SWL APRIL 2016

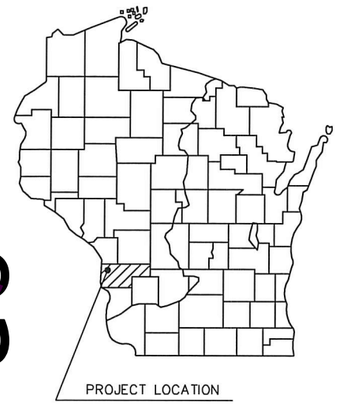
PROJECT ID: 5388-00-72
5388-13-71

COUNTY: VERNON

02

ORDER OF SHEETS

TOTAL SHEETS = 34



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOWN OF HAMBURG, NORTH STODDARD ROAD

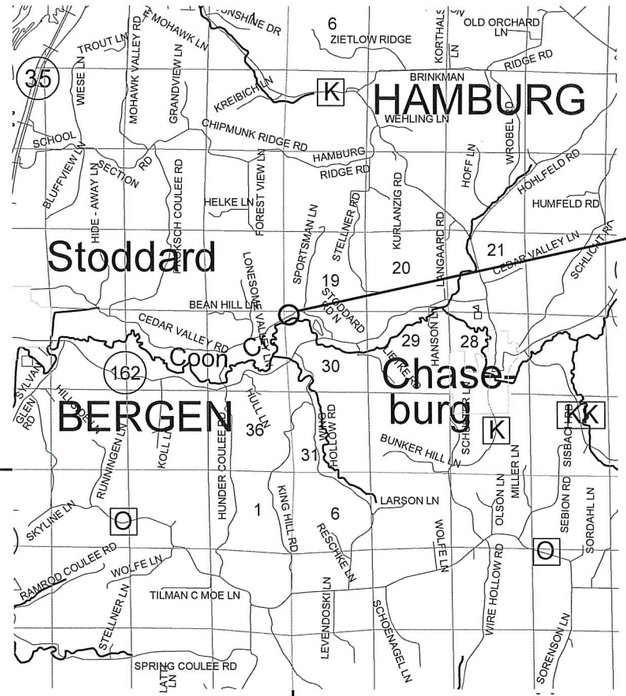
(BRANCH COON CREEK BRIDGE B-62-0249)

TOWN ROAD

VERNON COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5388-00-72	WISC 2016086	1

STATE PROJECT NUMBER
5388-00-72



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.057 MI

END PROJECT
STA 11+00
Y - 189155.73
X - 633383.61

STRUCTURE B-62-0249

BEGIN PROJECT
STA 8+00
Y - 189018.34
X - 633118.03

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

DESIGN DESIGNATION

AADT (2016)	=	< 100
AADT (2036)	=	< 100
DHV (2036)	=	3
D (%)	=	50/50
T (% OF ADT)	=	10%
DESIGN SPEED	=	< 25 MPH
ESALS	=	NA

CONVENTIONAL SYMBOLS

PLAN

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

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
- OVERHEAD LINES — OH
- FIBER OPTIC — FO
- GAS — G
- SANITARY SEWER — SAN
- STORM SEWER — SS
- TELEPHONE — T
- WATER — W
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

ACCEPTED FOR TOWN OF HAMBURG
10/21/15 DATE — Rod Davidson TOWN CHAIRMAN

ACCEPTED FOR VERNON COUNTY
10/21/15 DATE — Phil Hewitt COUNTY COMMISSIONER

ORIGINAL PLANS PREPARED BY

Cedar corporation
MENOMONIE - MADISON - GREEN BAY
www.cedarcorp.com
800-472-7372

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

10-15-15 DATE

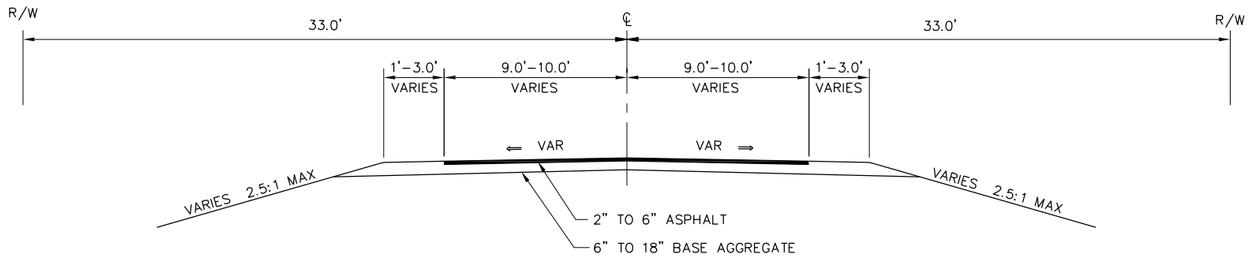
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor CEDAR CORPORATION
Designer CEDAR CORPORATION
Management Consultant KJOHNSON ENGINEERS, INC.

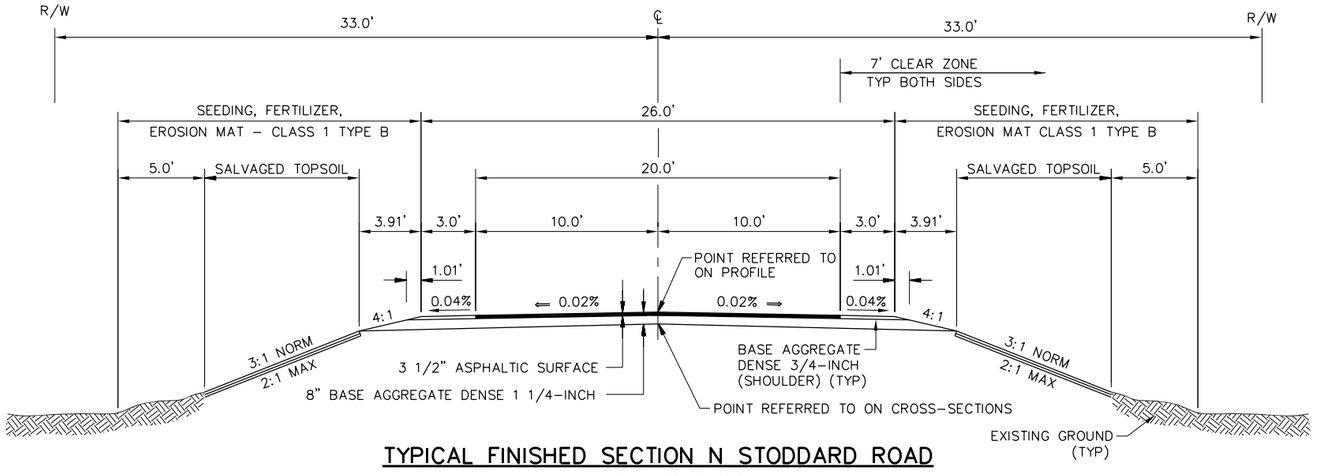
APPROVED FOR THE DEPARTMENT
10/29/15 DATE — (Management Consultant Signature)

E

FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\007 5388-00-02 N STODDARD RD TOWN OF HAMBURG\100 CAD\DWG\010101_TI_N STODDARD RD.DWG DATE : 10/15/2015 11:26 AM PLOT BY : NICK THOMPSON



EXISTING TYPICAL SECTION N STODDARD ROAD



TYPICAL FINISHED SECTION N STODDARD ROAD

STA 8+00 - STA 9+76.56
STA 10+19.44 - STA 11+00

DNR LIAISON

DNR SERVICE CENTER
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 785-9115
KAREN KALVELAGE
karen.kalvelage@wisconsin.gov

DESIGN CONSULTANT

CEDAR CORPORATION
604 WILSON AVENUE
MENOMONIE, WI 54751
(715) 235-9081
TROY L. PETERSON, PE
troy.peterson@cedarcorp.com

VERNON COUNTY

VERNON CO. HIGHWAY DEPARTMENT
602 NORTH MAIN STREET
VIROQUA, WI 54665
(608) 637-5452
PHIL HEWITT
phil.heweitt@vernoncounty.org

TOWN OF HAMBURG

HAMBURG TOWN HALL
S1631A CTY HWY K
CHASEBURG, WI 54621
(608) 452-3280
ROD ERLANDSON
hamburg@mwt.net

UTILITIES

VERNON ELECTRIC COOPERATIVE
110 SAUGSTAD ROAD
WESTBY, WI 54667
(608) 634-3121
CRAIG BUROS
cburos@vernonelectric.org

COON VALLEY FARMERS TELEPHONE
P.O. BOX 398
COON VALLEY, WI 54623
(608) 452-3101
TRAVIS FROMK & LENNY LEIS
cvt@mwt.net

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

** DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

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.

SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. SILT FENCE TO BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO BRIDGE REMOVAL.

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.

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

SHRINKAGE IS ESTIMATED AT 25%.

THE 3 1/2" ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1 3/4" LOWER LAYER AND A 1 3/4" UPPER LAYER. USE 1/2" NOMINAL AGGREGATE FOR ASPHALT SURFACE.

BEARINGS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), VERNON COUNTY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE FERTILIZED AND SEEDED AS DIRECTED BY THE ENGINEER. USE SEED MIX NO. 10.

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

THE BENCHMARK IS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), VERNON COUNTY.

WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS. DO NOT OPERATE EQUIPMENT OUTSIDE THE SLOPE INTERCEPTS.

STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AGG	AGGREGATE
ET AL	AND OTHERS
AADT	ANNUAL AVERAGE DAILY TRAFFIC
BF	BACK FACE
BM	BENCHMARK
C/L OR ℄	CENTERLINE
△	CENTRAL ANGLE OR DELTA
CLR	CLEAR
CONC	CONCRETE
CONST	CONSTRUCTION
COR	CORNER
CMP	CORRUGATED METAL PIPE
CTH	COUNTY TRUNK HIGHWAY
CR	CREEK
CFS	CUBIC FEET/SECOND
CULV	CULVERT
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
E	EAST
EL	ELEVATION
EST	ESTIMATED
FPS	FEET PER SECOND
FE	FIELD ENTRANCE
FT	FOOT (FEET)
FTG	FOOTING
FDN	FOUNDATION
FF	FRONT FACE
IP	IRON PIN
LT	LEFT
LHF	LEFT-HAND FORWARD
L	LENGTH OF CURVE
LF	LINEAR FOOT
MAX	MAXIMUM
MI	MILE
MIN	MINIMUM
NC	NORMAL CROWN
N	NORTH
NE	NORTHEAST
NW	NORTHWEST
NO	NUMBER
OFF	OFFSET
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
POL	POINT ON LINE
PE	PRIVATE ENTRANCE
PL	PROPERTY LINE
PSI	POUNDS/SQUARE INCH
PROP	PROPOSED
R	RADIUS
RR	RAILROAD
REBAR	REINFORCEMENT BAR
REQD	REQUIRED
RT	RIGHT
RHF	RIGHT-HAND FORWARD
R/W	RIGHT-OF-WAY
RD	ROAD
SEC	SECTION
S	SOUTH
SE	SOUTHEAST
SW	SOUTHWEST
STH	STATE TRUNK HIGHWAY
STA	STATION
SE	SUPER ELEVATION
T	TANGENT
TEL	TELEPHONE
TEMP	TEMPORARY
TI	TEMPORARY INTEREST
TLE	TEMPORARY LIMITED EASEMENT
TL OR T/L	TRANSIT LINE
T	TRUCKS
TYP	TYPICAL
U/G	UNDERGROUND
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
V	VELOCITY
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WEST
YD	YARD

2

LEGEND

SEEDING MIXTURE NO. 10 FERTILIZER AND EROSION MAT CLASS I TYPE B

SILT FENCE

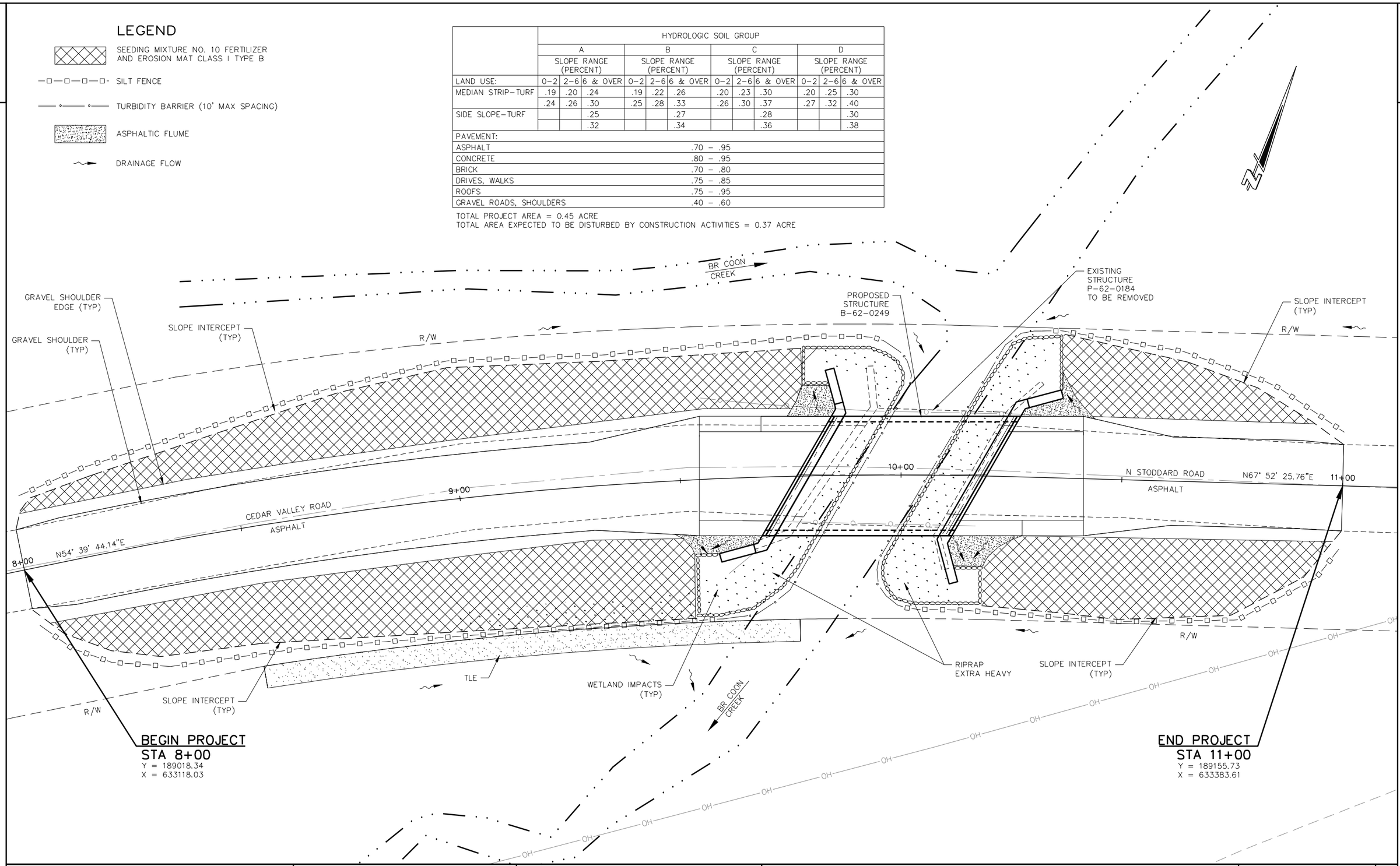
TURBIDITY BARRIER (10' MAX SPACING)

ASPHALTIC FLUME

DRAINAGE FLOW

	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
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE-TURF			.25			.27			.28			.30
			.32			.34			.36			.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 = 0.45 ACRE
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.37 ACRE



PROJECT NO: 5388-00-72	HWY: N STODDARD ROAD	COUNTY: VERNON	EROSION CONTROL	SHEET 3	E

FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\007 5388-00-02 N STODDARD RD TOWN OF HAMBURG\100 CAD\DWG\022001_EC_N STODDARD RD.DGN PLOTDATE : 10/21/2015 10:29 AM PLOT BY : NICK THOMPSON PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 44

2

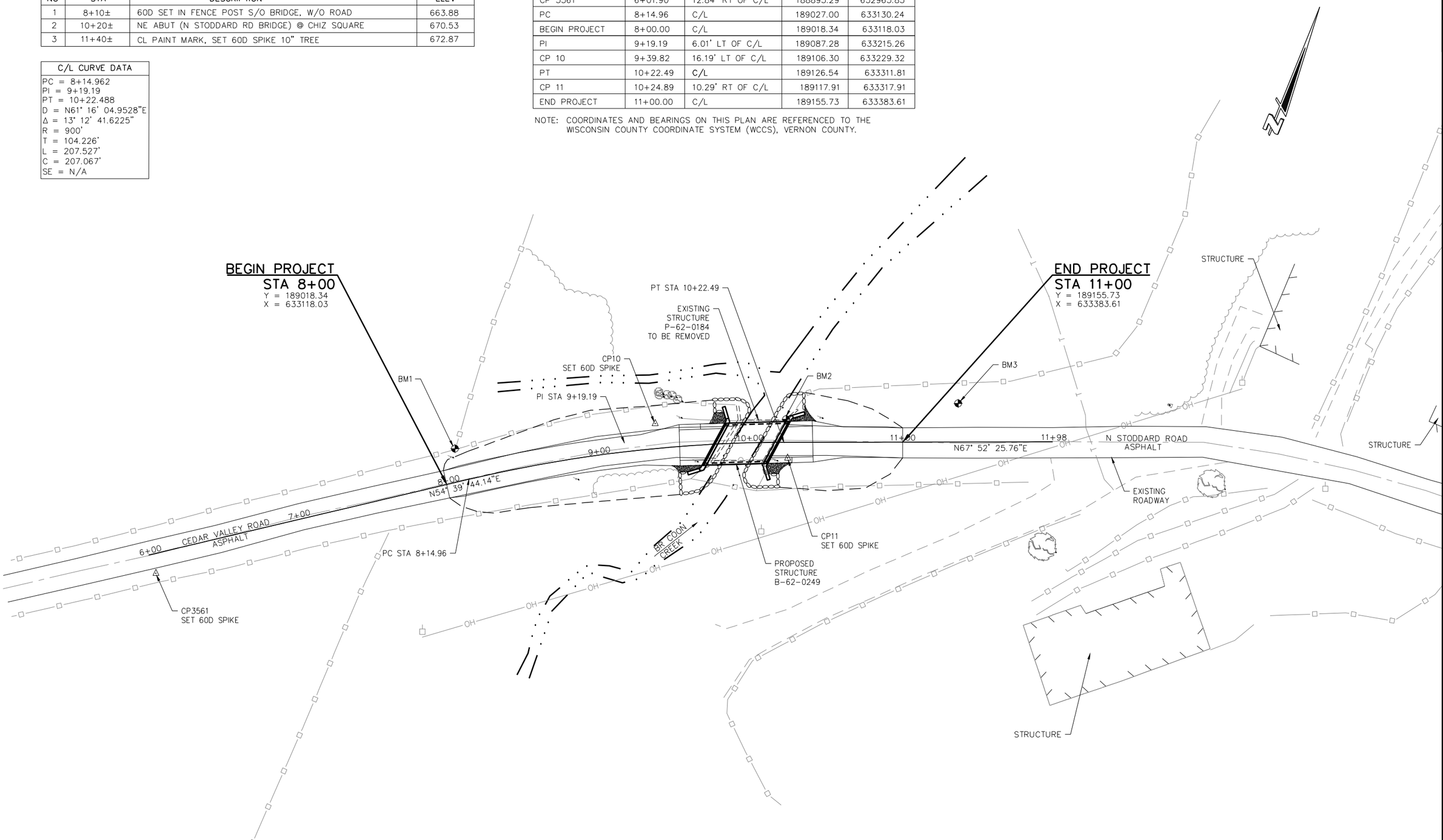
BENCHMARKS			
NO	STA	DESCRIPTION	ELEV
1	8+10±	60D SET IN FENCE POST S/O BRIDGE, W/O ROAD	663.88
2	10+20±	NE ABUT (N STODDARD RD BRIDGE) @ CHIZ SQUARE	670.53
3	11+40±	CL PAINT MARK, SET 60D SPIKE 10" TREE	672.87

C/L CURVE DATA
PC = 8+14.962
PI = 9+19.19
PT = 10+22.488
D = N61° 16' 04.9528"E
Δ = 13° 12' 41.6225"
R = 900'
T = 104.226'
L = 207.527'
C = 207.067'
SE = N/A

COORDINATES

DESCRIPTION	STATION	LOCATION	NORTHING	EASTING
CP 3561	6+01.90	12.84' RT OF C/L	188893.29	632963.85
PC	8+14.96	C/L	189027.00	633130.24
BEGIN PROJECT	8+00.00	C/L	189018.34	633118.03
PI	9+19.19	6.01' LT OF C/L	189087.28	633215.26
CP 10	9+39.82	16.19' LT OF C/L	189106.30	633229.32
PT	10+22.49	C/L	189126.54	633311.81
CP 11	10+24.89	10.29' RT OF C/L	189117.91	633317.91
END PROJECT	11+00.00	C/L	189155.73	633383.61

NOTE: COORDINATES AND BEARINGS ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), VERNON COUNTY.



PROJECT NO: 5388-00-72	HWY: N STODDARD ROAD	COUNTY: VERNON	ALIGNMENT TIES	SHEET 4	E

3

DATE 26JAN16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5388-00-72 QUANTITY
0010	201.0205	Grubbing	STA	2.000	2.000
0030	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00 (5388-00-72)	LS	1.000	1.000
0050	204.0165	Removing Guardrail	LF	37.000	37.000
0060	205.0100	Excavation Common **P**	CY	173.000	173.000
0070	206.1000	Excavation for Structures Bridges (structure) 01. B-62-0249	LS	1.000	1.000
0090	208.0100	Borrow	CY	194.000	194.000
0100	210.0100	Backfill Structure	CY	300.000	300.000
0110	213.0100	Finishing Roadway (project) 01. 5388-00-72	EACH	1.000	1.000
0130	305.0110	Base Aggregate Dense 3/4-Inch	TON	31.000	31.000
0140	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	369.000	369.000
0150	415.0120	Concrete Pavement 12-Inch	SY	24.000	24.000
0160	415.0410	Concrete Pavement Approach Slab	SY	102.000	102.000
0170	465.0105	Asphaltic Surface	TON	96.000	96.000
0180	465.0315	Asphaltic Flumes	SY	28.000	28.000
0190	502.0100	Concrete Masonry Bridges	CY	158.000	158.000
0200	502.3200	Protective Surface Treatment	SY	150.000	150.000
0210	505.0400	Bar Steel Reinforcement HS Structures	LB	4,880.000	4,880.000
0220	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	18,400.000	18,400.000
0230	513.4061	Railing Tubular Type M (structure) 01. B-62-0249	LF	78.000	78.000
0250	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0300	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	840.000	840.000
0320	606.0400	Riprap Extra-Heavy	CY	180.000	180.000
0330	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	180.000	180.000
0340	619.1000	Mobilization	EACH	0.500	0.500
0350	624.0100	Water	MGAL	5.810	5.810
0360	625.0500	Salvaged Topsoil **P**	SY	907.000	907.000
0370	628.1504	Silt Fence	LF	683.000	683.000
0380	628.1520	Silt Fence Maintenance	LF	883.000	883.000
0390	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0400	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0410	628.2004	Erosion Mat Class I Type B	SY	673.000	673.000
0420	628.6005	Turbidity Barriers	SY	113.000	113.000
0450	629.0210	Fertilizer Type B **P**	CWT	0.640	0.640
0460	630.0110	Seeding Mixture No. 10 **P**	LB	34.000	34.000
0490	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0500	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0510	638.2602	Removing Signs Type II	EACH	6.000	6.000
0520	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0530	642.5001	Field Office Type B	EACH	0.500	0.500
0540	643.0100	Traffic Control (project) 01. 5388-00-72	EACH	1.000	1.000
0570	643.0420	Traffic Control Barricades Type III	DAY	848.000	848.000
0580	643.0705	Traffic Control Warning Lights Type A	DAY	1,272.000	1,272.000
0600	643.0900	Traffic Control Signs	DAY	742.000	742.000
0620	645.0120	Geotextile Fabric Type HR	SY	280.000	280.000
0630	650.4500	Construction Staking Subgrade	LF	296.000	296.000
0640	650.5000	Construction Staking Base	LF	296.000	296.000
0650	650.6500	Construction Staking Structure Layout (structure) 01. B-62-0249	LS	1.000	1.000

DATE 26JAN16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5388-00-72 QUANTITY
0670	650.9910	Construction Staking Supplemental Control (project) 01. 5388-00-72	LS	1.000	1.000
0690	650.9920	Construction Staking Slope Stakes	LF	296.000	296.000
0700	690.0150	Sawing Asphalt	LF	38.000	38.000
0710	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0720	715.0502	Incentive Strength Concrete Structures	DOL	948.000	948.000
0750	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	150.000	150.000
0760	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	150.000	150.000

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED.

3

3

GRUBBING

STATION - STATION	LOCATION	201.0205 GRUBBING STA.
8+00 - 10+00	N STODDARD RD	2
TOTAL		2

REMOVING GUARDRAIL

STATION - STATION	LOCATION	204.0165 LF
9+64- 9+74	RT	10
9+56 - 9+83	LT	27
TOTAL		37

FINISHING ROADWAY

STATION - STATION	LOCATION	213.0100 EACH
8+00 - 11+00	N STODDARD RD	1
TOTAL		1

DIVISION	STATIONING	LOCATION	205.0100 COMMON EXCAVATION (CY) **P** CUT	SALVAGED / UNUSABLE PAVEMENT MATERIAL (1)	AVAILABLE MATERIAL (CY) (2)	UNEXPANDED FILL	EXPANDED FILL FACTOR 1.25	MASS ORDINATE +/- (3)	208.0100 BORROW (CY)
1	8+00 - 9+77	WEST APPROACH	123	43	80	169	212	-132	132
DIVISION 1 SUBTOTAL			123	43	80	169	212	-132	132
2	10+19 - 11+00	EAST APPROACH	50	16	34	76	96	-62	62
DIVISION 2 SUBTOTAL			50	16	34	76	96	-62	62
GRAND TOTAL			173	59	114	245	308	-194	194
TOTAL COMMON EXCAVATION =			173					-194	194

1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
2) AVAILABLE MATERIAL = CUT MINUS THE SALVAGED/UNUSABLE PAVEMENT MATERIAL
3) THE MASS ORDINATE = A + OR - QUANTITY CALCULATED FOR THE DIVISON. A POSITIVE QUANTITY INDICATES AN EXCESS OF MATERIAL.

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0120 1 1/4 - INCH TON	305.0110 3/4 - INCH TON
9+77 - 8+00	WEST APPROACH	258	23
11+00 - 10+20	EAST APPROACH	111	8
TOTAL		369	31

ASPHALTIC SURFACE

STATION - STATION	LOCATION	465.0105 TON
8+00 - 9+54	SOUTH APPROACH	47
10+41 - 11+00	NORTH APPROACH	47
9+54 - 10+41	APPROACH SHOULDER	2
TOTAL		96

CONCRETE PAVEMENT

STATION - STATION	LOCATION	APPROACH SLAB 415.0410 SY	PAVEMENT 12 INCH 415.0120 SY
9+54 - 9+77	WEST APPROACH	51	12
10+19 - 10+41	EAST APPROACH	51	12
TOTAL		102	24

ASPHALTIC FLUMES

STATION - STATION	LOCATION	465.0315 SY
9+70	RT	7
9+85	LT	7
10+10	RT	7
10+42	LT	7
TOTAL		28

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED.

3

WATER

PROJECT	LOCATION	624.0100 MGAL
5388-00-72	N STODDARD RD	5.81
TOTAL		5.81

RESTORATION ITEMS

STATION - STATION	LOCATION	625.0100 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0110 SEEDING MIXTURE NO. 10 LB
8+00 - 9+77	RT	337	0.20	11
8+00 - 9+77	LT	301	0.24	12
10+20 - 11+00	RT	154	0.11	6
10+20 - 11+00	LT	115	0.09	5
UNDISTRIBUTED		--	--	--
TOTAL		907	0.64	34

SIGNING QUANTITIES

LOCATION	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	DESCRIPTION
NW BRIDGE CORNER	3.00	1	1	1	W5-52 L
SW BRIDGE CORNER	3.00	1	1	1	W5-52 R
NE BRIDGE CORNER	3.00	1	1	1	W5-52 R
SE BRIDGE CORNER	3.00	1	1	1	W5-52 L
8+85 RT	--	--	1	1	
10+45 LT	--	--	1	1	
TOTAL	12.00	4	6	6	

EROSION CONTROL ITEMS

STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDITY BARRIER SY	628.2004 EROSION MAT CLASS I TYPE B SY
8+00 - 9+77	WEST APPROACH	443	--	--	470
10+20 - 11+00	EAST APPROACH	240	--	--	203
8+00 - 11+00	RT/LT	--	883	--	--
UNDISTRIBUTED		--	--	113	--
TOTAL		683	883	113	673

TRAFFIC CONTROL

LOCATION	643.0900 TRAFFIC CONTROL SIGNS DAY	643.0100 TRAFFIC CONTROL 5388-00-72 EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH
N STODDARD RD	742	1	848	1272
TOTAL	742	1	848	1272

CONSTRUCTION STAKING

STATION - STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.9920 SLOPE STAKES LF
8+00 - 11+00	N STODDARD RD	296	296	296
TOTAL		296	296	296

SAWING ASPHALT

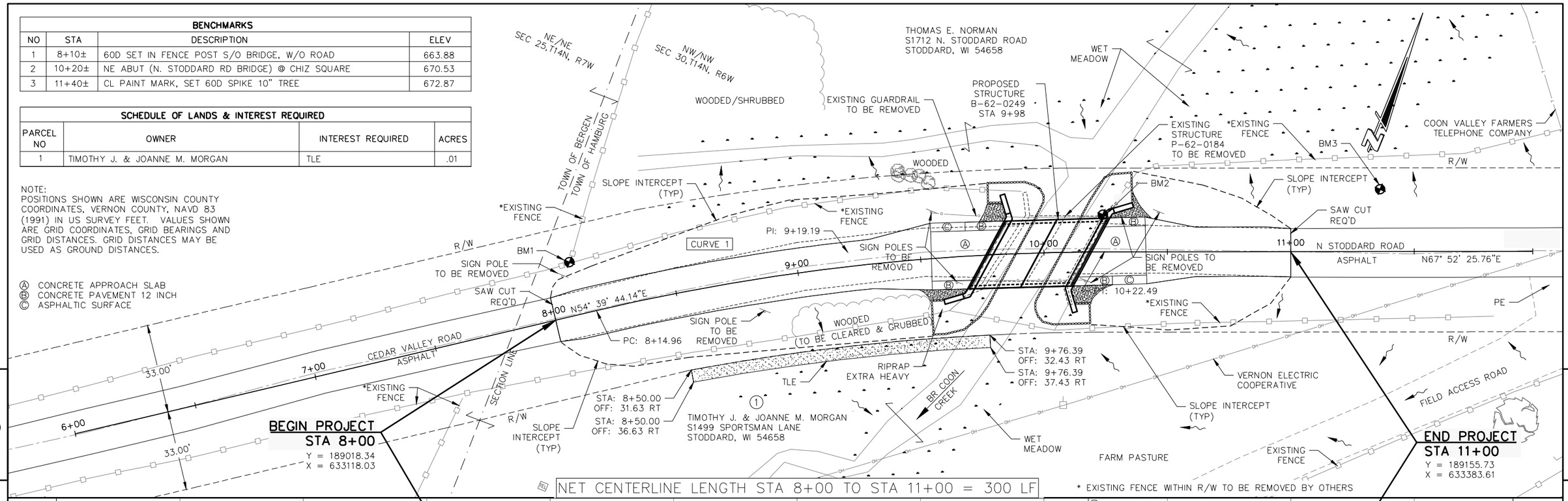
STATION	LOCATION	690.0150 LF
8+00	BEGIN PROJECT	18
11+00	END PROJECT	20
TOTAL		38

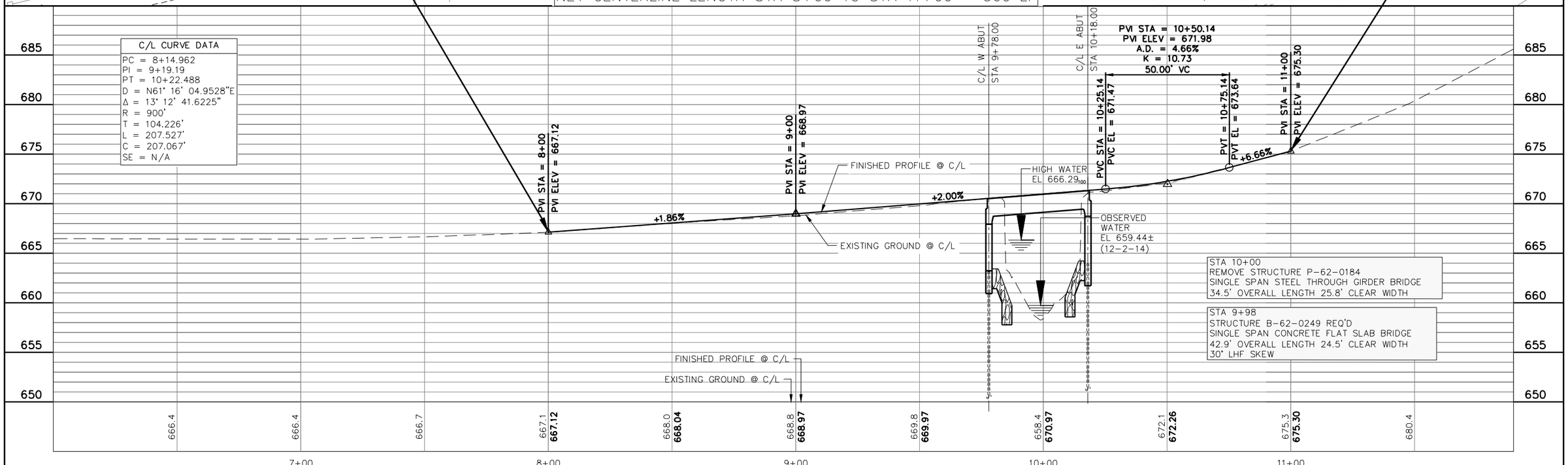
BENCHMARKS			
NO	STA	DESCRIPTION	ELEV
1	8+10±	60D SET IN FENCE POST S/O BRIDGE, W/O ROAD	663.88
2	10+20±	NE ABUT (N. STODDARD RD BRIDGE) @ CHIZ SQUARE	670.53
3	11+40±	CL PAINT MARK, SET 60D SPIKE 10" TREE	672.87

SCHEDULE OF LANDS & INTEREST REQUIRED			
PARCEL NO	OWNER	INTEREST REQUIRED	ACRES
1	TIMOTHY J. & JOANNE M. MORGAN	TLE	.01

NOTE:
POSITIONS SHOWN ARE WISCONSIN COUNTY COORDINATES, VERNON COUNTY, NAVD 83 (1991) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

Ⓐ CONCRETE APPROACH SLAB
Ⓑ CONCRETE PAVEMENT 12 INCH
Ⓒ ASPHALTIC SURFACE



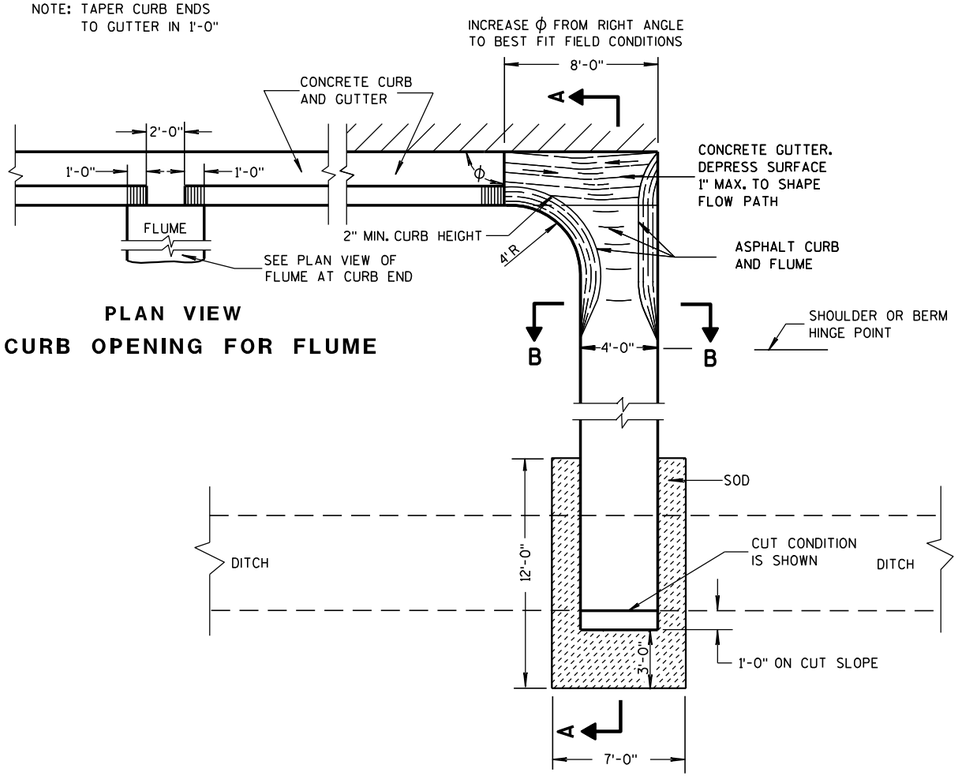


PROJECT NO: 5388-00-72	HWY: N STODDARD ROAD	COUNTY: VERNON	PLAN AND PROFILE	SHEET 9	E

Standard Detail Drawing List

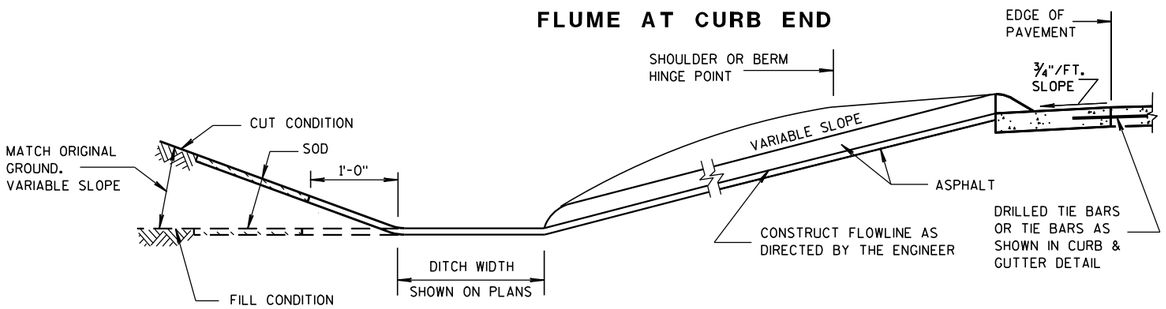
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES

ASPHALTIC FLUME

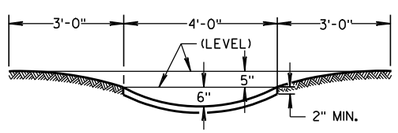


PLAN VIEW
CURB OPENING FOR FLUME

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.

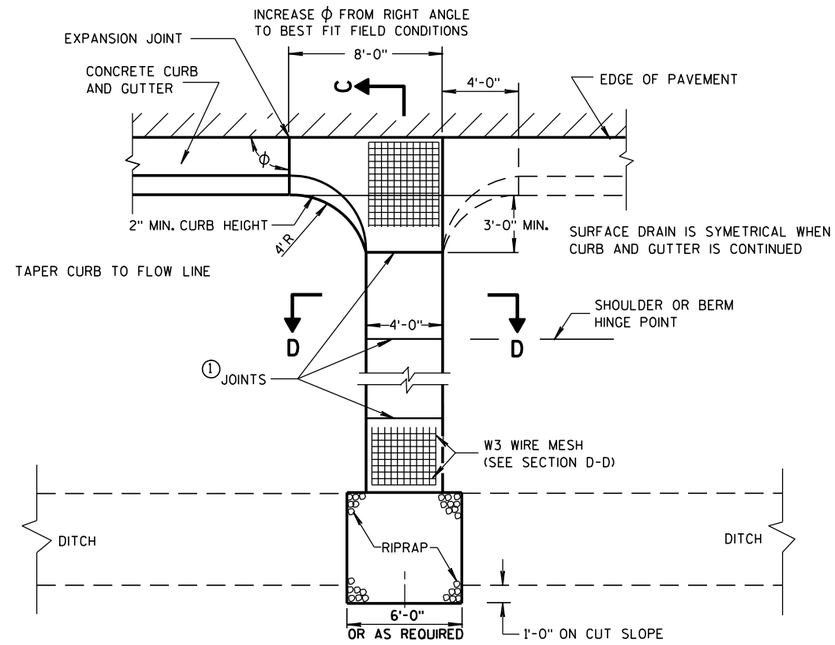
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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.

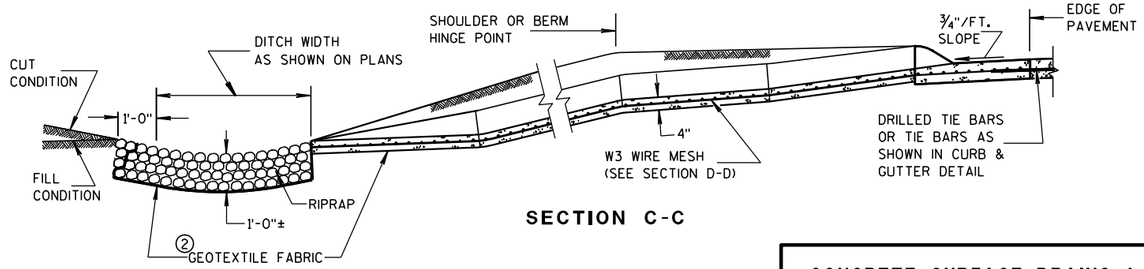
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

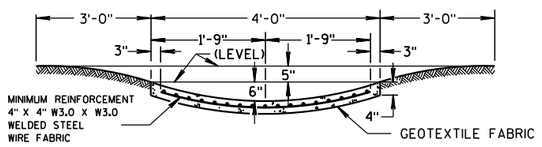
③ CONCRETE SURFACE DRAIN



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

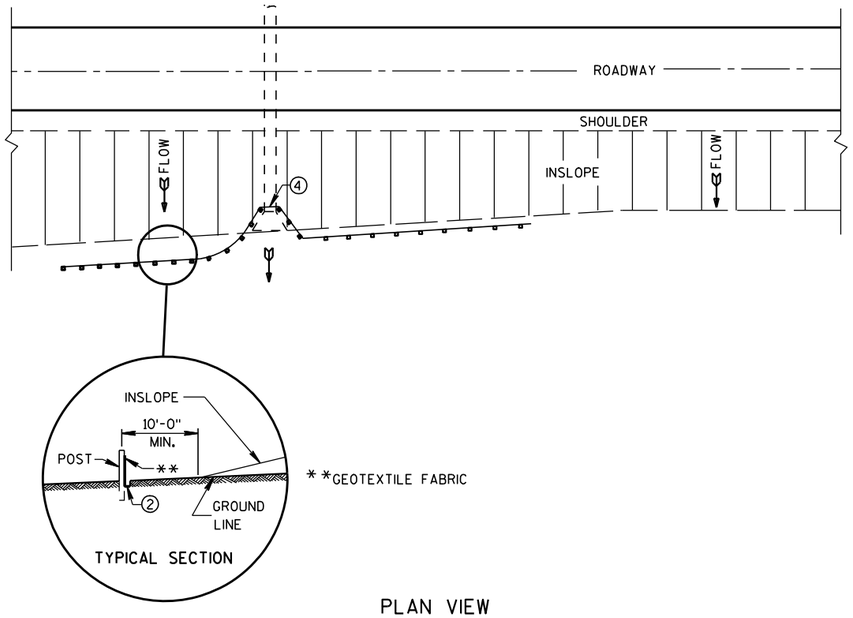
FHWA

6

S.D.D. 8 D 4-5

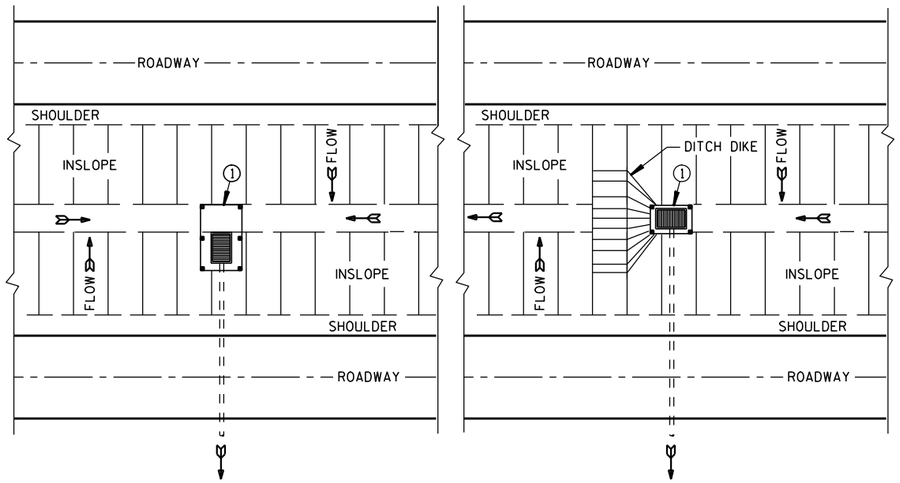
6

S.D.D. 8 D 4-5



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

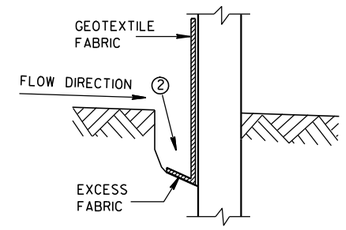
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

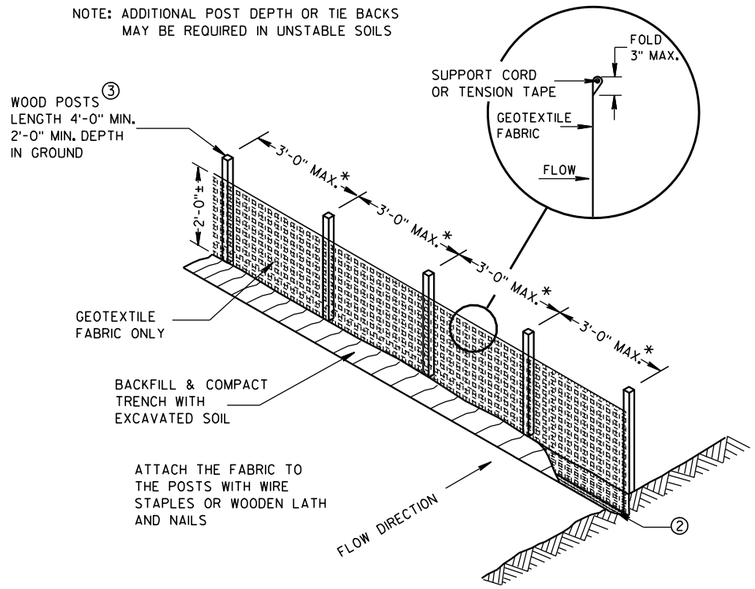
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

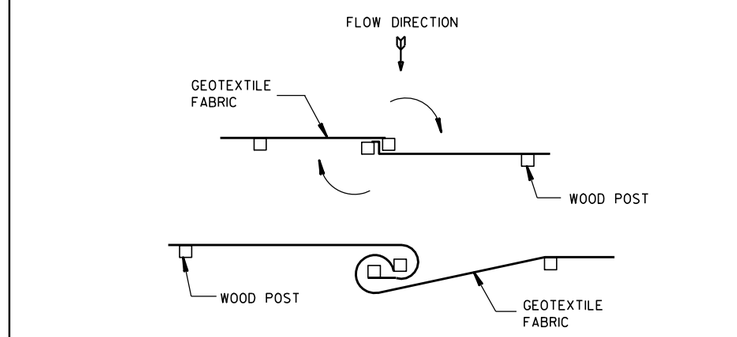


TRENCH DETAIL

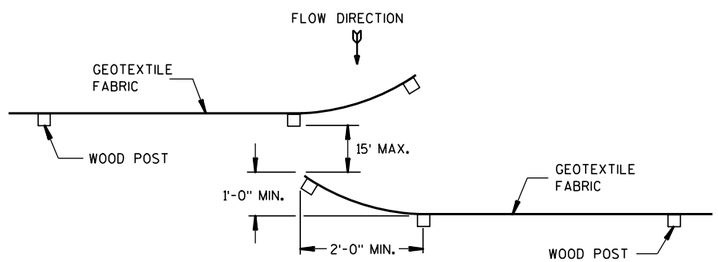


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

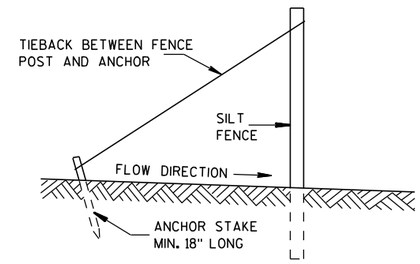


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

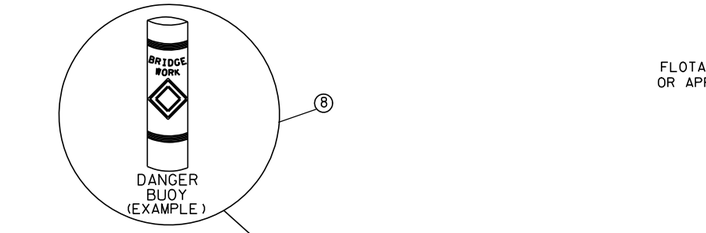
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

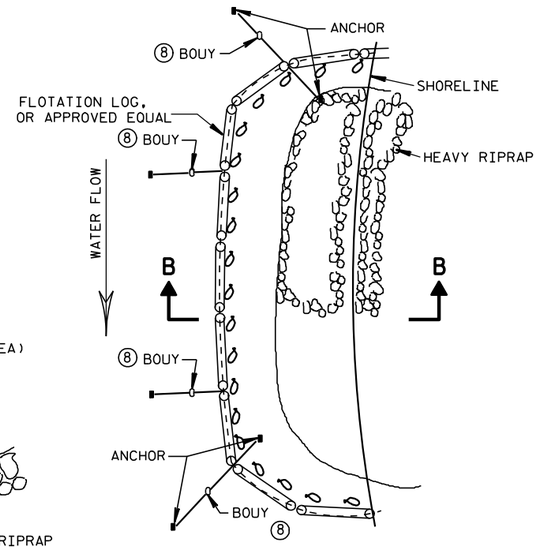
S.D.D. 8 E 9-6

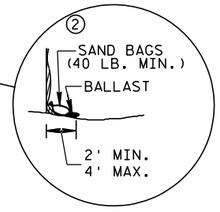
6

S.D.D. 8 E 9-6

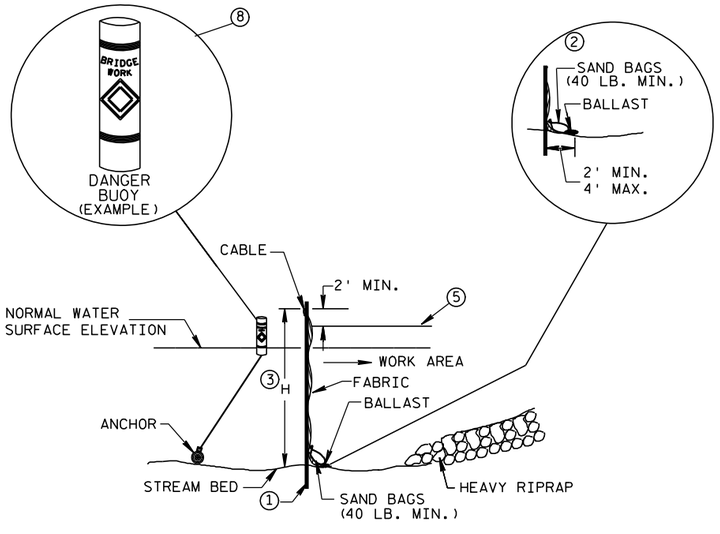


SECTION B-B

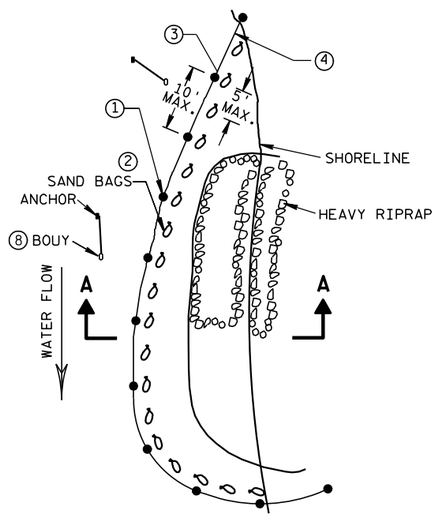




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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 SANDBAGS 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 FT., POST SPACING MAY NEED TO BE DECREASED.

