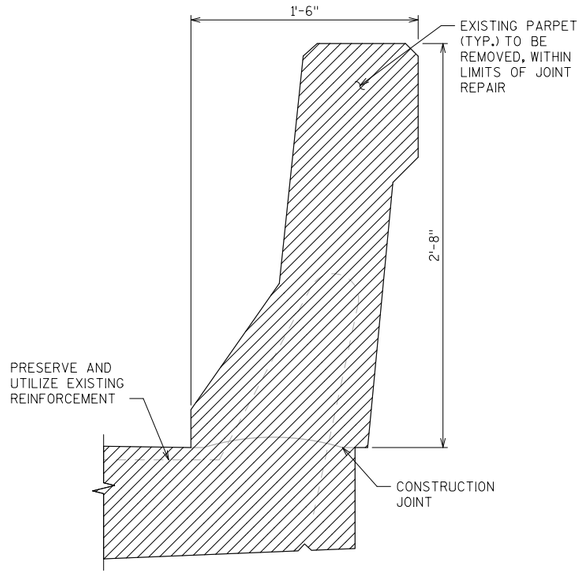
JOINT SECTION THRU PARAPET ON WING

TYPICAL WINGS



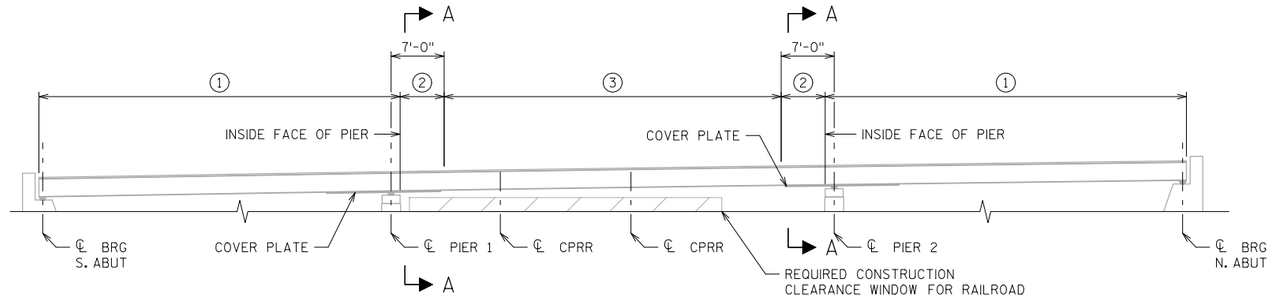
PAVING BLOCK AND END OF DECK REMOVAL DETAILS

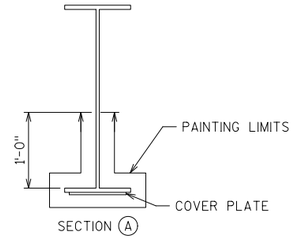
NORMAL TO ℄ SUBSTRUCTURE
TYPICAL ABUTMENTS



JOINT SECTION THRU PARAPET ON DECK

TYPICAL ABUTMENT LOCATIONS





PAINTING DETAILS

NOTE

BEARINGS AT BOTH ABUTMENTS TO BE REMOVED AND REPLACED.

LEGEND

(1) PAINT ALL EXPOSED STEEL ELEMENTS WITHIN THESE LIMITS, INCLUDING GIRDERS, BRACING ELEMENTS, NEW ABUTMENT BEARINGS, AND EXISTING PIER BEARINGS.

(2) PAINT BOTTOM FLANGE, BOTTOM COVER PLATES, AND BOTTOM 1'-0" OF WEB WITHIN THESE LIMITS. SEE SECTION (A) THIS SHEET.

(3) NO PAINTING REQUIRED WITHIN THESE LIMITS.

NO.	DATE	REVISION	BY

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STRUCTURE B-11-59

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REMOVAL AND PAINTING DETAILS

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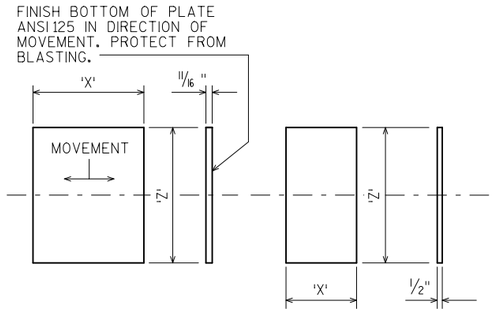
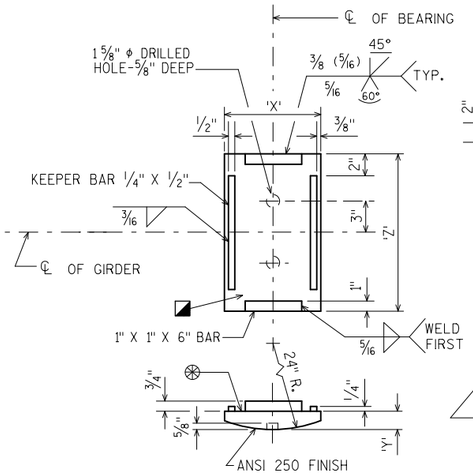


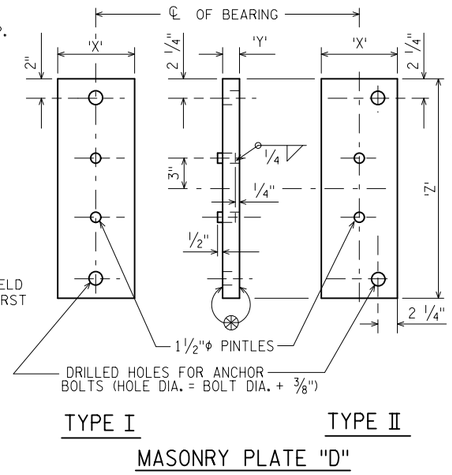
PLATE "A"

PLATE "B"

LUBRICATED BRONZE PLATE.
LUBRICATE TOP SURFACE ONLY.

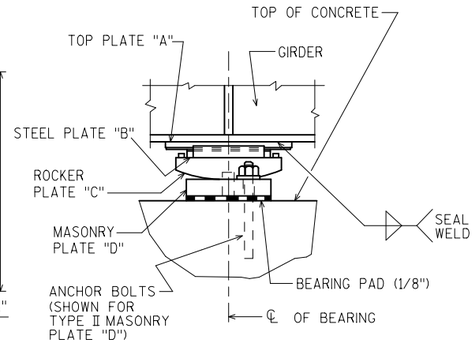


ROCKER PLATE "C"



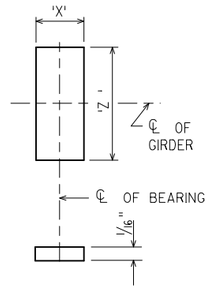
TYPE I TYPE II

MASONRY PLATE "D"



EXPANSION BEARING ASSEMBLY

EXPANSION BEARING	PLATE "A"		PLATE "B"		PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
	'X'	'Z'	'X'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'				
	9"	11 1/2"	5"	10"	7"	1 7/16"	1'-0 1/4"	8"	1 1/2"	2'-7"	II	(2) - 1-1/4"ϕ x 1'-5" LONG	6	NORTH ABUTMENT



SHIM PLATE DETAILS ◓

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING, UNLESS NOTED.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES 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.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5 FOR 1 1/4" ϕ AND 1'-10 FOR 1 1/2" ϕ BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-11-59", EACH.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A". ROCKER PLATE "C" AND MASONRY PLATE "D" SHALL BE GALVANIZED. DO NOT PAINT STAINLESS STEEL OR TEFLON SURFACES.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER.

TEMPORARILY REMOVE AND REPLACE END DIAPHRAGMS AS REQUIRED TO REPLACE BEARINGS.

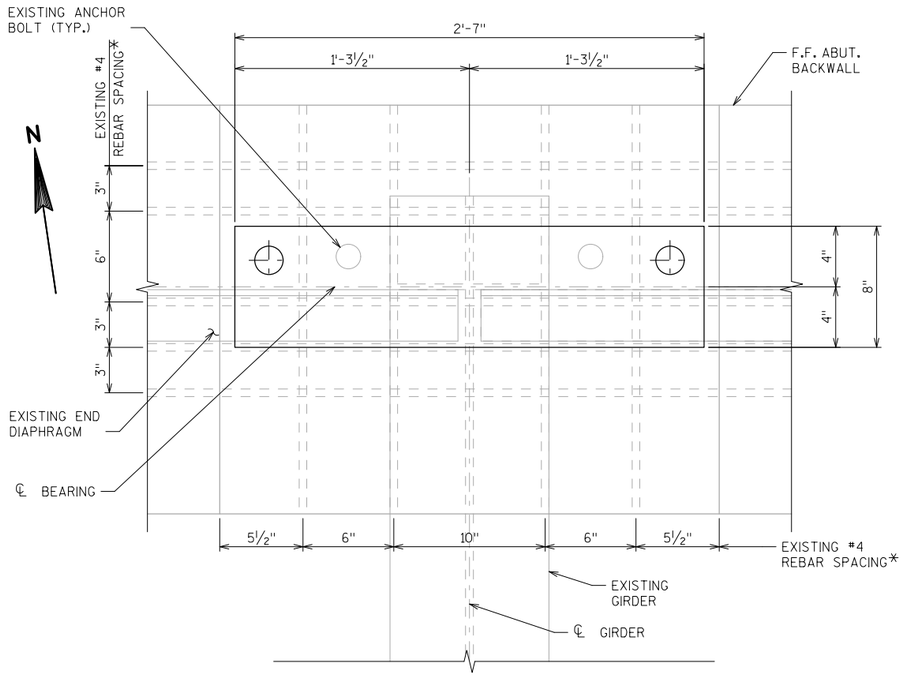
LEGEND

⊛ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

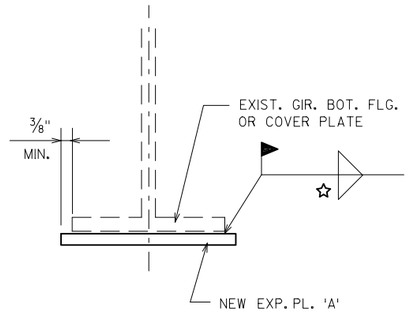
◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

◓ IF REQUIRED, PLACE SHIM PLATES BETWEEN BEARING PAD AND MASONRY PLATE "D". PLATE SHALL HAVE "X" AND "Z" DIMENSIONS THAT MATCH MASONRY PLATE "D". PROVIDE 2 PER BEARINGS.

✳ EXISTING REBAR SPACING IS APPROXIMATE AND IS BASED ON THE EXISTING PLAN.



PLAN VIEW



BEARING REPLACEMENT DETAILS

☆ TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	ǂ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	△ 5/16"
OVER 1 1/2" TO 2 1/4"	△ 3/8"
OVER 2 1/4" TO 6"	△ 1/2"

ǂ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-59

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EXPANSION BEARING DETAILS (NORTH ABUT)

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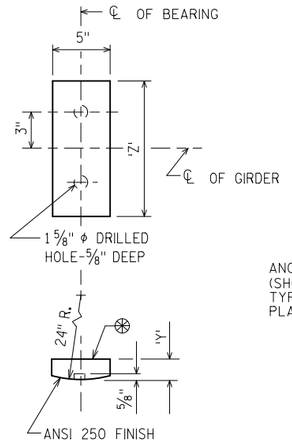
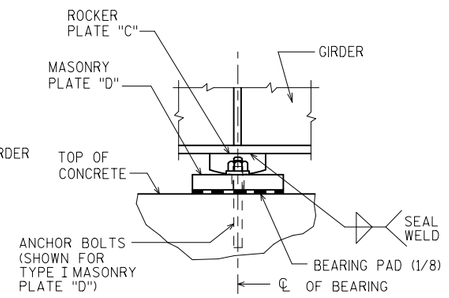
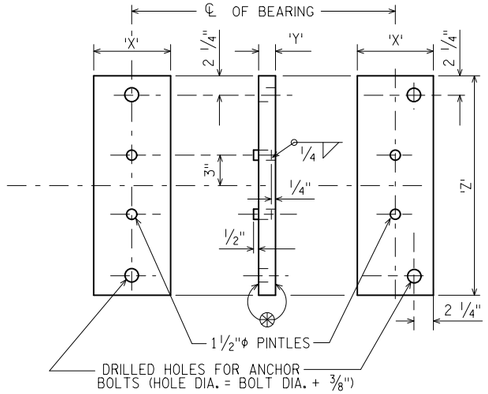


ROCKER PLATE "C"



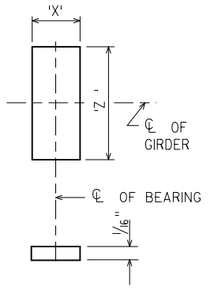
FIXED BEARING ASSEMBLY



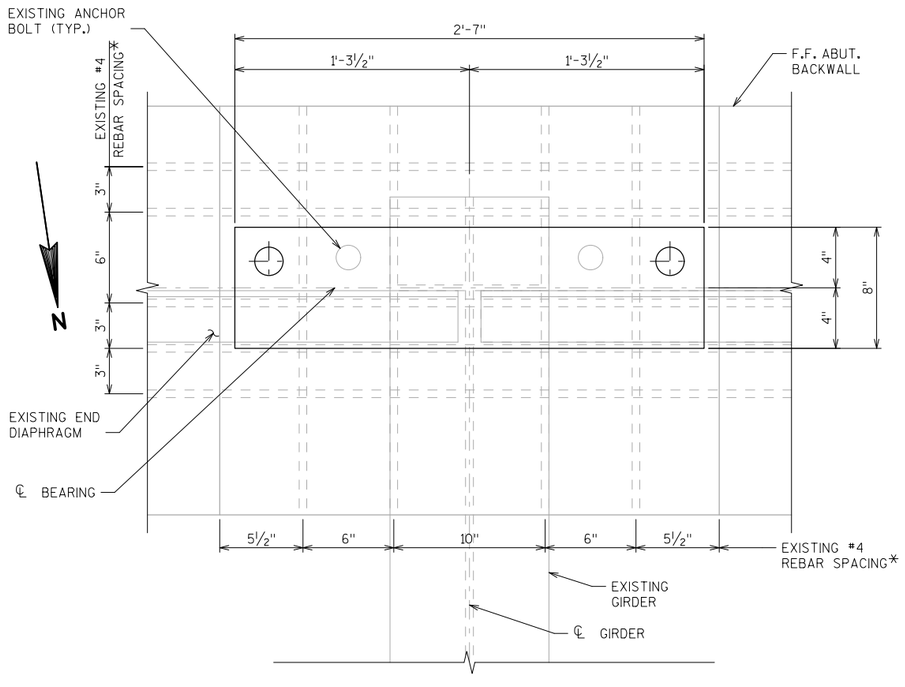
TYPE I TYPE II

MASONRY PLATE "D"

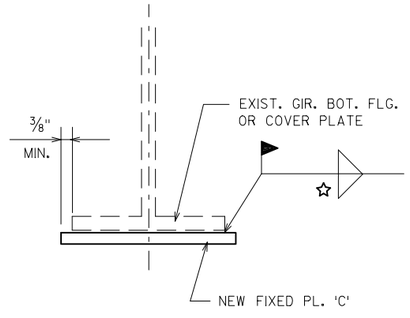
FIXED BEARING	PLATE "C"		PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
	'Y'	'Z'	'X'	'Y'	'Z'				
	1 15/16"	11 1/2"	8"	1 1/2"	2'-7"	II	(2) - 1-1/4"ϕ x 1'-5" LONG	6	SOUTH ABUTMENT



SHIM PLATE DETAILS ◓



PLAN VIEW



BEARING REPLACEMENT DETAILS

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING, UNLESS NOTED.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES 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.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5 FOR 1 1/4" ϕ AND 1'-10 FOR 1 1/2" ϕ BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES FIXED B-11-59" , EACH.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

ROCKER PLATE "C" SHALL BE SHOP PAINTED WITH A WELDABLE PRIMER.
MASONRY PLATE "D" SHALL BE GALVANIZED.

TEMPORARILY REMOVE AND REPLACE END DIAPHRAGMS AS REQUIRED TO REPLACE BEARINGS.

LEGEND

⊛ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

◓ IF REQUIRED, PLACE SHIM PLATES BETWEEN BEARING PAD AND MASONRY PLATE "D". PLATES SHALL HAVE "X" AND "Z" DIMENSIONS THAT MATCH MASONRY PLATE "D". PROVIDE 2 PER BEARING.

✳ EXISTING REBAR SPACING IS APPROXIMATE AND BASED ON THE EXISTING PLANS.

☆ TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	‡ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	△ 5/16"
OVER 1 1/2" TO 2 1/4"	△ 3/8"
OVER 2 1/4" TO 6"	△ 1/2"

‡ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-59

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FIXED BEARING DETAILS (SOUTH ABUT)

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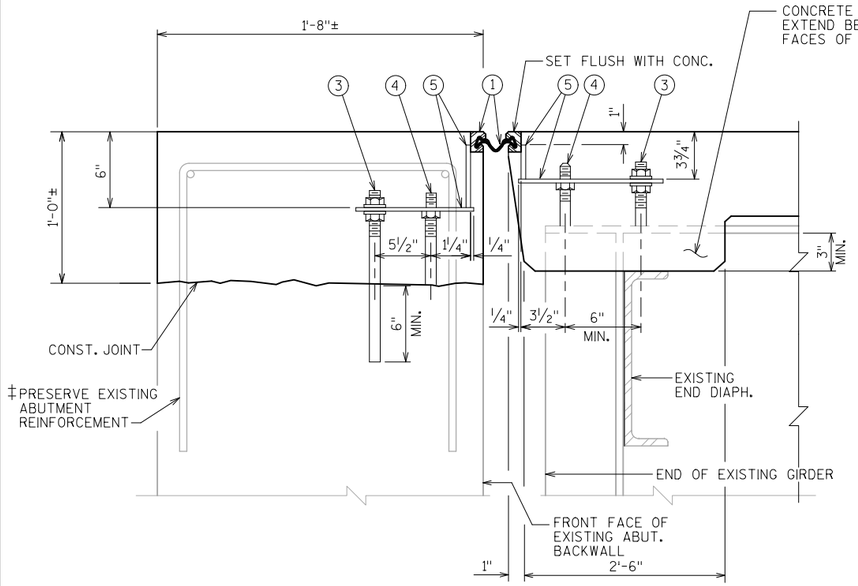
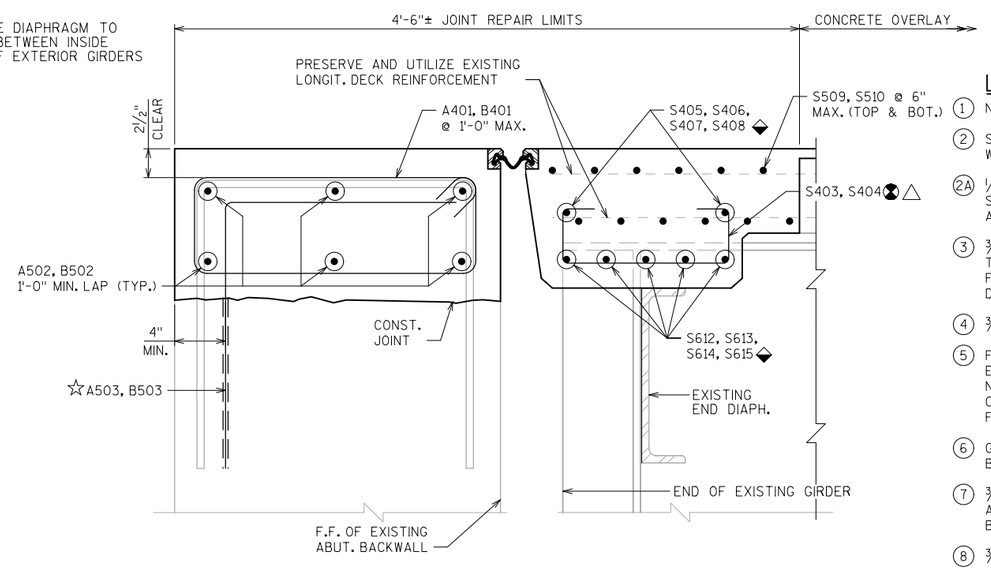


SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE
(SHOWING REINFORCEMENT)

LEGEND

(1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

(2) STUDS ⅝"ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝"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. 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"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. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 AND 1" ϕ HOLE FOR NO. 4.

(6) GALVANIZED PLATE ⅜" X 1'-2" x 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

(7) ¾"ϕ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾"ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) ¾"ϕ X 2¼" GALVANIZED THREADED COUPLING.

(10) 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

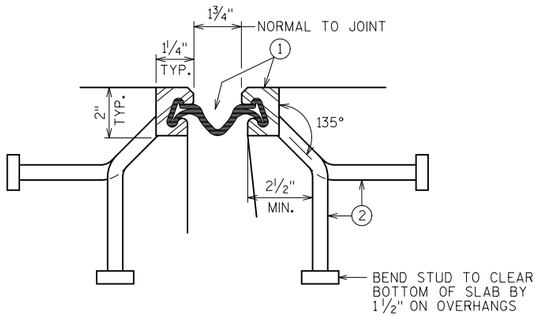
‡ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ☆ .

☆ ADHESIVE ANCHORS NO. 5 BARS. EMBED 1'-6" IN CONCRETE. SPACE AT 1'-0". TURN 1'-5" LEG AS NECESSARY TO FIT.

⊠ BARS PLACED PARALLEL TO GIRDERS.
SPACING PERPENDICULAR TO ℄ OF GIRDERS.
SPACING BETWEEN TOP FLANGE OF GIRDERS.

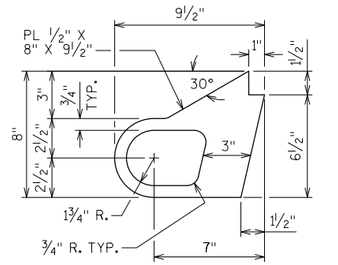
△ 9 SPA @ 9" MAX = 6'-4" - BETWEEN GIRDERS 1 AND 2 - N. ABUT.
9 SPA @ 9" MAX = 6'-6" - BETWEEN GIRDERS 2 AND 6 - N. ABUT.
5 SPA @ 9" MAX = 3'-4" - BETWEEN GIRDERS 1 AND 2 - S. ABUT.
9 SPA @ 9" MAX = 6'-6" - BETWEEN GIRDERS 2 AND 6 - S. ABUT.

◆ (4) S405 AND (5) S612 BARS BETWEEN GIRDERS 1 AND 2 - N. ABUT.
(16) S406 AND (20) S613 BARS BETWEEN GIRDERS 2 AND 6 - N. ABUT
(4) S407 AND (5) S614 BARS BETWEEN GIRDERS 1 AND 2 - S. ABUT.
(16) S408 AND (20) S615 BARS BETWEEN GIRDERS 2 AND 6 - S. ABUT

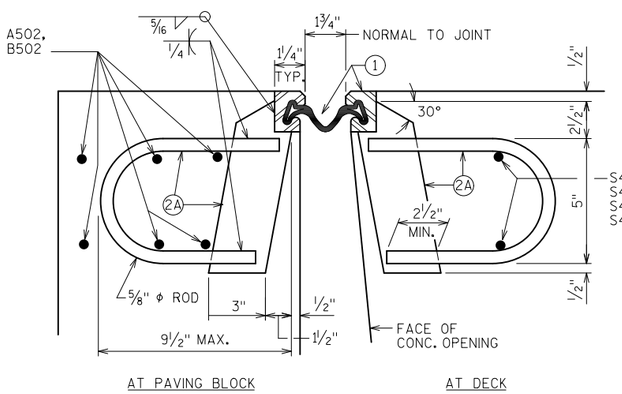


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS

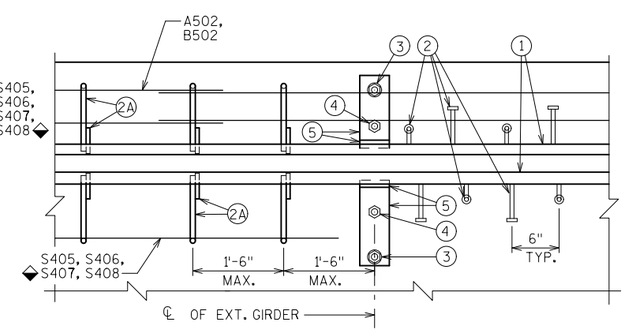


ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.
SYMMETRIC ABOUT ℄ JOINT UNLESS OTHERWISE SHOWN OR NOTED



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN 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, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 & 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-11-59".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-59

DRAWN BY	DRH	PLANS CK'D.	LMK

EXPANSION DEVICE

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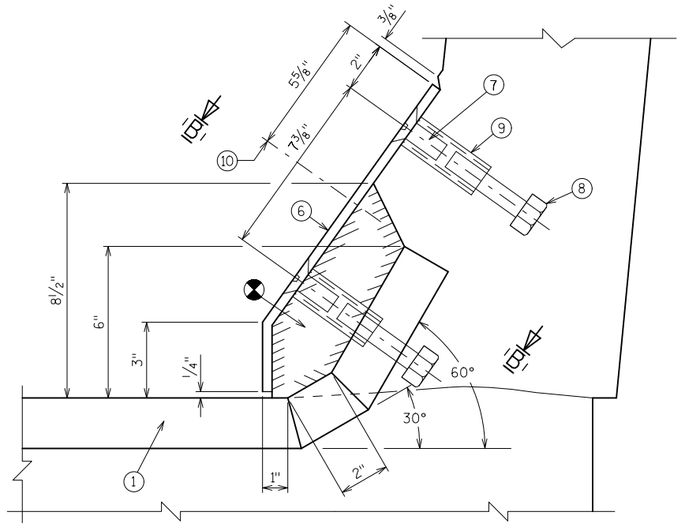
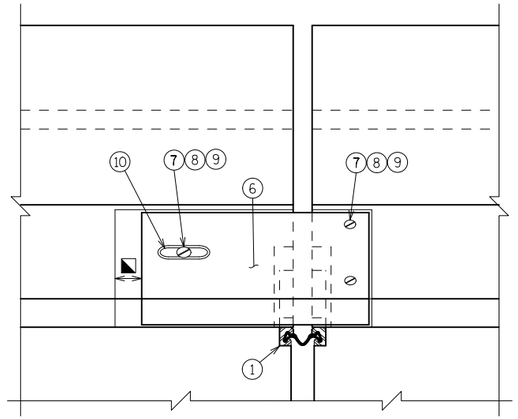
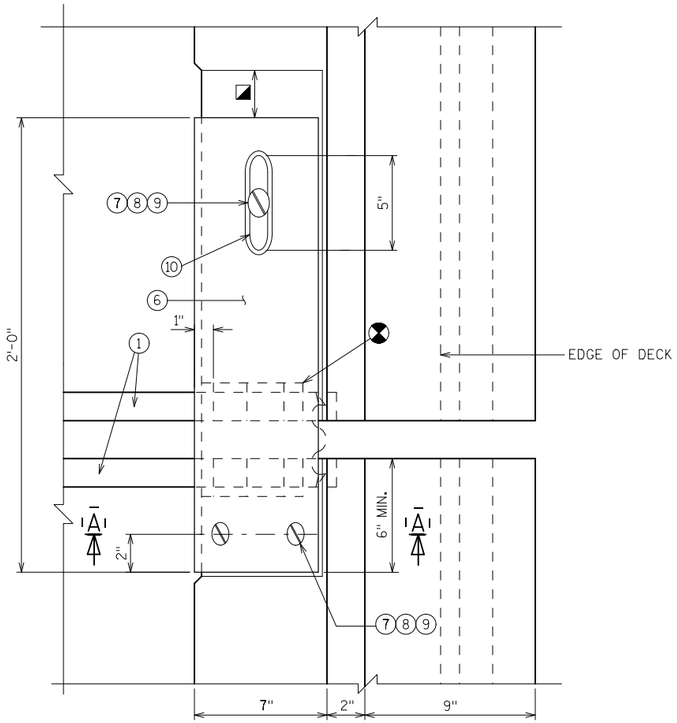


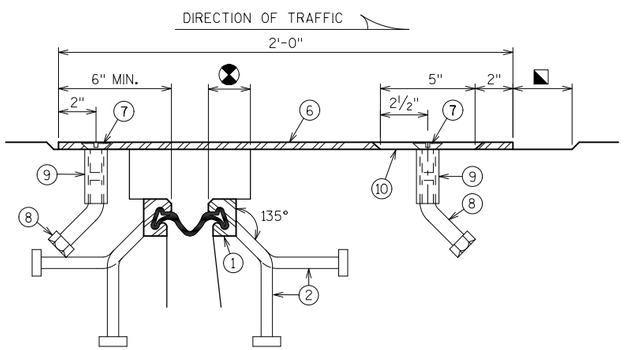
SECTION A-A



VIEW OF PARAPET PLATE
FROM ROADWAY



PLAN



SECTION B-B

LEGEND

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-59

DRAWN BY DRH | PLANS CK'D. LMK

COVER PLATE DETAILS

SHEET 7 OF 10

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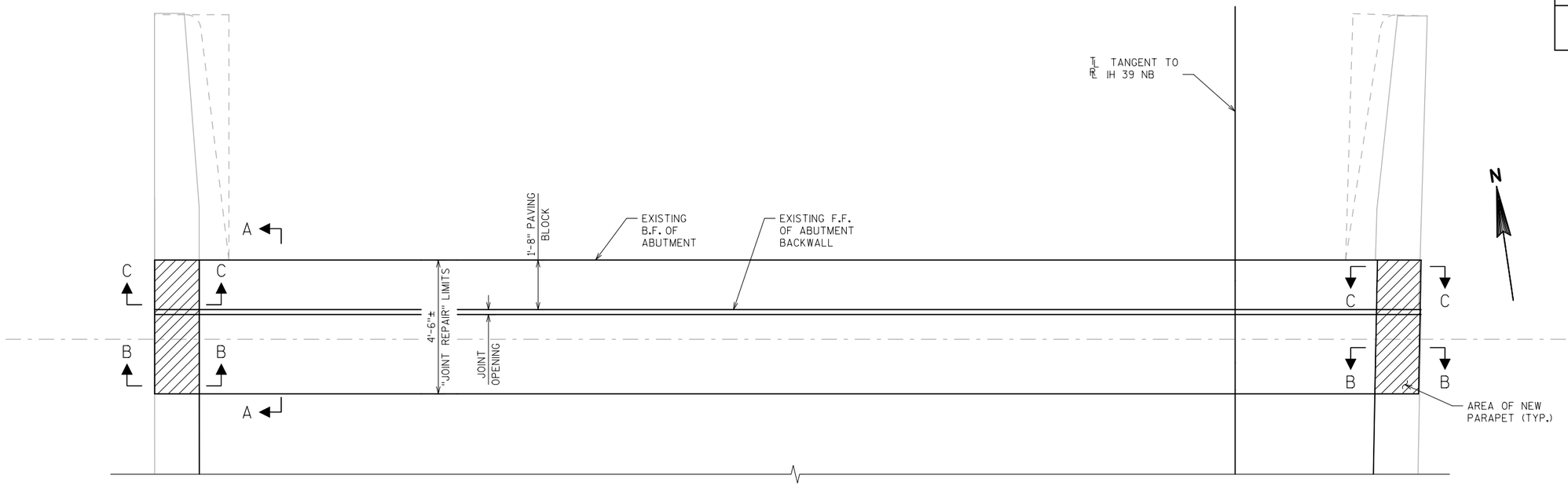
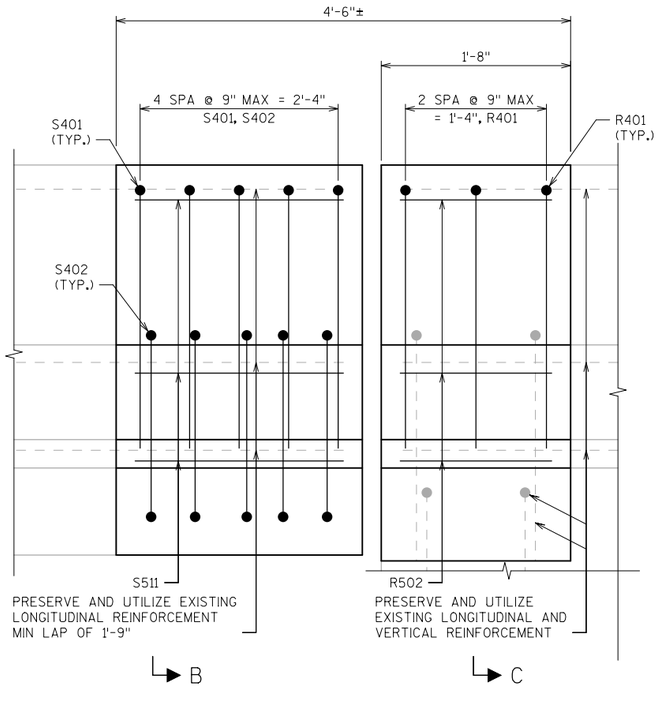
STATE PROJECT NUMBER

