SWL

SEPTEMBER 2017

ORDER OF SHEETS

TOTAL SHEETS = 56

PROJECT ID: 5671-00-76

WITH: N/A

COUNTY: LAFAYETTE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOWN OF DARLINGTON, HOLLAND ROAD

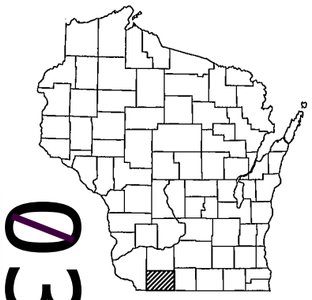
(BRANCH WOODS BRANCH BRIDGE B-33-0130)

TOWN ROAD

LAFAYETTE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5671-00-76	WISC 2017451	1

STATE PROJECT NUMBER
5671-00-76

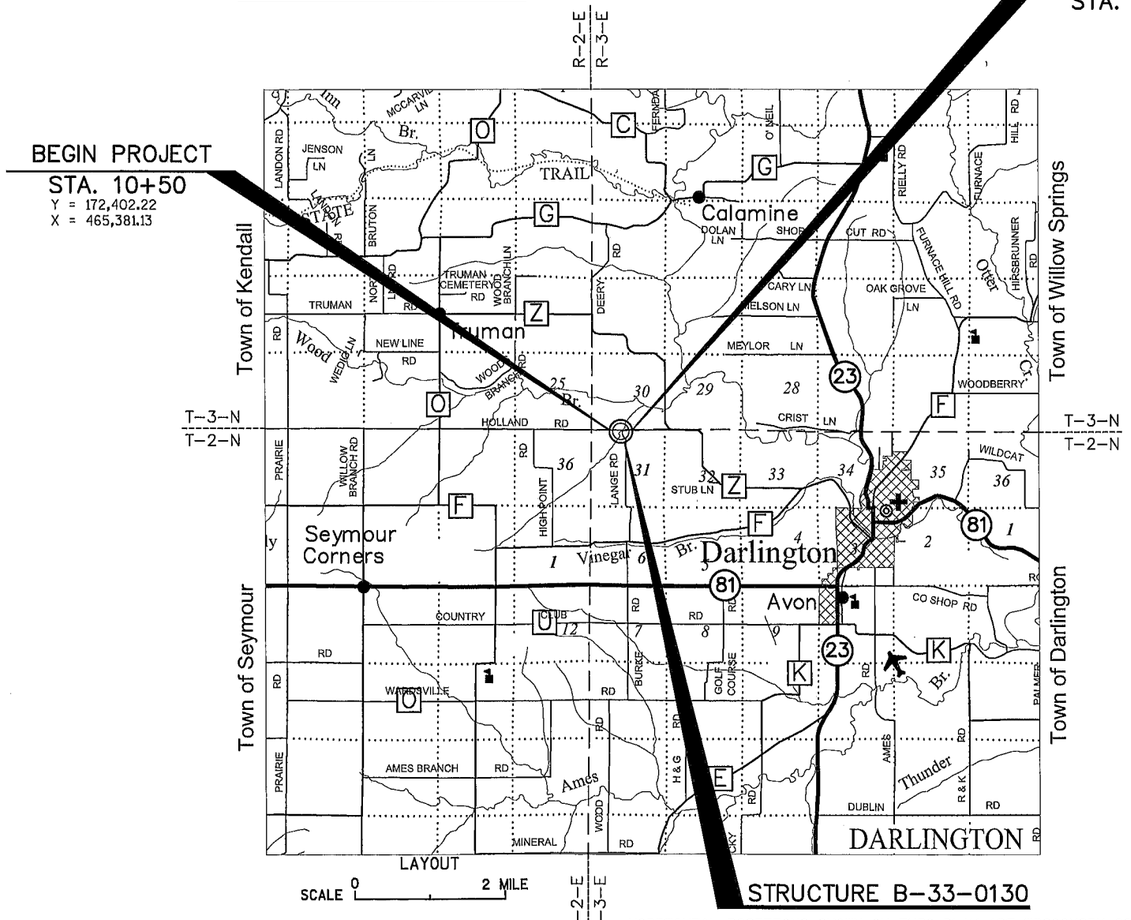


03

N

BEGIN PROJECT
STA. 10+50
Y = 172,402.22
X = 465,381.13

END PROJECT
STA. 14+50



TOTAL NET LENGTH OF CENTERLINE = 0.076 MI.

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

DESIGN DESIGNATION

A.A.D.T.	(2018)	= 170
A.A.D.T.	(2038)	= 250
D.H.V.	(2038)	= 23
D.D.		= 60/40
T.		= 10% (ASSUMED)
DESIGN SPEED		= 30 MPH
ESALS		= 52,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
WOODED OR SHRUB AREA		TELEPHONE POLE	

ACCEPTED FOR
COUNTY of LAFAYETTE
4-20-17 (Date) Thomas R. Jean (Highway Commissioner)

ACCEPTED FOR
TOWN of DARLINGTON
4-20-17 (Date) John E Breidling (Town Chairman)

ACCEPTED FOR
TOWN of WILLOW SPRINGS
4/18/17 (Date) James P Ackerman (Town Chairman)

ORIGINAL PLANS PREPARED BY

JEWELL
associates engineers, inc.
Engineers - Surveyors - Architects

WISCONSIN
ELLERY A. SCHAFFER
E-41742-6
SPRING GREEN, WI
PROFESSIONAL ENGINEER

3/30/17 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JEWELL ASSOCIATES ENGINEERS, INC.
Designer	JEWELL ASSOCIATES ENGINEERS, INC.
Management Consultant	KL ENGINEERING, INC.

APPROVED FOR THE DEPARTMENT
DATE: 4/28/17
Management Consultant Signature

E

LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment	INV	Invert	SALV	Salvaged
AC	Acre	IP	Iron Pipe or Pin	SAN S	Sanitary Sewer
AGG	Aggregate	IRS	Iron Rod Set	SEC	Section
AH	Ahead	JT	Joint	SHLDR	Shoulder
<	Angle	JCT	Junction	SHR	Shrinkage
ASPH	Asphaltic	LHF	Left–Hand Forward	SW	Sidewalk
AVG	Average	L	Length of Curve	S	South
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	SQ	Square
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SF or SQ FT	Square Feet
BK	Back	MH	Manhole	SY or SQ YD	Square Yard
BF	Back Face	MB	Mailbox	STD	Standard
BM	Bench Mark	ML or M/L	Match Line	SDD	Standard Detail Drawings
BR	Bridge	N	North	STH	State Trunk Highways
C or C/L	Center Line	Y	North Grid Coordinate	STA	Station
CC	Center to Center	OD	Outside Diameter	SS	Storm Sewer
CTH	County Trunk Highway	PLE	Permanent Limited Easement	SG	Subgrade
CR	Creek			SE	Superelevation
CR	Crushed	PT	Point	SL or S/L	Survey Line
CY or CU YD	Cubic Yard	PC	Point of Curvature	SV	Septic Vent
CP	Culvert Pipe	PI	Point of Intersection	T	Tangent
C & G	Curb and Gutter	PRC	Point of Reverse Curvature	TEL	Telephone
D	Degree of Curve	PT	Point of Tangency	TEMP	Temporary
DHV	Design Hour Volume	POC	Point On Curve	TI	Temporary Interest
DIA	Diameter	POT	Point on Tangent	TLE	Temporary Limited Easement
E	East	PVC	Polyvinyl Chloride		
X	East Grid Coordinate	PCC	Portland Cement Concrete	t	Ton
ELEC	Electric (al)	LB	Pound	T or TN	Town
EL or ELEV	Elevation	PSI	Pounds Per Square Inch	TRANS	Transition
ESALS	Equivalent Single Axle Loads	PE	Private Entrance	TL or T/L	Transit Line
		R	Radius	T	Trucks (percent of)
EBS	Excavation Below Subgrade	RR	Railroad	TYP	Typical
FF	Face to Face	R	Range	UNCL	Unclassified
FE	Field Entrance	RL or R/L	Reference Line	UG	Underground Cable
F	Fill	RP	Reference Point	USH	United States Highway
FG	Finished Grade	RCCP	Reinforced Concrete Culvert Pipe	VAR	Variable
FL or F/L	Flow Line			V	Velocity or Design Speed
FT	Foot	REQ'D	Required	VERT	Vertical
FTG	Footing	RES	Residence or Residential	VC	Vertical Curve
GN	Grid North	RW	Retaining Wall	VOL	Volume
HT	Height	RT	Right	WM	Water Main
CWT	Hundredweight	RHF	Right–Hand Forward	WV	Water Valve
HYD	Hydrant	R/W	Right–of–Way	W	West
INL	Inlet	R	River	WB	Westbound
ID	Inside Diameter	RD	Road	YD	Yard
		RDWY	Roadway		

GENERAL NOTES

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

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

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 COMMON EXCAVATION. EXACT LOCATIONS OF EBS WILL BE DETERMINED BY THE ENGINEER.

DISTURBED AREAS SHOWN WITHIN THE RIGHT–OF–WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEED MIX NO. 20), AND MULCHED/EROSION MAT URBAN CLASS I TYPE B AS DIRECTED BY THE ENGINEER. ALL POST CONSTRUCTION WET AREAS SHALL BE SEEDED WITH SEEDING MIXTURE NO. 60.

WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE DENSE, BREAKER RUN, OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

SILT FENCE, TEMPORARY DITCH CHECKS AND CULVERT PIPE CHECKS SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO STRUCTURE REMOVAL.

MULCH/EROSION MAT URBAN CLASS I TYPE B ALL MAINLINE SLOPES AS DIRECTED BY THE ENGINEER IN THE FIELD.

FILL EXPANSION IS VARIABLE AND IS ESTIMATED AT 25%.

ADJUST DITCH GRADING AS NECESSARY TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

3½–INCHES OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1¾–INCH UPPER LAYER AND A 1¾–INCH LOWER LAYER. THE NOMINAL SIZE OF AGGREGATE USED FOR THE LOWER LAYER SHALL BE 12.5 MM.

REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

INLET & OUTLET ELEVATIONS FOR CULVERT PIPES AS SHOWN ON THE PLAN MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS.

THE LOCATION OF ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD PRIOR TO PLACEMENT.

WETLANDS ARE PRESENT IN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOT OPERATE EQUIPMENT BEYOND THE SLOPE INTERCEPTS FROM STA. 10+50–12+95, LT., STA. 10+50–12+64, RT..

ALL RADII DIMENSIONS ARE MEASURED TO THE EDGE OF ASPHALT.

CURVE DATA IS BASED ON THE ARC DEFINITION.

CONTACTS

DESIGN CONSULTANT
JEWELL ASSOCIATES ENGINEERS, INC.
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
ATTN: ELLERY SCHAFFER, P.E.
PHONE: (608) 588-7484
FAX: (608) 588-9322
EMAIL: ellery.schaffer@jewellassoc.com

DNR LIAISON
STATE OF WISCONSIN
DNR SOUTH CENTRAL REGION HQ
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
ATTN: LAURA BUB
PHONE: (608) 275-3485
EMAIL: laura.bub@wisconsin.gov

LAFAYETTE COUNTY HIGHWAY DEPARTMENT
TOM JEAN, COMMISSIONER
12016 HILL STREET
DARLINGTON, WI 53530
PH: (608) 776–4919
EMAIL: Tom.Jean@lafayettecountywi.org

TOWN OF DARLINGTON
JOHN REICHLING, CHAIRMAN
11389 OTTER CREEK ROAD
DARLINGTON, WI 53530
PHONE: (608) 776-2558

TOWN OF WILLOW SPRINGS
JAMES ACHERMAN, CHAIRMAN
17577 COUNTY ROAD G
MINERAL POINT, WI 53565
PHONE: (608) 776-2973
EMAIL: jamesacherman@gmail.com

UTILITIES

ELECTRIC
SCENIC RIVERS ENERGY COOPERATIVE
ATTN: CHAD OLMSTEAD
231 NORTH SHERIDAN STREET
LANCASTER, WI 53813
OFFICE: (608) 723–2121 EXT. 561
FAX: (608) 723–2688
EMAIL: colmstead@srec.net

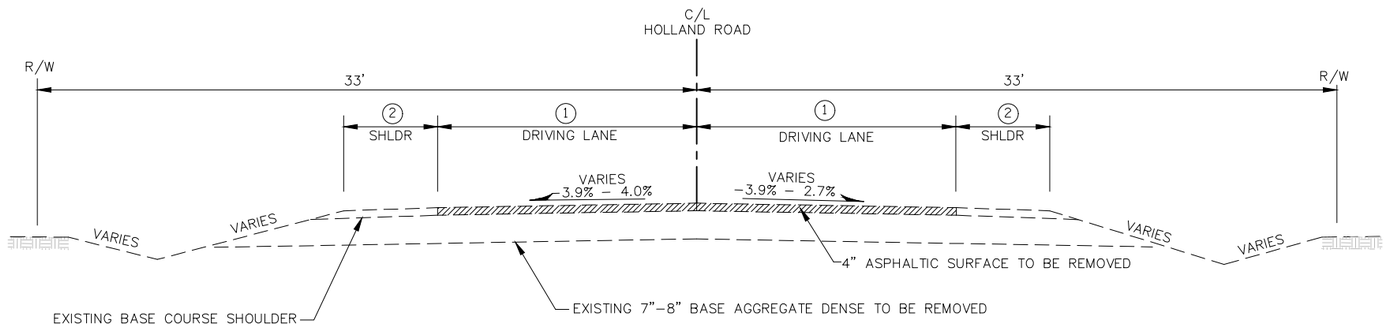
COMMUNICATION LINE
CENTURYLINK
ATTN: TRAVIS KREMSREITER
135 N. BONSON STREET
PLATTEVILLE, WI 53818
OFFICE: (608) 342–4369
CELL: (608) 732–8948
EMAIL: Travis.Kremsreiter@centurylink.com

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

* DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE

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

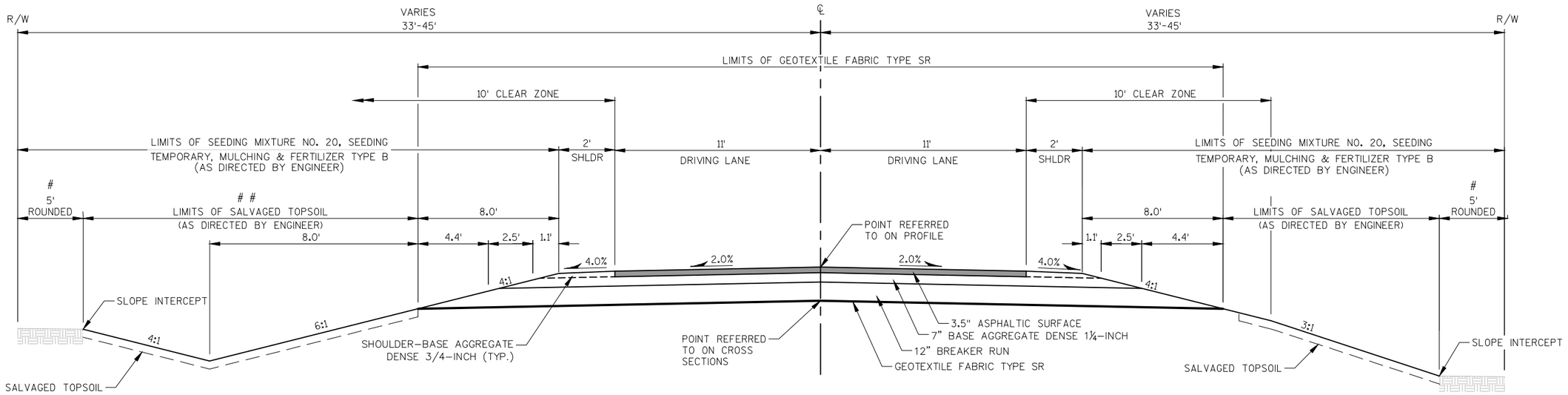
TOTAL PROJECT AREA= 1.07 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.91 ACRES



TYPICAL EXISTING SECTION

	① (FT)	② (FT)
HOLLAND ROAD	9-11	2-3
LANGE ROAD	10	2

PROJECT NO:5671-00-76	HWY:HOLLAND ROAD	COUNTY:LAFAYETTE	GEN NOTES - CONTACTS - UTILITIES - LAYOUT	SHEET 2	E

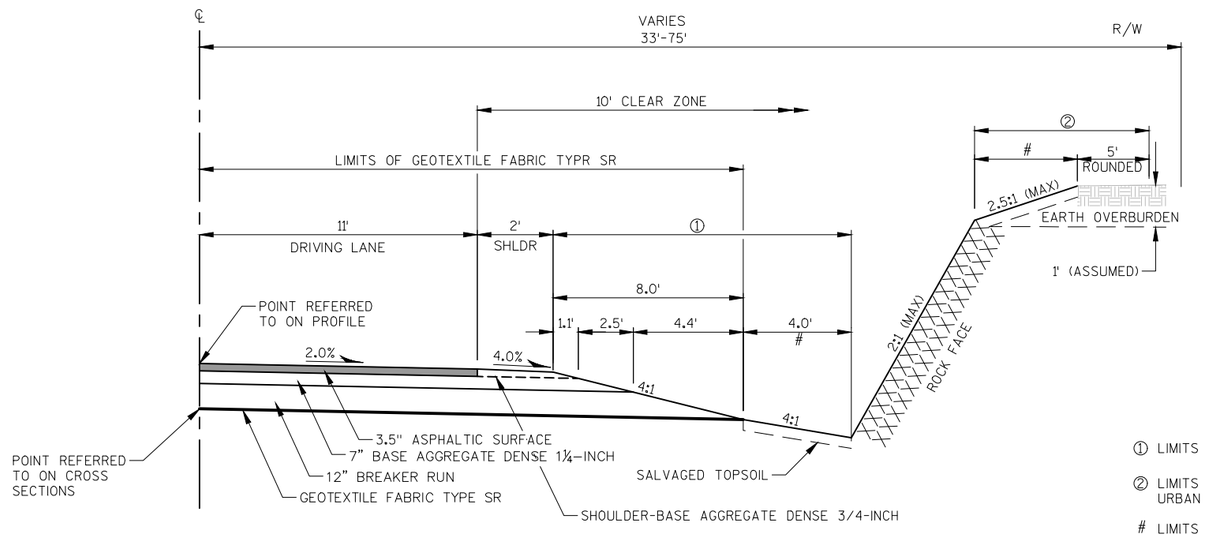


TYPICAL FINISHED SECTION

(HOLLAND ROAD)
(STA. 10+50 - STA. 14+50, LT.)
(STA. 10+50 - STA. 12+88.02, RT.)

\# APPLY SEEDING MIXTURE NO. 60 IN LIEU SEEDING MIXTURE NO. 20 AT THE FOLLOWING LOCATIONS:
STA. 10+50 - STA. 12+95, LT.
STA. 10+50 - STA. 12+64, RT.

\# \# APPLY SEEDING MIXTURE NO. 60 IN LIEU SEEDING MIXTURE NO. 20 AT THE FOLLOWING LOCATIONS:
STA. 10+50 - STA. 11+97, LT.



TYPICAL FINISHED SECTION

CUT

(HOLLAND ROAD)
(STA. 12+88.02 - STA. 14+50, RT.)

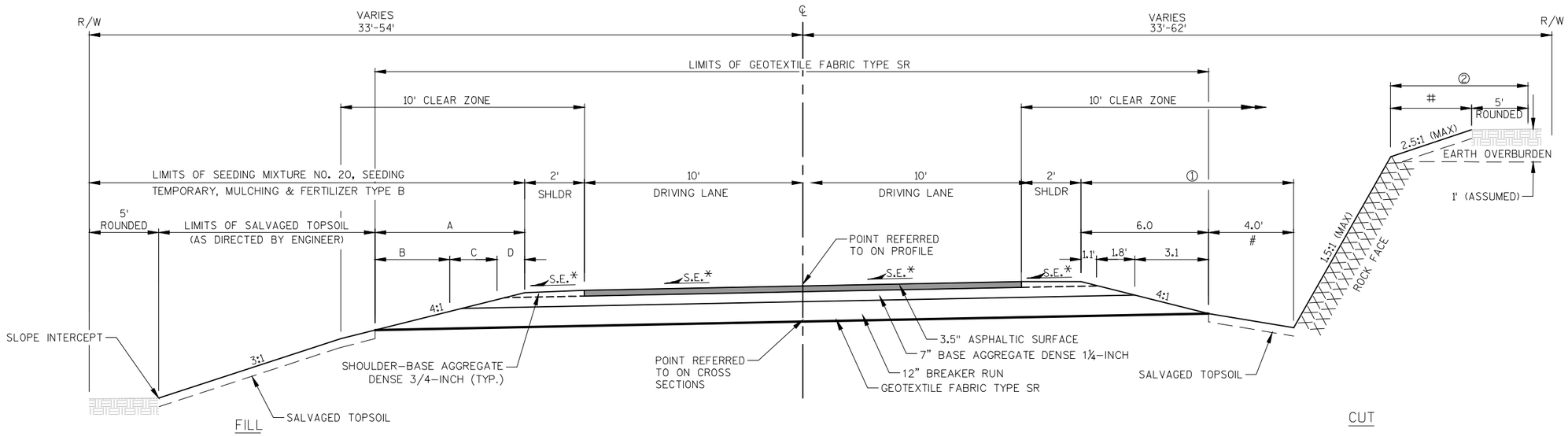
① LIMITS OF SEEDING MIXTURE NO. 20, SEEDING TEMPORARY, MULCHING & FERTILIZER TYPE B

② LIMITS OF SEEDING MIXTURE NO. 20, SEEDING TEMPORARY, FERTILIZER TYPE B & EROSION MAT URBAN CLASS I TYPE B

\# LIMITS OF SALVAGED TOPSOIL

PROJECT NO: 5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	TYPICAL FINISHED SECTION	SHEET 3	E

FILE NAME : S:\PROJECTS\K19260 HOLLAND RD LAFAYETTE COUNTY\SHEETSPLAN\TYPICALS\PROPOSED TYP.DWG
LAYOUT : HOLLAND RD
PLOT DATE : 3/14/2017
PLOT TIME : 9:20:24 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'



SUPERELEVATION TABLE

STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
21+70	MATCH EXISTING	MATCH EXISTING	-	-	-	-
22+00	0.4	0.4	7.3	3.9	2.3	1.1
22+50	3.4	3.4	8.6	4.6	2.7	1.3
22+84	MATCH MAINLINE	MATCH MAINLINE	-	-	-	-

TYPICAL FINISHED SECTION

(LANGE ROAD)

① LIMITS OF SEEDING MIXTURE NO. 20, SEEDING TEMPORARY, MULCHING & FERTILIZER TYPE B

① LIMITS OF SEEDING MIXTURE NO. 20, SEEDING TEMPORARY, FERTILIZER TYPE B & EROSION MAT URBAN CLASS I TYPE B

\# LIMITS OF SALVAGED TOPSOIL

THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION WHEN THE SUPERELEVATION IS GREATER THAN 0.04 FT./FT. IF THE SUPERELEVATION IS LESS THAN OR EQUALS 0.04 FT./FT., THEN THE LOW SIDE SHOULDER SLOPE IS 0.04 FT./FT. THE HIGH SIDE SHOULDER SLOPE ON THE SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION.

* SEE SUPERELEVATION TABLE

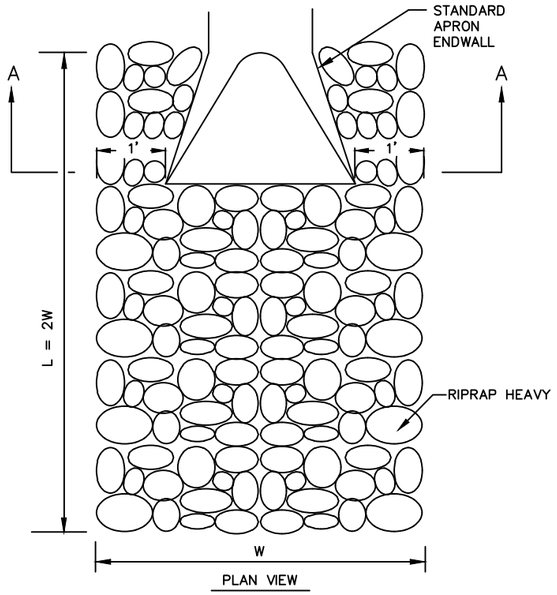
PROJECT NO: 5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	TYPICAL FINISHED SECTION	SHEET 4	E

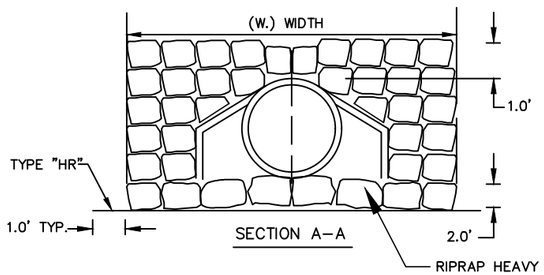
FILE NAME : S:\PROJECTS\K19260 HOLLAND RD LAFAYETTE COUNTY\SHEETSPLAN\TYPICALS\PROPOSED TYP.DWG
LAYOUT : LANGE RD

PLOT DATE : 3/14/2017
PLOT TIME : 8:01:29 AM

PLOT BY : JULIA ZEHNER

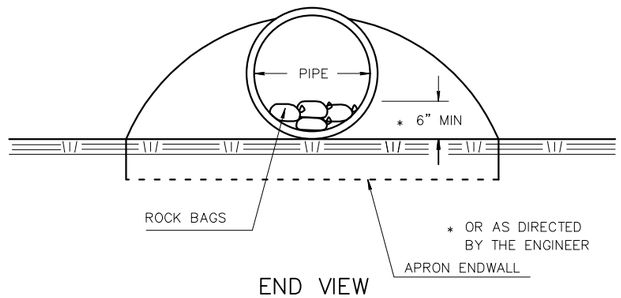
PLOT SCALE : 1" = 1'



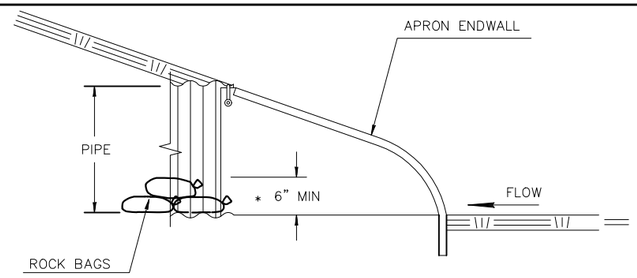


RIPRAP DISCHARGE APRON

(UNLESS NOTED OTHERWISE ON PLAN)

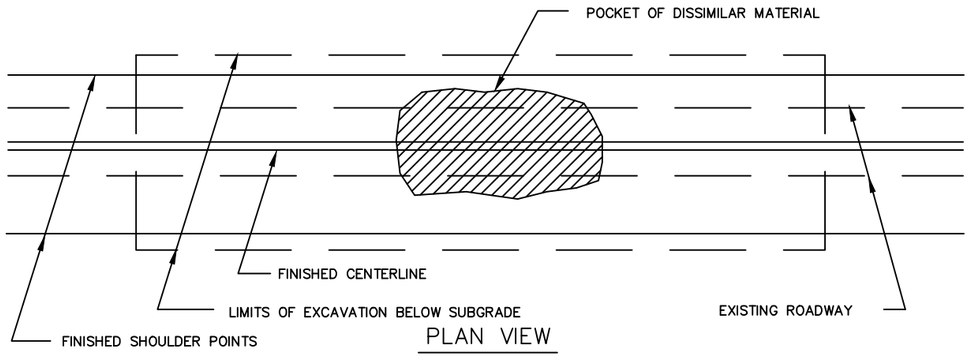


END VIEW

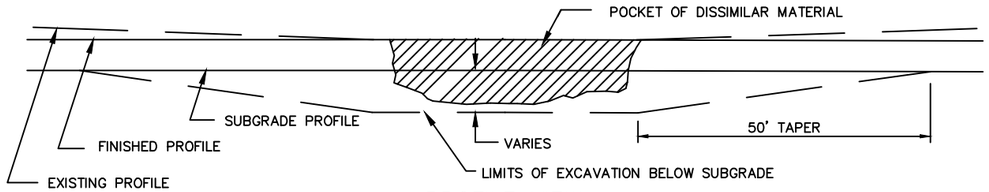


SIDE VIEW

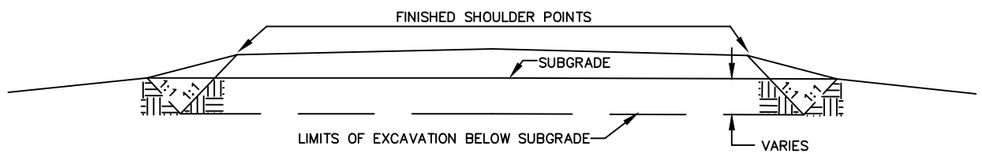
CULVERT PIPE CHECKS



PLAN VIEW



PROFILE VIEW



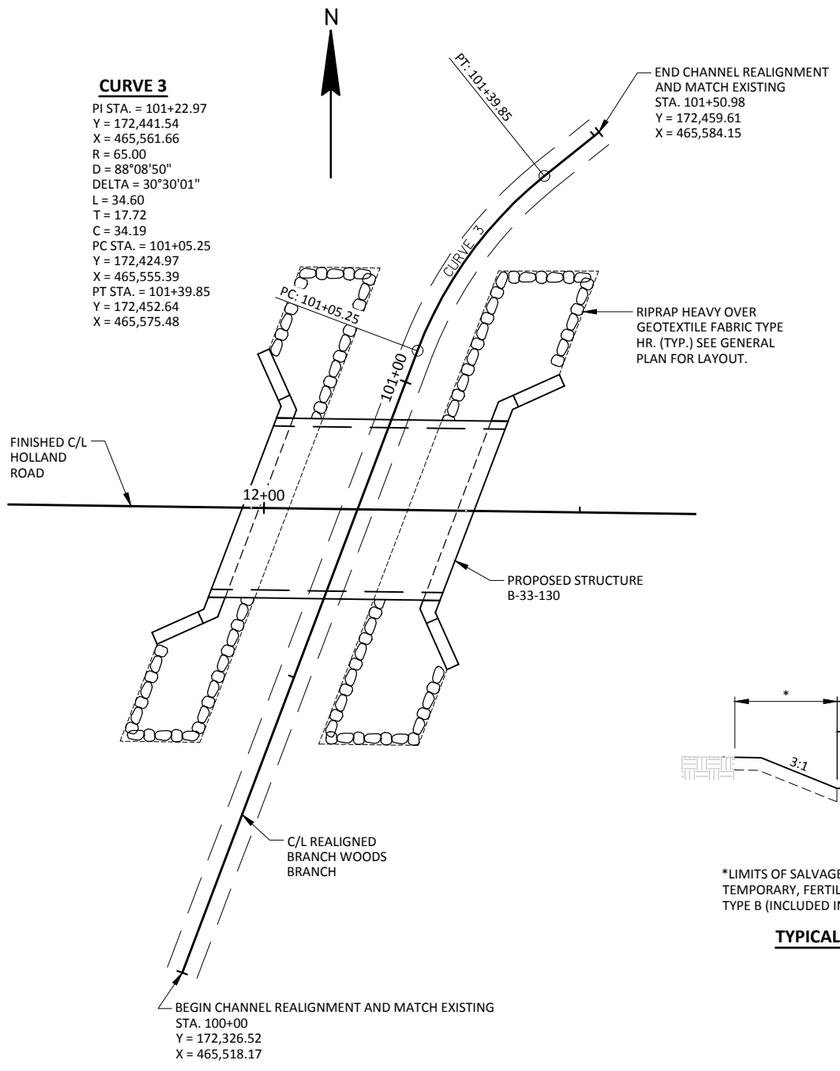
CROSS SECTION VIEW

1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.

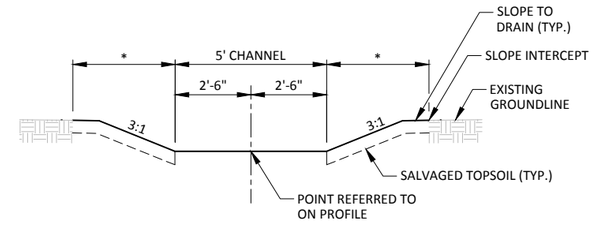
3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.

EXCAVATION BELOW SUBGRADE (E.B.S.)



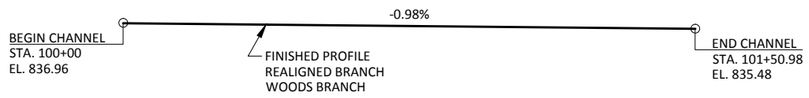
CHANNEL REALIGNMENT - PLAN VIEW

EARTHWORK AT CHANNEL REALIGNMENT TO BE INCLUDED IN CATEGORY 010 MAINLINE QUANTITIES.



