RHI

PROJECT ID: 9487-00-70

WITH: N/A

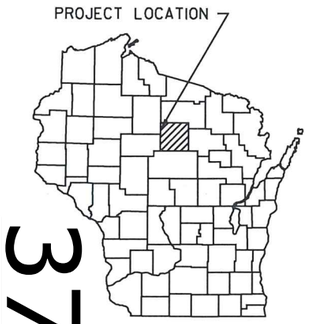
COUNTY: LINCOLN

JANUARY 2022
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 = 76

PROJECT LOCATION



37

N

DESIGN DESIGNATION 9487-00-00

A.A.D.T.	2022	=	366
A.A.D.T.	2042	=	404
D.H.V.		=	51
D.D.		=	40/60
T.		=	20.0%
DESIGN SPEED		=	55 MPH
ESALS		=	170,000

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

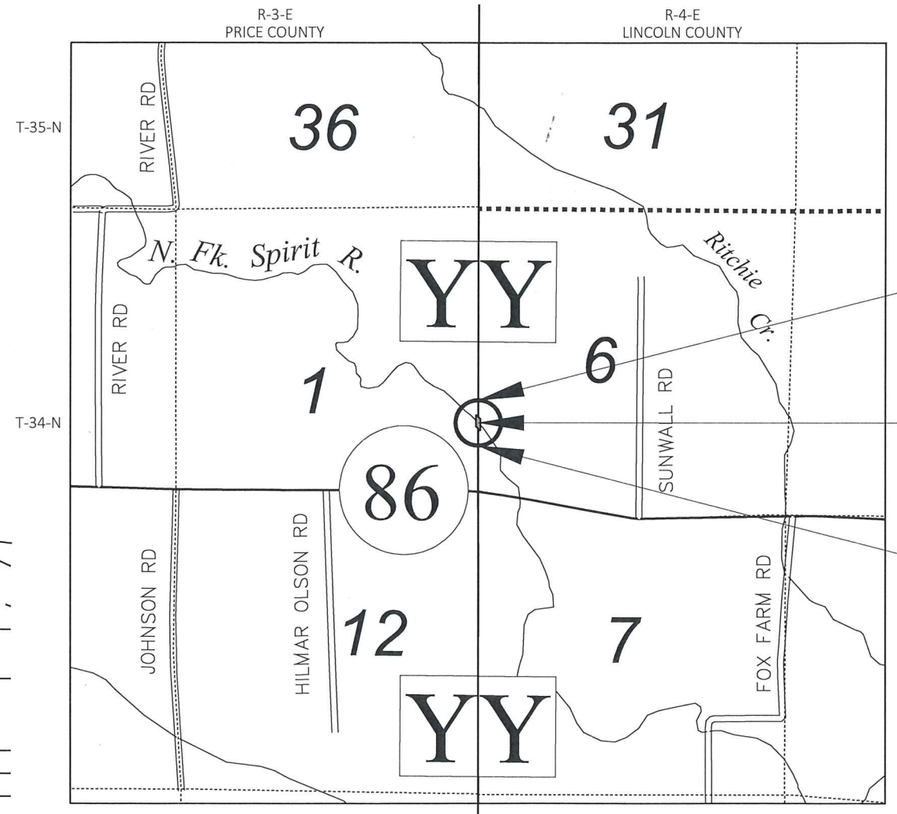
PLAN OF PROPOSED IMPROVEMENT

STH 86 - LOST AVENUE

NORTH FORK SPIRIT RIVER BRIDGE

CTH YY
LINCOLN COUNTY

STATE PROJECT NUMBER
9487-00-70



END PROJECT
STA 11+00.00
Y = 223730.0839
X = 301593.1096

STRUCTURE B-35-0118
STA 10+00.00

BEGIN PROJECT
STA 9+00.00
Y = 223530.0844
X = 301952.6725

LAYOUT
SCALE 0 0.5 MI

TOTAL NET LENGTH OF CENTERLINE = 0.038 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), LINCOLN COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2001). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9487-00-70	WISC 2022143	1

ACCEPTED FOR
COUNTY OF
PRICE
DATE: 7-26-21 Joe Barnes (Signature)
Commissioner (Title)

ACCEPTED FOR
COUNTY OF
LINCOLN
DATE: 7/20/21 John Haney (Signature)
Commissioner (Title)

ORIGINAL PLANS PREPARED BY
Cedar corporation
MENOMONIE - MADISON - GREEN BAY - CEDARBURG
www.cedarcorp.com
800-472-7372

WISCONSIN
TROY L. PETERSON
E-31102
MENOMONIE
WI
PROFESSIONAL ENGINEER
7-16-21

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	CEDAR CORPORATION
Designer	CEDAR CORPORATION
Project Manager	MICHAEL GRAGE, PE
Regional Examiner	N/A
Regional Supervisor	DAN ERVA, PE

APPROVED FOR THE DEPARTMENT
DATE: 7/28/2021 (Signature)

E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\010101-TI.DWG PLOT DATE : 7/14/2021 12:02 PM PLOT BY : NICK THOMPSON PLOT NAME :

GENERAL NOTES

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

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE COVERED WITH SALVAGED TOPSOIL, FERTILIZED, SEEDED, AND EROSION MAT INSTALLED AS DIRECTED BY THE ENGINEER.

WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS. DO NOT OPERATE EQUIPMENT OUTSIDE OF THE SLOPE INTERCEPTS. DO NOT STORE OR STOCKPILE MATERIALS IN WETLANDS

WHEN THE QUANTITY OF ITEM BASE LAYER OR SURFACE LAYER IS MEASURED FOR PAYMENT BY THE TON, THE THICKNESS OF THE MATERIAL THAT IS SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER.

THE WISCONSIN DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR A MONUMENT WHICH SHALL BE SET IN THE STRUCTURE AS DESIGNATED BY ENGINEER.

DESIGN CONSULTANT CONTACT

CEDAR CORPORATION
604 WILSON AVENUE
MENOMONIE, WI 54751
ATTN: TROY L. PETERSON, P.E.
PH: (715) 235-9081
EMAIL: troy.peterson@cedarcorp.com

DNR CONTACT

DNR NORTHERN REGION HEADQUARTERS
107 SUTLIFF AVENUE
RHINELANDER, WI 54501
ATTN: WENDY HENNIGES
PH: (715) 365-8916
EMAIL: wendy.henniges@wisconsin.gov

MUNICIPALITIES

LINCOLN COUNTY HIGHWAY DEPARTMENT
100 COOPER ST./P.O. BOX 110
MERRILL, WI 54452
ATTN: JOHN HANZ, HIGHWAY COMMISSIONER
PH: (715) 539-2500
EMAIL: john.hanz@co.lincoln.wi.us

PRICE COUNTY HIGHWAY DEPARTMENT
704 NORTH LAKE AVE./P.O. BOX 169
PHILLIPS, WI 54555
ATTN: JOE BARATKA, HIGHWAY COMMISSIONER
PH: (715) 339-3081
EMAIL: joe.baratka@co.price.wi.us

UTILITIES

COMMUNICATION
LUMEN (CENTURYLINK)
425 ELLINGSON AVE./P.O. BOX 78
HAWKINS, WI 54530
ATTN: BRIAN HUHN, ENGINEER II
PH: (715) 532-0023
EMAIL: brian.huhn@lumen.com

ELECTRIC
PRICE ELECTRIC COOPERATIVE
W6803 SPRINGS DR./P.O. BOX 110
PHILLIPS, WI 54555
ATTN: BEN ORYSEN, MANAGER OF OPERATIONS
PH: (715) 339-2155 x132
EMAIL: borysen@price-electric.com

DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com
**DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS.

2

STANDARD ABBREVIATIONS

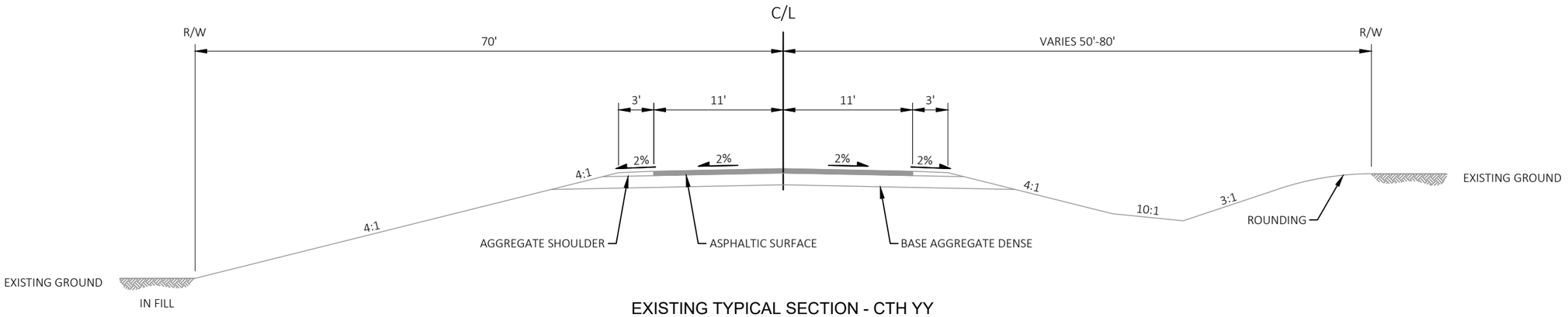
ABUT	ABUTMENT	OFF	OFFSET
AGG	AGGREGATE	PC	POINT OF CURVATURE
ET AL	AND OTHERS	PI	POINT OF INTERSECTION
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PT	POINT OF TANGENCY
BF	BACK FACE	POL	POINT ON LINE
BM	BENCHMARK	PE	PRIVATE ENTRANCE
C/L OR ℄	CENTERLINE	PL	PROPERTY LINE
Δ	CENTRAL ANGLE OR DELTA	PSI	POUNDS/SQUARE INCH
CLR	CLEAR	PROP	PROPOSED
CONC	CONCRETE	R	RADIUS
CONST	CONSTRUCTION	RR	RAILROAD
COR	CORNER	REBAR	REINFORCEMENT BAR
CMP	CORRUGATED METAL PIPE	REQ'D	REQUIRED
CTH	COUNTY TRUNK HIGHWAY	RT	RIGHT
CR	CREEK	RHF	RIGHT-HAND FORWARD
CFS	CUBIC FEET/SECOND	R/W	RIGHT-OF-WAY
CULV	CULVERT	RD	ROAD
D	DEGREE OF CURVE	SEC	SECTION
DHV	DESIGN HOUR VOLUME	S	SOUTH
DIA	DIAMETER	SE	SOUTHEAST
E	EAST	SW	SOUTHWEST
EL	ELEVATION	STH	STATE TRUNK HIGHWAY
EST	ESTIMATED	STA	STATION
FPS	FEET PER SECOND	SE	SUPER ELEVATION
FE	FIELD ENTRANCE	T	TANGENT
FT	FOOT (FEET)	TEL	TELEPHONE
FTG	FOOTING	TEMP	TEMPORARY
FDN	FOUNDATION	TI	TEMPORARY INTEREST
FF	FRONT FACE	TLE	TEMPORARY LIMITED EASEMENT
IP	IRON PIN	TL OR T/L	TRANSIT LINE
LT	LEFT	T	TRUCKS
LHF	LEFT-HAND FORWARD	TYP	TYPICAL
L	LENGTH OF CURVE	U/G	UNDERGROUND
LF	LINEAR FOOT	USH	UNITED STATES HIGHWAY
MAX	MAXIMUM	VAR	VARIABLE
MI	MILE	V	VELOCITY
MIN	MINIMUM	VPC	VERTICAL POINT OF CURVATURE
NC	NORMAL CROWN	VPI	VERTICAL POINT OF INTERSECTION
N	NORTH	VPT	VERTICAL POINT OF TANGENCY
NE	NORTHEAST	W	WEST
NW	NORTHWEST	YB	YARD
NO	NUMBER		

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 = 0.43 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.43 ACRES

2



EXISTING TYPICAL SECTION - CTH YY

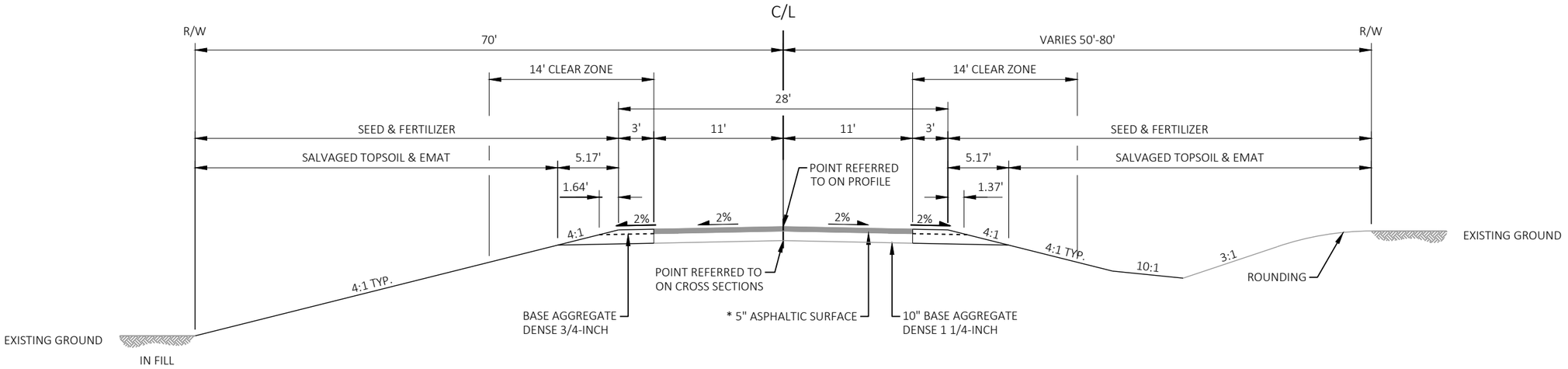
STA 7+71.77 - STA 12+30.78

PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	TYPICAL SECTIONS	SHEET 3	E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\020301-TS.DWG PLOT DATE : 7/14/2021 12:27 PM PLOT BY : NICK THOMPSON PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - TS-1 ORIG

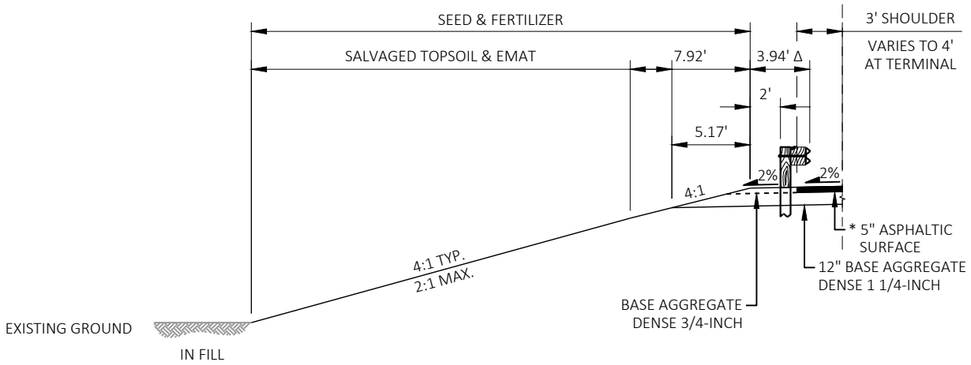
WISDOT/CADDS SHEET 42

2



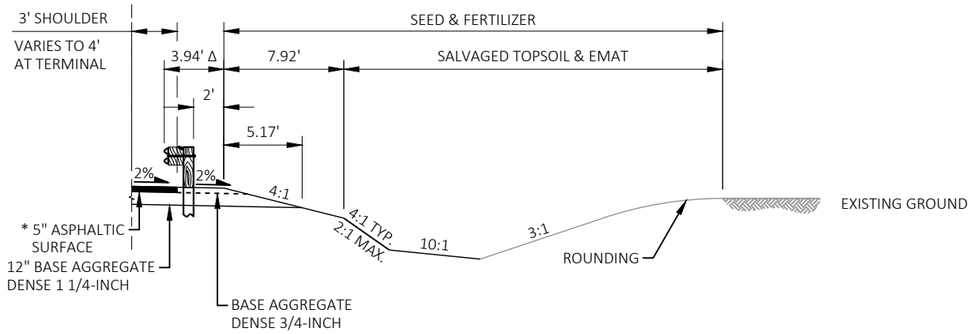
PROPOSED TYPICAL SECTION - CTH YY

STA 7+71.77 - STA 12+30.78



PROPOSED TYPICAL SECTION AT BEAM GUARD

STA 8+67.42 TO STA 9+10.51 LT
STA 11+00.00 TO STA 11+56.39 LT



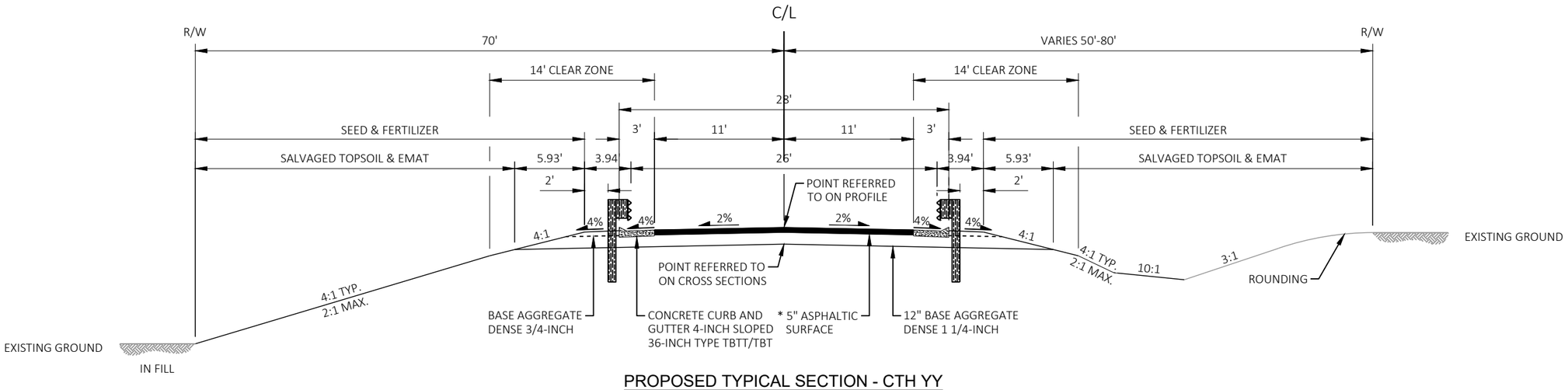
PROPOSED TYPICAL SECTION AT BEAM GUARD

STA 8+43.60 TO STA 8+86.69 RT
STA 11+00.00 TO STA 11+32.58 RT

* THE 5.0 INCH OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 2.50" LOWER LAYER AND A 2.50" UPPER LAYER.

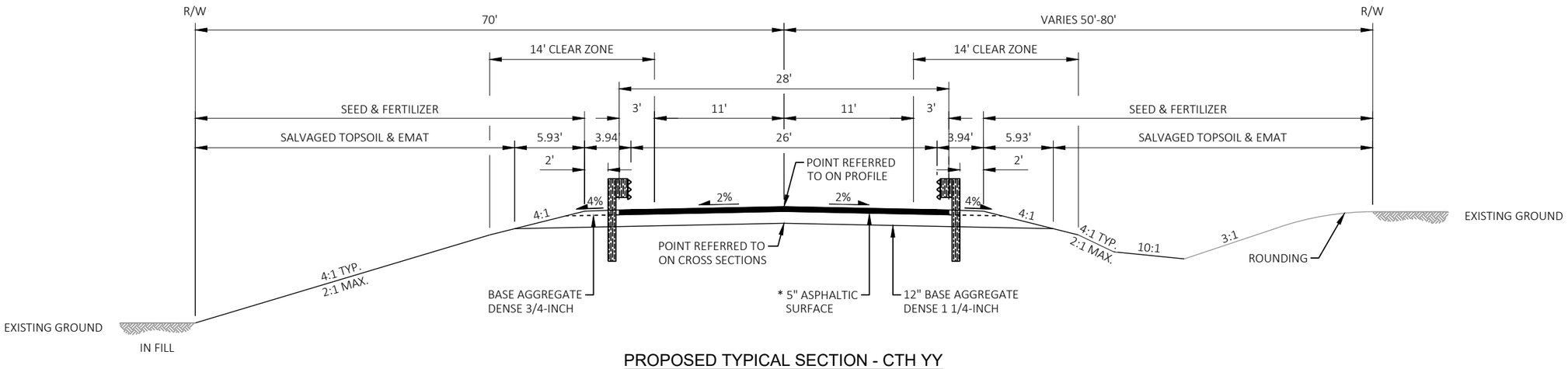
Δ INCREASE TO 7' AT POST NO. 1 OF ENERGY ABSORBING TERMINAL.

PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	TYPICAL SECTIONS	SHEET 4	E



PROPOSED TYPICAL SECTION - CTH YY

STA 9+10.51 TO STA 9+57.40 LT
STA 8+86.69 TO STA 9+33.59 RT



PROPOSED TYPICAL SECTION - CTH YY

STA 10+66.41 TO STA 11+00.00 LT
STA 10+42.58 TO STA 11+00.00 RT

* THE 5.0 INCH OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 2.50" LOWER LAYER AND A 2.50" UPPER LAYER.

Δ INCREASE TO 7' AT POST NO. 1 OF ENERGY ABSORBING TERMINAL.

PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\020301-TS.DWG PLOT DATE : 7/14/2021 12:27 PM PLOT BY : NICK THOMPSON PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - TS-3 ORIG
WISDOT/CADDS SHEET 42

2

2

LEGEND

- SURFACE WATER FLOW
- SLOPE INTERCEPT
- SILT FENCE
- TURBIDITY BARRIER (HEAVY ANCHORAGE)
- RIPRAP BOUNDARY
- SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION URBAN MAT CLASS 1, TYPE B
- BRUSH REMOVAL (INCIDENTAL TO RIPRAP)

NOTE: USE SEED MIX NO. 20

N

R/W

EDGE OF WATER

EDGE OF WATER

WETLAND LIMIT

R/W

CULVERT PIPE CORRUGATED STEEL 18-INCH TO REMAIN

GRAVEL

DRAINAGE DITCH

ASPHALTIC FLUME

8'

RIPRAP MEDIUM

RIPRAP HEAVY

RIPRAP HEAVY

S.I.

S.I.

70.00'

CONSTRUCTION LIMITS
STA 7+77.71 LT
MATCH EXISTING

PROPOSED STRUCTURE B-35-0118 STA 10+00

CONSTRUCTION LIMITS
STA 12+30.78 LT
MATCH EXISTING

PRIVATE ENTRANCE

END C&G LEFT

7+00 | CTH YY ASPHALT | 8+00 | N0° 07' 31"E | 9+00 | 10+00 | 11+00 | N0° 07' 31"E | 12+00 | 13+00

600.00' | 600.00'

END C&G RIGHT

S.I.

NORTH FORK SPIRIT RIVER

ASPHALTIC FLUME

8'

RIPRAP MEDIUM

EDGE OF WATER

EXISTING STRUCTURE B-35-0005 TO BE REMOVED

S.I.

65.00'

80.00'

R/W

R/W

R/W

EDGE OF WATER

P/L

PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	EROSION CONTROL	SHEET 6	E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - Erosion Control

PLOT DATE : 7/27/2021 1:16 PM PLOT BY : JORDAN DISTERHAFT PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

DAVID G. HULL

PATRICK J. RAILS

R/W

R/W

BP: 7+00.00

EP: 13+00.00

PROPOSED
STRUCTURE
B-35-0118
STA 10+00

8+00

9+00

10+00

11+00

12+00

CTH YY

BEGIN PROJECT
STA 9+00.00

END PROJECT
STA 11+00.00

NORTH FORK
SPIRIT RIVER

SCOTT A. & DIANE A. ERDMAN

R/W

SCOTT A. & DIANE A. ERDMAN

MICHAEL NYBERG

R/W

2
W5-52L
12"X36"

3R
REMOVE

5R
REMOVE

4
W5-52R
12"X36"

6R
WEIGHT LIMIT 40 TONS
REMOVE

7R
REMOVE

5
W3-1
36"X36"

1R
WEIGHT LIMIT 40 TONS
REMOVE

1
W5-52R
12"X36"

2R
REMOVE

4R
REMOVE

3
W5-52L
12"X36"

LEGEND

A MARKING LINE EPOXY 4-INCH, WHITE

B MARKING LINE EPOXY 4-INCH, YELLOW

NOTE: REMOVE EXISTING SIGNS & RETURN TO COUNTY.

PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	PERMANENT MARKING AND SIGNING	SHEET 7	E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\024501-PM.DWG PLOT DATE : 7/27/2021 11:51 AM PLOT BY : JORDAN DISTERHAFT PLOT NAME : PLOT SCALE : 1 IN:40 FT
LAYOUT NAME - 24501-pm

WISDOT/CADDS SHEET 42

2

BM4, R/R SPIKE IN BASE OF POWER POLE
STA 7+36.33, 51.9' LT, EL 1541.46'
Y = 223366.5307
X = 301540.4408

BEGIN PROJECT
STA 9+00.00
Y=223530.0844
X=301952.6725
MATCH EXISTING
SAW CUT REQ'D

CP700, SET 12" SPIKE
STA 7+00.74, 14.5' LT
Y = 223330.8593
X = 301577.7799

CP70, SET 12" SPIKE
STA 9+74.47, 17.8' LT
Y = 223604.5996
X = 301575.0595

CP9000, SET 12" SPIKE
STA 10+64.01, 36.2' LT
Y = 223694.1760
X = 301556.8069

END PROJECT
STA 11+00.00
Y=223730.0839
X=301593.1096
MATCH EXISTING
SAW CUT REQ'D

CP1300, SET 12" SPIKE
STA 13+00.05, 14.7' LT
Y = 223930.5048
X = 301578.8358

EDGE OF WATER

EDGE OF WATER

WETLAND LIMIT

N

NORTH FORK SPIRIT RIVER

R/W

R/W

BP: 7+00.00

EP: 13+00.00

70.00'

18" CMP

GRAVEL

DRAINAGE DITCH

CONSTRUCTION LIMITS
STA 7+77.71 LT
MATCH EXISTING

PRIVATE ENTRANCE

PROPOSED STRUCTURE
B-35-0118
STA 10+00

CONSTRUCTION LIMITS
STA 12+30.78 LT
MATCH EXISTING

7+00 | CTH YY ASPHALT | 8+00 | N0° 07' 31"E | 600.00' | 9+00 | 10+00 | 11+00 | N0° 07' 31"E | 600.00' | 12+00 | 13+00

65.00'

65.00'

80.00'

R/W

EDGE OF WATER

EXISTING STRUCTURE
B-35-0005
TO BE REMOVED

R/W

R/W

CP71, SET 12" SPIKE
STA 8+30.73, 28.3' RT
Y = 223460.7595
X = 301620.7814

CP69, SET 12" SPIKE
STA 9+16.83, 27.4' RT
Y = 223546.8534
X = 301620.0640

CP1000, MAG NAIL
STA 10+00.00, 0.7' RT
Y = 223630.0854
X = 301593.5805

EDGE OF WATER

BM5, USGS MARKER IN SE WINGWALL
STA 9+52.48, 18.1' RT, EL 1541.24'
Y = 223582.5324
X = 301610.8407

P/L

PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	ALIGNMENT	SHEET 8	E

9487-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. 10+00	EACH	1.000	1.000
0004	204.0165	Removing Guardrail	LF	394.000	394.000
0006	205.0100	Excavation Common	CY	427.000	427.000
0008	206.1000	Excavation for Structures Bridges (structure) 01. B-35-118	LS	1.000	1.000
0010	210.1500	Backfill Structure Type A	TON	500.000	500.000
0012	213.0100	Finishing Roadway (project) 01. 9487-00-70	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	73.000	73.000
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	569.000	569.000
0018	415.0060	Concrete Pavement 6-Inch	SY	9.000	9.000
0020	415.0410	Concrete Pavement Approach Slab	SY	132.000	132.000
0022	455.0605	Tack Coat	GAL	19.000	19.000
0024	465.0105	Asphaltic Surface	TON	81.000	81.000
0026	465.0315	Asphaltic Flumes	SY	23.000	23.000
0028	502.0100	Concrete Masonry Bridges	CY	193.000	193.000
0030	502.3200	Protective Surface Treatment	SY	247.000	247.000
0032	502.3210	Pigmented Surface Sealer	SY	108.000	108.000
0034	503.0137	Prestressed Girder Type I 36W-Inch	LF	332.000	332.000
0036	505.0400	Bar Steel Reinforcement HS Structures	LB	4,300.000	4,300.000
0038	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	24,510.000	24,510.000
0040	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000
0042	506.4000	Steel Diaphragms (structure) 01. B-35-118	EACH	6.000	6.000
0044	516.0500	Rubberized Membrane Waterproofing	SY	17.000	17.000
0046	550.0500	Pile Points	EACH	14.000	14.000
0048	550.2108	Piling CIP Concrete 10 3/4 X 0.50-Inch	LF	700.000	700.000
0050	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	70.000	70.000
0052	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	24.000	24.000
0054	606.0200	Riprap Medium	CY	4.000	4.000
0056	606.0300	Riprap Heavy	CY	200.000	200.000
0058	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	140.000	140.000
0060	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0062	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0064	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0066	618.0100	Maintenance And Repair of Haul Roads (project) 01. 9487-00-70	EACH	1.000	1.000
0068	619.1000	Mobilization	EACH	1.000	1.000
0070	624.0100	Water	MGAL	8.000	8.000
0072	625.0500	Salvaged Topsoil	SY	385.000	385.000
0074	628.1504	Silt Fence	LF	802.000	802.000
0076	628.1520	Silt Fence Maintenance	LF	802.000	802.000
0078	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0080	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0082	628.2008	Erosion Mat Urban Class I Type B	SY	385.000	385.000
0084	628.6005	Turbidity Barriers	SY	172.000	172.000
0086	629.0210	Fertilizer Type B	CWT	0.410	0.410
0088	630.0120	Seeding Mixture No. 20	LB	18.000	18.000
0090	630.0200	Seeding Temporary	LB	18.000	18.000
0092	630.0500	Seed Water	MGAL	7.000	7.000
0094	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	5.000	5.000
0096	637.2230	Signs Type II Reflective F	SF	21.000	21.000
0098	638.2602	Removing Signs Type II	EACH	7.000	7.000

9487-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	638.3000	Removing Small Sign Supports	EACH	7.000	7.000
0102	642.5001	Field Office Type B	EACH	1.000	1.000
0104	643.0300	Traffic Control Drums	DAY	70.000	70.000
0106	643.0420	Traffic Control Barricades Type III	DAY	1,260.000	1,260.000
0108	643.0705	Traffic Control Warning Lights Type A	DAY	1,960.000	1,960.000
0110	643.0900	Traffic Control Signs	DAY	980.000	980.000
0112	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0114	643.5000	Traffic Control	EACH	1.000	1.000
0116	645.0111	Geotextile Type DF Schedule A	SY	56.000	56.000
0118	645.0120	Geotextile Type HR	SY	384.000	384.000
0120	646.1020	Marking Line Epoxy 4-Inch	LF	1,084.000	1,084.000
0122	650.4500	Construction Staking Subgrade	LF	366.000	366.000
0124	650.5000	Construction Staking Base	LF	319.000	319.000
0126	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	94.000	94.000
0128	650.6500	Construction Staking Structure Layout (structure) 01. B-35-118	LS	1.000	1.000
0130	650.9910	Construction Staking Supplemental Control (project) 01. 9487-00-70	LS	1.000	1.000
0132	650.9920	Construction Staking Slope Stakes	LF	366.000	366.000
0134	690.0150	Sawing Asphalt	LF	312.000	312.000
0136	715.0502	Incentive Strength Concrete Structures	DOL	1,160.000	1,160.000
0138	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0140	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 10+00	EACH	1.000	1.000
0142	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	600.000	600.000
0144	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE	COMMENT
DIVISION 1											
CTH YY	07+77.71/12+30.78		427	0	54	373	70	88	286	286	
DIVISION 1 SUBTOTAL			427	0	54	373	70	88	286	286	
GRAND TOTAL			427	0	54	373	70	88	286	286	
TOTAL COMMON EXC			427								

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 BASE AGGREGATE DENSE 1 1/4-INCH

(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 - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) * 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) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

REMOVING GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	REMARKS
0010	8+52	-	9+53	RT	101	
0010	8+82	-	9+78	LT	97	
0010	10+20	-	11+17	RT	97	
0010	10+46	-	11+45	LT	99	
				TOTAL 0010	394	

BASE AGGREGATE DENSE

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	REMARKS
0010	8+21	-	9+57	MAINLINE	-	295	4	
0010	10+43	-	11+84	MAINLINE	-	274	4	
0010	7+78	-	9+57	LT SHOULDER	20	-	-	
0010	10+66		12+31	LT SHOULDER	18	-	-	
0010	7+87	-	9+34	RT SHOULDER	16	-	-	
0010	10+43	-	12+06	RT SHOULDER	19	-	-	
				TOTAL 0010	73	569	8	

CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STATION	TO	STATION	LOCATION	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	415.0060 CONCRETE PAVEMENT 6-INCH SY	REMARKS
0010	9+33.14	-	9+57.37	MAINLINE	64	-	
0010	10+42.63	-	10+66.86	MAINLINE	68	9	
				TOTAL 0010	132	9	

ASPHALTIC ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	465.0315 ASPHALTIC FLUMES SY	REMARKS
0010	8+21	-	9+33	MAINLINE	9	39	-	
0010	8+97	-		RT	-	-	12	
0010	9+21	-		LT	-	-	11	
0010	10+58	-	11+84	MAINLINE	10	42	-	
				TOTAL 0010	19	81	23	

GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	REMARKS
0010	8+44	-	9+36	RT	39.4	1	
0010	8+67	-	9+60	LT	39.4	1	
0010	10+40	-	11+33	RT	39.4	1	
0010	10+64	-	11+56	LT	39.4	1	
				TOTAL 0010	157.6	4	

EROSION CONTROL ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.6005 TURBIDITY BARRIERS SY	REMARKS
0010	7+74	-	10+00	LT & RT	399	399	1	1	92	
0010	10+00	-	12+38	LT & RT	403	403	1	1	80	
				TOTAL 0010	802	802	2	2	172	

LANDSCAPING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	REMARKS
0010	7+78	-	8+18	LT	20	20	0.02	1	1	0	
0010	7+87	-	9+34	RT	21	21	0.11	5	5	2	
0010	8+33	-	9+19	LT	59	59	0.06	2	2	1	
0010	9+23		9+57	LT	31	31	0.04	2	2	1	
0010	10+43	-	12+06	RT	92	92	0	3	3	1	
0010	10+66	-	12+31	LT	162	162	0.11	5	5	2	
				TOTAL 0010	385	385	0.41	18	18	7	

RIP RAP

CATEGORY	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	REMARKS
0010	8+97	RT	2	
0010	9+21	LT	2	
		TOTAL 0010	4	

PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	MISCELLANEOUS QUANTITIES	SHEET 12	E

3

CONCRETE CURB & GUTTER ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	601.0588 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT LF	601.0590 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT LF	REMARKS
0010	8+86.69		9+33.59	RT	47	-	
0010	9+10.51	-	9+33.14	LT	23	-	
0010	9+33.14	-	9+57.40	LT	-	24	
				TOTAL 0010	70	24	

SIGNING ITEMS

CATEGORY	STATION	LOCATION	SIGN NUMBER	SIGN CODE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	REMARKS
0010	9+32	RT	1	W5-52R	12X36	1	3.0	BRIDGE HASK MARKS
0010	9+55	LT	2	W5-52L	12X36	1	3.0	BRIDGE HASH MARKS
0010	10+45	RT	3	W5-52L	12X36	1	3.0	BRIDGE HASH MARKS
0010	10+68	LT	4	W5-52R	12X36	1	3.0	BRIDGE HASH MARKS
0010	11+38	LT	5	W3-1	36X36	1	9.0	STOP AHEAD
			TOTAL 0010			5	21.0	

REMOVING SIGN ITEMS

CATEGORY	STATION	LOCATION	NUMBER	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	9+25	RT	1R	1	1	WEIGHT LIMIT 40 TONS
0010	9+51	RT	2R	1	1	BRIDGE HASH MARKS
0010	9+78	LT	3R	1	1	BRIDGE HASH MARKS
0010	10+21	RT	4R	1	1	BRIDGE HASH MARKS
0010	10+48	LT	5R	1	1	BRIDGE HASH MARKS
0010	11+11	LT	6R	1	1	WEIGHT LIMIT 40 TONS
0010	11+38	LT	7R	1	1	STOP AHEAD
		TOTAL 0010		7	7	

MARKING LINE EPOXY 4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF YELLOW	646.1020 MARKING LINE EPOXY 4-INCH LF WHITE	REMARKS
0010	8+21	-	11+67	RT EDGE LINE	-	345	SOLID WHITE
0010	8+46	-	11+84	LT EDGE LINE	-	339	SOLID WHITE
0010	9+00	-	11+00	CENTERLINE	400	-	DOUBLE SOLID YELLOW
				SUBTOTAL	400	684	
				TOTAL 0010	1,084		

TRAFFIC CONTROL ITEMS

CATEGORY	LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	643.5000 TRAFFIC CONTROL EACH	REMARKS
0010	7-DAY ADVANCED WARNING	70	-	-	-	14	-	
0010	PROJECT	-	1,260	1,960	980	-	1	NO POSTED DETOUR
	TOTAL 0010	70	1,260	1,960	980	14	1	

GEOTEXTILE

CATEGORY	STATION	LOCATION	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
0010	8+97	RT	7	RIPRAP AT END OF FLUME
0010	9+21	LT	7	RIPRAP AT END OF FLUME
		TOTAL 0010	14	

3

CONSTRUCTION STAKING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 9487-00-70) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
0010	7+78	-	9+56	MAINLINE	178	155	-	-	178	
0010	8+87	-	9+34	RT	-	-	47	-	-	
0010	9+11	-	9+57	LT	-	-	47	-	-	
0010	10+43	-	12+31	MAINLINE	188	164	-	-	188	
0010		-		PROJECT	-	-	-	1	-	
				PROJECT TOTAL	366	319	94	1	366	

SAWING PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	REMARKS
0010	8+21	-	9+00	SOUTH APPROACH	159	
0010	11+00	-	11+84	NORTH APPROACH	153	
				TOTAL 0010	312	

BENCHMARKS			
NO	STA.	DESCRIPTION	ELEV.
4	7+36±	R/R SPIKE IN BASE OF POWER POLE, 51.9' LT. OF C/L	1541.46
5	9+52±	USGS MARKER IN SE WINGWALL, 18.1' RT. OF C/L	1541.24

DAVID G. HULL
PATRICK J. RAILS
WETLAND LIMIT
EDGE OF WATER
R/W
WOODED
GRAVEL
DRAINAGE DITCH
ASPHALTIC FLUME
RIPRAP MEDIUM
PRIVATE ENTRANCE
BM4
CULVERT PIPE CORRUGATED STEEL 18-INCH TO REMAIN
CONSTRUCTION LIMITS STA 7+77.71 LT MATCH EXISTING
PROPOSED STRUCTURE B-35-0118 STA 10+00
PRICE ELECTRIC COOPERATIVE
LUMEN(CENTURYLINK)
CONSTRUCTION LIMITS STA 12+30.78 LT MATCH EXISTING
CTH YY ASPHALT
BM5
EXISTING STRUCTURE B-35-0005 TO BE REMOVED
NORTH FORK SPIRIT RIVER
SCOTT A. & DIANE A. ERDMAN
MICHAEL NYBERG
70.00'
65.00'
80.00'
BEGIN PROJECT
STA 9+00.00
Y=223530.0844
X=301952.6725
MATCH EXISTING
SAW CUT REQ'D
END PROJECT
STA 11+00.00
Y=223730.0839
X=301593.1096
MATCH EXISTING
SAW CUT REQ'D

8+67.47, 15.00' L MGS EAT POST 1
8+92.40, 14.07' L MGS EAT POST 5
9+17.28, 13.15' L MGS EAT POST 9
11+06.43, 13.15' L MGS EAT POST 9
11+31.41, 14.07' L MGS EAT POST 5
11+56.39, 15.00' L MGS EAT POST 1
8+43.60, 15.00' R MGS EAT POST 1
8+68.58, 14.07' R MGS EAT POST 5
8+93.57, 13.15' R MGS EAT POST 9
10+82.61, 13.15' R MGS EAT POST 9
11+07.61, 14.08' R MGS POST 5
11+32.58, 15.00' R MGS EAT POST 1

7+00 8+00 9+00 10+00 11+00 12+00 13+00

STA 9+00.00 EL 1540.51
STA 9+31.46 EL 1540.73
STA 9+59.00 EL 1541.01
STA 10+41.00 EL 1541.83
STA 10+68.54 EL 1542.11
STA 11+00.00 EL 1542.55

FINISHED C/L PROFILE
EXISTING C/L PROFILE
PROPOSED STRUCTURE B-35-0118
0.71%
1.00%
1.00%
1.00%
1.40%
36W
HIGH WATER$_{100}$ EL 1534.56
OBSERVED WATER EL 1529.16± (5-15-19)
STREAMBED EL 1527.72±

EXISTING C/L ELEVATION: 1540.75 1540.57 1540.52 1540.56 1540.51 1540.77 1528.36 1541.77 1542.55 1543.71 1544.89 1546.10 1547.37
FINISHED C/L ELEVATION: 1540.51 1540.92 1541.42 1541.92 1542.55