1161-02-61

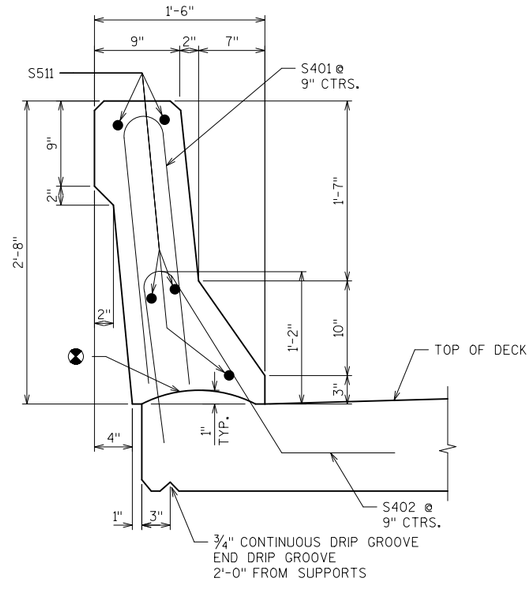


PLAN

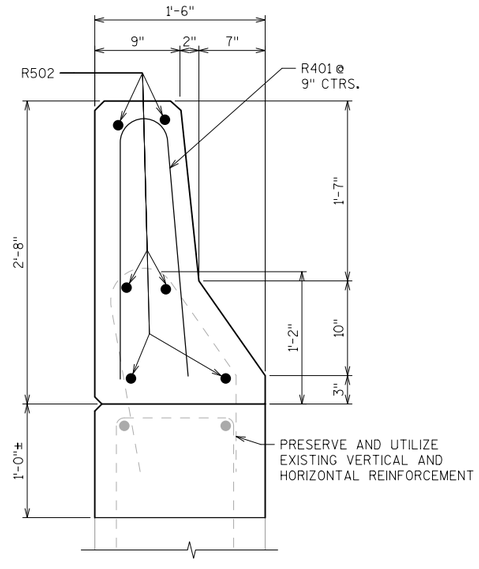
NORTH ABUTMENT SHOWN
SOUTH ABUTMENT SIMILAR



ELEVATION A-A



SECTION B-B



SECTION C-C

LEGEND

CONST. JOINT - STRIKE OFF AS SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-59

DRAWN BY DRH | PLANS CK'D. LMK

ABUTMENT PARAPET DETAILS

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STATE PROJECT NUMBER
1161-02-61

S. ABUT. - BILL OF BARS — TOTAL COATED = 570 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
A401	40	4'-5"	X	X	PAVING BLOCK - STIRRUP
A502	36	8'-0"	X		PAVING BLOCK - HORIZONTAL
☆ A503	40	3'-7"	X	X	PAVING BLOCK - VERTICAL

N. ABUT. - BILL OF BARS — TOTAL COATED = 590 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
B401	43	4'-5"	X	X	PAVING BLOCK - STIRRUP
B502	36	8'-0"	X		PAVING BLOCK - HORIZONTAL
☆ B503	43	3'-7"	X	X	PAVING BLOCK - VERTICAL

PPT ON WINGS - BILL OF BARS — TOTAL COATED = 80 LBS

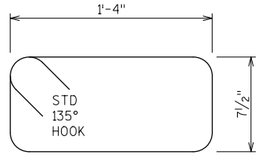
BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
R401	12	4'-9"	X	X	PARAPET - VERTICAL
R502	24	1'-4"	X		PARAPET - HORIZONTAL

SUPER. - BILL OF BARS — TOTAL COATED = 2,050 LBS

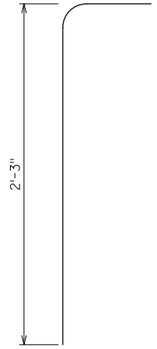
BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	LOCATION
S401	20	4'-10"	X	X	PARAPET - VERTICAL
S402	20	4'-3"	X	X	PARAPET - VERTICAL
S403	50	3'-11"	X	X	END DIAPHRAGM - LONGITUDINAL - N. ABUT.
S404	46	3'-11"	X	X	END DIAPHRAGM - LONGITUDINAL - S. ABUT.
S405	4	6'-4"	X		END DIAPHRAGM - TRANSVERSE - N. ABUT. - GIRDER 1-2
S406	16	6'-6"	X		END DIAPHRAGM - TRANSVERSE - N. ABUT. - GIRDERS 2-6
S407	4	3'-4"	X		END DIAPHRAGM - TRANSVERSE - S. ABUT. - GIRDER 1-2
S408	16	6'-6"	X		END DIAPHRAGM - TRANSVERSE - S. ABUT. - GIRDERS 2-6
S509	12	41'-4"	X		DECK - TRANSVERSE - N. ABUT
S510	12	38'-4"	X		DECK - TRANSVERSE - S. ABUT
S511	20	2'-4"	X		PARAPET - HORIZONTAL
S612	5	6'-4"	X		END DIAPHRAGM - TRANSVERSE - N. ABUT. - GIRDER 1-2
S613	20	6'-6"	X		END DIAPHRAGM - TRANSVERSE - N. ABUT. - GIRDERS 2-6
S614	5	3'-4"	X		END DIAPHRAGM - TRANSVERSE - S. ABUT. - GIRDER 1-2
S615	20	6'-6"	X		END DIAPHRAGM - TRANSVERSE - S. ABUT. - GIRDERS 2-6

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

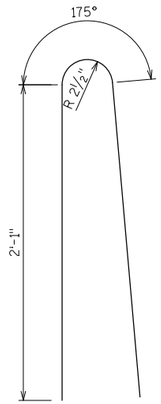
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.



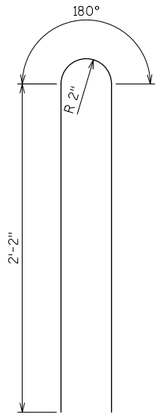
A401, B401



A503, B503



R401



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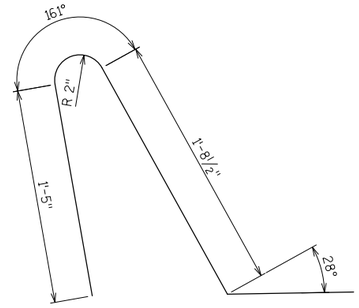
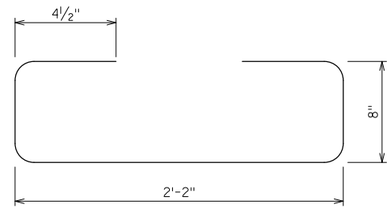


S402



S403, S404

LEGEND

☆ ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-6" IN CONCRETE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-59

DRAWN BY DRH | PLANS CK'D. LMK

BILL OF BARS

SHEET 9 OF 10

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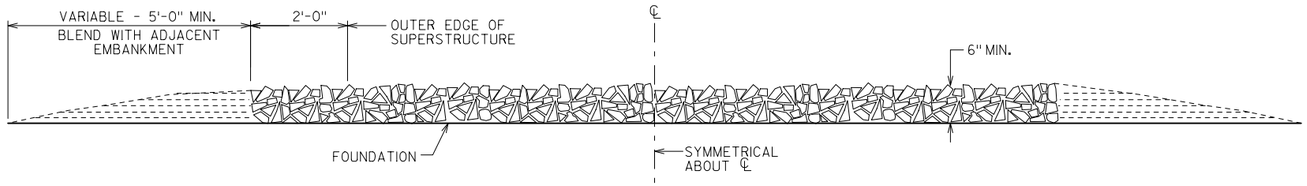
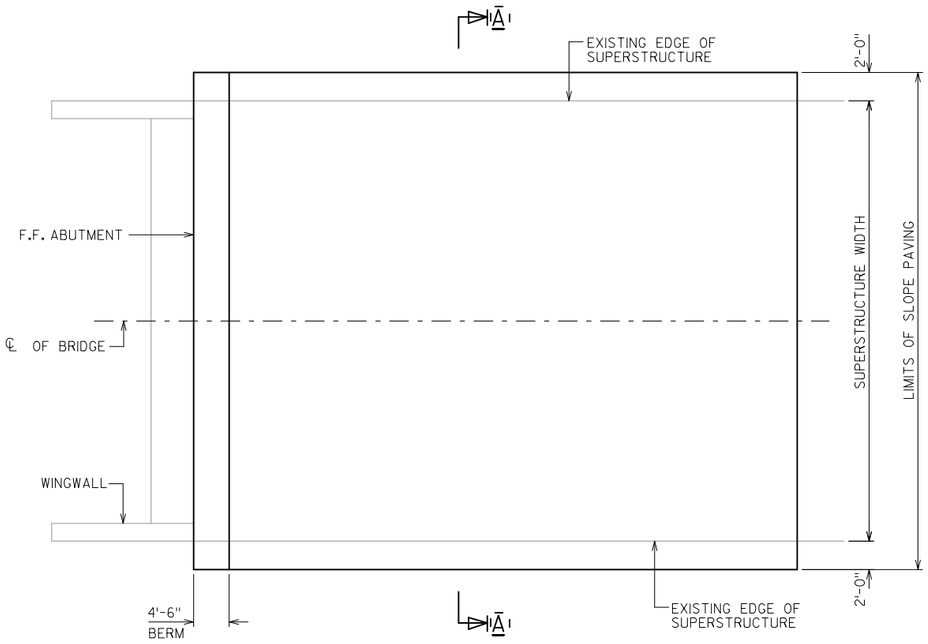
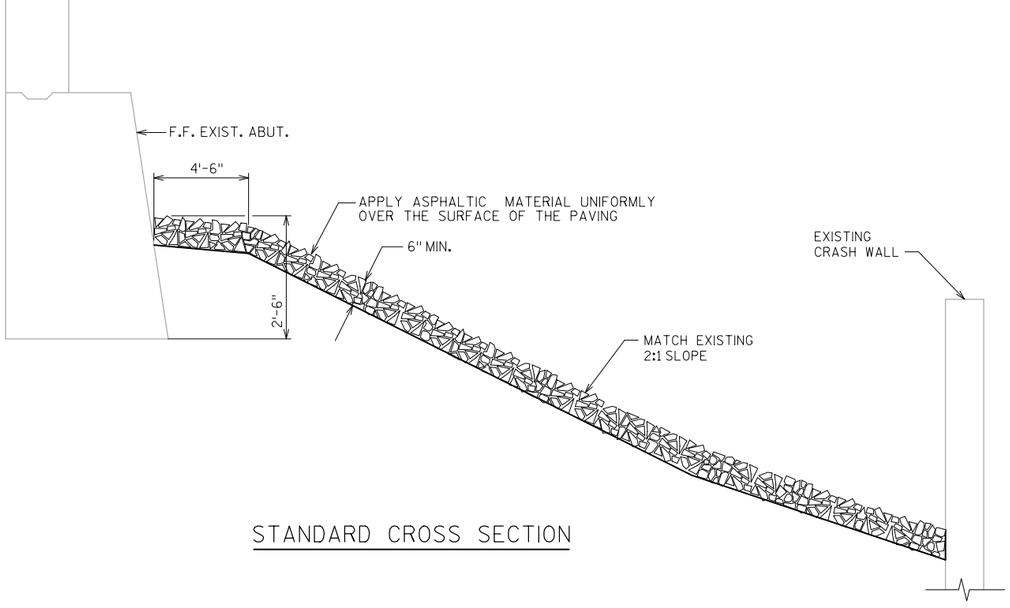


SECTION A-A



PLAN



STANDARD CROSS SECTION

GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

ALL ERODED AREAS IN THE EXISTING SLOPES BELOW THE STRUCTURE SHALL BE REPAIRED BEFORE PLACING "SLOPE PAVING CRUSHED AGGREGATE". ALL REPAIRS TO THE EXISTING SLOPES SHALL BE INCIDENTAL TO THE BID ITEM "SLOPE PAVING CRUSHED AGGREGATE".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-11-59

DRAWN BY	DRH	PLANS CK'D.	LMK

SLOPE PAVING (CRUSHED AGGREGATE)

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Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume or Select Fill
4 - Expanded Marsh Backfill	Will be backfilled with Cut or Borrow
5 - Reduced Marsh in Fill	Reduced Marsh Excavation that can be used in Fill
6 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
7 - Mass Ordinate	If Marsh and EBS to be backfilled with Cut or Borrow: [(Cut) - ((Fill) * Fill Factor))]

STAGE 1 (STA 184+30NB - STA 195+14NB): IH 39

STATION	Distance	Area					Incremental Volume (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	EBS	Cut	Expanded Fill	Expanded Marsh Backfill	Reduced Marsh in Fill	Reduced EBS In Fill	
		(SF)	(SF)	(SF)	(SF)	(SF)	Note 1 (CY)	Note 2 (CY)	Note 3 (CY)	(CY)	(CY)	1.00 Note 1	1.25	1.50 Note 4	0.60 Note 5	0.80 Note 6	Note 7
184+30		29.1	0.0	0.2	0.0	0.0											
184+50	20	29.0	0.0	3.0	0.0	0.0	21	0	1	0	0	21	1	0	0	0	20
185+00	50	29.9	0.0	11.0	0.0	0.0	55	0	13	0	0	76	18	0	0	0	58
185+50	50	30.2	0.0	11.1	0.0	0.0	56	0	20	0	0	131	43	0	0	0	88
186+00	50	30.2	0.0	10.5	0.0	0.0	56	0	20	0	0	187	68	0	0	0	119
186+50	50	31.1	0.0	11.4	0.0	0.0	57	0	20	0	0	244	94	0	0	0	151
187+00	50	64.1	0.0	7.3	0.0	0.0	88	0	17	0	0	332	115	0	0	0	217
187+50	50	66.5	0.0	5.5	0.0	0.0	121	0	12	0	0	453	130	0	0	0	323
188+00	50	68.1	0.0	4.3	0.0	0.0	125	0	9	0	0	578	141	0	0	0	436
188+50	50	74.1	0.0	1.9	0.0	0.0	132	0	6	0	0	709	149	0	0	0	561
189+00	50	70.3	0.0	2.7	0.0	0.0	134	0	4	0	0	843	154	0	0	0	689
189+50	50	70.1	0.0	2.8	0.0	0.0	130	0	5	0	0	973	160	0	0	0	813
190+00	50	63.7	0.0	4.2	0.0	0.0	124	0	6	0	0	1097	168	0	0	0	929
190+50	50	67.8	0.0	3.8	0.0	0.0	122	0	7	0	0	1219	178	0	0	0	1041
191+00	50	65.4	0.0	3.2	0.0	0.0	123	0	6	0	0	1342	186	0	0	0	1156
191+50	50	74.3	0.0	0.2	0.0	0.0	129	0	3	0	0	1471	190	0	0	0	1282
192+00	50	79.8	0.0	0.0	0.0	0.0	143	0	0	0	0	1614	190	0	0	0	1424
192+50	50	83.3	0.0	0.0	0.0	0.0	151	0	0	0	0	1765	190	0	0	0	1575
193+00	50	118.0	0.0	0.0	0.0	0.0	186	0	0	0	0	1951	190	0	0	0	1762
193+50	50	67.9	0.0	3.8	0.0	0.0	172	0	3	0	0	2124	194	0	0	0	1929
194+00	50	69.9	0.0	1.7	0.0	0.0	128	0	5	0	0	2251	200	0	0	0	2051
194+50	50	35.4	0.0	0.0	0.0	0.0	97	0	2	0	0	2349	202	0	0	0	2146
195+00	50	34.7	0.0	0.0	0.0	0.0	65	0	0	0	0	2413	202	0	0	0	2211
195+50	50	32.2	0.0	0.0	0.0	0.0	62	0	0	0	0	2475	202	0	0	0	2273
195+65	15	32.3	0.0	0.0	0.0	0.0	18	0	0	0	0	2493	202	0	0	0	2291
							2,493	0	162	0	0						

STAGE 1 (STA 342+10NB - STA 351+75NB): IH 39

STATION	Distance	Area					Incremental Volume (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	EBS	Cut	Expanded Fill	Expanded Marsh Backfill	Reduced Marsh in Fill	Reduced EBS In Fill	
		(SF)	(SF)	(SF)	(SF)	(SF)	Note 1 (CY)	Note 2 (CY)	Note 3 (CY)	(CY)	(CY)	1.00 Note 1	1.25	1.50 Note 4	0.60 Note 5	0.80 Note 6	Note 7
342+10		35.0	0.0	0.4	0.0	0.0											
342+50	40	59.8	0.0	13.2	0.0	0.0	71	0	10	0	0	71	13	0	0	0	58
343+00	50	62.4	0.0	8.0	0.0	0.0	113	0	20	0	0	184	37	0	0	0	147
343+50	50	73.0	0.0	1.3	0.0	0.0	125	0	9	0	0	309	48	0	0	0	261
344+00	50	79.2	0.0	0.0	0.0	0.0	141	0	1	0	0	450	50	0	0	0	401
344+50	50	85.8	0.0	0.0	0.0	0.0	153	0	0	0	0	603	50	0	0	0	553
345+00	50	96.3	0.0	0.0	0.0	0.0	169	0	0	0	0	772	50	0	0	0	722
345+50	50	102.9	0.0	0.0	0.0	0.0	184	0	0	0	0	956	50	0	0	0	907
346+00	50	101.8	0.0	0.0	0.0	0.0	190	0	0	0	0	1146	50	0	0	0	1096
346+50	50	101.8	0.0	0.0	0.0	0.0	189	0	0	0	0	1334	50	0	0	0	1285
347+00	50	100.5	0.0	0.0	0.0	0.0	187	0	0	0	0	1522	50	0	0	0	1472
347+50	50	102.0	0.0	0.0	0.0	0.0	187	0	0	0	0	1709	50	0	0	0	1659
348+00	50	105.2	0.0	0.0	0.0	0.0	192	0	0	0	0	1901	50	0	0	0	1851
348+50	50	102.8	0.0	0.0	0.0	0.0	193	0	0	0	0	2093	50	0	0	0	2044
349+00	50	97.8	0.0	0.0	0.0	0.0	186	0	0	0	0	2279	50	0	0	0	2229
349+50	50	98.6	0.0	0.0	0.0	0.0	182	0	0	0	0	2461	50	0	0	0	2411
350+00	50	92.2	0.0	0.0	0.0	0.0	177	0	0	0	0	2638	50	0	0	0	2588
350+50	50	83.1	0.0	0.0	0.0	0.0	162	0	0	0	0	2800	50	0	0	0	2750
351+00	50	76.7	0.0	0.0	0.0	0.0	148	0	0	0	0	2948	50	0	0	0	2898
351+50	50	70.8	0.0	1.9	0.0	0.0	137	0	2	0	0	3084	52	0	0	0	3033
352+00	50	70.3	0.0	1.3	0.0	0.0	131	0	3	0	0	3215	55	0	0	0	3160
352+50	50	72.1	0.0	0.2	0.0	0.0	132	0	1	0	0	3347	57	0	0	0	3290
352+72	22	53.1	0.0	0.0	0.0	0.0	52	0	0	0	0	3399	57	0	0	0	3342
							3,399	0	46	0	0						

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STAGE 1 (STA 0+00 NEL - STA 7+17 NEL): NE LOOP CROSSOVER

STATION	Distance	Area					Incremental Volume (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	EBS	Cut	Expanded Fill	Expanded Marsh Backfill	Reduced Marsh in Fill	Reduced EBS In Fill	
							Note 1	Note 2	Note 3			1.00	1.25	1.50	0.60	0.80	
		(SF)	(SF)	(SF)	(SF)	(SF)	(CY)	(CY)	(CY)	(CY)	(CY)	Note 1		Note 4	Note 5	Note 6	Note 7
0+00		0.0	0.0	0.0	0.0	0.0											
0+50	50	20.6	0.0	0.0	0.0	0.0	19	0	0	0	0	19	0	0	0	0	19
1+00	50	20.3	0.0	0.0	0.0	0.0	38	0	0	0	0	57	0	0	0	0	57
1+50	50	19.9	0.0	0.0	0.0	0.0	37	0	0	0	0	94	0	0	0	0	94
2+00	50	20.7	0.0	0.3	0.0	0.0	38	0	0	0	0	132	0	0	0	0	131
2+50	50	22.2	0.0	1.7	0.0	0.0	40	0	2	0	0	171	3	0	0	0	169
3+00	50	24.4	0.0	3.0	0.0	0.0	43	0	4	0	0	215	8	0	0	0	207
3+50	50	26.0	0.0	2.1	0.0	0.0	47	0	5	0	0	261	14	0	0	0	248
4+00	50	24.6	0.0	3.9	0.0	0.0	47	0	6	0	0	308	21	0	0	0	287
4+50	50	22.9	0.0	5.8	0.0	0.0	44	0	9	0	0	352	32	0	0	0	320
5+00	50	28.3	0.0	15.8	0.0	0.0	47	0	20	0	0	399	57	0	0	0	342
5+50	50	19.9	0.0	33.2	0.0	0.0	45	0	45	0	0	444	114	0	0	0	330
6+00	50	16.2	0.0	31.7	0.0	0.0	33	0	60	0	0	477	189	0	0	0	289
6+50	50	16.9	0.0	17.7	0.0	0.0	31	0	46	0	0	508	246	0	0	0	262
7+00	50	16.1	0.0	10.5	0.0	0.0	31	0	26	0	0	539	279	0	0	0	260
7+17	17	15.4	0.0	10.7	0.0	0.0	10	0	7	0	0	548	287	0	0	0	262
							548	0	229	0	0						

STAGE 3 (STA 278+06 NB - STA 285+19 NB): NE LOOP CROSSOVER

STATION	Distance	Area					Incremental Volume (Unadjusted)					Cumulative Vol (CY)					
		Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	EBS	Cut	Expanded Fill	Expanded Marsh Backfill	Reduced Marsh in Fill	Reduced EBS In Fill	Mass Ordinate
		(SF)	(SF)	(SF)	(SF)	(SF)	Note 1 (CY)	Note 2 (CY)	Note 3 (CY)	(CY)	(CY)	1.00 Note 1	1.25	1.50 Note 4	0.60 Note 5	0.80 Note 6	Note 7
278+06		4.3	0.0	1.8	0.0	0.0											
278+50	44	4.7	0.0	0.8	0.0	0.0	7	0	2	0	0	7	3	0	0	0	5
279+00	50	7.3	0.0	0.2	0.0	0.0	11	0	1	0	0	18	4	0	0	0	15
279+50	50	7.8	0.0	0.1	0.0	0.0	14	0	0	0	0	32	4	0	0	0	28
280+00	50	8.6	0.0	0.0	0.0	0.0	15	0	0	0	0	48	4	0	0	0	43
280+50	50	10.9	0.0	3.4	0.0	0.0	18	0	3	0	0	66	8	0	0	0	57
281+00	50	19.8	0.0	2.0	0.0	0.0	28	0	5	0	0	94	14	0	0	0	80
281+50	50	27.0	0.0	3.6	0.0	0.0	43	0	5	0	0	137	21	0	0	0	117
282+00	50	38.2	0.0	0.4	0.0	0.0	60	0	4	0	0	198	25	0	0	0	172
282+50	50	48.5	0.0	0.2	0.0	0.0	80	0	1	0	0	278	26	0	0	0	252
283+00	50	55.4	0.0	2.1	0.0	0.0	96	0	2	0	0	374	29	0	0	0	345
283+50	50	63.5	0.0	0.2	0.0	0.0	110	0	2	0	0	484	31	0	0	0	453
284+00	50	56.8	0.0	0.0	0.0	0.0	111	0	0	0	0	596	31	0	0	0	564
284+50	50	32.0	0.0	0.0	0.0	0.0	82	0	0	0	0	678	31	0	0	0	646
285+00	50	26.9	0.0	0.6	0.0	0.0	54	0	1	0	0	732	32	0	0	0	700
285+19	19	3.5	0.0	0.0	0.0	0.0	11	0	0	0	0	743	32	0	0	0	711
							743	0	26	0	0						

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PROJECT NO: 1161-02-61/63 | HWY: IH 39 | COUNTY: COLUMBIA | EARTHWORK DATA SHEETS | SHEET 228 E

STAGE 3 (STA 260+00 NB - STA 360+00 NB): CABLE BARRIER

STATION	Distance	Area					Incremental Volume (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	EBS	Cut	Expanded Fill	Expanded Marsh Backfill	Reduced Marsh in Fill	Reduced EBS In Fill	
		(SF)	(SF)	(SF)	(SF)	(SF)	Note 1 (CY)	Note 2 (CY)	Note 3 (CY)		(CY)	1.00 Note 1	1.25	1.50 Note 4	0.60 Note 5	0.80 Note 6	Note 7
259+00		1.8	0.0	7.7	0.0	0.0											
259+50	50	1.4	0.0	7.5	0.0	0.0	3	0	14	0	0	3	18	0	0	0	-15
260+00	50	6.8	0.0	4.0	0.0	0.0	8	0	11	0	0	11	31	0	0	0	-20
260+50	50	24.1	0.0	0.0	0.0	0.0	29	0	4	0	0	39	36	0	0	0	4
261+00	50	20.9	0.0	0.0	0.0	0.0	42	0	0	0	0	81	36	0	0	0	45
261+50	50	19.4	0.0	2.1	0.0	0.0	37	0	2	0	0	118	38	0	0	0	80
262+00	50	20.5	0.0	1.7	0.0	0.0	37	0	3	0	0	155	42	0	0	0	113
262+50	50	11.7	0.0	1.6	0.0	0.0	30	0	3	0	0	185	46	0	0	0	139
263+00	50	11.1	0.0	0.9	0.0	0.0	21	0	2	0	0	206	49	0	0	0	157
263+50	50	6.6	0.0	0.3	0.0	0.0	16	0	1	0	0	222	50	0	0	0	172
264+00	50	1.3	0.0	8.1	0.0	0.0	7	0	8	0	0	230	60	0	0	0	170
264+50	50	3.2	0.0	0.8	0.0	0.0	4	0	8	0	0	234	70	0	0	0	163
265+00	50	9.9	0.0	0.0	0.0	0.0	12	0	1	0	0	246	71	0	0	0	175
265+50	50	6.1	0.0	5.0	0.0	0.0	15	0	5	0	0	261	77	0	0	0	184
266+00	50	15.3	0.0	0.0	0.0	0.0	20	0	5	0	0	281	83	0	0	0	198
266+50	50	10.2	0.0	0.2	0.0	0.0	24	0	0	0	0	304	83	0	0	0	221
267+00	50	8.7	0.0	0.0	0.0	0.0	17	0	0	0	0	322	83	0	0	0	238
267+50	50	8.1	0.0	0.1	0.0	0.0	16	0	0	0	0	337	83	0	0	0	254
268+00	50	10.9	0.0	1.5	0.0	0.0	18	0	1	0	0	355	85	0	0	0	269
268+50	50	51.9	0.0	0.0	0.0	0.0	58	0	1	0	0	413	87	0	0	0	326
269+00	50	37.2	0.0	0.0	0.0	0.0	82	0	0	0	0	495	87	0	0	0	408
269+50	50	6.6	0.0	0.7	0.0	0.0	41	0	1	0	0	536	88	0	0	0	448
270+00	50	21.4	0.0	0.0	0.0	0.0	26	0	1	0	0	562	89	0	0	0	473
270+50	50	34.0	0.0	0.0	0.0	0.0	51	0	0	0	0	613	89	0	0	0	524
271+00	50	36.0	0.0	0.0	0.0	0.0	65	0	0	0	0	678	89	0	0	0	589
271+50	50	38.6	0.0	0.0	0.0	0.0	69	0	0	0	0	747	89	0	0	0	658
272+00	50	31.1	0.0	0.0	0.0	0.0	65	0	0	0	0	811	89	0	0	0	723
272+50	50	31.5	0.0	0.0	0.0	0.0	58	0	0	0	0	869	89	0	0	0	781
273+00	50	59.5	0.0	0.0	0.0	0.0	84	0	0	0	0	954	89	0	0	0	865
273+50	50	59.8	0.0	0.0	0.0	0.0	110	0	0	0	0	1064	89	0	0	0	975
274+00	50	59.6	0.0	0.0	0.0	0.0	111	0	0	0	0	1175	89	0	0	0	1086
274+50	50	1.5	0.0	9.0	0.0	0.0	57	0	8	0	0	1231	99	0	0	0	1132
275+00	50	1.2	0.0	7.8	0.0	0.0	3	0	16	0	0	1234	118	0	0	0	1115
275+50	50	2.6	0.0	4.7	0.0	0.0	4	0	12	0	0	1237	133	0	0	0	1104
276+00	50	5.6	0.0	0.5	0.0	0.0	8	0	5	0	0	1245	139	0	0	0	1106
276+50	50	8.0	0.0	1.8	0.0	0.0	13	0	2	0	0	1257	142	0	0	0	1116
277+00	50	7.9	0.0	1.9	0.0	0.0	15	0	3	0	0	1272	146	0	0	0	1126
277+50	50	9.1	0.0	1.1	0.0	0.0	16	0	3	0	0	1288	149	0	0	0	1138
278+00	50	4.3	0.0	2.0	0.0	0.0	12	0	3	0	0	1300	153	0	0	0	1147
278+50	50	1.3	0.0	2.5	0.0	0.0	5	0	4	0	0	1305	158	0	0	0	1147
279+00	50	1.5	0.0	8.4	0.0	0.0	3	0	10	0	0	1308	171	0	0	0	1137
279+50	50	1.6	0.0	11.5	0.0	0.0	3	0	18	0	0	1311	194	0	0	0	1117
280+00	50	2.6	0.0	8.9	0.0	0.0	4	0	19	0	0	1315	218	0	0	0	1097
280+50	50	1.9	0.0	9.4	0.0	0.0	4	0	17	0	0	1319	239	0	0	0	1080
281+00	50	3.1	0.0	10.7	0.0	0.0	5	0	19	0	0	1323	262	0	0	0	1061
281+50	50	2.7	0.0	9.0	0.0	0.0	5	0	18	0	0	1329	285	0	0	0	1044
282+00	50	1.5	0.0	9.4	0.0	0.0	4	0	17	0	0	1333	306	0	0	0	1026
282+50	50	0.9	0.0	6.0	0.0	0.0	2	0	14	0	0	1335	324	0	0	0	1011
283+00	50	1.0	0.0	3.2	0.0	0.0	2	0	9	0	0	1337	335	0	0	0	1002
283+50	50	1.3	0.0	1.3	0.0	0.0	2	0	4	0	0	1339	340	0	0	0	999
284+00	50	2.3	0.0	1.6	0.0	0.0	3	0	3	0	0	1342	343	0	0	0	999
284+50	50	2.6	0.0	2.0	0.0	0.0	5	0	3	0	0	1347	347	0	0	0	999
285+00	50	1.4	0.0	3.9	0.0	0.0	4	0	5	0	0	1350	354	0	0	0	996
285+50	50	1.2	0.0	5.4	0.0	0.0	2	0	9	0	0	1353	365	0	0	0	988
286+00	50	0.5	0.0	6.6	0.0	0.0	2	0	11	0	0	1354	379	0	0	0	976

