LAX

JULY 2018

ORDER OF SHEETS

TOTAL SHEETS = 78

PROJECT ID: 5527-00-70

WITH: N/A

COUNTY: CRAWFORD

07

N

DESIGN DESIGNATION

A.A.D.T.	(2018)	=	56
A.A.D.T.	(2038)	=	70
D.H.V.		=	23
D.D.		=	60/40
T.		=	7.0%
DESIGN SPEED		=	30 MPH
ESALS		=	7,738

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	
WOODED OR SHRUB AREA		POWER POLE	
		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CTH KK - USH 14

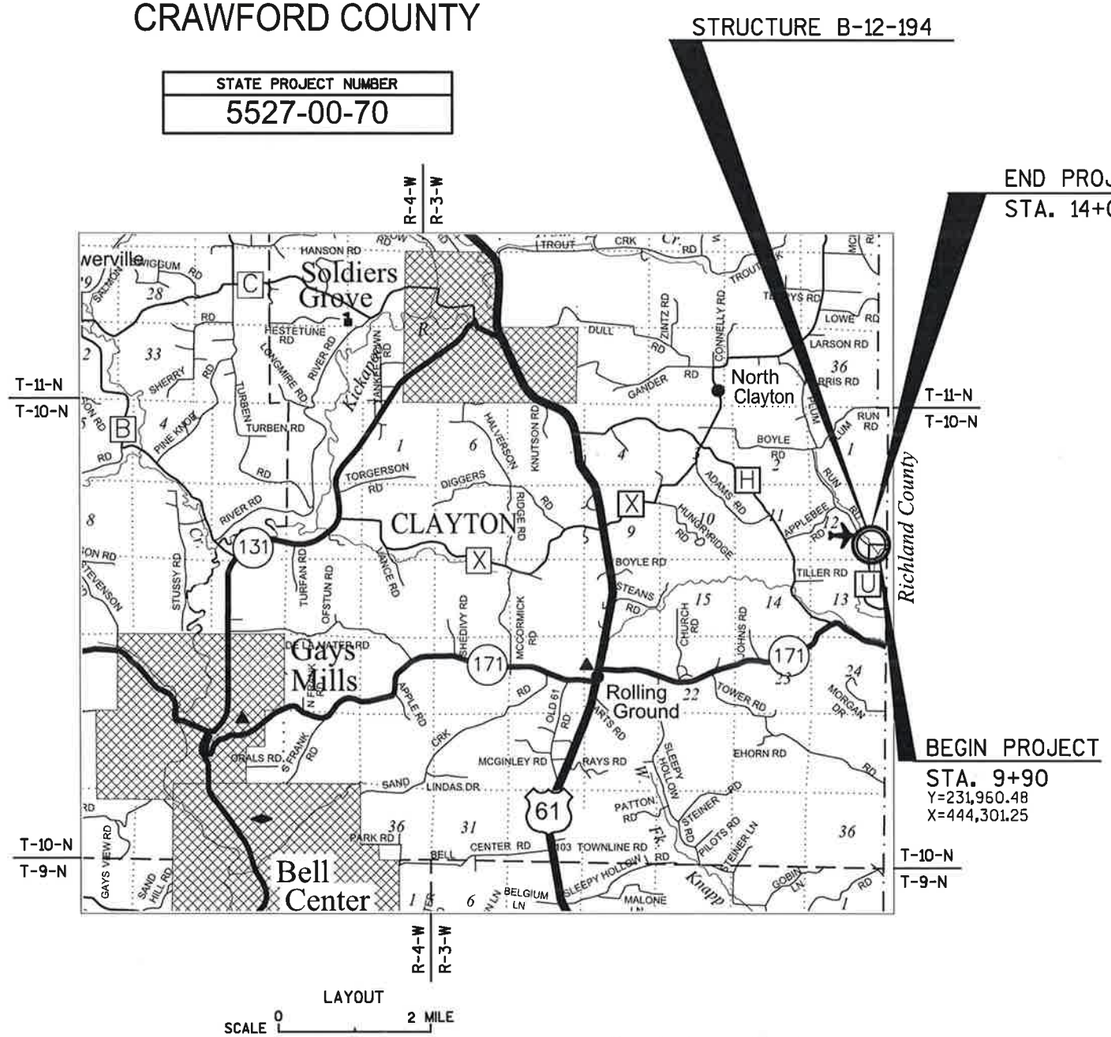
(PLUM RUN CREEK BRIDGE B-12-194)

CTH U

CRAWFORD COUNTY

STATE PROJECT NUMBER
5527-00-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5527-00-70	———	—



LAYOUT

SCALE 0 2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.078

"Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), Crawford County."

"Elevations shown on the plan are referenced to the North American Vertical Datum of 1988 (NAVD 88)."

ACCEPTED FOR

COUNTY of CRAWFORD

16 JAN 18 (Date) (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

JEWELL associates engineers, inc.

Engineers - Architects - Surveyors

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

1/15/18 (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: 1/30/18

Management Consultant Signature

E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\TITLE.DWG
LAYOUT NAME - TITLE SHEET

PLOT DATE : 12/27/2017 9:45 AM PLOT BY : STRINE, THERESA PLOT NAME :

WISDOT/CADDS SHEET 10

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	O.A.L.	Overall Length	SS	Storm Sewer
CTH	County Trunk Highway	OD	Outside Diameter	SG	Subgrade
CR	Creek	PLE	Permanent Limited Easement	SE	Superelevation
CR	Crushed			SL or S/L	Survey Line
CY or CU YD	Cubic Yard	PT	Point	SV	Septic Vent
CP	Culvert Pipe	PC	Point of Curvature	T	Tangent
C & G	Curb and Gutter	PI	Point of Intersection	TEL	Telephone
D	Degree of Curve	PRC	Point of Reverse Curvature	TEMP	Temporary
DHV	Design Hour Volume	PT	Point of Tangency	TI	Temporary Interest
DIA	Diameter	POC	Point On Curve	TLE	Temporary Limited Easement
E	East	POT	Point on Tangent		
X	East Grid Coordinate	PVC	Polyvinyl Chloride	t	Ton
ELEC	Electric (al)	PCC	Portland Cement Concrete	T or TN	Town
EL or ELEV	Elevation	LB	Pound	TRANS	Transition
ESALS	Equivalent Single Axle Loads	PSI	Pounds Per Square Inch	TL or T/L	Transit Line
		PE	Private Entrance	T	Trucks (percent of)
EBS	Excavation Below Subgrade	R	Radius	TYP	Typical
ESTR	Existing Sign to Remain	RR	Railroad	UNCL	Unclassified
FF	Face to Face	R	Range	UG	Underground Cable
FE	Field Entrance	RL or R/L	Reference Line	USH	United States Highway
F	Fill	RP	Reference Point	VAR	Variable
FG	Finished Grade	RCCP	Reinforced Concrete Culvert Pipe	V	Velocity or Design Speed
FL or F/L	Flow Line			VERT	Vertical
FT	Foot	REQ'D	Required	VC	Vertical Curve
FTG	Footing	RES	Residence or Residential	VOL	Volume
GN	Grid North	RW	Retaining Wall	WM	Water Main
HT	Height	RT	Right	WV	Water Valve
CWT	Hundredweight	RHF	Right–Hand Forward	W	West
HYD	Hydrant	R/W	Right–of–Way	WB	Westbound
INL	Inlet	R	River	YD	Yard
ID	Inside Diameter	RD	Road		
		RDWY	Roadway		

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

TOTAL PROJECT AREA= 0.59 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.49 ACRES

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), CRAWFORD 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 (BY OTHERS). 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) (BY OTHERS), SEEDED (USE SEED MIX NO. 70) (BY OTHERS), AND MULCHED/EMATTED (BY OTHERS) AS DIRECTED BY THE ENGINEER. ALL POST CONSTRUCTION WETLAND AREAS SHALL BE SEEDED WITH SEEDING MIXTURE NO. 60 (BY OTHERS).

WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE DENSE (BY OTHERS), BREAKER RUN (BY OTHERS), SELECT CRUSHED MATERIAL (BY OTHERS) OR ASPHALTIC SURFACE (BY OTHERS) 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 (BY OTHERS), CULVERT PIPE CHECKS (BY OTHERS) AND TEMPORARY DITCH CHECKS (BY OTHERS) SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE (BY OTHERS) SHALL BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO STRUCTURE REMOVAL.

MULCH/EROSION MAT (BY OTHERS) 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).

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

THE LOCATION OF ALL PERMANENT SIGNING (BY OTHERS) 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. 11+65 – STA. 12+32, STA. 12+05 – STA. 12+42, STA. 12+62, LT. AND STA. 12+87 – STA. 13+47, RT.

4–INCHES OF ASPHALTIC SURFACE (BY OTHERS) SHALL BE CONSTRUCTED WITH A 1 3/4–INCH UPPER LAYER AND A 2 1/4–INCH LOWER LAYER.

ASPHALTIC SURFACE (BY OTHERS) QUANTITIES WERE CALCULATED USING 115 LB/SY/IN. TACK COAT (BY OTHERS) QUANTITIES WERE CALCULATED USING A 0.050 GAL/SY APPLICATION RATE.

CURVE DATA IS BASED ON THE ARC DEFINITION.

THE EXACT LOCATION OF PRIVATE ENTRANCES TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

INLET AND OUTLET ELEVATIONS FOR CULVERT PIPES (BY OTHERS) AS SHOWN ON THE PLAN MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS.

ALL RADII DIMENSIONS ARE MEASURED TO EDGE OF ASPHALT.

CONTACTS

CRAWFORD COUNTY HIGHWAY DEPARTMENT
DENNIS PELOCK, COMMISSIONER
21515 STATE HIGHWAY 27
P.O. BOX 39
SENECA, WI 54654
PHONE: (608) 734-9500
EMAIL: dpelock@crawfordcountywi.org

DESIGN CONSULTANT
JEWELL ASSOCIATES ENGINEERS, INC
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
ATTN: ELLERY SCHAFFER, P.E.
PHONE: (608) 588-7484
CELL: (608) 341-8159
EMAIL: ellery.schaffer@jewellassoc.com

DNR LIAISON
STATE OF WISCONSIN
DNR SERVICE CENTER
3550 MORMAN COULEE RD
LACROSSE, WI 54601
ATTN: KAREN KALVELAGE
PHONE: (608) 785-9115
EMAIL: karen.kalvelage@wisconsin.gov

UTILITIES

TELEPHONE
RICHLAND–GRANT TELEPHONE
COOPERATIVE, INC.
ATTN: JOHN BARTZ
202 N. EAST ST.
P.O. BOX 67
BLUE RIVER, WI 53518
OFFICE: (608) 537–2461
EMAIL: jbartz@mwt.net

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

* DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE

N

DAN A. STEINER, INGRID A. STEINER,
KERRY L. STEINER

DUWAYNE F. GEBKEN AND JANET K. GEBKEN, SURVIVORSHIP MARITAL PROPERTY

LEEWARD FARM, LLC, A NEVADA LIMITED LIABILITY COMPANY

LEEWARD FARM, LLC, A NEVADA LIMITED LIABILITY COMPANY

EXISTING C/L PLUM RUN ROAD

END CONSTRUCTION
STA. 52+50

FINISHED C/L PLUM RUN ROAD

BEGIN CONSTRUCTION
STA. 50+16

BEGIN PROJECT
STA. 9+90

END PROJECT
STA. 14+00

PT: 52+16.98

PRC: 51+37.21

PC: 50+50.39

PC: 10+25.89

PT: 13+87.12

PLUM RUN ROAD

PLUM RUN CREEK

CTH U

RW

P.L.

REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS
STA. 12+45 (P-12-903)
SINGLE SPAN CONCRETE DECK GIRDER STRUCTURE
26.4' CLEAR ROADWAY WIDTH
22.2' OVERALL LENGTH

SLOPE INTERCEPT

FINISHED C/L CTH U

STRUCTURE B-12-194 REQ'D.

C/L STA. 11+37.09 (MAINLINE)=
C/L STA. 50+00.00 (PLUM RUN ROAD)
INTERSECTION TYPE C (MOD.) REQ'D

EDGE OF ASPHALT (TYP.)

SHOULDER HINGE POINT (TYP.)

EXISTING C/L CTH U

10+00 11+00 12+00 13+00 14+00

PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\DETAILS\OVERVIEW.DWG
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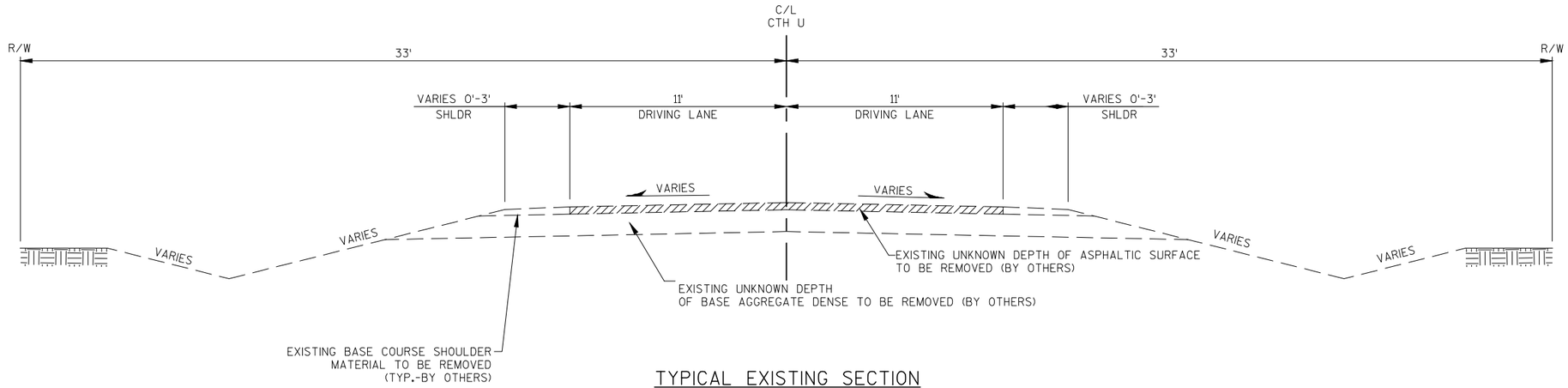
PLOT DATE : 1/9/2018
PLOT TIME : 8:29:24 AM

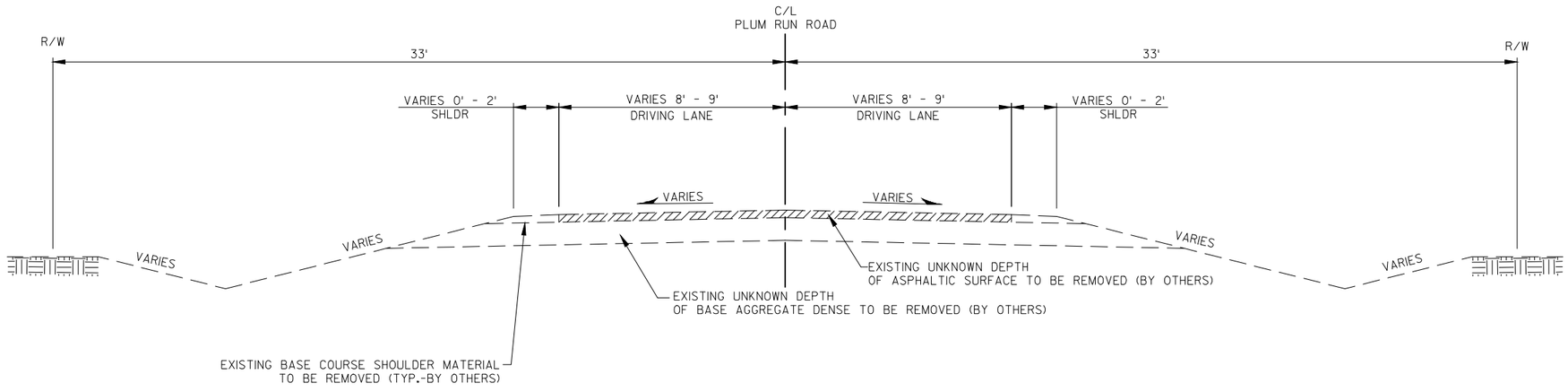
PLOT BY : STRINE, THERESA

PLOT SCALE : 1" = 1'

2



TYPICAL EXISTING SECTION
CTH U

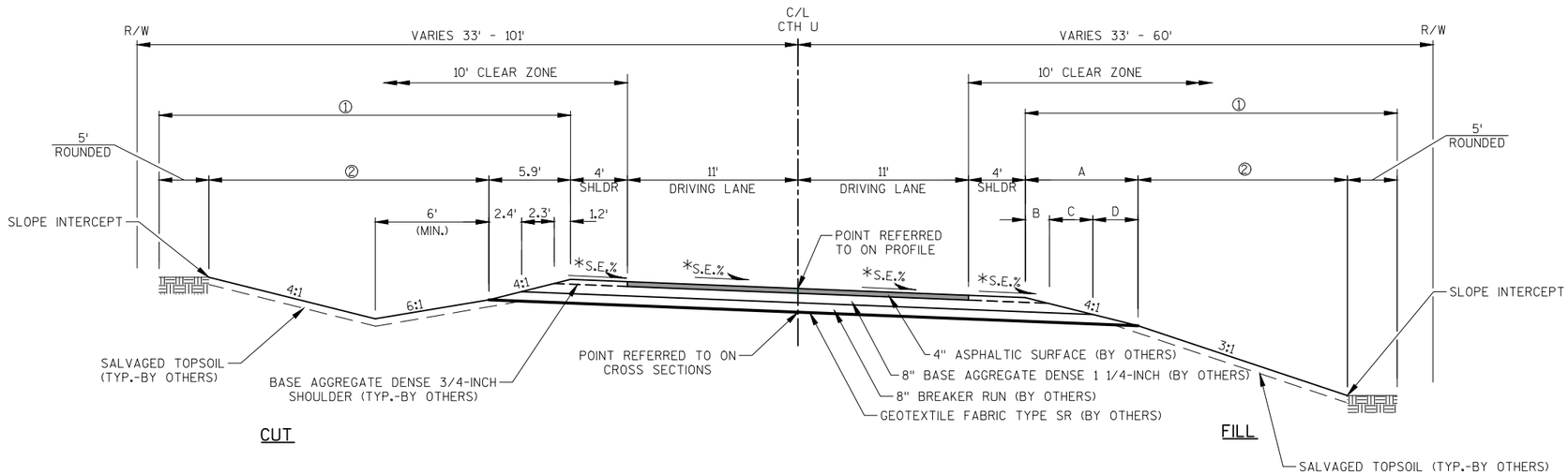


TYPICAL EXISTING SECTION
PLUM RUN ROAD

PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	TYPICAL EXISTING SECTION	SHEET 4	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\TYPICALS\CTH U EXISTING TYPICALS.DWG
LAYOUT :

PLOT DATE : 1/10/2018
PLOT TIME : 2:56:35 PM
PLOT BY : STRINE, THERESA
PLOT SCALE : 1" = 1'



TYPICAL FINISHED SUPERELEVATED SECTION

CTH U
(STA. 11+37 - STA. 14+00, LT.)
(STA. 9+90 - STA. 14+00, RT.)

SUPERELEVATION TABLE

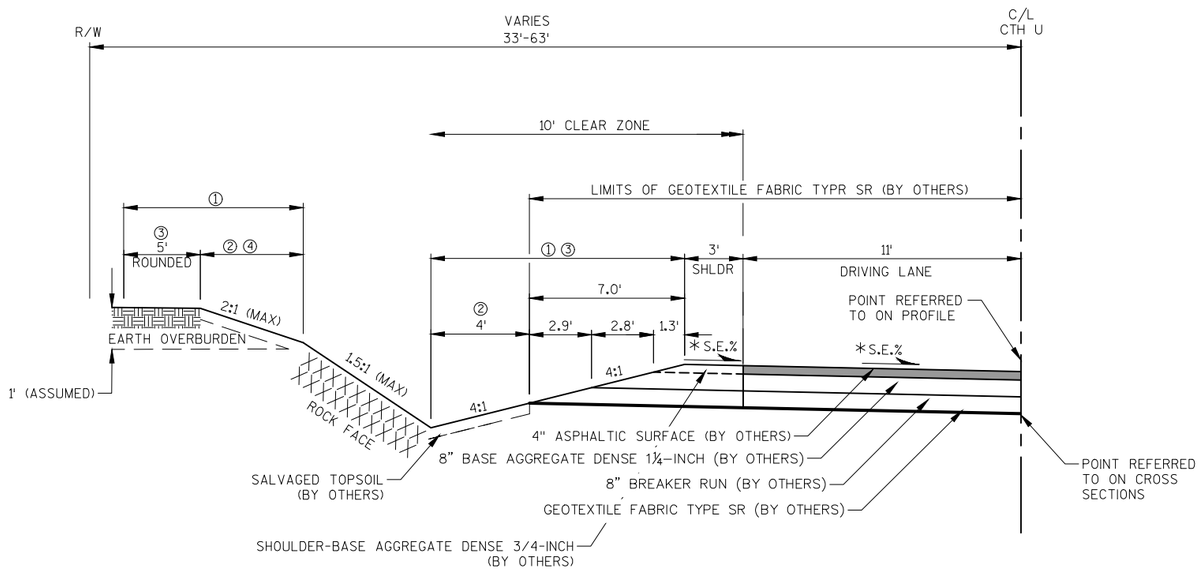
STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
9+90	MATCH EXISTING	MATCH EXISTING	-	-	-	-
10+00	2.0	2.0	6.9	1.1	2.9	2.9
10+50	0.8	2.0	6.9	1.1	2.9	2.9
11+00	3.5	3.5	7.6	1.4	3.1	3.1
11+45	6.0	6.0	8.8	3.5	3.5	1.8
11+50	6.0	6.0	8.8	3.5	3.5	1.8
12+50	6.0	6.0	8.8	3.5	3.5	1.8
12+55	6.0	6.0	8.8	3.5	3.5	1.8
13+00	3.5	3.5	7.6	1.4	3.1	3.1
13+50	0.8	2.0	6.9	1.1	2.9	2.9
14+00	MATCH EXISTING	MATCH EXISTING	-	-	-	-

* SEE SUPERELEVATION TABLE

① LIMITS OF FERTILIZER TYPE B, SEEDING MIXTURE NO. 70 OR SEEDING MIXTURE NO. 60, SEEDING TEMPORARY AND MULCHING (AS DIRECTED BY ENGINEER-BY OTHERS)

② LIMITS OF SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER-BY OTHERS)

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.



TYPICAL HALF FINISHED SUPERELEVATED SECTION

CTH U
(STA. 9+90 - STA. 11+37, LT.)

* SEE SUPERELEVATION TABLE

① LIMITS OF FERTILIZER TYPE B, SEEDING MIXTURE NO. 70 AND SEEDING TEMPORARY (AS DIRECTED BY ENGINEER-BY OTHERS)

② LIMITS OF SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER-BY OTHERS)

③ LIMITS OF MULCHING (AS DIRECTED BY ENGINEER-BY OTHERS)

④ LIMITS OF EROSION MAT URBAN CLASS I TYPE B (AS DIRECTED BY ENGINEER-BY OTHERS)

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.

PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	TYPICAL FINISHED SECTIONS (FOR INFORMATION ONLY- WORK BY OTHERS)	SHEET 5	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\TYPICALS\CTH U PROPOSED TYPICALS.DWG
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PLOT TIME : 2:54:10 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

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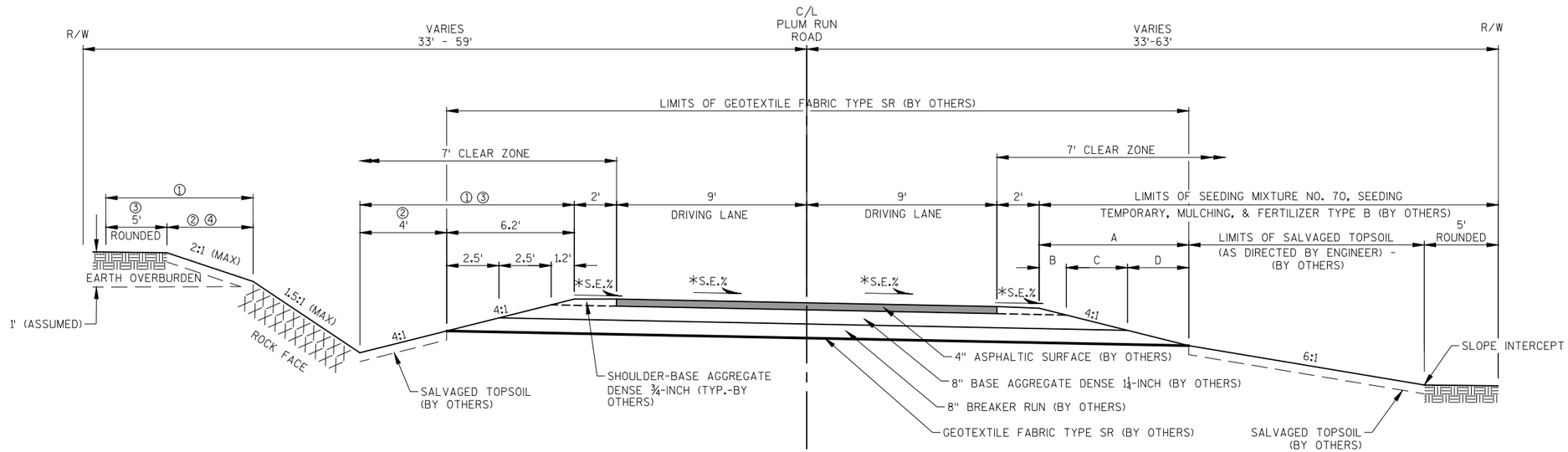


TYPICAL FINISHED SECTION

PLUM RUN ROAD

SUPERELEVATION TABLE

STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
50+16	1.7	1.7	-	-	-	-
50+50	2.0	2.0	7.0	1.2	2.9	2.9
51+00	2.0	2.0	7.0	1.2	2.9	2.9
51+37	0.0	0.0	-	-	-	-
51+50	2.0	1.0	7.0	1.2	2.9	2.9
52+00	2.0	0.0	7.0	1.2	2.9	2.9
52+50	MATCH EXISTING	MATCH EXISTING	-	-	-	-

* SEE SUPERELEVATION TABLE

① LIMITS OF FERTILIZER TYPE B, SEEDING MIXTURE NO. 70 AND SEEDING TEMPORARY (AS DIRECTED BY ENGINEER-BY OTHERS)

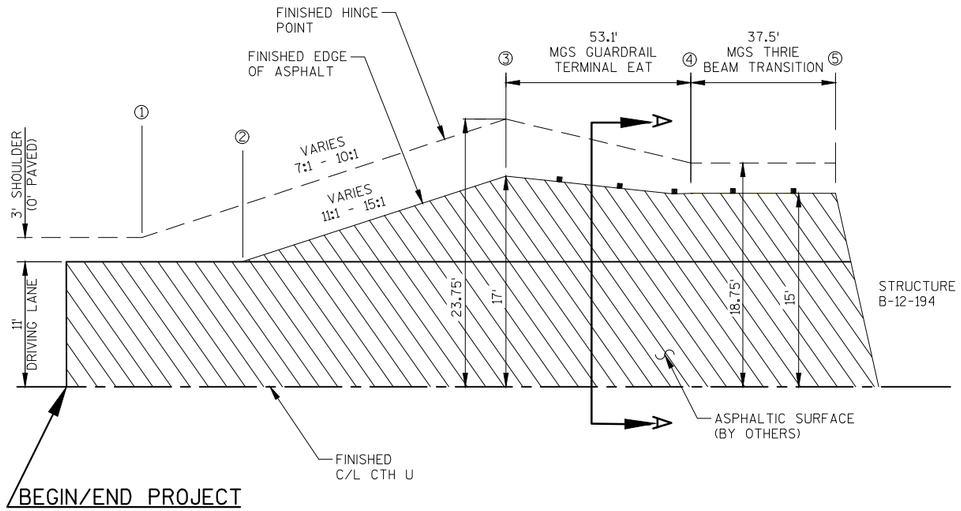
② LIMITS OF SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER-BY OTHERS)

③ LIMITS OF MULCHING (AS DIRECTED BY ENGINEER-BY OTHERS)

④ LIMITS OF EROSION MAT URBAN CLASS I TYPE B (AS DIRECTED BY ENGINEER-BY OTHERS)

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.

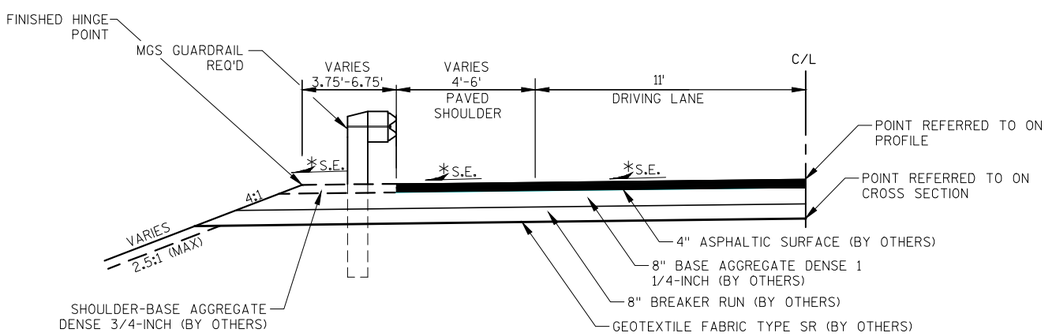
PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	TYPICAL FINISHED SECTIONS (FOR INFORMATION ONLY- WORK BY OTHERS)	SHEET 6	E



BEAMGUARD LAYOUT TABLE

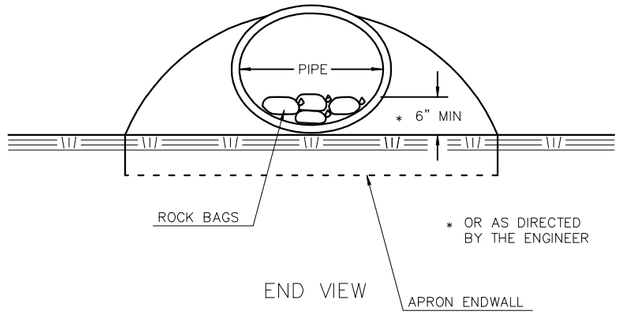
QUADRANT	LOCATION	STATION ①	②	③	④	⑤
SOUTHWEST	CTH U, RT.	10+00	10+00	10+89	11+43	11+86
SOUTHEAST	CTH U, RT.	14+00	14+00	13+33	12+76	12+36
NORTHEAST	CTH U, LT.	14+00	14+00	13+34	12+85	12+50

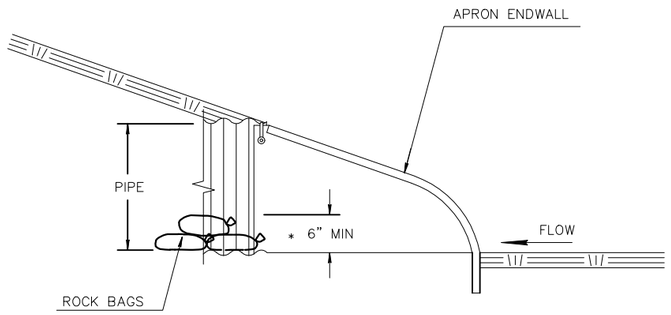
BEAMGUARD LAYOUT DETAIL



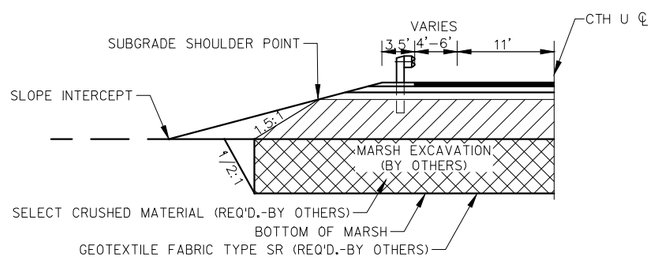
SECTION A–A

* SEE SUPERELEVATION TABLE





CULVERT PIPE CHECKS (BY OTHERS)

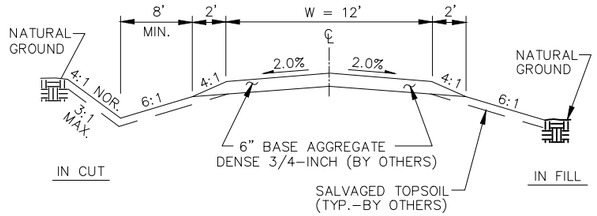


TYPICAL MARSH EXCAVATION

(STA. 11+65 - STA. 11+98, LT.)

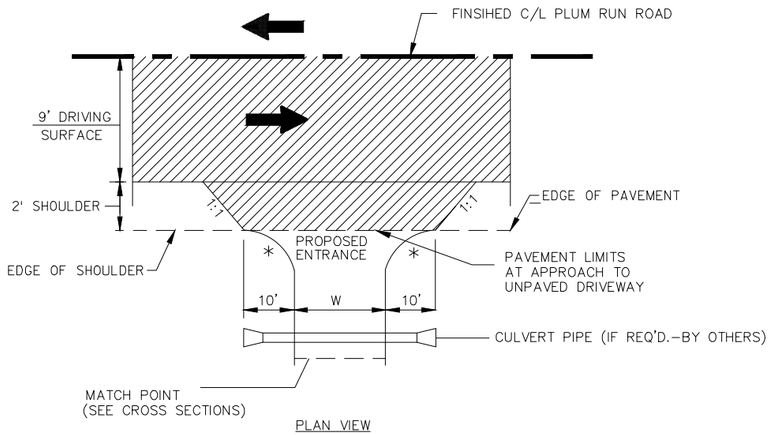
PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 7	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\DETAILS\CONSTRUCTION DETAILS.DWG
LAYOUT : CONST. DET. 1
PLOT DATE : 4/11/2018
PLOT TIME : 11:53:41 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



TYPICAL CROSS-SECTION FOR F.E.

F.E. – STA. 51+82, RT.



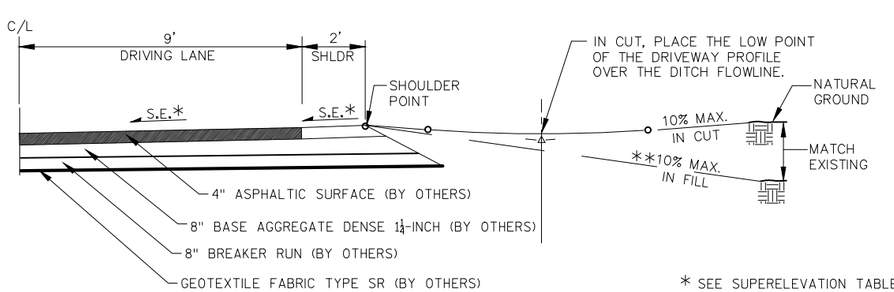
PLAN VIEW

APPROACH AT F.E.

TYPICAL PRIVATE ENTRANCE (F.E.) DETAILS

▨ LIMITS OF ASPHALTIC SURFACE (BY OTHERS)

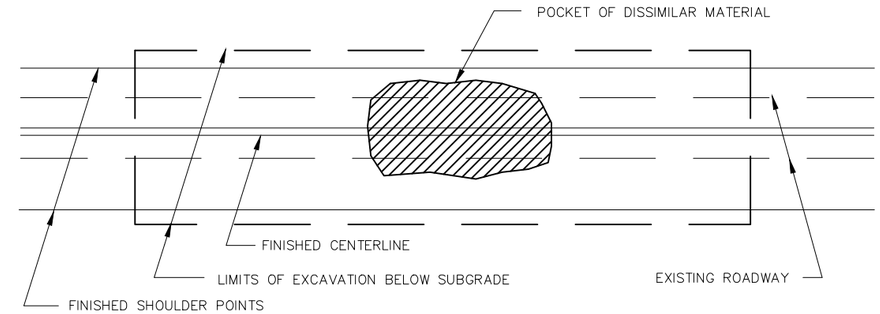
* RADIUS = 10' (UNLESS OTHERWISE NOTED)



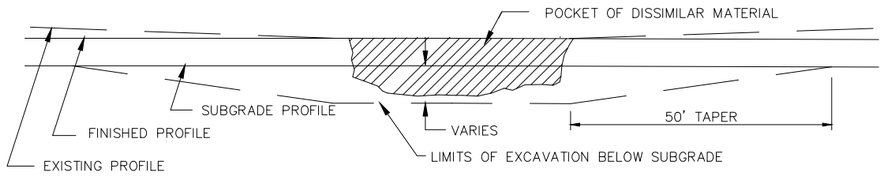
* SEE SUPERELEVATION TABLE

** UNLESS NOTED OTHERWISE

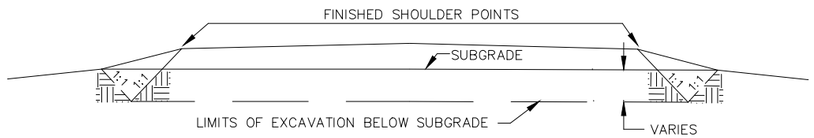
TYPICAL F.E. PROFILE



PLAN VIEW



PROFILE VIEW



CROSS SECTION VIEW

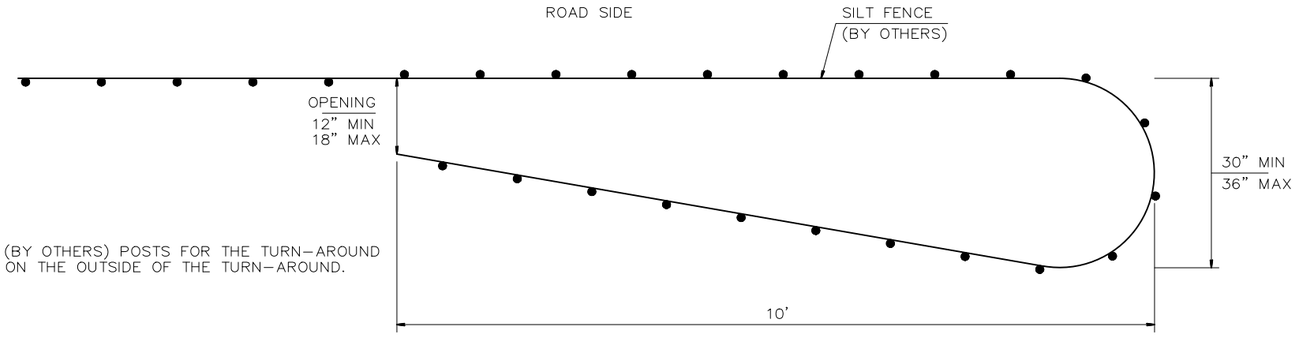
1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.
3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE 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.)

PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CONSTRUCTION DETAILS (FOR INFORMATION ONLY - WORK BY OTHERS)	SHEET 8	E

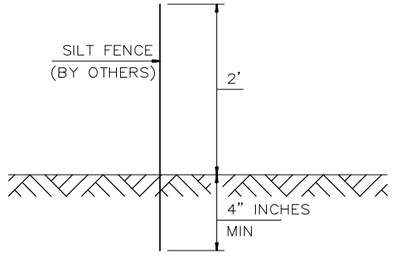
FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\DETAILS\CONSTRUCTION DETAILS.DWG
LAYOUT : CONST. DET. 2
PLOT DATE : 4/11/2018
PLOT TIME : 11:55:12 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

2



NOTE: SILT FENCE (BY OTHERS) POSTS FOR THE TURN–AROUND SHOULD BE ON THE OUTSIDE OF THE TURN–AROUND.

PLAN VIEW



SILT FENCE TURN–AROUND DETAIL

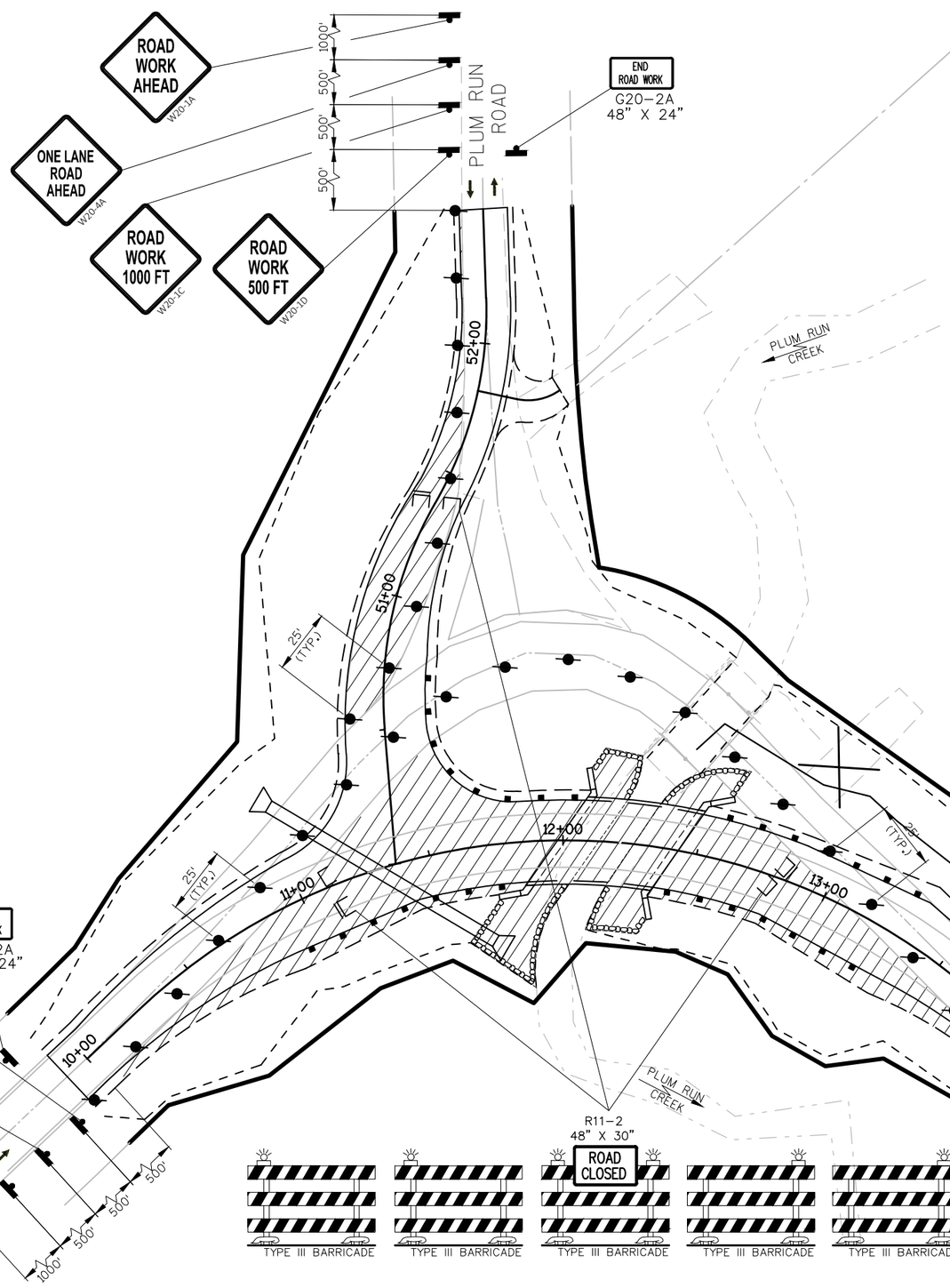
(BY OTHERS)

PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CONSTRUCTION DETAILS (FOR INFORMATION ONLY - WORK BY OTHERS)	SHEET 9	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\DETAILS\CONSTRUCTION DETAILS.DWG
LAYOUT : CONST. DET. 3
PLOT DATE : 4/11/2018
PLOT TIME : 11:55:25 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

LEGEND

- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT (BY OTHERS)
- TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT (BY OTHERS)
- TRAFFIC CONTROL BARRICADE TYPE III WITH/WITHOUT SIGN (BY OTHERS)
- WORK ZONE
- DIRECTION OF TRAFFIC



GENERAL NOTES FOR TRAFFIC CONTROL

THE COUNTY SHALL PROVIDE AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS, LIGHTS, TEMPORARY MARKINGS, FLAGGERS, AND SUCH OTHER SAFETY DEVICES AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

IT SHALL BE THE COUNTY'S RESPONSIBILITY TO PROVIDE AND MAINTAIN ACCESS TO ALL PROPERTY ABUTTING THE ROADWAY CONSTRUCTION WORK THROUGHOUT THE LIFE OF THE PROJECT.

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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

ALL "W" AND "WO" SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED.

ALL ROADS AND STREETS WITHIN THE WORK ZONES SHALL BE KEPT ACCESSIBLE FOR EMERGENCY VEHICLES, RESIDENTS AND BUSINESSES.

ANY STOP SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

ALL SIGN LAYOUT SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200' CLEARANCE TO EXISTING SIGNS.

DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

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

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON COUNTY'S METHODS OR SEQUENCES OF OPERATION.

ROAD MACHINERY, FLAGGERS AHEAD, ETC. SIGNS SHALL BE USED AS NEEDED AND SHALL BE REMOVED OR COVERED AT NIGHTS, ON WEEKENDS OR WHEN THE ACTIVITY DOES NOT EXIST.

ADDITIONAL DRUMS OR TYPE III BARRICADES MAY BE REQUIRED ADJACENT TO DROP-OFFS, OPEN TRENCHES, OR PROTRUSIONS. COST TO BE INCLUDED WITH OPERATION WHICH CREATES THE HAZARD.

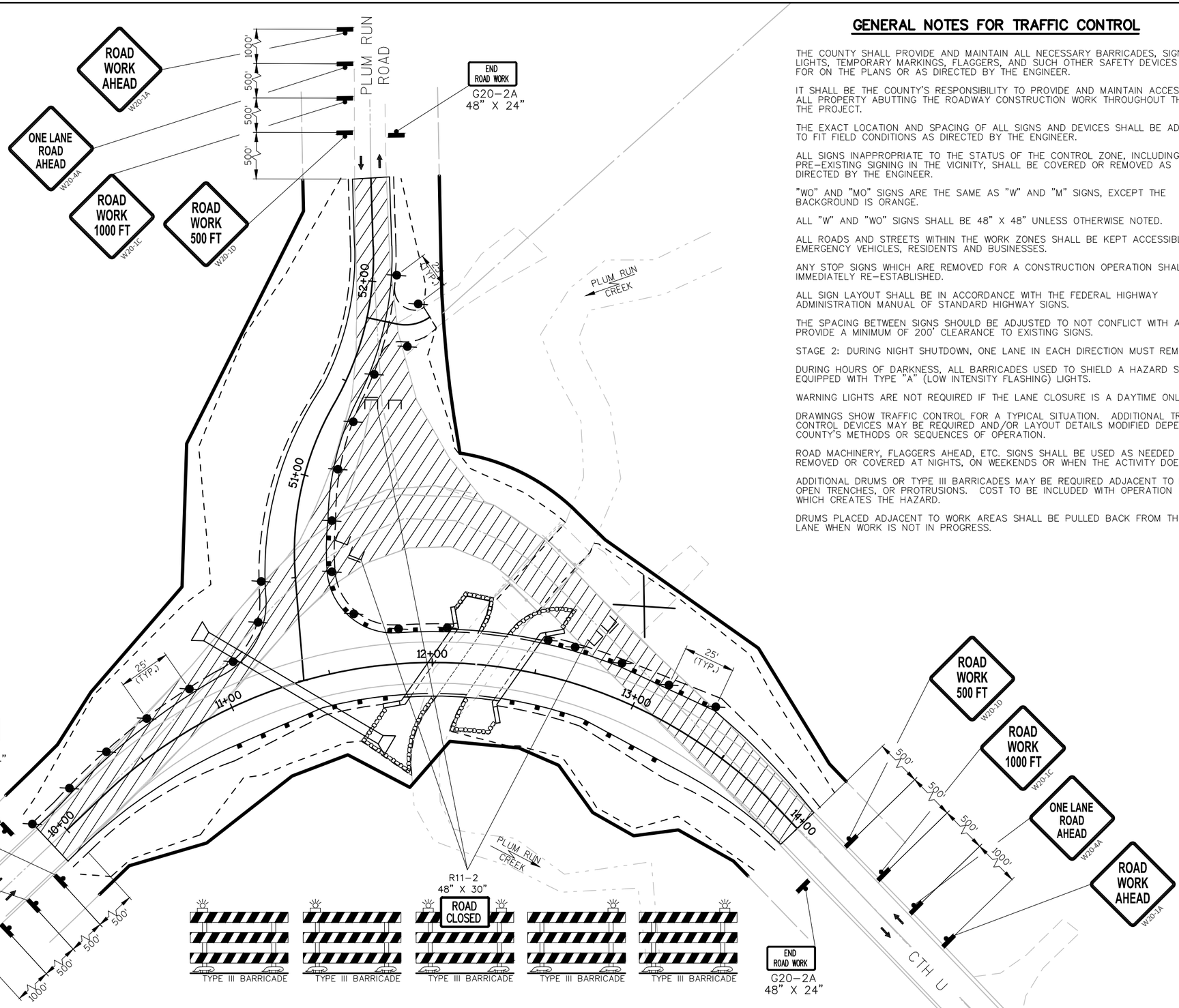
DRUMS PLACED ADJACENT TO WORK AREAS SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	TRAFFIC CONTROL - STAGE 1 (FOR INFORMATION ONLY - WORK BY OTHERS)	SHEET 10	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\DETAILS\TRAFFIC CONTROL.DWG
LAYOUT : STAGE 1
PLOT DATE : 4/11/2018
PLOT TIME : 11:58:48 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

LEGEND

- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT (BY OTHERS)
- TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT (BY OTHERS)
- TRAFFIC CONTROL BARRICADE TYPE III WITH/WITHOUT SIGN (BY OTHERS)
- WORK ZONE
- DIRECTION OF TRAFFIC



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THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200' CLEARANCE TO EXISTING SIGNS.

STAGE 2: DURING NIGHT SHUTDOWN, ONE LANE IN EACH DIRECTION MUST REMAIN OPEN.

DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

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

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON COUNTY'S METHODS OR SEQUENCES OF OPERATION.