*LIMITS OF SALVAGED TOPSOIL, SEEDING MIXTURE NO. 60, SEEDING TEMPORARY, FERTILIZER TYPE B, AND EROSION MAT URBAN CLASS I TYPE B (INCLUDED IN CATEGORY 010 MAINLINE QUANTITIES)

TYPICAL CHANNEL REALIGNMENT SECTION

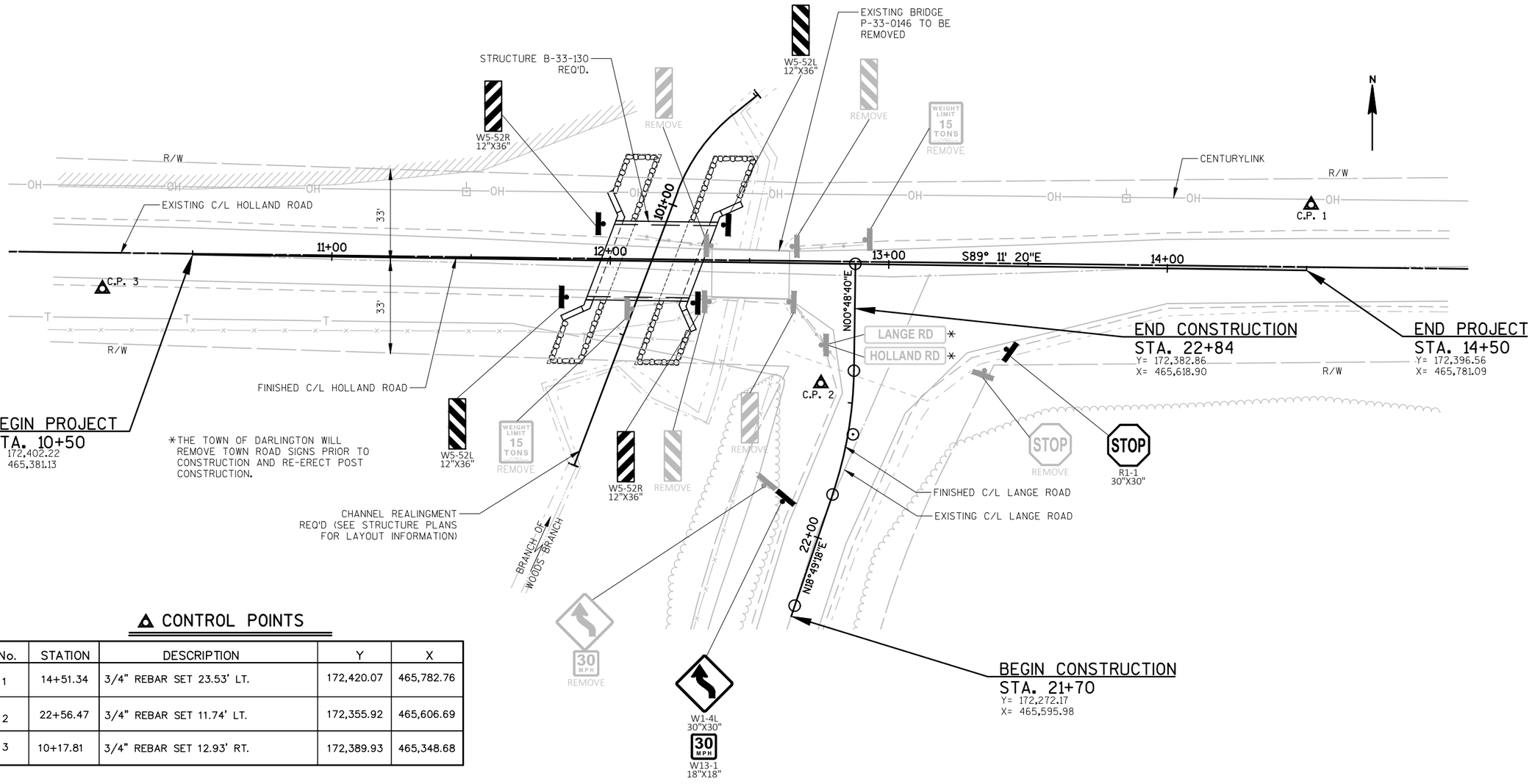


CHANNEL REALIGNMENT - PROFILE GRADE LINE

CHANNEL REALIGNMENT DETAILS

PROJECT NO: 5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	CONSTRUCTION DETAILS	SHEET 6	E

FILE NAME : S:\PROJECTS\K19260 HOLLAND RD LAFAYETTE COUNTY\SHEETSPLAN\DETAILS\CONSTRUCTION DETAILS
LAYOUT : 2.0X8.5T1
PLOT DATE : 4/18/2017
PLOT TIME : 2:06:21 PM
PLOT BY : STRINE, THERESA
PLOT SCALE : 1" = 1'



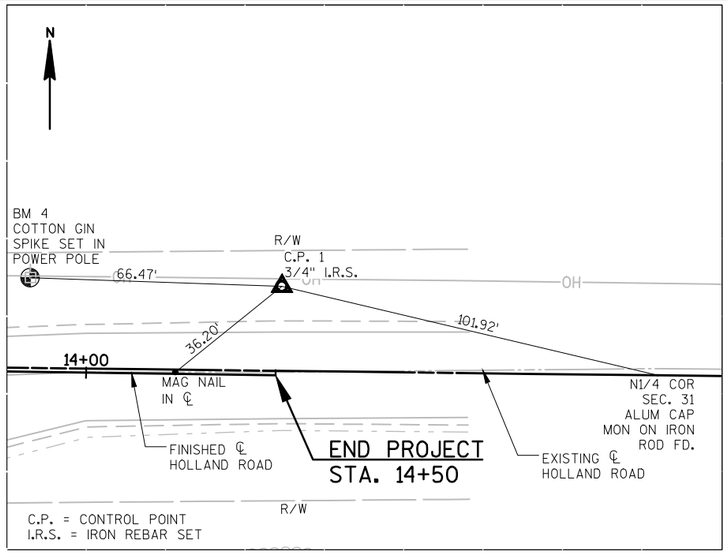
*THE TOWN OF DARLINGTON WILL REMOVE TOWN ROAD SIGNS PRIOR TO CONSTRUCTION AND RE-ERECT POST CONSTRUCTION.

▲ CONTROL POINTS

No.	STATION	DESCRIPTION	Y	X
1	14+51.34	3/4" REBAR SET 23.53' LT.	172,420.07	465,782.76
2	22+56.47	3/4" REBAR SET 11.74' LT.	172,355.92	465,606.69
3	10+17.81	3/4" REBAR SET 12.93' RT.	172,389.93	465,348.68

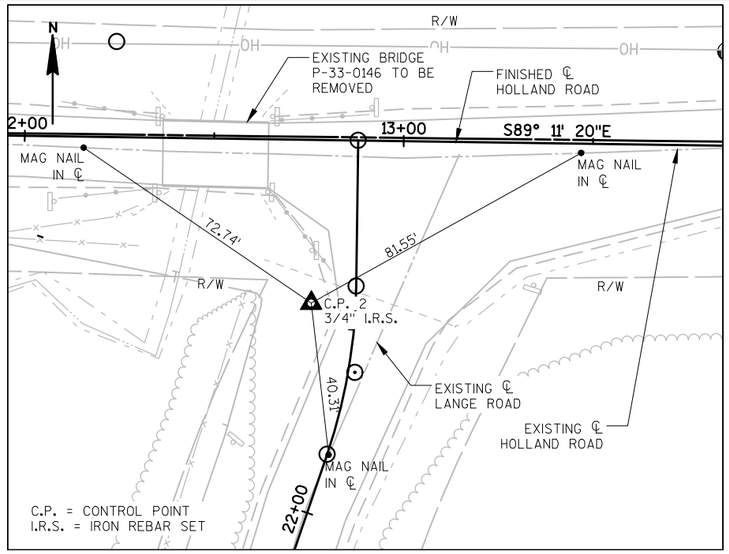
PROJECT NO: 5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	TIES AND ALIGNMENT PLAN	SHEET 7	E

FILE NAME : S:\PROJECTS\K19260 HOLLAND RD LAFAYETTE COUNTY\SHEETSPLAN\DETAILS\TIES AND ALIGNMENT.DWG
LAYOUT : ALIGNMENT.DWG
PLOT DATE : 3/14/2017
PLOT TIME : 11:47:13 AM
PLOT BY : STRINE, THERESA
PLOT SCALE : 1" = 1'



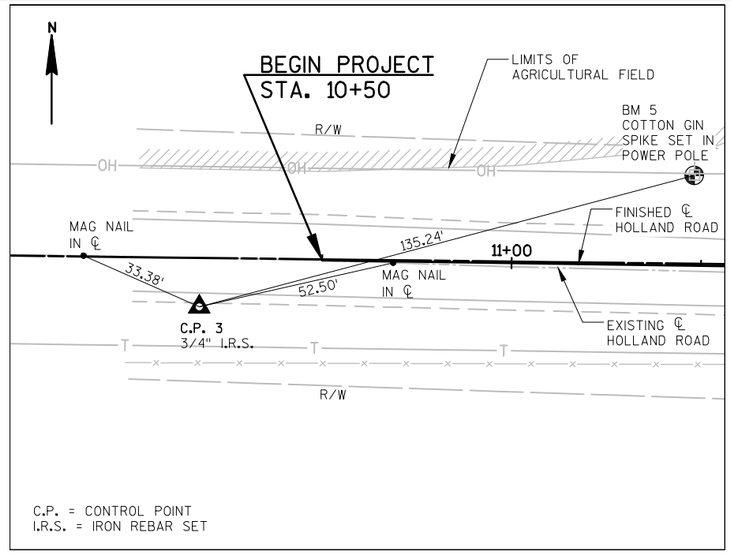
TIES TO C.P.#1

STA. 14+51.34; 23.53' LT.
Y = 172,420.07
X = 465,782.76



TIES TO C.P.#2

STA. 22+56.47; 11.74' LT.
Y = 172,355.92
X = 465,606.69



TIES TO C.P.#3

STA. 10+17.81; 12.93' RT.
Y = 172,389.93
X = 465,348.68

HOLLAND ROAD STATION LAYOUT

STATION	Y	X	COMMENTS
10+50	172,402.22	465,381.13	BEGIN PROJECT
11+00	172,401.52	465,431.12	–
11+50	172,400.81	465,481.12	–
11+96.58	172,400.15	465,527.69	END OF DECK
12+00	172,400.10	465,531.11	–
12+33.24	172,399.63	465,564.35	END OF DECK
12+50	172,399.39	465,581.11	–
13+00	172,398.69	465,631.10	–
13+50	172,397.98	465,681.10	–
14+00	172,397.27	465,731.09	–
14+50	172,396.56	465,781.09	END OF PROJECT

LANGE ROAD STATION LAYOUT

STATION	Y	X	COMMENTS
21+70	172,272.17	465,595.98	BEGIN CONSTRUCTION
22+00	172,300.58	465,605.62	–
22+50	172,348.88	465,617.95	–
22+84	172,382.86	465,618.90	END CONSTRUCTION

5671-00-76

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	2.000	2.000
0004	201.0205	Grubbing	STA	2.000	2.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	203.0500.S	Removing Old Structure Over Waterway (station) 01. Sta. 12+50	LS	1.000	1.000
0010	205.0100	Excavation Common	CY	910.000	910.000
0012	205.0200	Excavation Rock	CY	640.000	640.000
0014	206.1000	Excavation for Structures Bridges (structure) 01. B-33-0130	LS	1.000	1.000
0016	210.1500	Backfill Structure Type A	TON	250.000	250.000
0018	213.0100	Finishing Roadway (project) 01. 5671-00-76	EACH	1.000	1.000
0020	305.0110	Base Aggregate Dense 3/4-Inch	TON	70.000	70.000
0022	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	750.000	750.000
0024	311.0110	Breaker Run	TON	1,370.000	1,370.000
0026	455.0605	Tack Coat	GAL	75.000	75.000
0028	465.0105	Asphaltic Surface	TON	290.000	290.000
0030	502.0100	Concrete Masonry Bridges	CY	125.000	125.000
0032	502.3200	Protective Surface Treatment	SY	140.000	140.000
0034	505.0400	Bar Steel Reinforcement HS Structures	LB	4,530.000	4,530.000
0036	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	15,090.000	15,090.000
0038	513.4061	Railing Tubular Type M (structure) 01. B-33-0130	LF	77.000	77.000
0040	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0042	520.1036	Apron Endwalls for Culvert Pipe 36-Inch	EACH	2.000	2.000
0044	520.3336	Culvert Pipe Class III-A 36-Inch	LF	60.000	60.000
0046	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	410.000	410.000
0048	606.0300	Riprap Heavy	CY	170.000	170.000
0050	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	180.000	180.000
0052	614.0920	Salvaged Rail	LF	110.000	110.000
0054	619.1000	Mobilization	EACH	1.000	1.000
0056	624.0100	Water	MGAL	20.000	20.000
0058	625.0500	Salvaged Topsoil **P**	SY	2,300.000	2,300.000
0060	627.0200	Mulching **P**	SY	2,950.000	2,950.000
0062	628.1504	Silt Fence	LF	740.000	740.000
0064	628.1520	Silt Fence Maintenance	LF	1,480.000	1,480.000
0066	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0068	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0070	628.2008	Erosion Mat Urban Class I Type B **P**	SY	700.000	700.000
0072	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0074	628.7555	Culvert Pipe Checks	EACH	7.000	7.000
0076	629.0210	Fertilizer Type B **P**	CWT	2.000	2.000

5671-00-76

Line	Item	Item Description	Unit	Total	Qty
0078	630.0120	Seeding Mixture No. 20 **P**	LB	75.000	75.000
0080	630.0160	Seeding Mixture No. 60 **P**	LB	13.000	13.000
0082	630.0200	Seeding Temporary **P**	LB	50.000	50.000
0084	633.5100	Markers Row	EACH	18.000	18.000
0086	633.5200	Markers Culvert End	EACH	2.000	2.000
0088	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0090	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	2.000	2.000
0092	637.2210	Signs Type II Reflective H	SF	5.180	5.180
0094	637.2230	Signs Type II Reflective F	SF	20.500	20.500
0096	638.2602	Removing Signs Type II	EACH	9.000	9.000
0098	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0100	642.5001	Field Office Type B	EACH	1.000	1.000
0102	643.0100	Traffic Control (project) 01. 5671-00-76	EACH	1.000	1.000
0104	645.0111	Geotextile Type DF Schedule A	SY	90.000	90.000
0106	645.0120	Geotextile Type HR	SY	300.000	300.000
0108	645.0135	Geotextile Type SR	SY	2,430.000	2,430.000
0110	650.4500	Construction Staking Subgrade	LF	630.000	630.000
0112	650.5000	Construction Staking Base	LF	480.000	480.000
0114	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0116	650.6500	Construction Staking Structure Layout (structure) 01. B-33-0130	LS	1.000	1.000
0118	650.9910	Construction Staking Supplemental Control (project) 01. 5671-00-76	LS	1.000	1.000
0120	650.9920	Construction Staking Slope Stakes	LF	630.000	630.000
0122	690.0150	Sawing Asphalt	LF	63.000	63.000
0124	715.0502	Incentive Strength Concrete Structures	DOL	750.000	750.000

ALL BID ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

CLEARING & GRUBBING

STATION - STATION	LOCATION	201.0105 CLEARING (STA.)	201.0205 GRUBBING (STA.)
13+00 - 14+00	MAINLINE, RT.	1	1
21+70 - 22+70	LANGE ROAD	1	1
	TOTALS =	2	2

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 (EACH)	REMARKS
22+60	Lange Road	1	18" CMP, L=53'
	TOTAL =	1	

SALVAGED GUARDRAIL

STATION-STATION	LOCATION	614.0920 (LF)
12+10 - 12+37	MAINLINE, LT.	27
12+09 - 12+36	MAINLINE, RT.	27
12+65 - 12+91	MAINLINE, LT.	28
12+65 - 12+82	MAINLINE, RT.	28
	TOTAL =	110

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	311.0110 BREAKER RUN (TON)
10+50-14+50	MAINLINE	50	590	1076
21+70-22+84	LANGE ROAD	13	114	211
-	UNDISTRIBUTED	7	46	83
	TOTALS =	70	750	1370

EARTHWORK SUMMARY

FROM/TO STA	LOCATION	(1) 205.0100 COMMON EXCAVATION CUT (CY)	(2) AVAILABLE MATERIAL (CY)	(3) 205.0200 ROCK EXCAVATION (CY)	(4) EXPANDED ROCK (CY) FACTOR 1.1	UNEXPANDED FILL (CY)	(5) EXPANDED FILL (CY) FACTOR 1.25	(6) MASS ORDINATE +/- (CY)	WASTE (CY)
10+50-14+50	MAINLINE	435	435	283	312	725	516	-81	-81
21+70-22+84	LANGE ROAD	108	108	357	393	200	-241	349	349
100+00 - 101+50.98	CHANNEL REALIGNMENT	367	367	0	0	0	0	367	367
	TOTALS =	910	910	640	705	925	275	635	635

NOTES:
1.) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
2.) AVAILABLE MATERIAL = CUT
3.) ROCK EXCAVATION. ITEM NUMBER 205.0200
4.) EXPANDED ROCK FACTOR = 1.1
5.) EXPANDED FILL FACTOR 1.25: EXPANDED FILL = (UNEXPANDED FILL - (ROCK * ROCK FACTOR))*1.25
6.) THE MASS ORDINATE+ OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY.

NOTE: WASTE EXCESS CHANNEL REALIGNMENT MATERIAL. DO NOT USE EXCESS EXCAVATED MATERIAL FROM CHANNEL REALIGNMENT ACTIVITIES IN ROADWAY RECONSTRUCTION APPROACH COSNTRUCTION.

ASPHALTIC SURFACE

STATION - STATION	LOCATION	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)
10+50-14+50	MAINLINE	58	231
21+70-22+84	LANGE ROAD	11	42
	UNDISTRIBUTED	6	17
	TOTAL S =	75	290

CULVERT PIPES

STATION	LOCATION	520.1036 APRON ENDWALLS FOR CULVERT PIPE 36-INCH (EACH)	520.3336 CULVERT PIPE CLASS III-A 36-INCH (LF)	628.7555 CULVERT PIPE CHECKS (EACH)	650.6000 CONSTRUCTION STAKING PIPE CULVERTS (EACH)
22+50	LANGE ROAD	2	60	7	1
	TOTAL =	2	60	7	1

STEEL THICKNESS (MIN.) = 0.079 INCHES
ALUMINUM THICKNESS (MIN.) = 0.105 INCHES

RIPRAP HEAVY

STATION	LOCATION	*606.0300 RIPRAP HEAVY (CY)	*645.0120 GEOTEXTILE FABRIC TYPE HR (SY)
22+50	LANGE ROAD, LT.	10	25
-	UNDISTRIBUTED	-	5
	TOTAL =	10	30

*MORE LISTED ELSEWHERE

WATER

PROJECT	624.0100 (MGAL)
5671-00-76	20
TOTAL =	20

FINISHING ITEMS

SEE TYPICAL FINISHED SECTIONS FOR APPLICATION LOCATIONS

STATION - STATION	LOCATION	**P** 625.0500 SALVAGED TOPSOIL (SY)	**P** 627.0200 MULCHING (SY)	**P** 628.2008 EROSION MAT URBAN CLASS I TYPE B (SY)	**P** 629.0210 FERTILIZER TYPE B (CWT)	**P** 630.0120 SEEDING MIXTURE NO. 20 (LB)	**P** #630.0160 SEEDING MIXTURE NO. 60 (LB)	**P** 630.0200 SEEDING TEMPORARY (LB)
10+50-14+50	MAINLINE	1113	1714	95	1.1	35	7	24
21+70-22+84	LANGE ROAD	494	652	216	0.5	24	-	12
100+00-101+50.98	CHANNEL REALIGNMENT	252	-	252	0.2	-	4	4
-	UNDISTRIBUTED	441	584	137	0.2	16	2	10
	TOTALS =	2300	2950	700	2.0	75	13.0	50

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
11+75-14+50	MAINLINE, LT.	208	416
11+77-12+33	MAINLINE, RT.	52	104
21+70-22+30	LANGE ROAD, LT.	66	132
100+00 - 101+18	CHANNEL REALIGNMENT, LT.	118	236
100+00 - 101+47	CHANNEL REALIGNMENT, RT.	147	294
-	UNDISTRIBUTED	149	298
	TOTALS =	740	1480

ALL BID ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

3

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
5671-00-76	5	2
TOTALS =	5	2

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF)
11+50	MAINLINE, LT	10
11+50	MAINLINE, RT	10
14+00	MAINLINE, RT	10
22+00	MAINLINE, RT	10
-	UNDISTRIBUTED	10
	TOTAL =	50

MARKERS ROW

POINT	STATION	LOCATION	633.5100 (EACH)
1	10+50.00	MAINLINE 33.03' LT.	1
2	11+50.00	MAINLINE 45.00' LT.	1
3	14+00.00	MAINLINE 45.00' LT.	1
4	14+24.00	MAINLINE 32.32' LT.	1
5	14+50.00	MAINLINE 32.90' LT.	1
6	14+50.00	MAINLINE 33.12' RT.	1
7	14+35.00	MAINLINE 33.45' RT.	1
8	14+00.00	MAINLINE 75.00' RT.	1
9	13+48.00	MAINLINE 75.00' RT.	1
10	22+00.00	LANGE ROAD 52.00' RT.	1
11	21+70.00	LANGE ROAD 32.25' RT.	1
12	21+70.00	LANGE ROAD 33.81' LT.	1
13	22+00.00	LANGE ROAD 34.36' LT.	1
14	12+33.00	MAINLINE 45.00' RT.	1
15	11+75.00	MAINLINE 40.00' RT.	1
16	10+95.00	MAINLINE 40.00' RT.	1
17	10+85.00	MAINLINE 33.85' RT.	1
18	10+50.00	MAINLINE 32.99' RT.	1
		TOTALS =	18

MARKERS CULVERT END

STATION	LOCATION	633.5200 (EACH)
22+50	LANGE ROAD	2
	TOTAL =	2

3

PERMANENT SIGNING

STATION	LOCATION	SIGN CODE	SIGN DESCRIPTION	SIZE (INCH X INCH)	634.0612 POSTS WOOD 4X6 - INCH X 12-FT (EACH)	634.0616 POSTS WOOD 4x6-INCH x 16-FT (EACH)	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	REMARKS
11+91	MAINLINE, RT.	W5-52R	BRIDGE HASH MARKS	12X36	1	-	-	3.00	-	-	
12+02	MAINLINE, LT.	W5-52L	BRIDGE HASH MARKS	12X36	1	-	-	3.00	-	-	
12+08	MAINLINE, RT.	R12-55	WEIGHT LIMIT	24X30	-	-	-	-	1	1	
12+28	MAINLINE, RT.	W5-52R	BRIDGE HASH MARKS	12X36	1	-	-	3.00	-	-	
12+36	MAINLINE, RT.	W5-52R	BRIDGE HASH MARKS	12X36	-	-	-	-	1	1	
12+36	MAINLINE, LT.	W5-52L	BRIDGE HASH MARKS	12X36	-	-	-	-	1	1	
12+39	MAINLINE, LT.	W5-52L	BRIDGE HASH MARKS	12X36	1	-	-	3.00	-	-	
12+64	MAINLINE, RT.	W5-52R	BRIDGE HASH MARKS	12X36	-	-	-	-	1	1	
12+65	MAINLINE, LT.	W5-52L	BRIDGE HASH MARKS	12X36	-	-	-	-	1	1	
12+92	MAINLINE, LT.	R12-55	WEIGHT LIMIT	24X30	-	-	-	-	1	1	
22+11	LANGE ROAD, LT.	W1-4L	ROAD CURVES AHEAD	30X30	-	1	-	6.25	1	-	
22+11	LANGE ROAD, LT.	W13-1P	ADVISORY SPEED	18X18	-	-	-	2.25	1	1	SIGN MOUNTED BELOW W1-4L SIGN
22+62	LANGE ROAD, RT.	R1-1	STOP SIGN	30X30	-	1	5.18	-	1	1	
			TOTALS =		4	2	5.18	20.50	9	8	

GEOTEXTILE FABRIC TYPE SR

STATION - STATION	LOCATION	645.0135 (SY)
10+50-14+50	MAINLINE	1784
21+70-22+84	LANGE ROAD	512
	UNDISTRIBUTED	134
	TOTAL =	2430

CONSTRUCTION STAKING

		CONSTRUCTION STAKING				
STATION -STATION	LOCATION	650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	*650.6500 STRUCTURE LAYOUT (B-33-0130) (LS)	650.9910 SUPPLEMENTAL CONTROL (01.5671-00-76) (LS)	650.9920 SLOPES STAKES (LF)
10+50-14+50	MAINLINE	365	366	-	-	365
21+70-22+84	LANGE ROAD	114	114	-	-	114
100+00 - 101+50.98	CHANNEL REALIGNMENT	151				151
-	PROJECT	-	-	1	1	-
	TOTALS =	630	480	1	1	630

*CATEGORY 020

SEE CULVERT PIPES TABLE FOR BID ITEM 650.6000 CONSTRUCTION STAKING PIPE CULVERTS

SAWING ASPHALT

STATION	LOCATION	690.0150 (LF)
10+50	MAINLINE	19
14+50	MAINLINE	23
21+70	LANGE ROAD	21
	TOTAL =	63

FILE NAME : S:\PROJECTS\K19260 HOLLAND RD LAFAYETTE COUNTY\SHEETSPLAN\DETAILS\MISC QUANTITIES.DWG
LAYOUT : MQ2
PLOT DATE : 3/14/2017
PLOT TIME : 1:14:39 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1 IN:1 FT

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5671-00-06	4.01	2
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT-OF-WAY REQUIRED FOR

TOWN OF DARLINGTON, HOLLAND RD

(BRANCH WOODS BRANCH BRIDGE P-33-0146)

TOWN ROAD — LAFAYETTE COUNTY

CONSTRUCTION PROJECT NUMBER
5671-00-76

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	PROPERTY LINE	PL
ACCESS RIGHTS	AR	RECORDED AS	(100')
ACRES	AC.	REFERENCE LINE	R/L
AND OTHERS	ET.AL.	RELEASE OF RIGHTS	ROR
BARN	B.	REMAINING	REM.
CENTERLINE	C/L	RIGHT-OF-WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC.
CORNER	COR.	SHED	S.
CONVEYANCE OF RIGHTS	CR	STATION	STA.
DOCUMENT	DOC.	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE.	VOLUME	V.
GARAGE	G.		
HIGHWAY EASEMENT	H.E.	CURVE DATA	
HOUSE	H.	LONG CHORD	LCH
HOUSE TRAILER	H.T.	LONG CHORD BEARING	LCB
LAND CONTRACT	LC	RADIUS	R
MONUMENT	MON.	DEGREE OF CURVE	D
PAGE	P.	CENTRAL ANGLE OR DELTA	DELTA
PERMANENT LIMITED EASEMENT	PLE	LENGTH OF CURVE	L
		TANGENT	TAN

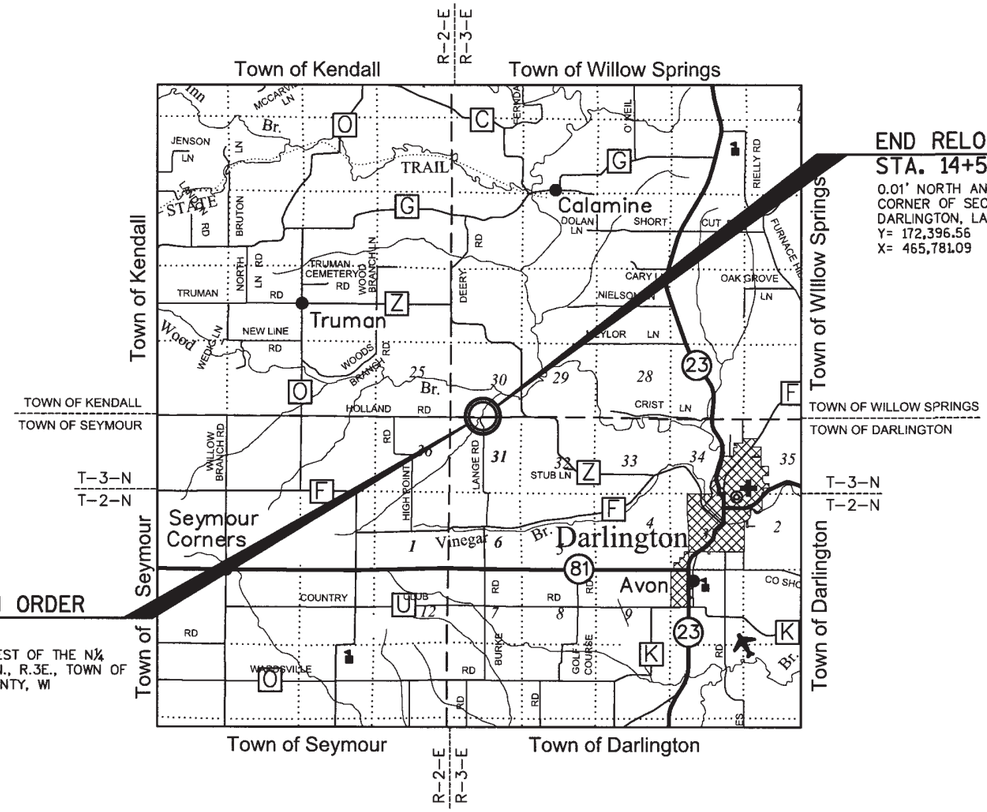
CONVENTIONAL SYMBOLS

FOUND SURVEY MONUMENT (WITH POINT NUMBER) o 1040
R/W MONUMENT o • (SET)
R/W STANDARD △ ▲ (SET)
SIGN ISIGN
SECTION CORNER MONUMENT
SECTION CORNER SYMBOL
FEE (HATCH VARIES)
TEMPORARY LIMITED EASEMENT
PERMANENT LIMITED EASEMENT
R/W BOUNDARY POINT RWB20
PARCEL NUMBER 8
UTILITY PARCEL NUMBER 92
SIGN NUMBER (OFF PREMISE) 21-Y
BUILDING

PROPOSED R/W LINE
EXISTING H.E. LINE
PROPERTY LINE
LOT & TIE LINES
SLOPE INTERCEPTS
CORPORATE LIMITS
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)
NO ACCESS (BY ACQUISTION)
NO ACCESS (BY STATUTORY AUTHORITY)
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
EXISTING CENTERLINE
PROPOSED REFERENCE LINE
PARALLEL OFFSET
ENCROACHMENT E-D/TYPE

CONVENTIONAL UTILITY SYMBOLS

			NON COMPENSABLE	COMPENSABLE
WATER	W	SANITARY SEWER	SAN	
GAS	G	STORM SEWER	SS	
TELEPHONE	T			
OVERHEAD TRANSMISSION LINES	OH	POWER POLE		
ELECTRIC	E	TELEPHONE POLE		
CABLE TELEVISION	TV	TELEPHONE PEDESTAL		
FIBER OPTIC	FO	ELECTRIC TOWER		



END RELOCATION ORDER
STA. 14+50

0.01' NORTH AND 100.84' WEST OF THE N¼ CORNER OF SECTION 31, T.3N., R.3E., TOWN OF DARLINGTON, LAFYAETTE COUNTY, WI
Y= 172,396.56
X= 465,781.09

BEGIN RELOCATION ORDER
STA. 10+50

5.67' NORTH AND 500.80' WEST OF THE N¼ CORNER OF SECTION 31, T.3N., R.3E., TOWN OF DARLINGTON, LAFAYETTE COUNTY, WI
Y= 172,402.22
X= 465,381.13

N

LAYOUT
SCALE 0 1 MI. 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.076 MI.

Carla M. Jacobson
Lafayette Co. Clerk
02/20/2017

JEWELL
associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
PHONE : 608.588.7484
FAX : 608.588.9322

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FOR THE TOWN OF DARLINGTON AND THE TOWN OF WILLOW SPRINGS, LAFAYETTE COUNTY, WISCONSIN AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN
2-08-2017
SCOTT D. WARNER
S-2524
RICHLAND CENTER, WI
LAND SURVEYOR

NOTES

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, LAFAYETTE COUNTY, NAD 83 (2011) 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 3/4" 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."

REVISION DATE

APPROVED FOR TOWN OF WILLOW SPRINGS
DATE: 2/14/17 James L. Acker (NAME/TITLE) Tn. Chairman

APPROVED FOR THE TOWN OF DARLINGTON
DATE: 2-8-17 John E. Reichling (NAME/TITLE) Chairman

E

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
1	10+50.00	33.03 LT.	172435.25	465381.59
2	11+50.00	45.00 LT.	172445.80	465481.75
3	14+00.00	45.00 LT.	172442.27	465731.73
4	14+24.00	32.32 LT.	172429.25	465755.55
5	14+50.00	32.90 LT.	172429.46	465781.55
6	14+50.00	33.12 RT.	172363.45	465780.62
7	14+35.00	33.45 RT.	172363.33	465765.61
8	14+00.00	75.00 RT.	172322.28	465730.03
9	13+48.00	75.00 RT.	172323.01	465678.03
10	22+00.00	52.00 RT.	172283.80	465654.84
11	21+70.00	32.25 RT.	172262.32	465626.70
12	21+70.00	33.81 LT.	172282.50	465563.79
13	22+00.00	34.36 LT.	172311.67	465573.10
14	12+33.00	45.00 RT.	172354.64	465563.47
15	11+75.00	40.00 RT.	172360.46	465505.54
16	10+95.00	40.00 RT.	172361.59	465425.56
17	10+95.00	33.85 RT.	172367.75	465425.64
18	10+50.00	32.99 RT.	172369.24	465380.66

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
1 TO 2	N83°59'01"E	100.71'
2 TO 3	S89°11'20"E	250.00'
3 TO 4	S61°20'30"E	27.14'
4 TO 5	N89°32'03"E	26.01'
5 TO 6	S00°48'40"W	66.02'
6 TO 7	S89°32'03"W	15.00'
7 TO 8	S40°55'14"W	54.33'
8 TO 9	N89°11'20"W	52.00'
9 TO 10	S30°36'09"W	45.55'
10 TO 11	S52°39'05"W	35.41'
11 TO 12	N72°13'07"W	66.06'
13 TO 14	N12°37'43"W	44.04'
14 TO 15	N84°15'43"W	58.22'
15 TO 16	N89°11'20"W	80.00'
16 TO 17	N00°48'43"E	6.16'
17 TO 18	N88°05'39"W	45.01'
18 TO 1	N00°48'40"E	66.01

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	R/W ACRES REQUIRED EXISTING	R/W ACRES REQUIRED TOTAL	TLE ACRES REQ.
1	SHANE L. HAVENS AND CATHERINE A. HAVENS, HIS WIFE, AS SURVIVORSHIP MARITAL PROPERTY	FEE, TLE	0.25	0.75	1.00	0.07
201	CENTURYLINK		RELEASE OF RIGHTS			
202	GRANT/LAFAYETTE ELECTRIC COOPERATIVE (SCENIC RIVER'S ENERGY COOPERATIVE)		RELEASE OF RIGHTS			

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY OF LAFAYETTE.