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

(CONTINUED ON NEXT SHEET)

STAGE 3 (STA 260+00 NB - STA 360+00 NB): CABLE BARRIER

STATION	Distance	Area					Incremental Volume (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Marsh Exc (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Marsh Exc (CY)	EBS (CY)	Cut 1.00 Note 1	Expanded Fill 1.25	Expanded Marsh Backfill 1.50 Note 4	Reduced Marsh in Fill 0.60 Note 5	Reduced EBS In Fill 0.80 Note 6	Note 7
286+50	50	1.0	0.0	6.1	0.0	0.0	1	0	12	0	0	1356	394	0	0	0	962
287+00	50	2.3	0.0	2.9	0.0	0.0	3	0	8	0	0	1359	404	0	0	0	955
287+50	50	7.0	0.0	0.1	0.0	0.0	9	0	3	0	0	1367	407	0	0	0	960
288+00	50	17.8	0.0	0.0	0.0	0.0	23	0	0	0	0	1391	408	0	0	0	983
288+50	50	4.4	0.0	0.3	0.0	0.0	21	0	0	0	0	1411	408	0	0	0	1003
289+00	50	1.8	0.0	45.5	0.0	0.0	6	0	42	0	0	1417	461	0	0	0	956
289+50	50	73.8	0.0	0.7	0.0	0.0	70	0	43	0	0	1487	514	0	0	0	973
290+00	50	7.2	0.0	10.1	0.0	0.0	75	0	10	0	0	1562	527	0	0	0	1035
290+50	50	10.1	0.0	4.9	0.0	0.0	16	0	14	0	0	1578	544	0	0	0	1034
291+00	50	16.5	0.0	7.7	0.0	0.0	25	0	12	0	0	1602	559	0	0	0	1044
291+50	50	30.6	0.0	0.0	0.0	0.0	44	0	7	0	0	1646	568	0	0	0	1078
292+00	50	3.0	0.0	5.7	0.0	0.0	31	0	5	0	0	1677	574	0	0	0	1103
292+50	50	1.7	0.0	3.5	0.0	0.0	4	0	9	0	0	1682	585	0	0	0	1097
293+00	50	2.6	0.0	4.9	0.0	0.0	4	0	8	0	0	1686	595	0	0	0	1091
293+50	50	8.5	0.0	3.0	0.0	0.0	10	0	7	0	0	1696	604	0	0	0	1092
294+00	50	3.8	0.0	1.9	0.0	0.0	11	0	5	0	0	1707	610	0	0	0	1098
294+50	50	4.0	0.0	2.6	0.0	0.0	7	0	4	0	0	1714	615	0	0	0	1100
295+00	50	14.2	0.0	0.6	0.0	0.0	17	0	3	0	0	1731	619	0	0	0	1113
295+50	50	3.9	0.0	1.0	0.0	0.0	17	0	1	0	0	1748	620	0	0	0	1128
296+00	50	17.1	0.0	0.0	0.0	0.0	19	0	1	0	0	1767	621	0	0	0	1146
296+50	50	16.4	0.0	0.0	0.0	0.0	31	0	0	0	0	1798	621	0	0	0	1177
297+00	50	10.0	0.0	0.0	0.0	0.0	24	0	0	0	0	1823	621	0	0	0	1201
297+50	50	35.3	0.0	0.0	0.0	0.0	42	0	0	0	0	1865	621	0	0	0	1243
298+00	50	17.4	0.0	0.0	0.0	0.0	49	0	0	0	0	1914	621	0	0	0	1292
298+50	50	20.7	0.0	0.0	0.0	0.0	35	0	0	0	0	1949	621	0	0	0	1327
299+00	50	4.8	0.0	3.9	0.0	0.0	1407	0	4	0	0	3356	626	0	0	0	1346
299+50	50	19.0	0.0	0.0	0.0	0.0	22	0	4	0	0	3378	630	0	0	0	1364
300+00	50	17.5	0.0	0.0	0.0	0.0	34	0	0	0	0	3412	630	0	0	0	1398
300+50	50	17.4	0.0	0.0	0.0	0.0	32	0	0	0	0	3444	630	0	0	0	1430
301+00	50	16.3	0.0	0.0	0.0	0.0	31	0	0	0	0	3475	630	0	0	0	1461
301+50	50	16.2	0.0	0.0	0.0	0.0	30	0	0	0	0	3506	630	0	0	0	1491
302+00	50	16.2	0.0	0.1	0.0	0.0	30	0	0	0	0	3536	631	0	0	0	1521
302+50	50	16.3	0.0	0.4	0.0	0.0	30	0	1	0	0	3566	631	0	0	0	1551
303+00	50	17.6	0.0	0.1	0.0	0.0	31	0	1	0	0	3597	632	0	0	0	1581
303+50	50	19.2	0.0	0.0	0.0	0.0	34	0	0	0	0	3631	632	0	0	0	1615
304+00	50	19.9	0.0	0.0	0.0	0.0	36	0	0	0	0	3667	632	0	0	0	1651
304+50	50	18.7	0.0	0.0	0.0	0.0	36	0	0	0	0	3703	632	0	0	0	1687
305+00	50	12.7	0.0	0.0	0.0	0.0	29	0	0	0	0	3732	632	0	0	0	1716
305+50	50	10.5	0.0	0.0	0.0	0.0	21	0	0	0	0	3754	632	0	0	0	1738
306+00	50	7.4	0.0	0.0	0.0	0.0	17	0	0	0	0	3770	632	0	0	0	1754
306+50	50	8.5	0.0	0.0	0.0	0.0	15	0	0	0	0	3785	632	0	0	0	1769
307+00	50	4.4	0.0	3.1	0.0	0.0	12	0	3	0	0	3797	636	0	0	0	1777
307+50	50	4.8	0.0	0.0	0.0	0.0	8	0	3	0	0	3805	639	0	0	0	1782
308+00	50	3.9	0.0	0.0	0.0	0.0	8	0	0	0	0	3813	639	0	0	0	1790
308+50	50	2.6	0.0	0.3	0.0	0.0	6	0	0	0	0	3819	640	0	0	0	1796
309+00	50	8.4	0.0	0.5	0.0	0.0	10	0	1	0	0	3829	641	0	0	0	1805

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

(CONTINUED ON NEXT SHEET)

STAGE 3 (STA 260+00 NB - STA 360+00 NB): CABLE BARRIER

STATION	Distance	Area					Incremental Volume (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Marsh Exc (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Marsh Exc (CY)	EBS (CY)	Cut 1.00 Note 1	Expanded Fill 1.25	Expanded Marsh Backfill 1.50 Note 4	Reduced Marsh in Fill 0.60 Note 5	Reduced EBS In Fill 0.80 Note 6	Note 7
309+50	50	9.1	0.0	0.2	0.0	0.0	16	0	1	0	0	3846	641	0	0	0	1820
310+00	50	52.8	0.0	0.0	0.0	0.0	57	0	0	0	0	3903	642	0	0	0	1878
310+50	50	11.6	0.0	0.0	0.0	0.0	60	0	0	0	0	3963	642	0	0	0	1937
311+00	50	12.3	0.0	0.0	0.0	0.0	22	0	0	0	0	3985	642	0	0	0	1959
311+50	50	8.5	0.0	0.0	0.0	0.0	19	0	0	0	0	4004	642	0	0	0	1978
312+00	50	3.0	0.0	0.2	0.0	0.0	11	0	0	0	0	4014	642	0	0	0	1989
312+50	50	6.6	0.0	0.0	0.0	0.0	9	0	0	0	0	4023	642	0	0	0	1997
313+00	50	4.3	0.0	0.5	0.0	0.0	10	0	0	0	0	4033	643	0	0	0	2007
313+50	50	7.2	0.0	0.6	0.0	0.0	11	0	1	0	0	4044	644	0	0	0	2016
314+50	100	9.8	0.0	0.6	0.0	0.0	31	0	2	0	0	4075	647	0	0	0	2045
315+00	50	11.4	0.0	0.3	0.0	0.0	20	0	1	0	0	4095	648	0	0	0	2063
315+50	50	12.1	0.0	0.5	0.0	0.0	22	0	1	0	0	4117	649	0	0	0	2084
316+00	50	12.2	0.0	0.5	0.0	0.0	22	0	1	0	0	4139	650	0	0	0	2105
316+50	50	10.6	0.0	1.0	0.0	0.0	21	0	1	0	0	4160	652	0	0	0	2125
317+00	50	9.4	0.0	0.8	0.0	0.0	19	0	2	0	0	4179	654	0	0	0	2141
317+50	50	11.7	0.0	0.1	0.0	0.0	20	0	1	0	0	4198	655	0	0	0	2160
318+00	50	12.9	0.0	0.0	0.0	0.0	23	0	0	0	0	4221	655	0	0	0	2182
318+50	50	10.1	0.0	0.0	0.0	0.0	21	0	0	0	0	4242	655	0	0	0	2204
319+00	50	8.8	0.0	0.1	0.0	0.0	18	0	0	0	0	4260	655	0	0	0	2221
319+50	50	7.3	0.0	0.0	0.0	0.0	15	0	0	0	0	4275	655	0	0	0	2236
320+00	50	5.9	0.0	0.1	0.0	0.0	12	0	0	0	0	4287	655	0	0	0	2248
320+50	50	2.8	0.0	0.3	0.0	0.0	8	0	0	0	0	4295	656	0	0	0	2256
321+00	50	4.3	0.0	0.0	0.0	0.0	7	0	0	0	0	4302	656	0	0	0	2262
321+50	50	2.8	0.0	1.0	0.0	0.0	7	0	1	0	0	4308	657	0	0	0	2268
322+00	50	1.7	0.0	2.0	0.0	0.0	4	0	3	0	0	4313	660	0	0	0	2268
322+50	50	1.4	0.0	3.2	0.0	0.0	3	0	5	0	0	4315	666	0	0	0	2265
323+00	50	2.3	0.0	2.6	0.0	0.0	3	0	5	0	0	4319	673	0	0	0	2262
323+50	50	2.8	0.0	2.5	0.0	0.0	5	0	5	0	0	4324	679	0	0	0	2261
324+00	50	1.8	0.0	6.6	0.0	0.0	4	0	8	0	0	4328	690	0	0	0	2254
324+50	50	1.8	0.0	5.7	0.0	0.0	3	0	11	0	0	4331	704	0	0	0	2244
325+00	50	1.6	0.0	5.7	0.0	0.0	3	0	11	0	0	4334	717	0	0	0	2233
325+50	50	1.5	0.0	7.0	0.0	0.0	3	0	12	0	0	4337	732	0	0	0	2222
326+00	50	0.5	0.0	13.0	0.0	0.0	2	0	19	0	0	4339	755	0	0	0	2200
326+50	50	0.8	0.0	8.0	0.0	0.0	1	0	19	0	0	4340	779	0	0	0	2177
327+00	50	1.0	0.0	6.7	0.0	0.0	2	0	14	0	0	4342	796	0	0	0	2162
327+50	50	1.0	0.0	6.2	0.0	0.0	2	0	12	0	0	4344	811	0	0	0	2149
328+00	50	2.3	0.0	0.7	0.0	0.0	3	0	6	0	0	4347	819	0	0	0	2144
328+50	50	2.0	0.0	0.9	0.0	0.0	4	0	1	0	0	4351	821	0	0	0	2146
329+00	50	3.8	0.0	0.9	0.0	0.0	5	0	2	0	0	4356	823	0	0	0	2149
329+50	50	9.8	0.0	0.0	0.0	0.0	13	0	1	0	0	4369	824	0	0	0	2161
330+00	50	10.5	0.0	0.0	0.0	0.0	19	0	0	0	0	4388	824	0	0	0	2180
330+50	50	11.0	0.0	0.0	0.0	0.0	20	0	0	0	0	4407	824	0	0	0	2200
331+00	50	12.4	0.0	0.0	0.0	0.0	22	0	0	0	0	4429	824	0	0	0	2221
331+50	50	7.6	0.0	0.0	0.0	0.0	19	0	0	0	0	4448	824	0	0	0	2240
332+00	50	7.2	0.0	0.0	0.0	0.0	14	0	0	0	0	4461	824	0	0	0	2254
332+50	50	8.6	0.0	0.0	0.0	0.0	15	0	0	0	0	4476	824	0	0	0	2268
333+00	50	6.7	0.0	0.0	0.0	0.0	14	0	0	0	0	4490	824	0	0	0	2282

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

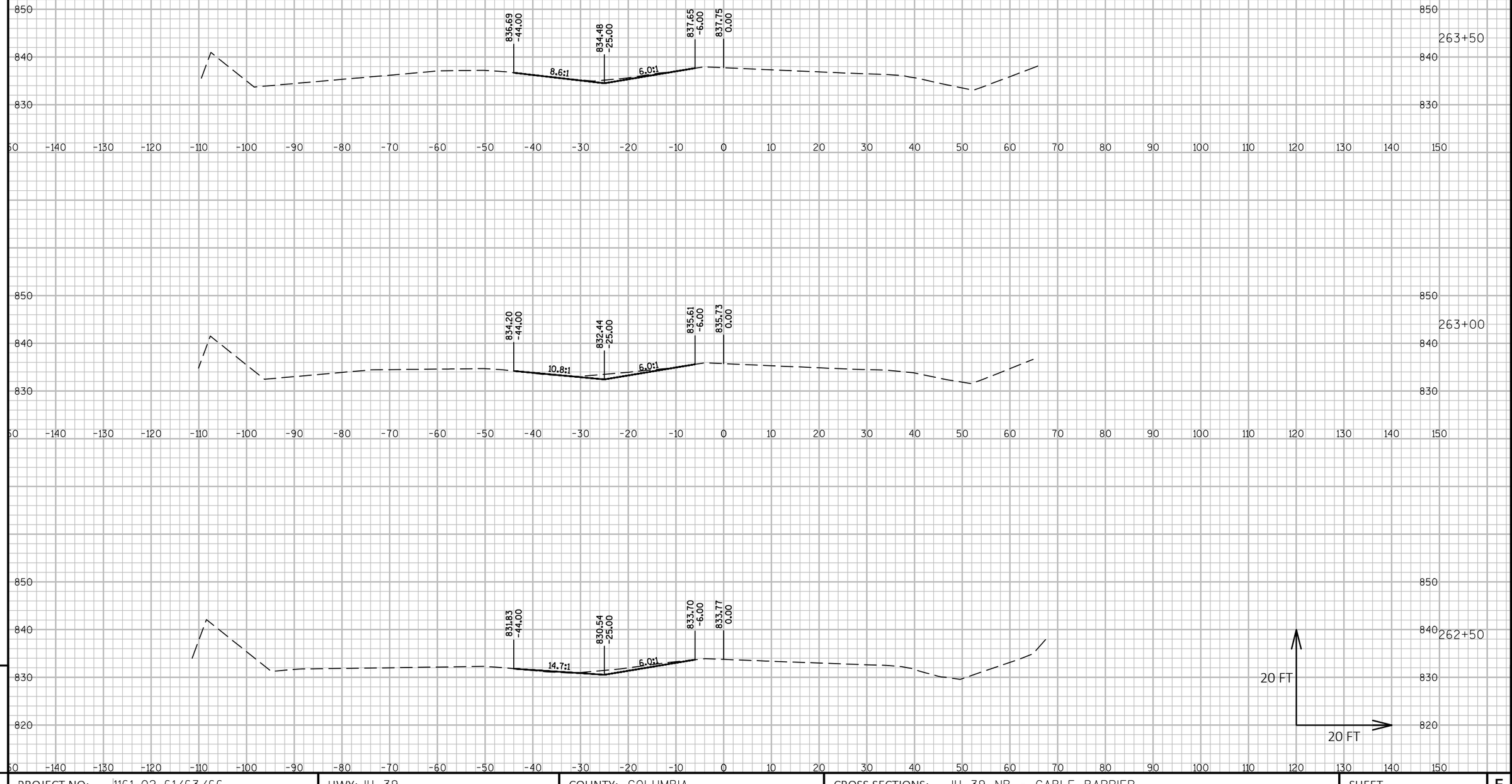
(CONTINUED ON NEXT SHEET)

STAGE 3 (STA 260+00 NB - STA 360+00 NB): CABLE BARRIER

STATION	Distance	Area					Incremental Volume (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Marsh Exc (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Marsh Exc (CY)	EBS (CY)	Cut 1.00 Note 1	Expanded Fill 1.25	Expanded Marsh Backfill 1.50 Note 4	Reduced Marsh in Fill 0.60 Note 5	Reduced EBS In Fill 0.80 Note 6	Note 7
333+50	50	5.6	0.0	0.0	0.0	0.0	11	0	0	0	0	4502	824	0	0	0	2294
334+00	50	4.7	0.0	0.9	0.0	0.0	10	0	1	0	0	4511	825	0	0	0	2302
334+50	50	3.9	0.0	1.0	0.0	0.0	8	0	2	0	0	4519	827	0	0	0	2308
335+00	50	4.8	0.0	0.8	0.0	0.0	8	0	2	0	0	4527	829	0	0	0	2314
335+50	50	3.9	0.0	1.7	0.0	0.0	8	0	2	0	0	4535	832	0	0	0	2319
336+00	50	2.3	0.0	3.4	0.0	0.0	6	0	5	0	0	4541	838	0	0	0	2319
336+50	50	2.5	0.0	4.8	0.0	0.0	5	0	8	0	0	4545	848	0	0	0	2314
337+00	50	3.0	0.0	4.3	0.0	0.0	5	0	8	0	0	4551	858	0	0	0	2308
337+50	50	3.4	0.0	4.6	0.0	0.0	6	0	8	0	0	4557	869	0	0	0	2304
338+00	50	1.6	0.0	9.4	0.0	0.0	5	0	13	0	0	4561	885	0	0	0	2293
338+50	50	0.5	0.0	11.8	0.0	0.0	2	0	20	0	0	4563	909	0	0	0	2270
339+00	50	1.2	0.0	18.0	0.0	0.0	2	0	28	0	0	4565	944	0	0	0	2237
339+50	50	4.8	0.0	4.8	0.0	0.0	6	0	21	0	0	4570	970	0	0	0	2216
340+00	50	3.2	0.0	9.8	0.0	0.0	7	0	13	0	0	4578	987	0	0	0	2207
340+50	50	0.9	0.0	12.6	0.0	0.0	4	0	21	0	0	4581	1013	0	0	0	2185
341+00	50	3.1	0.0	16.0	0.0	0.0	4	0	27	0	0	4585	1046	0	0	0	2155
358+50	50	3.0	0.0	0.0	0.0	0.0	6	0	15	0	0	4591	1065	0	0	0	2142
359+00	50	14.0	0.0	0.0	0.0	0.0	16	0	0	0	0	4606	1065	0	0	0	2158
359+50	50	20.0	0.0	0.0	0.0	0.0	31	0	0	0	0	4638	1065	0	0	0	2190
359+74	24	1.0	0.0	0.0	0.0	0.0	9	0	0	0	0	4647	1065	0	0	0	2199
							4647	0	852	0	0						

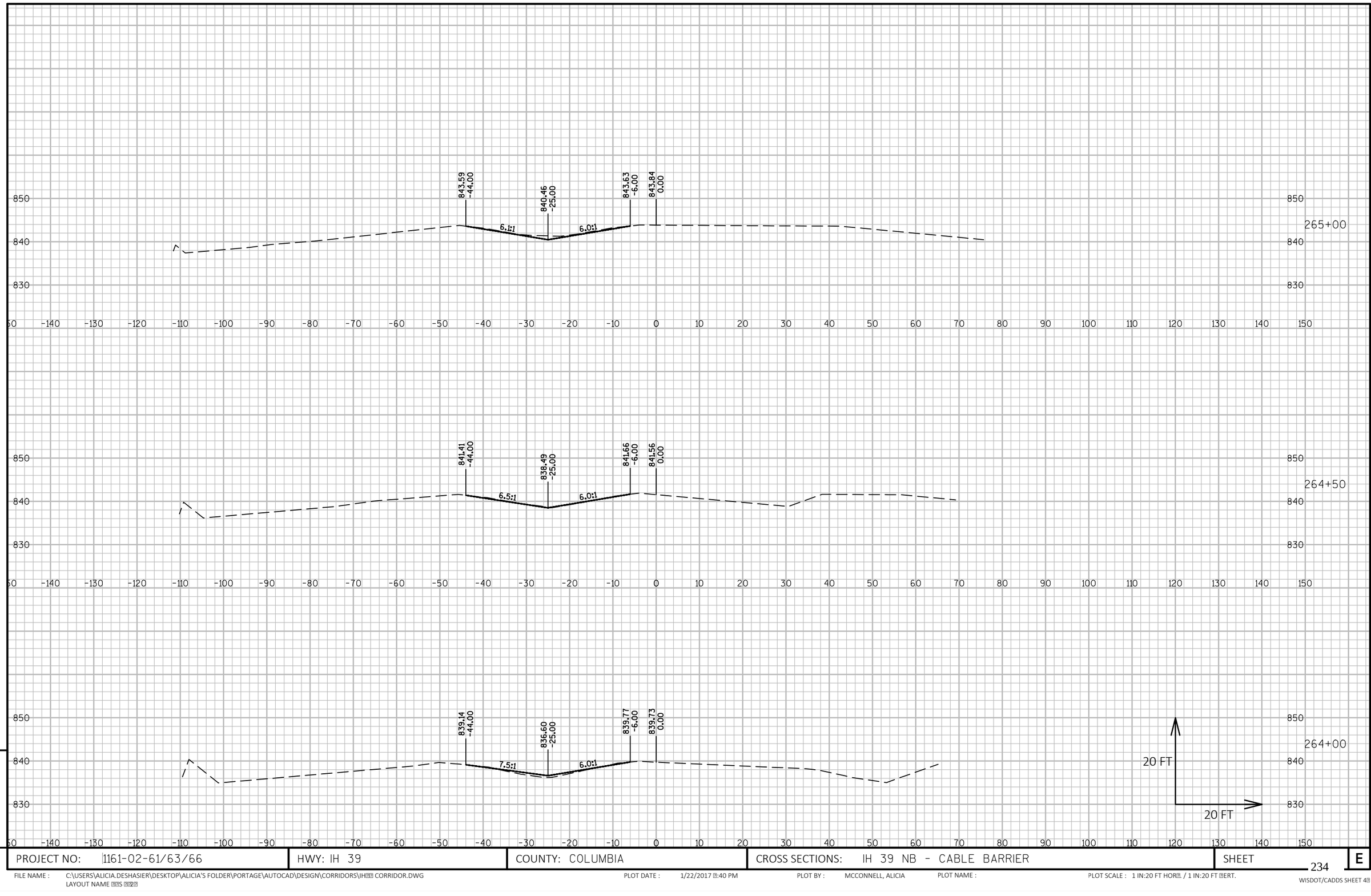
3

ALL ITEMS ARE CATEGORY 0010 UNLESS
OTHERWISE NOTED



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 233	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH□□ CORRIDOR.DWG
LAYOUT NAME □□S □□□□
PLOT DATE : 1/22/2017 □:□□ PM
PLOT BY : MCCONNELL, ALICIA
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HOR□. / 1 IN:20 FT □ERT.
WISDOT/CADDS SHEET 4□



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 234	E

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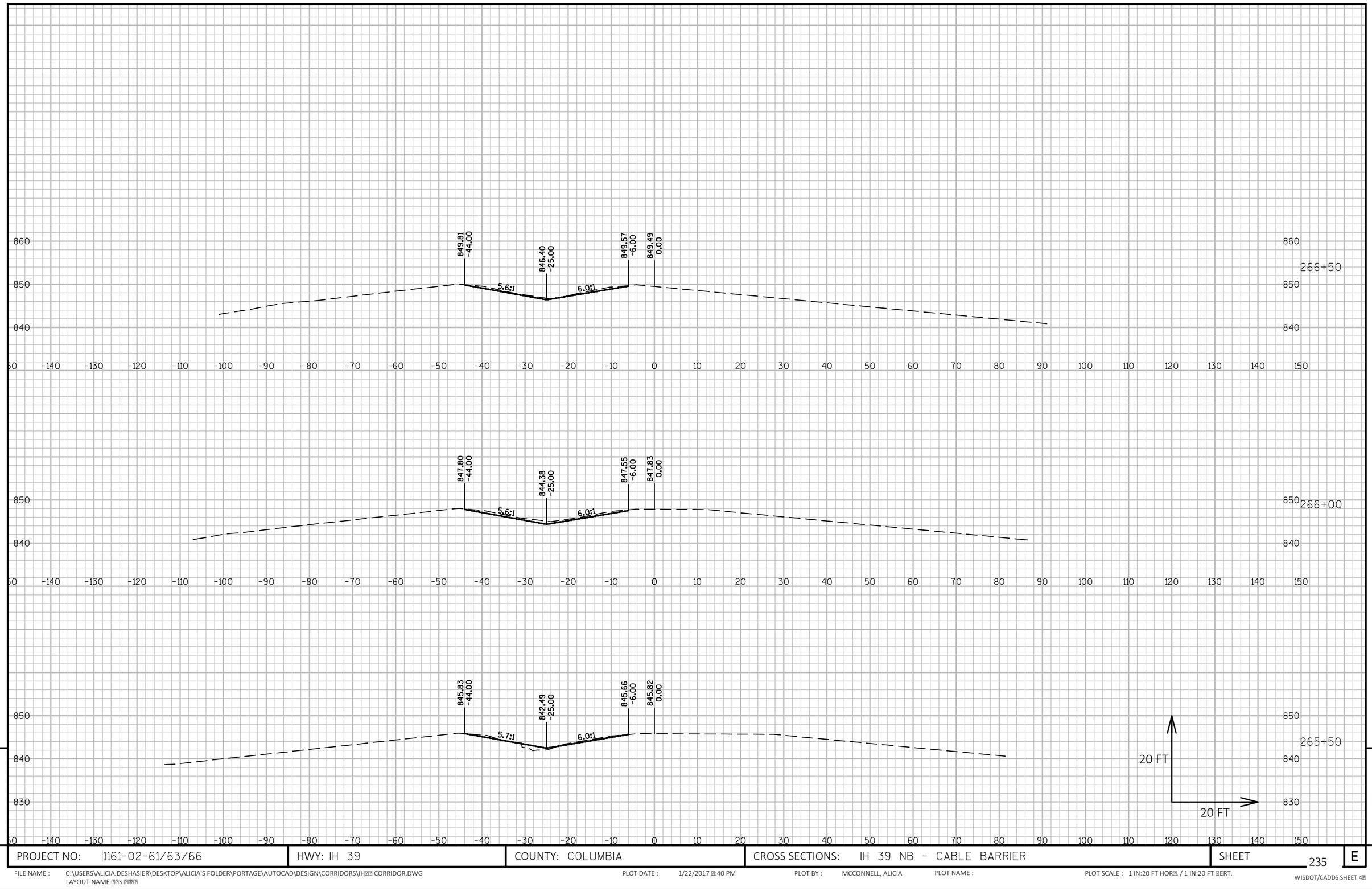
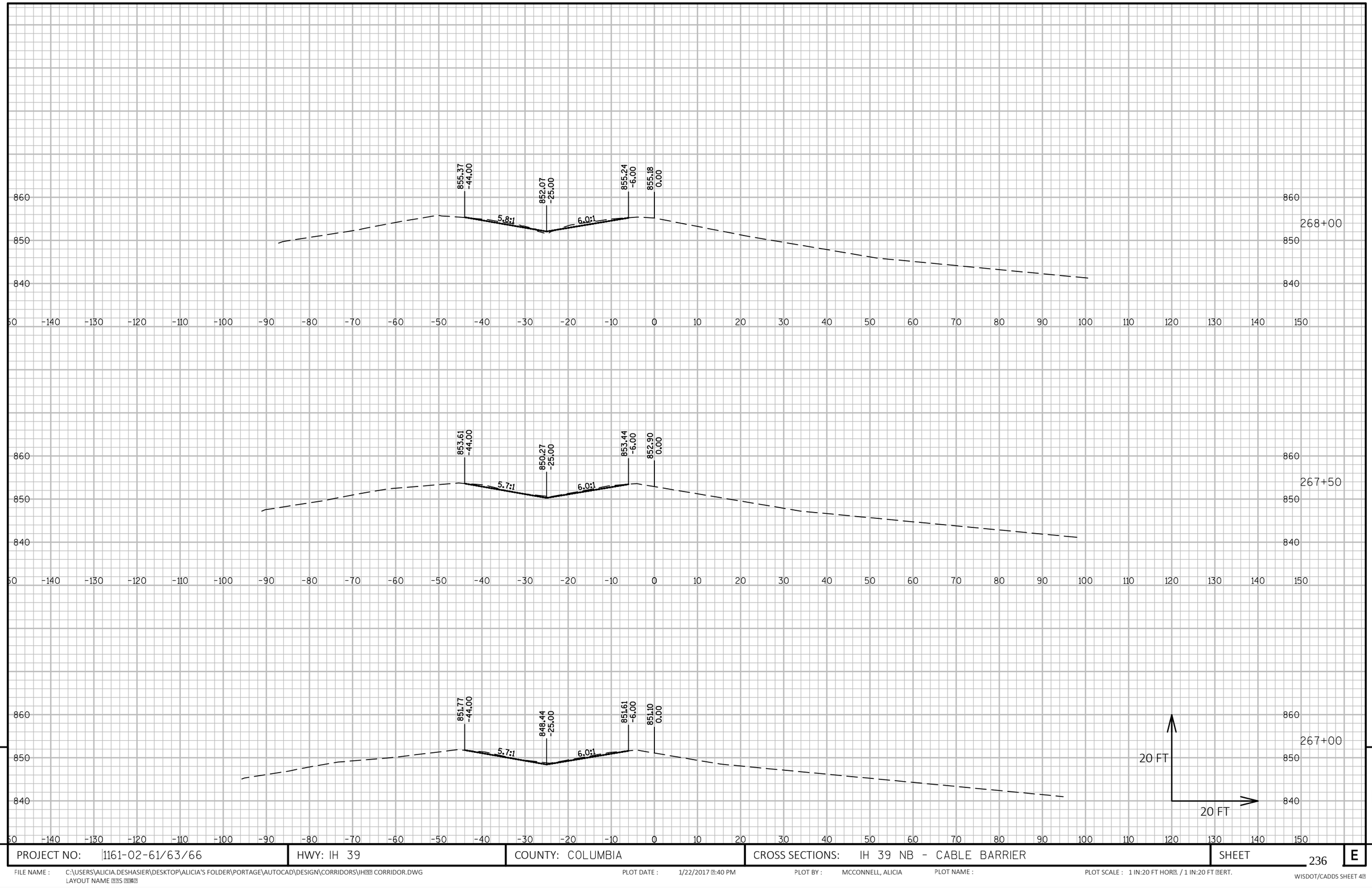
LAYOUT NAME □□S □□□□
PLOT DATE : 1/22/2017 □:40 PM
PLOT BY : MCCONNELL, ALICIA
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HOR□. / 1 IN:20 FT □ERT.
WISDOT/CADDS SHEET 4□