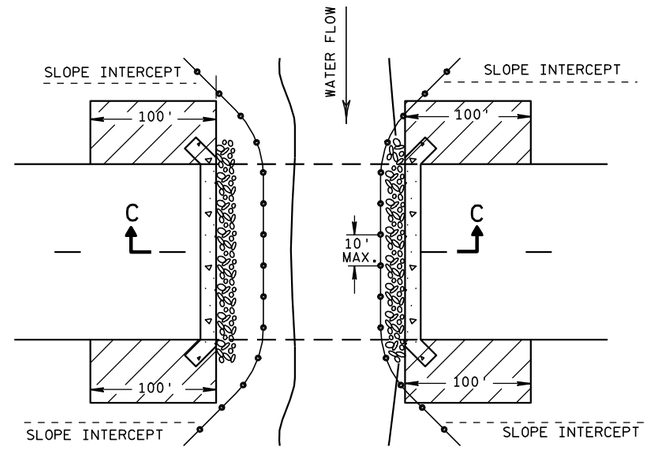
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

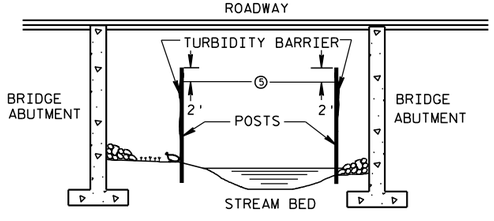
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

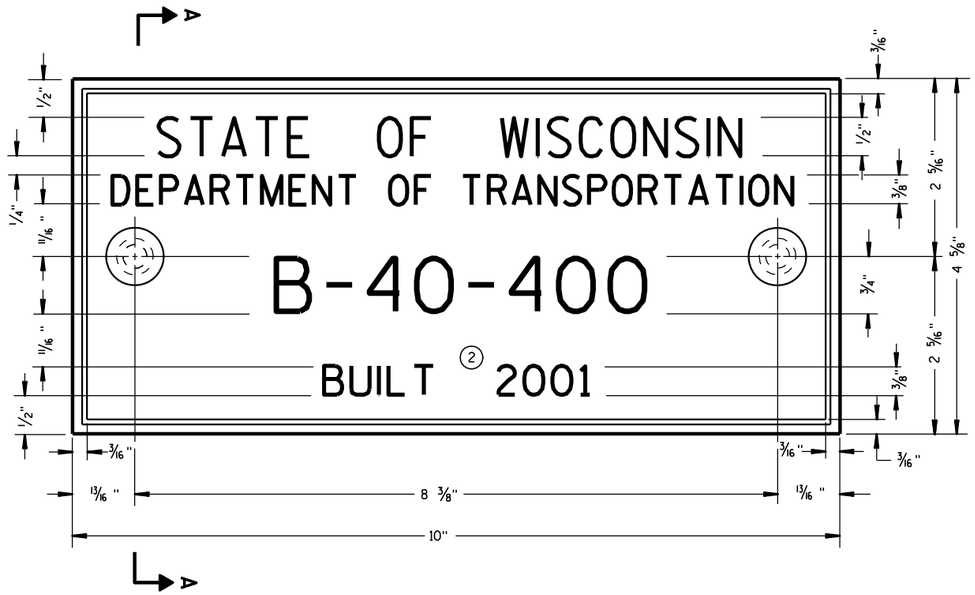
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2



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

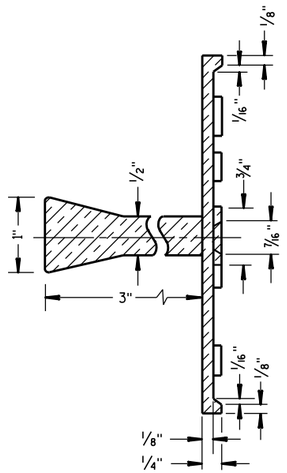
GENERAL NOTES

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.

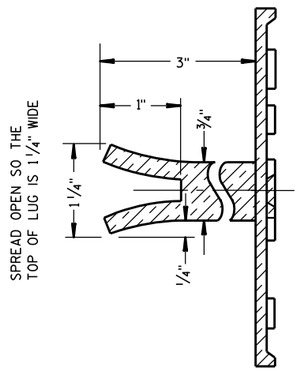
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(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

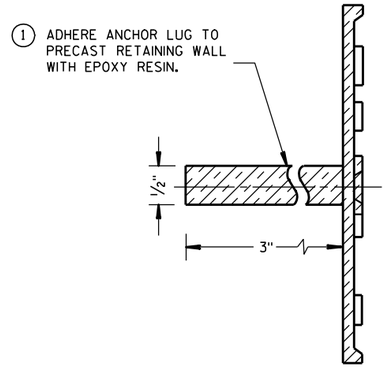
COUNTY NO.

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

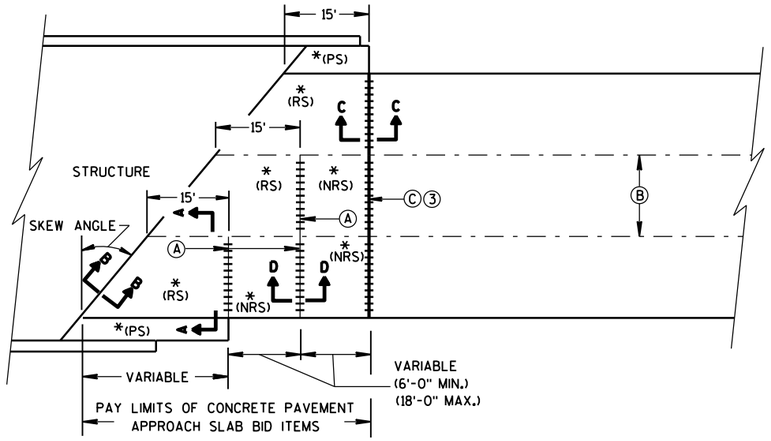
FHWA

6

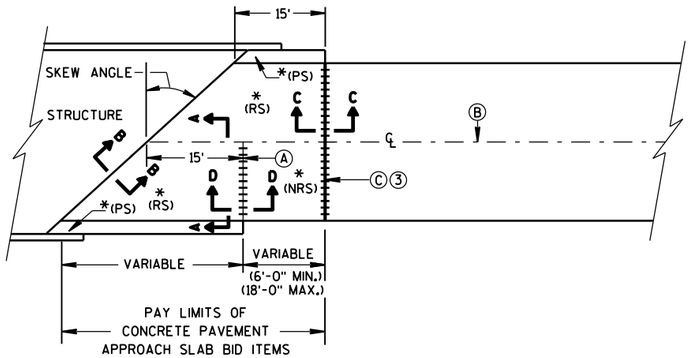
S.D.D. 12 A 3-10

6

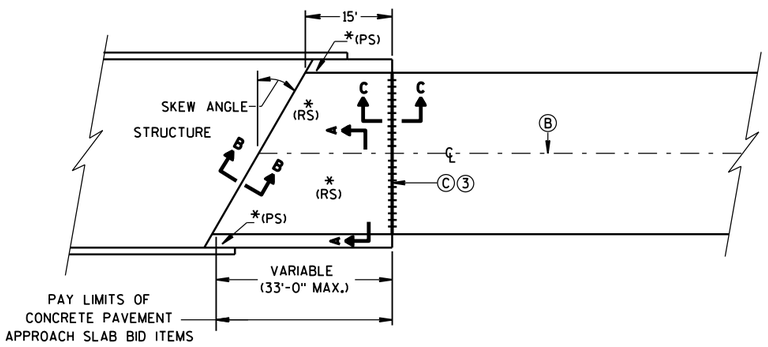
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

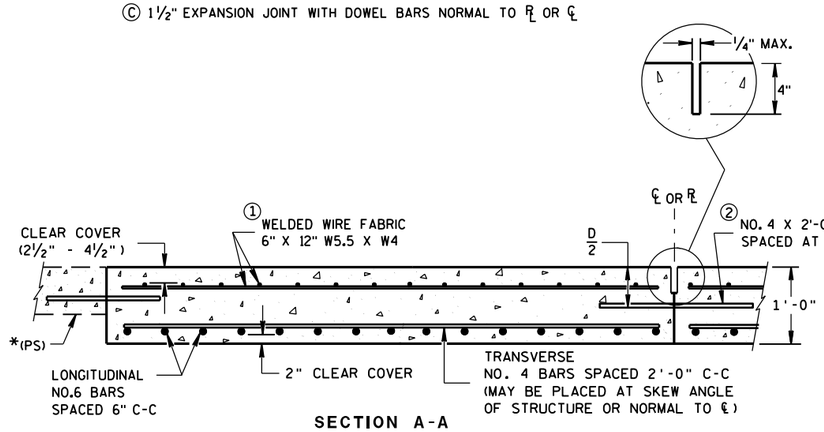
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

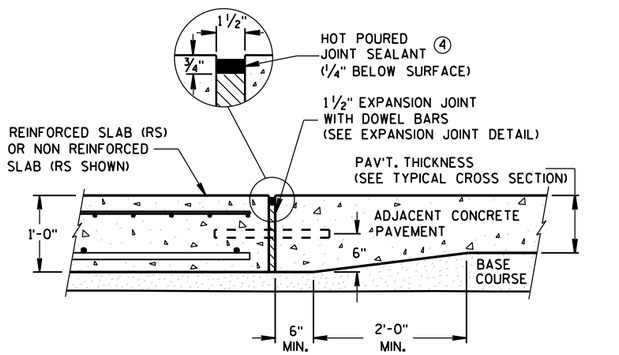
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

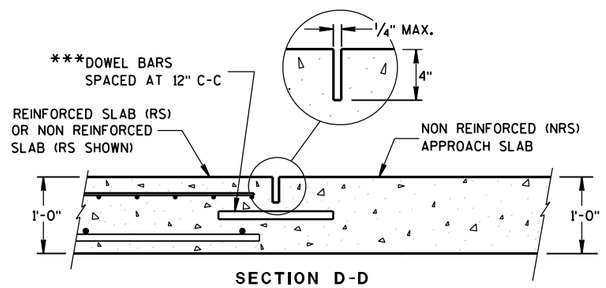
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

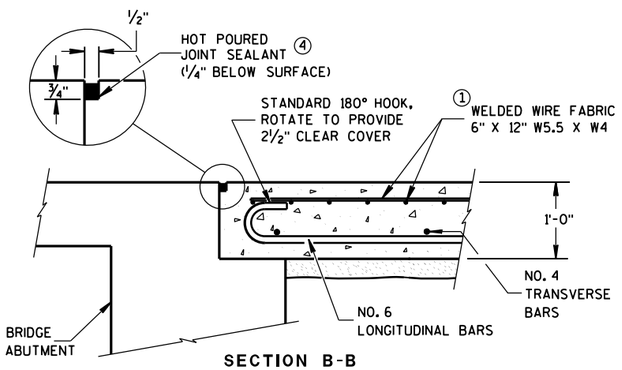
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

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

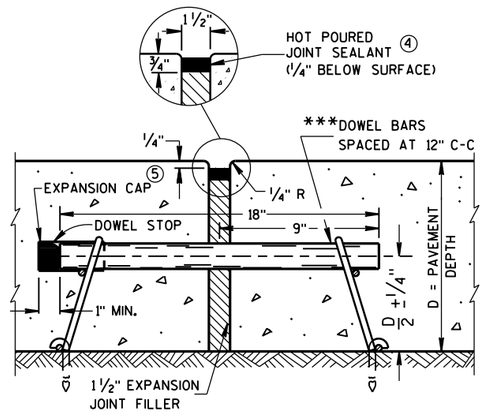
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

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

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



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



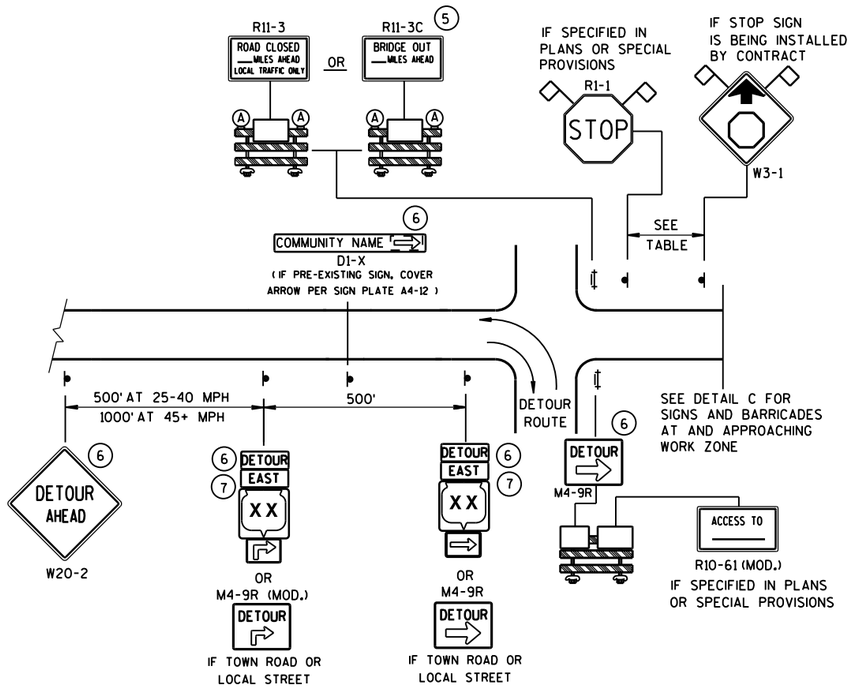
EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

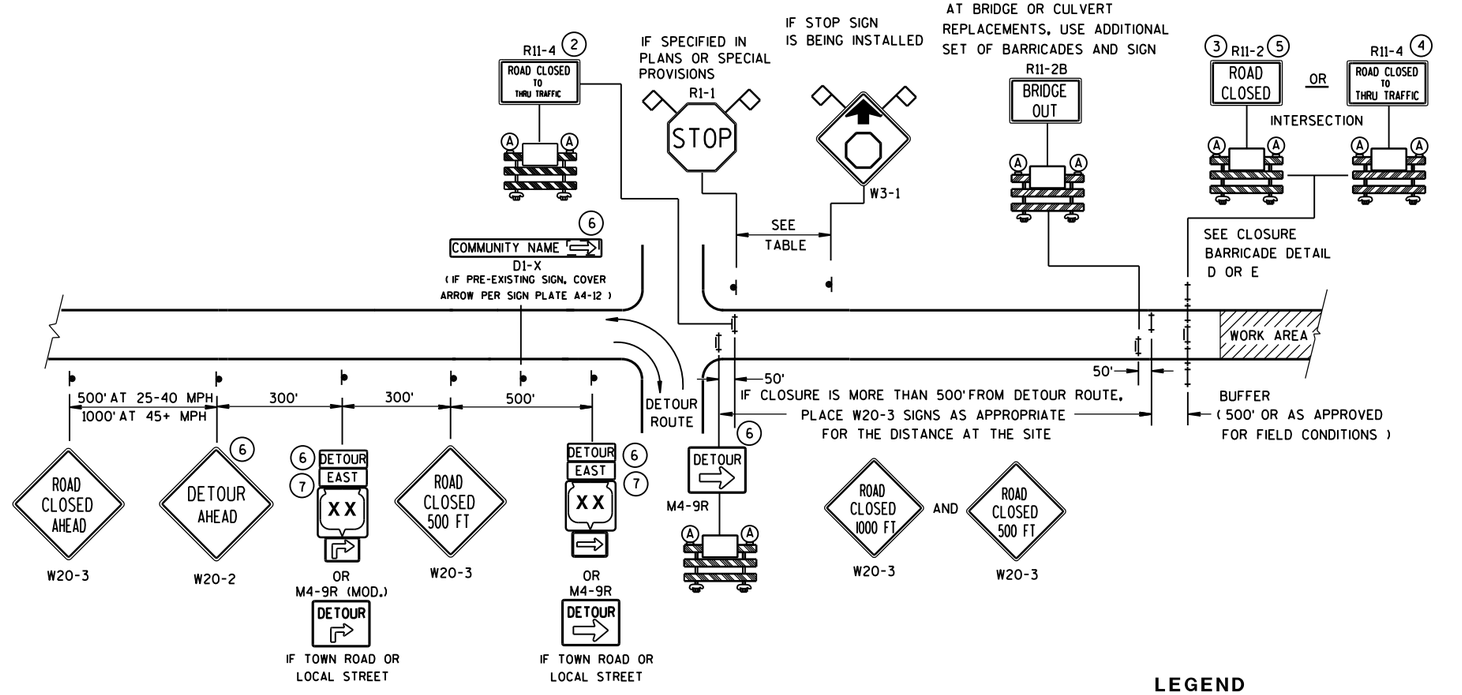
APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

6
S.D.D. 13 B 2-8a



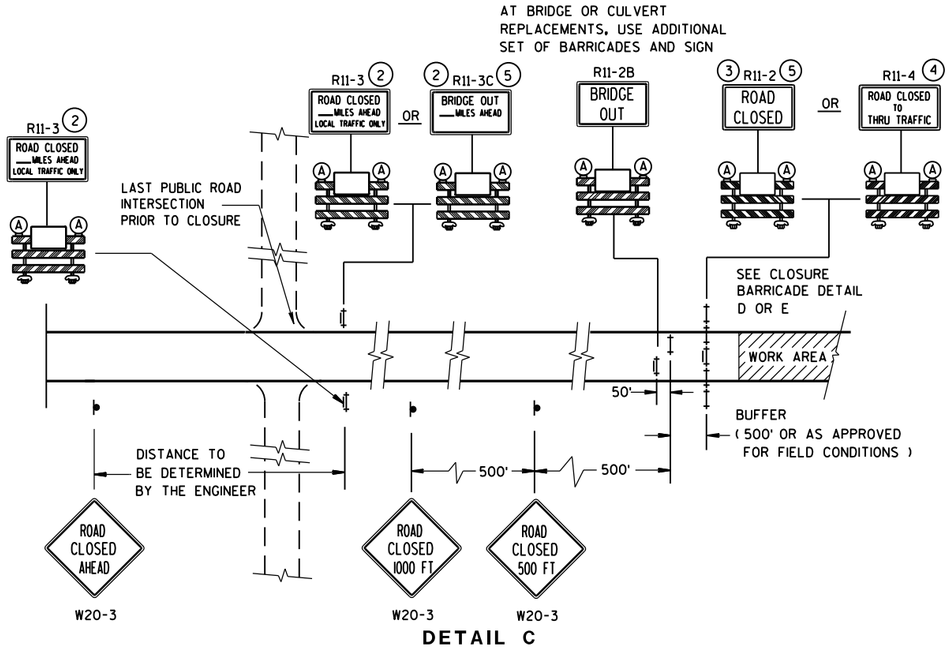
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

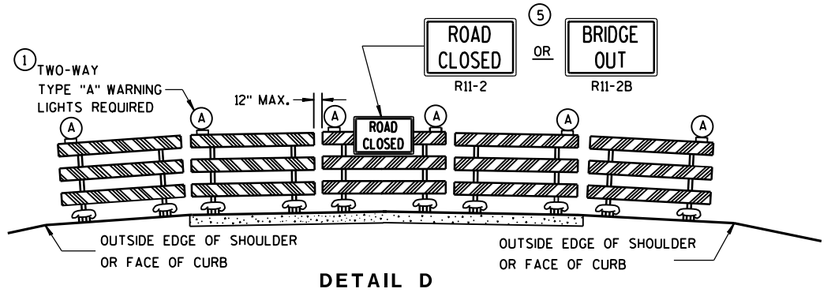
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

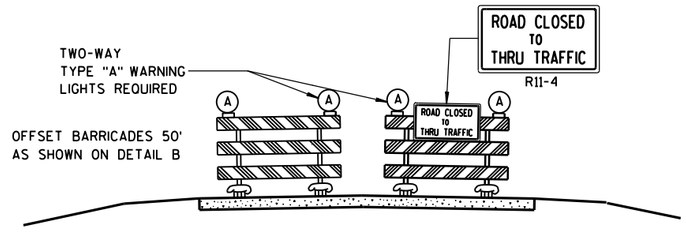
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE

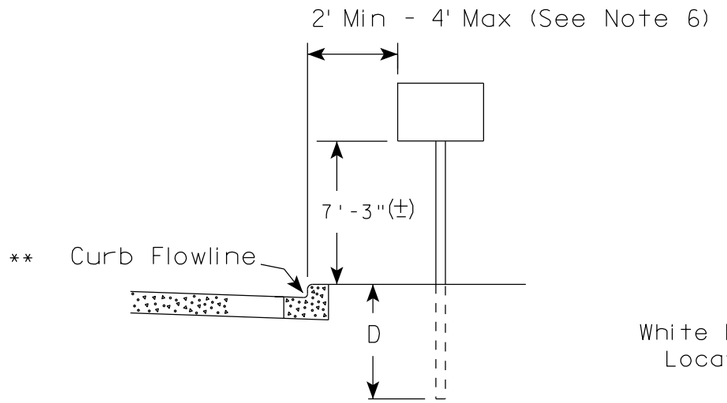
/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

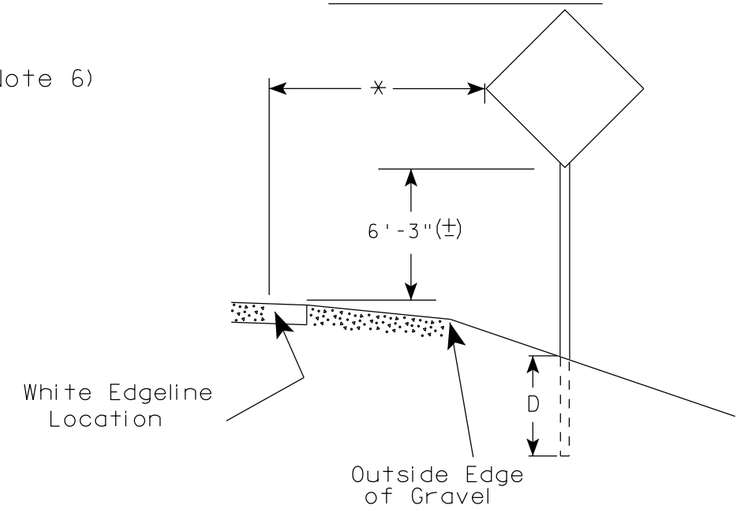
6

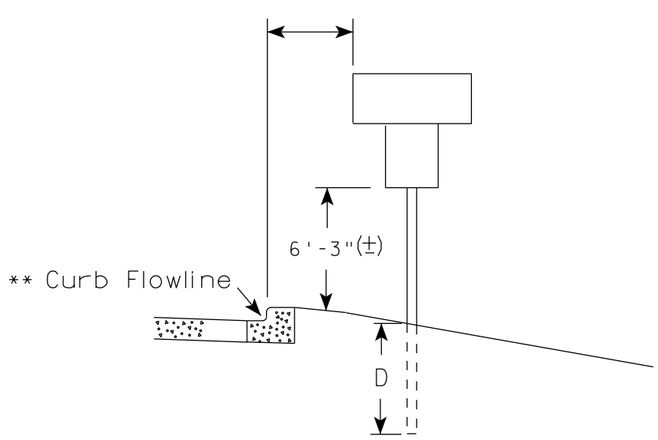
S.D.D. 15 C 2-5b

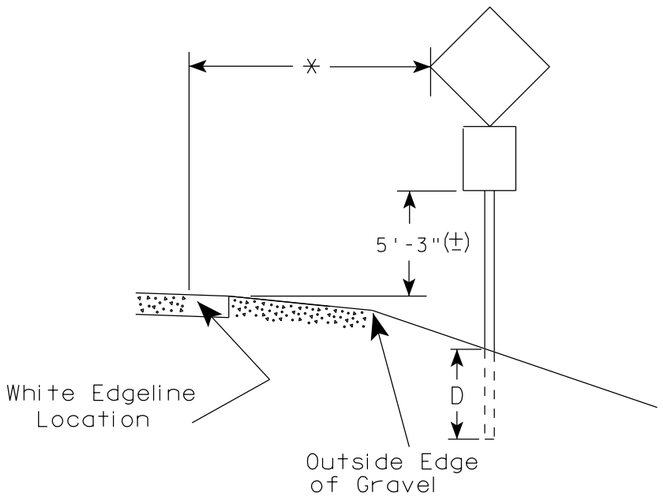
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

** 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.

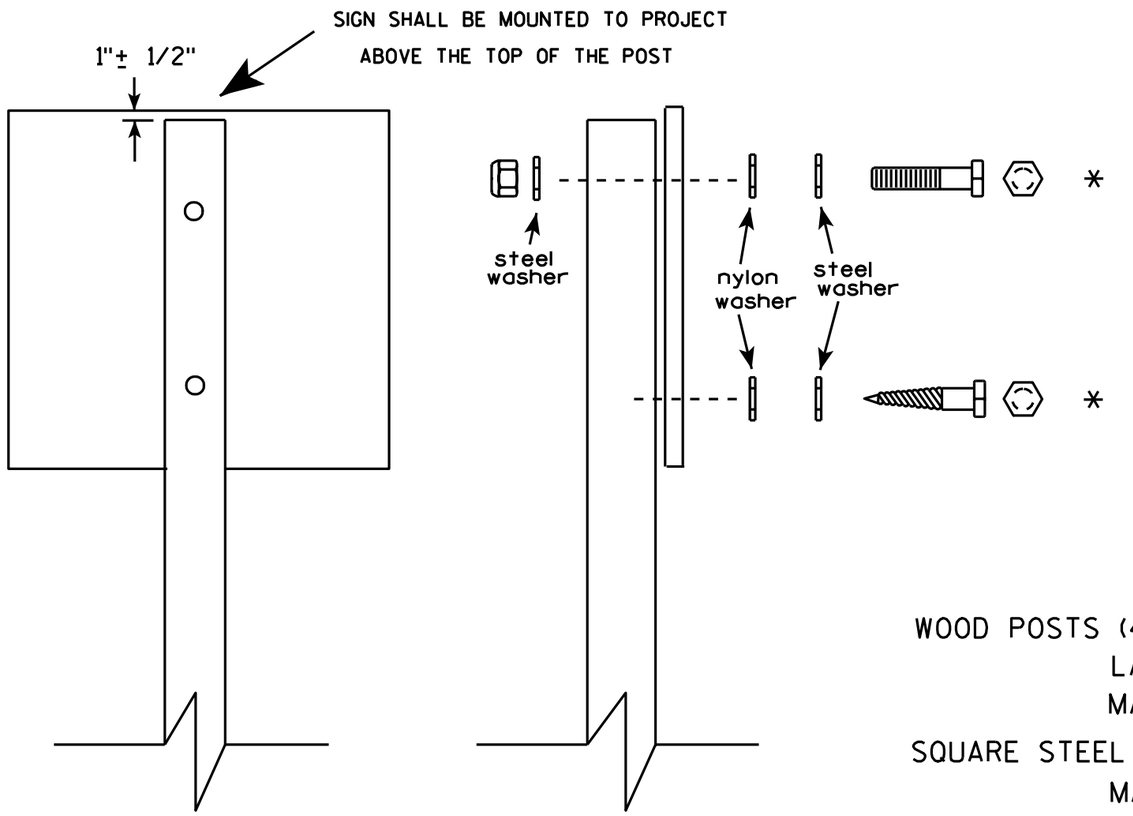
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-3.19

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

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

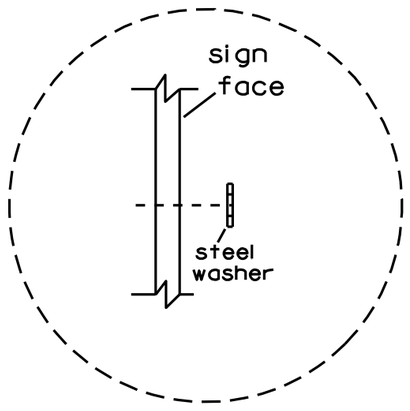
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

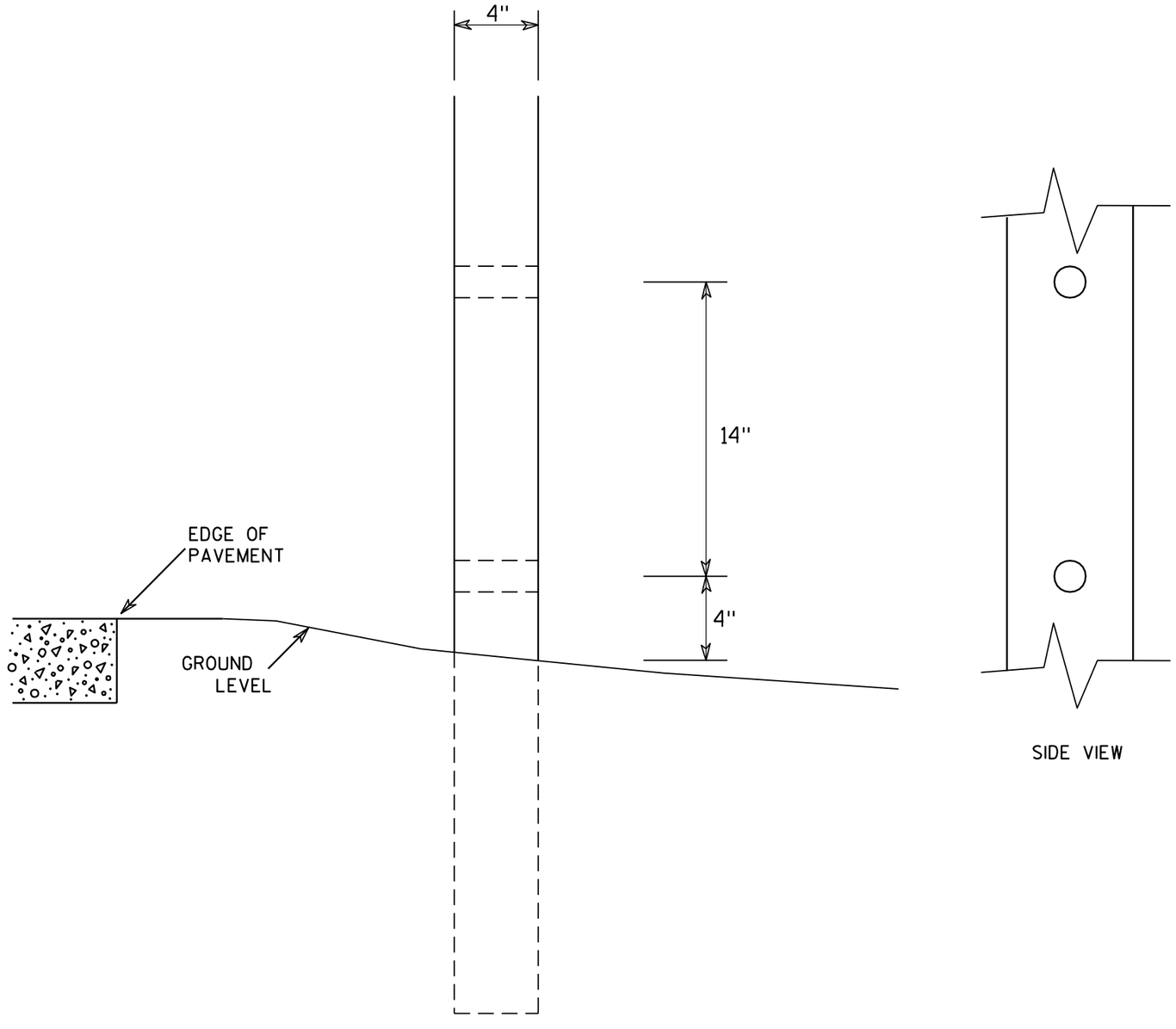
DATE 3/23/10 PLATE NO. A4-8.7

7

7

PROJECT NO:

SHEET NO: 19 E



SIDE VIEW

GENERAL NOTES

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

7

7

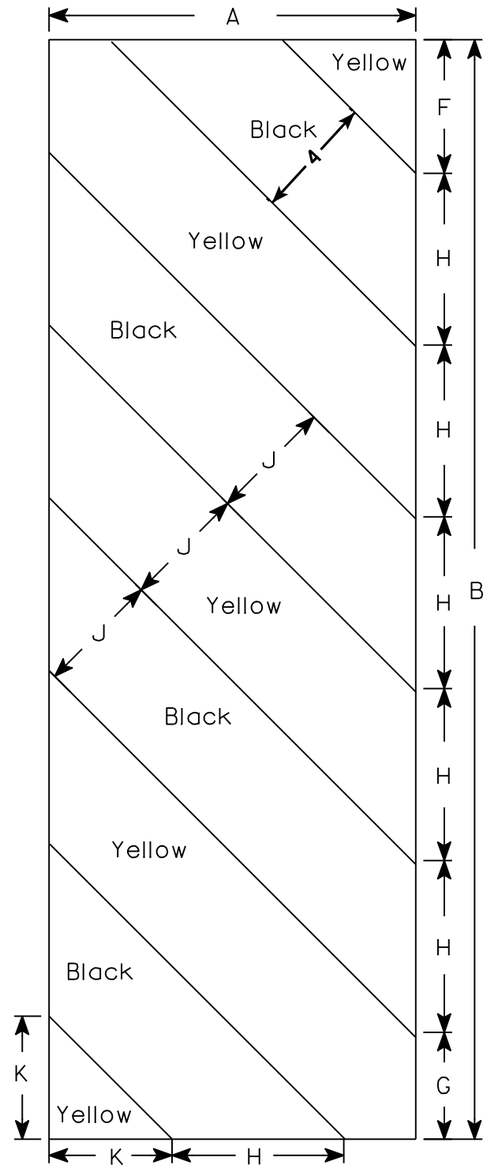
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

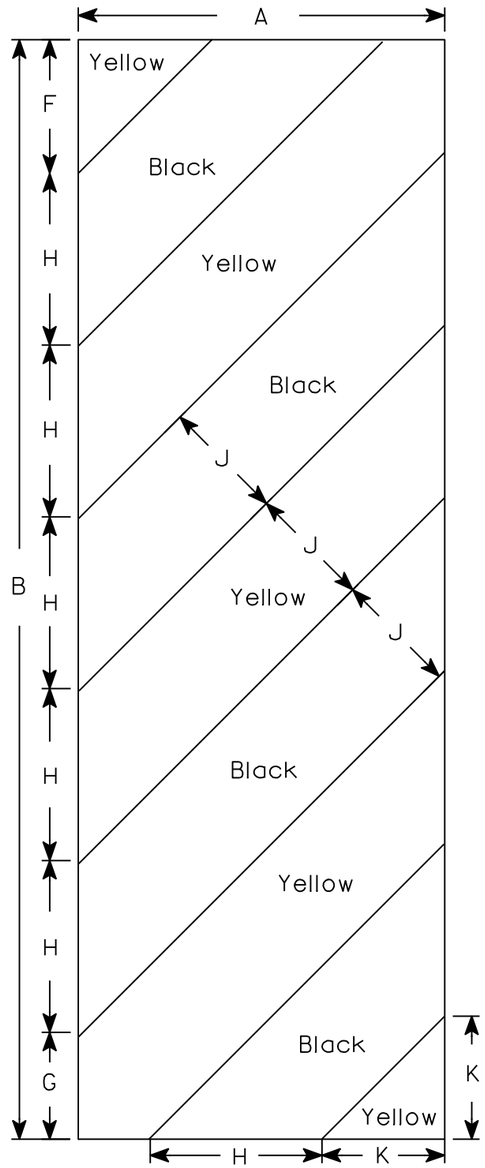
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 20	E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

W5-52L & W5-52R

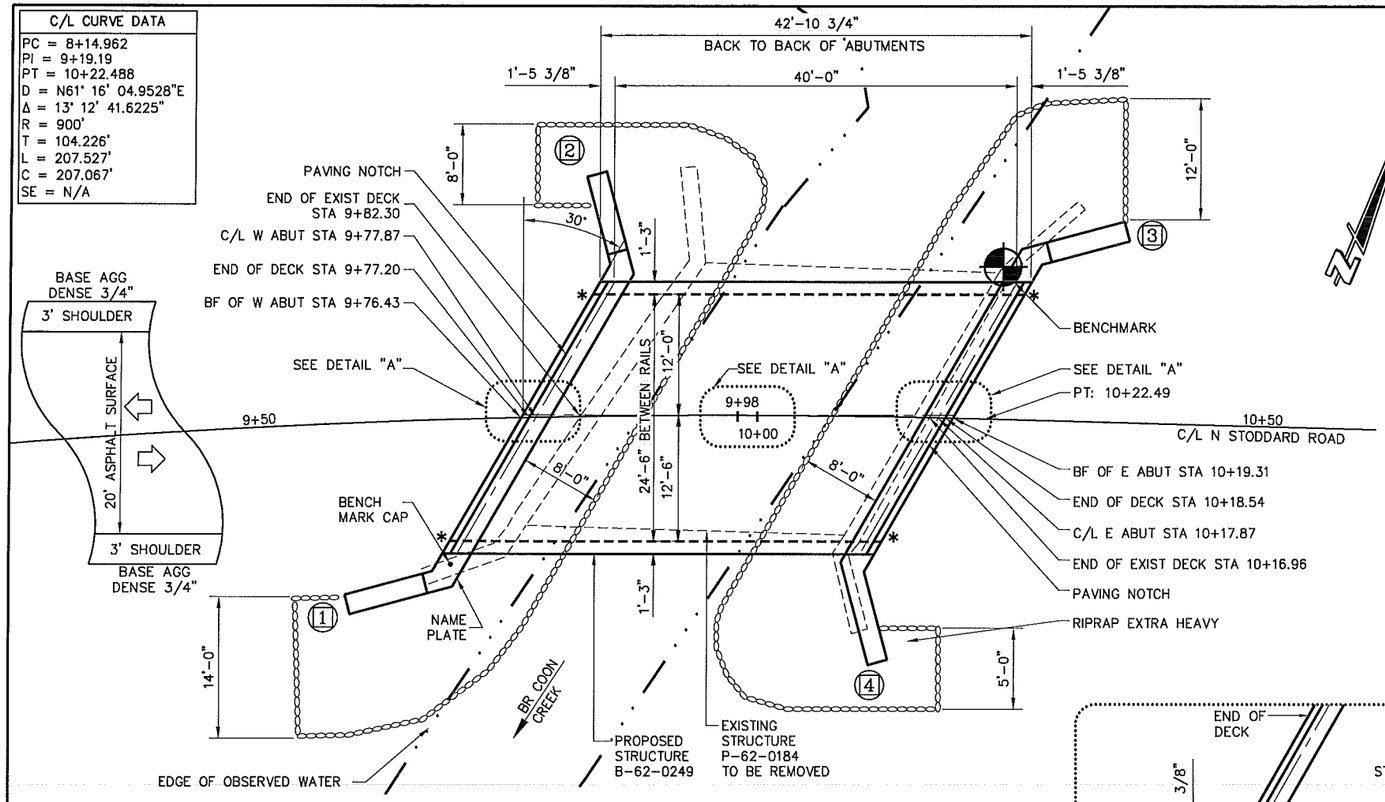
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 21	E

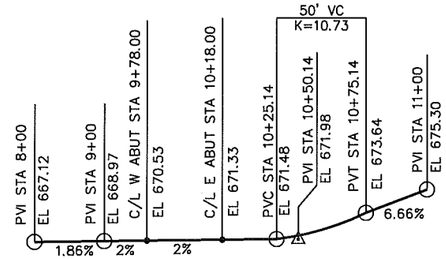
C/L CURVE DATA
PC = 8+14.962
PI = 9+19.19
PT = 10+22.488
D = N61° 16' 04.9528"E
Δ = 13° 12' 41.6225"
R = 900'
T = 104.226'
L = 207.527'
C = 207.067'
SE = N/A



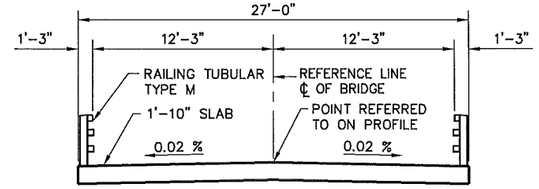
PLAN
SINGLE SPAN CONCRETE FLAT-SLAB BRIDGE

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT

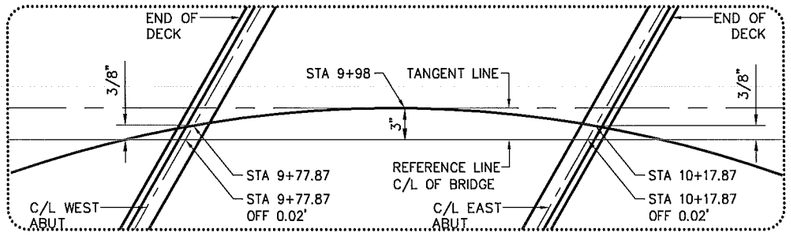
(n) INDICATES WING NUMBER



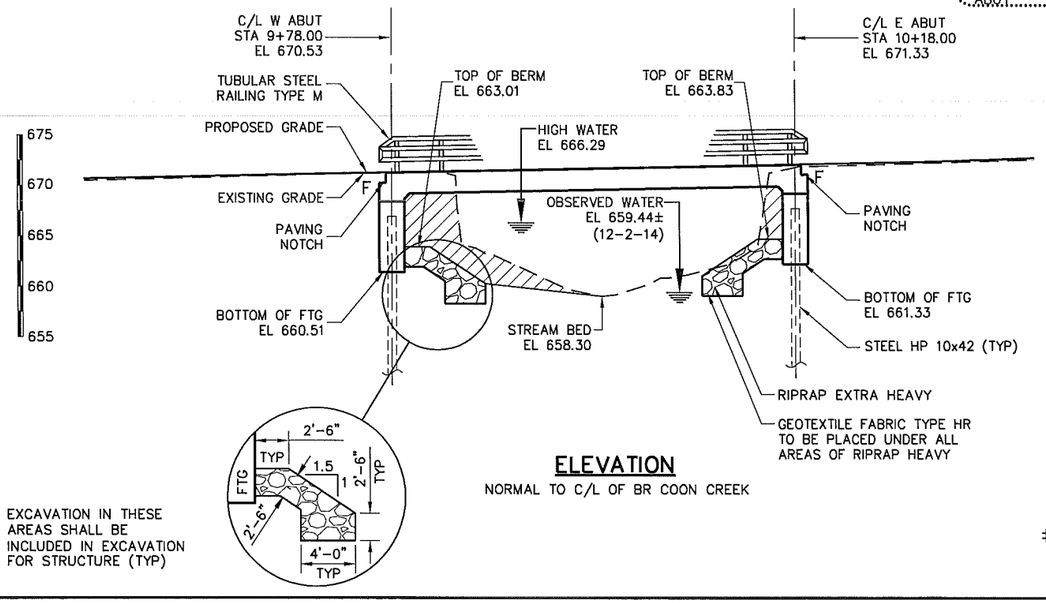
PROPOSED GRADE LINE



CROSS-SECTION THRU ROADWAY
(LOOKING EAST)



DETAIL "A"



ELEVATION
NORMAL TO C/L OF BR COON CREEK

WISCONSIN
TROY L. PETERSON
E-31102
MENOMONIE
WI
PROFESSIONAL ENGINEER
10-21-15

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10x42, WITH A REQUIRED DRIVING RESISTANCE OF 120 TONS MAX ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION.
ESTIMATED LENGTH 50' W ABUTMENT
ESTIMATED LENGTH 70' E 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.