NOTE: EXISTING C/L OF HOLLAND ROAD AND LANGE ROAD WERE BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT-OF-WAY FOR HOLLAND ROAD AND LANGE ROAD WAS BASED ON COUNTY RECORDS, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

TLE LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
2 TO 100	S89°11'20"E	70.00'
100 TO 101	N00°48'40"E	20.00'
101 TO 102	S89°11'20"E	40.00'
102 TO 103	S65°13'35"E	49.24'
103 TO 3	N89°11'20"W	95.00'
13 TO 104	N31°37'06"W	24.68'
104 TO 105	N63°32'52"W	27.73'
105 TO 106	S22°36'45"W	26.93'
106 TO 107	N89°11'20"W	15.00'
107 TO 108	N15°08'03"W	36.40'
108 TO 109	N75°09'09"W	20.62'
109 TO 16	S89°11'20"E	55.00'

BEGIN RELOCATION ORDER
STA. 10+50

5.67' NORTH AND 500.80' WEST OF THE N¼ CORNER OF SECTION 31, T.3N., R.3E., TOWN OF DARLINGTON, LAFAYETTE COUNTY, WI
Y= 172,402.22
X= 465,381.13

(1) SHANE L. HAVENS AND CATHERINE A. HAVENS, HIS WIFE, AS SURVIVORSHIP MARITAL PROPERTY DOC. #317333, VOL. 239, PG. 531

(1) SHANE L. HAVENS AND CATHERINE A. HAVENS, HIS WIFE, AS SURVIVORSHIP MARITAL PROPERTY DOC. #317333, VOL. 239, PG. 531

(202) EASEMENTS (BLANKET) GRANT/LAFAYETTE ELECTRIC COOPERATIVE (SCENIC RIVER'S ENERGY COOPERATIVE) DOC.# 267154, V. 71, PG. 264

(1) SHANE L. HAVENS AND CATHERINE A. HAVENS, HIS WIFE, AS SURVIVORSHIP MARITAL PROPERTY DOC. #317333, VOL. 239, PG. 531

TOWN OF WILLOW SPRINGS

SE ¼ - SW ¼ SEC. 30, T3N, R3E

NE ¼ - NW ¼ SEC. 31, T3N, R3E

TLE FOR SLOPES (0.03 ACRES)

STRUCTURE B-33-1030 REQ'D

WATERWAY (0.01 ACRES)

BRANCH WOODS BRANCH

C/L STA. 12+88.02 (HOLLAND ROAD)= C/L STA. 23+00.00 (LANGE ROAD)

SCENIC RIVERS ENERGY COOPERATIVE (TYP.)

FINISHED C/L HOLLAND ROAD

N85°34'40"W FROM N1/4 CORNER SEC. 31 TO PT. 1 501.83'

EP: 23+00.00

HOLLAND ROAD

S89°11'20"E (FINISHED ℄ HOLLAND ROAD)

90°00'00" ℄ TO ℄

N0°48'40"E

S00°48'40"W

EXISTING ℄ HOLLAND ROAD

PT: 22+61.60

SLOPE INTERCEPTS

CENTURYLINK (TYP.)

WATERWAY (0.01 ACRES)

TLE FOR SLOPES (0.04 ACRES)

PC: 22+16.34

EXISTING ℄ LANGE ROAD

FINISHED ℄ LANGE ROAD

LANGE ROAD

N18°49'58"E

PT: 21+74.19

N72°13'07"W 66.06'

33'

ERWC1

C1

C2

P.I. STA. 20+88.61

TOWN OF DARLINGTON

END RELOCATION ORDER
STA. 14+50

0.01' NORTH AND 100.84' WEST OF THE N¼ CORNER OF SECTION 31, T.3N., R.3E., TOWN OF DARLINGTON, LAFAYETTE COUNTY, WI
Y= 172,396.56
X= 465,781.09

N¼ CORNER SEC. 31 FOUND ⅞" IRON ROD WITH ALUMINUM CAP
Y = 172,396.56
X = 465,881.93

S¼ CORNER OF SEC. 31 TO N¼ CORNER OF SEC. 31 N01°06'13"E, 5294.30'

S¼ CORNER SEC. 31 FOUND ⅞" IRON ROD WITH ALUMINUM CAP
Y = 167,103.23
X = 465,779.95

T.3N. 30 31 R.3E.

T.3N. 31 6 R.3E.

EXISTING RIGHT OF WAY CURVE TABLE (ERWC)							
CURVE	POINT TO POINT	DELTA ANGLE	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
ERWC1	12 TO 13	04°23'12"	15.32	400.00	30.63	30.62	N17°42'07"E

ENCROACHMENT TABLE			
ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E-1	SHANE L. HAVENS AND CATHERINE A. HAVENS, HIS WIFE, AS SURVIVORSHIP MARITAL PROPERTY	STA. 10+50 – STA. 12+30, RT.	FENCE
E-2	SHANE L. HAVENS AND CATHERINE A. HAVENS, HIS WIFE, AS SURVIVORSHIP MARITAL PROPERTY	STA. 21+70 – STA. 22+60, LT.	FENCE

C1 DATA
PI STA. = 20+88.61
Y = 172,185.80
X = 465,566.50
R = 231.00
D = 24°48'12"
DELTA = 44°54'26"
L = 181.05
T = 95.46
C = 176.45
PC STA. = 19+93.14
Y = 172,100.06
X = 465,608.48
PT STA. = 21+74.19
Y = 172,276.16
X = 465,597.30

C2 DATA
PI STA. = 22+39.16
Y = 172,337.64
X = 465,618.26
R = 144.00
D = 39°47'19"
DELTA = 18°00'38"
L = 45.27
T = 22.82
C = 45.08
PC STA. = 22+16.34
Y = 172,316.04
X = 465,610.89
PT STA. = 22+61.60
Y = 172,360.46
X = 465,618.58

COORDINATE TABLE – TEMPORARY LIMITED EASEMENT (TLE) POINTS				
PT.#	STATION	OFFSET	Y	X
100	12+20.00	45.00 LT.	172444.81	465551.75
101	12+20.00	65.00 LT.	172464.81	465552.03
102	12+60.00	65.00 LT.	172464.25	465592.03
103	13+05.00	45.00 LT.	172443.61	465636.74
104	12+30.00	67.00 RT.	172332.68	465560.16
105	12+05.00	55.00 RT.	172345.04	465535.33
106	11+95.00	80.00 RT.	172320.18	465524.98
107	11+80.00	80.00 RT.	172320.39	465509.98
108	11+70.00	45.00 RT.	172355.53	465500.48
109	11+50.00	40.00 RT.	172360.81	465480.55

REVISION DATE	DATE 02-08-2017	SCALE, FEET 0 20 40	HWY: HOLLAND ROAD	STATE R/W PROJECT NUMBER: 5671-00-06	PLAT SHEET 4.02	
	GRID FACTOR N/A		COUNTY: LAFAYETTE	CONSTRUCTION PROJECT NUMBER: 5671-00-76	PS&E SHEET	E

LEGEND

- RIPRAP HEAVY OVER GEOTEXTILE FABRIC TYPE HR (CATEGORY 020)
- RIPRAP HEAVY OVER GEOTEXTILE FABRIC TYPE HR (CATEGORY 010)
- DIRECTION OF FLOW
- XXXXXXXXX SAWING ASPHALT
- SILT FENCE
- TEMPORARY DITCH CHECK
- WETLANDS
- CULVERT PIPE CHECKS

STA. 10+50 - STA. 12+30, RT.
STA. 11+93 - STA, 12+30, RT.
REMOVING FENCE BY OTHERS

SHANE L. HAVENS AND CATHERINE A. HAVENS, HIS WIFE, AS SURVIVORSHIP MARITAL PROPERTY
DOC. #317333, VOL. 239, PG. 531

STREAM REALIGNMENT REQ'D - SEE STRUCTURE PLANS (CONSTRUCTION DETAILS) FOR FURTHER INFORMATION.

STRUCTURE B-33-130 REQ'D

TLE REQ'D (TYP.)

BRANCH WOODS BRANCH

REMOVING OLD STRUCTURE OVER WATERWAY
STA. 12+50 (P-33-0146)
SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB
17.0' CLEAR ROADWAY WIDTH
28.0' OVERALL LENGTH

C/L STA. 12+88.02 (HOLLAND ROAD)=
C/L STA. 23+00.00 (LANGE ROAD)
INTERSECTION TYPE C (MOD.) REQ'D

CENTURYLINK

SCENIC RIVERS ENERGY COOPERATIVE (TYP.)

LIMITS OF AGRICULTURAL FIELD (TYP.)

BM 1 · BM 2 · BM 3 · BM 4 · BM 5

FINISHED C/L HOLLAND ROAD

EXISTING C/L HOLLAND ROAD

HOLLAND ROAD

S89°26'33"E

N00°48'40"E

90°0'0"

PT: 22+61.60

PC: 22+16.34

FINISHED C/L LANGE ROAD

SLOPE INTERCEPTS

CENTURYLINK (TYP.)

BEGIN PROJECT
STA. 10+50
Y= 172,402.22
X= 465,381.13

END PROJECT
STA. 14+50
Y= 172,396.56
X= 465,781.09

EARTHWORK SUMMARY				CHANNEL	
		MAINLINE	LANGE ROAD	REALIGNMENT	TOTALS
EXCAVATION COMMON (CY)	=	435	108	367	910
ROCK EXCAVATION (CY)	=	283	357	0	640
ROCK EXCAVATION EXPANDED (10%-CY)	=	312	393	0	705
FILL (CY)	=	725	200	0	925
FILL EXPANSION (CY-25%)		515	-241	0	275
WASTE (CY)		-81	349	367	635

L=318.00'
K=39.22

EXISTING C/L PROFILE HOLLAND ROAD

FINISHED C/L PROFILE HOLLAND ROAD

-1.60%

PI STA 12+13.00
EL 843.50

HIGH WATER$_{100}$
EL = 844.49

HIGH WATER$_2$
EL = 840.31

OBSERVED WATER
EL. 837.49
(1-8-2016)

STREAMBED
EL. 836.34

EXISTING STREAMBED
EL. 836.78

MATCH EXISTING
STA. 10+50
EL. = 846.11

PC STA 10+54.00
EL 846.05

STA. 10+50

STA. 12+14.91
STRUCTURE B-33-0130 REQ'D.
SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB
CLEAR ROADWAY WIDTH = 26.0'
O.A.L. = 36.67'
SKEW = 20° LHF

EXISTING C/L ELEVATION

FINISHED C/L ELEVATION

FINISHED C/L PROFILE HOLLAND ROAD

6.5%

STA. 14+50

MATCH EXISTING
STA. 14+50
EL. = 858.92

EXISTING C/L PROFILE HOLLAND ROAD

PT STA 13+72.00
EL 853.85

EXISTING C/L ELEVATION

FINISHED C/L ELEVATION

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	14+51	3/4" IRON REBAR SET, 23.5' LT	858.80
2	22+56	3/4" IRON REBAR SET, 11.7' LT	846.68
3	10+18	3/4" IRON REBAR SET, 12.9' RT	846.15
4	13+85	COTTON GIN SPINDLE SET IN PP, 24.9' LT	853.89
5	11+48	COTTON GIN SPINDLE SET IN PP, 23.8' LT	844.36

9+80	10+00	10+20	10+40	10+60	10+80	11+00	11+20	11+40	11+60	11+80	12+00	12+20	12+40	12+60	12+80
847.05	846.67	846.30	845.92 / 845.95	845.54 / 845.72	845.17 / 845.58	844.81 / 845.54	844.45 / 845.61	844.13 / 845.78	843.88 / 846.05	843.68 / 846.43	843.71 / 846.90	843.72 / 847.48	843.98 / 848.16	844.76 / 848.94	

13+00	13+20	13+40	13+60	13+80	14+00	14+20	14+40	14+60	14+80	15+00	15+20	15+40
845.78 / 849.82	847.34 / 850.81	849.13 / 851.89	851.00 / 853.08	852.94 / 854.37	854.87 / 855.67	856.49 / 856.97	858.11 / 858.27	859.62	860.94	862.27		

PROJECT NO: 5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	PLAN AND PROFILE: MAINLINE	SHEET 15	E

FILE NAME : S:\PROJECTS\K19260 HOLLAND RD LAFAYETTE COUNTY\SHEETSPLAN\PLAN & PROFILE SHEETS\050101-PP 30 MPH.DWG
LAYOUT : LAYOUT NAME - 050101-PP 30 MPH - LAYOUT1
PLOT DATE : 4/26/2017
PLOT TIME : 11:23:38 AM
PLOT BY : STRINE, THERESA
PLOT SCALE : 1.0000
PLOT SCALE : 1 IN:40 FT

LEGEND

- RIPRAP HEAVY OVER GEOTEXTILE FABRIC TYPE HR (CATEGORY 020)
- RIPRAP HEAVY OVER GEOTEXTILE FABRIC TYPE HR (CATEGORY 010)
- DIRECTION OF FLOW
- XXXXXXXXX SAWING ASPHALT
- SILT FENCE
- TEMPORARY DITCH CHECK
- WETLANDS
- CULVERT PIPE CHECKS

STA. 21+70 - STA. 22+60, LT.
REMOVING FENCE BY OTHERS

SHANE L. HAVENS AND CATHERINE A. HAVENS, HIS WIFE, AS SURVIVORSHIP MARITAL PROPERTY
DOC. #317333, VOL. 239, PG. 531

SHANE L. HAVENS AND CATHERINE A. HAVENS, HIS WIFE, AS SURVIVORSHIP MARITAL PROPERTY
DOC. #317333, VOL. 239, PG. 531

SHANE L. HAVENS AND CATHERINE A. HAVENS, HIS WIFE, AS SURVIVORSHIP MARITAL PROPERTY
DOC. #317333, VOL. 239, PG. 531

BRANCH
WOODS BRANCH

STA. 12+42.73 (HOLLAND ROAD)
STA. 22+50.53 (LANGE ROAD)
Y = 172,353.50
X = 465,573.18

STA. 22+60
REMOVING SMALL PIPE CULVERTS REQ'D

CENTURYLINK (TYP.)

EXISTING C/L LANGE ROAD

PT: 21+74.19
PC: 22+16.34
PT: 22+61.60
R=30'

TLE REQ'D (TYP.)

FINISHED C/L HOLLAND ROAD

EXISTING C/L HOLLAND ROAD

C/L STA. 12+88.02 (HOLLAND ROAD)=
C/L STA. 23+00.00 (LANGE ROAD)
INTERSECTION TYPE C (MOD.) REQ'D

BM 2

N0°48'40"E

90°0'0"

13+00

14+00

CENTURYLINK

22+00

CURVE 2

S18°49'18"W

21+00

LANGE ROAD

(ASPHALT)

CURVE 1

N26°05'08"W

R/W

66'

33'

10:1

2'

10'

15'

3'

R=40'

FINISHED C/L LANGE ROAD

STA. 13+42.24 (HOLLAND ROAD)
STA. 22+48.85 (LANGE ROAD)
Y = 172,342.09
X = 465,672.55

SLOPE INTERCEPTS

BM 4

SCENIC RIVERS ENERGY COOPERATIVE (TYP.)

OH

STA. 22+50
(1) CULVERT PIPE CLASS III-A 36-INCH
(2) APRON ENDWALLS REQ'D
SKEW=0°

CURVE 1 DATA
PI STA. = 20+88.61
Y = 172,185.80
X = 465,566.50
R = 231.00
D = 24°48'12"
DELTA = 44°54'26"
L = 181.05
T = 95.46
C = 176.45
PC STA. = 19+93.14
Y = 172,100.06
X = 465,608.48
PT STA. = 21+74.19
Y = 172,276.16
X = 465,597.30

CURVE 2 DATA
PI STA. = 22+39.16
Y = 172,337.64
X = 465,618.26
R = 144.00
D = 39°47'19"
DELTA = 18°00'38"
L = 45.27
T = 22.82
C = 45.08
PC STA. = 22+16.34
Y = 172,316.04
X = 465,610.89
PT STA. = 22+61.60
Y = 172,360.46
X = 465,61[illegible]

PC: 19+93.14

20+00

BEGIN CONSTRUCTION
STA. 21+70
Y= 172,272.17
X= 465,595.98

END CONSTRUCTION
STA. 22+84.00
Y= 172,382.86
X= 465,618.90

EXISTING C/L PROFILE LANGE ROAD

FINISHED C/L PROFILE LANGE ROAD

STA. 21+70

STA. 22+84

L=100.00'
K=28.94

-3.98%

-0.53%

2.00%

MATCH EXISTING
STA. 21+70.00
EL. = 851.29

PC STA 21+70.00
EL 851.29

PI STA 22+20.00
EL 849.30

PT STA 22+70.00
EL 849.03

EXISTING C/L ELEVATION

FINISHED C/L ELEVATION

EARTHWORK SUMMARY

		MAINLINE	LANGE ROAD	CHANNEL REALIGNMENT	TOTALS
EXCAVATION COMMON (CY)	=	435	108	367	910
ROCK EXCAVATION (CY)	=	283	357	0	640
ROCK EXCAVATION EXPANDED (10%-CY)	=	312	393	0	705
FILL (CY)	=	725	200	0	925
FILL EXPANSION (CY-25%)		515	-241	0	275
WASTE (CY)		-81	349	367	635

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	14+51	3/4" IRON REBAR SET, 23.5' LT	858.80
2	22+56	3/4" IRON REBAR SET, 11.7' LT	846.68
3	10+18	3/4" IRON REBAR SET, 12.9' RT	846.15
4	13+85	COTTON GIN SPINDLE SET IN PP, 24.9' LT	853.89
5	11+48	COTTON GIN SPINDLE SET IN PP, 23.8' LT	844.36

858 856 854 852 850 848 846 844 842

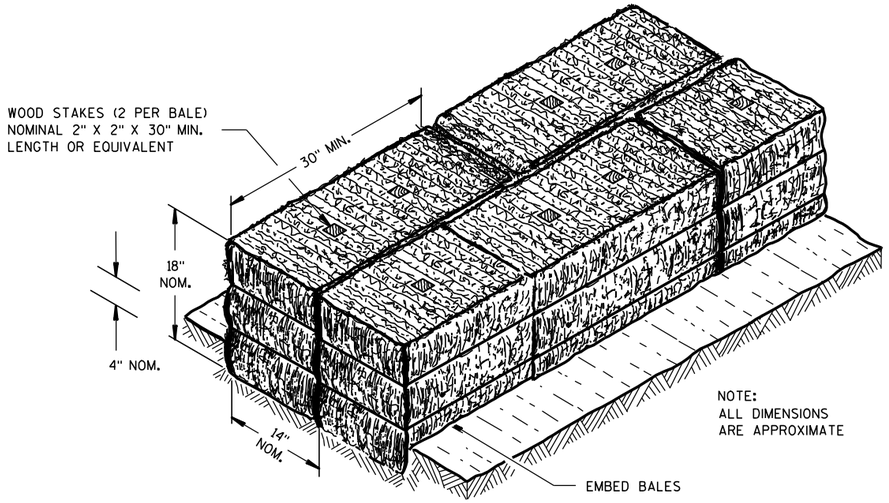
860.90 859.85 858.73 857.55 856.35 855.02 853.95 852.80 851.74 850.82 850.91 849.88 850.25 849.09 849.73 848.24 849.35 846.74 849.10 845.68 848.98 849.28

19+20 19+40 19+60 19+80 20+00 20+20 20+40 20+60 20+80 21+00 21+20 21+40 21+60 21+80 22+00 22+20 22+40 22+60 22+80 23+00 23+20 23+40 23+60 23+80 24+00 24+20 24+40 24+60 24+80 25+00

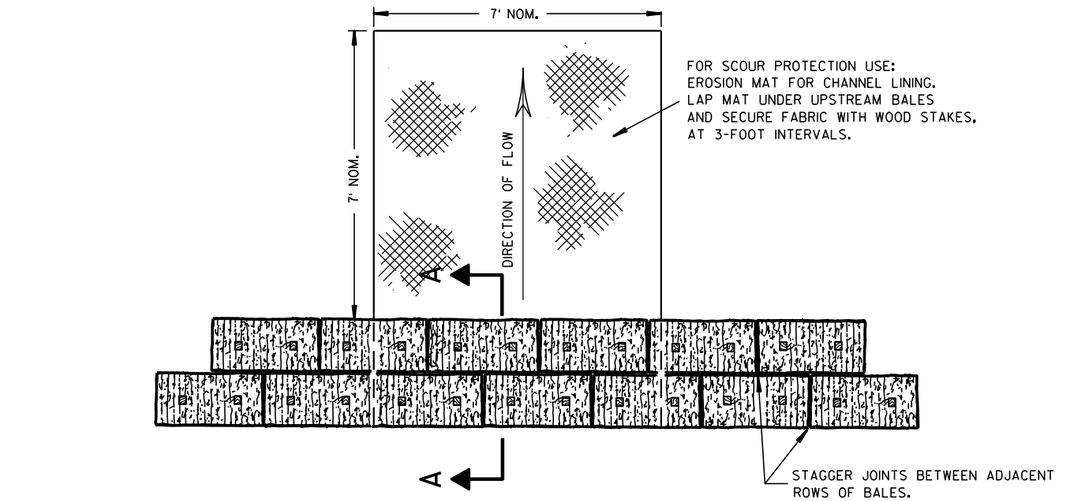
PROJECT NO:5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	PLAN AND PROFILE: LANGE ROAD	SHEET 16	E

Standard Detail Drawing List

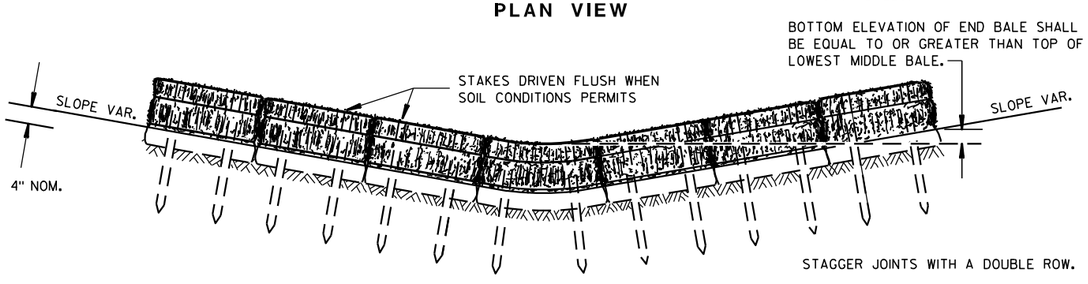
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
12A03-10	NAME PLATE (STRUCTURES)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C06-08	SIGNING & MARKING FOR TWO LANE BRIDGES



SECTION A-A



PLAN VIEW



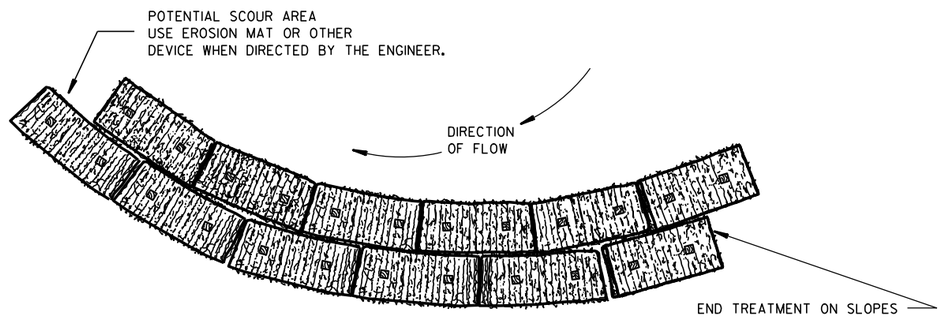
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

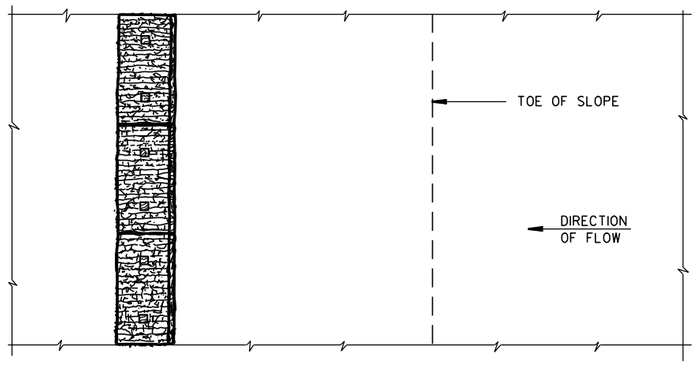
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

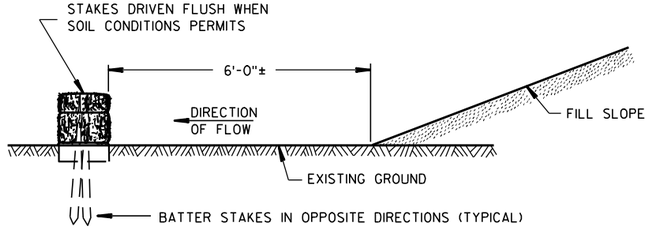


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

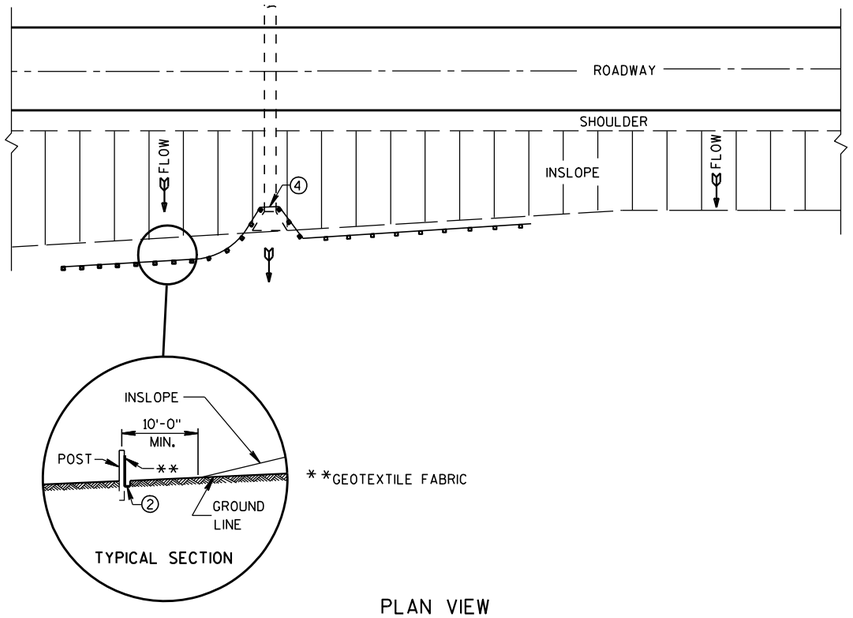
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

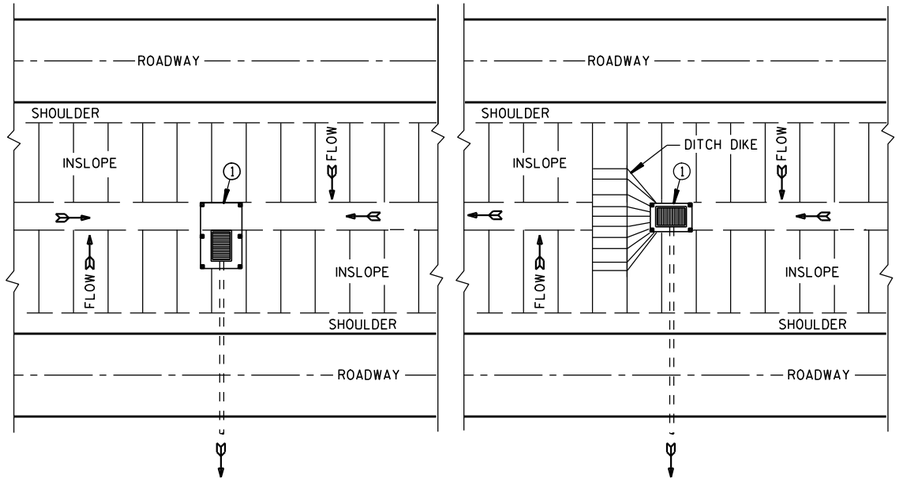
6

S.D.D. 8 E 8-3



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.

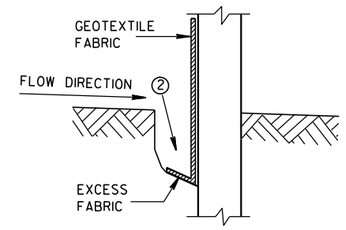
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

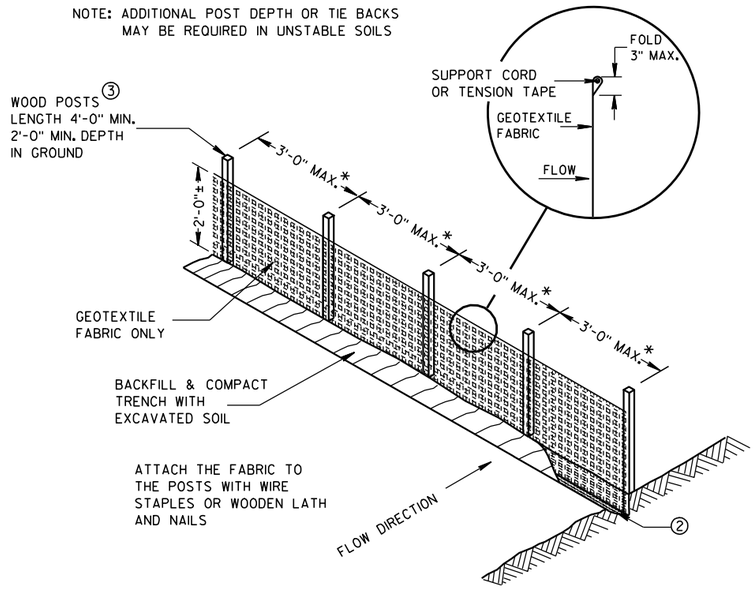
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

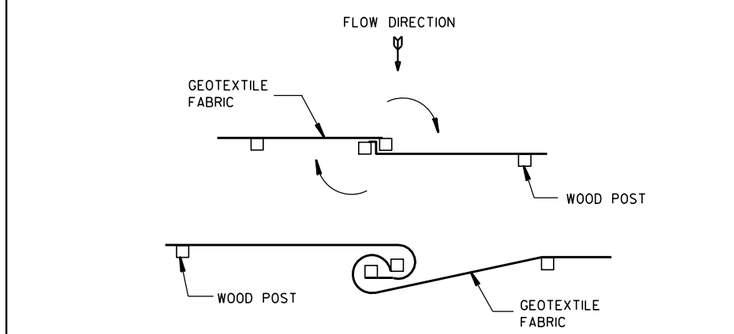
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



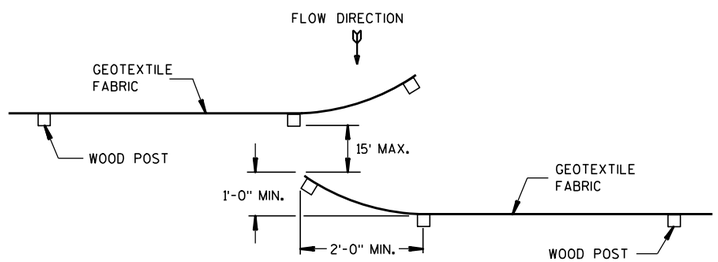
TRENCH DETAIL



SILT FENCE

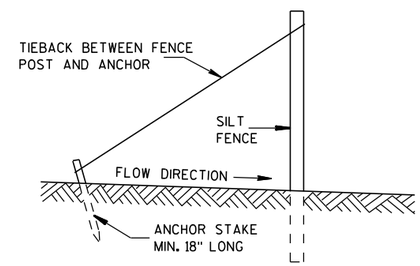


TWIST METHOD



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

METAL APRON ENDWALLS

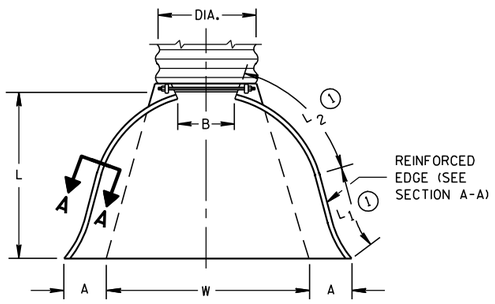
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

