WIS

JULY 2019

PROJECT ID: 1510-02-72

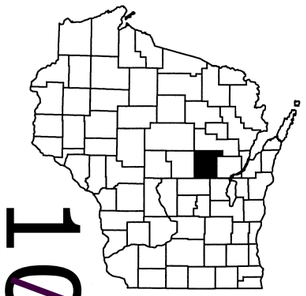
WITH:

COUNTY: WAUPACA

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 = 310



10

N

DESIGN DESIGNATION

			USH 10	CTH E
A.A.D.T.	(2020)	=	21,400	3,000
A.A.D.T.	(2040)	=	25,600	3,400
D.H.V.		=		
D.D.		=	59/41	
T.		=	13.4	
DESIGN SPEED		=	70 MPH	30 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 (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WAUPACA - APPLETON

CTH E STRUCTURE B-68-0022

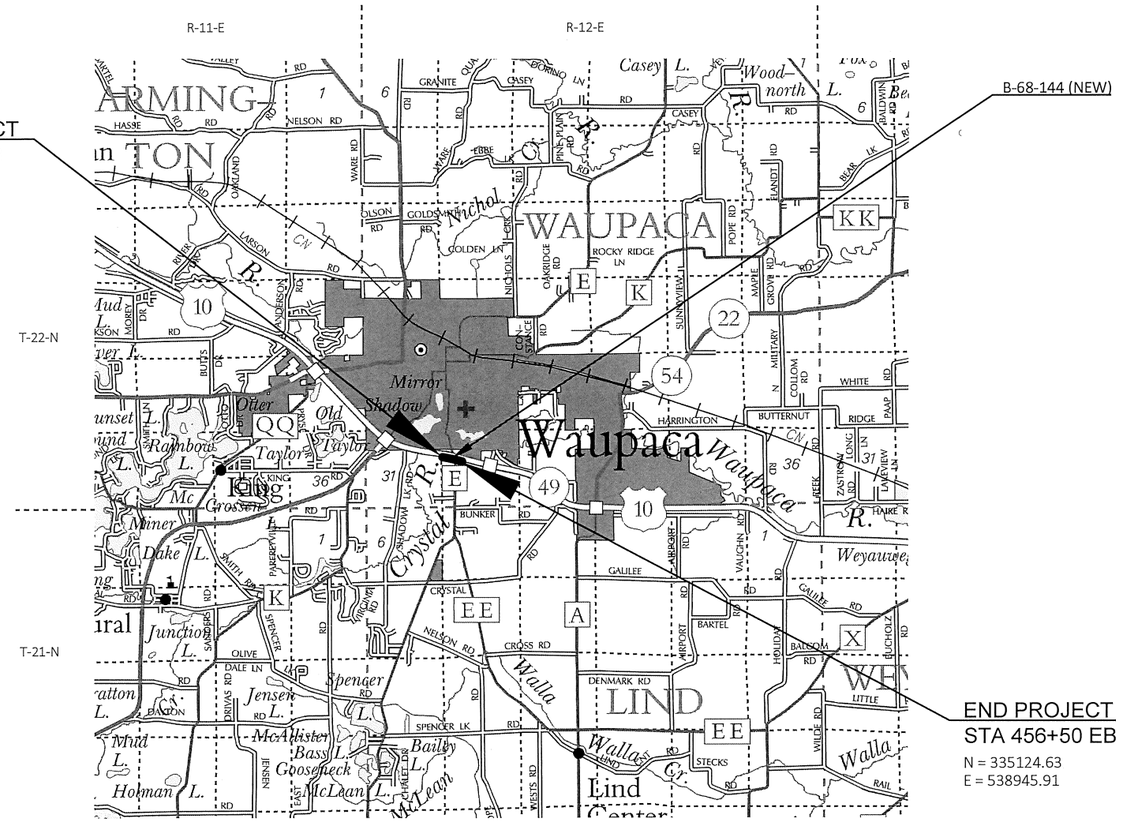
USH 10

WAUPACA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1510-02-72	WISC 2019499	1

STATE PROJECT NUMBER

1510-02-72



TOTAL NET LENGTH OF CENTERLINE = 0.204 MI

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NORTH CENTRAL REGION
Designer	ANDREW CASPER
Project Manager	MARK STEIDL
Regional Examiner	CHERYL SIMON
Regional Supervisor	MICHAEL KRETSCHMER

APPROVED FOR THE DEPARTMENT

DATE: 5/3/19 (Signature)

E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\010101-TI.DWG

PLOT DATE : 5/10/2018 3:07 PM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

DNR LIAISON

WISCONSIN DEPT. OF NATURAL RESOURCES
CASEY JONES
WDNR EA LIAISON
473 GRIFFITH AVENUE
WISCONSIN RAPIDS, WI 54494
PHONE: (715) 421-7867 WORK
casey.jones@wisconsin.gov

GENERAL NOTES

CURVE DATA IS BASED ON THE ARC DEFINITION.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

INLET GRATE ELEVATIONS REFERRED TO ON INLET NOTES ARE GRATE FLOW LINE ELEVATIONS.

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

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF A LANDMARK IN ALL AREAS WHERE SUCH A LANDMARK MAY EXIST.

WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.

ALL PROPOSED "INLETS MEDIAN 2 GRATE" SHALL BE CONSTRUCTED WITH NO SLOPE. SEE SDD (INLETS MEDIAN 1 & 2 GRATE) FOR MORE INFORMATION.

UTILITIES

AT&T Wisconsin-Communication Line
Chuck Bartelt
70 E Division St
Fond Du Lac, WI 54935
PHONE: (920) 929-1013 WORK
PHONE: (920) 410-5105 MOBILE
E-MAIL: CB1461@ATT.COM

We Energies-Gas/Petroleum
Jacob Hulbert
500 S 116th St
West Allis, WI, 53214
PHONE: (414) 944-5575 WORK
PHONE: (414) 651-1577 MOBILE
E-MAIL: Jacob.Hulbert@we-energies.com

Wisconsin Public Service Corporation-Electricity
Dean Pieczynski
1700 Sherman St
Wausau, WI 54401
PHONE: (715) 848-7384 Office
PHONE: (715) 498-2920 Mobile
E-MAIL: ddpieczynski@wisconsinpublicservice.com

Charter Communications - Communication Line
Rudi Rudiger
5024 Heffron Street
Stevens Point, WI 54481
PHONE: (715) 204-5339 Office
E-MAIL: Rudi.rudiger@charter.com

City of Waupaca-Water
Justin Berrens
111 S. Main Street
Waupaca, WI 54981
PHONE: (715) 250-3040 Mobile
PHONE: (715) 258-4420 Office
E-MAIL: jberrens@cityofwaupac.org

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

2

2

CITY
OF
WAUPACA

N

LAKESIDE PKWY

USH 10 WB

USH 10 EB

390WB

390EB

400WB

400EB

410WB

410EB

420WB

420EB

430WB

430EB

440WB

440EB

450WB

450EB

460WB

460EB

470WB

470EB

480WB

480EB

STH 22

B-68-74 (EXISTING)

B-68-77 (EXISTING)

B-68-21 (EXISTING)

CRYSTAL RIVER

B-68-75 (EXISTING)

BEGIN CONSTRUCTION
STA 425+50EB

BEGIN PROJECT
STA 445+75 EB

CTH E (BERLIN ST)

302T

END CONSTRUCTION
STA 115+30.35E

B-68-76 (EXISTING)

END PROJECT
STA 456+50 EB

CHURCHILL STEET

301T

BEGIN CONSTRUCTION
STA 110+48.96E

B-68-144 (NEW)
B-68-22 (EXISTING)

END CONSTRUCTION
STA 467+50EB

TOWN
OF
WAUPACA

CTH E

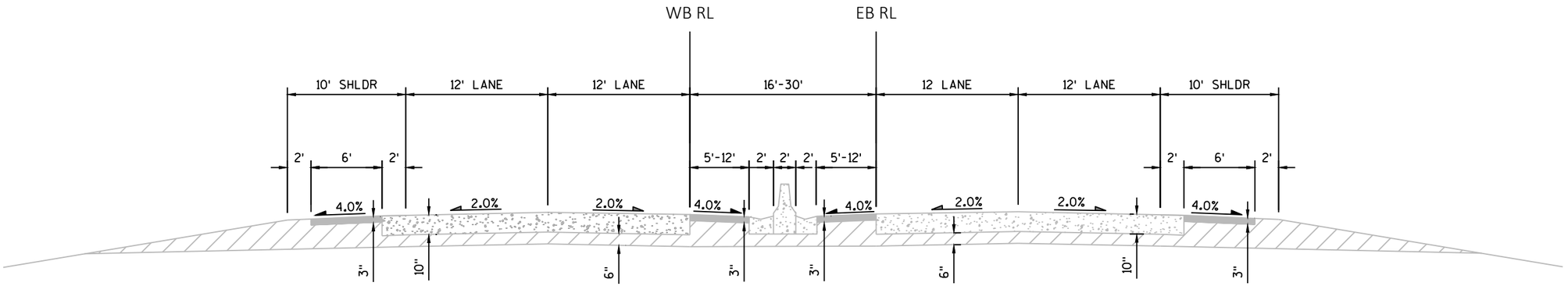
PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 01-po

PLOT DATE : 3/9/2018 11:08 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : ############

WISDOT/CADDS SHEET 42

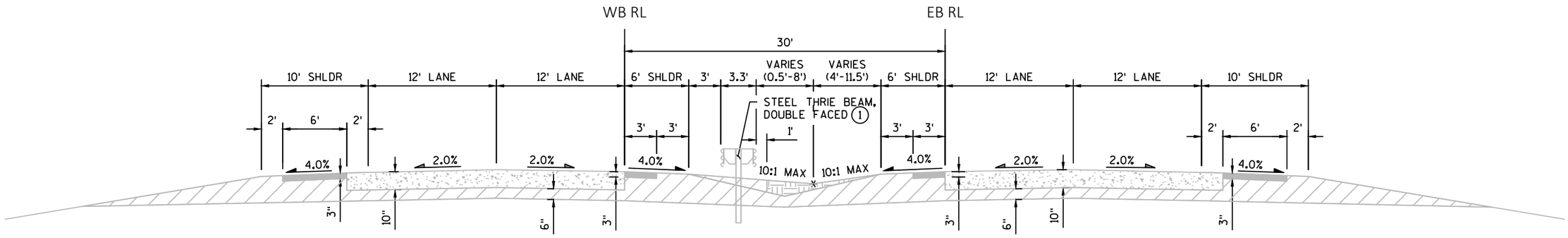
2



EXISTING TYPICAL SECTION USH 10 (CONCRETE BARRIER)
STA 408+00EB TO 440+00EB

LEGEND

- EXISTING BASE AGGREGATE DENSE
- EXISTING HMA PAVEMENT
- EXISTING CONCRETE PAVEMENT
- EXISTING TOPSOIL



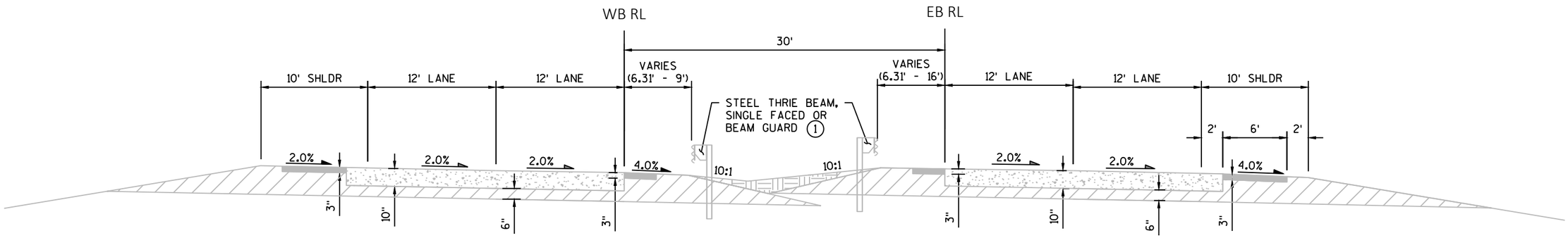
EXISTING TYPICAL SECTION USH 10 (STEEL THRIE BEAM, DOUBLE FACED)
STA 440+00.00EB TO 445+00EB
STA 454+00EB TO 470+00.00EB

NOTES

(1) NO BEAMGUARD EXISTS FROM 450+54EB TO 464+00EB

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN: TYPICAL SECTIONS	SHEET 4	E

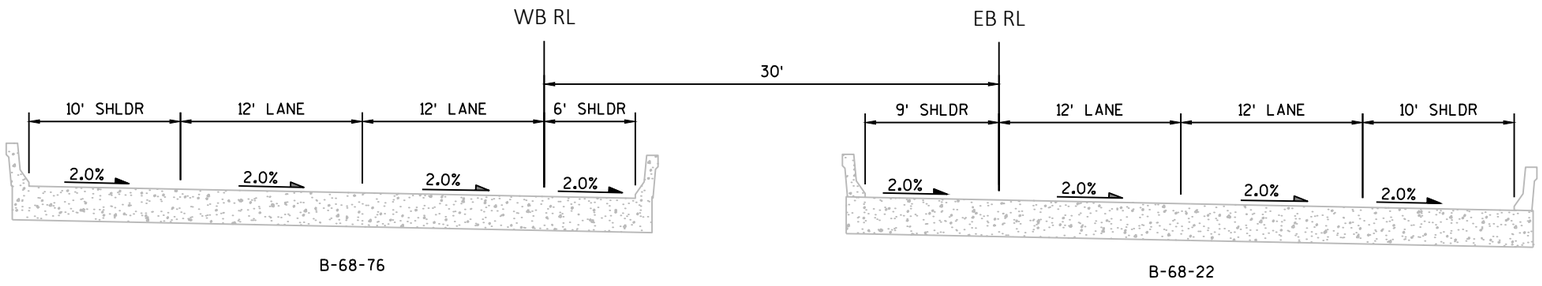
2



EXISTING TYPICAL SECTION USH 10 (STEEL THRIE BEAM, SINGLE FACED)
STA 445+00EB TO 448+71EB
STA 449+84EB TO 454+00EB

NOTES

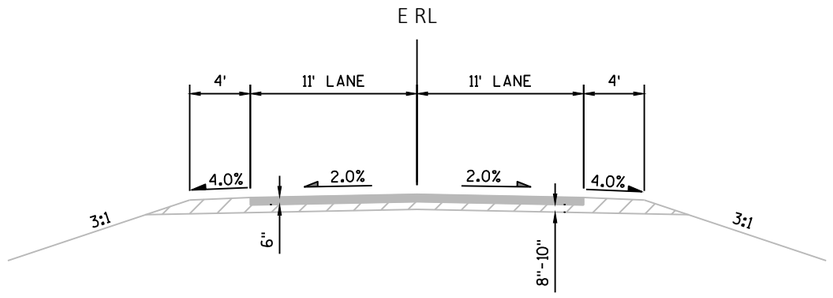
(1) NO BEAMGUARD EXISTS FROM 450+54EB TO 464+00EB



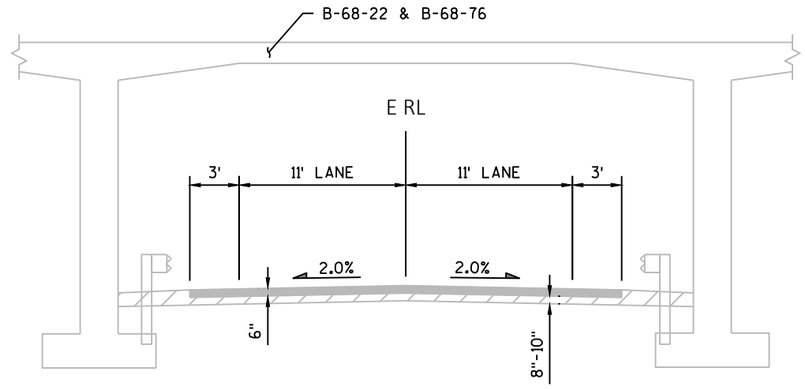
EXISTING TYPICAL SECTION USH 10 (BRIDGE LOCATION)
448+71EB TO 449+84EB

LEGEND

- EXISTING BASE AGGREGATE DENSE
- EXISTING HMA PAVEMENT
- EXISTING CONCRETE PAVEMENT
- EXISTING TOPSOIL

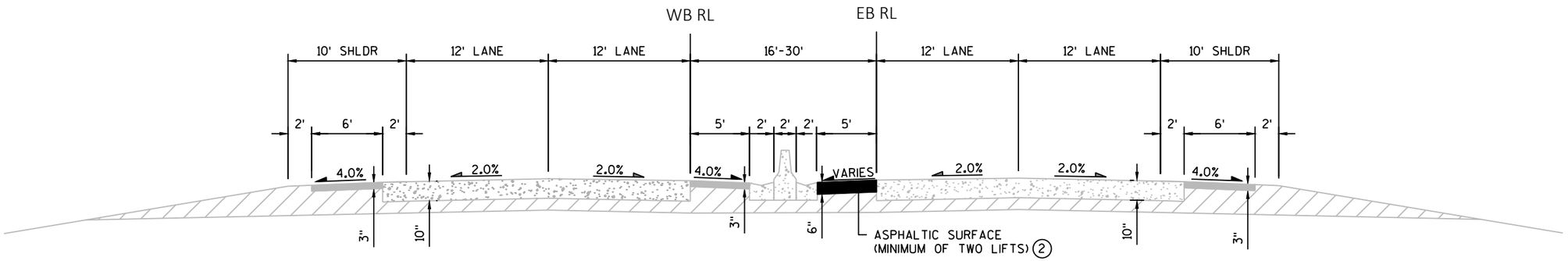


EXISTING TYPICAL SECTION CTH E
STA 108+00E TO 112+40E
STA 113+50E TO 118+00E

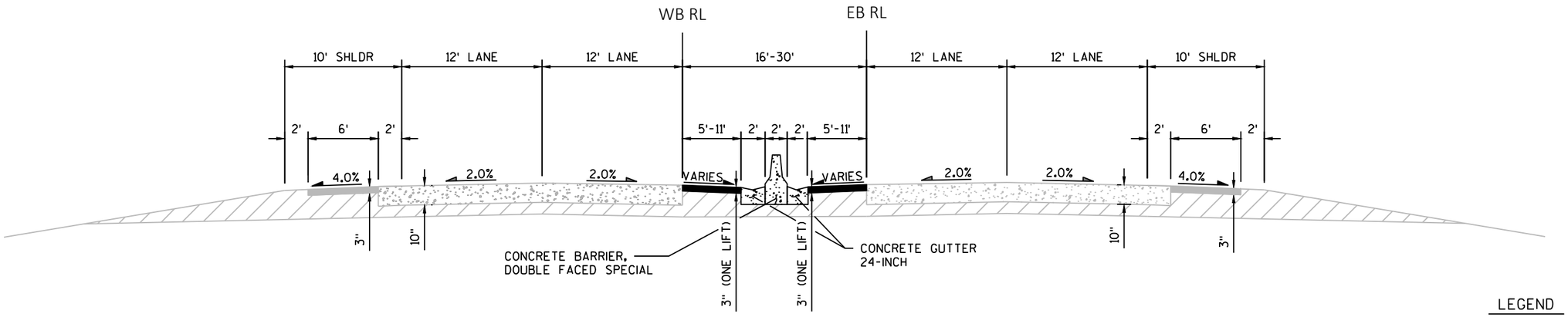


EXISTING TYPICAL SECTION CTH E UNDER B-68-22 & B-68-76
STA 112+40E TO 113+50E

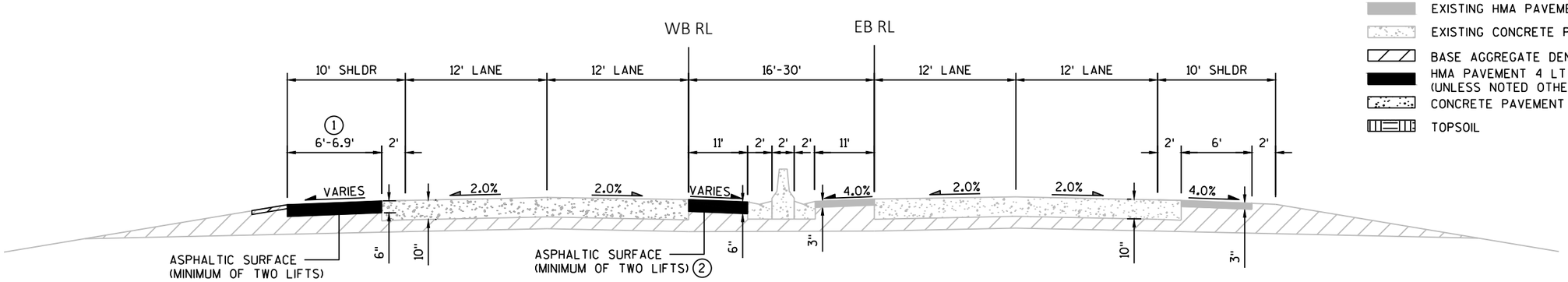
PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN: TYPICAL SECTIONS	SHEET 5	E



FINISHED TYPICAL SECTION USH 10 (CONCRETE BARRIER)
STA 425+50EB TO 428+50EB



FINISHED TYPICAL SECTION USH 10 (CONCRETE BARRIER)
STA 428+50EB TO 438+50EB



FINISHED TYPICAL SECTION USH 10 (CONCRETE BARRIER)
STA 438+50EB TO 440+00EB

LEGEND

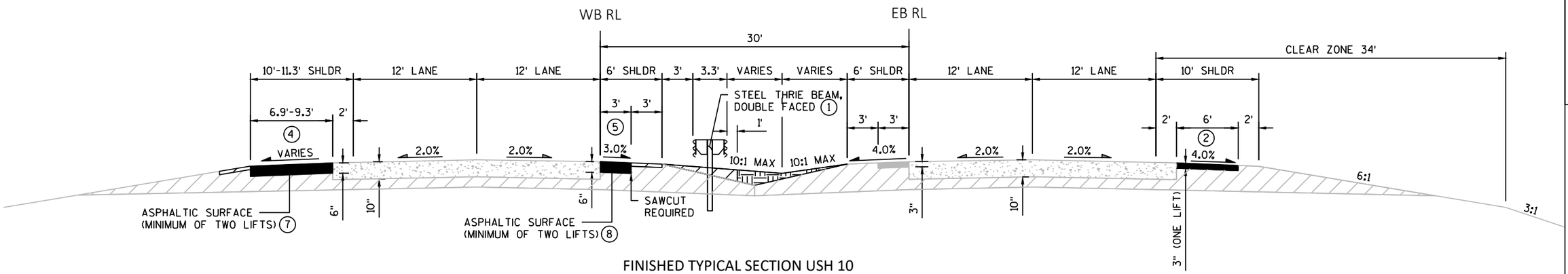
- EXISTING BASE AGGREGATE DENSE
- EXISTING HMA PAVEMENT
- EXISTING CONCRETE PAVEMENT
- BASE AGGREGATE DENSE
- HMA PAVEMENT 4 LT 58-28 S (UNLESS NOTED OTHERWISE)
- CONCRETE PAVEMENT 10-INCH
- TOPSOIL

NOTES

(1) 436+00EB TO 440+00EB

(2) INSTALLED DURING STAGE 1B

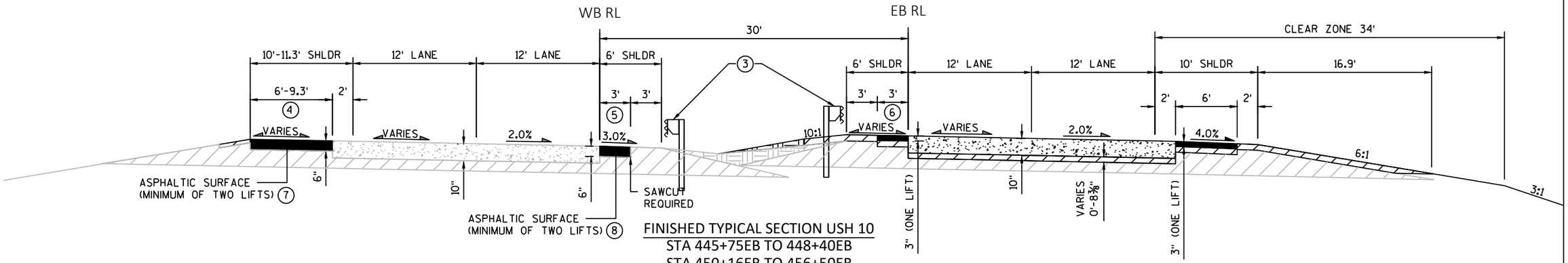
PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN: TYPICAL SECTIONS	SHEET 6	E



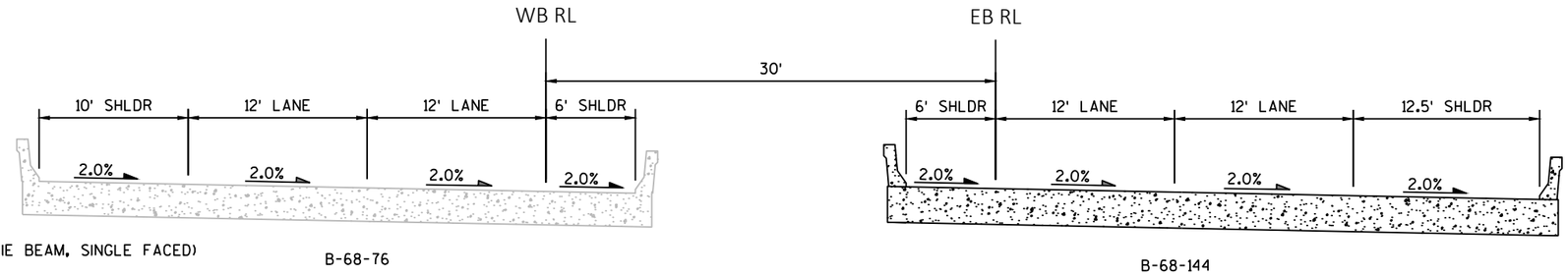
FINISHED TYPICAL SECTION USH 10

WB TYPICAL
STA 440+00EB TO 445+75EB
STA 456+50EB TO 463+00EB

EB TYPICAL
STA 440+00EB TO 445+75EB



FINISHED TYPICAL SECTION USH 10
STA 445+75EB TO 448+40EB
STA 450+16EB TO 456+50EB



FINISHED TYPICAL SECTION USH 10 (BRIDGE LOCATION)
STA 448+40EB TO 450+16EB

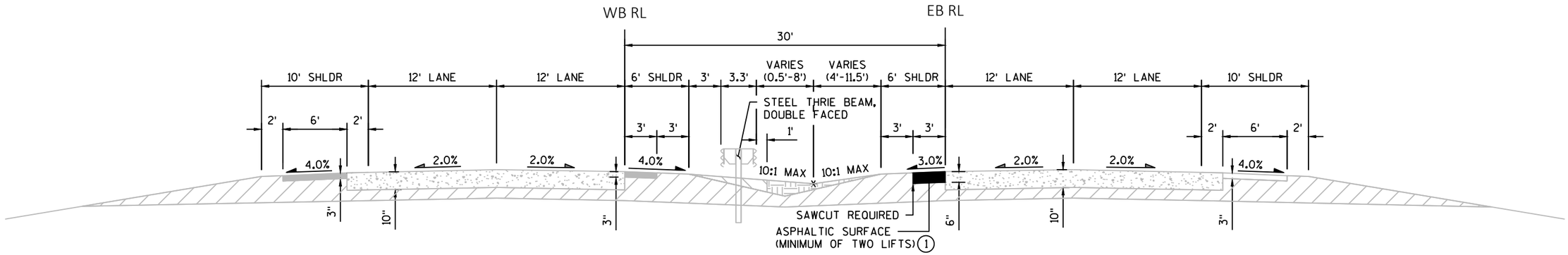
NOTES

(1) 443+50EB TO 445+50EB (OR STEEL THRIE BEAM, SINGLE FACED)
(2) 444+78EB TO 445+75EB
(3) 445+50EB TO 464+00EB (OR STEEL THRIE BEAM, DOUBLE FACED)
(4) 440+00EB TO 457+60EB
(5) 440+00EB TO 462+50EB
(6) 445+75EB TO 456+50EB
(7) INSTALLED DURING STAGE 1A.
(8) INSTALLED DURING STAGE 1B.

LEGEND

- EXISTING BASE AGGREGATE DENSE
- EXISTING HMA PAVEMENT
- EXISTING CONCRETE PAVEMENT
- BASE AGGREGATE DENSE
- HMA PAVEMENT 4 LT 58-28 S (UNLESS NOTED OTHERWISE)
- CONCRETE PAVEMENT 10-INCH

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN: TYPICAL SECTIONS	SHEET 7	E



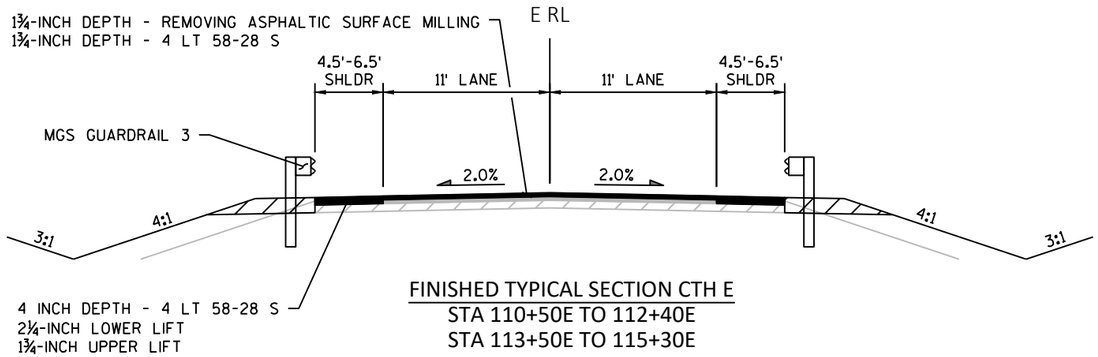
FINISHED TYPICAL SECTION USH 10

WB TYPICAL
STA. 463+00EB TO 467+50EB

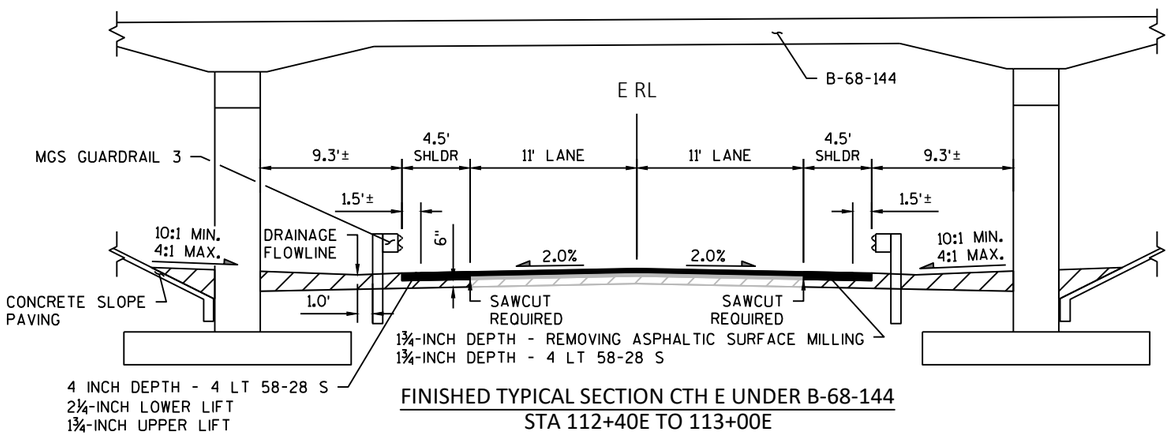
EB TYPICAL
STA. 456+50EB TO 467+50EB

NOTES

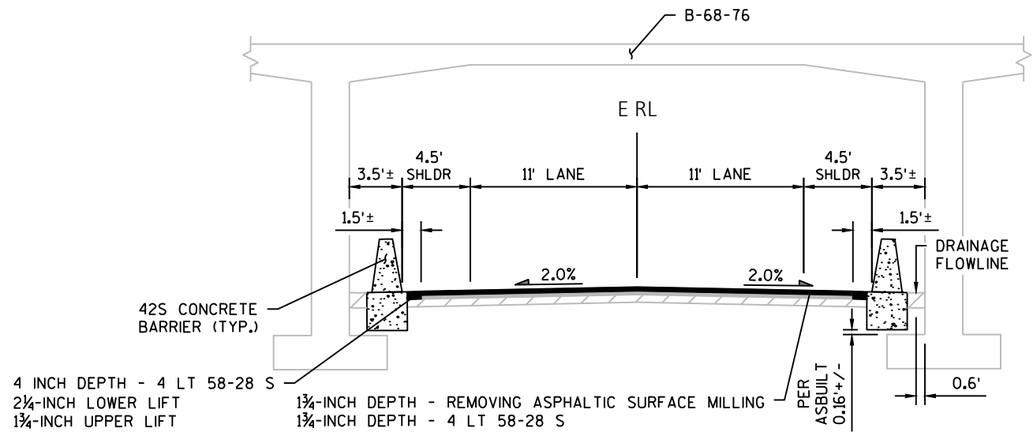
(1) INSTALLED DURING STAGE 1B



FINISHED TYPICAL SECTION CTH E
STA 110+50E TO 112+40E
STA 113+50E TO 115+30E



FINISHED TYPICAL SECTION CTH E UNDER B-68-144
STA 112+40E TO 113+00E



FINISHED TYPICAL SECTION CTH E UNDER B-68-76
STA 113+00E TO 113+50E

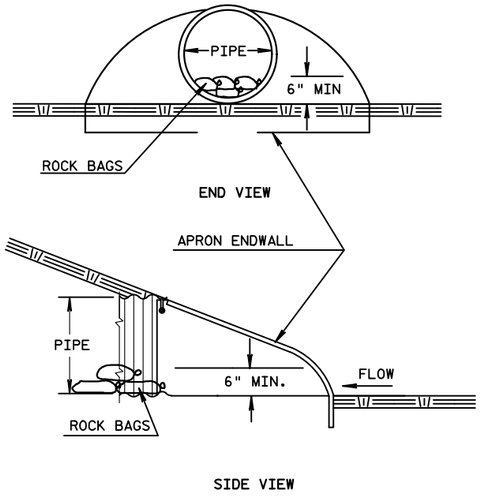
LEGEND

- EXISTING BASE AGGREGATE DENSE
- EXISTING HMA PAVEMENT
- EXISTING CONCRETE PAVEMENT
- BASE AGGREGATE DENSE
- HMA PAVEMENT 4 LT 58-28 S
- CONCRETE PAVEMENT 10-INCH

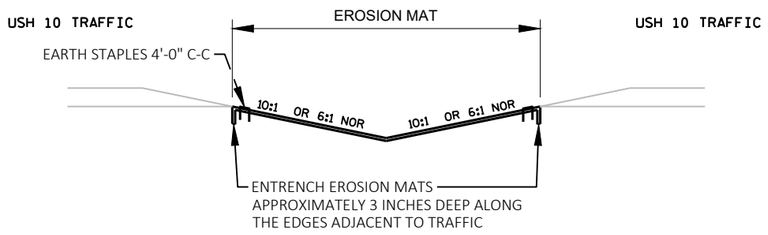
PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN: TYPICAL SECTIONS	SHEET 8	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\020301-TS.DWG PLOT DATE : 10/18/2018 2:59 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : ##########

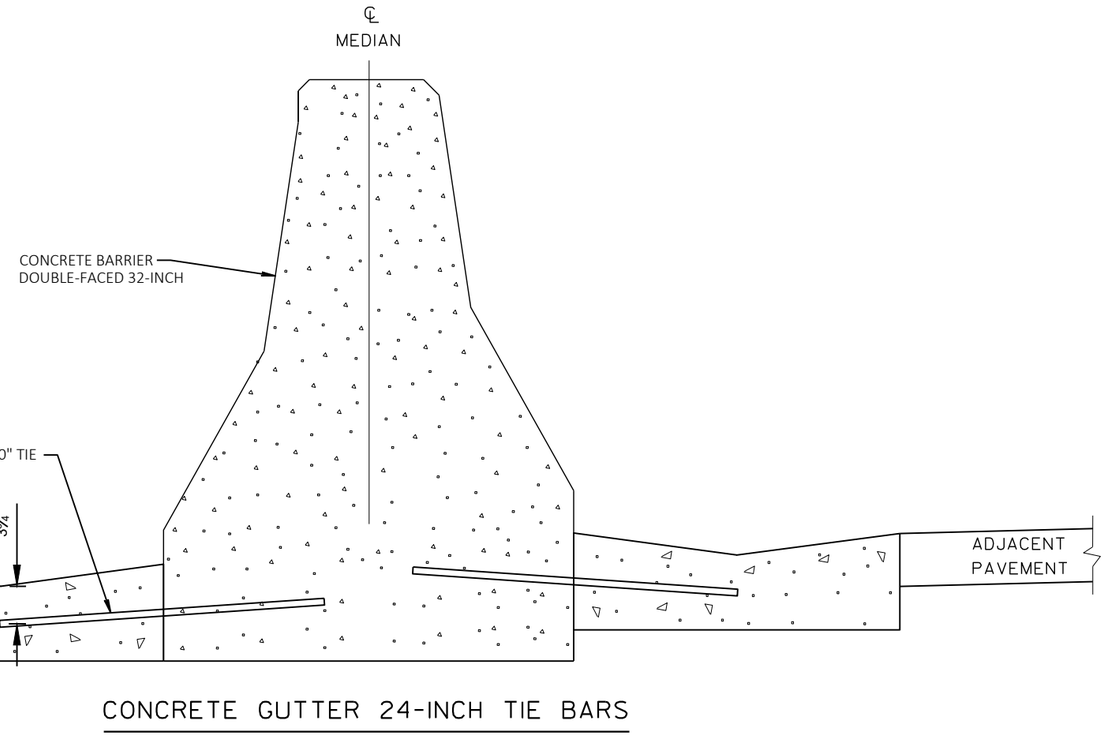
WISDOT/CADDS SHEET 42



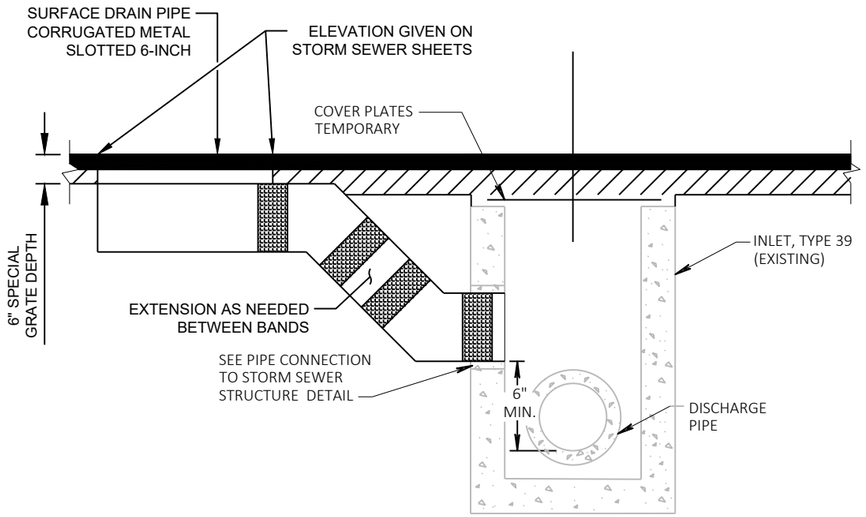
CULVERT PIPE CHECK



EROSION MAT DETAIL
(WORK PAID FOR UNDER THE EROSION MAT CALSS I TYPE B BID ITEM)

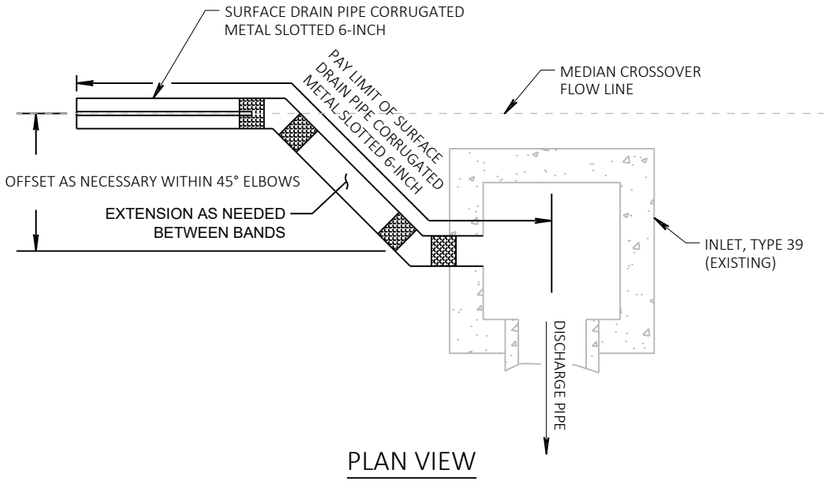


CONCRETE GUTTER 24-INCH TIE BARS



ELEVATION VIEW

SEE SDD SLOTTED CORRUGATED METAL PIPE
SURFACE DRAINS FOR MORE INFORMATION

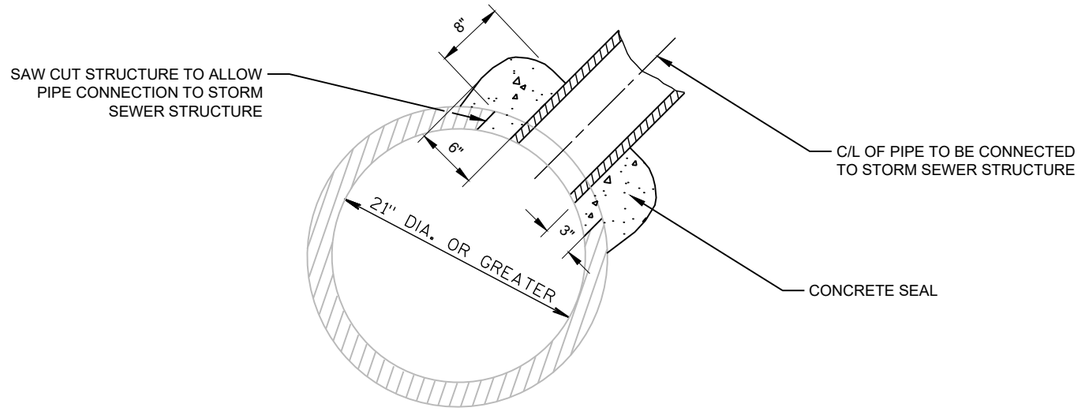


PLAN VIEW

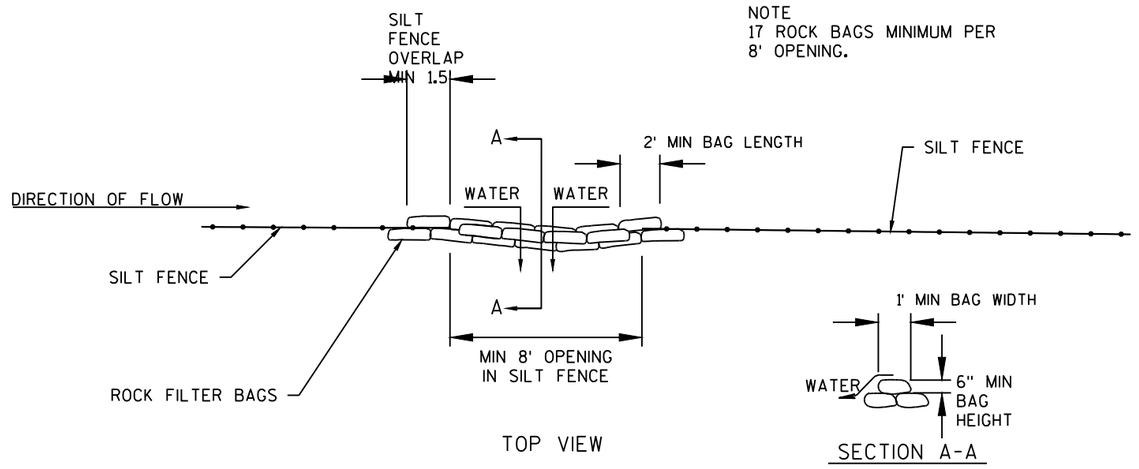
SURFACE DRAIN PIPE CORRUGATED METAL SLOTTED 6-INCH CONNECTION DETAIL

SEE SDD SLOTTED CORRUGATED METAL PIPE SURFACE DRAINS FOR MORE INFORMATION.
(ADDITIONAL CONNECTION PIECES MAY BE REQUIRED BASED ON FIELD CONDITIONS.)

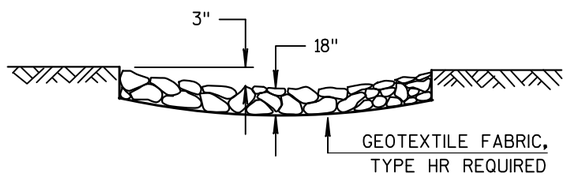
BANDS AS DEFINED IN SDD



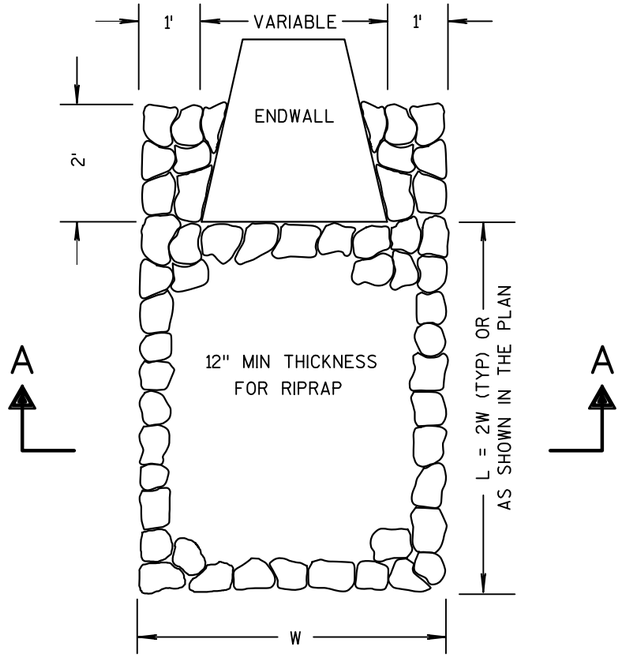
DETAIL OF PIPE CONNECTION TO STORM SEWER STRUCTURE



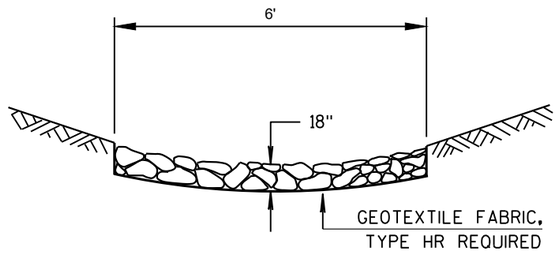
ROCK BAGS USED FOR SILT FENCE RELIEF



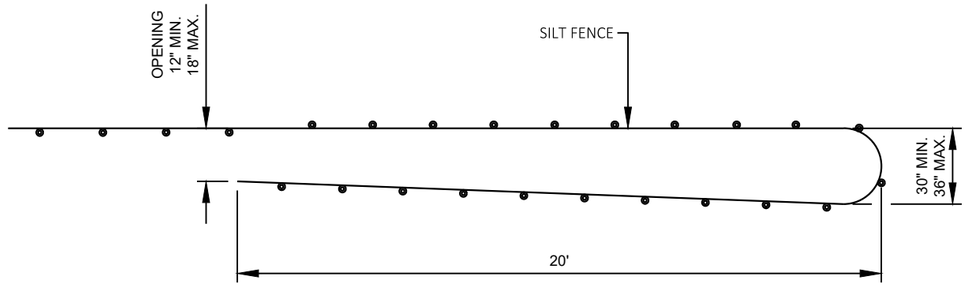
SECTION A-A



RIPRAP TREATMENT AT CULVERTS



RIPRAP TREATMENT IN DITCH



GENERAL NOTES:
SILT FENCE POST FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND AND FENCING TRENCHED IN ACCORDANCE TO SILT FENCE REQUIREMENTS.

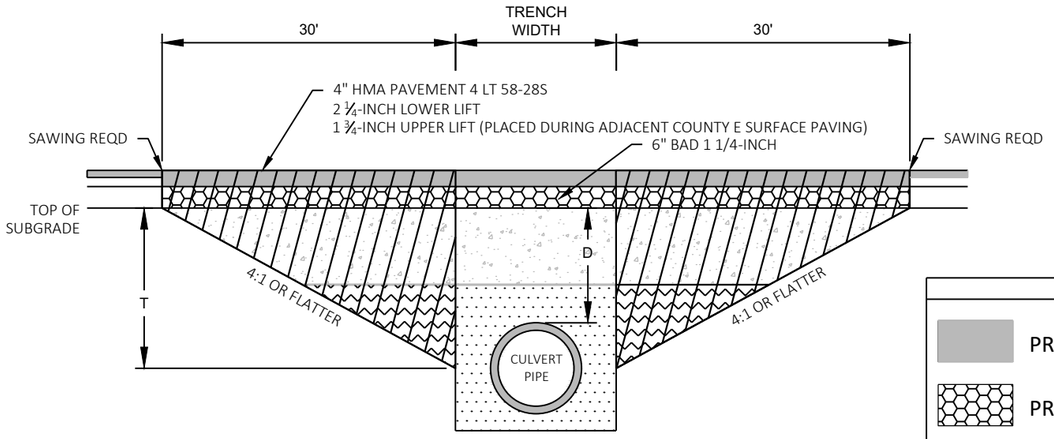
TEMPORARY SMALL ANIMAL TURN-AROUND DETAIL

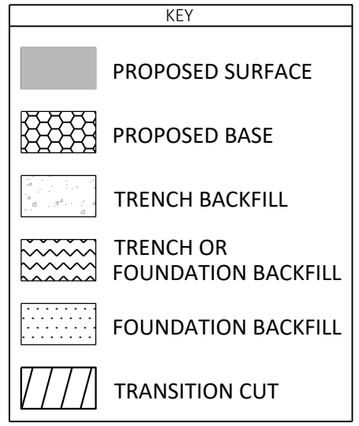
RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 19.558 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 6.226 ACRES

2





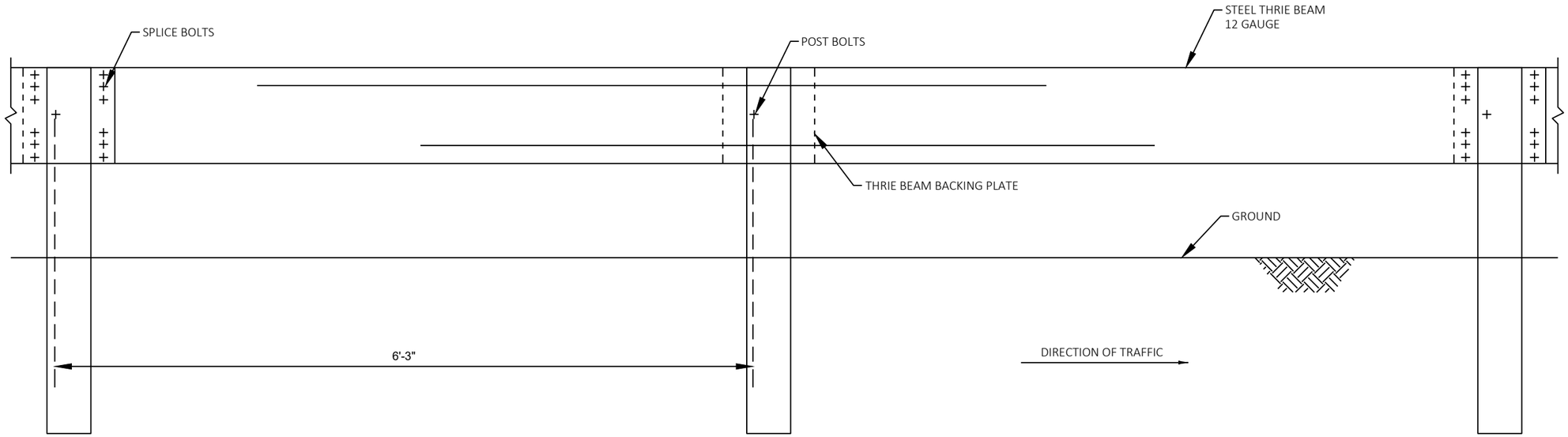
NOTES

TRANSITION CUT DEPTH (T) = THE LESSER OF DEPTH TO CENTER OF PIPE OR 5FT.
DO NOT EXTEND TRANSITION CUT BELOW HORIZONTAL CENTER OF PIPE.
TRANSITION CUT IS PAID UNDER THE CULVERT PIPE ITEMS.
TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.
BACKFILL TRANSITION CUT AREAS WITH FOUNDATION AND TRENCH BACKFILL AS SPECIFIED IN STANDARD SPEC 520.
PERFORM CULVERT PIPE INSTALLATION BEFORE MAINLINE MILLING AND PAVING ON COUNTY E.

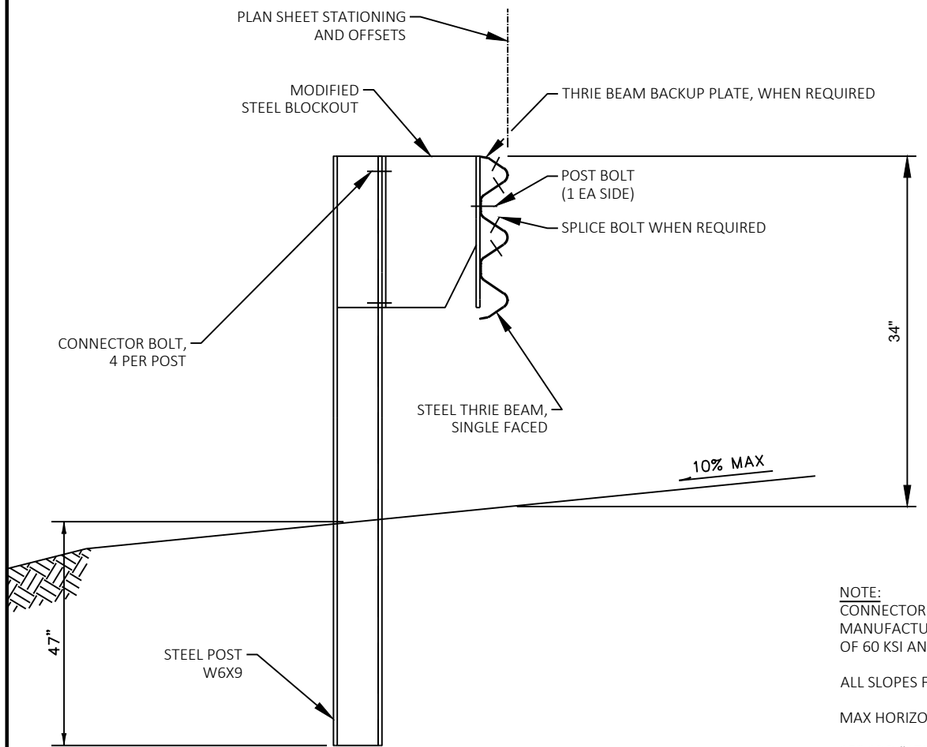
CULVERT PIPE TRANSITION

ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)	REMARKS
CTH E	111+49E	1.5FT	30-INCH	CPRC
CTH E	111+56E	1.6FT	30-INCH	CPRC

2



ELEVATION - STEEL THRIE BEAM, DOUBLE AND SINGLE FACED



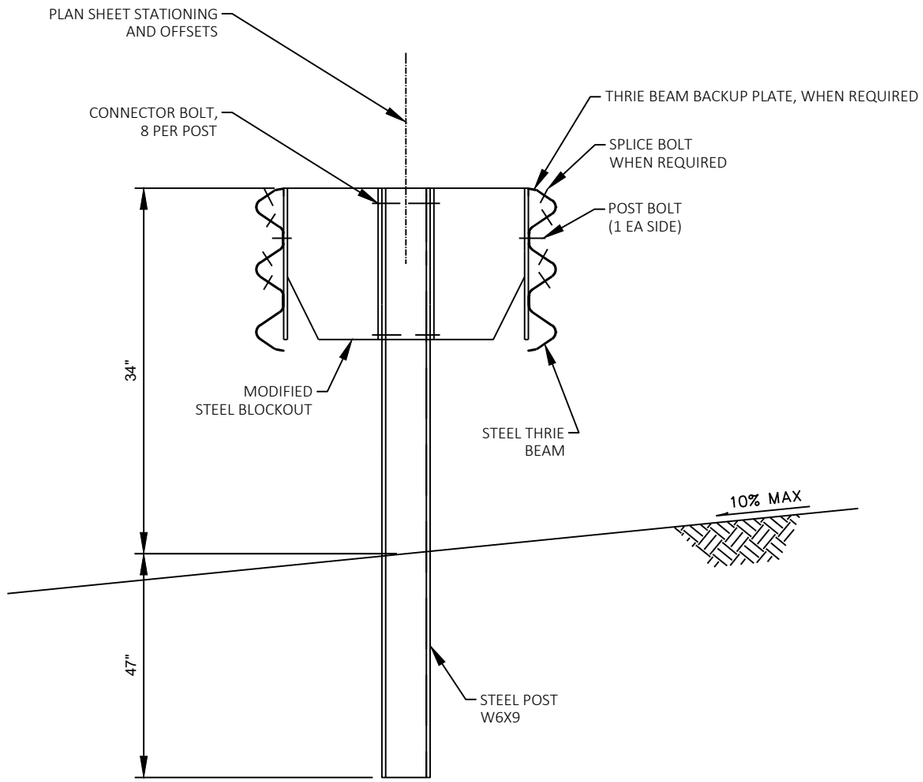
CROSS SECTION (SINGLE FACED)

NOTE:
CONNECTOR BOLT 5/8" DIAMETER BOLT, ASTM A307, NUT ASTM A563, WASHER F844. MANUFACTURE TO REQUIREMENTS OF ANSI B18.2.1 AND HAVE TENSILE STRENGTH OF 60 KSI AND MINIMUM YIELD STRENGTH OF 36 KSI

ALL SLOPES FROM EDGE OF TO FACE OF BARRIER ARE 10:1 OR FLATTER.

MAX HORIZONTAL FLARE IS 30:1.

SEE SDD "STEEL PLATE BEAM GUARD, CLASS A", "STEEL THRIE BEAM STRUCTURE APPROACH" AND "STEEL PLATE BEAM GUARD, CLASS A, OVER LOW FILL CULVERTS" FOR MORE INFORMATION

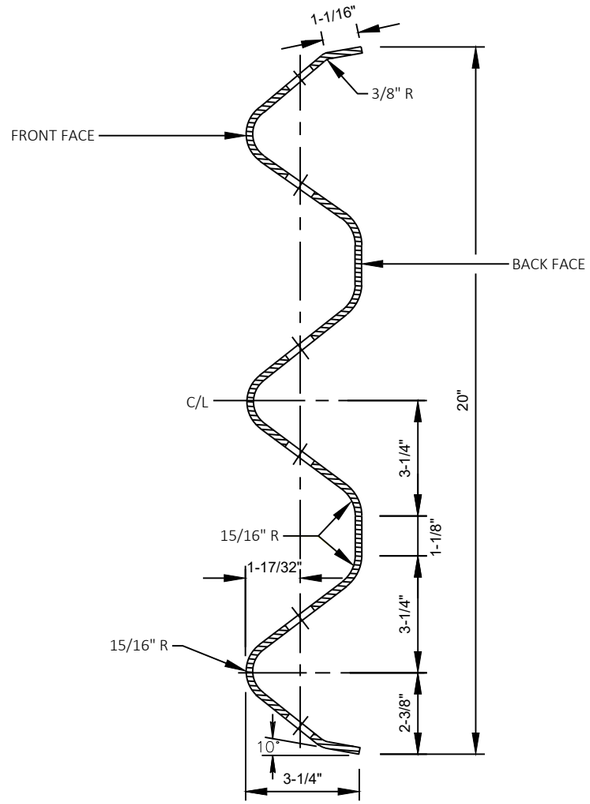


CROSS SECTION (DOUBLE FACED)

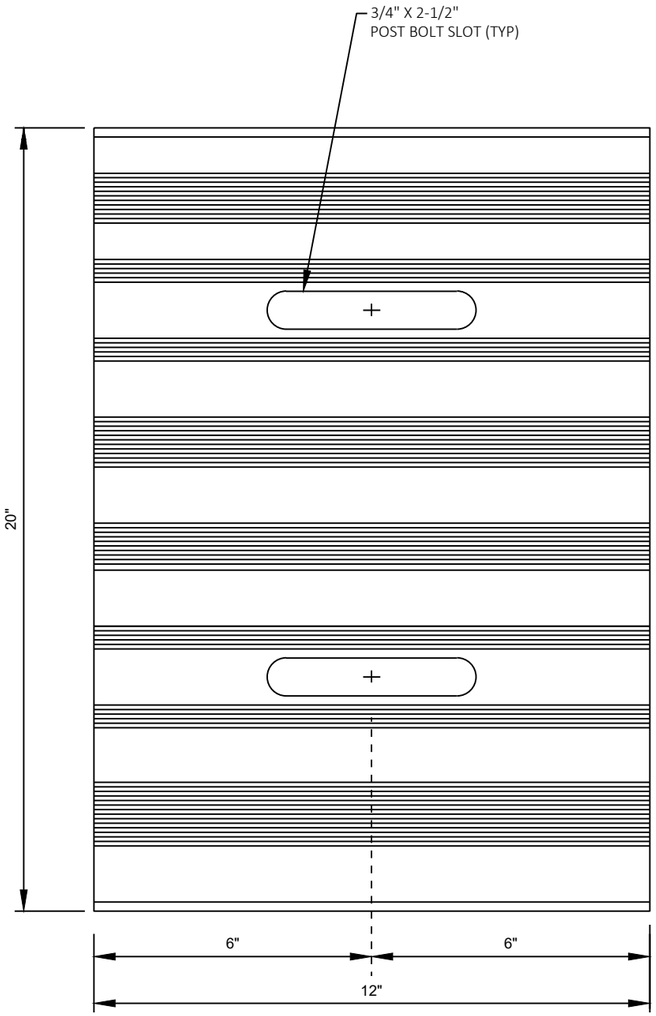
PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN: CONSTRUCTION DETAILS	SHEET 14	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\021002-CD.DWG
LAYOUT NAME - 01
PLOT DATE : 10/19/2018 8:19 AM
PLOT BY : CASPER, ANDREW P
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

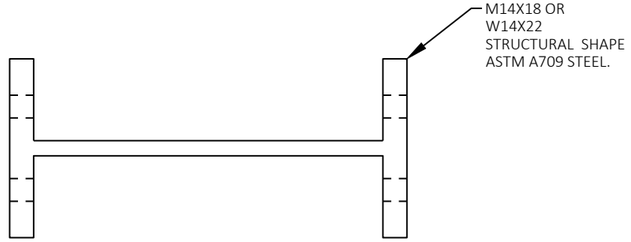
2



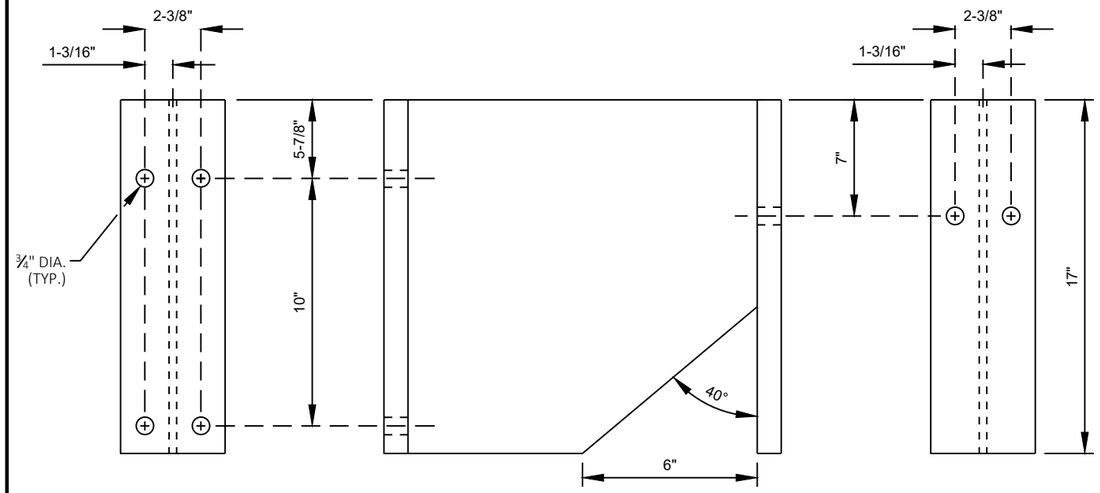
SECTION THRU THRIE BEAM RAIL ELEMENT/BACKING PLATE



THRIE BEAM BACKING PLATE

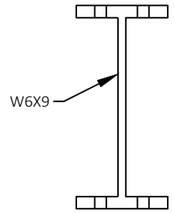


TOP

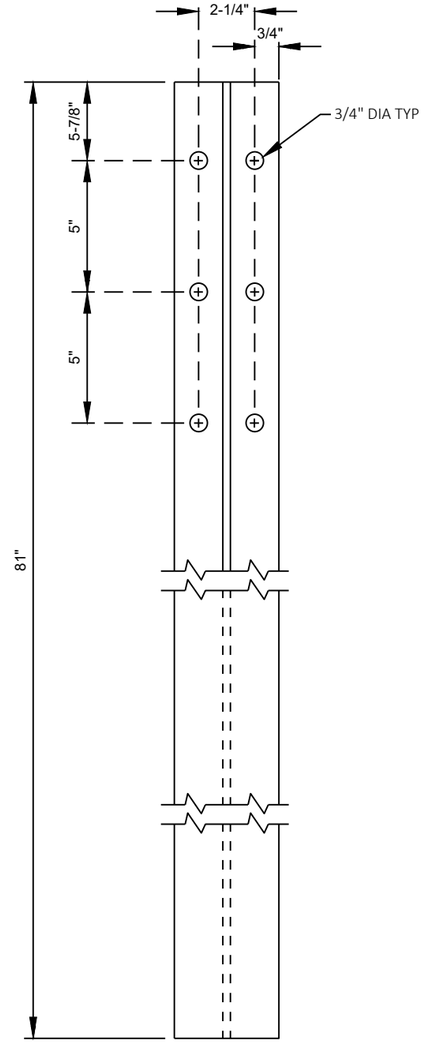


POST FACE **SIDE** **TRAFFIC FACE**

MODIFIED STEEL BLOCKOUT



SECTION



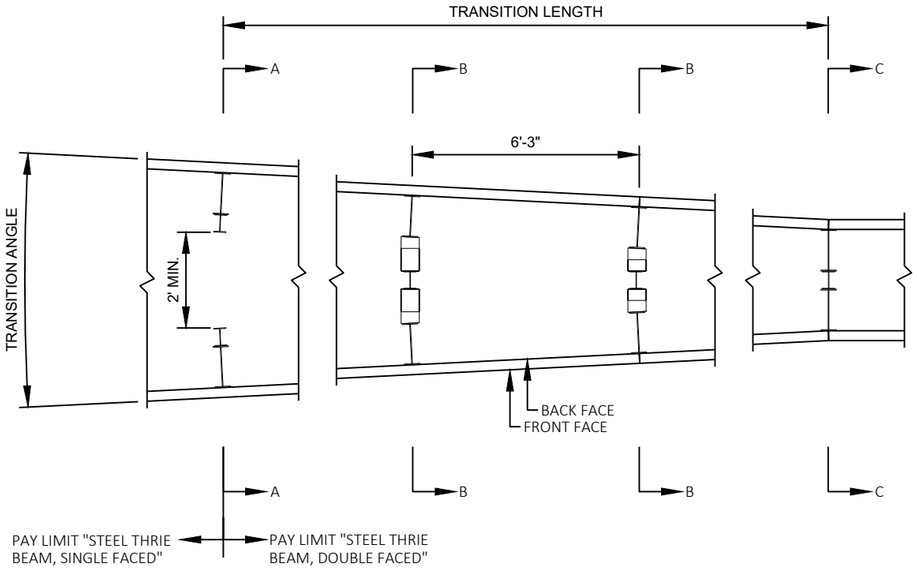
FRONT

STEEL POST

2

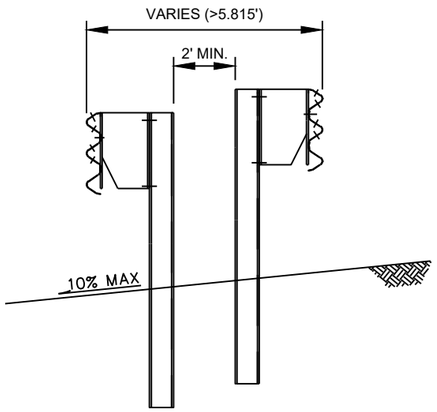
PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN: CONSTRUCTION DETAILS	SHEET 16	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\021002-CD.DWG
LAYOUT NAME - 03
PLOT DATE : 10/19/2018 8:19 AM
PLOT BY : CASPER, ANDREW P
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

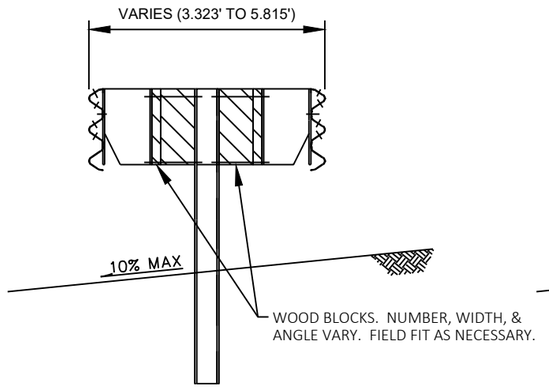


STEEL THRIE BEAM, SINGLE TO DOUBLE FACED TRANSITION

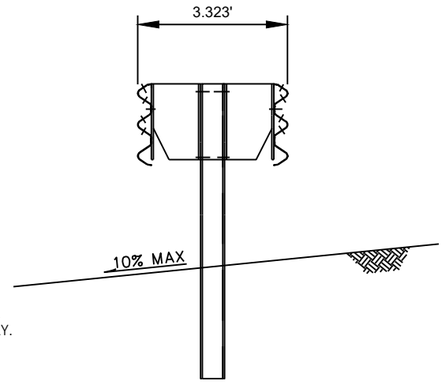
STEEL THRIE BEAM, DOUBLE TO SINGLE FACE TRANSITION DETAILS		
TRANSITION NUMBER SHOWN ON PLAN SHEETS	TRANSITION LENGTH	TRANSITION ANGLE
1	100'-0"	1.6°
2	112'-6"	1.5°



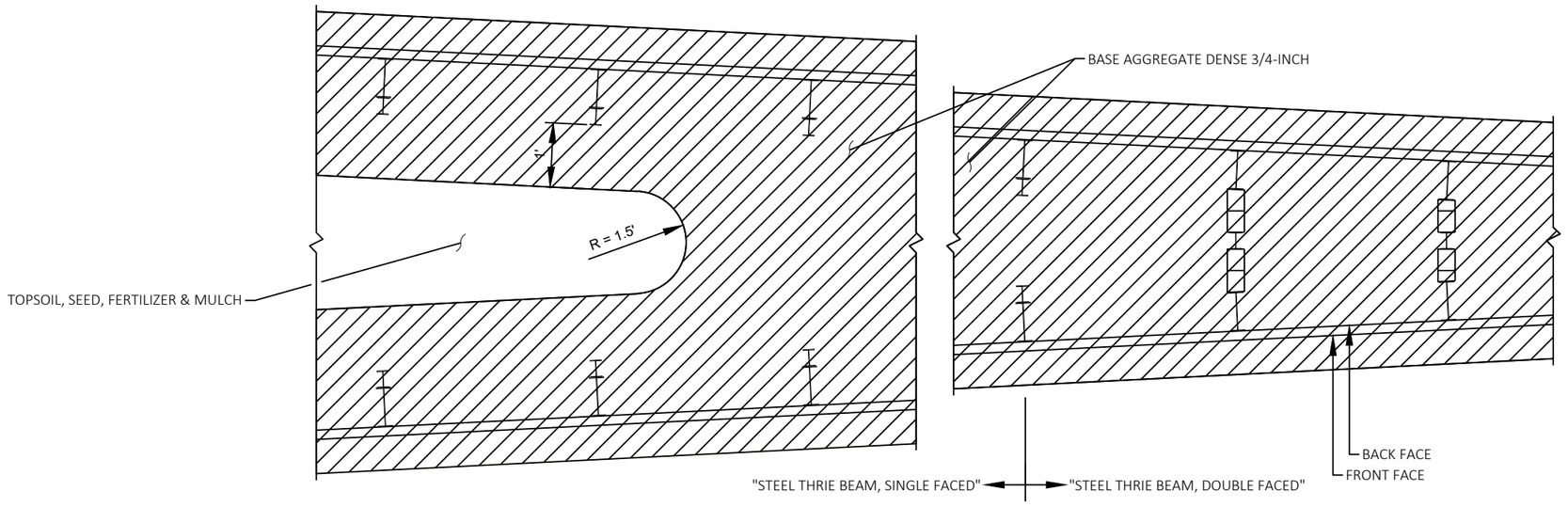
SECTION A-A



SECTION B-B

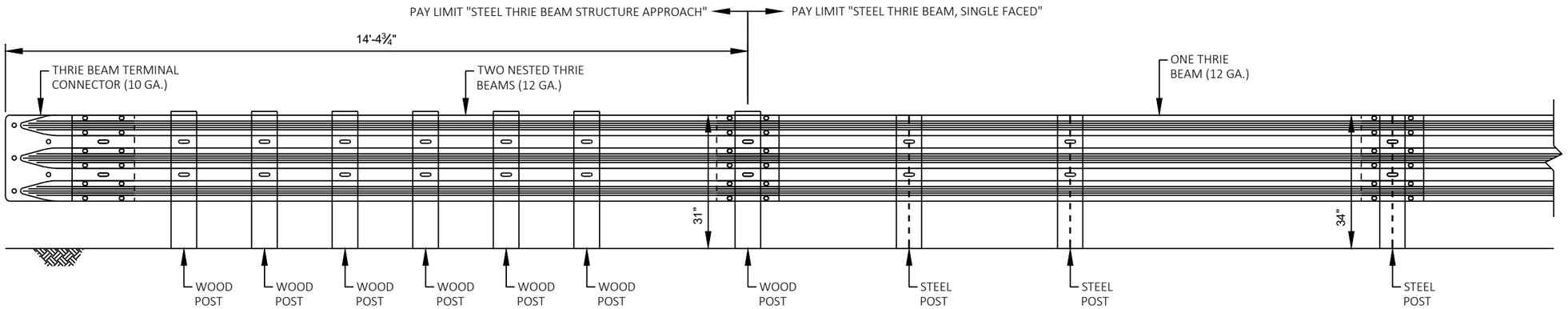


SECTION C-C



BASE AGGREGATE DENSE 3/4-INCH FOR STEEL THRIE BEAM, SINGLE TO DOUBLE FACED TRANSITION

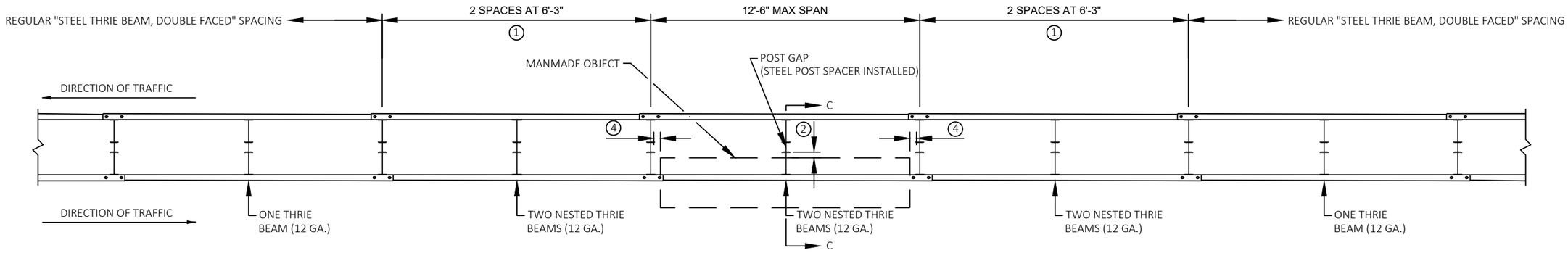
2



ELEVATION - STEEL THRIE BEAM STRUCTURE APPROACH MODIFICATION

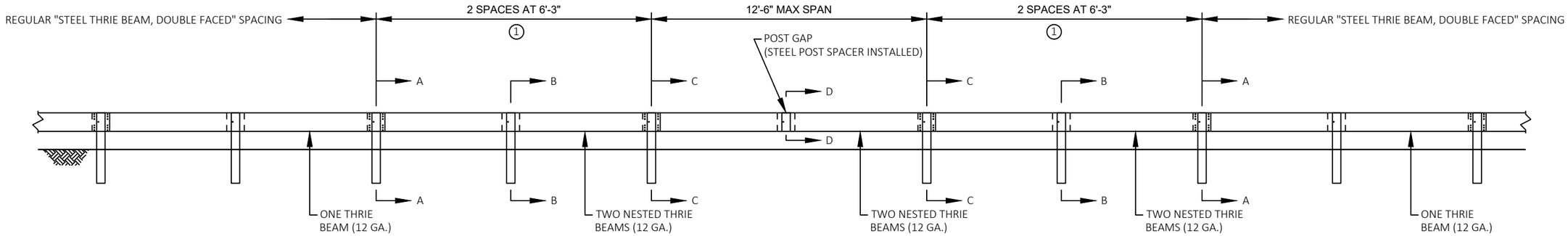
("W" TO THRIE BEAM TRANSITION SECTION OMITTED)

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN: CONSTRUCTION DETAILS	SHEET 18	E



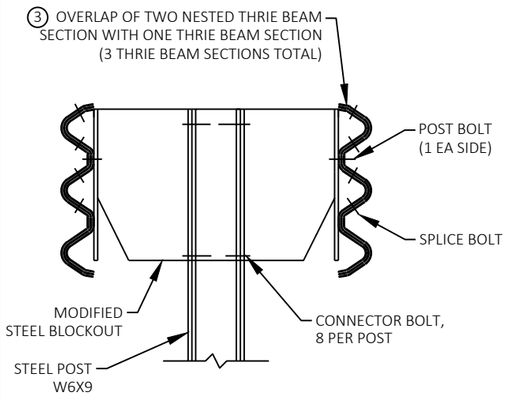
PLAN - STEEL THRIE BEAM, DOUBLE FACED POST GAP

STEEL THRIE BEAM, SINGLE FACED POST GAP SIMILAR
(SINGLE FACED POST GAP DOES NOT REQUIRE STEEL POST SPACER)

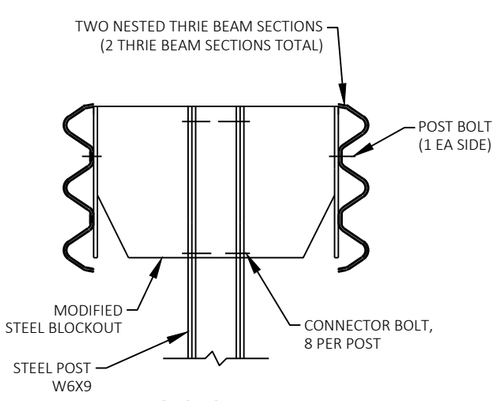


ELEVATION - STEEL THRIE BEAM, DOUBLE FACED POST GAP

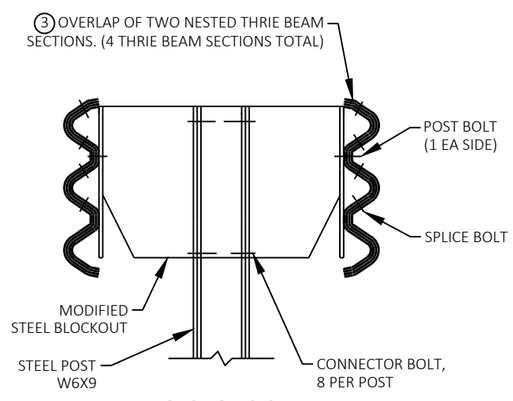
STEEL THRIE BEAM, SINGLE FACED POST GAP SIMILAR
(SINGLE FACED POST GAP DOES NOT REQUIRE STEEL POST SPACER)



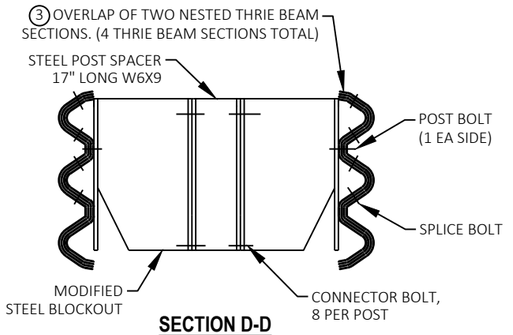
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

1. (1) ONE 12'-6" SECTION OF TWO NESTED THRIE BEAM (12 GA.) REQUIRED ON BOTH SIDES OF POST GAP. POST GAP SHALL NOT FALL WITHIN WITHIN THIS 12'-6" SECTION.
2. (2) POST GAP REQUIRED WHEN DISTANCE FROM EDGE OF POST TO MANMADE OBJECT IS LESS THAN 2'-0".
3. (3) MAINTAIN THE NESTING OF EACH NESTED PAIR OF THRIE BEAM SECTIONS THROUGH SPLICES. ORIENTATE NESTED THRIE BEAM SPLICES IN THE DIRECTION OF TRAFFIC AS THE PLAN VIEW SHOWS. SEE SDD "STEEL PLATE BEAM GUARD, CLASS A" FOR FURTHER DETAIL.
4. (4) POST GAP REQUIRED WHEN DISTANCE FROM EDGE OF POST TO MANMADE OBJECT IS LESS THAN 1'-0".

2

USH 10 WB

429+00WB

430+00WB

431+00WB

428+00EB

429+00EB

430+00EB

431+00EB

USH 10 EB

STA 428+75.00EB, 11.60LT
836.70

STA 429+00.00EB, 11.63LT
836.99

STA 429+25.00EB, 11.81LT
837.20

STA 429+50.00EB, 11.94LT
837.60

STA 429+75.00EB, 12.02LT
837.92

STA 430+00.00EB, 12.05LT
838.26

STA 430+25.00EB, 12.16LT
838.61

STA 430+50.00EB, 12.20LT
838.98

STA 430+76.51EB, 12.26LT
839.38

STA 428+75.00EB, 5.60LT
836.44

STA 429+00.00EB, 5.63LT
836.73

STA 429+25.00EB, 5.81LT
837.03

STA 429+50.00EB, 5.94LT
837.35

STA 429+75.00EB, 6.02LT
837.68

STA 430+00.00EB, 6.05LT
838.03

STA 430+25.00EB, 6.16LT
838.39

STA 430+50.00EB, 6.20LT
838.76

STA 430+76.51EB, 6.26LT
839.16

STA 430+88.51EB, 5.54LT
839.37

STA 430+91.01EB, 5.54LT
839.40

STA 431+03.01EB, 6.31LT
839.59

CONCRETE GUTTER 24"
(TOP OF FRONT FLANGE)

N

USH 10 WB

432+00WB

433+00WB

434+00WB

431+00EB

432+00EB

433+00EB

434+00EB

USH 10 EB

STA 431+03.01EB, 12.31LT
839.79

STA 431+25.00EB, 12.36LT
840.14

STA 431+50.00EB, 12.47LT
840.56

STA 431+75.00EB, 12.52LT
840.99

STA 432+00.00EB, 12.56LT
841.43

STA 432+25.00EB, 12.75LT
841.89

STA 432+50.00EB, 12.95LT
842.36

STA 432+75.00EB, 13.13LT
842.84

STA 433+00.00EB, 13.33LT
843.31

STA 433+25.00EB, 13.52LT
843.78

STA 433+50.00EB, 13.73LT
844.24

STA 433+75.00EB, 13.93LT
844.70

STA 431+03.01EB, 6.31LT
839.59

STA 431+25.00EB, 6.36LT
839.97

STA 431+50.00EB, 6.47LT
840.40

STA 431+75.00EB, 6.52LT
840.84

STA 432+00.00EB, 6.56LT
841.30

STA 432+25.00EB, 6.75LT
841.76

STA 432+50.00EB, 6.85LT
842.22

STA 432+75.00EB, 7.13LT
842.68

STA 433+00.00EB, 7.33LT
843.14

STA 433+25.00EB, 7.52LT
843.60

STA 433+50.00EB, 7.73LT
844.06

STA 433+75.00EB, 7.93LT
844.52

STA 434+00.00EB, 8.13LT
844.98

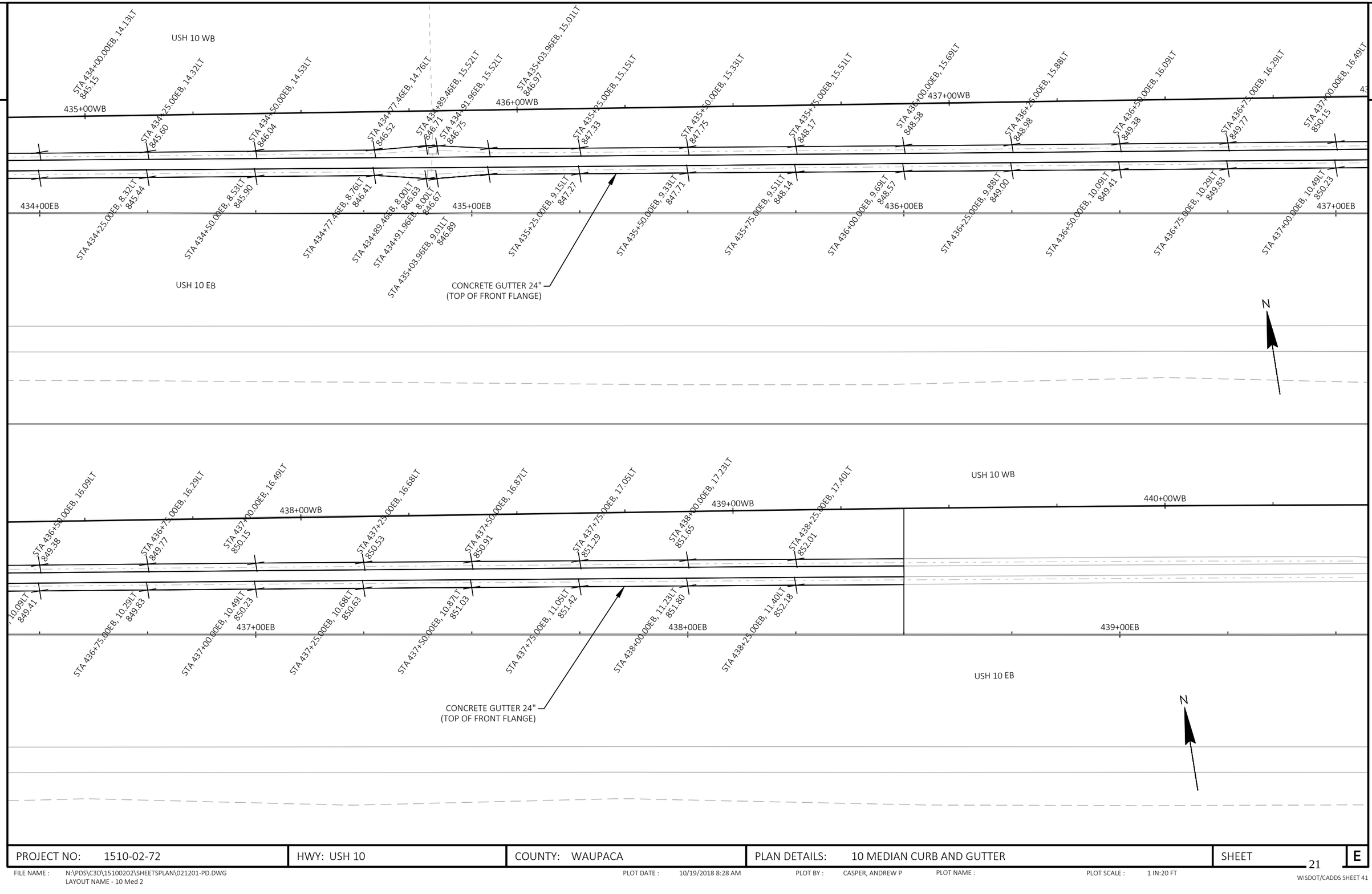
CONCRETE GUTTER 24"
(TOP OF FRONT FLANGE)

N

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN DETAILS: 10 MEDIAN CURB AND GUTTER	SHEET	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 10 Med 1

PLOT DATE : 10/19/2018 8:28 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN DETAILS: 10 MEDIAN CURB AND GUTTER	SHEET	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 10 Med 2

PLOT DATE : 10/19/2018 8:28 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

STA 113+09.90E, 15.50'LT
846.44

STA 113+34.90E, 15.50'LT
846.75

42S CONCRETE BARRIER
(INSIDE EDGE OF BARRIER AT FOOTING)

STA 113+59.90E, 15.50'LT
847.09

15.50'

USH 10 WB

450+00WB

113+00E

CTH E

113+50E

15.50'

N

42S CONCRETE BARRIER
(INSIDE EDGE OF BARRIER AT FOOTING)

STA 112+93.21E, 15.50'RT
846.26

STA 113+18.21E, 15.50'RT
846.54

STA 113+43.21E, 15.50'RT
846.86

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN DETAILS: CTH E BARRIER	SHEET 22	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - E Barr

PLOT DATE : 10/19/2018 8:29 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:5 FT

2

2

N

LEGEND

- MULCH (STAGE 2 UNLESS OTHERWISE NOTED)
- EROSION MAT CLASS I TYPE B (STAGE 2 UNLESS OTHERWISE NOTED)
- SILT FENCE (STAGE 2)
- RIP RAP MEDIUM (STAGE 2) SEE DETAIL
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK (STAGE 2)
- CULVERT PIPE CHECK (STAGE 2)
- SURFACE WATER FLOW
- TEMPORARY PAVEMENT PLACED IN STAGE 1
- SILT FENCE RELIEF (STAGE 2)
- TEMPORARY SMALL ANIMAL TURN-AROUND (STAGE 2) SEE DETAIL

INSTALL IN STAGE 1
INLET PROTECTION TYPE B
REMOVE AFTER STAGE 1B

INSTALL IN STAGE 1
INLET PROTECTION TYPE B
REMOVE AFTER STAGE 1B

INSTALL IN STAGE 1 GEOTEXTILE FABRIC TYPE HR
UNDERNEATH COVER PLATES TEMPORARY
INSTALL IN STAGE 3 INLET PROTECTION TYPE B

USH 10 WB

USH 10 EB

426WB

426EB

428WB

428EB

430WB

430EB

432WB

432EB

BEGIN CONSTRUCTION
STA 425+50 EB

SURFACE DRAIN PIPE CORRUGATED
METAL SLOTTED (6-INCH)

SIGN

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	EROSION CONTROL (STAGE 1 - STAGE 3)	SHEET 23	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\022001-EC2.DWG
LAYOUT NAME - 01-EC

PLOT DATE : 5/6/2019 7:45 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

LEGEND

- MULCH (STAGE 2 UNLESS OTHERWISE NOTED)
- EROSION MAT CLASS I TYPE B (STAGE 2 UNLESS OTHERWISE NOTED)
- SILT FENCE (STAGE 2)
- RIP RAP MEDIUM (STAGE 2) SEE DETAIL
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK (STAGE 2)
- CULVERT PIPE CHECK (STAGE 2)
- SURFACE WATER FLOW
- TEMPORARY PAVEMENT PLACED IN STAGE 1
- SILT FENCE RELIEF (STAGE 2)
- TEMPORARY SMALL ANIMAL TURN-AROUND (STAGE 2) SEE DETAIL

INSTALL IN STAGE 1 GEOTEXTILE FABRIC TYPE HR
UNDERNEATH COVER PLATES TEMPORARY
INSTALL IN STAGE 3 INLET PROTECTION TYPE B

SURFACE DRAIN PIPE CORRUGATED
METAL SLOTTED (6-INCH)

USH 10 WB
USH 10 EB
USH 10 WB
USH 10 EB

432EB
434WB
434EB
436WB
436EB
438WB
438EB
440WB

SIGN
SIGN
SIGN
SIGN
SIGN
SIGN

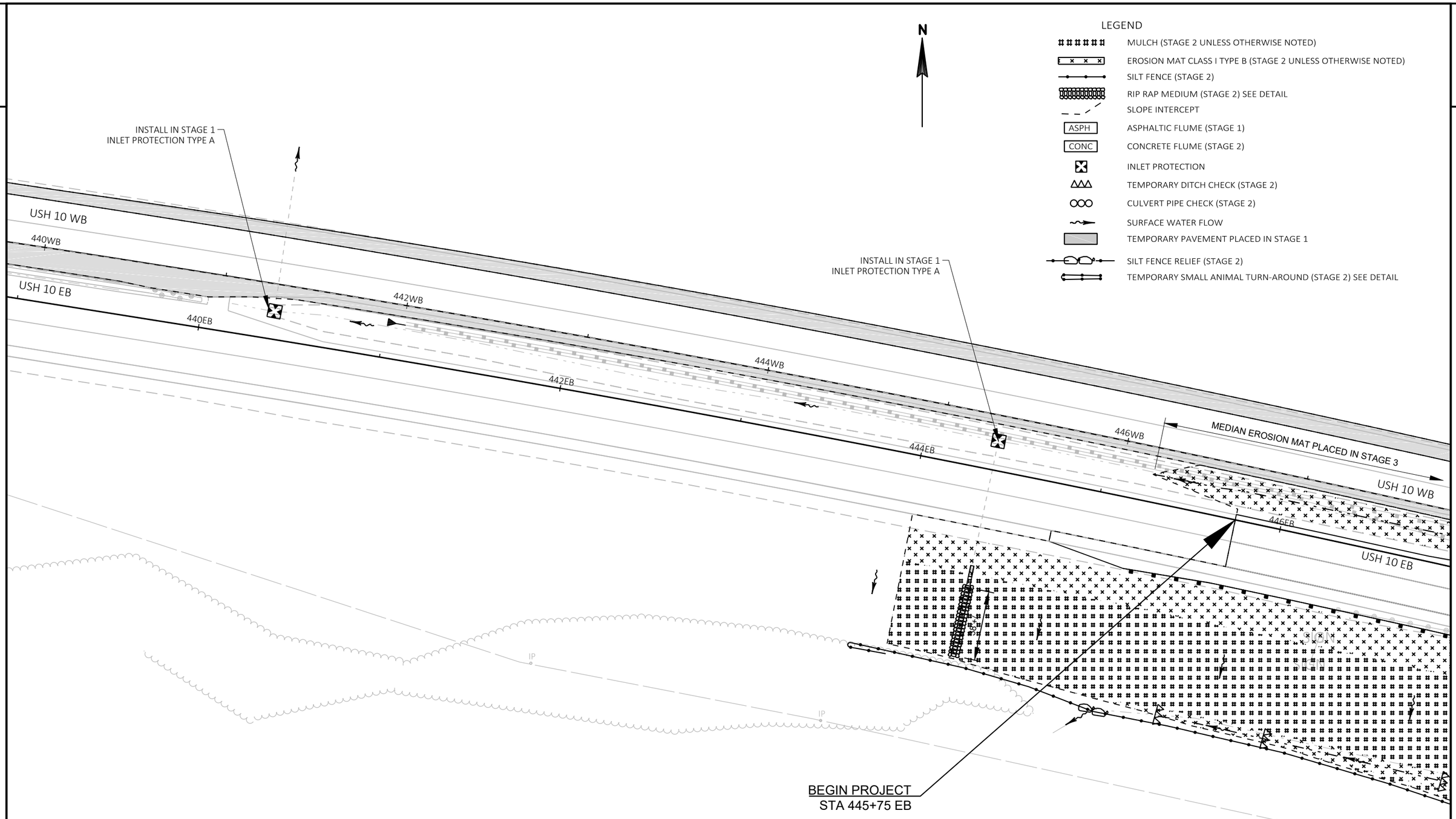
PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	EROSION CONTROL (STAGE 1 - STAGE 3)	SHEET 24	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\022001-EC2.DWG
LAYOUT NAME - 02-EC

PLOT DATE : 5/6/2019 7:45 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2



2

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	EROSION CONTROL (STAGE 1 - STAGE 3)	SHEET 25	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\022001-EC2.DWG
LAYOUT NAME - 03-EC

PLOT DATE : 5/6/2019 7:45 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

BEGIN CONSTRUCTION
STA 115+30.35 E

CTH E

114E

B-68-76 (EXISTING)

USH 10 WB

MEDIAN EROSION MAT PLACED IN STAGE 3

448WB

446EB

USH 10 EB

B-68-144 (NEW)

448EB

450WB

INSTALL IN STAGE 2
INLET PROTECTION TYPE B

INSTALL IN STAGE 1 GEOTEXTILE FABRIC TYPE
HR UNDERNEATH COVER PLATES TEMPORARY
INSTALL IN STAGE 3 INLET PROTECTION TYPE A

INSTALL IN STAGE 1
INLET PROTECTION TYPE A

450EB

452WB

MEDIAN EROSION MAT PLACED IN STAGE 3

INSTALL IN STAGE 1
INLET PROTECTION TYPE A

USH 10 WB

454WB

452EB

USH 10 EB

112E

CTH E

BEGIN CONSTRUCTION
STA 110+48.96 E

N

LEGEND

- MULCH (STAGE 2 UNLESS OTHERWISE NOTED)
- EROSION MAT CLASS I TYPE B (STAGE 2 UNLESS OTHERWISE NOTED)
- SILT FENCE (STAGE 2)
- RIP RAP MEDIUM (STAGE 2) SEE DETAIL
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK (STAGE 2)
- CULVERT PIPE CHECK (STAGE 2)
- SURFACE WATER FLOW
- TEMPORARY PAVEMENT PLACED IN STAGE 1
- SILT FENCE RELIEF (STAGE 2)
- TEMPORARY SMALL ANIMAL TURN-AROUND (STAGE 2) SEE DETAIL

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	EROSION CONTROL (STAGE 1 - STAGE 3)	SHEET 26	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\022001-EC2.DWG
LAYOUT NAME - 04-EC
PLOT DATE : 5/6/2019 7:45 AM
PLOT BY : CASPER, ANDREW P
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

- MULCH (STAGE 2 UNLESS OTHERWISE NOTED)
- EROSION MAT CLASS I TYPE B (STAGE 2 UNLESS OTHERWISE NOTED)
- SILT FENCE (STAGE 2)
- RIP RAP MEDIUM (STAGE 2) SEE DETAIL
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK (STAGE 2)
- CULVERT PIPE CHECK (STAGE 2 UNLESS OTHERWISE NOTED)
- SURFACE WATER FLOW
- TEMPORARY PAVEMENT PLACED IN STAGE 1
- SILT FENCE RELIEF (STAGE 2)
- TEMPORARY SMALL ANIMAL TURN-AROUND (STAGE 2) SEE DETAIL

N

USH 10 WB

454WB

USH 10 EB

454EB

456WB

456EB

458WB

458EB

460WB

460EB

MEDIAN EROSION MAT PLACED IN STAGE 3

INSTALL IN STAGE 1 GEOTEXTILE FABRIC TYPE HR UNDERNEATH COVER PLATES TEMPORARY INSTALL IN STAGE 3 INLET PROTECTION TYPE B

SURFACE DRAIN PIPE CORRUGATED METAL SLOTTED (6-INCH)

END PROJECT
STA 456+50 EB

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	EROSION CONTROL (STAGE 1 - STAGE 3)	SHEET 27	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\022001-EC2.DWG
LAYOUT NAME - 05-EC

PLOT DATE : 5/6/2019 7:45 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

LEGEND

- MULCH (STAGE 2 UNLESS OTHERWISE NOTED)
- EROSION MAT CLASS I TYPE B (STAGE 2 UNLESS OTHERWISE NOTED)
- SILT FENCE (STAGE 2)
- RIP RAP MEDIUM (STAGE 2) SEE DETAIL
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE FLUME
- INLET PROTECTION
- TEMPORARY DITCH CHECK (STAGE 2)
- CULVERT PIPE CHECK (STAGE 2)
- SURFACE WATER FLOW
- TEMPORARY PAVEMENT PLACED IN STAGE 1
- SILT FENCE RELIEF (STAGE 2)
- TEMPORARY SMALL ANIMAL TURN-AROUND (STAGE 2) SEE DETAIL

USH 10 WB

460EB

USH 10 EB

462WB

462EB

MEDIAN EROSION MAT PLACED IN STAGE 3

INSTALL IN STAGE 1
INLET PROTECTION TYPE B
REMOVE AFTER STAGE 1B
COVER PLATES TEMPORARY TO
ONLY PARTIALLY BLOCK GRATES

ASPH

464WB

464EB

466WB

466EB

468WB

USH 10 WB

USH 10 EB

SIGN

SIGN

IP

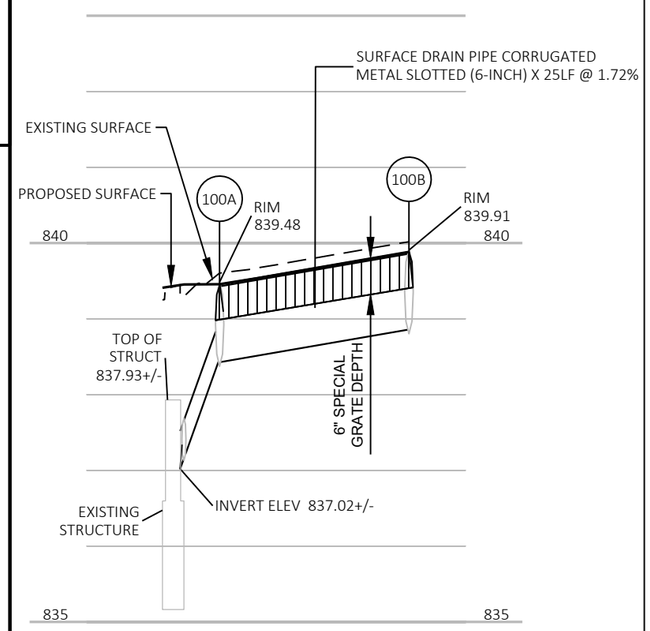
END CONSTRUCTION
STA 467+50 EB

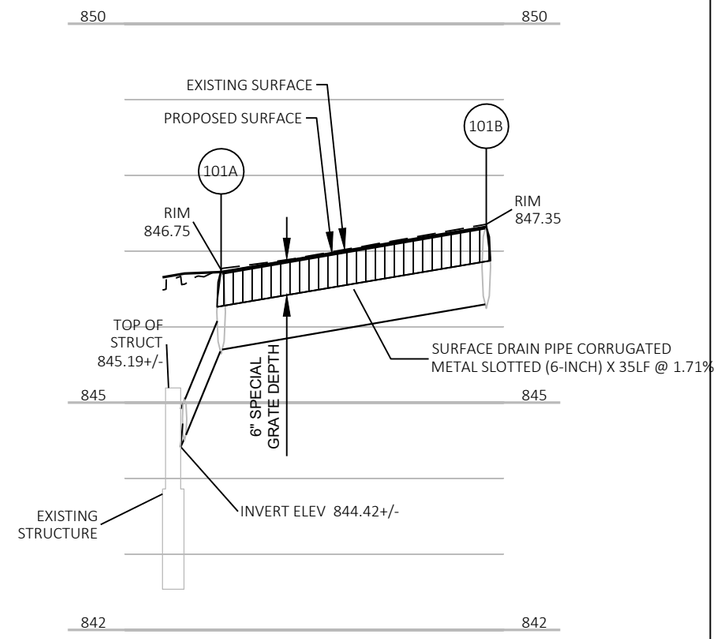
PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	EROSION CONTROL (STAGE 1 - STAGE 3)	SHEET 28	E

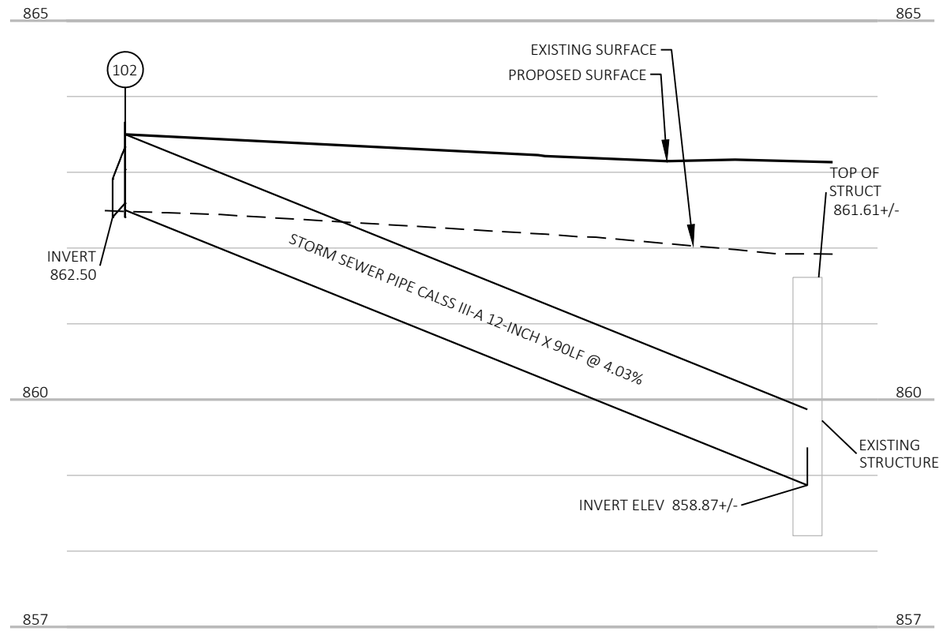
FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\022001-EC2.DWG
LAYOUT NAME - 06-EC

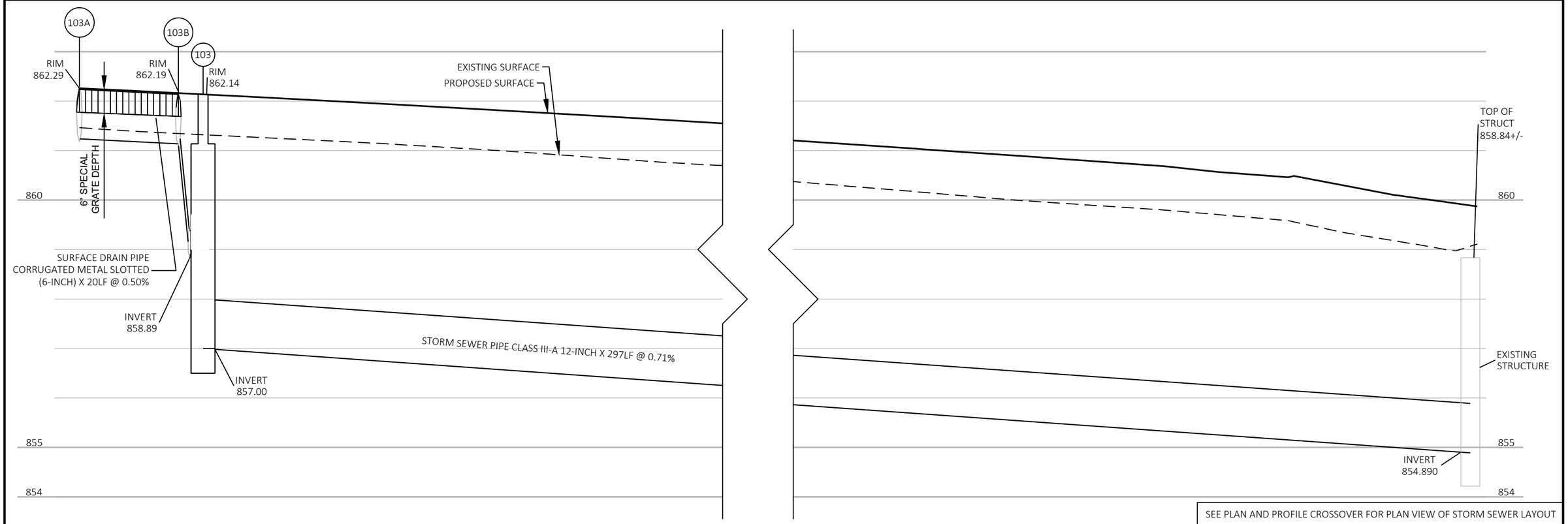
PLOT DATE : 5/6/2019 7:45 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



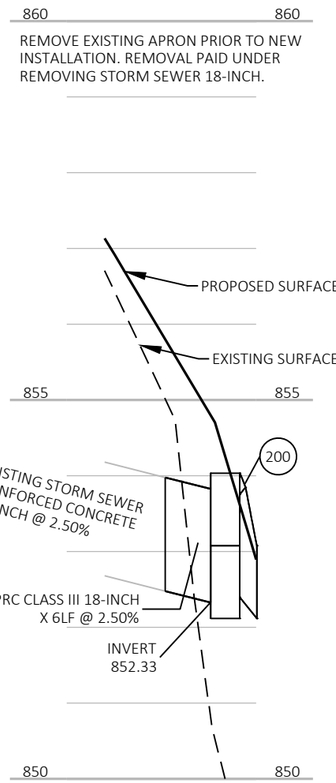


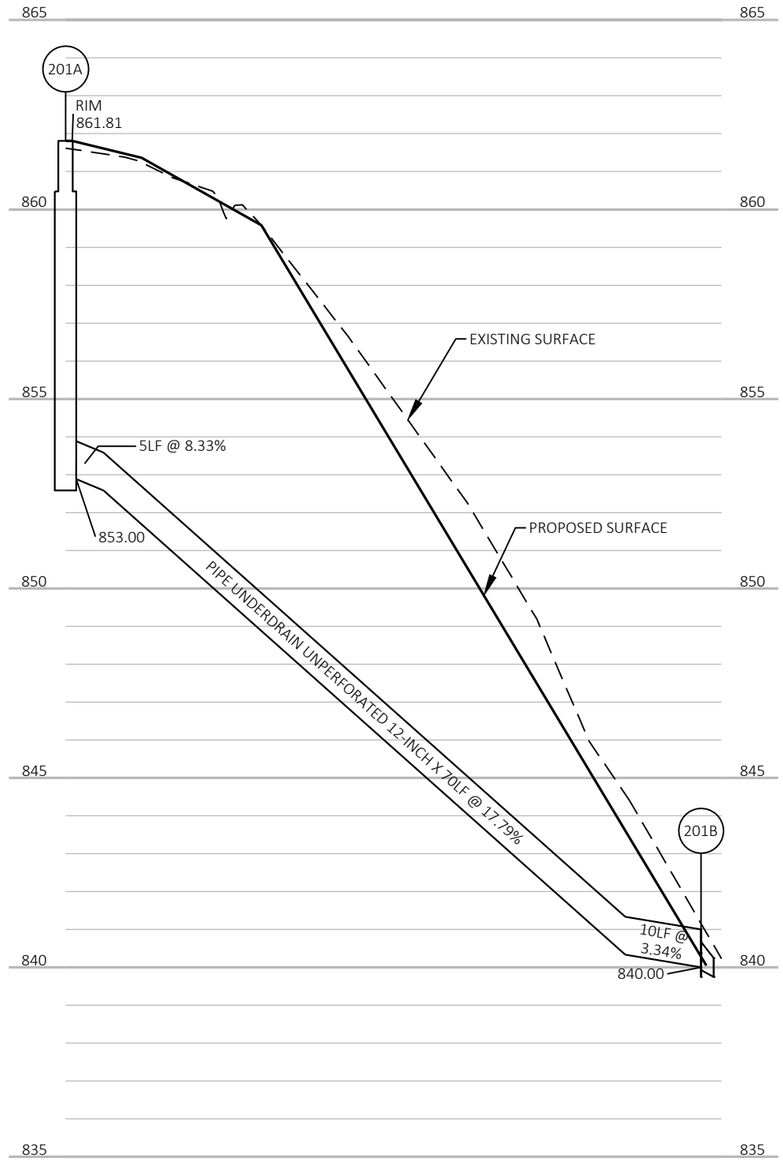


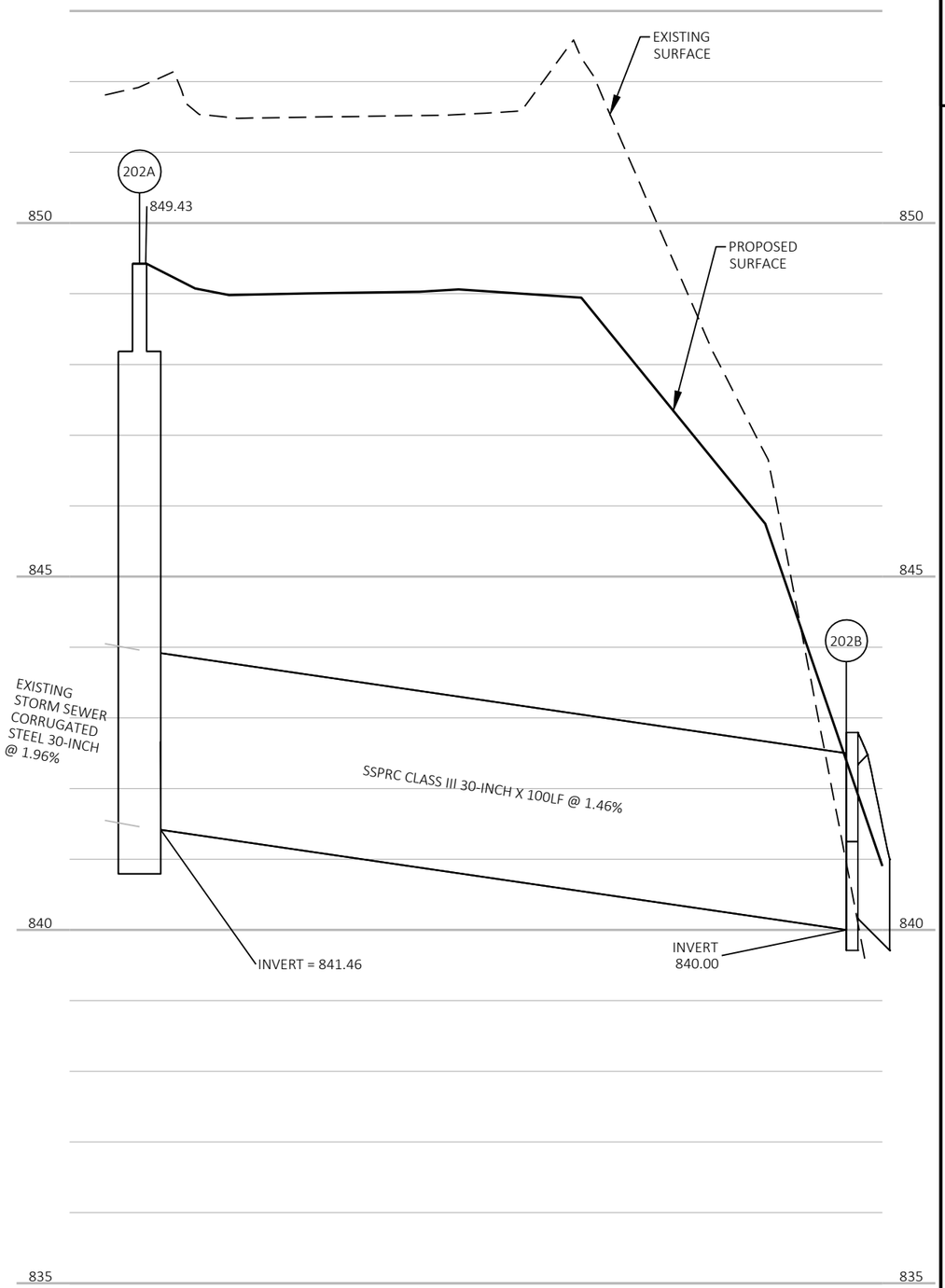


SEE PLAN AND PROFILE CROSSOVER FOR PLAN VIEW OF STORM SEWER LAYOUT

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	STORM SEWER (TEMPORARY)	SHEET 29	E

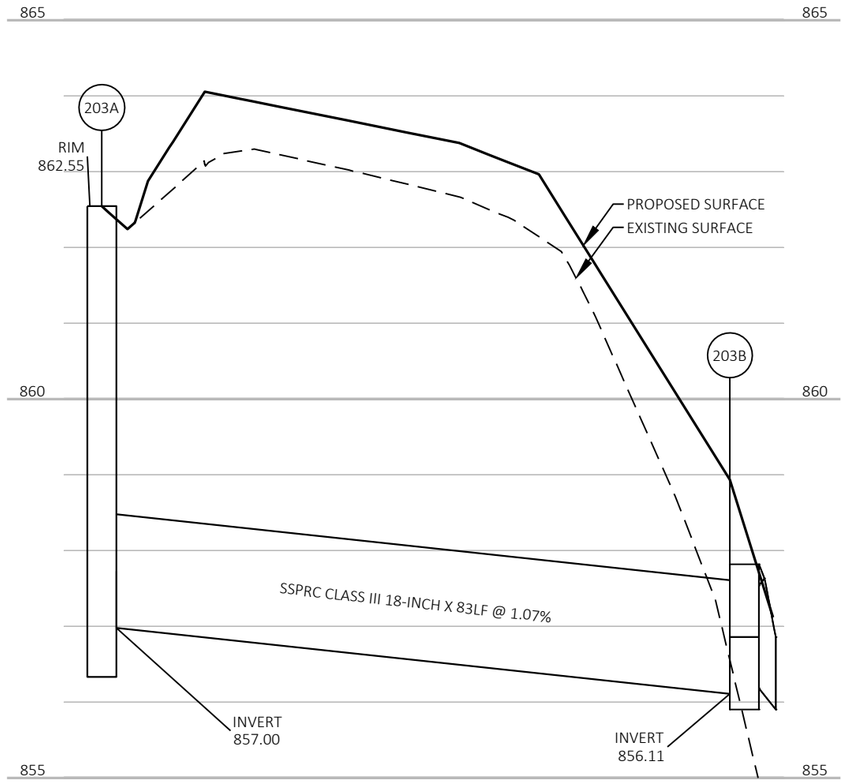




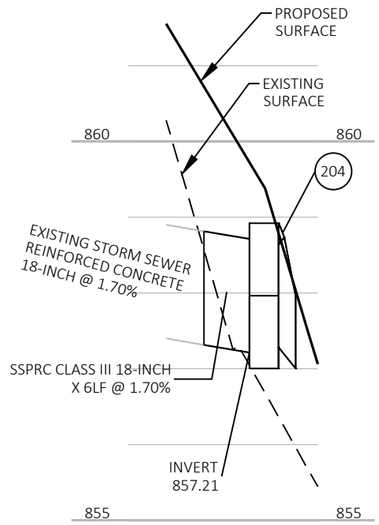


SEE PLAN AND PROFILE USH 10EB FOR PLAN VIEW OF STORM SEWER LAYOUT

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	STORM SEWER	SHEET 30	E



REMOVE EXISTING APRON PRIOR TO NEW INSTALLATION. REMOVAL PAID UNDER REMOVING STORM SEWER 18-INCH.

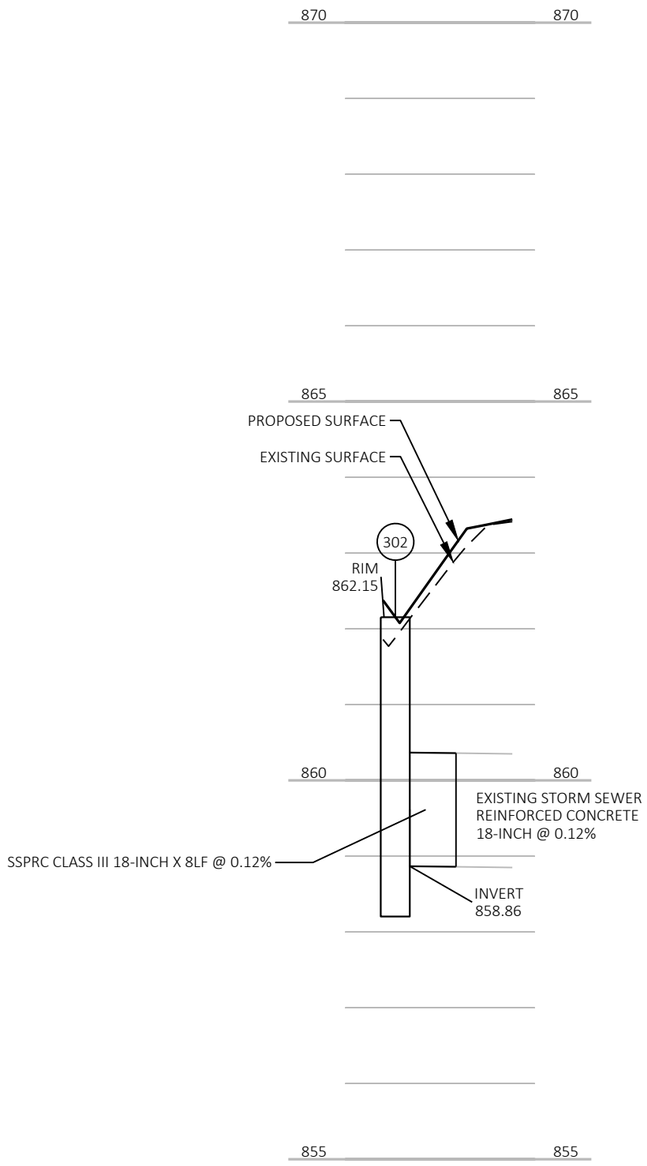


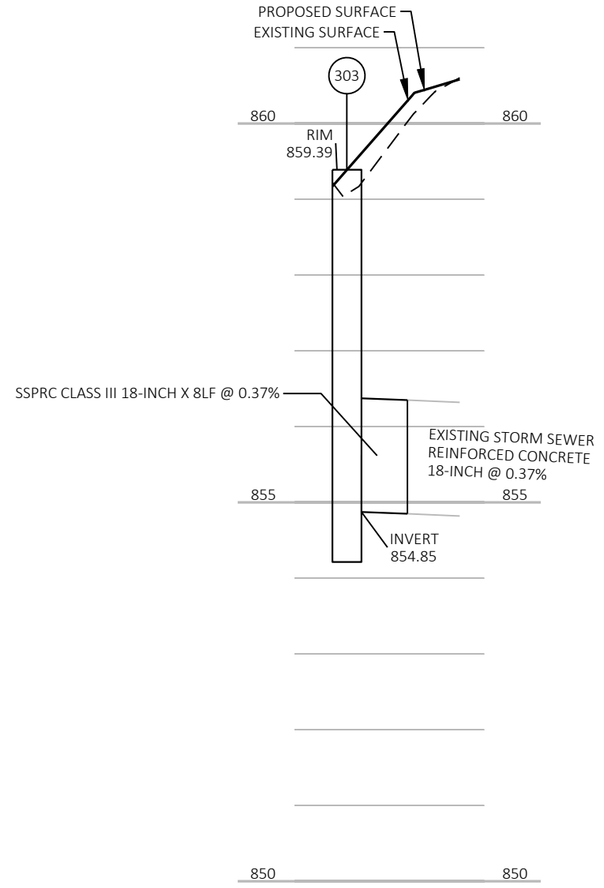
SEE PLAN AND PROFILE USH 10EB FOR PLAN VIEW OF STORM SEWER LAYOUT

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	STORM SEWER	SHEET 31	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\022501-SS.DWG
LAYOUT NAME - 3

PLOT DATE : 5/3/2018 8:29 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : ##########





SEE PLAN AND PROFILE USH 10EB FOR PLAN VIEW OF STORM SEWER LAYOUT

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	STORM SEWER	SHEET 32	E

2

2

N

BEGIN PROJECT
STA 445+75EB

END PROJECT
STA 456+50EB

436WB 436EB 438WB 438EB 440WB 440EB 442WB 442EB 444WB 444EB 446WB 446EB 448WB 448EB 450WB 450EB 452WB 452EB 454WB 454EB 456WB 456EB 458WB 458EB 460WB 460EB 462WB 462EB 464WB 464EB 466WB 466EB

120E 118E 116E 110E 108E 106E 104E 102E

W5-52L
18"X54"
1-02

W5-52R
18"X54"
1-03

MILE
2
5
3
D10-3
12"X48"
1-01

MILE
2
5
3
REMOVE

SPEED
LIMIT
65

EXIT 253
Churchill St
EXIT 1/2 MILE

GAS-NEXT-RIGHT

FOOD-NEXT-RIGHT

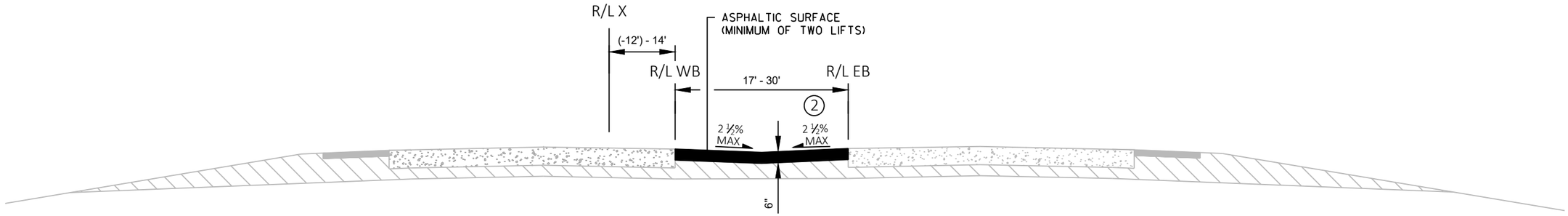
HOSPITAL
NEXT RIGHT

EXIT 253
Churchill st

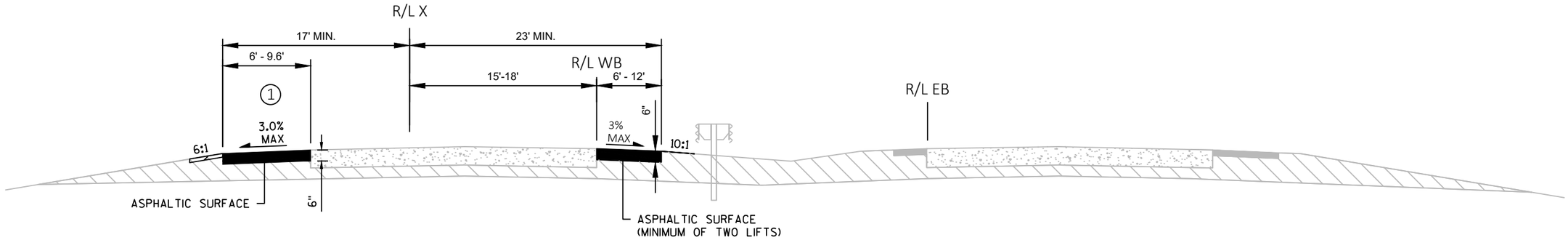
PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PERMANENT SIGNING	SHEET 33	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - 01-PS

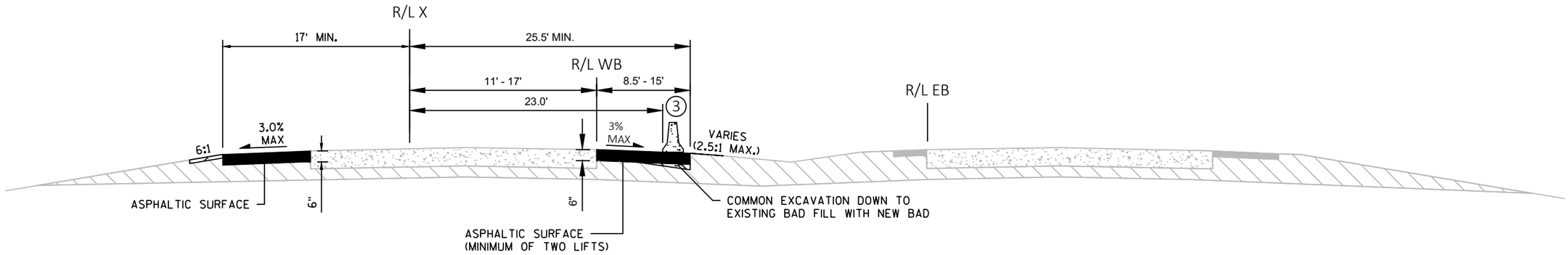
PLOT DATE : 5/3/2018 3:42 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : ##########



CROSSOVER TYPICAL SECTION USH 10 (CONCRETE BARRIER REMOVED)
STA 428+50EB TO 438+50EB



CROSSOVER TYPICAL SECTION USH 10 (STEEL THRIE BEAM, DOUBLE FACED)
STA 438+50EB TO 448+55EB



CROSSOVER TYPICAL SECTION USH 10 (STEEL THRIE BEAM, SINGLE FACED REMOVED)
STA 449+70EB TO 457+00EB

NOTES

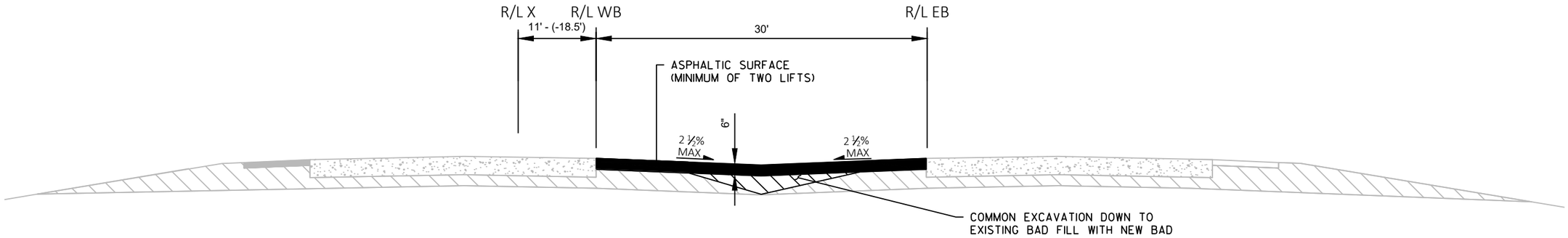
1. STA. 436+00EB TO STA. 457+60EB
2. STA. 425+50EB TO STA. 428+50EB, REMOVE ASPHALT AND PAVE EB MEDIAN SHOULDER, 5' WIDE, 6" DEPTH.
3. TEMPORARY CONCRETE BARRIER STA. 449+74EB TO STA. 448+60EB. STAGES 2A AND 2B.