ROAD MACHINERY, FLAGGERS AHEAD, ETC. SIGNS SHALL BE USED AS NEEDED AND SHALL BE REMOVED OR COVERED AT NIGHTS, ON WEEKENDS OR WHEN THE ACTIVITY DOES NOT EXIST.

ADDITIONAL DRUMS OR TYPE III BARRICADES MAY BE REQUIRED ADJACENT TO DROP-OFFS, OPEN TRENCHES, OR PROTRUSIONS. COST TO BE INCLUDED WITH OPERATION WHICH CREATES THE HAZARD.

DRUMS PLACED ADJACENT TO WORK AREAS SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	TRAFFIC CONTROL - STAGE 2 (FOR INFORMATION ONLY - WORK BY OTHERS)	SHEET 11	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\DETAILS\TRAFFIC CONTROL.DWG
LAYOUT : STAGE 2
PLOT DATE : 4/11/2018
PLOT TIME : 11:59:14 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

CTH U STATION LAYOUT

STATION	Y	X	COMMENTS
9+90	231,960.48	444,301.25	BEGIN PROJECT
10+00	231,970.48	444,300.90	–
10+50	232,020.45	444,300.38	–
11+00	232,069.57	444,309.17	–
11+50	232,115.66	444,328.31	–
11+97.99	232,155.04	444,355.58	END OF DECK
12+00	232,156.56	444,356.89	–
12+43.02	232,186.14	444,388.05	END OF DECK
12+50	232,190.37	444,393.60	–
13+00	232,215.51	444,436.71	–
13+50	232,230.80	444,484.21	–
14+00	232,235.89	444,533.88	END PROJECT

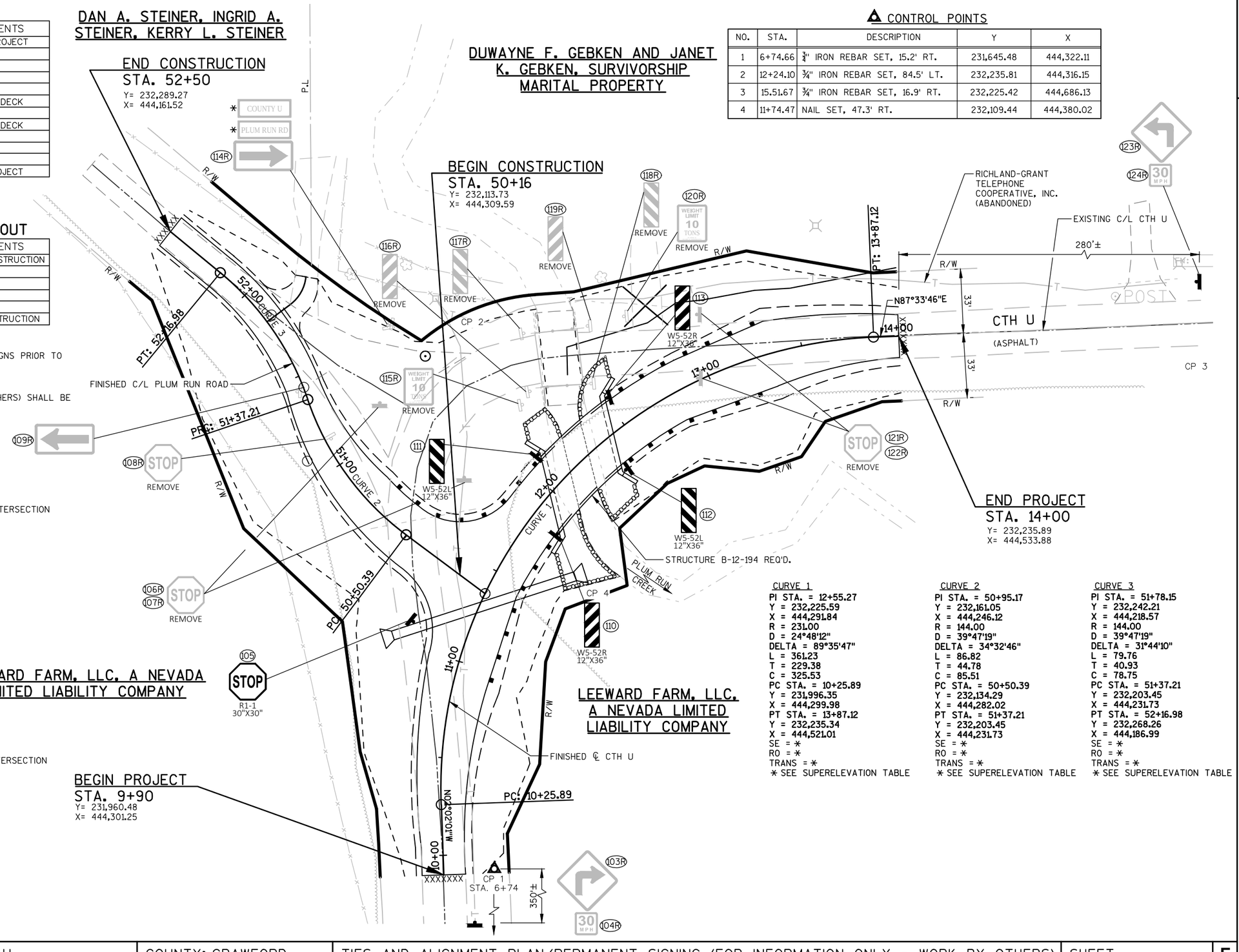
PLUM RUN ROAD STATION LAYOUT

STATION	Y	X	COMMENTS
50+16	232,113.73	444,309.59	BEGIN CONSTRUCTION
50+50	232,134.06	444,282.33	–
51+00	232,170.14	444,248.08	–
51+50	232,215.36	444,227.09	–
52+00	232,256.71	444,199.42	–
52+50	232,289.27	444,161.52	END CONSTRUCTION

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

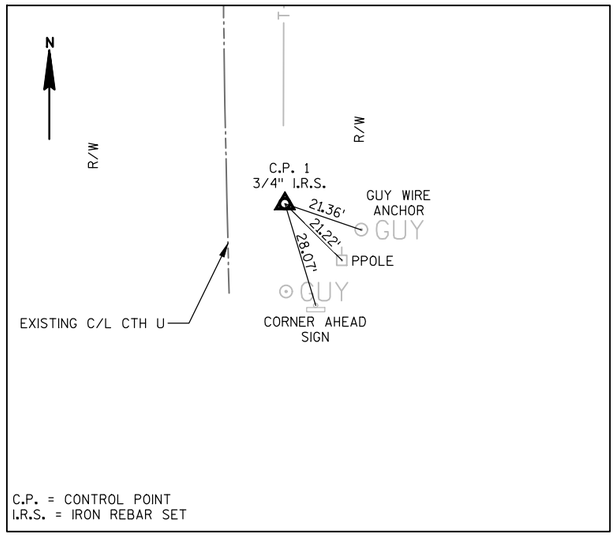
NOTE: THE FINAL LOCATION OF PERMANENT SIGNING (BY OTHERS) SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.

SIGN NO.	SIGN PLATE	DESCRIPTION
100R	10 TON BRIDGE X.X MILES AHEAD	LOCATED ON CTH U AT STH 171 INTERSECTION (SOUTH OF PROJECT)
101	W1-1R 36"X36"	ERECT AT STA. 5+50
102	30 MPH W13-1 24"X24"	ERECT AT STA. 5+50
125	W1-1L 36"X36"	ERECT AT STA. 18+40
126	30 MPH W13-1 24"X24"	ERECT AT STA. 18+40
127R	10 TON BRIDGE X.X MILES AHEAD	LOCATED ON CTH U AT USH 14 INTERSECTION (NORTH OF PROJECT)



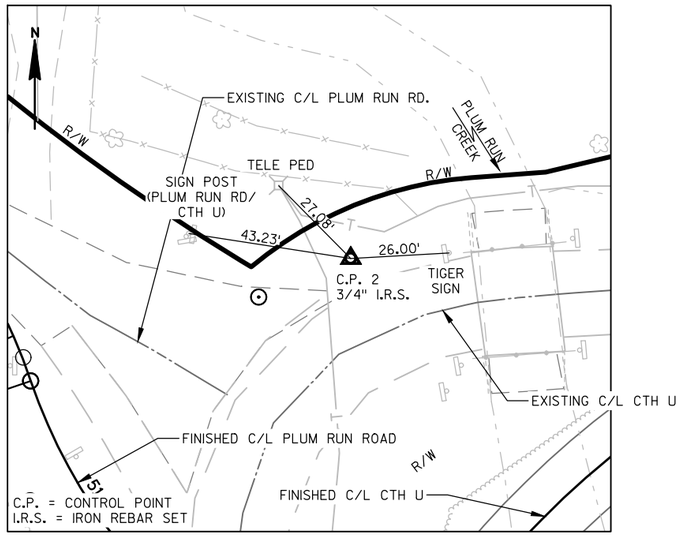
PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	TIES AND ALIGNMENT PLAN/PERMANENT SIGNING (FOR INFORMATION ONLY - WORK BY OTHERS)	SHEET 12	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\DETAILS\ALIGNMENT AND TIES.DWG
LAYOUT : ALIGNMENT
PLOT DATE : 4/11/2018
PLOT TIME : 1:13:54 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



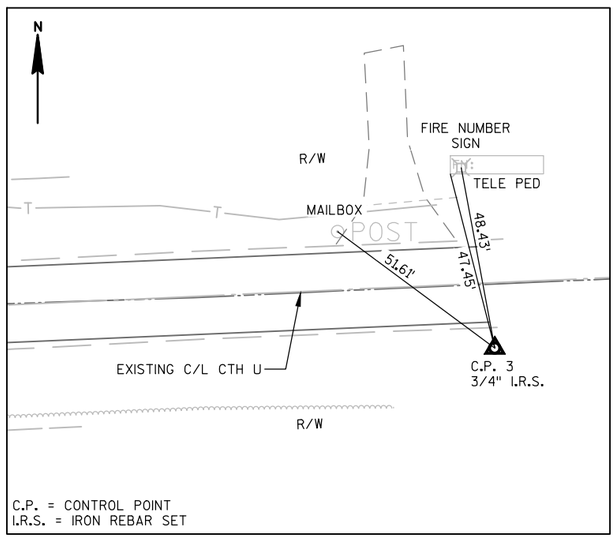
TIES TO C.P.#1

STA. 6+74; 15.2' RT.
Y = 231,645.48
X = 444,322.11



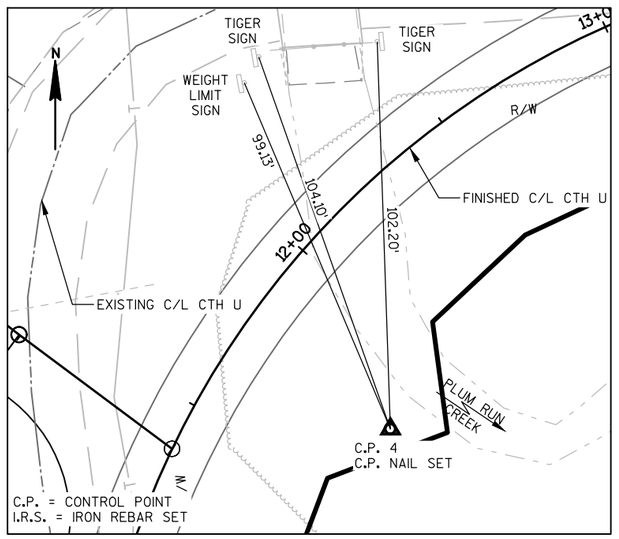
TIES TO C.P.#2

STA. 12+24.10; 34.5' LT.
Y = 232,235.81
X = 444,316.15



TIES TO C.P.#3

STA. 15+51.67; 16.9' RT.
Y = 232,225.42
X = 444,686.13



TIES TO C.P.#4

STA. 11+74.47; 47.3' RT.
Y = 232,109.44
X = 444,380.02

PROJECT NO:5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	TIES AND ALIGNMENT PLAN/PERMANENT SIGNING	SHEET 13	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\DETAILS\ALIGNMENT AND TIES.DWG
LAYOUT : TIES
PLOT DATE : 1/2/2018
PLOT TIME : 9:00:15 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

5527-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 12+45	LS	1.000	1.000
0004	206.1000	Excavation for Structures Bridges (structure) 01. B-12-0194	LS	1.000	1.000
0006	210.1500	Backfill Structure Type A	TON	625.000	625.000
0008	502.0100	Concrete Masonry Bridges	CY	219.000	219.000
0010	502.3200	Protective Surface Treatment	SY	185.000	185.000
0012	505.0400	Bar Steel Reinforcement HS Structures	LB	6,080.000	6,080.000
0014	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	22,640.000	22,640.000
0016	513.4061	Railing Tubular Type M (structure) 01. B-12-0194	LF	95.000	95.000
0018	516.0500	Rubberized Membrane Waterproofing	SY	15.000	15.000
0020	550.0020	Pre-Boring Rock or Consolidated Materials	LF	220.000	220.000
0022	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	300.000	300.000
0024	606.0300	Riprap Heavy	CY	240.000	240.000
0026	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000
0028	614.0200	Steel Thrie Beam Structure Approach	LF	21.000	21.000
0030	614.0345	Steel Plate Beam Guard Short Radius	LF	69.000	69.000
0032	614.0390	Steel Plate Beam Guard Short Radius Terminal	EACH	1.000	1.000
0034	614.2500	MGS Thrie Beam Transition	LF	120.000	120.000
0036	614.2610	MGS Guardrail Terminal EAT	EACH	3.000	3.000
0038	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5527-00-70	EACH	1.000	1.000
0040	619.1000	Mobilization	EACH	1.000	1.000
0042	628.6005	Turbidity Barriers	SY	240.000	240.000
0044	642.5001	Field Office Type B	EACH	1.000	1.000
0046	645.0111	Geotextile Type DF Schedule A	SY	110.000	110.000
0048	645.0120	Geotextile Type HR	SY	385.000	385.000
0050	650.6500	Construction Staking Structure Layout (structure) 01. B-12-0194	LS	1.000	1.000
0052	715.0502	Incentive Strength Concrete Structures	DOL	1,314.000	1,314.000

ALL BID ITEMS ARE BY OTHERS UNLESS OTHERWISE NOTED

CLEARING & GRUBBING

STATION	LOCATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
11+00 - 14+00	MAINLINE	3	3
51+00 - 52+00	PLUM RUN ROAD	1	1
	TOTALS =	4	4

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 (EACH)	COMMENTS
12+91	MAINLINE, LT.	1	12" CMP; L=25'
50+59	PLUM RUN ROAD	1	36" CMP; L=55'
	TOTALS =	2	

BASE AGGREGATE DENSE / BREAKER RUN / SELECT CRUSHED MATERIAL

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)	312.0110 SELECT CRUSHED MATERIAL (TON)
9+90 - 14+00	MAINLINE	86	800	722	247
50+16 - 52+50	PLUM RUN ROAD	37	390	353	-
51+82	F.E., - PLUM RUN ROAD, RT.	15	-	-	-
-	UNDISTRIBUTED	12	60	75	13
	TOTALS =	150	1250	1150	260

EARTHWORK SUMMARY

STATION - STATION	LOCATION	(1) 205.0100 EXCAVATION COMMON CUT (2) (CY)	AVAILABLE MATERIAL (CY) (3)	205.0400 MARSH EXCAVATION CY (4)	205.0200 ROCK EXCAVATION (CY) (5)	EXPANDED MARSH BACKFILL (CY) FACTOR 1.5 (6)	EXPANDED ROCK (CY) FACTOR 1.1 (7)	UNEXPANDED FILL (CY)	EXPANDED FILL (CY) FACTOR 1.25 (8)	MASS ORDINATE +/- (CY) (11)	WASTE (CY)	COMMENT:
9+90 - 14+00	MAINLINE - STAGE 1	220	220	90	-	135	-	800	1000	-780	-780	
9+90 - 14+00	MAINLINE - STAGE 2	440	440	-	40	-	45	16	-38	478	478	
50+16 - 52+50	PLUM RUN ROAD - STAGE 1	300	300	-	530	-	580	175	-500	800	800	
50+16 - 52+50	PLUM RUN ROAD - STAGE 2	1580	1580	-	-	-	-	80	100	1480	1480	
-	F.E. - STAGE 2	15	15	-	-	-	-	-	-	-	15	
TOTALS =		2555	2555	90	570	135	625	1071	562		1993	

NOTES:
1.) COMMON EXCAVATION, ITEM NUMBER 205.0100
2.) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
3.) AVAILABLE MATERIAL = CUT MATERIAL
4.) MARSH EXCAVATION - TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL. ITEM 205.0400
5.) ROCK EXCAVATION. ITEM NUMBER 205.0200
6.)EXPANDED MARSH BACKFILL - THIS IS TO BE FILLED WITH SELECT CRUSHED MATERIAL. MARSH BACKFILL FACTOR = 1.5. ITEM NUMBER 312.0110
7.) EXPANDED ROCK FACTOR = 1.1
8.) EXPANDED FILL FACTOR 1.25: EXPANDED FILL = (UNEXPANDED FILL -(ROCK *ROCK FACTOR))*1.25
9.) 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

MASS ORDINATE DOES NOT INCLUDE MARSH EXCAVATION VOLUME. WASTE MARSH EXCAVATION MATERIAL

EXCAVATION MARSH LOCATED - STA. 11+65 - STA. 11+98, LT.

ASPHALTIC SURFACE

STATION - STATION	LOCATION	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)
9+90 - 14+00	MAINLINE	62	282
50+16 - 52+50	PLUM RUN ROAD	30	138
-	UNDISTRIBUTED	8	30
	TOTALS =	100	450

CULVERT PIPE

STATION - STATION	LOCATION	521.3757 PIPE ARCH CORRUGATED STEEL 57 X 38-INCH (LF)	521.1257 APRON ENDWALLS FOR PIPE ARCH STEEL 57 X 38-INCH (EACH)
11+29	MAINLINE	98	2
	TOTAL =	98	2

MINIMUM STEEL THICKNESS = 0.109 INCHES

WATER

LOCATION	624.0100 (MGAL)
PROJECT	20
TOTALS =	20

BEAM GUARD

STATION - STATION	LOCATION	CATEGORY 010: 614.0200 STEEL THRIE BEAM STRUCTURE APPROACH (LF)	614.0345 STEEL PLATE BEAM GUARD SHORT RADIUS (LF)	614.0390 STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL (EACH)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EA)	FOR INFORMATIONAL PURPOSES ONLY: RADIUS (FT)	LENGTH OF INSTALLATION (FT)	NO. OF CRT POSTS
10+89 - 11+86	MAINLINE, RT.	-	-	-	40	1	-	-	-
11+58 - 12+08	MAINLINE, LT.	21	69	1	-	-	32	69	11
12+36 - 13+33	MAINLINE, RT.	-	-	-	40	1	-	-	-
12+50 - 13+34	MAINLINE, LT.	-	-	-	40	1	-	-	-
	TOTALS =	21	69	1	120	3	32	69	11

ALL BID ITEMS ARE BY OTHERS UNLESS OTHERWISE NOTED

FINISHING ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	628.2008 EROSION MAT URBAN CLASS I TYPE B (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0160 SEEDING MIXTURE NO. 60 (LB)	*630.0170 SEEDING MIXTURE NO. 70 (LB)	630.0200 SEEDING TEMPORARY (LB)
9+90 - 14+00	MAINLINE	1,021	1,540	113	1.1	4	7	22
50+16 - 52+50	PLUM RUN ROAD	1,379	1,660	292	1.3	-	8	27
-	UNDISTRIBUTED	600	800	95	0.6	1	5	11
	TOTALS =	3000	4000	500	3.0	5	20	60

*STA. 11+65 - STA. 12+32
STA. 12+05 - STA. 12+42
STA. 12+62, LT.
STA. 12+87 - STA. 13+47, RT.

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
9+90 - 14+00	MAINLINE	634	1902
50+16 - 52+50	PLUM RUN ROAD, RT.	202	606
-	UNDISTRIBUTED	214	642
	TOTALS =	1,050	3,150

TURBIDITY BARRIERS

STATION	LOCATION	CATEGORY 010 628.6005 (SY)
11+67 - 12+45	MAINLINE	118
12+21 - 12+68	MAINLINE	106
-	UNDISTRIBUTED	16
	TOTALS =	240

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATION EROSION CONTROL (EACH)	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL (EACH)
5527-00-70	5	3
TOTALS =	5	3

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF)
10+50	MAINLINE, LT.	8
13+25	MAINLINE, LT.	8
51+00	PLUM RUN ROAD, LT.	8
52+00	PLUM RUN ROAD, LT.	8
-	UNDISTRIBUTED	8
	TOTALS =	40

CULVERT PIPE CHECKS

STATION	LOCATION	628.7555 (EACH)
10+97	MAINLINE, LT.	10
	TOTALS =	10

MARKERS ROW

PT. NO.	STATION	LOCATION	633.5100 (EACH)
101	9+90.00	32.53' LT.	1
102	10+25.00	33.19' LT.	1
103	10+50.00	42.00' LT	1
104	50+50.00	55.00' LT.	1
105	51+00.00	59.00' LT.	1
106	52+35.00	33.16' LT.	1
107	52+50.00	32.96' LT.	1
108	52+50.00	33.05' RT.	1
109	52+09.09	32.73' RT.	1
110	51+45.71	63.09' RT.	1
111	12+09.64	101.41' LT.	1
112	12+52.07	80.86' LT.	1
113	12+65.00	70.93' LT.	1
114	13+35.53	53.93' LT.	1
115	13+68.29	32.85' LT.	1
116	14+00.00	32.89' LT.	1
117	14+00.00	33.11' RT.	1
118	13+90.00	33.14' RT.	1
119	13+55.00	40.11' RT.	1
120	13+35.00	55.00' RT.	1
121	13+05.00	55.00' RT.	1
122	12+75.00	40.00' RT.	1
123	12+50.00	37.00' RT.	1
124	12+10.00	38.00' RT.	1
125	11+85.00	60.00' RT.	1
126	11+50.00	40.00' RT.	1
127	11+15.00	42.00' RT.	1
128	10+50.00	50.00' RT.	1
129	10+10.00	33.23' RT.	1
130	9+90.00	33.47' RT.	1
			30

PERMANENT SIGNING

SIGN NUMBER	APPROX. STATION	POSITIIO	SITE ID	SIGN CODE	SIGN DESCRIPTION	ORDER LINES	SIGN SIZE (IN X	POSTS WOOD 4X6 INCH 634.0612 12 FT (EACH)	634.0616 16 FT (EACH)	634.0618 18 FT (EACH)	637.2210 SIGNS TYPE II REFLECTIV E H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	SIGN MOUNTED ON SAME
100R	--	–	–	--	LOAD POSTING SIGN	–	24X48	–	–	--	--	–	1	1	
101	5+50	RIGHT	MAINLINE	W1-1R	ROAD TURNS RIGHT	--	36X36	--	--	1	--	9.00	--	--	
102	5+50	RIGHT	MAINLINE	W13-1	_ MPH	30	24X24	–	–	--	--	4.00	--	–	101
103R	6+50	RIGHT	MAINLINE	W1-1R	ROAD TURNS RIGHT	–	30X30	–	–	--	--	–	1	1	
104R	6+50	RIGHT	MAINLINE	W13-1	_ MPH	30	18X18	–	–	--	--	–	1	–	103R
105	50+20	LEFT	PLUM RUN ROAD	R1-1	STOP	--	30X30	--	1	--	5.18	--	--	--	
106R	11+84	RIGHT	MAINLINE	R1-1	STOP	--	30X30	–	–	--	--	–	1	1	
107R	11+87	LEFT	MAINLINE	R1-1	STOP	–	30X30	–	–	--	--	–	1	1	
108R	51+14	RIGHT	PLUM RUN ROAD	R1-1	STOP	–	30X30	–	–	--	--	–	1	1	
109R	51+44	LEFT	PLUM RUN ROAD	W1-6	ONE-DIRECTION LARGE ARROW	–	24X48	–	–	--	--	–	1	1	
110	11+84	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	–	12X36	1	---	---	---	3.00	---	---	
111	12+09	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	–	12X36	1	---	---	---	3.00	---	---	
112	12+36	RIGHT	MAINLINE	W5-52L	BRIDGE HASH MARKS	–	12X36	1	---	---	---	3.00	---	---	
113	12+50	LEFT	MAINLINE	W5-52R	BRIDGE HASH MARKS	--	12X36	1	---	---	---	3.00	---	---	
114R	12+05	LEFT	MAINLINE	W1-6	ONE-DIRECTION LARGE ARROW	--	24X48	--	--	--	--	--	1	1	
115R	12+20	LEFT	MAINLINE	R12-1	WEIGHT LIMIT 10 TONS	–	24X36	---	---	---	---	---	1	1	
116R	12+26	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS		12X36	---	---	---	---	---	1	1	
117R	12+40	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS		12X36	---	---	---	---	---	1	1	
118R	12+49	LEFT	MAINLINE	W5-52R	BRIDGE HASH MARKS		12X36	---	---	---	---	---	1	1	
119R	12+62	LEFT	MAINLINE	W5-52R	BRIDGE HASH MARKS		12X36	---	---	---	---	---	1	1	
120R	12+77	LEFT	MAINLINE	R12-1	WEIGHT LIMIT 10 TONS		24X36	---	---	---	---	---	1	1	
121R	12+90	LEFT	MAINLINE	R1-1	STOP SIGN		30X30	–	–	--	--	–	1	1	
122R	13+05	LEFT	MAINLINE	R1-1	STOP SIGN		30X30	--	--	--	--	--	1	1	
123R	16+80	LEFT	MAINLINE	W1-1L	ROAD TURNS LEFT	–	30X30	–	–	--	--	–	1	1	
124R	16+80	LEFT	MAINLINE	W13-1	_ MPH	30	18X18	–	–	--	--	–	1	–	123R
125	18+40	LEFT	MAINLINE	W1-1L	ROAD TURNS LEFT	--	36X36	–	–	1	--	9.00	--	–	
126	18+40	LEFT	MAINLINE	W13-1	_ MPH	30	24X24	–	–	--	--	4.00	--	–	125
127R	--	–	–	--	LOAD POSTING SIGN	–	24X48	–	–	--	--	–	1	1	
							TOTALS =	4	1	2	5.18	38.00	19	17	

MARKERS CULVERT END

STATION	LOCATION	633.5200 (EACH)
11+29	MAINLINE	2
	TOTALS =	2

PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	MISCELLANEOUS QUANTITIES	SHEET	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\DETAILS\MISC QUANT.DWG
LAYOUT : LAYOUT2
PLOT DATE : 4/11/2018
PLOT TIME : 1:53:42 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

ALL BID ITEMS ARE BY OTHERS UNLESS OTHERWISE NOTED

PAVEMENT MARKING

STATION - STATION	LOCATION	DESCRIPTION	646.1020 MARKING LINE EPOXY 4-INCH (LF)	646.6120 MARKING STOP LINE EPOXY 18-INCH (LF)
9+90 - 14+00	MAINLINE	DOUBLE YELLOW	820	--
9+90 - 14+00	MAINLINE, RT.	WHITE EDGELINE	410	--
9+90 - 14+00	MAINLINE, LT.	WHITE EDGELINE	320	--
50+24	PLUM RUN ROAD	STOP BAR	--	20
		TOTALS =	1550	20

TRAFFIC CONTROL

LOCATION	643.0300 TRAFFIC CONTROL DRUMS (DAYS) STAGE 1	643.0300 STAGE 2	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAYS) STAGE 1	643.0420 STAGE 2	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAYS) STAGE 1	643.0705 STAGE 2	643.5000 TRAFFIC CONTROL (EACH)
PROJECT	–	--	–	--	–	--	1
MAINLINE	2,060	510	1,070	320	1,280	380	--
SUBTOTALS =	2,060	510	1,070	320	1,280	380	1
TOTALS =	2,570		1,390		1,660		1

TRAFFIC CONTROL SIGNS

SIGN	DESCRIPTION	643.0900 (DAYS) STAGE 1	STAGE 2
W20-1	(3) ROAD WORK AHEAD	213	63
W20-1	(3) ROAD WORK 1000 FT	213	63
W20-1	(3) ROAD WORK 500 FT	213	63
W20-1	(3) ONE LANE ROAD AHEAD	213	63
G20-2A	(3) END ROAD WORK	214	64
R11-2	(3) ROAD CLOSED	214	64
	SUBTOTALS =	1280	380
	TOTALS =	1,660	

GEOTEXTILE FABRIC TYPE SR

STATION - STATION	LOCATION	645.0135 (SY)	COMMENTS
9+90 - 14+00	MAINLINE	1967	
11+65 - 11+98	MAINLINE, LT.	130	MARSH EXCAVATION
50+16 - 52+50	PLUM RUN ROAD	1030	
-	UNDISTRIBUTED	223	
	TOTALS =	3,350	

CONSTRUCTION STAKING

STATION -STATION	LOCATION	CONSTRUCTION STAKING 650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	650.6000 PIPE CULVERTS (EACH)	*650.6500 STRUCTURE LAYOUT (B-12-0194) (LS)	650.9910 SUPPLEMENTAL CONTROL (01. 5527-00-70) (LS)	650.9920 SLOPES STAKES (LF)
9+90 - 14+00	MAINLINE	365	365	-	-	-	365
11+29	MAINLINE	-	-	1	-	-	-
12+21	MAINLINE	-	-	-	1	-	-
50+16 - 52+50	PLUM RUN RD.	235	235	-	-	-	235
–	PROJECT	-	-	-	-	1	-
	TOTALS =	600	600	1	1	1	600

*INDICATES BID ITEM IS CATEGORY 020

SAWING ASPHALT

STATION	LOCATION	690.0150 (L.F.)
9+90	MAINLINE	22
14+00	MAINLINE	22
52+50	PLUM RUN ROAD	18
	TOTAL =	62

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5527-00-00		
FEDERAL PROJECT NUMBER	4.01	2

PLAT OF RIGHT-OF-WAY REQUIRED FOR

CTH KK – USH 14

(PLUM RUN CREEK BRIDGE B-12-0194)

CTH U — CRAWFORD COUNTY

CONSTRUCTION PROJECT NUMBER
5527-00-70

CONVENTIONAL ABBREVIATIONS

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

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND SURVEY MONUMENT (WITH POINT NUMBER) o1040
R/W MONUMENT ○ ● (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) 21-1
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		

NOTES

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), CRAWFORD 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.

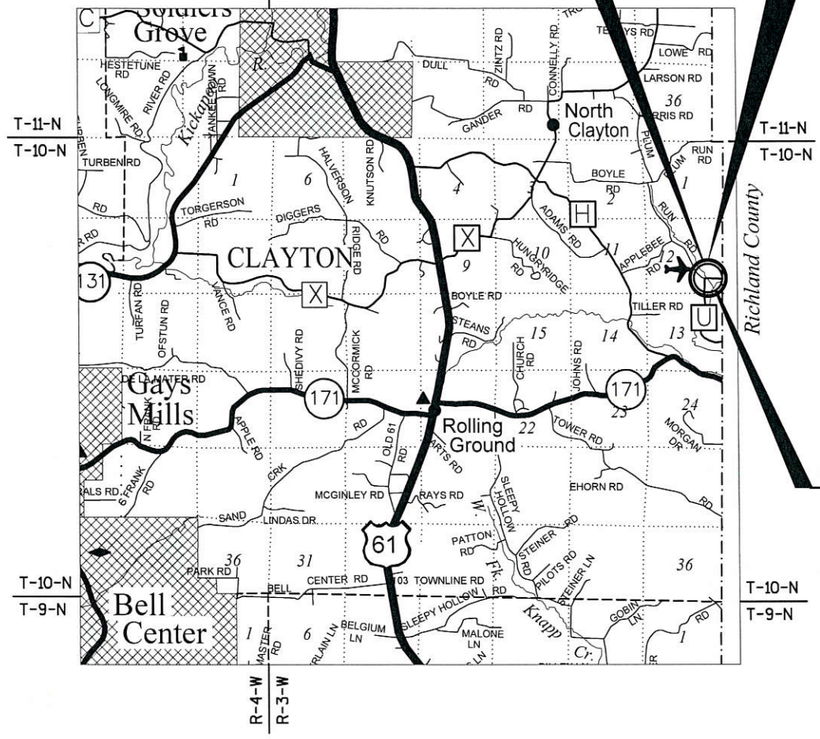
RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4" X 24" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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."

STRUCTURE B-12-0194

END RELOCATION ORDER
STA. 14+00
1291.14' NORTH AND 1688.14' EAST OF THE S¼ CORNER OF SECTION 12, T1ON, R3W, TOWN OF CLAYTON, CRAWFORD COUNTY, WI
Y= 232,235.89
X= 444,533.88

BEGIN RELOCATION ORDER
STA. 9+90
1015.73' NORTH AND 1455.51' EAST OF THE S¼ CORNER OF SECTION 12, T1ON, R3W, TOWN OF CLAYTON, CRAWFORD COUNTY, WI
Y= 231,960.48
X= 444,301.25



LAYOUT
SCALE 0 1 MI. 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.078 MI.

REVISION DATE

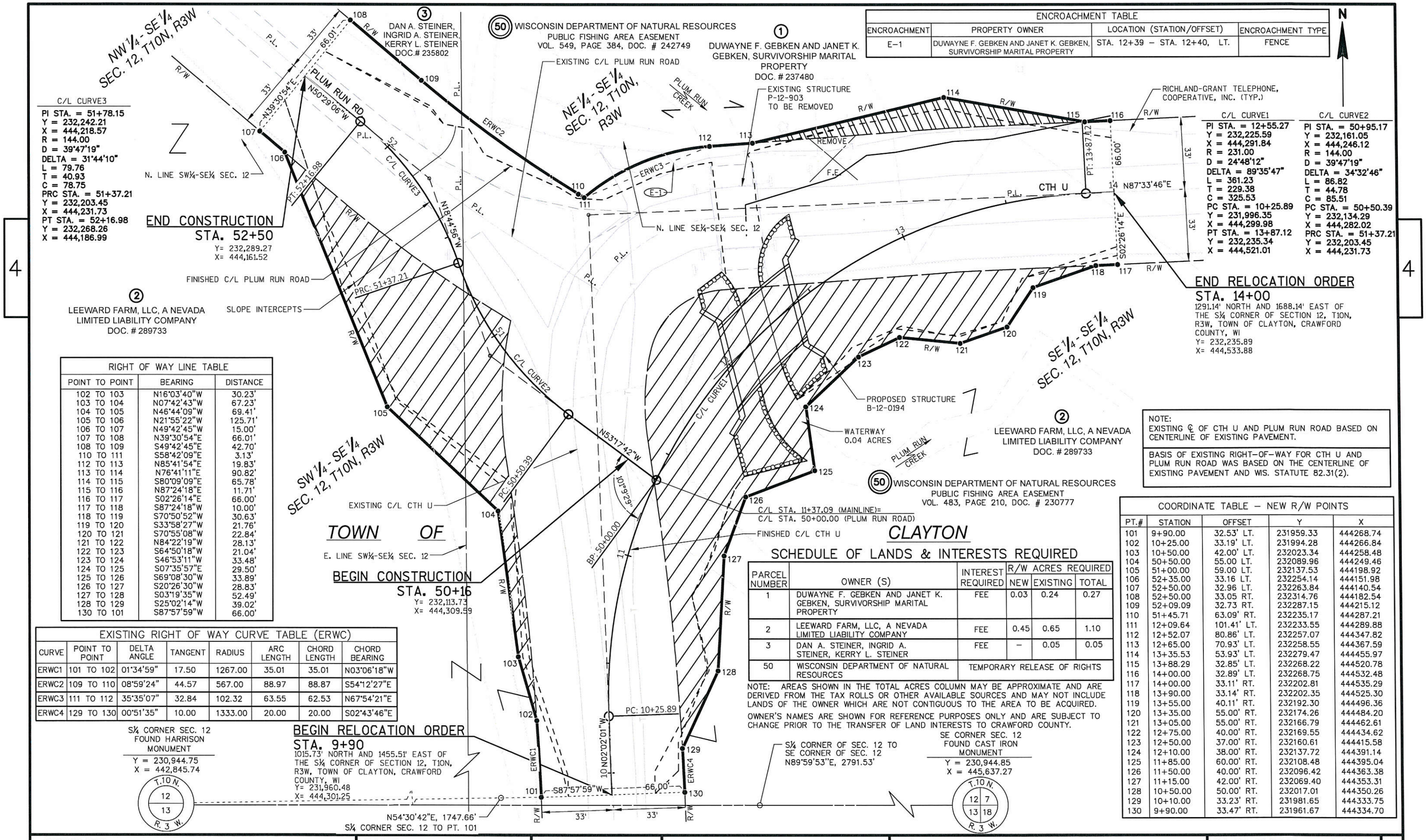
JEWELL
associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
PHONE : 608.588.7484
FAX : 608.588.9322

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FOR CRAWFORD COUNTY, WISCONSIN AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN
SCOTT D. WARNER
S-2524
RICHLAND CENTER, WI
01-26-2018
LAND SURVEYOR

APPROVED FOR CRAWFORD COUNTY
DATE: 1-29-18 (NAME/TITLE)

FILE NAME : S:\Projects\C54480 Crawford Co CTH U Bridge\RW\55270070_Title.dwg
PLOT NAME :
PLOT SCALE :



ENCROACHMENT TABLE			
ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E-1	DUWAYNE F. GEBKEN AND JANET K. GEBKEN, SURVIVORSHIP MARITAL PROPERTY	STA. 12+39 – STA. 12+40, LT.	FENCE

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
102 TO 103	N16°03'40"W	30.23'
103 TO 104	N07°42'43"W	67.23'
104 TO 105	N46°44'09"W	69.41'
105 TO 106	N21°55'22"W	125.71'
106 TO 107	N49°42'45"W	15.00'
107 TO 108	N39°30'54"E	66.01'
108 TO 109	S49°42'45"E	42.70'
110 TO 111	S58°42'09"E	3.13'
112 TO 113	N85°41'54"E	19.83'
113 TO 114	N76°41'11"E	90.82'
114 TO 115	S80°09'09"E	65.78'
115 TO 116	N87°24'18"E	11.71'
116 TO 117	S02°26'14"E	66.00'
117 TO 118	S87°24'18"W	10.00'
118 TO 119	S70°50'52"W	30.63'
119 TO 120	S33°58'27"W	21.76'
120 TO 121	S70°55'08"W	22.84'
121 TO 122	N84°22'19"W	28.13'
122 TO 123	S64°50'18"W	21.04'
123 TO 124	S46°53'11"W	33.48'
124 TO 125	S07°35'57"E	29.50'
125 TO 126	S69°08'30"W	33.89'
126 TO 127	S20°26'30"W	28.83'
127 TO 128	S03°19'35"W	52.49'
128 TO 129	S25°02'14"W	39.02'
130 TO 101	S87°57'59"W	66.00'

EXISTING RIGHT OF WAY CURVE TABLE (ERWC)							
CURVE	POINT TO POINT	DELTA ANGLE	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
ERWC1	101 TO 102	01°34'59"	17.50	1267.00	35.01	35.01	N03°06'18"W
ERWC2	109 TO 110	08°59'24"	44.57	567.00	88.97	88.87	S54°12'27"E
ERWC3	111 TO 112	35°35'07"	32.84	102.32	63.55	62.53	N67°54'21"E
ERWC4	129 TO 130	00°51'35"	10.00	1333.00	20.00	20.00	S02°43'46"E

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	EXISTING	TOTAL
1	DUWAYNE F. GEBKEN AND JANET K. GEBKEN, SURVIVORSHIP MARITAL PROPERTY	FEE	0.03	0.24	0.27
2	LEEWARD FARM, LLC, A NEVADA LIMITED LIABILITY COMPANY	FEE	0.45	0.65	1.10
3	DAN A. STEINER, INGRID A. STEINER, KERRY L. STEINER	FEE	–	0.05	0.05
50	WISCONSIN DEPARTMENT OF NATURAL RESOURCES	TEMPORARY 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 CRAWFORD COUNTY.

NOTE:
EXISTING ℄ OF CTH U AND PLUM RUN ROAD BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT-OF-WAY FOR CTH U AND PLUM RUN ROAD WAS BASED ON THE CENTERLINE OF EXISTING PAVEMENT AND WIS. STATUTE 82.31(2).

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
101	9+90.00	32.53' LT.	231959.33	444268.74
102	10+25.00	33.19' LT.	231994.28	444266.84
103	10+50.00	42.00' LT.	232023.34	444258.48
104	50+50.00	55.00 LT.	232089.96	444249.46
105	51+00.00	59.00 LT.	232137.53	444198.92
106	52+35.00	33.16 LT.	232254.14	444151.98
107	52+50.00	32.96 LT.	232263.84	444140.54
108	52+50.00	33.05 RT.	232314.76	444182.54
109	52+09.09	32.73 RT.	232287.15	444215.12
110	51+45.71	63.09' RT.	232235.17	444287.21
111	12+09.64	101.41' LT.	232233.55	444289.88
112	12+52.07	80.86' LT.	232257.07	444347.82
113	12+65.00	70.93' LT.	232258.55	444367.59
114	13+35.53	53.93' LT.	232279.47	444455.97
115	13+88.29	32.85' LT.	232268.22	444520.78
116	14+00.00	32.89' LT.	232268.75	444532.48
117	14+00.00	33.11' RT.	232202.81	444535.29
118	13+90.00	33.14' RT.	232202.35	444525.30
119	13+55.00	40.11' RT.	232192.30	444496.36
120	13+35.00	55.00' RT.	232174.26	444484.20
121	13+05.00	55.00' RT.	232166.79	444462.61
122	12+75.00	40.00' RT.	232169.55	444434.62
123	12+50.00	37.00' RT.	232160.61	444415.58
124	12+10.00	38.00' RT.	232137.72	444391.14
125	11+85.00	60.00' RT.	232108.48	444395.04
126	11+50.00	40.00' RT.	232096.42	444363.38
127	11+15.00	42.00' RT.	232069.40	444353.31
128	10+50.00	50.00' RT.	232017.01	444350.26
129	10+10.00	33.23' RT.	231981.65	444333.75
130	9+90.00	33.47' RT.	231961.67	444334.70

REVISION DATE	DATE	SCALE, FEET 0 20 40	HWY: CTH U	R/W PROJECT NUMBER: 5527-00-00	PLAT SHEET 4.02
	GRID FACTOR N/A		COUNTY: CRAWFORD	CONSTRUCTION PROJECT NUMBER: 5527-00-70	PS&E SHEET 19 E

FILE NAME : S:\Projects\C54480 Crawford Co CTH U Bridge\RW\55270070_Plat Sheets.dwg PLOT DATE : PLOT BY : Stephanie Potter PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75

LEGEND

- RIPRAP HEAVY
- DIRECTION OF FLOW
- XXXXXXXXX SAWING ASPHALT (BY OTHERS)
- SILT FENCE (BY OTHERS)
- TURBIDITY BARRIER
- TEMPORARY DITCH CHECK (BY OTHERS)
- WETLANDS
- CULVERT PIPE CHECKS (BY OTHERS)

FINISHED C/L PLUM RUN ROAD

STA. 11+00.12 (MAINLINE)=
STA. 50+42.49 (PLUM RUN ROAD)
Y= 232,085.47
X= 444,255.48

PC: 50+50.39

R40'-0"

N53°17'42"W

10°9'13"

C/L STA. 11+37.09 (CTH U)=
C/L STA. 50+00.00 (PLUM RUN ROAD)
INTERSECTION TYPE C (MOD.) REQ'D

R/W

12+00

CURVE 1

R32'-0"

STA. 11+84.44 (MAINLINE)=
STA. 50+51.83 (PLUM RUN ROAD)
Y= 232,172.98
X= 444,309.67

REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS
STA. 12+45 (P-12-903)
SINGLE SPAN CONCRETE DECK GIRDER STRUCTURE
26.4' CLEAR ROADWAY WIDTH
22.2' OVERALL LENGTH

DUWAYNE F. GEBKEN AND JANET K. GEBKEN, SURVIVORSHIP MARITAL PROPERTY

STA. 12+91, LT.
REMOVE F.E. (BY OTHERS)

RICHLAND-GRANT TELEPHONE COOPERATIVE, INC. (ABANDONED)

REMOVING SMALL PIPE CULVERTS (BY OTHERS)
STA. 12+91. LRT.
REMOVING 12" CMP

STA. 12+39 - STA. 12+40, LT.
REMOVING FENCE BY OTHERS

FINISHED C/L CTH U

EDGE OF ASPHALT (TYP.)

SHOULDER HINGE POINT (TYP.)

LEEWARD FARM, LLC, A NEVADA LIMITED LIABILITY COMPANY

STA. 11+29
(1) PIPE ARCH CORRUGATED STEEL 57x38-INCH (BY OTHERS)
(2) APRON ENDWALLS FOR PIPE ARCH STEEL 57x38-INCH (BY OTHERS)
SKEW = 41°49' RHF
W. INV. = 778.74
E. INV. = 775.00

INVERT
Y = 232,082.80
X = 444,275.25

OUTLET
Y = 232,113.12
X = 444,368.44

11+00

PC: 10+25.89

10+00 N2° 02' 01"W

R/W

SLOPE INTERCEPTS (TYP.)

WETLAND DETERMINATION (TYP.)

STRUCTURE B-12-194 REQ'D.

PLUM RUN CREEK

BM 5

13+00

PT: 13+87.12

14+00 N87°33'46"E

33'

33'

CTH U

(ASPHALT)

CURVE 1 DATA
PI STA. = 12+55.27
Y = 232,225.59
X = 444,291.84
R = 231.00
D = 24°48'12"
DELTA = 89°35'47"
L = 361.23
T = 229.38
C = 325.53
PC STA. = 10+25.89
Y = 231,996.35
X = 444,299.98
PT STA. = 13+87.12
Y = 232,235.34
X = 444,521.01
SE = ✱
RO = ✱
TRANS = ✱
✱ SEE SUPERELEVATION TABLE

BEGIN PROJECT
STA. 9+90
Y= 231,960.48
X= 444,301.25

(ASPHALT)

EXISTING C/L CTH U

LEEWARD FARM, LLC, A NEVADA LIMITED LIABILITY COMPANY

-3.44%

MATCH EXISTING
STA. 9+90
EL. = 786.55

PC STA 9+90.00
EL 786.55

L=90.00'
K=51.02

PI STA 10+35.00
EL 785.00

PT STA 10+80.00
EL 784.24

STA. 9+90

-1.68%

FINISHED C/L PROFILE CTH U

STA. 12+20.51
STRUCTURE B-12-194 REQ'D.
SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB
CLEAR ROADWAY WIDTH = 30.0'
O.A.L. = 44.88'
SKEW = 30° LHF

END PROJECT
STA. 14+00
Y= 232,235.89
X= 444,533.88

HIGH WATER100
EL = 778.10

EXISTING GROUND LINE AT FINISHED C/L CTH U

STA. 14+00

MATCH EXISTING
STA. 14+00
EL. = 778.87

OBSERVED WATER
EL. 770.26
(12-15-2016)

STREAMBED
EL. 769.93

EARTHWORK SUMMARY-BY OTHERS

	MAINLINE		PLUM RUN ROAD		
	STAGE 1	STAGE 2	STAGE 1	STAGE 2	TOTAL
EXCAVATION COMMON (C.Y.)	220	440	300	*1595	2555
ROCK EXCAVATION (C.Y.)	–	40	530	–	570
ROCK EXCAVATION EXPANDED (10%–C.Y.)	–	45	580	–	625
FILL (C.Y.)	800	16	175	80	1071
FILL EXPANSION (C.Y.)	1000	–38	–500	100	562
WASTE (C.Y.)	–780	478	800	1495	1993

*INCLUDES 15 C.Y. FOR F.E.

EXISTING GROUNDLINE ELEVATION
FINISHED C/L ELEVATION

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	6+75	¾" IRON ROD SET, 15.3' RT.	790.33
2	12+24	¾" IRON ROD SET, 84.5' LT.	781.69
5	12+46	STAR SPIKE IN TREE, 103.7' RT.	778.39
3	15+52	¾" IRON ROD SET, 16.9' RT.	776.22

786.57 | 786.89 | 786.55 / 786.55 | 786.21 / 786.21 | 785.63 / 785.60 | 785.04 / 785.07 | 784.53 / 784.62 | 784.10 / 784.24 | 783.24 / 783.91 | 782.17 / 783.57 | 781.07 / 783.24 | 779.38 / 782.90 | 777.28 / 782.56 | 771.91 / 782.23 | 770.20 / 781.89 | 774.97 / 781.56 | 775.48 / 781.22 | 777.98 / 780.89 | 780.13 / 780.55 | 780.29 / 780.21 | 779.90 / 779.88 | 779.57 / 779.54 | 779.22 / 779.21 | 778.87 / 778.87 | 778.51 | 778.27 | 778.05 | 777.84

9+20 | 9+40 | 9+60 | 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 | 13+00 | 13+20 | 13+40 | 13+60 | 13+80 | 14+00 | 14+20 | 14+40 | 14+60 | 14+80

PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	PLAN AND PROFILE: MAINLINE	SHEET 20	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\PLAN & PROFILE SHEETS\C54480_PLAN & PROFILE.DWG
LAYOUT :

PLOT DATE : 1/29/2018
PLOT TIME : 1:47:37 PM

PLOT BY : STRINE, THERESA

PLOT SCALE : 1" = 1'

LEGEND

- RIPRAP HEAVY
- DIRECTION OF FLOW
- XXXXXXXXX SAWING ASPHALT (BY OTHERS)
- SILT FENCE (BY OTHERS)
- TURBIDITY BARRIER
- TEMPORARY DITCH CHECK (BY OTHERS)
- WETLANDS
- CULVERT PIPE CHECKS (BY OTHERS)

REMOVING SMALL PIPE CULVERTS (BY OTHERS)
STA. 50+59
REMOVE 36" CMP

LEEWARD FARM, LLC, A NEVADA LIMITED LIABILITY COMPANY

STA. 50+79, LT. - STA. 51+91, LT.
REMOVING FENCE BY OTHERS

FINISHED C/L PLUM RUN ROAD

PC: 50+50.39

PRC: 51+37.21

PT: 52+16.98

SHOULDER HINGE POINT (TYP.)
EDGE OF ASPHALT (TYP.)