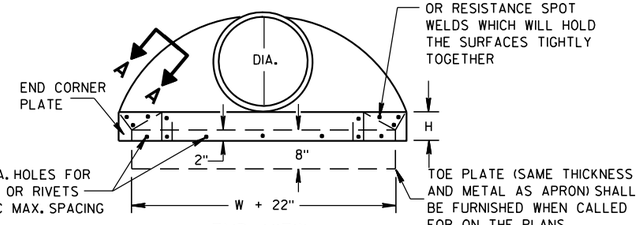
REINFORCED CONCRETE APRON ENDWALLS

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

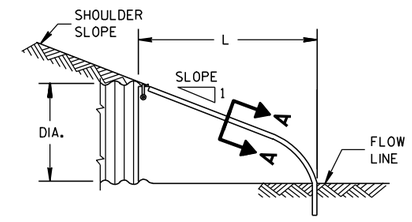
*MINIMUM
**MAXIMUM



PLAN VIEW

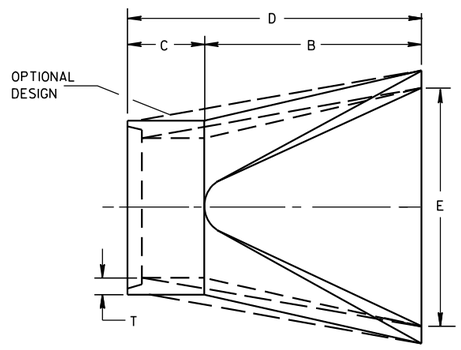


END VIEW

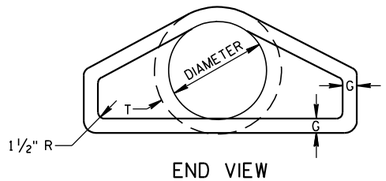


SIDE ELEVATION

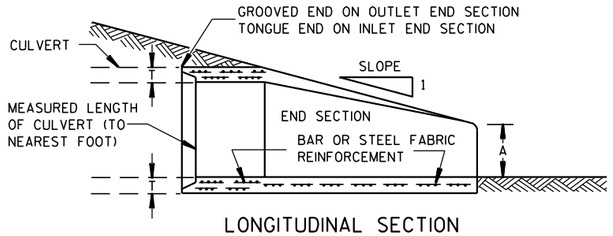
METAL ENDWALLS



PLAN

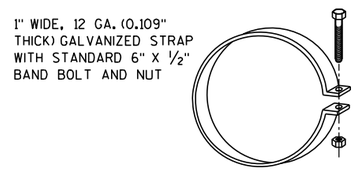


END VIEW



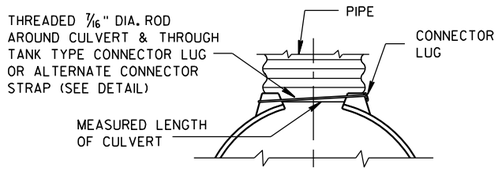
LONGITUDINAL SECTION

CONCRETE ENDWALLS

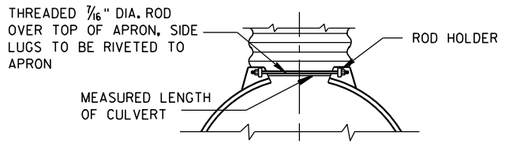


ALTERNATE FOR TYPE 1 CONNECTION

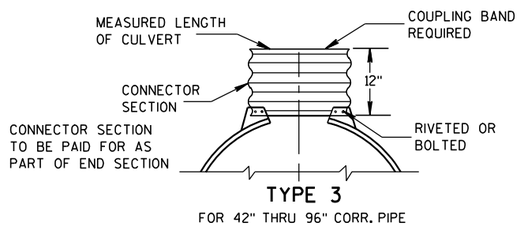
END SECTION CONNECTOR STRAP



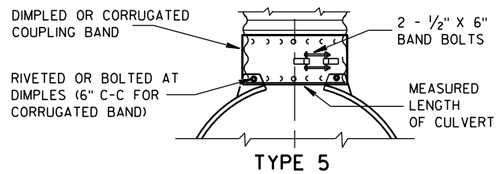
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

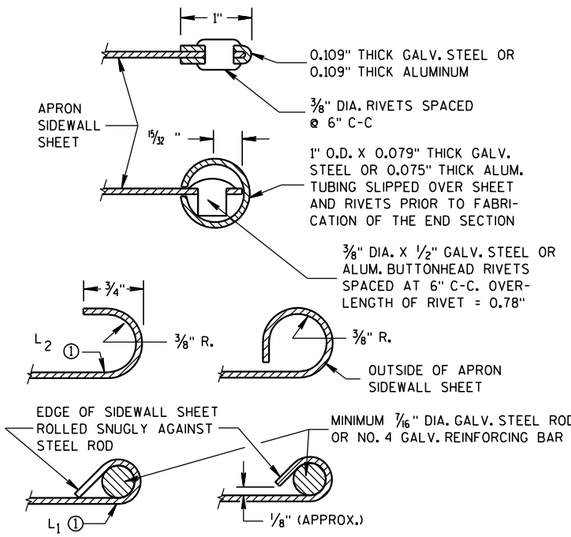
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

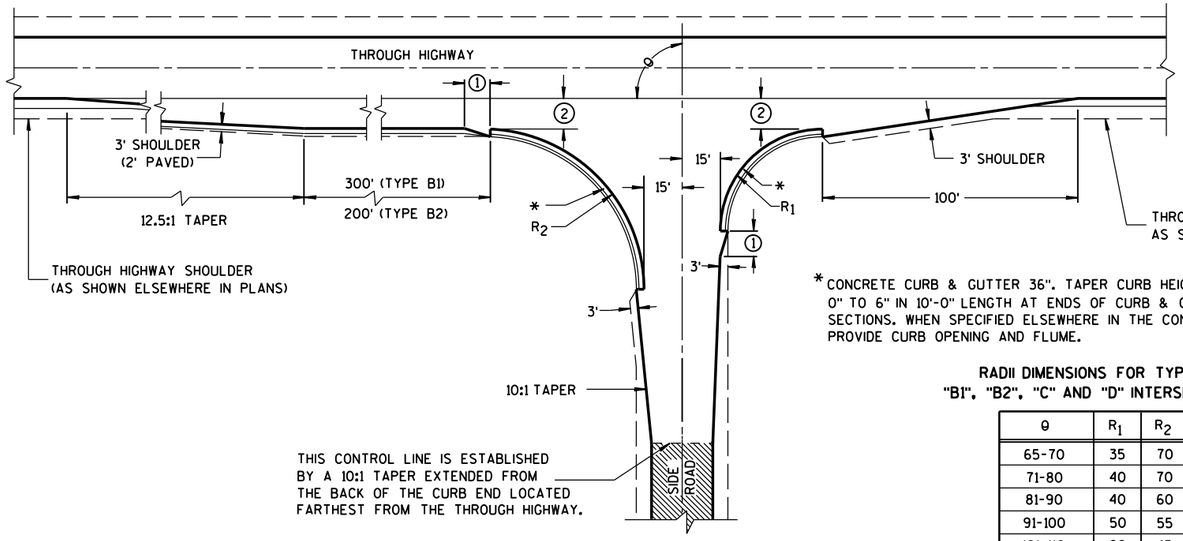
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

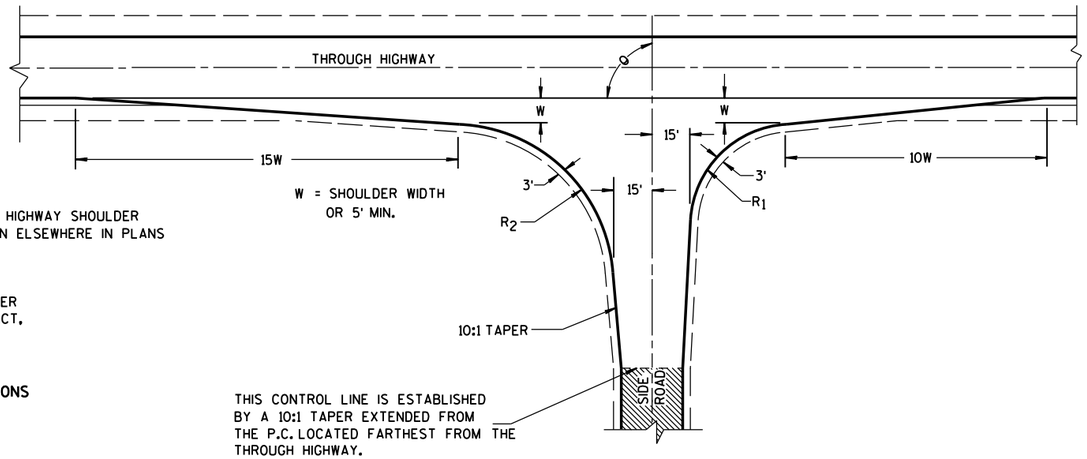


TYPE "B1" AND "B2"

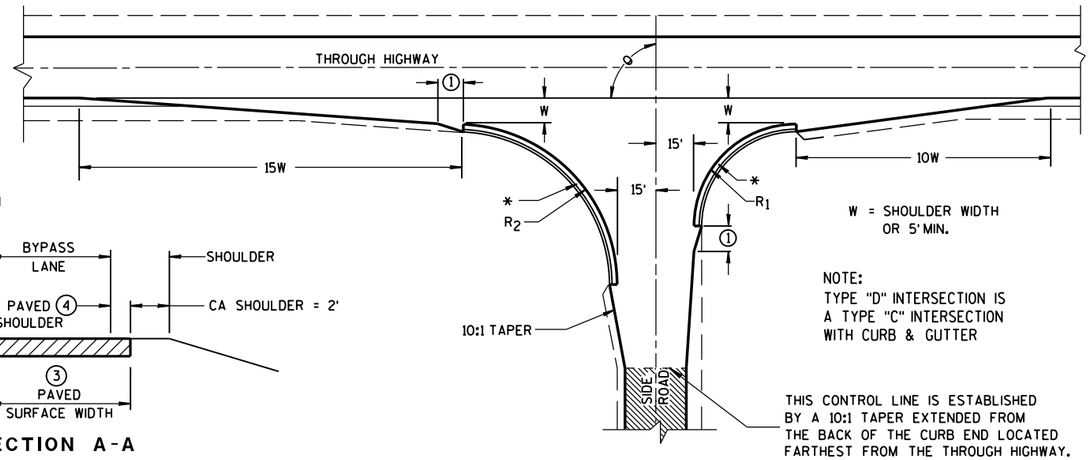
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45



TYPE "C"



TYPE "D"

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

(1) 10-FT TYPICAL.

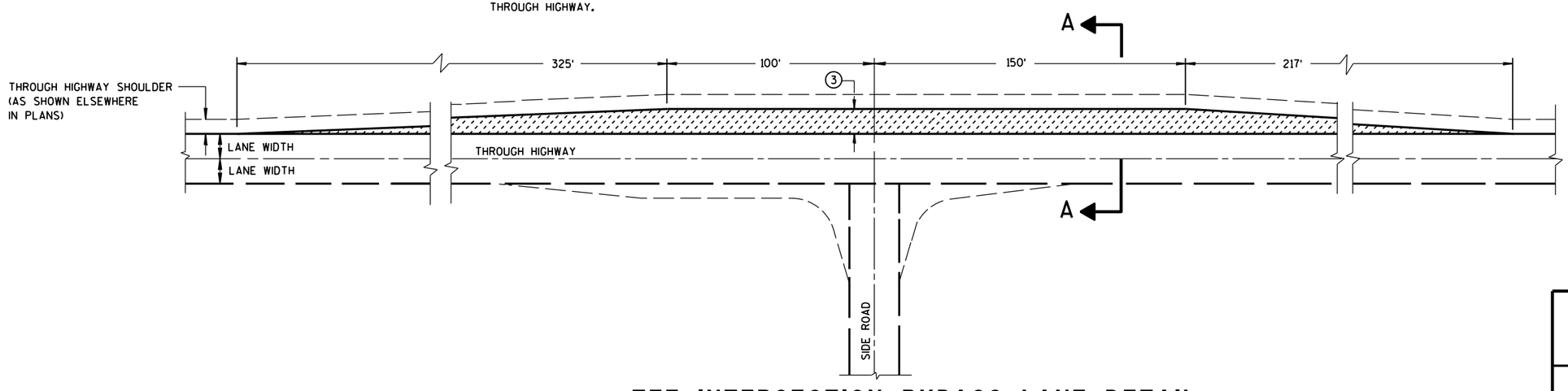
(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.

(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.

SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)

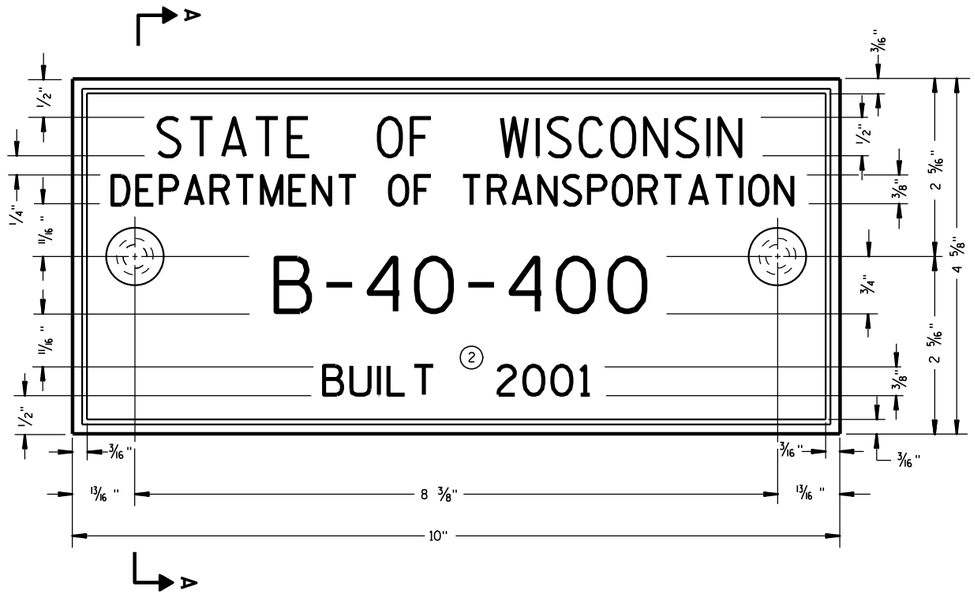


TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 9 A 1-13a



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

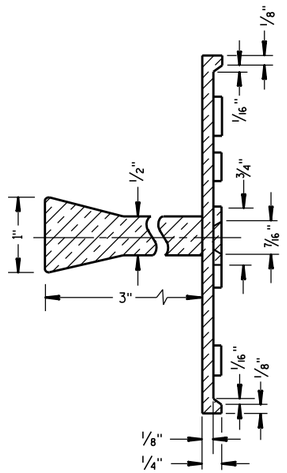
GENERAL NOTES

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.

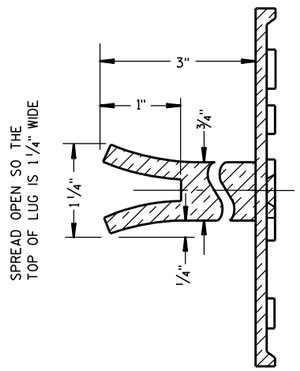
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

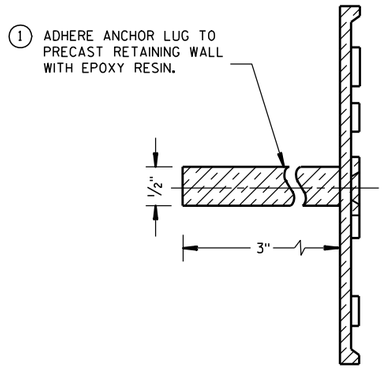
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

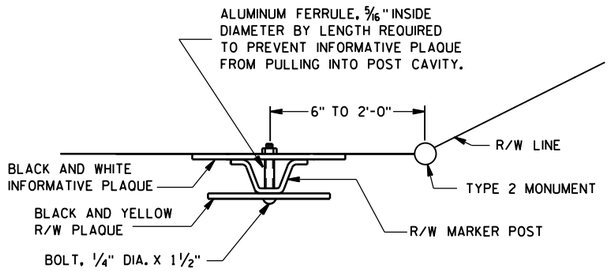
3/26/10 DATE

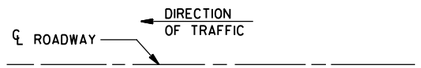
/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

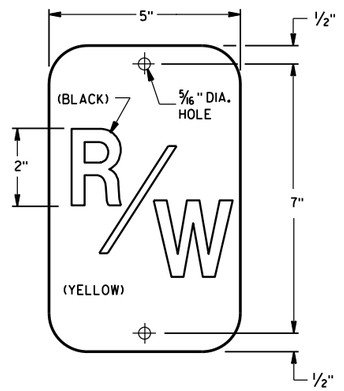
6

S.D.D. 12 A 3-10



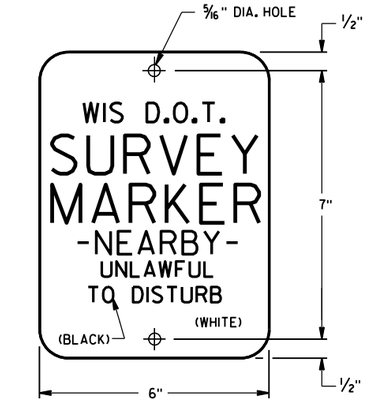


PLAN VIEW



R/W PLAQUE

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



INFORMATIVE PLAQUE

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.

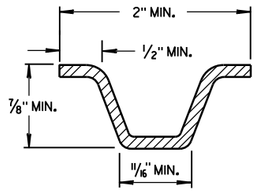
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. R/W AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE DEPARTMENT OF TRANSPORTATION.

STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

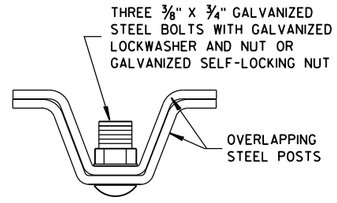
(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3'10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR.

FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT. DEPENDING ON THE STABILITY OF THE ROCK.

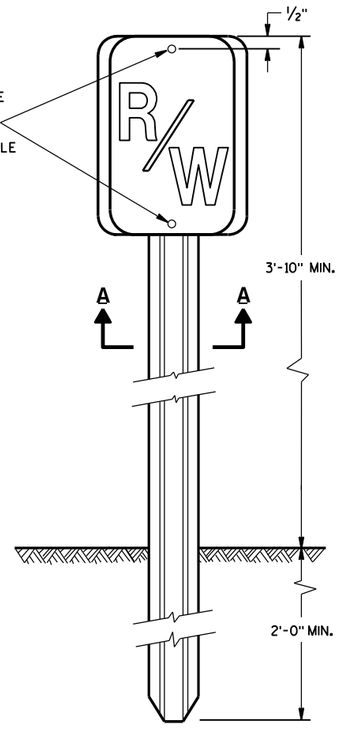


MIN. WEIGHT 1.12 LB./FT.

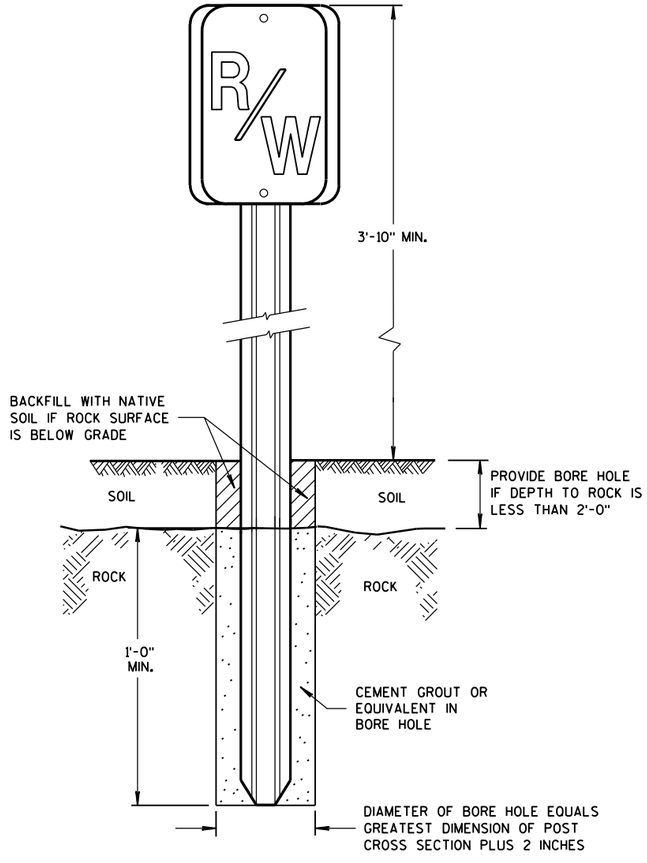
SECTION A-A



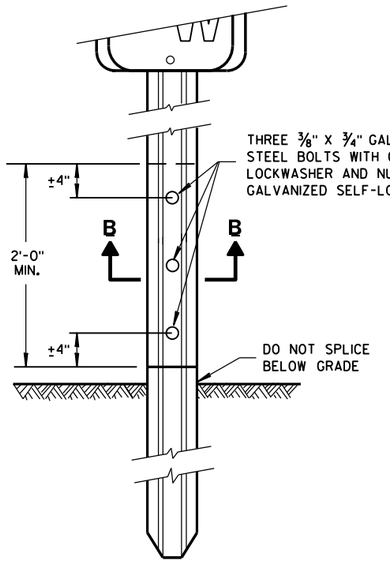
SECTION B-B



FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)



FRONT VIEW
SPLICE DETAIL

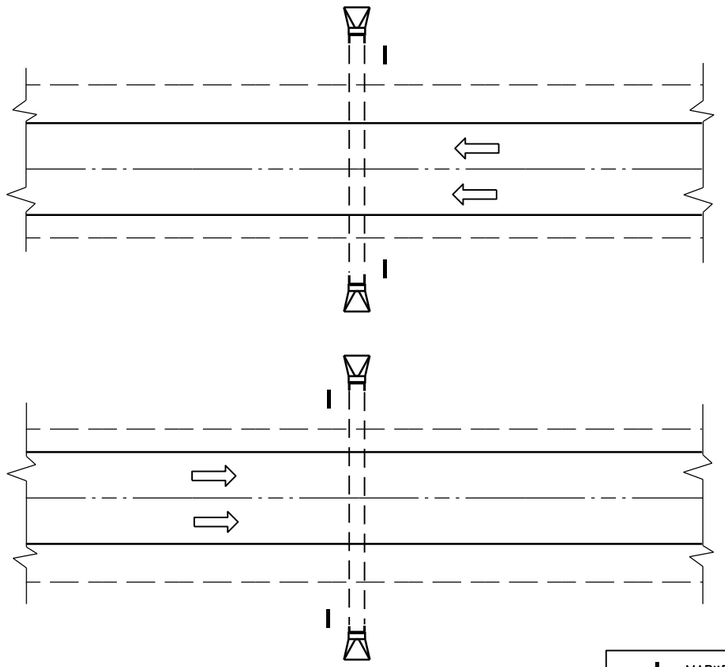
MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/18/2016 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MAPPING ENGINEER
FHWA

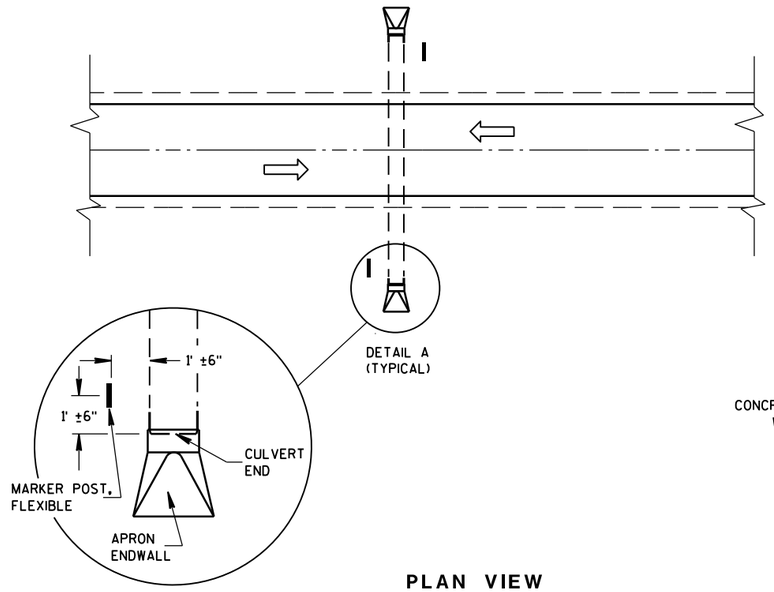
6

S.D.D. 15 A 1-13a



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

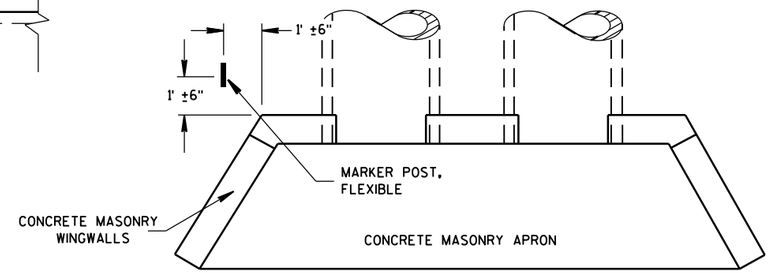
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

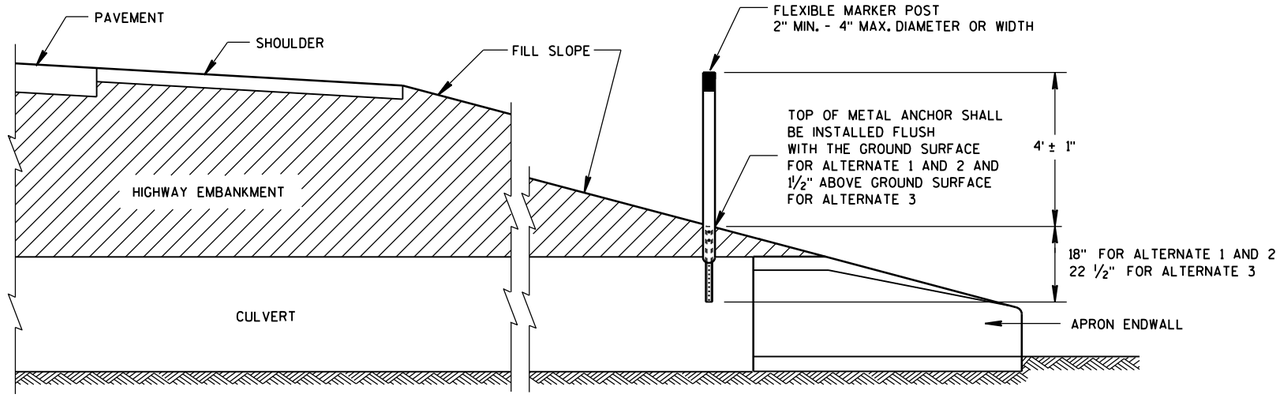
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

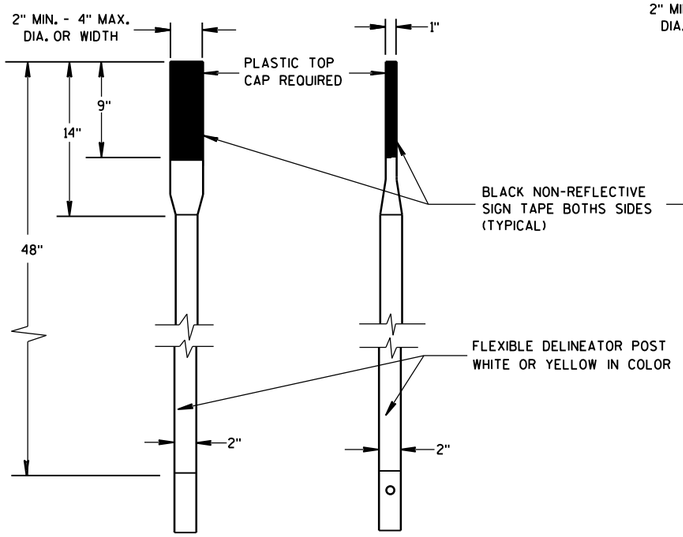
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

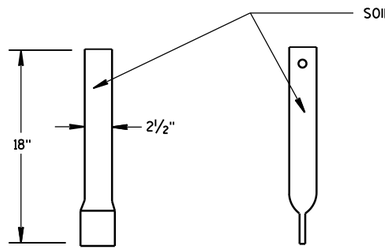
6

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

6

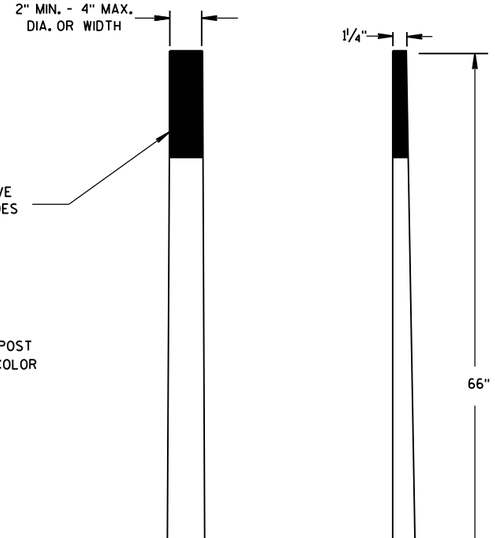
S.D.D. 15 A 3-2a





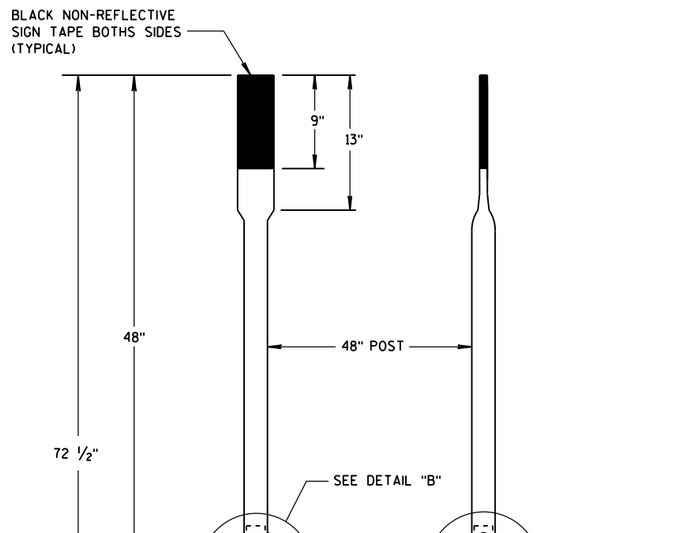
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

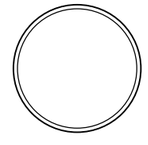
ALTERNATE 2



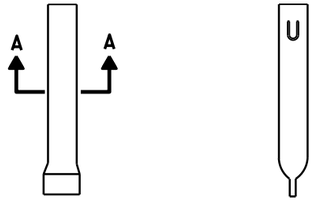
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

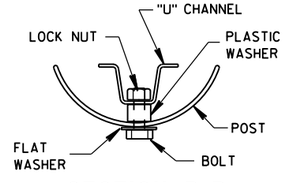


SECTION A-A

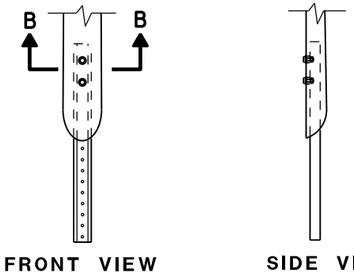


FRONT VIEW SIDE VIEW

ALTERNATE 1

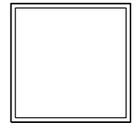


SECTION B-B

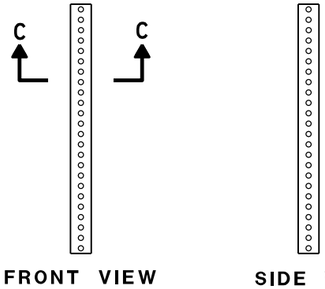


FRONT VIEW SIDE VIEW

ALTERNATE 2



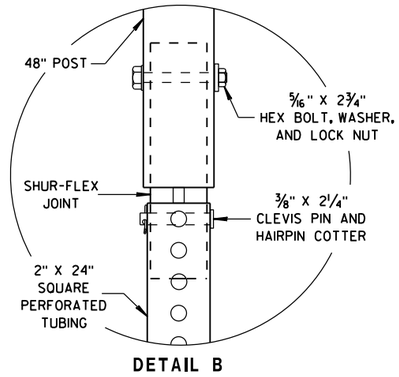
SECTION C-C



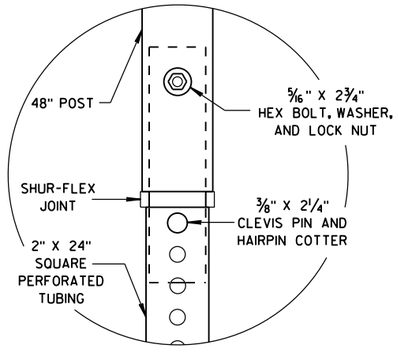
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

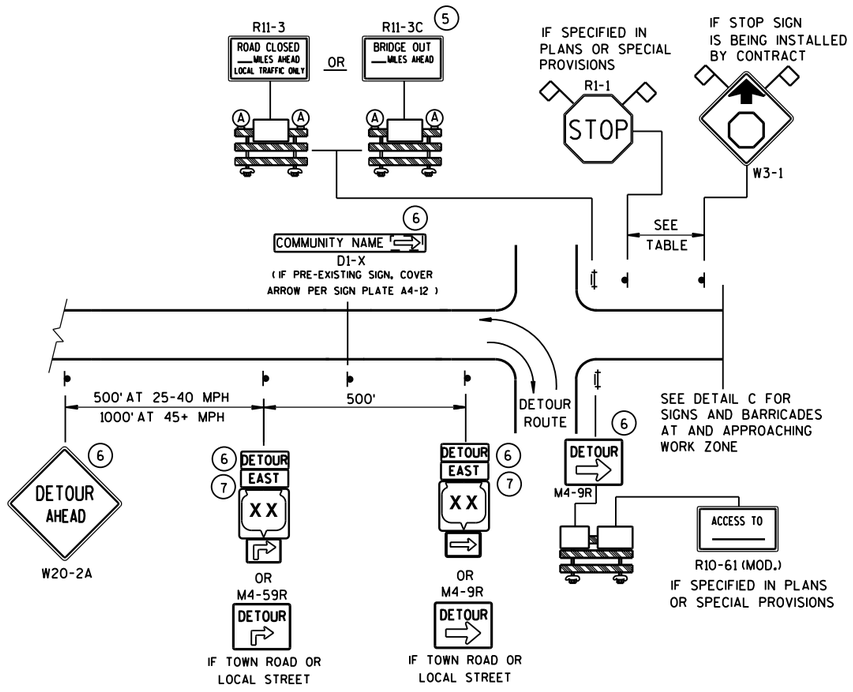
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