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 235	E

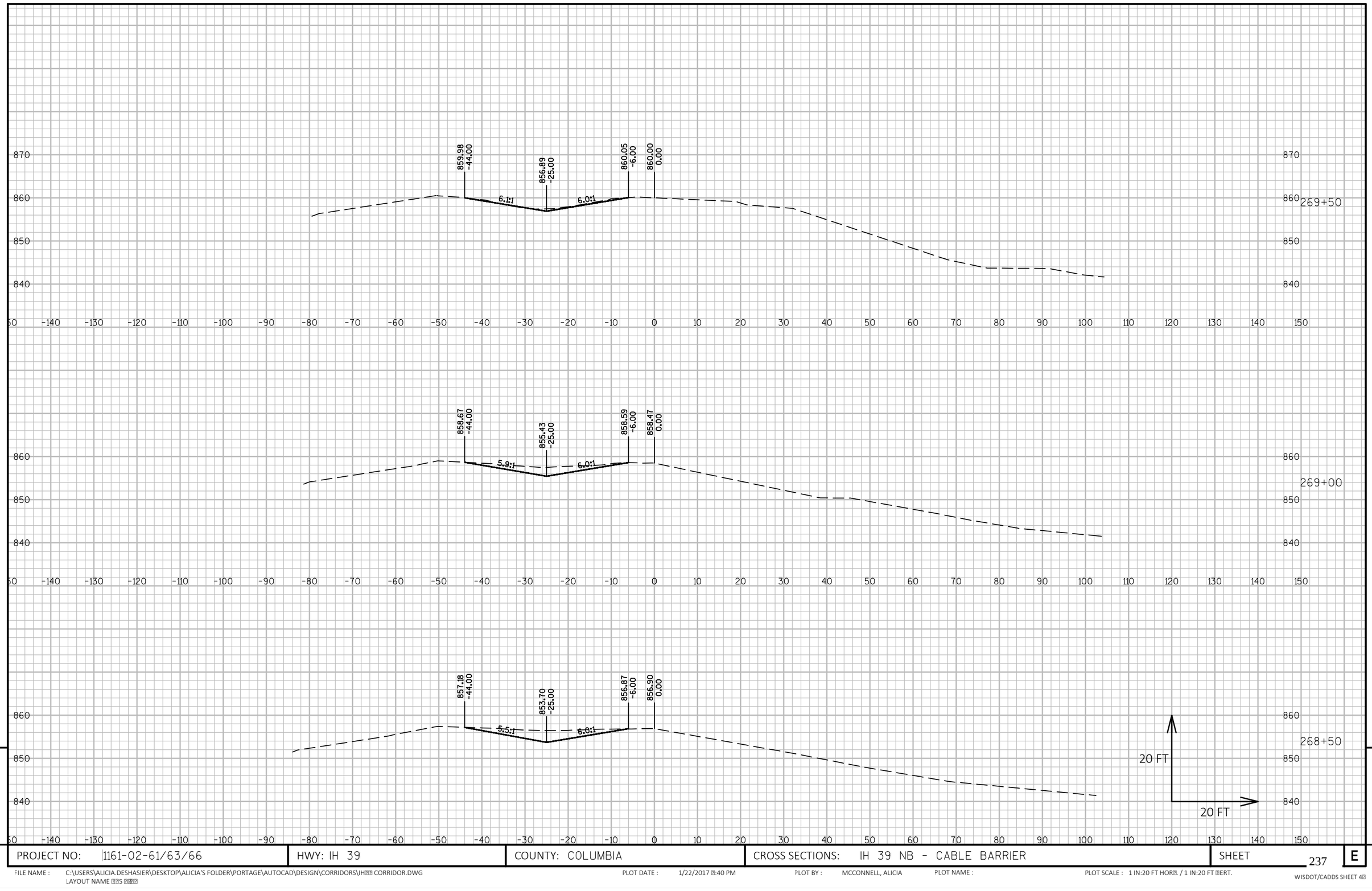


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 236 E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

PLOT DATE : 1/22/2017 :40 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4

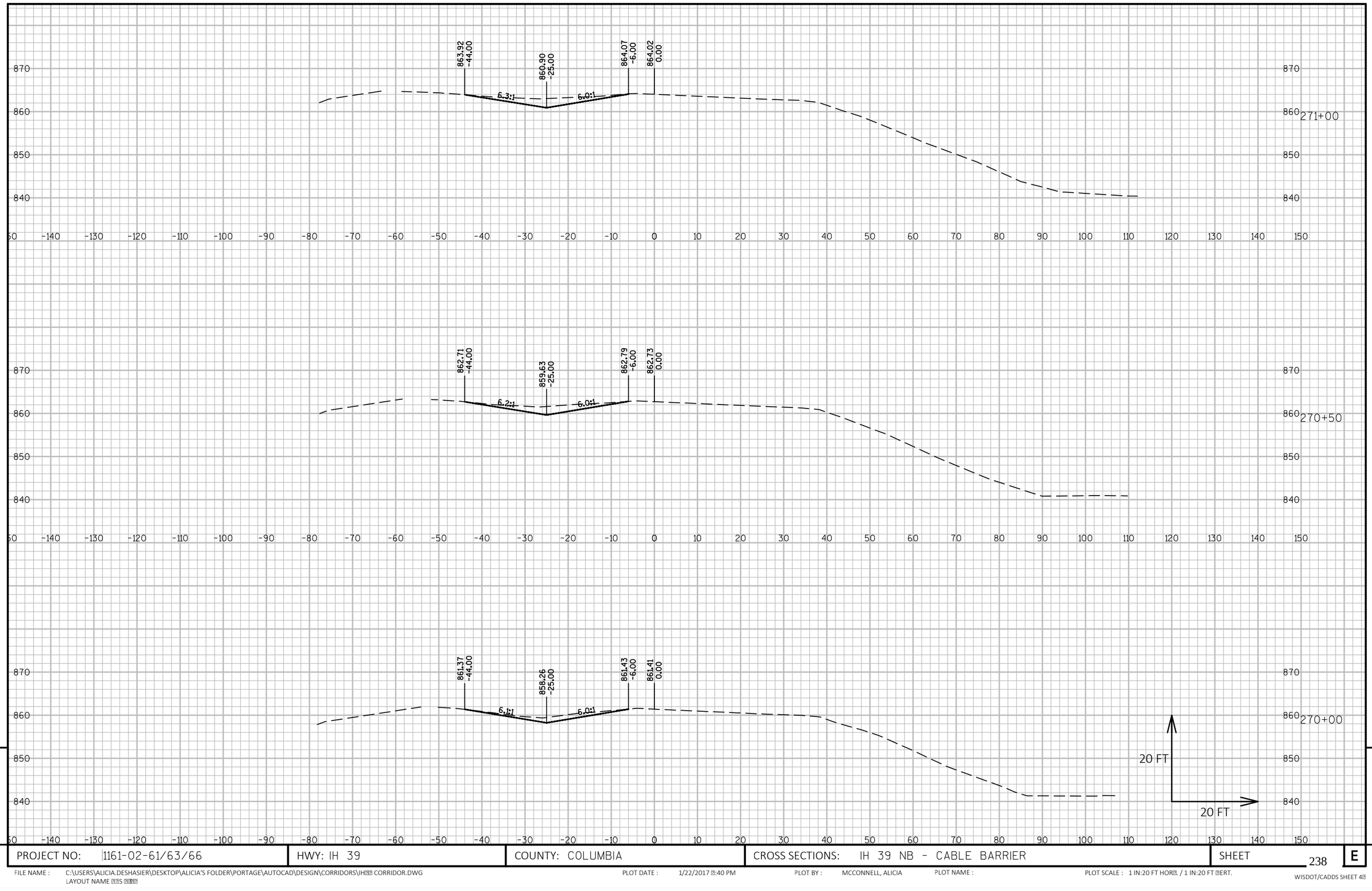


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 237	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

PLOT DATE : 1/22/2017 :40 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR. / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET



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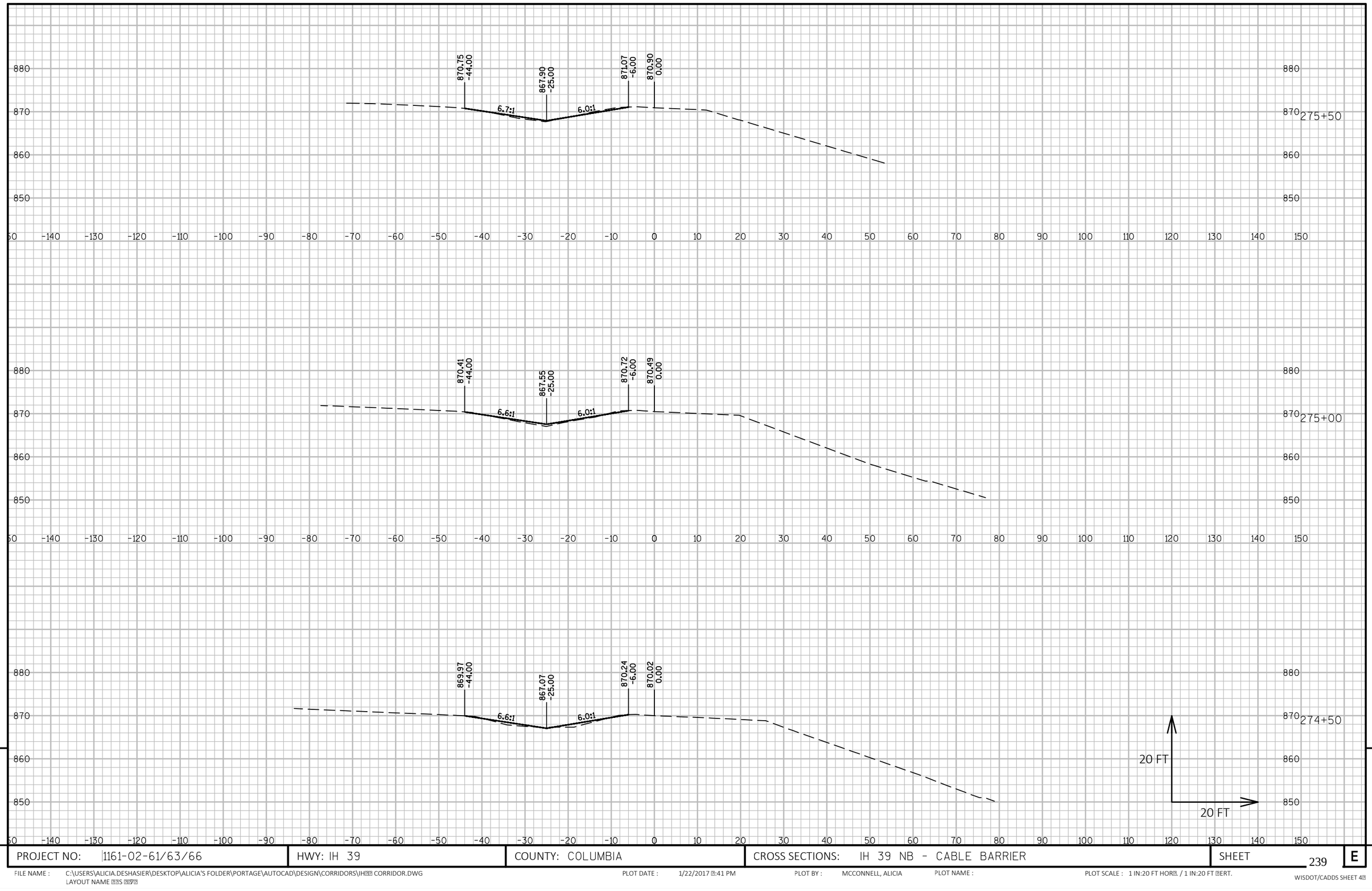


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 239	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

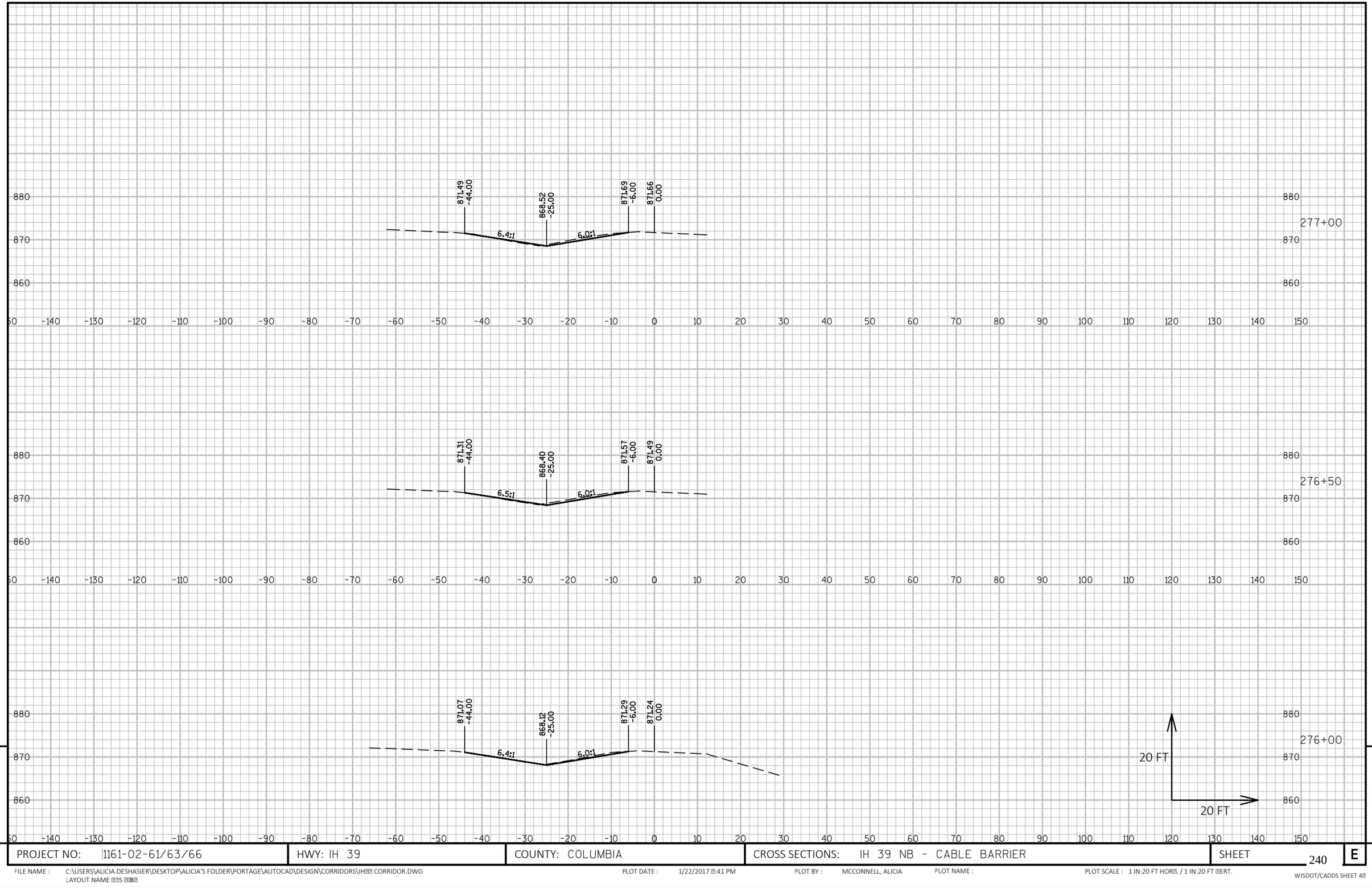
PLOT DATE : 1/22/2017 :41 PM

PLOT BY : MCCONNELL, ALICIA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4

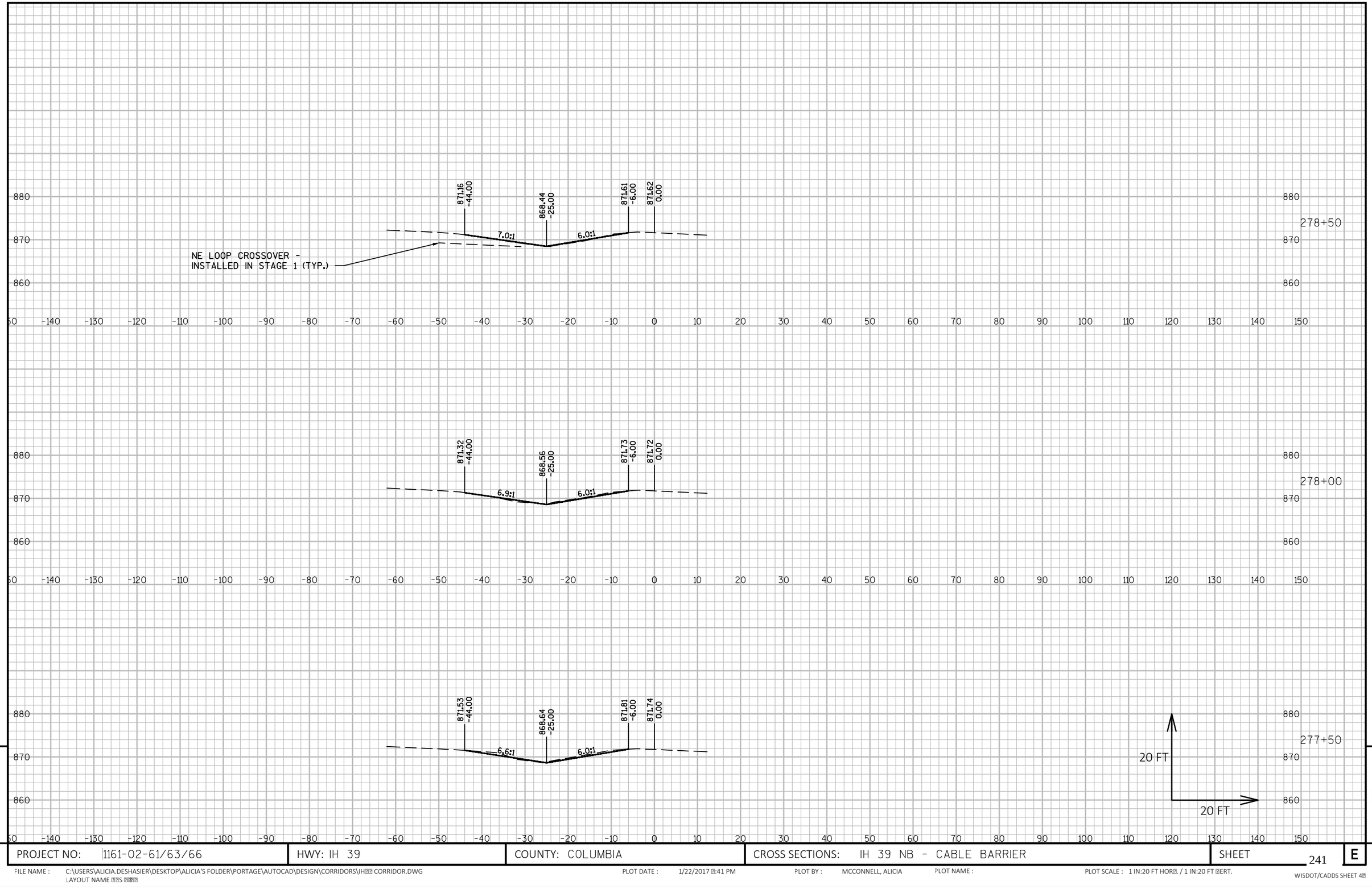


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 240	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

PLOT DATE : 1/22/2017 :41 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET



20 FT

20 FT

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 241	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH□□ CORRIDOR.DWG
LAYOUT NAME □□S □□□□

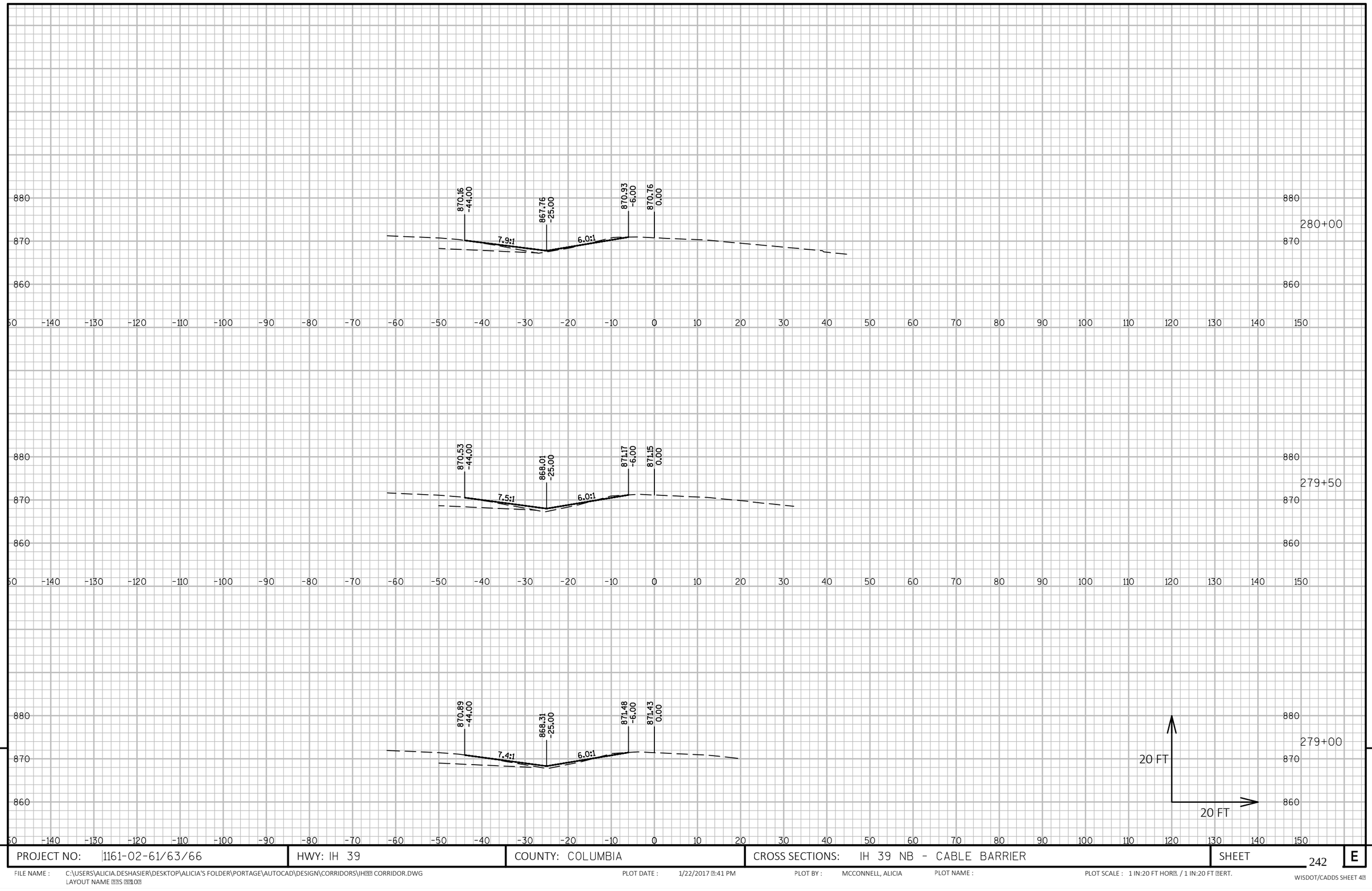
PLOT DATE : 1/22/2017 □:41 PM

PLOT BY : MCCONNELL, ALICIA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HOR□ / 1 IN:20 FT □ERT.

WISDOT/CADDS SHEET 4□

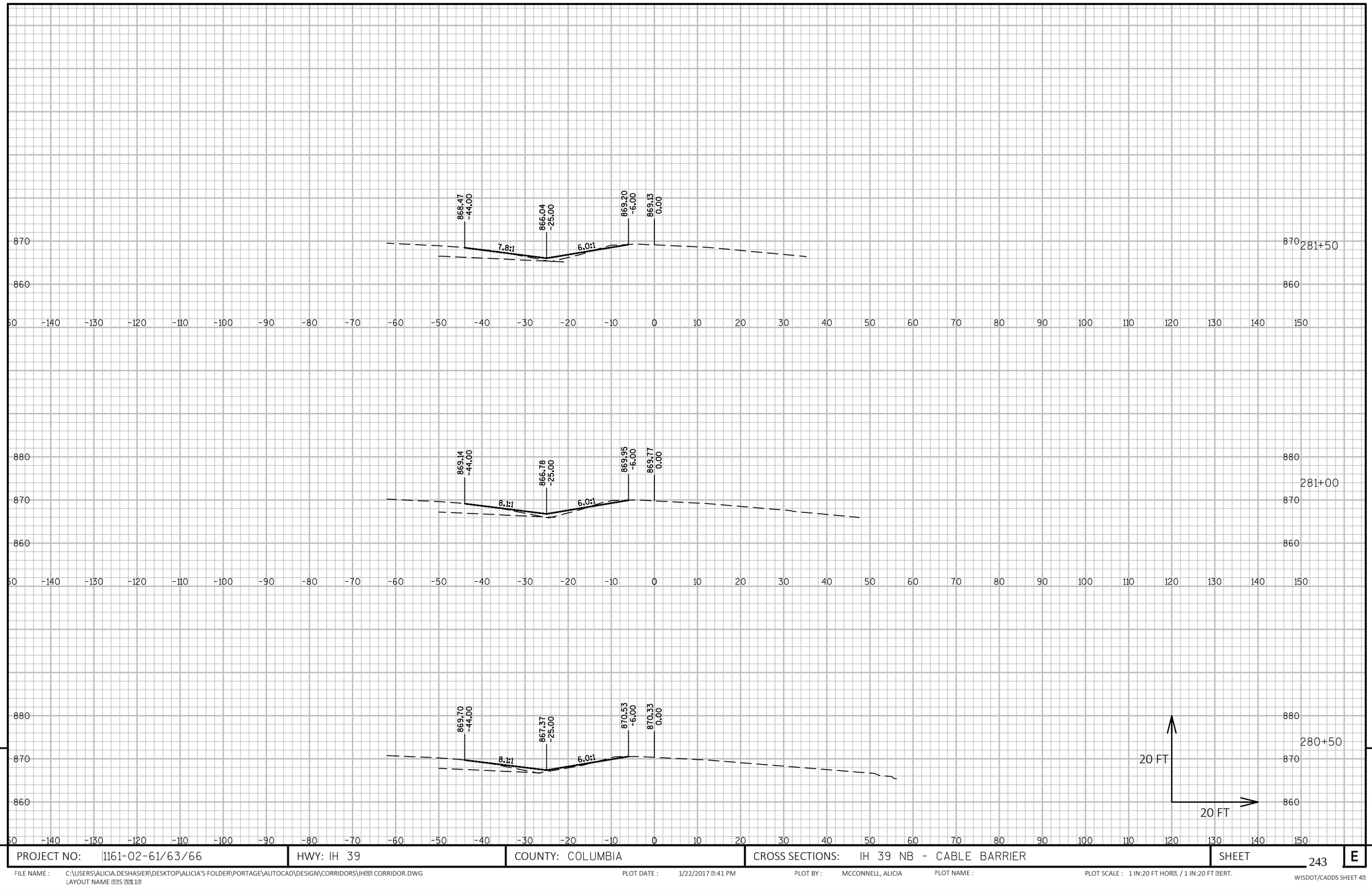


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 242	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S 10

PLOT DATE : 1/22/2017 :41 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4

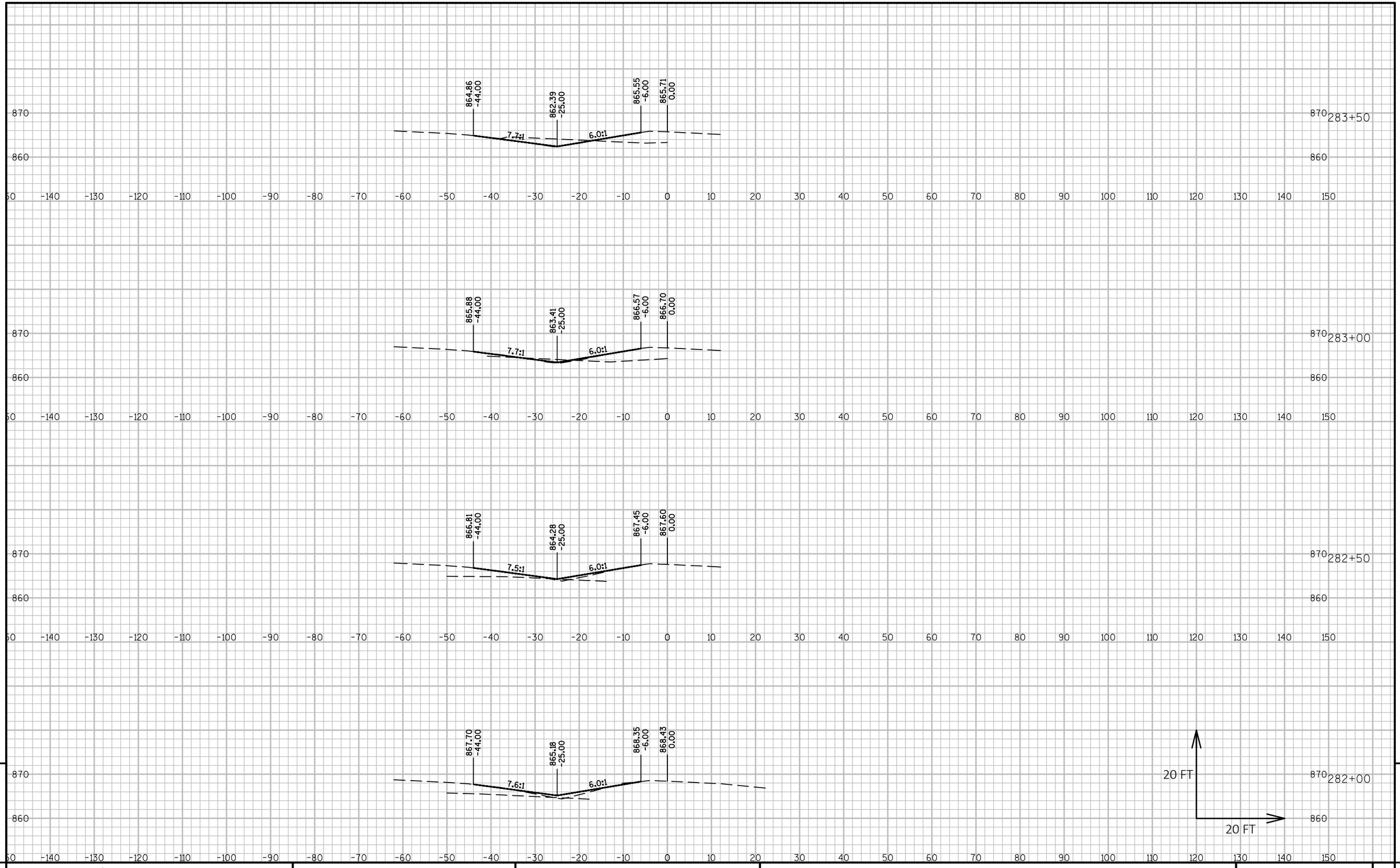


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 243	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH□□ CORRIDOR.DWG
LAYOUT NAME □□S □□1□

PLOT DATE : 1/22/2017 □:41 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR□ / 1 IN:20 FT □ERT.