33'

33'

CURVE 2 DATA
PI STA. = 50+95.17
Y = 232,161.05
X = 444,246.12
R = 144.00
D = 39°47'19"
DELTA = 34°32'46"
L = 86.82
T = 44.78
C = 85.51
PC STA. = 50+50.39
Y = 232,134.29
X = 444,282.02
PT STA. = 51+37.21
Y = 232,203.45
X = 444,231.73
S.E.= ✱
RO=✱
TRANS=✱
✱SEE SUPERELEVATION TABLE

CURVE 3 DATA
PI STA. = 51+78.15
Y = 232,242.21
X = 444,218.57
R = 144.00
D = 39°47'19"
DELTA = 31°44'10"
L = 79.76
T = 40.93
C = 78.75
PC STA. = 51+37.21
Y = 232,203.45
X = 444,231.73
PT STA. = 52+16.98
Y = 232,268.26
X = 444,186.99
S.E.= ✱
RO=✱
TRANS=✱
✱SEE SUPERELEVATION TABLE

101°9'13"

N53°17'42"W

11+00

51+00 CURVE 2

CURVE 3 52+00

N50°29'06"W

(ASPHALT)

R/W

FINISHED C/L CTH U

RICHLAND-GRANT TELEPHONE COOPERATIVE, INC. (ABANDONED)

C/L STA. 11+37.09 (MAINLINE)=
C/L STA. 50+00.00 (PLUM RUN ROAD)
INTERSECTION TYPE C (MOD.) REQ'D

LEEWARD FARM, LLC, A NEVADA LIMITED LIABILITY COMPANY

BEGIN CONSTRUCTION
STA. 50+16
Y= 232,113.73
X= 444,309.59

STRUCTURE B-12-194 REQ.D

12+00

PLUM RUN CREEK

WETLAND DETERMINATION (TYP.)

BM 2

EXISTING C/L CTH U

R=20'

SLOPE INTERCEPTS (TYP.)

Y=232,268.08
X=444,210.83

DUWAYNE F. GEBKEN AND JANET K. GEBKEN, SURVIVORSHIP MARITAL PROPERTY

P.I.

STA. 52+05 - STA. 52+50, RT.
REMOVING FENCE BY OTHERS

STA. 51+82, RT.
CONSTRUCT F.E. (B.A.D.-BY OTHERS)

DAN A. STEINER, INGRID A. STEINER, KERRY L. STEINER

END CONSTRUCTION
STA. 52+50
Y= 232,289.27
X= 444,161.52

5

5

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	6+75	¾" IRON ROD SET, 15.3' RT.	790.33
2	12+24	¾" IRON ROD SET, 84.5' LT.	781.69
5	12+46	STAR SPIKE IN TREE, 103.7' RT.	778.39
3	15+52	¾" IRON ROD SET, 16.9' RT.	776.22

EARTHWORK SUMMARY-BY OTHERS

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ROCK EXCAVATION EXPANDED (10%–C.Y.)	–	45	580	–	625
FILL (C.Y.)	800	16	175	80	1071
FILL EXPANSION (C.Y.)	1000	–38	–500	100	562
WASTE (C.Y.)	–780	478	800	1495	1993

*INCLUDES 15 C.Y. FOR F.E.

794
792
790
788
786
784
782
780
778

L=140.00'
K=27.57

5.56%

0.54%

5.62%

FINISHED C/L PROFILE PLUM RUN ROAD

MATCH CTH U
STA. 50+16
EL. = 784.18

STA. 50+16

PC STA 51+06.00
EL 784.67

PI STA 51+76.00
EL 785.05

PT STA 52+46.00
EL 788.99

STA. 52+50

MATCH EXISTING
STA. 52+50
EL. = 789.21

EXISTING GROUND LINE AT FINISHED C/L PLUM RUN ROAD

EXISTING GROUNDLINE ELEVATION

FINISHED C/L ELEVATION

781.24 783.29 | 782.61 784.20 | 783.09 784.31 | 783.24 784.42 | 782.66 784.53 | 782.38 784.64 | 782.98 784.78 | 783.94 785.06 | 784.38 785.49 | 785.48 786.06 | 786.41 786.78 | 787.52 787.65 | 788.65 788.65 | 789.21 789.21 | 789.82 | 791.12

48+20 48+40 48+60 48+80 49+00 49+20 49+40 49+60 49+80 50+00 50+20 50+40 50+60 50+80 51+00 51+20 51+40 51+60 51+80 52+00 52+20 52+40 52+60 52+80 53+00 53+20 53+40 53+60 53+80

PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	PLAN AND PROFILE: PLUM RUN ROAD	SHEET 21	E

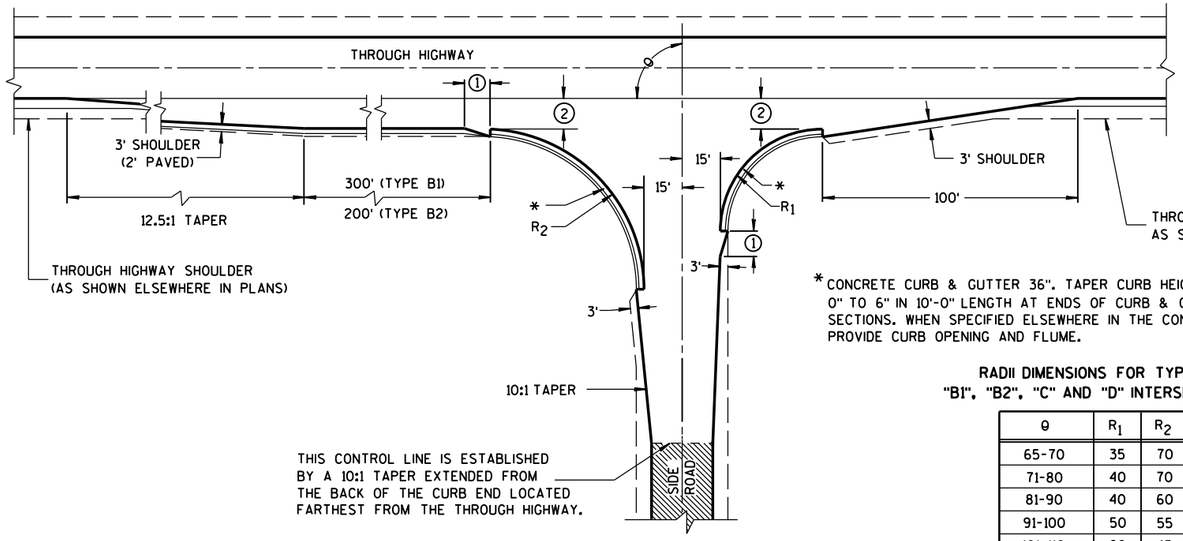
FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\SHEETSPLAN\PLAN & PROFILE SHEETS\C54480 PLAN & PROFILE.DWG
LAYOUT :

PLOT DATE : 1/29/2018
PLOT TIME : 1:50:08 PM
PLOT BY : STRINE, THERESA
PLOT SCALE : 1" = 1'

Standard Detail Drawing List

09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
12A03-10	NAME PLATE (STRUCTURES)
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11F	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"
14B27-01A	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01B	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01C	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B44-03A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

6

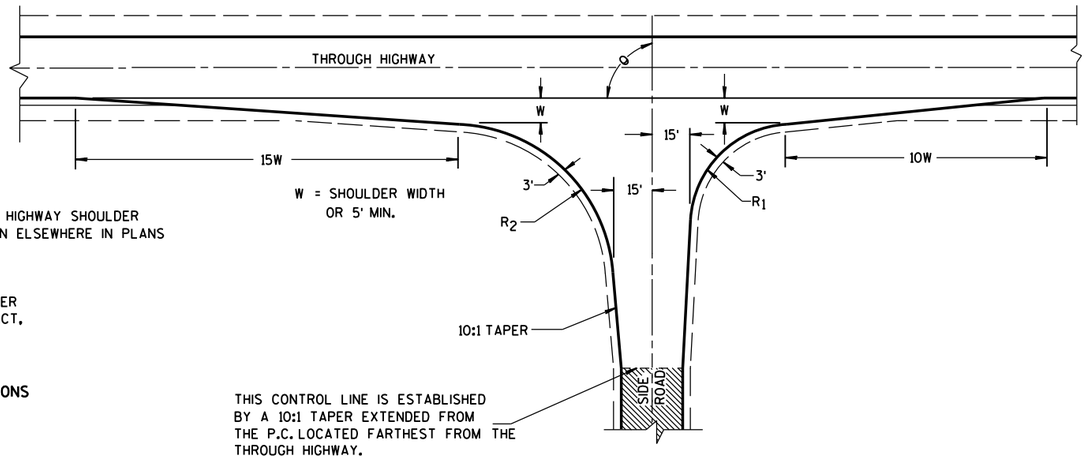


TYPE "B1" AND "B2"

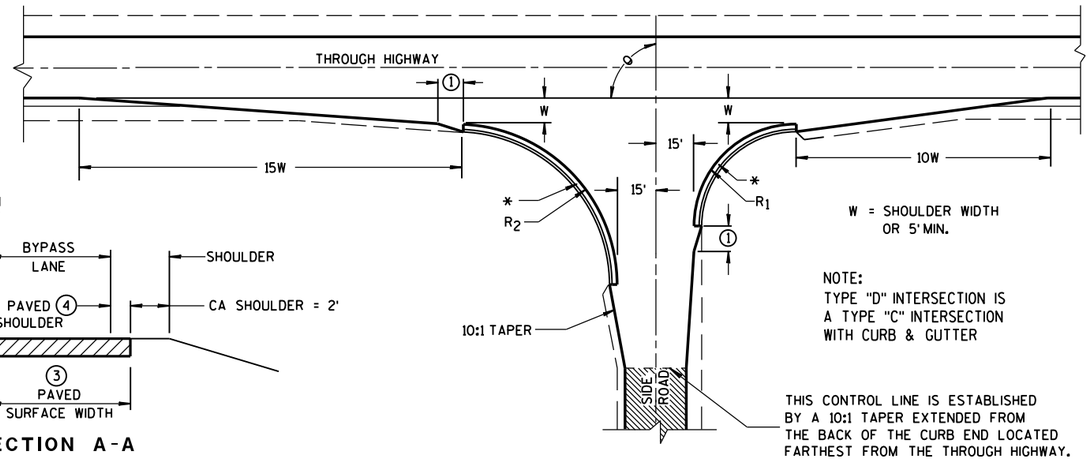
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

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

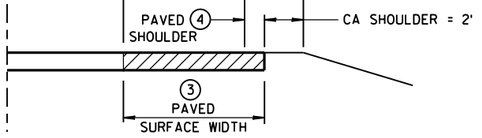
(1) 10-FT TYPICAL.

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

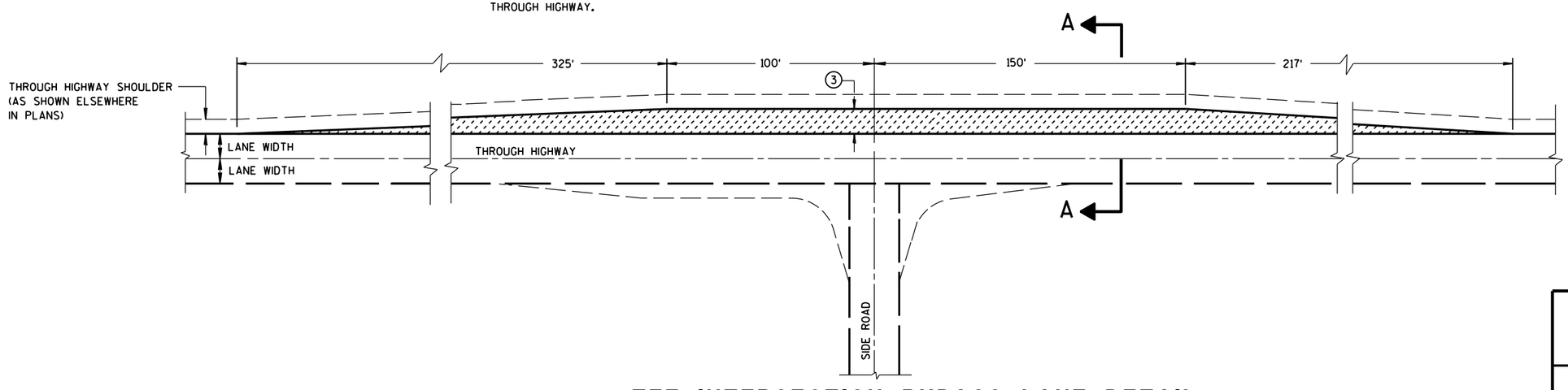
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(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)

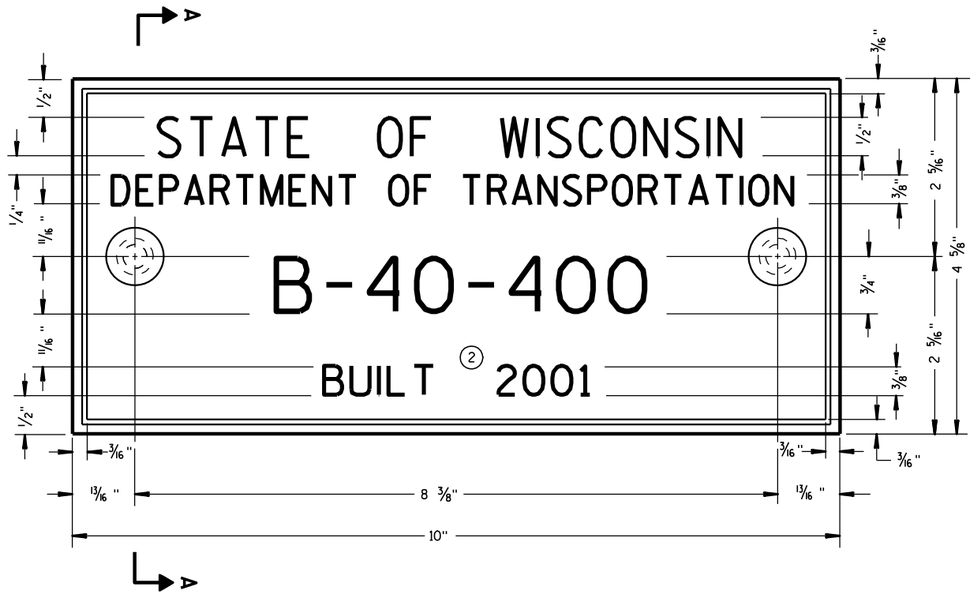


TEE INTERSECTION BYPASS LANE DETAIL

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

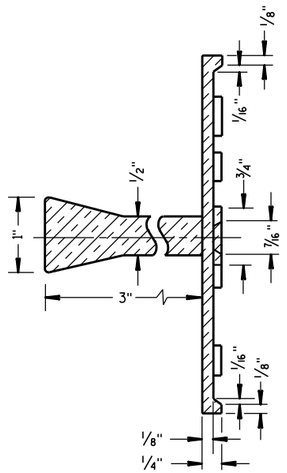
GENERAL NOTES

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.

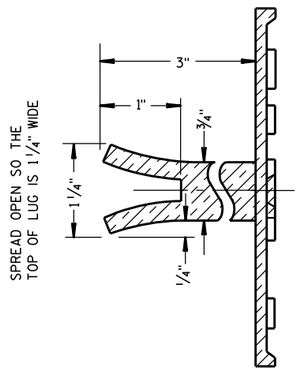
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

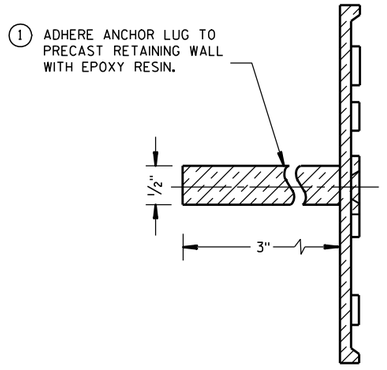
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

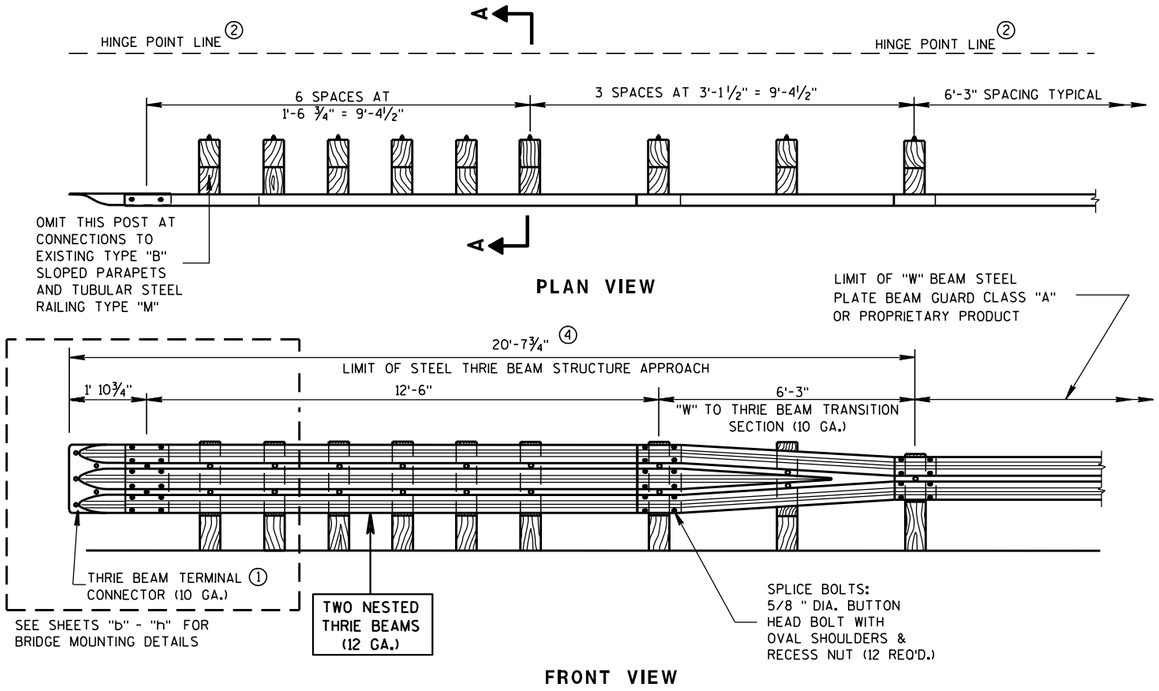
3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 12 A 3-10



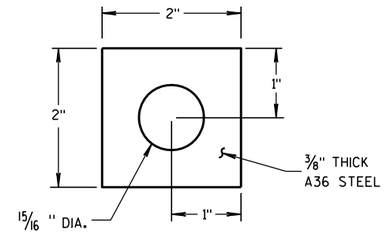


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

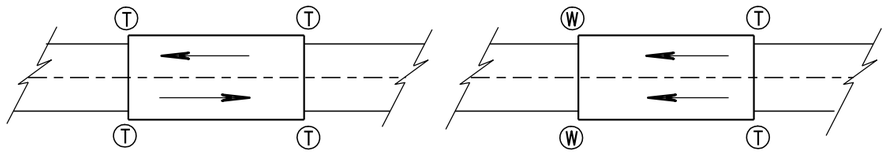
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



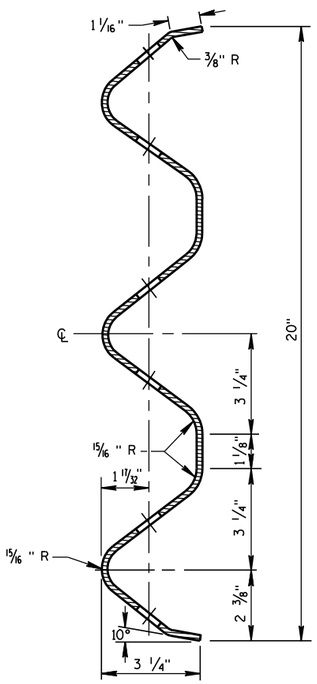
TWO WAY TRAFFIC

ONE WAY TRAFFIC

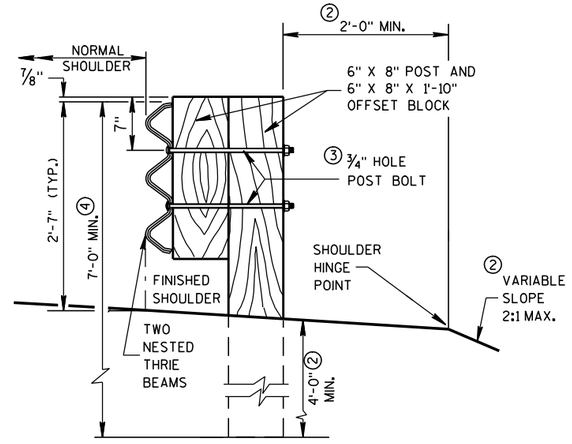
T THRIE BEAM CONNECTION

W W-BEAM CONNECTION WHEN REQUIRED

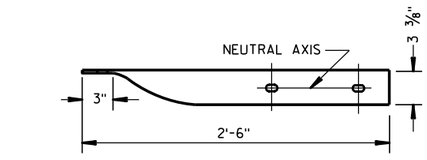
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

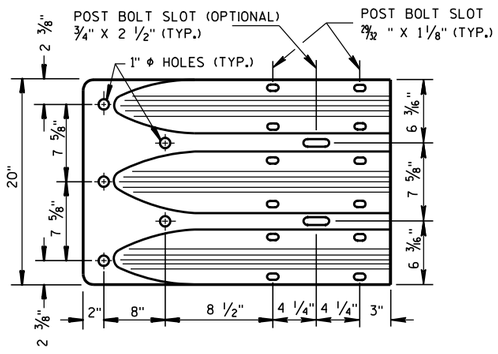


SECTION THRU THRIE BEAM RAIL ELEMENT

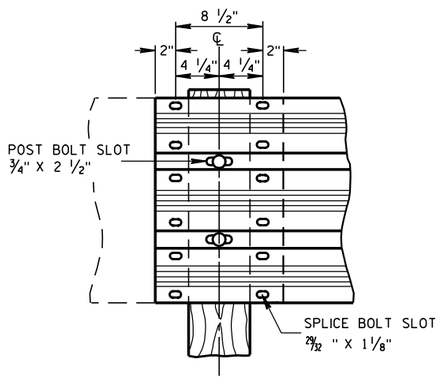


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS 125
ENGINEER

FHWA

6

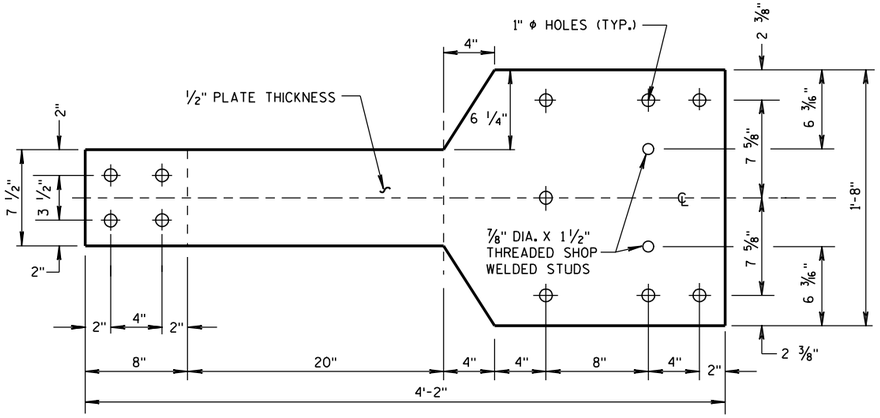
S.D.D. 14 B 20-11a

6

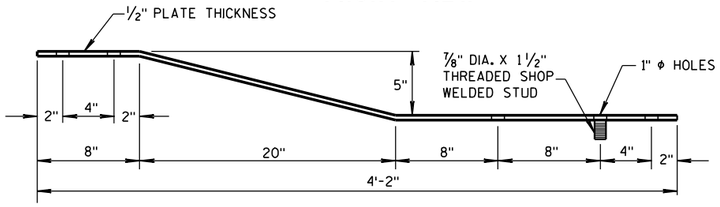
S.D.D. 14 B 20-11a

GENERAL NOTES

① VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL BE AS CLOSE AS FEASIBLE TO THE STEEL END POST.

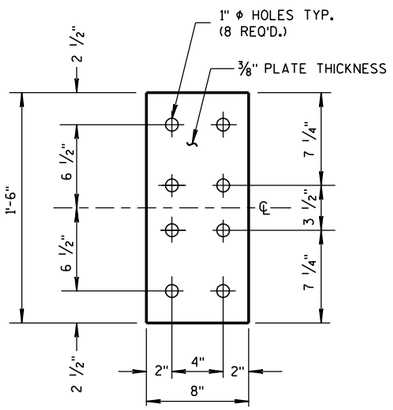


FRONT VIEW



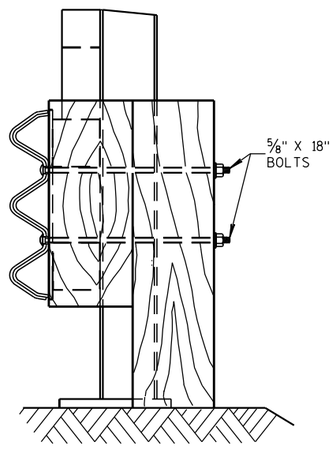
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

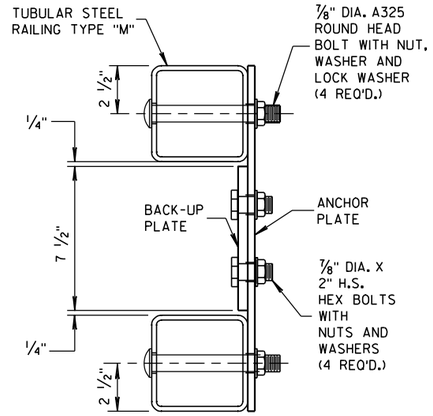


FRONT VIEW

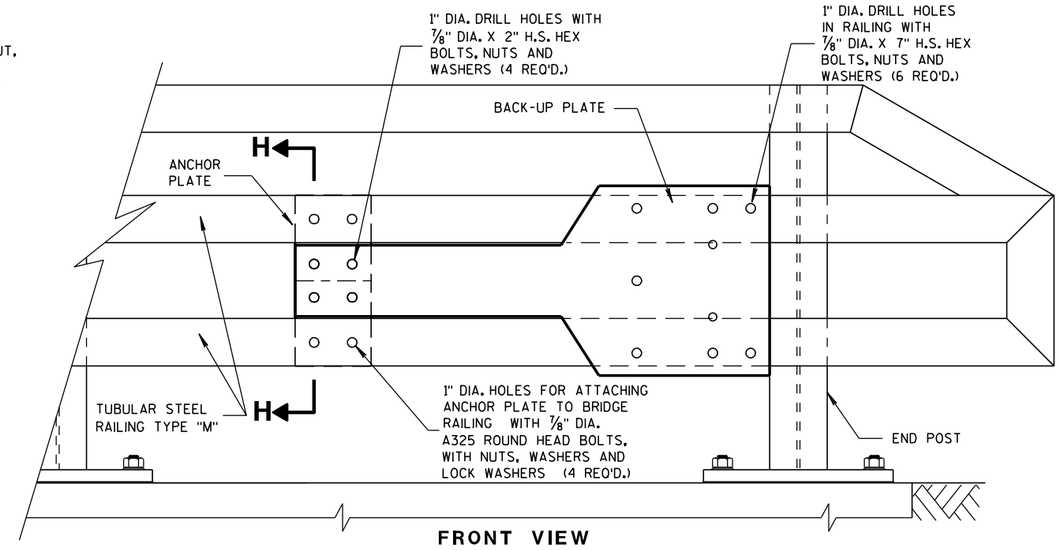
ANCHOR PLATE DETAIL, TYPE "M"



SECTION I-I

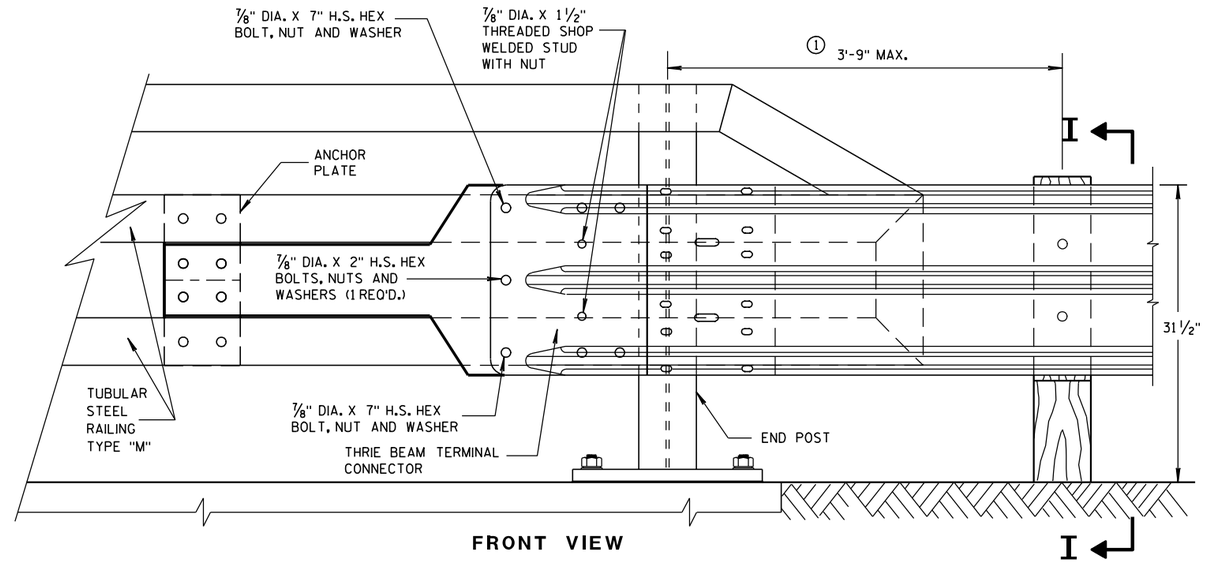


SECTION H-H

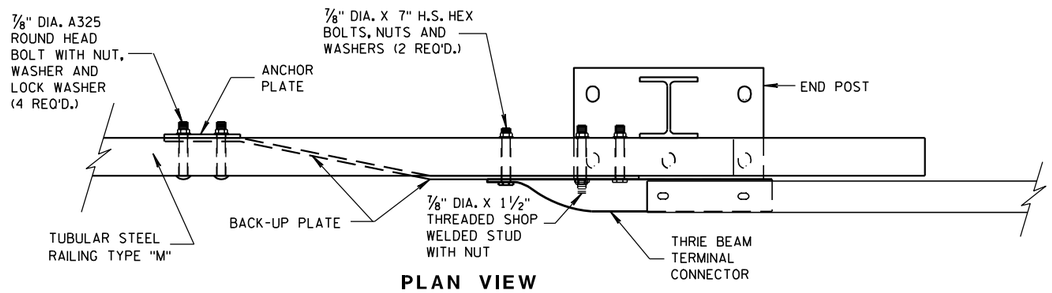


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

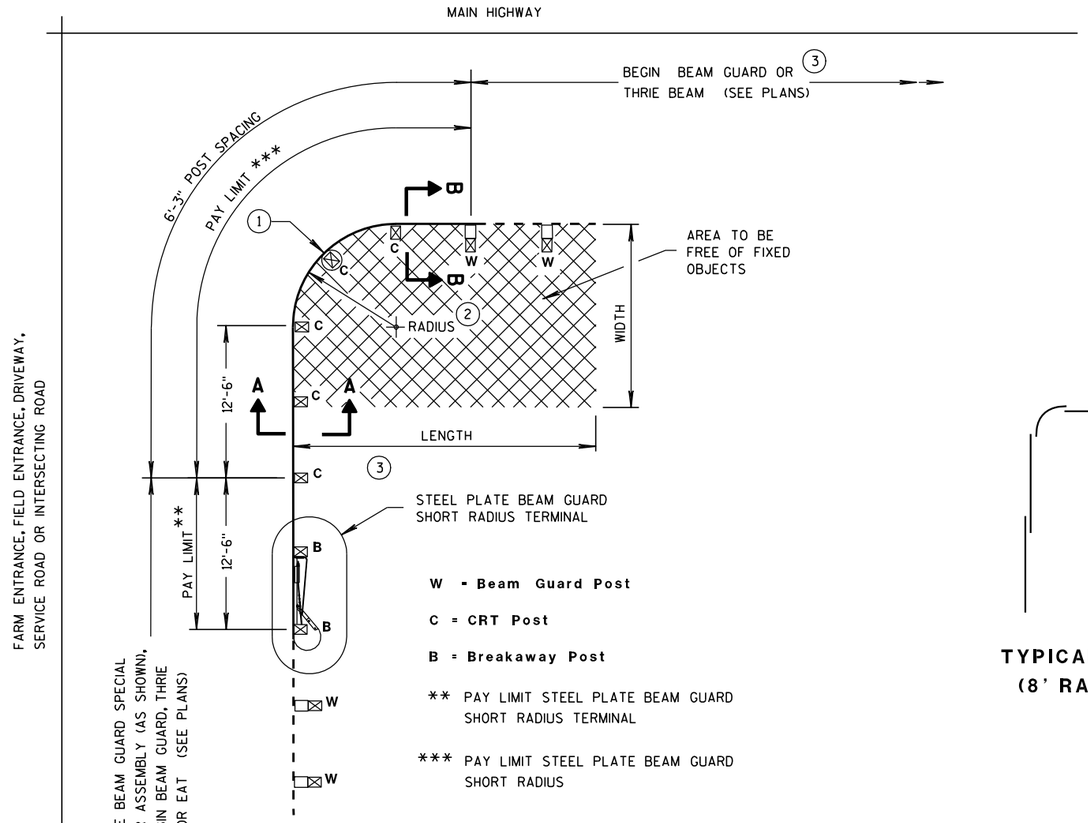
APPROVED

8/31/2012 — DATE

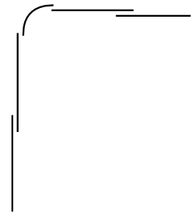
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER

FHWA

6 S.D.D. 14 B 20-11f



TYPICAL LAYOUT
(8' RADIUS SHOWN)



TYPICAL LAP SPLICES
(8' RADIUS SHOWN)

GENERAL NOTES

ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 AND THE STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. PUNCHING, DRILLING, CUTTING, OR WELDING WILL NOT BE PERMITTED AFTER GALVANIZING. FURNISH AND INSTALL HARDWARE PER STANDARD SPECIFICATION 614.2. UNLESS NOTED OTHERWISE.

SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

(1) ON THE 8 FOOT RADIUS INSTALLATION, DO NOT INSTALL BUTTON HEAD BOLT AT CENTER CRT POST.

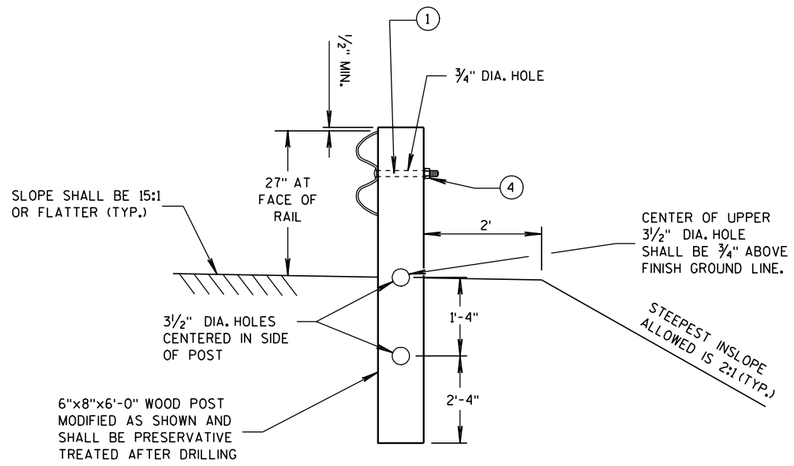
(2) RADIUS FROM 8' - 36'. SEE PLAN.

(3) HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.

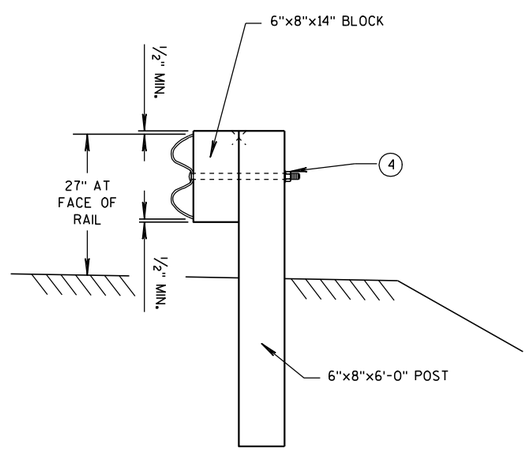
(4) 5/8" ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

RADIUS	NUMBER OF CRT POSTS	*NUMBER AND LENGTH OF CURVED RAILS	REQUIRED AREA FREE OF FIXED OBJECTS (LENGTH x WIDTH)
8'	5	1 at 12.5'	25' x 15'
16'	7	1 at 25'	30' x 15'
24'	9	1 at 25' and 1 at 12.5'	40' x 20'
32'	11	2 at 25'	50' x 20'

* THE NUMBER OF RAILS IS BASED ON A 90° INTERSECTION. SEE PLAN FOR NON 90° INSTALLATIONS.



SECTION A-A
(CRT POST)

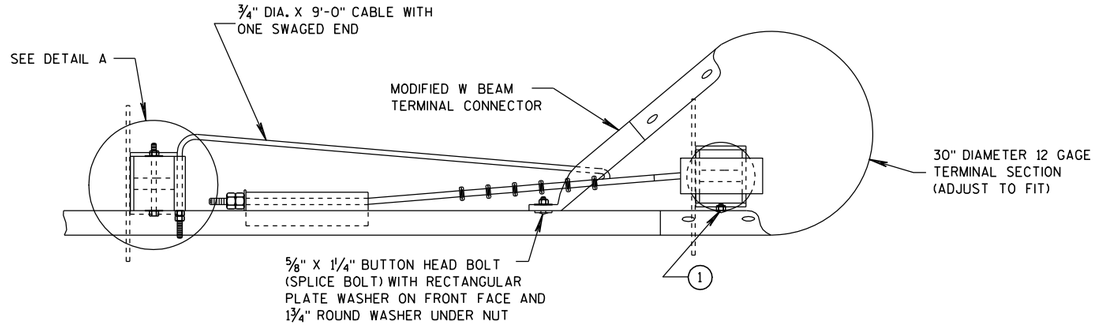


SECTION B-B
(BEAM GUARD POST)

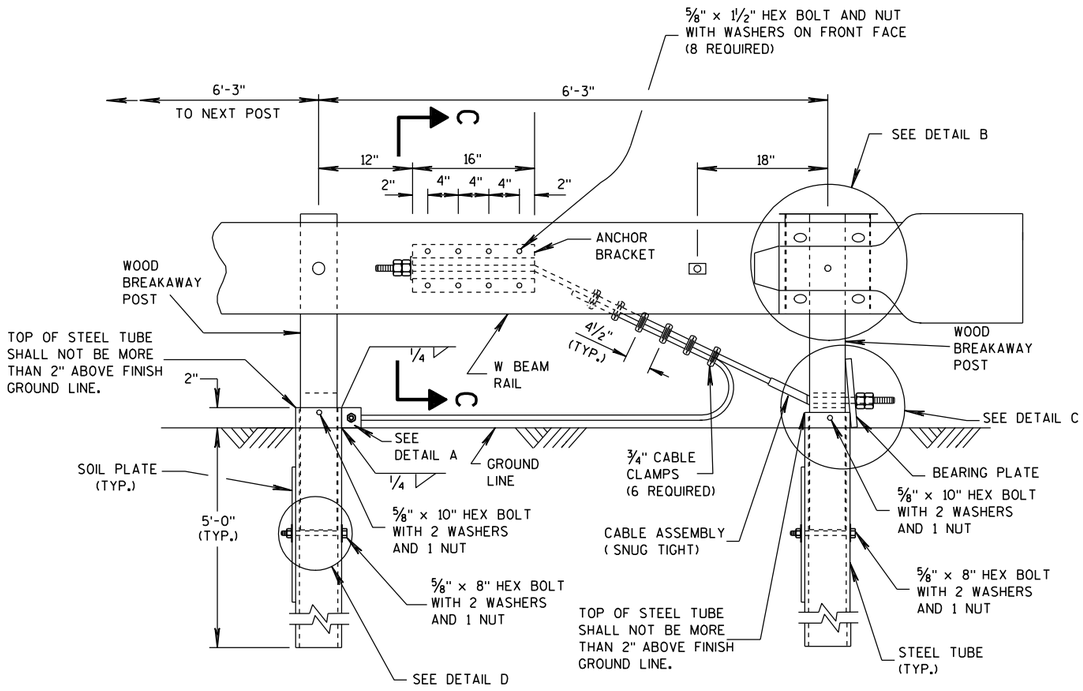
STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 27-1a



PLAN VIEW



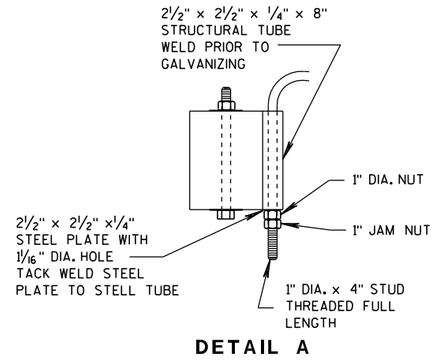
ELEVATION VIEW

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

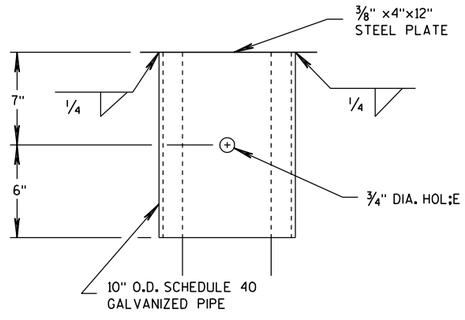
GENERAL NOTES

(1) ATTACH W BEAM RAIL TO THE STEEL PIPE WITH A ⅝" X 2" BUTTON HEAD BOLT WITH NO WASHER. CONNECTION TO THE POST IS NOT REQUIRED.

INSTALL GALVANIZED ¾" (6X19) PREFORMED WIRE OR INDEPENDENT WIRE ROPE CORE CONFORMING TO AASHTO M 30. MANUFACTURE WIRE ROPE OUT OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,800 PSI.



DETAIL A



DETAIL B

(BEAM GUARD AND TERMINAL SECTION NOT SHOWN)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

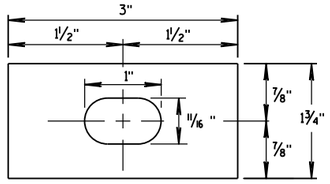
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

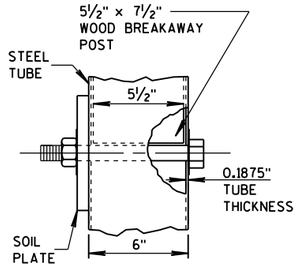
S.D.D. 14 B 27-1b

6

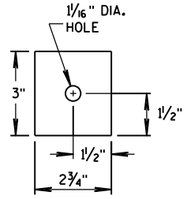
S.D.D. 14 B 27-1b



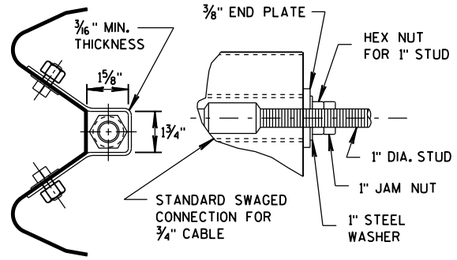
RECTANGULAR PLATE WASHER



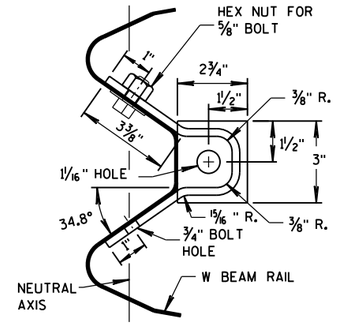
DETAIL D



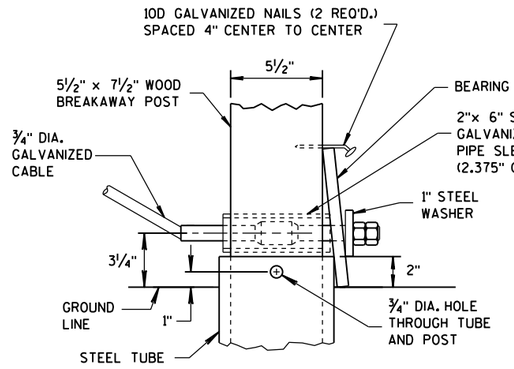
END PLATE



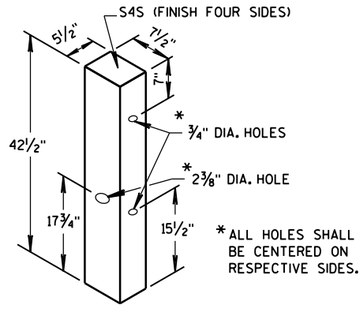
SECTION C-C
(END PLATE REMOVED)



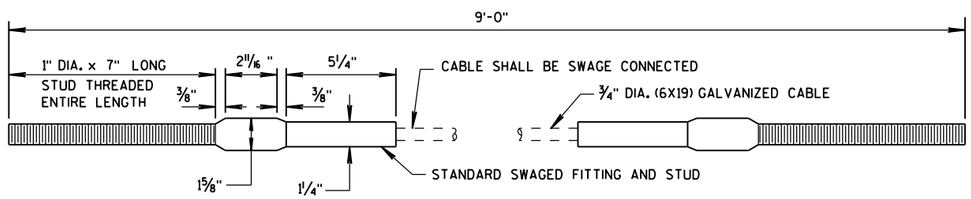
ANCHOR BRACKET



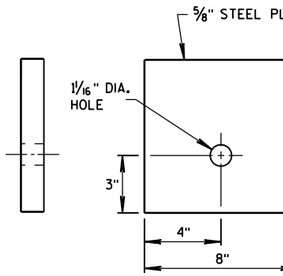
DETAIL C



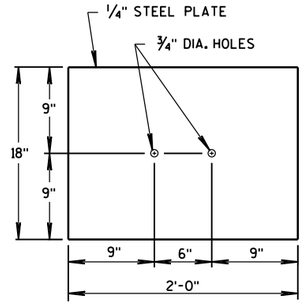
WOOD BREAKAWAY POST



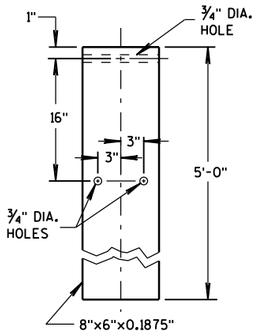
CABLE ASSEMBLY



BEARING PLATE



SOIL PLATE



STEEL TUBE

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/18/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 27-1c

6

S.D.D. 14 B 27-1c

GENERAL NOTES

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

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

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

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

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

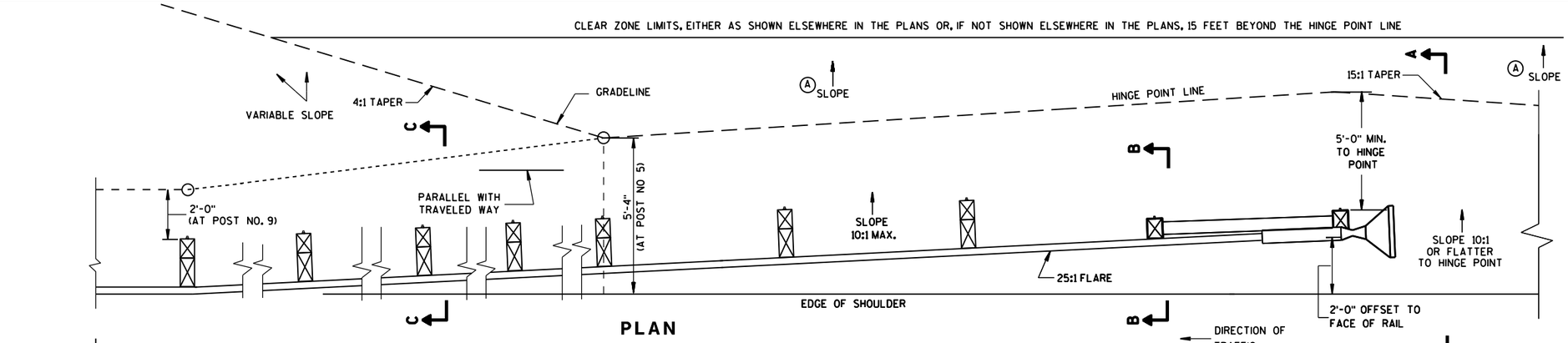
SEE SDD 14B42 FOR MORE INFORMATION.

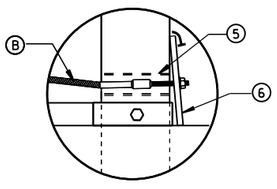
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

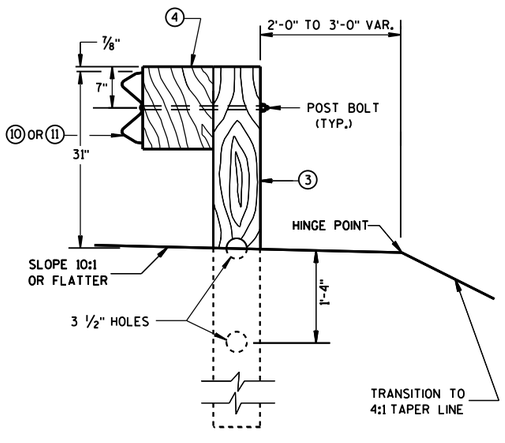
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

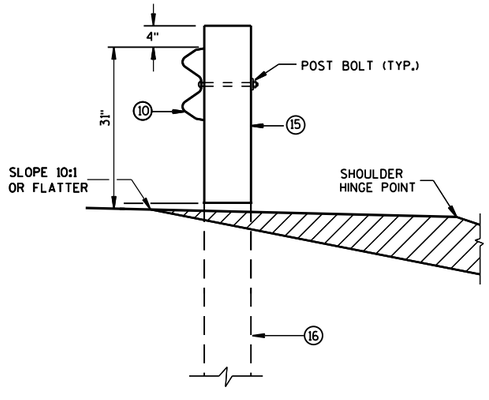
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

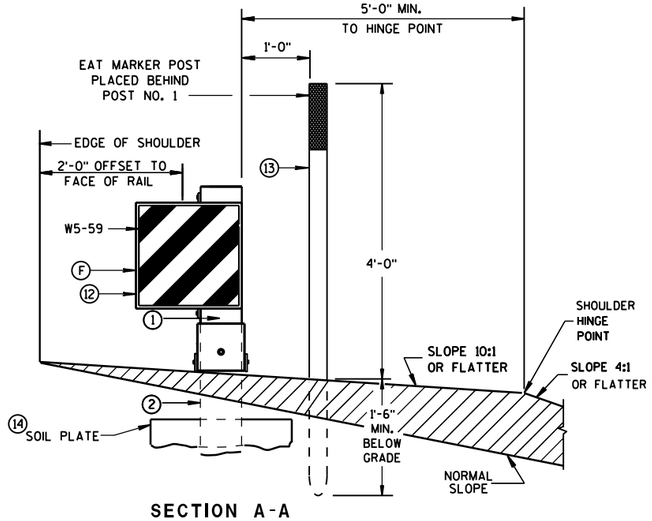
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

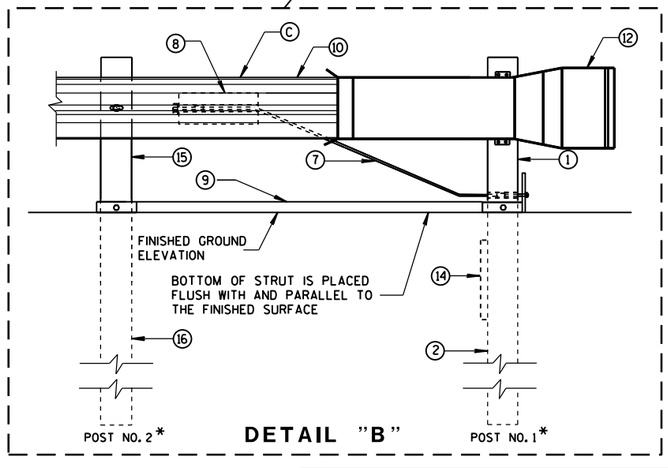












MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

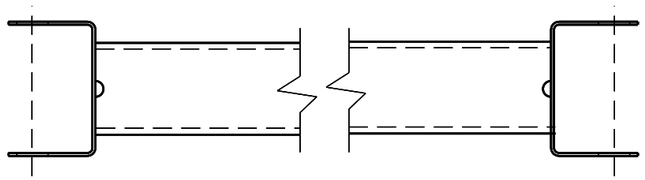
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

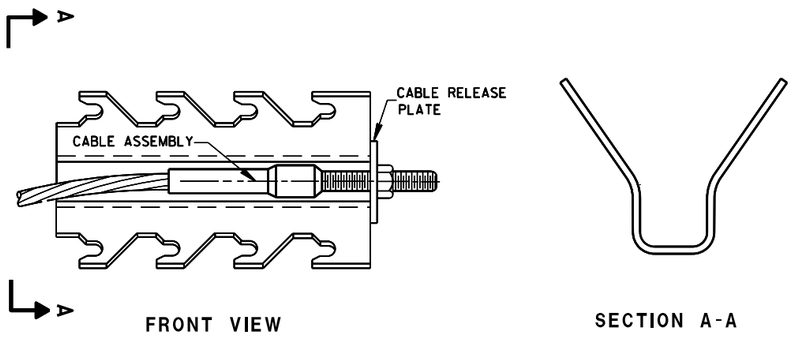
S.D.D. 14 B 44-3a

6

S.D.D. 14 B 44-3a



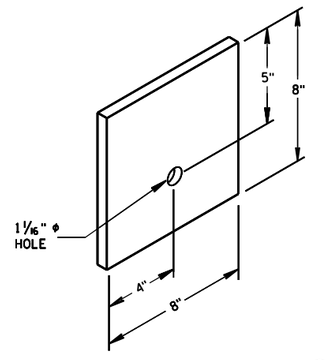
GENERIC GROUND STRUT (9) (H)



GENERIC ANCHOR CABLE BOX (8) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	UPPER POST NO. 1 6" X 6" TUBE
(2)	LOWER POST NO. 1
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	IMPACT HEAD
(13)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
(14)	SOIL PLATE
(15)	UPPER POST NO. 2
(16)	LOWER POST NO. 2



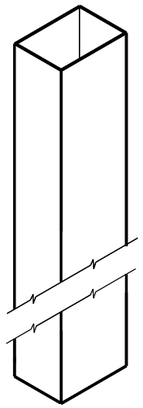
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

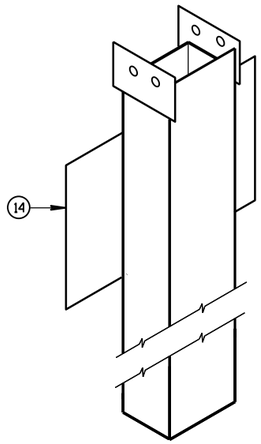
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 44-3b



UPPER POST NO. 1 (1)



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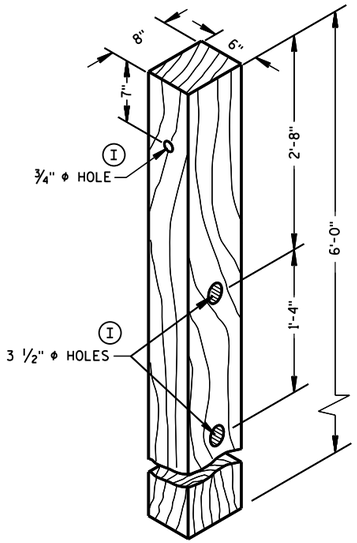
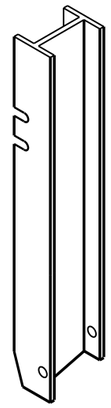


POSTS NUMBER 3-9

WOOD CRT POST (3)



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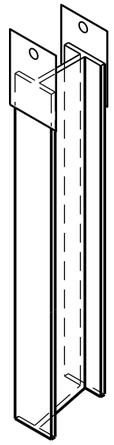

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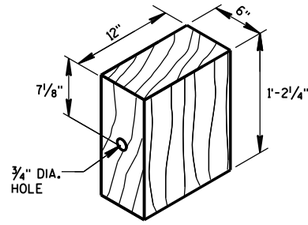
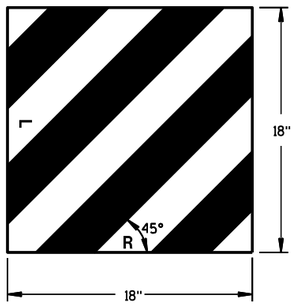


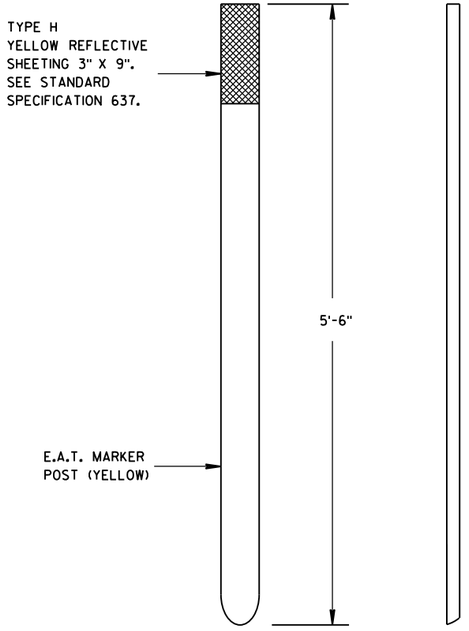
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



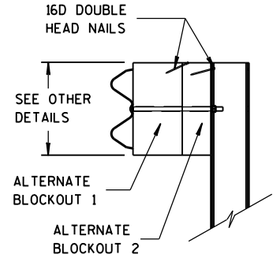
W5-59

REFLECTIVE SHEETING DETAIL (H)

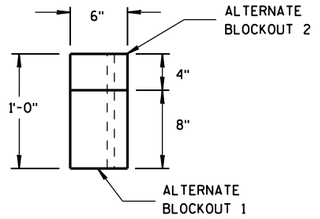


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

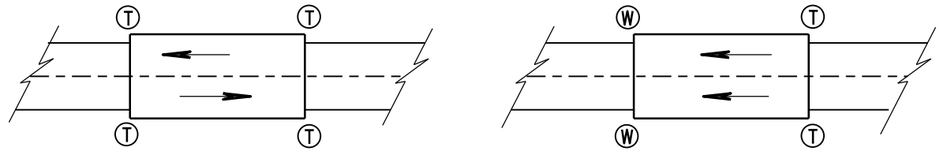
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERVISOR

FHWA

6

S.D.D. 14 B 44-3c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

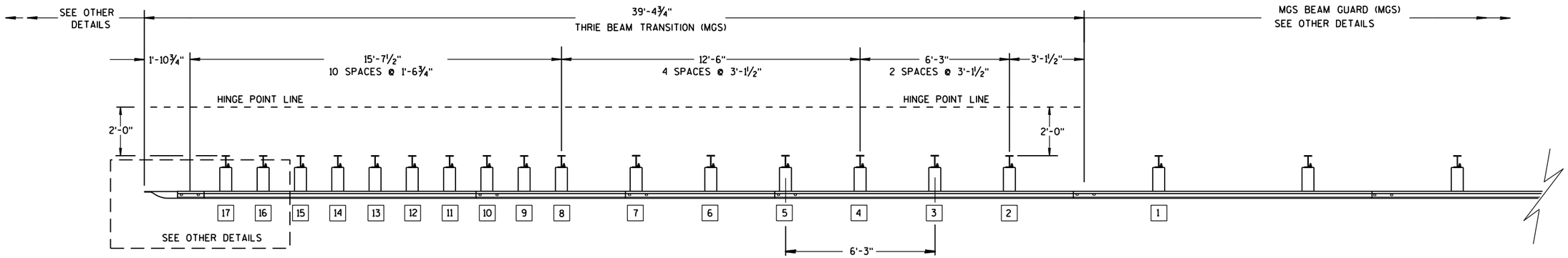
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

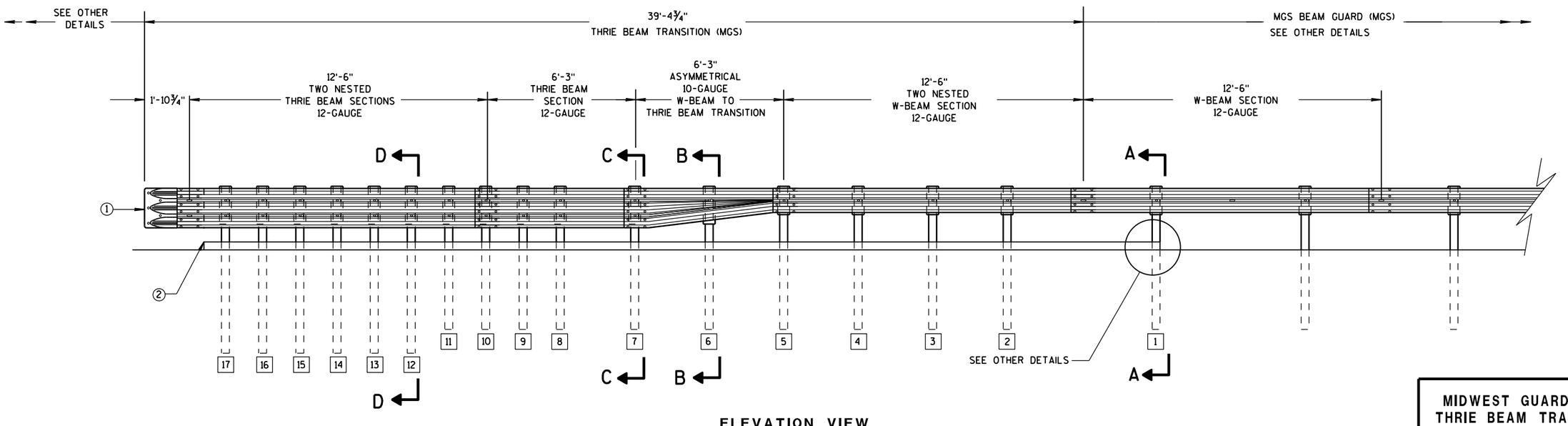
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 45-4a

6

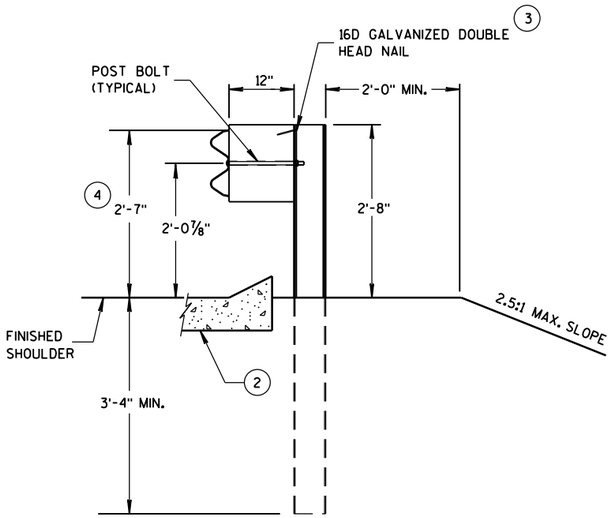
S.D.D. 14 B 45-4a

GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

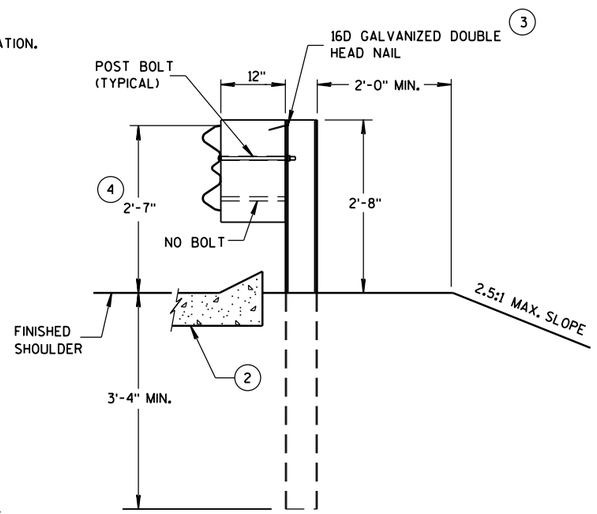
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



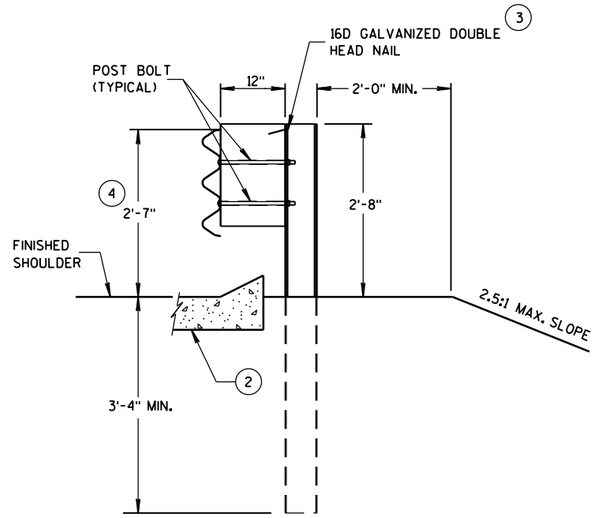
SECTION A-A

POSTS 1-5



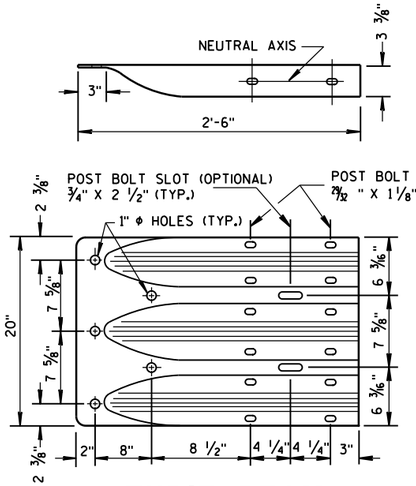
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

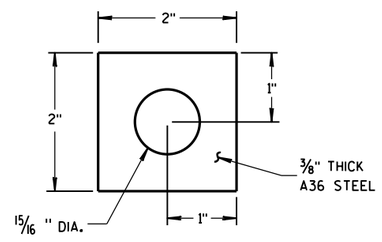
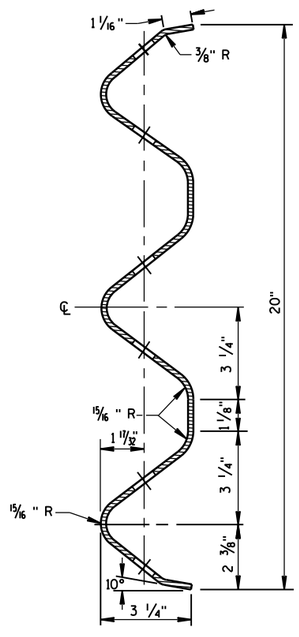
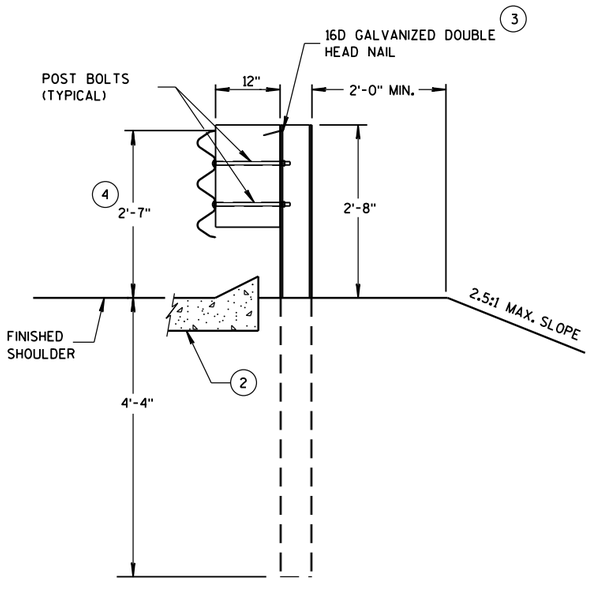


PLATE WASHER DETAIL

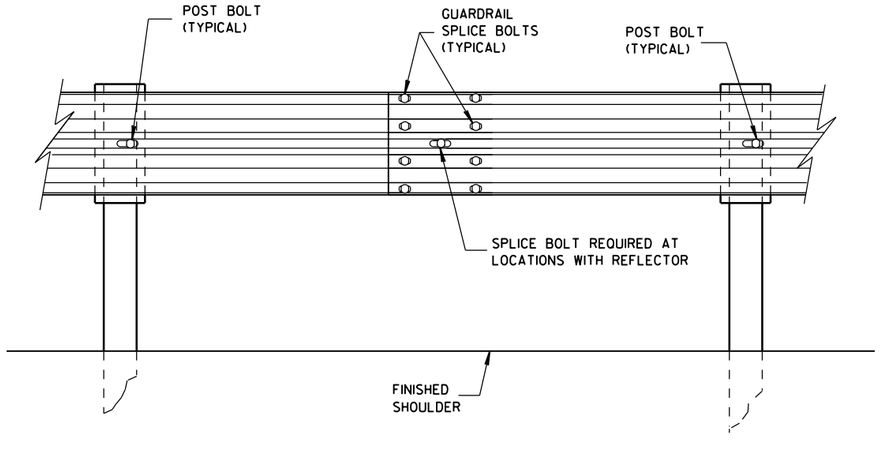


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



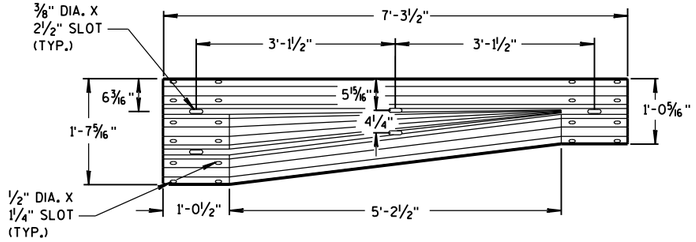
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

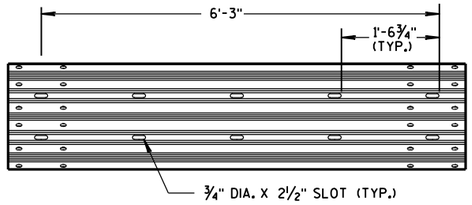
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

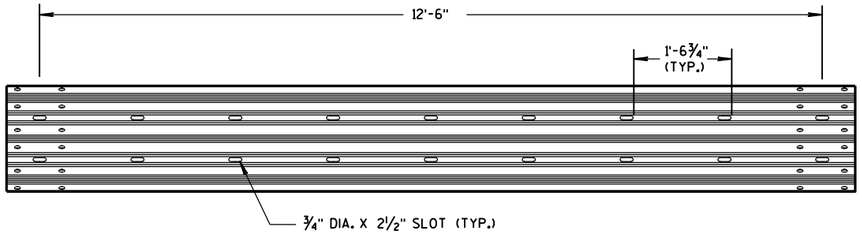
S.D.D. 14 B 45-4b



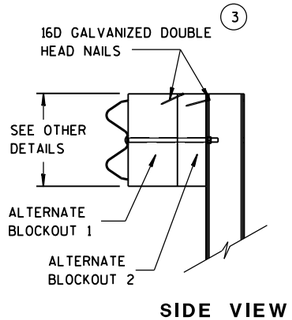
W-BEAM TO THRIE BEAM TRANSITION SECTION



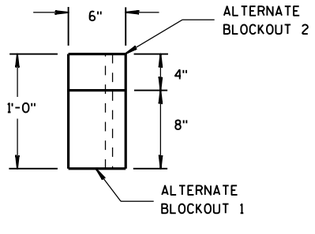
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

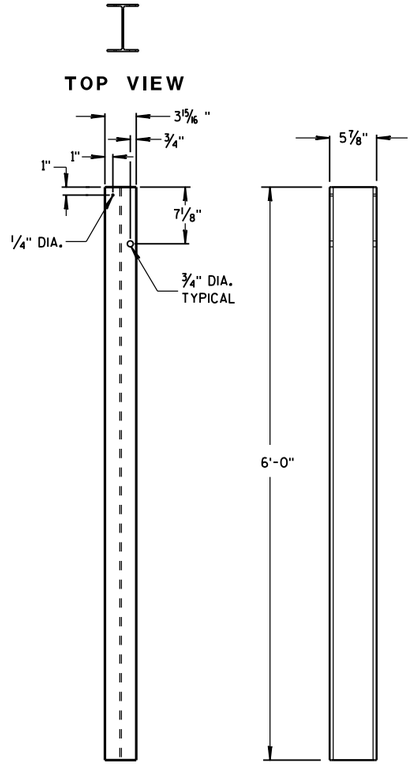


SIDE VIEW



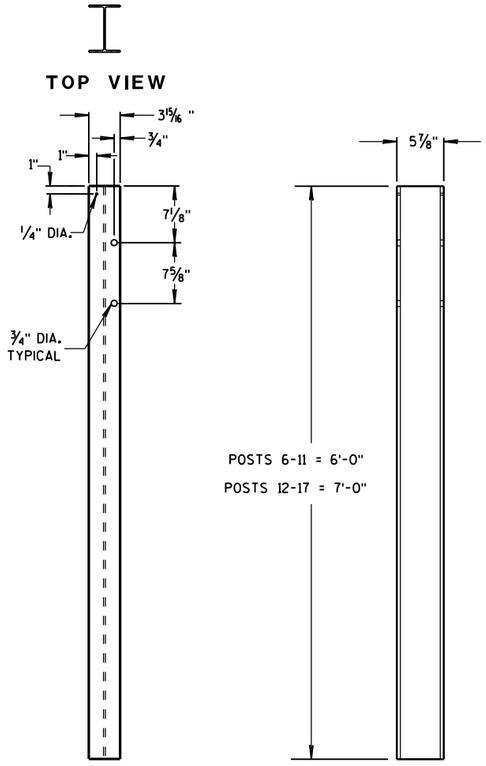
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



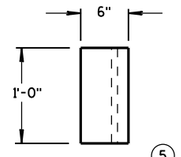
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5

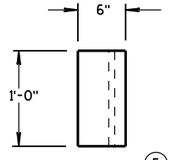


FRONT VIEW SIDE VIEW

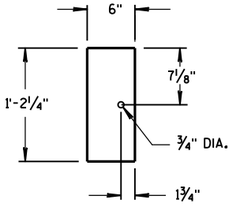
STEEL POSTS 6-17



TOP VIEW

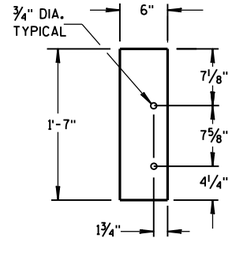


TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

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

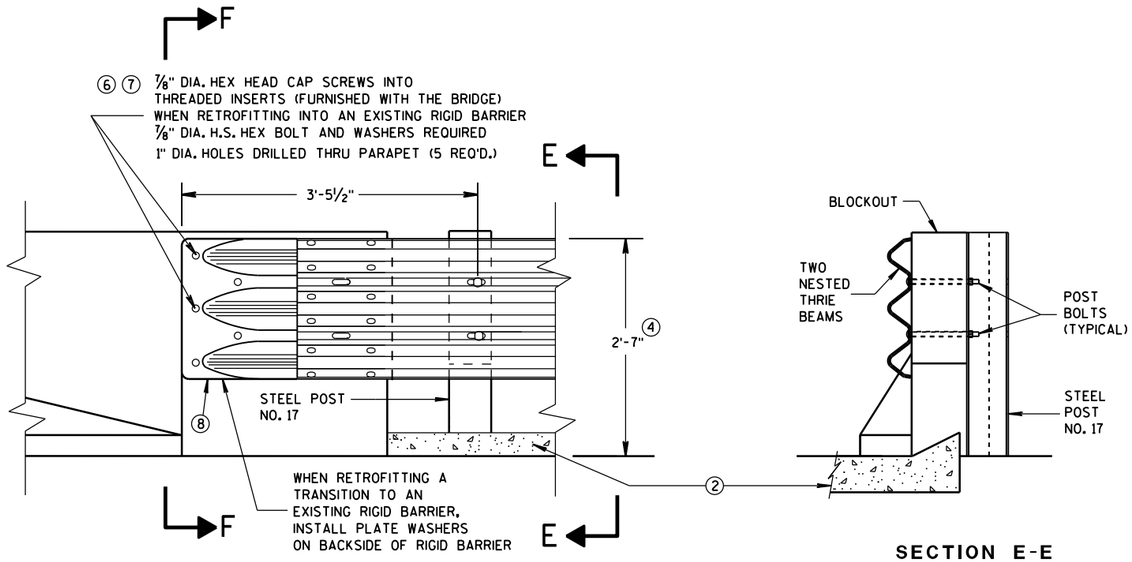
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-4c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

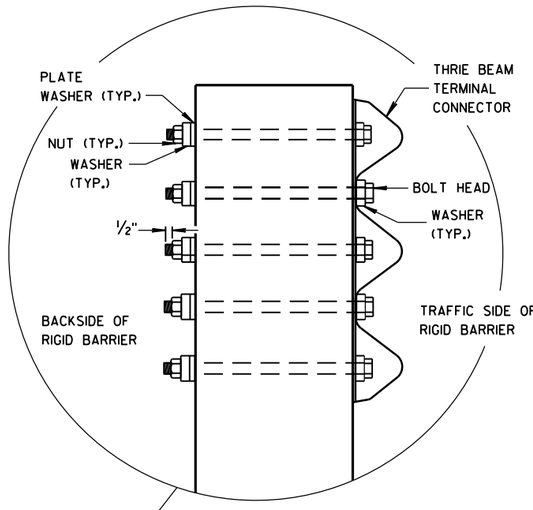
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

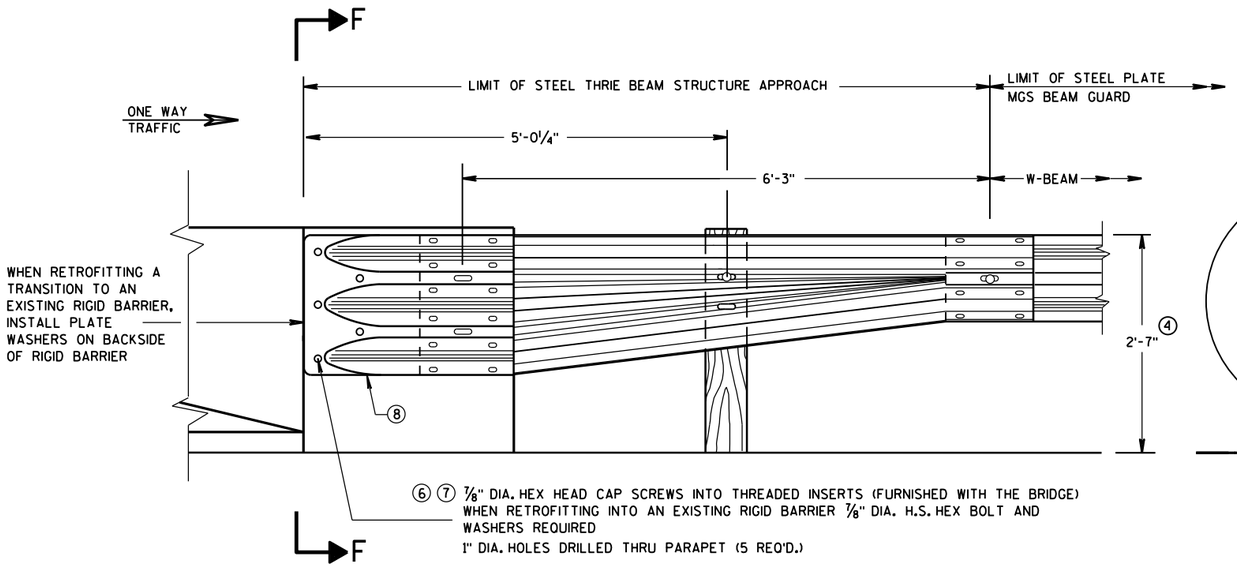
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

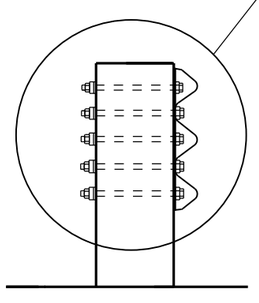
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

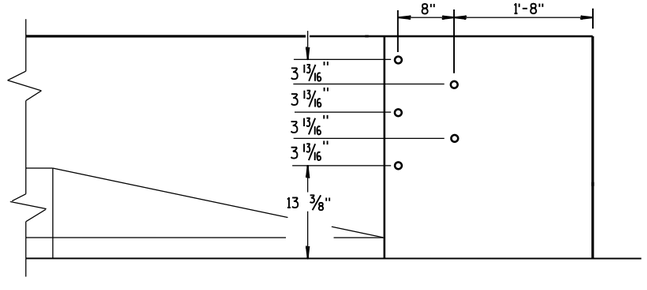




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

NT

6

S.D.D. 14 B 45-4d

6

S.D.D. 14 B 45-4d

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

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

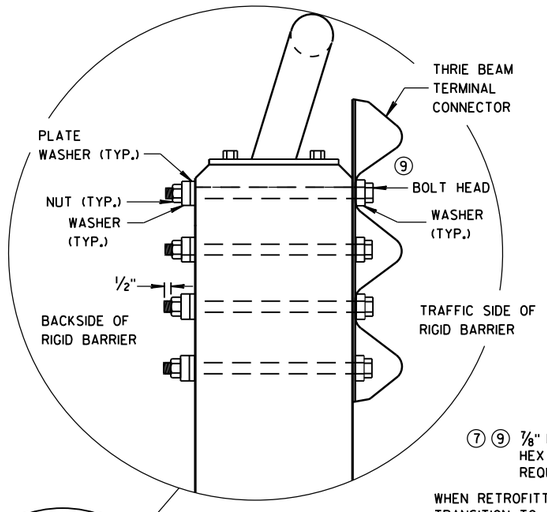
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

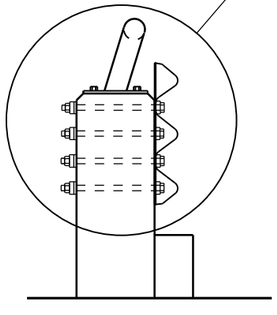
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

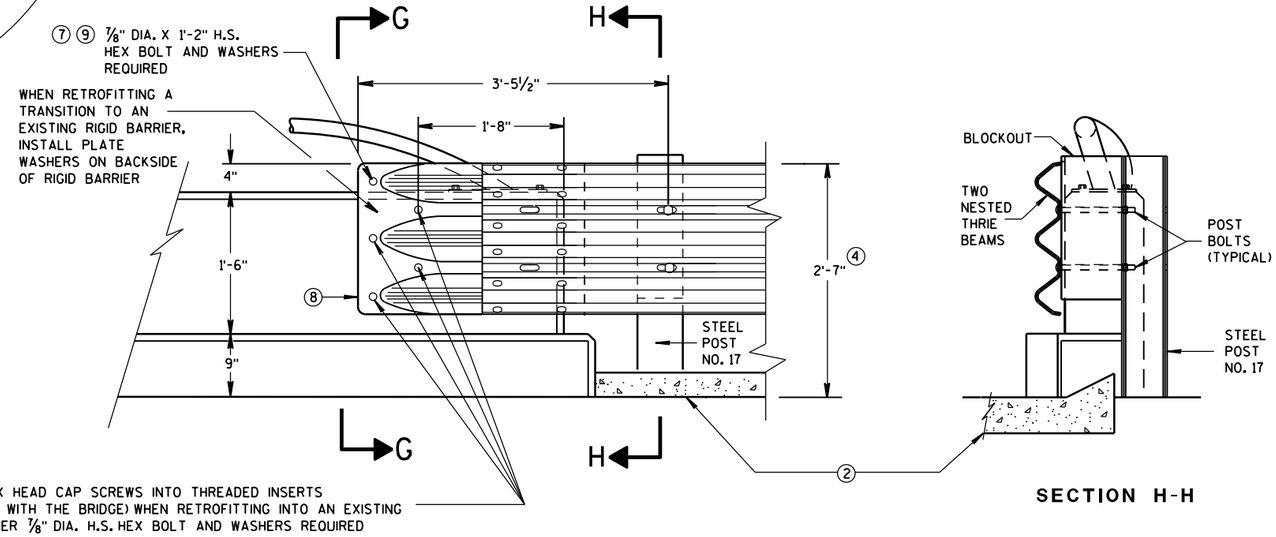
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





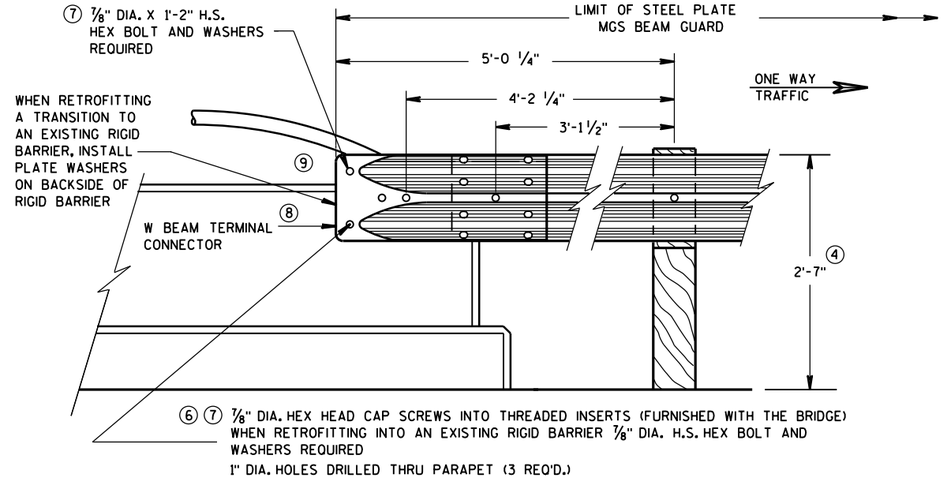
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
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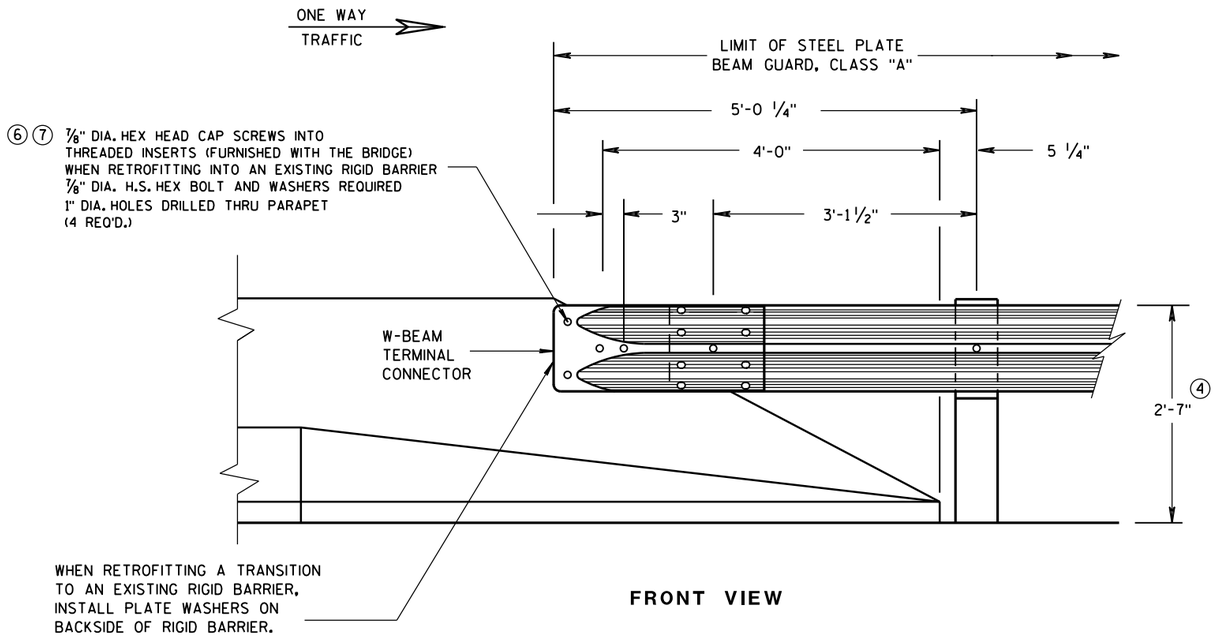
FHWA

6

S.D.D. 14 B 45-4e

6

S.D.D. 14 B 45-4e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

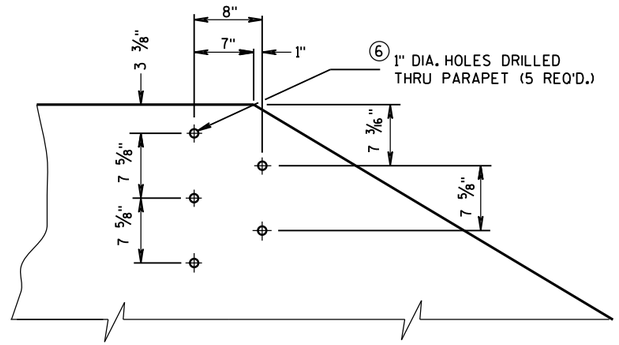
GENERAL NOTES

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

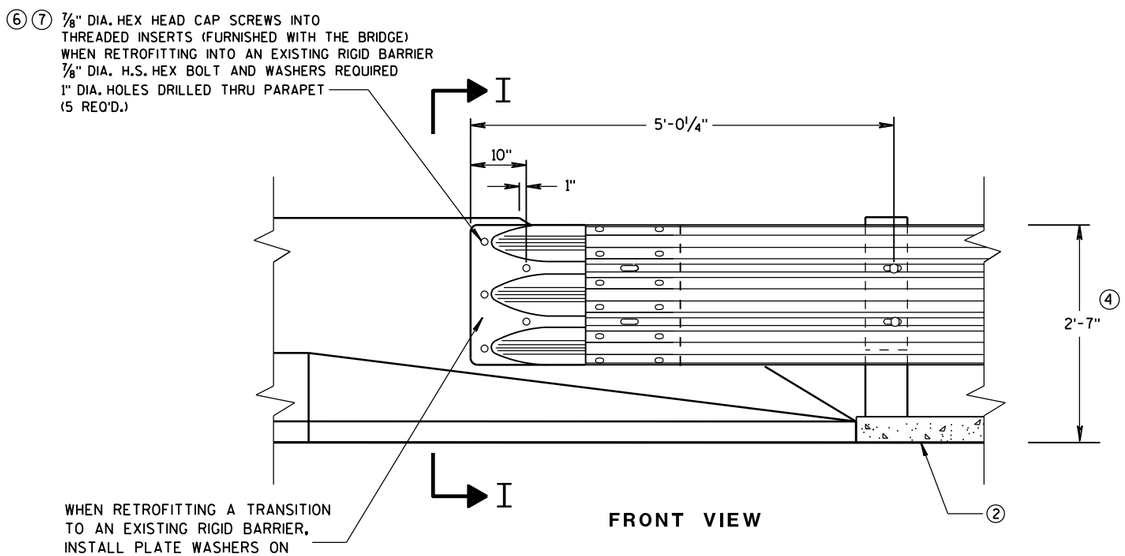
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

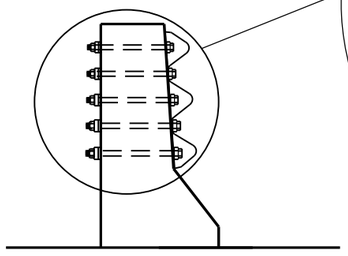
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



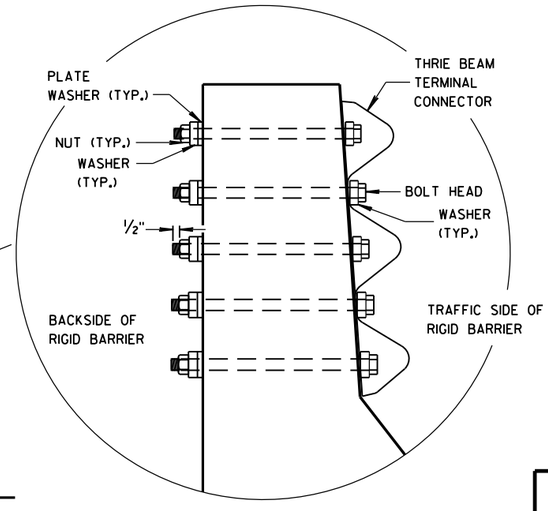
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 45-4f

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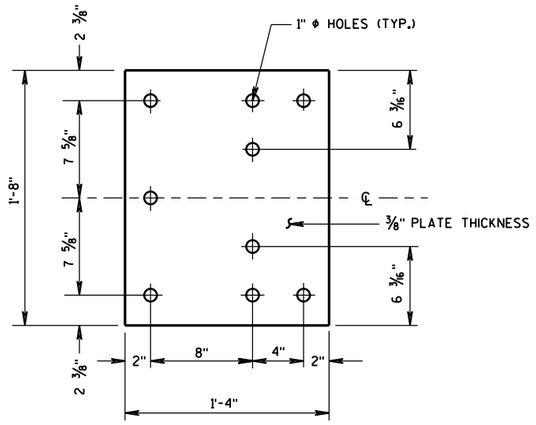
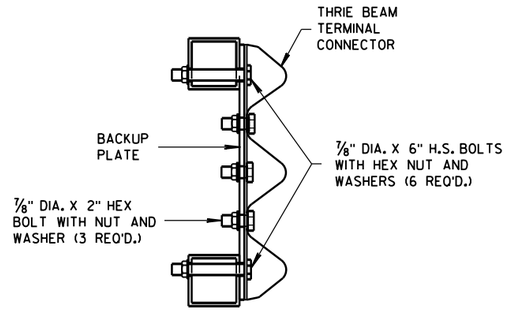
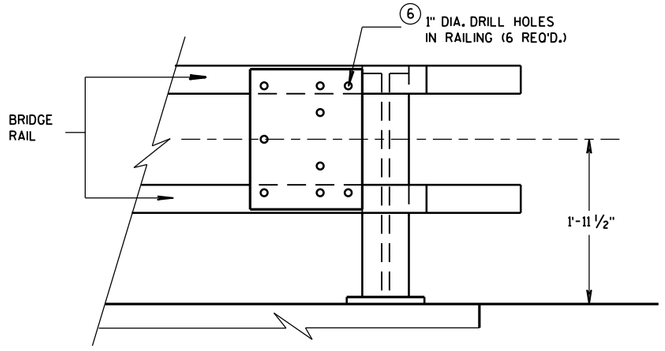
S.D.D. 14 B 45-4f



BACK-UP PLATE DETAIL



SECTION J-J

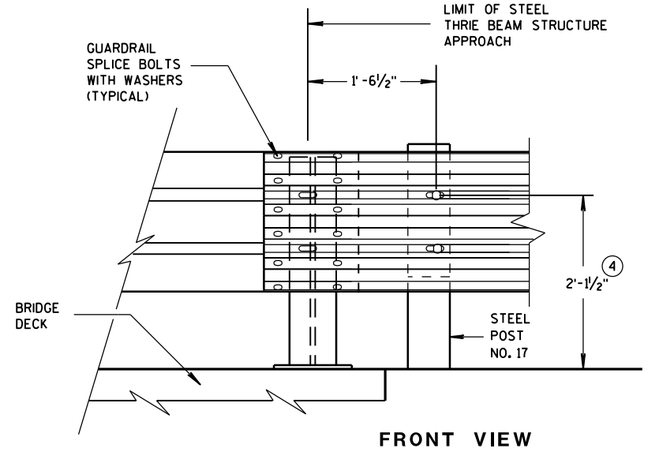


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

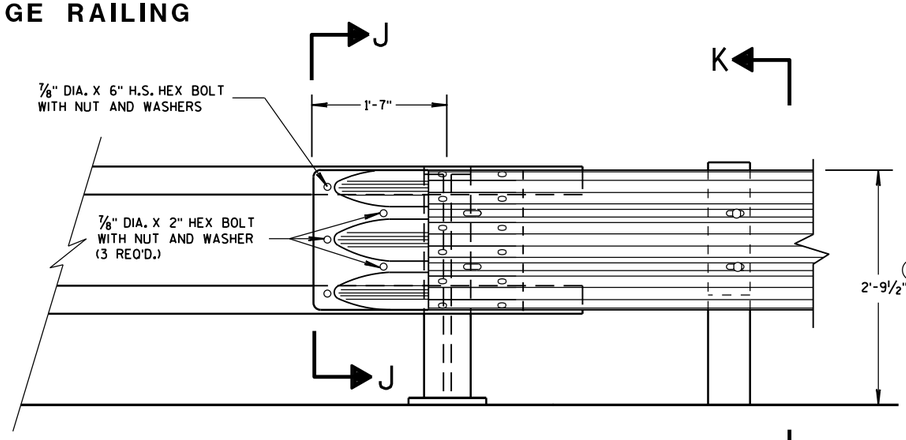
4 TOLERANCE FOR TOP OF BEAM IS ± 1".

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

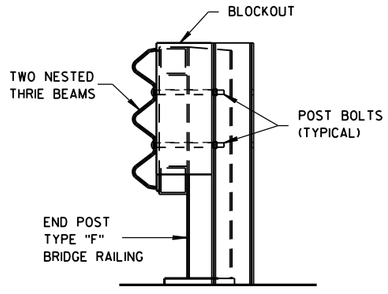


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
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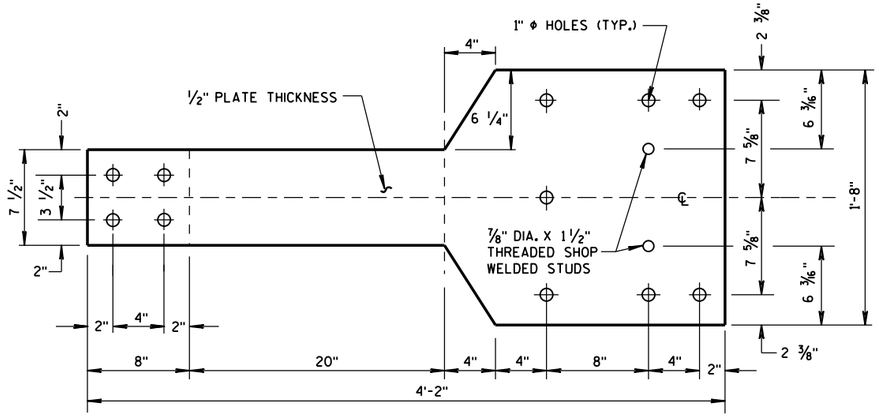
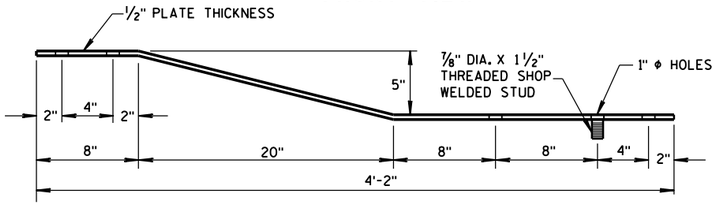
GENERAL NOTES

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

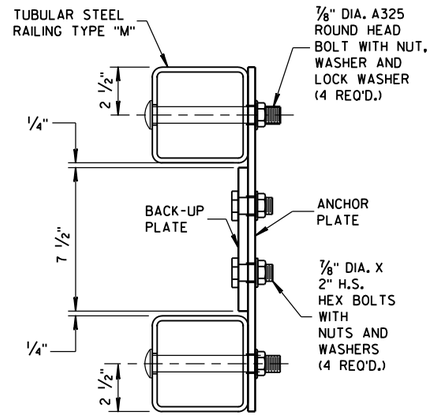


FRONT VIEW

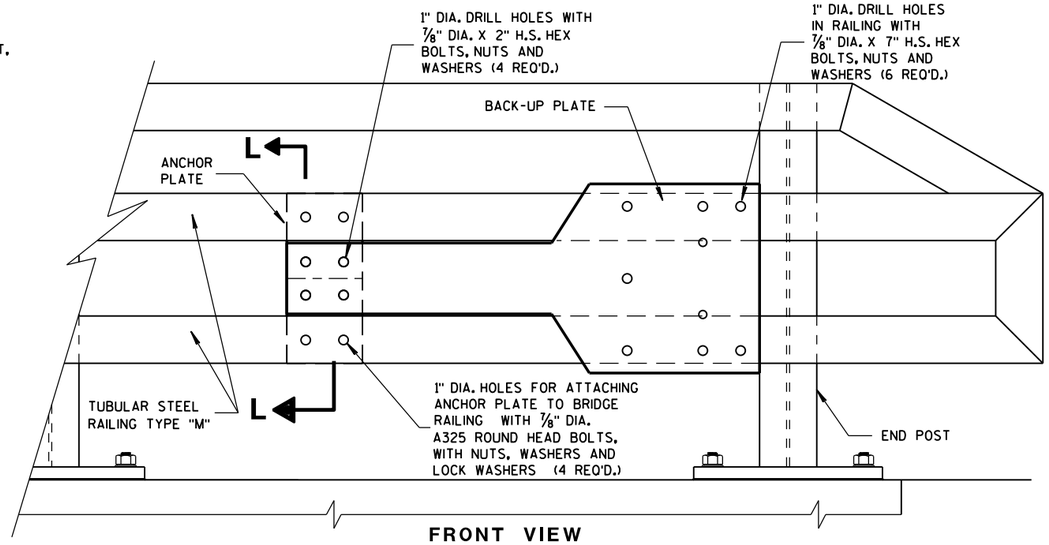


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

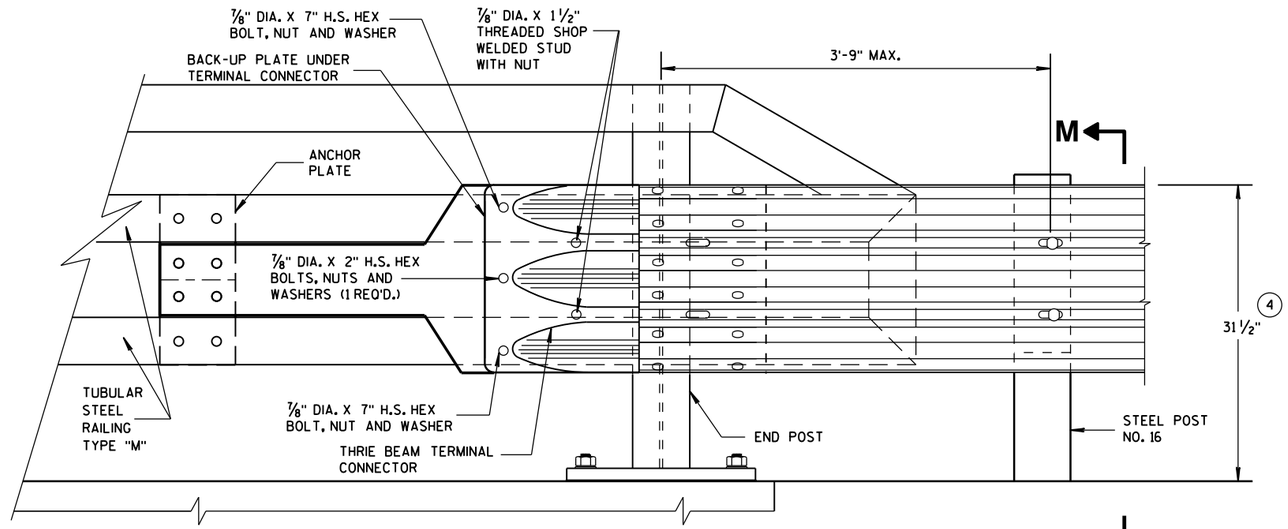


SECTION L-L

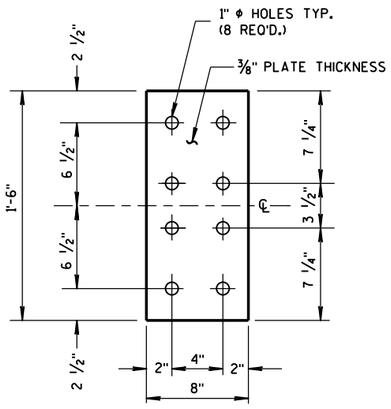


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"

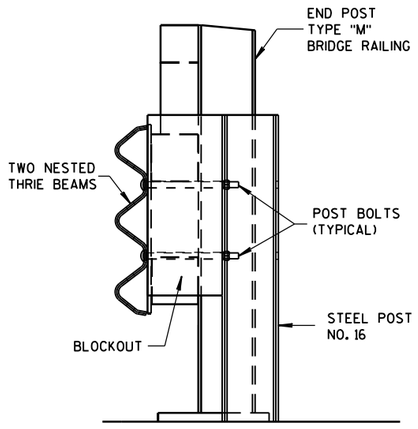


FRONT VIEW

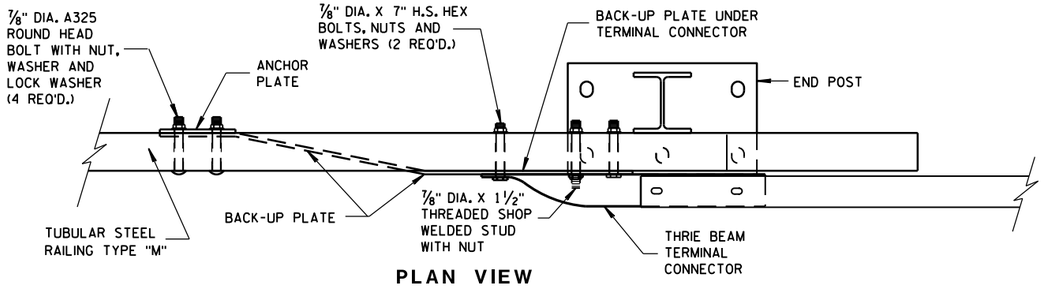


FRONT VIEW

ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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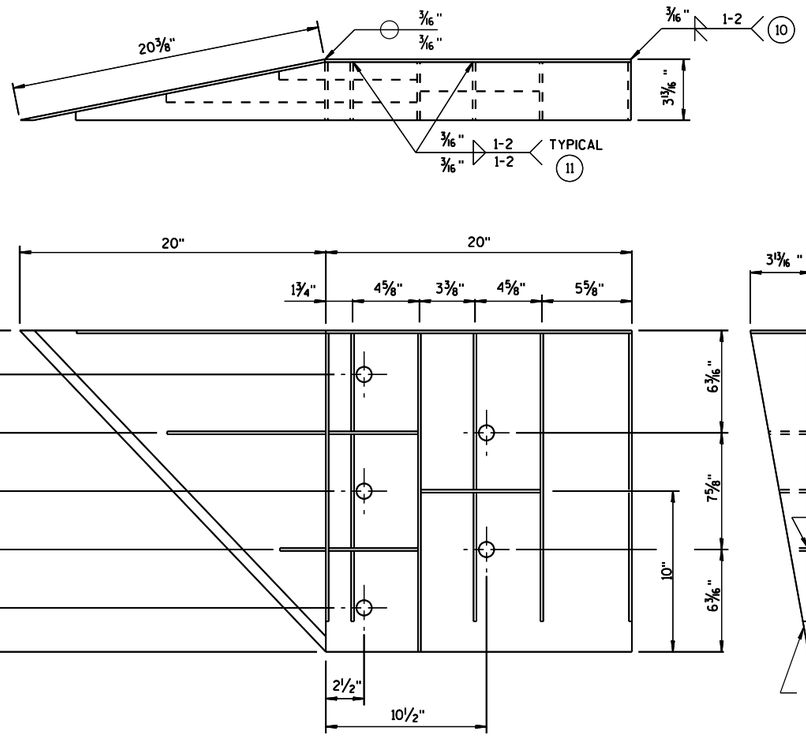

WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

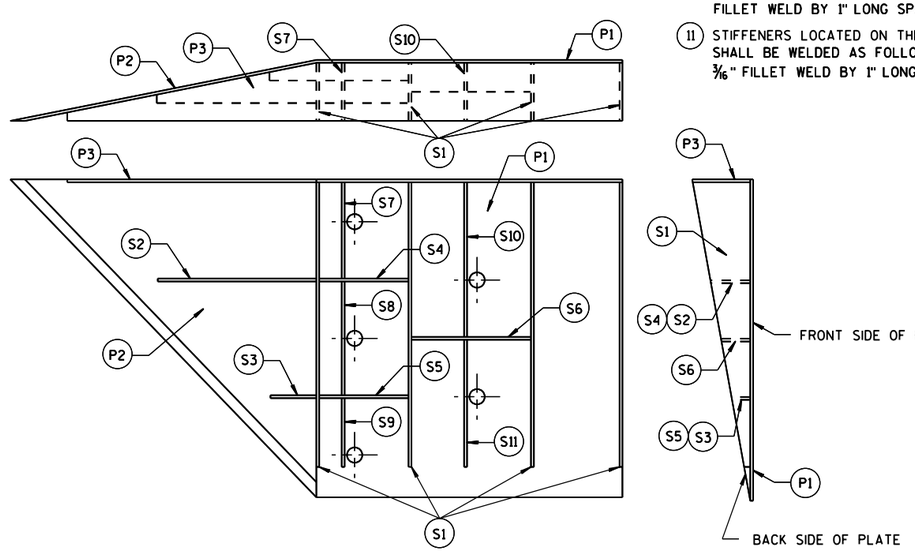

PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 3/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 1/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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June, 2015 — DATE
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S.D.D. 14 B 45-4i

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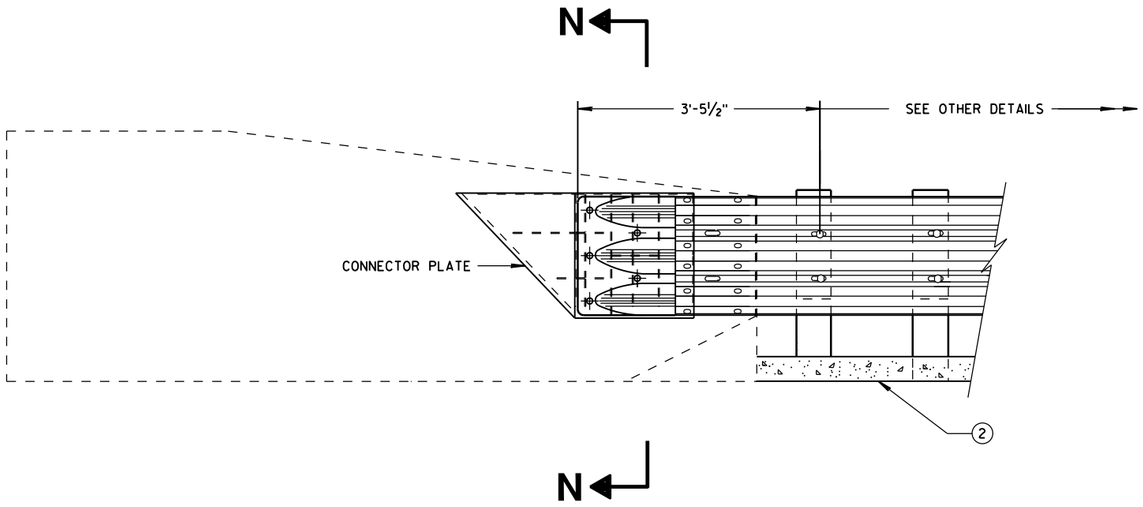
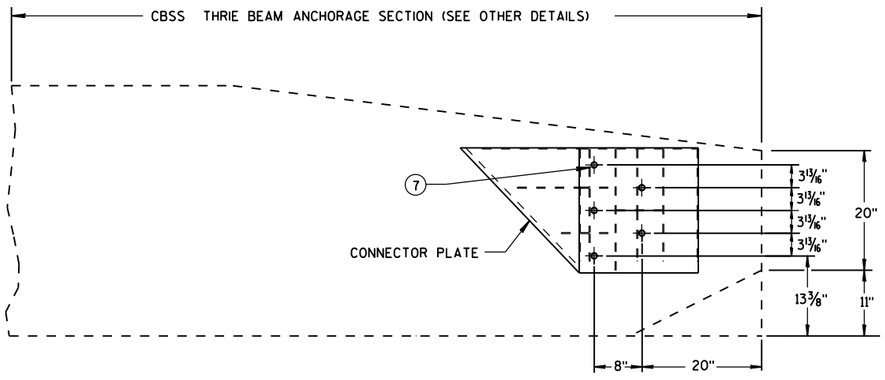
S.D.D. 14 B 45-4i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



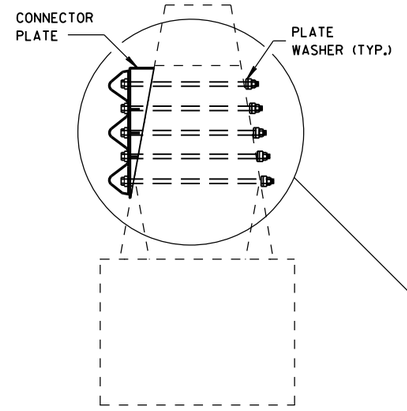
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

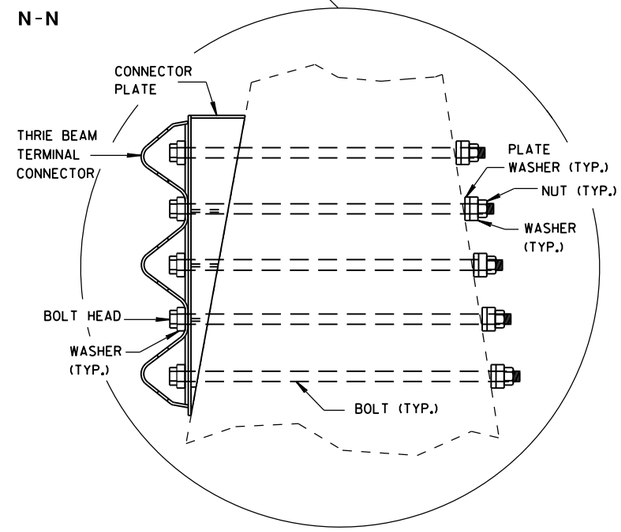
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS DEVELOPMENT ENGINEER
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S.D.D. 14 B 45-4j

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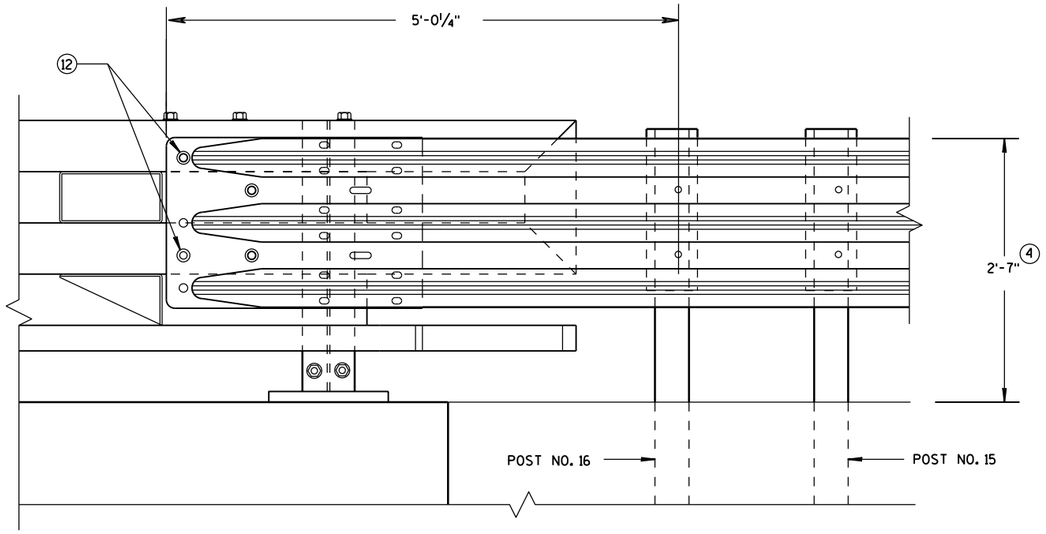
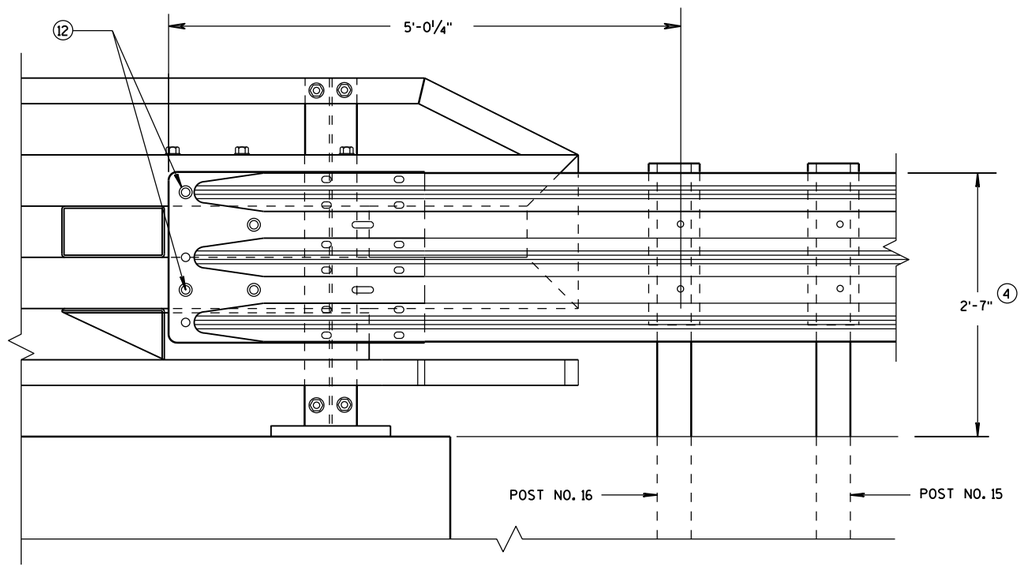
S.D.D. 14 B 45-4j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER

FHWA

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S.D.D. 14 B 45-4k

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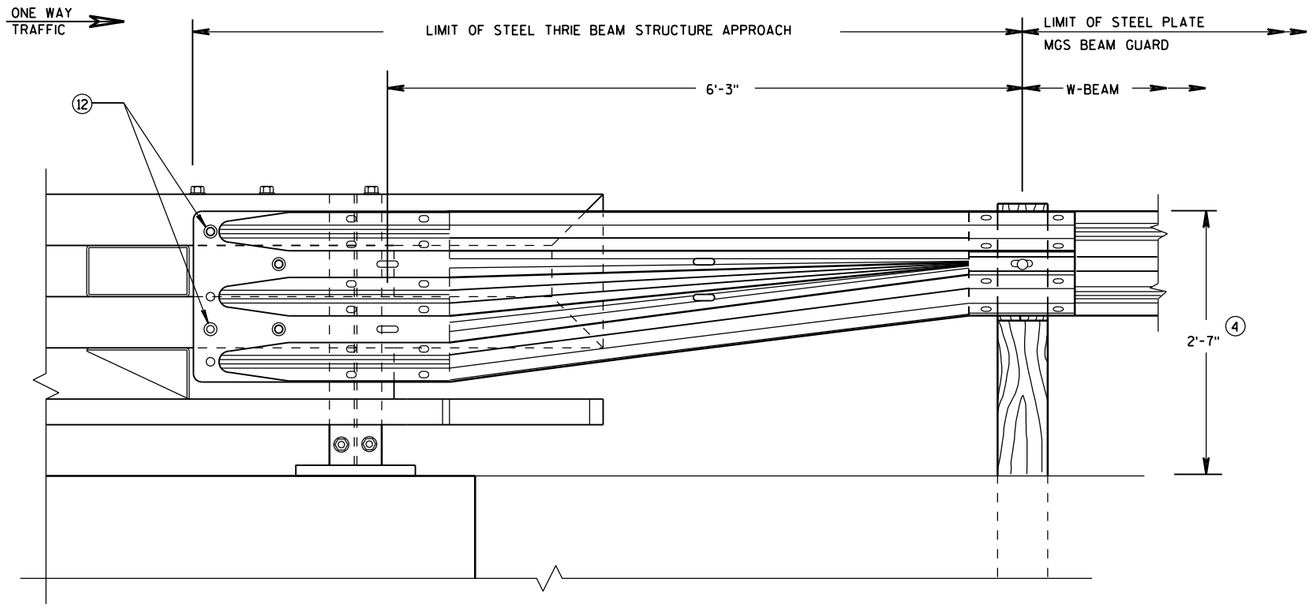
S.D.D. 14 B 45-4k



FRONT VIEW

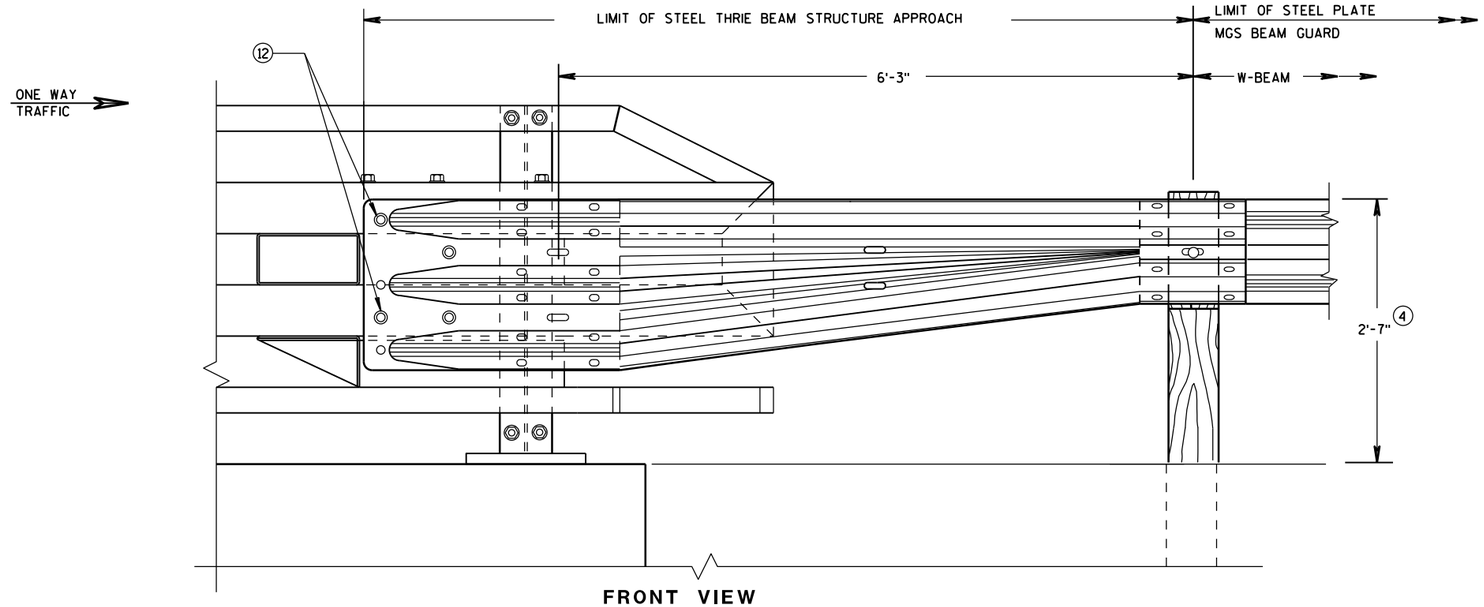
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS D 44 ENGINEER
NT
FHWA

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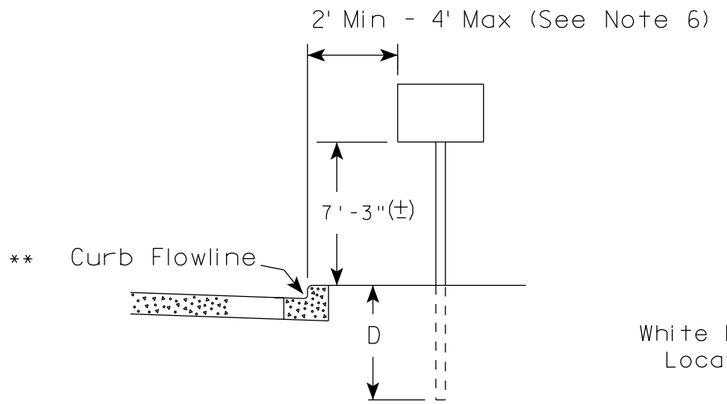
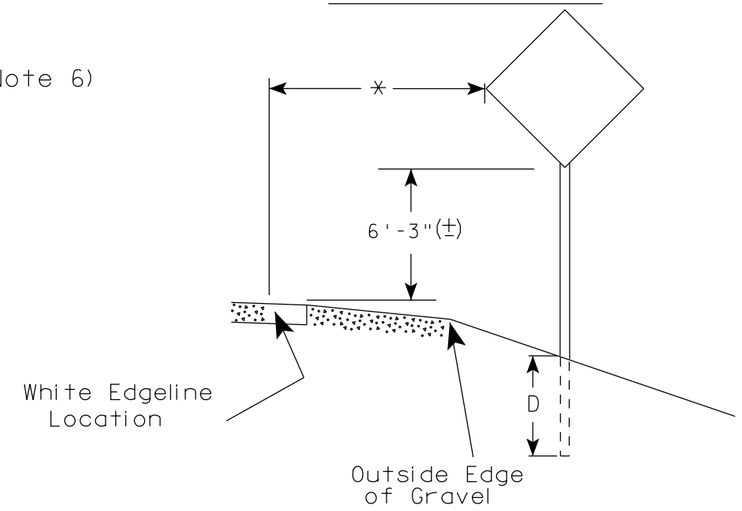
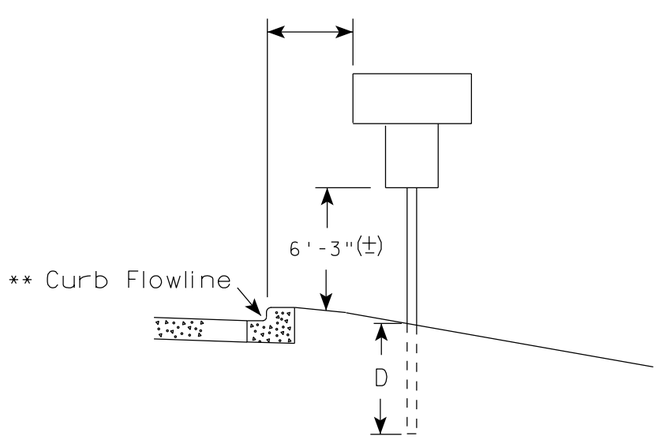
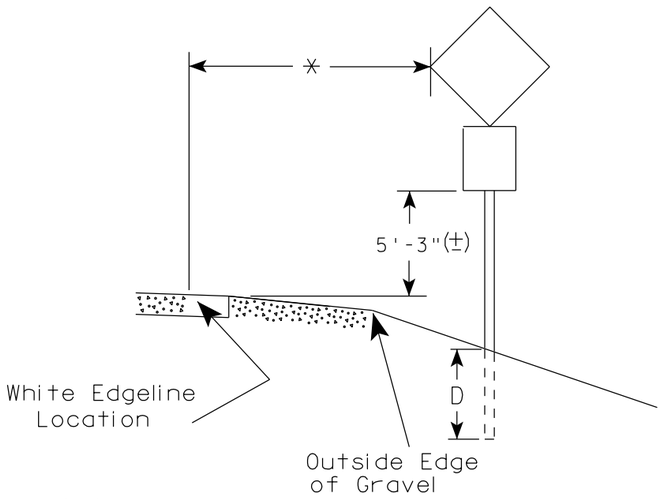
URBAN AREA



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

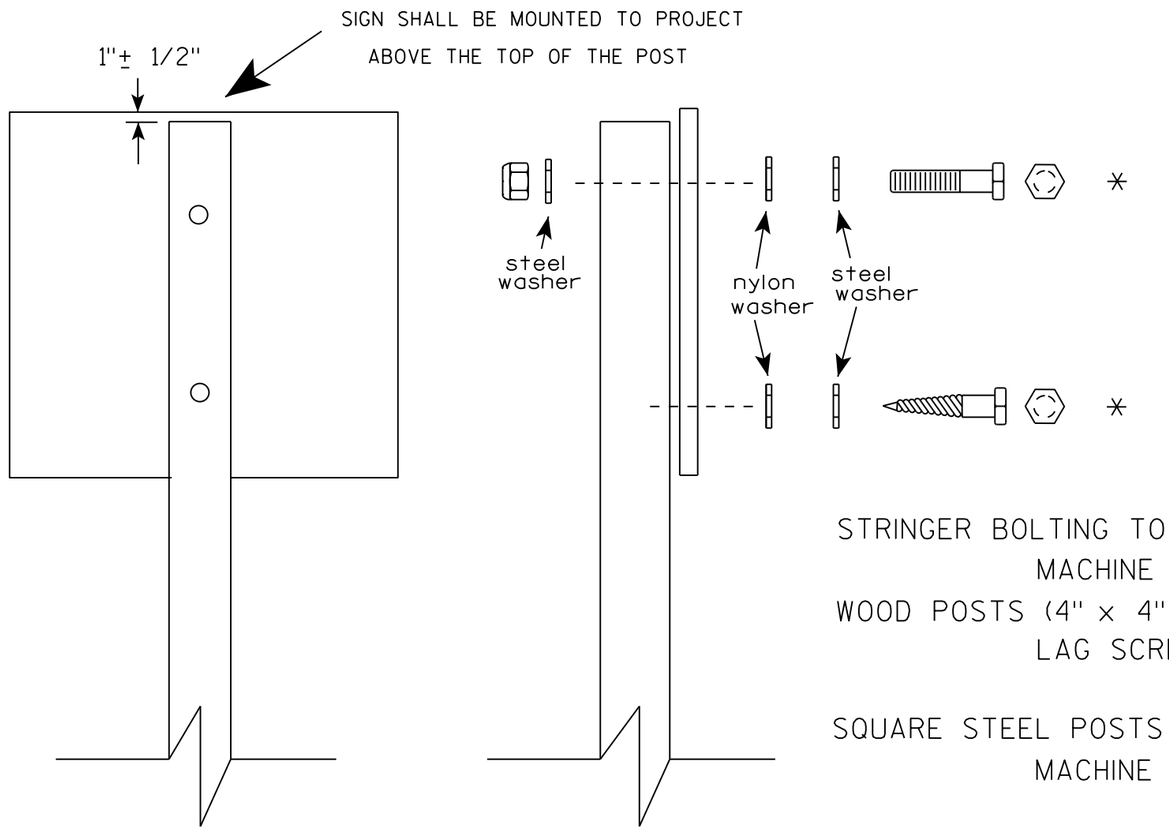
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:	(FOR INFORMATION ONLY - WORK BY OTHERS)	SHEET NO:	E

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



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

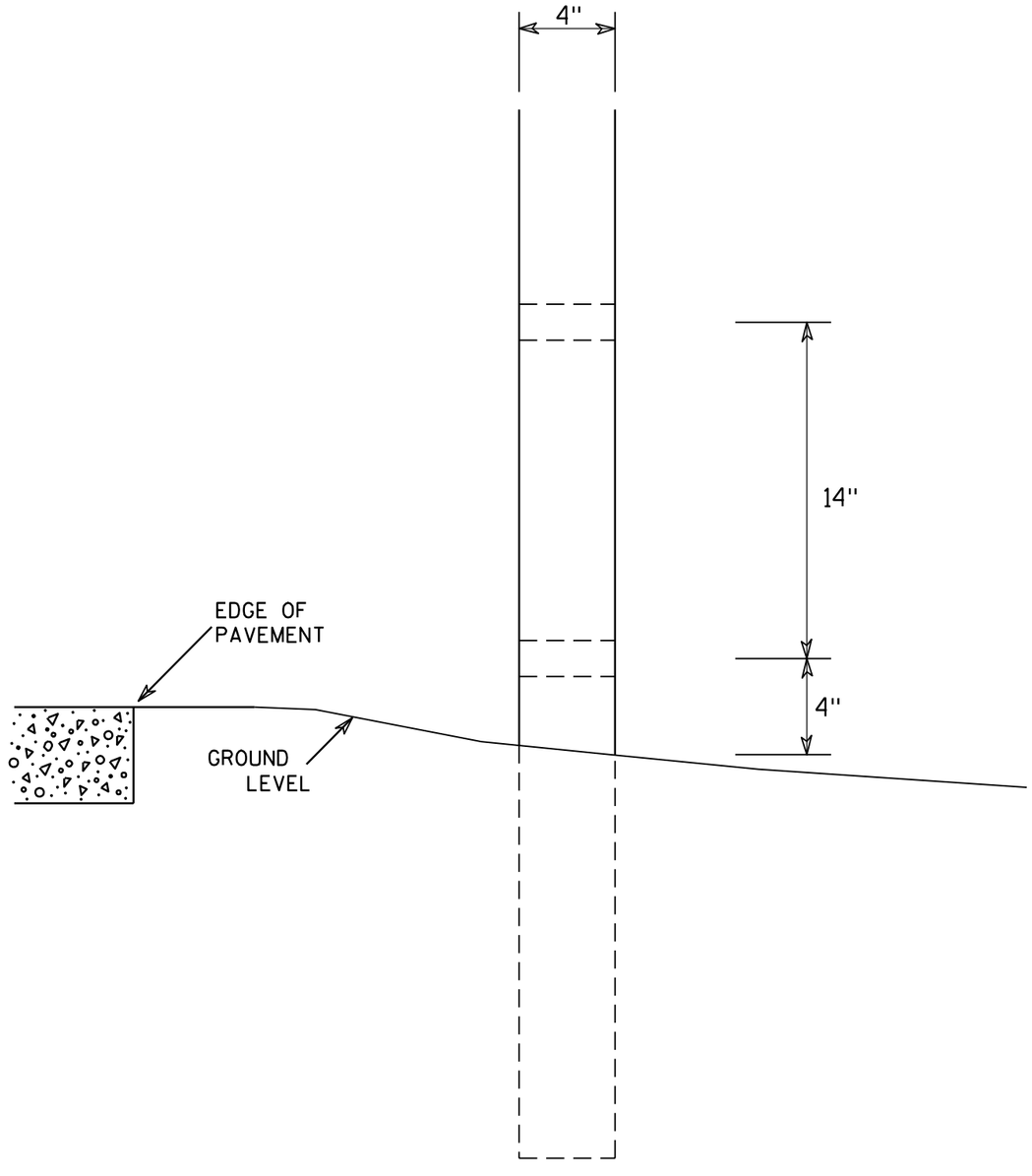
7

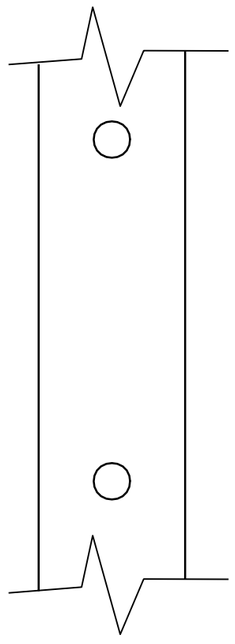
PROJECT NO:

(FOR INFORMATION ONLY - WORK BY OTHERS)

SHEET NO: E

FILE NAME : C:\CADfiles\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

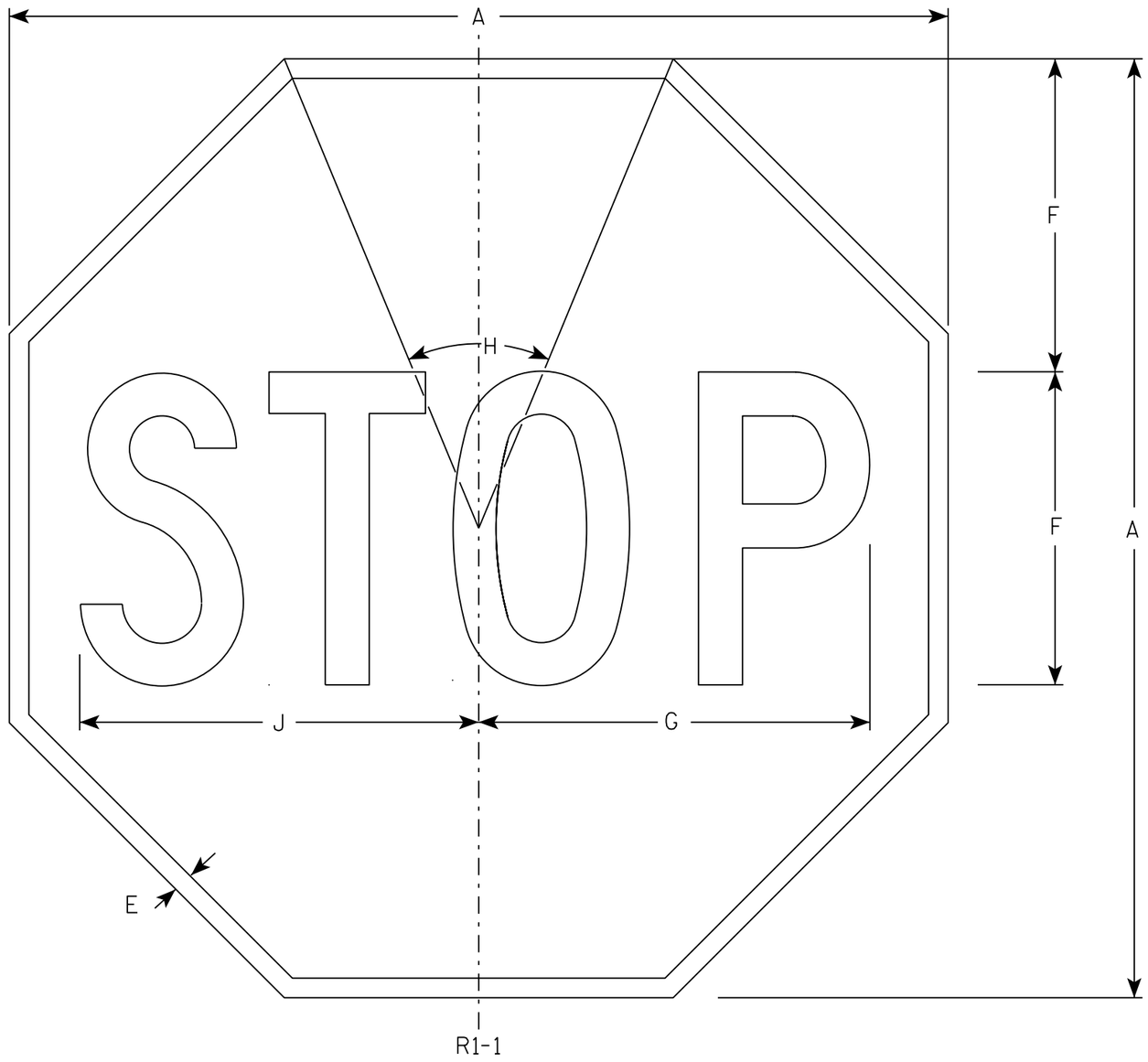
4 X 6 WOOD POST MODIFICATIONS

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:	(FOR INFORMATION ONLY - WORK BY OTHERS)	SHEET NO: 47	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

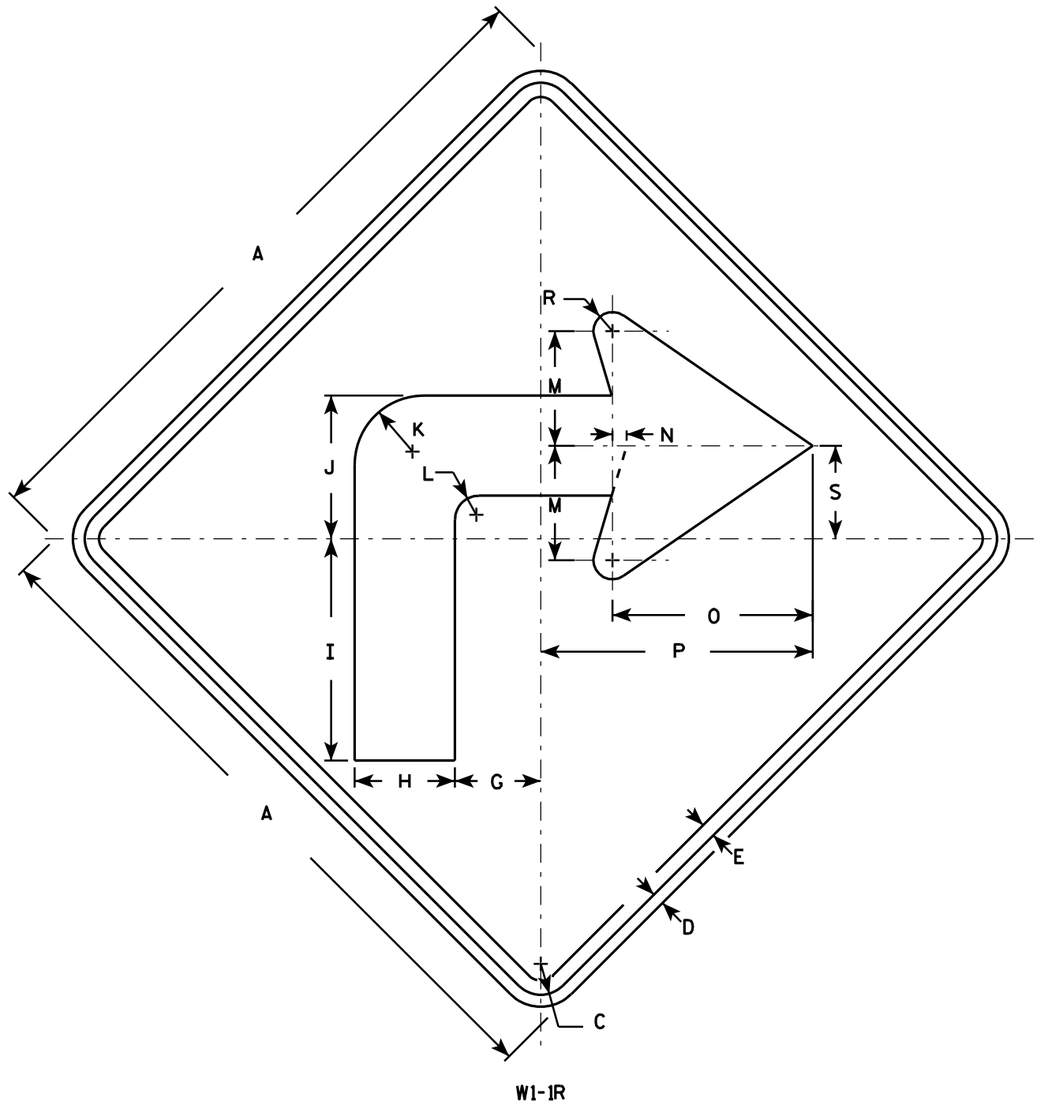
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:	(FOR INFORMATION ONLY - WORK BY OTHERS)	SHEET NO: 48	E



W1-1R

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		3	3 1/2	7 3/4	5	2 1/2	7/8	4	1/2	7	9 1/2		5/8	3 1/4								4.0
2S	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
2M	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
3	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
4	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0
5	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0

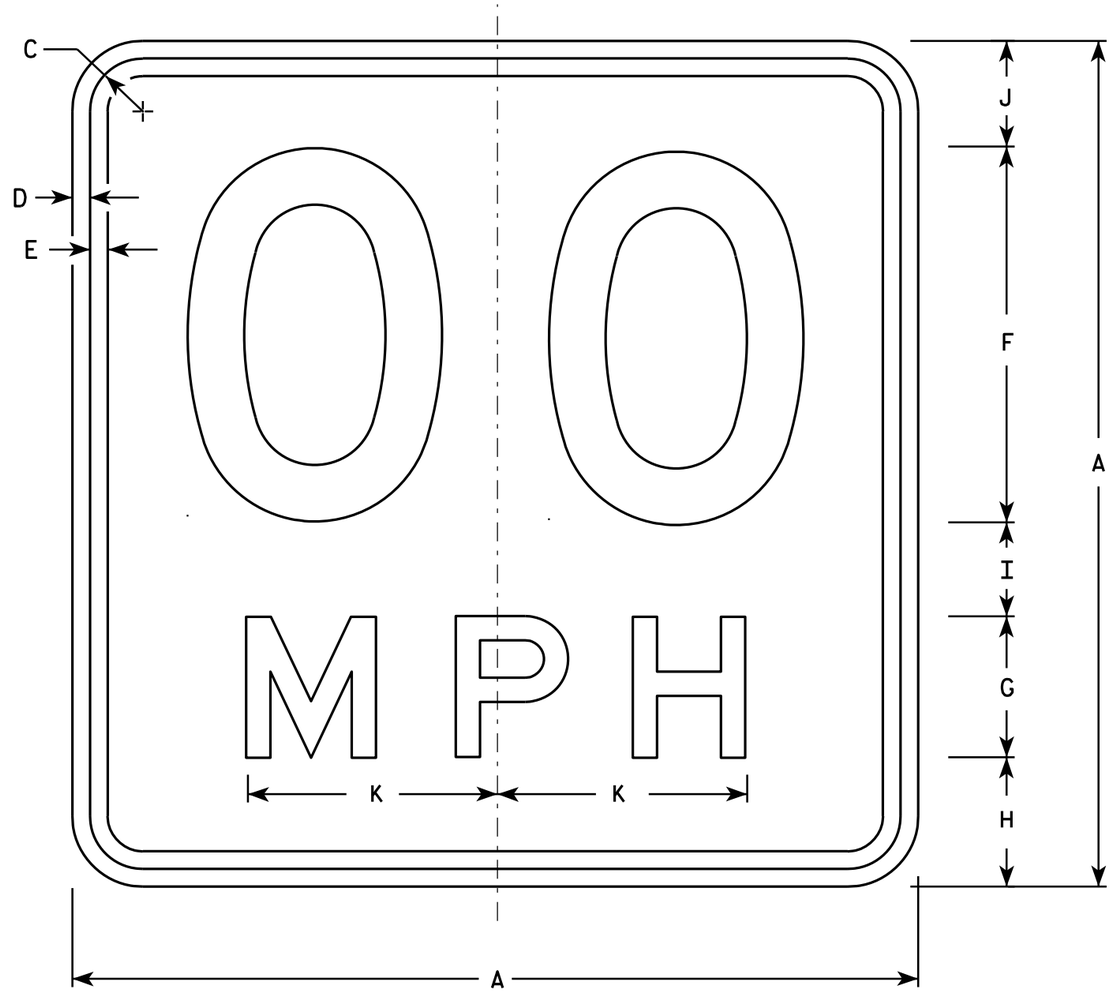
STANDARD SIGN
W1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-1.11

PROJECT NO: | HWY: | COUNTY: | (FOR INFORMATION ONLY - WORK BY OTHERS) | SHEET NO: 49 | 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

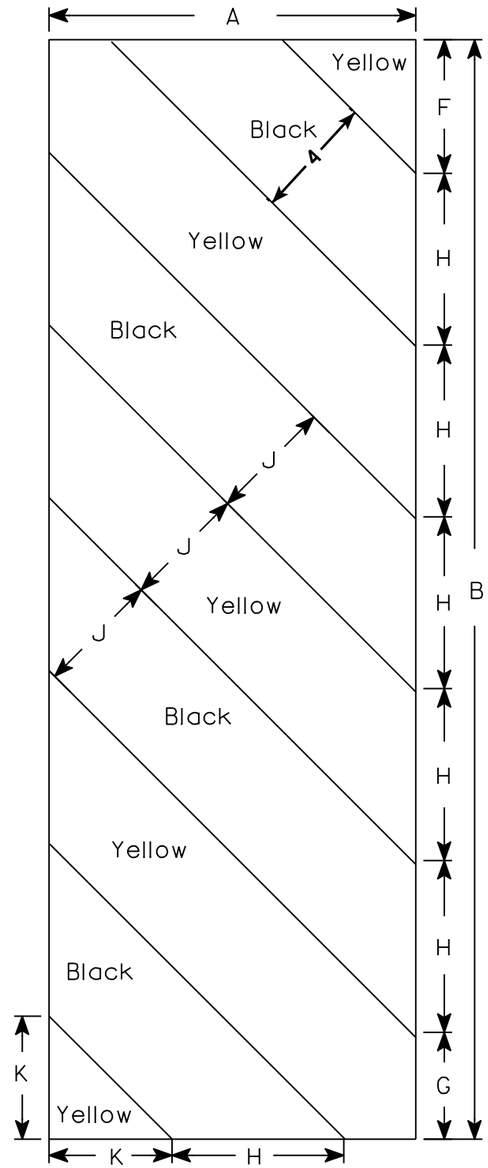
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

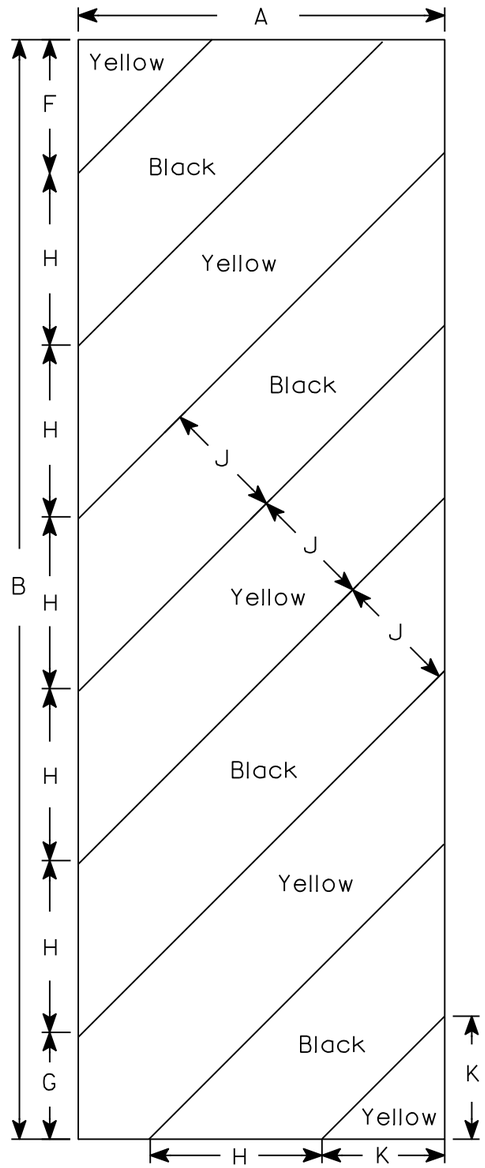
APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | (FOR INFORMATION ONLY - WORK BY OTHERS) | SHEET NO: 50 | 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

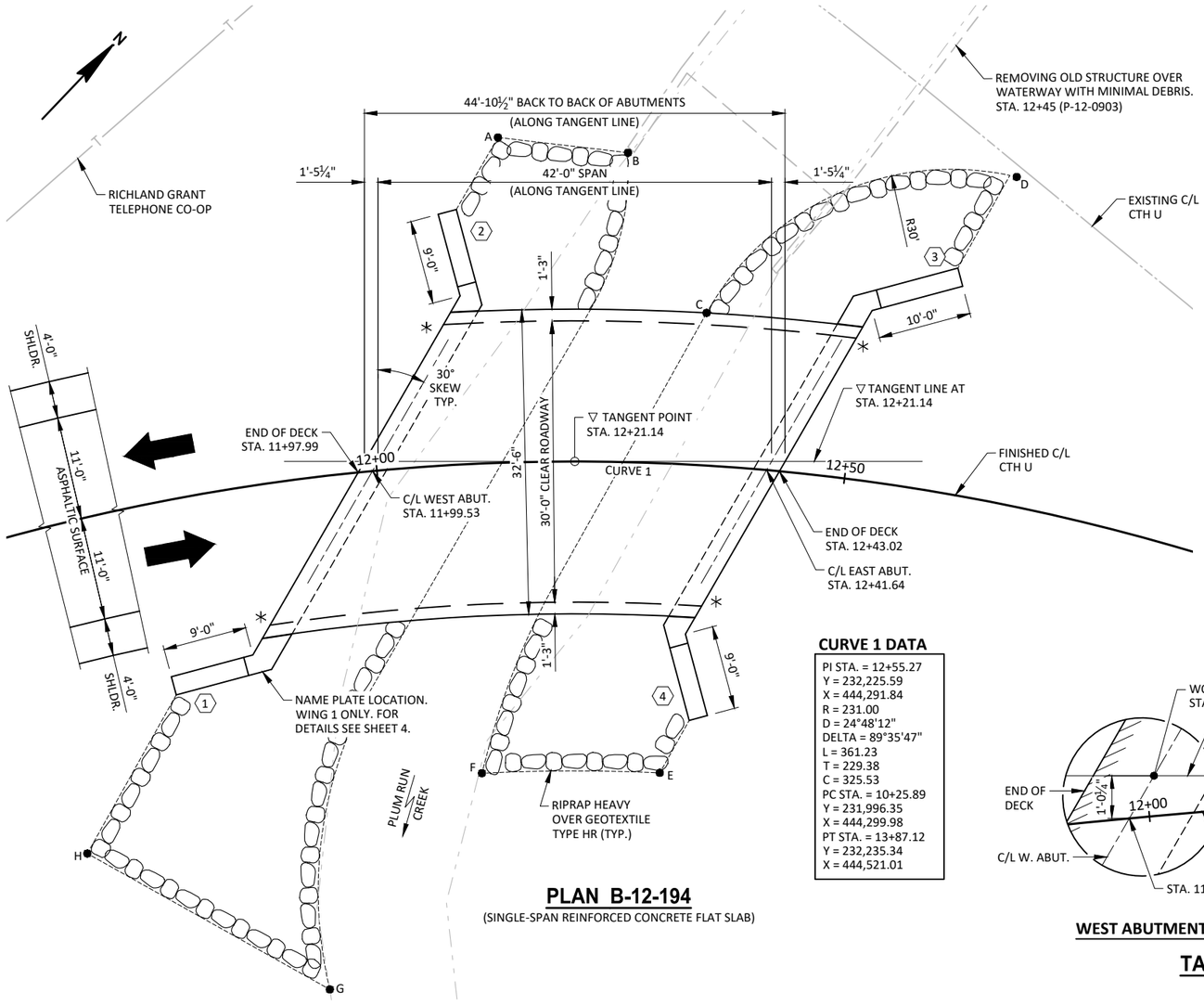
W5-52L & W5-52R

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:	(FOR INFORMATION ONLY - WORK BY OTHERS)	SHEET NO: 51	E



PLAN B-12-194

(SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB)

CURVE 1 DATA

PI STA. = 12+55.27
Y = 232,225.59
X = 444,291.84
R = 231.00
D = 24°48'12"
DELTA = 89°35'47"
L = 361.23
T = 229.38
C = 325.53
PC STA. = 10+25.89
Y = 231,996.35
X = 444,299.98
PT STA. = 13+87.12
Y = 232,235.34
X = 444,521.01

⬡ INDICATES WING NUMBER

✳ THRIE BEAM RAIL ATTACHMENT

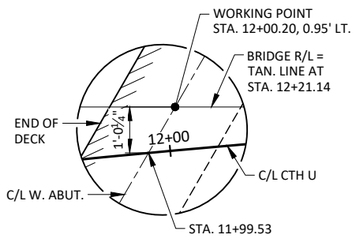
▽ SEE THIS SHEET FOR OFFSET DETAILS

RIPRAP HEAVY LAYOUT

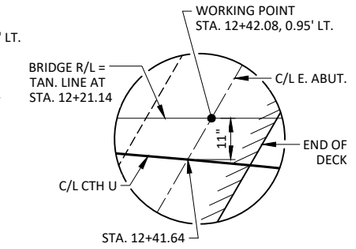
POINT	STATION	OFFSET
A	12+14	35' LT.
B	12+26	33' LT.
C	12+34	17' LT.
D	12+62	35' LT.
E	12+32	33' RT.
F	12+10	33' RT.
G	11+87	54' RT.
H	11+59	35' RT.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	6+75	3/4" IRON ROD SET, 15.3' RT.	790.33
2	12+24	3/4" IRON ROD SET, 84.5' LT.	781.69
5	12+46	STAR SPIKE IN TREE, 103.7' RT.	778.39
3	15+52	3/4" IRON ROD SET, 16.9' RT.	776.22

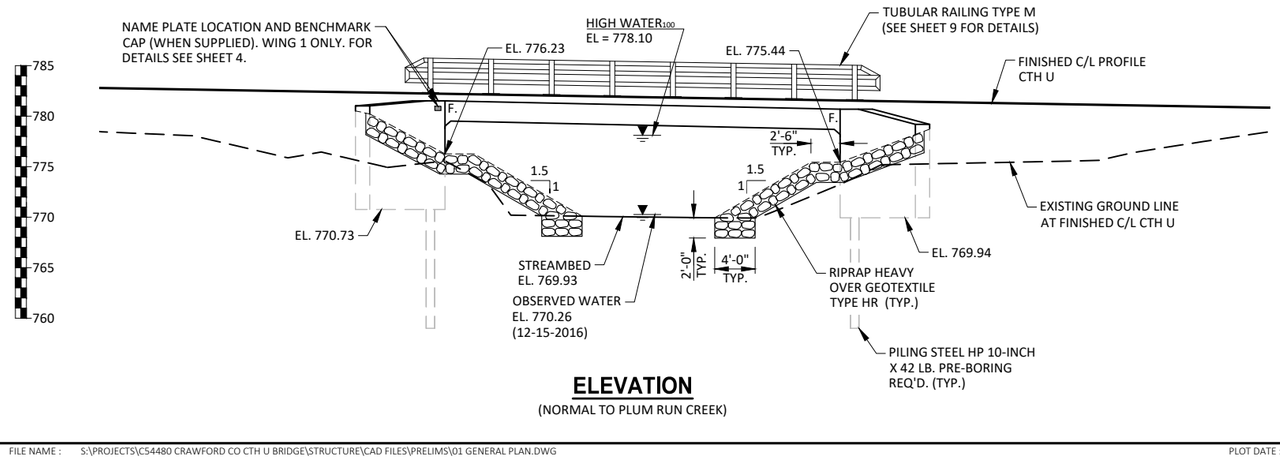


WEST ABUTMENT



EAST ABUTMENT

TANGENT OFFSET DETAILS



ELEVATION

(NORMAL TO PLUM RUN CREEK)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	RF=1.13
OPERATING RATING FACTOR	RF=1.47
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 120 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 20 FT PILE LENGTHS AT BOTH ABUTMENTS. PRE-BORING IS REQUIRED 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)	56
A.D.T. (2038)	70
DESIGN SPEED	30 M.P.H.

HYDRAULIC DATA

100-YEAR FREQUENCY	
DRAINAGE AREA	4.1 SQ. MI.
Q_{100} TOTAL	1,190 C.F.S.
THROUGH STRUCTURE	1,190 C.F.S.
OVERTOPPING ROADWAY	N/A
VELOCITY - THROUGH STRUCTURE	10.4 F.P.S.
WATERWAY AREA - THROUGH STRUCTURE	115.0 SQ. FT.
HIGH WATER$_{100}$ ELEVATION	778.10
SCOUR CRITICAL CODE	5
EROSION CONTROL	
Q_2	195 C.F.S.
HIGH WATER$_2$ ELEVATION	773.70
VELOCITY$_2$	5.9 F.P.S.

LIST OF DRAWINGS

STATE PROJECT NUMBER

5527-00-70

WISCONSIN PROFESSIONAL ENGINEER
PATRICK T. BOLAND
E-36303
SPRING GREEN, WIS.
Patrick Boland 1-31-18

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors
5[illegible]0 SUNRISE DRIVE
SPRING GREEN, WI 5[illegible]588
PHONE[illegible](608) 588-7484
FA[illegible] (608) 588-9[illegible]22

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/07/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-12-194

CTH U OVER PLUM RUN CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
CRAWFORD	CLAYTON

DESIGN SPEC: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

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

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

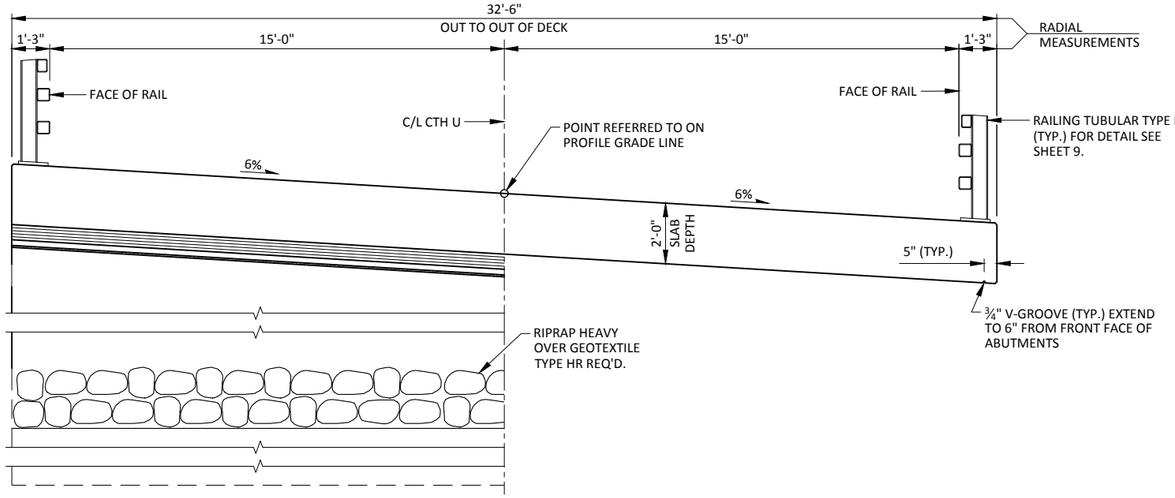
BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

GENERAL PLAN

SHEET 1 OF 9
52

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\STRUCTURE\CAD FILES\PRELIMS\01 GENERAL PLAN.DWG
PLOT DATE : 1/31/2018 10:19:10 AM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1" = 1'
LAYOUT : LAYOUT1

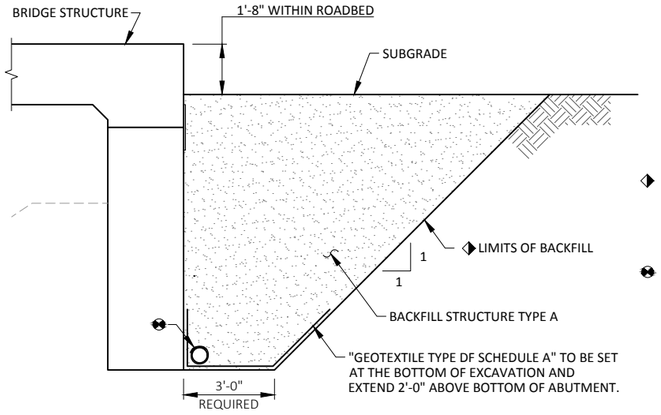
STATE PROJECT NUMBER
5527-00-70



AT ABUTMENT **IN SPAN**

PROPOSED CROSS-SECTION THROUGH ROADWAY

(LOOKING EAST)

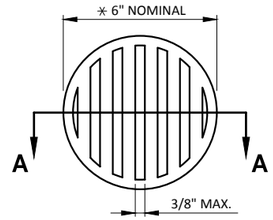


BACKFILL STRUCTURE DETAIL

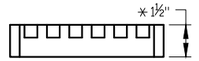
(TYPICAL AT BOTH ABUTMENTS)

◆ BACKFILL STRUCTURE TYPE A PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES B-12-194". 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."



RODENT SCREEN



SECTION A-A

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.

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.

ANY EXCAVATION BELOW THE ABUTMENT AND ASSOCIATED ABUTMENT BEDDING MATERIALS REQUIRE THE APPROVAL OF THE ENGINEER IN THE FIELD.

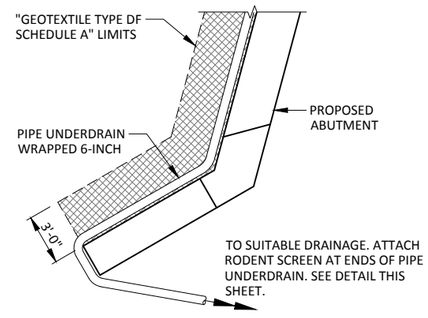
APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK, THE SIDES OF THE DECK AND EXTERIOR 12" OF THE UNDERSIDE OF THE DECK (CONCRETE MATERIAL ONLY).

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

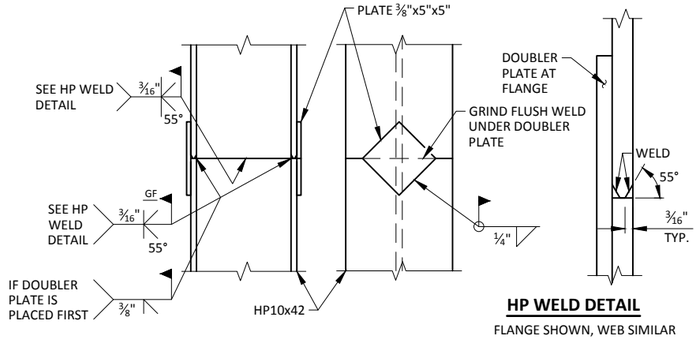
THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-12-194" SHALL BE THE EXISTING GROUNDLINE.

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.



PIPE UNDERDRAIN DETAIL



HP WELD DETAIL

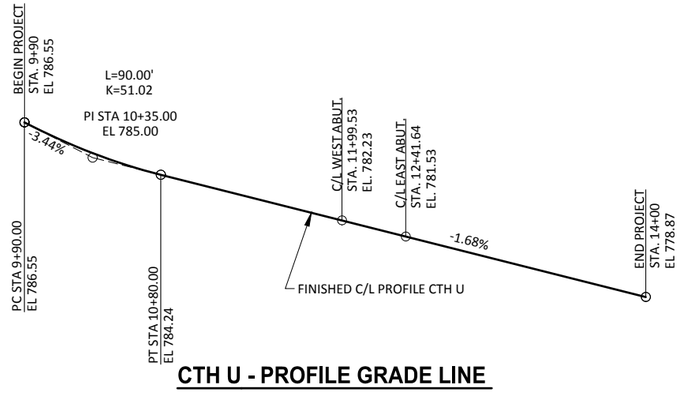
FLANGE SHOWN, WEB SIMILAR

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
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 12+45	LS	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-12-194	LS	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	320	--	305	625
502.0100	CONCRETE MASONRY BRIDGES	CY	53	115	51	219
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	185	--	185
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	3,190	--	2,890	6,080
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,590	19,410	1,640	22,640
513.4061	RAILING TUBULAR TYPE M B-12-194	LF	--	95	--	95
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8	--	7	15
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	110	--	110	220
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	150	--	150	300
606.0300	RIPRAP HEAVY	CY	130	--	110	240
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	80	--	80	160
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	55	--	55	110
645.0120	GEOTEXTILE TYPE HR	SY	215	--	170	385
	NON-BID ITEMS					
	FILLER	SIZE				½" & ¾"



CTH U - PROFILE GRADE LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-194

DRAWN BY JZ | PLANS CK'D. PTB

CROSS SECTION AND QUANTITIES

SHEET 2 OF 9

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8

8

STATE PROJECT NUMBER

5527-00-70

SOIL BORINGS

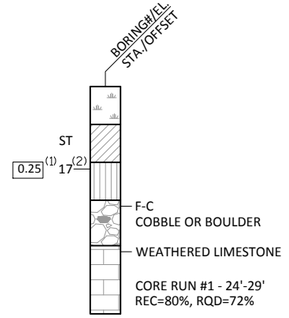
BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	04/25/17	232,216.28	444,383.41
2	04/25/17	232,135.39	444,361.12

BORINGS & REPORT COMPLETED BY: BRAUN INTERTEC
2309 PALACE ST.
LA CROSSE, WI 54601

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

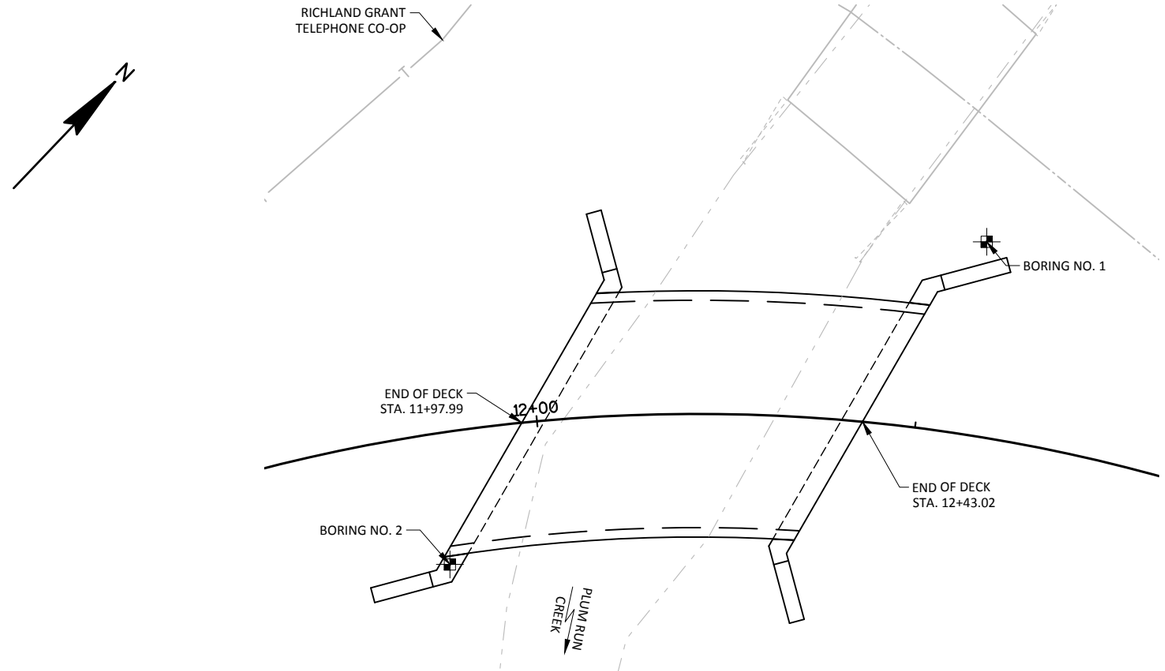
AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

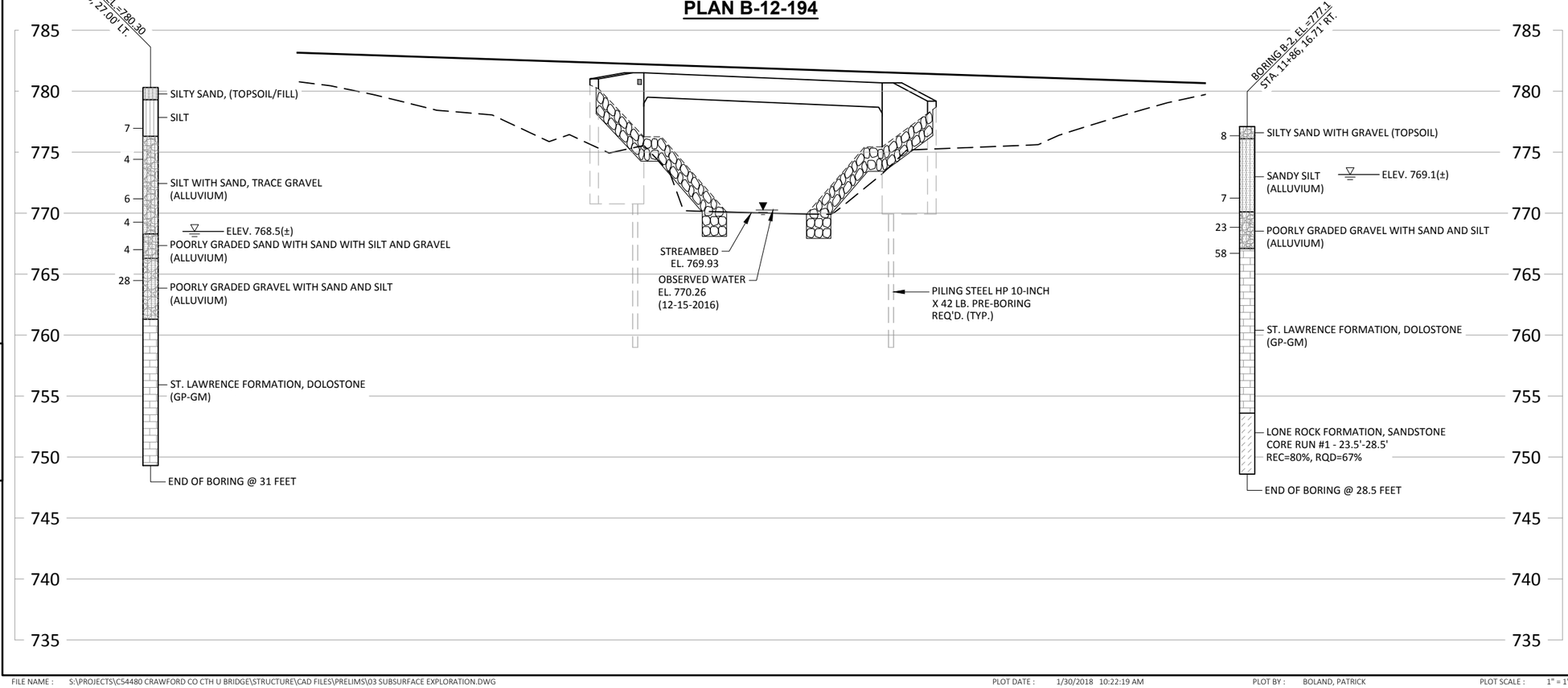
F-FINE M-MEDIUM C-COURSE ST-SHELBY TUBE

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.



PLAN B-12-194



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-194

DRAWN BY TS | PLANS CK'D. PTB

SUBSURFACE EXPLORATION

SHEET 3 OF 9

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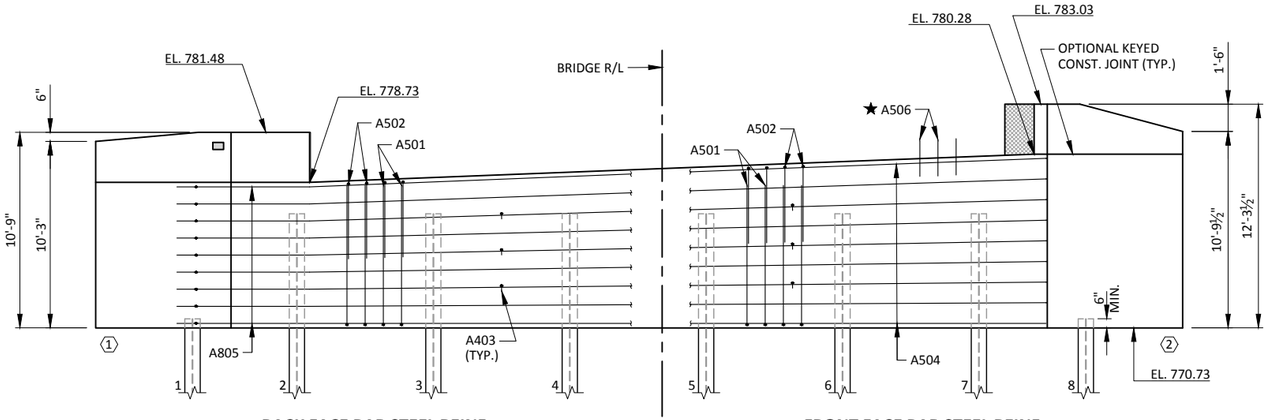
STATE PROJECT NUMBER

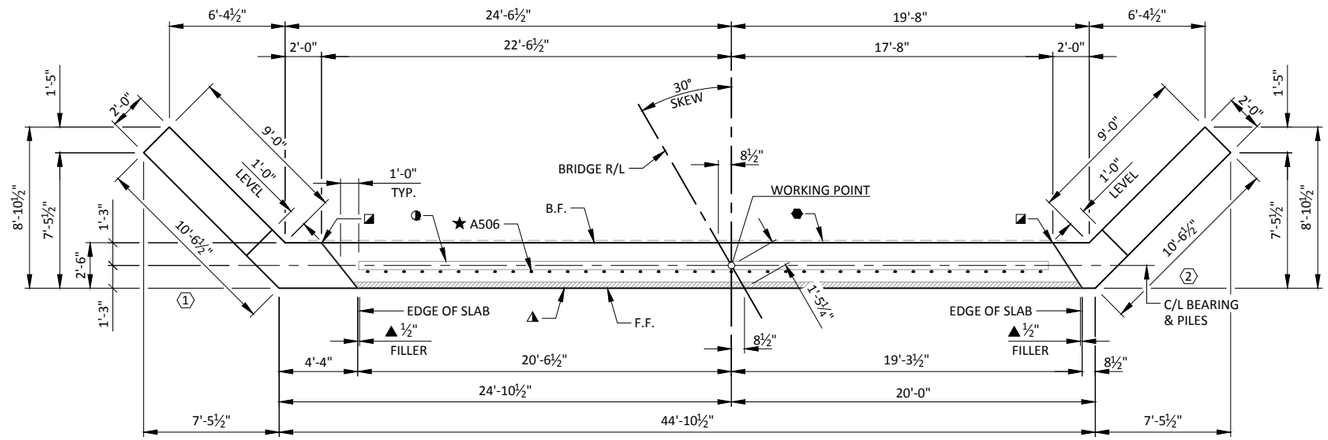
5527-00-70



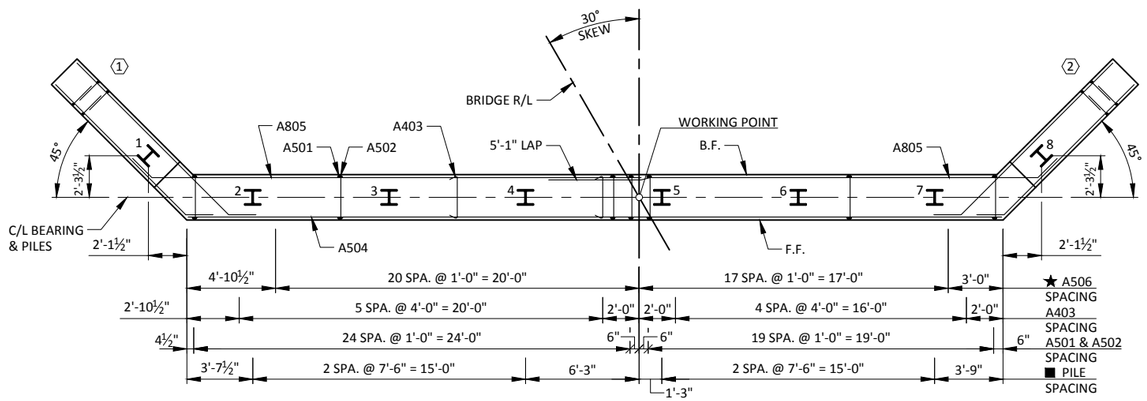
BACK FACE BAR STEEL REINF. **FRONT FACE BAR STEEL REINF.**

ELEVATION

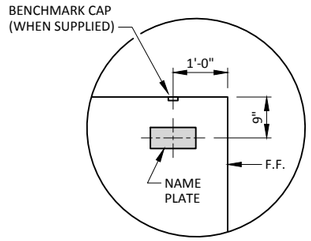
(WEST ABUTMENT LOOKING WEST)



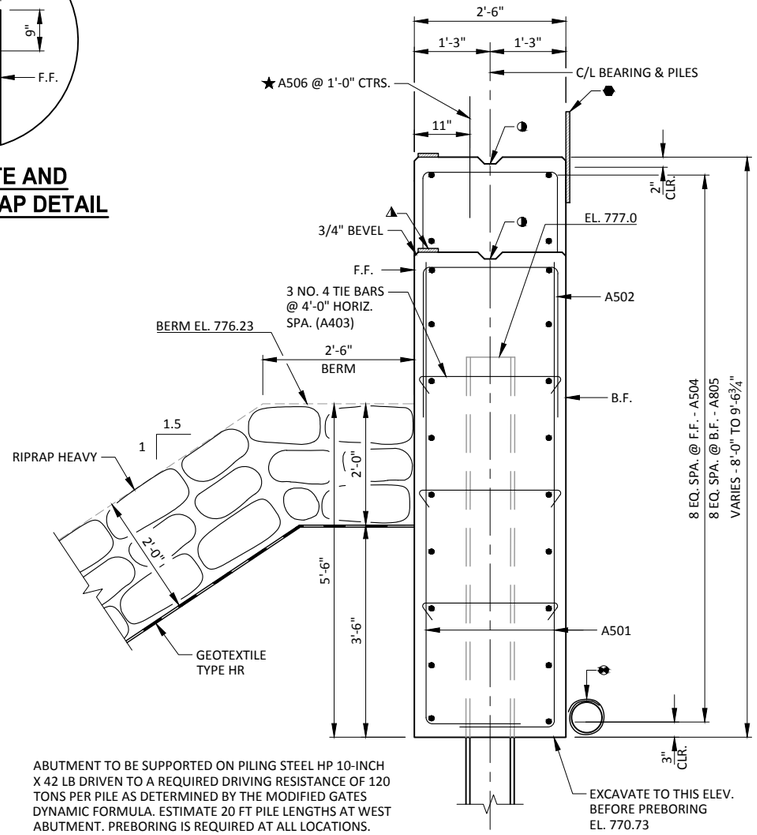
PLAN



LAYOUT



NAME PLATE AND BENCHMARK CAP DETAIL



ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 20 FT PILE LENGTHS AT WEST ABUTMENT. PREBORING IS REQUIRED AT ALL LOCATIONS.

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."

NOTES

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

SEAT ELEVATIONS SHOWN IN THE ELEVATION VIEW ARE TAKEN AT THE C/L OF BEARING.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-194

DRAWN BY	JZ	PLANS CK'D.	PTB

WEST ABUTMENT

SHEET 4 OF 9

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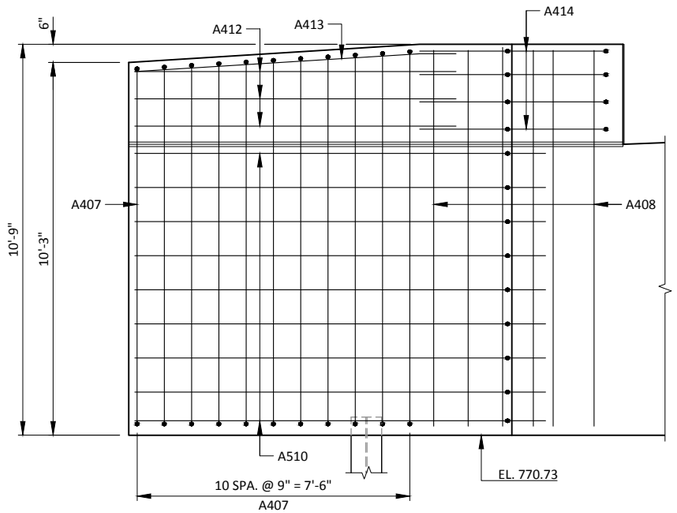
8

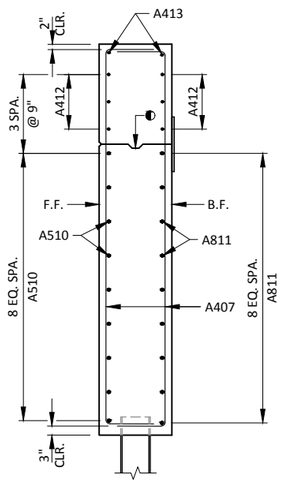
8

STATE PROJECT NUMBER

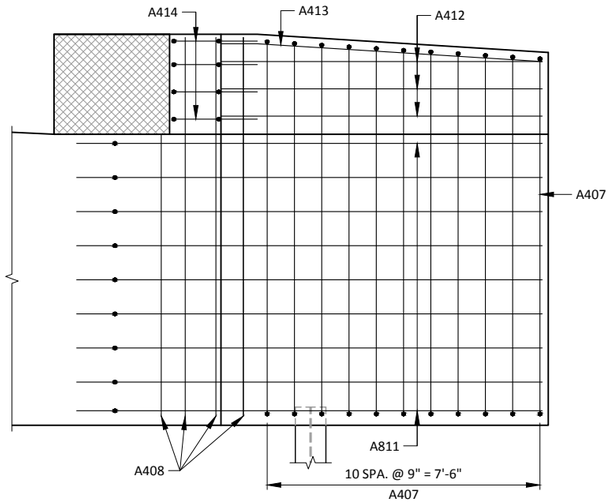
5527-00-70



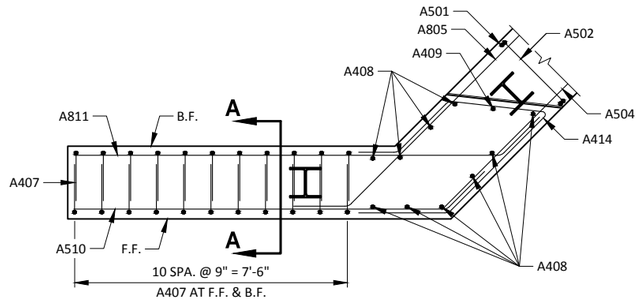
F.F. ELEVATION - WING 1



SECTION A-A



B.F. ELEVATION - WING 1



PLAN VIEW - WING 1

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".

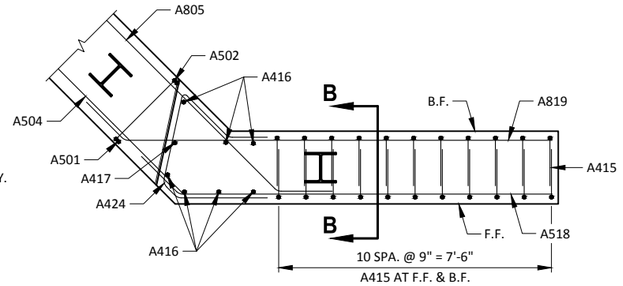
NOTES

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

BILL OF BARS
WEST ABUTMENT

1,590 LB (COATED)
3,190 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
A501	90	9-1	X			BODY - VERT. - F.F & B.F.
A502	45	10-3	X			BODY - VERT. - TOP
A403	33	2-10	X			TIE BARS
A504	9	44-8				BODY - HORIZ. - F.F.
A805	18	28-8	X			BODY - HORIZ. - B.F.
A506	38	2-0		X		BODY - VERT. - DOWELS
A407	22	12-7	X	X	⚹	WING 1 - VERT. - F.F. & B.F.
A408	10	10-4		X		WING 1 - VERT.
A409	1	3-6		X		WING 1 - VERT. - TOP
A510	9	11-10	X	X		WING 1 - HORIZ. - F.F.
A811	9	13-3	X	X		WING 1 - HORIZ. - B.F.
A412	6	8-10		X		WING 1 - HORIZ. - F.F. & B.F.
A413	2	8-10	X	X		WING 1 - HORIZ. - F.F. & B.F. - TOP
A414	4	11-8	X	X		WING 2 - HORIZ. - TOP
A415	22	13-7	X	X	⚹	WING 2 - VERT. - F.F. & B.F.
A416	7	11-10		X		WING 2 - VERT.
A417	1	3-6		X		WING 2 - VERT. - TOP
A518	9	11-10	X	X		WING 2 - HORIZ. - F.F.
A819	9	13-3	X	X		WING 2 - HORIZ. - B.F.
A420	2	8-10		X		WING 2 - HORIZ. - F.F. & B.F.
A421	2	8-1		X		WING 2 - HORIZ. - F.F. & B.F.
A422	2	4-1		X		WING 2 - HORZ. - F.F & B.F.
A423	2	8-11	X	X		WING 2 - HORIZ. - F.F. & B.F. - TOP
A424	4	8-0	X	X		WING 2 - HORIZ.- TOP

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

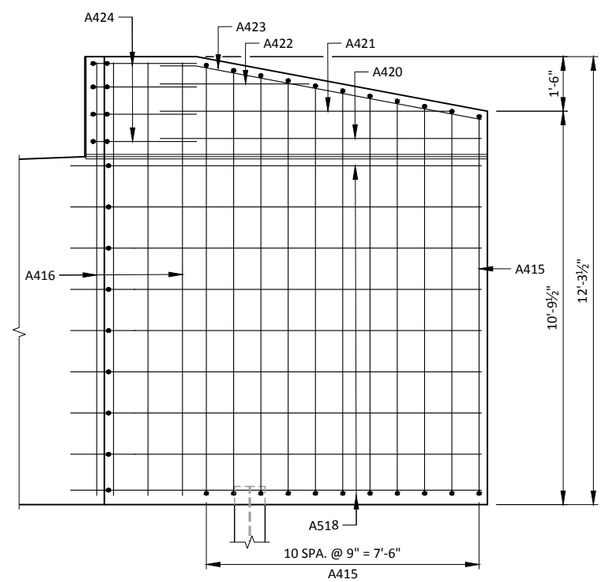
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

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

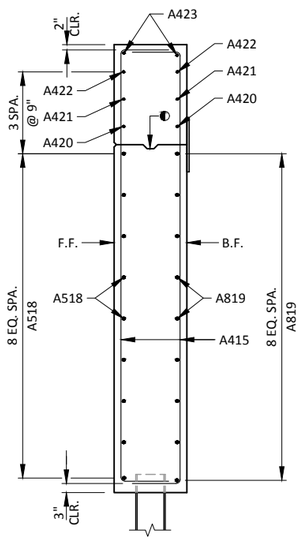
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A407	2 SERIES OF 11	12-10 TO 12-4
A415	2 SERIES OF 11	14-3 TO 12-11

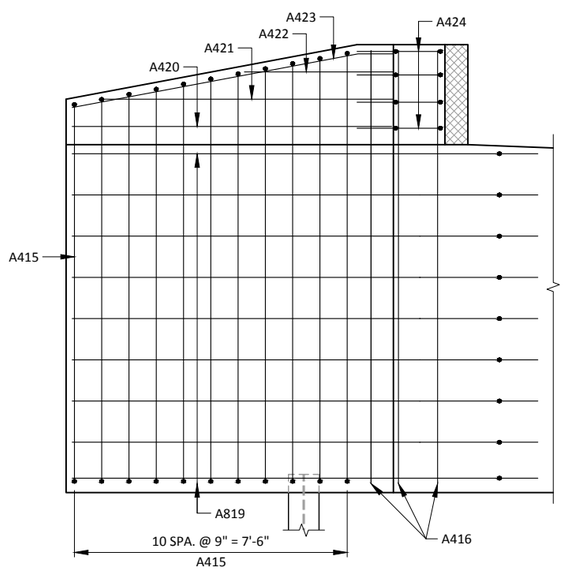
BUNDLE AND TAG EACH SERIES SEPARATELY.



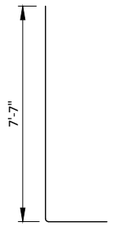
F.F. ELEVATION - WING 2



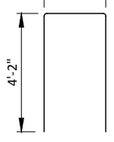
SECTION B-B



B.F. ELEVATION - WING 2



A501



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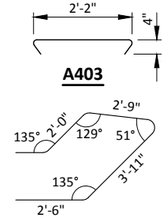
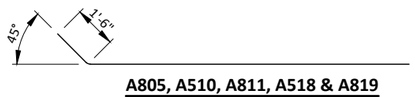
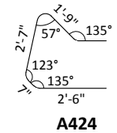


A414

A407 & A415



A805, A510, A811, A518 & A819



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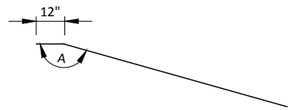

A413 & A423

MARK	'A'
A413	178°13'
A423	165°58'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-194

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

WEST ABUTMENT DETAILS

SHEET 5 OF 9

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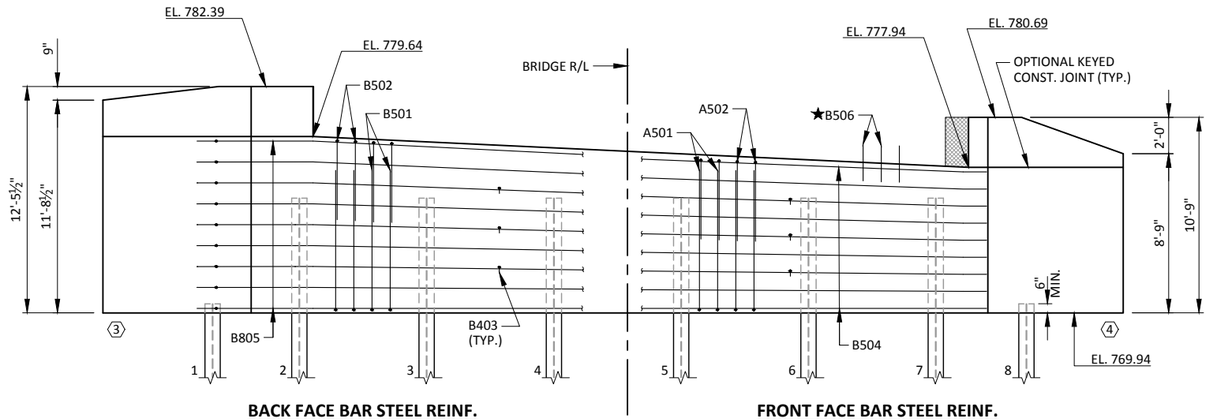
STATE PROJECT NUMBER

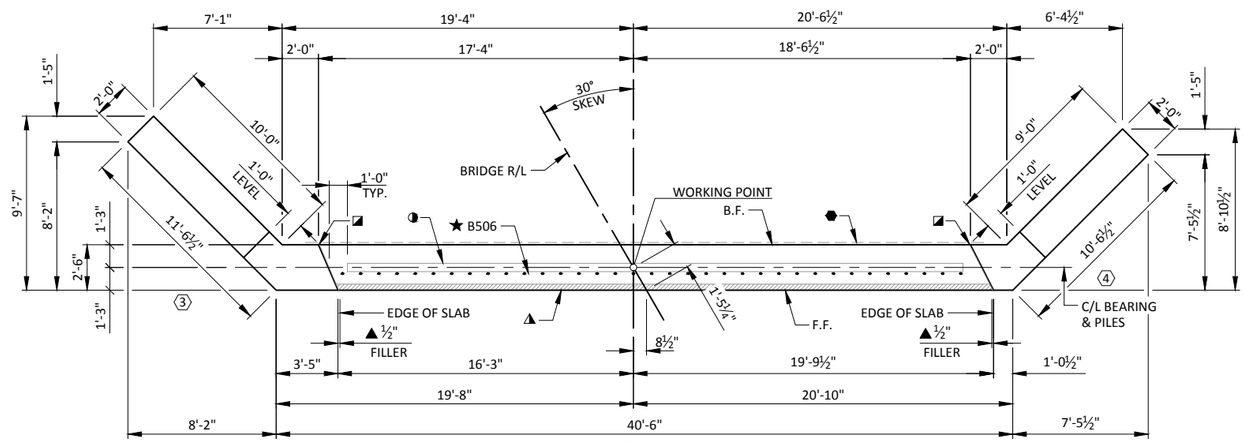
5527-00-70



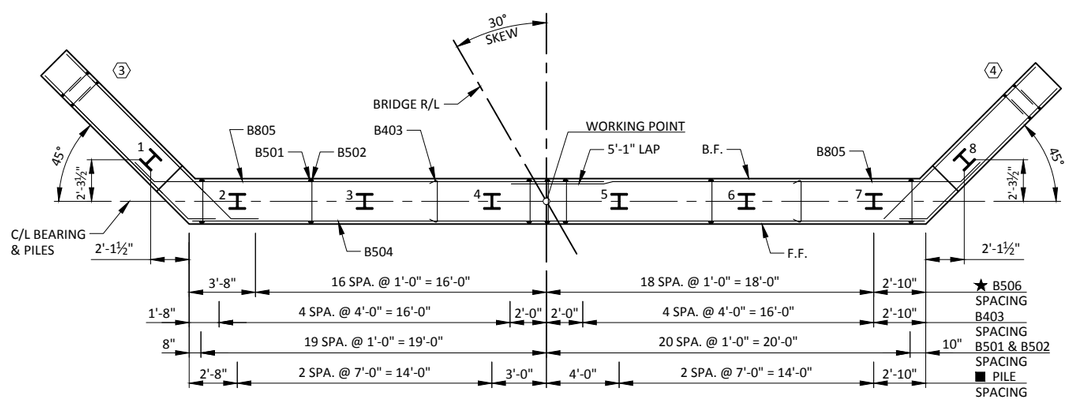
BACK FACE BAR STEEL REINF. **FRONT FACE BAR STEEL REINF.**

ELEVATION

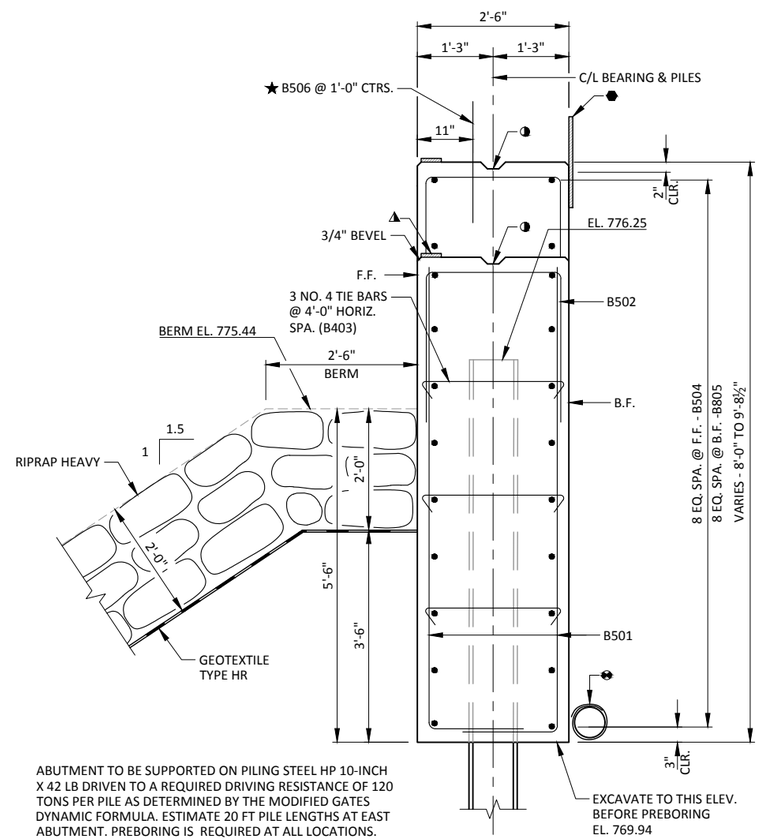
(EAST ABUTMENT LOOKING EAST)



PLAN



LAYOUT



ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 20 FT PILE LENGTHS AT EAST ABUTMENT. PREBORING IS REQUIRED AT ALL LOCATIONS.

TYPICAL SECTION THROUGH ABUTMENT BODY

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 7 FOR BILL OF BARS.

SEAT ELEVATIONS SHOWN IN THE ELEVATION VIEW ARE TAKEN AT THE C/L OF BEARING.

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

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-12-194

DRAWN BY JZ | PLANS CK'D. PTB

EAST ABUTMENT

SHEET 6 OF 9

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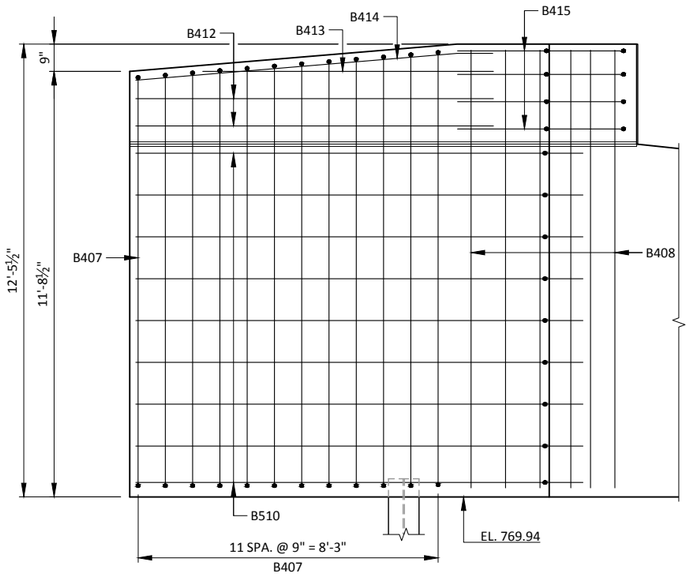
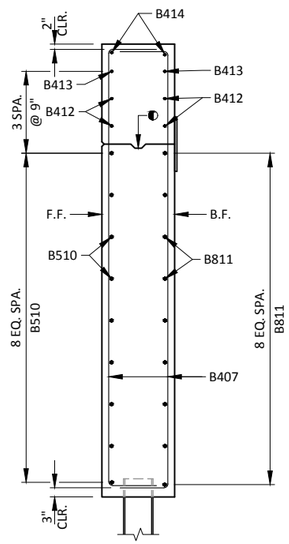
STATE PROJECT NUMBER

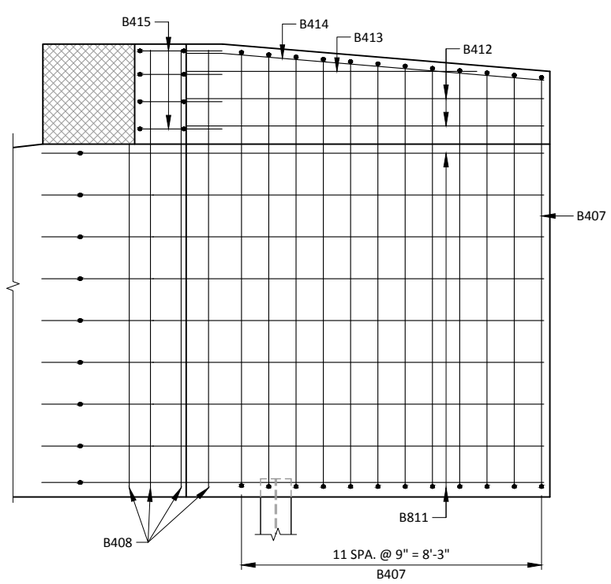
5527-00-70



F.F. ELEVATION - WING 3



SECTION A-A



B.F. ELEVATION - WING 3

BILL OF BARS
EAST ABUTMENT

1,640 LB (COATED)
2,890 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
B501	80	9-1	X			BODY - VERT. - F.F & B.F.
B502	40	10-5	X			BODY - VERT. - TOP
B403	30	2-10	X			TIE BARS
B504	9	40-3				BODY - HORIZ. - F.F.
B805	18	26-4	X			BODY - HORIZ. - B.F.
B506	35	2-0		X		BODY - VERT. - DOWELS
B407	24	14-2	X	X	⚹	WING 3 - VERT. - F.F. & B.F.
B408	10	12-0		X		WING 3 - VERT.
B409	1	3-6		X		WING 3 - VERT. - TOP
B510	9	12-10	X	X		WING 3 - HORIZ. - F.F.
B811	9	14-3	X	X		WING 3 - HORIZ. - B.F.
B412	4	9-10		X		WING 3 - HORIZ. - F.F. & B.F.
B413	2	8-0		X		WING 3 - HORIZ. - F.F. & B.F.
B414	2	9-10	X	X		WING 3 - HORIZ. - F.F. & B.F. - TOP
B415	4	10-6	X	X		WING 3 - HORIZ. - TOP
B416	22	11-10	X	X	⚹	WING 4 - VERT. - F.F. & B.F.
B417	7	10-4		X		WING 4 - VERT.
B418	1	3-6		X		WING 4 - VERT. - TOP
B519	9	11-10	X	X		WING 4 - HORIZ. - F.F.
B820	9	13-3	X	X		WING 4 - HORIZ. - B.F.
B421	2	8-10		X		WING 4 - HORIZ. - F.F. & B.F.
B422	2	6-4		X		WING 4 - HORIZ. - F.F. & B.F.
B423	2	3-4		X		WING 4 - HORZ. - F.F & B.F. - TOP
B424	2	9-1	X	X		WING 4 - HORIZ. - F.F. & B.F.
B425	4	8-3	X	X		WING 4 - HORIZ.- TOP

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

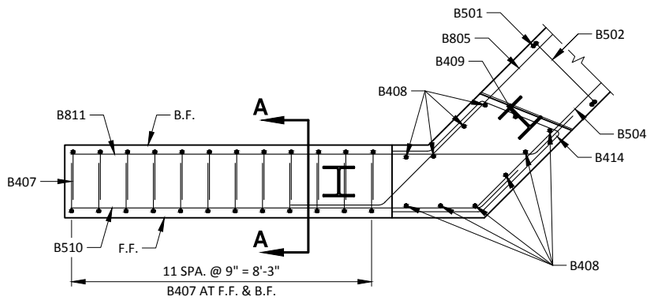
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

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

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B407	2 SERIES OF 12	14-6 TO 13-10
B416	2 SERIES OF 11	12-9 TO 10-11

BUNDLE AND TAG EACH SERIES SEPARATELY.



PLAN VIEW - WING 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".

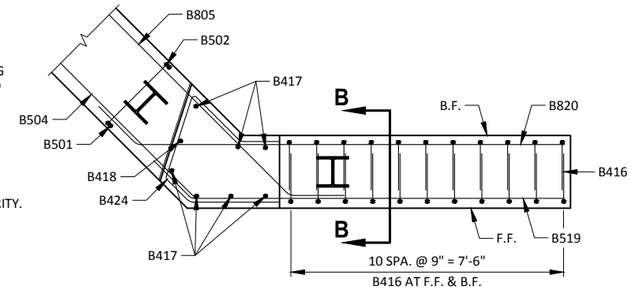
NOTES

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

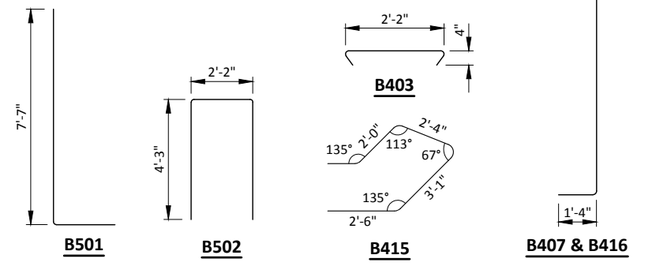
SPACE REINFORCEMENT TO MISS PILING

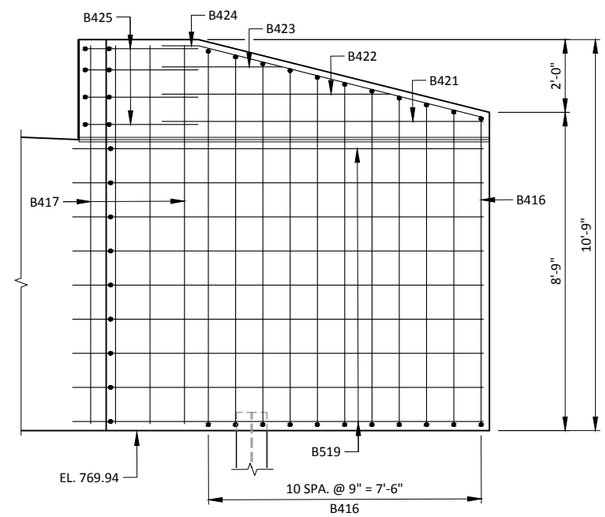
F.F. - FRONT FACE

B.F. - BACK FACE

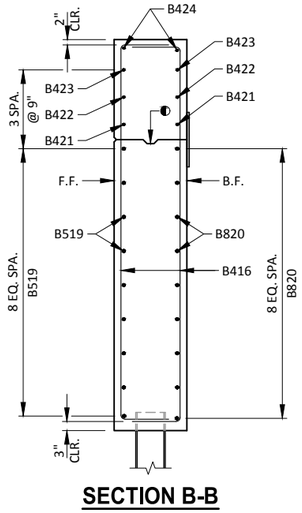


PLAN VIEW - WING 4

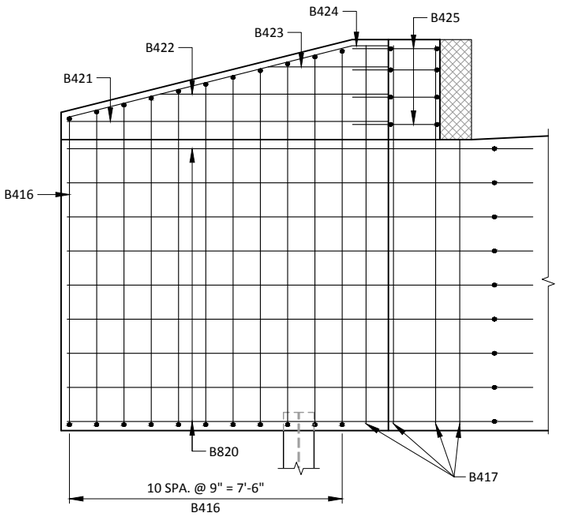




F.F. ELEVATION - WING 4

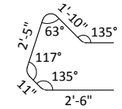


SECTION B-B

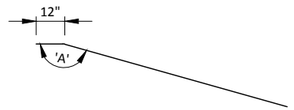


B.F. ELEVATION - WING 4

B805, B510, B811, B519 & B820



B425



B414 & B424

MARK	'A'
B414	175°14'
B424	165°58'

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STRUCTURE B-12-194

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EAST ABUTMENT DETAILS

SHEET 7 OF 9

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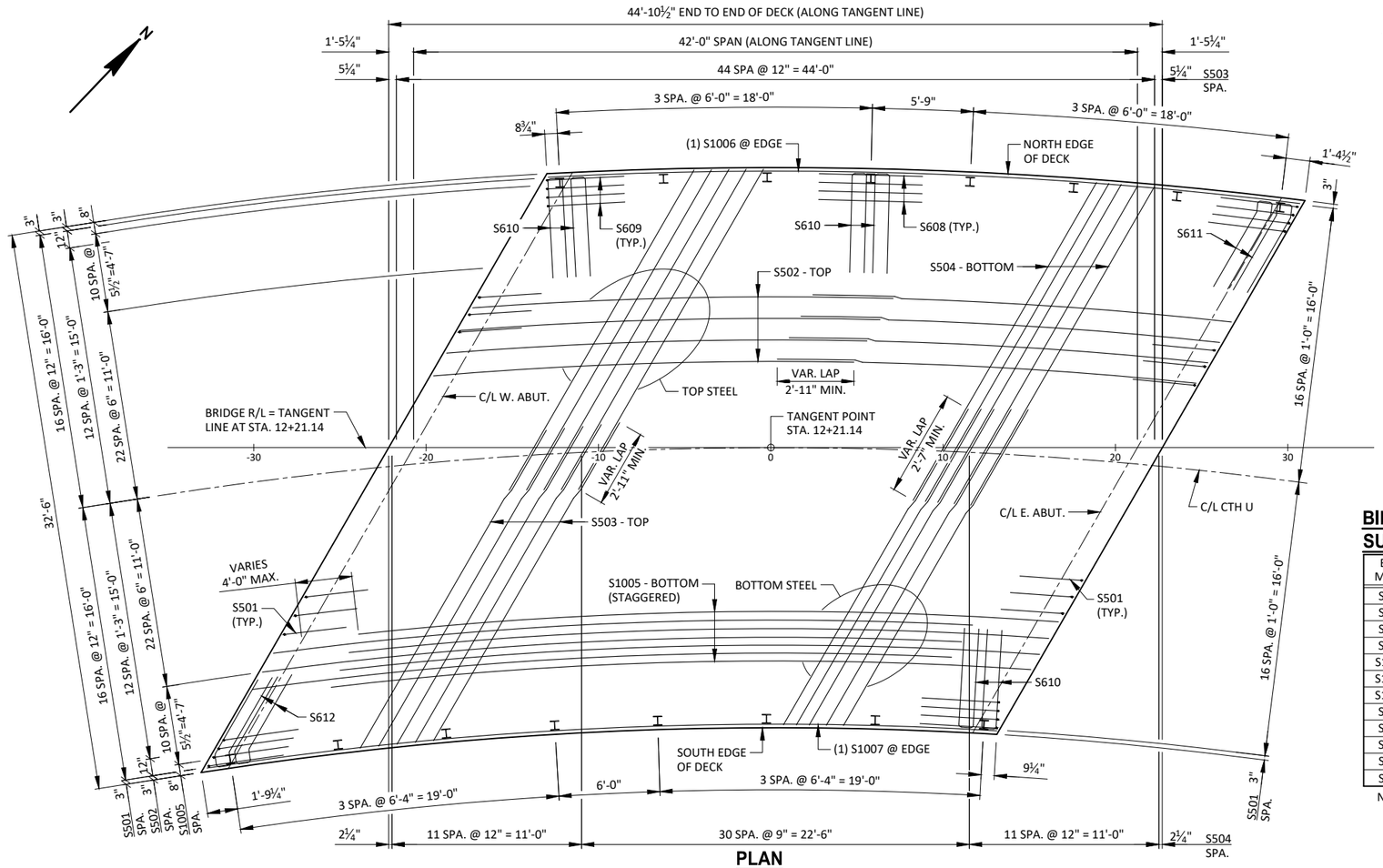


PLAN

SURVEY TOP OF DECK ELEVATIONS

	W. ABUT.	0.50 PT.	E. ABUT.
NORTH EDGE OF DECK			
CENTER LINE			
SOUTH 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.

TANGENT LINE OFFSETS AT EDGE OF DECK

TANGENT OFFSET LOCATION	NORTH EDGE OF DECK TAN. OFFSET	SOUTH EDGE OF DECK TAN. OFFSET
-30	--	18'-4¼"
-20	--	17'-2¼"
-10	16'-0½"	16'-5¾"
0	16'-3"	16'-3"
+10	16'-0½"	16'-5¾"
+20	16'-5¼"	--
+30	14'-5"	--

BILL OF BARS
SUPERSTRUCTURE

19,410 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	66	7-6	X	X	END OF DECK
S502	54	24-6		X	SLAB - TOP - LONGIT.
S503	102	21-4		X	SLAB - TOP - TRANS.
S504	106	21-2		X	SLAB - BOTTOM - TRANS.
S1005	65	40-8	X	X	SLAB - BOTTOM - LONGIT.
S1006	1	43-8	X	X	SLAB - BOTTOM - LONGIT. - N. EDGE
S1007	1	46-0	X	X	SLAB - BOTTOM - LONGIT. - S. EDGE
S608	48	6-0		X	RAIL POSTS - INTERIOR
S609	16	6-0	X	X	RAIL POSTS - ENDS
S610	28	12-0	X	X	RAIL POSTS
S611	2	12-0	X	X	RAIL POSTS - ENDS
S612	2	12-0	X	X	RAIL POSTS - ENDS

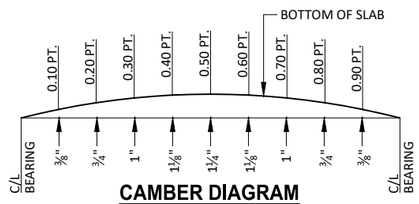
NOTES: THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

SOME BARS HAVE BEEN OMITTED FOR CLARITY.

STATE PROJECT NUMBER

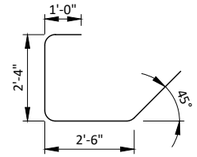
5527-00-70



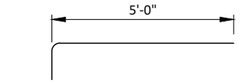
CAMBER DIAGRAM

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.

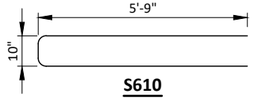
TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB OR CENTER LINE FOLLOW THIS PROCEDURE:
TOP OF SLAB ELEVATION AT FINAL GRADE
-SLAB THICKNESS
+CAMBER
+FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (COMPUTED BY CONTRACTOR)
=TOP OF SLAB FALSEWORK ELEVATION.



S501



S609



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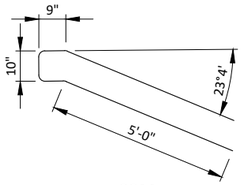
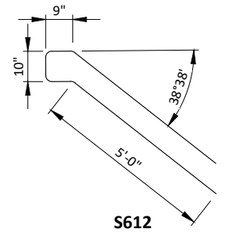
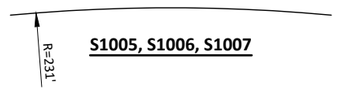


S611



S612



S1005, S1006, S1007

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.

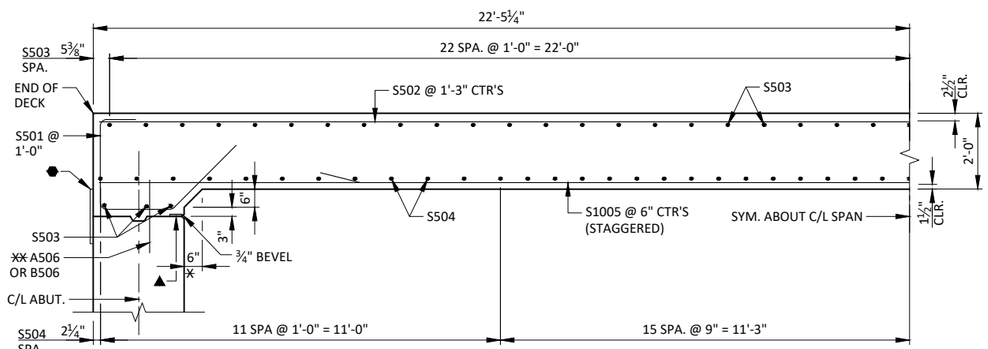
THE SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

LEGEND

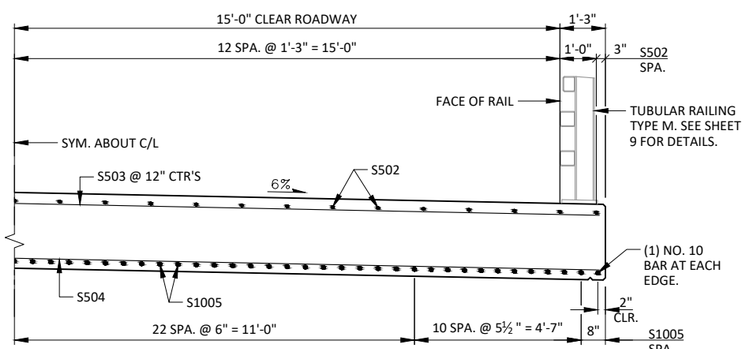
- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ✕ DIMENSION IS NORMAL TO THE C/L OF SUBSTRUCTURE UNITS.
- ✕✕ SEE SHEET 4 OR 6 FOR PLACEMENT OF A506 OR B506 BARS.

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.
W. EDGE	783.03	782.97	782.91	782.84	782.78	782.71	782.65	782.58	782.52	782.45	782.39
C/L	782.23	782.16	782.09	782.02	781.95	781.88	781.81	781.74	781.67	781.60	781.53
E. EDGE	781.48	781.40	781.32	781.24	781.16	781.08	781.01	780.93	780.85	780.77	780.69



PARTIAL LONGITUDINAL SECTION THROUGH ROADWAY



PARTIAL CROSS SECTION THROUGH ROADWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-194

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SUPERSTRUCTURE

SHEET 8 OF 9

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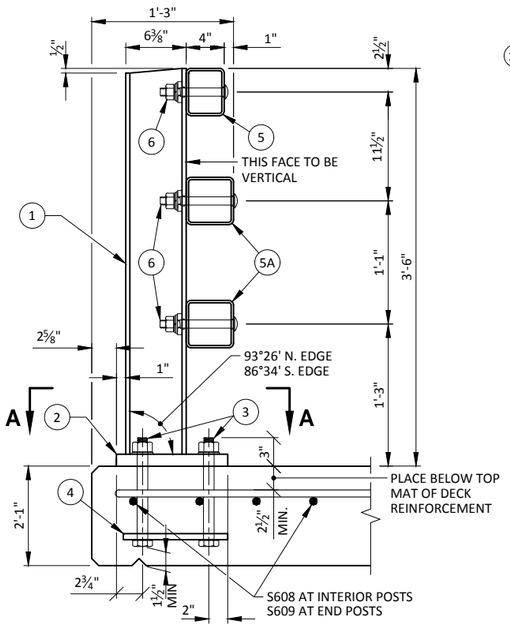
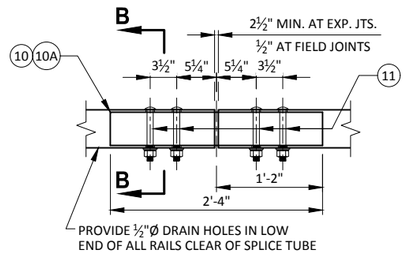
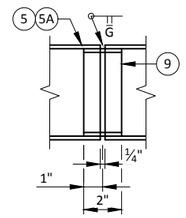
FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\STRUCTURE\CAD FILES\FINALS\06 SUPERSTRUCTURE.DWG
PLOT DATE : 1/31/2018 10:27:59 AM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1 IN:1 FT
LAYOUT : SUPERSTRUCTURE



SECTION THROUGH RAILING ON DECK

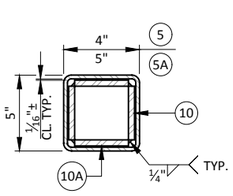


FIELD ERECTION JOINT DETAIL

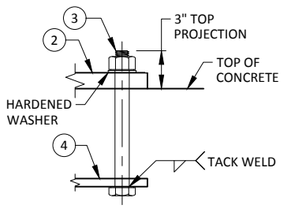


SHOP RAIL SPLICE DETAIL

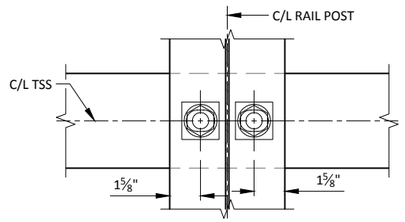
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



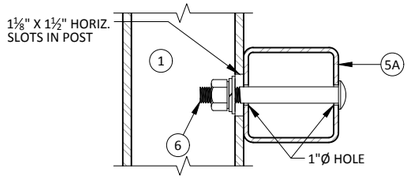
SECTION B-B



ANCHOR BOLTS



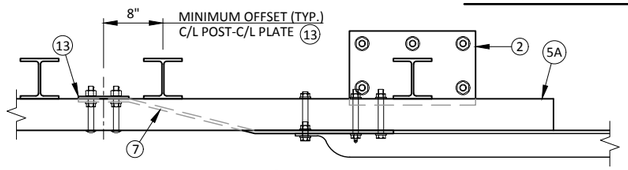
SECTION THROUGH POST WEB



SECTION THROUGH RAIL

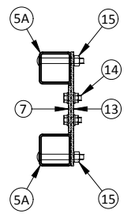
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

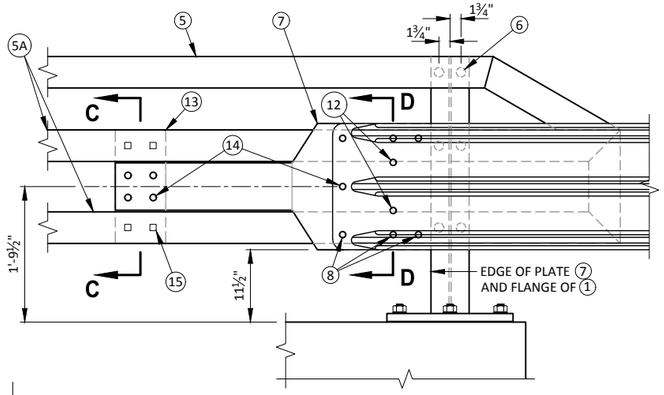


TOP VIEW AT END POST

(THRIE BEAM RAIL ATTACHMENT)

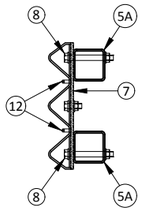


SECTION C-C

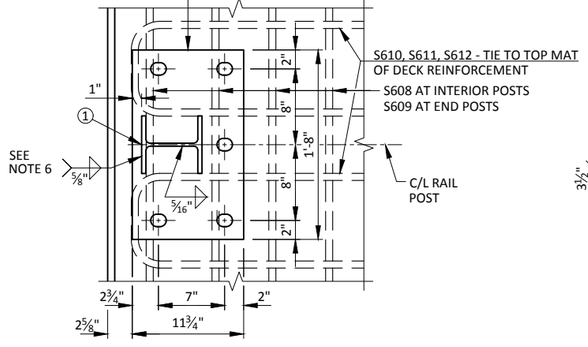


DETAIL AT END POST

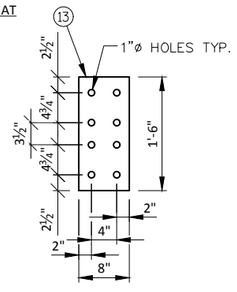
(THRIE BEAM RAIL ATTACHMENT)



SECTION D-D

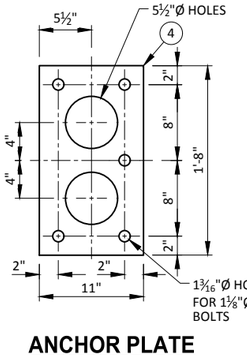


SECTION A-A



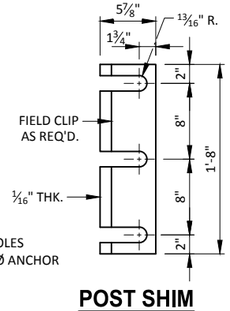
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

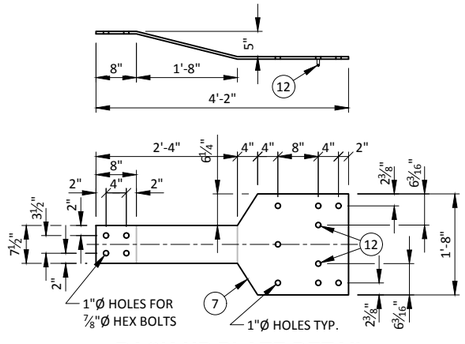


ANCHOR PLATE

AT RAIL TO DECK CONNECTION

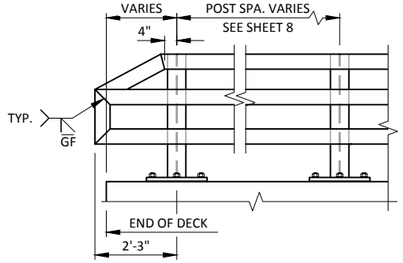


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

LEGEND

1. W6x25 WITH 1⅛" x 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼ "x11¾"x1'-8" WITH 1⁵⁄₁₆"x1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
3. ASTM A449 - 1½" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). FIVE 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 > 1'-4" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS.
4. ⅝"x11"x1'-8" ANCHOR PLATE (GALVANIZED) WITH 1³⁄₁₆" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TSS 5x4x¼ STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TSS 5x5x¼ STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, ³⁄₁₆"x1⅝"x1⅝" WASHER, AND LOCK WASHER (TWO REQ'D. AT EACH RAIL TO POST LOCATION).
7. ½" THK. BACK-UP PLATE WITH (2) ⅞"x1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
8. 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. SIX HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜"x3⅝"x2'-4" PLATE. TWO PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜"x2⅝"x2'-4" PLATE USED IN NO. 5, ⅜"x3⅝"x2'-4" PLATE USED IN NO. 5A. TWO PER RAIL.
11. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE ¹⁵⁄₁₆"x1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND ¹⁵⁄₁₆"x2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
12. ⅞" DIA. BY 1½" LONG THREADED SHOP WELDED STUDS (TWO REQ'D).
13. ⅜"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. ⅞" DIA. x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (FIVE REQ'D.).
15. 1" DIA. HOLES IN TUBES NO. 5A FOR ⅞" A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (FOUR REQ'D.). FOUR HOLES IN TUBES.

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-12-194" 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 MASH EVALUATION CRITERIA FOR TEST LEVEL 2 (TL-2).

STATE PROJECT NUMBER

5527-00-70

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-194

DRAWN BY JZ | PLANS CK'D. PTB

TUBULAR RAILING TYPE M

SHEET 9 OF 9

60

EARTHWORK-MAINLINE - STAGE 1 - BY OTHERS

STATION	AREA (SF) CUT	SALVAGED/ UNUSABLE PAV'T MATERIAL	FILL	ROCK EXC	INCREMENTAL VOL (CY) CUT NOTE 1	SALVAGED/ UNUSABLE PAV'T MATERIAL NOTE 2	FILL NOTE 3	ROCK EXC	EXPANDED ROCK (1.1) NOTE 4	FILL (25%)	CUMMULATIVE VOLUME (CY) CUT 1.00 NOTE 1	FILL	ROCK EXC	EXPANDED ROCK (1.1) NOTE 4	FILL (25%) NOTE 5	MASS ORDINATE NOTE 6
9+90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10+00	19	0	0	0	4	0	0	0	0	0	4	0	0	0	0	4
10+50	33	0	0	0	49	0	0	0	0	0	53	0	0	0	0	53
11+00	16	0	5	0	45	0	3	0	0	6	98	3	0	0	6	92
11+00	0	0	71	0	0	0	0	0	0	0	98	3	0	0	6	92
11+50	0	0	71	0	0	0	131	0	0	163	98	134	0	0	169	-71
11+84	0	0	71	0	0	0	88	0	0	111	98	222	0	0	280	-182
11+84	26	0	193	0	0	0	0	0	0	0	98	222	0	0	280	-182
11+98	26	0	193	0	13	0	100	0	0	123	111	322	0	0	403	-292
11+98	0	0	0	0	0	0	0	0	0	0	111	322	0	0	403	-292
12+43	0	0	0	0	0	0	0	0	0	0	111	322	0	0	403	-292
12+43	27	0	120	0	0	0	0	0	0	0	111	322	0	0	403	-292
12+50	67	0	191	0	12	0	40	0	0	50	123	362	0	0	453	-330
13+00	9	0	122	0	71	0	290	0	0	362	194	652	0	0	815	-621
13+50	9	0	19	0	17	0	130	0	0	163	211	782	0	0	978	-767
14+00	0	0	0	0	9	0	18	0	0	22	220	800	0	0	1000	-780
			COLUMN SUBTOTALS =		220	0	800	0	0	1000						

EARTHWORK-PLUM RUN ROAD - STAGE 1 - BY OTHERS

STATION	AREA (SF) CUT	SALVAGED/ UNUSABLE PAV'T MATERIAL	FILL	ROCK EXC	INCREMENTAL VOL (CY) CUT NOTE 1	SALVAGED/ UNUSABLE PAV'T MATERIAL NOTE 2	FILL NOTE 3	ROCK EXC	EXPANDED ROCK (1.1) NOTE 4	FILL (25%)	CUMMULATIVE VOLUME (CY) CUT 1.00 NOTE 1	FILL	ROCK EXC	EXPANDED ROCK (1.1) NOTE 4	FILL (25%) NOTE 5	MASS ORDINATE NOTE 6
50+16	4	0	266	0	0	0	0	0	0	0	0	0	0	0	0	0
50+31	4	0	266	0	3	0	147	0	0	184	3	147	0	0	184	-181
50+31	0	0	0	0	0	0	0	0	0	0	3	147	0	0	184	-181
50+46	0	0	0	0	0	0	0	0	0	0	3	147	0	0	184	-181
50+46	251	0	15	0	0	0	0	0	0	0	3	147	0	0	184	-181
50+50	251	0	15	4	38	0	2	0	0	3	41	149	0	0	186	-145
51+00	1	0	6	177	236	0	19	168	184	-204	277	168	168	184	-18	295
51+50	6	0	0	86	7	0	5	243	266	-324	284	173	411	450	-342	626
52+00	5	0	1	21	11	0	1	99	108	-132	295	174	510	558	-474	769
52+50	0	0	0	0	5	0	1	20	22	-26	300	175	530	580	-500	800
			COLUMN SUBTOTALS =		300	0	175	530	580	-500						

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	REDUCED MARSH THAT CAN BE USED IN FILL
5 - FILL (25%)	FILL 25%: (FILL -REDUCED MARSH IN FILL)*1.25
6 - MASS ORDINATE	(CUT - FILL (25%))
	EXPANDED ROCK FACTOR = 1.1
	FILL 25%: (UNEXPANDED FILL - (ROCK * ROCK FACTOR))*1.25
	(CUT - FILL (25%))

EARTHWORK-MAINLINE - STAGE 2 - BY OTHERS

	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
9+90	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10+00	46	0	1	0	17	0	4	0	0	5	17	4	0	0	5	12
10+50	37	0	4	4	78	0	3	3	4	-1	95	7	3	4	4	91
11+00	17	0	0	36	51	0	0	37	41	-53	146	7	40	45	-49	195
11+00	0	0	0	0	0	0	0	0	0	0	146	7	40	45	-49	195
11+50	0	0	0	0	0	0	0	0	0	0	146	7	40	45	-49	195
11+84	0	0	0	0	0	0	0	0	0	0	146	7	40	45	-49	195
11+84	0	0	0	0	0	0	0	0	0	0	146	7	40	45	-49	195
11+98	0	0	0	0	0	0	0	0	0	0	146	7	40	45	-49	195
11+98	0	0	0	0	0	0	0	0	0	0	146	7	40	45	-49	195
12+43	0	0	0	0	0	0	0	0	0	0	146	7	40	45	-49	195
12+43	0	0	0	0	0	0	0	0	0	0	146	7	40	45	-49	195
12+50	57	0	0	0	7	0	0	0	0	0	153	7	40	45	-49	202
13+00	56	0	0	0	105	0	0	0	0	0	258	7	40	45	-49	307
13+50	48	0	3	0	97	0	5	0	0	6	355	12	40	45	-43	398
14+00	43	0	0	0	85	0	4	0	0	5	440	16	40	45	-38	478
			COLUMN SUBTOTALS =		440	0	16	40	45	-38						

EARTHWORK-PLUM RUN ROAD - STAGE 2 - BY OTHERS

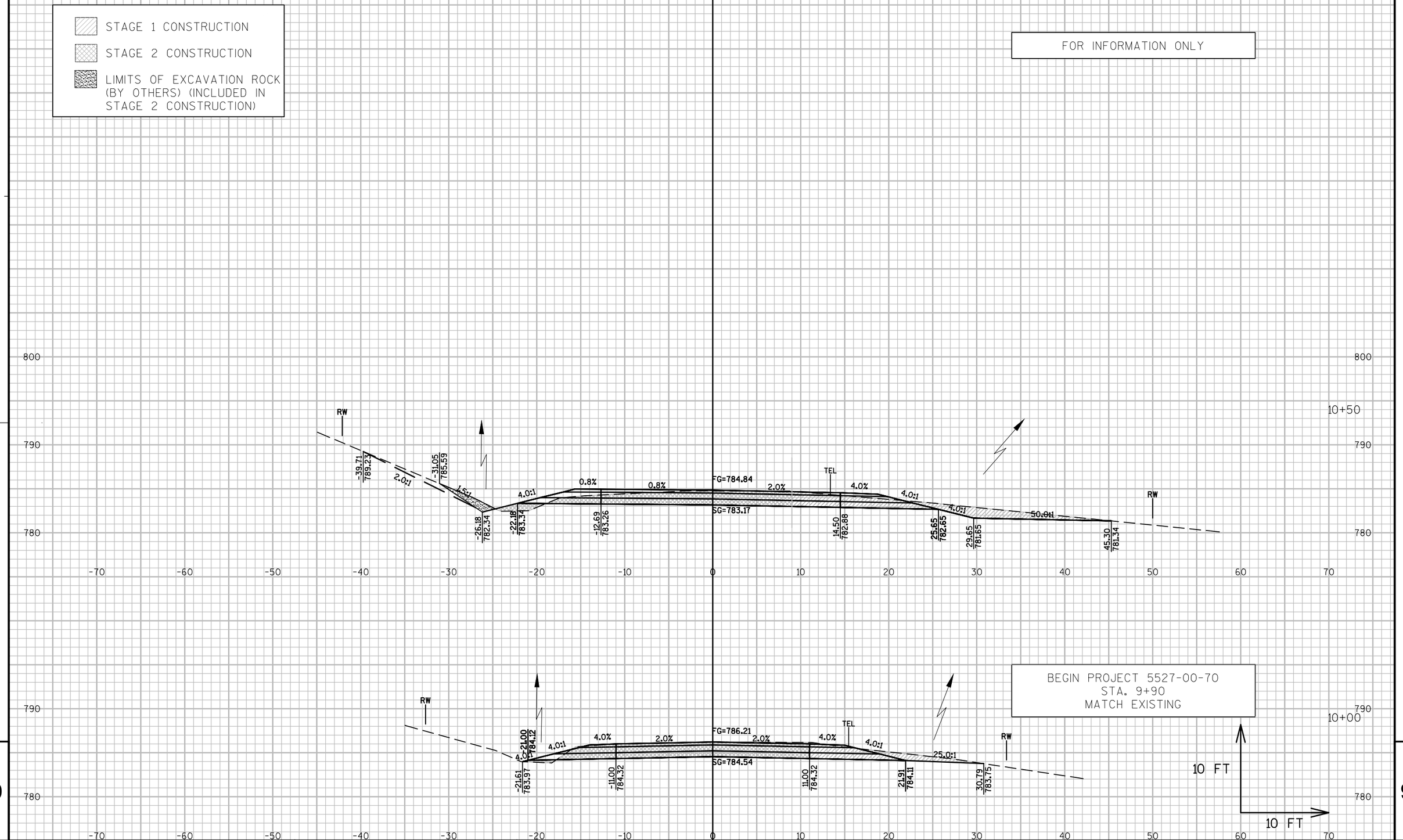
	AREA (SF)				INCREMENTAL VOL (CY)						CUMMULATIVE VOLUME (CY)					
STATION	CUT	SALVAGED/ UNUSABLE PAV'T MATERIAL	FILL	ROCK EXC	CUT NOTE 1	SALVAGED/ UNUSABLE PAV'T MATERIAL NOTE 2	FILL NOTE 3	ROCK EXC	EXPANDED ROCK (1.1) NOTE 4	FILL (25%)	CUT 1.00 NOTE 1	FILL	ROCK EXC	EXPANDED ROCK (1.1) NOTE 4	FILL (25%) NOTE 5	MASS ORDINATE NOTE 6
50+16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50+31	16	0	0	0	9	0	0	0	0	0	9	0	0	0	0	9
50+31	19	0	266	0	0	0	0	0	0	0	9	0	0	0	0	9
50+46	478	0	15	0	138	0	80	0	0	100	147	80	0	0	100	47
50+46	226	0	0	0	0	0	0	0	0	0	147	80	0	0	100	47
50+50	226	0	0	0	34	0	0	0	0	0	181	80	0	0	100	81
51+00	588	0	0	0	755	0	0	0	0	0	936	80	0	0	100	836
51+50	9	0	0	0	555	0	0	0	0	0	1491	80	0	0	100	1391
52+00	24	0	0	0	32	0	0	0	0	0	1523	80	0	0	100	1423
52+50	37	0	0	0	57	0	0	0	0	0	1580	80	0	0	100	1480
				COLUMN SUBTOTALS =	1580	0	80	0	0	100						
				MAINLINE - STAGE 1	220	0	800	0	0	1000	220	800	0	0	1000	-780
				MAINLINE - STAGE 2	440	0	16	40	45	-38	660	816	40	45	962	-302
				PLUM RUN ROAD - STAGE 1	300	0	175	530	580	-500	960	991	570	625	462	498
				PLUM RUN ROAD - STAGE 2	1580	0	80	0	0	100	2540	1071	570	625	562	1978
				F.E. - STAGE 2	15	0	0	0	0	0	2555	1071	570	625	562	1993
					2555	0	1071	570	625	562						

STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

LIMITS OF EXCAVATION ROCK (BY OTHERS) (INCLUDED IN STAGE 2 CONSTRUCTION)

FOR INFORMATION ONLY



PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET 63	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\DESIGN\CORRIDORS\CTH U CORRIDOR.DWG PLOT DATE : 1/9/2018 2:08 PM PLOT BY : STRINE, THERESA PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

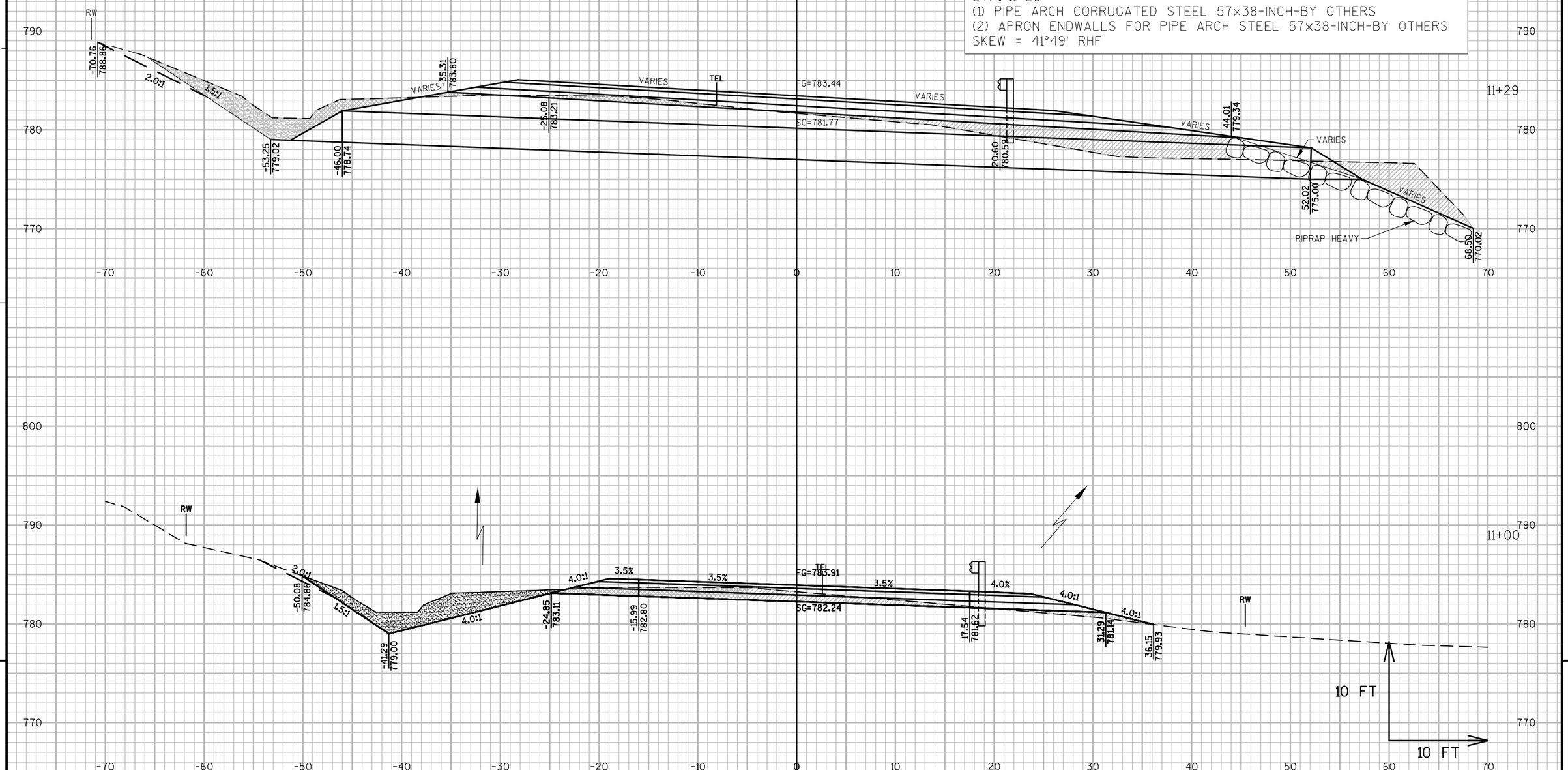
STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

LIMITS OF EXCAVATION ROCK (BY OTHERS) (INCLUDED IN STAGE 2 CONSTRUCTION)

FOR INFORMATION ONLY

STA. 11+29
(1) PIPE ARCH CORRUGATED STEEL 57x38-INCH-BY OTHERS
(2) APRON ENDWALLS FOR PIPE ARCH STEEL 57x38-INCH-BY OTHERS
SKEW = 41°49' RHF



9

9

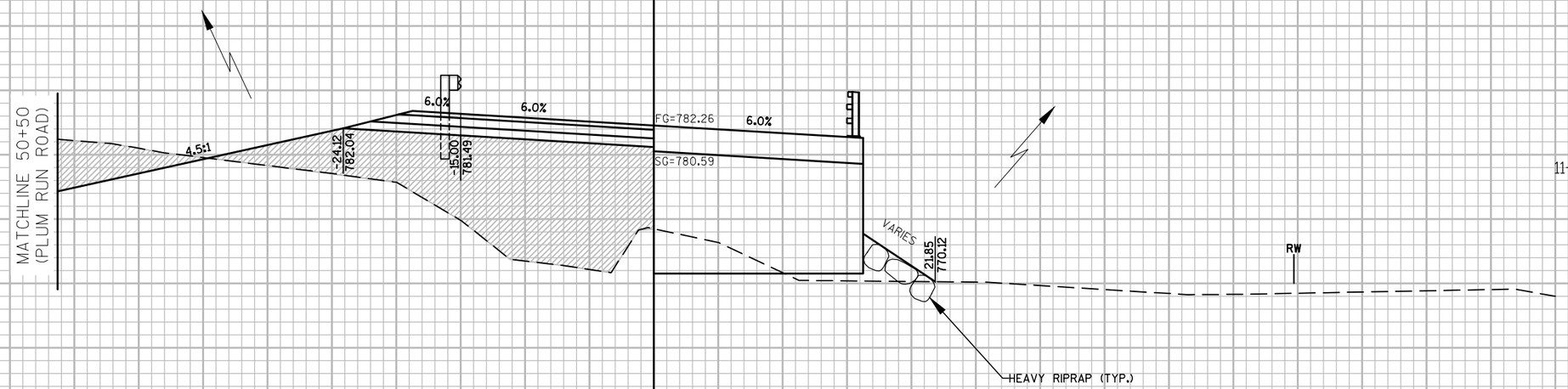
PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET 64	E

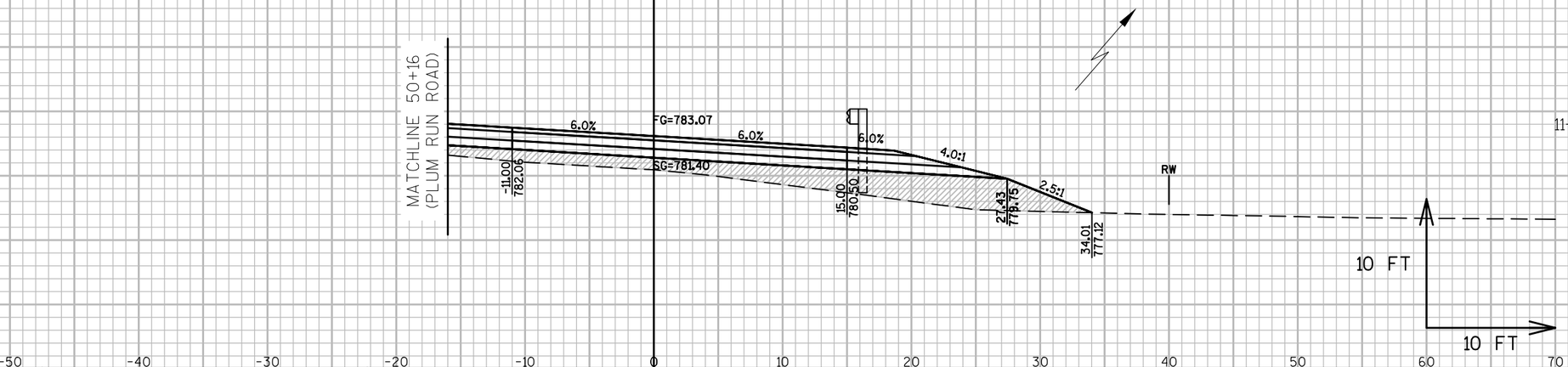
FOR INFORMATION ONLY

STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

STRUCTURE B-12-194
REQ'D





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

9

9

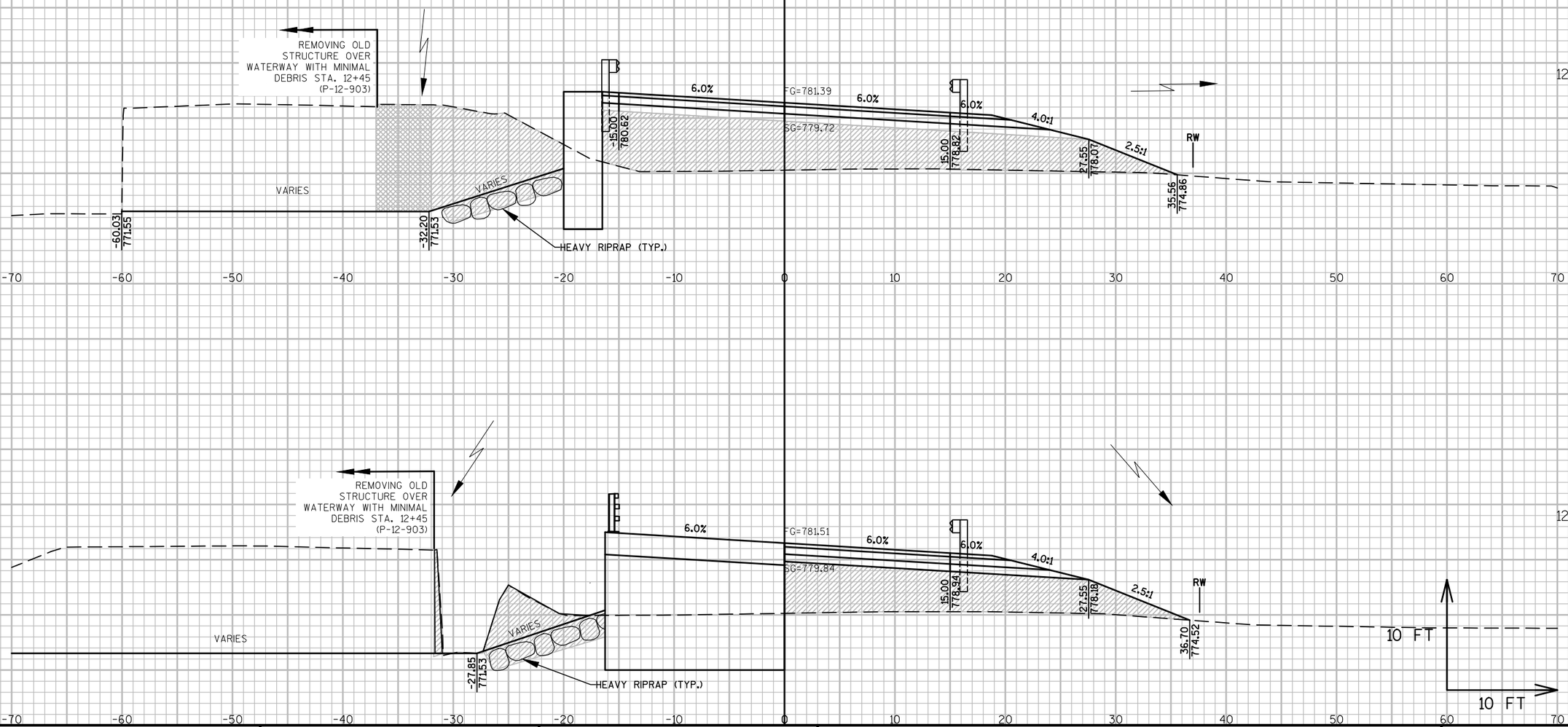
PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET 65	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\DESIGN\CORRIDORS\CTH U CORRIDOR.DWG PLOT DATE : 1/9/2018 2:09 PM PLOT BY : STRINE, THERESA PLOT NAME : PLOT SCALE : 1 IN:10 FT

FOR INFORMATION ONLY

STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

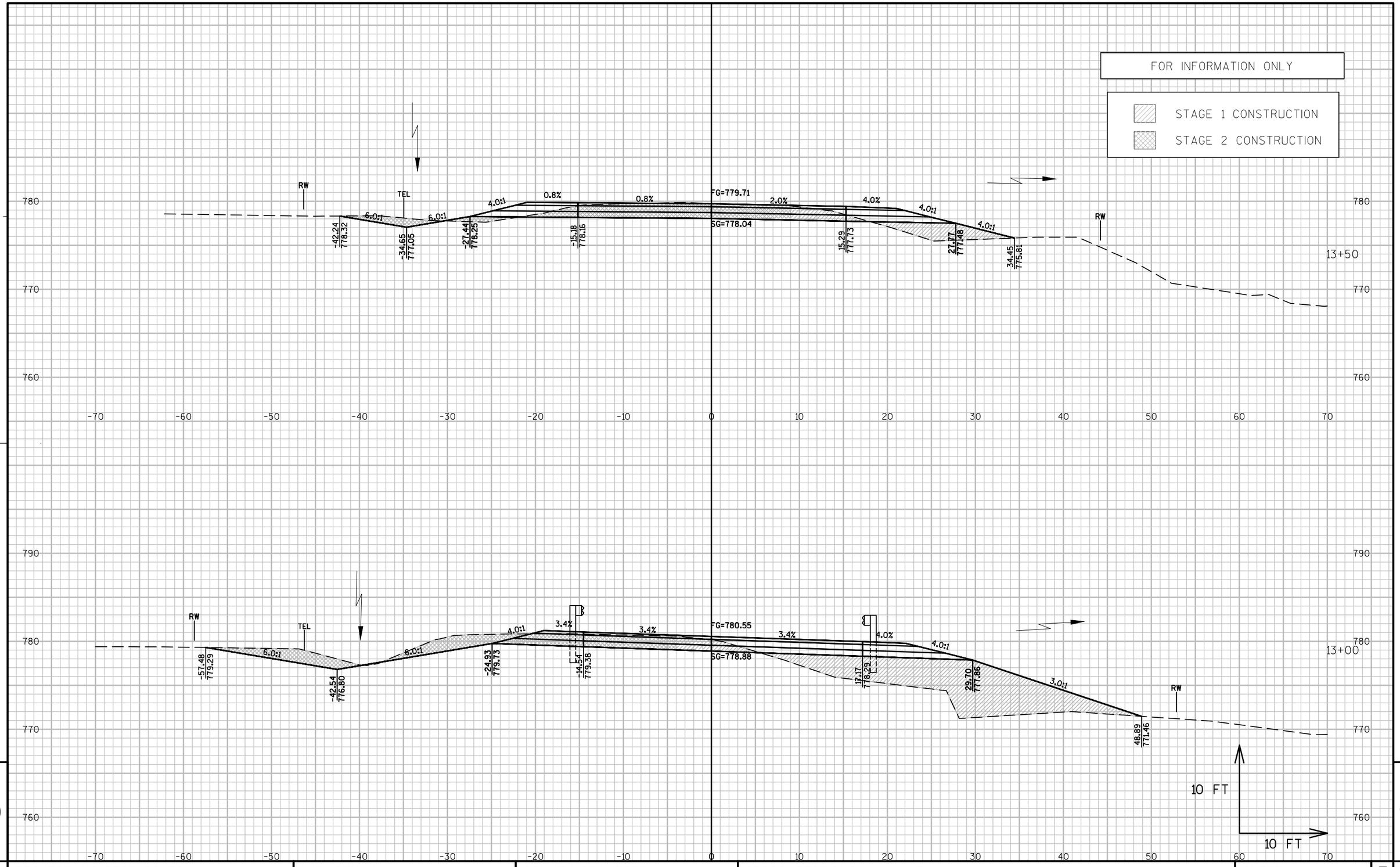


PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET 66	E

FOR INFORMATION ONLY

STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

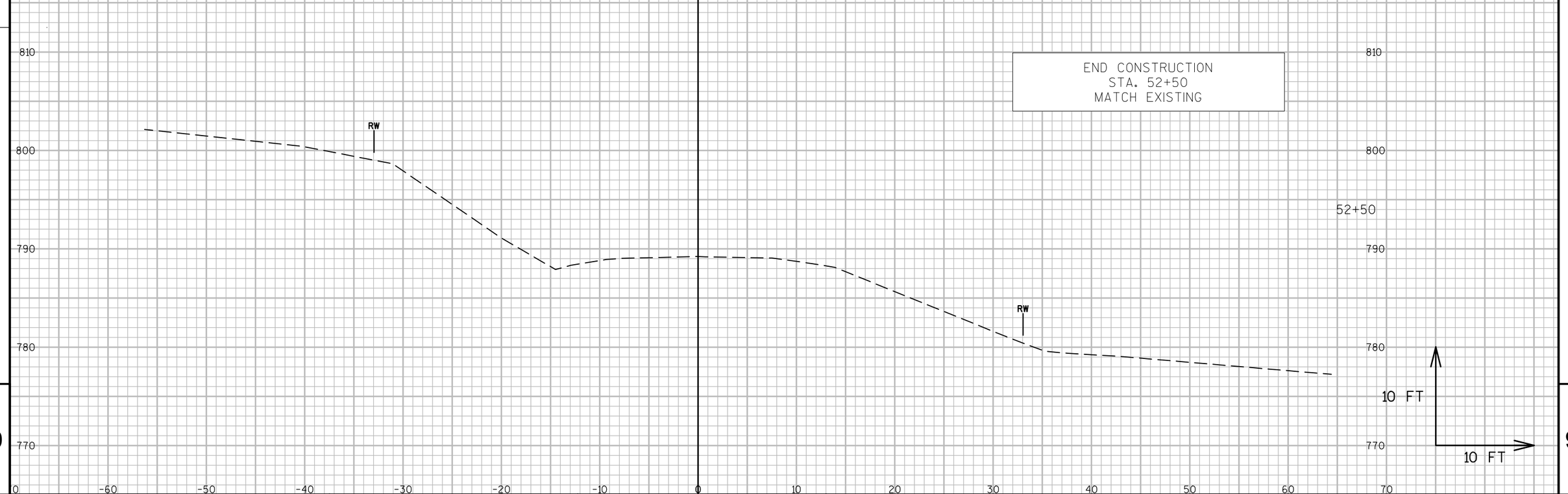


PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET 67 E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\DESIGN\CORRIDORS\CTH U CORRIDOR.DWG PLOT DATE : 1/9/2018 2:11 PM PLOT BY : STRINE, THERESA PLOT NAME : PLOT SCALE : 1 IN:10 FT

FOR INFORMATION ONLY

END CONSTRUCTION
STA. 52+50
MATCH EXISTING



9

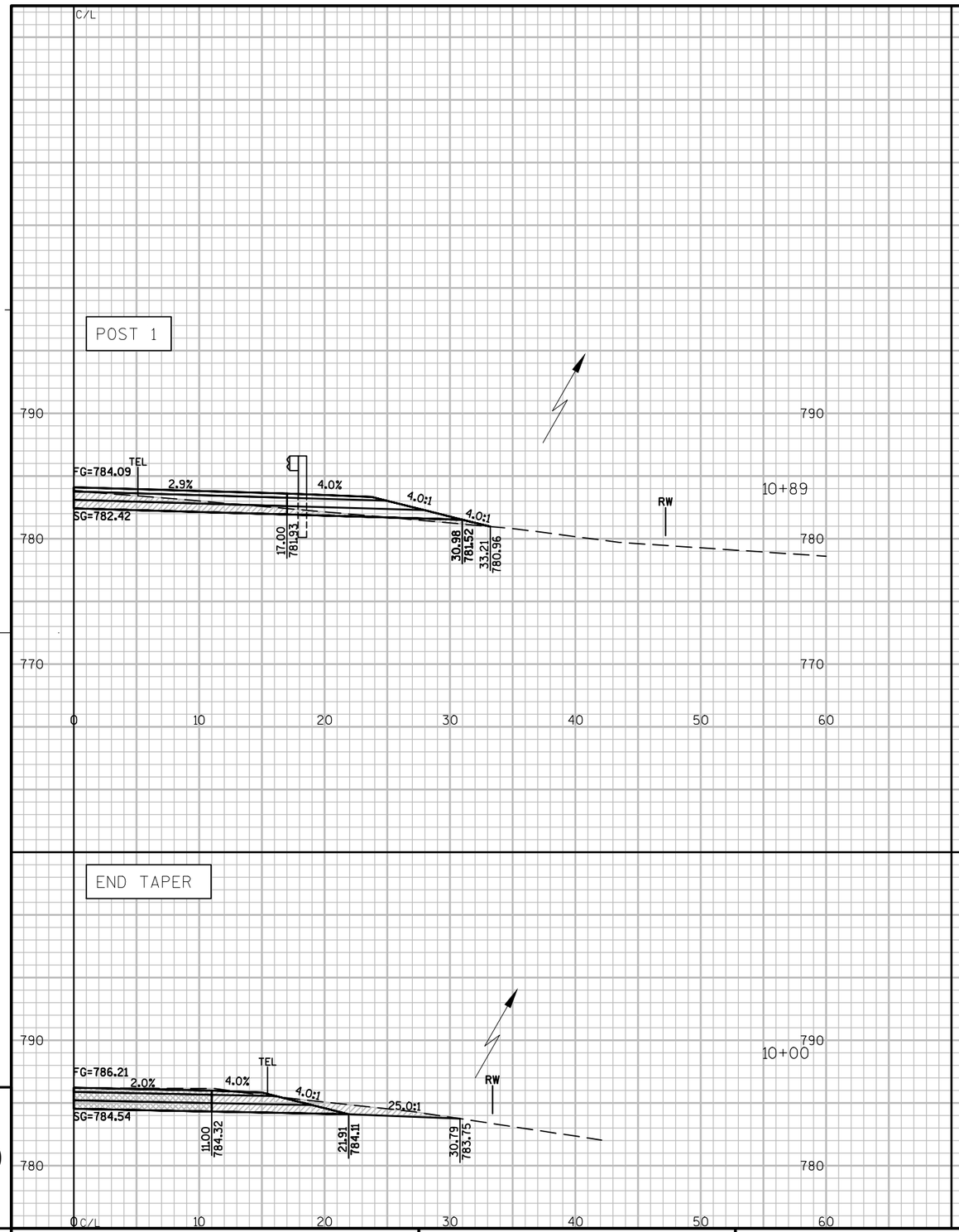
9

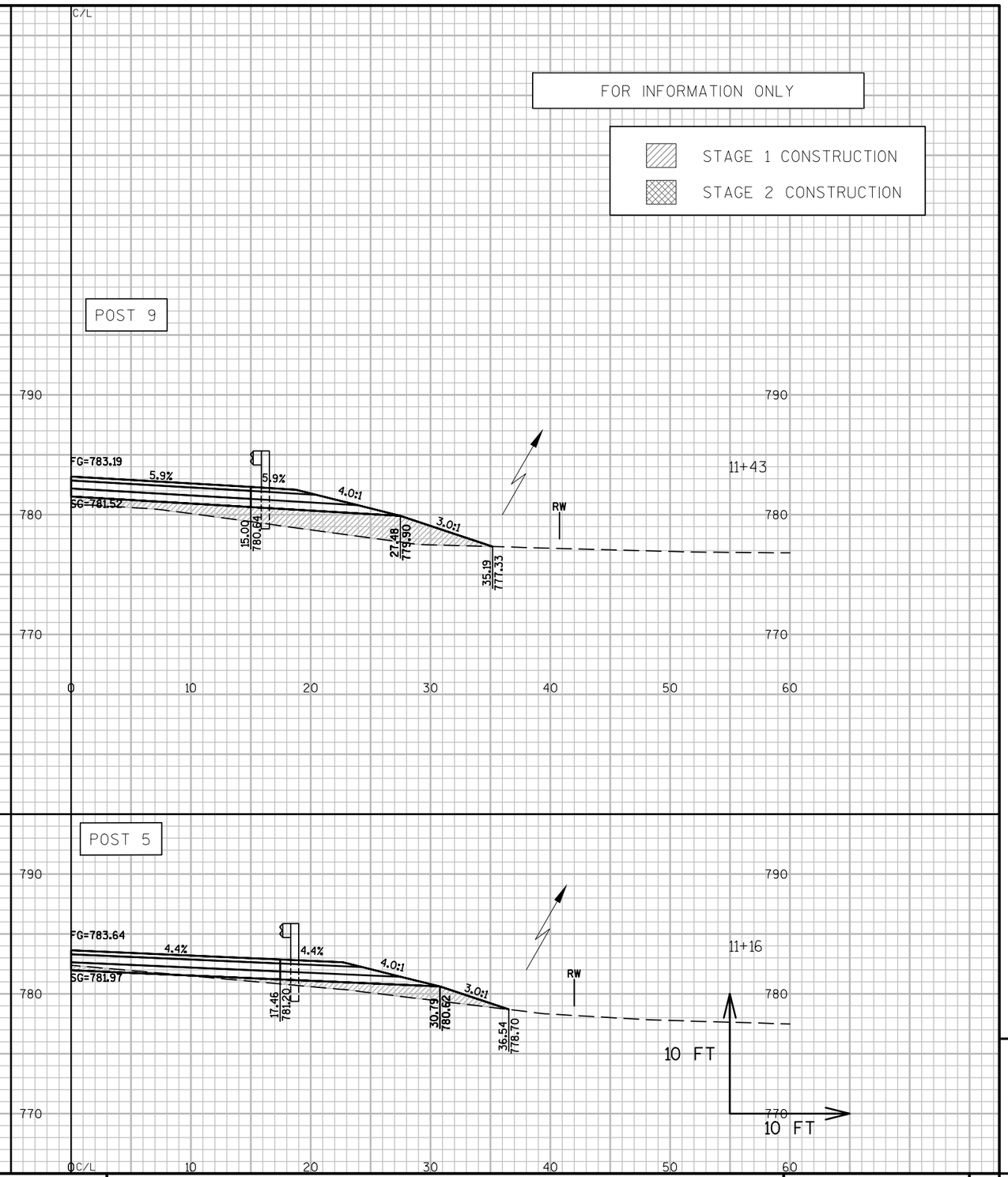
PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: PLUM RUN ROAD	SHEET 68	E

FOR INFORMATION ONLY

STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION



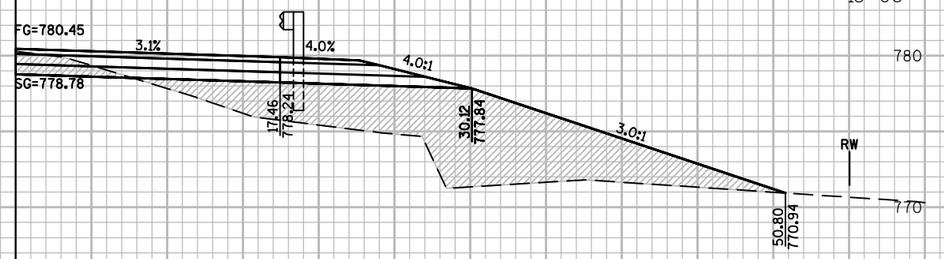


9

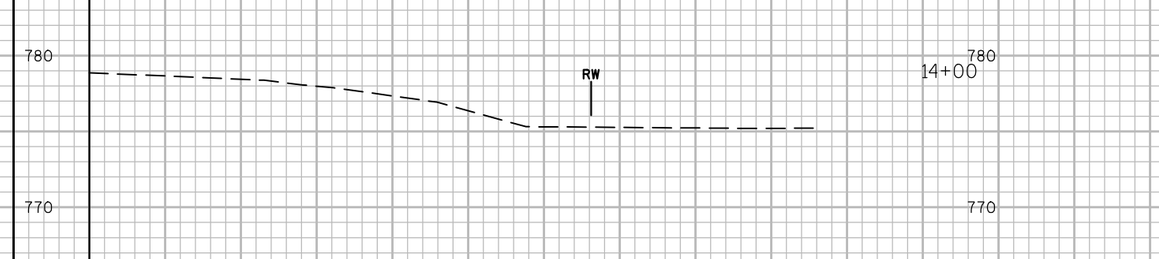
9

PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL SECTIONS)	SHEET 69	E

POST 5



END TAPER

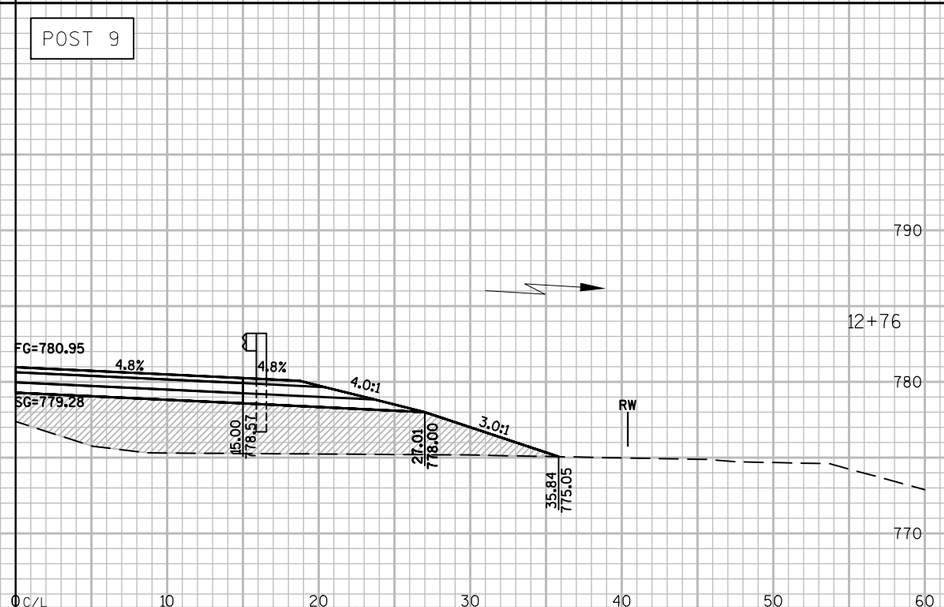


FOR INFORMATION ONLY

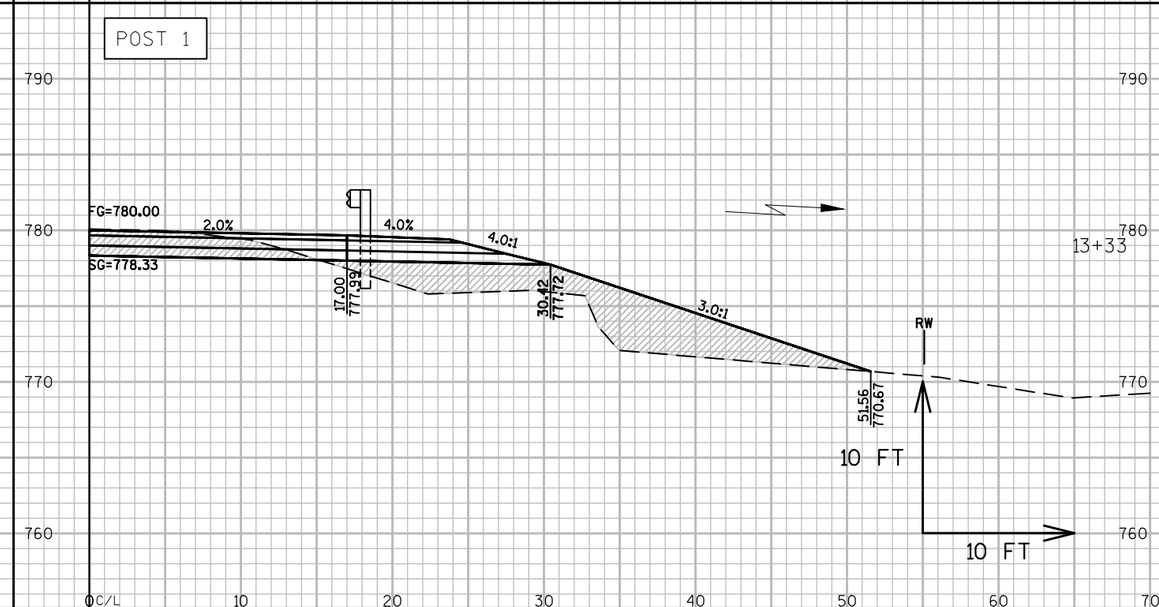
STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

POST 9



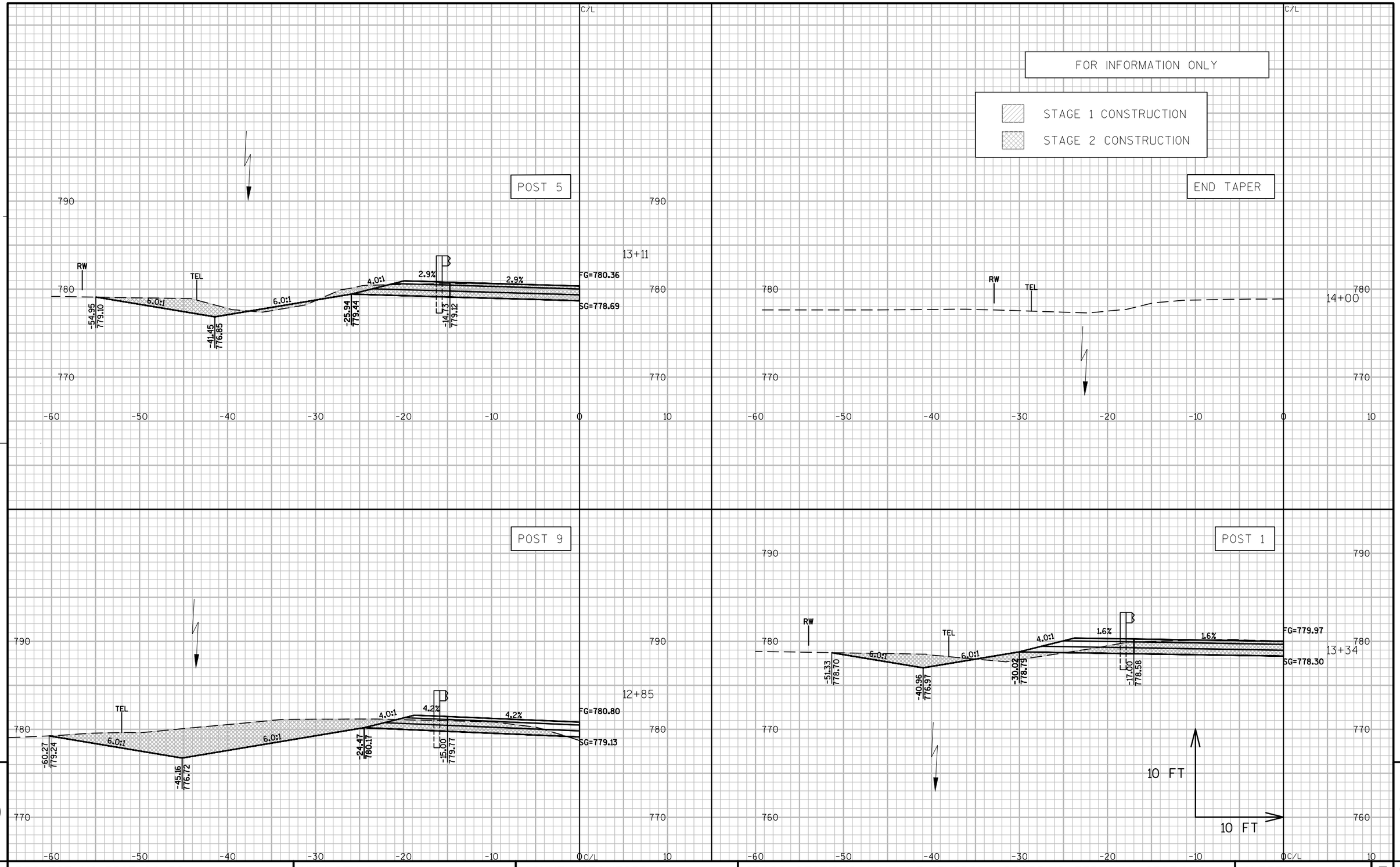
POST 1



PROJECT NO:5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL SECTIONS)	SHEET 70	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\DESIGN\CORRIDORS\CTH U CORRIDOR.DWG PLOT DATE : 1/9/2018 2:07 PM PLOT BY : STRINE, THERESA PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

9

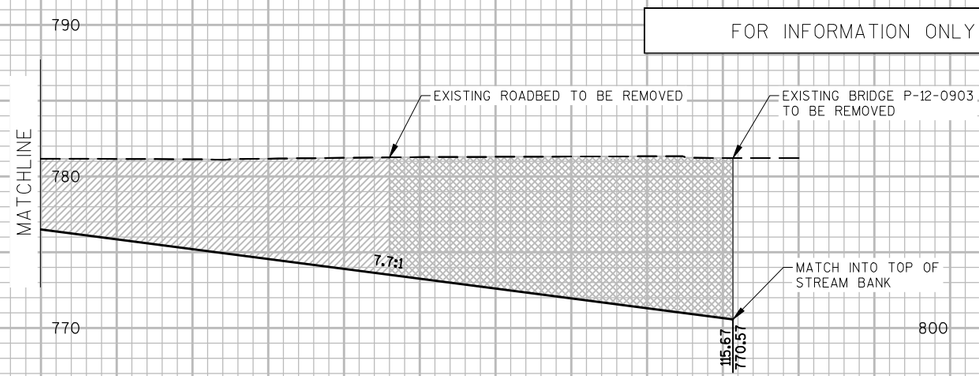
PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL SECTIONS)	SHEET 71	E

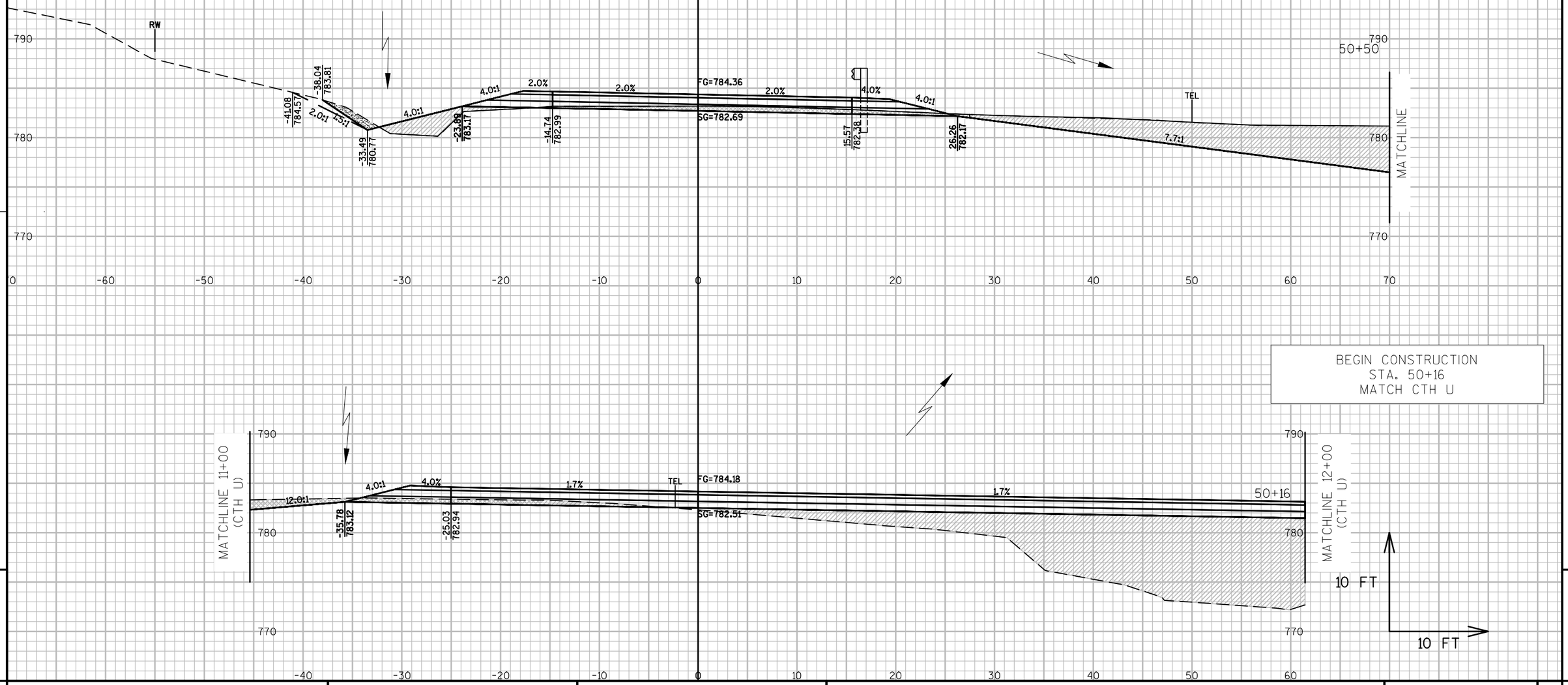
STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

LIMITS OF EXCAVATION ROCK (BY OTHERS) (INCLUDED IN STAGE 1 CONSTRUCTION)

FOR INFORMATION ONLY





PROJECT NO:5527-00-70	HWY:CTH U	COUNTY:CRAWFORD	CROSS SECTIONS: PLUM RUN ROAD	SHEET	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\DESIGN\CORRIDORS\CTH U CORRIDOR.DWG PLOT DATE : 1/10/2018 3:30 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : 1 IN:10 FT

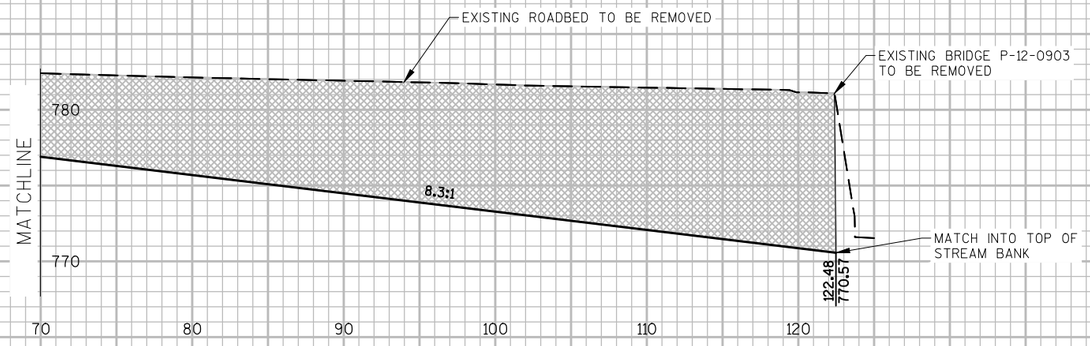
WISDOT/CADDS SHEET 49

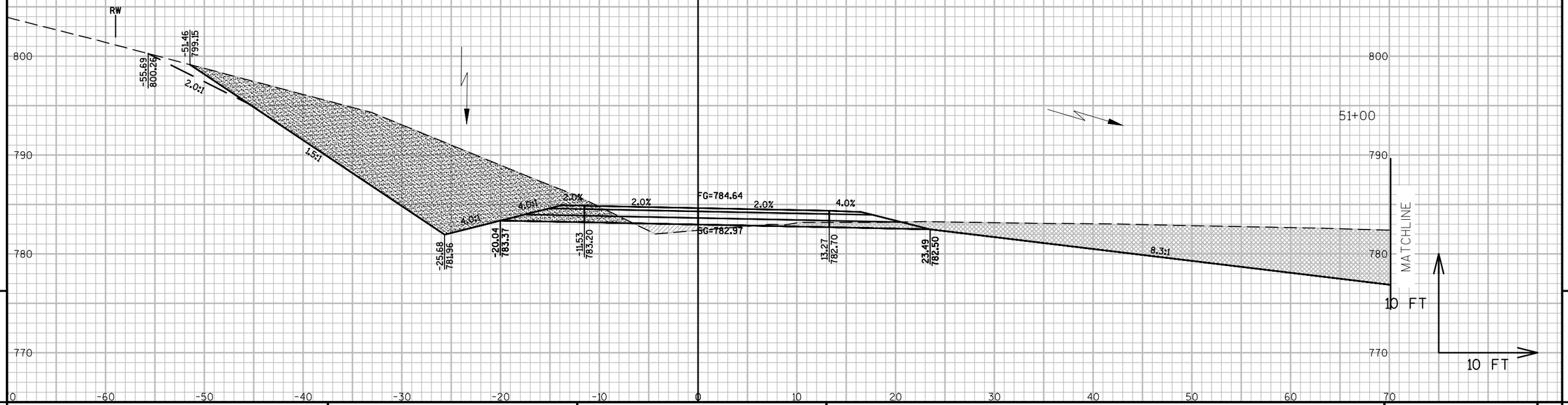
STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

LIMITS OF EXCAVATION ROCK (BY OTHERS) (INCLUDED IN STAGE 1 CONSTRUCTION)

FOR INFORMATION ONLY





9

9

PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: PLUM RUN ROAD	SHEET 73	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\DESIGN\CORRIDORS\CTH U CORRIDOR.DWG PLOT DATE : 1/10/2018 3:42 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : **********

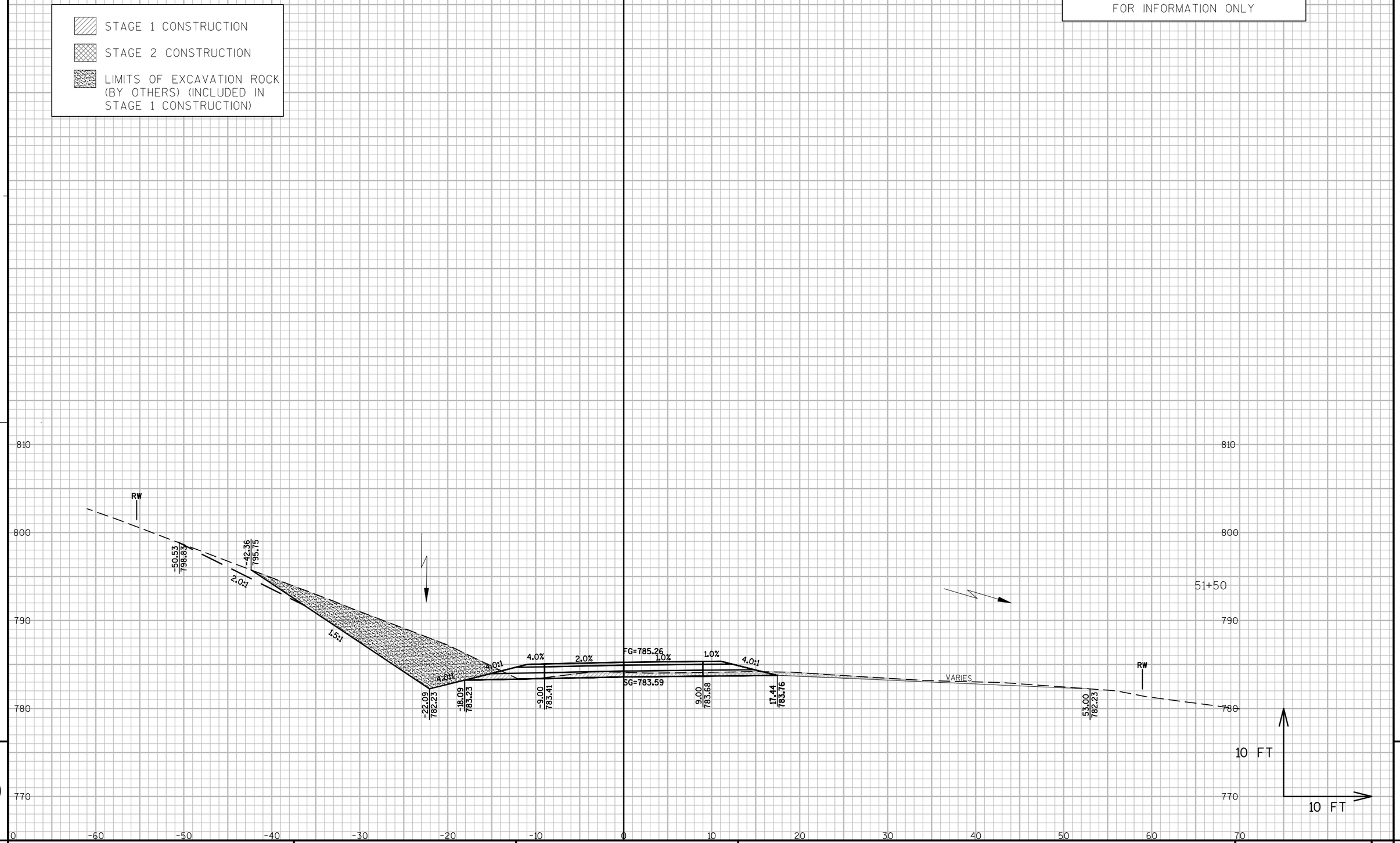
WISDOT/CADDS SHEET 49

STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

LIMITS OF EXCAVATION ROCK (BY OTHERS) (INCLUDED IN STAGE 1 CONSTRUCTION)

FOR INFORMATION ONLY



PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: PLUM RUN ROAD	SHEET 74	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\DESIGN\CORRIDORS\CTH U CORRIDOR.DWG PLOT DATE : 1/10/2018 3:59 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : **********

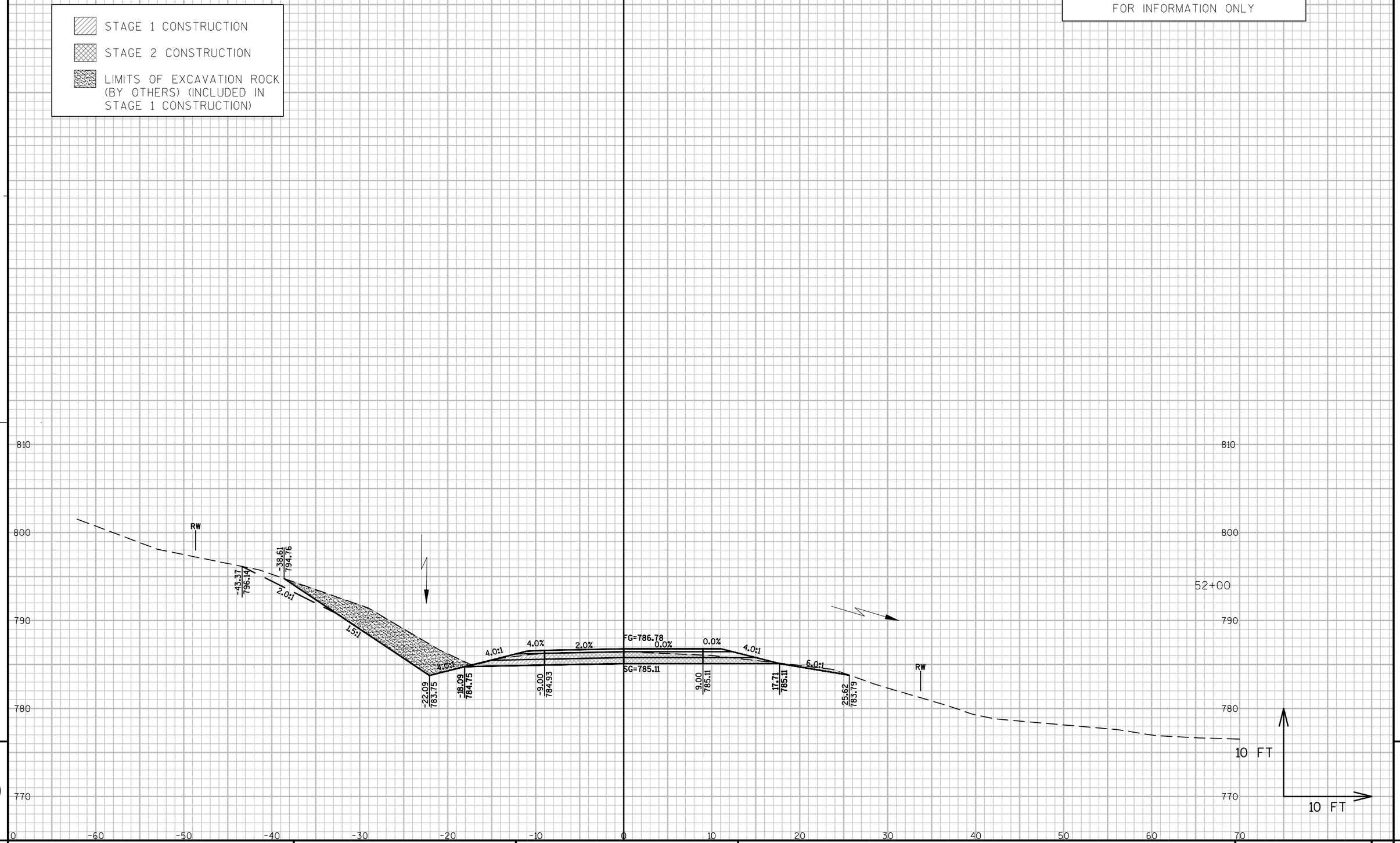
WISDOT/CADDS SHEET 49

FOR INFORMATION ONLY

STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

LIMITS OF EXCAVATION ROCK (BY OTHERS) (INCLUDED IN STAGE 1 CONSTRUCTION)



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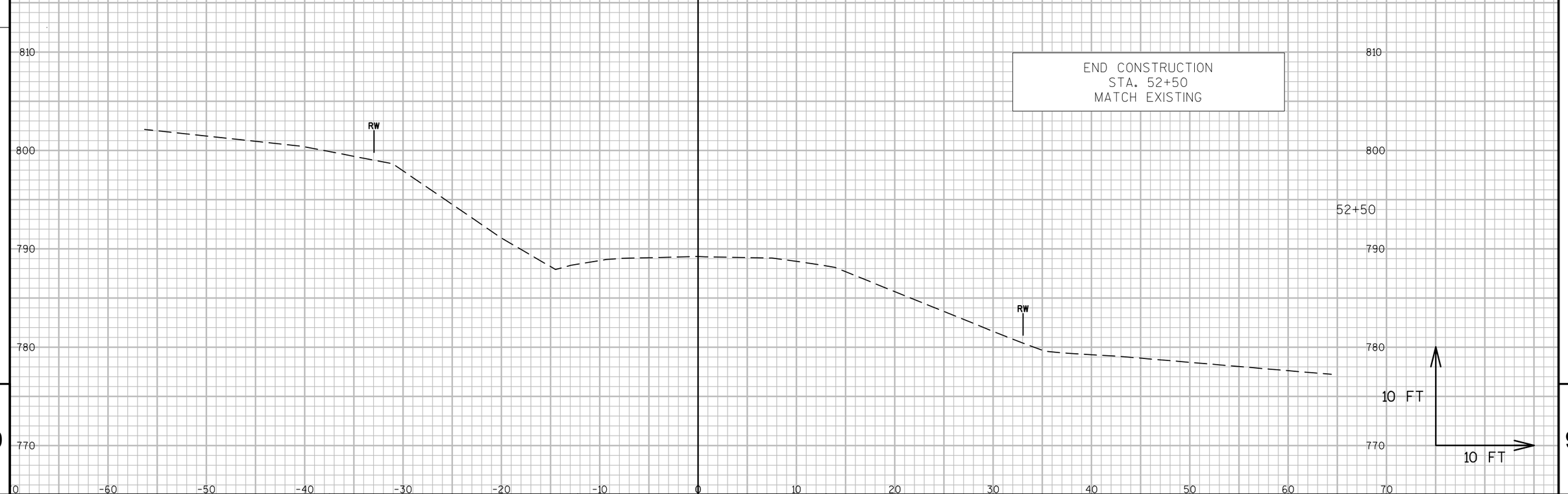
PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: PLUM RUN ROAD	SHEET 75	E

FILE NAME : S:\PROJECTS\C54480 CRAWFORD CO CTH U BRIDGE\DESIGN\CORRIDORS\CTH U CORRIDOR.DWG PLOT DATE : 1/10/2018 4:00 PM PLOT BY : STEPHANIE POTTER PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 49

FOR INFORMATION ONLY

END CONSTRUCTION
STA. 52+50
MATCH EXISTING



9 9

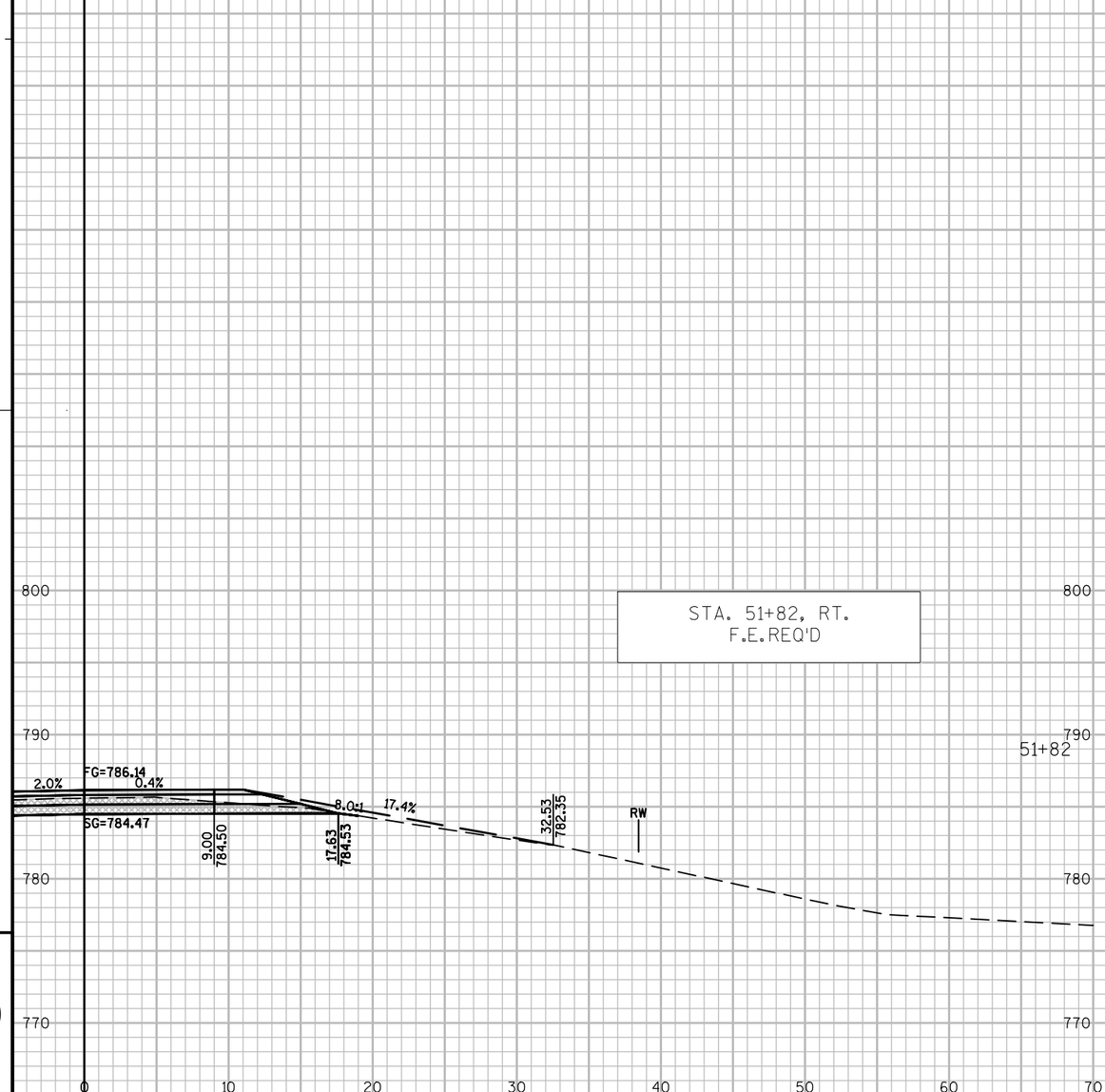
PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: PLUM RUN ROAD	SHEET 76	E

STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

FOR INFORMATION ONLY

STA. 51+82, RT.
F.E.REQ'D



10 FT

10 FT

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PROJECT NO: 5527-00-70	HWY: CTH U	COUNTY: CRAWFORD	CROSS SECTIONS: PLUM RUN ROAD	SHEET 77	E

Wisconsin Department of Transportation

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