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

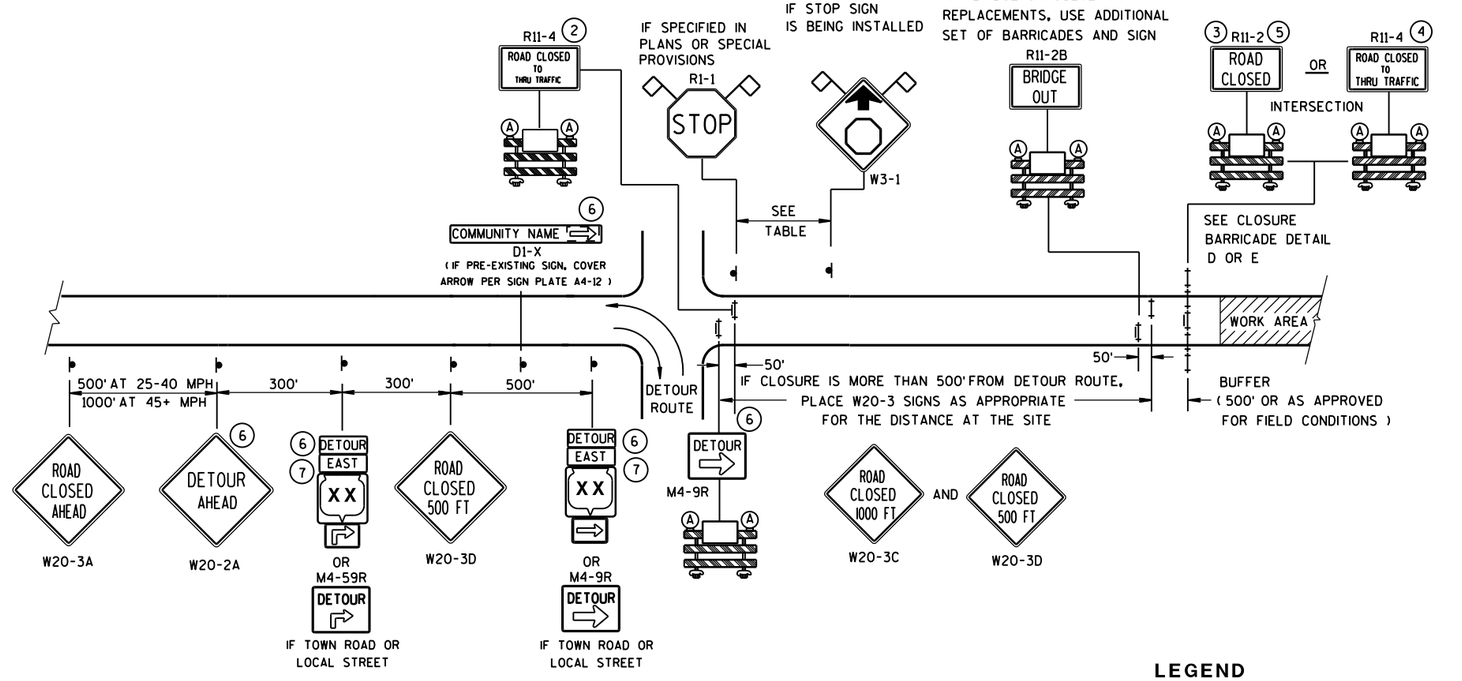
6

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



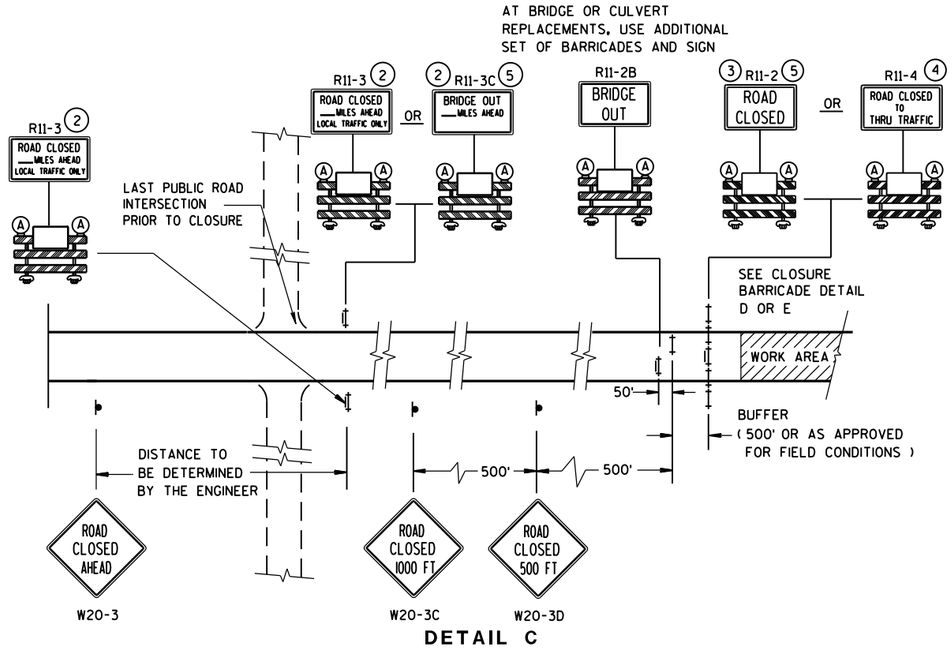
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

LEGEND

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

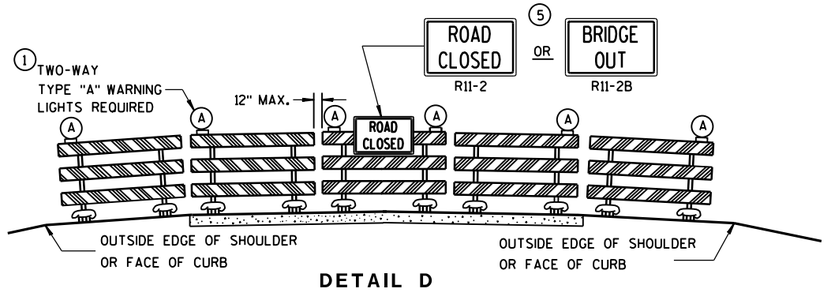
SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

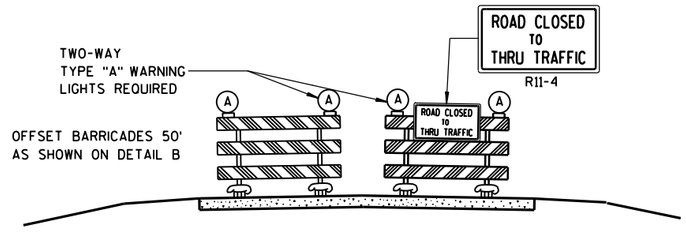
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

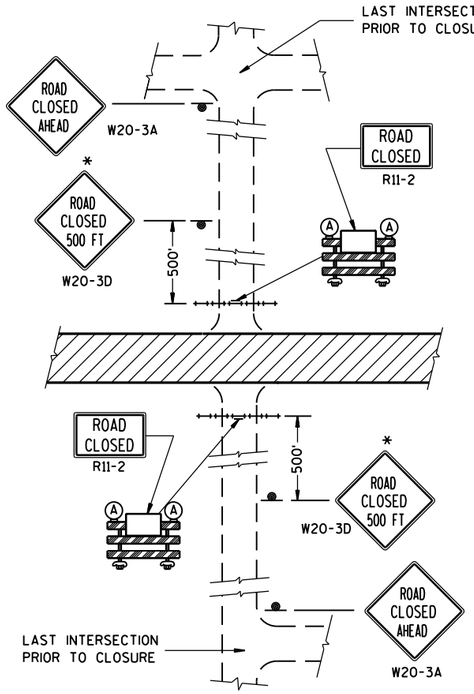
(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

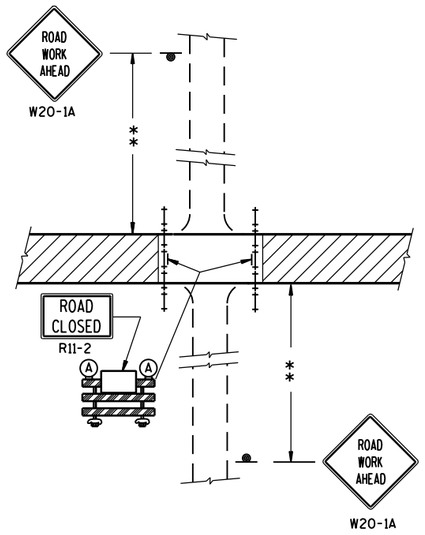
Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO 27 FIC
SAFETY ENGI
FHWA



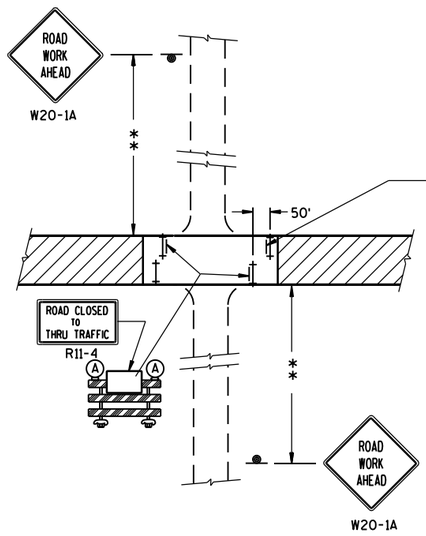
DETAIL 1

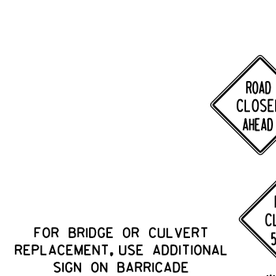
(NO ACCESS TO PROJECT)



DETAIL 2

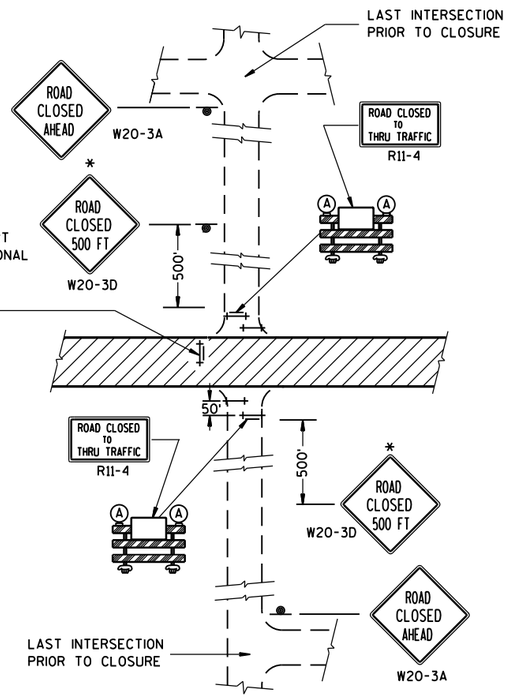
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).





DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

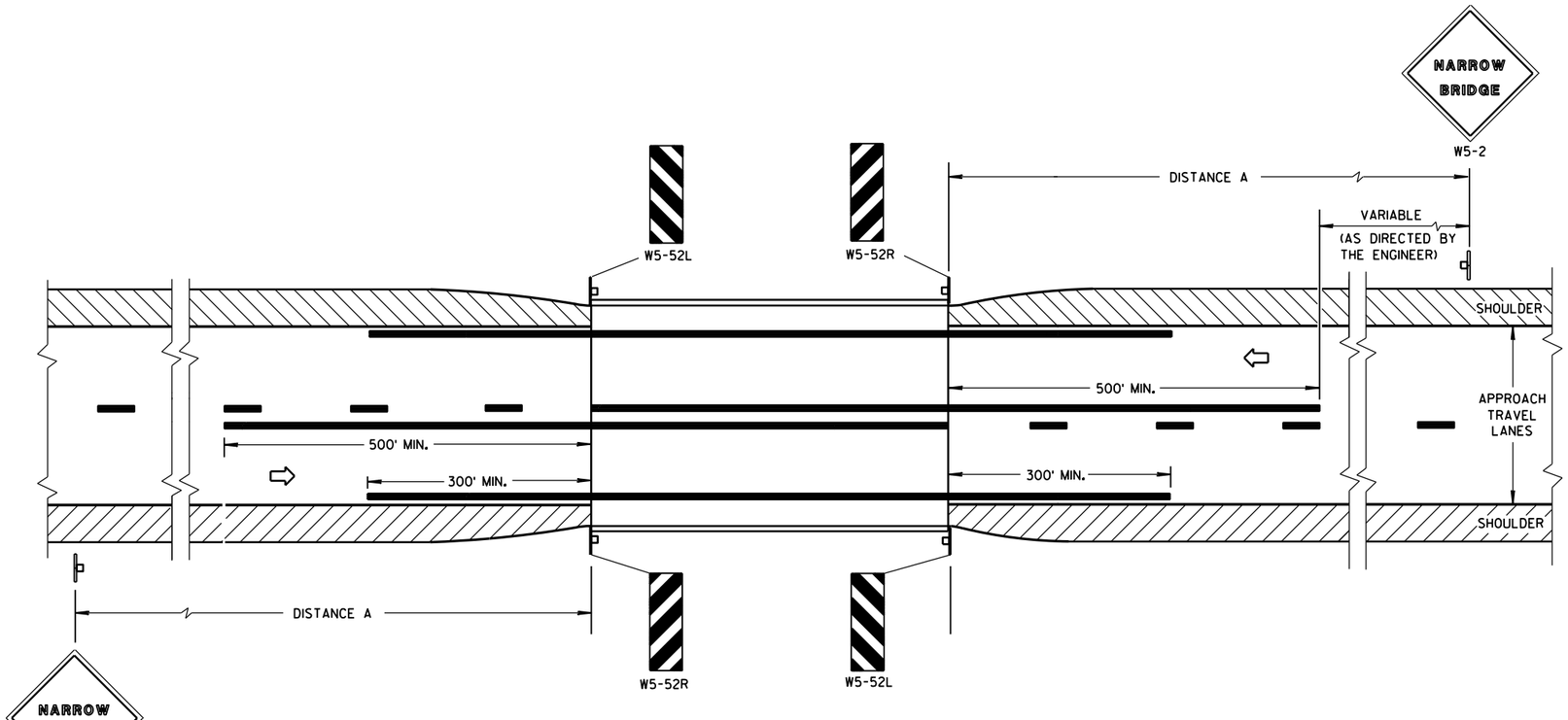
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible]FIC SAFETY ENGI[illegible]
FHWA

6

S.D.D. 15 C 3-3

6

S.D.D. 15 C 3-3

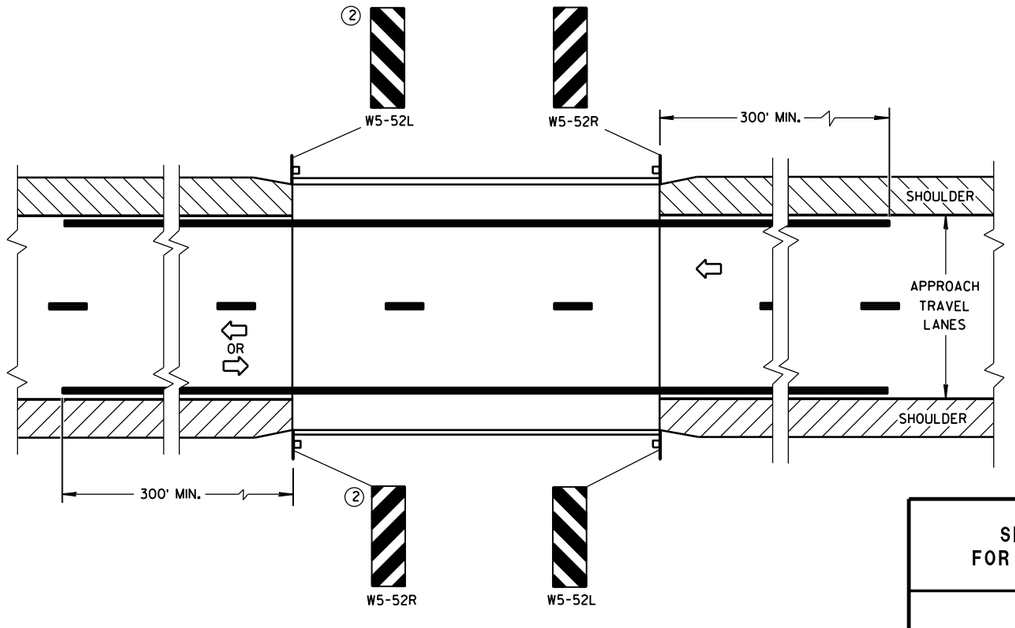


SITUATION 1

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

DISTANCE TABLE

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



SITUATION 2

WARRANTING CRITERIA:

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

GENERAL NOTES

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

① LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

② OMIT ON ONE-WAY TRAVELLED WAYS.

③ EDGE OF W5-52 SIGN SHALL BE PLACED IN LINE WITH FACE OF CURB OR PARAPET.

SIGNING & MARKING FOR TWO LANE BRIDGES

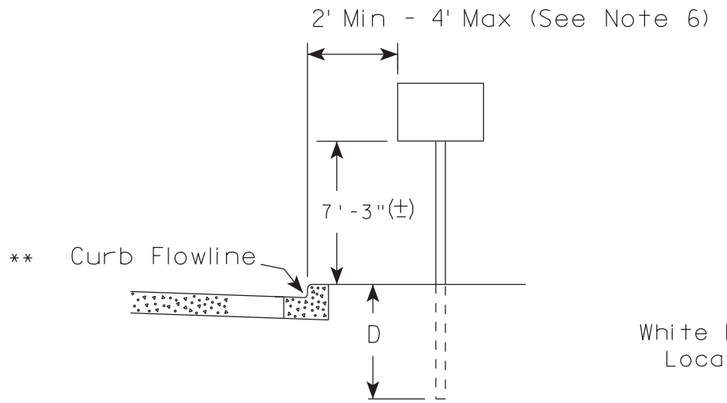
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR ...EER
FHWA

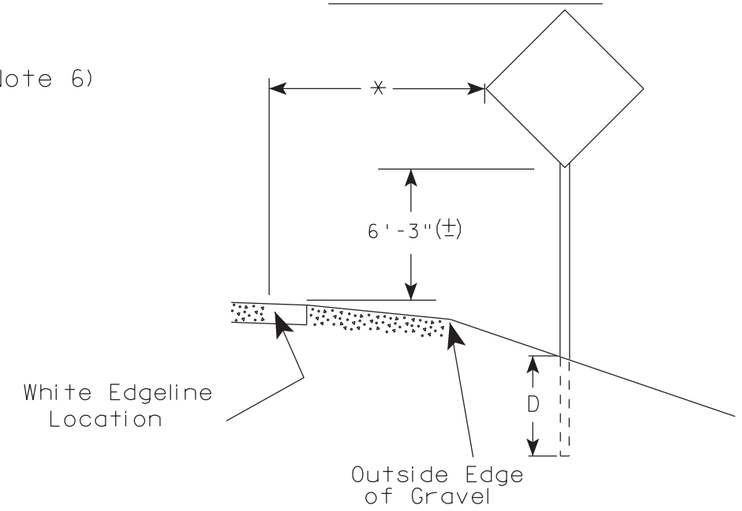
6

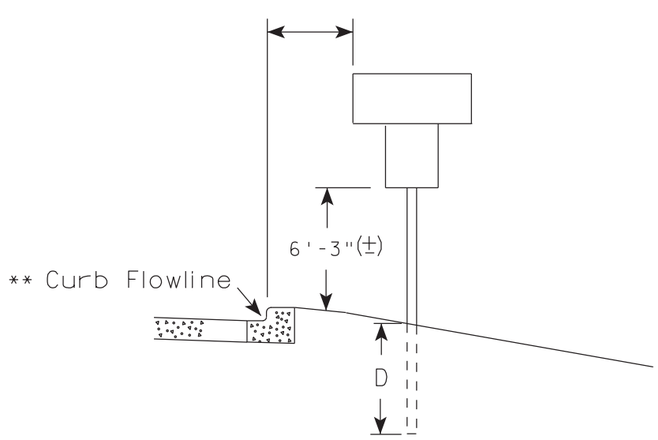
S.D.D. 15 C 6-8

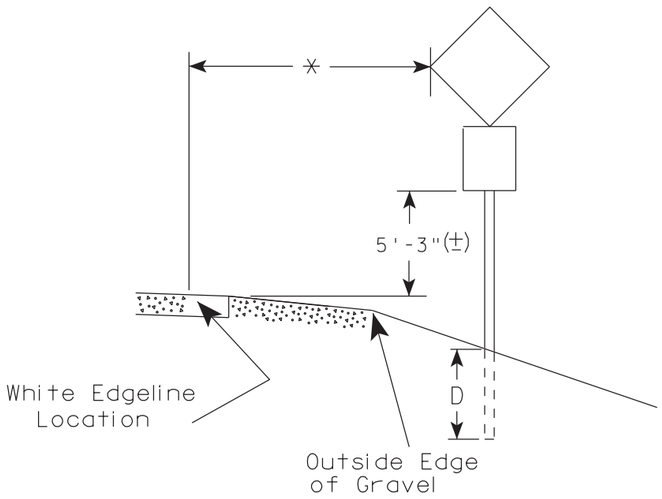
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

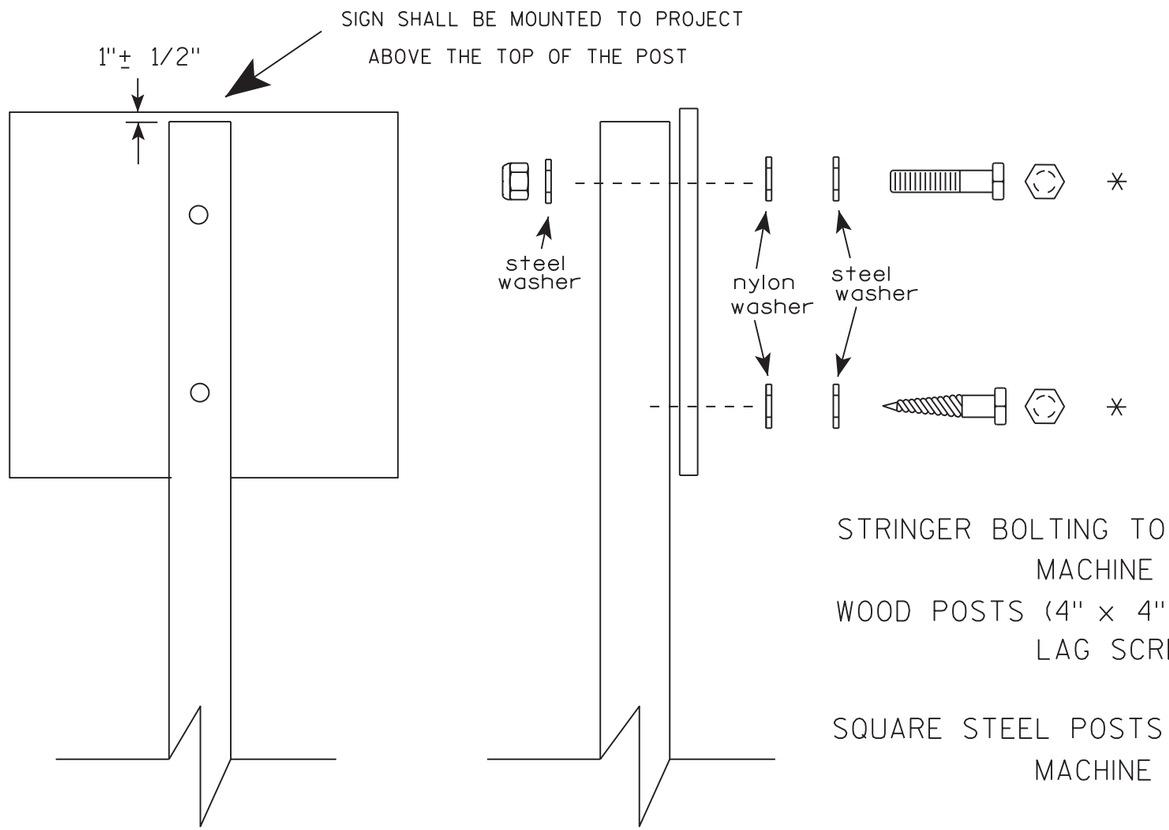
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

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

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

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

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

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

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

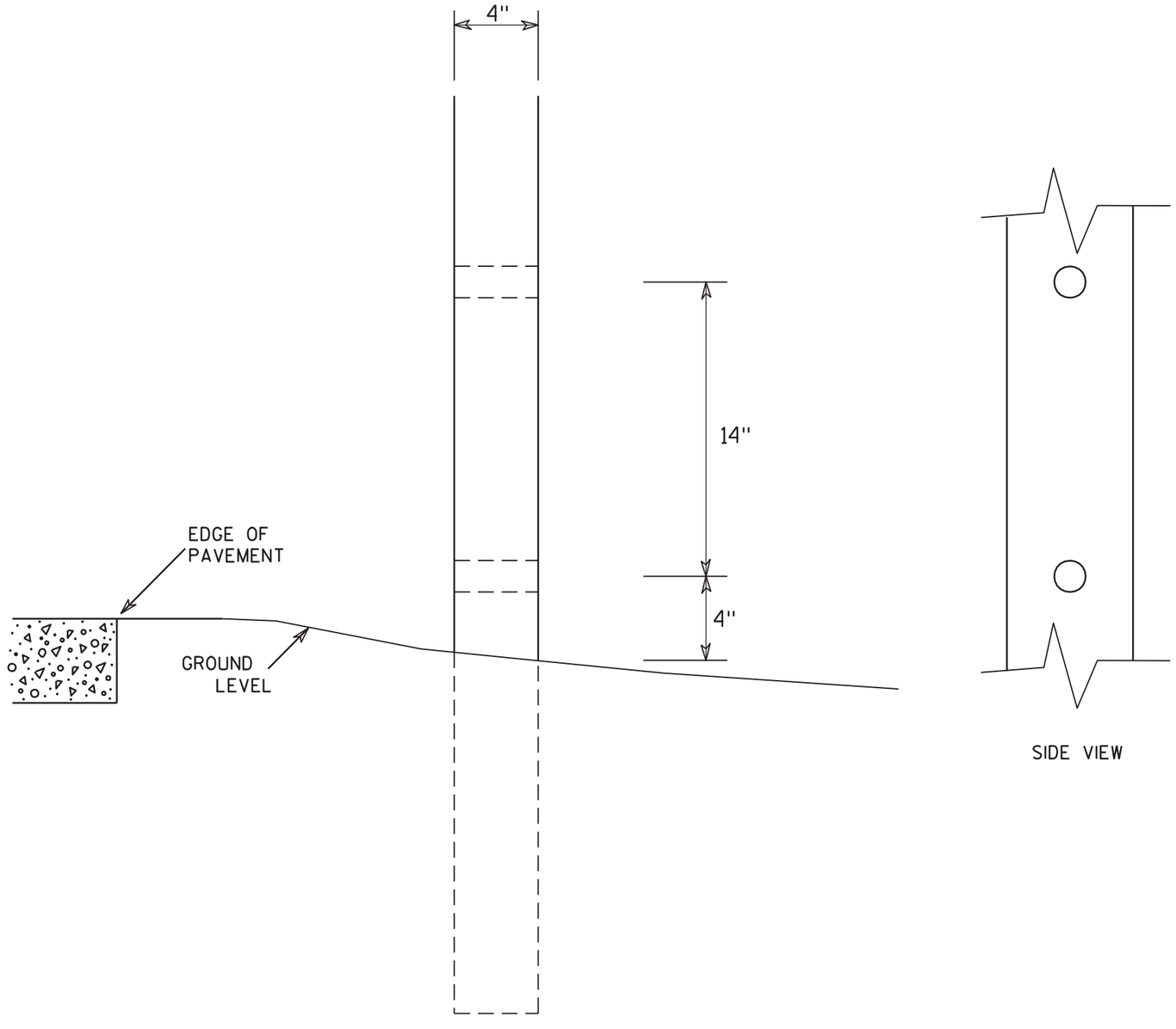
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: E

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



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

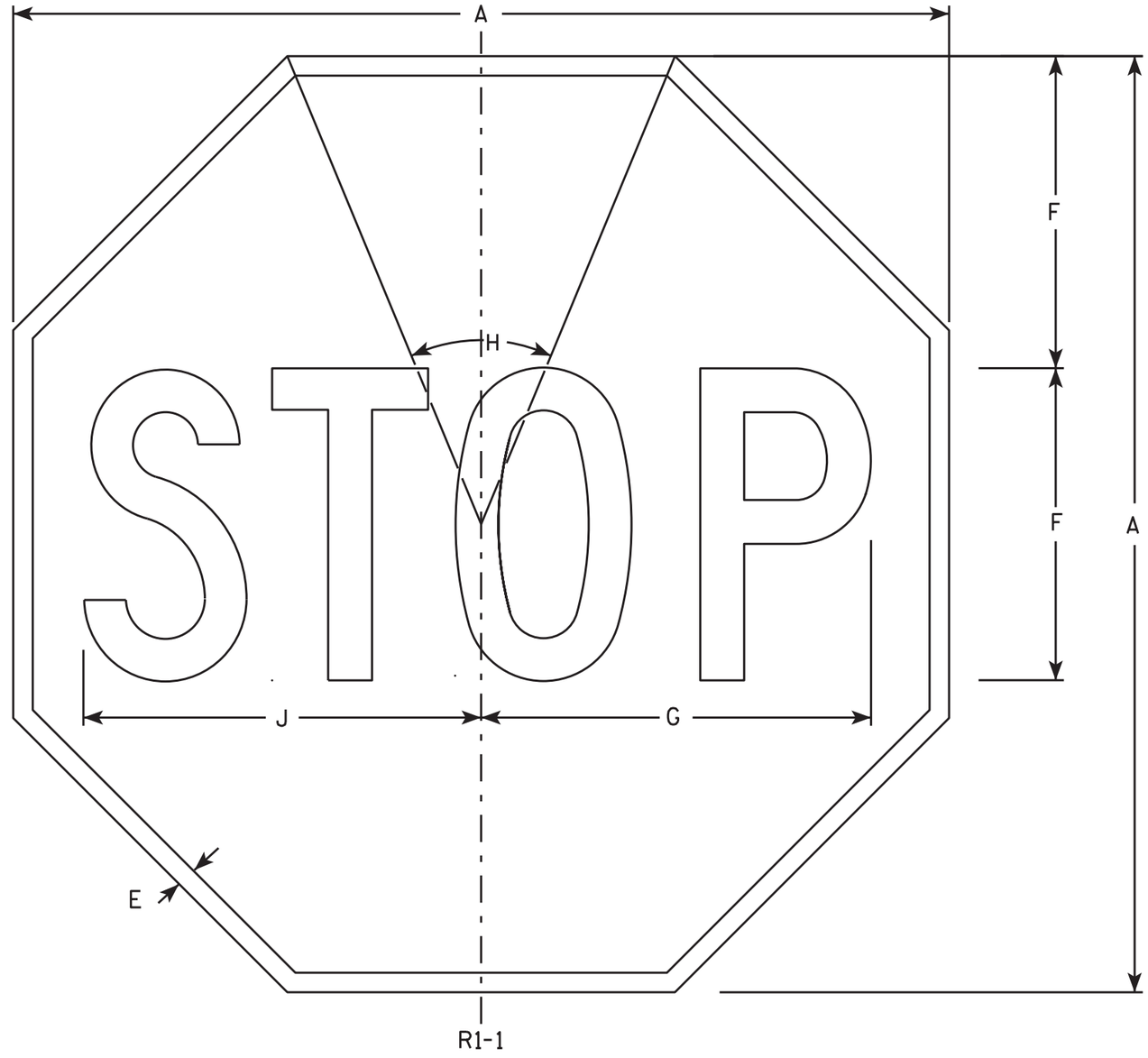
4 X 6 WOOD POST MODIFICATIONS

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: 32	E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

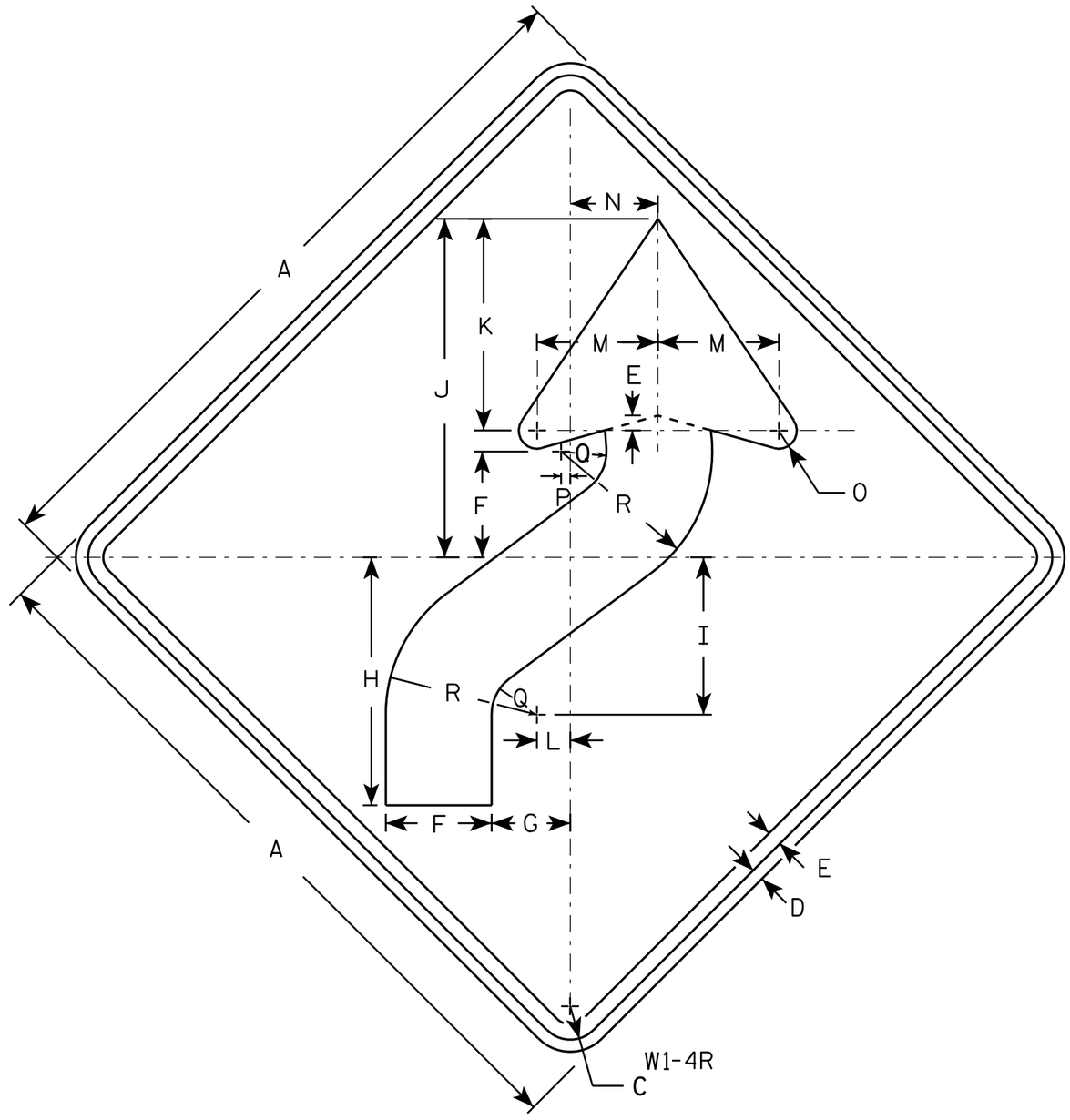
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO. 33	E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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. W1-4L is the same as W1-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	3 1/2	2 5/8	8 1/4	5 1/4	11 1/4	7	1 1/8	4	3	5/8	1/4	1 1/2	5									4.0
2S	30		1 3/8	1/2	5/8	4 3/8	3 1/4	10 1/4	6 1/2	14	8 3/4	1 3/8	5	3 5/8	3/4	3/8	1 7/8	6 1/4									6.25
2M	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
3	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
4	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

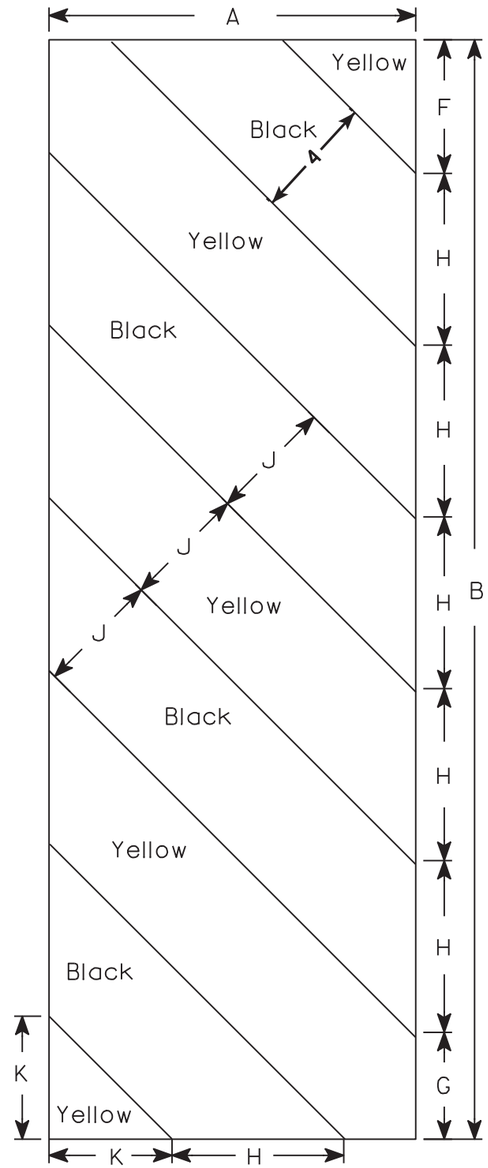
STANDARD SIGN
W1-4

WISCONSIN DEPT OF TRANSPORTATION

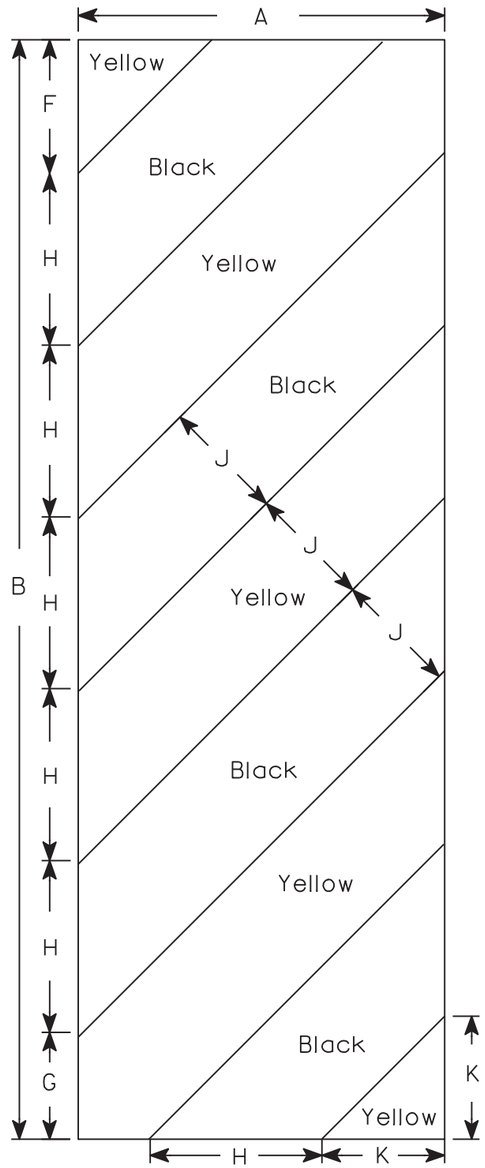
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-4.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 34 | 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

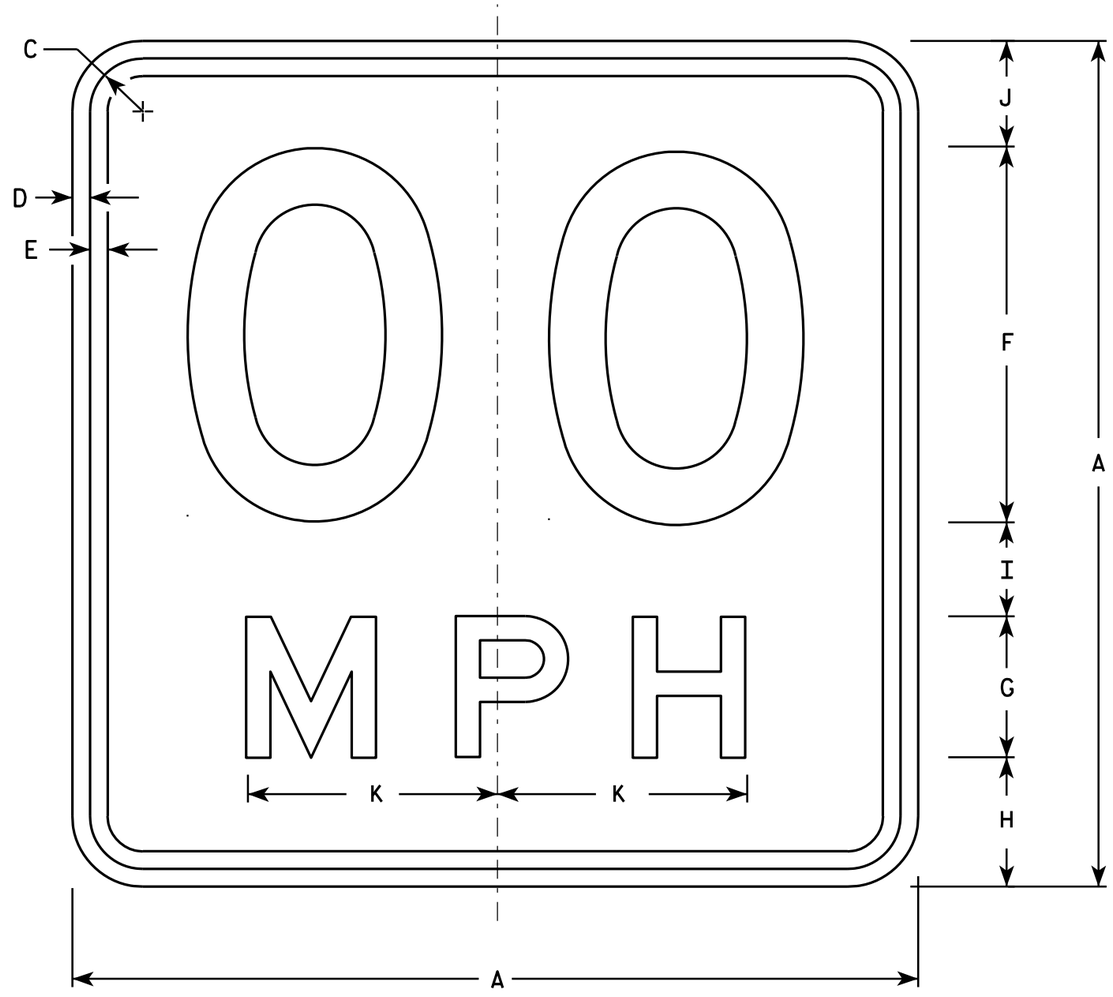
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 35 | E



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

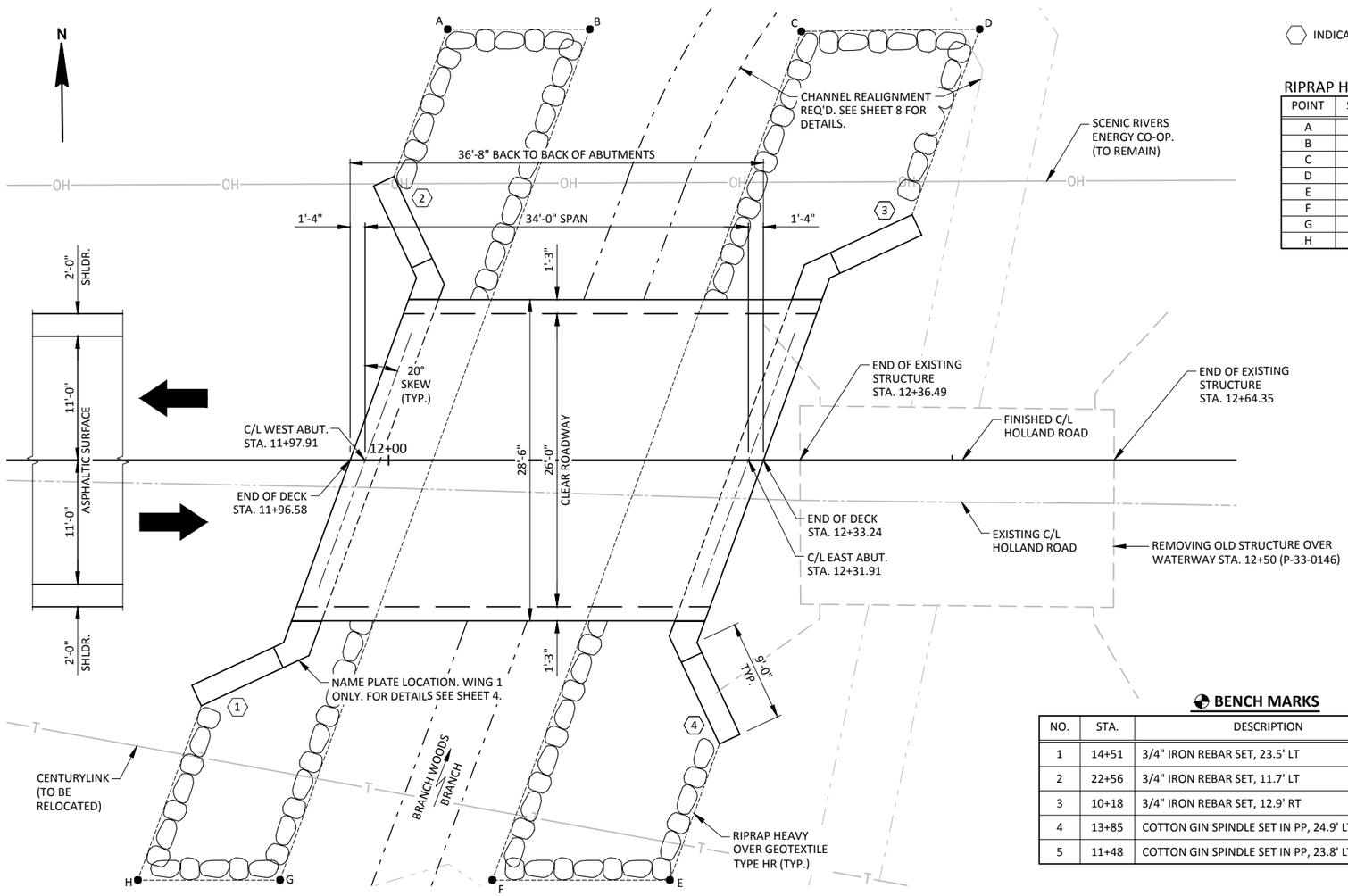
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 36 | E



PLAN B-33-130

(SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB)

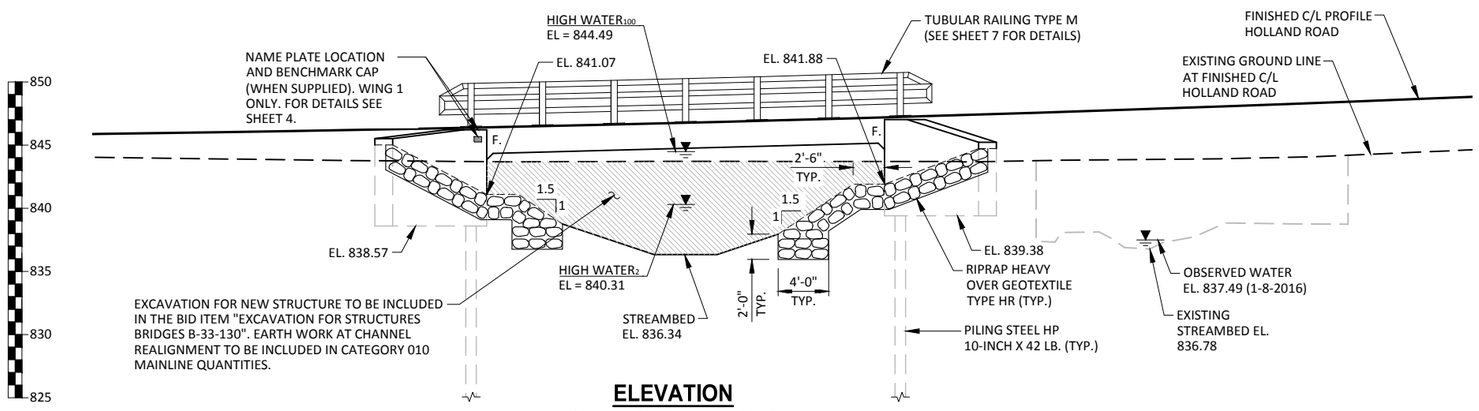
⬡ INDICATES WING NUMBER

RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	12+05	38' LT.
B	12+18	38' LT.
C	12+37	38' LT.
D	12+52	38' LT.
E	12+25	37' RT.
F	12+09	37' RT.
G	11+90	37' RT.
H	11+78	37' RT.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	14+51	3/4" IRON REBAR SET, 23.5' LT	858.80
2	22+56	3/4" IRON REBAR SET, 11.7' LT	846.68
3	10+18	3/4" IRON REBAR SET, 12.9' RT	846.15
4	13+85	COTTON GIN SPINDLE SET IN PP, 24.9' LT	853.89
5	11+48	COTTON GIN SPINDLE SET IN PP, 23.8' LT	844.36



ELEVATION

(NORMAL TO BRANCH WOODS BRANCH)

STATE PROJECT NUMBER

5671-00-76

DESIGN DATA

LIVE LOAD:

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.28
OPERATING RATING FACTOR — RF=1.66
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) — 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 P.S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A ** REQUIRED DRIVING RESISTANCE OF 100 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 30 FT PILE LENGTHS AT BOTH ABUTMENTS.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA

A.D.T. (2018) — 170
A.D.T. (2038) — 250
DESIGN SPEED — 30 M.P.H.

HYDRAULIC DATA

100-YEAR FREQUENCY
DRAINAGE AREA — 1.9 SQ. MI.
Q_{100} TOTAL — 1,130 C.F.S.
THROUGH STRUCTURE — 1,130 C.F.S.
OVERTOPPING ROADWAY — N.A.
VELOCITY - THROUGH STRUCTURE — 10.7 F.P.S.
WATERWAY AREA - THROUGH STRUCTURE — 105.5 SQ. FT.
HIGH WATER100 ELEVATION — 844.49
SCOUR CRITICAL CODE — 5

EROSION CONTROL
Q_2 — 215 C.F.S.
HIGH WATER2 ELEVATION — 840.31

LIST OF DRAWINGS

WISCONSIN
PATRICK T. BOLAND E-36303 SPRING GREEN WIS.
Patrick Boland 1-7-17
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR — 05/12/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-33-130

HOLLAND ROAD OVER BRANCH WOODS BRANCH

COUNTY: LAFAYETTE — TOWN/~~CITY/VILLAGE~~: DARLINGTON
DESIGN SPEC: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
PTB	RBH	PTB	RBH

DESIGN CONSULTANT
PATRICK BOLAND, PE
(608) 588-7484

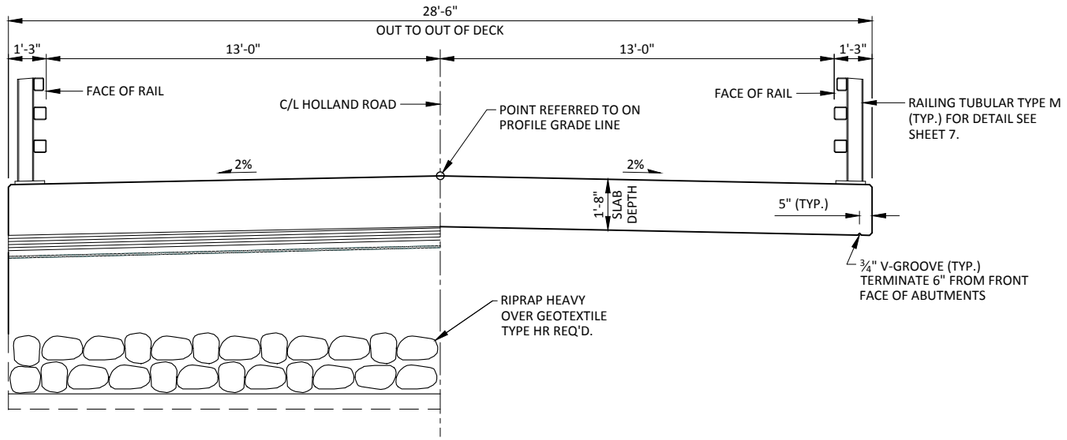
BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

GENERAL PLAN

SHEET 1 OF 8
37

STATE PROJECT NUMBER

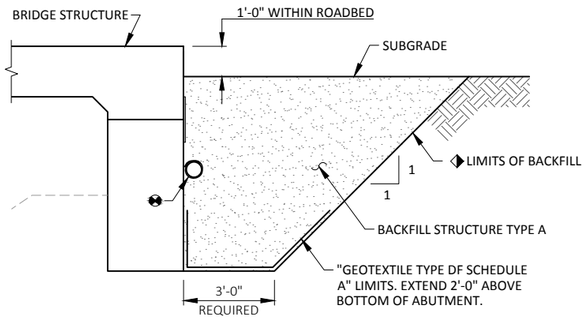
5671-00-76



AT ABUTMENT **IN SPAN**

PROPOSED CROSS-SECTION THROUGH ROADWAY

(LOOKING NORTH)

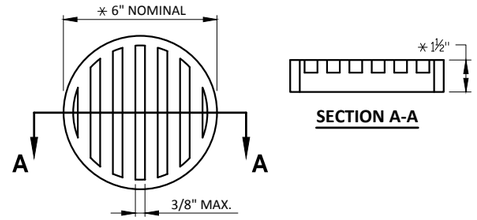


BACKFILL STRUCTURE DETAIL

(TYPICAL AT BOTH ABUTMENTS)

◆ BACKFILL STRUCTURE TYPE A PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES B-33-130". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

◆ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."



SECTION A-A

RODENT SCREEN

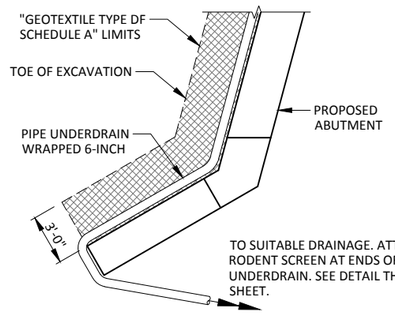
NOTES:

⁎ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

ORIENT SCREEN SO SLOTS ARE VERTICAL.

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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



PIPE UNDERDRAIN DETAIL

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD 88).

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

JOINT FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION MI53, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS, OR AS DIRECTED BY THE ENGINEER IN THE FIELD.

AT THE BACK FACE OF ABUTMENTS, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A. SEE THIS SHEET FOR DETAIL.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK, THE SIDES OF THE DECK AND EXTERIOR 12" OF THE UNDERSIDE OF THE DECK (CONCRETE MATERIAL ONLY).

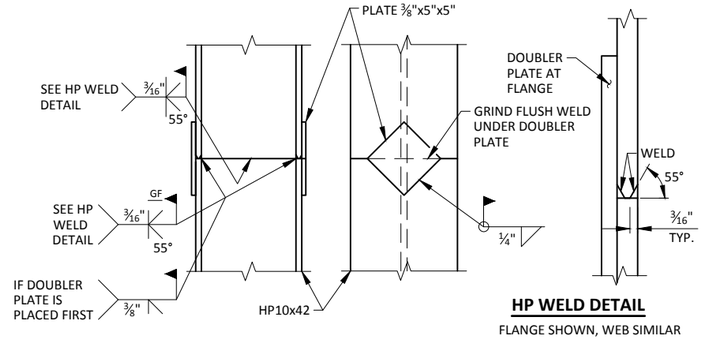
THE EXISTING STRUCTURE (P-33-146) IS A SINGLE-SPAN FLAT SLAB STRUCTURE SUPPORTED ON FULL RETAINING CONCRETE ABUTMENTS. THE STRUCTURE HAS A CLEAR ROADWAY WIDTH OF 17' AND IS 28' LONG AND SHALL BE REMOVED.

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

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

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

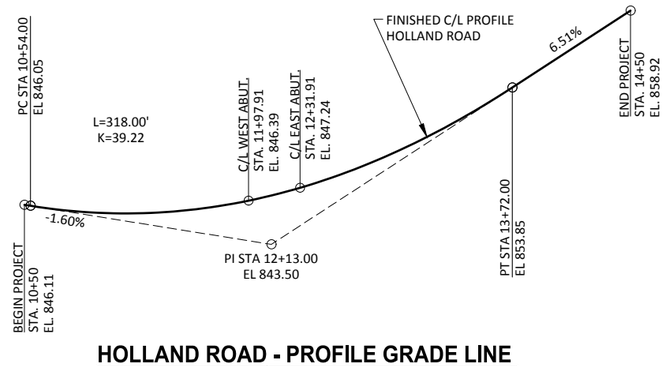
PILE SPLICE DETAIL

STEEL "HP" PILE MATERIAL SHALL BE ASTM A 572 GRADE 50.

TOTAL ESTIMATED QUANTITIES

	ITEM NUMBER	ITEM DESCRIPTION	UNIT	W. ABUT.	SUPER	E. ABUT.	TOTALS
	203.0500.S	REMOVING OLD STRUCTURE OVER WATERWAY STA. 12+50	LS	--	--	--	1
	206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-33-130	LS	--	--	--	1
	210.1500	BACKFILL STRUCTURE TYPE A	TON	125	--	125	250
	502.0100	CONCRETE MASONRY BRIDGES	CY	28	69	28	125
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	140	--	140
	505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,265	--	2,265	4,530
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,335	12,420	1,335	15,090
	513.4061	RAILING TUBULAR TYPE M B-33-130	LF	--	77	--	77
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	--	6	12
	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	205	--	205	410
▽	606.0300	RIPRAP HEAVY	CY	70	--	90	160
	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	90	--	90	180
	645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	45	--	45	90
▽	645.0120	GEOTEXTILE TYPE HR	SY	120	--	150	270
		NON-BID ITEMS					
		FILLER	SIZE				½" & ¾"

▽ ADDITIONAL AMOUNT INCLUDED IN CATEGORY 010 MAINLINE QUANTITIES.



HOLLAND ROAD - PROFILE GRADE LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-130

DRAWN BY JZ | PLANS CK'D. PTB

CROSS SECTIONS AND QUANTITIES

SHEET 2 OF 8

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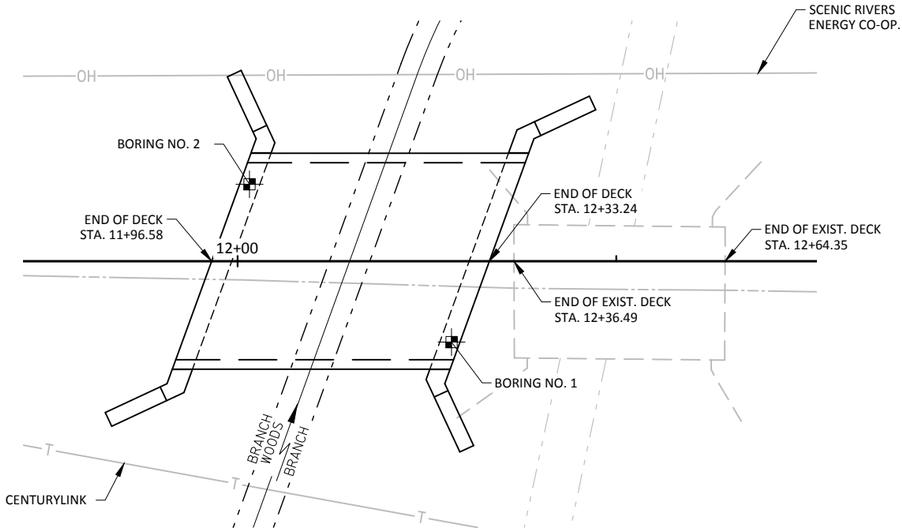
8

8

STATE PROJECT NUMBER

5671-00-76



PLAN B-33-130

SOIL BORINGS

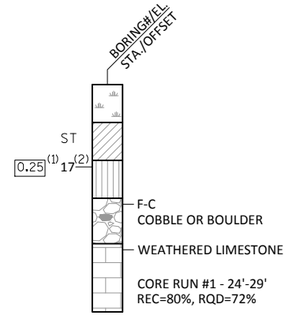
BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	03/31/16	172,389.0	465,532.8
2	03/31/16	172,410.2	465,559.2

BORINGS & REPORT COMPLETED BY: CGC, INC.
2921 PERRY STREET
MADISON, WI 53713

MATERIAL SYMBOLS

Asphalt, Topsoil, Peat, Concrete, Fill, Gravel, Sand, Clay, Silt, Boulders or Cobbles, Limestone, Bedrock (unknown), Shale, Sandstone, Igneous/ meta

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206 STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATIONS

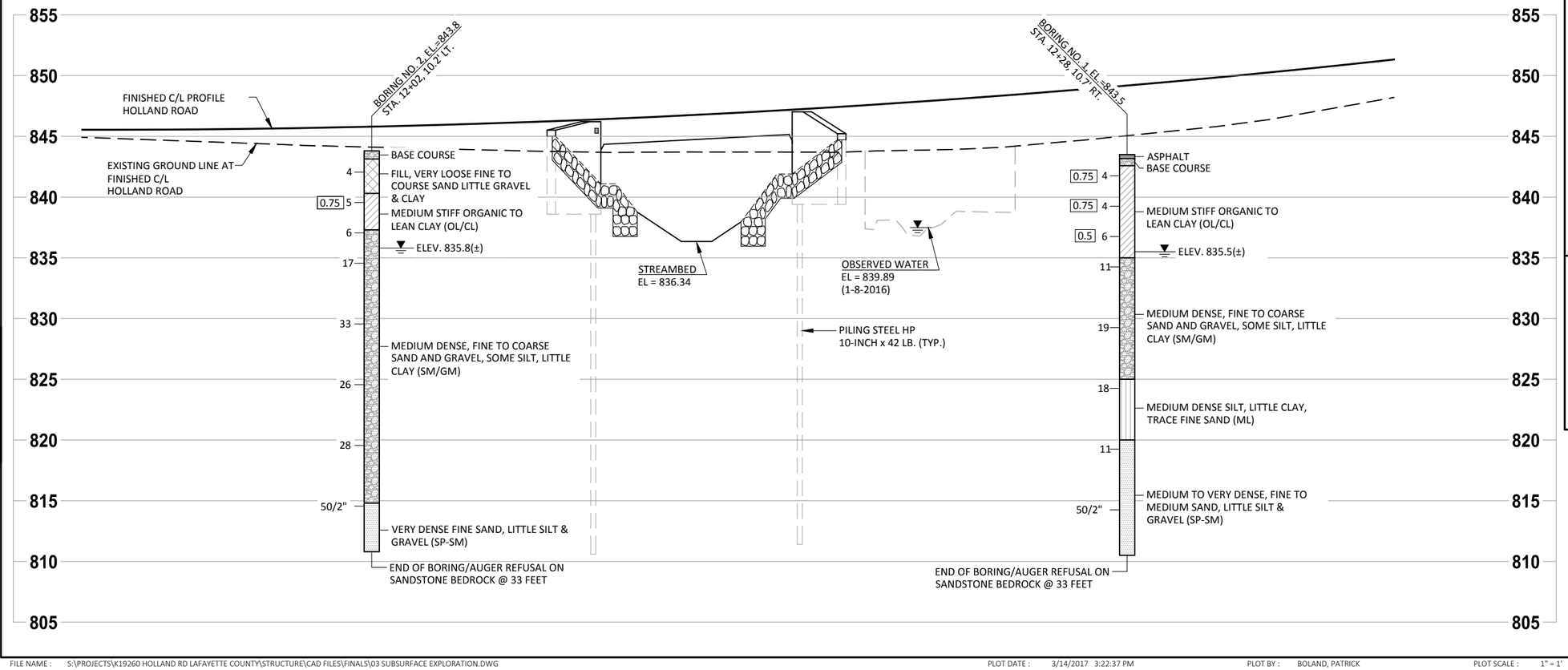
AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COURSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY occur.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-130

DRAWN BY PTB | PLANS CK'D. RBH

SUBSURFACE EXPLORATION

SHEET 3 OF 8

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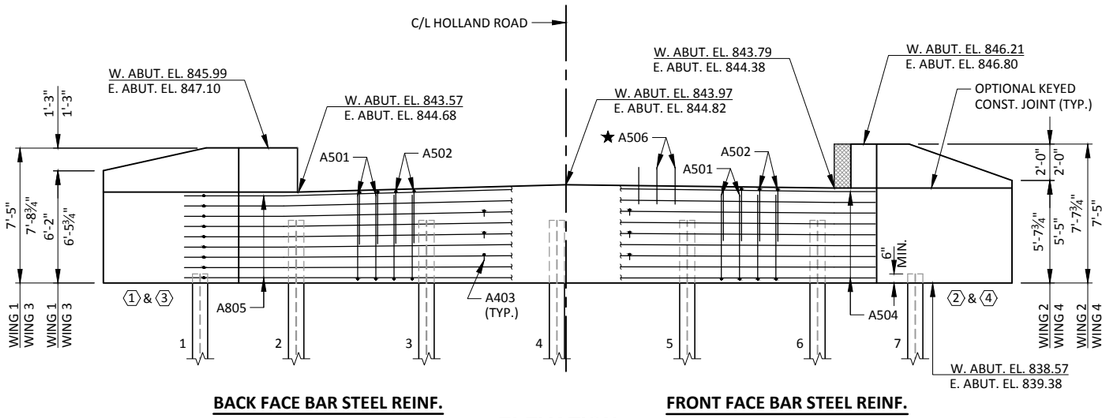
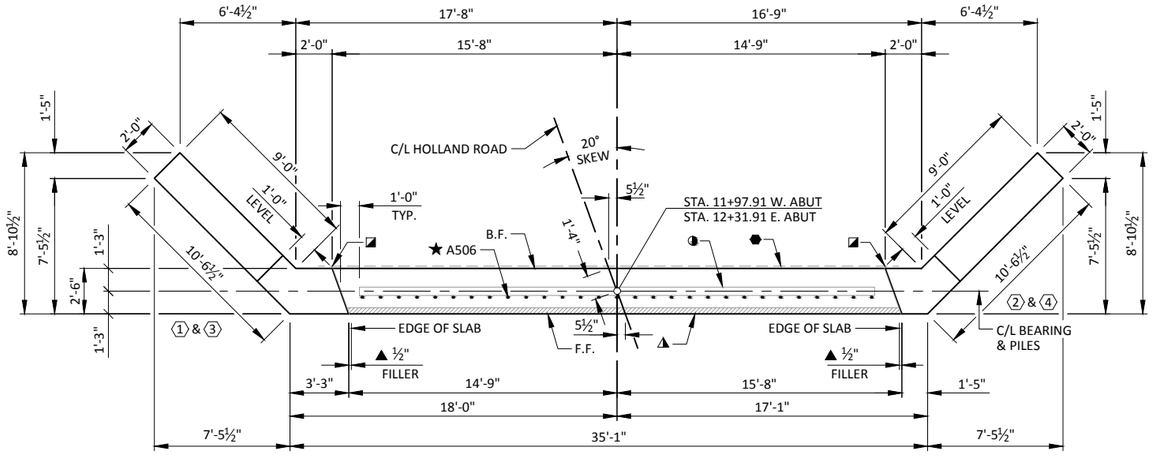


BACK FACE BAR STEEL REINF.

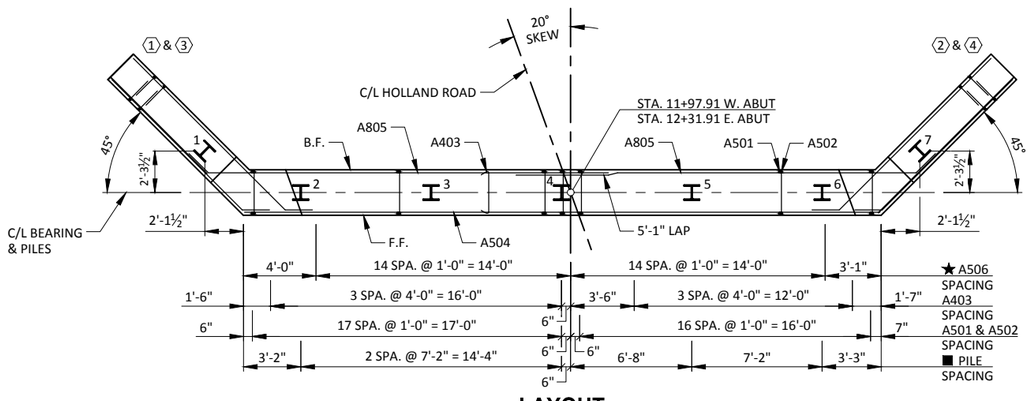
FRONT FACE BAR STEEL REINF.

ELEVATION

(WEST ABUTMENT LOOKING WEST)
(EAST ABUTMENT LOOKING EAST)



PLAN



LAYOUT

NOTES

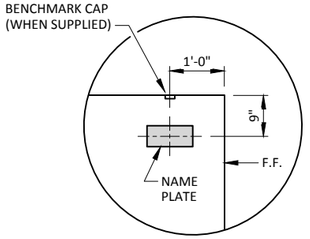
SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 5 FOR BILL OF BARS.

DO NOT PLACE FILL HIGHER THAN 3 FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

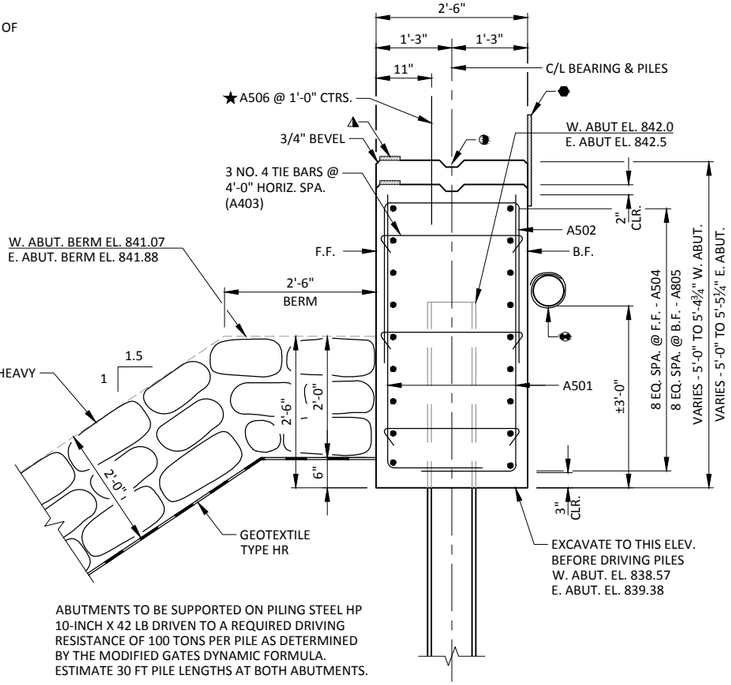
SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE



NAME PLATE AND BENCHMARK CAP DETAIL



ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 100 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 30 FT PILE LENGTHS AT BOTH ABUTMENTS.

TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

- KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ◭ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ★ A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- ■ PILE SPACING MEASURED AT BASE OF ABUTMENT BODY.
- PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 2. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-130

DRAWN BY PTB | PLANS CK'D. RBH

ABUTMENTS

SHEET 4 OF 8

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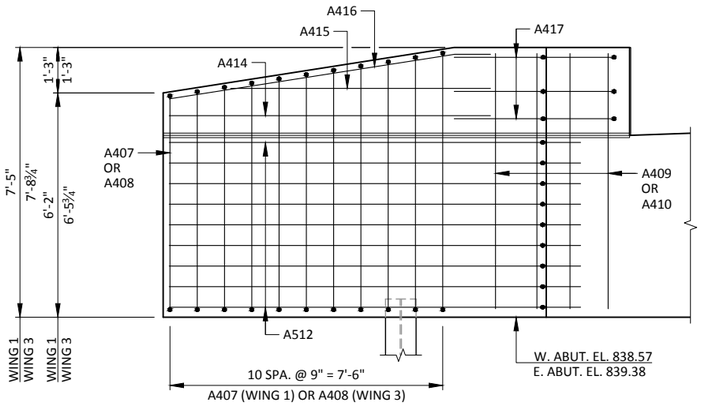
8

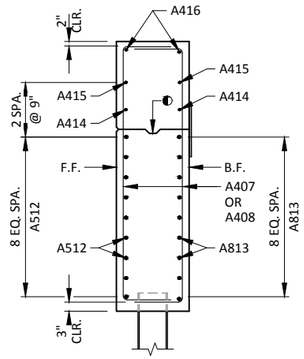
8

STATE PROJECT NUMBER

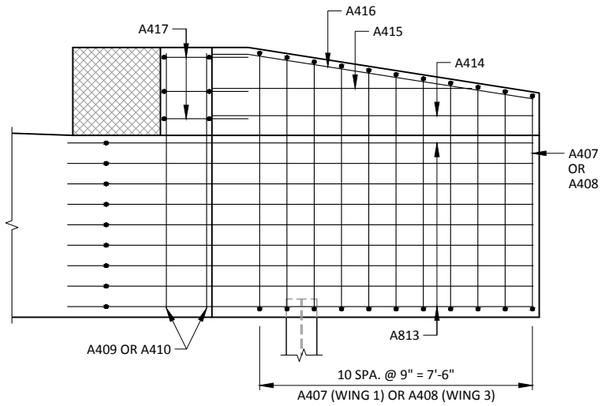
5671-00-76



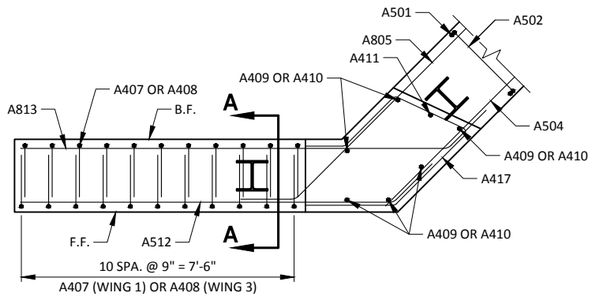
F.F. ELEVATION - WING 1 & 3



SECTION A-A



B.F. ELEVATION - WING 1 & 3



PLAN VIEW - WING 1 & 3

LEGEND

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾" "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

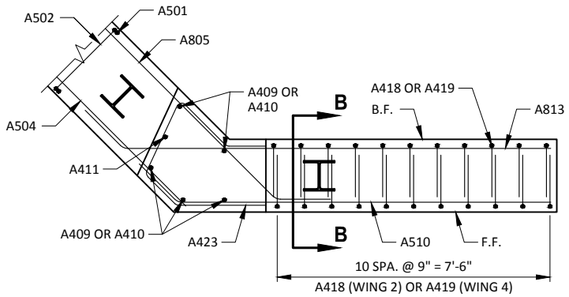
NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE



PLAN VIEW - WING 2 & 4

BILL OF BARS
TWO ABUTMENTS SHOWN

2,670 LB (COATED)
4,530 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
A501	140	6-1	X			BODY - VERT. - F.F & B.F.
A502	70	8-7	X			BODY - VERT. - TOP
A403	48	2-8	X			TIE BARS
A504	18	34-10				BODY - HORIZ. - F.F.
A805	36	23-8	X			BODY - HORIZ. - B.F.
A506	58	2-0		X		BODY - VERT. - DOWELS
A407	22	8-9	X	X	✳	WING 1 - VERT. - F.F. & B.F.
A408	22	8-8	X	X	✳	WING 3 - VERT. - F.F. & B.F.
A409	11	7-0		X		WINGS 1 & 4 - VERT.
A410	11	7-3		X		WINGS 2 & 3 - VERT.
A411	4	3-3		X		WINGS - VERT. - TOP
A512	36	11-9	X	X		WINGS - HORIZ. - F.F.
A813	36	13-3	X	X		WINGS - HORIZ. - B.F.
A414	4	8-10		X		WING 1 & 3 - HORIZ. - F.F. & B.F.
A415	4	7-2		X		WING 1 & 3 - HORIZ. - F.F. & B.F.
A416	4	8-11	X	X		WING 1 & 3 - HORIZ. - F.F. & B.F. - TOP
A417	6	10-2	X	X		WING 1 & 3 - HORIZ. - TOP
A418	22	9-2	X	X	✳	WING 2 - VERT. - F.F. & B.F.
A419	22	8-6	X	X	✳	WING 4 - VERT. - F.F. & B.F.
A420	4	7-10		X		WING 2 & 4 - HORIZ. - F.F. & B.F.
A421	4	4-10		X		WING 2 & 4 - HORIZ. - F.F. & B.F.
A422	4	9-1	X	X		WING 2 & 4 - HORIZ. - F.F. & B.F. - TOP
A423	6	8-10	X	X		WING 2 & 4 - HORIZ. - TOP

NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

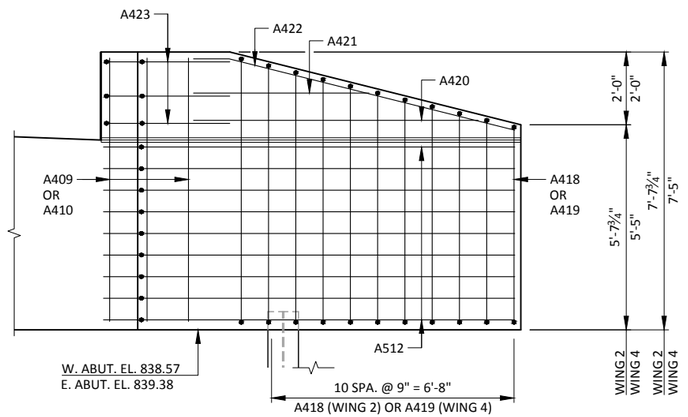
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

✳ LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

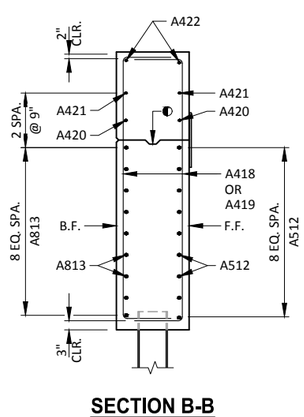
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A407	2 SERIES OF 11	9-5 TO 8-1
A408	2 SERIES OF 11	9-7 TO 7-9
A418	2 SERIES OF 11	9-9 TO 8-7
A419	2 SERIES OF 11	9-5 TO 7-7

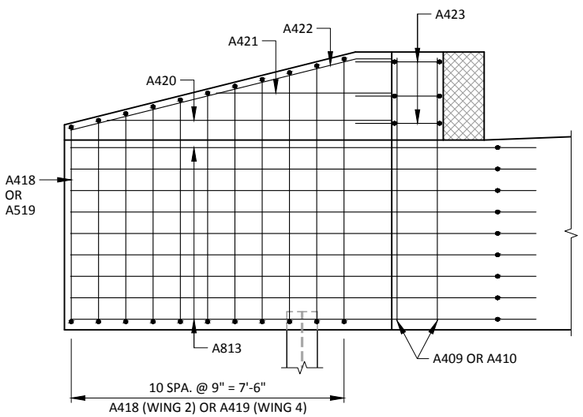
BUNDLE AND TAG EACH SERIES SEPARATELY.



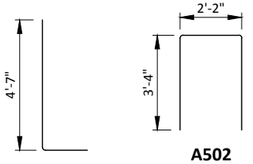
F.F. ELEVATION - WING 2 & 4



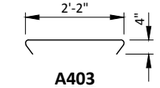
SECTION B-B



B.F. ELEVATION - WING 2 & 4



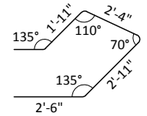
A501 **A502**



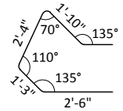
A403

A407, A408, A418 & A419

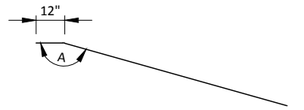
A805, A512 & A813



A417



A423



A416 & A422

MARK	'A'
A416	171°07'
A422	165°57'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-130

DRAWN BY PTB | PLANS CK'D. RBH

ABUTMENT DETAILS

SHEET 5 OF 8

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8

8

STATE PROJECT NUMBER

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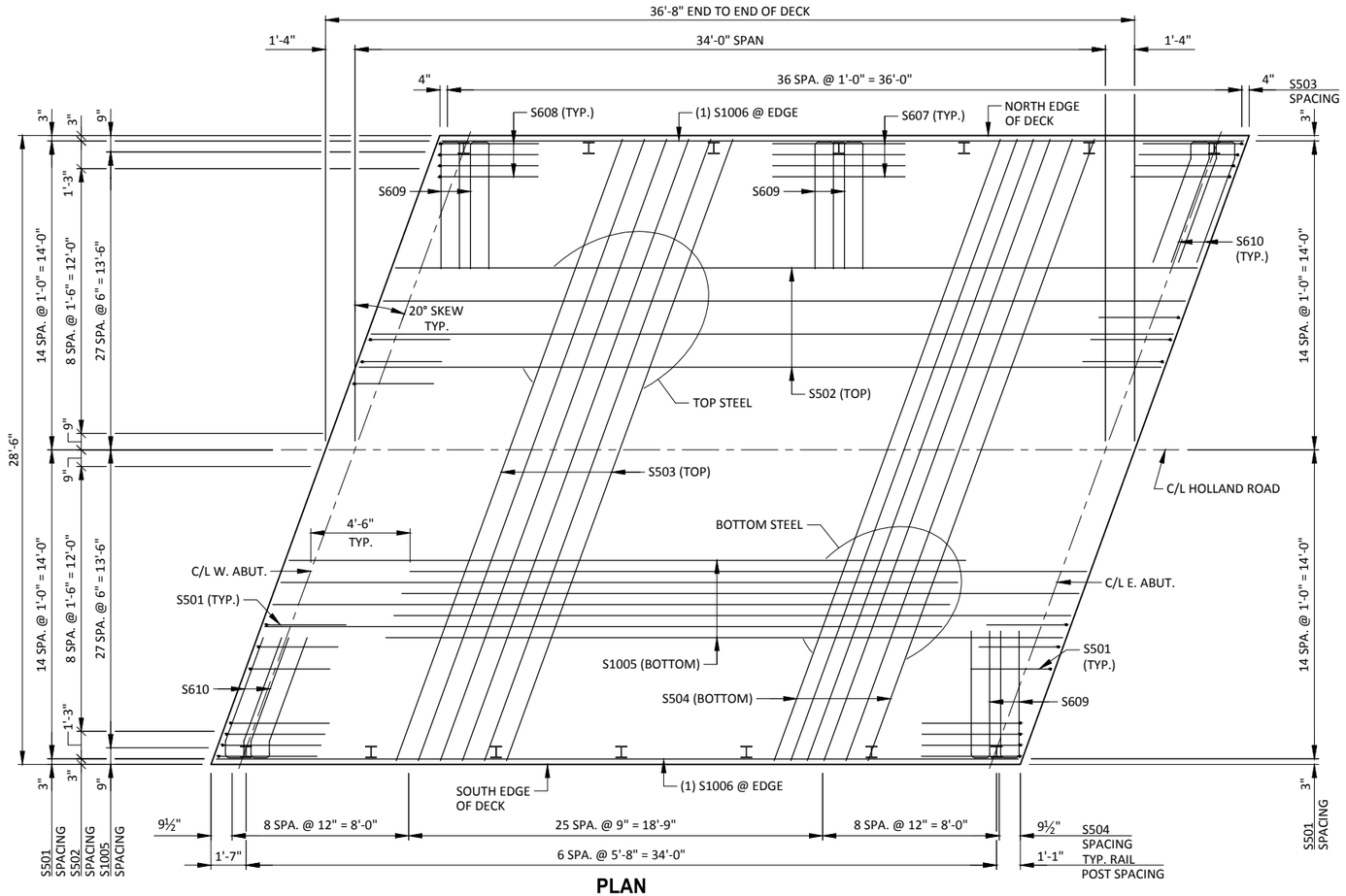
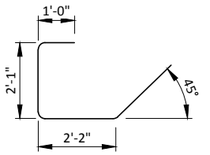
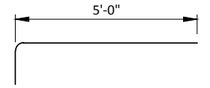


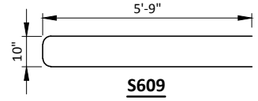
PLAN



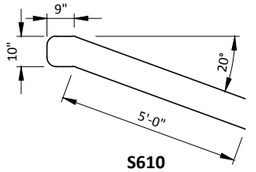
S501



S608



S609



S610

BILL OF BARS
SUPERSTRUCTURE

12,420 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	58	7-2	X	X	END OF DECK
S502	20	36-3		X	SLAB - TOP - LONGIT.
S503	43	29-11		X	SLAB - TOP - TRANS.
S504	42	29-11		X	SLAB - BOTTOM - TRANS.
S1005	55	30-8		X	SLAB - BOTTOM - LONGIT.
S1006	2	36-3		X	SLAB - BOTTOM - LONGIT. - EDGES
S607	40	6-0		X	RAIL POSTS - INTERIOR
S608	16	6-0	X	X	RAIL POSTS - ENDS
S609	24	12-0	X	X	RAIL POSTS - INTERIOR
S610	4	12-0	X	X	RAIL POSTS - CORNERS

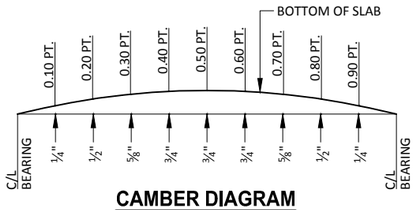
NOTES: THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

SOME BARS HAVE BEEN OMITTED FOR CLARITY.

LEGEND

- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ✕ DIMENSION IS NORMAL TO THE C/L OF SUBSTRUCTURE UNITS.
- ✕✕ SEE SHEET 4 FOR PLACEMENT OF A506 BARS.



CAMBER DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPAN AS SHOWN TO PROVIDE FOR THEORETICAL DEADLOAD DEFLECTION AND FUTURE PLASTIC FLOW. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB OR CENTER LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
-SLAB THICKNESS
+CAMBER
+FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (COMPUTED BY CONTRACTOR)
=TOP OF SLAB FALSEWORK ELEVATION.

TOP OF DECK ELEVATIONS

	C/L W. ABUT.	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L E. ABUT.
N. EDGE	846.21	846.28	846.36	846.44	846.53	846.62	846.71	846.80	846.90	847.00	847.10
C/L	846.39	846.46	846.53	846.61	846.69	846.77	846.86	846.95	847.04	847.14	847.24
S. EDGE	845.99	846.06	846.13	846.20	846.28	846.36	846.44	846.52	846.61	846.70	846.80

NOTES

SUPPORT ALTERNATE TOP TRANSVERSE BARS IN SLAB BY INDIVIDUAL BAR CHAIRS AT APPROX. 3'-0" CENTERS. SUPPORT BOTTOM LONGITUDINAL BARS BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CENTERS.

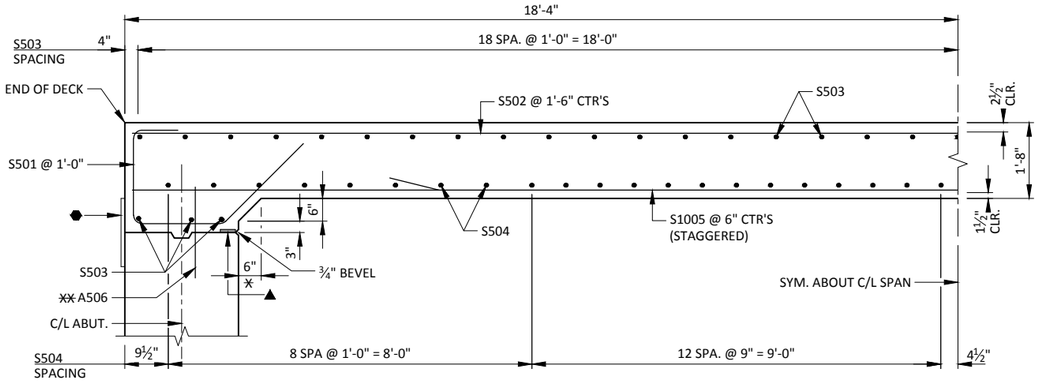
PLACE TRANSVERSE BARS PARALLEL TO THE CENTERLINE OF SUBSTRUCTURE UNITS.

THE SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

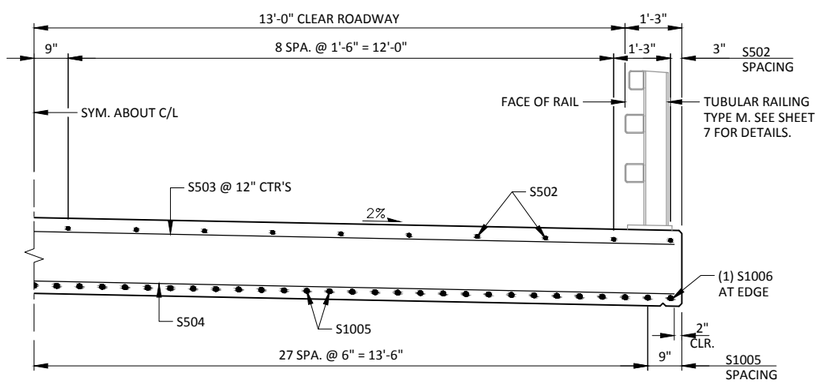
SURVEY TOP OF DECK ELEVATIONS

	W. ABUT.	0.50 PT.	E. ABUT.
N. EDGE OF DECK			
CENTER LINE			
S. EDGE OF DECK			

PRIOR TO RELEASING SLAB FASLEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF THE ABUTMENTS AND AT 0.50 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG THE EDGE OF DECK AND CENTER LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.



PARTIAL LONGITUDINAL SECTION THROUGH ROADWAY



PARTIAL CROSS SECTION THROUGH ROADWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-130

DRAWN BY: PTB | PLANS CK'D.: RBH

SUPERSTRUCTURE

SHEET 6 OF 8

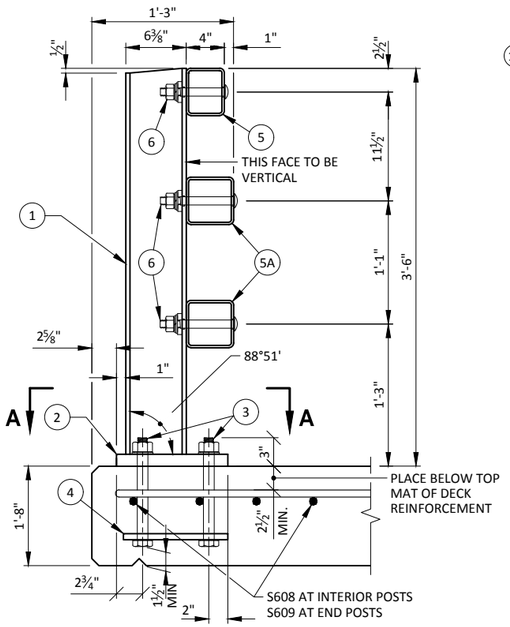
42

8

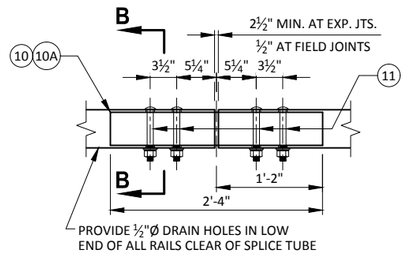
8

STATE PROJECT NUMBER

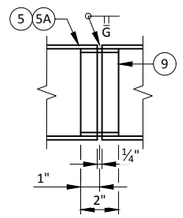
5671-00-76



SECTION THROUGH RAILING ON DECK

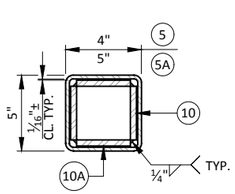


FIELD ERECTION JOINT DETAIL

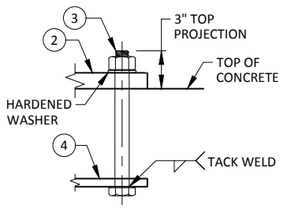


SHOP RAIL SPLICE DETAIL

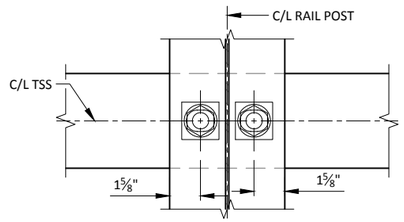
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



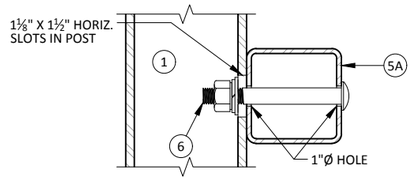
SECTION B-B



ANCHOR BOLTS



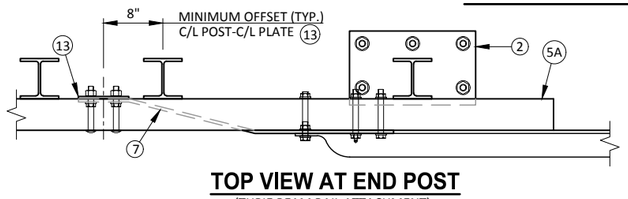
SECTION THROUGH POST WEB



SECTION THROUGH RAIL

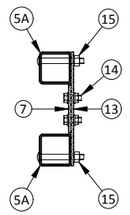
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

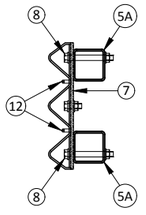


TOP VIEW AT END POST

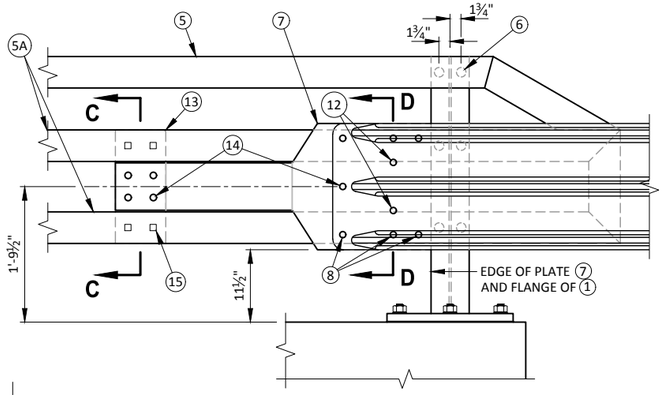
(THRIE BEAM RAIL ATTACHMENT)



SECTION C-C

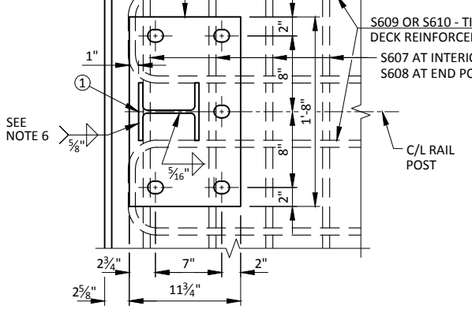


SECTION D-D

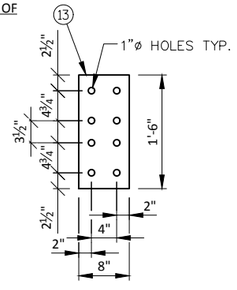


DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)

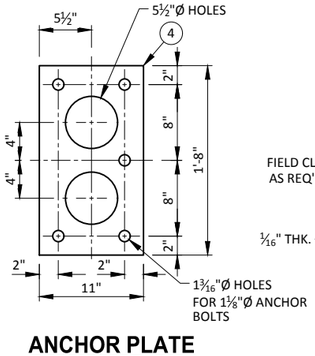


SECTION A-A



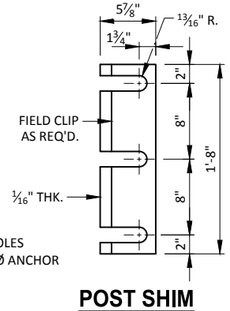
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

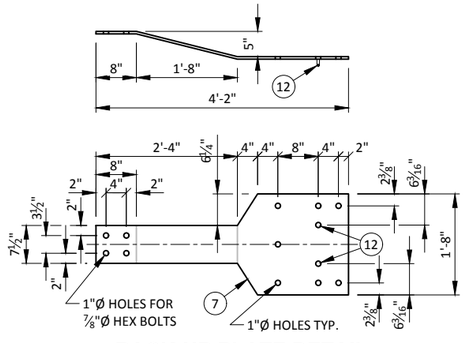


ANCHOR PLATE

AT RAIL TO DECK CONNECTION

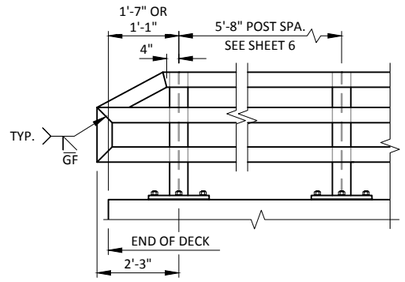


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

LEGEND

1. W6x25 WITH 11/8" x 11/2" 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 11/4"x113/4"x1'-8" WITH 15/16"x15/8" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
3. ASTM A449 - 11/8" 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. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 103/4" LONG AT ALL OTHER LOCATIONS.
4. 5/8"x11"x1'-8" ANCHOR PLATE (GALVANIZED) WITH 13/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TSS 5x4x1/4 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TSS 5x5x1/4 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16"x15/8"x15/8" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION).
7. 1/2" THK. BACK-UP PLATE WITH 2 -7/8"x11/2" 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 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
10. 3/8"x35/8"x2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. 3/8"x25/8"x2'-4" PLATE USED IN NO. 5, 3/8"x35/8"x2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16"x11/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15/16"x21/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
12. 7/8" DIA. BY 11/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
13. 3/8"x8"x1'-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. 7/8" DIA. x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
15. 1" DIA. HOLES IN TUBES NO. 5A FOR 7/8" 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-33-130" 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 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
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 S.S.P.C. SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-130

DRAWN BY PTB | PLANS CK'D. RBH

TUBULAR RAILING TYPE M

SHEET 7 OF 8

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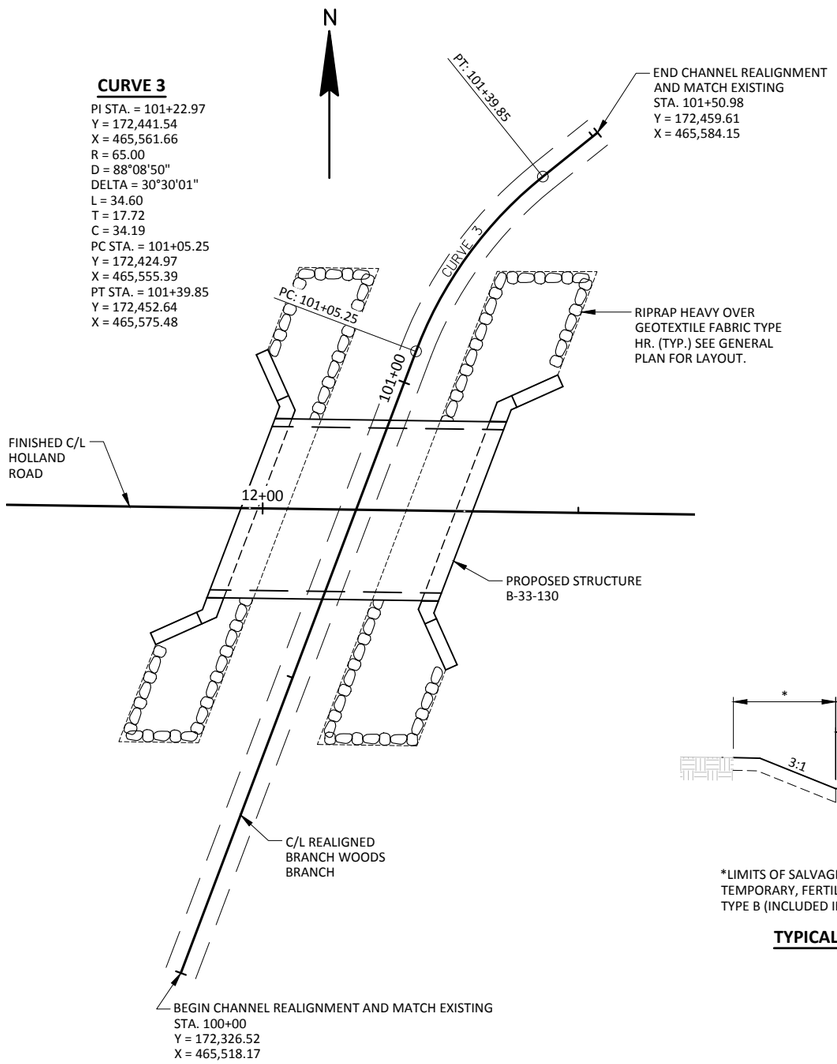
STATE PROJECT NUMBER
5671-00-76

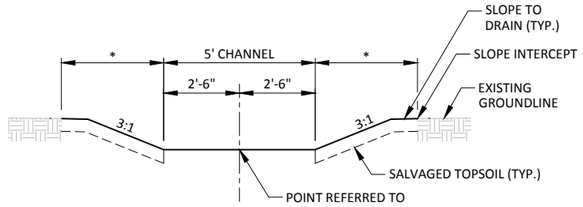


CURVE 3

PI STA. = 101+22.97
Y = 172,441.54
X = 465,561.66
R = 65.00
D = 88°08'50"
DELTA = 30°30'01"
L = 34.60
T = 17.72
C = 34.19
PC STA. = 101+05.25
Y = 172,424.97
X = 465,555.39
PT STA. = 101+39.85
Y = 172,452.64
X = 465,575.48

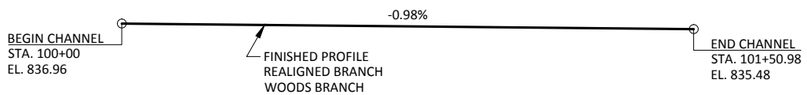
CHANNEL REALIGNMENT - PLAN VIEW

EARTHWORK AT CHANNEL REALIGNMENT TO BE
INCLUDED IN CATEGORY 010 MAINLINE QUANTITIES.



*LIMITS OF SALVAGED TOPSOIL, SEEDING MIXTURE NO. 60, SEEDING TEMPORARY, FERTILIZER TYPE B, AND EROSION MAT URBAN CLASS I TYPE B (INCLUDED IN CATEGORY 010 MAINLINE QUANTITIES)

TYPICAL CHANNEL REALIGNMENT SECTION



CHANNEL REALIGNMENT - PROFILE GRADE LINE

CHANNEL REALIGNMENT DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-130

DRAWN BY PTB | PLANS CK'D. RBH

CONSTRUCTION DETAILS

SHEET 8 OF 8

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EARTHWORK-MAINLINE

	AREA (SF)				INCREMENTAL VOL (CY)						CUMMULATIVE VOLUME (CY)					
STATION	CUT	SALVAGED/ UNUSABLE PAV'T MATERIAL	FILL	ROCK EXC	CUT NOTE 1	SALVAGED/ UNUSABLE PAV'T MATERIAL NOTE 2	FILL NOTE 3	ROCK EXC	EXPANDED ROCK (1.1) NOTE 4	FILL (25%)	CUT 1.00 NOTE 1	FILL	ROCK EXC	EXPANDED ROCK (1.1) NOTE 4	FILL (25%) NOTE 5	MASS ORDINATE NOTE 6
10+50	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11+00	85	0	0	0	124	0	0	0	0	0	124	0	0	0	0	124
11+50	38	0	1	0	114	0	1	0	0	1	238	1	0	0	1	237
11+96	0	0	31	0	33	0	27	0	0	34	271	28	0	0	35	236
11+96	0	0	0	0	0	0	0	0	0	0	271	28	0	0	35	236
12+33	0	0	0	0	0	0	0	0	0	0	271	28	0	0	35	236
12+33	0	0	157	0	0	0	0	0	0	0	271	28	0	0	35	236
12+43	0	0	232	0	0	0	72	0	0	90	271	100	0	0	125	146
12+43	0	0	232	0	0	0	0	0	0	0	271	100	0	0	125	146
12+50	0	0	282	0	0	0	67	0	0	84	271	167	0	0	209	62
13+00	0	0	140	0	0	0	393	0	0	491	271	560	0	0	700	-429
13+43	4	0	27	0	4	0	133	0	0	166	275	693	0	0	866	-591
13+43	4	0	27	0	0	0	0	0	0	0	275	693	0	0	866	-591
13+50	5	0	27	0	1	0	7	0	0	9	276	700	0	0	875	-599
14+00	60	0	0	153	58	0	25	141	155	-163	334	725	141	155	713	-379
14+50	49	0	0	0	101	0	0	142	157	-196	435	725	283	312	516	-81
				COLUMN SUBTOTALS =	435	0	725	283	312	516						

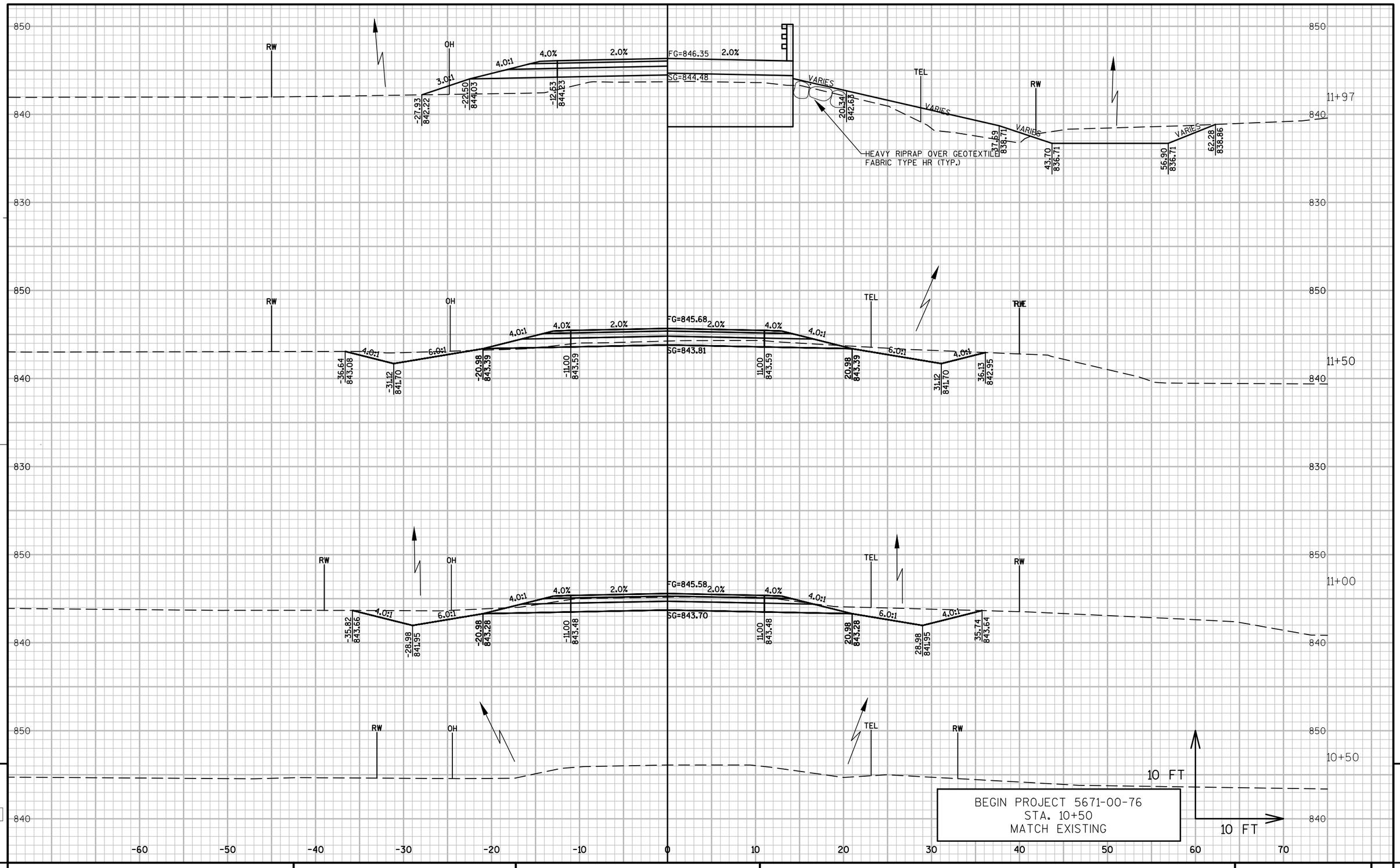
EARTHWORK-LANGE ROAD

	AREA (SF)				INCREMENTAL VOL (CY)						CUMMULATIVE VOLUME (CY)					
STATION	CUT	SALVAGED/ UNUSABLE PAV'T MATERIAL	FILL	ROCK EXC	CUT NOTE 1	SALVAGED/ UNUSABLE PAV'T MATERIAL NOTE 2	FILL NOTE 3	ROCK EXC	EXPANDED ROCK (1.1) NOTE 4	FILL (25%)	CUT 1.00 NOTE 1	FILL	ROCK EXC	EXPANDED ROCK (1.1) NOTE 4	FILL (25%) NOTE 5	MASS ORDINATE NOTE 6
21+70	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22+00	53	0	0	46	56	0	0	26	29	-36	56	0	26	29	-36	92
22+50	2	0	91	128	51	0	85	166	183	-123	107	85	192	212	-159	266
22+84	0	0	31	128	1	0	115	165	181	-83	108	200	357	393	-241	349
				COLUMN SUBTOTALS =	108	0	200	357	393	-241						

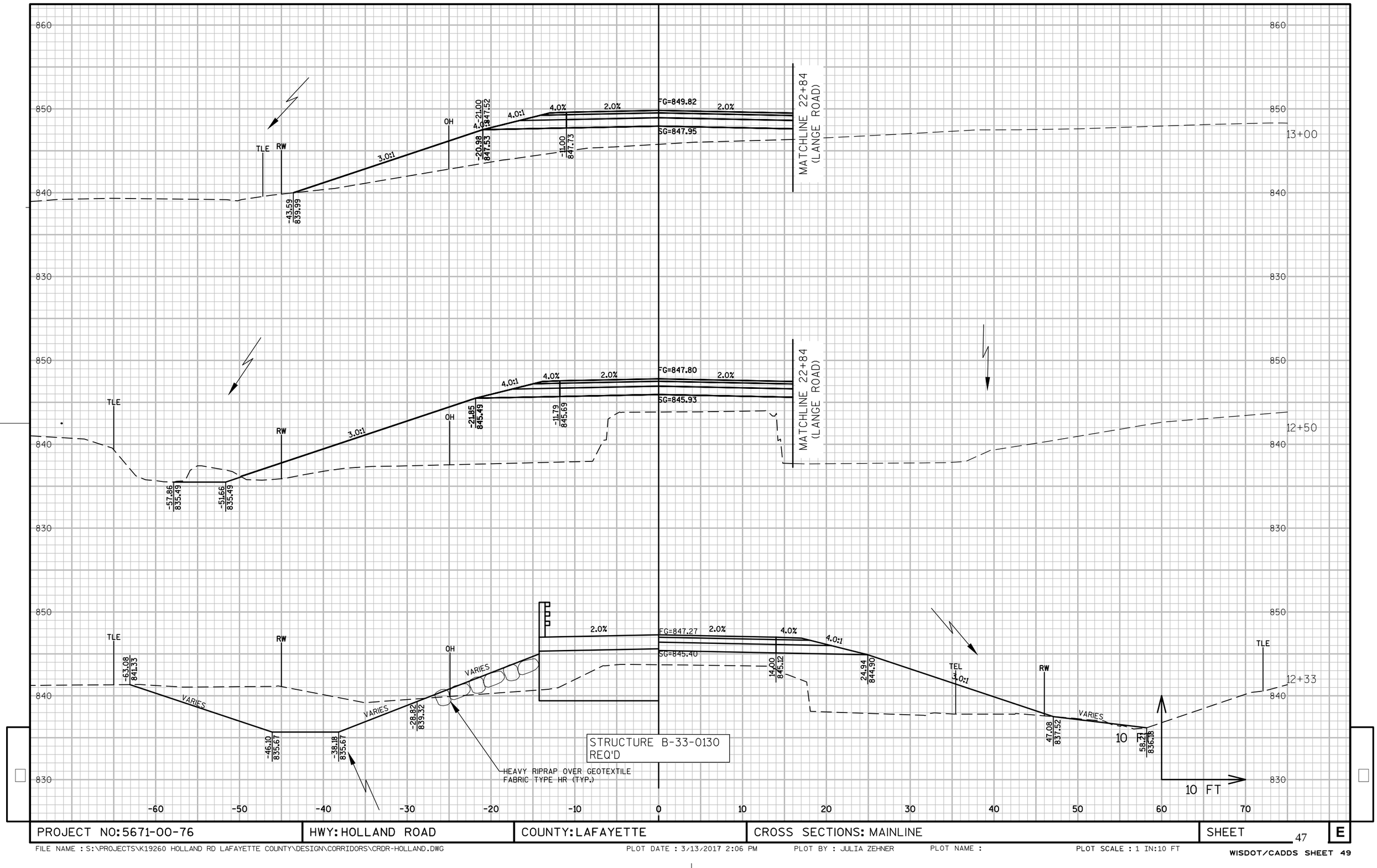
EARTHWORK-CHANNEL REALIGNMENT

	AREA (SF)				INCREMENTAL VOL (CY)						CUMMULATIVE VOLUME (CY)					
STATION	CUT	SALVAGED/ UNUSABLE PAV'T MATERIAL	FILL	ROCK EXC	CUT NOTE 1	SALVAGED/ UNUSABLE PAV'T MATERIAL NOTE 2	FILL NOTE 3	ROCK EXC	EXPANDED ROCK (1.1) NOTE 4	FILL (25%)	CUT 1.00 NOTE 1	FILL	ROCK EXC	EXPANDED ROCK (1.1) NOTE 4	FILL (25%) NOTE 5	MASS ORDINATE NOTE 6
100+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100+50	51	0	0	0	47	0	0	0	0	0	47	0	0	0	0	47
101+00	145	0	0	0	184	0	0	0	0	0	231	0	0	0	0	231
101+50	0	0	0	0	136	0	0	0	0	0	367	0	0	0	0	367
				COLUMN SUBTOTALS =	367	0	0	0	0	0						
				MAINLINE	435	0	725	283	312	516	435	725	283	312	516	-81
				LANGE ROAD	108	0	200	357	393	-241	543	925	640	705	275	268
				CHANNEL REALIGNMENT	367	0	0	0	0	0	910	925	640	705	275	635

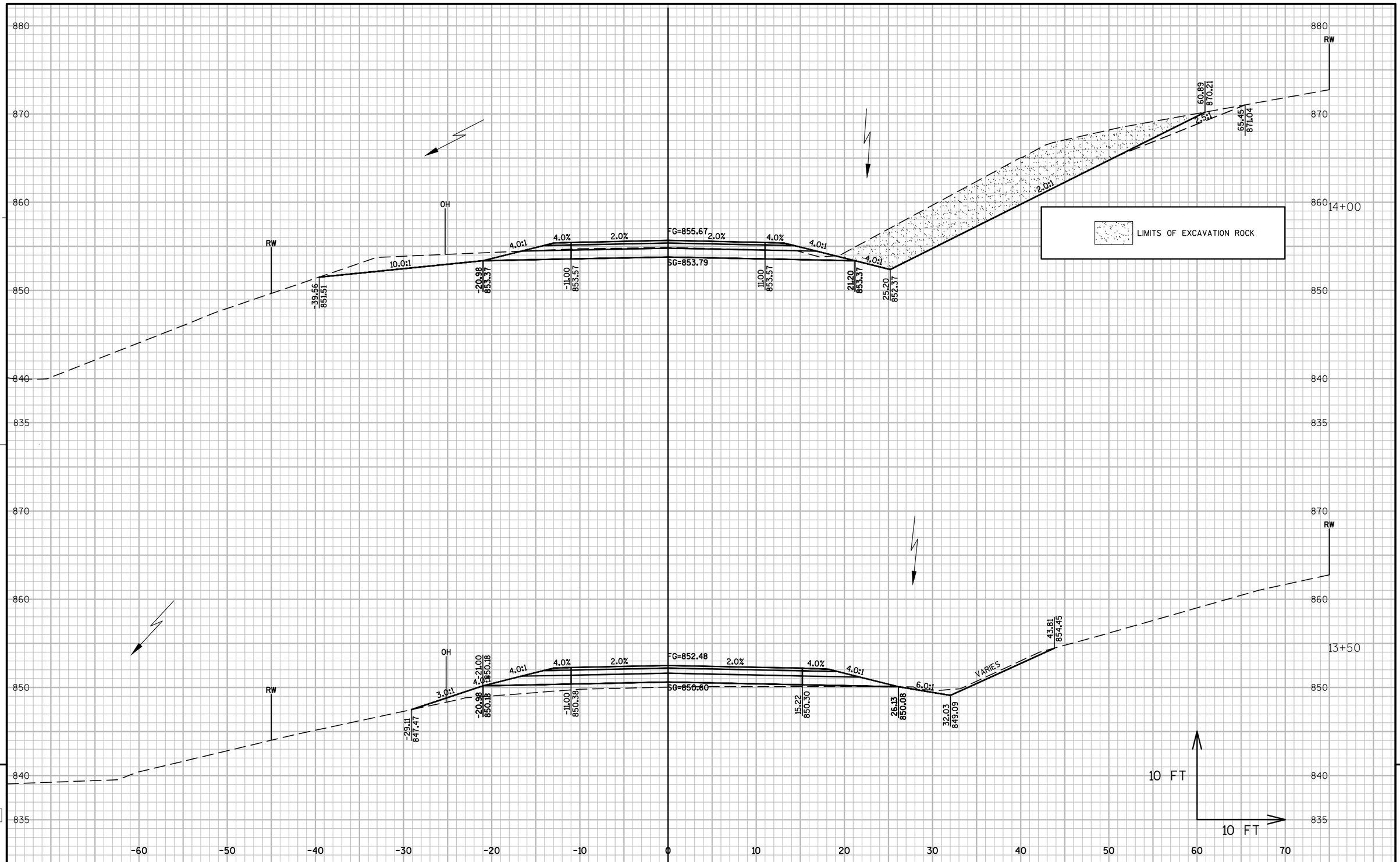
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED ROCK FACTOR	EXPANDED ROCK FACTOR = 1.1
5 - FILL (25%)	FILL 25%: (UNEXPANDED FILL - (ROCK * ROCK FACTOR))*1.25
6 - MASS ORDINATE	(CUT - FILL (25%))



PROJECT NO:5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	CROSS SECTIONS: MAINLINE	SHEET 46	E

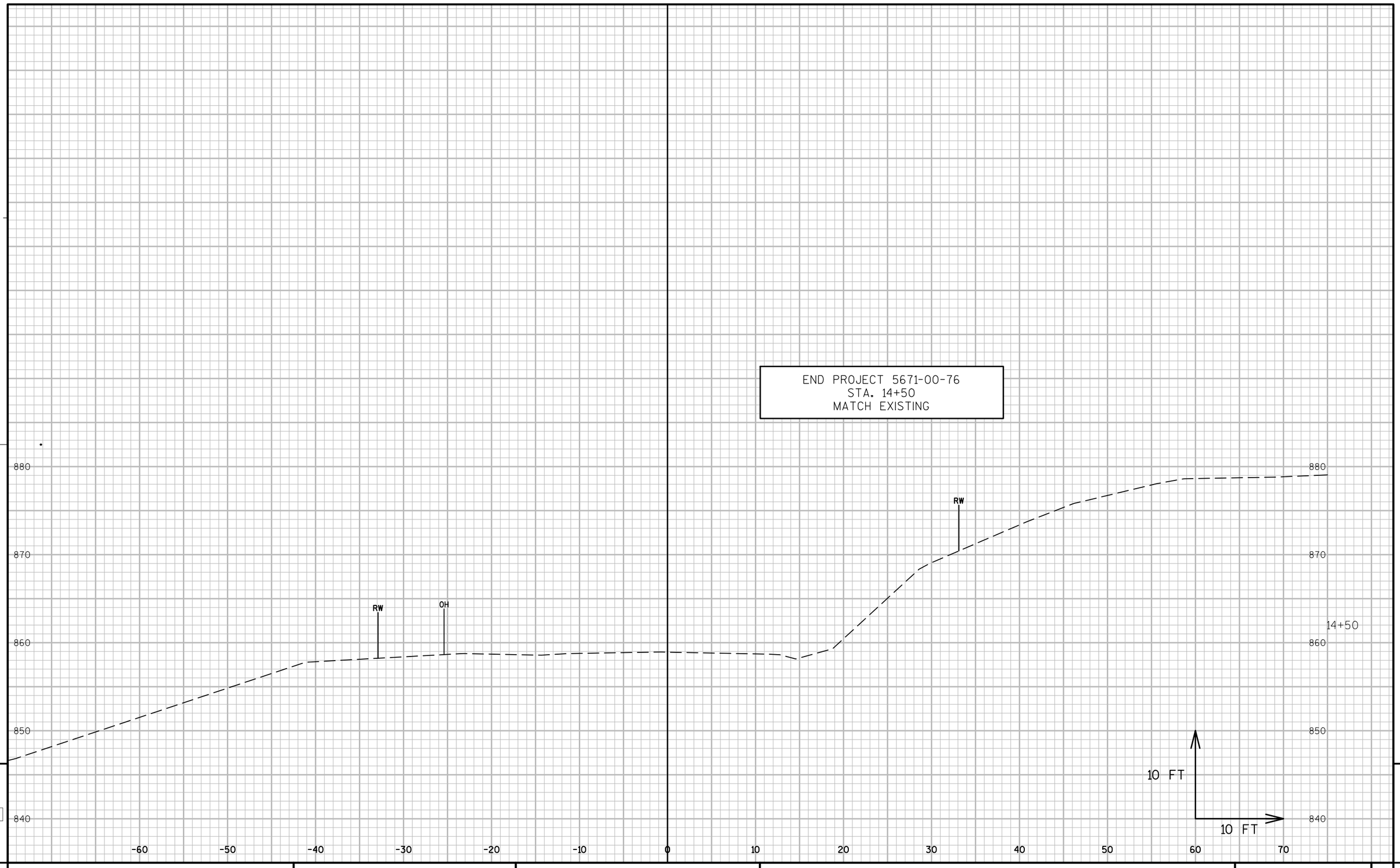


PROJECT NO: 5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	CROSS SECTIONS: MAINLINE	SHEET 47	E

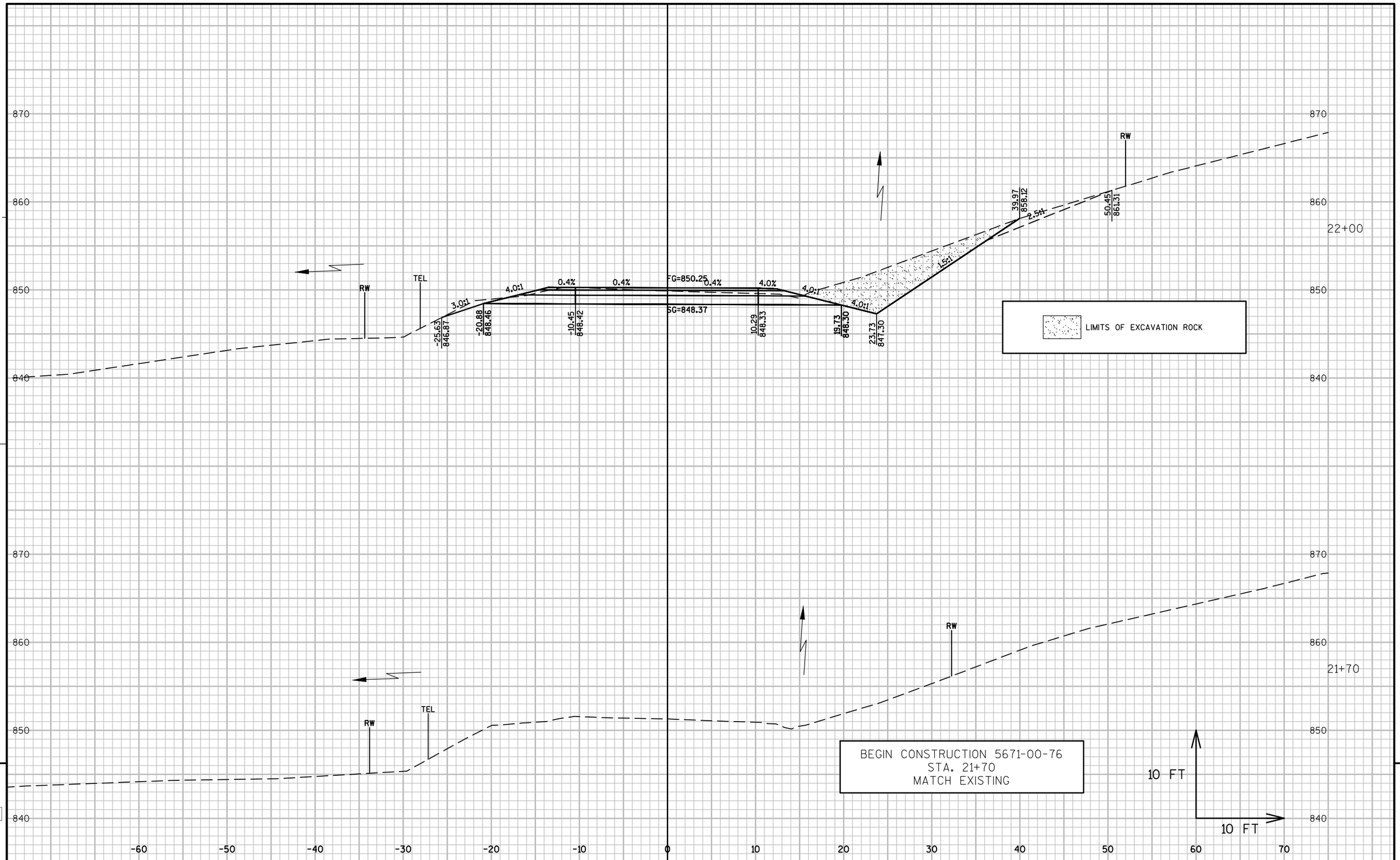


PROJECT NO: 5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	CROSS SECTIONS: MAINLINE	SHEET 48	E

END PROJECT 5671-00-76
STA. 14+50
MATCH EXISTING



PROJECT NO:5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	CROSS SECTIONS: MAINLINE	SHEET 49	E



PROJECT NO: 5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	CROSS SECTIONS: LANGE ROAD	SHEET 50	E

STA. 22+50
(1) CULVERT PIPE CLASS III-A 36-INCH
(2) APRON ENDWALLS REQ'D
SKEW=0° R.H.F.

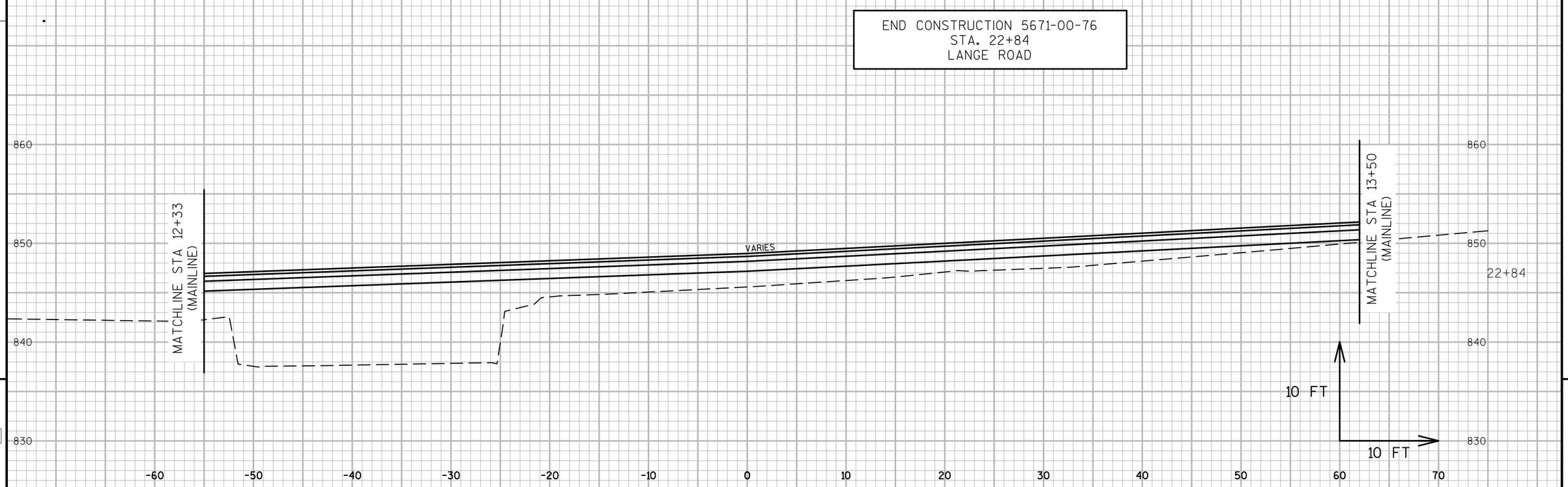
22+50

TEL
RW
-26.63
846.44
-15.03
846.83
-30.00
842.48
-53.63
837.43
FG=849.22
SG=847.34
15.03
847.85
24.84
848.19
30.00
843.06
38.91
843.50
57.71
856.03
69.98
859.94
4.0:1
3.4%
6.0%
3.0:1
2.5:1
LIMITS OF EXCAVATION ROCK
10 FT
10 FT
HEAVY RIPRAP OVER GEOTEXTILE
FABRIC TYPE HR (TYP.)

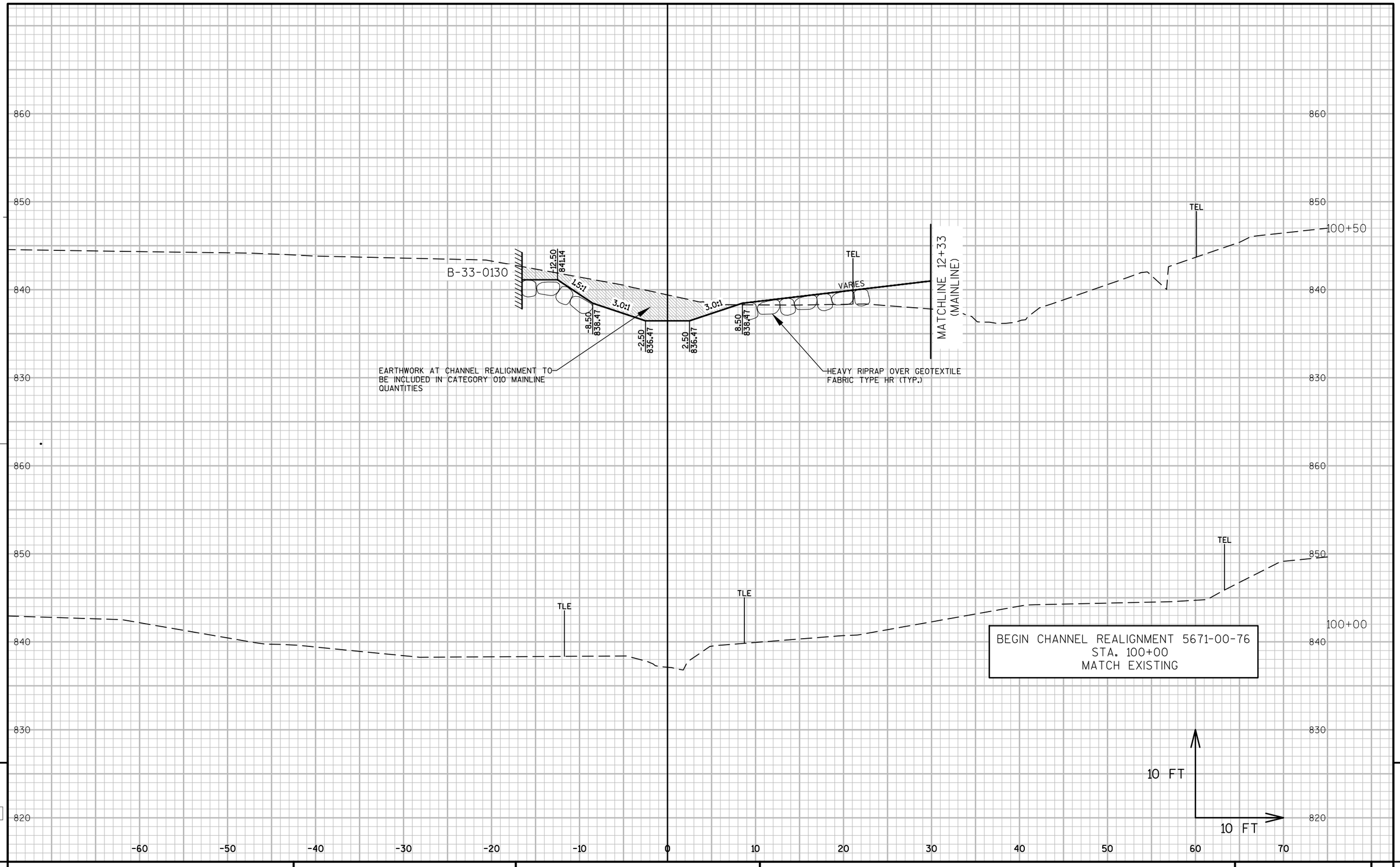
870
860
850
840
830
-60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

PROJECT NO:5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	CROSS SECTIONS: LANGE ROAD	SHEET 51	E

END CONSTRUCTION 5671-00-76
STA. 22+84
LANGE ROAD



PROJECT NO: 5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	CROSS SECTIONS: LANGE ROAD	SHEET 52	E



PROJECT NO:5671-00-76	HWY:HOLLAND ROAD	COUNTY:LAFAYETTE	CROSS SECTIONS: STREAM REALIGNMENT	SHEET 53	E

END CHANNEL REALIGNMENT 5671-00-76
STA. 101+50.98
MATCH EXISTING

TLE

OH

101+51

OH

B-33-0130

101+00

-27.10
842.20

VARIES

3.0:1

-8.50
837.98

-2.50
835.98

2.50
835.98

3.0:1

VARIES

8.50
837.98

HEAVY RIPRAP OVER GEOTEXTILE FABRIC TYPE HR (TYP.)

EARTHWORK AT CHANNEL REALIGNMENT TO BE INCLUDED IN CATEGORY 010 MAINLINE QUANTITIES

10 FT

10 FT

860
850
840
830
820

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

PROJECT NO:5671-00-76	HWY: HOLLAND ROAD	COUNTY: LAFAYETTE	CROSS SECTIONS: STREAM REALIGNMENT	SHEET 54	E

FILE NAME : S:\PROJECTS\K19260 HOLLAND RD LAFAYETTE COUNTY\DESIGN\CORRIDORS\CRDR-HOLLAND.DWG PLOT DATE : 3/13/2017 2:07 PM PLOT BY : JULIA ZEHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT

Notes

Wisconsin Department of Transportation

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through innovation and exceptional service.

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