BENCHMARK
STA 10+23.46, 15.34' LT
CHISELED "□" TOP OF NE CORNER BRIDGE ABUTMENT
EL 666.15

LIST OF DRAWINGS
1. GENERAL PLAN
2. QUANTITIES & NOTES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. EAST ABUTMENT
6. ABUTMENT DETAILS
7. SUPERSTRUCTURE
8. TUBULAR STEEL RAILING TYPE "M"

DESIGN CONTACT:
TROY PETERSON
(715) 232-9081

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608) 266-8489

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

LIVE LOAD:
- DESIGN LOADING — HL-93
- INVENTORY RATING FACTOR — RF = 1.18
- OPERATING RATING FACTOR — RF = 1.53
- WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV) — 250 KIPS

ULTIMATE DESIGN STRESSES:
- CONCRETE MASONRY
  - SLAB — f'c = 4,000 PSI
  - ALL OTHER — f'c = 3,500 PSI
- BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 PSI

HYDRAULIC DATA
100 YEAR FREQUENCY
- DRAINAGE AREA — 1.95 SQ MILES
- Q_{100} TOTAL — 900 CFS
  - THRU STRUCTURE — 900 CFS
  - VELOCITY - THRU STRUCTURE — 8.8 FPS
  - WATERWAY AREA THRU STRUCTURE — 102.0 FT
  - HIGH WATER $_{100}$ELEVATION — 666.29
  - SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY
- Q_2TOTAL — 110 CFS
- HIGH WATER$_2$ ELEVATION — 662.7 FT

TRAFFIC DATA
- AADT (2016) — < 100
- AADT (2036) — < 100
- DESIGN SPEED — < 25 MPH

STATE PROJECT NUMBER
5388-00-72

NO.	DATE	REVISION	BY

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 11/04/15
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-62-0249

N STODDARD ROAD OVER BR COON CREEK

COUNTY	TOWN
VERNON	HAMBURG

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

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

GENERAL PLAN

SHEET 1 OF 8

8

8

FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\007 5388-00-02 N STODDARD RD TOWN OF HAMBURG\100 CAD\DWG\080101_GP_N STODDARD RD.DWG PLOT DATE : 10/20/2015 4:33 PM PLOT BY : NICK THOMPSON

STATE PROJECT NUMBER
5388-00-72

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	W ABUT	E ABUT	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA 10+00	LS	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-62-0249	LS	———	———	———	1
210.0100	BACKFILL STRUCTURE	CY	150	150	———	300
502.0100	CONCRETE MASONRY BRIDGES	CY	38.1	38.0	81.9	158.0
502.3200	PROTECTIVE SURFACE TREATMENT	SY	———	———	150	150
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2440	2440	———	4880
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1480	1480	15440	18400
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	350	490	———	840
513.4061	RAILING TUBULAR TYPE M (B-62-0249)	LF	———	———	78	78
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	6	———	12
606.0400	RIPRAP EXTRA HEAVY	CY	85	95	———	180
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	90	90	———	180
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	135	145	———	280

	NON-BID ITEMS					
	FILLER	SIZE	———	———	———	1/2 & 3/4

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 EXTRA HEAVY AND GEOTEXTILE FABRIC TYPE 'HR' TO THE EXTENT SHOWN ON SHEET 1 AND AND IN THE ABUTMENT DETAILS.

STEEL 'HP' PILE MATERIAL SHALL BE A.S.T.M. DESIGNATION A36.

THE EXISTING STRUCTURE (P-62-0184) IS A 34.5' LONG BY 25.8' CLEAR WIDTH SINGLE SPAN STEEL DECK GIRDER BRIDGE.

THE PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND EDGES OF THE SLAB AND TO THE OUTSIDE 1'-0" OF THE UNDERSIDE OF THE SLAB.

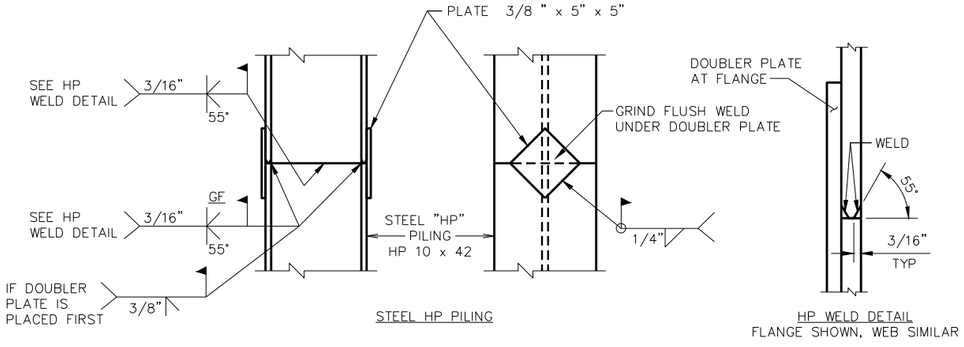
AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE IN PLACE BEFORE ABUTMENT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

THE GRADATION OF THE BACKFILL STRUCTURE SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

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

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.



STEEL HP PILING

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAILS

NO.	DATE	REVISION	BY

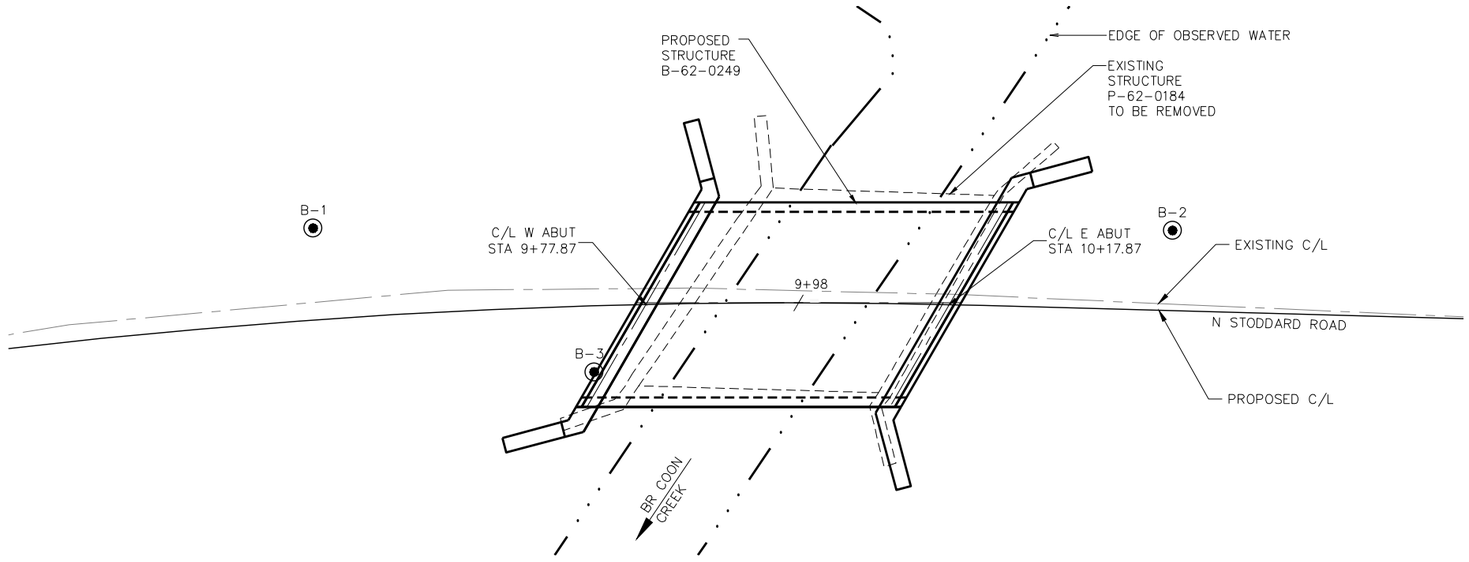
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

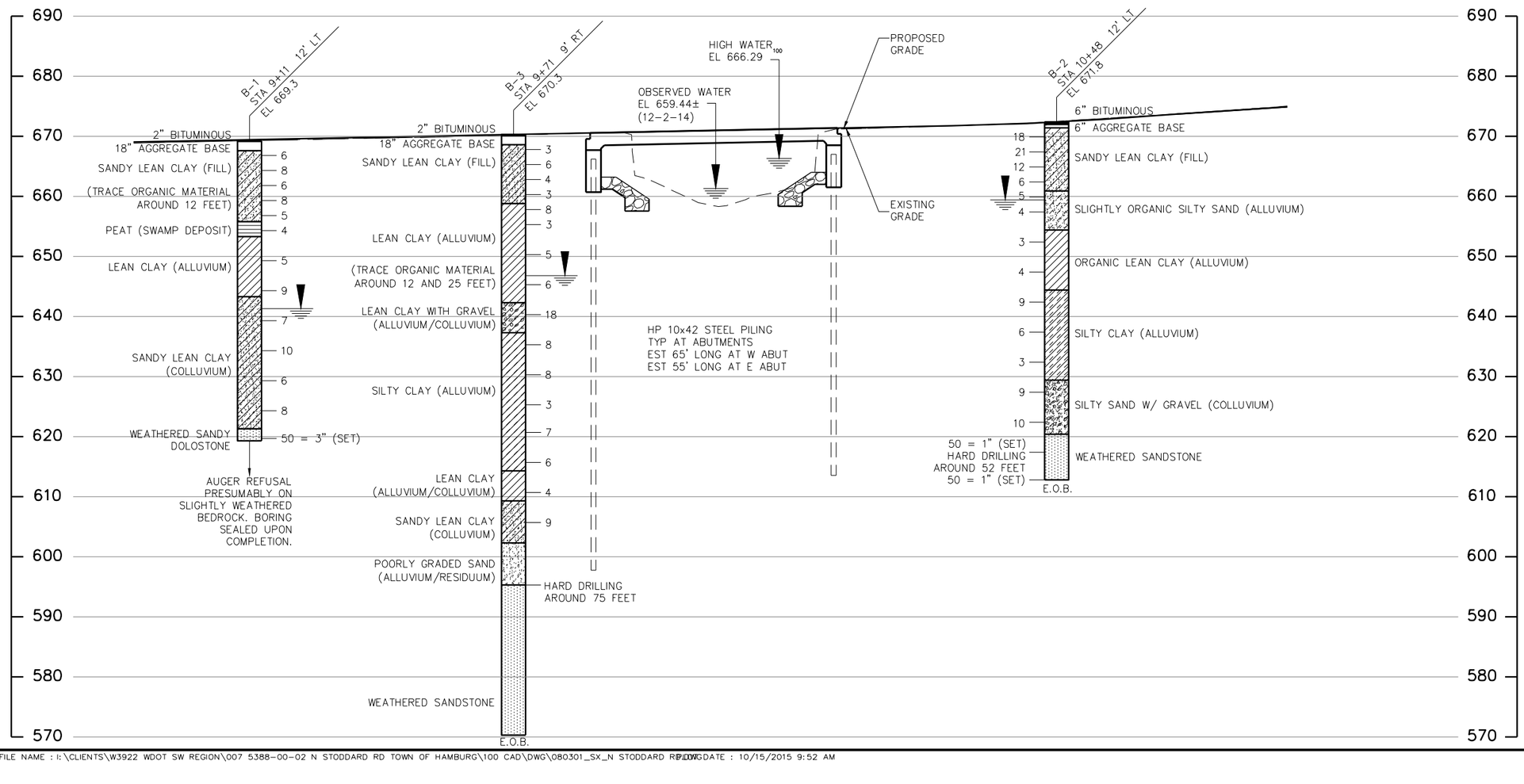
STRUCTURE B-62-0249

DRAWN BY NJT | PLANS CK'D TLP

QUANTITIES & NOTES

SHEET 2 OF 8





BORINGS TAKEN BY:

CHOSEN VALLEY TESTING, INC

WISCONSIN OFFICE
135 BUCKNER PLACE
LA CROSSE, WI 54603
(608) 782-5505

MINNESOTA OFFICE
1410 7TH STREET NW
ROCHESTER, MN 55901
(507) 281-0968
2/6/2015

STATE PROJECT NO.

5388-00-72

ABBREVIATIONS

F---FINE	VF---VERY FINE	M---MEDIUM
C---COARSE	WS---WEATHERED	SO---SOUND

MATERIAL SYMBOLS

TOPSOIL	SILT	SANDSTONE
SAND	PEAT	LIMESTONE
GRAVEL	CLAY	IGNEOUS ROCK

LEGEND OF BORING

PROBING NO.
STATION
ELEVATION

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

7 AVERAGE BLOWS PER FOOT

REFUSAL 95/6

LEGEND OF BORING

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROX. AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

Cedar corporation

MENOMONIE - MADISON - GREEN BAY
www.cedarcorp.com 800-472-7372

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-62-0249

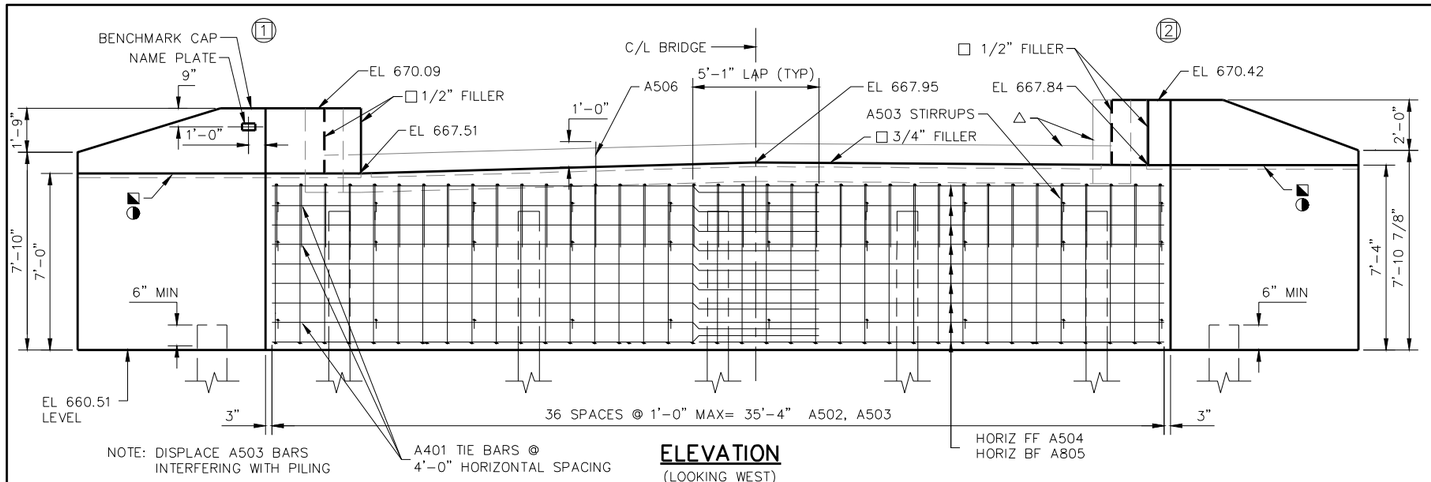
DRAWN BY NJT | PLANS CHECKED TLP

SUBSURFACE EXPLORATION

SHEET 3 OF 8

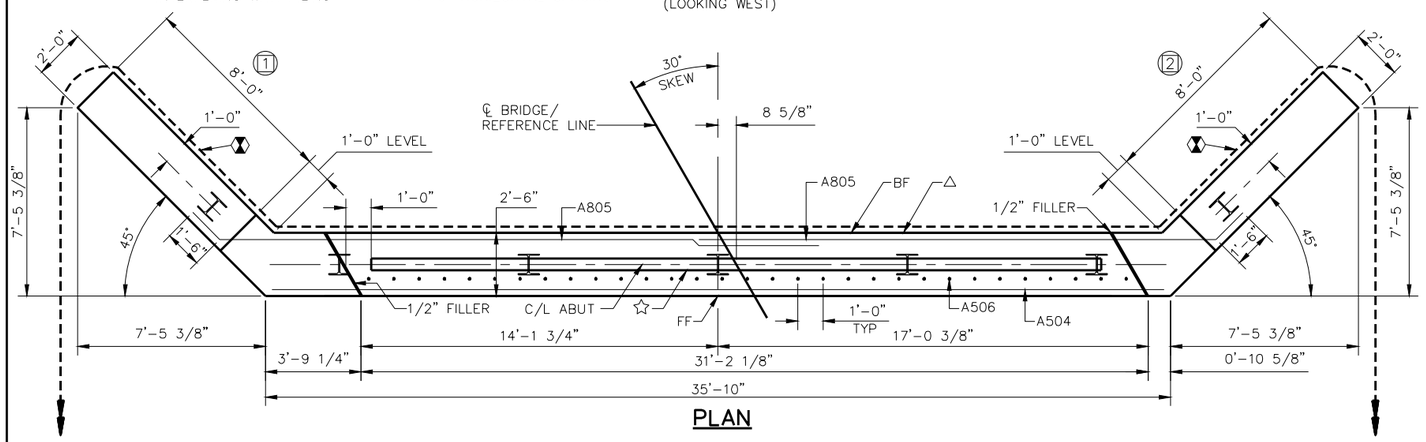
FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\007 5388-00-02 N STODDARD RD TOWN OF HAMBURG\100 CAD\DWG\080301_SX_N STODDARD RD.DWG PLOTDATE : 10/15/2015 9:52 AM

STATE PROJECT NUMBER
5388-00-72

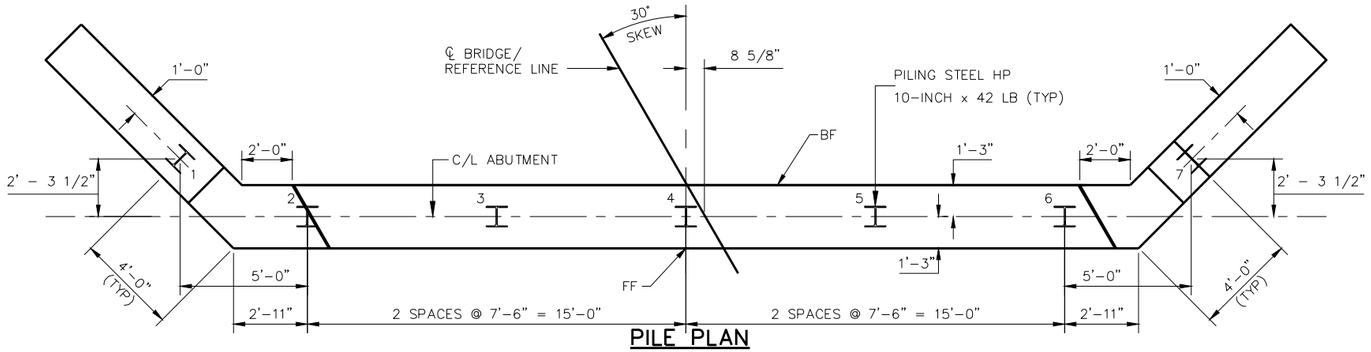


NOTE: DISPLACE A503 BARS INTERFERING WITH PILING

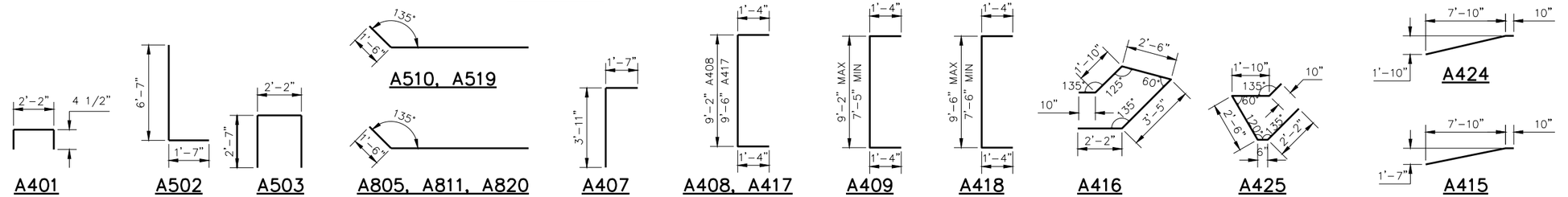
ELEVATION
(LOOKING WEST)



PLAN



PILE PLAN



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.

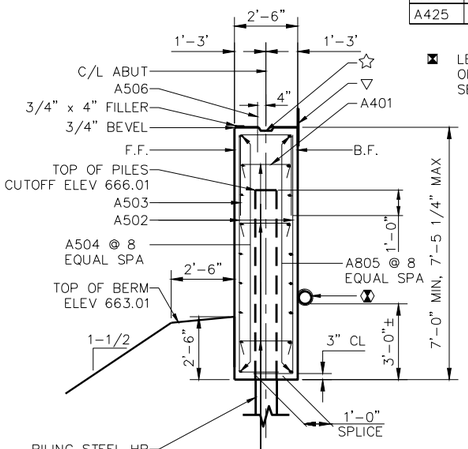
- INDICATES WING NUMBER
- ▽ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ & VERT JOINTS ON BACKFACE
- ◥ 3/4" 'V' GROOVE ON FF OF WING WALL – NOT REQUIRED IF CONSTRUCTION JOINT IS NOT USED
- ◑ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6"
- ☆ KEYED CONSTRUCTION JOINT FORMED BEVELED 2" x 6"
- □ SEAL ALL EXPOSED HORIZ & VERT SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONC.)
- PIPE UNDER DRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDER DRAIN WRAPPED 6-INCH".

BILL OF BARS

2440 # UNCOATED 1480 # COATED

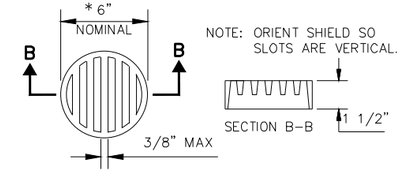
BAR MARK	COAT	NO. REQ.	LENGTH	BENT	BAR SERIES	LOCATION
A401		30	2-9	X		TIE BARS
A502		74	8-1	X		BODY - VERT
A503		37	7-1	X		BODY - STIRRUPS
A504		9	35-6			BODY - HORIZ FF
A805		18	23-11	X		BODY - HORIZ BF
A506	X	31	2-0			BODY DOWELS
A407	X	12	5-5	X		WING 1 & 2 - VERT
A408	X	3	11-8	X		WING 1 - VERT
A409	X	24	10-10	X	⧓	WING 1 - VERT
A510	X	9	11-7	X		WING 1 - HORIZ FF
A811	X	9	13-2	X		WING 1 - HORIZ BF
A412	X	2	8-8			WING 1 - HORIZ
A413	X	2	8-3			WING 1 - HORIZ
A414	X	2	4-10			WING 1 - HORIZ
A415	X	2	8-9	X		WING 1 - HORIZ
A416	X	4	10-4	X		WING 1 - HORIZ
A417	X	3	12-0	X		WING 2 - VERT
A418	X	24	11-0	X	⧓	WING 2 - VERT
A519	X	9	11-7	X		WING 2 - FF
A820	X	9	13-2	X		WING 2 - BF
A421	X	2	8-8			WING 2 - HORIZ
A422	X	2	7-4			WING 2 - HORIZ
A423	X	2	4-3			WING 2 - HORIZ
A424	X	2	8-10	X		WING 2 - HORIZ
A425	X	4	7-8	X		WING 2 - HORIZ

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



NOTE: A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED BARS 1'-0".

SECTION THRU BODY



DIMENSION IS APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

RODENT SHIELD

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-62-0249

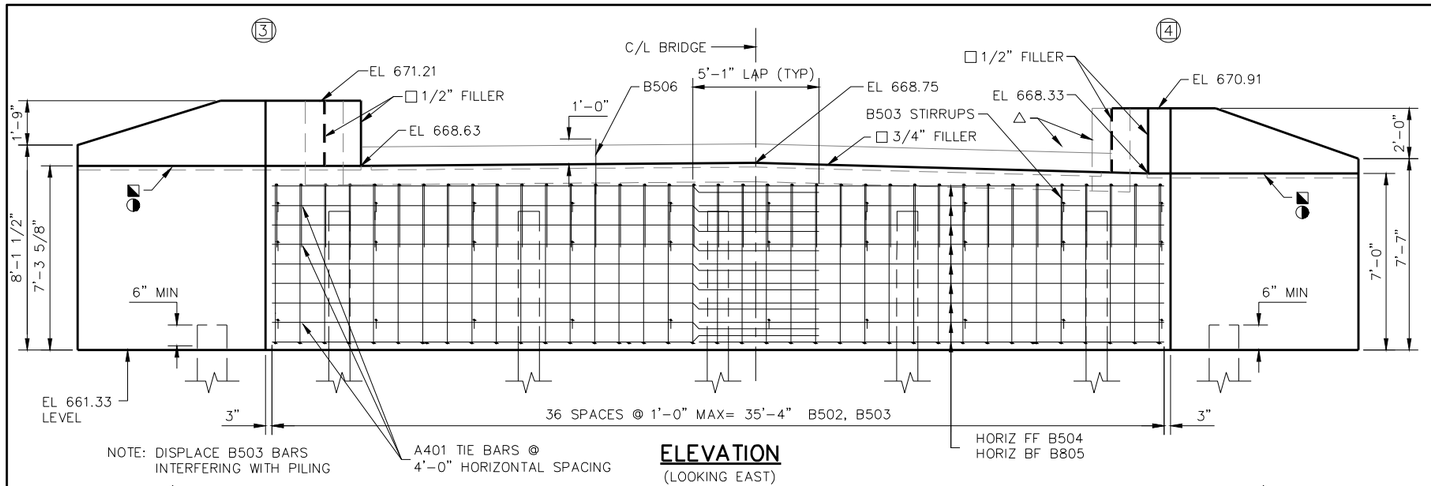
DRAWN BY NJT PLANS CK'D TLP

WEST ABUTMENT

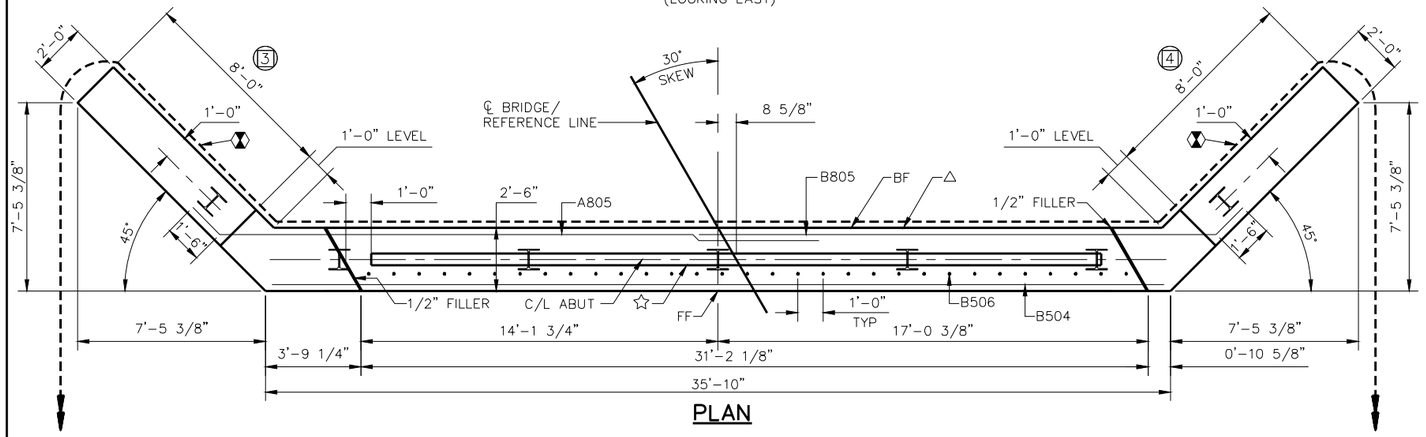
SHEET 4 OF 8

FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\007 5388-00-02 N STODDARD RD TOWN OF HAMBURG\100 CAD\DWG\080402_WA_N. STODDARD RD.DWG PLOT DATE : 10/20/2015 4:26 PM

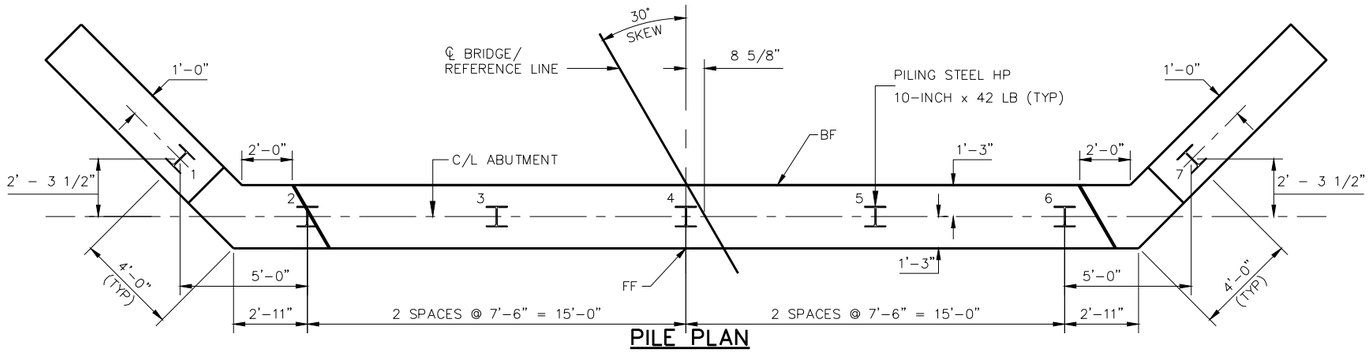
STATE PROJECT NUMBER
5388-00-72



ELEVATION
(LOOKING EAST)



PLAN



PILE PLAN

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B412	X	2	8-8			WING 3 - HORIZ
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B414	X	2	4-1			WING 3 - HORIZ
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B416	X	4	10-4	X		WING 3 - HORIZ
B417	X	3	11-8	X		WING 4 - VERT
B418	X	24	10-8	X	⧓	WING 4 - VERT
B519	X	9	11-7	X		WING 4 - FF
B820	X	9	13-2	X		WING 4 - BF
B421	X	2	8-6			WING 4 - HORIZ
B422	X	2	7-2			WING 4 - HORIZ
B423	X	2	4-3			WING 4 - HORIZ
B424	X	2	8-10	X		WING 4 - HORIZ
B425	X	4	7-8	X		WING 4 - HORIZ

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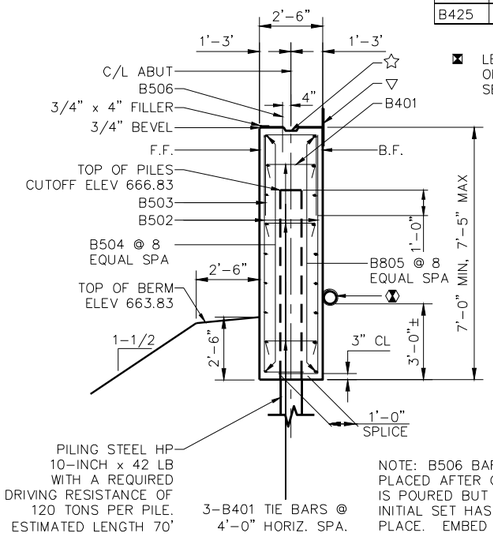
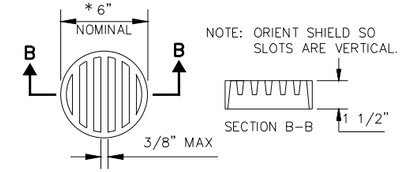


NOTE: B506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED BARS 1'-0".

SECTION THRU BODY



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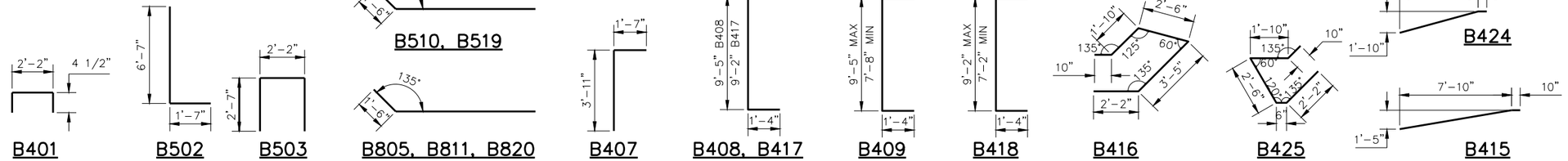


NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-62-0249

DRAWN BY NJT PLANS CK'D TLP

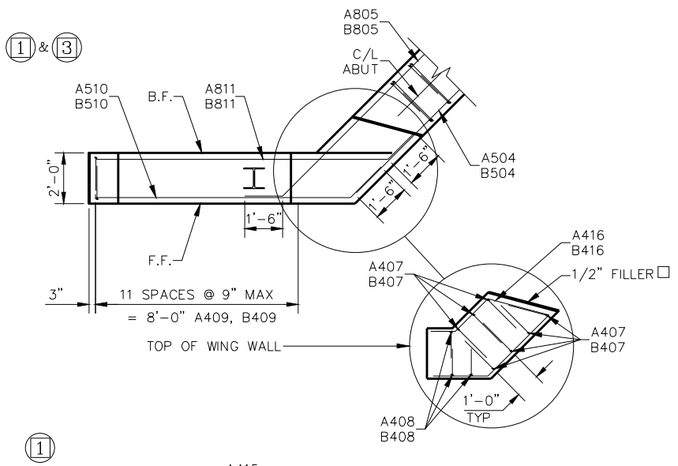
EAST ABUTMENT

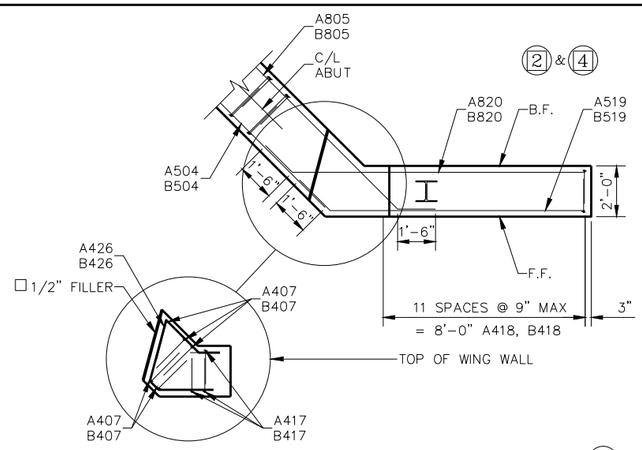
SHEET 5 OF 8

FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\007 5388-00-02 N STODDARD RD TOWN OF HAMBURG\100 CAD\DWG\080401_EA_N. STODDARD RD.DWG PLOT DATE : 10/20/2015 4:24 PM

STATE PROJECT NUMBER

5388-00-72

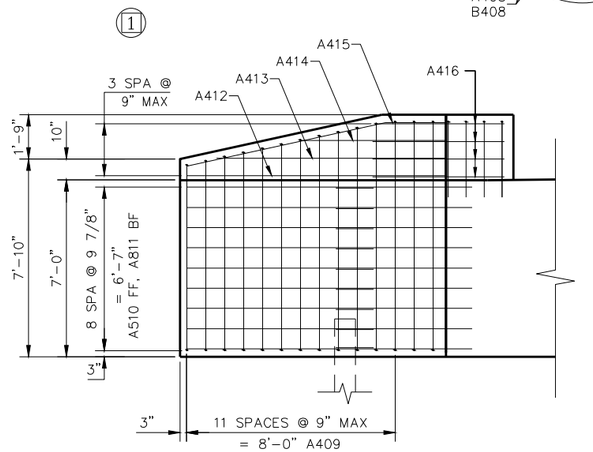


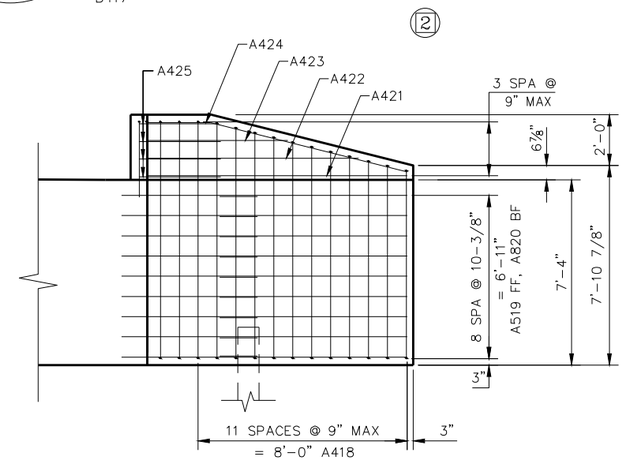


BAR SERIES TABLE

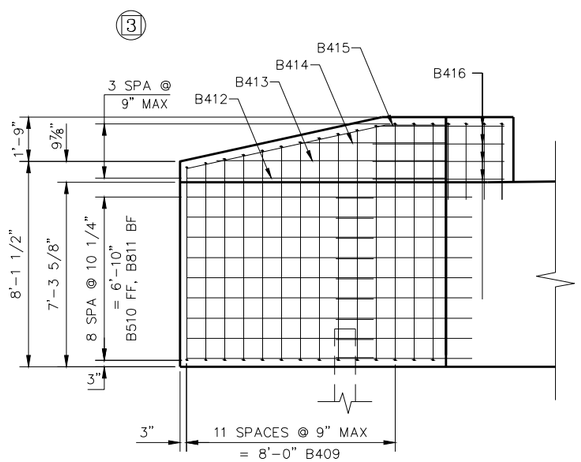
MARK	NO. REQUIRED	LENGTH
A409	2 SERIES OF 12	9'-11" TO 11'-8"
A418	2 SERIES OF 12	10'-0" TO 12'-0"
B409	2 SERIES OF 12	10'-0" TO 11'-10"
B418	2 SERIES OF 12	9'-8" TO 11'-8"

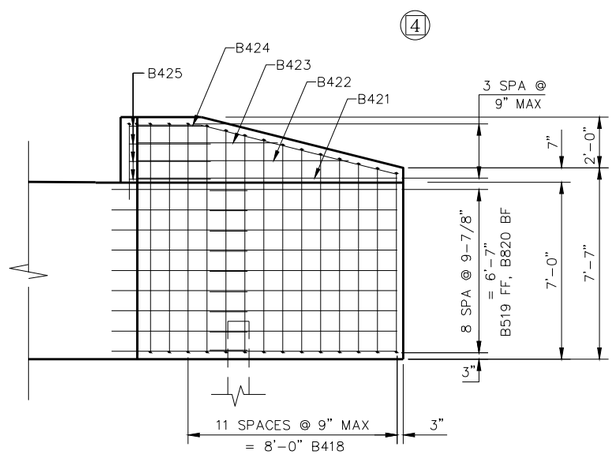
BUNDLE AND TAG EACH SERIES SEPARATELY



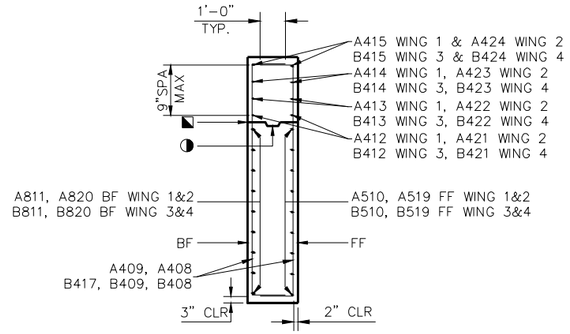


WEST ABUTMENT WINGS





EAST ABUTMENT WINGS



BF = BACK FACE
FF = FRONT FACE

TYPICAL SECTION THRU WING

- 3/4" 'V' GROOVE ON FF OF WING WALL – NOT REQUIRED IF CONSTRUCTION JOINT IS NOT USED
- OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6"

NO.	DATE	REVISION	BY

Cedar corporation
604 Wilson Avenue
Menomonie, Wisconsin 54751
715-235-9081
800-472-7372
FAX 715-235-2727
www.cedarcorp.com
engineers • architects • planners • environmental specialists
land surveyors • landscape architects • interior designers

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

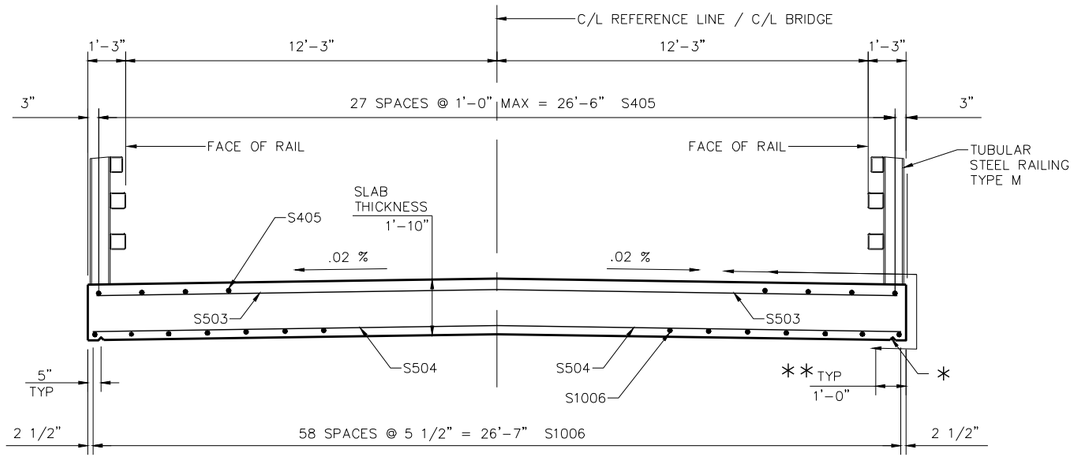
STRUCTURE B-62-0249

CONST SPEC	DRAWN BY NJT	PLANS CK'D TLP

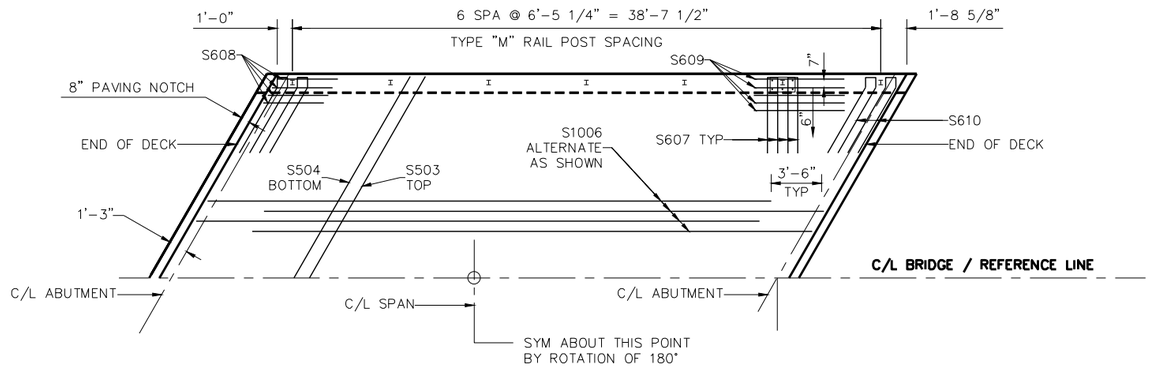
ABUTMENT DETAILS

SHEET 6 of 8

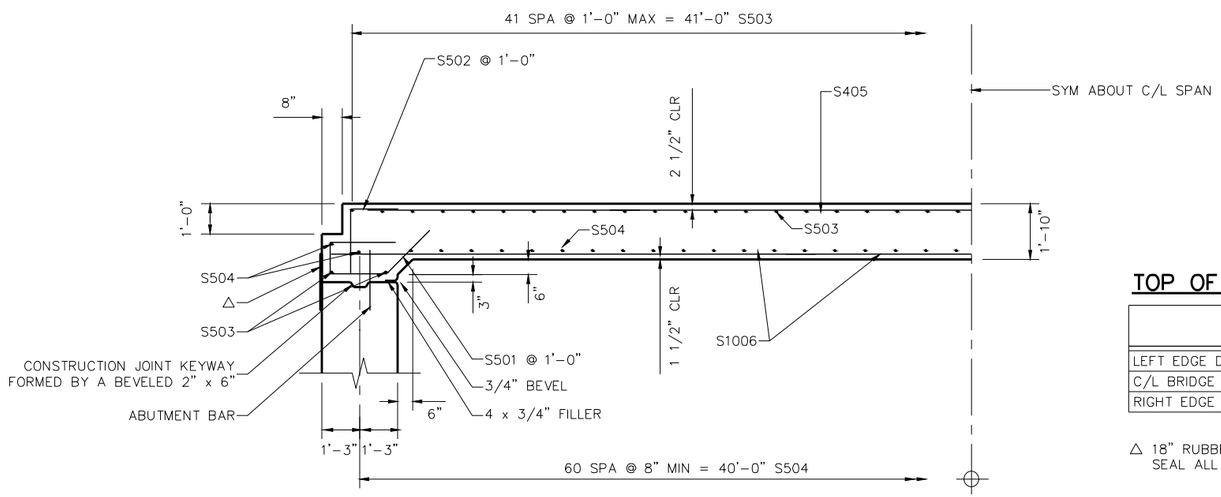
STATE PROJECT NUMBER
5388-00-72



CROSS SECTION THRU RDWY
(LOOKING EAST)



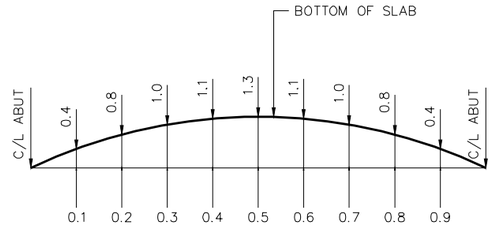
PLAN



LONGITUDINAL SECTION THRU RDWY

** APPLY PROTECTIVE SURFACE TREATMENT

* 3/4" V-GROOVE EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM



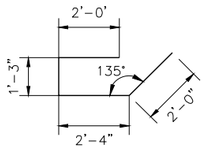
CAMBER DIAGRAM

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.

BILL OF BARS

15440 # COATED

BAR MARK	COAT	NO. REQD	LENGTH	BENT	BUN -DLE	LOCATION
S501	X	64	7-4	X		AT END OF DECK
S502	X	64	3-7	X		AT END OF DECK
S503	X	46	30-10			SLAB, TOP, TRANSVERSE
S504	X	63	30-10			SLAB, BOTTOM, TRANSVERSE
S405	X	28	41-0			SLAB, TOP, LONGITUDINAL
S1006	X	59	37-0			SLAB, BOTTOM, LONGITUDINAL
S607	X	20	12-0	X		AT RAIL POSTS
S608	X	16	5-0	X		AT END RAIL POSTS
S609	X	40	6-0			AT INTERIOR RAIL POSTS
S610	X	8	12-0	X		AT END RAIL POSTS



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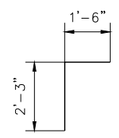

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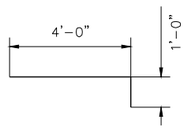

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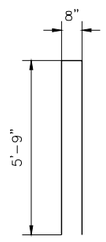
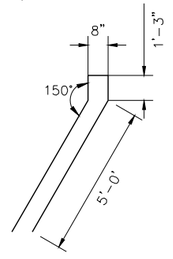


S607



S610

BAR DIMENSIONS ARE OUT TO OUT OF BAR.

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS TO BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE C/L OF SUBSTRUCTURE UNITS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEADLOAD DEFLECTIONS ONLY EQUAL APPROXIMATELY 1/3 OF CAMBER VALUES SHOWN.

PRIOR TO RELEASING SLAB FALSEWORK., TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, AND THE 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℄.

TOP OF DECK ELEVATIONS

	WEST ABUT	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	EAST ABUT
LEFT EDGE DECK	670.41	670.49	670.57	670.65	670.72	670.80	670.88	670.96	671.04	671.12	671.20
C/L BRIDGE	670.53	670.61	670.69	670.77	670.85	670.93	671.01	671.09	671.17	671.25	671.33
RIGHT EDGE DECK	670.09	670.17	670.25	670.33	670.41	670.49	670.57	670.65	670.74	670.82	670.90

△ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ & VERT JOINTS ON BACKFACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-62-0249

DRAWN BY NJT | PLANS CK'D TLP

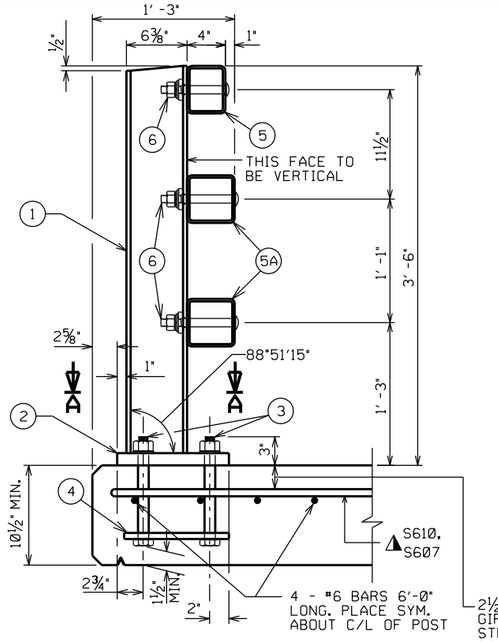
SUPERSTRUCTURE

SHEET 7 OF 8

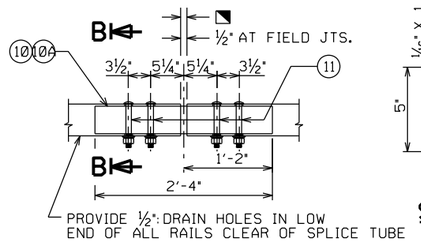
STATE PROJECT NUMBER
5388-00-72

LEGEND

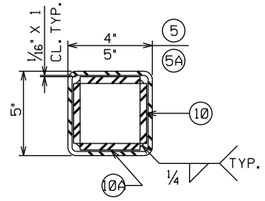
1. W6 x 25 WITH 1⅛" x 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼" x 11¾" x 1'-8" WITH 1⅝" x 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)
4. ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 x 4 x Ø.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 x 5 x Ø.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1⅝" X 1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
7. ½" THK. BACK-UP PLATE WITH 2 - ⅞" X 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
8. 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15/16" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
12. ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
13. ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
14. ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
15. 1" DIA. HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.



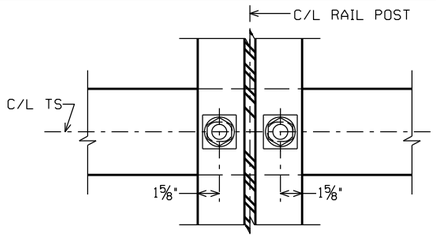
SECTION THRU RAILING ON DECK



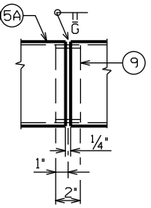
FIELD ERECTION JOINT DETAIL



SECTION B-B

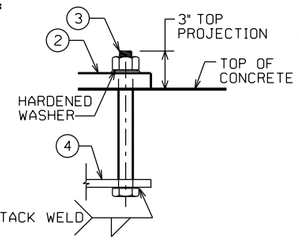


SECTION THRU POST WEB

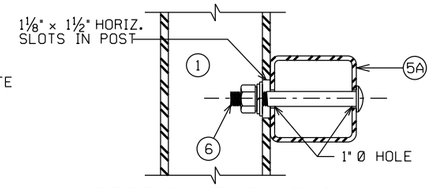


SHOP RAIL SPLICE DETAIL

LOCATION MUST BE SHOWN ON SHOP DRAWINGS



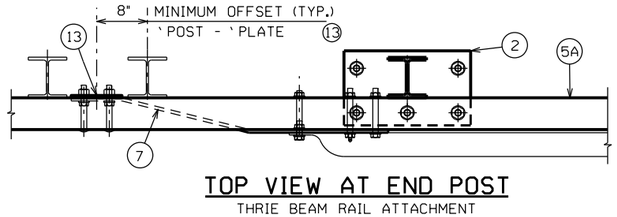
ANCHOR BOLTS



TYPICAL RAIL TO POST CONNECTIONS

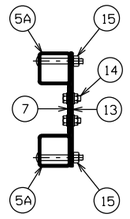
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

SECTION THRU RAIL

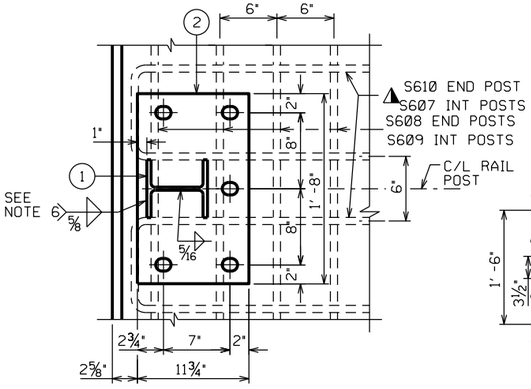


TOP VIEW AT END POST

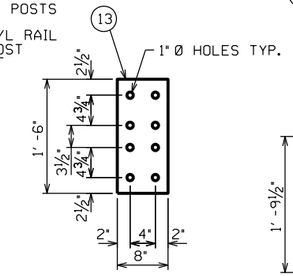
THRIE BEAM RAIL ATTACHMENT



SECTION C-C

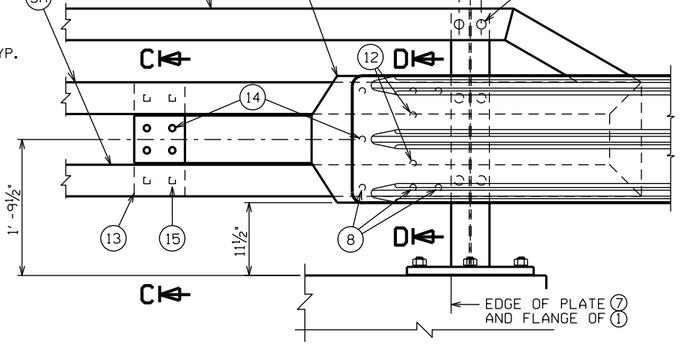


SECTION A-A



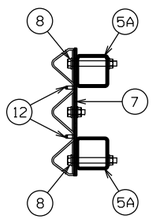
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

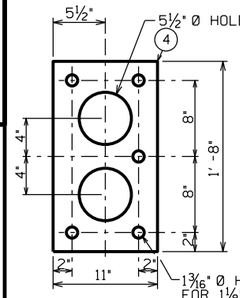


DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT

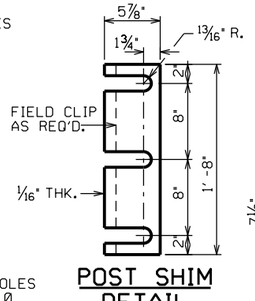


SECTION D-D

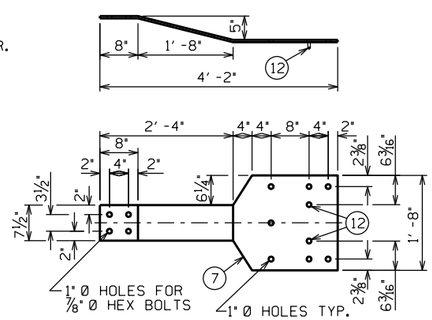


ANCHOR PLATE

AT RAIL TO DECK CONNECTION

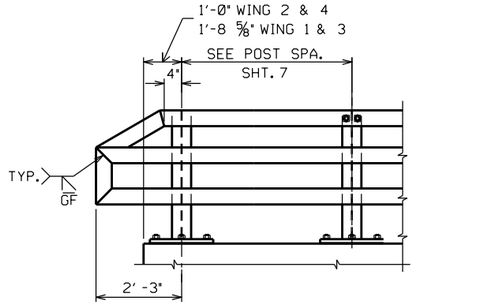


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-54-0119 WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 ksi. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
10. WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED TIE COAT AND TOP COAT.
11. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).
12. PLACE FIRST BOTTOM LONGITUDINAL BAR CLEAR OF DRIP GROOVE.

⚠ TIE TO TOP MAT OF STEEL.

• FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTIBILITY.

◹ RDWY. OPENING OR 2½" MIN. FOR STRIP SEAL EXP. JOINT & ½" OPENING FOR A1 ABUTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-62-0249

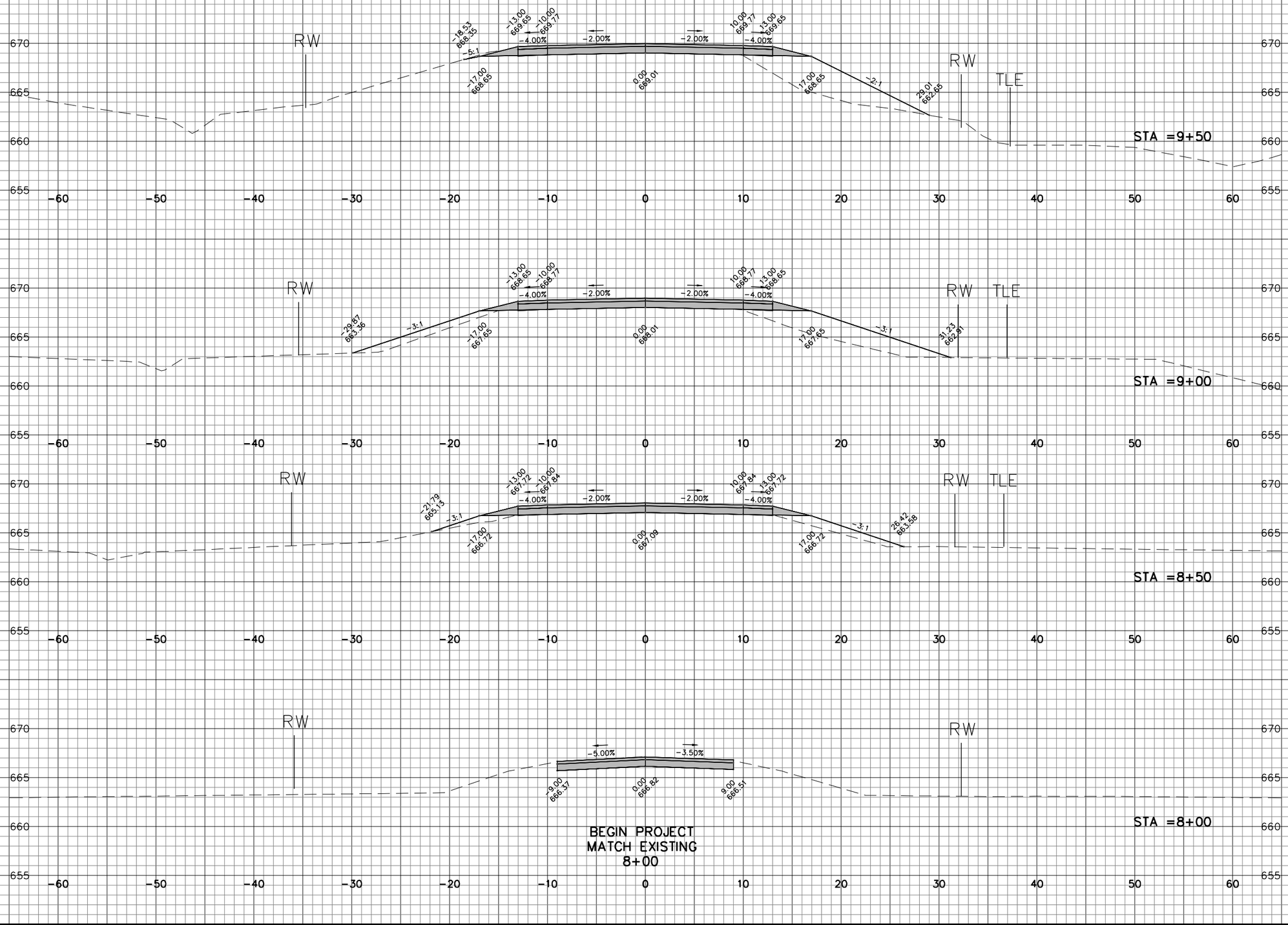
DRAWN BY NJT | PLANS CK'D. TLP

TUBULAR STEEL RAILING TYPE M

SHEET 8 OF 8
29

STATION	REAL STATION	DISTANCE (FT)	AREA (SF)			INCREMENTAL VOL (CY) - (UNADJUSTED)			CUMULATIVE VOL (CY)		MASS ORDINATE
			CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	
8+00	800	0	17.3	6.7	0.0	0.0	0	0.0	1.0	0.0	1.0
8+50	850	50	19.5	6.7	11.7	34.1	12	10.8	35.1	13.5	21.6
9+00	900	50	18.0	6.7	40.1	34.7	12	48.0	69.8	73.5	-3.7
9+50	950	50	19.7	6.7	38.0	34.9	12	72.3	104.7	164.0	-59.3
9+77	977	27	19.7	6.7	38.0	19.7	7	38.0	124.4	211.5	-87.1
						123.4	43	169.1			

STATION	REAL STATION	DISTANCE (FT)	AREA (SF)			INCREMENTAL VOL (CY) - (UNADJUSTED)			CUMULATIVE VOL (CY)		MASS ORDINATE
			CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	
10+19	1019	0	15.4	6.7	36.7	17.7	0	42.1	17.7	52.6	-34.9
10+50	1050	31	15.4	6.7	36.7	31.6	8	34.0	49.3	95.1	-45.8
11+00	1100	50	18.7	6.7	0.0	0.0	8	0.0	50.3	95.1	-44.8
						50.0	16.0	76.1			

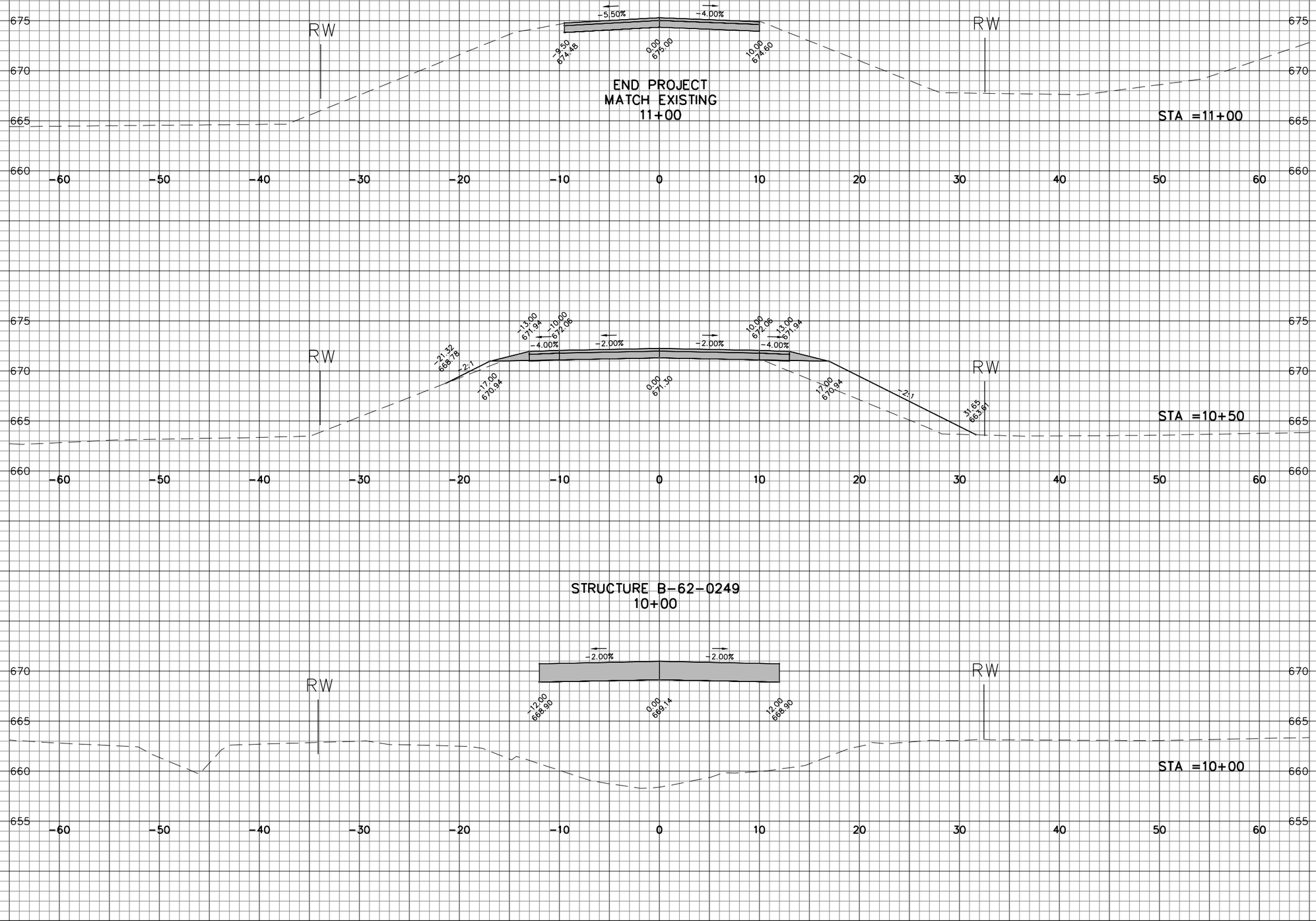


9

9

PROJECT NO: 5388-00-72	HWY: N STODDARD ROAD	COUNTY: VERNON	CROSS SECTIONS:	SHEET 31	E

FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\007 5388-00-02 N STODDARD RD TOWN OF HAMBURG\100 CAD\DWG\00BASE_3922007.DWG PLOT DATE : 10/26/2015 5:01 PM PLOT BY : NICK THOMPSON PLOT NAME : _____ PLOT SCALE : ######## WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5388-00-72	HWY: N STODDARD ROAD	COUNTY: VERNON	CROSS SECTIONS:	SHEET -----	E

FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\007 5388-00-02 N STODDARD RD TOWN OF HAMBURG\100 CAD\DWG\00BASE_3922007.DWG PLOT DATE : 10/26/2015 5:01 PM PLOT BY : NICK THOMPSON PLOT NAME : _____PLOT_SCALE : ########

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

SWL APRIL 2016

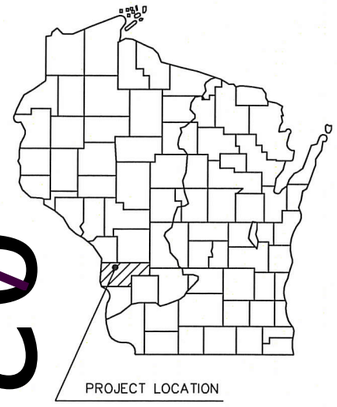
PROJECT ID: 5388-13-71
WITH: 5388-00-72

COUNTY: VERNON

02

ORDER OF SHEETS

TOTAL SHEETS = 48



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

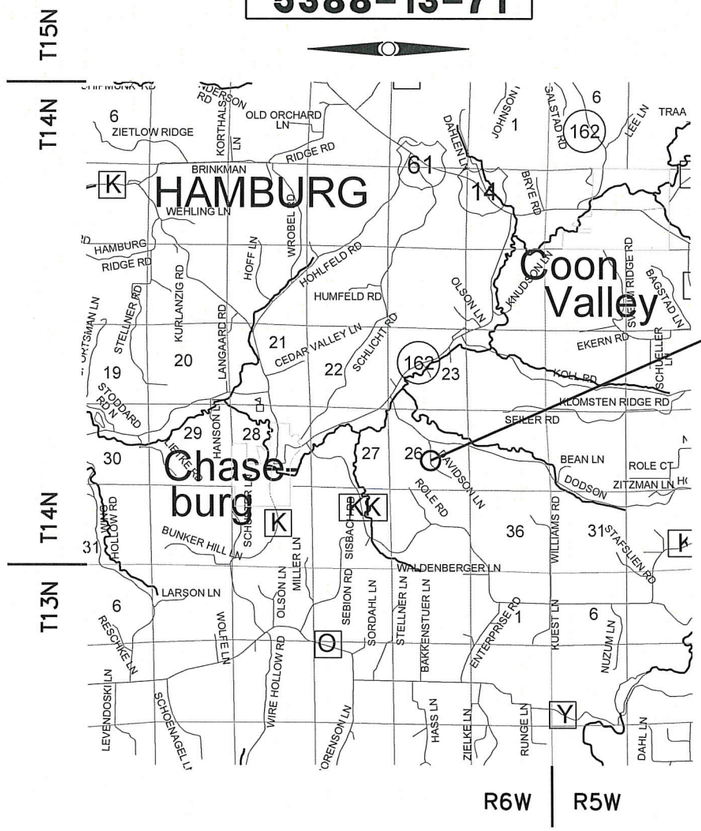
DAVIDSON LANE BRIDGE & APPROACHES

(TOWN OF HAMBURG B-62-0251)

TOWN ROAD
VERNON COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5388-13-71	WISC 2016087	1

STATE PROJECT NUMBER
5388-13-71



LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.057 MI

END CONSTRUCTION
STA 11+71
Y - 185889.07
X - 656861.79

END PROJECT
STA 11+50
Y - 185877.29
X - 656862.50

STRUCTURE B-62-0251

BEGIN PROJECT
STA 8+50
Y - 185578.16
X - 656867.03

BEGIN CONSTRUCTION
STA 6+59
Y - 185423.44
X - 656971.27

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

DESIGN DESIGNATION

AADT (2016)	=	20
AADT (2036)	=	25
DHV (2036)	=	3
D (%)	=	50/50
T (% OF ADT)	=	10%
DESIGN SPEED	=	< 25 MPH
ESALS	=	NA

CONVENTIONAL SYMBOLS

PLAN
- FENCE
- RIPRAP
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE 48
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- HIGH VOLTAGE (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA
- RIGHT-OF-WAY MARKERS

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
- OVERHEAD LINES — OH
- FIBER OPTIC — FO
- GAS — G
- SANITARY SEWER — SAN
- STORM SEWER — SS
- TELEPHONE — T
- WATER — W
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

ACCEPTED FOR TOWN OF HAMBURG
10/21/15 DATE — Rod Anderson TOWN CHAIRMAN

ACCEPTED FOR VERNON COUNTY
10/21/15 DATE — Phil Hewitt COUNTY COMMISSIONER

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

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

10-15-15 DATE

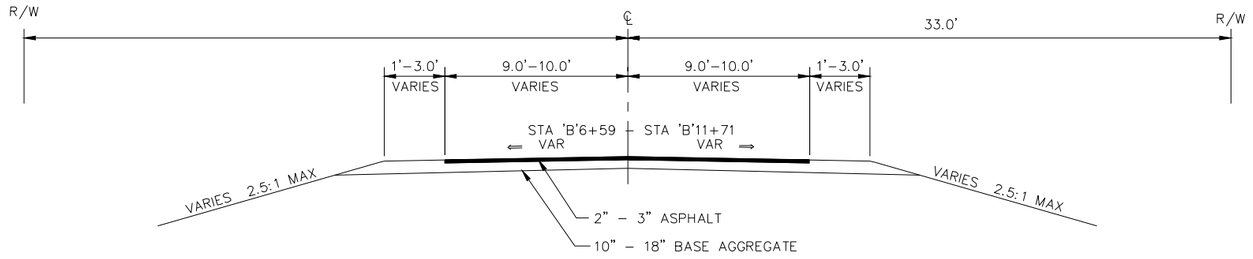
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor CEDAR CORPORATION
Designer CEDAR CORPORATION
Management Consultant KJOHNSON ENGINEERS, INC.

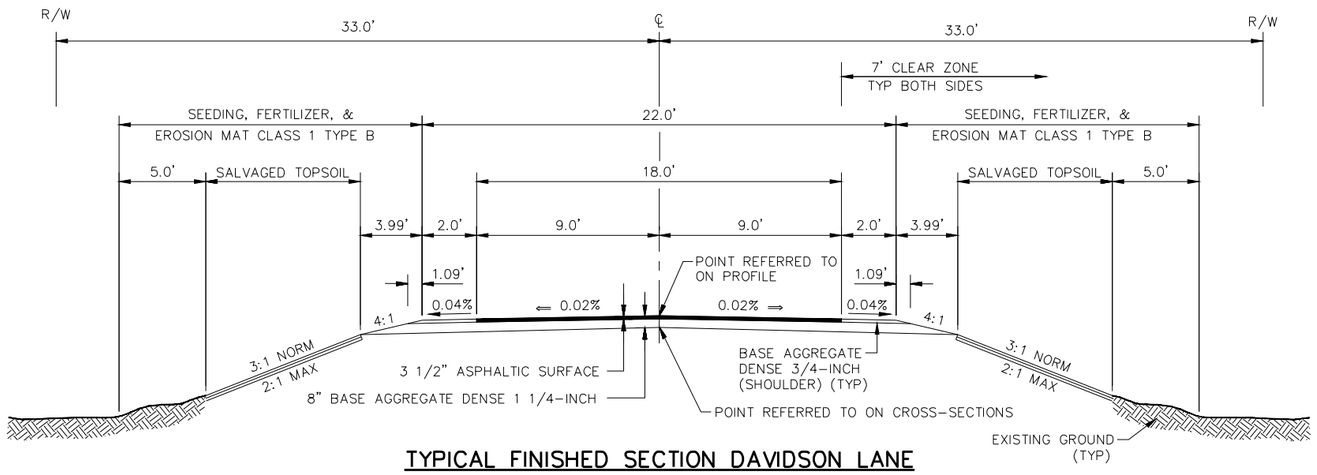
APPROVED FOR THE DEPARTMENT
10/29/15 DATE — (Management Consultant Signature)

E

FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\008 5388-13-00 DAVIDSON LN TOWN OF HAMBURG\100 CAD\DWG\010101_TI_DAVIDSON LANE.DWGPLOT DATE : 10/15/2015 11:17 AM PLOT BY : NICK THOMPSON



EXISTING TYPICAL SECTION DAVIDSON LANE



TYPICAL FINISHED SECTION DAVIDSON LANE

STA 8+50 - STA 9+82.55
STA 10+25.44 - STA 11+50

DNR LIAISON

DNR SERVICE CENTER
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 785-9115
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COON VALLEY, WI 54623
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cvt@mwt.net

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

**DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

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.

SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. SILT FENCE TO BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO BRIDGE REMOVAL.

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.

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

SHRINKAGE IS ESTIMATED AT 25%.

THE 3 1/2" ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1 3/4" LOWER LAYER AND A 1 3/4" UPPER LAYER. USE 1/2" NOMINAL AGGREGATE FOR ASPHALT SURFACE.

BEARINGS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), VERNON COUNTY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE FERTILIZED AND SEEDED AS DIRECTED BY THE ENGINEER. USE SEED MIX NO. 10.

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

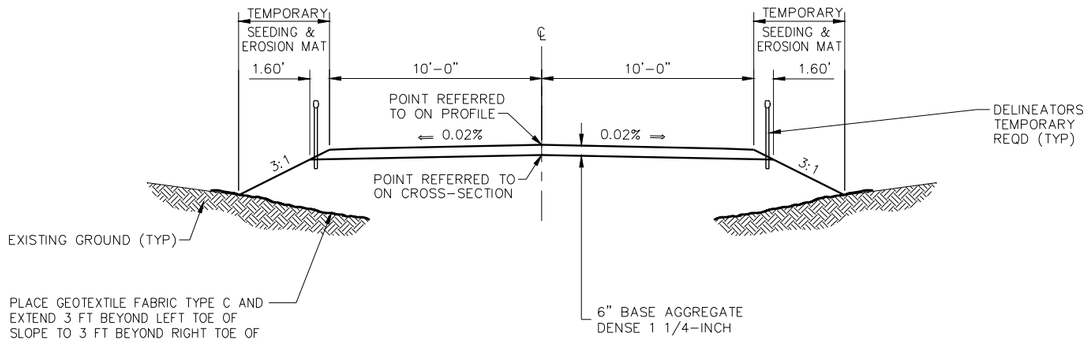
THE BENCHMARK IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD88).

WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS. DO NOT OPERATE EQUIPMENT OUTSIDE THE SLOPE INTERCEPTS.

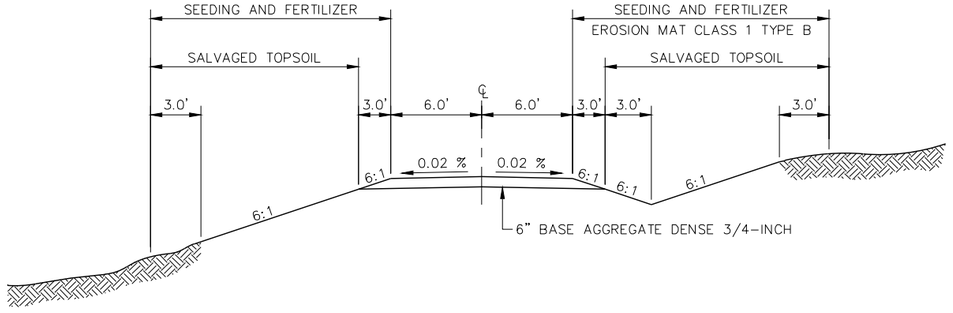
STANDARD ABBREVIATIONS

ABUT	ABUTMENT	OFF	OFFSET
AGG	AGGREGATE	PC	POINT OF CURVATURE
ET AL	AND OTHERS	PRC	POINT OF REVERSE CURVATURE
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PI	POINT OF INTERSECTION
BF	BACK FACE	PT	POINT OF TANGENCY
BM	BENCHMARK	POL	POINT ON LINE
C/L OR ℄	CENTERLINE	PE	PRIVATE ENTRANCE
△	CENTRAL ANGLE OR DELTA	PL	PROPERTY LINE
CLR	CLEAR	PSI	POUNDS/SQUARE INCH
CONC	CONCRETE	PROP	PROPOSED
CONST	CONSTRUCTION	R	RADIUS
COR	CORNER	RR	RAILROAD
CMP	CORRUGATED METAL PIPE	REBAR	REINFORCEMENT BAR
CTH	COUNTY TRUNK HIGHWAY	REQD	REQUIRED
CR	CREEK	RT	RIGHT
CFS	CUBIC FEET/SECOND	RHF	RIGHT-HAND FORWARD
CULV	CULVERT	R/W	RIGHT-OF-WAY
D	DEGREE OF CURVE	RD	ROAD
DHV	DESIGN HOUR VOLUME	SEC	SECTION
DIA	DIAMETER	S	SOUTH
E	EAST	SE	SOUTHEAST
EL	ELEVATION	SW	SOUTHWEST
EST	ESTIMATED	STH	STATE TRUNK HIGHWAY
FPS	FEET PER SECOND	STA	STATION
FE	FIELD ENTRANCE	SE	SUPER ELEVATION
FT	FOOT (FEET)	T	TANGENT
FTG	FOOTING	TEL	TELEPHONE
FDN	FOUNDATION	TEMP	TEMPORARY
FF	FRONT FACE	TI	TEMPORARY INTEREST
IP	IRON PIN	TLE	TEMPORARY LIMITED EASEMENT
LT	LEFT	TL OR T/L	TRANSIT LINE
LHF	LEFT-HAND FORWARD	T	TRUCKS
L	LENGTH OF CURVE	TYP	TYPICAL
LF	LINEAR FOOT	U/G	UNDERGROUND
MAX	MAXIMUM	USH	UNITED STATES HIGHWAY
MI	MILE	VAR	VARIABLE
MIN	MINIMUM	V	VELOCITY
NC	NORMAL CROWN	VPC	VERTICAL POINT OF CURVATURE
N	NORTH	VPI	VERTICAL POINT OF INTERSECTION
NE	NORTHEAST	VPT	VERTICAL POINT OF TANGENCY
NW	NORTHWEST	W	WEST
NO	NUMBER	YD	YARD

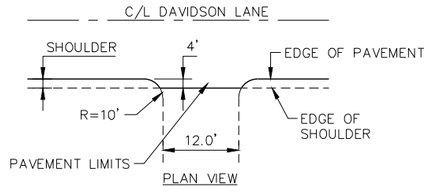
2



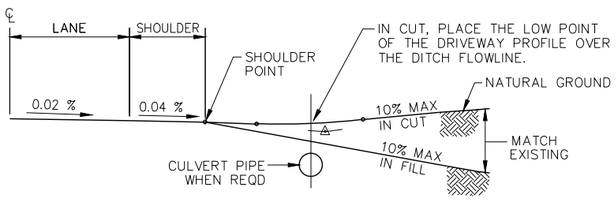
TYPICAL SECTION
FOR TEMPORARY BYPASS



TYPICAL FINISHED SECTION FOR GRAVEL ENTRANCES



ENTRANCE DETAIL
STA 9+46 LT



TYPICAL PROFILE FOR ENTRANCES

PROJECT NO: 5388-13-71	HWY: DAVIDSON LANE	COUNTY: VERNON	TYPICAL SECTIONS	SHEET 3	E

2

2

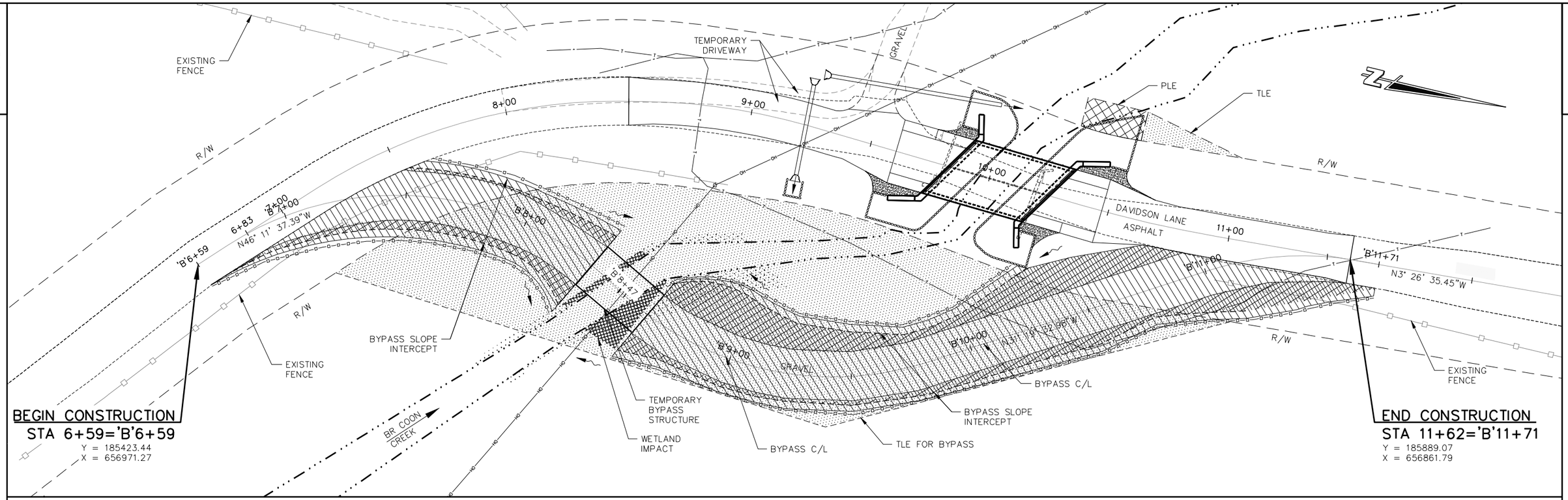
LEGEND

- SEEDING MIXTURE NO. 10 FERTILIZER AND EROSION MAT CLASS I TYPE B
- GEOTEXTILE FABRIC TYPE HR
- SILT FENCE
- TURBIDITY BARRIER (10' MAX SPACING)
- DRAINAGE FLOW
- ASPHALTIC FLUME
- PROPOSED CULVERT (Box or Pipe)

GRAVEL SHOULDER EDGE (TYP)
GRAVEL SHOULDER (TYP)
SLOPE INTERCEPT (TYP)
R/W
GRAVEL
RIPRAP EXTRA HEAVY
PROPOSED STRUCTURE B-62-0251
PLE
TLE
SLOPE INTERCEPT (TYP)
R/W
9+00
ASPHALT
10+00
N12° 58' 54.41"E
DAVIDSON LANE
ASPHALT
11+00
N12° 47' 34.67"W
RIPRAP MEDIUM
SLOPE INTERCEPT (TYP)
EXISTING STRUCTURE P-62-0191 TO BE REMOVED
RIPRAP EXTRA HEAVY
EXISTING FENCE
R/W
EXISTING FENCE
R/W
BEGIN PROJECT
STA 8+50
Y = 185578.16
X = 656867.03
BR COON CREEK
END PROJECT
STA 11+50
Y = 185877.29
X = 656862.50
SLOPE INTERCEPT (TYP)
TLE

NOTE: EXISTING FENCE WITHIN R/W TO BE REMOVED BY OTHERS

PROJECT NO: 5388-13-71	HWY: DAVIDSON LANE	COUNTY: VERNON	EROSION CONTROL	SHEET 4 E



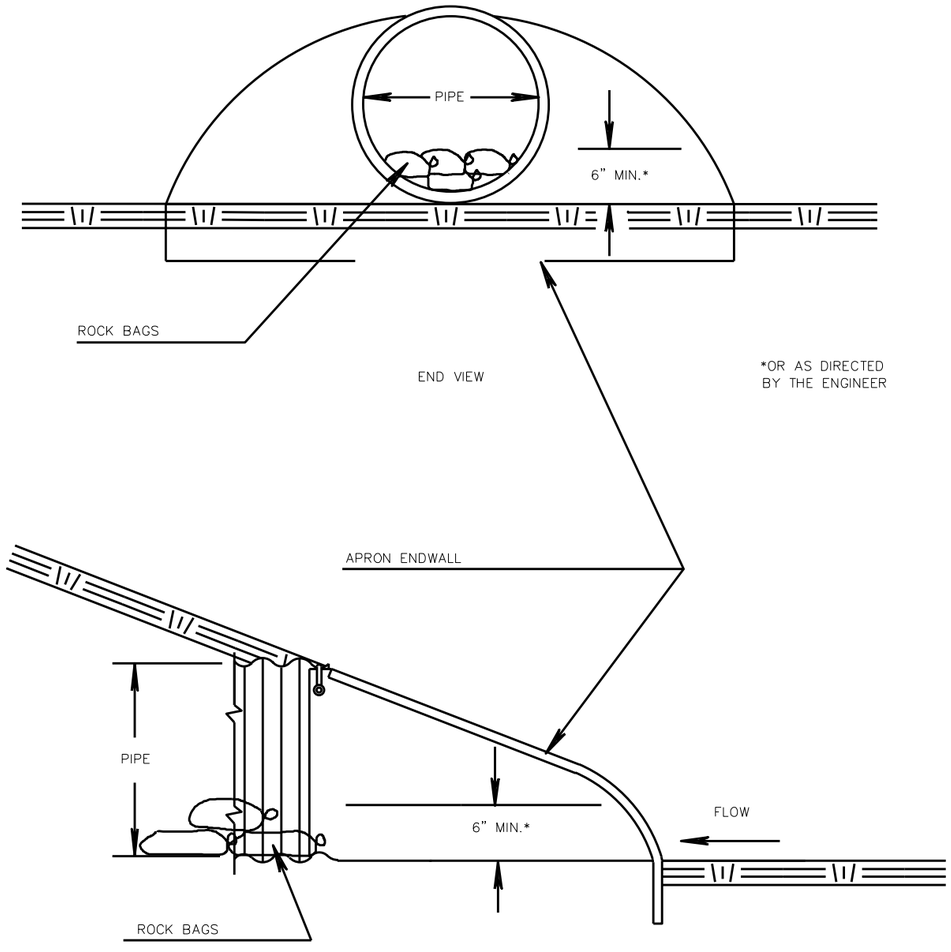
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0–2	2–6	6 & OVER	0–2	2–6	6 & OVER	0–2	2–6	6 & OVER	0–2	2–6	6 & OVER
MEDIAN STRIP–TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE–TURF			.25			.27			.28			.30
			.32			.34			.36			.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 = 1.19 ACRE
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.94 ACRE

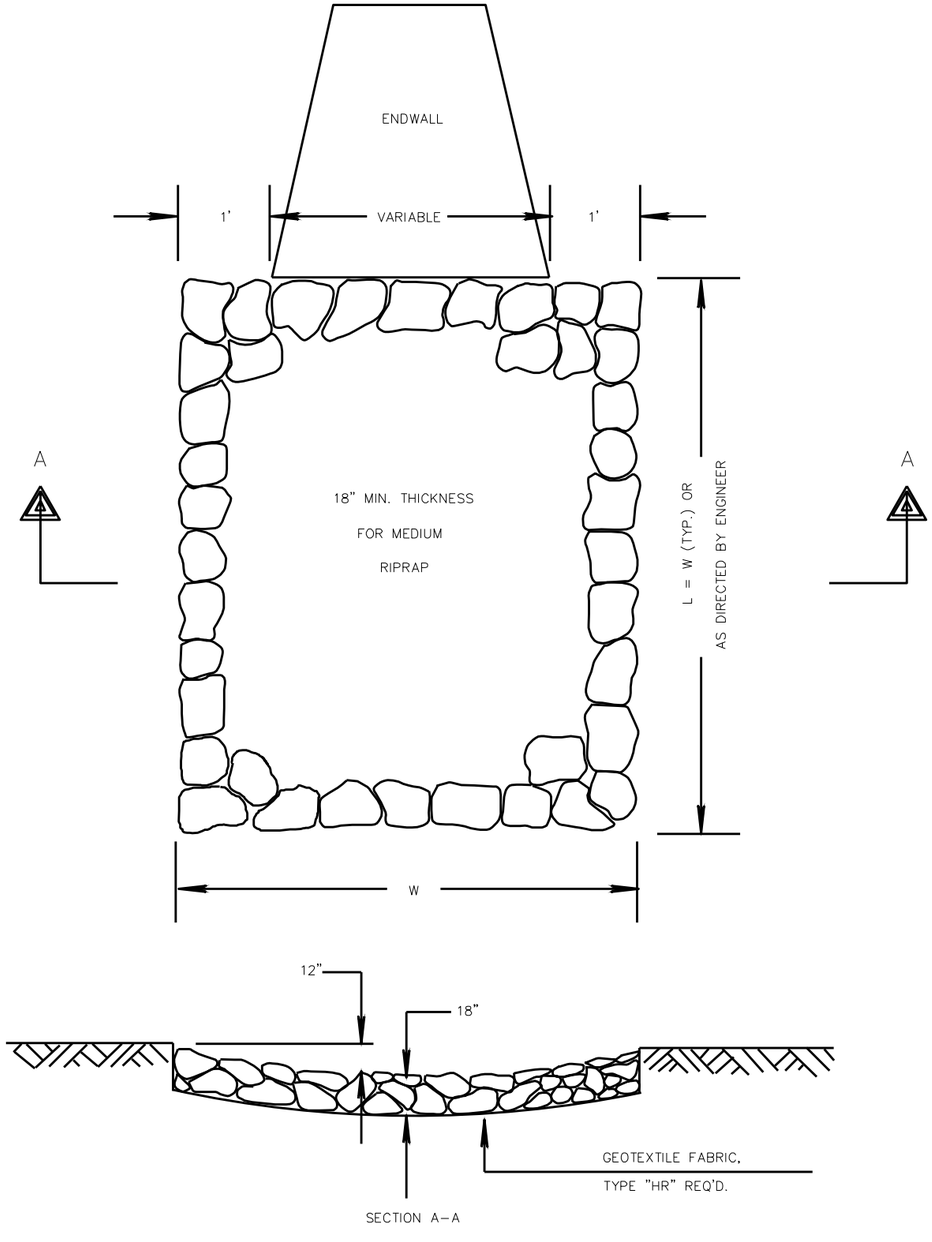
LEGEND

- EROSION MAT CLASS I TYPE B
- GEOTEXTILE FABRIC TYPE C
- SILT FENCE
- DRAINAGE FLOW
- ASPHALTIC FLUME
- PROPOSED CULVERT (Box or Pipe)

PROJECT NO: 5388–13–71	HWY: DAVIDSON LANE	COUNTY: VERNON	EROSION CONTROL – TEMPORARY BYPASS	SHEET 5	E



CULVERT PIPE CHECKS



MEDIUM RIPRAP TREATMENT AT CULVERTS

2

BENCHMARKS			
NO	STA	DESCRIPTION	ELEV
2	10+20±	NW ABUT (DAVIDSON LN BRIDGE) @ CHIZ SQUARE	746.11
3	12+45±	CL PAINT MARK, SET 60D SPIKE 12" TREE (@ 21.58' RT)	756.50

C/L CURVE 1 DATA
PC = 7+16.74
PI = 7+83.35
PT = 8+46.25
D = N29°16'57"W
Δ = 32°58'46"
R = 225.00'
T = 66.60'
L = 129.51'
C = 127.73'

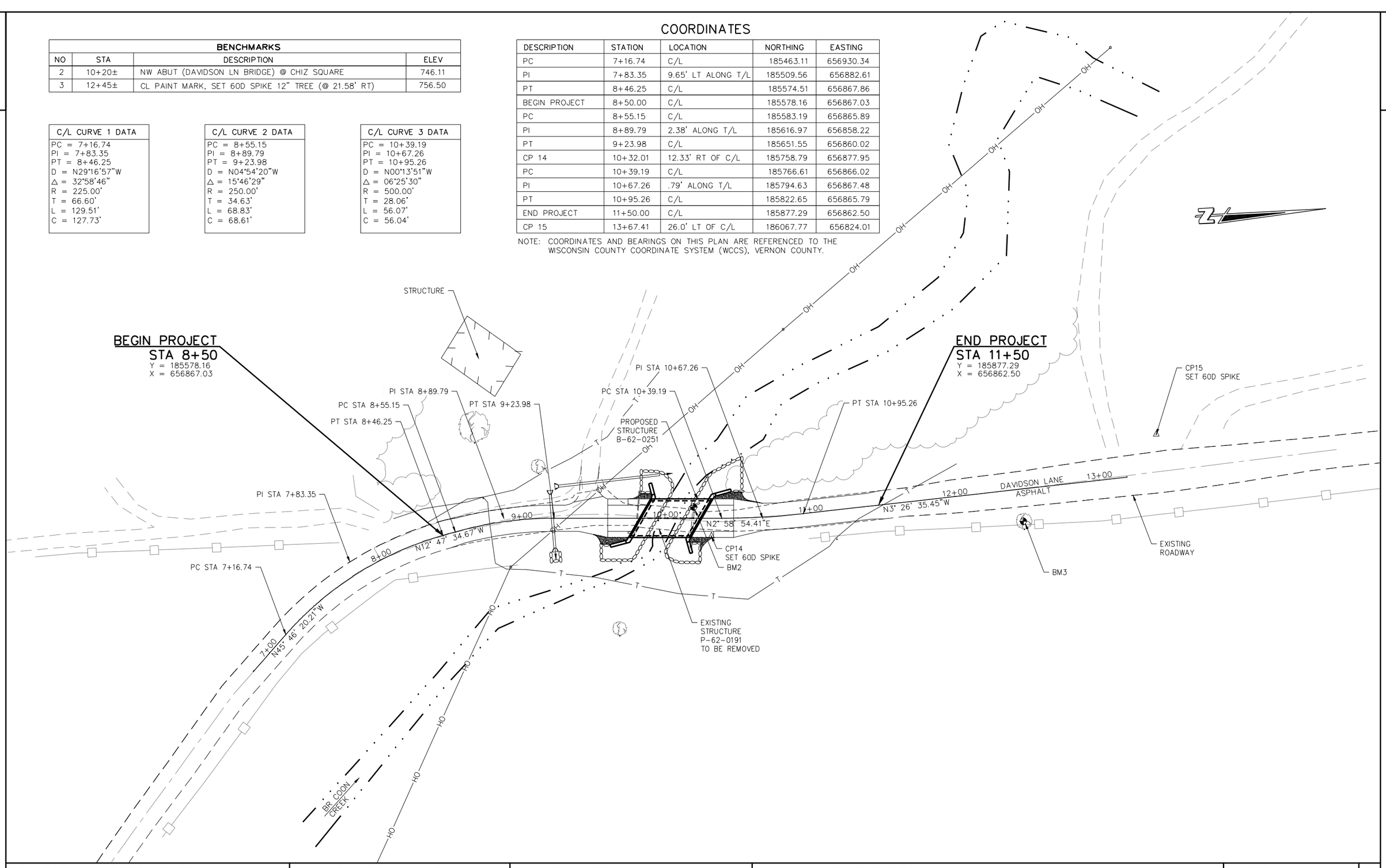
C/L CURVE 2 DATA
PC = 8+55.15
PI = 8+89.79
PT = 9+23.98
D = N04°54'20"W
Δ = 15°46'29"
R = 250.00'
T = 34.63'
L = 68.83'
C = 68.61'

C/L CURVE 3 DATA
PC = 10+39.19
PI = 10+67.26
PT = 10+95.26
D = N00°13'51"W
Δ = 06°25'30"
R = 500.00'
T = 28.06'
L = 56.07'
C = 56.04'

COORDINATES

DESCRIPTION	STATION	LOCATION	NORTHING	EASTING
PC	7+16.74	C/L	185463.11	656930.34
PI	7+83.35	9.65' LT ALONG T/L	185509.56	656882.61
PT	8+46.25	C/L	185574.51	656867.86
BEGIN PROJECT	8+50.00	C/L	185578.16	656867.03
PC	8+55.15	C/L	185583.19	656865.89
PI	8+89.79	2.38' ALONG T/L	185616.97	656858.22
PT	9+23.98	C/L	185651.55	656860.02
CP 14	10+32.01	12.33' RT OF C/L	185758.79	656877.95
PC	10+39.19	C/L	185766.61	656866.02
PI	10+67.26	.79' ALONG T/L	185794.63	656867.48
PT	10+95.26	C/L	185822.65	656865.79
END PROJECT	11+50.00	C/L	185877.29	656862.50
CP 15	13+67.41	26.0' LT OF C/L	186067.77	656824.01

NOTE: COORDINATES AND BEARINGS ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), VERNON COUNTY.



PROJECT NO: 5388-13-71	HWY: DAVIDSON LANE	COUNTY: VERNON	ALIGNMENT TIES	SHEET 7 E

DATE 26JAN16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5388-13-71 QUANTITY
0010	201.0205	Grubbing	STA	3.000	3.000
0020	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0040	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 02. 10+00 (5388-13-71)	LS	1.000	1.000
0060	205.0100	Excavation Common **P**	CY	811.000	811.000
0080	206.1000	Excavation for Structures Bridges (structure) 02. B-62-0251	LS	1.000	1.000
0090	208.0100	Borrow	CY	454.000	454.000
0100	210.0100	Backfill Structure	CY	400.000	400.000
0120	213.0100	Finishing Roadway (project) 02. 5388-13-71	EACH	1.000	1.000
0130	305.0110	Base Aggregate Dense 3/4-Inch	TON	66.000	66.000
0140	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	718.000	718.000
0150	415.0120	Concrete Pavement 12-Inch	SY	26.000	26.000
0160	415.0410	Concrete Pavement Approach Slab	SY	90.000	90.000
0170	465.0105	Asphaltic Surface	TON	86.000	86.000
0180	465.0315	Asphaltic Flumes	SY	31.000	31.000
0190	502.0100	Concrete Masonry Bridges	CY	187.000	187.000
0200	502.3200	Protective Surface Treatment	SY	145.000	145.000
0210	505.0400	Bar Steel Reinforcement HS Structures	LB	5,220.000	5,220.000
0220	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	18,620.000	18,620.000
0240	513.4061	Railing Tubular Type M (structure) 02. B-62-0251	LF	78.000	78.000
0250	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0260	521.0118	Culvert Pipe Corrugated Steel 18-Inch	LF	110.000	110.000
0270	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	4.000	4.000
0280	526.0100	Temporary Structure (station) 01. 'B' 8+47	LS	1.000	1.000
0290	550.0500	Pile Points	EACH	14.000	14.000
0300	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	630.000	630.000
0310	606.0200	Riprap Medium	CY	4.000	4.000
0320	606.0400	Riprap Extra-Heavy	CY	200.000	200.000
0330	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	180.000	180.000
0340	619.1000	Mobilization	EACH	0.500	0.500
0350	624.0100	Water	MGAL	12.600	12.600
0360	625.0500	Salvaged Topsoil **P**	SY	539.000	539.000
0370	628.1504	Silt Fence	LF	1,347.000	1,347.000
0380	628.1520	Silt Fence Maintenance	LF	1,847.000	1,847.000
0390	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0400	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0410	628.2004	Erosion Mat Class I Type B	SY	1,086.000	1,086.000
0420	628.6005	Turbidity Barriers	SY	160.000	160.000
0430	628.7504	Temporary Ditch Checks	LF	20.000	20.000
0440	628.7555	Culvert Pipe Checks	EACH	6.000	6.000
0450	629.0210	Fertilizer Type B **P**	CWT	0.440	0.440
0460	630.0110	Seeding Mixture No. 10 **P**	LB	21.000	21.000
0470	630.0200	Seeding Temporary	LB	12.000	12.000
0480	633.1100	Delineators Temporary	EACH	27.000	27.000
0490	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0500	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0510	638.2602	Removing Signs Type II	EACH	6.000	6.000
0520	638.3000	Removing Small Sign Supports	EACH	6.000	6.000

3

DATE 26JAN16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5388-13-71 QUANTITY
0530	642.5001	Field Office Type B	EACH	0.500	0.500
0550	643.0100	Traffic Control (project) 02. 5388-13-71	EACH	1.000	1.000
0560	643.0300	Traffic Control Drums	DAY	1,452.000	1,452.000
0570	643.0420	Traffic Control Barricades Type III	DAY	1,320.000	1,320.000
0580	643.0705	Traffic Control Warning Lights Type A	DAY	1,584.000	1,584.000
0590	643.0715	Traffic Control Warning Lights Type C	DAY	1,320.000	1,320.000
0600	643.0900	Traffic Control Signs	DAY	2,640.000	2,640.000
0610	645.0105	Geotextile Fabric Type C	SY	1,480.000	1,480.000
0620	645.0120	Geotextile Fabric Type HR	SY	334.000	334.000
0630	650.4500	Construction Staking Subgrade	LF	770.000	770.000
0640	650.5000	Construction Staking Base	LF	770.000	770.000
0660	650.6500	Construction Staking Structure Layout (structure) 02. B-62-0251	LS	1.000	1.000
0680	650.9910	Construction Staking Supplemental Control (project) 02. 5388-13-71	LS	1.000	1.000
0690	650.9920	Construction Staking Slope Stakes	LF	770.000	770.000
0700	690.0150	Sawing Asphalt	LF	40.000	40.000
0710	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0720	715.0502	Incentive Strength Concrete Structures	DOL	1,122.000	1,122.000
0730	999.1000.S	Seismograph	LS	1.000	1.000
0740	999.1500.S	Crack and Damage Survey	LS	1.000	1.000
0750	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	150.000	150.000
0760	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	150.000	150.000

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED.

3

3

GRUBBING

STATION - STATION	LOCATION	201.0205 GRUBBING STA.
8+50 - 11+50	DAVIDSON LANE	3
TOTAL		3

REMOVING SMALL PIPE CULVERTS

STATION - STATION	LOCATION	203.0100 EACH	DESCRIPTION
9+20 - 9+26	DAVIDSON LANE	1	15" CMP
9+23 - 9+98	DAVIDSON LANE	1	18" CMP
TOTAL		2	

DIVISION	STATIONING	LOCATION	205.0100 COMMON EXCAVATION (CY) **P** CUT	SALVAGED / UNUSABLE PAVEMENT MATERIAL (1)	AVAILABLE MATERIAL (CY) (2)	UNEXPANDED FILL	EXPANDED FILL FACTOR 1.25	MASS ORDINATE +/- (3)	208.0100 BORROW (CY)
1	8+50 - 9+83	MAINLINE SOUTH APPROACH	111	22	89	18	23	67	0
DIVISION 1 SUBTOTAL			111	22	89	18	23	67	0
2	10+25 - 11+50	MAINLINE NORTH APPROACH	176	21	155	82	103	52	0
DIVISION 2 SUBTOTAL			176	21	155	82	103	52	0
3	B 6+59 - B 8+33	BYPASS SOUTH APPROACH	8	0	8	48	60	-53	60
DIVISION 3 SUBTOTAL			8	0	8	48	60	-53	60
4	B 8+61 - B11+71	BYPASS NORTH APPROACH	9	0	9	291	364	-355	394
DIVISION 4 SUBTOTAL			9	0	9	291	364	-355	394
5	B 6+59 - B11+71	BYPASS SOUTH APPROACH REMOVAL	109	0	109	7	8	101	0
DIVISION 5 SUBTOTAL			109	0	109	7	8	101	0
6	B 6+59 - B11+71	BYPASS NORTH APPROACH REMOVAL	398	0	398	9	11	387	0
DIVISION 6 SUBTOTAL			398	0	398	9	11	387	0
GRAND TOTAL			811	43	768	455	569	199	454

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0120 1 1/4 - INCH TON	305.0110 3/4 - INCH TON
8+50 - 9+83	MAINLINE SOUTH	171	34
10+25 - 11+50	MAINLINE NORTH	160	32
B 6+59 - B 8+33	BYPASS SOUTH	139	--
B 8+61- B 11+71	BYPASS NORTH	248	--
TOTAL		718	66

CONCRETE

STATION - STATION	LOCATION	APPROACH SLAB 415.0410 SY	PAVEMENT 12 INCH 415.0120 SY
9+60.67- 9+84.00	SOUTH APPROACH	45	15
10+24.67 - 10+47.32	NORTH APPROACH	45	11
TOTAL		90	26

ASPHALTIC SURFACE

STATION - STATION	LOCATION	465.0105 TON
8+50 - 9+60.67	SOUTH APPROACH	43
10+47.32 - 11+50	NORTH APPROACH	40
9+60.67 - 10+47.32	APPROACH SHOULDER	3
TOTAL		86

ASPHALTIC FLUMES

STATION - STATION	LOCATION	465.0315 SY
9+60	RT	9
9+85	LT	5
10+20	RT	7
10+45	LT	10
TOTAL		31

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED.

3

3

CULVERT PIPE AND ENDWALLS

STATION - STATION	LOCATION	521.0118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF	MINIMUM THICKNESS STEEL INCHES	521.1018 APRON ENDWALLS FOR CULVERT PIPE, 18-INCH EACH
9+20 - 9+25	MAINLINE	40	0.064	2
9+23 - 9+98	MAINLINE	70	0.064	2
TOTAL		110		4

RESTORATION ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0110 SEEDING MIXTURE NO. 10 LB
8+50 - 9+83	MAINLINE, RT	96	0.08	4
8+50 - 9+83	MAINLINE, LT	157	0.13	6
10+25- 11+50	MAINLINE, RT	154	0.12	6
10+25 - 11+50	MAINLINE, LT	132	0.11	5
UNDISTRIBUTED		--	--	--
TOTAL		539	0.44	21

RIPRAP MEDIUM

STATION - STATION	LOCATION	606.0200 CY
9-20 - 9-25	CULVERT	4
TOTAL		4

WATER

STATION	LOCATION	624.0100 MGAL
8+50 - 11+50	MAINLINE	5.20
B 6+59 - B 11+71	BYPASS	7.40
TOTAL		12.60

EROSION CONTROL ITEMS

STATION - STATION	LOCATION	630.0200 SEEDING TEMPORARY LB	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDITY BARRIER SY	628.2004 EROSION MAT CLASS I TYPE B SY
8+50 - 9.98	MAINLINE, RT	--	130.5	--	--	123
8+50 - 9+98	MAINLINE, LT	--	130.5	--	--	168
10+55 - 11+50	MAINLINE, RT	--	125	--	--	194
10+06 - 11+50	MAINLINE, LT	--	125	--	--	164
B' 6+59 - B 8+35	BYPASS, RT	1.50	209	--	--	56
B' 6+59 - B 8+35	BYPASS, LT	1.00	209	--	--	21
B' 8+62 - B 11+71	BYPASS, RT	3.50	209	--	--	129
B' 8+62 - B 11+71	BYPASS, LT	6.00	209	--	--	231
UNDISTRIBUTED		--	--	1847	160	--
TOTAL		12.00	1347	1847	160	1,086

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED.

3

3

TEMPORARY DITCH CHECKS

STATION - STATION	LOCATION	628.7504 LF
9+25	LT	20
TOTAL		20

CULVERT PIPE CHECKS

STATION - STATION	LOCATION	628.7555 EA
9+25	LT	3
9+35	LT	3
TOTAL		6

GEOTEXTILE FABRIC TYPE C

STATION - STATION	LOCATION	645.0105 SY
B 6+59 - B 8+33	BYPASS	420
B 8+61 - B 11+71	BYPASS	1060
TOTAL		1480

GEOTEXTILE FABRIC TYPE HR

STATION - STATION	LOCATION	695.0120 SY
9+20 - 9+25	CULVERT	4
TOTAL		4

SIGNING QUANTITIES

LOCATION	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	DESCRIPTION
NW BRIDGE CORNER	3.00	1	2	2	W5-52 L
SW BRIDGE CORNER	3.00	1	1	1	W5-52 R
NE BRIDGE CORNER	3.00	1	1	1	W5-52 R
SE BRIDGE CORNER	3.00	1	2	2	W5-52 L
TOTAL	12.00	4	6	6	

TRAFFIC CONTROL

LOCATION	CALENDAR DAYS	633.1100 DELINEATORS TEMPORARY EACH	643.0100 TRAFFIC CONTROL EACH	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C DAYS	643.0900 SIGNS DAYS
BYPASS	66	27	--	1452	1320	1584	1320	2640
PROJECT 5388-13-71	66	--	1	--	--	--	--	--
TOTALS		27	1	1452	1320	1584	1320	2640

CONSTRUCTION STAKING

STATION - STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.9910 SUPPLEMENTAL CONTROL 5388-13-70 LS	650.9920 SLOPE STAKES LF
8+50 - 11+50	MAINLINE	258	258	1	258
B 6+59 - B 11+71	BYPASS	512	512	--	512
TOTAL		770	770	1	770

SAWING ASPHALT

STATION	LOCATION	690.0150 LF
8+50	BEGIN PROJECT	20
11+50	END PROJECT	20
TOTAL		40

CONVENTIONAL SYMBOLS

SECTION LINE
1/4 LINE
COUNTY LINE
CORPORATE LIMITS
PROPERTY LINE
SIXTEENTH LINE
TOWN OR RANGE LINE
LIMITED HIGHWAY EASEMENT
EXISTING RIGHT OF WAY
EXISTING EASEMENT
NEW RIGHT OF WAY
EXISTING FENCE
REFERENCE LINE
SLOPE INTERCEPT
TREE
TREELINE
MARSH
SECTION MONUMENT
IRON PIPE
REBAR
SIGN

COMBUSTIBLE FLUIDS (UNDER PRESSURE) — CAUTION

UTILITIES
- SANITARY SEWER — SAN —
- GAS — GAS —
- UNDERGROUND ELECTRIC — E —
- OVERHEAD ELECTRIC — OE —
- TELEPHONE — T —
- FIBER OPTIC — FO —
- TELEPHONE PEDESTAL — TEL — (COMPENSABLE)
- POWER POLE — (COMPENSABLE)
- SANITARY MANHOLE — SAN

RIGHT-OF-WAY MARKERS

FEE
PLE
TLE

SECTION CORNER — T 14 N, 26 26 26 26, R6W

CONVENTIONAL ABBREVIATIONS

AC	ACRES	PI	POINT OF INTERSECTION
℄	CENTERLINE	PT	POINT OF TANGENCY
CTH	COUNTY TRUNK HIGHWAY	PL	PROPERTY LINE
D	DEGREE OF CURVATURE	MI	MILE
DOC	DOCUMENT	R	RADIUS / RANGE
E	EAST	R/L	REFERENCE LINE
H	HOUSE	R/W	RIGHT OF WAY
IP	IRON PIPE	SEC	SECTION
L	LENGTH OF CURVE	S	SOUTH
LC	LONG CHORD	SE	SOUTHEAST
LCB	LONG CORD BEARING	SW	SOUTHWEST
MON	MONUMENT	STH	STATE TRUNK HIGHWAY
N	NORTH	STA	STATION
NE	NORTHEAST	T	TANGENT / TOWNSHIP
NO.	NUMBER	USH	UNITED STATES HIGHWAY
NW	NORTHWEST	V	VOLUME
OFF	OFFSET	PLE	PERMANENT LIMITED EASEMENT
P	PAGE	TLE	TEMPORARY LIMITED EASEMENT
PC	POINT OF CURVATURE	W	WEST

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5388-13-00	4.01	2
FEDERAL PROJECT NUMBER		

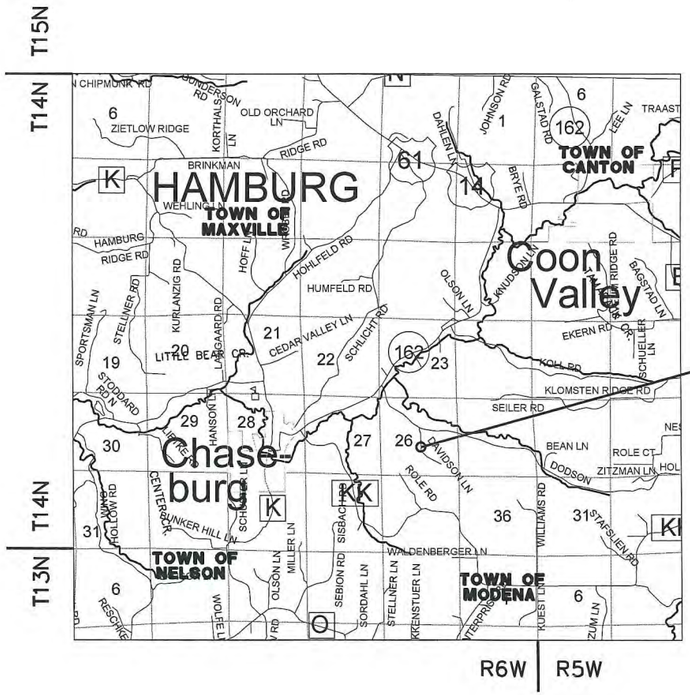
PLAT OF RIGHT OF WAY REQUIRED FOR

DAVIDSON LANE BRIDGE & APPROACHES

TOWN OF HAMBURG (B-62-0251)

TOWN ROAD — VERNON COUNTY

CONSTRUCTION PROJECT NUMBER
5388-13-71



END RELOCATION ORDER

3327.80 FEET S AND 27.80 FEET E OF THE N QUARTER COR OF SEC 26, T14N, R6W

STA 11+50
Y – 185877.29
X – 656862.50

STRUCTURE B-62-0251

BEGIN RELOCATION ORDER

1504.54 FEET N AND 78.35 FEET E OF THE S QUARTER COR OF SEC 26, T14N, R6W

STA 7+05
Y – 185454.92
X – 656938.75

RECEIVED
OCT 21 2015
VERNON COUNTY CLERK'S OFFICE

SCALE, MILES: 0 1 2

TOTAL NET LENGTH OF CENTERLINE = 0.084 MI

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), VERNON COUNTY. IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY ¾" x 24" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

RIGHT-OF-WAY BOUNDARIES ARE LOCATED 33 FEET EACH WAY FROM CENTERLINE OF EXISTING ROADWAY FOR A TOTAL OF 66 FEET OF RIGHT-A-WAY.

REVISION DATE:

APPROVED FOR TOWN OF HAMBURG
10/21/15 DATE — Rod Erlandson SIGNATURE

ORIGINAL PLAT PREPARED BY

Cedar corporation
604 Wilson Avenue
Menomonie, Wisconsin 54751
715-235-9081
800-472-7372
FAX 715-235-2727
www.cedarcorp.com
engineers • architects • planners • environmental specialists
land surveyors • landscape architects • interior designers

WISCONSIN
JAMES T. SWANSON S-1482 MENOMONIE WI
LAND SURVEYOR

10-5-15 DATE — (Signature)

E

SCHEDULE OF LANDS AND INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	TLE ACRES	PLE ACRES
1	MARK K. & MICHELE J. SANTOS	TLE & PLE	0.005	0.007
2	RICHARD B., JEFFREY P., & RODNEY B. DAVIDSON	TLE	0.42	0.00
50	XCEL ENERGY	TEMP. RELEASE OF RIGHTS	0.00	0.00
51	COON VALLEY FARMERS TELEPHONE COMPANY	TEMP. RELEASE OF RIGHTS	0.00	0.00

NOTE:
POSITIONS SHOWN ARE WISCONSIN COUNTY COORDINATES, VERNON COUNTY, NAD 83 (1991) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STRUCTURE

TOWN OF HAMBURG

EXISTING RIGHT-OF-WAY ON DAVIDSON LANE DETERMINED FROM THE CENTERLINE OF THE EXISTING PAVEMENT AND STATE STATUTE 82.31

SEC 26, T14N, R6W NE/SW

① MARK K & MICHELE J SANTOS
S1991 DAVIDSON LANE
CHASEBURG, WI 54621

① 0.007 ACRES PLE FOR RIPRAP

① 0.005 ACRES TLE FOR SLOPE GRADING

STA: 11+00.00
OFF: 33.00' LT

PRIVATE DRIVEWAY

GRAVEL

COON VALLEY FARMERS TELEPHONE COMPANY

SLOPE INTERCEPT (TYP)

PL

R/W

33.00'

PI: 8+89.79

PC: 8+55.15

PT: 8+46.25

CURVE 2

CURVE 1

PI: 7+83.35

N18° 47' 34.67"W

PT: 9+23.98

SEC LINE = S 00°42'08" E 2700.87'

SOUTH 1/4 CORNER SEC 6
FOUND IRON 3/4" REBAR
Y = 183950.38
X = 656860.40

PC: 7+16.74

BEGIN RELOCATION ORDER
STA 7+05
Y = 185454.92
X = 656938.75

N45° 46' 20.21"W

STA: 7+05
OFF: 33.00' RT

BR COON CREEK

202 203 201 204

WOODED/SHRUBBED

CLEARING & GRUBBING

PI: 10+67.26

PT: 10+95.26

PC: 10+39.19

CURVE 3

N2° 55' 4.41"E

CONCRETE APPROACH

SLOPE INTERCEPT (TYP)

STA: 11+07
OFF: 33.00' RT

51 COON VALLEY FARMERS TELEPHONE COMPANY

50 XCEL ENERGY
VOLUME 99 OF DEEDS
PAGE 466,
DOCUMENT NO 166010

② 0.42 ACRES TLE FOR BYPASS

STA: 9+64
OFF: 115.24' RT

② RICHARD B DAVIDSON
JEFFREY P DAVIDSON
RODNEY B DAVIDSON
S1922 DAVIDSON LANE
HAMBURG, WI 54624

FARM FIELD

12+00 DAVIDSON LANE ASPHALT

N3° 26' 35.45"W

SEC LINE = S 00°42'08" E 2700.87'

NORTH 1/4 CORNER, SEC 26
FOUND 3/4" IRON REBAR
Y = 189205.09
X = 656890.30

SEC 26, T14N, R6W NW/SE

END RELOCATION ORDER
STA 11+50
Y = 185877.29
X = 656862.50

WISCONSIN
JAMES T. SWANSON
S-1482
MENOMONIE
WI
LAND SURVEYOR
10-5-15

RECEIVED
OCT 21 2015
VERNON COUNTY CLERK'S OFFICE

10/21/15

R/W COORDINATES				
POINT	Y	X	STATION	OFFSET
201	185758.85	656834.79	10+29.82	30.78' LT
202	185758.99	656822.79	10+29.33	42.77' LT
203	185783.99	656823.07	10+55.76	43.54' LT
204	185783.73	656835.07	10+55.86	31.56' LT

R/W COURSES					
COURSE	BEARING	DISTANCE	RADIUS	DELTA	LENGTH
201-202	N 89° 21' 21" W	12.00'			
202-203	N 00° 38' 39" E	25.00'			
203-204	S 89° 21' 21" E	12.00'			
201-204	S 03° 26' 35" E	25.04'	112.43	9°31'33"	18.69'

C/L CURVE 1 DATA		
PC = 7+16.74	Y = 185463.10	X = 656930.34
PI = 7+83.35	Y = 185509.56	X = 656882.61
PT = 8+46.25	Y = 185574.51	X = 656867.86
Δ = 32° 58' 46"	D = N29° 16' 34"W	
R = 225.00'	T = 66.60'	
L = 129.51'	C = 127.73'	SE = N/A

C/L CURVE 2 DATA		
PC = 8+55.15	Y = 185583.19	X = 656865.89
PI = 8+89.79	Y = 185616.97	X = 656858.22
PT = 9+23.98	Y = 185651.55	X = 656860.02
Δ = 15° 46' 29"	D = N04° 54' 20"W	
R = 250.00'	T = 34.63'	
L = 68.83'	C = 68.61'	SE = N/A

C/L CURVE 3 DATA		
PC = 10+39.19	Y = 185766.61	X = 656866.02
PI = 10+67.26	Y = 185794.63	X = 656867.48
PT = 10+95.26	Y = 185822.65	X = 656865.79
Δ = 06° 25' 30"	D = N00° 13' 51"W	
R = 500.00'	T = 28.06'	
L = 56.07'	C = 56.04'	SE = N/A

10/21/15

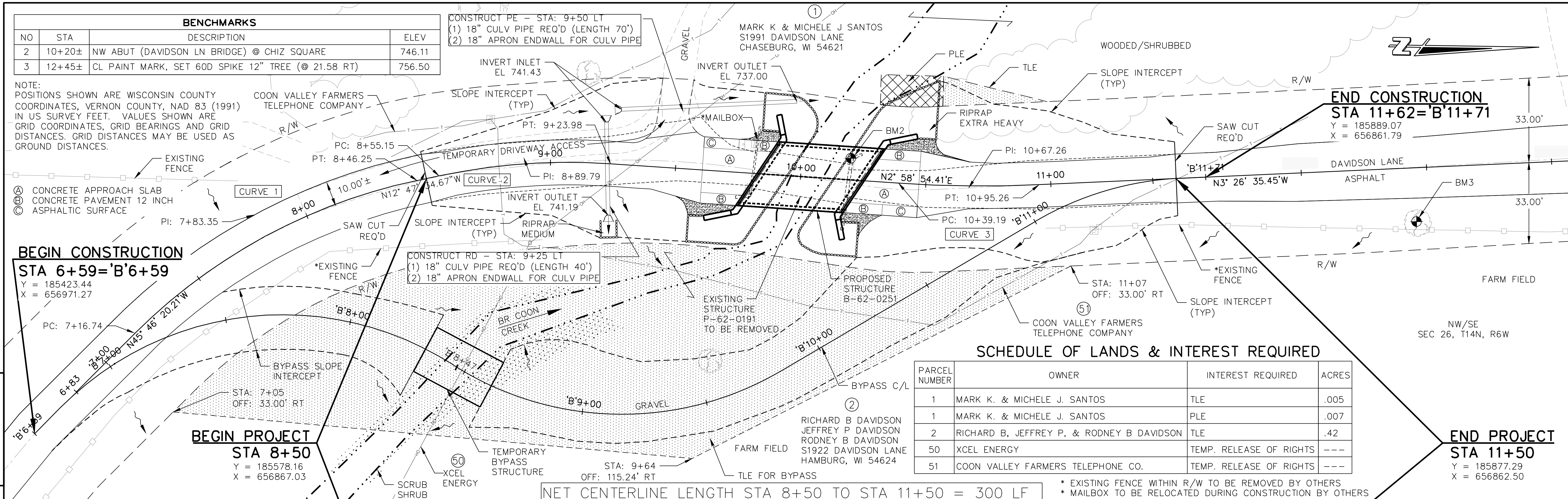
SCALE, FEET
0' 25' 50'

ROAD: DAVIDSON LANE	STATE R/W PROJECT NUMBER: 5388-13-00	PLAT SHEET 4.02	
COUNTY: VERNON	CONSTRUCTION PROJECT NUMBER: 5388-13-71	PS&E SHEET	E

BENCHMARKS			
NO	STA	DESCRIPTION	ELEV
2	10+20±	NW ABUT (DAVIDSON LN BRIDGE) @ CHIZ SQUARE	746.11
3	12+45±	CL PAINT MARK, SET 60D SPIKE 12" TREE (@ 21.58 RT)	756.50

NOTE:
POSITIONS SHOWN ARE WISCONSIN COUNTY COORDINATES, VERNON COUNTY, NAD 83 (1991) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

Ⓐ CONCRETE APPROACH SLAB
Ⓑ CONCRETE PAVEMENT 12 INCH
Ⓒ ASPHALTIC SURFACE



CONSTRUCT PE – STA: 9+50 LT
(1) 18" CULV PIPE REQ'D (LENGTH 70')
(2) 18" APRON ENDWALL FOR CULV PIPE
CONSTRUCT RD – STA: 9+25 LT
(1) 18" CULV PIPE REQ'D (LENGTH 40')
(2) 18" APRON ENDWALL FOR CULV PIPE
MARK K & MICHELE J SANTOS
S1991 DAVIDSON LANE
CHASEBURG, WI 54621
RICHARD B DAVIDSON
JEFFREY P DAVIDSON
RODNEY B DAVIDSON
S1922 DAVIDSON LANE
HAMBURG, WI 54624
BEGIN CONSTRUCTION
STA 6+59='B'6+59
Y = 185423.44
X = 656971.27
BEGIN PROJECT
STA 8+50
Y = 185578.16
X = 656867.03
END CONSTRUCTION
STA 11+62='B'11+71
Y = 185889.07
X = 656861.79
END PROJECT
STA 11+50
Y = 185877.29
X = 656862.50
DAVIDSON LANE
ASPHALT
WOODED/SHRUBBED
FARM FIELD
NW/SE
SEC 26, T14N, R6W
N45° 46' 20.21"W
N12° 47' 54.67"W
N2° 58' 54.41"E
N3° 26' 35.45"W
PC: 7+16.74
PI: 7+83.35
PT: 8+46.25
PC: 8+55.15
PI: 8+89.79
PT: 9+23.98
PC: 10+39.19
PI: 10+67.26
PT: 10+95.26
CURVE 1
CURVE 2
CURVE 3
INVERT INLET EL 741.43
INVERT OUTLET EL 737.00
INVERT OUTLET EL 741.19
COON VALLEY FARMERS TELEPHONE COMPANY
EXISTING FENCE
SLOPE INTERCEPT (TYP)
TEMPORARY DRIVEWAY ACCESS
SAW CUT REQ'D
RIPRAP MEDIUM
RIPRAP EXTRA HEAVY
*MAILBOX
BM2
BM3
PLE
TLE
R/W
33.00'
10.00'±
EXISTING STRUCTURE P-62-0191 TO BE REMOVED
PROPOSED STRUCTURE B-62-0251
BR COON CREEK
BYPASS SLOPE INTERCEPT
BYPASS C/L
STA: 7+05 OFF: 33.00' RT
STA: 9+64 OFF: 115.24' RT
STA: 11+07 OFF: 33.00' RT
TEMPORARY BYPASS STRUCTURE
XCEL ENERGY
SCRUB SHRUB
GRAVEL
TLE FOR BYPASS

SCHEDULE OF LANDS & INTEREST REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	ACRES
1	MARK K. & MICHELE J. SANTOS	TLE	.005
1	MARK K. & MICHELE J. SANTOS	PLE	.007
2	RICHARD B, JEFFREY P, & RODNEY B DAVIDSON	TLE	.42
50	XCEL ENERGY	TEMP. RELEASE OF RIGHTS	---
51	COON VALLEY FARMERS TELEPHONE CO.	TEMP. RELEASE OF RIGHTS	---

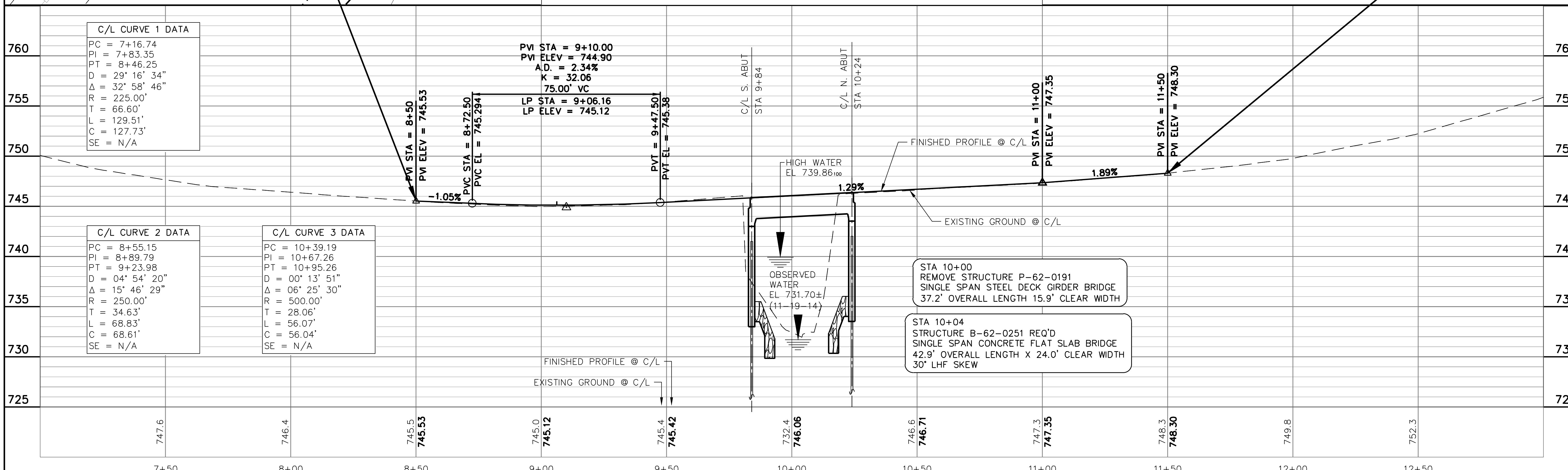
NET CENTERLINE LENGTH STA 8+50 TO STA 11+50 = 300 LF

* EXISTING FENCE WITHIN R/W TO BE REMOVED BY OTHERS
* MAILBOX TO BE RELOCATED DURING CONSTRUCTION BY OTHERS

C/L CURVE 1 DATA
PC = 7+16.74
PI = 7+83.35
PT = 8+46.25
D = 29° 16' 34"
Δ = 32° 58' 46"
R = 225.00'
T = 66.60'
L = 129.51'
C = 127.73'
SE = N/A

C/L CURVE 2 DATA
PC = 8+55.15
PI = 8+89.79
PT = 9+23.98
D = 04° 54' 20"
Δ = 15° 46' 29"
R = 250.00'
T = 34.63'
L = 68.83'
C = 68.61'
SE = N/A

C/L CURVE 3 DATA
PC = 10+39.19
PI = 10+67.26
PT = 10+95.26
D = 00° 13' 51"
Δ = 06° 25' 30"
R = 500.00'
T = 28.06'
L = 56.07'
C = 56.04'
SE = N/A



PVI STA = 9+10.00
PVI ELEV = 744.90
A.D. = 2.34%
K = 32.06
75.00' VC
LP STA = 9+06.16
LP ELEV = 745.12
PVI STA = 8+50
PVI ELEV = 745.53
PVC STA = 8+72.50
PVC EL = 745.294
PVT = 9+47.50
PVT EL = 745.38
C/L S. ABUT STA 9+84
C/L N. ABUT STA 10+24
PVI STA = 11+00
PVI ELEV = 747.35
PVI STA = 11+50
PVI ELEV = 748.30
-1.05%
1.29%
1.89%
HIGH WATER EL 739.86₁₀₀
OBSERVED WATER EL 731.70± (11-19-14)
FINISHED PROFILE @ C/L
EXISTING GROUND @ C/L
STA 10+00
REMOVE STRUCTURE P-62-0191
SINGLE SPAN STEEL DECK GIRDER BRIDGE
37.2' OVERALL LENGTH 15.9' CLEAR WIDTH
STA 10+04
STRUCTURE B-62-0251 REQ'D
SINGLE SPAN CONCRETE FLAT SLAB BRIDGE
42.9' OVERALL LENGTH X 24.0' CLEAR WIDTH
30° LHF SKEW
760
755
750
745
740
735
730
725
747.6
746.4
745.5 745.53
745.0 745.12
745.4 745.42
732.4 746.06
746.6 746.71
747.3 747.35
748.3 748.30
749.8
752.3
7+50
8+00
8+50
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50

PROJECT NO: 5388-13-71	HWY: DAVIDSON LANE	COUNTY: VERNON	PLAN AND PROFILE	SHEET 15	E

FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\008 5388-13-00 DAVIDSON LN TOWN OF HAMBURG\100 CAD\DWG\050101_PP_3922008.DWG PLOT DATE : 10/23/2015 9:18 AM PLOT BY : NICK THOMPSON PLOT NAME : ______________ PLOT SCALE : ########## WISDOT/CADDS SHEET 44

C/L CURVE 1 DATA	C/L CURVE 3 DATA	C/L CURVE 2 DATA
PC = 'B'6+74.06	PC = 'B'11+00.34	PC = 'B'8+82.29
PI = 'B'7+75.42	PI = 'B'11+37.37	PT = 'B'9+21.31
PRC = 'B'8+44.40	PT = 'B'11+61.17	D = N00° 16' 39"E
D = N07° 09' 23"W	D = N17° 23' 04"W	Δ = 63° 12' 23"
Δ = 78° 04' 28"	Δ = 27° 52' 57"	R = 125.00'
R = 125.00'	R = 125.00'	T = 79.91'
T = 101.36'	T = 31.03'	L = 137.90'
L = 170.33'	L = 60.83'	C = 131.01'
C = 157.46'	C = 60.23'	

BEGIN BYPASS
STA 'B'6+59
Y = 185423.44
X = 656971.27

END BYPASS
STA 'B'11+71
Y = 185889.07
X = 656861.79

NET CENTERLINE LENGTH STA 'B'6+59 TO STA 'B'11+71 = 512 LF

* EXISTING FENCE WITHIN R/W TO BE REMOVED BY OTHERS
* MAILBOX TO BE RELOCATED DURING CONSTRUCTION BY OTHERS

TEMPORARY STRUCTURE 'B'847 REQ'D
MIN STRUCTURE CLEAR LENGTH = 28 FT
ABR = 35.5 SQ FT
Q5 = 220 CFS
HW5 = 738.66 FT
ASSUME 3.0 FT SUPERSTRUCTURE DEPTH
FOR HYDRAULIC MODELING PURPOSES

PROJECT NO: 5388-13-71	HWY: DAVIDSON LANE	COUNTY: VERNON	PLAN AND PROFILE: TEMPORARY BYPASS	SHEET 16	E

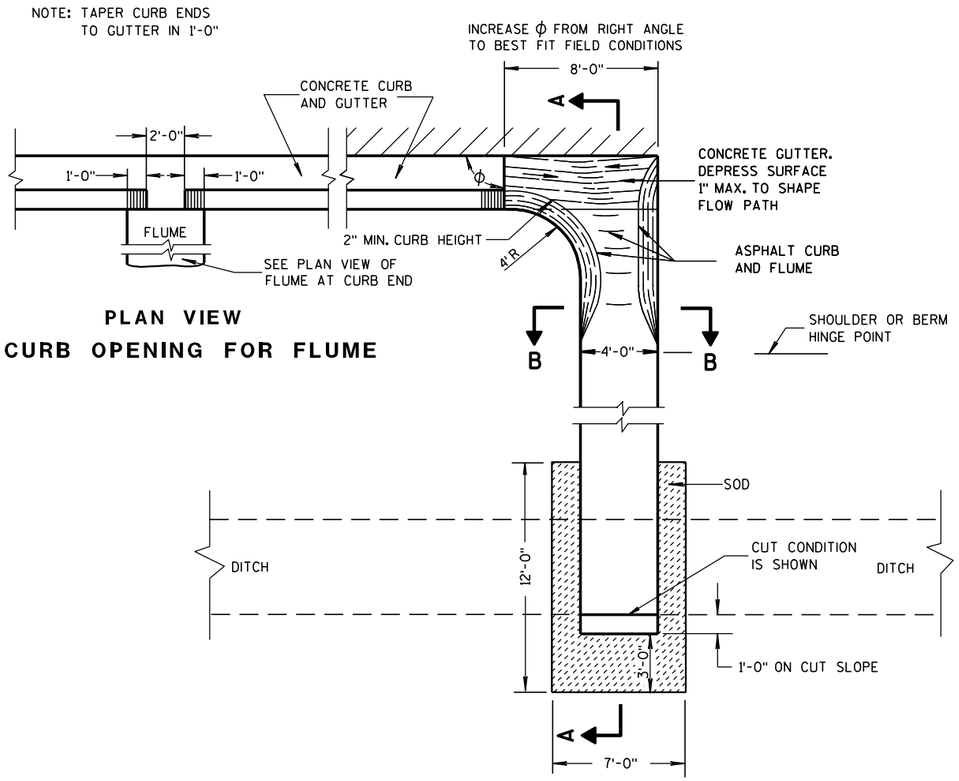
Standard Detail Drawing List

08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
15A02-08	DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15D31-02	TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

6

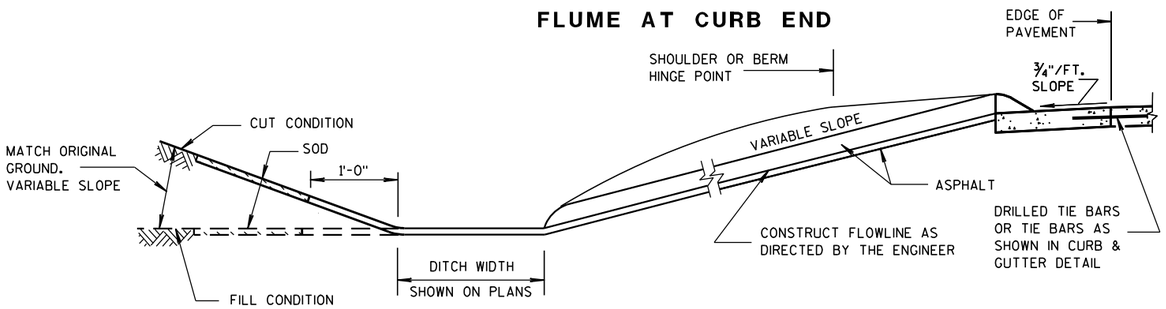
6

ASPHALTIC FLUME

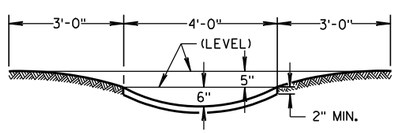


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

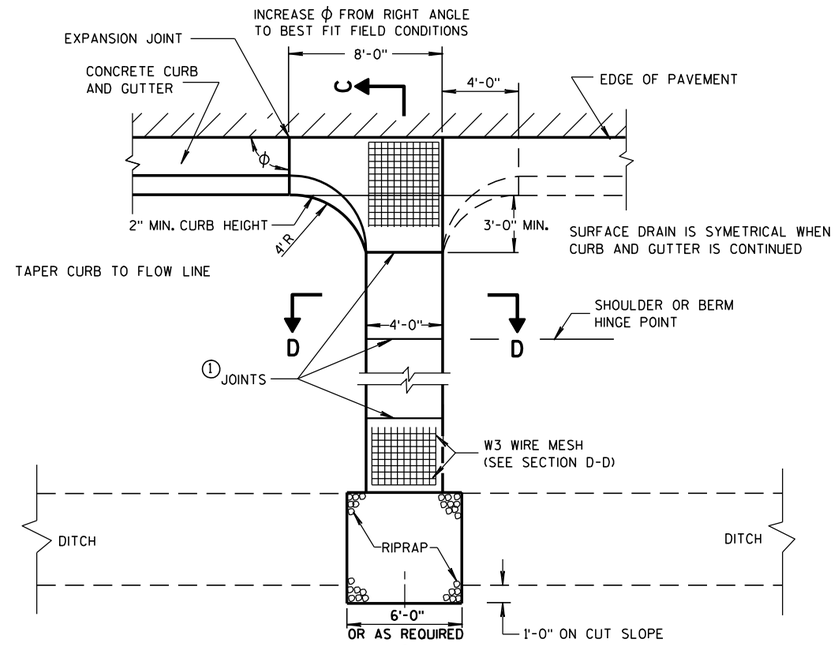
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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

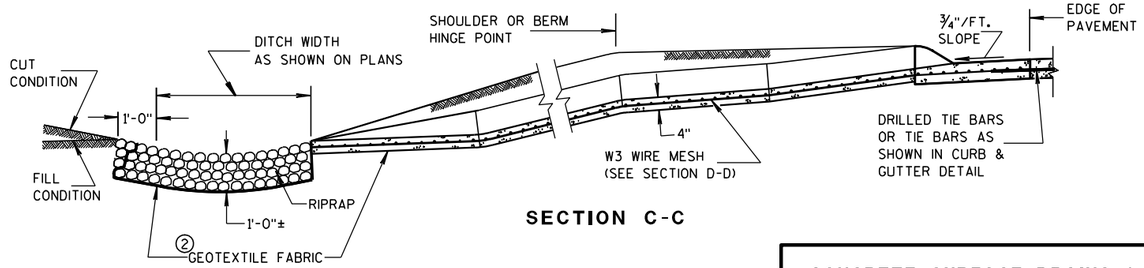
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

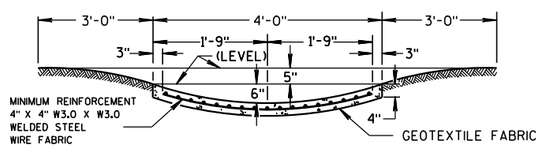
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

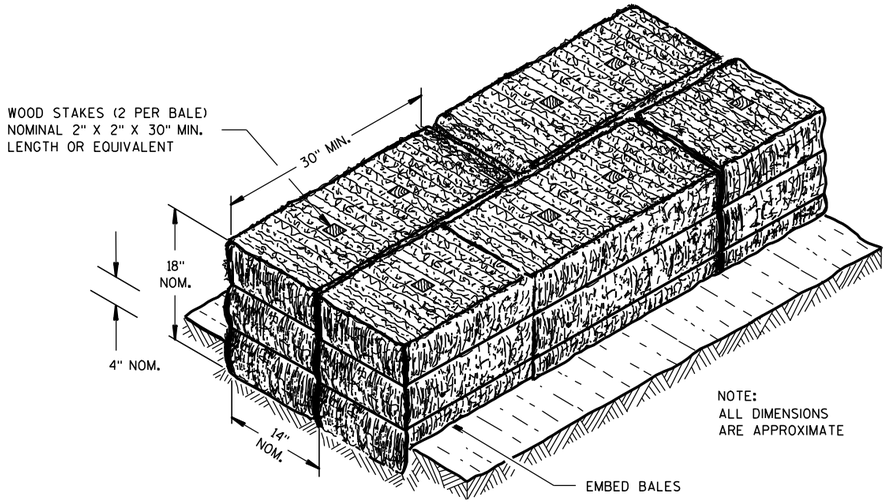
FHWA

6

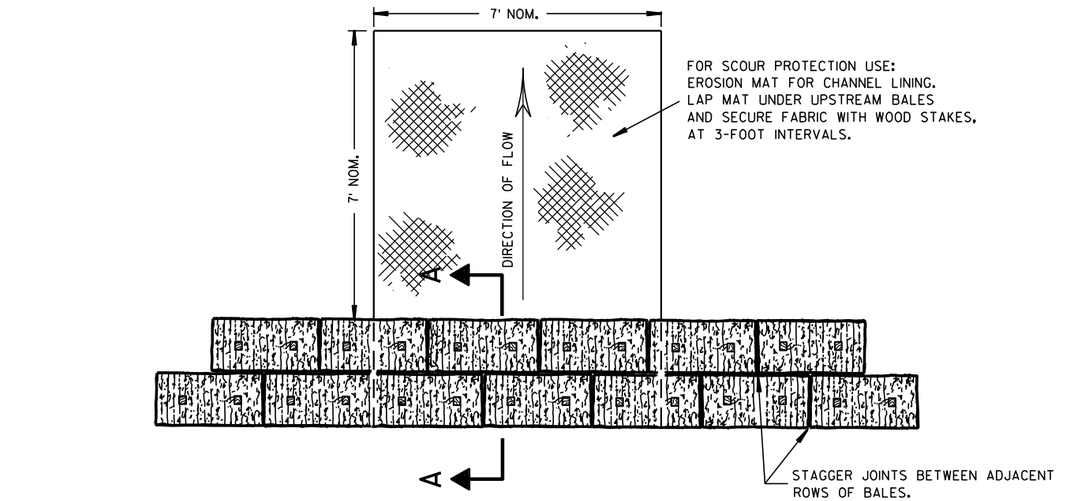
S.D.D. 8 D 4-5

6

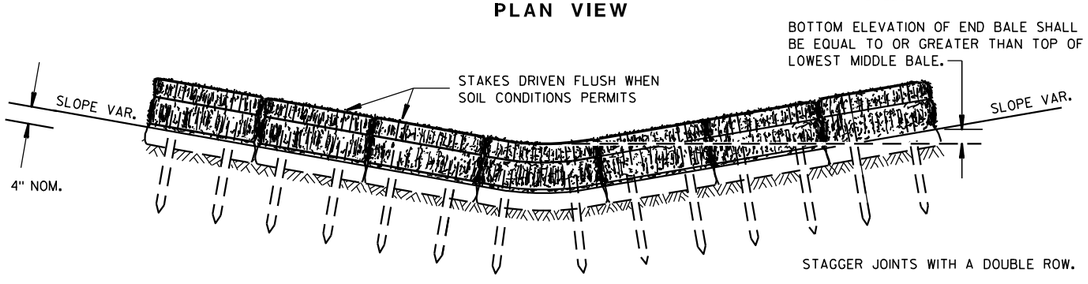
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



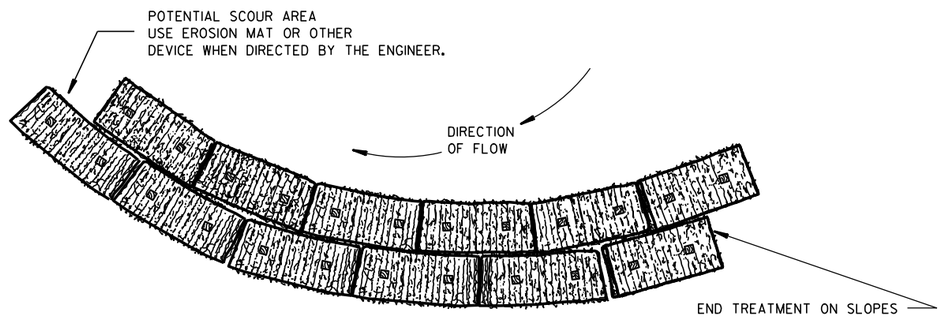
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

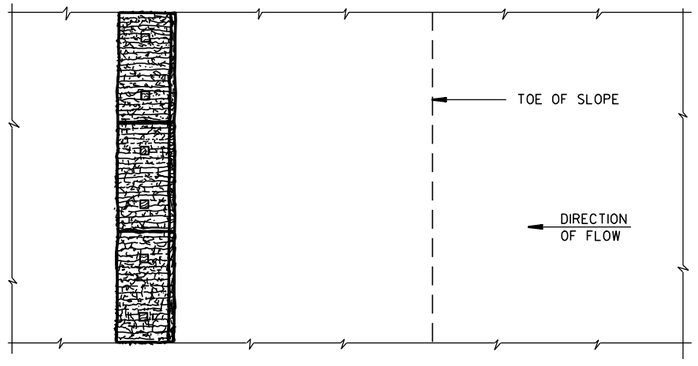
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

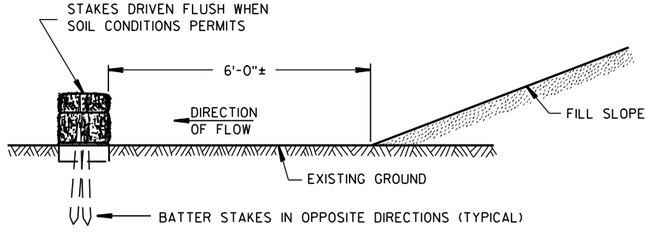


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 8-3

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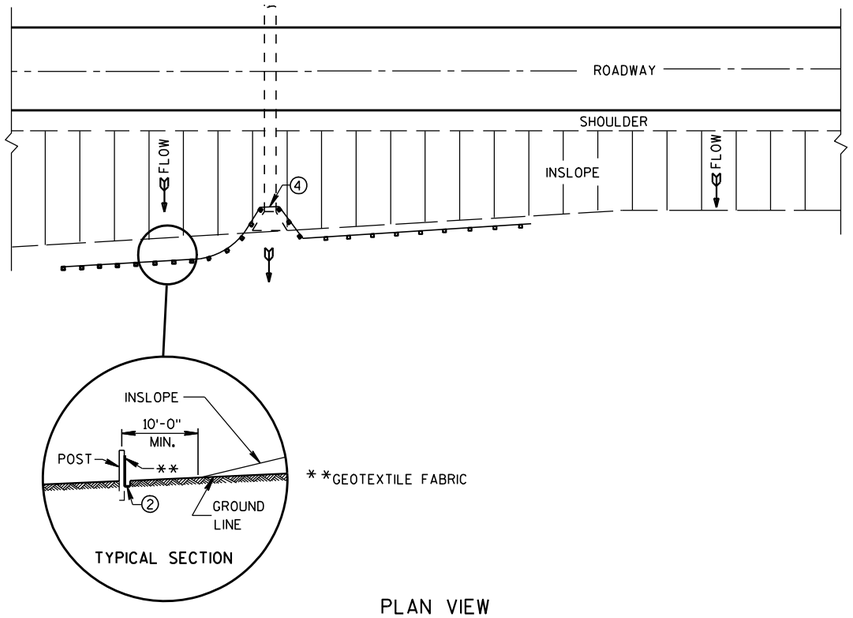
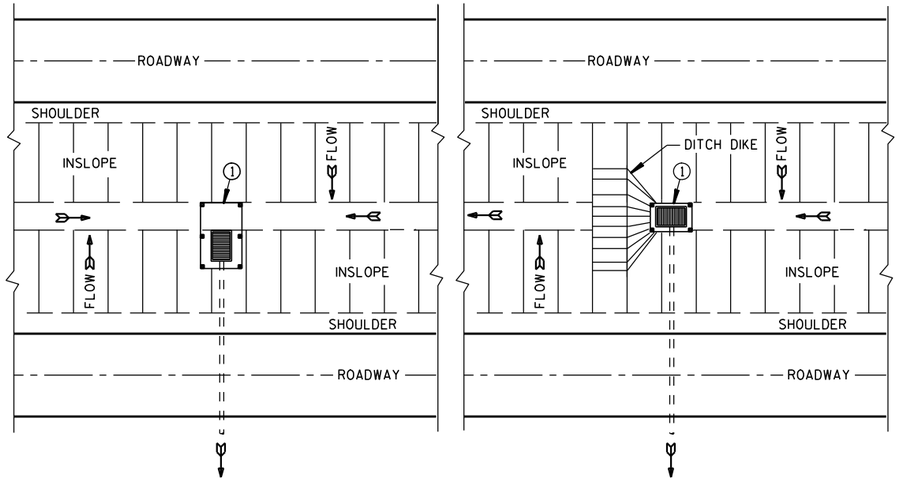
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



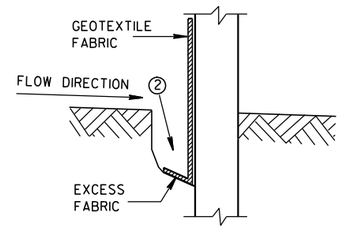
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

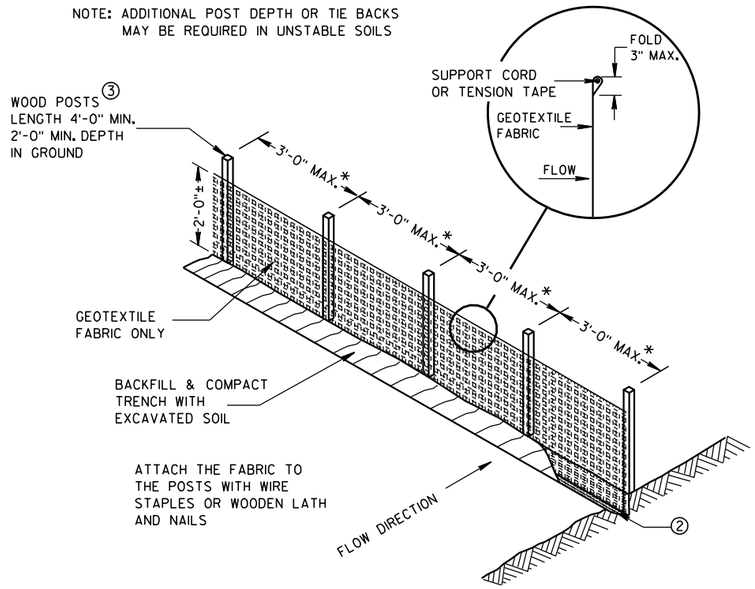
GENERAL NOTES

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

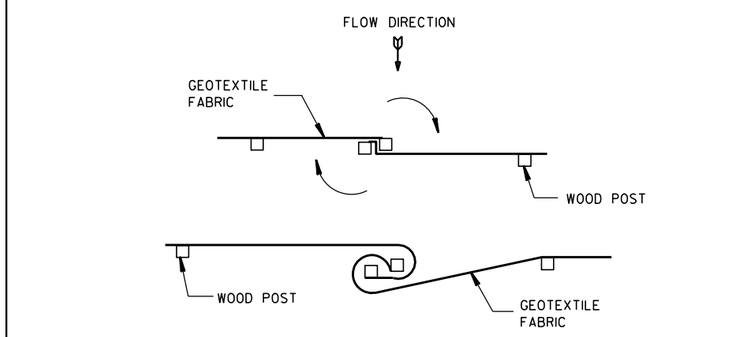
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



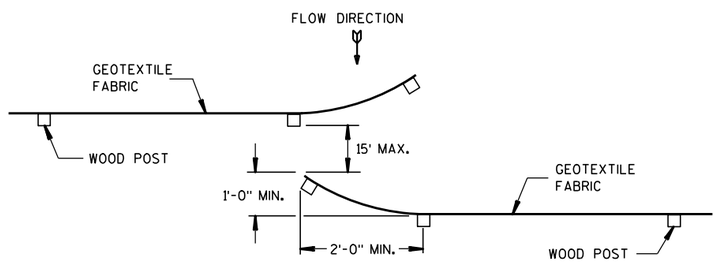
TRENCH DETAIL



SILT FENCE

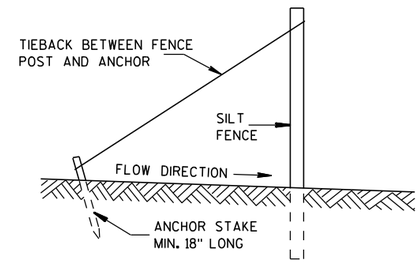


TWIST METHOD



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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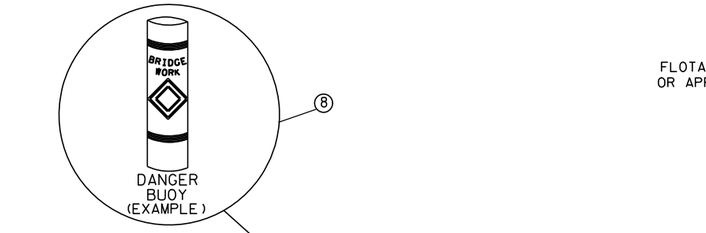
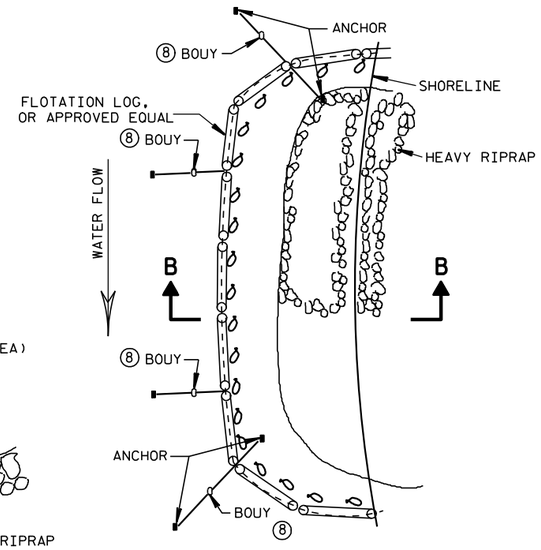
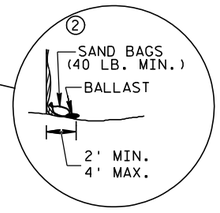
S.D.D. 8 E 9-6

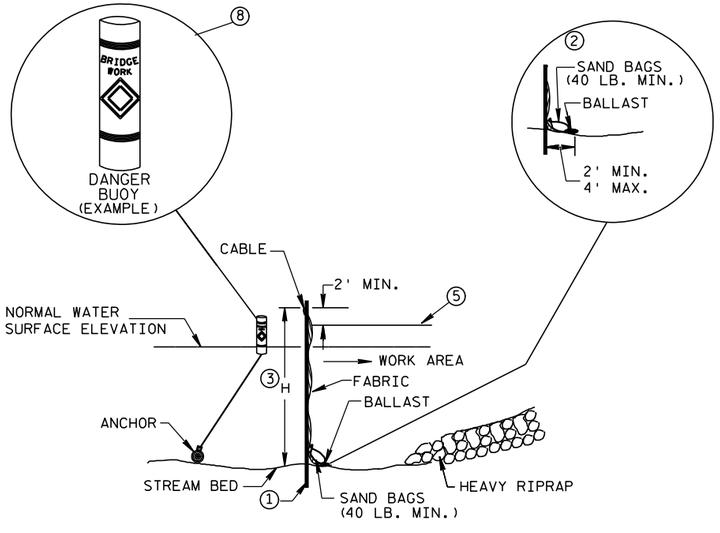


SECTION B-B

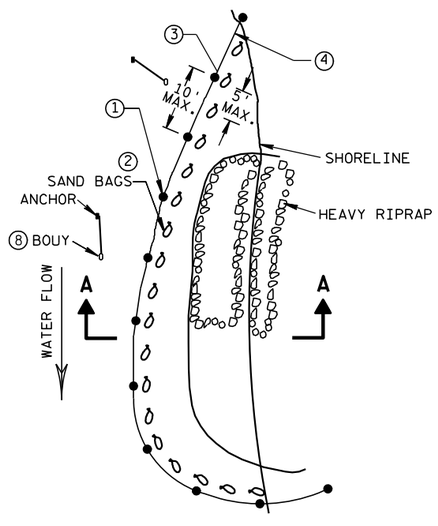




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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 SANDBAGS 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 FT., POST SPACING MAY NEED TO BE DECREASED.

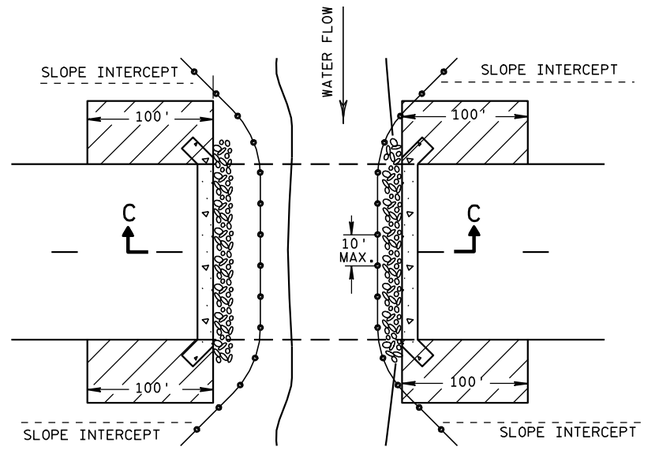
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

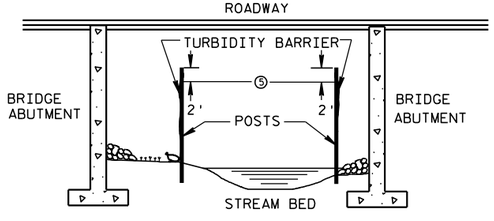
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

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S.D.D. 8 E 11-2

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S.D.D. 8 E 11-2

METAL APRON ENDWALLS

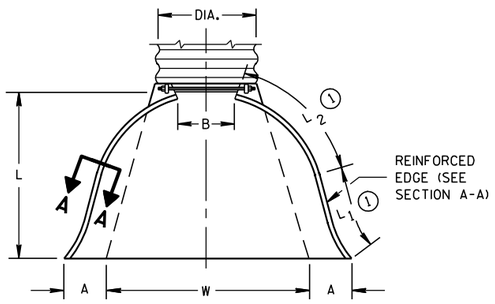
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

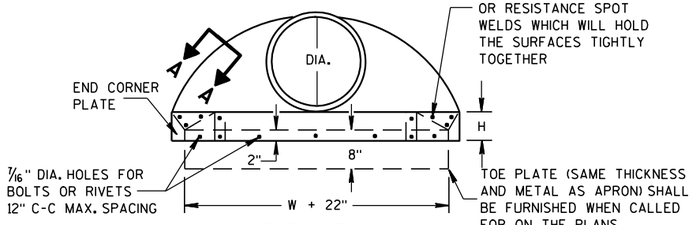
REINFORCED CONCRETE APRON ENDWALLS

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

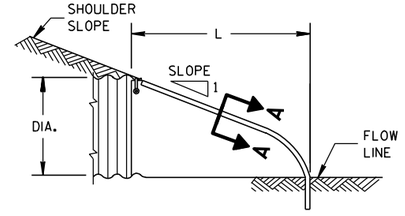
* MINIMUM
** MAXIMUM



PLAN VIEW

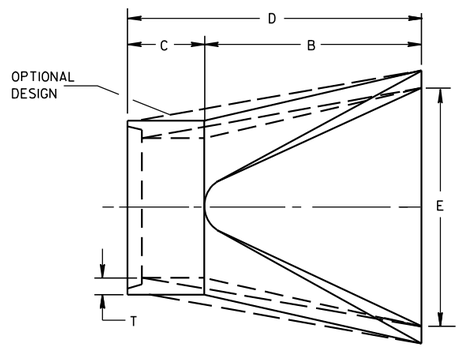


END VIEW

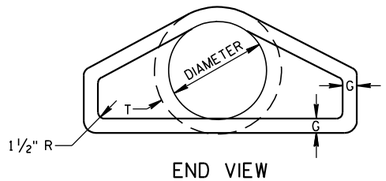


SIDE ELEVATION

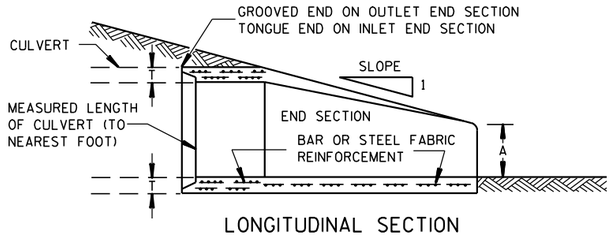
METAL ENDWALLS



PLAN

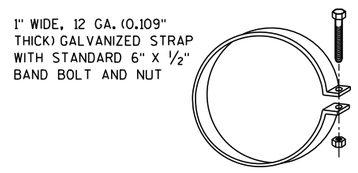


END VIEW



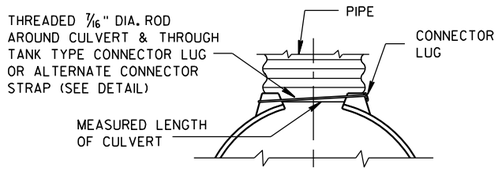
LONGITUDINAL SECTION

CONCRETE ENDWALLS

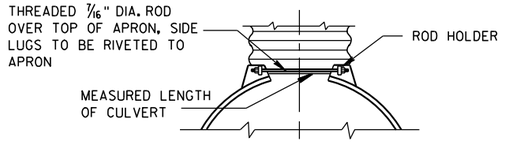


ALTERNATE FOR TYPE 1 CONNECTION

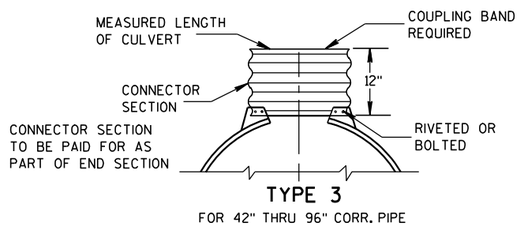
END SECTION CONNECTOR STRAP



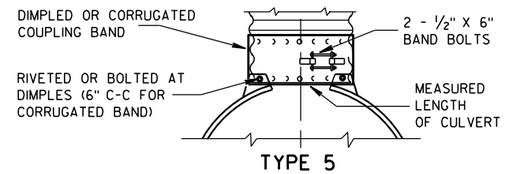
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

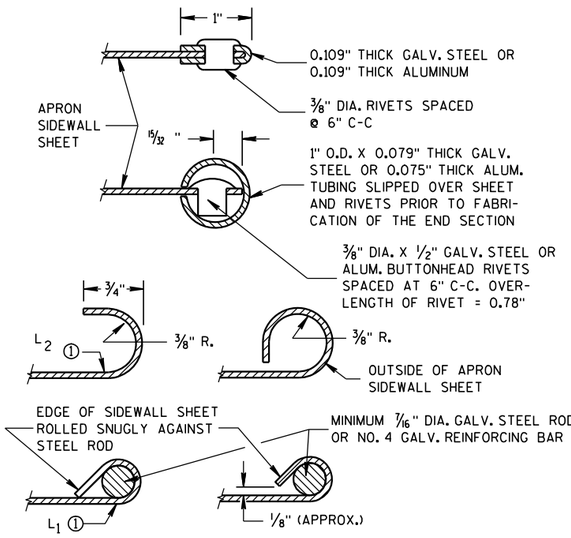
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

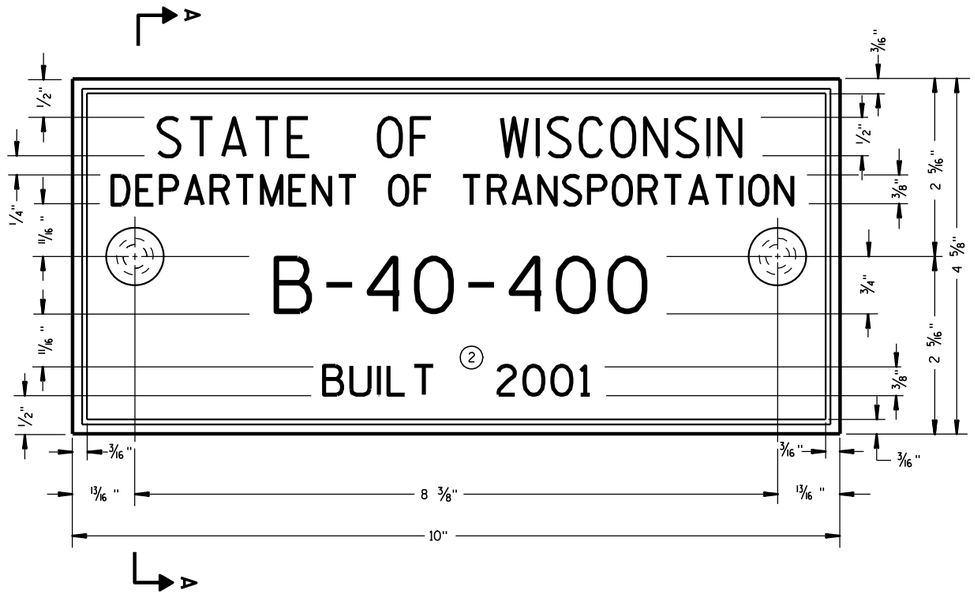
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)

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

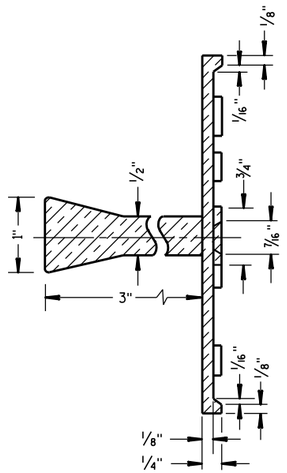
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

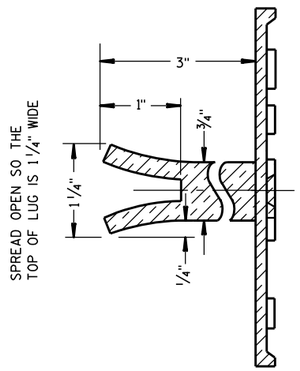
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

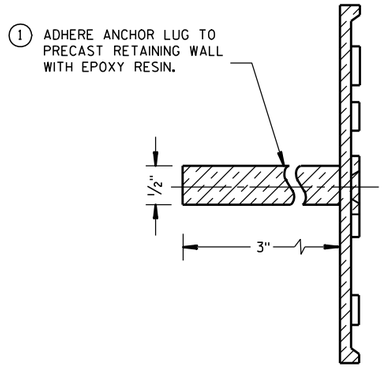
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

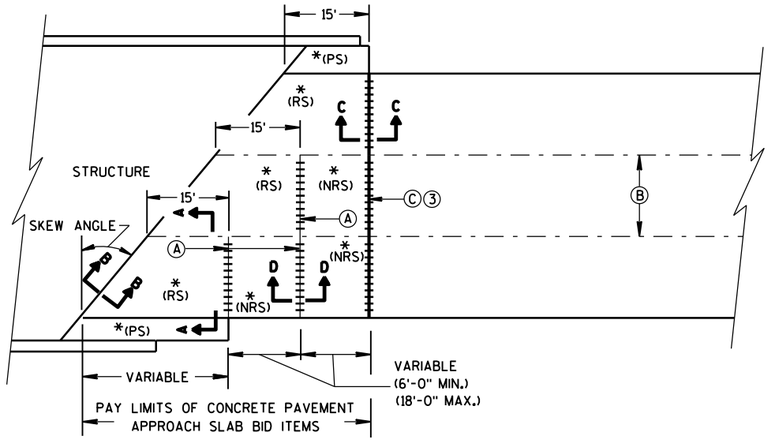
3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

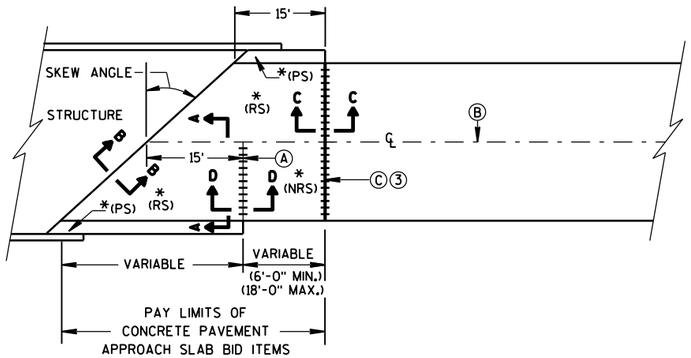
FHWA

6

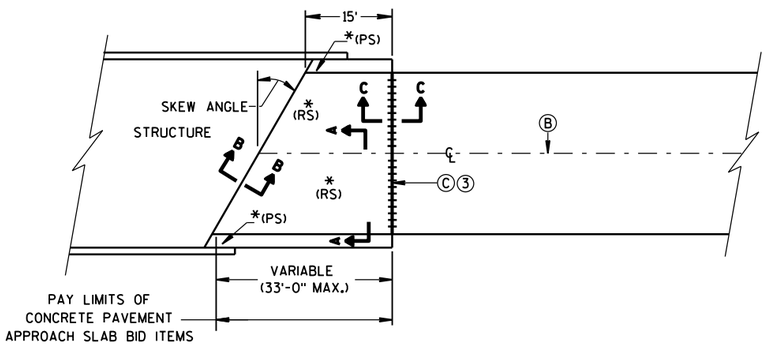
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

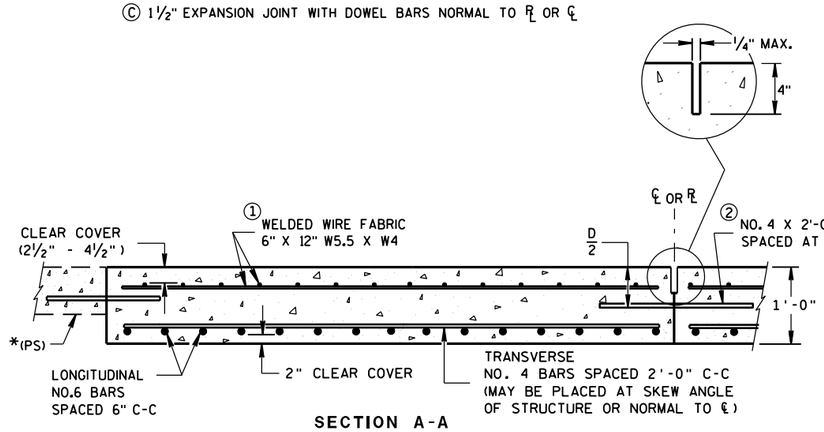
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

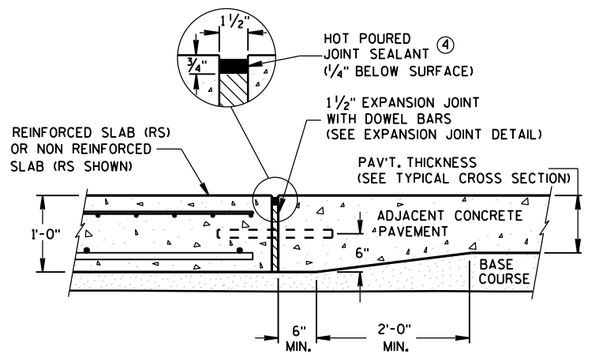
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

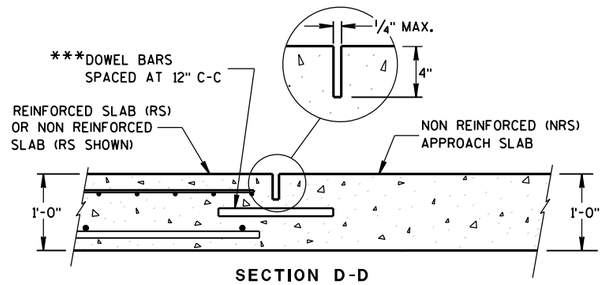
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

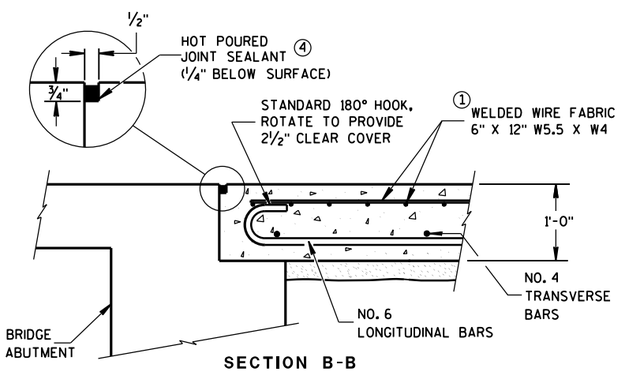
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

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

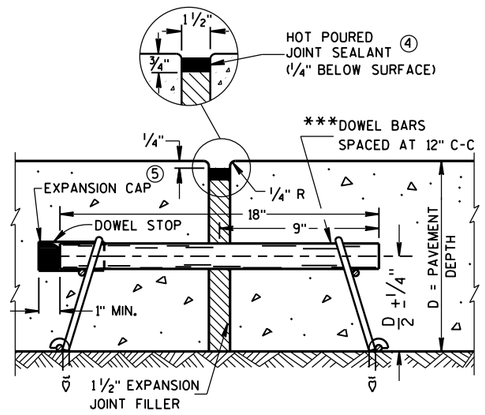
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

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

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



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

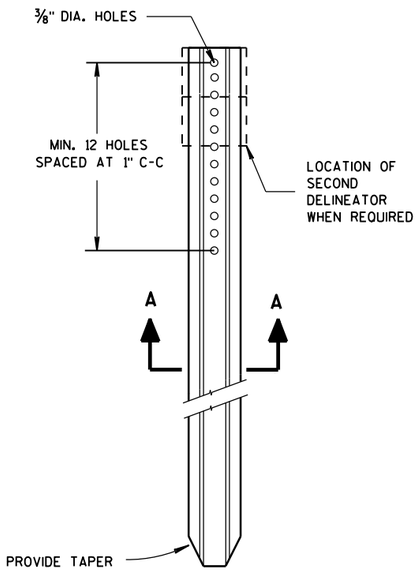
CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

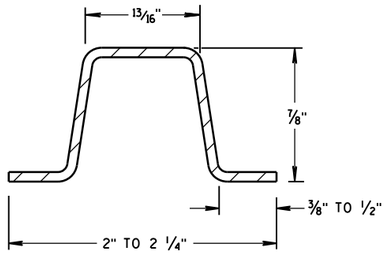
APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

6

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

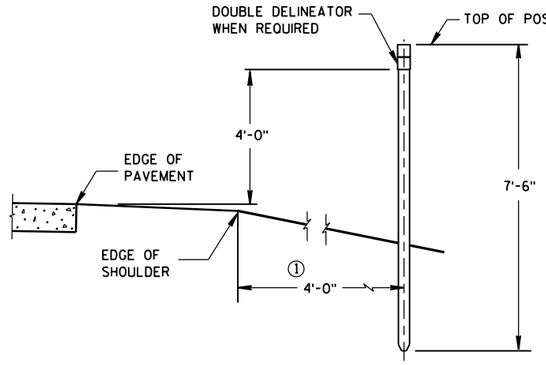


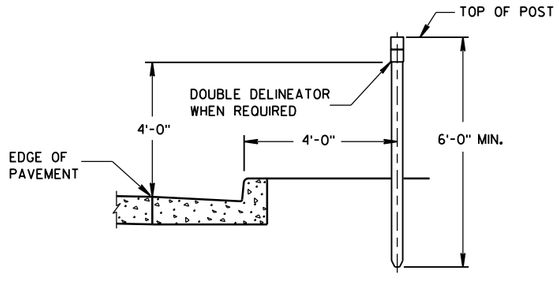
DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.



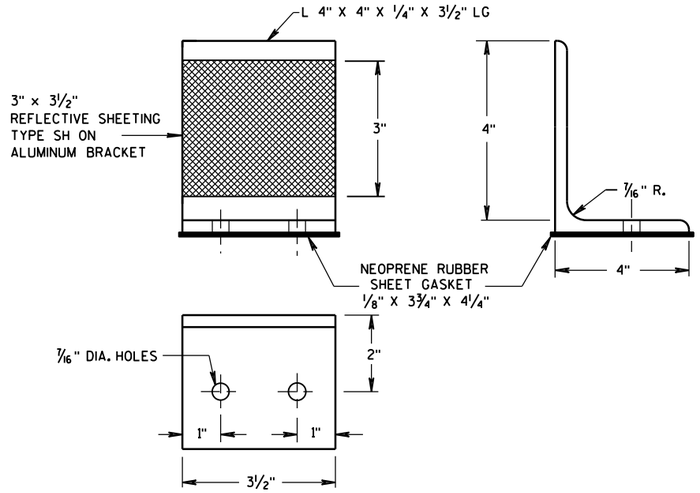


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

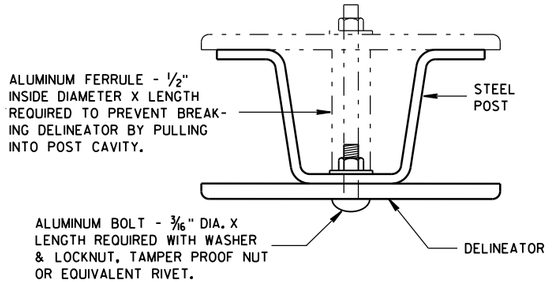
GENERAL NOTES

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

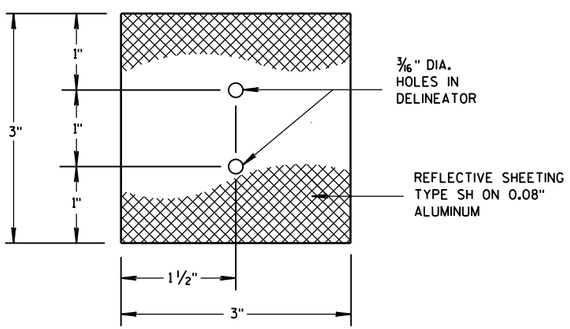
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



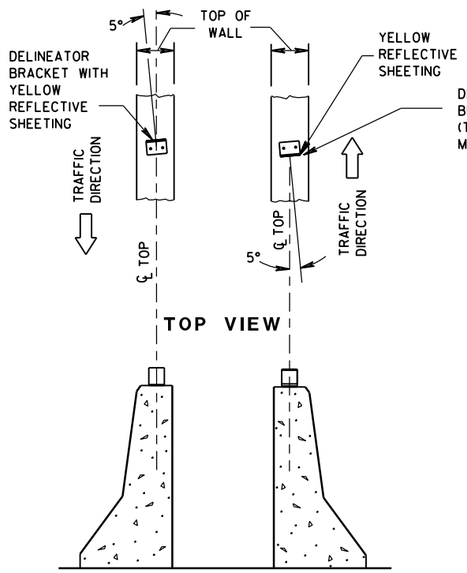
DELINEATOR BRACKET



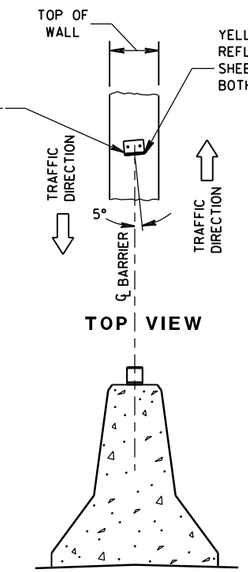
MOUNTING DETAIL FOR DELINEATOR



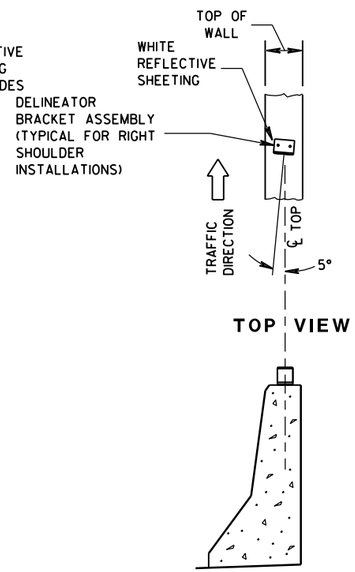
3"x 3" DELINEATOR



DOUBLE BARRIERS IN MEDIAN

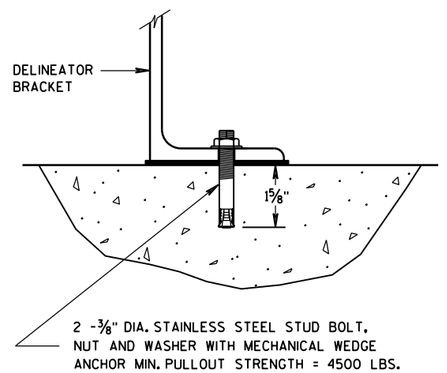


MEDIAN BARRIER



BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC E
FHWA

6

S.D.D. 15 A 2-8

6

S.D.D. 15 A 2-8

S	BUFFER SPACE (DESIRABLE)
25	55'
30	85'
35	120'
40	170'
45	220'
50	280'
55	335'

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

END ROAD WORK
G20-2A
48"x24"

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH SOLID YELLOW CENTERLINE ✳✳

NO PASSING ZONE
W14-3
48"x36"

1000'
500'
400'
500'
200'
50'
50'
25' TYP.

W01-6
48"x24"
✳✳✳

R11-2
48"x30"
ROAD CLOSED
TYPE III BARRICADE

FOR BRIDGE OR CULVERT REPLACEMENTS SUBSTITUTE
BRIDGE OUT
R11-2B
48"x30"

W01-6
48"x24"
TYPE III BARRICADE

W01-6
48"x24"
TYPE III BARRICADE

W01-3L
W013-1
XX M.P.H.
24"x24"

OR

W01-4L
W013-1
XX M.P.H.
24"x24"

ROAD WORK 1000 FT
W20-1

ROAD WORK AHEAD
W20-1

W01-6
48"x24"
✳✳✳

400'

END TEMPORARY PAVEMENT MARKING, 4-INCH SOLID YELLOW CENTERLINE ✳✳

50'
50'
25' TYP.

ROAD CLOSURE OR BRIDGE/CULVERT REPLACEMENT

BUFFER SPACE (SEE TABLE)

WORK AREA

BUFFER SPACE (SEE TABLE)

W01-6
48"x24"
TYPE III BARRICADE

TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT WHEN INCLUDED IN THE CONTRACT. FOR LAYOUT, SEE DETAILS ELSEWHERE IN THE PLAN.

W5-52L
12"x36"

W5-52R
12"x36"

25' TYP.

W01-6
48"x24"
✳✳✳

200'
500'
500'
1000'

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

25' TYP.

ROAD WORK AHEAD
W20-1

ROAD WORK 1000 FT
W20-1

W01-4R
W013-1
XX M.P.H.
24"x24"

OR

W01-3R
W013-1
XX M.P.H.
24"x24"

W01-6
48"x24"

W01-6
48"x24"
✳✳✳

W5-52R
12"x36"

W5-52L
12"x36"

25' TYP.

W01-6
48"x24"

END TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINES. (USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT)

TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW CENTERLINE AND 2-WAY YELLOW RAISED PAVEMENT MARKERS AT 25' SPACING. USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT.

W01-4R
W013-1
XX M.P.H.
24"x24"

OR

W01-3R
W013-1
XX M.P.H.
24"x24"

W01-4L
W013-1
XX M.P.H.
24"x24"

OR

W01-3L
W013-1
XX M.P.H.
24"x24"

NO PASSING ZONE
W14-3
48"x36"

END ROAD WORK
G20-2A
48"x24"

GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

EQUIPMENT, VEHICLES, OR MATERIAL SHOULD NOT BE STORED IN BUFFER SPACE.

✳ IF ADVISORY SPEED IS GREATER THAN 30 MPH, USE THE W01-4 SIGN. IF ADVISORY SPEED IS 30 MPH OR LESS, USE THE W01-3 SIGN.

✳✳ WHEN THE DISTANCE TO/FROM THE NEXT CLOSEST NO-PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

✳✳✳ OMIT THESE W01-6 SIGNS IF THE ADVISORY SPEED OF THE CURVE IS GREATER THAN 30 MPH.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY-BURN LIGHT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR, (WHITE) (SINGLE DELINEATOR)
- TEMPORARY RAISED PAVEMENT MARKERS (TWO-WAY YELLOW)
- XXX REMOVE PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT
- WORK AREA

TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

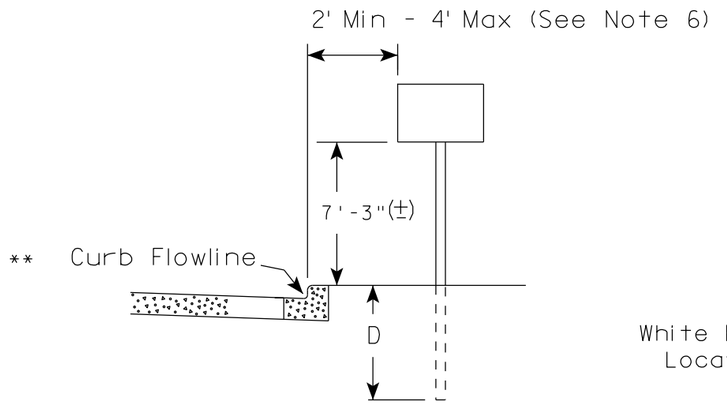
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

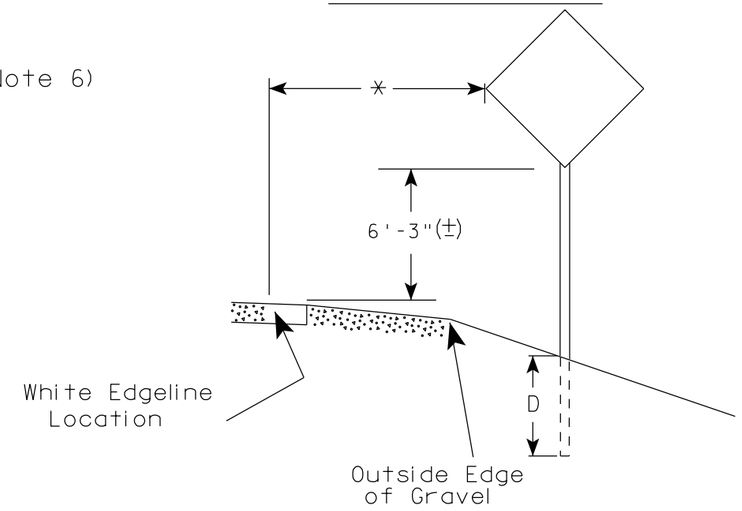
6

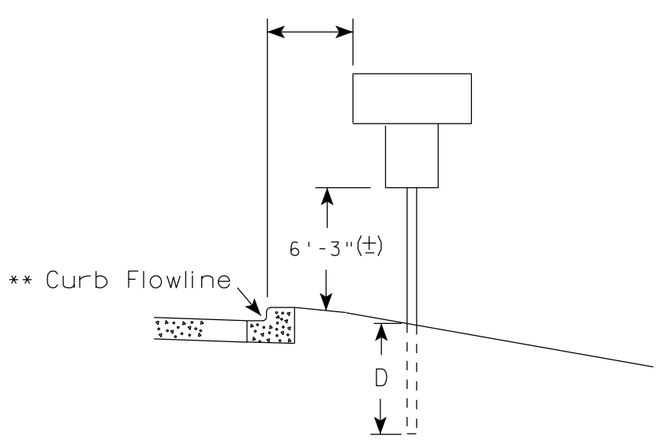
S.D.D. 15 D 31-2

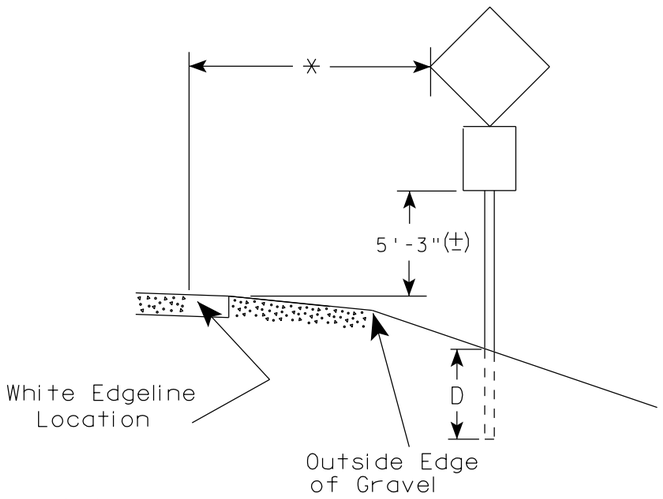
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

** 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.

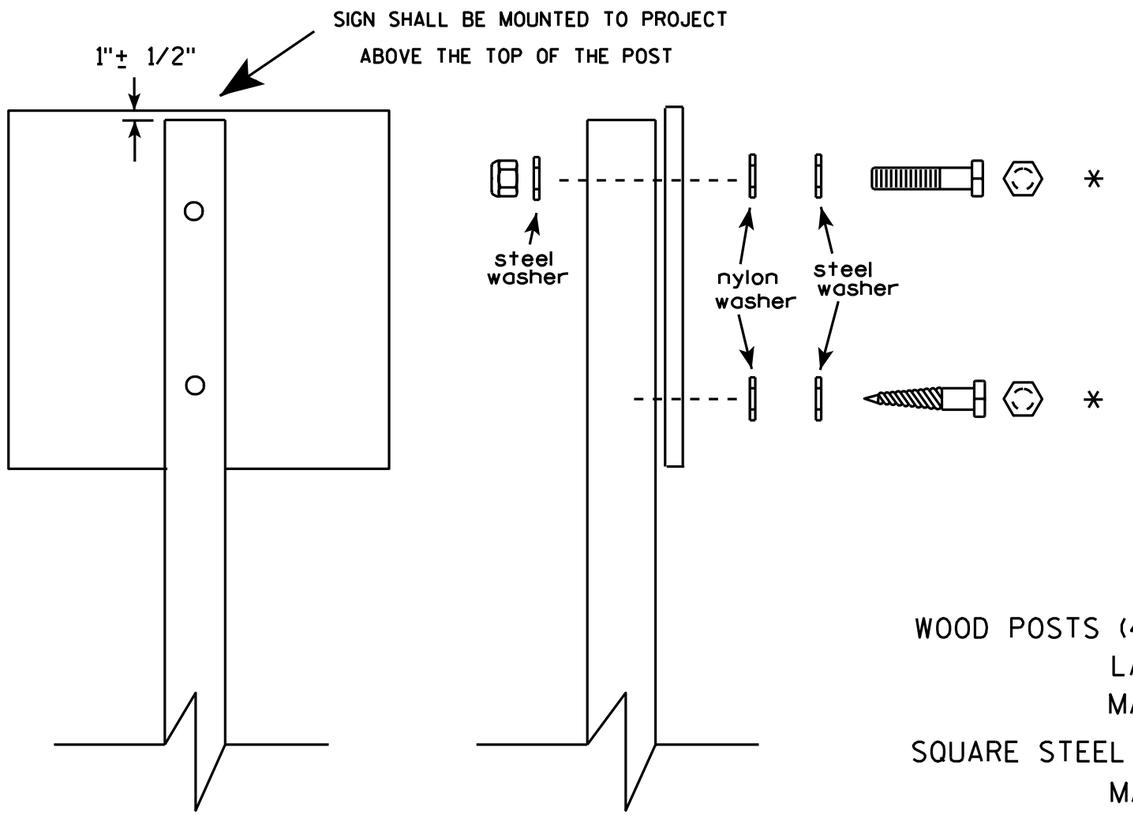
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-3.19

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

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

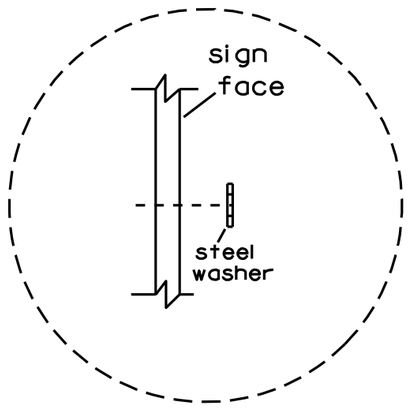
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

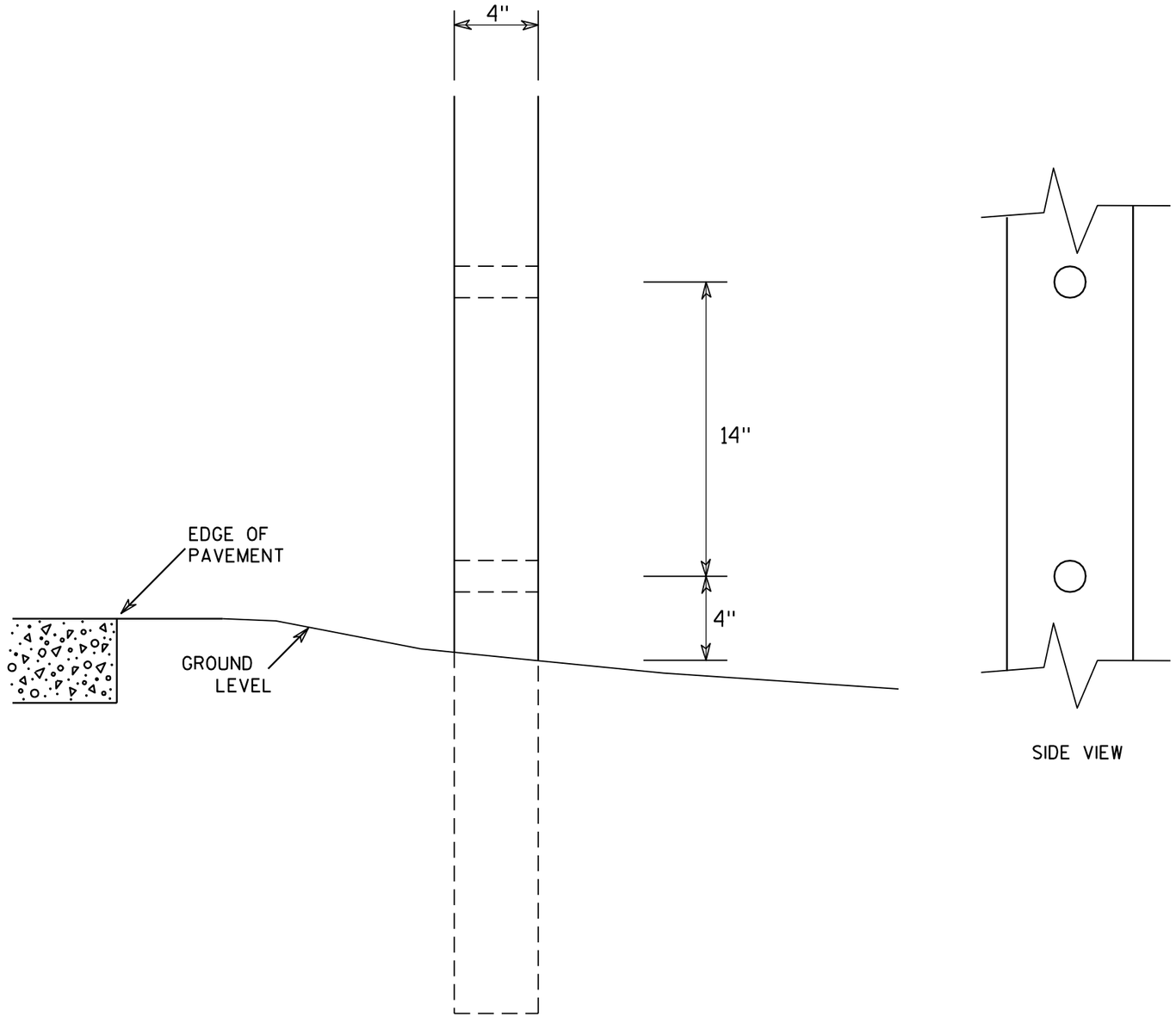
DATE 3/23/10 PLATE NO. A4-8.7

7

7

PROJECT NO:

SHEET NO: 28 E



SIDE VIEW

GENERAL NOTES

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

7

7

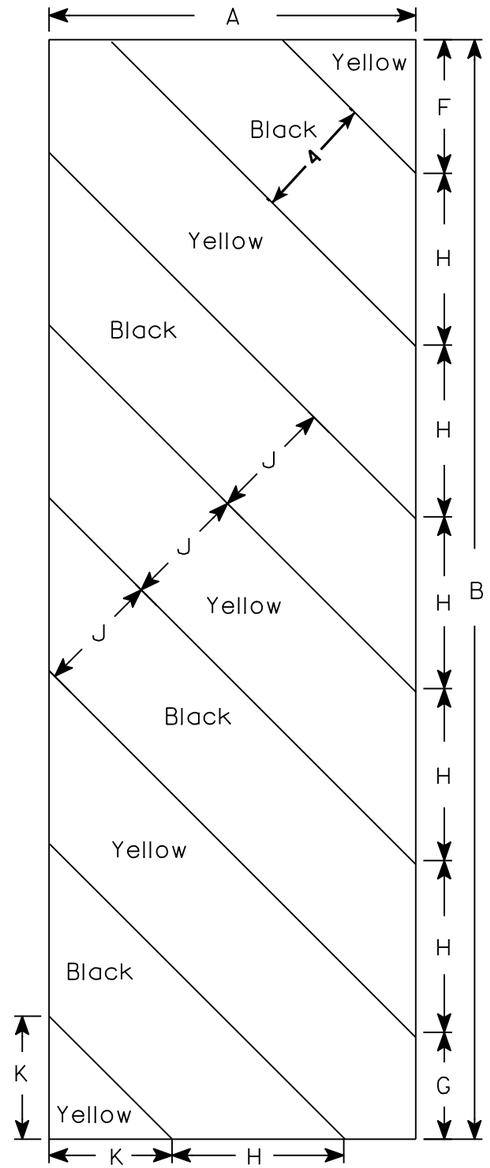
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

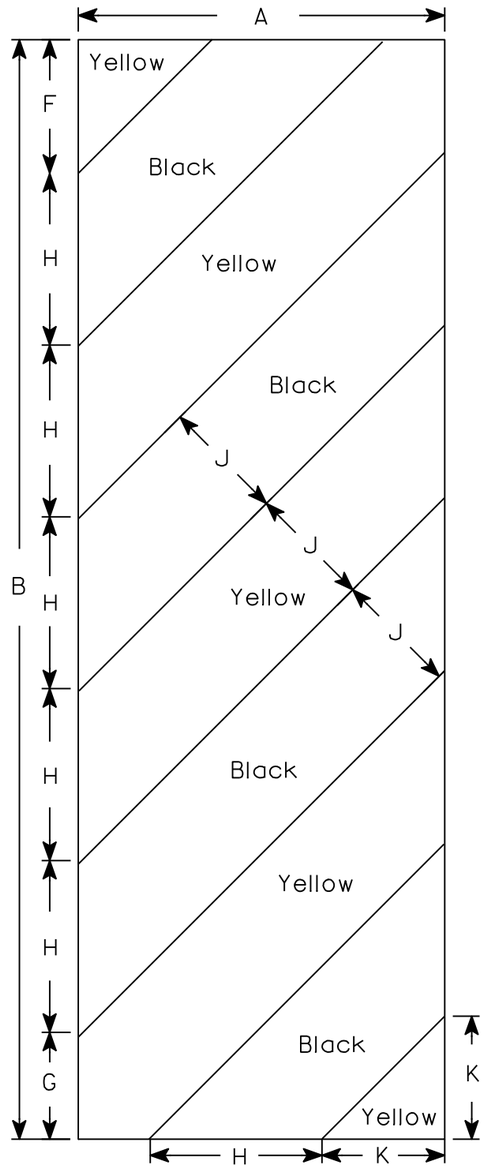
APPROVED Chester J Spang
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 29	E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

W5-52L & W5-52R

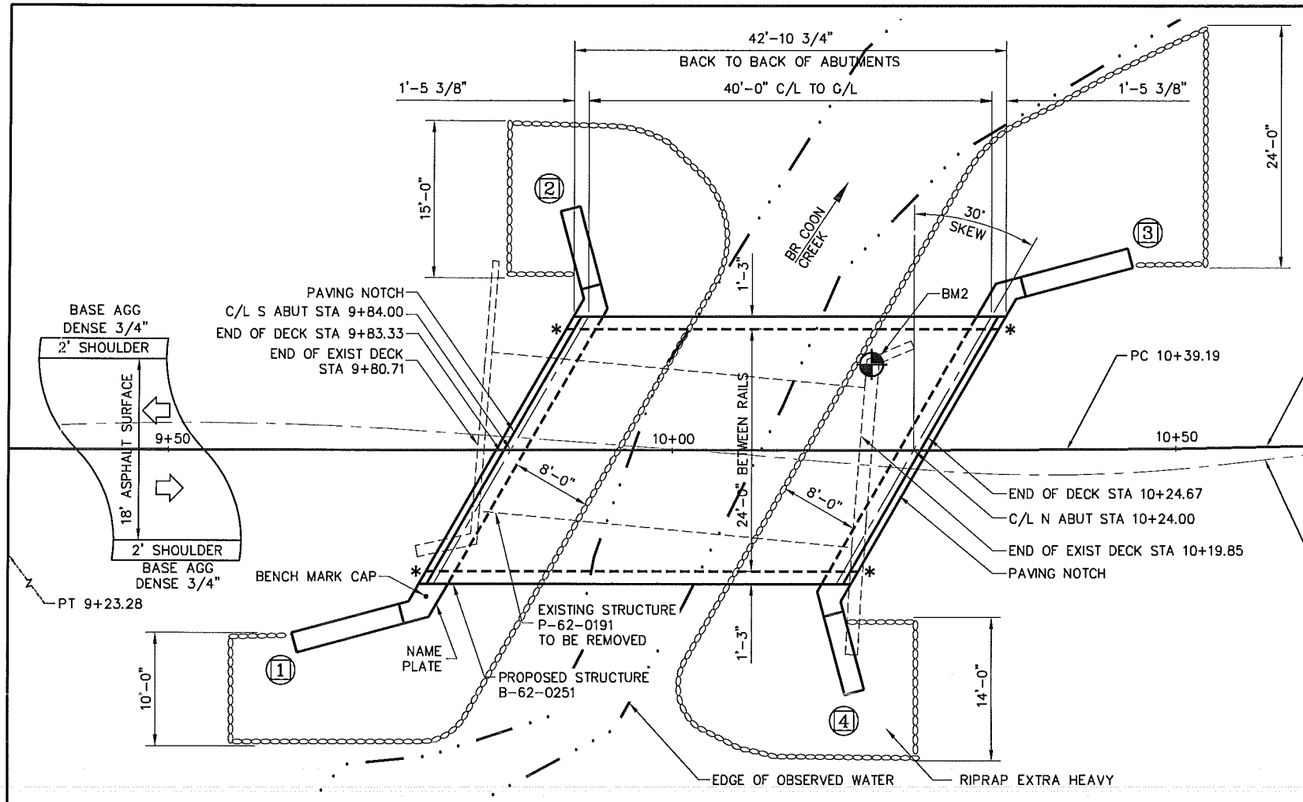
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 30	E

STATE PROJECT NUMBER
5388-13-71

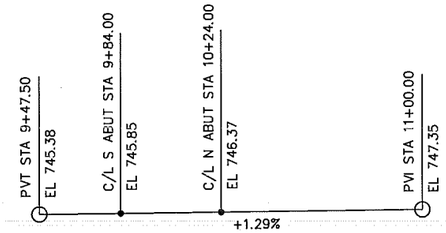


* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT

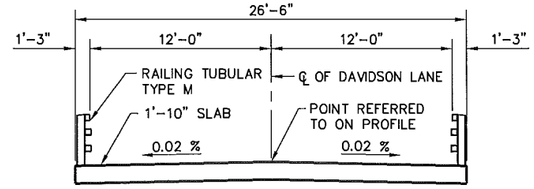
(2) INDICATES WING NUMBER

PLAN

SINGLE SPAN CONCRETE FLAT-SLAB BRIDGE



PROPOSED GRADE LINE



CROSS-SECTION THRU ROADWAY

DESIGN DATA

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

LIVE LOAD:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	RF = 1.18
OPERATING RATING FACTOR	RF = 1.53
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV)	250 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY	
SLAB	f'c = 4,000 PSI
ALL OTHER	f'c = 3,500 PSI
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 PSI

HYDRAULIC DATA

100 YEAR FREQUENCY

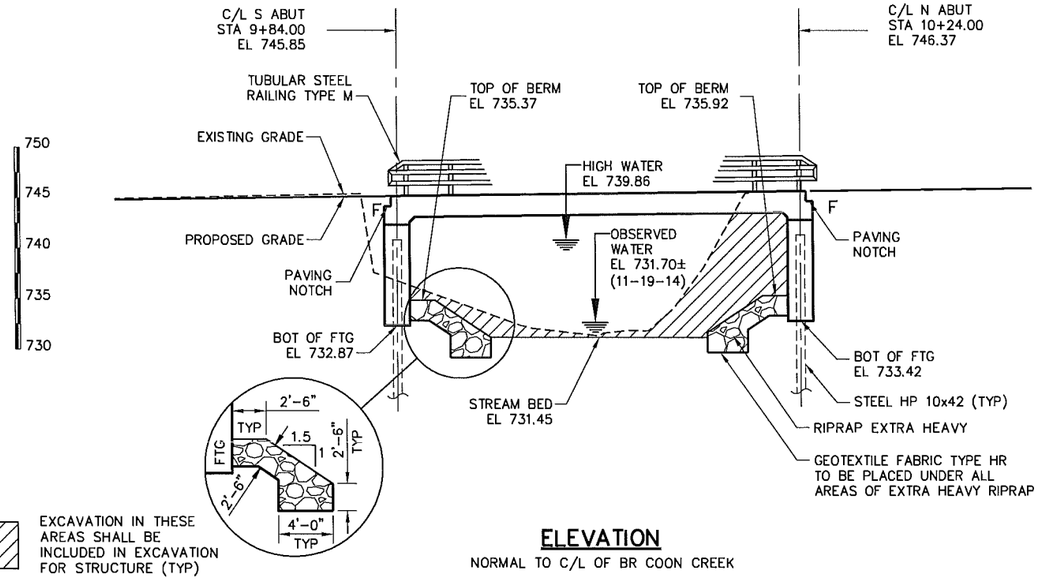
DRAINAGE AREA	1.8 SQ MILES
Q_{100} TOTAL	850 CFS
THRU STRUCTURE	850 CFS
OVERFLOW	N/A CFS
VELOCITY - THRU STRUCTURE	8.41 FPS
WATERWAY AREA THRU STRUCTURE	101.0 SQ FT
HIGH WATER $_{100}$ ELEVATION	739.86 FT
SCOUR CRITICAL CODE	B

2 YEAR FREQUENCY

Q_2 TOTAL	110 CFS
HIGH WATER $_2$ ELEVATION	737.03

TRAFFIC DATA

AADT (2016)	20
AADT (2036)	25
DESIGN SPEED	25 MPH



ELEVATION

NORMAL TO C/L OF BR COON CREEK

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10x42, WITH A REQUIRED DRIVING RESISTANCE OF 120 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION.
ESTIMATED LENGTH 45' S ABUTMENT
ESTIMATED LENGTH 45' N 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.

WISCONSIN
TROY L. PETERSON
E-31102
MENOMONIE
WI
PROFESSIONAL ENGINEER
1-14-16

BENCHMARK

STA 10+19.67, 8.54 LT
CHIZ SQUARE IN NW CORNER OF BRIDGE
EL 746.11

LIST OF DRAWINGS

DESIGN CONTACT:
TROY PETERSON
(715) 235-9081

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608) 266-8489

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

Cedar corporation
MENOMONIE - MADISON - GREEN BAY
www.cedarcorp.com 800-472-7372

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 01/14/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-62-0251

DAVIDSON LANE OVER BR COON CREEK

COUNTY	TOWN
VERNON	HAMBURG

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

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

GENERAL PLAN

SHEET 1 OF 8

FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\008 5388-13-00 DAVIDSON LN TOWN OF HAMBURG\100 CAD\DWG\080101_GP_DAVIDSON LANE.DWBLOT DATE : 1/14/2016 11:16 AM

STATE PROJECT NUMBER
5388-13-71

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	S ABUT	N ABUT	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA 10+04	LS	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-62-0251	LS	———	———	———	1
210.0100	BACKFILL STRUCTURE	CY	200	200	———	400
502.0100	CONCRETE MASONRY BRIDGES	CY	53.5	53.5	80	187
502.3200	PROTECTIVE SURFACE TREATMENT	SY	———	———	145	145
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2610	2610	———	5220
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1760	1760	15100	18620
526.0100	TEMPORARY STRUCTURE ('B'8+47)	LS	———	———	———	1
550.0500	PILE POINTS	EA	7	7	———	14
550.1100	PILING STEEL HP 10-INCH x 42 LB	LS	315	315	———	630
513.4061	RAILING TUBULAR TYPE M STRUCTURE B-62-0251	LF	———	———	78	78
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	6	———	12
606.0400	RIPRAP EXTRA HEAVY	CY	90	110	———	200
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	90	90	———	180
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	150	180	———	330

	NON-BID ITEMS					
	FILLER	SIZE	———	———	———	1/2 & 3/4

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 EXTRA HEAVY AND GEOTEXTILE FABRIC TYPE 'HR' TO THE EXTENT SHOWN ON SHEET 1 AND AND IN THE ABUTMENT DETAILS.

STEEL 'HP' PILE MATERIAL SHALL BE A.S.T.M. DESIGNATION A36.

THE EXISTING STRUCTURE (P-62-0191) IS A 39.5' LONG BY 15.8' CLEAR WIDTH SINGLE SPAN STEEL DECK GIRDER BRIDGE.

THE PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND EDGES OF THE SLAB AND TO THE OUTSIDE 1'-0" OF THE UNDERSIDE OF THE SLAB.

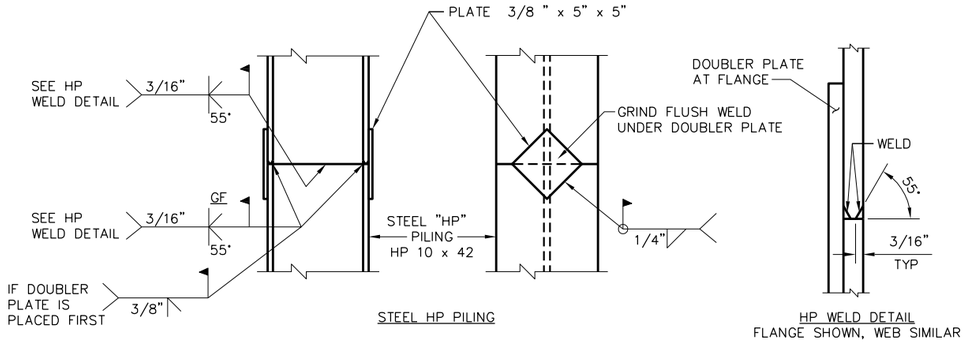
AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE IN PLACE BEFORE ABUTMENT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

THE GRADATION OF THE BACKFILL STRUCTURE SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

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

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.



STEEL HP PILING

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

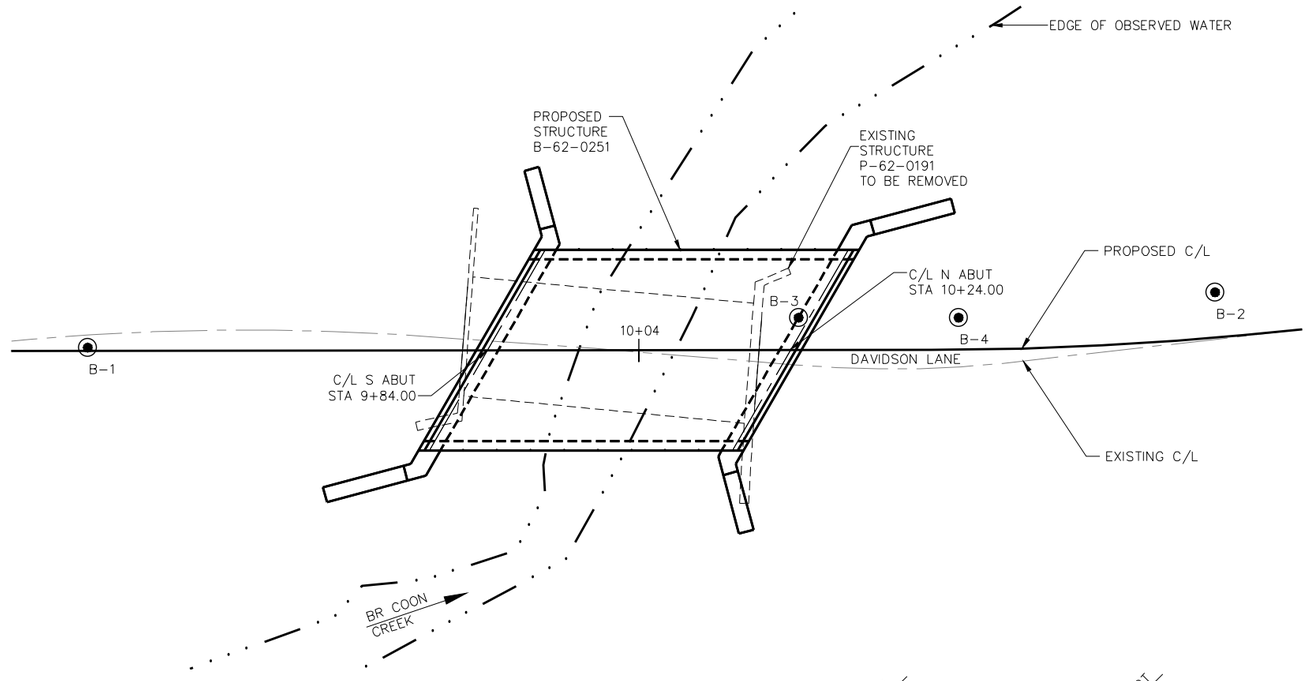
STRUCTURE B-62-0251

DRAWN BY NJT | PLANS CK'D TLP

QUANTITIES & NOTES

SHEET 2 OF 8

I:\Clients\W3922 WDOT SW Region\008 5388-13-00 Davidson Ln Town of Hamburg\100 Cad\dwg\080201_bq_Davidson Lane.dwg 01/14/16 11:12:54 AM

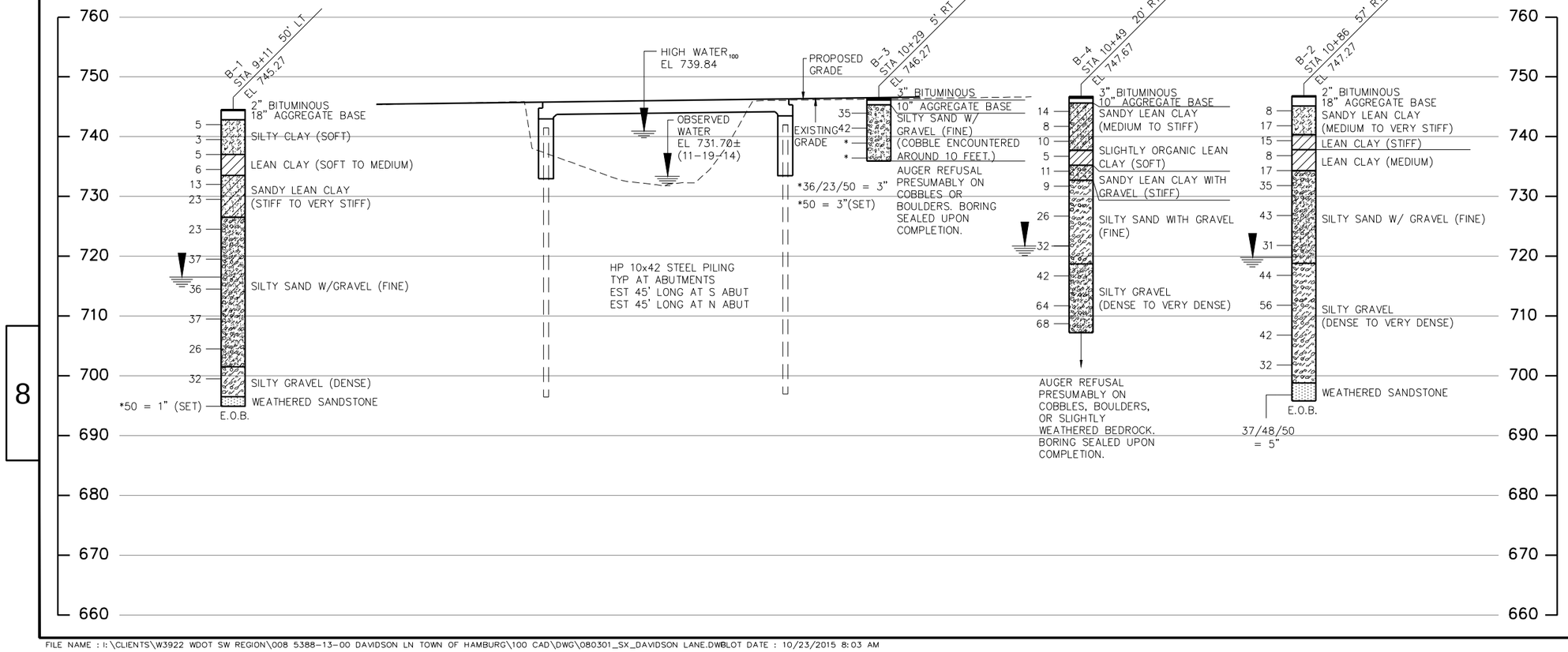


BORINGS TAKEN BY:

CHOSEN VALLEY TESTING, INC

WISCONSIN OFFICE
135 BUCKNER PLACE
LA CROSSE, WI 54603
(608) 782-5505

MINNESOTA OFFICE
1410 7TH STREET NW
ROCHESTER, MN 55901



STATE PROJECT NO.

5388-13-71

ABBREVIATIONS

F---FINE	VF---VERY FINE	M---MEDIUM
C---COARSE	WS---WEATHERED	SO---SOUND

MATERIAL SYMBOLS

TOPSOIL, SAND, GRAVEL, SILT, PEAT, CLAY, SANDSTONE, LIMESTONE, IGNEOUS ROCK

LEGEND OF BORING

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STATION
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

ELEV.
BORING NO.
STA. & OFFSET
UNCONFINED STRENGTH 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F.
BOULDERS OR COBBLES
SAND
SILTY CLAY
SO
LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROX. AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

Cedar corporation
MENOMONIE - MADISON - GREEN BAY
www.cedarcorp.com 800-472-7372

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-62-0251

DRAWN BY NJT | PLANS CHECKED TLP

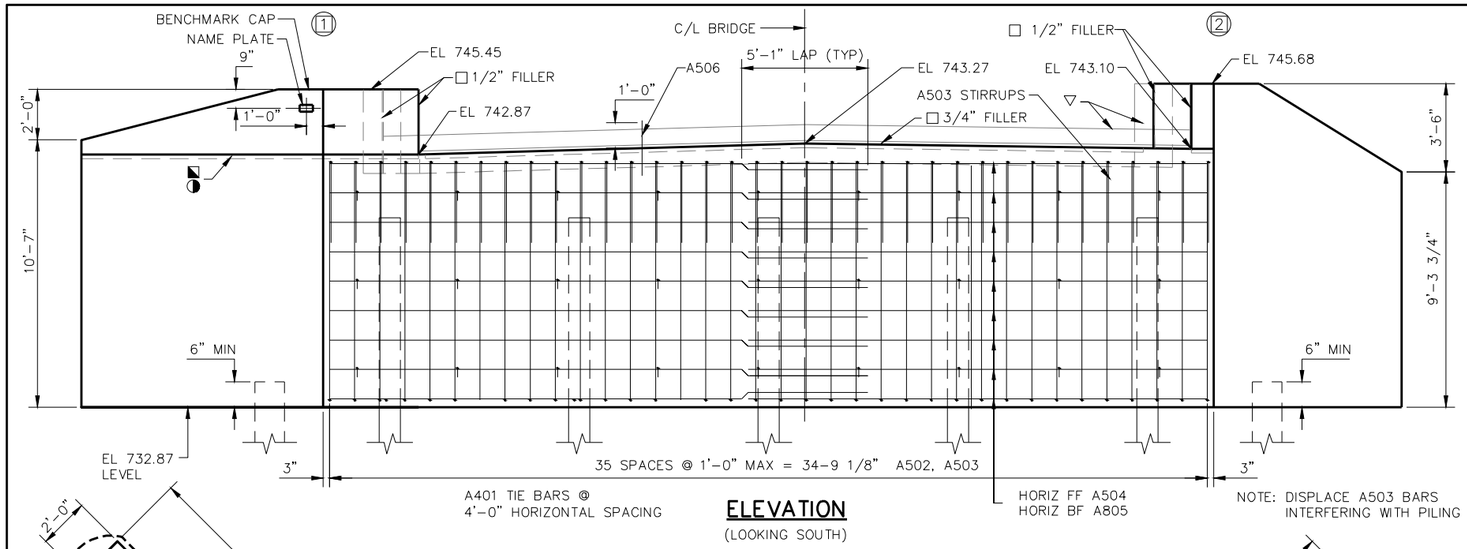
SUBSURFACE EXPLORATION

SHEET 3 OF 8

FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\008 5388-13-00 DAVIDSON LN TOWN OF HAMBURG\100 CAD\DWG\080301_SX_DAVIDSON LANE.DWBLOT DATE : 10/23/2015 8:03 AM

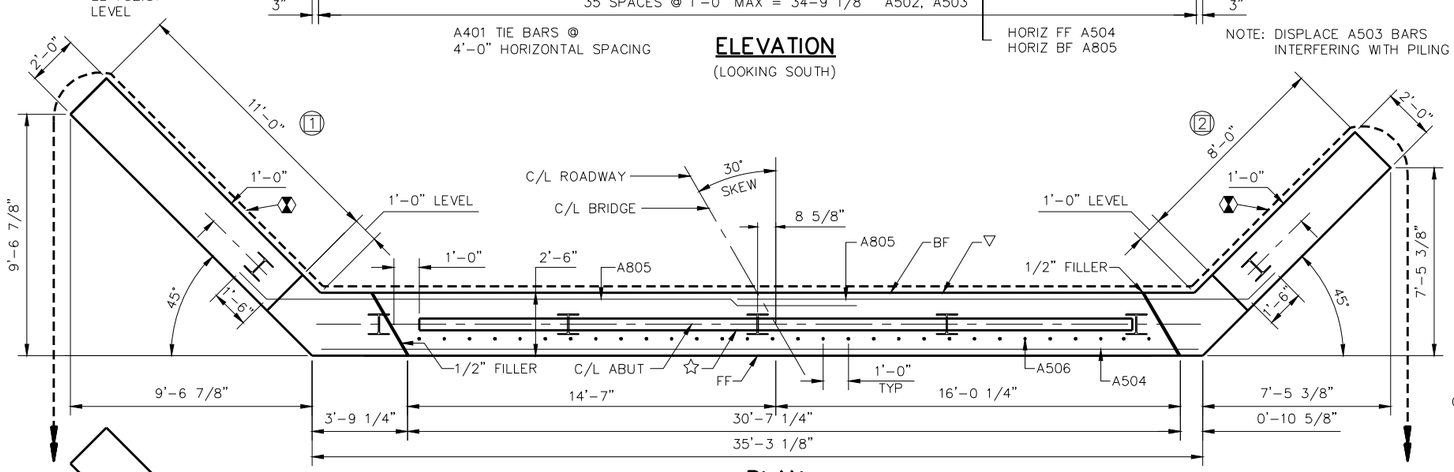
STATE PROJECT NUMBER

5388-13-71

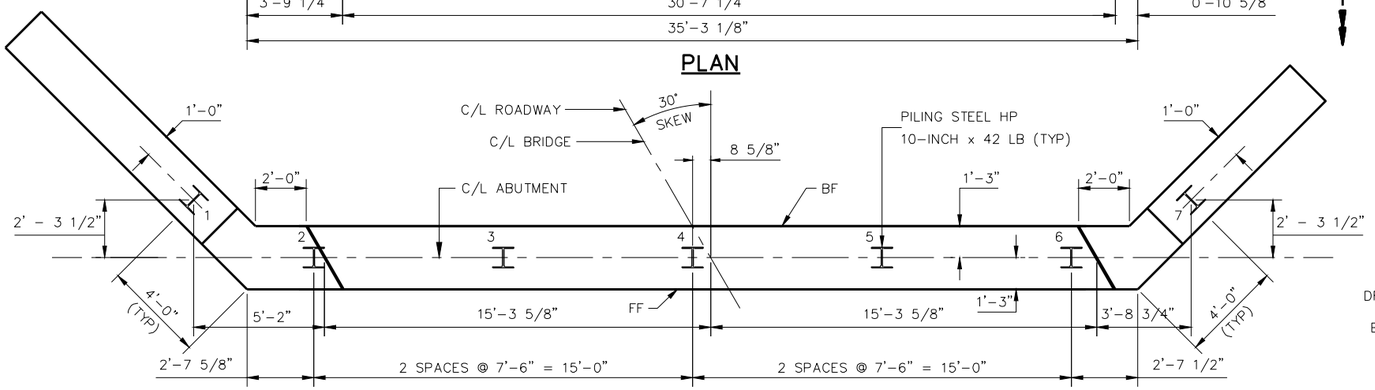


ELEVATION

(LOOKING SOUTH)



PLAN



PILE PLAN

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.

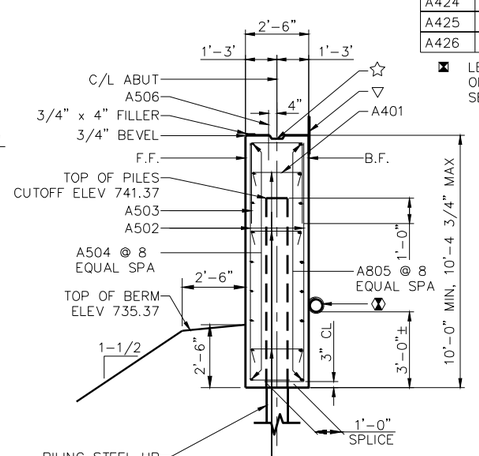
- ⬠ INDICATES WING NUMBER
- ▽ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ & VERT JOINTS ON BACKFACE
- ◥ 3/4" 'V' GROOVE ON FF OF WING WALL – NOT REQUIRED IF CONSTRUCTION JOINT IS NOT USED
- ◑ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6"
- ☆ KEYED CONSTRUCTION JOINT FORMED BEVELED 2" x 6"
- □ SEAL ALL EXPOSED HORIZ & VERT SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONC.)
- ⋈ PIPE UNDER DRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDER DRAIN WRAPPED 6-INCH".

BILL OF BARS

2610 # UNCOATED 1760 # COATED

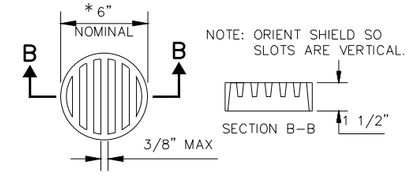
BAR MARK	COAT	NO. REQ.	LENGTH	BENT	BAR SERIES	LOCATION
A401		27	2-9	X		TIE BARS
A502		72	11-1	X		BODY - VERT
A503		36	7-1	X		BODY - STIRRUPS
A504		9	34-11			BODY - HORIZ FF
A805		18	23-8	X		BODY - HORIZ BF
A506	X	30	2-0			BODY DOWELS
A407	X	12	5-5	X		WING 1 & 2 - VERT
A408	X	3	14-8	X		WING 1 - VERT
A409	X	32	13-8	X	⋈	WING 1 - VERT
A510	X	9	14-6	X		WING 1 - HORIZ FF
A811	X	9	16-2	X		WING 1 - HORIZ BF
A412	X	2	11-5			WING 1 - HORIZ
A413	X	2	8-3			WING 1 - HORIZ
A414	X	2	5-0			WING 1 - HORIZ
A415	X	2	11-9	X		WING 1 - HORIZ
A416	X	4	10-4	X		WING 1 - HORIZ
A417	X	3	14-10	X		WING 2 - VERT
A418	X	24	13-1	X	⋈	WING 2 - VERT
A519	X	9	11-7	X		WING 2 - FF
A820	X	9	13-3	X		WING 2 - BF
A421	X	2	7-6			WING 2 - HORIZ
A422	X	2	5-10			WING 2 - HORIZ
A423	X	2	4-3			WING 2 - HORIZ
A424	X	2	2-8			WING 2 - HORIZ
A425	X	2	9-3	X		WING 2 - HORIZ
A426	X	5	7-8	X		WING 2 - HORIZ

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



NOTE: A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED BARS 1'-0".

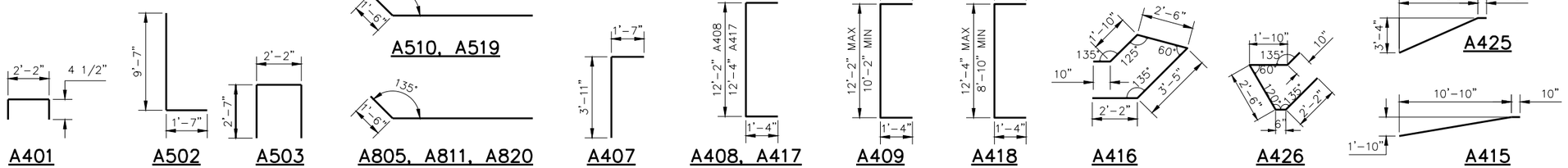
SECTION THRU BODY



DIMENSION IS APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

RODENT SHIELD

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



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-62-0251

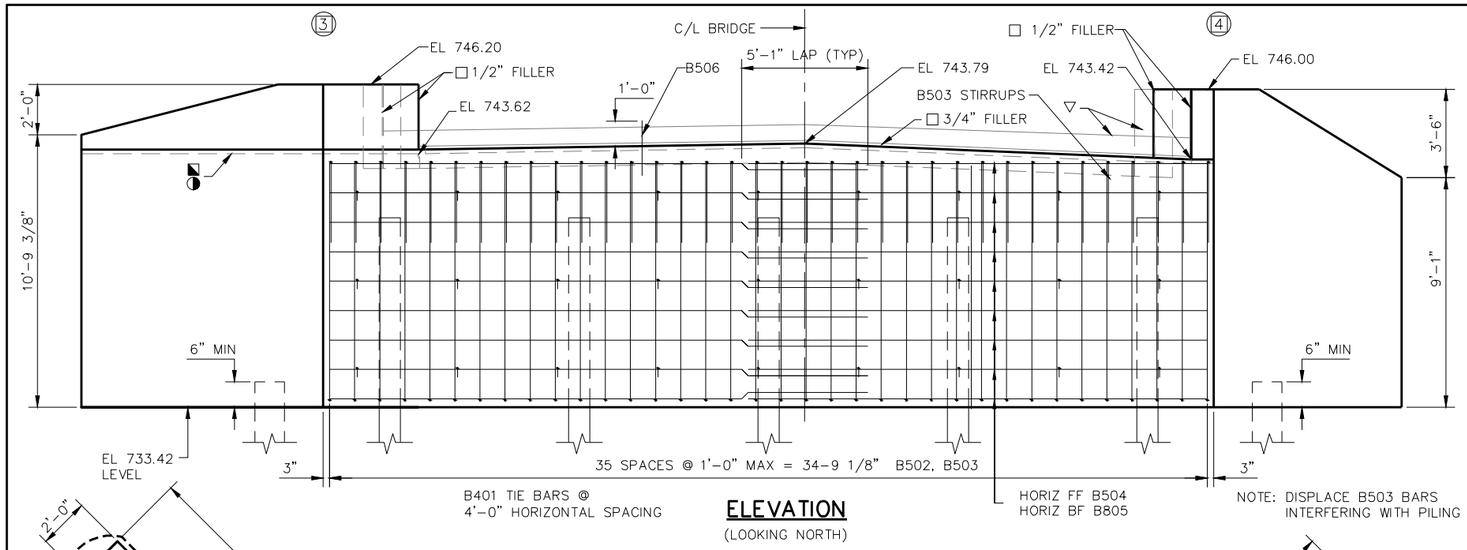
DRAWN BY NJT | PLANS CK'D TLP

SOUTH ABUTMENT

SHEET 4 OF 8

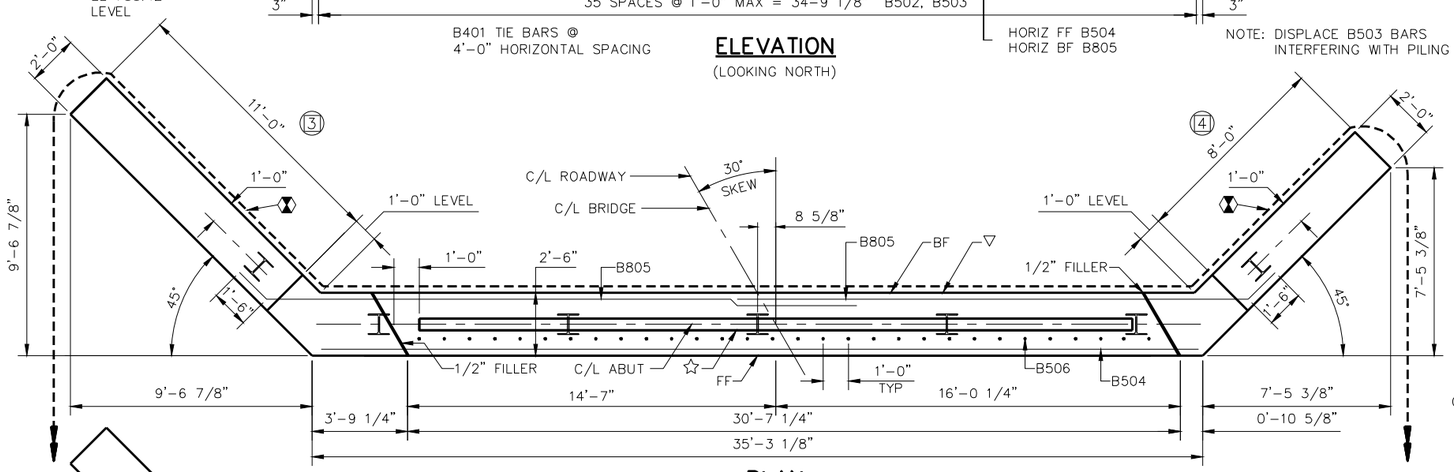
FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\008 5388-13-00 DAVIDSON LN TOWN OF HAMBURG\100 CAD\DWG\080401_SA_DAVIDSON LN.DWG PLOT DATE : 10/23/2015 7:22 AM

STATE PROJECT NUMBER
5388-13-71

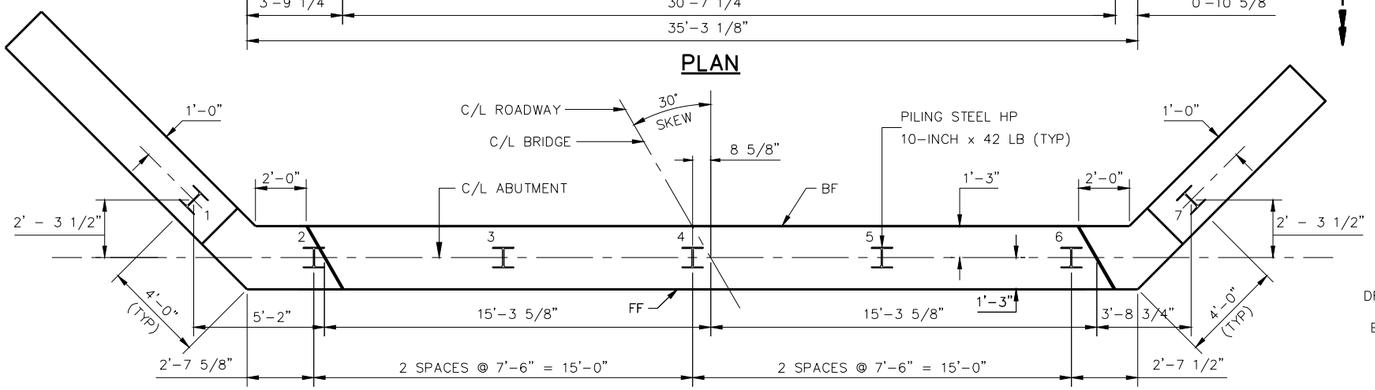


ELEVATION

(LOOKING NORTH)



PLAN



PILE PLAN

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.

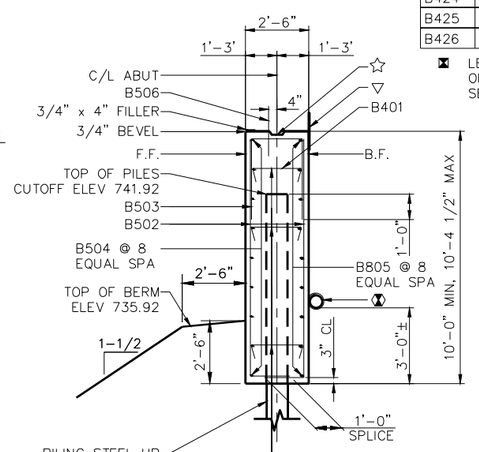
- INDICATES WING NUMBER
- ▽ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ & VERT JOINTS ON BACKFACE
- ◥ 3/4" 'V' GROOVE ON FF OF WING WALL – NOT REQUIRED IF CONSTRUCTION JOINT IS NOT USED
- ◑ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6"
- ☆ KEYED CONSTRUCTION JOINT FORMED BEVELED 2" x 6"
- □ SEAL ALL EXPOSED HORIZ & VERT SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONC.)
- ⋈ PIPE UNDER DRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDER DRAIN WRAPPED 6-INCH".

BILL OF BARS

2610 # UNCOATED 1760 # COATED

BAR MARK	COAT	NO. REQ.	LENGTH	BENT	BAR SERIES	LOCATION
B401		27	2-9	X		TIE BARS
B502		72	11-1	X		BODY - VERT
B503		36	7-1	X		BODY - STIRRUPS
B504		9	34-11			BODY - HORIZ FF
B805		18	23-8	X		BODY - HORIZ BF
B506	X	30	2-0			BODY DOWELS
B407	X	12	5-5	X		WING 3 & 4 - VERT
B408	X	3	14-10	X		WING 3 - VERT
B409	X	32	13-10	X	⋈	WING 3 - VERT
B510	X	9	14-6	X		WING 3 - HORIZ FF
B811	X	9	16-2	X		WING 3 - HORIZ BF
B412	X	2	11-7	X		WING 3 - HORIZ
B413	X	2	8-5			WING 3 - HORIZ
B414	X	2	5-0			WING 3 - HORIZ
B415	X	2	11-9			WING 3 - HORIZ
B416	X	4	10-4	X		WING 3 - HORIZ
B417	X	3	14-8	X		WING 4 - VERT
B418	X	24	12-11	X	⋈	WING 4 - VERT
B519	X	9	11-7	X		WING 4 - FF
B820	X	9	12-11	X		WING 4 - BF
B421	X	2	7-6			WING 4 - HORIZ
B422	X	2	5-10			WING 4 - HORIZ
B423	X	2	4-3			WING 4 - HORIZ
B424	X	2	2-8			WING 4 - HORIZ
B425	X	2	9-3	X		WING 4 - HORIZ
B426	X	5	7-8	X		WING 4 - HORIZ

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



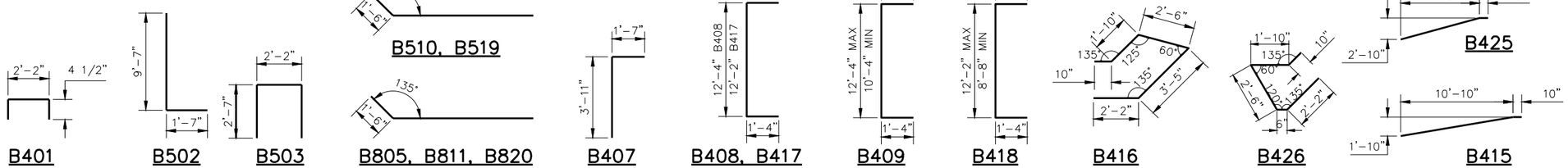
NOTE: B506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED BARS 1'-0".

SECTION THRU BODY

DIMENSION IS APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

RODENT SHIELD

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



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-62-0251

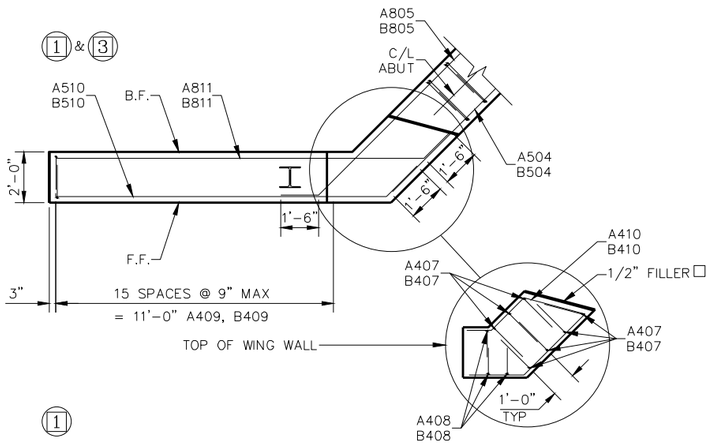
DRAWN BY NJT | PLANS CK'D TLP

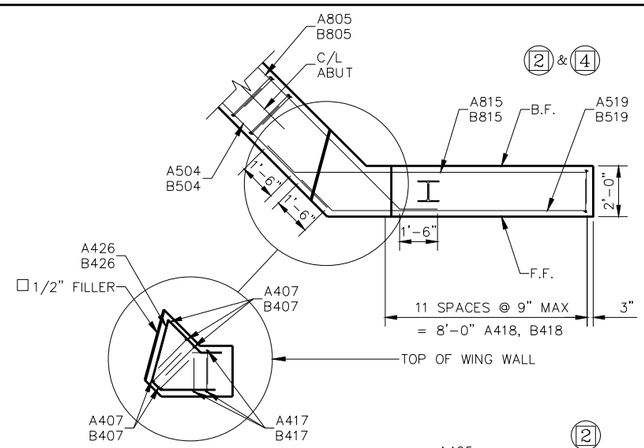
NORTH ABUTMENT

SHEET 5 OF 8

FILE NAME : I:\CLIENTS\W3922 WDOT SW REGION\008 5388-13-00 DAVIDSON LN TOWN OF HAMBURG\100 CAD\DWG\080402_NA_DAVIDSON LN.DWG PLOT DATE : 10/23/2015 7:22 AM

STATE PROJECT NUMBER
5388-13-71

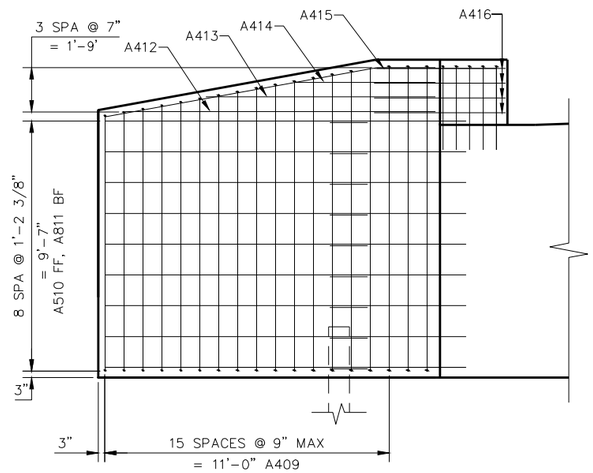


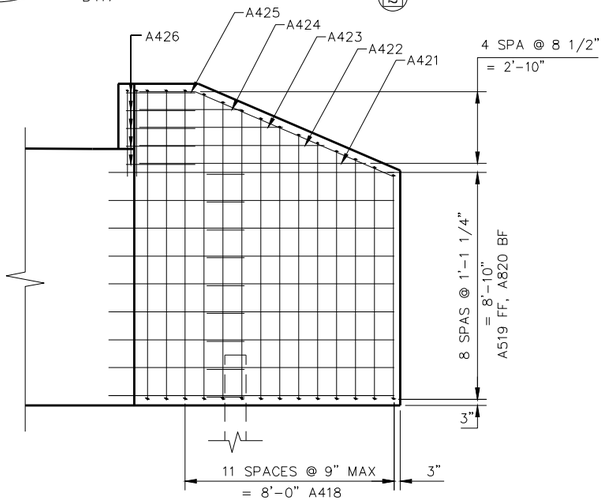


BAR SERIES TABLE

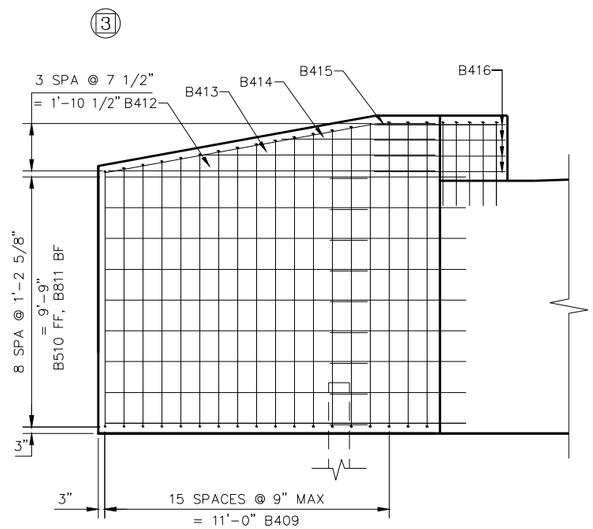
MARK	NO. REQUIRED	LENGTH
A409	2 SERIES OF 16	12'-8" TO 14'-8"
A418	2 SERIES OF 12	11'-4" TO 14'-10"
B409	2 SERIES OF 16	12'-10" TO 14'-10"
B418	2 SERIES OF 12	11'-2" TO 14'-8"

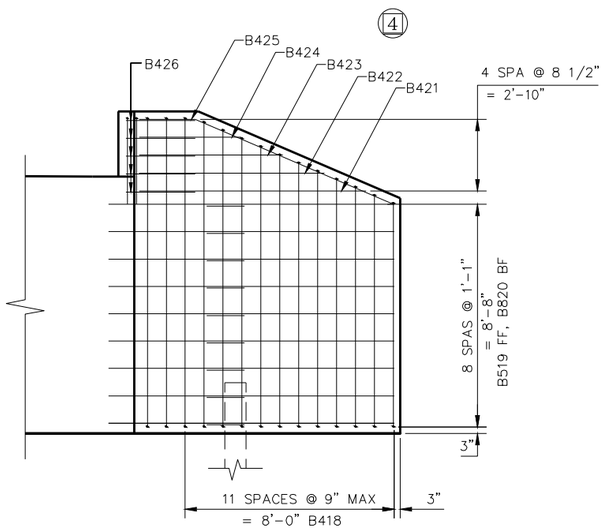
BUNDLE AND TAG EACH SERIES SEPARATELY



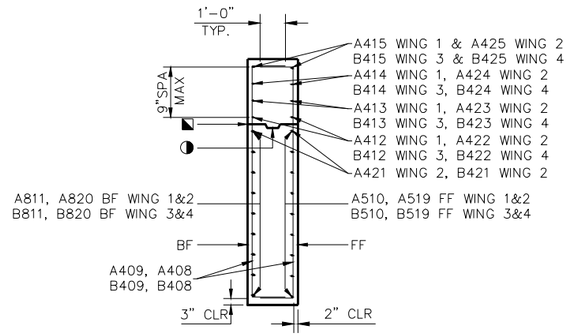


SOUTH ABUTMENT WINGS





NORTH ABUTMENT WINGS



BF = BACK FACE
FF = FRONT FACE

TYPICAL SECTION THRU WING

- 3/4" 'V' GROOVE ON FF OF WING WALL – NOT REQUIRED IF CONSTRUCTION JOINT IS NOT USED
- OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6"

NO.	DATE	REVISION	BY

Cedar corporation
604 Wilson Avenue
Menomonie, Wisconsin 54751
715-235-9081
800-472-7372
FAX 715-235-2727
www.cedarcorp.com
engineers • architects • planners • environmental specialists
land surveyors • landscape architects • interior designers

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

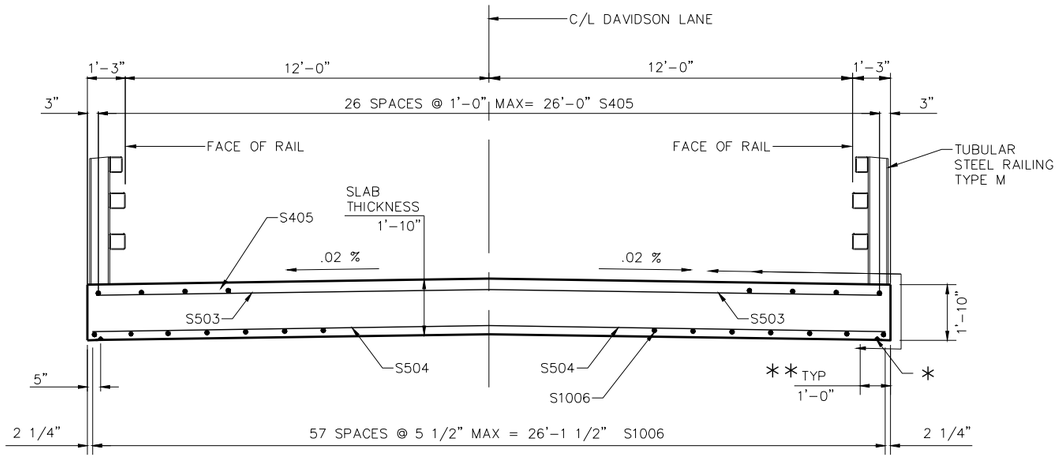
STRUCTURE B-62-0251

CONST SPEC	DRAWN BY NJT	PLANS CK'D TLP

ABUTMENT DETAILS

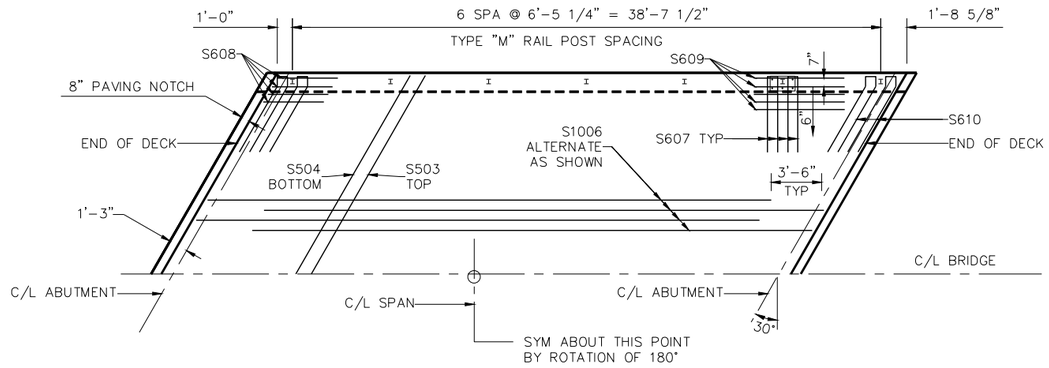
SHEET 6 of 8

STATE PROJECT NUMBER
5388-13-71

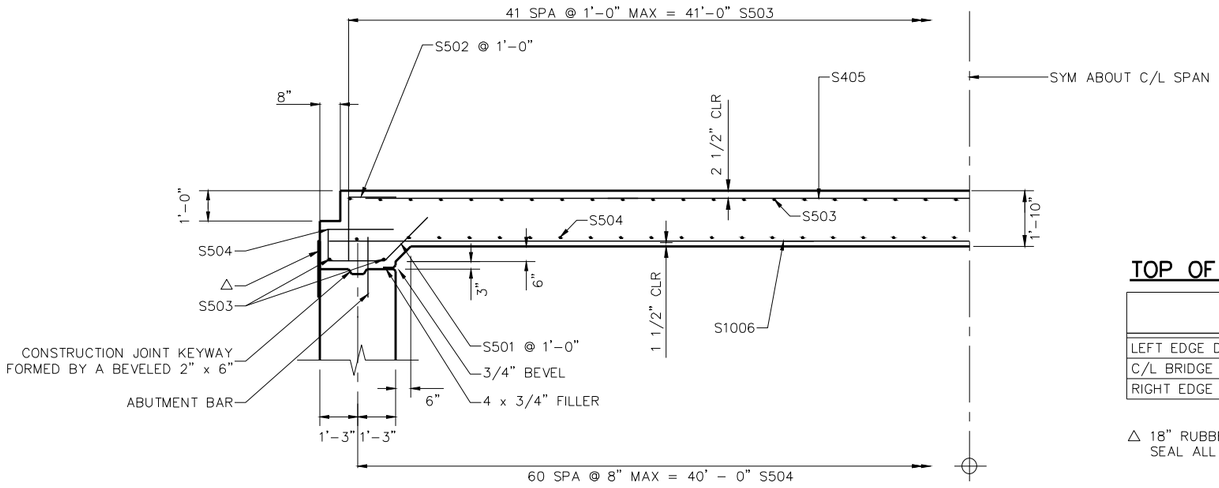


CROSS SECTION THRU RDWY

(LOOKING NORTH)



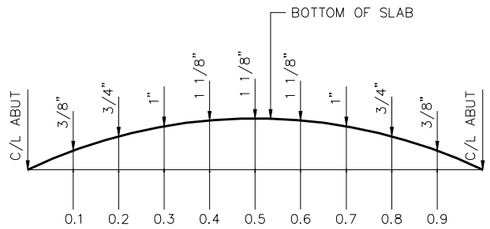
PLAN



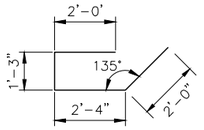
LONGITUDINAL SECTION THRU RDWY

** APPLY PROTECTIVE SURFACE TREATMENT

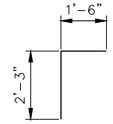
* 3/4" V-GROOVE EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM



CAMBER DIAGRAM



S501



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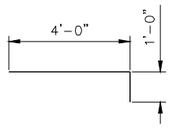
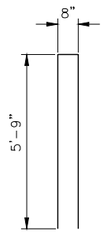


S608



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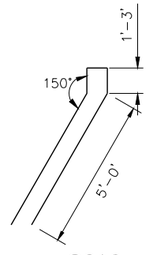


S610

TOP OF DECK ELEVATIONS

	SOUTH ABUT	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	NORTH ABUT
LEFT EDGE DECK	745.69	745.74	745.79	745.84	745.89	745.94	746.00	746.05	746.10	746.15	746.21
C/L BRIDGE	745.85	745.90	745.95	746.00	746.06	746.11	746.16	746.21	746.27	746.32	746.37
RIGHT EDGE DECK	745.46	745.51	745.56	745.62	745.67	745.72	745.77	745.82	745.88	745.93	745.98

△ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ & VERT JOINTS ON BACKFACE

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.

BILL OF BARS

15100 # COATED

BAR MARK	COAT	NO. REQD	LENGTH	BENT	BUN -DLE	LOCATION
S501	X	62	7-4	X		AT END OF DECK
S502	X	62	3-7	X		AT END OF DECK
S503	X	41	30-3			SLAB, TOP, TRANSVERSE
S504	X	63	30-3			SLAB, BOTTOM, TRANSVERSE
S405	X	27	41-0			SLAB, TOP, LONGITUDINAL
S1006	X	58	37-0			SLAB, BOTTOM, LONGITUDINAL
S607	X	20	12-0	X		AT RAIL POSTS
S608	X	16	5-0	X		AT END RAIL POSTS
S609	X	40	6-0			AT INTERIOR RAIL POSTS
S610	X	8	12-0	X		AT END RAIL POSTS

NOTES:

BAR DIMENSIONS ARE OUT TO OUT OF BAR.

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS TO BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE C/L OF SUBSTRUCTURE UNITS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEADLOAD DEFLECTIONS ONLY EQUAL APPROXIMATELY 1/3 OF CAMBER VALUES SHOWN.

PRIOR TO RELEASING SLAB FALSE-WORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, THE ℄ OF PIERS, AND AT 5/10 POINTS. TO VERIFY CAMBER, TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℄.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

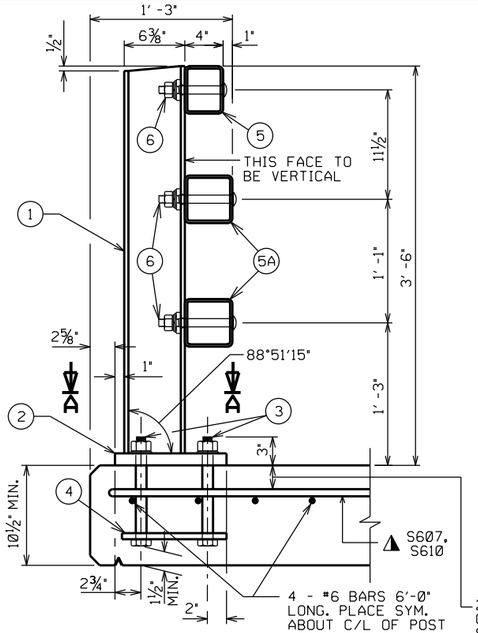
STRUCTURE B-62-0251

DRAWN BY NJT | PLANS CK'D TLP

SUPERSTRUCTURE

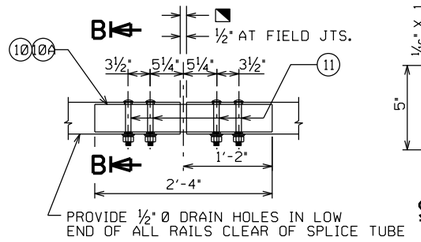
SHEET 7 OF 8

I:\Clients\W3921 WDOT SW Region - LaCrosse\001 Waumandee Cr Road Bridge\dwg\080601_sup_waumandee.dwg 5/1/2007 12:08:00 PM CDT

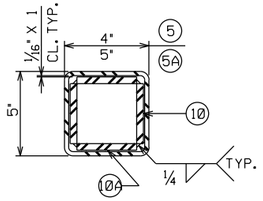


SECTION THRU RAILING ON DECK

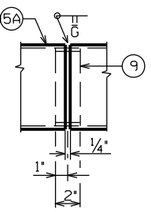
2½" FOR SLABS ON GIRDERS; FOR OTHER STRUCTURES, PLACE BELOW TOP MAT SLAB REINFORCEMENT.



FIELD ERECTION JOINT DETAIL

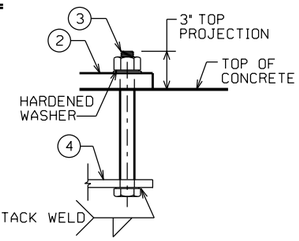


SECTION B-B

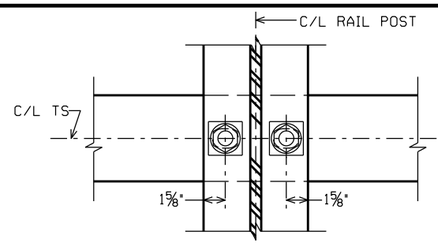


SHOP RAIL SPLICE DETAIL

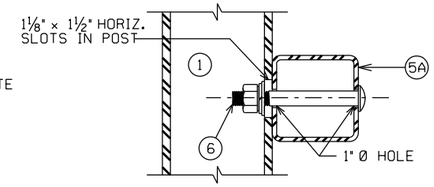
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



ANCHOR BOLTS



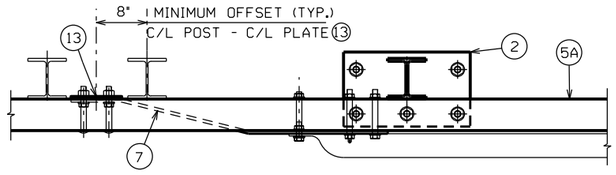
SECTION THRU POST WEB



SECTION THRU RAIL

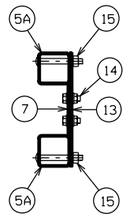
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

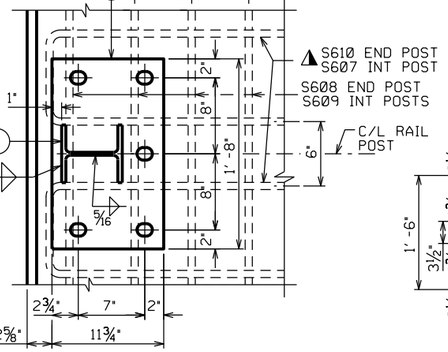


TOP VIEW AT END POST

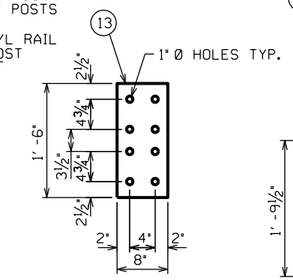
THRIE BEAM RAIL ATTACHMENT



SECTION C-C

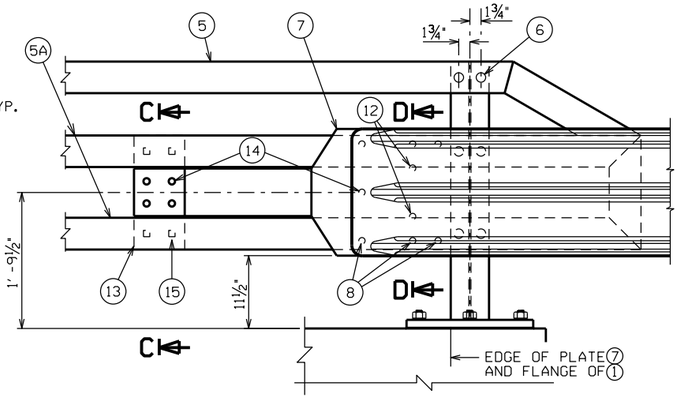


SECTION A-A



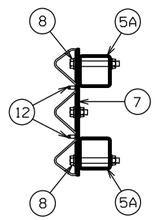
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

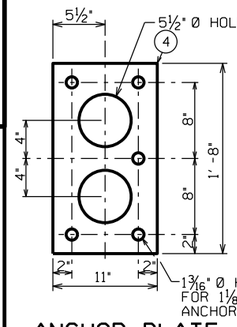


DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT

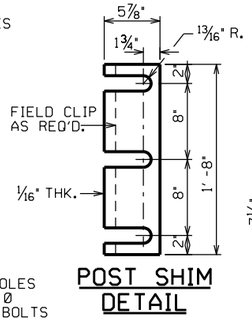


SECTION D-D

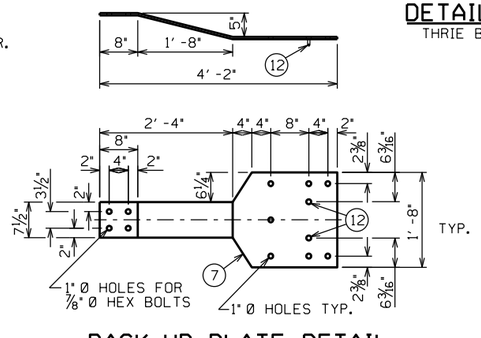


ANCHOR PLATE

AT RAIL TO DECK CONNECTION

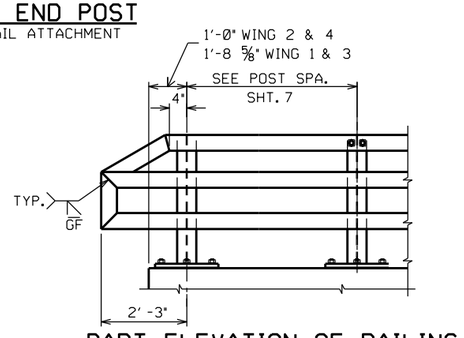


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

LEGEND

① W6 x 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

② PLATE 1¼" x 11¾" x 1'-8" WITH 1⅝" X 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

③ ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)

④ ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1⅜" DIA. HOLES FOR ANCHOR BOLTS NO. 3

⑤ TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

⑤A TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

⑥ ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1⅝" X 1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)

⑦ ½" THK. BACK-UP PLATE WITH 2 - ⅞" X 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.

⑧ 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.

⑨ SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".

⑩ ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

⑩A ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

⑪ ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15/16" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.

⑫ ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).

⑬ ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

⑭ ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).

⑮ 1" DIA. HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-62-0251 WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 ksi. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
10. WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED TIE COAT AND TOP COAT.
11. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).
12. PLACE FIRST BOTTOM LONGITUDINAL BAR CLEAR OF DRIP GROOVE.

⚠ TIE TO TOP MAT OF STEEL.

• FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTIBILITY.

◥ RDWY. OPENING OR 2½" MIN. FOR STRIP SEAL EXP. JOINT & ½" OPENING FOR A1 ABUTMENT.

STATE PROJECT NUMBER

5388-13-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-62-0251

DRAWN BY NJT | PLANS CK'D. TLP

TUBULAR STEEL RAILING TYPE M

SHEET 8 OF 8

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STATION	REAL STATION	DISTANCE (FT)	AREA (SF)			INCREMENTAL VOL (CY) - (UNADJUSTED)			CUMULATIVE VOL (CY)		MASS ORDINATE
			CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	
8+50	850	0	30.0	4.5	0.0	0.0	0.0	0.0	1.0	0.0	1.0
9+00	900	50	22.4	4.5	0.6	48.5	8.3	0.6	49.5	0.8	48.7
9+23	923	23	25.9	4.5	2.1	20.6	3.8	1.1	70.1	2.1	68.0
9+50	950	27	17.0	4.5	8.9	21.4	4.5	5.5	91.5	9.0	82.5
9+83	983	33	17.0	4.5	8.9	20.8	5.5	10.9	112.3	22.7	89.6
						111.3	22.1	18.1			

STATION	REAL STATION	DISTANCE (FT)	AREA (SF)			INCREMENTAL VOL (CY) - (UNADJUSTED)			CUMULATIVE VOL (CY)		MASS ORDINATE
			CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	
10+25	1025	0	24.8	4.5	44.3	23.0	0.0	41.0	23.0	51.3	-28.3
10+50	1050	25	24.8	4.5	44.3	71.2	4.2	41.0	94.2	102.6	-8.4
11+00	1100	50	52.1	4.5	0.0	81.6	8.3	0.0	175.4	102.6	72.8
11+50	1150	50	36.0	4.5	0.0	0.0	8.3	0.0	176.4	102.6	73.8
						175.8	20.8	82.0			

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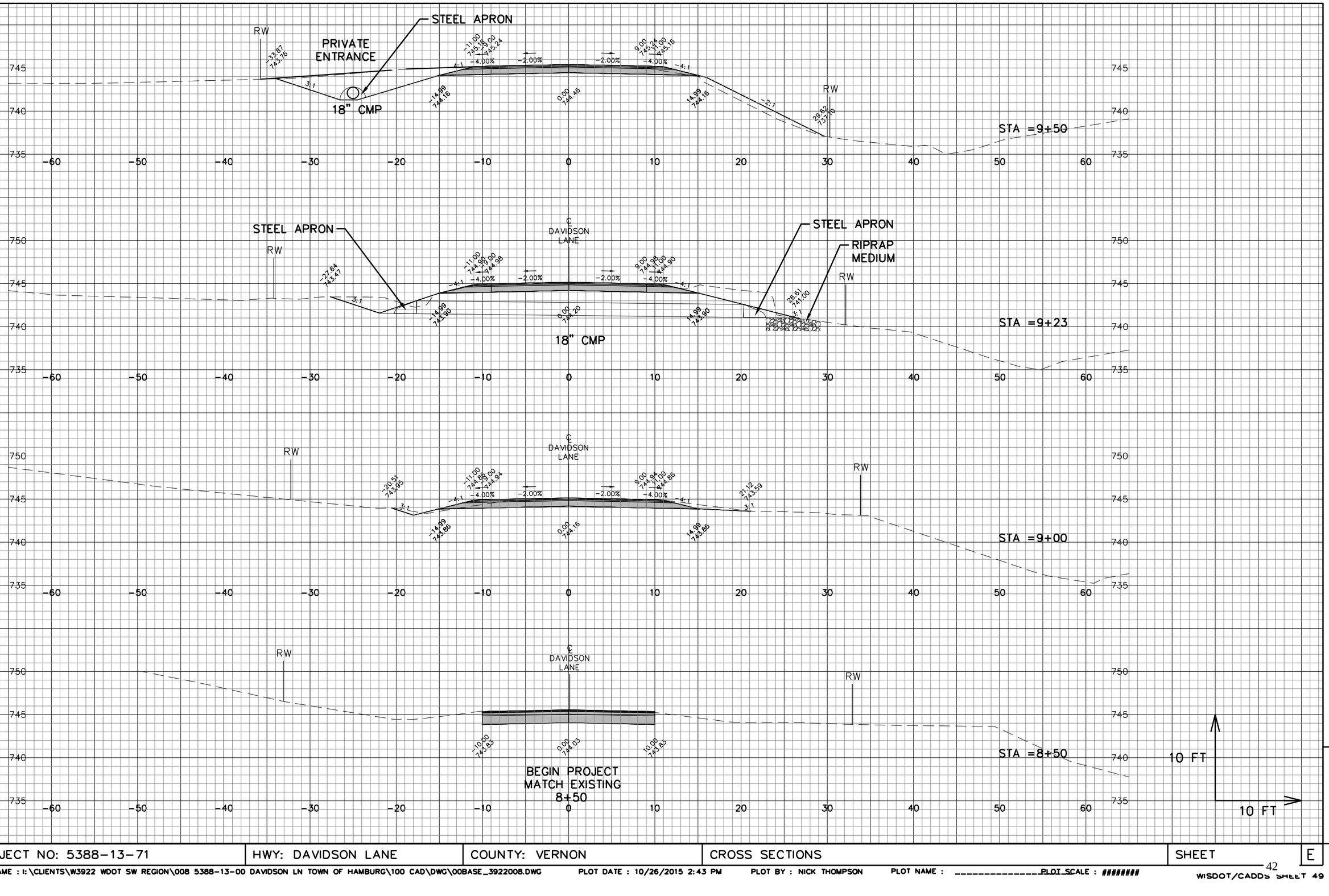
STATION	REAL STATION	DISTANCE (FT)	AREA (SF)			INCREMENTAL VOL (CY) - (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
B 6+59	659	0	8.7	0	0.0	1.0	0	0.0	1.0	0.0	1.0
B 7+00	700	41	0.0	0	3.0	6.6	0	2.3	7.6	2.9	4.7
B 7+50	750	50	0.0	0	11.9	0.0	0	13.8	7.6	20.1	-12.5
B 8+00	800	50	0.0	0	9.8	0.0	0	20.1	7.6	45.3	-37.7
B 8+33	833	33	0.0	0	9.8	0.0	0	12.0	7.6	60.3	-52.7
						7.6	0	48.2			

STATION	REAL STATION	DISTANCE (FT)	AREA (SF)			INCREMENTAL VOL (CY) - (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
B 8+61	861	0	0.0	0	0.0	0.0	0	0.0	0.0	0.0	0.0
B 9+00	900	39	0.0	0	43.6	0.0	0	31.5	0.0	39.4	-39.4
B 9+50	950	50	0.0	0	12.6	0.0	0	52.0	0.0	104.4	-104.4
B 10+00	1000	50	0.0	0	22.2	0.0	0	32.2	0.0	144.6	-144.6
B 10+50	1050	50	0.0	0	80.9	0.0	0	95.5	0.0	264.0	-264.0
B 11+00	1100	50	4.8	0	2.5	4.5	0	77.2	4.5	360.5	-356.0
B 11+50	1150	50	0.0	0	0.3	4.5	0	2.6	9.0	363.8	-354.8
B 11+71	1171	21	0.0	0	0.3	0.0	0	0.2	0.0	364.0	-364.0
						9.0	0	291.2			

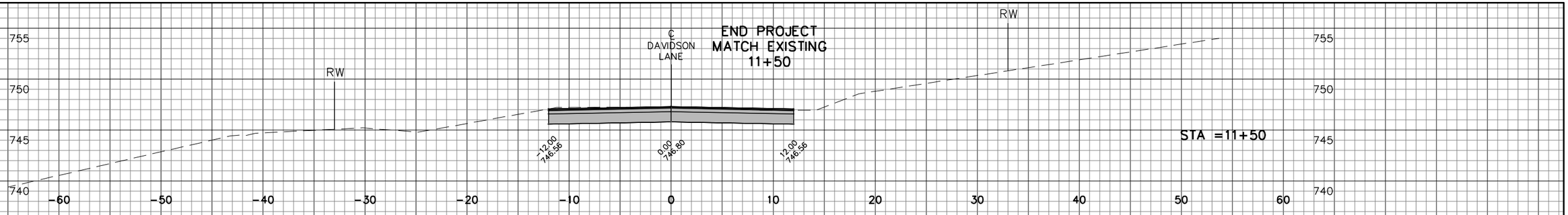
STATION	REAL STATION	DISTANCE (FT)	AREA (SF)			INCREMENTAL VOL (CY) - (UNADJUSTED)			CUMULATIVE VOL (CY)		MASS ORDINATE
			CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	
B 6+59	659	0	9.3	0	8.7	1.0	0	0.0	1.0	0.00	1.0
B 7+00	700	41	12.3	0	0.0	16.4	0	6.6	15.4	8.25	6.7
B 7+50	750	50	21.2	0	0.0	31.0	0	0.0	48.4	8.75	39.65
B 8+00	800	50	19.1	0	0.0	37.3	0	0.0	85.7	8.75	76.95
B 8+33	833	33	19.1	0	0.0	23.3	0	0.0	109.0	8.75	100.3
						109	0	6.6		8.75	

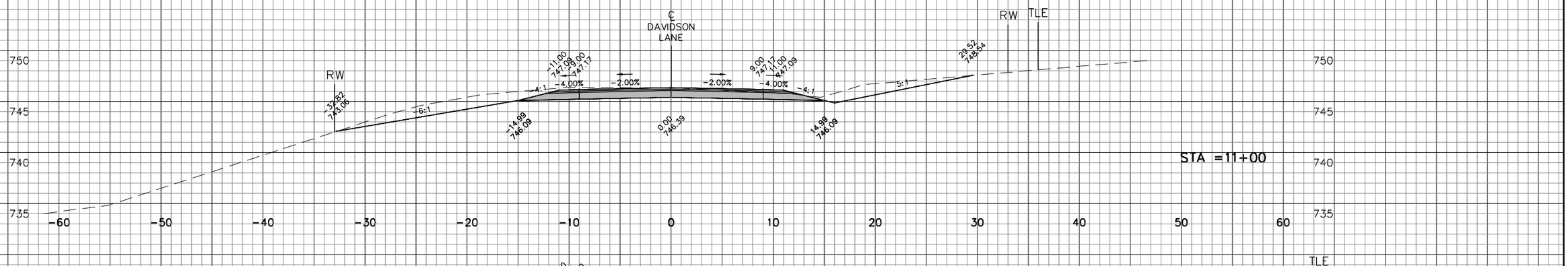
STATION	REAL STATION	DISTANCE (FT)	AREA (SF)			INCREMENTAL VOL (CY) - (UNADJUSTED)			CUMULATIVE VOL (CY)		MASS ORDINATE
			CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	
B 8+61	861	0	9.3	0	0.0	0.0	0	0.0	0.0	0.0	0.0
B 9+00	900	39	52.9	0	0.0	44.9	0	0.0	44.9	0.0	44.9
B 9+50	950	50	21.9	0	0.0	69.3	0	0.0	114.2	0.0	114.2
B 10+00	1000	50	31.5	0	0.0	49.4	0	0.0	163.6	0.0	163.6
B 10+50	1050	50	90.2	0	0.0	112.7	0	0.0	276.3	0.0	276.3
B 11+00	1100	50	11.8	0	4.83	94.4	0	4.5	370.7	5.6	370.7
B 11+50	1150	50	9.6	0	0.0	19.8	0	4.5	390.5	11.25	390.5
B 11+71	1171	21	9.6	0	0.0	7.5	0	0.0	398.0	11.25	398.0
						398.0	0	9.0			

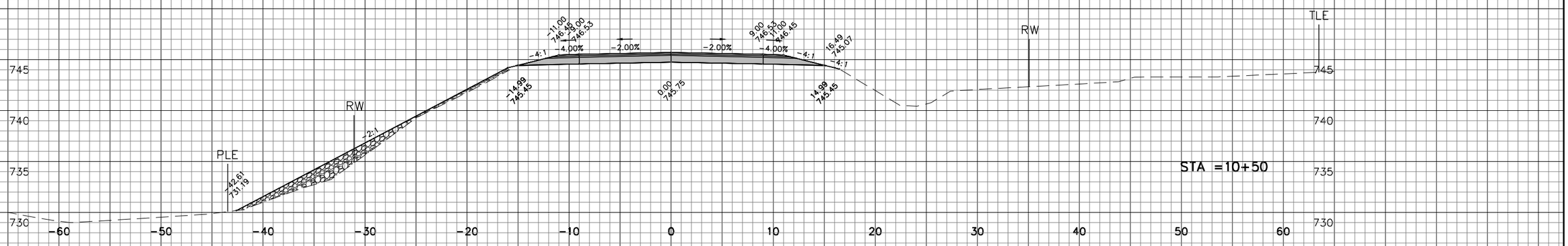


PROJECT NO: 5388-13-71	HWY: DAVIDSON LANE	COUNTY: VERNON	CROSS SECTIONS	SHEET	E

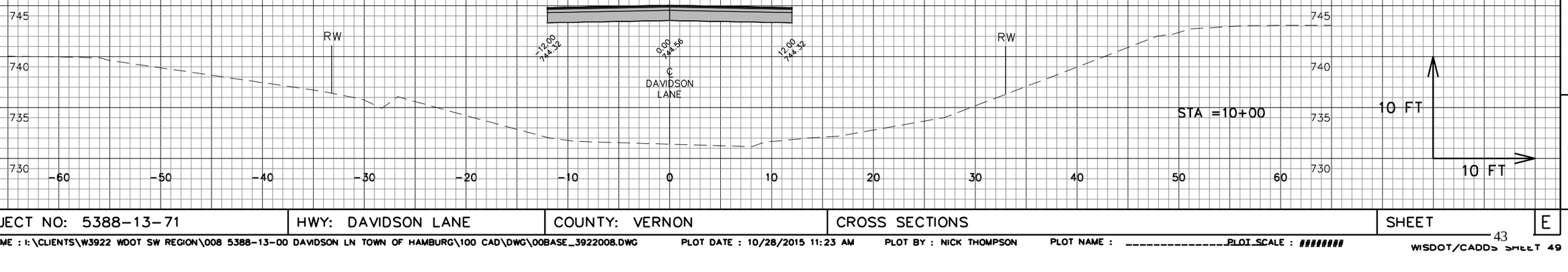
END PROJECT
MATCH EXISTING
11+50







STRUCTURE B-62-0251
10+00



PROJECT NO: 5388-13-71	HWY: DAVIDSON LANE	COUNTY: VERNON	CROSS SECTIONS	SHEET E

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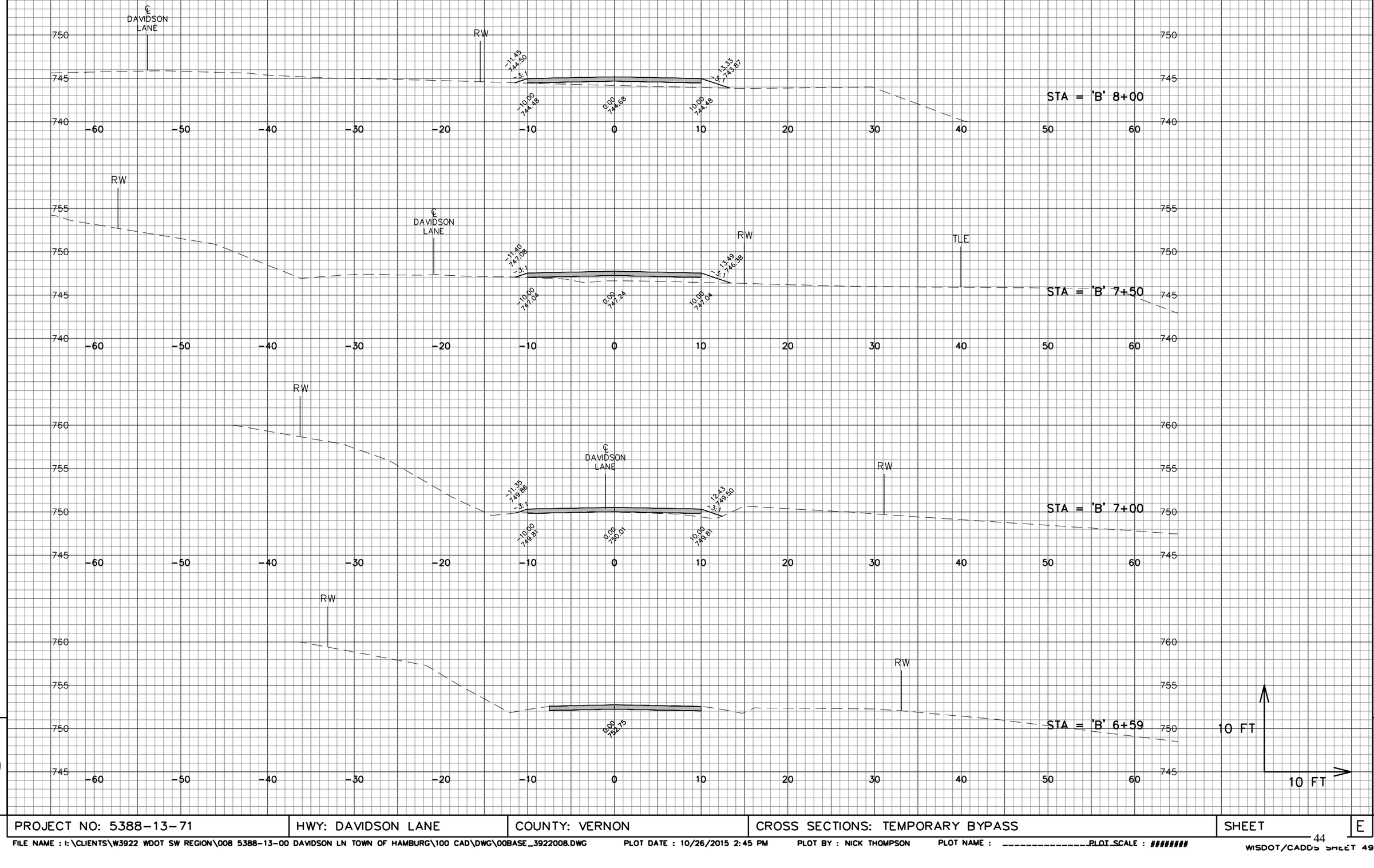

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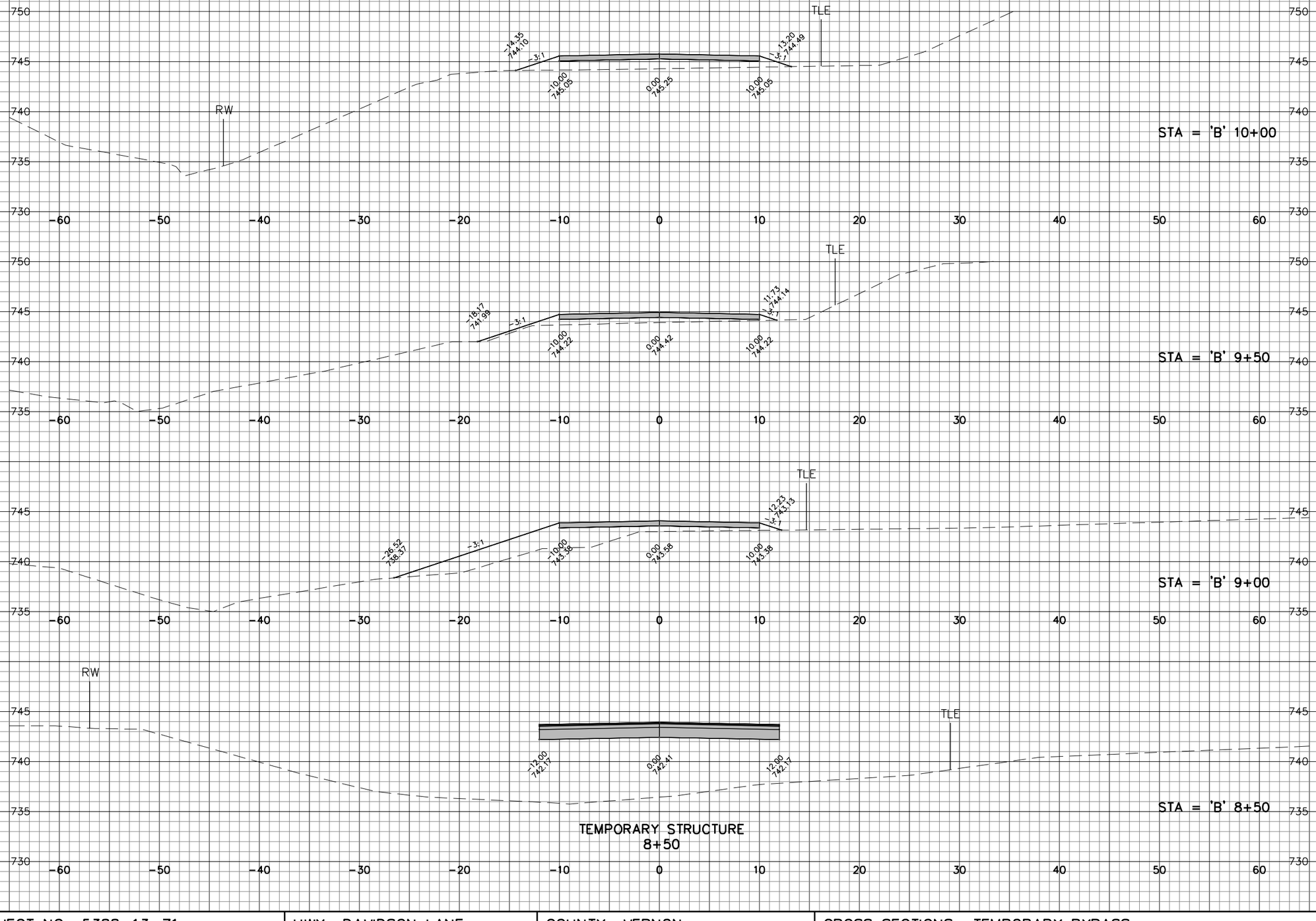
PROJECT NO: 5388-13-71	HWY: DAVIDSON LANE	COUNTY: VERNON	CROSS SECTIONS: TEMPORARY BYPASS	SHEET	E

9



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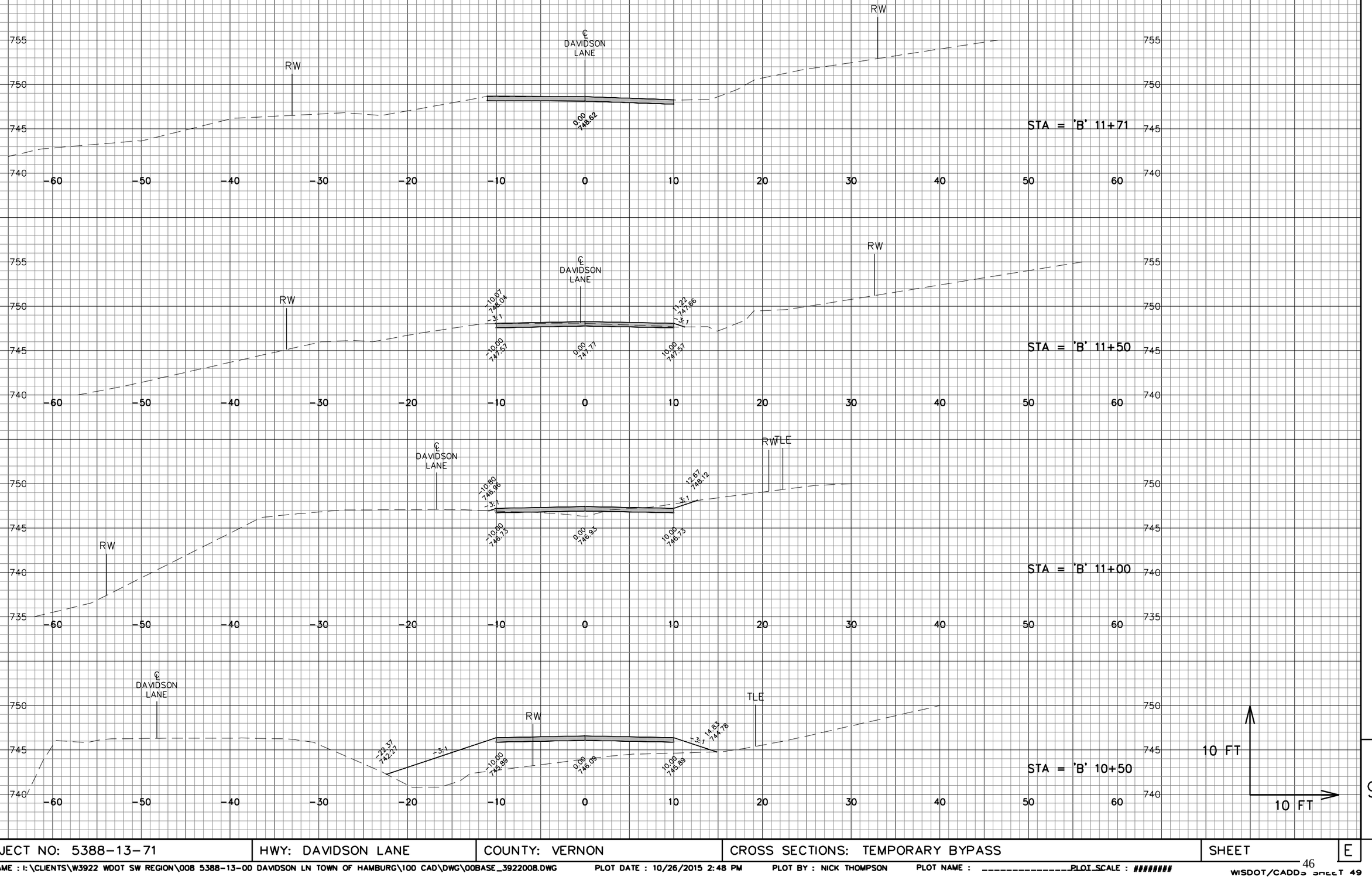

PROJECT NO: 5388-13-71	HWY: DAVIDSON LANE	COUNTY: VERNON	CROSS SECTIONS: TEMPORARY BYPASS	SHEET	E

Notes

Wisconsin Department of Transportation

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