LEGEND

- (AP05) 5-INCH ASPHALTIC SURFACE
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (CPAS) CONCRETE PAVEMENT APPROACH SLAB, SEE SDD
- (CCG01) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT, SEE SDD
- (CCG02) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT, SEE SDD
- (PS) CONCRETE PAVEMENT 6-INCH
- xxxx xxxx SAWCUT ASPHALT

STATION 10+00
REMOVE STRUCTURE B-35-0005
SINGLE SPAN STEEL DECK GIRDER BRIDGE
65.7' OVERALL LENGTH
26.5' OVERALL WIDTH
SKEW 45° LHF

STATION 10+00
STRUCTURE B-35-0118 REQUIRED
SINGLE SPAN CONCRETE DECK GIRDER BRIDGE
87.0' OVERALL LENGTH
28.5' OVERALL WIDTH
SKEW 40° LHF

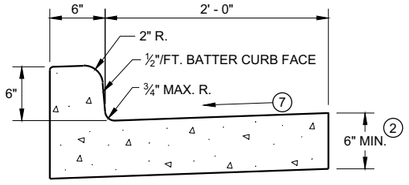
PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	PLAN AND PROFILE:	SHEET 15	E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\050101-PP.DWG PLOT DATE : 11/5/2021 12:12 PM PLOT BY : NICK THOMPSON PLOT NAME : PLOT SCALE : 1 IN:40 FT
LAYOUT NAME - Plan & Profile

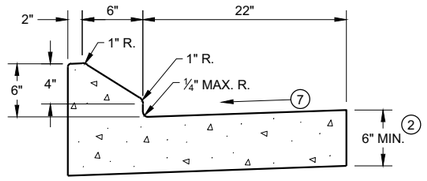
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

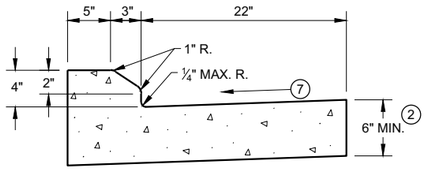
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13A03-06	CONCRETE PAVEMENT SHOULDERS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-12A	RURAL DOWELED CONCRETE PAVEMENT
13C11-12B	RURAL DOWELED CONCRETE PAVEMENT
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	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)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



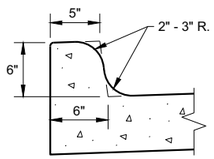
TYPES A[1] & D



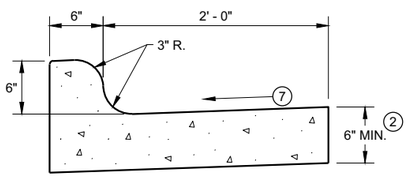
6" SLOPED CURB TYPES G[1] & J



4" SLOPED CURB TYPES G[1] & J

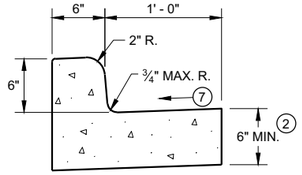


TYPES K[1] & L
(OPTIONAL CURB SHAPE)



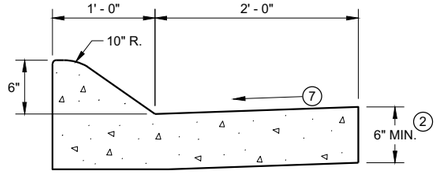
TYPES K[1] & L

CONCRETE CURB AND GUTTER 30"



TYPES A[1] & D

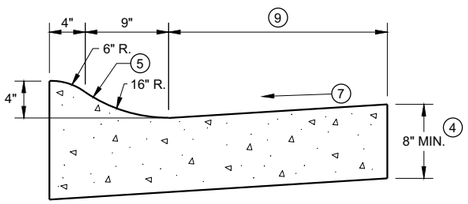
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A[1] & D

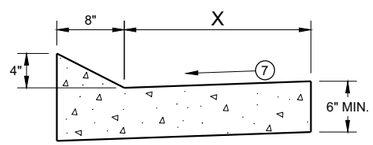
4" SLOPED CURB TYPES A[1] & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R[1] & T

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

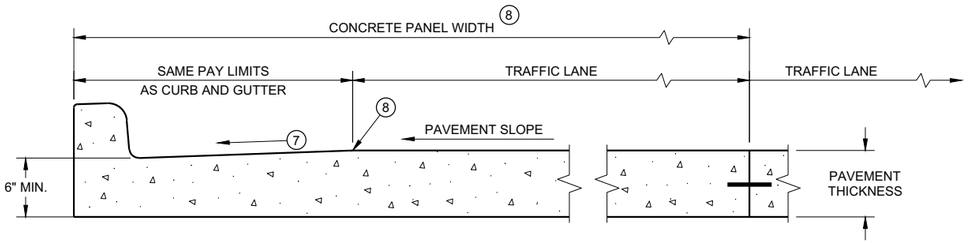


TYPES TBT & TBTT[1]

CONCRETE CURB AND GUTTER

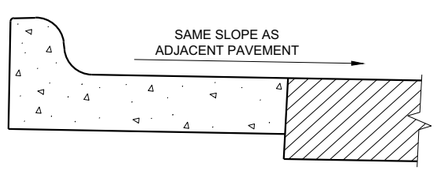
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

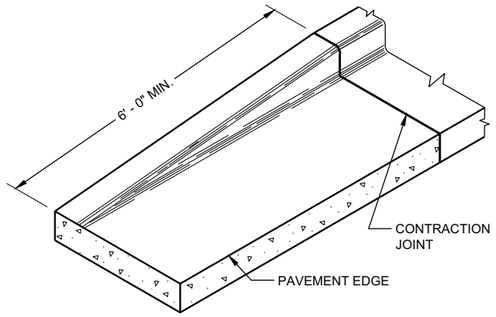
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

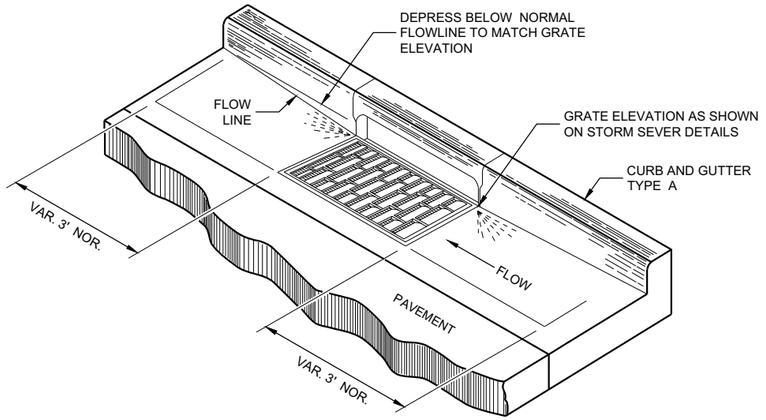
1. TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
3. USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
4. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
5. UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
6. WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
7. USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
8. INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
9. CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
   CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

SDD 08D01 - 22a
6



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

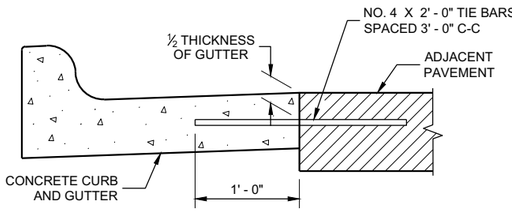
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

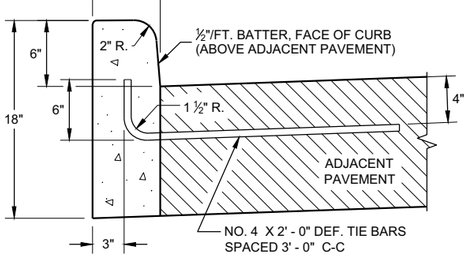
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

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

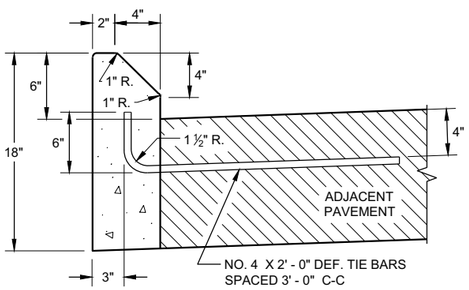
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

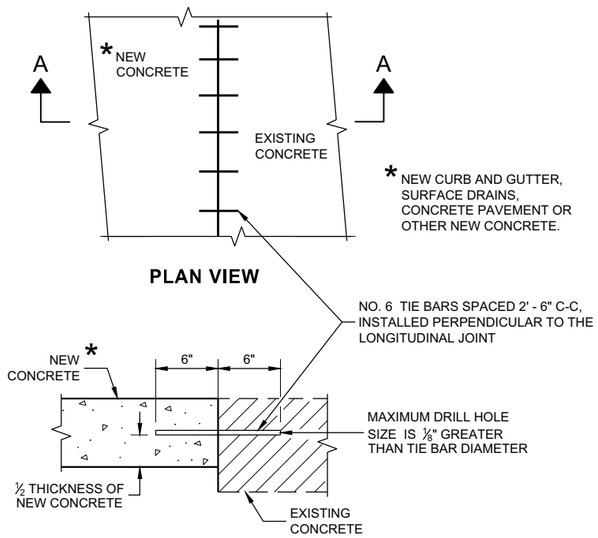


TYPES A (1) & D

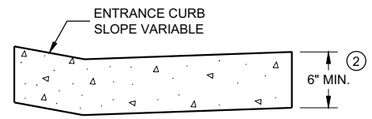


TYPES G (1) & J

CONCRETE CURB



TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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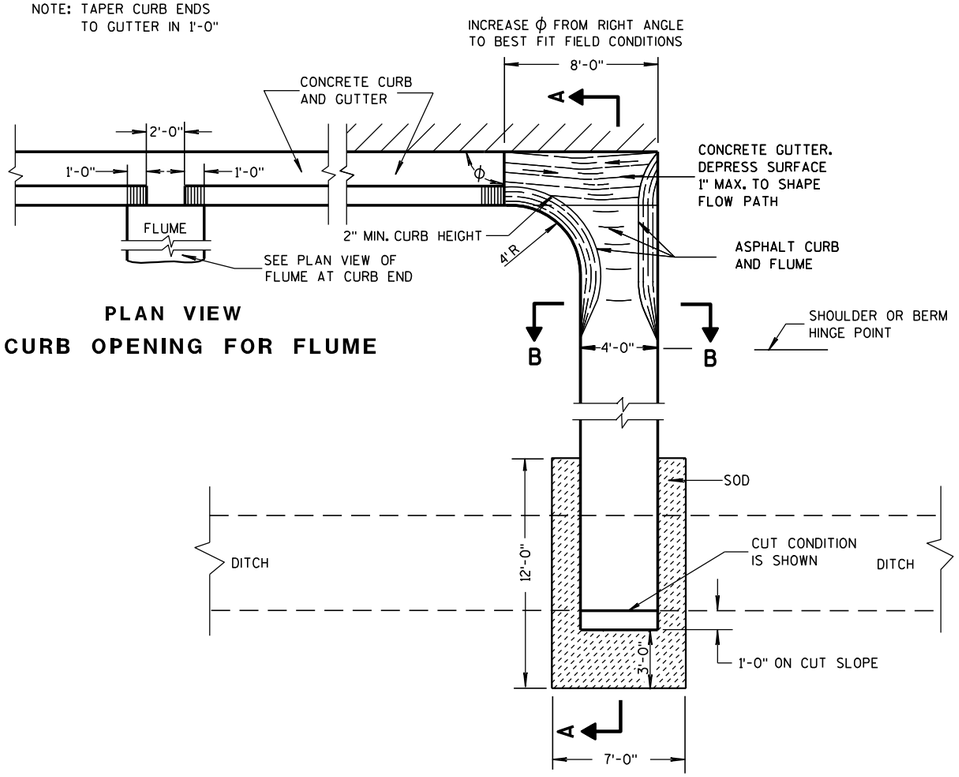
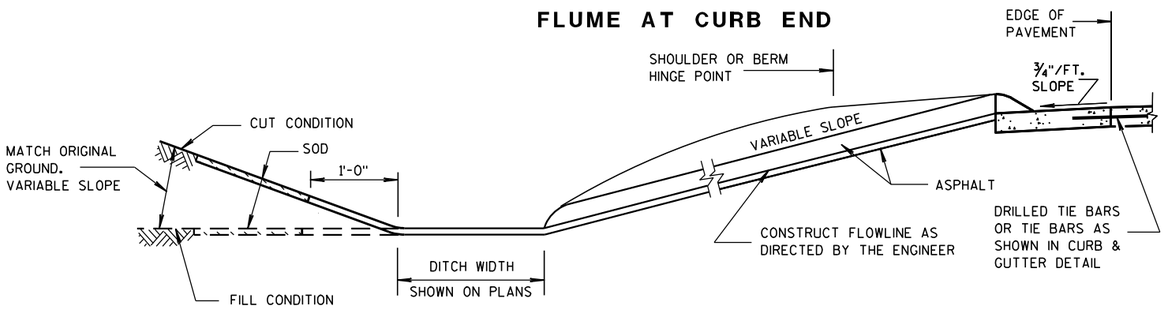
SDD08D01 - 22b

ASPHALTIC FLUME

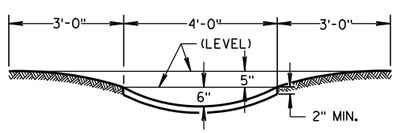


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

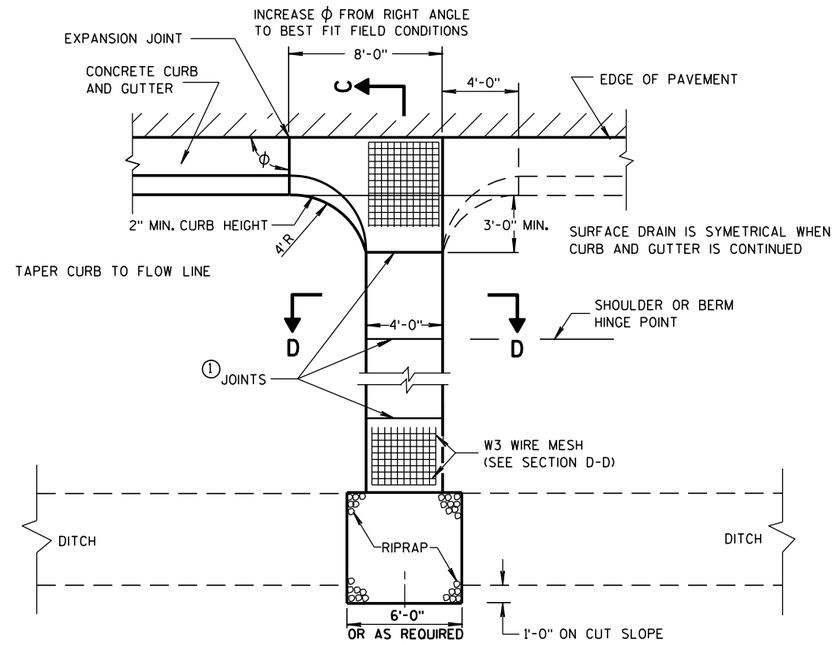
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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

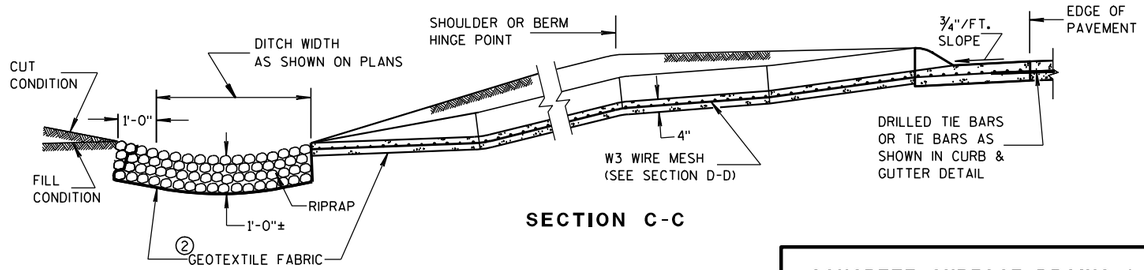
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

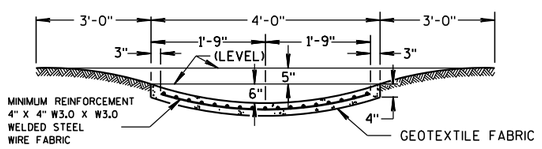
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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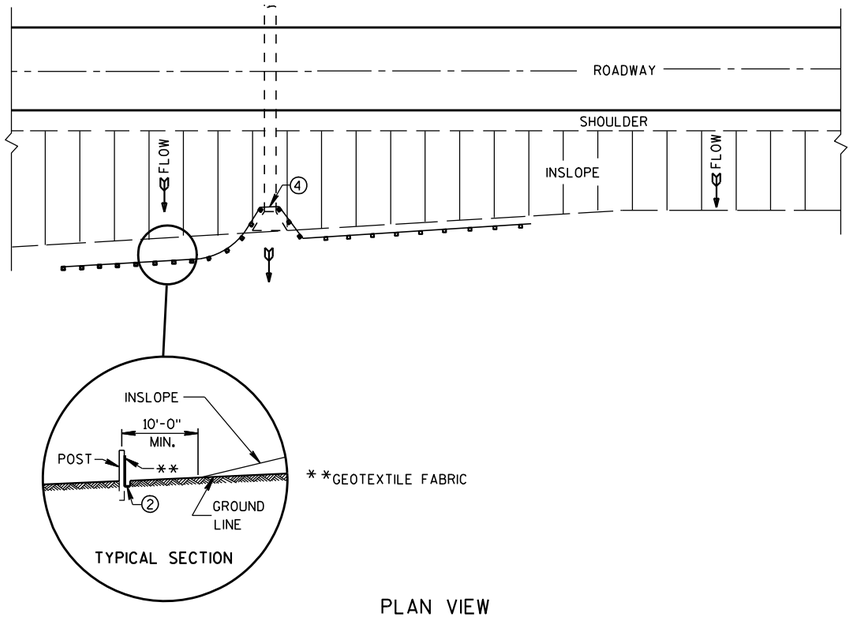
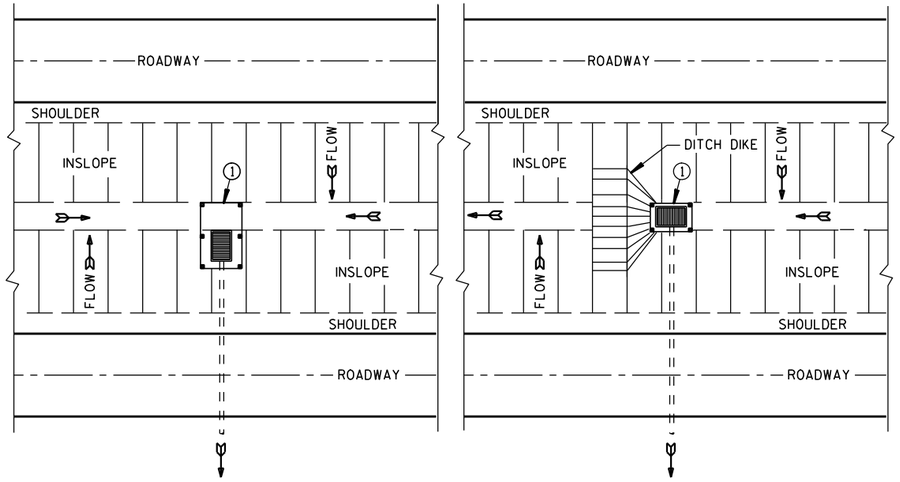


PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



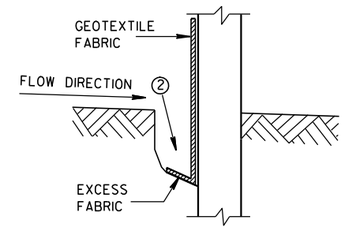
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

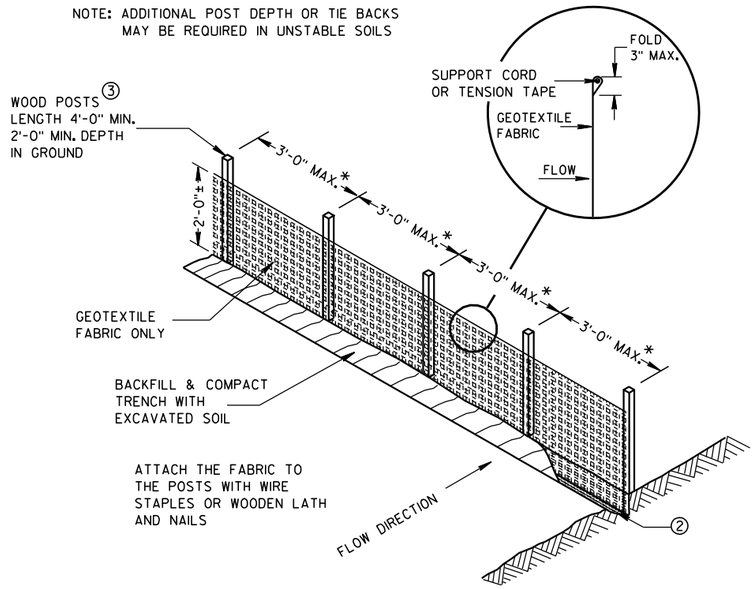
GENERAL NOTES

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

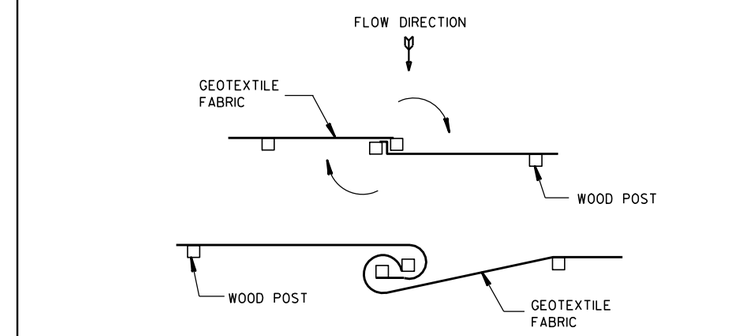
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



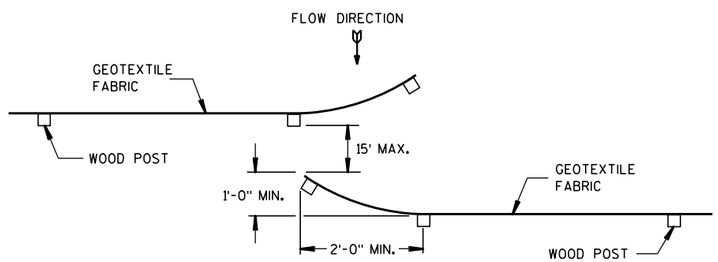
TRENCH DETAIL



SILT FENCE

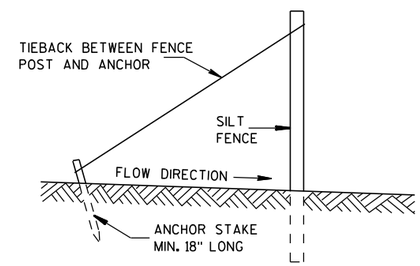


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

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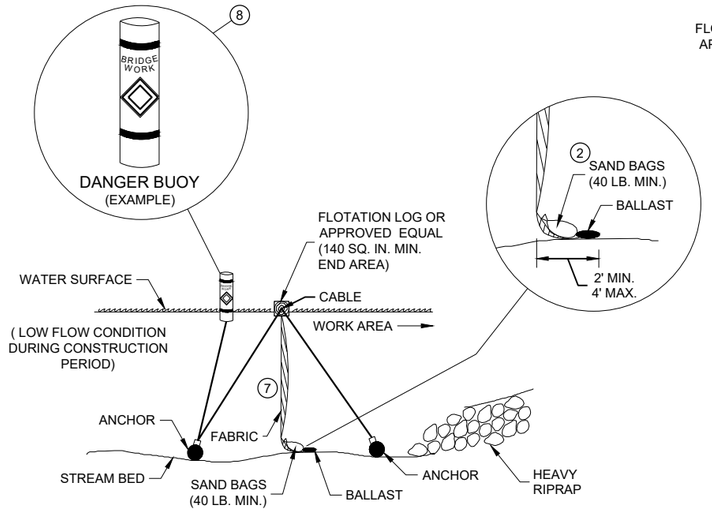
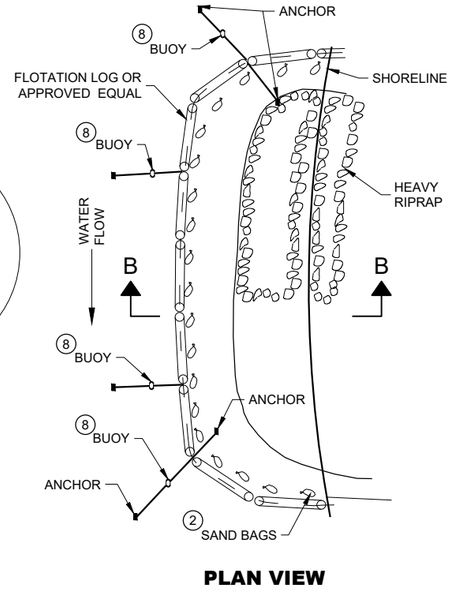
S.D.D. 8 E 9-6

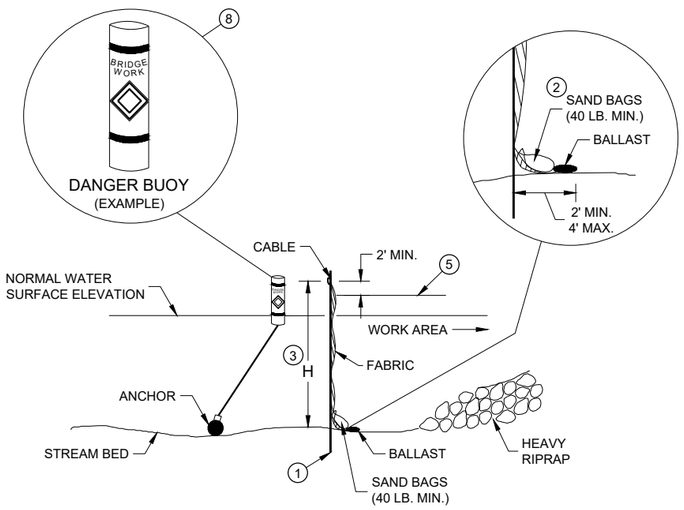


SECTION B - B

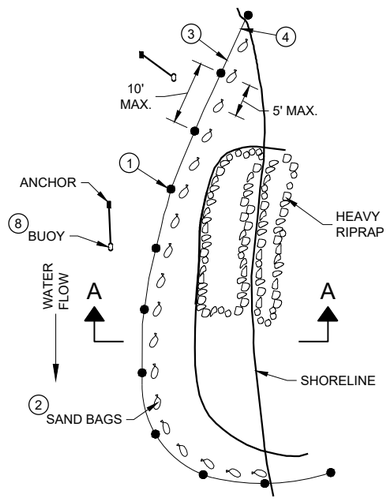


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

(1) DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

(2) SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

(3) WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.

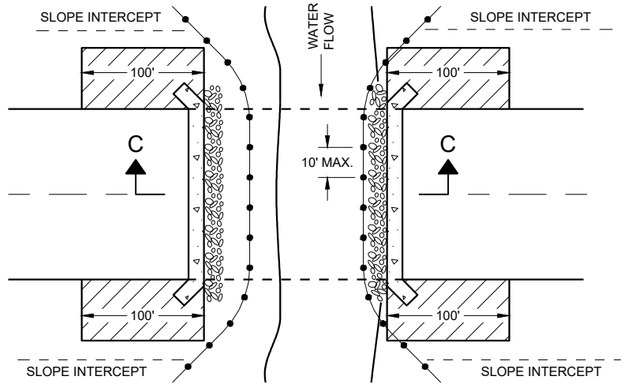
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.

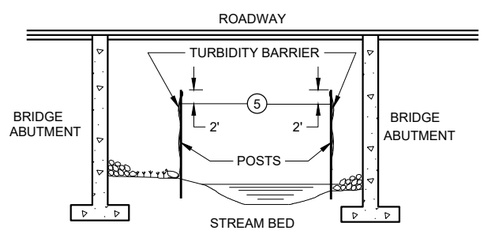
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(7) ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

(8) USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/4/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOI
ENGINEER

FHWA

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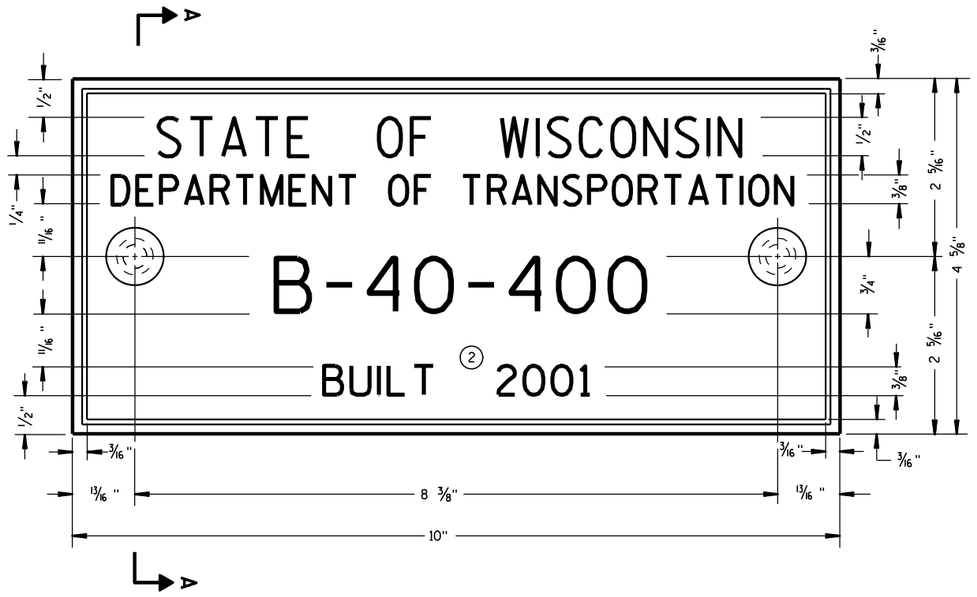
SDD 08E11 - 02



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

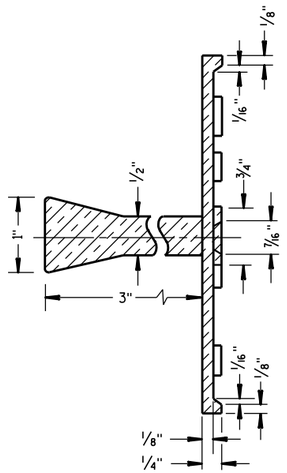
GENERAL NOTES

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.

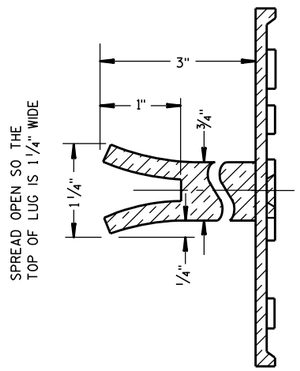
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

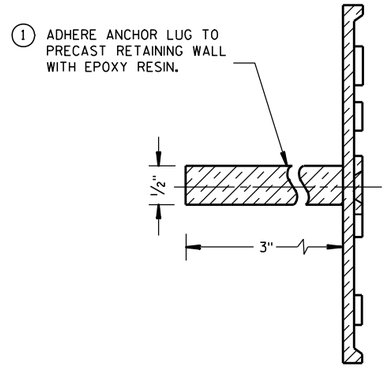
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



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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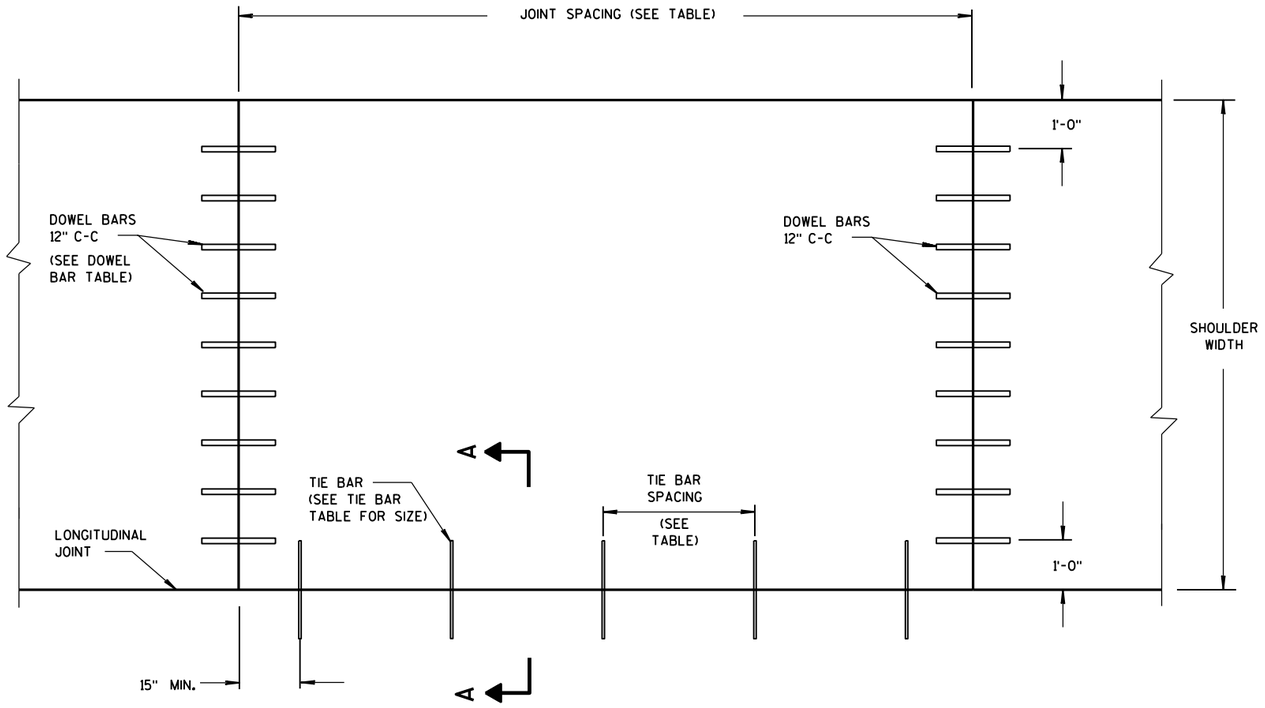
S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

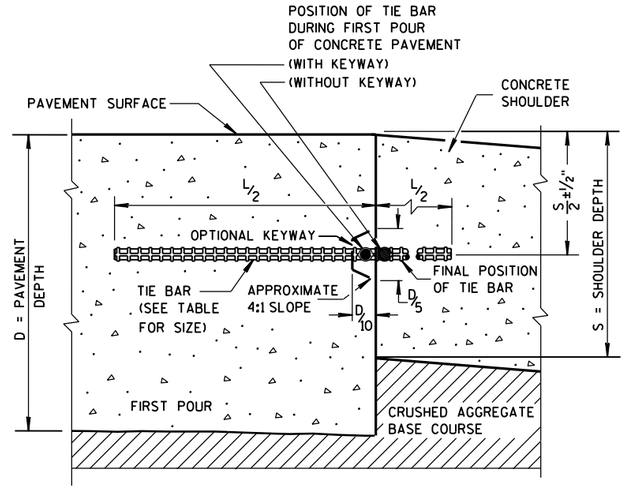
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	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.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER***	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 13 A 3-6

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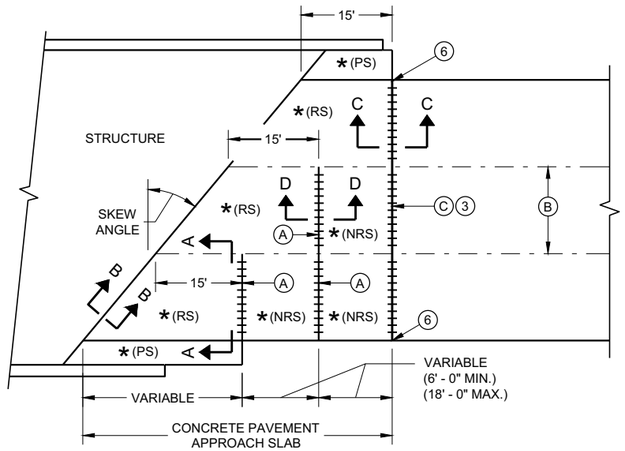
S.D.D. 13 A 3-6



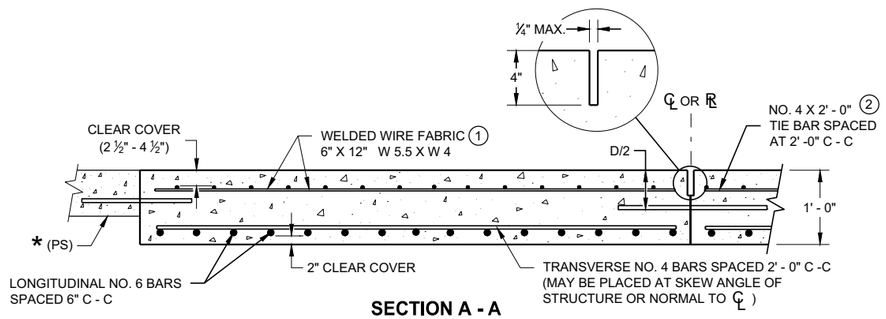
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

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

* (NRS) - NON - REINFORCED CONCRETE SLAB

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



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

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

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

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

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

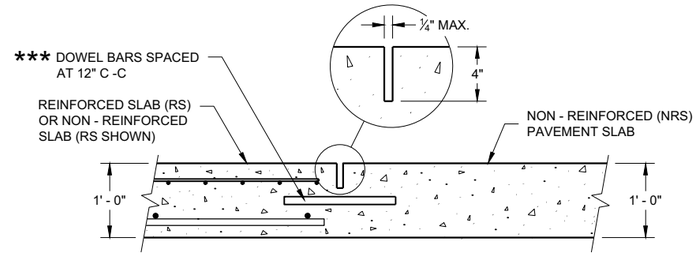
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

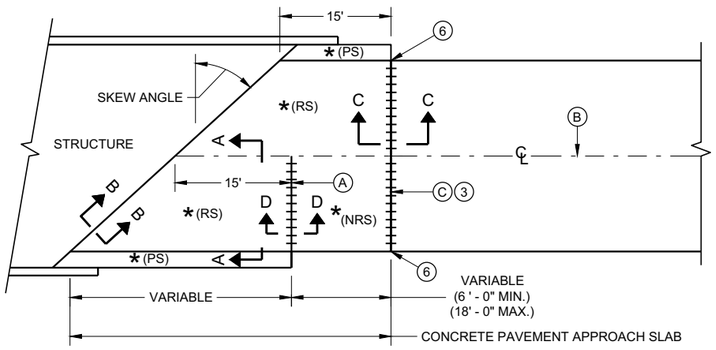
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

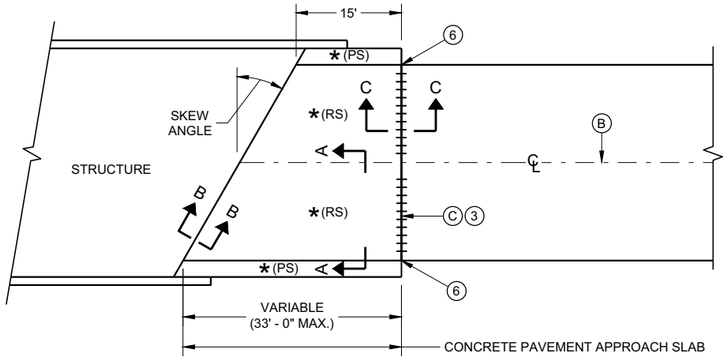
(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