WISDOT/CADDS SHEET 4□

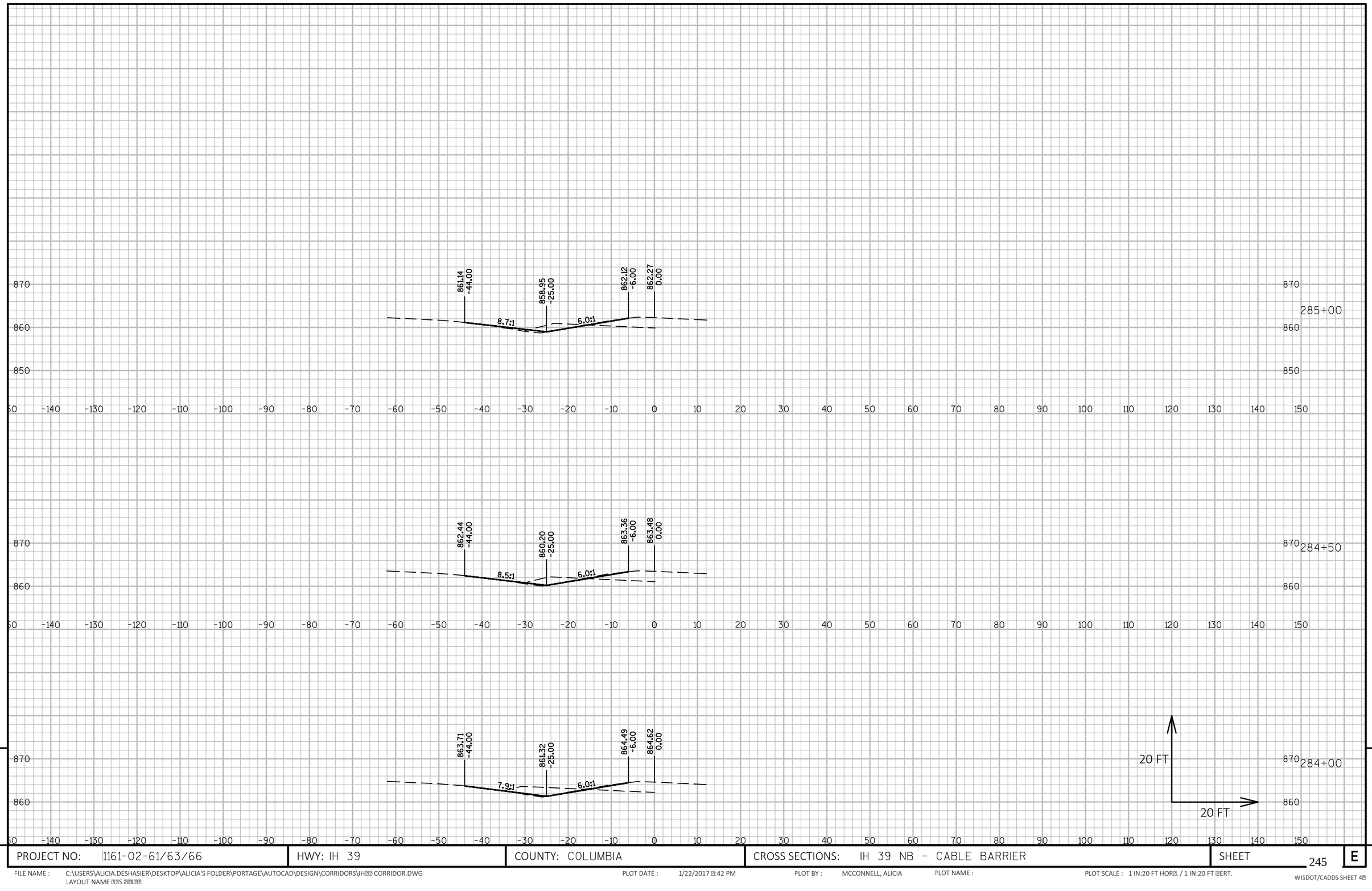


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 244	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S 2

PLOT DATE : 1/22/2017 :42 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4

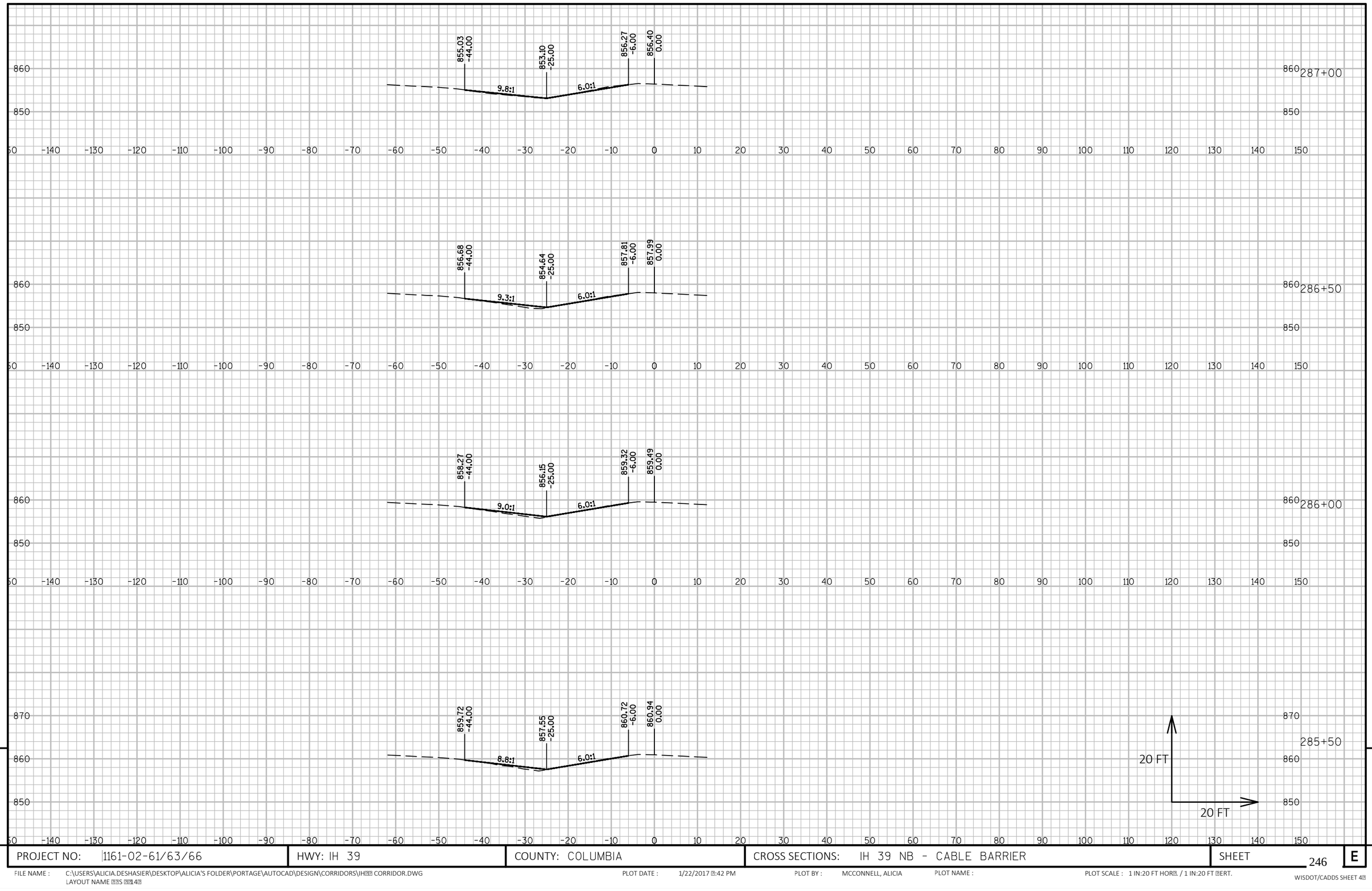


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 245	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

PLOT DATE : 1/22/2017 :42 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4



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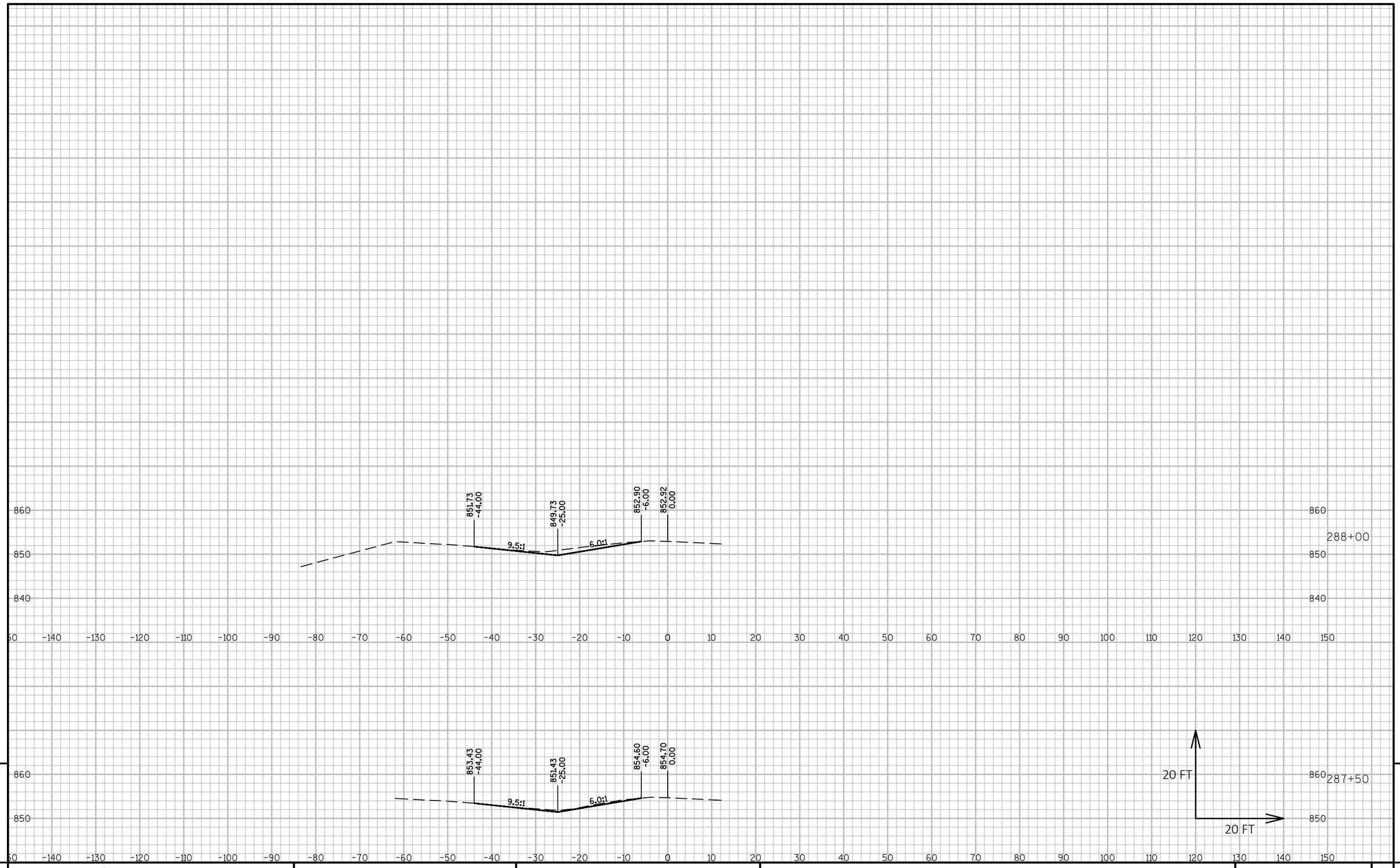
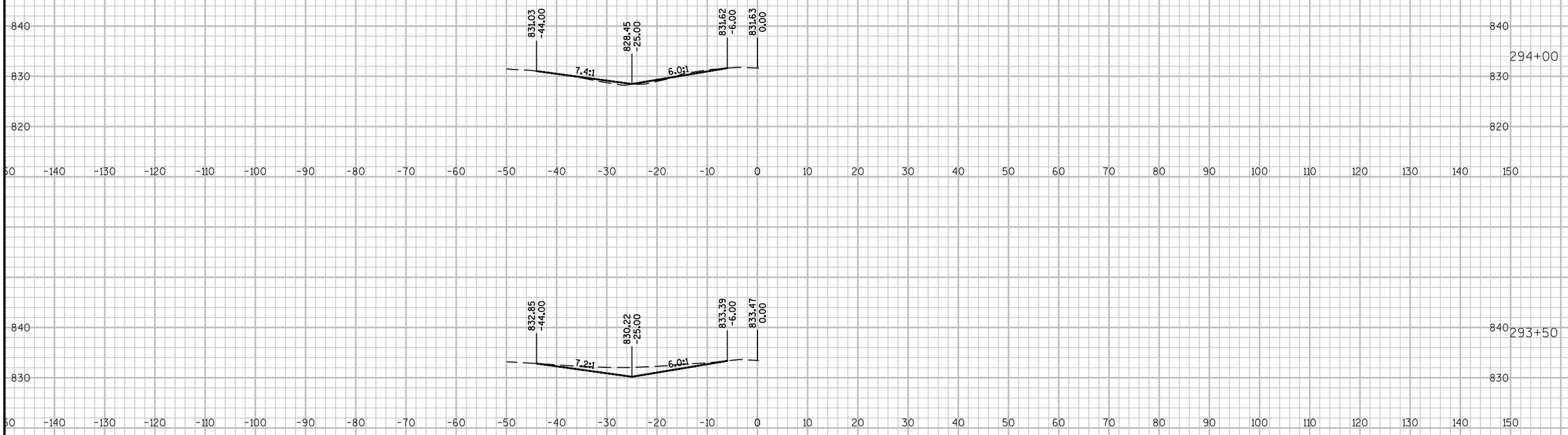


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 247	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

PLOT DATE : 1/2/2017 12:27 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4

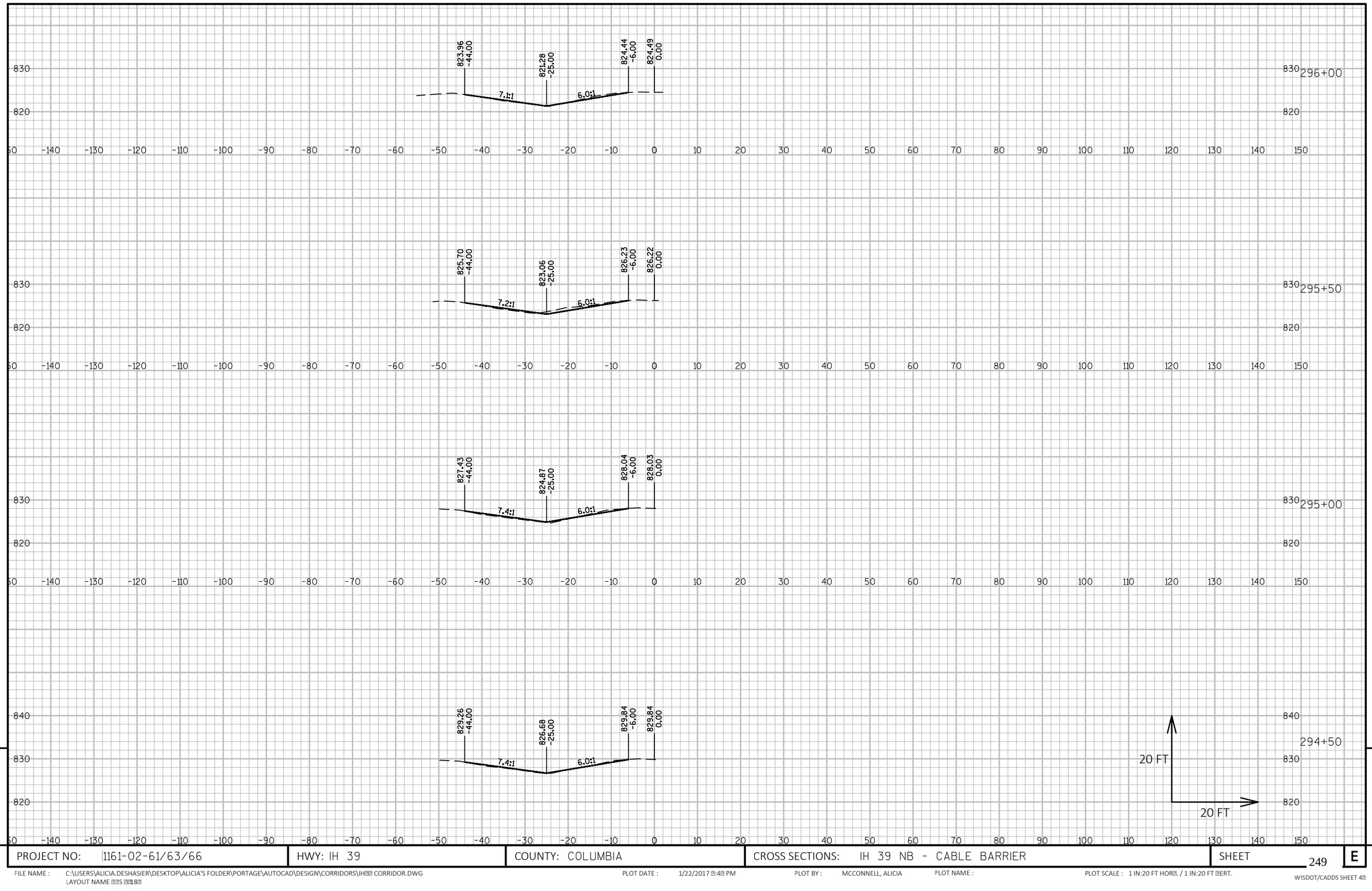


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 248	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

PLOT DATE : 1/ /2017 12: 7 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4

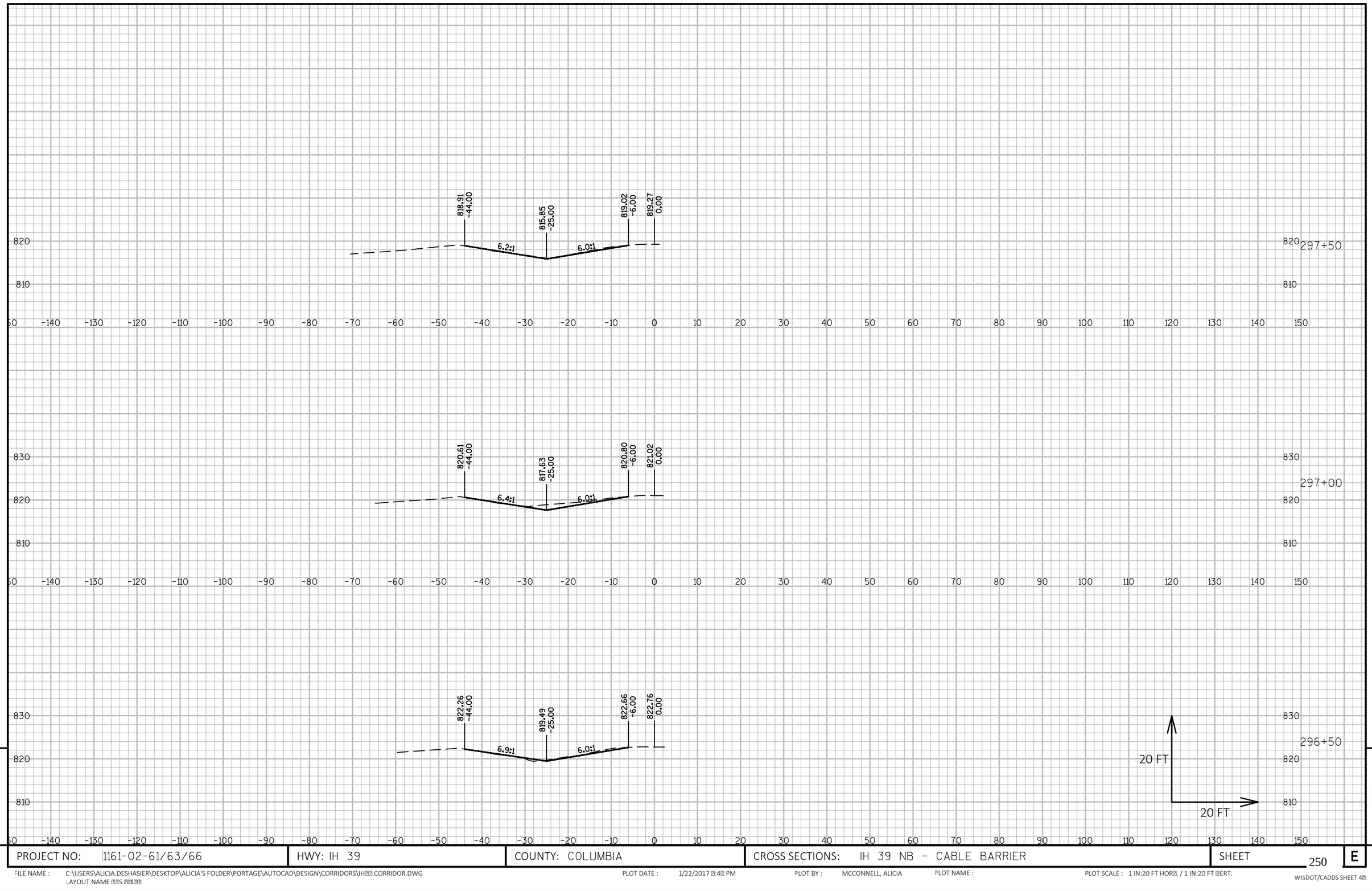


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 249	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S 18

PLOT DATE : 1/22/2017 :4 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4

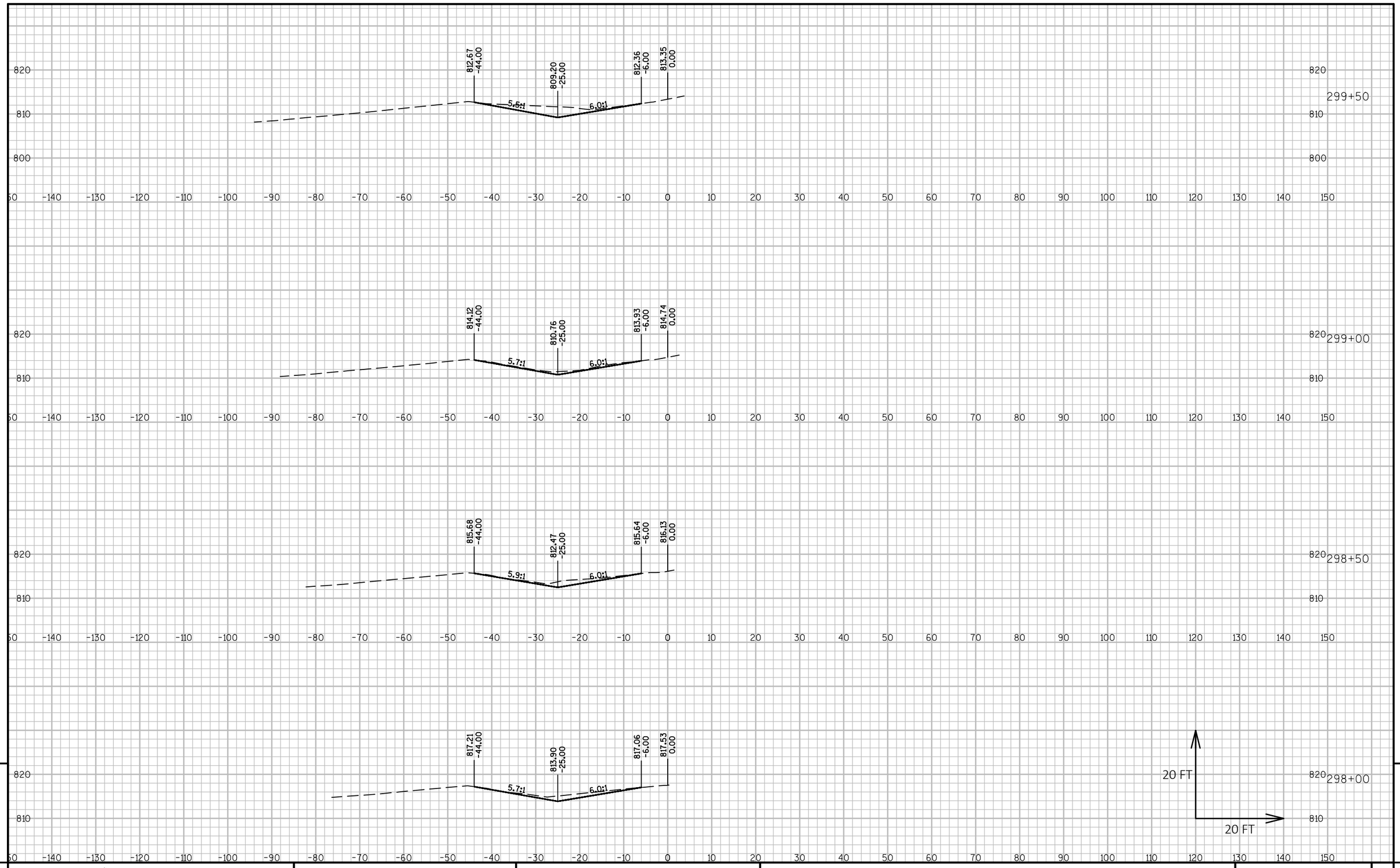


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 250	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

PLOT DATE : 1/22/2017 4 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 251	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

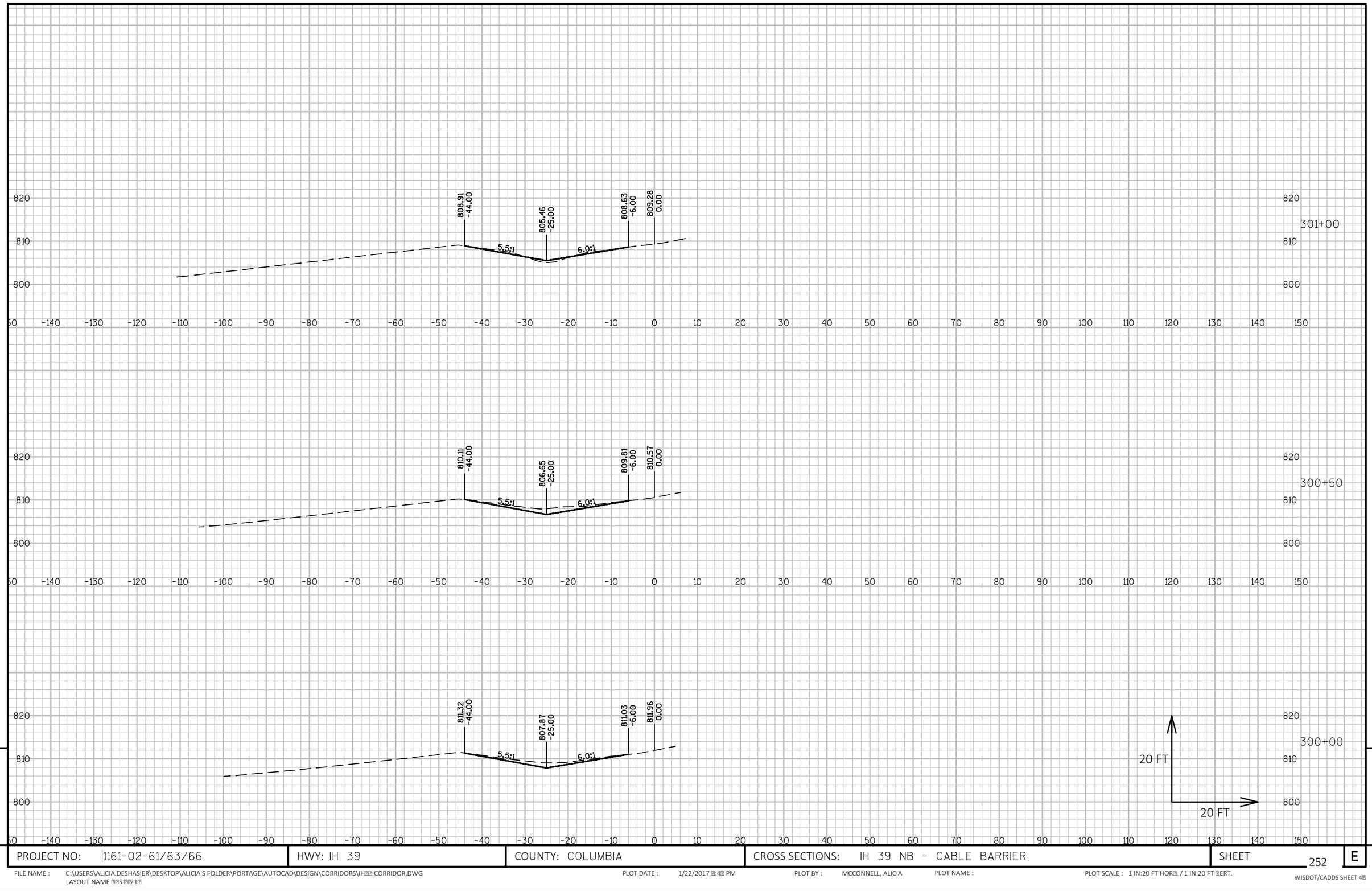
PLOT DATE : 1/22/2017 :4 PM

PLOT BY : MCCONNELL, ALICIA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4