LEGEND

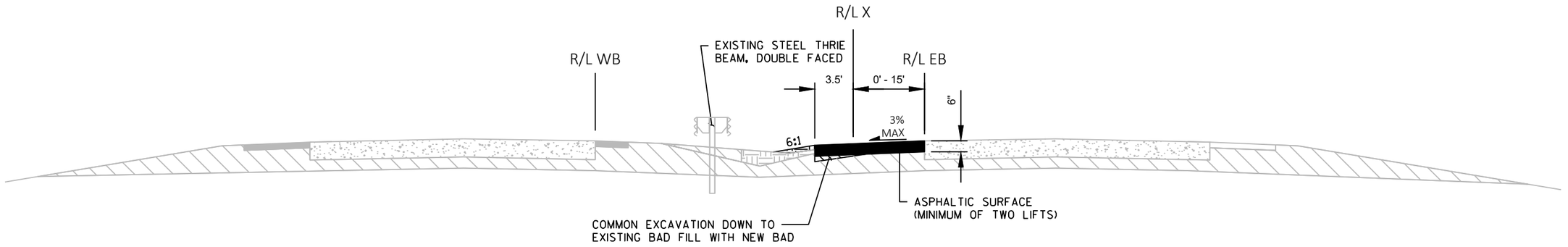
- EXISTING BASE AGGREGATE DENSE
- EXISTING HMA PAVEMENT
- EXISTING CONCRETE PAVEMENT
- EXISTING TOPSOIL
- BASE AGGREGATE DENSE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN: CROSSOVER TYPICALS	SHEET 34	E

2



CROSSOVER TYPICAL SECTION USH 10 (STEEL THRIE BEAM, DOUBLE FACED REMOVED)
STA. 457+00EB TO 462+50EB



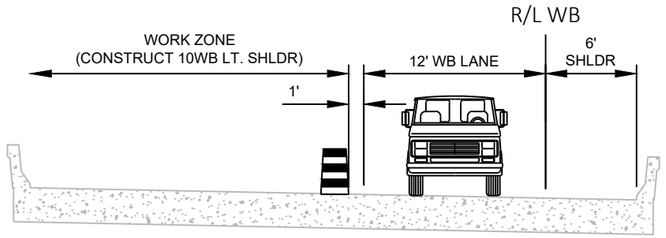
CROSSOVER TYPICAL SECTION USH 10 (STEEL THRIE BEAM, DOUBLE FACED)
STA. 462+50EB TO 467+50EB

LEGEND

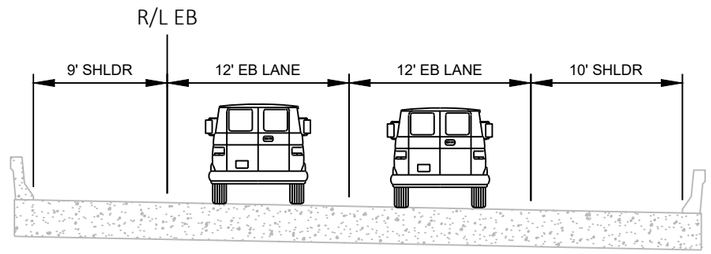
- EXISTING BASE AGGREGATE DENSE
- EXISTING HMA PAVEMENT
- EXISTING CONCRETE PAVEMENT
- EXISTING TOPSOIL
- BASE AGGREGATE DENSE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN: CROSSOVER TYPICALS	SHEET 35	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\025001-TC.DWG
LAYOUT NAME - 02
PLOT DATE : 5/3/2018 3:28 PM
PLOT BY : CASPER, ANDREW P
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

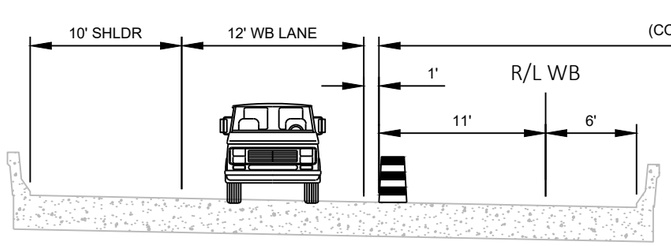


B-68-76

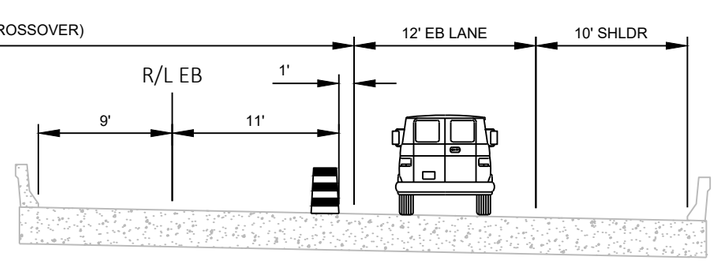


B-68-22

STAGE 1A
LOOKING EAST

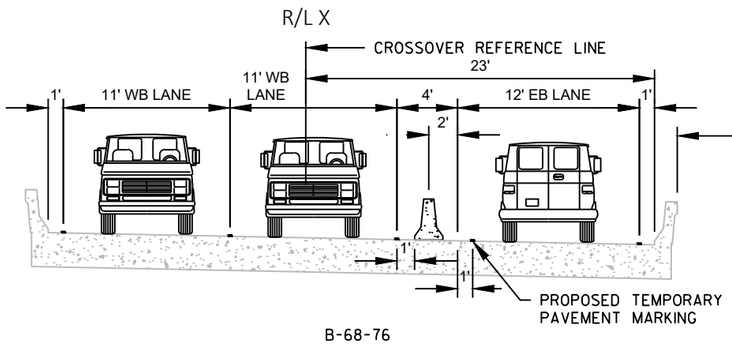


B-68-76

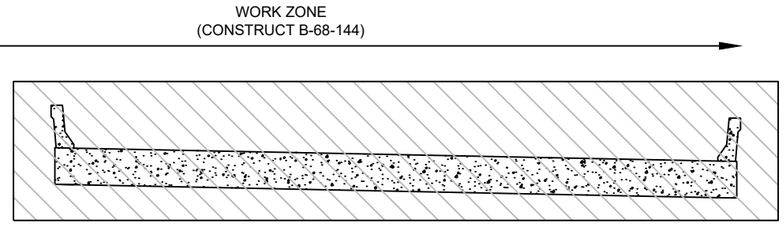


B-68-22

STAGE 1B
LOOKING EAST

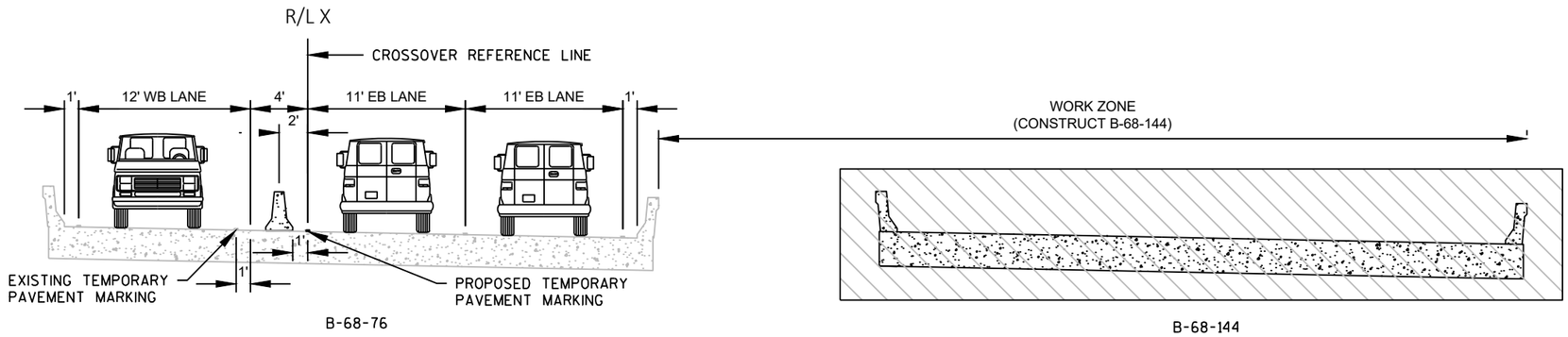


B-68-76

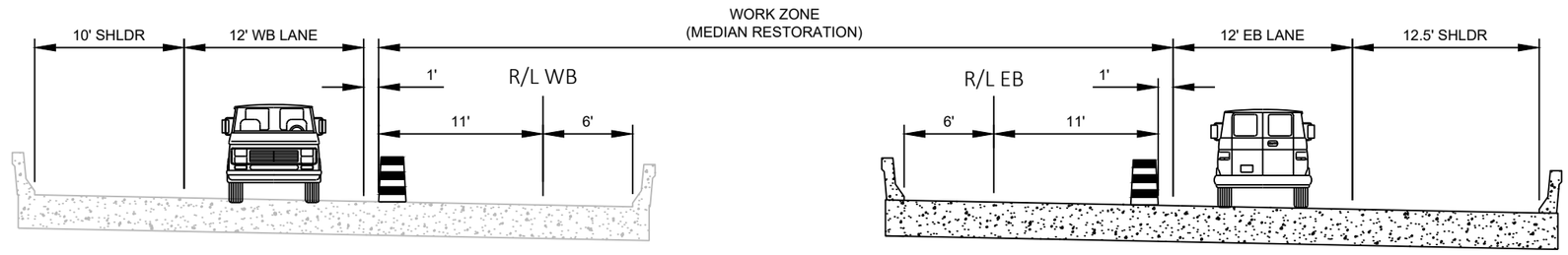


B-68-144

STAGE 2A
LOOKING EAST



STAGE 2B
LOOKING EAST



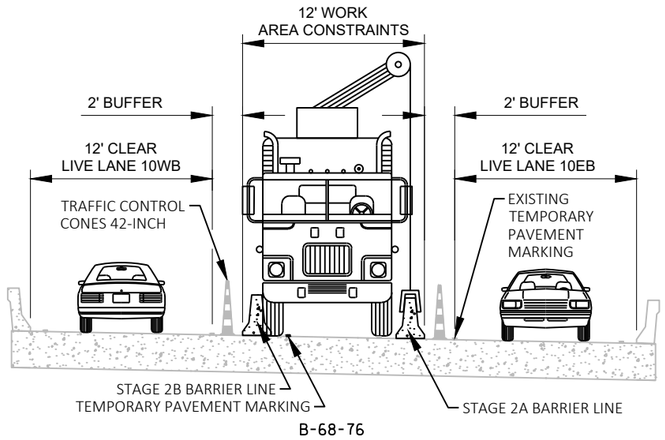
STAGE 3A
LOOKING EAST

STAGE 3B
LOOKING EAST

2

LEGEND

- TRAFFIC CONTROL CONES 42-INCH
- CONCRETE BARRIER TEMPORARY PRECAST

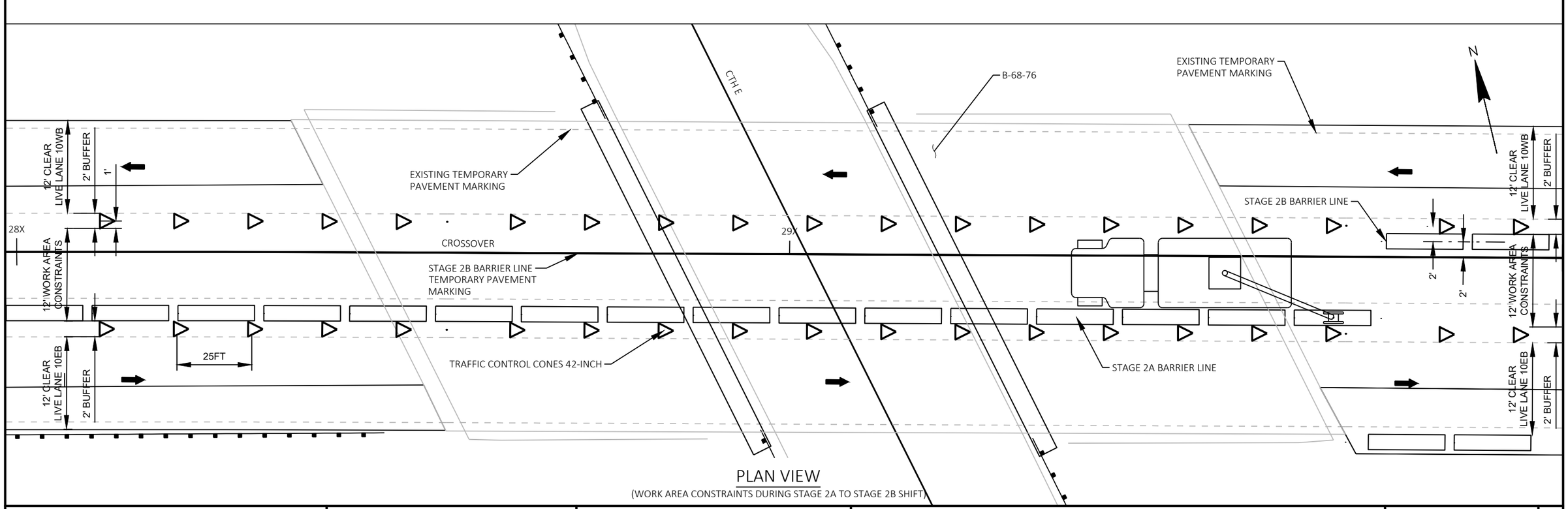


TYPICAL SECTION

LOOKING EAST

(WORK AREA CONSTRAINTS DURING STAGE 2A TO STAGE 2B SHIFT)

STA 7+44 X - STA 43+51 X



PLAN VIEW

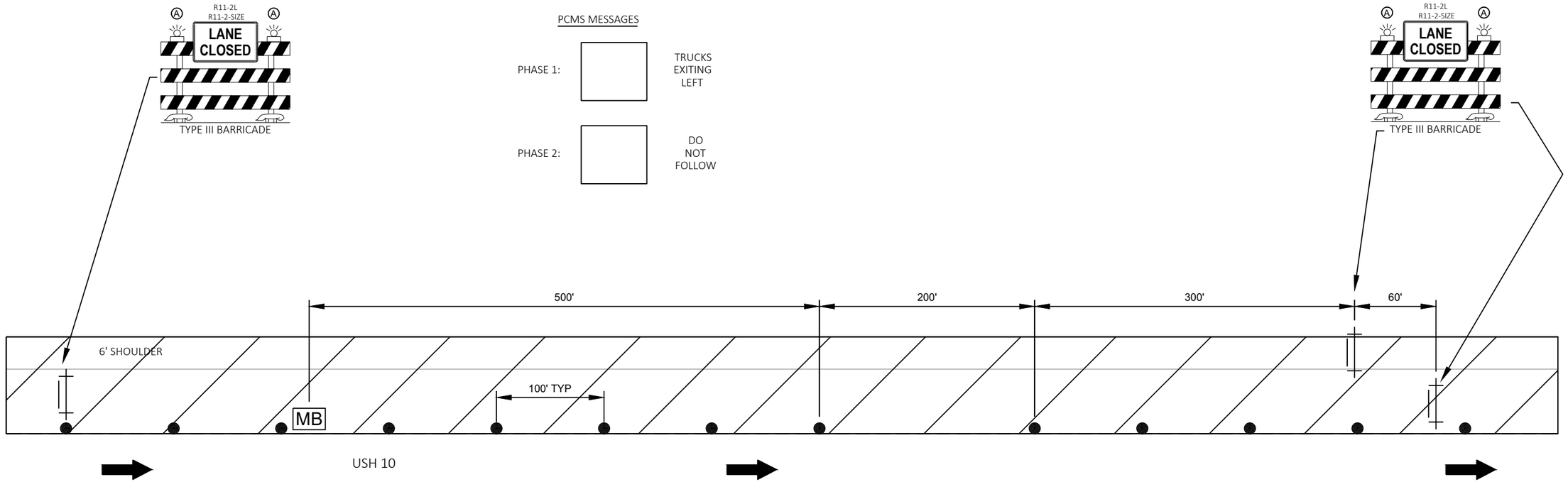
(WORK AREA CONSTRAINTS DURING STAGE 2A TO STAGE 2B SHIFT)

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN: WORK AREA CONSTRAINTS DURING STAGE 2A TO STAGE 2B SHIFT	SHEET	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\025001-TC.DWG
LAYOUT NAME - 05

PLOT DATE : 5/3/2018 3:28 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT

2



WORK ZONE ACCESS (SINGLE LANE CLOSURE)

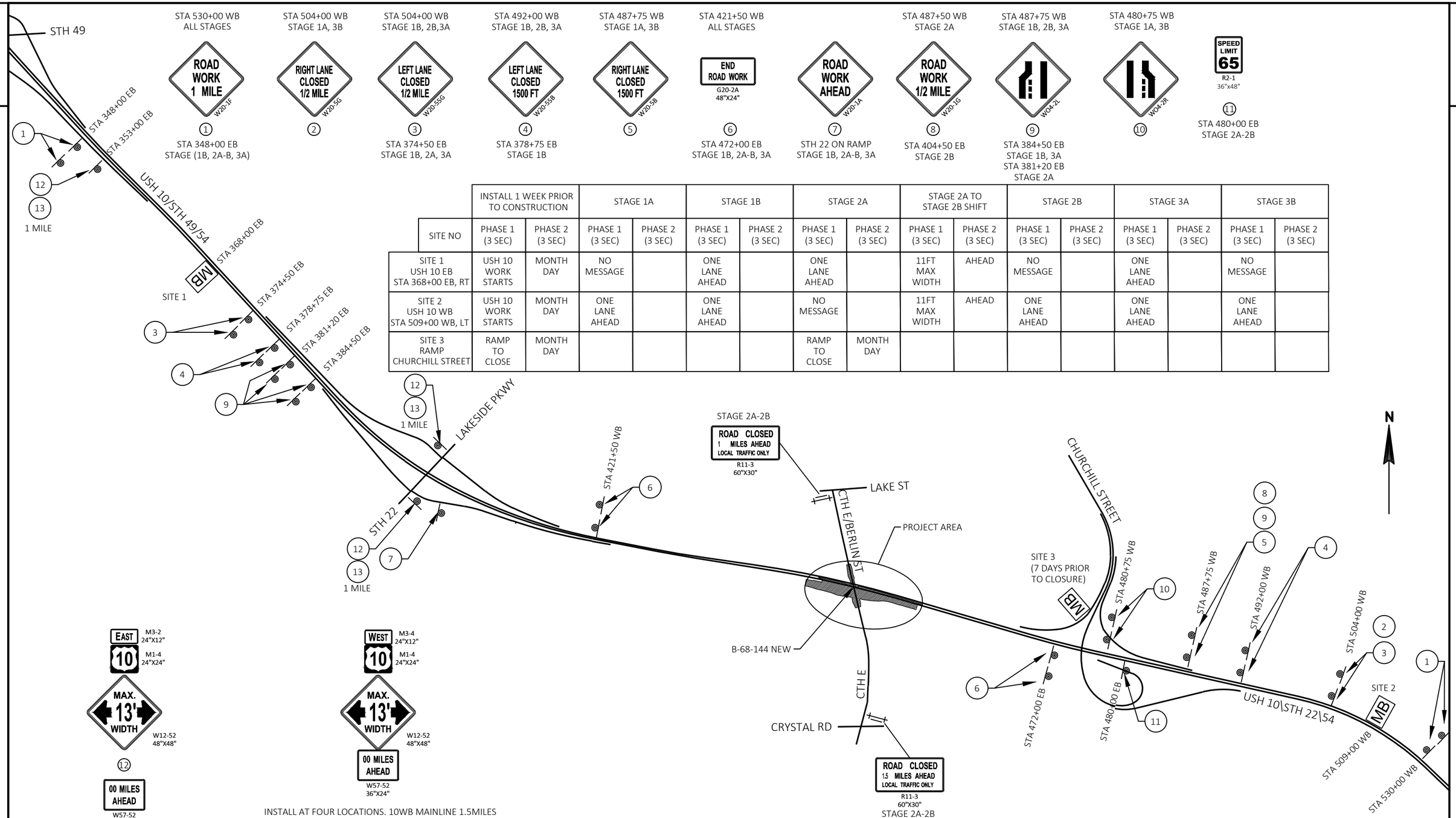
USED DURING STAGES 1B AND 3A WHEN MATERIALS/EQUIPMENT IS BEING DELIVERED TO WORK ZONES

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN: TRAFFIC CONTROL WORKZONE ACCESS STAGE 2A & 2B	SHEET 39	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\025001-TC.DWG
LAYOUT NAME - 06
PLOT DATE : 5/3/2018 3:28 PM
PLOT BY : CASPER, ANDREW P
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



STA 530+00 WB
ALL STAGES

ROAD WORK 1 MILE
W20-1F

① STA 348+00 EB
STAGE (1B, 2A-B, 3A)

STA 504+00 WB
STAGE 1A, 3B

RIGHT LANE CLOSED 1/2 MILE
W20-5G

②

STA 504+00 WB
STAGE 1B, 2B,3A

LEFT LANE CLOSED 1/2 MILE
W20-55G

③ STA 374+50 EB
STAGE 1B, 2A, 3A

STA 492+00 WB
STAGE 1B, 2B, 3A

LEFT LANE CLOSED 1500 FT
W20-55B

④ STA 378+75 EB
STAGE 1B

STA 487+75 WB
STAGE 1A, 3B

RIGHT LANE CLOSED 1500 FT
W20-5B

⑤

STA 421+50 WB
ALL STAGES

END ROAD WORK
G20-2A
48"X24"

⑥ STA 472+00 EB
STAGE 1B, 2A-B, 3A

ROAD WORK AHEAD
W20-1A

⑦ STH 22 ON RAMP
STAGE 1B, 2A-B, 3A

STA 487+50 WB
STAGE 2A

ROAD WORK 1/2 MILE
W20-1G

⑧ STA 404+50 EB
STAGE 2B

STA 487+75 WB
STAGE 1B, 2B, 3A

W04-2L

⑨ STA 384+50 EB
STAGE 1B, 3A
STA 381+20 EB
STAGE 2A

STA 480+75 WB
STAGE 1A, 3B

W04-2R

⑩

SPEED LIMIT 65
R2-1
36"x48"

⑪ STA 480+00 EB
STAGE 2A-2B

SITE NO	INSTALL 1 WEEK PRIOR TO CONSTRUCTION		STAGE 1A		STAGE 1B		STAGE 2A		STAGE 2A TO STAGE 2B SHIFT		STAGE 2B		STAGE 3A		STAGE 3B	
	PHASE 1 (3 SEC)	PHASE 2 (3 SEC)	PHASE 1 (3 SEC)	PHASE 2 (3 SEC)	PHASE 1 (3 SEC)	PHASE 2 (3 SEC)	PHASE 1 (3 SEC)	PHASE 2 (3 SEC)	PHASE 1 (3 SEC)	PHASE 2 (3 SEC)	PHASE 1 (3 SEC)	PHASE 2 (3 SEC)	PHASE 1 (3 SEC)	PHASE 2 (3 SEC)	PHASE 1 (3 SEC)	PHASE 2 (3 SEC)
SITE 1 USH 10 EB STA 368+00 EB, RT	USH 10 WORK STARTS	MONTH DAY	NO MESSAGE		ONE LANE AHEAD		ONE LANE AHEAD		11FT MAX WIDTH	AHEAD	NO MESSAGE		ONE LANE AHEAD		NO MESSAGE	
SITE 2 USH 10 WB STA 509+00 WB, LT	USH 10 WORK STARTS	MONTH DAY	ONE LANE AHEAD		ONE LANE AHEAD		NO MESSAGE		11FT MAX WIDTH	AHEAD	ONE LANE AHEAD		ONE LANE AHEAD		ONE LANE AHEAD	
SITE 3 RAMP CHURCHILL STREET	RAMP TO CLOSE	MONTH DAY					RAMP TO CLOSE	MONTH DAY								

EAST M3-2 24"X12"
10 M1-4 24"X24"
MAX. 13' WIDTH W12-52 48"X48"
⑫
00 MILES AHEAD
W57-52 36"X24"
⑬

SIGNS 12 AND 13 TO ALSO BE INSTALLED ON 10EB MAINLINE 2MILES AWAY FROM WORK ZONE.
STAGE 2A AND STAGE 2A TO STAGE 2B SHIFT (EB ONLY)

WEST M3-4 24"X12"
10 M1-4 24"X24"
MAX. 13' WIDTH W12-52 48"X48"
00 MILES AHEAD
W57-52 36"X24"

INSTALL AT FOUR LOCATIONS. 10WB MAINLINE 1.5MILES AWAY FROM WORK ZONE, 10WB MAINLINE 2.5MILES AWAY FROM WORK ZONE, CTH A NB PRIOR TO 10WB ON RAMP AND CTH A SB PRIOR TO 10WB ON RAMP.
STAGE 2B AND STAGE 2A TO STAGE 2B SHIFT (WB ONLY)

NOTE:
ALL SIGNS ARE 48"X48" FOR TRAFFIC CONTROL, UNLESS OTHERWISE NOTED

2

NOTE:
USE THE FOLLOWING TRAFFIC CONTROL SDD

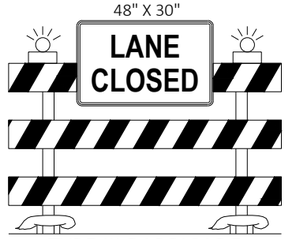
-LANE CLOSURE

LEGEND

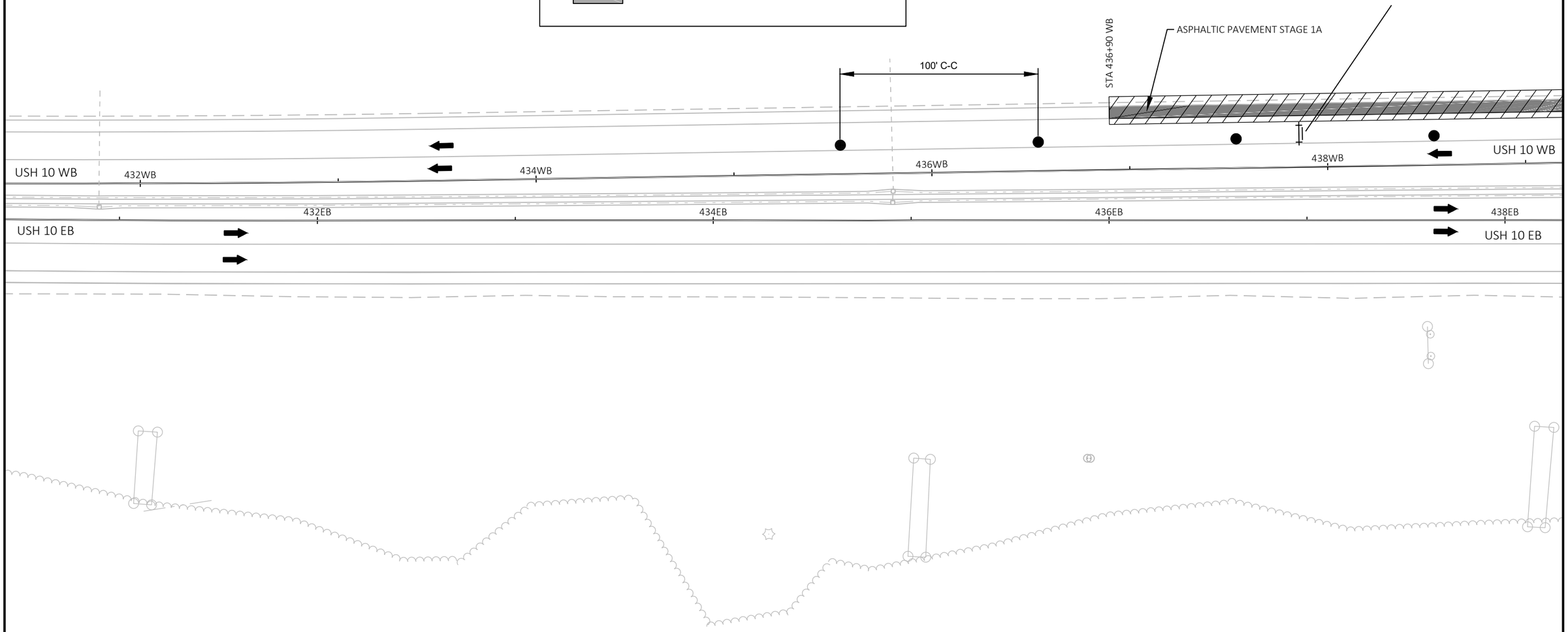
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

R11-2L
48" X 30"



TYPE III BARRICADE



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1A	SHEET 41	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026001-S1A.DWG
LAYOUT NAME - tc1-01

PLOT DATE : 5/7/2018 7:15 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE

N

SPEED LIMIT 65

ASPHALTIC PAVEMENT STAGE 1A

100'

USH 10 WB

440WB

442WB

444WB

USH 10 WB

446WB

438EB

USH 10 EB

440EB

442EB

444EB

USH 10 EB

SPEED LIMIT 65

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1A	SHEET 42	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026001-S1A.DWG
LAYOUT NAME - tc1-02

PLOT DATE : 5/7/2018 7:15 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

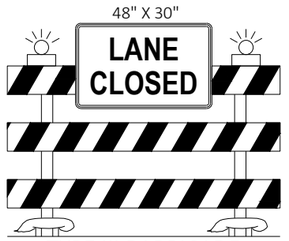
2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE

R11-2L
48" X 30"



TYPE III BARRICADE

N

CTH E
BERLIN ST

1124E

ASPHALTIC PAVEMENT STAGE 1A

ASPHALTIC PAVEMENT STAGE 1A

100'

USH 10 WB 446WB

448WB

450WB

452WB

USH 10 WB

446EB

448EB

450EB

452EB

USH 10 EB

USH 10 EB

1124E

CTH E

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1A	SHEET 43	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026001-S1A.DWG
LAYOUT NAME - tc1-03

PLOT DATE : 5/7/2018 7:15 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

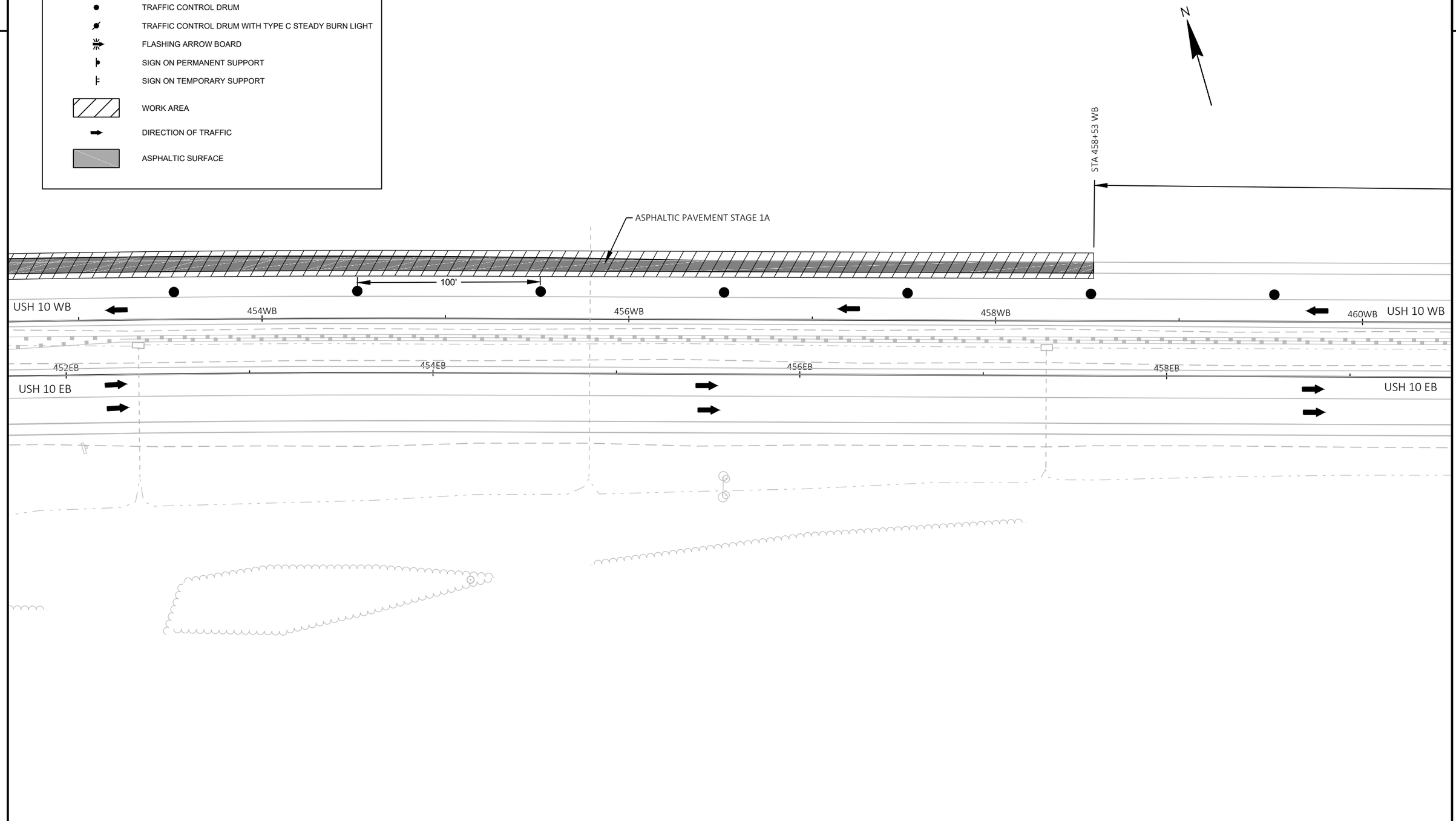
WISDOT/CADDS SHEET 42

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE

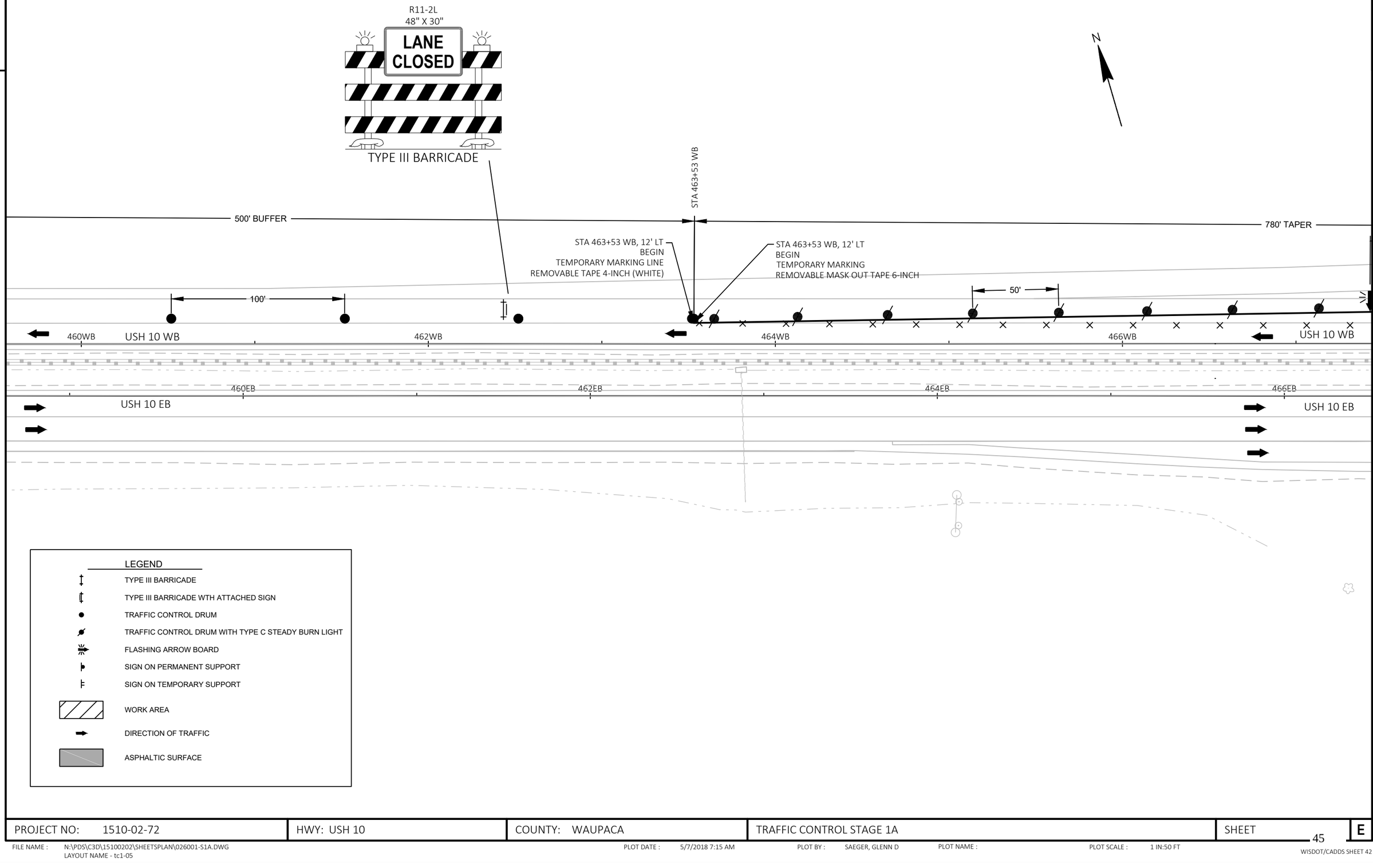


PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1A	SHEET 44	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026001-S1A.DWG
LAYOUT NAME - tc1-04

PLOT DATE : 5/7/2018 7:15 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1A	SHEET 45	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026001-S1A.DWG
LAYOUT NAME - tc1-05
PLOT DATE : 5/7/2018 7:15 AM
PLOT BY : SAEGER, GLENN D
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

N

RAMP IS CLOSED
SEE OTHER TRAFFIC CONTROL SHEETS
FOR CLOSURE

STA 471+33 WB

780' TAPER

390'

500'

50'

50'

STA 471+33 WB, 24' LT
END
TEMPORARY MARKING LINE
REMOVABLE TAPE 4-INCH (WHITE)

USH 10 WB

468WB

470WB

472WB

USH 10 WB

474WB

STA 471+83 WB, 12' LT
END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

466EB

468EB

470EB

472EB

USH 10 EB

USH 10 EB

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE

2

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1A	SHEET 46	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026001-S1A.DWG
LAYOUT NAME - tc1-06

PLOT DATE : 5/7/2018 7:15 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

CHURCHILL ST

N

OFF RAMP

EXIT

WC4-2R

STA 476+33 WB

STA 480+75 WB

500'

USH 10 WB

474WB

476WB

478WB

480WB

USH 10 WB

474EB

476EB

478EB

480EB

USH 10 EB

USH 10 EB

OFF RAMP

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1A	SHEET 47	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026001-S1A.DWG
LAYOUT NAME - tc1-07

PLOT DATE : 5/7/2018 7:16 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

NOTE:
USE THE FOLLOWING TRAFFIC CONTROL SDD

-EXIT RAMP CLOSURE

NOTE:
RAMP WILL BE CLOSED
DURING STAGE 1A & 1B,
STAGE 2A, STAGE 3A & 3B

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

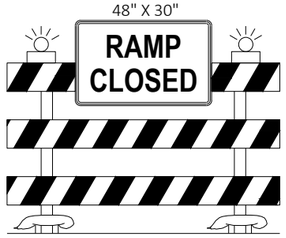
N

INSTALL 1 WEEK PRIOR TO CLOSURE

MB

ON RAMP

R11-2R
48" X 30"



TYPE III BARRICADE

COVER SIGNS STAGE 1A

COVER SIGNS STAGE 1A

25'

50'

CHURCHILL STREET

OFF RAMP

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL CHURCHILL ST RAMP CLOSURE (STAGE 1A, 1B, 2B, 3A, 3B)	SHEET 48	E

2

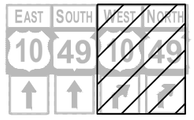
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

COVER SIGNS STAGE 1A

COVER SIGNS STAGE 1A



COVER SIGNS STAGE 1A

RAMP CLOSED
USE
ALT ROUTE
R11-54F
48"X30"

50'

CHURCHILL ST

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL CHURCHILL ST RAMP CLOSURE (STAGE 1A, 1B, 2B, 3A, 3B)	SHEET 49	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026002-S1A-RAMP.DWG
LAYOUT NAME - ts1a-r02

PLOT DATE : 5/7/2018 7:17 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

NOTE:
USE THE FOLLOWING TRAFFIC CONTROL SDD

-LANE CLOSURE
-TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
-EXIT RAMP CLOSURE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

ON RAMP

LAKESIDE PRWY

USH 10 WB

USH 10 EB

396WB

398WB

400WB

402WB

390'

500'

50'

394EB

396EB

398EB

400EB

STA 394+20 EB

STA 398+70 EB, 12' RT
BEGIN
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

STA 399+20 EB
BEGIN
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

OFF RAMP

ON RAMP

STH 22

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET 50	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 01-s1b

PLOT DATE : 10/19/2018 2:13 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

LAKESIDE PRWY

OFF RAMP

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

W04-1R

USH 10 WB

402WB

404WB

406WB

408WB

780' TRANSITION AREA

390'

50'

402EB

404EB

406EB

408EB

USH 10 EB

USH 10 EB

50'

STA 407+00 EB, 12' RT
END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STH 22

ON RAMP

R11-2L
48" X 30"

LANE CLOSED

TYPE III BARRICADE

W03-2

ROAD WORK AHEAD

W20-1A

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET 51	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 02-s1b

PLOT DATE : 10/19/2018 2:13 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

OFF RAMP

USH 10 WB

410WB

412WB

414WB

416WB

USH 10 WB

USH 10 EB

414EB

412EB

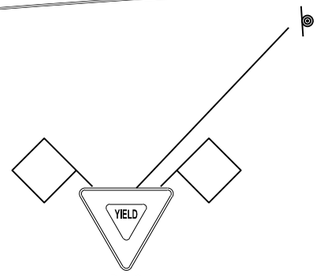
100'

408EB

410EB

USH 10 EB

ON RAMP



R1-2
36"X31"

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET 52	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 03-s1b

PLOT DATE : 10/19/2018 2:13 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

INSTALLED IN STAGE 1A

END
ROAD WORK

USH 10 WB

USH 10 EB

416WB

418WB

420WB

422WB

416EB

418EB

420EB

422EB

100'

25'

R11-2L
48" X 30"

LANE
CLOSED

TYPE III BARRICADE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET 53	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 04-s1b

PLOT DATE : 10/19/2018 2:13 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

R11-2L
48" X 30"

TYPE III BARRICADE

USH 10 WB

USH 10 EB

422EB

424WB

424EB

100'

100'

426WB

426EB

428WB

428EB

430WB

USH 10 WB

USH 10 EB

STA 428+50 EB, 8.5' LT TO CENTER
BEGIN
CONCRETE BARRIER TEMPORARY PRECAST
END OF STAGE 1B

ASPHALTIC PAVEMENT STAGE 1B

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET 54	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 05-s1b

PLOT DATE : 10/19/2018 2:13 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

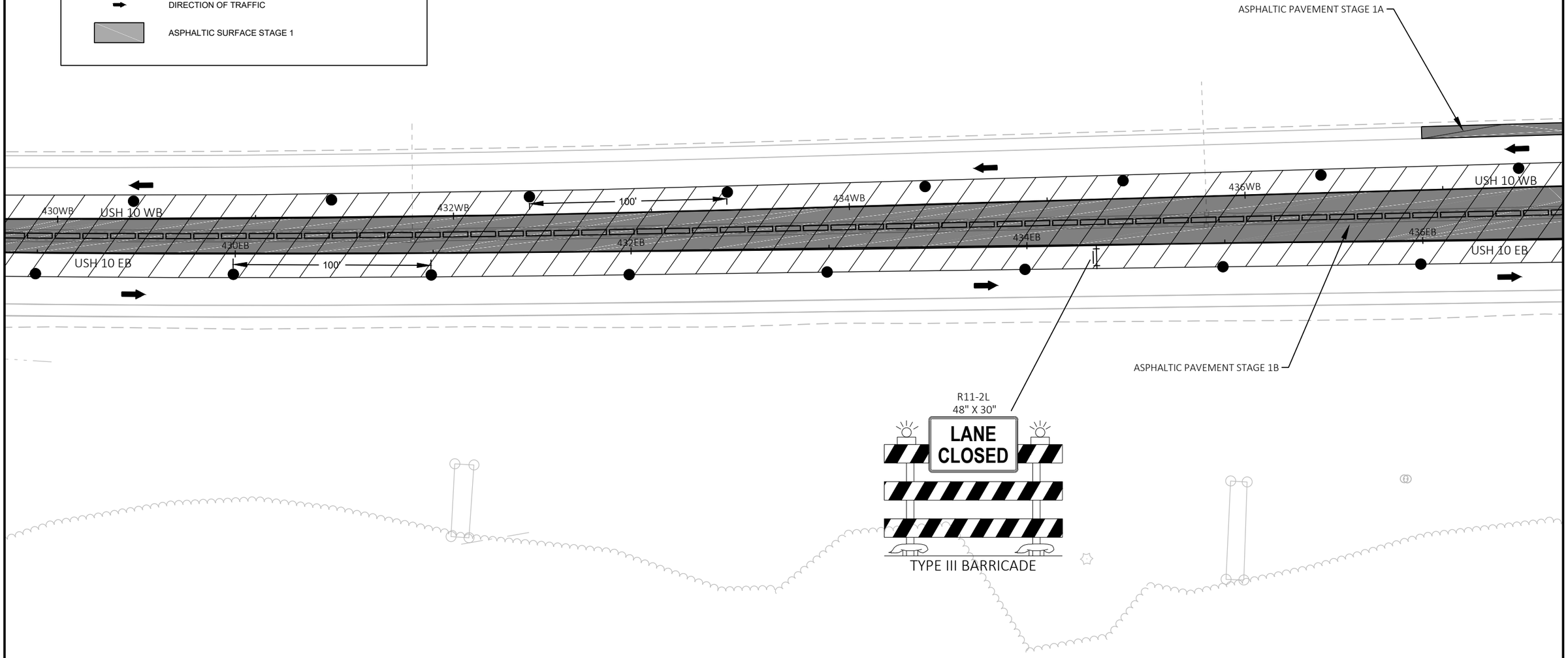
WISDOT/CADDS SHEET 42

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 06-s1b

PLOT DATE : 10/19/2018 2:13 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

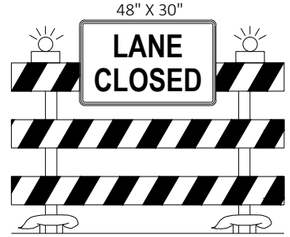
2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

R11-2L
48" X 30"



TYPE III BARRICADE

SPEED LIMIT 65

ASPHALTIC PAVEMENT STAGE 1A

USH 10 WB

USH 10 EB

436EB

438WB

438EB

440WB

440EB

442WB

100'

444WB

447EB

100'

USH 10 WB

USH 10 EB

ASPHALTIC PAVEMENT STAGE 1B

STA 438+50 EB, 14.6' LT TO CENTER
END
CONCRETE BARRIER TEMPORARY PRECAST
END OF STAGE 1B

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET 56	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 07-s1b

PLOT DATE : 10/19/2018 2:13 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

ASPHALTIC PAVEMENT STAGE 1A

ASPHALTIC PAVEMENT STAGE 1B

CTH E
BERLIN ST

L14E

L12E

CTH E

STA 450+74 WB, 7' RT TO CENTER=
STA 29+72 X, 24' RT TO CENTER
BEGIN
CONCRETE BARRIER TEMPORARY PRECAST
END OF STAGE 1B

444WB

USH 10 WB

446WB

100'

448WB

450WB

USH 10 WB

444EB

USH 10 EB

100'

446EB

448EB

450EB

USH 10 EB

SPEED LIMIT 65

R11-2L
48" X 30"

LANE CLOSED

TYPE III BARRICADE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET 57	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 08-s1b

PLOT DATE : 10/19/2018 2:13 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

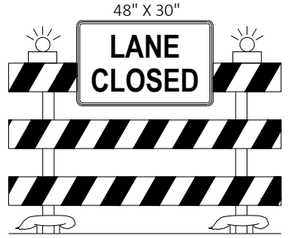
2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

R11-2L
48" X 30"



TYPE III BARRICADE

ASPHALTIC PAVEMENT STAGE 1A

ASPHALTIC PAVEMENT STAGE 1B

USH 10 WB

452WB

100'

454WB

456WB

458WB

USH 10 WB

450EB

USH 10 EB

452EB

454EB

100'

456EB

USH 10 EB

SAME BARRIER LINE USED IN STAGE 2A/2B

CTH E

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET 58	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 09-s1b

PLOT DATE : 10/19/2018 2:13 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

ASPHALTIC PAVEMENT STAGE 1A

ASPHALTIC PAVEMENT STAGE 1B

STA 463+34 EB, 9.8' LT TO CENTER
END
CONCRETE BARRIER TEMPORARY PRECAST
END OF STAGE 1B

ON RAMP CLOSED FROM CHURCHILL ST

458WB USH 10 WB 460WB 100' 462WB 464WB USH 10 WB

458EB USH 10 EB 460EB 100' 462EB 464EB USH 10 EB

STA 458+60 EB, 9.8' LT TO CENTER=
STA 38+62 X, 24' RT TO CENTER
CONCRETE BARRIER TEMPORARY PRECAST
END OF STAGE 1B

R11-2L
48" X 30"

TYPE III BARRICADE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET 59	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 10-s1b

PLOT DATE : 10/19/2018 2:13 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

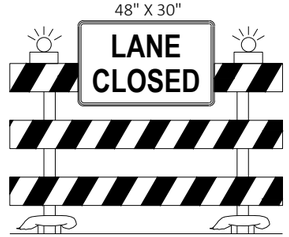
2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

R11-2L
48" X 30"



TYPE III BARRICADE

ON RAMP CLOSED FROM CHURCHILL ST

STA 471+45 WB, 12' LT
BEGIN
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH
BEGIN
TEMPORARY MARKING LINE REMOVALBE TAPE 4-INCH
(YELLOW)

100'

USH 10 WB

466WB

468WB

470WB

472WB

802' BUFFER

USH 10 WB

464EB

466EB

468EB

470EB

USH 10 EB

USH 10 EB

100'

ASPHALTIC PAVEMENT STAGE 1B

2

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET 60	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 11-s1b

PLOT DATE : 10/19/2018 2:13 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

ON RAMP CLOSED

OFF RAMP TO CHURCHILL ST

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

STA 478+57 WB, 12' LT
END
TEMPORARY MARKING
REMOVABLE MASK OUT
TAPE 6-INCH

STA 478+07 WB
END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

USH 10 WB

USH 10 EB

472WB

474WB

476WB

478WB

780 TRANSITION AREA

19'

472EB

474EB

476EB

478EB

OFF RAMP TO CHURCHILL ST

END
ROAD WORK
G20-2A
48"X24"

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 12-s1b
PLOT DATE : 10/19/2018 2:13 PM
PLOT BY : CASPER, ANDREW P
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

2

N

OFF RAMP TO CHURCHILL ST

EXIT

STA 479+75 WB, 12' LT
END
TEMPORARY MARKING
REMOVABLE MASK OUT
TAPE 6-INCH

USH 10 WB

480WB

482WB

484WB

486WB

USH 10 WB

50'

500'

478EB

480EB

482EB

484EB

USH 10 EB

USH 10 EB

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

OFF RAMP TO CHURCHILL ST

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 1B	SHEET 62	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026003-S1B.DWG
LAYOUT NAME - 13-s1b

PLOT DATE : 10/19/2018 2:13 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

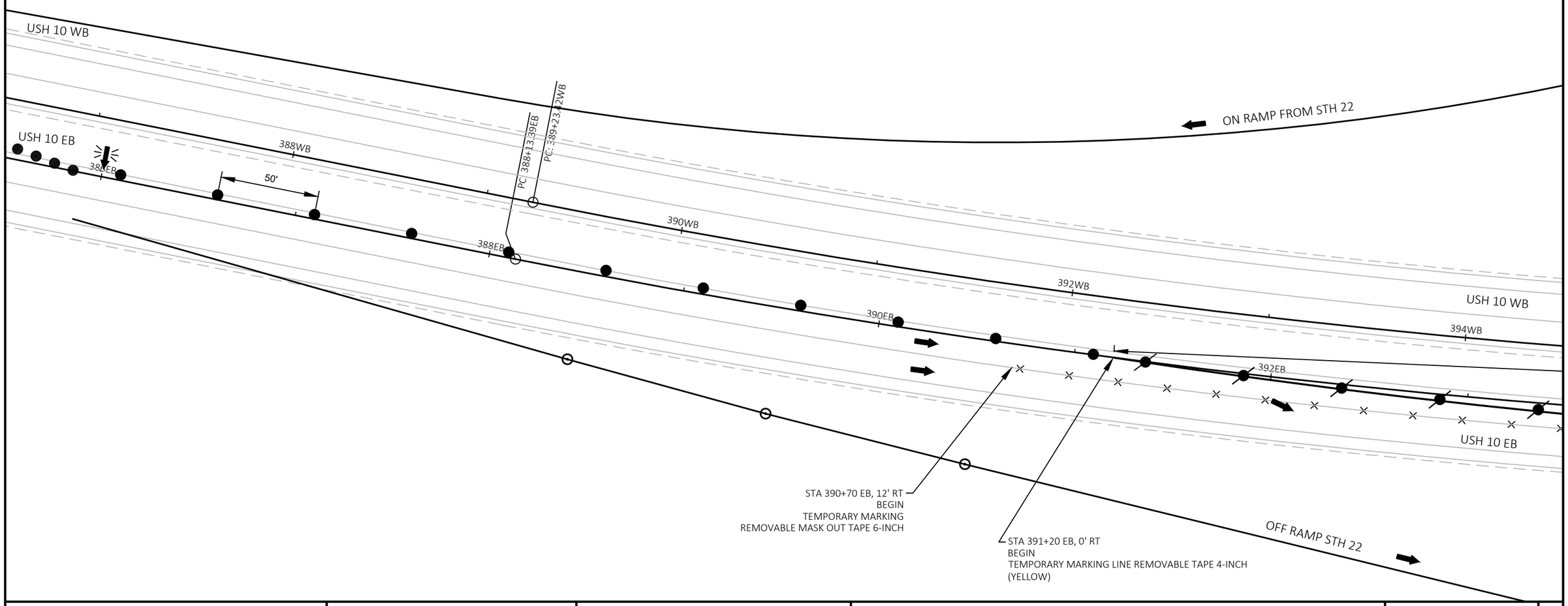
NOTE:
USE THE FOLLOWING TRAFFIC CONTROL SDD:

-LANE CLOSURE
-LANE CLOSURE, SPEEDS GREATER THAN 40 MPH WITH BARRIER
-TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
-SINGLE LANE CROSSOVER
-BARRICADES AND SIGNS FOR MAINLINE CLOSURES
-BARRICADES AND SIGNS FOR SIDE ROAD CLOSURES
-EXIT RAMP CLOSURE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET 63	E

2

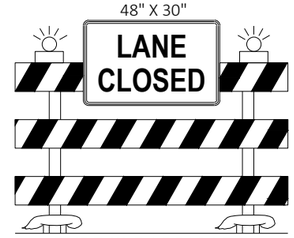
ON RAMP FROM STH 22

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

R11-2L
48" X 30"



TYPE III BARRICADE

LAKESIDE PRKWY

USH 10 WB

396WB

398WB

780' TAPER TRANSITION

PCC 397+89.07EB

400WB

USH 10 WB

402WB

394EB

USH 10 EB

396EB

50'

398EB

400EB

USH 10 EB

STA 399+00 EB, 12' RT
END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

OFF RAMP STH 22

STH 22

2

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET 64	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 01s2a

PLOT DATE : 10/19/2018 2:28 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

OFF RAMP

PCC: 404+38.05WB

402WB

USH 10 WB

404WB

406WB

408WB

USH 10 WB

USH 10 EB

402EB

100'

404EB

406EB

USH 10 EB

408EB

PCC: 405+07.98EB

50'

W04-1R

ON RAMP FROM STH 22

W03-2

ROAD WORK AHEAD

W20-1A

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET 65	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 02s2a

PLOT DATE : 10/19/2018 2:28 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

OFF RAMP

USH 10 WB

410WB

412WB

414WB

USH 10 WB

416WB

USH 10 EB

408EB

410EB

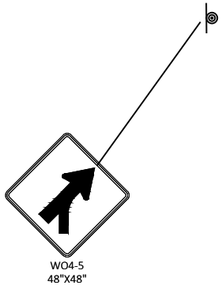
412EB

414EB

100'

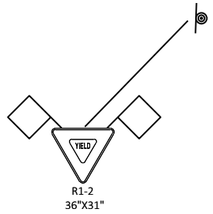
USH 10 EB

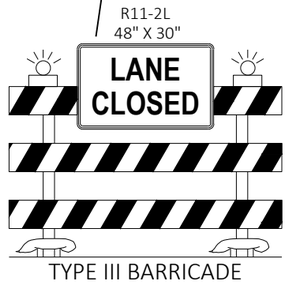
ON RAMP



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1





PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 03s2a

PLOT DATE : 10/19/2018 2:28 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

END ROAD WORK
G20-2A
48"X24"

USH 10 WB
416WB
418WB
420WB
422WB
USH 10 WB

USH 10 EB
416EB
418EB
420EB
422EB
USH 10 EB

100'

PT: 420+26.29EB
PT: 421+71.39WB
BP: 1+00.00X

W24-1L

55
MPH
WO13-1
36"X36"

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET 67	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 04s2a

PLOT DATE : 10/19/2018 2:28 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

STA 428+40 WB, 4' RT TO CENTER
BEGIN
CONCRETE BARRIER TEMPORARY PRECAST

PC: 5+55.98X

PC: 427+75.67WB

PC: 427+66.96EB

USH 10 WB

USH 10 EB

422EB

424WB

424EB

426WB

426EB

428WB

428EB

430WB

100'

12'

12'

25'

10'

12'

12'

8X

FO

STA 425+62 EB, 0' RT
BEGIN
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STA 425+62 EB, 12' RT
BEGIN
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

STA 5+56 X, 12' RT
BEGIN
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 5+56 X, 24' RT
BEGIN
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 425+62 EB TO STA 426+90 EB, 24' RT
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

STA 7+60 X, 22' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA7+60 X, 10' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET 68	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 05s2a

PLOT DATE : 10/19/2018 2:28 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

STA 15+04 X, 6.9' LT=
STA 436+00 WB, 12' LT
BEGIN
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

BEGIN
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STA 15+04 X, 5.1' RT=
STA 436+00 WB, 0' RT
BEGIN
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

BEGIN
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STA 15+04 X, 18.9' LT=
STA 436+00 WB, 24' LT
BEGIN
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

BEGIN
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

N

149' TAPER (12' LANES TO 11' LANES)

STA 435+74.81 WB, 4' RT=
14+74.81 X, 8' RT TO CENTER
CONCRETE BARRIER TEMPORARY PRECAST

PT: 431+71.03EB

PT: 433+47.67WB

PT: 13+66.80X

PC: 15+79.09X

USH 10 WB

USH 10 EB

430WB

432WB

434WB

436WB

430EB

432EB

434EB

436EB

14X

15X

100'

25'

12'

10'

11'

A

B

C

STA 431+19 EB, 12' RT
END
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

STA 13+66.80 X, 10' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 13+66.80 X, 22' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 434+00 EB, 0' RT
END
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

STA 15+79 X, 22' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 15+79 X, 10' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

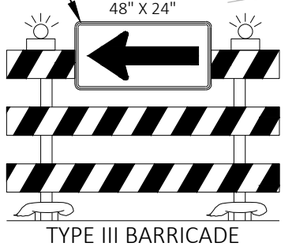
A

R11-2L
48" X 30"

TYPE III BARRICADE

B

WO1-6
48" X 24"



TYPE III BARRICADE

C

R11-2B
48"X30"

TYPE III BARRICADE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET 69	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 06s2a

PLOT DATE : 10/19/2018 2:28 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

STA 437+00 WB, 0' RT
BEGIN
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

STA 16+54 X, 16' LT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 16+54 X, 5' LT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 16+54 X, 6' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

SPEED LIMIT 65

PC: 15+79.09X

PC: 439+06.00WB

USH 10 WB

USH 10 EB

11'

11'

16X

18X

20X

22X

436EB

438EB

438WB

440WB

440EB

442WB

442EB

444WB

50'

PC: 439+94.02EB

STA 436+64 EB, 10.2' RT
TO CENTER
CONCRETE BARRIER TEMPORARY PRECAST

STA 438+46 EB, 14' LT
TO CENTER
CONCRETE BARRIER TEMPORARY PRECAST

C

R11-2B
48"X30"

BRIDGE OUT

TYPE III BARRICADE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET 70	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 07s2a

PLOT DATE : 10/19/2018 2:28 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

STA 28+55.64 X, 16' LT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 28+55.64 X, 5' LT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 28+55.64 X, 6' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 28+55.64 X, 10' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 28+55.64 X,22' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 29+72 X, 6' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 29+72 X, 5' LT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 29+72 X, 16' LT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 29+72 X, 10' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 29+72 X,22' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 29+72 X,24' RT
TO CENTER
CONCRETE BARRIER TEMPORARY PRECAST

PC: 114+00.65E
PT: 28+68.64
PC: 29+71.98X
PT: 112+68.64E
PC: 111+18.64E
CTH E
USH 10 WB
USH 10 EB
444WB
446WB
448WB
450WB
444EB
446EB
448EB
450EB
24X
28X
30X
SPEED LIMIT 65
FO

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET 71	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 08s2a

PLOT DATE : 10/19/2018 2:29 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

STA 36+13 X, 16' LT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 36+13 X, 5' LT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 36+13 X, 6' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

294' TAPER (11' LANES TO 12' LANES)

PC: 29+71.98X

PT: 455+10.76WB

PT: 454+23.96EB

STA 29+73.38 X, 24' RT
TO CENTER
CONCRETE BARRIER TEMPORARY PRECAST

USH 10 WB
USH 10 EB

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET 72	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 09s2a

PLOT DATE : 10/19/2018 2:29 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

294' TAPER (11' LANES TO 12' LANES)

USH 10 WB

USH 10 EB

12'

12'

458EB

458WB

460WB

460EB

462WB

464WB

40X

42X

44X

441EB

50'

10'

12'

RT: 39+34.63X

PC: 41+52.40X

N

W24-1AR

55 MPH

W013-1
36"X36"

STA 39+06 X, 22.5' LT=
STA 460+00 WB, 24' LT
END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 39+06.7 X, 10.6' LT=
STA 460+00 WB, 12' LT
END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 39+07 X, 1.4' RT=
STA 460+00 WB, 0' LT
END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 461+00 EB, 0' RT
END
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

STA 464+43 WB, 31' RT =
STA 43+47 X, 8' RT
TO CENTER
CONCRETE BARRIER TEMPORARY PRECAST

C

STA 38+62 X, 24' RT
TO CENTER
CONCRETE BARRIER TEMPORARY PRECAST

STA 460+00 EB, 0' RT
BEGIN
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STA 41+52.40, 10' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 41+52.40, 22' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 42+80.75 X, 22' RT=
STA 462+78.50 EB, 12' RT
BEGIN
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 43+81 X, 30.18' RT=
STA 463+78.50 EB, 24' RT
END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

C

R11-2B
48"X30"

BRIDGE OUT

TYPE III BARRICADE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET 73	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 10s2a

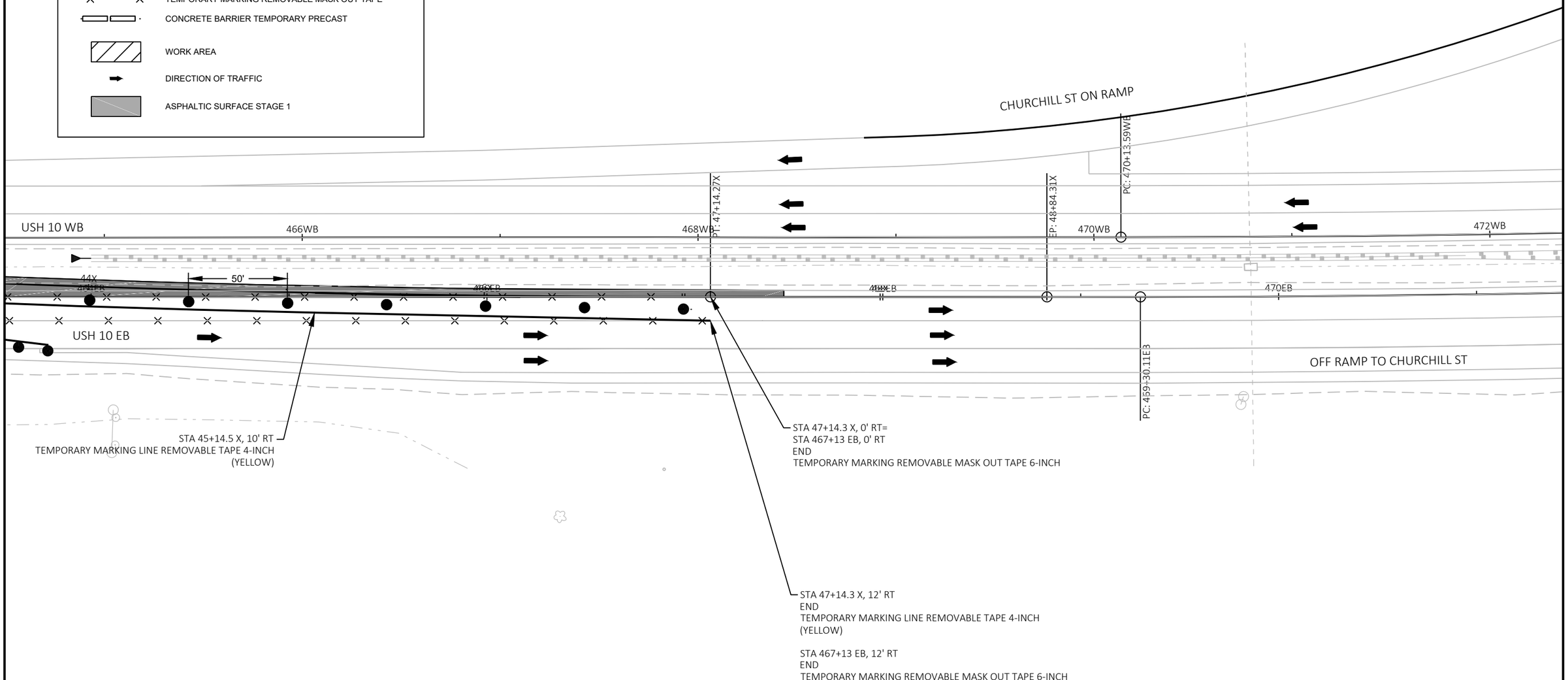
PLOT DATE : 10/19/2018 2:29 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET 74	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 11s2a

PLOT DATE : 10/19/2018 2:29 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

SITE 3

MB

CHURCHILL ST

OFF RAMP TO CHURCHILL ST

N

ROAD WORK AHEAD
W20-1A

CHURCHILL ST ON RAMP

ROAD WORK 1000 FT
W20-1C

PT: 477+51.80WB

PT 476+41.88EB

472WB

474WB

476WB

478WB

472EB

474EB

476EB

478EB

OFF RAMP TO CHURCHILL ST

END ROAD WORK
G20-2A
48"X24"

2

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A	SHEET 75	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 12s2a

PLOT DATE : 10/19/2018 2:29 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

NOTE:
USE THE FOLLOWING TRAFFIC CONTROL SDD:

-BARRICADES AND SIGNS FOR SIDEROAD CLOSURES, DETAIL 1

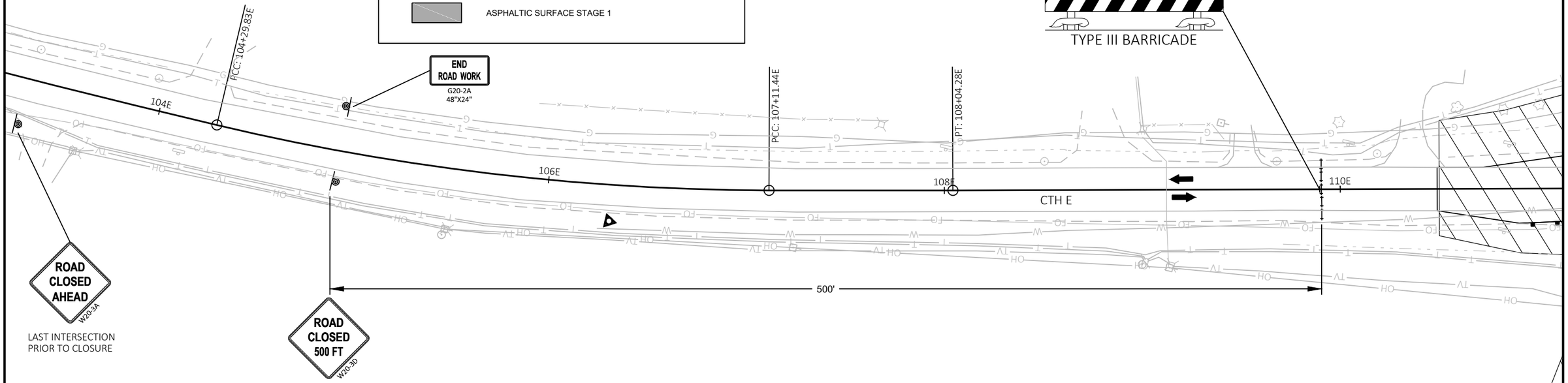
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

R11-2
48" X 30"

TYPE III BARRICADE



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A AND STAGE 2B	SHEET 76	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 13s2a

PLOT DATE : 10/19/2018 2:29 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

NOTE:
USE THE FOLLOWING TRAFFIC CONTROL SDD:

-BARRICADES AND SIGNS FOR SIDEROAD CLOSURES, DETAIL 1

N

500'

ROAD CLOSED 500 FT
W20-3D

LAST INTERSECTION PRIOR TO CLOSURE

ROAD CLOSED AHEAD
W20-3A

116E

118E

120E

122E

CTH E/BERLIN ST

END ROAD WORK
G20-2A
48"X24"

R11-2
48" X 30"

ROAD CLOSED

TYPE III BARRICADE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2A AND STAGE 2B	SHEET 77	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026101-S2A-2017.DWG
LAYOUT NAME - 14s2a

PLOT DATE : 10/19/2018 2:29 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

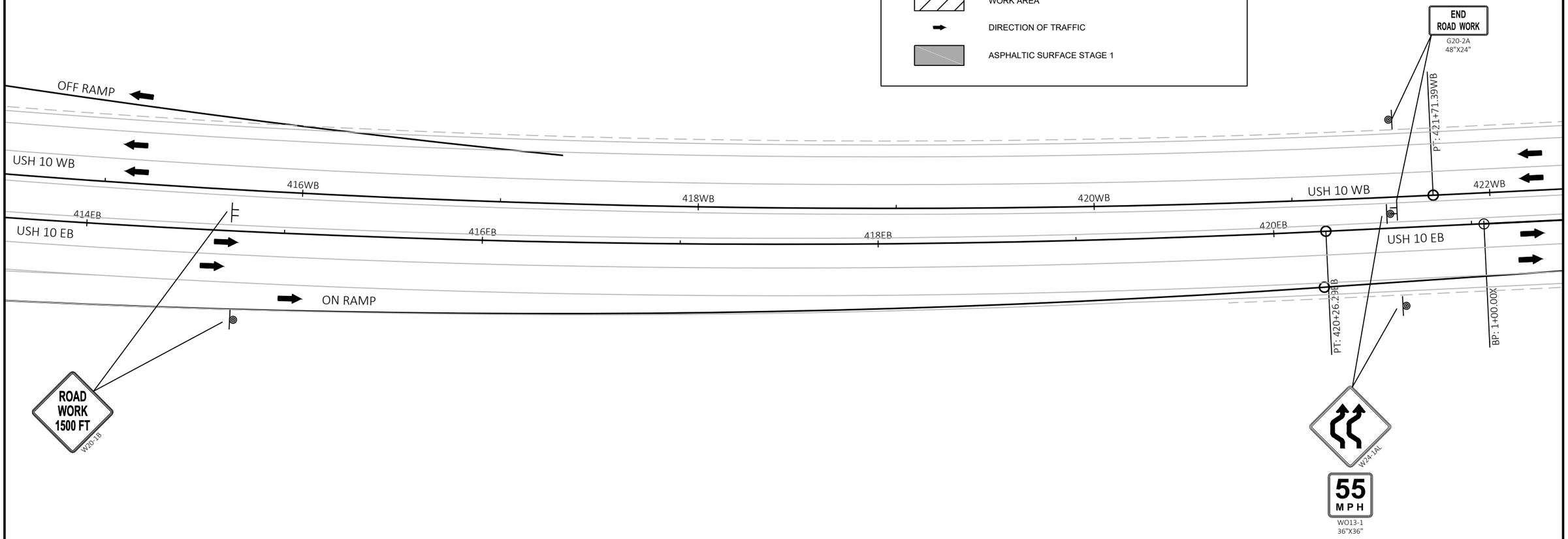
NOTE:
USE THE FOLLOWING TRAFFIC CONTROL SDD:

-LANE CLOSURE
-LANE CLOSURE, SPEEDS GREATER THAN 40 MPH WITH BARRIER
-TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
-TEMPORARY BYPASS ROADWAY
-BARRICADES AND SIGNS FOR MAINLINE CLOSURES
-BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
-EXIT RAMP CLOSURE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2B	SHEET 78	E

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

PC: 421+71.39WB

422WB

USH 10 WB

424WB

426WB

PC: 5+55.98X

PC: 427+75.67WB

428WB

PC: 427+66.96EB

USH 10 WB

422EB

424EB

426EB

8X

USH 10 EB

12'

12'

11'

11'

25'

BP: 1+00.00X

FO

STA 428+40 WB, 4' RT TO CENTER
BEGIN
CONCRETE BARRIER TEMPORARY PRECAST

STA 5+56 X, 0' RT
BEGIN
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 425+62 EB TO STA 426+90, 24' RT
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

STA 425+62 EB, 0' RT
PLACED IN STAGE 2A
BEGIN
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

205' TAPER (12' LANES TO 11' LANES)

STA 5+56 X, 12' RT
BEGIN
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA7+60 X, 22' RT
PLACED IN STAGE 2A
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 425+62 EB, 12' RT
PLACED IN STAGE 2A
BEGIN
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STA7+60 X, 11' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 5+56 X, 24' RT
PLACED IN STAGE 2A
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 7+60 X, 0' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2B	SHEET	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026102-S2B.DWG
LAYOUT NAME - 02-s2b

PLOT DATE : 5/7/2018 7:29 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

STA 436+00 WB, 24' LT
PLACED IN STA
BEGIN
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STA 436+00 WB, 12' LT
PLACE IN STAGE 2A
BEGIN
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STA 436+00 WB, 0' LT
PLACE IN STAGE 2A
BEGIN
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STA 11+71.37 X, 2' LT TO CENTER
CONCRETE BARRIER TEMPORARY PRECAST

STA 434+00 WB TO 436+00 WB, 0' LT
PLACE IN STAGE 2B
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

STA 432+41.12 WB, 4' RT=
STA 11+45.37 X, 2.3' LT
TO CENTER
CONCRETE BARRIER TEMPORARY PRECAST

PT: 433+47.67WB

PT: 13+66.80X

USH 10 WB

USH 10 EB

430WB

432WB

434WB

436WB

430EB

432EB

434EB

436EB

8X

10X

12X

14X

100'

25'

11'

11'

PT: 431+71.03EB

STA 434+00 EB, 0' RT
PLACED IN STAGE 2A
END
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

STA 431+19 EB, 12' RT
END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH
PLACED IN STAGE 2A

STA 13+66.80 X, 0' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 13+66.80 X, 22' RT
PLACED IN STAGE 2A
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 13+66.80 X, 11' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

FO

R11-2L
48" X 30"

LANE CLOSED

TYPE III BARRICADE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2B	SHEET 80	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026102-S2B.DWG
LAYOUT NAME - 03-s2b

PLOT DATE : 5/7/2018 7:29 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

STA 15+04.7, 6.9' LT=
STA 436+00 WB, 12' LT
BEGIN
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 436+00 WB, 24' LT
PLACED IN STAGE 2A
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 16+54 X, 16' LT
PLACED IN STAGE 2A
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 16+54 X, 4' LT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

149' TAPER

PC: 15+79.09X

PC: 439+06.00WB

SPEED LIMIT 65

USH 10 WB

USH 10 EB

436WB

438WB

440WB

442WB

436EB

438EB

440EB

442EB

12'

12'

18'X

18'X

30'X

32'X

11'

11'

50'

B

C

PC: 439+94.02EB

STA 436+64 EB, 10.2' RT TO CENTER
BEGIN
CONCRETE BARRIER TEMPORARY PRECAST

STA 438+50 EB, 14.6' LT TO CENTER
END
CONCRETE BARRIER TEMPORARY PRECAST

STA 15+79.09 X, 22' RT
PLACED IN STAGE 2A
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 15+79 X, 0' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 15+79 X, 11' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

FO

B

WO1-6
48" X 24"

TYPE III BARRICADE

C

R11-2B
48"X30"

BRIDGE OUT

TYPE III BARRICADE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2B	SHEET 81	E

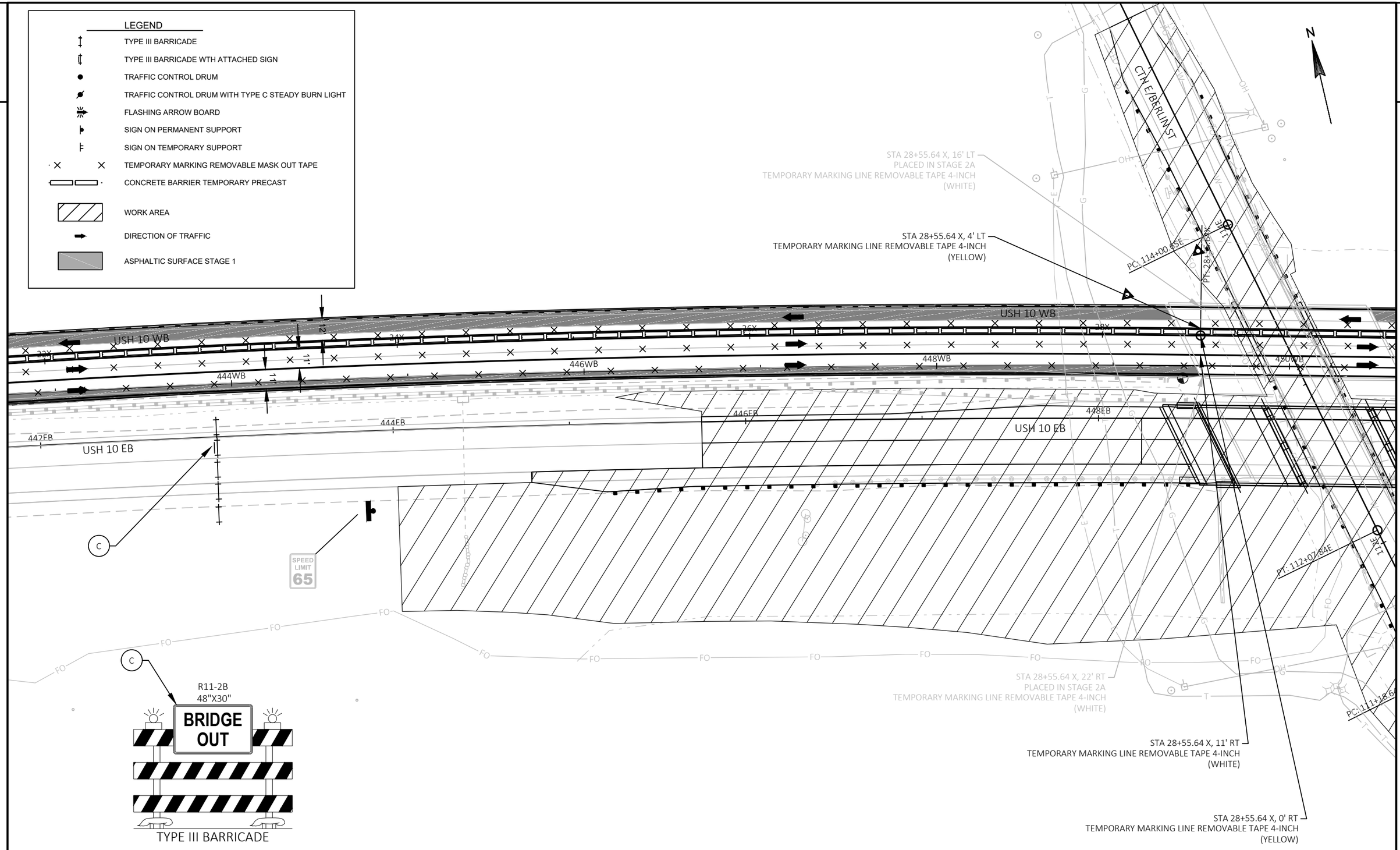
FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026102-S2B.DWG
LAYOUT NAME - 04-s2b

PLOT DATE : 5/7/2018 7:29 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2B	SHEET 82	E

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

STA 29+72 X, 16' LT
PLACED IN STAGE 2A
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 29+72 X, 4' LT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

PC: 29+71.98X

USH 10 WB

30X

32X

34X

PT: 455+10.76WB

USH 10 WB

36X

480WB

452WB

454WB

456WB

450EB

452EB

454EB

456EB

USH 10 EB

USH 10 EB

PT: 454+23.96EB

PT: 112+07.84E

34X

STA 29+72 X, 0' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 29+72 X, 11' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 29+72 X, 24' RT TO CENTER
CONCRETE BARRIER TEMPORARY BARRIER PRECAST

PC: 111+18.64E

CTH E

STA 29+72 X, 22' RT
PLACED IN STAGE 2A
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2B	SHEET 83	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026102-S2B.DWG
LAYOUT NAME - 06-s2b

PLOT DATE : 5/7/2018 7:29 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

STA 460+00 WB, 24' LT
PLACED IN STAGE 2A
END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STA 39+07, 10.6' LT=
STA 460+00 WB, 12' LT
END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 460+00 WB, 12' LT
PLACED IN STAGE 2A
END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STA 461+00 WB, 0' RT
PLACED IN STAGE 2A
END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STA 36+13 X, 4' LT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 36+13 X, 16' LT
PLACED IN STAGE 2A
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

294' SHIFT TAPER

12'

36X

USH 10 WB

458WB

460WB

PT: 39+34.63X

100'

462WB

PC: 41+52.40X

464WB

USH 10 WB

W24-1R

55
MPH

WO13-1
36"X36"

40X

42X

456ER

458ER

460ER

462ER

USH 10 EB

USH 10 EB

50'

C

JOINT REPAIR

STA 38+62 X, 24' RT TO CENTER
CONCRETE BARRIER TEMPORARY BARRIER PRECAST

STA 39+34.63 X, 0' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 39+34.63 X, 11' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 39+34.63 X, 22' RT
PLACED IN STAGE 2A
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 460+00 EB, 0' RT
PLACED IN STAGE 2A
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

STA 41+52.40 X, 0' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 42+80 X, 22' RT=
STA 462+78.50 EB, 12' RT
PLACED IN STAGE 2A
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 41+52.40 X, 11' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 41+52.40 X, 22' RT
PLACED IN STAGE 2A
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

C

R11-2B
48"X30"

BRIDGE
OUT

TYPE III BARRICADE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2B	SHEET 84	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026102-S2B.DWG
LAYOUT NAME - 07-s2b
PLOT DATE : 5/7/2018 7:29 AM
PLOT BY : SAEGER, GLENN D
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

R11-2L
48" X 30"

TYPE III BARRICADE

N

STA 464+43 WB, 21' RT=
STA 43+51.20 X, 2' LT
TO CENTER
END
CONCRETE BARRIER TEMPORARY PRECAST

ON RAMP CLOSED

464WB
USH 10 WB
100'
466WB
468WB
PT: 47+14.27X
FP: 48+84.31X
470WB
PC: 470+13.59WB
PC: 469+30.11EB
USH 10 WB

44X
44XEB
46XEB
48XEB
48XEB
470EB
USH 10 EB
11'
12'
USH 10 EB
OFF RAMP

200' TAPER (11' LANE TO 12' LANE)

STA 45+14.5 X, 0' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 45+14.5 X, 11' RT
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 463+78.50 EB, 24' RT
PLACED IN STAGE 2A
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 47+14.27 X, 0' RT
END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 467+12.9 EB, 0' RT
PLACED IN STAGE 2A
END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

STA 47+14.27 X, 12' RT
END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(WHITE)

STA 467+12.9 EB, 12' RT
PLACED IN STAGE 2A
END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2B	SHEET 85	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026102-S2B.DWG
LAYOUT NAME - 08-s2b

PLOT DATE : 5/7/2018 7:29 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

STA 471+44 WB, 12' LT
BEGIN
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

STA 471+44 WB, 12' LT
BEGIN
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

ON RAMP CLOSED

SEE STAGE 1A FOR TRAFFIC CONTROL

CHURCHILL STREET

N

USH 10 WB

USH 10 EB

470EB

472WB

472EB

474WB

474EB

476WB

476EB

478WB

50'

780' TAPER TRANSITION

PT: 477+51.80WB

PT: 476+41.88EB

END
ROAD WORK
G20-2A
48"X24"

LEGEND

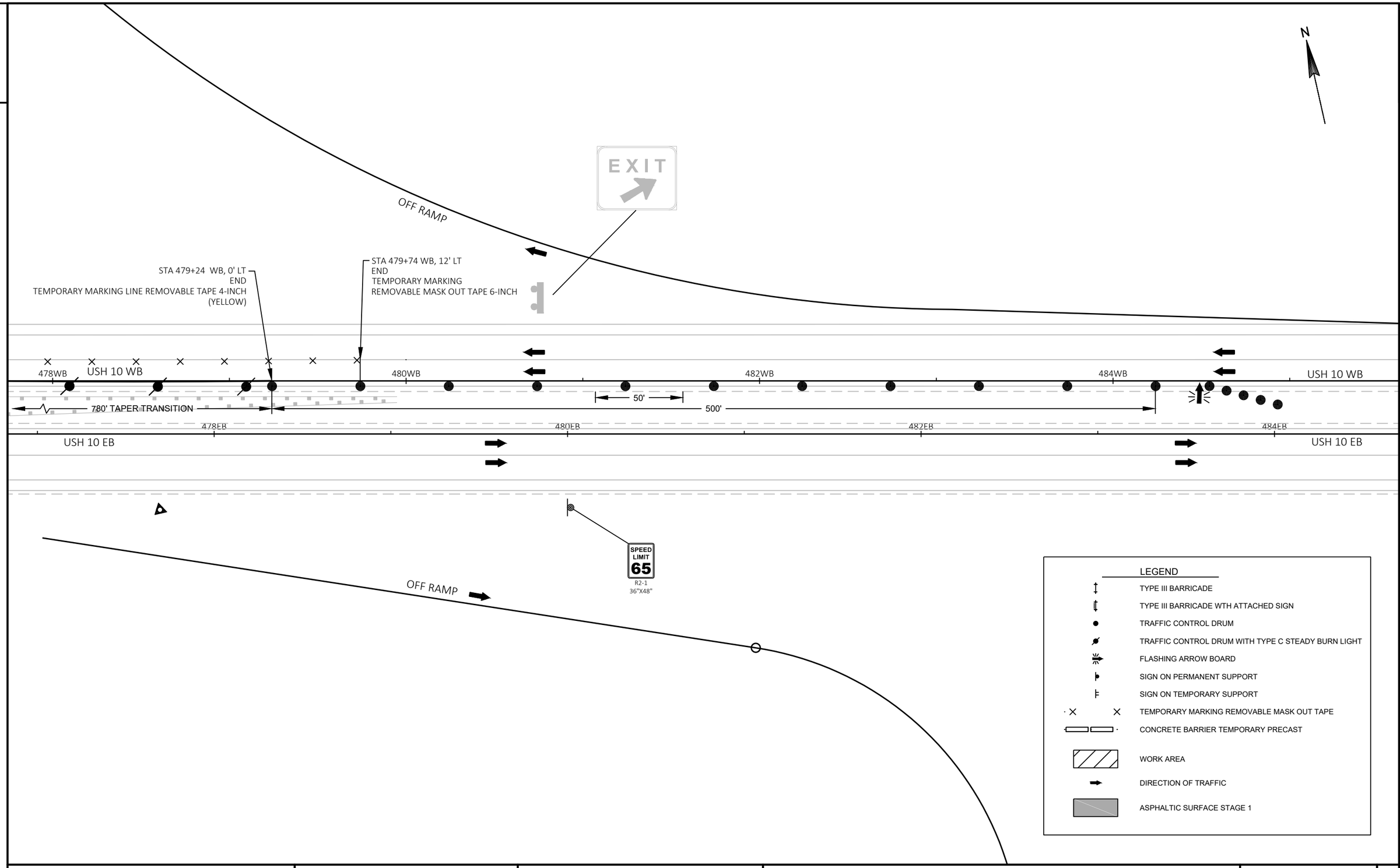
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2B	SHEET 86	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026102-S2B.DWG
LAYOUT NAME - 09-s2b

PLOT DATE : 5/7/2018 7:29 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 2B	SHEET 87	E

2

2

ON RAMP

NOTE:
USE THE FOLLOWING TRAFFIC CONTROL SDD

-LANE CLOSURE
-TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
-EXIT RAMP CLOSURE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

LAKESIDE PRWY

USH 10 WB

396WB

398WB

400WB

USH 10 WB

402WB

390'

394EB

USH 10 EB

500'

50'

396EB

398EB

400EB

USH 10 EB

STA 395+40 EB

PCC: 397+89.07EB

STA 399+20 EB
BEGIN
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

STA 398+70 EB, 12' RT
BEGIN
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

OFF RAMP

STH 22

ON RAMP

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 01s3a
PLOT DATE : 5/7/2018 7:30 AM
PLOT BY : SAEGER, GLENN D
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

2

LAKESIDE PRWY

OFF RAMP

N

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

W04-1R

PCC: 404+38.05WB

402WB

USH 10 WB

404WB

406WB

408WB

USH 10 WB

390'

780' TRANSITION AREA

402EB

50'

404EB

406EB

408EB

USH 10 EB

USH 10 EB

STH 22

PCC: 405+07.98EB

STA 407+00 EB, 12' RT
END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

ON RAMP

W03-2

R11-2L
48" X 30"

LANE CLOSED

TYPE III BARRICADE

ROAD WORK AHEAD

W20-1A

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 02s3a

PLOT DATE : 5/7/2018 7:31 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

OFF RAMP

USH 10 WB

410WB

412WB

414WB

USH 10 WB

416WB

408EB

USH 10 EB

410EB

412EB

100'

414EB

USH 10 EB

ON RAMP

YIELD

R1-2
36"X31"

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET 90	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 03s3a

PLOT DATE : 5/7/2018 7:31 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

INSTALLED IN STAGE 2A

END ROAD WORK

OFF RAMP

416WB

USH 10 WB

418WB

420WB

PT: 420+26.29EB

PT: 421+71.39WB

422WB

USH 10 WB

422EB

416EB

USH 10 EB

418EB

100'

420EB

USH 10 EB

ON RAMP

25'

R11-2L
48" X 30"

LANE CLOSED

TYPE III BARRICADE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 04s3a

PLOT DATE : 5/7/2018 7:31 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

TYPE III BARRICADE

N

USH 10 WB
USH 10 EB
422EB
424WB
424EB
100'
426WB
426EB
PC: 427+75.67WB
428WB
PC: 427+66.96EB
428EB
USH 10 WB
430WB
USH 10 EB
FO

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET 92	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 05s3a

PLOT DATE : 5/7/2018 7:31 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

PT : 433+47.67WB

PT: 431+71.03EB

430WB

USH 10 WB

100'

432WB

434WB

436WB

USH 10 WB

430EB

USH 10 EB

100'

432EB

434EB

436EB

USH 10 EB

R11-2L
48" X 30"

LANE CLOSED

TYPE III BARRICADE

FO

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET 93	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 06s3a

PLOT DATE : 5/7/2018 7:31 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

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

SPEED LIMIT 65

PC 439+06.00WB

PC 439+94.02EB

USH 10 WB

USH 10 EB

436EB

438WB

438EB

440WB

440EB

442WB

100'

447EB

100'

USH 10 WB

444WB

USH 10 EB

FO

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET 94	E

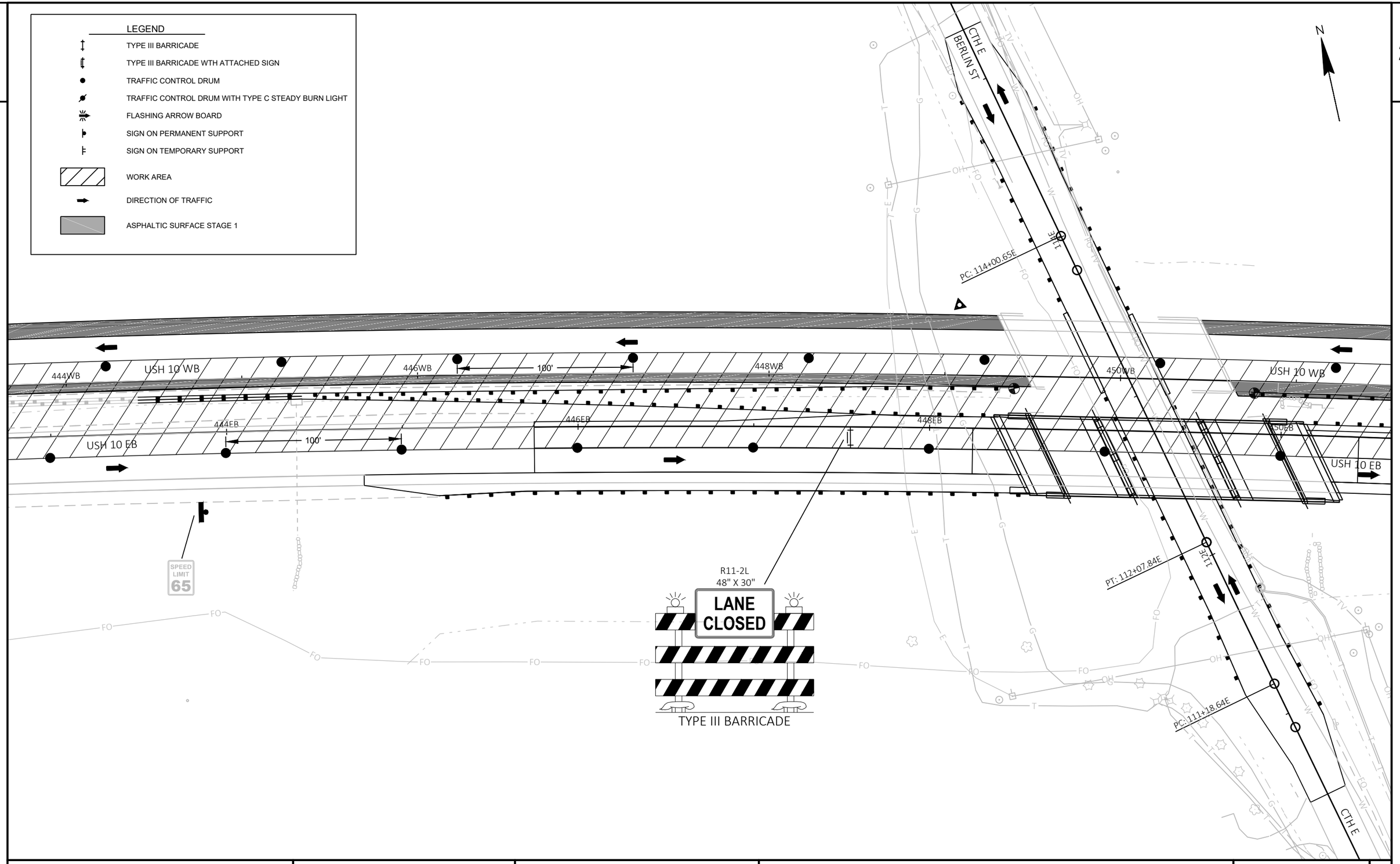
FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 07s3a

PLOT DATE : 5/7/2018 7:31 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET 95	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 08s3a

PLOT DATE : 5/7/2018 7:31 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

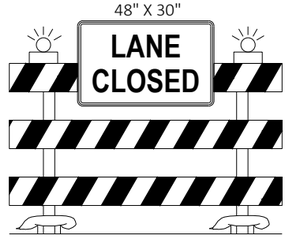
2

LEGEND

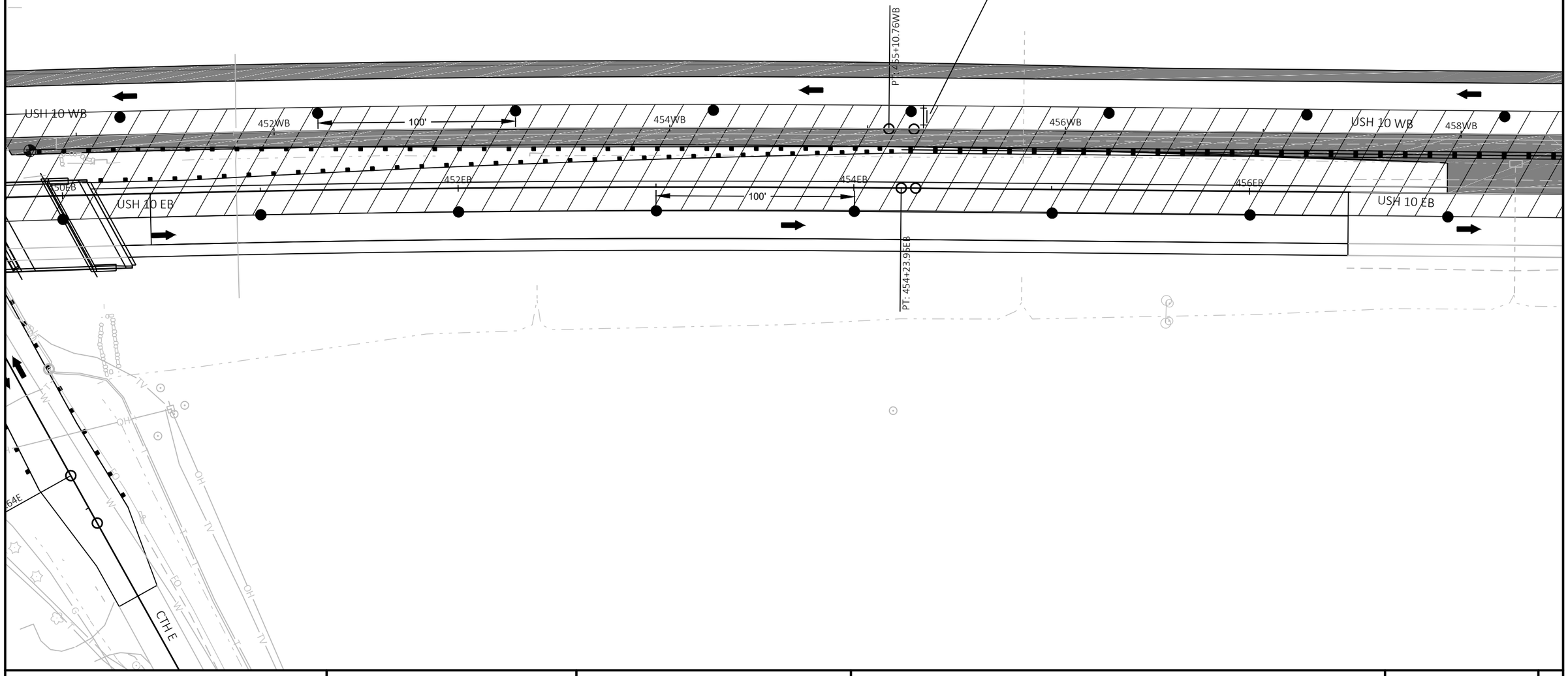
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

R11-2L
48" X 30"



TYPE III BARRICADE



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET 96	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 09s3a

PLOT DATE : 5/7/2018 7:31 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

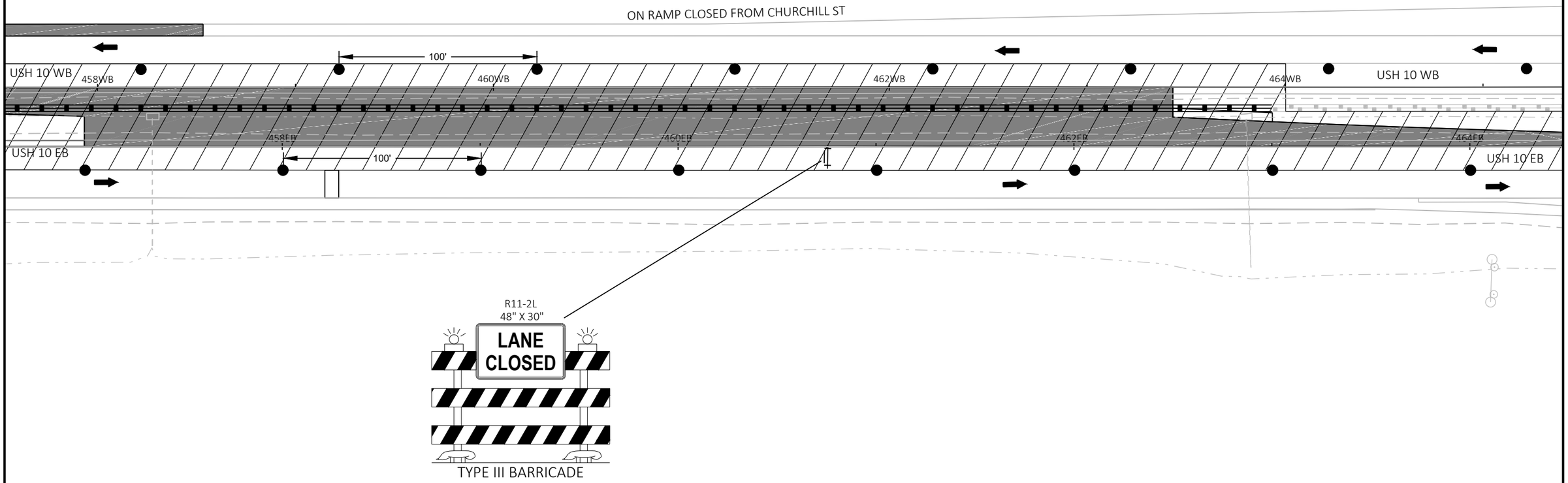
2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N



TYPE III BARRICADE

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET 97	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 10s3a

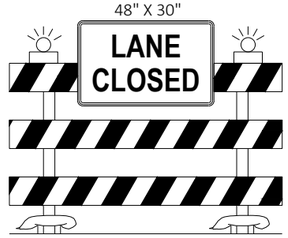
PLOT DATE : 5/7/2018 7:31 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

R11-2L
48" X 30"



TYPE III BARRICADE

N

STA 471+45 WB, 12' LT
BEGIN
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH
BEGIN
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

ON RAMP CLOSED FROM CHURCHILL ST

100'

USH 10 WB

466WB

468WB

PC: 470+13.59WB

470WB

USH 10 WB

472WB

464EB

466EB

USH 10 EB

468EB

470EB

USH 10 EB

100'

PC: 459+30.11E3

2

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET 98	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 11s3a

PLOT DATE : 5/7/2018 7:31 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

ON RAMP CLOSED

OFF RAMP TO CHURCHILL ST

N

STA 479+25 WB, 0' LT
END
TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
(YELLOW)

PT: 477+51.80WB

USH 10 WB

472WB

474WB

476WB

478WB

780' TRANSITION AREA

50'

USH 10 EB

472EB

474EB

476EB

478EB

PT: 476+41.88EB

OFF RAMP TO CHURCHILL ST

END
ROAD WORK
G20-2A
48"X24"
PLACED IN STAGE 2A

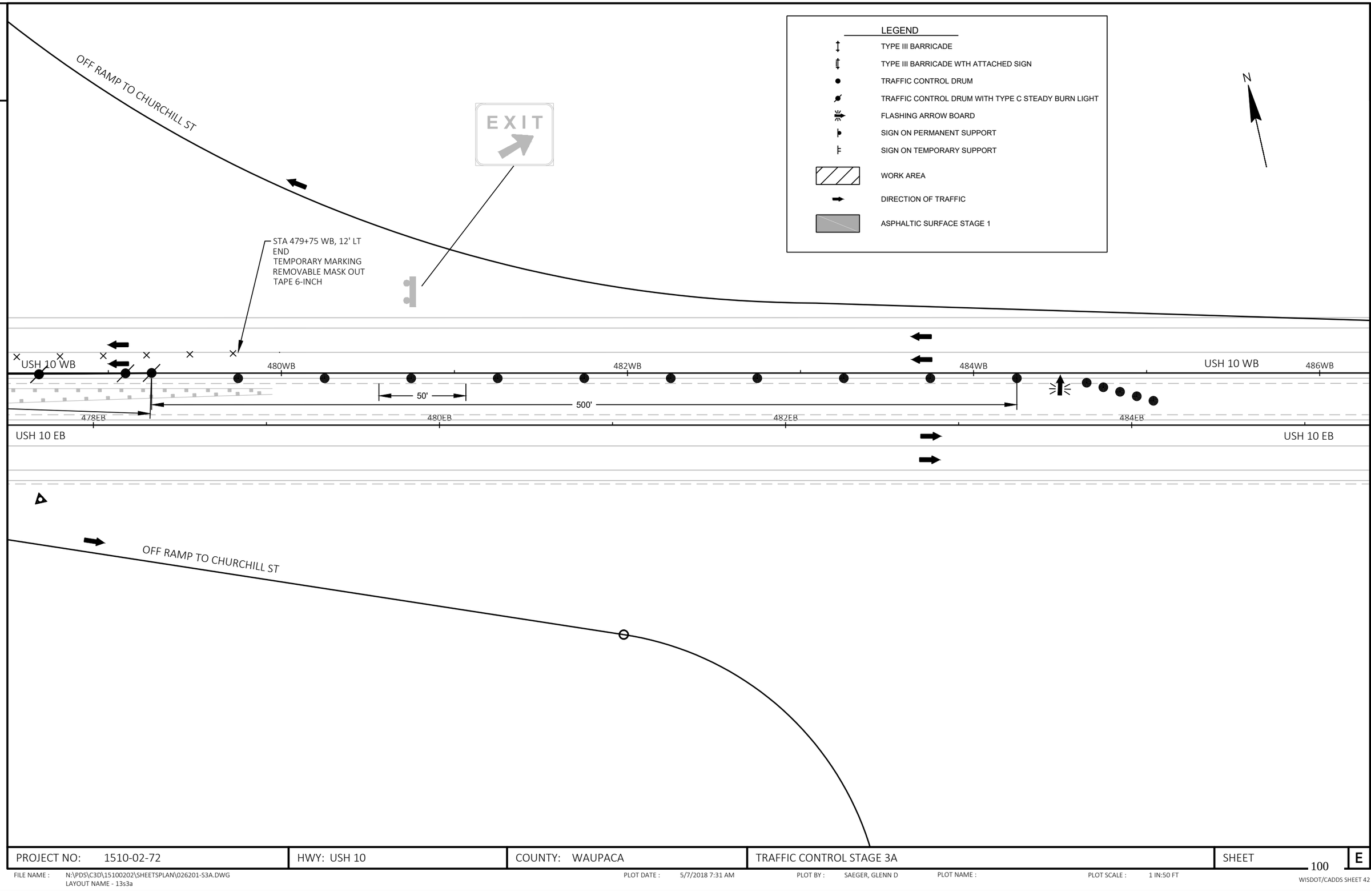
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 12s3a
PLOT DATE : 5/7/2018 7:31 AM
PLOT BY : SAEGER, GLENN D
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



2

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3A	SHEET 100	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026201-S3A.DWG
LAYOUT NAME - 13s3a

PLOT DATE : 5/7/2018 7:31 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

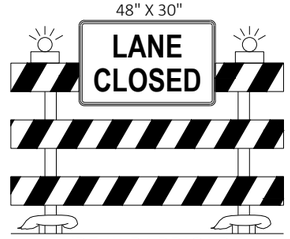
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

NOTE:
USE THE FOLLOWING TRAFFIC CONTROL SDD

-LANE CLOSURE

R11-2L
48" X 30"



TYPE III BARRICADE

N

SPEED LIMIT 65

STA 436+90 WB

PC: 439+06.00WB

100'

434WB

USH 10 WB

436WB

438WB

440WB

USH 10 WB

434EB

436EB

438EB

440EB

USH 10 EB

USH 10 EB

PC: 439+94.02E3

FO

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3B	SHEET 101	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026202-S3B.DWG
LAYOUT NAME - 01-s3b

PLOT DATE : 5/7/2018 7:33 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

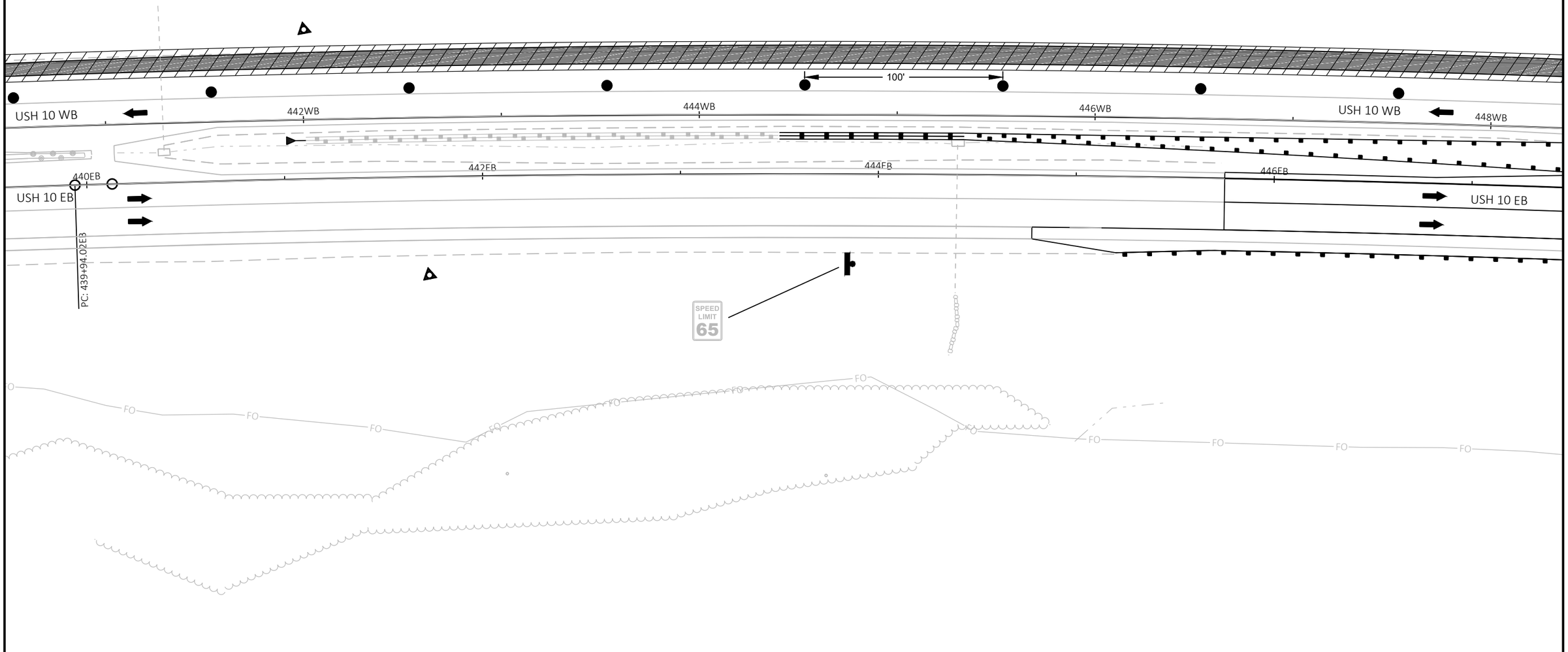
2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3B	SHEET 102	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026202-S3B.DWG
LAYOUT NAME - 02-s3b

PLOT DATE : 5/7/2018 7:33 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

R11-2L
48" X 30"

TYPE III BARRICADE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N

CTH E
BERLIN ST

PC: 114+00.65E

L12E

100'

448WB USH 10 WB

450WB

452WB

USH 10 WB

454WB

PT: 454+10.76WB

448EB

450EB

452EB

454EB

USH 10 EB

USH 10 EB

PT: 454+23.95EB

PT: 112+07.84E

L12E

PC: 111+18.64E

CTH E

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3B	SHEET 103	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026202-S3B.DWG
LAYOUT NAME - 03-s3b

PLOT DATE : 5/7/2018 7:33 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

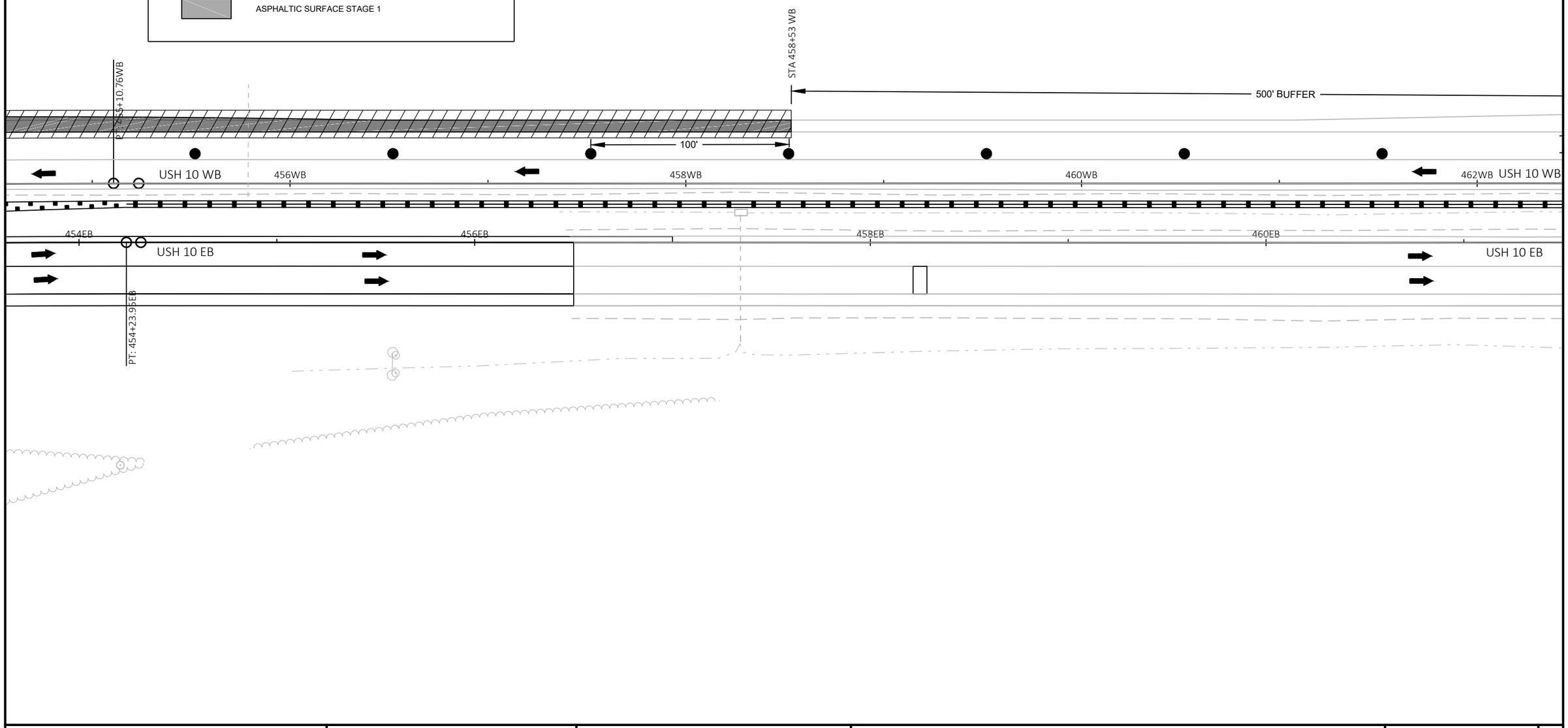
2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

N



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3B	SHEET 104	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026202-S3B.DWG
LAYOUT NAME - 04-s3b

PLOT DATE : 5/7/2018 7:33 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

R11-2L
48" X 30"

TYPE III BARRICADE

N

780' TAPER TRANSITION

390'

STA 463+53 WB, 12' LT
BEGIN
TEMPORARY MARKING
REMOVABLE MASK OUT TAPE 6-INCH

100'

50'

462WB USH 10 WB

464WB

466WB

468WB USH 10 WB

462EB

464EB

466EB

468EB

USH 10 EB

USH 10 EB

STA 463+53 WB, 12 LT
BEGIN
TEMPORARY MARKING LINE
REMOVABLE TAPE 4-INCH (YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3B	SHEET 105	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026202-S3B.DWG
LAYOUT NAME - 05-s3b

PLOT DATE : 5/7/2018 7:33 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

RAMP IS CLOSED
SEE STAGE 1A TRAFFIC CONTROL SHEETS
FOR CLOSURE

N

STA 471+33 WB

390'

499'

STA 471+33 WB, 24' LT
END
TEMPORARY MARKING LINE
REMOVABLE TAPE 4-INCH (YELLOW)

STA 471+83 WB, 12' LT
END
TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH

50'

PC: 470+13.59WB

USH 10 WB

470WB

472WB

474WB

476WB

USH 10 WB

468EB

USH 10 EB

470EB

472EB

474EB

USH 10 EB

PC: 469+30.11EB

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3B	SHEET 106	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026202-S3B.DWG
LAYOUT NAME - 06-s3b

PLOT DATE : 5/7/2018 7:33 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

CHURCHILL ST

OFF RAMP

EXIT

N

STA 476+33 WB

PT: 477+51.80WB

W04-2R

STA 480+75 WB

USH 10 WB

476WB

478WB

480WB

USH 10 WB

482WB

474EB

476EB

478EB

480EB

USH 10 EB

USH 10 EB

PT: 476+41.83EB

OFF RAMP

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- ASPHALTIC SURFACE STAGE 1

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL STAGE 3B	SHEET 107	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\026202-S3B.DWG
LAYOUT NAME - 07-s3b

PLOT DATE : 5/7/2018 7:33 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:50 FT

1510-02-72

Line	Item	Item Description	Unit	Total	Qty
0002	201.0120	Clearing	ID	20.000	20.000
0004	201.0220	Grubbing	ID	20.000	20.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	203.0200	Removing Old Structure (station) 01. 449+27.58 EB	LS	1.000	1.000
0010	204.0100	Removing Pavement	SY	2,789.000	2,789.000
0012	204.0120	Removing Asphaltic Surface Milling	SY	1,300.000	1,300.000
0014	204.0150	Removing Curb & Gutter	LF	2,000.000	2,000.000
0016	204.0157	Removing Concrete Barrier	LF	1,000.000	1,000.000
0018	204.0165	Removing Guardrail	LF	935.000	935.000
0020	204.0175	Removing Concrete Slope Paving	SY	378.000	378.000
0022	204.0190	Removing Surface Drains	EACH	5.000	5.000
0024	204.0220	Removing Inlets	EACH	4.000	4.000
0026	204.0245	Removing Storm Sewer (size) 01. 6-Inch to 30-Inch	LF	695.000	695.000
0028	204.9060.S	Removing (item description) 01. Removing Drainage Cover	EACH	3.000	3.000
0030	205.0100	Excavation Common	CY	2,689.000	2,689.000
0032	206.1000	Excavation for Structures Bridges (structure) 01. B-68-144	LS	1.000	1.000
0034	208.0100	Borrow	CY	2,570.000	2,570.000
0036	210.1500	Backfill Structure Type A	TON	198.000	198.000
0038	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	61.000	61.000
0040	213.0100	Finishing Roadway (project) 01. 1510-02-72	EACH	1.000	1.000
0042	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,397.000	1,397.000
0044	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,003.000	2,003.000
0046	415.0100	Concrete Pavement 10-Inch	SY	2,469.000	2,469.000
0048	415.0410	Concrete Pavement Approach Slab	SY	124.000	124.000
0050	416.0620	Drilled Dowel Bars	EACH	68.000	68.000
0052	416.1010	Concrete Surface Drains	CY	1.000	1.000
0054	416.1710	Concrete Pavement Repair	SY	11.000	11.000
0056	455.0605	Tack Coat	GAL	112.000	112.000
0058	460.2000	Incentive Density HMA Pavement	DOL	500.000	500.000
0060	460.5224	HMA Pavement 4 LT 58-28 S	TON	705.000	705.000
0062	465.0105	Asphaltic Surface	TON	2,808.000	2,808.000
0064	465.0315	Asphaltic Flumes	SY	25.000	25.000
0066	465.0400	Asphaltic Shoulder Rumble Strips	LF	9,590.000	9,590.000
0068	502.0100	Concrete Masonry Bridges	CY	941.000	941.000
0070	502.3200	Protective Surface Treatment	SY	855.000	855.000
0072	502.3210	Pigmented Surface Sealer	SY	174.000	174.000
0074	505.0400	Bar Steel Reinforcement HS Structures	LB	26,540.000	26,540.000
0076	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	155,270.000	155,270.000

1510-02-72

Line	Item	Item Description	Unit	Total	Qty
0078	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	410.000	410.000
0080	516.0500	Rubberized Membrane Waterproofing	SY	28.000	28.000
0082	520.4130	Culvert Pipe Class IV 30-Inch	LF	108.000	108.000
0084	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	2.000	2.000
0086	521.2005.S	Surface Drain Pipe Corrugated Metal Slotted (inch) 01. 6-Inch	LF	102.000	102.000
0088	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	3.000	3.000
0090	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	5.000	5.000
0092	550.0500	Pile Points	EACH	16.000	16.000
0094	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	520.000	520.000
0096	601.0205	Concrete Gutter 24-Inch	LF	2,000.000	2,000.000
0098	603.0205	Concrete Barrier Double-Faced 32-Inch	LF	1,000.000	1,000.000
0100	603.1142	Concrete Barrier Type S42	LF	100.000	100.000
0102	603.8000	Concrete Barrier Temporary Precast Delivered	LF	6,162.500	6,162.500
0104	603.8125	Concrete Barrier Temporary Precast Installed	LF	9,775.000	9,775.000
0106	604.0400	Slope Paving Concrete	SY	426.000	426.000
0108	606.0200	Riprap Medium	CY	153.000	153.000
0110	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	111.000	111.000
0112	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	100.000	100.000
0114	608.3012	Storm Sewer Pipe Class III-A 12-Inch	LF	387.000	387.000
0116	611.0606	Inlet Covers Type B	EACH	3.000	3.000
0118	611.0642	Inlet Covers Type MS	EACH	6.000	6.000
0120	611.0651	Inlet Covers Type S	EACH	2.000	2.000
0122	611.0654	Inlet Covers Type V	EACH	1.000	1.000
0124	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0126	611.3004	Inlets 4-FT Diameter	EACH	1.000	1.000
0128	611.3220	Inlets 2x2-FT	EACH	1.000	1.000
0130	611.3902	Inlets Median 2 Grate	EACH	3.000	3.000
0132	611.8120.S	Cover Plates Temporary	EACH	6.000	6.000
0134	612.0212	Pipe Underdrain Unperforated 12-Inch	LF	85.000	85.000
0136	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	190.000	190.000
0138	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0140	614.0200	Steel Thrie Beam Structure Approach	LF	57.600	57.600
0142	614.0920	Salvaged Rail	LF	700.000	700.000
0144	614.0930	Salvaged Crash Cushions	EACH	1.000	1.000
0146	614.2300	MGS Guardrail 3	LF	558.500	558.500
0148	614.2500	MGS Thrie Beam Transition	LF	197.000	197.000

1510-02-72

Line	Item	Item Description	Unit	Total	Qty
0150	614.2610	MGS Guardrail Terminal EAT	EACH	5.000	5.000
0152	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1510-02-72	EACH	1.000	1.000
0154	619.1000	Mobilization	EACH	1.000	1.000
0156	624.0100	Water	MGAL	35.000	35.000
0158	625.0100	Topsoil	SY	15,026.000	15,026.000
0160	627.0200	Mulching	SY	6,367.000	6,367.000
0162	628.1504	Silt Fence	LF	1,859.000	1,859.000
0164	628.1520	Silt Fence Maintenance	LF	1,859.000	1,859.000
0166	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0168	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0170	628.2004	Erosion Mat Class I Type B	SY	8,609.000	8,609.000
0172	628.7005	Inlet Protection Type A	EACH	7.000	7.000
0174	628.7010	Inlet Protection Type B	EACH	5.000	5.000
0176	628.7504	Temporary Ditch Checks	LF	96.000	96.000
0178	628.7555	Culvert Pipe Checks	EACH	6.000	6.000
0180	628.7560	Tracking Pads	EACH	1.000	1.000
0182	628.7570	Rock Bags	EACH	54.000	54.000
0184	629.0210	Fertilizer Type B	CWT	10.000	10.000
0186	630.0120	Seeding Mixture No. 20	LB	151.000	151.000
0188	630.0130	Seeding Mixture No. 30	LB	170.000	170.000
0190	633.5200	Markers Culvert End	EACH	8.000	8.000
0192	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	3.000	3.000
0194	637.2210	Signs Type II Reflective H	SF	4.000	4.000
0196	637.2230	Signs Type II Reflective F	SF	13.500	13.500
0198	638.2602	Removing Signs Type II	EACH	1.000	1.000
0200	638.3000	Removing Small Sign Supports	EACH	1.000	1.000
0202	642.5201	Field Office Type C	EACH	1.000	1.000
0204	643.0300	Traffic Control Drums	DAY	34,650.000	34,650.000
0206	643.0420	Traffic Control Barricades Type III	DAY	4,743.000	4,743.000
0208	643.0705	Traffic Control Warning Lights Type A	DAY	7,052.000	7,052.000
0210	643.0715	Traffic Control Warning Lights Type C	DAY	3,960.000	3,960.000
0212	643.0800	Traffic Control Arrow Boards	DAY	562.000	562.000
0214	643.0900	Traffic Control Signs	DAY	10,601.000	10,601.000
0216	643.0920	Traffic Control Covering Signs Type II	EACH	8.000	8.000
0218	643.1050	Traffic Control Signs PCMS	DAY	80.000	80.000
0220	643.1051	Traffic Control Signs PCMS with Cellular Communications	DAY	429.000	429.000
0222	643.1070	Traffic Control Cones 42-Inch	DAY	290.000	290.000
0224	643.1200.S	Portable Automated Real-Time Traffic Queue Warning	DAY	117.000	117.000

1510-02-72

Line	Item	Item Description	Unit	Total	Qty
		System			
0226	643.5000	Traffic Control	EACH	1.000	1.000
0228	645.0111	Geotextile Type DF Schedule A	SY	136.000	136.000
0230	645.0120	Geotextile Type HR	SY	494.000	494.000
0232	646.1020	Marking Line Epoxy 4-Inch	LF	4,074.000	4,074.000
0234	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	269.000	269.000
0236	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	32,153.000	32,153.000
0238	649.0960	Temporary Marking Removable Mask Out Tape 6-Inch	LF	10,450.000	10,450.000
0240	650.4000	Construction Staking Storm Sewer	EACH	21.000	21.000
0242	650.5000	Construction Staking Base	LF	911.000	911.000
0244	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,000.000	2,000.000
0246	650.6500	Construction Staking Structure Layout (structure) 01. B-68-144	LS	1.000	1.000
0248	650.7000	Construction Staking Concrete Pavement	LF	911.000	911.000
0250	650.7500	Construction Staking Concrete Barrier	LF	1,100.000	1,100.000
0252	650.9910	Construction Staking Supplemental Control (project) 01. 1510-02-72	LS	1.000	1.000
0254	650.9920	Construction Staking Slope Stakes	LF	4,509.000	4,509.000
0256	690.0150	Sawing Asphalt	LF	3,377.000	3,377.000
0258	690.0250	Sawing Concrete	LF	60.000	60.000
0260	715.0415	Incentive Strength Concrete Pavement	DOL	750.000	750.000
0262	715.0502	Incentive Strength Concrete Structures	DOL	5,000.000	5,000.000
0264	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	2,000.000
0266	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,260.000	1,260.000
0268	SPV.0060	Special 01. Sawing Concrete Barrier Double-Faced	EACH	2.000	2.000
0270	SPV.0060	Special 02. Pipe Connection To Storm Sewer Structure	EACH	4.000	4.000
0272	SPV.0090	Special 01. Steel Thrie Beam Single Faced	LF	1,221.000	1,221.000
0274	SPV.0090	Special 02. Steel Thrie Beam Double Faced	LF	1,282.000	1,282.000

CLEARING AND GRUBBING

STATION	LOCATION	201.0120 CLEARING ID	201.0220 GRUBBING ID	REMARKS
448+56EB	USH 10EB 111' RT	5	5	STAGE 2
448+57EB	USH 10EB 124' RT	7	7	STAGE 2
448+67EB	USH 10EB 115' RT	8	8	STAGE 2
	TOTAL	**20**	**20**	

REMOVING CURB & GUTTER

STATION - STATION	LOCATION	204.0150 LF	REMARKS
428+50EB - 438+50EB	USH 10 - MEDIAN	2000	STAGE 1
	TOTAL	**2000**	

REMOVING SURFACE DRAINS

STATION - STATION	LOCATION	204.0190 EACH	REMARKS
448+69EB	USH 10 (EB) RT	1	STAGE 2
450+04EB	USH 10 (EB) LT	1	STAGE 2
111+59E - 112+24E	CTH E (RT)	1	STAGE 2
112+10E - 112+44E	CTH E (LT)	1	STAGE 2
42+51X - 43+01X	CROSSOVER (LT)	1	STAGE 3
	TOTAL	**5**	

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	REMARKS
111+54E	CTH E (RT/LT)	1	STAGE 3 (CPCS 30"X58" 49' LONG)
	TOTAL	**1**	

REMOVING CONCRETE BARRIER

STATION - STATION	LOCATION	204.0157 LF	REMARKS
428+50EB - 438+50EB	USH 10 - MEDIAN	1000	STAGE 1
	TOTAL	**1000**	

REMOVING INLETS

STATION - STATION	LOCATION	204.0220 EACH	REMARKS
450+20EB	USH 10 (EB) LT	1	STAGE 2
457+34EB	USH 10 (EB) LT	1	STAGE 3
459+90EB	USH 10 (EB) LT	1	STAGE 3
462+87EB	USH 10 (EB) LT	1	STAGE 3
	TOTAL	**4**	

REMOVING PAVEMENT

STATION - STATION	LOCATION	204.0100 SY	REMARKS
445+75EB - 448+52EB	USH 10 (EB)	874	STAGE 2
450+16EB - 456+50EB	USH 10 (EB)	1904	STAGE 2
458+25EB	USH 10 (EB)	11	STAGE 2
	TOTAL	**2789**	

REMOVING GUARDRAIL

STATION - STATION	LOCATION	204.0165 LF	614.0920 SALVAGED RAIL LF	614.0930 SALVAGED CRASH CUSHIONS EACH	REMARKS
443+50EB - 446+57EB	USH 10 (EB) LT	---	307	---	STAGE 3
446+57EB - 448+57EB	USH 10 (EB) LT	---	200	---	STAGE 2
447+48WB - 449+41WB	USH 10 (WB) RT	---	193	---	STAGE 3
450+74WB - 452+79WB	USH 10 (WB) RT	70	---	---	STAGE 1
449+89EB - 451+86EB	USH 10 (EB) LT	63	---	---	STAGE 2
451+86EB - 464+00EB	USH 10 (EB) LT	---	---	1	STAGE 1
446+30EB - 448+76EB	USH 10 (EB) RT	246	---	---	STAGE 2
111+48E - 114+26E	CTH E (RT)	278	---	---	STAGE 2
111+69E - 114+47E	CTH E (LT)	278	---	---	STAGE 2
	TOTAL	**935**	**700**	**1**	

REMOVING ASPHALTIC SURFACE

STATION - STATION	LOCATION	*MILLING 204.0120 SY	REMARKS
110+48.96E - 115+30.35E	CTH E	1300	STAGE 3
	TOTAL	**1300**	

REMOVING CONCRETE SLOPE PAVING

STATION - STATION	LOCATION	204.0175 SY	REMARKS
112+51E - 113+09E	CTH E LT.	192	STAGE 2
112+13E - 112+75E	CTH E RT.	186	STAGE 2
	TOTAL	**378**	

REMOVING DRAINAGE COVER

STATION - STATION	LOCATION	204.9060.S.01 EACH	REMARKS
430+90EB	USH 10EB 6.5' LT	1	STAGE 1
434+91EB	USH 10EB 9.0' LT	1	STAGE 1
434+91EB	USH 10EB 14.7' LT	1	STAGE 1
	TOTAL	**3**	

EXCAVATION COMMOM

Division	From/To Station	Location	205.0100 Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	208.0100 Borrow	Comment:
			Cut (2)	EBS Excavation (3)				Factor 1.25				
Division 1												
EWK-Detail-10-Stage-1.xml	425+00/468+00	10 Med & 10WB Shldr	1,138	0	402	736	0	0	736	736	0	
Division 1 Subtotal			1,138	0	402	736	0	0	736	736	0	SEE NOTE 15
Division 2												
EWK-Detail-10-Stage-2.xml	444+00/458+00	10EB Mainline	215	0	91	124	2,089	2,611	-2,487	0	2,487	
Division 2 Subtotal			215	0	91	124	2,089	2,611	-2,487	0	2,487	SEE NOTE 16
Division 3												
EWK-Detail-10-Stage-3.xml	428+00/466+00	10 Med	978	0	876	103	149	186	-84	0	84	
Division 3 Subtotal			978	0	876	103	149	186	-84	0	84	SEE NOTE 17
Division 4												
EWK-Detail-E-Stage-3.xml	110+00/116+00	CTH E	357	0	0	357	151	188	169	169	0	
Division 4 Subtotal			357	0	0	357	151	188	169	169	0	SEE NOTE 18
Grand Total			2,689	0	1,368	1,320	2,389	2,986	-1,666	905	2,570	
Total Common Exc			2,689									

Notes:

(1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100

(2) Salvaged/Unsuable Pavement Material is included in Cut.

(3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.

(4) Salvaged/Unusable Pavement Material

5) Available Material = Cut - Salvaged/Unusuable Pavement Material

(13) Expanded Fill Factor = 1.25

Depending on selections: **Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor**

Or Expanded Fill = (Unexpanded Fill - Rock * Rock Factor - Reduced EBS) * Fill Factor

Or Expanded Fill = (Unexpanded Fill - Rock * Rock Factor - Reduced Marsh) * Fill Factor

Or Expanded Fill = (Unexpanded Fill - Rock * Rock Factor) * Fill Factor

(14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

(15) Use 736 CY of material from Division 1. Borrow Excavation item number 208.0100

(16) No Borrow Needed

(17) No Borrow Needed

(18) Use 169 CY of material from Division 4. Borrow Excavation item number 208.0100

3

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

STATION - STATION	LOCATION	211.0400 STA.	REMARKS
5+44X - 8+44X	CROSSOVER - USH 10 (EB)	3	STAGE 1*
8+44X - 18+44X	CROSSOVER - MEDIAN	10	STAGE 1*
15+95X - 28+35X	CROSSOVER - USH 10 (WB)	12	STAGE 1*
18+44X - 28+56X	CROSSOVER - USH 10 (WB)	10	STAGE 1*
29+52X - 37+59X	CROSSOVER - USH 10 (WB)	8	STAGE 1*
29+73X - 37+01X	CROSSOVER - USH 10 (WB)	7	STAGE 1*
37+01X - 42+51X	CROSSOVER - MEDIAN	5	STAGE 1*
42+51X - 47+51X	CROSSOVER - USH 10 (EB)	5	STAGE 1*
	TOTAL	**61**	

*BID ITEM LOCATION INCLUDES ALL AREAS OF "ASPHALTIC SURFACE TEMPORARY"

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	624.0100 WATER MGAL	REMARKS
428+50EB - 438+50EB	USH 10 MEDIAN	---	111	2	STAGE 1
450+67WB - 458+00WB	USH 10 (WB) RT	31	124	2	STAGE 1
457+00EB - 462+50EB	USH 10 MEDIAN	---	305	6	STAGE 1
462+50EB - 465+00EB	USH 10 (EB) LT	---	30	1	STAGE 1
441+30WB - 449+50WB	USH 10 (WB) RT	34	---	---	STAGE 1
436+90WB - 449+34WB	USH 10 (WB) LT	52	---	---	STAGE 1
450+45WB - 458+53WB	USH 10 (WB) LT	34	---	---	STAGE 1
444+30EB - 448+58EB	USH 10 (EB) LT/RT	140	306	6	STAGE 2
450+13EB - 457+00EB	USH 10 (EB) LT/RT	240	581	12	STAGE 2
110+50E - 115+30E	CTH E (RT)	32	101	2	STAGE 2
110+50E - 115+30E	CTH E (LT)	31	103	2	STAGE 2
112+40E - 113+00E	CTH E (RT)	23	---	---	STAGE 3
112+40E - 113+00E	CTH E (LT)	23	---	---	STAGE 3
111+15E - 111+90E	CTH E	---	64	1	STAGE 3
441+30WB - 449+50WB	USH 10 (WB) RT	205	---	---	STAGE 3
450+65WB - 463+43WB	USH 10 (WB) RT	320	---	---	STAGE 3
457+00EB - 462+50EB	USH 10 (EB) LT	138	---	---	STAGE 3
462+50EB -467+50EB	USH 10 EB) LT	94	---	---	STAGE 3
	TOTALS	**1397**	**1725**	**35**	

CONCRETE PAVEMENT 10-INCH, DOWEL BARS, AND TIE BARS

STATION - STATION	LOCATION	415.0100 SY	415.0410 APPROACH SLAB SY	416.0620 DRILLED DOWEL BARS EACH	416.1710* REPAIR SY	REMARKS
445+75EB - 448+52EB	USH 10 (EB)	720	62	24	---	STAGE 2
450+16EB - 456+50EB	USH 10 (EB)	1749	62	24	---	STAGE 2
458+25EB	USH 10 (EB)	---	---	20	11	STAGE 2
	TOTAL	**2469**	**124**	**68**	**11**	

* LOCATION APPROXIMATE. FIELD ENGINEER TO VERIFY CRACKED PANEL.

CONCRETE SURFACE DRAINS

STATION - STATION	LOCATION	416.1010 CY	REMARKS
448+46EB - 448+58EB	USH 10EB (RT)	1	STAGE 2
	TOTAL	**1**	

HMA PAVEMENT & TACK COAT

STATION - STATION	LOCATION	455.0605 TACK COAT GAL	460.5224 4 LT 58-28 S TON	REMARKS
445+20EB - 448+58EB	USH 10 (EB) RT	---	62	STAGE 2 - SHOULDER
445+75EB - 448+40EB	USH 10 (EB) LT	---	23	STAGE 2 - SHOULDER
450+14EB - 457+00EB	USH 10 (EB) LT	---	38	STAGE 2 - SHOULDER
450+29EB - 456+50EB	USH 10 (EB) RT	---	68	STAGE 2 - SHOULDER
428+50EB - 438+50EB	USH 10 (EB) - MEDIAN (LT)	---	147	STAGE 3A - MEDIAN
428+50EB - 438+50EB	USH 10 (EB) - MEDIAN (RT)	---	147	STAGE 3A - MEDIAN
110+50E - 115+30E	CTH E - WIDENING (LT)	---	18	STAGE 3
110+50E - 115+30E	CTH E - WIDENING (RT)	---	18	STAGE 3
111+15E - 111+90E	CTH E - CULVERT PIPES	---	24	STAGE 3
112+10E - 112+87E	CTH E RT	---	4	STAGE 3
112+35E - 113+10E	CTH E LT	---	3	STAGE 3
110+50E - 115+30E	CTH E	112	153	STAGE 3
	TOTALS	**112**	**705**	

3

ASPHALTIC SURFACE

STATION	LOCATION	465.0105 TON	REMARKS
5+44X - 8+44X	CROSSOVER - USH 10 (EB)	56	STAGE 1
8+44X - 18+44X	CROSSOVER - MEDIAN	845	STAGE 1
15+95X - 28+40X	CROSSOVER - USH 10 (WB)	382	STAGE 1
18+44X - 28+56X	CROSSOVER - USH 10 (WB)	248	STAGE 1
29+52X - 37+60X	CROSSOVER - USH 10 (WB)	247	STAGE 1
29+69X - 37+01X	CROSSOVER - USH 10 (WB)	265	STAGE 1
37+01X - 42+50X	CROSSOVER - MEDIAN	631	STAGE 1
42+50X - 47+51X	CROSSOVER - USH 10 (EB)	134	STAGE 1
	TOTAL	**2808**	

ASPHALT FLUME

STATION	LOCATION	465.0315 SY	REMARKS
42+51X - 43+01X	CROSSOVER (LT)	25	STAGE 1
	TOTAL	**25**	

ASPHALTIC SHOULDER RUMBLE STRIPS

STATION - STATION	LOCATION	465.0400 LF	REMARKS
425+50EB - 438+50EB	USH 10 (EB) LT	1300	STAGE 3
445+20EB - 448+52EB	USH 10 (EB) RT	332	STAGE 2
445+75EB - 448+40EB	USH 10 (EB) LT	265	STAGE 2
450+16EB - 467+50EB	USH 10 (EB) LT	1734	STAGE 3
450+29EB - 456+50EB	USH 10 (EB) RT	621	STAGE 2
429+40WB - 449+49WB	USH 10 (WB) RT	2009	STAGE 3
436+90WB - 449+34WB	USH 10 (WB) LT	1244	STAGE 3
450+49WB - 458+53WB	USH 10 (WB) LT	804	STAGE 3
450+62WB - 463+43WB	USH 10 (WB) RT	1281	STAGE 3
	TOTAL	**9590**	

CULVERT PIPE ITEMS

STATION	LOCATION	520.4130** CULVERT PIPE CLASS IV 30-INCH LF	522.1030* APRON ENDWALLS CULVERT PIPE 30-INCH EACH	633.5200* MARKERS CULVERT END EACH	INLET ELEVATION	DISCHARGE ELEVATION	REMARKS
111+49E	CTH E	54	2	2	840.70	840.40	STAGE 3
111+55E	CTH E	54	2	2	840.70	840.40	STAGE 3
	TOTAL	**108**	**4**	**4**			

*ADDITIONAL QUANTITY SHOWN ELSEWHERE

CONCRETE GUTTER 24-INCH

STATION - STATION	LOCATION	601.0205 LF	REMARKS
428+50EB - 438+50EB	USH 10 - MEDIAN	2000	STAGE 3
	TOTAL	**2000**	

CONCRETE BARRIER

STATION - STATION	LOCATION	603.0205 DOUBLE-FACED 32-INCH LF	603.1142 TYPE S42 LF	603.8000 TEMPORARY PRECAST DELIVERED LF	603.8125 TEMPORARY PRECAST INSTALLED LF	SPV.0060.01 SAWING DOUBLE-FACED EACH	REMARKS
428+50EB - 438+50EB	USH 10 - MEDIAN	1000	---	1000	1000	2	STAGE 1B
436+64EB - 438+46EB	USH 10EB	---	---	188	188	---	STAGES 2A/2B
29+72X - 38+62X	CROSSOVER (RT)	---	---	887.5	887.5	---	STAGES 1B/2A/2B (BARR. ANCHORED)
428+40WB - 464+43WB	CROSSOVER	---	---	3612.5	3612.5	---	STAGE 2A
428+40WB - 464+43WB	CROSSOVER	---	---	---	3612.5	---	STAGE 2B
458+60EB - 463+34EB	CROSSOVER	---	---	475.0	475.0	---	STAGE 1B
113+10E - 113+60E	CTH E (LT)	---	50	---	---	---	
112+93E - 113+43E	CTH E (RT)	---	50	---	---	---	
	TOTALS	**1000**	**100**	**6162.5**	**9775.0**	**2.0**	

RIP RAP AND GEOTEXTILE FABRIC

STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY	REMARKS
430+90EB	USH 10EB (LT)	---	2	STAGE 1
434+91EB	USH 10EB (LT)	---	4	STAGE 1
457+34EB	USH 10EB (LT)	---	2	STAGE 1
444+39EB	USH 10EB (RT)	11	35	STAGE 2
449+20EB	USH 10EB (RT)	3	11	STAGE 2
449+25EB	USH 10EB (RT)	5	18	STAGE 2
450+20EB - 452+41EB	USH 10EB (RT)	74	223	STAGE 2
450+50EB	USH 10EB (RT)	15	51	STAGE 2
452+32EB	USH 10EB (RT)	3	11	STAGE 2
111+60E	CTH E (LT/RT)	11	36	STAGE 3
111+66E	CTH E (LT/RT)	11	36	STAGE 3
111+66E - 112+00E	CTH E (LT)	21	65	STAGE 2
	TOTALS	**153**	**494**	

STORM SEWER PIPE

LOCATION	STATION OR STRUCTURE	-	STATION OR STRUCTURE	204.0245 REMOVING STORM SEWER 6-INCH LF	204.0245 REMOVING STORM SEWER 12-INCH LF	204.0245 REMOVING STORM SEWER 18-INCH LF	204.0245 REMOVING STORM SEWER 30-INCH LF	521.2005.S SURFACE DRAIN PIPE CORRUGATED METAL SLOTTED 6-INCH LF	STORM SEWER PIPE 608.0318 CONCRETE CLASS III 18-INCH LF	STORM SEWER PIPE 608.0330 CONCRETE CLASS III 30-INCH LF	STORM SEWER PIPE 608.3012 CLASS III-A 12-INCH LF	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	SPV.0060.02 PIPE CONNECTION TO STORM SEWER STRUCTURE EACH	INLET ELEVATION	DISCHARGE ELEVATION	REMARKS
USH 10EB (LT)	EXISTING	-	100B	33	---	---	---	33	---	---	---	---	1	---	837.02+/-	INSTL STG 1 & RMV STG 3
USH 10EB (LT)	EXISTING	-	101B	43	---	---	---	43	---	---	---	---	1	---	844.42+/-	INSTL STG 1 & RMV STG 3
USH 10EB (LT)	102	-	EXISTING	---	90	---	---	---	---	---	90	---	1	862.50	858.87	INSTL STG 1 & RMV STG 3
USH 10EB (LT)	103A	-	103	26	---	---	---	26	---	---	---	---	---	---	858.89	INSTL STG 1 & RMV STG 3
USH 10EB (LT)	103	-	EXISTING	---	297	---	---	---	---	---	297	---	1	857.00	854.89	INSTL STG 1 & RMV STG 3
USH 10EB (LT)	200	-	EXISTING	---	---	6	---	---	6	---	---	---	---	---	852.33	INSTL STG 2
USH 10EB (RT)	201A	-	201B	---	---	---	---	---	---	---	---	85	---	853.00	839.50	INSTL STG 2
USH 10EB (LT)	202A	-	202B	---	---	---	103	---	---	100	---	---	---	841.46	839.59	INSTL STG 2^
USH 10EB (LT)	450+20EB LT	-	450+20EB RT	---	---	75	---	---	---	---	---	---	---	---	---	RMV STG 2*
USH 10EB (LT)	203A	-	203B	---	---	---	---	---	83	---	---	---	---	857.00	856.11	INSTL STG 2*
USH 10EB (LT)	204	-	EXISTING	---	---	6	---	---	6	---	---	---	---	---	857.21	INSTL STG 2
USH 10EB (LT)	302	-	302-R	---	---	8	---	---	8	---	---	---	---	858.86	---	INSTL STG 3
USH 10EB (LT)	303	-	303-R	---	---	8	---	---	8	---	---	---	---	854.85	---	INSTL STG 3
			TOTALS	**102**	**387**	**103**	**103**	**102**	**111**	**100**	**387**	**85**	**4**			

*INSTALL AT THE BEGINNING OF STAGE 2 TO MAINTAIN DRAINAGE
^INSTALL AFTER THE ADJACENT PIER FOOTING/COLUMNS HAVE BEEN COMPLETED

STORM SEWER STRUCTURES

STATION	LOCATION	STRUCTURE	APRON ENDWALLS FOR CULVERT PIPE 521.1012 STEEL 12-INCH EACH	522.1018 REINFORCED CONCRETE 18-INCH EACH	522.1030** REINFORCED CONCRETE 30-INCH EACH	INLET COVERS 611.0606 TYPE B EACH	611.0642 TYPE MS EACH	611.0651 TYPE S EACH	611.0654 TYPE V EACH	INLETS AND MANHOLES 611.2005 MANHOLES 5-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3220 INLETS 2X2-FT EACH	611.3902 MEDIAN 2 GRATE EACH	611.8120.S COVER PLATES TEMPORARY EACH	633.5200** MARKERS CULVERT END EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	RIM ELEV	REMARKS
430+95EB	9.3' LT	100A	---	---	---	---	---	---	---	---	---	---	---	---	---	1	839.48	
431+20EB	9.4' LT	100B	---	---	---	---	---	---	---	---	---	---	---	---	---	1	839.91	
434+96EB	12.0' LT	101A	---	---	---	---	---	---	---	---	---	---	---	---	---	1	846.75	
435+31EB	12.3' LT	101B	---	---	---	---	---	---	---	---	---	---	---	---	---	1	847.35	
456+37EB	14.8' LT	102	1	---	---	---	---	---	---	---	---	---	---	---	---	1	862.50	INVERT
459+65EB	15.0' LT	103A	---	---	---	---	---	---	---	---	---	---	---	---	---	1	862.29	
459+85EB	15.0' LT	103B	---	---	---	---	---	---	---	---	---	---	---	---	---	1	862.19	
459+90EB	15.0' LT	103	---	---	---	---	---	1	---	---	1	---	---	---	---	1	862.14	
444+39EB	59.4' RT	200	---	1	---	---	---	---	---	---	---	---	---	---	1	1	852.33	INVERT
448+51EB	35.6' RT	201A	---	---	---	---	---	---	1	---	---	1	---	---	---	1	861.89	
449+21EB	81.9' RT	201B	1	---	---	---	---	---	---	---	---	---	---	---	---	1	840.00	INVERT
448+81EB	18.4' LT	202A	---	---	---	---	---	1	---	1	---	---	---	---	---	1	849.43	
449+25EB	74.2' RT	202B	---	---	1	---	---	---	---	---	---	---	---	---	1	1	840.00	INVERT ^
450+75EB	18.9 LT	203A	---	---	---	---	2	---	---	---	---	---	1	1	---	1	862.55	*
450+50EB	60.0' RT	203B	---	1	---	---	---	---	---	---	---	---	---	---	1	1	856.11	INVERT *
452+40EB	58.0' RT	204	---	1	---	---	---	---	---	---	---	---	---	---	1	1	857.21	INVERT
430+90EB	6.5' LT	300	---	---	---	1	---	---	---	---	---	---	---	1	---	1	839.26	
434+91EB	9.0' LT	301	---	---	---	1	---	---	---	---	---	---	---	1	---	1	846.53	
434+91EB	14.7' LT	301A	---	---	---	1	---	---	---	---	---	---	---	1	---	1	846.63	
457+34EB	15.4'LT	EXISTING	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	
457+34EB	15.4' LT	302	---	---	---	---	2	---	---	---	---	---	1	---	---	1	862.15	
462+87EB	14.9' LT	303	---	---	---	---	2	---	---	---	---	---	1	1	---	1	859.39	
		TOTALS	**2**	**3**	**1**	**3**	**6**	**2**	**1**	**1**	**1**	**1**	**3**	**6**	**4**	**21**		

*INSTALL STRUCTURE AT THE BEGINNING OF STAGE 1. PLATE OPENING AND CONNECT PIPE IN STAGE 2.
^INSTALL AFTER THE ADJACENT PIER FOOTING HAS BEEN COMPLETED
**ADDITIONAL QUANTITY SHOWN ELSEWHERE

3

3

BEAM GUARD

STATION - STATION	LOCATION	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH LF	MGS GUARDRAIL 614.2300 GUARDRAIL 3 LF	MGS GUARDRAIL 614.2500 THRIE BEAM TRANSITION LF	MGS GUARDRAIL 614.2610 TERMINAL EAT EACH	STEEL THRIE BEAM SPV.0090.01 SINGLE FACED LF	STEEL THRIE BEAM SPV.0090.02 DOUBLE FACED LF	REMARKS
445+20EB - 448+60EB	USH 10 (EB) RT	---	246.0	39.4	1	---	---	STAGE 2
443+50EB - 445+43EB	USH 10 (EB) LT	---	---	---	---	---	194.0	STAGE 3
445+43EB - 448+39EB	USH 10 (EB) LT	14.4	---	---	---	282.0	---	STAGE 3
445+43EB - 448+50EB	USH 10 (WB) RT	14.4	---	---	---	307.0	---	STAGE 3
450+10EB - 453+12EB	USH 10 (EB) LT	14.4	---	---	---	302.0	---	STAGE 3
449+82EB - 453+12EB	USH 10 (WB) RT	14.4	---	---	---	330.0	---	STAGE 3
453+12EB - 464+00EB	USH 10 (EB) LT	---	---	---	---	---	1088.0	STAGE 3
110+91E - 112+96E	CTH E (RT)	---	112.5	39.4	1	---	---	STAGE 3
111+120E - 113+12E	CTH E (LT)	---	100.0	39.4	1	---	---	STAGE 3
113+41E - 114+83E	CTH E (RT)	---	50.0	39.4	1	---	---	STAGE 3
113+57E - 115+00E	CTH E (LT)	---	50.0	39.4	1	---	---	STAGE 3
	TOTALS	**57.60**	**558.5**	**197.0**	**5**	**1221.0**	**1282.0**	

TOPSOIL, MULCHING/E-MAT, FERTILIZER, AND SEEDING

STATION - STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.2004 EROSION MAT CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0130 SEEDING MIXTURE NO. 30 LB	REMARKS
444+01EB - 449+33EB	USH 10EB (RT)	1513	---	1513	0.95	---	27	STAGE 2
444+01EB - 449+25EB	USH 10EB (RT)	3008	3008	---	1.90	81	---	STAGE 2
446+50EB - 449+62EB	USH 10EB (RT)	274	274	---	0.17	7	---	STAGE 2
445+27EB - 448+97EB	USH 10EB (LT)	575	---	575	0.36	---	10	STAGE 3
449+36EB - 465+32EB	USH 10EB (LT)	3082	---	3082	1.94	---	55	STAGE 3
449+68EB - 456+50EB	USH 10EB (RT)	1738	---	1738	1.10	---	31	STAGE 2
449+80EB - 456+50EB	USH 10EB (RT)	1129	1129	---	0.71	30	---	STAGE 2
450+40EB - 452+22EB	USH 10EB (RT)	43	43	---	0.03	1	---	STAGE 2
10+49EB - 112+35E	CTH E (LT)	279	279	---	0.18	---	5	STAGE 3
110+49E - 111+80E	CTH E (RT)	128	128	---	0.08	---	2	STAGE 3
110+90E - 111+32E	CTH E (RT)	24	24	---	0.02	1	---	STAGE 2
113+40E - 115+30E	CTH E (RT)	101	101	---	0.06	---	2	STAGE 3
113+60E - 115+30E	CTH E (LT)	131	131	---	0.08	---	2	STAGE 3
	UNDISTRIBUTED	3000	1250	1700	2.00	30	34	
	TOTALS	**15026**	**6367**	**8609**	**10**	**151**	**170**	

3

EROSION CONTROL ITEMS

STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7560 TRACKING PAD EACH	628.7570 ROCK BAGS EACH	REMARKS
443+81EB - 450+06EB	USH 10EB (RT)	714	714	---	---	48	---	---	18	STAGE 1 & STAGE 2
450+43EB - 456+73EB	USH 10EB (RT)	767	767	---	---	32	1	---	36	STAGE 1 & STAGE 2
456+31EB	USH 10EB (LT)	---	---	---	---	---	1	---	---	STAGE 1
465+43EB	USH 10EB (LT)	---	---	---	---	8	---	---	---	STAGE 1
468+00EB	USH 10EB (LT)	---	---	---	---	8	---	---	---	STAGE 1
113+91E - 115+41E	CTH E (RT)	196	196	---	---	---	---	---	---	STAGE 1
114+11E - 115+48E	CTH E (LT)	182	182	---	---	---	---	---	---	STAGE 1
113+76E	CTH E (RT)	---	---	---	---	---	1	---	---	STAGE 1
113+98E	CTH E (RT)	---	---	---	---	---	1	---	---	STAGE 1
111+40E	CTH E (RT)	---	---	---	---	---	1	---	---	STAGE 3
111+46E	CTH E (RT)	---	---	---	---	---	1	---	---	STAGE 3
	PROJECT 1510-02-72	---	---	4	2	---	---	1	---	ALL STAGES
	TOTALS	**1859**	**1859**	**4**	**2**	**96**	**6**	**1**	**54**	

3

INLET PROTECTION

STATION	LOCATION	628.7005 TYPE A EACH	628.7010 TYPE B EACH	REMARKS
425+90EB	USH 10EB (LT)	---	1	STAGE 1
427+90EB	USH 10EB (LT)	---	1	STAGE 1
430+90EB	USH 10EB (LT)	---	1	STAGE 3
434+91EB	USH 10EB (LT)	---	1	STAGE 3
434+91EB	USH 10EB (LT)	---	1	STAGE 3
440+40EB	USH 10EB (LT)	1	---	STAGE 1
444+40EB	USH 10EB (LT)	1	---	STAGE 1
450+19EB	USH 10EB (LT)	1	---	STAGE 1
450+75EB	USH 10EB (LT)	1	---	STAGE 3
452+40EB	USH 10EB (LT)	1	---	STAGE 1
457+35EB	USH 10EB (LT)	1	---	STAGE 3
462+87EB	USH 10EB (LT)	1	---	STAGE 1
	TOTALS	**7**	**5**	

SIGN LISTING

SIGN NO.	SIGN CODE	MESSAGE	SIZE	634.0616 POSTS WOOD 4"X6" 16-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGN TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
1-01	D10-3	MILE 253	12"x48"	1	4.00	---	1	1
1-02	D5-52L	BRIDGE HASH MARKS	18"x54"	1	---	6.75	---	---
1-03	D5-52R	BRIDGE HASH MARKS	18"x54"	1	---	6.75	---	---
			TOTALS	**3**	**4.00**	**13.50**	**1**	**1**

TRAFFIC CONTROL

LOCATION	643.0300 DRUMS DAYS	643.0420 BARRICADE TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C DAYS	643.0800 ARROW BOARD DAYS	REMARKS
WORK ZONE ACESS	0	160	320	0	0	SEE CONST DETAIL, STAGE 1B & 3A
STAGE 1A						SEE TRAFFIC CONTROL STAGE 1A
435+50 WB - 476+33 WB	295	15	30	90	10	USH 10 WB, LT SIDE
CHURCHILL STREET	160	25	30	-	-	RAMP CLOSED
STAGE 1A TOTALS	**463**	**40**	**60**	**90**	**10**	
STAGE 1B						SEE TRAFFIC CONTROL STAGE 1B
394+00 EB - 469+50 EB	2850	150	300	540	60	USH 10 EB
424+50 WB - 484+00 WB	2310	120	240	540	60	USH 10 WB
STH 22 ON RAMP, LT SHLD	120	-	-	-	-	
STH 22 ON RAMP, RT SHLD	480	-	-	480	-	
CHURCHILL STREET	160	25	30	-	-	RAMP CLOSED
STAGE 1B TOTALS	**5934**	**295**	**570**	**1560**	**120**	
STAGE 2A						SEE TRAFFIC CONTROL STAGE 2A
386+00 EB - 440+00 EB	6545	255	510	1530	170	USH 10 EB, LT SIDE
5+56 X - 20+00 X	4335	-	-	210	0	USH 10 EB, RT SIDE
37+00 X - 44+00 X	1275	-	-	-	-	USH 10 EB, RT SIDE
43+00 X - 47+14 X	680	-	-	-	-	USH 10 EB, LT SIDE
431+00 EB - 458+00 EB	-	1275	1700	-	-	USH 10 EB BRIDGE OUT
CRYSTAL RD & 109+90 E	-	510	680	-	-	CTH E, ROAD CLOSED
116+10 E & LAKE ST	-	510	680	-	-	CTH E, ROAD CLOSED
ON RAMP STH 22	340	0	0	0	0	LT SIDE ON RAMP STH 22
STAGE 2A TOTALS	**13205**	**2550**	**3570**	**1740**	**170**	

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TRAFFIC CONTROL

LOCATION	643.0300 DRUMS DAYS	643.0420 BARRICADE TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C DAYS	643.0800 ARROW BOARD DAYS	REMARKS
STAGE 2B						SEE TRAFFIC CONTROL STAGE 2B
426+00 WB - 428+00 WB	90	-	-	-	-	USH 10 WB RT SHLD
432+00 WB - 436+00 WB	150	-	-	-	-	USH 10 WB RT SHLD
5+56 X - 20+00 X	1530	-	-	210	-	USH 10 EB RT SIDE, PLACED IN STAGE 2A
431+00 EB - 458+00 EB	-	450	600	-	-	USH 10 EB BRIDGE OUT PLACED IN STAGE 2A
37+00 X - 44+00 X	450	-	-	-	-	USH 10 EB, RT SIDE PLACED IN STAGE 2A
460+00 WB - 485+00 WB	1320	60	120	90	60	USH 10 WB RT
CRYSTAL RD & 109+90 E	-	180	240	-	-	CTH E, ROAD CLOSED PLACED IN STAGE 2A
116+10 E	-	150	180	-	-	CTH E, ROAD CLOSED PLACED IN STAGE 2A
CHURCHILL STREET	960	150	180	-	-	RAMP CLOSED
STAGE 2B TOTALS	**4533**	**990**	**1320**	**300**	**60**	
STAGE 3A						SEE TRAFFIC CONTROL STAGE 3A
394+00 EB - 469+00 EB	4750	250	500	90	100	USH 10 EB PASSING LANE CLOSED
STH 22 ON RAMP	200	-	-	-	-	
425+00 WB - 484+00 WB	3850	200	400	90	100	USH 10 WB PASSING LANE CLOSED
CHURCHILL STREET	1600	250	300	-	-	RAMP CLOSED
STAGE 3A TOTALS	**10414**	**700**	**1200**	**180**	**200**	
STAGE 3B						SEE TRAFFIC CONTROL STAGE 3B
435+00 WB - 476+33 WB	61	3	6	90	2	USH 10 EB TRAVEL LANE CLOSED
CHURCHILL STREET	32	5	6	-	-	RAMP CLOSED
STAGE 3B TOTALS	**101**	**8**	**12**	**90**	**2**	
GRAND TOTALS	**34650**	**4743**	**7052**	**3960**	**562**	

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TRAFFIC CONTROL SIGNS

MESSAGE	SIGN CODE	643.0900 SIGNS USH 10 (WB) DAYS	USH 10 (EB) DAYS	CTH E DAYS	STH 22 ON RAMP DAYS	CHURCHILL STREET ON RAMP DAYS	CTH A STH 22/54 INTERCHANGE DAYS
WORK ZONE ACCESS (SINGLE LANE CLOSURE)	R11-2L	0	240	0	0	0	0
STAGE 1A							
ROAD WORK 1 MILE	W20-1F	10	0	0	0	0	0
RIGHT LANE CLOSED 1/2 MILE	WO3-5	10	0	0	0	0	0
RIGHT LANE CLOSED 1500 FT	W20-5B	10	0	0	0	0	0
PAVEMENT WIDTH TRANSITION SYMBOL-RIGHT	WO4-2R	10	0	0	0	0	0
END ROAD WORK	G20-2A	10	0	0	0	0	0
	-	0	0	0	0	0	0
LANE CLOSED	R11-2L	15	0	0	0	0	0
RAMP CLOSED	R11-2R	0	0	0	0	10	0
RAMP CLOSED USE ALT ROUTE	R11-54F	0	0	0	0	5	0
STAGE 1A TOTALS		**65**	**0**	**0**	**0**	**15**	**0**
STAGE 1B							
ROAD WORK 1 MILE	W20-1F	28	28	0	0	0	0
ROAD WORK AHEAD	W20-1A	0	0	0	14	0	0
LEFT LANE CLOSED 1/2 MILE	W20-55G	28	28	0	0	0	0
LEFT LANE CLOSED 1500 FT	W20-55B	28	0	0	0	0	0
PAVEMENT WIDTH TRANSITION SYMBOL-LEFT	WO4-2L	28	28	0	0	0	0
END ROAD WORK	G20-2A	28	28	0	0	0	0
	-	0	0	0	0	0	0
MERGING TRAFFIC SYMBOL (RIGHT)	W04-1R	0	14	0	0	0	0
YIELD AHEAD	WO3-2	0	0	0	14	0	0
LANE CLOSED	R11-2L	56	84	0	0	0	0
YIELD	R1-2	0	0	0	14	0	0
RAMP CLOSED	R11-2R	0	0	0	0	28	0
RAMP CLOSED USE ALT ROUTE	R11-54F	0	0	0	0	14	0
STAGE 1B TOTALS		**196**	**210**	**0**	**42**	**42**	**0**

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TRAFFIC CONTROL SIGNS

MESSAGE	SIGN CODE	643.0900 SIGNS USH 10 (WB) DAYS	USH 10 (EB) DAYS	CTH E DAYS	STH 22 ON RAMP DAYS	CHURCHILL STREET ON RAMP DAYS	CTH A STH 22/54 INTERCHANGE DAYS
STAGE 2A							
ROAD WORK 1 MILE	W20-1F	170	170	0	0	0	0
ROAD WORK AHEAD	W20-1A	0	0	0	85	85	0
ROAD WORK 1000 FT	W20-1C	170	0	0	0	0	0
ROAD WORK 1/2 MILE	W20-1G	170	0	0	0	0	0
LEFT LANE CLOSED 1/2 MILE	W20-55G	0	170	0	0	0	0
		0	0	0	0	0	0
END ROAD WORK	G20-2A	170	170	170	0	0	0
	-	0	0	0	0	0	0
ROAD CLOSED 1.5 MILES AHEAD Local Traffic Only	R11-3	0	0	85	0	0	0
ROAD CLOSED 1 MILE AHEAD Local Traffic Only	R11-3	0	0	85	0	0	0
EAST	M3-2	0	255	0	170	0	0
USH 10	M1-4	0	255	0	170	0	0
MAX 11' WIDTH	W12-52	0	255	0	170	0	0
1.5 MILES AHEAD	W57-52	0	85	0	0	0	0
1 MILE AHEAD	W57-52	0	170	0	170	0	0
PAVEMENT WIDTH TRANSITION SYMBOL-LEFT	W04-2L	0	170	0	0	0	0
MERGING TRAFFIC SYMBOL (RIGHT)	W04-1R	0	85	0	0	0	0
YIELD AHEAD	W03-2	0	0	0	85	0	0
MERGE TRAFFIC FROM RIGHT	W04-5	0	0	0	85	0	0
YIELD	R1-2	0	0	0	85	0	0
DOUBLE REVERSE CURVE (1 LANE) LEFT	W24-1L	0	170	0	0	0	0
ADVISORY SPEED 55 MPH	W013-1	85	85	0	0	0	0
LANE CLOSED	R11-2L	0	255	0	0	0	0
BRIDGE OUT	R11-2B	0	255	0	0	0	0
NIGHT ARROW SINGLE	W01-6	0	0	0	0	0	0
DOUBLE REVERSE CURVE (2 LANE) RIGHT	W24-1AR	170	0	0	0	0	0
ROAD CLOSED	R11-2	0	0	170	0	0	0
ROAD CLOSED 500 FT	W20-3D	0	0	170	0	0	0
ROAD CLOSED AHEAD	W20-3A	0	0	170	0	0	0
SPEED LIMIT 65 MPH	R2-1	0	85	0	0	0	0
STAGE 2A TOTALS		**935**	**2635**	**850**	**1020**	**85**	**0**

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TRAFFIC CONTROL SIGNS

MESSAGE	SIGN CODE	643.0900 SIGNS USH 10 (WB) DAYS	USH 10 (EB) DAYS	CTH E DAYS	STH 22 ON RAMP DAYS	CHURCHILL STREET ON RAMP DAYS	CTH A STH 22/54 INTERCHANGE DAYS
STAGE 2B							
ROAD WORK 1 MILE	W20-1F	60	60	0	0	0	0
ROAD WORK AHEAD	W20-1A	0	0	0	30	0	0
ROAD WORK 1500 FT	W20-1B	0	60	0	0	0	0
ROAD WORK 1/2 MILE	W20-1G	0	60	0	0	0	0
LEFT LANE CLOSED 1/2 MILE	W20-55G	60	0	0	0	0	0
LEFT LANE CLOSED 1500 FT	W20-55B	60	0	0	0	0	0
PAVEMENT WIDTH TRANSITION SYMBOL-LEFT	WO4-2L	60	0	0	0	0	0
END ROAD WORK	G20-2A	60	60	60	0	0	0
	-	0	0	0	0	0	0
ROAD CLOSED 1.5 MILES AHEAD Local Traffic Only	R11-3	0	0	0	0	0	0
ROAD CLOSED 1 MILE AHEAD Local Traffic Only	R11-3	0	0	0	0	0	0
WEST	M3-2	120	0	0	0	0	240
USH 10	M1-4	120	0	0	0	0	240
MAX 11' WIDTH	W12-52	120	0	0	0	0	240
1.5 MILES AHEAD	W57-52	60	0	0	0	0	0
2 MILES AHEAD	W57-52	60	0	0	0	0	120
RAMP CLOSED USE ALT ROUTE	R11-54F	0	0	0	0	30	0
RAMP CLOSED	R11-2R	0	0	0	0	60	0
ROAD CLOSED	R11-2	0	0	60	0	0	0
ROAD CLOSED 500 FT	W20-3D	0	0	60	0	0	0
ROAD CLOSED AHEAD	W20-3A	0	0	60	0	0	0
DOUBLE REVERSE CURVE (2 LANE) LEFT	W24-1AL	0	60	0	0	0	0
LANE CLOSED	R11-2L	30	30	0	0	0	0
BRIDGE OUT	R11-2B	0	90	0	0	0	0
NIGHT ARROW SINGLE	W01-6	0	30	0	0	0	0
DOUBLE REVERSE CURVE (1 LANE) RIGHT	W24-1R	0	0	0	0	0	0
ADVISORY SPEED 55 MPH	W013-1	30	30	0	0	0	0
SPEED LIMIT 65 MPH	R2-1	0	30	0	0	0	0
	STAGE 2B TOTALS	**840**	**510**	**240**	**30**	**90**	**840**

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TRAFFIC CONTROL SIGNS

MESSAGE	SIGN CODE	643.0900 SIGNS USH 10 (WB) DAYS	USH 10 (EB) DAYS	CTH E DAYS	STH 22 ON RAMP DAYS	CHURCHILL STREET ON RAMP DAYS	CTH A STH 22/54 INTERCHANGE DAYS
STAGE 2B TOTALS		**840**	**510**	**240**	**30**	**90**	**840**
STAGE 3A							
ROAD WORK 1 MILE	W20-1F	100	100	0	0	0	0
ROAD WORK AHEAD	W20-1A	0	0	0	50	0	0
LEFT LANE CLOSED 1/2 MILE	W20-55G	100	100	0	0	0	0
LEFT LANE CLOSED 1500 FT	W20-55B	100	0	0	0	0	0
PAVEMENT WIDTH TRANSITION SYMBOL-LEFT	WO4-2L	100	100	0	0	0	0
END ROAD WORK	G20-2A	100	100	0	0	0	0
	-	0	0	0	0	0	0
RAMP CLOSED USE ALT ROUTE	R11-54F	0	0	0	0	50	0
RAMP CLOSED	R11-2R	0	0	0	0	100	0
YIELD AHEAD	WO3-2	0	0	0	50	0	0
YIELD	R1-2	0	0	0	50	0	0
MERGING TRAFFIC SYMBOL (RIGHT)	WO4-1R	0	0	0	50	0	0
LANE CLOSED	R11-2L	200	250	0	0	0	0
STAGE 3A TOTALS		**700**	**650**	**0**	**200**	**150**	**0**
STAGE 3B							
ROAD WORK 1 MILE	W20-1F	2	0	0	0	0	0
RIGHT LANE CLOSED 1/2 MILE	WO3-5	2	0	0	0	0	0
RIGHT LANE CLOSED 1500 FT	W20-5B	2	0	0	0	0	0
PAVEMENT WIDTH TRANSITION SYMBOL-RIGHT	WO4-2R	2	0	0	0	0	0
END ROAD WORK	G20-2A	2	0	0	0	0	0
	-	0	0	0	0	0	0
RAMP CLOSED USE ALT ROUTE	R11-54F	0	0	0	0	1	0
RAMP CLOSED	R11-2R	0	0	0	0	2	0
LANE CLOSED	R11-2L	3	0	0	0	0	0
STAGE 3B TOTALS		**13**	**0**	**0**	**0**	**3**	**0**
SUBTOTALS		**2749**	**4245**	**1090**	**1292**	**385**	**840**

PORTABLE CHANGEABLE MESSAGE SIGNS

LOCATION	STAGE DAYS	643.1050 TRAFFIC CONTOL SIGNS PCMS DAY	643.1051 TRAFFIC CONTOL SIGNS PCMS WITH CELLULAR COMMUNICATIONS DAY	STAGE DAYS	REMARKS
USH 10 EB, STA 368+00, RT	0	0	7	-	ONE WEEK PRIOR
USH 10 WB, STA 509+00, LT	0	0	7	-	ONE WEEK PRIOR
RAMP-CHURCHILL ST	0	0	7	-	ONE WEEK PRIOR
ADVANCED		**0**	**21**		
STAGE 1A					
USH 10 EB, STA 368+00, RT	0	0	5	-	
USH 10 WB, STA 509+00, LT	0	0	5	-	
RAMP-CHURCHILL ST	0	0	0	-	RAMP CLOSED
STAGE 1A TOTALS		**0**	**10**		
STAGE 1B					
WORK ZONE ACESS	30	30	-	-	SEE CONSTRUCTION DETAIL
USH 10 EB, STA 368+00, RT	0	0	30	-	
USH 10 WB, STA 509+00, LT	0	0	30	-	
RAMP-CHURCHILL ST	0	0	0	-	RAMP CLOSED
STAGE 1B TOTALS		**30**	**60**		
STAGE 2A					
USH 10EB	0	0	85	85	
USH 10WB	0	0	85	85	DURING SWITCH
RAMP-CHURCHILL ST	0	0	0	-	RAMP OPEN
STAGE 2A TOTALS		**0**	**170**		
STAGE 2B					
USH 10EB	0	0	30	30	DURING SWITCH
USH 10WB	0	0	30	30	
RAMP-CHURCHILL ST	0	0	7	-	7 DAYS PRIOR TO RAMP CLOSURE
STAGE 2B TOTALS		**0**	**67**		
STAGE 3A					
WORK ZONE ACESS	50	50	-	-	SEE CONSTRUCTION DETAIL
USH 10EB	0	0	50	50	DURING SWITCH
USH 10WB	0	0	50	50	
RAMP-CHURCHILL ST	0	0	0	-	RAMP CLOSED
STAGE 3A TOTALS		**50**	**100**		
STAGE 3B					
USH 10EB	0	0	0	1	DURING SWITCH
USH 10WB	0	0	1	1	
RAMP-CHURCHILL ST	0	0	0	-	RAMP CLOSED
STAGE 3B TOTALS		**0**	**1**		
GRAND TOTALS		**80**	**429**		

PORTABLE AUTOMATED REAL-TIME TRAFFIC QUEUE WARNING SYSTEM (QWS)

LOCATION	STAGE DAYS	DISTANCE (MILES)	643.1200.S QWS (DAY)	REMARKS
STAGE 2A				
USH 10EB	85	5	85	
STAGE 2A TO STAGE 2B SHIFT				
USH 10EB	1	5	1	
USH 10WB	1	5	1	
STAGE 2B				
USH 10WB	30	5	30	
GRAND TOTALS			**117**	

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TRAFFIC CONTROL COVERING SIGNS

LOCATION	DESCRIPTION	NUMBER OF CYCLES EACH	NUMBER OF SIGNS EACH	643.0920 TYPE II EACH	REMARKS
STAGE 1A-1B, 2B, 3A-3B					
CHRUCHILL STREET	WEST, SOUTH, NORTH, WEST USH 10, STH 22, STH 49, STH 54 ARROW, ARROW, ARROW, ARROW	2	1	2	J3-4
CHRUCHILL STREET	STEVENS POINT, ARROW	2	1	2	
CHURCHILL STREET	WEST, NORTH USH 10, STH 49 ARROW, ARROW	2	1	2	J2-4
CHURCHILL STREET	SOUTH, WEST STH 22, STH 54 ARROW, ARROW	2	1	2	J2-2
			TOTALS	**8**	

PAVEMENT MARKING

STATION - STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH SOLID WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH SOLID YELLOW LF	646.1555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH LF
445+75EB - 456+50EB	USH 10EB	1075	1075	269
110+49E - 115+30E	CTH E	962	962	
	SUB TOTALS	**2037**	**2037**	**269**
	GRAND TOTAL	**4074**		**269**

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TEMPORARY MARKING

STATION - STATION	LOCATION	649.0150 REMOVABLE TAPE 4-INCH SOLID WHITE LF	649.0150 REMOVABLE TAPE 4-INCH SOLID YELLOW LF	649.0960 REMOVABLE MASK OUT TAPE 6-INCH LF	REMARKS
STAGE 1A					SEE TC STAGE 1A
463+53 WB - 471+83 WB	12' LT	-	-	208	CENTER DASH
463+53 WB - 471+33 WB	12'LT - 24'LT	780	-	-	SHIFT TAPER
	SUB TOTALS 1A	**780**	**0**	**208**	
STAGE 1B					SEE TC STAGE 1B
398+70 EB - 407+00 EB	USH 10 EB 12' RT	-	-	208	DASHED CENTER LINE
399+20 EB - 407+00 EB	USH 10 EB 0' RT - 12' RT	-	780	-	LANE SHIFT TAPER
471+45 WB - 479+75 WB	USH 10 WB 12' LT	-	-	208	DASHED CENTER LINE
471+45 WB - 479+25 WB	USH 10 WB 12' LT - 0' LT	-	780	-	LANE SHIFT TAPER
	SUB TOTALS 1B	**0**	**1560**	**416**	

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TRAFFIC CONTROL

STATION	LOCATION	STAGE DAYS	QTY	643.1070 CONES 42-INCH DAY	REMARKS
7+44 X - 43+51 X	10' RT	1	145	145	STAGE 2A
7+44 X - 43+51 X	4' LT	1	145	145	STAGE 2B
		TOTAL		**290**	

TRAFFIC CONTROL

LOCATION	643.5000 EACH
PROJECT	1
	1

TEMPORARY MARKING

STATION - STATION	LOCATION	649.0150 REMOVABLE TAPE 4-INCH SOLID WHITE LF	649.0150 REMOVABLE TAPE 4-INCH SOLID YELLOW LF	649.0960 REMOVABLE MASK OUT TAPE 6-INCH LF	REMARKS
STAGE 2A					SEE TC STAGE 2A
390+70 EB - 399+00 EB	USH 10 EB 12' RT	-	-	208	DASHED CENTER LINE
391+20 EB - 399+00 EB	USH 10 EB 0' RT - 12' RT	-	780	-	LANE SHIFT TAPER
425+62 EB - 434+00 EB	USH 10 EB 0' RT	-	-	838	LT EDGE LINE
425+62 EB - 431+19 EB	USH 10 EB 12' RT	-	-	140	DASHED CENTER LINE
5+56 X - 47+14.3 X	USH 10 EB	-	4159	-	YELLOW EDGE LINE
425+62 EB - 426+90 EB	USH 10 EB 24' RT	-	-	128	RT EDGE LINE
5+56 X - 43+81 X	USH 10 EB	3825	-	-	WHITE EDGE LINE
460+00 EB - 467+13 EB	USH 10 EB 0' RT	-	-	713	LT EDGE LINE
462+78.5 EB - 467+13 EB	USH 10 EB 12' RT	-	-	435	DASHED CENTER LINE
-	-	-	-	-	-
436+00 WB - 461+00 WB	USH 10 WB, 0' LT	-	-	2500	YELLOW EDGE LINE
15+04 X - 39+07 X	USH 10 WB	-	2403	-	YELLOW EDGE LINE
436+00 WB - 460+00 WB	USH 10 WB 12' LT	-	-	600	DASHED CENTER LINE
15+04 X - 39+06.7 X	USH 10 WB	2403	-	-	CENTER LANE
436+00 WB - 460+00 WB	USH 10 WB 24' LT	-	-	2400	WHITE EDGE LINE
15+04 X - 39+06 X	USH 10 WB	2402	-	-	WHITE EDGE LINE
	SUB TOTALS 2A	**8630**	**7342**	**8794**	
STAGE 2B					SEE TC STAGE 2B
5+56 X - 47+14.3 X	USH 10 EB 0' RT	-	4159	-	YELLOW EDGE LINE
5+56 X - 47+14.3 X	USH 10 EB	4159	-	-	CENTER LANE
434+00 WB - 436+00 WB	USH 10 WB	-	-	200	YELLOW EDGE LINE
15+04.7 X - 39+07 X	USH 10 WB	-	2403	-	YELLOW EDGE LINE
471+44 WB - 479+74 WB	USH 10 WB 12' LT	-	-	208	DASHED CENTER LINE
471+44 WB - 479+24 WB	USH 10 WB	-	780	-	LANE SHIFT TAPER
	SUB TOTALS 2B	**4159**	**7342**	**408**	
STAGE 3A	-	-	-	-	SEE TC STAGE 3A
398+70 EB - 407+00 EB	USH 10 EB	-	-	208	DASHED CENTER LINE
399+20 EB - 407+00 EB	USH 10 EB	-	780	-	LANE SHIFT TAPER
471+45 WB - 479+75 WB	USH 10 WB	-	-	208	DASHED CENTER LINE
471+45 WB - 479+25 WB	USH 10 WB	-	780	-	LANE SHIFT TAPER
	SUB TOTALS 3A	**0**	**1560**	**416**	
STAGE 3B	-	-	-	-	SEE TC STAGE 3B
463+53 WB - 471+83 WB	USH 10 WB	-	-	208	DASHED CENTER LINE
463+53 WB - 471+33 WB	USH 10 WB	780	-	-	LANE SHIFT TAPER
	SUB TOTALS 3B	**780**	**0**	**208**	
	GRAND TOTALS		**32153**	**10450**	

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CONSTRUCTION STAKING

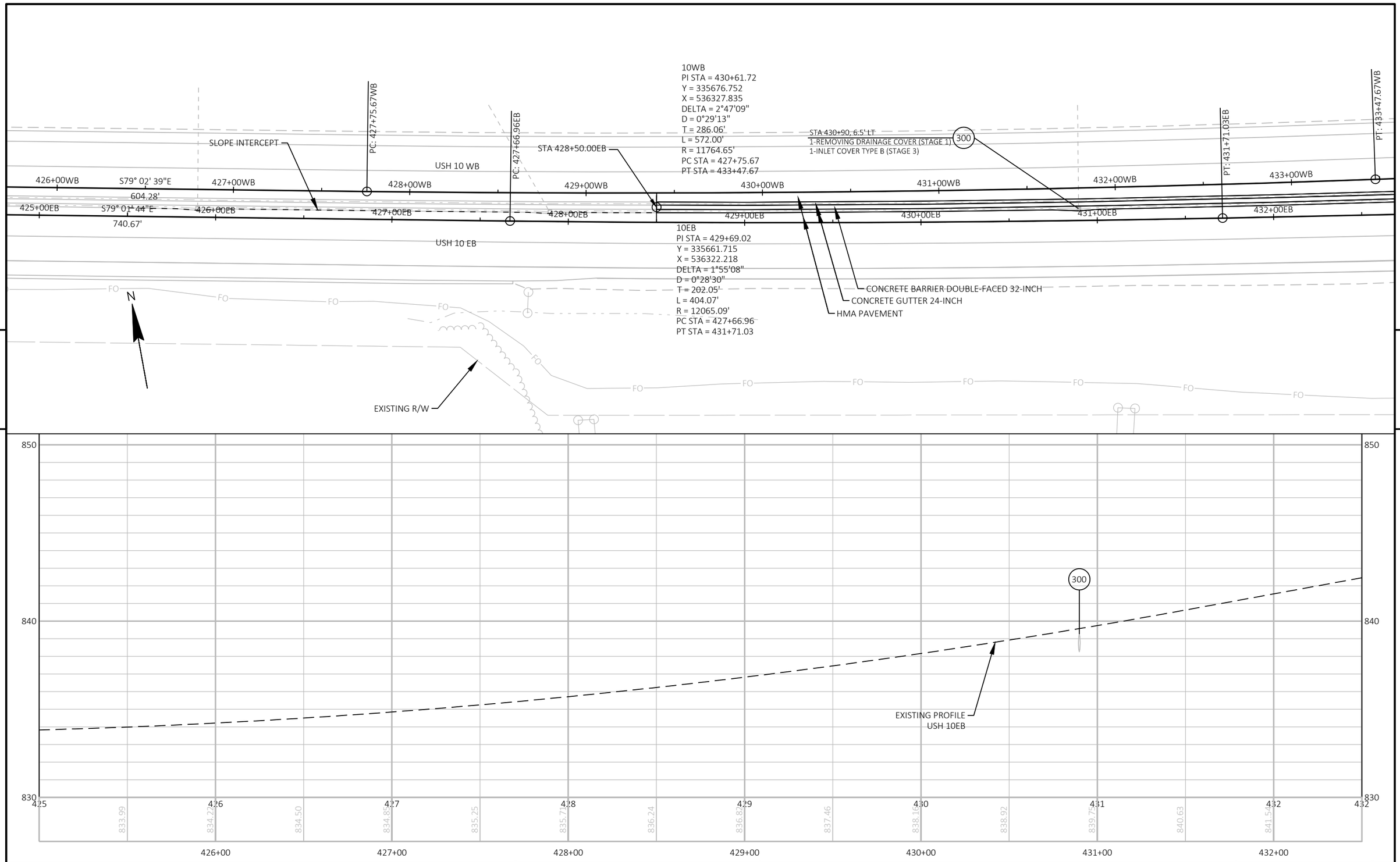
STATION - STATION	LOCATION	650.5000 BASE LF	650.5500 CURB & GUTTER LF	650.6500 STRUCTURE LAYOUT (STRUCTURE) LS	650.7000 CONCRETE PAVEMENT LF	650.7500 CONCRETE BARRIER LF	650.9920 SLOPE STAKES LF
426+00EB - 467+00EB	USH 10EB	---	---	---	---	---	4100
428+50EB - 438+50EB	USH 10EB MEDIAN	---	2000	---	---	1000	---
445+75EB - 448+52EB	USH 10EB	277	---	---	277	---	---
449+27.54EB	B-68-144	---	---	1	---	---	---
450+16EB - 456+50EB	USH 10EB	634	---	---	634	---	---
110+91E - 115+00E	CTH E	---	---	---	---	---	409
113+10E - 113+60E	CTH E (LT)	---	---	---	---	50	---
112+93E - 113+43E	CTH E (RT)	---	---	---	---	50	---
	TOTALS	**911**	**2000**	**1**	**911**	**1100**	**4509**

SAWING ASPHALT

STATION	LOCATION	690.0150 LF	REMARKS
425+50EB	USH 10 MEDIAN	5	STAGE 1
438+50EB	USH 10 MEDIAN	12	STAGE 1
457+00EB	USH 10 (EB) LT	3	STAGE 1
467+50EB	USH 10 (EB) LT	3	STAGE 1
429+40WB	USH 10 (WB) RT	5	STAGE 1
436+90WB	USH 10 (WB) LT	6	STAGE 1
458+53WB	USH 10 (WB) LT	6	STAGE 1
463+43WB	USH 10 (WB) RT	3	STAGE 1
445+20EB	USH 10 (EB) RT	6	STAGE 2
445+75EB	USH 10 (EB) LT	3	STAGE 2
456+50EB	USH 10 (EB) RT	6	STAGE 2
457+00EB	USH 10 (EB) LT	3	STAGE 2
428+50EB	USH 10 MEDIAN	10	STAGE 3
441+29WB - 448+98WB	USH 10 (WB) RT	769	STAGE 3
450+66WB - 463+43WB	USH 10 (WB) RT	1277	STAGE 3
457+00EB - 467.50EB	USH 10 (EB) LT	1050	STAGE 3
111+15E	CTH E RT/LT	23	STAGE 3
111+90E	CTH E RT/LT	23	STAGE 3
112+10E - 112+87E	CTH E RT	83	STAGE 3
112+35E - 113+10E	CTH E LT	81	STAGE 3
	TOTAL	**3377**	

SAWING CONCRETE

STATION	LOCATION	690.0250 LF	REMARKS
428+50EB	USH 10 MEDIAN	4	STAGE 1
438+50EB	USH 10 MEDIAN	4	STAGE 1
445+75EB	USH 10 (EB)	26	STAGE 2
456+50EB	USH 10 (EB)	26	STAGE 2
	TOTAL	**60**	

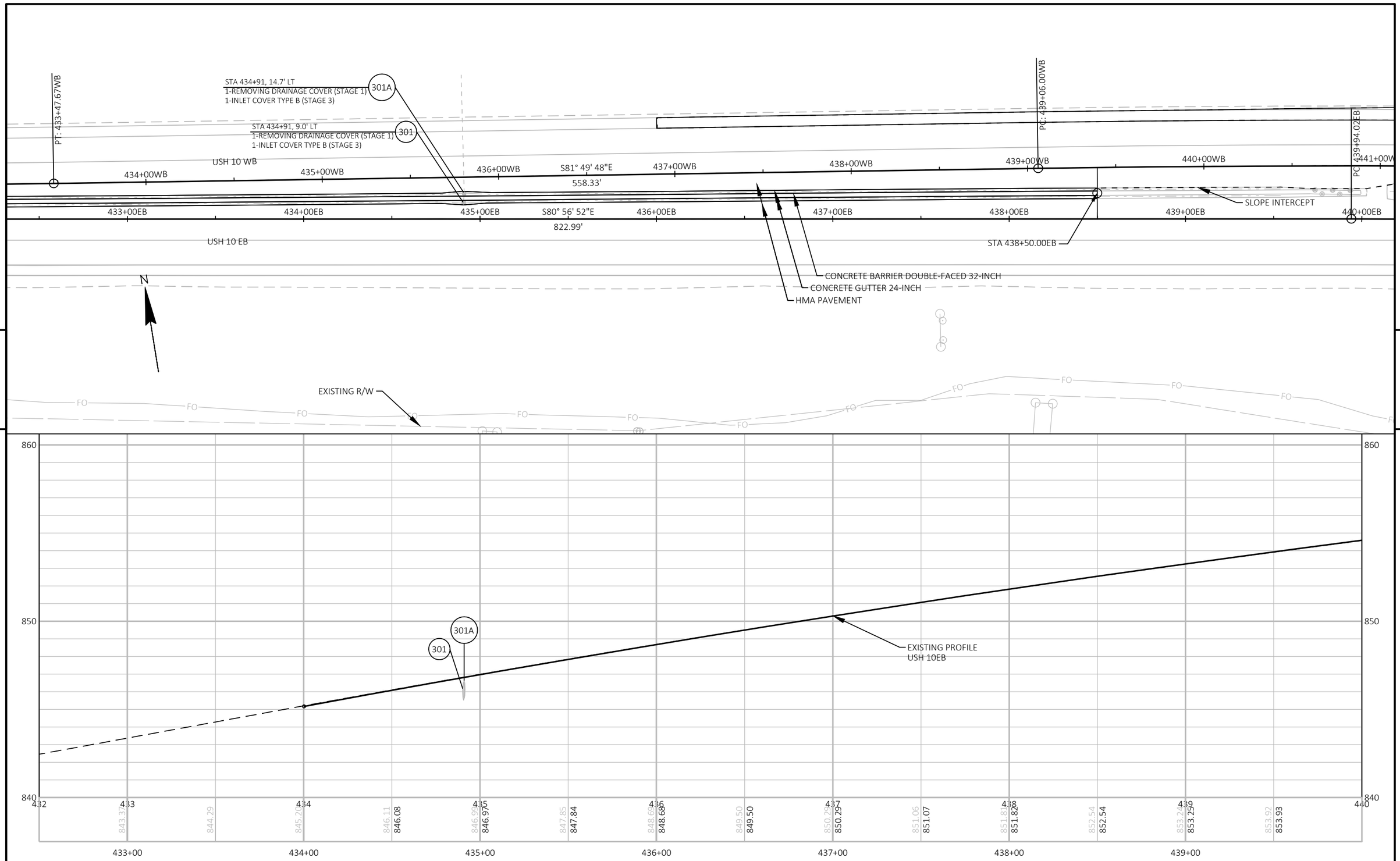


PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: USH 10EB	SHEET 130 E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\050101-PP-10-EB.DWG
LAYOUT NAME - 1

PLOT DATE : 5/3/2019 11:14 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 41



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5

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: USH 10EB	SHEET 131	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\050101-PP-10-EB.DWG
LAYOUT NAME - 2

PLOT DATE : 5/3/2019 11:14 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 41

10WB
PI STA = 447+09.70
Y = 335442.541
X = 537959.195
DELTA = 8°02'22"
D = 0°30'04"
T = 803.70'
L = 1604.77'
R = 11436.86'
PC STA = 439+06.00
PT STA = 455+10.76

10EB
PI STA = 447+09.92
Y = 335387.804
X = 538041.475
DELTA = 7°10'19"
D = 0°30'06"
T = 715.90'
L = 1429.93'
R = 11423.43'
PC STA = 439+94.02
PT STA = 454+23.95
S.E. = 2.0%
S.E. R.O. = 200'

SUPERELEVATION TABLE USH 10EB (CURVE FROM 439+94.02EB-454+23.95EB)					
STATION	DESCRIPTION	LT SHLD	LT LANE	RT LANE	RT SHLD
438+94.02	END NC	-2.00%	-2.00%	-2.00%	-4.00%
439+54.02	LEVEL CROWN	0.00%	0.00%	-2.00%	-4.00%
440+14.02	BEGIN FS	2.00%	2.00%	-2.00%	-4.00%
454+03.94	END FS	2.00%	2.00%	-2.00%	-4.00%
454+63.94	LEVEL CROWN	0.00%	0.00%	-2.00%	-4.00%
455+23.94	BEGIN NC	-2.00%	-2.00%	-2.00%	-4.00%

N

TRANSITION 1
(SEE CONSTRUCTION DETAIL)

SAWING ASPHALT

EXISTING STEEL THRIE BEAM, DOUBLE FACED

USH 10 WB

USH 10 EB

EXISTING CRASH CUSHIONS
PERM LOW MAINTENANCE

STA 443+50.00EB, 19.34LT

STEEL THRIE BEAM, DOUBLE FACED

STA 444+43.23EB, 19.36LT

STA 444+77.82EB

STA 445+43.09EB, 20.63LT

STA 445+43.05EB, 17.59LT

STA 445+43.01EB, 14.56LT

REMOVING GUARDRAIL
STAGE 2 & 3

STEEL THRIE BEAM, SINGLE FACED

CONCRETE PAVEMENT 10-INCH

HMA PAVEMENT

STA 444+39, 59.4' RT
1-APRON ENDWALLS FOR CPRC 18-INCH (STAGE 2)

STA 445+20.47EB, 38.49RT

MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TEMPORARY TERMINAL EAT

SLOPE INTERCEPT

BEGIN PROJECT
STA 445+75EB

FO

5

5

VCL = 210.00
K = 2244.46

VPT STA 445+88.92
VPT EL 860.61

EXISTING CREST CURVE BLENDING INTO
VPC = 434+00.11, EL = 845.17
VPI = 439+94.52, EL = 856.14
VPT = 445+88.92, EL = 860.61
VCL = 1,188.81, K = 1,086.78

PROPOSED PROFILE
USH 10EB

EXISTING PROFILE
USH 10EB

POINT WHERE FINISHED
PROFILE BLENDS INTO
EXISTING PROFILE

VPI STA 446+93.92
VPI EL 861.40

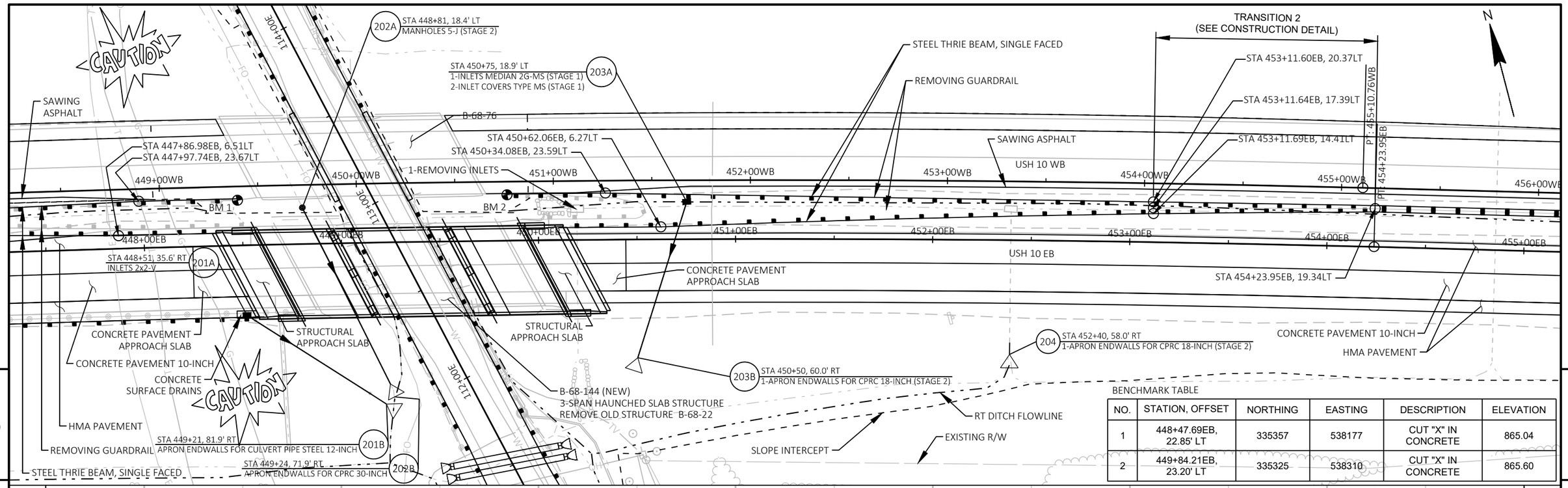
200

870
860
850

440	441	442	443	444	445	446	447
855.21	855.22	855.84	856.43	856.99	857.54	858.06	858.55
859.03	859.48	859.91	860.32	860.70	861.07	861.40	861.48

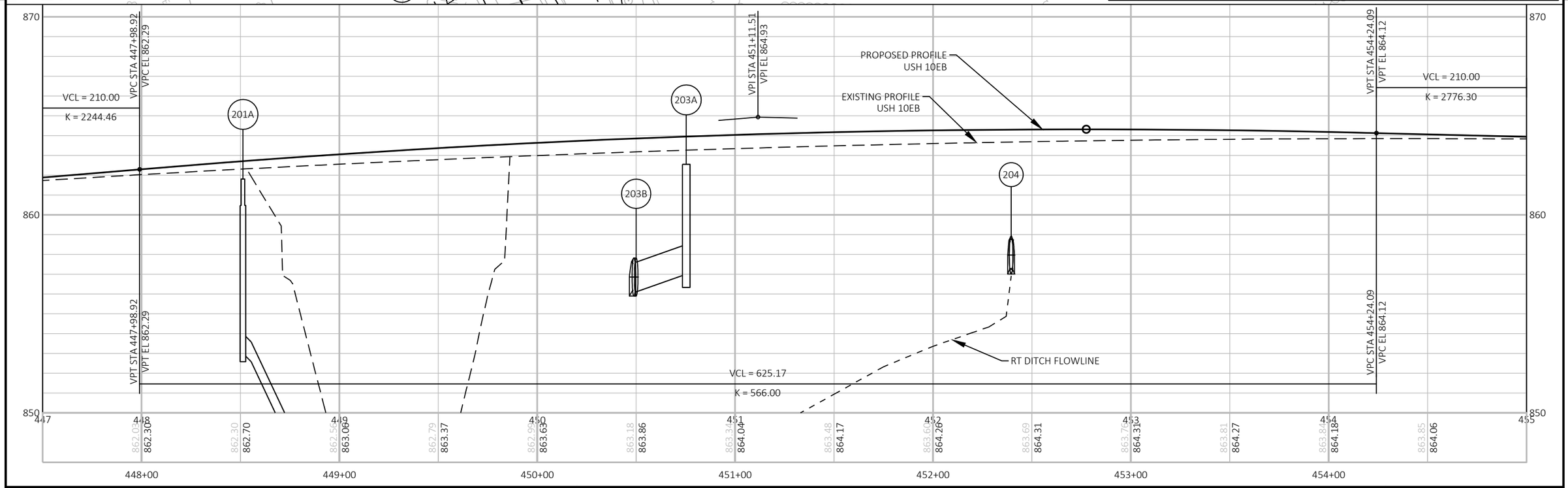
441+00 442+00 443+00 444+00 445+00 446+00 447+00

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: USH 10EB	SHEET 132	E



BENCHMARK TABLE

NO.	STATION, OFFSET	NORTHING	EASTING	DESCRIPTION	ELEVATION
1	448+47.69EB, 22.85' LT	335357	538177	CUT "X" IN CONCRETE	865.04
2	449+84.21EB, 23.20' LT	335325	538310	CUT "X" IN CONCRETE	865.60



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: USH 10EB	SHEET 133 E

302 STA 457+34, 15.4' LT
1-REMOVING INLETS (STAGE 3)
1-INLETS MEDIAN 2G-MS (STAGE 3)
2-INLET COVERS TYPE MS (STAGE 3)

SAWING ASPHALT

STEEL THRIE BEAM DOUBLE FACED

456+00WB 457+00WB 458+00WB 459+00WB 460+00WB USH 10 WB 461+00WB 462+00WB S73° 47' 26"E 1502.82' 463+00WB

455+00EB 456+00EB 457+00EB 458+00EB 459+00EB 460+00EB 461+00EB S73° 46' 33"E 1506.16' 462+00EB

USH 10 EB

SINGLE LANE CONCRETE PAVEMENT REPAIR

CONCRETE PAVEMENT 10-INCH

HMA PAVEMENT

SLOPE INTERCEPT

EXISTING R/W

N

5

5

END PROJECT
STA 456+50EB

VCL = 210.00

K = 2776.30

VPC STA 456+34.09
VPC EL 863.66

PROPOSED PROFILE USH 10EB

EXISTING CREST CURVE BLENDING INTO
VPC = 456+34.09, EL = 863.66
VPI = 461+08.94, EL = 862.79
VPT = 465+83.79, EL = 857.93
VCL = 949.70, K = 1,129.43

302

EXISTING PROFILE USH 10EB

POINT WHERE FINISHED PROFILE BLENDS INTO EXISTING PROFILE

VPI STA 455+29.09
VPI EL 863.85

870 860 855

455 456 457 458 459 460 461 462

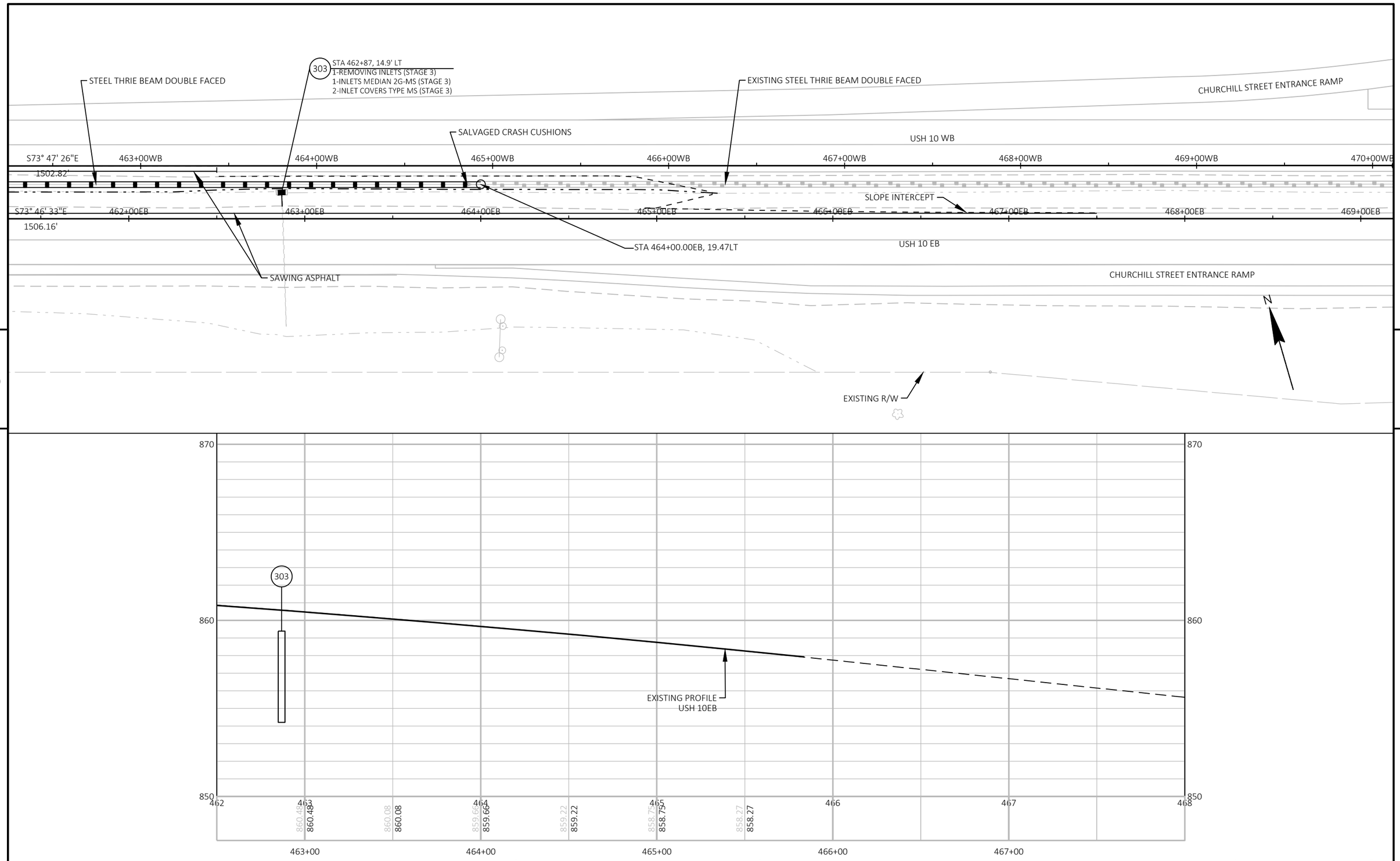
863.79 863.83 863.72 863.64 863.63 863.52 863.40 863.39 863.23 863.07 863.06 862.86 862.66 862.64 862.40 862.15 862.13 861.84 861.55 861.54 861.20

456+00 457+00 458+00 459+00 460+00 461+00 462+00

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: USH 10EB	SHEET 134	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\050101-PP-10-EB.DWG
LAYOUT NAME - 5

PLOT DATE : 5/3/2019 11:14 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: USH 10EB	SHEET 135 E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\050101-PP-10-EB.DWG
LAYOUT NAME - 6

PLOT DATE : 5/3/2019 11:14 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

CTH E
PI STA = 111+63.24
Y = 335204.626
X = 538275.108
DELTA = 0°25'20"
D = 0°28'24"
T = 44.60'
L = 89.20'
R = 12106.48'
PC STA = 111+18.64
PT STA = 112+07.84

STA 111+63, 26.8' LT
APRON ENDWALLS FOR CPRC 30-INCH
401B

STA 111+57, 26.8' LT
APRON ENDWALLS FOR CPRC 30-INCH
400B

400 AND 401
CPRC CLASS IV 30-INCH
INVERT 1: 840.70
INVERT 2: 840.40
LENGTH: 54 FT
SLOPE: 0.56%

BENCHMARK TABLE

NO.	STATION, OFFSET	NORTHING	EASTING	DESCRIPTION	ELEVATION
1	448+47.69EB, 22.85' LT	335357	538177	CUT "X" IN CONCRETE	865.04
2	449+84.21EB, 23.20' LT	335325	538310	CUT "X" IN CONCRETE	865.60

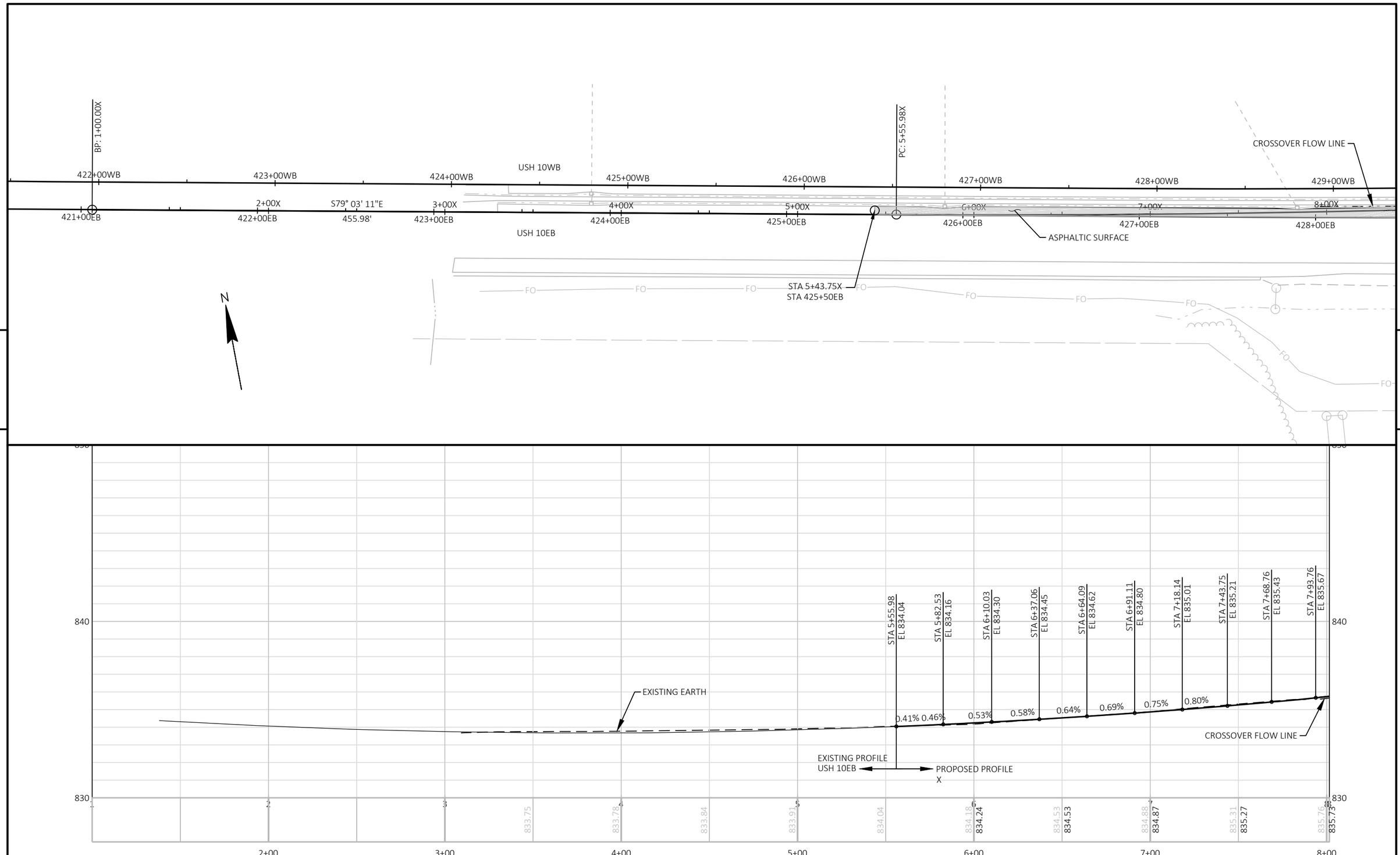
EXISTING R/W
STA 111+20.00E, 17.50LT
STA 110+90.66E, 17.52RT
STA 110+72.37E, 10.83LT
PC: 111+18.64E
PT: 112+07.84E
BM 1
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TEMPORARY TERMINAL EAT
PC: 114+00.65E
STA 114+99.97E, 17.52LT
STA 115+17.30E, 11.05RT
EXISTING R/W
N13° 25' 41"W
314.36'
110+00E
CTH E
111+00E
112+00E
N13° 00' 21"W
192.81'
113+00E
114+00E
115+00E
116+00E
CTH E
SAWING ASPHALT
1 REMOVING SMALL PIPE CULVERT
STA 114+83.26E, 17.49RT
REMOVING GUARDRAIL
CTH E
PI STA = 118+80.51
Y = 335903.501
X = 538113.686
DELTA = 1°26'59"
D = 0°09'04"
T = 479.86'
L = 959.67'
R = 37927.18'
PC STA = 114+00.65
PT STA = 123+60.32
EXISTING R/W
SAWING ASPHALT
EXISTING R/W
401A
STA 111+48, 24.9' RT
APRON ENDWALLS FOR CPRC 30-INCH
400A
STA 111+41, 24.9' RT
APRON ENDWALLS FOR CPRC 30-INCH
BM 2
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL 3
MGS GUARDRAIL TEMPORARY TERMINAL EAT
CONCRETE BARRIER TYPE 42S
BEGIN CONSTRUCTION
STA 110+48.96E
MATCH EXISTING
SAW CUT REQUIRED
SLOPE INTERCEPT
END CONSTRUCTION
STA 115+30.35E
MATCH EXISTING
SAW CUT REQUIRED
USH 10 EB
USH 10 WB
448+00EB
449+00WB
450+00WB
451+00WB
CAUTION
CAUTION

VCL = 725.00
K = 169.53
VPC STA 115+20.86
VPC EL 850.49
VPT STA 115+20.86
VPT EL 850.49
VCL = 417.03
K = 96.39
EXISTING PROFILE
CTH E
CPRC CLASS IV 30-INCH @ 0.56%
CPRC CLASS IV 30-INCH @ 0.56%
LT DITCH FLOWLINE
RT DITCH FLOWLINE
VPI STA 111+58.36
VPI EL 841.80

850
840
835
109
110
111
112
113
114
115
116
846.42
846.05
845.74
845.63
845.66
845.83
846.16
846.63
847.26
848.02
848.94
850.05
851.15
852.05
852.72
110+00
111+00
112+00
113+00
114+00
115+00
116+00

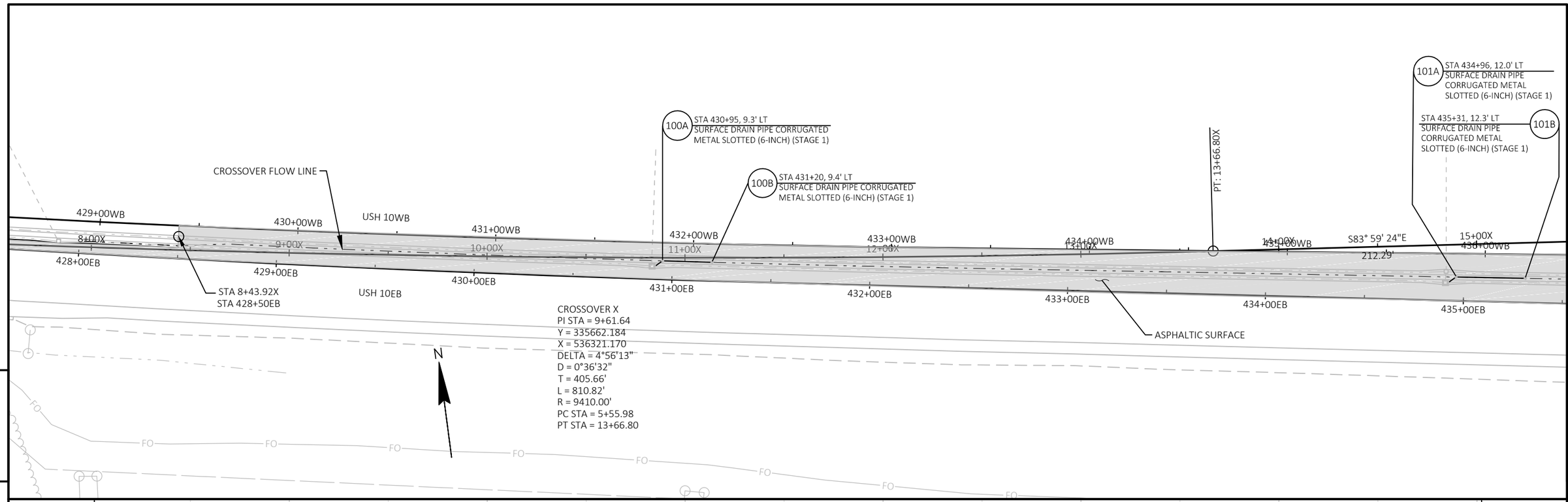
PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: CTH E	SHEET 136	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\050102-PP-CTH-E.DWG
LAYOUT NAME - 1
PLOT DATE : 10/19/2018 1:05 PM
PLOT BY : CASPER, ANDREW P
PLOT NAME :
PLOT SCALE : ##########



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: CROSSOVER	SHEET 137	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\050104-PP-X.DWG
LAYOUT NAME - 1
PLOT DATE : 10/19/2018 1:57 PM
PLOT BY : CASPER, ANDREW P
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: CROSSOVER	SHEET 138 E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\050104-PP-X.DWG
LAYOUT NAME - 2

PLOT DATE : 10/19/2018 1:57 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

101A
STA 434+96, 12.0' LT
SURFACE DRAIN PIPE
CORRUGATED METAL
SLOTTED (6-INCH) (STAGE 1)

STA 435+31, 12.3' LT
SURFACE DRAIN PIPE
CORRUGATED METAL
SLOTTED (6-INCH) (STAGE 1)
101B

PC: 15+79.09X

STA 15+95.41X, 23.5LT
STA 436+00EB, 57.41LT

ASPHALTIC SURFACE

6.00' MIN.
9.60' MAX.

17.00' MIN.

CROSSOVER X
PI STA = 22+18.35
Y = 335530.554
X = 537571.471
DELTA = 7°46'22"
D = 0°36'32"
T = 639.26'
L = 1276.56'
R = 9410.00'
PC STA = 15+79.09
PT STA = 28+55.64

15+00X
438+00WB
16+00X
437+00WB
USH 10WB
17+00X
438+00WB
18+00X
439+00WB
19+00X
440+00WB
20+00X
441+00WB
21+00X
442+00WB
22+00X
443+00WB

23.00' MIN.

435+00EB
436+00EB
USH 10EB
437+00EB
438+00EB
439+00EB
440+00EB
441+00EB
442+00EB

STA 18+43.48X
STA 438+50EB

STA 20+34.63X, 23.0RT
STA 440+40.27EB, 23.35LT

CROSSOVER FLOW LINE

ASPHALTIC SURFACE

N

5

5

FO FO FO FO

EXISTING EARTH

EXISTING PROFILE USH 10WB

CROSSOVER FLOW LINE

101B

850

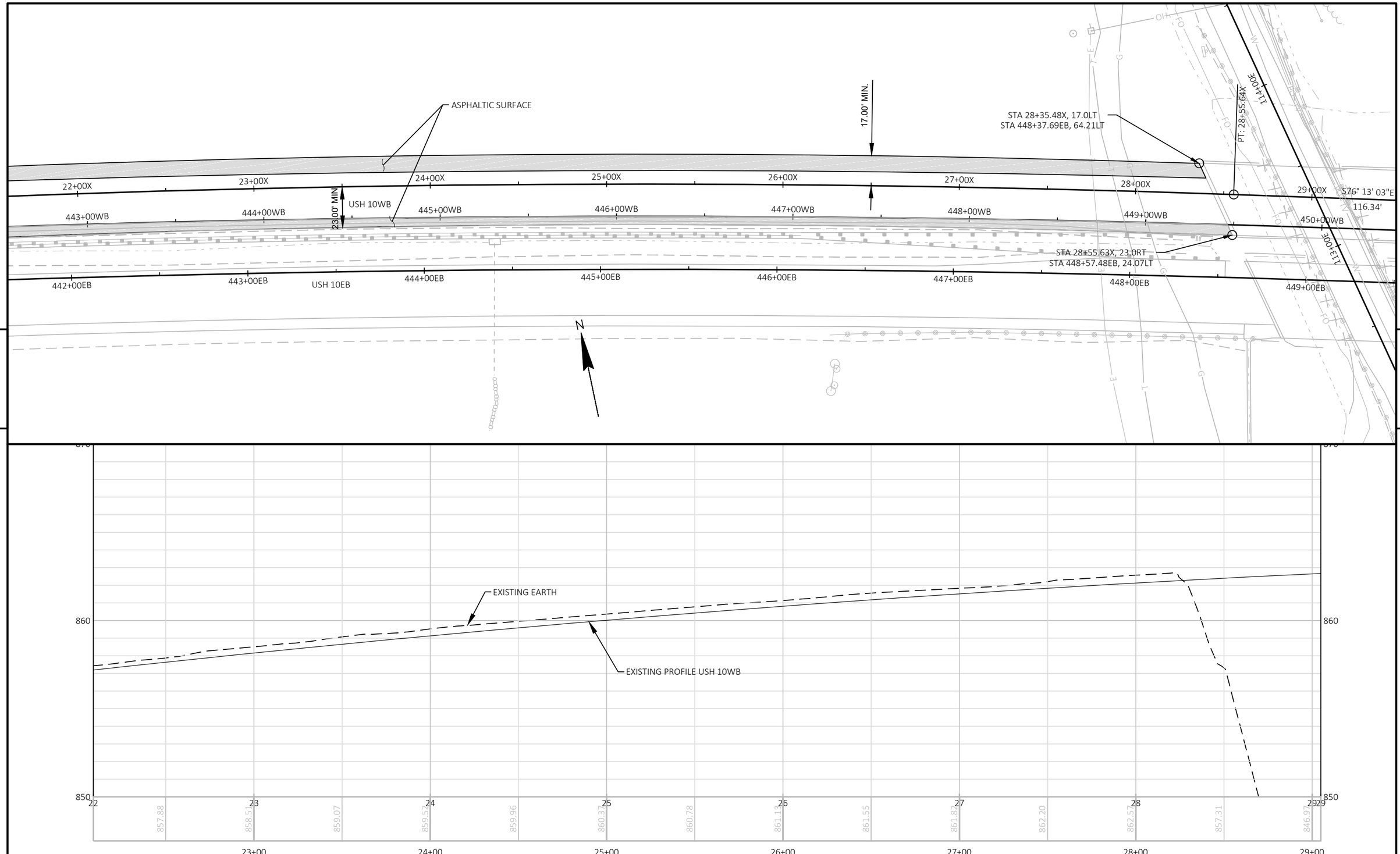
840

15 16 17 18 19 20 21 22 22

848.09 849.04 849.95 850.68 851.46 852.31 852.98 853.72 854.37 854.97 855.60 856.24 856.86 857.34

16+00 17+00 18+00 19+00 20+00 21+00 22+00

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: CROSSOVER	SHEET 139	E



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: CROSSOVER	SHEET 140 E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\050104-PP-X.DWG
LAYOUT NAME - 4

PLOT DATE : 10/19/2018 1:58 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT

STA 29+51.52X, 17.0LT
STA 449+53.12EB, 63.80LT

PC: 29+71.98X

17.00' MIN.

ASPHALTIC SURFACE

CROSSOVER X
PI STA = 34+53.73
Y = 335235.770
X = 538773.186
DELTA = 5°51'41"
D = 0°36'32"
T = 481.75'
L = 962.65'
R = 9410.00'
PC STA = 29+71.98
PT STA = 39+34.63

17.00' MIN.
6.00' MIN.
9.60' MAX.

29+00X
S76° 13' 03"E
116.34'
30+00X
31+00X
32+00X
33+00X
34+00X
35+00X
36+00X

450+00WB
451+00WB
452+00WB
453+00WB
454+00WB
455+00WB
456+00WB
457+00WB

25.50' MIN.

USH 10WB

STA 29+73.38X, 25.5RT
STA 449+74.99, 21.36LT

449+00EB
450+00EB
451+00EB
452+00EB
453+00EB
454+00EB
455+00EB
456+00EB

USH 10EB

CROSSOVER FLOW LINE

1132+00E

1133+00E

N

5

5

EXISTING EARTH

EXISTING PROFILE USH 10WB

CROSSOVER FLOW LINE

870
860
850

29 30 31 32 33 34 35 36

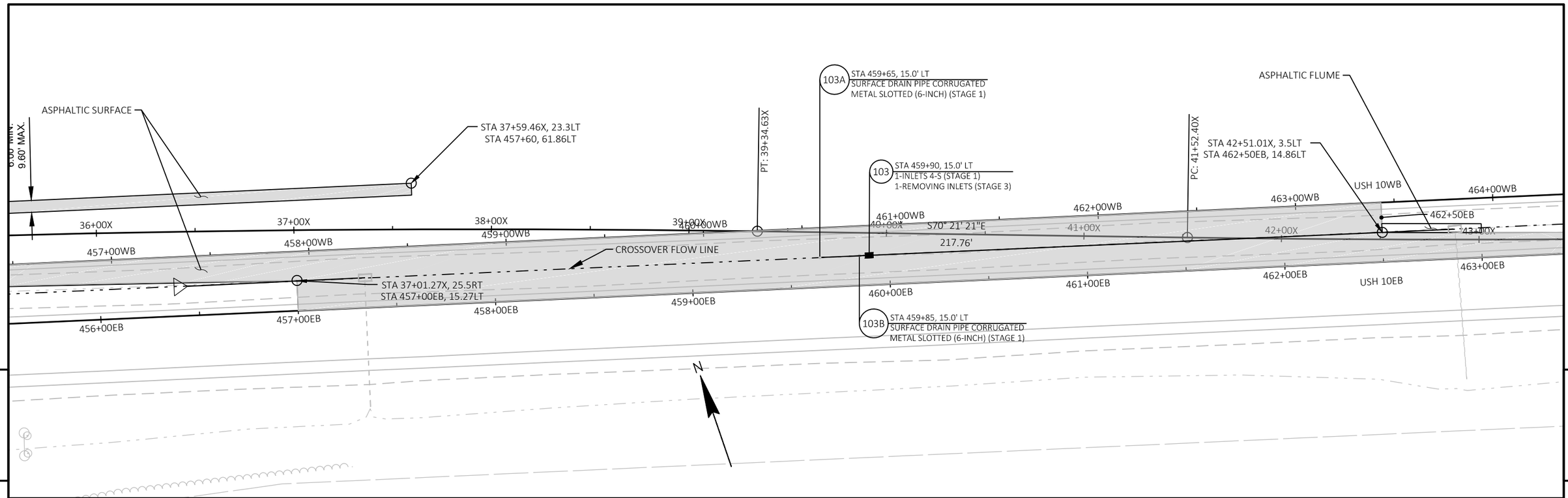
856.27 863.55 863.71 863.80 863.88 864.01 864.21 864.20 864.25 864.24 864.16 864.17 864.08 863.94

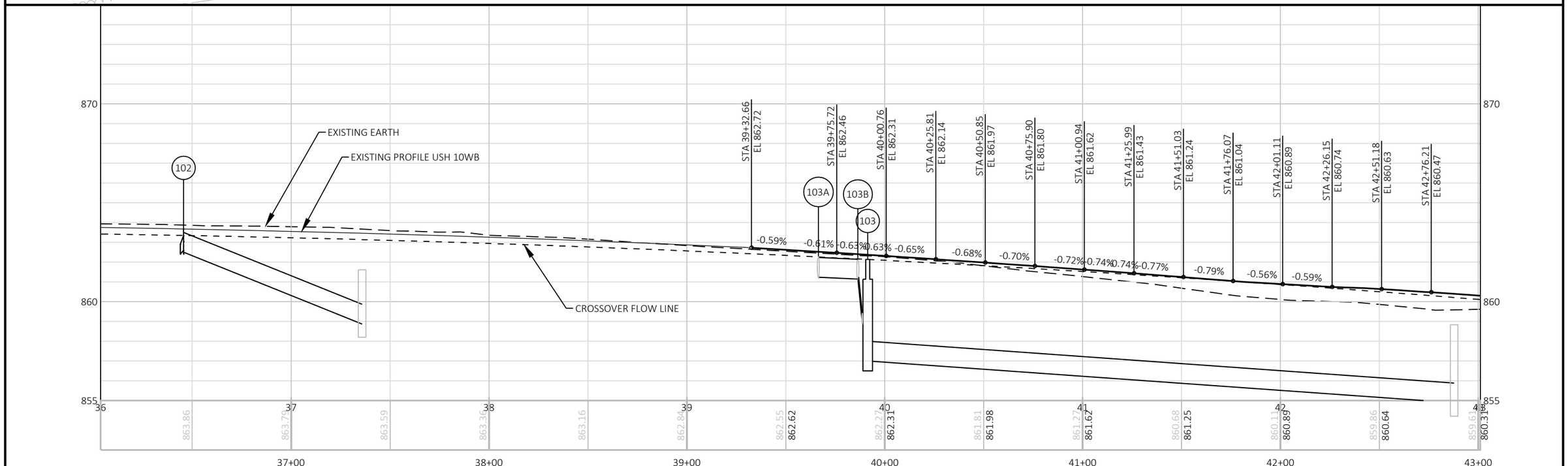
30+00 31+00 32+00 33+00 34+00 35+00 36+00

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: CROSSOVER	SHEET 141	E

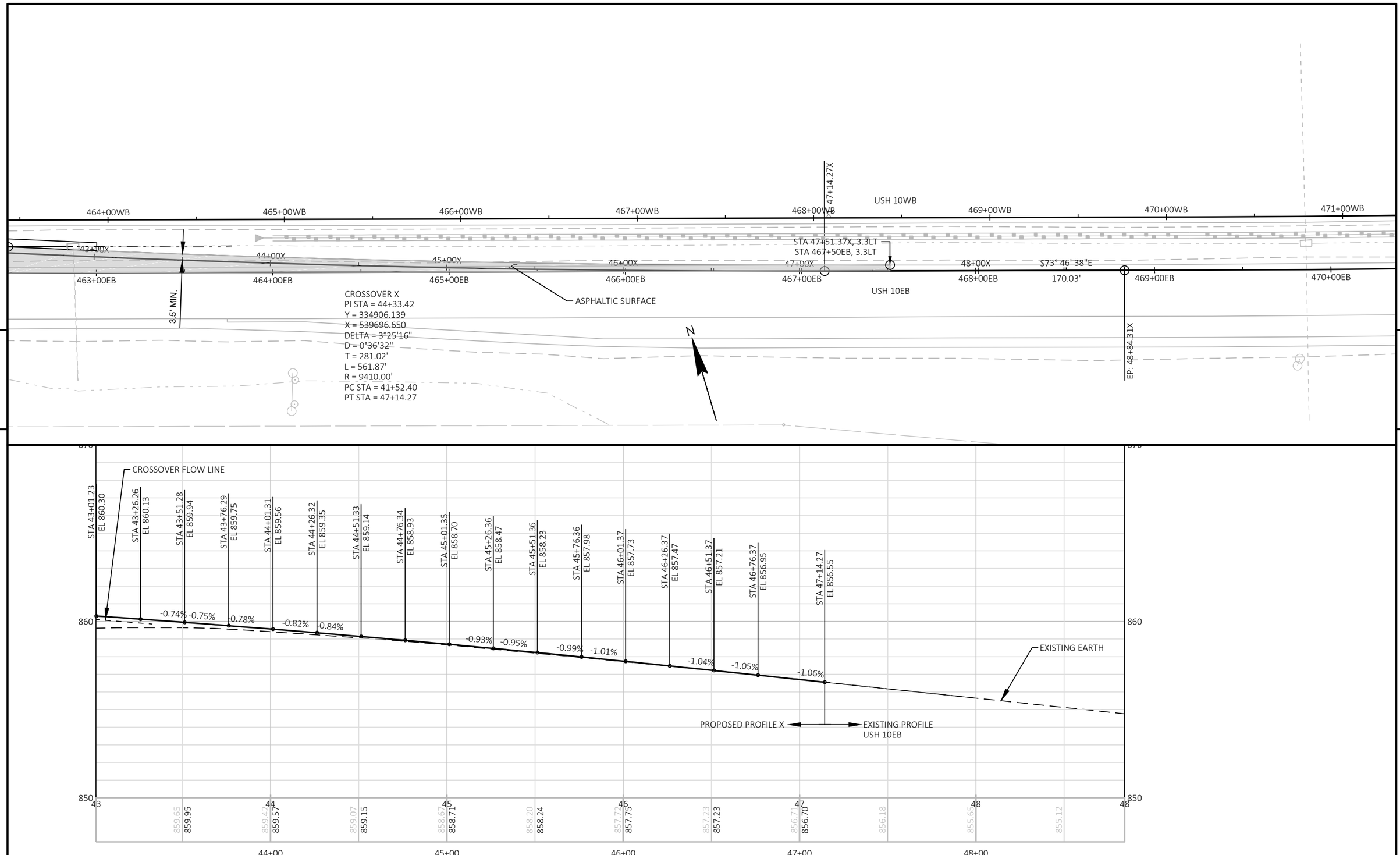
FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\050104-PP-X.DWG
LAYOUT NAME - 5

PLOT DATE : 10/19/2018 1:58 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:50 FT





PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: CROSSOVER	SHEET 142	E



PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: CROSSOVER	SHEET 143	E

Standard Detail Drawing List

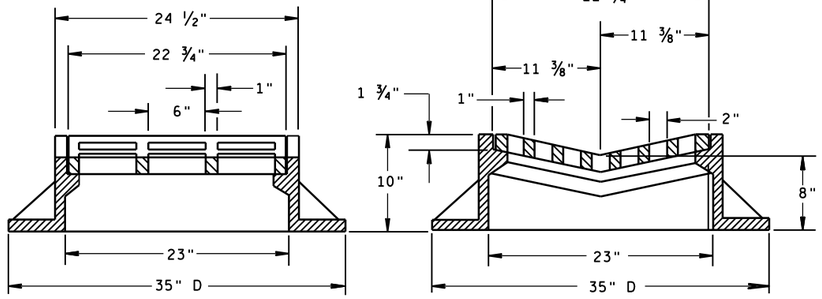
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D03-07	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D13-01	SLOTTED CORRUGATED METAL PIPE SURFACE DRAINS
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
12A03-10	NAME PLATE (STRUCTURES)
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-15A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C11-12A	RURAL DOWELED CONCRETE PAVEMENT
13C11-12B	RURAL DOWELED CONCRETE PAVEMENT
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B11-02	CONCRETE BARRIER (DOUBLE FACED)
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-11H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
14B25-01	STEEL PLATE BEAM GUARD, CLASS "A", OVER LOW FILL CULVERTS
14B33-01G	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B33-01H	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B34-02A	32", 36" & 42" CONCRETE BARRIER SINGLE SLOPE CLASS B
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A07-02	OBJECT MARKER FOR HAZARDOUS CULVERT
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D03-05	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D11-07	TRAFFIC CONTROL, SINGLE LANE CROSSOVER
15D12-07A	TRAFFIC CONTROL, LANE CLOSURE
15D15-04D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

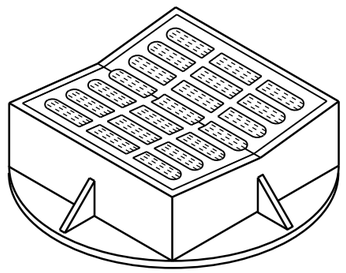
6

Standard Detail Drawing List

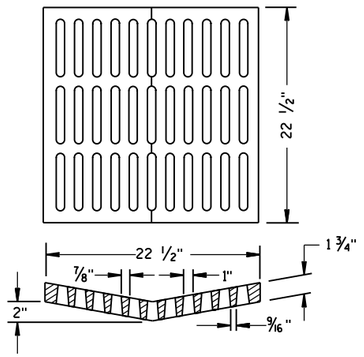
15D16-04	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D31-03	TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

6



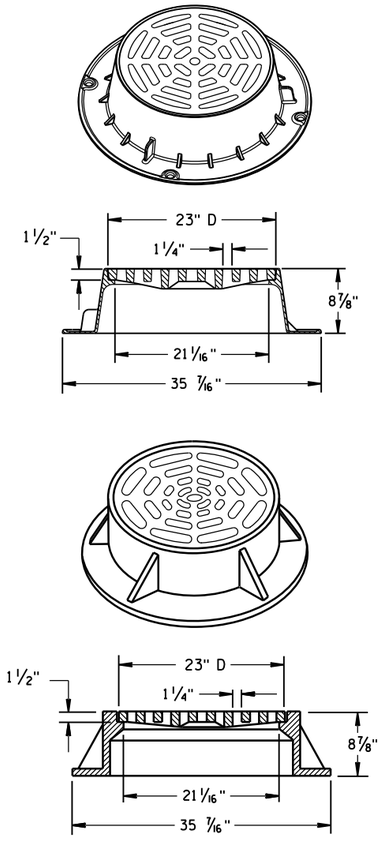


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

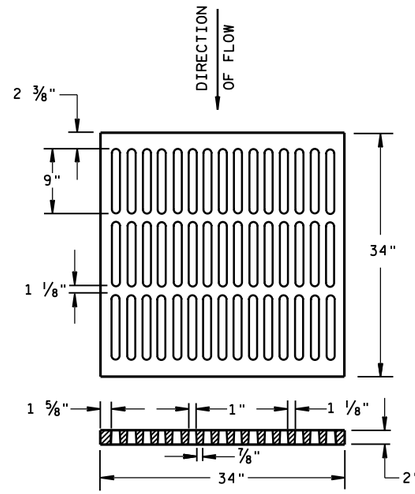
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

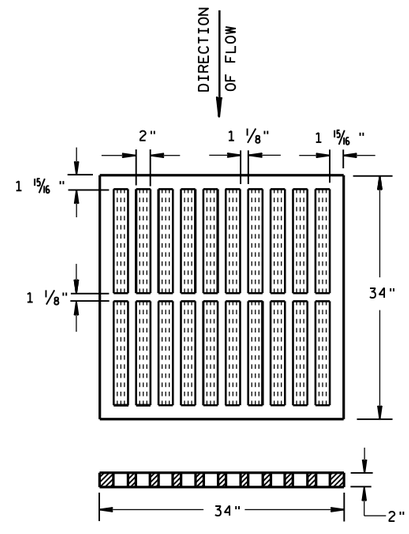
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



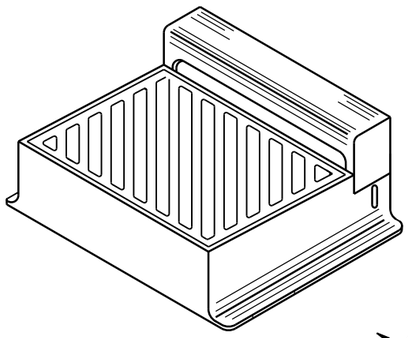
ALTERNATIVE TYPE "MS"

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

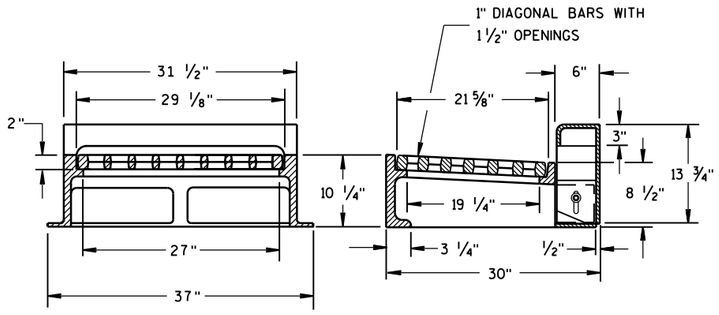


TYPE "MS"

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



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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

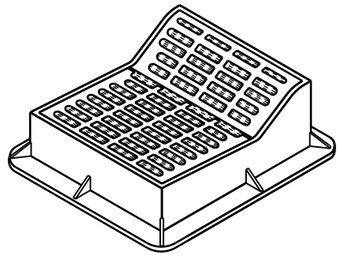
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

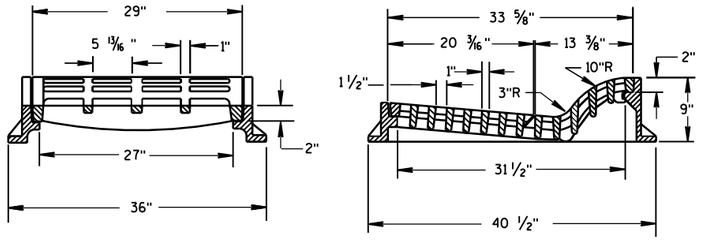
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

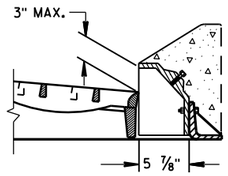
S.D.D. 8 A 5-19b





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

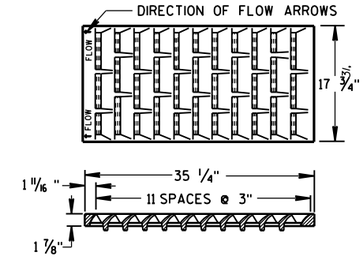
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

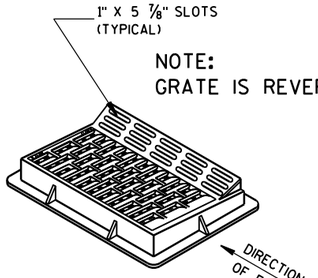
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

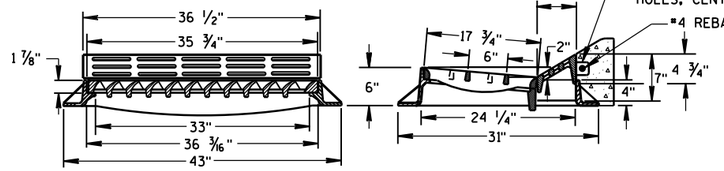
GENERAL NOTES

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

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



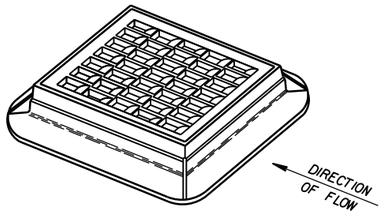


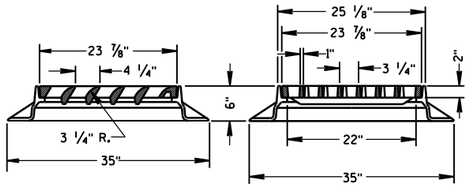


TYPE "HM"

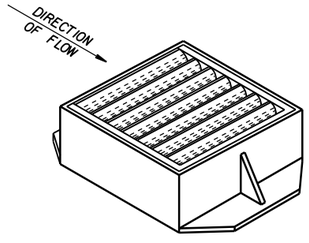
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

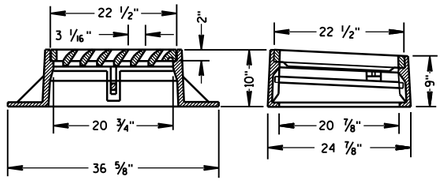
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



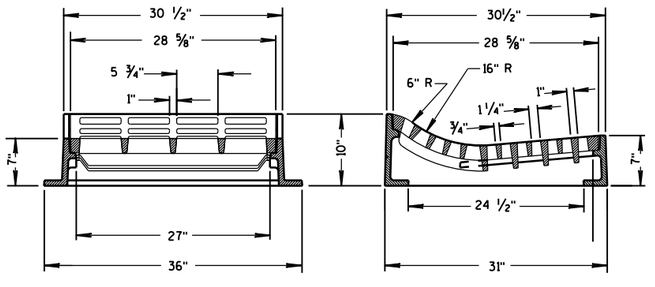


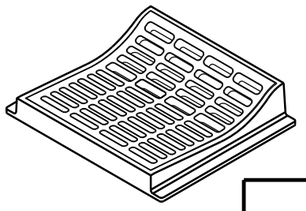
TYPE "S"





TYPE "V"





TYPE "T"

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

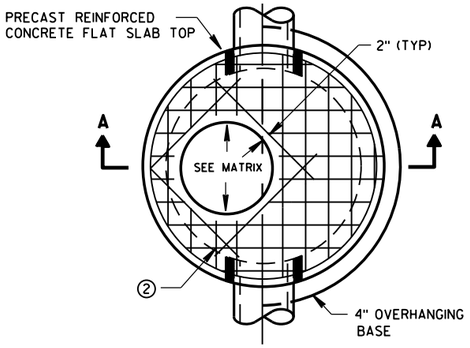
APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

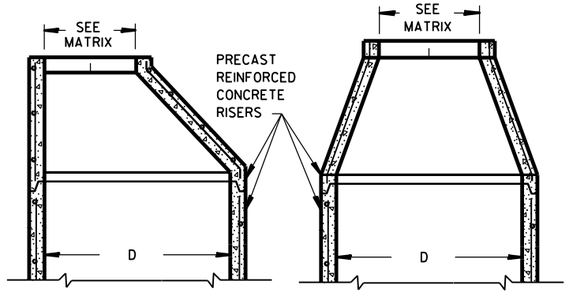
FHWA

6

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

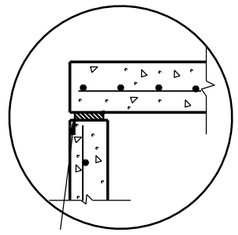


PLAN VIEW CIRCULAR OPENING

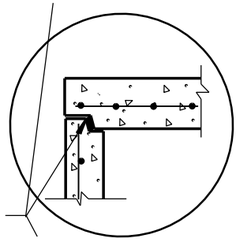


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

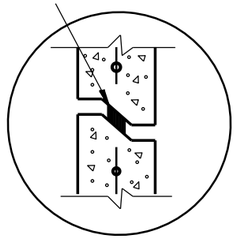


TOP WITH PLAIN END JOINT



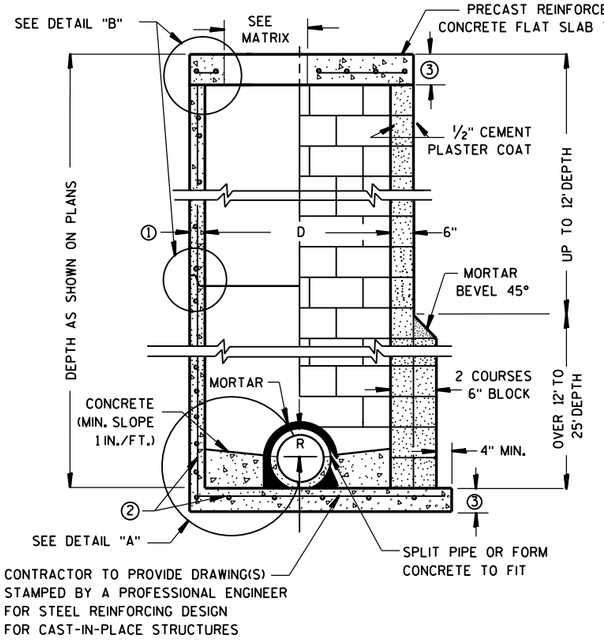
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



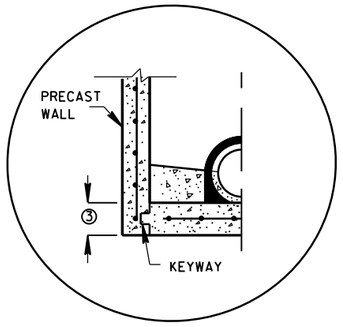
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

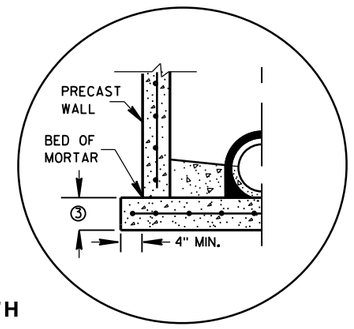


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

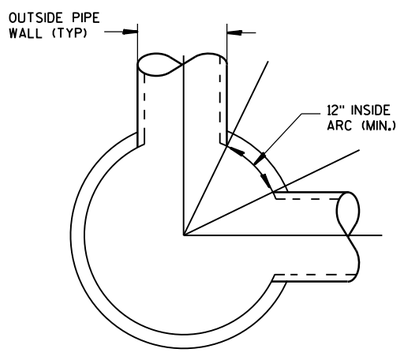


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

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

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

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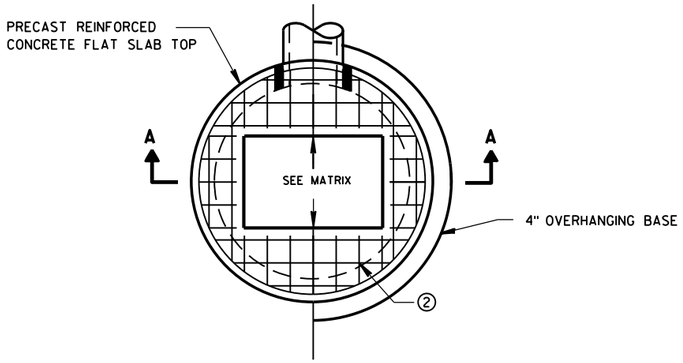
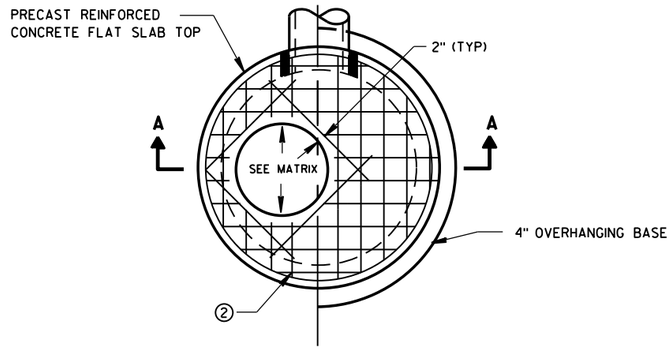
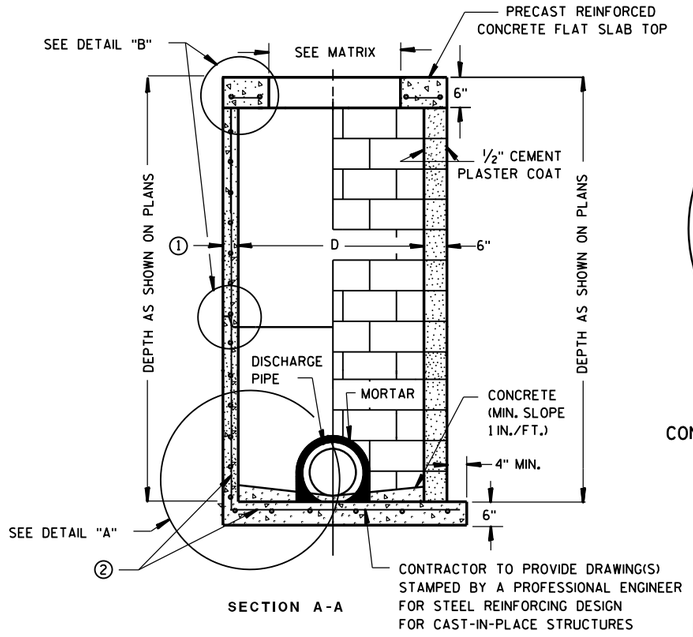


PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

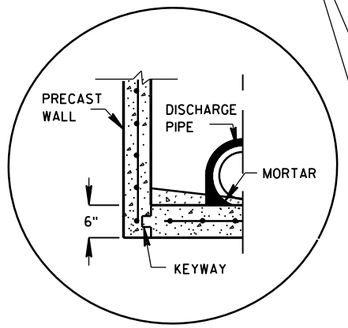


SECTION A-A

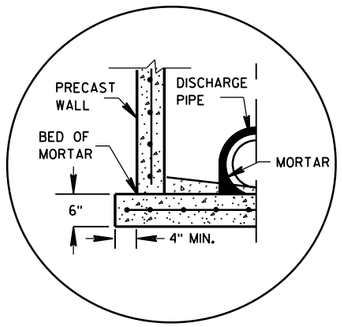
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

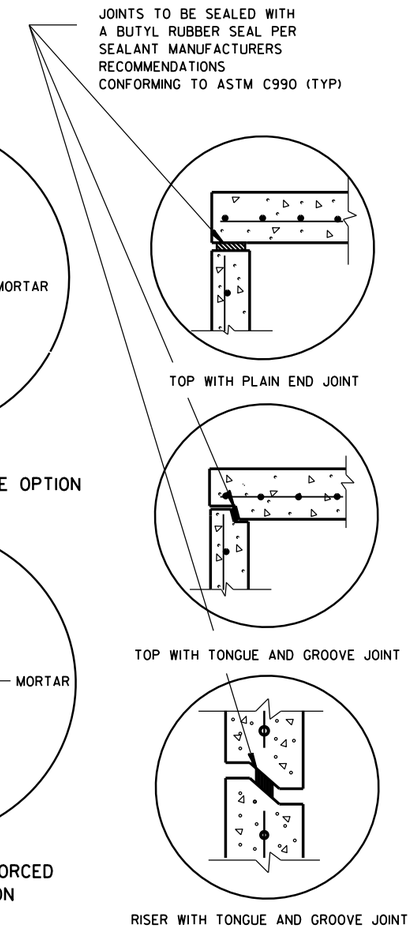


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



TOP WITH PLAIN END JOINT

TOP WITH TONGUE AND GROOVE JOINT

RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

GENERAL NOTES

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

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

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

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

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

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

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

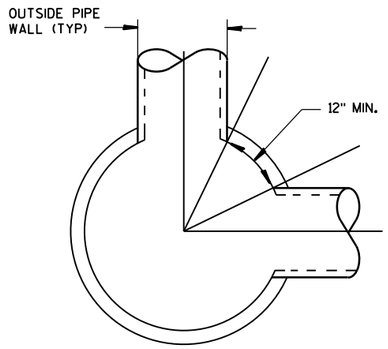
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

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

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

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INLETS 3-FT AND 4-FT DIAMETER

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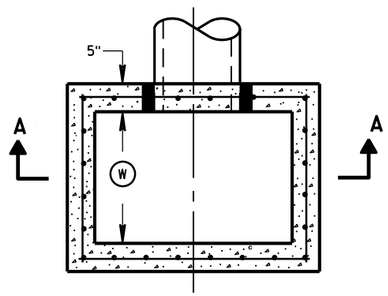
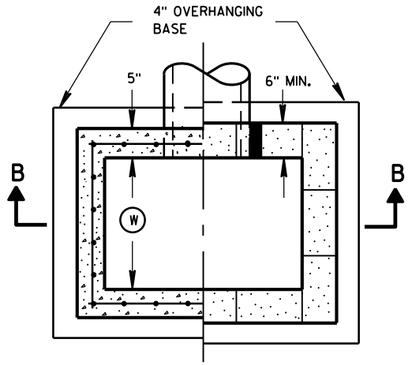
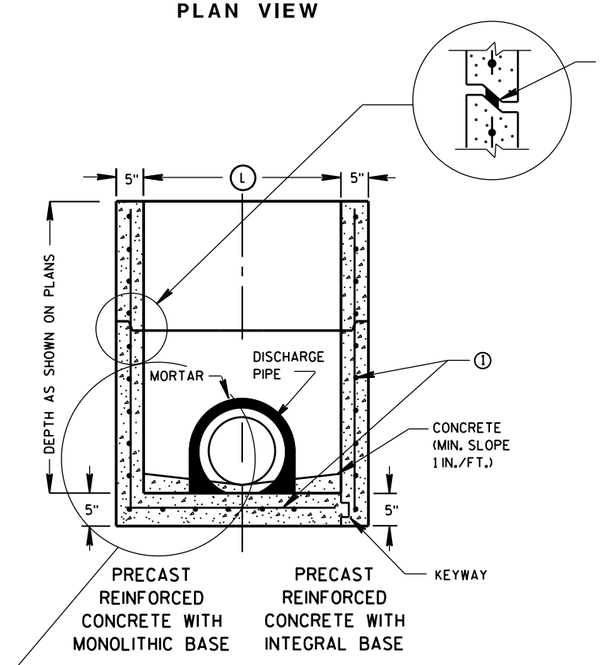


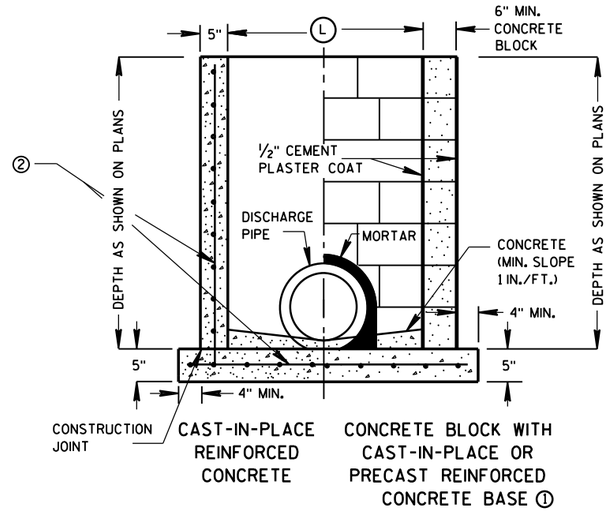
PLAN VIEW



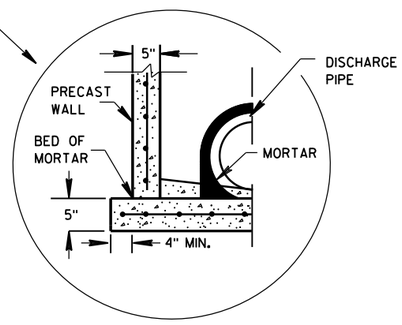
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

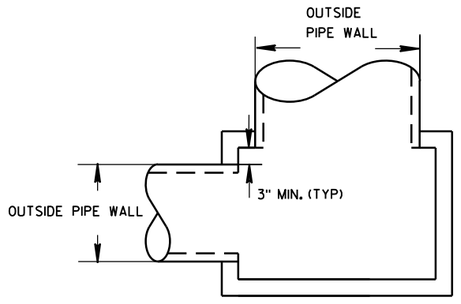
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

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

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ROADWAY STANDARDS D IT
UNIT SUPERVIS
FHWA

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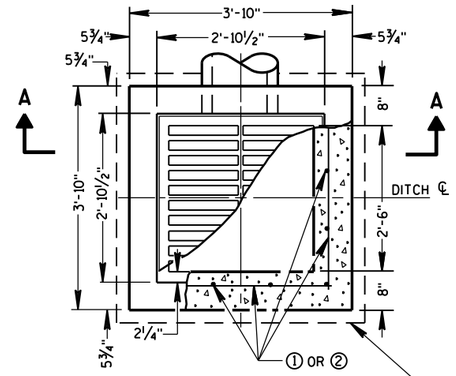
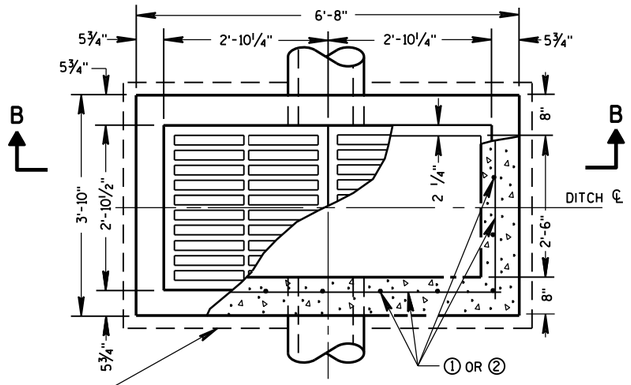
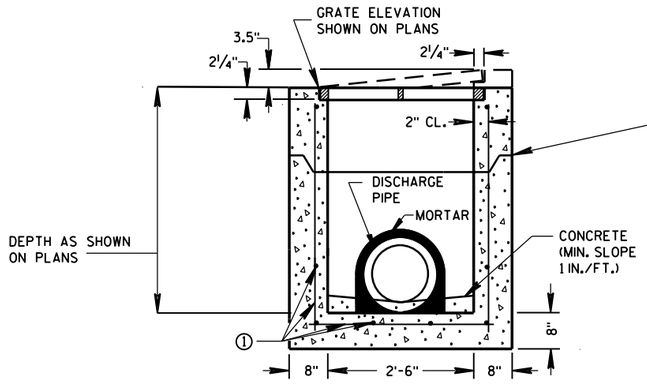


PLAN VIEW

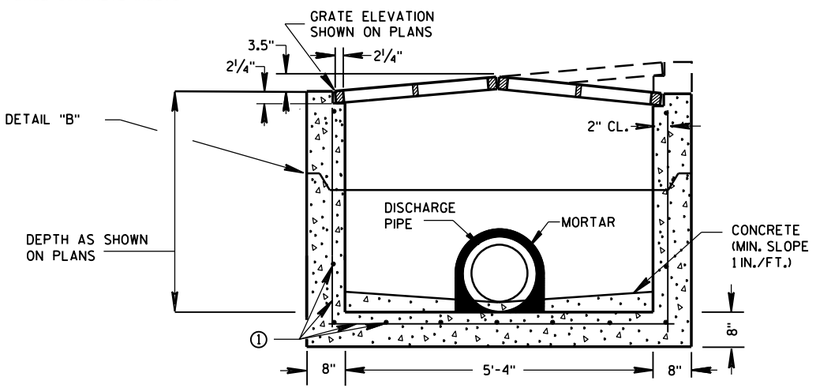


PLAN VIEW

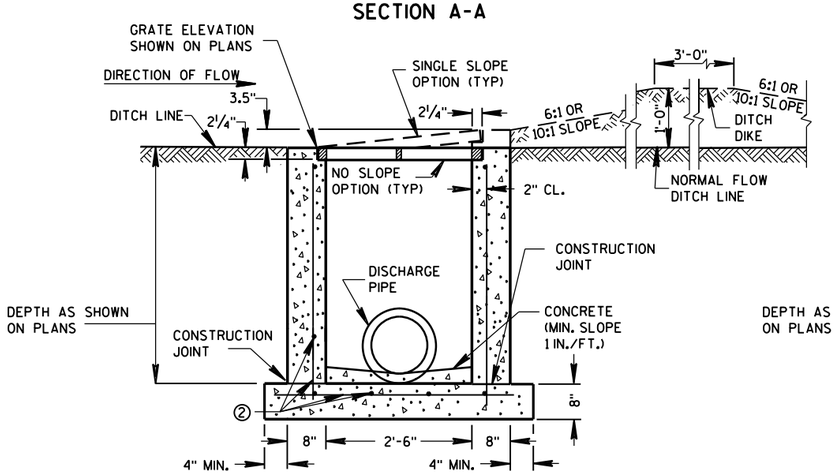
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



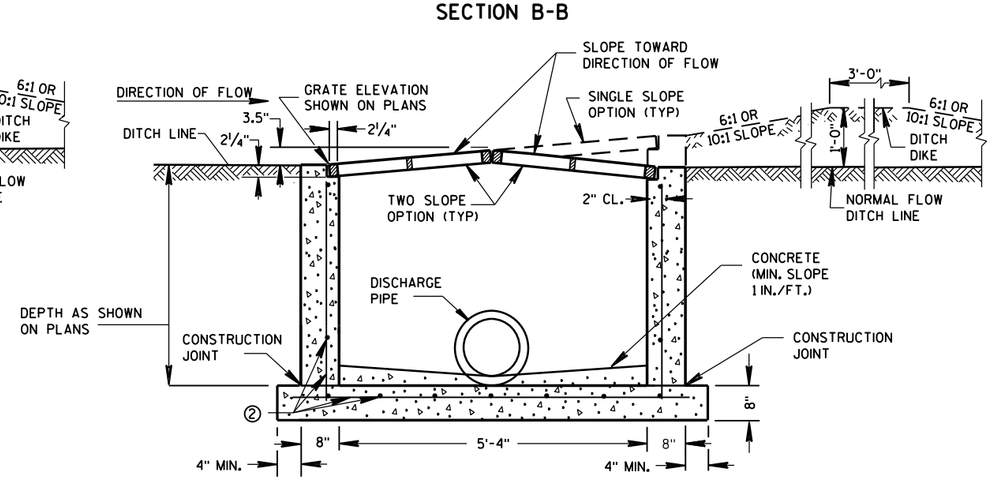
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

GENERAL NOTES

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

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

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

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

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

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

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

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

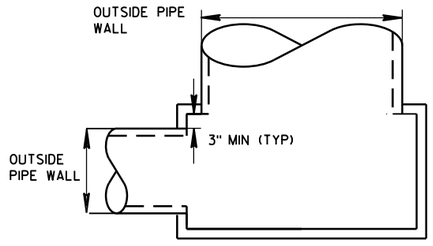
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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

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

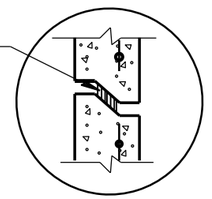
PIPE MATRIX

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



DETAIL "A"

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



DETAIL "B"

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

INLETS MEDIAN 1 AND 2 GRATE

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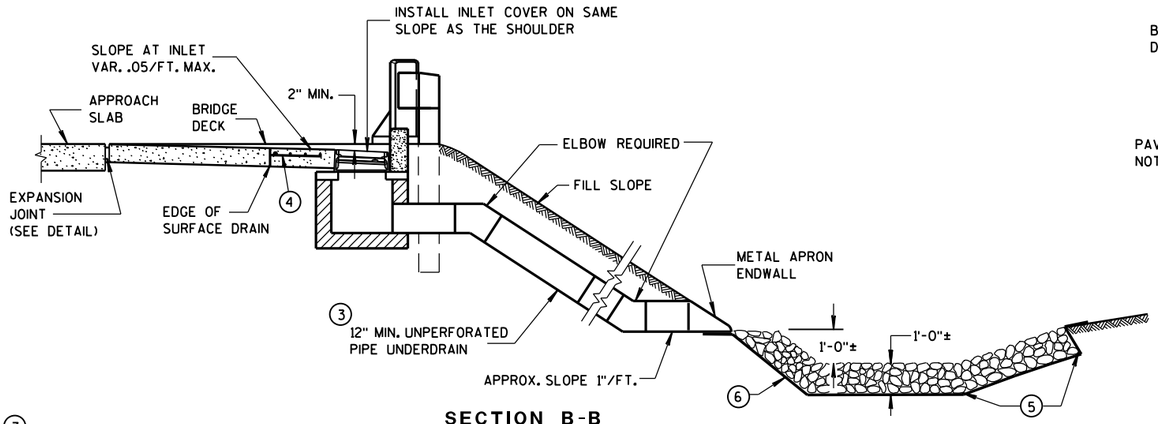
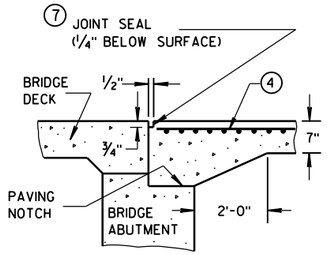
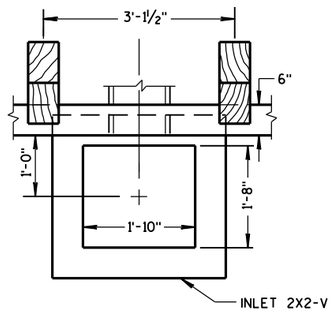


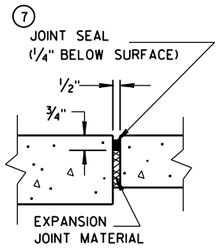
SECTION B-B



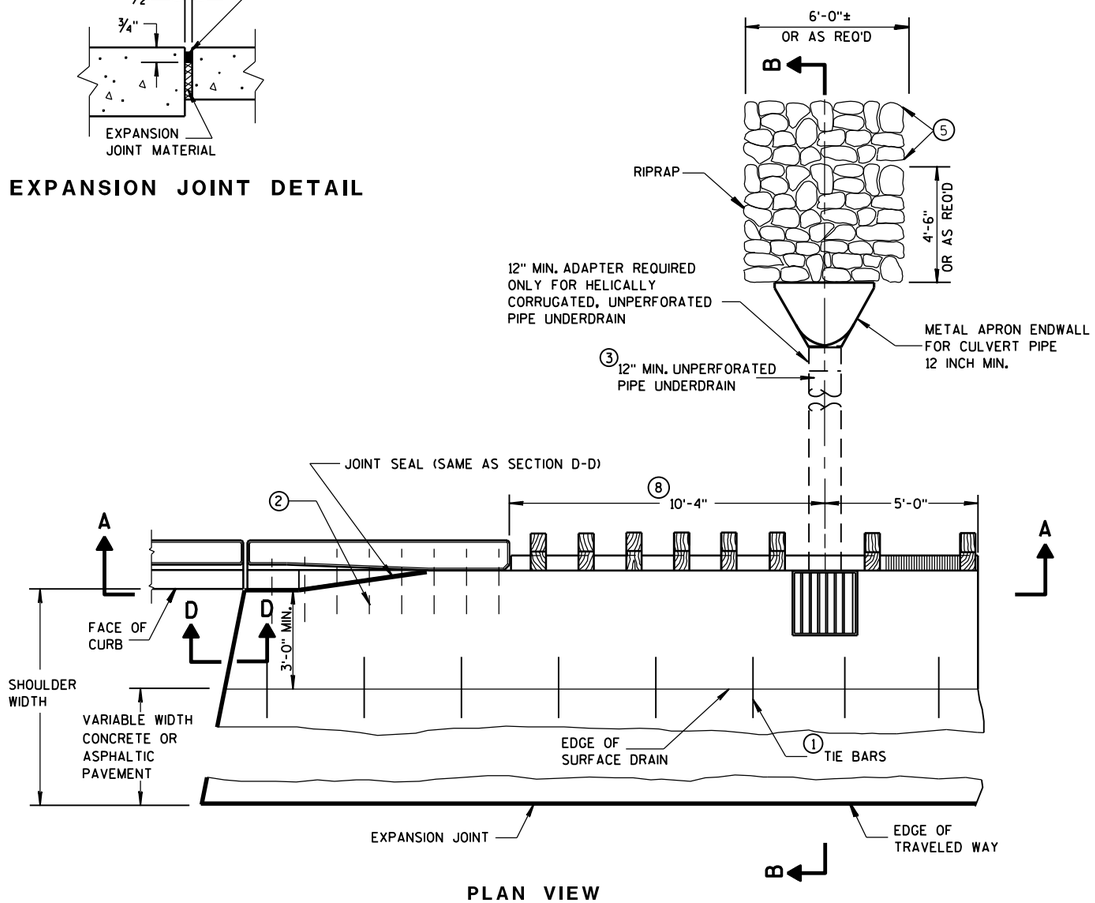
SECTION D-D



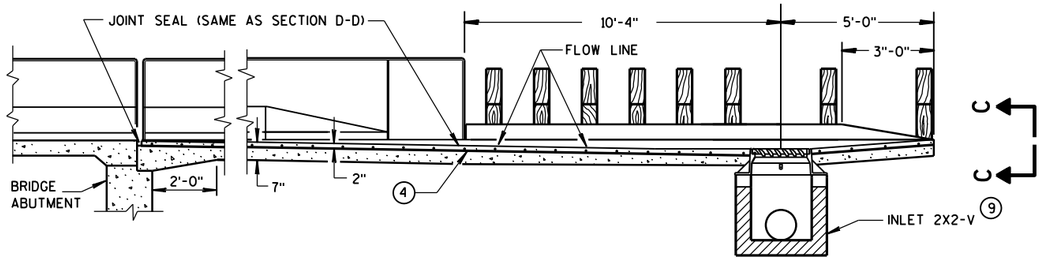
PLAN VIEW



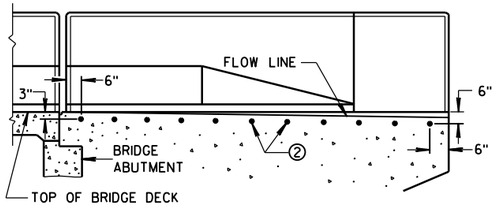
EXPANSION JOINT DETAIL



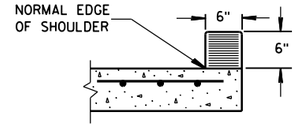
PLAN VIEW



SECTION A-A



LOCATION OF TIE BARS IN WINGWALL



SECTION C-C

GENERAL NOTES

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

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

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

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

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

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

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

(6) GEOTEXTILE FABRIC.

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

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

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

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 D 3-7

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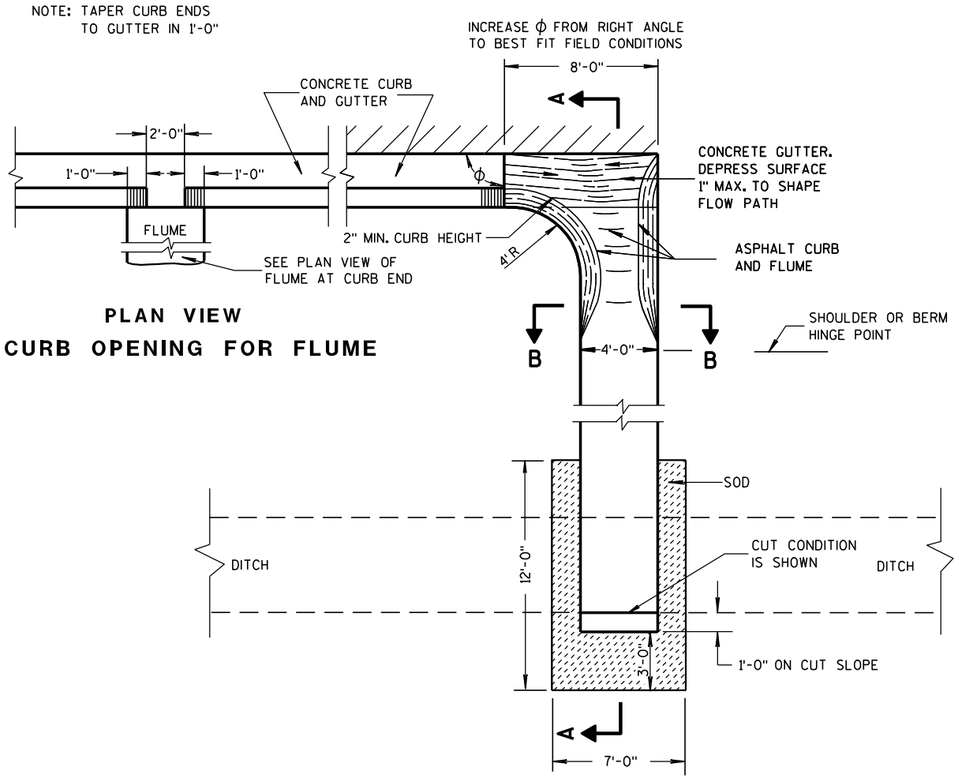
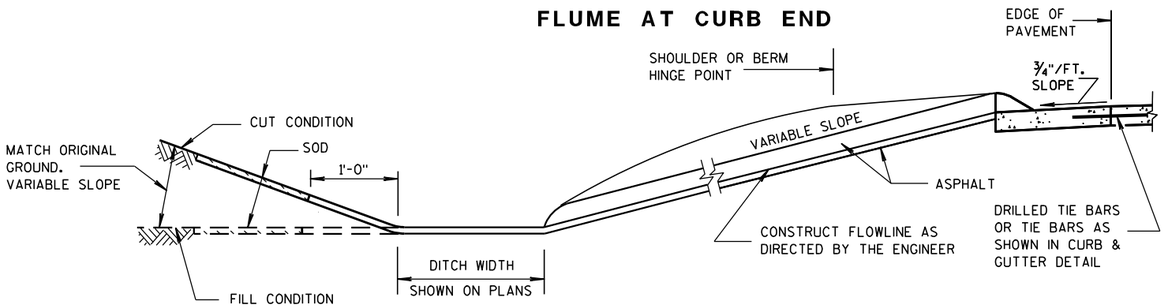
ASPHALTIC FLUME

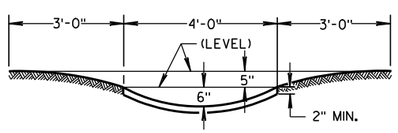


PLAN VIEW
CURB OPENING FOR FLUME

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.

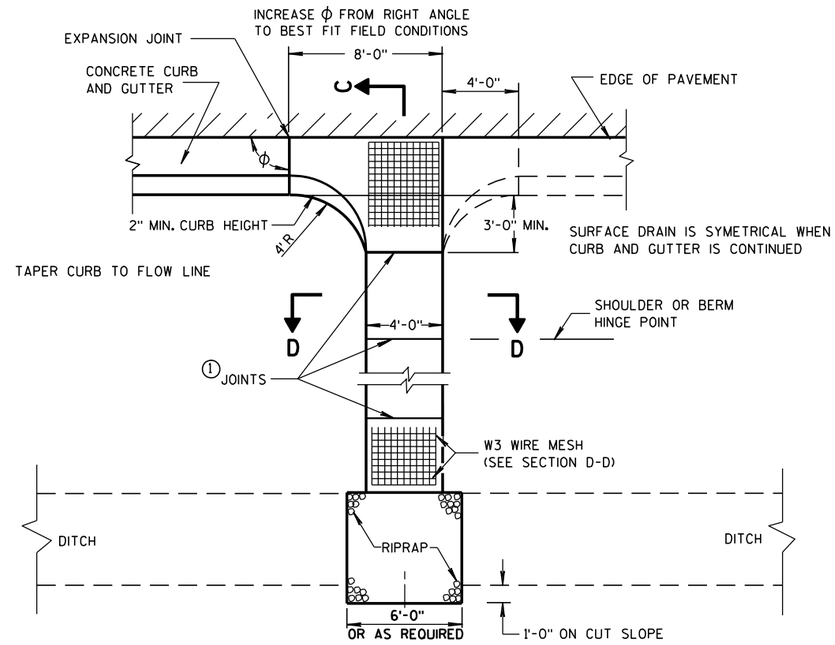
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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.

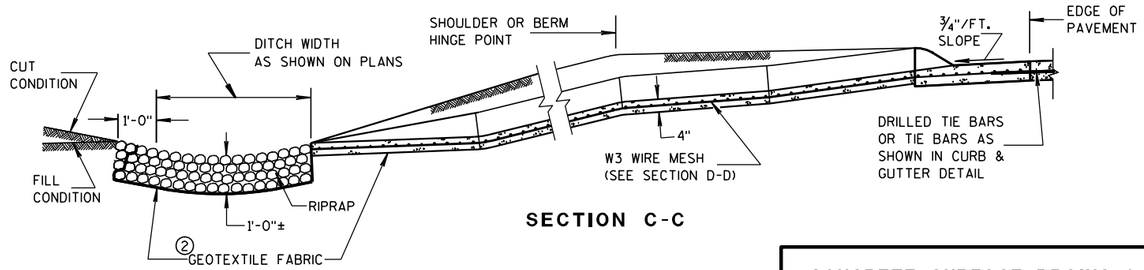
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

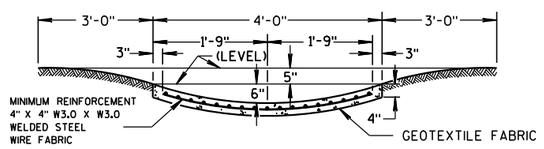
③ CONCRETE SURFACE DRAIN



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
153
MENT
FHWA

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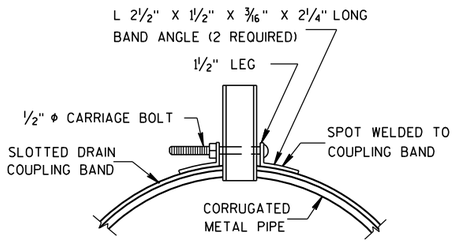
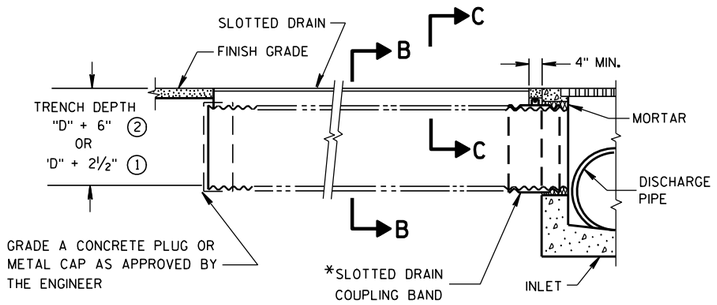
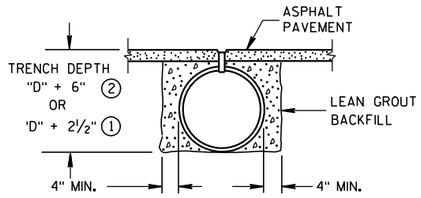
S.D.D. 8 D 4-5



SECTION A-A



SLOTTED DRAIN INSTALLATION TYPE "A"



SECTION B-B

GENERAL NOTES

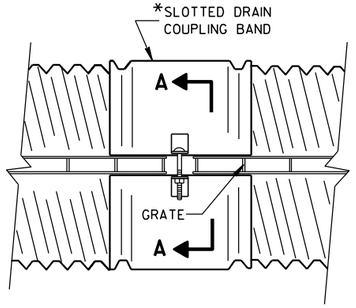
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

BACKFILL MATERIAL

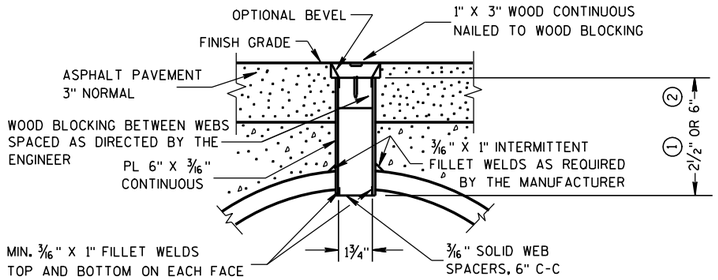
THE LEAN GROUT BACKFILL MATERIAL SHALL BE A FINE AGGREGATE, IN ACCORDANCE WITH SUBSECTION 501.3.6.3.6 OF THE STANDARD SPECIFICATIONS, MIXED WITH 150 POUNDS OF CEMENT AND APPROXIMATELY 30 GALLONS OF WATER FOR EACH 3000 POUNDS OF FINE AGGREGATE.

THE PIPE FOR THE SLOTTED DRAIN SHALL MEET AASHTO DESIGNATION M-36, AND THE GRATE ASSEMBLIES SHALL BE MADE FROM STRUCTURAL STEEL SUITABLY WELDED TO FORM THE OPEN SLOT AND HOT-DIP GALVANIZED TO MEET THE PROVISIONS OF AASHTO DESIGNATION M-111.

NORMAL PIPE SIZES ARE 12-INCH THROUGH 24-INCH DIAMETER IN 0.064 INCH THICKNESS, AND 30-INCH DIAMETER PIPE IN 0.079 INCH THICKNESS.

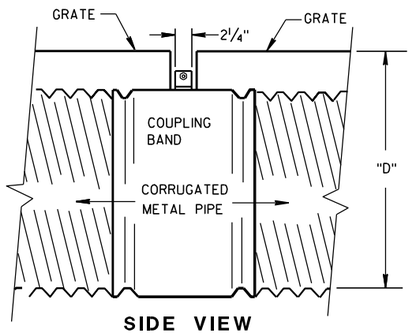


PLAN VIEW



SECTION C-C

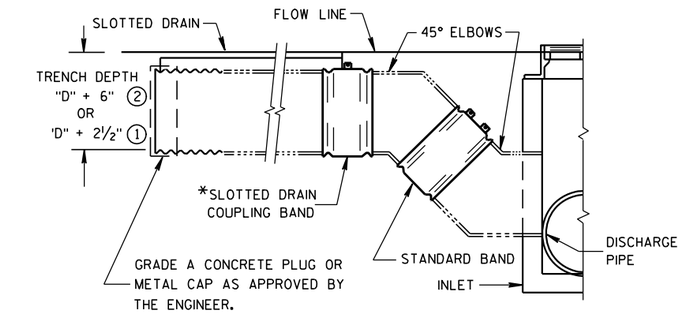
GRATE SLOT DETAIL



SIDE VIEW

*TYPICAL COUPLING BAND FOR SLOTTED DRAIN

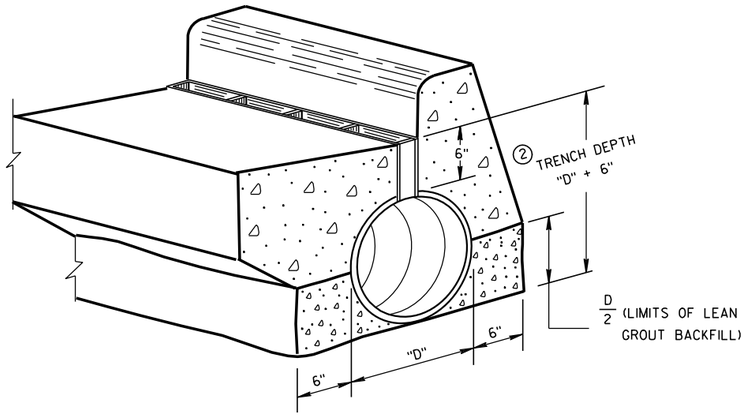
(ALTERNATES PERMITTED AS APPROVED BY THE ENGINEER)



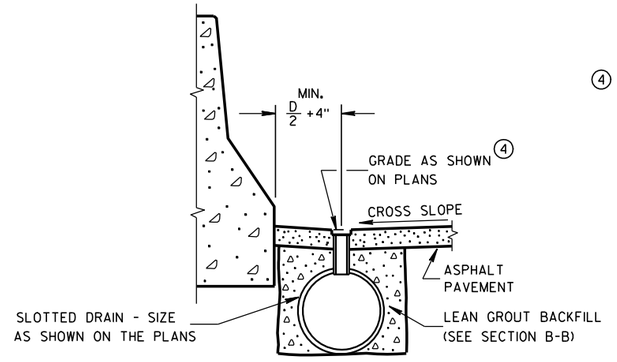
NOTE:

TO PREVENT "FLOATING" OF THE SLOTTED DRAIN DURING BACKFILL OPERATIONS PROVIDE ADEQUATE WEDGES, OR POUR THE LEAN GROUT ON TOP OF THE PLUGGED SLOT ALLOWING IT TO SLOUGH TO THE SIDES OF THE PIPE. THIS WILL PROVIDE ENOUGH WEIGHT ON TOP TO KEEP THE PIPE FROM FLOATING.

SLOTTED DRAIN INSTALLATION TYPE "B"



SLOTTED DRAIN INSTALLATION IN FLOW LINE OF CURB & GUTTER TYPE "C"



SLOTTED DRAIN INSTALLATION AT MEDIAN BARRIER TYPE "D"

① 2½" NORMAL GRATE DEPTH.

② 6" SPECIAL GRATE DEPTH, WHEN SPECIFIED ON THE PLANS.

③ FOR SCREEDING DIRECTLY OVER THE SLOTTED DRAIN WITH ASPHALT PAVER. FOR CONCRETE SURFACE USE 3" WIDE TAPE OVER THE SLOT TO KEEP MATERIAL OUT OF THE PIPE.

④ WHEN THE SURFACE IS CONCRETE PAVEMENT THE GRADE AS SHOWN ON THE PLANS WILL BE FLUSH WITH THE TOP OF THE SLOTTED DRAIN.

SLOTTED CORRUGATED METAL PIPE SURFACE DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/30/79
DATE

/S/ D. L. Str---
CHIEF ROADWAY DEVELOP

ENGINEER

FHWA

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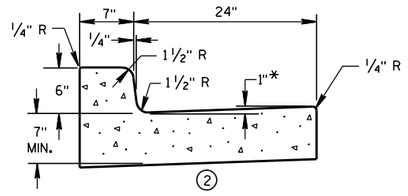
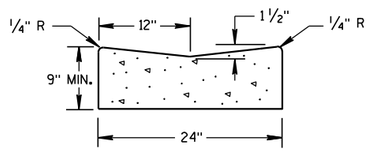
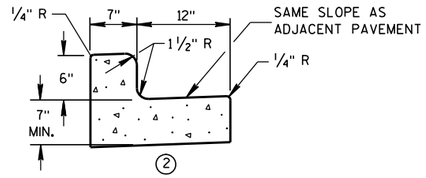


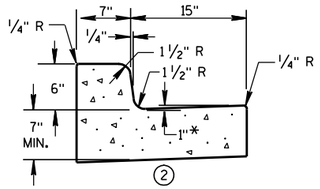
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

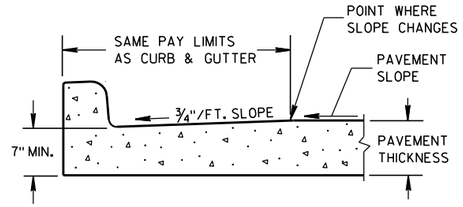


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

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.

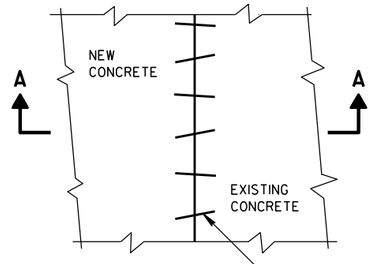
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

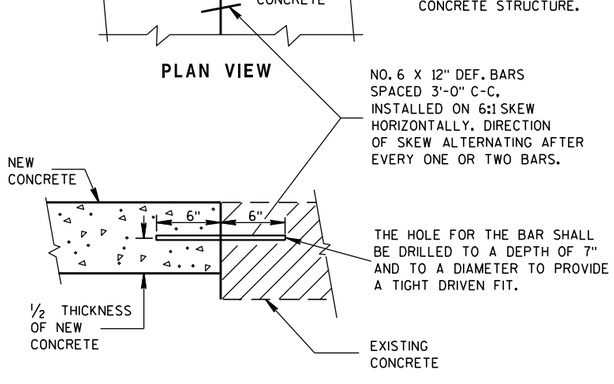
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MIMIMUM GUTTER THICKNESS IS MAINTAINED.

③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



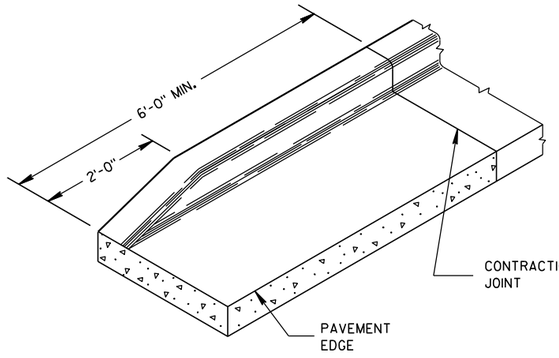
PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

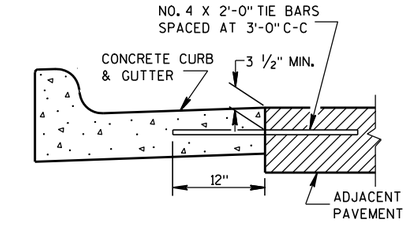


SECTION A-A

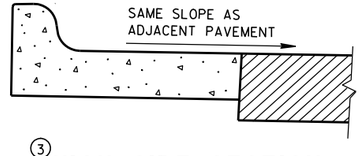
PAVEMENT TIES



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION

(TYPICAL FOR ALL CURB & GUTTER)

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/2/2010 — DATE

/S/ Jerry Zogg — ROADWAY STANDARDS ENGINEER

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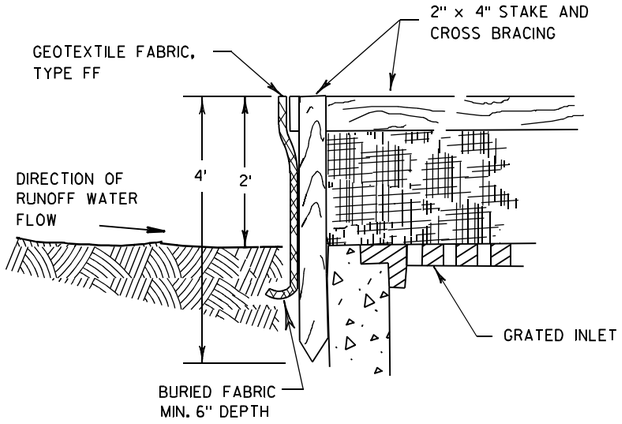
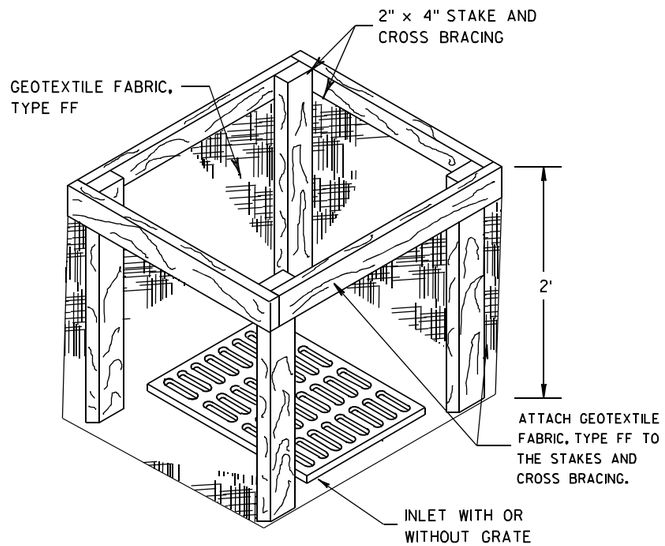
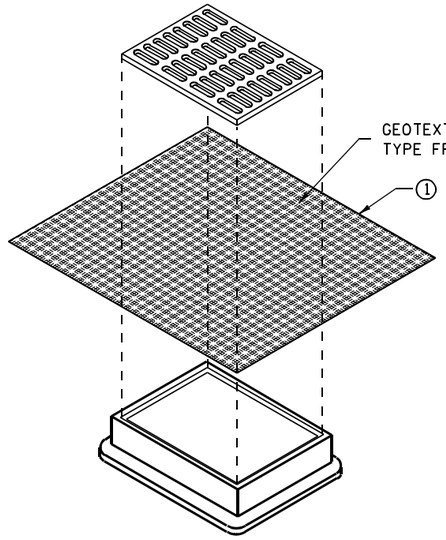


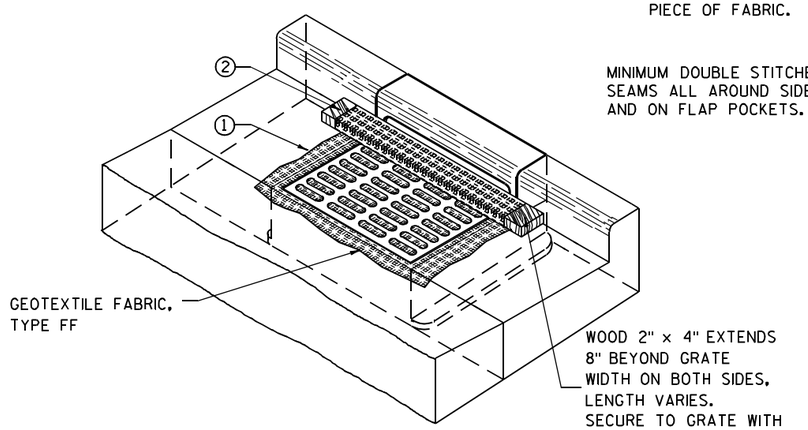


INLET PROTECTION, TYPE A

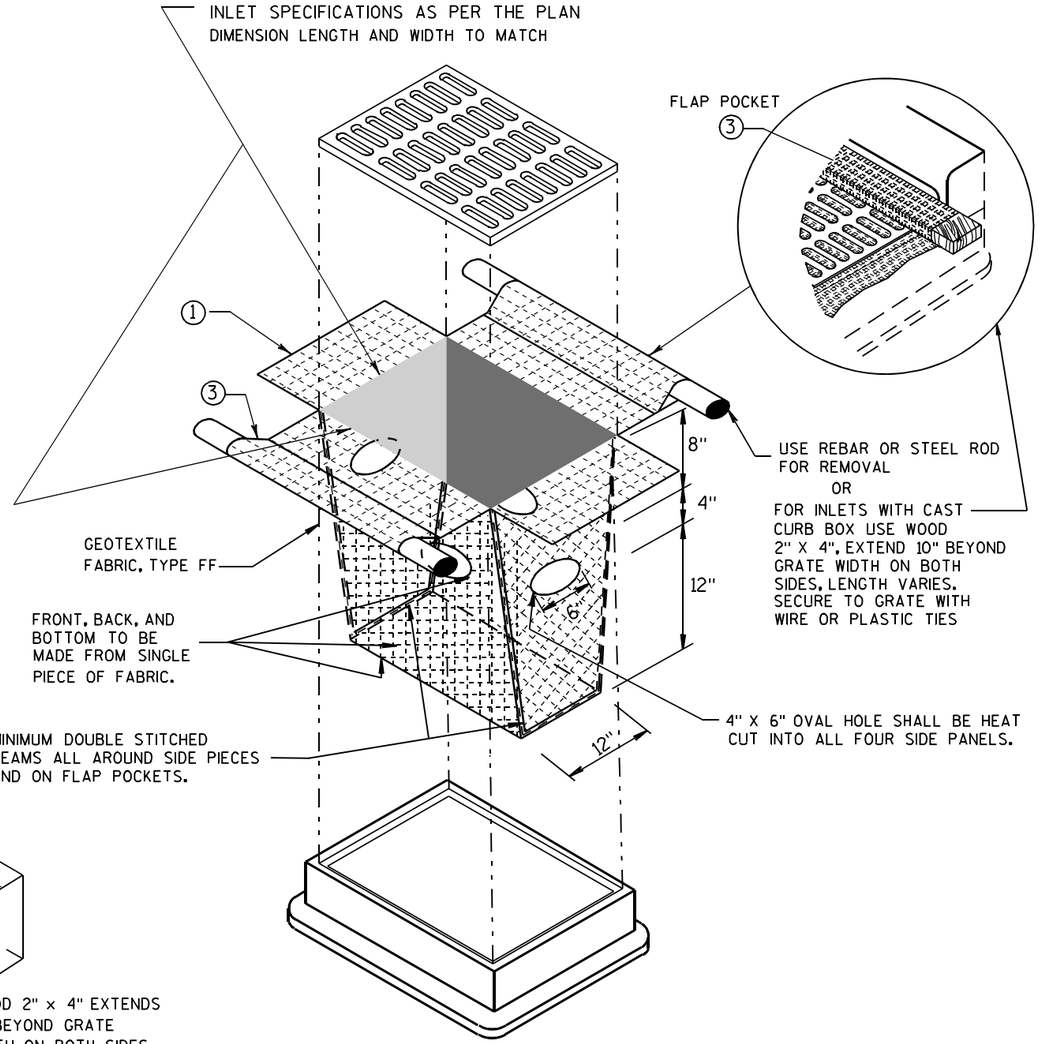


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

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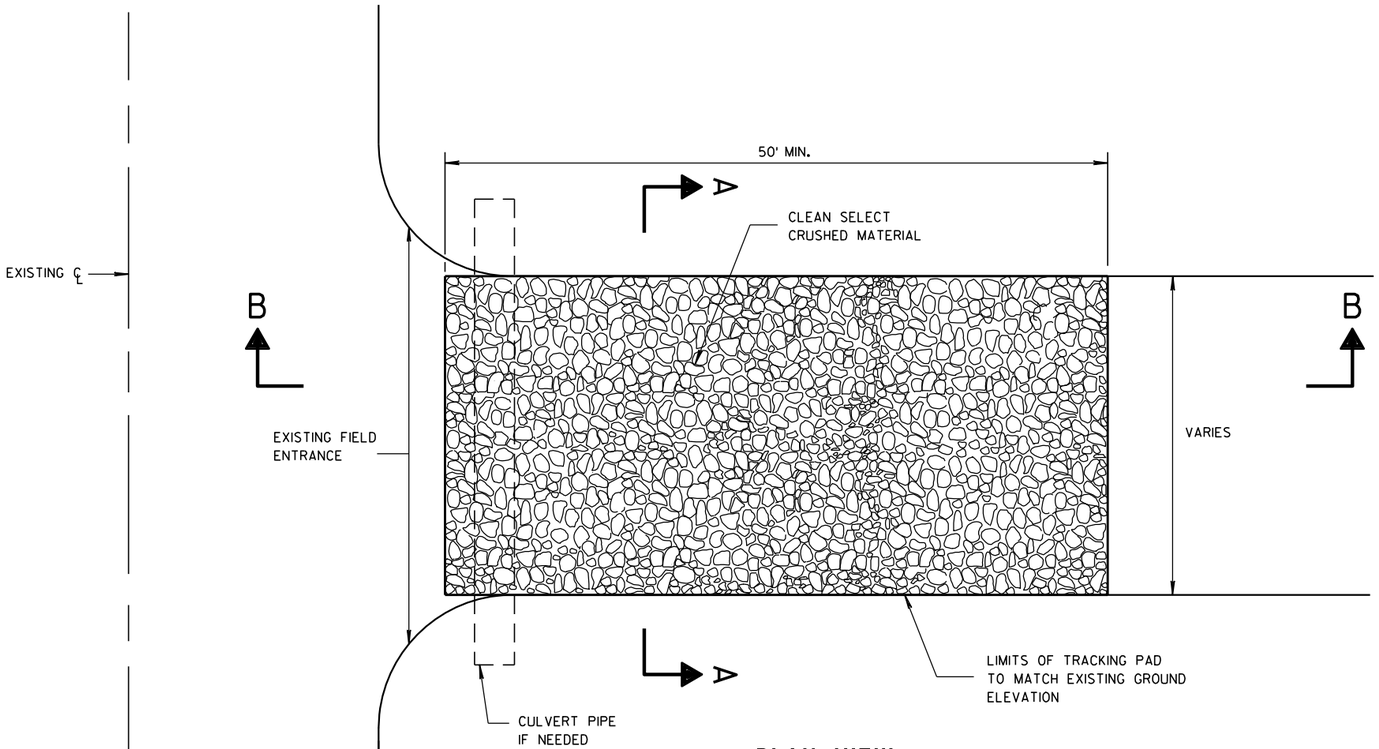
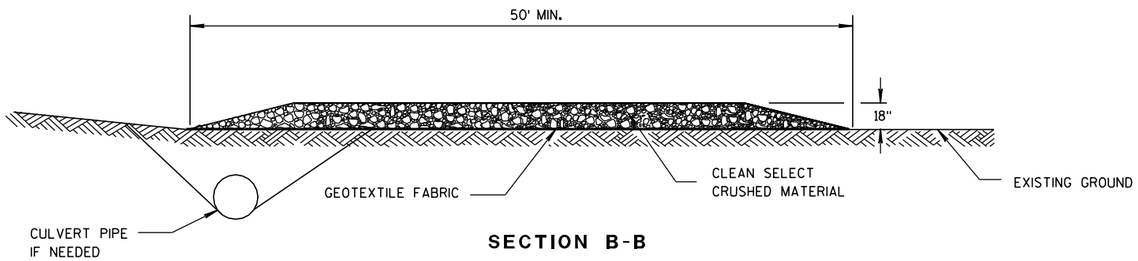
S.D.D. 8 E 10-2



PLAN VIEW



SECTION B-B

GENERAL NOTES

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

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

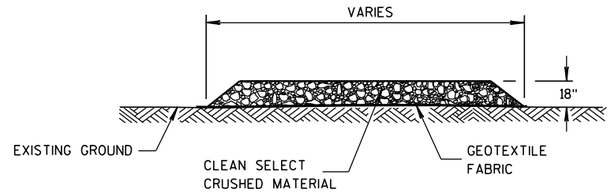
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A-A

TRACKING PAD

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TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011 — DATE

/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER

FHWA

ENT

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S.D.D. 8 E 14-1

METAL APRON ENDWALLS

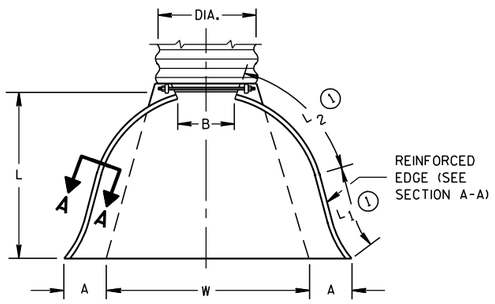
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

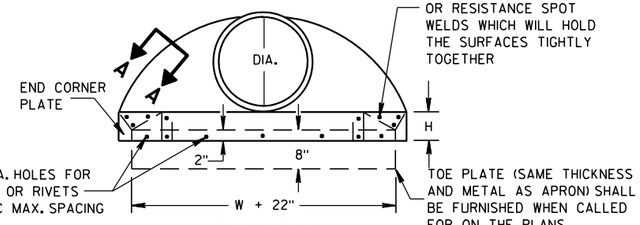
REINFORCED CONCRETE APRON ENDWALLS

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

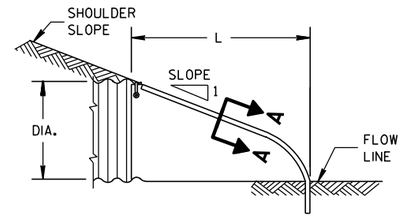
*MINIMUM
**MAXIMUM



PLAN VIEW

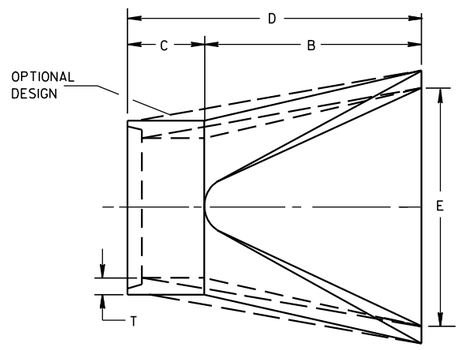


END VIEW

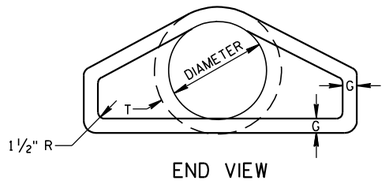


SIDE ELEVATION

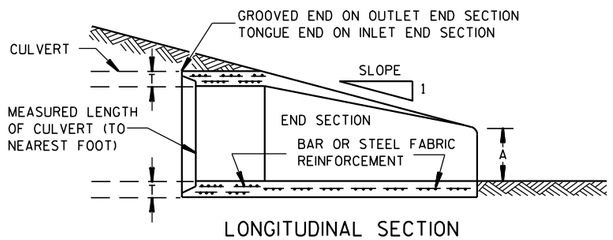
METAL ENDWALLS



PLAN

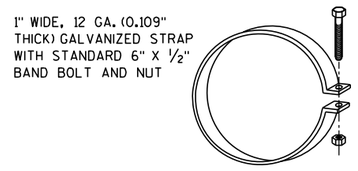


END VIEW



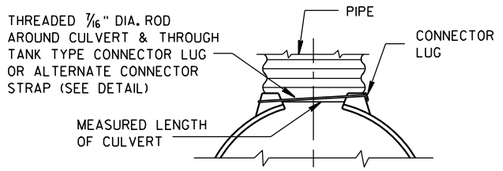
LONGITUDINAL SECTION

CONCRETE ENDWALLS

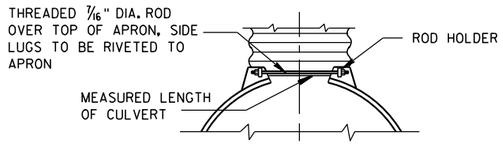


ALTERNATE FOR TYPE 1 CONNECTION

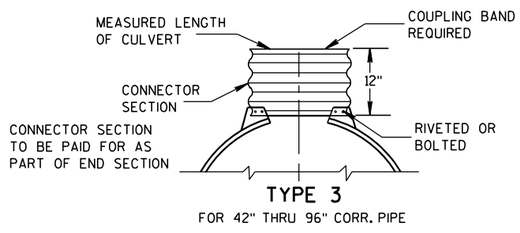
END SECTION CONNECTOR STRAP



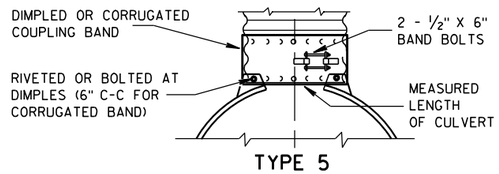
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

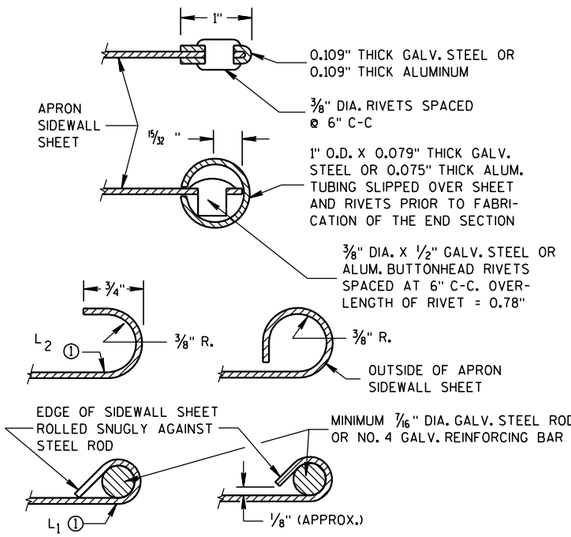
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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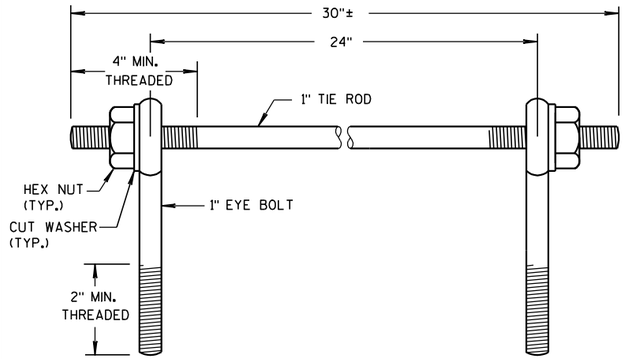
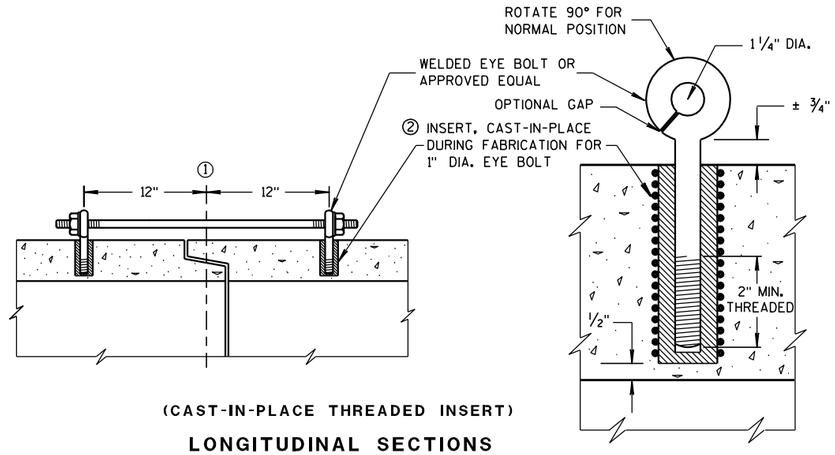
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

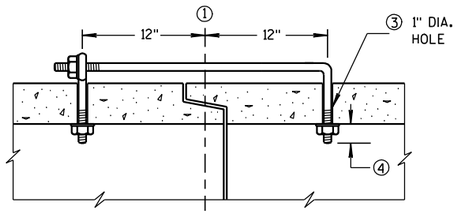
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

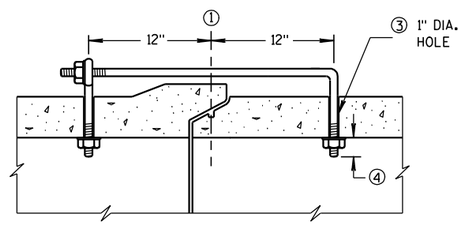
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

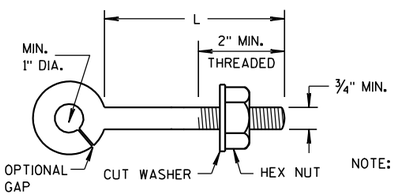


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

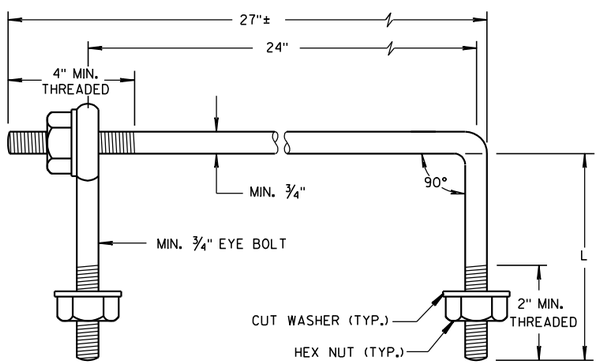
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

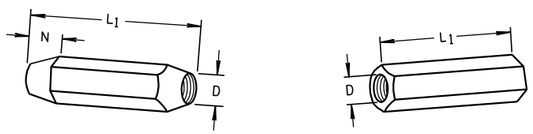
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

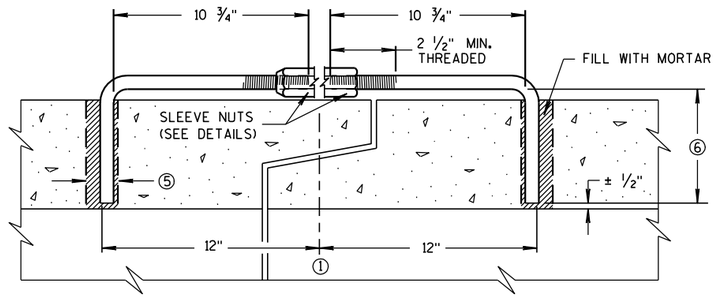
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

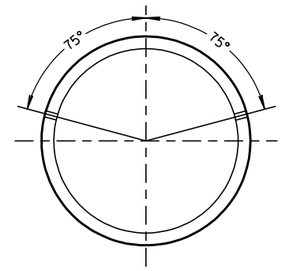
SLEEVE NUTS



LONGITUDINAL SECTION

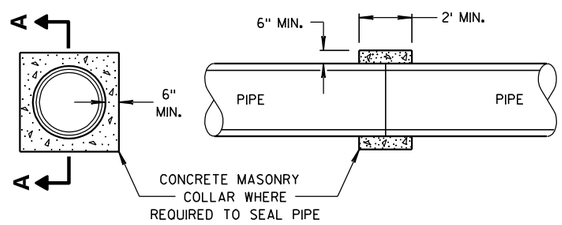
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 F 4-7

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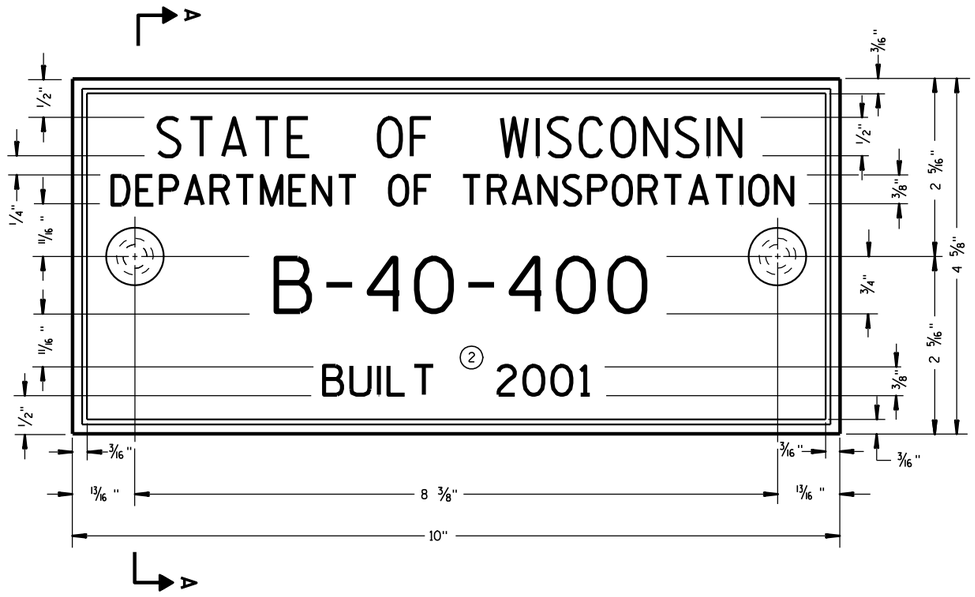
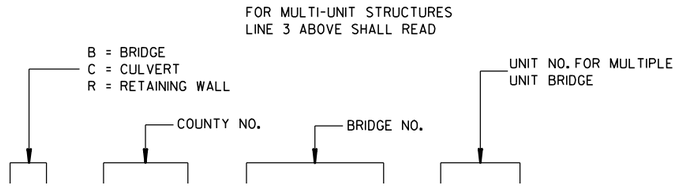
S.D.D. 8 F 4-7



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

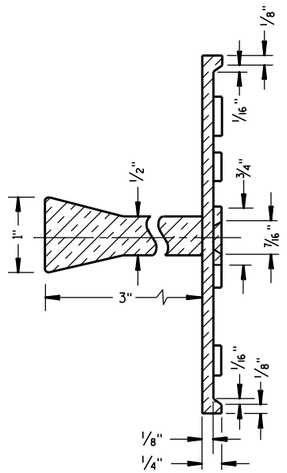
GENERAL NOTES

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

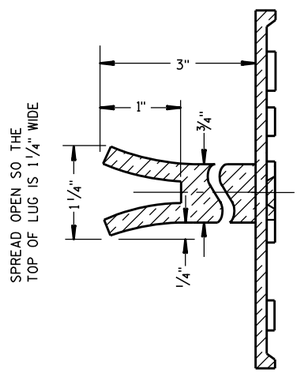
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

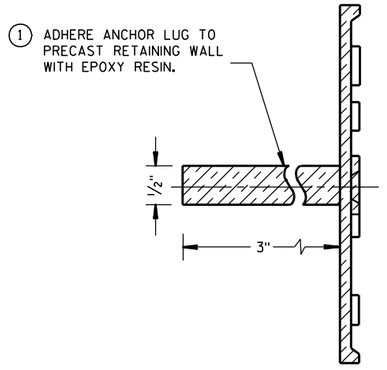
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE — /S/ Scot Beck — CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

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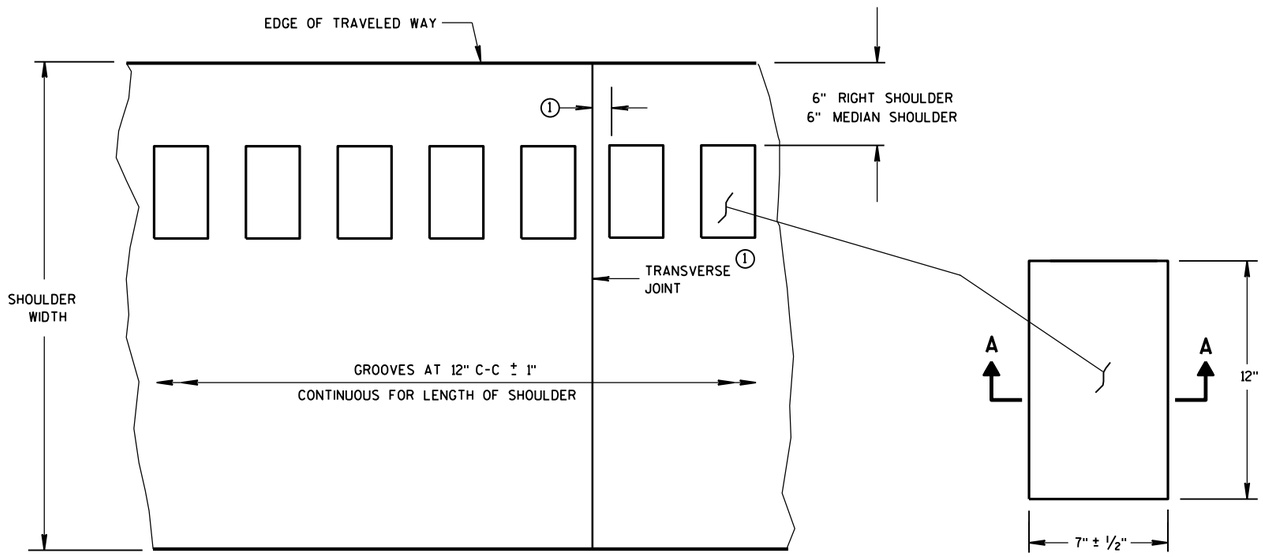
S.D.D. 12 A 3-10

6

S.D.D. 12 A 3-10



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

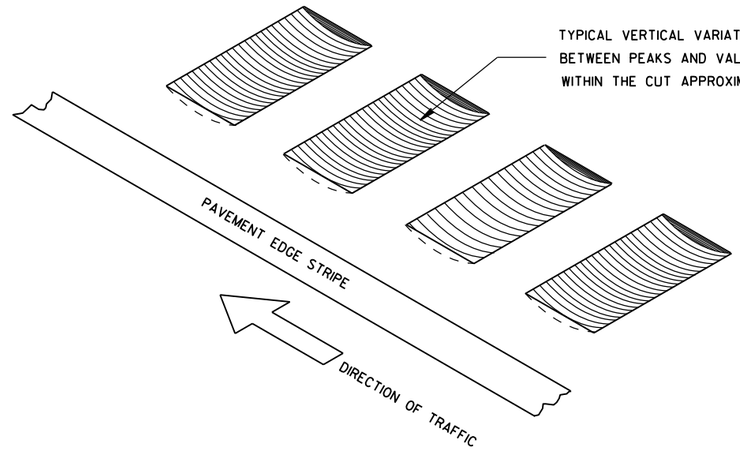
GENERAL NOTES

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

RUMBLE STRIPS ON EXPRESSWAYS

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

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



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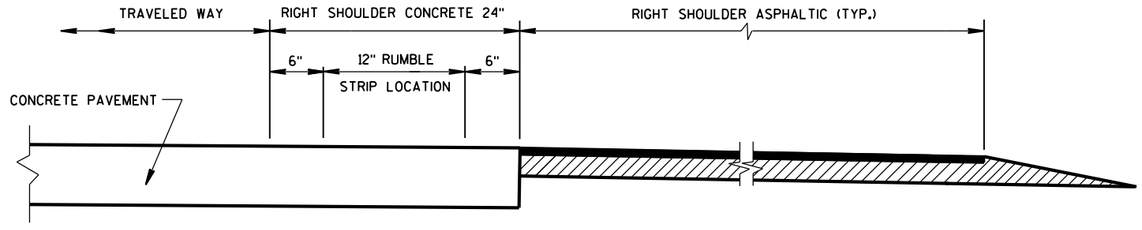
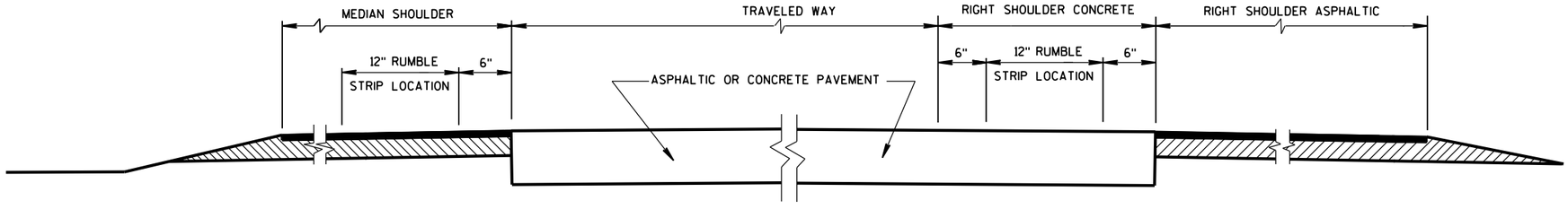


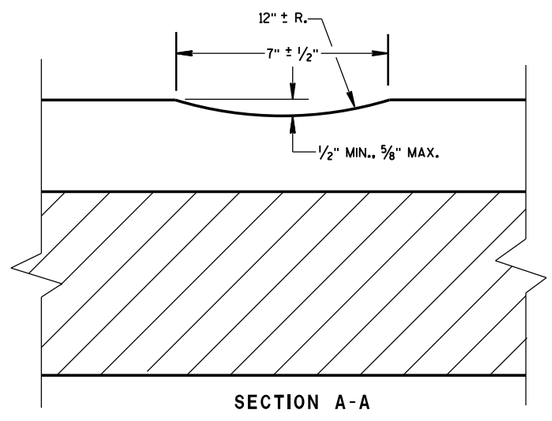
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

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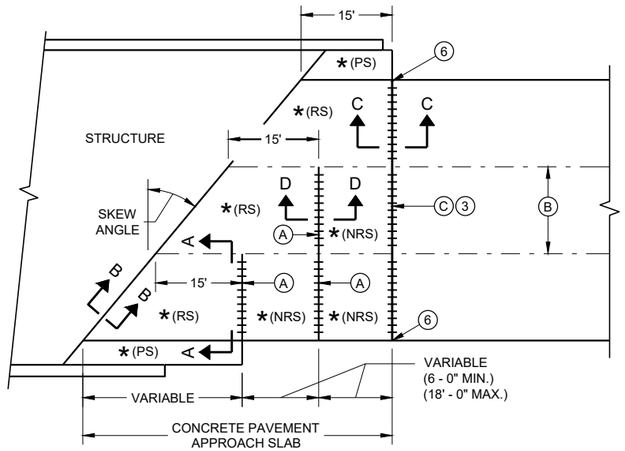
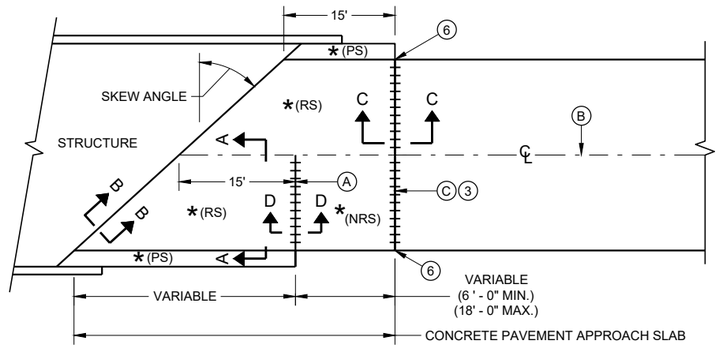
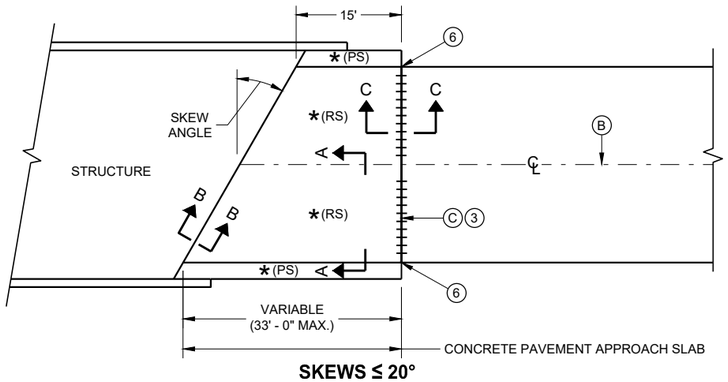
S.D.D. 13 A 5-5a



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

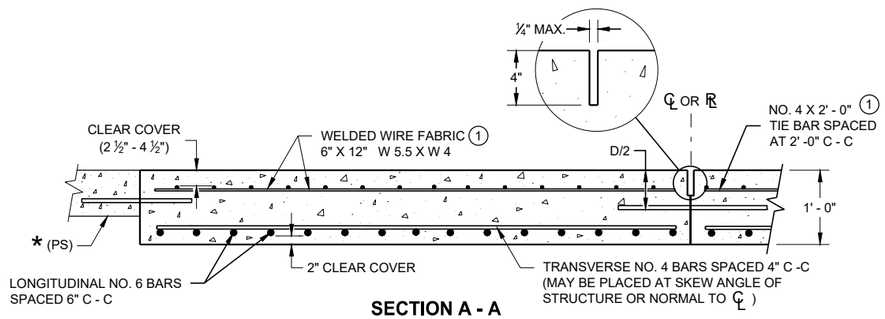
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

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

* (NRS) - NON - REINFORCED CONCRETE SLAB

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



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

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

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

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

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

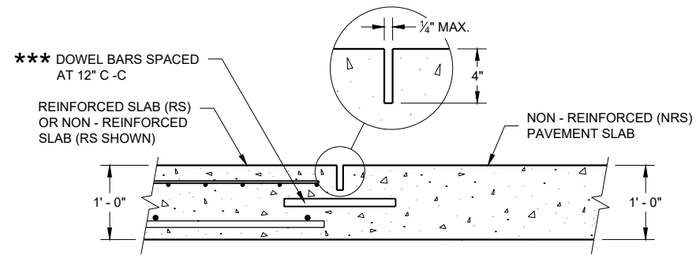
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

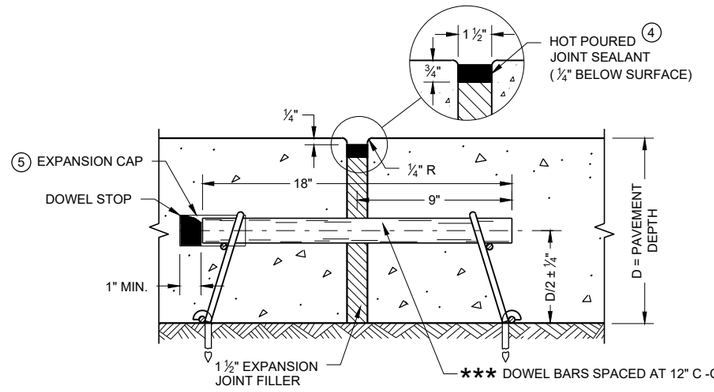
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

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



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVISOR

FHWA

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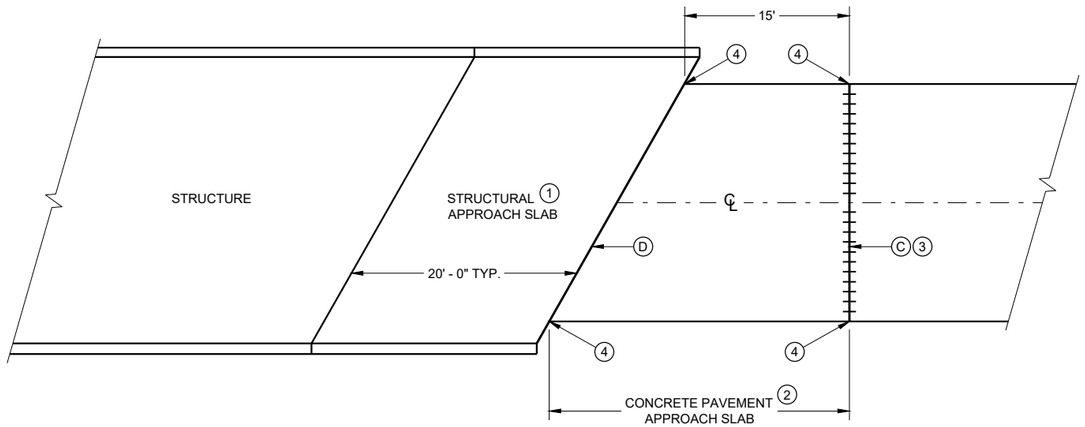
SDD 13B02 - 09a



BRIDGE APPROACHES

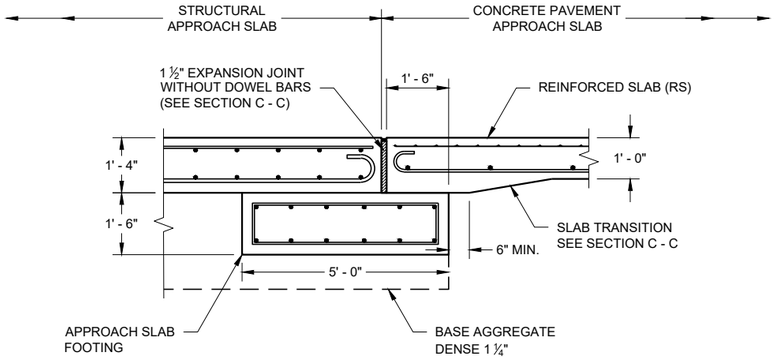
GENERAL NOTES

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

1. SEE BRIDGE PLAN.
2. CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS
3. DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
4. EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

C. 1 ½" EXPANSIONT JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞.

D. 1 ½" EXPANSION JOINT (NO DOWELS)



SECTION E - E
FOOTING DETAIL
STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 13B02 - 09b

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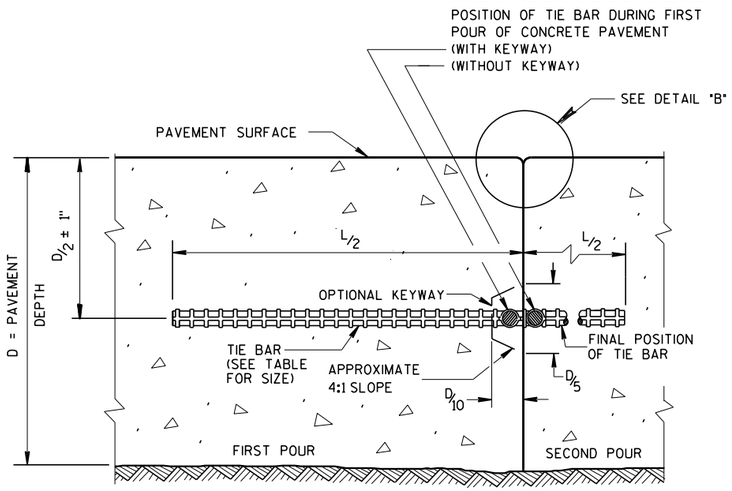
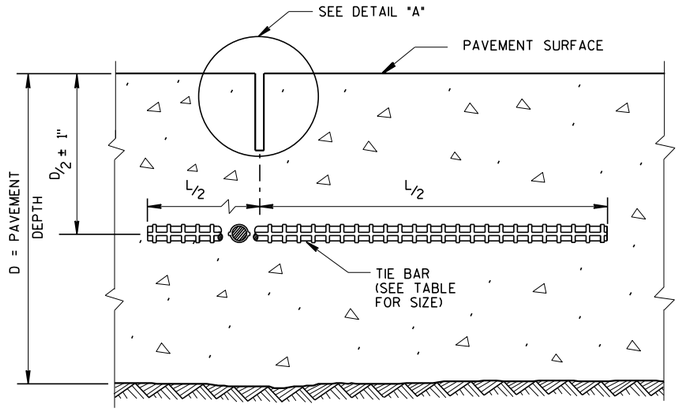
SDD 13B02 - 09b



CONSTRUCTION JOINT



SAWED JOINT

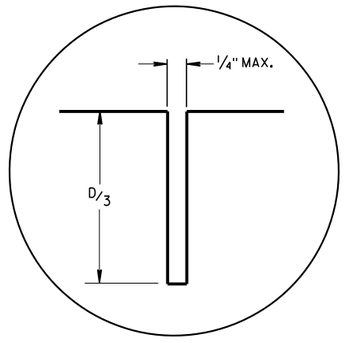
GENERAL NOTES

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

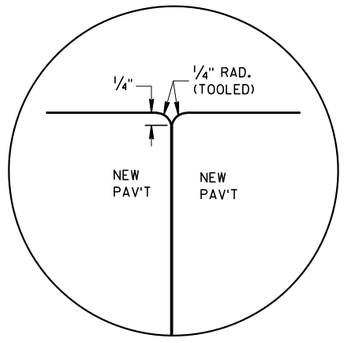
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

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



DETAIL "A"



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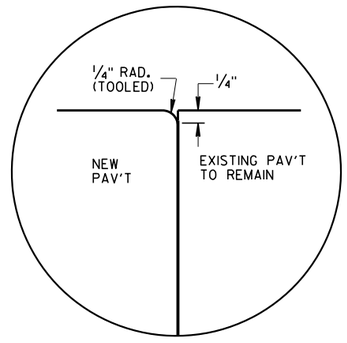
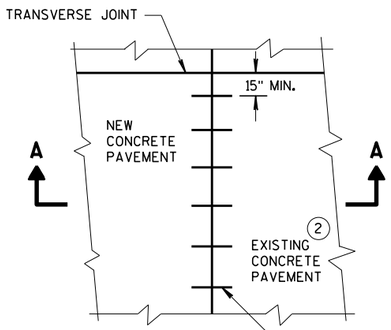
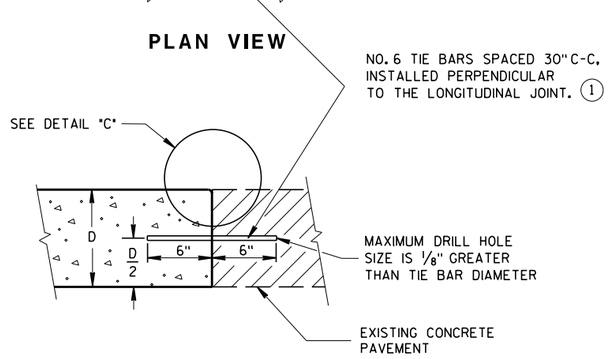


DETAIL "C"



PLAN VIEW



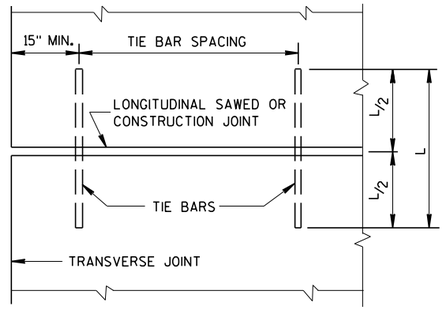
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp PE — PAVEMENT SUPE
FHWA

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S.D.D. 13 C 1-19

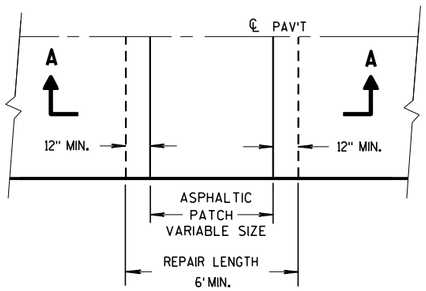
GENERAL NOTES

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

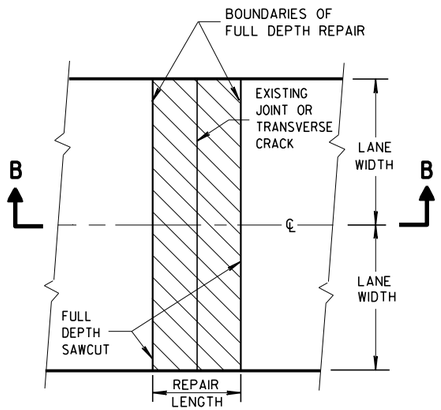
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

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

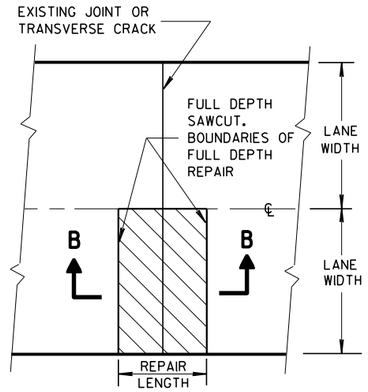
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

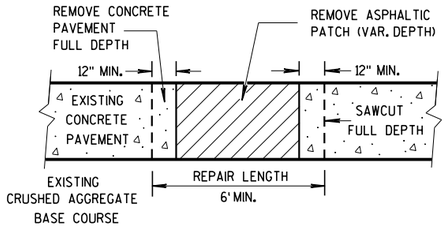


PLAN VIEW
(DOUBLE LANE REPAIR)



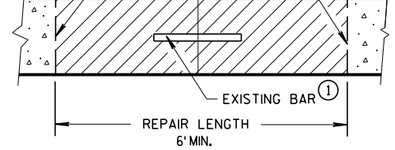
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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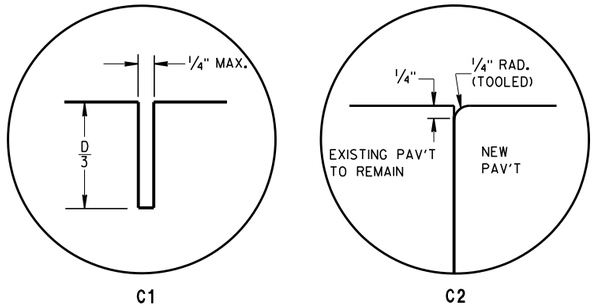
S.D.D. 13 C 9-15a



C1 C2

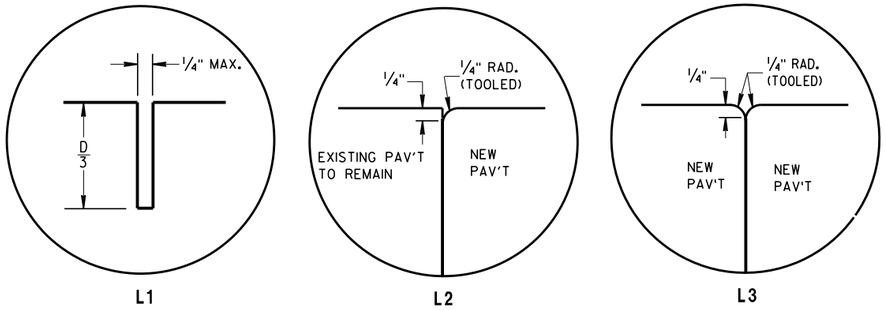
TRANSVERSE JOINTS

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

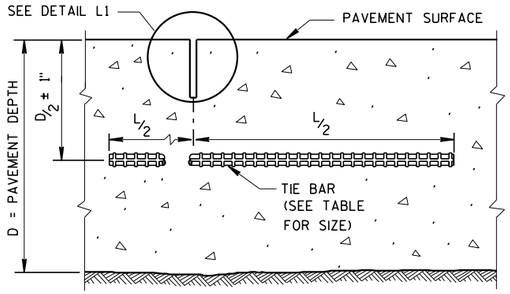
* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



L1 L2 L3

LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

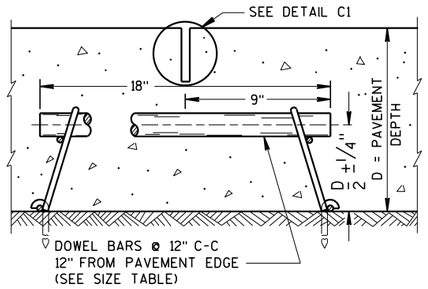
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

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

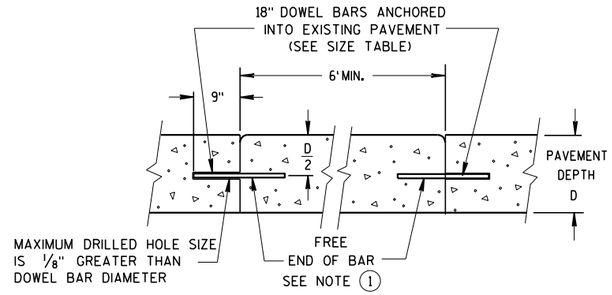
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

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

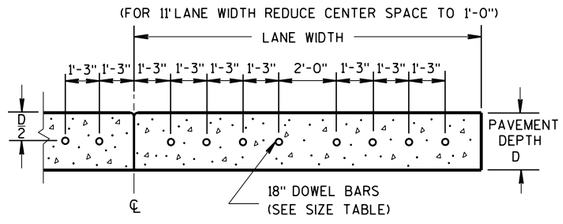


SECTION F-F

CONTRACTION JOINT



SECTION D-D

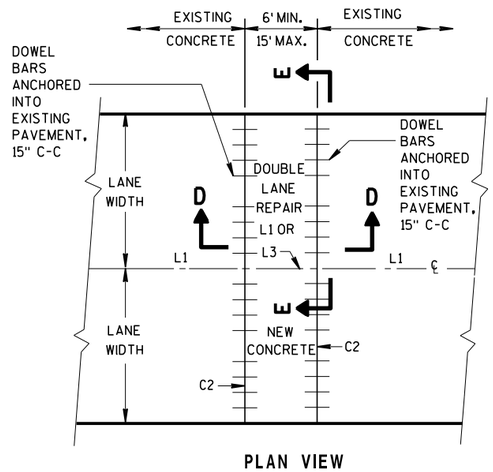


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

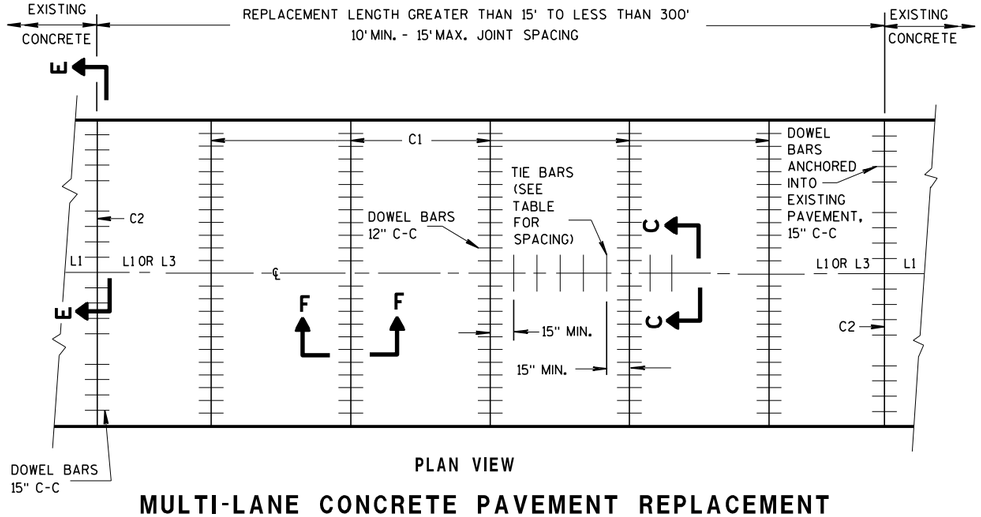
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	NONE	12'
7", 7 1/2"	1"	1"	14'
8", 8 1/2"	1 1/4"	1 1/4"	15'
9", 9 1/2"	1 1/4"	1 1/4"	15'
10" & ABOVE	1 1/2"	1 1/4"	15'



PLAN VIEW

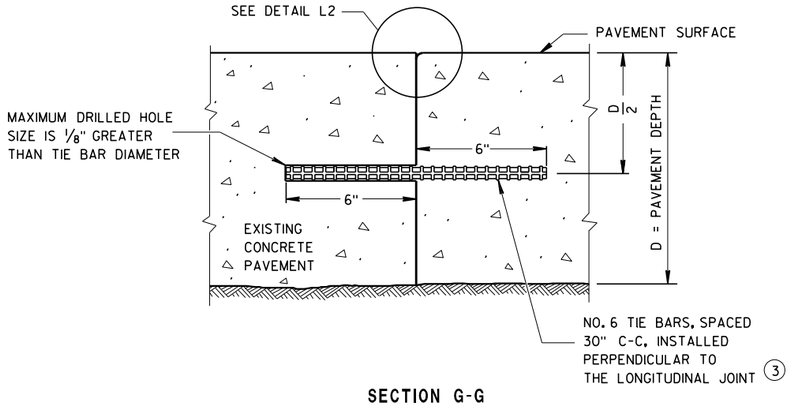
MULTI-LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT



SECTION G-G

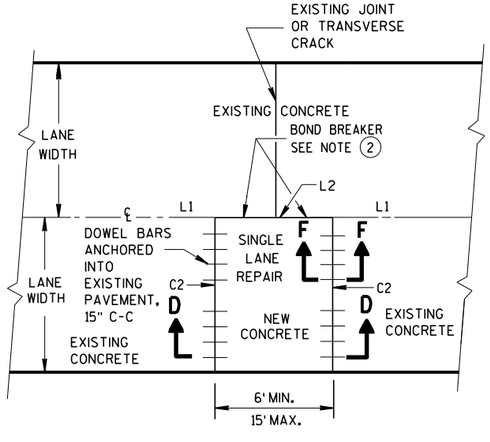
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

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

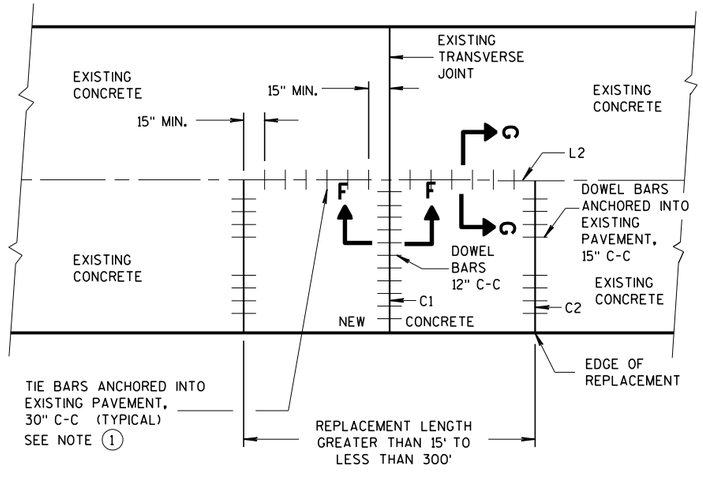
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

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



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Ken... — PAVEMENT SUPE...
FHWA

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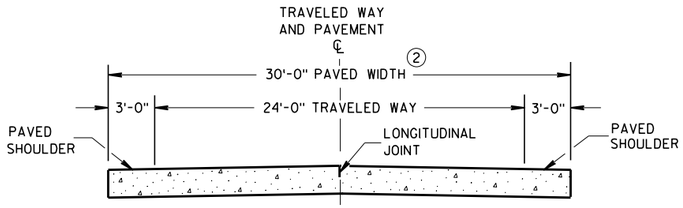
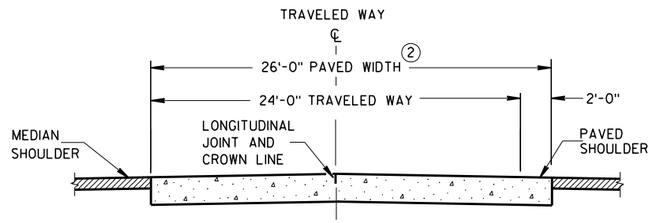
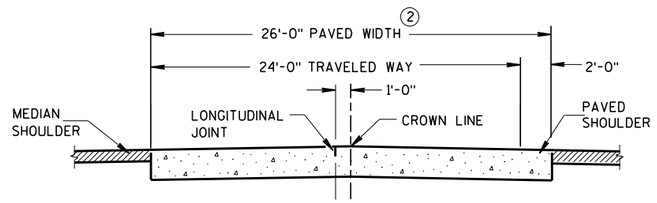


SECTION A-A
TWO-LANE TWO-WAY HIGHWAY (1)



SECTION B-B



ALTERNATIVE SECTION B-B
(1)
DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

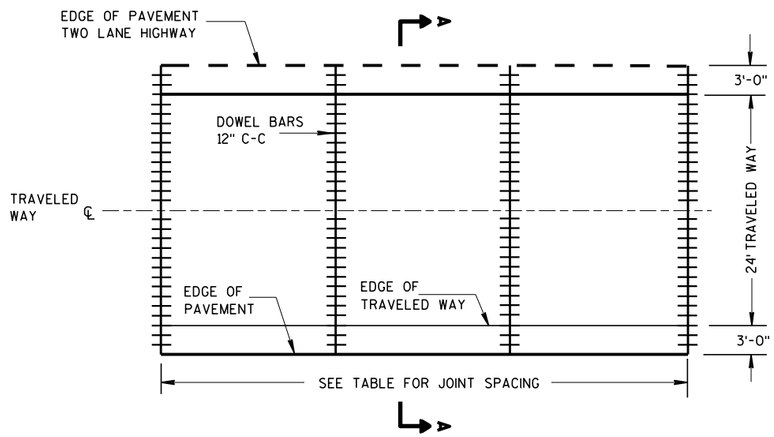
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

(1) REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

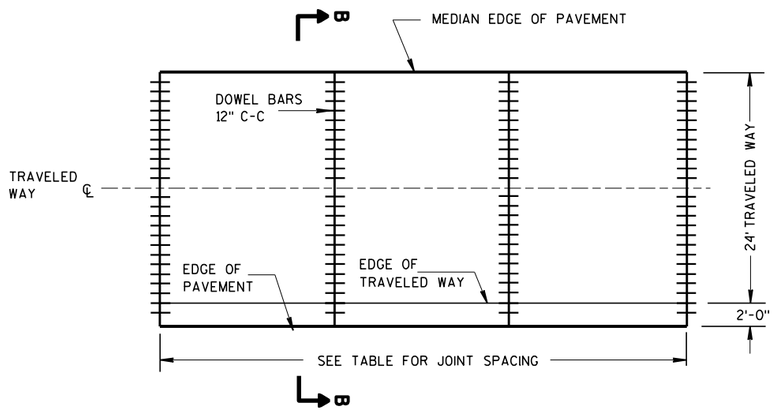
(2) MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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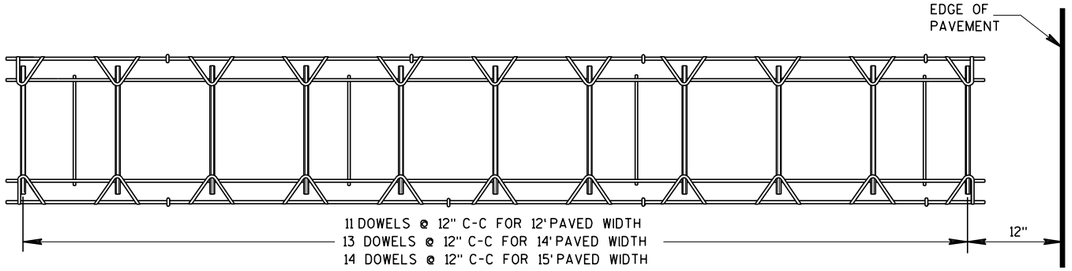
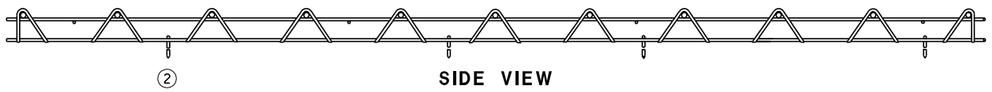
S.D.D. 13 C 11-12a



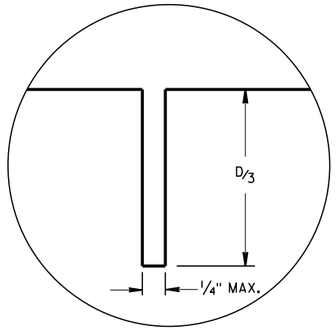
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

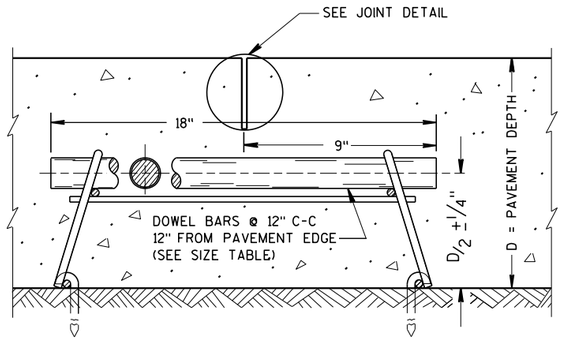
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

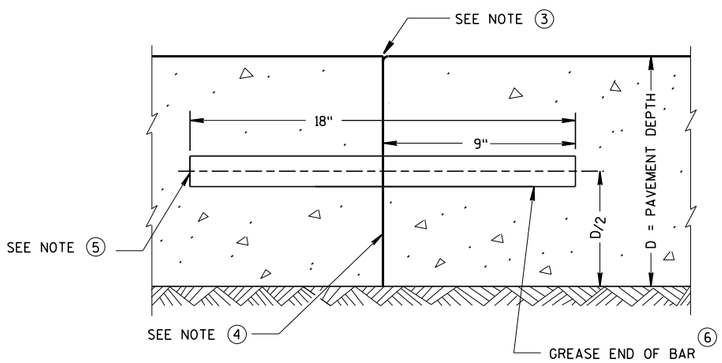
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

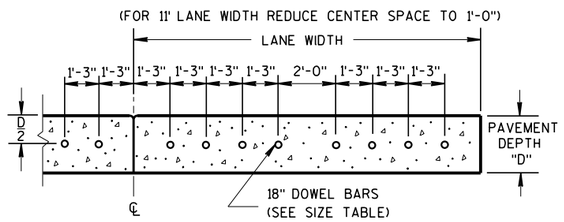
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

RURAL DOWELED CONCRETE PAVEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2018 DATE FHWA	/S/ Peter Kemp P.E. PAVEMENT SUP

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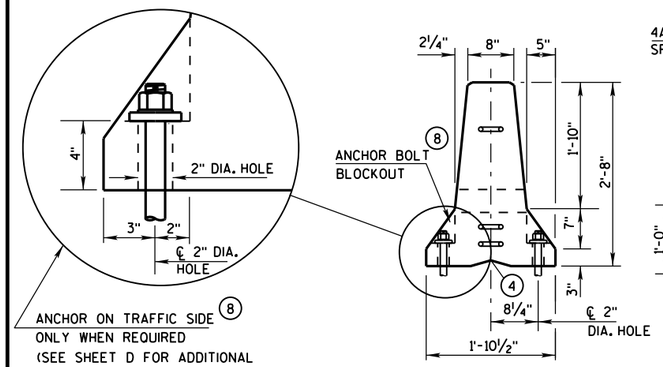
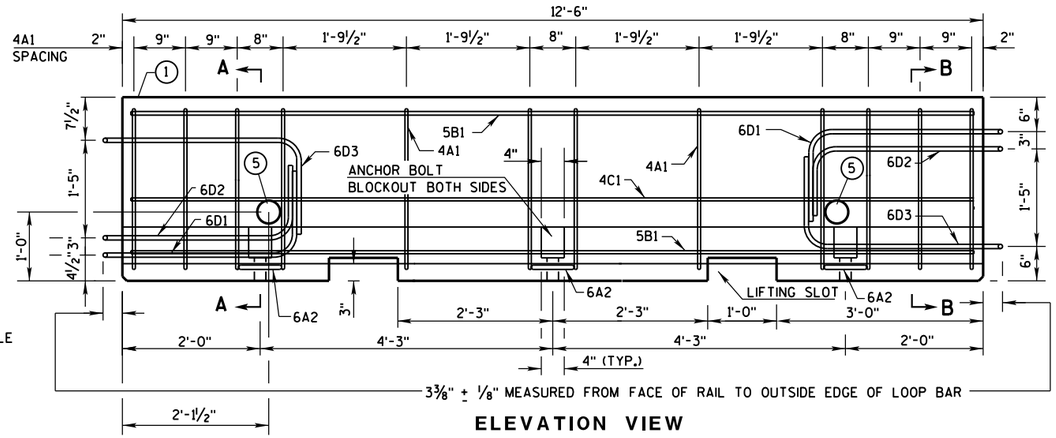
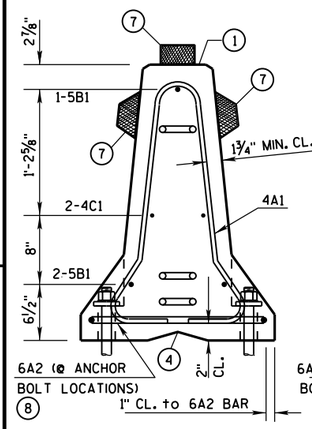
S.D.D. 13 C 11-12b



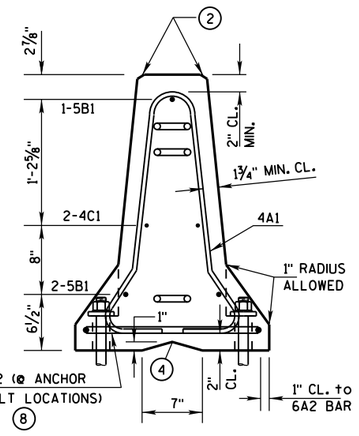
END VIEW



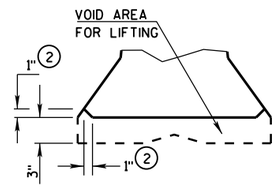
ELEVATION VIEW



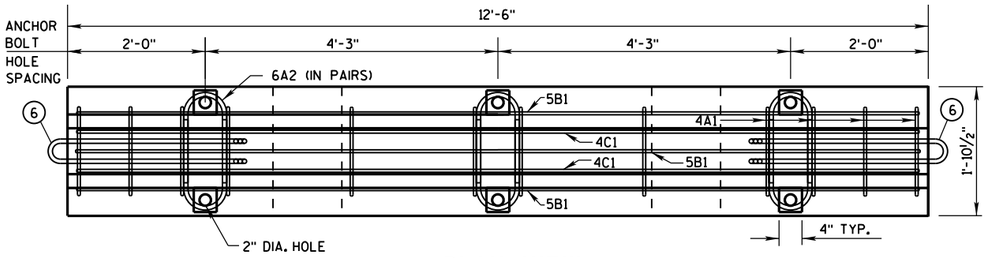
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

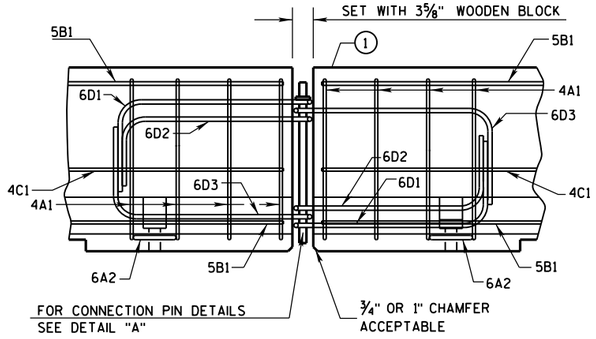


DETAIL "B"
LIFTING SLOT DETAIL

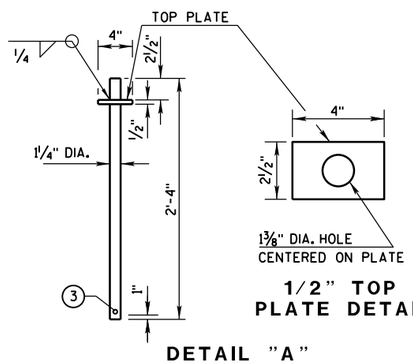


PLAN VIEW

DETAILS OF BARRIER SECTION

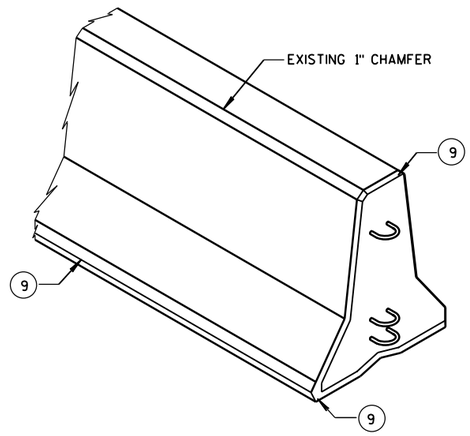


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

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

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

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

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

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

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

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

(2) 1" CHAMFER TO PREVENT SPALLING.

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

(4) "V" NOTCH IS OPTIONAL.

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

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

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

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

(9) 1" CHAMFER OPTIONAL.

f'c = 4,000 psi

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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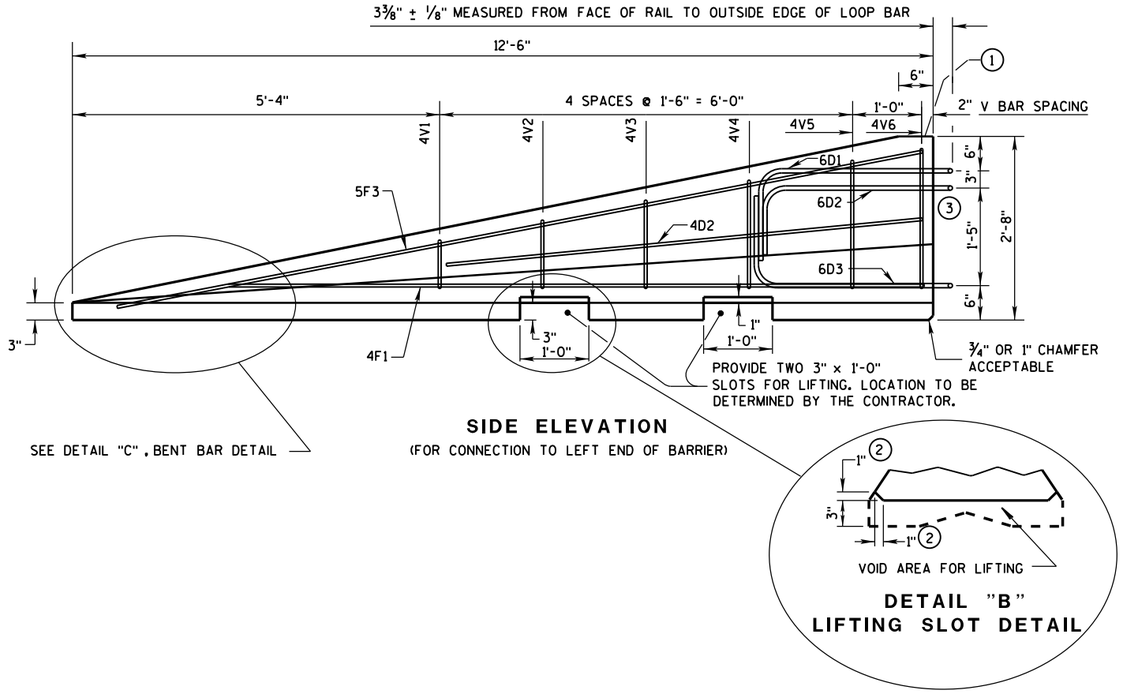
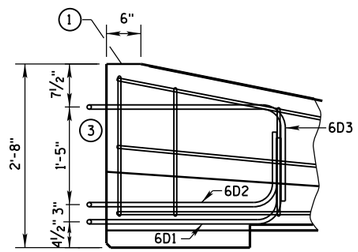
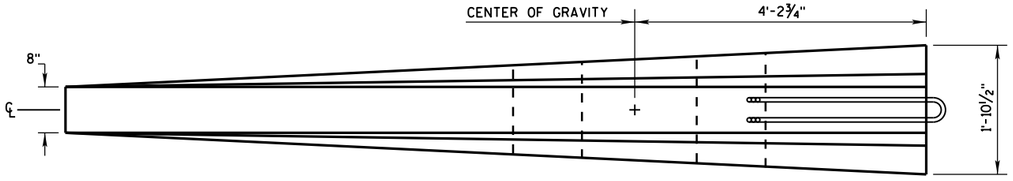
S.D.D. 14 B 7-15a

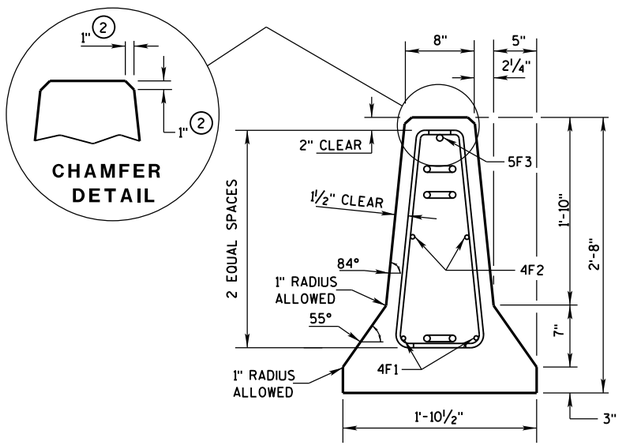


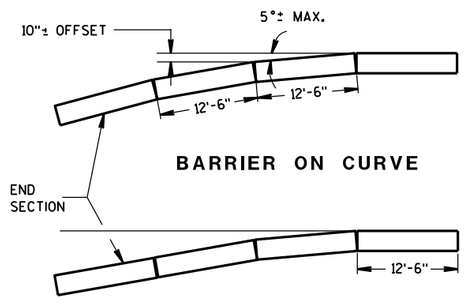


GENERAL NOTES

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







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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

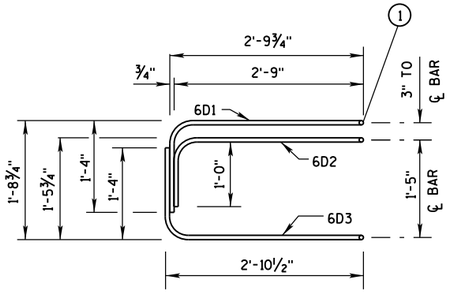
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

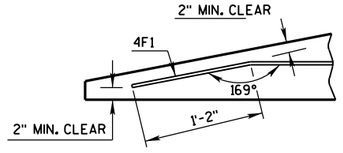
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

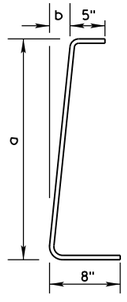
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



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

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

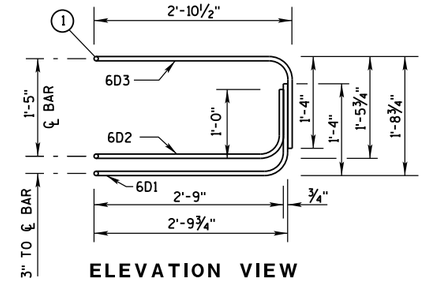
GENERAL NOTES

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

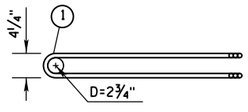
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

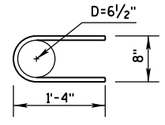
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



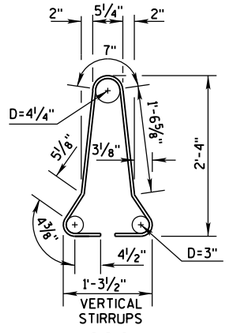
ELEVATION VIEW



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



6A2



4A1

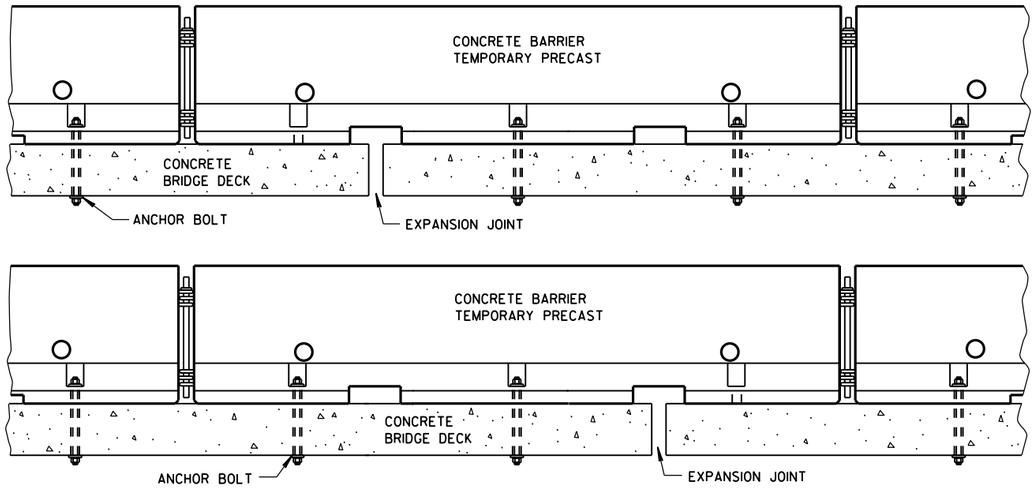
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

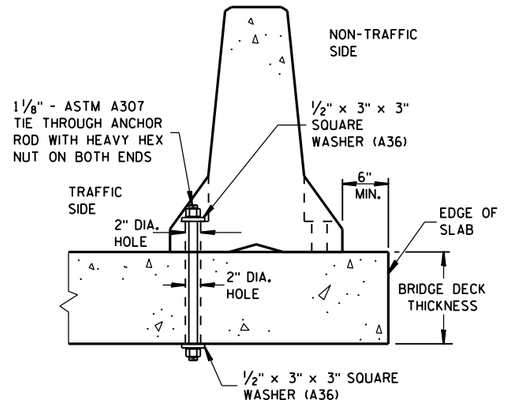
6

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



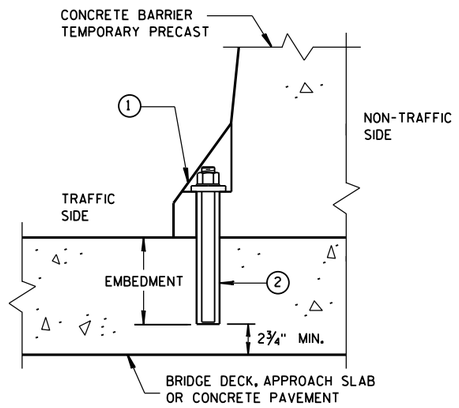
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

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



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



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

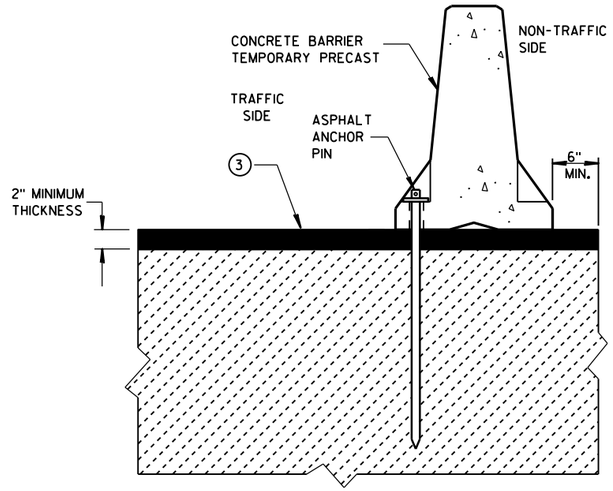
(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

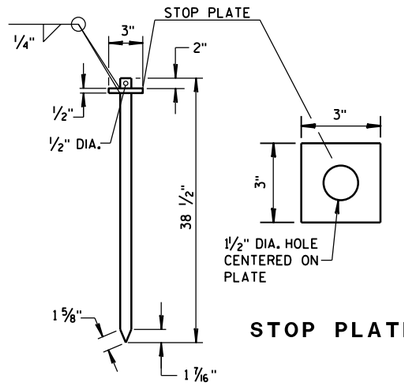
GENERAL NOTES

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

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERICAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

1. 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.
2. ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.
3. ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



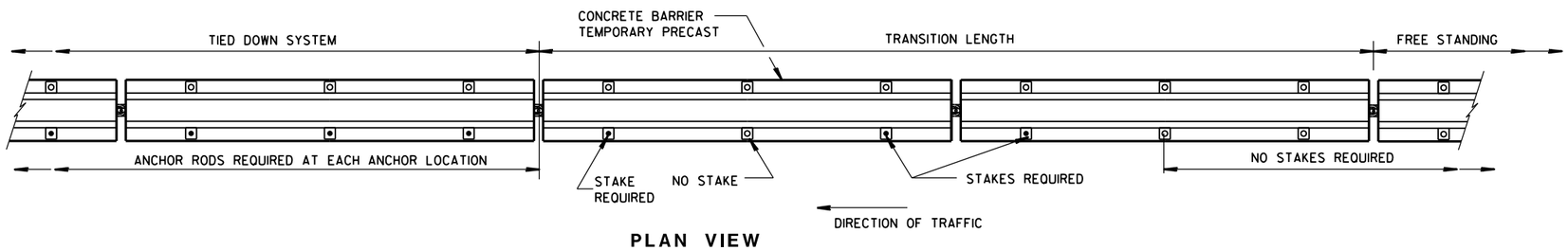


STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)

STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

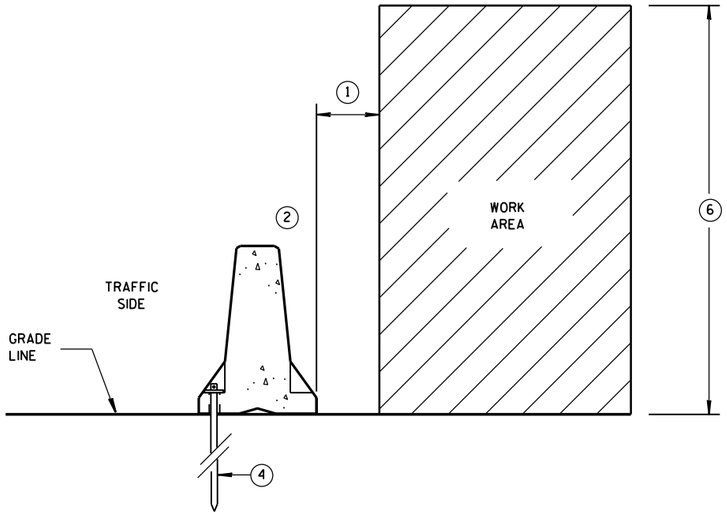
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

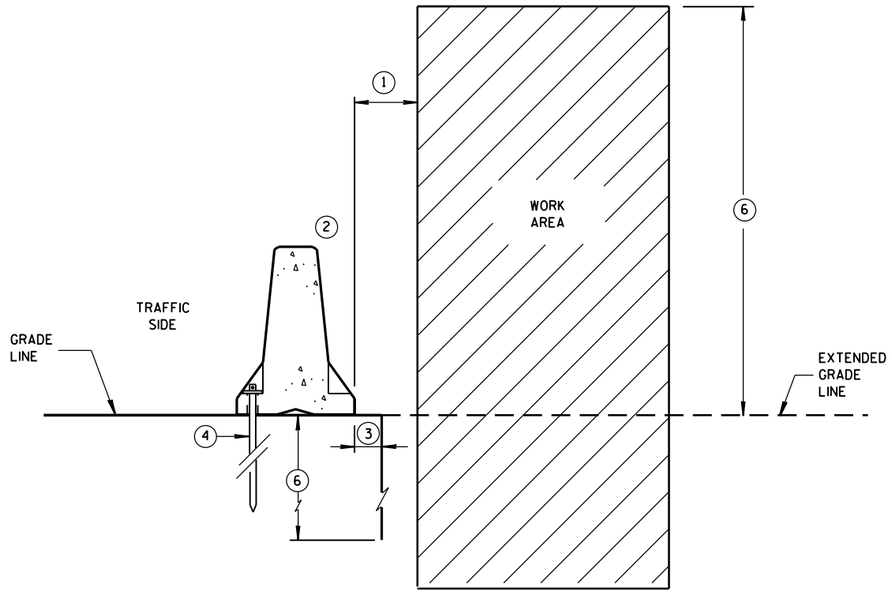
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

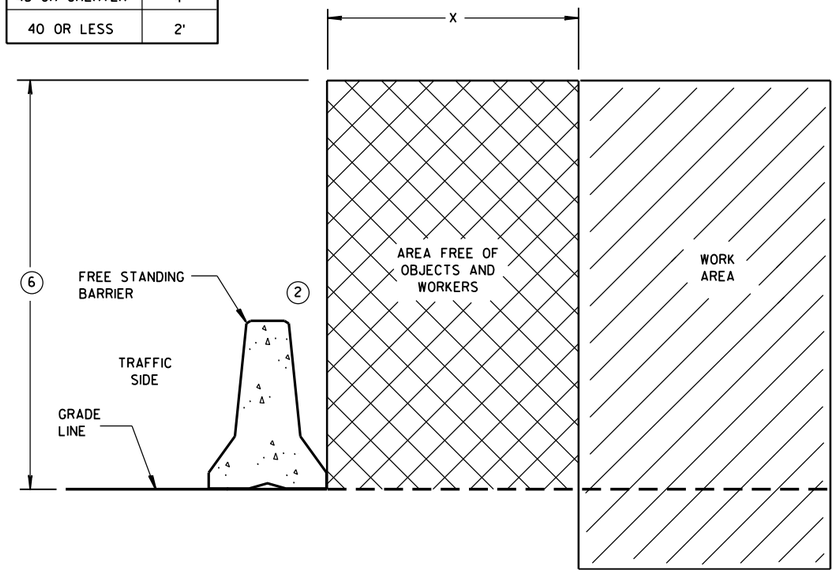


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

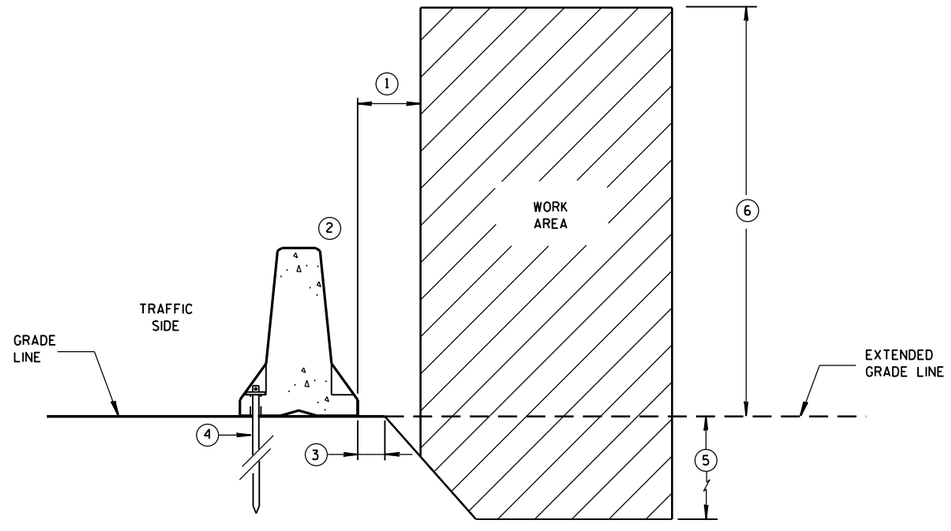
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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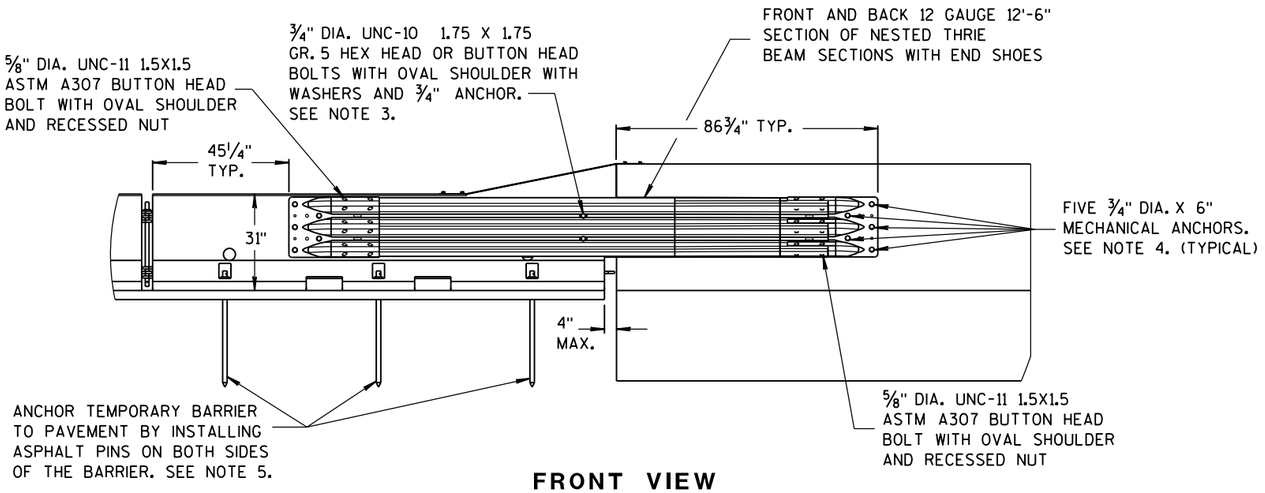
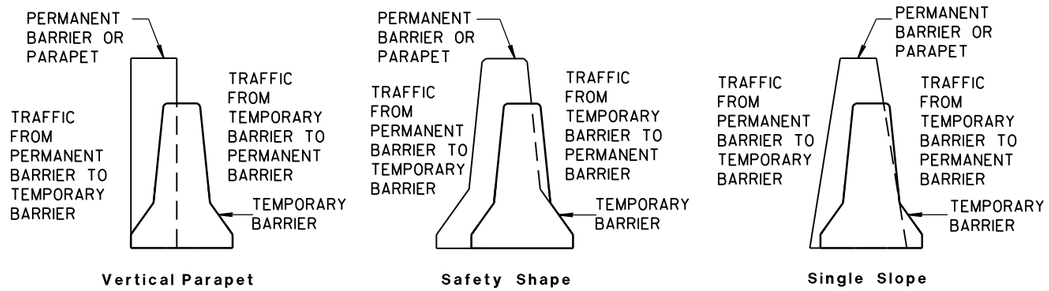
S.D.D. 14 B 7-15e



FRONT VIEW

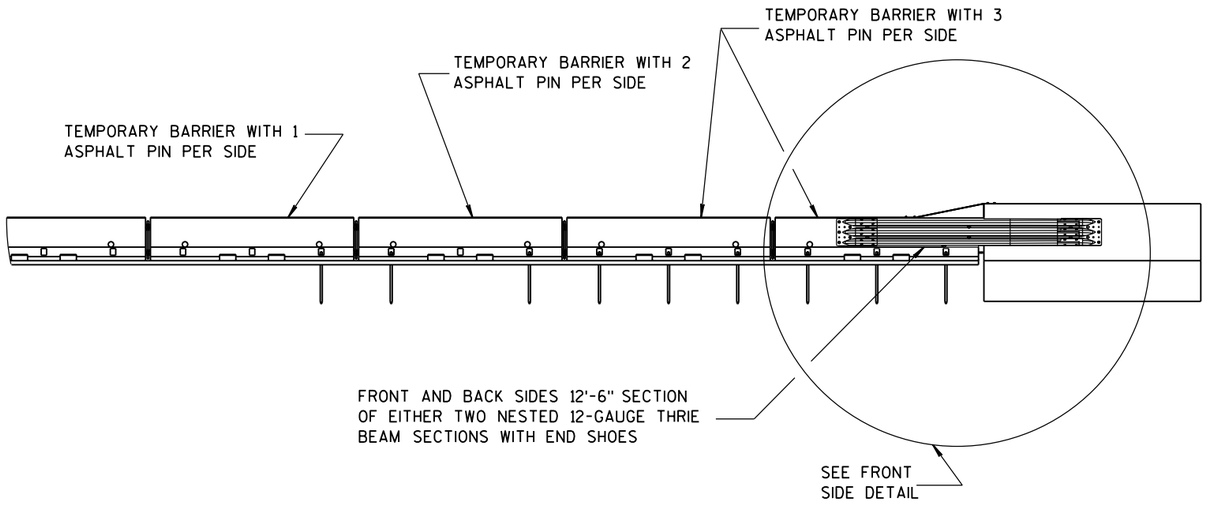


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

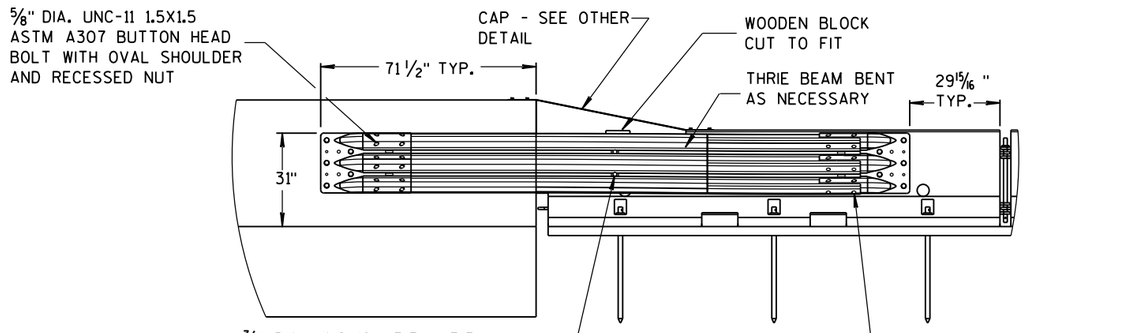
NOTES

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

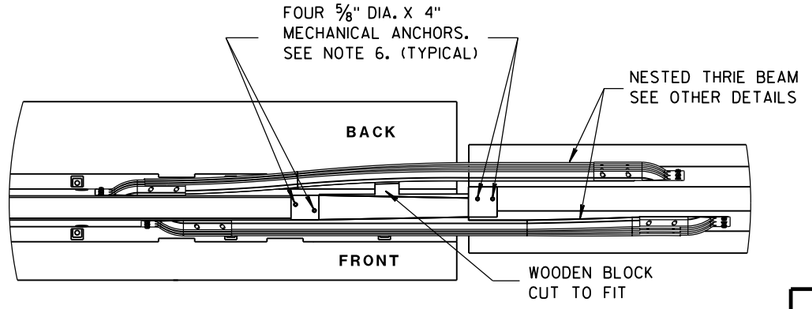
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD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



FRONT VIEW



BACK VIEW



PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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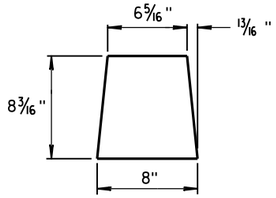
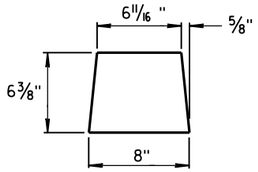
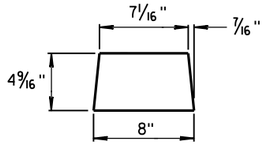
S.D.D. 14 B 7-15f



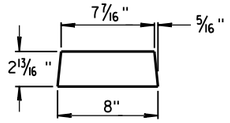
GUSSET 1



GUSSET 2

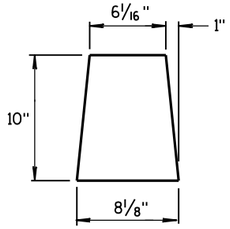


GUSSET 3

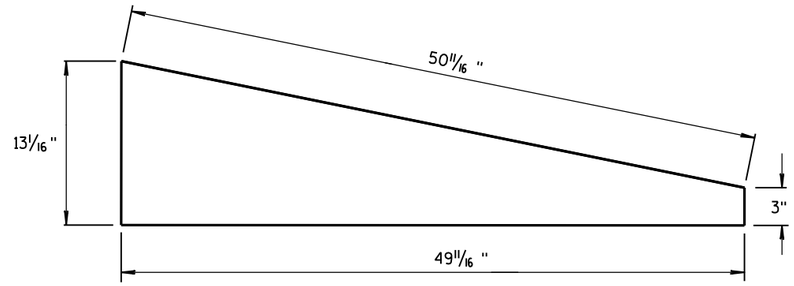


GUSSET 4

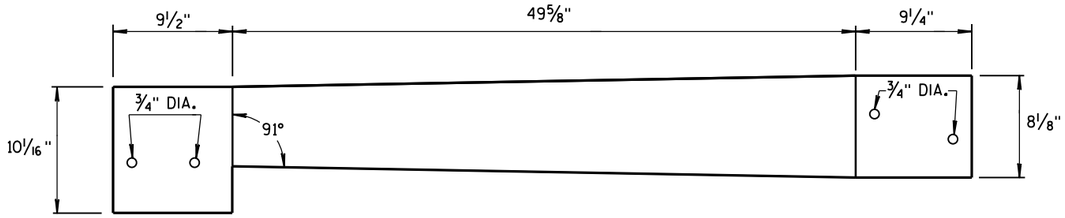
GUSSETS

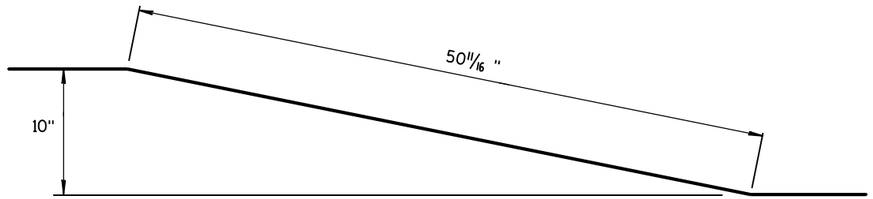


END PLATE



SIDE PLATE

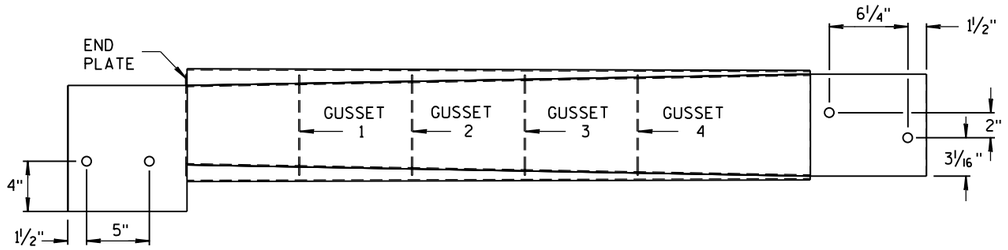


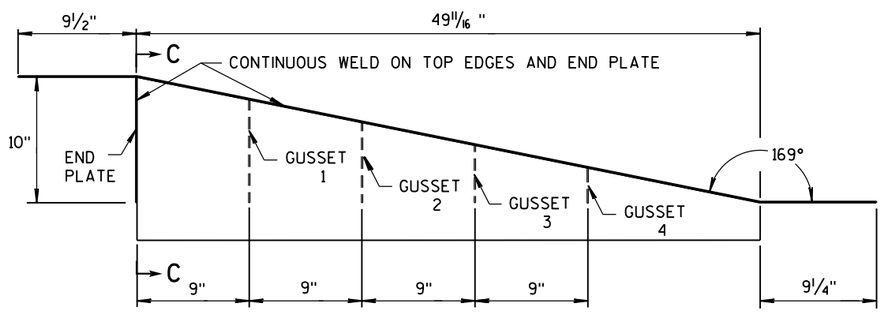


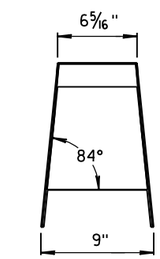
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

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







SECTION C-C

NOTES

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

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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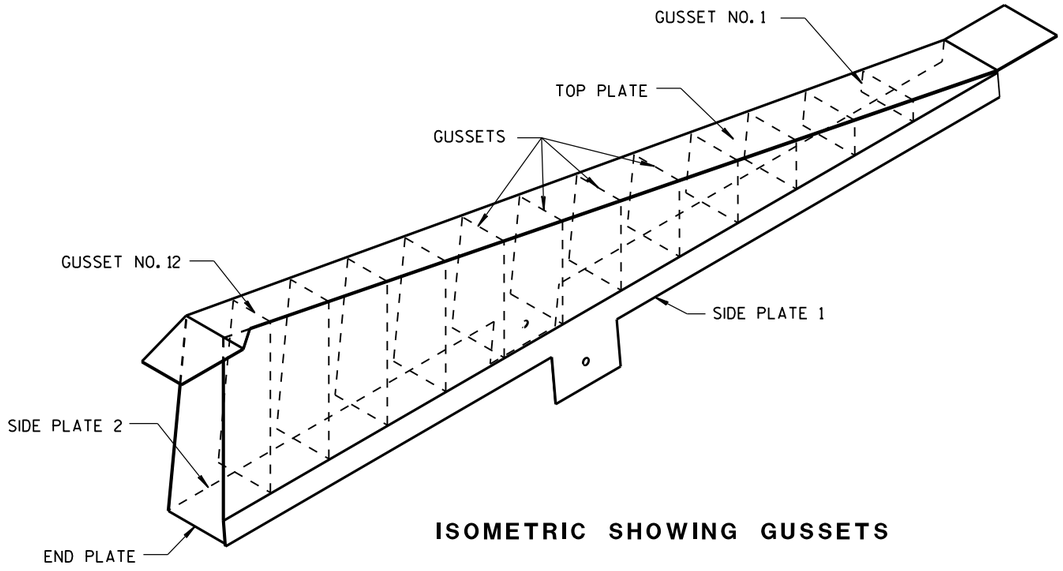
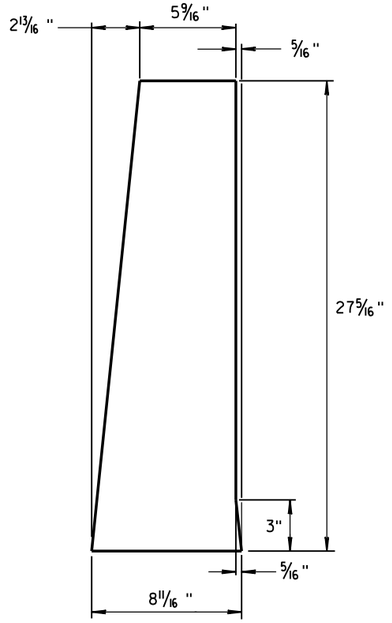
S.D.D. 14 B 7-15g

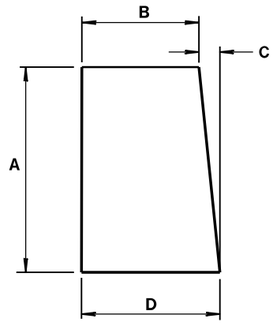


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



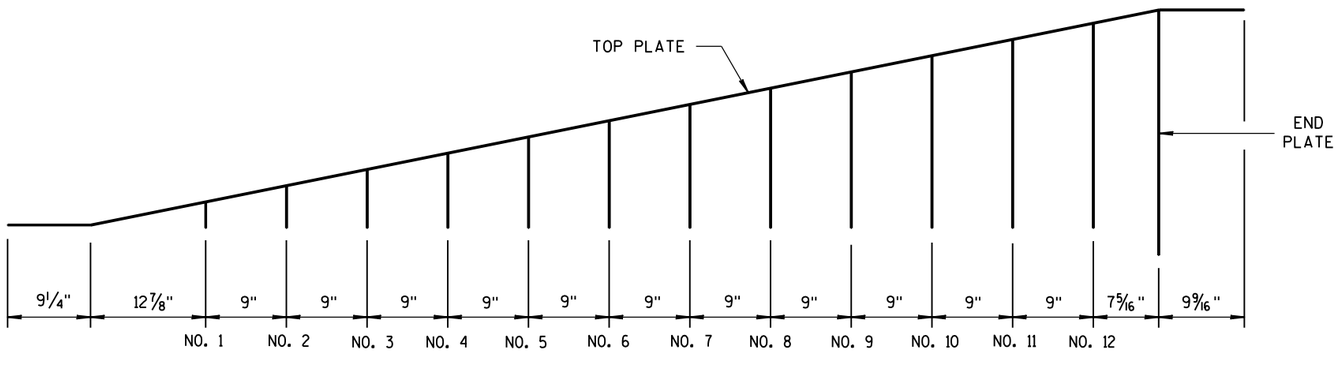
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

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

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

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



GUSSET LOCATION

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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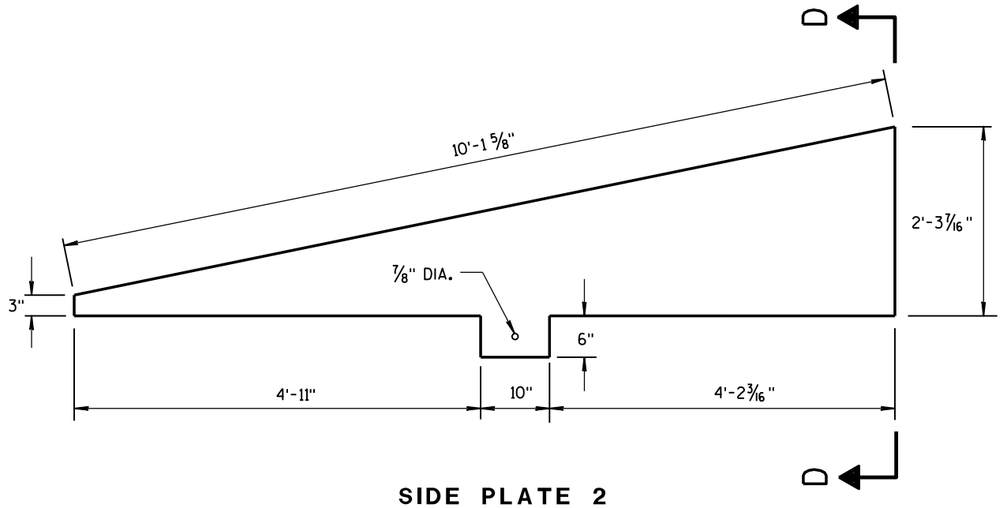
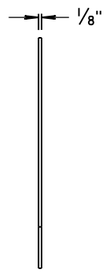
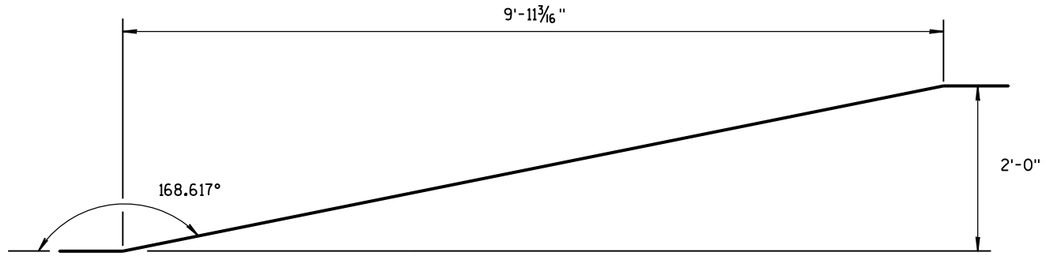
S.D.D. 14 B 7-15h



SIDE PLATE 2

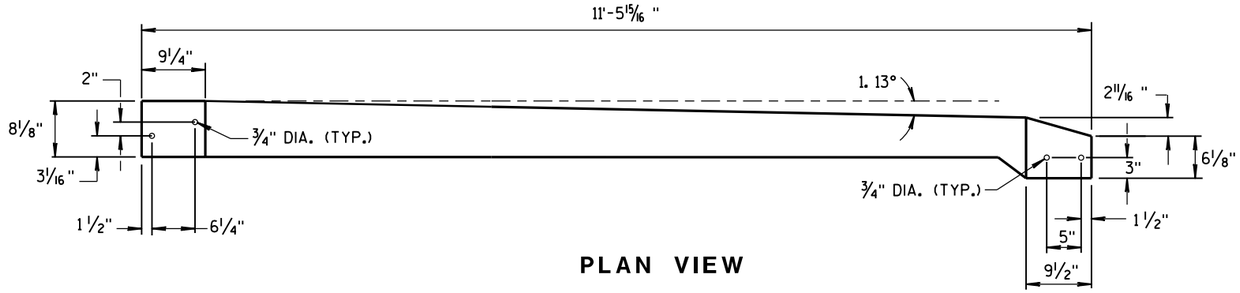


END VIEW



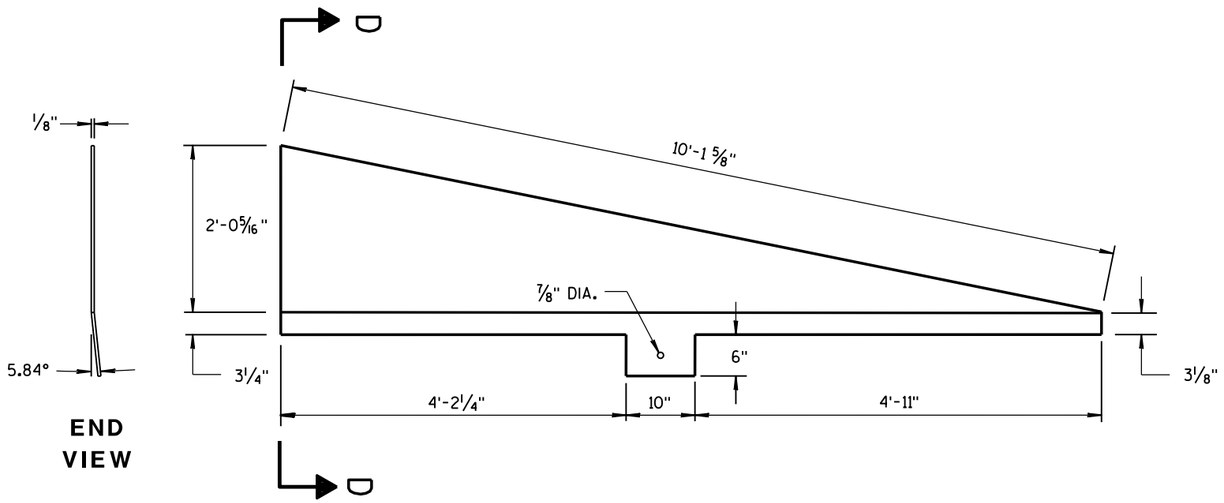
SIDE VIEW

TOP PLATE



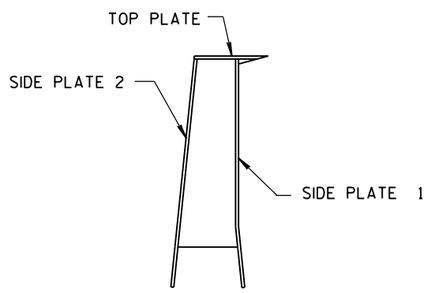
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV

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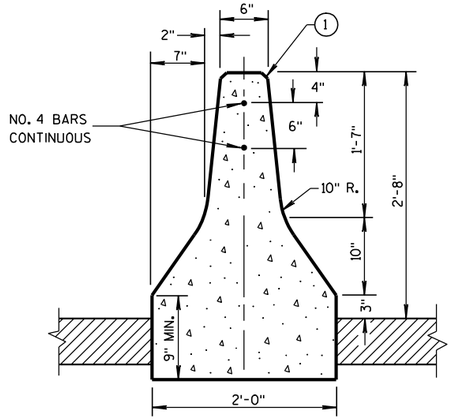
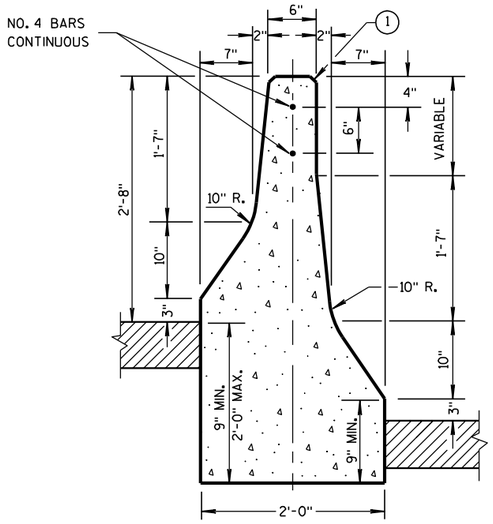
S.D.D. 14 B 7-15i



CAST-IN-PLACE



CAST-IN-PLACE
IN STEPPED MEDIAN

CONCRETE MEDIAN BARRIER WITH INTEGRAL FOOTING

GENERAL NOTES

ALL BAR STEEL REINFORCEMENT SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

SPLICES OF LONGITUDINAL BARS SHALL BE MADE WITH THE BARS LAPPED AT LEAST 18 INCHES AND FIRMLY TIED OR FASTENED TOGETHER.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED AT LEAST 2 INCHES.

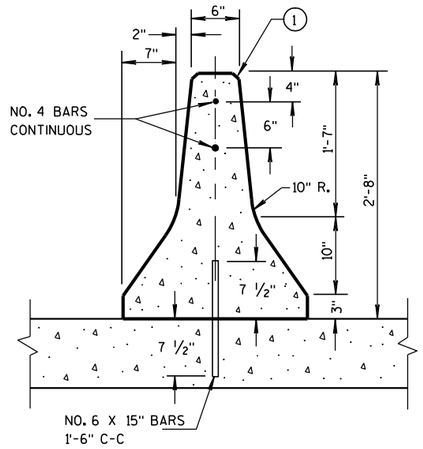
NO. 6 BARS TO ANCHOR THE BARRIERS SHALL BE EITHER INSTALLED IN THE SUPPORTING SURFACE WHEN PLACED, OR IN DRILLED HOLES USING AN EPOXY RESIN APPROVED BY THE ENGINEER.

(1) ¾ INCH BEVEL OR 1 INCH RADIUS (TYPICAL)

(2) EXPANSION JOINTS SHALL BE PLACED AT EXISTING EXPANSION JOINTS IN THE PAVEMENT AND AT STRUCTURES.

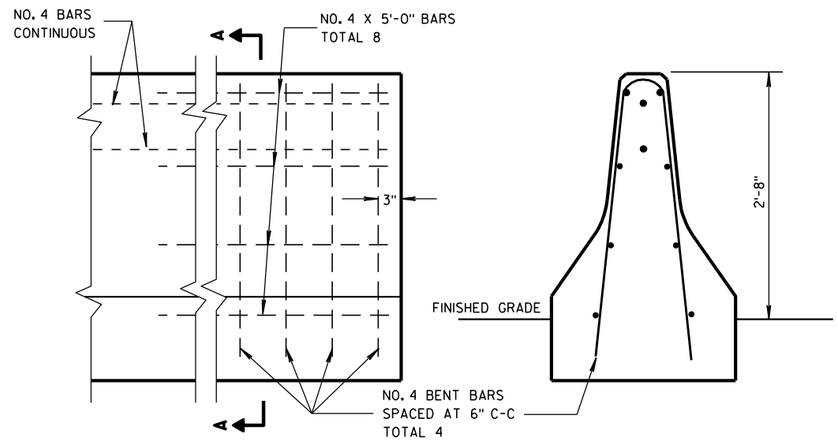
(3) NO. 4 BARS SHALL BE CONTINUED THROUGH CONSTRUCTION JOINTS.

(4) STEM REINFORCEMENT REQUIRED AT EXPANSION JOINTS AND WHERE CONCRETE BARRIER IS TERMINATED.



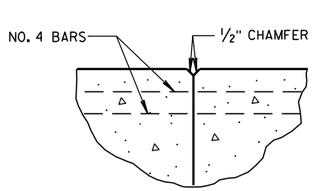
CAST-IN-PLACE

CONCRETE MEDIAN BARRIER ON NEW OR EXISTING RIGID BASE

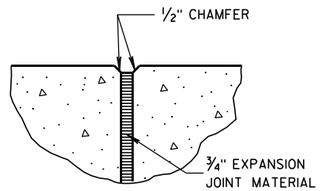


SECTION A-A

(4) STEM REINFORCEMENT AT BARRIER END
(BARRIER WITH FOOTING IS SHOWN)



(3) CONSTRUCTION JOINT



EXPANSION JOINT (2)

JOINT DETAILS

CONCRETE BARRIER (DOUBLE FACED)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/12/2010 — DATE
/S/ Jerry H. Zaaa — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 11-2

6

S.D.D. 14 B 11-2

GENERAL NOTES

(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.

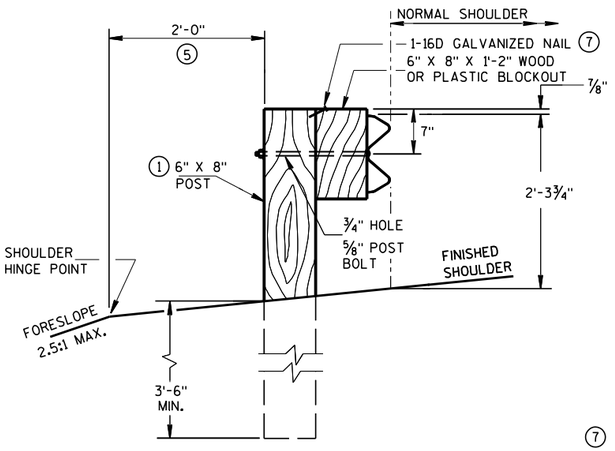
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(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.

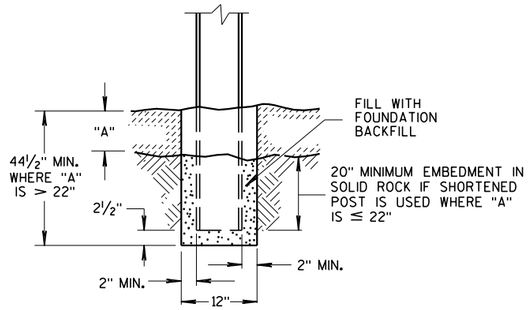
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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

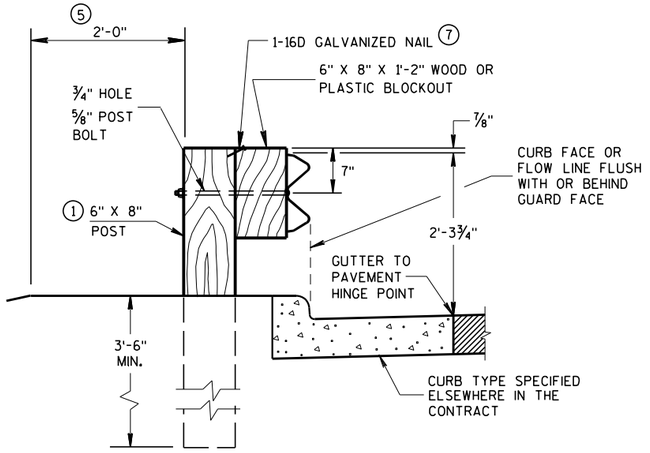
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



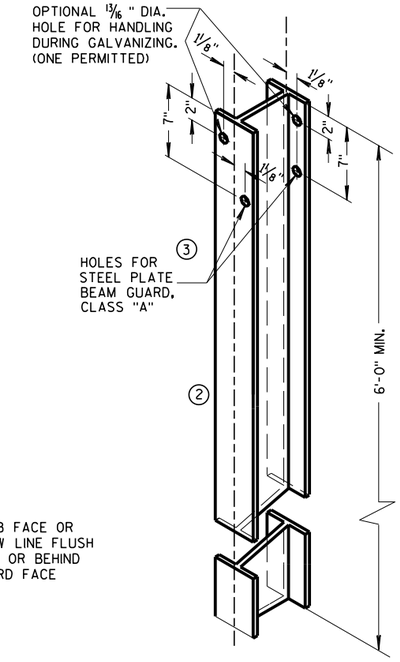
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



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

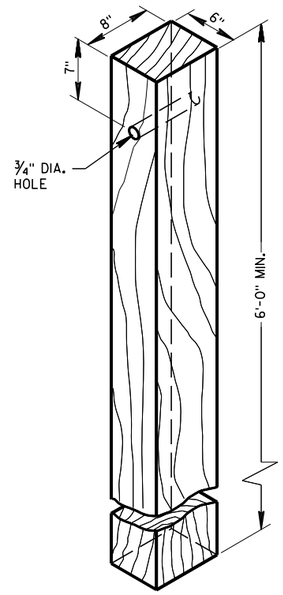


END VIEW
LOCATED ALONG A CURBED ROADWAY

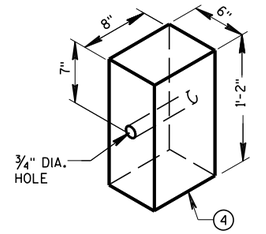


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

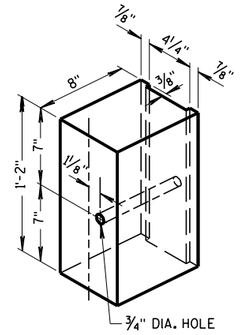
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



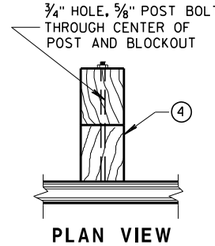
WOOD POST
(6"X8") NOMINAL



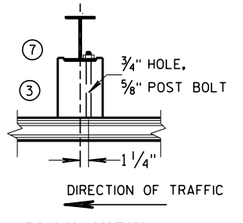
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



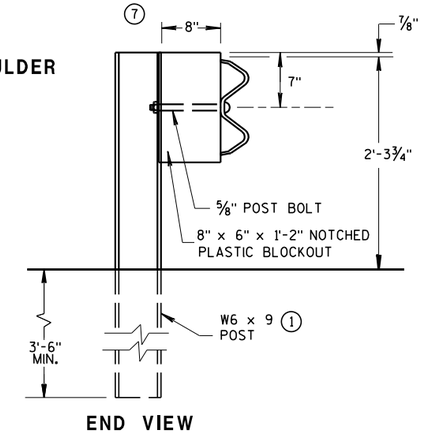
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS (1)



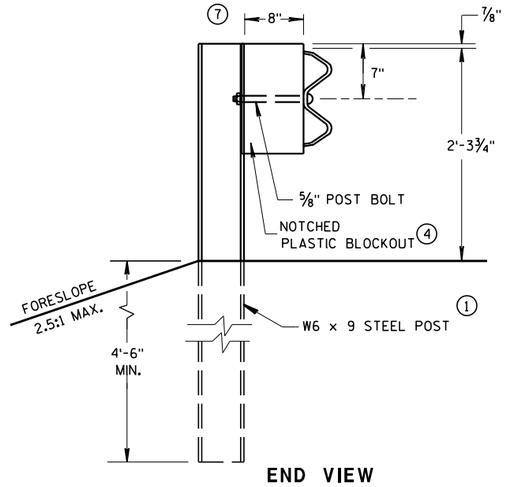
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



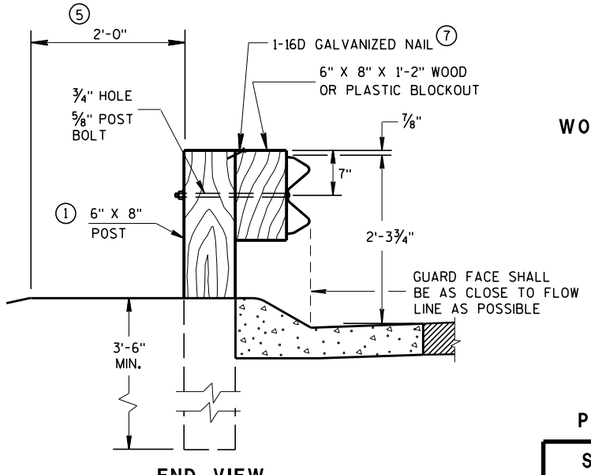
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



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



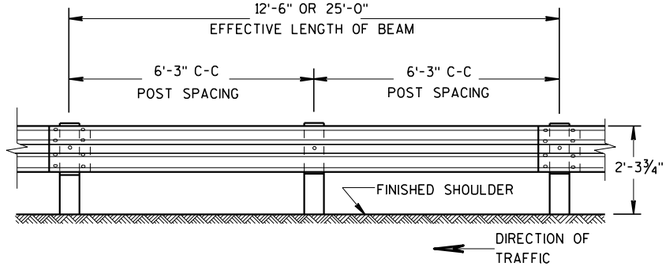
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

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

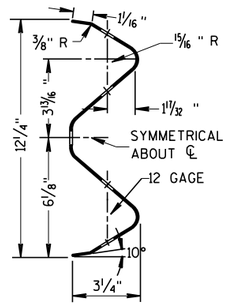
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-11a

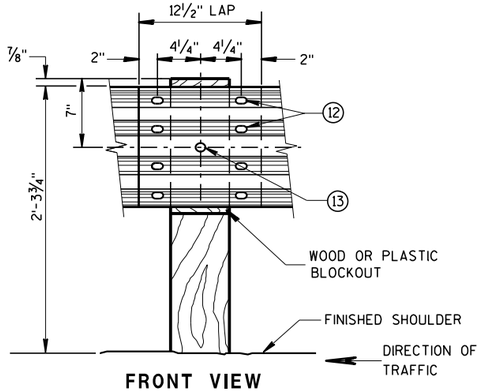


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

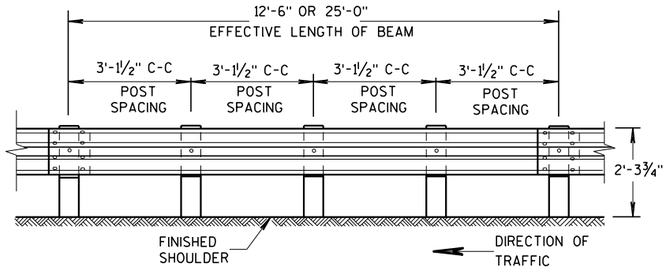
GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.

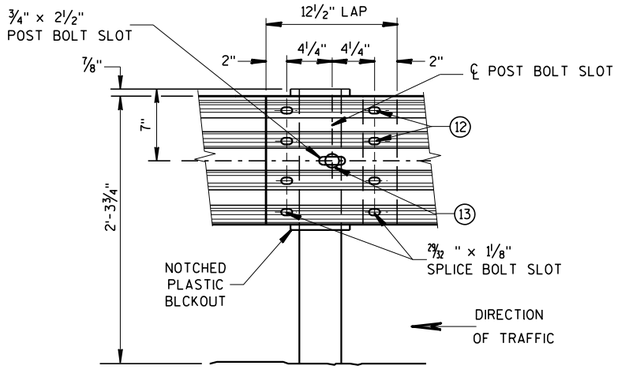
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

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



FRONT VIEW

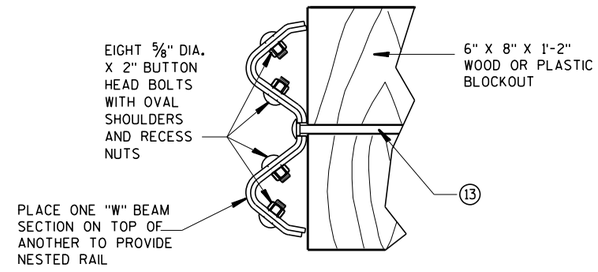
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

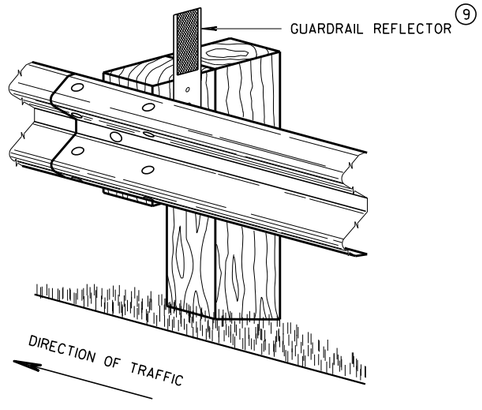
TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD



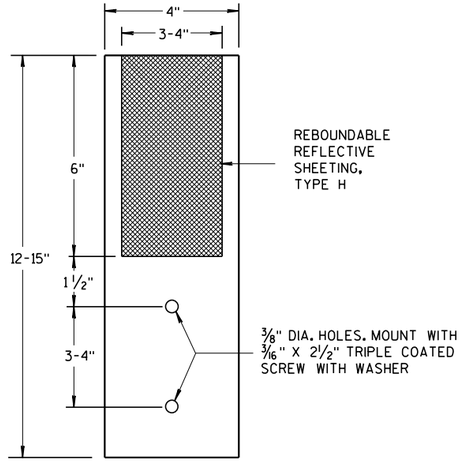
NESTED W BEAM (NW)

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

* USE DOUBLE SIDED WHITE GUADRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



4" X 12" GUARDRAIL REFLECTOR DETAIL AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

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

STATE OF WISCO 181
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 15-11b

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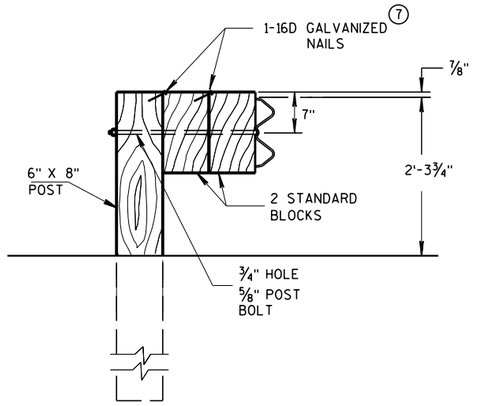
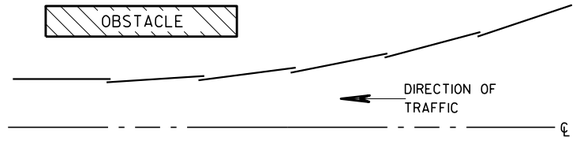
S.D.D. 14 B 15-11b

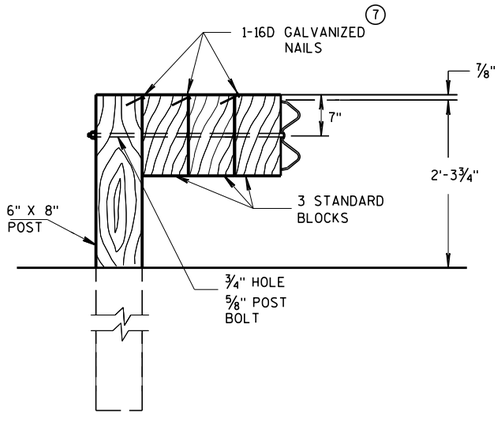


DETAIL FOR DOUBLE BLOCKS

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

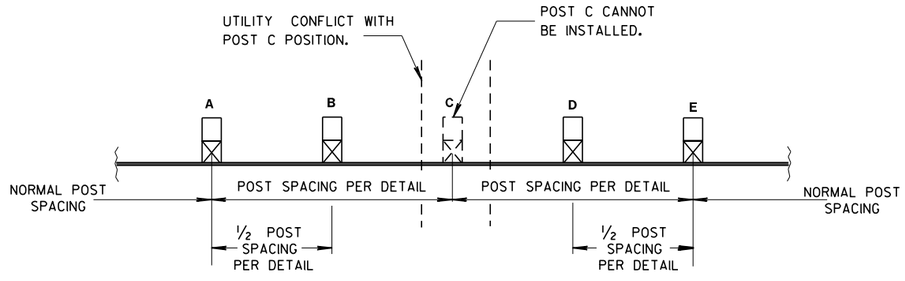


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

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



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

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

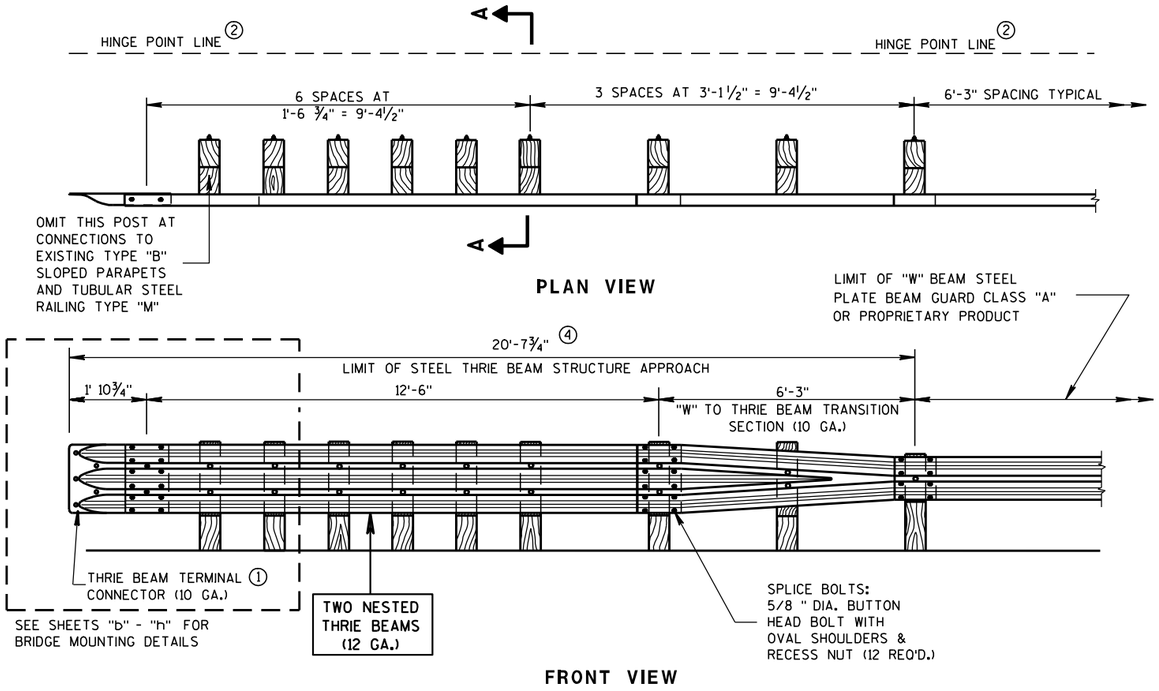
STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR

6
S.D.D. 14 B 15-11c



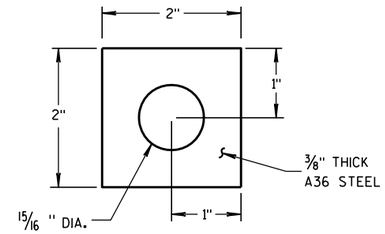


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

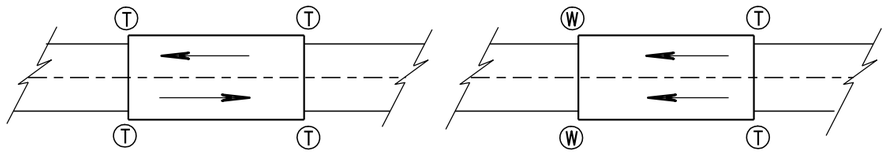
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



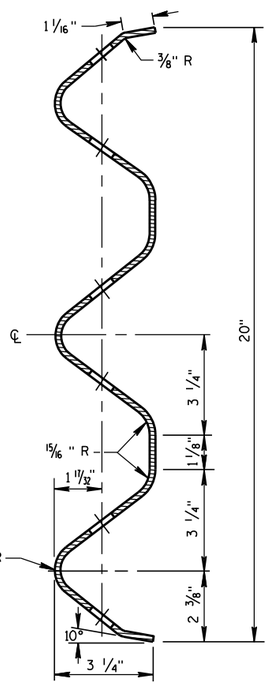
TWO WAY TRAFFIC

ONE WAY TRAFFIC

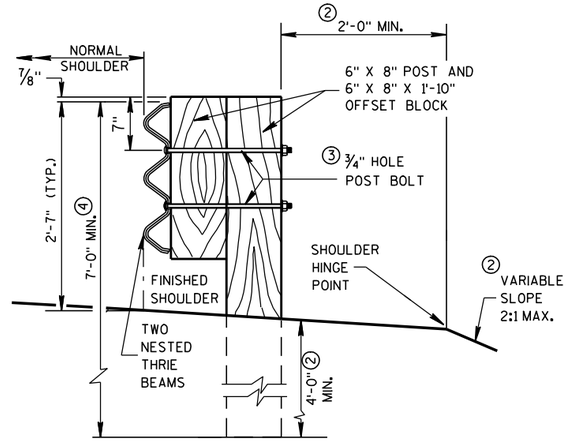
T THRIE BEAM CONNECTION

W W-BEAM CONNECTION WHEN REQUIRED

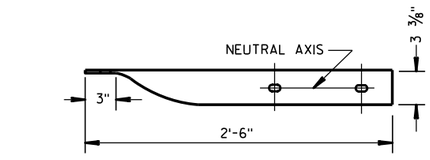
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

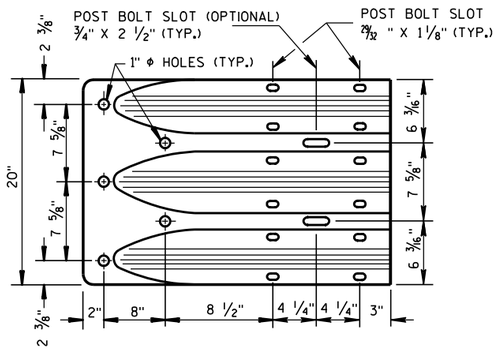


SECTION THRU THRIE BEAM RAIL ELEMENT

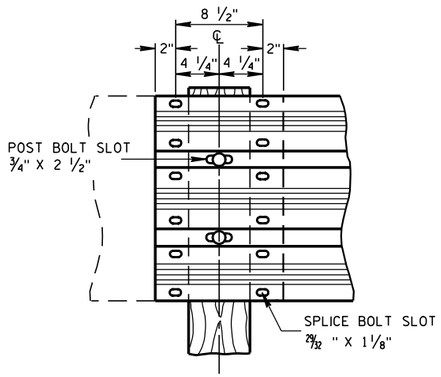


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



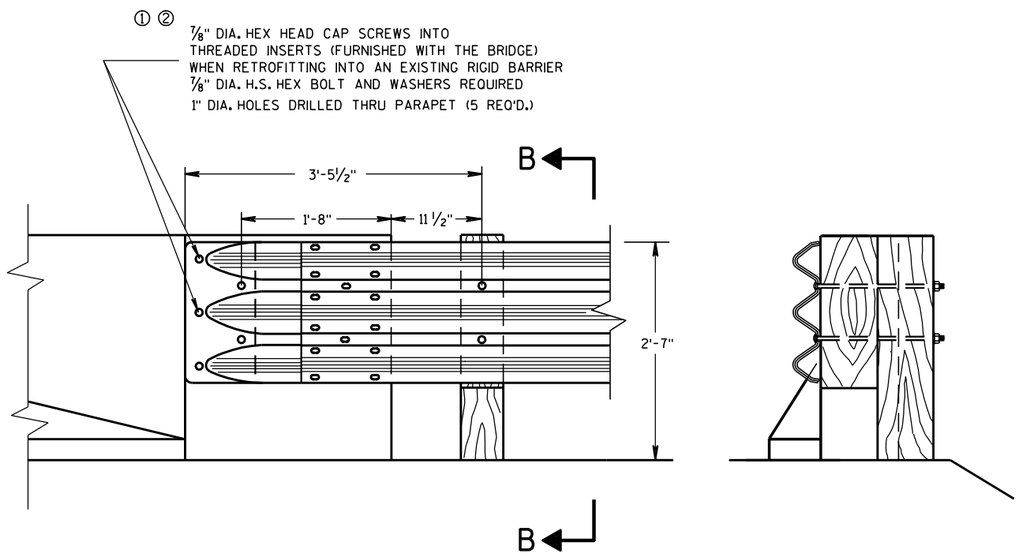
THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

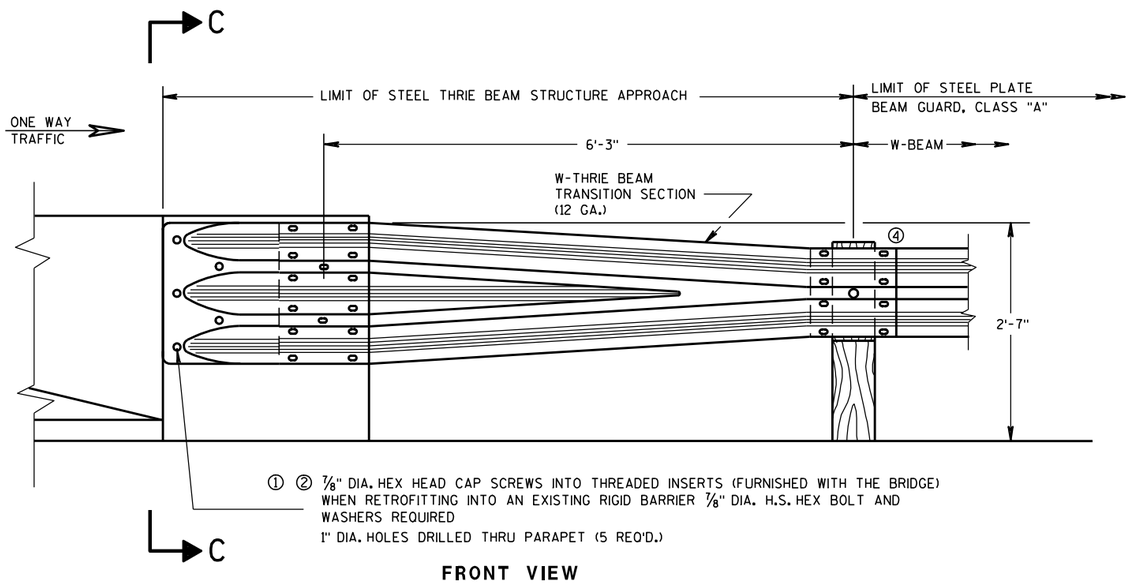
FHWA



FRONT VIEW

SECTION B-B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET (5 REQ'D.)

FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

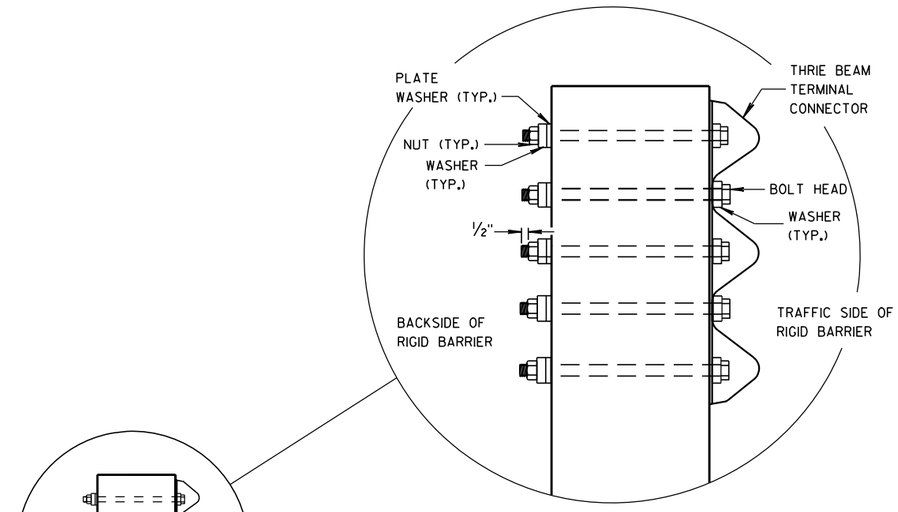
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

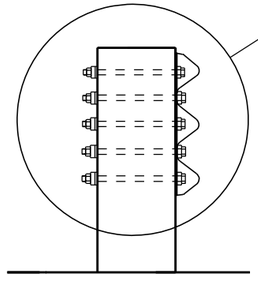
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



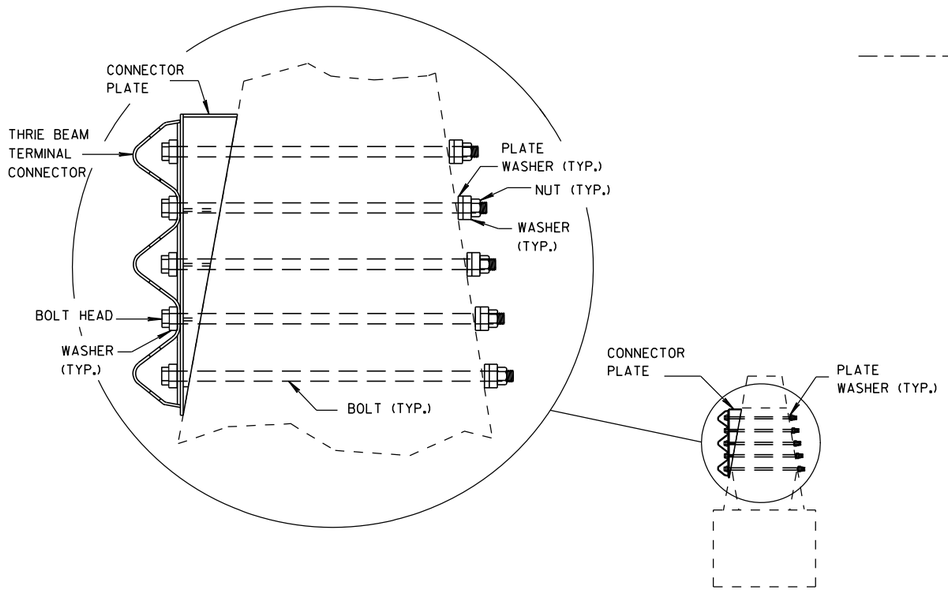


SECTION C-C

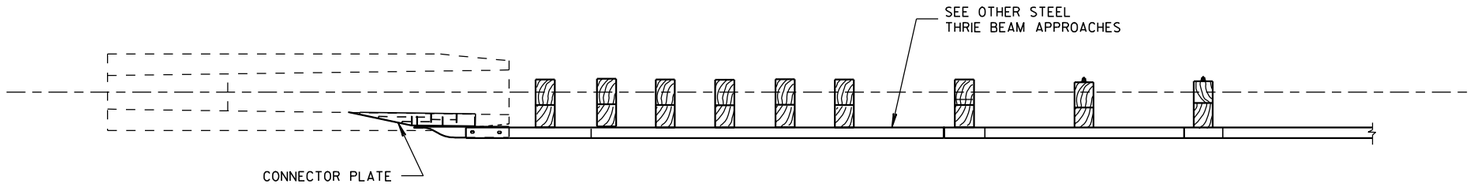
STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

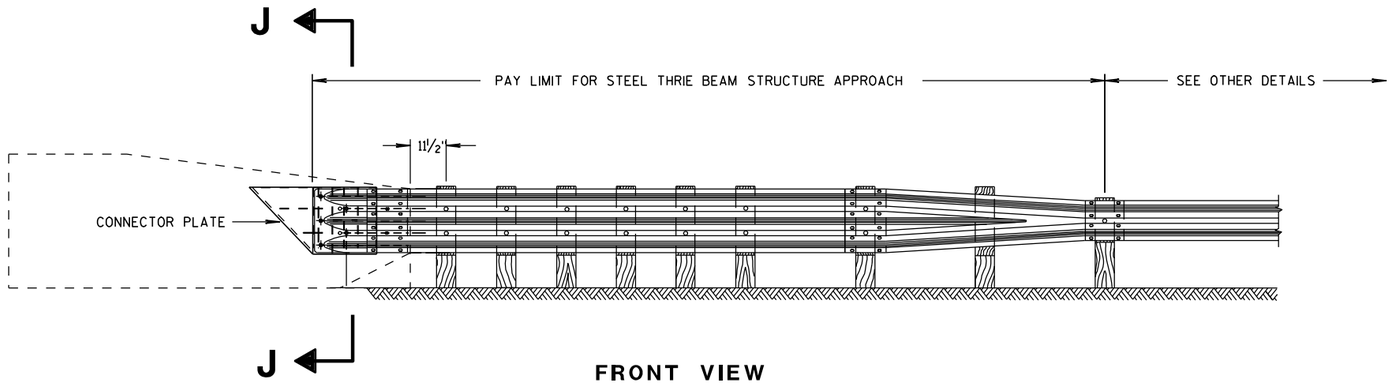
APPROVED
8/31/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA



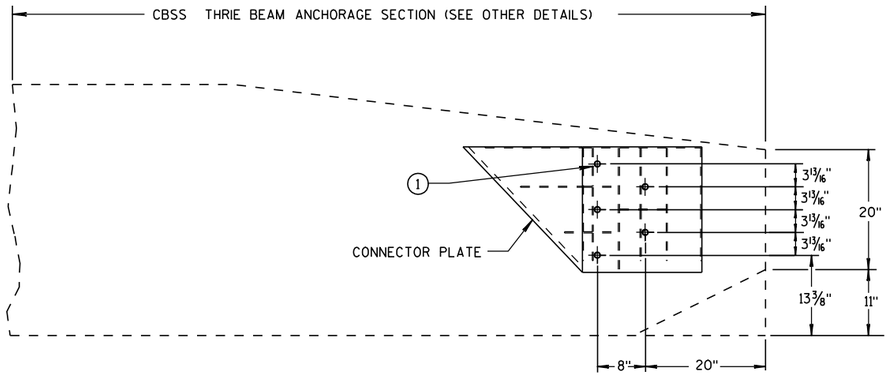
SECTION J-J



PLAN VIEW



FRONT VIEW



CONNECTOR PLATE LOCATION

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

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

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

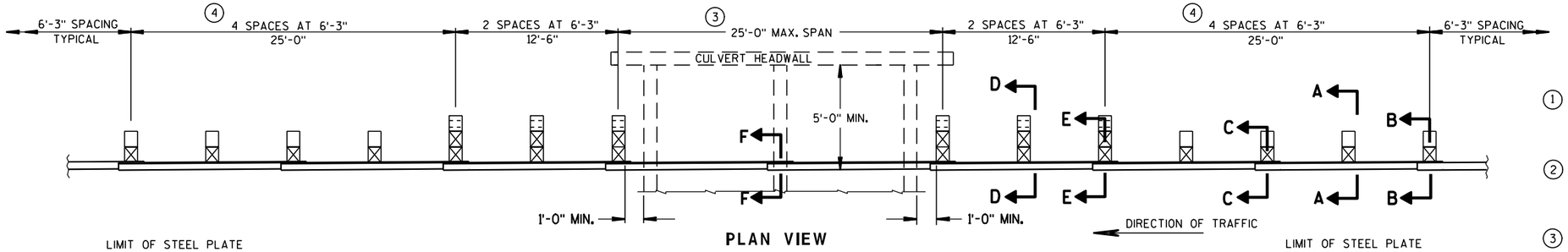
8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

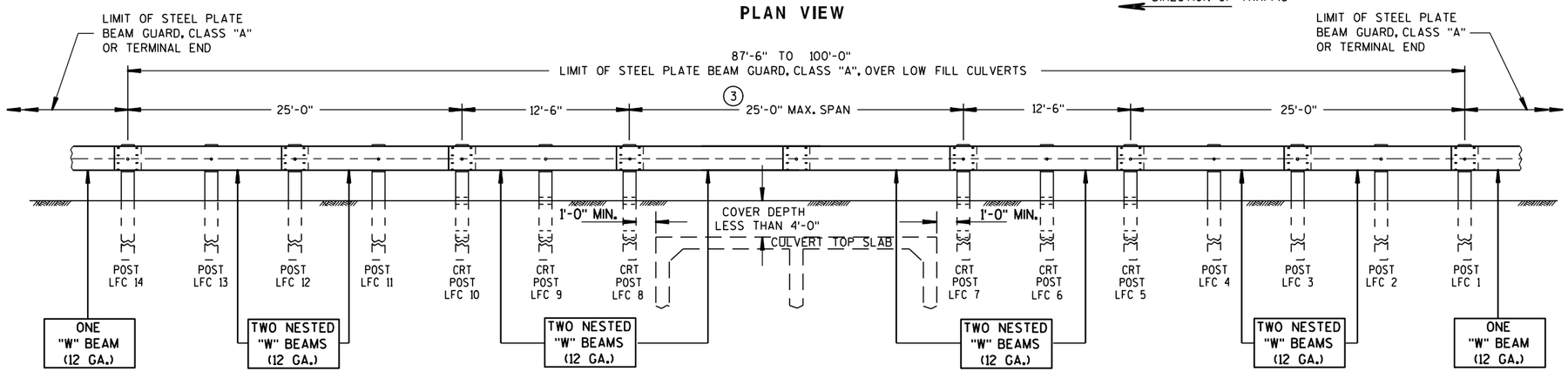
FHWA

6

S.D.D. 14 B 20-11h



PLAN VIEW



FRONT VIEW

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD OVER LOW FILL CULVERTS

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.

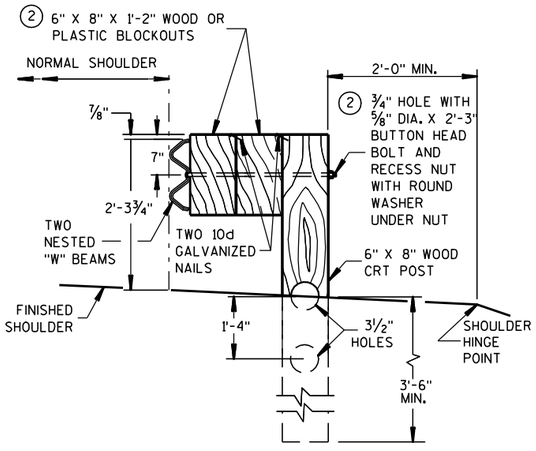
(1) MAINTAIN THE NESTING OF EACH NESTED PAIR OF "W" BEAM SECTIONS THROUGH SPLICES. ORIENTATE NESTED "W" BEAM SPLICES IN THE DIRECTION OF TRAFFIC AS THE PLAN VIEW SHOWS. SEE S.D.D. 14 B 15 FOR SPLICE INSTALLATION.

(2) THE CONTRACTOR MAY USE APPROVED PLASTIC BLOCKOUTS IN LIEU OF WOOD BLOCKOUTS. SEE S.D.D. 14 B 15 FOR TYPICAL BLOCKOUT, SPLICE AND REFLECTOR INSTALLATIONS. USE BOLT SIZES AND LENGTHS AS SHOWN ON THIS DETAIL.

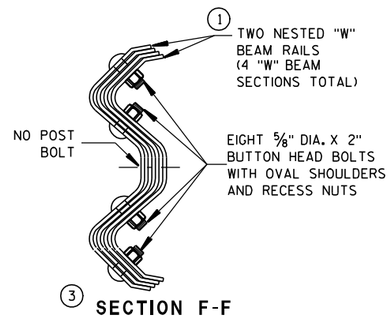
(3) PROVIDE 12'-6", 18'-9" AND 25'-0" SPANS ONLY. USE A MAXIMUM OF ONE SPLICE LOCATED ANYWHERE WITHIN THE SPAN SECTION. LOCATE ALL OTHER SPLICES AT BEAM GUARD POSTS.

(4) IN THE FIRST AND LAST 25 FOOT SECTIONS (POSTS LFC 1-4 & LFC 11-14), THE CONTRACTOR MAY USE W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS OR 6" X 8" WOOD POSTS WITH EITHER WOOD OR PLASTIC BLOCKOUTS. DO NOT MIX STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS AND WOOD POSTS WITH EITHER WOOD OR PLASTIC BLOCKOUTS IN THE SAME INSTALLATION.

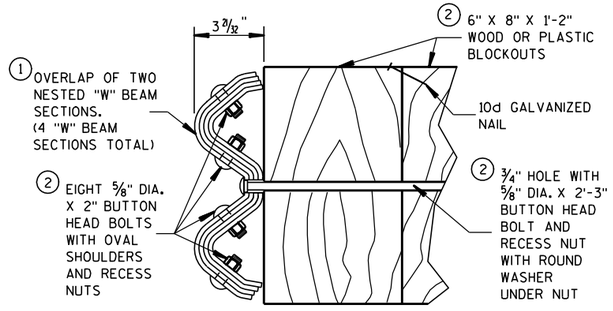
(5) WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK, THE PLAN TYPICAL SECTIONS OR DETAILS MAY SHOW, OR THE ENGINEER MAY ALLOW, THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. BUILD AS THE PLAN SHOWS OR ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST SOIL DEPTH TO 4'-6" OR MORE.



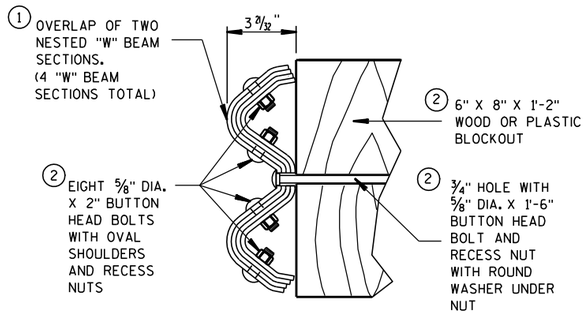
SECTION D-D
TYPICAL CRT POST LFC 6 AND 9



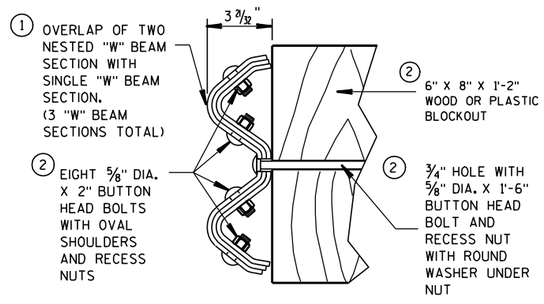
(3) SECTION F-F
BEAM SPLICE IN SPAN OVER CULVERT



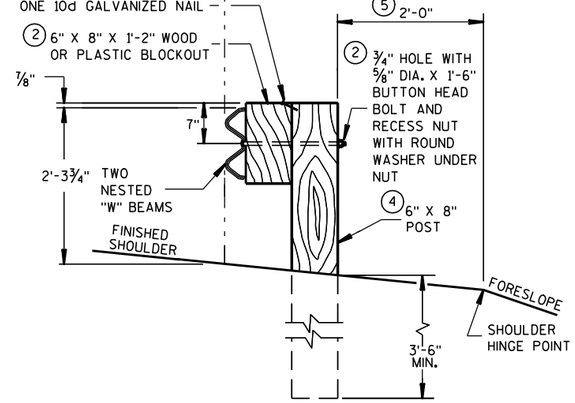
SECTION E-E
TYPICAL CRT POST LFC 5, 7, 8 AND 10



SECTION C-C
TYPICAL AT POSTS LFC 3 AND 12



SECTION B-B
TYPICAL AT POSTS LFC 1 AND 14



SECTION A-A
TYPICAL AT POST LFC 2,4,11,13

STEEL PLATE BEAM GUARD, CLASS "A", OVER LOW FILL CULVERTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

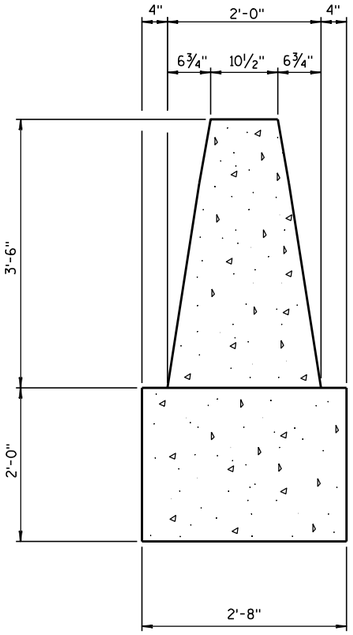
APPROVED
12/8/00 DATE
/S/ John Have... CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

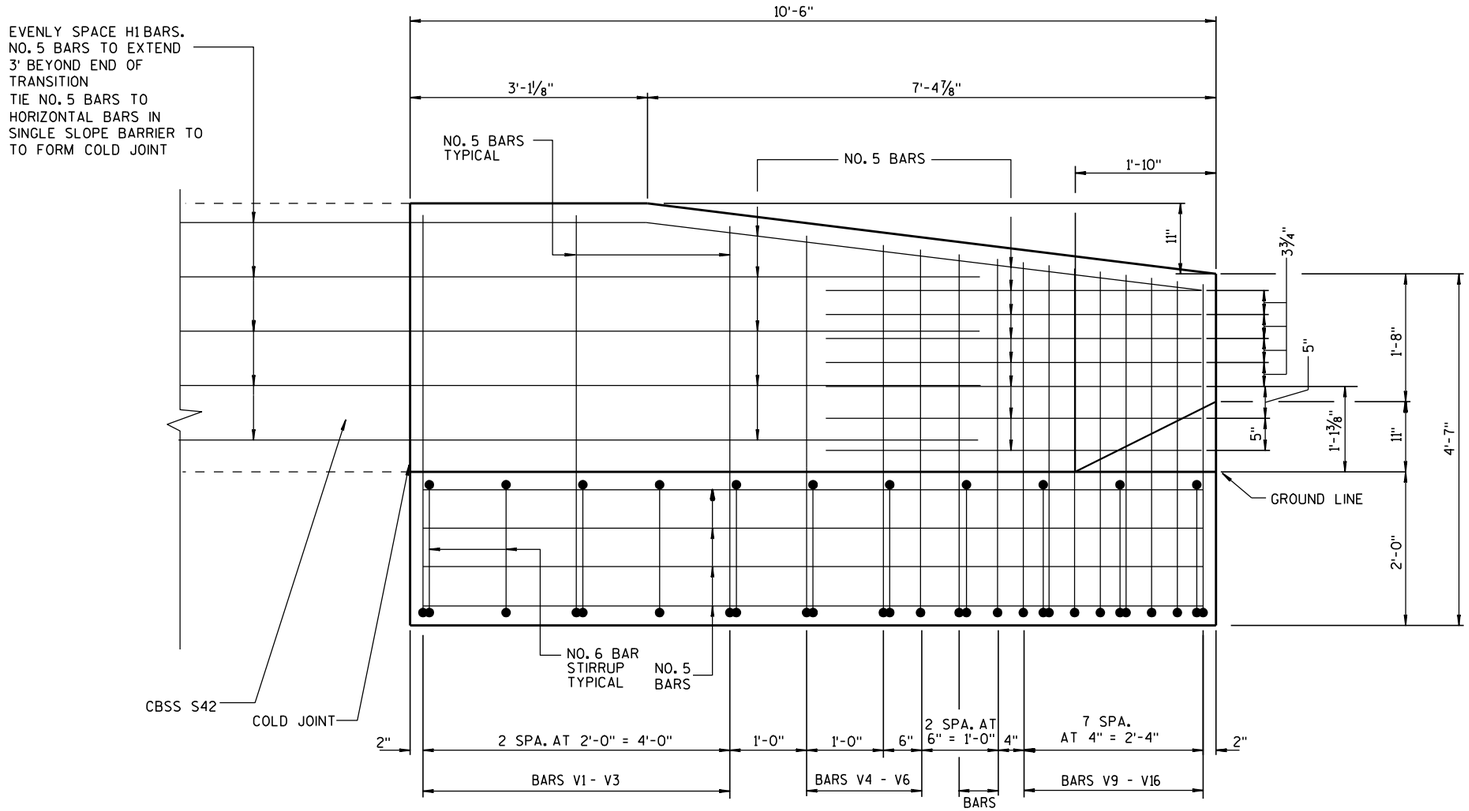
S.D.D. 14 B 25-1

6

S.D.D. 14 B 25-1

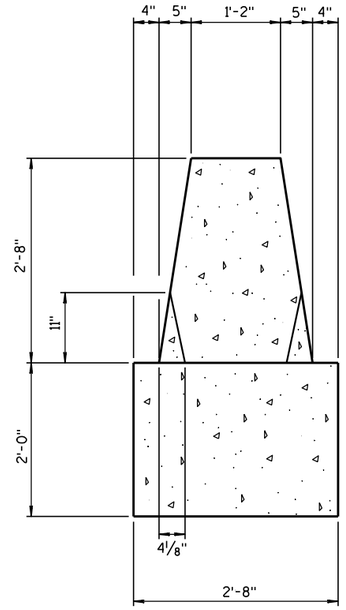


SECTION A-A

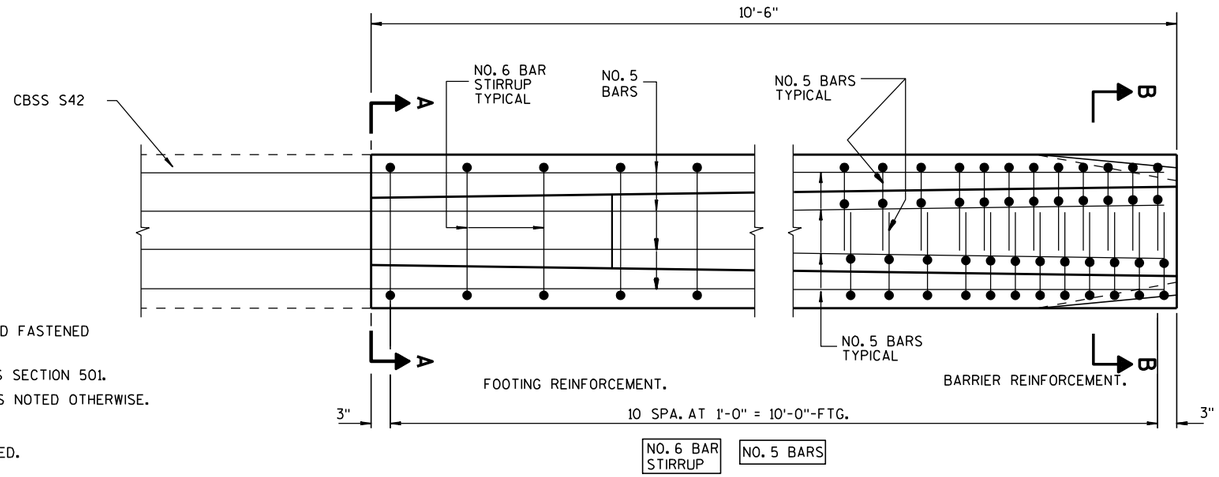


SEE SECTIONS ① THRU ⑯

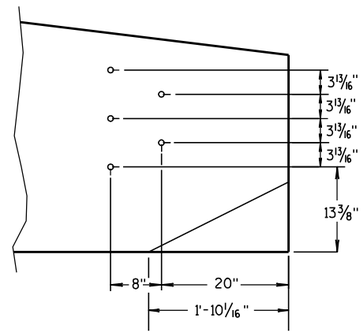
ELEVATION VIEW



SECTION B-B



PLAN VIEW



PVC PIPE LOCATIONS

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THRIE BEAM ANCHOR INCIDENTAL TO CONCRETE BARRIER ITEM.

INSTALL SCHEDULE 40 PVC PIPE 1" DIAMETER AT LOCATIONS INDICATED.

EXTEND PVC PIPE COMPLETELY THROUGH BARRIER.

CUT ENDS OF PVC PIPE FLUSH WITH FINISHED FACE of BARRIER.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR

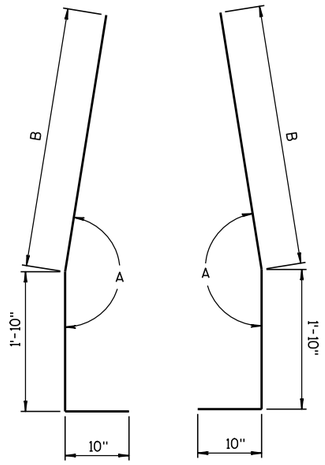
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 33-1g

BAR CHART
SECTIONS V1 - V11

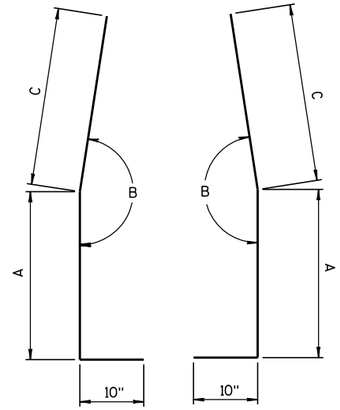
BAR	A	B
V1	170°-50'	3'-4½"
V2	171°-20'	3'-4½"
V3	171°-30'	3'-2½"
V4	171°-25'	3'-1½"
V5	171°-15'	3'-0"
V6	171°-15'	2'-11"
V7	171°-20'	2'-10½"
V8	171°-10'	2'-9½"
V9	171°-10'	2'-9"
V10	171°-05'	2'-8½"
V11	171°-10'	2'-8"



BAR BENDING DETAIL
FOR BARS V1 - V11

BAR CHART
SECTIONS V12 - V13

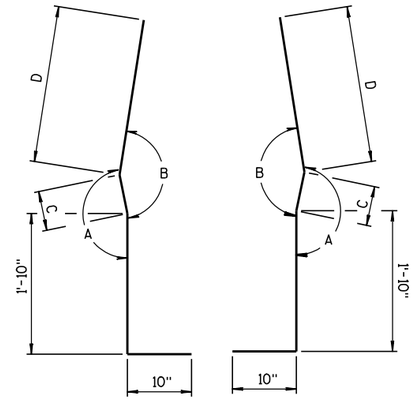
BAR	A	B	C
V12	2'-2"	171°-15'	2'-3½"
V13	2'-7"	171°-05'	1'-10"



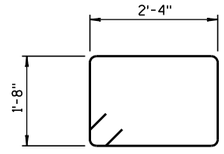
BAR BENDING DETAIL
FOR BARS V12 - V13

BAR CHART
SECTIONS V14 - V16

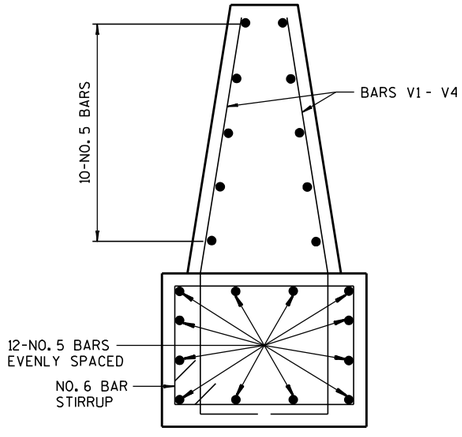
BAR	A	B	C	D
V14	168°-15'	159°-15'	6"	2'-0"
V15	169°-20'	161°-00'	8"	1'-10"
V16	168°-40'	160°-10'	10"	1'-8"



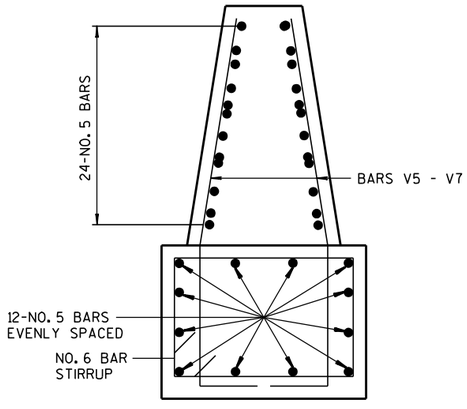
BAR BENDING DETAIL
FOR BARS V14 - V16



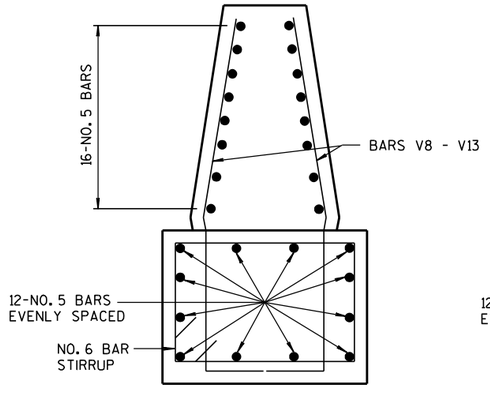
STIRRUP BAR
BENDING DETAIL



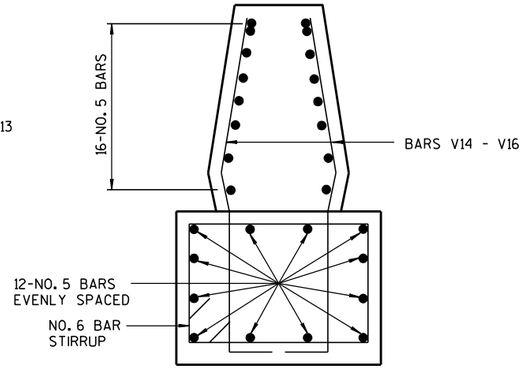
BAR DETAIL
SECTIONS V1 - V4



BAR DETAIL
SECTIONS V5 - V7



BAR DETAIL
SECTIONS V8 - V13



BAR DETAIL
SECTIONS V14 - V16

CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-3-2010 DATE
/S/ Jerry H. Z---
ROADWAY STANDARDS ENGINEER

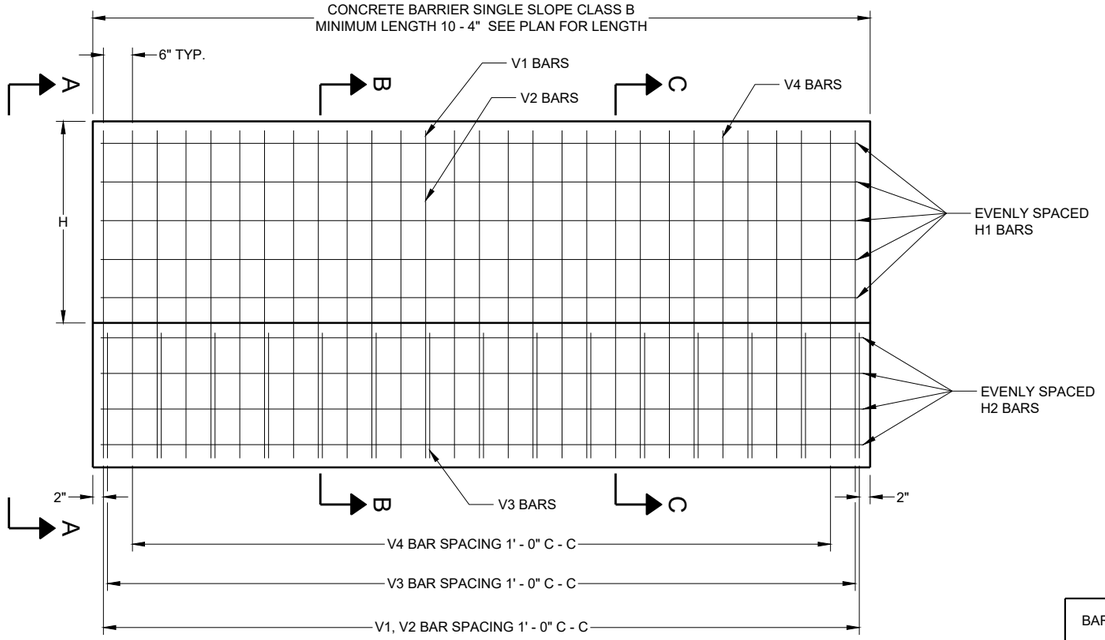
FHWA

6

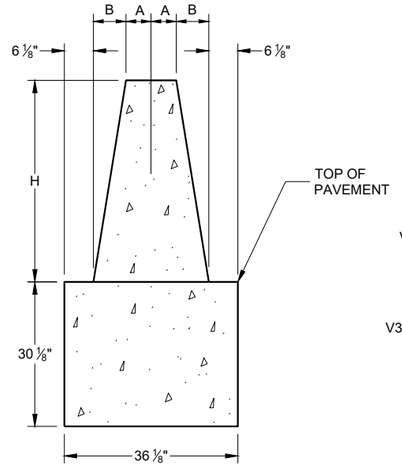
S.D.D. 14 B 33-1h

6

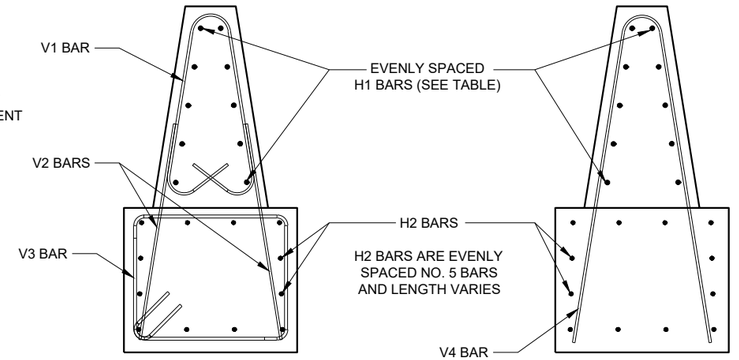
S.D.D. 14 B 33-1h



ELEVATION VIEW



SECTION A - A

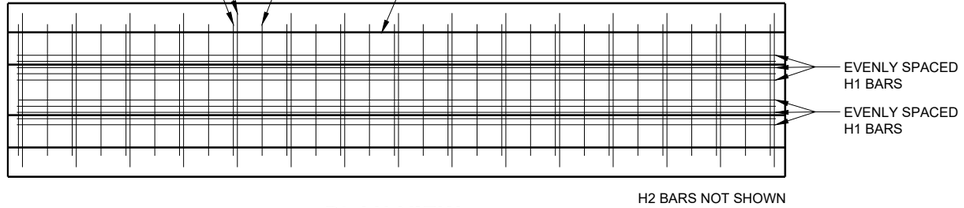


SECTION B - B

SECTION C - C

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF H1 BARS EACH
32	7	5	8
36	6 ¼	5 ¾	8
42	5 ¼	6 ¾	10

BARRIER HEIGHT H INCHES	V1 BAR		V4 BAR	
	C RAD. INCHES	D INCHES	E RAD. INCHES	F INCHES
32	5 ⅝	18 ¾	5 ½	53 ¾
36	4 ¾	23 ¾	4 ⅞	58 ⅜
42	3 ⅝	30 ½	3 ⅝	65 ⅜



PLAN VIEW

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾ " BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

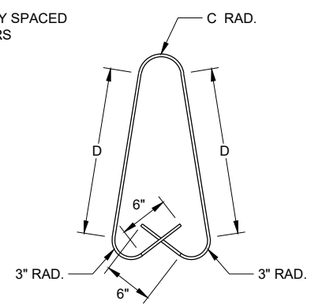
WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.

PAVEMENT AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL.

PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.

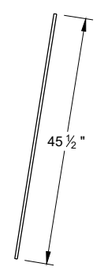
WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.

IF REQUIRED USE THRIE BEAM ANCHOR. NO OTHER ANCHOR REQUIRED.



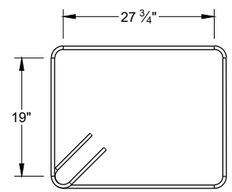
V1 BAR BENDING DETAIL

V1 BARS ARE NO. 4 BARS



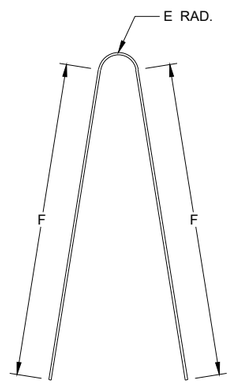
V2 BAR DETAIL

V2 BARS ARE NO. 5 BARS



V3 BAR BENDING DETAIL

V3 BARS ARE NO. 6 BARS



V4 BAR BENDING DETAIL

V4 BARS ARE NO. 6 BARS

32", 36", & 42"
CONCRETE BARRIER
SINGLE SLOPE CLASS B

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B34 - 02a

SDD 14B34 - 02a

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

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

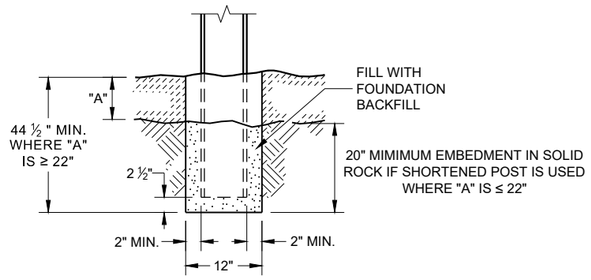
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS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

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

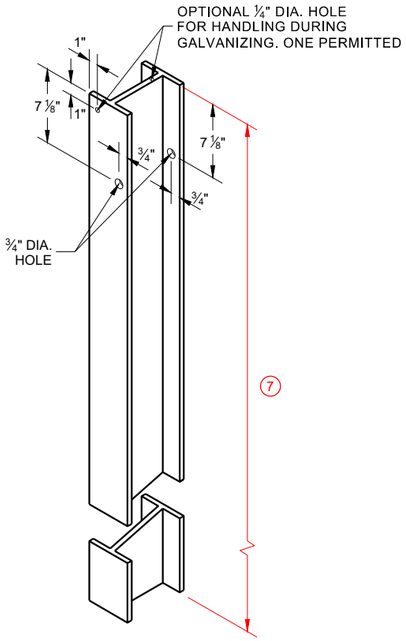
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

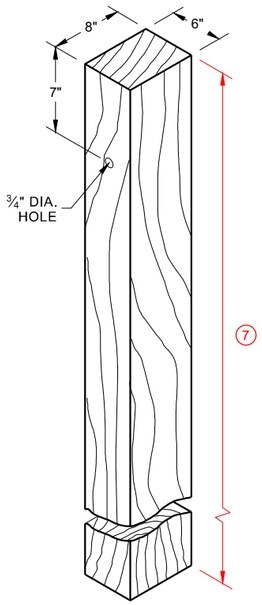
7. TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



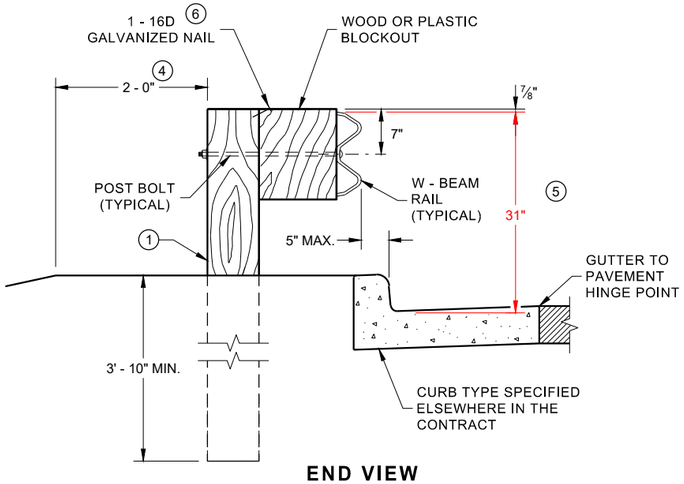
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



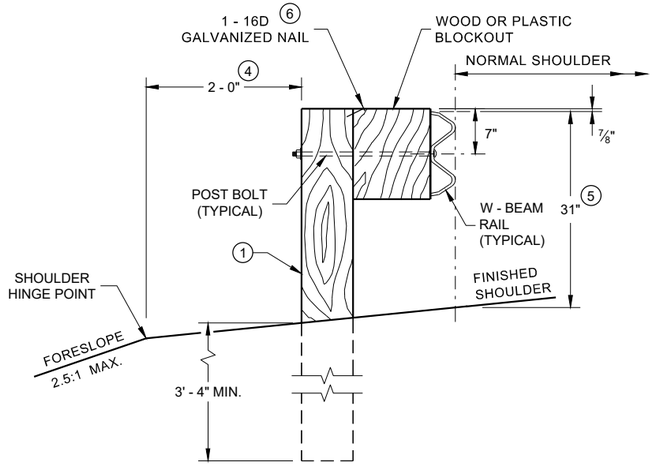
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



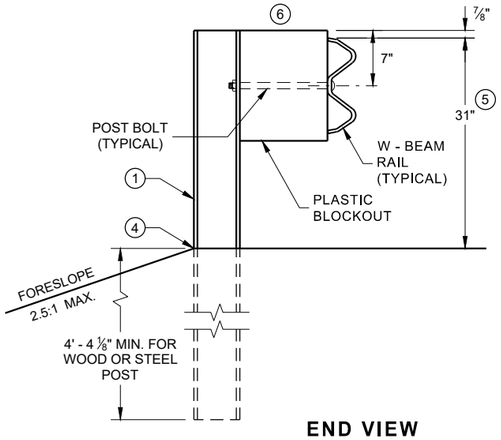
WOOD POST (6" X 8") NOMINAL (1)



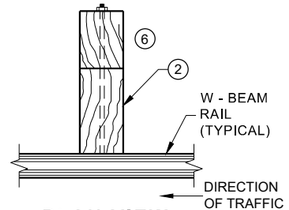
END VIEW
LOCATED ALONG A CURBED ROADWAY



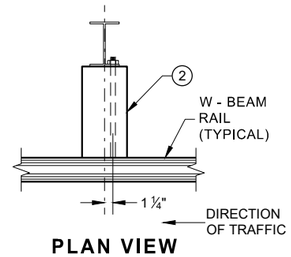
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



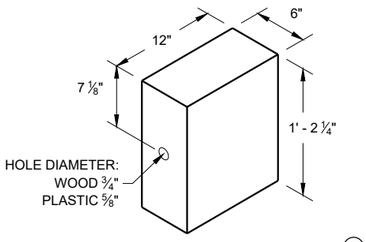
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

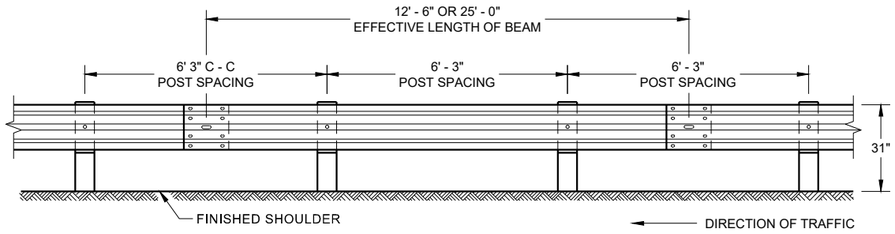
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

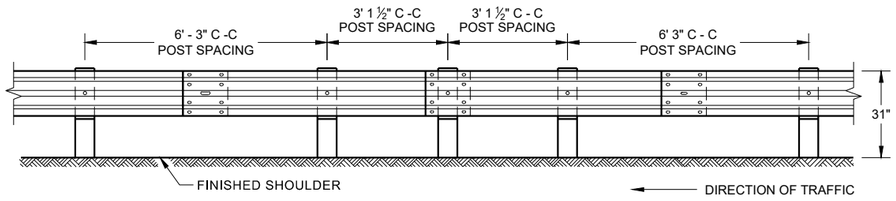
SDD 14B42 - 06a

6

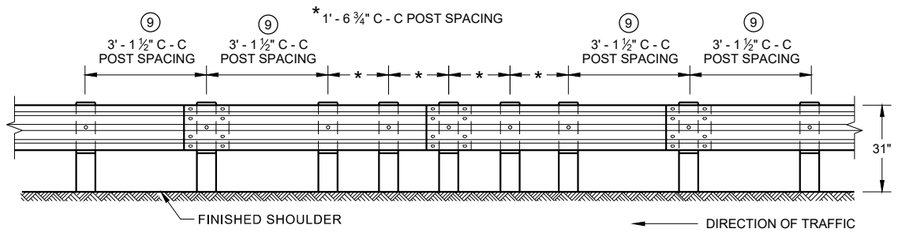
SDD 14B42 - 06a



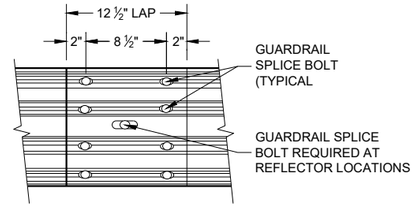
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

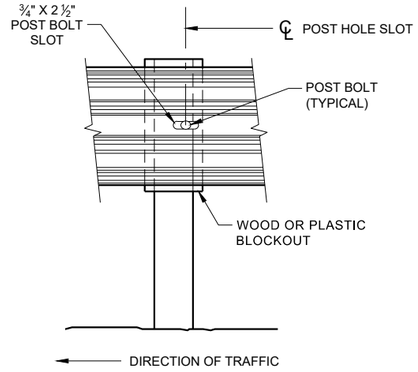
GENERAL NOTES

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

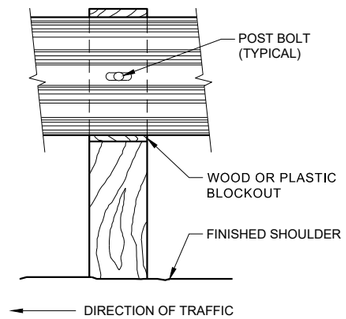
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ¾" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

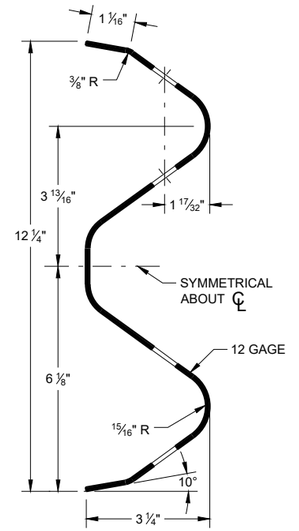
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



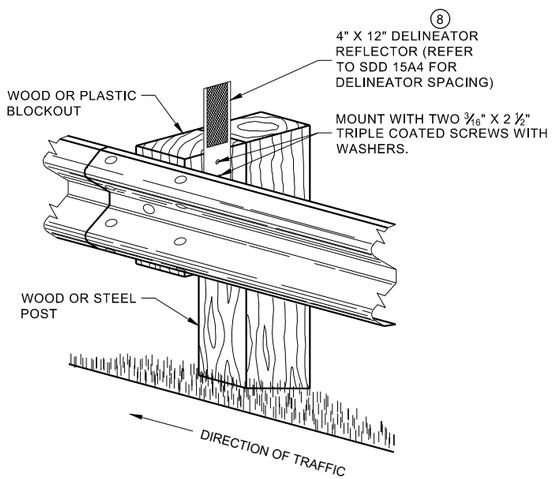
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL

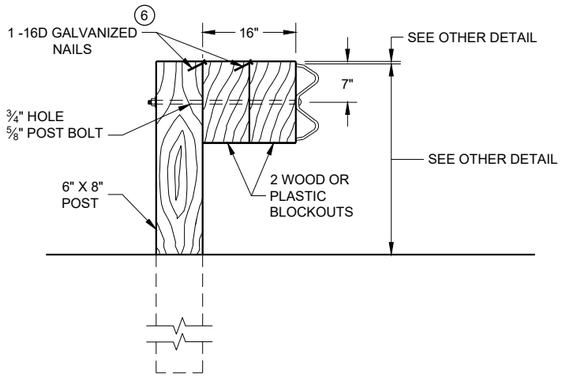


ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 06b

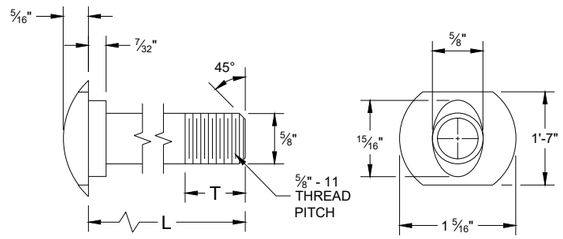


DETAIL FOR 16" BLOCKOUT DEPTH

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

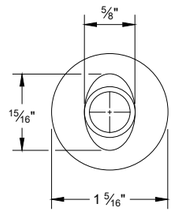
NOTE:

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

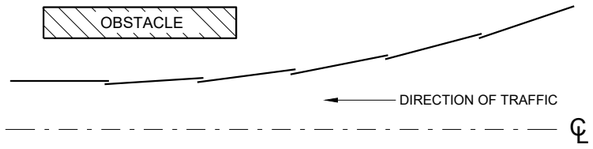


POST BOLT TABLE

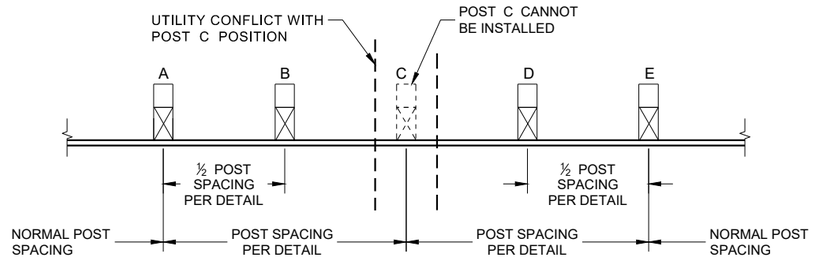
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



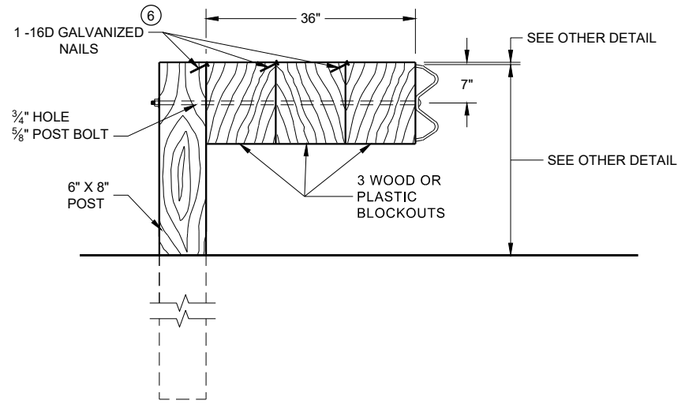
ALTERNATE BOLT HEAD



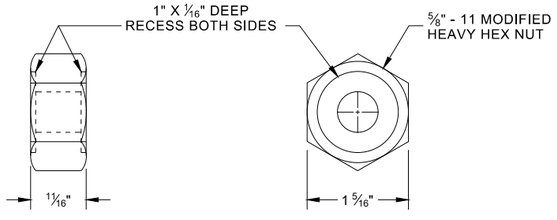
PLAN VIEW
BEAM LAPPING DETAIL



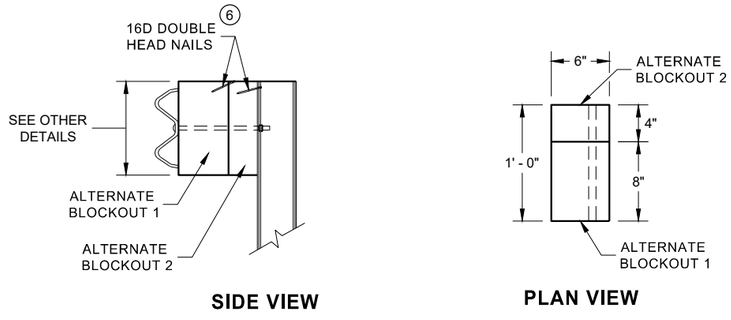
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

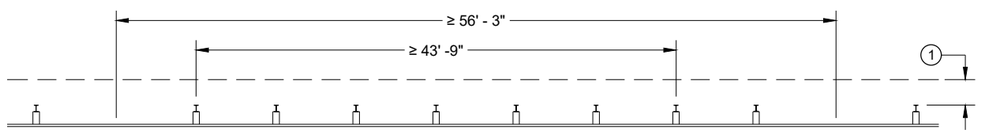
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

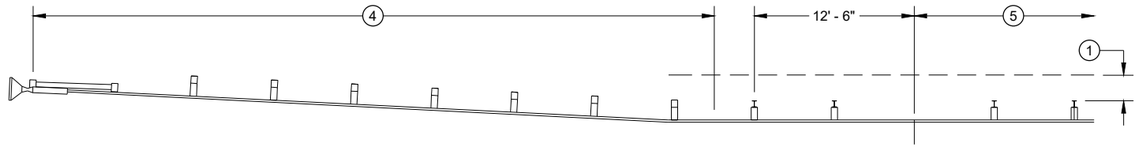
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

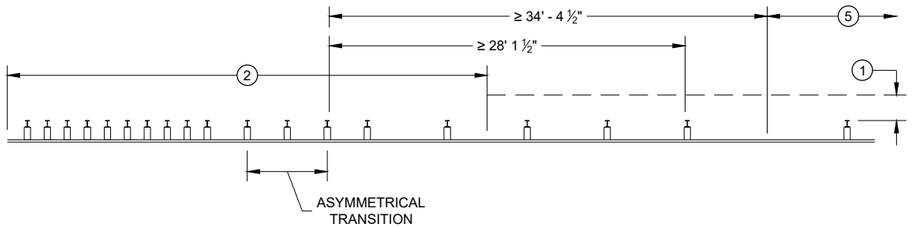
SDD 14B42 - 06c



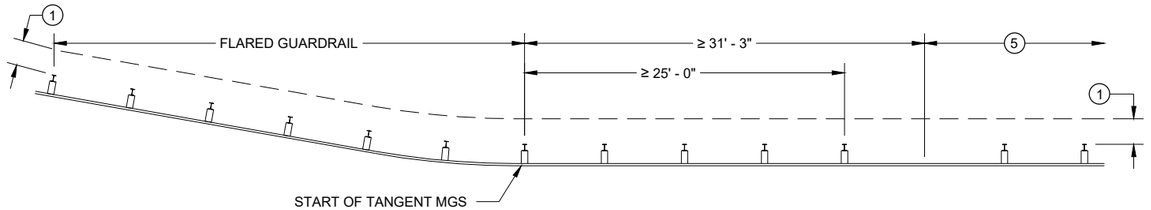
MISSING POST IN NORMAL BEAM GUARD RUN



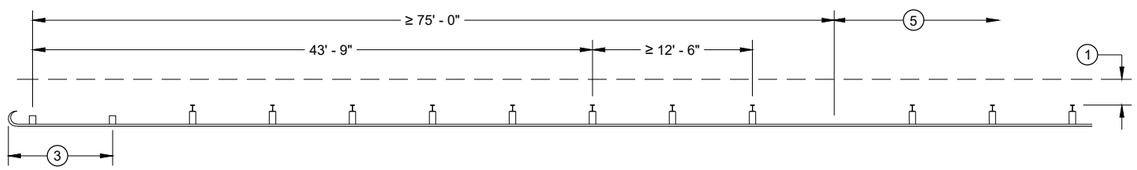
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



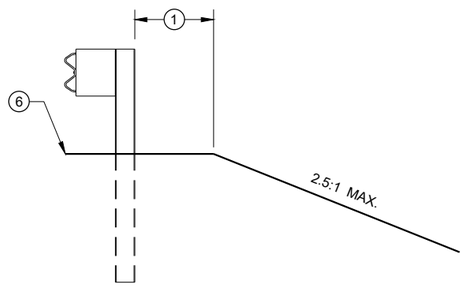
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 14B42 - 06d

6

SDD 14B42 - 06d

GENERAL NOTES

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

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

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

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

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

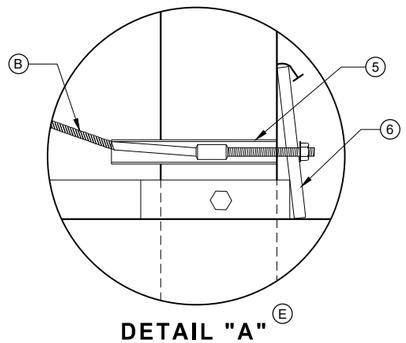
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

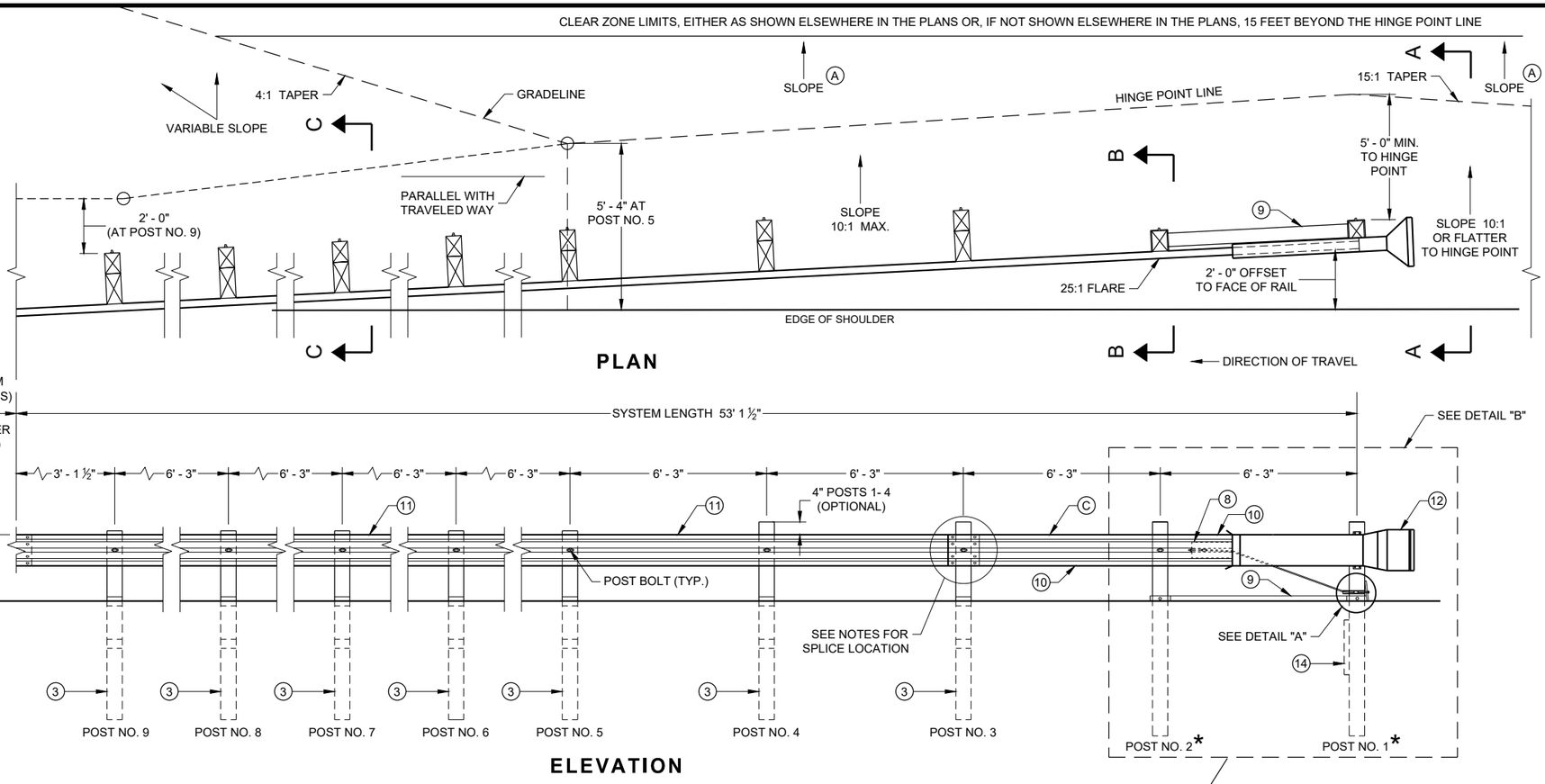
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

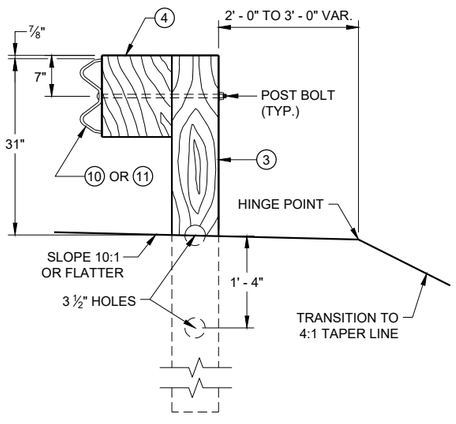
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

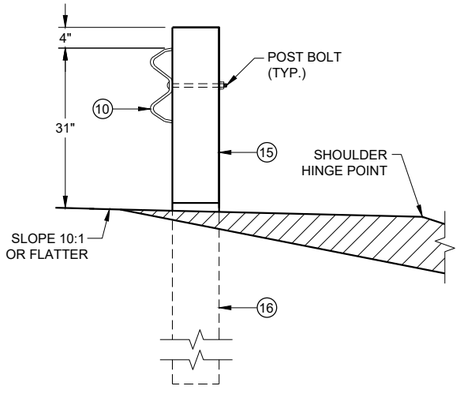


DETAIL "A" (E)

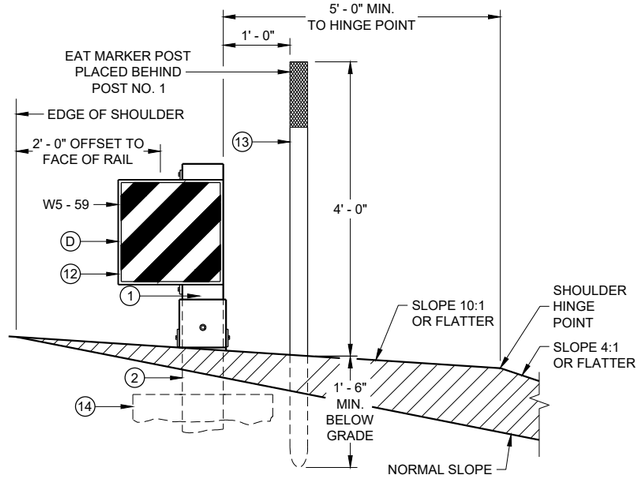




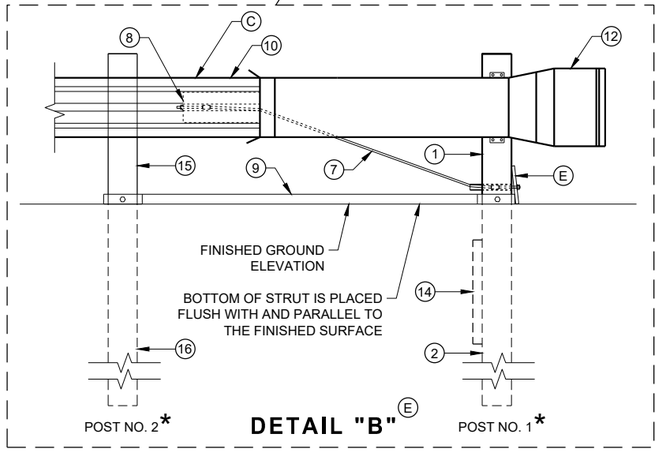
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



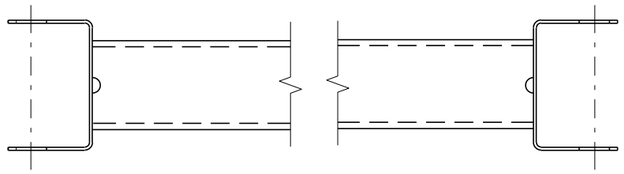
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

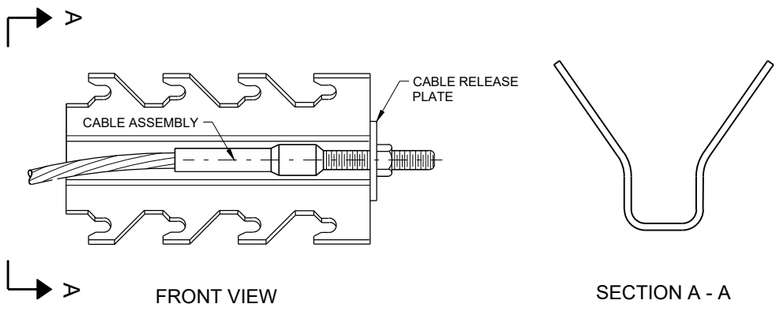
SDD 14B44 - 04a



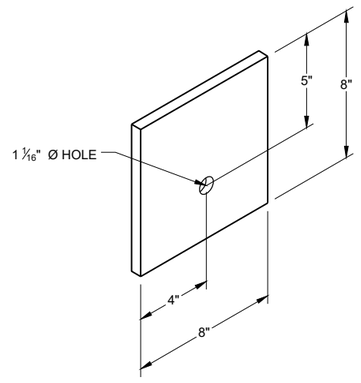
GENERIC GROUND STRUT (9) (E)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
(1)	UPPER POST NO. 1 6" X 6" TUBE
(2)	LOWER POST NO. 1
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	IMPACT HEAD
(13)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
(14)	SOIL PLATE
(15)	UPPER POST NO. 2
(16)	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX (9) (E)



BEARING PLATE (6) (E)

6

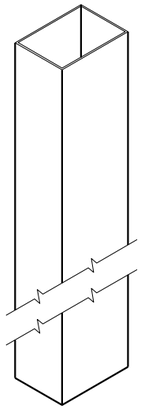
6

SDD 14B45 - 04b

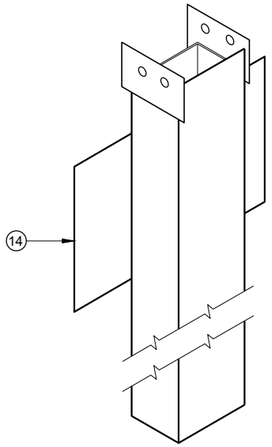
SDD 14B45 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UPPER POST NO. 1 (1) (E)



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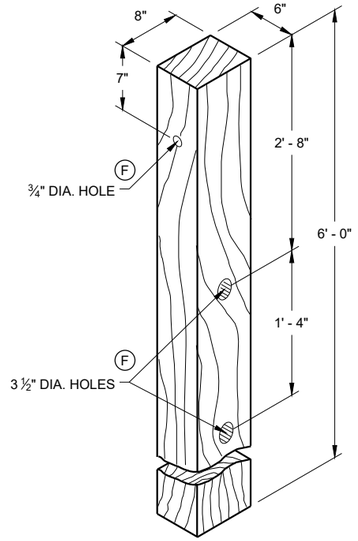
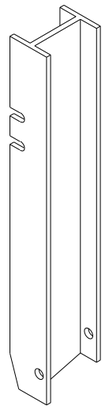


WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



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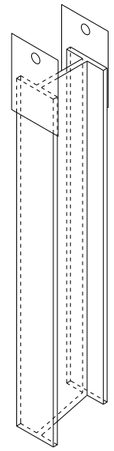

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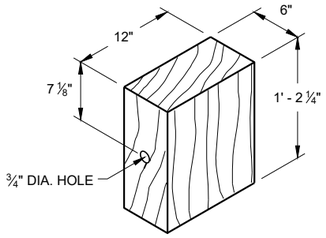
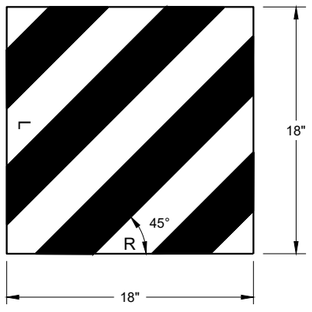
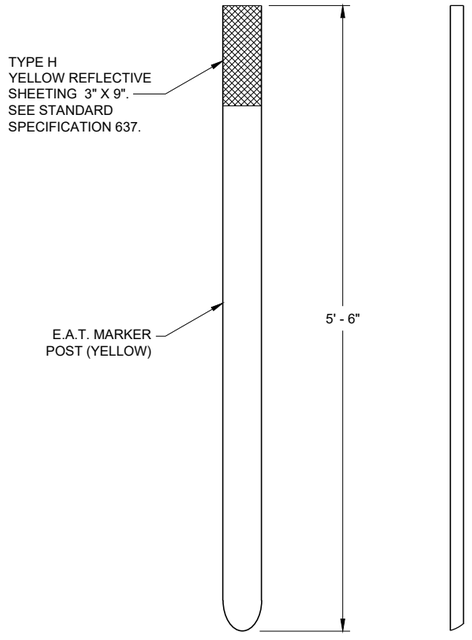


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



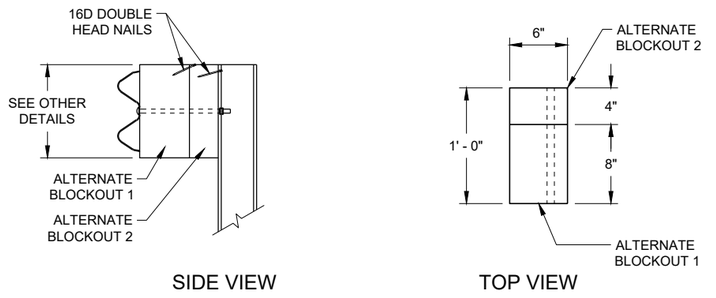
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

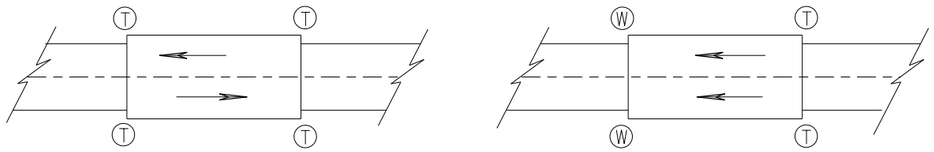
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c
SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

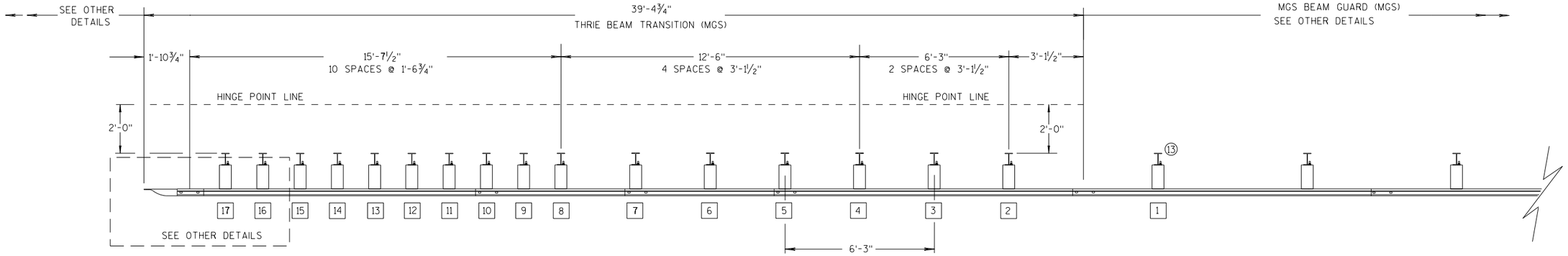
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

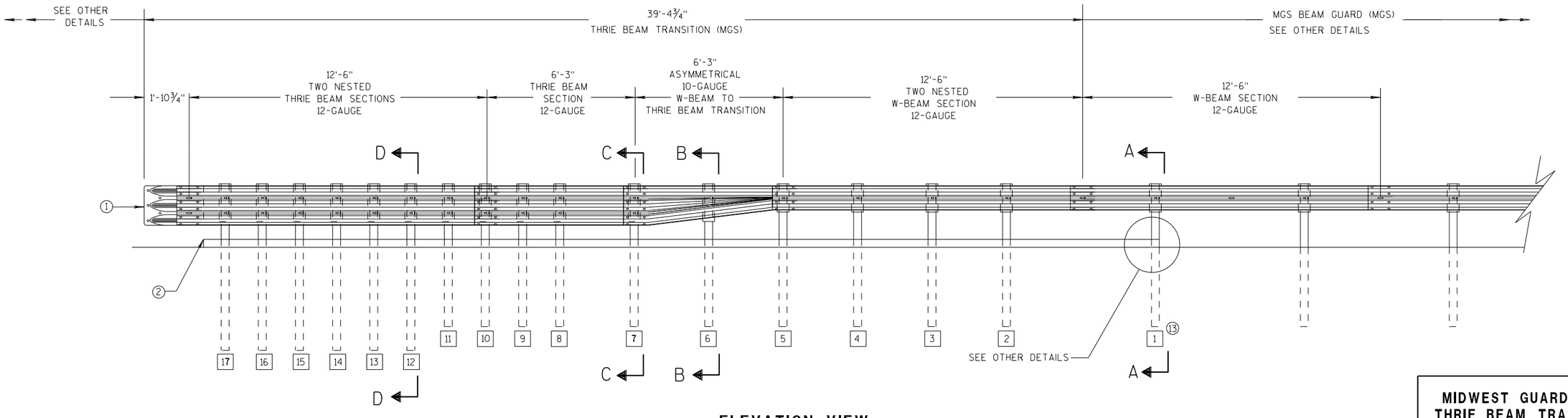
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

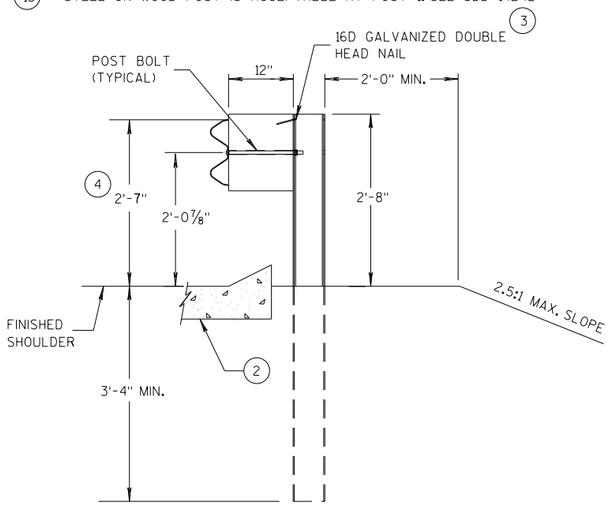
GENERAL NOTES

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

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

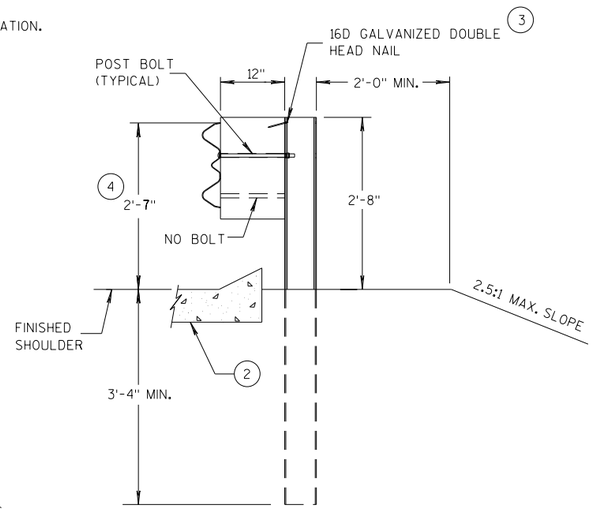
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



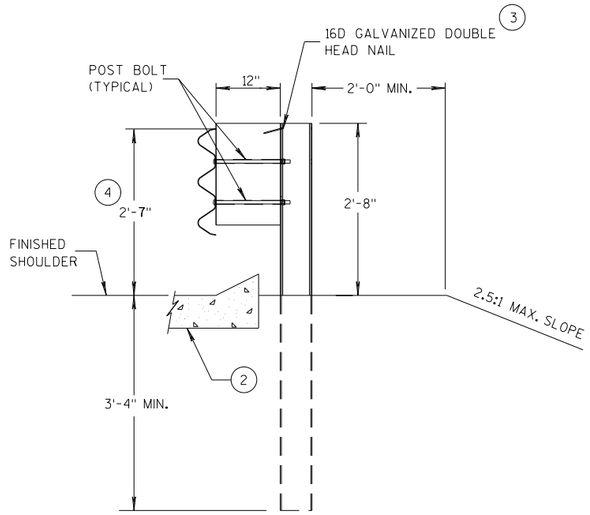
SECTION A-A (13)

POSTS 1-5



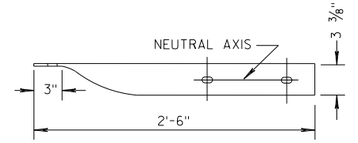
SECTION B-B

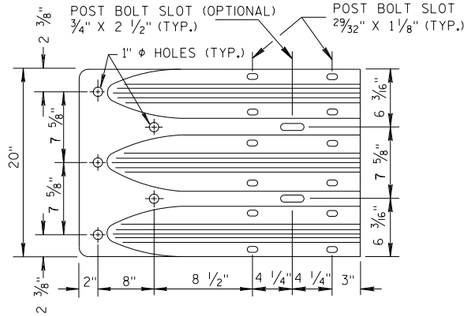
POST 6



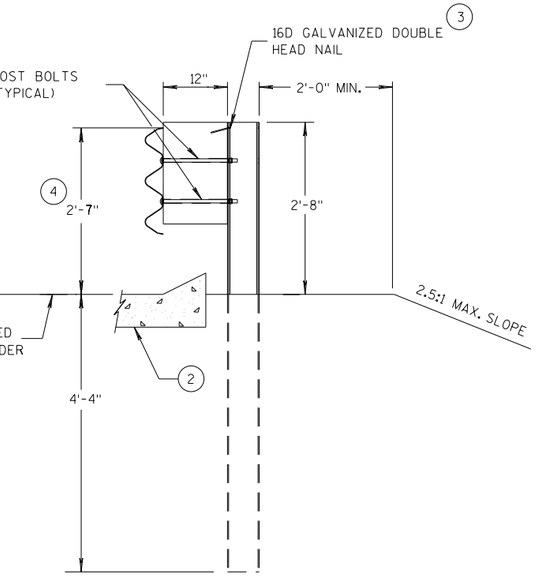
SECTION C-C

POSTS 7-11



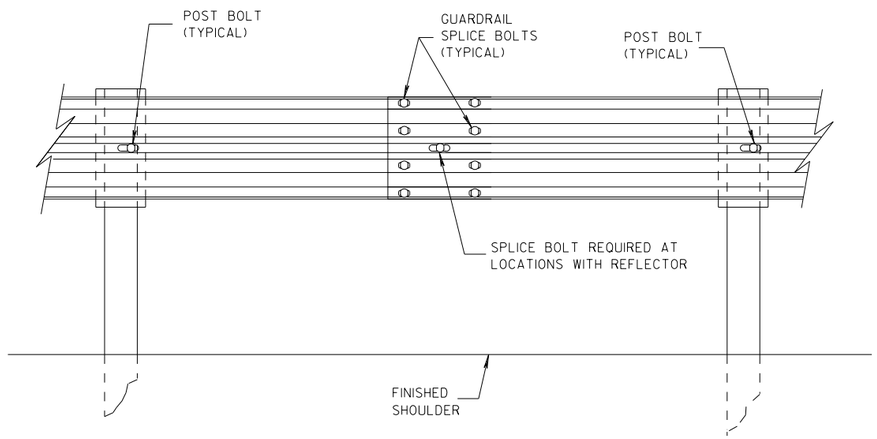


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

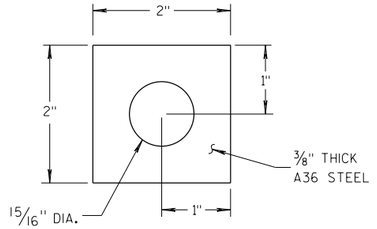
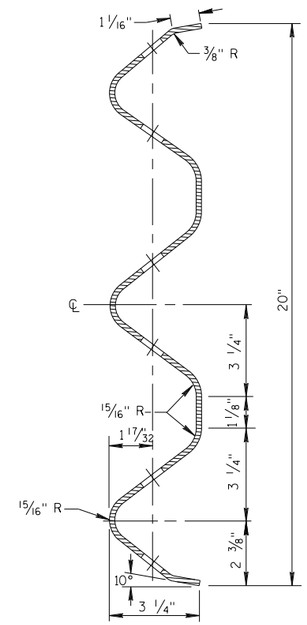


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

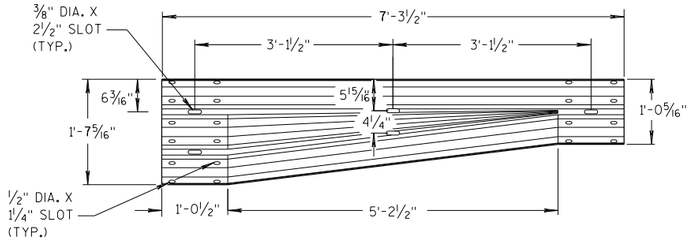
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF 198

6

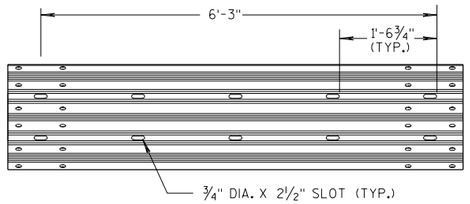
S.D.D. 14 B 45-5b

6

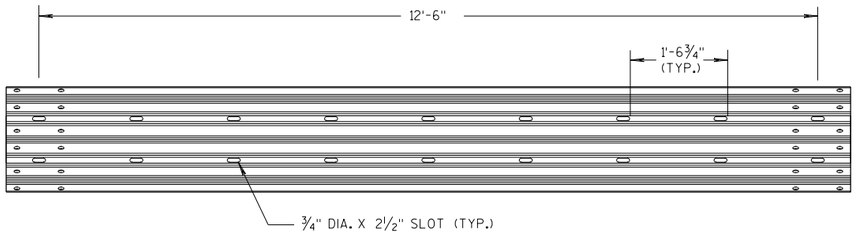
S.D.D. 14 B 45-5b



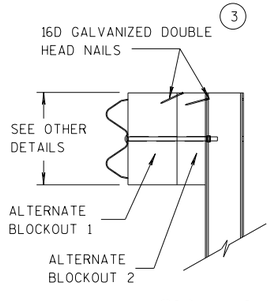
W-BEAM TO THRIE BEAM TRANSITION SECTION



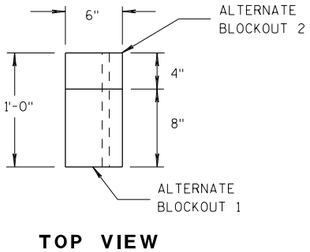
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

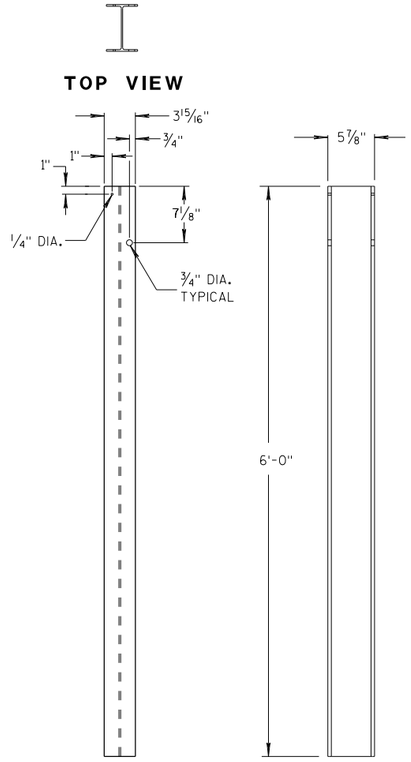


SIDE VIEW



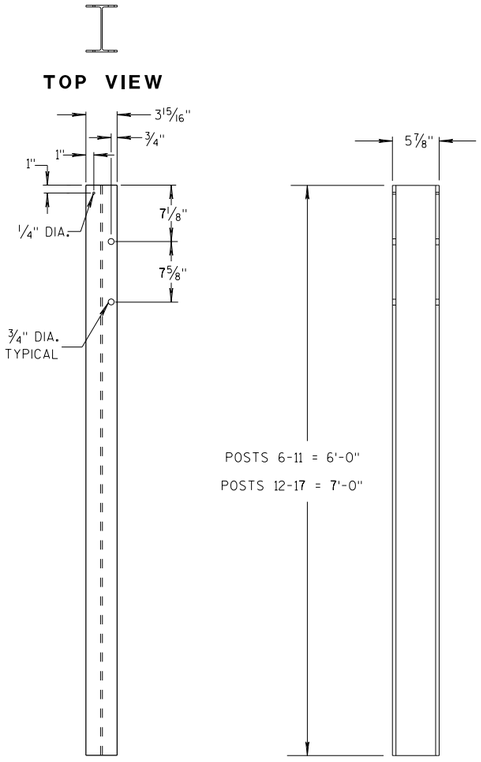
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



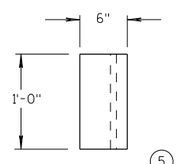
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

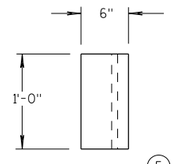


FRONT VIEW SIDE VIEW

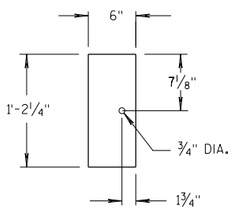
STEEL POSTS 6-17



TOP VIEW (5)

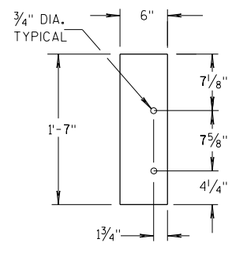


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

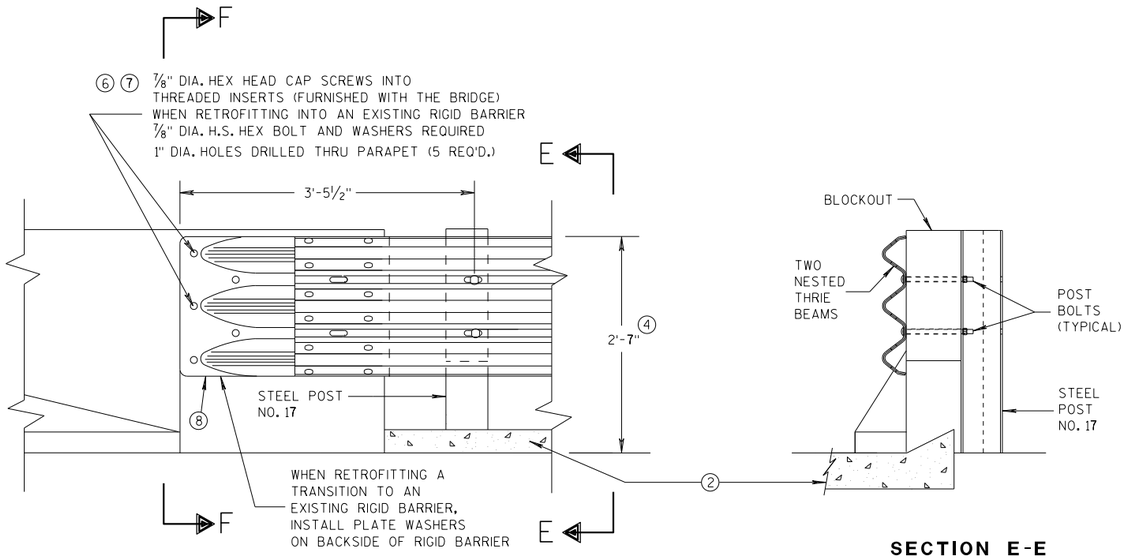
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

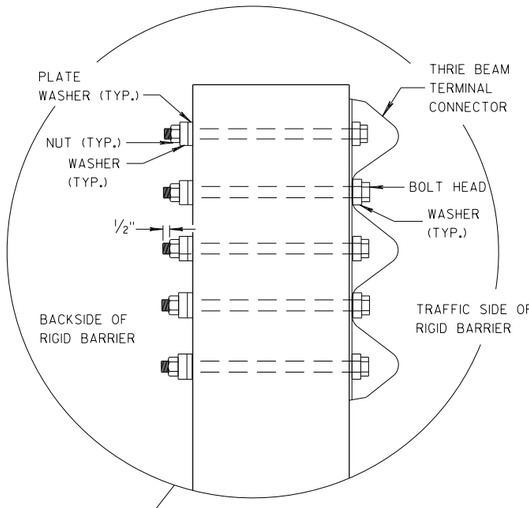
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

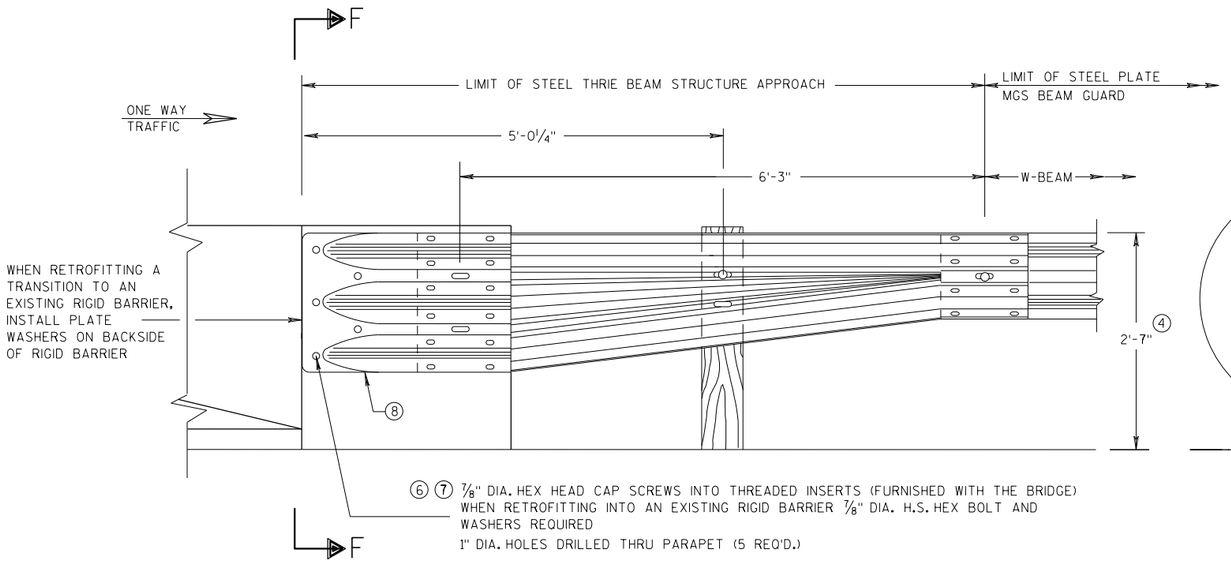
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

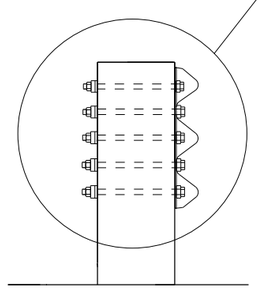
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

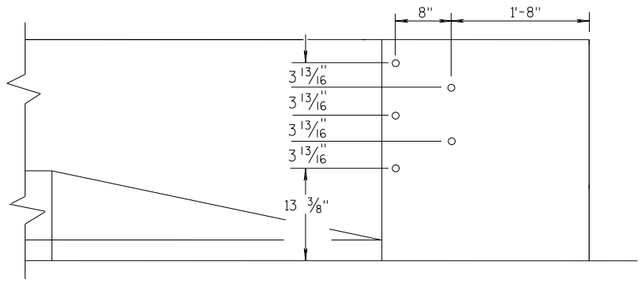




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

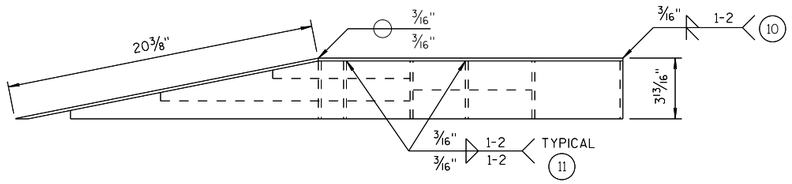
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D[UNIT SUPERVIS[NT
FHWA

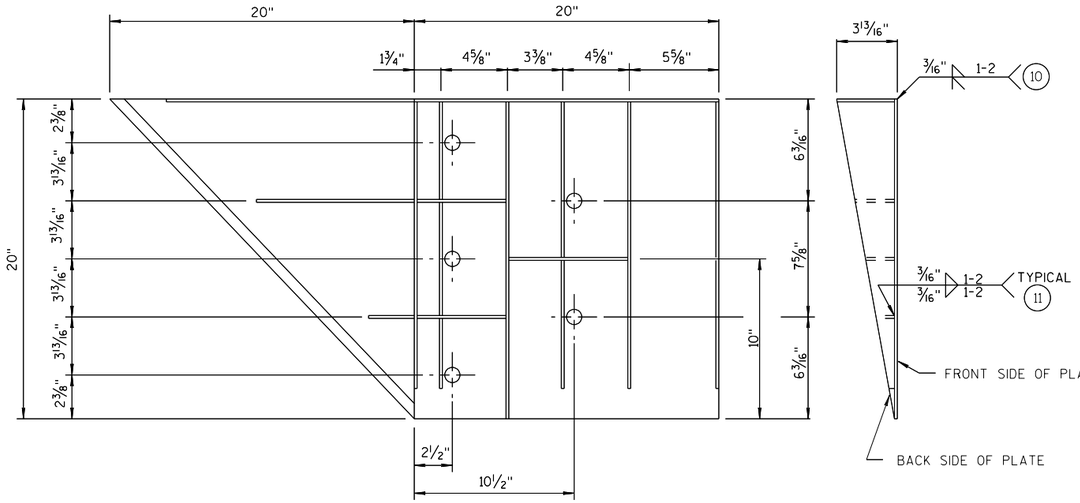
6

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

6

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





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

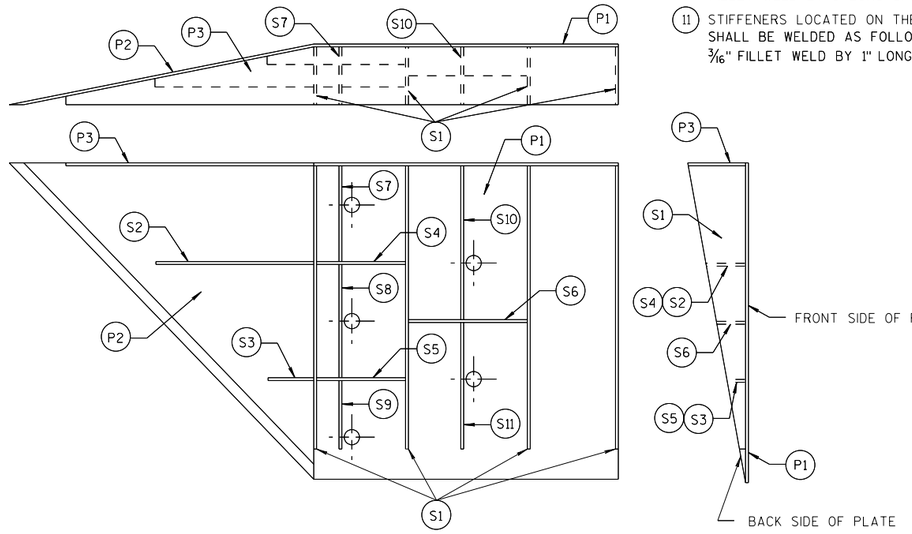


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS I
UNIT SUPERVI

6

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

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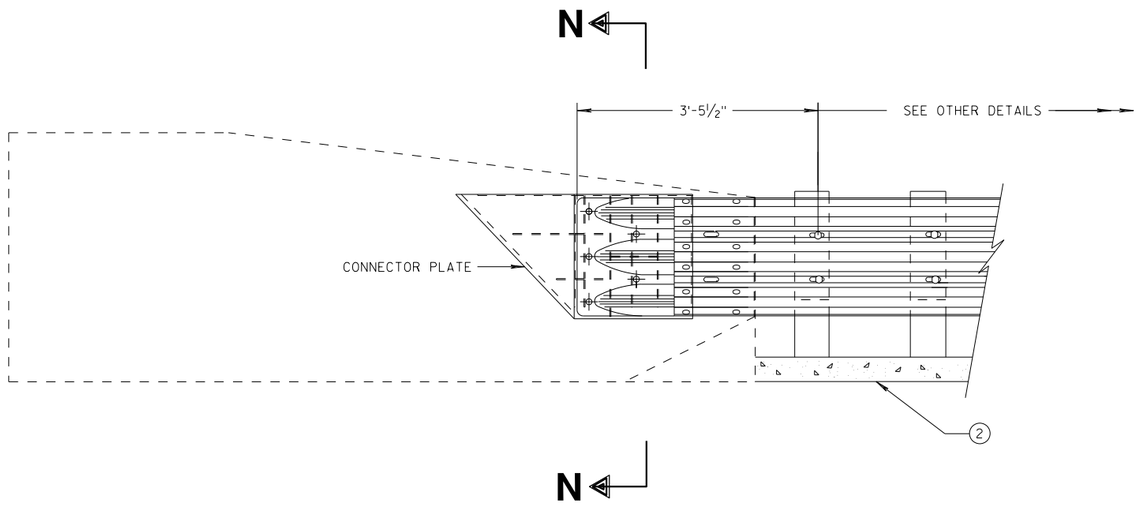
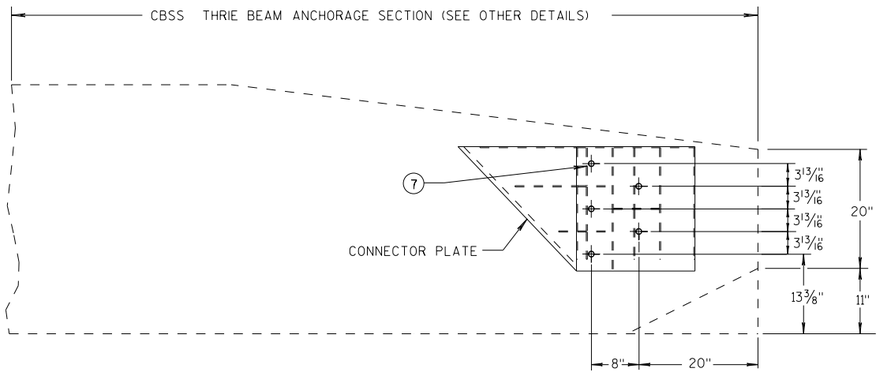
S.D.D. 14 B 45-5i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



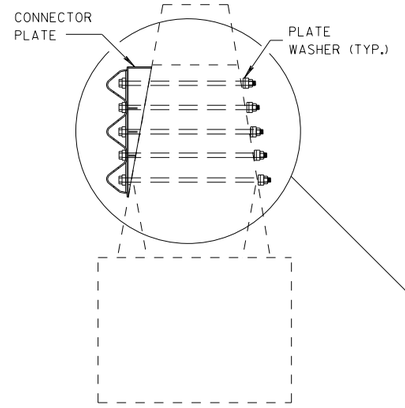
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

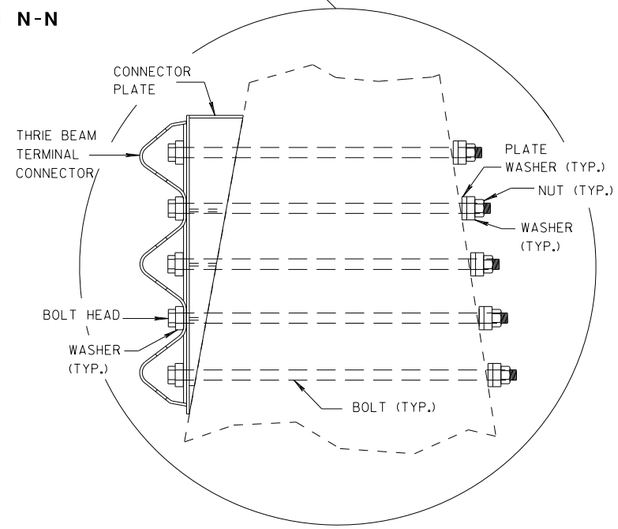
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DI UNIT SUPERVIS NT

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

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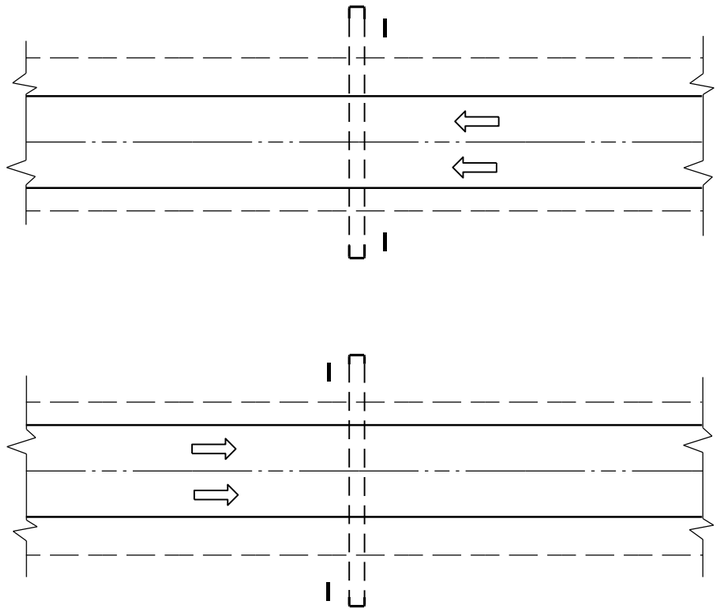
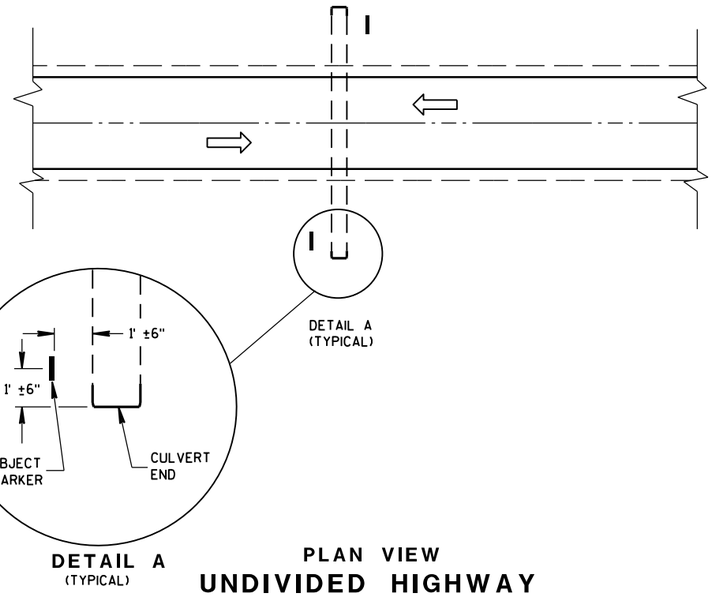
S.D.D. 14 B 45-5j



PLAN VIEW

DIVIDED HIGHWAY



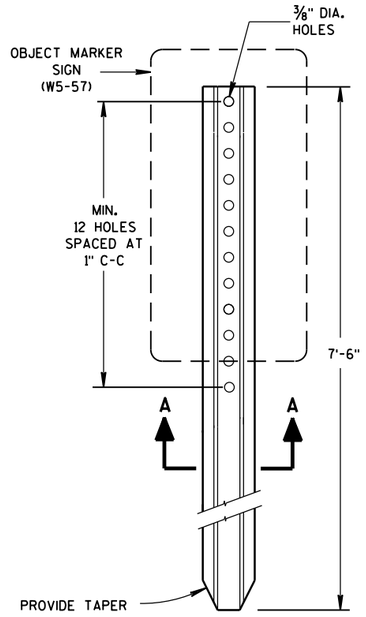
DETAIL A
(TYPICAL)

PLAN VIEW

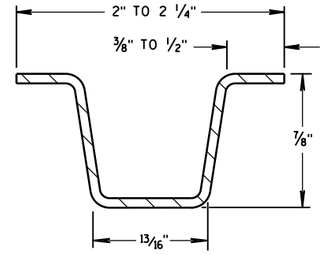
UNDIVIDED HIGHWAY

OBJECT MARKER

DIRECTION OF TRAFFIC FLOW



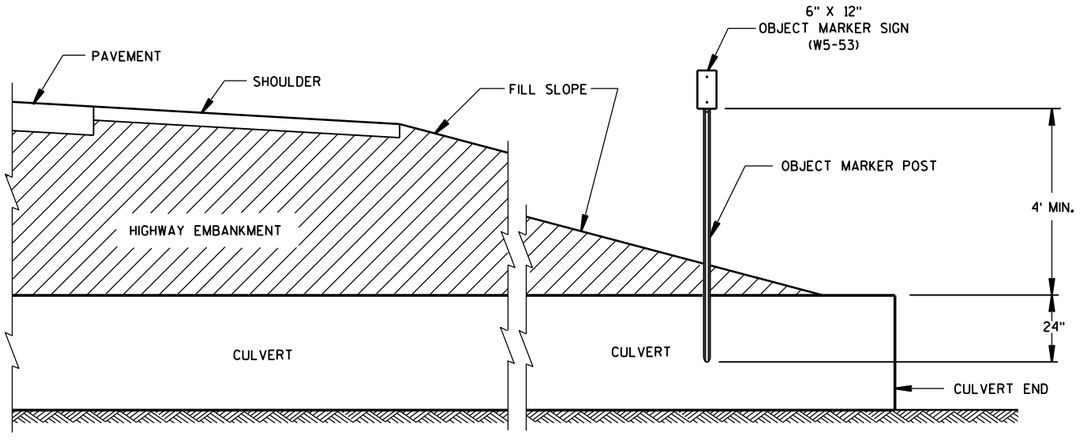
OBJECT MARKER POST



SECTION A-A

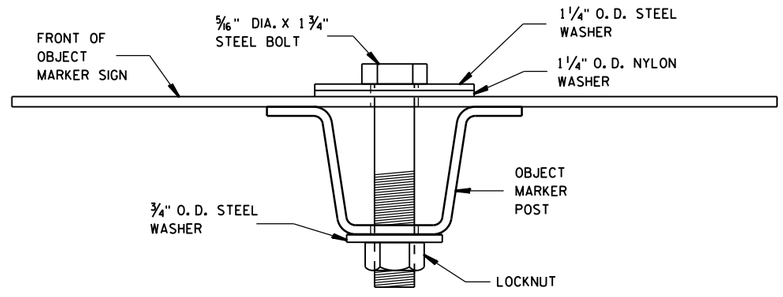
WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

OBJECT MARKER LOCATION



CROSS SECTION

OBJECT MARKER PLACEMENT



MOUNTING DETAIL FOR OBJECT MARKER SIGN

OBJECT MARKER FOR HAZARDOUS CULVERT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017 — DATE

/S/ Matthew Rauch — STATE SIGNING AND MARK 203 EER

FHWA

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S.D.D. 15 A 7-2

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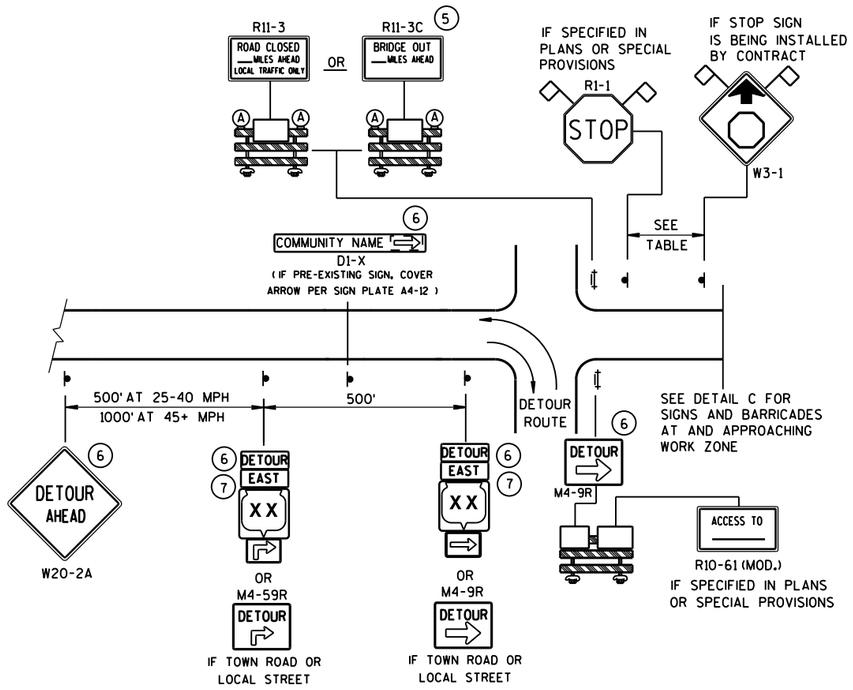
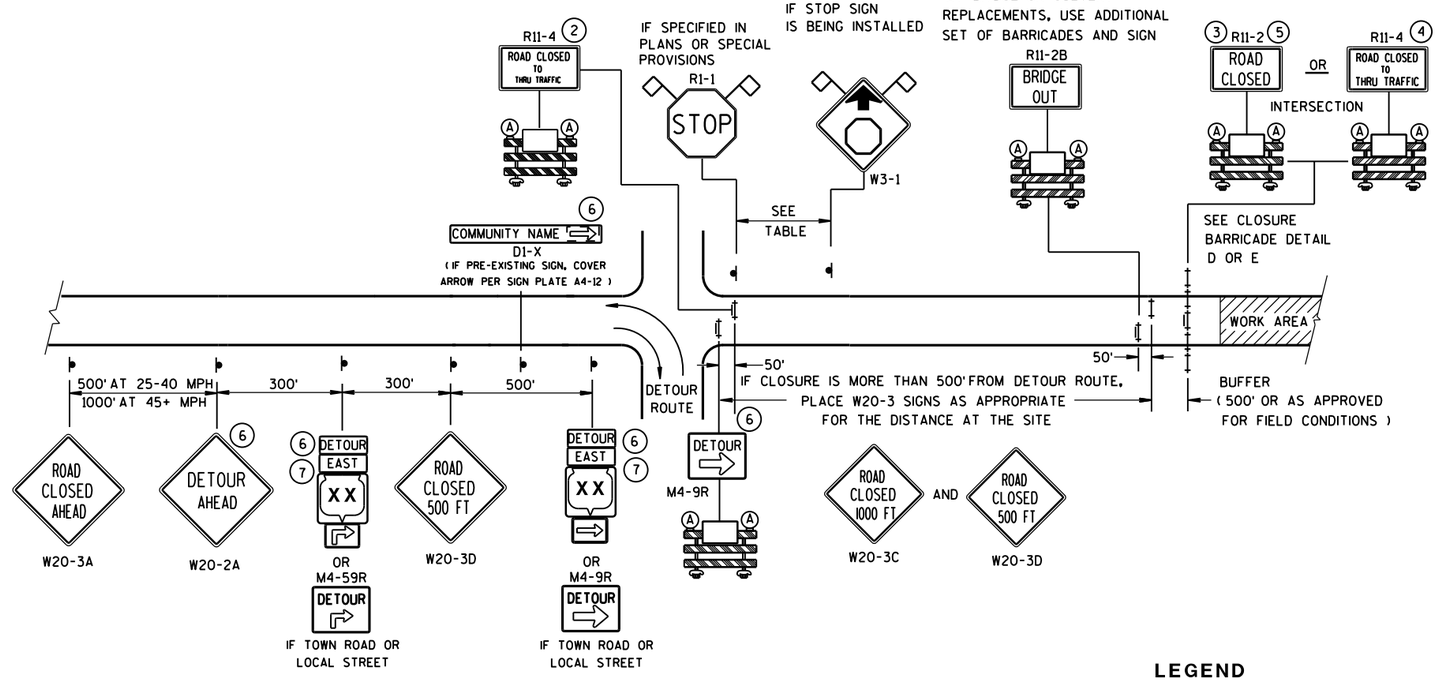
S.D.D. 15 A 7-2



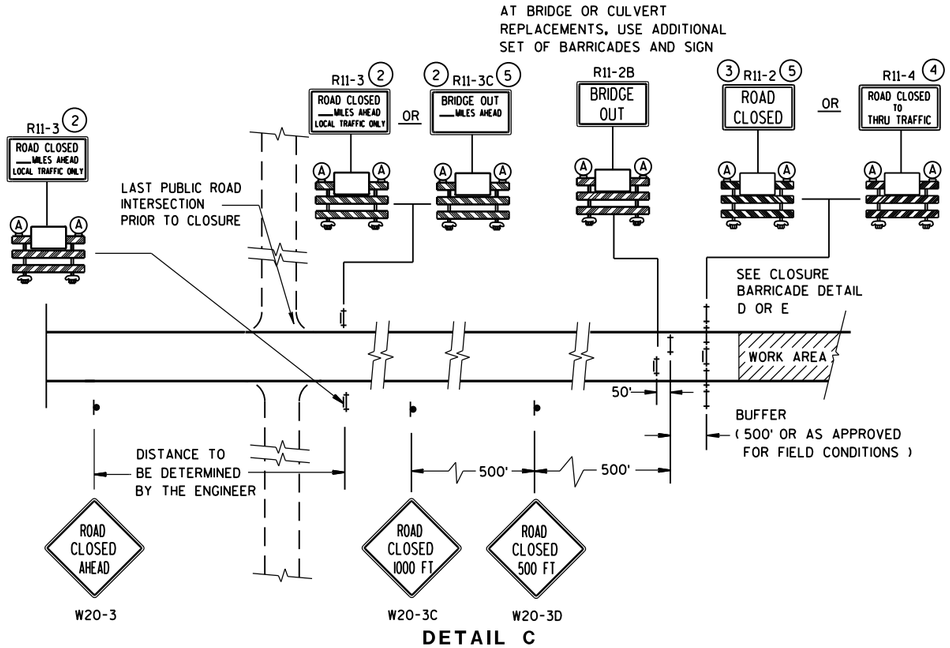
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

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)

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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

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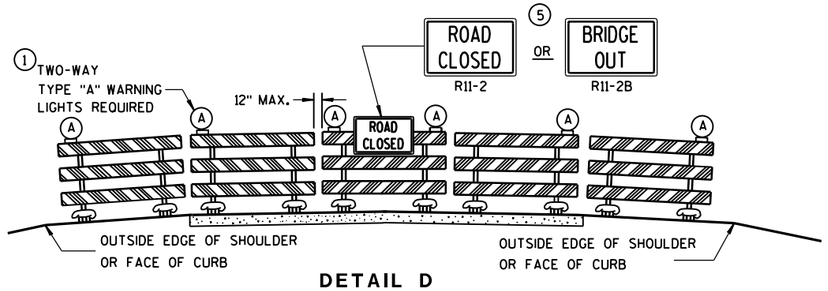
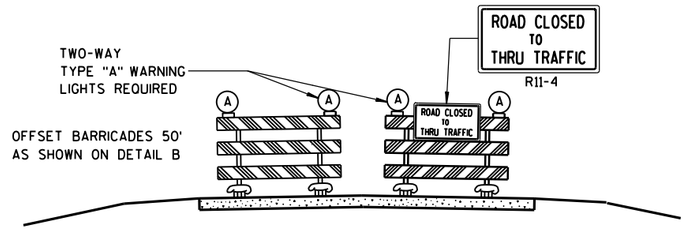
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

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

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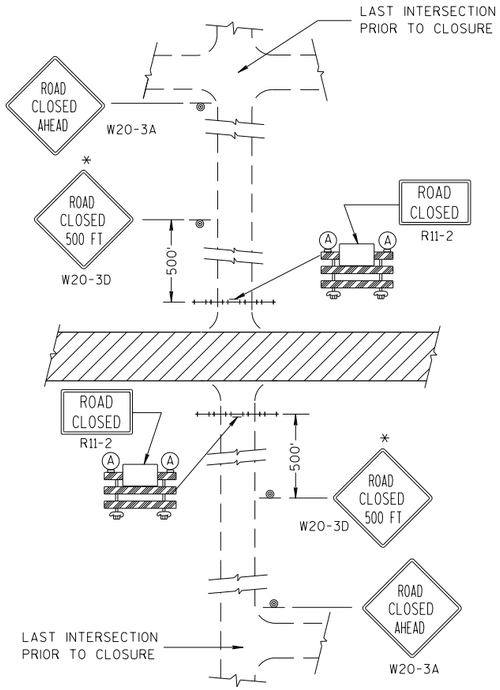
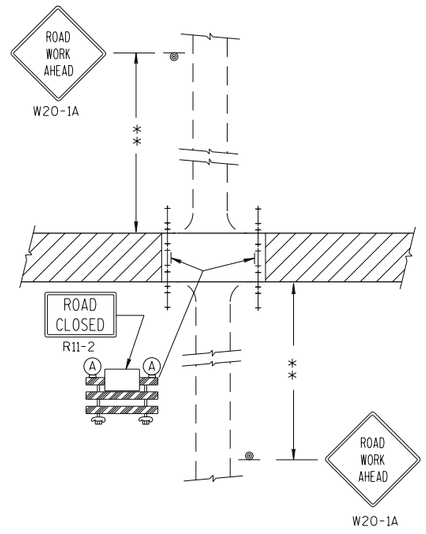
S.D.D. 15 C 2-6b



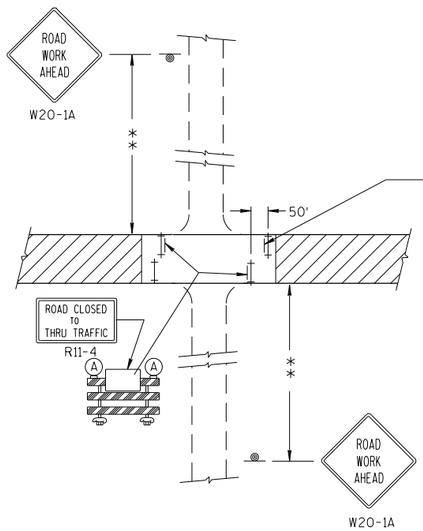
DETAIL 1

(NO ACCESS TO PROJECT)



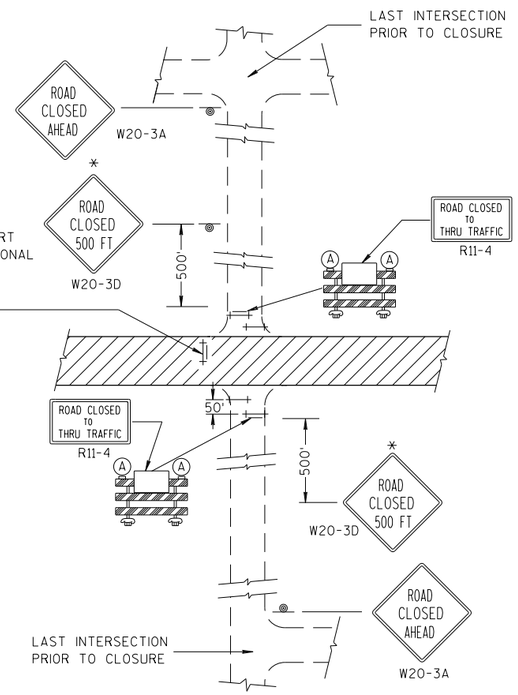
DETAIL 2

(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).



DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR,
LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

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.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

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 AND R11-4 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.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGI

FHWA

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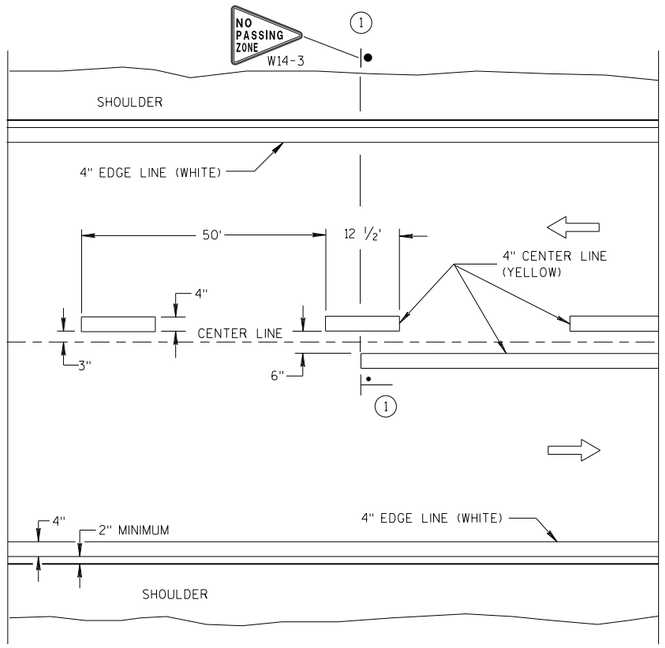
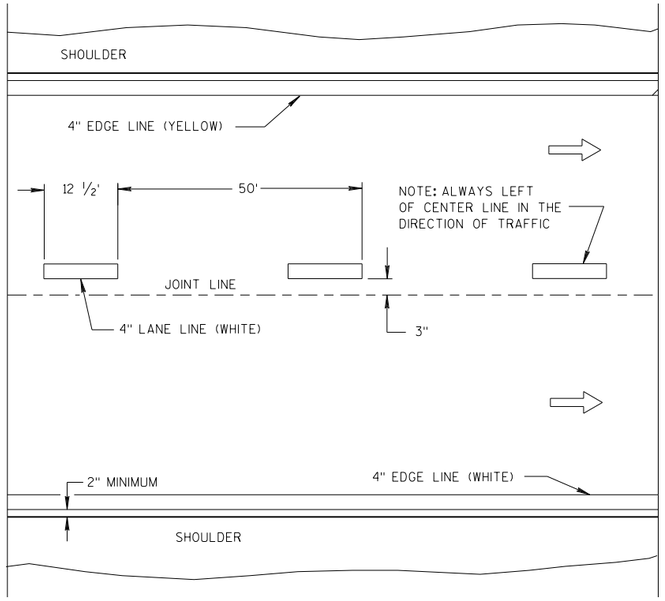
S.D.D. 15 C 3-5



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

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

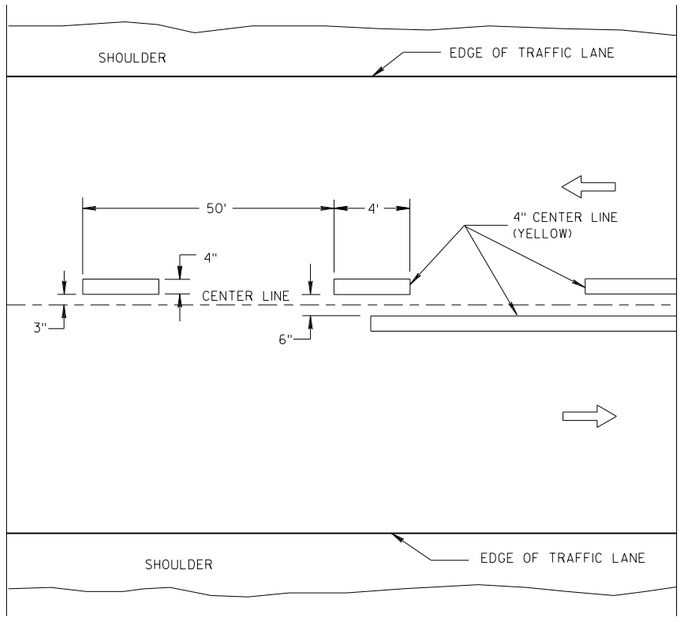
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

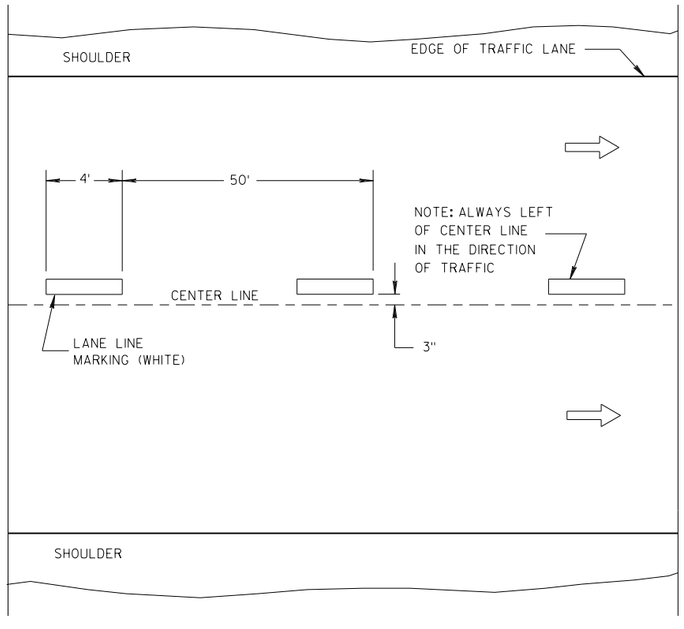
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

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S.D.D. 15 C 8-19a

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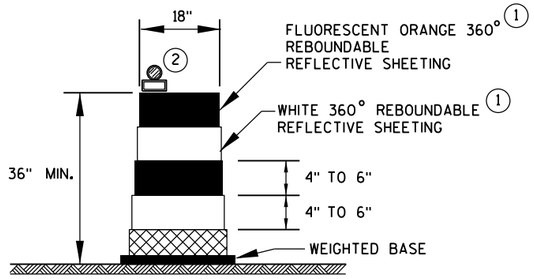
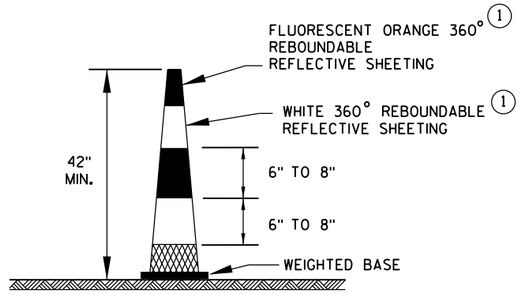
S.D.D. 15 C 8-19a



DRUM

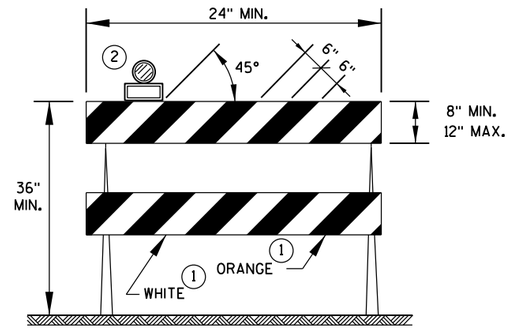


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

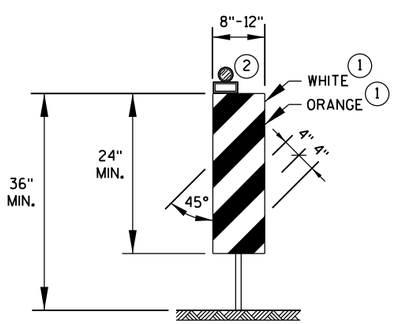
GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



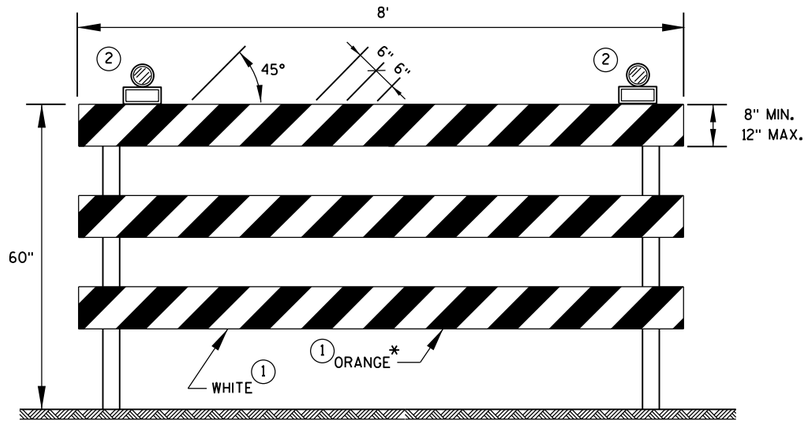
TYPE 2 BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE 3 BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017 — DATE

/S/ Andrew Heidtke — WORK ZONE ENG

FHWA

6

S.D.D. 15 C 11-7b

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48" x 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 OR AS APPROVED BY THE ENGINEER.

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

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

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

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

(1) CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

(2) IF NEEDED. USE ONLY IF DESIGN SPEED IS 10 MPH LESS THAN POSTED SPEED.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- REMOVING PAVEMENT MARKING
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA

OR

R2-1
48"X60"

OR

R2-1
48"X60"

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES.

LOCATED 400 FEET BEYOND THE W20- 5G SIGN.

SEE SDD 15D12b FOR SIGN PLACEMENT.

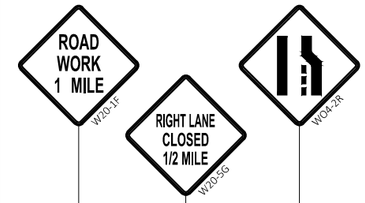
(BLACK AND WHITE)

LOCATED 700 FEET BEYOND W03-5 SIGN

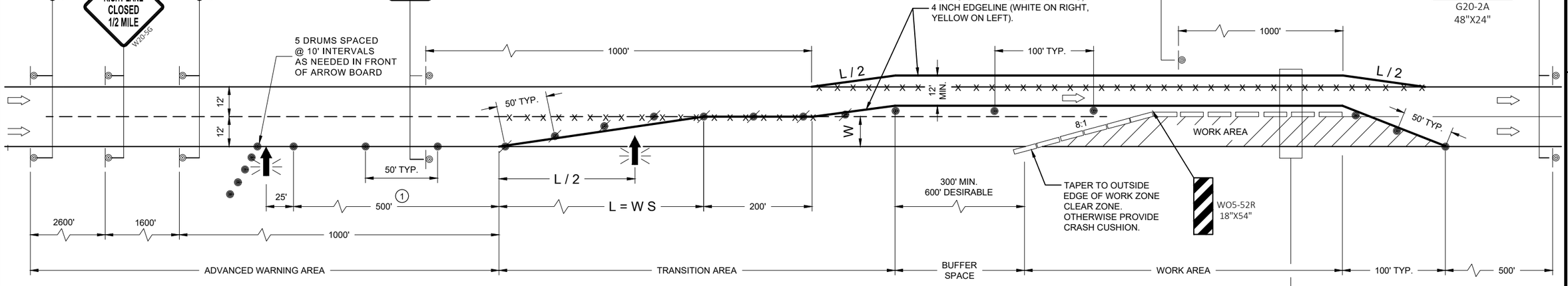
WO13-1
36"X36"

* INCLUDE RESUME SPEED LIMIT SIGN A MINIMUM OF 200 FEET (500 FEET DESIRABLE) AFTER END ROAD WORK SIGNS.

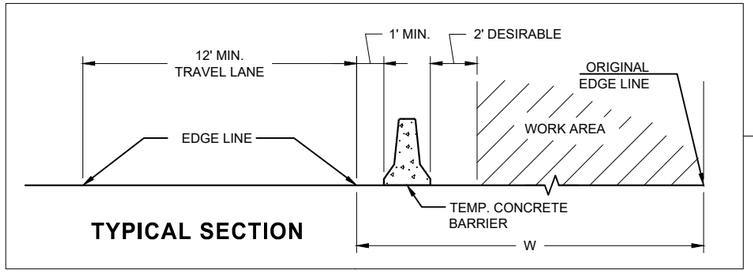
G20-2A
48"X24"



WO13-1
36"X36"



L, TAPER LENGTH (MPH)												
SPEED (MPH)	W, LATERAL OFFSET (FT)											
	1	2	3	4	5	6	7	8	9	10	11	12
45	45	90	135	180	225	270	315	360	405	450	495	540
50	50	100	150	200	250	300	350	400	450	500	550	600
55	55	110	165	220	275	330	385	440	495	550	605	660
60	60	120	180	240	300	360	420	480	540	600	660	720
65	65	130	195	260	325	390	455	520	585	650	715	780
70	70	140	210	280	350	420	490	560	630	700	770	840



TYPICAL SECTION

TRAFFIC CONTROL LANE CLOSURE, SPEEDS GREATER THAN 40 MPH WITH BARRIER

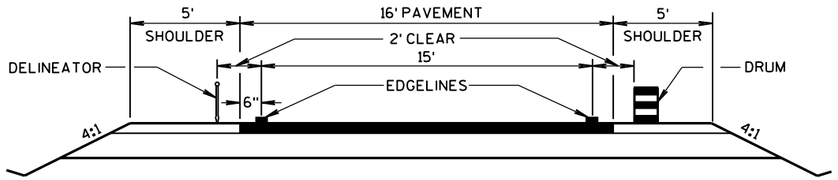
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINE

FHWA

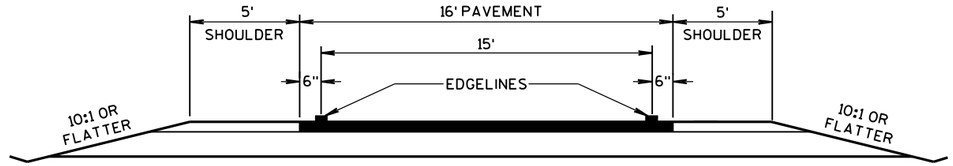
SDD 15D03-05

SDD 15D03-05



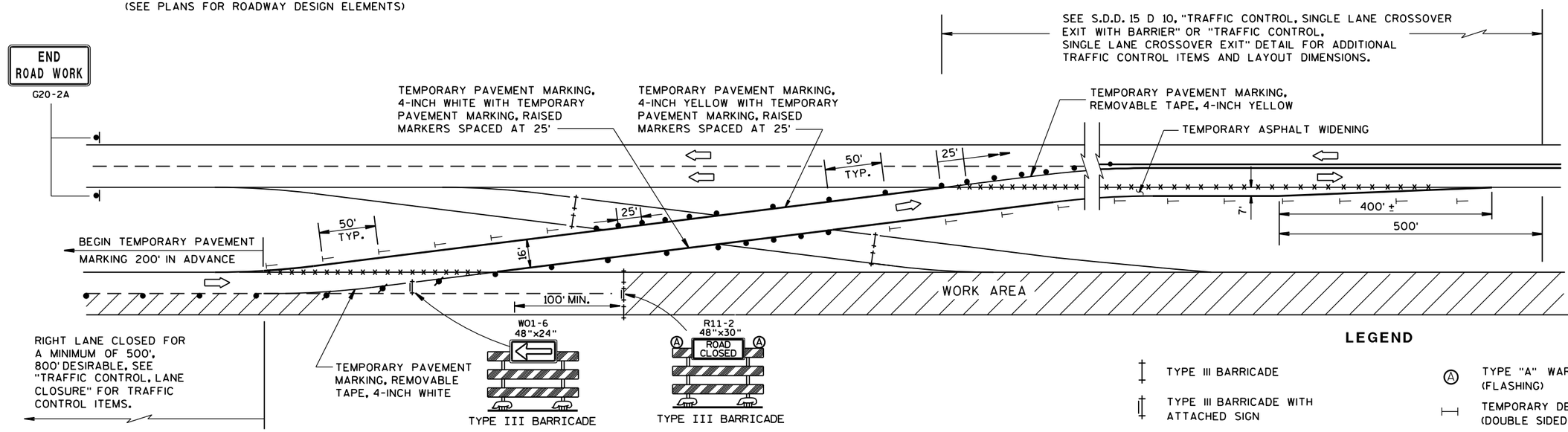
TYPICAL TEMPORARY CROSSOVER ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



TYPICAL CROSSOVER TO REMAIN IN PLACE ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

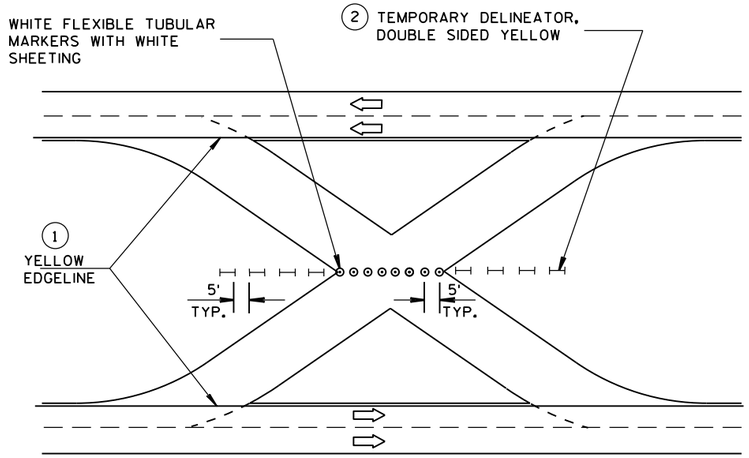
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

REVERSE DEVICES WHEN OTHER LEG OF CROSSOVER IS IN USE.

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

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



TRAFFIC CONTROL FOR CROSSOVER THAT IS NOT IN USE

TRAFFIC CONTROL, SINGLE LANE CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENGI
FHWA

6

S.D.D. 15 D 11-7

GENERAL NOTES

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

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

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

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

"WO" 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 OR AS APPROVED BY THE ENGINEER.

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

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

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

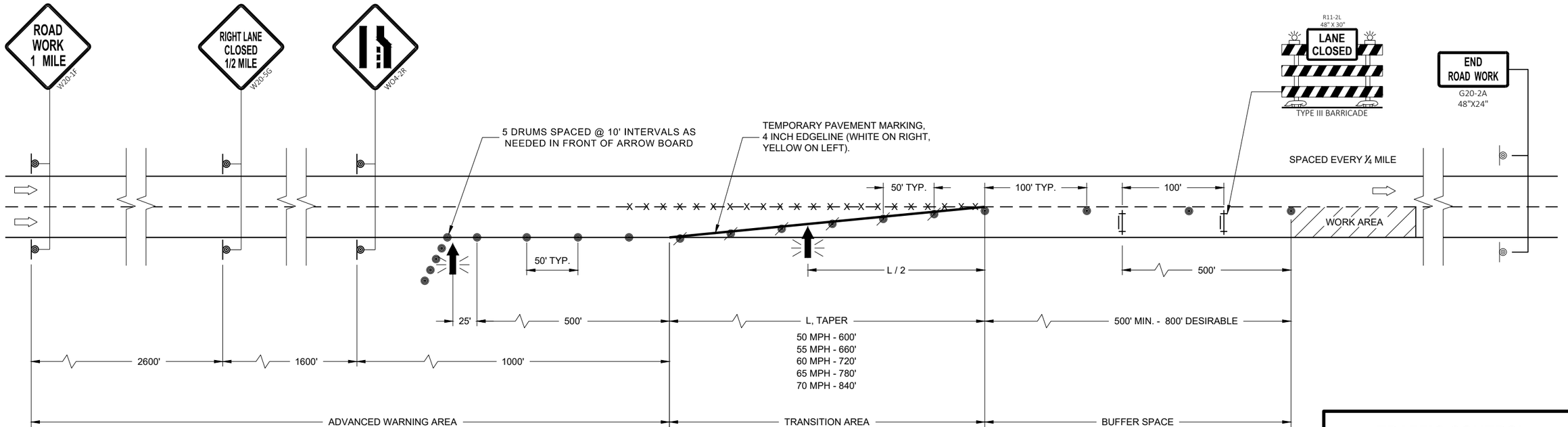
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

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



TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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SDD 15D12 - 07a

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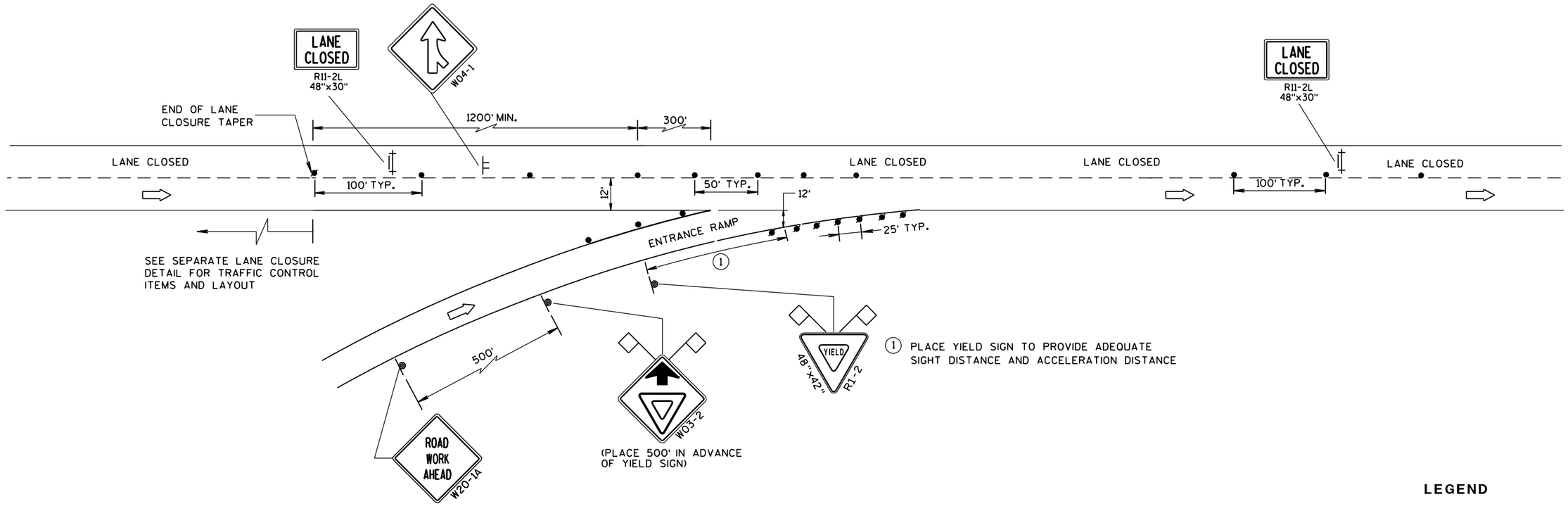
SDD 15D12 - 07a



TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

LEGEND

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

TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heidtke — WORK ZONE ENG
FHWA

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S.D.D. 15 D 15-4d

6

S.D.D. 15 D 15-4d

LEGEND

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

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

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

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

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

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

PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

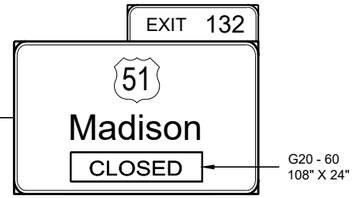
WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

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 - 1A 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 CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

OR



PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN

COVER ARROW ON EXISTING E4 - 1 SIGN (COVERING SIGNS TYPE I)

G20 - 61
120 ' X 30"

OR

PCMS MESSAGING

FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

TRAFFIC CONTROL EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D16 - 04

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

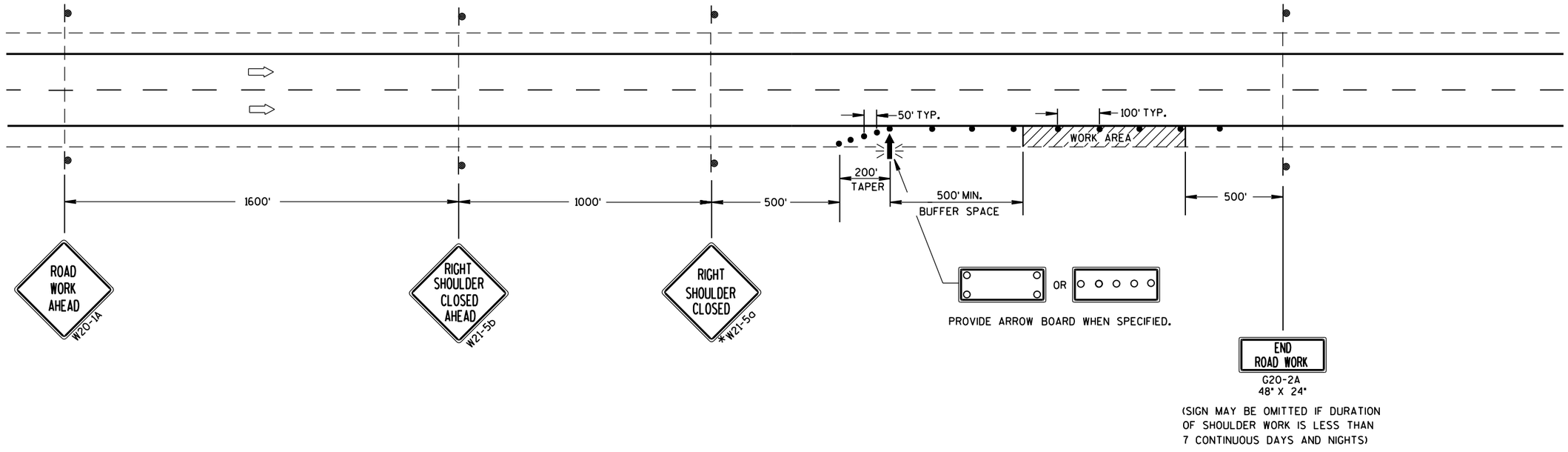
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

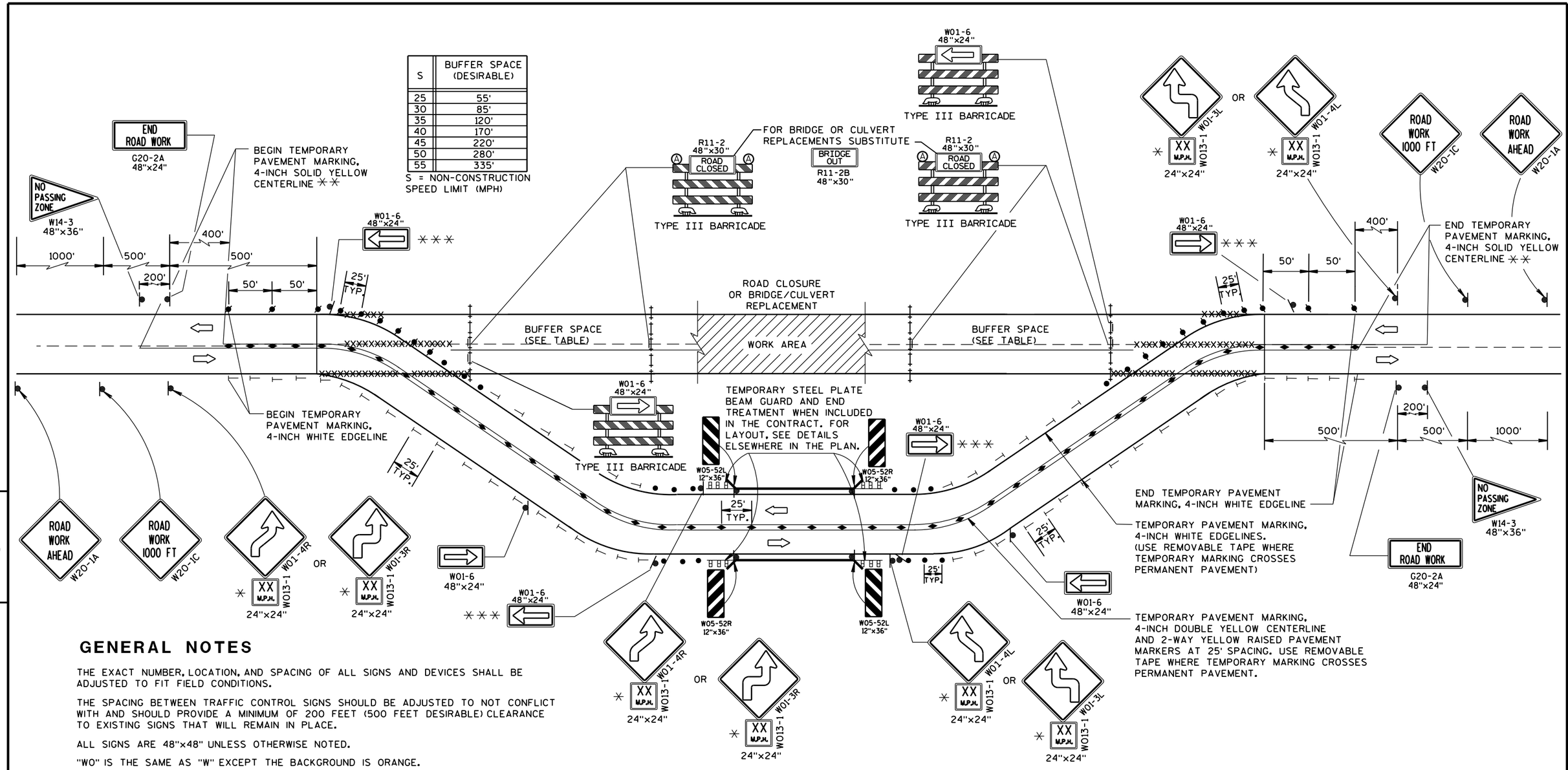
June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

6

S.D.D. 15 D 27-3



GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

EQUIPMENT, VEHICLES, OR MATERIAL SHOULD NOT BE STORED IN BUFFER SPACE.

✳ IF ADVISORY SPEED IS GREATER THAN 30 MPH, USE THE W01-4 SIGN. IF ADVISORY SPEED IS 30 MPH OR LESS, USE THE W01-3 SIGN.

✳✳ WHEN THE DISTANCE TO/FROM THE NEXT CLOSEST NO-PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

✳✳✳ OMIT THESE W01-6 SIGNS IF THE ADVISORY SPEED OF THE CURVE IS GREATER THAN 30 MPH.

S	BUFFER SPACE (DESIRABLE)
25	55'
30	85'
35	120'
40	170'
45	220'
50	280'
55	335'

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY-BURN LIGHT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR, (WHITE) (SINGLE DELINEATOR)
- TEMPORARY RAISED PAVEMENT MARKERS (TWO-WAY YELLOW)
- XXX REMOVE PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT
- WORK AREA

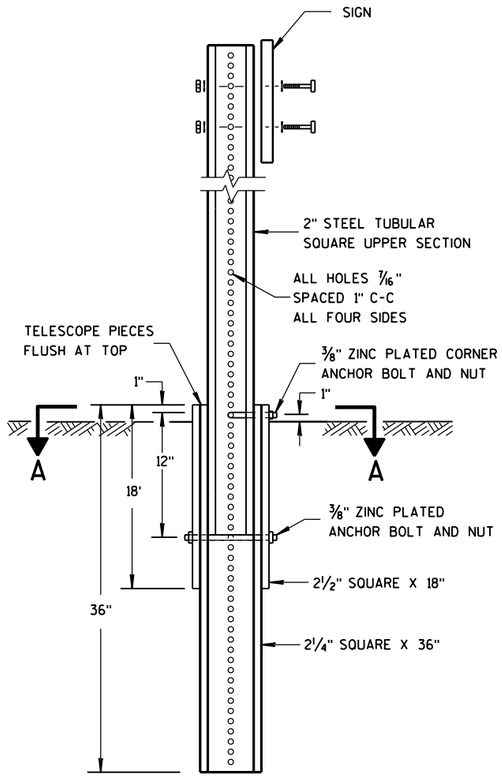
TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

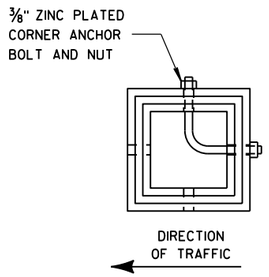
APPROVED

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

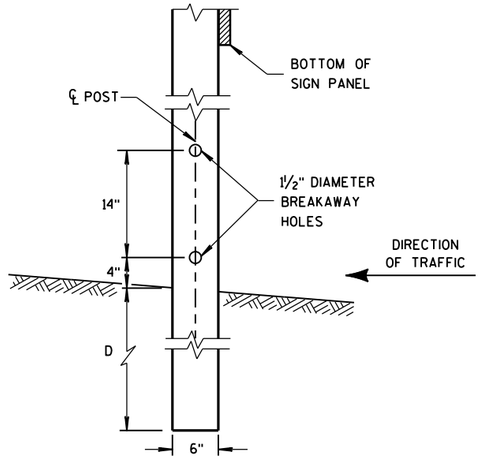
6 S.D.D. 15 D 31-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



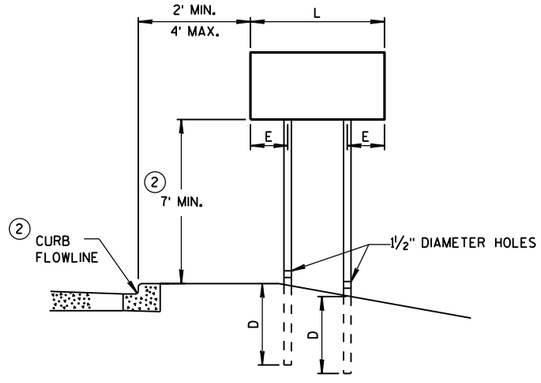
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

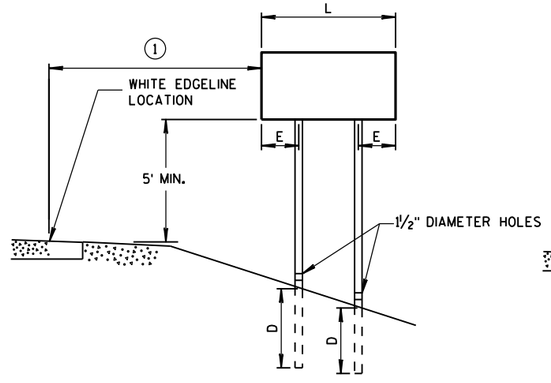
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

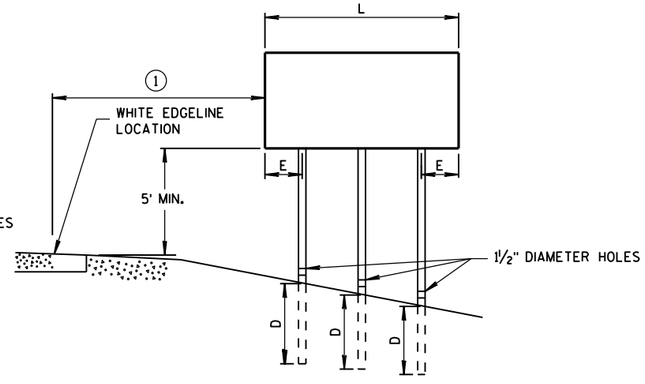
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

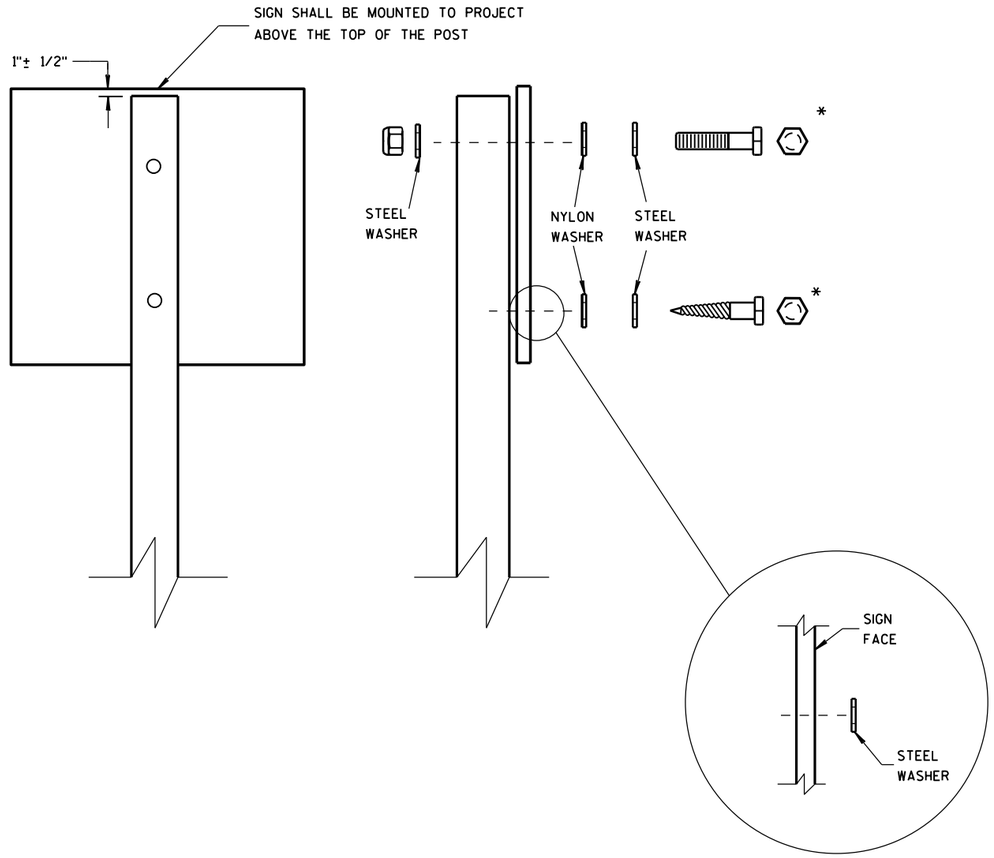
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 38-2a



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

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

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

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

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

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

LAG SCREWS - 3/8" X 3"

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

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

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

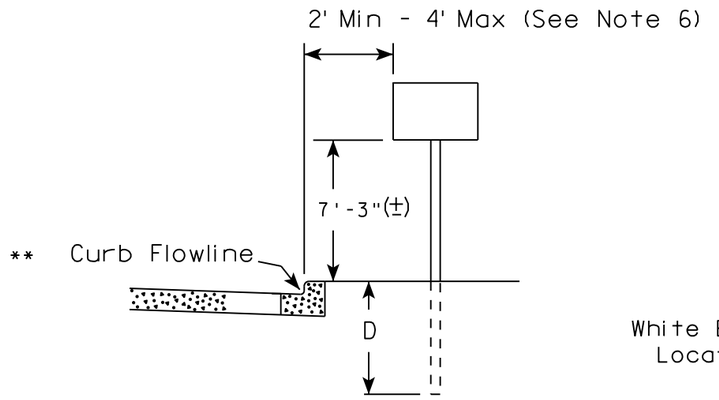
APPROVED

June 2017
DATE

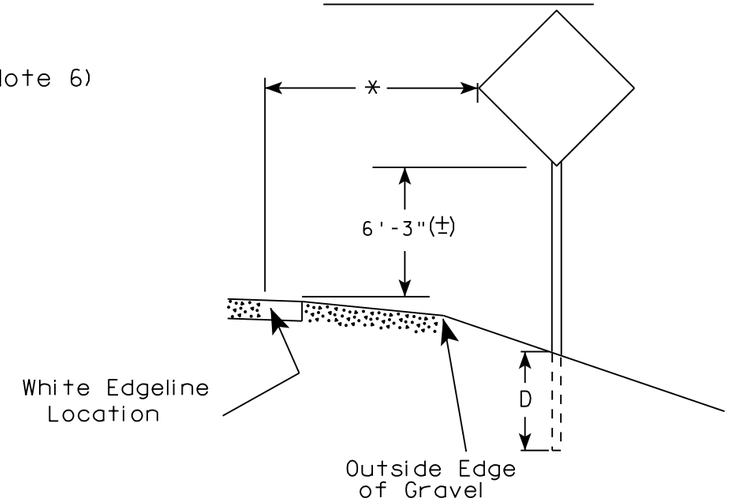
/S/ Andrew Heldtke
WORK ZONE ENG

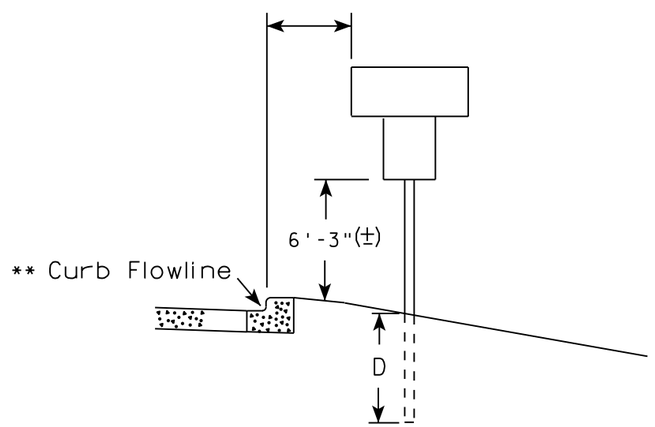
FHWA

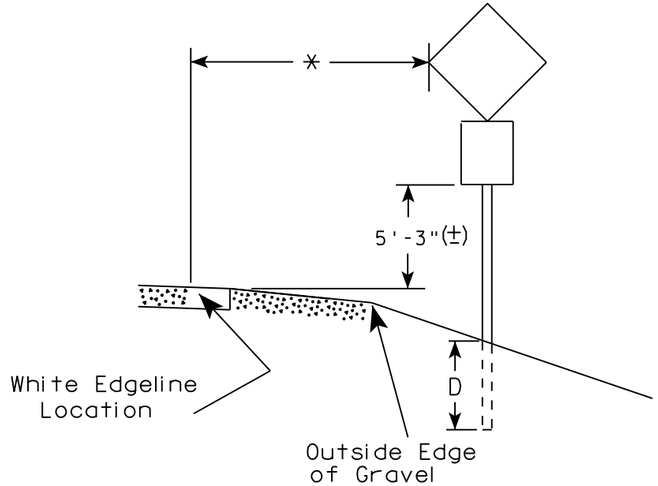
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

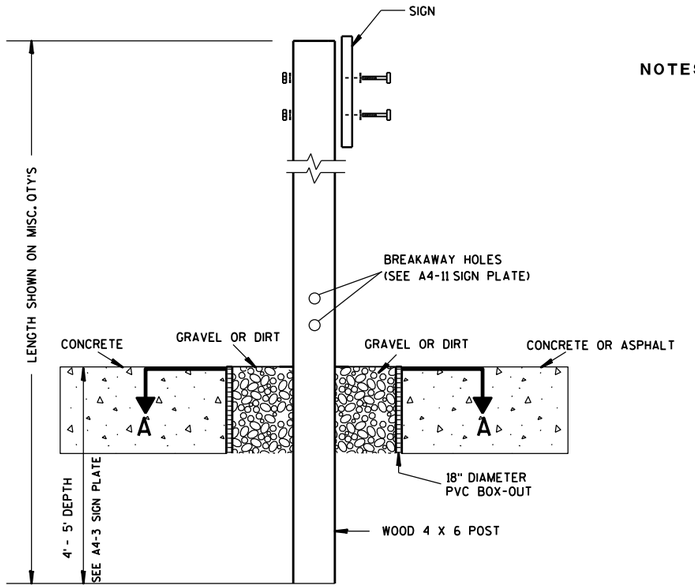
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

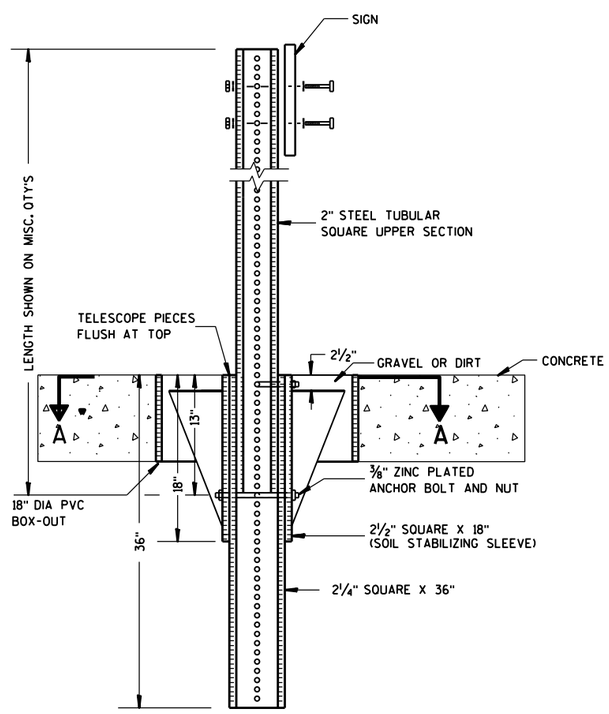
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

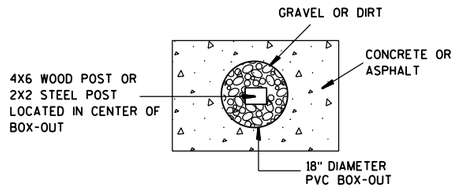
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

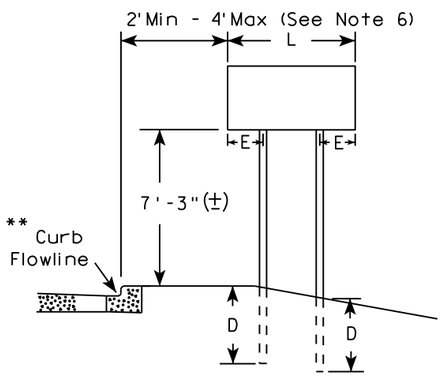
APPROVED Matthew R Rauch
for State Traffic Engineer

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

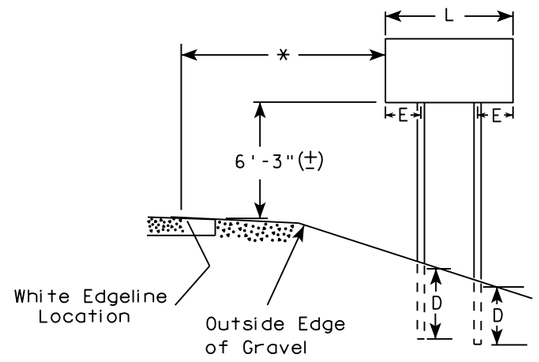
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

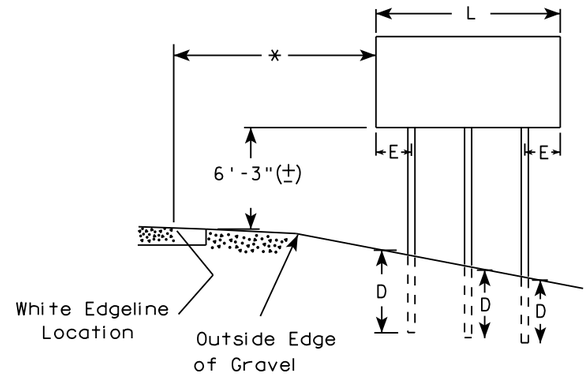
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

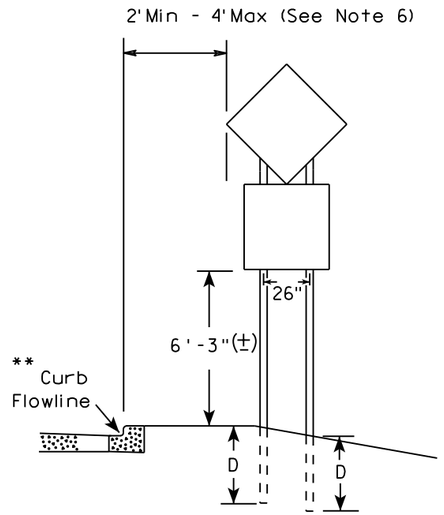
URBAN AREA



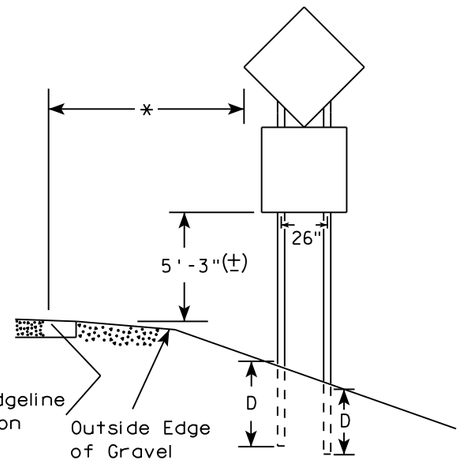
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)		
	L	E
***	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

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

POST EMBEDMENT DEPTH

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

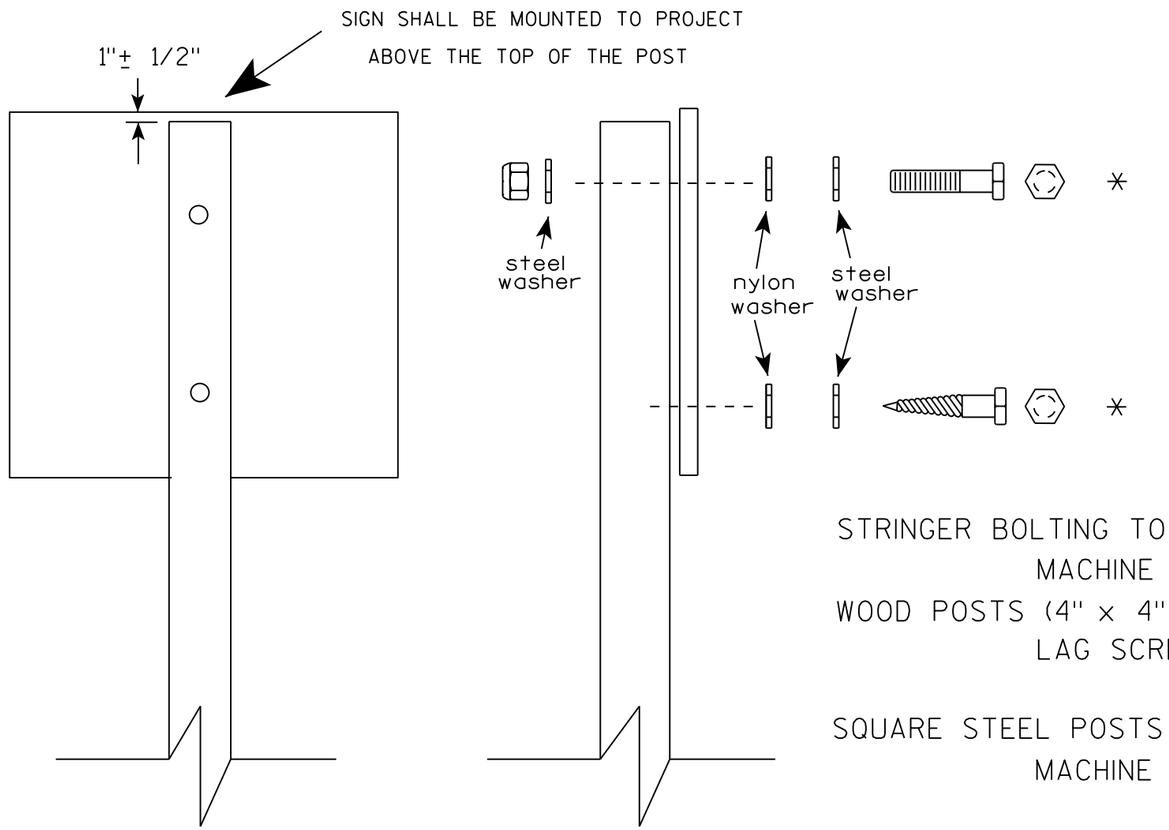
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 220	E



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

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

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

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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

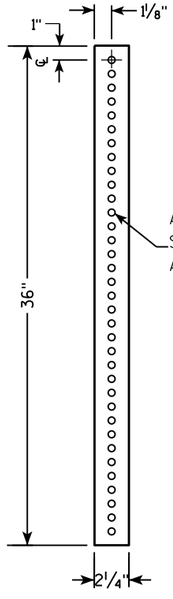
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

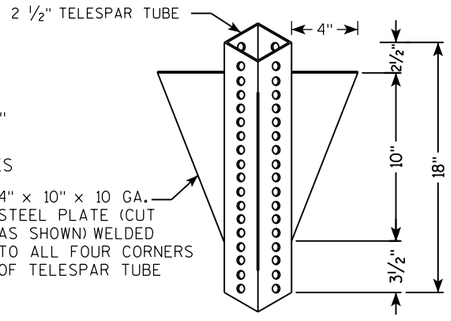
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

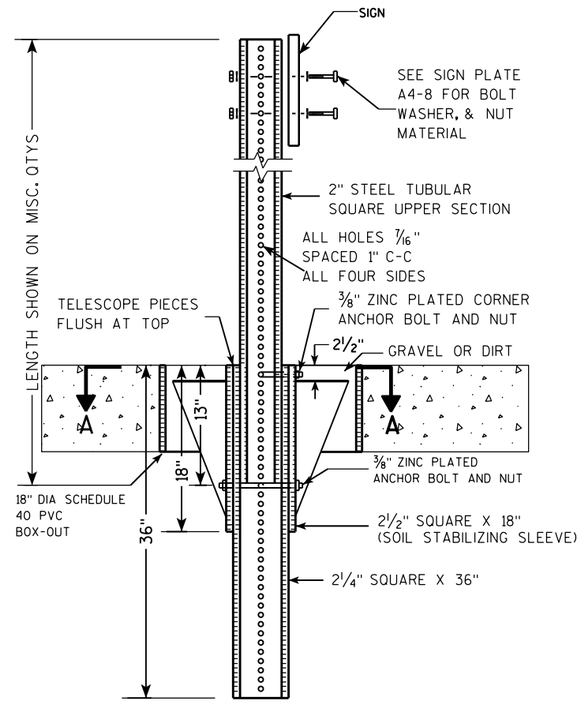
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



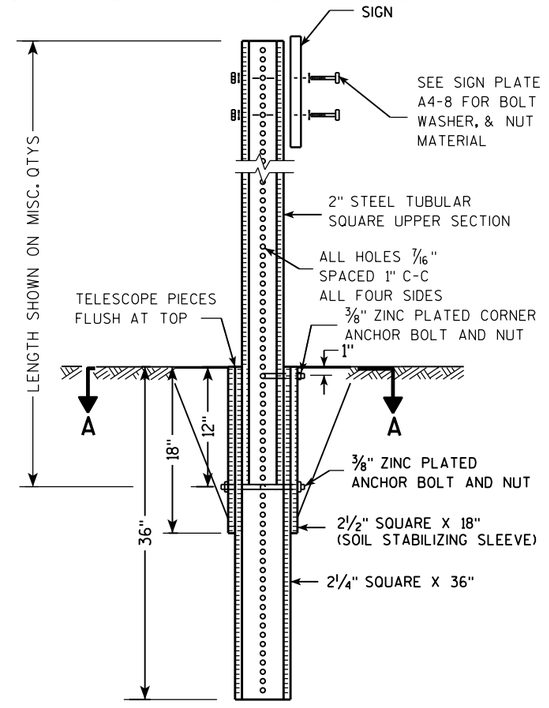
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

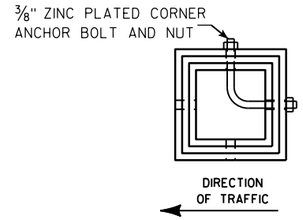


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

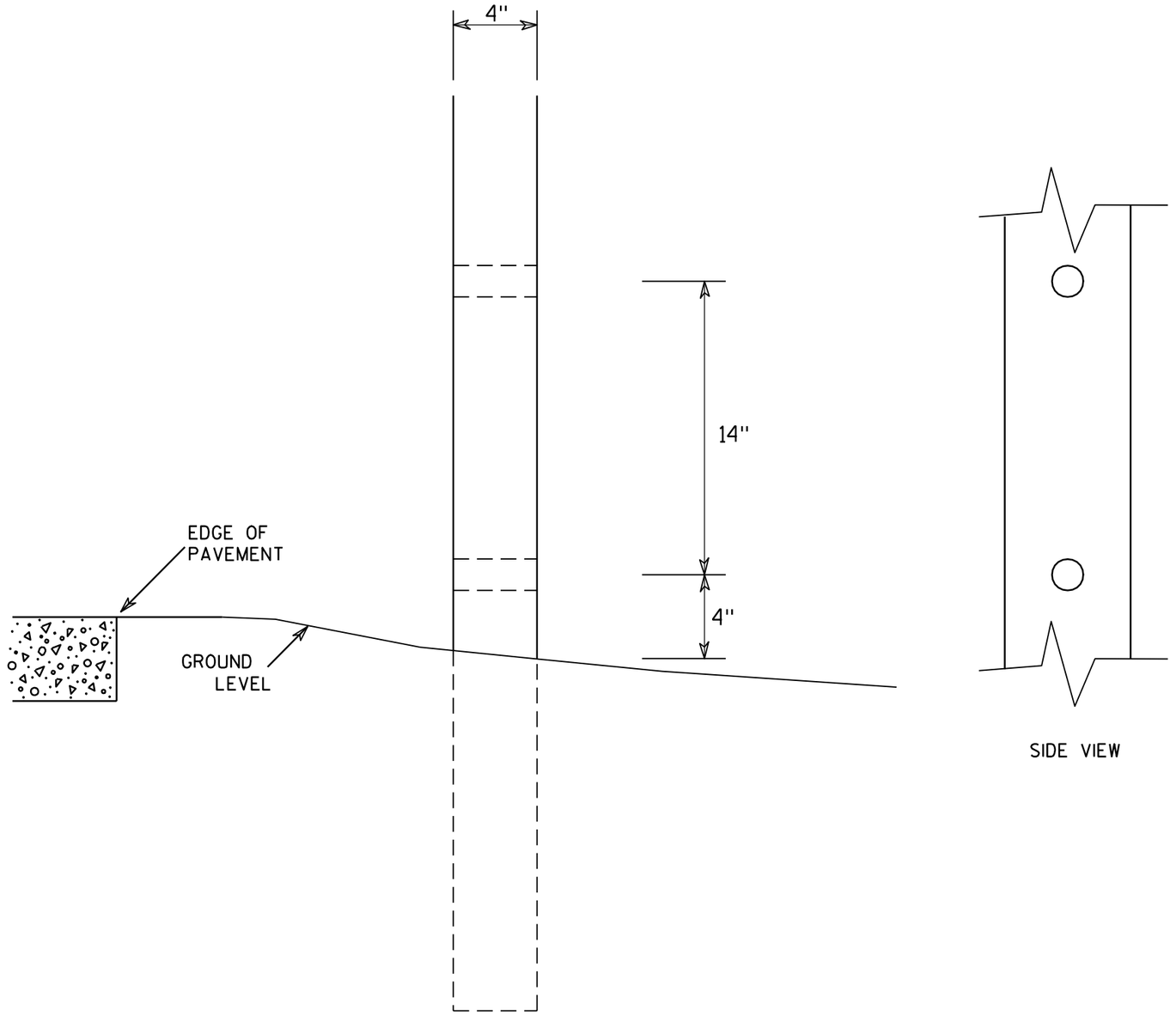
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 222 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.

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

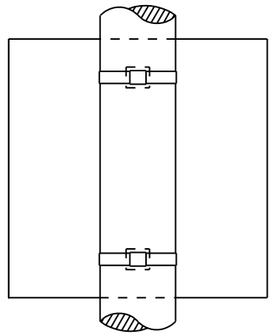
APPROVED Chester J Spang for State Traffic Engineer

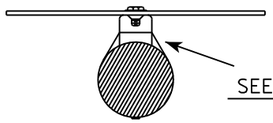
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 223	E

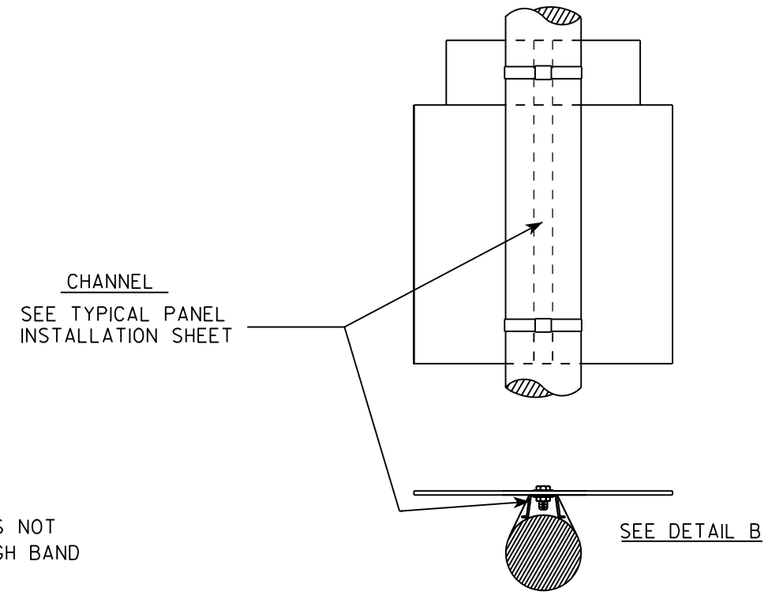
BANDING

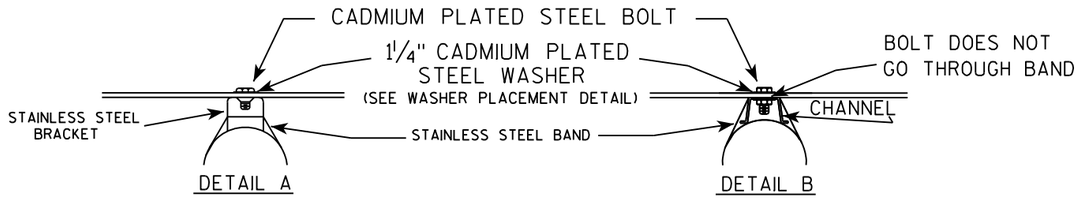
SINGLE SIGN



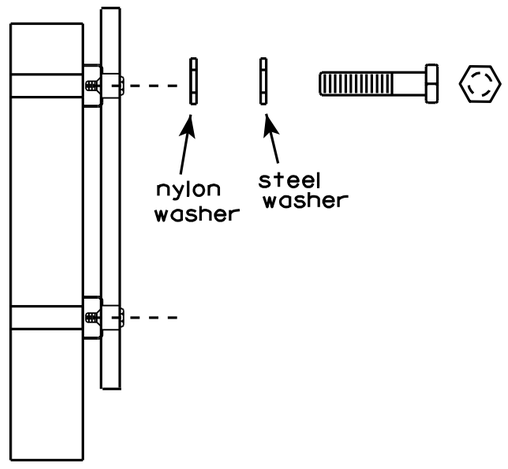


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

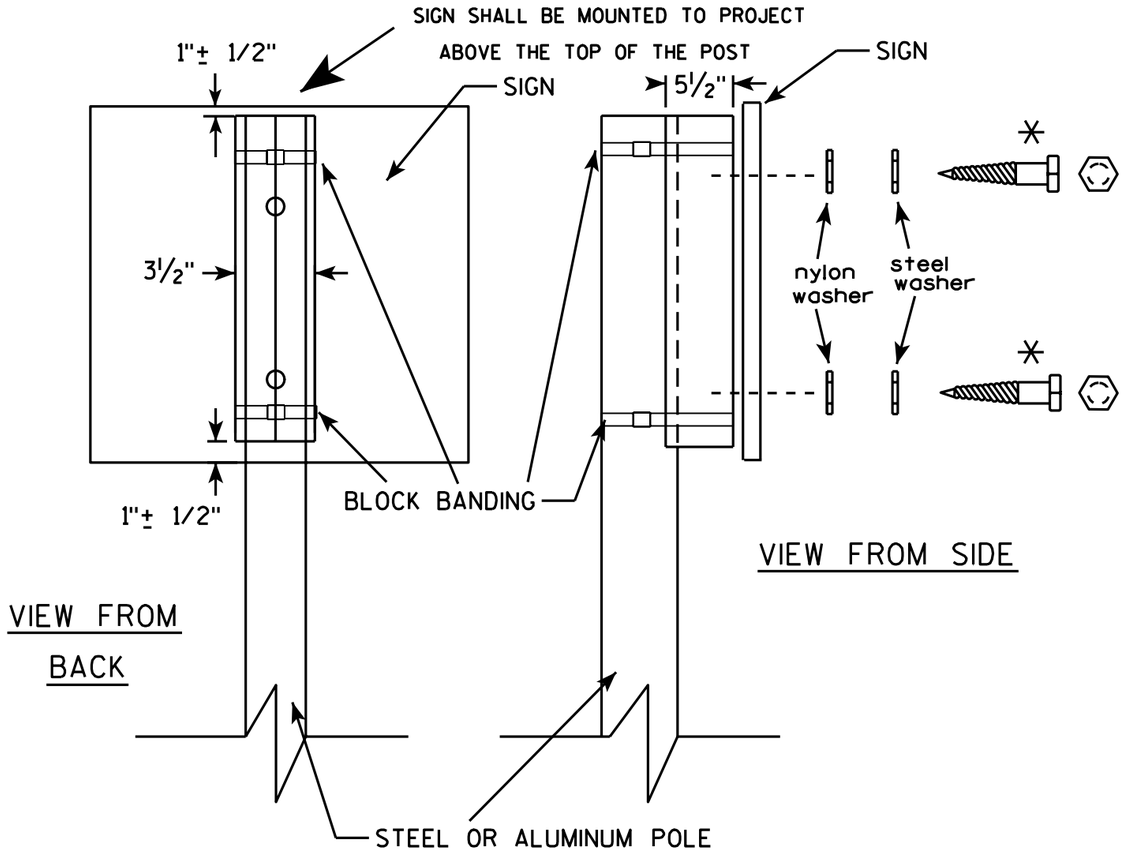
STANDARD SIGN
SIGN BANDING DETAILS

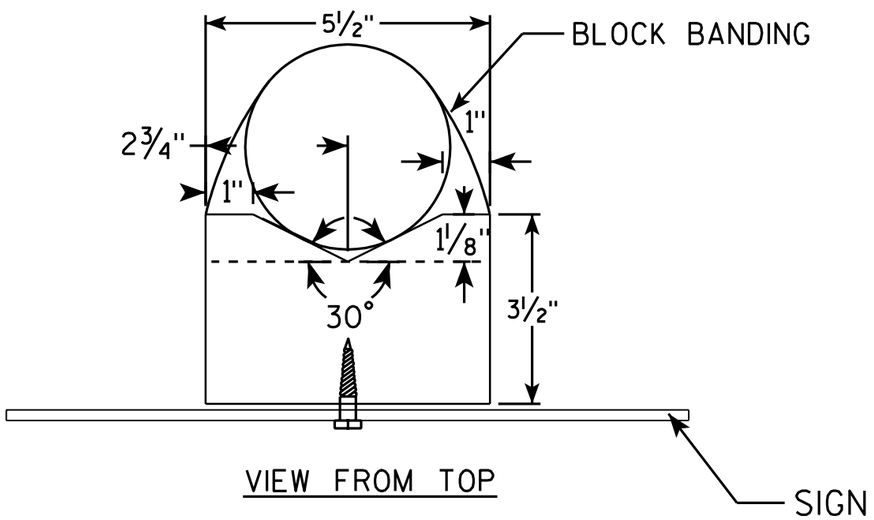
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 224	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

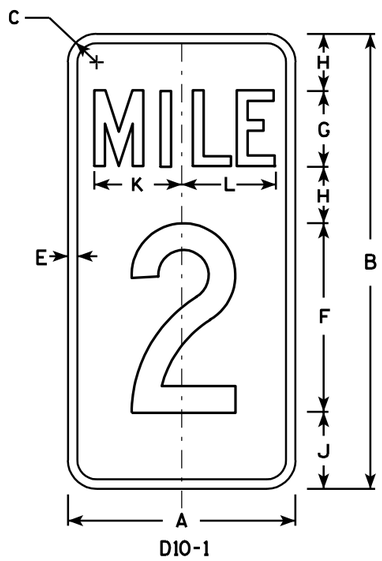
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

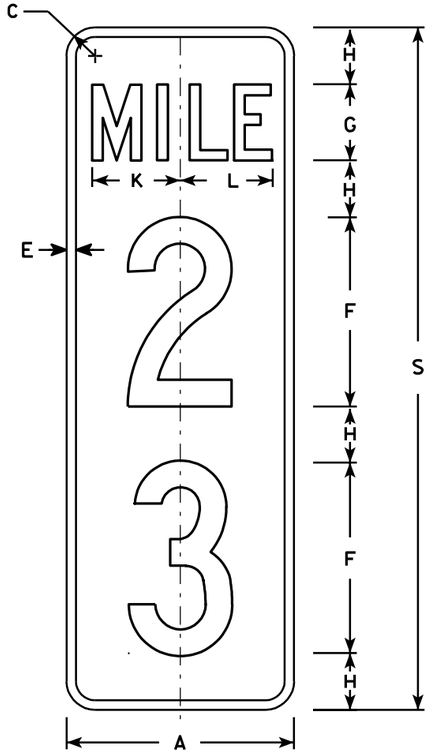
SHEET NO: 225 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

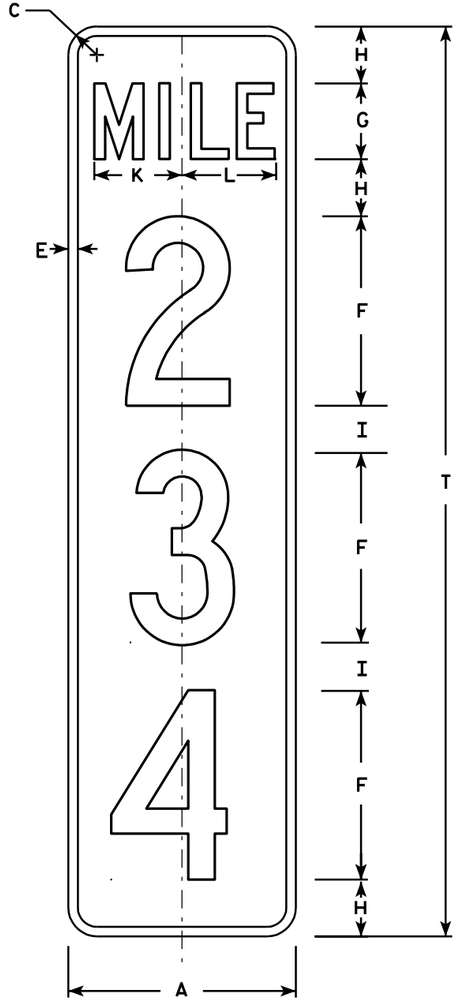
WISDOT/CADDS SHEET 42



D10-1



D10-2



D10-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Optically adjust numerals about the centerline of the sign to achieve proper balance.

Metric equivalent for this sign is:

PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1																										
2																										
3																										
4	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						
5	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						

D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m2	Area m2	Area m2
.19	.28	.38

STANDARD SIGN
D10-1 , D10-2 & D10-3

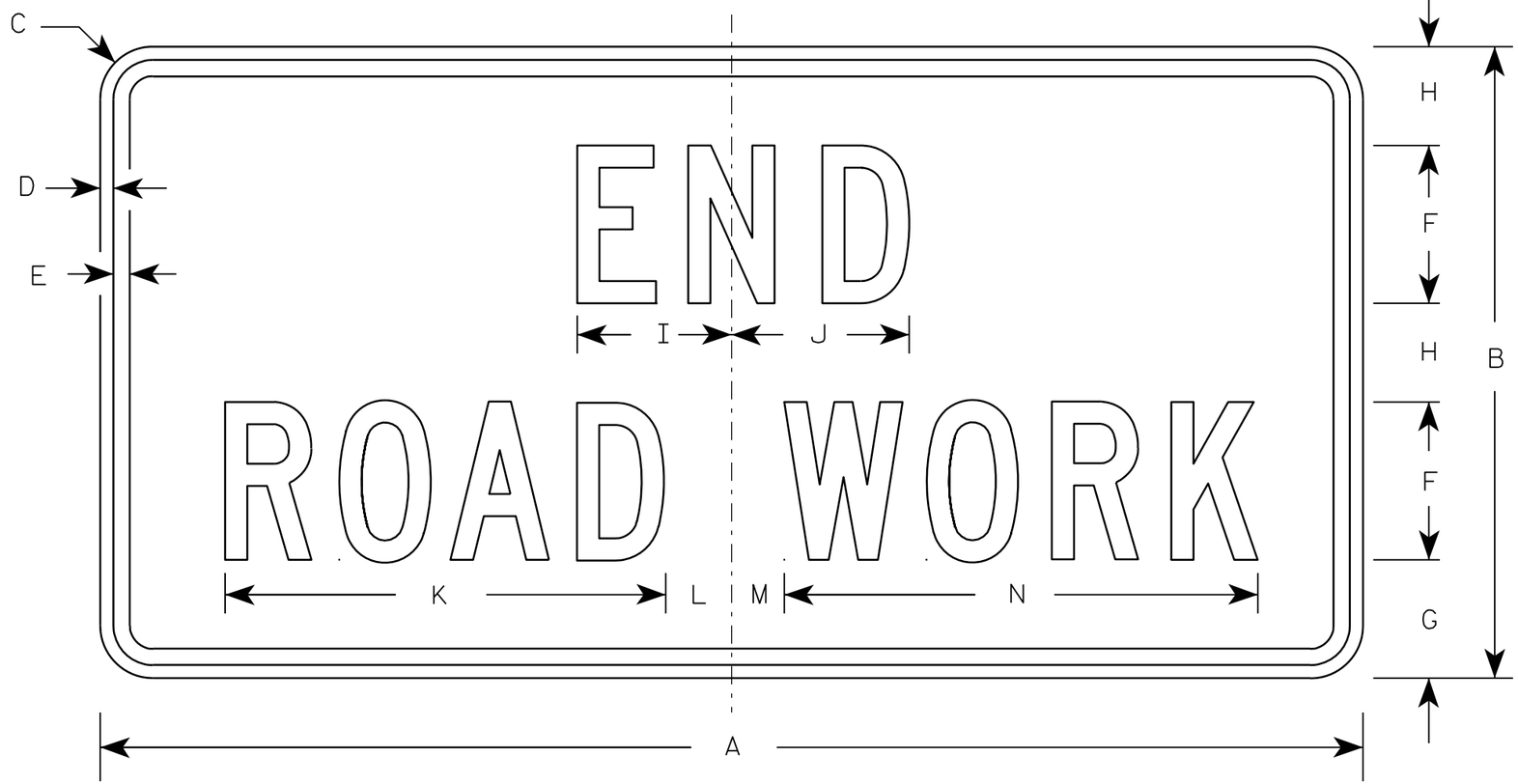
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for Director, Office of Traffic

DATE 1/16/02 PLATE NO. D10-3.2

PROJECT NO:

SHEET NO: 226 E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

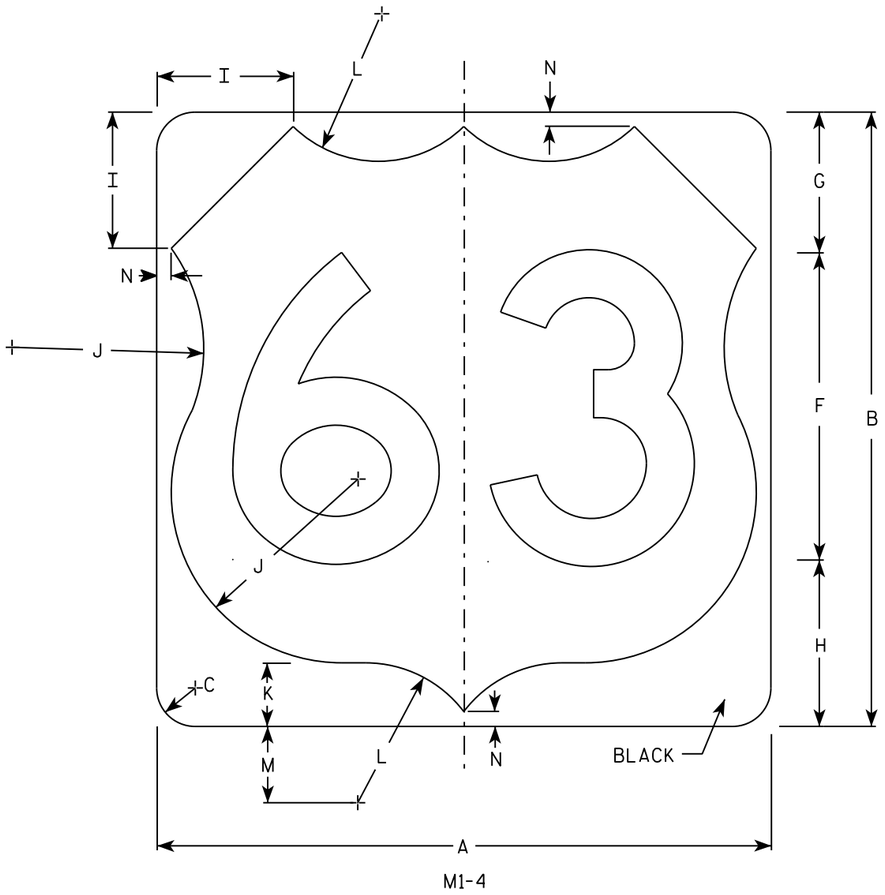
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

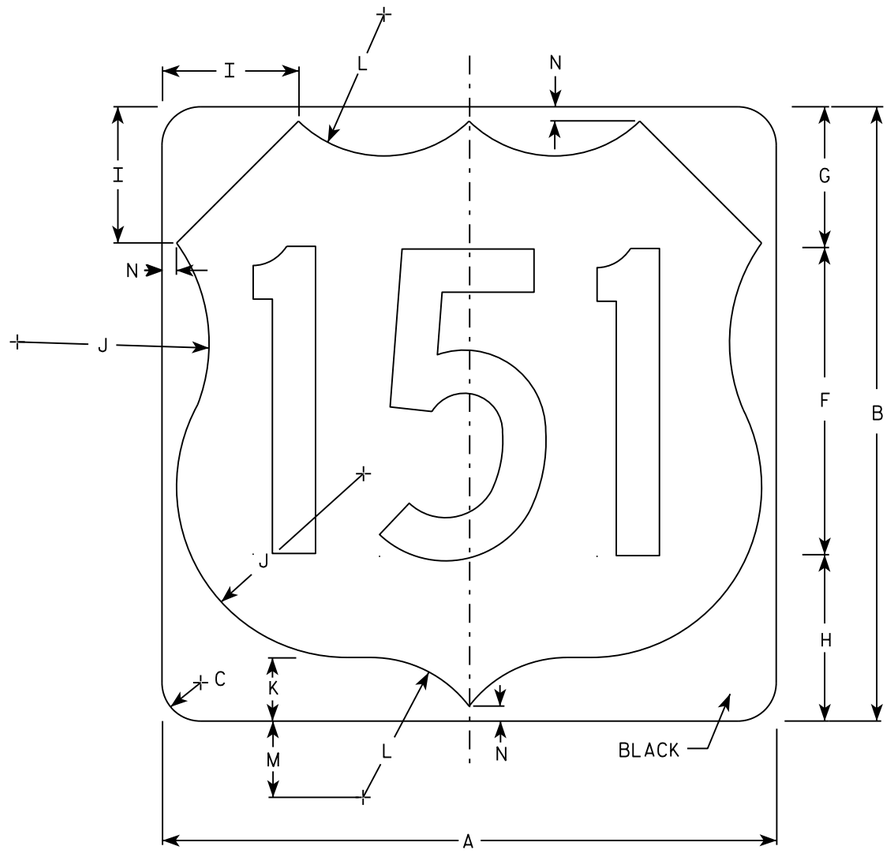
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 227	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs 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.



M1-4



M1-4

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	Area Sq. ft.
1																											
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0

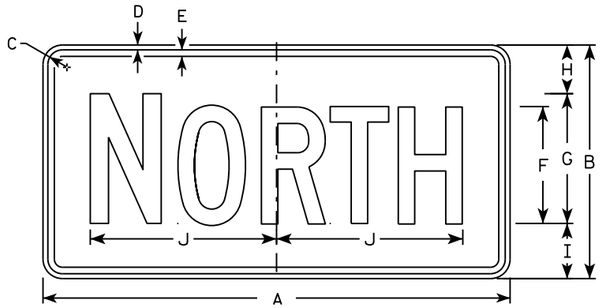
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

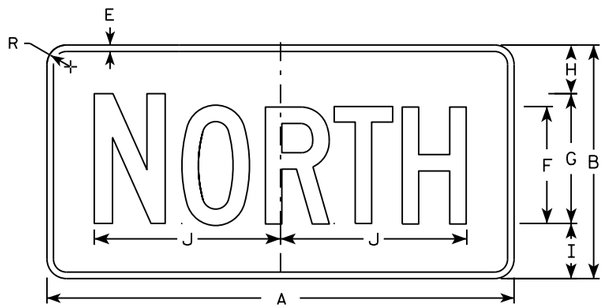
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-4.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 228	E



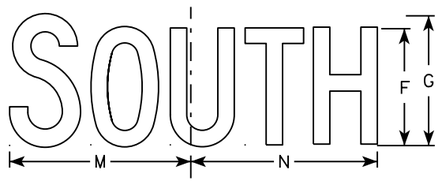
M3-1
MM3-1
MP3-1



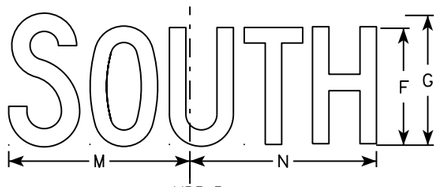
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

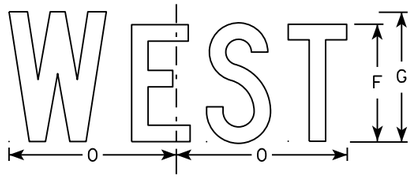
MB3-2
MK3-2
MN3-2



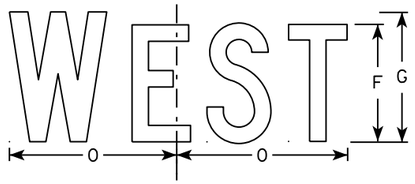
M3-3
MM3-3
MP3-3



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

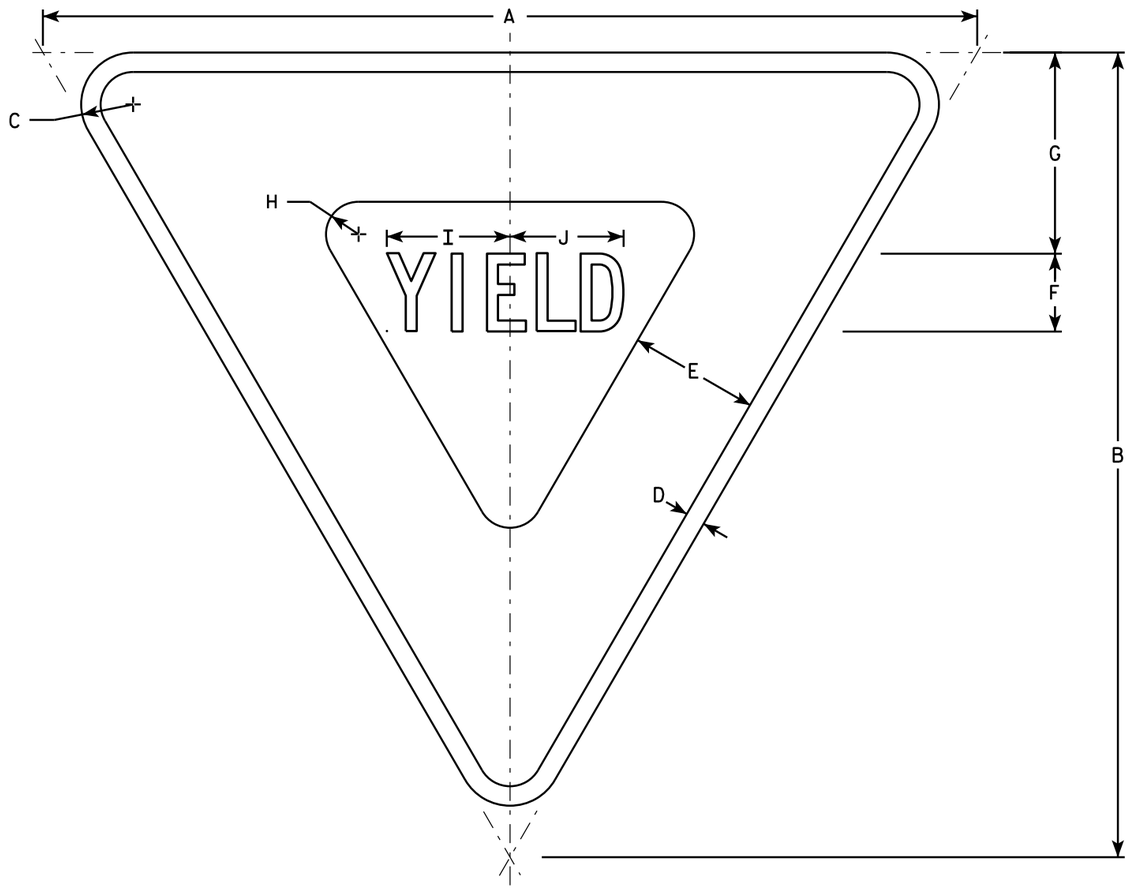
WISCONSIN DEPT OF TRANSPORTATION

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



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

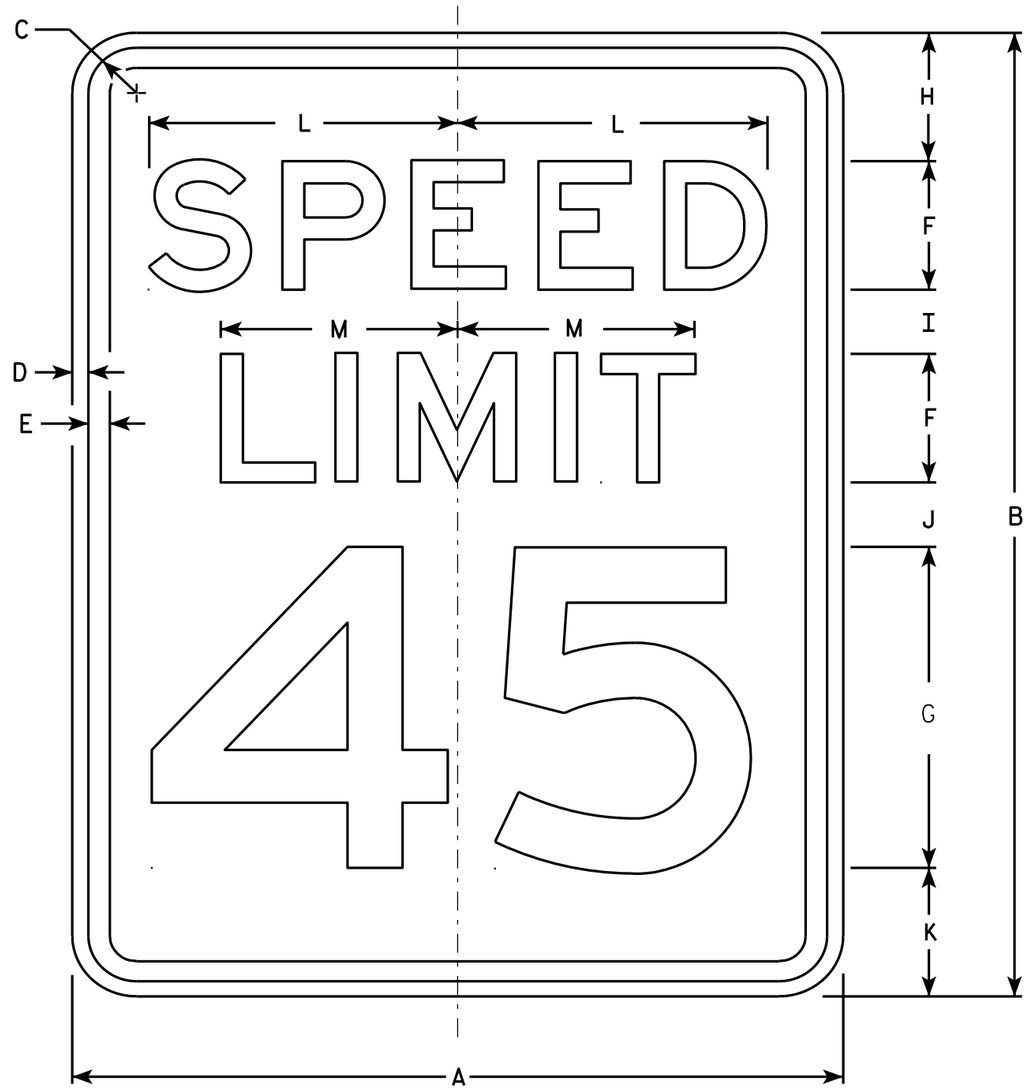
APPROVED Matthew R Rauch
for State Traffic Engineer

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

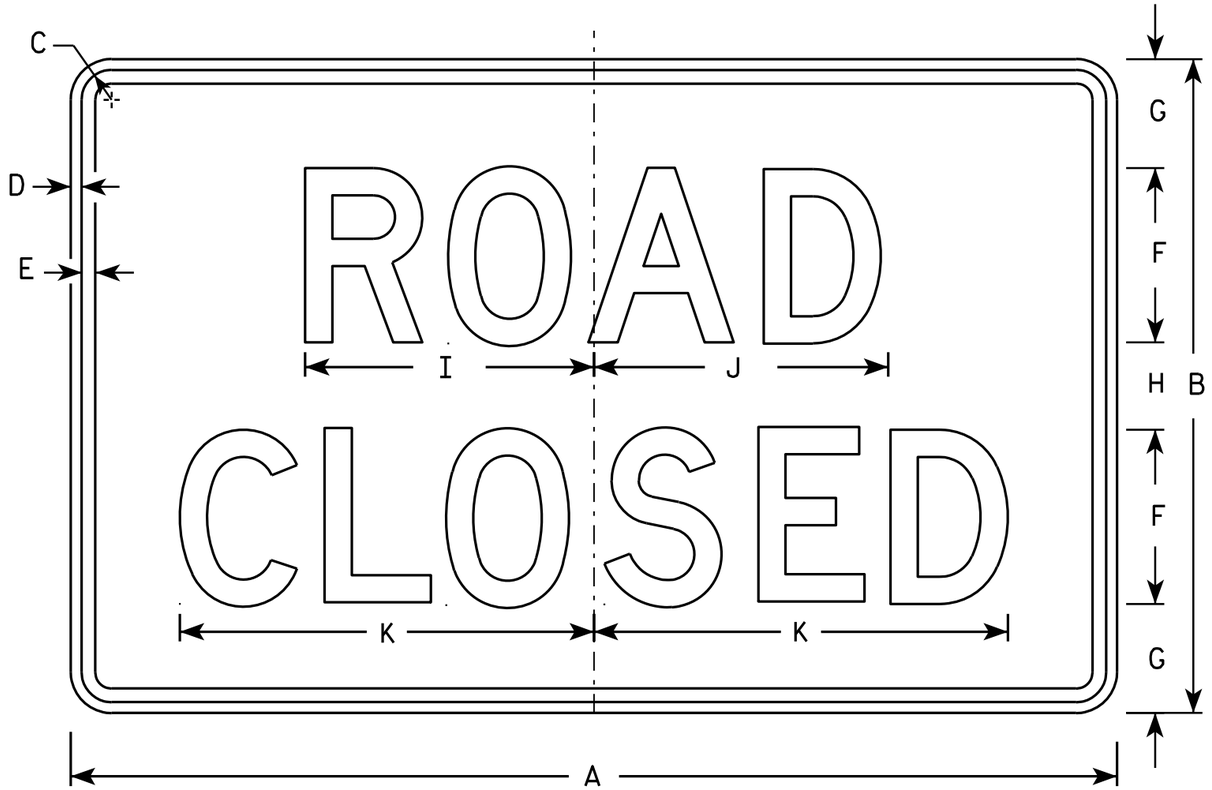
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

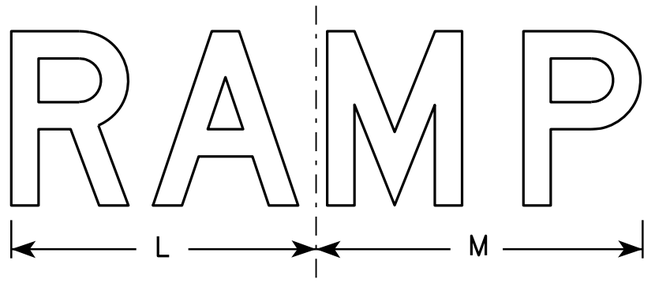
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 231 | E



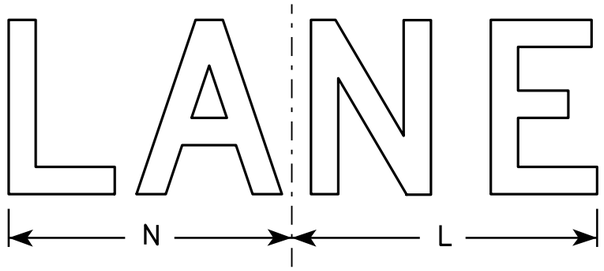
R11-2

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

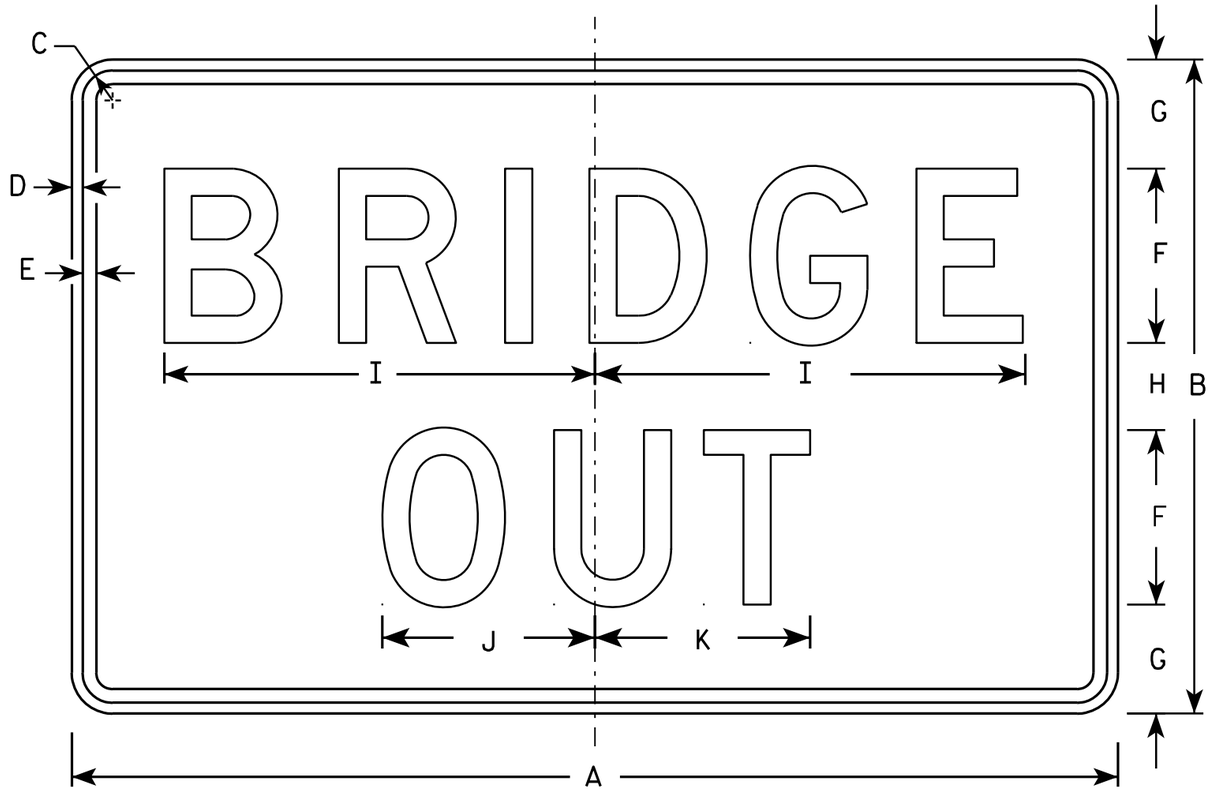
STANDARD SIGN
R11-2

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: 232 | E



R11-2B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

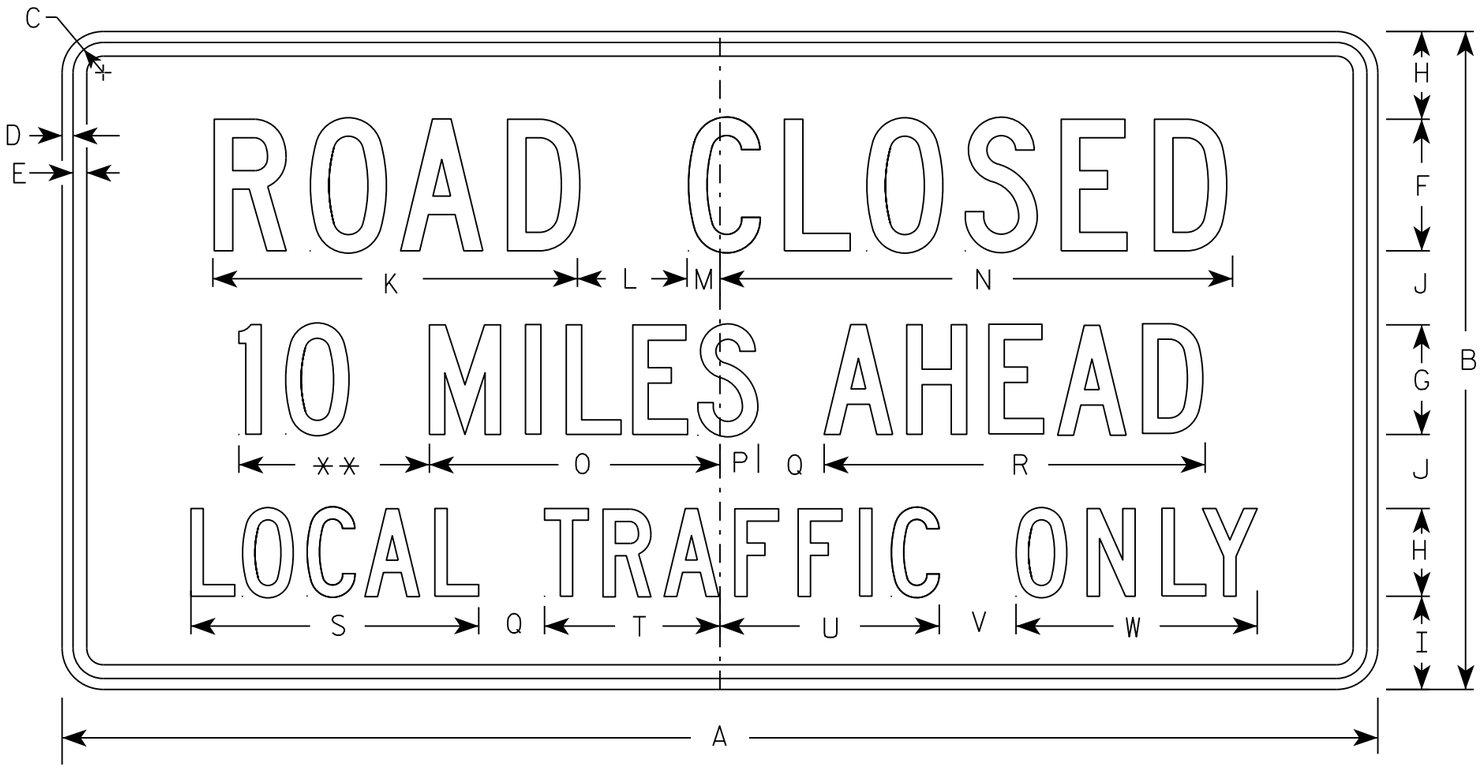
DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO:

SHEET NO: 233 E

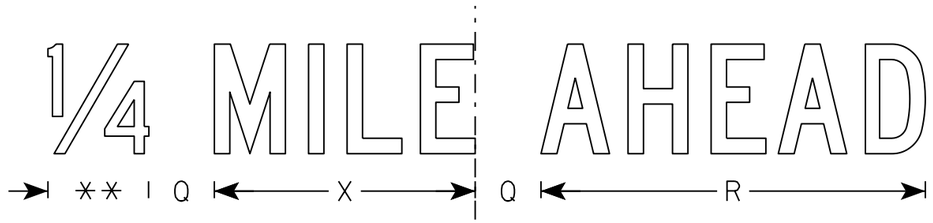
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

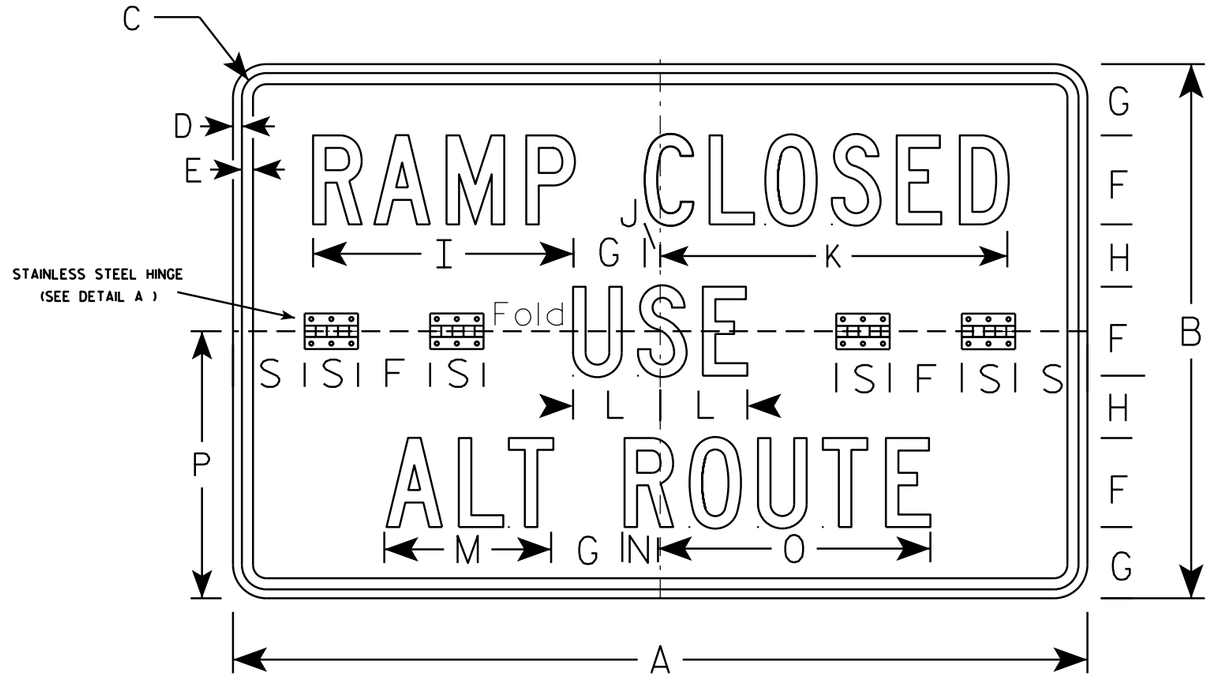
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

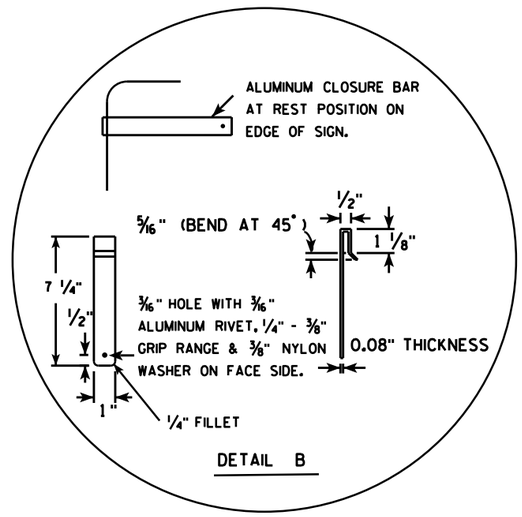
DATE 3/15/17 PLATE NO. R11-3.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 234	E



R11-54F

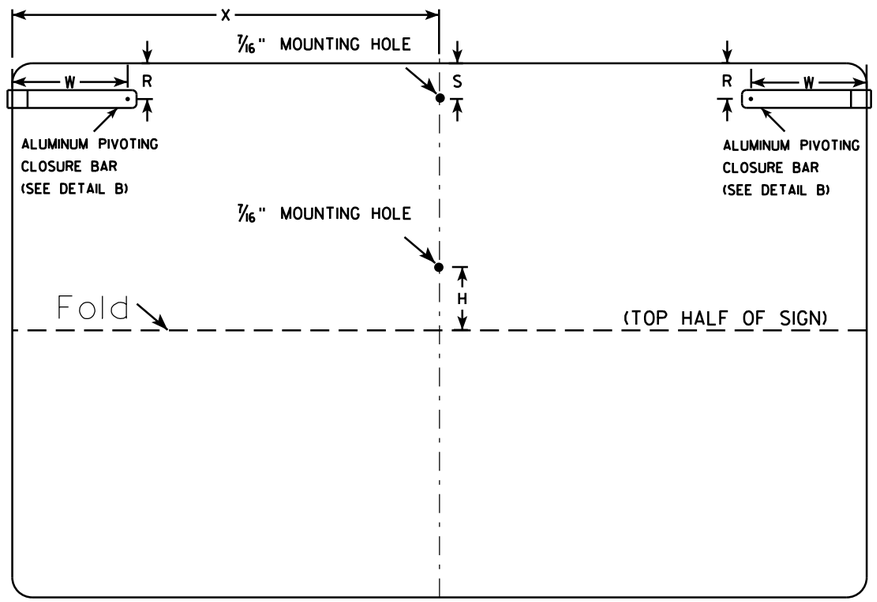
DETAIL A



DETAIL B

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - C
4. Sign Base Material shall be aluminum, corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
6. Refer to plate A5-3A for sign blank layout.



(BACK VIEW)

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	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
2M	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
3																											
4																											
5																											

STANDARD SIGN
R11-54F

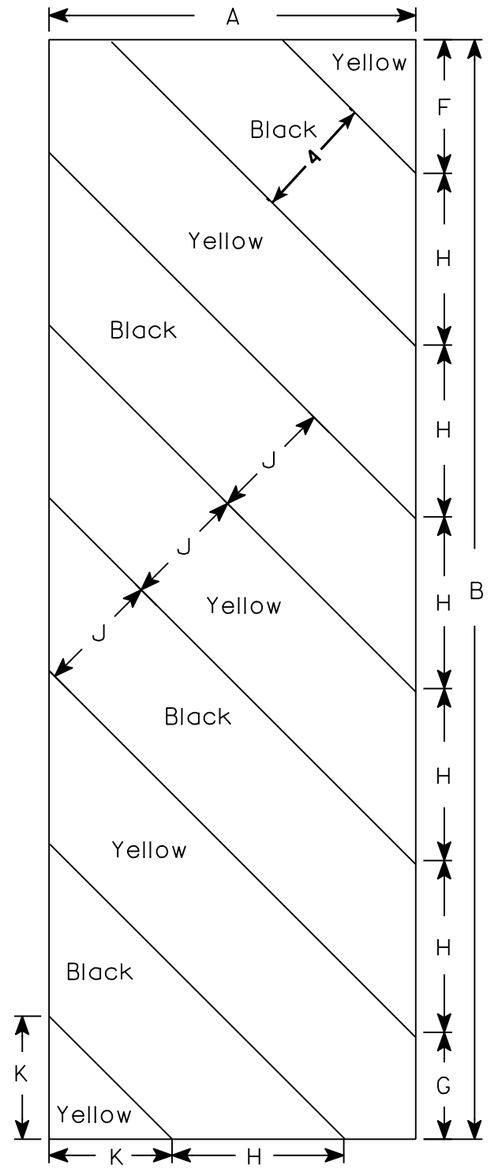
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

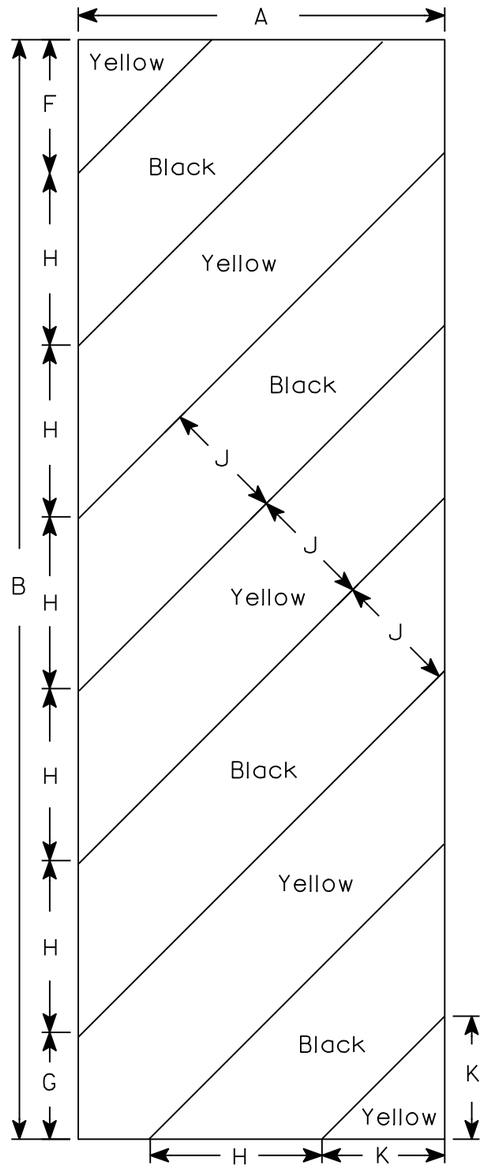
DATE 5/28/14 PLATE NO. R11-54F.3

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R1154F.DGN PLOT DATE : 28-MAY-2014 14:15 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 8.511110:1.000000
WISDOT/CADDS SHEET 42



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

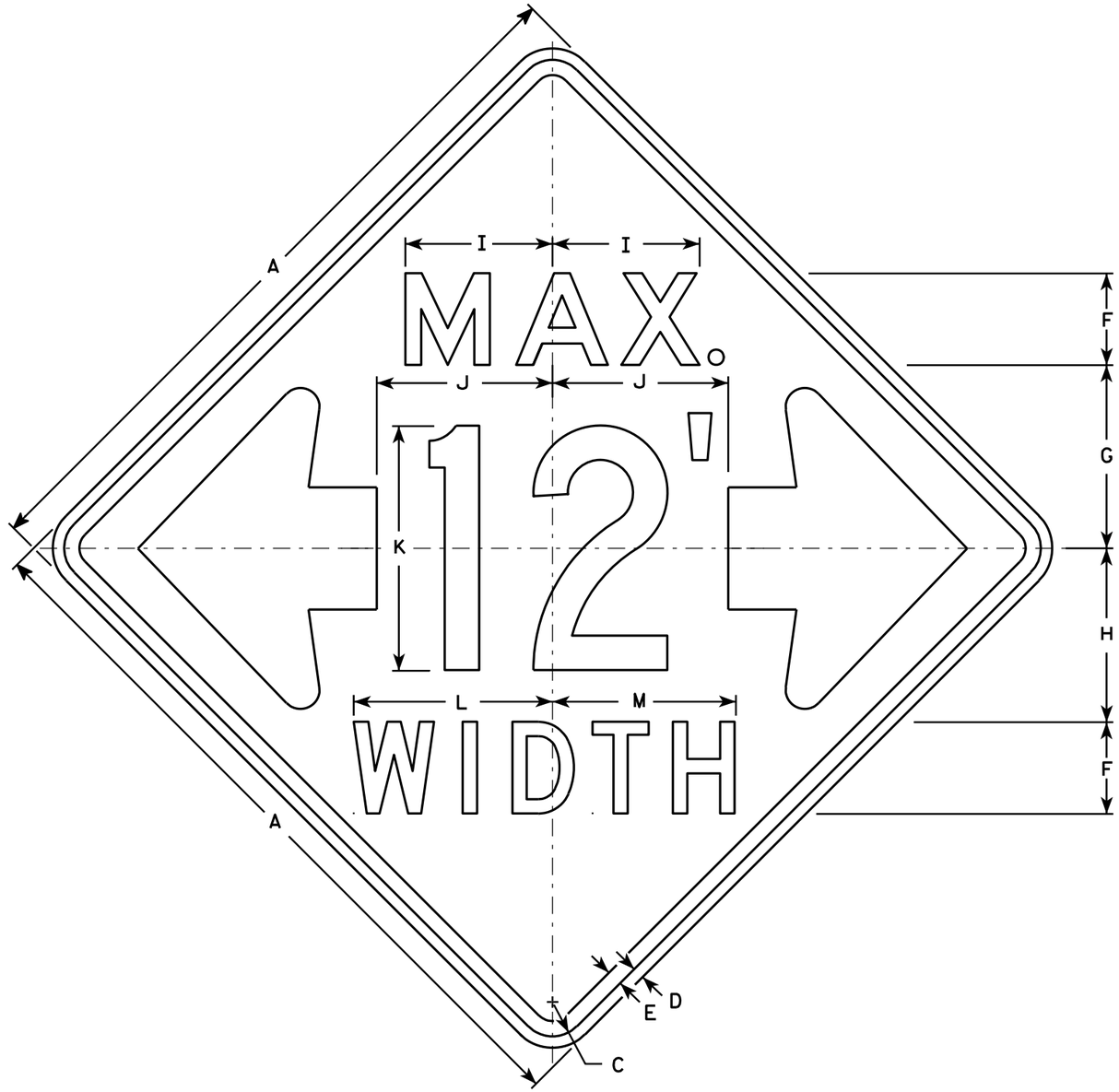
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

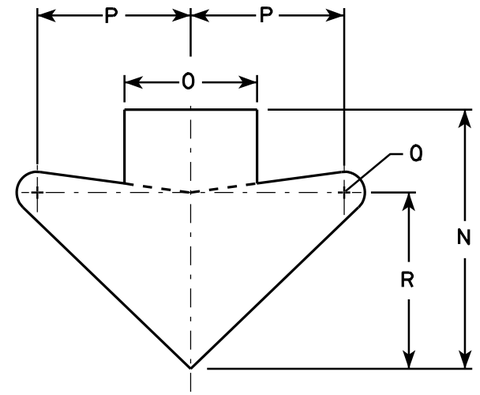
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 236	E



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

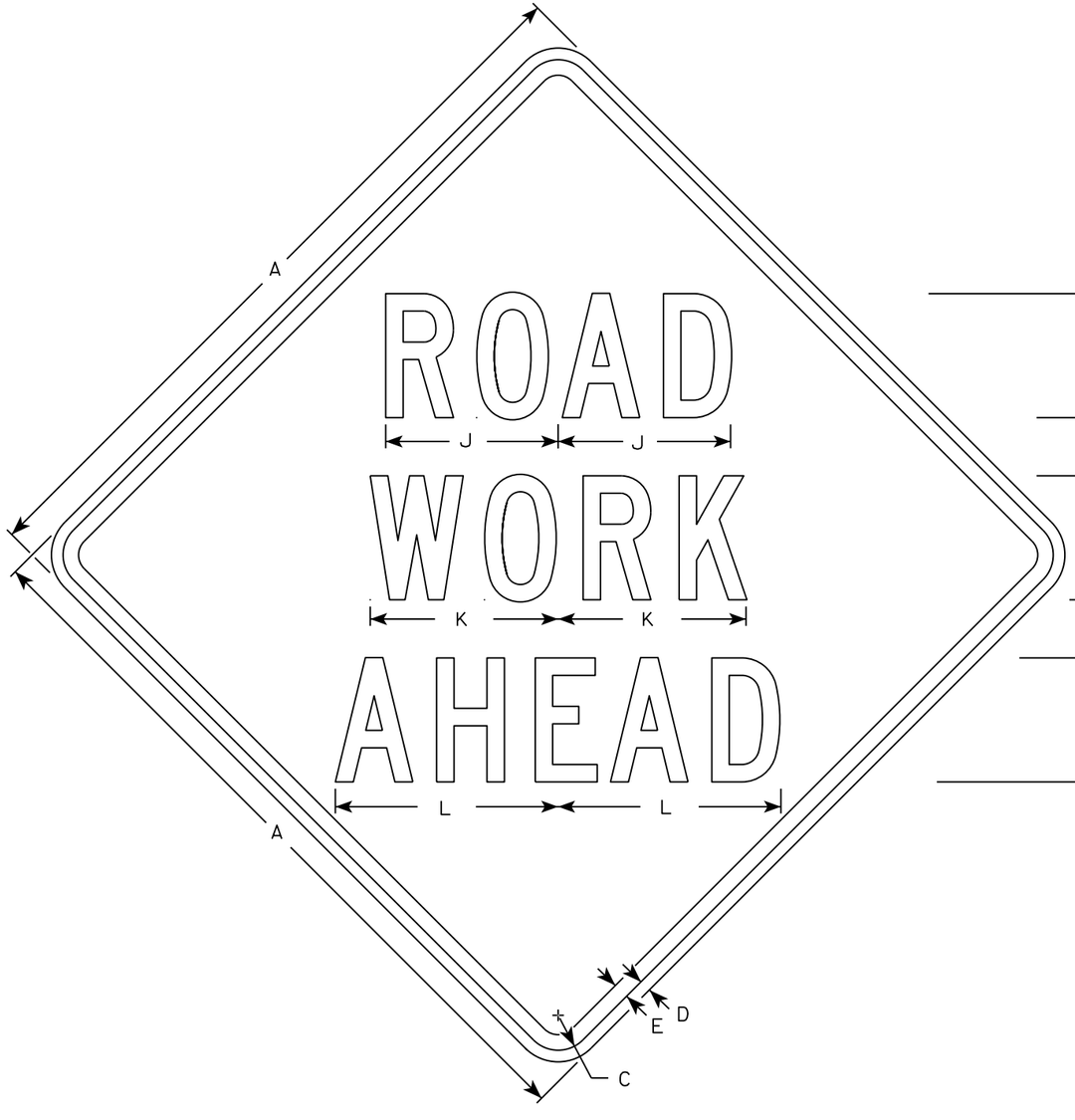
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

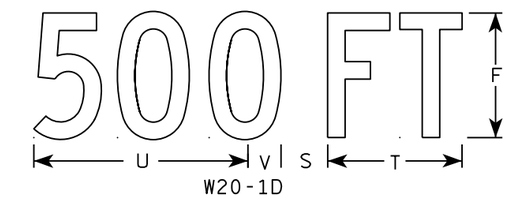
DATE 3/16/11 PLATE NO. W12-52.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 237 | E

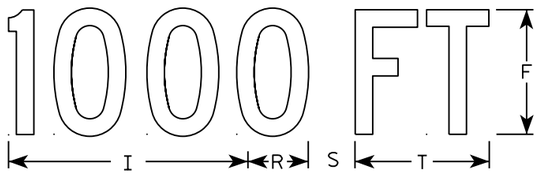
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000
WISDOT/CADDS SHEET 42



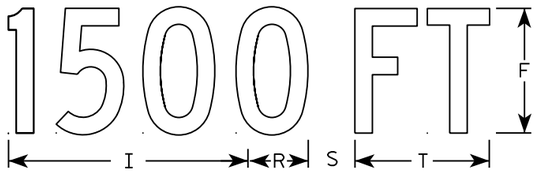
W20-1A



W20-1D

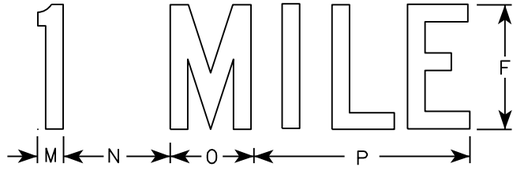


W20-1C

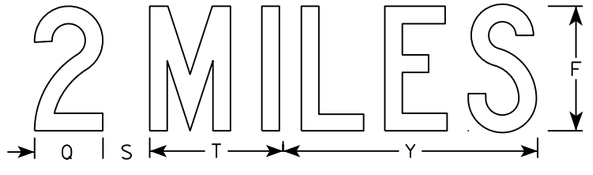


W20-1B

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

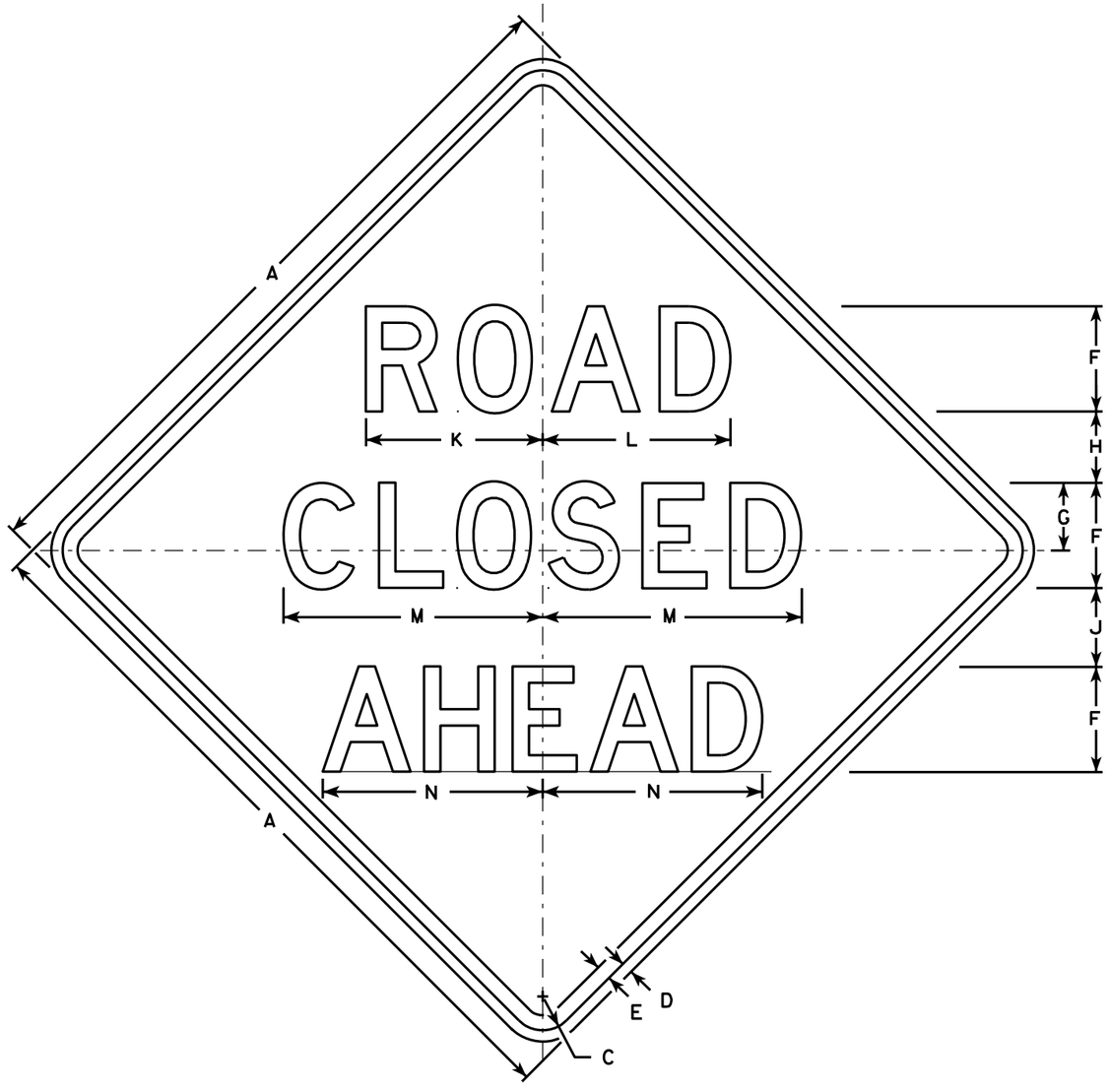
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

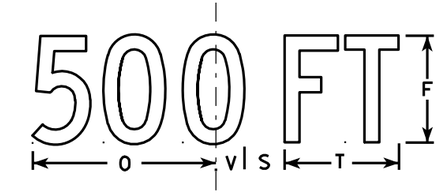
PROJECT NO:

SHEET NO: E

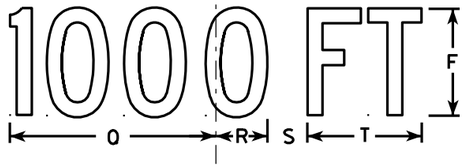
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



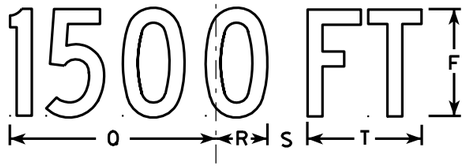
W20-3A



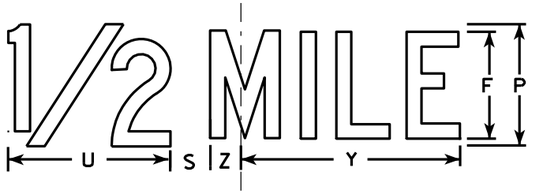
W20-3D



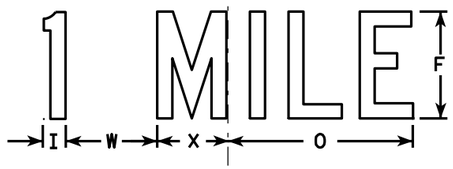
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

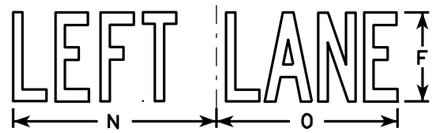
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 239 | E

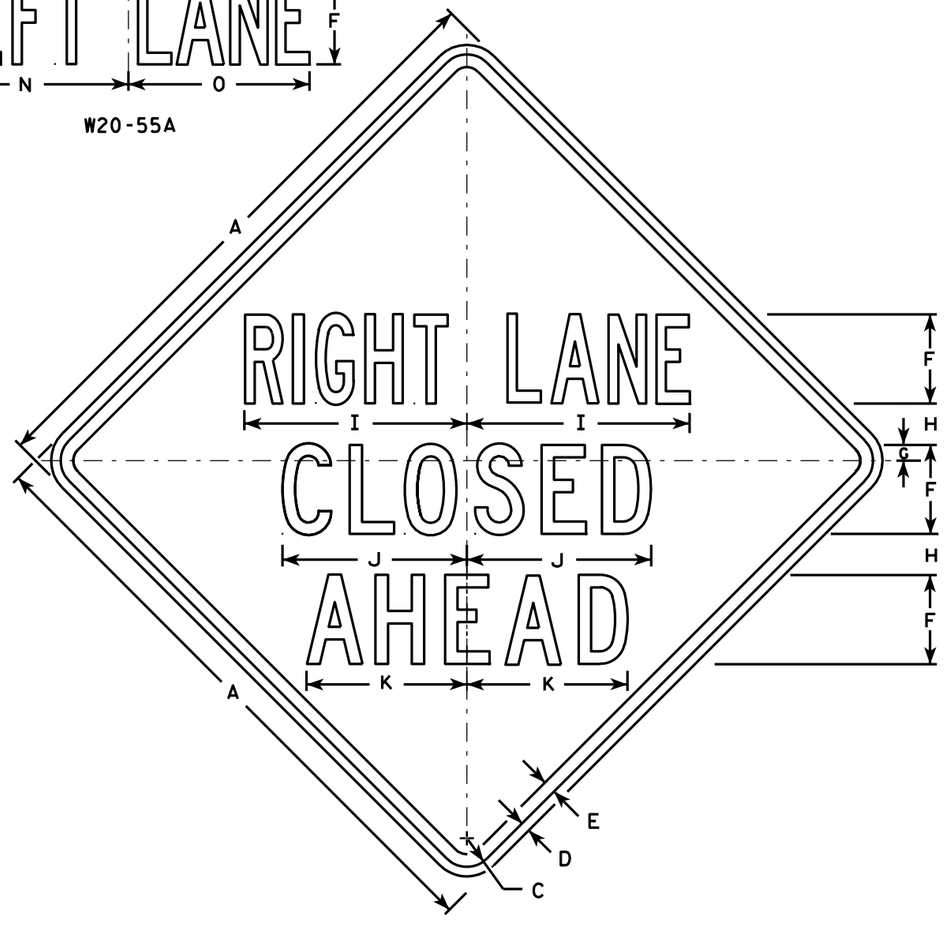
7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42

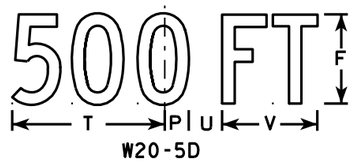
W20-56A



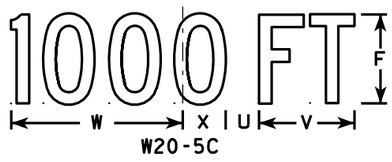
W20-55A



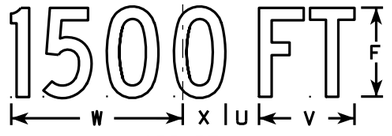
W20-5A



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

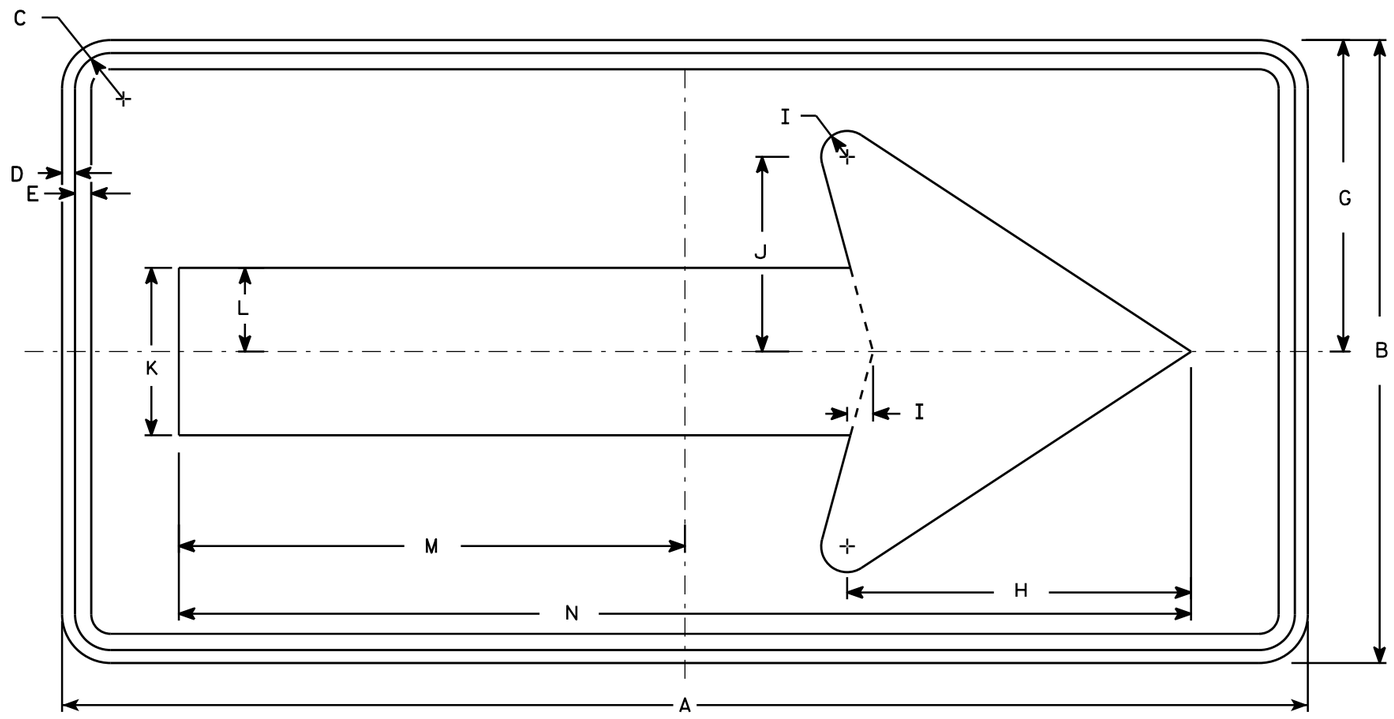
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 240 | E

7

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

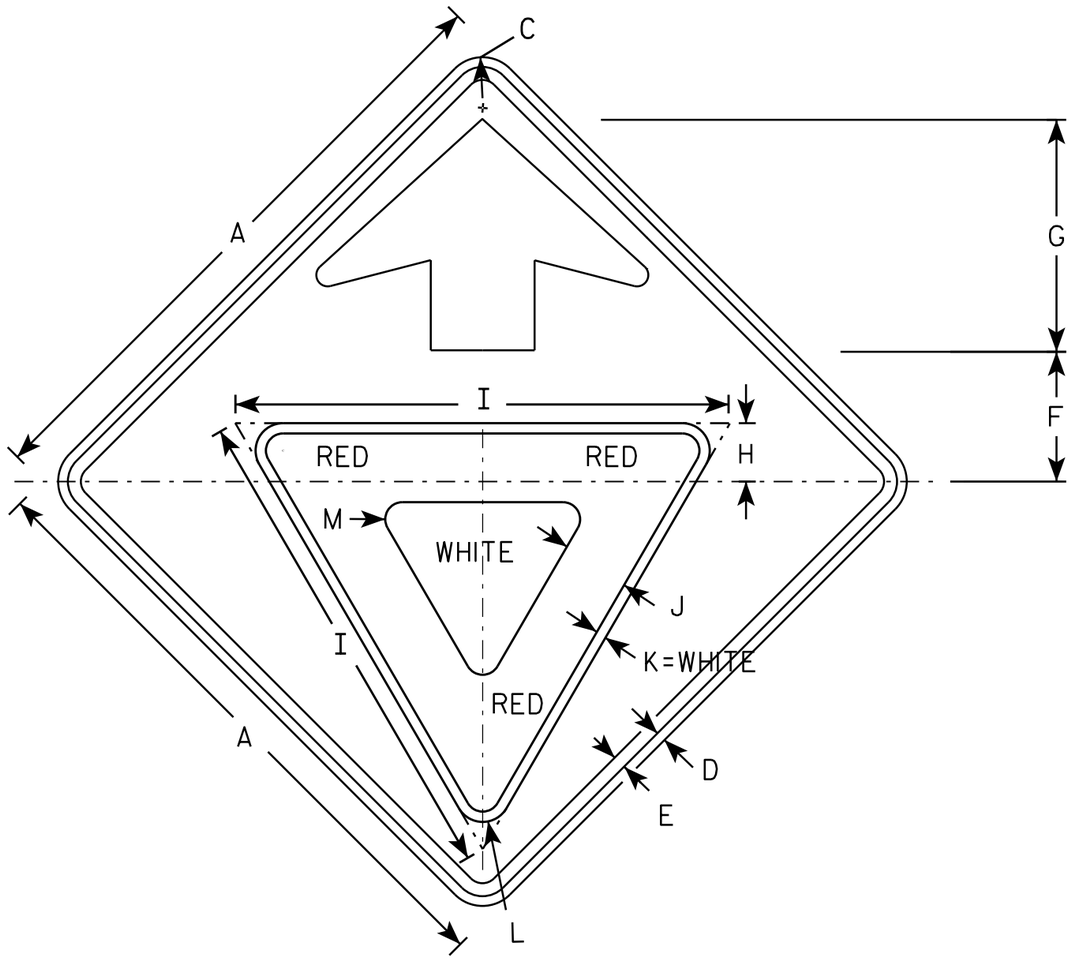
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

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

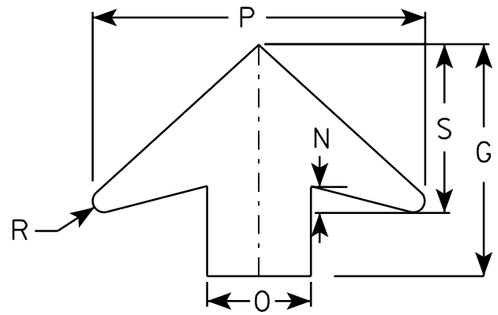
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W03-2

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

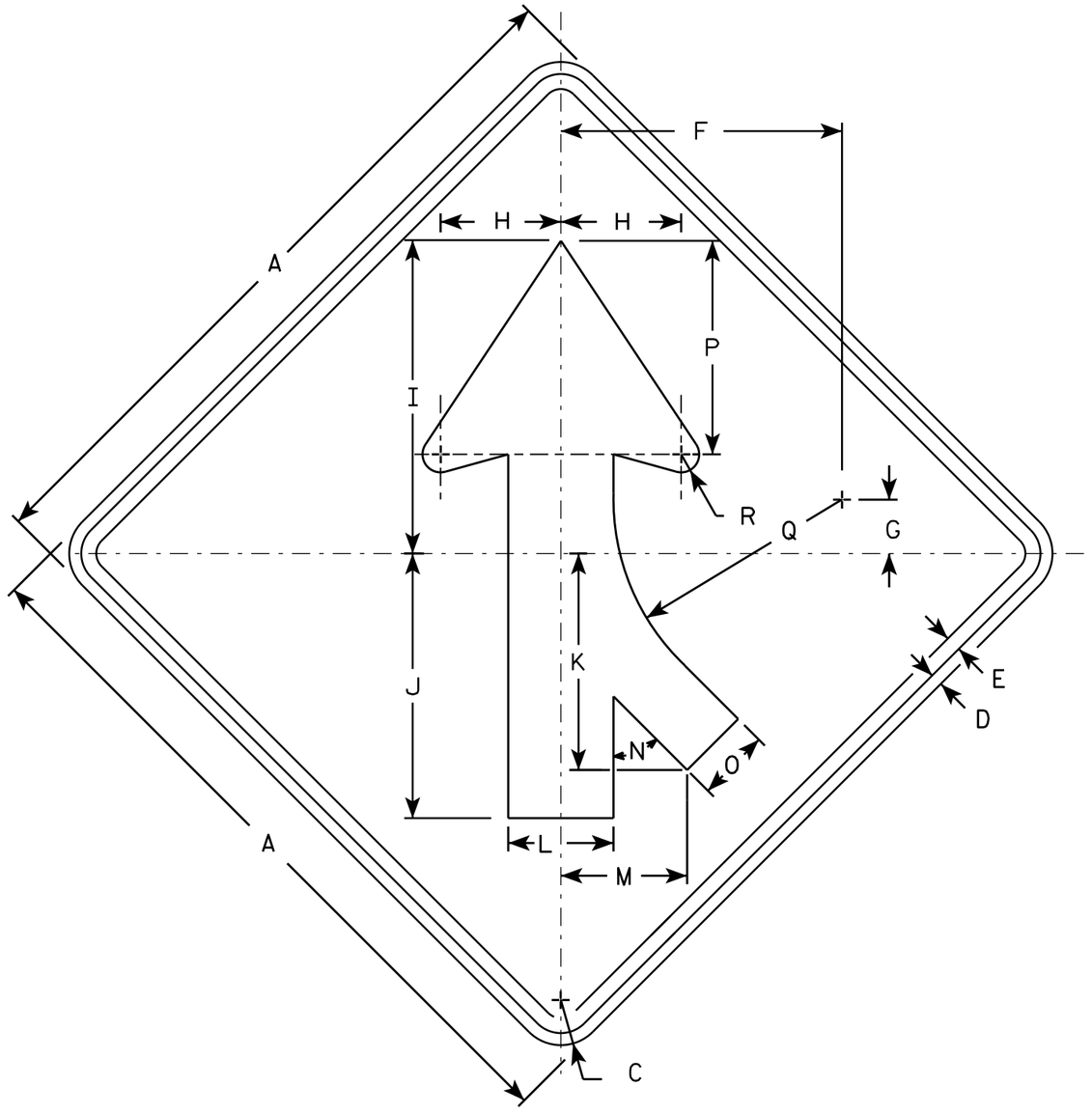
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W03-2.1

PROJECT NO:

SHEET NO: E



W04-1R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2S	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
2M	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
3	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

STANDARD SIGN
W04-1

WISCONSIN DEPT OF TRANSPORTATION

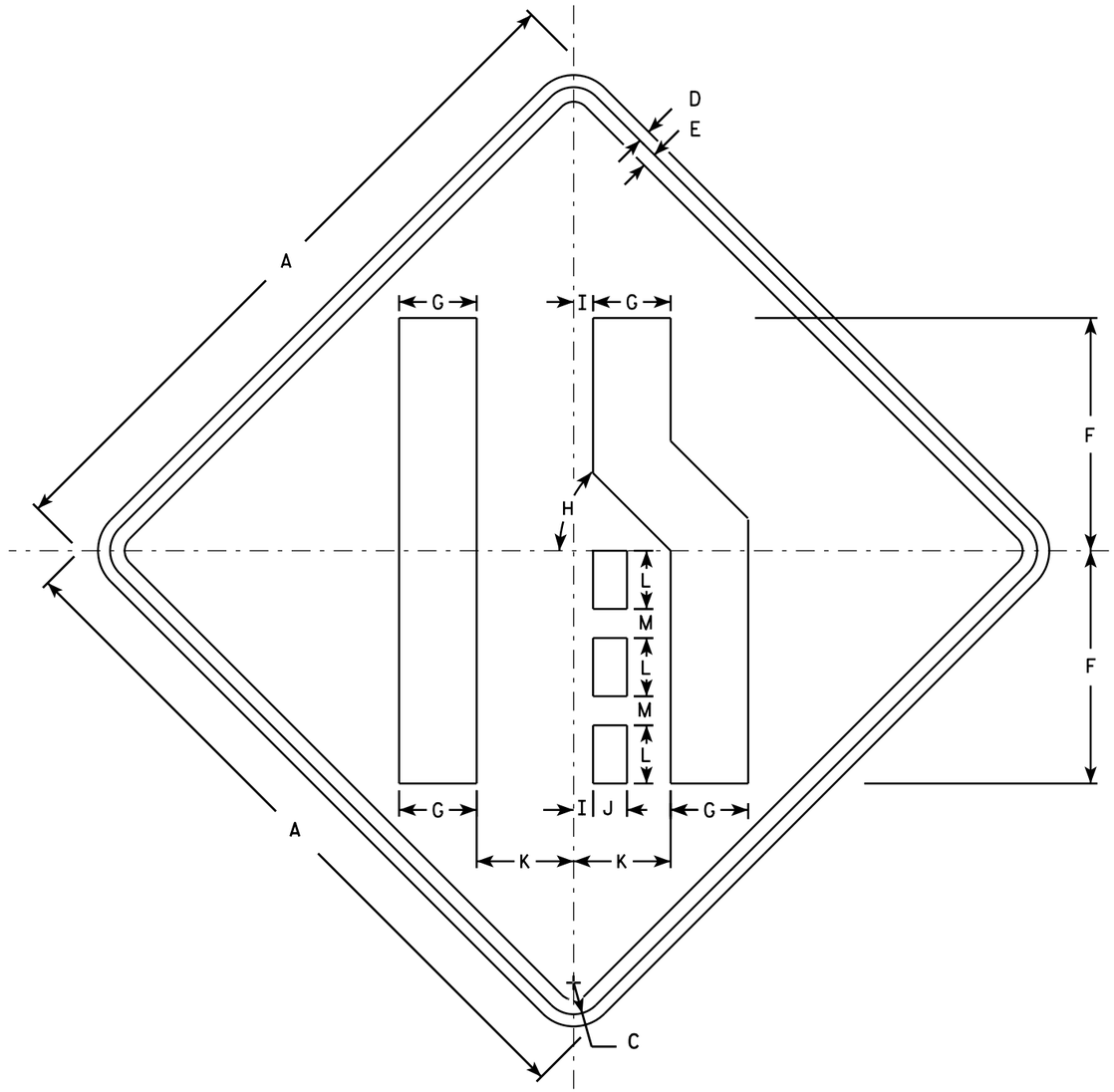
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO W04-1.1

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

7

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

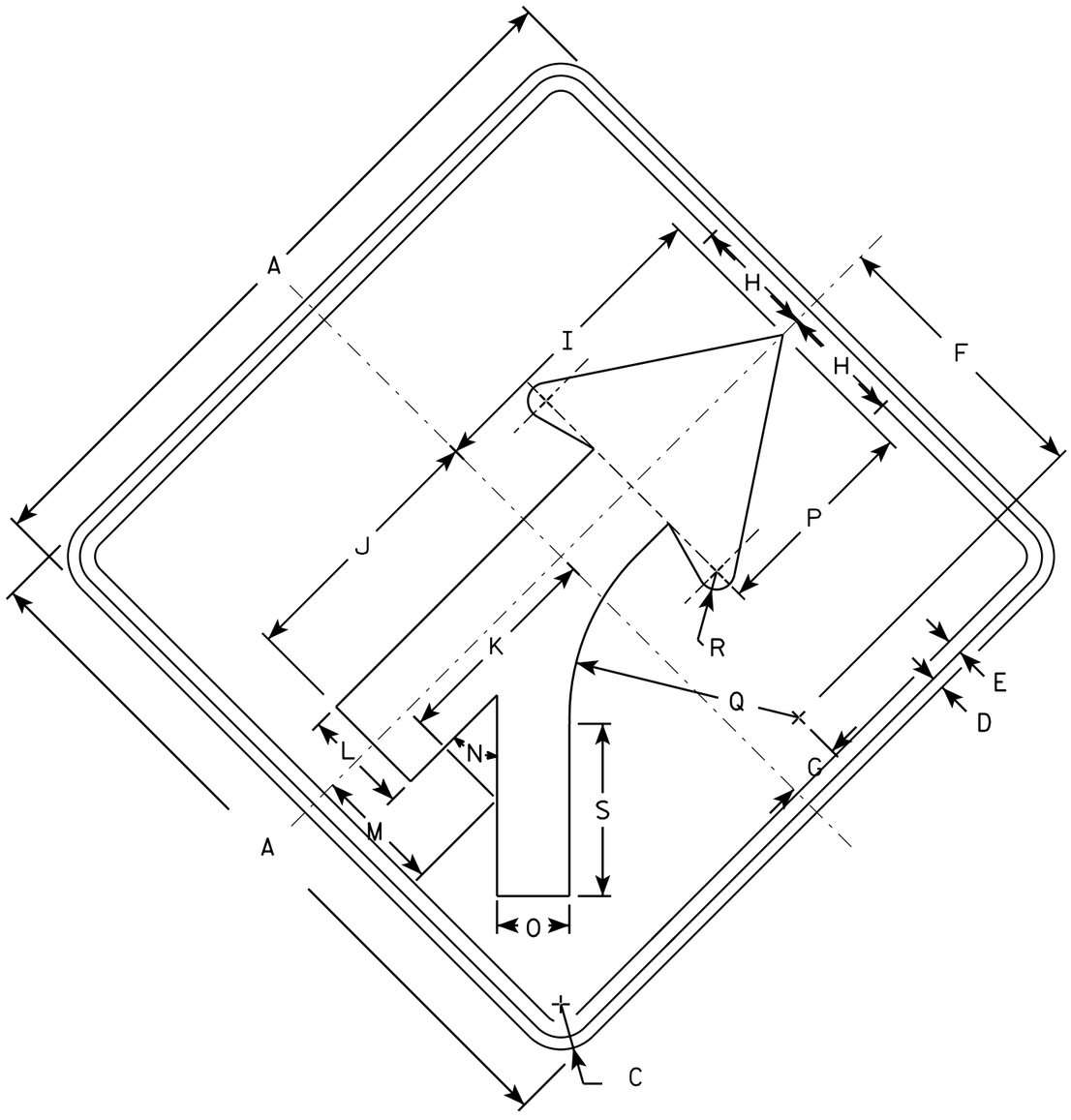
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 244 W04-2.1

PROJECT NO:

SHEET NO: E



W04-5

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. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	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	8 1/2								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	11 3/8								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	11 3/8								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	11 3/8								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	11 3/8								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	11 3/8								16.0

STANDARD SIGN
W04-5

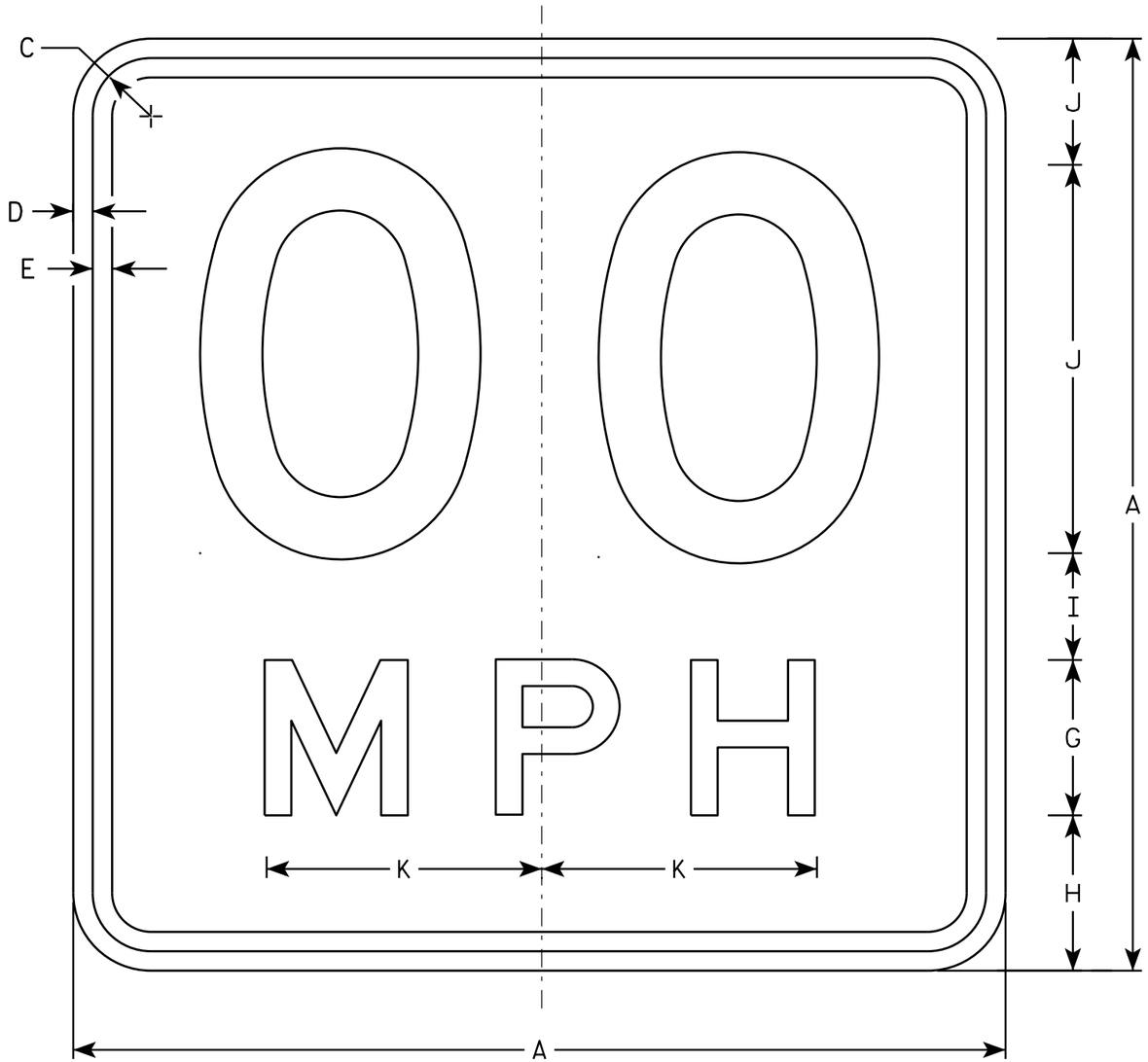
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/28/16 PLATE NO W04-5.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W045.DGN PLOT DATE : 28-APR-2016 13:30 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.080757:1.000000
WISDOT/CADDS SHEET 42



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

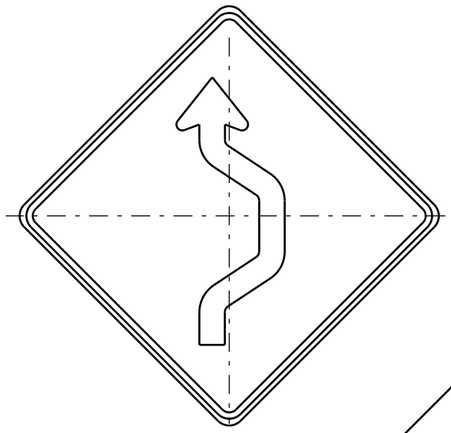
STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

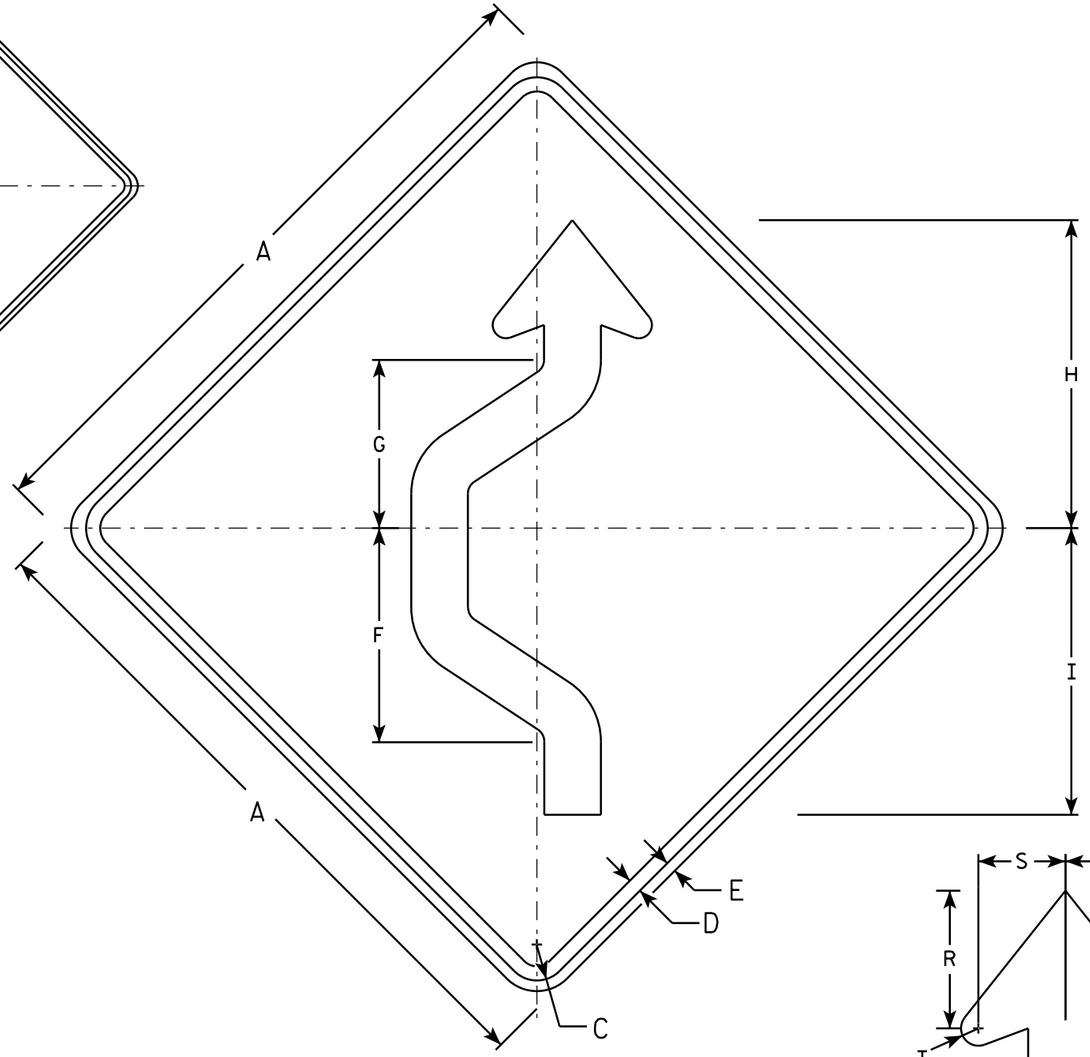
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 246 W013-1.1

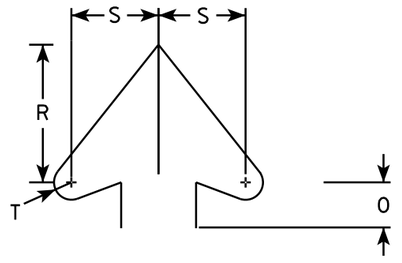
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



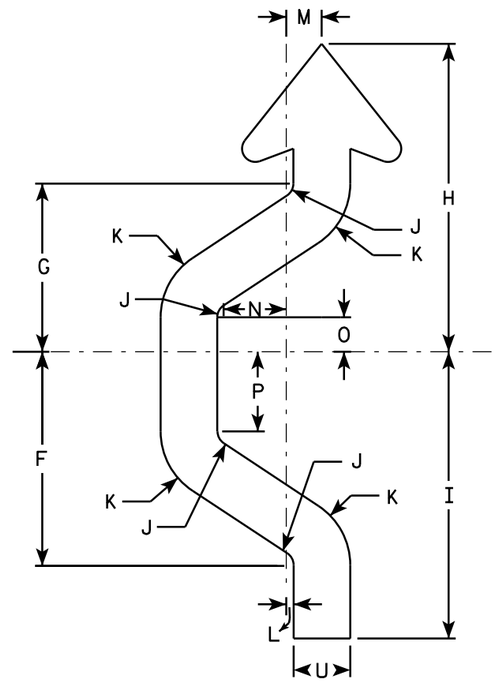
W024-1R



W024-1L



Arrowhead Detail



Arrow Detail

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. W024-1R is the same as W024-1L except 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 3/8	5/8	1/2	11 3/8	8 7/8	16 3/8	15 1/4	3/4	3 3/4	3/8	2	3 3/8	1 7/8	4 1/4		5 1/2	3 1/2	5/8	3						9
2S	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
2M	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
3	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
4	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
5	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16

STANDARD SIGN
W024-1 L & R

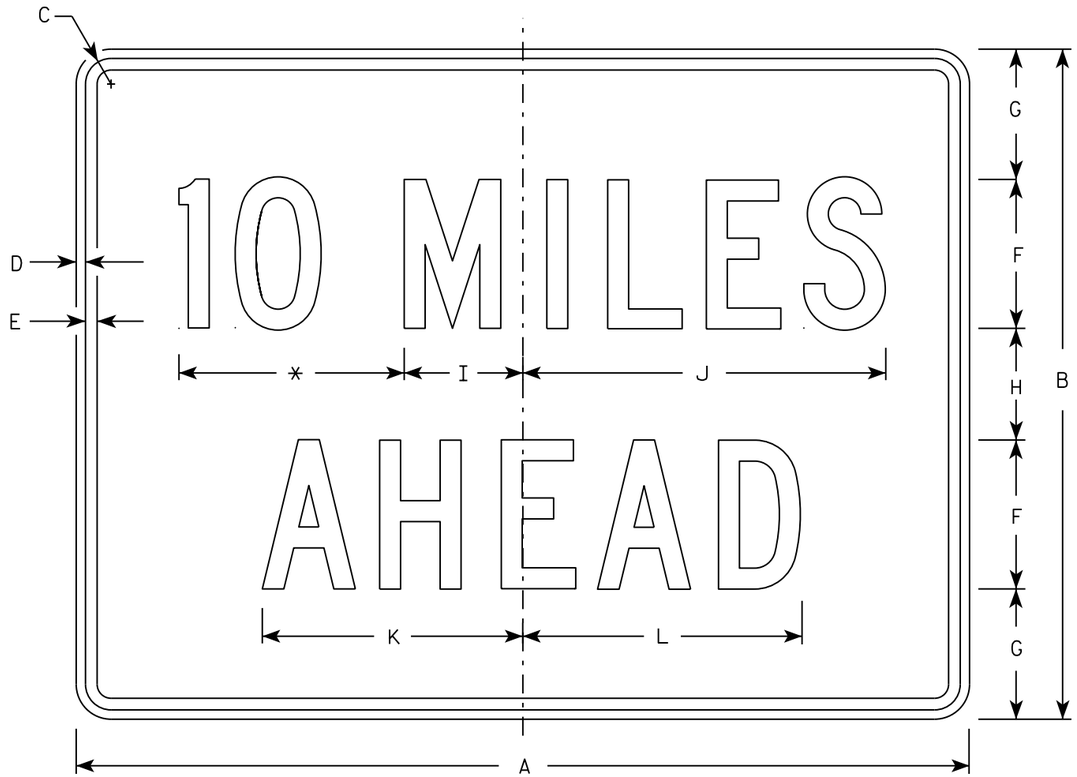
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

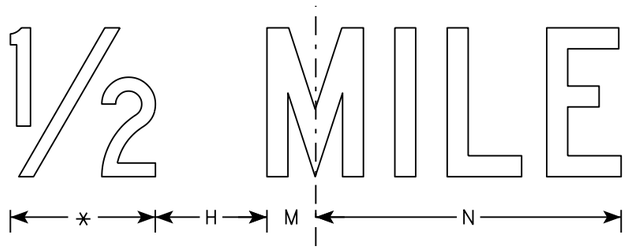
DATE 9/25/2013 PLATE NO. W024-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W0241.DGN PLOT DATE : 25-SEP-2013 13:08 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 10.702132:1.000000
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

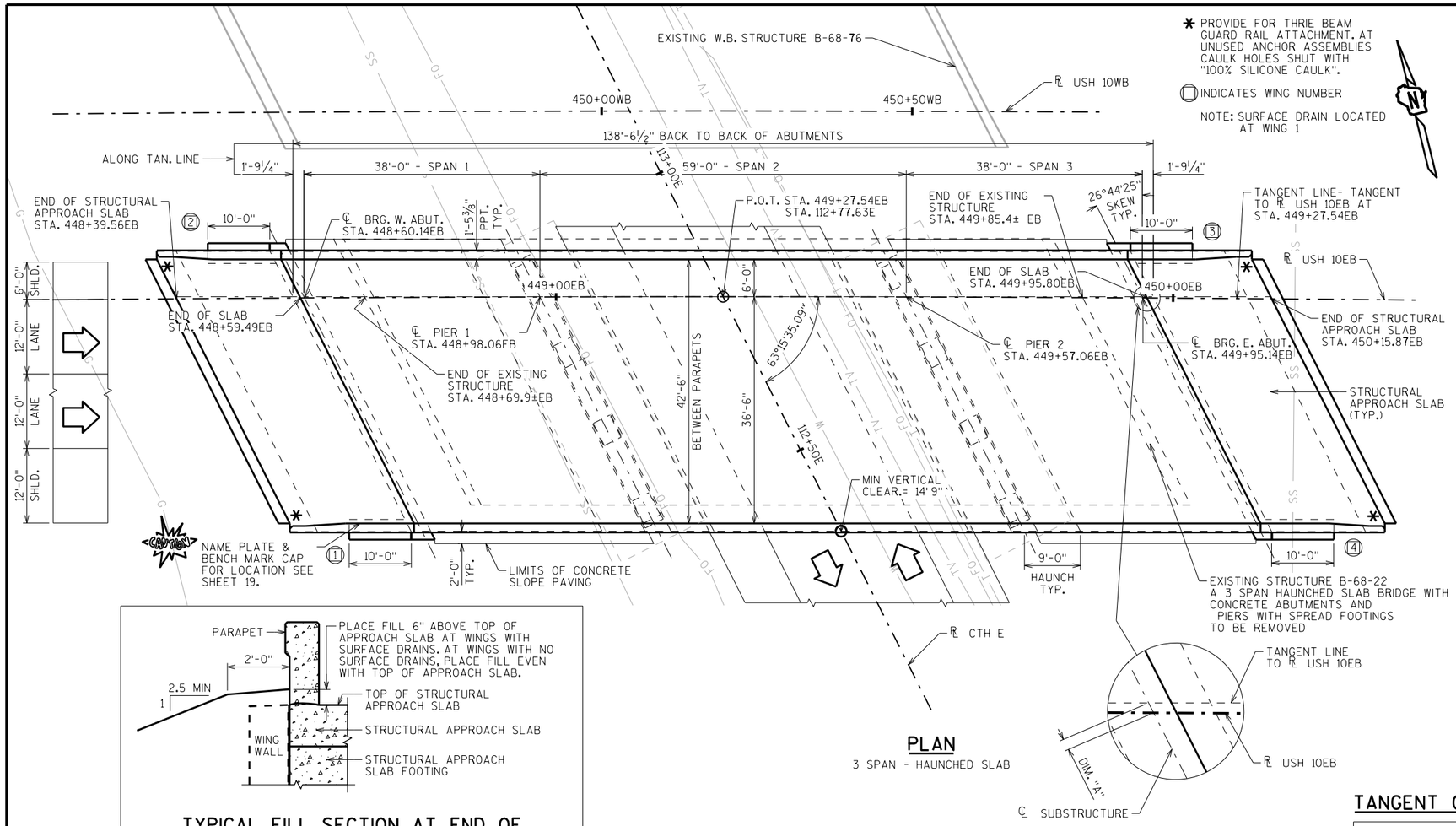
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W057-52.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 248	E

STATE PROJECT NUMBER

1510-02-72



* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

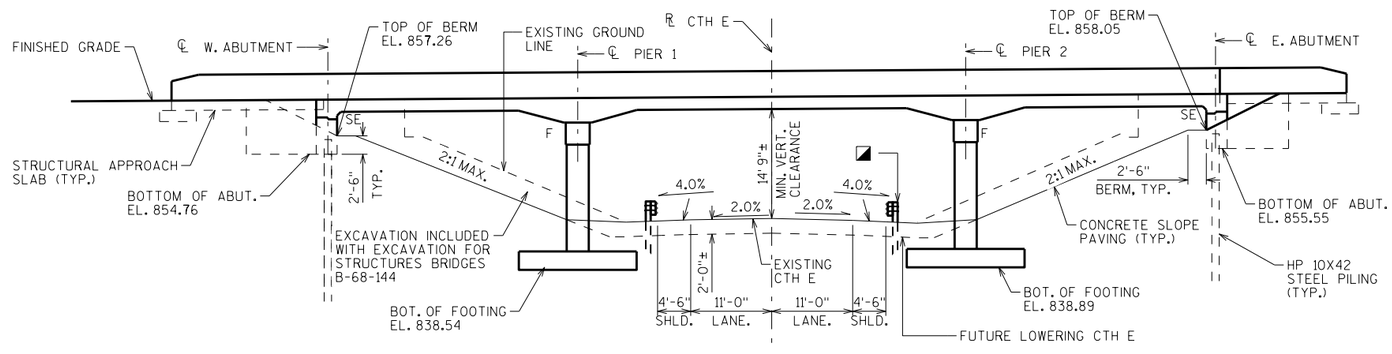
(2) INDICATES WING NUMBER

NOTE: SURFACE DRAIN LOCATED AT WING 1

PLAN

3 SPAN - HAUNCHED SLAB

TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS



◪ MGS GUARDRAIL 3 (TYP.) SEE ROADWAY PLANS FOR DETAILS

ELEVATION

NORMAL TO CTH E - LOOKING NORTH

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.13
OPERATING RATING FACTOR: RF = 1.50
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ✱✱ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 30' LONG AT W. ABUT. AND 35' LONG AT E. ABUT. PILE POINTS REQUIRED.

PIERS WITH SPREAD FOOTINGS TO BE SUPPORTED BY UNDERLYING NATIVE SOILS WITH A REQUIRED FACTORED BEARING RESISTANCE OF 6000 PSF✱✱✱. A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY VISUAL INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTING.

✱✱✱ THE FACTORED BEARING RESISTANCE IS THE VALUE USED FOR DESIGN.

✱✱ THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

CURVE DATA

USH 10EB
P.I. = 447+09.92
△ = 7°10' 19.19"
D = 0°30'06"
T = 715.90
L = 1429.93
R = 11423.43
S.E. = 2%
P.C. = 439+94.02
P.T. = 454+23.95

TRAFFIC VOLUME

USH 10
ADT = 25,600 (2040)
R.D.S. = 70 M.P.H.

CTH E
ADT = 3,400 (2040)
R.D.S. = 30 M.P.H.

TANGENT OFFSET DETAILS

LOCATION	DIM. "A" (ALONG ℄ SUB.)
WEST ABUT.	0'-2⅝"
PIER 1	0'-0½"
PIER 2	0'-0½"
EAST ABUT.	0'-2⅝"

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. PIER 1
9. PIER 1 DETAILS
10. PIER 2
11. PIER 2 DETAILS
12. SUPERSTRUCTURE
13. SUPERSTRUCTURE LONGITUDINAL CROSS SECTIONS
14. SUPERSTRUCTURE CROSS SECTIONS
15. SUPERSTRUCTURE DETAILS
16. SUPERSTRUCTURE BAR DETAILS
17. SUPERSTRUCTURE DATA
18. STRUCTURAL APPROACH SLABS
19. SINGLE SLOPE PARAPET 42SS
20. CONCRETE SLOPE PAVING
21. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:
AIHAM ALSKIF (608) 261-6113
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS — 3/1/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-68-144

USH 10EB OVER CTH E

COUNTY	CITY
WAUPACA	WAUPACA

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
AA	MJL	AA	MJL

GENERAL PLAN

SHEET 1 OF 21

249

I.D. 1510-02-02A DATE: JAN. 2019

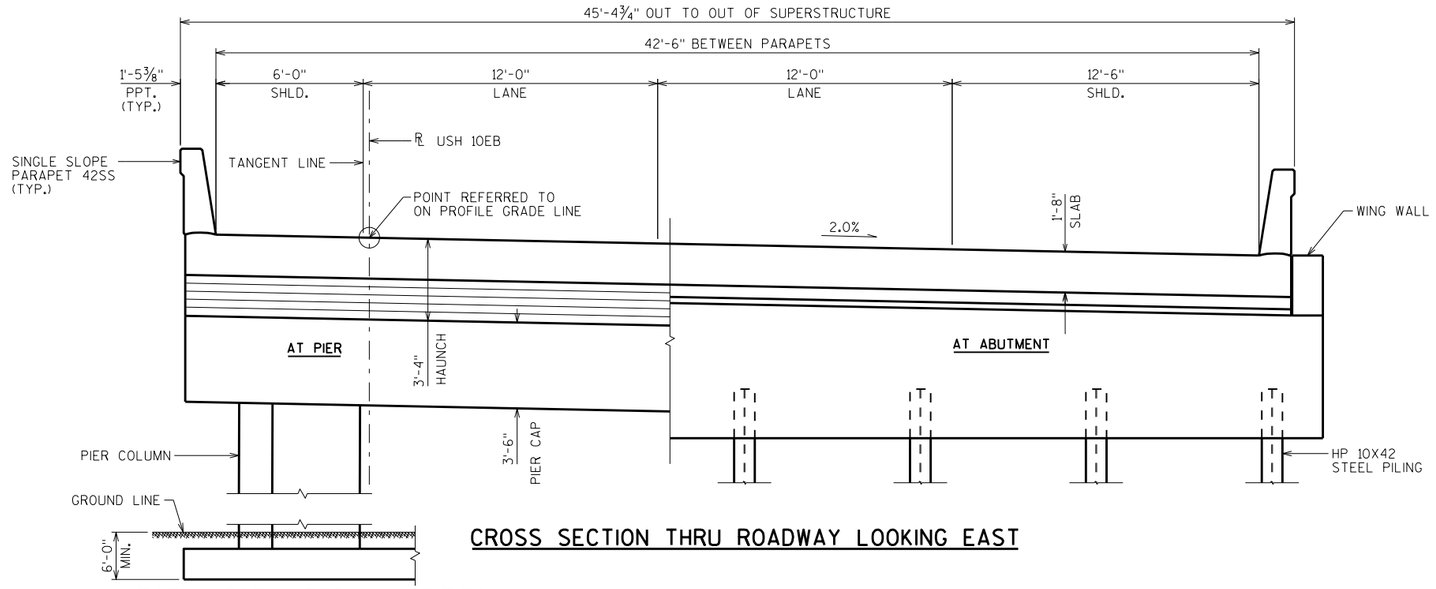
SCALE = 10.00

8

8

STATE PROJECT NUMBER

1510-02-72



CROSS SECTION THRU ROADWAY LOOKING EAST

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	EAST APPROACH	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 449+27.58 EB	LS	———	———	———	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-68-144	LS	———	———	———	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON			99			99		198
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON			139			139		278
502.0100	CONCRETE MASONRY BRIDGES	CY	489	64	46	116	116	46	64	941
502.3200	PROTECTIVE SURFACE TREATMENT	SY	665	95					95	855
502.3210	PIGMENTED SURFACE SEALER	SY	134	20					20	174
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB			3370	9900	9900	3370		26,540
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	107,720	11,340	1,250	11,180	11,180	1,260	11,340	155,270
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	410							410
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY			14			14		28
550.0500	PILE POINTS	EACH			8			8		16
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF			240			280		520
604.0400	SLOPE PAVING CONCRETE	SY			213			213		426
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF			95			95		190
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH		2					2	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY			68			68		136
	NON-BID ITEMS									
	FILLER	SIZE	———	———	———	———	———	———	———	½" & ¾" & 1½"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-68-144" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

EXCAVATION BELOW THE ABUTMENT AND USE OF ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

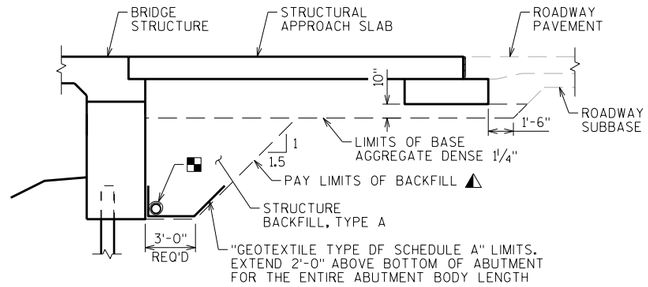
THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND SHEET 20.

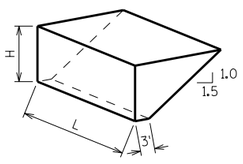
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.



TYPICAL SECTION THRU ABUTMENT

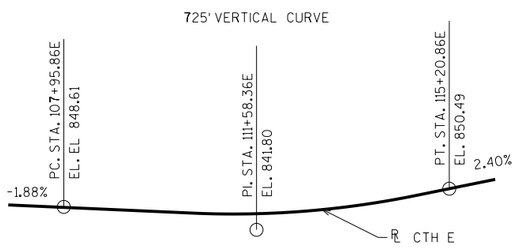
⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

▪ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

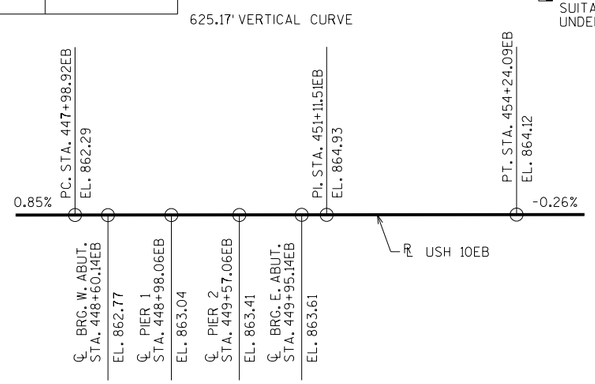


ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)



PROFILE GRADE LINE - CTH E



PROFILE GRADE LINE - USH 10EB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

CROSS SECTION & QUANTITIES

SHEET 2

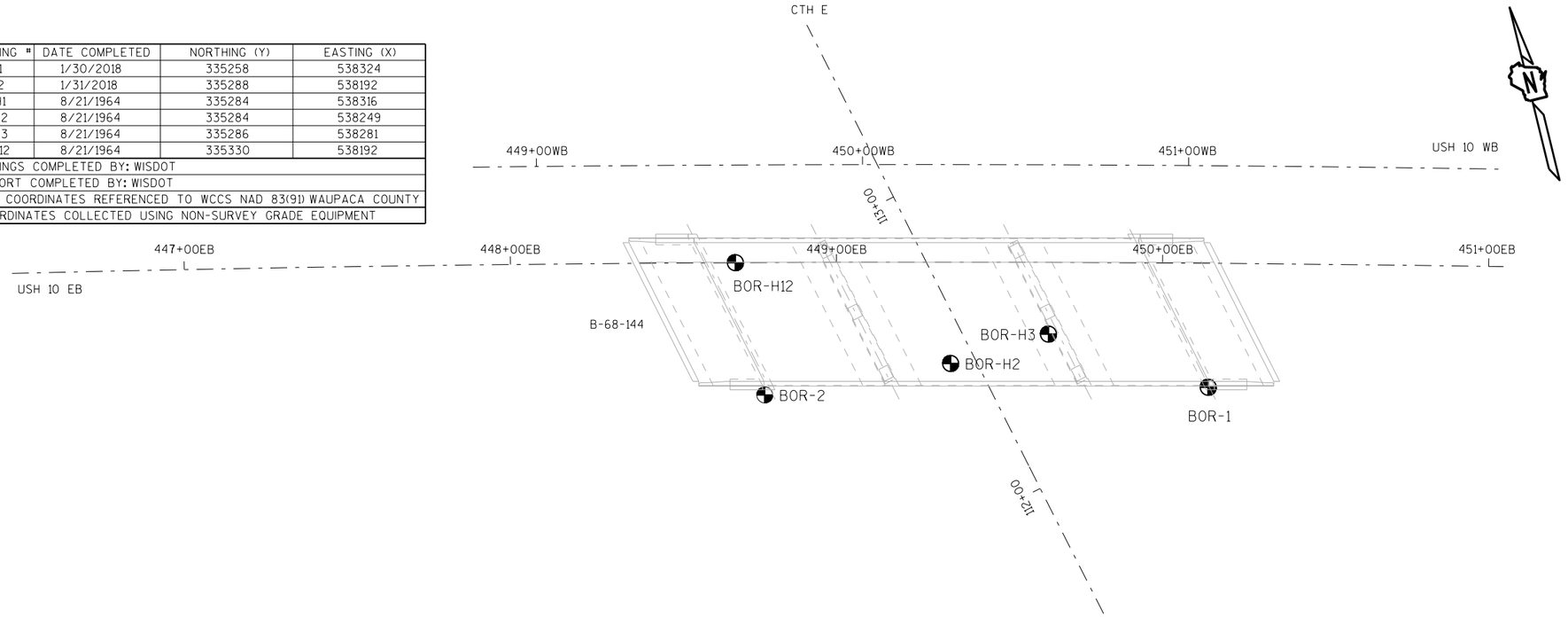
250

SCALE = 3.00

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	1/30/2018	335258	538324
2	1/31/2018	335288	538192
H1	8/21/1964	335284	538316
H2	8/21/1964	335284	538249
H3	8/21/1964	335286	538281
H12	8/21/1964	335330	538192
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) WAUPACA COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



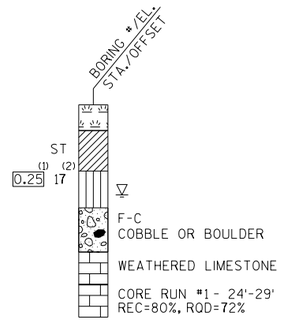
STATE PROJECT NUMBER

1510-02-72

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

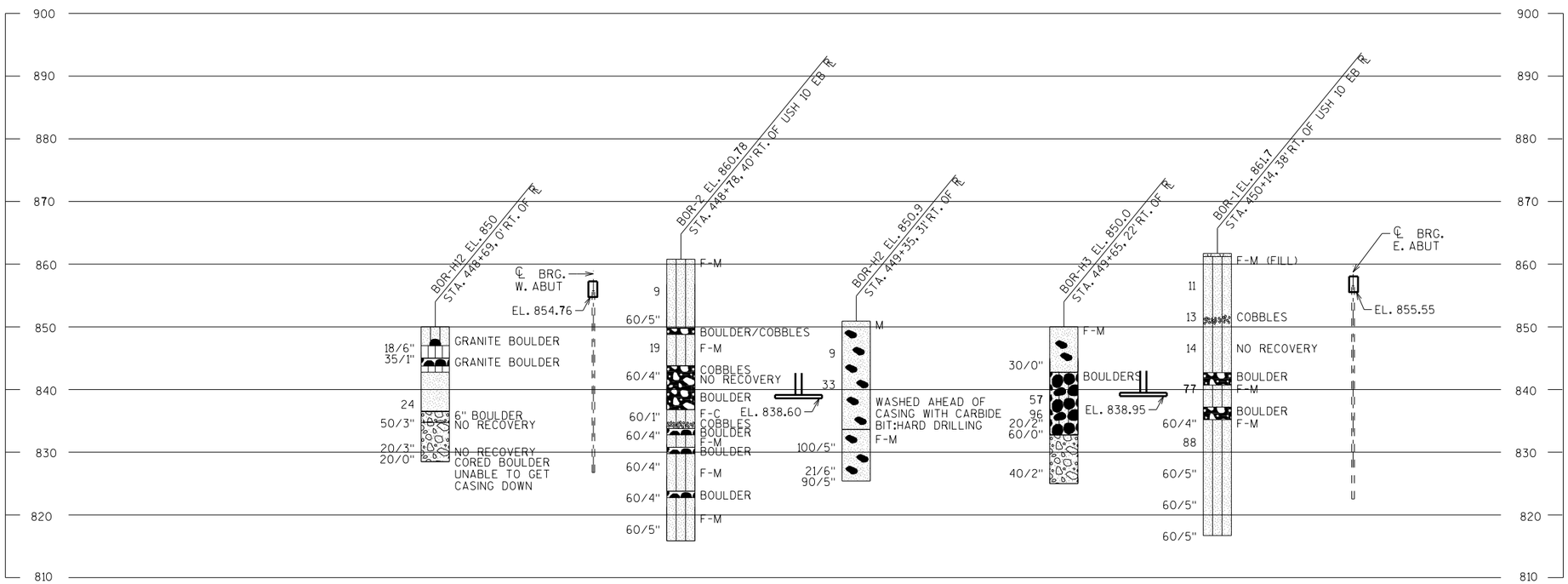
- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY TLP/AA | PLANS CK'D. MJL

SUBSURFACE EXPLORATION

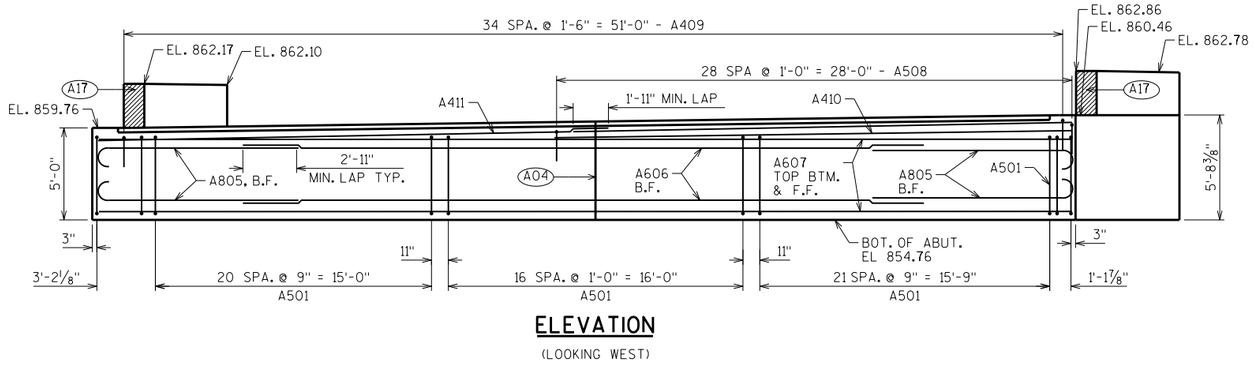
SHEET 3

251

SCALE = 20.00

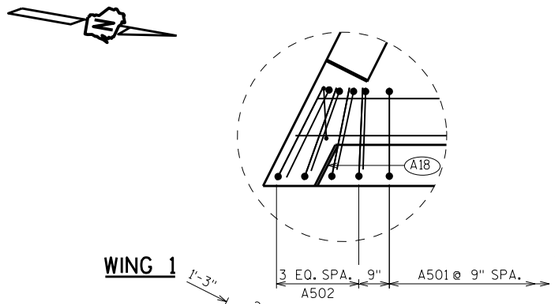
8

8

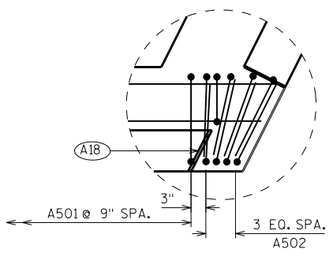


ELEVATION

(LOOKING WEST)

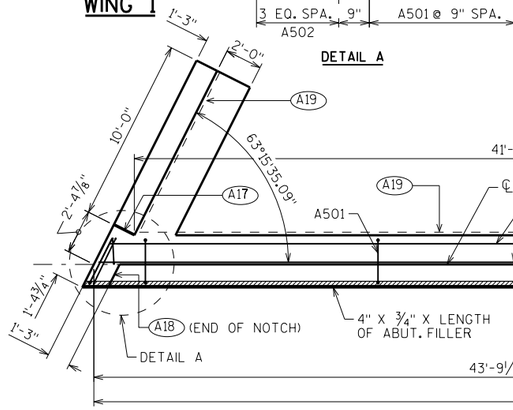


DETAIL A

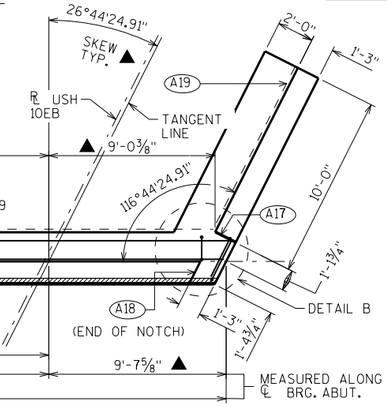


DETAIL B

WING 1

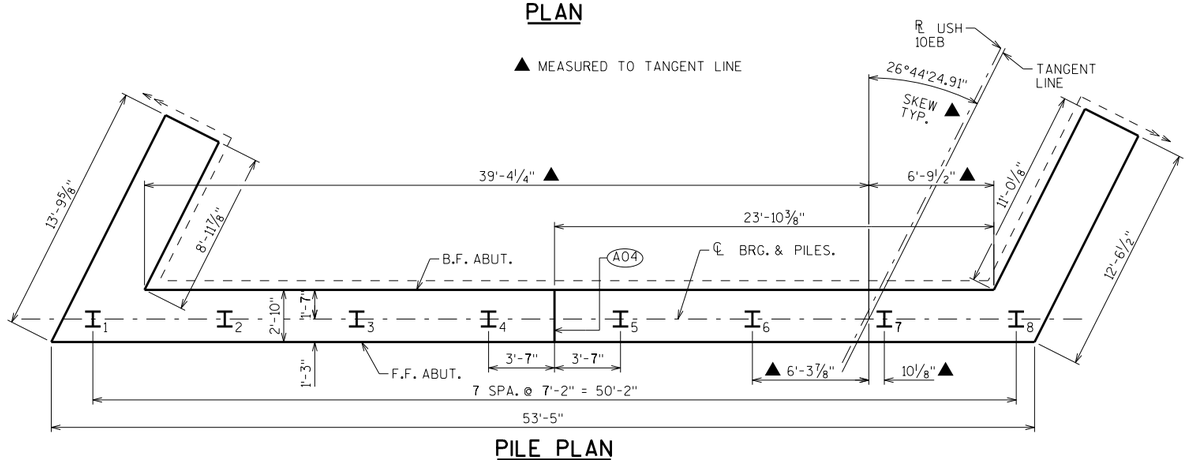


WING 2



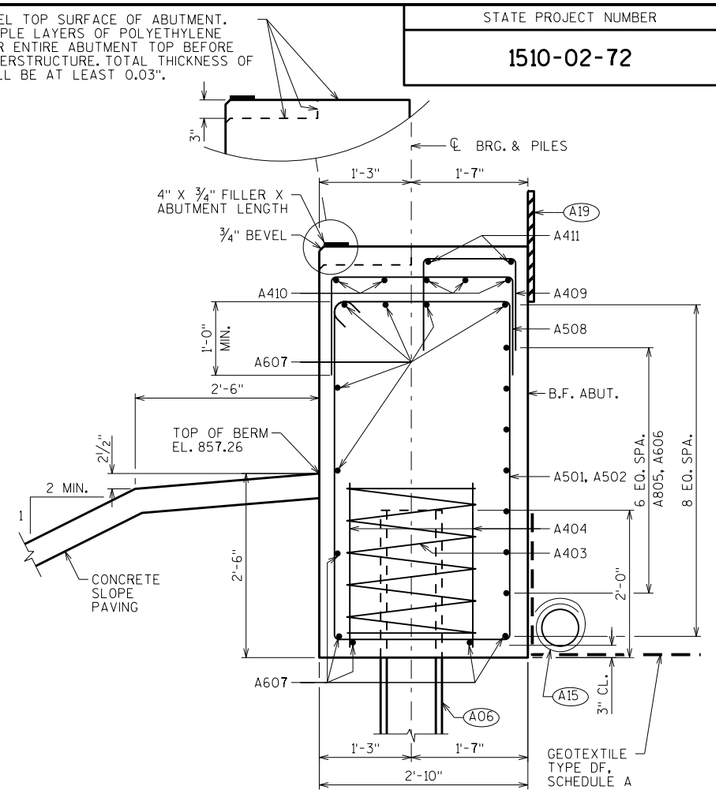
PLAN

▲ MEASURED TO TANGENT LINE



PILE PLAN

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".



SECTION THRU BODY

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

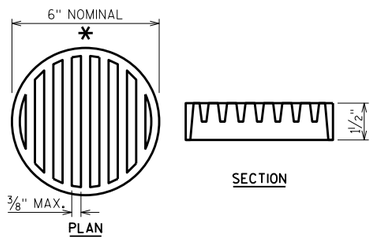
(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH SLAB.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



SECTION

PLAN

RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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

STATE PROJECT NUMBER

1510-02-72

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

WEST ABUTMENT

SHEET 4

252

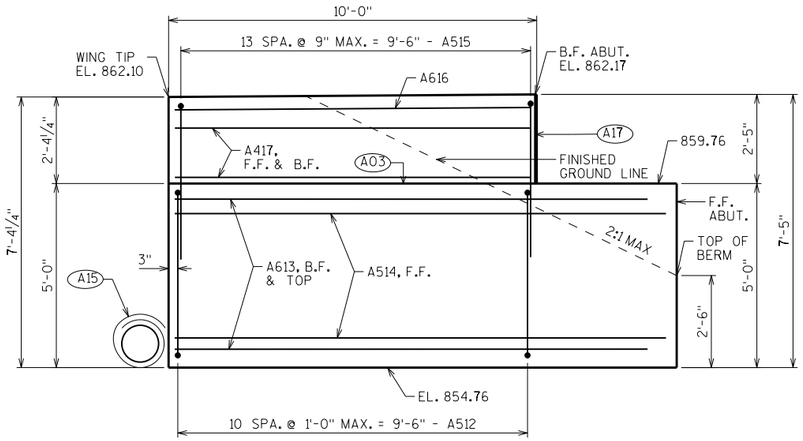
SCALE = 4.00

8

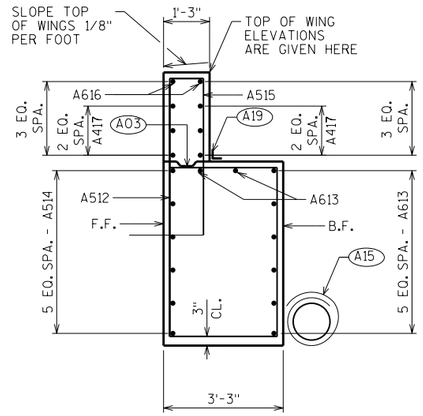
8

STATE PROJECT NUMBER

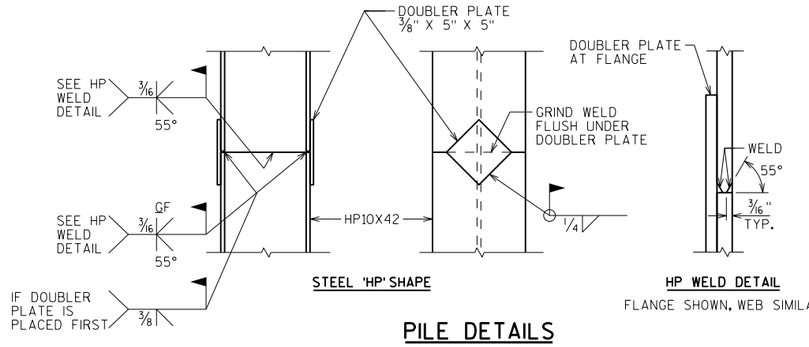
1510-02-72



WING 1 ELEVATION



SECTION THRU WING 1

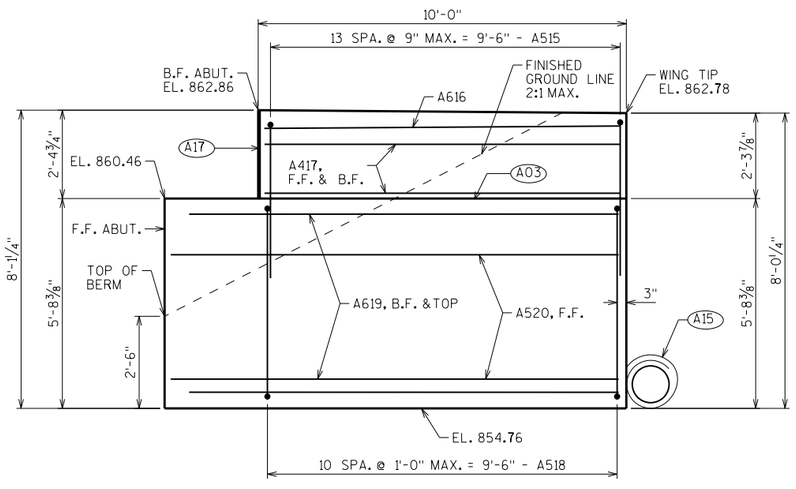


STEEL 'HP' SHAPE

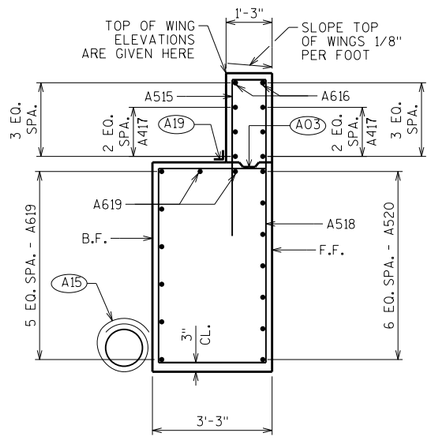
HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

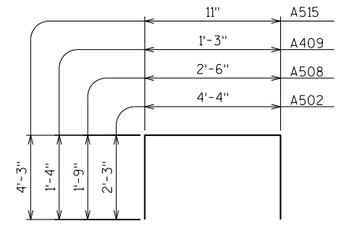
PILE DETAILS



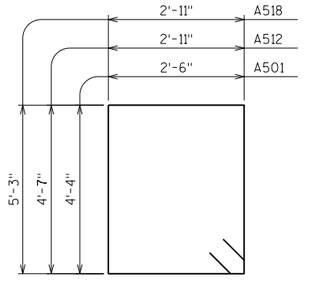
WING 2 ELEVATION



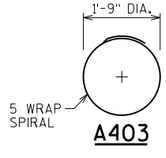
SECTION THRU WING 2



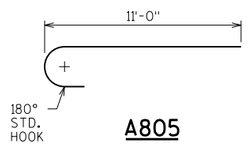
A502, A508, A409, A515



A501, A512, A518,



A403



A805

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		61	14'-4"	X		BODY - VERTICAL - STIRRUP
A502		16	8'-7"	X		BODY - VERTICAL - STIRRUP
A403		8	28'-0"	X		BODY - 1 PER PILE
A404		16	2'-3"			BODY - 2 PER PILE
A805		14	11'-11"	X		BODY - HORIZ. - B.F. - HOOK
A606		7	37'-0"			BODY - HORIZ. - B.F.
A607		11	53'-1"			BODY - HORIZ. - TOP & F.F.
A508		29	5'-9"	X		BODY - VERTICAL
A409		35	3'-9"	X		BODY - VERTICAL
A410		5	28'-8"			BODY - HORIZ. - TOP
A411		4	28'-0"			BODY - HORIZ. - TOP
A512	X	11	15'-8"	X		WING 1 - VERTICAL - STIRRUP
A613	X	8	11'-9"			WING 1 - HORIZ. - B.F. & TOP
A514	X	6	13'-4"			WING 1 - HORIZ. - F.F.
A515	X	28	9'-2"	X		WING 1 & 2 - VERTICAL
A616	X	4	9'-8"			WING 1 & 2 - HORIZ. - TOP
A417	X	12	9'-8"			WING 1 & 2 - HORIZ. - B.F. & F.F.
A518	X	11	17'-0"	X		WING 2 - VERTICAL - STIRRUP
A619	X	8	13'-6"			WING 2 - HORIZ. - B.F. & TOP
A520	X	7	12'-3"			WING 2 - HORIZ. - F.F.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

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STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

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WEST ABUTMENT DETAILS

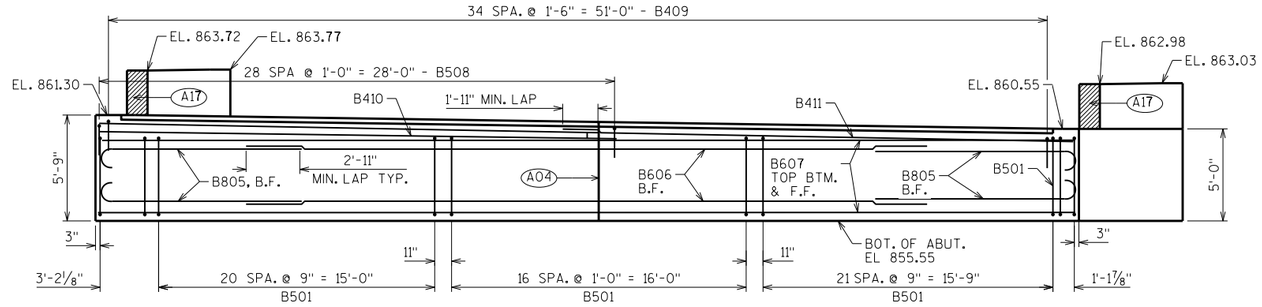
SHEET 5

253

SCALE = 2.00

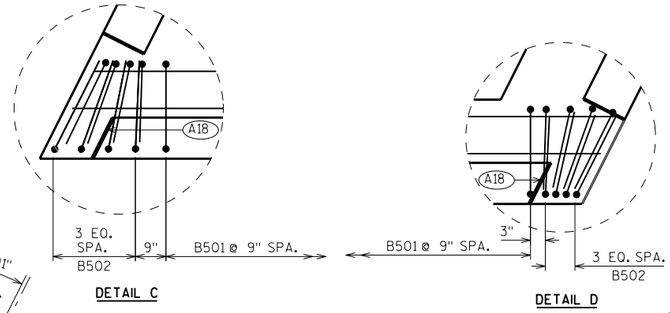
8

8



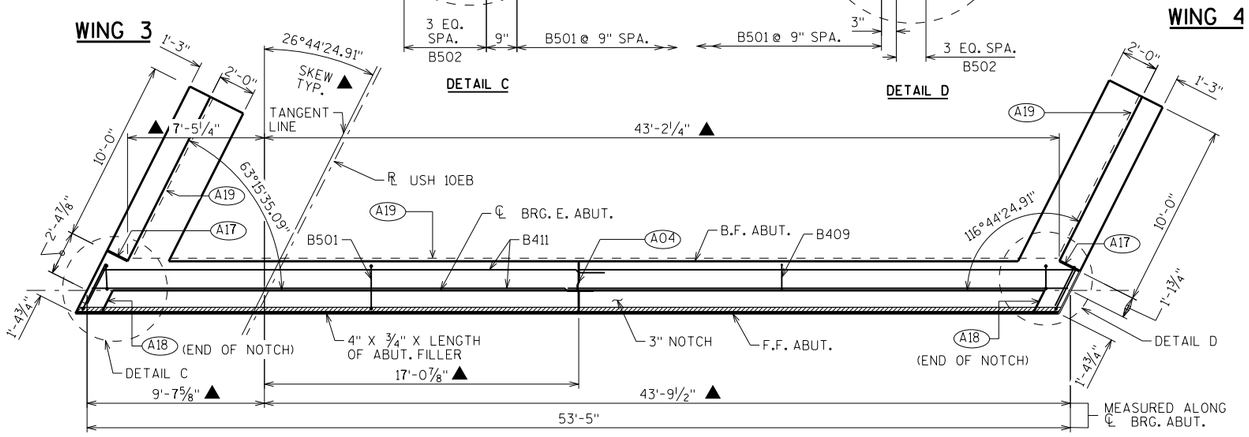
ELEVATION

(LOOKING EAST)



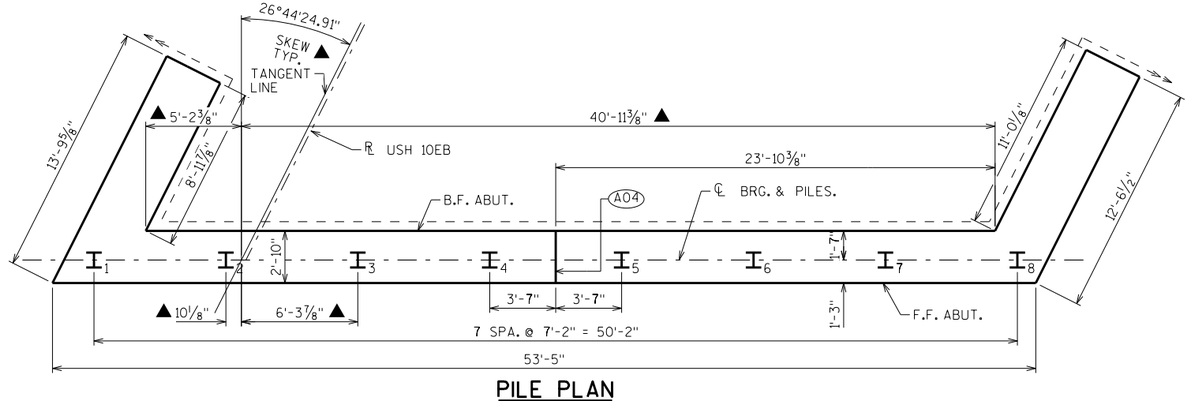
DETAIL C

DETAIL D



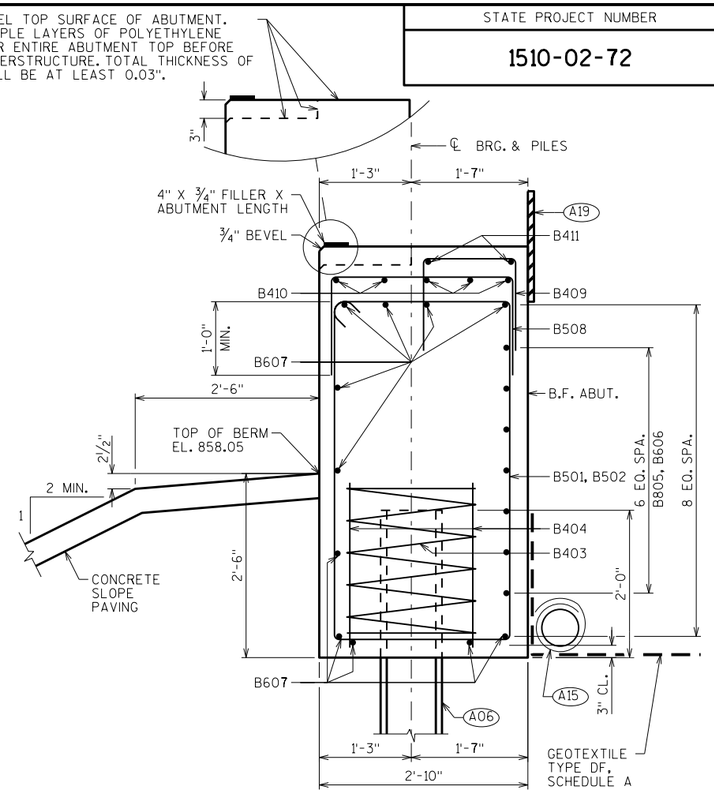
PLAN

▲ MEASURED TO TANGENT LINE



PILE PLAN

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".



SECTION THRU BODY

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

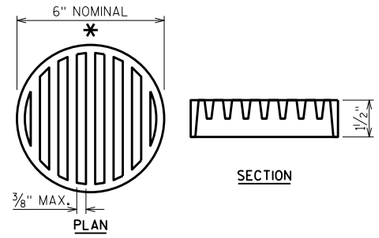
(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 35'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH SLAB.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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

STATE PROJECT NUMBER

1510-02-72

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

EAST ABUTMENT

SHEET 6

254

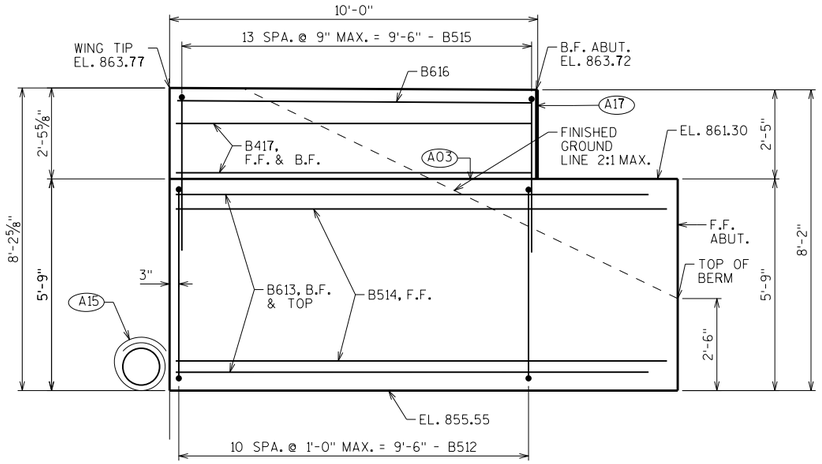
SCALE = 4.00

8

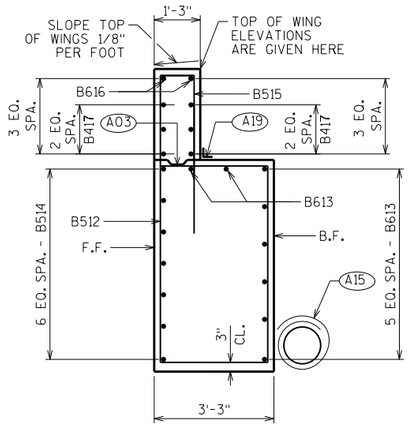
8

STATE PROJECT NUMBER

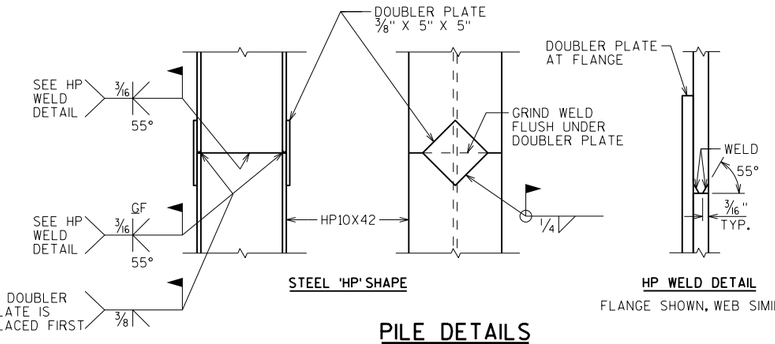
1510-02-72



WING 3 ELEVATION



SECTION THRU WING 3



STEEL 'HP' SHAPE

HP WELD DETAIL

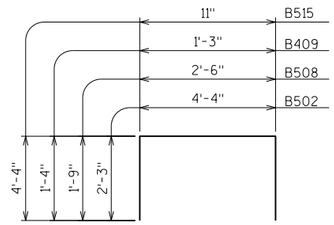
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

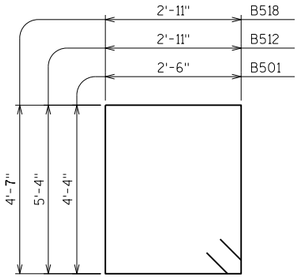
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		61	14'-4"	X		BODY - VERTICAL - STIRRUP
B502		16	8'-7"	X		BODY - VERTICAL - STIRRUP
B403		8	28'-0"	X		BODY - 1 PER PILE
B404		16	2'-3"			BODY - 2 PER PILE
B805		14	11'-11"	X		BODY - HORIZ. - B.F. - HOOK
B606		7	37'-0"			BODY - HORIZ. - B.F.
B607		11	53'-1"			BODY - HORIZ. - TOP. & F.F.
B508		29	5'-9"	X		BODY - VERTICAL
B409		35	3'-9"	X		BODY - VERTICAL
B410		5	28'-8"			BODY - HORIZ. - TOP
B411		4	28'-0"			BODY - HORIZ. - TOP
B512	X	11	17'-2"	X		WING 3 - VERTICAL - STIRRUP
B613	X	8	11'-9"			WING 3 - HORIZ. - B.F. & TOP
B514	X	7	13'-4"			WING 3 - HORIZ. - F.F.
B515	X	28	9'-4"	X		WING 3 & 4 - VERTICAL - STIRRUP
B616	X	4	9'-8"			WING 3 & 4 - HORIZ. - TOP
B417	X	12	9'-8"			WING 3 & 4 - HORIZ. - B.F. & F.F.
B518	X	11	15'-8"	X		WING 4 - VERTICAL - STIRRUP
B619	X	8	12'-11"			WING 4 - HORIZ. - B.F. & TOP
B520	X	6	12'-3"			WING 4 - HORIZ. - F.F.



B502, B508, B409, B515



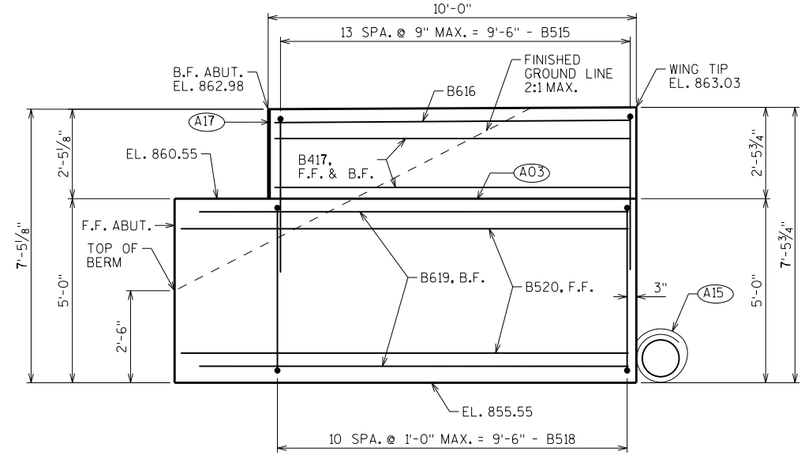
B501, B512, B518,

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

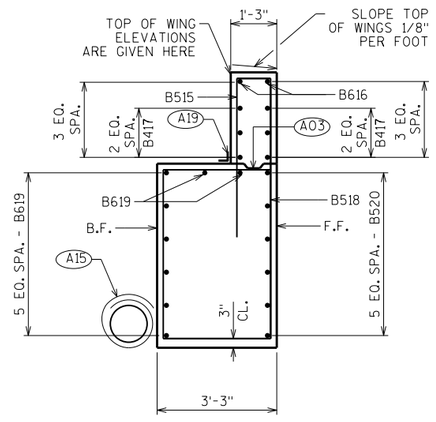
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

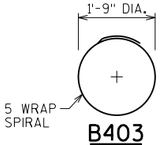
(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



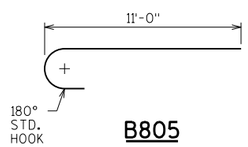
WING 4 ELEVATION



SECTION THRU WING 4



B403



B805

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

EAST ABUTMENT DETAILS

SHEET 7

255

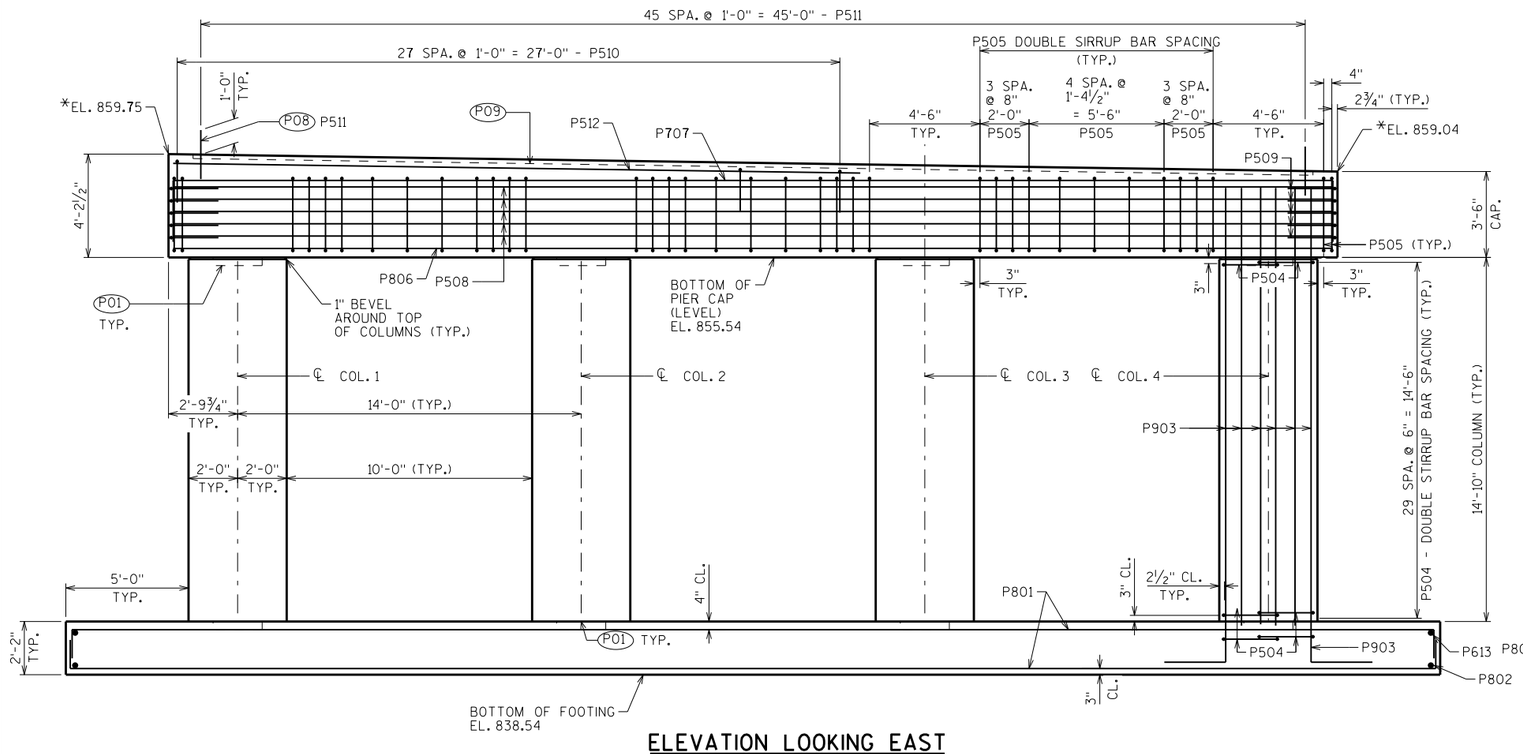
SCALE = 2.00

8

8

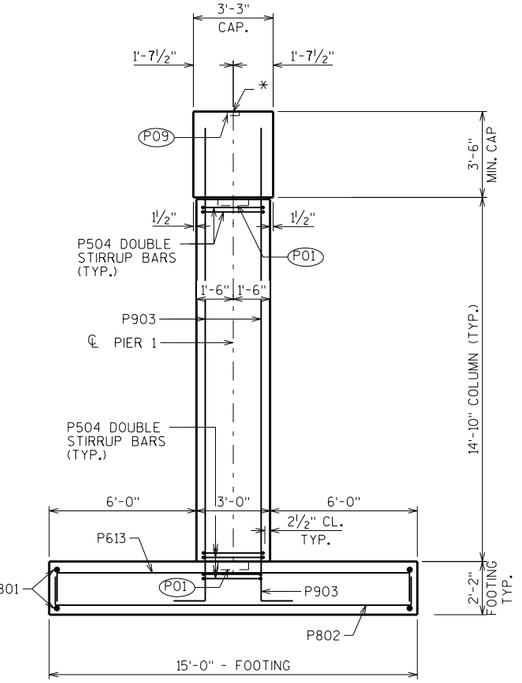
STATE PROJECT NUMBER

1510-02-72

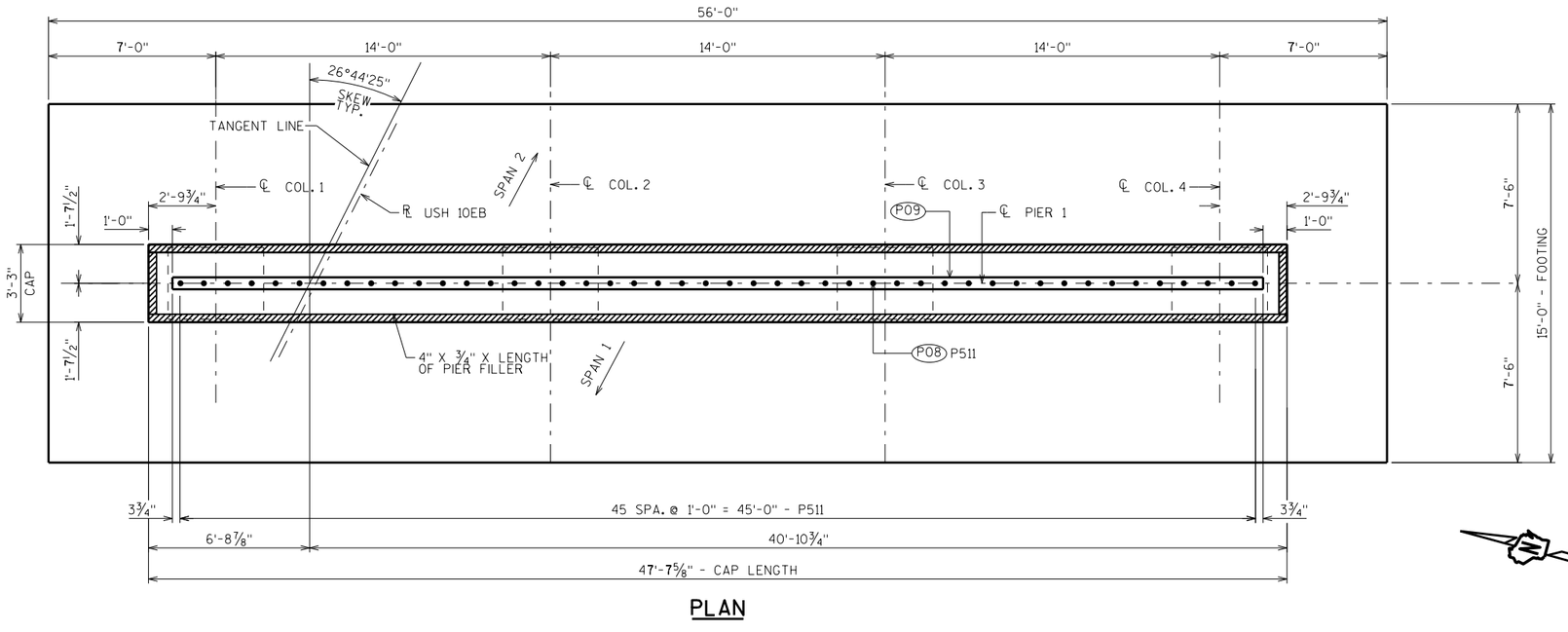


ELEVATION LOOKING EAST

* ELEVATIONS ARE GIVEN AT ℄ OF PIER 1



SECTION THRU PIER



PLAN

PIER ON SPREAD FOOTING TO BE SUPPORTED BY UNDERLYING NATIVE SOIL WITH A REQUIRED FACTORED BEARING RESISTANCE OF 6,000 PSF.

(P01) 1'-3" x 2'-0" x 4" DEEP CONST. JOINT FORMED BY BEVELED KEYWAY.

(P08) BARS P511 @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 AT TOP OF PIER CAP.

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PIER 1

SHEET 8

256

SCALE = 3.00

8

8

STATE PROJECT NUMBER

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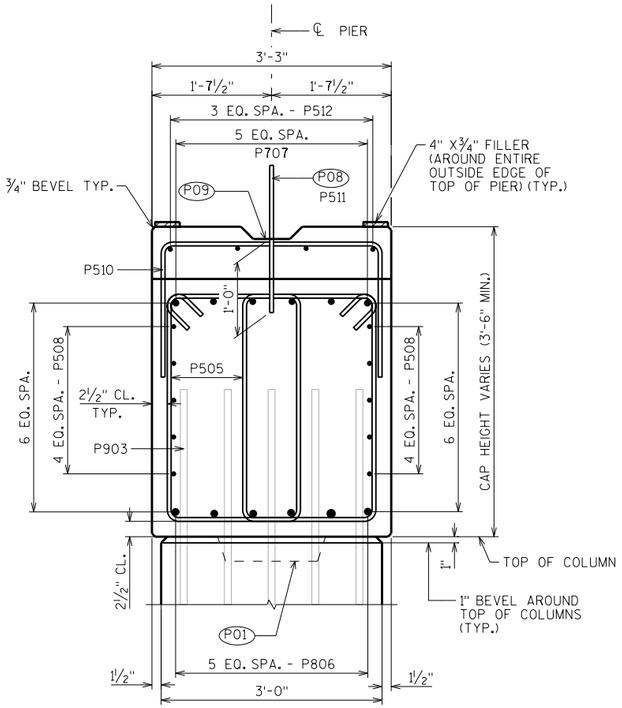
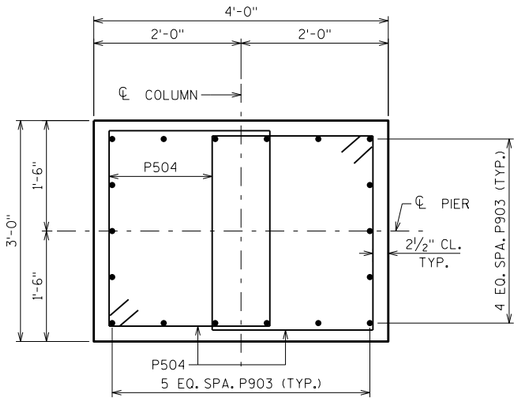
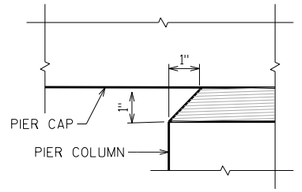


SECTION THRU CAP



TYPICAL SECTION THRU COLUMNS

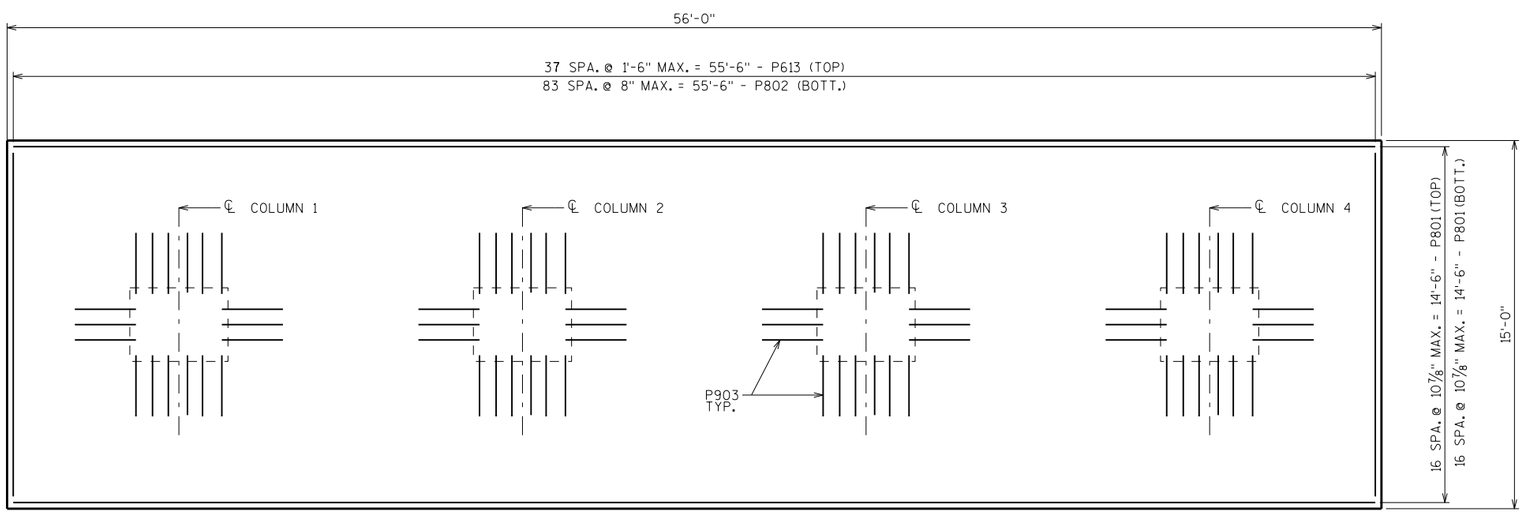


PIER COLUMN BEVEL DETAIL

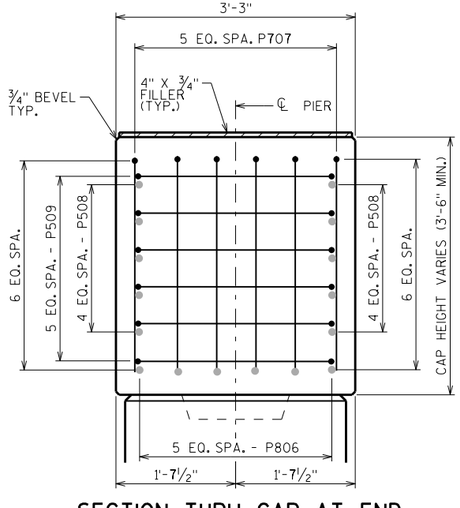
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

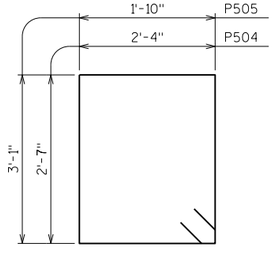
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P801		34	57'-7"	X		FOOTING - HORIZ. - LONGIT. BOTT. & TOP LAYER
P802		84	16'-7"	X		FOOTING - HORIZ. - TRANS. BOTT. LAYER
P903	X	72	21'-7"	X		FOOTING/COLUMNS / CAP - VERT.
P504	X	248	10'-6"	X		FOOTING & COLUMNS - HORIZ. - DOUBLE STIRRUP
P505	X	76	10'-6"	X		CAP - VERT. STIRRUP
P806	X	6	47'-3"			CAP - HORIZ. BOT.
P707	X	6	51'-11"	X		CAP - HORIZ. TOP
P508	X	10	47'-3"			CAP - HORIZ. SIDES
P509	X	12	6'-0"	X		CAP - HORIZ. - ENDS
P510	X	28	6'-1"	X		CAP - VERT.
P511	X	46	2'-0"			CAP - VERT. TOP
P512	X	4	28'-2"			CAP - HORIZ. TOP
P613		38	16'-8"	X		FOOTING - HORIZ. - TRANS. TOP LAYER



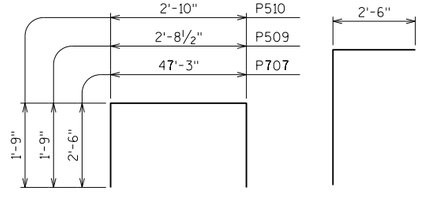
FOOTING PLAN



SECTION THRU CAP AT END

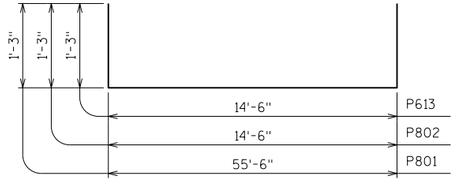


P504, P505



P707, P509, P510

P903



P801, P802, P613

(P01) 1'-3" x 2'-0" x 4" DEEP CONST. JOINT FORMED BY BEVELED KEYWAY.

(P08) BARS P511 @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

PIER 1 DETAILS

SHEET 9

257

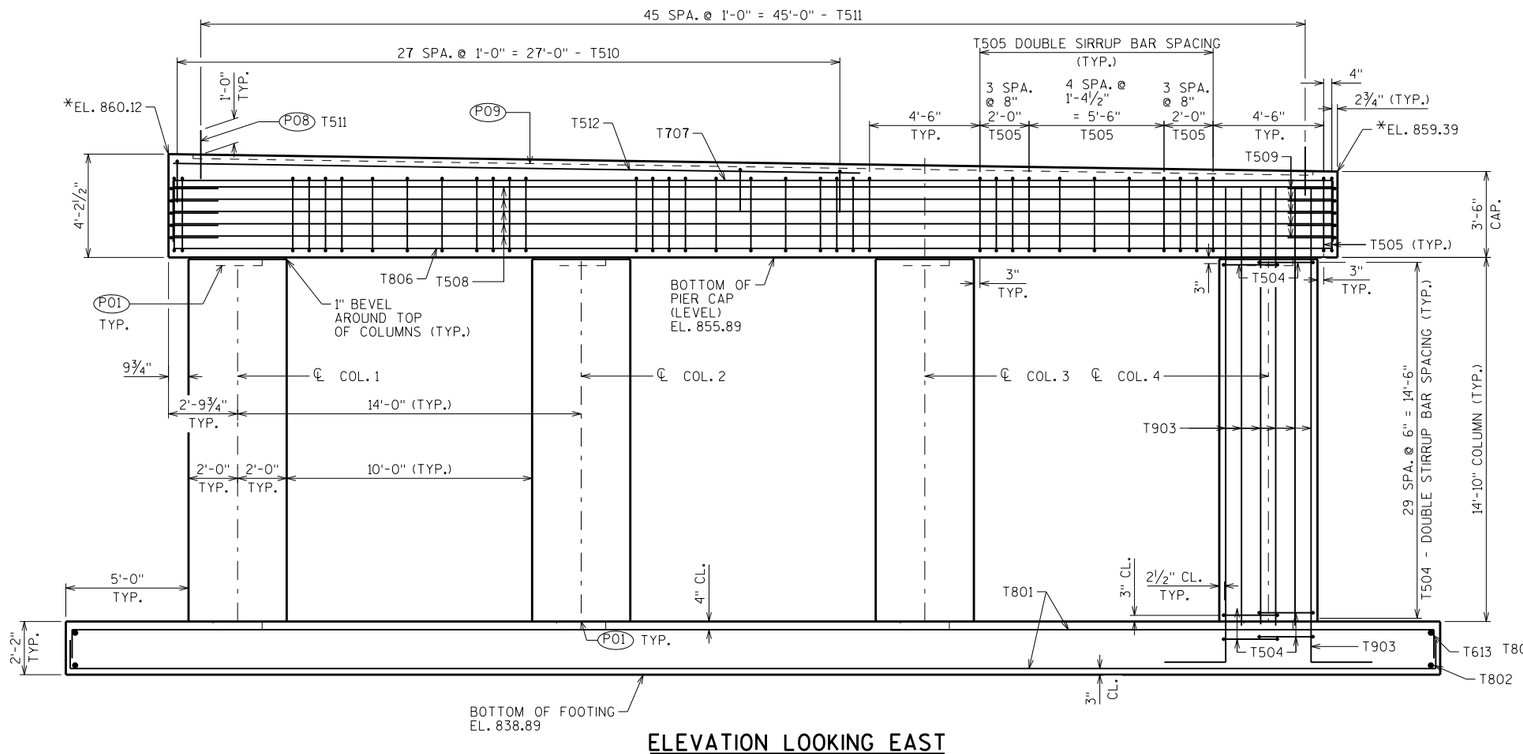
SCALE = 1.00

8

8

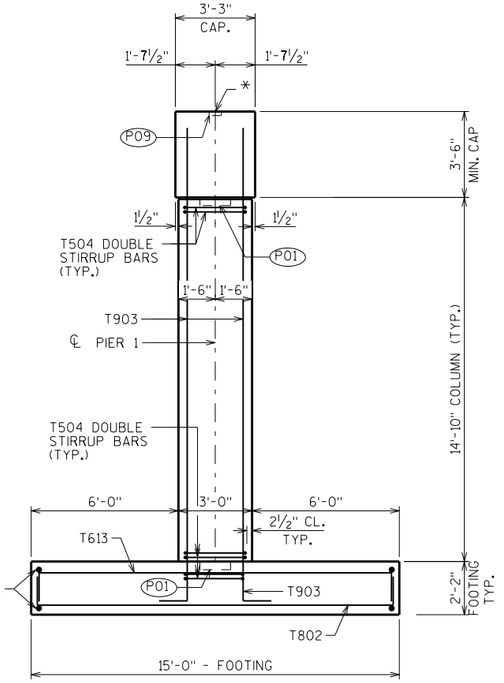
STATE PROJECT NUMBER

1510-02-72

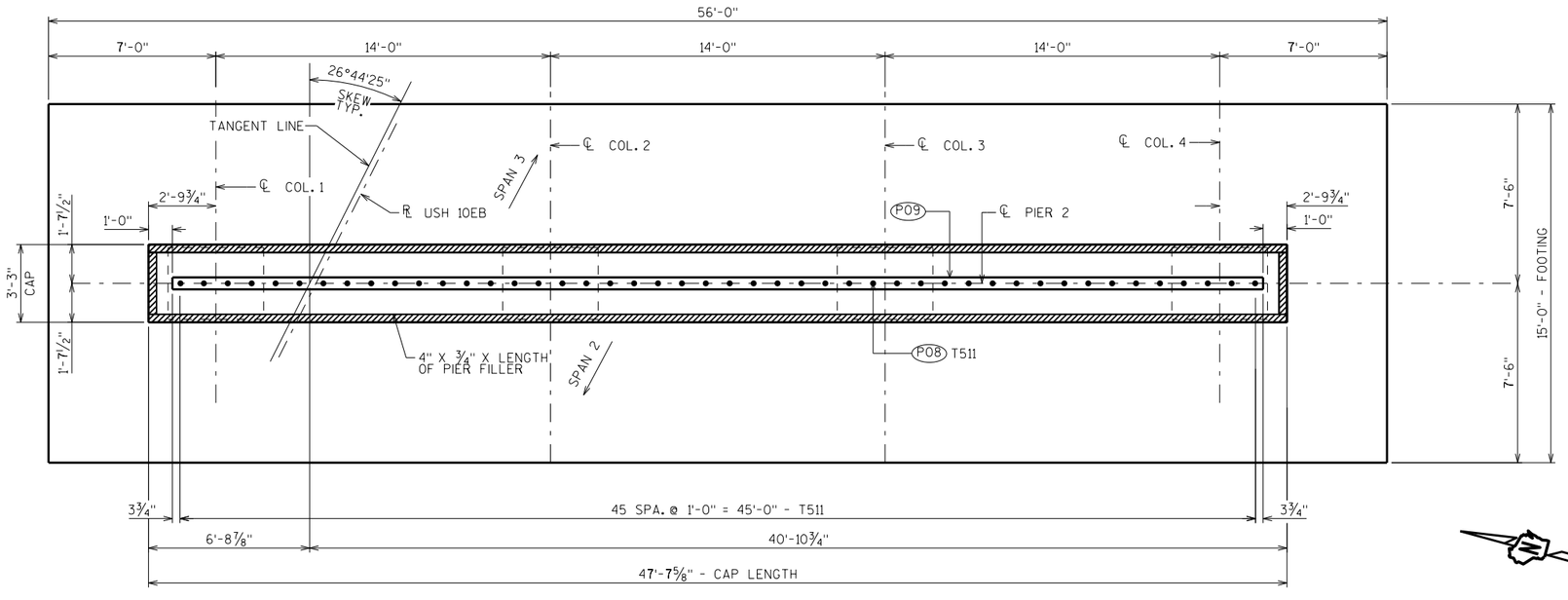


ELEVATION LOOKING EAST

* ELEVATIONS ARE GIVEN AT ℄ OF PIER 2



SECTION THRU PIER



PLAN

PIER ON SPREAD FOOTING TO BE SUPPORTED BY UNDERLYING NATIVE SOIL WITH A REQUIRED FACTORED BEARING RESISTANCE OF 6,000 PSF.

(P01) 1'-3" x 2'-0" x 4" DEEP CONST. JOINT FORMED BY BEVELED KEYWAY.

(P08) BARS T511 @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

PIER 2

SHEET 10

258

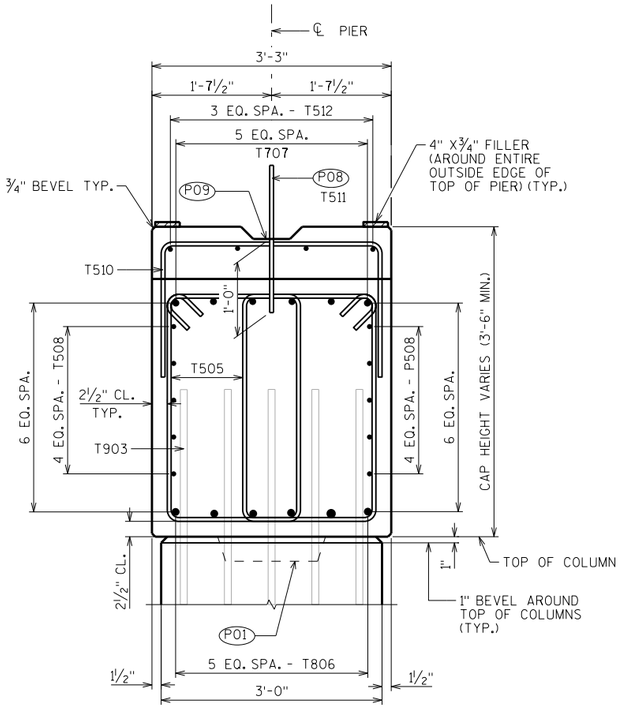
SCALE = 3.00

8

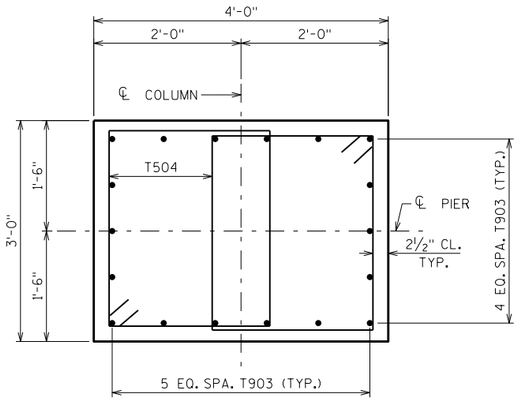
8

STATE PROJECT NUMBER

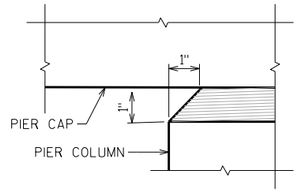
1510-02-72



SECTION THRU CAP



TYPICAL SECTION THRU COLUMNS

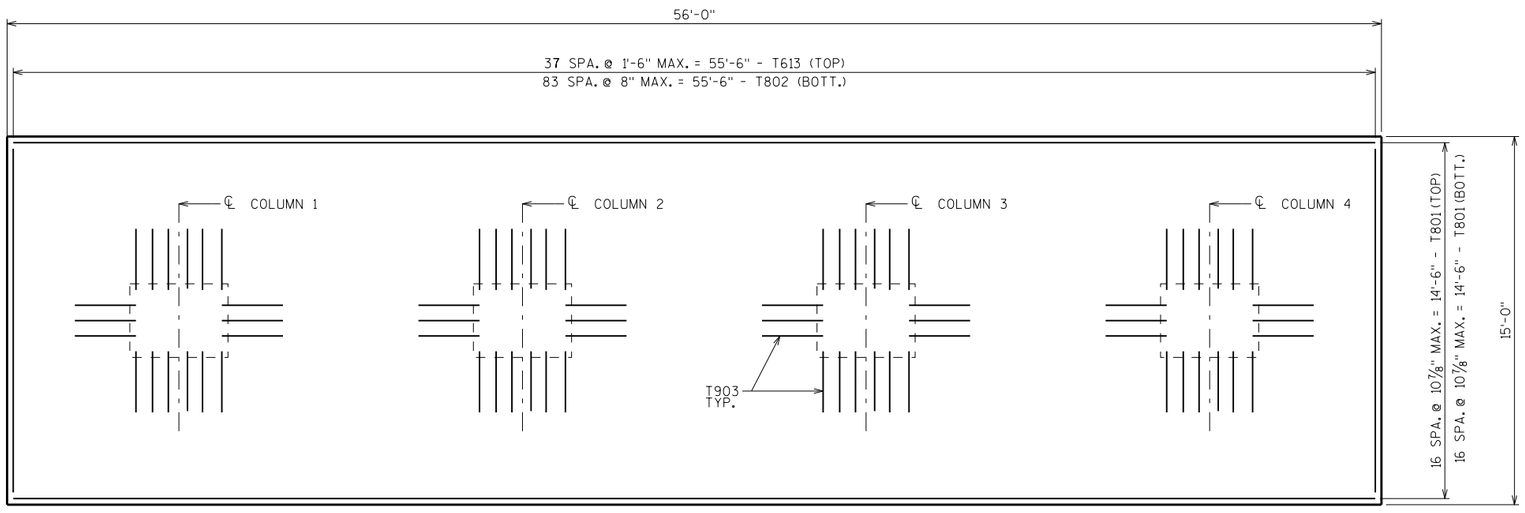


PIER COLUMN BEVEL DETAIL

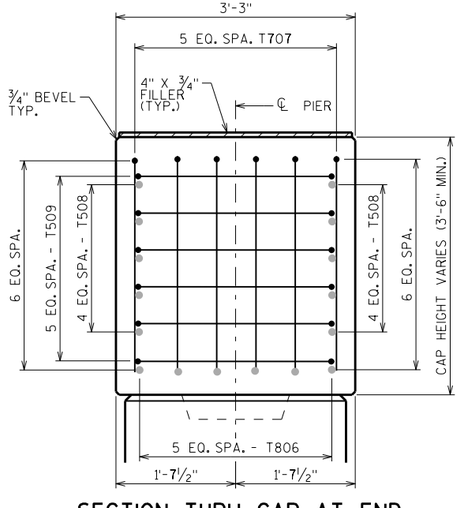
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

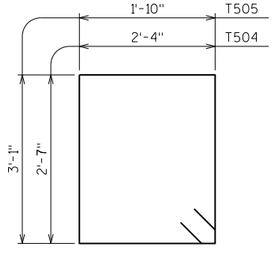
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T801		34	57'-7"	X		FOOTING - HORIZ. - LONGIT. BOTT. & TOP LAYER
T802		84	16'-7"	X		FOOTING - HORIZ. - TRANS. BOTT. LAYER
T903	X	72	21'-7"	X		FOOTING/COLUMNS / CAP - VERT.
T504	X	248	10'-6"	X		FOOTING & COLUMNS - HORIZ. - DOUBLE STIRRUP
T505	X	76	10'-6"	X		CAP - VERT. STIRRUP
T806	X	6	47'-3"			CAP - HORIZ. BOT.
T707	X	6	51-11"	X		CAP - HORIZ. TOP
T508	X	10	47'-3"			CAP - HORIZ. SIDES
T509	X	12	6'-0"	X		CAP - HORIZ. - ENDS
T510	X	28	6'-1"	X		CAP - VERT.
T511	X	46	2'-0"			CAP - VERT. TOP
T512	X	4	28'-2"			CAP - HORIZ. TOP
T613		38	16'-8"	X		FOOTING - HORIZ. - TRANS. TOP



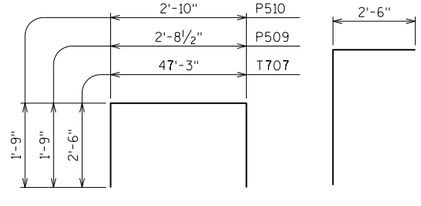
FOOTING PLAN



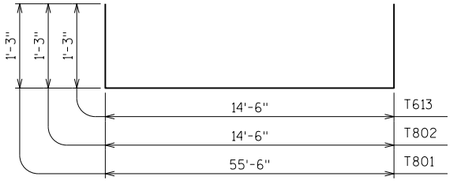
SECTION THRU CAP AT END



T504, T505



T707, T509, T510 T903



T801, T802, T613

(P01) 1'-3" x 2'-0" x 4" DEEP CONST. JOINT FORMED BY BEVELED KEYWAY.

(P08) BARS T511 @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

PIER 2 DETAILS

SHEET 11

259

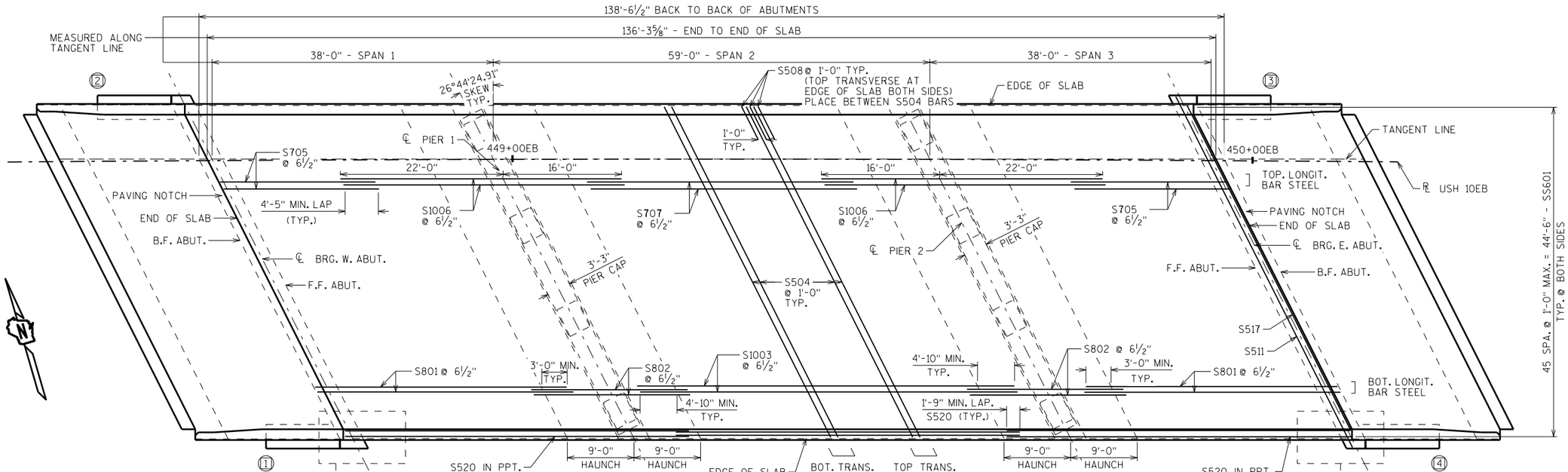
SCALE = 1.00

8

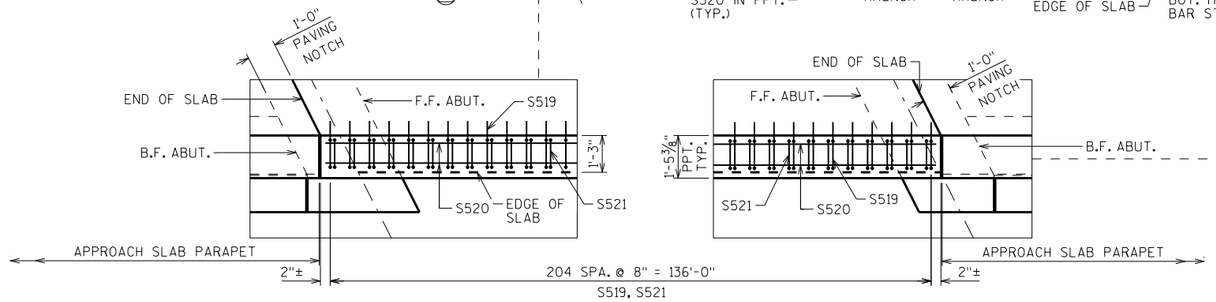
8

STATE PROJECT NUMBER

1510-02-72



PLAN



PARTIAL PLAN OF PARAPET REINFORCEMENT

(TYP. @ BOTH SIDES)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

SUPERSTRUCTURE

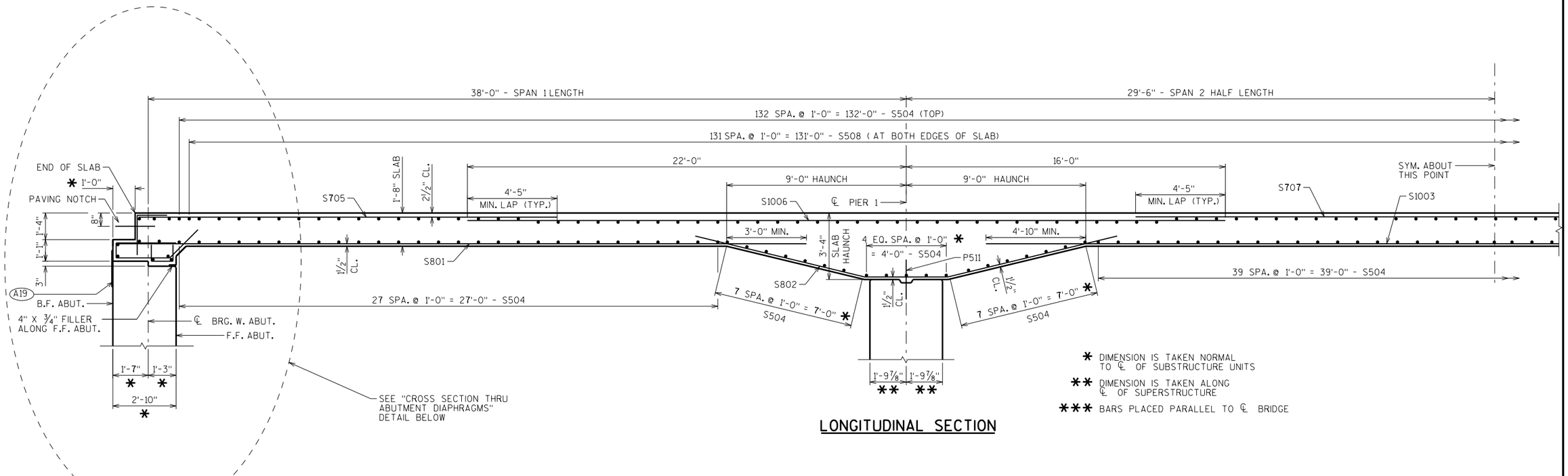
SHEET 12

260

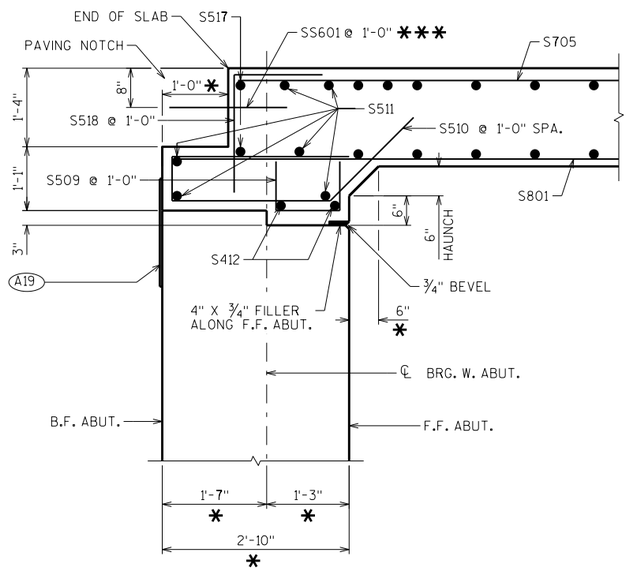
SCALE = 7.50

STATE PROJECT NUMBER

1510-02-72



LONGITUDINAL SECTION



CROSS SECTION THRU ABUTMENT DIAPHRAGMS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

SUPERSTRUCTURE LONGITUDINAL CROSS SECTIONS

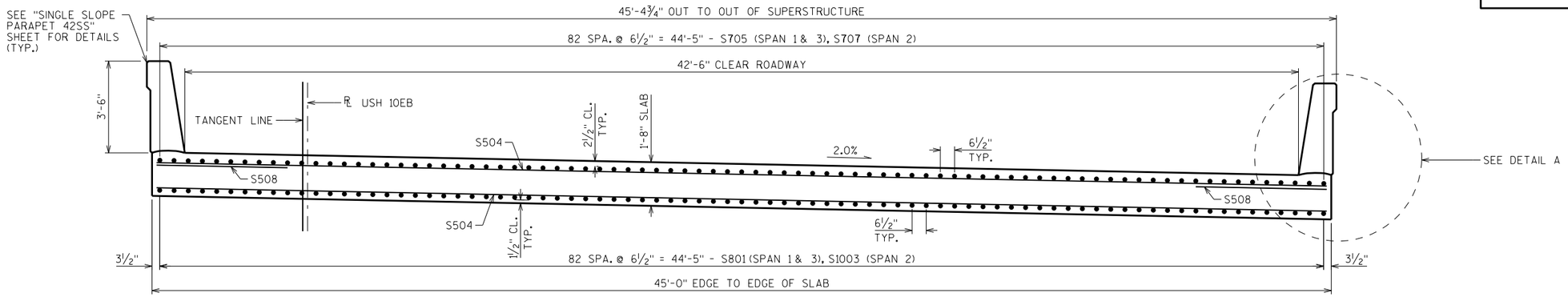
SHEET 13

261

SCALE = 7.50

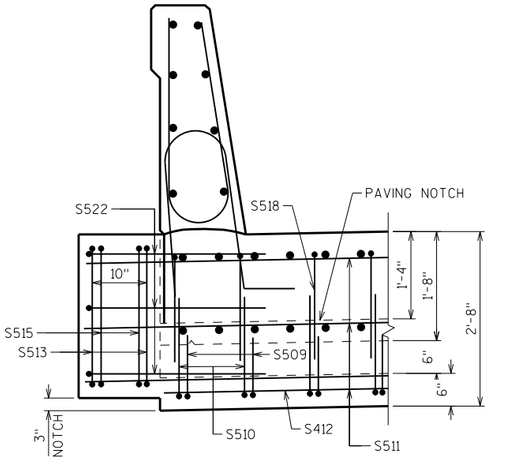
STATE PROJECT NUMBER

1510-02-72



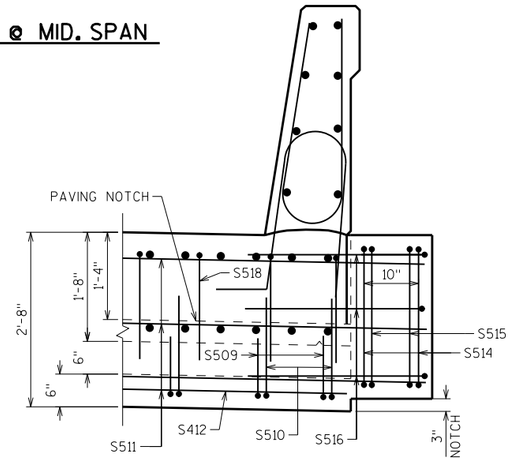
CROSS SECTION THRU SLAB @ MID. SPAN

LOOKING EAST



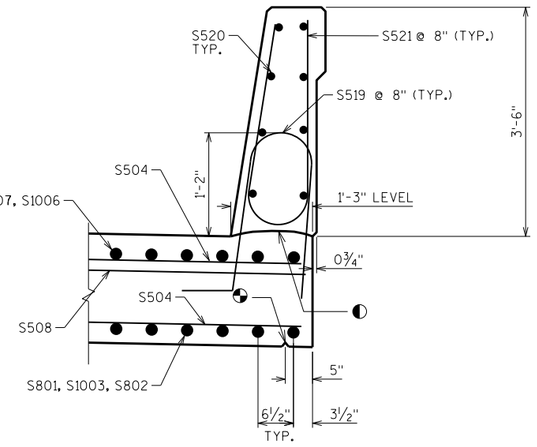
TYPICAL SECTION AT ABUTMENT CORNER

CORNER AT WING 3 SHOWN, CORNER 1 SIMILAR



TYPICAL SECTION AT ABUTMENT CORNER

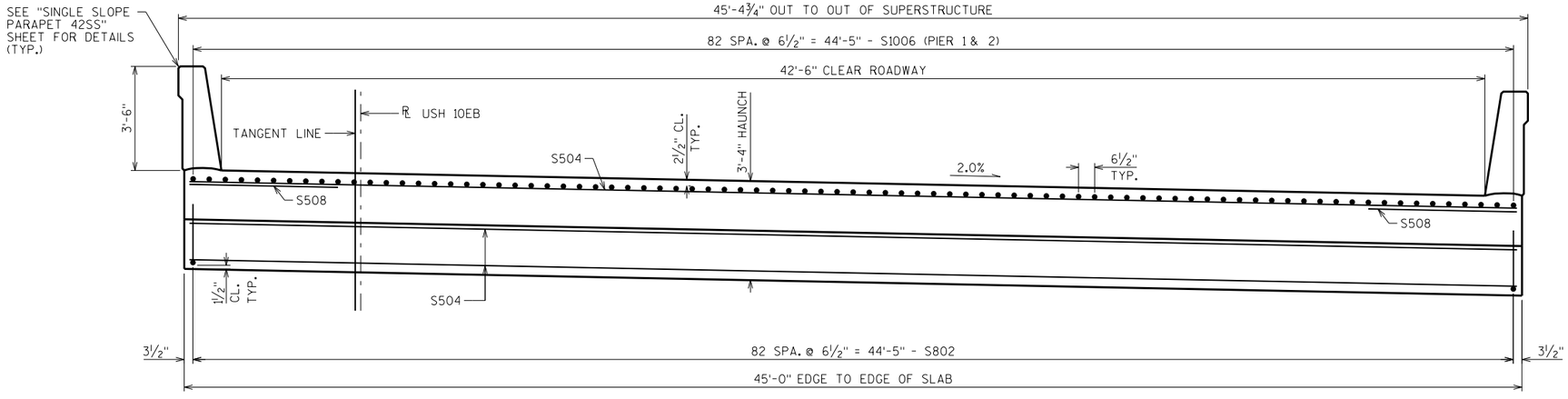
CORNER AT WING 4 SHOWN, CORNER 2 SIMILAR



DETAIL A

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◒ ¾" V-GROOVE REQUIRED, EXTEND TO 6" FROM F.F. OF ABUT. DIAPH.



CROSS SECTION THRU SLAB @ PIER

LOOKING EAST

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

SUPERSTRUCTURE CROSS SECTIONS

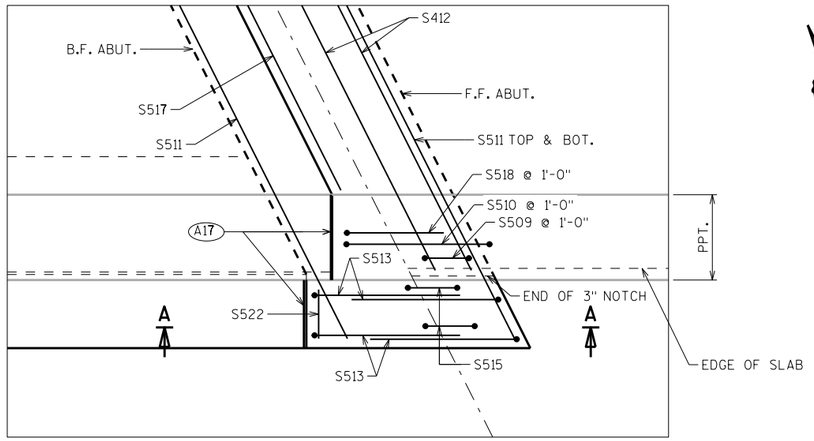
SHEET 14

262

SCALE = 2.25

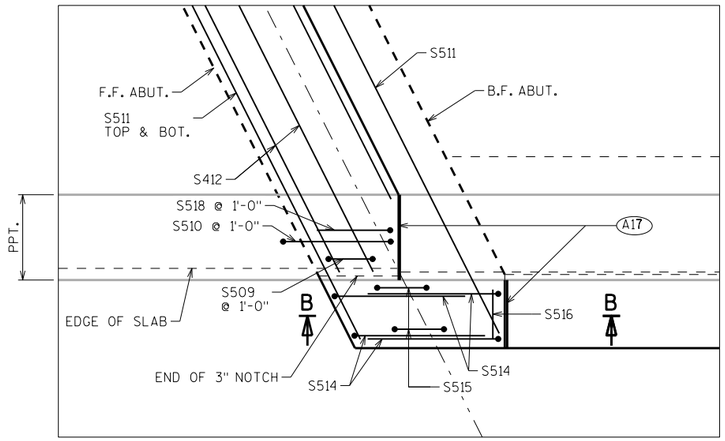
STATE PROJECT NUMBER

1510-02-72



TYPICAL CORNER DETAIL

(WING 1 SHOWN, WING 3 SIMILAR)

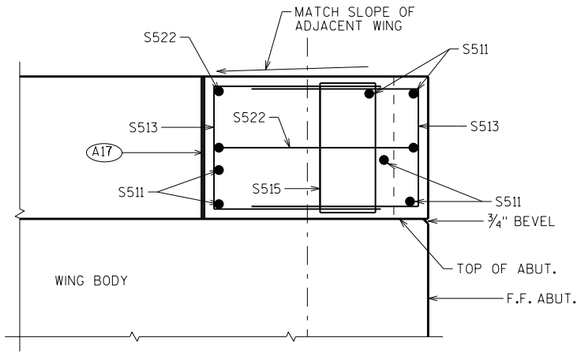


TYPICAL CORNER DETAIL

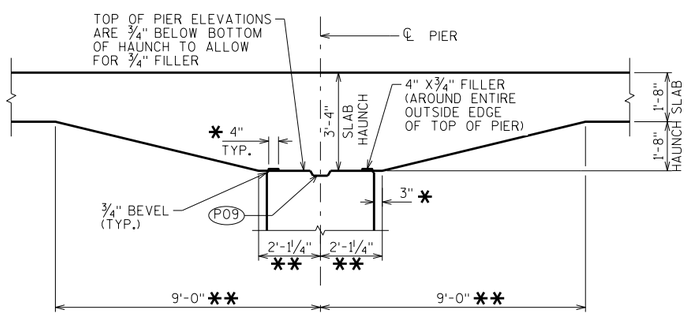
(WING 4 SHOWN, WING 2 SIMILAR)

A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

P09 KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6.

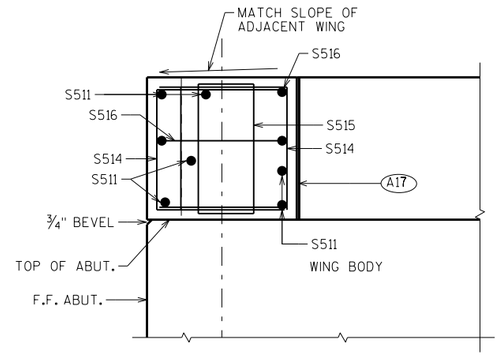


SECTION A-A



DETAILS AT PIER

TYP. @ BOTH PIERS



SECTION B-B

* DIMENSION IS TAKEN PERPENDICULAR TO ℄ OF PIER
** DIMENSION IS TAKEN ALONG ℄ OF SUPERSTRUCTURE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

SUPERSTRUCTURE DETAILS

SHEET 15

263

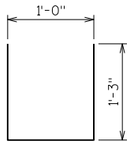
SCALE = 2.50

8

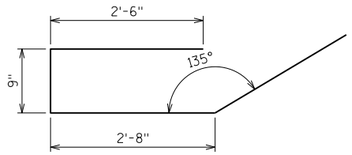
8

STATE PROJECT NUMBER

1510-02-72



S509



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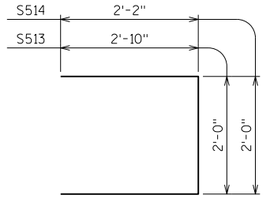
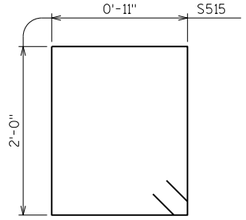


S513, S514



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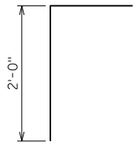

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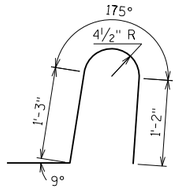

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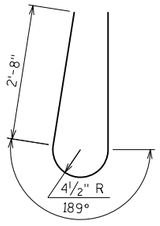

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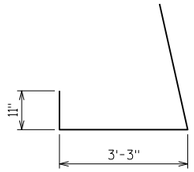

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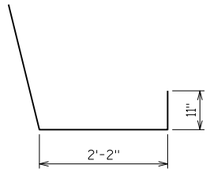
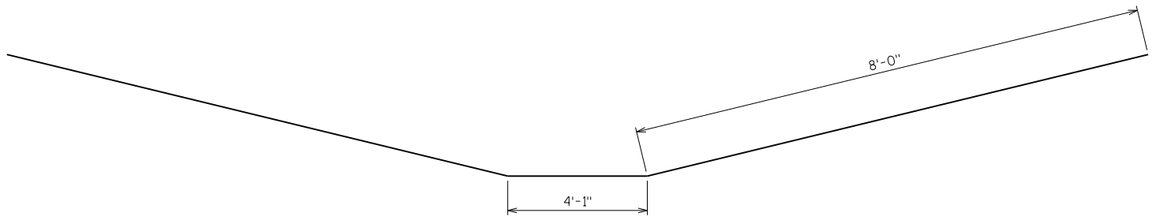


S516

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S801	X	166	34'-7"			SLAB - LONGIT. BOT. - SPANS 1 & 3
S802	X	166	20'-1"	X		SLAB - LONGIT. BOT. - OVER PIERS 1 & 2
S1003	X	83	50'-8"			SLAB - LONGIT. BOT. - SPAN 2
S504	X	268	50'-0"			SLAB - TRANS. BOT. & TOP - ALL SPANS
S705	X	166	21'-0"			SLAB - LONGIT. TOP. - SPANS 1 & 3
S1006	X	166	38'-0"			SLAB - LONGIT. TOP. - OVER PIERS 1 & 2
S707	X	83	36'-0"			SLAB - LONGIT. TOP. - SPAN 2
S508	X	264	5'-0"			SLAB - TRANS. TOP AT EDGES
S509	X	92	3'-3"	X		ABUT. DIAPH. - VERT.
S510	X	92	7'-9"	X		ABUT. DIAPH. - VERT.
S511	X	12	53'-1"			ABUT. DIAPH. - HORIZ. BOT. & TOP
S412	X	4	50'-3"			ABUT. DIAPH. - HORIZ. BOT. AT ABUT.
S513	X	8	7'-5"	X		ABUT DIAPH. - VERT. AT CORNERS - WINGS 1 & 3
S514	X	8	6'-1"	X		ABUT DIAPH. - VERT. AT CORNERS - WINGS 2 & 4
S515	X	4	6'-6"	X		ABUT DIAPH. - VERT. AT CORNERS
S516	X	6	4'-7"	X		ABUT DIAPH. - AT CORNERS 2 & 4
S517	X	4	49'-1"			ABUT. DIAPH. - HORIZ. BOT.
S518	X	92	3'-6"	X		SLAB - ABUTS. DIAPH. VERT.
S519	X	410	4'-5"			42SS PARAPET - VERT.
S520	X	48	46'-6"			42SS PARAPET - LONG.
S521	X	410	6'-8"			42SS PARAPET - VERT.
S522	X	6	5'-8"	X		ABUT DIAPH. - AT CORNERS 1 & 3
STAINLESS STEEL → SS601	X	92	3'-0"			STRUCTURE TO APPROACH SLAB



S802

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

SUPERSTRUCTURE BAR DETAILS

SHEET 16

264

SCALE = 1.00

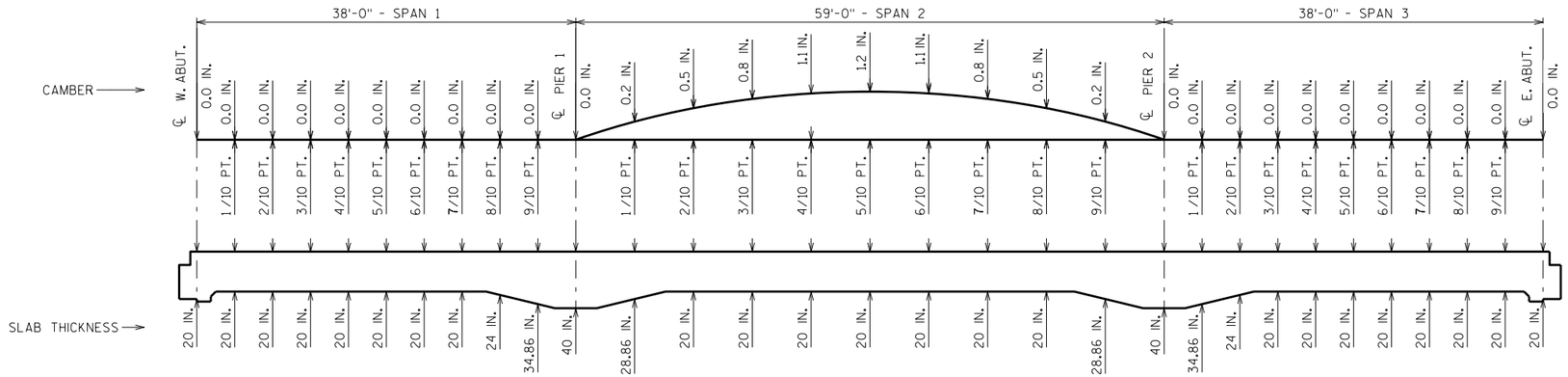
STATE PROJECT NUMBER

1510-02-72

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.
PARAPET PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, OR REFERENCE LINE FOLLOW THIS PROCEDURE:

	TOP OF SLAB ELEVATION AT FINAL GRADE
LESS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION.

TOP OF SLAB ELEVATIONS

LOCATION	℄ BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. E. ABUT.
N. GUTTER/EDGE OF DECK	862.88	862.90	862.93	862.96	862.98	863.01	863.04	863.06	863.09	863.12	863.14	863.18	863.22	863.26	863.29	863.33	863.37	863.40	863.44	863.47	863.51	863.53	863.55	863.57	863.59	863.61	863.64	863.66	863.68	863.70	863.72
REFERENCE LINE	862.77	862.80	862.83	862.86	862.88	862.91	862.94	862.96	862.99	863.02	863.04	863.08	863.12	863.16	863.19	863.23	863.27	863.30	863.34	863.37	863.40	863.43	863.45	863.47	863.49	863.51	863.53	863.55	863.57	863.59	863.61
S. GUTTER/EDGE OF DECK	862.18	862.20	862.23	862.26	862.28	862.31	862.33	862.36	862.38	862.41	862.43	862.47	862.50	862.54	862.58	862.61	862.65	862.68	862.71	862.75	862.78	862.80	862.82	862.84	862.86	862.88	862.90	862.92	862.94	862.95	862.97

SURVEY TOP OF SLAB ELEVATIONS

	℄ BRG. WEST ABUTMENT	5/10 PT.	℄ PIER 1	5/10 PT.	℄ PIER 2	5/10 PT.	℄ BRG. EAST ABUTMENT
N. GUTTER							
℄ USH 10EB							
S. GUTTER							

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE ℄ OF SUBTRUCTURE UNITS, AND AT 5/10 PTS OF SPANS.
TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND REFERENCE LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

SUPERSTRUCTURE DATA

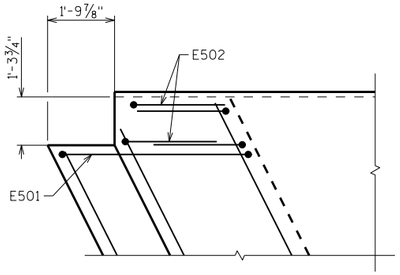
SHEET 17

265

SCALE = 1.00

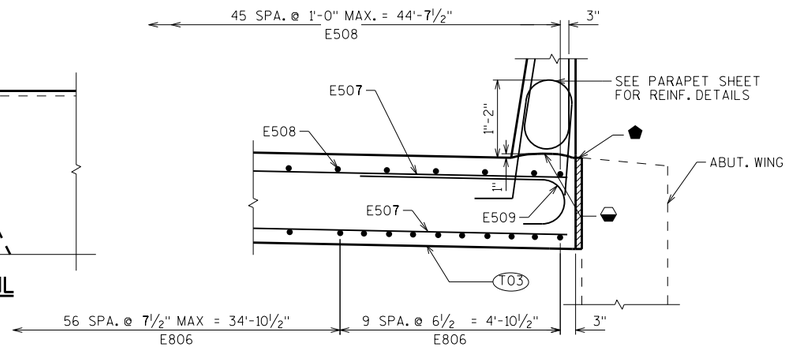
STATE PROJECT NUMBER

1510-02-72



FOOTING END DETAIL

(TYP. ALL 4 ENDS)



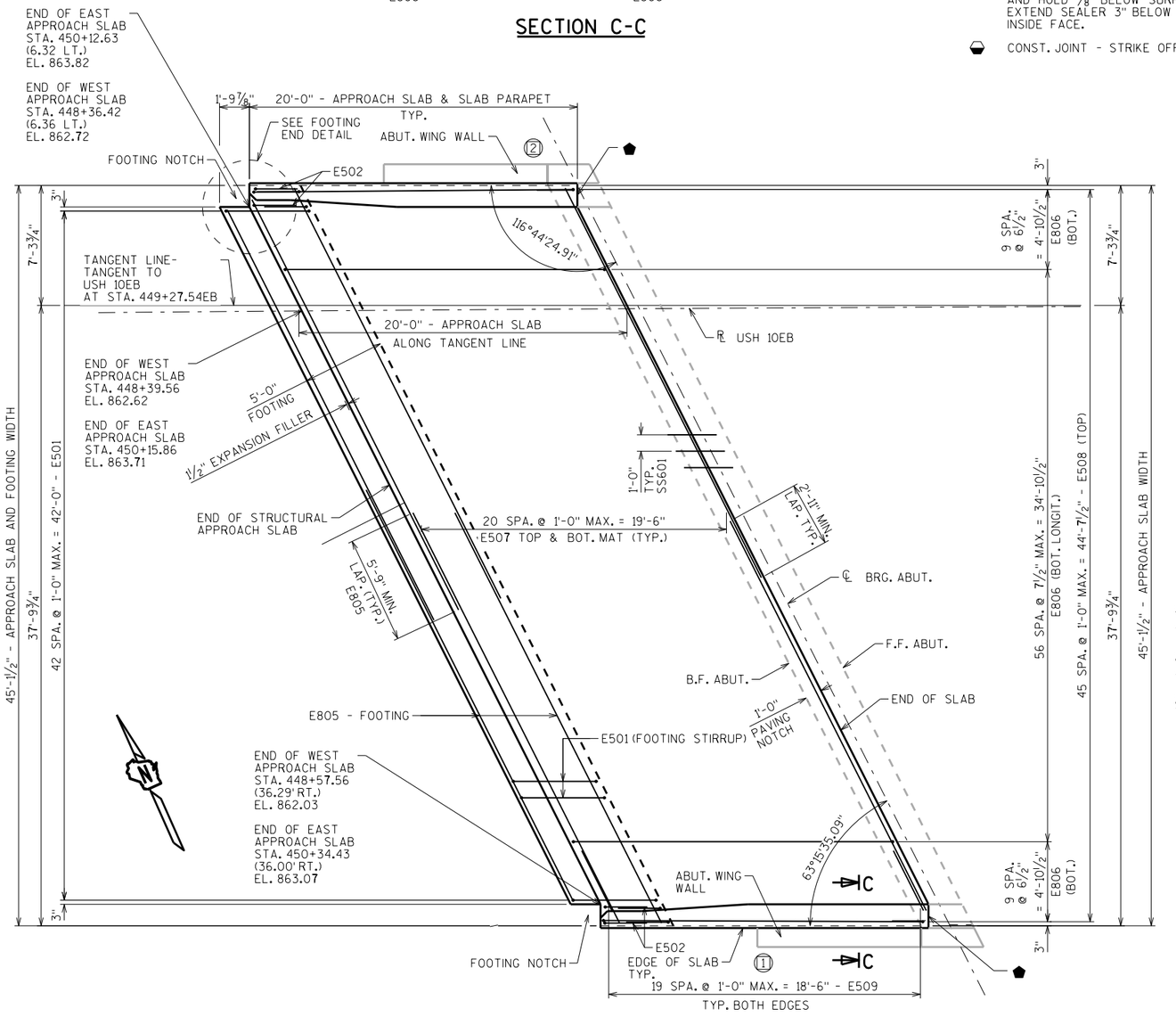
SECTION C-C

- APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.
- MEASURED NORMAL TO ABUTMENT
- (T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.
- (T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.
- SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE) EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- CONST. JOINT - STRIKE OFF AS SHOWN

BILL OF BARS

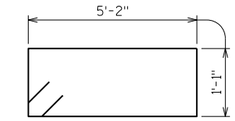
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D. W. SLAB	NO. REQ'D. E. SLAB	LENGTH	BENT	LOCATION
E501	X	43	43	13'-2"	X	FOOTING - STIRRUP
E502	X	8	8	6'-2"	X	FOOTING - STIRRUP
E805	X	24	24	28'-0"		FOOTING - HORIZONTAL
E806	X	75	75	21'-5"	X	APPROACH SLAB - LONGITUDINAL - BOTTOM
E507	X	84	84	26'-7"		APPROACH SLAB - TRANSVERSE - TOP & BOTTOM
E508	X	47	47	19'-8"		APPROACH SLAB - LONGITUDINAL - TOP
E509	X	40	40	4'-1"	X	APPROACH SLAB - TRANSVERSE - TOP EDGES OF SLAB

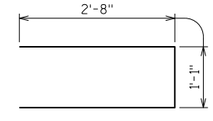


PLAN

WEST APPROACH SLAB SHOWN, EAST APPROACH SLAB SIMILAR



E501



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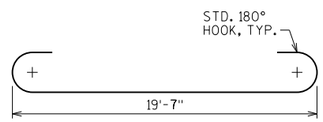
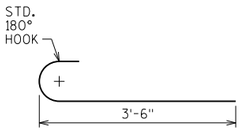
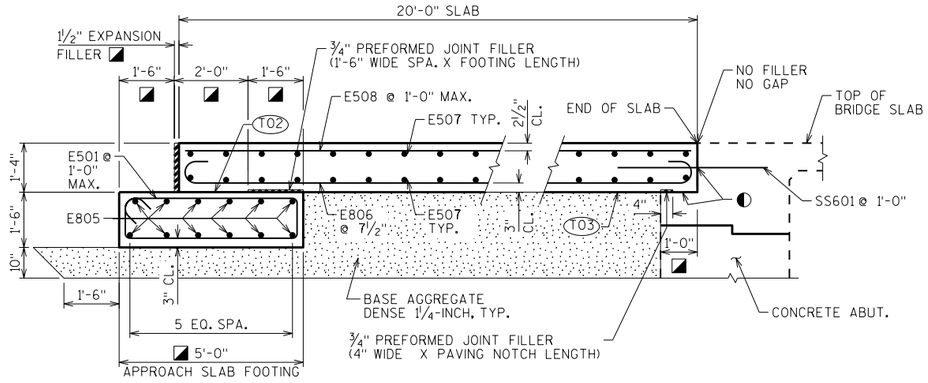


E806



E509



SECTION THRU APPROACH SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

STRUCTURAL APPROACH SLABS

SHEET 18

266

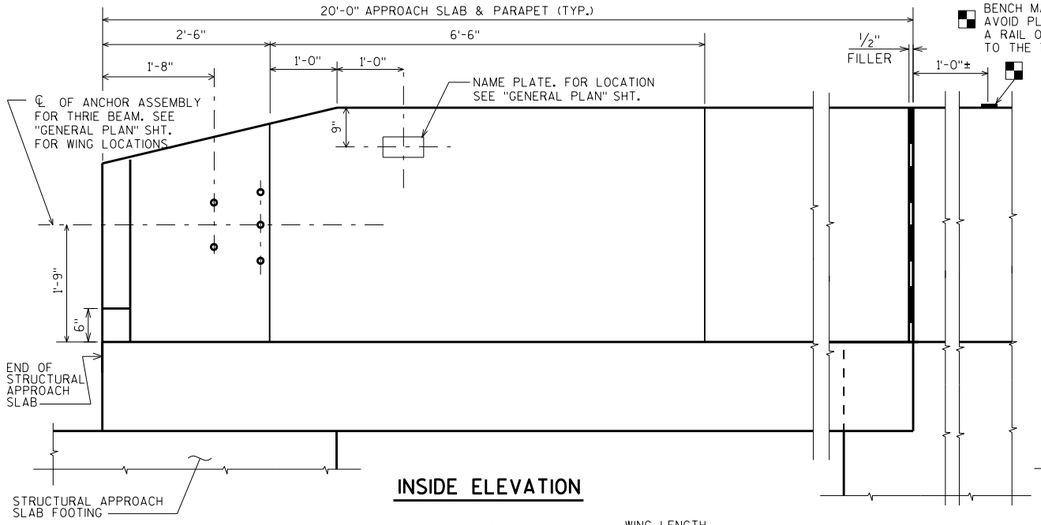
SCALE = 4.00

8

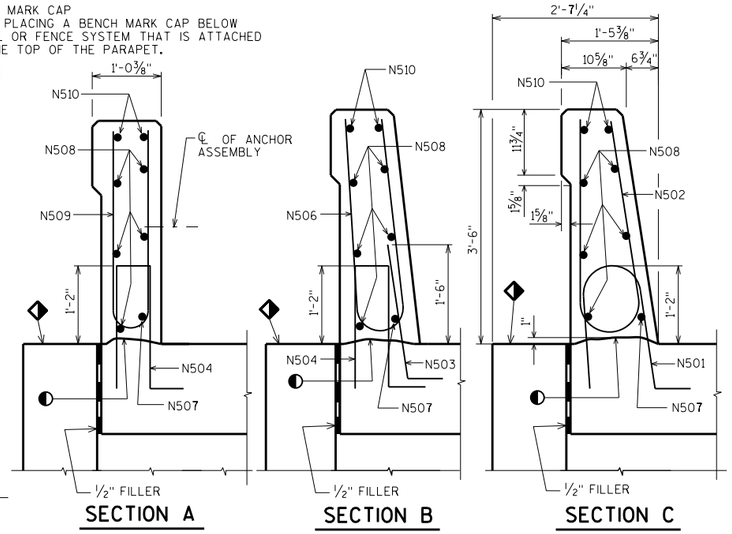
8

STATE PROJECT NUMBER

1510-02-72



INSIDE ELEVATION



SECTION A

SECTION B

SECTION C

BILL OF BARS

FOR STRUCTURAL APPROACH SLAB PARAPETS

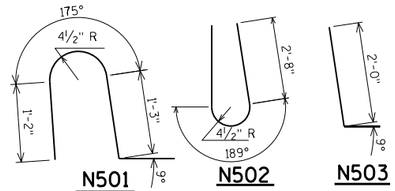
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
N501	X	34	34	4'-5"	X		PARAPET VERT.
N502	X	34	34	6'-8"	X		PARAPET VERT.
N503	X	22	22	2'-9"	X		PARAPET VERT.
N504	X	34	34	4'-4"	X		PARAPET VERT.
N505	X	10	10	6'-5"	X		PARAPET VERT.
N506	X	12	12	6'-6"	X		PARAPET VERT.
N507	X	2	2	19'-7"	X		PARAPET HORIZ.
N508	X	10	10	19'-7"			PARAPET HORIZ.
N509	X	12	12	5'-5"	X	◭	PARAPET VERT.
N510	X	4	4	19'-7"	X		PARAPET HORIZ

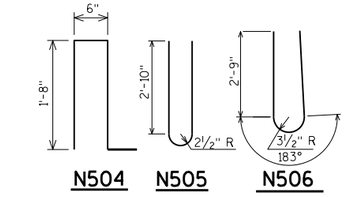
◭ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

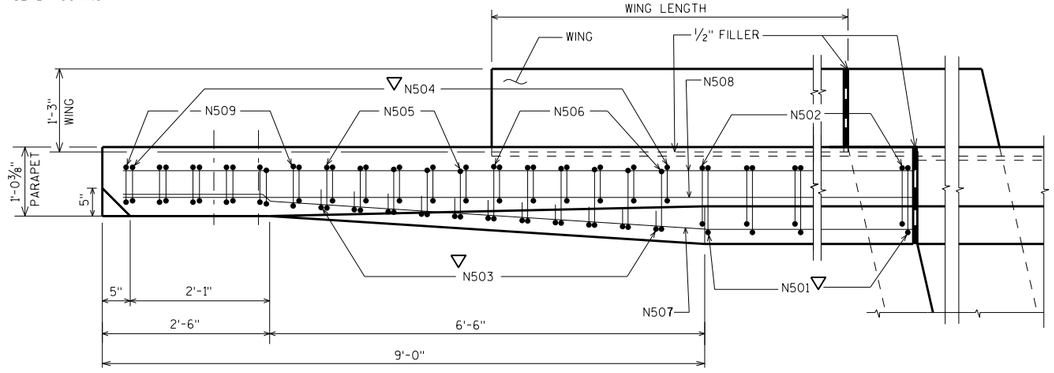
BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
N509	4 SERIES OF 6	4'-9" TO 6'-1"

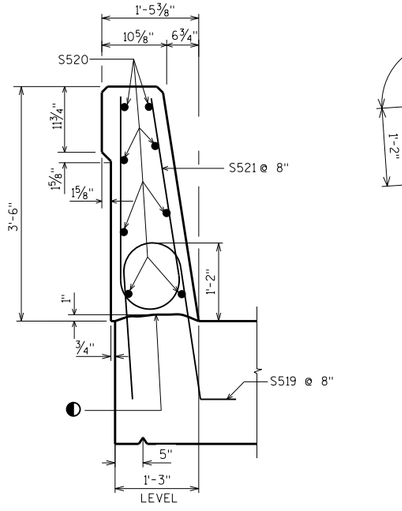
BUNDLE AND TAG EACH SERIES SEPARATELY.



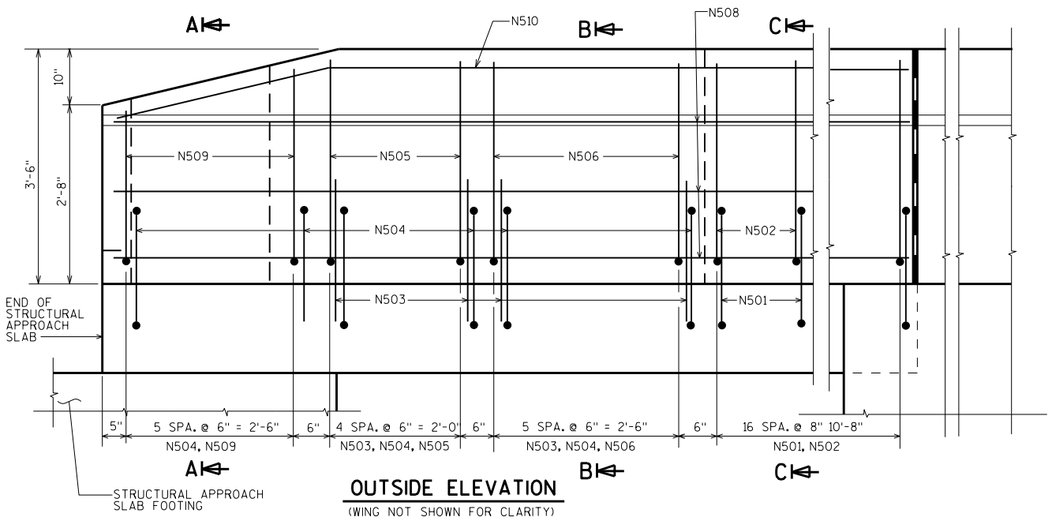




PLAN

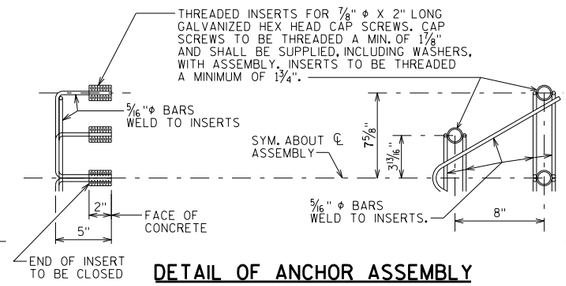


SECTION THROUGH PARAPET ON BRIDGE



OUTSIDE ELEVATION

(WING NOT SHOWN FOR CLARITY)



DETAIL OF ANCHOR ASSEMBLY

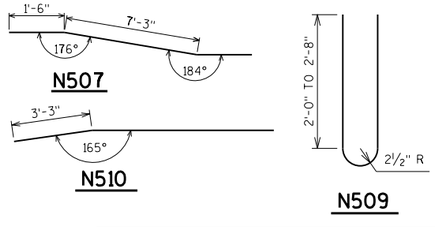
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◆ SLOPE FOR DRAINAGE

▽ N501, N503 AND N504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

SINGLE SLOPE PARAPET 42SS

SHEET 19

267

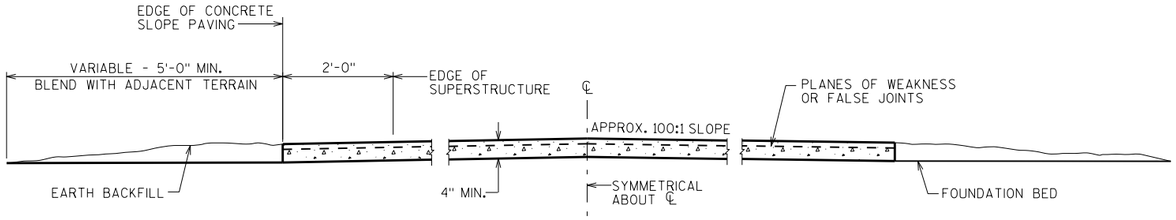
SCALE = 1.10

8

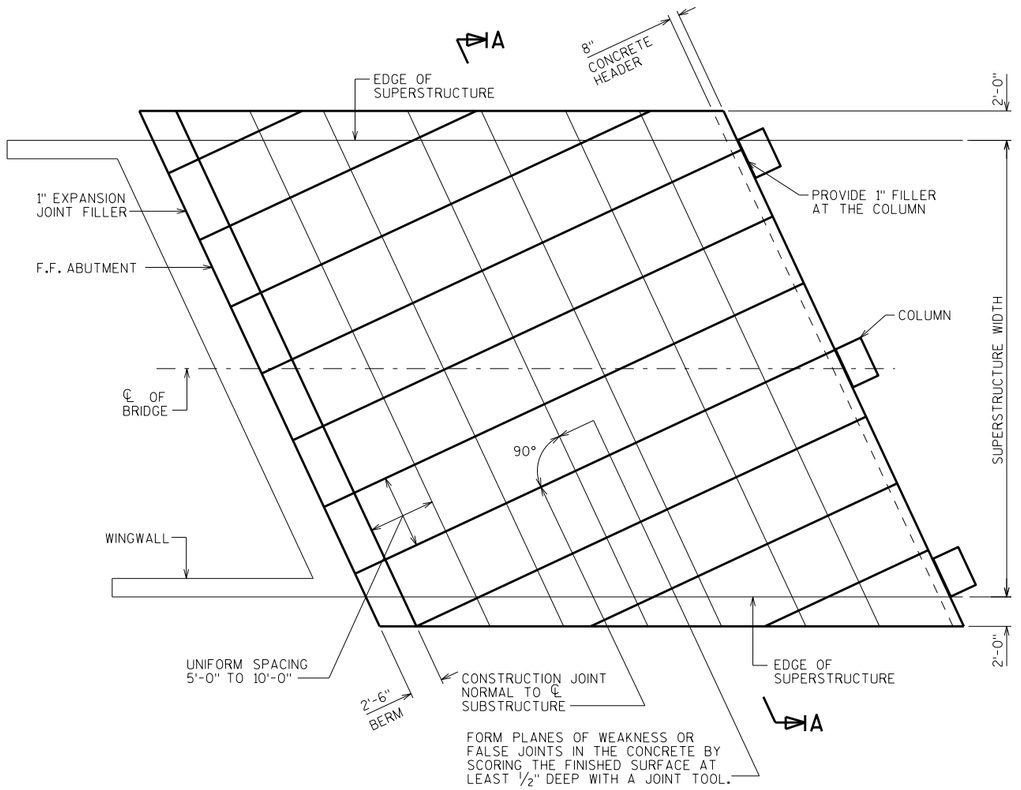
8

STATE PROJECT NUMBER

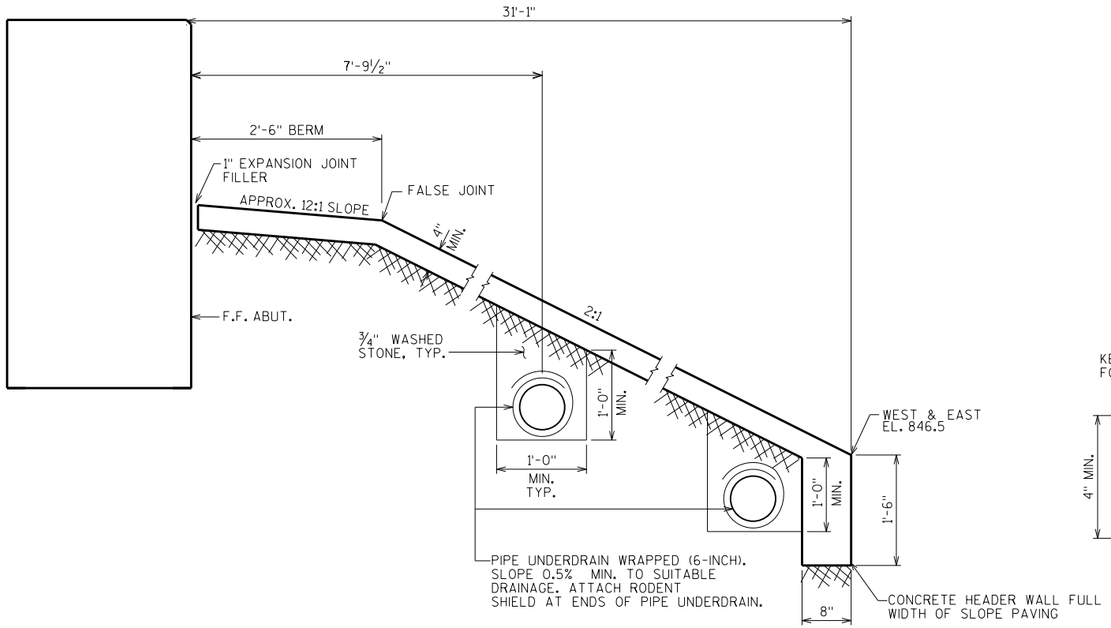
1510-02-72



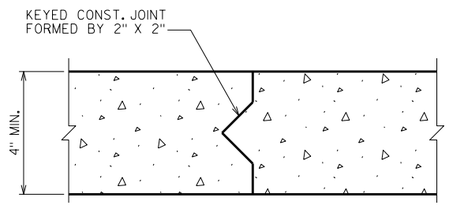
SECTION A-A



CONSTRUCTION JOINT DESIGN



TYPICAL SECTION



CONSTRUCTION JOINT

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN HEREON SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

CONCRETE SLOPE PAVING

SHEET 20

268

8

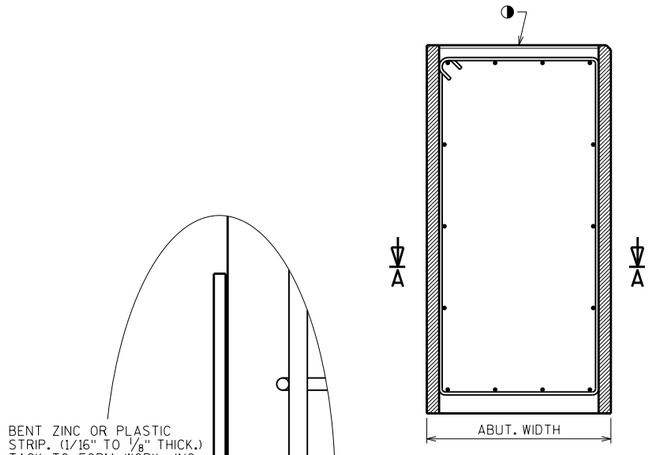
1 2 3 8

8

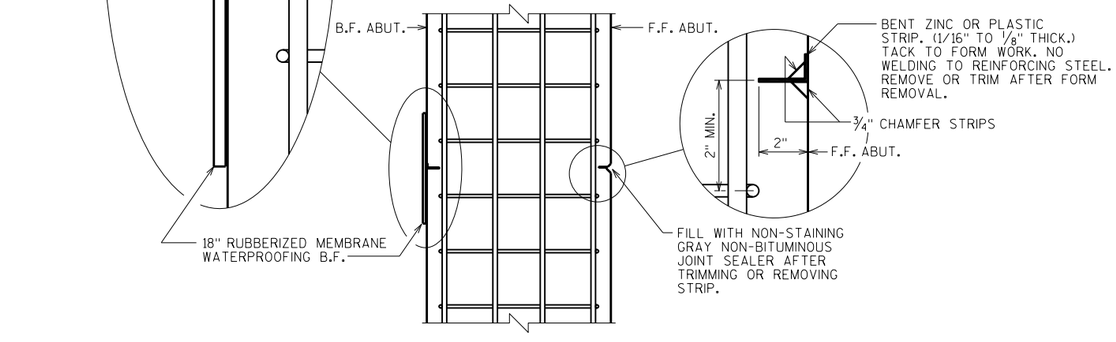
SCALE = 1.00

STATE PROJECT NUMBER

1510-02-72



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-68-144

DRAWN BY AA | PLANS CK'D. MJL

ALTERNATE CONSTRUCTION JOINT

SHEET 21

269

8

8

1 2 3

SCALE = 1.00

Division 1 - 10EB - Stage 1

STATION	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut	Salvaged/Unusable Pavement Material	Fill	Cumulative Vol (CY) Expanded Cut 1.00	Fill 1.25	Mass Ordinate
				Note 1	Note 2	Note 3	Note 1		Note 8
425+00	0.00	0.00	0.00	0	0	0	0	0	0
426+00	2.04	1.15	0.00	4	2	0	4	0	2
427+00	2.32	1.26	0.00	8	4	0	12	0	5
428+00	2.59	1.17	0.00	9	5	0	21	0	10
429+00	5.82	2.74	0.00	16	7	0	37	0	18
430+00	6.32	3.06	0.00	22	11	0	59	0	30
431+00	5.90	3.20	0.00	23	12	0	82	0	41
432+00	6.10	3.45	0.00	22	12	0	104	0	51
433+00	7.26	3.76	0.00	25	13	0	129	0	62
434+00	7.86	4.22	0.00	28	15	0	157	0	75
435+00	7.20	4.47	0.00	28	16	0	184	0	87
436+00	8.62	6.48	0.00	29	20	0	214	0	96
437+00	14.27	6.88	0.00	42	25	0	256	0	114
438+00	15.07	7.12	0.00	54	26	0	310	0	142
439+00	10.51	4.56	0.00	47	22	0	358	0	168
440+00	10.12	4.71	0.00	38	17	0	396	0	189
441+00	6.85	2.25	0.00	31	13	0	427	0	208
442+00	6.52	2.25	0.00	25	8	0	452	0	224
443+00	6.86	2.25	0.00	25	8	0	477	0	241
444+00	6.88	2.25	0.00	25	8	0	502	0	258
445+00	6.79	2.25	0.00	25	8	0	528	0	275
446+00	6.84	2.25	0.00	25	8	0	553	0	291
447+00	6.26	2.25	0.00	24	8	0	577	0	307
448+00	8.04	3.33	0.00	26	10	0	604	0	324
449+00	0.00	0.00	0.00	15	6	0	619	0	332
450+00	9.47	3.50	0.00	18	6	0	636	0	343
451+00	7.87	2.25	0.00	32	11	0	668	0	365
452+00	7.39	2.25	0.00	28	8	0	697	0	385
453+00	6.58	2.25	0.00	26	8	0	722	0	402
454+00	7.15	2.25	0.00	25	8	0	748	0	419
455+00	7.19	2.25	0.00	27	8	0	774	0	438
456+00	6.95	2.25	0.00	26	8	0	801	0	455
457+00	11.88	3.00	0.03	35	10	0	835	0	481
458+00	8.49	1.50	0.00	38	8	0	873	0	510
459+00	12.70	1.50	0.00	39	6	0	912	0	543
460+00	13.21	1.50	0.00	48	6	0	960	0	586
461+00	12.75	1.50	0.00	48	6	0	1,008	0	628
462+00	11.94	1.50	0.00	46	6	0	1,054	0	669
463+00	6.14	0.75	0.00	33	4	0	1,088	0	698
464+00	4.56	0.75	0.00	20	3	0	1,107	0	715
465+00	2.44	0.75	0.00	13	3	0	1,120	0	725
466+00	1.91	0.75	0.00	8	3	0	1,128	0	730
467+00	1.58	0.75	0.00	6	3	0	1,135	0	734
468+00	0.00	0.00	0.00	3	1	0	1,138	0	736

Division 2 - 10EB - Stage 2

STATION	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut	Salvaged/Unusable Pavement Material	Fill	Cumulative Vol (CY) Expanded Cut 1.00	Fill 1.25	Mass Ordinate
				Note 1	Note 2	Note 3	Note 1		Note 8
444+00	0.00	0.00	0.00	0	0	0	0	0	0
445+00	1.50	1.50	106.57	3	3	197	3	247	-247
445+21	1.50	1.50	112.80	1	1	85	4	353	-353
445+46	1.50	1.50	92.85	1	1	95	5	472	-472
445+71	1.77	1.50	77.83	2	1	79	7	571	-571
445+75	2.70	2.26	76.30	0	0	11	7	585	-585
445+89	2.77	2.26	76.31	2	1	51	8	635	-635
446+00	2.80	2.26	77.74	1	1	31	10	674	-674
447+00	6.96	2.46	97.77	18	9	325	28	1,081	-1,071
447+99	18.12	3.82	98.18	46	12	359	74	1,530	-1,485
448+00	17.90	3.82	97.90	1	0	4	74	1,534	-1,489
449+00	0.00	0.00	0.00	33	7	181	107	1,761	-1,690
450+00	0.00	0.00	0.00	0	0	0	107	1,761	-1,690
451+00	12.95	2.26	88.25	24	4	163	131	1,965	-1,874
452+00	5.91	2.26	46.50	35	8	250	166	2,277	-2,160
453+00	2.30	2.26	16.66	15	8	117	182	2,423	-2,299
454+00	2.26	2.26	10.42	8	8	50	190	2,486	-2,362
454+24	2.26	2.26	14.18	2	2	11	192	2,500	-2,375
455+00	2.26	2.26	9.51	6	6	33	198	2,541	-2,417
456+00	2.26	2.26	6.95	8	8	30	207	2,579	-2,455
456+34	2.26	2.26	5.22	3	3	8	210	2,589	-2,465
457+00	0.75	0.75	0.00	4	4	6	213	2,597	-2,473
458+00	0.00	0.00	0.00	1	1	0	215	2,597	-2,473

9

PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	EARTHWORK DATA	SHEET: 270	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

Division 3 - 10EB - Stage 3

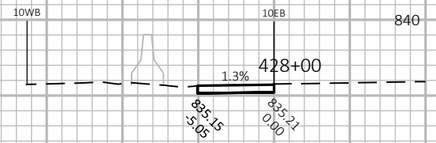
STATION	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Expanded Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) Mass Ordinate
				Note 1	Note 2	Note 3	Note 1		Note 8
428+00	0.00	0.00	0.00	0	0	0	0	0	0
429+00	8.69	8.48	0.00	16	16	0	16	0	0
430+00	9.31	8.89	0.00	33	32	0	49	0	2
431+00	10.46	9.29	0.00	37	34	0	86	0	5
432+00	11.60	9.73	0.00	41	35	0	127	0	10
433+00	12.15	10.39	0.00	44	37	0	171	0	17
434+00	12.77	11.16	0.00	46	40	0	217	0	23
435+00	13.47	11.93	0.00	49	43	0	266	0	29
436+00	13.25	12.70	0.00	49	46	0	315	0	33
437+00	13.67	13.47	0.00	50	48	0	365	0	34
438+00	14.10	13.89	0.00	51	51	0	416	0	35
439+00	0.00	0.00	0.00	26	26	0	443	0	35
440+00	0.00	0.00	0.00	0	0	0	443	0	35
441+00	1.64	1.64	0.00	3	3	0	446	0	35
442+00	1.34	1.34	0.00	6	6	0	451	0	35
443+00	2.23	2.23	0.00	7	7	0	458	0	35
444+00	0.95	0.95	0.00	6	6	0	464	0	35
445+00	1.95	1.95	0.00	5	5	0	469	0	35
446+00	1.01	0.90	2.35	5	5	4	474	5	30
447+00	1.26	1.26	3.02	4	4	10	479	18	18
448+00	0.56	0.00	1.76	3	2	9	482	29	8
449+00	0.00	0.00	0.00	1	0	3	483	33	5
450+00	3.62	0.00	0.00	7	0	0	490	33	12
450+25	0.08	0.00	7.95	2	0	4	491	38	9
451+00	2.74	2.43	3.57	4	3	16	495	58	-11
452+00	2.90	2.67	5.50	10	9	17	506	79	-31
452+25	2.85	2.64	6.43	3	2	6	508	85	-38
453+00	3.06	2.74	4.73	8	7	15	517	105	-56
453+75	3.05	2.85	4.26	8	8	12	525	120	-71
454+00	3.22	2.97	3.90	3	3	4	528	125	-76
455+00	4.00	3.49	3.78	13	12	14	541	143	-92
456+00	5.96	4.57	2.84	18	15	12	560	158	-104
456+75	7.91	5.68	2.57	19	14	8	579	168	-108
457+00	17.54	15.00	2.15	12	10	2	591	170	-109
457+50	15.00	15.00	0.00	30	28	2	621	173	-109
458+00	15.00	15.00	0.00	28	28	0	649	173	-109
459+00	16.30	15.00	0.00	58	56	0	707	173	-106
460+00	17.25	15.00	0.00	62	56	0	769	173	-100
461+00	17.33	15.00	0.00	64	56	0	833	173	-91
462+00	16.88	15.00	0.00	63	56	0	896	173	-84
462+38	17.96	15.00	0.00	25	21	0	921	173	-80
463+00	6.27	4.76	0.18	28	23	0	949	173	-75
464+00	4.80	4.33	0.73	20	17	2	969	175	-74
465+00	0.11	0.00	2.03	9	8	5	978	182	-79
466+00	0.00	0.00	0.00	0	0	4	978	186	-84

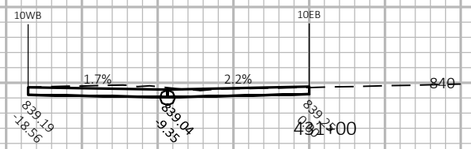
Division 4 - E - Stage 3

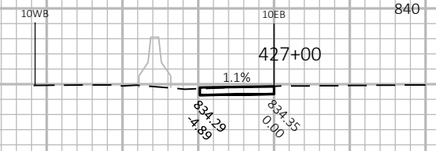
STATION	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Expanded Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) Mass Ordinate
				Note 1	Note 2	Note 3	Note 1		Note 8
110+00	0.00	0.00	0.00	0	0	0	0	0	0
110+91	1.73	0.00	21.51	3	0	36	3	45	-42
111+16	2.84	0.00	35.66	2	0	26	5	78	-73
111+20	2.91	0.00	39.93	0	0	6	5	85	-80
111+40	35.67	0.00	17.49	14	0	21	20	112	-92
111+45	28.66	0.00	19.61	6	0	3	26	116	-91
111+59	30.57	0.00	73.47	15	0	24	41	146	-105
111+70	27.79	0.00	9.88	12	0	17	53	168	-115
112+00	111.38	0.00	1.12	77	0	6	130	175	-45
113+00	0.00	0.00	0.00	206	0	2	337	178	159
114+00	0.00	0.00	0.00	0	0	0	337	178	159
114+33	4.81	0.00	0.01	3	0	0	339	178	162
114+50	4.38	0.00	0.29	3	0	0	342	178	164
114+58	3.01	0.00	1.04	1	0	0	343	178	165
114+75	3.02	0.00	2.78	2	0	1	345	180	166
114+83	3.51	0.00	3.30	1	0	1	346	181	165
114+99.97	4.55	0.00	2.24	3	0	2	349	183	166
116+00	0.00	0.00	0.00	8	0	4	357	188	169

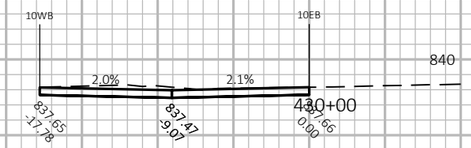
PROJECT NO: 1510-02-72	HWY: USH 10	COUNTY: WAUPACA	EARTHWORK DATA	SHEET: 271	E

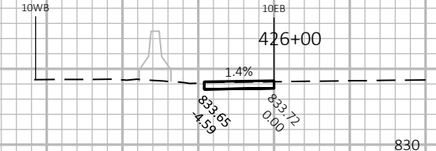
FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

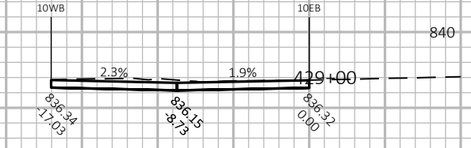


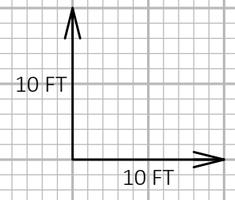












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9

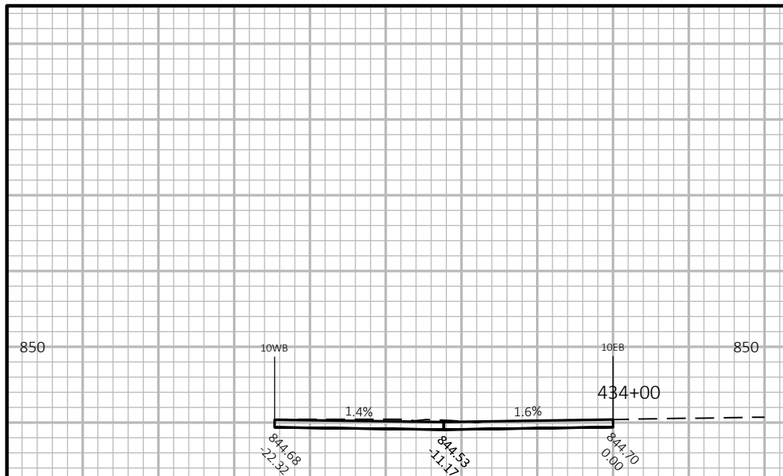
PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 1	SHEET 272	E

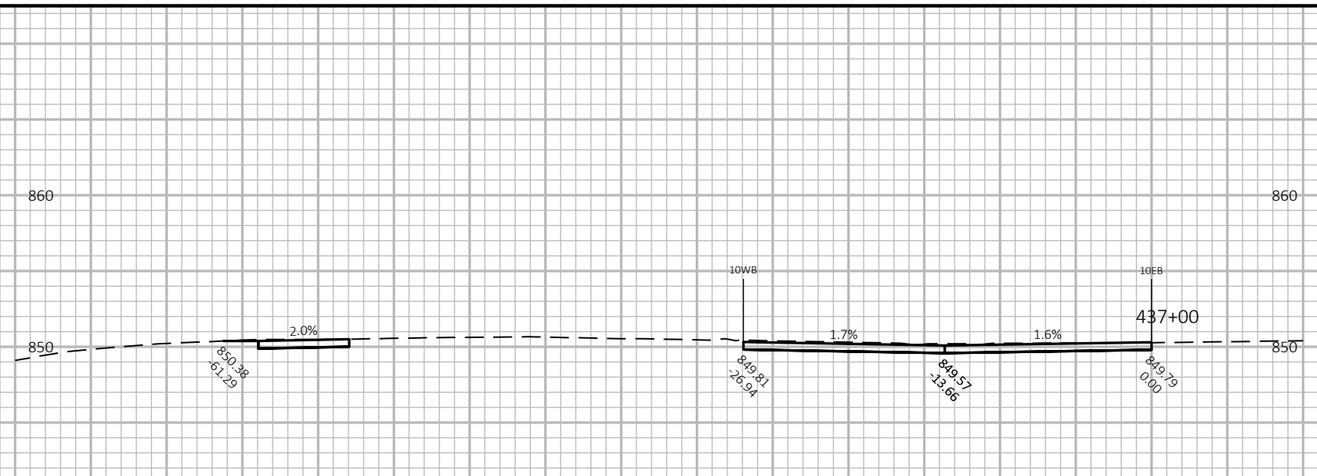
FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090201-XS-STAGE-1.DWG
LAYOUT NAME - 1

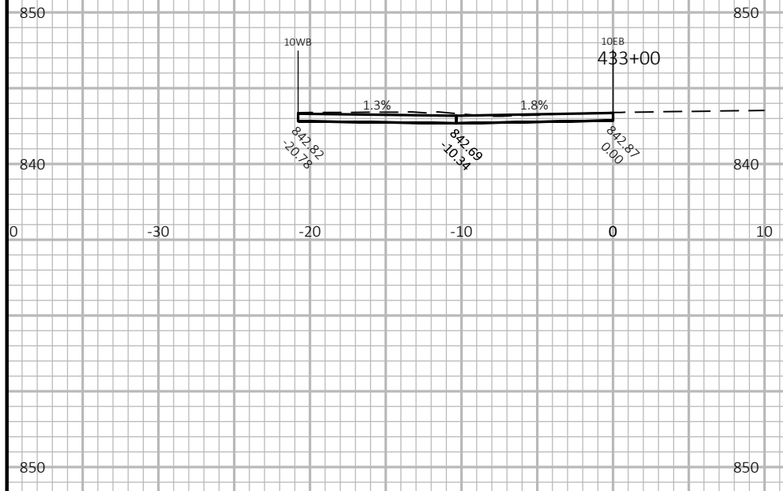
PLOT DATE : 10/19/2018 2:55 PM PLOT BY : CASPER, ANDREW P PLOT NAME :

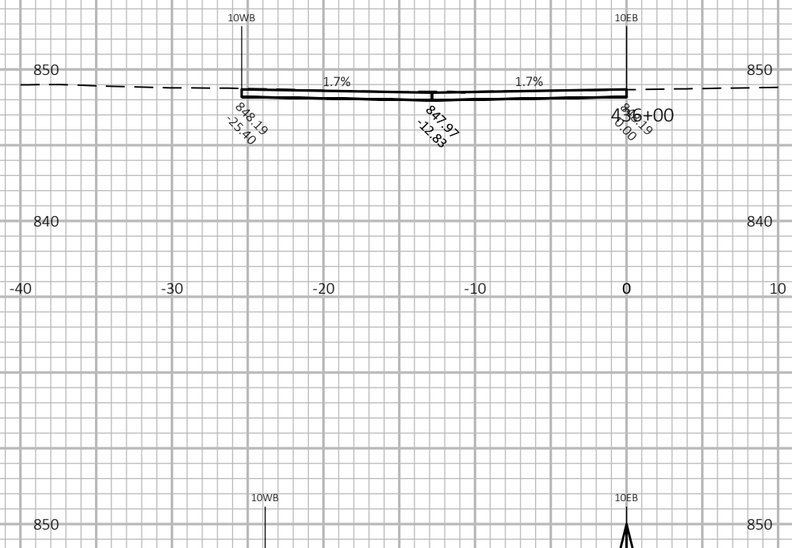
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

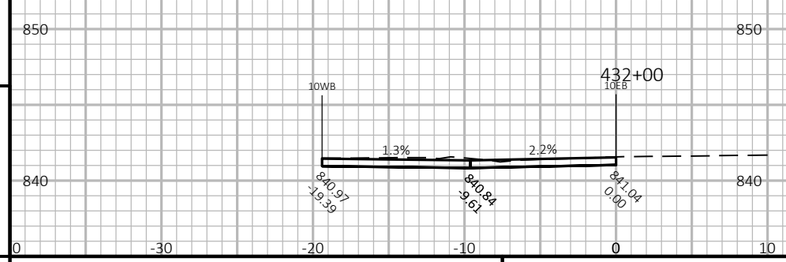
WISDOT/CADDS SHEET 49











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PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 1	SHEET 273	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090201-XS-STAGE-1.DWG
LAYOUT NAME - 2

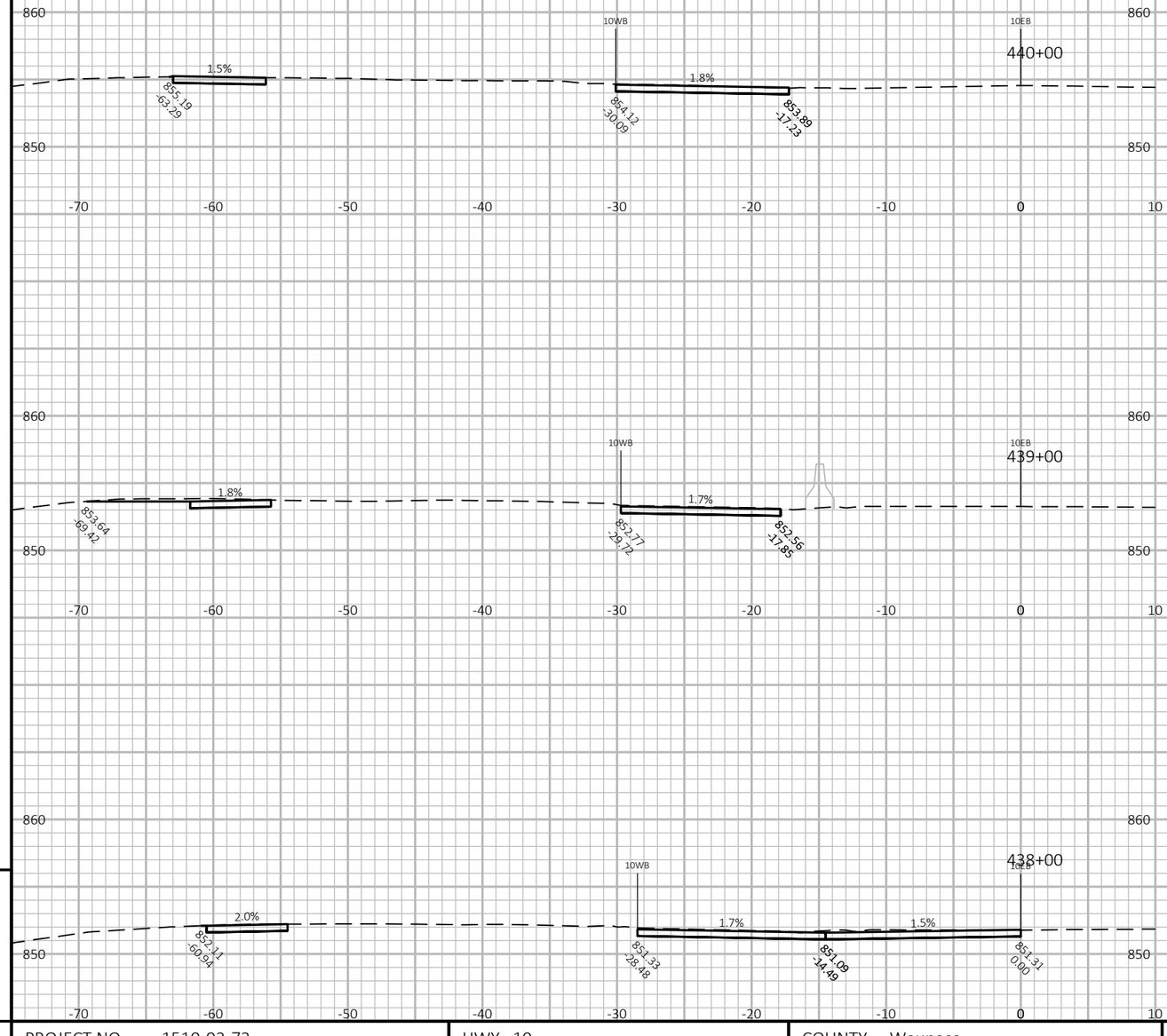
PLOT DATE : 10/19/2018 2:55 PM

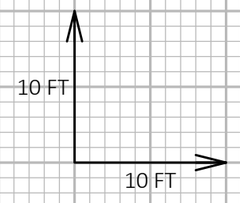
PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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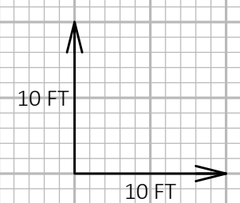
PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 1	SHEET 274	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090201-XS-STAGE-1.DWG
LAYOUT NAME - 3

PLOT DATE : 10/19/2018 2:55 PM PLOT BY : CASPER, ANDREW P PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 1	SHEET 275	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090201-XS-STAGE-1.DWG
LAYOUT NAME - 4

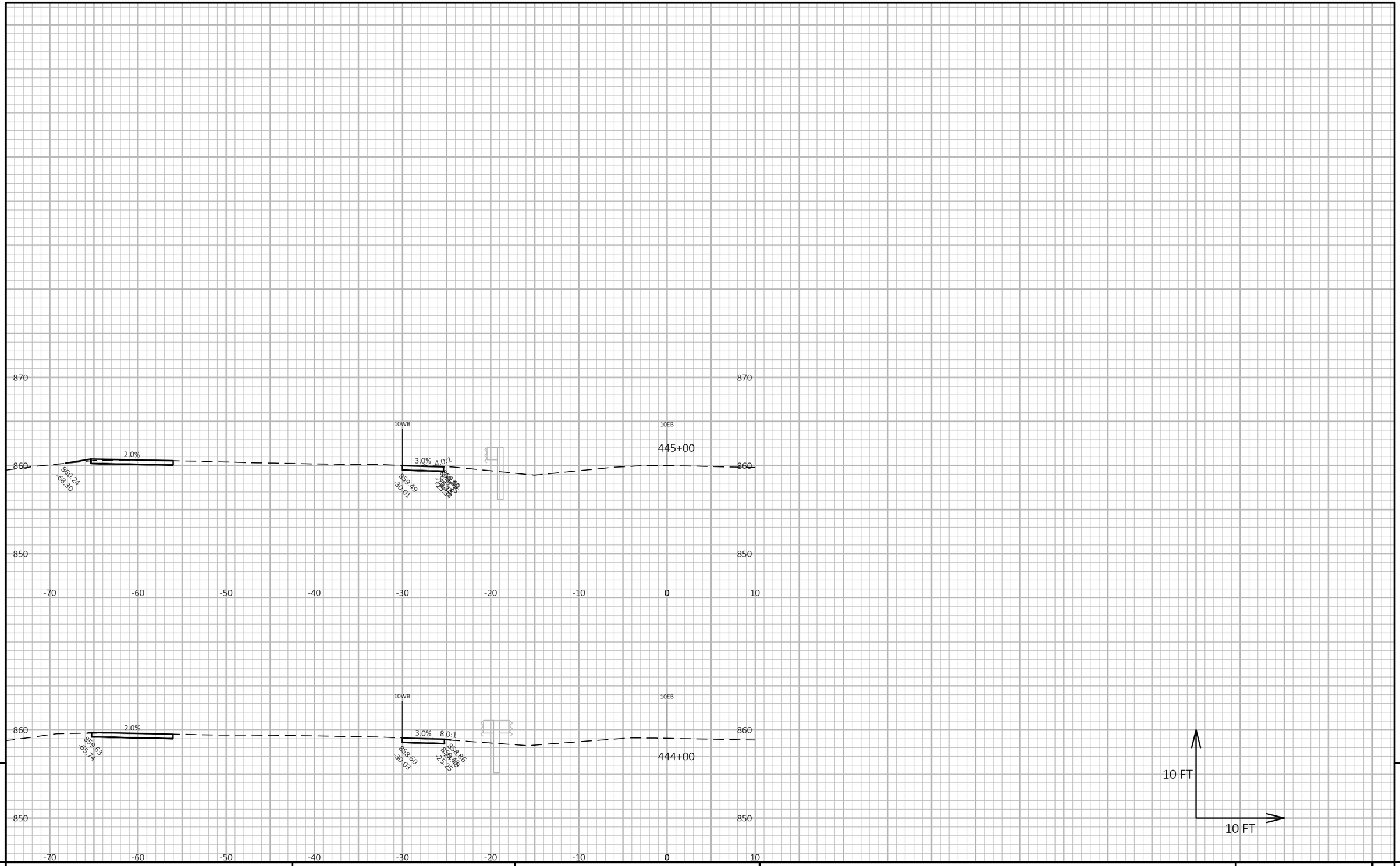
PLOT DATE : 10/19/2018 2:55 PM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 1	SHEET 276	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090201-XS-STAGE-1.DWG
LAYOUT NAME - 5

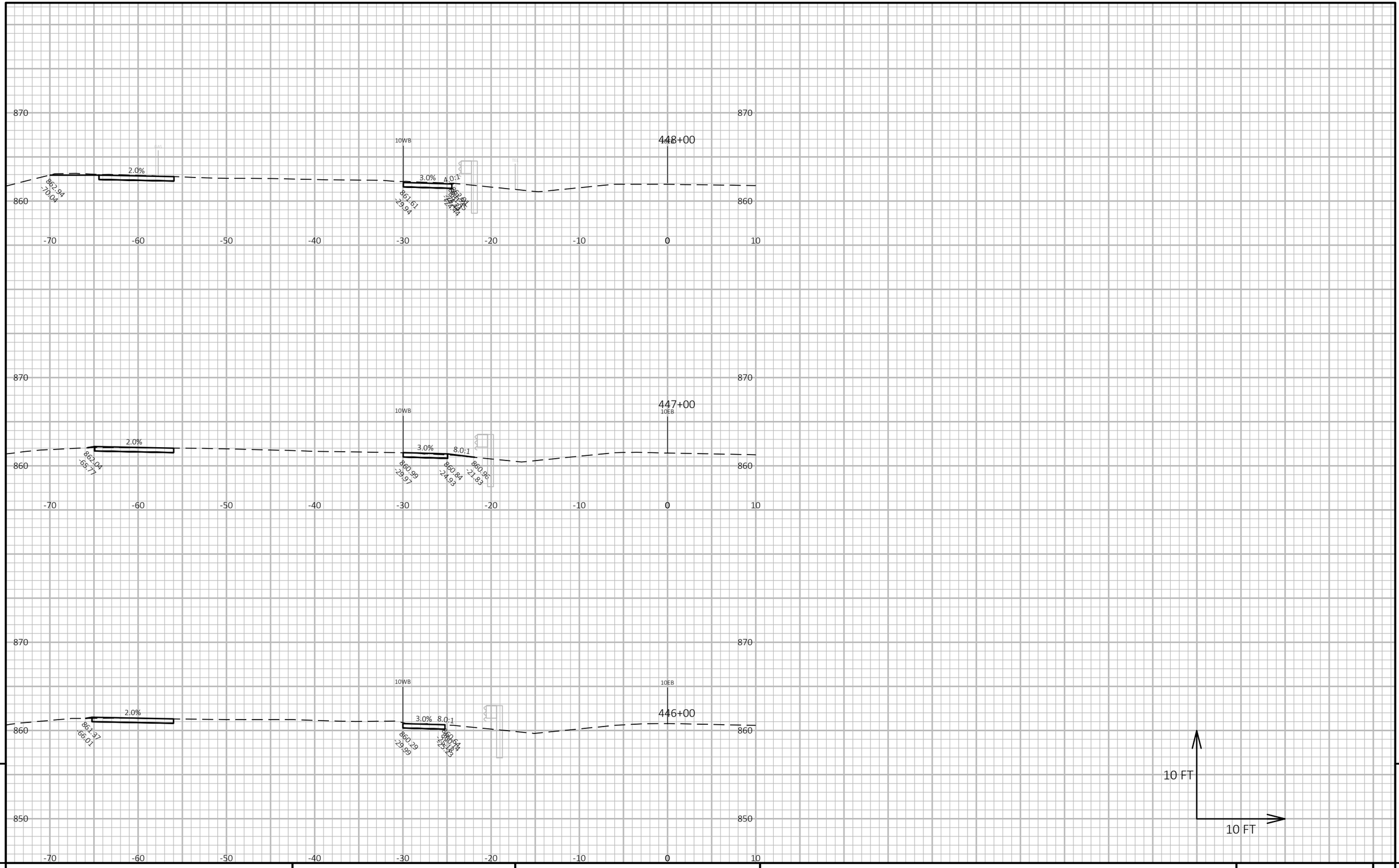
PLOT DATE : 10/19/2018 2:55 PM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 1	SHEET 277	E

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LAYOUT NAME - 6

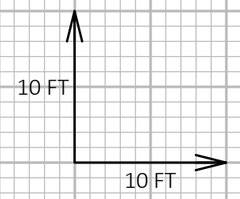
PLOT DATE : 10/19/2018 2:55 PM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 1	SHEET 278	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090201-XS-STAGE-1.DWG
LAYOUT NAME - 7

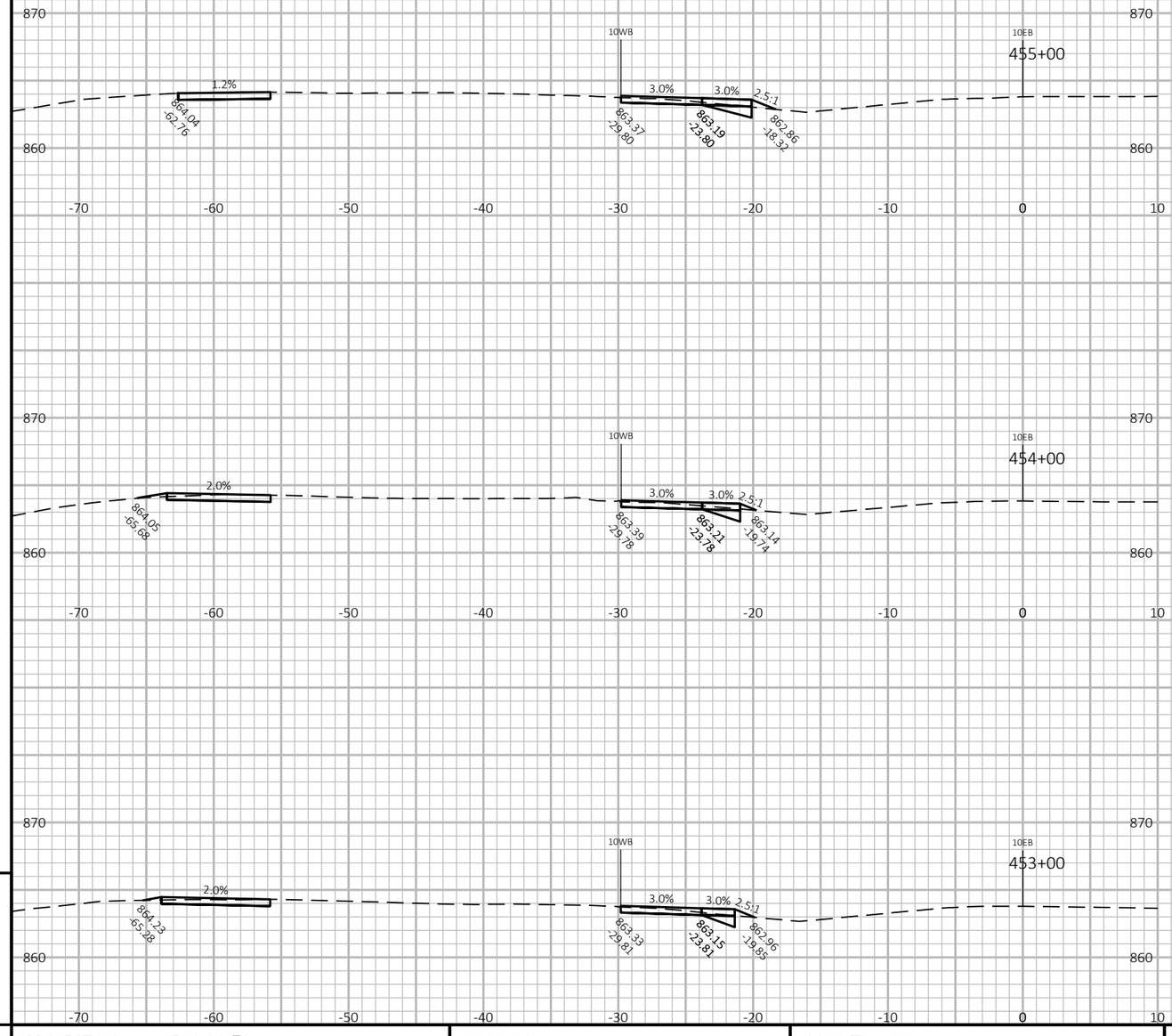
PLOT DATE : 10/19/2018 2:55 PM

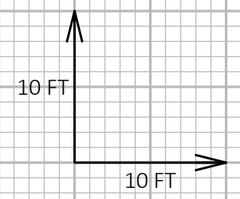
PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 1	SHEET 279	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090201-XS-STAGE-1.DWG
LAYOUT NAME - 8

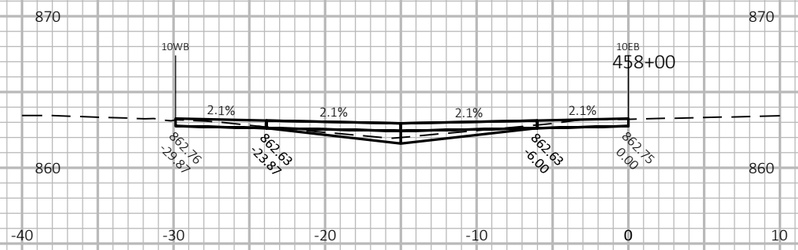
PLOT DATE : 10/19/2018 2:56 PM

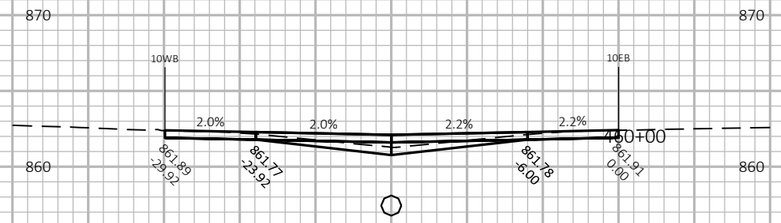
PLOT BY : CASPER, ANDREW P

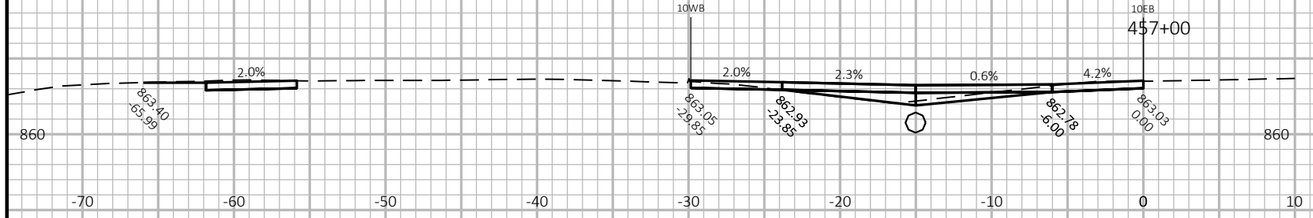
PLOT NAME :

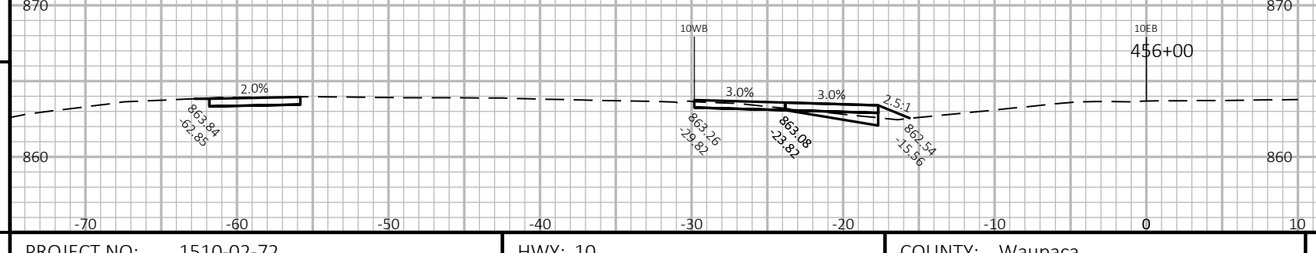
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

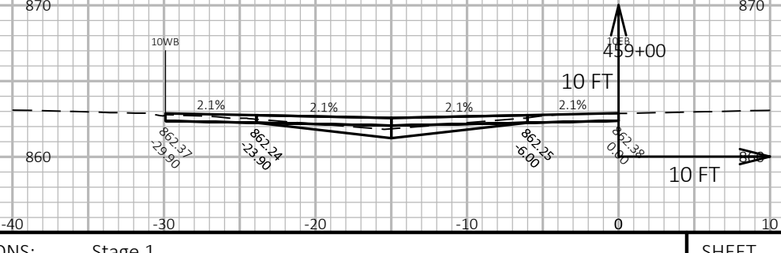
WISDOT/CADDS SHEET 49











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PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 1	SHEET 280	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090201-XS-STAGE-1.DWG
LAYOUT NAME - 9

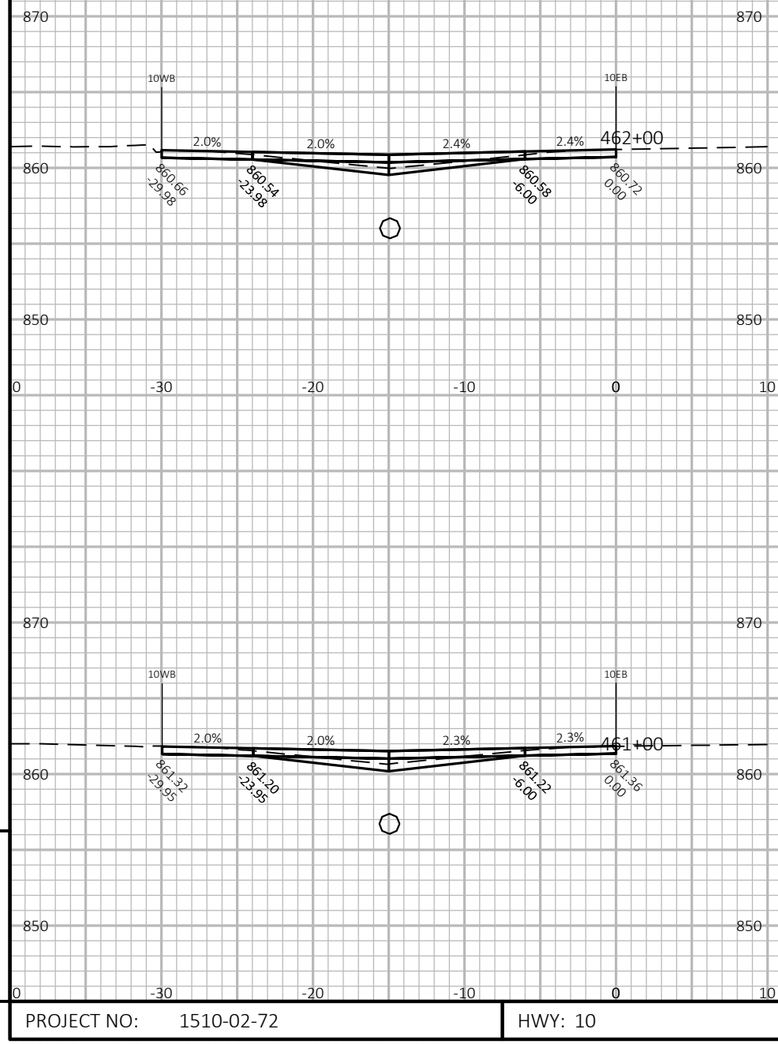
PLOT DATE : 10/19/2018 2:56 PM

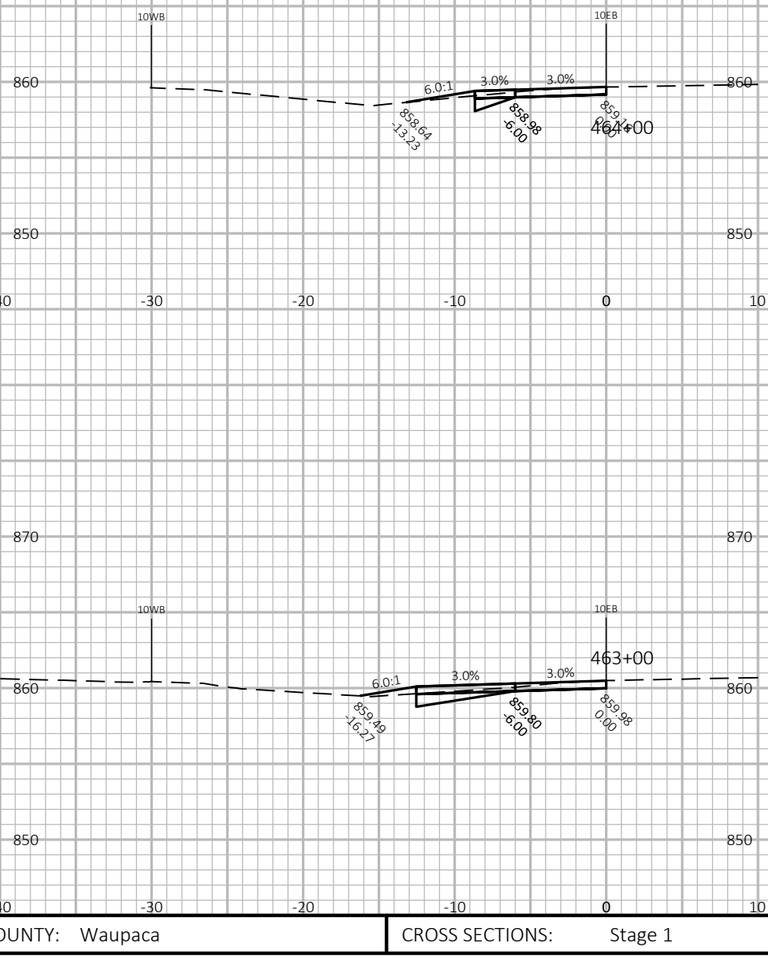
PLOT BY : CASPER, ANDREW P

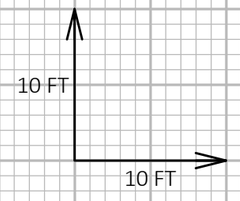
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







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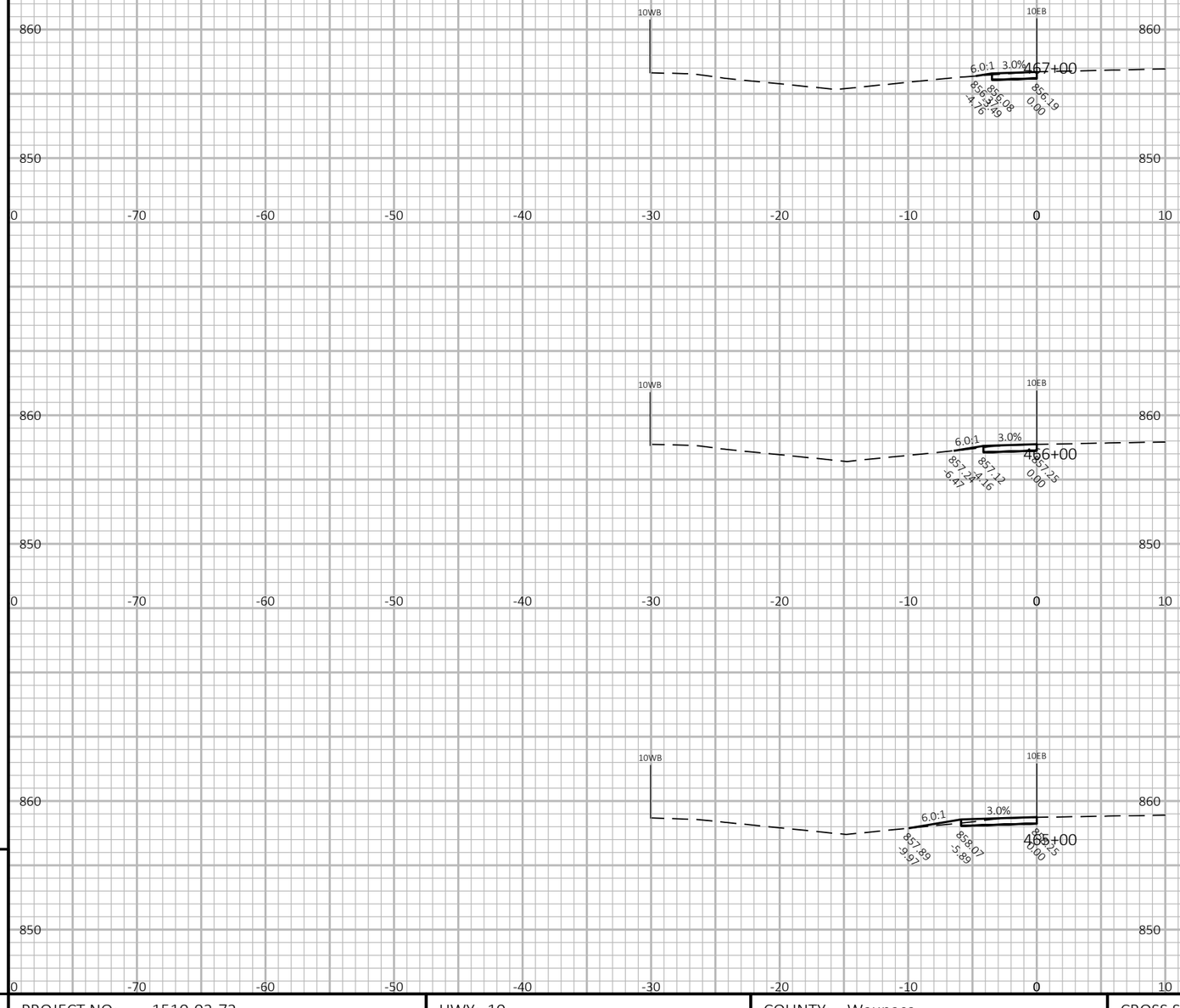
9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 1	SHEET 281	E



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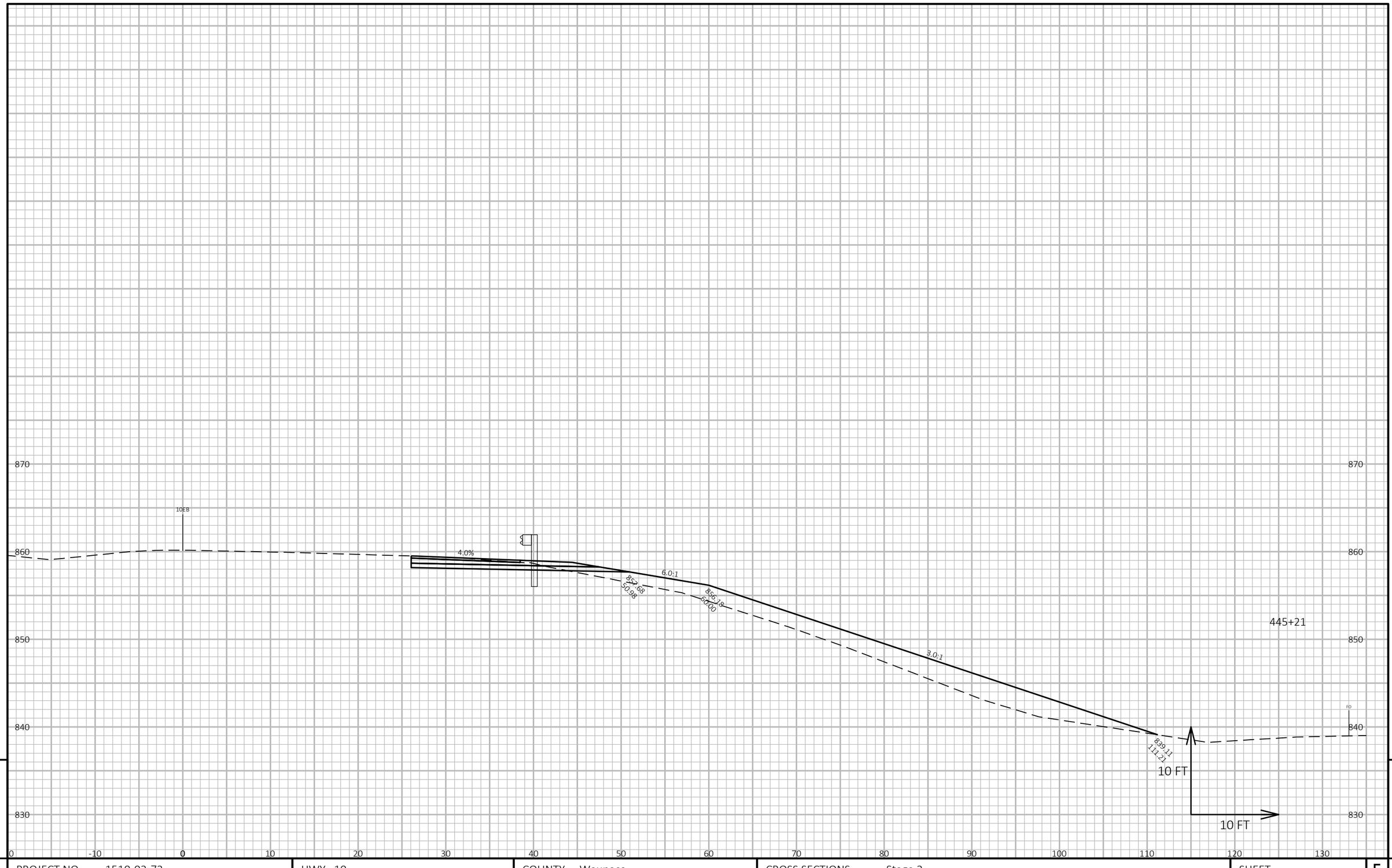
9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 1	SHEET 282	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090201-XS-STAGE-1.DWG
LAYOUT NAME - 11

PLOT DATE : 10/19/2018 2:56 PM PLOT BY : CASPER, ANDREW P PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

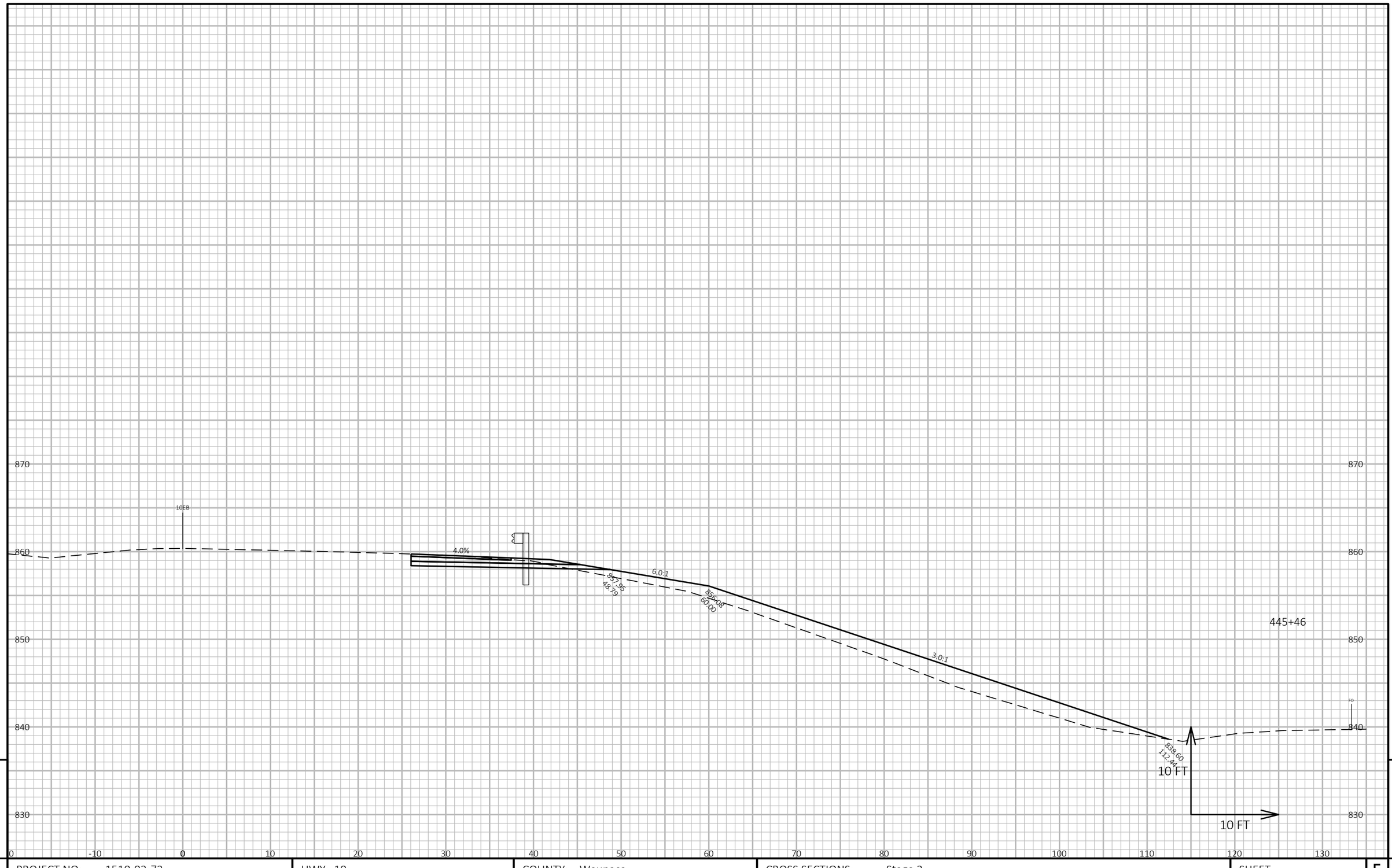
9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 283	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 1

PLOT DATE : 5/4/2018 7:07 AM PLOT BY : CASPER, ANDREW P PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 284	E

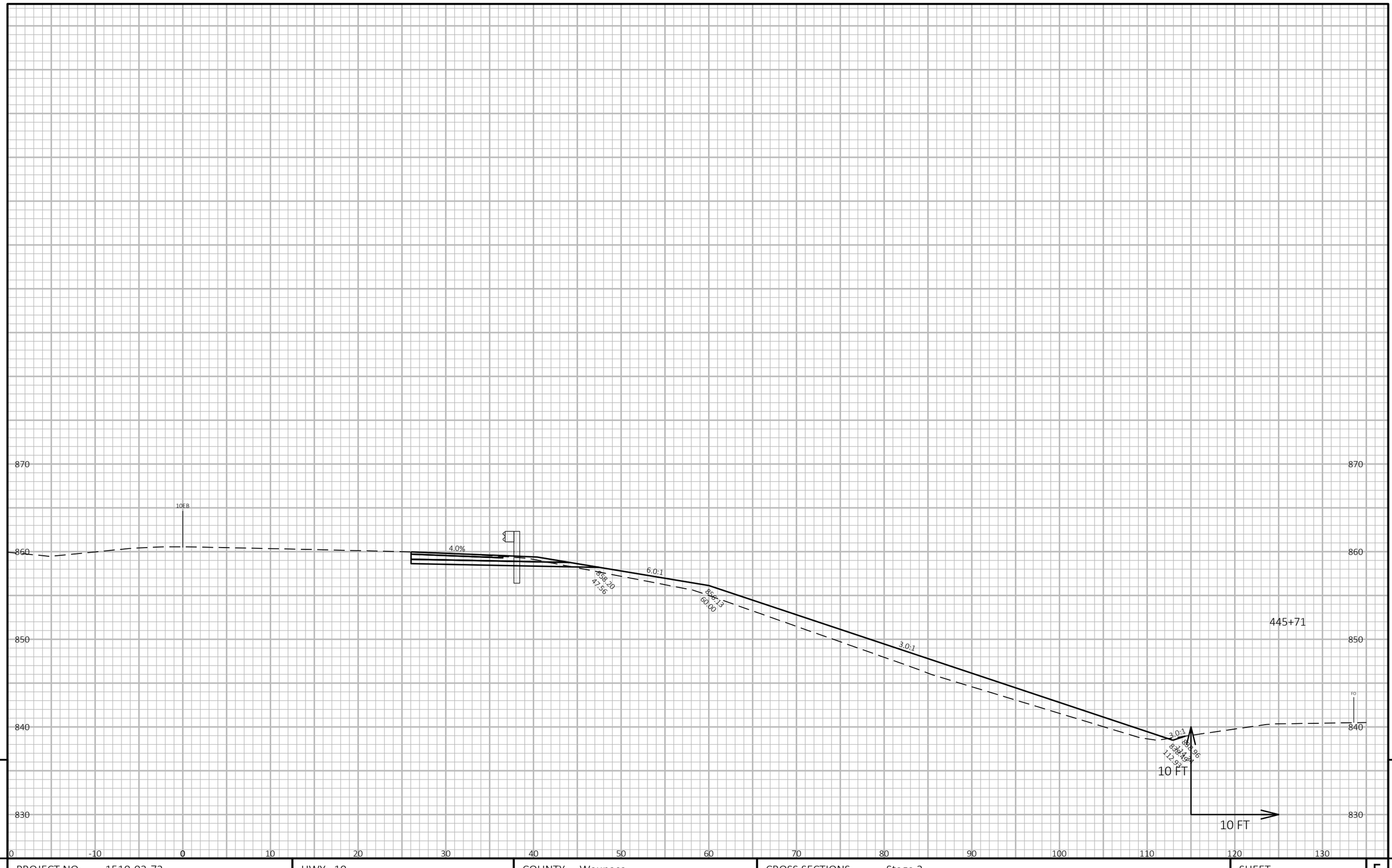
FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 2

PLOT DATE : 5/4/2018 7:07 AM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 285	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 3

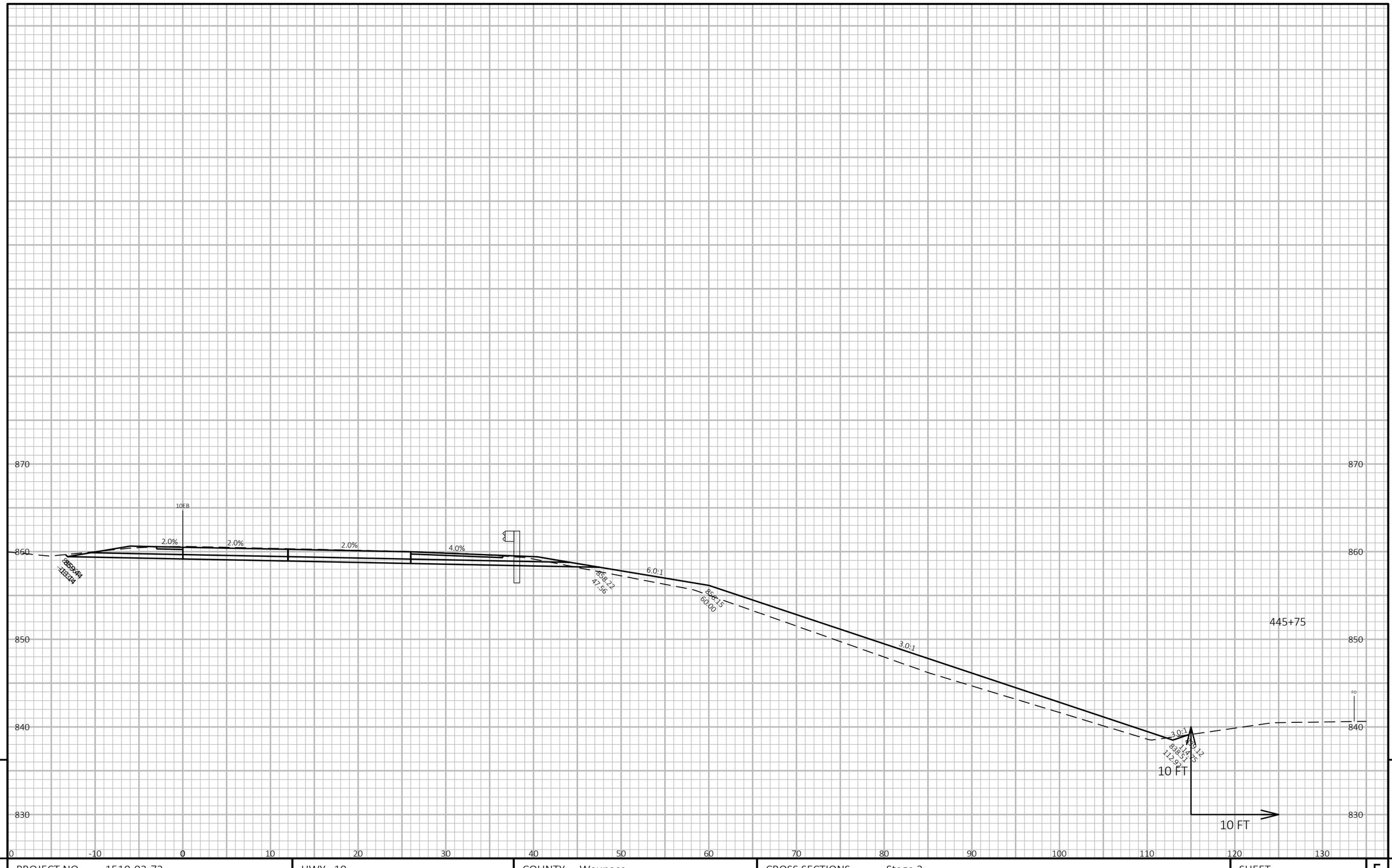
PLOT DATE : 5/4/2018 7:07 AM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

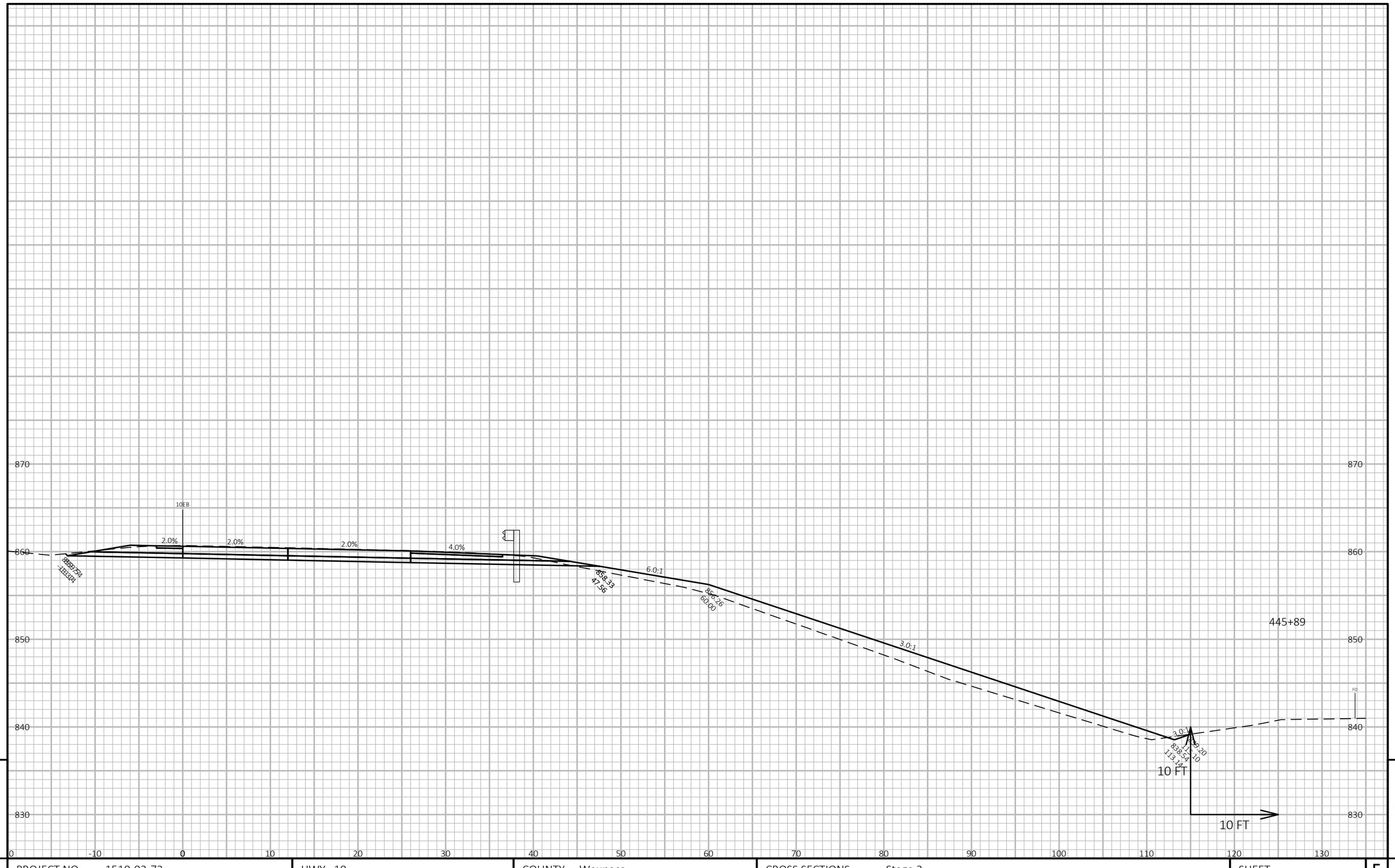
PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 286	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 4

PLOT DATE : 5/4/2018 7:08 AM PLOT BY : CASPER, ANDREW P PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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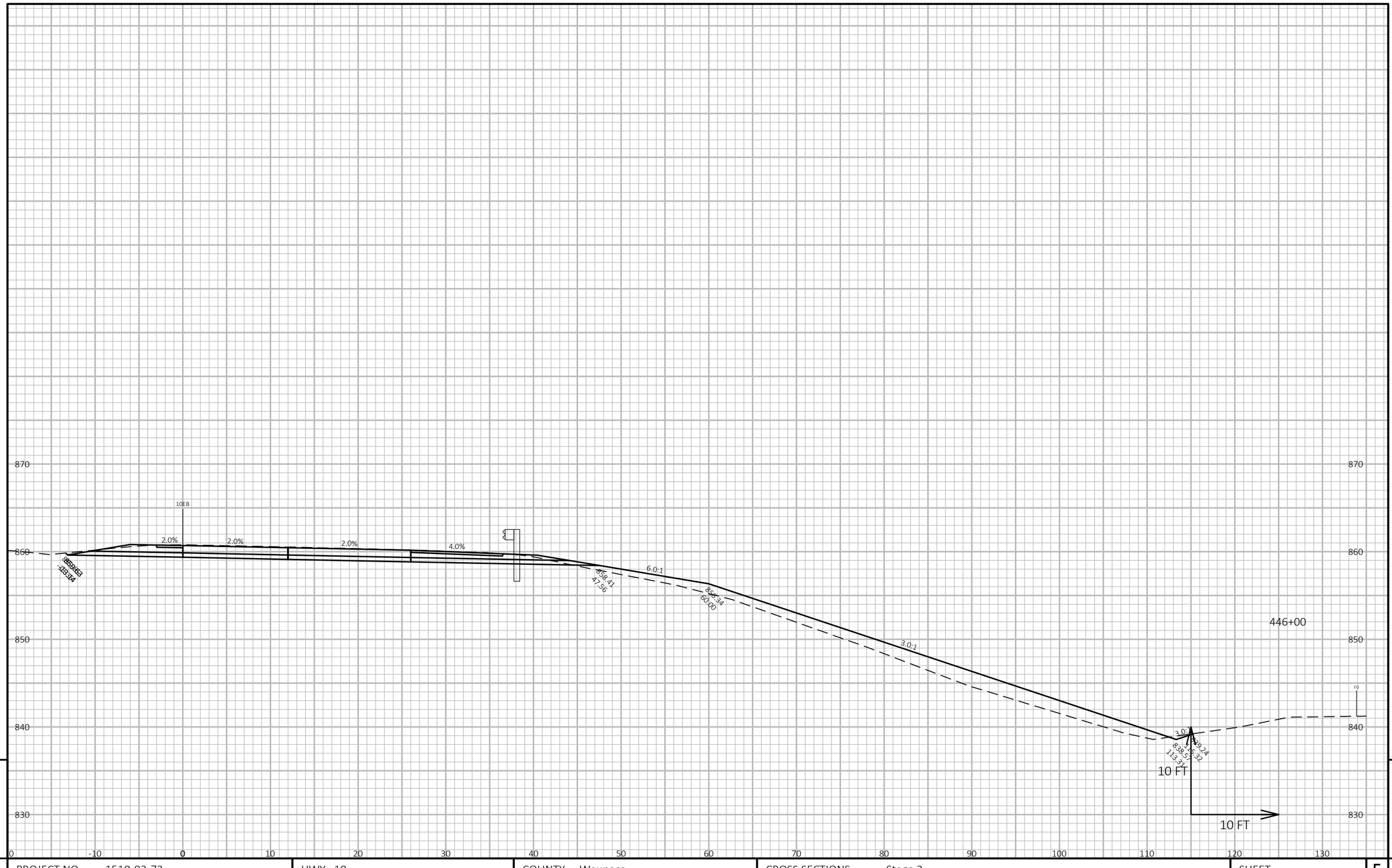
9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 287	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 5

PLOT DATE : 5/4/2018 7:08 AM PLOT BY : CASPER, ANDREW P PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 288	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 6

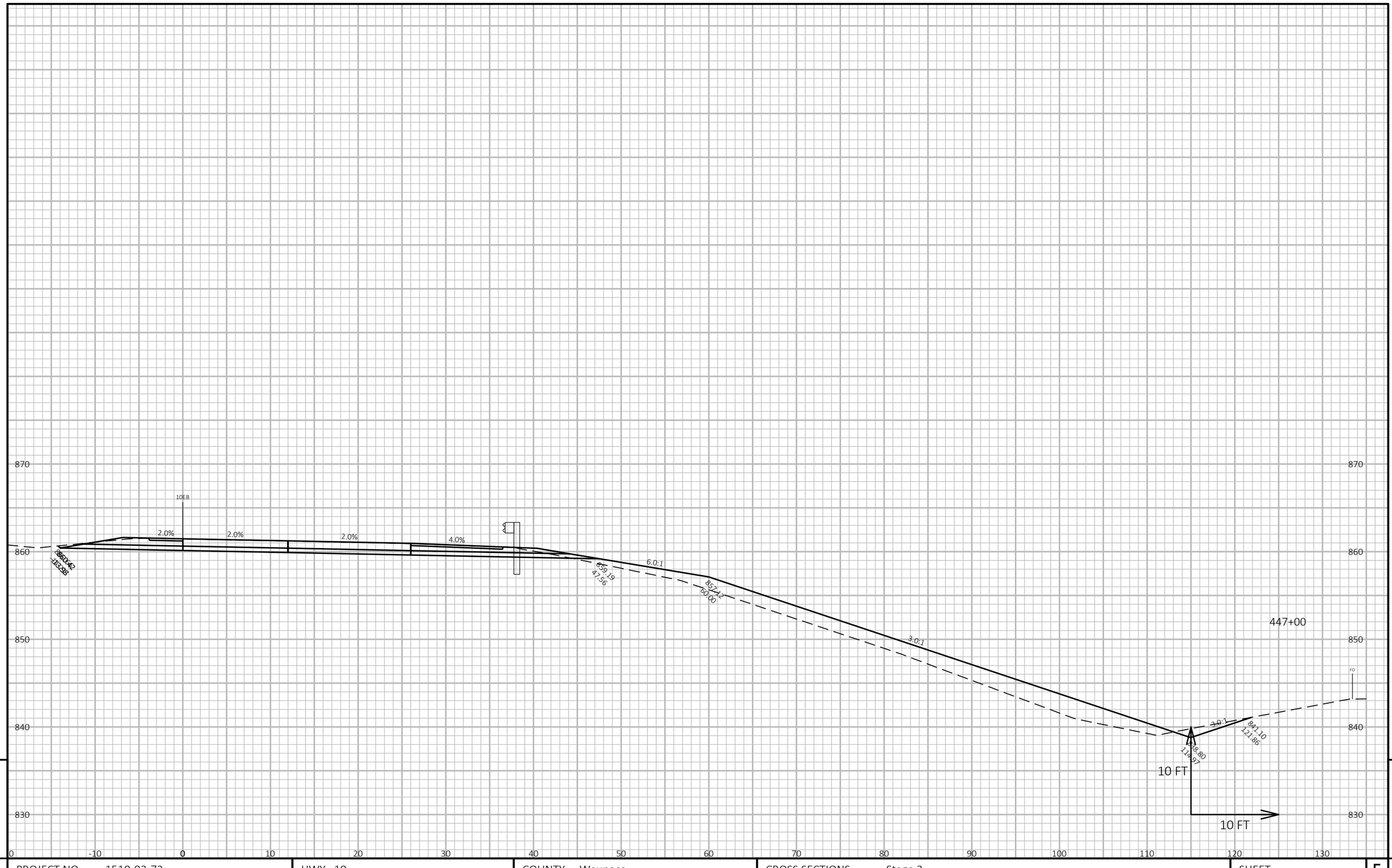
PLOT DATE : 5/4/2018 7:08 AM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 289	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 7

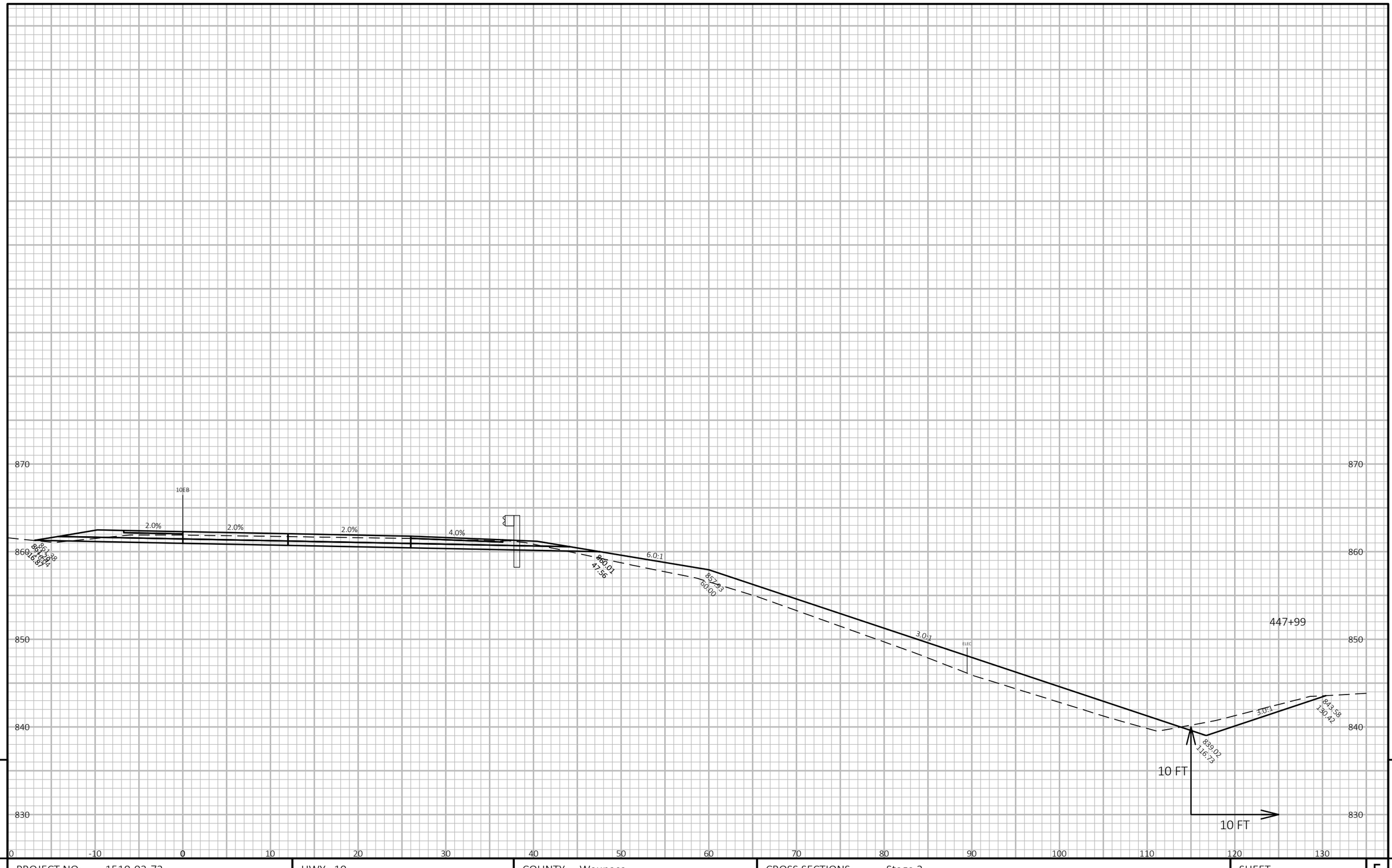
PLOT DATE : 5/4/2018 7:08 AM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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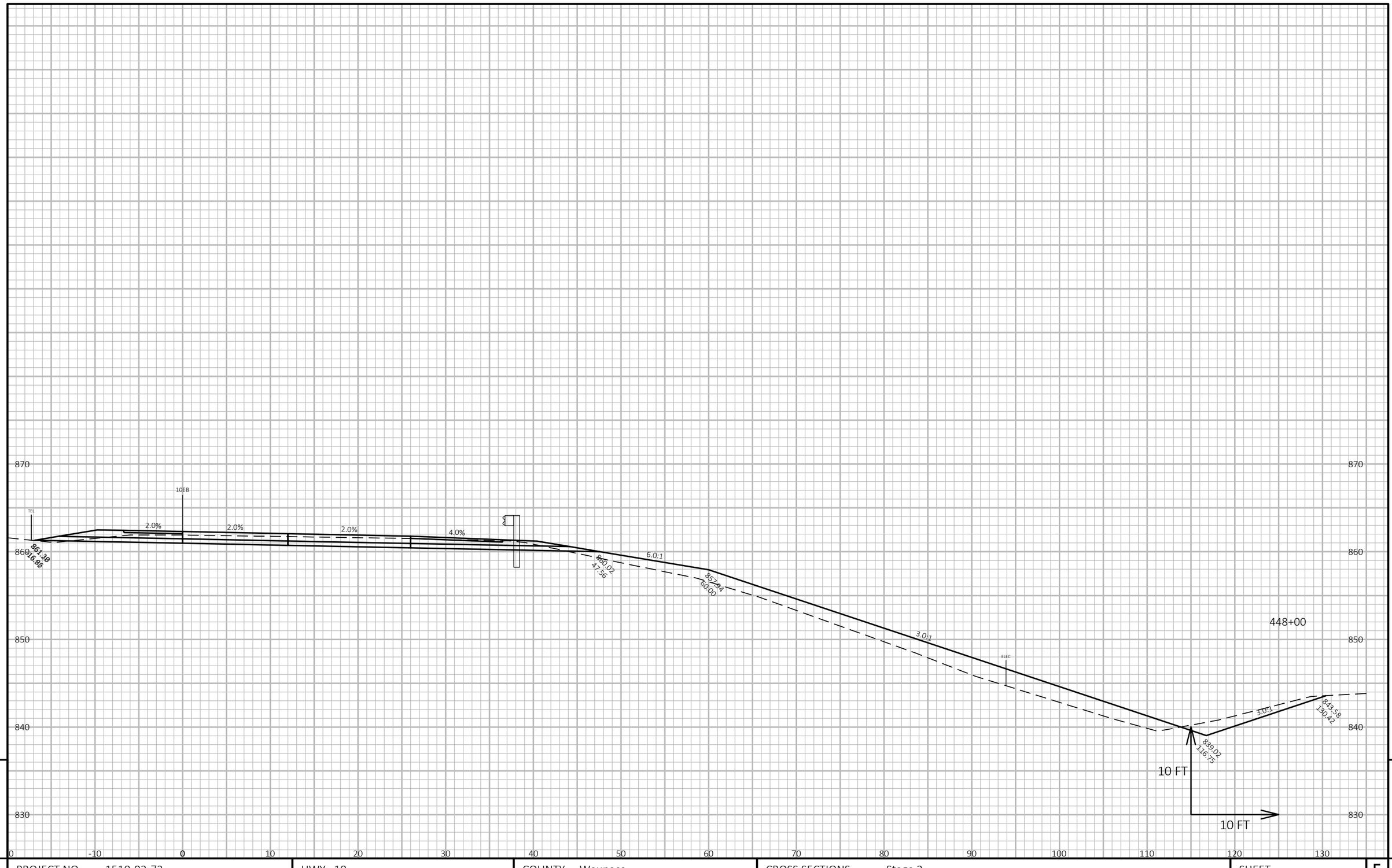
PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 290	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 8

PLOT DATE : 5/4/2018 7:08 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 291	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 9

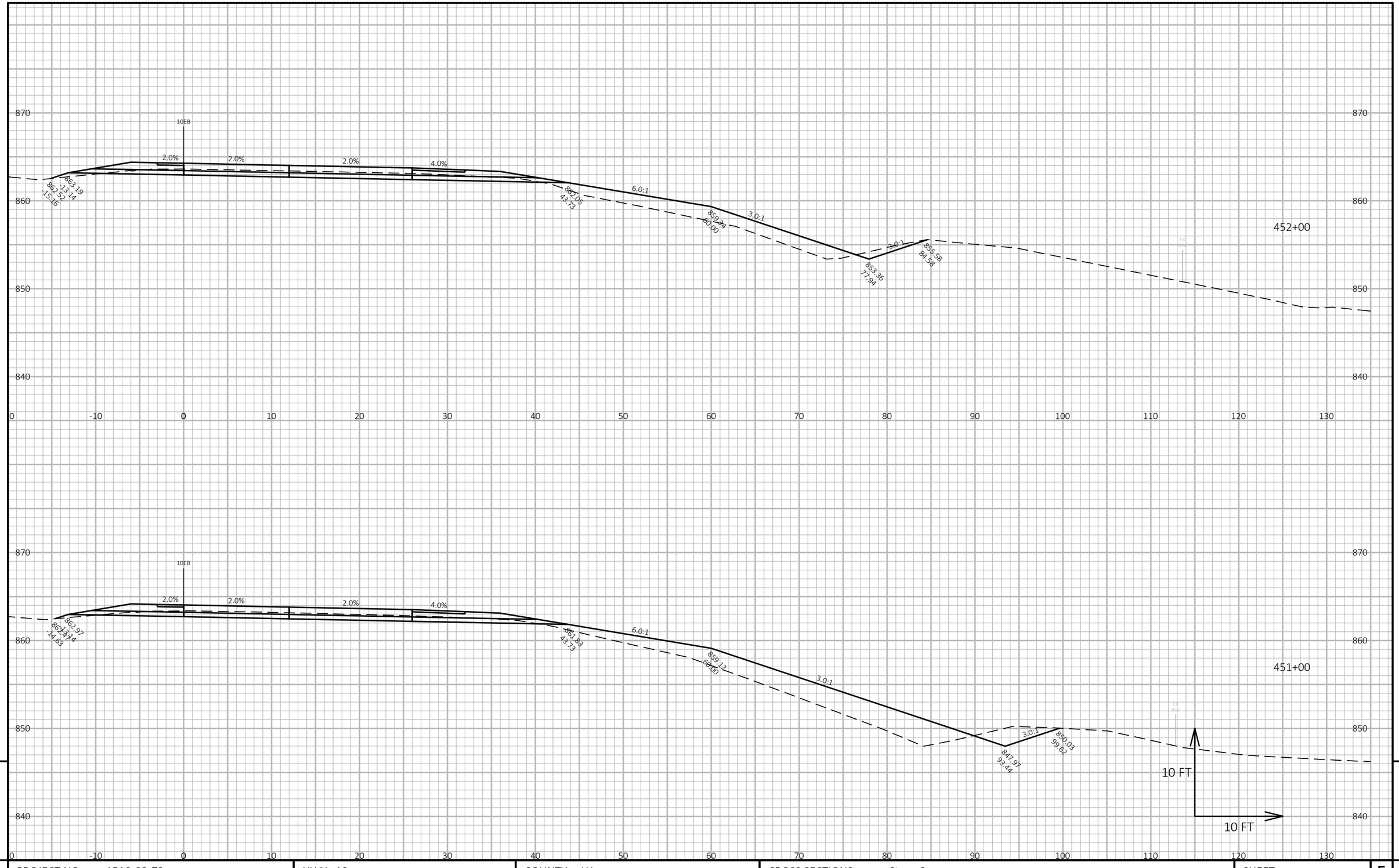
PLOT DATE : 5/4/2018 7:08 AM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

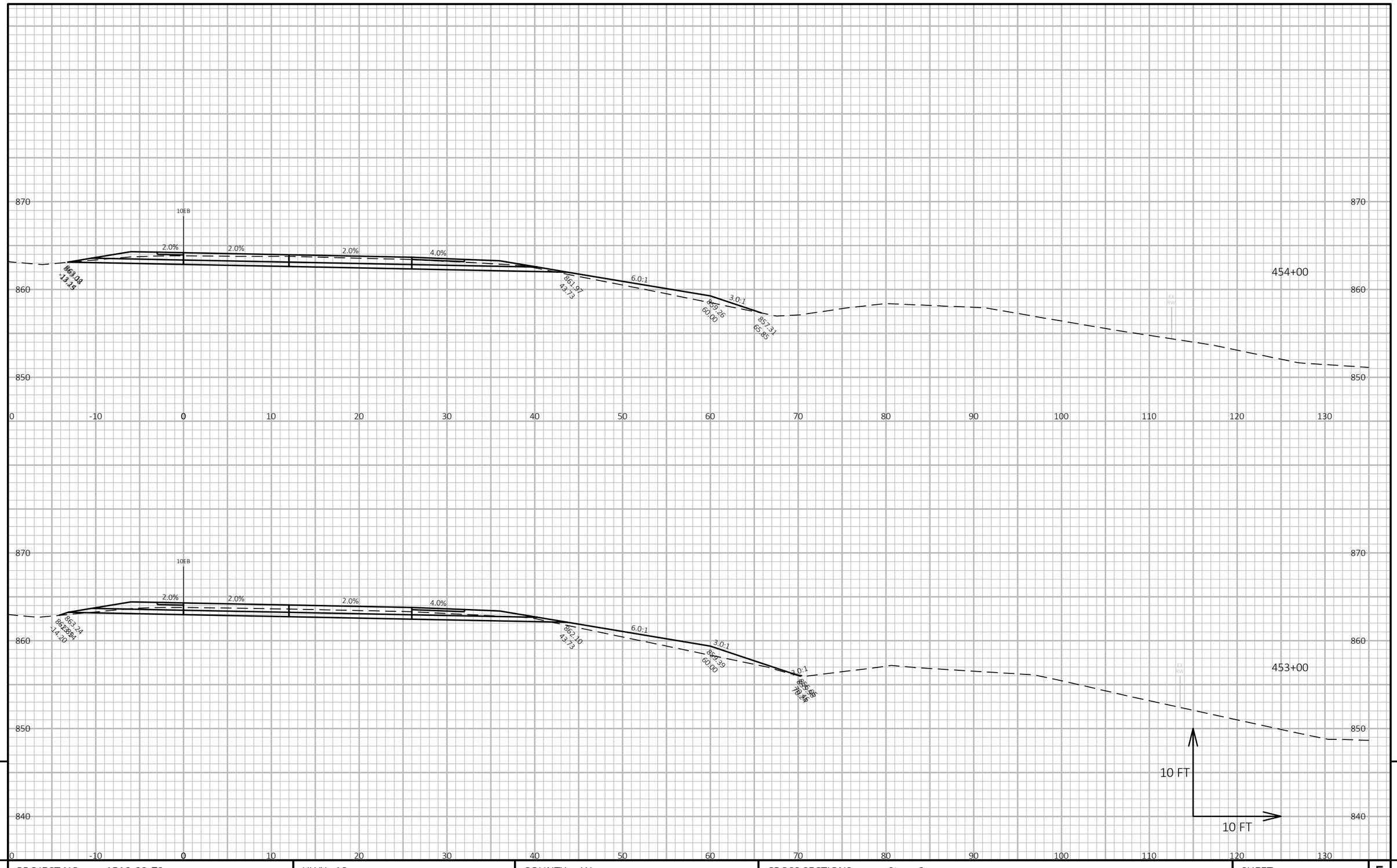


PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 292 E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 10

PLOT DATE : 5/4/2018 7:12 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 293	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 11

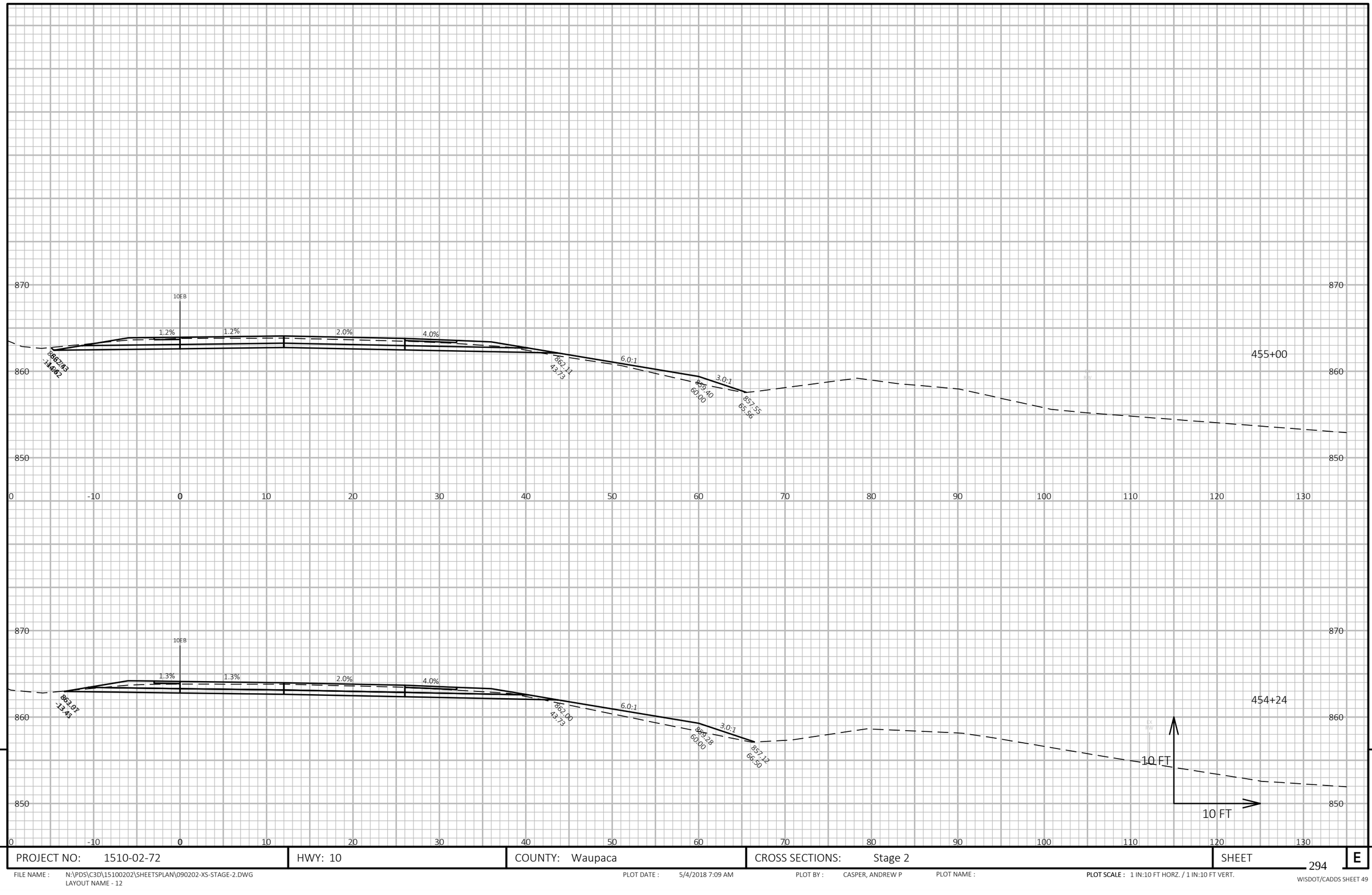
PLOT DATE : 5/4/2018 7:12 AM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 294	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 12

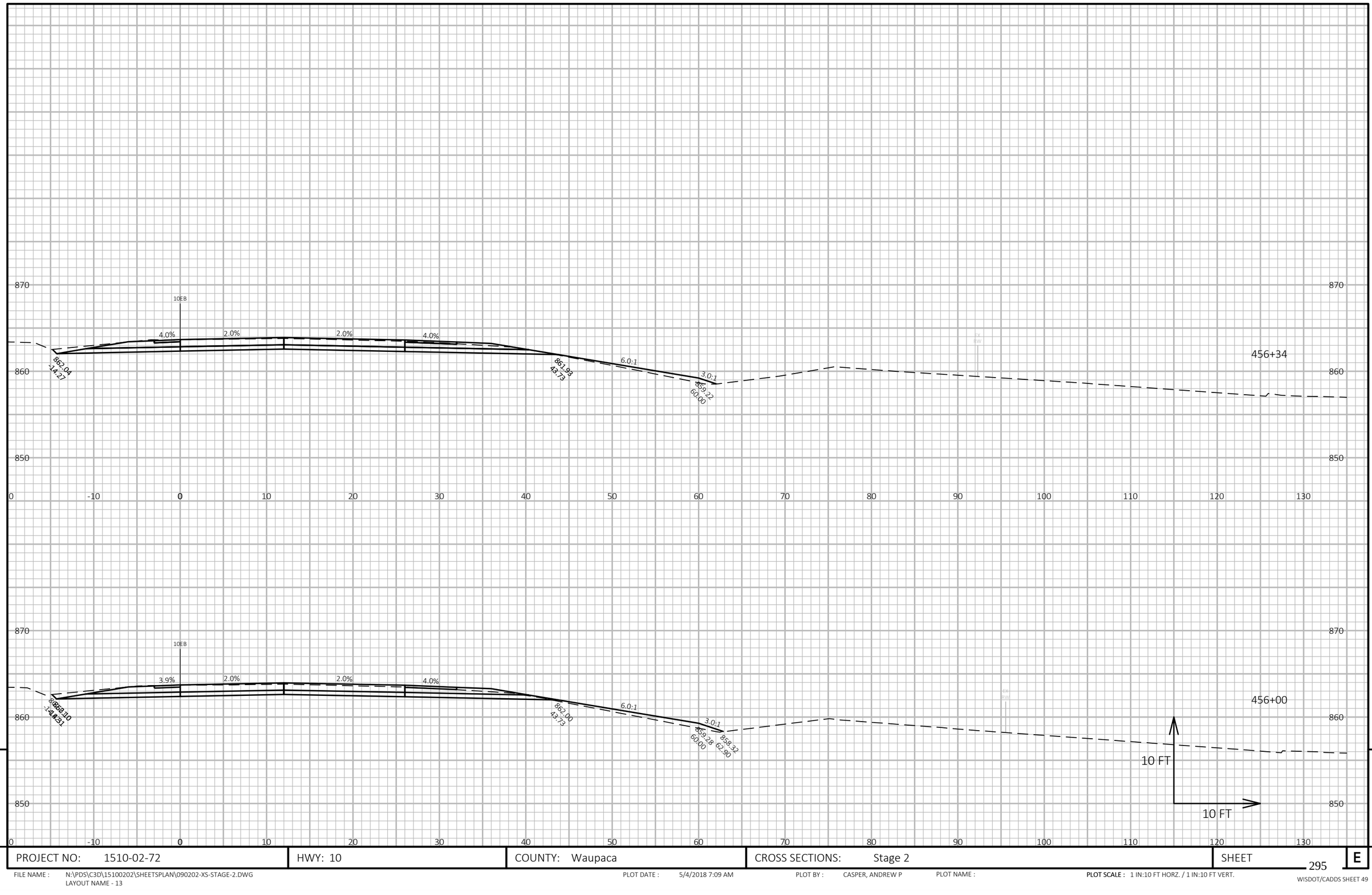
PLOT DATE : 5/4/2018 7:09 AM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 295 E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 13

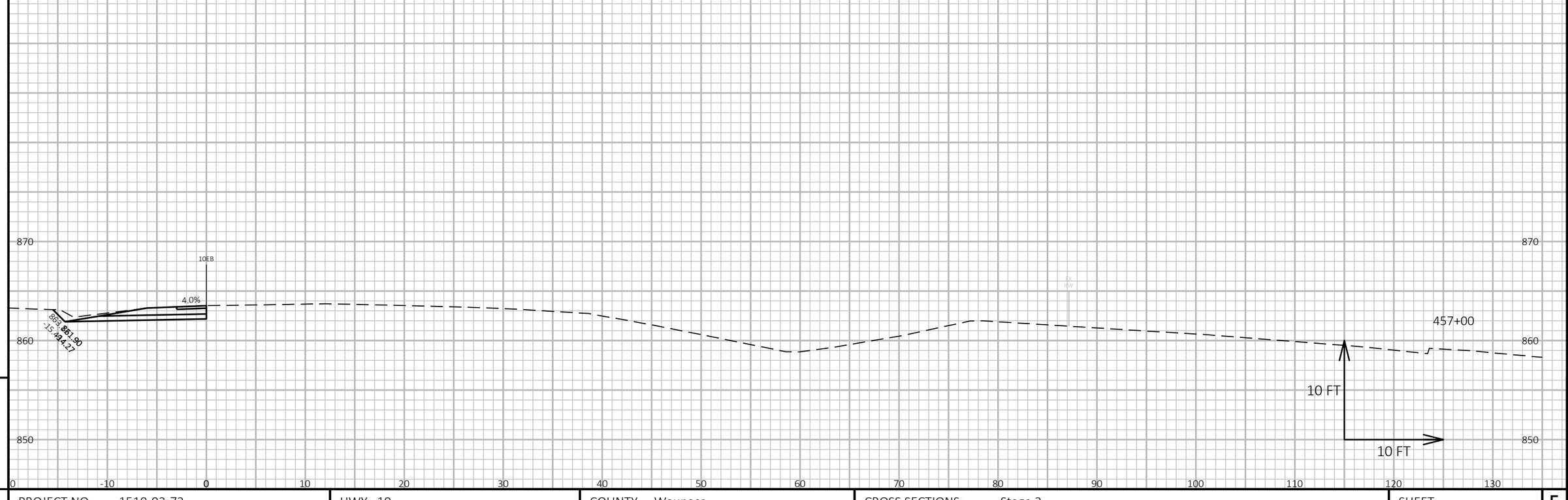
PLOT DATE : 5/4/2018 7:09 AM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 2	SHEET 296	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090202-XS-STAGE-2.DWG
LAYOUT NAME - 14

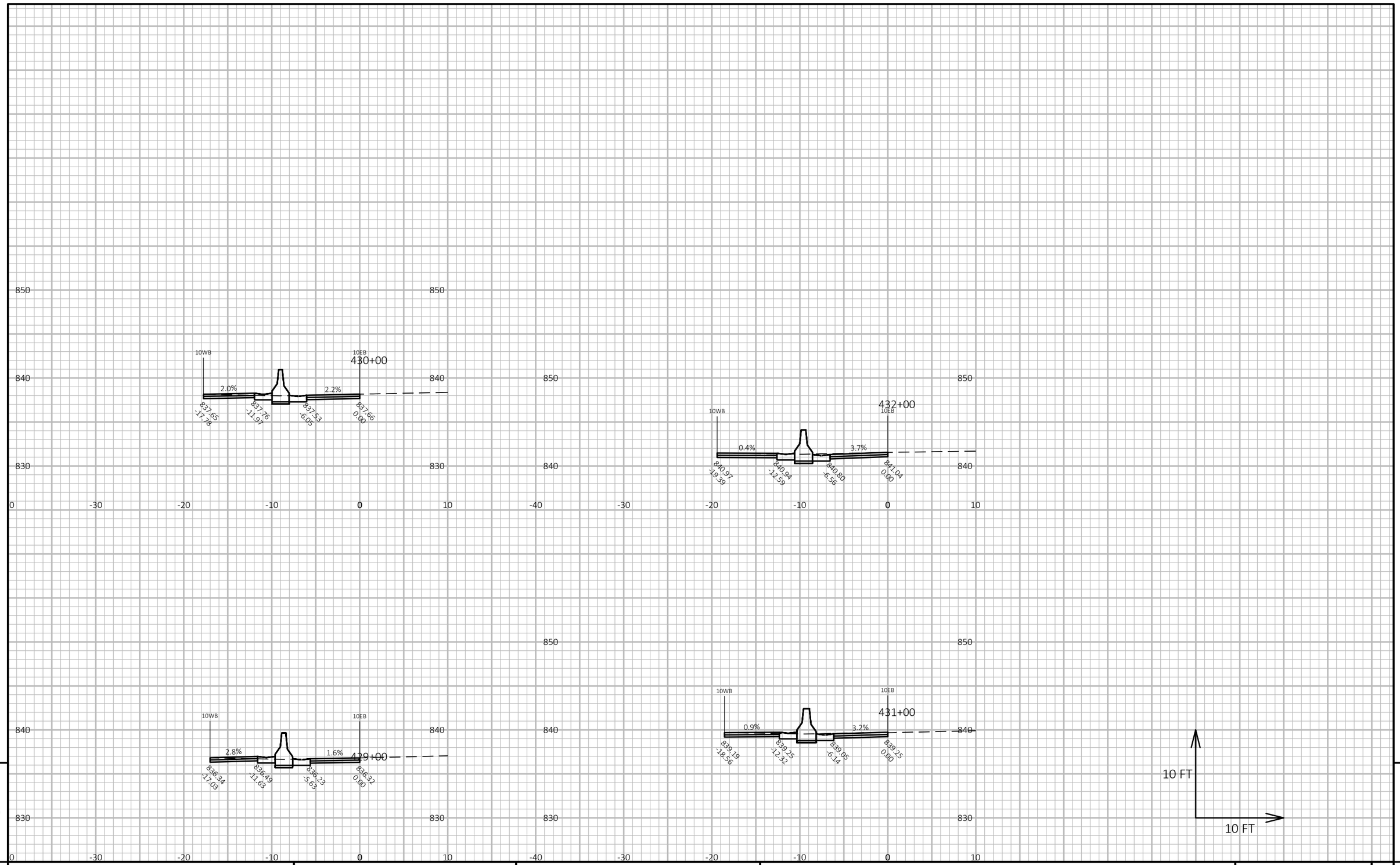
PLOT DATE : 5/4/2018 7:09 AM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 3	SHEET 297	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090203-XS-STAGE-3.DWG
LAYOUT NAME - 1

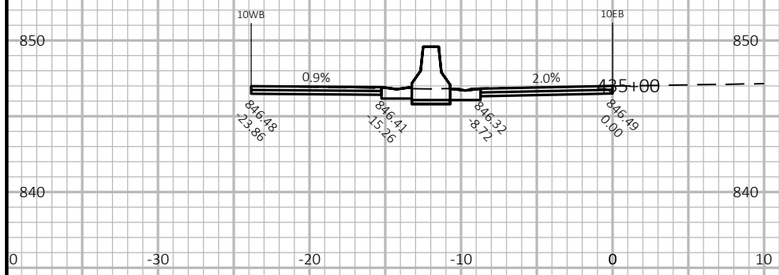
PLOT DATE : 2/16/2018 11:14 AM

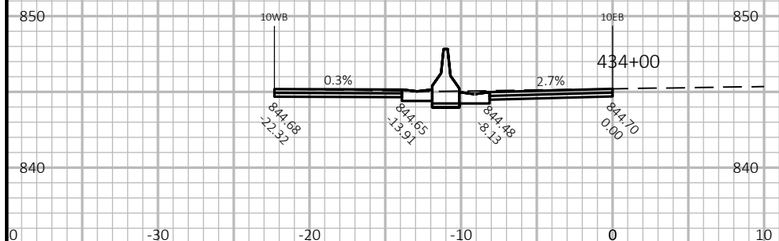
PLOT BY : CASPER, ANDREW P

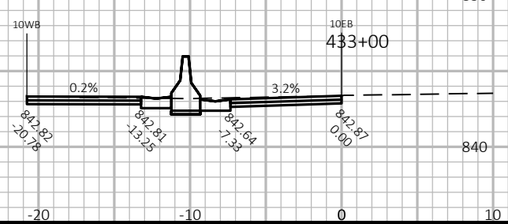
PLOT NAME :

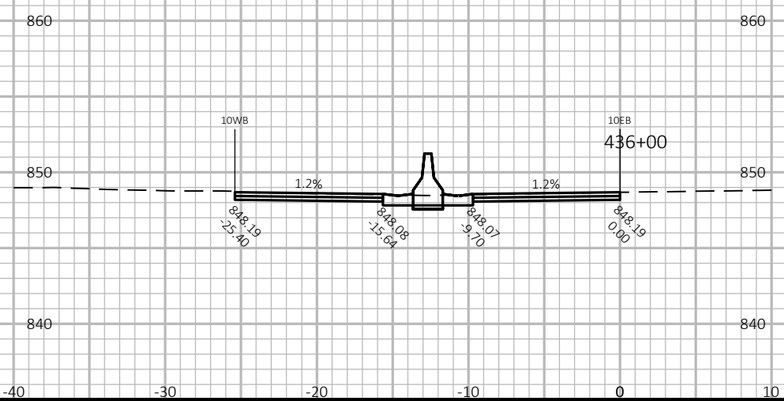
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

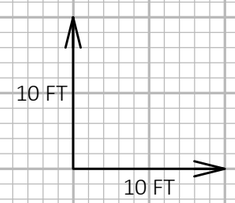
WISDOT/CADDS SHEET 49











9

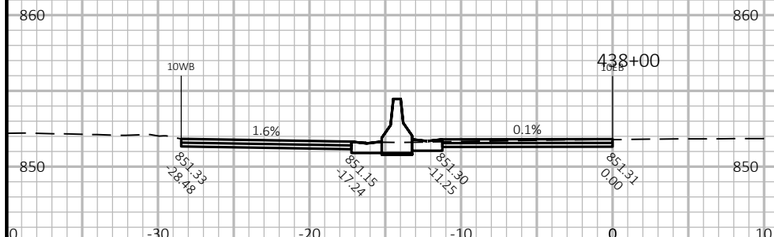
9

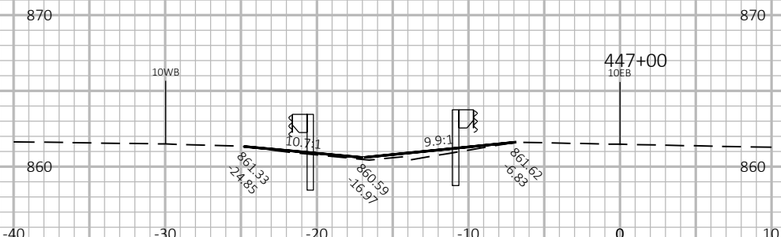
PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 3	SHEET 298	E

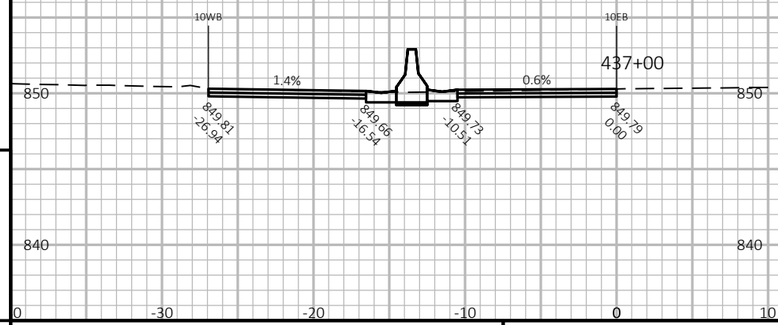
FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090203-XS-STAGE-3.DWG
LAYOUT NAME - 2

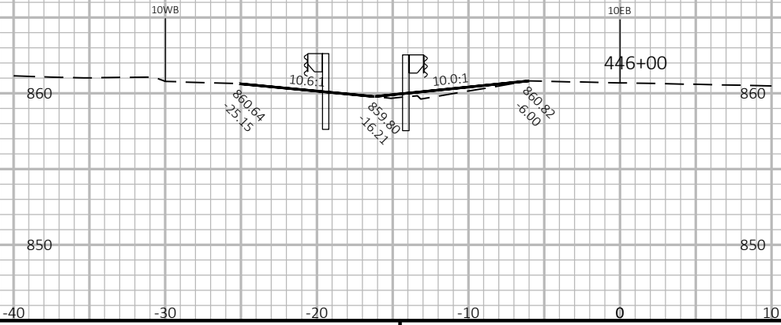
PLOT DATE : 2/16/2018 11:14 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

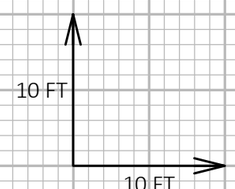
WISDOT/CADDS SHEET 49











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9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 3	SHEET 299	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090203-XS-STAGE-3.DWG
LAYOUT NAME - 3

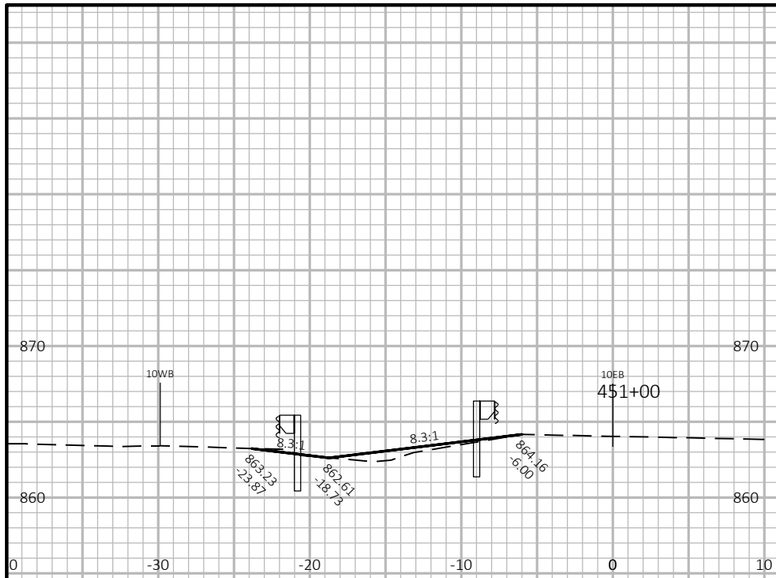
PLOT DATE : 2/16/2018 11:15 AM

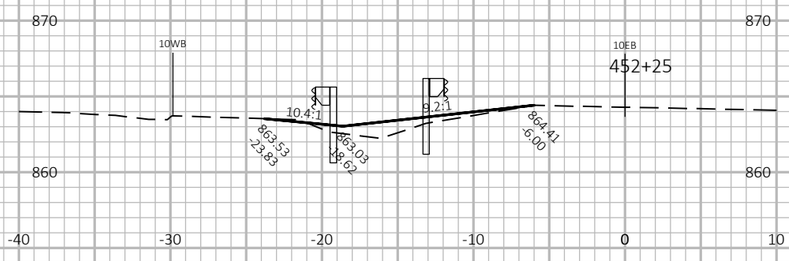
PLOT BY : CASPER, ANDREW P

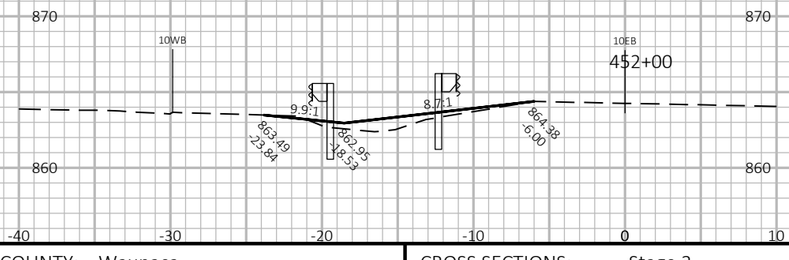
PLOT NAME :

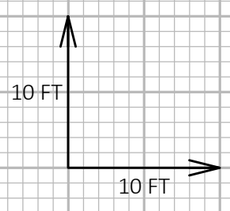
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49









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9

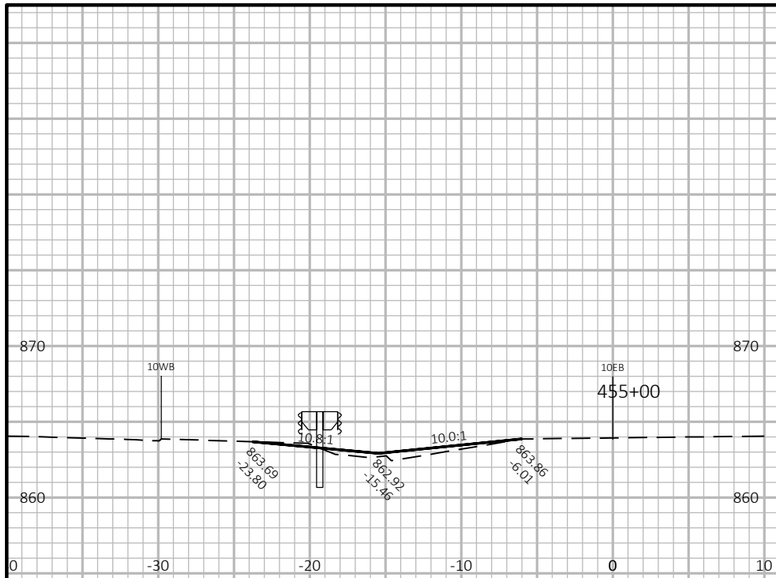
PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 3	SHEET 300	E

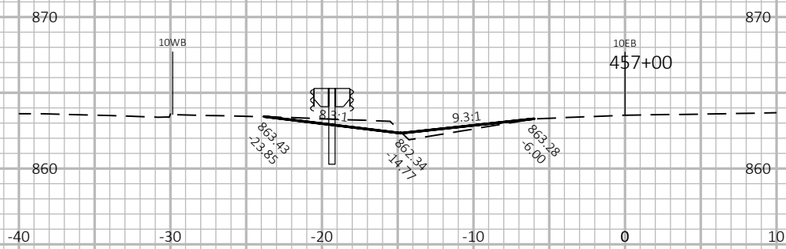
FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090203-XS-STAGE-3.DWG
LAYOUT NAME - 4

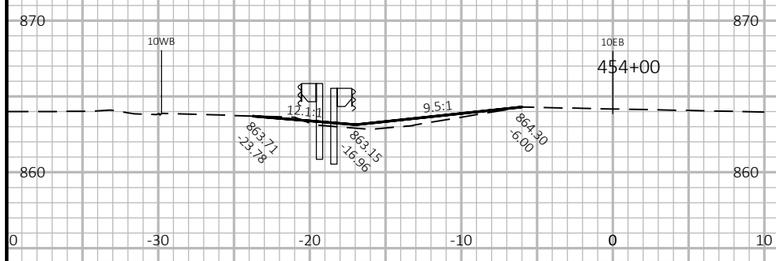
PLOT DATE : 2/16/2018 11:15 AM PLOT BY : CASPER, ANDREW P PLOT NAME :

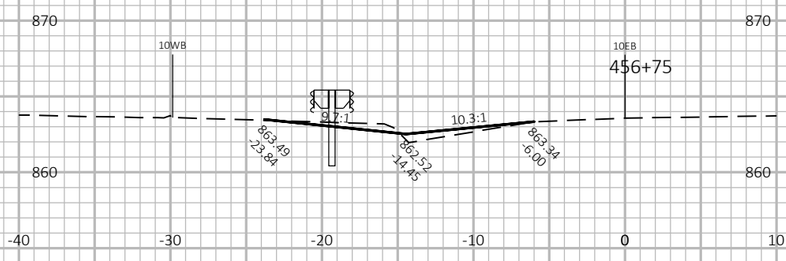
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

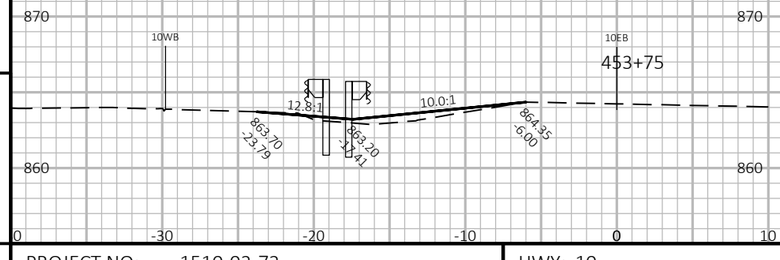
WISDOT/CADDS SHEET 49

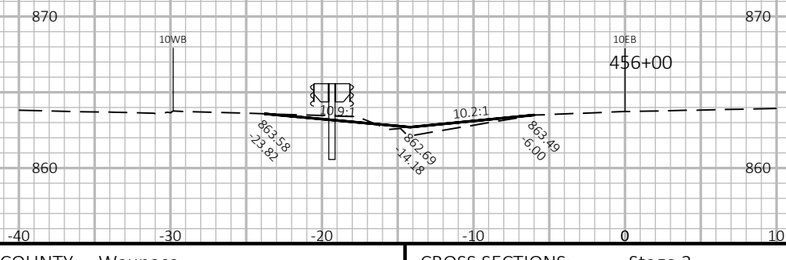


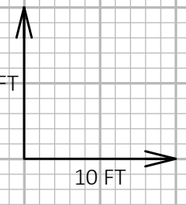












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9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 3	SHEET 301	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090203-XS-STAGE-3.DWG
LAYOUT NAME - 5

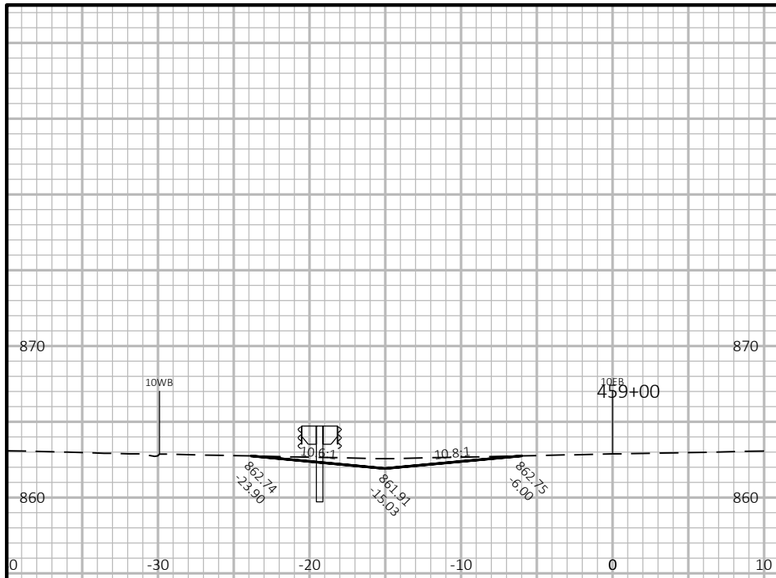
PLOT DATE : 2/16/2018 11:16 AM

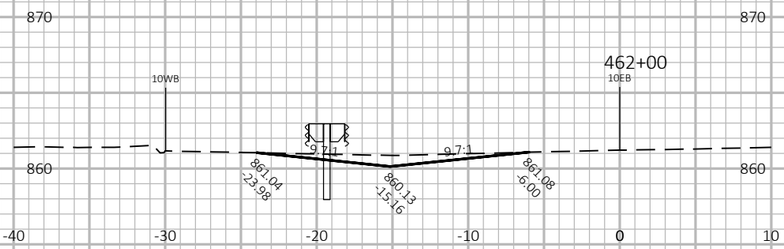
PLOT BY : CASPER, ANDREW P

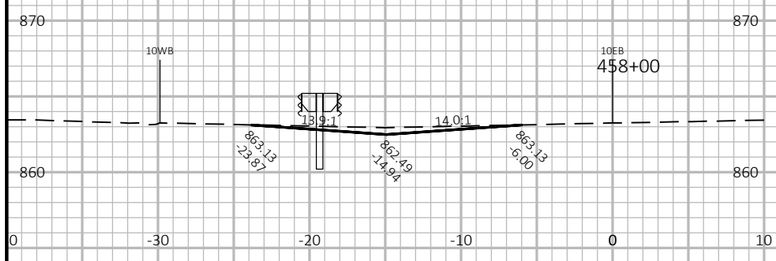
PLOT NAME :

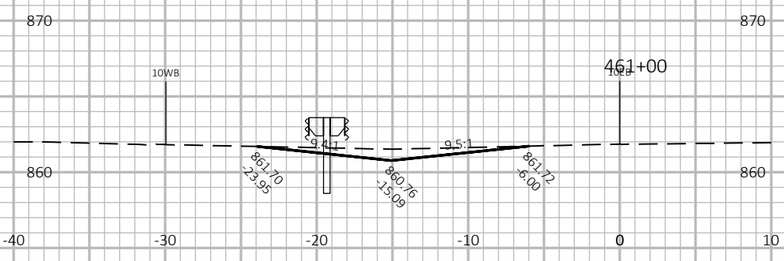
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

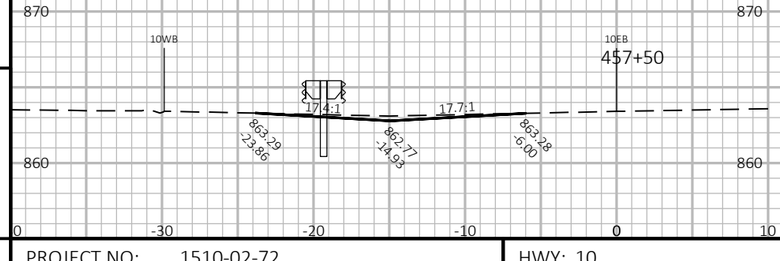
WISDOT/CADDS SHEET 49

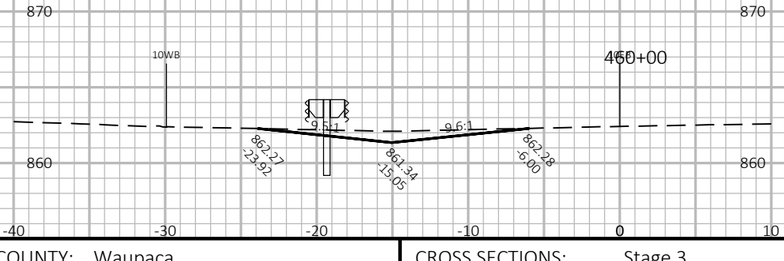


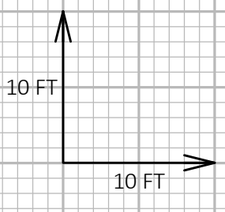












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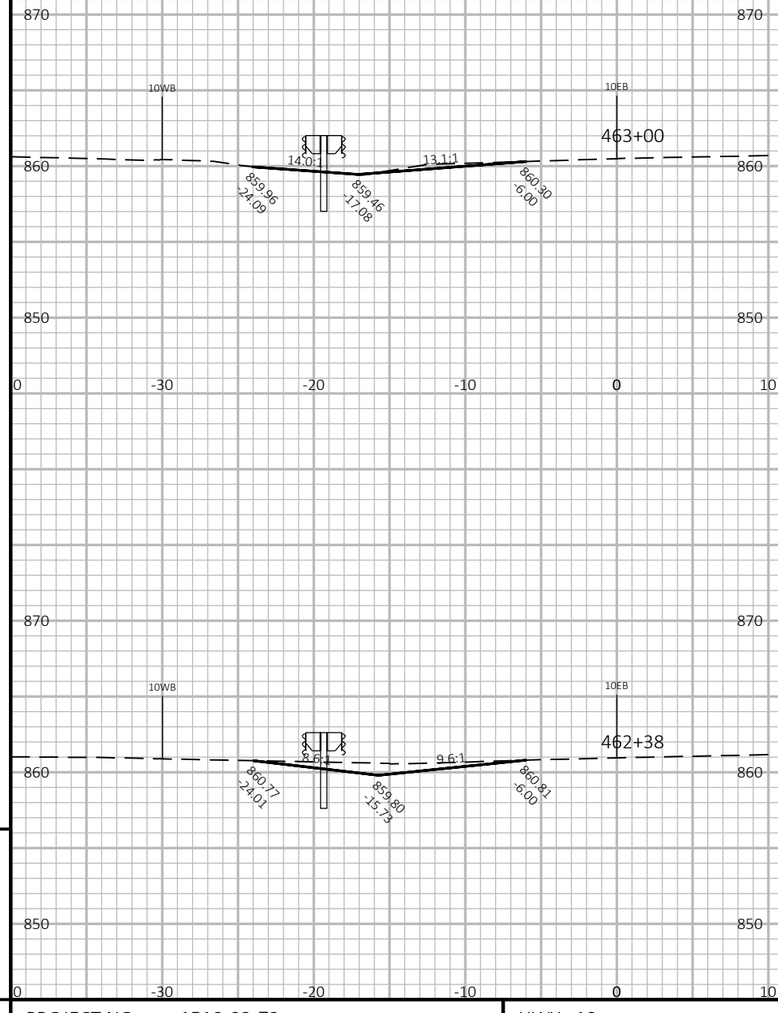
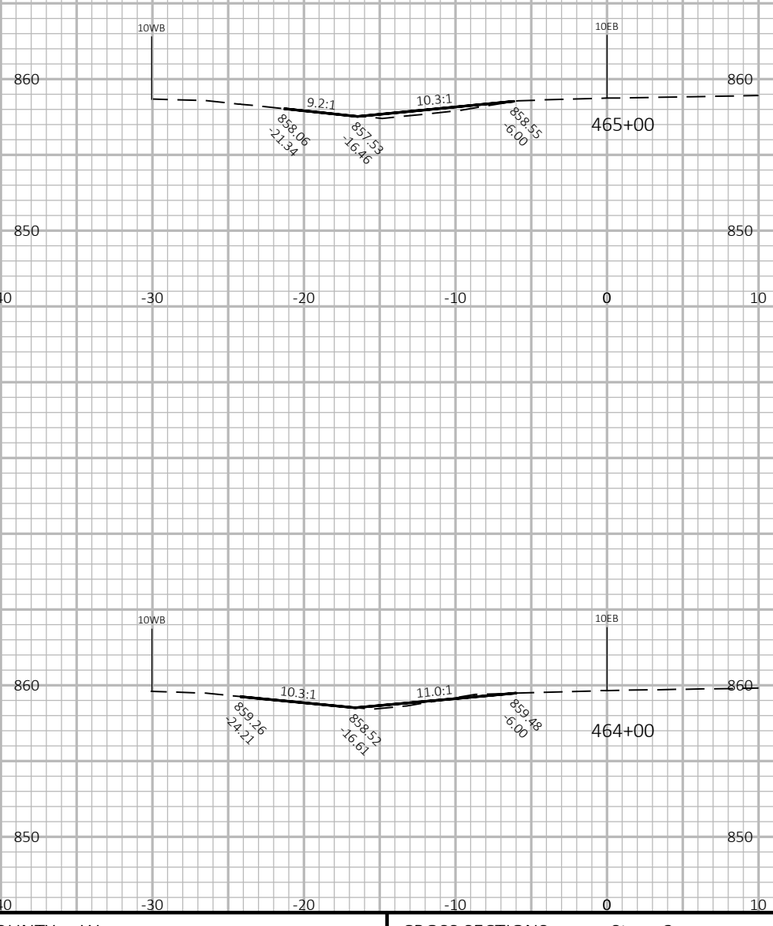
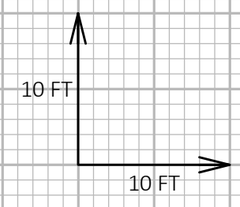
PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 3	SHEET 302	E







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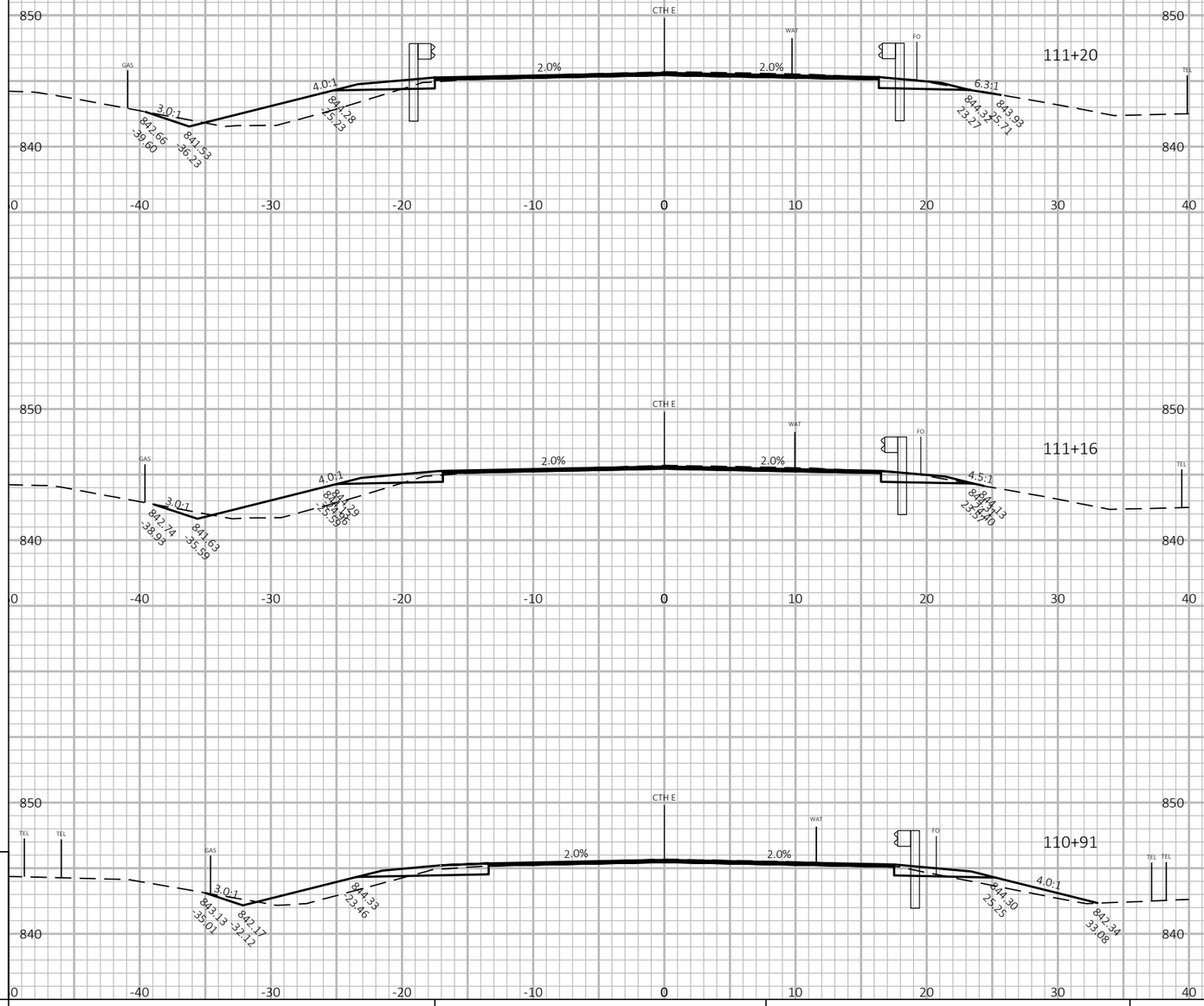
PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: Stage 3	SHEET 303	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090203-XS-STAGE-3.DWG
LAYOUT NAME - 7

PLOT DATE : 2/16/2018 11:16 AM PLOT BY : CASPER, ANDREW P PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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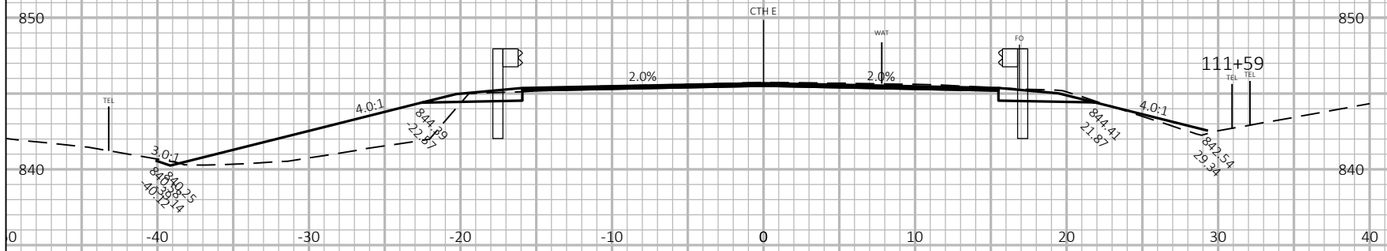
PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: CTH E (Stage 3)	SHEET 304	E

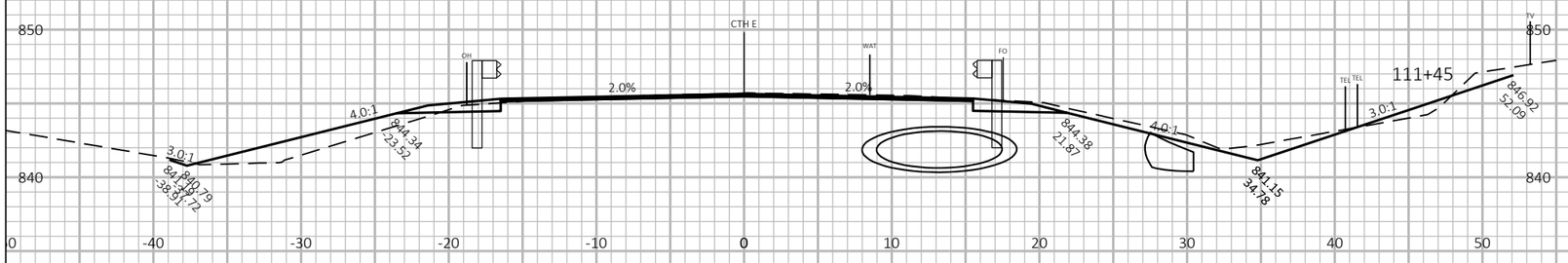
FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090204-XS-CTH-E.DWG
LAYOUT NAME - 1

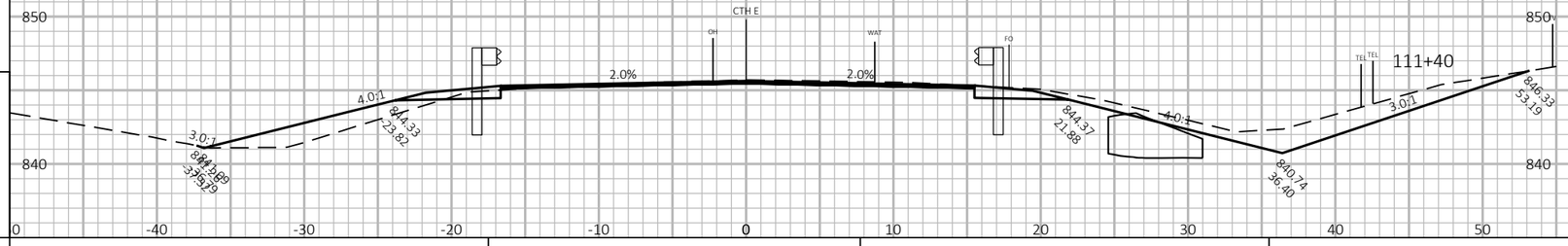
PLOT DATE : 3/15/2018 4:06 PM PLOT BY : CASPER, ANDREW P PLOT NAME :

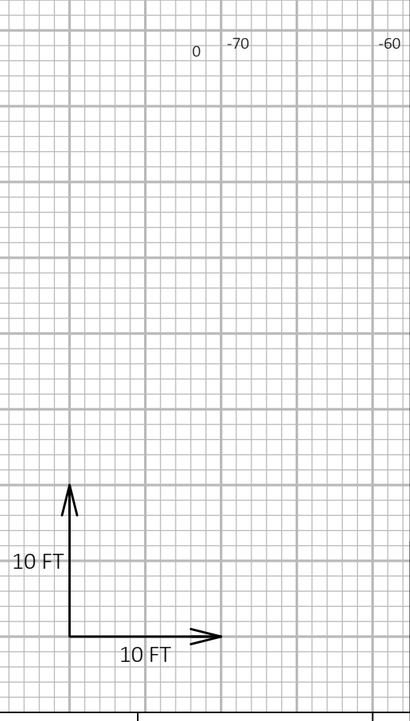
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49









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9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: CTH E (Stage 3)	SHEET 305	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090204-XS-CTH-E.DWG
LAYOUT NAME - 2

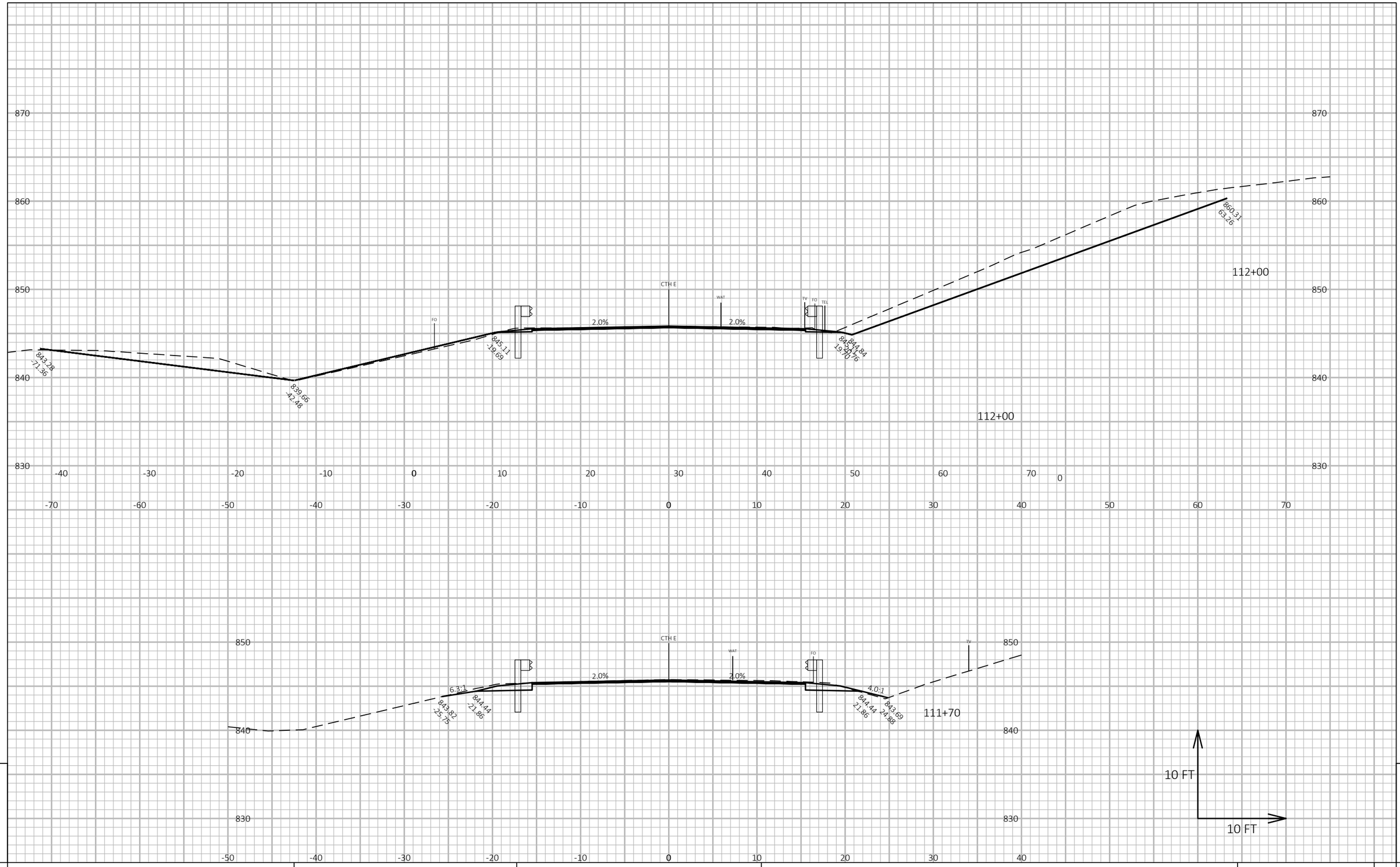
PLOT DATE : 3/15/2018 4:06 PM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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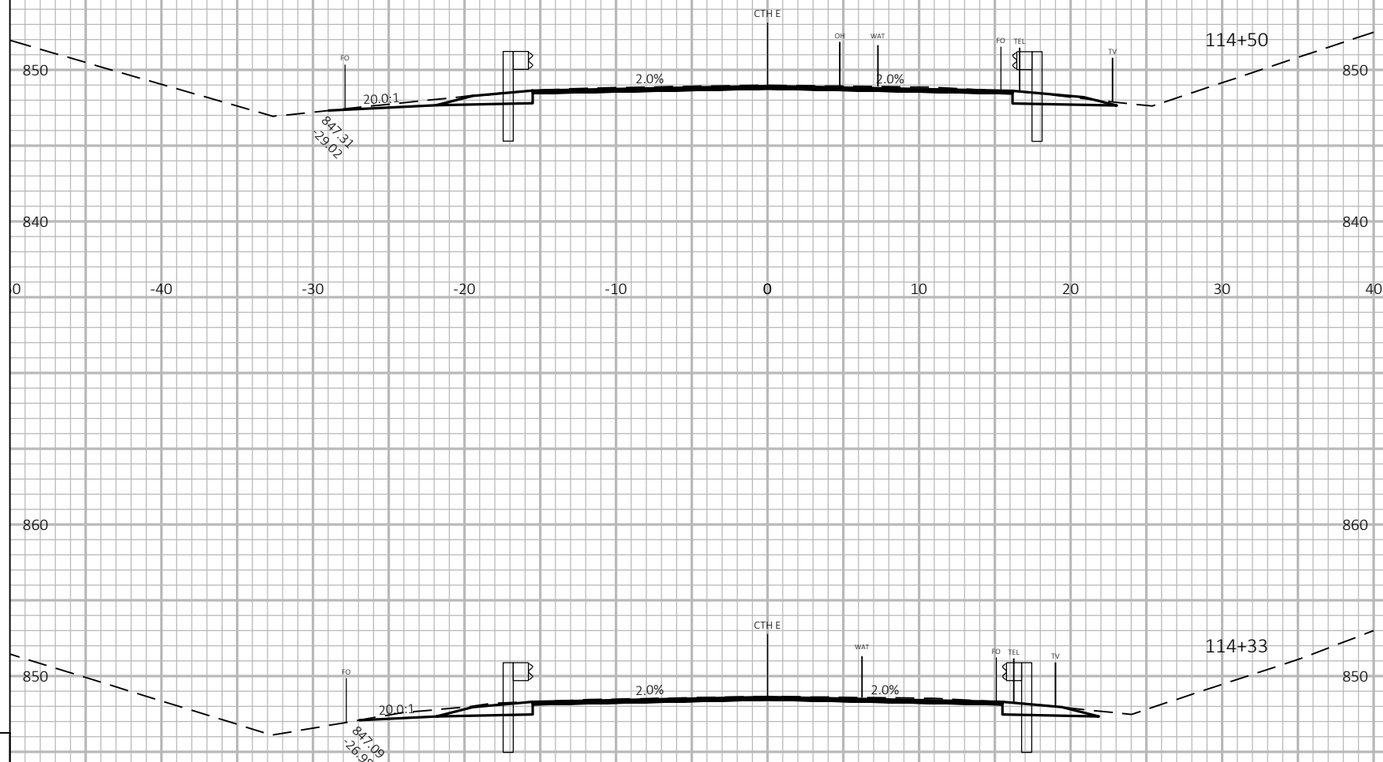
PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: CTH E (Stage 3)	SHEET 306	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090204-XS-CTH-E.DWG
LAYOUT NAME - 3

PLOT DATE : 3/15/2018 4:06 PM PLOT BY : CASPER, ANDREW P PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: CTH E (Stage 3)	SHEET 307	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090204-XS-CTH-E.DWG
LAYOUT NAME - 4

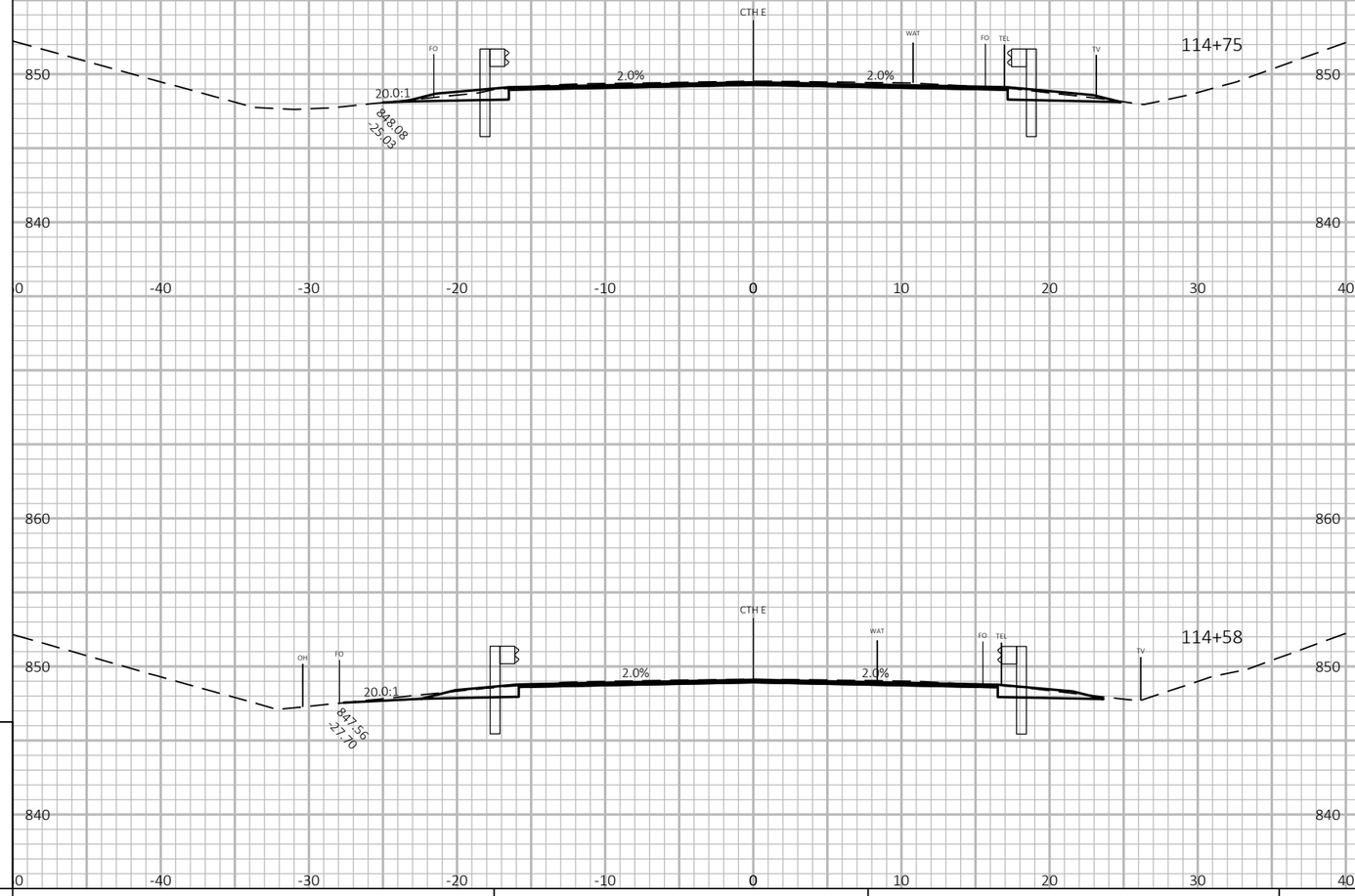
PLOT DATE : 3/15/2018 4:07 PM

PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: CTH E (Stage 3)	SHEET 308	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090204-XS-CTH-E.DWG
LAYOUT NAME - 5

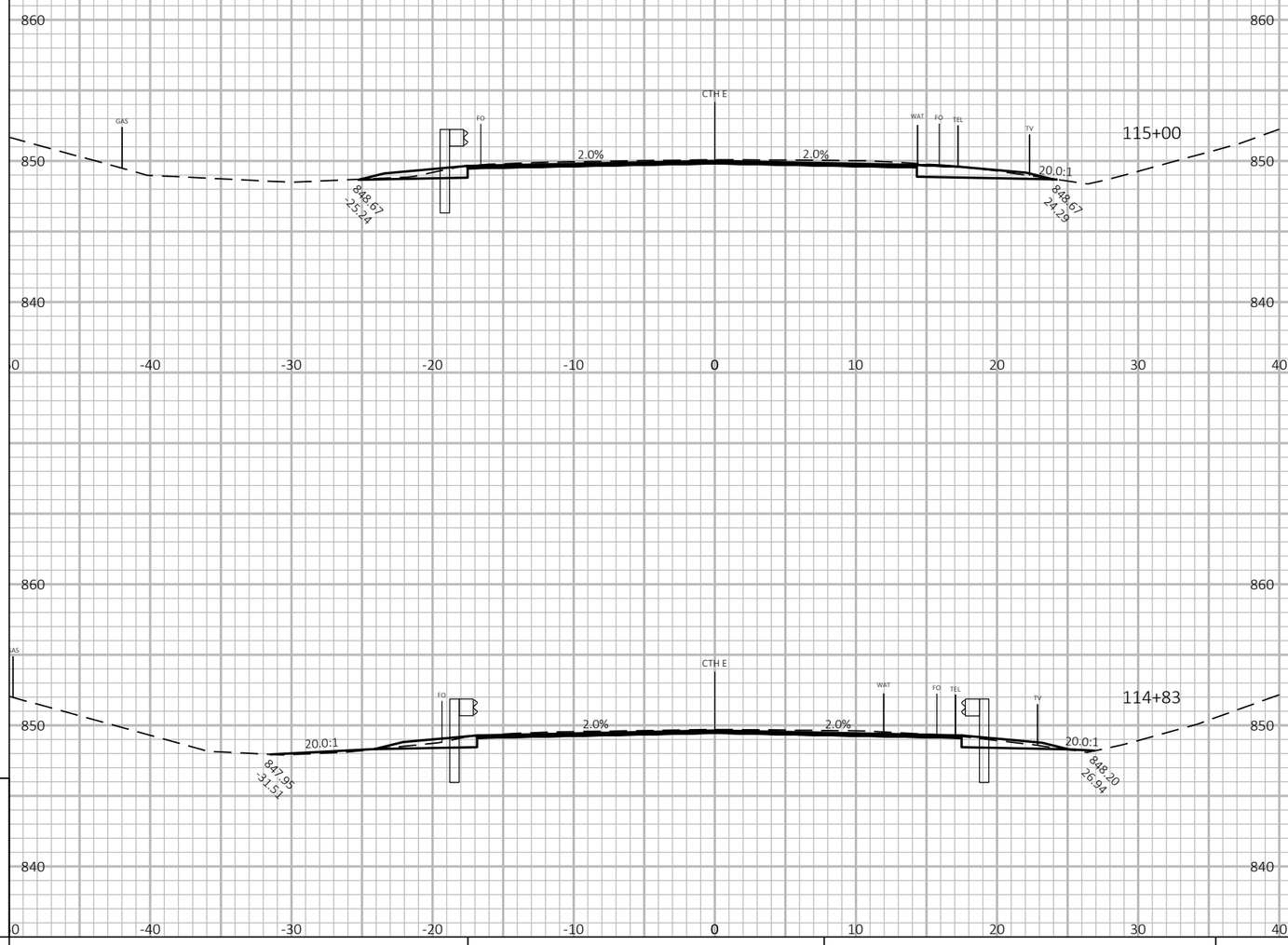
PLOT DATE : 3/15/2018 4:07 PM

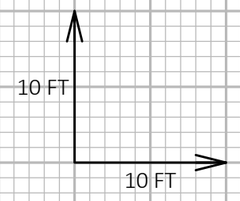
PLOT BY : CASPER, ANDREW P

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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9

PROJECT NO: 1510-02-72	HWY: 10	COUNTY: Waupaca	CROSS SECTIONS: CTH E (Stage 3)	SHEET 309	E

FILE NAME : N:\PDS\C3D\15100202\SHEETSPLAN\090204-XS-CTH-E.DWG
LAYOUT NAME - 6

PLOT DATE : 3/15/2018 4:07 PM PLOT BY : CASPER, ANDREW P PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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