SECTION D - D
CONTRACTION JOINT

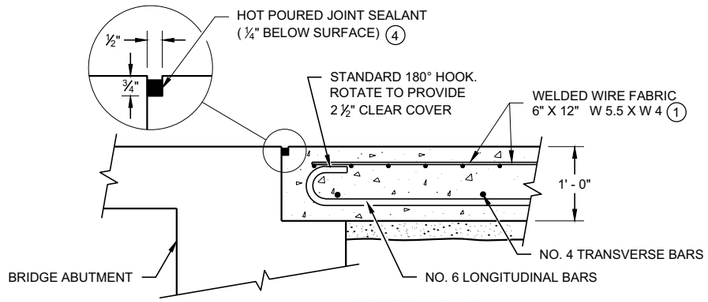


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

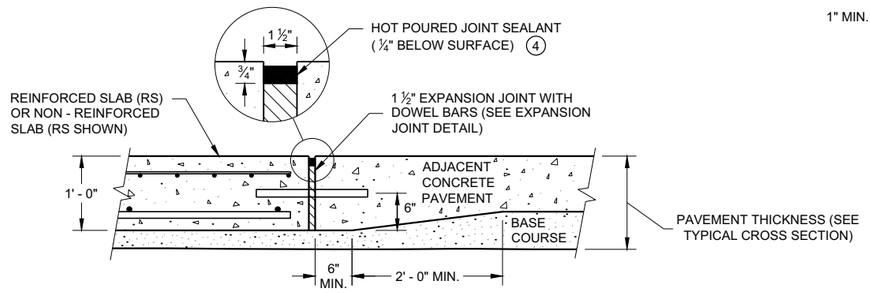


SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

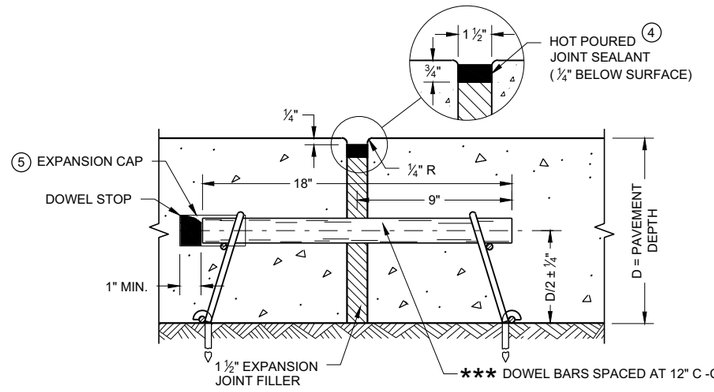
APPROACH SLAB AND ADJACENT PAVEMENT



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

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

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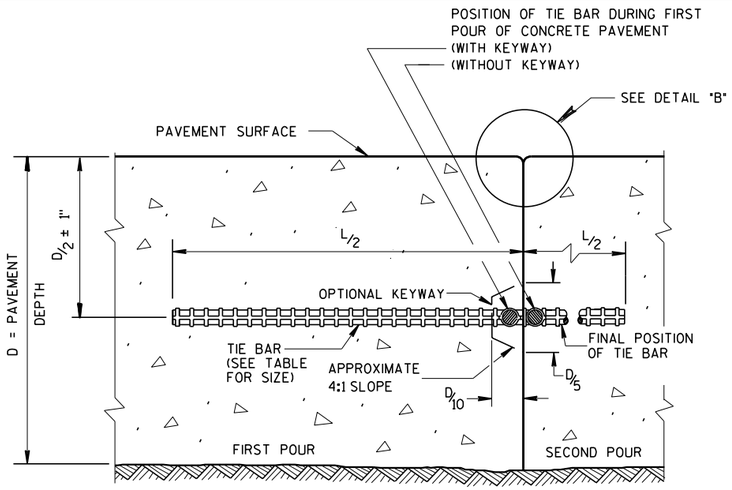
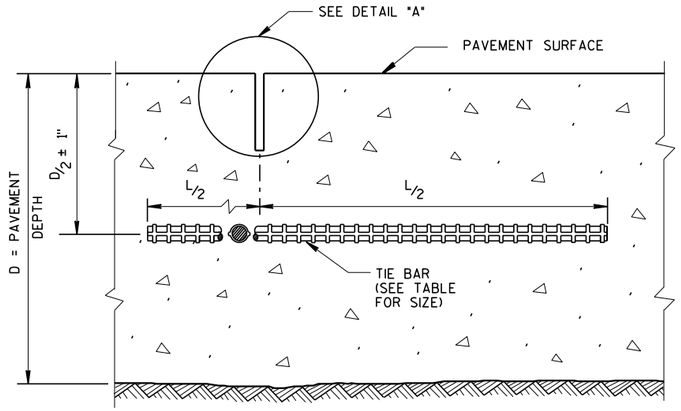
SDD 13B02 - 09a



CONSTRUCTION JOINT



SAWED JOINT

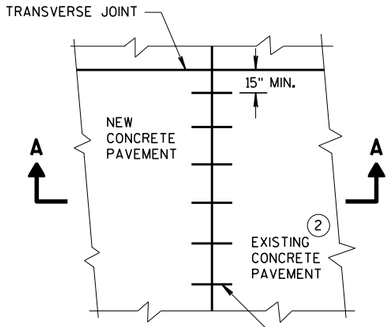
GENERAL NOTES

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

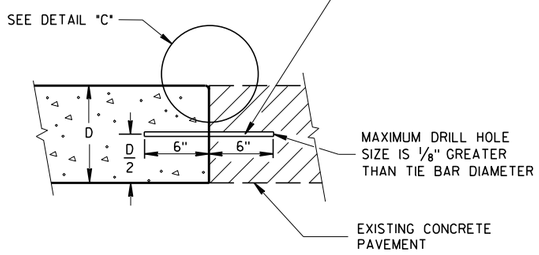
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

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

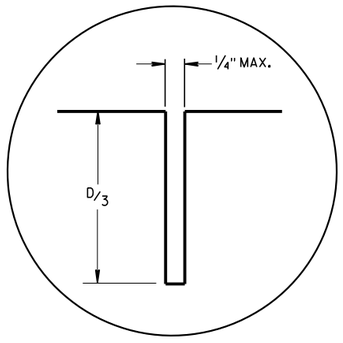


PLAN VIEW

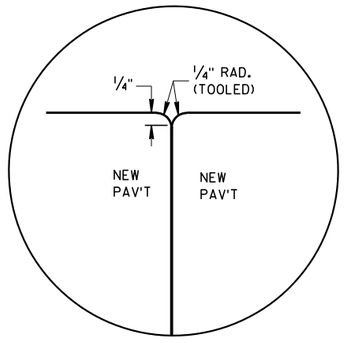


SECTION A-A

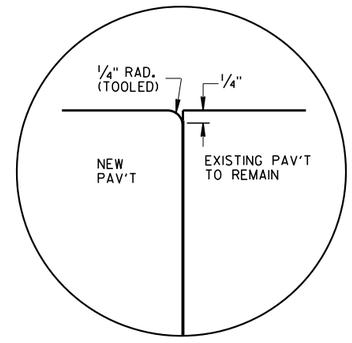
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



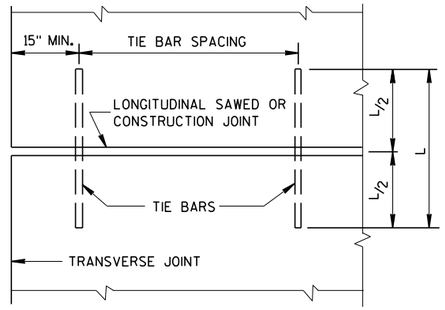
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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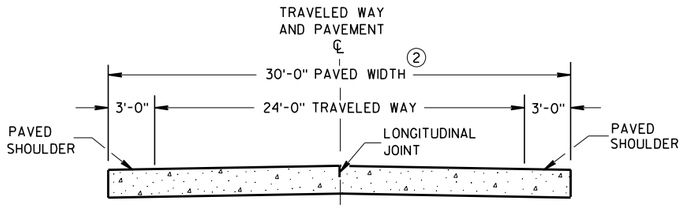
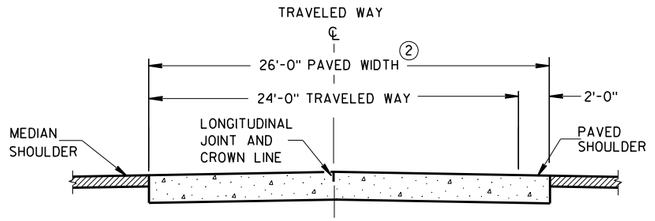
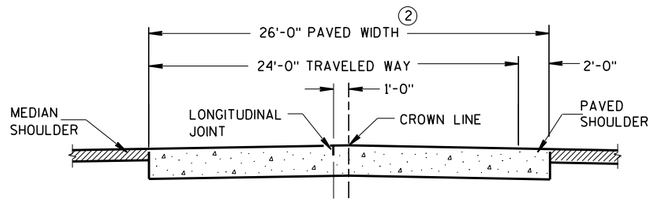


SECTION A-A ①
TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B
①
DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

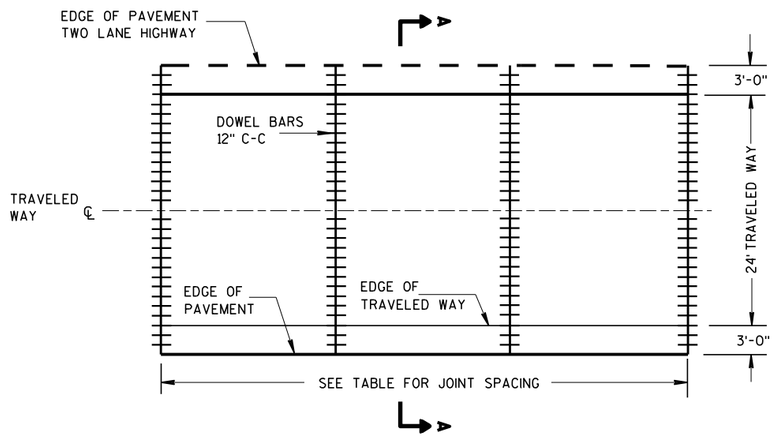
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

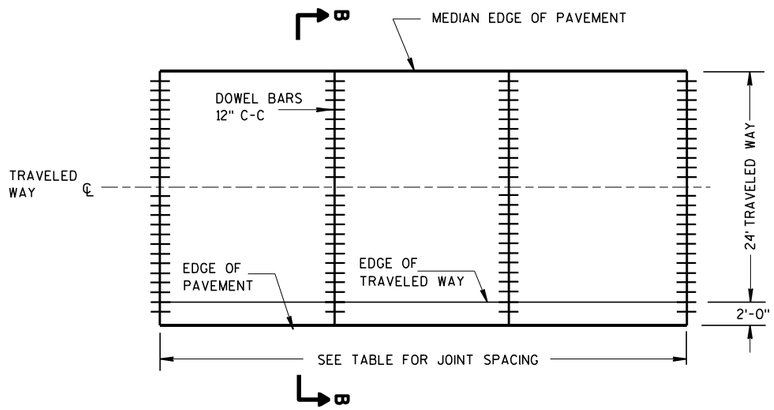
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

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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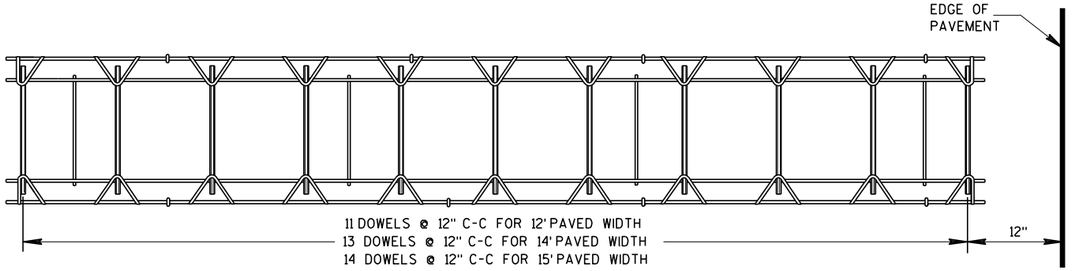
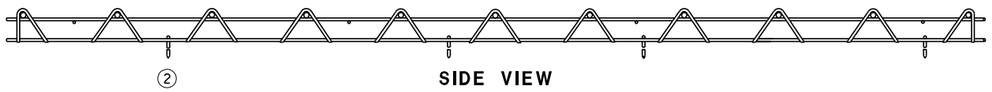
S.D.D. 13 C 11-12a



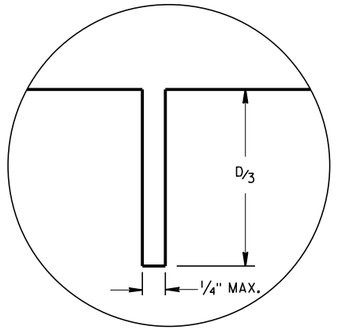
PLAN VIEW



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.

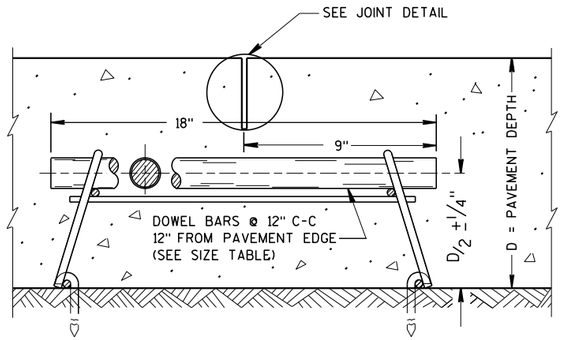
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

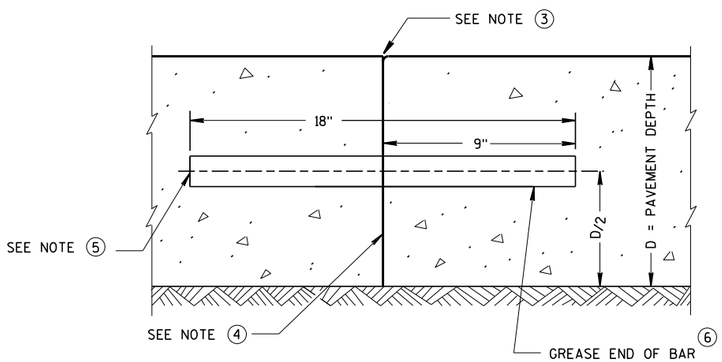
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

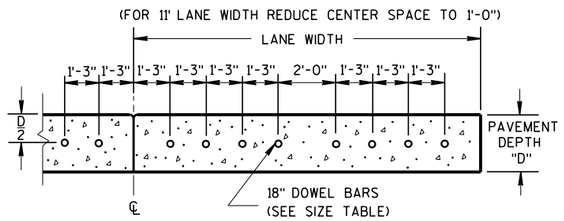
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



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	/S/ Peter Kemp P.E. PAVEMENT SUP
FHWA	

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S.D.D. 13 C 11-12b

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

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

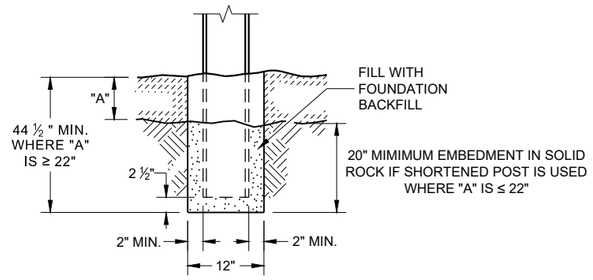
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

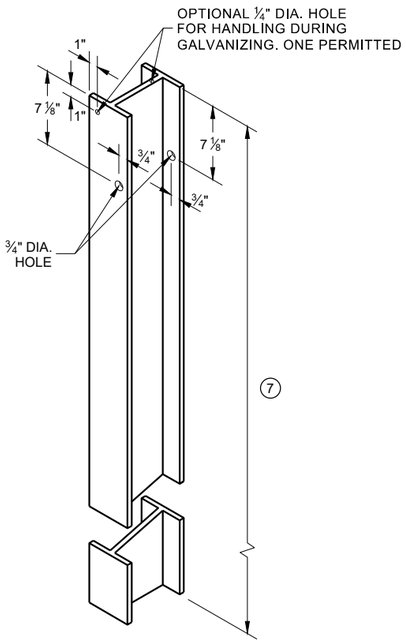
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

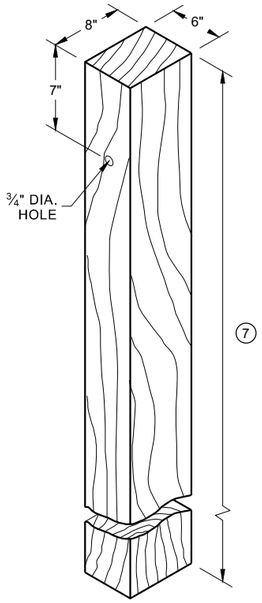
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



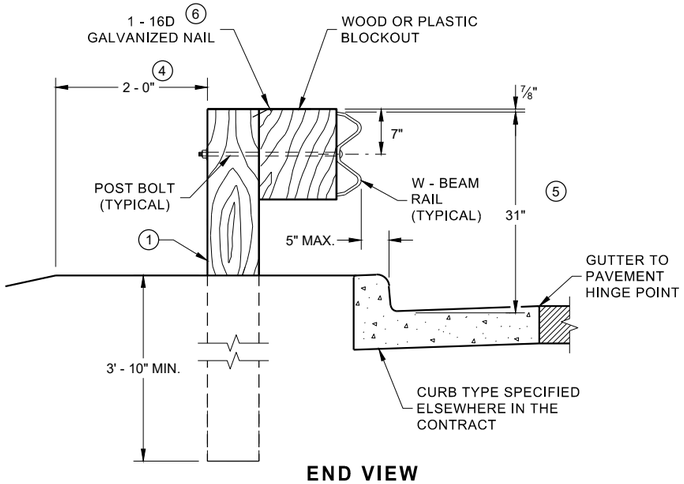
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



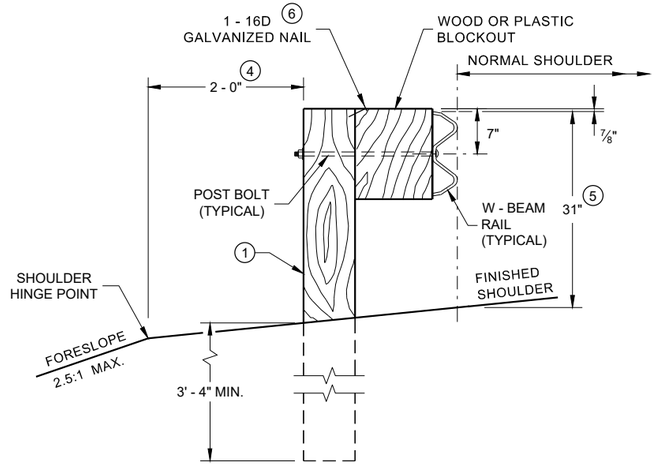
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



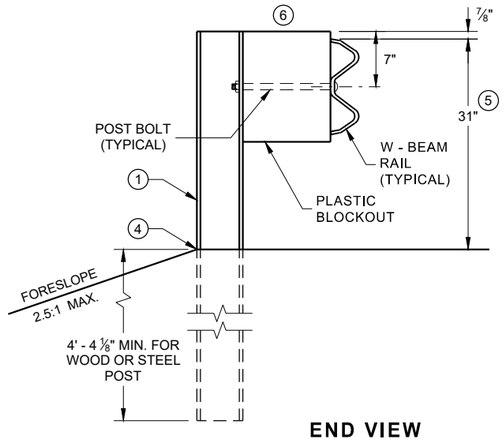
WOOD POST (6" X 8") NOMINAL (1)



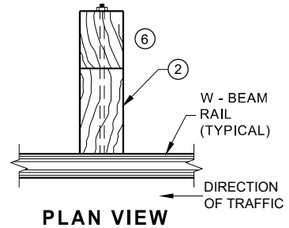
END VIEW
LOCATED ALONG A CURBED ROADWAY



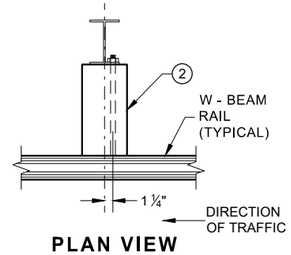
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



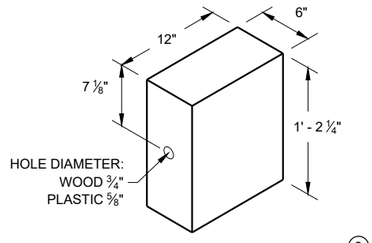
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

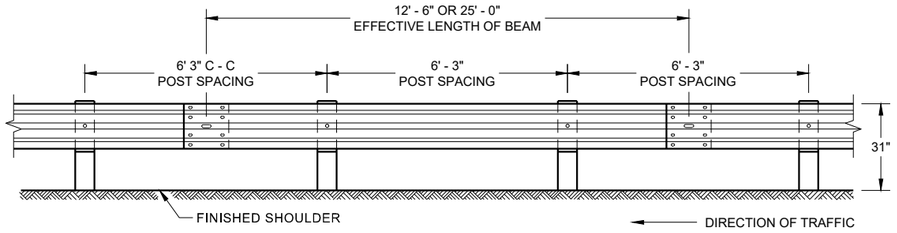
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

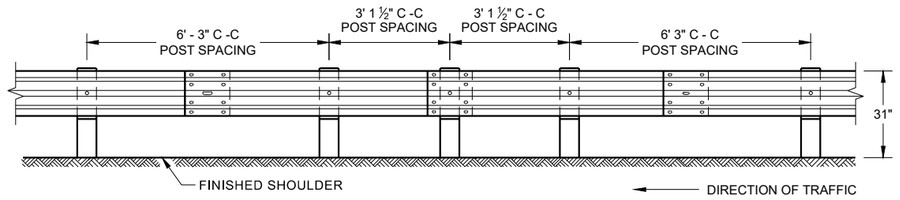
SDD 14B42 - 07a

6

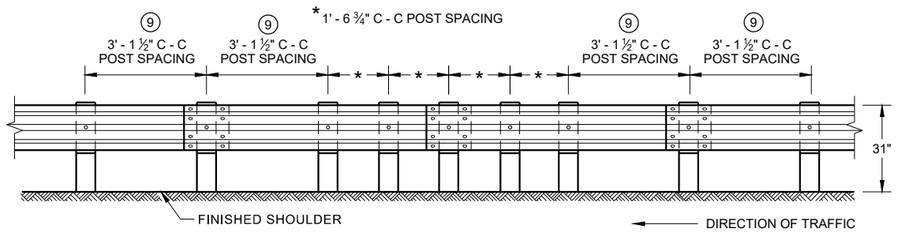
SDD 14B42 - 07a



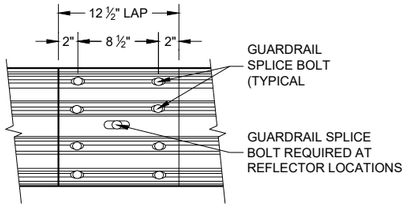
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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

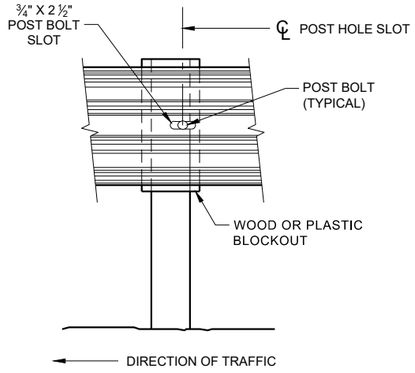
GENERAL NOTES

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

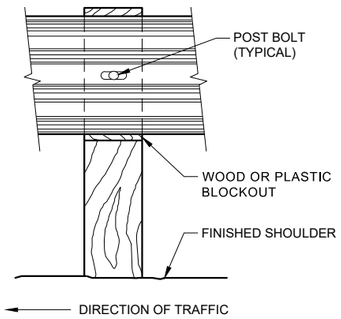
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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

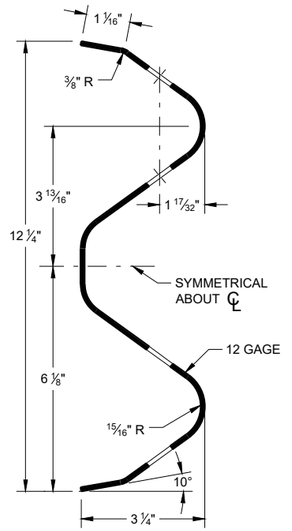
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



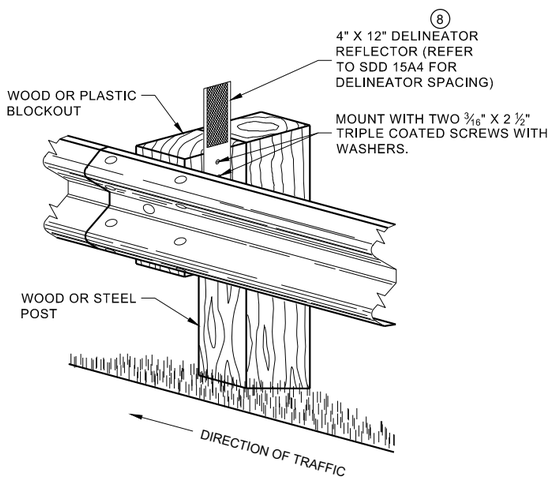
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



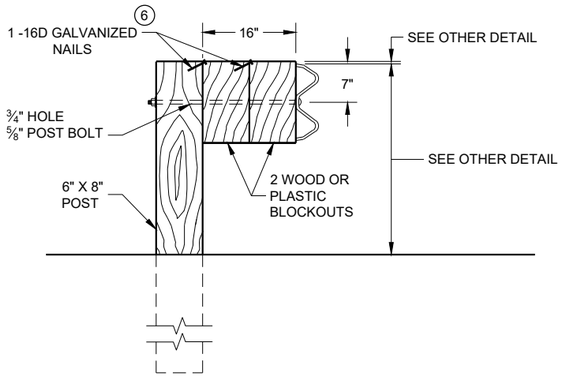
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 07b
SDD 14B42 - 07b

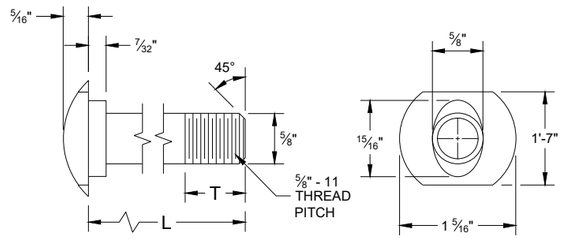


DETAIL FOR 16" BLOCKOUT DEPTH

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.

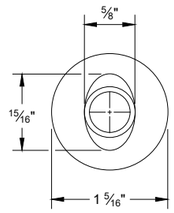
NOTE:

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.

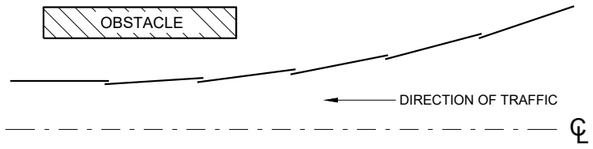


POST BOLT TABLE

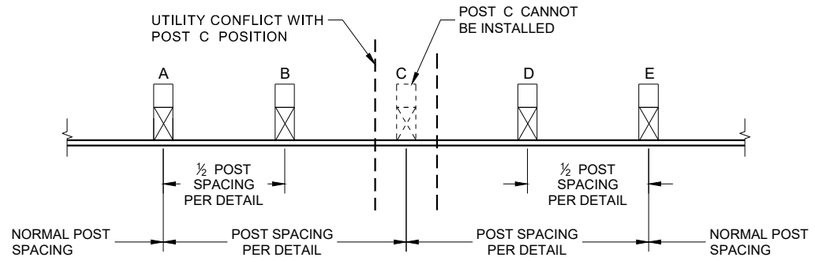
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



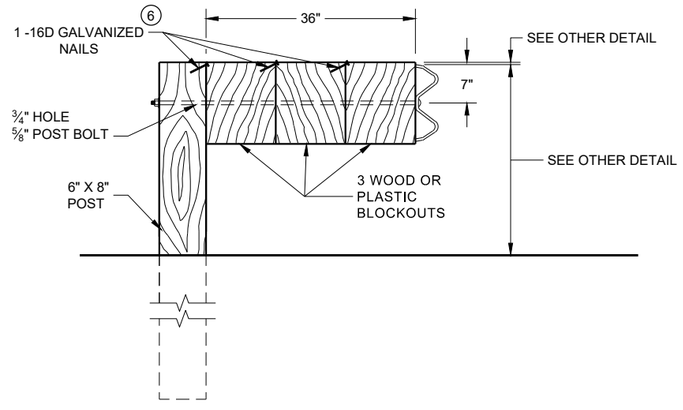
ALTERNATE BOLT HEAD



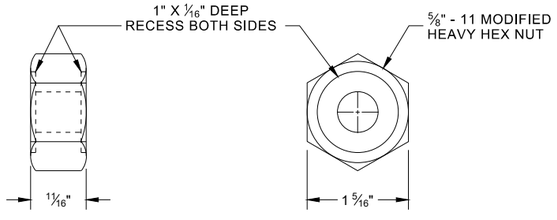
PLAN VIEW
BEAM LAPPING DETAIL



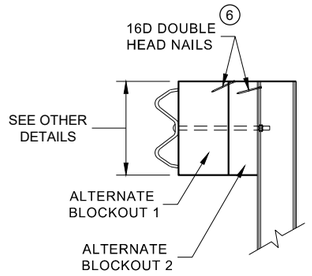
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



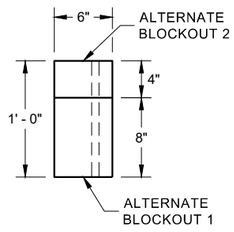
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

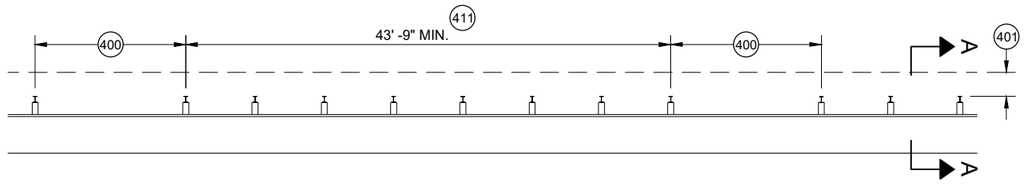
ALTERNATE WOOD BLOCKOUT DETAIL

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.

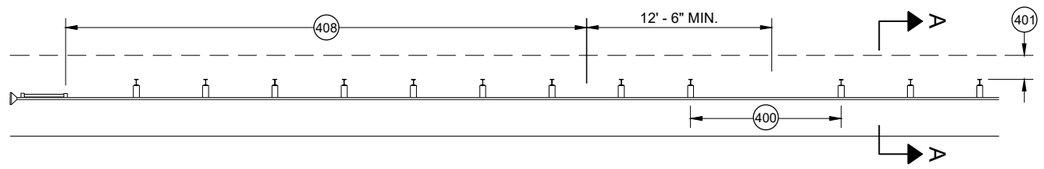
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

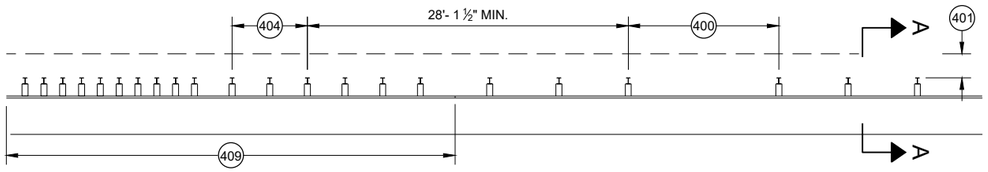
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



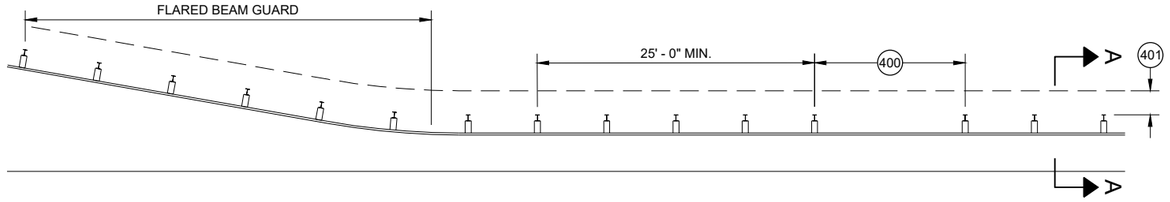
MISSING POST IN MGS GUARDRAIL



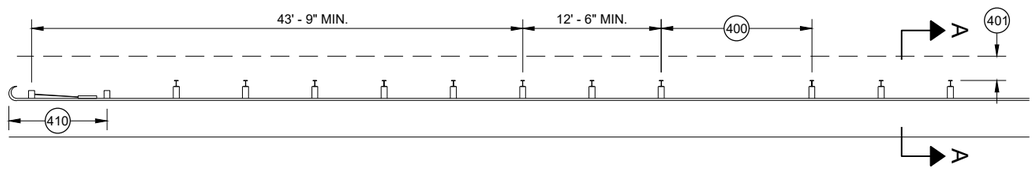
MISSING POST IN MGS GUARDRAIL NEAR EAT



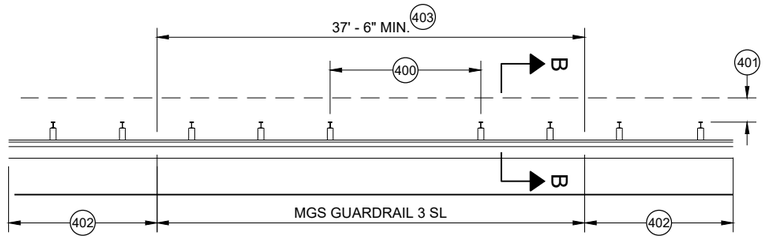
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

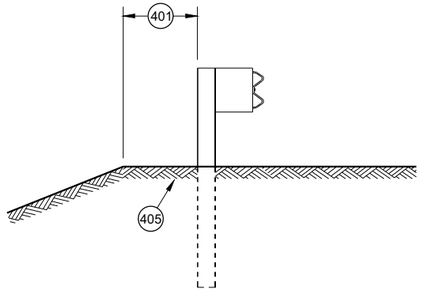


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

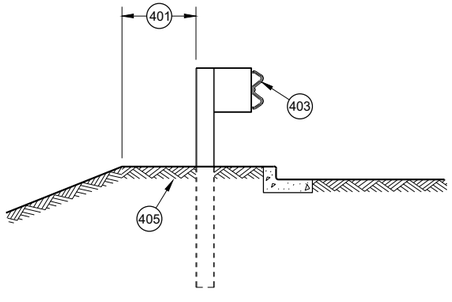


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
FHWA

6

SDD 14B42 - 07d

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.

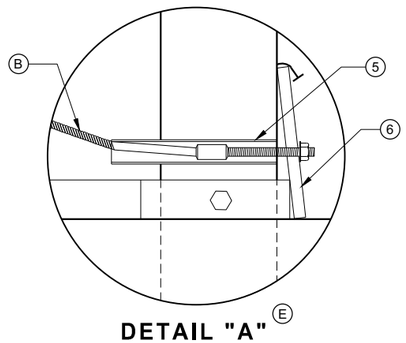
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

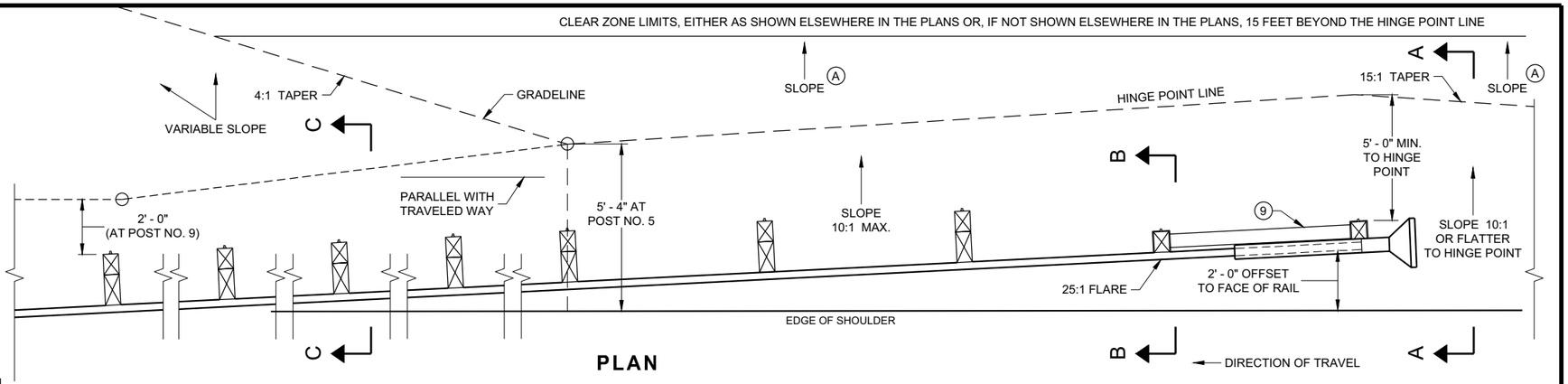
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

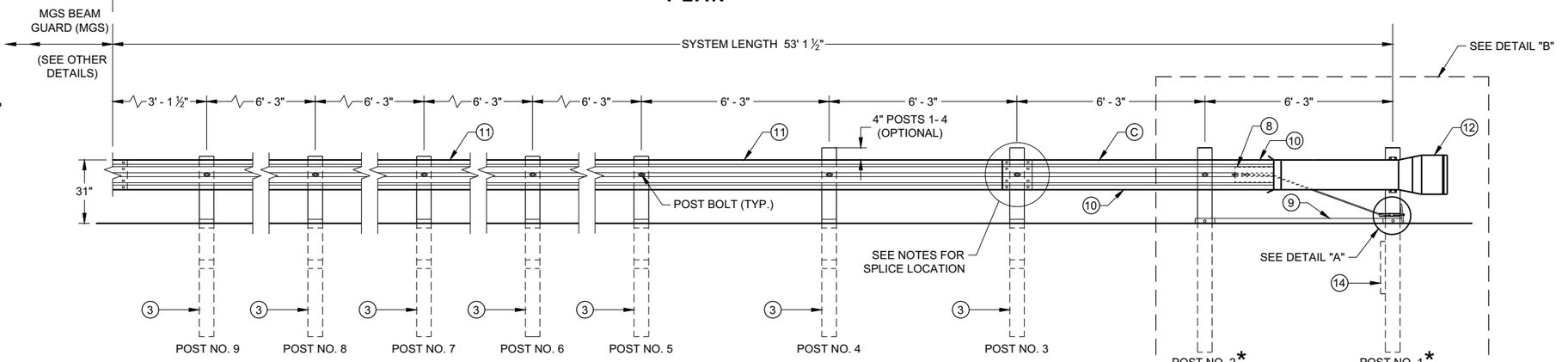
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

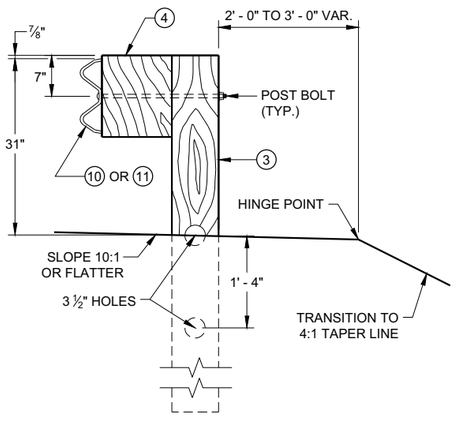
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



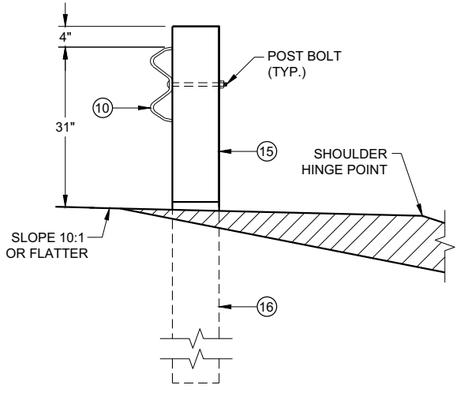
DETAIL "A" (E)



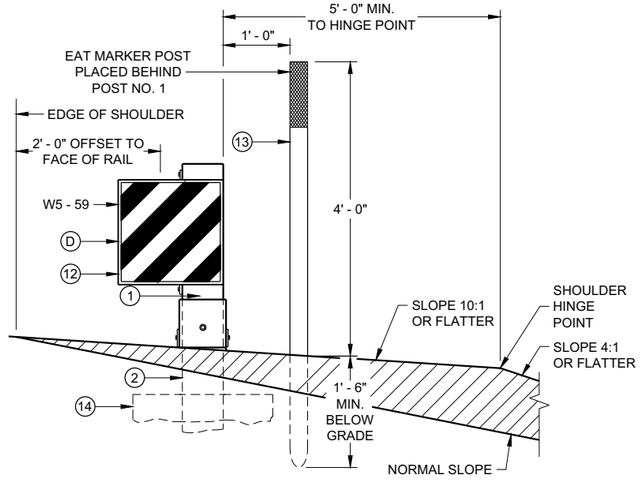




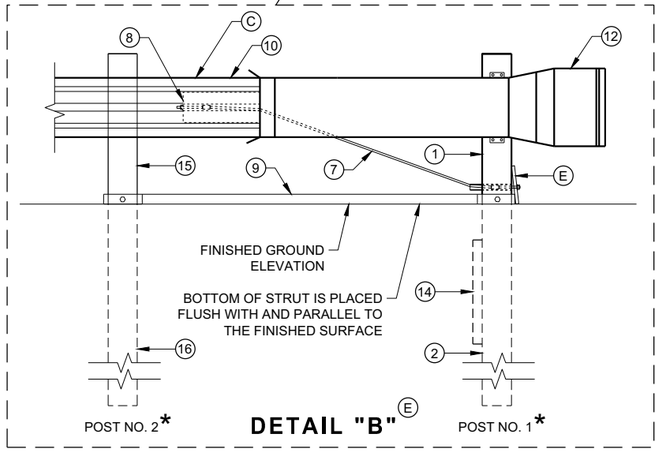
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



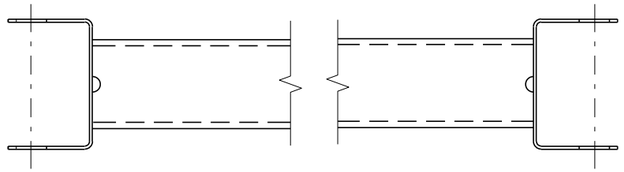
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

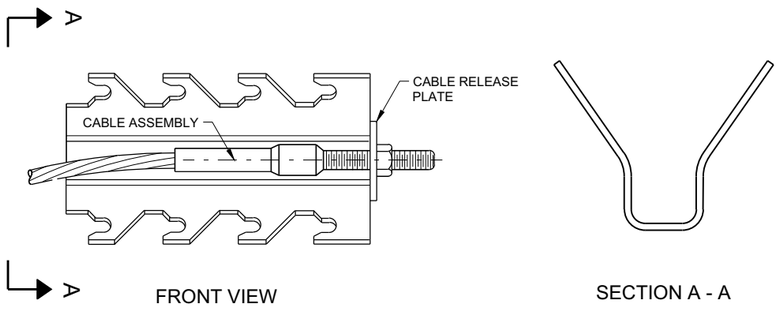
SDD 14B44 - 04a



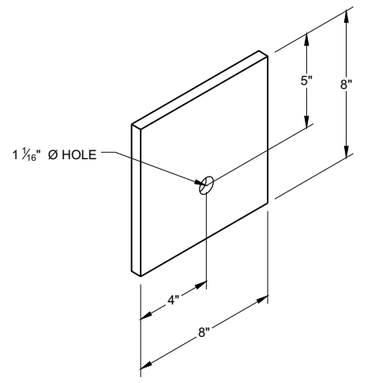
GENERIC GROUND STRUT ⑨ Ⓔ

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 Ⓔ



BEARING PLATE ⑥ Ⓔ

6

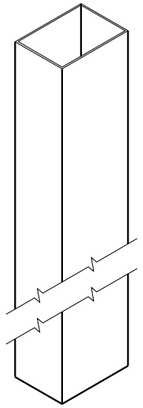
6

SDD 14B44 - 04b

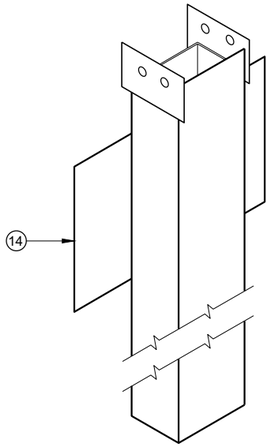
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

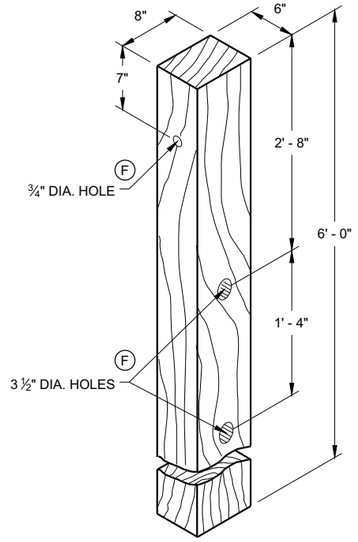
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



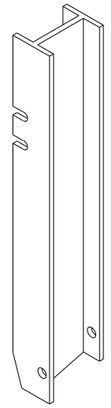
UPPER POST NO. 1 (1) (E)



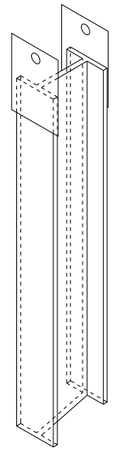
LOWER POST NO. 1 (2) (E)



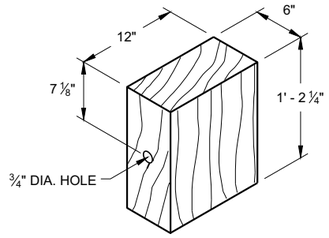
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



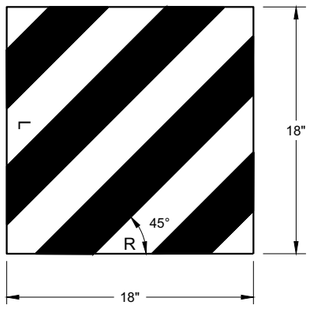
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

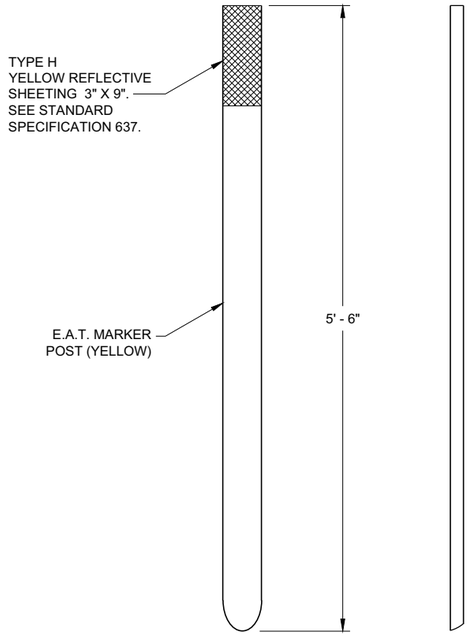


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



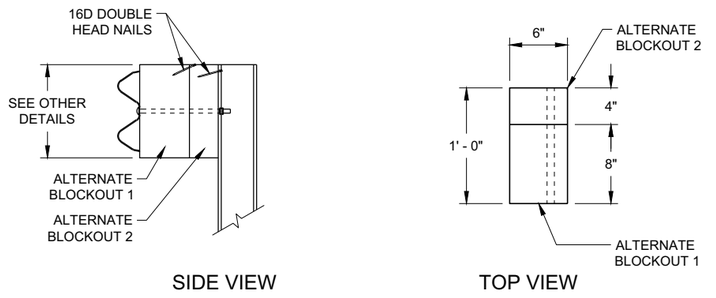
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

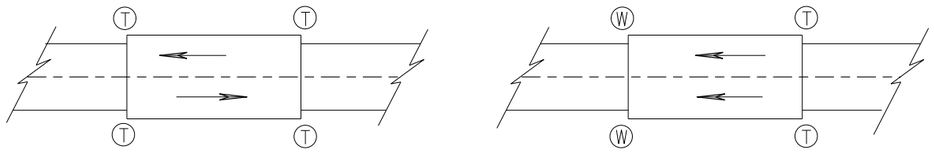
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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.

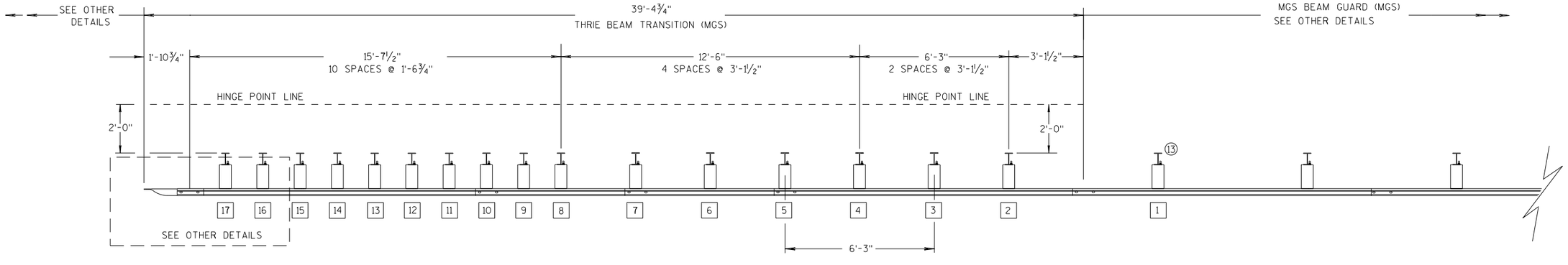
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

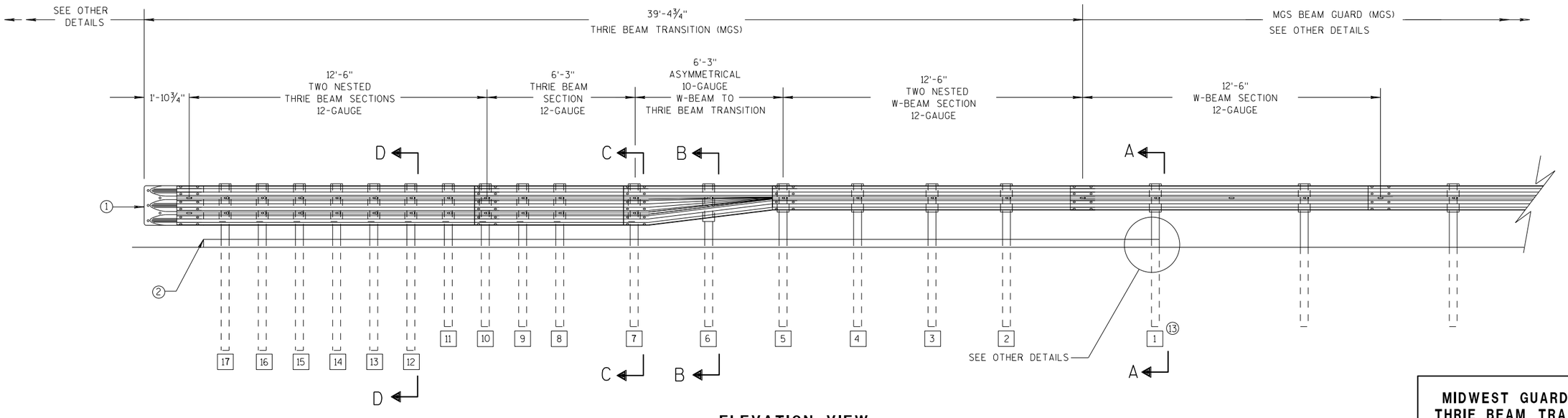
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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

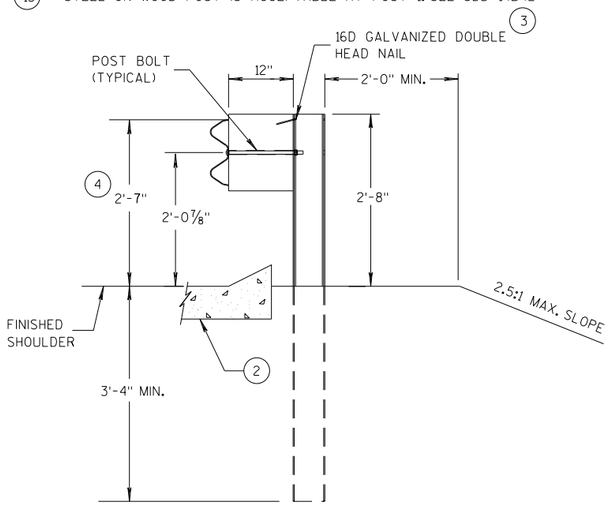
GENERAL NOTES

(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.

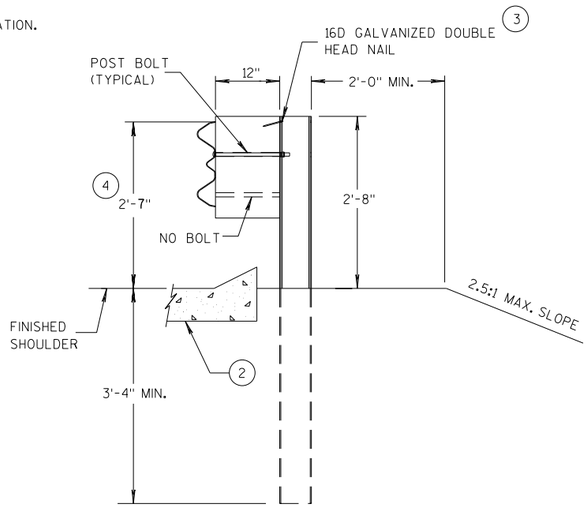
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



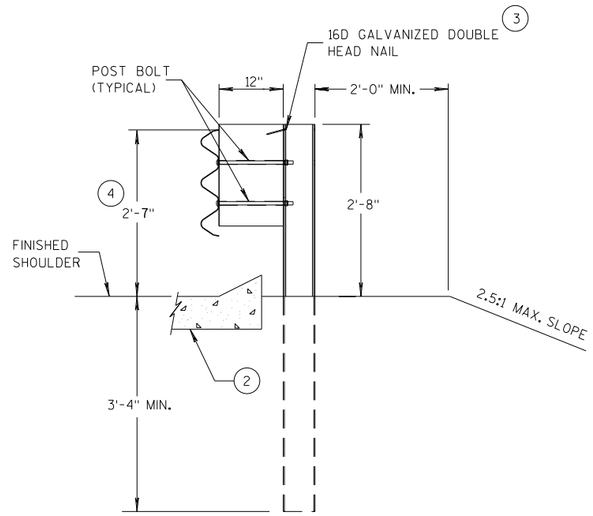
SECTION A-A (13)

POSTS 1-5



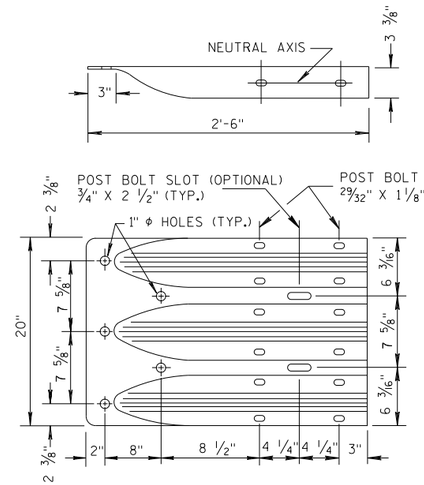
SECTION B-B

POST 6

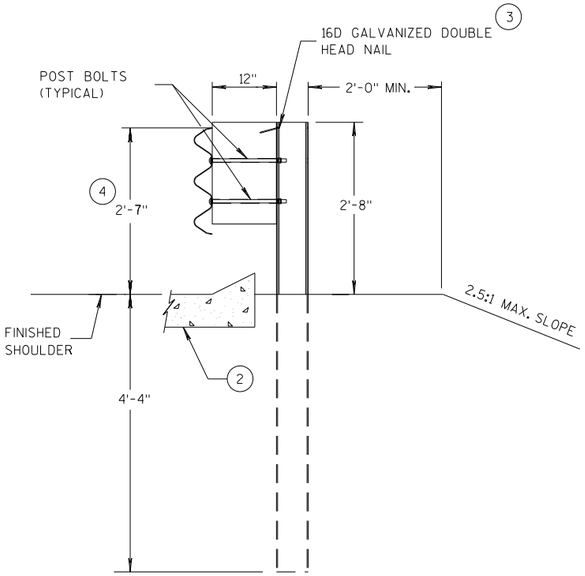


SECTION C-C

POSTS 7-11

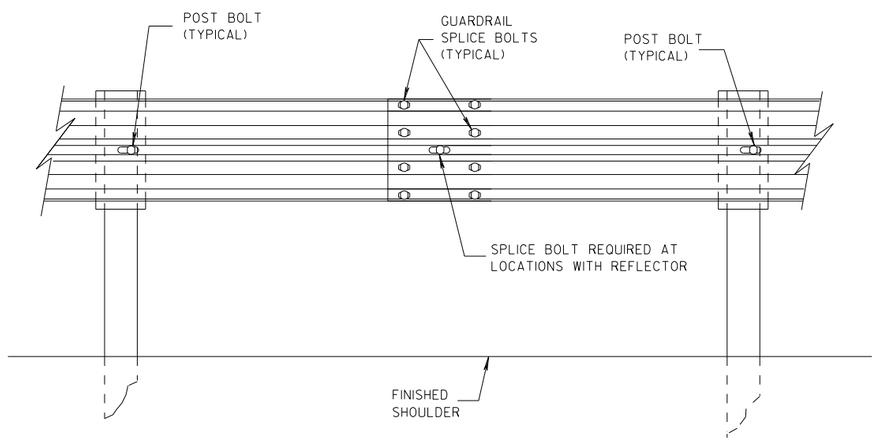


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

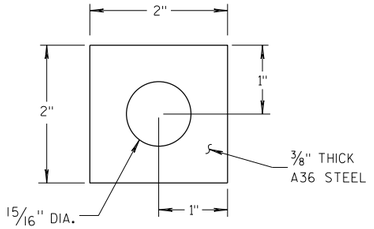
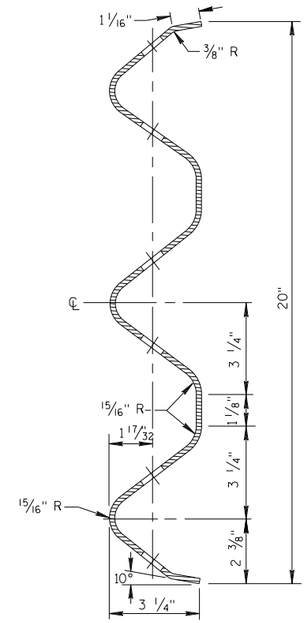


PLATE WASHER DETAIL



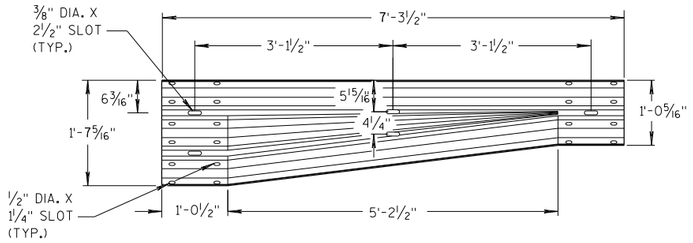
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

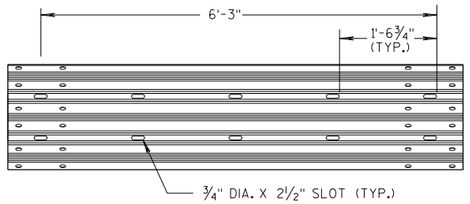
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

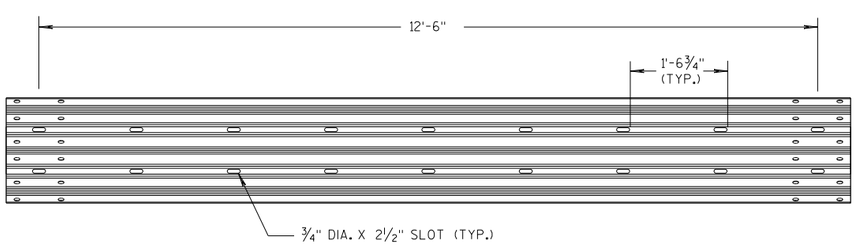
S.D.D. 14 B 45-5b



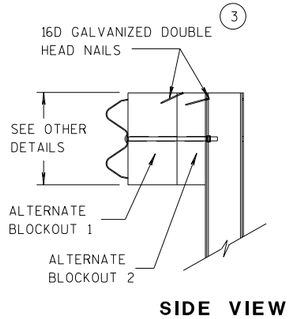
W-BEAM TO THRIE BEAM TRANSITION SECTION



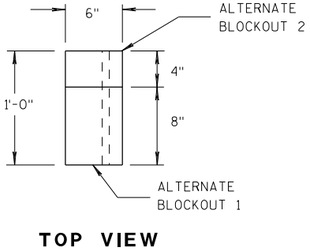
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

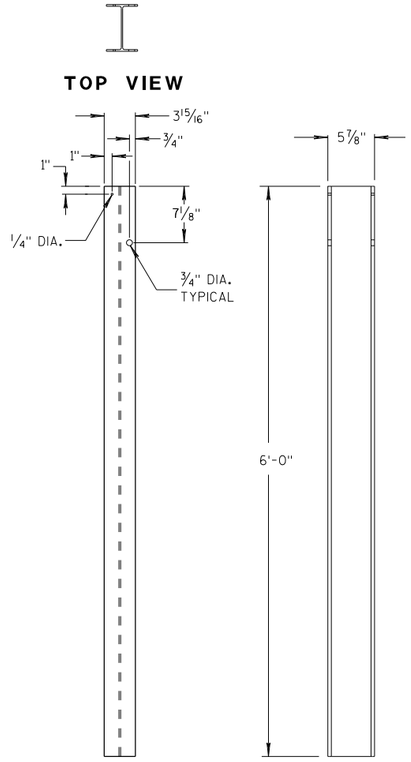


SIDE VIEW



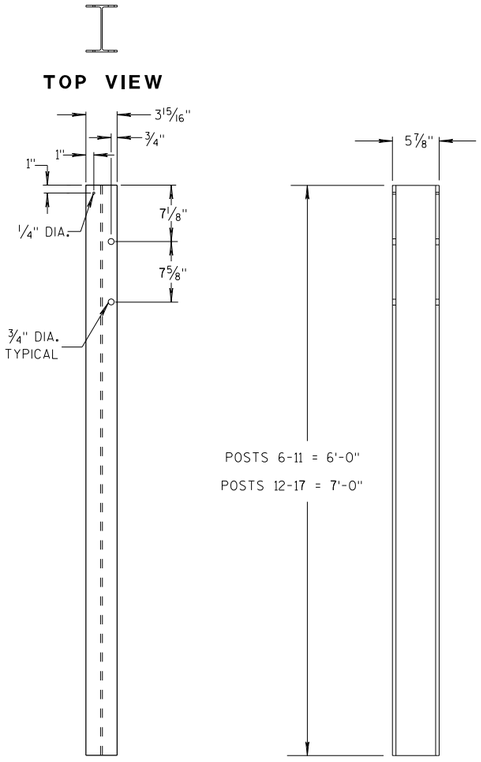
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



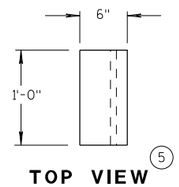
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

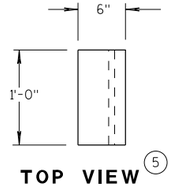


FRONT VIEW SIDE VIEW

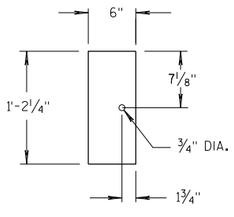
STEEL POSTS 6-17



TOP VIEW (5)

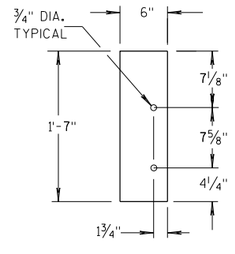


TOP VIEW (5)



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.

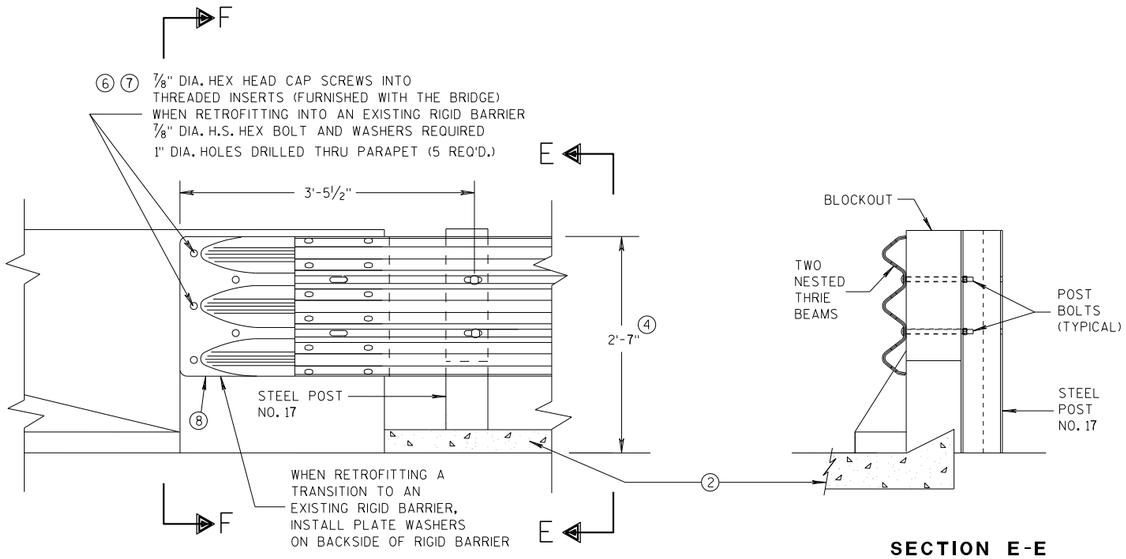
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

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.

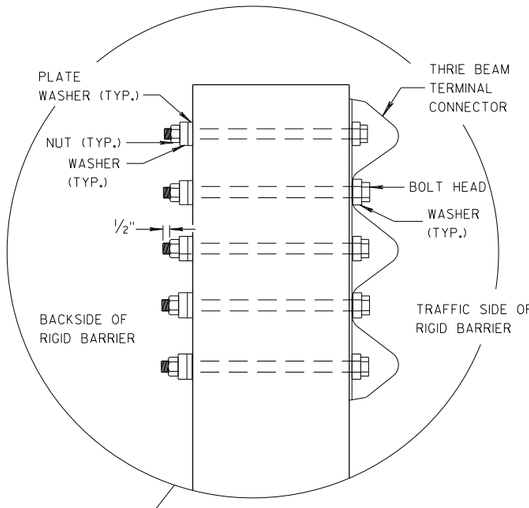
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

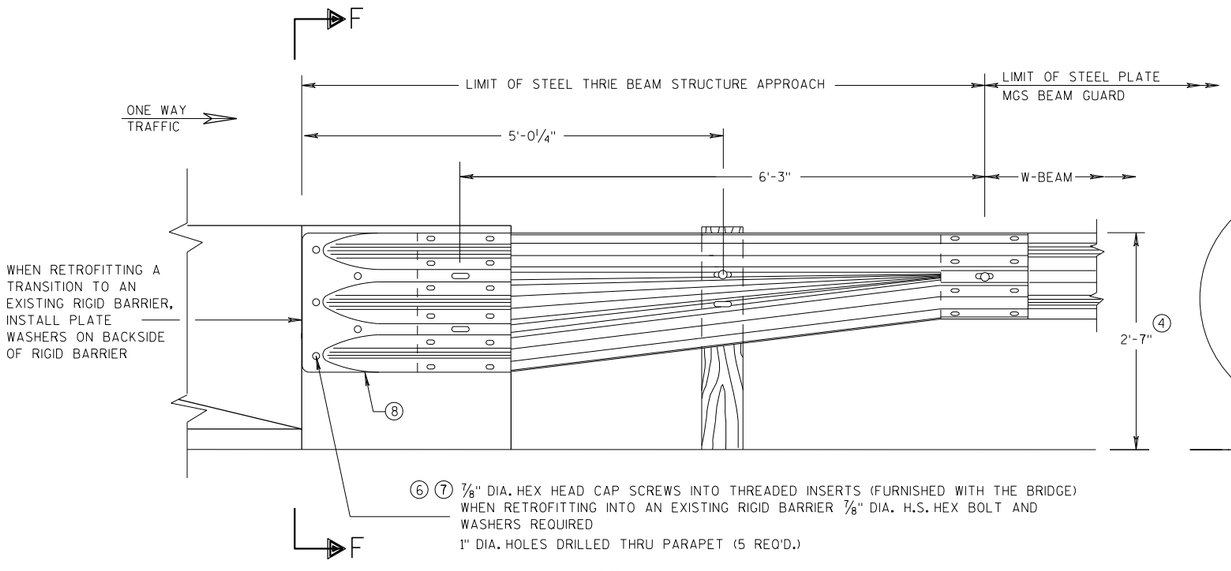
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

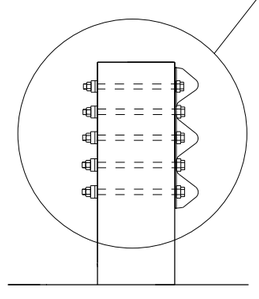
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

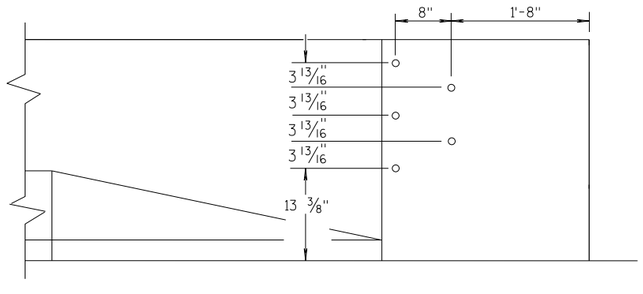




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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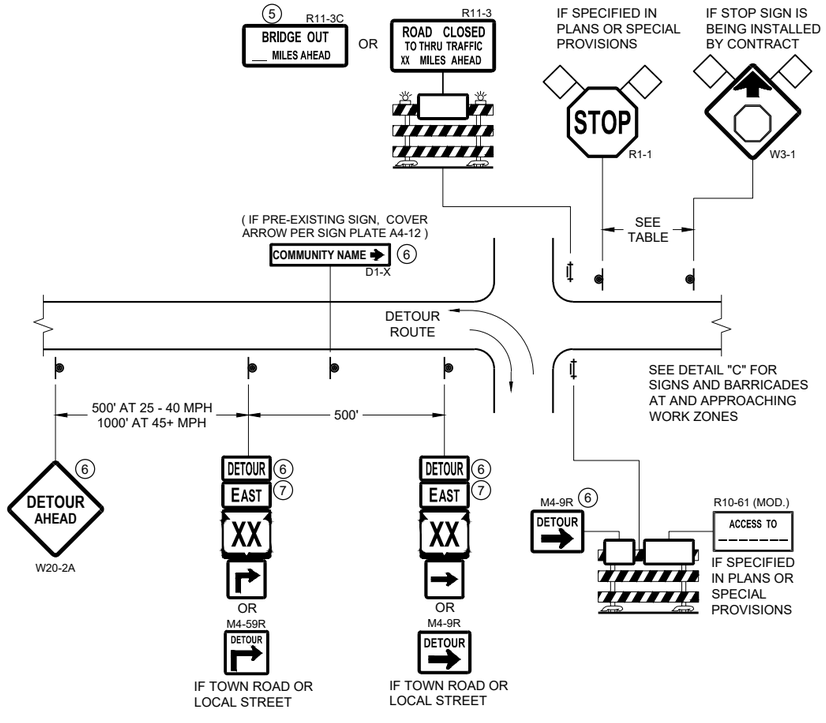
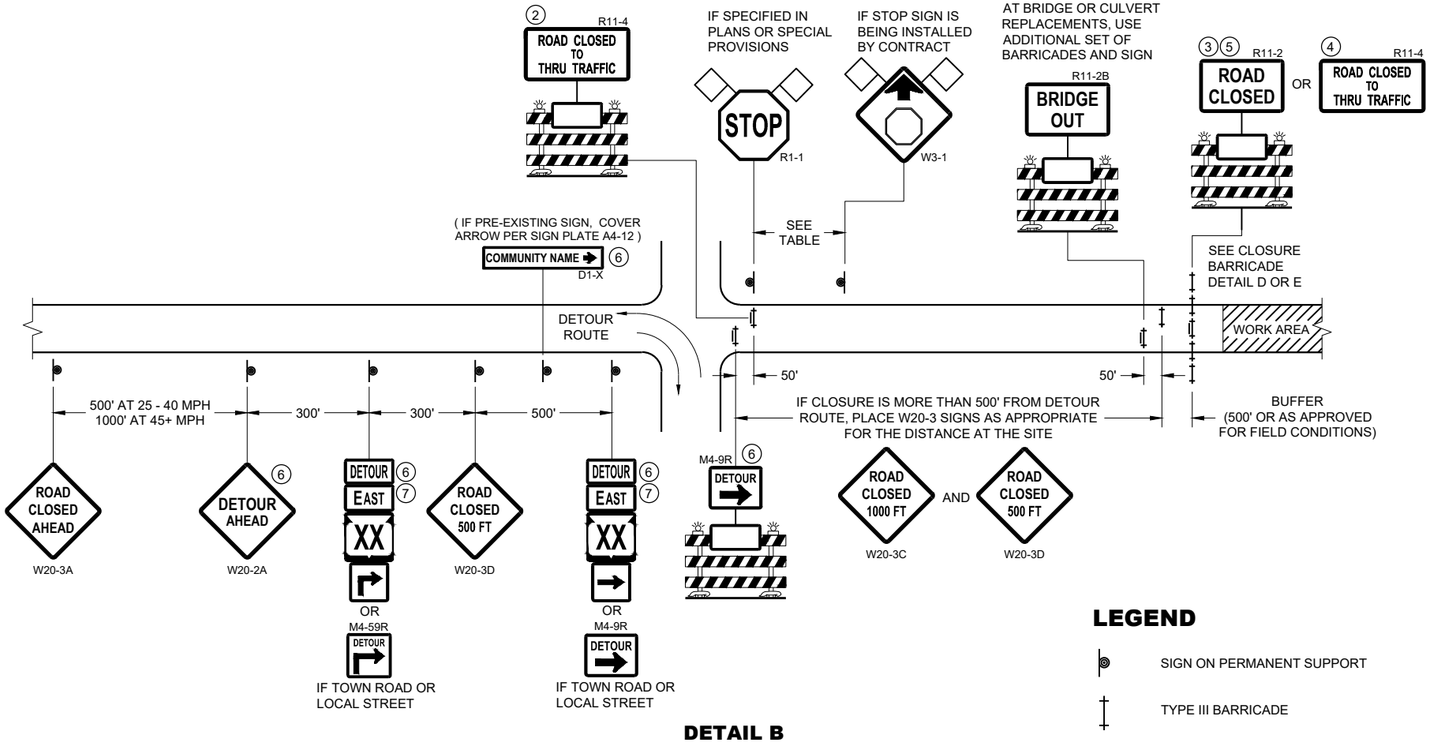
S.D.D. 14 B 45-5d



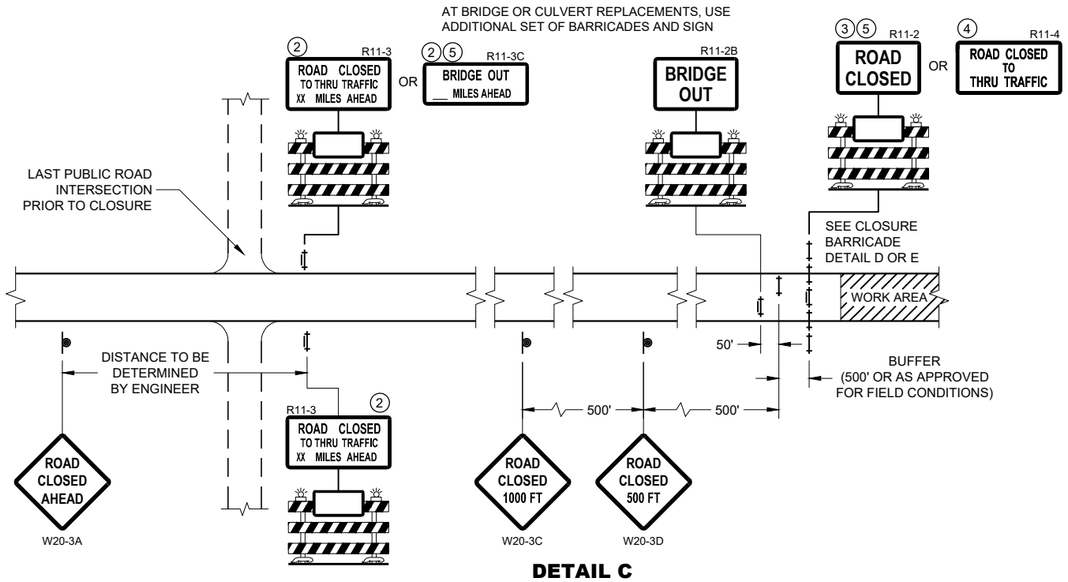
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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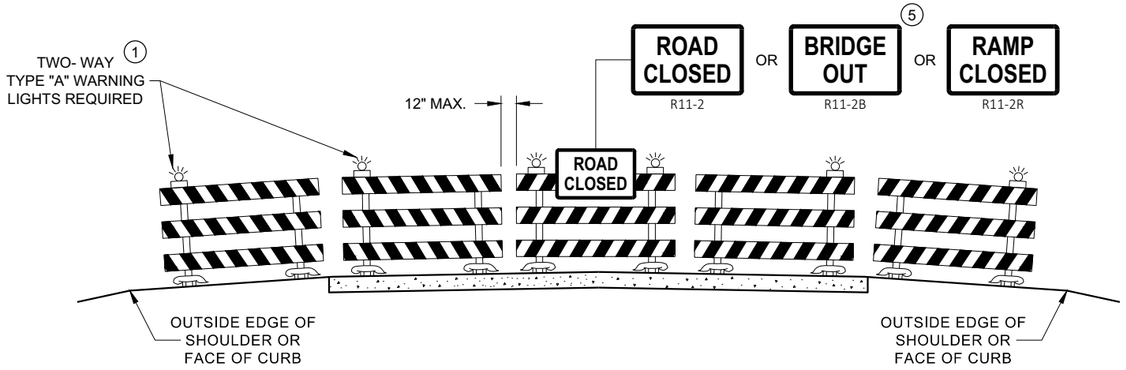
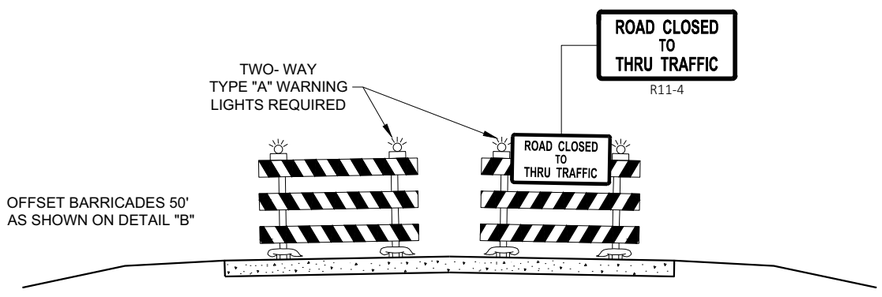
SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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SDD 15C02 - 08b

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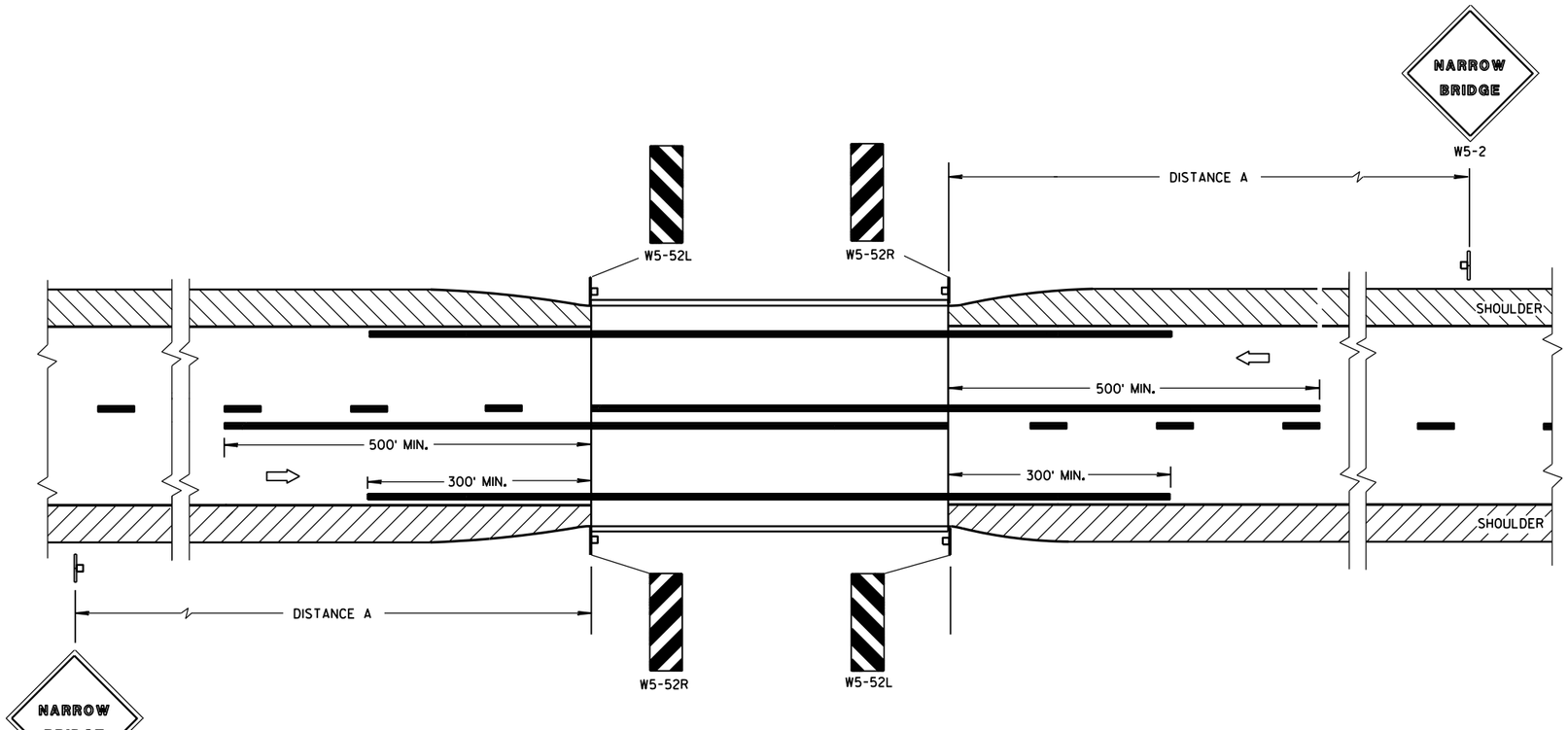
SDD 15C02 - 08b



SITUATION 1

WARRANTING CRITERIA:

BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

GENERAL NOTES

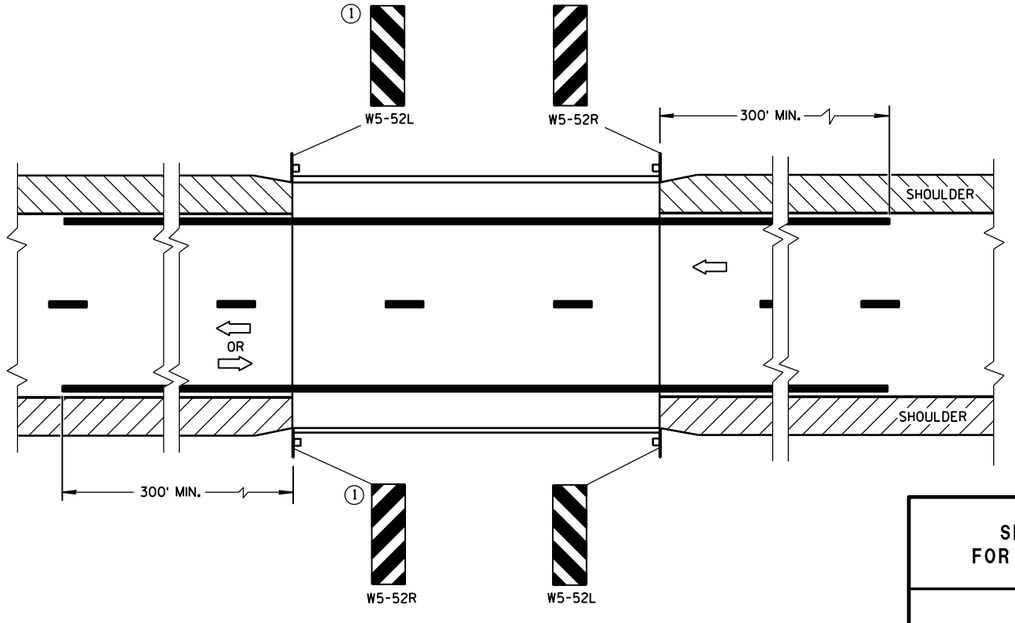
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

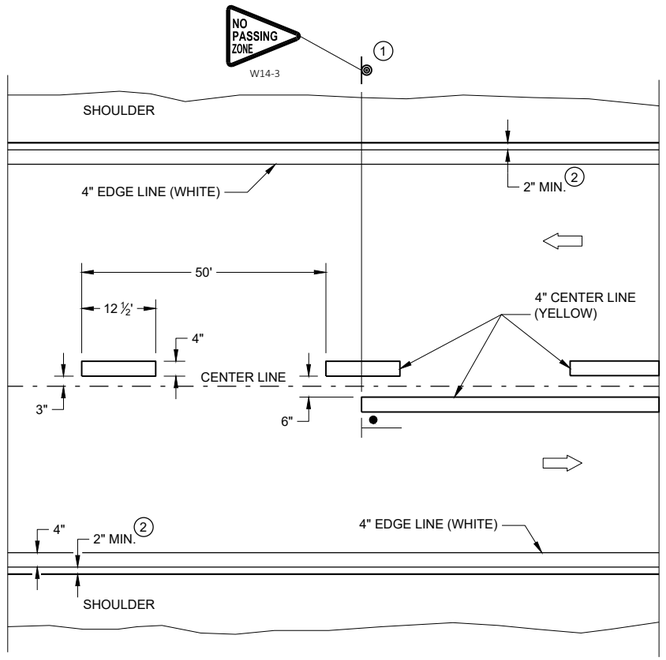
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

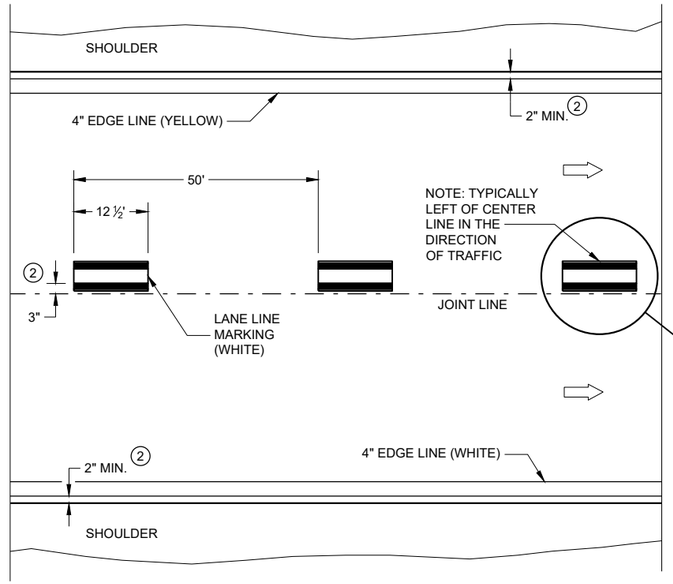
S.D.D. 15 C 6-9

6

S.D.D. 15 C 6-9



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

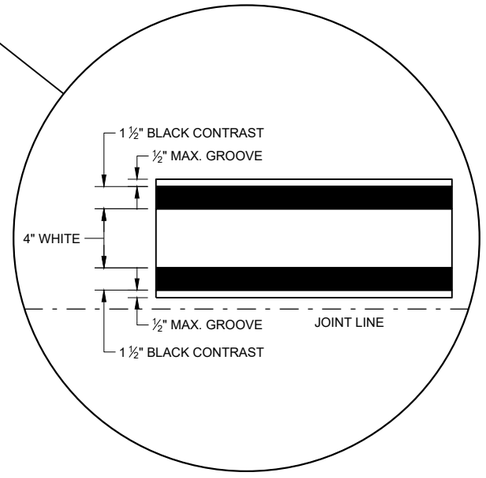
GENERAL NOTES

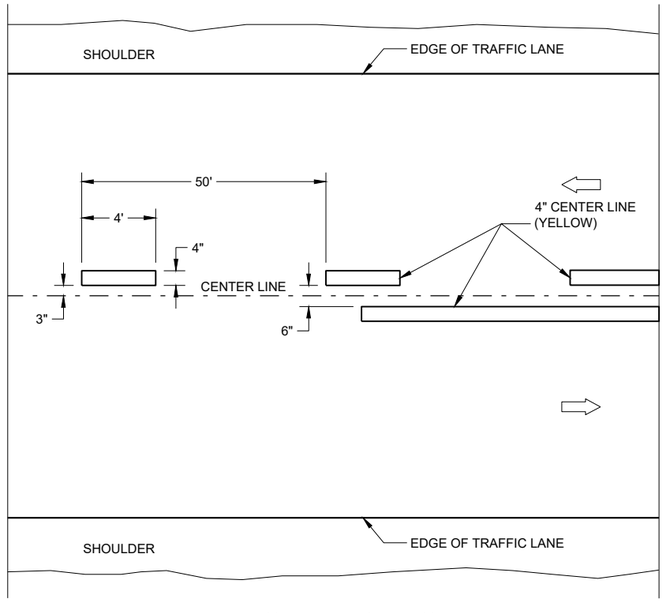
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

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

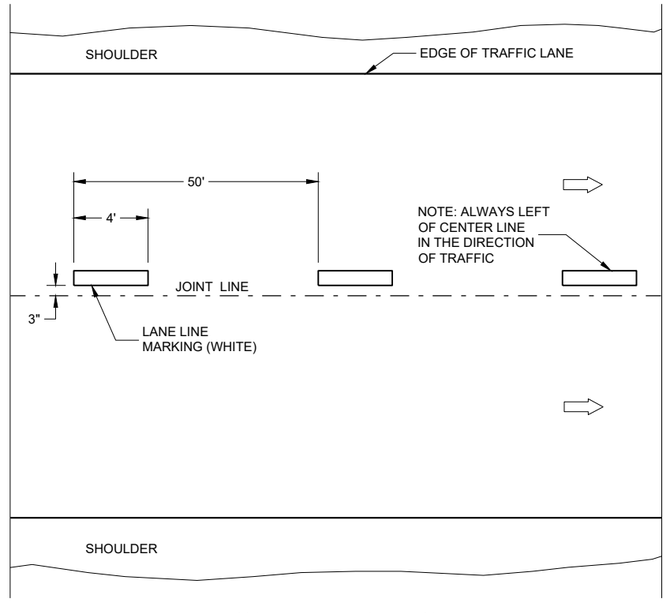
LEGEND

- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC





TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Matthew Rauch — STATEWIDE SIGNING AND M ENGINEER

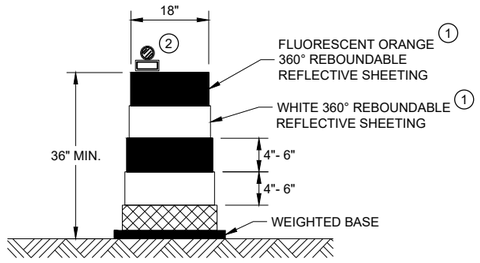
FHWA

SDD 15C08 - 20a

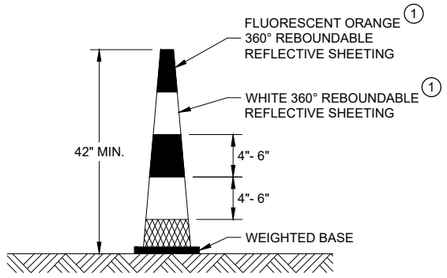
6

GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

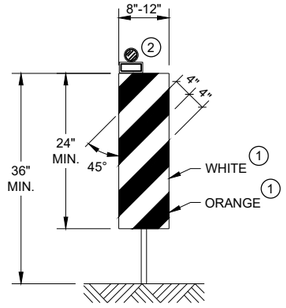


DRUM



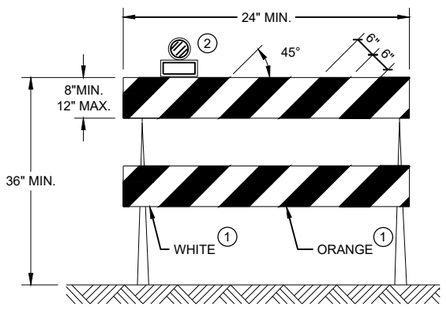
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



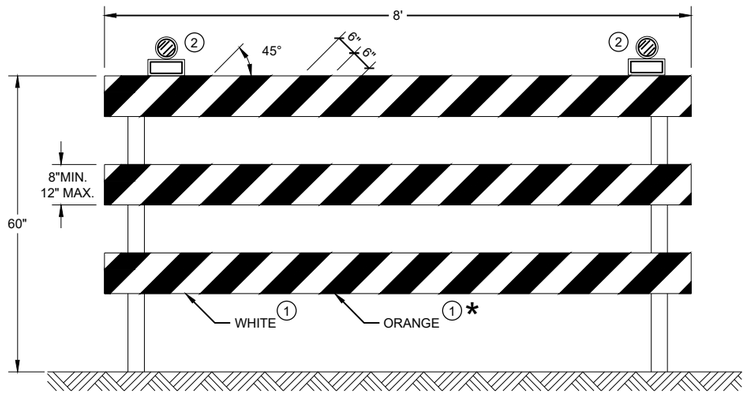
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

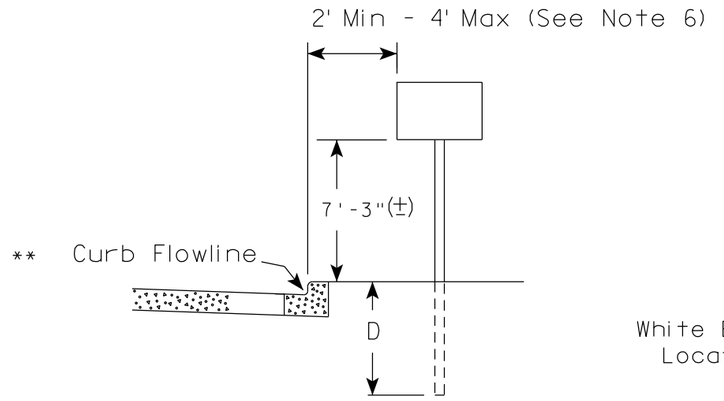
6

SDD 15C11 - 09b

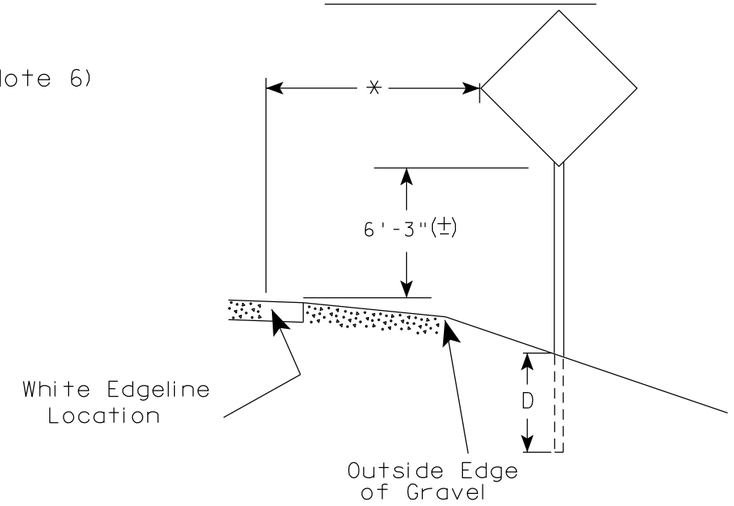
6

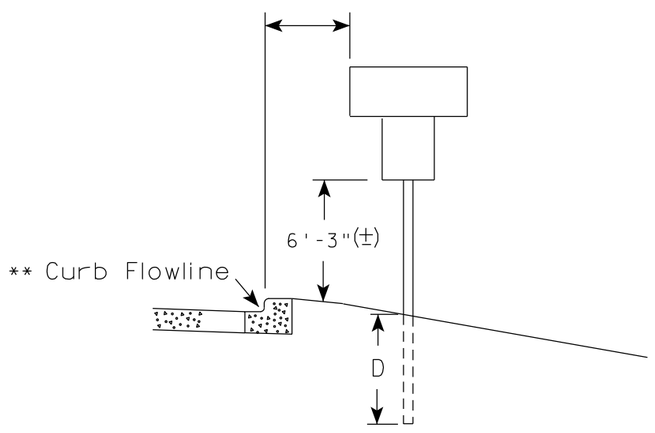
SDD 15C11 - 09b

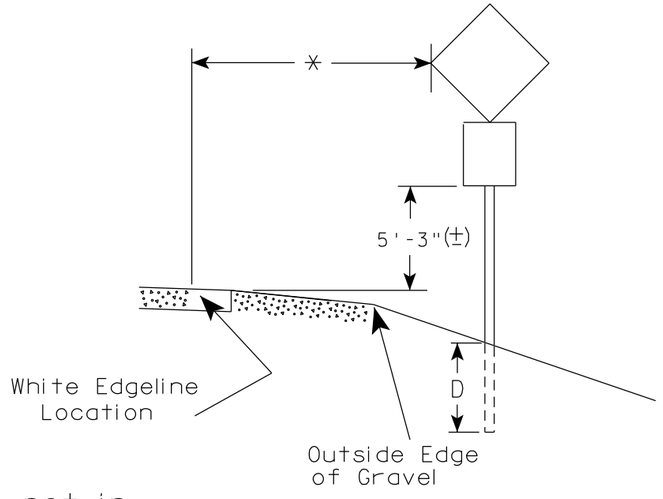
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

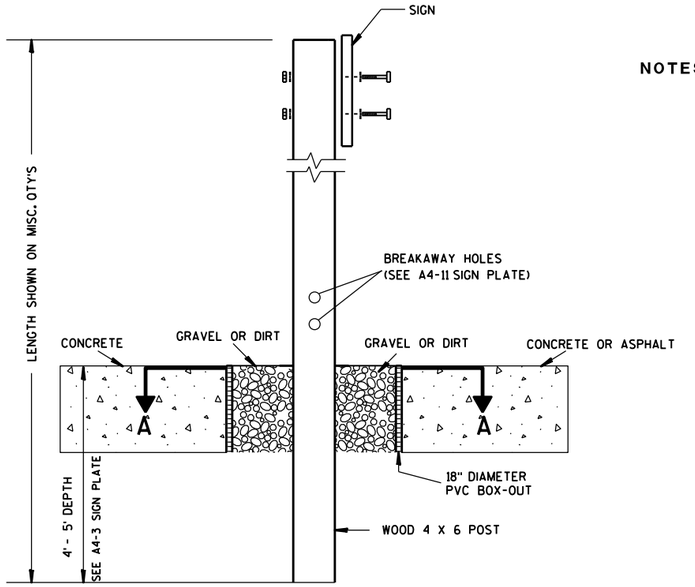
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

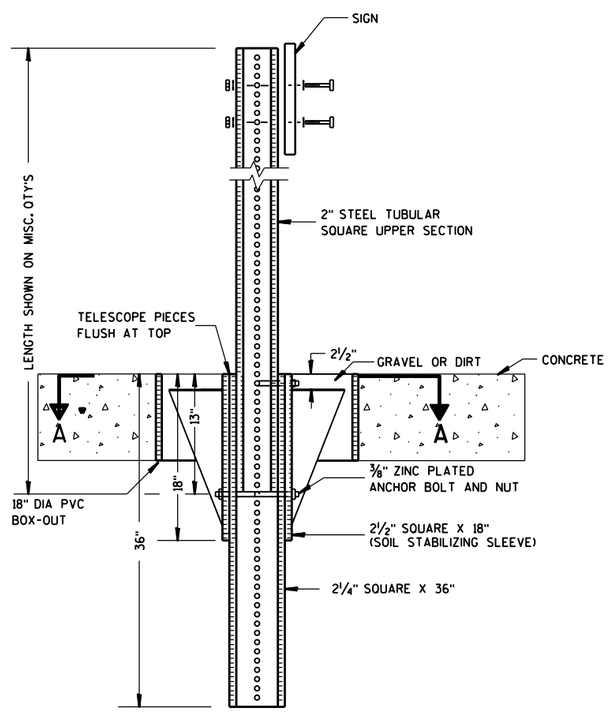
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 44	E



ELEVATION VIEW

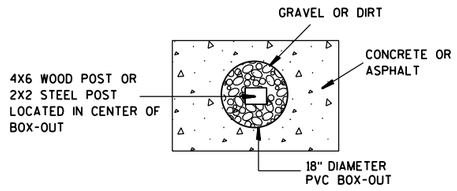
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

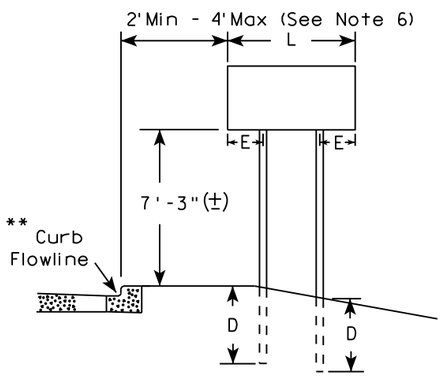
APPROVED Matthew R Rauch
for State Traffic Engineer

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

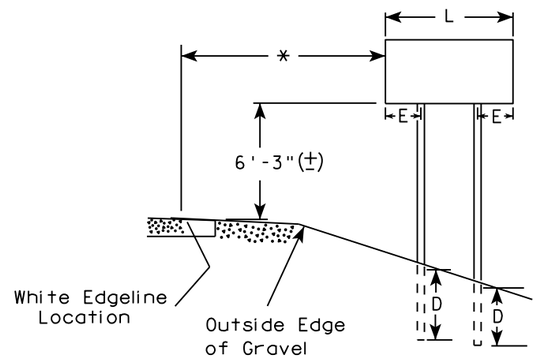
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

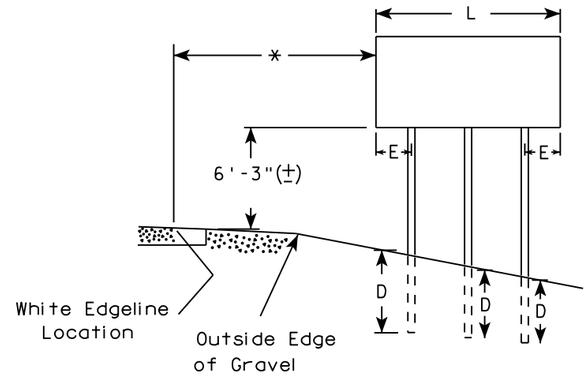
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

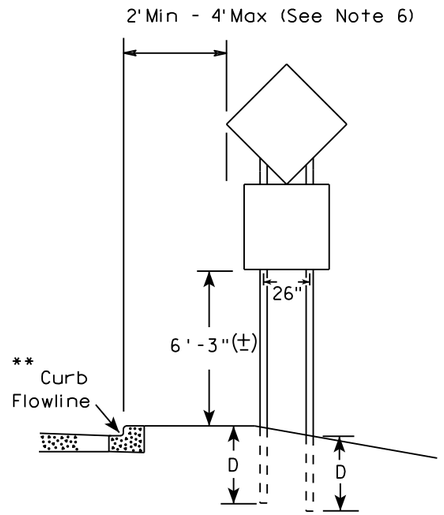
URBAN AREA



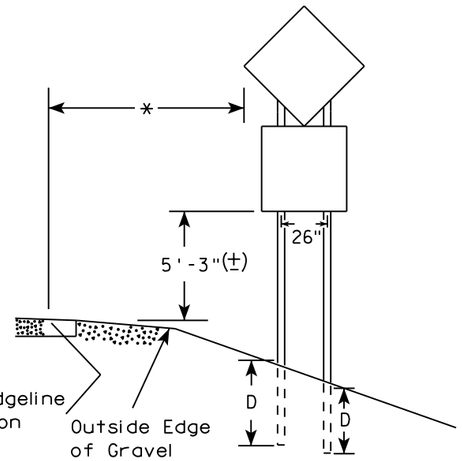
RURAL AREA (See Note 3)







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'

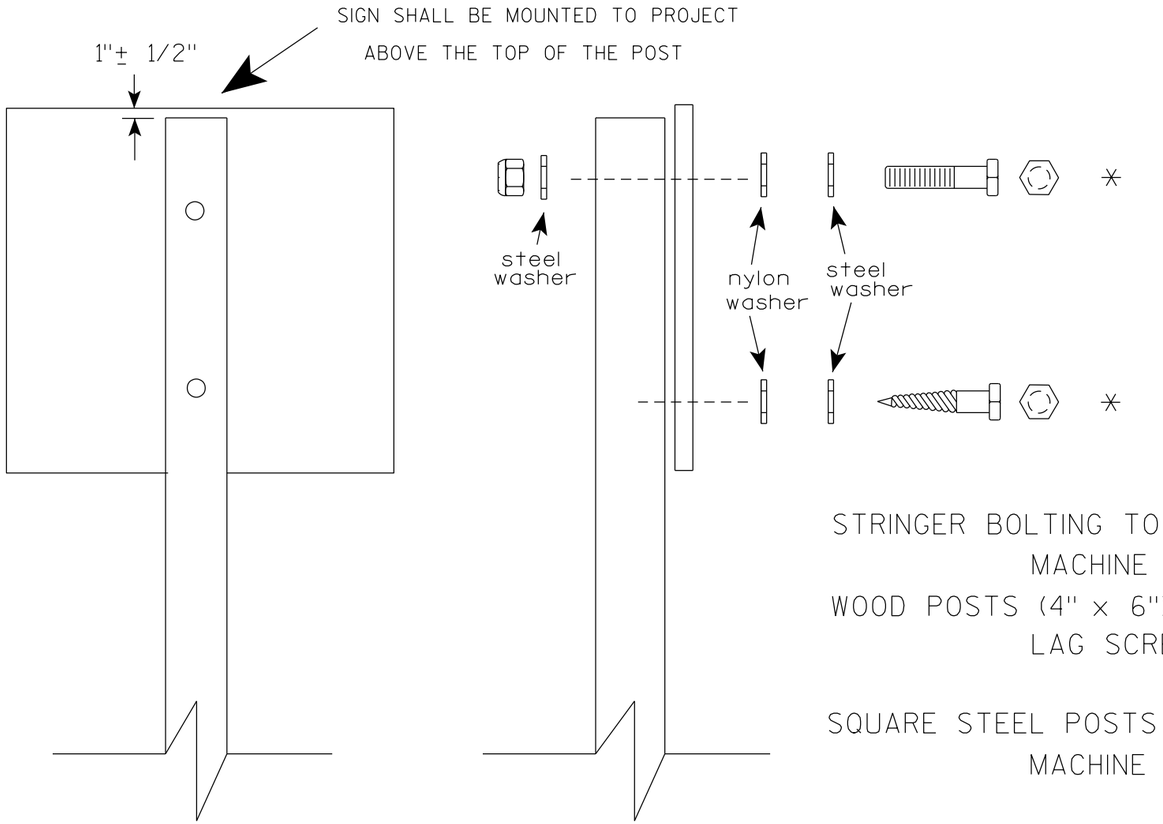
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 46	E



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

WASHERS (ALL POSTS) -

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

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

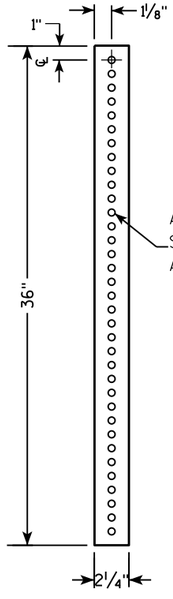
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

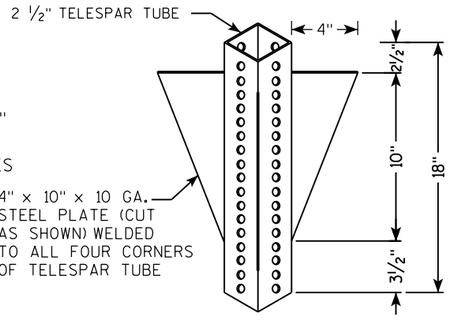
SHEET NO: 47 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

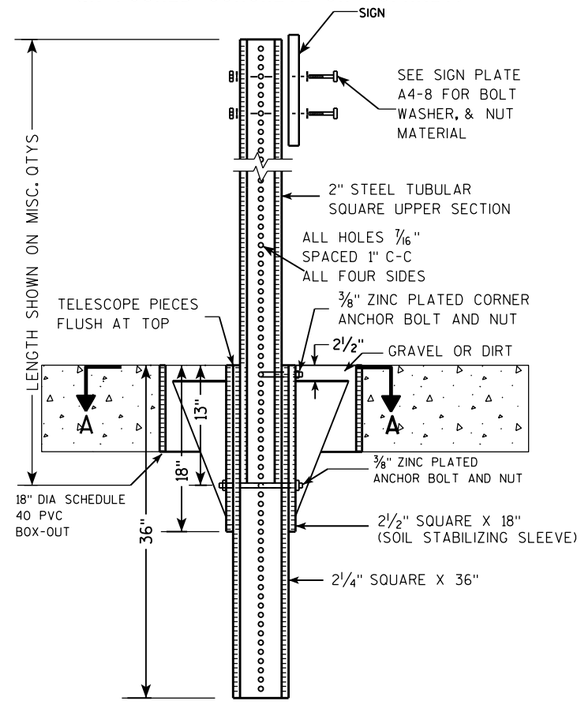
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



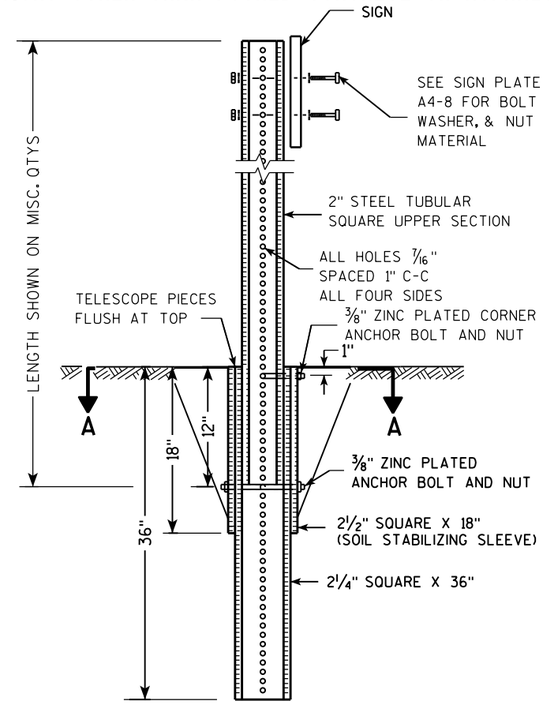
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

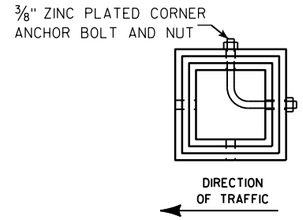


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

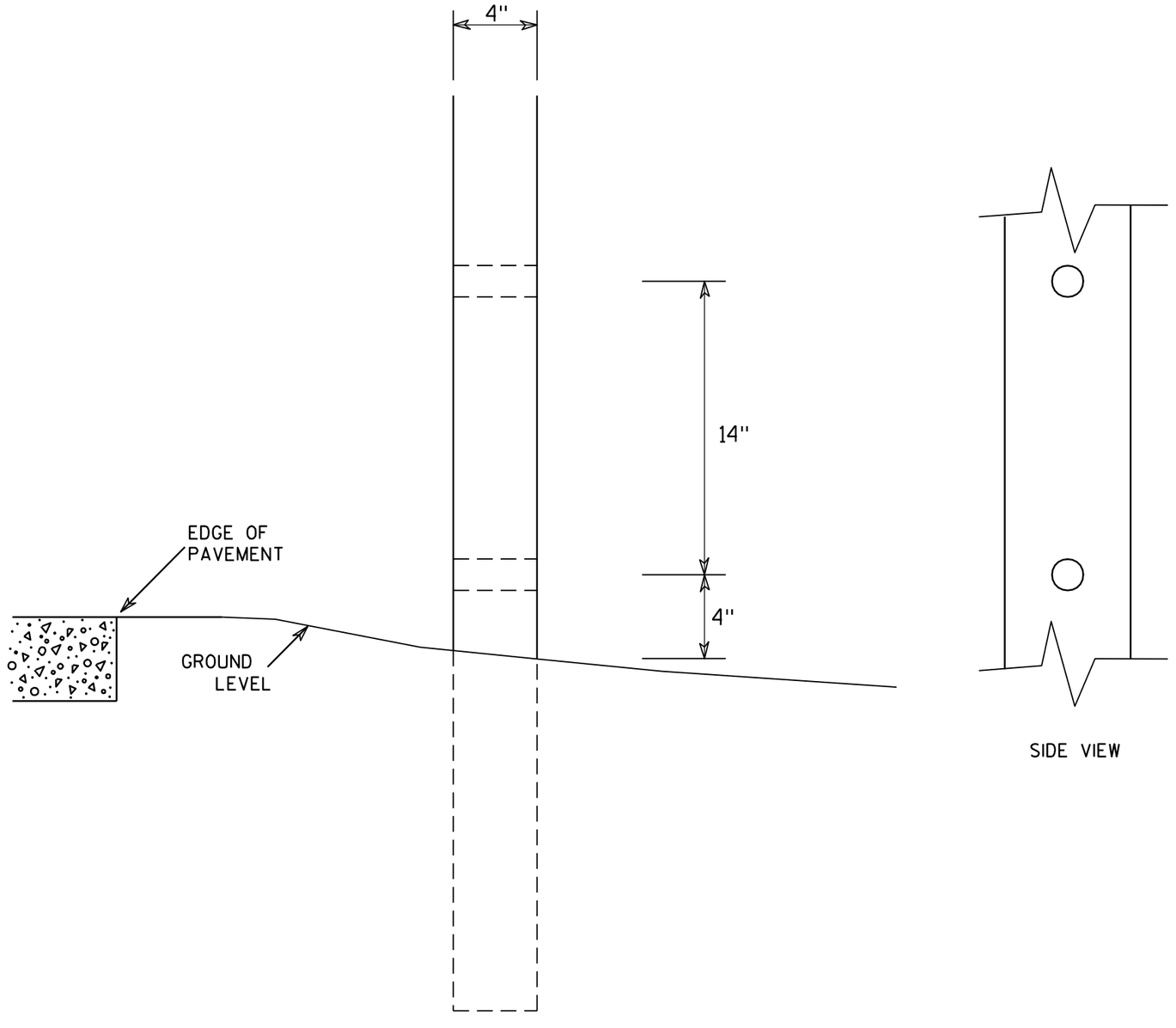
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 48 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

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7

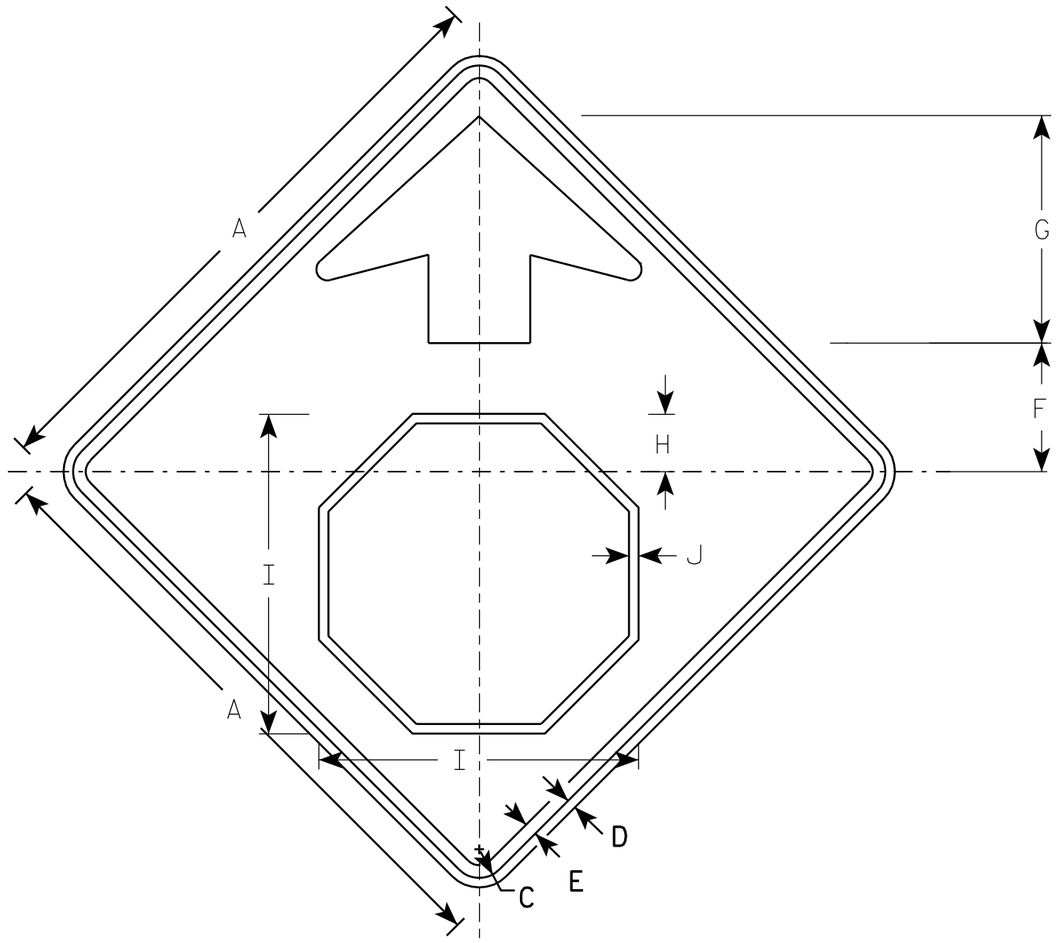
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

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

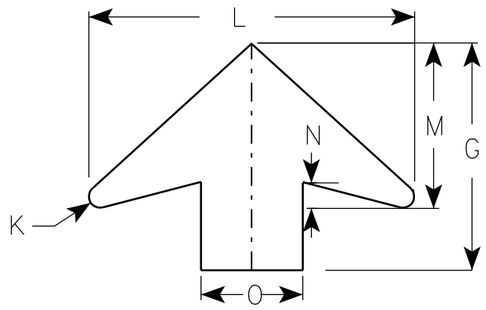
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 49	E



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 50 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W31.DGN PLOT DATE : 07-JUN-2010 12:59 PLOT BY : ditjph

WISDOT/CADDS SHEET 42

7

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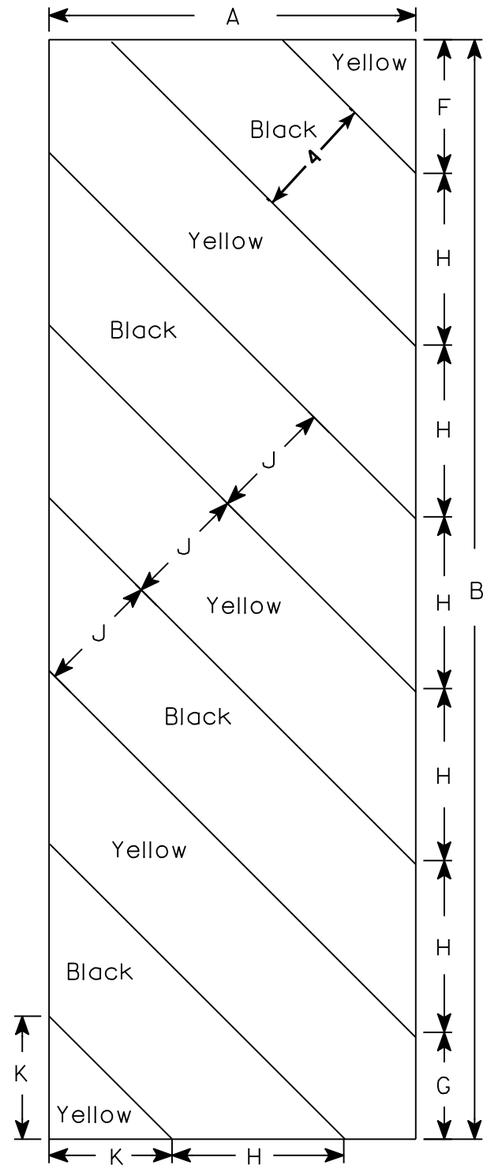
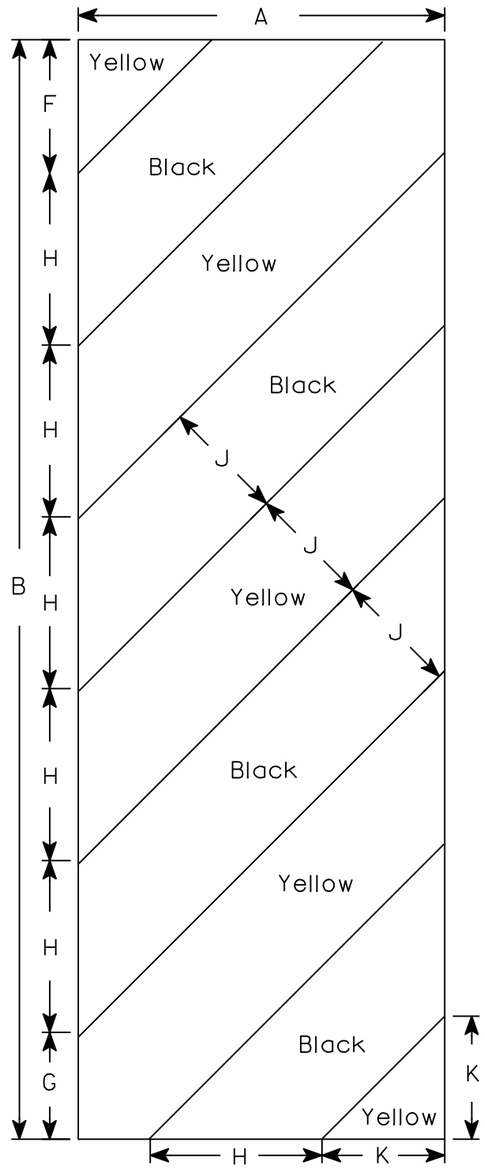


W5-52L



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

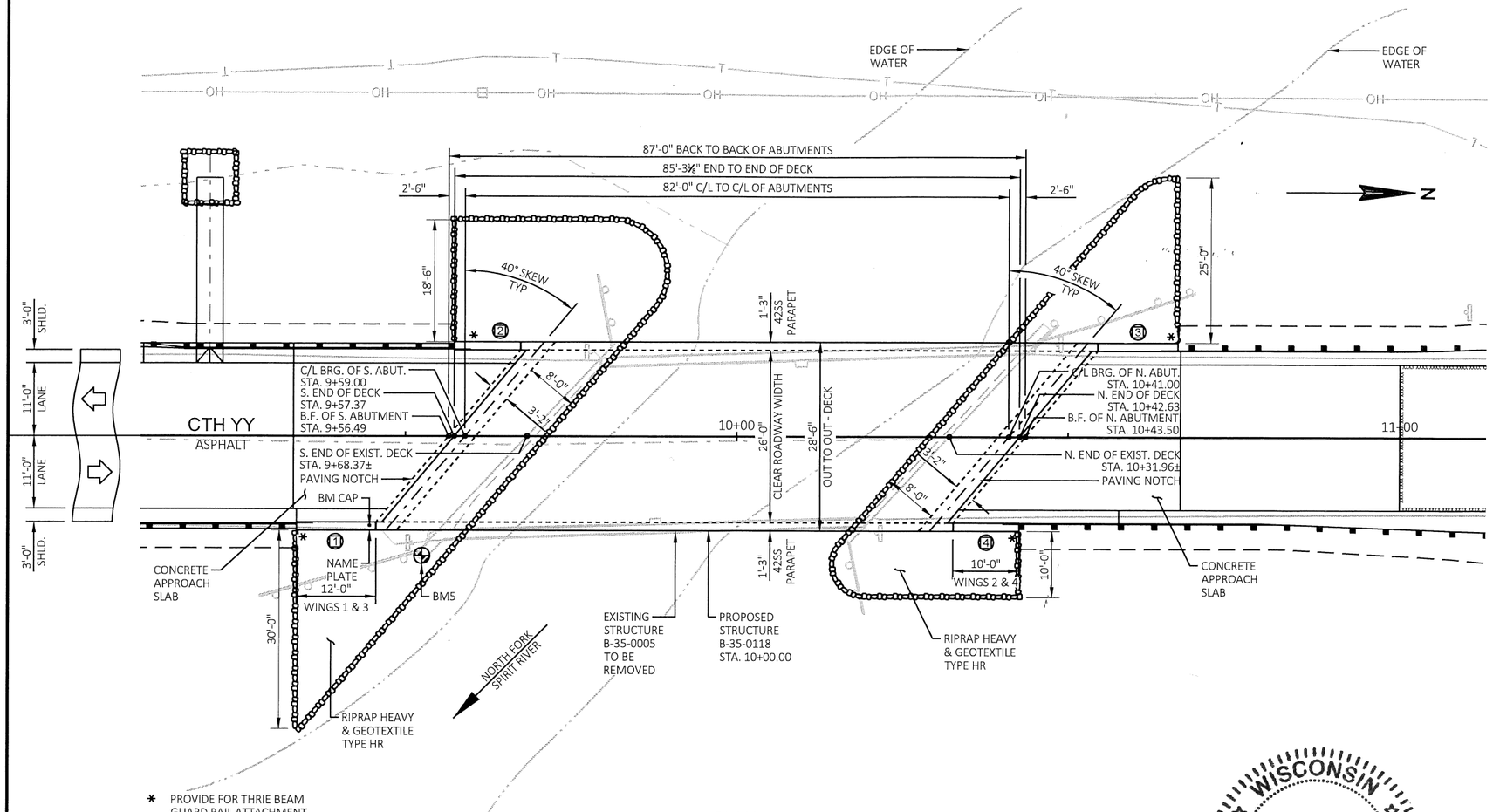
W5-52L & W5-52R

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: 51	E

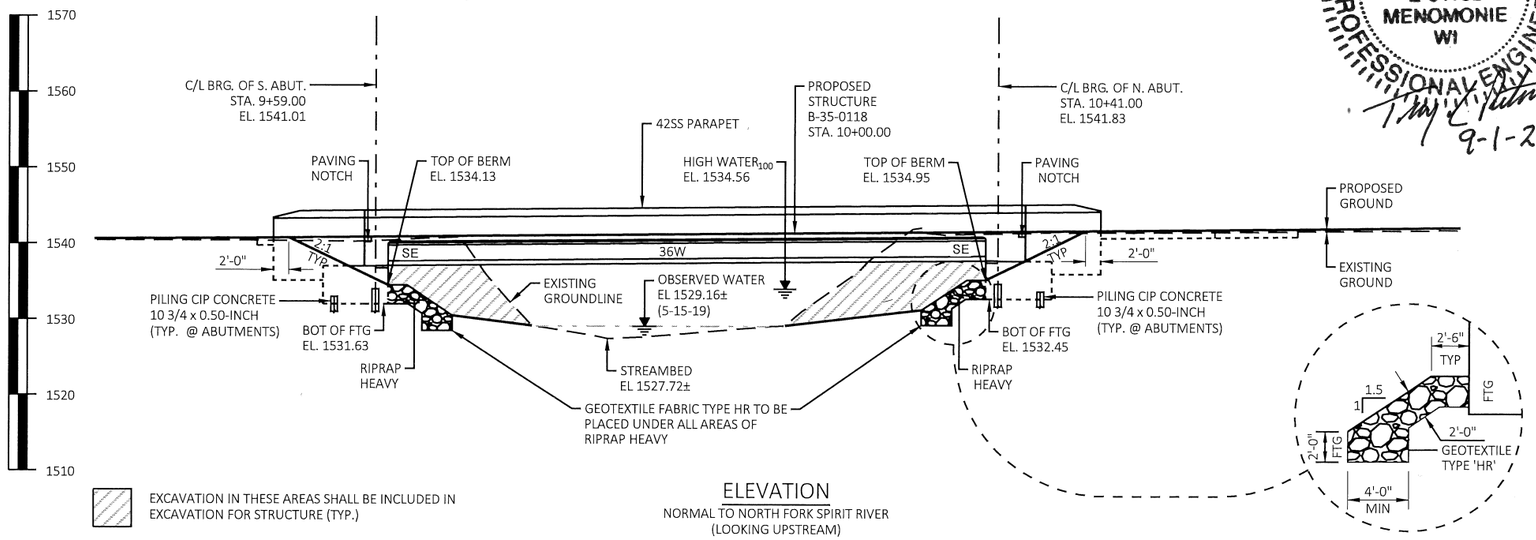


* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT

INDICATES WING NUMBER

PLAN

SINGLE SPAN - 36W PRESTRESSED GIRDERS



EXCAVATION IN THESE AREAS SHALL BE INCLUDED IN EXCAVATION FOR STRUCTURE (TYP.)

ELEVATION

NORMAL TO NORTH FORK SPIRIT RIVER (LOOKING UPSTREAM)

STATE PROJECT NUMBER

9487-00-70

DESIGN DATA

STRUCTURE IS DESIGNED FOR FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

LIVE LOAD:

DESIGN LOADING	HL - 93
INVENTORY RATING FACTOR	RF = 1.20
OPERATING RATING FACTOR	RF = 2.18
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY	
SLAB	f'c = 4,000 PSI
ALL OTHER	f'c = 3,500 PSI
BAR STEEL REINFORCEMENT, GRADE 60 (INCLUDES STAINLESS STEEL REINFORCEMENT)	fy = 60,000 PSI
PRESTRESSED GIRDER	
CONCRETE MASONRY	f'c = 8,000 PSI
STRANDS - 0.6" DIA WITH ULTIMATE TENSILE STRENGTH OF	f's = 270,000 PSI

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100}	1570	C.F.S.
Q_{BRIDGE}	1570	C.F.S.
Q_{RDWY}	N/A	C.F.S.
VEL.	7.6	F.P.S.
HW_{100}	EL. 1534.56	
WATERWAY AREA	207	SQ. FT.
DRAINAGE AREA	22.6	SQ. MI.
SCOUR CRITICAL CODE	5	

2 YEAR FREQUENCY

Q_2 TOTAL	480	C.F.S.
VEL.	5.3	F.P.S.
HW_2	EL. 1531.67	

TRAFFIC DATA

AADT (2022)	366
AADT (2042)	404
DESIGN SPEED	55 MPH

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 10 3/4 x 0.50-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. PILE POINTS ARE REQUIRED.

ESTIMATED LENGTH 65'-0" NORTH ABUTMENT
ESTIMATED LENGTH 35'-0" SOUTH ABUTMENT

* 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.

BENCHMARKS			
NO	STA.	DESCRIPTION	ELEV.
4	7+36±	R/R SPIKE IN BASE OF POWER POLE, 21' LT. OF C/L	1541.46
5	9+52±	USGS MARKER IN SE WINGWALL, 18' RT. OF C/L	1541.24

WISCONSIN
TROY L. PETERSON
E-31102
MENOMONIE
WI
PROFESSIONAL ENGINEER

9-1-21

LIST OF DRAWINGS

BRIDGE OFFICE CONTACT
AARON M. BONK
(608) 261-0261

CONSULTANT CONTACT
TROY L. PETERSON
(715) 235-9081

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
Cedar corporation
www.cedarcorp.com 800-472-7372

ACCEPTED _____ SDR 09/02/21
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-35-0118

CTH YY OVER NORTH FORK SPIRIT RIVER

COUNTY: LINCOLN
TOWN/~~CITY/VILLAGE~~: TOMAHAWK

DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
TLP	DWM	NJT	TLP

GENERAL PLAN

SHEET 1 OF 13

52

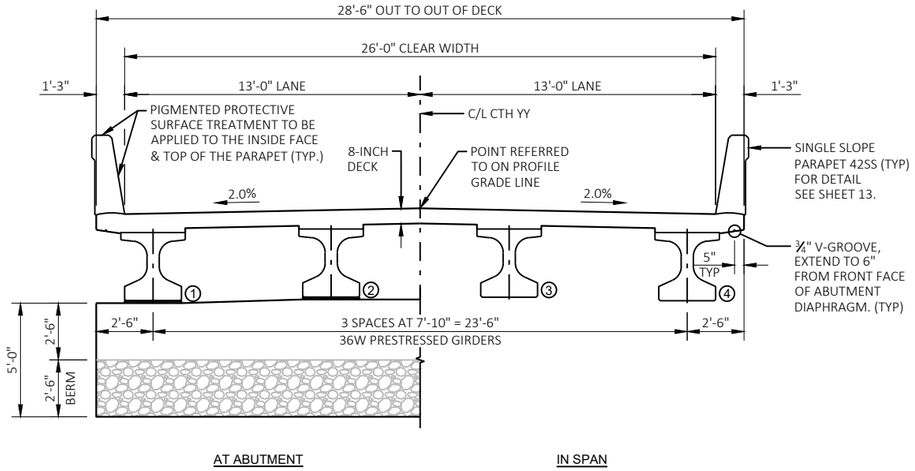
I.D. 9487-00-70

DATE: August 2021

SCALE = 1:1

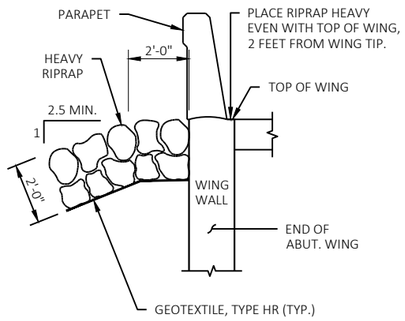
8

8

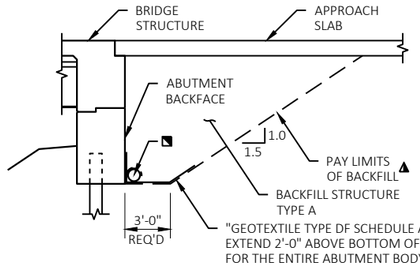


CROSS SECTION THRU STRUCTURE

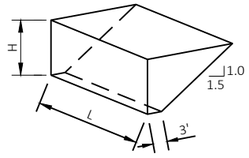
(LOOKING NORTH)



TYPICAL FILL SECTION AT WING TIPS

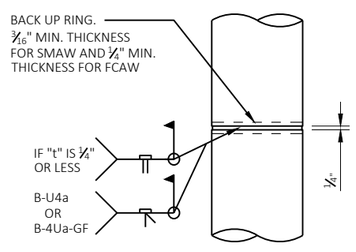


STRUCTURE BACKFILL & LIMITS

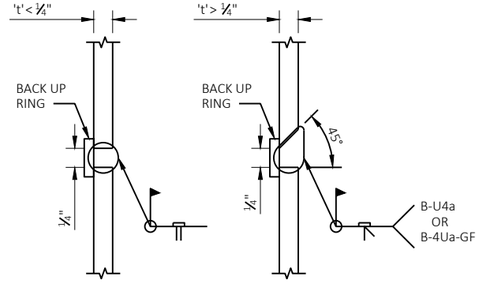


ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS & 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)



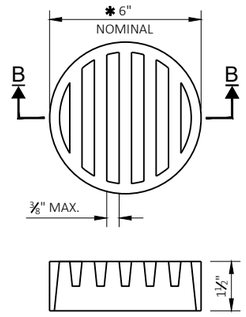
CAST-IN-PLACE 'PIPE PILE'



CIP PILE WELD DETAIL

PILE SPLICE DETAIL

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION.



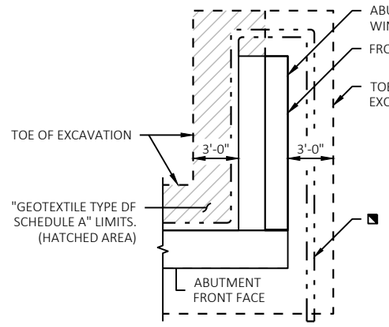
SECTION B-B

RODENT SHIELD DETAIL

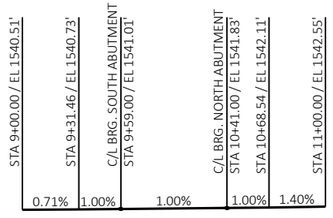
✱ DIMENSION IS APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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.



ABUTMENT PLAN WITH WING



PROPOSED GRADE ON CTH YY ROAD

NOT TO SCALE

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	SOUTH ABUT.	NORTH ABUT.	SUPER.	TOTALS
203.0260.01	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS (B-35-0005)	EACH	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-35-0118	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	250	250	-	500
502.0100	CONCRETE MASONRY BRIDGES	CY	36.3	36.3	120.4	193
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	247	247
502.3210	PIGMENTED SURFACE SEALER	SY	-	-	108	108
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	-	-	332	332
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2150	2150	-	4300
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1870	1880	20760	24510
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	4	4	-	8
506.4000	STEEL DIAPHRAGMS B-35-118	EACH	-	-	6	6
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8.5	8.5	-	17.0
550.0500	PILE POINTS	EACH	7	7	-	14
550.2108	PILING CIP CONCRETE 10 3/4 X 0.50-INCH	LF	245	455	-	700
606.0300	RIPRAP HEAVY	CY	115	85	-	200
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	70	70	-	140
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	-	4	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	28	28	-	56
645.0120	GEOTEXTILE TYPE HR	SY	210	160	-	370
	NON-BID ITEMS					
	FILLER	SIZE	-	-	-	½" x ¾"

STATE PROJECT NUMBER

9487-00-70

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

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

ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE 'HR' TO THE EXTENT SHOWN ON SHEETS 1 AND 2 AND IN THE ABUTMENT DETAILS.

THE EXISTING STRUCTURE (B-35-0005) IS A 65.7' LONG BY 24.0' CLEAR WIDTH SINGLE SPAN STEEL DECK GIRDER BRIDGE.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-35-0118" SHALL BE THE EXISTING GRADE LINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE IN PLACE BEFORE ABUTMENT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

AT ABUTMENTS, CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

▲ 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.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE DECK SURFACE BETWEEN THE PARAPETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-0118

DRAWN BY NJT | PLANS CK'D. TLP

CROSS SECTION, QUANTITIES, & NOTES

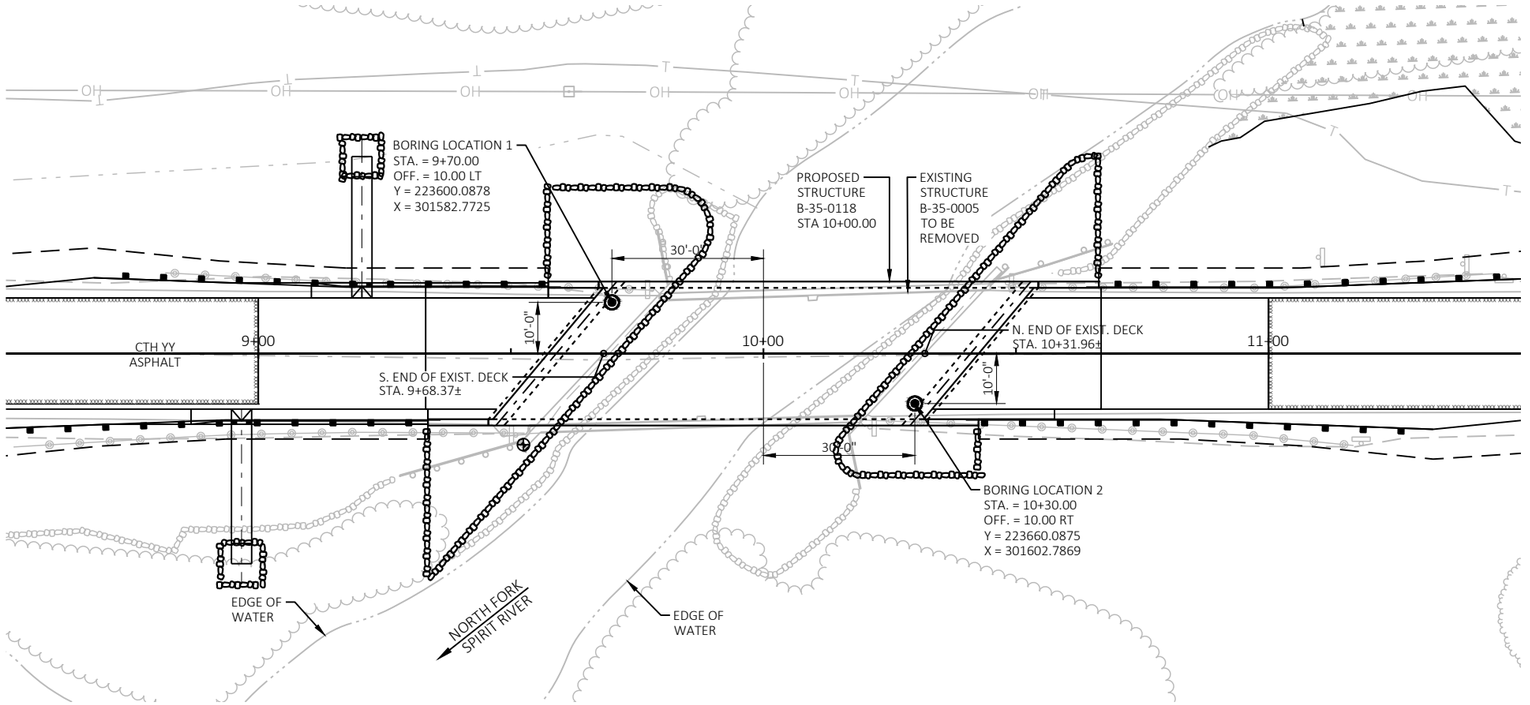
SHEET 2 OF 13

53

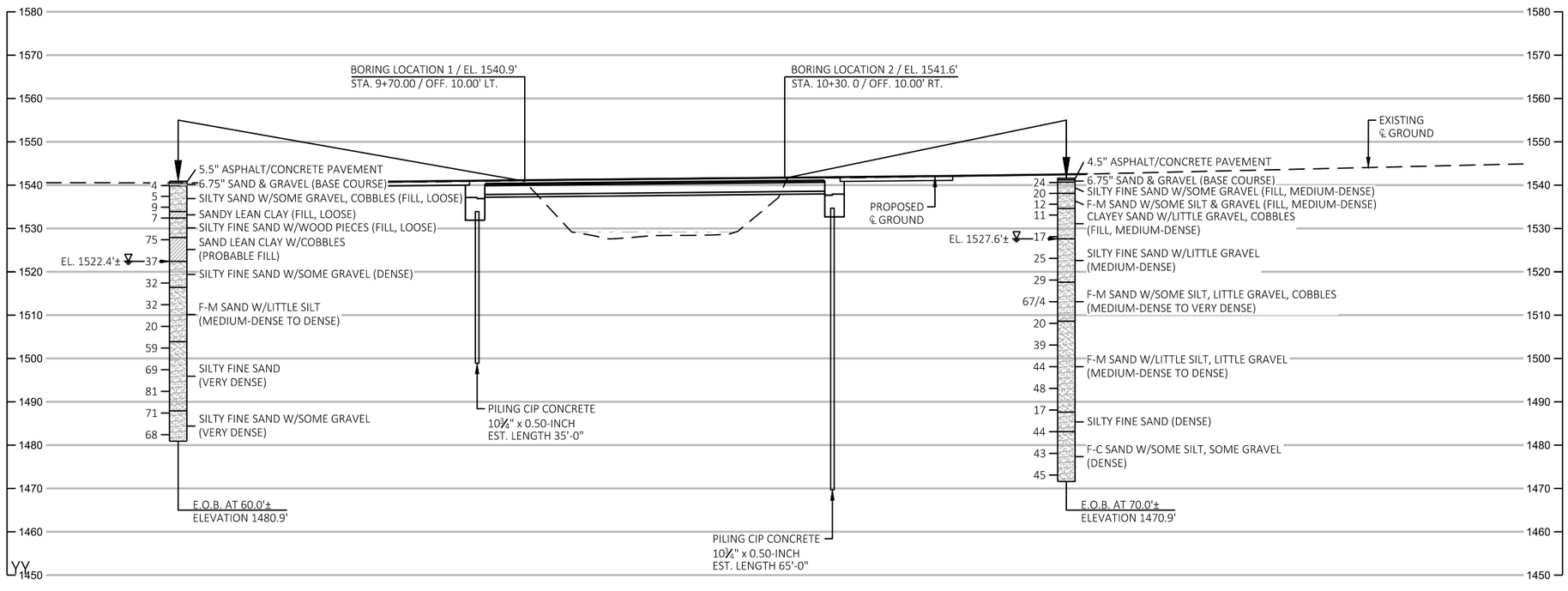
SCALE = 1:1

8

8



PLAN



ELEVATION

SUBSURFACE NOTES

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORINGS & REPORT COMPLETED BY:

NUMMELIN TESTING SERVICES, INC.
3217 WHITING AVENUE
P.O. BOX 127
STEVENS POINT, WI 54481
(715) 341-7974

BORINGS PERFORMED ON:
10/16/2019 - B1
10/14/2019 - B2

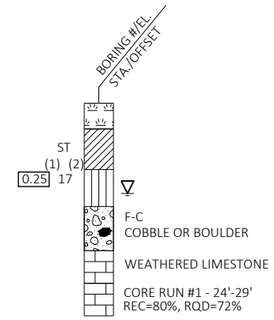
STATE PROJECT NUMBER

9487-00-70

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

STRUCTURE B-35-0118

DRAWN BY NJT | PLANS CK'D. TLP

SUBSURFACE EXPLORATION

SHEET 3 OF 13

54

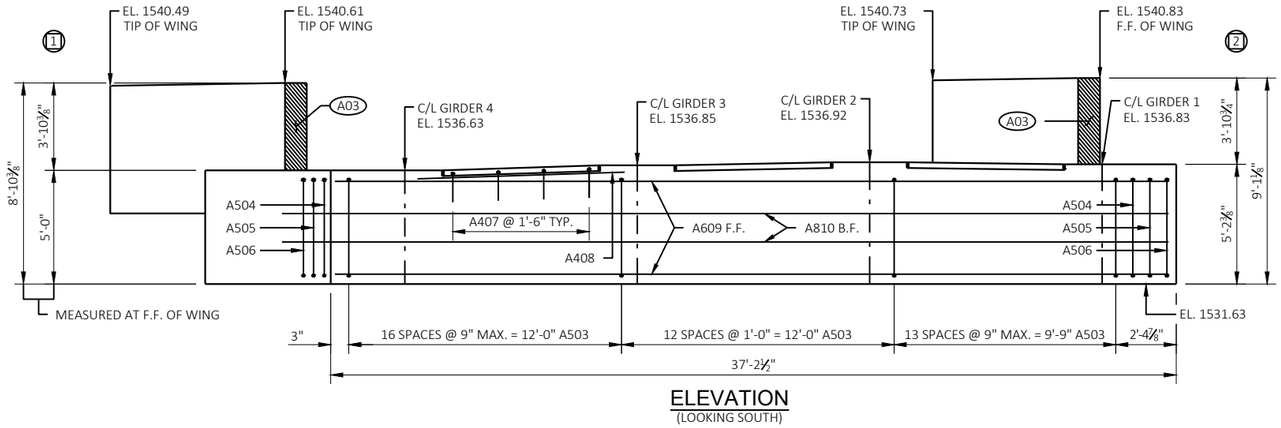
SCALE = 1:1

8

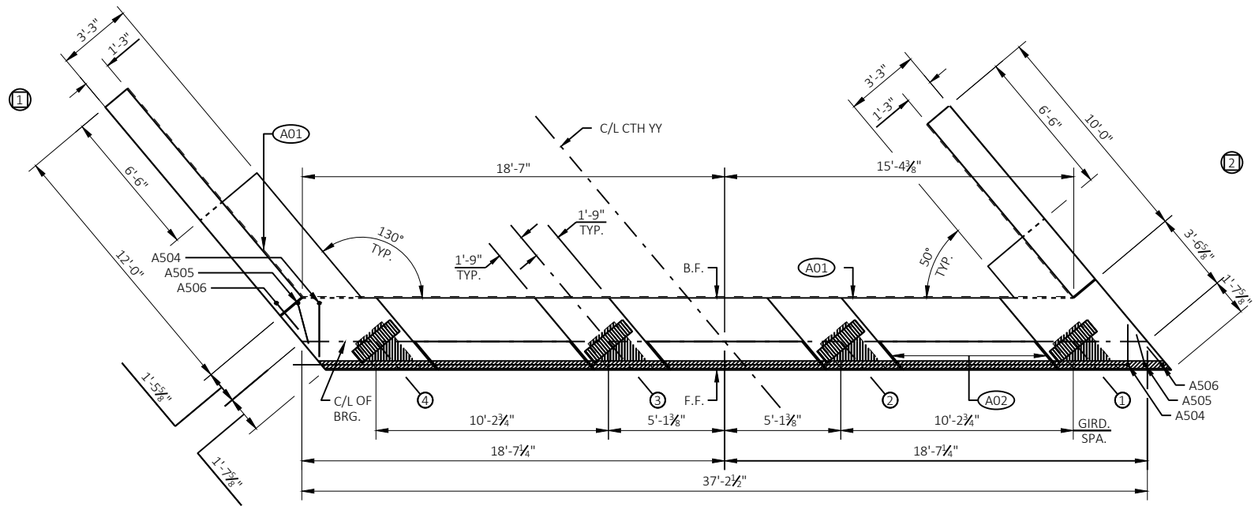
8

STATE PROJECT NUMBER

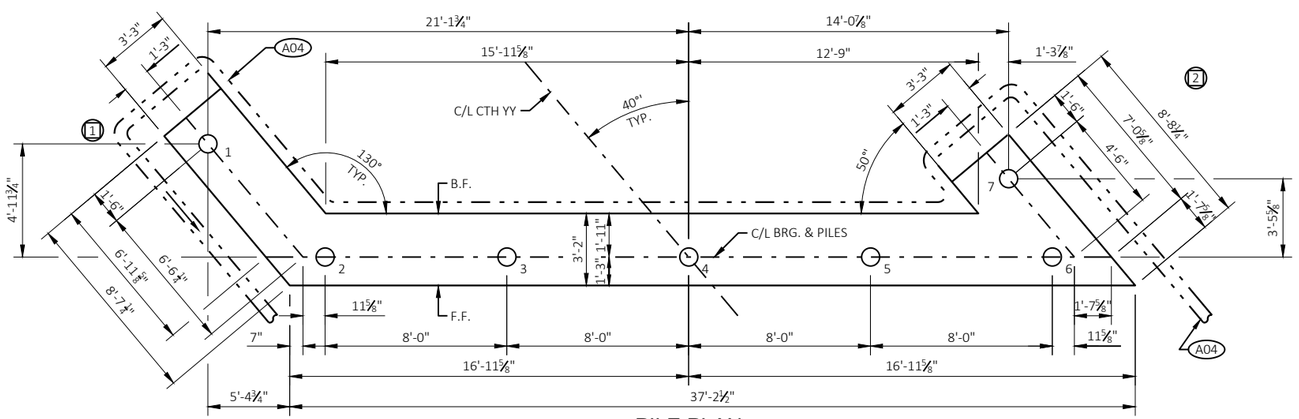
9487-00-70



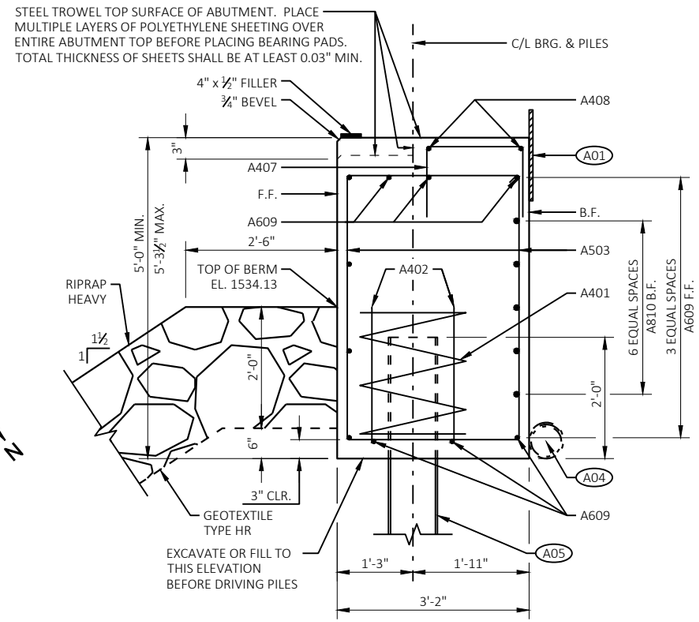
ELEVATION
(LOOKING SOUTH)



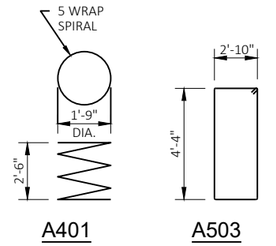
PLAN

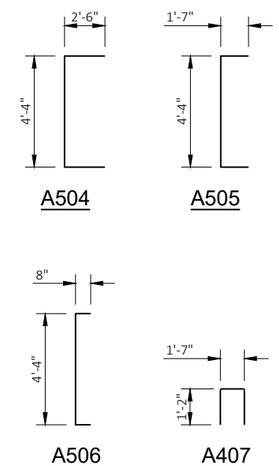


PILE PLAN



SECTION THRU BODY





LEGEND

ⓘ	INDICATES WING NUMBER
✱	ELEVATION GIVEN AT ℄ BEARING.
A01	18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W). SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
A02	3/4" CORK FILLER ON ALL VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
A03	SEAL ALL EXPOSED HORIZONTAL AND VERTICAL 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.
A04	PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
A05	PILING CIP CONCRETE 10-3/4" x 0.50-INCH WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 35'-0". PILE POINTS ARE REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-0118

DRAWN BY NJT | PLANS CK'D. TLP

SOUTH ABUTMENT

SHEET 4 OF 13

55

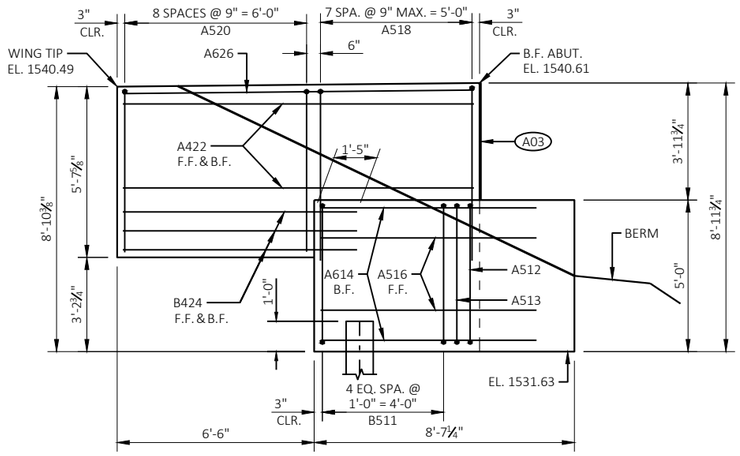
SCALE = 1:1

8

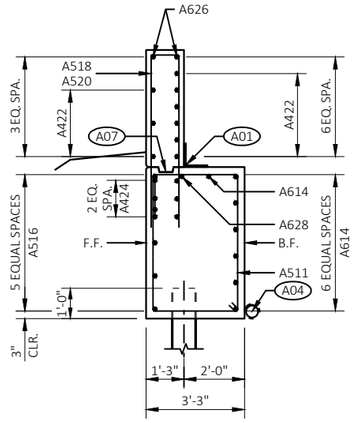
8

STATE PROJECT NUMBER

9487-00-70



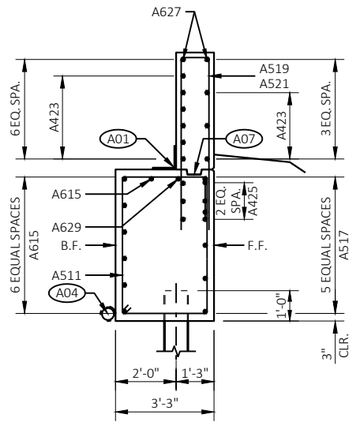
WING 1 ELEVATION



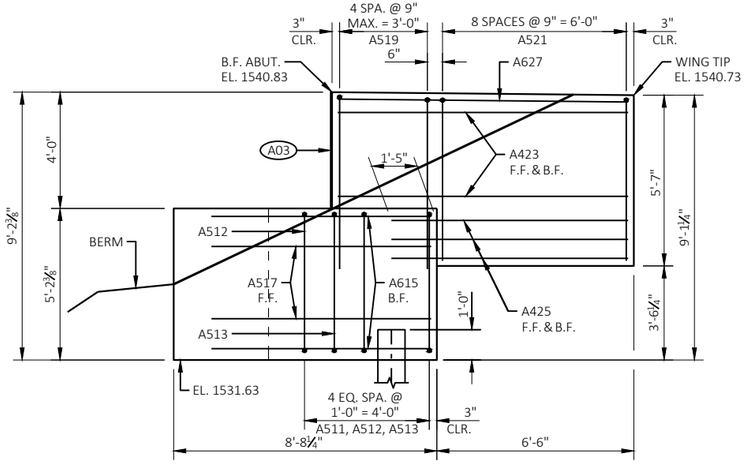
WING 1 SECTION

WING 1 PLAN

WING 2 PLAN



WING 2 SECTION



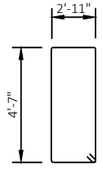
WING 2 ELEVATION

BILL OF BARS

1870# COATED 2150# UNCOATED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A401		7	28-0	X		BODY - ONE PER PILE
A402		14	2-3			BODY - TWO PER PILE
A503		42	15-0	X		BODY - STIRRUPS
A504		2	9-1	X		BODY - STIRRUPS @ ABUT. ENDS
A505		2	7-3	X		BODY - STIRRUPS @ ABUT. ENDS
A506		2	5-5	X		BODY - STIRRUPS @ ABUT. ENDS
A407		12	3-9	X		BODY - VERT. TOP - BTWN. GIRDERS
A408		6	5-3			BODY - HORIZ. TOP - BTWN. GIRDERS
A609		10	36-10			BODY - HORIZ.
A810		7	36-10			BODY - HORIZ. B.F.
A511	X	8	15-8	X		WINGS 1 & 2 - STIRRUPS
A512	X	2	10-10	X		WINGS 1 & 2 - STIRRUPS @ ABUT END
A513	X	2	7-8	X		WINGS 1 & 2 - STIRRUPS @ ABUT END
A614	X	8	9-10			WING 1 - BASE HORIZONTAL B.F.
A615	X	8	5-6			WING 2 - BASE HORIZONTAL B.F.
A516	X	6	8-0			WING 1 - BASE HORIZONTAL F.F.
A517	X	6	12-7			WING 2 - BASE HORIZONTAL F.F.
A518	X	8	12-4	X		WING 1 - VERTICAL
A519	X	5	12-4	X		WING 2 - VERTICAL
A520	X	9	11-0	X		WING 1 - VERTICAL
A521	X	9	11-0	X		WING 2 - VERTICAL
A422	X	9	11-8			WING 1 - HORIZONTAL F.F. & B.F. TOP
A423	X	9	9-8			WING 2 - HORIZONTAL F.F. & B.F. TOP
A424	X	6	7-9			WING 1 - HORIZONTAL F.F. & B.F.
A425	X	6	7-9			WING 2 - HORIZONTAL F.F. & B.F.
A626	X	2	11-8			WING 1 - HORIZONTAL TOP
A627	X	2	9-8			WING 2 - HORIZONTAL TOP
A628	X	1	7-2			WING 1 - HORIZONTAL BASE
A629	X	1	6-2			WING 2 - HORIZONTAL BASE

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.



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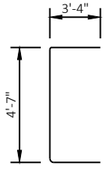

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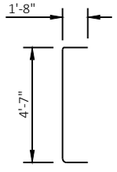

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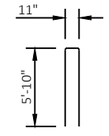
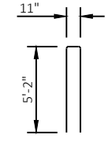


A518
A519



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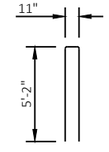

A521

LEGEND

⬭	INDICATES WING NUMBER
A01	18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W). SEAL ALL HORIZONTAL & VERTICAL JOINTS ON BACK FACE.
A03	SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONC.)
A04	PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
A07	OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6". (18" R.M.W. @ B.F. & 3/4" V-GROOVE @ F.F. IF JOINT IS USED).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-0118

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SOUTH ABUTMENT DETAILS

SHEET 5 OF 13

56

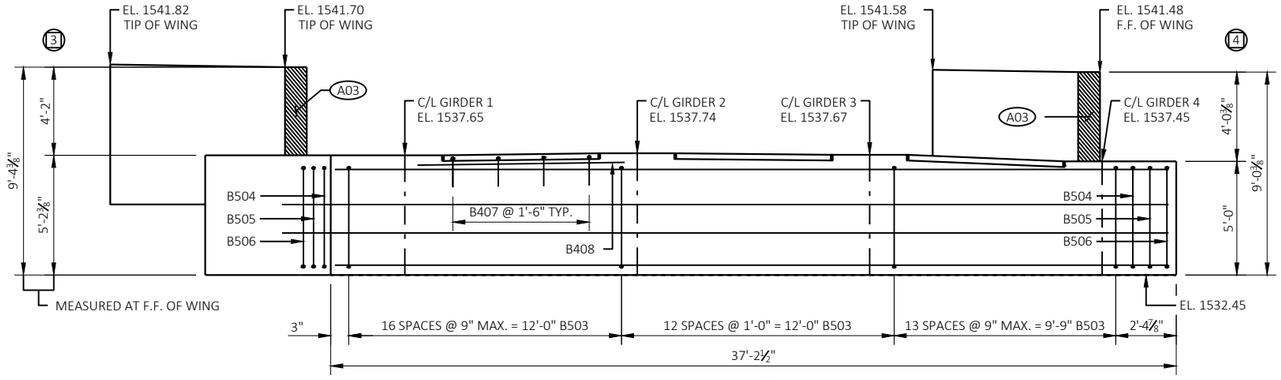
SCALE = 1:1

8

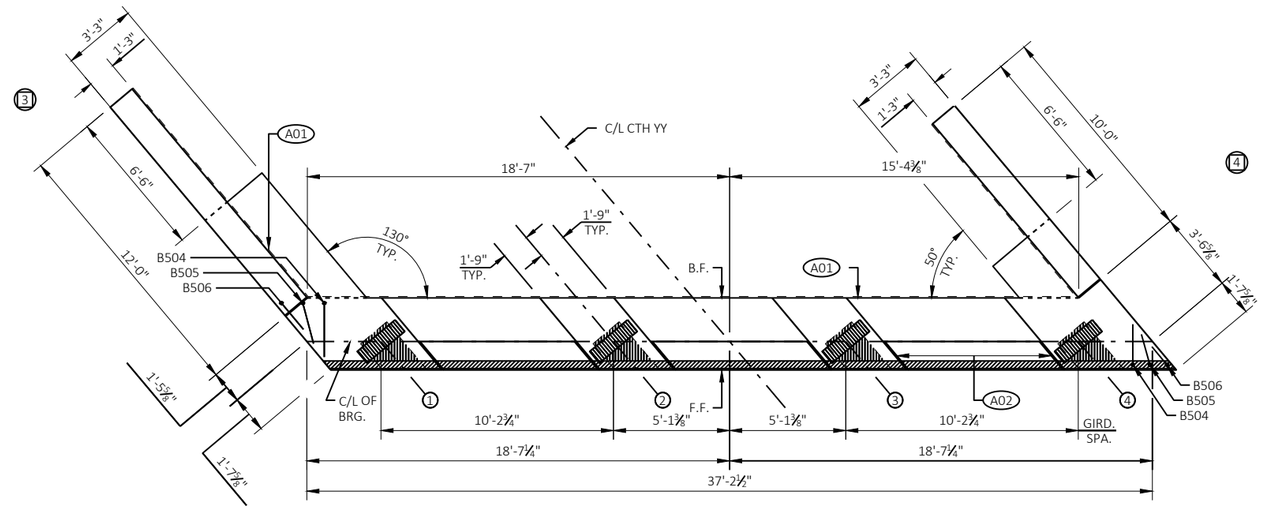
8

STATE PROJECT NUMBER

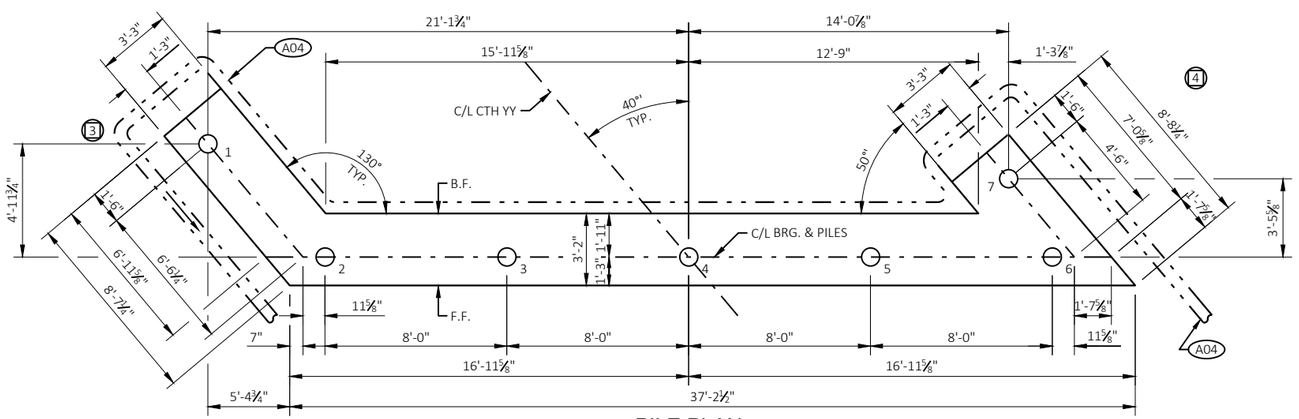
9487-00-70



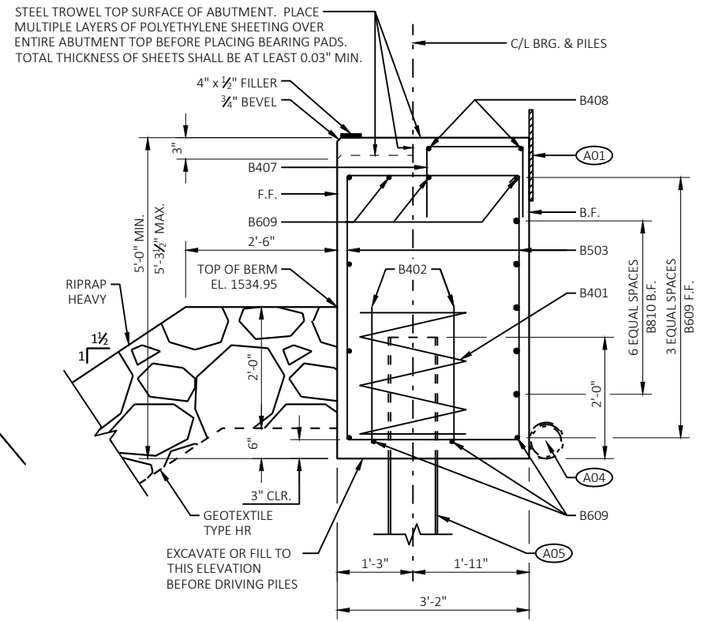
ELEVATION
(LOOKING NORTH)



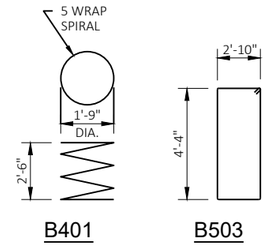
PLAN



PILE PLAN



SECTION THRU BODY



LEGEND

⬭	INDICATES WING NUMBER
✱	ELEVATION GIVEN AT ℄ BEARING.
A01	18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W). SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
A02	3/4" CORK FILLER ON ALL VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
A03	SEAL ALL EXPOSED HORIZONTAL AND VERTICAL 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.
A04	PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
A05	PILING CIP CONCRETE 10-3/4" x 0.50-INCH WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 65'-0". PILE POINTS ARE REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-0118

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NORTH ABUTMENT

SHEET 6 OF 13

57

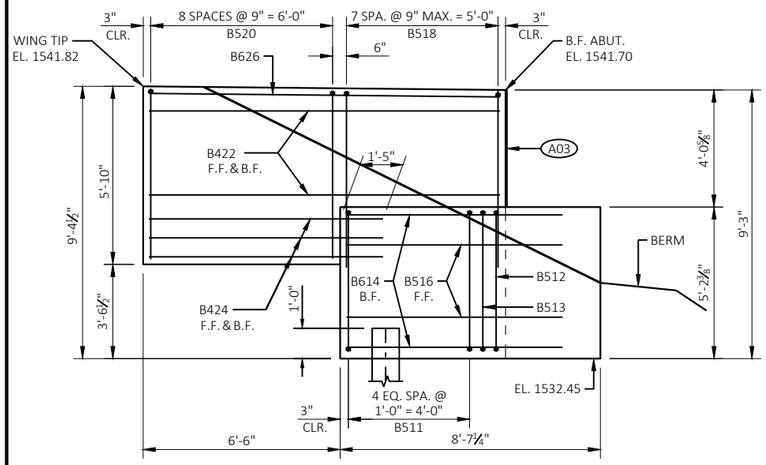
SCALE = 1:1

8

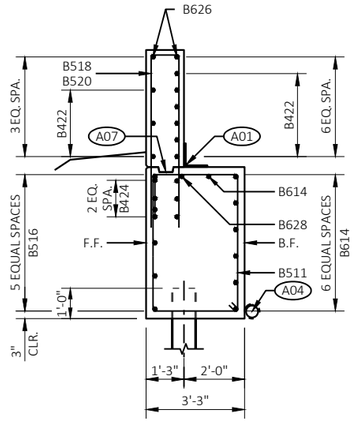
8

STATE PROJECT NUMBER

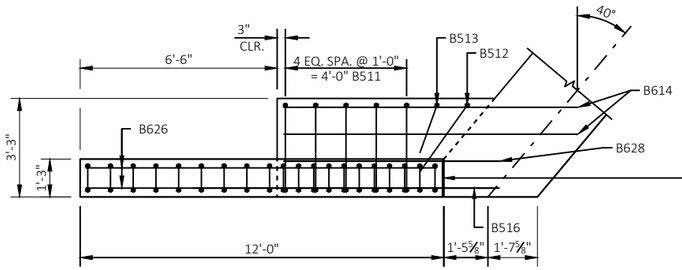
9487-00-70



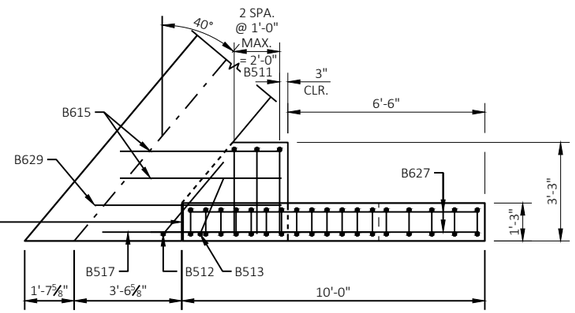
WING 3 ELEVATION



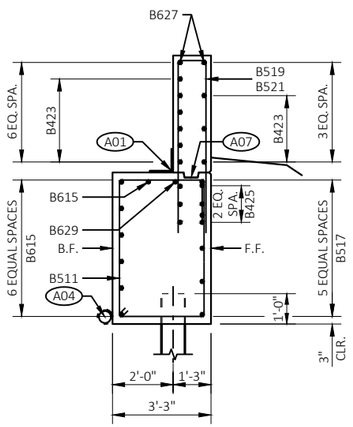
WING 3 SECTION



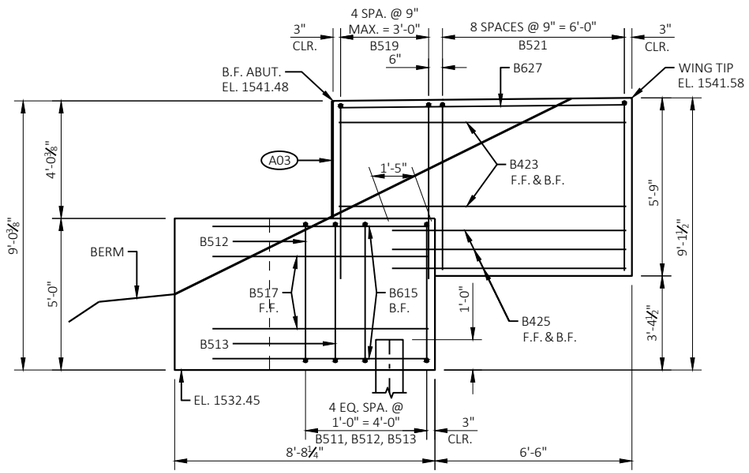
WING 3 PLAN



WING 4 PLAN



WING 4 SECTION



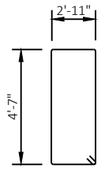
WING 4 ELEVATION

BILL OF BARS

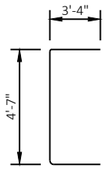
1880# COATED 2150# UNCOATED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B401		7	28-0	X		BODY - ONE PER PILE
B402		14	2-3			BODY - TWO PER PILE
B503		42	15-0	X		BODY - STIRRUPS
B504		2	9-1	X		BODY - STIRRUPS @ ABUT. ENDS
B505		2	7-3	X		BODY - STIRRUPS @ ABUT. ENDS
B506		2	5-5	X		BODY - STIRRUPS @ ABUT. ENDS
B407		12	3-9	X		BODY - VERT. TOP - BTWN. GIRDERS
B408		6	5-3			BODY - HORIZ. TOP - BTWN. GIRDERS
B609		10	36-10			BODY - HORIZ.
B810		7	36-10			BODY - HORIZ. B.F.
B511	X	8	15-8	X		WINGS 3 & 4 - STIRRUPS
B512	X	2	10-10	X		WINGS 3 & 4 - STIRRUPS @ ABUT END
B513	X	2	7-8	X		WINGS 3 & 4 - STIRRUPS @ ABUT END
B614	X	8	9-10			WING 3 - BASE HORIZONTAL B.F.
B615	X	8	5-6			WING 4 - BASE HORIZONTAL B.F.
B516	X	6	8-0			WING 3 - BASE HORIZONTAL F.F.
B517	X	6	12-7			WING 4 - BASE HORIZONTAL F.F.
B518	X	8	12-4	X		WING 3 - VERTICAL
B519	X	5	12-4	X		WING 4 - VERTICAL
B520	X	9	11-6	X		WING 3 - VERTICAL
B521	X	9	11-4	X		WING 4 - VERTICAL
B422	X	9	11-8			WING 3 - HORIZONTAL F.F. & B.F. TOP
B423	X	9	9-8			WING 4 - HORIZONTAL F.F. & B.F. TOP
B424	X	6	7-9			WING 3 - HORIZONTAL F.F. & B.F.
B425	X	6	7-9			WING 4 - HORIZONTAL F.F. & B.F.
B626	X	2	11-8			WING 3 - HORIZONTAL TOP
B627	X	2	9-8			WING 4 - HORIZONTAL TOP
B628	X	1	7-2			WING 3 - HORIZONTAL BASE
B629	X	1	6-2			WING 4 - HORIZONTAL BASE

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.



B511



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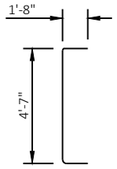

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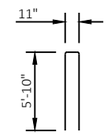
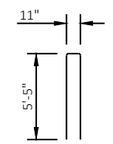


B518
B519



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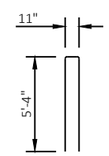


B521

LEGEND

⬭	INDICATES WING NUMBER
A01	18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W). SEAL ALL HORIZONTAL & VERTICAL JOINTS ON BACK FACE.
A03	SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONC.)
A04	PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
A07	OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6". (18" R.M.W. @ B.F. & 3/4" V-GROOVE @ F.F. IF JOINT IS USED).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-0118

DRAWN BY NJT | PLANS CK'D. TLP

NORTH ABUTMENT DETAILS

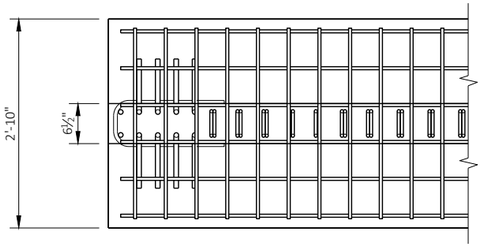
SHEET 7 OF 13

58

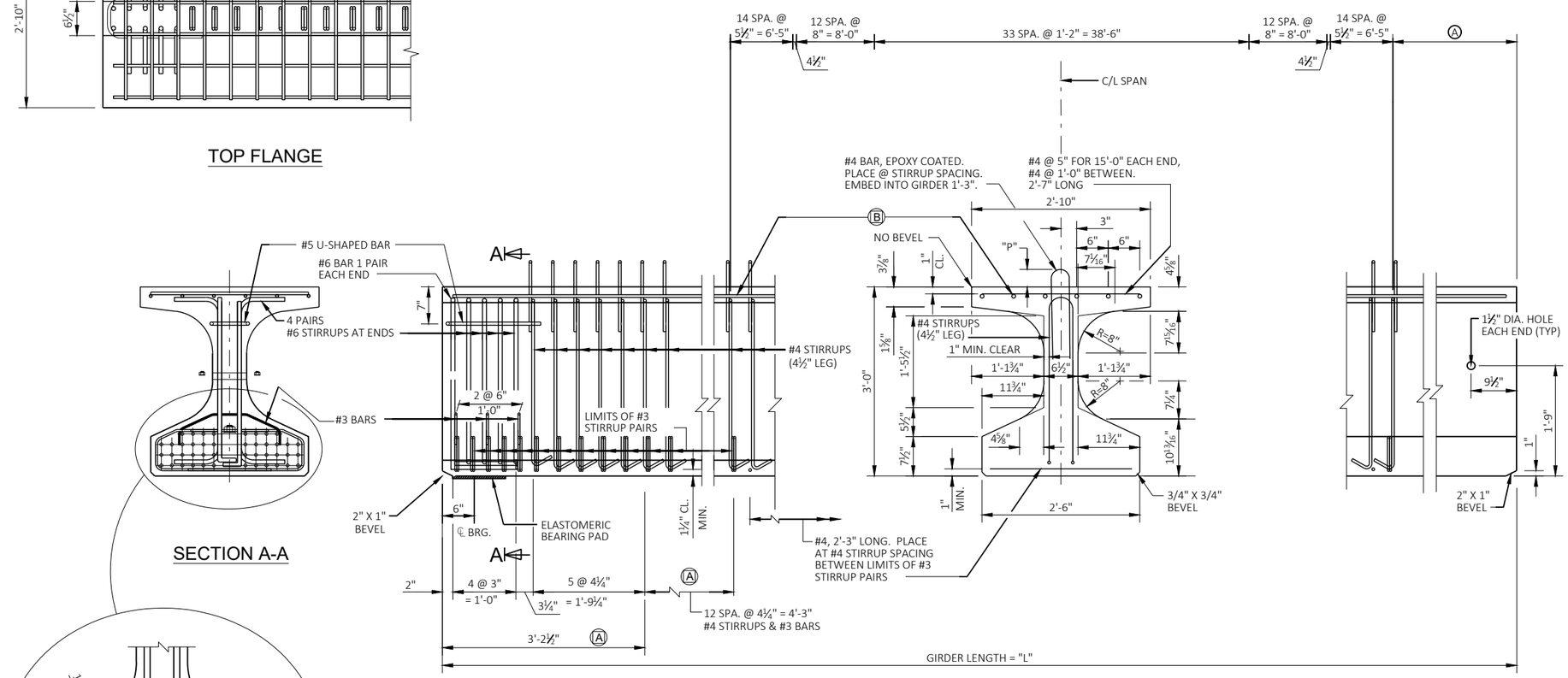
SCALE = 1:1

8

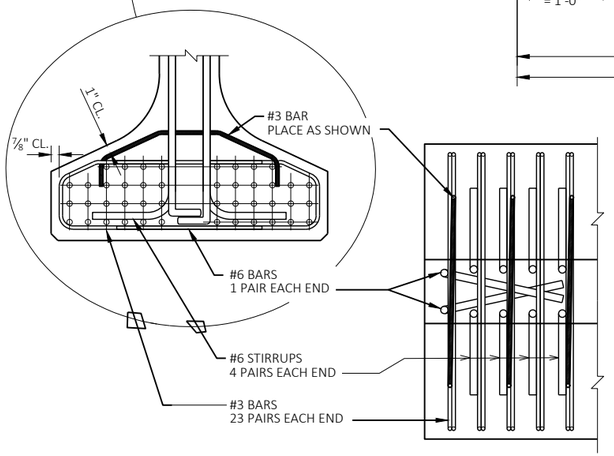
8



TOP FLANGE



SECTION A-A

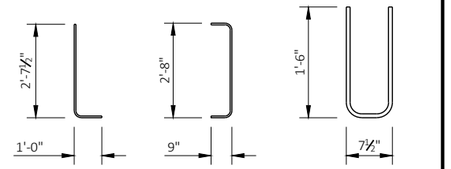


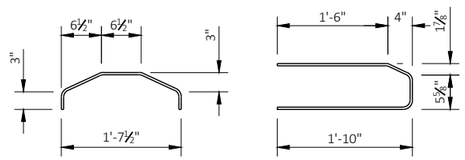
BOTTOM FLANGE

SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ (6) #4 BARS, FULL LENGTH, MIN. LAP = 2' - 4"





* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA																								
SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (P.S.I.)	"P" (IN.)			DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10		1st 1/3 OF GIRDER	MID 1/3 OF GIRDER	END 1/3 OF GIRDER		TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
1	1-4	83'-0"	11/16	1-1/8	1-7/16	1-5/8	1-5/8	1-5/8	1-7/16	1-1/8	11/16	8000	7	7	7	0.6	30	6800	32	11	14	4	———	———

STATE PROJECT NUMBER

9487-00-70

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON ACCEPTANCE OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

0.6" DIA. PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-0118

DRAWN BY NJT | PLANS CK'D. TLP

36W PRESTRESSED GIRDER DETAILS 1

SHEET 8 OF 13

59

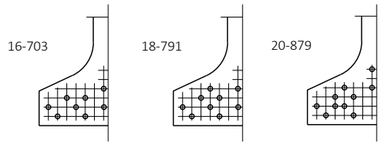
8

8

SCALE = 1:1

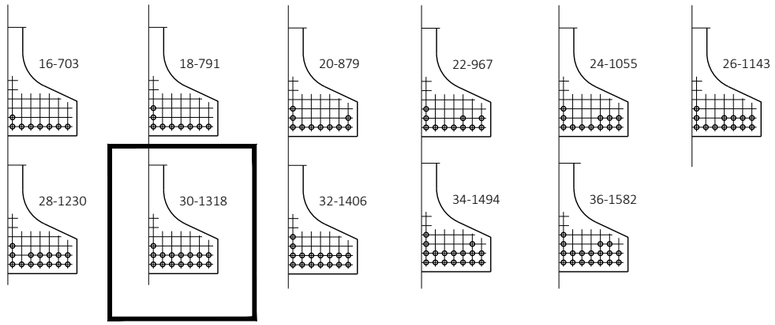
STATE PROJECT NUMBER

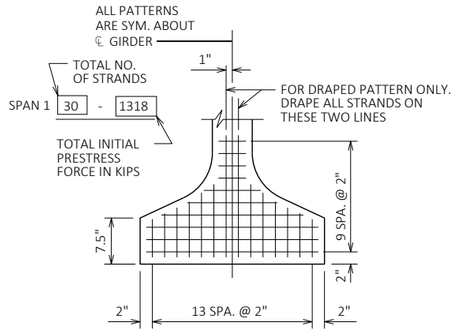
9487-00-70



STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS

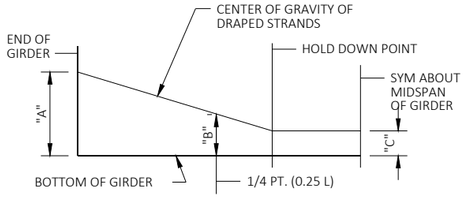




TYP. STRAND PATTERN

ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



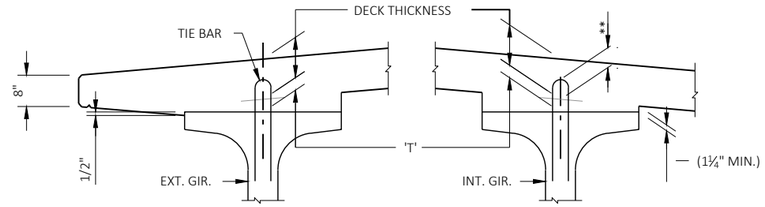
DRAPED STRAND PROFILE

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	3-3/16

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DECK HAUNCH DETAIL

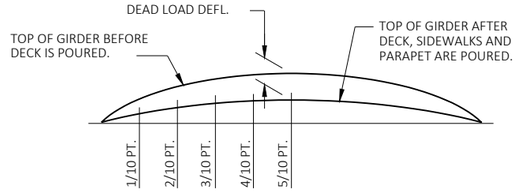
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ` OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-0118

DRAWN BY NJT | PLANS CK'D. TLP

36W PRESTRESSED GIRDER DETAILS 2

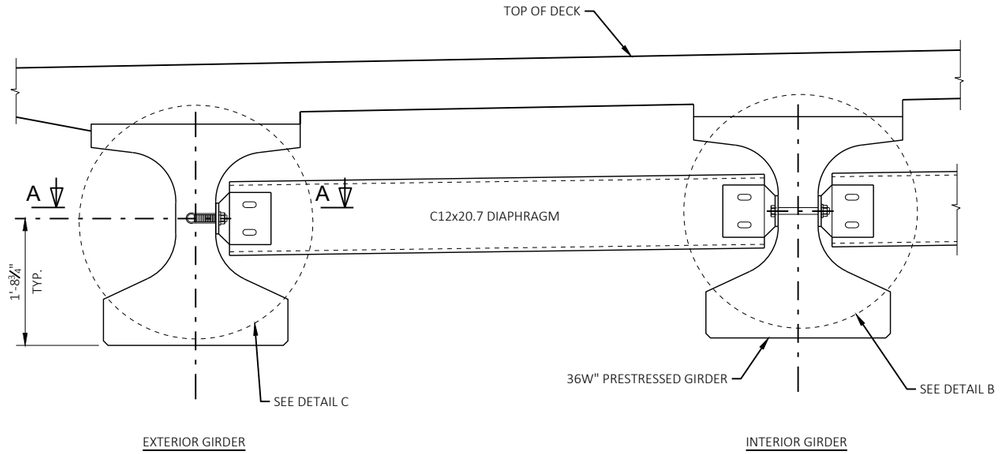
SHEET 9 OF 13

60

SCALE = 1:1

8

8



PART TRANSVERSE SECTION AT DIAPHRAGM

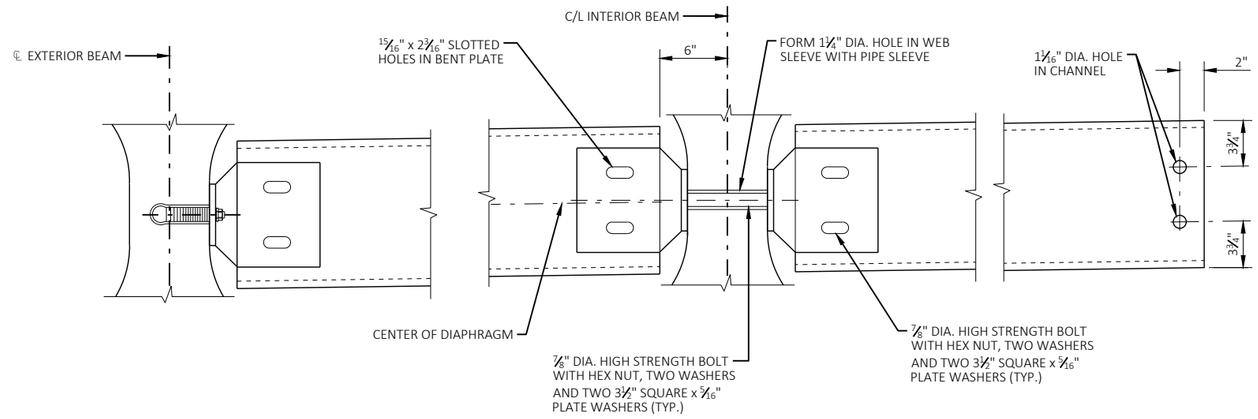
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-35-118, EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

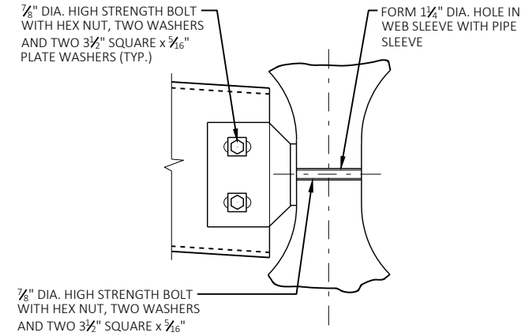
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

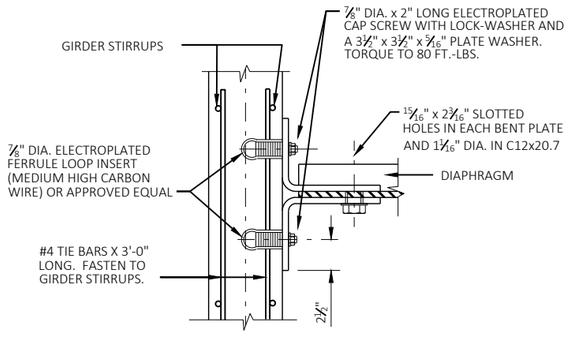


DETAIL C

DETAIL B

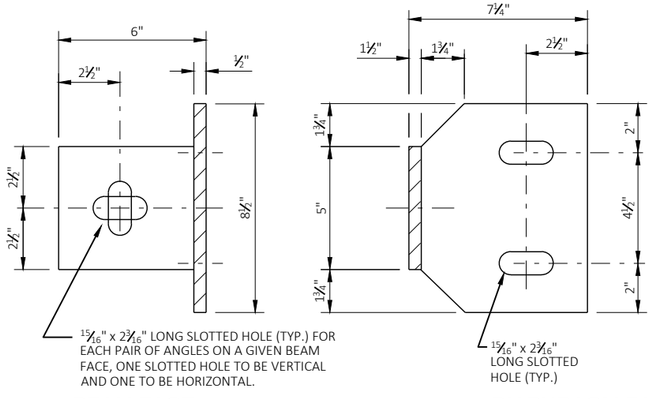


SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°



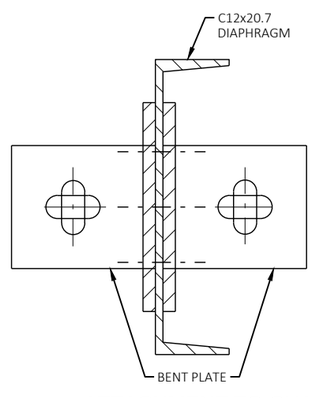
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



BEAM FACE

DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-0118

DRAWN BY NJT | PLANS CK'D. TLP

STEEL DIAPHRAGMS

SHEET 10 OF 13

61

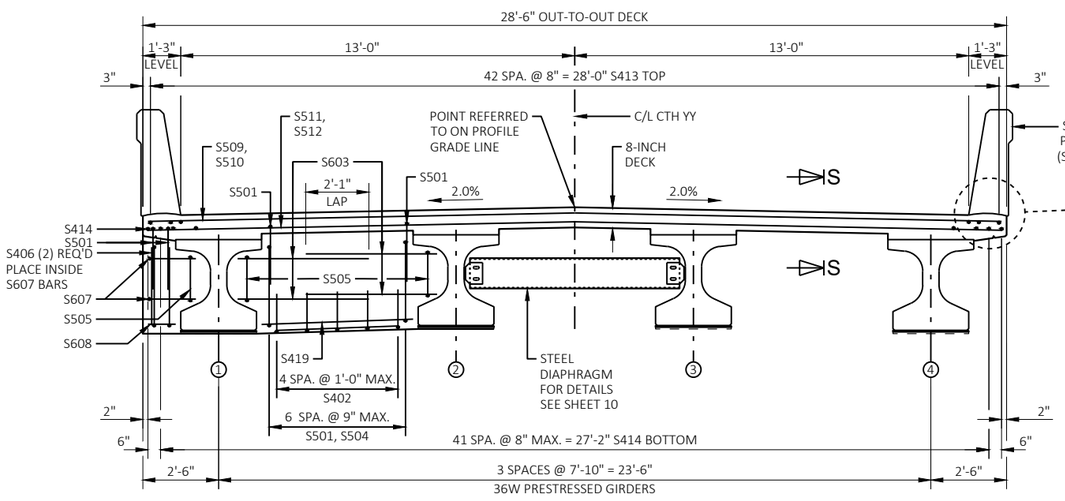
SCALE = 1:1

8

8

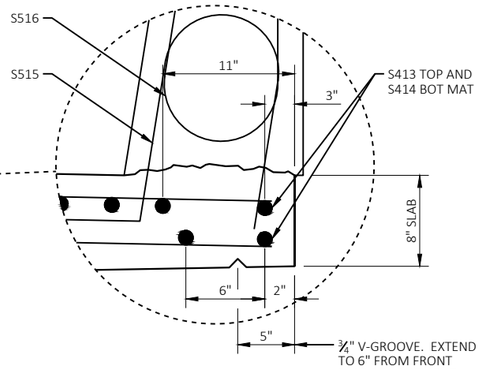
STATE PROJECT NUMBER

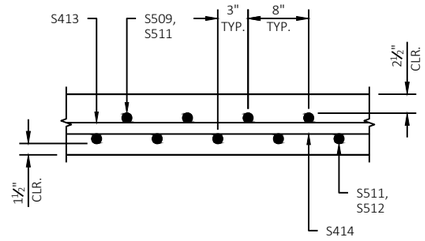
9487-00-70



AT ABUTMENT IN SPAN

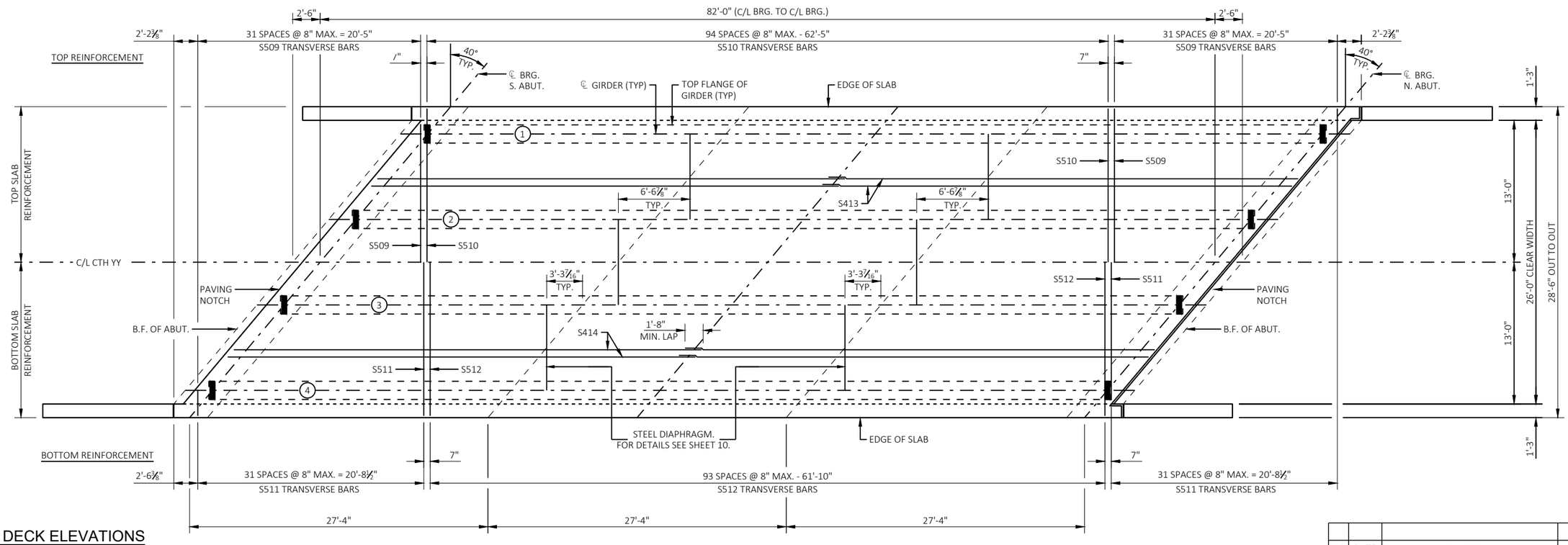
CROSS SECTION THRU STRUCTURE





SECTION S-S

N



PLAN

TOP OF DECK ELEVATIONS

LOCATIONS	SOUTH ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	NORTH ABUT.
WEST DECK EDGE	1540.84	1540.92	1541.00	1541.09	1541.17	1541.25	1541.33	1541.41	1541.50	1541.58	1541.66
GIRDER 1	1540.87	1540.95	1541.03	1541.12	1541.20	1541.28	1541.36	1541.44	1541.53	1541.61	1541.69
GIRDER 2	1540.96	1541.04	1541.12	1541.21	1541.29	1541.37	1541.45	1541.53	1541.62	1541.70	1541.78
GIRDER 3	1540.89	1540.98	1541.06	1541.14	1541.22	1541.30	1541.39	1541.47	1541.55	1541.63	1541.71
GIRDER 4	1540.67	1540.75	1540.84	1540.92	1541.00	1541.08	1541.16	1541.25	1541.33	1541.41	1541.49
EAST DECK EDGE	1540.60	1540.68	1540.76	1540.85	1540.93	1541.01	1541.09	1541.17	1541.26	1541.34	1541.42

ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES OF DEAD LOAD DEFLECTION AND FUTURE CREEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-0118

DRAWN BY NJT | PLANS CK'D. TLP

SUPERSTRUCTURE

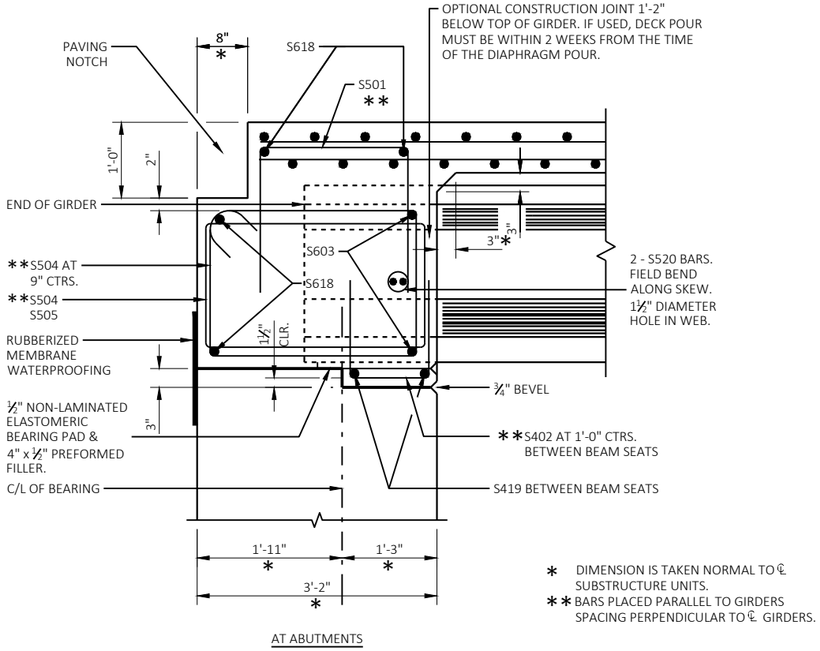
SHEET 11 OF 13

62

SCALE = 1:1

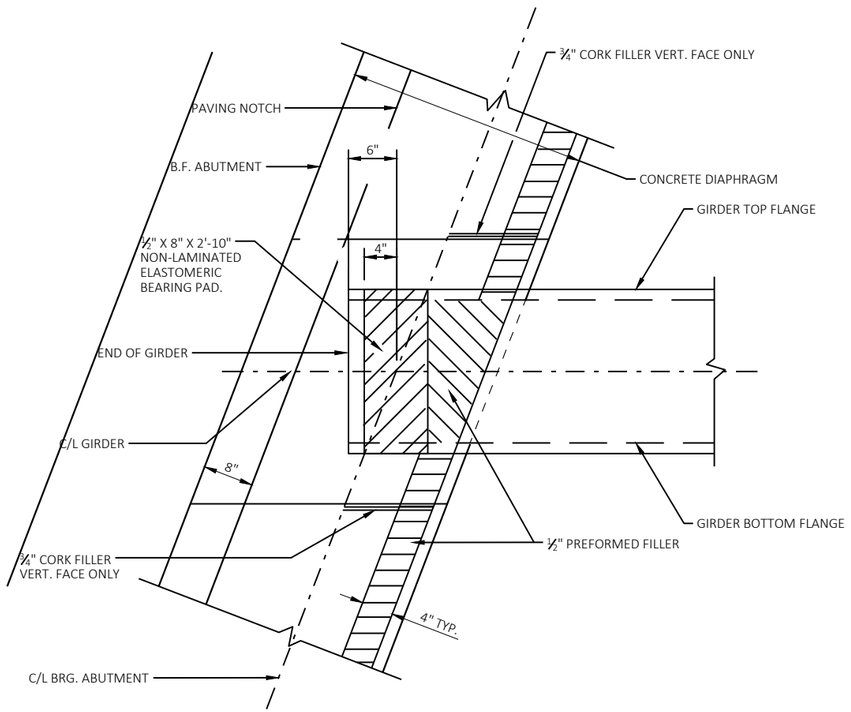
8

8

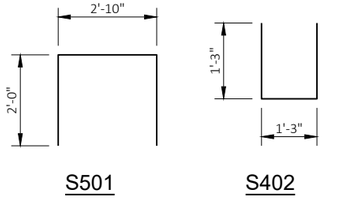


AT ABUTMENTS

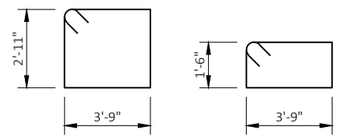
PARTIAL LONGITUDINAL SECTION



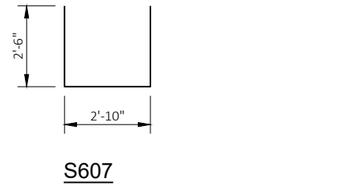
BEARING PAD DETAIL



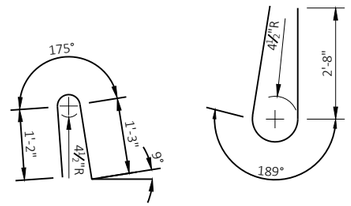
S501 S402



S504 S505



S607



S515 S516

BILL OF BARS

20760# COATED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	50	6-7	X		ABUTMENT DIAPHRAGM VERTICAL
S402	X	30	3-7	X		ABUTMENT DIAPHRAGM VERTICAL
S603	X	24	5-7			ABUTMENT DIAPHRAGM HORIZONTAL
S504	X	42	14-0	X		ABUTMENT DIAPHRAGM VERTICAL
S505	X	16	11-2	X		ABUTMENT DIAPHRAGM VERTICAL
S406	X	8	3-0			ABUTMENT DIAPHRAGM VERTICAL END
S607	X	8	7-6	X		ABUTMENT DIAPHRAGM HORIZ. END
S608	X	8	0-11			ABUTMENT DIAPHRAGM HORIZ. END
S509	X	64	15-3		☒	DECK TOP TRANSVERSE
S510	X	95	28-2			DECK TOP TRANSVERSE
S511	X	64	15-5		☒	DECK BOTTOM TRANSVERSE
S512	X	94	28-2			DECK BOTTOM TRANSVERSE
S413	X	86	43-4			DECK LONGITUDINAL TOP
S414	X	88	43-4			DECK LONGITUDINAL BOTTOM
S515	X	264	4-5	X		PARAPET VERTICAL
S516	X	264	6-8	X		PARAPET VERTICAL
S517	X	64	44-3			PARAPET HORIZONTAL
S618	X	8	36-9			ABUTMENT DIAPHRAGM HORIZONTAL
S419	X	12	5-3			ABUTMENT DIAPHRAGM HORIZONTAL
S520	X	16	6-0			ABUTMENT DIAPHRAGM (2) PER GIRDER END

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY

BAR MARK	NO. REQUIRED	LENGTH
S509	2 SERIES OF 32	2-4 TO 28-2
S511	2 SERIES OF 32	2-8 TO 28-2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-0118

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SUPERSTRUCTURE DETAILS

SHEET 12 OF 13

63

STATE PROJECT NUMBER

9487-00-70

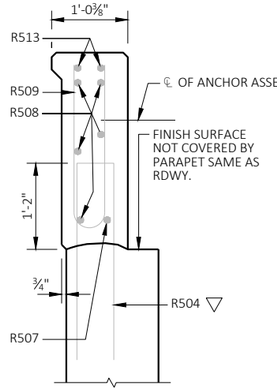
8

8

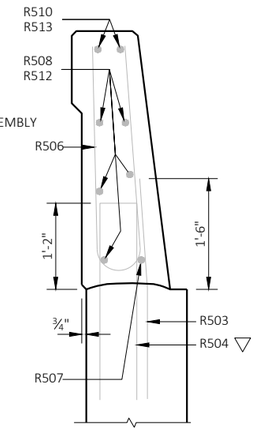
SCALE = 1:1

STATE PROJECT NUMBER

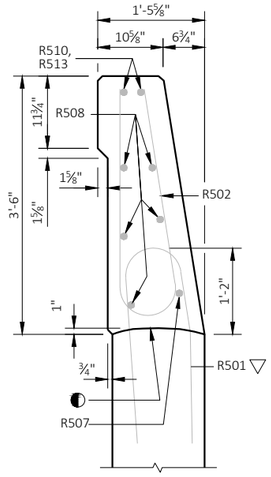
9487-00-70



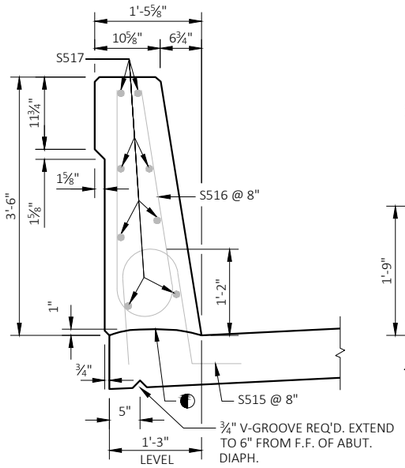
SECTION A-A



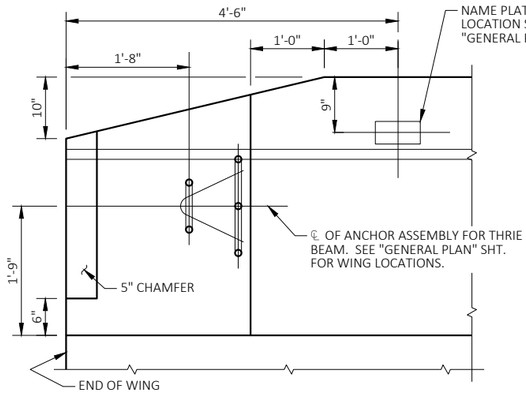
SECTION B-B



SECTION C-C



SECTION THRU PARAPET ON DECK



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

FOR ABUTMENT PAPAPETS , WEIGHT INCLUDED IN SUPERSTRUCTURE TABLE

BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	7	7	5-10	X		PARAPET VERTICAL
R502	X	7	7	6-8	X		PARAPET VERTICAL
R503	X	22	22	3-0	X		PARAPET VERTICAL
R504	X	34	34	5-7	X		PARAPET VERTICAL
R505	X	10	10	6-5	X		PARAPET VERTICAL
R506	X	12	12	6-6	X		PARAPET VERTICAL
R507	X	1	1	11-6	X		PARAPET HORIZONTAL
R508	X	5	5	11-8	X		PARAPET HORIZONTAL
R509	X	12	12	5-5	X	◪	PARAPET VERTICAL
R510	X	2	2	11-8	X		PARAPET HORIZONTAL
R511	X	1	1	9-7	X		PARAPET HORIZONTAL
R512	X	5	5	9-8	X		PARAPET HORIZONTAL
R513	X	1	1	9-8	X		PARAPET HORIZONTAL

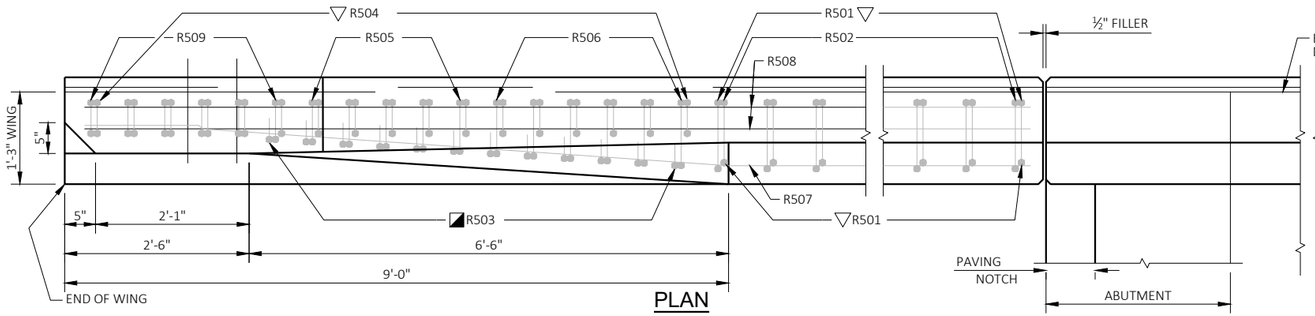
NOTE: ◪ BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTH.