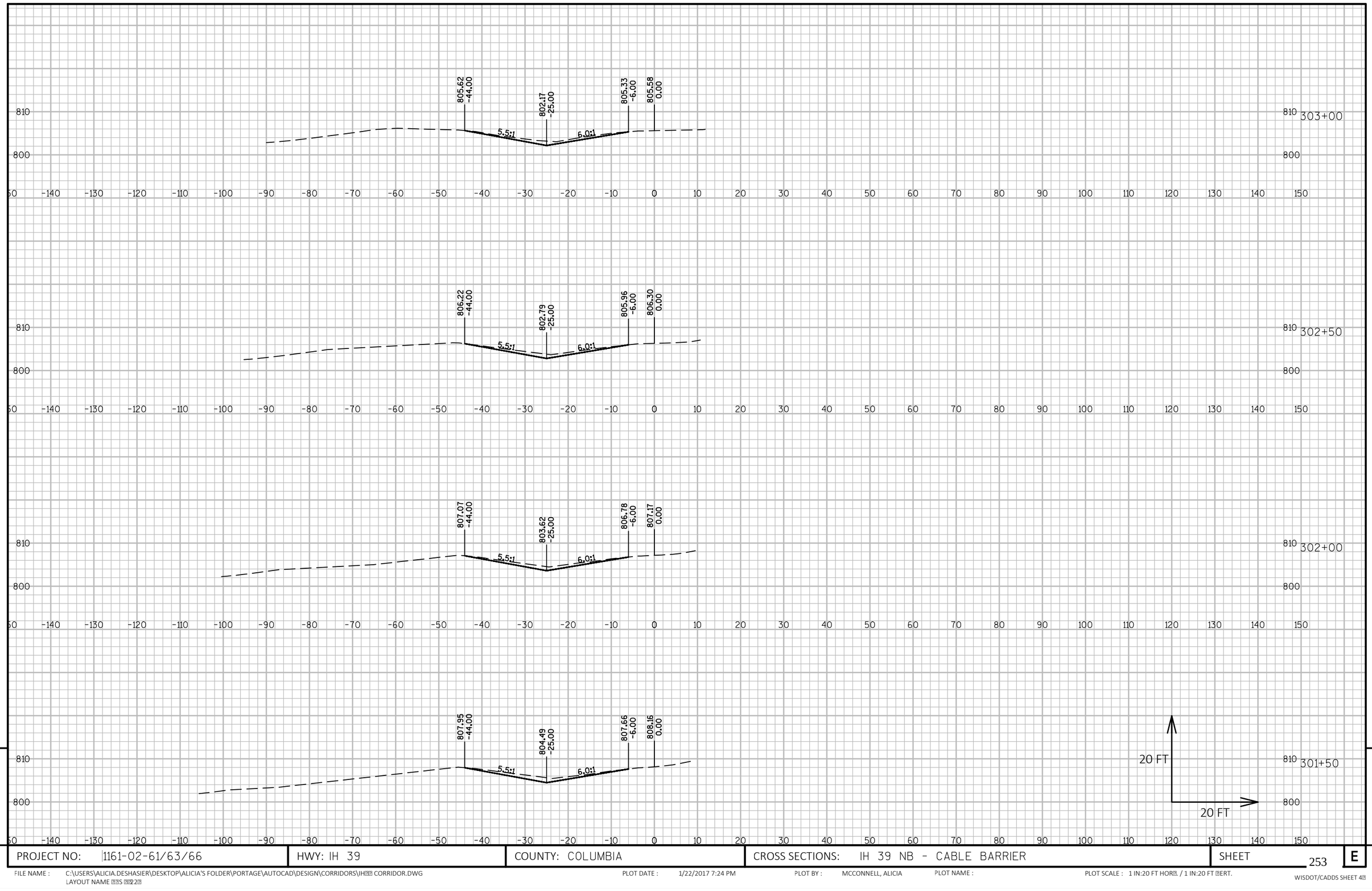


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 252	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH□□ CORRIDOR.DWG
LAYOUT NAME □□S □□2 1□

PLOT DATE : 1/22/2017 □:4□ PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR□ / 1 IN:20 FT □ERT.

WISDOT/CADDS SHEET 4□

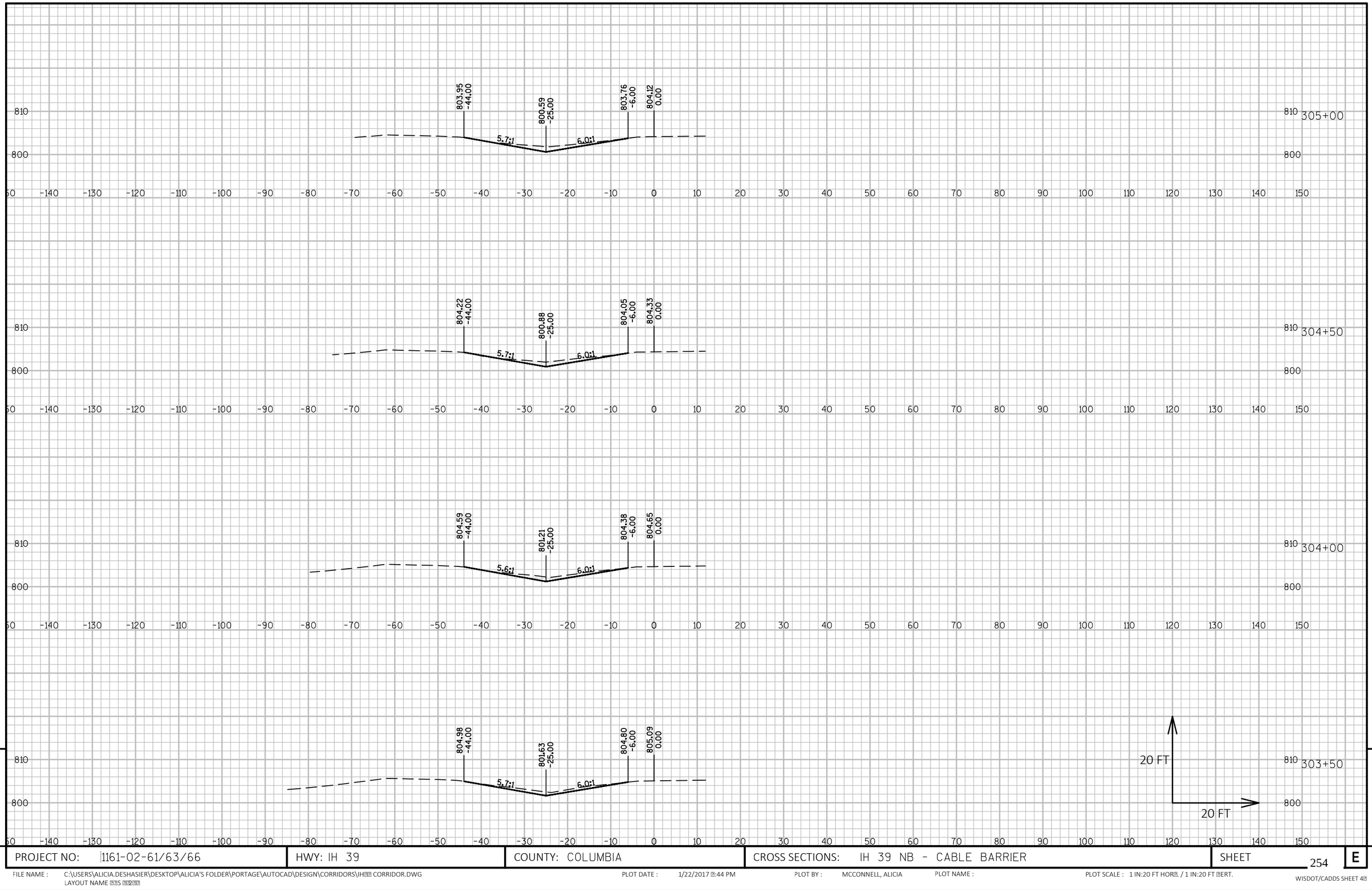


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 253	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH□□ CORRIDOR.DWG
LAYOUT NAME □□S □□2□

PLOT DATE : 1/22/2017 7:24 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR□ / 1 IN:20 FT □ERT.

WISDOT/CADDS SHEET 4□



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 254	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

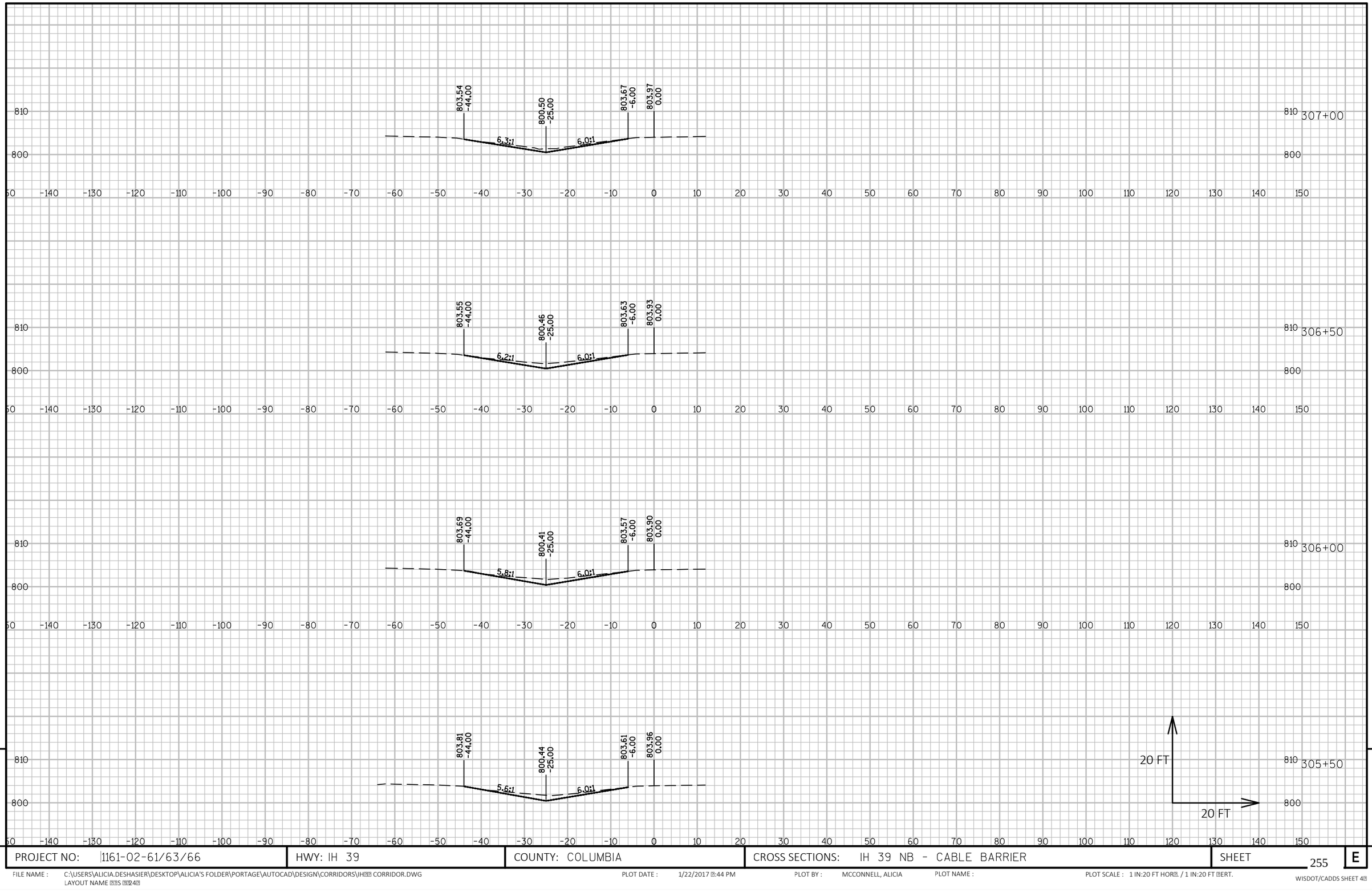
PLOT DATE : 1/22/2017 :44 PM

PLOT BY : MCCONNELL, ALICIA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4

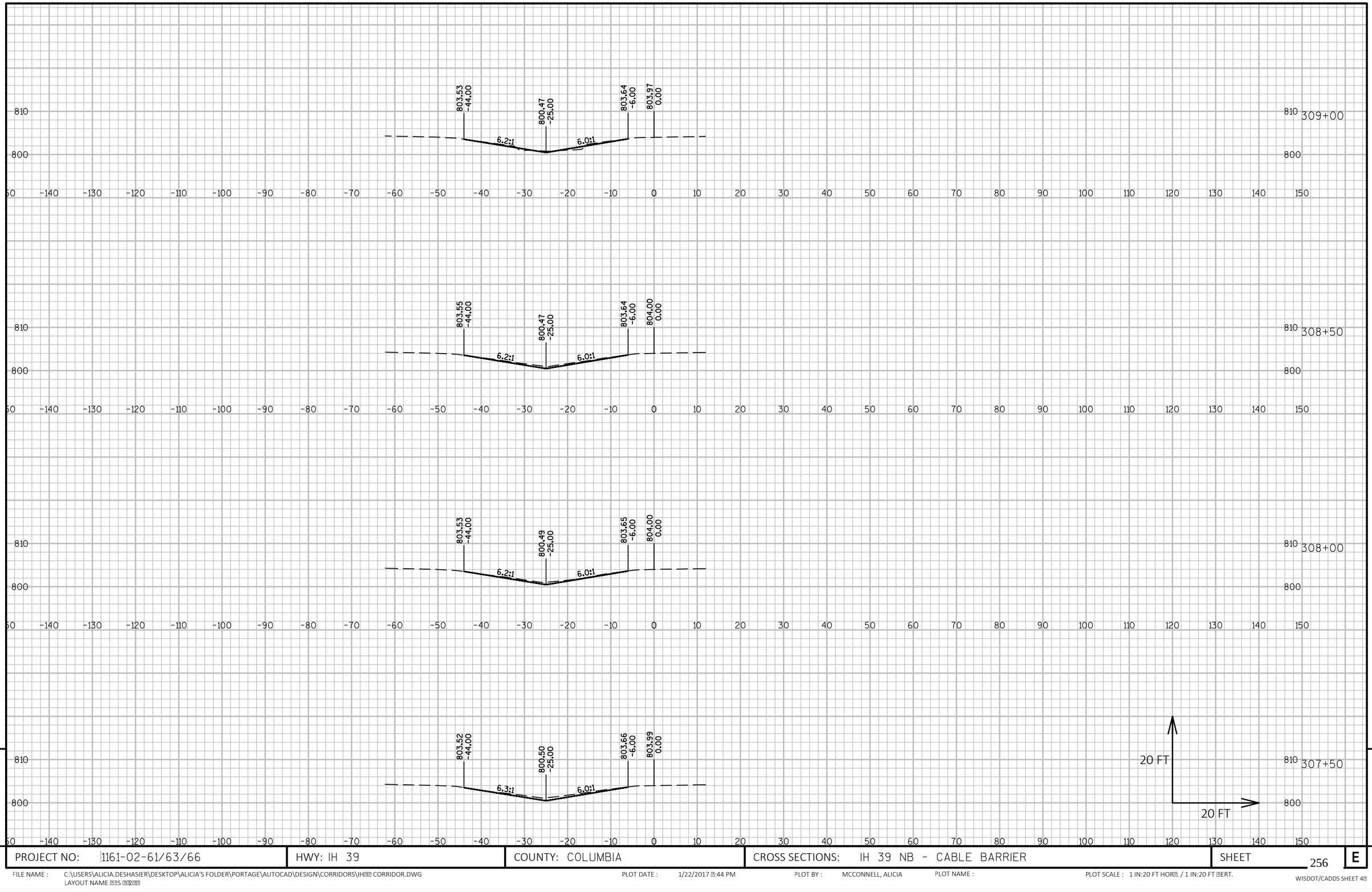


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 255	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S 24

PLOT DATE : 1/22/2017 :44 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4

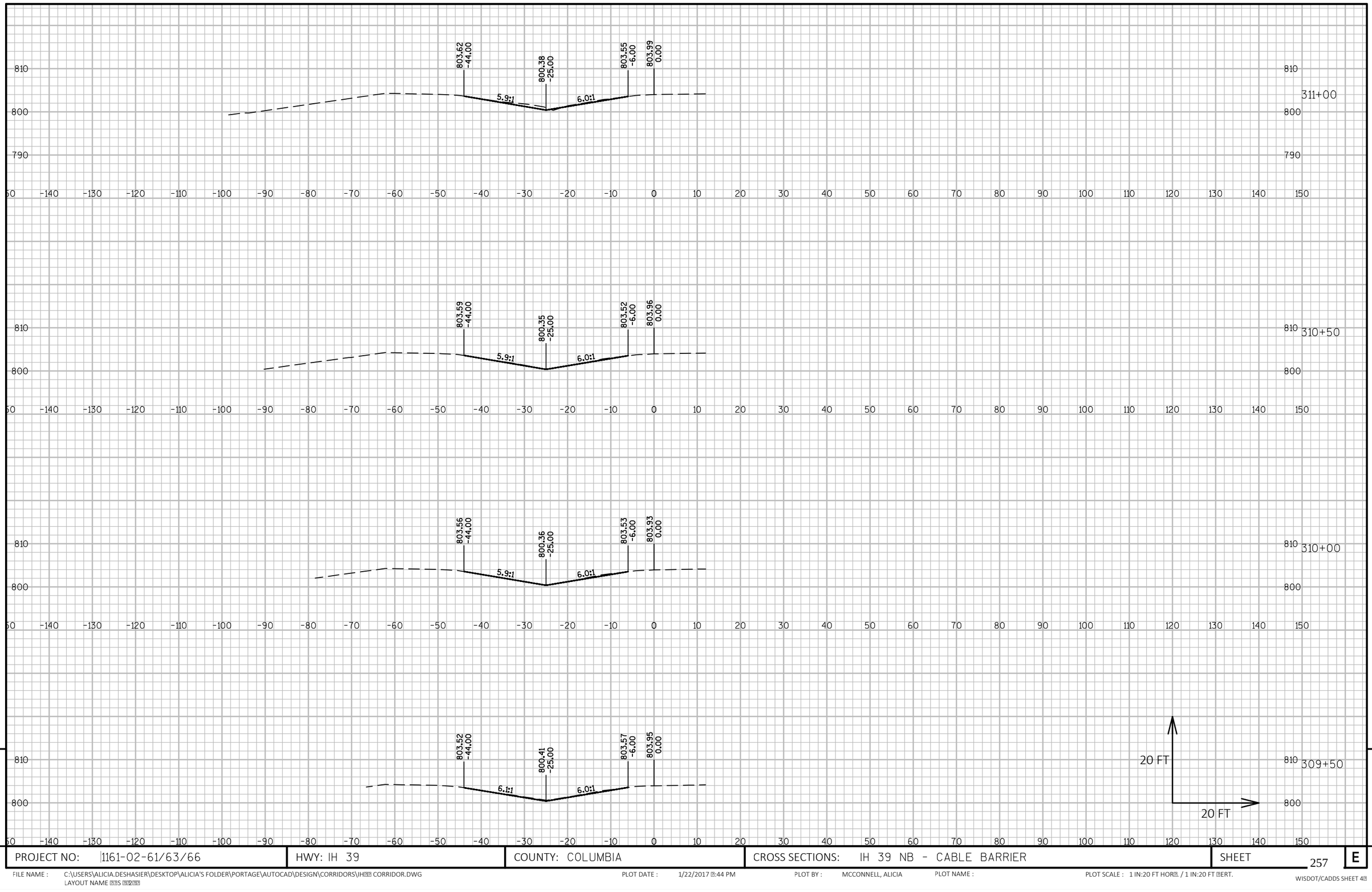


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 256	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH□□ CORRIDOR.DWG
LAYOUT NAME □□S □□2□□

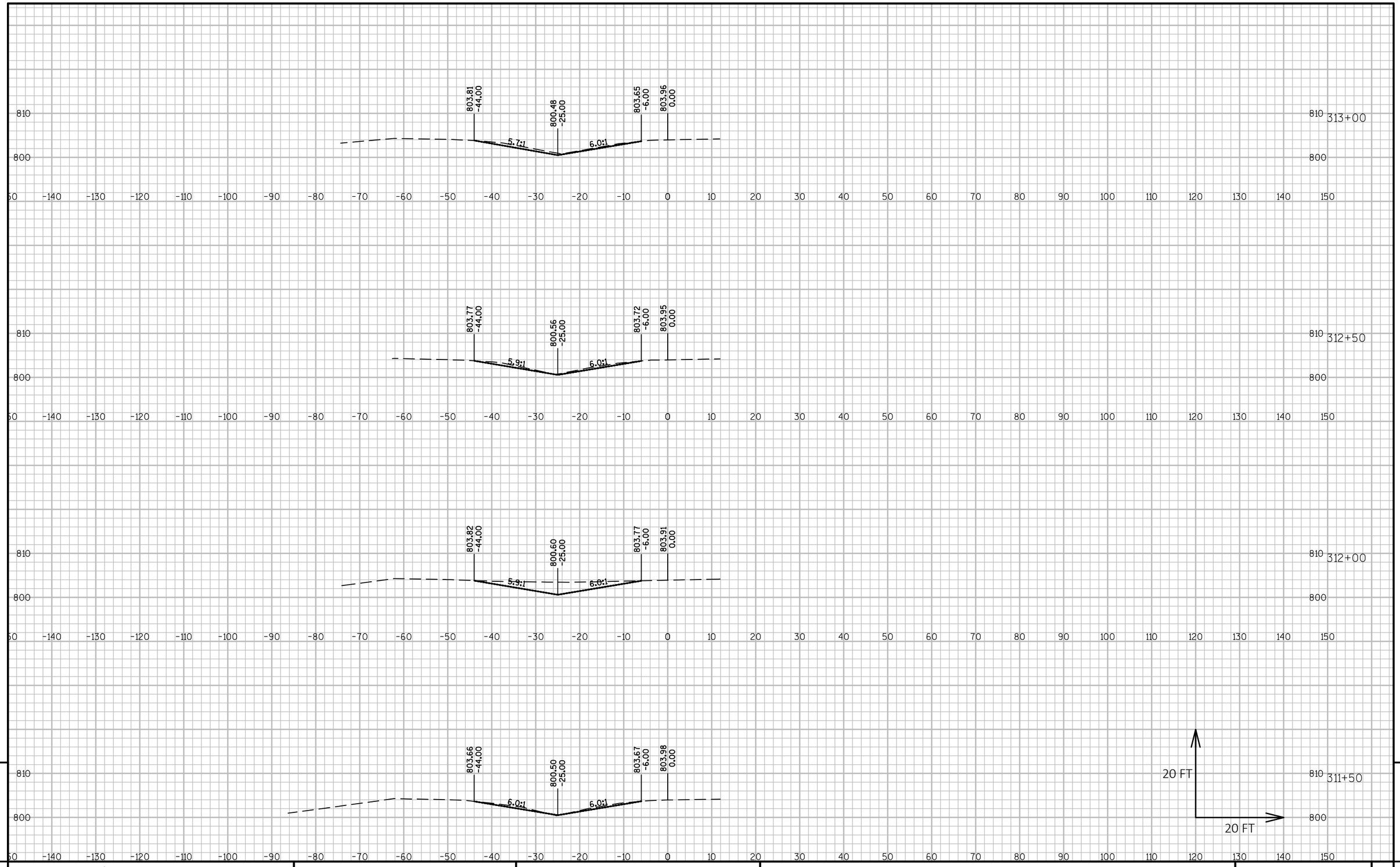
PLOT DATE : 1/22/2017 □:44 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR□ / 1 IN:20 FT □ERT.

WISDOT/CADDS SHEET 4□



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 257	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH□□ CORRIDOR.DWG
LAYOUT NAME □□S □□2□□
PLOT DATE : 1/22/2017 □:44 PM
PLOT BY : MCCONNELL, ALICIA
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HOR□ / 1 IN:20 FT □ERT.
WISDOT/CADDS SHEET 4□

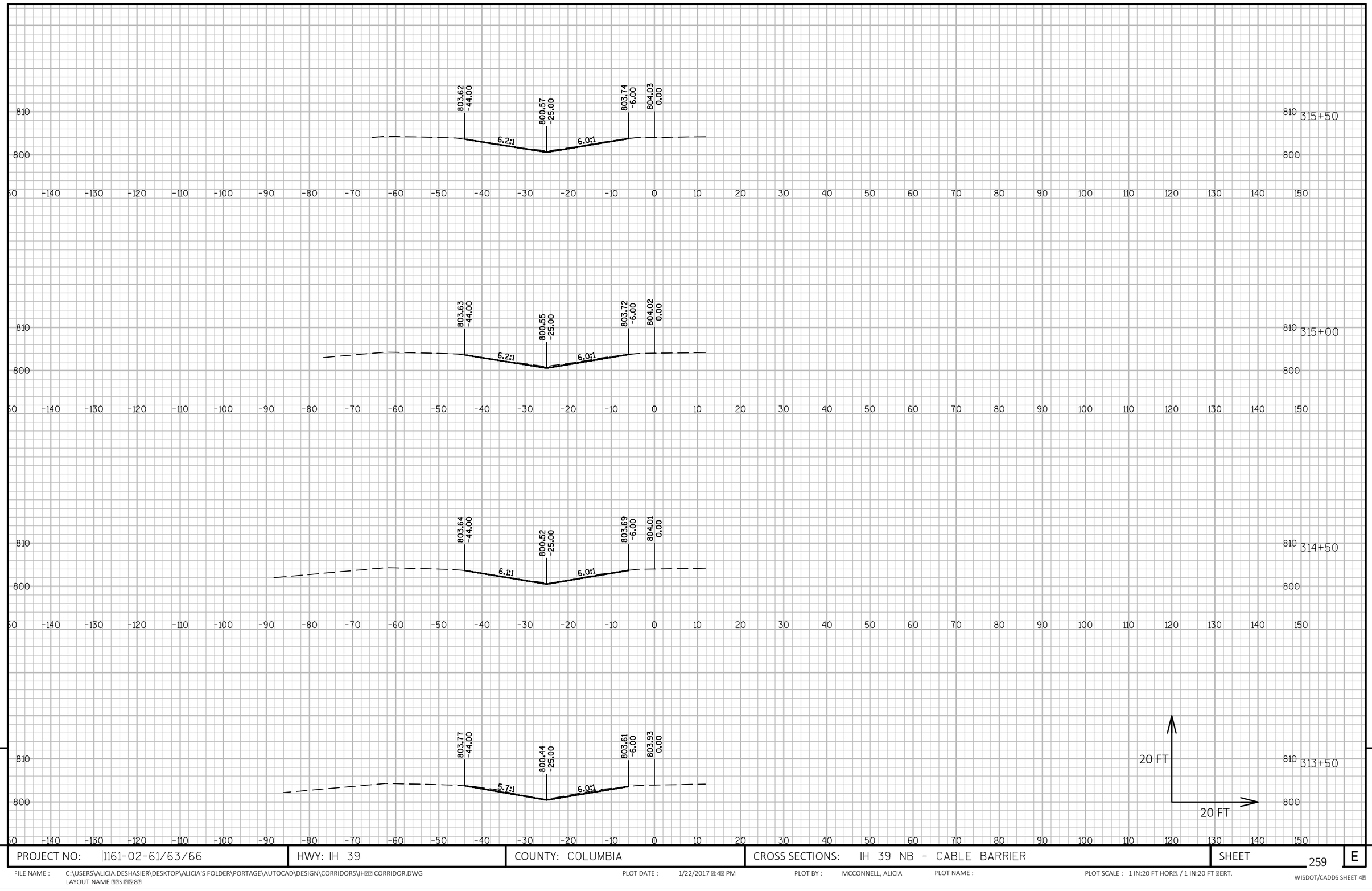


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 258	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

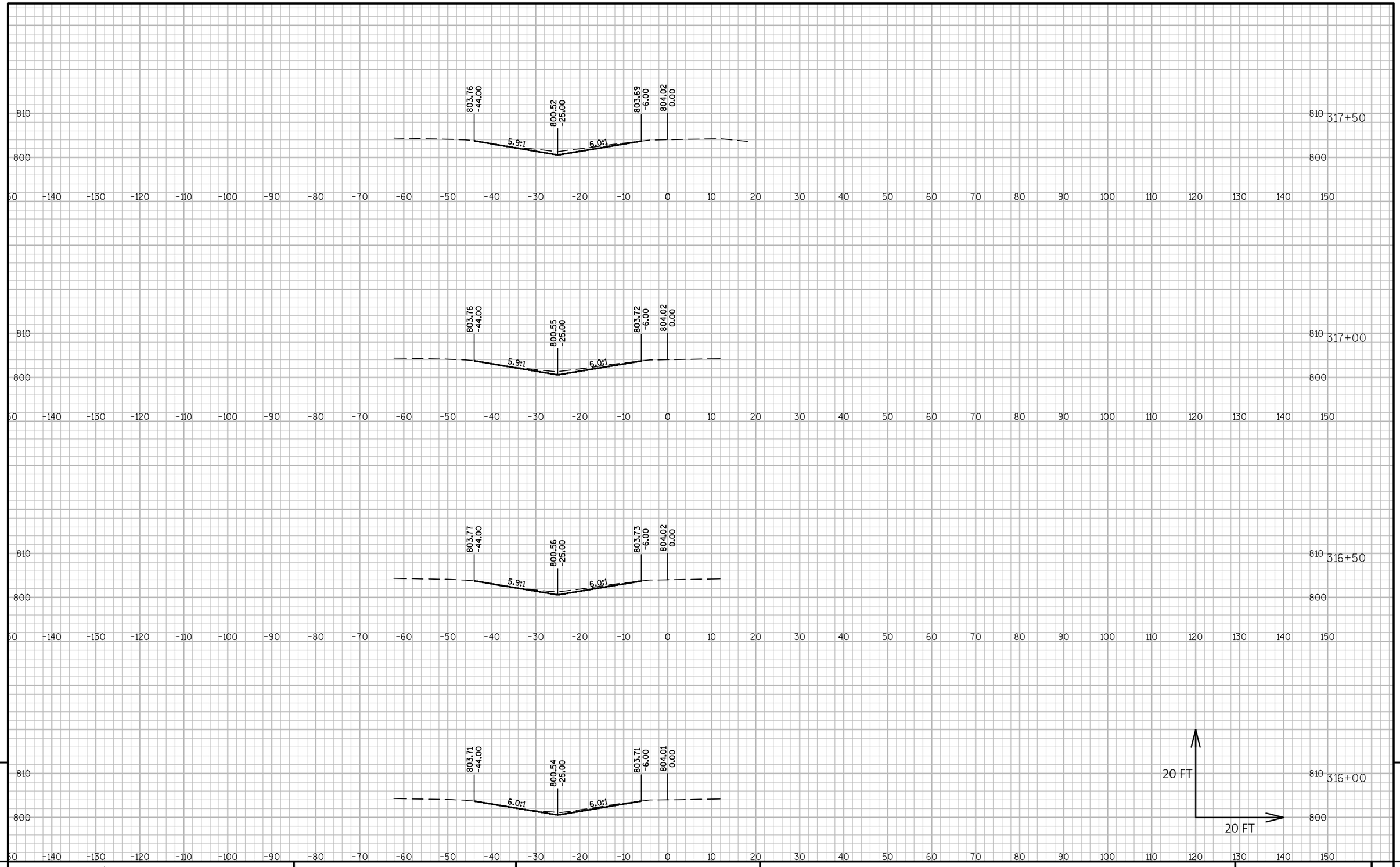
PLOT DATE : 1/22/2017 :4 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 259	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH□□ CORRIDOR.DWG
LAYOUT NAME □□S □□28□
PLOT DATE : 1/22/2017 □:4□ PM
PLOT BY : MCCONNELL, ALICIA
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HOR□. / 1 IN:20 FT □ERT.
WISDOT/CADDS SHEET 4□



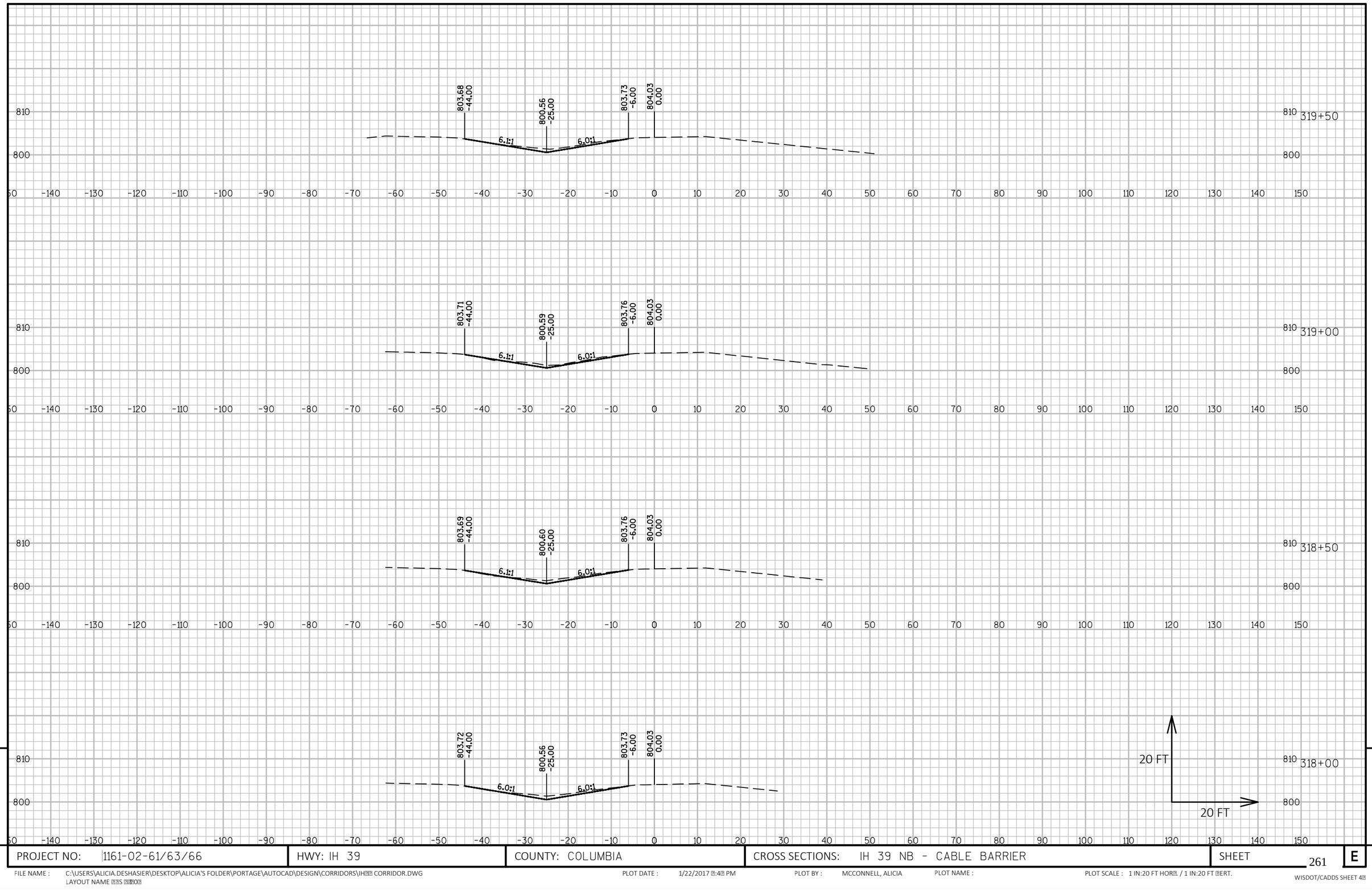
PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 260	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

PLOT DATE : 1/22/2017 :4 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME :

PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 261	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

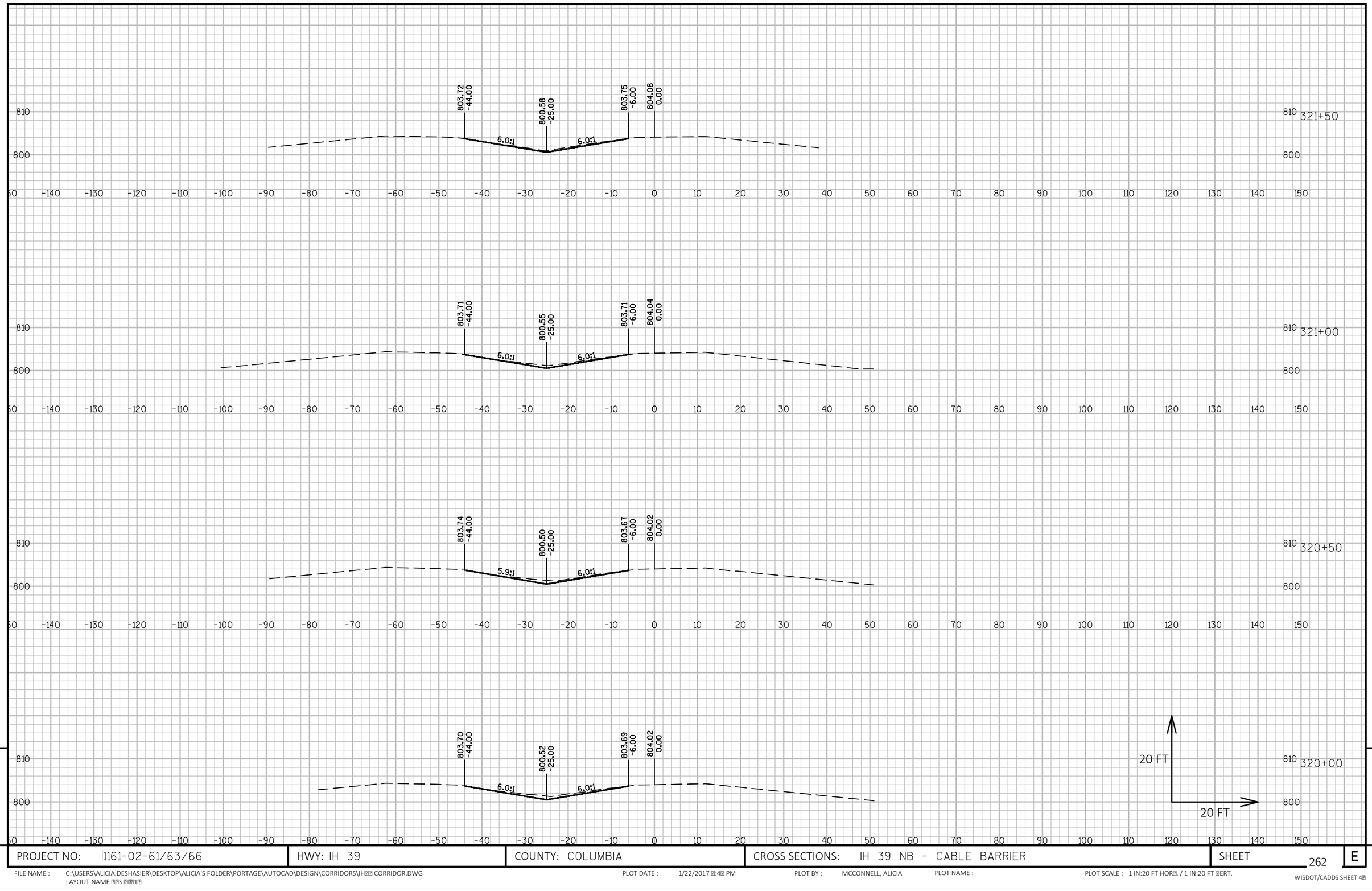
PLOT DATE : 1/22/2017 :4 PM

PLOT BY : MCCONNELL, ALICIA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 262	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S 1

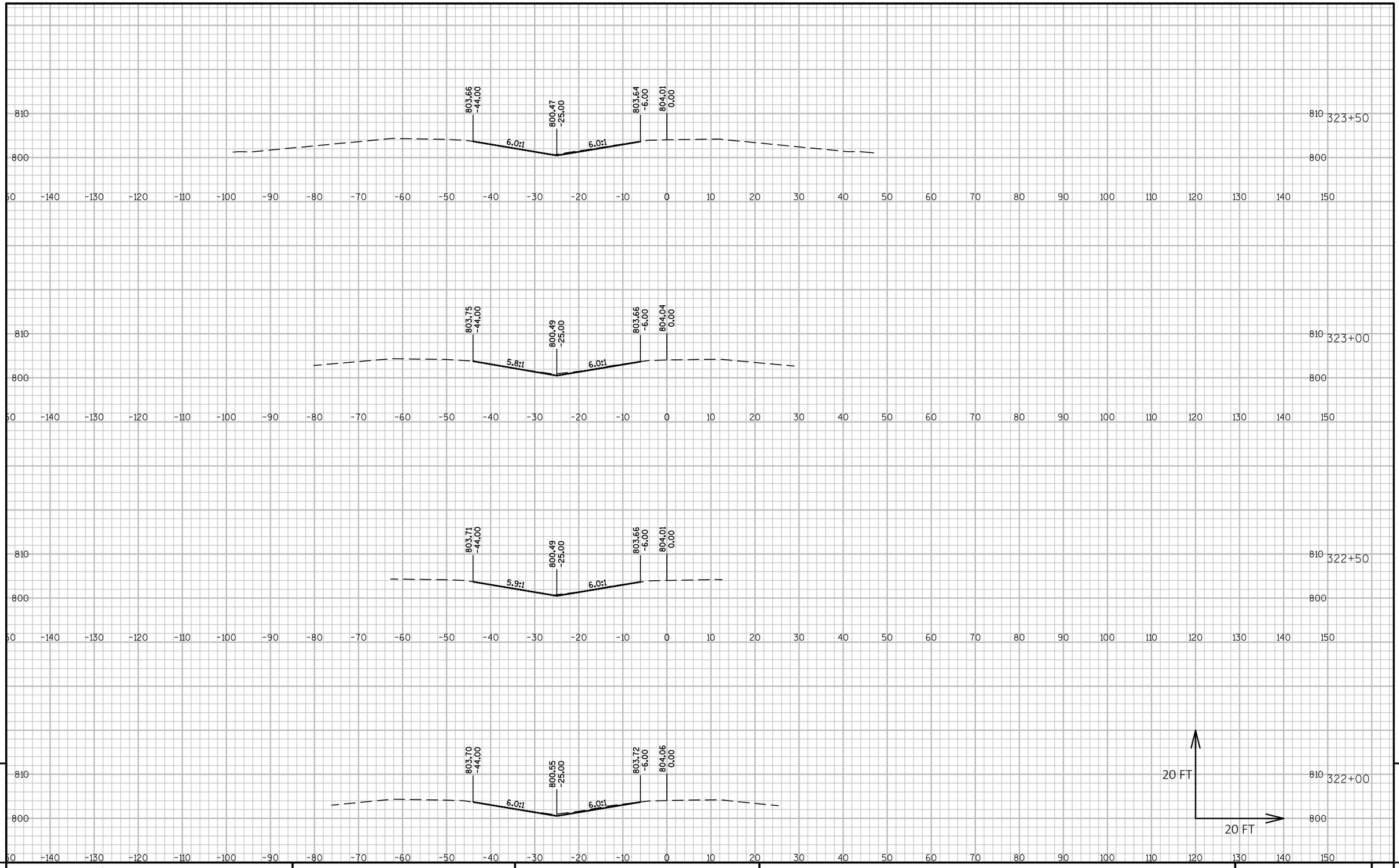
PLOT DATE : 1/22/2017 4 PM

PLOT BY : MCCONNELL, ALICIA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 263	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

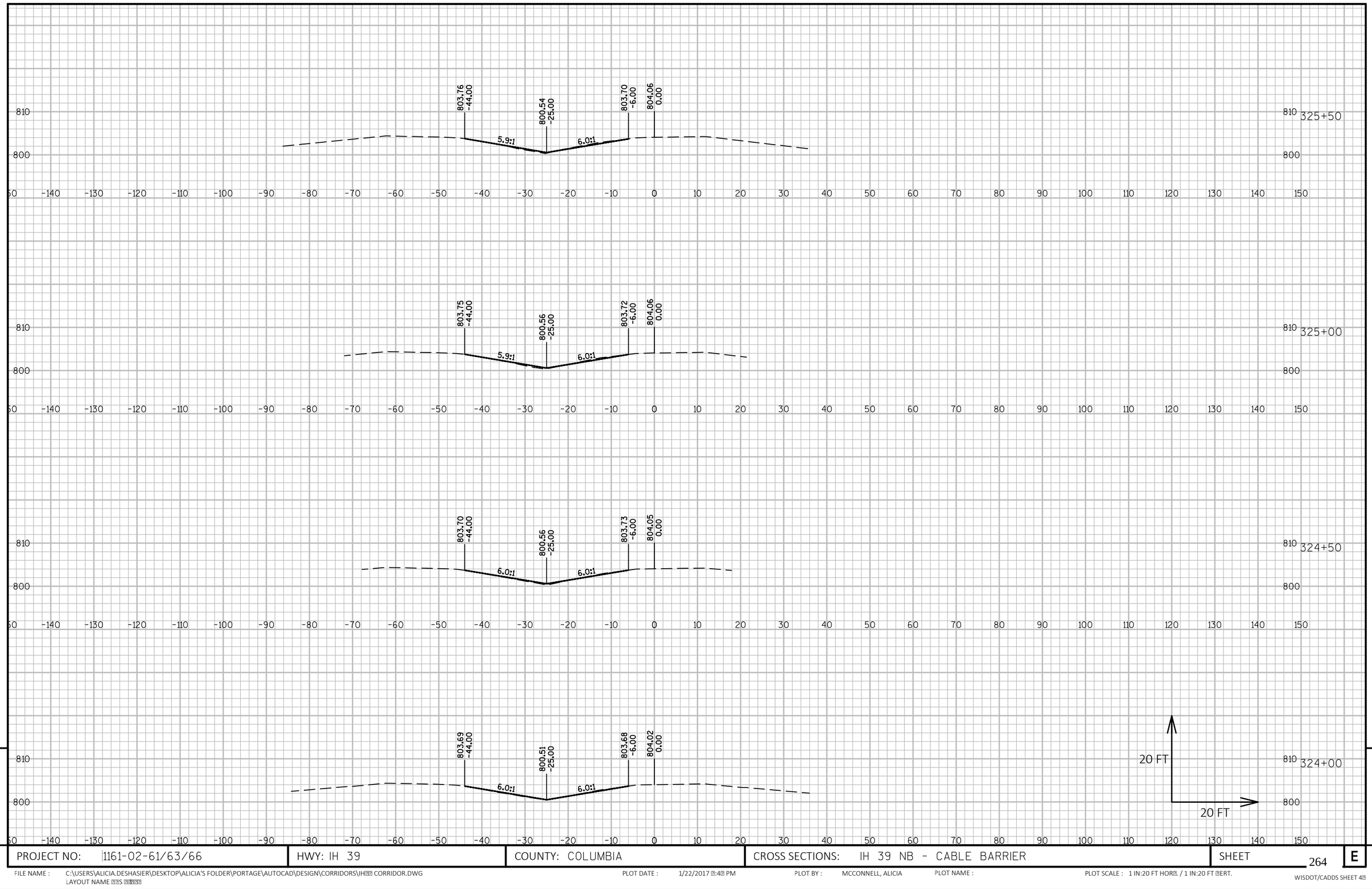
PLOT DATE : 1/22/2017 4 PM

PLOT BY : MCCONNELL, ALICIA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4



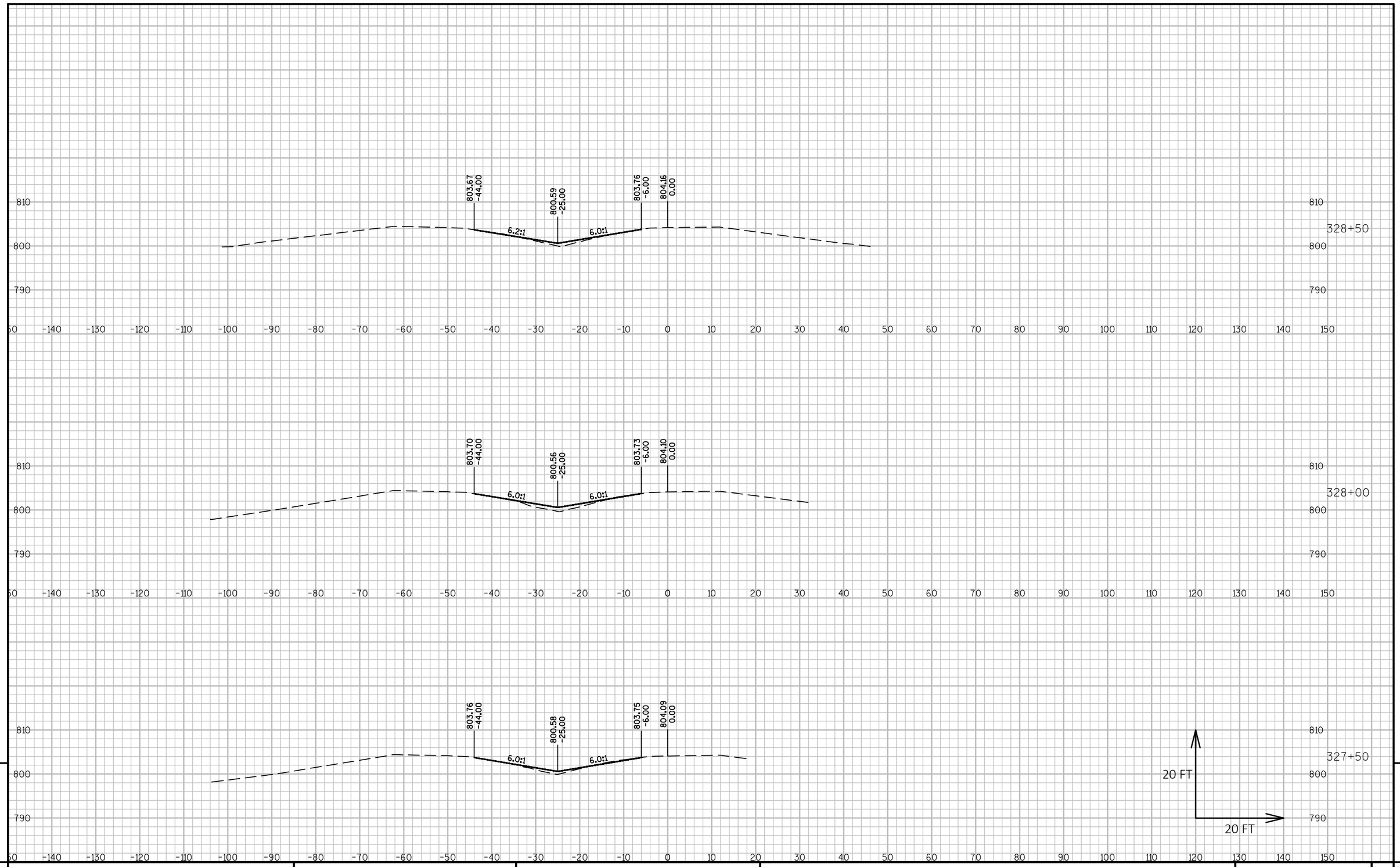
PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 264	E

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 265	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH□□ CORRIDOR.DWG
LAYOUT NAME □□S □□□4□

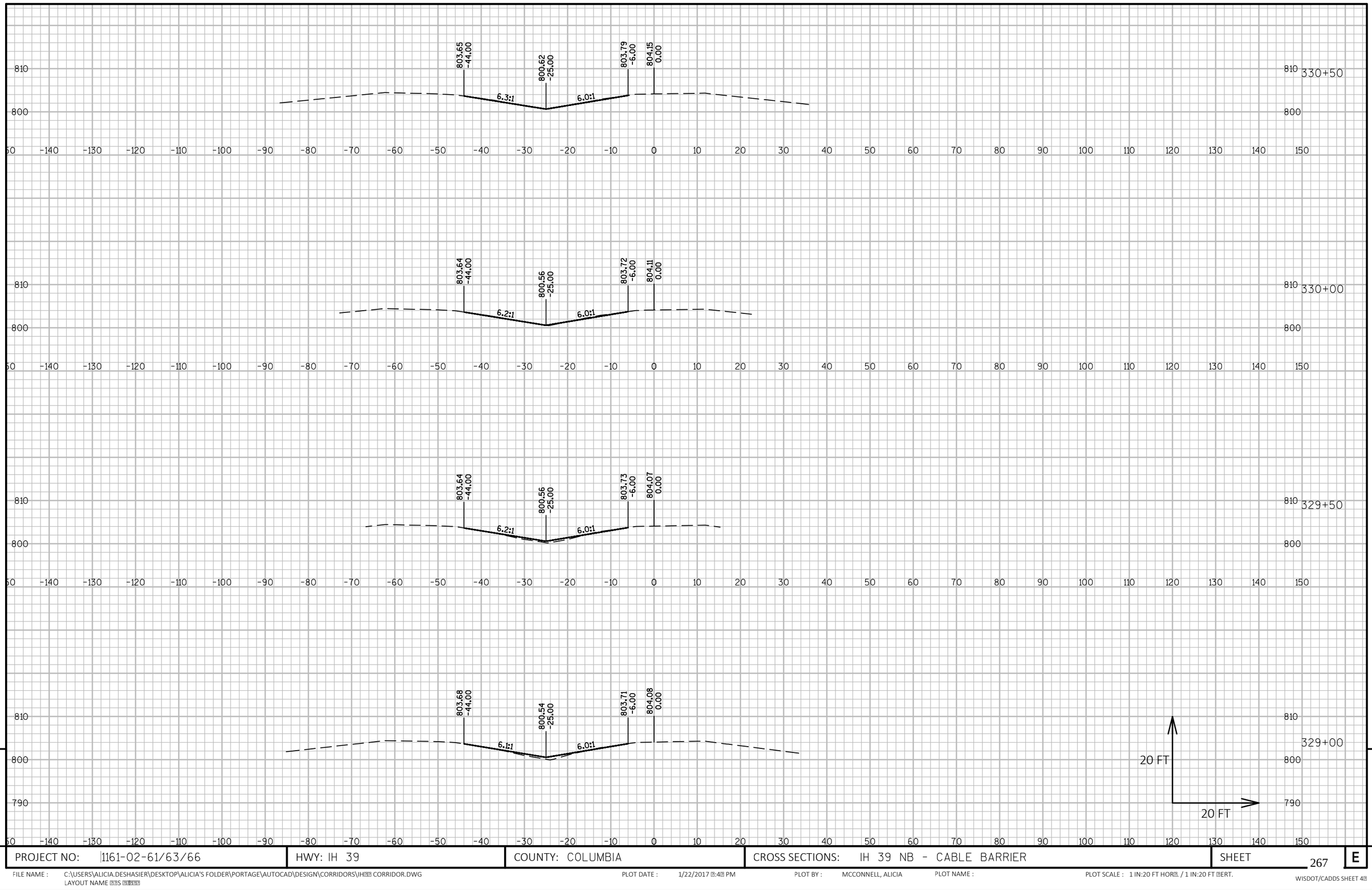
PLOT DATE : 1/22/2017 □:4□ PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR□. / 1 IN:20 FT □ERT.

WISDOT/CADDS SHEET 4□



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 266	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH□□ CORRIDOR.DWG
LAYOUT NAME □□S □□□□
PLOT DATE : 1/22/2017 □:4□ PM
PLOT BY : MCCONNELL, ALICIA
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HOR□. / 1 IN:20 FT □ERT.
WISDOT/CADDS SHEET 4□

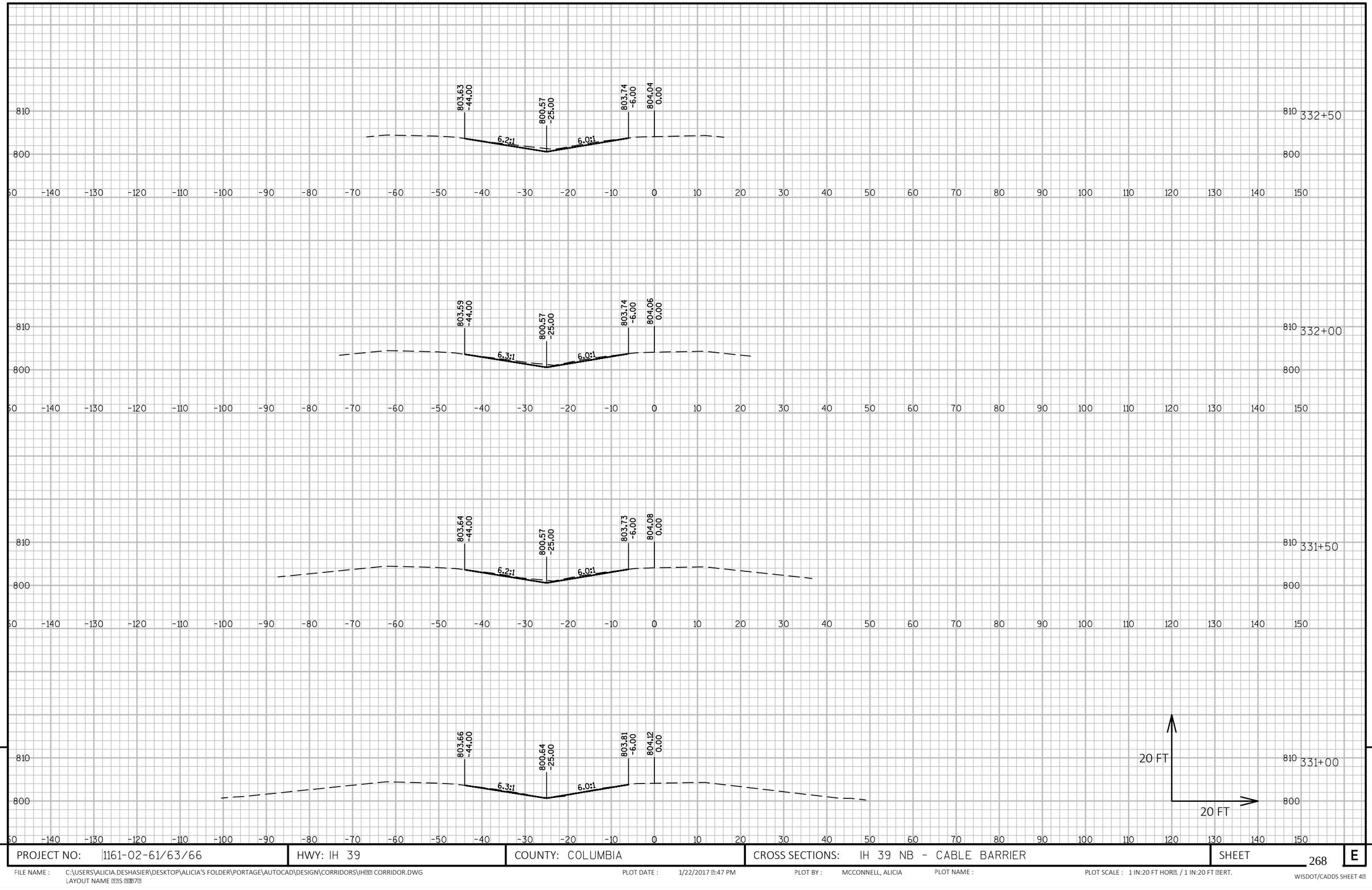


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 267	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

PLOT DATE : 1/22/2017 :4 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET 4