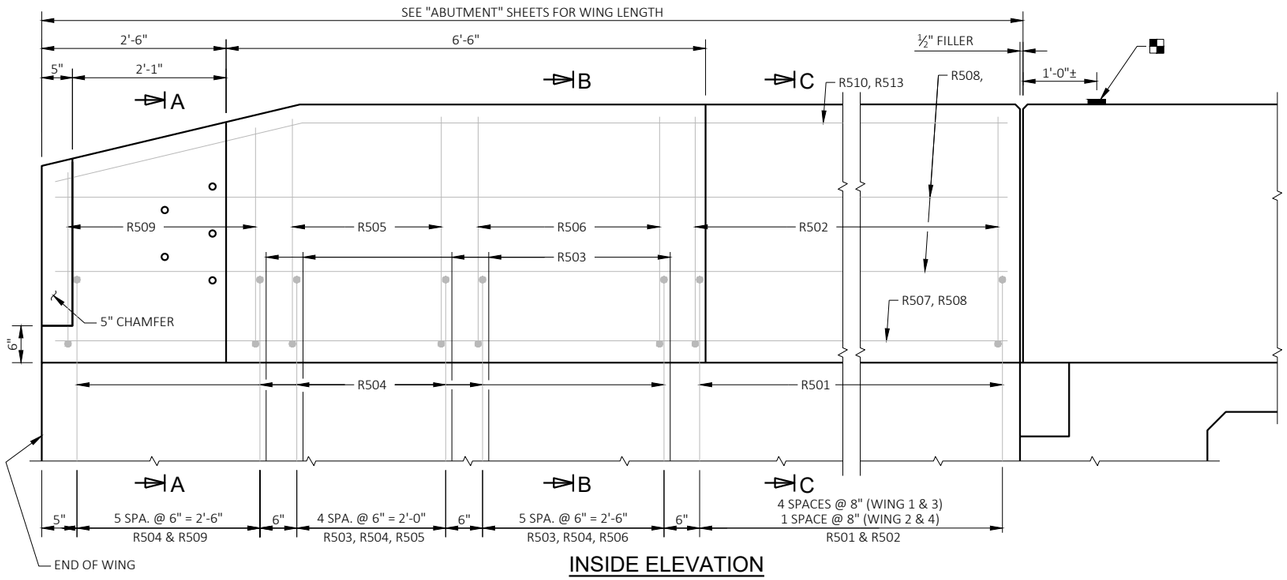
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY

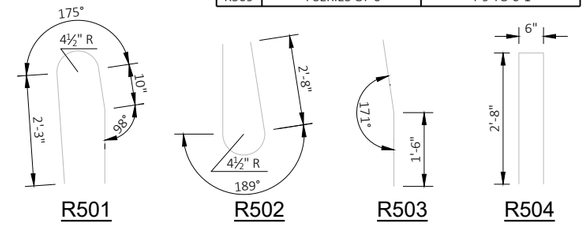
BAR MARK	NO. REQUIRED	LENGTH
R509	4 SERIES OF 6	4-9 TO 6-1

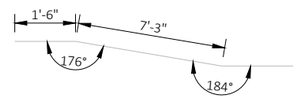


PLAN

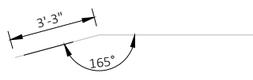


INSIDE ELEVATION

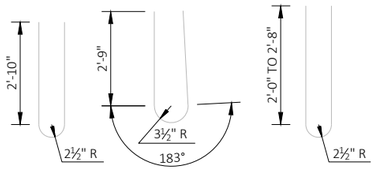




R507 & R511



R510 & R513

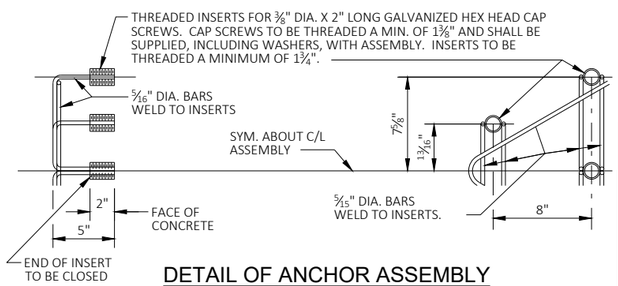


◪ BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-0118

DRAWN BY NJT | PLANS CK'D. TLP

SINGLE SLOPED PARAPET 42SS

SHEET 13 OF 13

64

SCALE = 1:1

8

8

DIVISION 1 - ALIPROF-CTH YY

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
07+77.706	777.71	0.00	7.18	0.00	0.54	0	0	0	0	0	0
07+86.634	786.63	8.93	51.06	0.00	3.11	10	0	1	10	1	9
08+00	800.00	13.36	18.50	0.00	2.47	17	0	1	27	3	25
08+50	850.00	50.00	53.64	0.00	5.30	67	0	7	94	11	83
09+00	900.00	50.00	40.71	9.20	3.15	87	9	8	181	21	151
09+24.768	924.77	24.77	35.54	9.20	23.02	35	8	12	216	36	163
09+33.6	933.60	8.83	16.60	9.20	10.83	9	3	6	225	44	161
09+50	950.00	16.40	16.78	8.30	13.72	10	5	7	235	53	158
09+57.403	957.40	7.40	16.85	4.60	6.43	5	2	3	240	56	157
10+42.591	1042.59	85.19	29.77	4.60	0.00	0	0	0	240	56	157
10+50	1050.00	7.41	30.31	8.30	0.00	8	2	0	248	56	163
10+66.4	1066.40	16.40	29.87	9.20	0.00	18	5	0	266	56	176
11+00	1100.00	33.60	52.79	9.20	2.31	51	11	1	317	58	215
11+50	1150.00	50.00	18.41	0.00	8.10	66	9	10	383	70	259
12+00	1200.00	50.00	18.52	0.00	4.82	34	0	12	417	85	278
12+06.183	1206.18	6.18	7.85	0.00	3.29	3	0	1	420	86	280
12+30.783	1230.78	24.60	7.84	0.00	0.00	7	0	1	427	88	286

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 BASE AGGREGATE DENSE 1 1/4-INCH

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL

(13) EXPANDED FILL FACTOR = 1.25

DEPENDING ON SELECTIONS: EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) * 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) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

GRAVEL DRIVEWAY

END OF PAVED SHOULDER

EXISTING CULVERT

EX RW

TEL OH

1540

1530

1520

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

8+21

7+87

7+78

TEL

WAT

10 FT

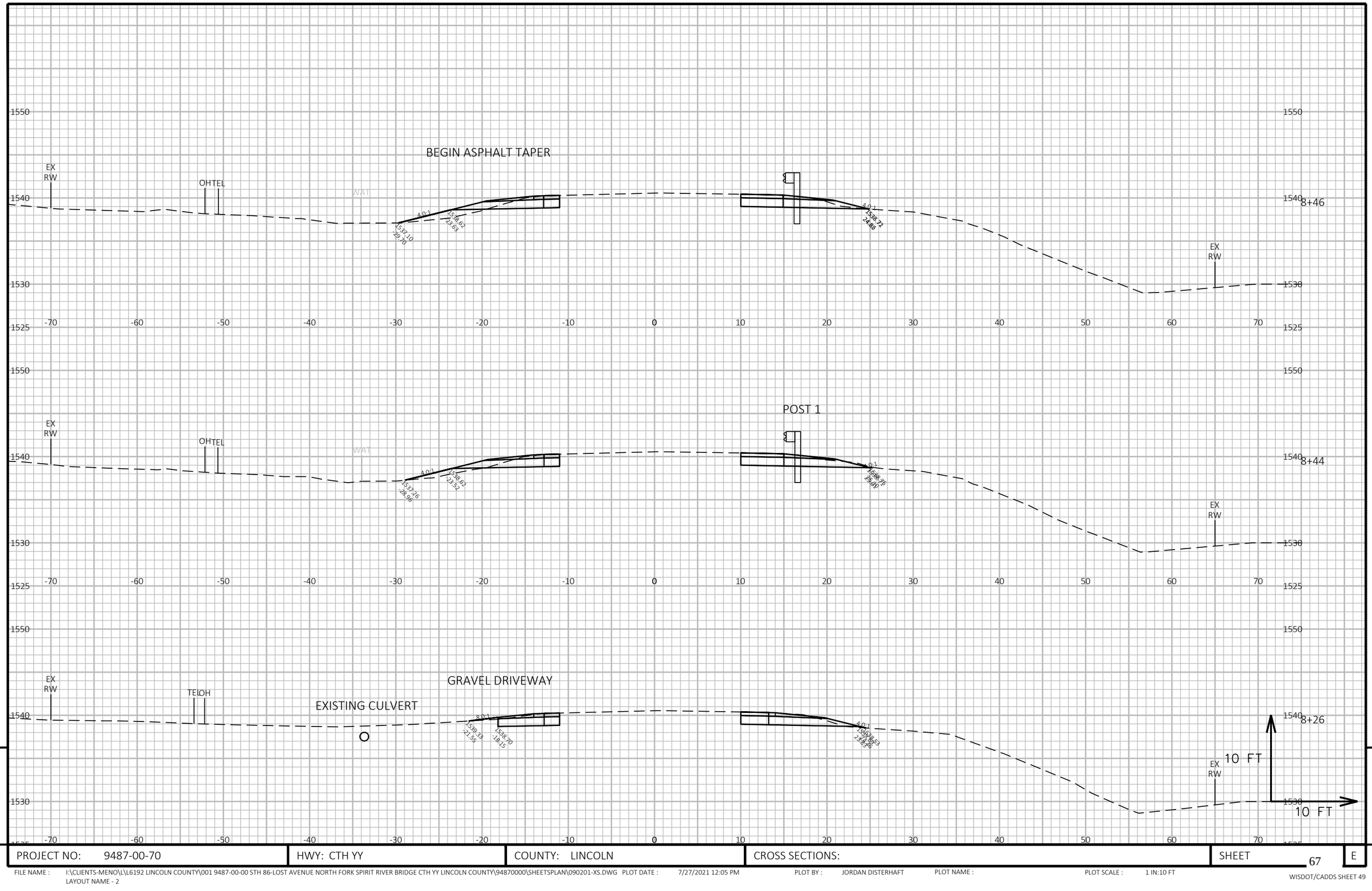
9

PROJECT NO: 9487-00-70 | HWY: CTH YY | COUNTY: LINCOLN | CROSS SECTIONS: | SHEET 66 | E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/27/2021 12:05 PM PLOT BY : JORDAN DISTERHAFT PLOT NAME : PLOT SCALE : 1 IN:10 FT

LAYOUT NAME - 1

WISDOT/CADDS SHEET 49

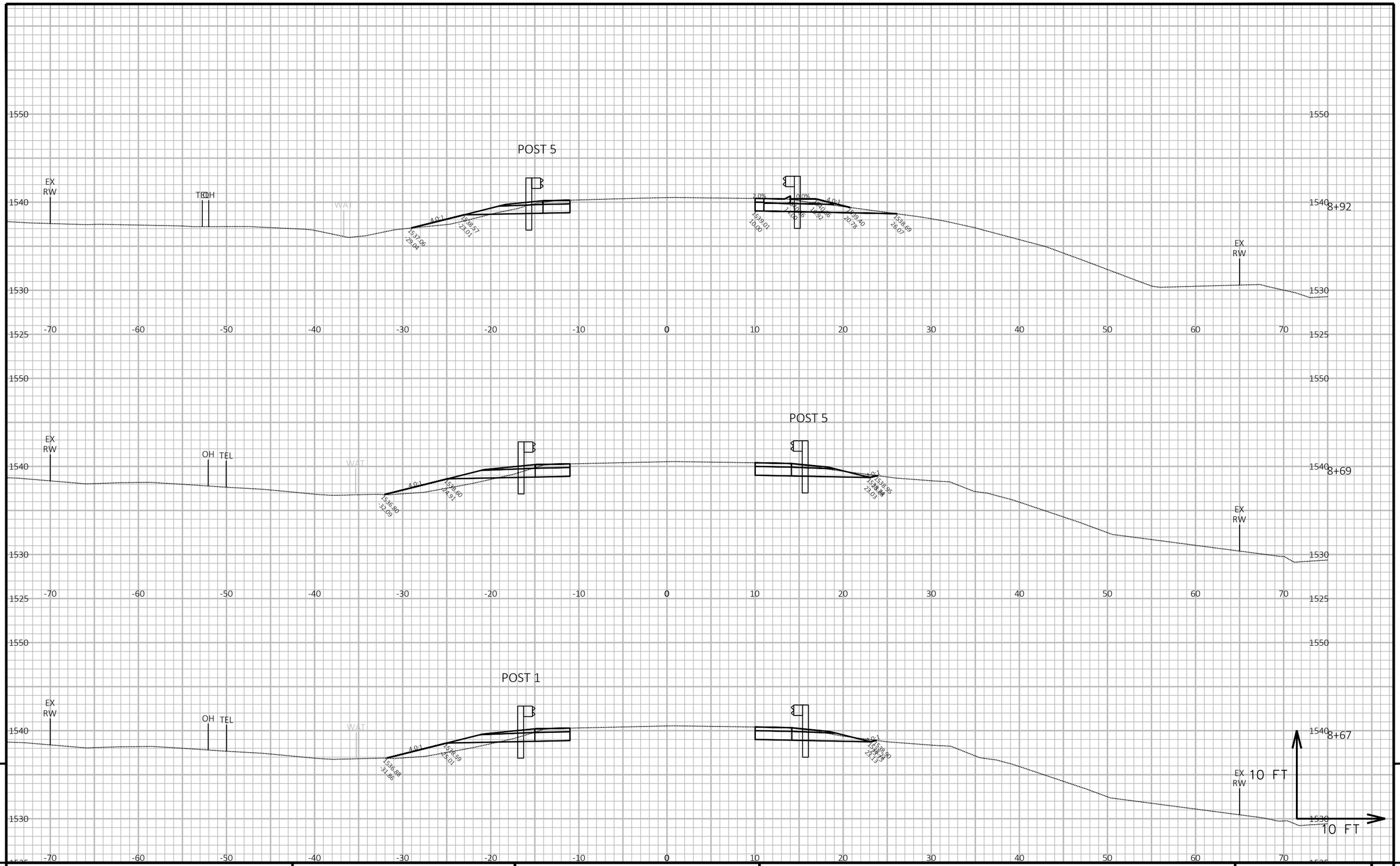


9 9

PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	CROSS SECTIONS:	SHEET 67	E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/27/2021 12:05 PM PLOT BY : JORDAN DISTERHAFT PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 2

WISDOT/CADDS SHEET 49



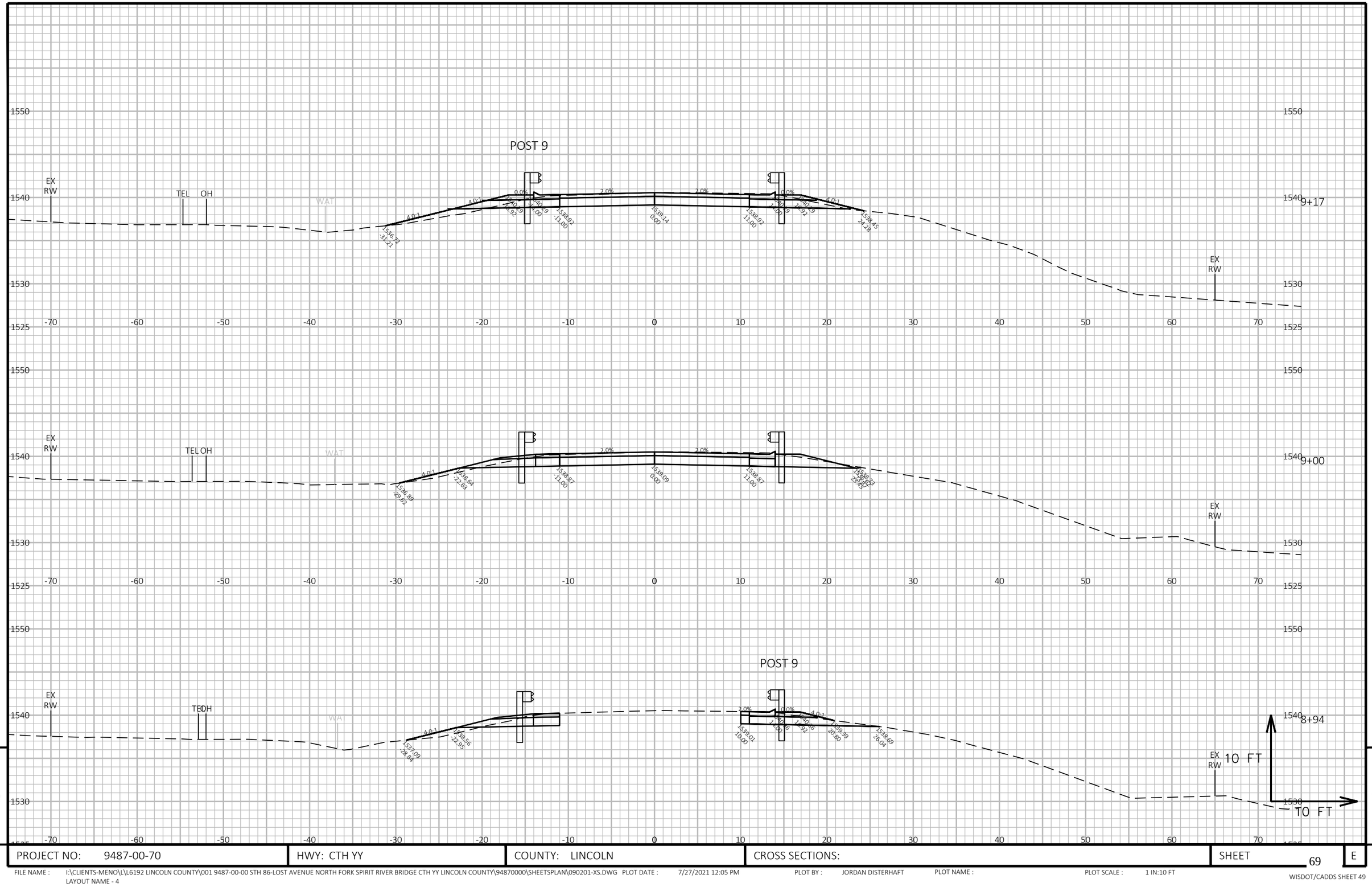
9

9

PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	CROSS SECTIONS:	SHEET 68	E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/27/2021 12:05 PM PLOT BY : JORDAN DISTERHAFT PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 3

WISDOT/CADDS SHEET 49



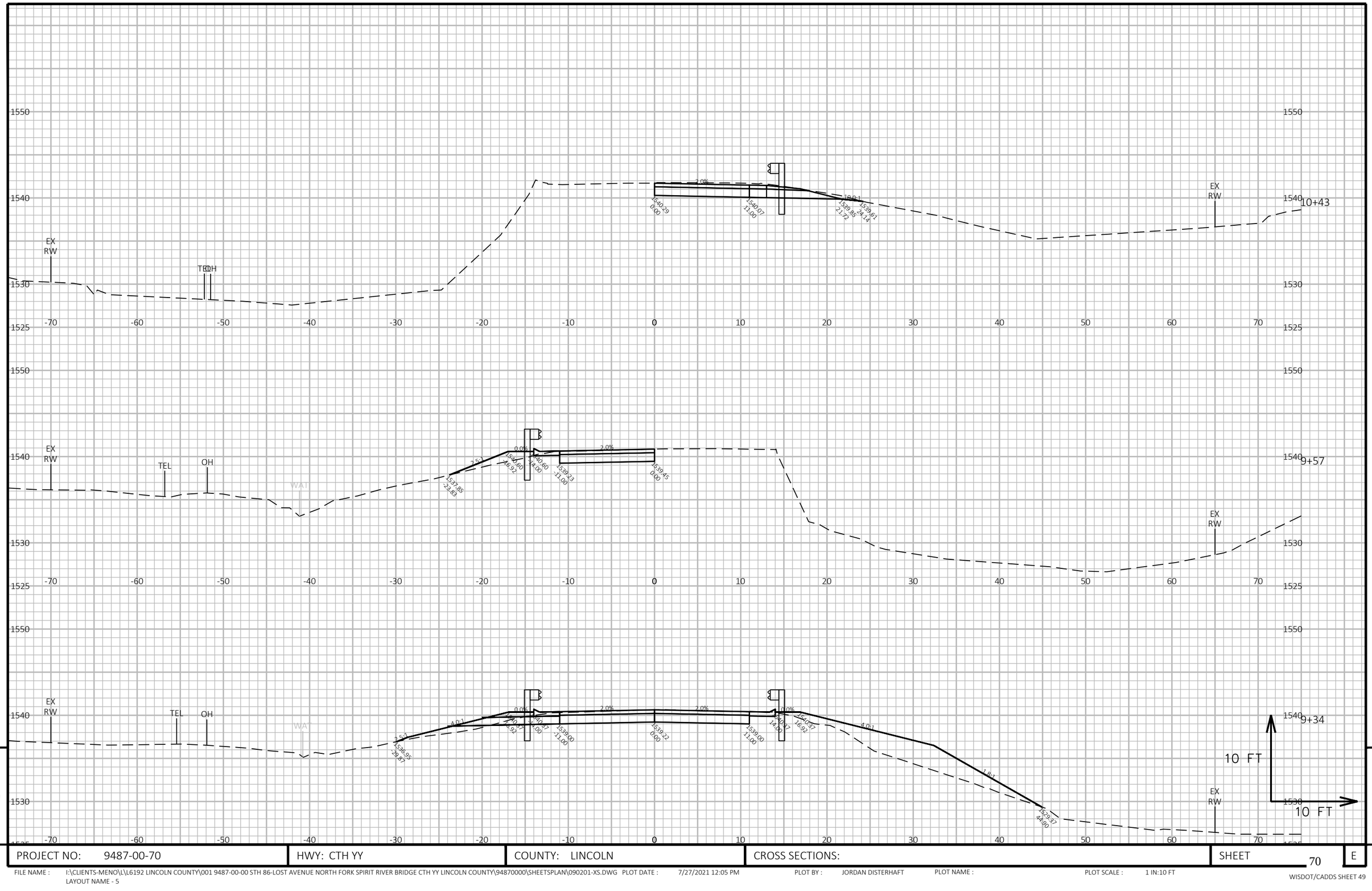
9

9

PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	CROSS SECTIONS:	SHEET 69	E

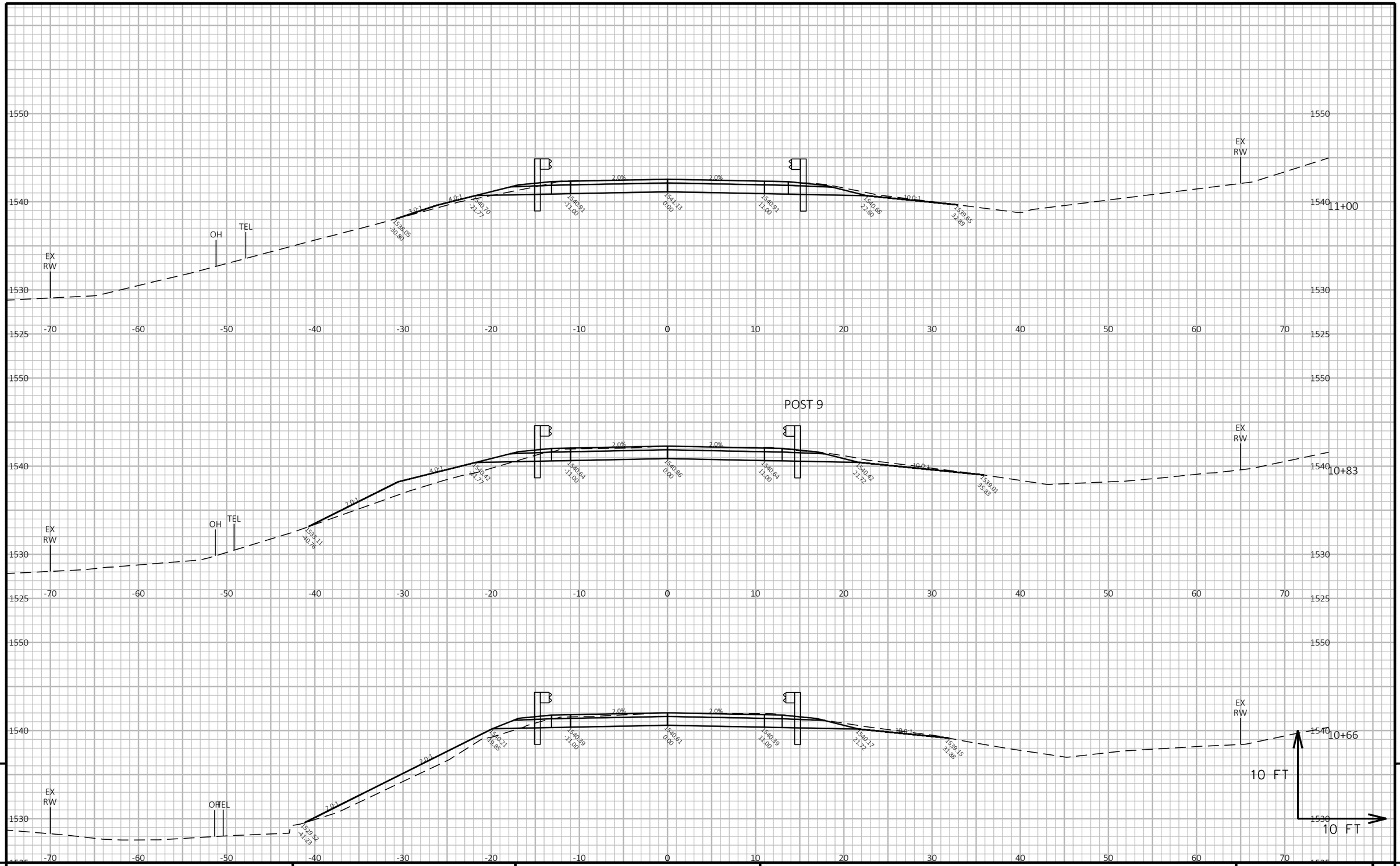
FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/27/2021 12:05 PM PLOT BY : JORDAN DISTERHAFT PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 4

WISDOT/CADDS SHEET 49



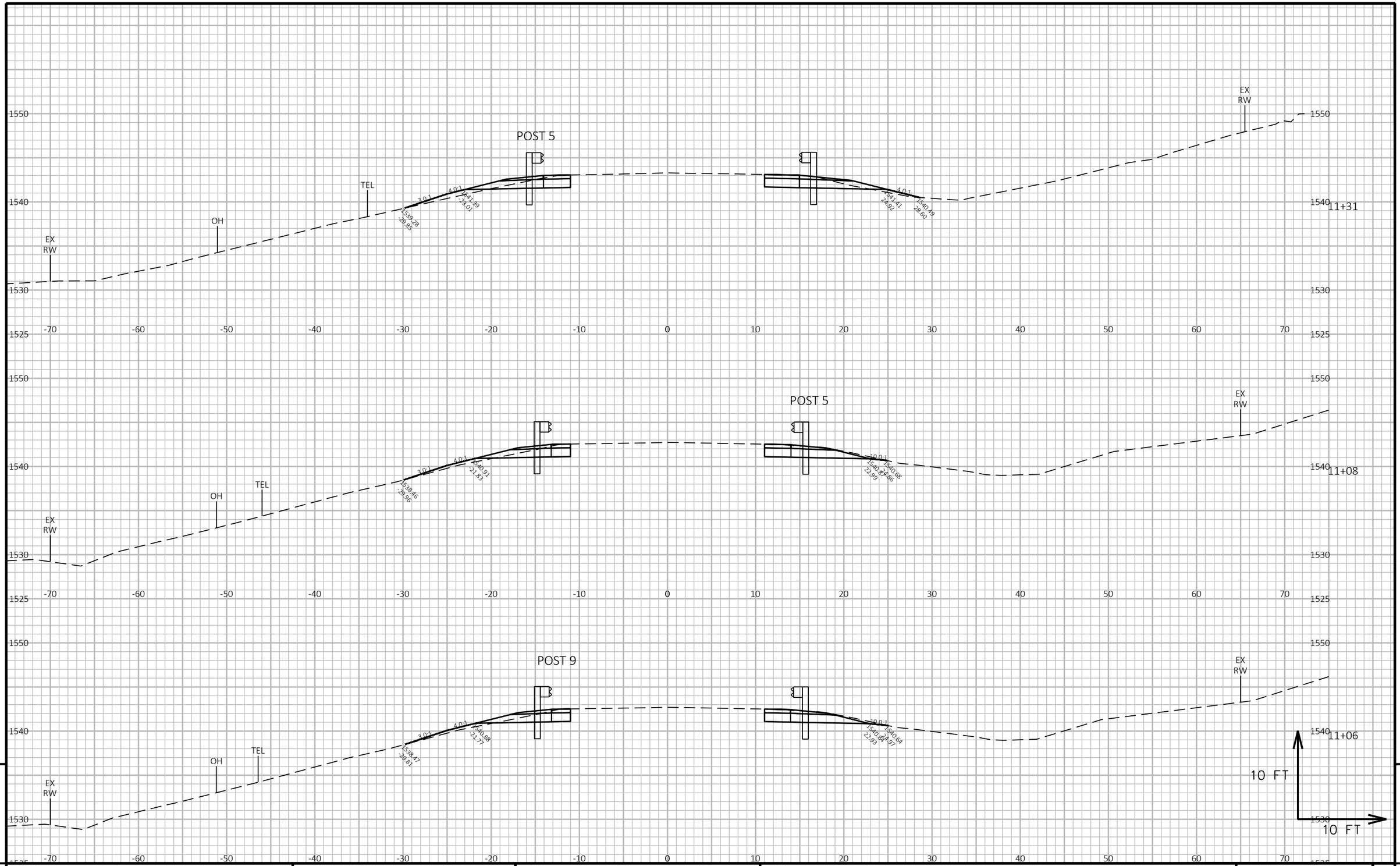
PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	CROSS SECTIONS:	SHEET 70	E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/27/2021 12:05 PM PLOT BY : JORDAN DISTERHAFT PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 5



PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	CROSS SECTIONS:	SHEET 71	E

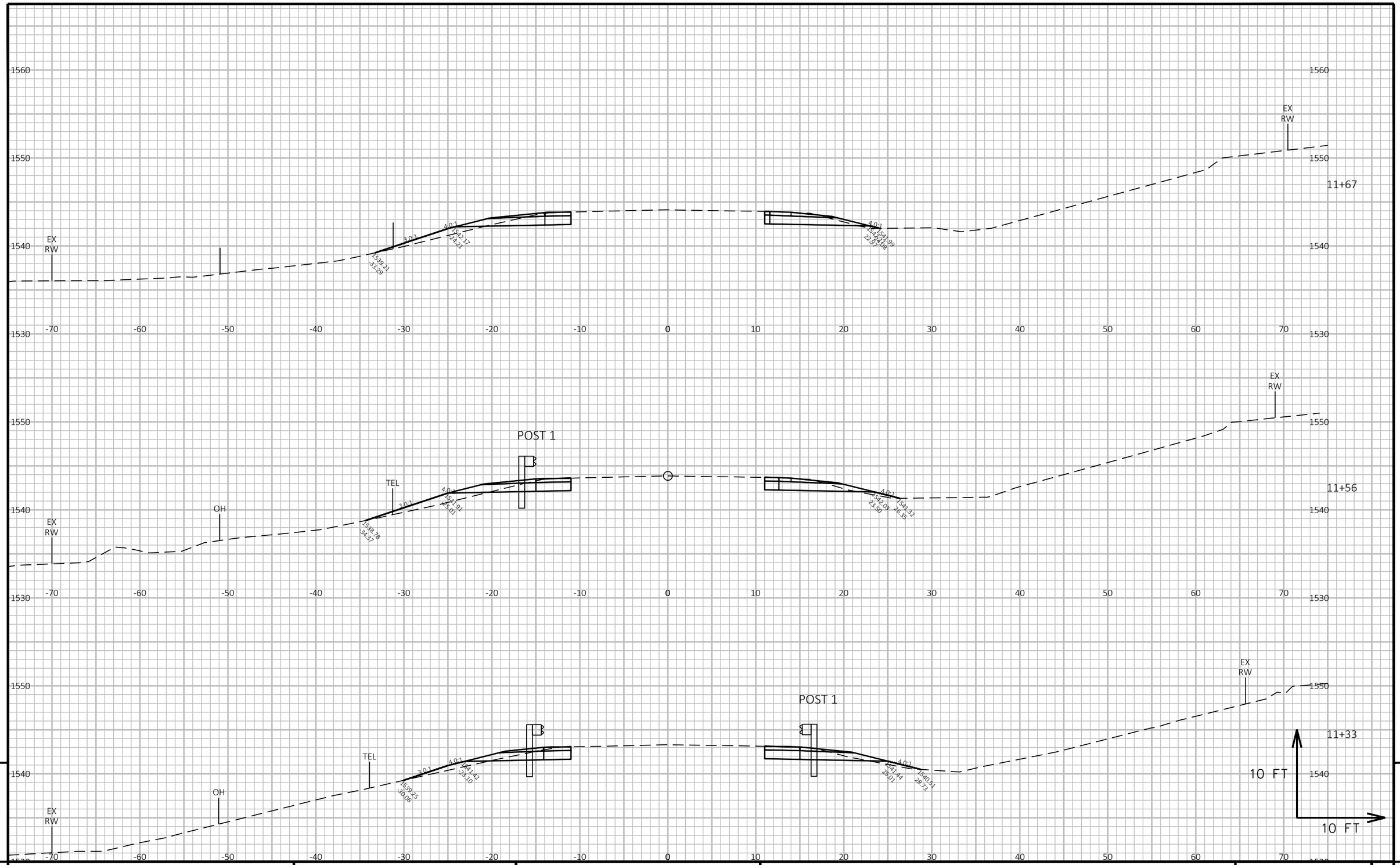
FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/27/2021 12:05 PM PLOT BY : JORDAN DISTERHAFT PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 6



9 9

PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	CROSS SECTIONS:	SHEET 72	E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/27/2021 12:05 PM PLOT BY : JORDAN DISTERHAFT PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 7

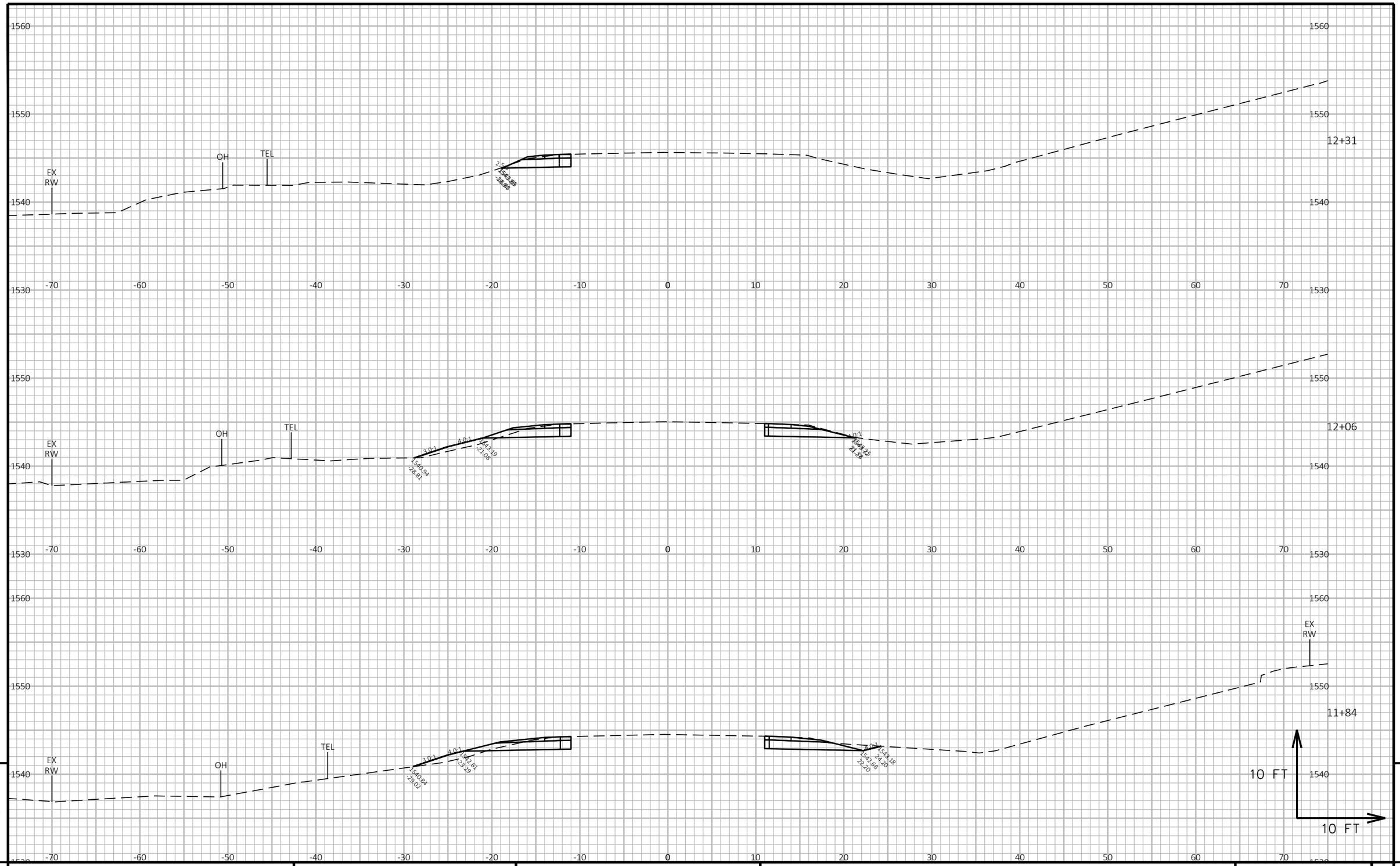


9

9

PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	CROSS SECTIONS:	SHEET 73	E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/27/2021 12:05 PM PLOT BY : JORDAN DISTERHAFT PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 8



PROJECT NO: 9487-00-70	HWY: CTH YY	COUNTY: LINCOLN	CROSS SECTIONS:	SHEET 74	E

FILE NAME : I:\CLIENTS-MENO\L\L6192 LINCOLN COUNTY\001 9487-00-00 STH 86-LOST AVENUE NORTH FORK SPIRIT RIVER BRIDGE CTH YY LINCOLN COUNTY\94870000\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/27/2021 12:05 PM PLOT BY : JORDAN DISTERHAFT PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 9

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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