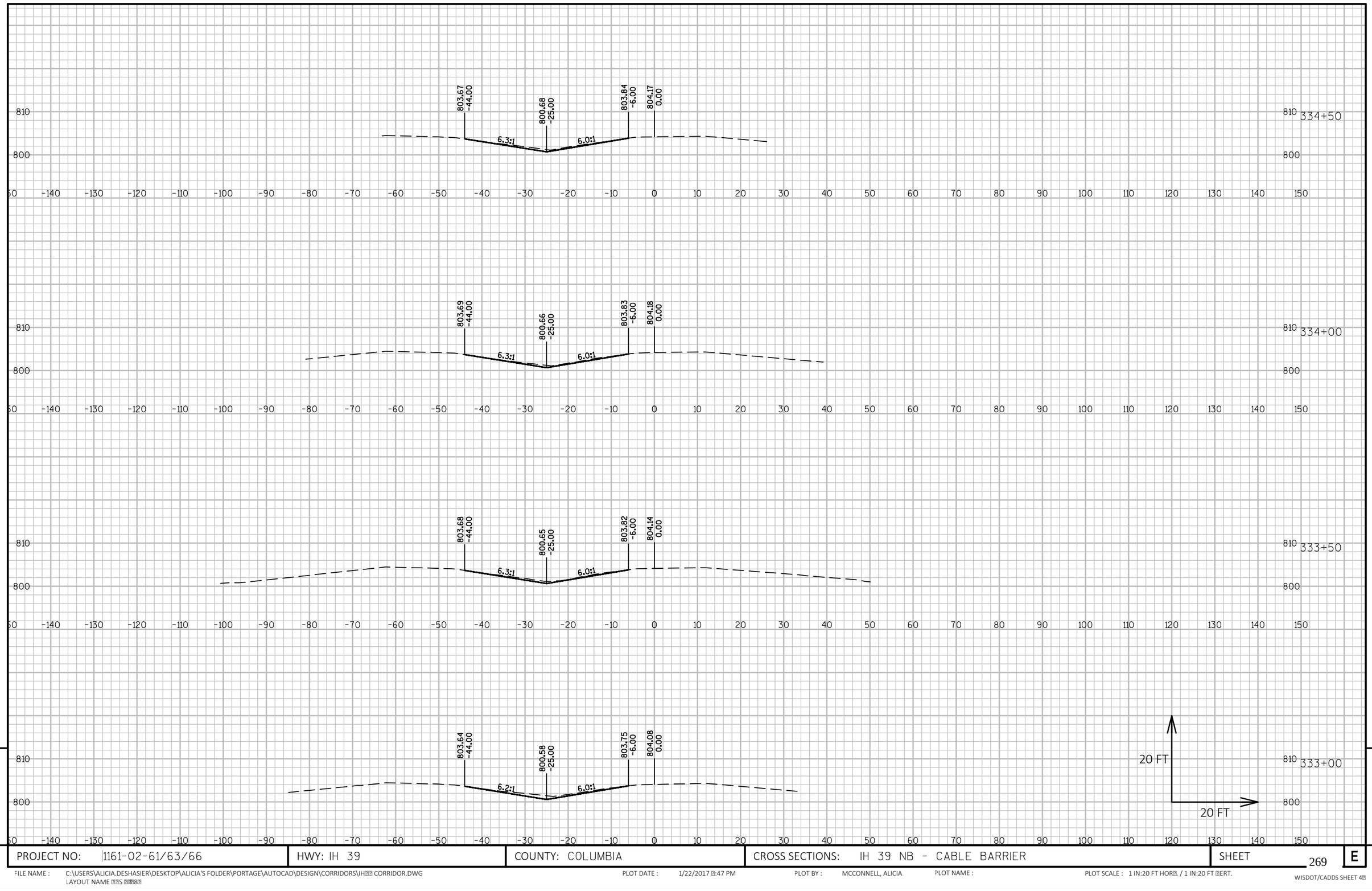


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 268	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

PLOT DATE : 1/22/2017 :47 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET

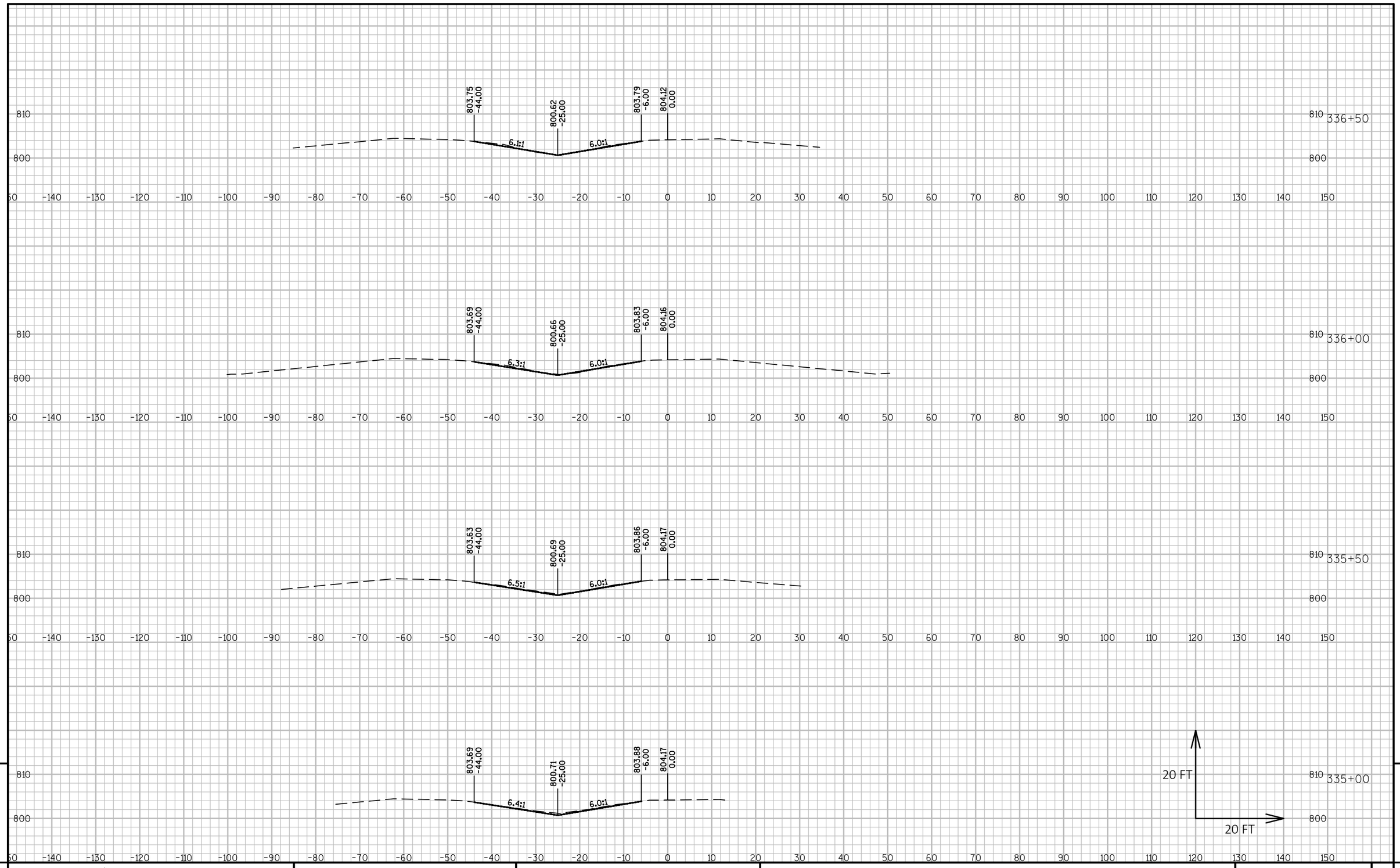


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 269	E

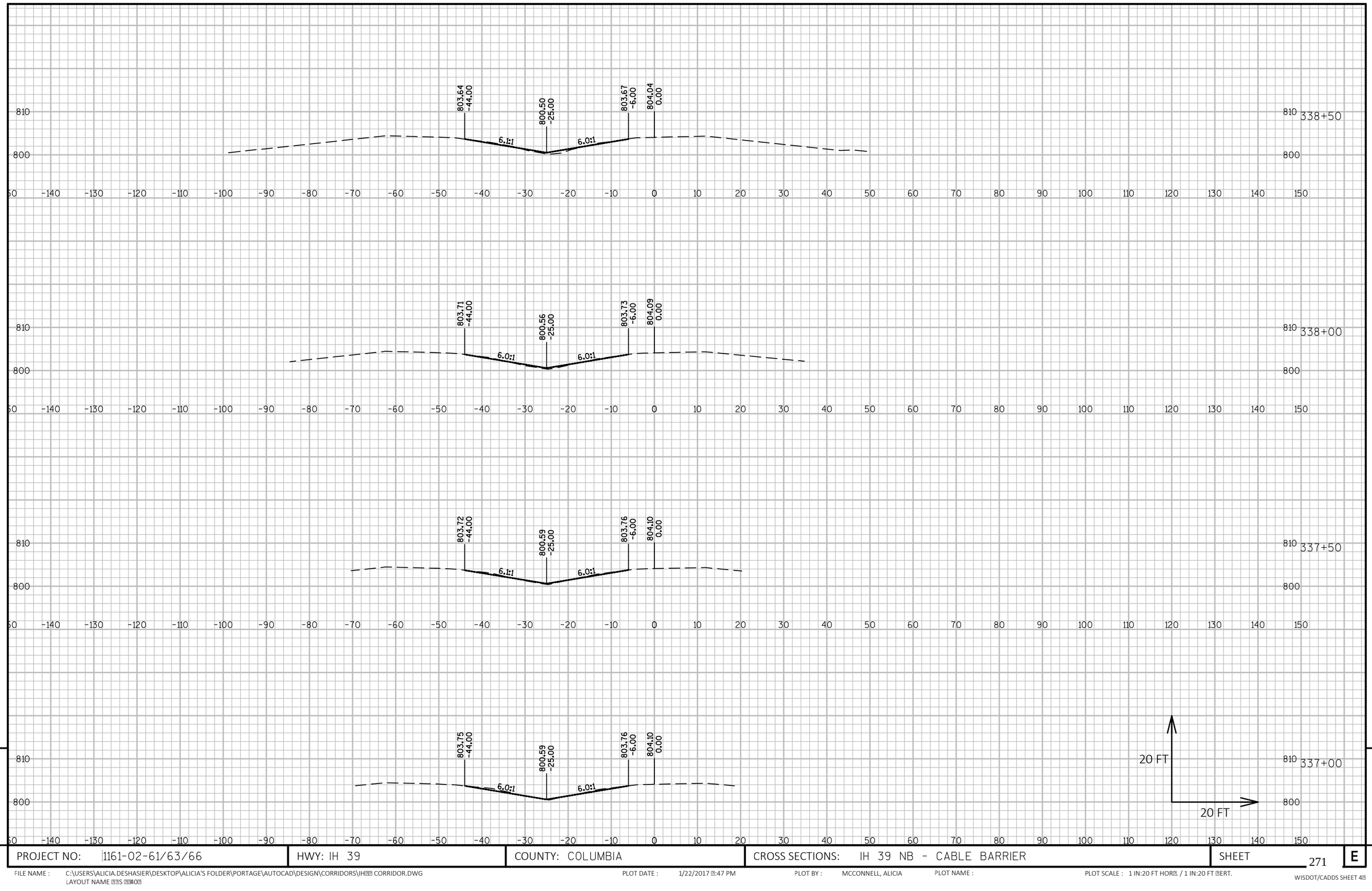
FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

PLOT DATE : 1/22/2017 :47 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.

WISDOT/CADDS SHEET

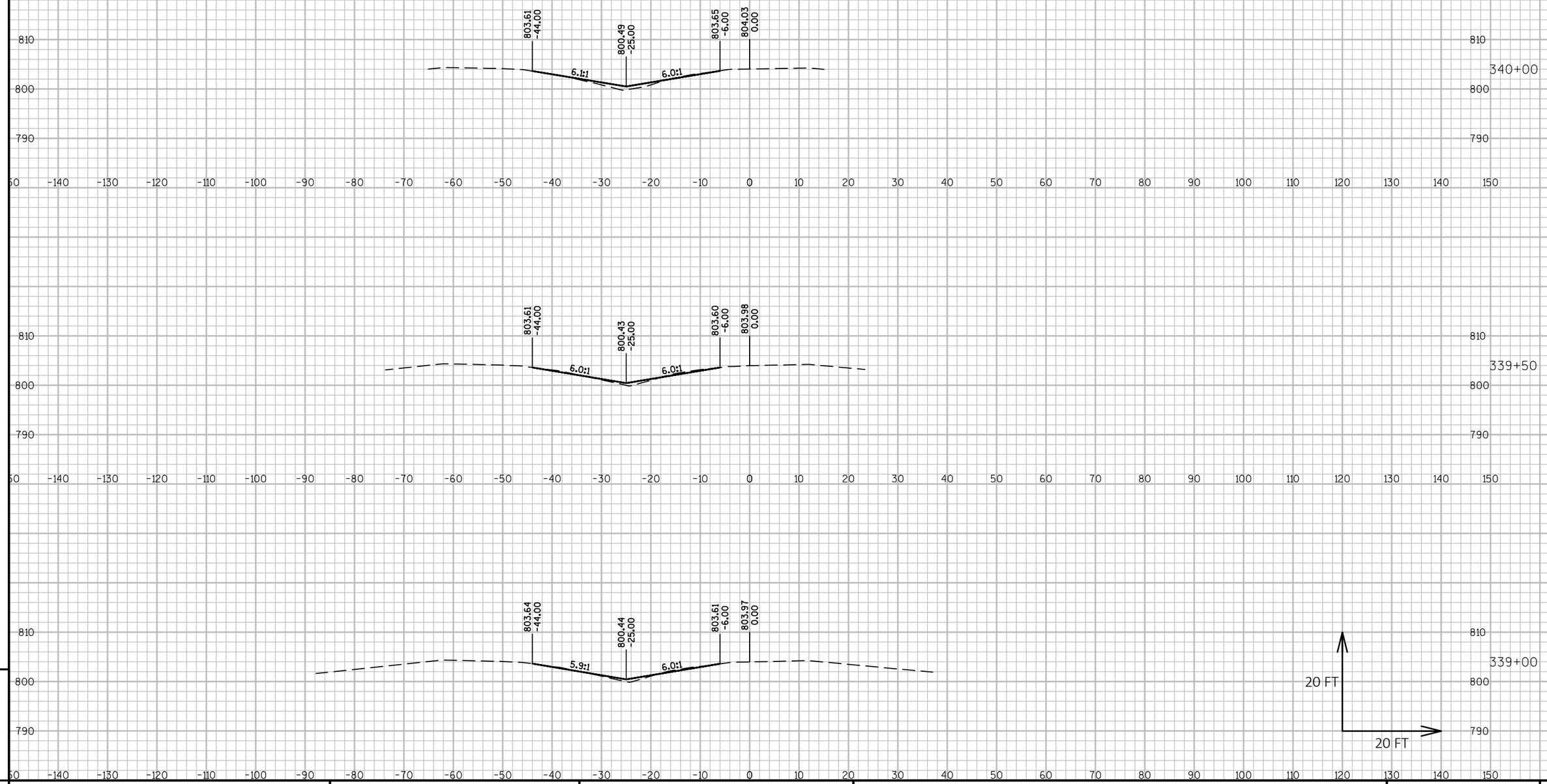


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 270	E



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 271	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH□□ CORRIDOR.DWG
LAYOUT NAME □□S □□40□
PLOT DATE : 1/22/2017 □:47 PM
PLOT BY : MCCONNELL, ALICIA
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HOR□ / 1 IN:20 FT □ERT.
WISDOT/CADDS SHEET 4□

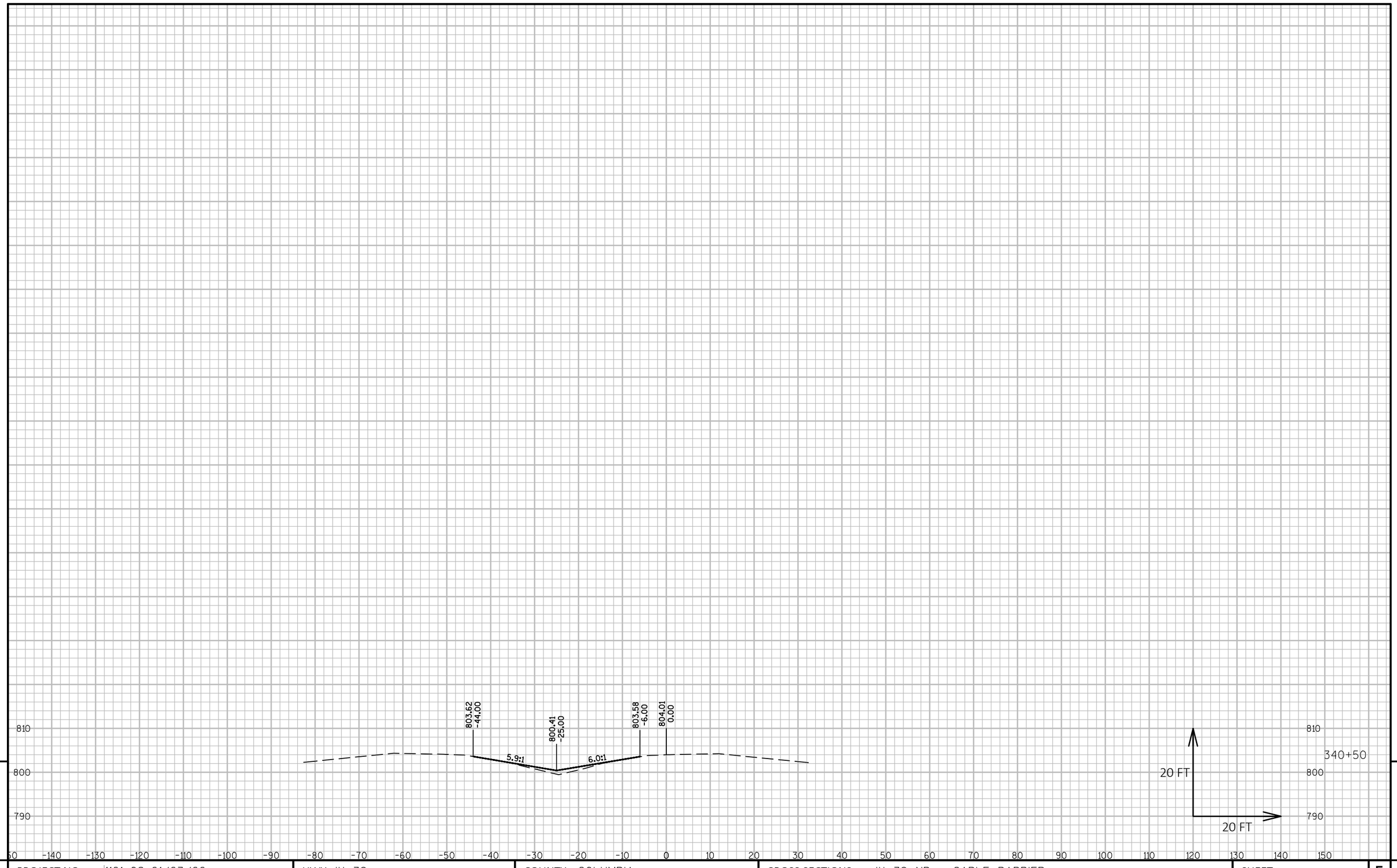


PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 272	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH□□ CORRIDOR.DWG
LAYOUT NAME □□S □□41□

PLOT DATE : 1/22/2017 □:48 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR□. / 1 IN:20 FT □ERT.

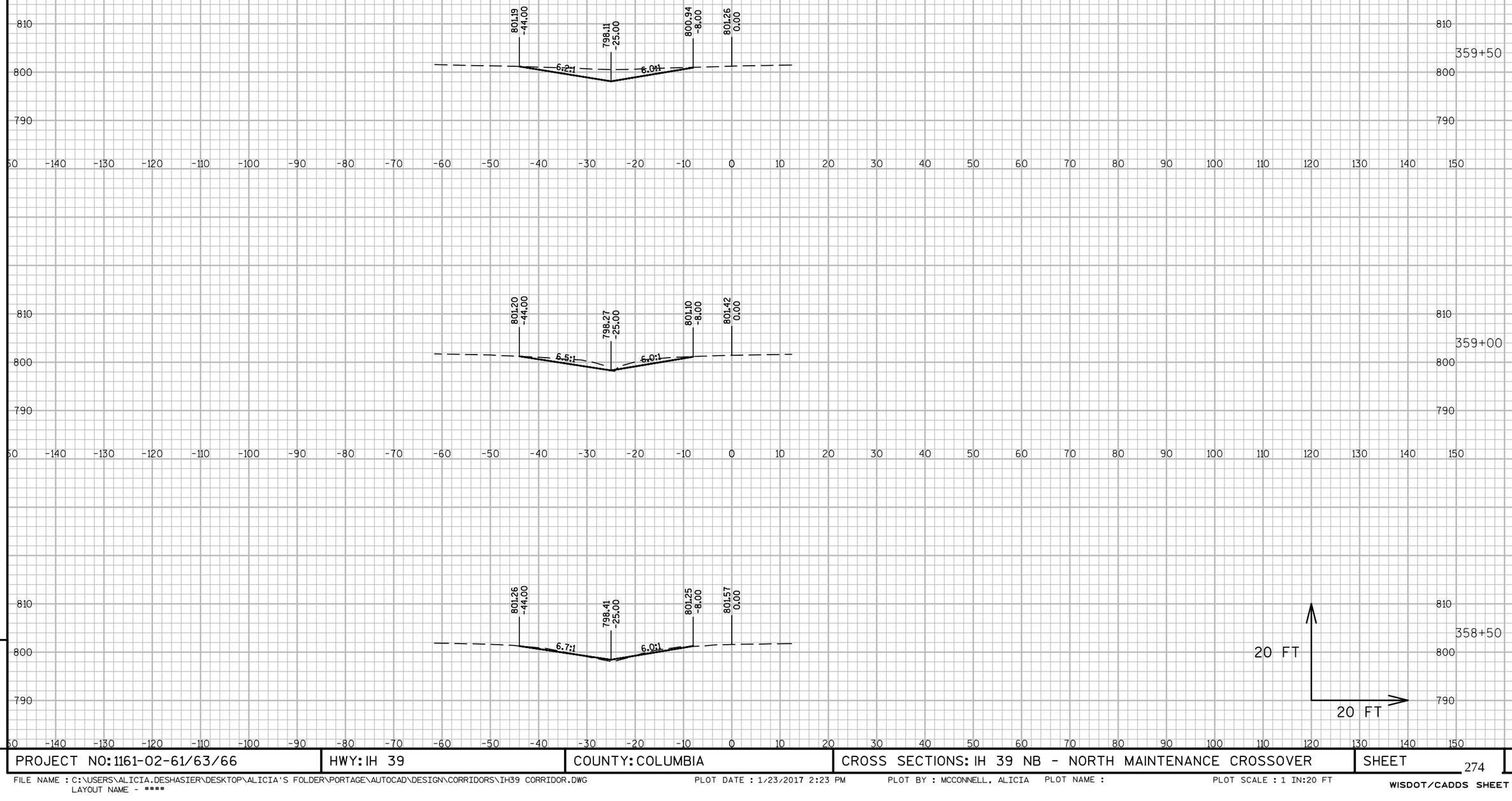
WISDOT/CADDS SHEET 4□



PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - CABLE BARRIER	SHEET 273	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH CORRIDOR.DWG
LAYOUT NAME S

PLOT DATE : 1/2/2017 12:40 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT HOR / 1 IN:20 FT ERT.



9

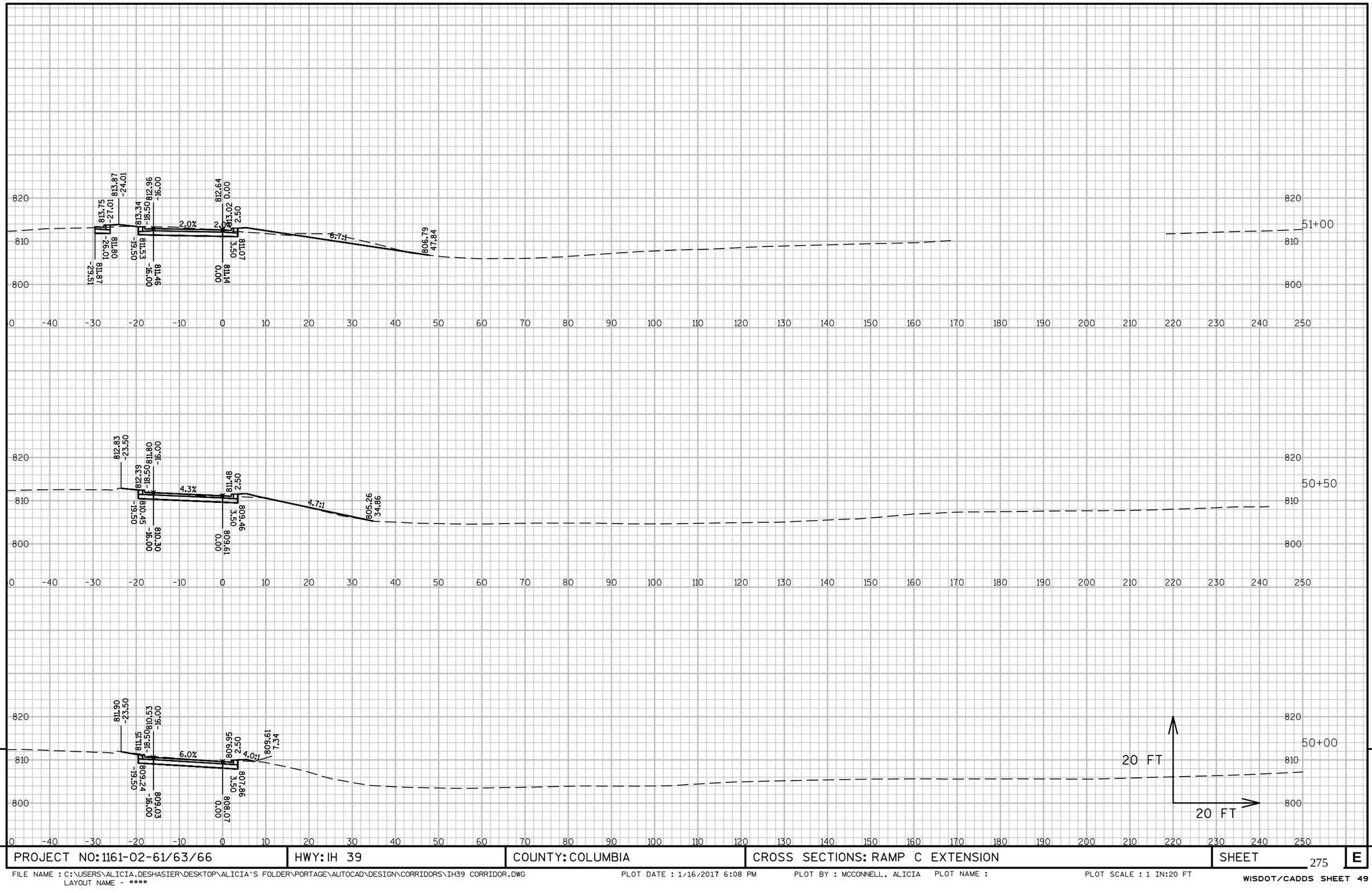
9

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39 NB - NORTH MAINTENANCE CROSSOVER	SHEET 274 E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH39 CORRIDOR.DWG
LAYOUT NAME - ****

PLOT DATE : 1/23/2017 2:23 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

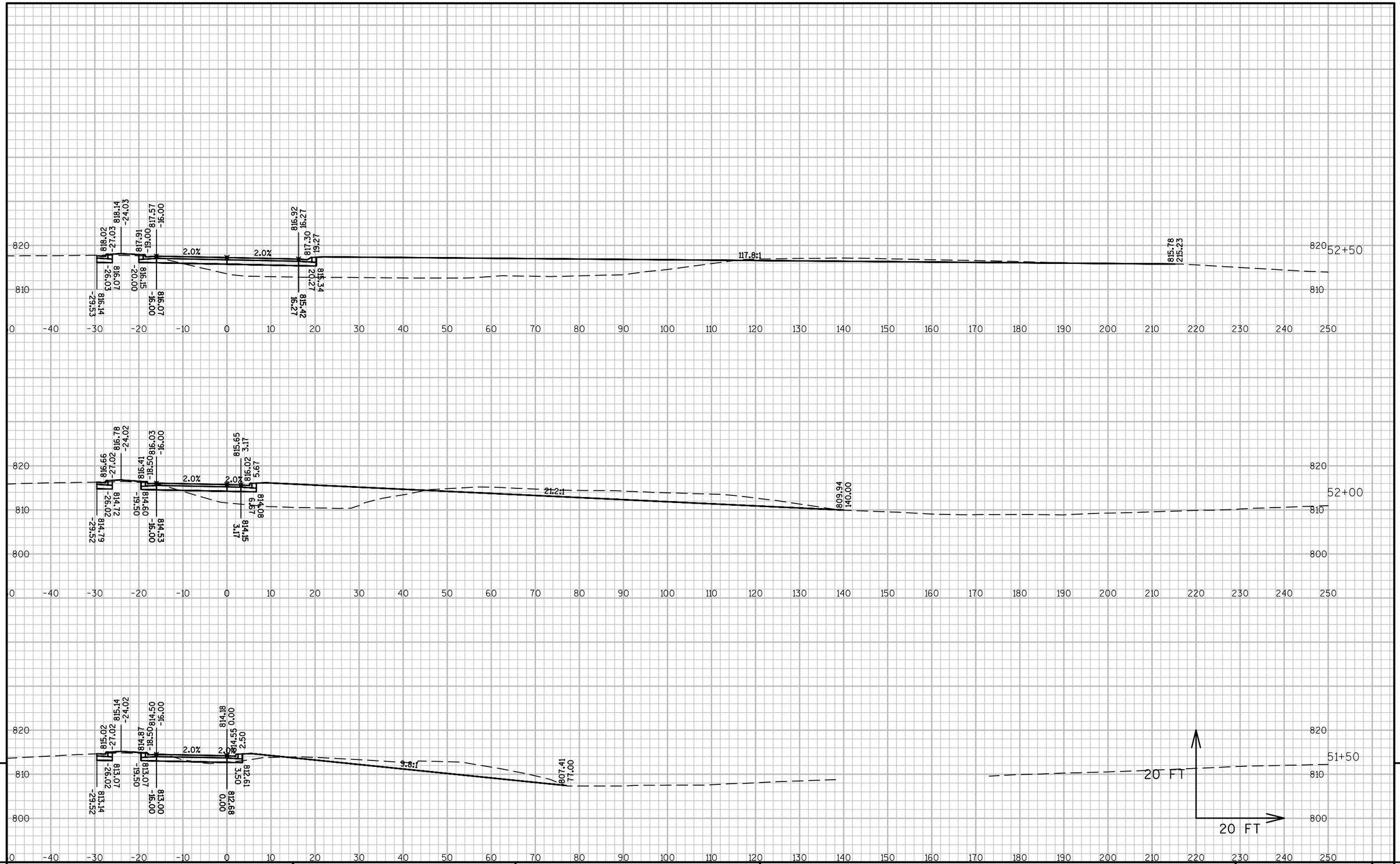


9

9

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: RAMP C EXTENSION	SHEET 275	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH39 CORRIDOR.DWG
LAYOUT NAME - ****
PLOT DATE : 1/16/2017 6:08 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1161-02-61/63/66	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: RAMP C EXTENSION	SHEET 276	E

FILE NAME : C:\USERS\ALICIA.DESHASIER\DESKTOP\ALICIA'S FOLDER\PORTAGE\AUTOCAD\DESIGN\CORRIDORS\IH39 CORRIDOR.DWG
LAYOUT NAME - ****

PLOT DATE : 1/16/2017 6:08 PM PLOT BY : MCCONNELL, ALICIA PLOT NAME : PLOT SCALE : 1 IN:20 FT

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov