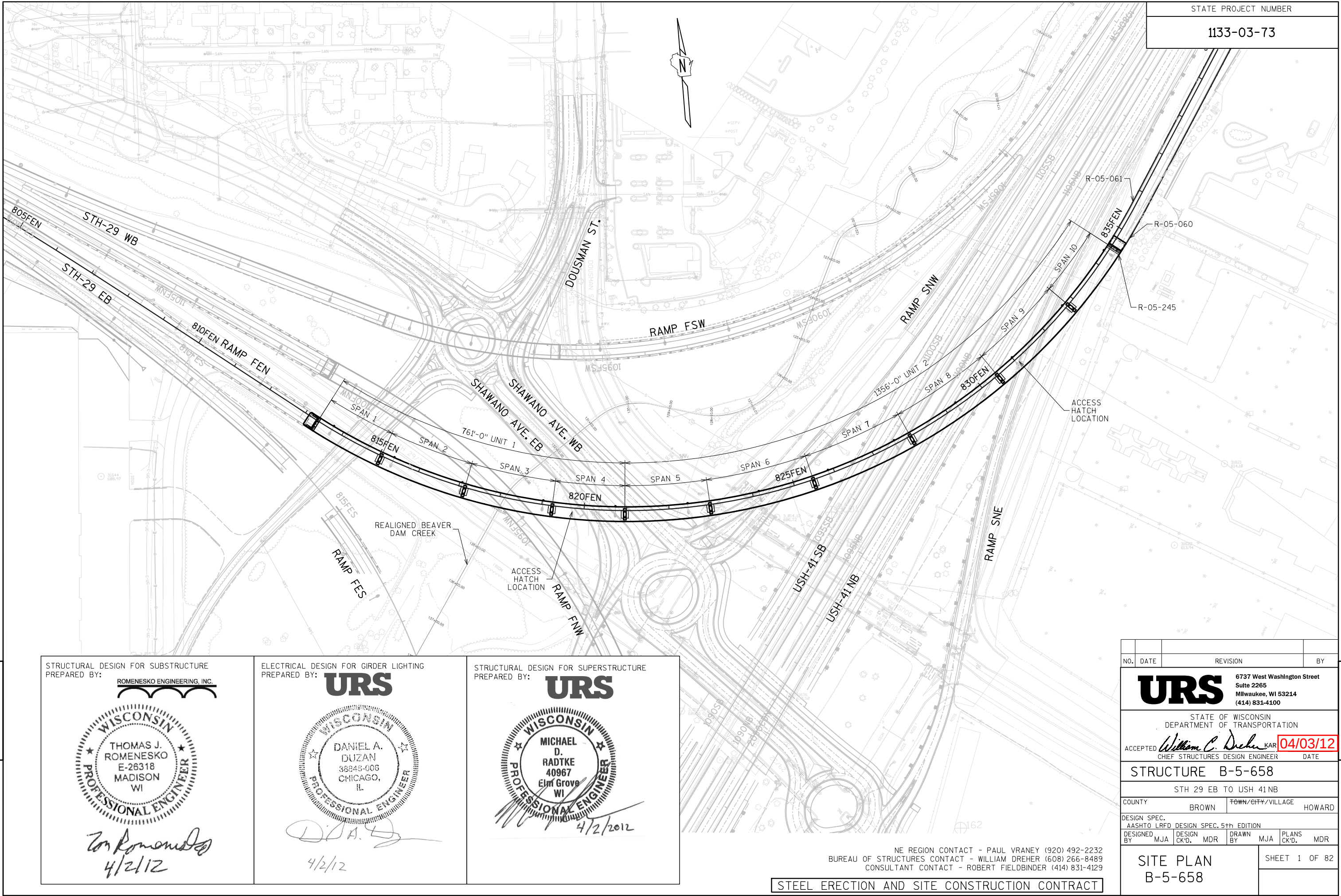




STATE PROJECT NUMBER

1133-03-73

STRUCTURAL DESIGN FOR SUBSTRUCTURE
PREPARED BY:

ROMENESKO ENGINEERING, INC.



Tom Romenesko
4/2/12

ELECTRICAL DESIGN FOR GIRDER LIGHTING
PREPARED BY:

URS



D.A. DuZan
4/2/12

STRUCTURAL DESIGN FOR SUPERSTRUCTURE
PREPARED BY:

URS



Michael D. Radtke
4/2/2012

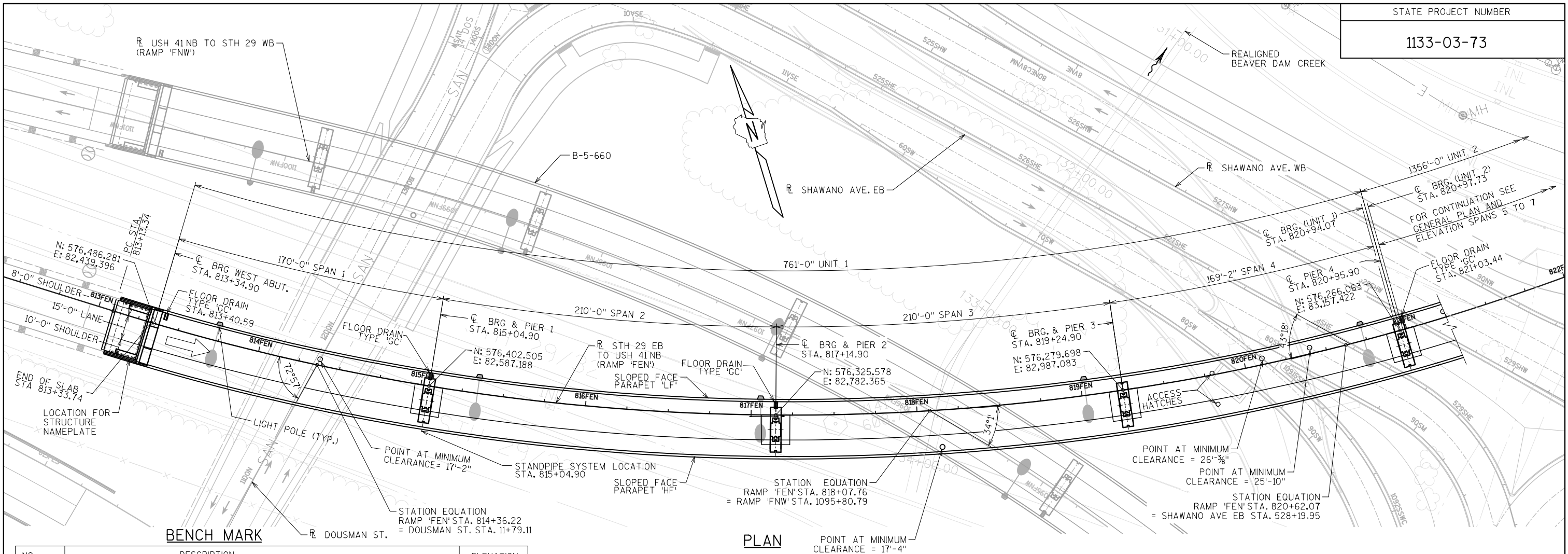
NE REGION CONTACT - PAUL VRANEY (920) 492-2232
BUREAU OF STRUCTURES CONTACT - WILLIAM DREHER (608) 266-8489
CONSULTANT CONTACT - ROBERT FIELDBINDER (414) 831-4129

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

NO.	DATE	REVISION	BY
URS 6737 West Washington Street Suite 2265 Milwaukee, WI 53214 (414) 831-4100			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i> KAR		DATE 04/03/12	
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-5-658			
STH 29 EB TO USH 41 NB			
COUNTY	BROWN	TOWN/CITY/VILLAGE	HOWARD
DESIGN SPEC. AASHTO LRFD DESIGN SPEC. 5th EDITION			
DESIGNED BY	MJA	DESIGN CK'D.	MDR
DRAWN BY	MJA	PLANS CK'D.	MDR
SITE PLAN B-5-658			SHEET 1 OF 82

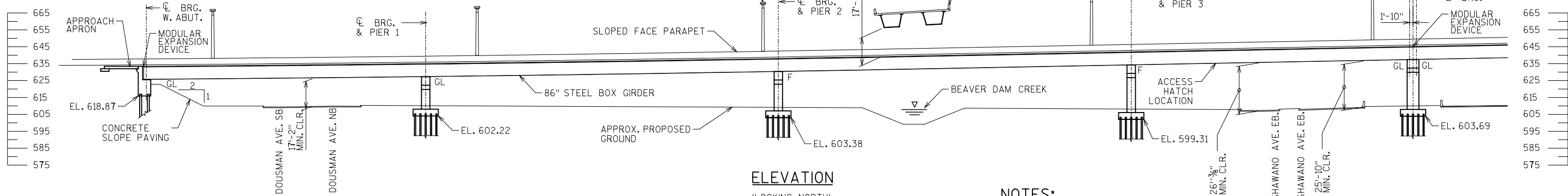
FILE= P:\Transportation\Brown County Bridges USH 41\CADD\Sheets\B-5-658 (RemainingStructure)\001 B-05-658-SITE PLAN.dgn

DATE: 4/2/2012
I.D.



PLAN

NO.	DESCRIPTION	ELEVATION
BM 823	CHISELED SQUARE ON SE CORNER OF CONCRETE SLAB WITH WHITE FUEL TANK ON TOP AT SEMFUELS, 100' W OF DEAD END SHAWANO AVE.	607.39
BM 842	CHISELED "X" ON THE BOLT OF THE FIRE HYDRANT ON THE DEAD END ROAD, SOUTH OF SHAWANO AVE AND NORTH OF THE HOLCIM RR TRACKS.	617.58



ELEVATION
(LOOKING NORTH)

STRUCTURE TYPE

UNIT 1 4-SPAN CONTINUOUS STEEL BOX GIRDERS
UNIT 2 6-SPAN CONTINUOUS STEEL BOX GIRDERS

DESIGN DATA

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY, HIGH PERFORMANCE CONCRETE
SLAB----- $f_c' = 4,000$ P.S.I.
ALL OTHER----- $f_c' = 4,000$ P.S.I.
HIGH STRENGTH
BAR STEEL REINFORCEMENT, GRADE 60----- $f_y = 60,000$ P.S.I.
STAINLESS STEEL REINFORCEMENT (ASTM A615, GRADE 60)----- $f_y = 60,000$ P.S.I.
HIGH STRENGTH STRUCTURAL STEEL,----- $f_y = 50,000$ P.S.I.
(ASTM A709/GRADE 50, HPS50W)

FOUNDATION DATA

WEST AND NORTH ABUTMENTS AND PIER 1 THROUGH PIER 9 TO BE SUPPORTED ON HP 14X89 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PILE DRIVING ANALYZER. SEE SUBSTRUCTURE SHEETS FOR ESTIMATED PILE LENGTHS.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.8 USING THE PILE DRIVING ANALYZER TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME:

RAMP EN ADT (2035) = 4,200 R.D.S. = 60 M.P.H.	DOUSMAN ADT (2035) = 14,500 R.D.S. = 40 M.P.H.	SHAWANO ADT (2035) = 37,200 R.D.S. = 40 M.P.H.
RAMP NW ADT (2035) = 8,500 R.D.S. = 60 M.P.H.	USH 41 ADT (2035) = 121,700 R.D.S. = 70 M.P.H.	

NOTES:

ALL SUBSTRUCTURE UNITS ARE NORMAL TO $\mathbb{R}$.

DIMENSIONS SHOWN ARE ALONG $\mathbb{R}$.

FOR LIGHT POLE LOCATIONS, SEE SHEET TITLED "LIGHT STANDARD".

SPAN LENGTHS SHOWN ARE MEASURED ALONG $\mathbb{R}$.

FOR CURVE DATA SEE SHEET TITLED "ALIGNMENT LAYOUT AND SUPERELEVATION".

EXISTING AND FUTURE UTILITIES ARE SHOWN FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES PRIOR TO EXCAVATION OR PILE DRIVING.

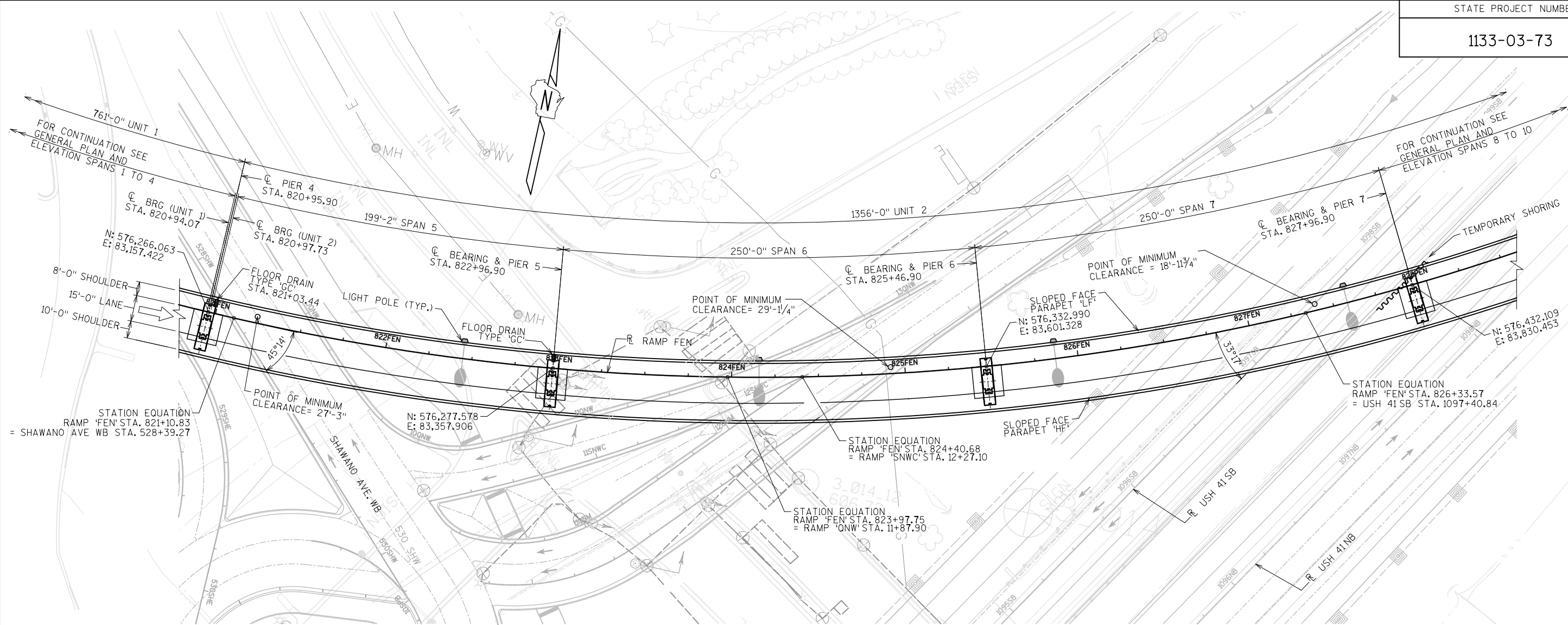
GUIDED LONGITUDINAL BEARINGS ARE ORIENTED PARALLEL TO $\mathbb{R}$.

LEGEND

F - FIXED BEARING
GL - GUIDED LONGITUDINAL UNIDIRECTIONAL BEARING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
GENERAL PLAN & ELEVATION SPANS 1-4		SHEET 3 OF 82	

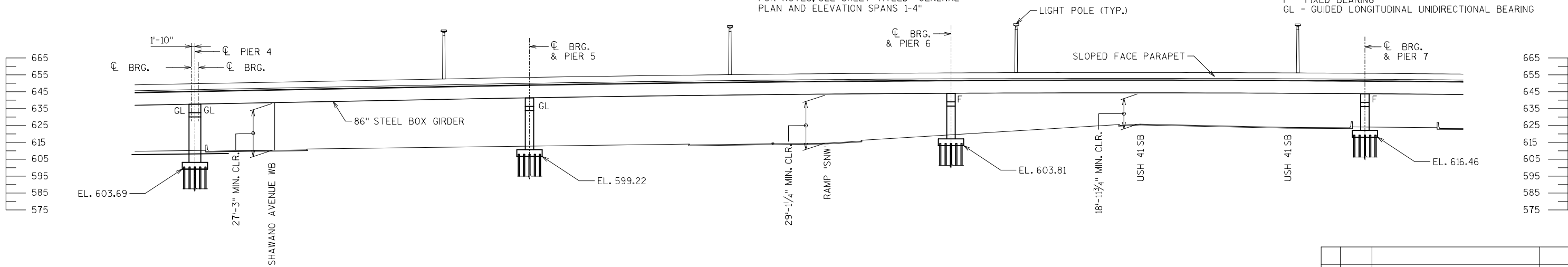
STEEL ERECTION AND SITE CONSTRUCTION CONTRACT



PLAN

FOR NOTES, SEE SHEET TITLED "GENERAL
PLAN AND ELEVATION SPANS 1-4"

LEGEND

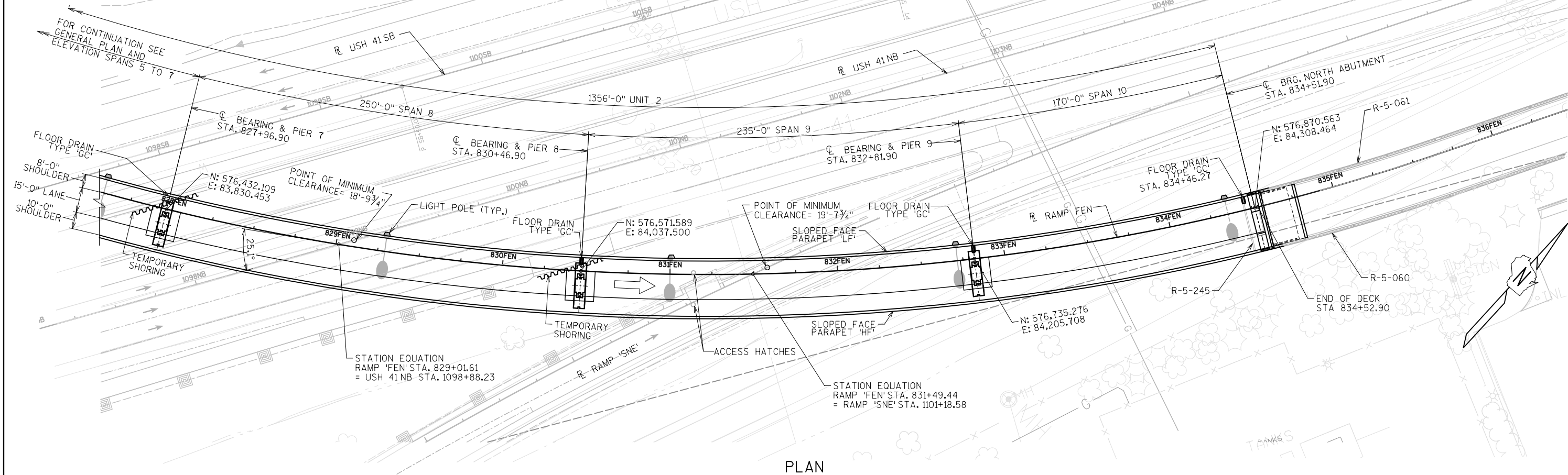
F - FIXED BEARING
GL - GUIDED LONGITUDINAL UNIDIRECTIONAL BEARING

ELEVATION

(LOOKING NORTH)

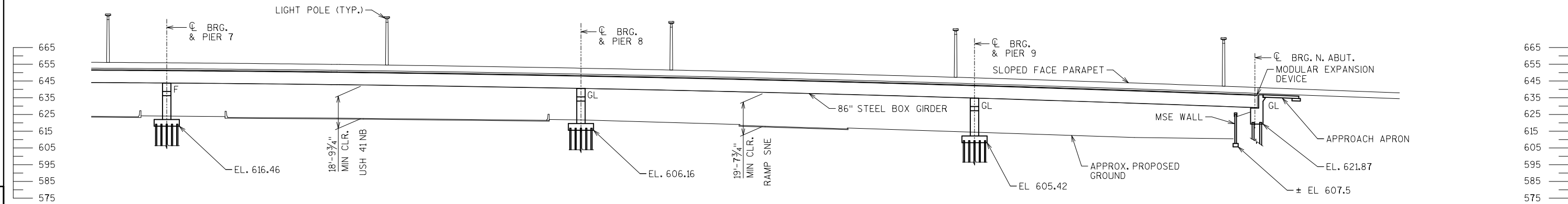
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
GENERAL PLAN & ELEVATION SPANS 5-7			SHEET 4 OF 82

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT



PLAN

FOR NOTES, SEE SHEET TITLED "GENERAL PLAN AND ELEVATION SPANS 1 - 4"



ELEVATION

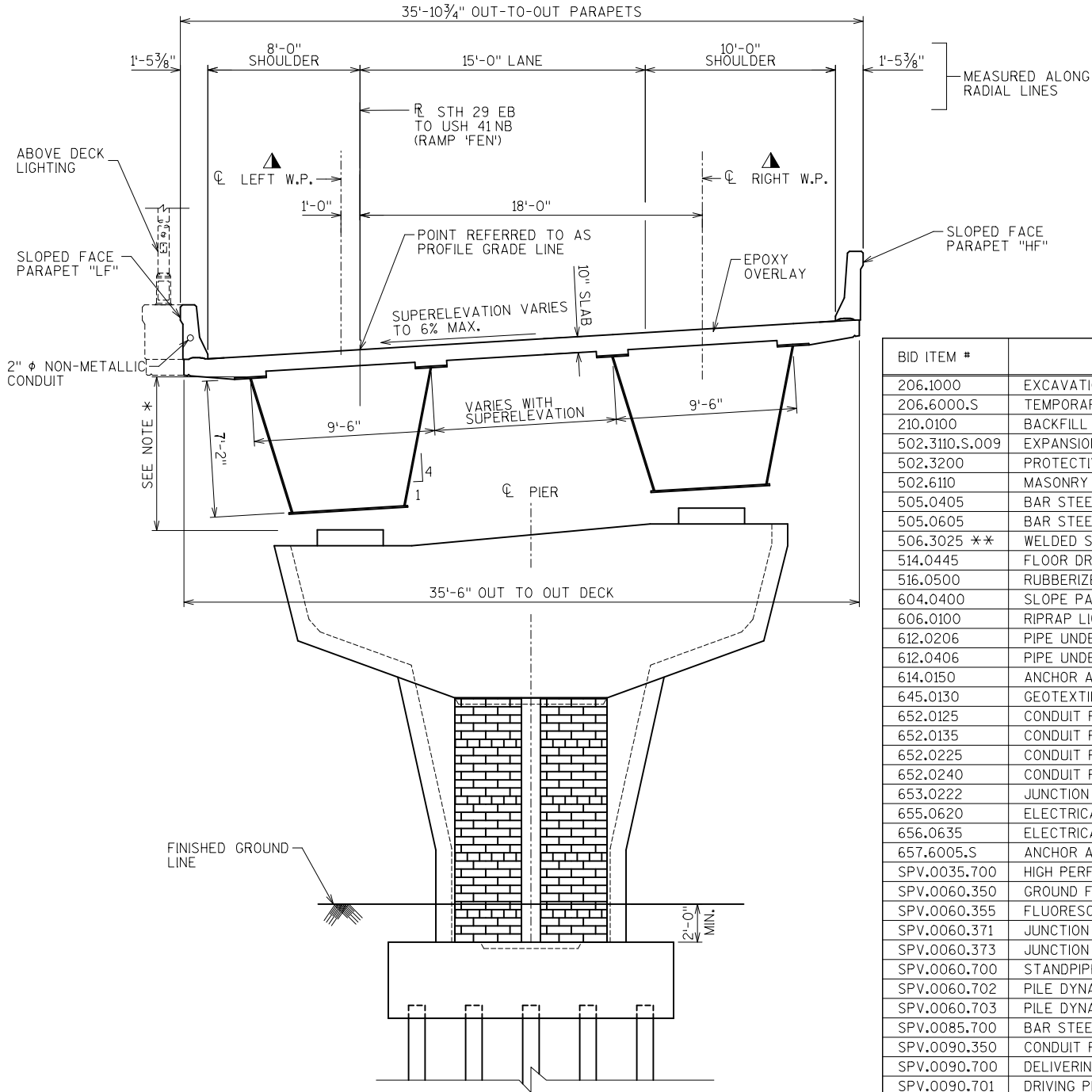
(LOOKING NORTH)

LEGEND

F - FIXED BEARING
GL - GUIDED LONGITUDINAL UNIDIRECTIONAL BEARING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
GENERAL PLAN & ELEVATION SPANS 8-10			SHEET 5 OF 82

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT



TYPICAL CROSS SECTION - UNITS 1 & 2
(LOOKING UPSTATION)

TOTAL ESTIMATED QUANTITIES

BID ITEM #	BID ITEM	UNIT	W. APPR. APRON	W. ABUT	UNIT 1		UNIT 2		N. ABUT	N. APPR. APRON	TOTAL
					SUPER. SPANS 1-4	PIERS 1-4	SUPER. SPANS 5-10	PIERS 5-9			
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-5-658	LS	-	-	-	1	-	-	-	-	1
206.6000.S	TEMPORARY SHORING	SF	-	-	-	-	-	400	-	-	400
210.0100	BACKFILL STRUCTURE	CY	-	299	-	504	-	719	357	-	1,880
502.3110.S.009	EXPANSION DEVICE MODULAR B-5-658	LS	-	-	-	-	-	-	-	-	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	92	-	3478	-	6,198	-	-	92	9,860
502.6110	MASONRY ANCHORS TYPE S 3/4-INCH	EACH	-	-	-	-	-	-	3	-	3
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	-	4,630	-	16,100	-	20,970	3,830	-	45,530
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	6,006	7,790	270,448	80,110	477,645	107,470	2,600	6,006	958,075
506.3025 **	WELDED STUD SHEAR CONNECTORS 7/8 X 8-INCH	EACH	-	-	7,167	-	11,295	-	-	-	18,462
514.0445	FLOOR DRAINS TYPE GC	EACH	-	-	4	-	5	-	-	-	9
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	10	-	-	-	-	6	-	16
604.0400	SLOPE PAVING CONCRETE	SY	-	112	-	-	-	-	0	-	112
606.0100	RIPRAP LIGHT	CY	-	-	-	3	-	4	-	-	7
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	46	-	-	-	-	-	-	46	92
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	93	40	-	-	-	-	0	93	226
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-	-	-	-	-	-	-	2
645.0130	GEOTEXTILE FABRIC TYPE R	SY	-	-	-	27	-	45	-	-	72
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	35	-	-	-	-	-	-	25	60
652.0135	CONDUIT RIGID METALLIC 3-INCH	LF	-	-	3,044	-	5,424	-	-	-	8,468
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	-	-	761	-	1,356	-	-	35	2,152
652.0240	CONDUIT RIGID NONMETALLIC SCHEDULE 40 4-INCH	LF	-	-	-	-	25	-	-	-	25
653.0222	JUNCTION BOXES 18x12x6-INCH	EACH	-	-	5	-	8	-	-	2	15
655.0620	ELECTRICAL WIRE LIGHTING 8 AWG	LF	-	-	13,314	-	22,484	-	-	-	35,798
656.0635	ELECTRICAL WIRE LIGHTING 2 AWG	LF	-	-	1,326	-	4,710	-	-	-	6,036
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	-	-	5	-	9	-	-	-	14
SPV.0035.700	HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES	CY	52	119	1,044	530	1,859	719	77	41	4,441
SPV.0060.350	GROUND FAULT CIRCUIT INTERRUPTER (GFCI) RECEPTACLES	EACH	-	-	16	-	28	-	-	-	44
SPV.0060.355	FLUORESCENT OUTDOOR FIXTURE 4-FOOT	EACH	-	-	56	-	88	-	-	-	144
SPV.0060.371	JUNCTION BOXES STAINLESS STEEL 27x12x8-INCH	EACH	-	-	58	-	92	-	-	-	150
SPV.0060.373	JUNCTION BOXES STAINLESS STEEL 24x18x12-INCH	EACH	-	-	1	-	-	-	-	-	1
SPV.0060.700	STANDPIPE SYSTEM	EACH	-	-	-	1	-	-	-	-	1
SPV.0060.702	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	-	3	-	16	-	17	3	-	39
SPV.0060.703	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	-	3	-	16	-	17	3	-	39
SPV.0085.700	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	-	613	-	-	-	-	613	-	1,225
SPV.0090.350	CONDUIT RIGID METALLIC PVC COATED 3-INCH	LF	-	-	-	50	-	-	-	-	50
SPV.0090.700	DELIVERING AND STOCKPILING PILING STEEL STATE FURNISHED HP 14-INCH X 89 LB	LF	-	1285	-	9300	-	10853	774	-	22,211
SPV.0090.701	DRIVING PILING STEEL STATE FURNISHED HP 14-INCH X 89 LB	LF	-	1080	-	7815	-	9120	650	-	18,665
SPV.0090.705	DOWNSPOUT RTRP 6-INCH	LF	-	15	-	73	-	129	-	-	217
SPV.0105.350	ELECTRICAL SERVICE INSTALLATION B-5-658	LS	-	-	0.5	-	0.5	-	-	-	1
SPV.0105.700	ERECTING STRUCTURAL STEEL B-5-658	LS	-	-	0.5	-	0.5	-	-	-	1
SPV.0105.705	FIELD PAINTING STRUCTURAL STEEL B-5-658	LS	-	-	0.5	-	0.5	-	-	-	1
SPV.0165.700	ARCHITECTURAL SURFACE TREATMENT	SF	-	91	-	864	-	1,296	-	-	2,251
SPV.0165.701	STAINING CONCRETE	SF	123	480	11368	4280	20,217	5,620	360	123	42,571
SPV.0165.702	STAINING CONCRETE BRICK	SF	-	91	-	864	-	1,296	-	-	2,251
SPV.0180.700	EPOXY OVERLAY	SY	74	-	2790	-	4,972	-	-	74	7,910

NOTES:

* STRUCTURAL STEEL AND BEARINGS ARE PROVIDED UNDER A SEPARATE STRUCTURAL STEEL FABRICATION CONTRACT AND WILL BE INSTALLED UNDER THIS CONSTRUCTION CONTRACT.

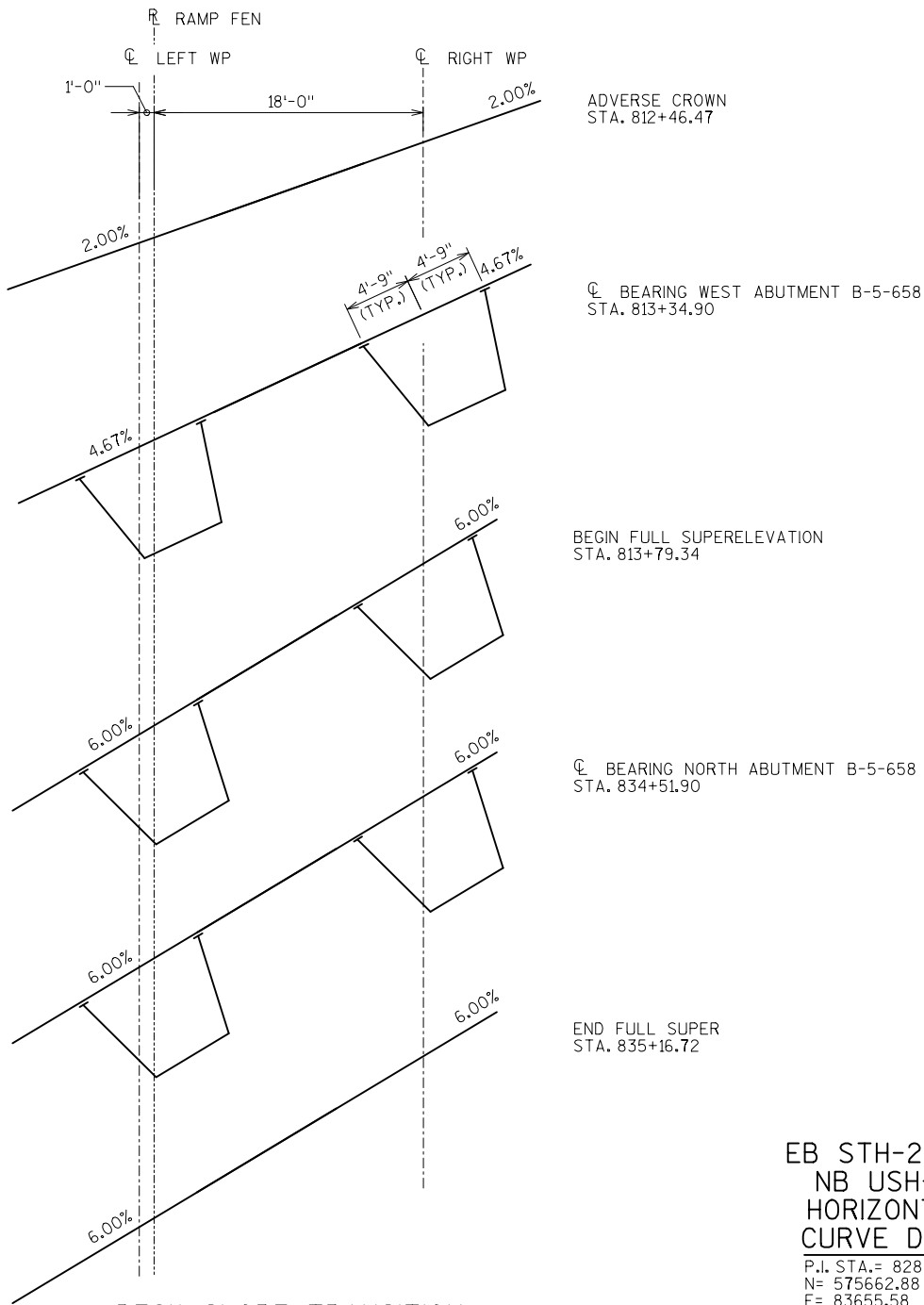
** SHEAR STUDS ARE FURNISHED AND INSTALLED UNDER THIS CONTRACT. SEE STEEL FABRICATION PLANS FOR LOCATIONS AND SPACING OF SHEAR STUDS. REMOVE 3MM COAT OF PRIMER FROM THE TOP FLANGE AT SHEAR STUD LOCATIONS BEFORE INSTALLING STUDS.

STAY-IN-PLACE METAL DECK FORMS PERMITTED INSIDE BOX GIRDERS ONLY. SEE SUPERSTRUCTURE DETAILS FOR HAUNCH.

GIRDER FLANGES ALWAYS PARALLEL TO DECK ABOVE.

▲ W.P. = WORK POINT. SEE TYPICAL DECK SECTION FOR DETAILS.

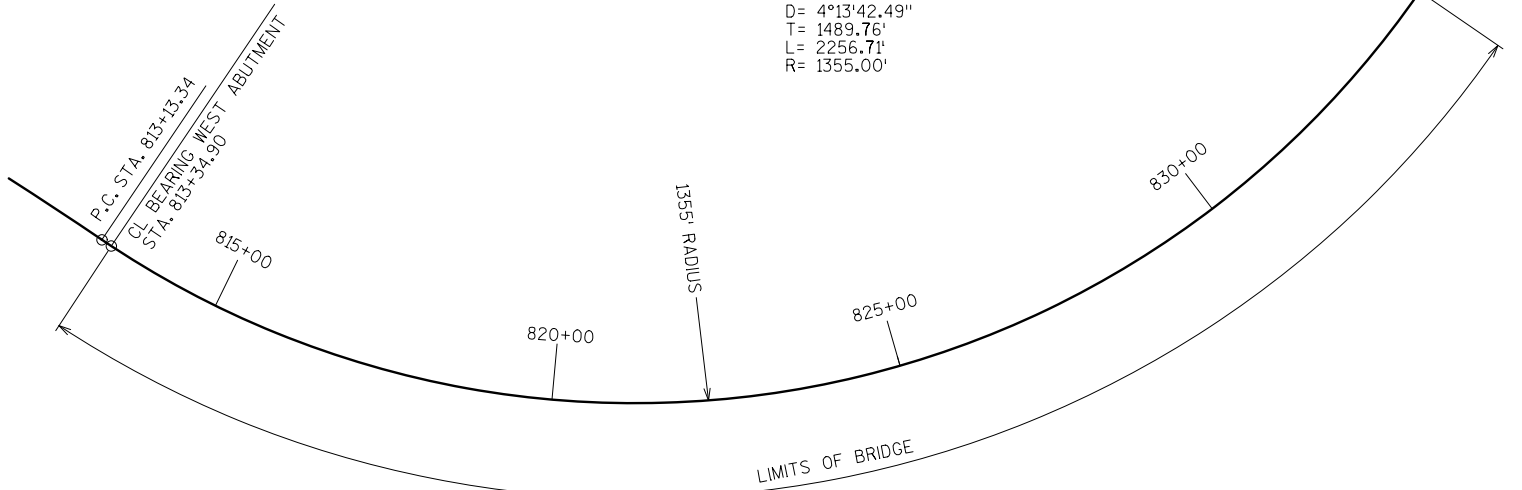
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
CROSS SECTION & QUANTITIES			SHEET 6 OF 82



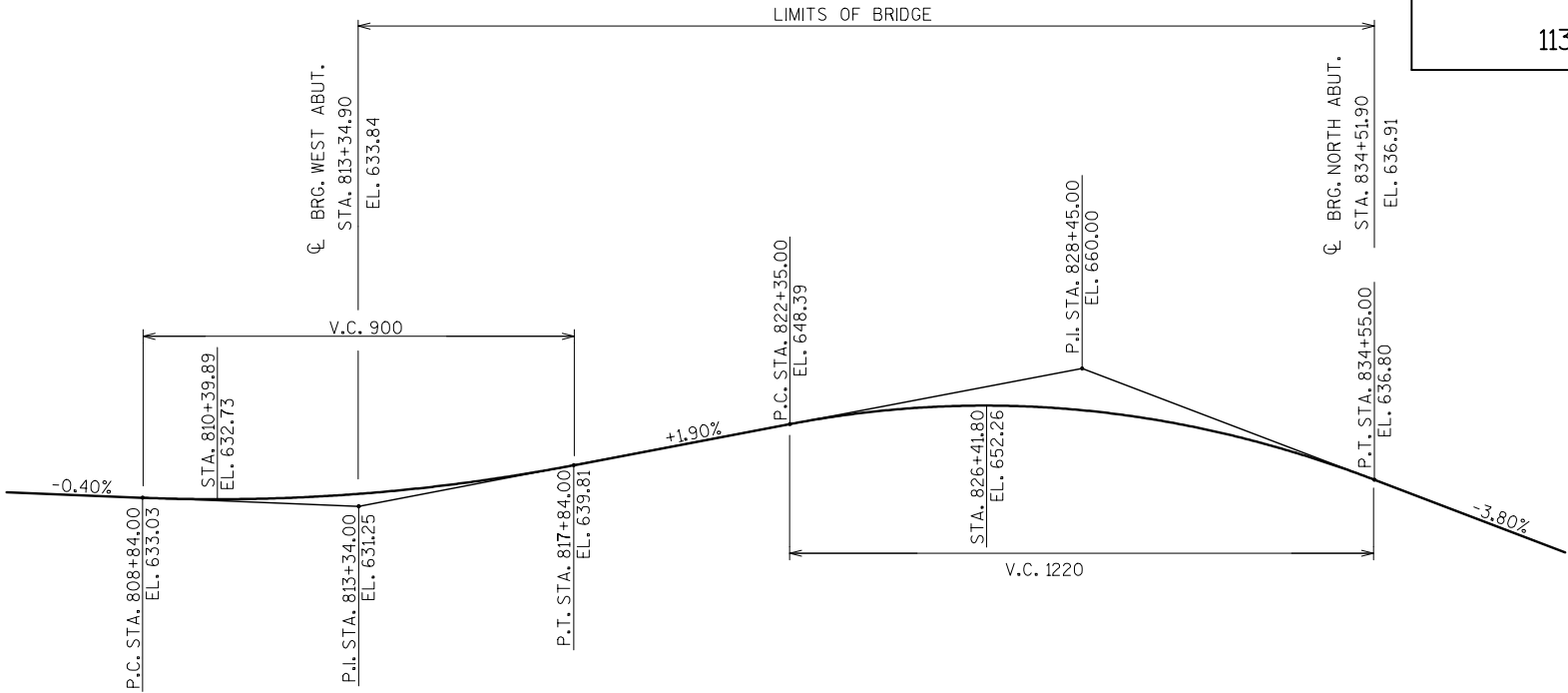
DECK SLOPE TRANSITION

EB STH-29 TO NB USH-41 HORIZONTAL CURVE DATA

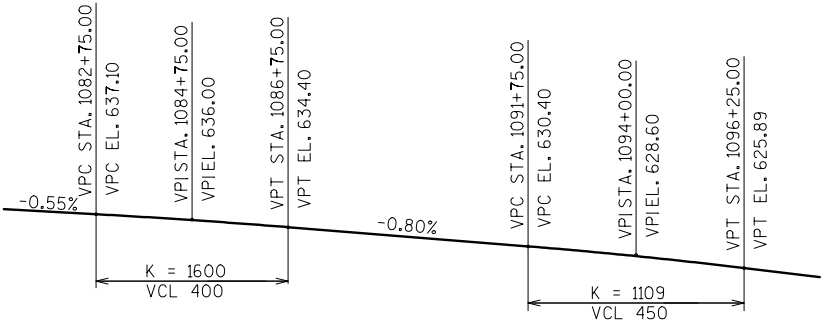
P.I. STA.= 828+03.10
N= 575662.88
E= 83655.58
P.C. STA.= 813+13.34
P.T. STA.= 835+70.05
Δ= 95°25'27.06"
D= 4°13'42.49"
T= 1489.76'
L= 2256.71'
R= 1355.00'



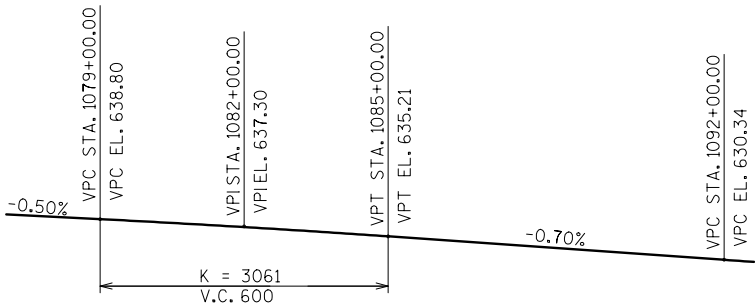
HORIZONTAL ALIGNMENT EB STH 29 - NB USH 41 SYSTEM RAMP



PROFILE GRADE LINE EB STH 29 - NB USH 41 SYSTEM RAMP



PROFILE GRADE LINE USH 41 SB

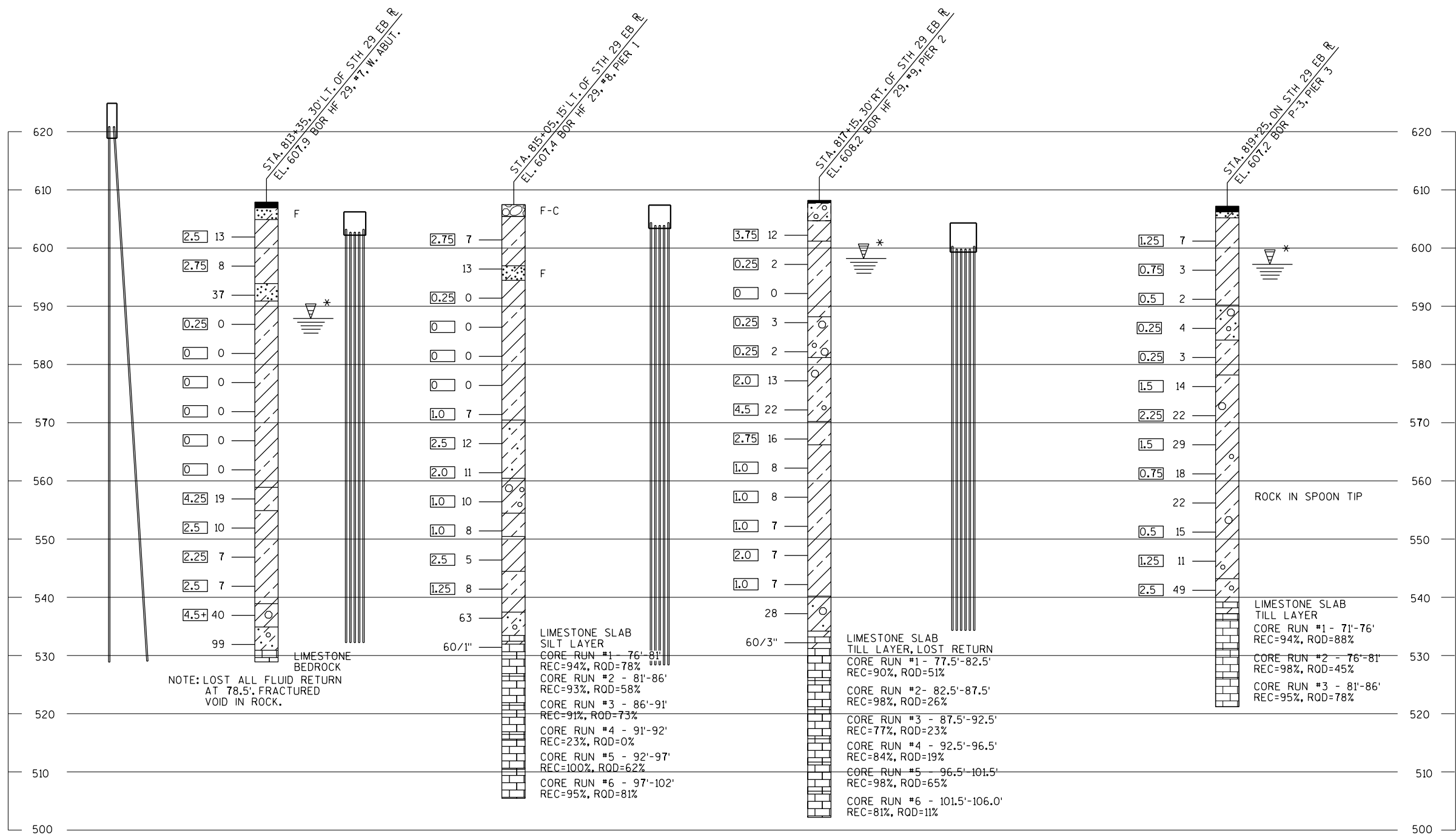
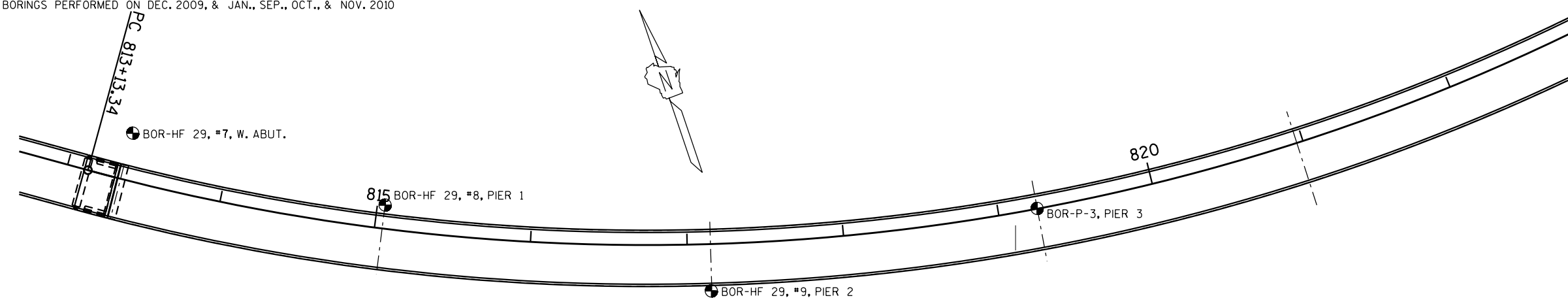


PROFILE GRADE LINE USH 41 NB

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
		DRAWN BY MJA	PLANS CK'D. MDR
ALIGNMENT LAYOUT AND SUPERELEVATION		SHEET 7 OF 82	

BORINGS PERFORMED BY:
FOUNDATION AND PAVEMENT ENGINEERING UNIT (WISDOT)
BORINGS PERFORMED ON DEC. 2009, & JAN., SEP., OCT., & NOV. 2010



STATE PROJECT NUMBER

1133-03-73

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6
95/6=95 BLOWS FOR 6"
PENETRATION
PROBING TAKEN WITH
A 350# WT.
FALLING 18" ON A 2"
O.D. POINT.

LEGEND OF BORING

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

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY TAW		PLANS CK'D. TR	
SUBSURFACE EXPLORATION		SHEET 8 OF 82	

FILE NAME : P+152 USH 41133-03-02 URS+STRUCTURES+B-5-658 SUBSTRUCTURE+08.SOI.S. V8.B-5-658.DGN
PLOT DATE : 1/31/2012

8

8

BORINGS PERFORMED BY:
FOUNDATION AND PAVEMENT ENGINEERING UNIT (WISDOT)
BORINGS PERFORMED ON DEC. 2009, & JAN., SEP., OCT., & NOV. 2010

STATE PROJECT NUMBER

1133-03-73

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STA.
ELEVATION
95/6=95 BLOWS FOR 6"
PENETRATION
PROBING TAKEN WITH
A 350# WT.
FALLING 18" ON A 2"
O.D. POINT.
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

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STA.
ELEV.
UNCONFINED STRENGTH → 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
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SAND
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SO
LIMESTONE

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY TAW		PLANS CK'D. TR	
SUBSURFACE EXPLORATION		SHEET 10 OF 82	

* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

FILE NAME : P:\B2 USH 41133-03-02 URS\STRUCTURES\B-5-658 SUBSTRUCTURE\10 SOILS.V8.B-5-658.DGN
PLOT DATE : 1/30/2012

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8

POTENTIAL GIRDER ERECTION SEQUENCE

UNIT 1

- (2 CRANES LOCATED AT L-1 AND L-2)
1. ASSEMBLE TEMPORARY SHORING TOWER.
 2. GROUND PREPARE FS1-R.
 3. LIFT GIRDER SECTION IN PLACE.
 4. GROUND PREPARE FS1-L.
 5. LIFT GIRDER SECTION IN PLACE.
 6. ASSEMBLE ABUTMENT DIAPHRAGM.

- (2 CRANES LOCATED AT L-2 AND L-3)
1. GROUND PREPARE FS2-R.
 2. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 3. GROUND PREPARE FS2-L.
 4. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 5. ASSEMBLE PIER DIAPHRAGM.

- (2 CRANES LOCATED AT L-3 AND L-4)
1. ASSEMBLE TEMPORARY SHORING TOWER.
 2. GROUND PREPARE FS3-R.
 3. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 4. GROUND PREPARE FS3-L.
 5. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.

- (2 CRANES LOCATED AT L-4 AND L-5)
1. GROUND PREPARE FS4-R.
 2. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 3. GROUND PREPARE FS4-L.
 4. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 5. ASSEMBLE PIER DIAPHRAGM.

- (2 CRANES LOCATED AT L-5 AND L-6)
1. ASSEMBLE TEMPORARY SHORING TOWER.
 2. GROUND PREPARE FS5-R.
 3. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 4. GROUND PREPARE FS5-L.
 5. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.

- (2 CRANES LOCATED AT L-6 AND L-7)
1. GROUND PREPARE FS6-R.
 2. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 3. GROUND PREPARE FS6-L.
 4. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 5. ASSEMBLE PIER DIAPHRAGM.

- (2 CRANES LOCATED AT L-7 AND L-8)
1. GROUND PREPARE FS7-R.
 2. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 3. GROUND PREPARE FS7-L.
 4. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 5. ASSEMBLE PIER DIAPHRAGM.

UNIT 2

- (2 CRANES LOCATED AT L-1 AND L-2)
1. ASSEMBLE TEMPORARY SHORING TOWER.
 2. GROUND PREPARE FS18-L.
 3. LIFT GIRDER SECTION IN PLACE GROUND PREPARE FS18-R.
 4. LIFT GIRDER SECTION IN PLACE
 5. ASSEMBLE ABUTMENT DIAPHRAGM.

- (2 CRANES LOCATED AT L-2 AND L-3)
1. GROUND PREPARE FS17-L.
 2. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 3. GROUND PREPARE FS17-R.
 4. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 5. ASSEMBLE PIER DIAPHRAGM.

- (2 CRANES LOCATED AT L-3 AND L-4)
1. ASSEMBLE TEMPORARY SHORING TOWER.
 2. GROUND PREPARE FS16-L.
 3. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 4. GROUND PREPARE FS16-R.
 5. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.

- (2 CRANES LOCATED AT L-4 AND L-5)
1. GROUND PREPARE FS15-L.
 2. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 3. GROUND PREPARE FS15-R.
 4. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 5. ASSEMBLE PIER DIAPHRAGM.

- (2 CRANES LOCATED AT L-5 AND L-6)
1. ASSEMBLE TEMPORARY SHORING TOWER.
 2. GROUND PREPARE FS14-L.
 3. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 4. GROUND PREPARE FS14-R.
 5. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.

- (2 CRANES LOCATED AT L-6 AND L-7)
1. GROUND PREPARE FS13-L.
 2. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 3. GROUND PREPARE FS13-R.
 4. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 5. ASSEMBLE PIER DIAPHRAGM.

- (2 CRANES LOCATED AT L-7 AND L-8)
1. ASSEMBLE TEMPORARY SHORING TOWER.
 2. GROUND PREPARE FS12-L.
 3. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 4. GROUND PREPARE FS12-R.
 5. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.

- (2 CRANES LOCATED AT L-8 AND L-9)
1. GROUND PREPARE FS11-L.
 2. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 3. GROUND PREPARE FS11-R.
 4. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 5. ASSEMBLE PIER DIAPHRAGM.

- (2 CRANES LOCATED AT L-10 AND L-11)
1. ASSEMBLE TEMPORARY SHORING TOWER.
 2. GROUND PREPARE FS10-R.
 3. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 4. GROUND PREPARE FS10-L.
 5. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.

- (2 CRANES LOCATED AT L-11 AND L-12)
1. GROUND PREPARE FS9-R.
 2. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 3. GROUND PREPARE FS9-L.
 4. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 5. ASSEMBLE PIER DIAPHRAGM.

- (2 CRANES LOCATED AT L-12 AND L-13)
1. GROUND PREPARE FS8-R.
 2. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 3. GROUND PREPARE FS8-L.
 4. LIFT GIRDER SECTION IN PLACE AND BOLT FIELD SPLICES.
 5. ASSEMBLE PIER DIAPHRAGM.

NOTES

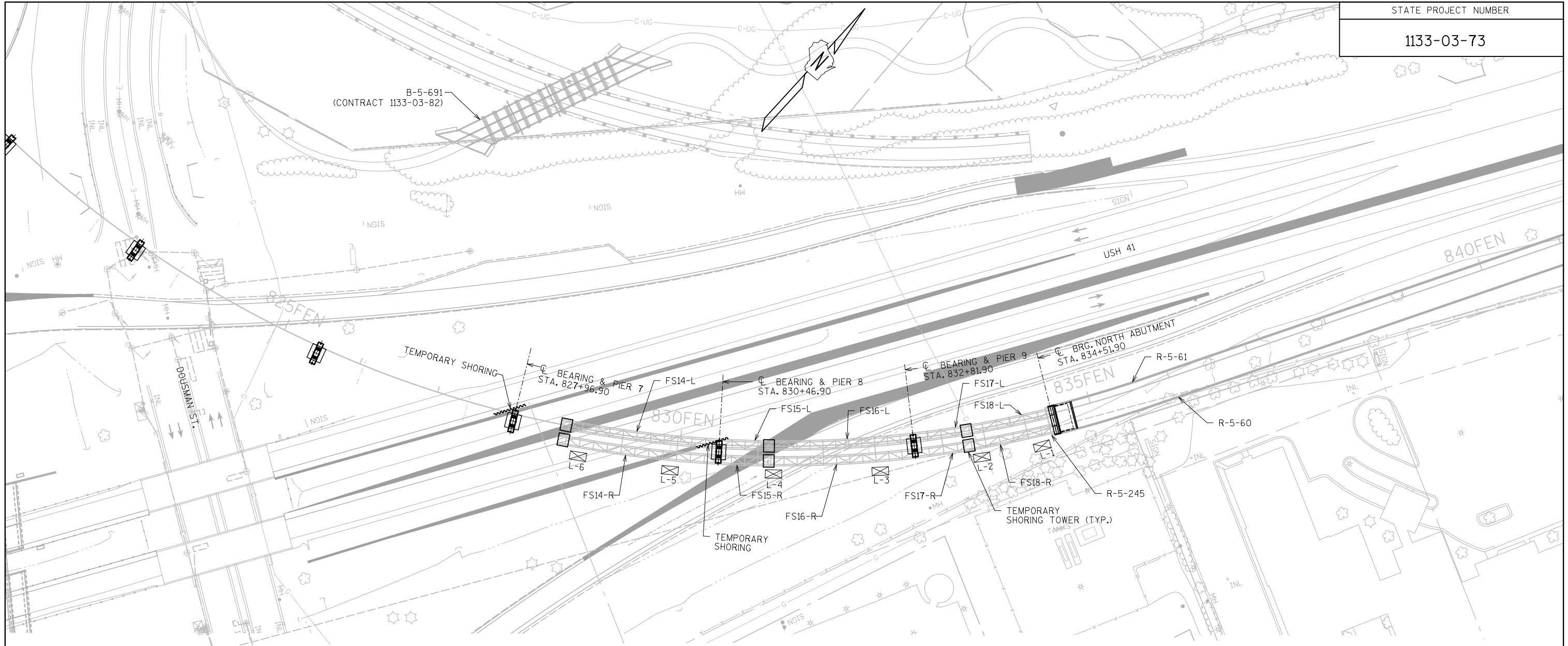
1. SEE SHEET 12 FOR SPANS 8-10 STAGING PLANS & INFORMATION.
2. SEE SHEET 13 FOR SPANS 5-7 STAGING PLANS & INFORMATION.
3. SEE SHEET 14 FOR SPANS 1-4 STAGING PLANS & INFORMATION.
4. THE POTENTIAL CONSTRUCTION SEQUENCE PLAN GIVEN IS PRESENTED FOR CONSIDERATION ONLY.
5. CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE CONSTRUCTION METHOD AND SEQUENCES UTILIZED.
6. PREPARE A GIRDER ERECTION SEQUENCE SCHEDULE AND SUBMIT IT TO THE ENGINEER FOR REVIEW NO LATER THAN 30 DAYS PRIOR TO BEGINNING GIRDER ERECTION OPERATIONS.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY UTILITY LOCATIONS AND TO PROVIDE ANY NECESSARY PROTECTION MEASURES TO AVOID UTILITY DAMAGE.
8. THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS TO AVOID DAMAGE.
9. THE CONTRACTOR IS REQUIRED TO PROVIDE NECESSARY PRECAUTIONS FOR GIRDER STABILITY DURING ERECTION.
10. FIELD SECTION WEIGHTS DO NOT INCLUDE SPLICE PLATES, BOLTS, BEARING ASSEMBLIES OR PORTIONS OF EXTERNAL DIAPHRAGMS NOT SHOP-CONNECTED TO THE BOX GIRDER.
11. FIELD SECTION WEIGHTS ARE SHOWN FOR INFORMATION ONLY. THE CONTRACTOR MUST CALCULATE ACTUAL FIELD SECTION WEIGHTS BASED ON THE MATERIAL AS DELIVERED TO THE SITE.

STATE PROJECT NUMBER

1133-03-73

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
		DRAWN BY JLM	PLANS CK'D. MJA
CONSTRUCTION STAGING NOTES		SHEET 11 OF 82	

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT



PLAN

FIELD SECTION WEIGHTS		
FIELD SECTION	LEFT GIRDER	RIGHT GIRDER
14	124500 LBS	126200 LBS
15	155000 LBS	156900 LBS
16	119500 LBS	120200 LBS
17	154600 LBS	156500 LBS
18	113000 LBS	114400 LBS

* FIELD SECTION WEIGHTS ARE APPROXIMATE AND INTENDED TO GIVE CONTRACTOR INFORMATION FOR LIFTING PIECES. CONTRACTOR IS RESPONSIBLE FOR MAKING A DETERMINATION OF ACTUAL PIECE WEIGHT PRIOR TO LIFTING.

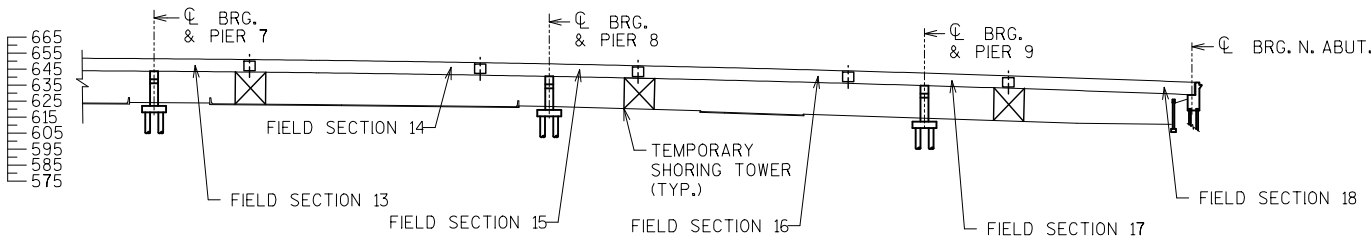
FIELD SECTION WEIGHTS DO NOT INCLUDE SPLICE PLATES, BOLTS, BEARING ASSEMBLIES OR PORTIONS OF EXTERNAL DIAPHRAGMS NOT STOP-CONNECTED TO THE BOX GIRDER.

LEGEND

L-2
CRANE LOCATION L-2
FSX-L FIELD SECTION X - LEFT

NOTES

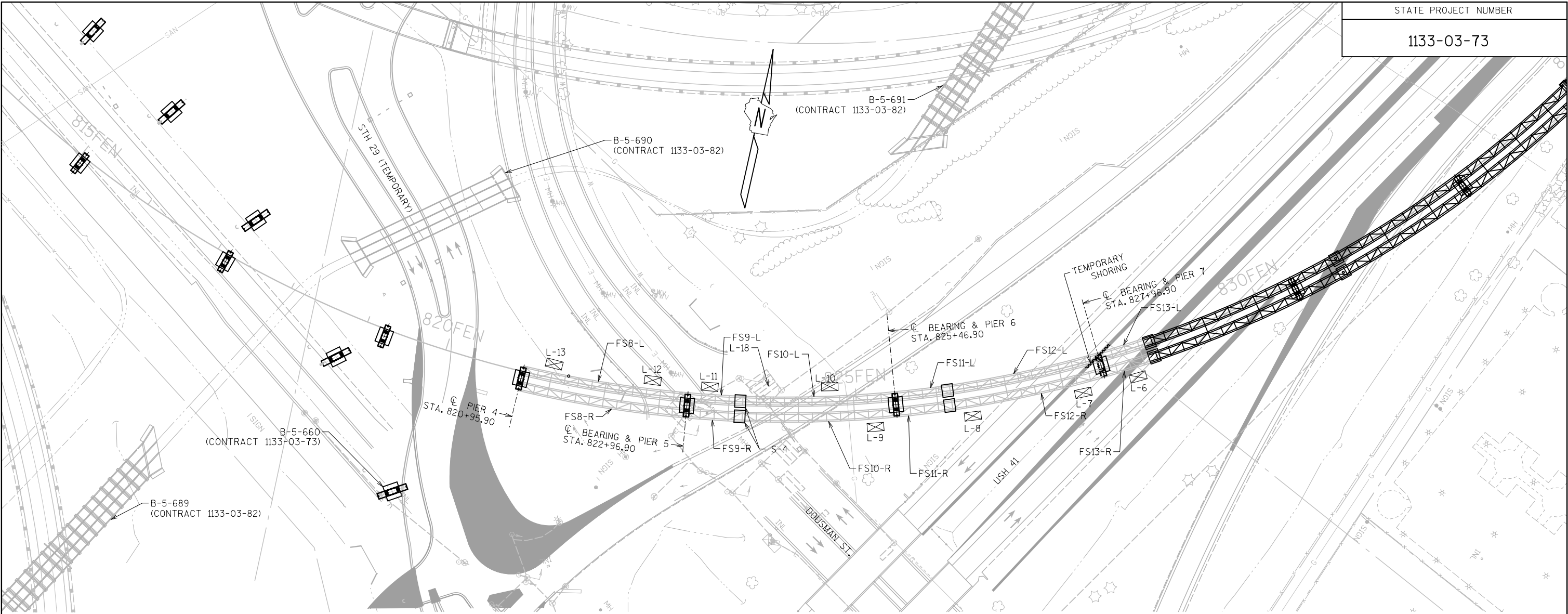
- SEE SHEET 2 FOR GENERAL NOTES.
- SEE SHEET 11 FOR CONSTRUCTION NOTES.



ELEVATION
(LOOKING NORTH)

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
CONSTRUCTION STAGING		SHEET 12 OF 82	
1 OF 3			



PLAN

FIELD SECTION WEIGHTS		
FIELD SECTION	LEFT GIRDER	RIGHT GIRDER
8	141700 LBS	143100 LBS
9	155000 LBS	156900 LBS
10	127100 LBS	128700 LBS
11	157300 LBS	159200 LBS
12	127100 LBS	128800 LBS
13	158400 LBS	160300 LBS

LEGEND

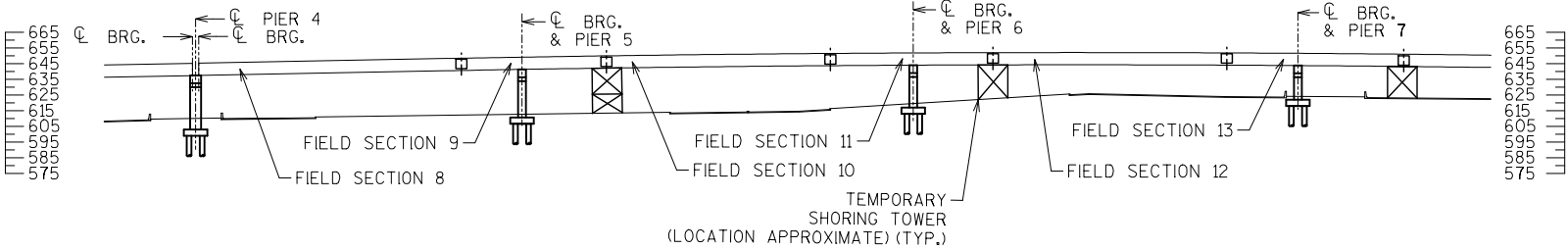
 CRANE LOCATION L-2
FSX-L FIELD SECTION X - LEFT

NOTES

- SEE SHEET 2 FOR GENERAL NOTES.
- SEE SHEET 11 FOR CONSTRUCTION NOTES.

* FIELD SECTION WEIGHTS ARE APPROXIMATE AND INTENDED TO GIVE CONTRACTOR INFORMATION FOR LIFTING PIECES. CONTRACTOR IS RESPONSIBLE FOR MAKING A DETERMINATION OF ACTUAL PIECE WEIGHT PRIOR TO LIFTING.

FIELD SECTION WEIGHTS DO NOT INCLUDE SPLICE PLATES, BOLTS, BEARING ASSEMBLIES OR PORTIONS OF EXTERNAL DIAPHRAGMS NOT STOP-CONNECTED TO THE BOX GIRDER.

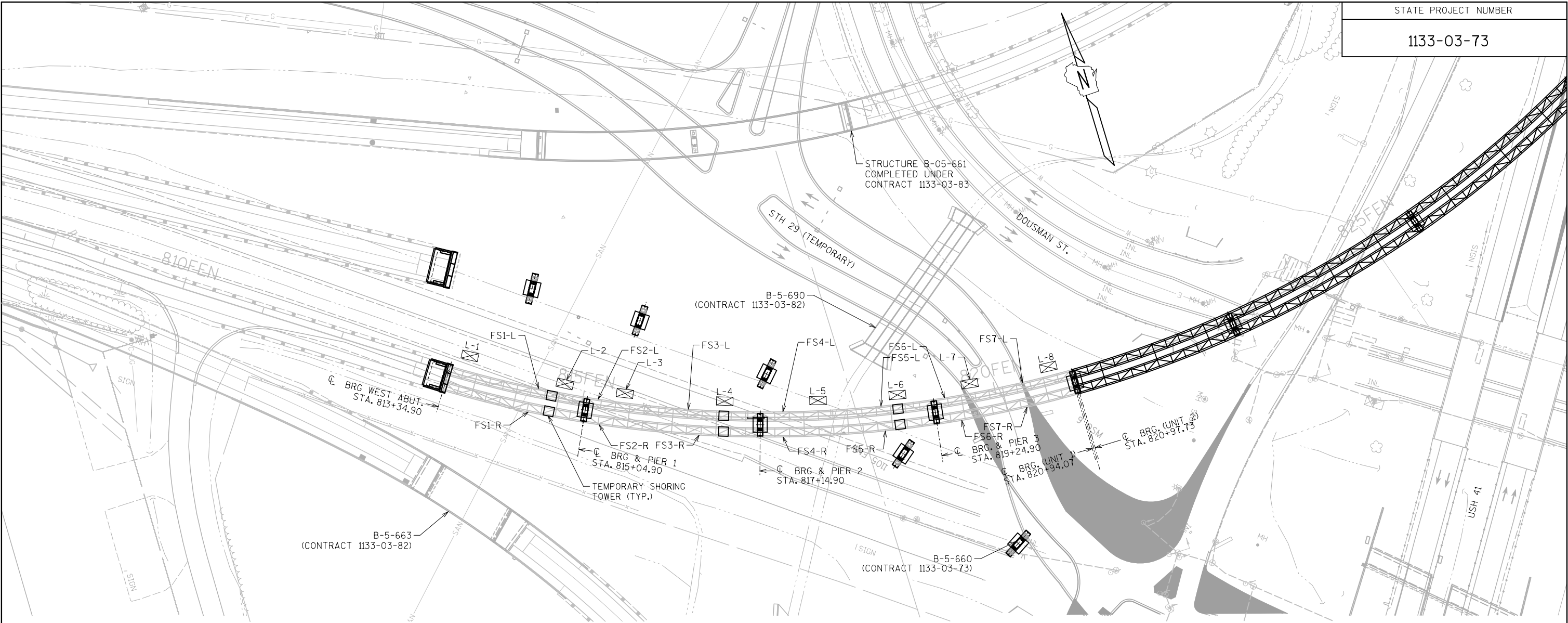


ELEVATION

(LOOKING NORTH)

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
CONSTRUCTION STAGING 2 OF 3		SHEET 13 OF 82	

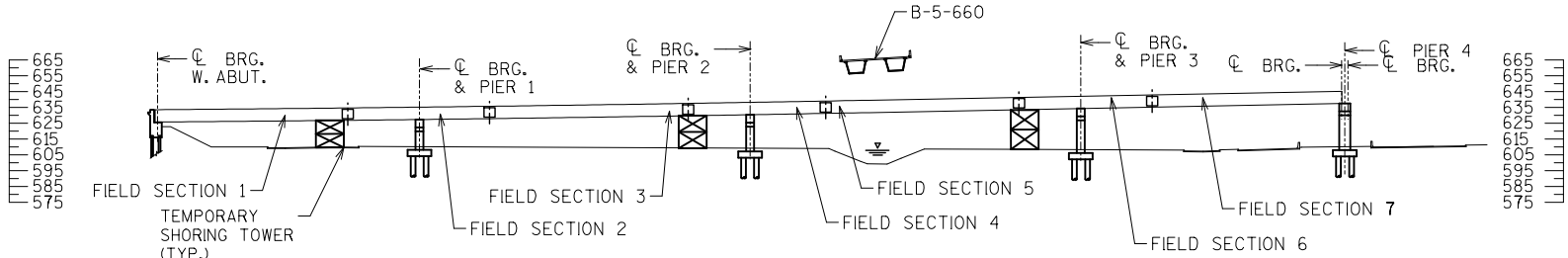


PLAN

FIELD SECTION WEIGHTS		
FIELD SECTION	LEFT GIRDER	RIGHT GIRDER
1	123700 LBS	125200 LBS
2	103700 LBS	104700 LBS
3	113700 LBS	115100 LBS
4	104500 LBS	105800 LBS
5	113700 LBS	115100 LBS
6	104300 LBS	105600 LBS
7	123600 LBS	125200 LBS

* FIELD SECTION WEIGHTS ARE APPROXIMATE AND INTENDED TO GIVE CONTRACTOR INFORMATION FOR LIFTING PIECES. CONTRACTOR IS RESPONSIBLE FOR MAKING A DETERMINATION OF ACTUAL PIECE WEIGHT PRIOR TO LIFTING.

FIELD SECTION WEIGHTS DO NOT INCLUDE SPLICE PLATES, BOLTS, BEARING ASSEMBLIES OR PORTIONS OF EXTERNAL DIAPHRAGMS NOT STOP-CONNECTED TO THE BOX GIRDER.



ELEVATION
(LOOKING NORTH)

LEGEND

- L-2
CRANE LOCATION L-2
FSX-L FIELD SECTION X - LEFT

NOTES

- SEE SHEET 2 FOR GENERAL NOTES.
- SEE SHEET 11 FOR CONSTRUCTION NOTES.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
CONSTRUCTION STAGING 3 OF 3		SHEET 14 OF 82	

NOTE: APPLY "BRIDGE SEAT PROTECTION" PER SECTION 502.3.12 TO THE TOP OF ABUTMENT (SEATS AND BETWEEN SEATS).

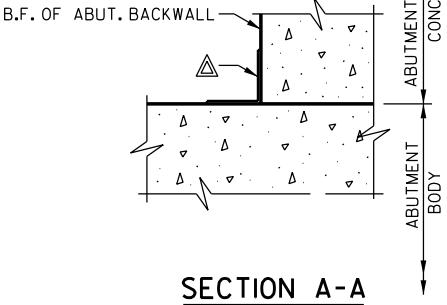
LEGEND

- * ELEVATIONS ARE GIVEN AT THE TOP OF CONCRETE PEDESTAL AT THE CL OF BEARING.
- ** DIMENSIONS AND ELEVATIONS ARE GIVEN AT THE F.F. OF ABUTMENT BACKWALL AT TOP OF CONCRETE.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE ABOVE FOOTING.
- PLACE BOTTOM HALF OF RUBBERIZED MEMBRANE WATERPROOFING HORIZONTAL IN THIS AREA. SEE SECTION A-A ON THIS SHEET.
- KEYED CONST. JOINT FORMED BY BEVELED 2" x 6".
- INDICATES CONCRETE AREA TO BE POURED AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE.
- INDICATES WING NUMBER
- 6" DIA. ANCHOR BOLT BLOCKOUT. BLOCKOUTS SHALL BE FORMED USING CORRUGATED FORMS THAT WILL PROVIDE POSITIVE INTERLOCK BETWEEN ABUTMENT BODY AND THE GROUT SURROUNDING THE ANCHOR BOLTS. (DISPLACE BAR STEEL AS NECESSARY TO CLEAR BOXOUT)

PILE NOTE

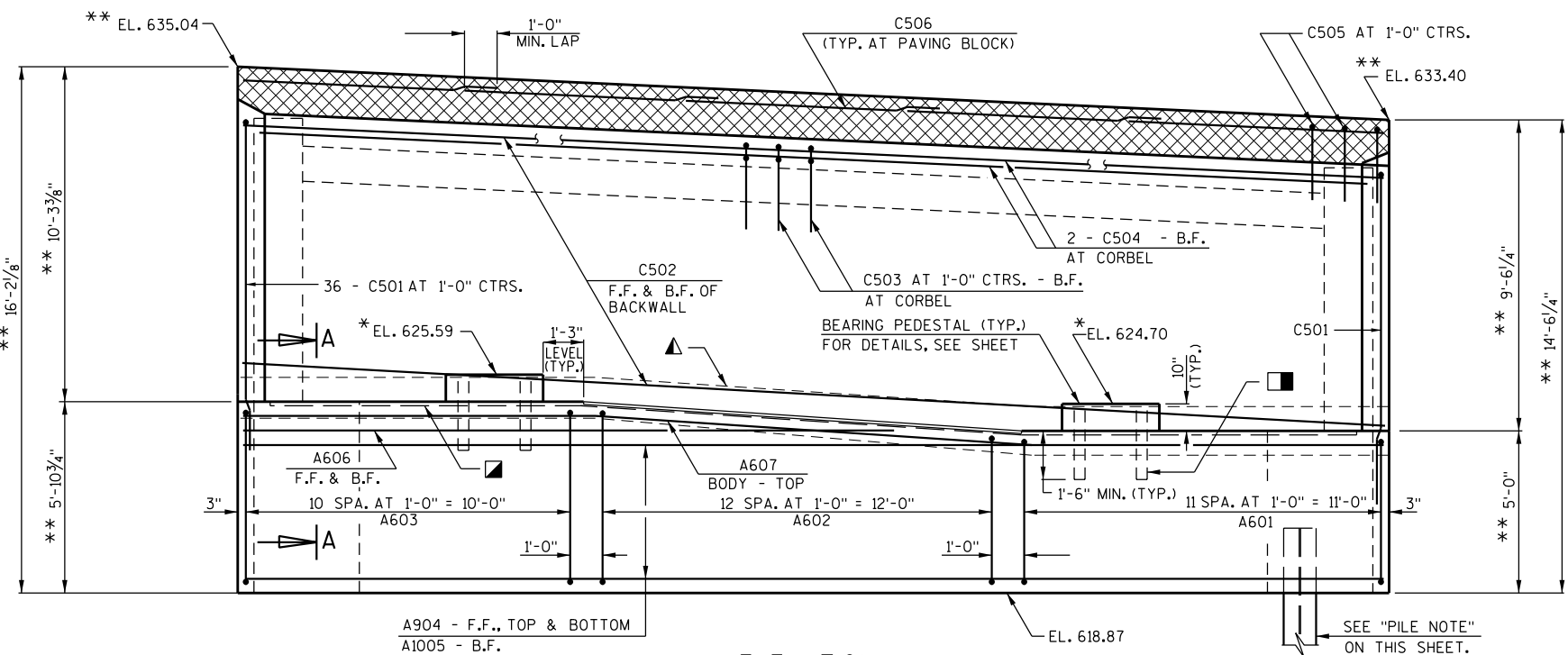
WEST ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 14 x 89 WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PILE DRIVING ANALYZER. ESTIMATED 90' LONG. FOR PILE LAYOUT DETAILS, SEE SHEET 16. FOR PILE SPLICE DETAILS, SEE SHEET 17.

NOTE: FOR "TYPICAL SECTION THRU BODY", SEE SHEET 17.
SPACE A601, A602 & A603 BARS TO MISS PILES.

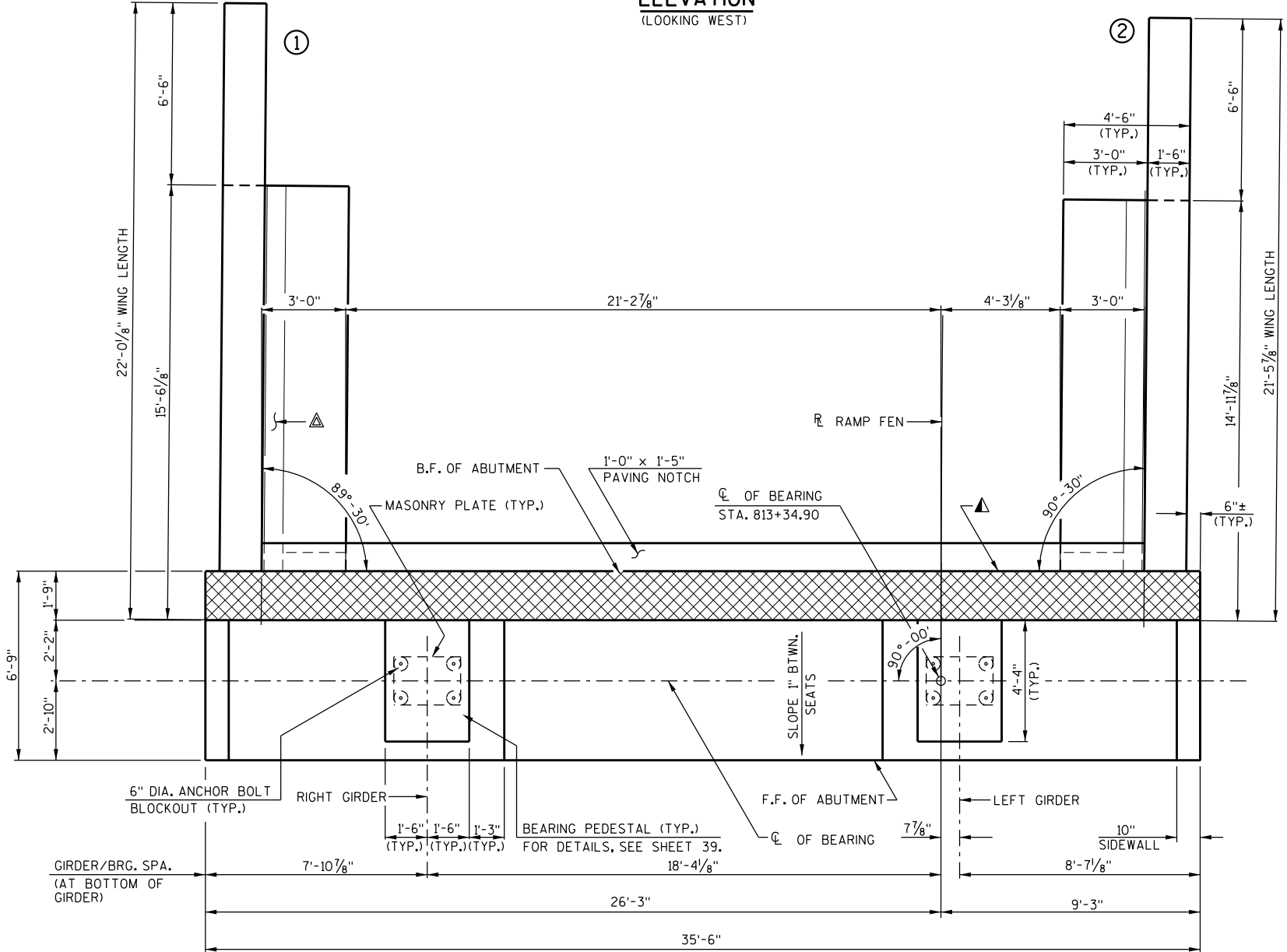


SECTION A-A

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

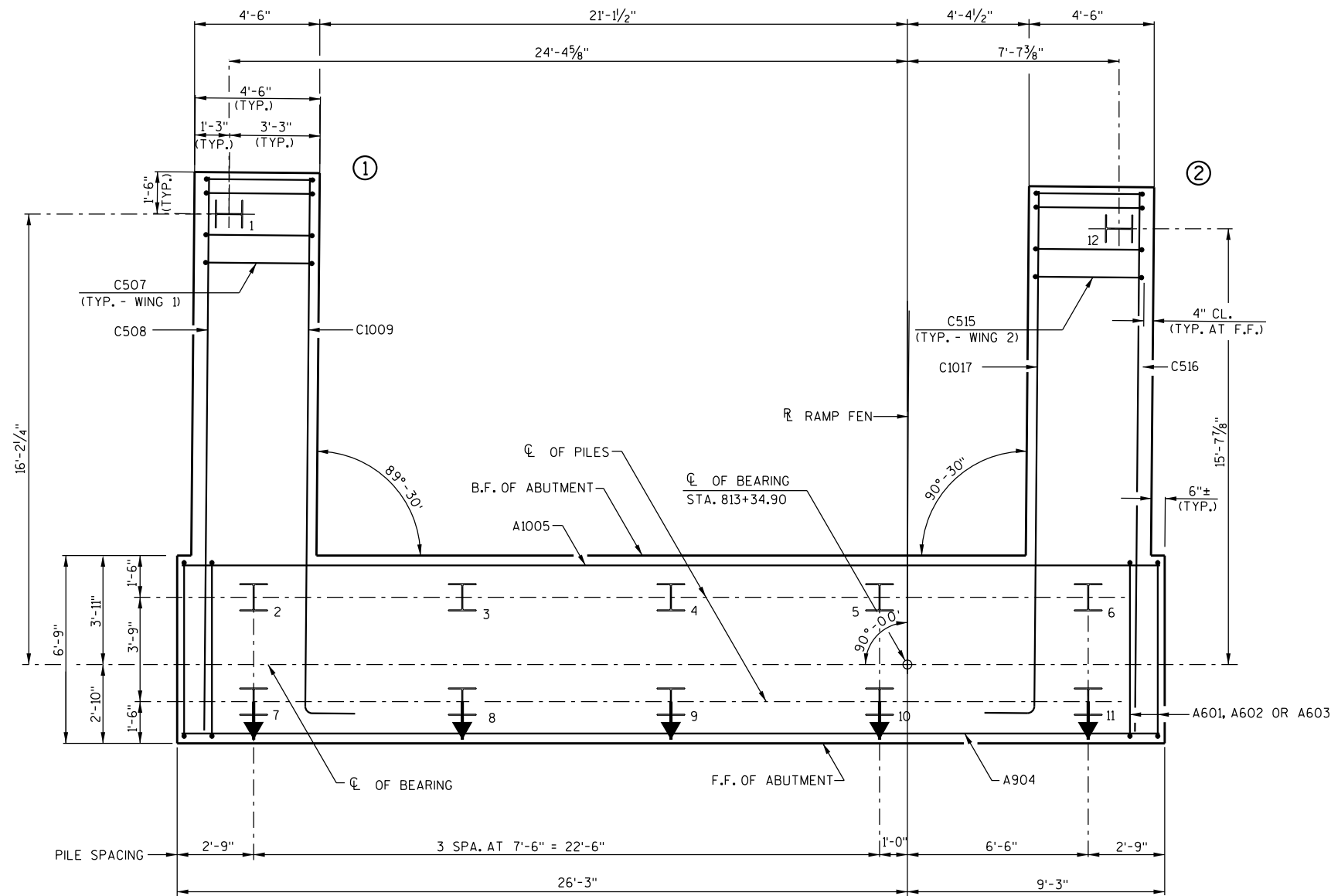


ELEVATION
(LOOKING WEST)



PLAN

NO.		DATE		REVISION		BY	
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.							
							
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION							
STRUCTURE B-5-658							
DRAWN BY				TAW		PLANS CK'D. TR	
WEST ABUTMENT				SHEET 15 OF 82			

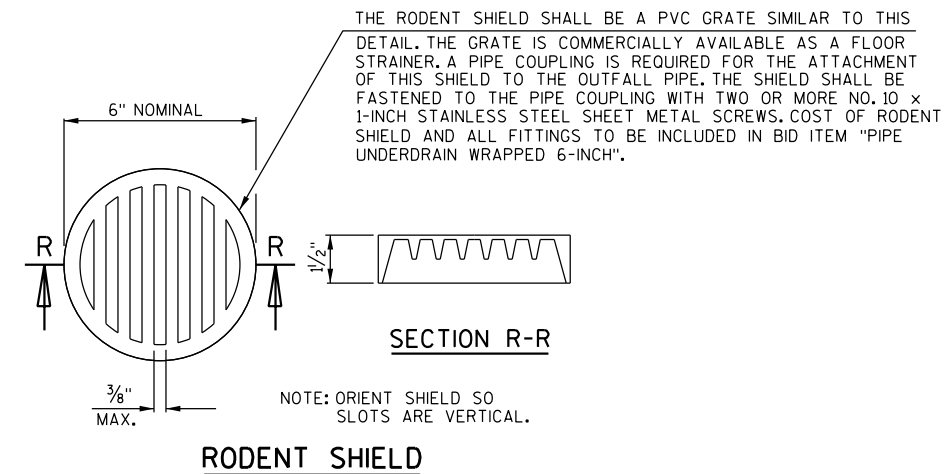
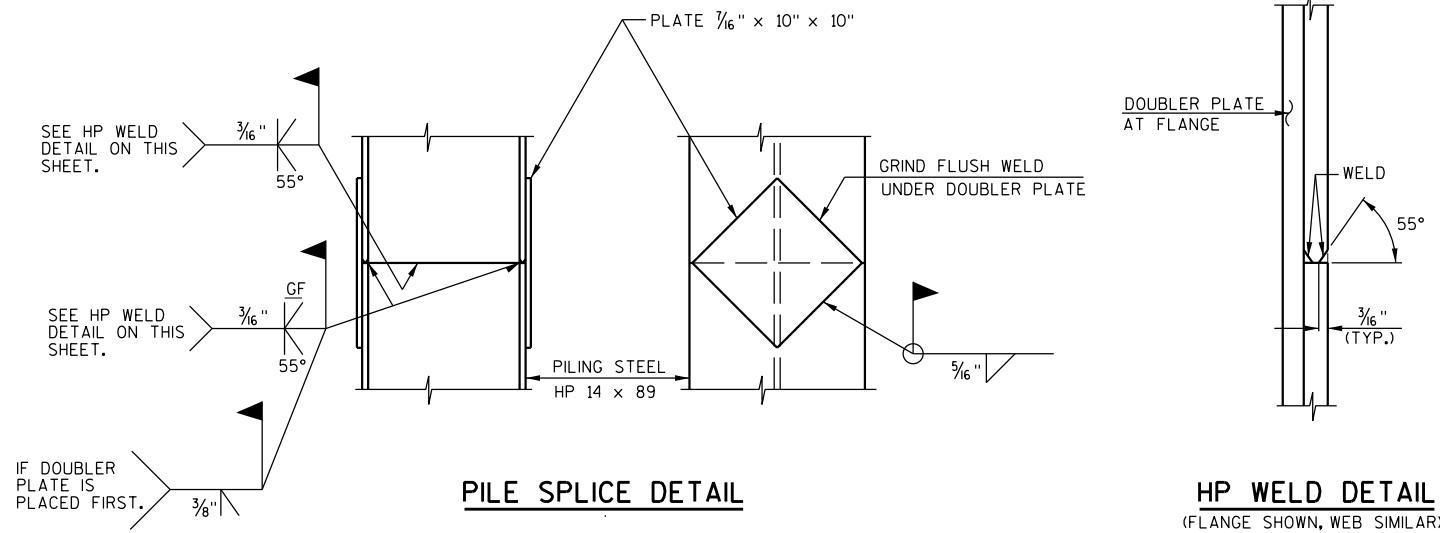
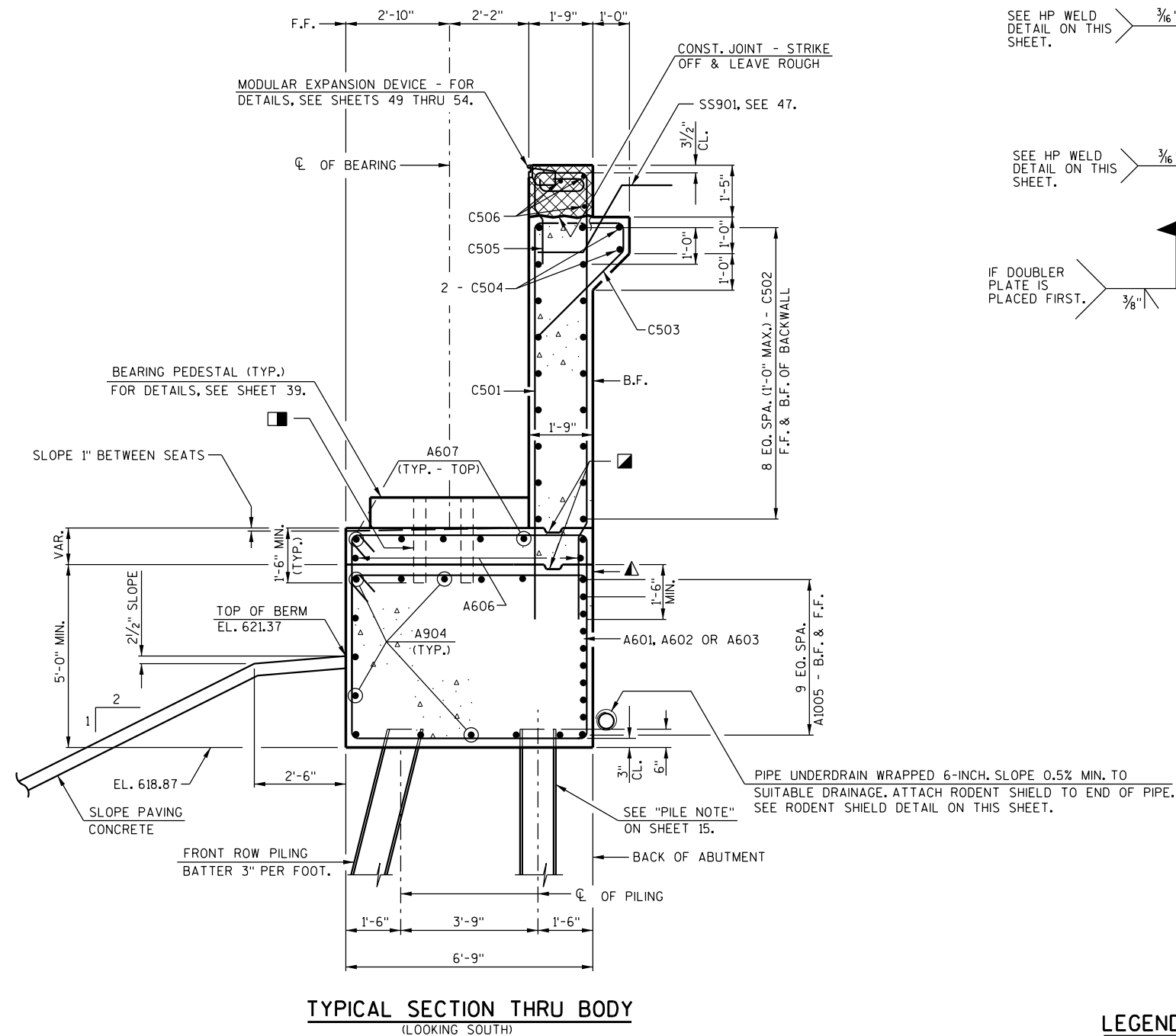


LEGEND

- ⊗ INDICATES WING NUMBER
- ↓ INDICATES PILES BATTERED 3" PER FOOT IN DIRECTION OF ARROW.

PILE PLAN

NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY	TAW	PLANS CK'D.	TR
WEST ABUTMENT		SHEET 16 OF 82	



LEGEND

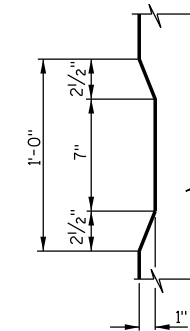
■ ▲ ■ ▨ FOR SYMBOL DESCRIPTIONS, SEE SHEET 15.

NOTE: BACKWALL MAY BE PLACED AFTER THE END DIAPHRAGM IS BOLTED.

NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY TAW		PLANS CK'D. TR	
WEST ABUTMENT		SHEET 17 OF 82	

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

 FOR SYMBOL DESCRIPTIONS, SEE SHEET 15.



EL. 633.21

14'-4 1/8"

8'-5 1/2"

14 EQUAL SPACES
C412 - F.F.

9 EQUAL SPACES
C412 - B.F.

3" ±

1'-0"

5'-6"

C511

C510

C508 - F.F.
C1009 - B.F.

C507

3" CL.

1'-6"

SEE "PILE NOTE"
ON SHEET 16.

EL. 633.51

1'-5 3/8"

EL. 634.96

B

C

1'-0" ±

9"

1'-0"

C413

8 SPA. AT 1'-0" = 8'-0"

C414 BARS
** 1'-0" - 2 3/8"

1'-3"

1'-0" MIN.
BELOW FINISHED
GROUND

TOP OF BERM

EL. 618.87

** 5'-10 3/4"

OUTLINE OF APPROACH APRON

1'-6"

F.F.

1'-6"

B.F.

4" CL.
(F.F. ONLY)

SEE "REVEAL DETAIL"
ON THIS SHEET.

C412 (TYP.)
EACH FACE

C510 OR C511

11'-0"

2'-0" MIN.

5 EQ. SPA.
C508 - F.F.

4'-6"

1'-3"

3'-3"

4'-6"

C1009

C507

7 EQUAL SPACES
C1009 - B.F.
5'-10 3/4"

1'-0"

NO.	DATE	REVISION	BY
PLANS PREPARED BY <u>ROMENESKO ENGINEERING, INC.</u>			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAW BY		TAW	PLANS CK'D. TR
WING 1		SHEET 18 OF 82	

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

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

MARK	NO. REQ'D.	LENGTH
A602	1 SERIES OF 13	23'-0" TO 24'-4"

PLANS PREPARED BY
ROMENESKO ENGINEERING, INC.

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 STRUCTURES DESIGN SECTION

STRUCTURE B-5-658

	DRAWN BY	TAW	PLANS CK'D.
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WEST ABUTMENT DETAILS	SHEET 20



NOTE: APPLY "BRIDGE SEAT PROTECTION" PER SECTION 502.3.12 TO THE TOP OF ABUTMENT (SEATS AND BETWEEN SEATS).

STATE PROJECT NUMBER

1133-03-73

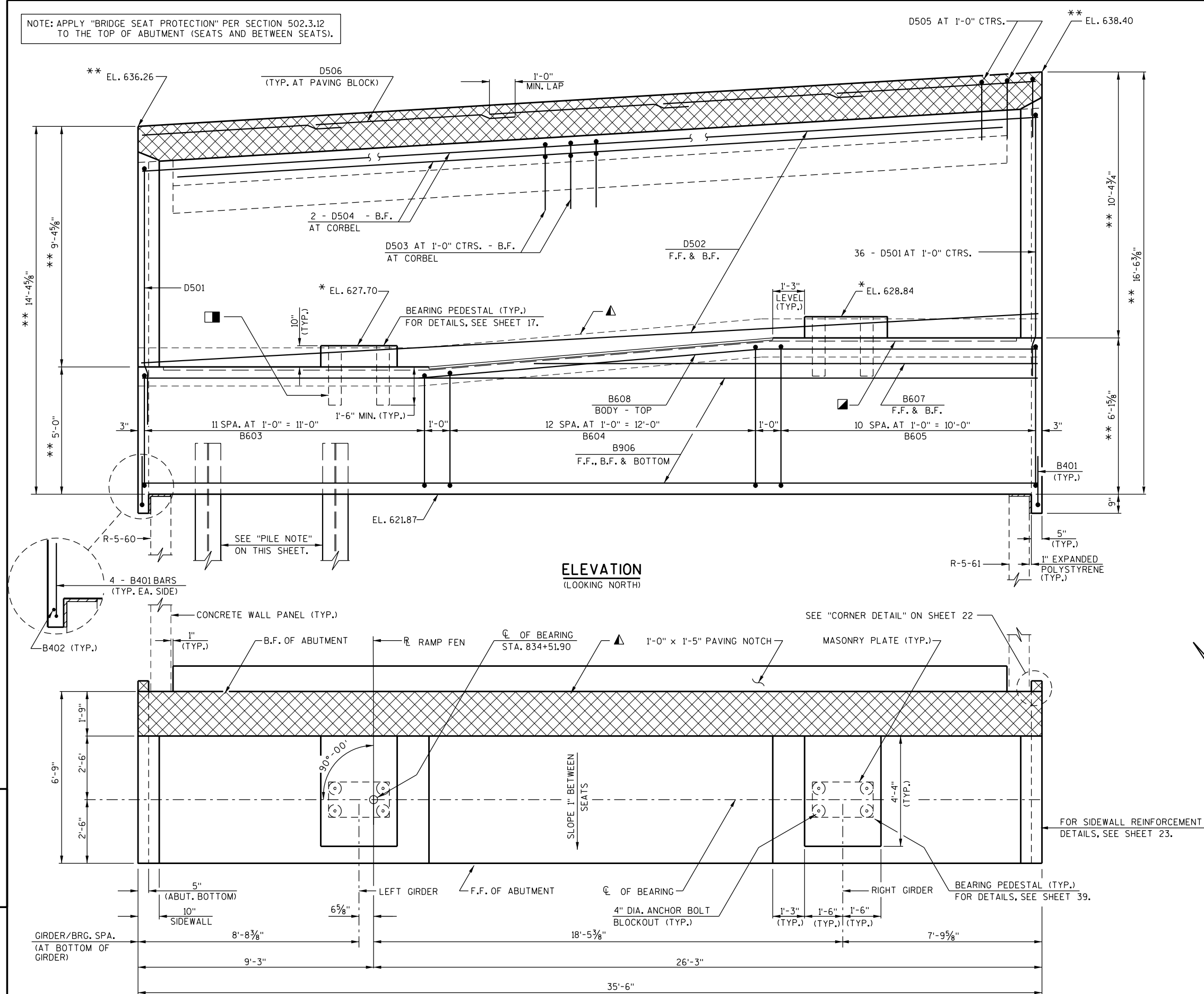
LEGEND

- * ELEVATIONS ARE GIVEN AT THE TOP OF CONCRETE PEDESTAL AT THE ϕ OF BEARING.
- ** DIMENSIONS AND ELEVATIONS ARE GIVEN AT THE F.F. OF ABUTMENT BACKWALL AT TOP OF CONCRETE.
- ▲ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE ABOVE FOOTING.
- KEYED CONST. JOINT FORMED BY BEVELED 2" x 6".
- ▨ INDICATES CONCRETE AREA TO BE POURED AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE.
- ⊗ INDICATES WING NUMBER
- 6" DIA. ANCHOR BOLT BLOCKOUT. BLOCKOUTS SHALL BE FORMED USING CORRUGATED FORMS THAT WILL PROVIDE POSITIVE INTERLOCK BETWEEN ABUTMENT BODY AND THE GROUT SURROUNDING THE ANCHOR BOLTS. (DISPLACE BAR STEEL AS NECESSARY TO CLEAR BOXOUT)

PILE NOTE

NORTH ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 14 x 89 WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PILE DRIVING ANALYZER, ESTIMATED 65' LONG. FOR PILE LAYOUT DETAILS, SEE SHEET 22. FOR PILE SPLICE DETAILS, SEE SHEET 17.

NOTE: FOR "TYPICAL SECTION THRU BODY", SEE SHEET 22. SPACE B603, B604 & B605 BARS TO MISS PILES.



ELEVATION
(LOOKING NORTH)

PLAN

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

NO. DATE REVISION BY			
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY TAW		PLANS CK'D. TR	
NORTH ABUTMENT		SHEET 21 OF 82	

FILE NAME : P:\152 USH 411033-03-02 URS\STRUCTURES\B-5-658 SUBSTRUCTURE\21.NABUT11.V7.B-5-658.DGN

PLOT DATE : 1/30/2012

BILL OF BARS

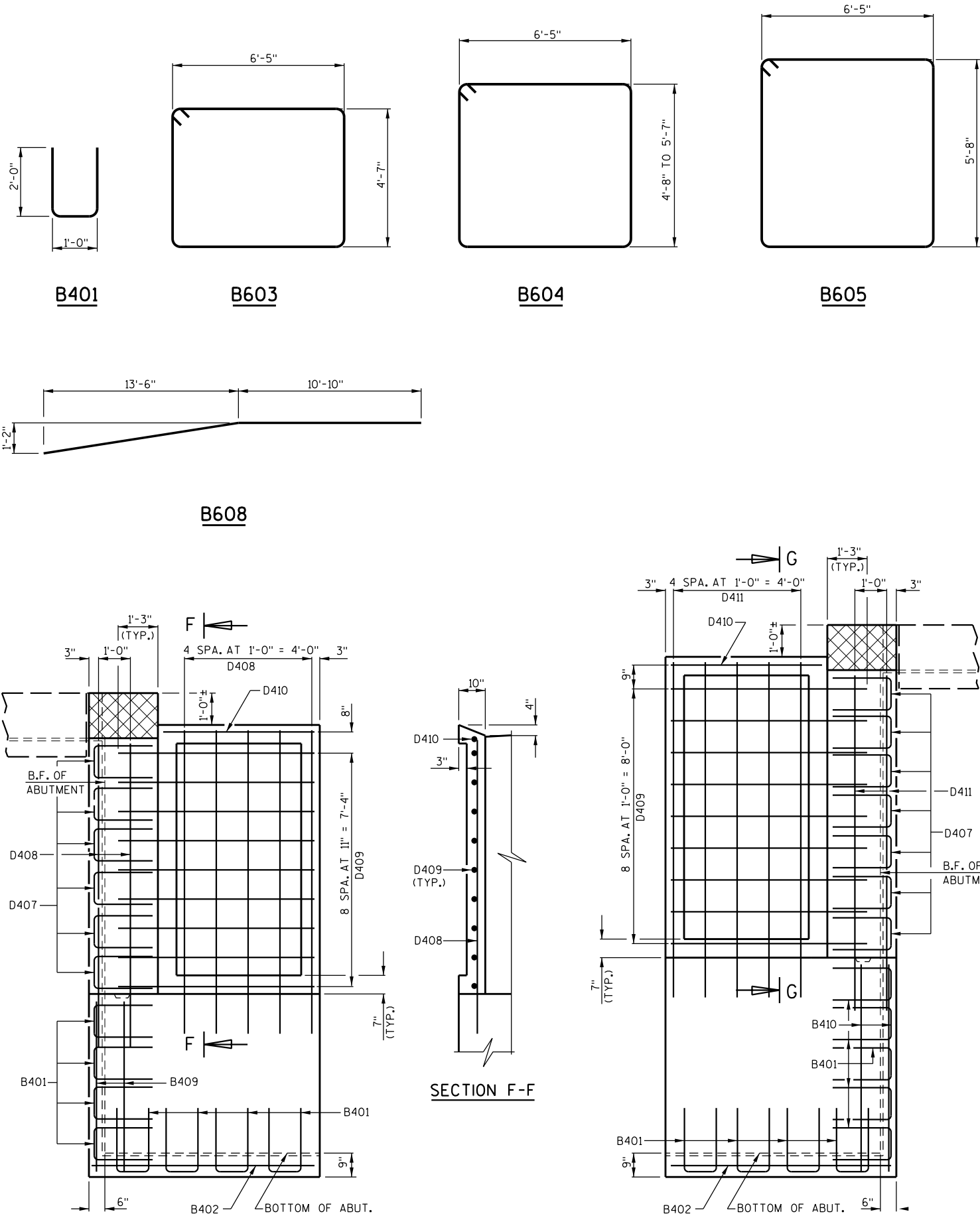
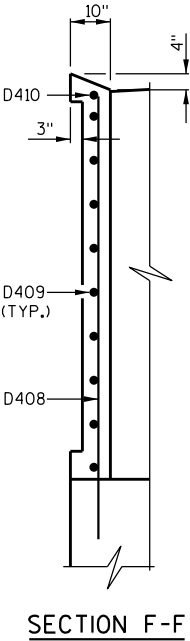
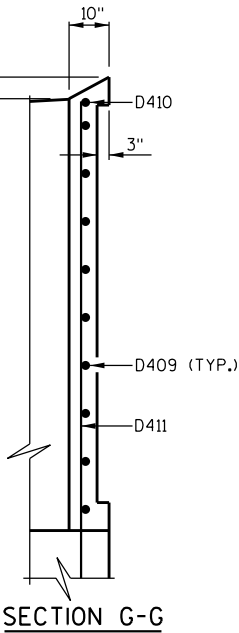
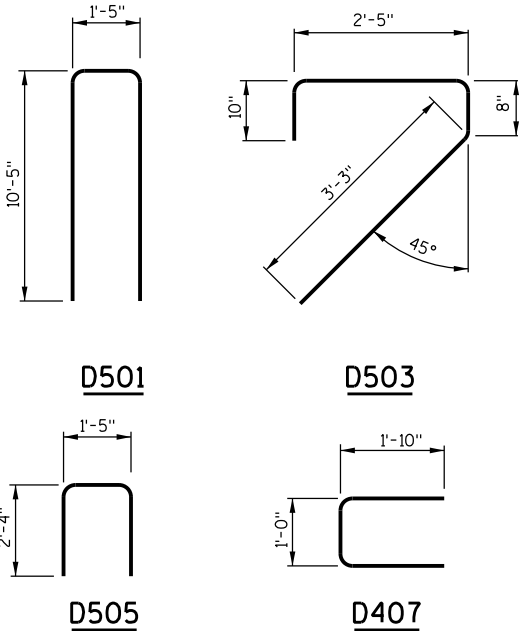
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
NON-COATED BARS					TOTAL WEIGHT = 3,830 LBS.
B401	17	4-10	X		BODY - BOTTOM - EACH END VERT. & HORIZ.
B402	2	6-4			BODY - BOTTOM - EACH END HORIZ.
B603	12	22-10	X		BODY -STIRRUPS VERT.
B604	13	23-11	X	✱	BODY -STIRRUPS VERT.
B605	11	25-0	X		BODY -STIRRUPS VERT.
B906	18	35-2			BODY - F.F., B.F., TOP, & BOTTOM HORIZ.
B607	2	19-9			BODY - F.F. & B.F. HORIZ.
B608	6	24-4	X		BODY - TOP HORIZ.
B409	2	5-4			BODY - WEST END VERT.
B410	2	6-6			BODY - EAST END VERT.
EPOXY COATED BARS					TOTAL WEIGHT = 2,350 LBS.
D501	36	22-0	X		ABUTMENT BACKWALL VERT.
D502	18	35-2			ABUTMENT BACKWALL HORIZ.
D503	32	6-10	X		ABUTMENT BACKWALL - CORBEL VERT.
D504	2	32-5			ABUTMENT BACKWALL - CORBEL HORIZ.
D505	36	5-10	X		PAVING BLOCK VERT.
D506	15	8-0			PAVING BLOCK HORIZ.
D407	13	4-6	X		SIDEWALL - EACH END HORIZ.
D408	7	9-7			SIDEWALL - WEST END VERT.
D409	18	6-3			SIDEWALL - EACH END HORIZ.
D410	2	4-9			SIDEWALL - EACH END HORIZ.
D411	7	10-7			SIDEWALL - EAST END VERT.

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

BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
B604	1 SERIES OF 13	23'-0" TO 24'-10"

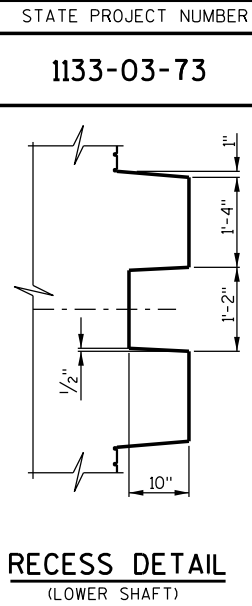
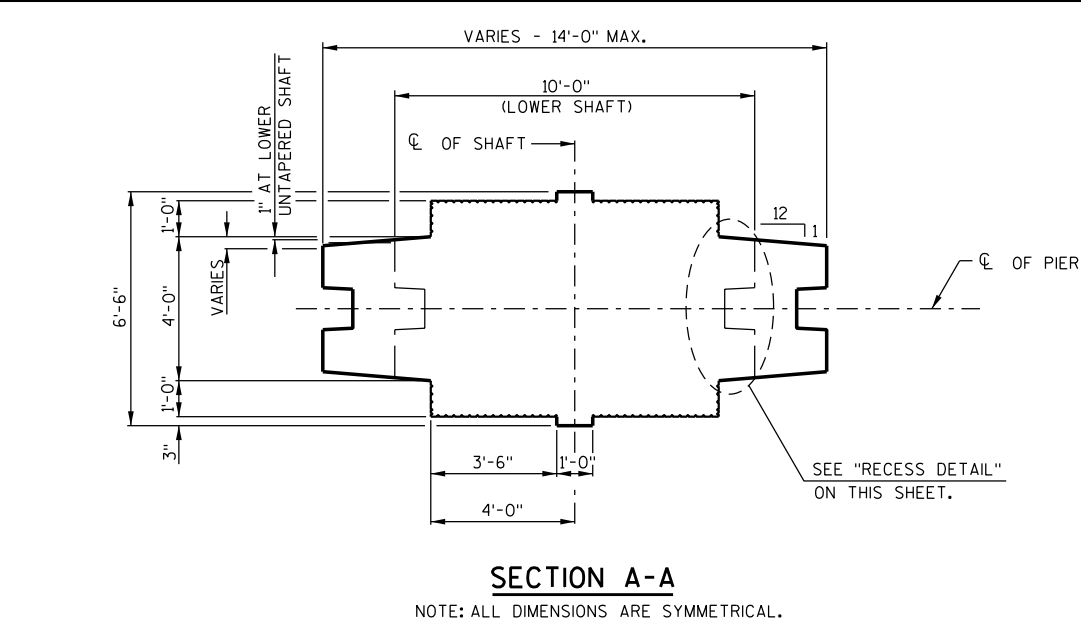
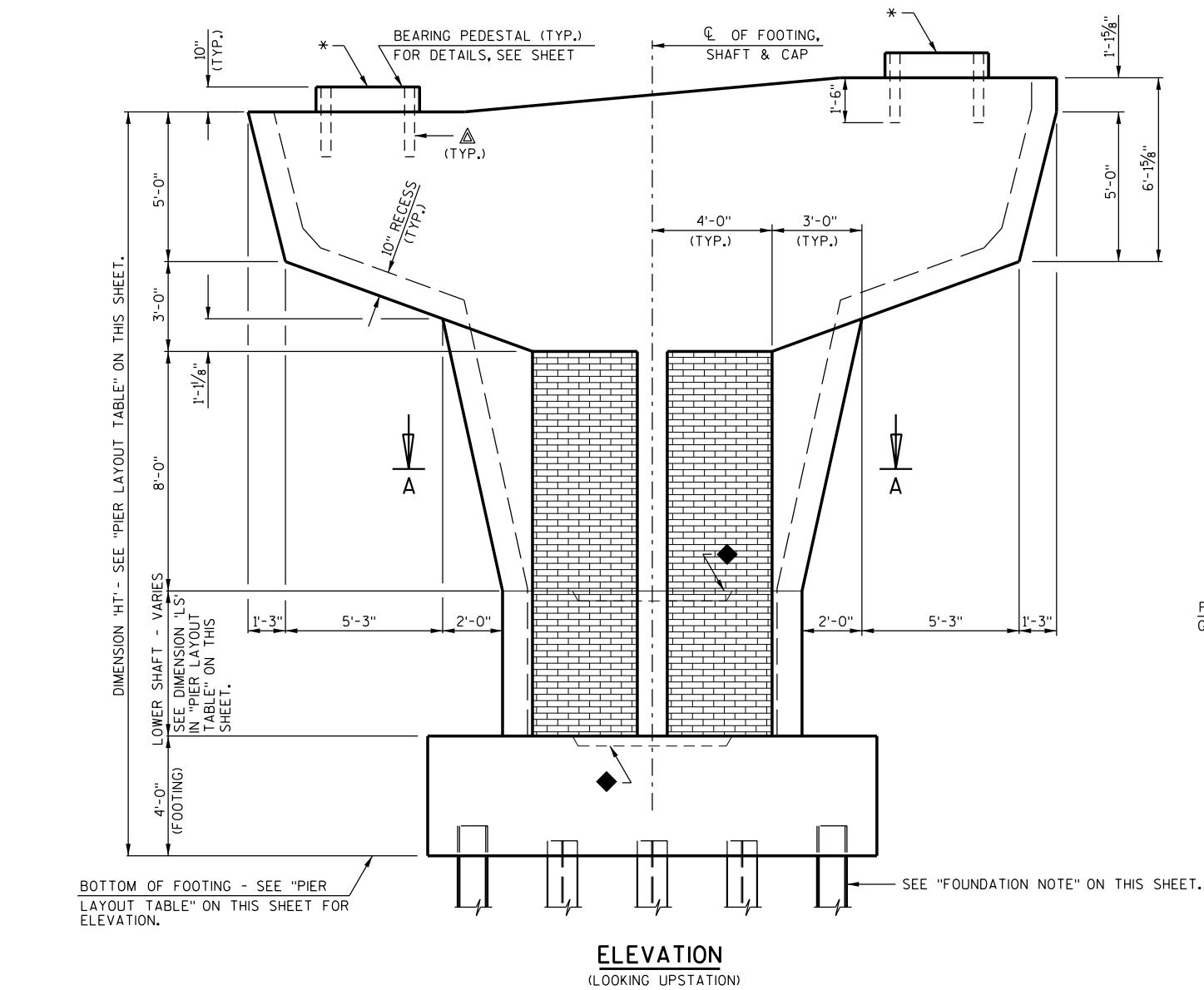
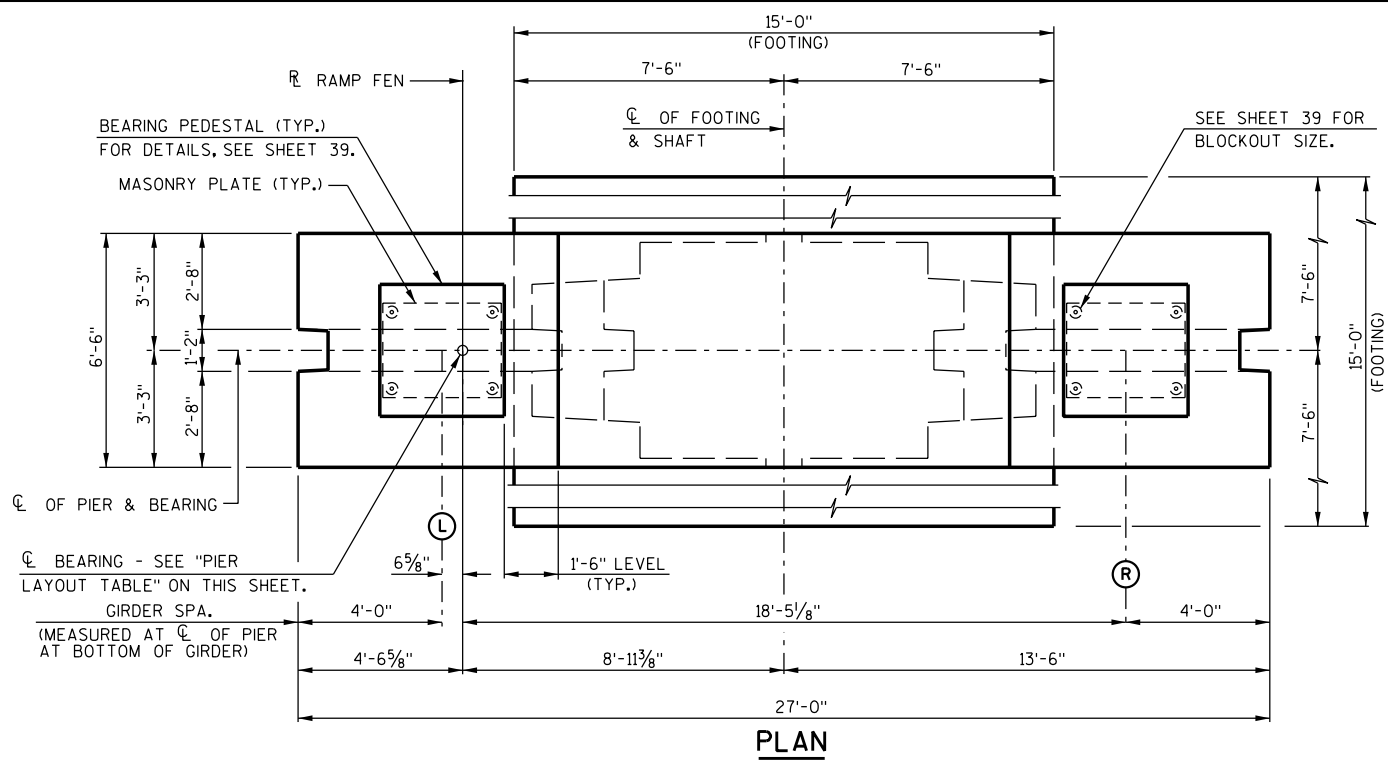


END VIEW - WEST END
(SHOWING SIDEWALL & B.F. NOTCH REINFORCEMENT)

END VIEW - EAST END
(SHOWING SIDEWALL & B.F. NOTCH REINFORCEMENT)

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

NO.	DATE	REVISION	BY	
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.				
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION				
STRUCTURE B-5-658				
	DRAWN BY	TAW	PLANS CK'D.	TR
NORTH ABUTMENT DETAILS			SHEET 23 OF 82	



PIER LAYOUT TABLE

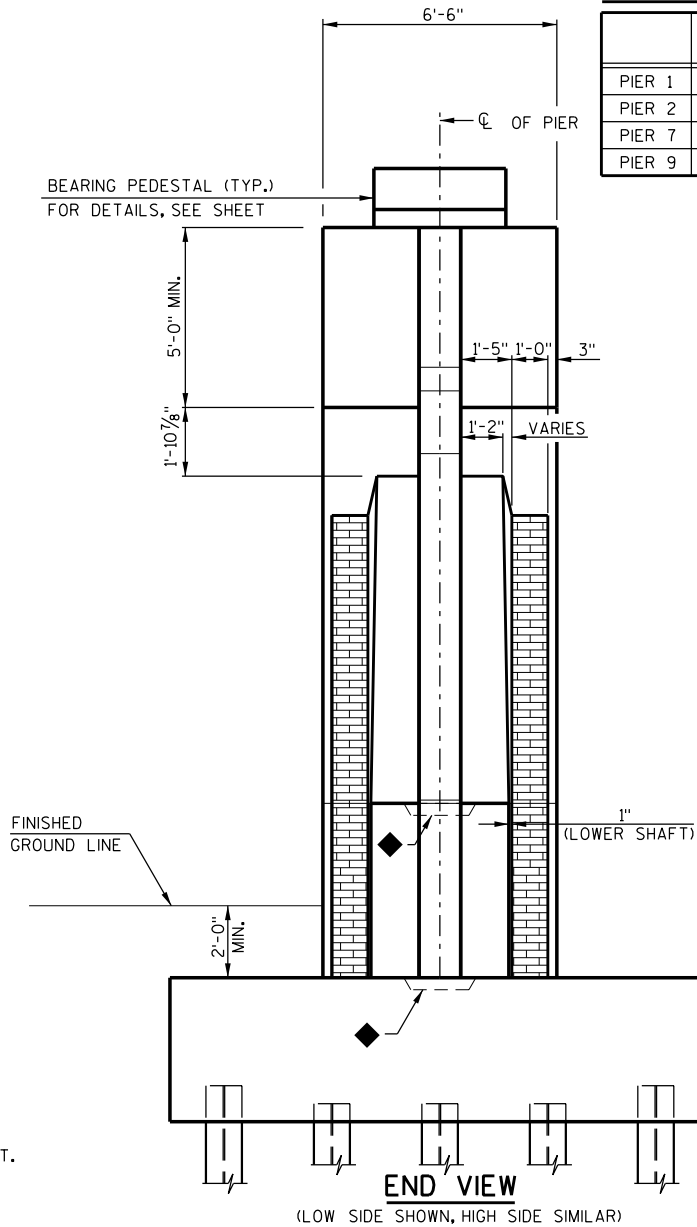
	CL OF BRG. STATION	* ELEVATION LEFT PEDESTAL	* ELEVATION RIGHT PEDESTAL	SHAFT DIM. 'LS'	DIMENSION 'HT'	BOTTOM FTG. ELEVATION
PIER 1	815+04.90	626.05	627.19	3'-0"	23'-0"	602.22
PIER 2	817+14.90	629.21	630.35	5'-0"	25'-0"	603.38
PIER 7	827+96.90	642.29	643.43	5'-0"	25'-0"	616.46
PIER 9	832+81.90	633.25	634.39	7'-0"	27'-0"	605.42

LEGEND

- * ELEVATIONS ARE GIVEN AT THE TOP OF CONCRETE PEDESTAL AT THE CL OF BEARING. SEE "PIER LAYOUT TABLE" ON THIS SHEET FOR SEAT ELEVATIONS.
 - ◆ KEYED CONST. JOINT FORMED BY BEVELED 4" x 2'-0" x 5'-4".
 - △ BLOCKOUTS SHALL BE FORMED USING CORRUGATED FORMS THAT WILL PROVIDE POSITIVE INTERLOCK BETWEEN PIER CAP AND THE GROUT SURROUNDING THE ANCHOR BOLTS. SEE SHEET 39 FOR BLOCKOUT SIZES. (DISPLACE BAR STEEL AS NECESSARY TO CLEAR BOXOUT).
- NOTE: FOR PIERS 1, 2, 7 & 9 BAR STEEL REINFORCEMENT DETAILS, SEE SHEETS 28 THRU 31 AND 36 THRU 39.

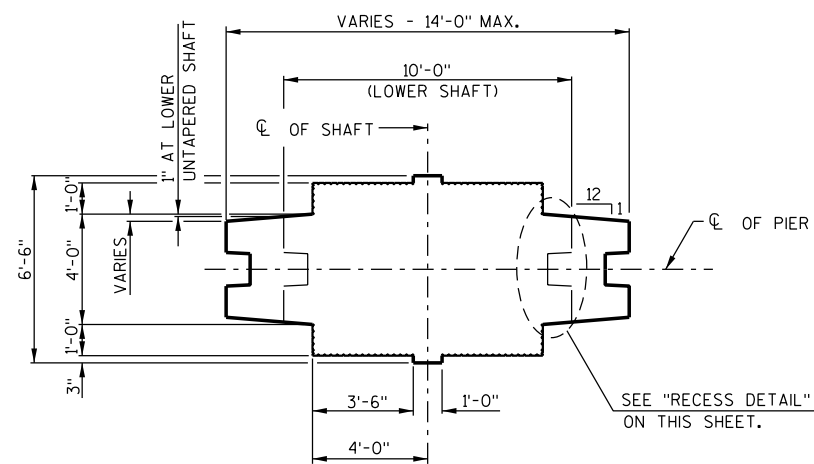
FOUNDATION NOTE

PIERS 1, 2, 7 & 9 TO BE SUPPORTED ON HP 14X89 STEEL PILES WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PILE DRIVING ANALYZER. ESTIMATED 70' LONG AT PIER 1, 75' AT PIER 2, 80' AT PIER 7 AND 50' AT PIER 9. FOR FOOTING LAYOUT DETAILS, SEE SHEET 38. FOR PILE SPLICE DETAILS, SEE SHEET 17.



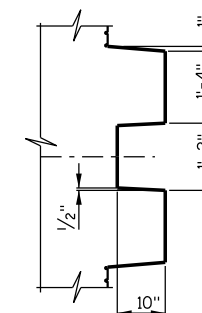
STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY TAW		PLANS CK'D. TR	
PIERS 1, 2, 7 & 9 LAYOUT DETAILS			SHEET 24 OF 82

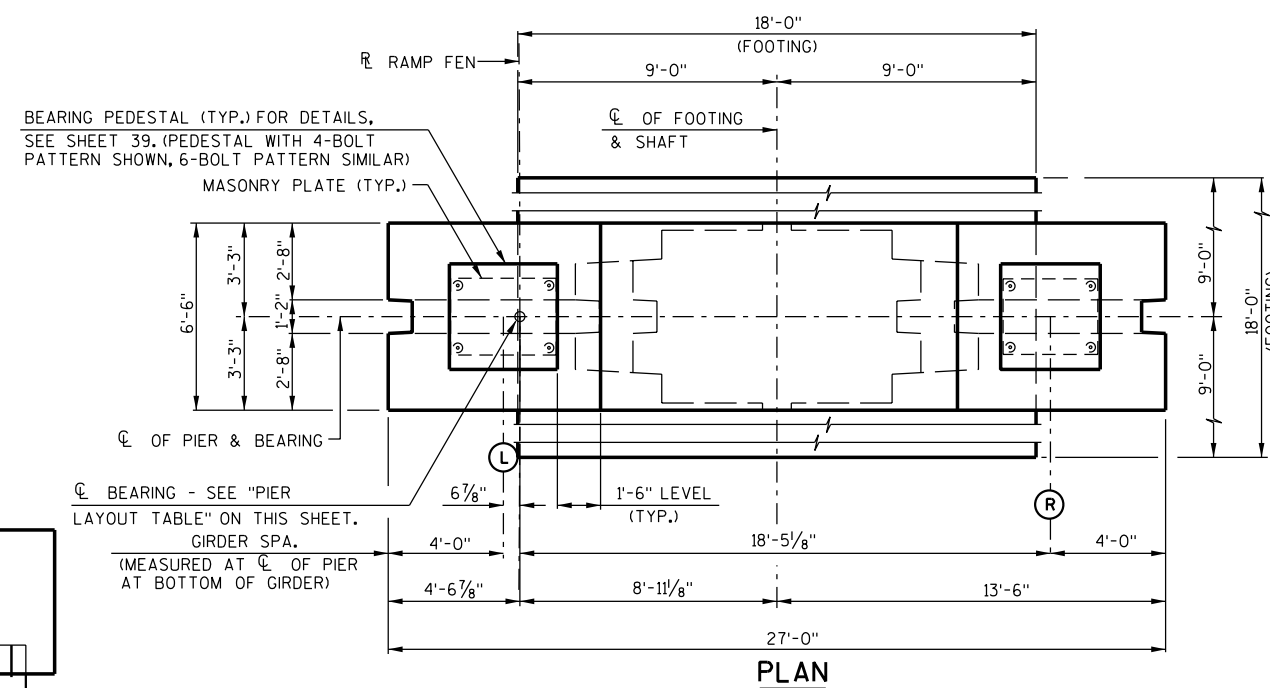


SECTION A-A

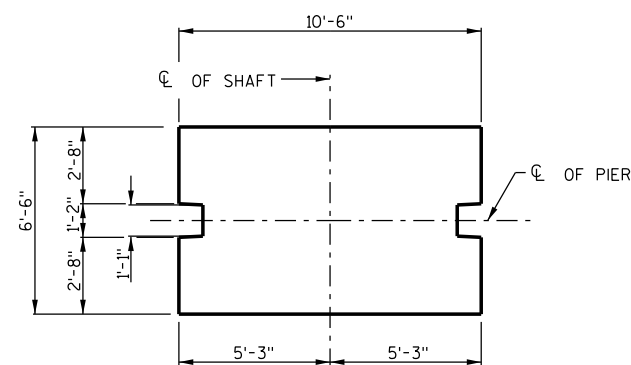
NOTE: ALL DIMENSIONS ARE SYMMETRICAL.



RECESS DETAIL (LOWER SHAFT)



PLAN



SECTION B-B

NOTE: ALL DIMENSIONS ARE SYMMETRICAL.

	CL OF BRG. STATION	* ELEVATION LEFT PEDESTAL	* ELEVATION RIGHT PEDESTAL	SHAFT DIM. 'LS1'	SHAFT DIM. 'LS2'	DIMENSION 'HT'	BOTTOM FTG. ELEVATION
PIER 3	819+24.90	633.14	634.28	8'-0"	4'-0"	33'-0"	599.31
PIER 8	830+46.90	638.99	640.13	7'-0"	4'-0"	32'-0"	606.16

PIERS 3 & 8 TO BE SUPPORTED ON HP 14x89 STEEL PILES WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER SHAFT AS DETERMINED BY THE PILE DRIVING ANALYZER. ESTIMATED 65' LONG FOR PIER 3 AND 85' AT PIER 8. FOR FOOTING LAYOUT DETAILS, SEE SHEET 38. FOR PILE SPLICE DETAILS, SEE SHEET 17.

* ELEVATIONS ARE GIVEN AT THE TOP OF CONCRETE PEDESTAL AT THE CL OF BEARING. SEE "PIER LAYOUT TABLE" ON THIS SHEET FOR SEAT ELEVATIONS.

- ◆ KEYED CONST. JOINT FORMED BY BEVELED 4" x 2'-0" x 5'-4".

- ▲ BLOCKOUTS SHALL BE FORMED USING CORRUGATED FORMS THAT WILL PROVIDE POSITIVE INTERLOCK BETWEEN PIER CAP AND THE GROUT SURROUNDING THE ANCHOR BOLTS. SEE SHEET 39 FOR BLOCKOUT SIZES. (DISPLACE BAR STEEL AS NECESSARY TO CLEAR BOXOUT).

NOTE: FOR PIERS 3 & 8 BAR STEEL REINFORCEMENT DETAILS,
SEE SHEETS 28, 29, 32, 33, 37, 38, & 39.

NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		TAW	PLANS CK'D. TR
PIERS 3 & 8 LAYOUT DETAILS		SHEET 25 OF 8	



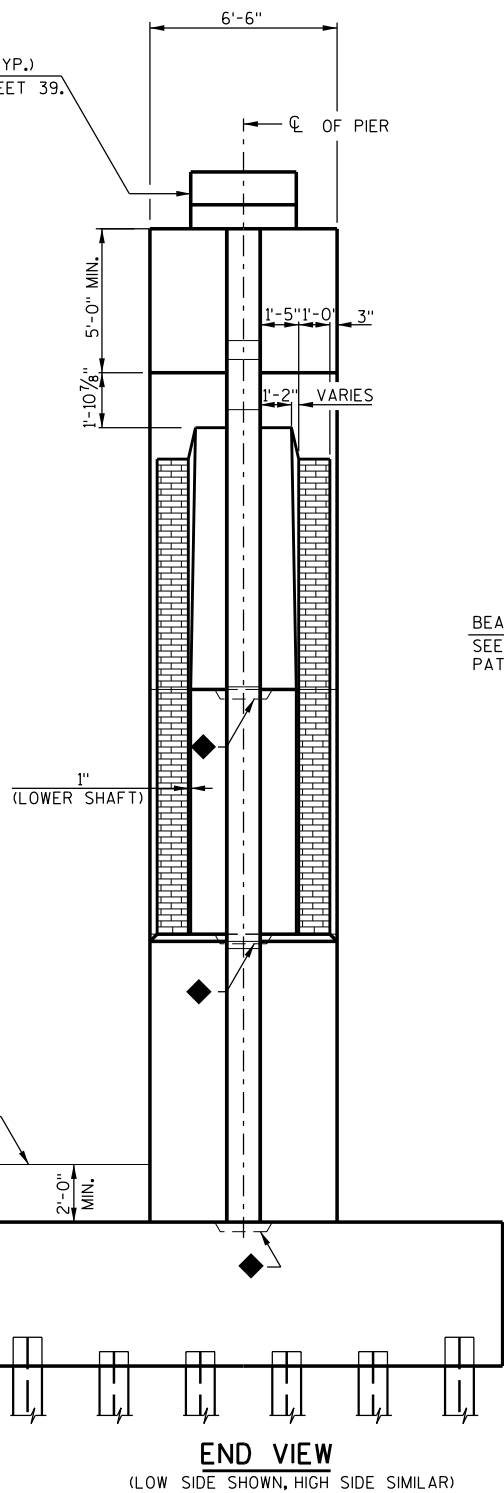
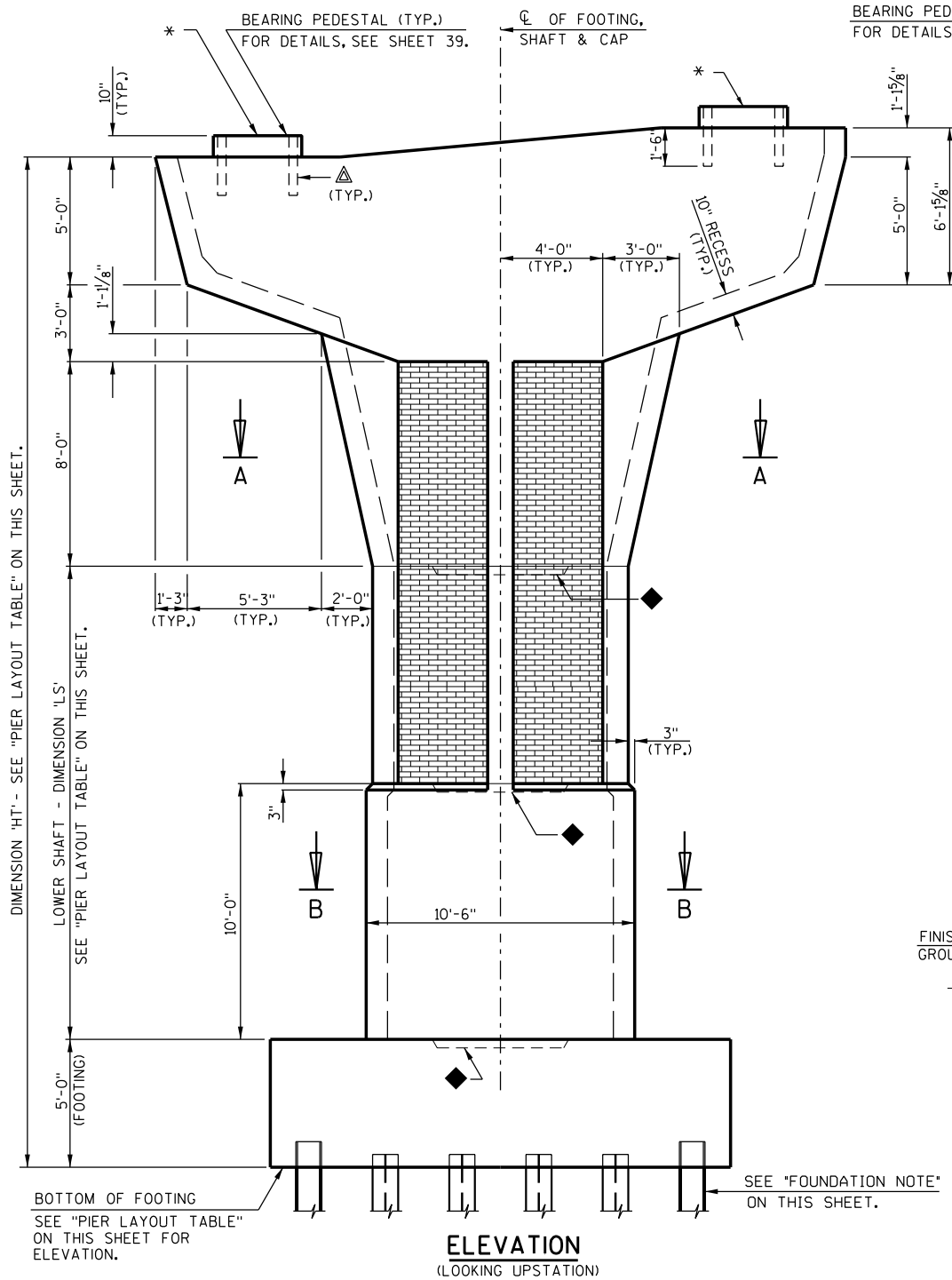
STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

LEGEND

- NOTE: FOR PIER 4 BAR STEEL REINFORCEMENT DETAILS,
SEE SHEETS 28, 29, 33, 37, 38, & 39.

FOUNDATION NOTE

PIER 4 TO BE SUPPORTED ON HP 14x89 STEEL PILES
WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER
SHAFT AS DETERMINED BY THE PILE DRIVING ANALYZER.
ESTIMATED 75' LONG. FOR FOOTING LAYOUT DETAILS, SEE
SHEET 38. FOR PILE SPlice DETAILS, SEE SHEET 17.



PIER LAYOUT TABLE

	CL OF BRG. STATION	* ELEVATION LEFT PEDESTAL	* ELEVATION RIGHT PEDESTAL	SHAFT DIM. 'LS'	DIMENSION 'HT'	BOTTOM FTG. ELEVATION
PIER 5	822+96.90	640.05	641.19	19'-0"	40'-0"	599.22
PIER 6	825+46.90	642.64	643.78	17'-0"	38'-0"	603.81

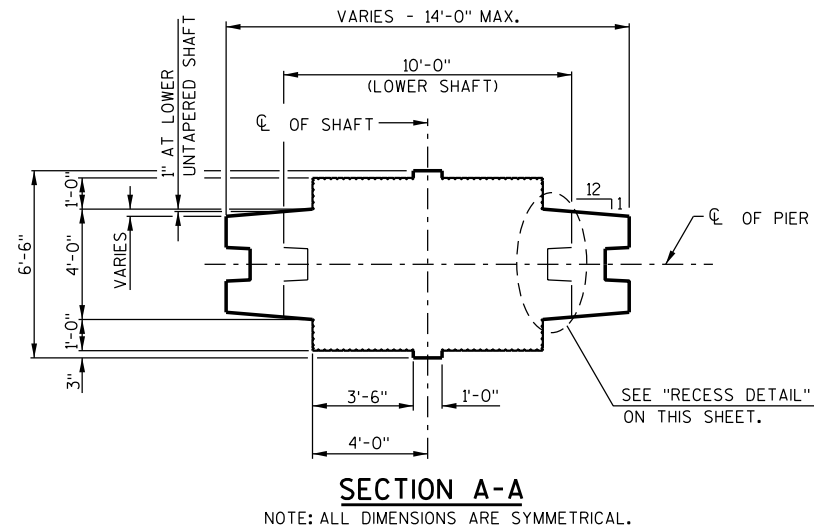
FOUNDATION NOTE

PIERS 5 & 6 TO BE SUPPORTED ON HP 14x89 STEEL PILES WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER SHAFT AS DETERMINED BY THE PILE DRIVING ANALYZER. ESTIMATED 70' LONG FOR PIER 5 AND 45' FOR PIER 6. FOR FOOTING LAYOUT DETAILS, SEE SHEET 38. FOR PILE SPLICE DETAILS, SEE SHEET 17.

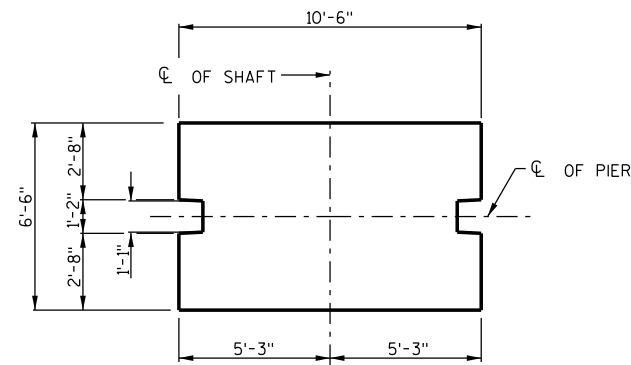
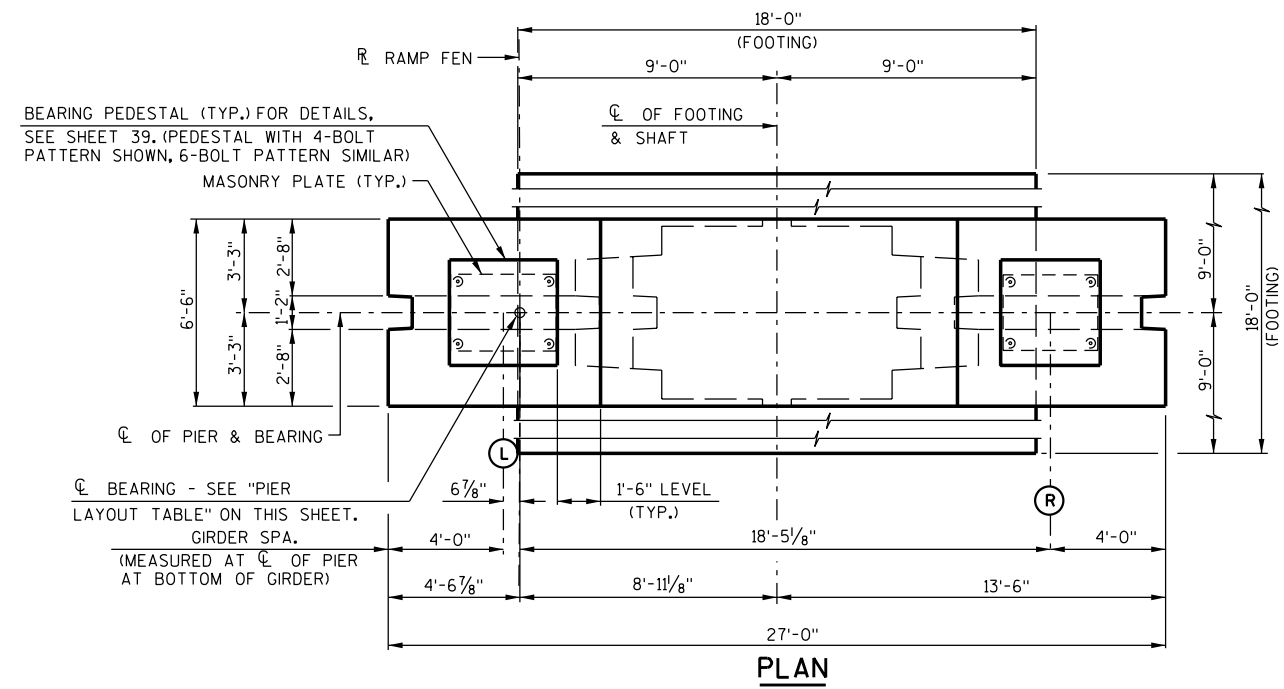
LEGEND

- * ELEVATIONS ARE GIVEN AT THE TOP OF CONCRETE PEDESTAL AT THE CL OF BEARING. SEE "PIER LAYOUT TABLE" ON THIS SHEET FOR SEAT ELEVATIONS.
- ◆ KEYED CONST. JOINT FORMED BY BEVELED 4" x 2'-0" x 5'-4".
- ▲ BLOCKOUTS SHALL BE FORMED USING CORRUGATED FORMS THAT WILL PROVIDE POSITIVE INTERLOCK BETWEEN PIER CAP AND THE GROUT SURROUNDING THE ANCHOR BOLTS. SEE SHEET 39 FOR BLOCKOUT SIZES. (DISPLACE BAR STEEL AS NECESSARY TO CLEAR BOXOUT).

NOTE: FOR PIERS 5 & 6 BAR STEEL REINFORCEMENT DETAILS, SEE SHEETS 28, 29, 34, 35, 37, 38, & 39.



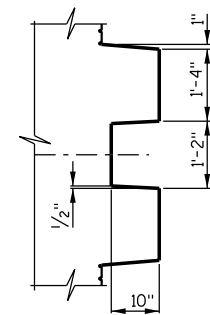
RECESS DETAIL
(LOWER SHAFT)



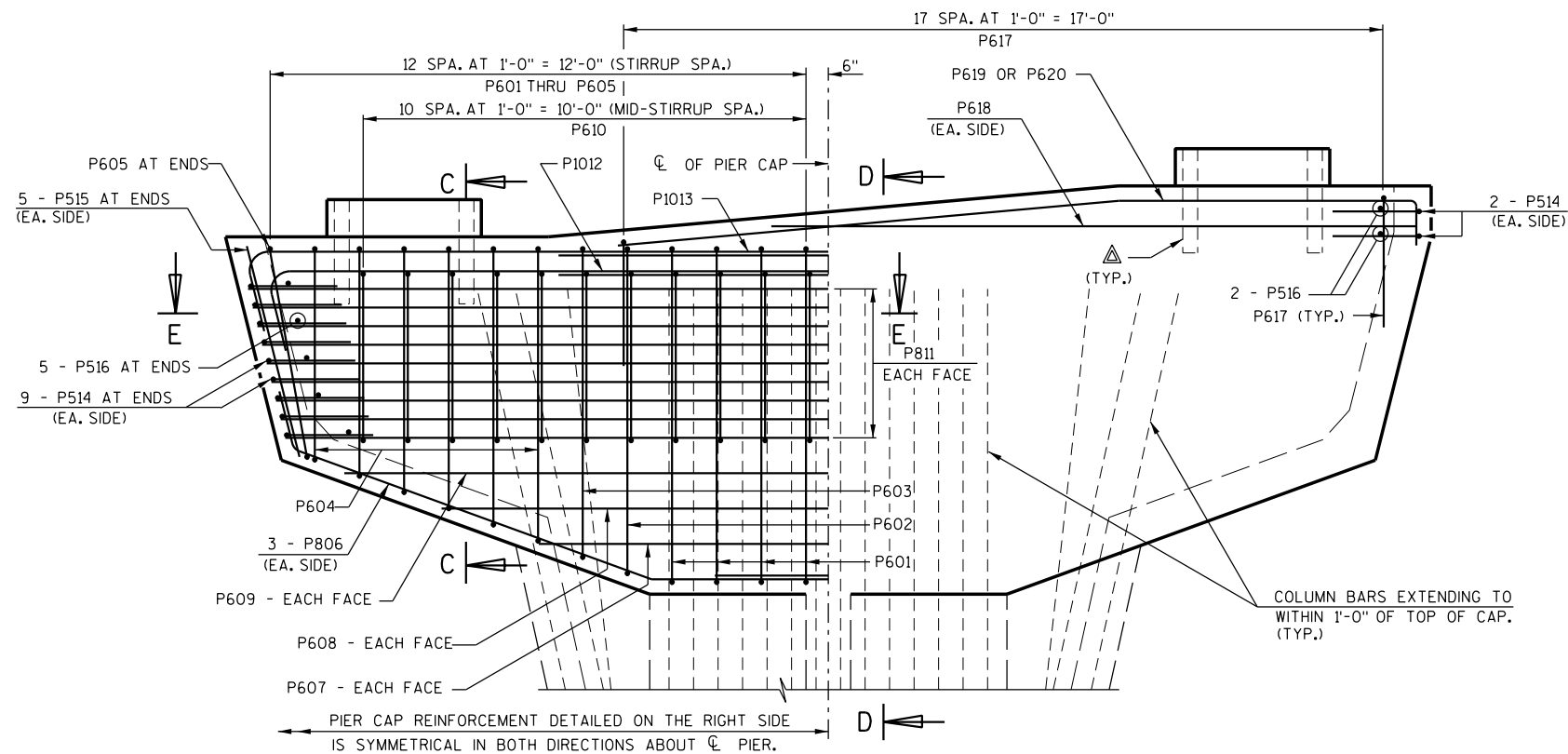
STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

STATE PROJECT NUMBER

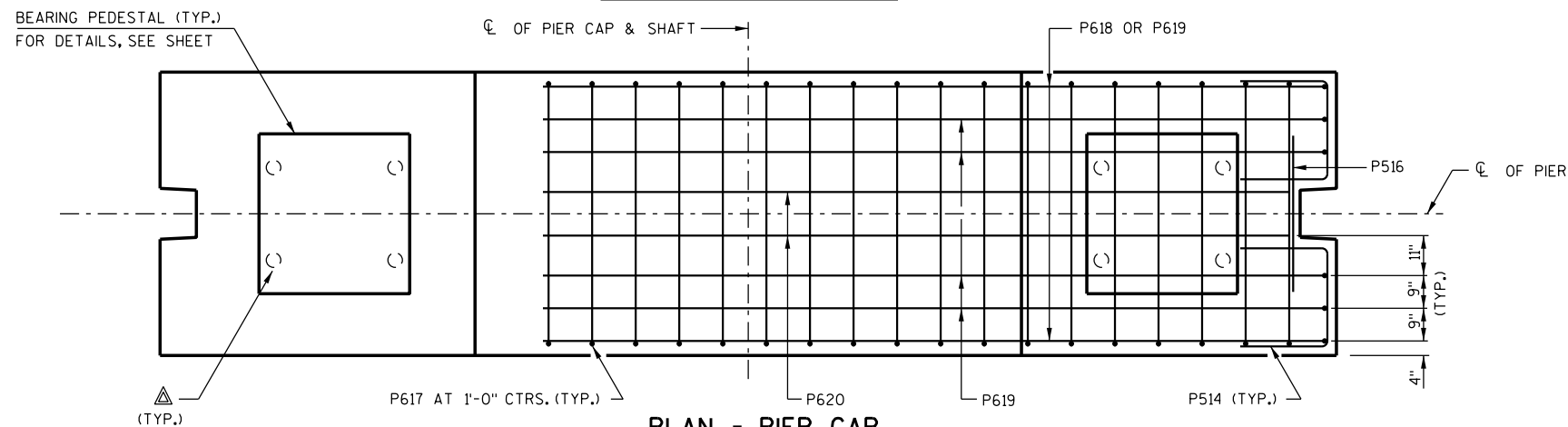
1133-03-73



NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY TAW		PLANS CK'D. TR	
PIERS 5 & 6 LAYOUT DETAILS		SHEET 27 OF 82	



ELEVATION - PIER CAP



PLAN - PIER CAP

(SHOWING BAR STEEL REINFORCEMENT AT TOP OF CAP)

P610 - MID-STIRRUPS

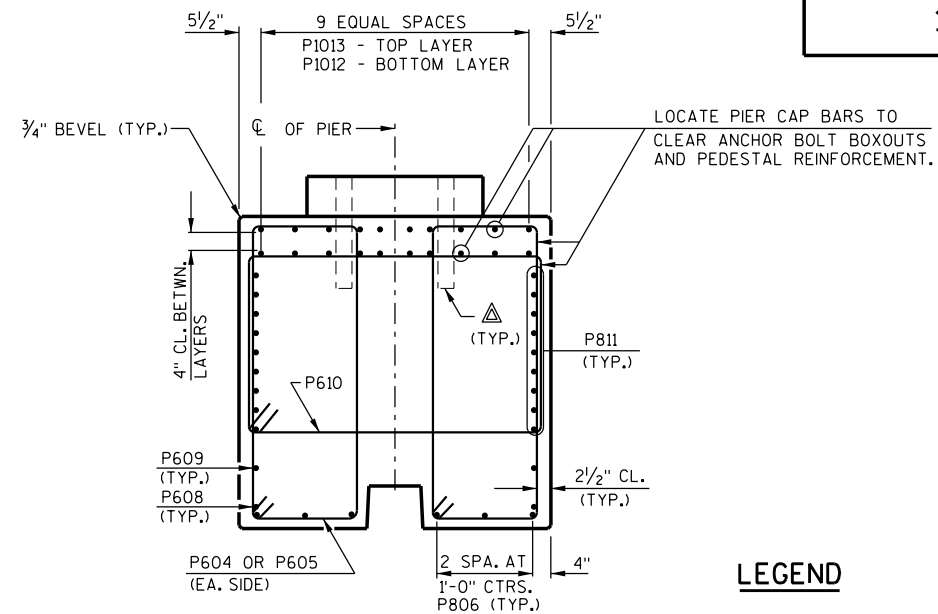
PIER CAP REINFORCEMENT DETAILED IS SYMMETRICAL
IN BOTH DIRECTIONS ABOUT CL PIER.

CL OF PIER CAP & SHAFT

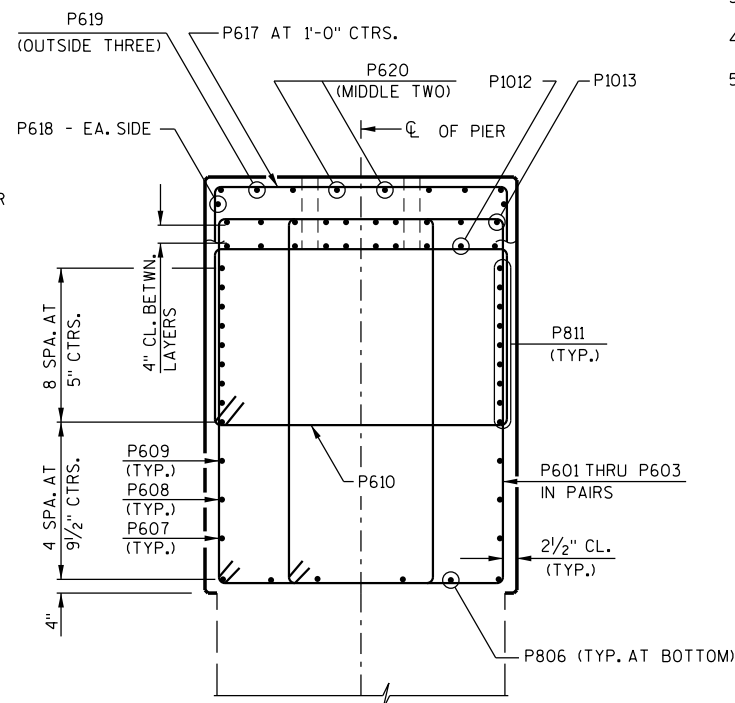
P806 - BOTTOM
(TYP.)

P811 (TYP. AT SIDES)

SECTION E-E



SECTION C-C



SECTION D-D

LEGEND

△ FOR SYMBOL DESCRIPTION, SEE SHEETS 24 THRU 27

NOTES

1. LAP P806 BARS 5'-1" MIN.
2. LAP P1012 & P1013 BARS 11'-6" MIN.
3. SEE SHEETS 24 THRU 27 FOR TYPICAL PIER GEOMETRY AND ELEVATIONS.
4. SEE SHEETS 30 THRU 37 FOR PIER SHAFT BAR STEEL REINFORCEMENT DETAILS.
5. SEE SHEET FOR TYPICAL PEDESTAL BAR STEEL REINFORCEMENT DETAILS. (SINGLE BEARING PEDESTAL AS SHOWN ON THIS SHEET IS NORMAL. BEARING PEDESTAL WITH TWO BEARINGS ON EACH SIDE IS REQUIRED AT PIER 4.)

NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY TAW		PLANS CK'D. TR	
PIER CAP DETAILS			SHEET 28 OF 82

BILL OF BARS - PIER CAP

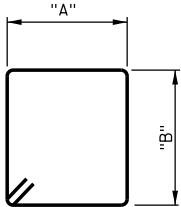
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
ALL BAR STEEL REINFORCEMENT IN THIS BILL OF BARS SHALL BE EPOXY COATED.

MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	TOTAL WEIGHT = 83,610 LBS.
P601	144	25-2	X		CAP - STIRRUPS	VERT.
P602	36	24-8	X		CAP - STIRRUPS	VERT.
P603	36	24-0	X		CAP - STIRRUPS	VERT.
P604	216	16-10	X	✕	CAP - STIRRUPS	VERT.
P605	36	15-0	X		CAP - STIRRUPS	VERT.
P806	108	16-6	X		CAP - BOTTOM	HORIZ.
P607	18	13-0			CAP - SIDES	HORIZ.
P608	18	17-4			CAP - SIDES	HORIZ.
P609	18	22-11			CAP - SIDES	HORIZ.
P610	198	20-8	X		CAP - MIDDLE STIRRUP	VERT.
P811	162	25-2		✕	CAP - SIDES	HORIZ.
P1012	180	20-1	X		CAP - TOP	HORIZ.
P1013	180	20-7	X		CAP - TOP	HORIZ.
P514	360	6-0	X		CAP - ENDS	HORIZ.
P515	180	4-11			CAP - ENDS	VERT.
P516	90	3-7			CAP - ENDS	HORIZ.
P617	162	11-10	X		CAP - TOP	VERT.
P618	18	14-5			CAP - TOP	HORIZ.
P619	54	18-10	X		CAP - TOP	HORIZ.
P620	18	17-4	X		CAP - TOP	HORIZ.

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

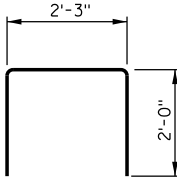
BAR SERIES TABLE

	NO. REQ'D.	LENGTH
P604	36 SERIES OF 6	15'-0" TO 18'-8"
P811	18 SERIES OF 9	24'-4" TO 26'-0"

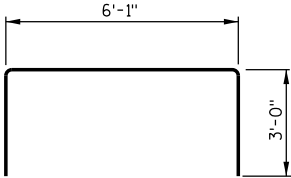


MARK	DIMENSION "A"	DIMENSION "B"
P601	4'-7"	7'-7"
P602	4'-7"	7'-4"
P603	4'-7"	7'-0"
P604	2'-3"	4'-10" TO 6'-8"
P605	2'-3"	4'-10"
P610	6'-1"	3'-10"

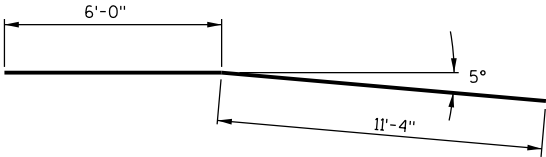
P601 THRU P605, P610



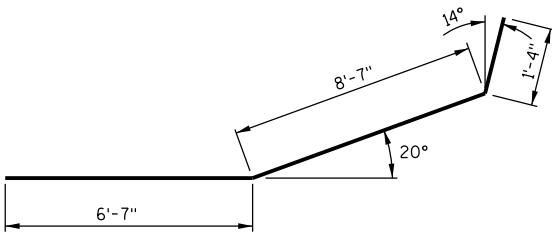
P514



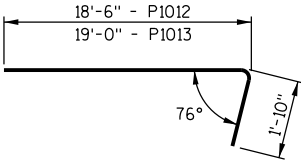
P617



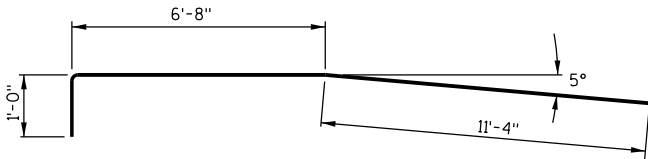
P620



P806



P1012 & P1013



P619

NO. DATE

REVISION

BY

PLANS PREPARED BY
ROMENESKO ENGINEERING, INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-658

DRAWN BYTAW

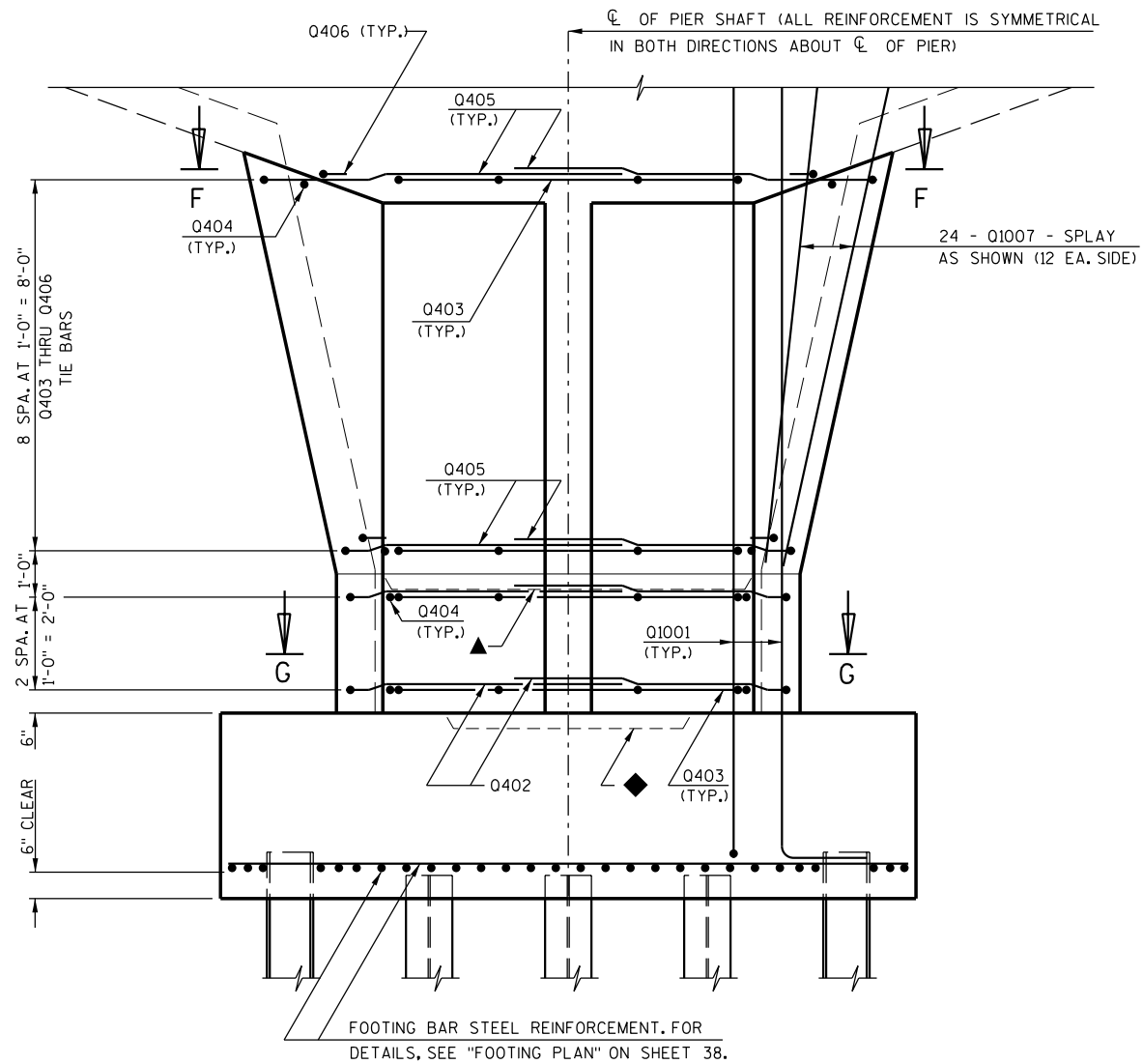
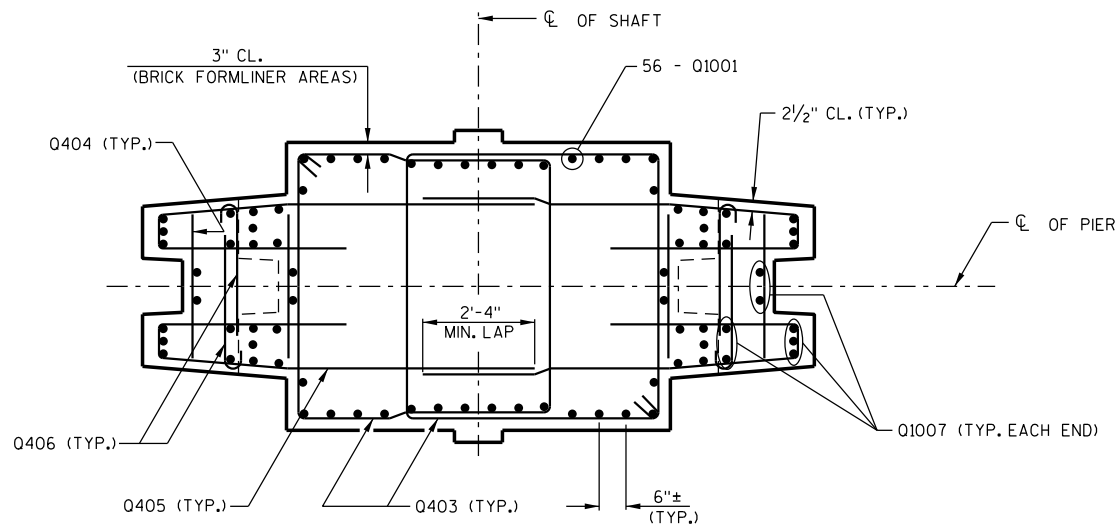
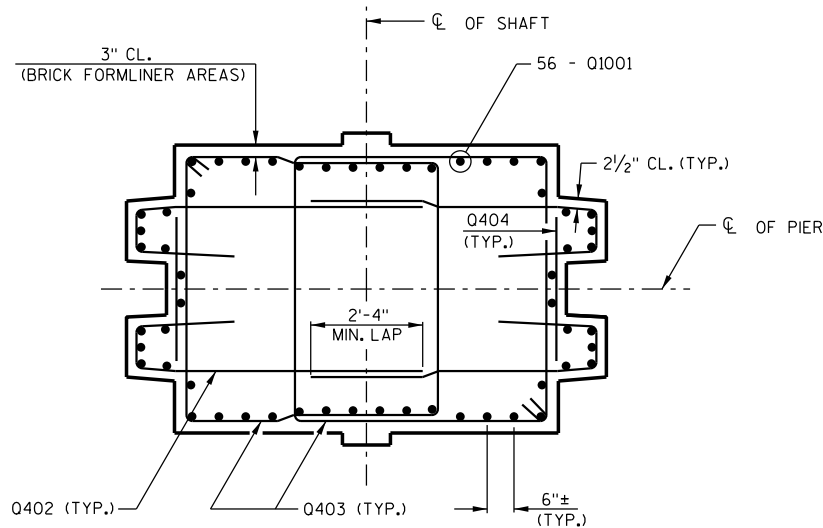
PLANS CK'D. TR

BILL OF BARS
- PIER CAP

SHEET 29 OF 82

LEGEND

◆ KEYED CONST. JOINT FORMED BY BEVELED 4" x 2'-0" x 5'-4".

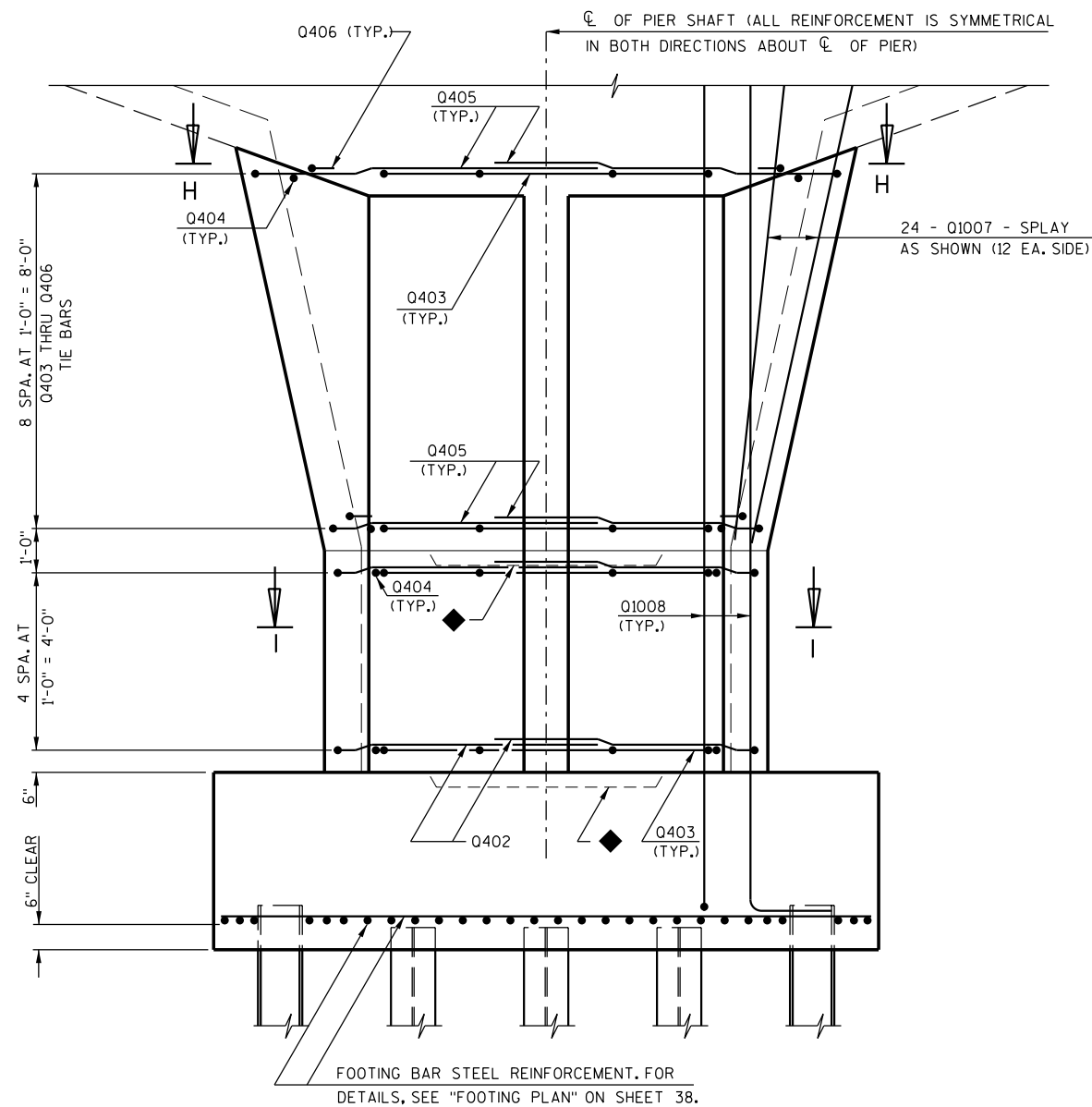
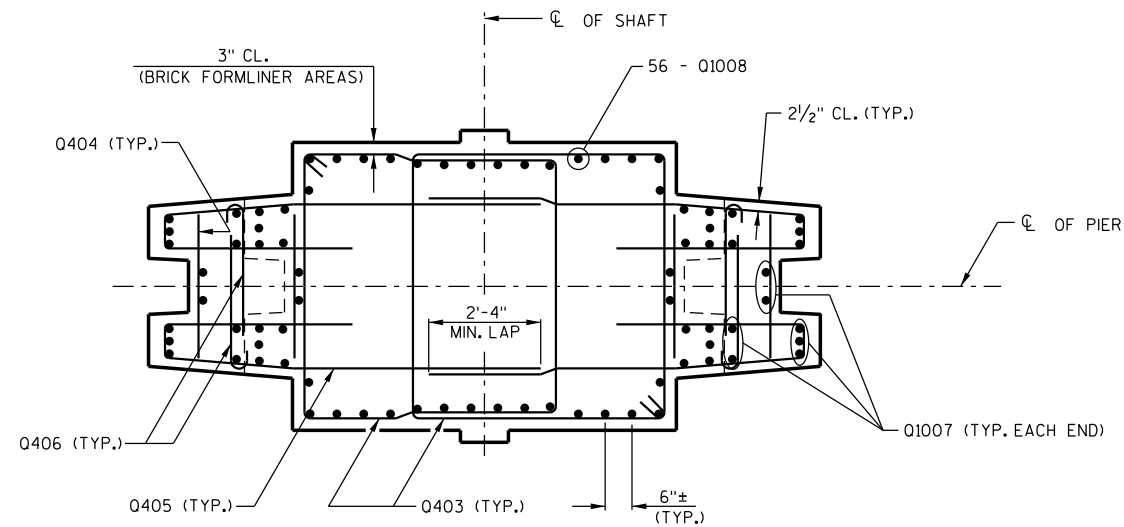
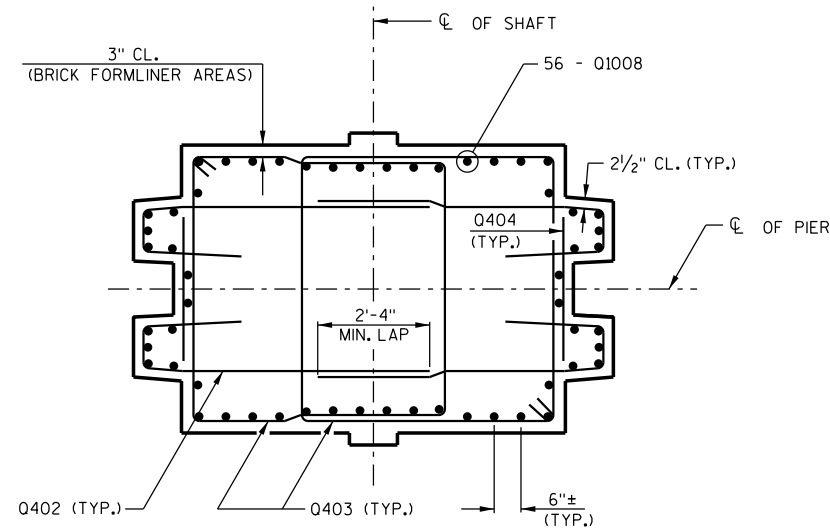
**ELEVATION - PIER 1****SECTION F-F****SECTION G-G**

NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY	TAW	PLANS CK'D.	TR
SHAFT DETAILS - PIER 1			SHEET 30 OF 82

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

LEGEND

◆ KEYED CONST. JOINT FORMED BY BEVELED 4" x 2'-0" x 5'-4".

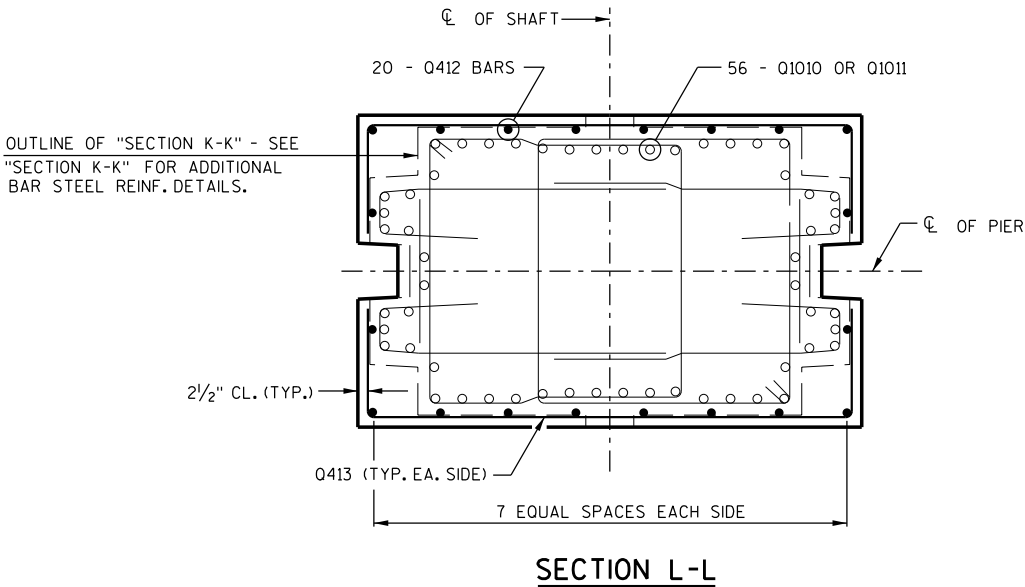
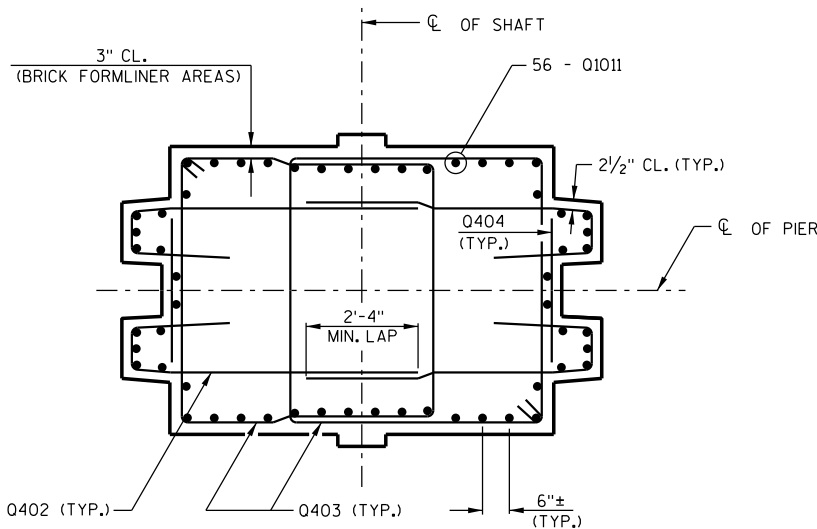
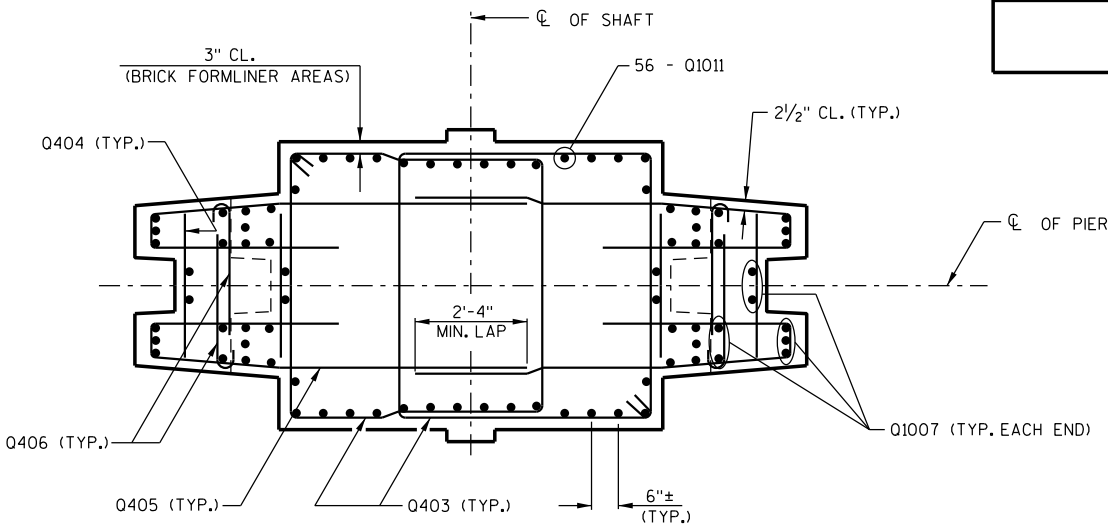
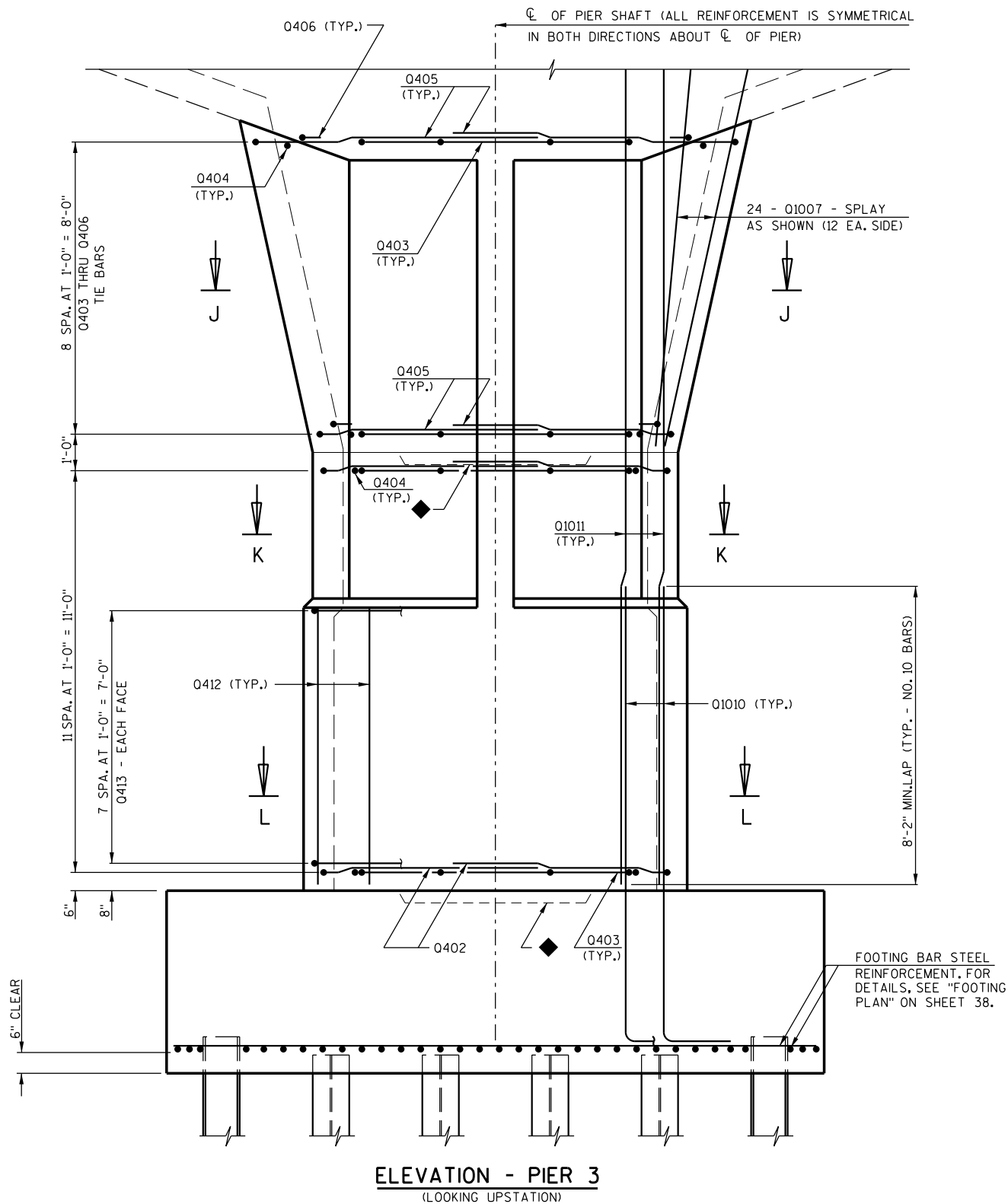
**ELEVATION - PIERS 2 & 7****SECTION H-H****SECTION I-I**

NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY	TAW	PLANS CK'D.	TR
SHAFT DETAILS - PIERS 2 & 7			SHEET 31 OF 82

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

LEGEND

◆ KEYED CONST. JOINT FORMED BY BEVELED 4" x 2'-0" x 5'-4".

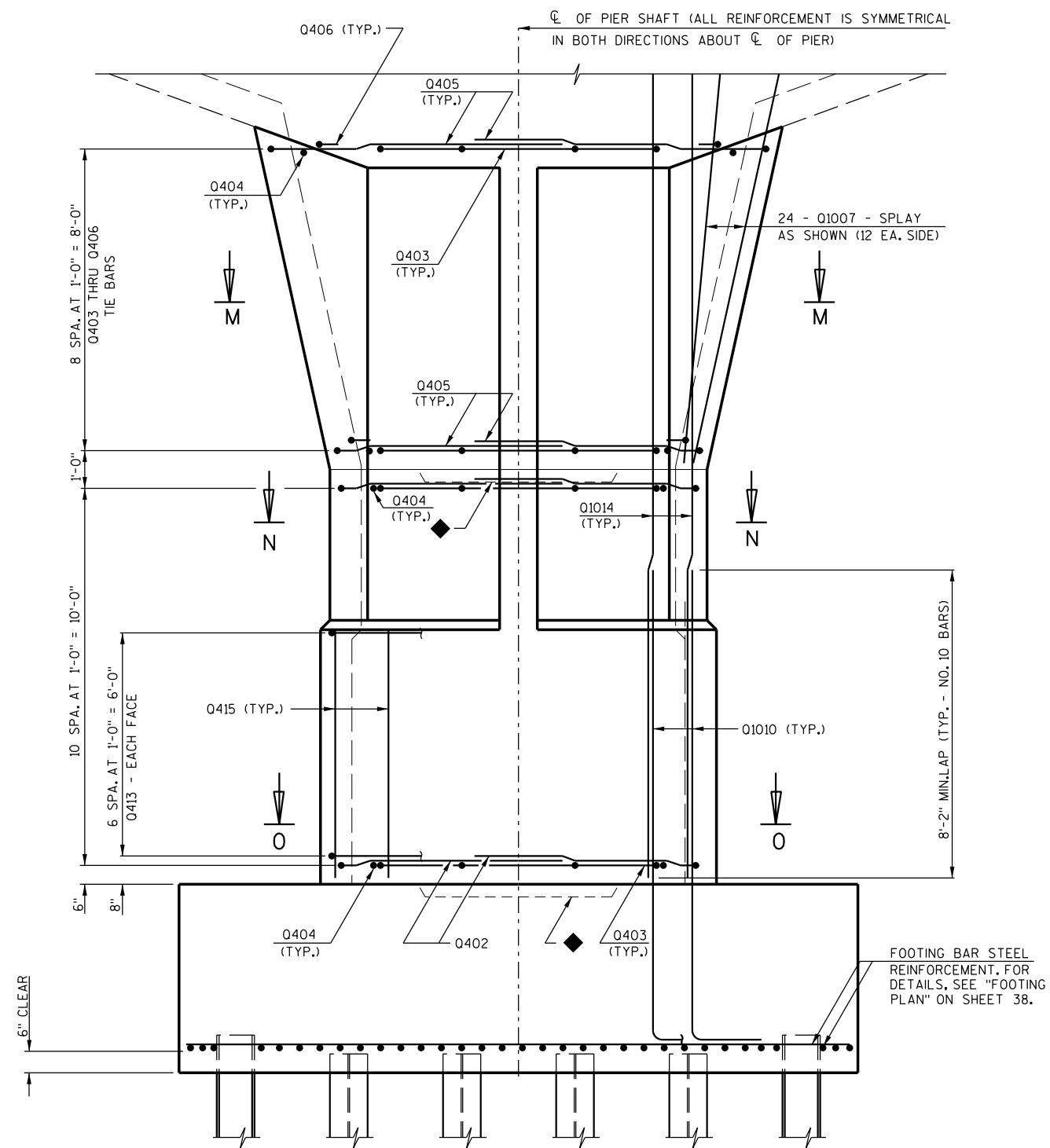
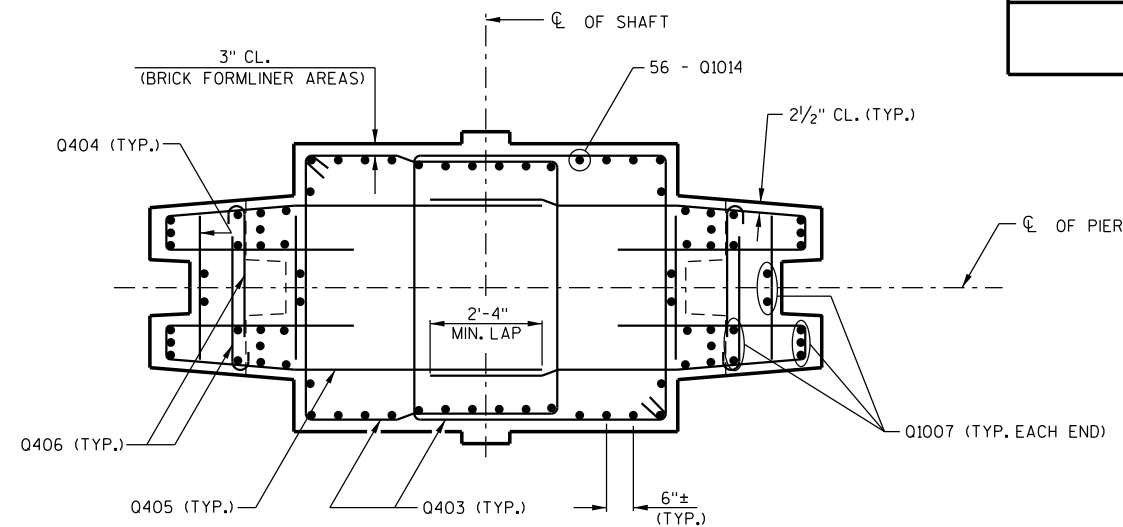
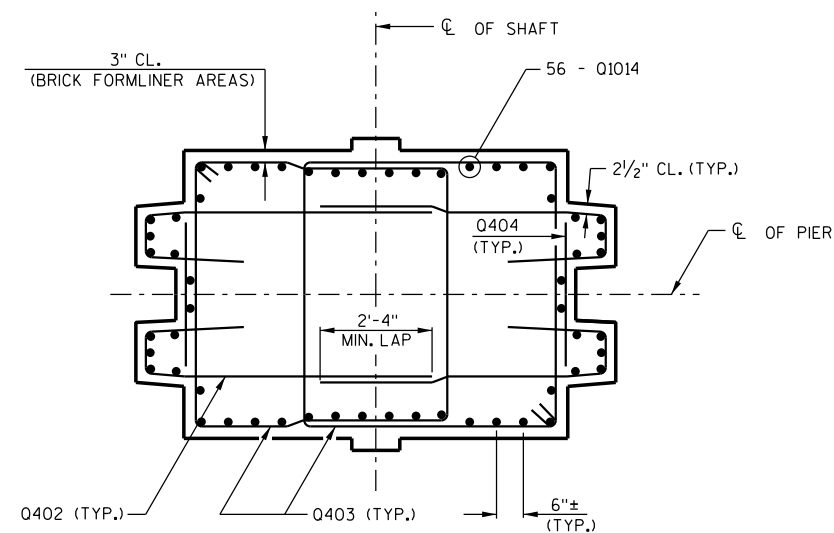
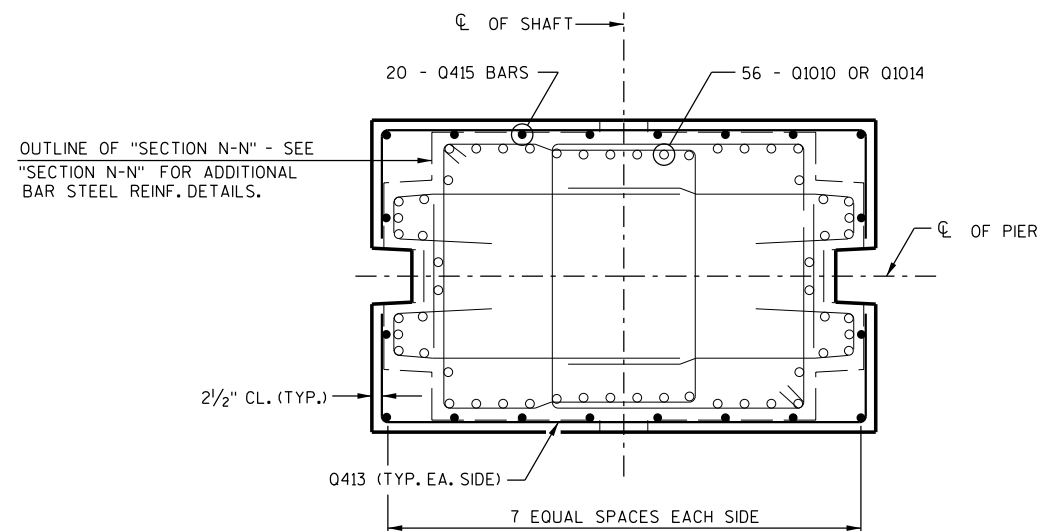


STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY	TAW	PLANS CK'D.	TR
SHAFT DETAILS - PIER 3		SHEET 32 OF 82	

LEGEND

◆ KEYED CONST. JOINT FORMED BY BEVELED 4" x 2'-0" x 5'-4".

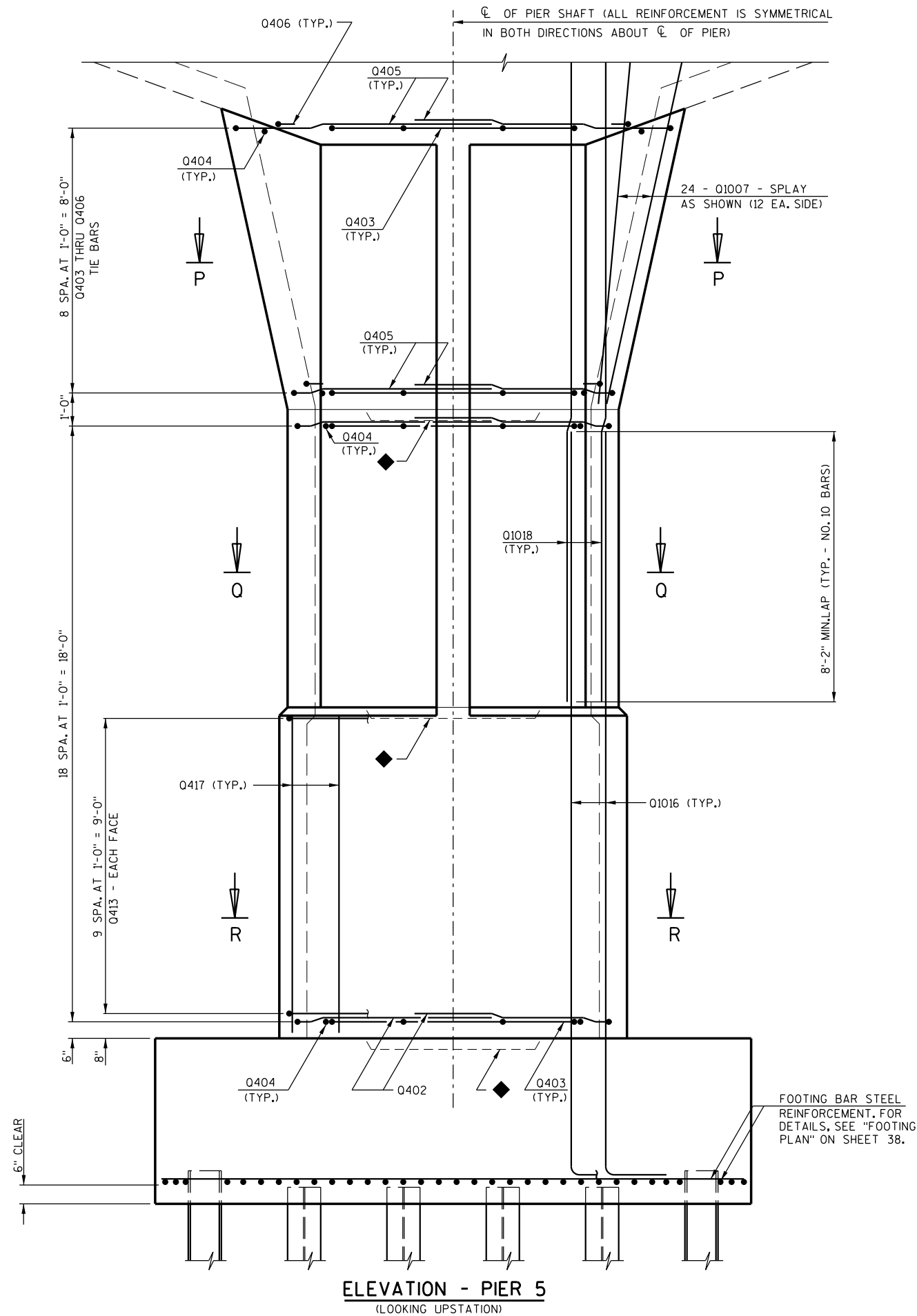
**ELEVATION - PIERS 4 & 8**
(LOOKING UPSTATION)**SECTION M-M****SECTION N-N****SECTION O-O**

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

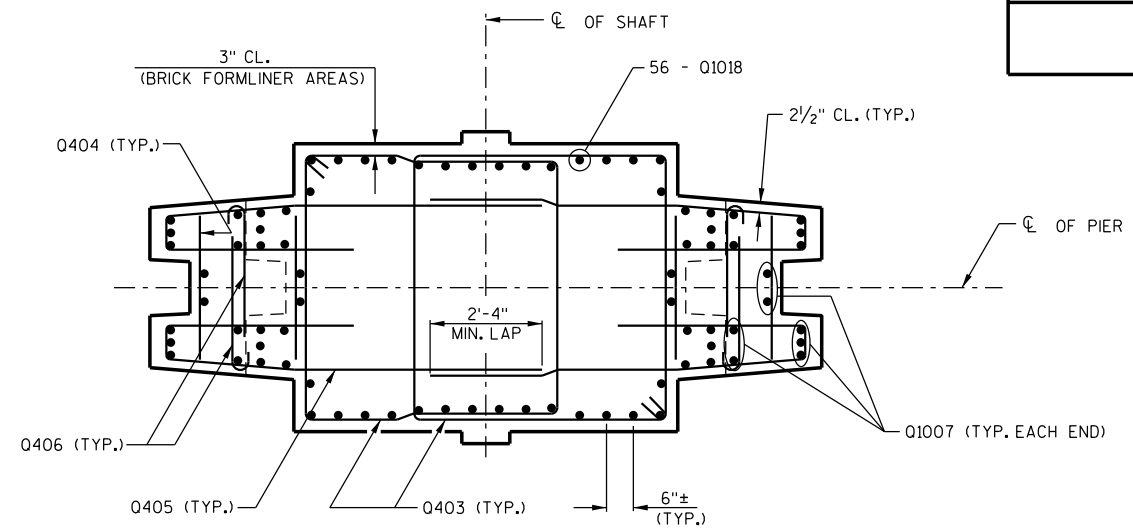
NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY	TAW	PLANS CK'D.	TR
SHAFT DETAILS - PIERS 4 & 8			SHEET 33 OF 82

LEGEND

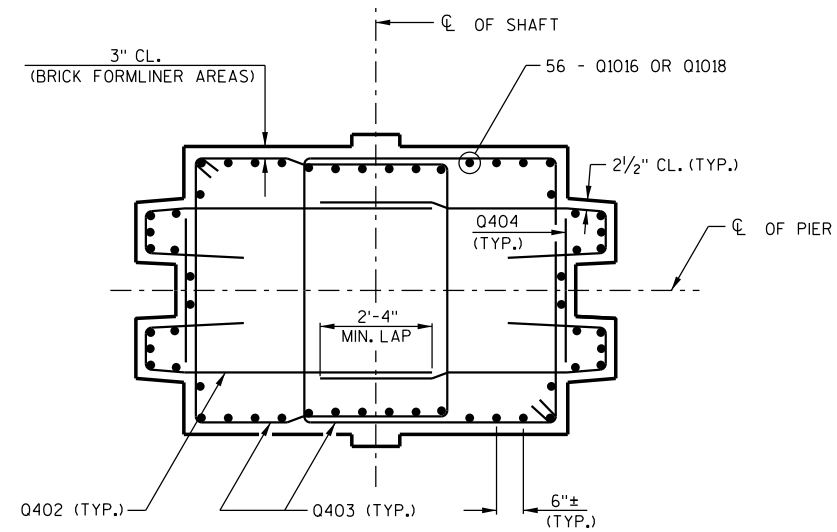
◆ KEYED CONST. JOINT FORMED BY BEVELED 4" x 2'-0" x 5'-4".



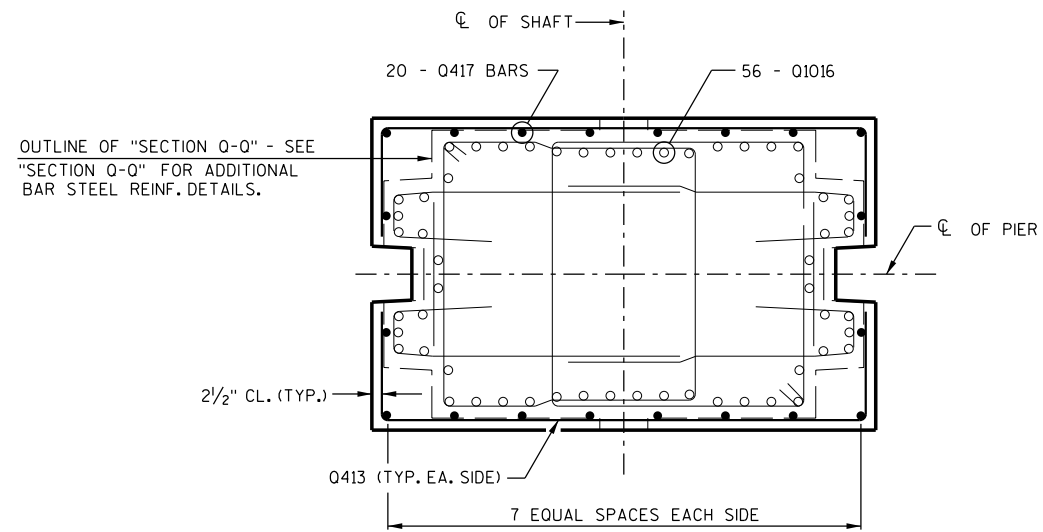
ELEVATION - PIER 5
(LOOKING UPSTATION)



SECTION P-P



SECTION Q-Q



SECTION R-R

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

STATE PROJECT NUMBER

1133-03-73

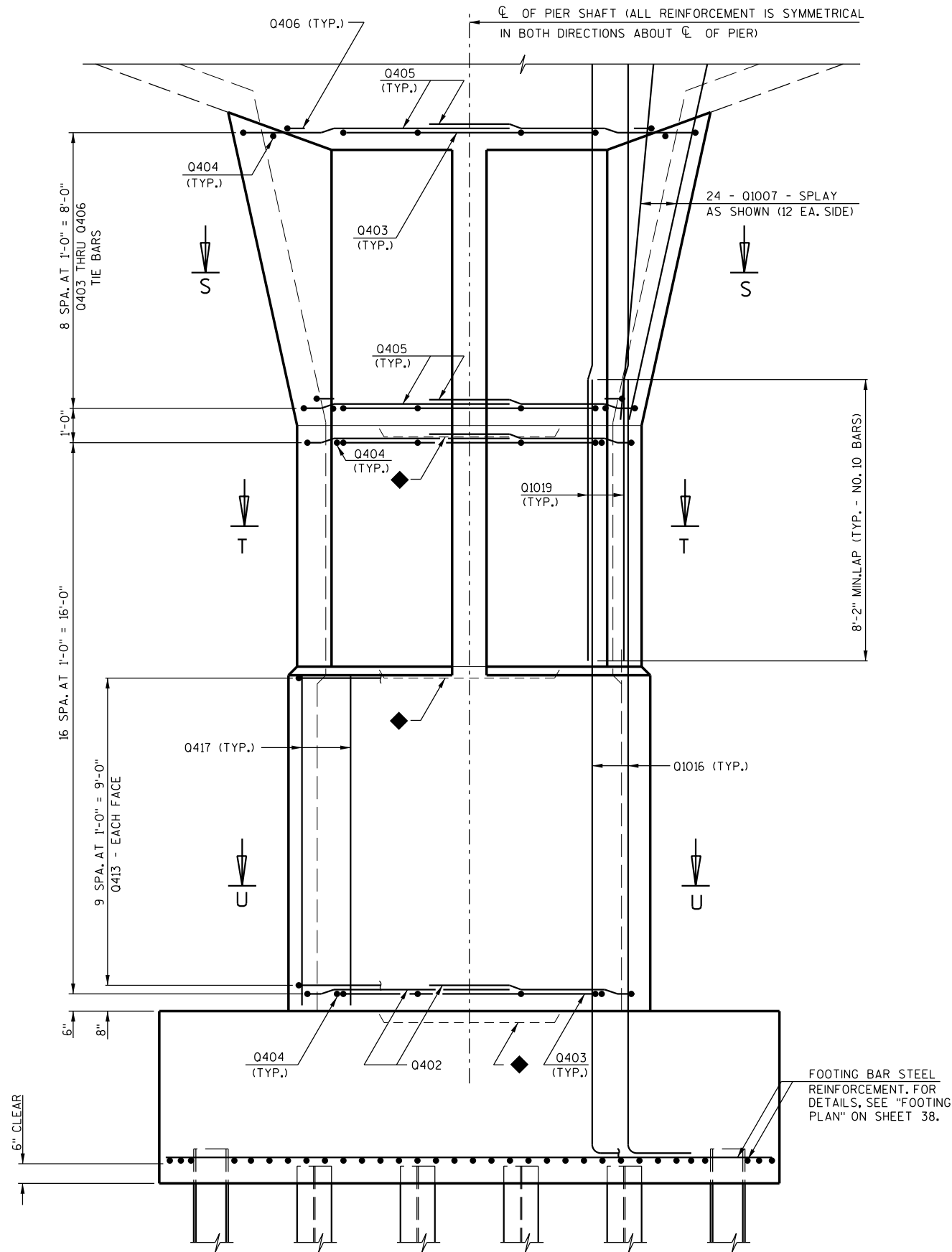
NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY	TAW	PLANS CK'D.	TR
SHAFT DETAILS - PIER 5		SHEET 34 OF 82	

FILE NAME : P:\152 USH 41133-03-02 URS\STRUCTURES\B-5-658 SUBSTRUCTURE\34.PIER SHAFT\5.VT.B-5-658.DGN

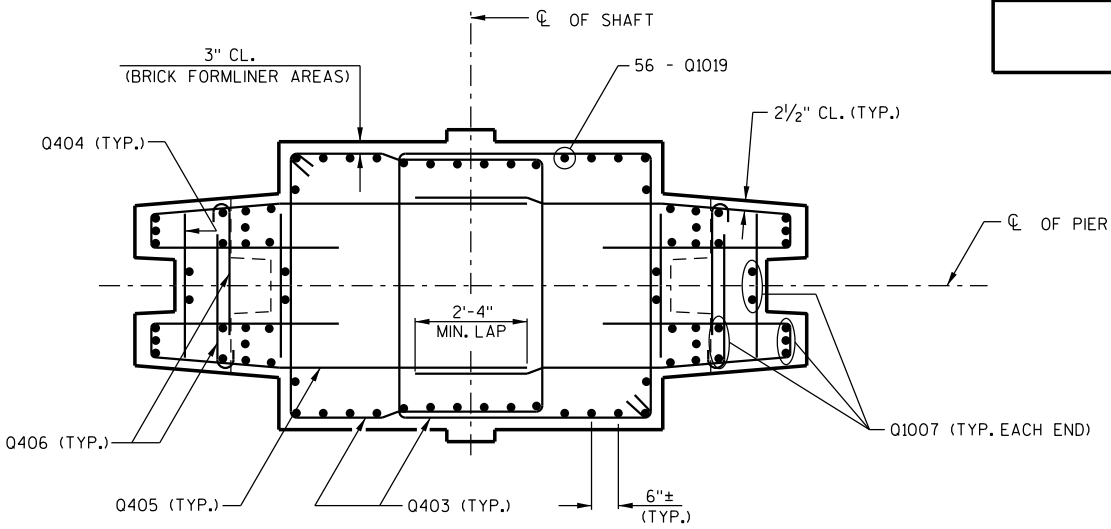
PLOT DATE : 1/25/2012

LEGEND

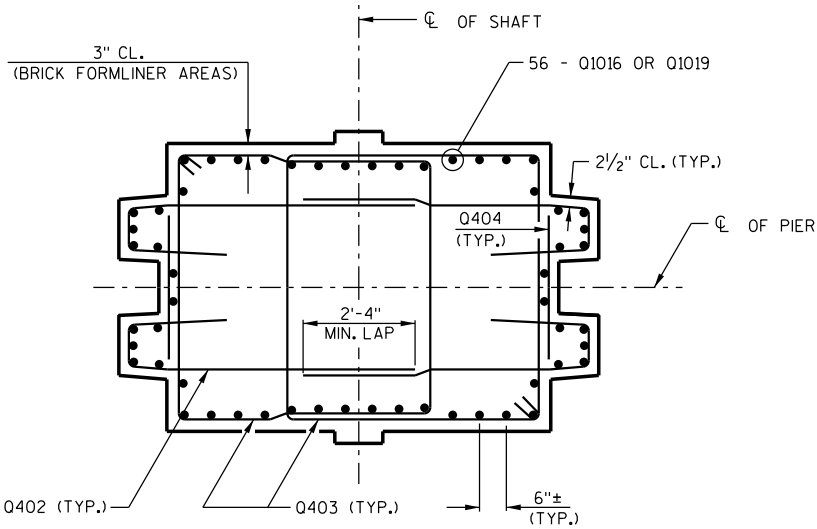
◆ KEYED CONST. JOINT FORMED BY BEVELED 4" x 2'-0" x 5'-4".



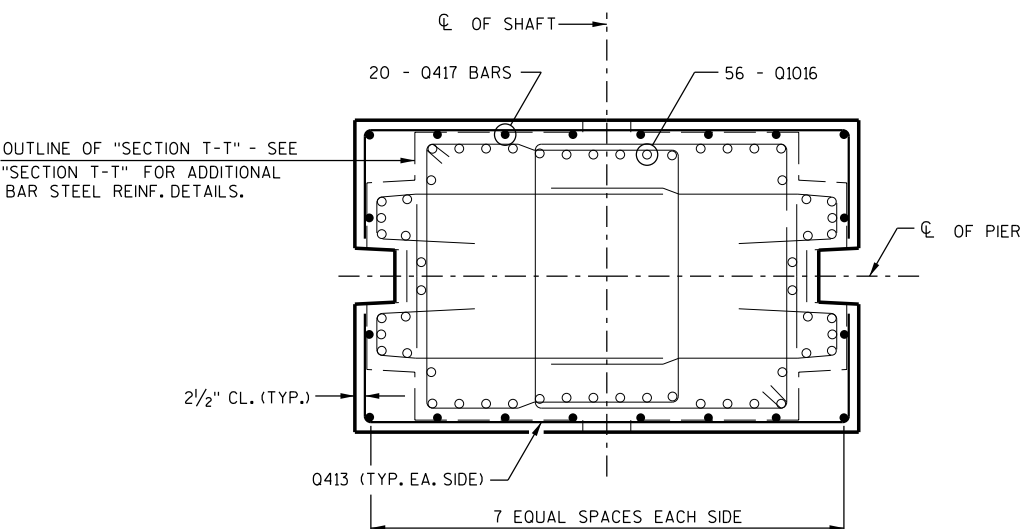
ELEVATION - PIER 6
(LOOKING UPSTATION)



SECTION S-S



SECTION T-T



SECTION U-U

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

STATE PROJECT NUMBER

1133-03-73

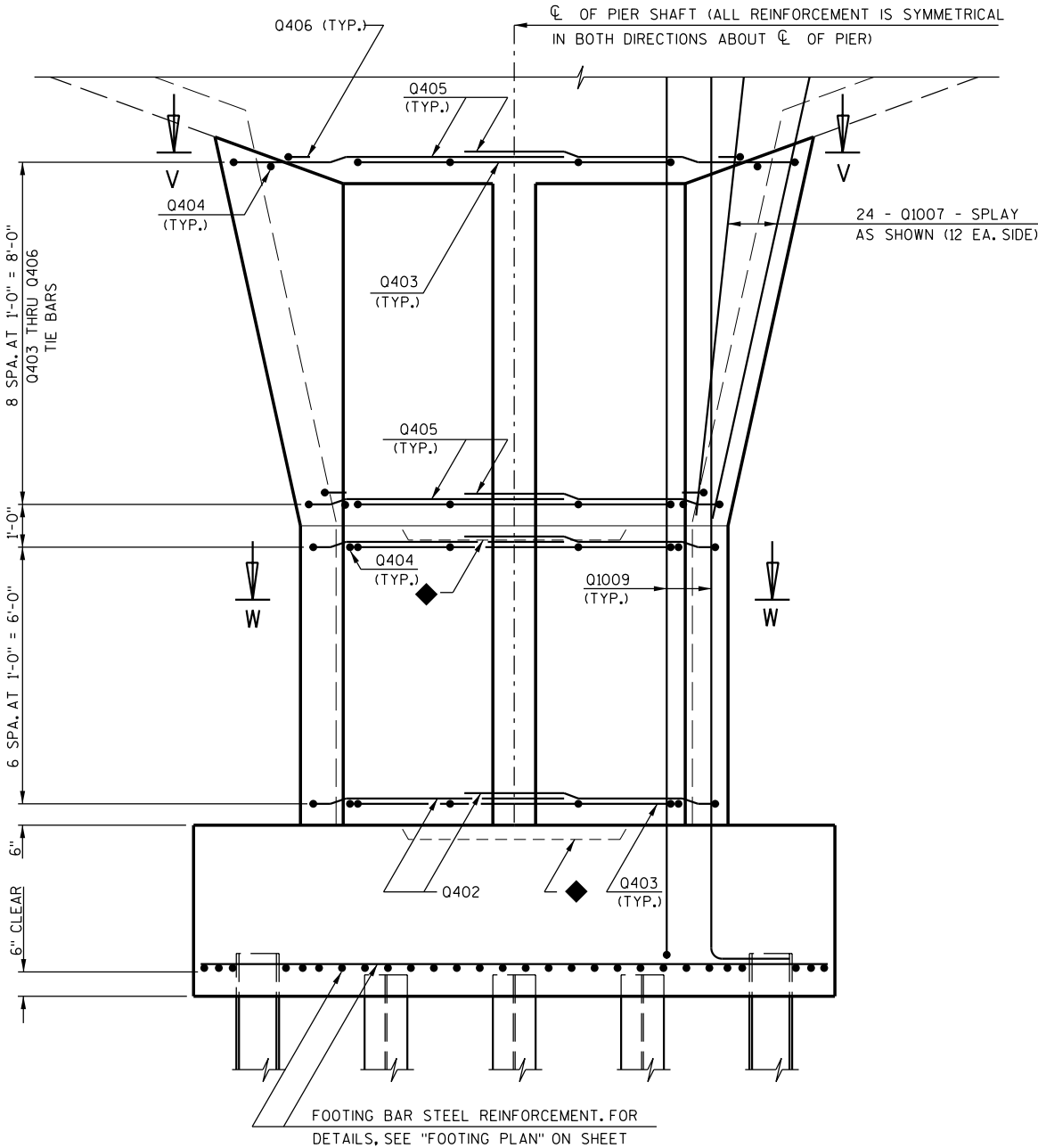
NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY	TAW	PLANS CK'D.	TR
SHAFT DETAILS - PIER 6		SHEET 38. OF 82	

FILE NAME : P:\152 USH 41133-03-02 URS\STRUCTURES\B-5-658 SUBSTRUCTURE\35-PIER SHAFT\6.VT.B-5-658.DGN

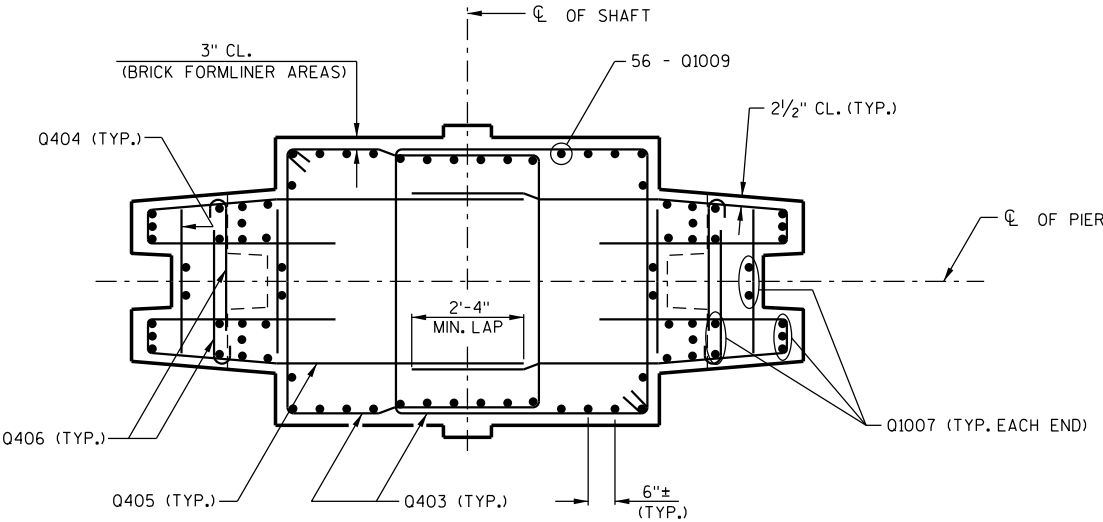
PLOT DATE : 1/25/2012

LEGEND

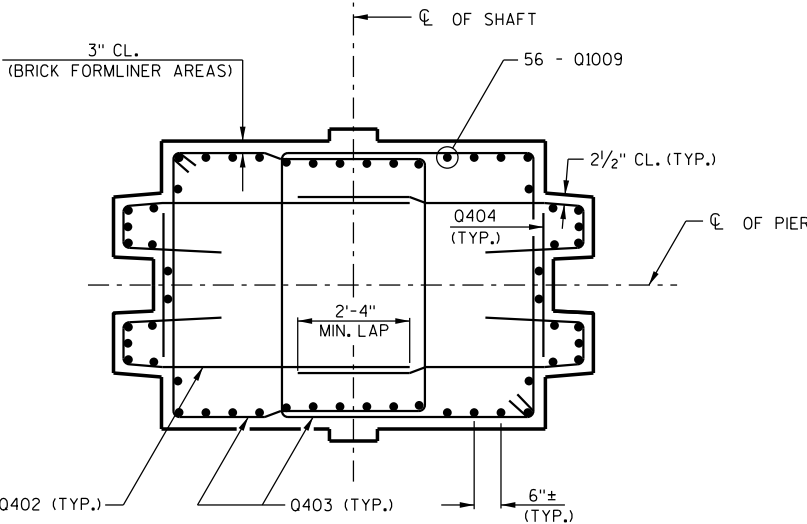
◆ KEYED CONST. JOINT FORMED BY BEVELED 4" x 2'-0" x 5'-4".



ELEVATION - PIER 9



SECTION V-V



SECTION W-W

NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY	TAW	PLANS CK'D.	TR
SHAFT DETAILS - PIER 9			SHEET 36 OF 82

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

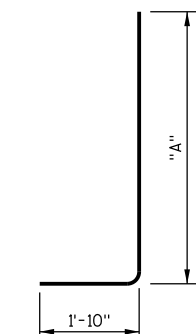
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
ALL BAR STEEL REINFORCEMENT IN THIS BILL OF BARS SHALL BE EPOXY COATED.

[illegible]

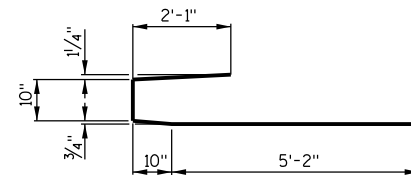
BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
0405	36 SERIES OF 9	8'-11" TO 12'-5"

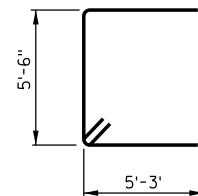
MARK	DIMENSION "A"
Q1001	21'-2"
Q1008	23'-2"
Q1009	25'-2"
Q1010	12'-7"
Q1016	22'-7"



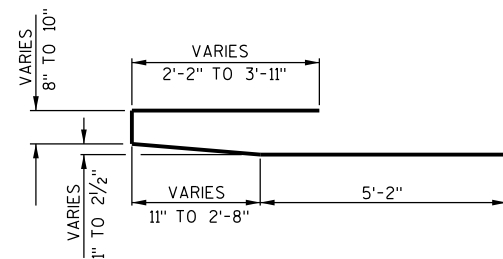
Q1001, Q1008, Q1009,
Q1010, & Q1016



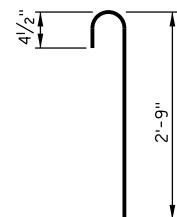
Q402



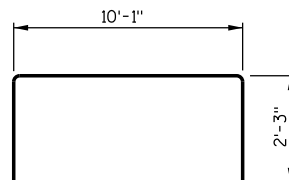
Q403



Q405



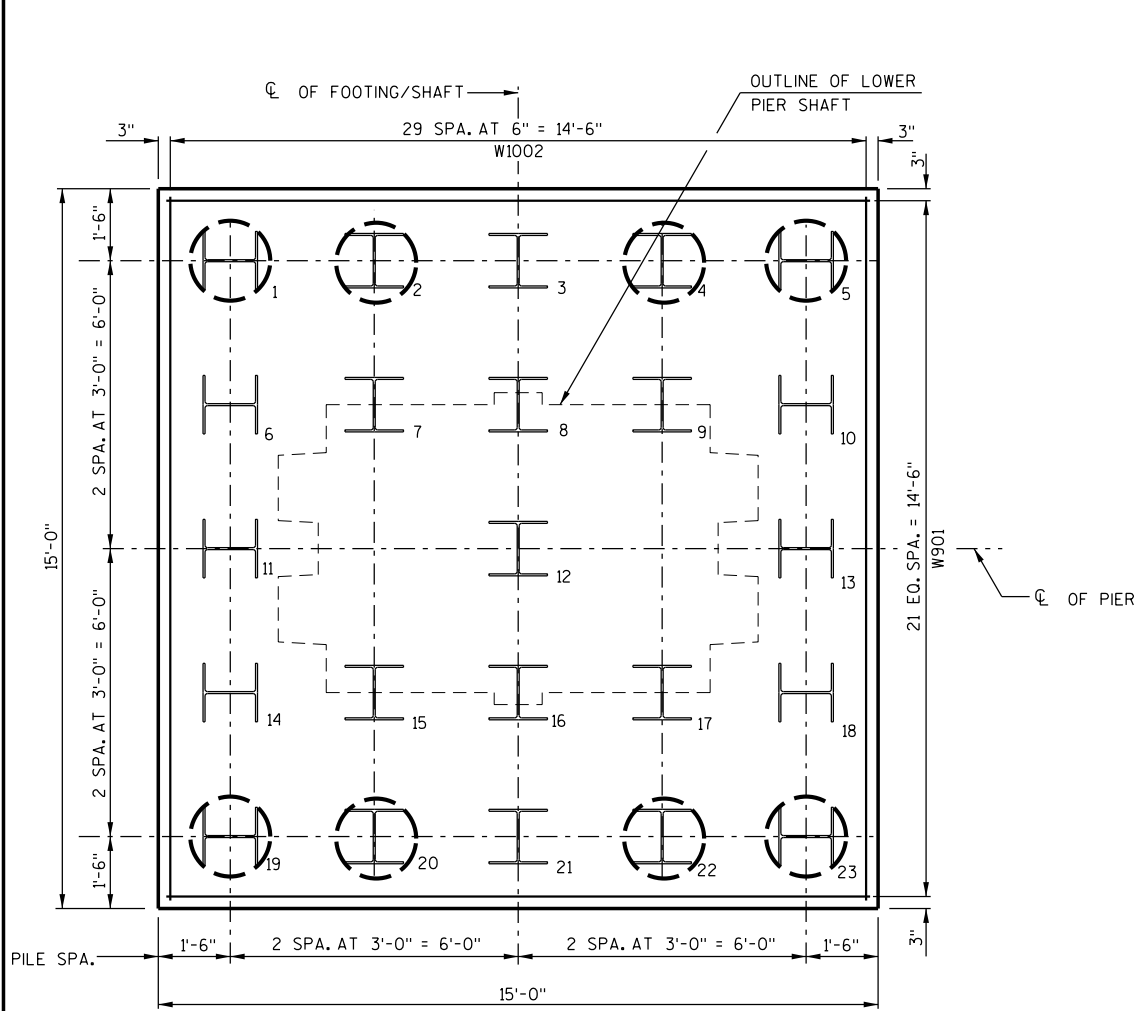
Q406



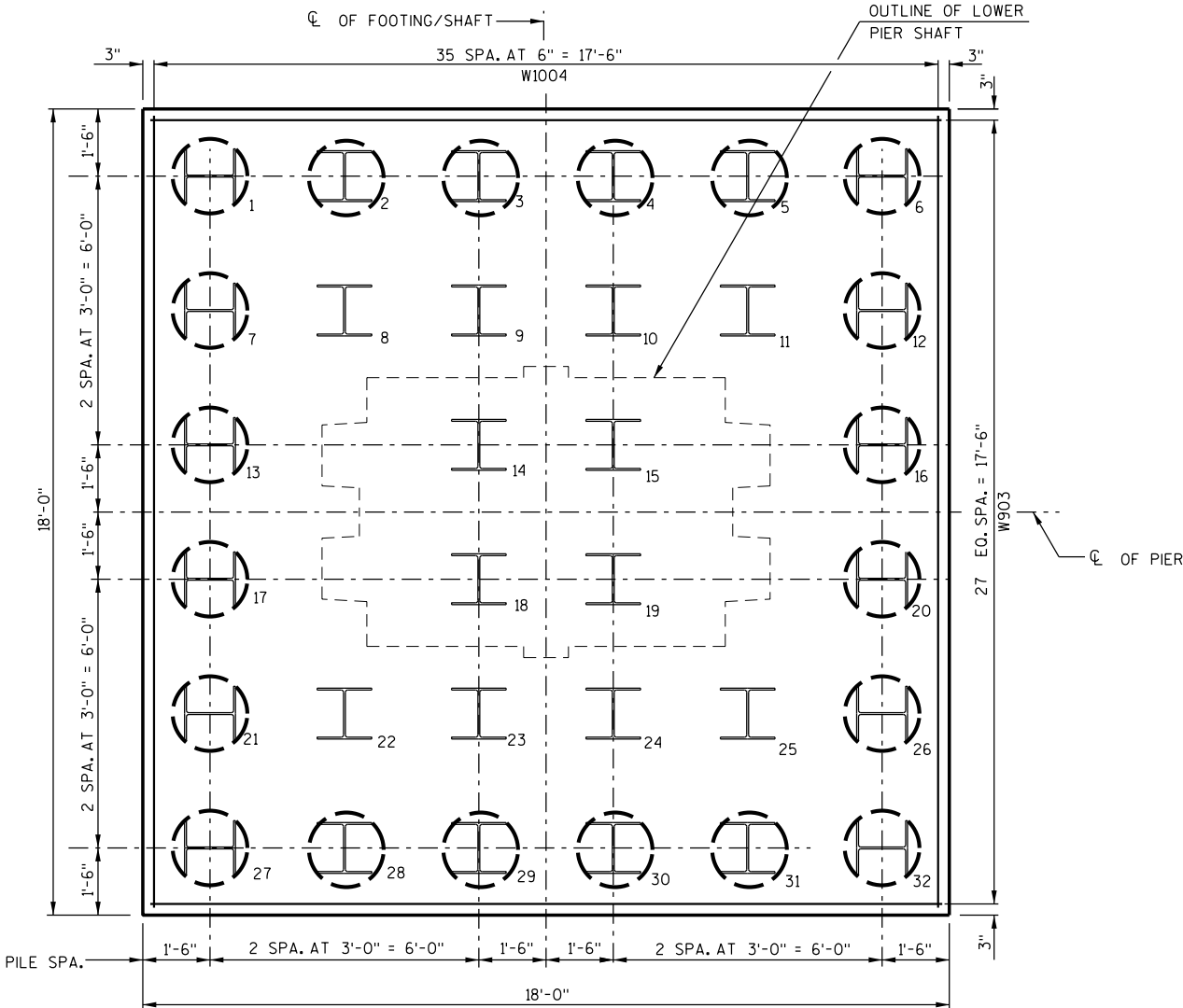
Q413

NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
	DRAWN BY	TAW	PLANS CK'D. TR
BILL OF BARS - SHAFT		SHEET 37 OF 82	

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.



FOOTING PLAN - PIERS 1, 2, 7, & 9



FOOTING PLAN - PIERS 3, 4, 5, 6, & 8

** PILES 23, 24, 27, 29, 30, & 32 OF PIER 6 ARE EXISTING PILES FROM PILE LOAD TEST COMPLETED IN DEC. 2011. PILES ARE CUTOFF PER PLAN. FIVE ADDITIONAL PILES ARE LOCATED WITHIN 20' WEST OF FOOTING. THOSE PILES ARE CUTOFF AT ELEVATION 602.82.

LEGEND

- INDICATES PILE LOCATION WHERE UPLIFT CONNECTION IS REQUIRED.
- * FIELD BEND W605 BARS AFTER PLACING IN 1/4" HOLES BURNED INTO PILE. USE 2 BARS AT EACH UPLIFT PILE.

NOTE: SPACE FOOTING BAR STEEL REINFORCEMENT TO MISS EXTERIOR ROW PILES.

BILL OF BARS - FOOTINGS

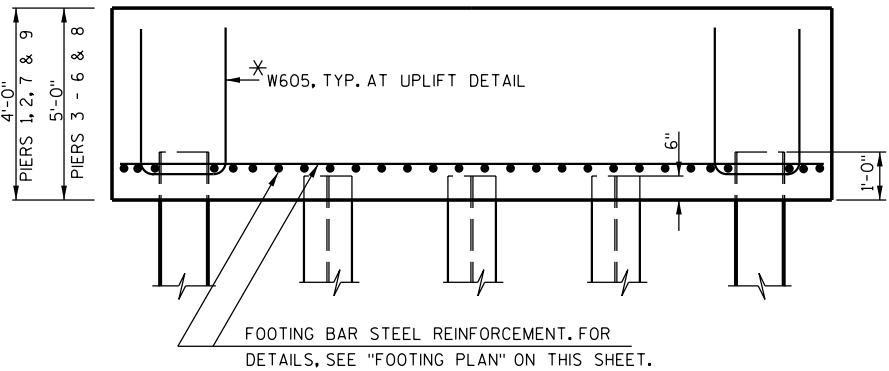
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
UNCOATED BARS					TOTAL WEIGHT = 37,070 LBS.
W901	88	14-8			FOOTING - PIERS 1, 2, 7, & 9 HORIZ.
W1002	120	14-8			FOOTING - PIERS 1, 2, 7, & 9 HORIZ.
W903	140	17-8			FOOTING - PIERS 3, 4, 5, 6, & 8 HORIZ.
W1004	180	17-8			FOOTING - PIERS 3, 4, 5, 6, & 8 HORIZ.
W605	264	7-6			FOOTING - ALL PIERS HORIZ.

PILE DYNAMIC ANALYZER (PDA) TESTING LOACATIONS

THE BID ITEMS FOR THIS WORK ARE "PILE DYNAMIC ANALYZER (PDA) TESTING", ITEM SPV. 0060.702 AND "PILE DYNAMIC ANALYZER (PDA) RESTRIKES", ITEM SPV. 0060.703.

	PILE NUMBERS
W. ABUT.	2, 4, & 6
PIER 1	1, 6, 19, & 23
PIER 2	1, 6, 19, & 23
PIER 3	1, 6, 27, & 32
PIER 4	1, 6, 27, & 32
PIER 5	1, 6, 27, & 32
** PIER 6	23, 24, 27, 29, 30, & 32
PIER 7	1, 6, 12, 19, 27, & 23
PIER 8	1, 6, 27, & 32
PIER 9	1, 6, 19, & 23
N. ABUT.	1, 5, & 8



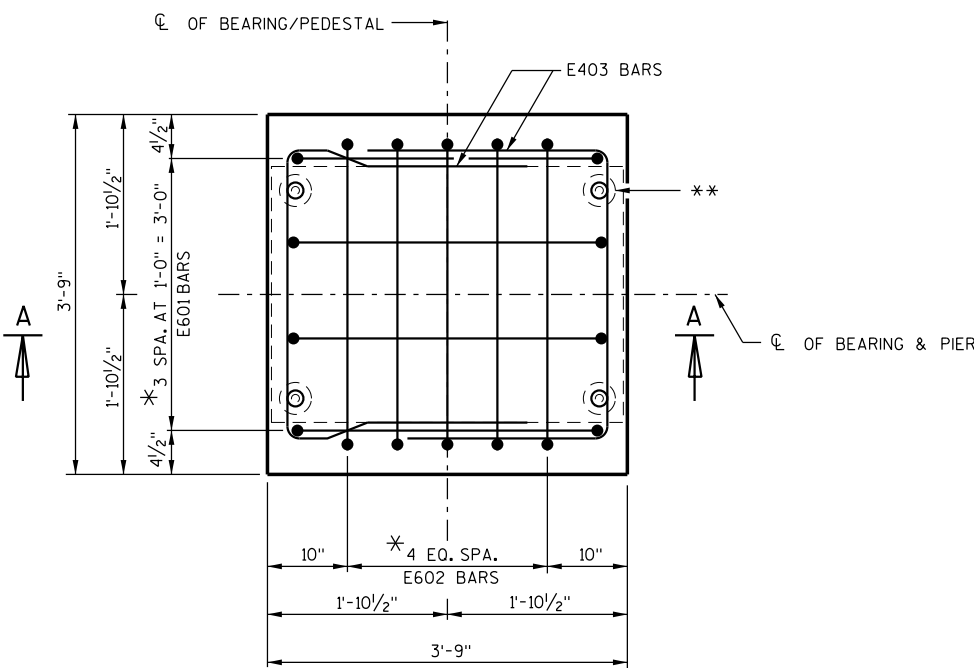
TYPICAL UPLIFT CONNECTION DETAIL

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY TAW		PLANS CK'D. TR	
PIER FOOTING DETAILS		SHEET 38 OF 82	

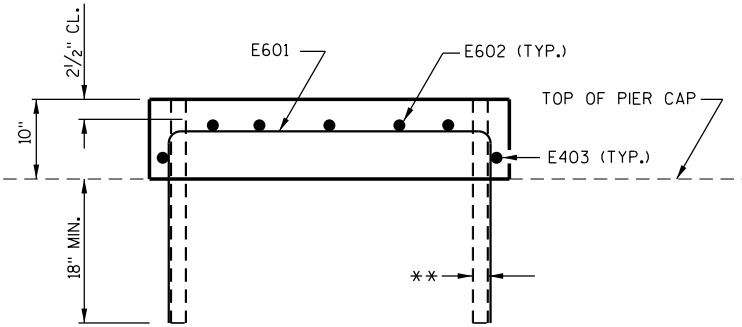
NOTE: FOR ANCHOR GROUT SLEEVE AND BASEPLATE SEATING USE HIGH MODULUS FLOWABLE EPOXY RESIN GROUT, SIKADUR 42 GROUT-PAK OR APPROVED EQUAL. GROUT SLEEVE AND GROUT WILL BE CONSIDERED INCIDENTAL TO THE COST OF "HPC MASONRY STRUCTURES".

ADJUST TOP OF PEDESTAL ELEVATIONS IF ACTUAL BEARING THICKNESSES ARE DIFFERENT THAN THOSE SHOWN ON THE DS BROWN SHOP DRAWINGS.

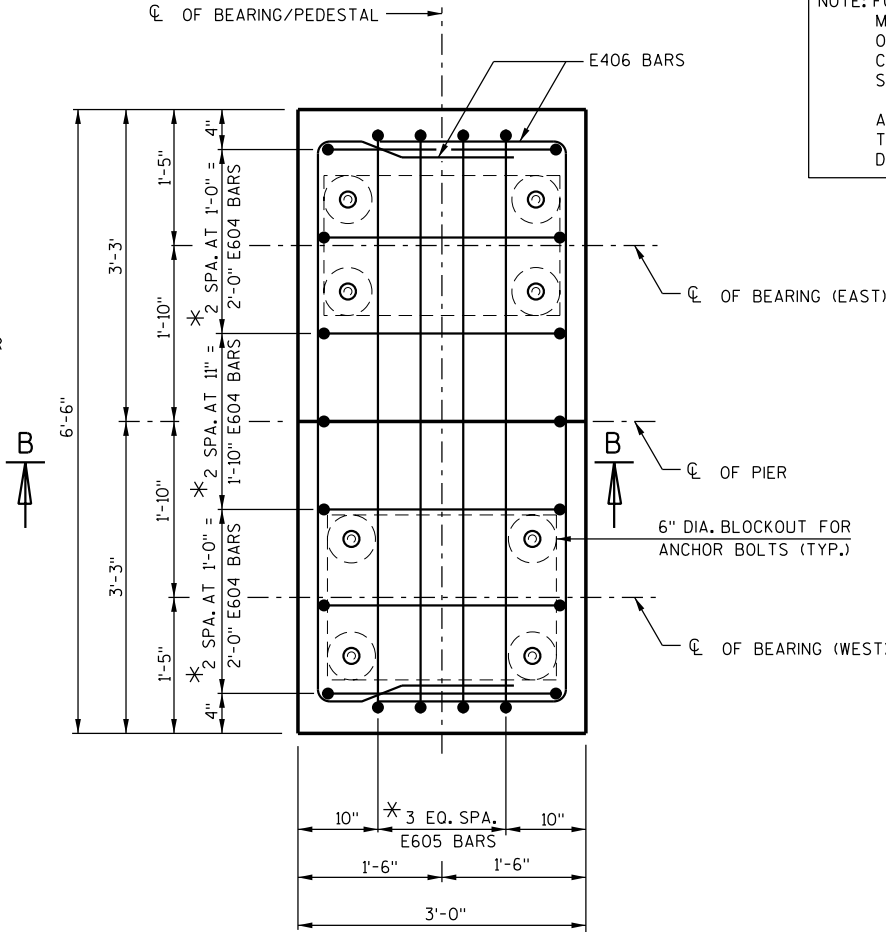


PLAN

(PIER PEDESTAL - PIERS 1 THRU 3 & 5 THRU 9)
* ADJUST SPA. TO MISS ANCHOR BOLT BLOCKOUTS. PIERS 1 THRU 3, 6, 7, & 9 HAVE 4 ANCHOR BOLTS. PIERS 5 & 8 HAVE 6 ANCHOR BOLTS.
* * 6" DIA. BLOCKOUT FOR PIERS 1, 5, 8, & 9. 4 1/2" DIA. BLOCKOUT FOR PIERS 2 & 3. 2" DIA. BLOCKOUT FOR PIERS 6 & 7.

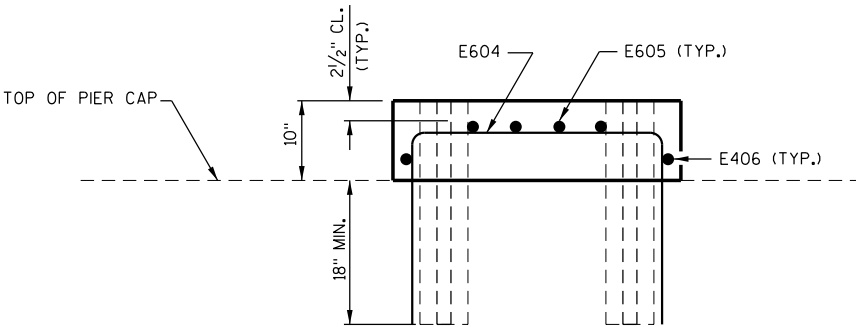


SECTION A-A

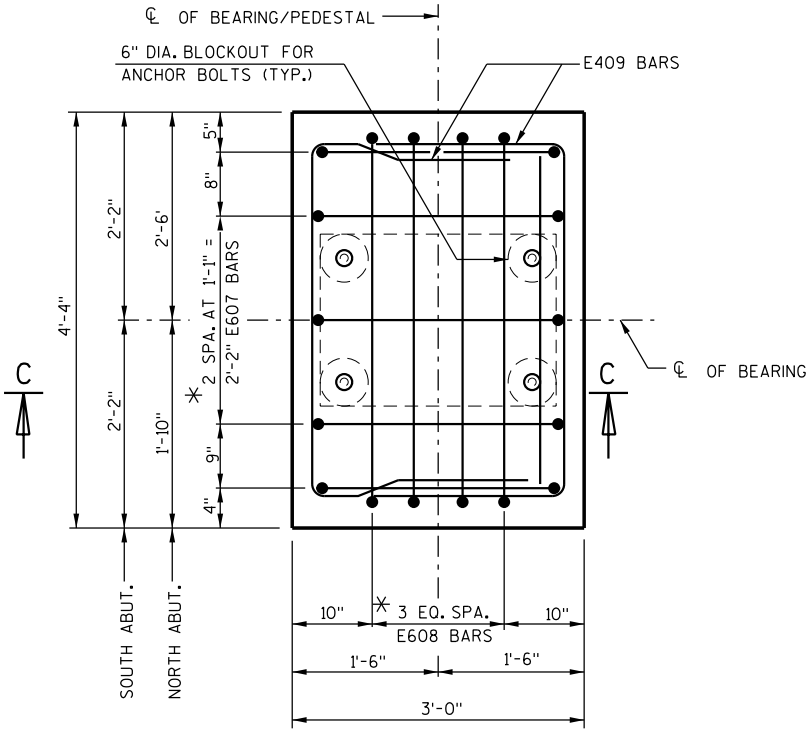


PLAN

(PIER PEDESTAL - PIER 4)
* ADJUST SPA. TO MISS ANCHOR BOLT BLOCKOUTS

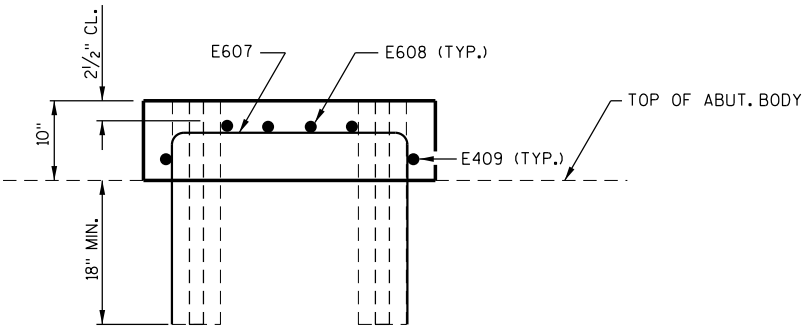


SECTION B-B



PLAN

(ABUTMENT PEDESTAL)
* ADJUST SPA. TO MISS ANCHOR BOLT BLOCKOUTS

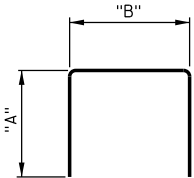


SECTION C-C

BILL OF BARS

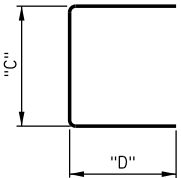
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
ALL BARS IN THIS BILL OF BARS SHALL BE EPOXY COATED.

MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	TOTAL WEIGHT = 2,490 LBS.
E601	64	7-3	X		PEDESTAL - AT PIERS 1 - 3 & 5 - 9	VERT.
E602	80	7-7	X		PEDESTAL - AT PIERS 1 - 3 & 5 - 9	VERT.
E403	32	8-3	X		PEDESTAL - AT PIERS 1 - 3 & 5 - 9	HORIZ.
E604	14	6-6	X		PEDESTAL - AT PIER 4	VERT.
E605	8	10-2	X		PEDESTAL - AT PIER 4	VERT.
E406	4	10-4	X		PEDESTAL - AT PIER 4	HORIZ.
E607	20	6-6	X		PEDESTAL - AT ABUTMENTS	VERT.
E608	16	8-0	X		PEDESTAL - AT ABUTMENTS	VERT.
E409	8	8-2	X		PEDESTAL - AT ABUTMENTS	HORIZ.



E601, E602, E604,
E605, E607 & E608

MARK	"A"	"B"
E601	2'-2"	3'-3"
E602	2'-2"	3'-5"
E604	2'-2"	2'-6"
E605	2'-2"	6'-2"
E607	2'-2"	2'-6"
E608	2'-2"	4'-0"

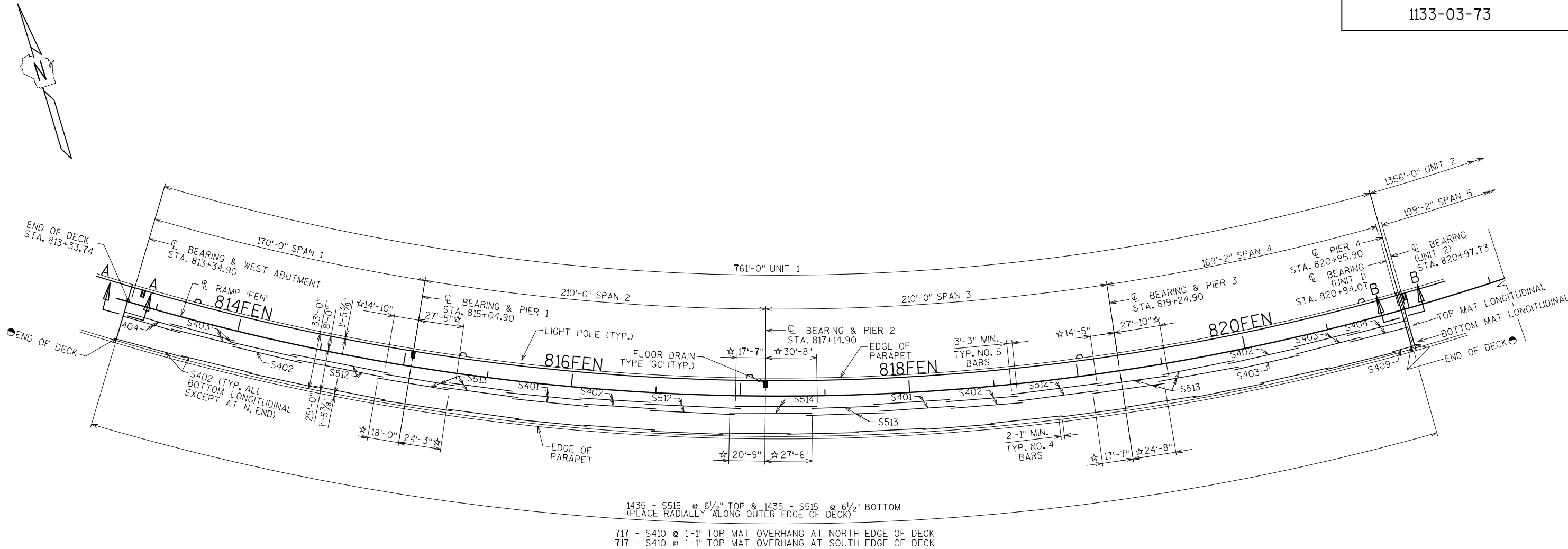


E403, E406 & E409

MARK	"C"	"D"
E403	3'-3"	2'-7"
E406	6'-0"	2'-3"
E409	3'-10"	2'-3"

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

NO.	DATE	REVISION	BY
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY	TAW	PLANS CK'D.	TR
BEARING PEDESTAL DETAILS		SHEET 39 OF 81	



LEGEND

- END OF DECK = END OF SLAB AT WEST ABUTMENT, NORTH ABUTMENT, AND PIER 4. SEE SHEET TITLED "REINFORCING AT EXPANSION JOINT" FOR FURTHER INFORMATION.
- ★ STAGGER OFFSET AS SHOWN FOR EACH ADJACENT BAR

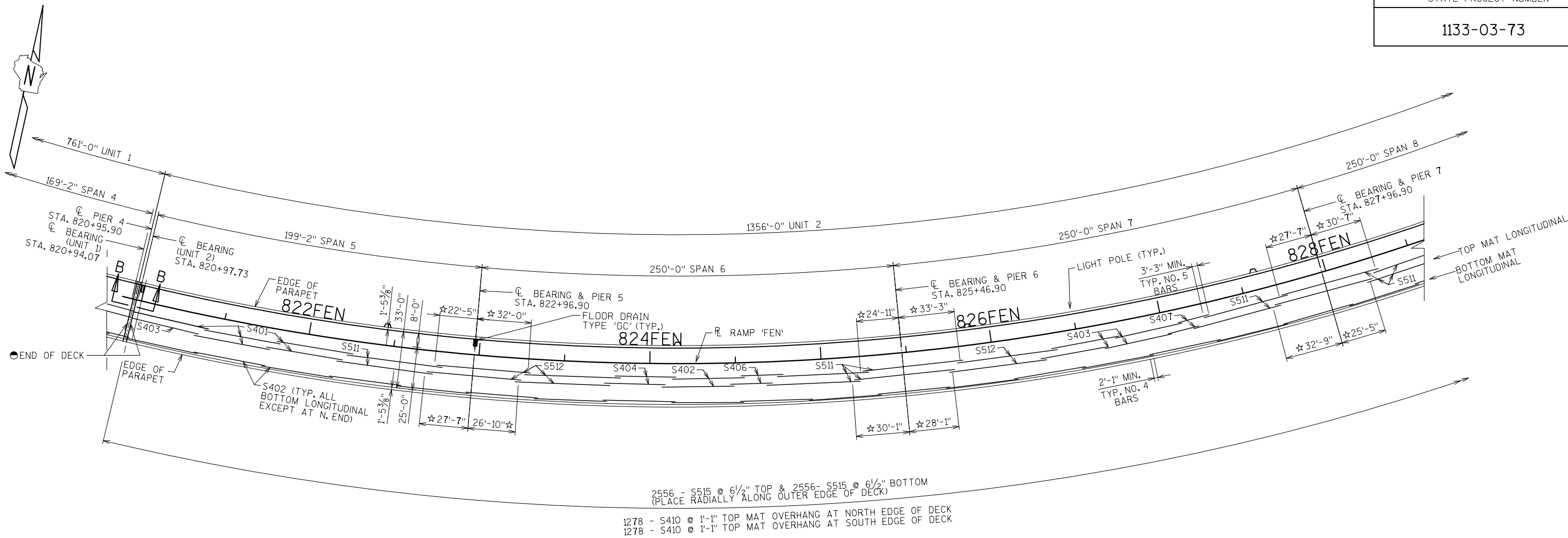
NOTES:

- SEE SHEET "SUPERSTRUCTURE BILL OF BARS" FOR BAR BILL.
- THE BOTTOM TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS WITH A CENTER TO CENTER SPACING NOT TO EXCEED 4'-0". ONE LINE OF CONTINUOUS BAR CHAIRS SHALL BE PLACED NEAR EACH EDGE OF SLAB TO SUPPORT THE ENDS OF THE BOTTOM TRANSVERSE BAR STEEL.
- THE TOP LONGITUDINAL BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS IN TRANSVERSE DIRECTION ON 4'-0" CENTERS.
- ALL TRANSVERSE BAR STEEL SHALL BE PLACED RADIALLY TO THE RAMP FEN REFERENCE LINE.
- ALL LONGITUDINAL BAR STEEL SHALL BE PLACED CONCENTRIC TO THE RAMP FEN REFERENCE LINE.
- FOR LOCATIONS OF FLOOR DRAINS SEE GENERAL PLAN AND ELEVATION. FOR FLOOR DRAIN DETAILS SEE SHEET TITLED "FLOOR DRAIN DETAILS".
- SPLICE ALL DECK LONGITUDINAL NO. 5 BARS 3'-3" AND NO. 4 BARS 2'-1" UNLESS NOTED OTHERWISE.
- FOR LIGHT BLISTER REINFORCEMENT DETAILS SEE SHEET TITLED "LIGHT STANDARD".
- FOR SECTION A-A, B-B, & C-C DETAILS SEE SHEET TITLED "REINFORCING AT EXPANSION JOINT".

DECK REINFORCEMENT UNIT 1

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JLM		PLANS CK'D. MJA	
DECK REINFORCEMENT UNIT 1			SHEET 40 OF 82



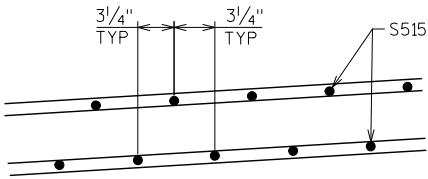
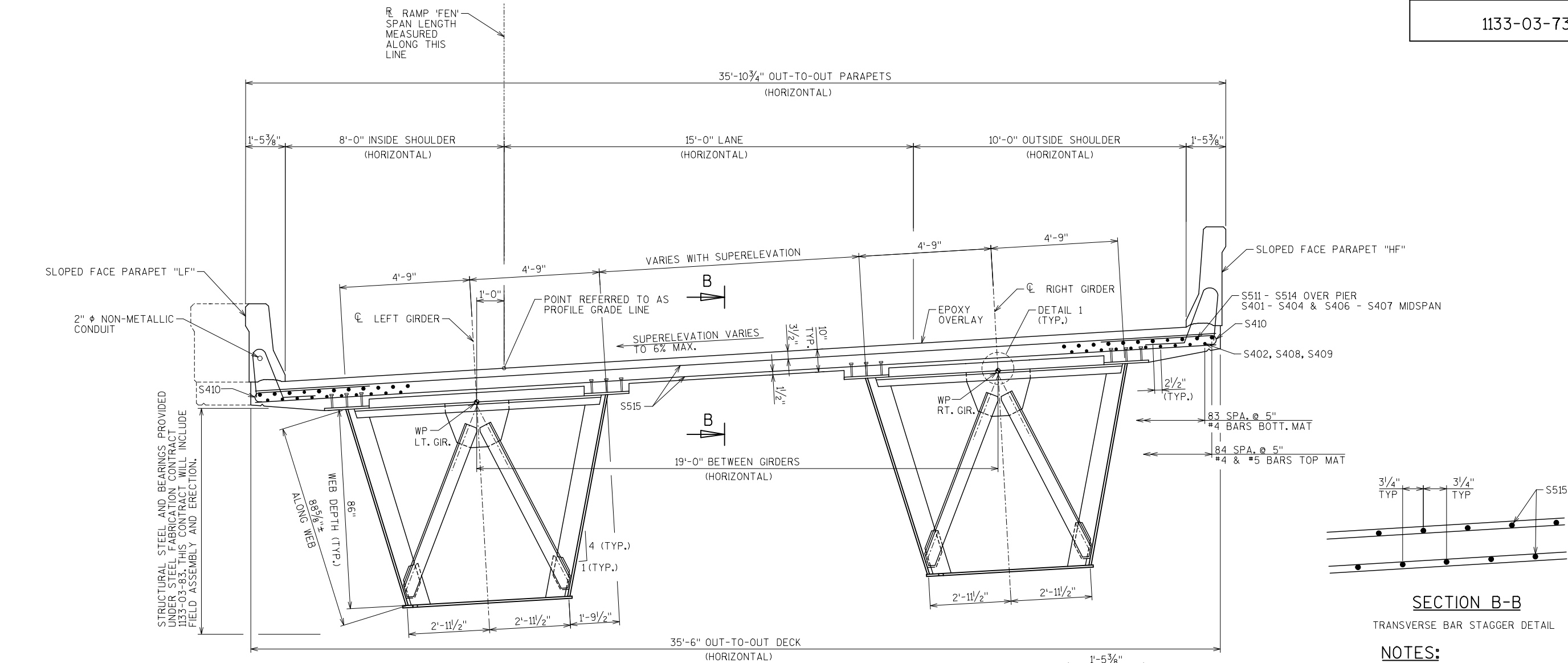
DECK REINFORCEMENT UNIT 2

FOR NOTES AND LEGEND SEE SHEET TITLED
"DECK REINFORCEMENT UNIT 1"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JLM		PLANS CK'D. MJA	
DECK REINFORCEMENT UNIT 2			SHEET 41 OF 82

STATE PROJECT NUMBER

1133-03-73



SECTION B-B

TRANSVERSE BAR STAGGER DETAIL

NOTES:

STAY-IN-PLACE METAL DECK FORMS PERMITTED INSIDE BOX GIRDERS ONLY.

W.P.= WORK POINT TO WHICH DIMENSIONS ARE MEASURED.

SEE CONTRACT 1133-03-83 "SUPERSTRUCTURE DETAILS" SHT. FOR HAUNCH DETAILS.

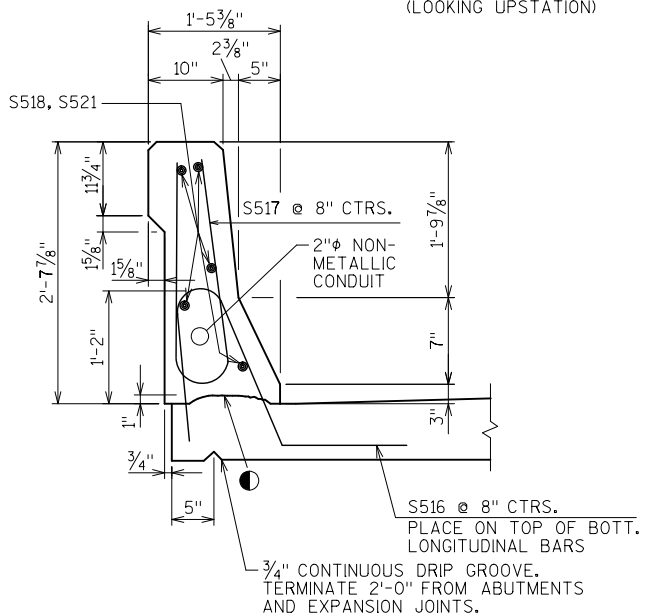
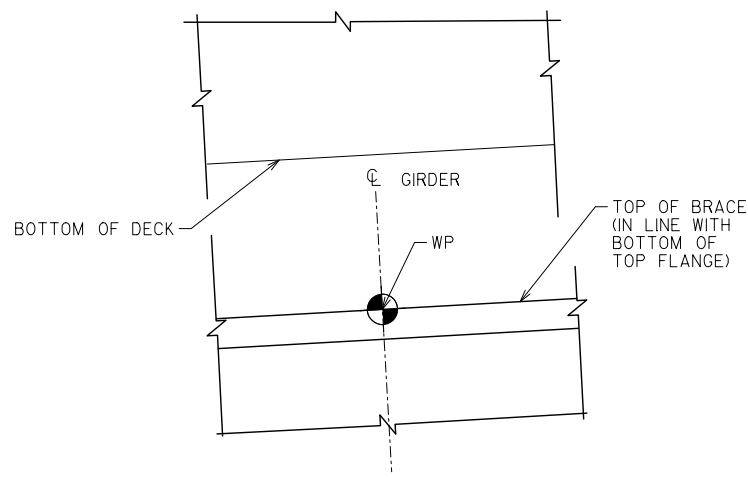
SHEAR STUDS ARE FURNISHED AND INSTALLED UNDER THIS CONTRACT. SEE STEEL FABRICATION PLANS FOR LOCATIONS AND SPACING OF SHEAR STUDS. REMOVE 3MM COAT OF PRIMER FROM THE TOP FLANGE AT SHEAR STUD LOCATIONS BEFORE INSTALLING STUDS.

LAP S518 & S521 BARS IN PARAPET 1'-9" MIN.

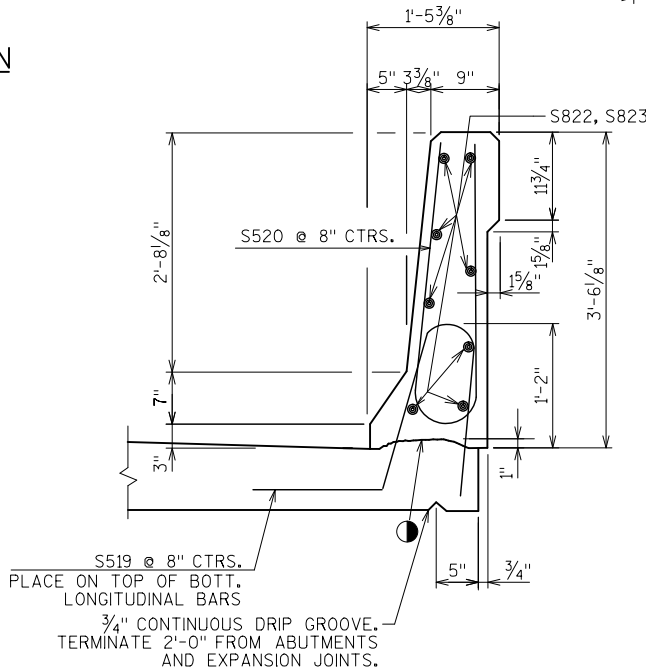
LAP S822 & S823 BARS IN PARAPET 3'-5" MIN.

DO NOT PLACE SHEAR STUDS AT FLOOR DRAIN LOCATION.

● CONSTRUCTION JOINT-STRIKE OFF AS SHOWN.



SECTION THRU PARAPET ON BRIDGE SLOPED FACE PARAPET 'LF'



SECTION THRU PARAPET ON BRIDGE SLOPED FACE PARAPET 'HF'

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MDR		PLANS CK'D. MJA	
TYPICAL DECK SECTION			SHEET 43 OF 82

BILL OF BARS - SUPERSTRUCTURE

BAR MARK	NO. REQ'D	LENGTH	WEIGHT (LB)	BENT	LOCATION
S401	383	45'-0"	11,513		TOP LONGITUDINAL
S402	5,100	42'-3"	143,937		TOP & BOTT. LONGITUDINAL
S403	510	39'-11"	13,599		TOP LONGITUDINAL
S404	553	35'-6"	13,114		TOP LONGITUDINAL
S605	36	7'-10"	426	X	DECK DRAIN
S406	85	24'-6"	1,391		TOP LONGITUDINAL
S407	255	18'-6"	3,151		TOP LONGITUDINAL
S408	85	17'-10"	1,013		BOTT. LONGITUDINAL
S409	85	13'-10"	785		BOTT. LONGITUDINAL
S410	3,990	5'-10"	15,547	X	TRANSVERSE AT OVERHANG
S511	680	58'-2"	41,254		TOP LONGITUDINAL OVER PIER
S512	680	54'-5"	38,595		TOP LONGITUDINAL OVER PIER
S513	425	42'-3"	18,728		TOP LONGITUDINAL OVER PIER
S514	255	47'-3"	12,567		TOP LONGITUDINAL OVER PIER
S515	7,982	35'-2"	292,771		TRANSVERSE
S516	3,161	4'-2"	13,737	X	LF PARAPET DOWELS
S517	3,161	4'-0"	13,188	X	LF PARAPET STIRRUPS
S518	100	39'-7"	4,129		LF PARAPET LONGITUDINAL - UNIT 1
S519	3,242	4'-7"	15,498	X	HF PARAPET DOWELS
S520	3,242	6'-6"	21,979	X	HF PARAPET STIRRUPS
S521	175	40'-3"	7,347		LF PARAPET LONGITUDINAL - UNIT 2
S822	144	46'-5"	17,846		HF PARAPET LONGITUDINAL
S823	256	46'-7"	31,841		HF PARAPET LONGITUDINAL
TOTAL		733,955			

ALL BARS ARE EPOXY COATED

BAR SERIES

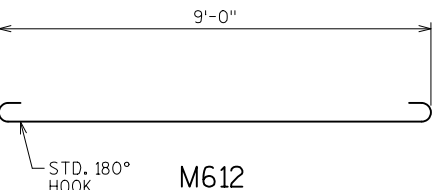
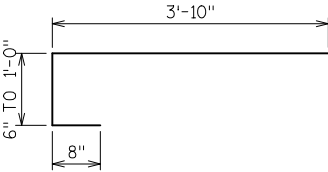
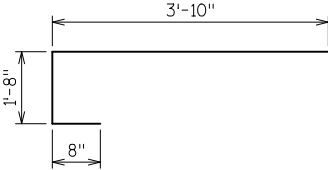
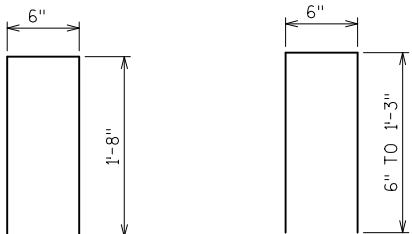
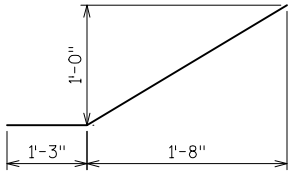
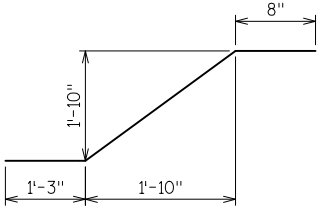
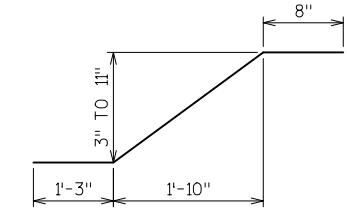
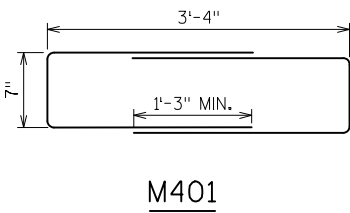
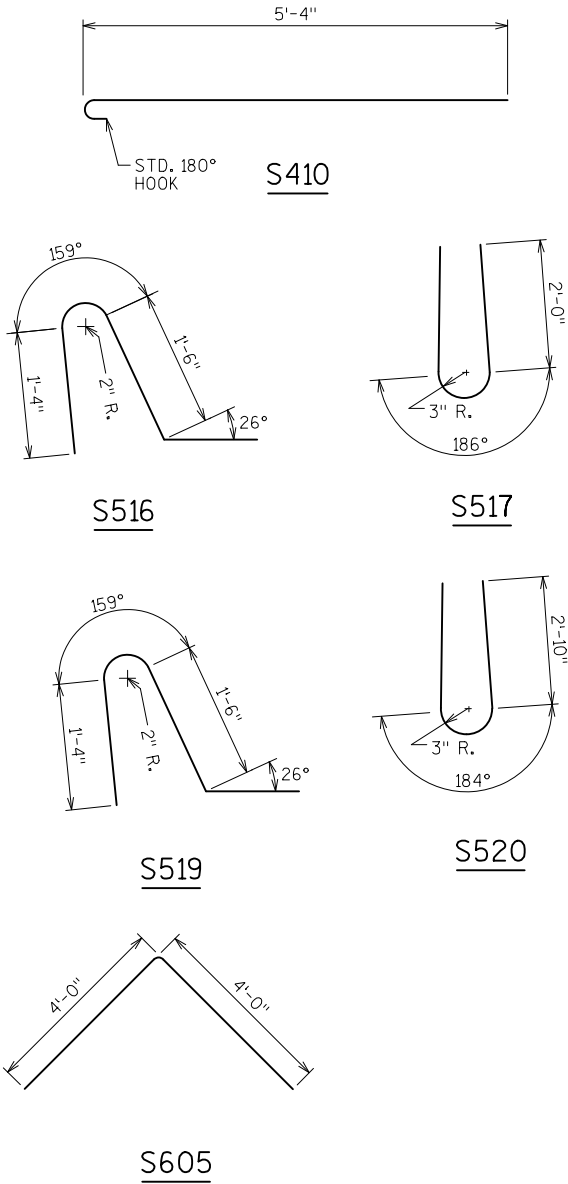
BAR SERIES LENGTH IS AVERAGE AND TO BE USED FOR BAR WEIGHT CALCULATION ONLY.

MARK	NO. REQD.	LENGTH
M403	8 SERIES OF 3	1'-8" TO 3'-2"
M406	8 SERIES OF 3	3'-11 TO 4'-1"
M408	8 SERIES OF 3	4'-10" TO 5'-4"

BILL OF BARS - EXPANSION JOINT

BAR MARK	NO. REQ'D	LENGTH	WEIGHT (LB)	BENT	LOCATION
M401	432	6'-2"	1,780	X	HORIZONTAL STIRRUP
M402	384	4'-0"	1,026	X	VERTICAL STIRRUP
M403	48	2'-5"	77	X	VERTICAL STIRRUP
M604	80	4'-7"	551	X	TOP & BOTT. TRANSVERSE
M405	160	4'-5"	472	X	LONGITUDINAL
M406	24	28'-1"	450	X	LONGITUDINAL
M607	12	4'-7"	83		TOP TRANSVERSE
M408	24	5'-1"	81	X	TOP LONGITUDINAL
M509	288	4'-10"	1,452		TRANSVERSE
M610	40	31'-2"	1,872		TOP & BOTT. TRANSVERSE
M411	192	4'-10"	620	X	TOP & BOTT. LONGITUDINAL
M612	16	10'-4"	248	X	TRANSVERSE
M613	32	10'-0"	481	X	TRANSVERSE
TOTAL		9,194			

ALL BARS ARE EPOXY COATED



NOTES:

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES BAR SIZE.
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

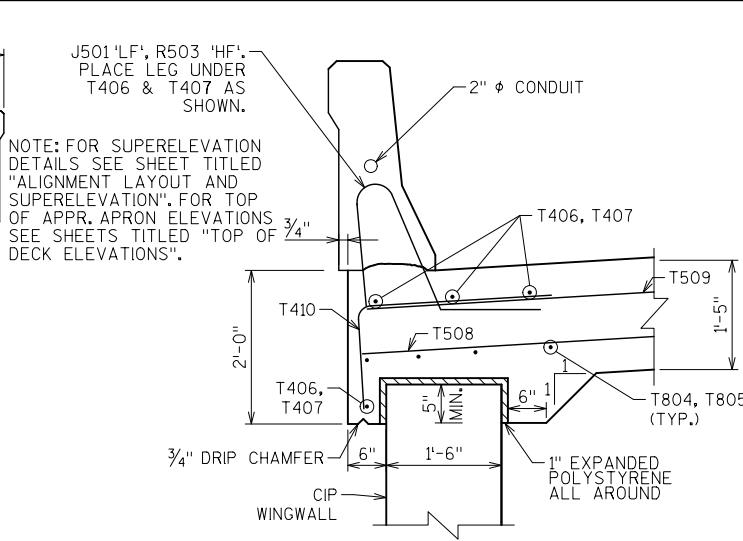
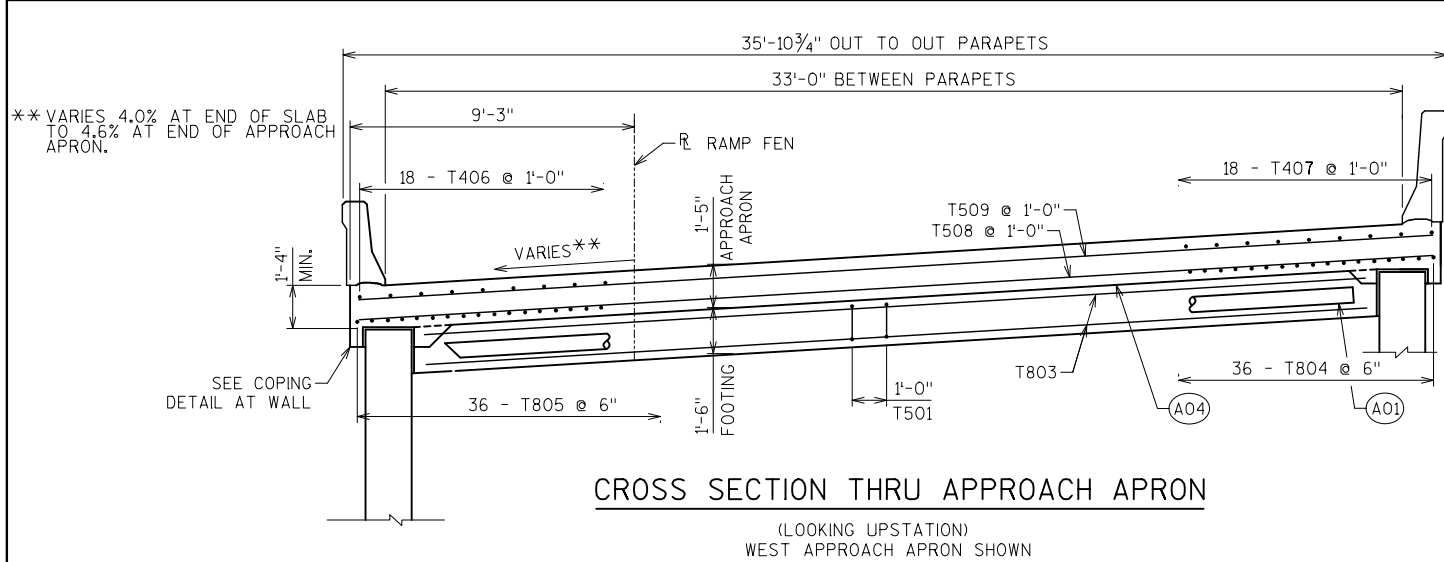
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		MDR	PLANS CK'D. MJA
SUPERSTRUCTURE		SHEET 44 OF 82	
BILL OF BARS			

LOCATION	P12-4	P12-5	P12-6	P12-7	P12-8	FS #11	P13-1	P13-2	P13-3	PIER 7	P13-5	P13-6	P13-7	FS #12	P14-1	P14-2	P14-3	P14-4	P14-5	P14-6	P14-7	P14-8	FS #13	P15-1	P15-2	P15-3	PIER 8	P15-5	P15-6	P15-7
LEFT EDGE OF SLAB	651.69	651.67	651.63	651.58	651.52	651.49	651.45	651.36	651.26	651.14	651.02	650.87	650.72	650.64	650.55	650.38	650.18	649.98	649.76	649.53	649.28	649.03	648.89	648.76	648.47	648.18	647.87	647.56	647.25	646.92
LEFT GIRDER; LEFT WEB	651.90	651.88	651.84	651.79	651.73	651.70	651.66	651.57	651.47	651.35	651.23	651.08	650.93	650.85	650.76	650.59	650.39	650.19	649.97	649.74	649.49	649.24	649.10	648.97	648.68	648.39	648.08	647.77	647.46	647.13
PGL	652.25	652.23	652.19	652.14	652.08	652.04	652.00	651.91	651.81	651.70	651.57	651.43	651.28	651.19	651.11	650.93	650.74	650.53	650.31	650.08	649.84	649.58	649.45	649.31	649.03	648.73	648.42	648.12	647.81	647.48
LEFT GIRDER; RIGHT WEB	652.47	652.45	652.41	652.36	652.30	652.27	652.23	652.14	652.04	651.92	651.80	651.65	651.50	651.42	651.33	651.16	650.96	650.76	650.54	650.31	650.06	649.81	649.67	649.54	649.25	648.96	648.65	648.34	648.03	647.70
RIGHT GIRDER; LEFT WEB	653.04	653.02	652.98	652.93	652.87	652.84	652.80	652.71	652.61	652.49	652.37	652.22	652.07	651.99	651.90	651.73	651.53	651.33	651.11	650.88	650.63	650.38	650.24	650.11	649.82	649.53	649.22	648.91	648.60	648.27
RIGHT GIRDER; RIGHT WEB	653.61	653.59	653.55	653.50	653.44	653.41	653.37	653.28	653.18	653.06	652.94	652.79	652.64	652.56	652.47	652.30	652.10	651.90	651.68	651.45	651.20	650.95	650.81	650.68	650.39	650.10	649.79	649.48	649.17	648.84
RIGHT EDGE OF SLAB	653.82	653.80	653.76	653.71	653.65	653.62	653.58	653.49	653.39	653.27	653.15	653.00	652.85	652.77	652.68	652.51	652.31	652.11	651.89	651.66	651.41	651.16	651.02	650.89	650.60	650.31	650.00	649.69	649.38	649.05

LOCATION	FS #14	P16-1	P16-2	P16-3	P16-4	P16-5	P16-6	P16-7	P16-8	FS #15	P17-1	P17-2	P17-3	PIER 9	P17-5	P17-6	P17-7	FS #16	P18-1	P18-2	P18-3	P18-4	P18-5	P18-6	CL BRG. N. ABUT.	END OF SLAB	APRON START	APRON MIDPT.	APRON END
LEFT EDGE OF SLAB	646.76	646.59	646.24	645.88	645.51	645.12	644.73	644.32	643.91	643.69	643.48	643.04	642.59	642.12	641.61	641.08	640.54	640.26	639.98	639.41	638.83	638.23	637.62	636.99	636.36	636.24	636.21	635.83	635.45
LEFT GIRDER; LEFT WEB	646.97	646.80	646.45	646.09	645.72	645.33	644.94	644.53	644.12	643.90	643.69	643.25	642.80	642.33	641.82	641.29	640.75	640.47	640.19	639.62	639.04	638.44	637.83	637.20	636.57	636.45	636.42	636.04	635.66
PGL	647.31	647.14	646.79	646.43	646.06	645.68	645.29	644.88	644.46	644.25	644.03	643.59	643.14	642.68	642.16	641.63	641.09	640.81	640.53	639.96	639.38	638.78	638.17	637.55	636.91	636.80	636.77	636.39	636.01
LEFT GIRDER; RIGHT WEB	647.54	647.37	647.02	646.66	646.29	645.90	645.51	645.10	644.69	644.47	644.26	643.82	643.37	642.90	642.39	641.86	641.32	641.04	640.76	640.19	639.61	639.01	638.40	637.77	637.14	637.02	636.99	636.61	636.23
RIGHT GIRDER; LEFT WEB	648.11	647.94	647.59	647.23	646.86	646.47	646.08	645.67	645.26	645.04	644.83	644.39	643.94	643.47	642.96	642.43	641.89	641.61	641.33	640.76	640.18	639.58	638.97	638.34	637.71	637.59	637.56	637.18	636.80
RIGHT GIRDER; RIGHT WEB	648.68	648.51	648.16	647.80	647.43	647.04	646.65	646.24	645.83	645.61	645.40	644.96	644.51	644.04	643.53	643.00	642.46	642.18	641.90	641.33	640.75	640.15	639.54	638.91	638.28	638.16	638.13	637.75	637.37
RIGHT EDGE OF SLAB	648.89	648.72	648.37	648.01	647.64	647.25	646.86	646.45	646.04	645.82	645.61	645.17	644.72	644.25	643.74	643.21	642.67	642.39	642.11	641.54	640.96	640.36	639.75	639.12	638.49	638.37	638.34	637.96	637.58

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
TOP OF DECK ELEVATIONS 2		SHEET 46 OF 82	

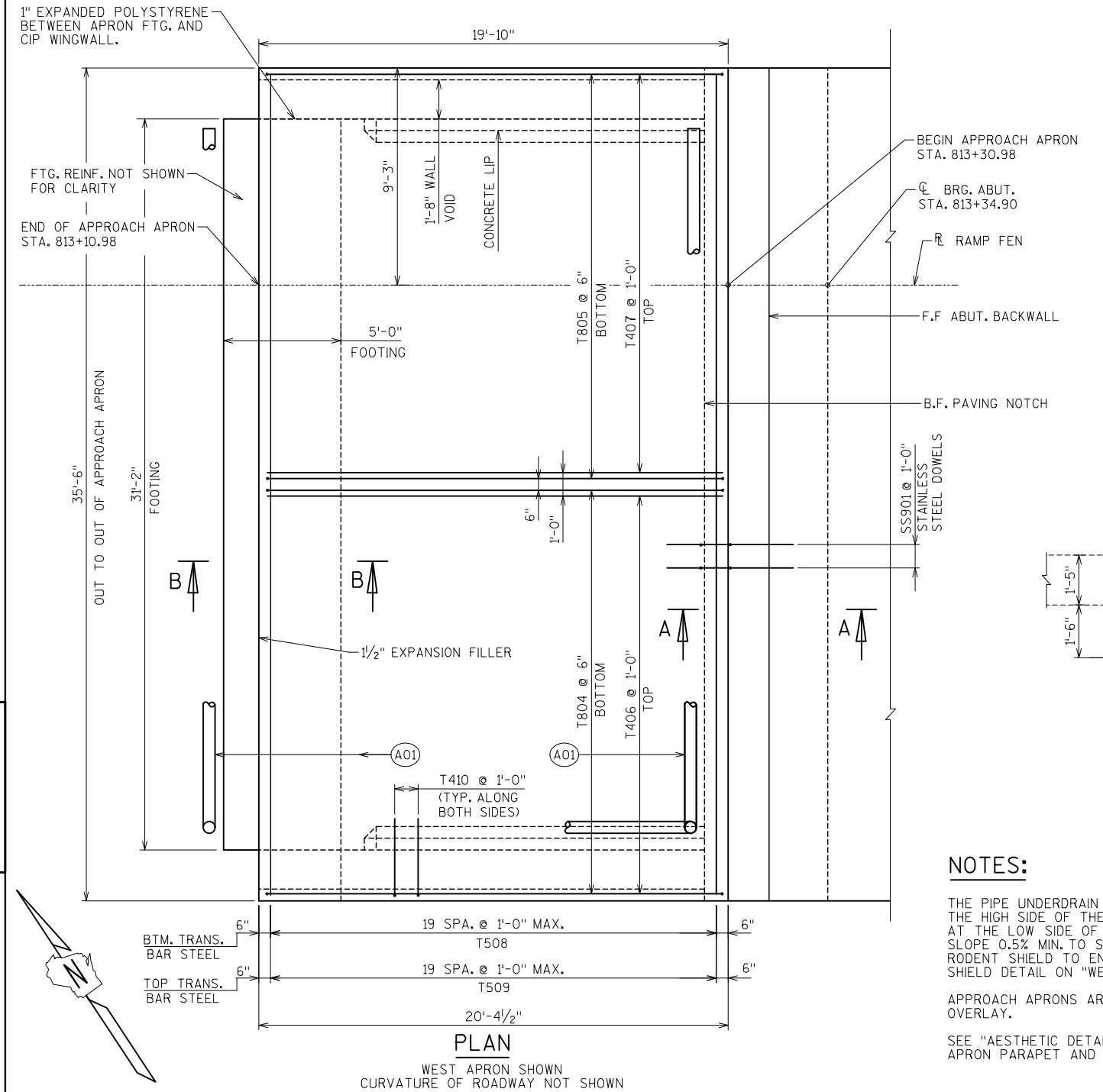


BILL OF BARS

BAR MARK	NO. REQ'D		LENGTH	WEIGHT (LB)	BENT	LOCATION
	W. APPR.	N. APPR.				
T501	31	33	10'-10"	723	X	FOOTING - STIRRUPS
T802	0	12	32'-6"	1,041	X	FOOTING - HORIZONTAL
T803	12	0	30'-10"	988		FOOTING - HORIZONTAL
T804	35	35	19'-3"	3,598	X	APPROACH APRON - LONG. BTM.
T805	35	35	19'-7"	3,660	X	APPROACH APRON - LONG. BTM.
T406	18	18	19'-2"	461		APPROACH APRON - LONG. TOP
T407	18	18	19'-6"	469		APPROACH APRON - LONG. TOP
T508	20	20	35'-0"	2,103		APPROACH APRON - TRANS. BTM.
T509	20	20	35'-0"	1,460		APPROACH APRON - TRANS. TOP
T410	40	40	4'-10"	258	X	APPROACH APRON - TRANS. EDGE
TOTAL				4,751		ALL BARS ARE EPOXY COATED.

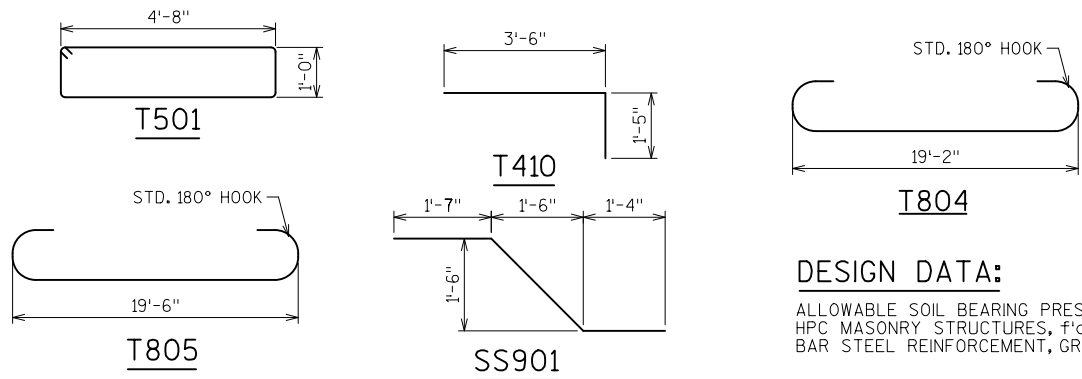
STATE PROJECT NUMBER

1133-03-73



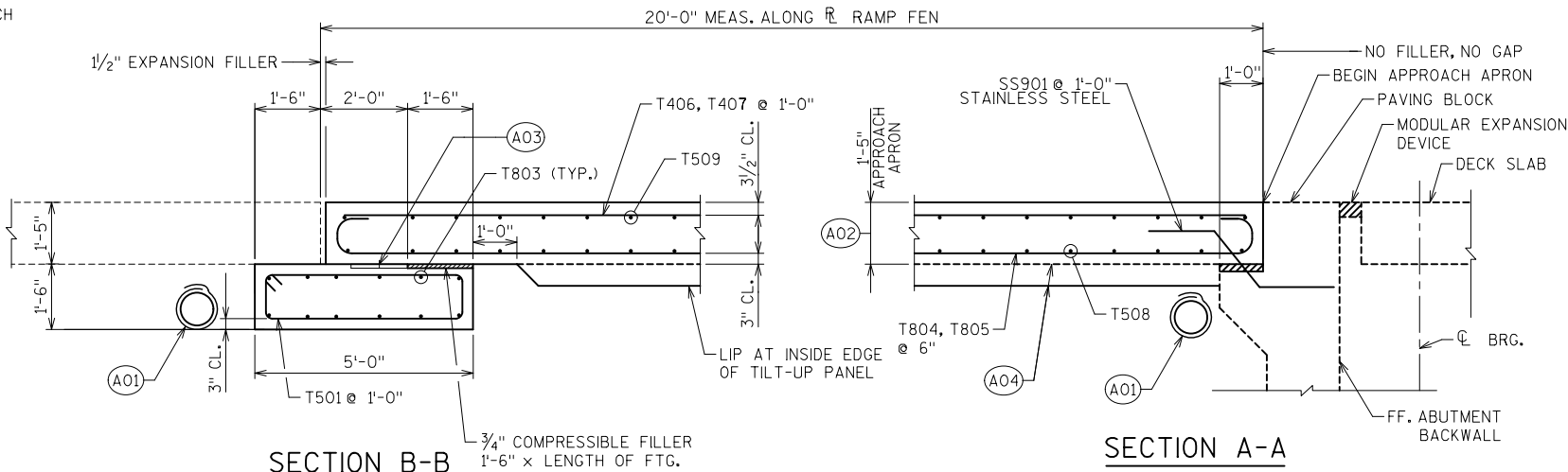
COPING DETAIL AT WALL

'LF' PARAPET SHOWN, 'HF' PARAPET SIMILAR.



DESIGN DATA:

ALLOWABLE SOIL BEARING PRESSURE: 2,000 PSF
HPC MASONRY STRUCTURES, f'_c: 4,000 PSI
BAR STEEL REINFORCEMENT, GRADE 60, f_y: 60,000 PSI



TRANSVERSE SECTION THRU APPROACH APRON

- (A01) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE.
- (A02) APPROACH APRON AND APPROACH APRON PAPAPETS SHALL BE "HPC MASONRY STRUCTURES".
- (A03) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHELENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.
- (A04) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHELENE SHEETS OVER THE ENTIRE LENGTH AND WIDTH OF THE SUBGRADE.

NOTES:

THE PIPE UNDERDRAIN (A01) SHOULD BE CAPPED AT THE HIGH SIDE OF THE ROADWAY CROSS SLOPE. AT THE LOW SIDE OF THE CROSS SLOPE, SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD TO END OF PIPE. SEE RODENT SHIELD DETAIL ON "WEST ABUTMENT" SHEET.

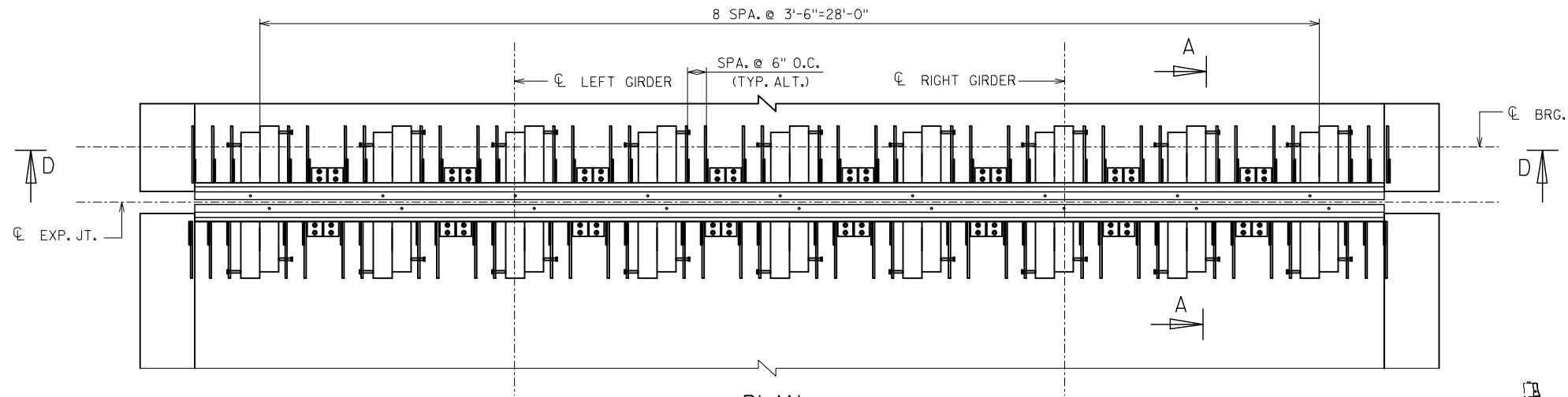
APPROACH APRONS ARE TO RECIEVE EPOXY OVERLAY.

SEE "AESTHETIC DETAILS" SHEET FOR APPROACH APRON PARAPET AND COPING STAIN COLOR.

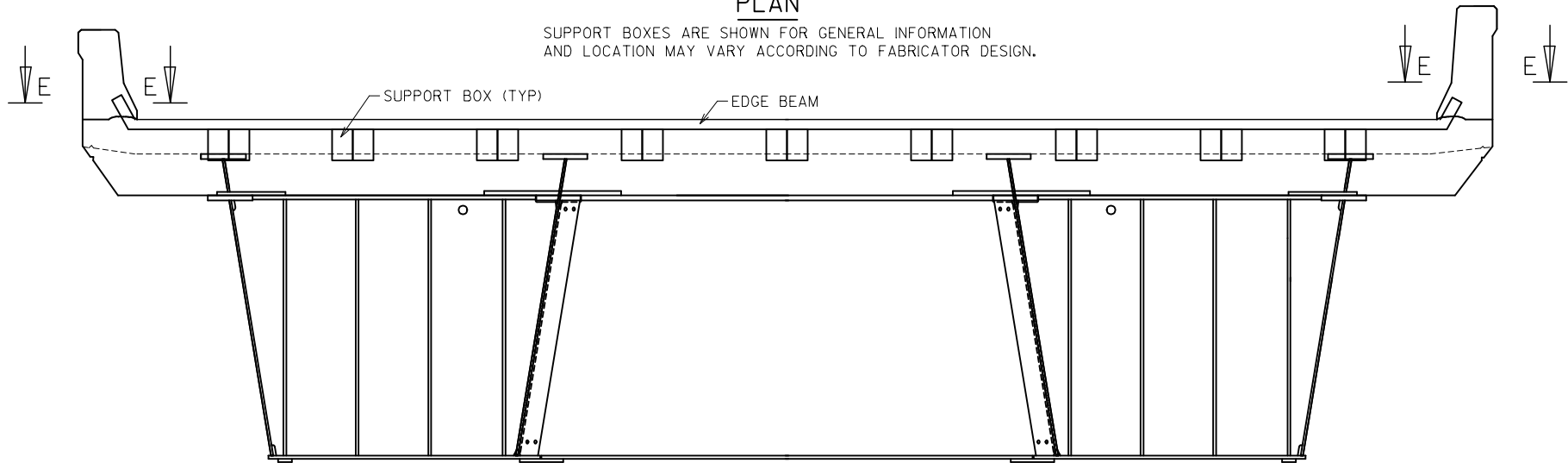
STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
APPROACH APRON DETAILS WEST ABUTMENT			SHEET 47 OF 82

DATE: 4/2/2012
I.D.



SUPPORT BOXES ARE SHOWN FOR GENERAL INFORMATION
AND LOCATION MAY VARY ACCORDING TO FABRICATOR DESIGN.



NOTES

ALL DIMENSIONS SHOWN ARE AT MEDIAN TEMP OF 45° F.

FABRICATOR WILL DESIGN EACH JOINT DEPENDING ON THE CONDITIONS AND THE DESIGN CRITERIA USED BY THE SUPPLIER. FABRICATION DRAWINGS ARE SUBJECT TO THE APPROVAL OF THE BUREAU OF STRUCTURES.

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE GLAND.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST, & SWEEP.

NO EXPANSION JOINT PROTRUSIONS PERMITTED ABOVE ROADWAY SURFACE OR ON PARAPET ROADWAY FACE.

THE EXPANSION JOINT SEALS SHALL BE PLACED, BONDED, & SEALED AS RECOMMENDED BY THE MANUFACTURER. FORM WORK SHALL BE PLACED BETWEEN THE SUPPORT BOXES TO PREVENT CONCRETE INTRUSION INTO THE SUPPORT BOX. A TECHNICAL REPRESENTATIVE OF THE MANUFACTURER SHALL BE PRESENT DURING INSTALLATION. PRIOR TO SETTING THE JOINT ASSEMBLY INTO POSITION, THE PROJECT ENGINEER SHALL DETERMINE THE PROPER JOINT OPENING.

EXPANSION JOINT EXTRUSIONS SHALL BE FABRICATED TO CONFORM TO ROADWAY CROWN & GRADE. FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST BARS, PLATES, WT-SECTION, ANCHORAGE LOOP, & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THIS ASSEMBLY SHALL BE HOT DIPPED GALVANIZED.

COST OF FURNISHING & PLACING OF THE EXPANSION JOINTS COMPLETE WITH PARAPET PLATES SHALL BE PAID FOR UNDER THE PRICE BID FOR "EXPANSION DEVICE MODULAR, STRUCTURE B-5-658".

BAR STEEL REINF. IN DECK AND CONC. DIAPHRAGM SHALL BE RESPAVED AS NECESSARY TO ALLOW PLACEMENT OF JOINT ASSEMBLY.

STATE PROJECT NUMBER

1133-03-73

TEMP. TABLE

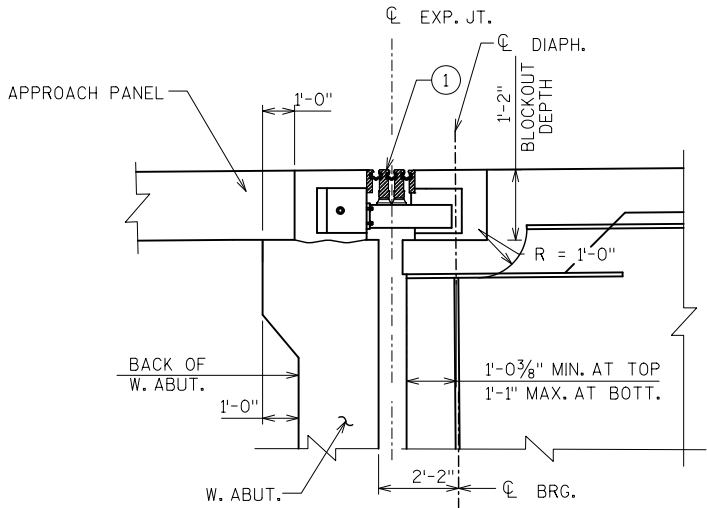
TEMPERATURE TABLE FOR SETTING JOINT OPENINGS
TO BE DETERMINED BY JOINT MANUFACTURER WITH
THE FOLLOWING DESIGN DATA:

1. 3/16" OF MOVEMENT PER 10° F
2. MEDIAN TEMPERATURE OF 45° F
3. TEMP. RANGE IN TABLE FROM (-30° F TO +120° F)

A TABLE OF JOINT OPENINGS BASED ON ABOVE DATA
SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

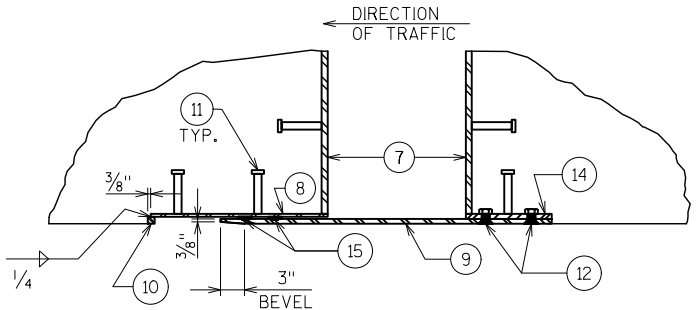
LEGEND

- 1 MODULAR EXPANSION DEVICE.
- 7 3/4" BULKHEAD PLATE. WELD TO NO. 1, NO. 8, AND NO. 14.
- 8 INSIDE PLATE. FABRICATE FROM 3/8" PLATE.
- 9 OUTSIDE PLATE. FABRICATE FROM 5/8" PLATE.
- 10 7/8" SQUARE BAR. WELD TO NO. 8 AS SHOWN.
- 11 3/4" DIA. X 4" LONG STUDS. WELD TO NO. 8, NO. 7, AND NO. 14.
- 12 3/4" DIA. X 2" STAINLESS STEEL FLAT CTSK. SLOTTED HEAD CAP SCREWS. RECESS 1/16" BELOW PLATE SURFACE.
- 14 INSIDE PLATE. FABRICATE FROM 5/8" PLATE.
- 15 ADIPRENE BUTTON. SEE DETAIL. SET IN OUTSIDE PLATE.



SECTION A-A

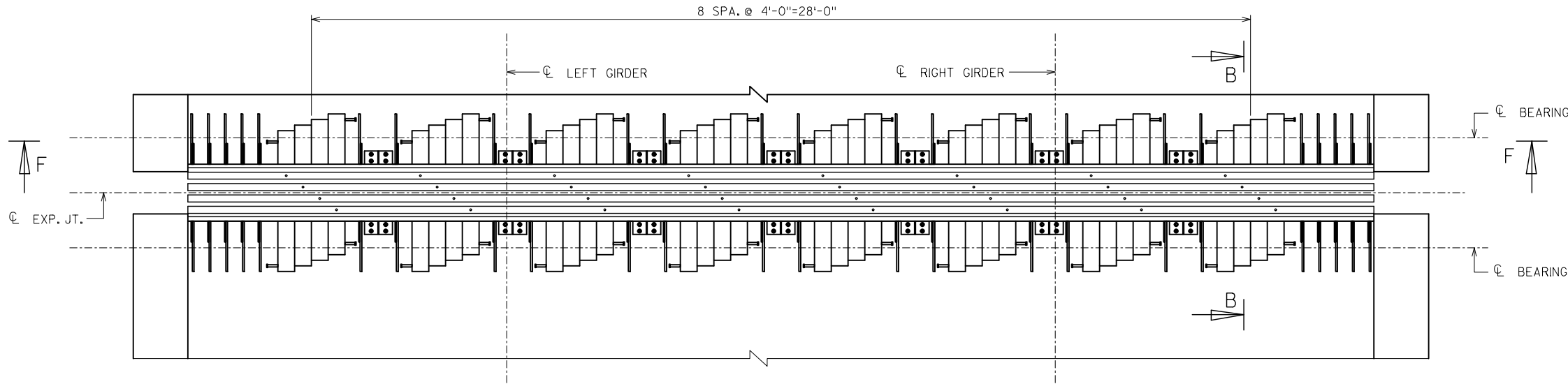
(SEE SECTION A-A, SHEET 54, FOR FURTHER DETAIL)



SECTION E-E

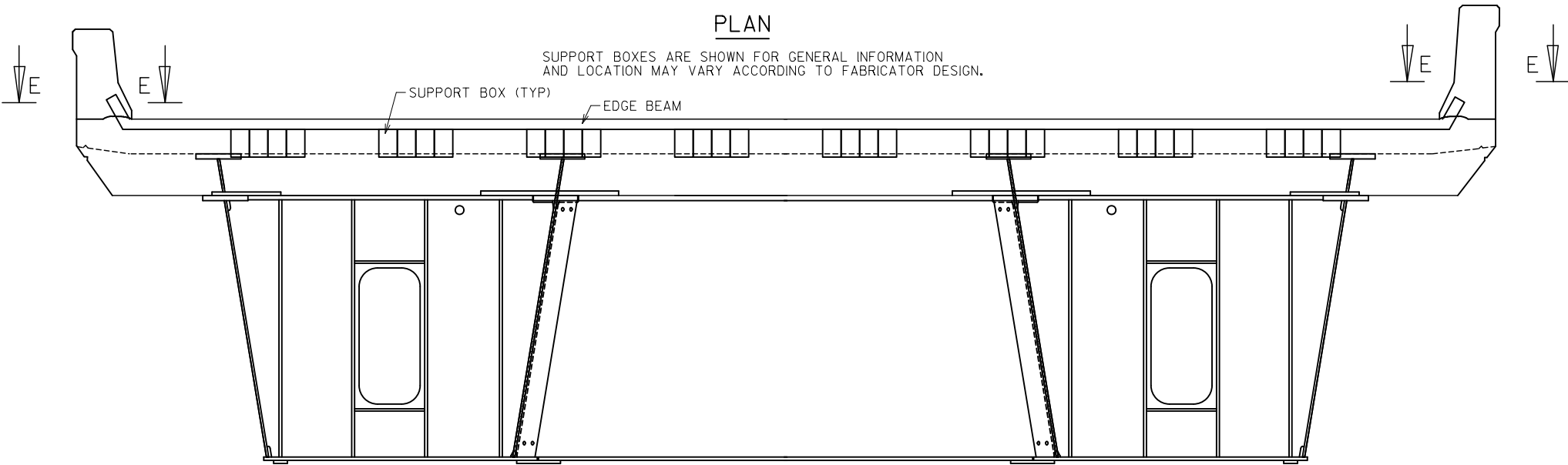
(NOT TO SCALE)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D.	
MODULAR EXPANSION JOINT WEST ABUTMENT			SHEET 49 OF 82



PLAN

SUPPORT BOXES ARE SHOWN FOR GENERAL INFORMATION
AND LOCATION MAY VARY ACCORDING TO FABRICATOR DESIGN.



VIEW F-F

(NOT TO SCALE)

TEMP. TABLE

TEMPERATURE TABLE FOR SETTING JOINT OPENINGS
TO BE DETERMINED BY JOINT MANUFACTURER WITH
THE FOLLOWING DESIGN DATA:

1. $\frac{1}{8}$ " OF MOVEMENT PER 10° F
2. MEDIAN TEMPERATURE OF 45° F
3. TEMP. RANGE IN TABLE FROM (-30° F TO +120° F)

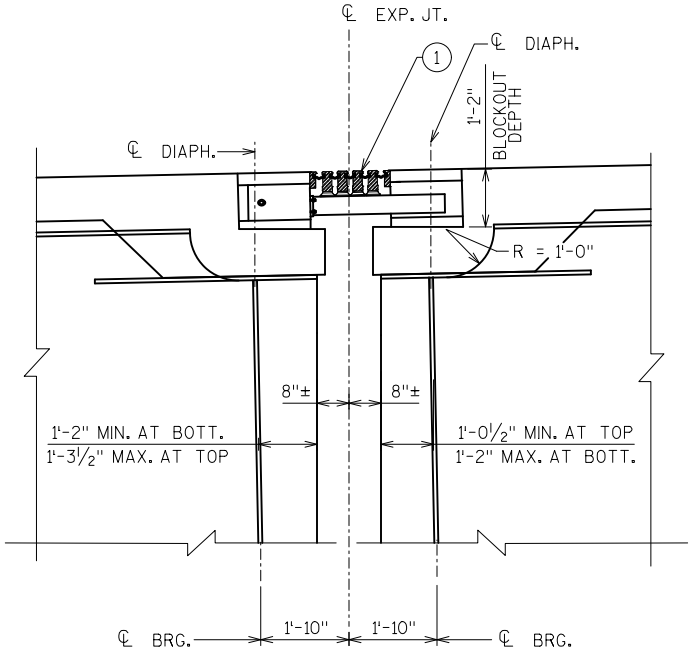
A TABLE OF JOINT OPENINGS BASED ON ABOVE DATA
SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

LEGEND

1. MODULAR EXPANSION DEVICE.
7. $\frac{3}{4}$ " BULKHEAD PLATE. WELD TO NO. 1, NO. 8, AND NO. 14.
8. INSIDE PLATE. FABRICATE FROM $\frac{3}{8}$ " PLATE.
9. OUTSIDE PLATE. FABRICATE FROM $\frac{5}{8}$ " PLATE.
10. $\frac{7}{8}$ " SQUARE BAR. WELD TO NO. 8 AS SHOWN.
11. $\frac{3}{4}$ " DIA. X 4" LONG STUDS. WELD TO NO. 8, NO. 7, AND NO. 14.
12. $\frac{3}{4}$ " DIA. X 2" STAINLESS STEEL FLAT CTSK. SLOTTED HEAD CAP SCREWS. RECESS $\frac{1}{16}$ " BELOW PLATE SURFACE.
14. INSIDE PLATE. FABRICATE FROM $\frac{5}{8}$ " PLATE.
15. ADIPRENE BUTTON. SEE DETAIL. SET IN OUTSIDE PLATE.

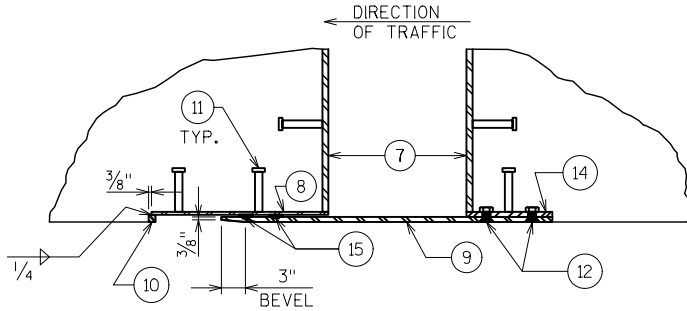
NOTES

FOR NOTES SEE EXPANSION JOINT WEST ABUTMENT SHEET.



SECTION B-B

(SEE SECTION B-B, SHEET 54, FOR FURTHER DETAIL)

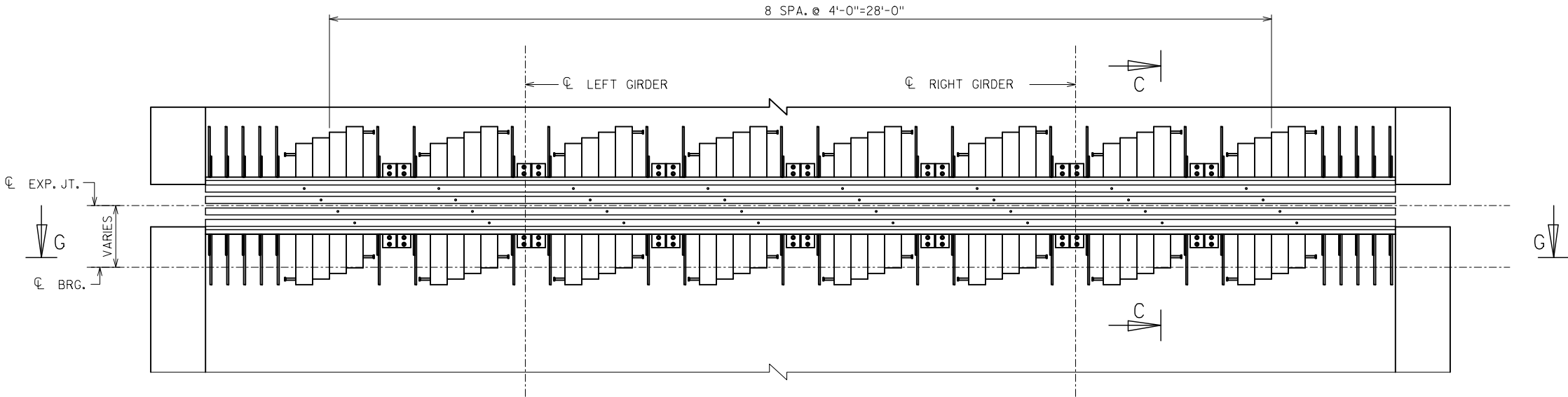


SECTION E-E

(NOT TO SCALE)

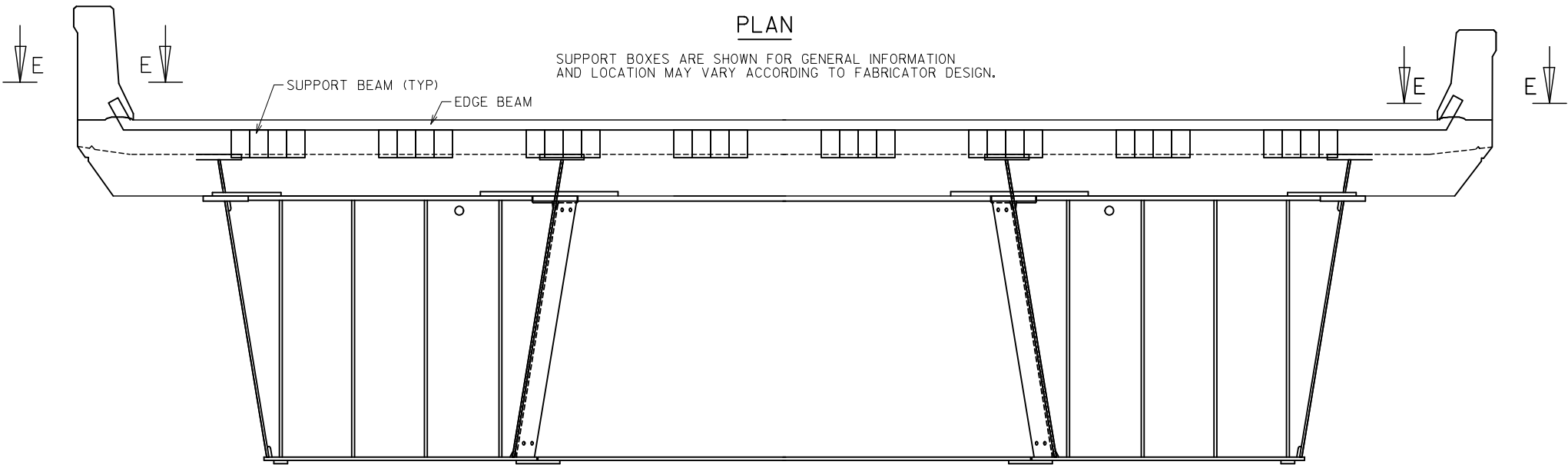
STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D.	
MODULAR EXPANSION JOINT AT PIER 4			SHEET 50 OF 82



PLAN

SUPPORT BOXES ARE SHOWN FOR GENERAL INFORMATION AND LOCATION MAY VARY ACCORDING TO FABRICATOR DESIGN.



VIEW G-G

(NOT TO SCALE)

TEMP. TABLE

TEMPERATURE TABLE FOR SETTING JOINT OPENINGS TO BE DETERMINED BY JOINT MANUFACTURER WITH THE FOLLOWING DESIGN DATA:

1. $\frac{5}{8}$ " OF MOVEMENT PER 10° F
2. MEDIAN TEMPERATURE OF 45° F
3. TEMP. RANGE IN TABLE FROM (-30° F TO +120° F)

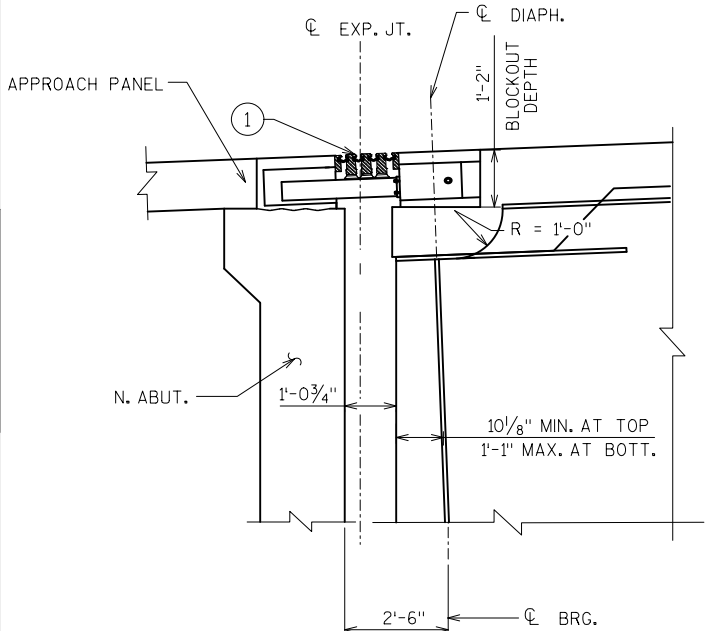
A TABLE OF JOINT OPENINGS BASED ON ABOVE DATA SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

LEGEND

1. MODULAR EXPANSION DEVICE.
7. $\frac{3}{4}$ " BULKHEAD PLATE. WELD TO NO. 1, NO. 8, AND NO. 14.
8. INSIDE PLATE. FABRICATE FROM $\frac{3}{8}$ " PLATE.
9. OUTSIDE PLATE. FABRICATE FROM $\frac{5}{8}$ " PLATE.
10. $\frac{7}{8}$ " SQUARE BAR. WELD TO NO. 8 AS SHOWN.
11. $\frac{3}{4}$ " DIA. X 4" LONG STUDS. WELD TO NO. 8, NO. 7, AND NO. 14.
12. $\frac{3}{4}$ " DIA. X 2" STAINLESS STEEL FLAT CTSK. SLOTTED HEAD CAP SCREWS. RECESS $\frac{1}{16}$ " BELOW PLATE SURFACE.
14. INSIDE PLATE. FABRICATE FROM $\frac{5}{8}$ " PLATE.
15. ADIPRENE BUTTON. SEE DETAIL. SET IN OUTSIDE PLATE.

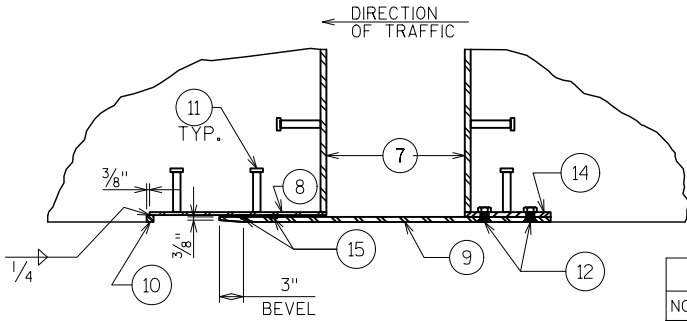
NOTES

FOR NOTES SEE EXPANSION JOINT WEST ABUTMENT SHEET.



SECTION C-C

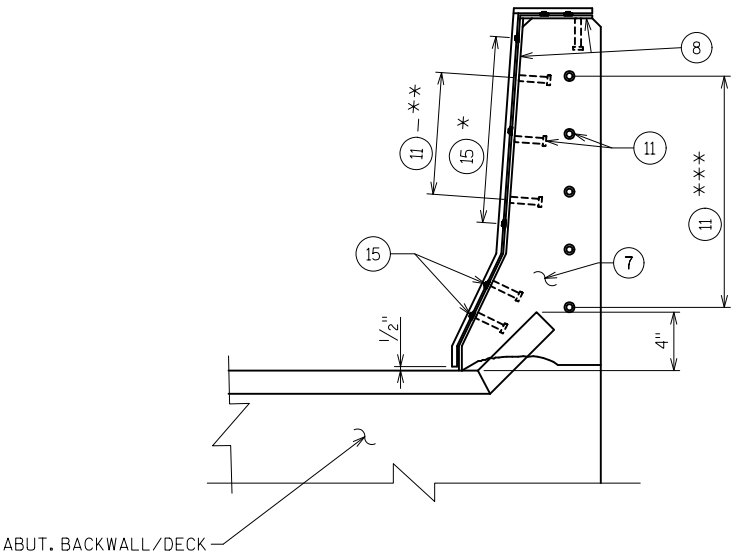
(SEE SECTION C-C, SHEET 54, FOR FURTHER DETAIL)



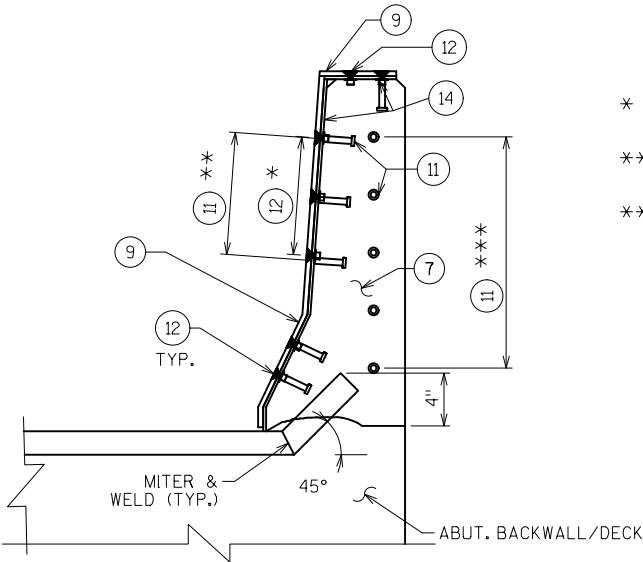
SECTION E-E

(NOT TO SCALE)

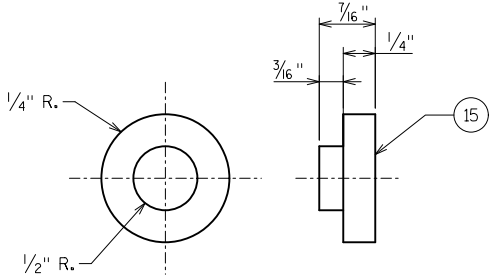
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D.	
MODULAR EXPANSION JOINT NORTH ABUTMENT			SHEET 51 OF 82



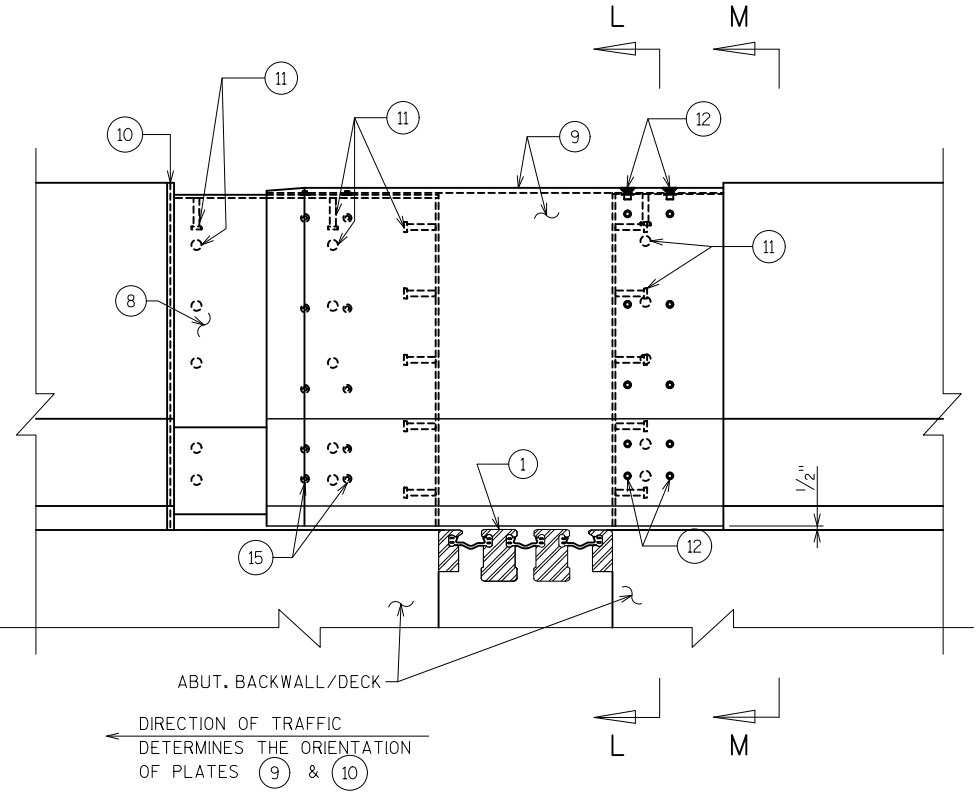
SECTION L-L



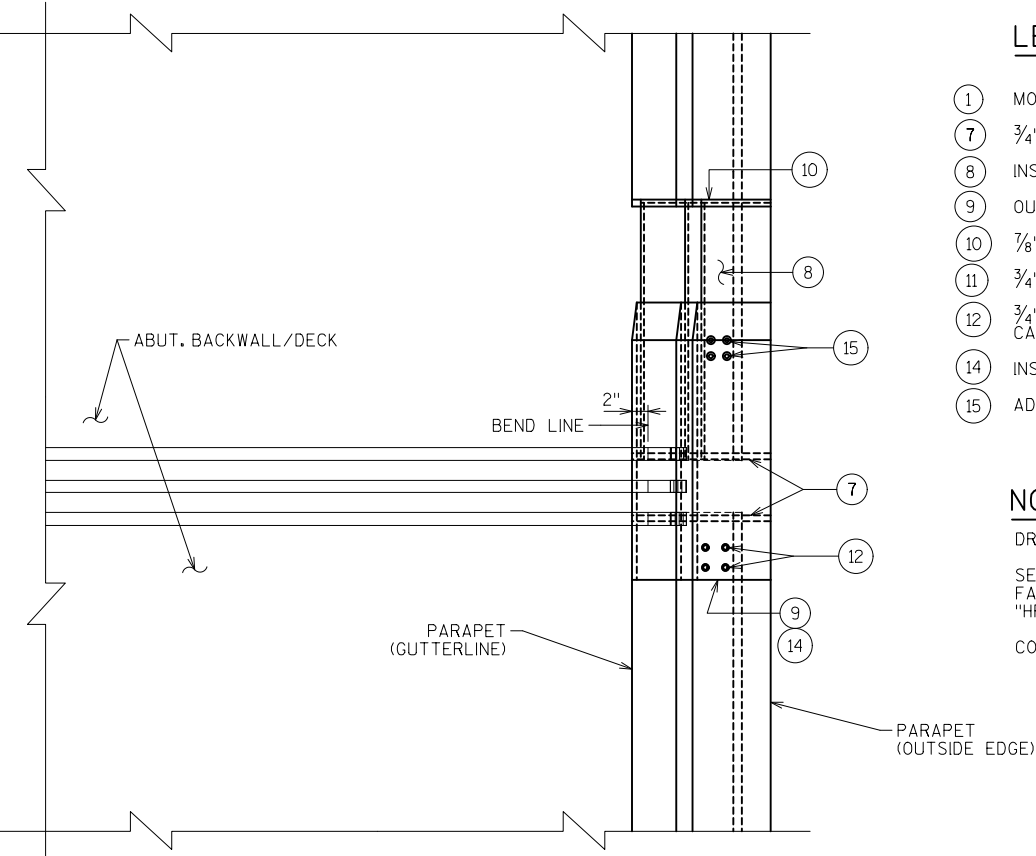
SECTION M-M



ADIPRENE BUTTON DETAIL



PARAPET ELEVATION LF/HF



PLAN DETAIL

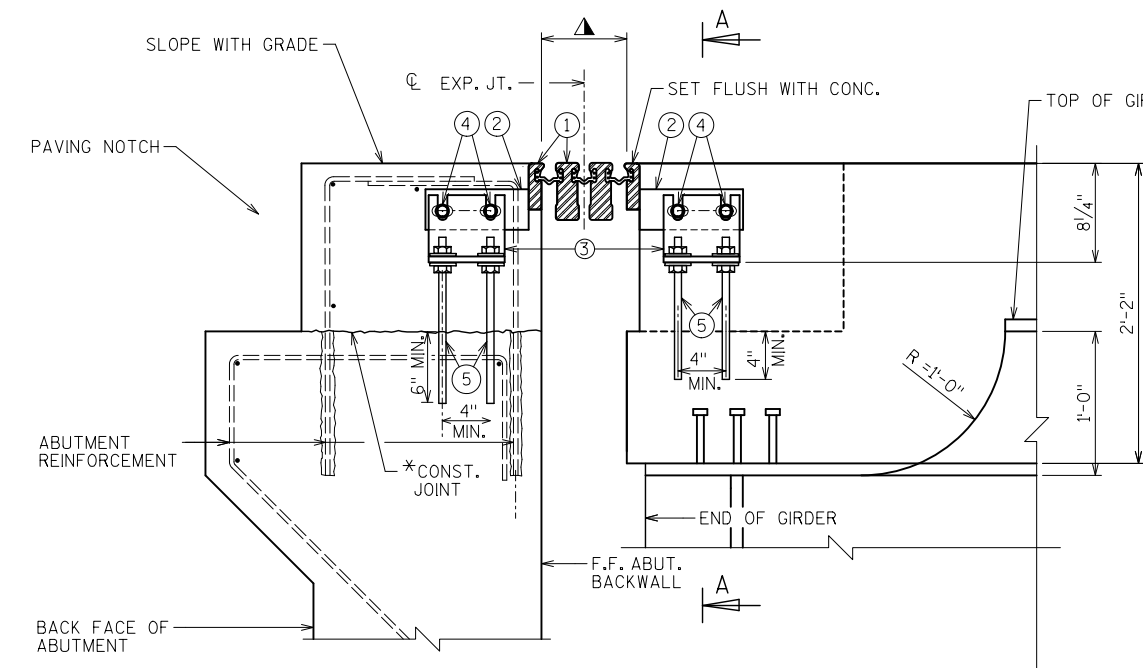
LEGEND

- 1 MODULAR EXPANSION JOINT DEVICE.
- 7 3/4" BULKHEAD PLATE WELD TO NO. 1, NO. 8, AND NO. 14.
- 8 INSIDE PLATE. FABRICATE FROM 3/8" PLATE.
- 9 OUTSIDE PLATE. FABRICATE FROM 5/8" PLATE.
- 10 7/8" SQUARE BAR. WELD TO NO. 8 AS SHOWN.
- 11 3/4" DIA. X 4" LONG STUDS. WELD TO NO. 8, NO. 7, AND NO. 14.
- 12 3/4" DIA. X 2" STAINLESS STEEL FLAT CTSK. SLOTTED HEAD CAP SCREWS, RECESS 1/16" BELOW PLATE SURFACE.
- 14 INSIDE PLATE. FABRICATE FROM 5/8" PLATE.
- 15 ADIPRENE BUTTON. SEE DETAIL. SET IN OUTSIDE PLATE.

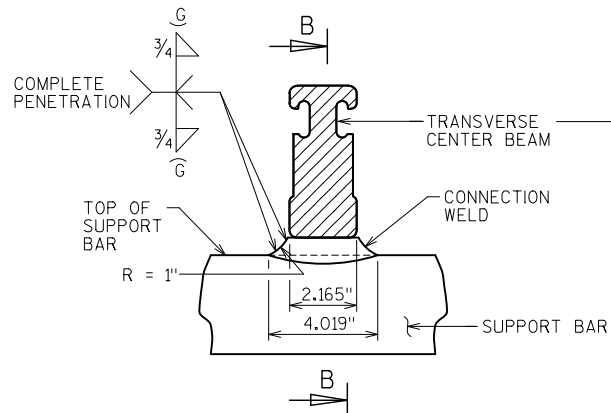
NOTES

DRAWINGS ARE NOT TO SCALE.
SEE SHEETS TITLED "SLOPED FACE PARAPET 'LF', 'LF-2' & 'HF'" FOR PARAPET DIMENSIONS.
COVER PLATES SHALL BE GALVANIZED.

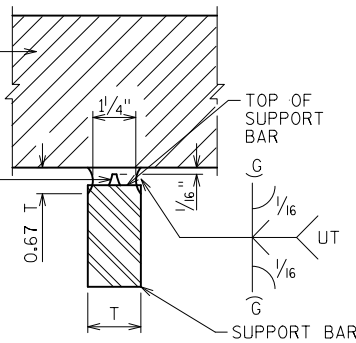
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D.	
MODULAR EXPANSION JOINT COVER PLATES		SHEET 52 OF 82	



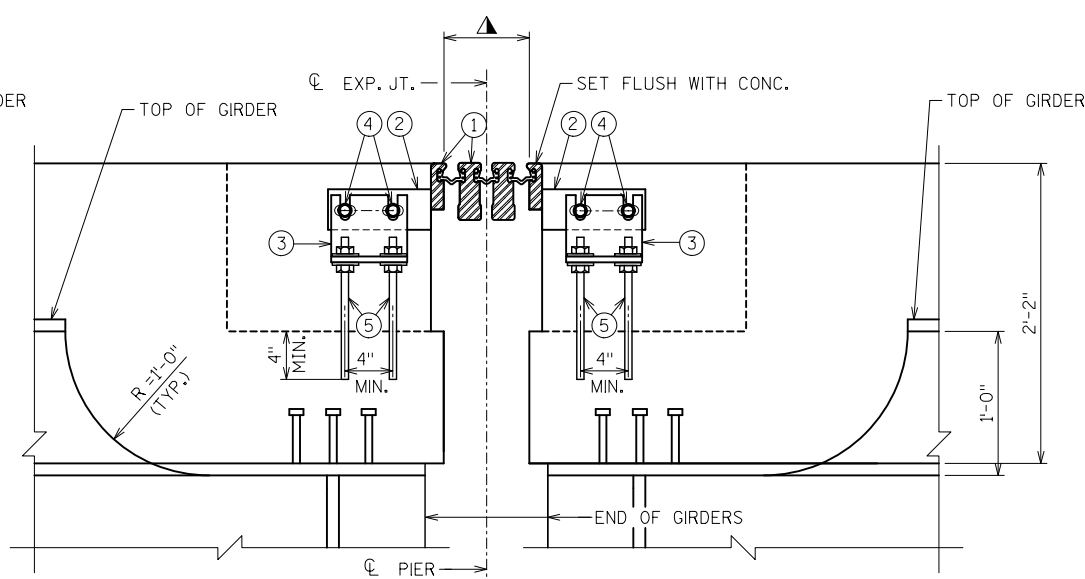
SECTION THRU JOINT @ ABUTMENT
NORMAL TO ϕ SUBSTRUCTURE



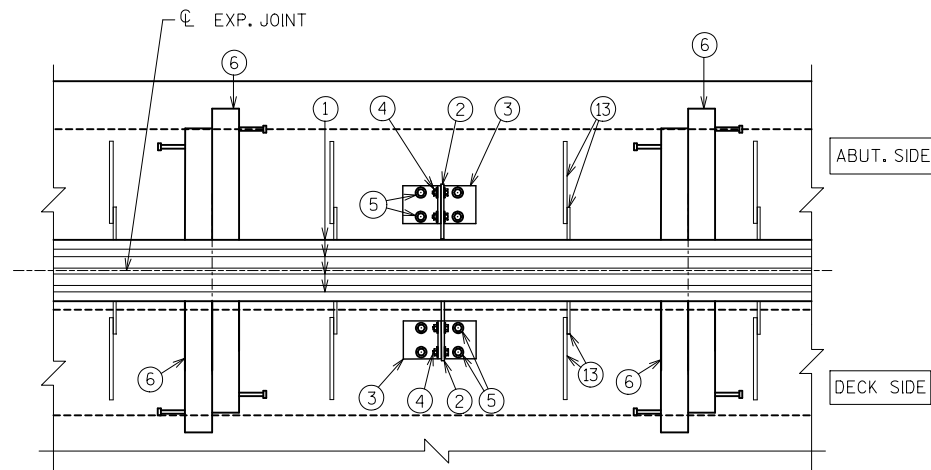
MODULAR EXPANSION JOINT CONNECTION
DETAIL AND WELD SPECIFICATION



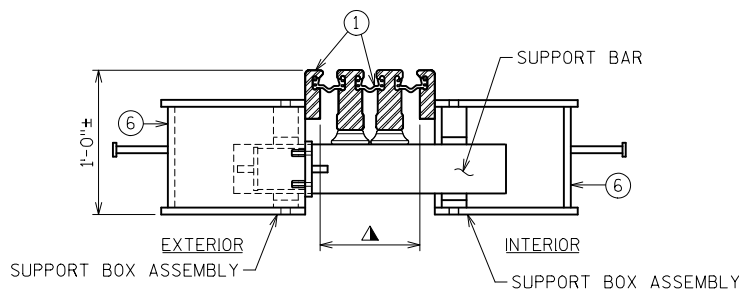
SECTION B-B



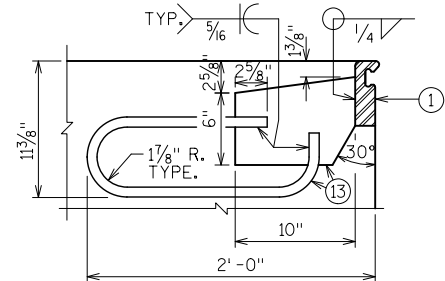
SECTION THRU JOINT @ PIER
NORMAL TO ϕ SUBSTRUCTURE



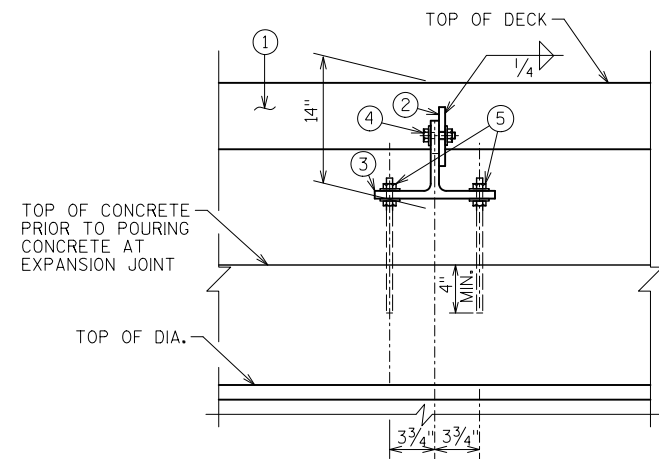
PART PLAN



JOINT DETAIL
AT SUPPORT BAR & SUPPORT BOX ASSEMBLY



ANCHORAGE DETAIL
PLACE ADJACENT TO SUPPORT BOXES IN
PAVING BLOCK @ ABUT. & IN DECK @ CONC. DIAPH.



SECTION A-A

LEGEND

- ① MODULAR EXPANSION JOINT DEVICES, CELLS.
 - ② 1/2" PLATE, ONE PER WT NO. 3 MIN. PROVIDE 2 - 1" X 2" MIN. SLOTTED HOLES PLACED HORIZONTALLY FOR BOLTS NO. 4.
 - ③ WT 6 X 29 (OR EQUIVALENT BUILT UP T-SECTION SPA. PER MANUFACTURER) PROVIDE 2 - 1" X 3" MIN. SLOTTED HOLES PLACED VERTICALLY IN WEB OF WT FOR BOLTS NO. 4.
 - ④ 3/4" DIA. HIGH STRENGTH BOLTS WITH NUTS & WASHERS. (A325 GALV.)
 - ⑤ 3/4" DIA. THREADED ROD WITH 2 NUTS & WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES. (GALV.)
 - ⑥ SUPPORT BOX ASSEMBLY FOR SUPPORT BAR (SPA. PER MANUFACTURER). FABRICATE BOX FROM 1/2" PLATES.
 - ⑬ 1/2" PLATE WITH 5/8" DIA. LOOP ANCHOR FABRICATED AS SHOWN. SPACED AT MANUFACTURER'S SPEC.
- * POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH.
- ▲ MANUFACTURER'S RECOMMENDED JOINT OPENING BASED ON THE TEMPERATURE ON THE DAY OF PLACEMENT PER TEMPERATURE TABLE. THE MODULAR EXPANSION DEVICE SHALL HAVE THE NUMBER OF CELLS AS INDICATED IN 1.

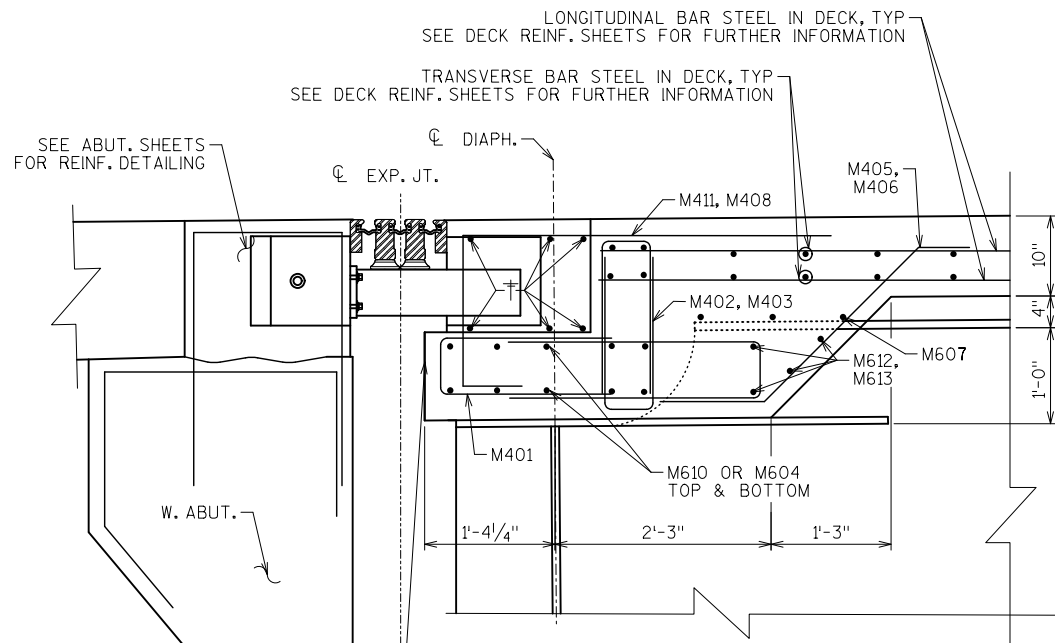
GENERAL NOTES

FOR NOTES SEE SHEET "MODULAR EXPANSION JOINT WEST ABUTMENT"

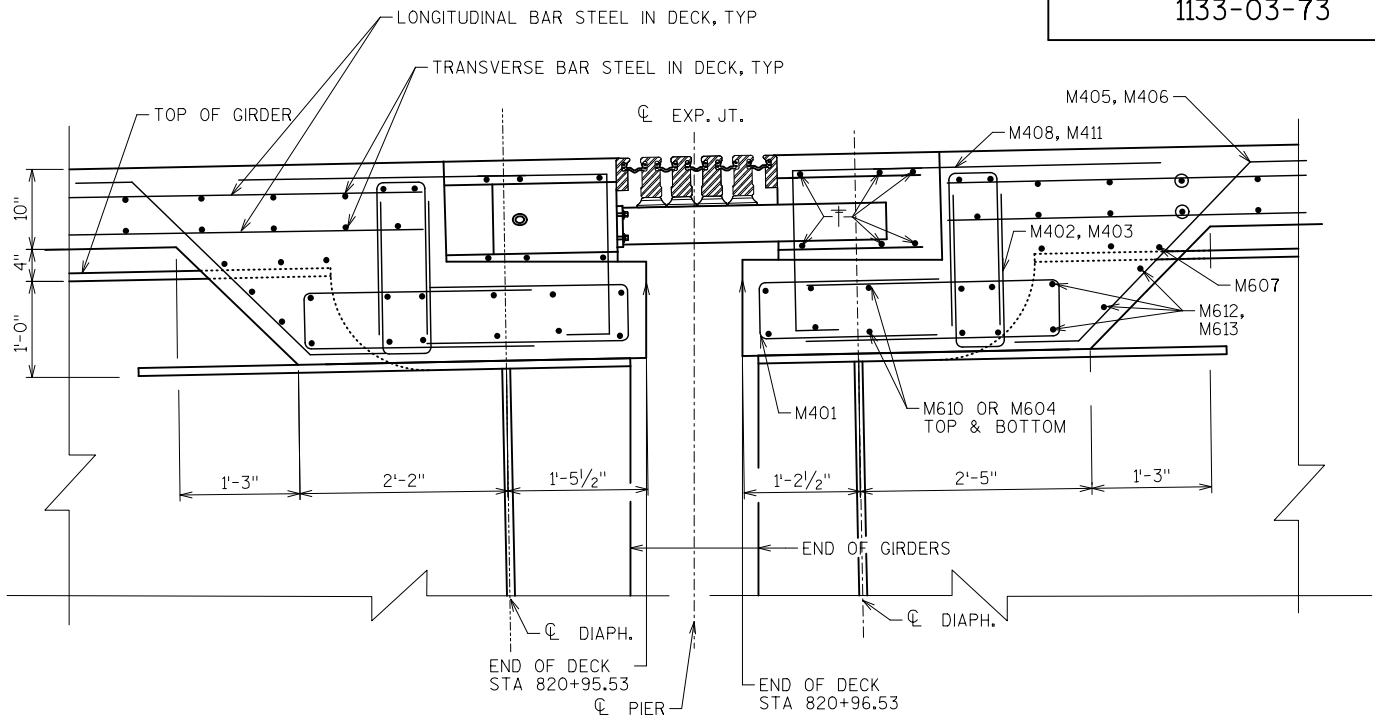
MODULAR EXPANSION DEVICE DESIGN AND DETAILS ARE SPECIFIC TO THE MANUFACTURER SELECTED FROM THOSE LISTED IN THE SPECIAL PROVISIONS. FABRICATION DRAWING IS SUBJECT TO THE APPROVAL OF THE BUREAU OF STRUCTURES.

SUPPORT BOXES ARE SHOWN FOR GENERAL INFORMATION AND LOCATION MAY VARY ACCORDING TO FABRICATOR DESIGN. SPACE SUPPORT BOXES TO MISS GIRDER TOP FLANGES WHEN POSSIBLE, BUT NOT TO EXCEED MAXIMUM SPACING PER SPECIAL PROVISIONS.

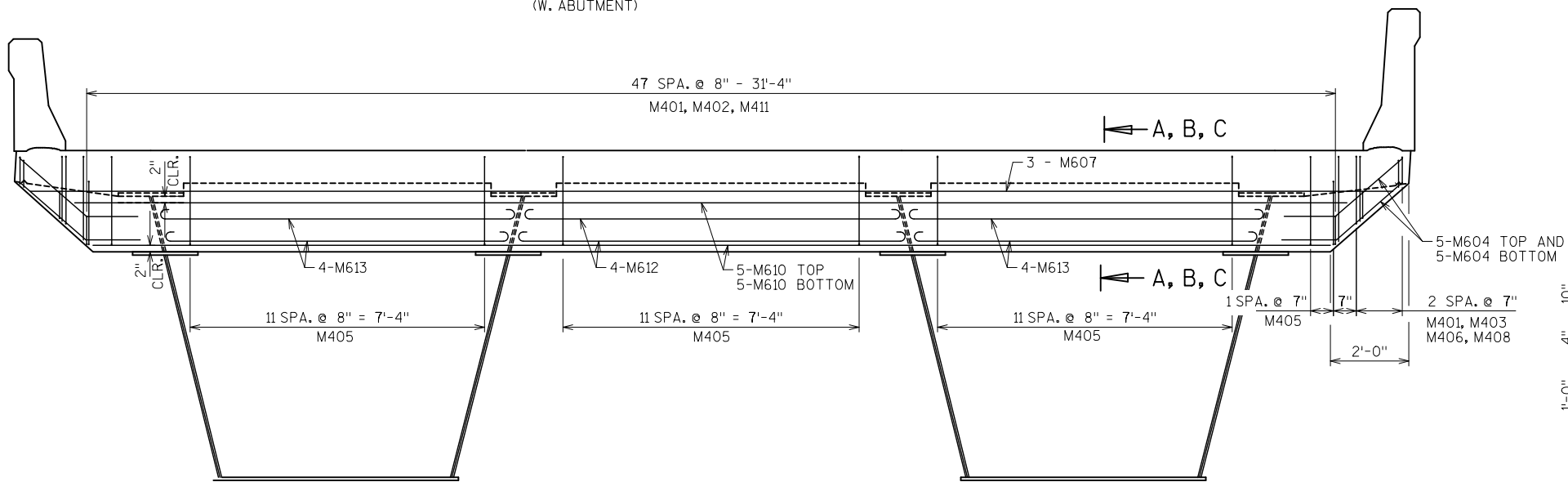
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D.	
MODULAR EXPANSION JOINT DETAILS			SHEET 53 OF 82



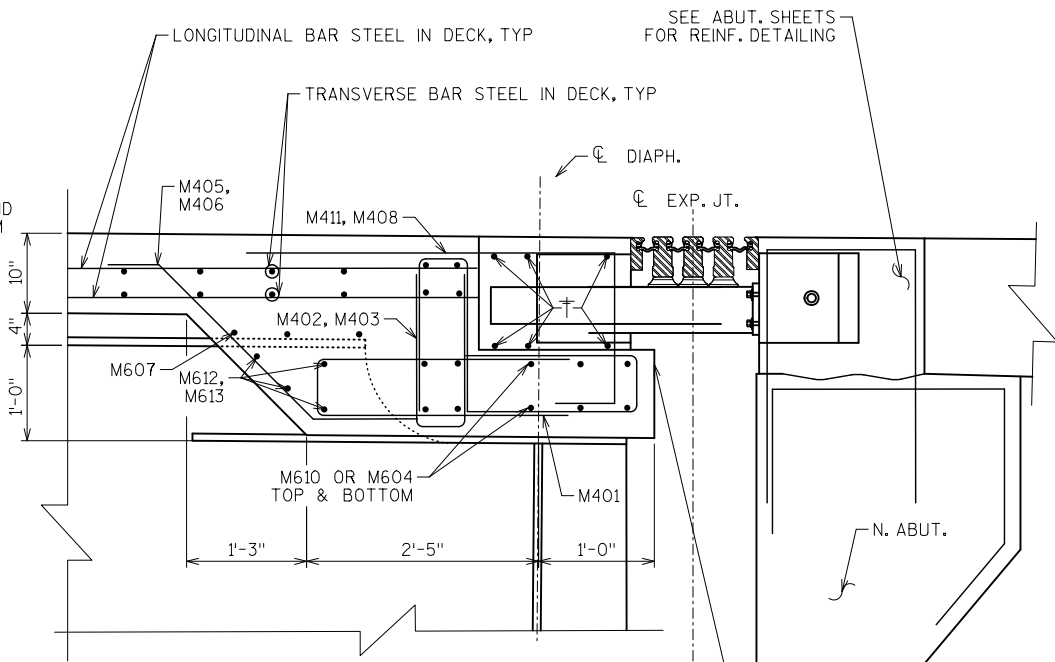
SECTION A-A
(W. ABUTMENT)



SECTION B-B
(PIER 4)



SECTION THRU DECK AT END DIAPHRAGMS
(DECK REINFORCEMENT NOT SHOWN FOR CLARITY)
LOOKING UPSTATION



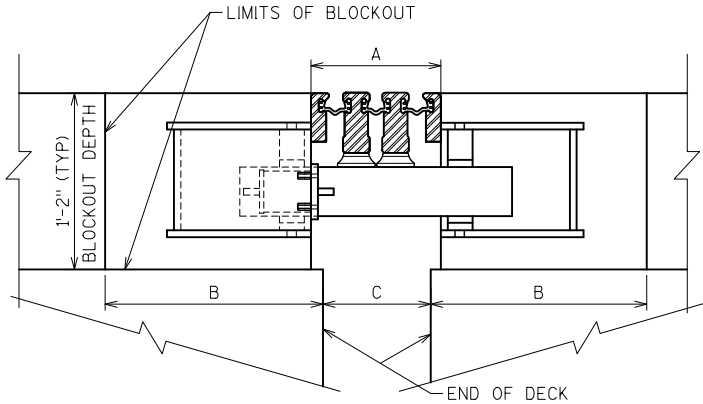
SECTION C-C
(N. ABUTMENT)

LEGEND

† 72- M509 BARS, 8'-0" LONG WITH 1'-0" MIN. LAP. CUT IN FIELD TO CLEAR JOINT SUPPORT AS REQ'D.

NOTES:

- SEE STEEL FABRICATION PLANS FOR END DIAPHRAGM DETAILS.
- SEE SHEETS TITLED "MODULAR EXPANSION JOINT" FOR PLAN LAYOUT OF EXPANSION DEVICE.
- ALL SIZE, SPACING AND DETAIL INFORMATION SHALL BE TAKEN ONLY FROM THE APPROVED EXPANSION JOINT SHOP DRAWINGS.
- SPACE REINFORCEMENT TO MISS LOOP ANCHORS AND SUPPORT BOX ASSEMBLIES.
- SEE DECK REINFORCEMENT SHEETS FOR SECTION A-A, B-B & C-C LOCATIONS.
- SEE SHEET TITLED "SUPERSTRUCTURE BILL OF BARS" FOR REINFORCEMENT DETAILS.

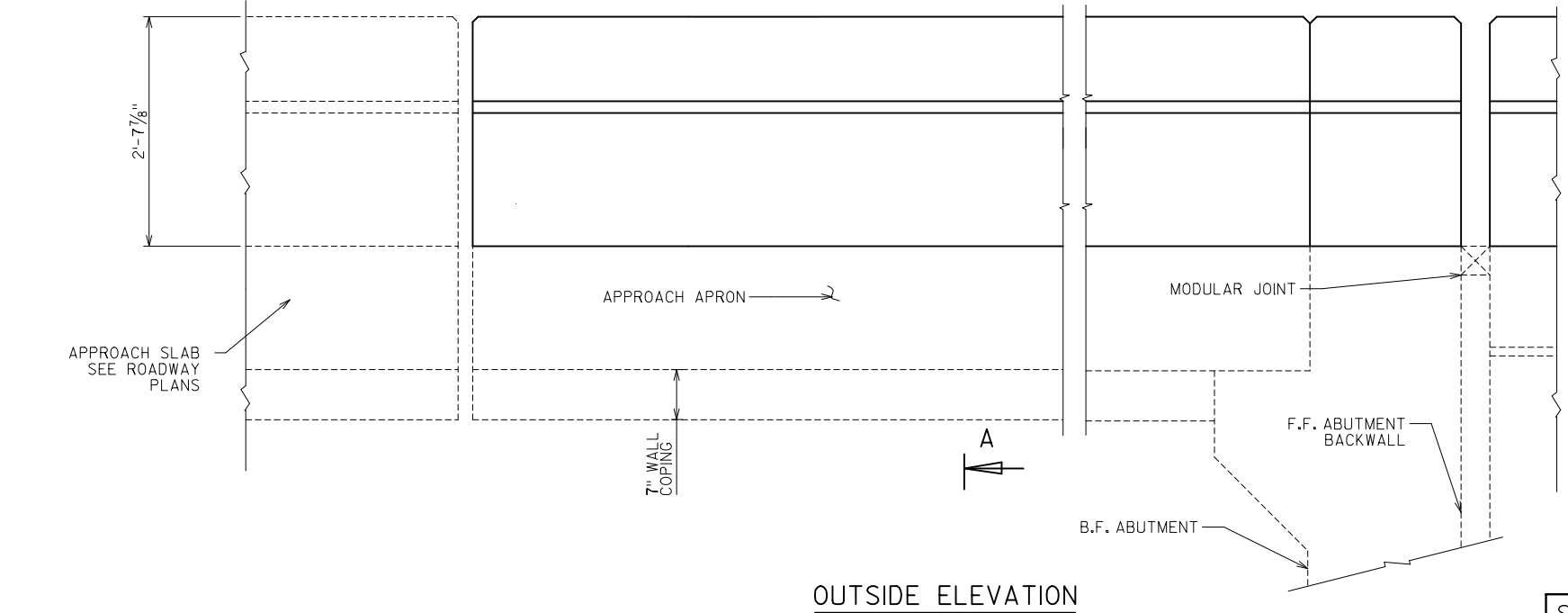
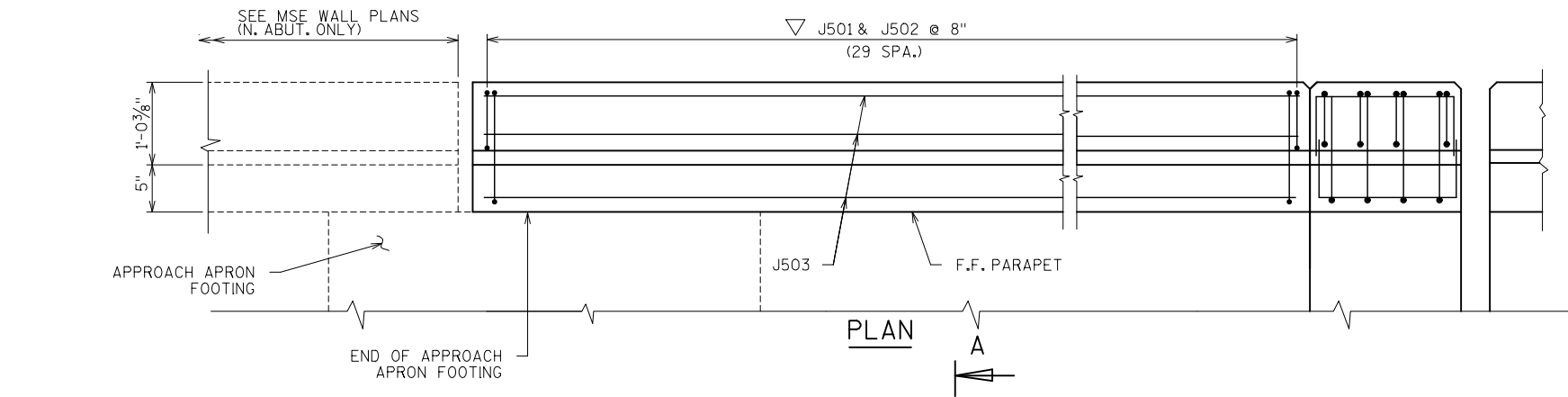
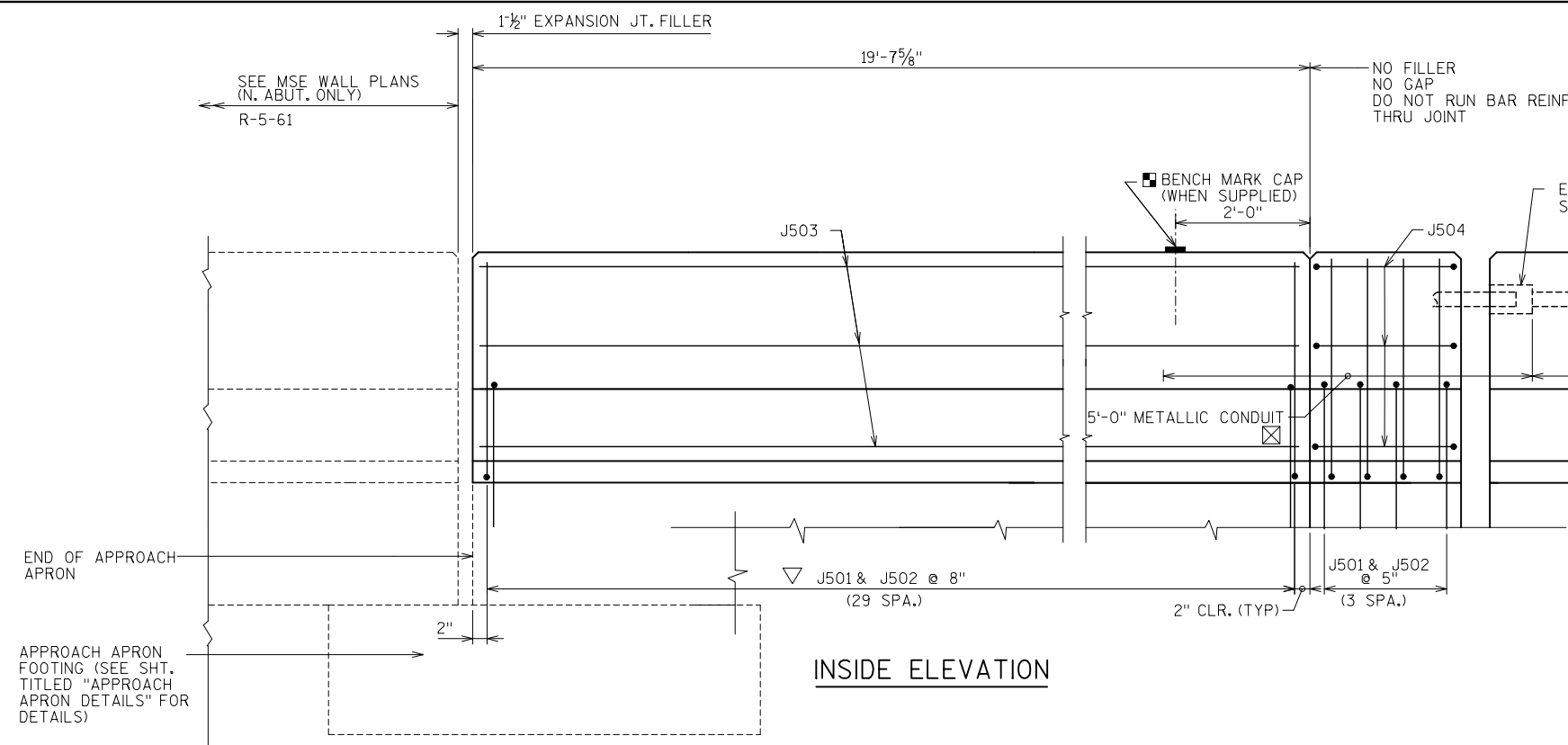


TYPICAL SECTION THRU SUPPORT BOX

	W. ABUT.	PIER 4	N. ABUT.
A	1'-0 1/8"	1'-8 3/8"	1'-4"
B	1'-6"	2'-1"	1'-10"
C MIN	5"	8"	6 1/2"
C MAX	9 5/8"	1'-5 7/8"	1'-1 3/4"

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JLM		PLANS CK'D. MDR	
REINFORCING AT EXPANSION JOINT			SHEET 54 OF 82

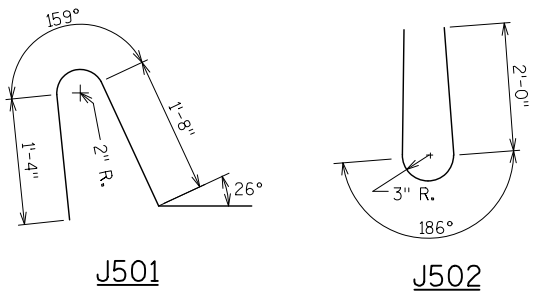
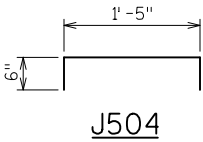


STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

STATE PROJECT NUMBER
1133-03-73

BILL OF BARS

FOR "LF" PARAPET AT APPROACH APRON					
BAR MARK	NO. REQUIRED	LENGTH	WEIGHT (LB)	BENT	LOCATION
	N. APRON		N. APRON		
J501	34	4'-2"	148	X	VERT.
J502	34	4'-10"	171	X	VERT.
J503	5	19'-3"	100		HORIZ.
J504	6	2'-10"	18	X	HORIZ.
TOTAL		437	ALL BARS ARE EPOXY COATED.		



OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINFORCEMENT THRU THE JOINT. LAP LONGITUDINAL BARS A MINIMUM OF 1'-9". USE A MINIMUM JOINT SPACING OF 80'-0". DEFINE CONSTRUCTION JOINT WITH A 3/4" 'V' GROOVE.

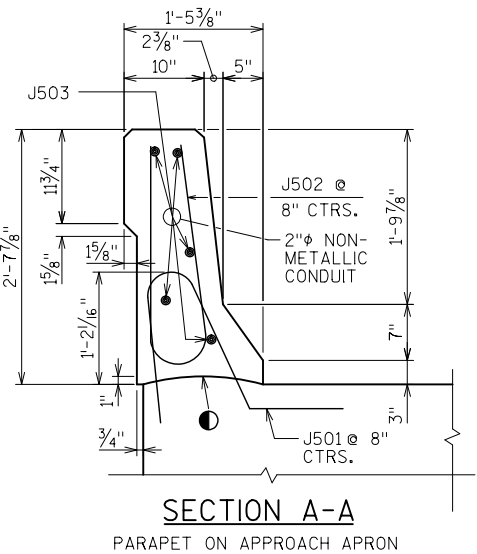
LEGEND

- CONST. JOINT - STRIKE OFF AS SHOWN.
- ▽ J501 BARS TO BE TIED TO APPROACH APRON STEEL BEFORE APPROACH APRON IS POURED.
- POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.
- ⊠ USE 2" DIA. RIGID NON-METALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 5'-0" INTO WALL SEGMENT OR PARAPET. FOR SHORT DISTANCES BETWEEN EXPANSION FITTINGS <20' USE METALLIC CONDUIT BETWEEN EXPANSION FITTINGS. PROVIDE #10 AWG BONDING JUMPER BETWEEN METALLIC CONDUIT AND JUNCTION BOX. BONDING JUMPERS SHALL EITHER ENTER THE JUNCTION BOX AND BE TERMINATED TO THE GROUNDING LUG USING TERMINAL BLOCKS; OR CAN BE EXOTHERMICALLY WELDED TO A FIELD INSTALLED GROUNDING LUG ON THE BACK SIDE OF THE JUNCTION BOX. BONDING JUMPERS WILL BE PAID FOR UNDER BID ITEM 652.0125 "CONDUIT RIGID METALLIC 2-INCH"
- AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

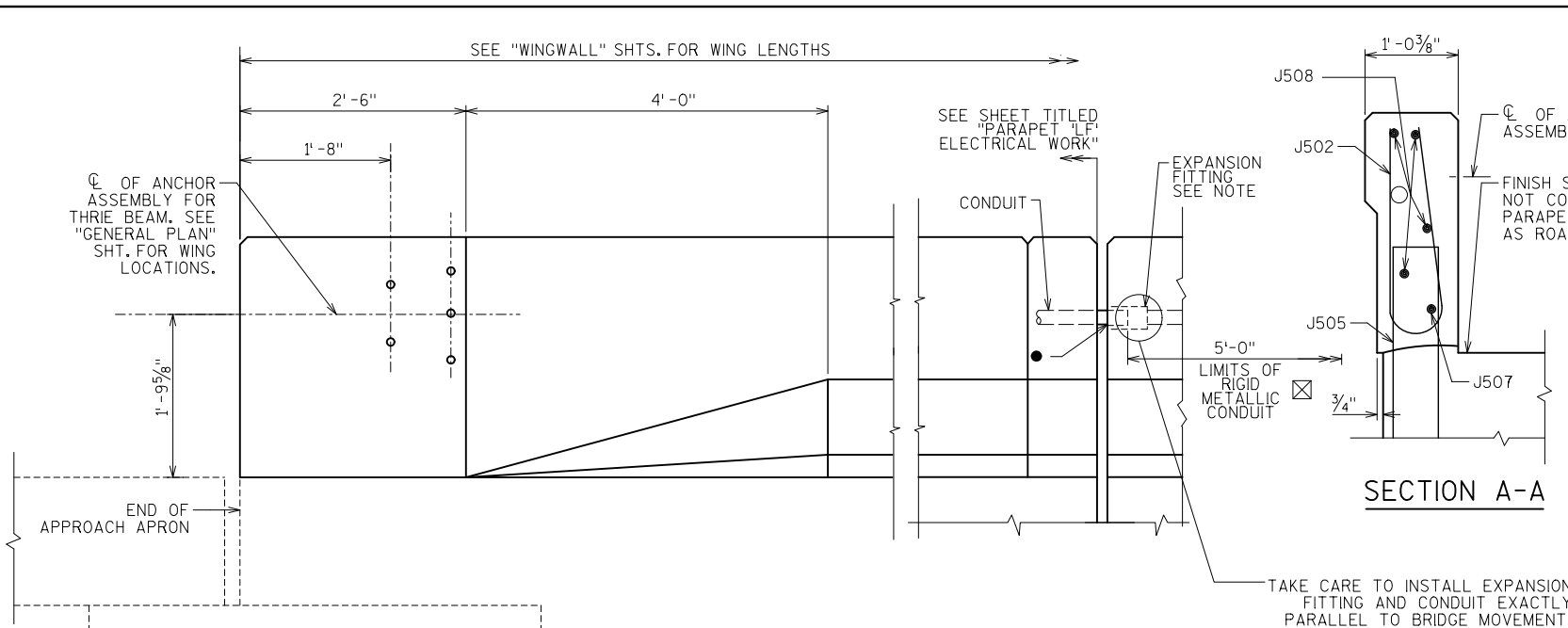
NOTES

THE PARAPET TRANSITION FROM SLOPED FACE TO VERTICAL FOR CONNECTION OF THE STEEL PLATE BEAM GUARD TAKES PLACE AT THE END OF THE MSE WALLS. SEE MSE WALL PLANS R-05-61 FOR DETAILS.

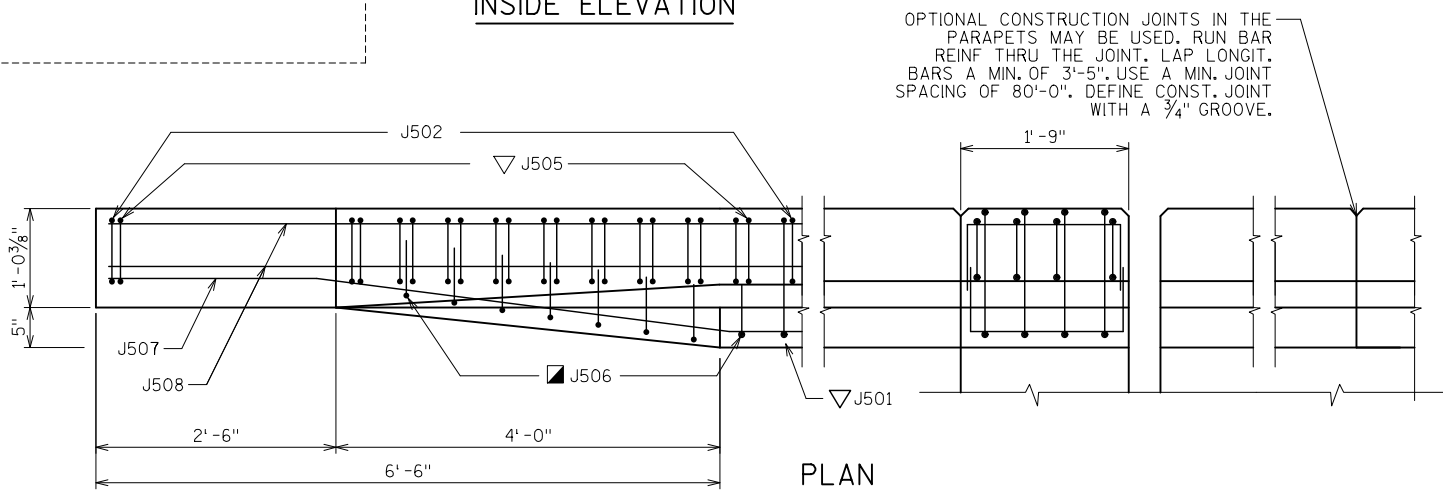
APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING: (HORIZ. AND VERT. MOVEMENT): O-Z/GEDNEY TYPE AX8DX-200 AND BONDING JUMPER (8" TOTAL CONDUIT MOVEMENT) AT PIER 4 EXPANSION JOINT AND NORTH ABUTMENT AND O-Z/GEDNEY TYPE AXDX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT) AT WEST ABUTMENT.



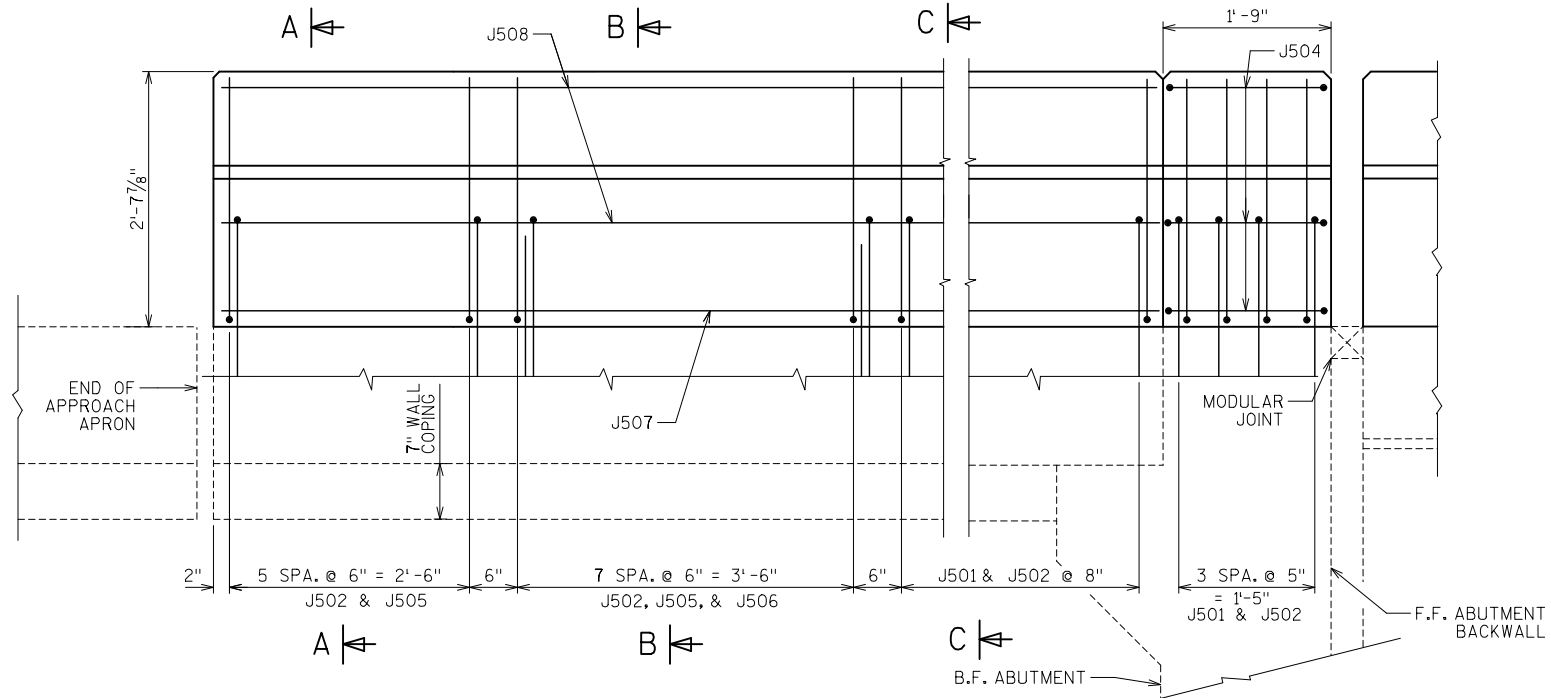
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
SLOPED FACE PARAPET "LF"		SHEET 55 OF 82	



INSIDE ELEVATION



PLAN



OUTSIDE ELEVATION

SECTION A-A

SECTION B-B

SECTION C-C

STATE PROJECT NUMBER

1133-03-73

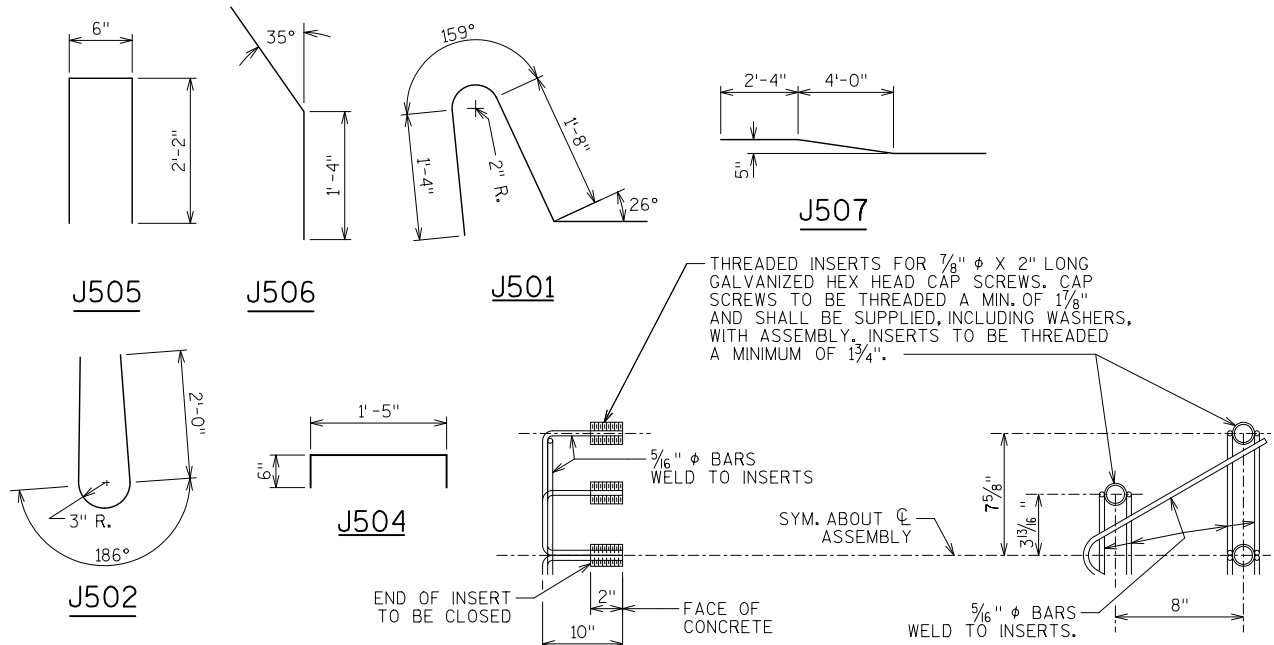
BILL OF BARS

FOR 'LF' PARAPET AT WEST APPROACH APRON

BAR MARK	NO. REQUIRED	LENGTH	WEIGHT (LB)	BENT	LOCATION
	W. APRON		W. APRON		
J501	25	4'-2"	109	X	VERT.
J502	39	4'-10"	197	X	VERT.
J504	6	2'-2"	14	X	HORIZ.
J505	14	4'-7"	67	X	VERT.
J506	8	2'-4"	19	X	VERT.
J507	1	19'-4"	20	X	HORIZ.
J508	4	19'-3"	80		HORIZ.

TOTAL 386

ALL BARS ARE EPOXY COATED



NOTES:

- CONST. JOINT - STRIKE OFF AS SHOWN
- J502 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE J502 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- ▽ J501 AND J505 BARS TO BE TIED TO APRON STEEL BEFORE APRON IS POURED
- ⊠ USE 2" DIA. RIGID NON-METALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 5'-0" INTO WALL SEGMENT OR PARAPET. FOR SHORT DISTANCES BETWEEN EXPANSION FITTINGS <20' USE METALLIC CONDUIT BETWEEN EXPANSION FITTINGS. PROVIDE #10 AWG BONDING JUMPER BETWEEN METALLIC CONDUIT AND JUNCTION BOX. BONDING JUMPERS SHALL EITHER ENTER THE JUNCTION BOX AND BE TERMINATED TO THE GROUNDING LUG USING TERMINAL BLOCKS; OR CAN BE EXOTHERMICALLY WELDED TO A FIELD INSTALLED GROUNDING LUG ON THE BACK SIDE OF THE JUNCTION BOX. BONDING JUMPERS WILL BE PAID FOR UNDER BID ITEM 652.0125 "CONDUIT RIGID METALLIC 2-INCH"
- POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

DETAIL OF ANCHOR ASSEMBLY

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

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

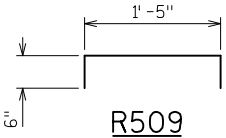
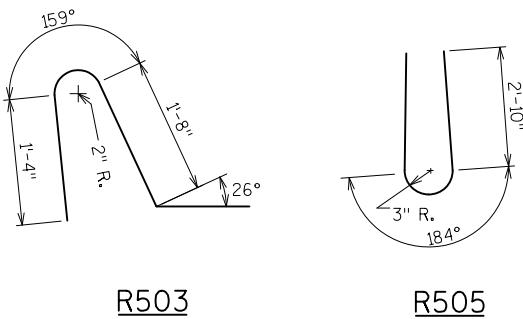
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
SLOPED FACE PARAPET "LF" - 2			SHEET 56 OF 82

BILL OF BARS

FOR "HF" PARAPET AT NORTH APPROACH APRON

BAR MARK	NO. REQUIRED	LENGTH	WEIGHT (LB)	BENT	LOCATION
R503	35	4'-2"	152	X	VERT.
R505	35	6'-5"	234	X	VERT.
R509	8	2'-2"	18	X	HORIZ.
R810	8	19'-9"	422		HORIZ.
TOTAL		826			

ALL BARS ARE EPOXY COATED.



OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 3'-5" MIN. JOINT SPACING OF 80'-0" DEFINE CONST. JOINT WITH A 3/4" "V" GROOVE.

LEGEND

- CONST. JOINT - STRIKE OFF AS SHOWN.
- ▽ R503 BARS TO BE TIED TO APPROACH APRON STEEL BEFORE APPROACH APRON IS POURED.
- POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.
- ☒ USE 2" DIA. RIGID NON-METALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 5'-0" INTO WALL SEGMENT OR PARAPET. FOR SHORT DISTANCES BETWEEN EXPANSION FITTINGS <20' USE METALLIC CONDUIT BETWEEN EXPANSION FITTINGS. PROVIDE #10 AWG BONDING JUMPER BETWEEN METALLIC CONDUIT AND JUNCTION BOX. BONDING JUMPERS SHALL EITHER ENTER THE JUNCTION BOX AND BE TERMINATED TO THE GROUNDING LUG USING TERMINAL BLOCKS; OR CAN BE EXOTHERMICALLY WELDED TO A FIELD INSTALLED GROUNDING LUG ON THE BACK SIDE OF THE JUNCTION BOX. BONDING JUMPERS WILL BE PAID FOR UNDER BID ITEM 652.0125 "CONDUIT RIGID METALLIC 2-INCH"

NOTE

THE PARAPET TRANSITION FROM SLOPED FACE TO VERTICAL FOR CONNECTION OF THE STEEL PLATE BEAM GUARD TAKES PLACE AT THE END OF THE MSE WALL. SEE MSE WALL PLANS R-05-60 FOR DETAILS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
SLOPED FACE PARAPET "HF"			SHEET 57 OF 82

INSIDE ELEVATION

PLAN

OUTSIDE ELEVATION

END OF APPROACH APRON

APPROACH APRON FOOTING. SEE SHT. TITLED "APPROACH APRON DETAILS" FOR DETAILS

APPROACH APRON FOOTING

END OF APPROACH APRON FOOTING

MODULAR JOINT

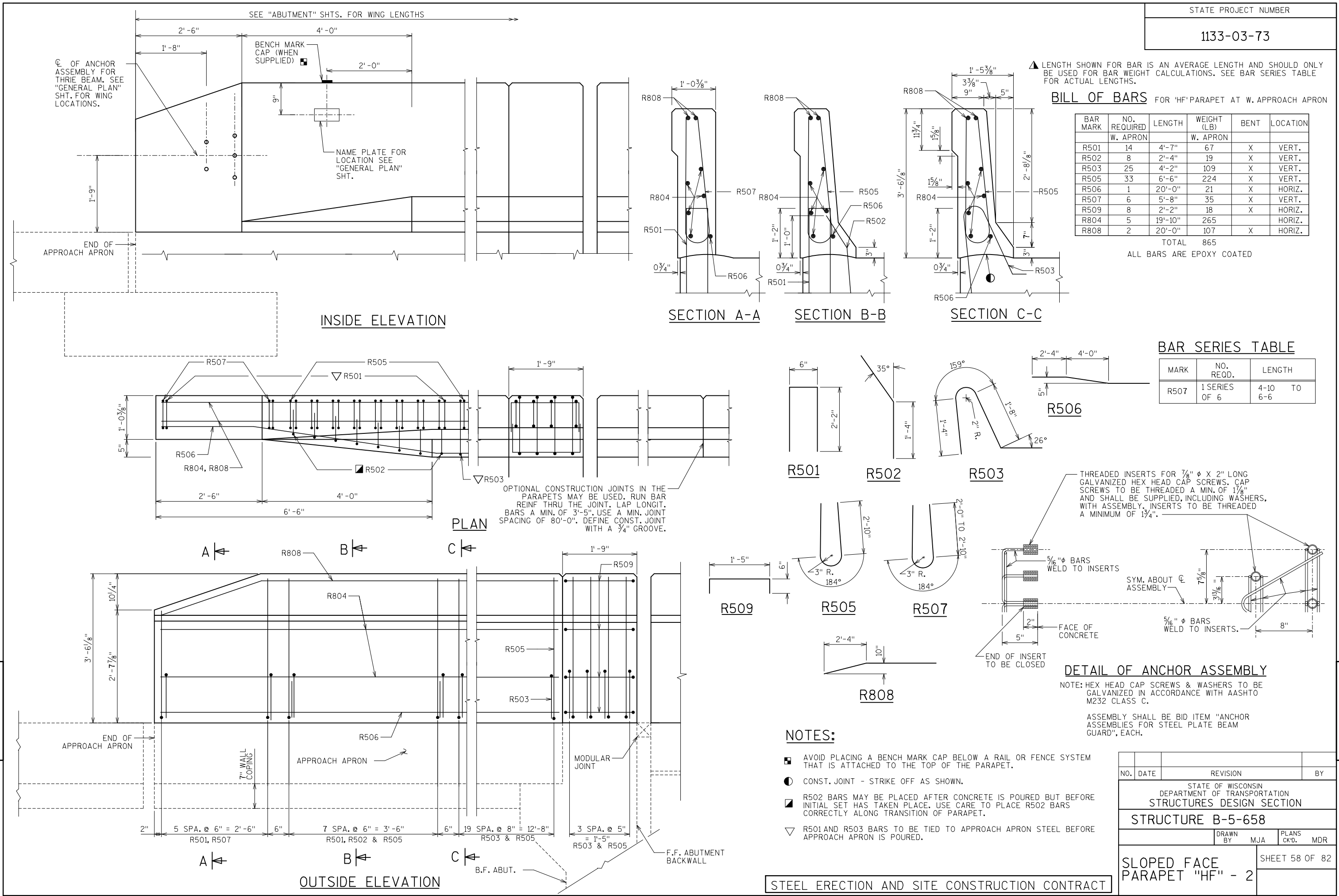
F.F. ABUTMENT BACKWALL

B.F. ABUT.

APPROACH APRON

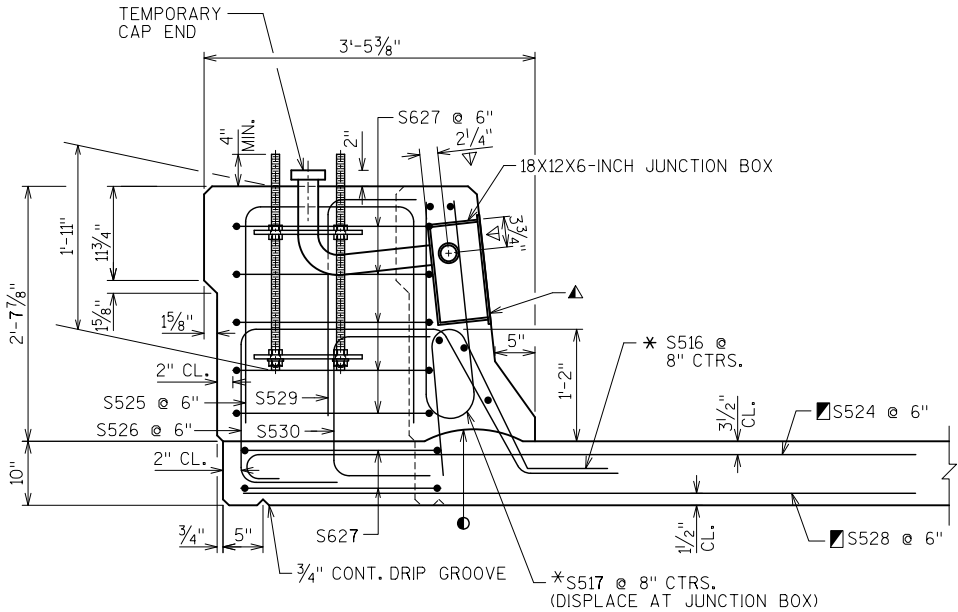
7" WALL COPING

APPROACH SLAB (SEE ROADWAY PLANS)



BILL OF BARS

BAR MARK	NO. REQ'D	LENGTH	WEIGHT (LB)	BENT	LOCATION
S524	140	8'-11"	1,302	X	DECK TRANSVERSE AT LIGHT STD.
S525	56	6'-0"	350	X	PARAPET VERT. AT LIGHT STD.
S526	56	7'-0"	409	X	PARAPET VERT. AT LIGHT STD.
S627	98	10'-0"	1,473	X	PARAPET HORZ. AT LIGHT STD.
S528	140	8'-4"	1,216		DECK TRANSVERSE AT LIGHT STD.
S529	28	3'-2"	92	X	PARAPET VERT. AT LIGHT STD.
S530	28	3'-5"	100	X	PARAPET VERT. AT LIGHT STD.
TOTAL			4,944		ALL BARS ARE EPOXY COATED.



SECTION A-A

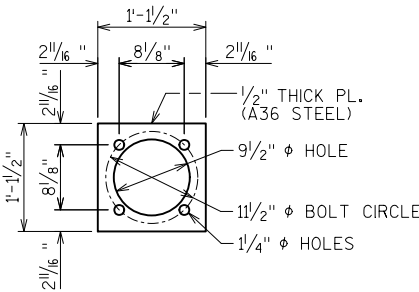


PLATE DETAIL

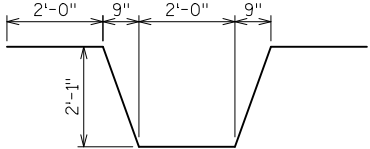
(28 REQ'D. FOR 14 LIGHT STANDARDS)

STD. 180°
HOOK

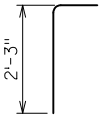
S524

S525

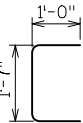
S526



S627



S529



S530

LEGEND

- CONSTR. JT. STRIKE OFF AS SHOWN
- CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.
- LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.
- THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN DECK.
- 1"φ THREADED ANCHOR BOLTS
ASTM A449 OR AASHTO M 314-90 GR 55. HOT DIP ASTM A153, CLASS C, ENTIRE ANCHORAGE. PROVIDE ENLARGED THREAD ON NUTS FOR PROPER FIT AFTER GALVANIZING. PROVIDE DOUBLE FLAT WASHERS & NUTS.
- SEE SHT. TITLED "DECK REINFORCEMENT" & "TYPICAL DECK SECTION" FOR ADDITIONAL BAR STEEL DETAILS.

NOTES

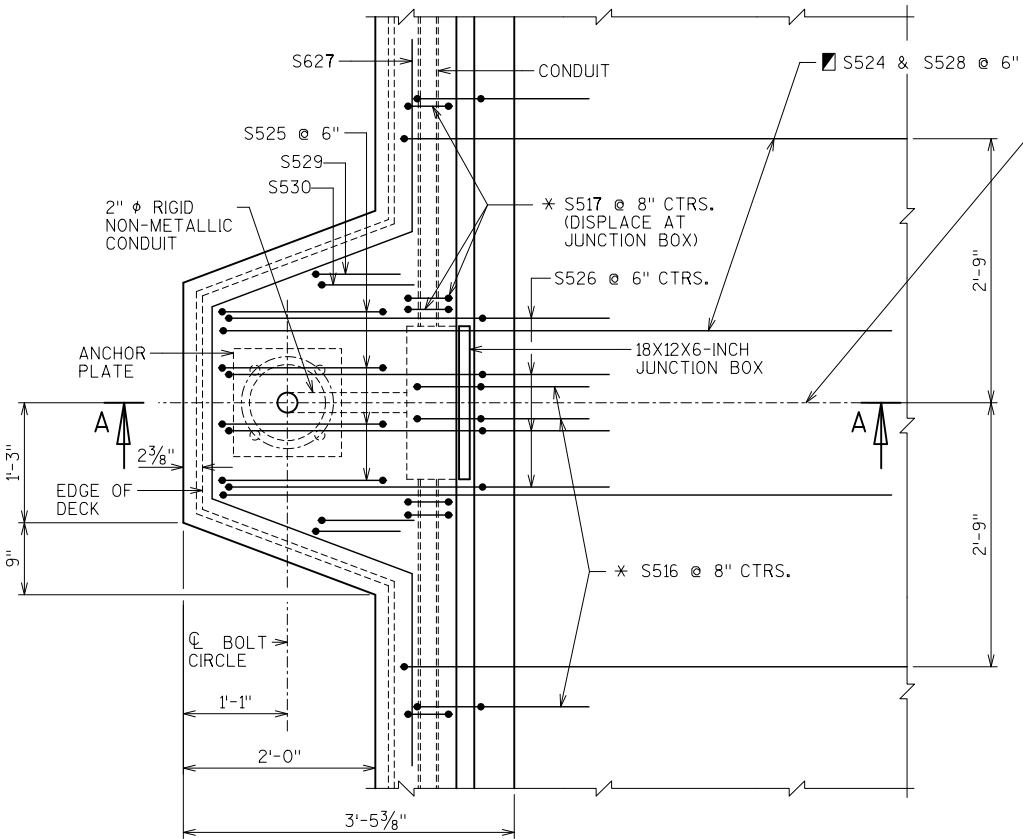
BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"
"CONDUIT RIGID METALLIC 2-INCH"

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
O-Z/GEDNEY TYPE AX8DX-200/AXDX-200 AND BONDING JUMPER COMBINATION EXPANSION AND DEFLECTION FITTING (8" & 4" TOTAL VERT. & HORIZ. CONDUIT MOVEMENT). SEE SHT. TITLED "SLOPED FACE PARAPET 'LF'" FOR LOCATION OF EXPANSION FITTING.

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".
WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. LISTED FOR ELECTRICAL USE SHALL BE USED.

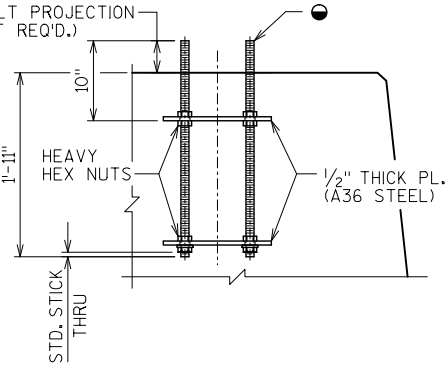
JUNCTION BOX REQUIREMENTS.
PLACE A 18"X12"X6" JUNCTION BOX AT EACH LIGHT STANDARAD (CENTERED ON LIGHT Ⓞ)
USE A JUNCTION BOX TO KEEP A CONTINUOUS RUN OF CONDUIT (PULL LENGTH) TO A MAXIMUM OF 190 FT. CONTACT THE BUREAU OF HIGHWAY OPERATIONS, ELECTRICAL SECTION WHEN PULL LENGTH IS >190' BUT <200'.



PLAN AT LIGHT STANDARD

Ⓞ LIGHT STANDARD
Ⓞ JUNCTION BOX
STA 813+73
STA 815+39
STA 817+25
STA 819+02
STA 820+73
STA 822+45
STA 824+16
STA 825+87
STA 827+58
STA 829+29
STA 831+01
STA 832+72
STA 834+35

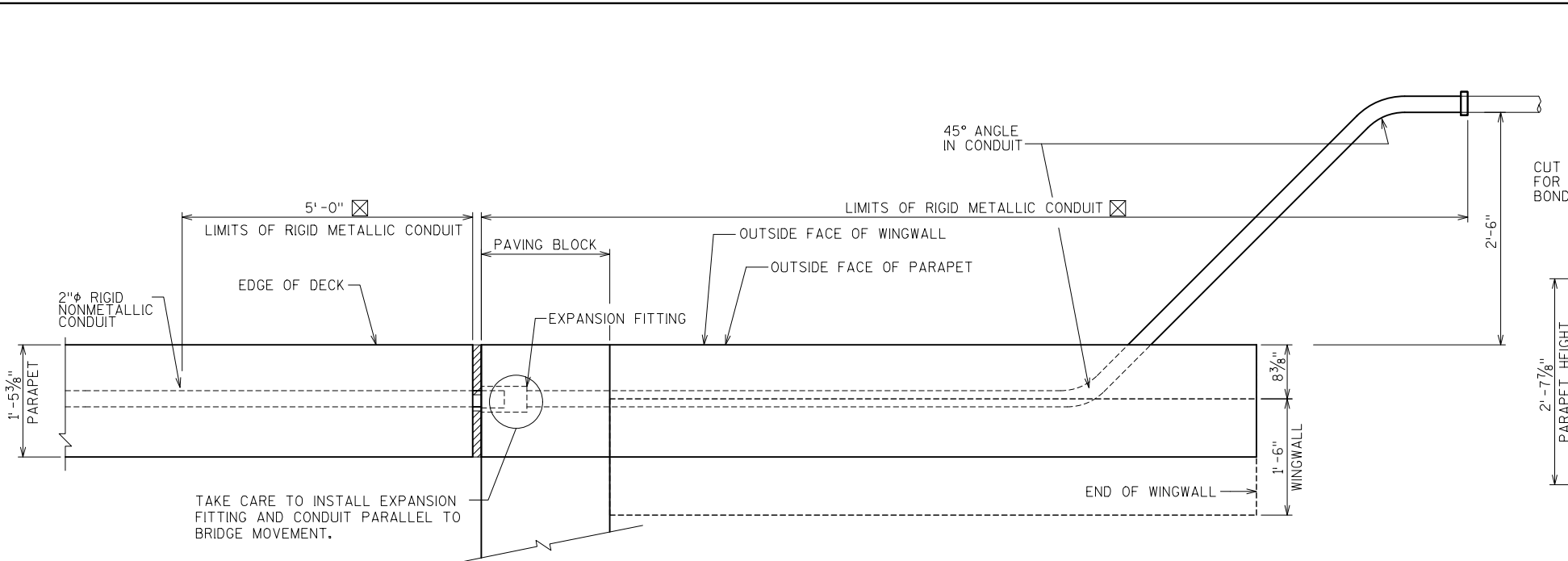
4" MIN. BOLT PROJECTION
(NO GROUT REQ'D.)



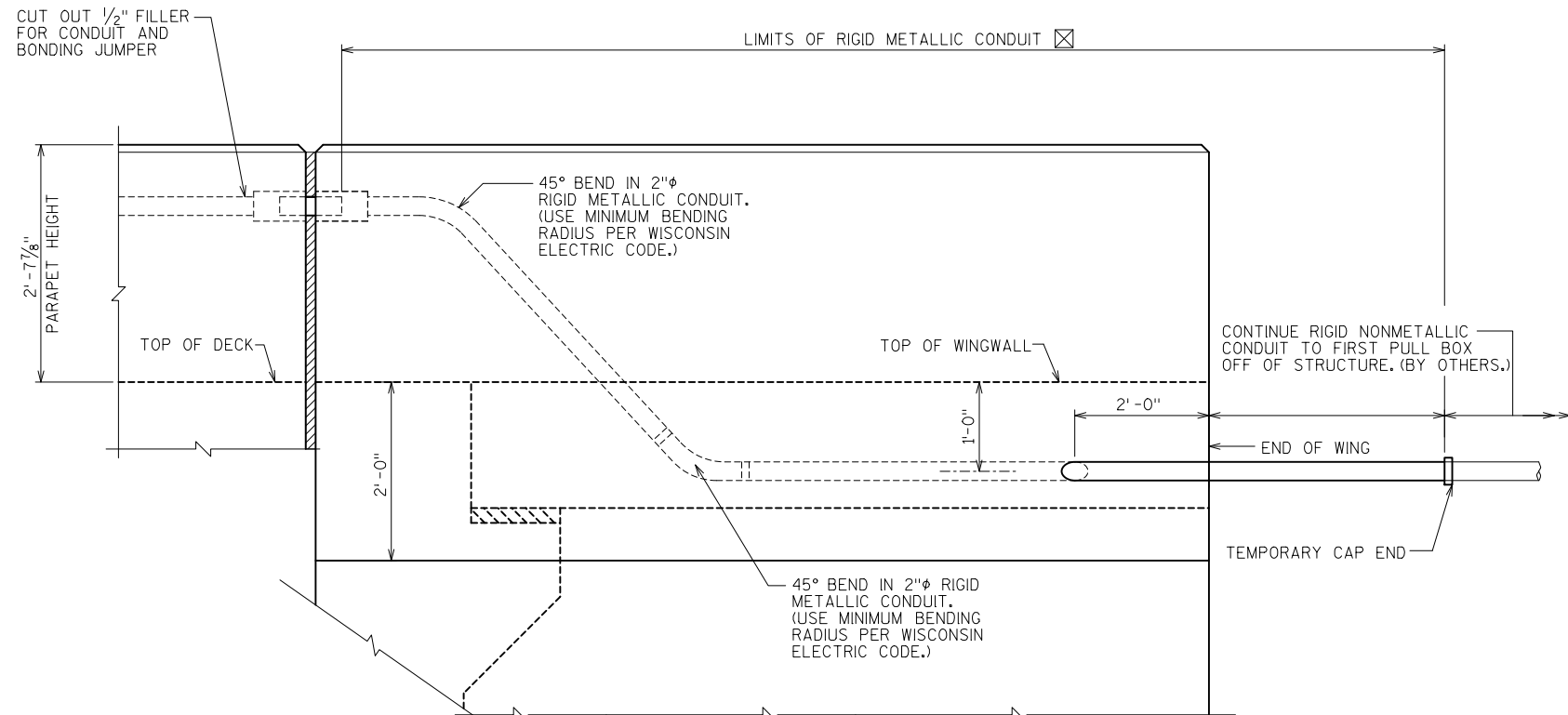
ANCHORAGE DETAIL

(14 REQ'D.)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		PLANS CK'D.	
LIGHT STANDARD		SHEET 59 OF 82	



PLAN OF PARAPET "LF" AT WEST ABUTMENT WING



OUTSIDE ELEVATION OF PARAPET "LF" AT WEST ABUTMENT WING

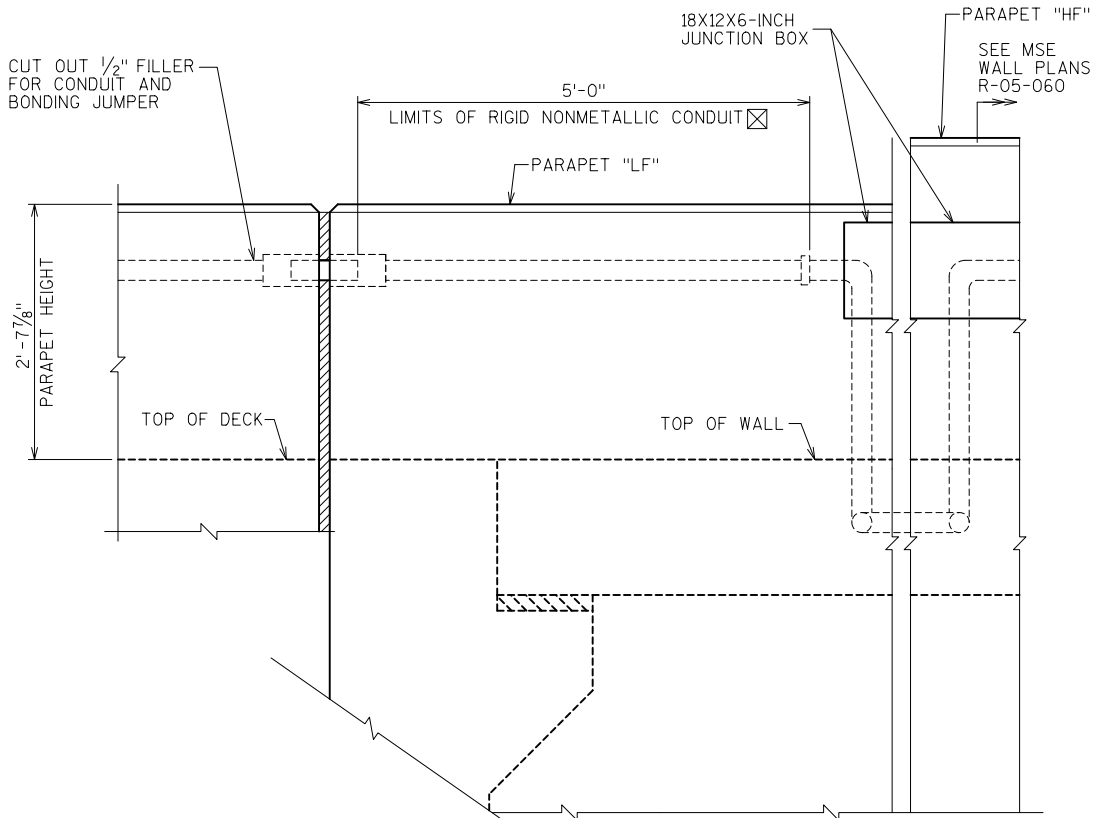
LEGEND

- ☒ USE 2" DIA. RIGID NON-METALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE RIGID METALLIC CONDUIT 5'-0" INTO WALL SEGMENT OR PARAPET. ON THE NORTH WINGWALL OF THE WEST ABUTMENT PROVIDE RIGID METALLIC CONDUIT TO A MINIMUM OF 6" BEYOND END OF WINGWALL (FOR GROUNDING PURPOSES). PROVIDE #10 AWG BONDING JUMPER BETWEEN METALLIC CONDUIT AND JUNCTION BOX. BONDING JUMPERS SHALL EITHER ENTER THE JUNCTION BOX AND BE TERMINATED TO THE GROUNDING LUG USING TERMINAL BLOCKS; OR CAN BE EXOTHERMICALLY WELDED TO A FIELD INSTALLED GROUNDING LUG ON THE BACK SIDE OF THE JUNCTION BOX. BONDING JUMPERS WILL BE PAID FOR UNDER BID ITEM 652.0125 "CONDUIT RIGID METALLIC 2-INCH"

NOTE

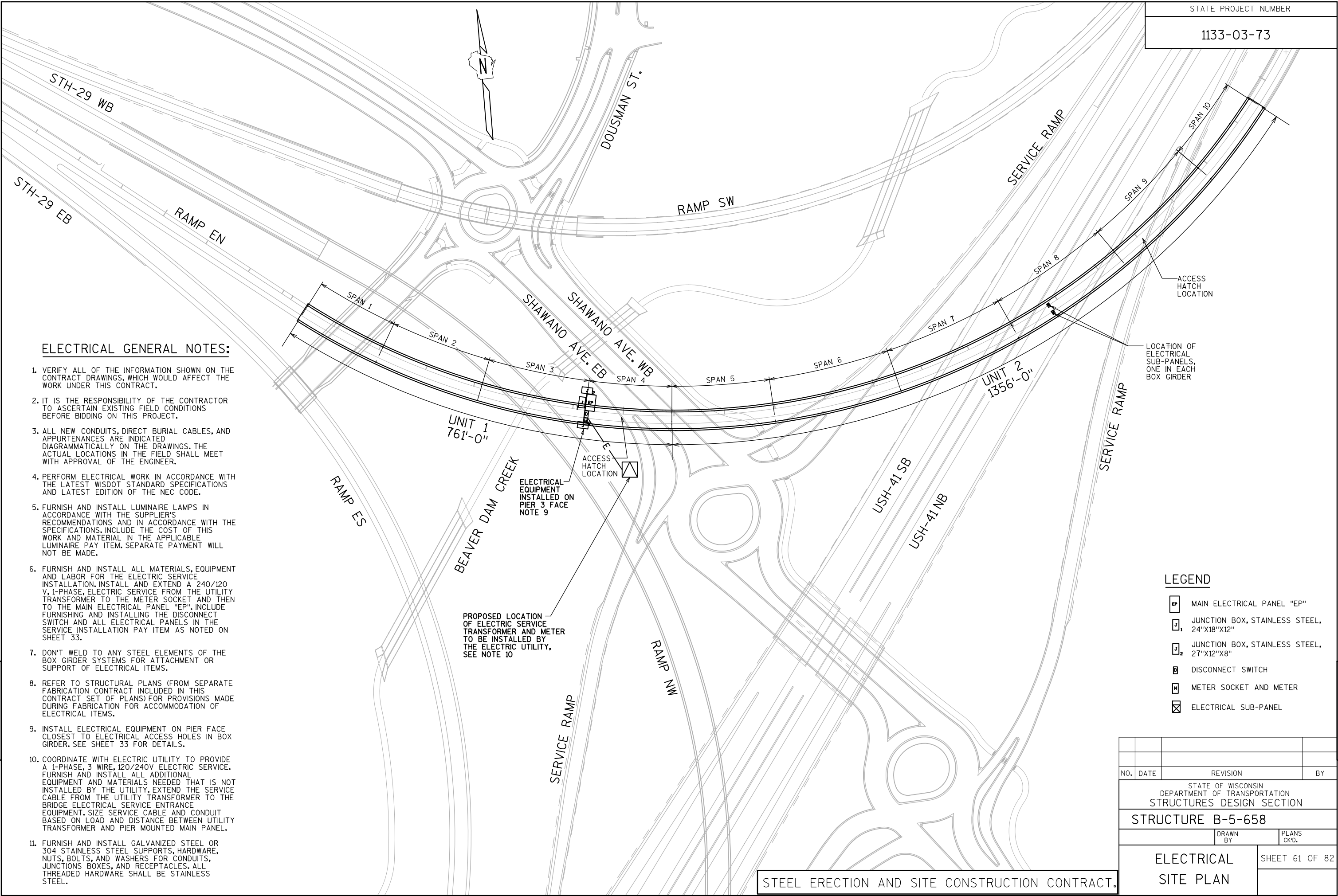
EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS ARE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT



CONDUIT TRANSITION FROM PARAPET "LF" TO PARAPET "HF" AT NORTH ABUTMENT WALL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		SOI	PLANS CK'D.
PARAPET "LF" ELECTRICAL WORK			SHEET 60 OF 82



ELECTRICAL GENERAL NOTES:

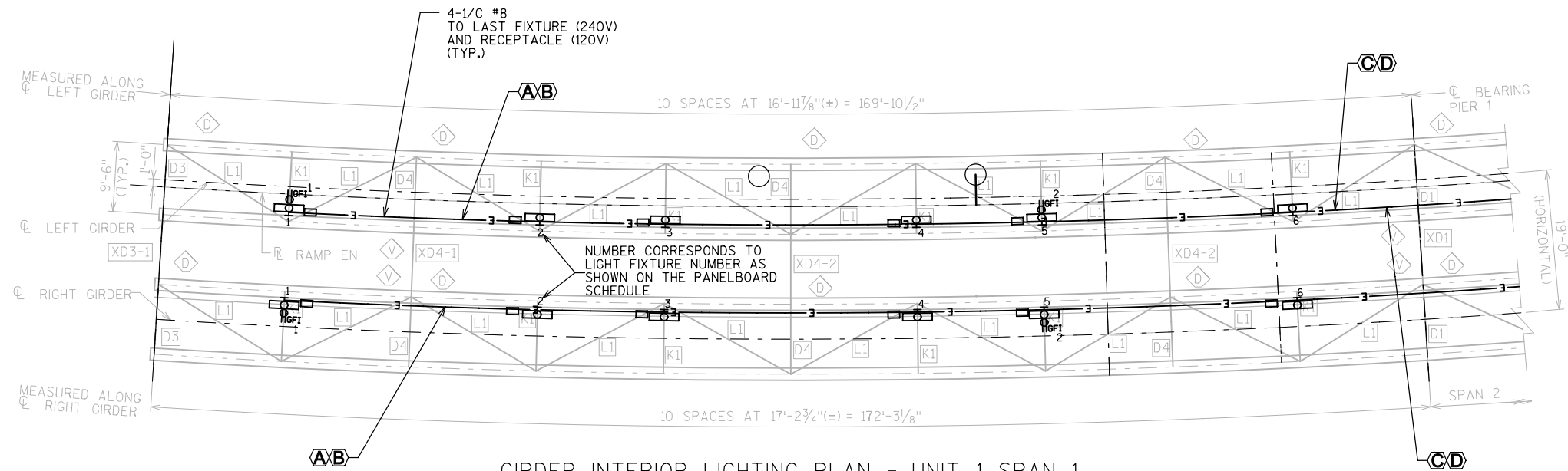
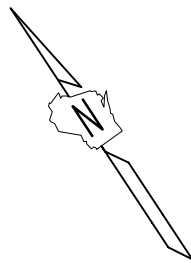
1. VERIFY ALL OF THE INFORMATION SHOWN ON THE CONTRACT DRAWINGS, WHICH WOULD AFFECT THE WORK UNDER THIS CONTRACT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT.
3. ALL NEW CONDUITS, DIRECT BURIAL CABLES, AND APPURTENANCES ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS. THE ACTUAL LOCATIONS IN THE FIELD SHALL MEET WITH APPROVAL OF THE ENGINEER.
4. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH THE LATEST WISDOT STANDARD SPECIFICATIONS AND LATEST EDITION OF THE NEC CODE.
5. FURNISH AND INSTALL LUMINAIRE LAMPS IN ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE SPECIFICATIONS. INCLUDE THE COST OF THIS WORK AND MATERIAL IN THE APPLICABLE LUMINAIRE PAY ITEM. SEPARATE PAYMENT WILL NOT BE MADE.
6. FURNISH AND INSTALL ALL MATERIALS, EQUIPMENT AND LABOR FOR THE ELECTRIC SERVICE INSTALLATION. INSTALL AND EXTEND A 240/120 V, 1-PHASE, ELECTRIC SERVICE FROM THE UTILITY TRANSFORMER TO THE METER SOCKET AND THEN TO THE MAIN ELECTRICAL PANEL "EP". INCLUDE FURNISHING AND INSTALLING THE DISCONNECT SWITCH AND ALL ELECTRICAL PANELS IN THE SERVICE INSTALLATION PAY ITEM AS NOTED ON SHEET 33.
7. DON'T WELD TO ANY STEEL ELEMENTS OF THE BOX GIRDER SYSTEMS FOR ATTACHMENT OR SUPPORT OF ELECTRICAL ITEMS.
8. REFER TO STRUCTURAL PLANS (FROM SEPARATE FABRICATION CONTRACT INCLUDED IN THIS CONTRACT SET OF PLANS) FOR PROVISIONS MADE DURING FABRICATION FOR ACCOMMODATION OF ELECTRICAL ITEMS.
9. INSTALL ELECTRICAL EQUIPMENT ON PIER FACE CLOSEST TO ELECTRICAL ACCESS HOLES IN BOX GIRDER. SEE SHEET 33 FOR DETAILS.
10. COORDINATE WITH ELECTRIC UTILITY TO PROVIDE A 1-PHASE, 3 WIRE, 120/240V ELECTRIC SERVICE. FURNISH AND INSTALL ALL ADDITIONAL EQUIPMENT AND MATERIALS NEEDED THAT IS NOT INSTALLED BY THE UTILITY. EXTEND THE SERVICE CABLE FROM THE UTILITY TRANSFORMER TO THE BRIDGE ELECTRICAL SERVICE ENTRANCE EQUIPMENT. SIZE SERVICE CABLE AND CONDUIT BASED ON LOAD AND DISTANCE BETWEEN UTILITY TRANSFORMER AND PIER MOUNTED MAIN PANEL.
11. FURNISH AND INSTALL GALVANIZED STEEL OR 304 STAINLESS STEEL SUPPORTS, HARDWARE, NUTS, BOLTS, AND WASHERS FOR CONDUITS, JUNCTIONS BOXES, AND RECEPTACLES. ALL THREADED HARDWARE SHALL BE STAINLESS STEEL.

LEGEND

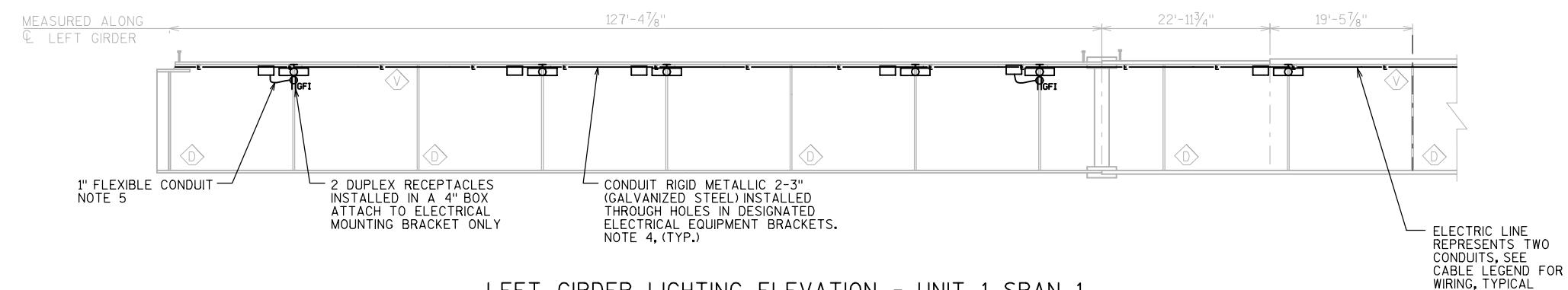
- EP MAIN ELECTRICAL PANEL "EP"
- J1 JUNCTION BOX, STAINLESS STEEL, 24"X18"X12"
- J2 JUNCTION BOX, STAINLESS STEEL, 27"X12"X8"
- DISCONNECT SWITCH
- METER SOCKET AND METER
- ELECTRICAL SUB-PANEL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		PLANS CK'D.	
ELECTRICAL SITE PLAN			SHEET 61 OF 82

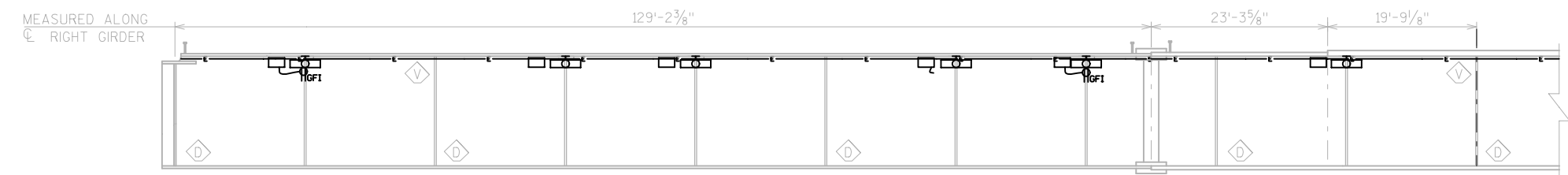
STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.



GIRDER INTERIOR LIGHTING PLAN - UNIT 1 SPAN 1



LEFT GIRDER LIGHTING ELEVATION - UNIT 1 SPAN 1
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)



RIGHT GIRDER LIGHTING ELEVATION - UNIT 1 SPAN 1
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

- LEGEND
- [Symbol] FLUORESCENT LUMINAIRE, ENCLOSED, GASKETED, 4', T8, 2-32W LAMPS, 240V
 - [Symbol] GFI RECEPTACLE, TWO DUPLEX RECEPTACLES IN A 4" BOX, 120V
 - [Symbol] JUNCTION BOX, STAINLESS STEEL, 27"x12"x8"
 - [Symbol] CONDUIT RIGID METALLIC 2-3" (GALVANIZED STEEL) WITH 7-1/C #8 CONDUCTORS
 - [Symbol] INTERIOR DIAPHRAGM OVER PIER FOR CONTINUOUS SPAN
 - [Symbol] INTERIOR DIAPHRAGM AT ABUTMENT
 - [Symbol] INTERIOR INTERMEDIATE DIAPHRAGM
 - [Symbol] EXTERIOR DIAPHRAGM (WHERE 'A' INDICATES CORRESPONDING INTERIOR DIAPHRAGM NUMBER)
 - [Symbol] INTERIOR K FRAME
 - [Symbol] TOP FLANGE LATERAL BRACING

- NOTES:
- FURNISH AND INSTALL FLUORESCENT LUMINAIRES THAT ARE ENCLOSED, GASKETED, AND U.L. RATED FOR DAMP AND WET LOCATIONS.
 - INSTALL ELECTRICAL CONDUITS THROUGH HOLES IN STEEL BOX GIRDER DIAPHRAGMS.
 - FURNISH AND INSTALL CABLES FOR THE LIGHTING CIRCUITS AND RECEPTACLES IN SEPARATE CONDUITS. THE LIGHTING CIRCUITS ARE ON SEPARATE BREAKERS.
 - DO NOT PERFORM DRILLING IN ANY STRUCTURAL MEMBERS. DRILL ONLY ON ELECTRICAL BRACKETS. DO NOT DRILL FOR INTO BOTTOM OF CONCRETE DECK.
 - INSTALL GFCI RECEPTACLES IN DESIGNATED LOCATIONS SPACED AT APPROXIMATELY 100'. PROVIDE TWO (2) DUPLEX RECEPTACLES IN ONE BOX AT EACH LOCATION WITH COVER PLATE.
 - PROVIDE AND INSTALL 1" LIQUIDTIGHT FLEXIBLE METAL CONDUITS BETWEEN JUNCTION BOXES AND RECEPTACLES AND LUMINAIRES, AS NEEDED. COST OF SUCH CONDUITS SHALL BE INCLUDED IN THE COST OF THE RECEPTACLES OR LUMINAIRES. NO ADDITIONAL COMPENSATION WILL BE MADE FOR MATERIALS OR LABOR TO PERFORM THIS WORK.

- CABLE LEGEND
- [Symbol] 2-1/C #8, RECEPTACLE CIRCUIT, 120V
 - [Symbol] 2-1/C #8, LIGHTING CIRCUIT, 240V
 - [Symbol] 3-1/C #8, (2) RECEPTACLE CIRCUITS, ALTERNATING
 - [Symbol] 4-1/C #8, (2) LIGHTING CIRCUITS, ALTERNATING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MAE		PLANS CK'D. DAD	
GIRDER LIGHTING PLAN & ELEVATION		SHEET 62 OF 82	
UNIT 1 - SPAN 1			

LEGEND

- FLUORESCENT LUMINAIRE, ENCLOSED, GASKETED, 4', T8, 2-32W LAMPS, 240V
- GFI RECEPTACLE, TWO DUPLEX RECEPTACLES IN A 4" BOX, 120V
- JUNCTION BOX, STAINLESS STEEL, 27"X12"X8"
- CONDUIT RIGID METALLIC 2-3" (GALVANIZED STEEL) WITH 7-1/2" #8 CONDUCTORS
- INTERIOR DIAPHRAGM OVER PIER FOR CONTINUOUS SPAN
- INTERIOR DIAPHRAGM AT ABUTMENT
- INTERIOR INTERMEDIATE DIAPHRAGM
- EXTERIOR DIAPHRAGM (WHERE 'A' INDICATES CORRESPONDING INTERIOR DIAPHRAGM NUMBER)
- INTERIOR K FRAME
- TOP FLANGE LATERAL BRACING

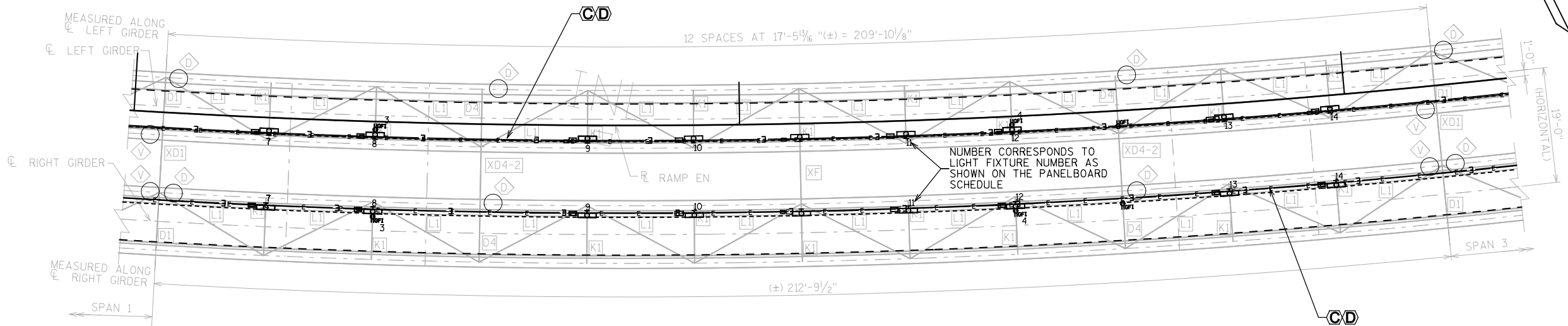
NOTES:

- FURNISH AND INSTALL FLUORESCENT LUMINAIRES THAT ARE ENCLOSED, GASKETED, AND U.L. RATED FOR DAMP AND WET LOCATIONS.
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- DO NOT PERFORM DRILLING IN ANY STRUCTURAL MEMBERS. DRILL ONLY ON ELECTRICAL BRACKETS. DO NOT DRILL FOR INTO BOTTOM OF CONCRETE DECK.
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- PROVIDE AND INSTALL 1" LIQUIDTIGHT FLEXIBLE METAL CONDUITS BETWEEN JUNCTION BOXES AND RECEPTACLES AND LUMINAIRES, AS NEEDED. COST OF SUCH CONDUITS SHALL BE INCLUDED IN THE COST OF THE RECEPTACLES OR LUMINAIRES. NO ADDITIONAL COMPENSATION WILL BE MADE FOR MATERIALS OR LABOR TO PERFORM THIS WORK.

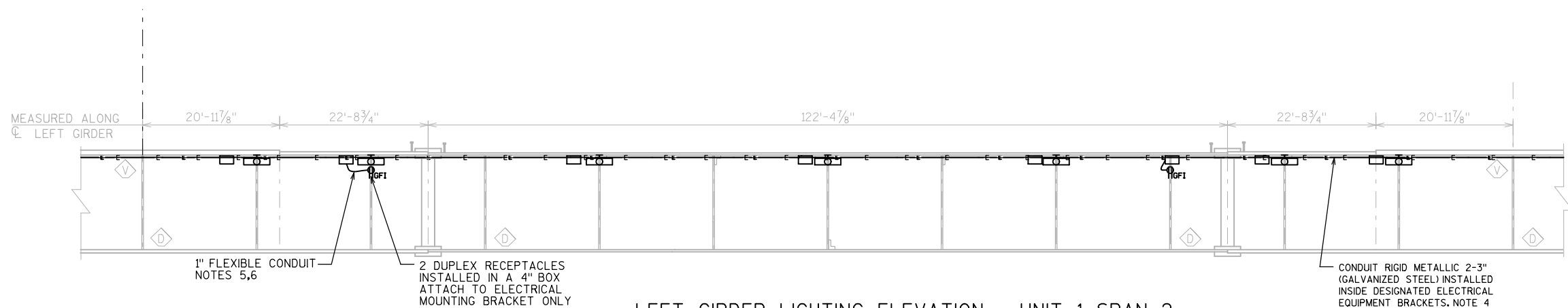
CABLE LEGEND

- A 2-1/2" #8, RECEPTACLE CIRCUIT, 120V
- B 2-1/2" #8, LIGHTING CIRCUIT, 240V
- C 3-1/2" #8, (2) RECEPTACLE CIRCUITS, ALTERNATING
- D 4-1/2" #8, (2) LIGHTING CIRCUITS, ALTERNATING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		MAE	PLANS CK'D. DAD
GIRDER LIGHTING PLAN & ELEVATION UNIT 1 - SPAN 2		SHEET 63 OF 82	

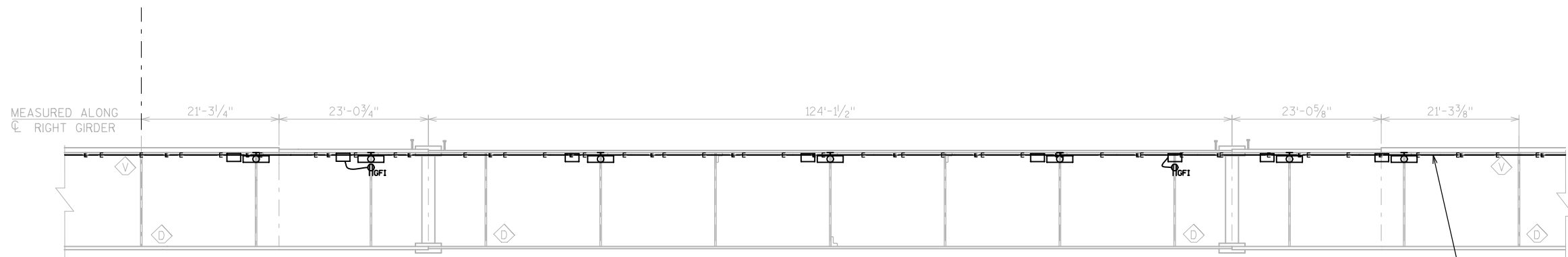


GIRDER INTERIOR LIGHTING PLAN - UNIT 1 SPAN 2



LEFT GIRDER LIGHTING ELEVATION - UNIT 1 SPAN 2

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)



RIGHT GIRDER LIGHTING ELEVATION - UNIT 1 SPAN 2

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

ELECTRIC LINE
REPRESENTS TWO
CONDUITS, SEE
CABLE LEGEND FOR
WIRING, TYPICAL

LEGEND

- FLUORESCENT LUMINAIRE, ENCLOSED, GASKETED, 4', T8, 2-32W LAMPS, 240V
- GFI RECEPTACLE, TWO DUPLEX RECEPTACLES IN A 4" BOX, 120V
- JUNCTION BOX, STAINLESS STEEL, 27"X12"X8"
- CONDUIT RIGID METALLIC 2-3" (GALVANIZED STEEL) WITH 7-1/C #8 CONDUCTORS
- INTERIOR DIAPHRAGM OVER PIER FOR CONTINUOUS SPAN
- INTERIOR DIAPHRAGM AT ABUTMENT
- INTERIOR INTERMEDIATE DIAPHRAGM
- EXTERIOR DIAPHRAGM (WHERE 'A' INDICATES CORRESPONDING INTERIOR DIAPHRAGM NUMBER)
- INTERIOR K FRAME
- TOP FLANGE LATERAL BRACING

NOTES:

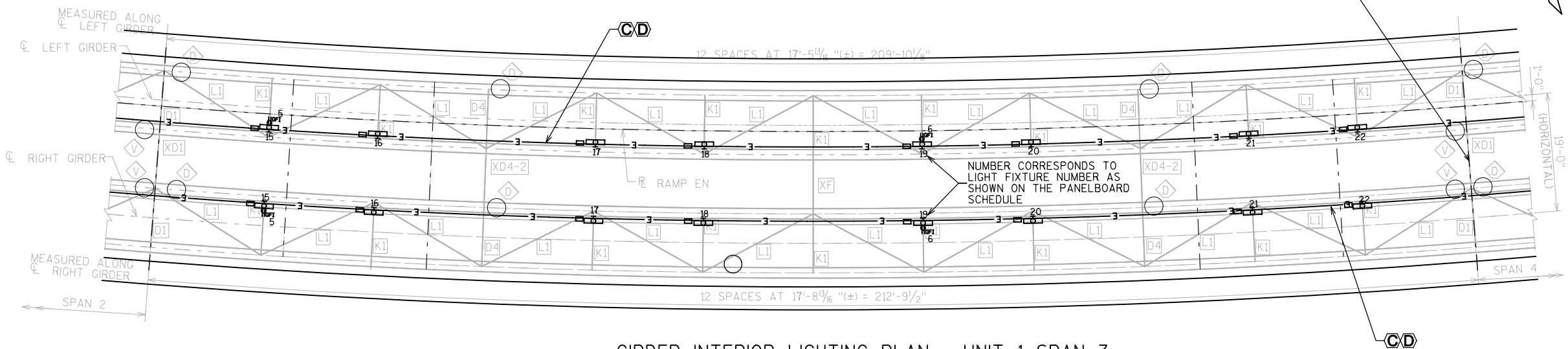
- FURNISH AND INSTALL FLUORESCENT LUMINAIRE THAT ARE ENCLOSED, GASKETED, AND U.L. RATED FOR DAMP AND WET LOCATIONS.
- INSTALL ELECTRICAL CONDUITS THROUGH HOLES IN STEEL BOX GIRDER DIAPHRAGMS.
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- DO NOT PERFORM DRILLING IN ANY STRUCTURAL MEMBERS. DRILL ONLY ON ELECTRICAL BRACKETS. DO NOT DRILL FOR INTO BOTTOM OF CONCRETE DECK.
- INSTALL GFCI RECEPTACLES IN DESIGNATED LOCATIONS SPACED AT APPROXIMATELY 100'. PROVIDE TWO (2) DUPLEX RECEPTACLES IN ONE BOX AT EACH LOCATION WITH COVER PLATE.
- PROVIDE AND INSTALL 1" LIQUIDTIGHT FLEXIBLE METAL CONDUITS BETWEEN JUNCTION BOXES AND RECEPTACLES AND LUMINAIRES, AS NEEDED. COST OF SUCH CONDUITS SHALL BE INCLUDED IN THE COST OF THE RECEPTACLES OR LUMINAIRES. NO ADDITIONAL COMPENSATION WILL BE MADE FOR MATERIALS OR LABOR TO PERFORM THIS WORK.

CABLE LEGEND

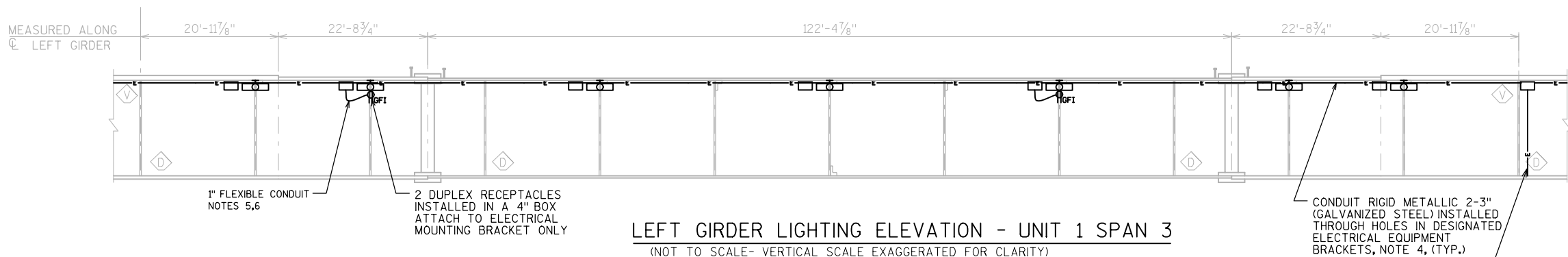
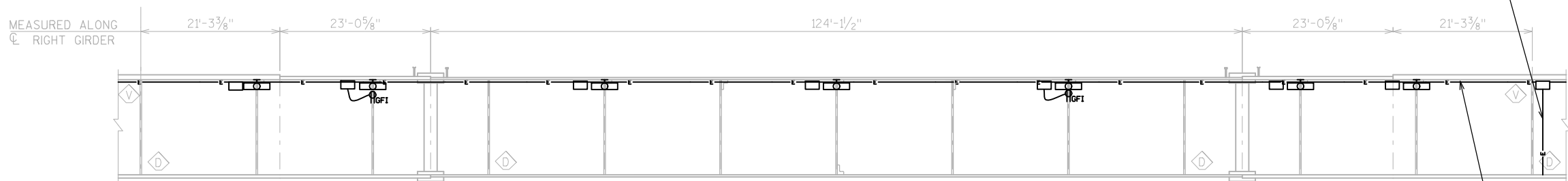
- A 2-1/C #8, RECEPTACLE CIRCUIT, 120V
- B 2-1/C #8, LIGHTING CIRCUIT, 240V
- C 3-1/C #8, (2) RECEPTACLE CIRCUITS, ALTERNATING
- D 4-1/C #8, (2) LIGHTING CIRCUITS, ALTERNATING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		MAE	PLANS CK'D. DAD
GIRDER LIGHTING PLAN & ELEVATION UNIT 1 - SPAN 3		SHEET 64 OF 82	

SEE PIER 3 ELECTRICAL
DETAILS SHEET FOR
ELECTRICAL EQUIPMENT
MOUNTED ON PIER



GIRDER INTERIOR LIGHTING PLAN - UNIT 1 SPAN 3

LEFT GIRDER LIGHTING ELEVATION - UNIT 1 SPAN 3
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)RIGHT GIRDER LIGHTING ELEVATION - UNIT 1 SPAN 3
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

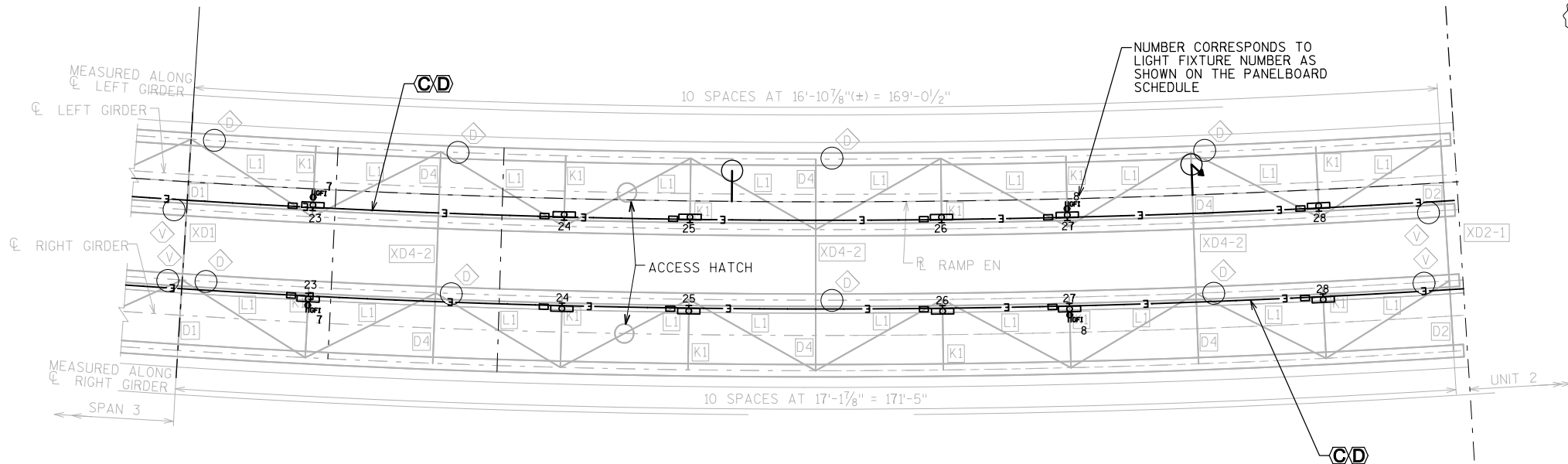
ELECTRIC LINE
REPRESENTS TWO
CONDUITS, SEE
CABLE LEGEND FOR
WIRING, TYPICAL

LEGEND

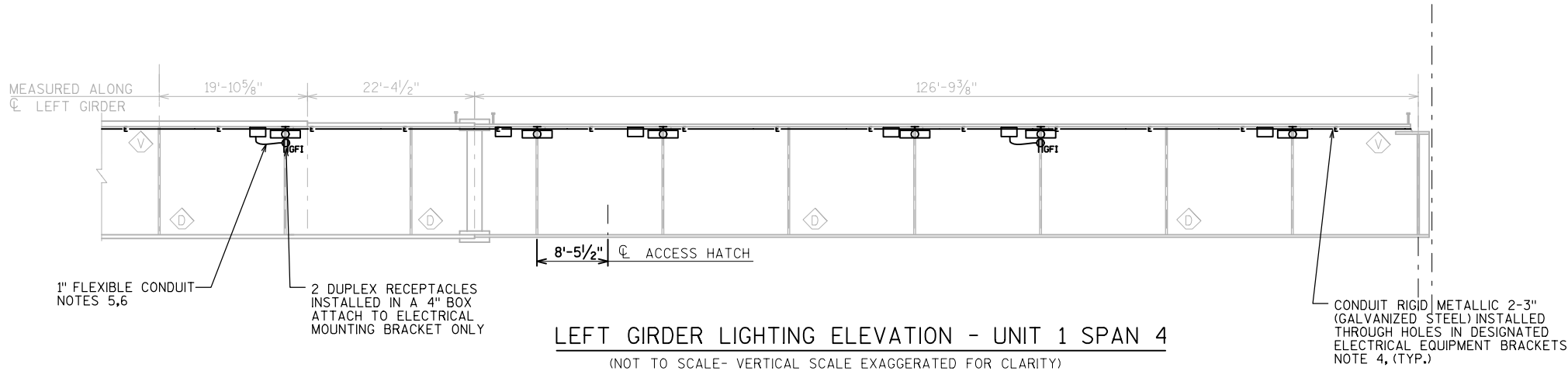
- FLUORESCENT LUMINAIRE, ENCLOSED, GASKETED, 4', T8, 2-32W LAMPS, 240V
- GFI RECEPTACLE, TWO DUPLEX RECEPTACLES IN A 4" BOX, 120V
- JUNCTION BOX, STAINLESS STEEL, 27"X12"X8"
- CONDUIT RIGID METALLIC 2-3" (GALVANIZED STEEL) WITH 7-1/C #8 CONDUCTORS
- INTERIOR DIAPHRAGM OVER PIER FOR CONTINUOUS SPAN
- INTERIOR DIAPHRAGM AT ABUTMENT
- INTERIOR INTERMEDIATE DIAPHRAGM
- EXTERIOR DIAPHRAGM (WHERE 'A' INDICATES CORRESPONDING INTERIOR DIAPHRAGM NUMBER)
- INTERIOR K FRAME
- TOP FLANGE LATERAL BRACING

NOTES:

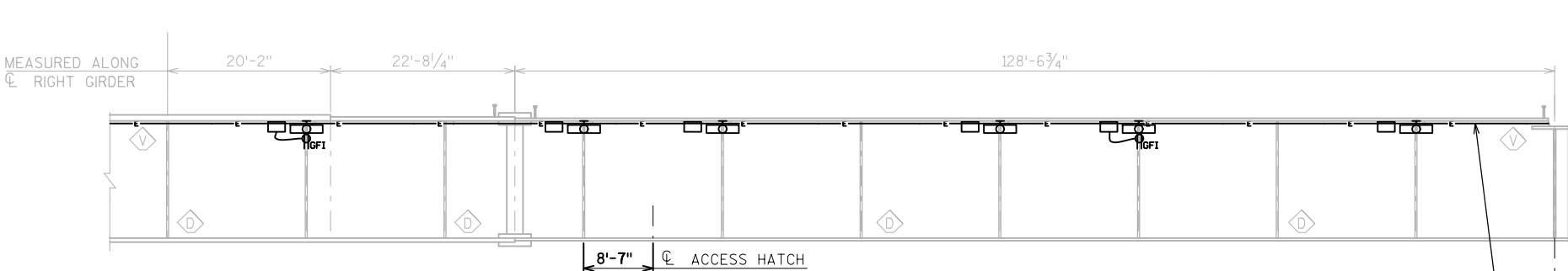
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- INSTALL ELECTRICAL CONDUITS THROUGH HOLES IN STEEL BOX GIRDER DIAPHRAGMS.
- FURNISH AND INSTALL CABLES FOR THE LIGHTING CIRCUITS AND RECEPTACLES IN SEPARATE CONDUITS. THE LIGHTING CIRCUITS ARE ON SEPARATE BREAKERS.
- DO NOT PERFORM DRILLING IN ANY STRUCTURAL MEMBERS. DRILL ONLY ON ELECTRICAL BRACKETS. DO NOT DRILL FOR INTO BOTTOM OF CONCRETE DECK.
- INSTALL GFCI RECEPTACLES IN DESIGNATED LOCATIONS SPACED AT APPROXIMATELY 100'. PROVIDE TWO (2) DUPLEX RECEPTACLES IN ONE BOX AT EACH LOCATION WITH COVER PLATE.
- PROVIDE AND INSTALL 1" LIQUIDTIGHT FLEXIBLE METAL CONDUITS BETWEEN JUNCTION BOXES AND RECEPTACLES AND LUMINAIRES, AS NEEDED. COST OF SUCH CONDUITS SHALL BE INCLUDED IN THE COST OF THE RECEPTACLES OR LUMINAIRES. NO ADDITIONAL COMPENSATION WILL BE MADE FOR MATERIALS OR LABOR TO PERFORM THIS WORK.
- FURNISH AND INSTALL ALL NECESSARY CONDUITS, JUNCTION BOXES, AND WIRING TO PROVIDE ELECTRIC SERVICE TO THE LIGHTS AND RECEPTACLES INSIDE THE BOX GIRDERS, AS SHOWN. SEE ELECTRIC SERVICE DETAILS ON SHEET 32.



GIRDER INTERIOR LIGHTING PLAN - UNIT 1 SPAN 4



LEFT GIRDER LIGHTING ELEVATION - UNIT 1 SPAN 4
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)



RIGHT GIRDER LIGHTING ELEVATION - UNIT 1 SPAN 4
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

CABLE LEGEND

- 2-1/C #8, RECEPTACLE CIRCUIT, 120V
- 2-1/C #8, LIGHTING CIRCUIT, 240V
- 3-1/C #8, (2) RECEPTACLE CIRCUITS, ALTERNATING
- 4-1/C #8, (2) LIGHTING CIRCUITS, ALTERNATING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
		DRAWN BY	MAE PLANS CK'D. DAD
GIRDER LIGHTING PLAN & ELEVATION UNIT 1 - SPAN 4		SHEET 65 OF 82	

LEGEND

- FLUORESCENT LUMINAIRE, ENCLOSED, GASKETED, 4', 2-34W, T12 TYPE, 240V
- GFI RECEPTACLE, TWO DUPLEX RECEPTACLES IN A 4" BOX, 120V
- JUNCTION BOX, STAINLESS STEEL, 27"x12"x8"
- CONDUIT RIGID METALLIC 2-3" (GALVANIZED STEEL) WITH 7-1/C #8 CONDUCTORS
- INTERIOR DIAPHRAGM OVER PIER FOR CONTINUOUS SPAN
- INTERIOR DIAPHRAGM AT ABUTMENT
- INTERIOR INTERMEDIATE DIAPHRAGM
- EXTERIOR DIAPHRAGM (WHERE 'A' INDICATES CORRESPONDING INTERIOR DIAPHRAGM NUMBER)
- INTERIOR K FRAME
- TOP FLANGE LATERAL BRACING

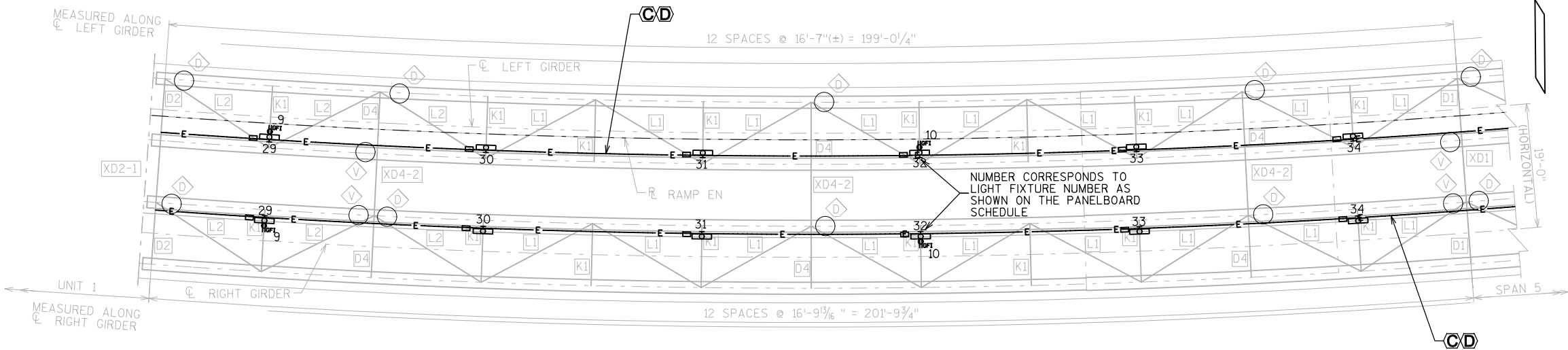
NOTES:

- FURNISH AND INSTALL FLUORESCENT LUMINAIRES THAT ARE ENCLOSED, GASKETED, AND U.L. RATED FOR DAMP AND WET LOCATIONS.
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- INSTALL GFCI RECEPTACLES IN DESIGNATED LOCATIONS SPACED AT APPROXIMATELY 100'. PROVIDE TWO (2) DUPLEX RECEPTACLES IN ONE BOX AT EACH LOCATION WITH COVER PLATE.
- PROVIDE AND INSTALL 1" LIQUIDTIGHT FLEXIBLE METAL CONDUITS BETWEEN JUNCTION BOXES AND RECEPTACLES AND LUMINAIRES, AS NEEDED. COST OF SUCH CONDUITS SHALL BE INCLUDED IN THE COST OF THE RECEPTACLES OR LUMINAIRES. NO ADDITIONAL COMPENSATION WILL BE MADE FOR MATERIALS OR LABOR TO PERFORM THIS WORK.

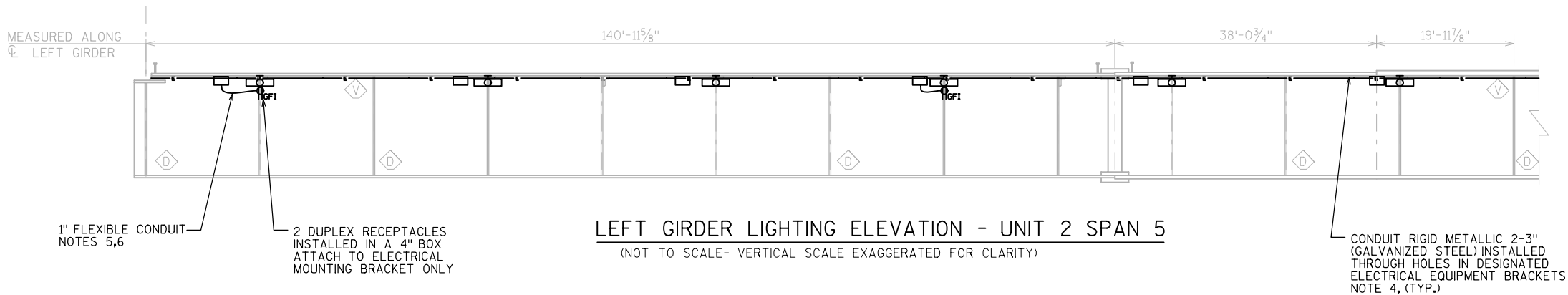
CABLE LEGEND

- A 2-1/C #8, RECEPTACLE CIRCUIT, 120V
- B 2-1/C #8, LIGHTING CIRCUIT, 240V
- C 3-1/C #8, (2) RECEPTACLE CIRCUITS, ALTERNATING
- D 4-1/C #8, (2) LIGHTING CIRCUITS, ALTERNATING

NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION					
STRUCTURE B-5-658					
		DRAWN BY	MAE	PLANS CK'D.	DAD
GIRDER LIGHTING PLAN & ELEVATION				SHEET 66 OF 82	
UNIT 2 - SPAN 5					

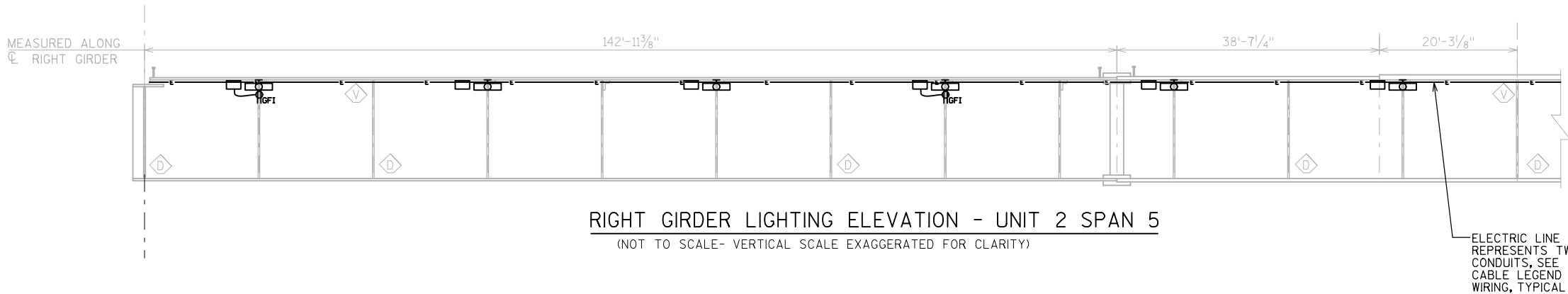


GIRDER INTERIOR LIGHTING PLAN - UNIT 2 SPAN 5



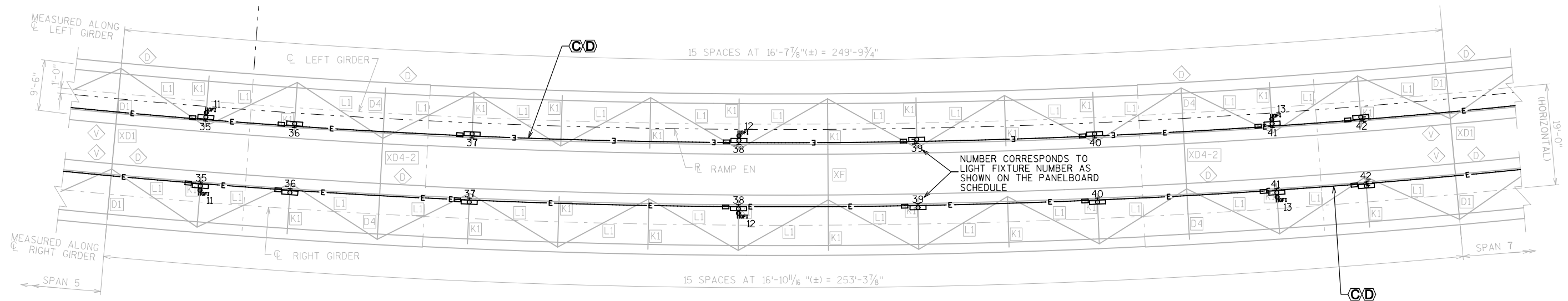
LEFT GIRDER LIGHTING ELEVATION - UNIT 2 SPAN 5

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

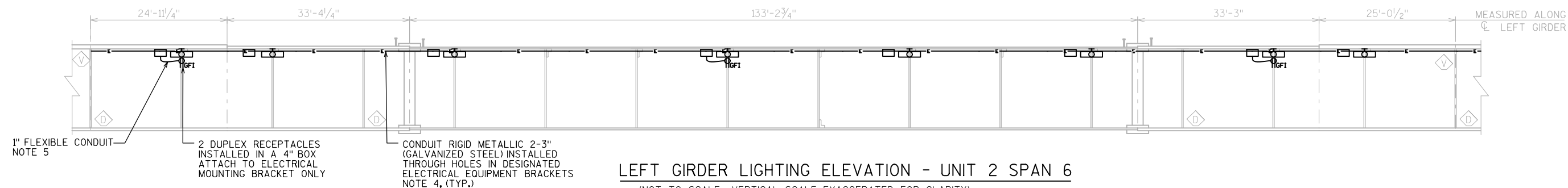


RIGHT GIRDER LIGHTING ELEVATION - UNIT 2 SPAN 5

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

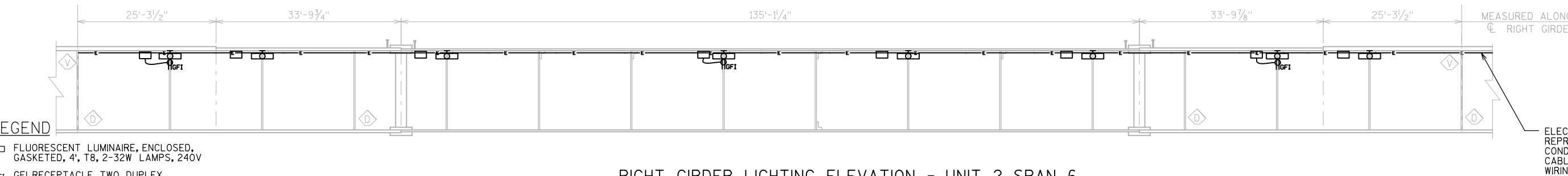


GIRDER INTERIOR LIGHTING PLAN - UNIT 2 SPAN 6



LEFT GIRDER LIGHTING ELEVATION - UNIT 2 SPAN 6

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)



RIGHT GIRDER LIGHTING ELEVATION - UNIT 2 SPAN 6

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

LEGEND

- 8
- FLUORESCENT LUMINAIRE, ENCLOSED, GASKETED, 4', T8, 2-32W LAMPS, 240V
 - GFI RECEPTACLE, TWO DUPLEX RECEPTACLES IN A 4" BOX, 120V
 - JUNCTION BOX, STAINLESS STEEL, 27"X12"X8"
 - E— CONDUIT RIGID METALLIC 2-3" (GALVANIZED STEEL) WITH 7-1/C #8 CONDUCTORS
 - D1 INTERIOR DIAPHRAGM OVER PIER FOR CONTINUOUS SPAN
 - D2 INTERIOR DIAPHRAGM AT ABUTMENT
 - D3 INTERIOR INTERMEDIATE DIAPHRAGM
 - XD4 EXTERIOR DIAPHRAGM (WHERE 'A' INDICATES CORRESPONDING INTERIOR DIAPHRAGM NUMBER)
 - K1 INTERIOR K FRAME
 - L1 TOP FLANGE LATERAL BRACING

NOTES:

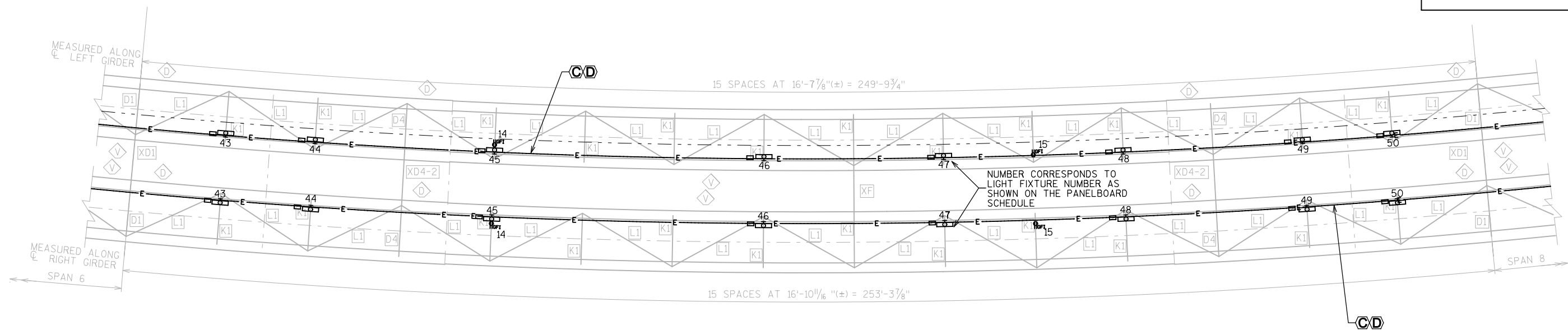
1. FURNISH AND INSTALL FLUORESCENT LUMINAIRES THAT ARE ENCLOSED, GASKETED, AND U.L. RATED FOR DAMP AND WET LOCATIONS.
2. INSTALL ELECTRICAL CONDUITS THROUGH HOLES IN STEEL BOX GIRDER DIAPHRAGMS.
3. FURNISH AND INSTALL CABLES FOR THE LIGHTING CIRCUITS AND RECEPTACLES IN SEPARATE CONDUITS. THE LIGHTING CIRCUITS ARE ON SEPARATE BREAKERS.
4. DO NOT PERFORM DRILLING IN ANY STRUCTURAL MEMBERS. DRILL ONLY ON ELECTRICAL BRACKETS. DO NOT DRILL FOR INTO BOTTOM OF CONCRETE DECK.
5. INSTALL GFCI RECEPTACLES IN DESIGNATED LOCATIONS SPACED AT APPROXIMATELY 100'. PROVIDE TWO (2) DUPLEX RECEPTACLES IN ONE BOX AT EACH LOCATION WITH COVER PLATE.
6. PROVIDE AND INSTALL 1" LIQUIDTIGHT FLEXIBLE METAL CONDUITS BETWEEN JUNCTION BOXES AND RECEPTACLES AND LUMINAIRES, AS NEEDED. COST OF SUCH CONDUITS SHALL BE INCLUDED IN THE COST OF THE RECEPTACLES OR LUMINAIRES. NO ADDITIONAL COMPENSATION WILL BE MADE FOR MATERIALS OR LABOR TO PERFORM THIS WORK.

CABLE LEGEND

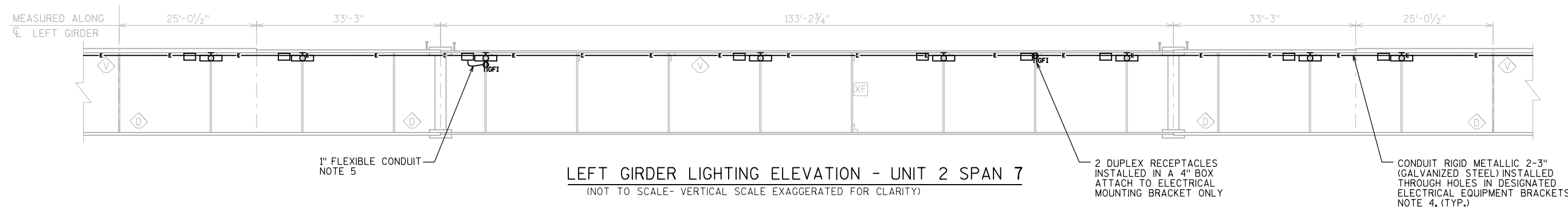
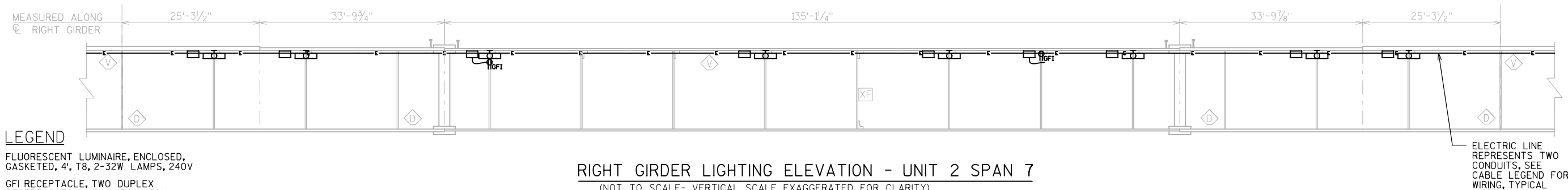
- A 2-1/C #8, RECEPTACLE CIRCUIT, 120V
- B 2-1/C #8, LIGHTING CIRCUIT, 240V
- C 3-1/C #8, (2) RECEPTACLE CIRCUITS, ALTERNATING
- D 4-1/C #8, (2) LIGHTING CIRCUITS, ALTERNATING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MAE		PLANS CK'D. DAD	
GIRDER LIGHTING PLAN & ELEVATION			SHEET 67 OF 82
UNIT 2 - SPAN 6			

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.



GIRDER INTERIOR LIGHTING PLAN - UNIT 2 SPAN 7

LEFT GIRDER LIGHTING ELEVATION - UNIT 2 SPAN 7
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)RIGHT GIRDER LIGHTING ELEVATION - UNIT 2 SPAN 7
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

LEGEND

- 8
- FLUORESCENT LUMINAIRE, ENCLOSED, GASKETED, 4', T8, 2-32W LAMPS, 240V
 - GFI RECEPTACLE, TWO DUPLEX RECEPTACLES IN A 4" BOX, 120V
 - JUNCTION BOX, STAINLESS STEEL, 27"x12"x8"
 - CONDUIT RIGID METALLIC 2-3" (GALVANIZED STEEL) WITH 7-1/2" #8 CONDUCTORS
 - INTERIOR DIAPHRAGM OVER PIER FOR CONTINUOUS SPAN
 - INTERIOR DIAPHRAGM AT ABUTMENT
 - INTERIOR INTERMEDIATE DIAPHRAGM
 - EXTERIOR DIAPHRAGM (WHERE 'A' INDICATES CORRESPONDING INTERIOR DIAPHRAGM NUMBER)
 - INTERIOR K FRAME
 - TOP FLANGE LATERAL BRACING

NOTES:

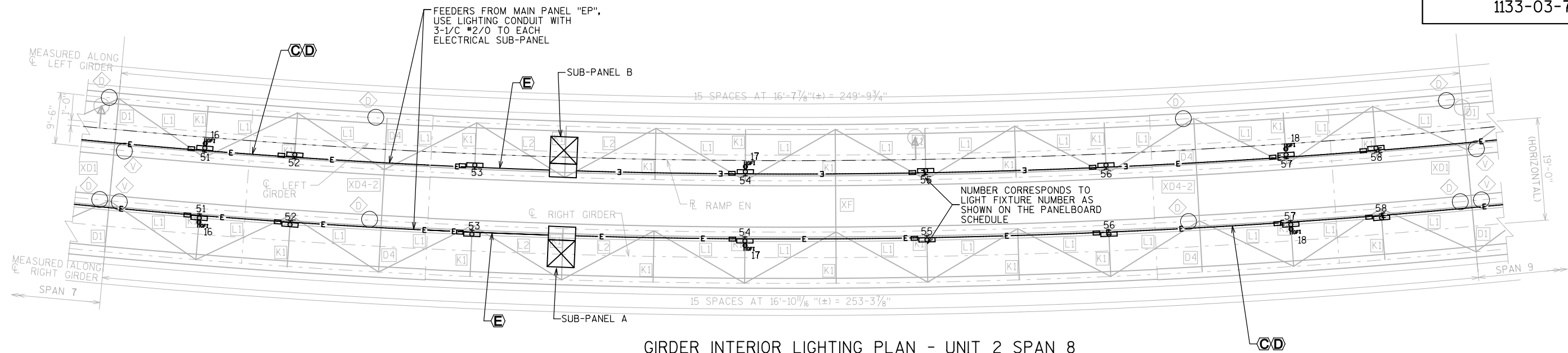
1. FURNISH AND INSTALL FLUORESCENT LUMINAIRES THAT ARE ENCLOSED, GASKETED, AND U.L. RATED FOR DAMP AND WET LOCATIONS.
2. INSTALL ELECTRICAL CONDUITS THROUGH HOLES IN STEEL BOX GIRDER DIAPHRAGMS.
3. FURNISH AND INSTALL CABLES FOR THE LIGHTING CIRCUITS AND RECEPTACLES IN SEPARATE CONDUITS. THE LIGHTING CIRCUITS ARE ON SEPARATE BREAKERS.
4. DO NOT PERFORM DRILLING IN ANY STRUCTURAL MEMBERS. DRILL ONLY ON ELECTRICAL BRACKETS. DO NOT DRILL FOR INTO BOTTOM OF CONCRETE DECK.
5. INSTALL GFI RECEPTACLES IN DESIGNATED LOCATIONS SPACED AT APPROXIMATELY 100'. PROVIDE TWO (2) DUPLEX RECEPTACLES IN ONE BOX AT EACH LOCATION WITH COVER PLATE.
6. PROVIDE AND INSTALL 1" LIQUIDTIGHT FLEXIBLE METAL CONDUITS BETWEEN JUNCTION BOXES AND RECEPTACLES AND LUMINAIRES, AS NEEDED. COST OF SUCH CONDUITS SHALL BE INCLUDED IN THE COST OF THE RECEPTACLES OR LUMINAIRES. NO ADDITIONAL COMPENSATION WILL BE MADE FOR MATERIALS OR LABOR TO PERFORM THIS WORK.

CABLE LEGEND

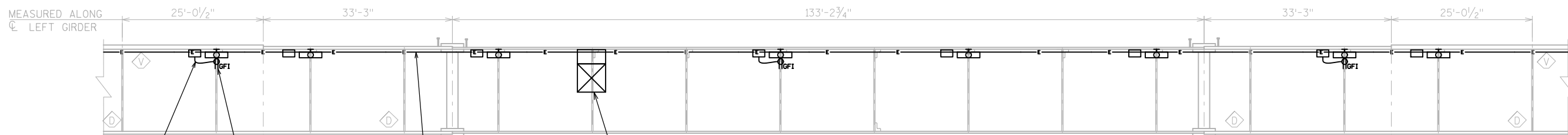
- A 2-1/C #8, RECEPTACLE CIRCUIT, 120V
- B 2-1/C #8, LIGHTING CIRCUIT, 240V
- C 3-1/C #8, (2) RECEPTACLE CIRCUITS, ALTERNATING
- D 4-1/C #8, (2) LIGHTING CIRCUITS, ALTERNATING

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MAE		PLANS CK'D. DAD	
GIRDER LIGHTING PLAN & ELEVATION			SHEET 68 OF 82
UNIT 2 - SPAN 7			

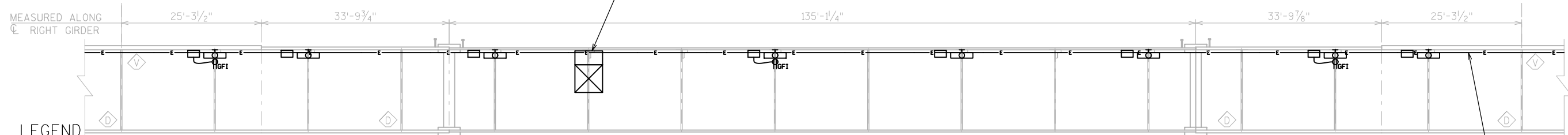


GIRDER INTERIOR LIGHTING PLAN - UNIT 2 SPAN 8



LEFT GIRDER LIGHTING ELEVATION - UNIT 2 SPAN 8

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)



RIGHT GIRDER LIGHTING ELEVATION - UNIT 2 SPAN 8

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

LEGEND

- 8
- FLUORESCENT LUMINAIRE, ENCLOSED, GASKETED, 4', T8, 2-32W LAMPS, 240V
 - GFI RECEPTACLE, TWO DUPLEX RECEPTACLES IN A 4" BOX, 120V
 - JUNCTION BOX, STAINLESS STEEL, 27"X12"X8"
 - CONDUIT RIGID METALLIC 2-3" (GALVANIZED STEEL) WITH 7-1/C #8 CONDUCTORS
 - INTERIOR DIAPHRAGM OVER PIER FOR CONTINUOUS SPAN
 - INTERIOR DIAPHRAGM AT ABUTMENT
 - INTERIOR INTERMEDIATE DIAPHRAGM
 - EXTERIOR DIAPHRAGM (WHERE 'A' INDICATES CORRESPONDING INTERIOR DIAPHRAGM NUMBER)
 - INTERIOR K FRAME
 - TOP FLANGE LATERAL BRACING

NOTES:

1. FURNISH AND INSTALL FLUORESCENT LUMINAIRES THAT ARE ENCLOSED, GASKETED, AND U.L. RATED FOR DAMP AND WET LOCATIONS.
2. INSTALL ELECTRICAL CONDUITS THROUGH HOLES IN STEEL BOX GIRDER DIAPHRAGMS.
3. FURNISH AND INSTALL CABLES FOR THE LIGHTING CIRCUITS AND RECEPTACLES IN SEPARATE CONDUITS. THE LIGHTING CIRCUITS ARE ON SEPARATE BREAKERS.
4. DO NOT PERFORM DRILLING IN ANY STRUCTURAL MEMBERS. DRILL ONLY ON ELECTRICAL BRACKETS. DO NOT DRILL FOR INTO BOTTOM OF CONCRETE DECK.

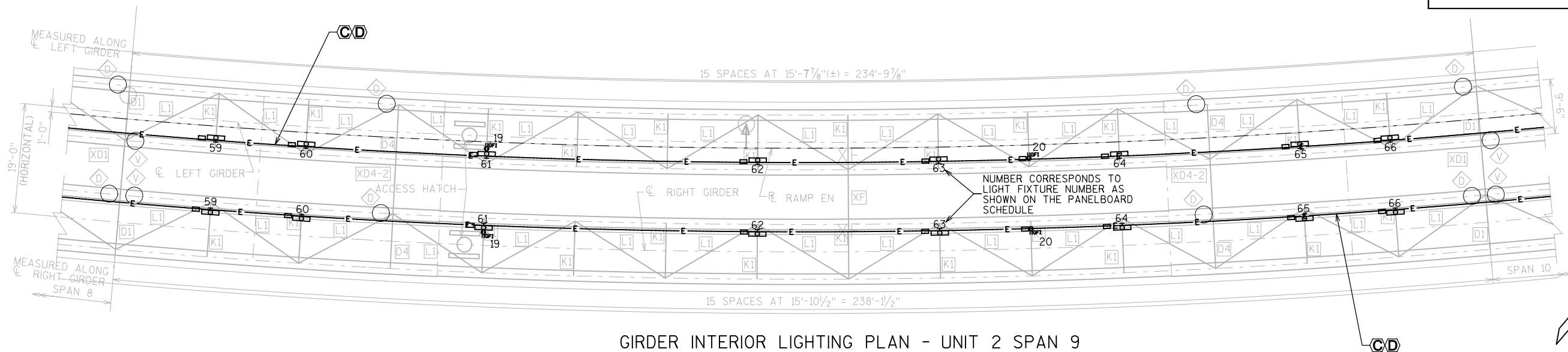
5. INSTALL GFCI RECEPTACLES IN DESIGNATED LOCATIONS SPACED AT APPROXIMATELY 100'. PROVIDE TWO (2) DUPLEX RECEPTACLES IN ONE BOX AT EACH LOCATION WITH COVER PLATE.
6. PROVIDE AND INSTALL 1" LIQUIDTIGHT FLEXIBLE METAL CONDUITS BETWEEN JUNCTION BOXES AND RECEPTACLES AND LUMINAIRES, AS NEEDED. COST OF SUCH CONDUITS SHALL BE INCLUDED IN THE COST OF THE RECEPTACLES OR LUMINAIRES. NO ADDITIONAL COMPENSATION WILL BE MADE FOR MATERIALS OR LABOR TO PERFORM THIS WORK.

CABLE LEGEND

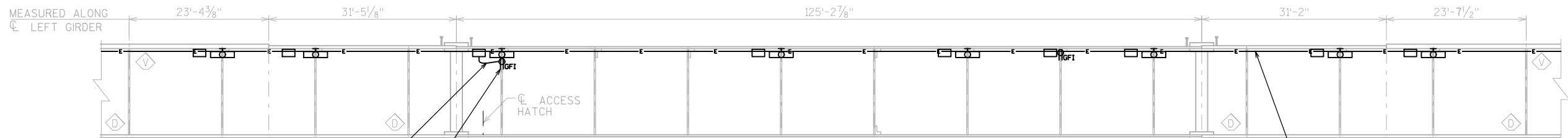
- A 2-1/C #8, RECEPTACLE CIRCUIT, 120V
- B 2-1/C #8, LIGHTING CIRCUIT, 240V
- C 3-1/C #8, (2) RECEPTACLE CIRCUITS, ALTERNATING
- D 4-1/C #8, (2) LIGHTING CIRCUITS, ALTERNATING
- E 3-1/C #2/0, WIRING TO EACH SUB-PANEL FROM PIER MOUNTED MAIN PANEL "EP"

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

NO.		DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION				
STRUCTURE B-5-658				
DRAWN BY		MAE	PLANS CK'D.	DAD
GIRDER LIGHTING PLAN & ELEVATION UNIT 2 - SPAN 8				SHEET 69 OF 82



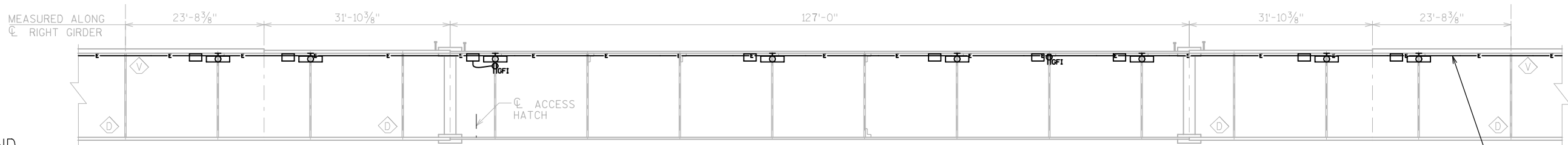
GIRDER INTERIOR LIGHTING PLAN - UNIT 2 SPAN 9



LEFT GIRDER LIGHTING ELEVATION - UNIT 2 SPAN 9

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

CONDUIT RIGID METALLIC 2-3" (GALVANIZED STEEL) INSTALLED THROUGH HOLES IN DESIGNATED ELECTRICAL EQUIPMENT BRACKETS, NOTE 4, (TYP.)



RIGHT GIRDER LIGHTING ELEVATION - UNIT 2 SPAN 9

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

LEGEND

- 8
- FLUORESCENT LUMINAIRE, ENCLOSED, GASKETED, 4', T8, 2-32W LAMPS, 240V
 - GFI RECEPTACLE, TWO DUPLEX RECEPTACLES IN A 4" BOX, 120V
 - JUNCTION BOX, STAINLESS STEEL, 27"X12"X8"
 - CONDUIT RIGID METALLIC 2-3" (GALVANIZED STEEL) WITH 7-1/C #8 CONDUCTORS
 - INTERIOR DIAPHRAGM OVER PIER FOR CONTINUOUS SPAN
 - INTERIOR DIAPHRAGM AT ABUTMENT
 - INTERIOR INTERMEDIATE DIAPHRAGM
 - EXTERIOR DIAPHRAGM (WHERE 'A' INDICATES CORRESPONDING INTERIOR DIAPHRAGM NUMBER)
 - INTERIOR K FRAME
 - TOP FLANGE LATERAL BRACING

NOTES:

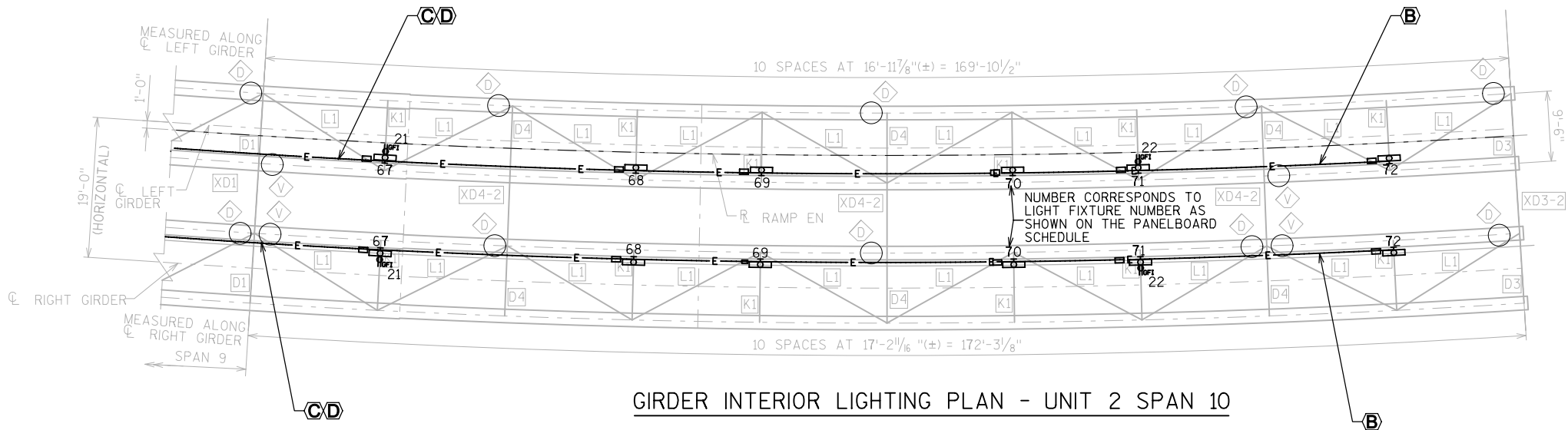
1. FURNISH AND INSTALL FLUORESCENT LUMINAIRES THAT ARE ENCLOSED, GASKETED, AND U.L. RATED FOR DAMP AND WET LOCATIONS.
2. INSTALL ELECTRICAL CONDUITS THROUGH HOLES IN STEEL BOX GIRDER DIAPHRAGMS.
3. FURNISH AND INSTALL CABLES FOR THE LIGHTING CIRCUITS AND RECEPTACLES IN SEPARATE CONDUITS. THE LIGHTING CIRCUITS ARE ON SEPARATE BREAKERS.
4. DO NOT PERFORM DRILLING IN ANY STRUCTURAL MEMBERS. DRILL ONLY ON ELECTRICAL BRACKETS. DO NOT DRILL FOR INTO BOTTOM OF CONCRETE DECK.
5. INSTALL GFCI RECEPTACLES IN DESIGNATED LOCATIONS SPACED AT APPROXIMATELY 100'. PROVIDE TWO (2) DUPLEX RECEPTACLES IN ONE BOX AT EACH LOCATION WITH COVER PLATE.
6. PROVIDE AND INSTALL 1" LIQUIDTIGHT FLEXIBLE METAL CONDUITS BETWEEN JUNCTION BOXES AND RECEPTACLES AND LUMINAIRES, AS NEEDED. COST OF SUCH CONDUITS SHALL BE INCLUDED IN THE COST OF THE RECEPTACLES OR LUMINAIRES. NO ADDITIONAL COMPENSATION WILL BE MADE FOR MATERIALS OR LABOR TO PERFORM THIS WORK.

CABLE LEGEND

- A 2-1/C #8, RECEPTACLE CIRCUIT, 120V
- B 2-1/C #8, LIGHTING CIRCUIT, 240V
- C 3-1/C #8, (2) RECEPTACLE CIRCUITS, ALTERNATING
- D 4-1/C #8, (2) LIGHTING CIRCUITS, ALTERNATING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
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GIRDER LIGHTING PLAN & ELEVATION			SHEET 70 OF 82
UNIT 2 - SPAN 9			

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

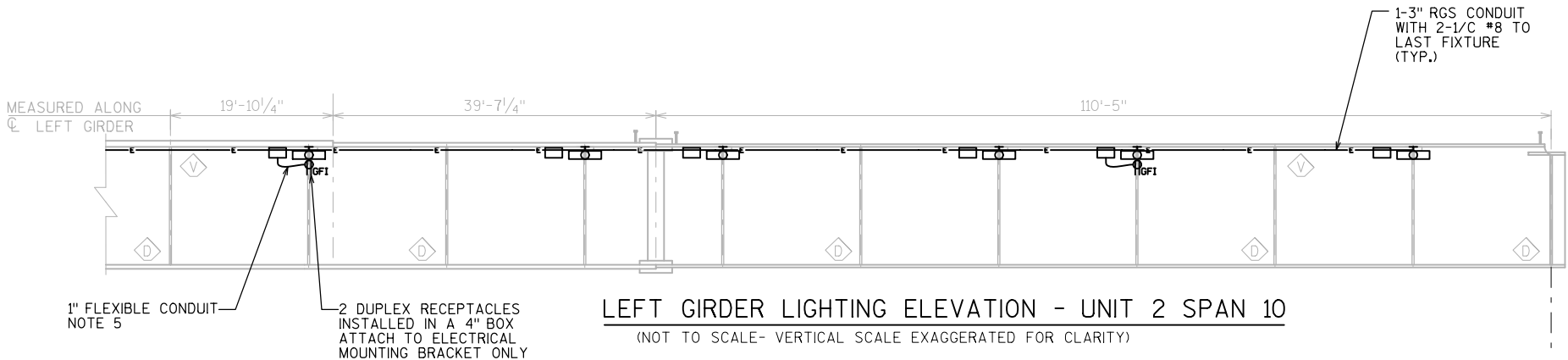


LEGEND

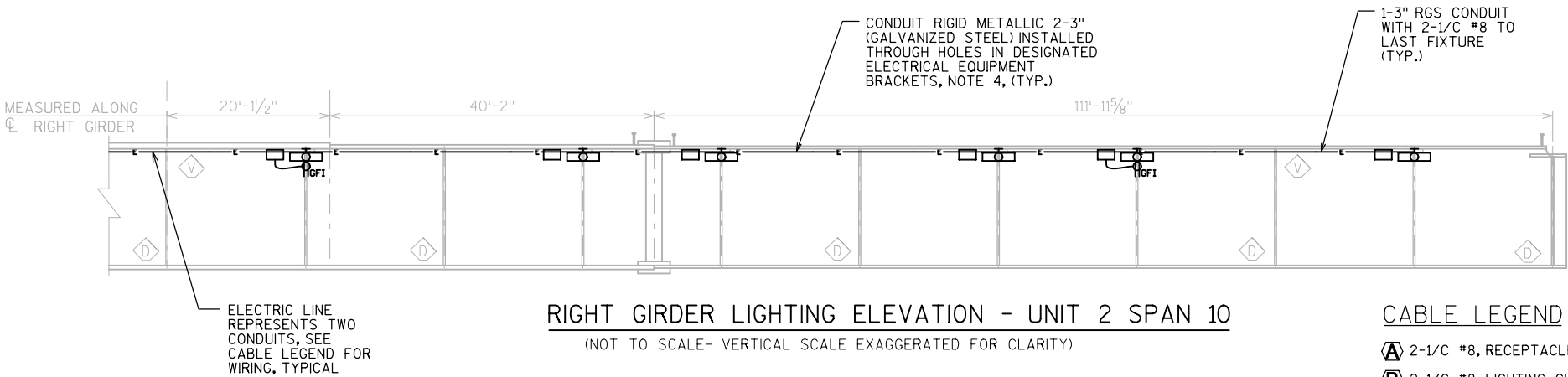
- FLUORESCENT LUMINAIRE, ENCLOSED, GASKETED, 4', T8, 2-32W LAMPS, 240V
- GFI RECEPTACLE, TWO DUPLEX RECEPTACLES IN A 4" BOX, 120V
- JUNCTION BOX, STAINLESS STEEL, 27"x12"x8"
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- INTERIOR DIAPHRAGM OVER PIER FOR CONTINUOUS SPAN
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- EXTERIOR DIAPHRAGM (WHERE 'A' INDICATES CORRESPONDING INTERIOR DIAPHRAGM NUMBER)
- INTERIOR K FRAME
- TOP FLANGE LATERAL BRACING

NOTES:

- FURNISH AND INSTALL FLUORESCENT LUMINAIRES THAT ARE ENCLOSED, GASKETED, AND U.L. RATED FOR DAMP AND WET LOCATIONS.
- INSTALL ELECTRICAL CONDUITS THROUGH HOLES IN STEEL BOX GIRDER DIAPHRAGMS.
- FURNISH AND INSTALL CABLES FOR THE LIGHTING CIRCUITS AND RECEPTACLES IN SEPARATE CONDUITS. THE LIGHTING CIRCUITS ARE ON SEPARATE BREAKERS.
- DO NOT PERFORM DRILLING IN ANY STRUCTURAL MEMBERS. DRILL ONLY ON ELECTRICAL BRACKETS. DO NOT DRILL FOR INTO BOTTOM OF CONCRETE DECK.
- INSTALL GFCI RECEPTACLES IN DESIGNATED LOCATIONS SPACED AT APPROXIMATELY 100'. PROVIDE TWO (2) DUPLEX RECEPTACLES IN ONE BOX AT EACH LOCATION WITH COVER PLATE.
- PROVIDE AND INSTALL 1" LIQUIDTIGHT FLEXIBLE METAL CONDUITS BETWEEN JUNCTION BOXES AND RECEPTACLES AND LUMINAIRES, AS NEEDED. COST OF SUCH CONDUITS SHALL BE INCLUDED IN THE COST OF THE RECEPTACLES OR LUMINAIRES. NO ADDITIONAL COMPENSATION WILL BE MADE FOR MATERIALS OR LABOR TO PERFORM THIS WORK.



LEFT GIRDER LIGHTING ELEVATION - UNIT 2 SPAN 10
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

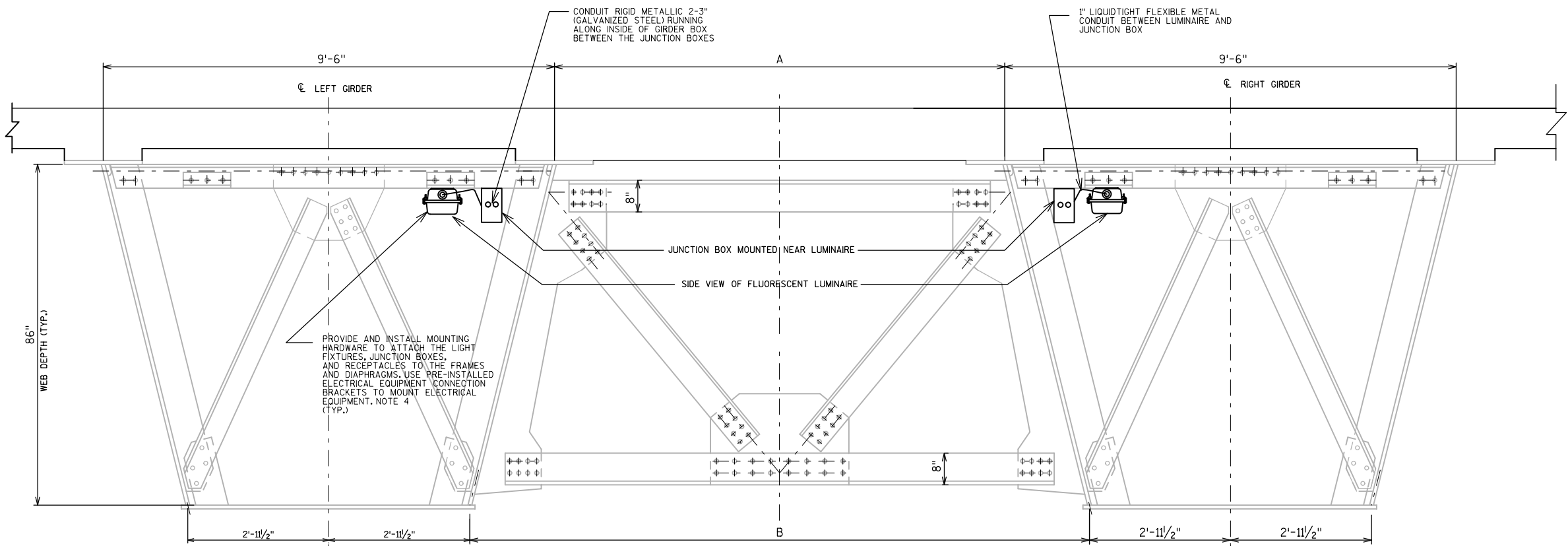


RIGHT GIRDER LIGHTING ELEVATION - UNIT 2 SPAN 10
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

CABLE LEGEND

- A 2-1/C #8, RECEPTACLE CIRCUIT, 120V
- B 2-1/C #8, LIGHTING CIRCUIT, 240V
- C 3-1/C #8, (2) RECEPTACLE CIRCUITS, ALTERNATING
- D 4-1/C #8, (2) LIGHTING CIRCUITS, ALTERNATING

NO. DATE REVISION BY			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MAE		PLANS CK'D. DAD	
GIRDER LIGHTING PLAN & ELEVATION		SHEET 71 OF 82	
UNIT 2 - SPAN 10			

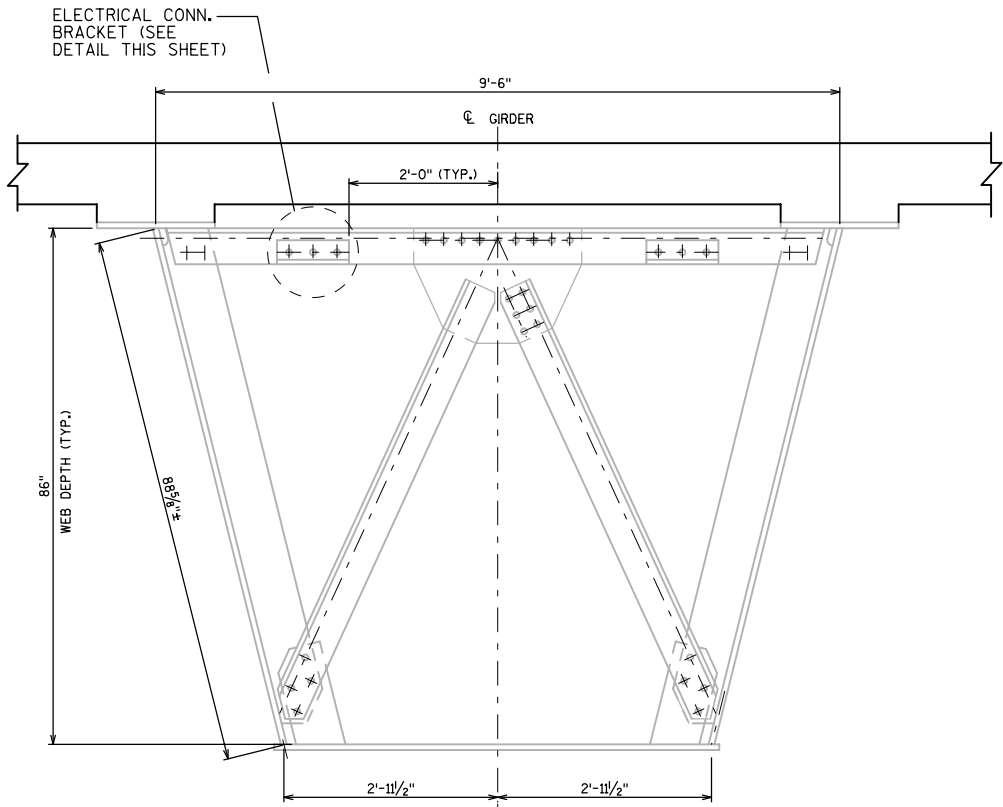


TYPICAL CROSS SECTION AT K-FRAME

NOT TO SCALE

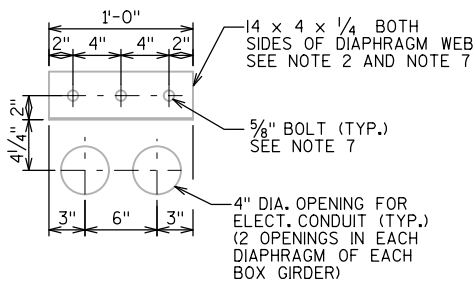
NOTES:

1. CONNECTION BRACKETS AND ATTACHING BOLTS SHOWN ARE FURNISHED BY STEEL GIRDER FABRICATOR FOR USE BY THE ELECTRICAL CONTRACTOR TO ATTACH THE LIGHT FIXTURES, CONDUITS AND BOXES. MODIFY BRACKETS AS NECESSARY AND FURNISH AND INSTALL MOUNTING HARDWARE TO PROVIDE A PROPER INSTALLATION FOR THE ELECTRICAL EQUIPMENT.
2. FURNISH AND INSTALL LIQUIDTIGHT FLEXIBLE METAL CONDUITS BETWEEN LIGHT FIXTURES/RECEPTACLES, JUNCTION BOXES AND ELECTRICAL PANELS, AS NEEDED.
3. SEAL OPENING AROUND ALL CONDUITS ENTERING THE BOX GIRDERS.
4. FURNISH AND INSTALL GALVANIZED STEEL OR 304 STAINLESS STEEL SUPPORTS, HARDWARE, NUTS, BOLTS, AND WASHERS FOR CONDUITS, JUNCTIONS BOXES, AND RECEPTACLES. ALL THREADED HARDWARE SHALL BE STAINLESS STEEL.
5. FURNISH AND INSTALL CONDUIT EXPANSION COUPLINGS AND FLEXIBLE BONDING JUMPERS BYPASSING THE COUPLINGS FOR CONDUITS CROSSING EXPANSION JOINTS, TO ENSURE GROUND CONTINUITY.



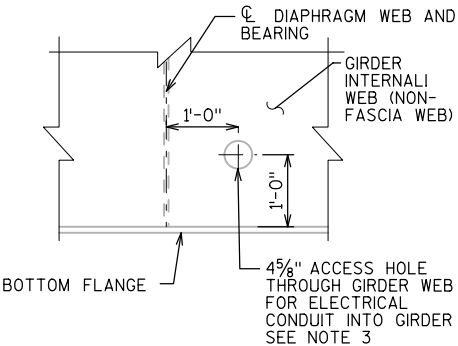
TYPICAL SECTION AT K-FRAME

NOT TO SCALE



OPENINGS AND CONNECTION
BRACKET DETAILS FOR ELECTRICAL

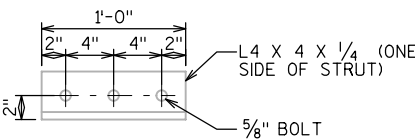
NOT TO SCALE



EXTERNAL ELECTRICAL
ACCESS DETAIL

TWO ACCESS LOCATIONS FOR INCOMING
POWER TO INTERIOR OF GIRDER
(TYP. BOTH GIRDERS)

NOT TO SCALE

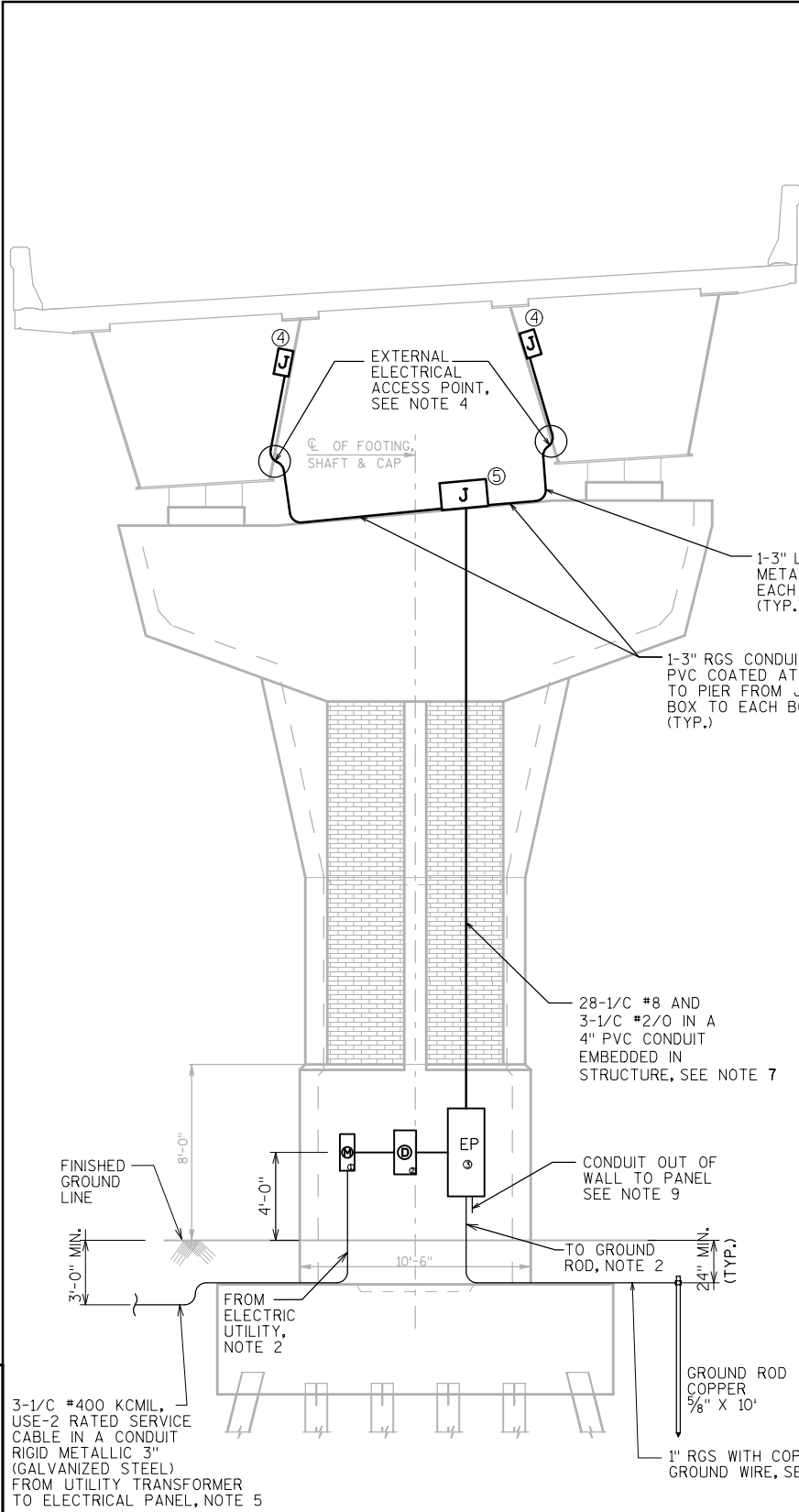


DETAIL FOR ELECTRICAL
CONNECTION BRACKET

NOT TO SCALE

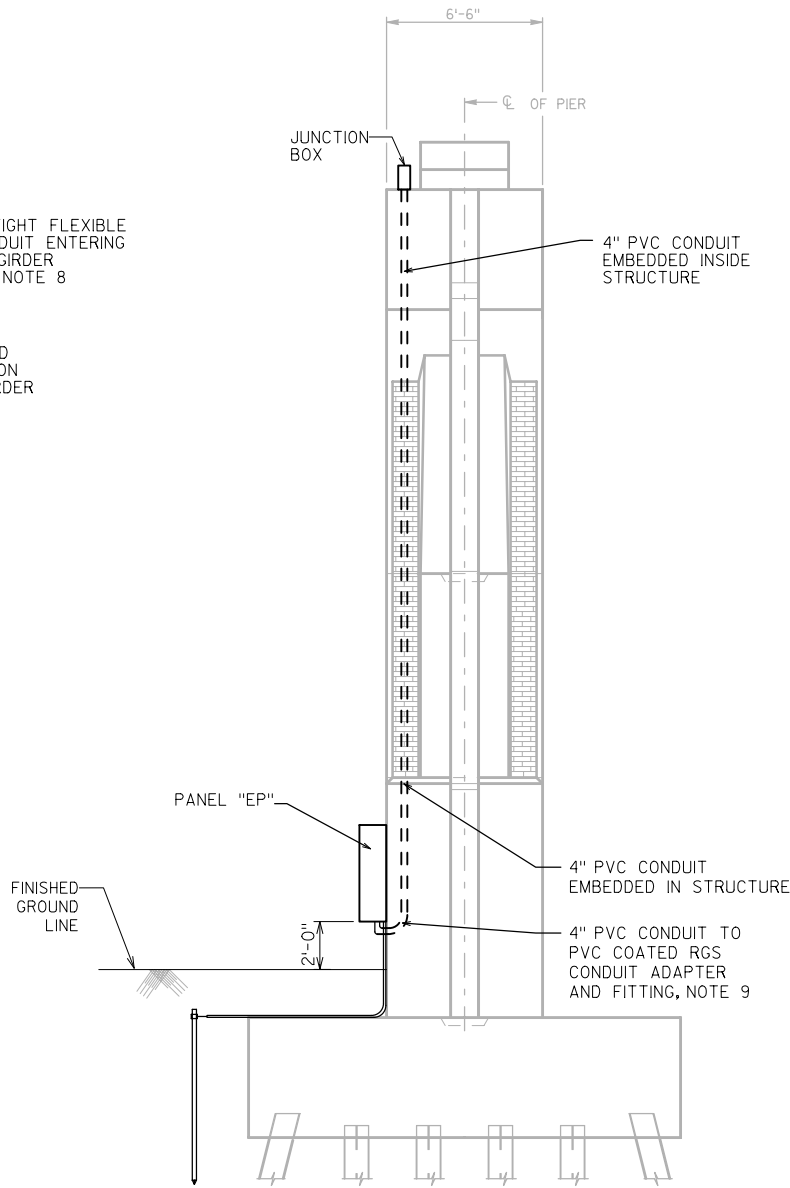
STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

NO.	DATE	REVISION	BY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION				
STRUCTURE B-5-658				
DRAWN BY		MAE	PLANS CK'D.	DAD
ELECTRICAL INSTALLATION DETAILS 1			SHEET 72 OF 82	



PIER 3 ELEVATION AND BRIDGE CROSS-SECTION

(SIDE FACING PIER 4)
NOT TO SCALE

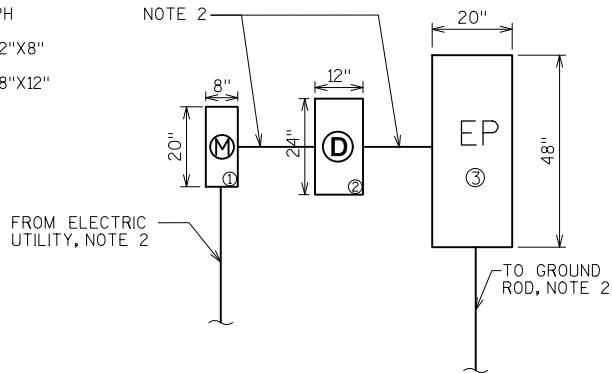


END VIEW

(LOW SIDE SHOWN, HIGH SIDE SIMILAR)
NOT TO SCALE

LEGEND:

- ① METER SOCKET AND METER
- ② DISCONNECT SWITCH, 400A,
- ③ ELECTRICAL PANEL, 400A, 240V/120, 1-PH
- ④ STAINLESS STEEL JUNCTION BOX, 27\"X12\"X8"
- ⑤ STAINLESS STEEL JUNCTION BOX, 24\"X18\"X12"



ELECTRICAL SERVICE EQUIPMENT DETAILS

NOT TO SCALE
* DIMENSIONS ARE APPROXIMATE AND VARY BY MANUFACTURER.

NOTES:

- FURNISH AND INSTALL NEMA 4X RATED STAINLESS STEEL OUTDOOR CABINETS, JUNCTION BOXES, AND ENCLOSURES.
- PAYMENT FOR ALL MATERIALS, EQUIPMENT, AND LABOR NEEDED TO INSTALL AND CONNECT THE ELECTRIC SERVICE FROM THE UTILITY TRANSFORMER TO THE MAIN ELECTRICAL PANEL "EP" IS PAID FOR AS PART OF PAY ITEM NO. SPV.0105.700 - ELECTRICAL SERVICE INSTALLATION. THAT PAYMENT INCLUDES THE APPROVED METER SOCKET, ALL ELECTRICAL PANELS INCLUDING SUB-PANELS, DISCONNECT SWITCH, CABLES, CONDUITS, GROUNDING, AND TRENCHING FOR CONDUITS SHOWN ON THE PLANS. ALL CONNECTIONS, SPLICING, AND WIRING TO THE NEW ELECTRICAL PANELS AND DISCONNECT SWITCH ARE ALSO INCLUDED UNDER THE SAME PAY ITEM. THE SERVICE CABLE AND CONDUIT SIZE SHALL BE AS SHOWN ON THE PLANS. FURNISH, INSTALL, AND PAY FOR ELECTRICAL PANEL GROUNDING MATERIALS, EQUIPMENT AND LABOR UNDER THIS PAY ITEM. JUNCTION BOXES SHOWN ARE PAID FOR SEPARATELY.
- EXTEND THE SERVICE UP THE PIER TO A DISTRIBUTION JUNCTION BOX. FROM THERE, ROUTE THE BRANCH CIRCUIT WIRING TO EACH BOX GIRDER.
- SEE EXTERNAL ELECTRICAL ACCESS DETAIL ON SHEET 77. ALSO SEE INTERMEDIATE PIER DIAPHRAGMS XD1 AND D1 FOR EXACT LOCATION OF ELECTRICAL ACCESS HOLE.
- VERIFY THE SIZE OF THE SERVICE CONDUCTORS ONCE THE EXACT LOCATION OF THE ELECTRIC UTILITY TRANSFORMER IS KNOWN AND BASED UPON THE ACTUAL LOAD, THE DISTANCE TO THE ELECTRIC UTILITY TRANSFORMER AND THE SIZE OF THE MAIN CIRCUIT BREAKER IN THE ELECTRICAL PANEL "EP". ALLOWABLE VOLTAGE DROP OF 3%. PROVIDE AND INSTALL USE-2 RATED SERVICE CONDUCTORS.
- THE UTILITY TO PROVIDE THE EXACT LOCATION OF THE ELECTRIC SERVICE TRANSFORMER.
- FURNISH AND INSTALL 4" CONDUIT RIGID NONMETALLIC SCHEDULE 40 (PVC) CAST INTO THE PIER (EMBEDDED) AS SHOWN. INSTALL CONDUITS ENTERING EACH BOX GIRDER THAT WILL HAVE THE CONDUCTORS FOR BOTH THE LIGHTING AND THE GFI RECEPTACLE CIRCUITS.
- FURNISH AND INSTALL 3" LIQUIDTIGHT FLEXIBLE METAL CONDUITS (LTFMC) WHEN ENTERING THE BOX GIRDERS THROUGH THE ELECTRICAL ACCESS HOLES. INSTALL THE LTFMC BETWEEN THE RIGID GALVANIZED STEEL CONDUITS. SEAL THE AREA AROUND THE FLEXIBLE CONDUITS ENTERING THE BOX GIRDERS AT THE ACCESS HOLE WITH BUSHINGS TO PROVIDE A TIGHT SEAL. PAYMENT FOR ALL LIQUIDTIGHT FLEXIBLE METAL CONDUITS IS INCLUDED UNDER THE CONDUIT RIGID METALLIC PVC COATED 3" PAY ITEM, AND NO SEPARATE PAYMENT WILL BE MADE.
- STUB CONDUIT EMBEDDED IN STRUCTURE OUT OF WALL UNDER THE ELECTRICAL PANEL "EP". FURNISH AND INSTALL CONDUIT RIGID METALLIC PVC COATED 4" BETWEEN THE PVC CONDUIT EMBEDDED IN THE PIER AND THE ELECTRICAL PANEL "EP". FURNISH AND INSTALL ALL NECESSARY ELBOWS, FITTINGS, AND PVC TO RGS ADAPTERS TO COMPLETE THE INSTALLATION. INCLUDE COST FOR THE MATERIALS AND LABOR NEEDED, AND DESCRIBED HERE, IN THE COST OF THE ELECTRICAL PANEL.
- FURNISH AND INSTALL GALVANIZED STEEL OR 304 STAINLESS STEEL SUPPORTS, HARDWARE, NUTS, BOLTS, AND WASHERS FOR CONDUITS, JUNCTIONS BOXES, AND RECEPTACLES. ALL THREADED HARDWARE SHALL BE STAINLESS STEEL.
- FURNISH AND INSTALL CONDUIT EXPANSION COUPLINGS AND FLEXIBLE BONDING JUMPERS BYPASSING THE COUPLINGS FOR CONDUITS CROSSING EXPANSION JOINTS, TO ENSURE GROUND CONTINUITY.

STATE PROJECT NUMBER			
1133-03-73			
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		MAE	PLANS CK'D. DAD
ELECTRICAL INSTALLATION DETAILS 2		SHEET 73 OF 82	

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

NOTES:

1. CONTROL THE OPERATION OF THE BOX GIRDER LIGHTING FROM THE MAIN ELECTRICAL PANEL "EP", OR SUB-PANELS "A" AND "B". LIGHT SWITCHES INSIDE THE BOX GIRDERS WILL NOT BE INSTALLED. USE MAIN BREAKER IN PANEL "EP" TO TURN ALL LIGHTS ON OR OFF. USE INDIVIDUAL BRANCH CIRCUIT BREAKERS TO TURN ON/OFF INDIVIDUAL CIRCUITS FOR LIGHTING OR RECEPTACLES.
2. USE MULTIPLE CIRCUIT BREAKERS TO WIRE THE LIGHTING FIXTURES AND GFCI RECEPTACLES IN EACH BOX GIRDER, AS SHOWN.
3. FURNISH AND INSTALL TWO (2) ELECTRICAL SUB-PANELS IN ADDITION TO THE MAIN ELECTRICAL PANEL "EP". INSTALL ONE SUB-PANEL INSIDE EACH BOX GIRDER AS SHOWN IN OTHER PLANS.
4. BRANCH CIRCUIT LOAD DISTRIBUTION IS THE SAME FOR BOTH SUB-PANELS "A" AND "B".
5. FURNISH AND INSTALL SPARE BREAKERS FOR ALL UNUSED CIRCUITS, NO EMPTY SPACES IN PANELS.
6. USE COPPER FOR ALL WIRING AND BUS BARS.
7. FURNISH AND INSTALL HEAVY DUTY, COMMERCIAL QUALITY, OUTDOOR RATED EQUIPMENT, PANELS, JUNCTION BOXES, AND CABINETS. FURNISH AND INSTALL NEMA 4X RATED STAINLESS STEEL JUNCTION BOXES, RECEPTACLE BOXES AND ENCLOSURES FOR ALL OUTDOOR ELECTRICAL EQUIPMENT. DISCONNECT SWITCH SHALL BE SERVICE ENTRANCE RATED.
8. FURNISH AND INSTALL 3-1/2 #400 KCMIL, USE-2 RATED SERVICE CABLE. SEE NOTES ON SHEET 73, ELECTRICAL INSTALLATION DETAILS 2.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
		DRAWN BY MAE	PLANS CK'D. DAD
ELECTRICAL INSTALLATION DETAILS 3			SHEET 74 OF 82

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.

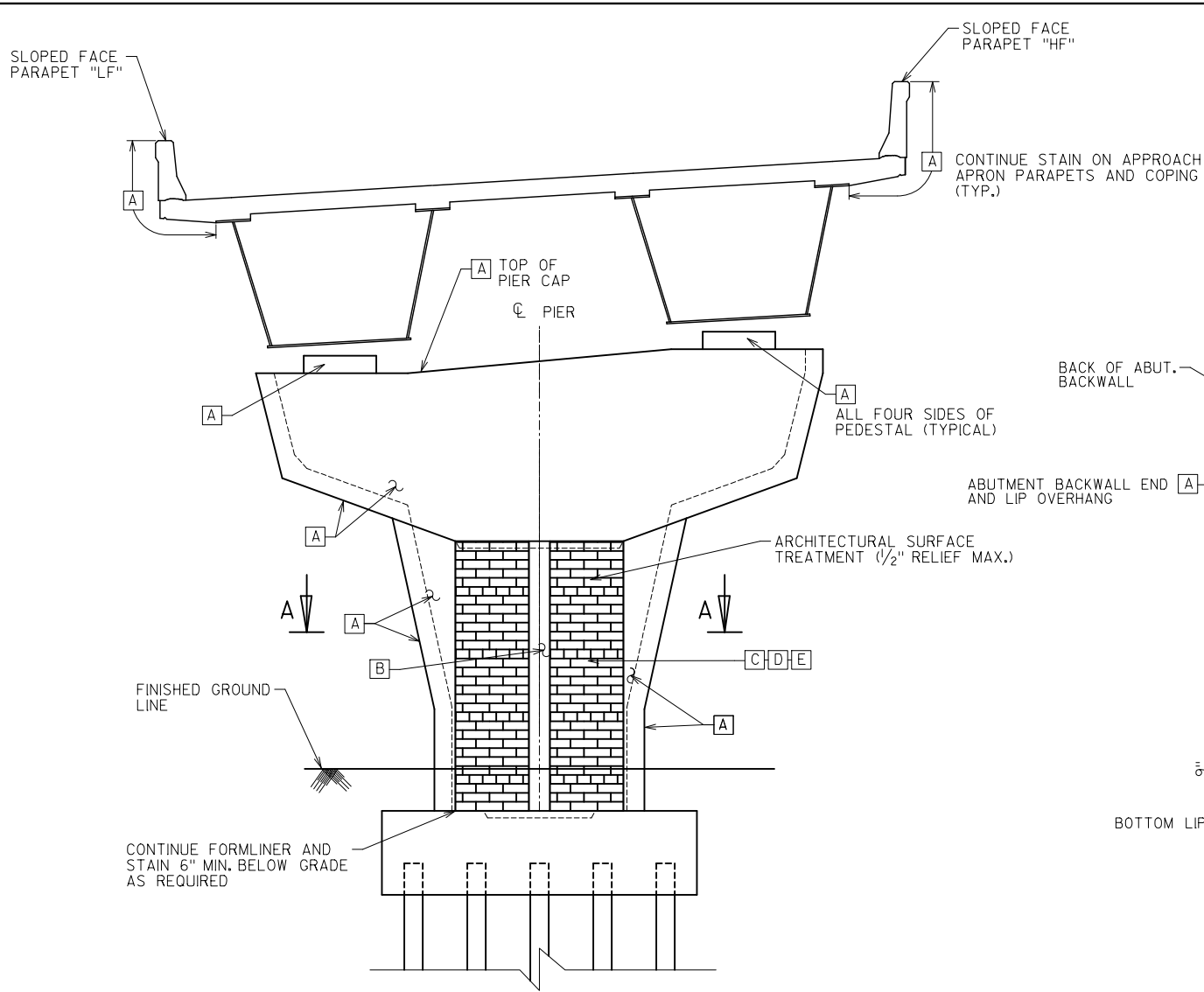
STATE PROJECT NUMBER

1133-03-73

Electrical Panel: <u>EP</u>													
Rating: 400A Voltage: 120/240 Volts, <u>1</u> Phase <u>3</u> Wire Feeder Conductors: <u>400</u> KCMIL Main Brkr: <u>400</u> amps						BRIDGE B-5-658							
Ckt	Brkr Amps	Brkr Poles 1 or 2	Description	VA		A	B	VA		Description	Brkr Poles 1 or 2	Brkr Amps	Ckt
1	20	1	RIGHT BOX GIRDER RECEPTACLES 2-6 EVEN	1080		X		550		RIGHT BOX GIRDER LIGHTS 2-22 (EVEN)	1	20	2
3	20	1	RIGHT BOX GIRDER RECEPTACLES 1-5 ODD		1080		X		550				4
5	20	1	RIGHT BOX GIRDER RECEPTACLES 8-10 EVEN	720		X		550		RIGHT BOX GIRDER LIGHTS 1-21 (ODD)	1	20	6
7	20	1	RIGHT BOX GIRDER RECEPTACLES 7-11 ODD		1080		X		550				8
9	20	1	LEFT BOX GIRDER RECEPTACLES 2-6 EVEN	1080		X		350		RIGHT BOX GIRDER LIGHTS 24-36 (EVEN)	1	20	10
11	20	1	LEFT BOX GIRDER RECEPTACLES 1-5 ODD		1080		X		350				12
13	20	1	LEFT BOX GIRDER RECEPTACLES 8-10 EVEN	720		X		400		RIGHT BOX GIRDER LIGHTS 23-37 (ODD)	1	20	14
15	20	1	LEFT BOX GIRDER RECEPTACLES 7-11 ODD		1080		X		400				16
17	20	1	SPARE			X		550		LEFT BOX GIRDER LIGHTS 2-22 (EVEN)	1	20	18
19	20	1	SPARE				X		550				20
21	20	1	SPARE			X		550		LEFT BOX GIRDER LIGHTS 1-21 (ODD)	1	20	22
23	20	1	SPARE				X		550				24
25	20	1	SPARE			X		350		LEFT BOX GIRDER LIGHTS 24-36 (EVEN)	1	20	26
27	20	1	SPARE				X		350				28
29	20	1	SPARE			X		400		LEFT BOX GIRDER LIGHTS 23-37 (ODD)	1	20	30
31	20	1	SPARE				X		400				32
33	20	1	SPARE				X			SPARE	1	20	34
35	20	1	SPARE				X						36
37	100	2	ELECTRICAL SUB-PANEL A FEEDER (RIGHT GIRDER)	7920		X		7920		ELECTRICAL SUB-PANEL B FEEDER (LEFT GIRDER)	2	100	38
39					7200		X		7200				
41	20	1	SPARE			X				SPARE	1	20	42
TOTALS				11520	11520			11620	10900	TOTALS			
BUS A: <u>23140</u> BUS B: <u>22420</u> LOAD: <u>45560</u>												45.56 KVA DEMAND 189.8 LINE AMPS 237.3 TRIP MAIN AMPS 400A FRAME MAIN	

Electrical Panel: <u>SUB-PANEL "A"</u>													
Rating: 150A Voltage: 120/240 Volts, <u>1</u> Phase <u>3</u> Wire Feeder Conductors: <u>2/0</u> AWG Main Brkr: <u>150</u> amps						BRIDGE B-5-658							
Ckt	Brkr Amps	Brkr Poles 1 or 2	Description	VA		A	B	VA		Description	Brkr Poles 1 or 2	Brkr Amps	Ckt
1	20	1	RIGHT BOX GIRDER RECEPTACLES 22-18 EVEN	1080		X		550		RIGHT BOX GIRDER LIGHTS 72-54 (EVEN)	1	20	2
3	20	1	RIGHT BOX GIRDER RECEPTACLES 21-17 ODD		1080		X		550				4
5	20	1	RIGHT BOX GIRDER RECEPTACLES 12-16 EVEN	1080		X		450		RIGHT BOX GIRDER LIGHTS 71-55 (ODD)	1	20	6
7	20	1	RIGHT BOX GIRDER RECEPTACLES 13-15 ODD		720		X		450				8
9	20	1	LEFT BOX GIRDER RECEPTACLES 22-18 EVEN	1080		X		400		RIGHT BOX GIRDER LIGHTS 38-52 (EVEN)	1	20	10
11	20	1	LEFT BOX GIRDER RECEPTACLES 21-17 ODD		1080		X		400				12
13	20	1	LEFT BOX GIRDER RECEPTACLES 12-16 EVEN	1080		X		400		RIGHT BOX GIRDER LIGHTS 39-53 (ODD)	1	20	14
15	20	1	LEFT BOX GIRDER RECEPTACLES 13-15 ODD		720		X		400				16
17	20	1	SPARE			X		550		LEFT BOX GIRDER LIGHTS 72-54 (EVEN)	1	20	18
19	20	1	SPARE				X		550				20
21	20	1	SPARE			X		450		LEFT BOX GIRDER LIGHTS 71-55 (ODD)	1	20	22
23	20	1	SPARE				X		450				24
25	20	1	SPARE			X		400		LEFT BOX GIRDER LIGHTS 38-52 (EVEN)	1	20	26
27	20	1	SPARE				X		400				28
29	20	1	SPARE			X		400		LEFT BOX GIRDER LIGHTS 39-53 (ODD)	1	20	30
31	20	1	SPARE				X		400				32
33	20	1	SPARE			X				SPARE	1	20	34
35	20	1	SPARE				X						36
37	20	1	SPARE			X				SPARE	1	20	38
39	20	1	SPARE				X						40
41	20	1	SPARE			X				SPARE	1	20	42
TOTALS				4320	3600			3600	3600	TOTALS			
BUS A: <u>7920</u> BUS B: <u>7200</u> LOAD: <u>15120</u>						15.12 KVA DEMAND 63.0 LINE AMPS 78.8 TRIP MAIN AMPS 150A FRAME MAIN							

ELECTRICAL SUB-PANEL "B" IN THE LEFT BOX GIRDER IS SIMILAR.

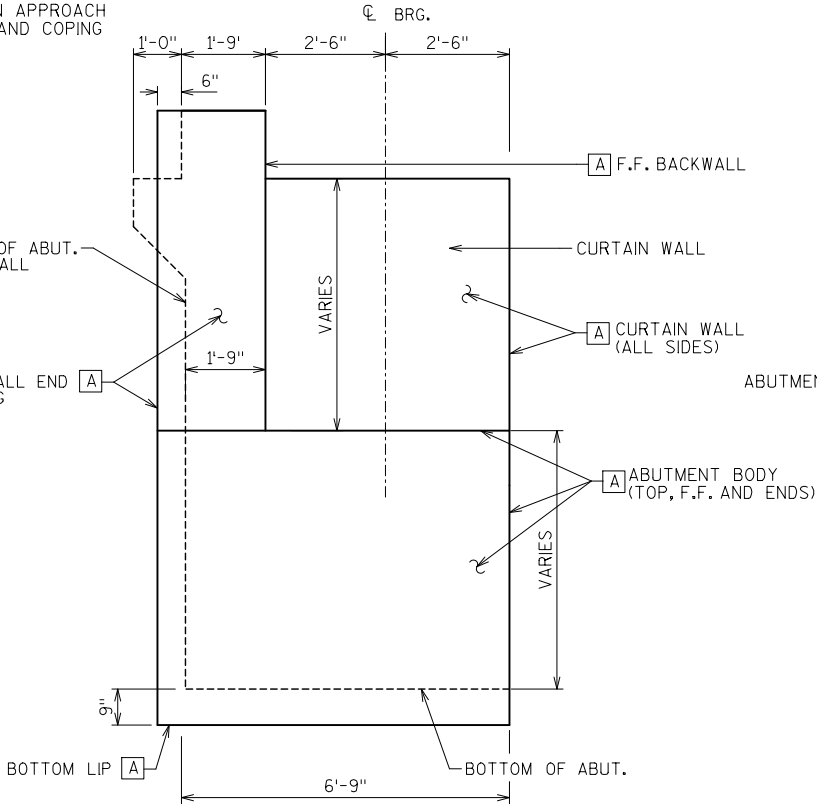


TYPICAL CROSS SECTION - UNITS 1 & 2
(LOOKING UPSTATION)

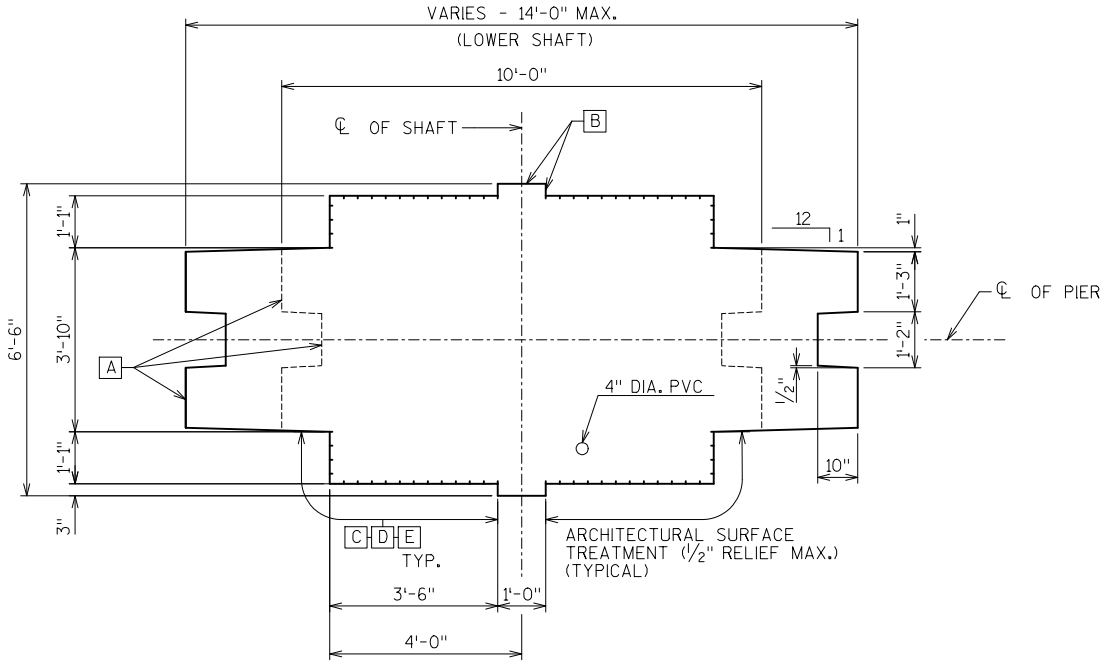
CONCRETE STAINING SCHEDULE

MARK	COLOR	FEDERAL COLOR	LOCATION
A	BASE COLOR	33522	BRIDGES, PARAPETS, WALLS
B	ACCENT COLOR #1	33303	REVEALS, OUTSIDE OF CONC. GIRDER, STEEL BOX GIRDERS
C	ACCENT COLOR #3	12160	BRICK COLOR (70% OF BRICK)
D	ACCENT COLOR #4	10091	BRICK COLOR (15% OF BRICK)
E	ACCENT COLOR #5	10219	BRICK COLOR (15% OF BRICK)

NOTE: 1. ALL COLOR DESIGNATIONS ARE FEDERAL STANDARD COLORS.
2. FINISH ON COLORS IS FLAT (LUSTERLESS)



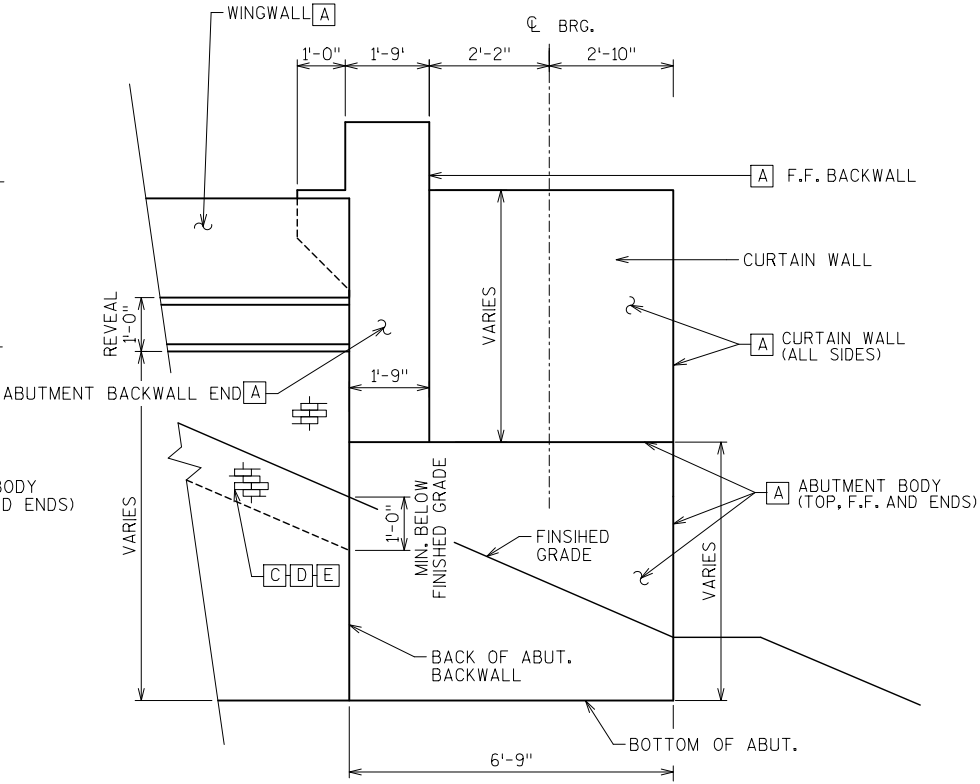
NORTH ABUTMENT ELEVATION



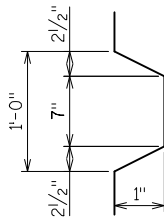
SECTION A-A

NOTE: ALL DIMENSIONS ARE SYMMETRICAL.

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT



WEST ABUTMENT ELEVATION



REVEAL DETAIL

NOTES:

FORMLINER COURSING ON PIERS SHALL BE LEVEL.
THE FORMLINER COURSING ON ALL FACES OF EACH COLUMN SHALL BE VERTICALLY ALIGNED.
THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS.
FOR ABUT. AND PIER DETAILS SEE SHEETS TITLED "WEST ABUTMENT", "NORTH ABUTMENT" & "PIER 1-9 LAYOUT DETAILS".
SEE MSE WALL R-5-60, R-5-61, AND R-5-245 PLANS FOR AESTHETIC DETAILS AT NORTH ABUTMENT.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
AESTHETIC DETAILS		SHEET 75 OF 82	

ALL MATERIAL FOR TYPE "GC" CASTINGS,
EXCLUDING GRATE HOLD DOWN SCREWS,
SHALL BE GRAY IRON CONFORMING TO
A.S.T.M. A48, CLASS 30. (APPROX. WEIGHT=
225#)

THE CONTRACTOR MAY PROPOSE AN ALTERNATE TYPE OF BRACKET. THE PROPOSED ALTERNATE DETAILS SHALL BE SUBMITTED AND SUBJECT TO THE APPROVAL OF THE ENGINEER.

TRANSVERSE AND LONGITUDINAL SLAB BAR
REINFORCEMENT TO BE CUT A MINIMUM 1" CLEAR
FROM DRAIN. DISPLACE BARS WHERE POSSIBLE.

DO NOT PLACE SHEAR STUDS ON TOP FLANGE OF LEFT GIRDER WHERE THEY INTERFERE WITH THE FLOOR DRAIN.

ATTACH GRATE TO
FRAME FOR SHIPMENT

1/4" ALLOW FOR TIGHTENING

1/2" ϕ BOLT

2 1/2" X 3/8" BAR (TYP.)

6 5/8" DIA.

1/2"

1/4"

FACE OF GIRDER WEB

1 1/2"

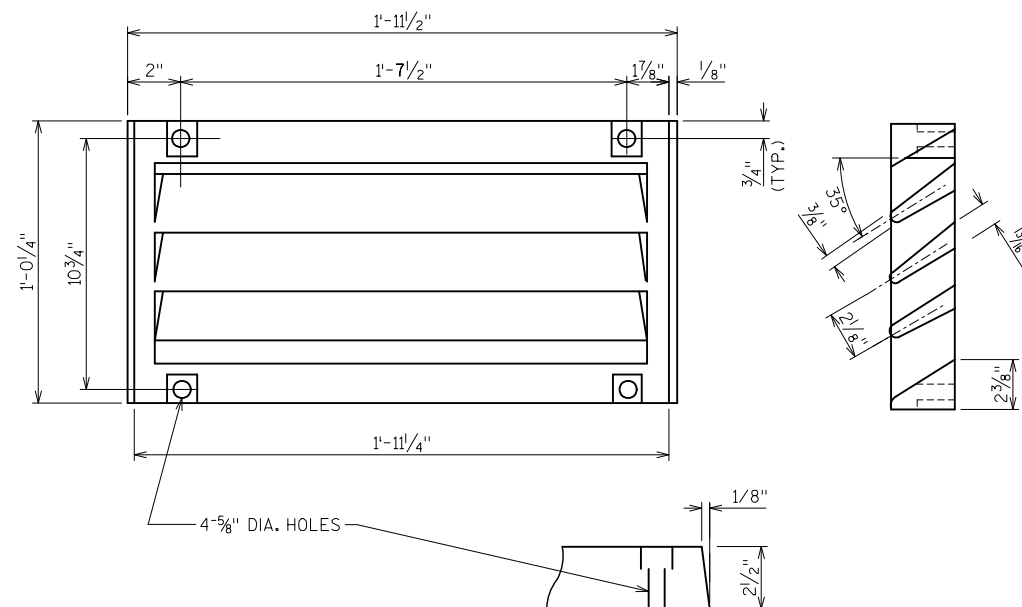
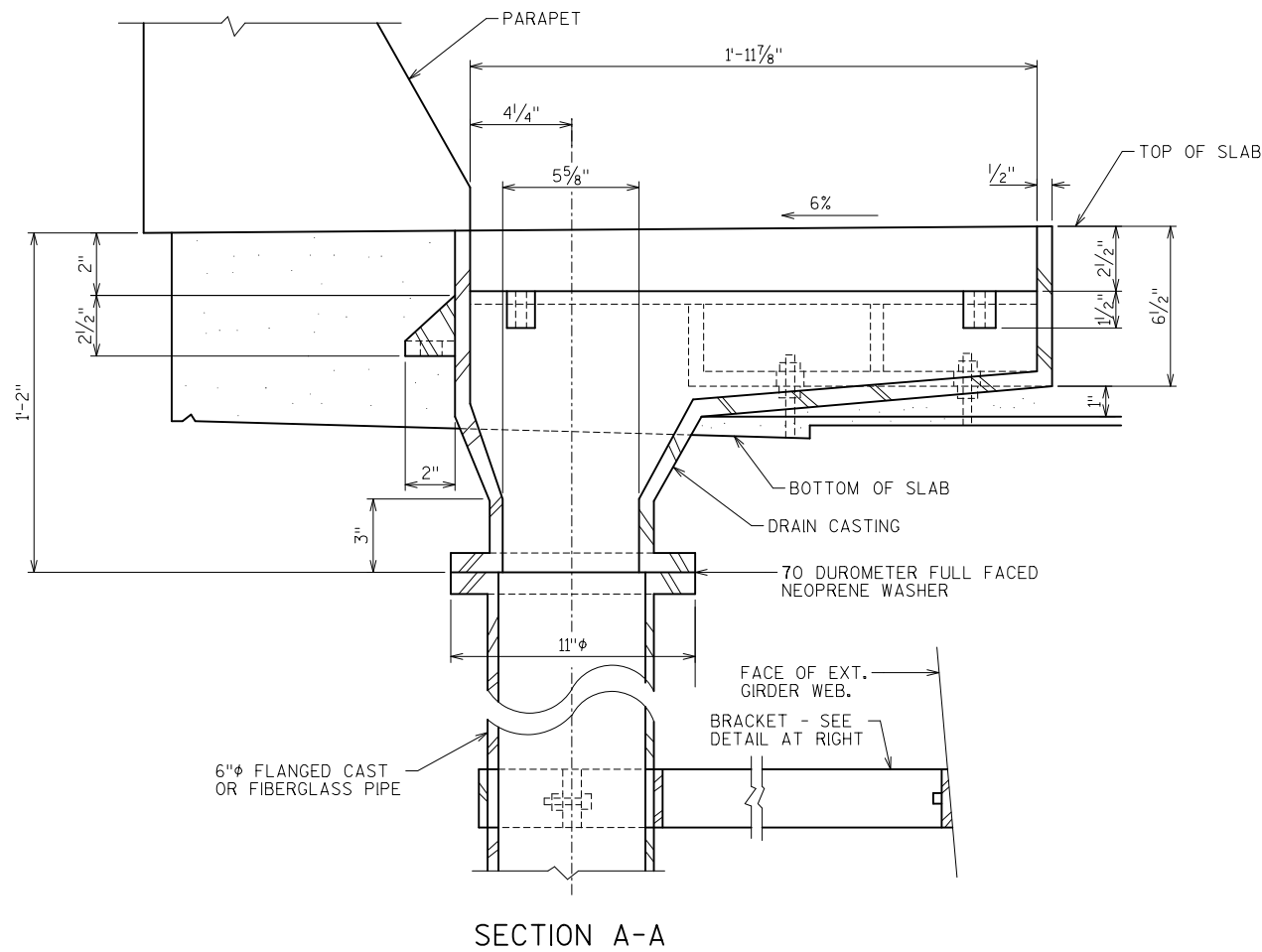
1 1/2"

13/16" ϕ HOLE FOR 3/4" ϕ BOLT

1/2" ϕ BOLT-THRU 9/16" ϕ HOLE & 2 1/2" X 2 1/2" SLOTTED HOLE

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		MJA	PLANS CK'D. MDR
FLOOR DRAIN TYPE 'GC'		SHEET 76 OF 82	



NOTES:

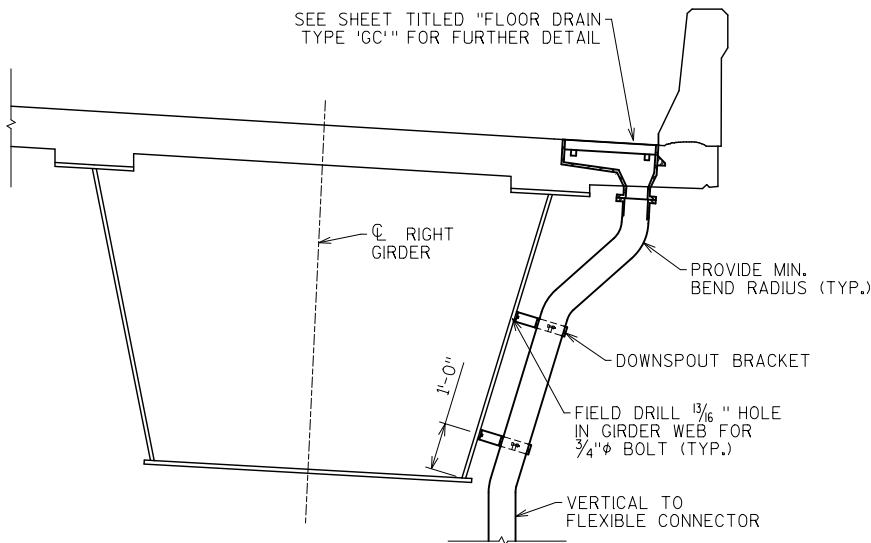
SEE SHEETS TITLED "DECK REINFORCEMENT UNIT 1-2" FOR TYPICAL DECK SLAB REINFORCEMENT.

SEE SHEETS TITLED "TYPICAL DECK SECTION" FOR PARAPET DETAILS AND REINFORCEMENT.

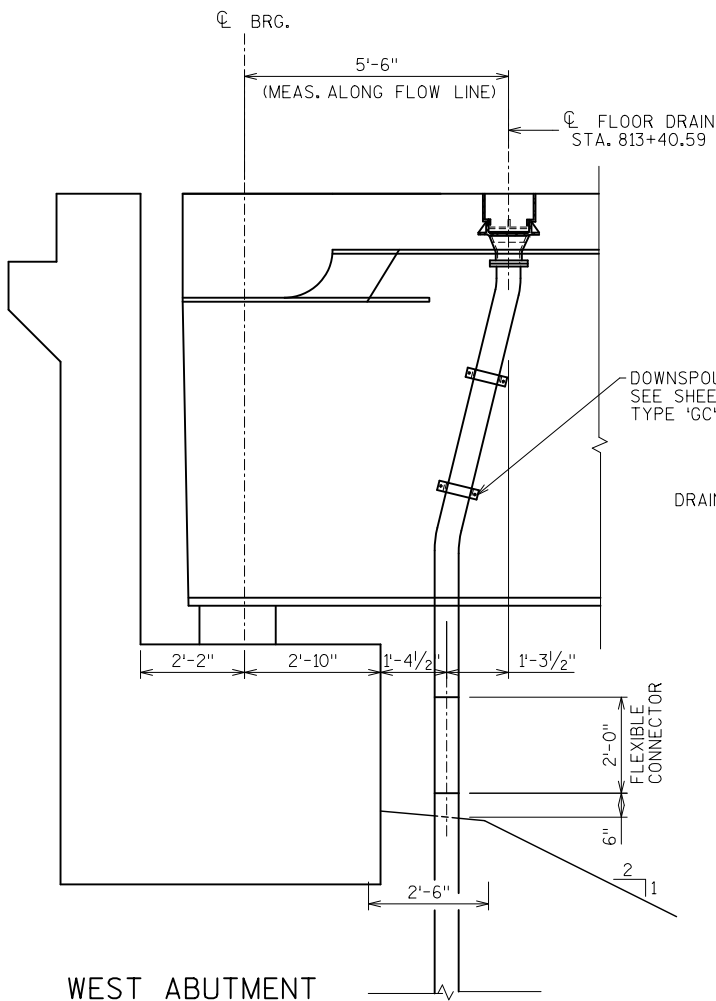
PARAPET REINFORCEMENT AND DOWELS NOT SHOWN FOR CLARITY - RESPACE LOCALLY AS REQUIRED TO CLEAR FLOOR DRAIN.

FORM DECK AROUND DRAIN PIPE CASTING TO ALLOW SUFFICIENT CLEARANCE TO TIGHTEN FLANGE BOLTS.

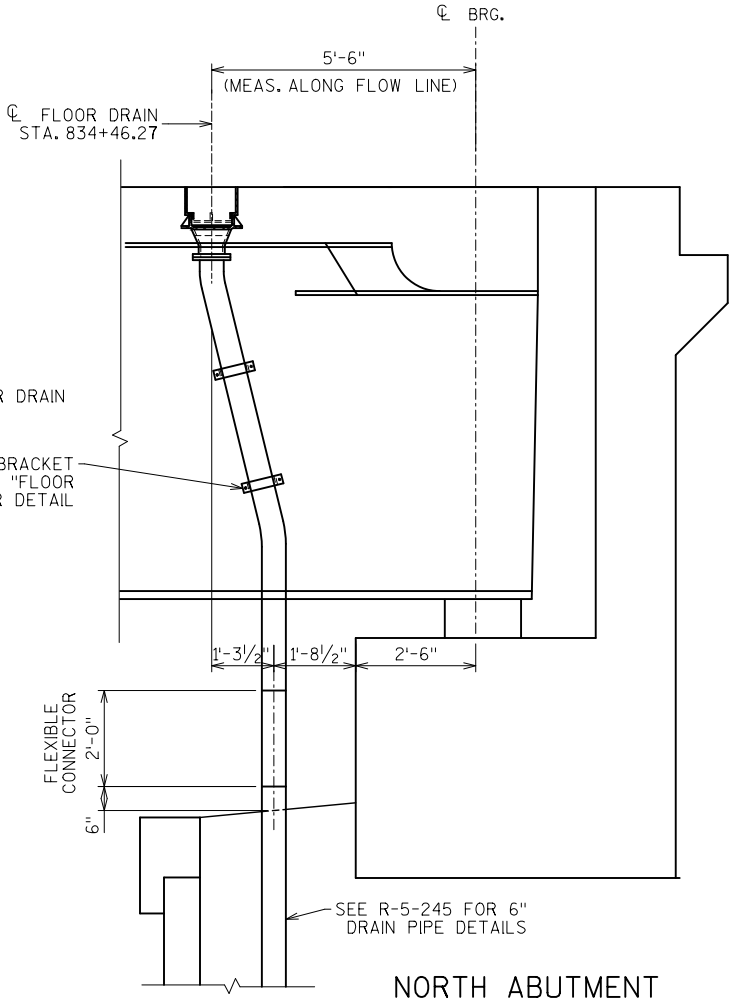
PAYMENT FOR 6"Ø DOWNSPOUT, FLEXIBLE CONNECTOR, DOWNSPOUT BRACKETS, AND ALL NECESSARY HARDWARE IS INCLUDED IN BID ITEM SPV.0090.705 "DOWNSPOUT 6-INCH."



PART SECTION THRU BRIDGE
(LOOKING UPSTATION)

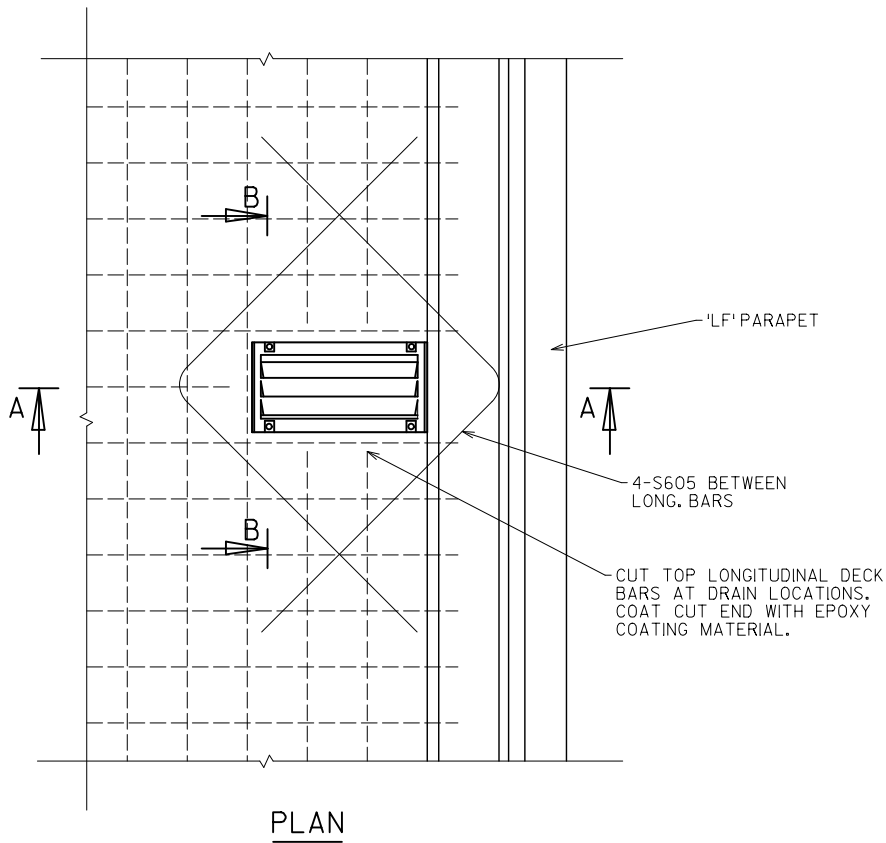


WEST ABUTMENT

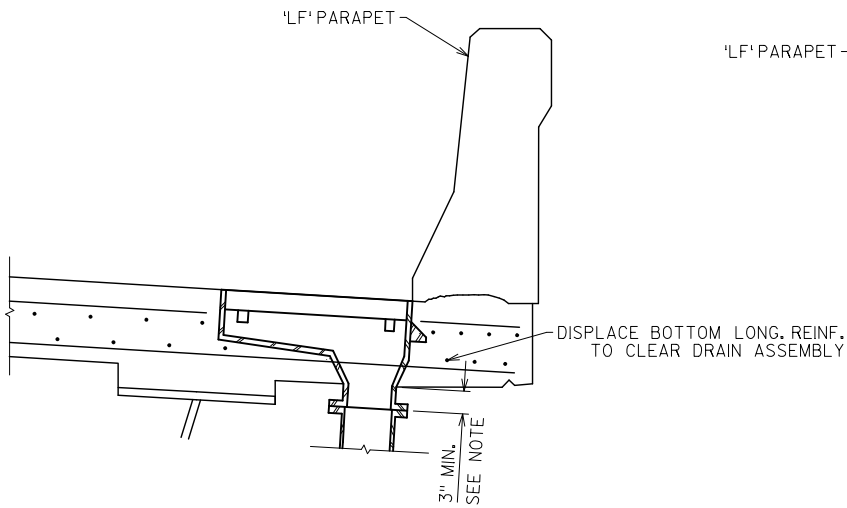


NORTH ABUTMENT

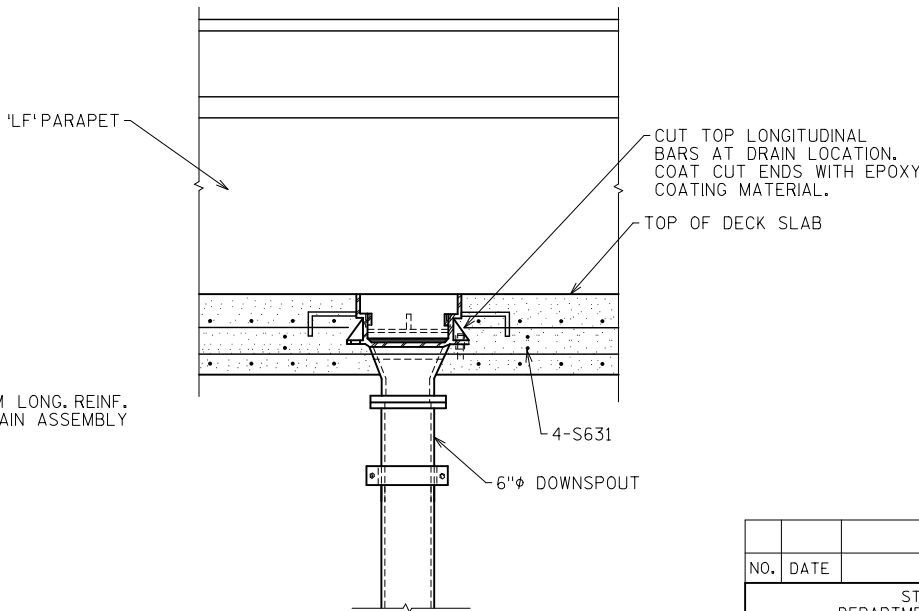
ELEVATION
(LOOKING NORTH)



PLAN

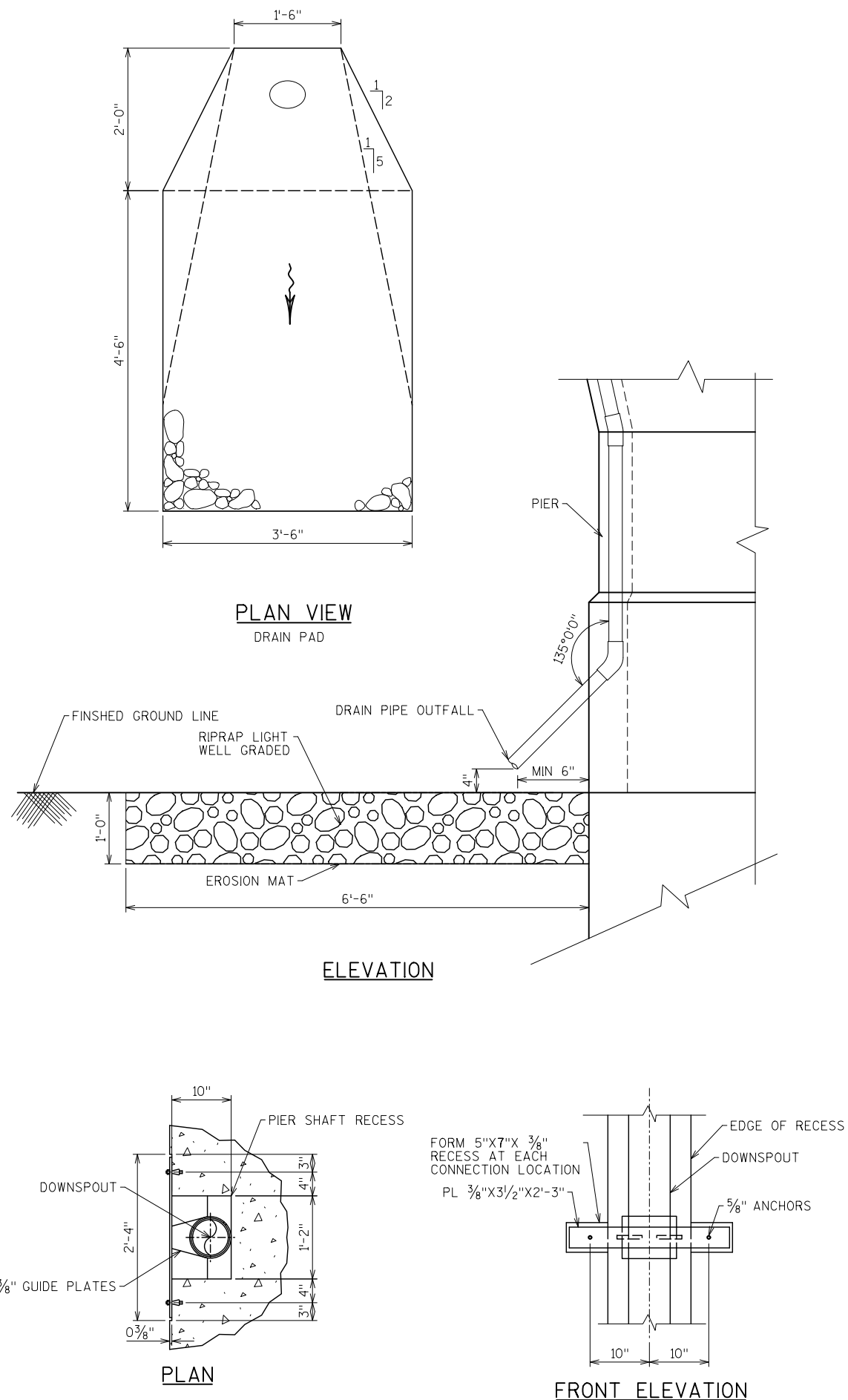


SECTION A-A

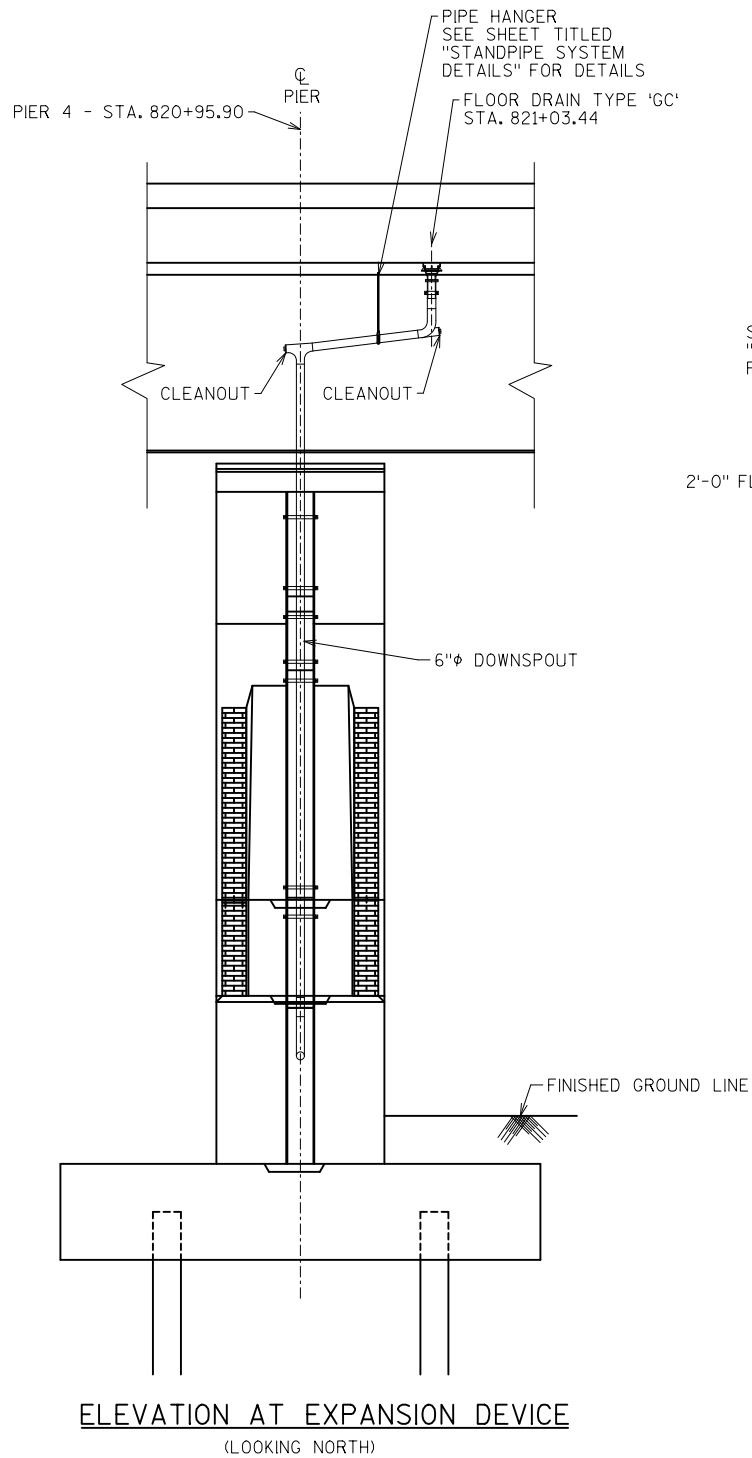


SECTION B-B

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY MJA		PLANS CK'D. MDR	
FLOOR DRAIN DETAILS		SHEET 77 OF 82	



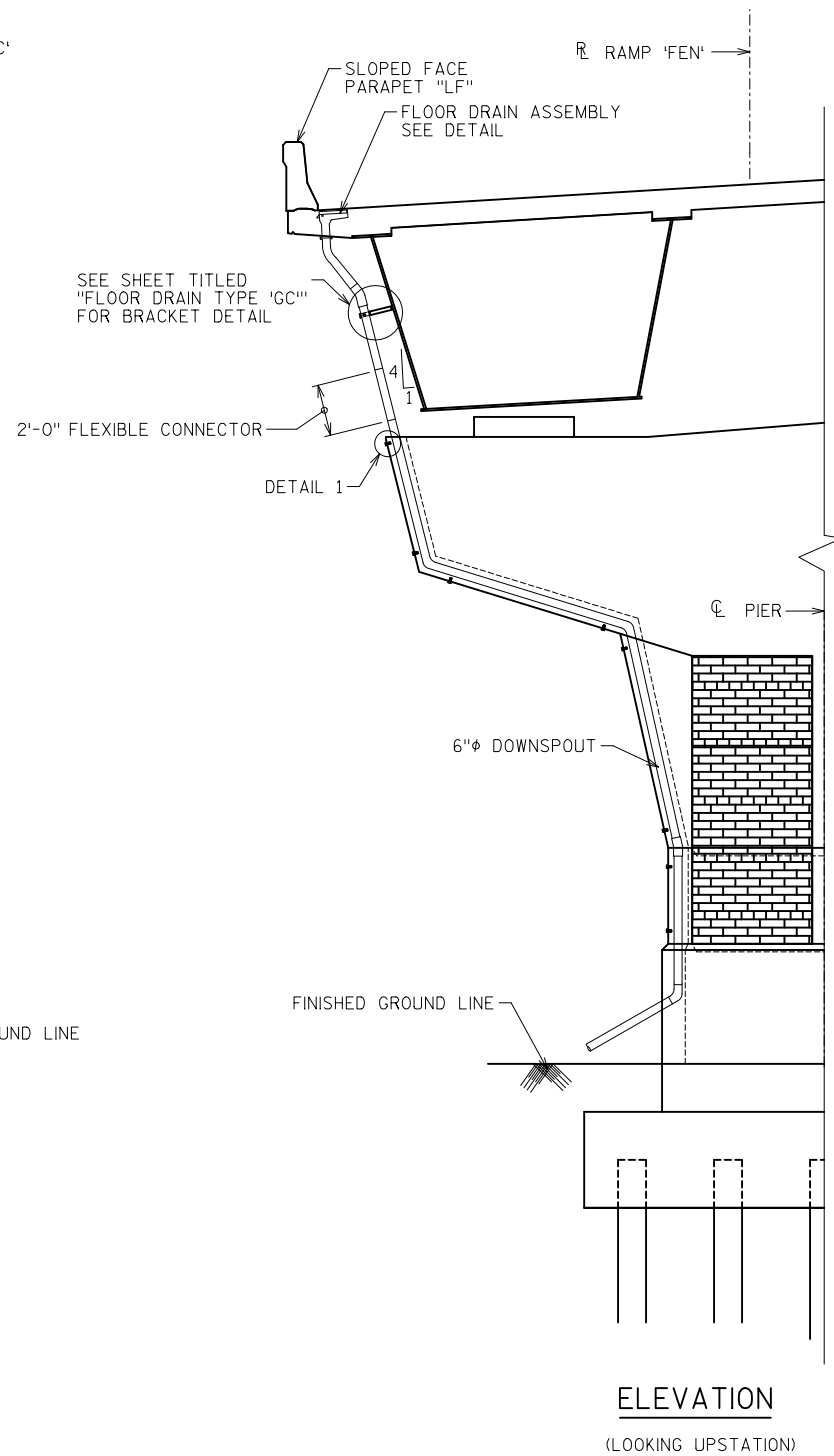
DETAIL 1



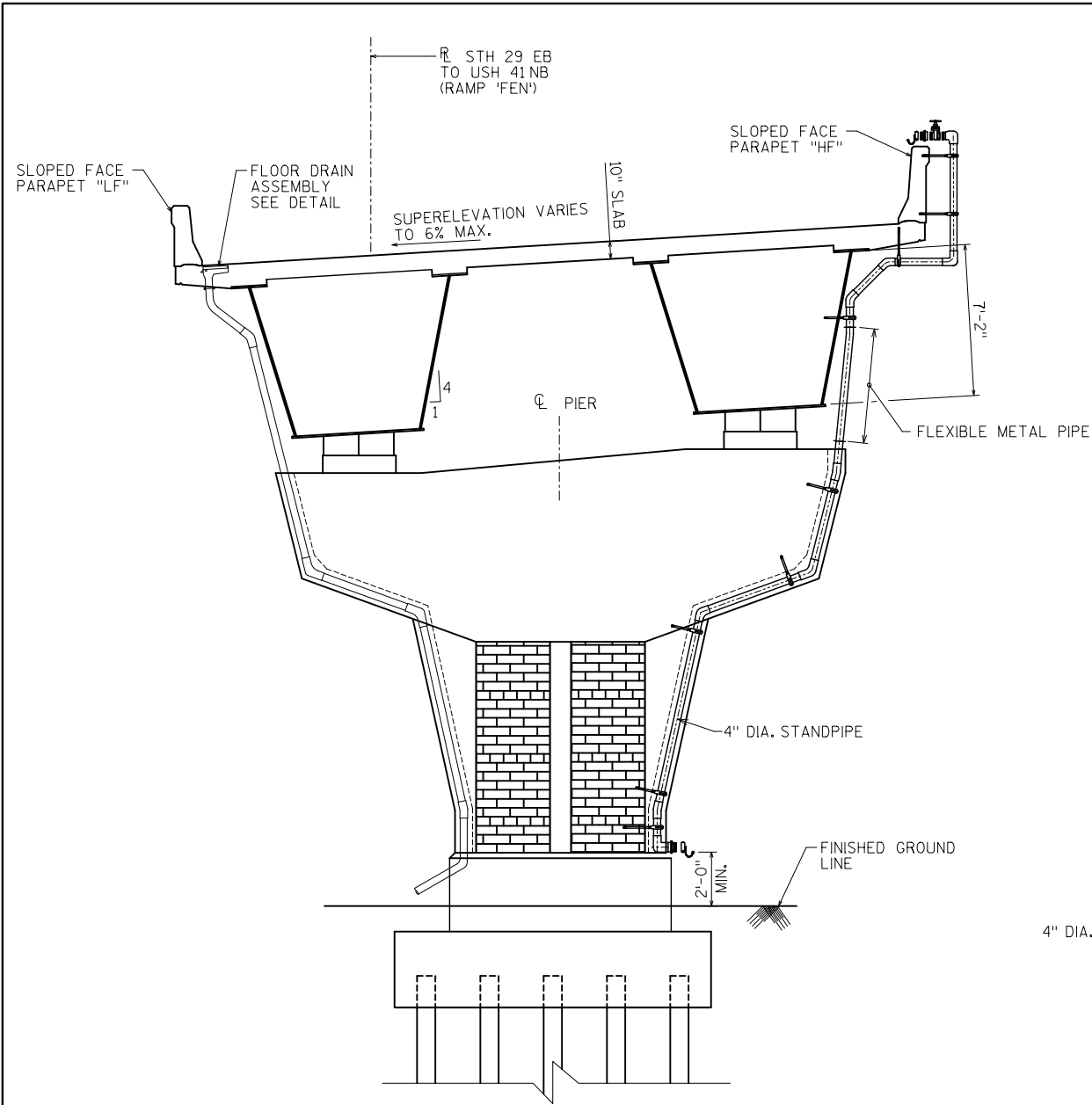
NOTES

- SEE SHEET TITLED "FLOOR DRAIN DETAILS" FOR DRAIN PIPE SPECIFICATIONS.
- EXCAVATION INCIDENTAL TO ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-5-658".
- VERIFY ALL DIMENSIONS PRIOR TO FABRICATING DOWNSPOUT.
- ALL FLEXIBLE CONNECTORS, FITTINGS, ELBOWS, CLEANOUTS, HANGERS AND ALL CONNECTION AND INSTALLATION HARDWARE ARE CONSIDERED INCIDENTAL TO ITEM "DOWNSPOUT RTRP 6-INCH".
- THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE DOWNSPOUT MAY BE ALTERED TO AVOID INTERFERENCE WITH THE GIRDER CROSS FRAME. MAINTAIN A 2% MINIMUM SLOPE AND TRANSITION TO STEEPER SLOPE AS SOON AS POSSIBLE.

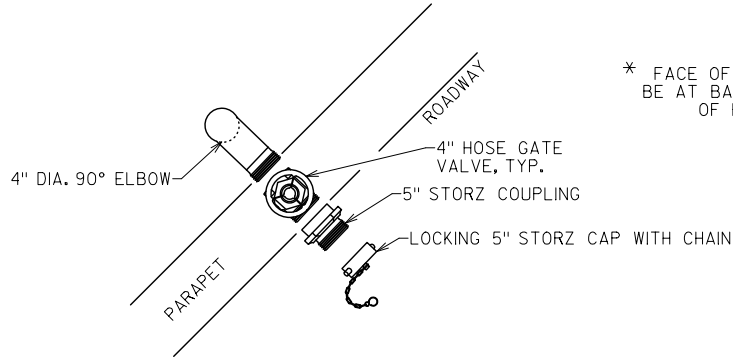
STEEL ERECTION AND SITE CONSTRUCTION CONTRACT



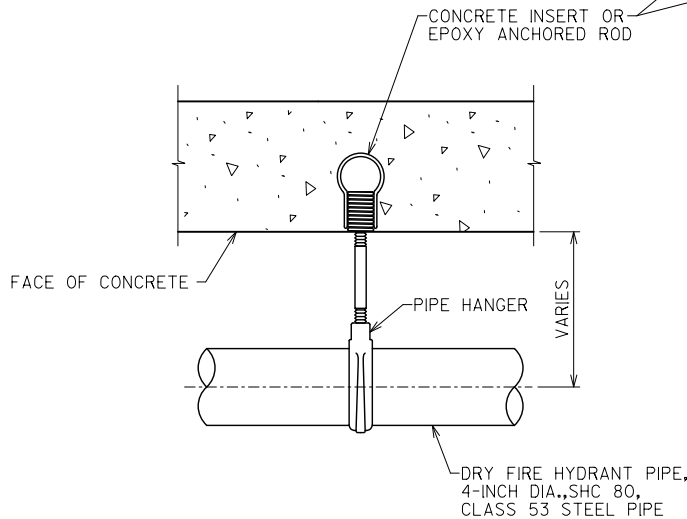
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JLM		PLANS CK'D. MDR	
FLOOR DRAIN DETAILS - 2		SHEET 78 OF 82	



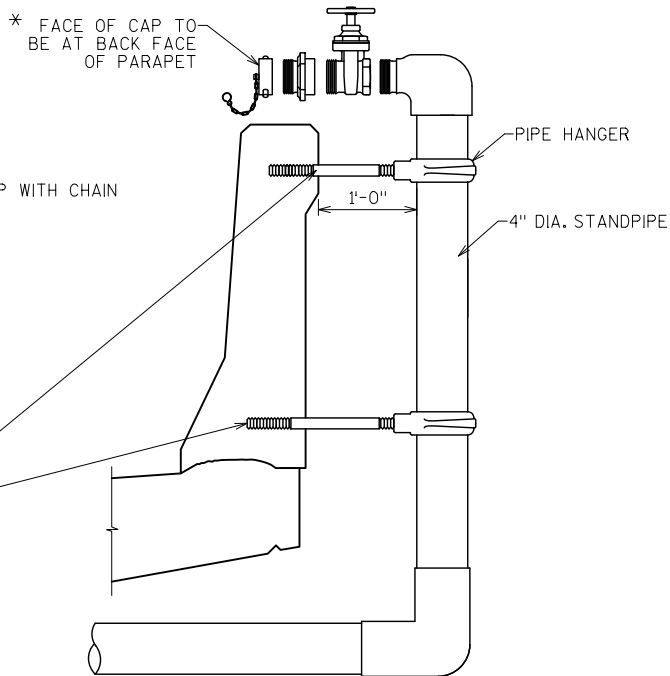
TYPICAL CROSS SECTION - UNITS 1 & 2
(LOOKING UPSTATION)



DISCHARGE CONNECTION PLAN



CONCRETE INSERT



DISCHARGE CONNECTION ELEVATION

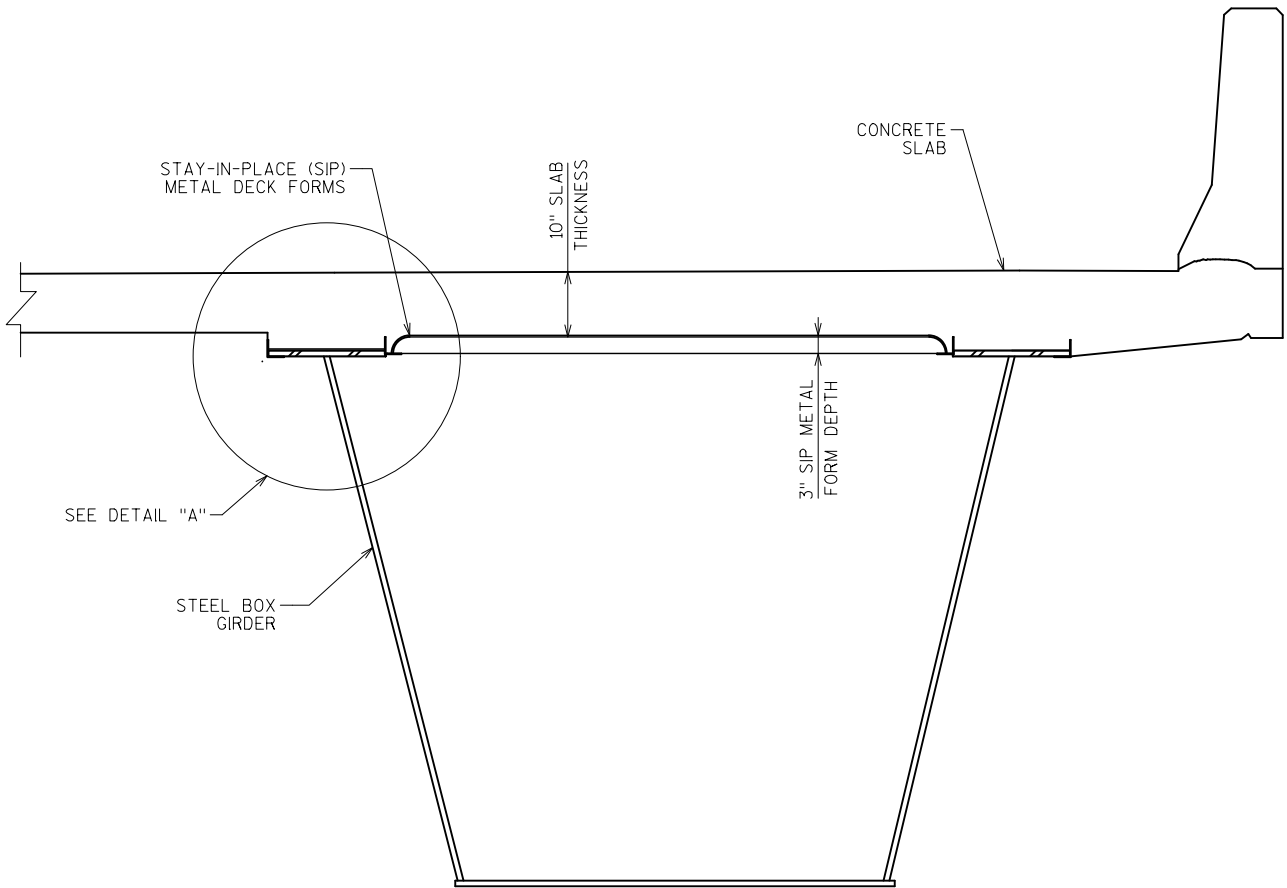
NOTES

PAINT 4" DIA. CLASS 53 STEEL PIPE WITH URETHANE PAINT PER SPV.0060.700 "STANDPIPE SYSTEM." PAINT COLOR TO BE BASKET BEIGE - SW 6143

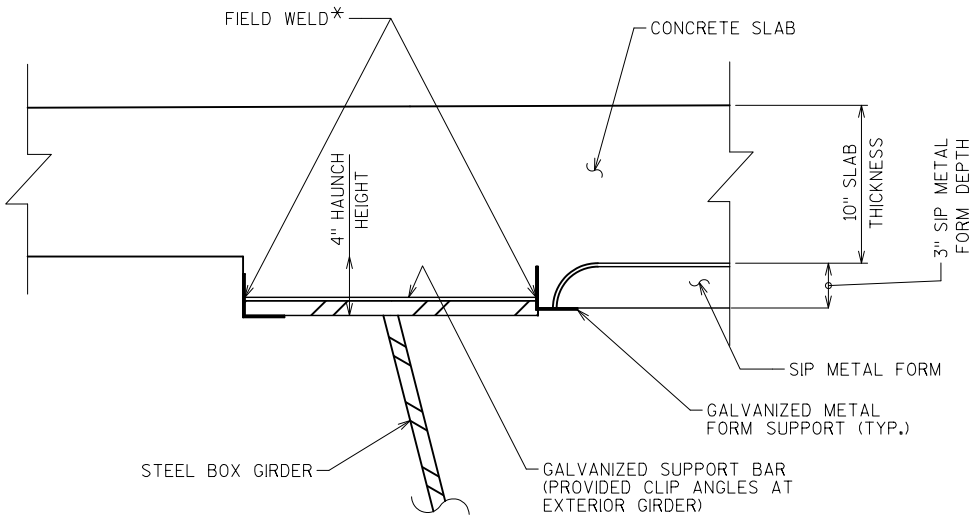
PIPE, PIPE CLAMPS, HANGERS, ADHESIVE ANCHOR RODS, STORZ COUPLINGS, FITTINGS, FLEXIBLE METAL PIPE AND MISC. ITEMS ARE INCLUDED IN BID ITEMS SPV.0060.700 "STANDPIPE SYSTEM."

PIPE TO BE SUPPORTED AT 8'-0" MAX.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY DAO		PLANS CK'D. MDR	
STANDPIPE SYSTEM DETAILS		SHEET 79 OF 82	

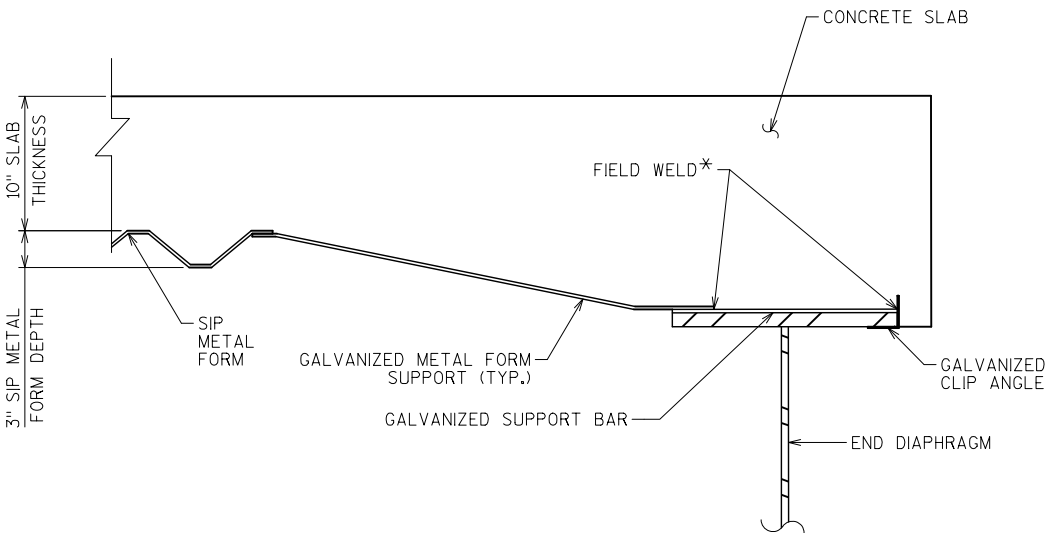


PARTIAL SECTION THROUGH SUPERSTRUCTURE
(SHOWING TYPICAL DETAILS AND NOTES FOR SIP METAL FORMS)



DETAIL "A"

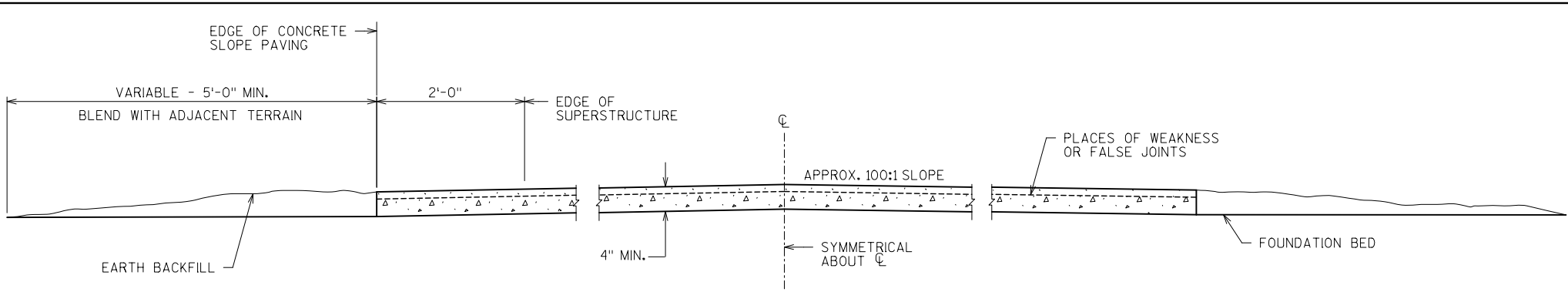
* DO NOT WELD TO NOR PERMIT WELD SPATTER ON SUPPORTING STEEL GIRDER, DIAPHRAGMS, BRACING ETC. ELLECTRICAL GROUNDING TO STRUCTURAL STEEL IS PROHIBITED. SEE SPECIFICATIONS FOR FIELD WELDING OF SIP FORMS IN PLACE AND PAINTING OF THE TOP FLANGE.



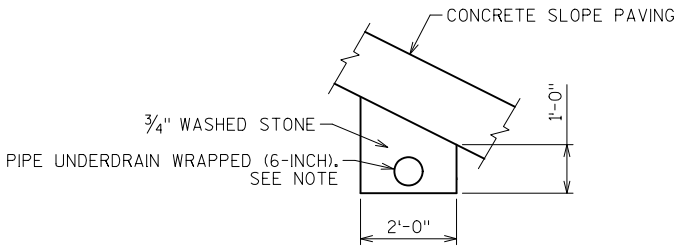
PARTIAL SECTION THROUGH END OF SPAN
(INTERIOR OF BOXES ONLY)

NOTES:
STAY-IN-PLACE (SIP) METAL DECK FORM DETAILS ARE SHOWN FOR REFERENCE ONLY. SIP FORMS ARE OPTIONAL. PAYMENT FOR OPTIONAL SIP FORMS IS CONSIDERED INCLUDED IN THE CONTRACT UNIT BID PRICE FOR HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES.

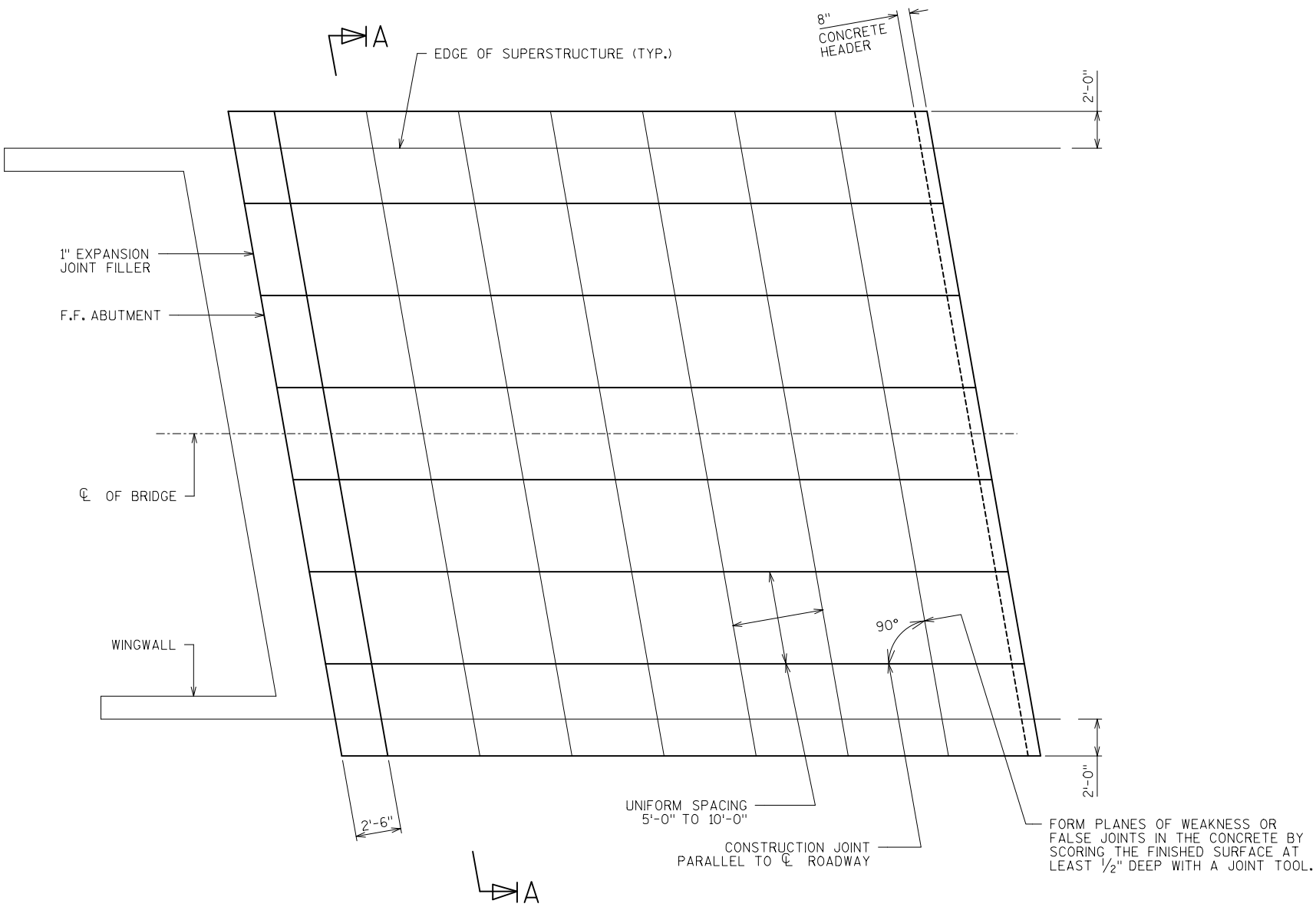
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D. NPP	
DECK FORM DETAILS			SHEET 80 OF 82



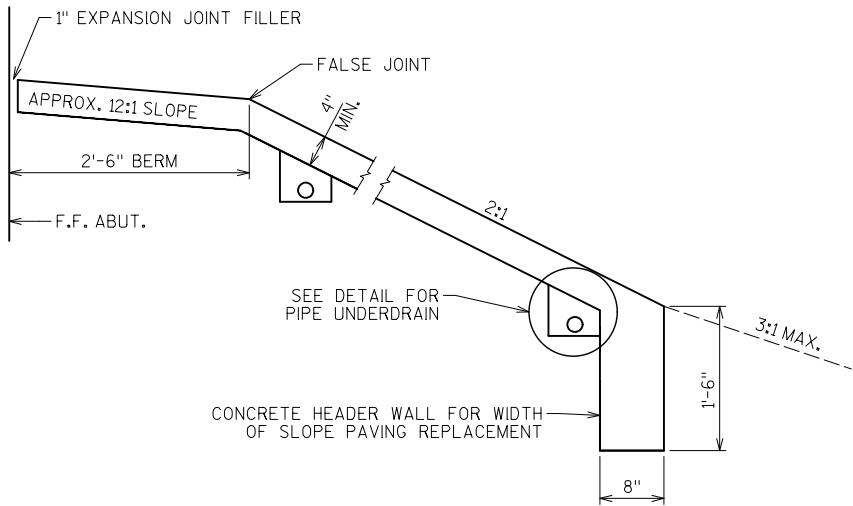
SECTION A-A



PIPE UNDERDRAIN DETAIL



PLAN
(W. ABUTMENT)



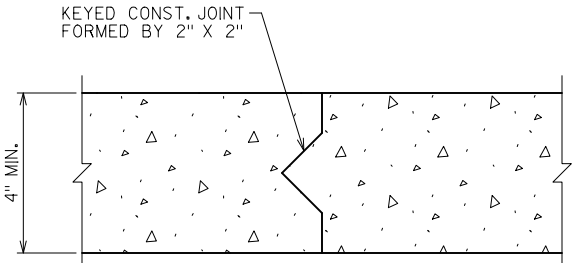
TYPICAL SECTION

NOTES

DETAILS OF CONSTRUCTION NOT SHOWN HEREON SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

PAYMENT FOR THE PIPE UNDERDRAINS IS INCLUDED IN THE BID ITEM "SLOPE PAVING CONCRETE" AND INCLUDES THE PIPE UNDERDRAIN WRAPPED (6-INCH), 3/4" WASHED STONE, AND RODENT SCREEN.

SLOPE PIPE UNDERDRAIN 0.5% MIN. TO DAYLIGHT AT ADJACENT SLOPE OR INLET. ATTACH RODENT SCREEN AT END OF PIPE UNDERDRAIN AS DETAILED ON SDD FOR REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN.



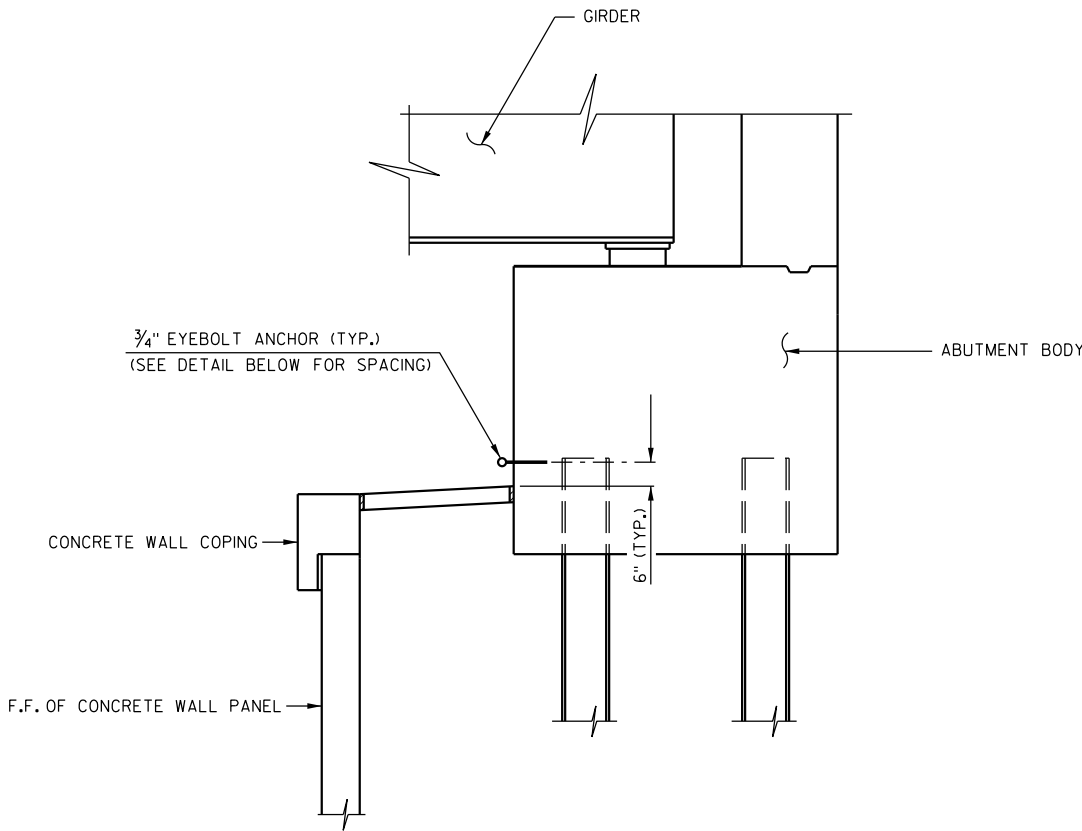
CONSTRUCTION JOINT

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT

STATE PROJECT NUMBER			
1133-03-73			
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		MDR	PLANS CK'D. MJA
SLOPE PAVING (CONCRETE CAST-IN-PLACE)		SHEET 81 OF 82	

DATE: 2/1/2012
I.D.

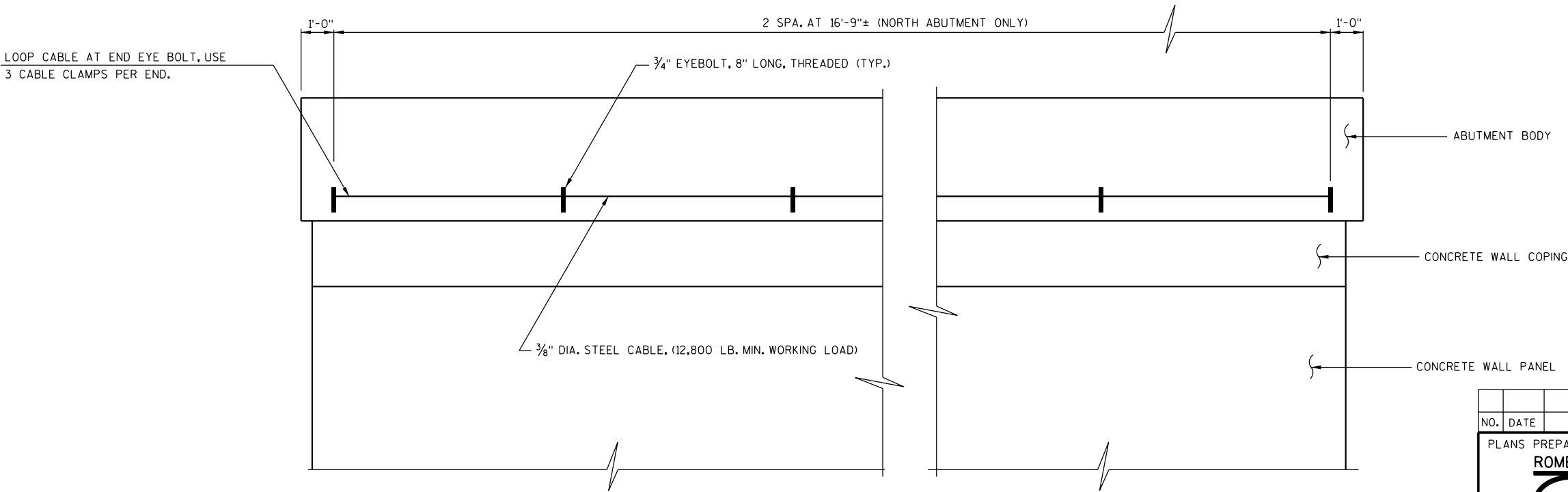
FILE= P:\Transportation\Brown County Bridges USH 41\CADD\Sheets\B-5-658 (RemainingStructure)\081 B-05-658-SLOPE PAVING CIP.dgn



NOTES

1. ALL LABOR AND MATERIAL (EYEBOLTS, CABLE AND CLAMPS) INCIDENTAL TO BID ITEM "MASONRY ANCHORS TYPE S 3/4-INCH".
2. ALL HARDWARE AND CABLE TO BE GALVANIZED OR STAINLESS STEEL.
3. USE EYEBOLTS FOR TYPE S ANCHOR HARDWARE.

TYPICAL SECTION THRU ABUTMENT BODY



PART FRONT VIEW OF ABUTMENT

NO.		DATE		REVISION		BY	
PLANS PREPARED BY ROMENESKO ENGINEERING, INC.							
							
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION							
STRUCTURE B-5-658							
DRAWN BY				TAW		PLANS CK'D. TR	
FALL PROTECTION				SHEET 82 OF 82			

STEEL ERECTION AND SITE CONSTRUCTION CONTRACT.



STATE PROJECT NUMBER

1133-03-83



02/16/2010 Donald E. Yetter

1	5/20/10	ADDENDUM #1	JRS
NO.	DATE	REVISION	BY
Plans Prepared By			
URS		6737 West Washington Street Suite 2205 Milwaukee, WI 53214 (414) 831-4100	
		Plans Prepared For WISDOT BUREAU OF STRUCTURES	
APPROVED _____ DATE _____			
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-5-658			
EB STH 29 TO NB USH 41			
COUNTY	BROWN	TOWN/CITY/VILLAGE	HOWARD
DESIGN SPEC.	2007 AASHTO LRFD DESIGN SPEC. 4th EDITION	LOAD	HL-93
DESIGNED BY	JRS	DESIGN CK'D.	NPP
DRAWN BY	ZMG	PLANS CK'D.	MAD
SITE PLAN B-5-658			SHEET 1 OF 50

NE REGION CONTACT - PAUL VRANEY (920) 492-5999
BUREAU OF STRUCTURES CONTACT - WILLIAM DREHER (608) 266-8489
CONSULTANT CONTACT - ROBERT FIELDBINDER (414) 831-4129

STEEL FABRICATION CONTRACT ONLY

I.D.

DATE: FEB 2010

LIST OF DRAWINGS

1. SITE PLAN B-5-658 TITLE SHEET
2. DRAWING LIST AND GENERAL NOTES
3. GENERAL PLAN AND ELEVATION SPANS 1-4
4. GENERAL PLAN AND ELEVATION SPANS 5-7
5. GENERAL PLAN AND ELEVATION SPANS 8-10
6. TYPICAL CROSS SECTION
7. ALIGNMENT LAYOUT AND SUPERELEVATION
8. BEARING LAYOUT UNIT 1
9. BEARING LAYOUT UNIT 2 - SHEET 1
10. BEARING LAYOUT UNIT 2 - SHEET 2
11. BEARING DETAILS
12. JACKING PROVISIONS
13. FRAMING PLAN UNIT 1 SPANS 1-4
14. FRAMING PLAN UNIT 2 SPANS 5-7
15. FRAMING PLAN UNIT 2 SPANS 8-10
16. GIRDER PLAN AND ELEVATION UNIT 1 - SPAN 1
17. GIRDER PLAN AND ELEVATION UNIT 1 - SPAN 2
18. GIRDER PLAN AND ELEVATION UNIT 1 - SPAN 3
19. GIRDER PLAN AND ELEVATION UNIT 1 - SPAN 4
20. GIRDER PLAN AND ELEVATION UNIT 2 - SPAN 5
21. GIRDER PLAN AND ELEVATION UNIT 2 - SPAN 6
22. GIRDER PLAN AND ELEVATION UNIT 2 - SPAN 7
23. GIRDER PLAN AND ELEVATION UNIT 2 - SPAN 8
24. GIRDER PLAN AND ELEVATION UNIT 2 - SPAN 9
25. GIRDER PLAN AND ELEVATION UNIT 2 - SPAN 10
26. INTERMEDIATE PIER DIAPHRAGMS XD1 AND D1
27. UNIT END DIAPHRAGMS XD2, XD3, D2 AND D3
28. INTERMEDIATE DIAPHRAGMS XD4 AND D4
29. MISCELLANEOUS DIAPHRAGM DETAILS
30. EXTERIOR CROSS FRAME DETAILS
31. INTERIOR CROSS FRAME K1 DETAILS
32. FIELD SPLICE DETAILS
33. BRACING CONNECTION DETAILS
34. BRACING CONNECTION DETAILS SHEET 2
35. MISCELLANEOUS GIRDER DETAILS
36. MISCELLANEOUS GIRDER DETAILS SHEET 2
37. ACCESS HATCH DETAILS
38. ACCESS DOOR DETAILS
39. SUPERSTRUCTURE DETAILS
40. CAMBER DIAGRAM UNIT 1
41. CAMBER DIAGRAM UNIT 2
42. THROUGH
50. CAMBER DATA

GENERAL NOTES

A DETAILED STUDY OF THE REDUNDANCY FOR THIS STRUCTURE VERIFIED THAT THERE ARE NO ELEMENTS TO BE OFFICIALLY CLASSIFIED AS FRACTURE CRITICAL MEMBERS. HOWEVER, SOME MEMBERS AND/OR ELEMENTS OF THEM SHALL BE FURNISHED, FABRICATED, AND TESTED IN ACCORDANCE WITH REQUIREMENTS FOR FRACTURE CRITICAL MEMBERS (SEE FOLLOWING NOTES). AFTER COMPLETION OF CONSTRUCTION, FUTURE INSPECTIONS OF THE IN-SERVICE BRIDGE WILL BE PERFORMED ON THE BASIS OF IT BEING CLASSIFIED AS A REDUNDANT STRUCTURE.

ALL STRUCTURAL STEEL PLATE FOR BOX GIRDER FLANGES AND WEBS, BOX GIRDER FLANGE AND WEB SPLICE PLATES, EXTERNAL AND INTERNAL DIAPHRAGMS FOR BOX GIRDERS, AND ALL OTHER STEEL PLATE COMPONENTS WELDED TO ANY OF THESE ELEMENTS SHALL BE HIGH STRENGTH ASTM A709 (AASHTO M270) GRADE HPS 50W (FY=50 KSI). ALL OTHER STEEL SHALL BE IN ACCORDANCE WITH ASTM A709 GRADE 50 (FY=50 KSI).

ALL STRUCTURAL STEEL PLATE FOR BOX GIRDER FLANGES AND WEBS IN TENSION ZONES AS SHOWN ON THE PLANS AND ALL ASSOCIATED SPLICE PLATES, ALL ATTACHING TRANSVERSE WEB STIFFENERS AND CONNECTION PLATES, AND ALL STEEL PLATE ELEMENTS OF EXTERNAL AND INTERNAL DIAPHRAGMS FOR BOX GIRDERS SHALL MEET THE FRACTURE CRITICAL TENSION COMPONENT IMPACT TEST REQUIREMENTS OF HPS 50WF/HPS 345WF OF TABLE 10 OF ASTM A709/A709M-05 FOR ZONE 2.

ALL WELDING PERFORMED IN TENSION ZONES SHOWN ON THE PLANS FOR BOX GIRDER WEB AND FLANGE ELEMENTS, INCLUDING ATTACHING TRANSVERSE WEB STIFFENER AND CONNECTION PLATES, AND ALL WELDING PERFORMED FOR ALL ELEMENTS OF EXTERNAL AND INTERNAL STEEL PLATE DIAPHRAGMS FOR BOX GIRDERS SHALL BE PERFORMED, TESTED, AND INSPECTED IN ACCORDANCE WITH REQUIREMENTS FOR FABRICATION OF FRACTURE CRITICAL MEMBERS.

CHARPY V-NOTCH TOUGHNESS REQUIREMENTS FOR ALL STEEL SHALL CONFIRM TO THE REQUIREMENTS FOR ZONE 2.

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES. ALL STATIONS AND ELEVATIONS ARE IN FEET.

ELEVATIONS ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.

GIRDERS AND OTHER ELEMENTS OF THE STRUCTURE ARE REFERRED TO AS 'LEFT' AND 'RIGHT'. THESE ORIENTATIONS ARE WITH RESPECT TO THE REFERENCE LINE WHEN LOOKING IN THE DIRECTION OF INCREASING STATION.

TRANSVERSE DIMENSIONS ARE RADIAL TO THE REFERENCE LINE UNLESS NOTED OTHERWISE.

ALL WELDING SHALL BE IN ACCORDANCE WITH THE CURRENT AASHTO/AWS D1.5 BRIDGE WELDING CODE.

USE WELD MATERIAL WITH A TENSILE STRENGTH AT LEAST 20 KSI GREATER THAN THE YIELD STRENGTH OF THE STEEL BEING WELDED. NON-WEATHERING CONSUMABLES MAY BE USED FOR SINGLE-PASS FILLET WELDS.

FABRICATE BEARING ASSEMBLIES FROM ASTM A709 GRADE 50 MATERIAL (FY=50 KSI).

PROVIDE ANCHOR RODS, NUTS AND WASHERS CONFORMING TO ASTM F1554 (GRADE 105) AND HOT-DIP GALVANIZE IN ACCORDANCE WITH AASHTO M232.

ALL BOLTS SHALL BE ASTM A325 TYPE 1. BOLTS SHALL BE 7/8" DIAMETER UNLESS NOTED OTHERWISE. ALL HOLES SHALL BE STANDARD DIAMETER. NO OVERSIZE HOLES WILL BE PERMITTED WITHOUT PRIOR APPROVAL. ALL CONNECTIONS SHALL BE FABRICATED AND ASSEMBLED AS SLIP-CRITICAL CONNECTIONS. DESIGN ASSUMED SURFACE CLASS A.

PAINT ALL STRUCTURAL STEEL, INCLUDING SURFACES AND BRACING MEMBERS ON THE INSIDE OF THE BOX GIRDERS, IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

THIS CONTRACT INCLUDES FABRICATING, FURNISHING, STORING AND DELIVERING STRUCTURAL STEEL AND BEARINGS AS SHOWN IN THESE PLANS AND DESCRIBED IN THE SPECIAL PROVISIONS.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
SPV.0060.01	BEARINGS HIGH-LOAD MULTI-ROTATIONAL FIXED	EACH	8
SPV.0060.02	BEARINGS HIGH-LOAD MULTI-ROTATIONAL UNI-DIRECTIONAL	EACH	16
SPV.0085.01	FABRICATED STRUCTURAL STEEL HPS 50W	LB	4,655,000
SPV.0085.02	FABRICATED STRUCTURAL STEEL HS	LB	332,900
SPV.0105.01	PAINTING POLYSILOXANE SYSTEM STRUCTURE B-05-658	LS	1

DESIGN CRITERIA

DESIGN IS IN ACCORDANCE WITH AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION WITH 2008 AND 2009 INTERIM REVISIONS, AND THE WISDOT BRIDGE MANUAL.

ALL DETAILS, MATERIALS, AND FABRICATION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION OF THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION EDITION OF 2010, EXCEPT AS OTHERWISE NOTED.

LIVE LOAD PLUS DYNAMIC LOAD DEFLECTION LIMIT = SPAN / 800 (HL93).

DESIGN LIVE LOAD

DESIGN LOADING: HL-93

INVENTORY RATING FACTOR: RF = 1.03

OPERATING RATING FACTOR: RF = 1.34

WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

OTHER DESIGN LOADS

THE STRUCTURE IS DESIGNED FOR THE DECK THICKNESS SHOWN, WHICH INCLUDES A 1/4" INTEGRAL WEARING SURFACE. NO ADDITIONAL LOAD FOR A FUTURE WEARING SURFACE IS CONSIDERED IN THE DESIGN.

TEMPERATURE CHANGE FOR DETERMINING THERMAL FORCES ON SUBSTRUCTURES = 90°F.

BEARING MOVEMENT RANGE IS BASED ON BEARING CENTERED AT 60°F AND ACCOMODATING 90°F OF MOVEMENT IN EITHER DIRECTION.

DESIGN ASSUMED A WEIGHT PER GIRDER OF 10 PSF FOR STAY-IN-PLACE METAL FORMS INSIDE EACH GIRDER ONLY AND 13.5 PSF FOR CONCRETE WITHIN THE RIBS OF THESE FORMS.

DESIGN ASSUMED 7.5 PSF FOR TEMPORARY FORMWORK IN ADDITION TO STAY-IN-PLACE FORMS.

PARAPETS WERE ASSUMED TO WEIGH 525 PLF AND 420 PLF FOR 42" AND 32" SECTIONS RESPECTIVELY.

ALL OTHER LOADS IN ACCORDANCE WITH AASHTO.

MINIMUM FILLET WELD SIZE:

THICKNESS OF THICKER PART JOINED	MINIMUM WELD SIZE
T <= 1/2"	3/16"
1/2" < T <= 3/4"	1/4"
3/4" < T <= 1 1/2"	5/16"
1 1/2" < T <= 2 1/4"	3/8"
T > 2 1/4"	1/2"

MINIMUM WELD SIZES SHOWN SHALL BE USED WHEN A SIZE IS NOT OTHERWISE SPECIFIED OR SHOWN.

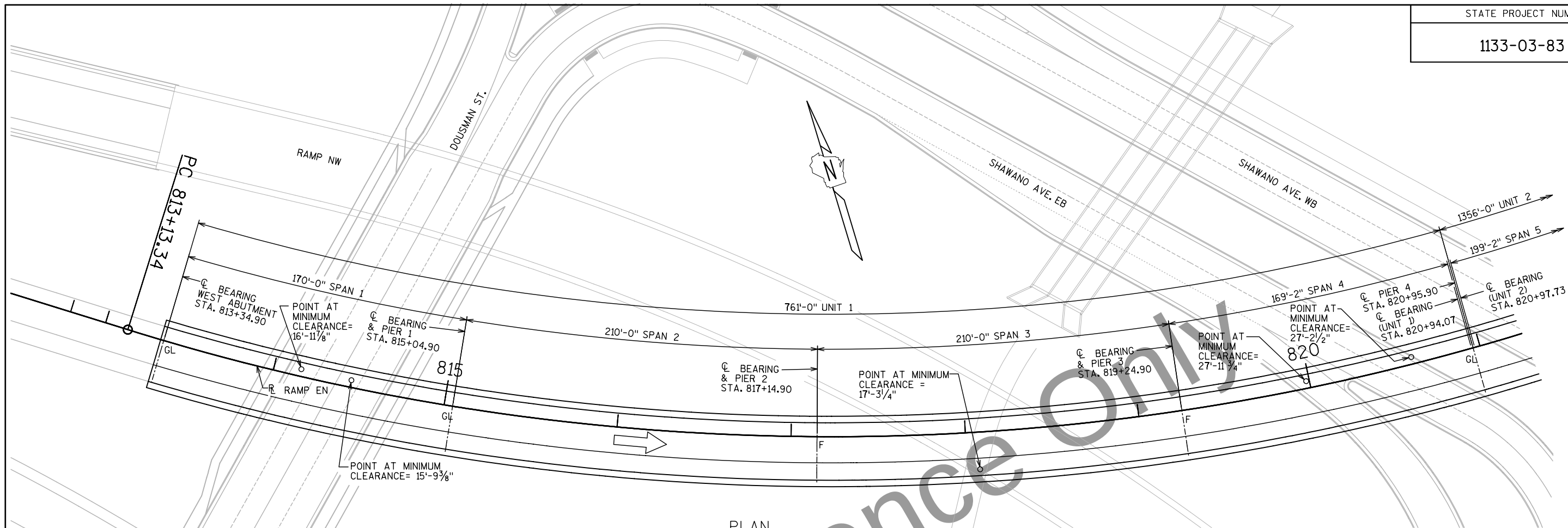
WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART BEING JOINED.

FOR ALL WELDS 5/16" OR LARGER, THE MINIMUM PASS SIZE SHALL BE 5/16".

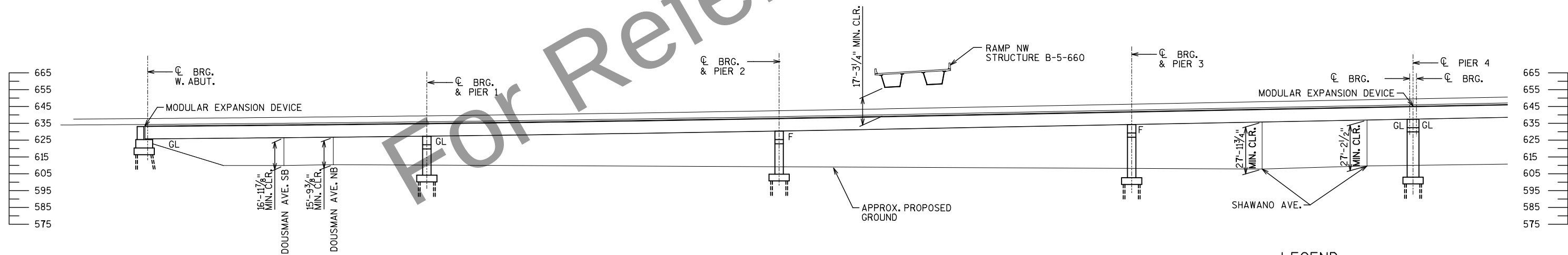
STATE PROJECT NUMBER

1133-03-83

1	5/20/10	ADDENDUM #1	JRS
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. MAD	
DRAWING LIST AND GENERAL NOTES			SHEET 2 OF 50



PLAN



ELEVATION

NOTES:

ALL SUBSTRUCTURE UNITS ARE NORMAL TO R.
SUBSTRUCTURES ARE SHOWN FOR REFERENCE
ONLY. SPECIFIC DETAILS INCLUDING CONFIGURATION
OF PILES WILL BE CONFIRMED IN A FUTURE CONTRACT.

DIMENSIONS SHOWN ARE ALONG R.

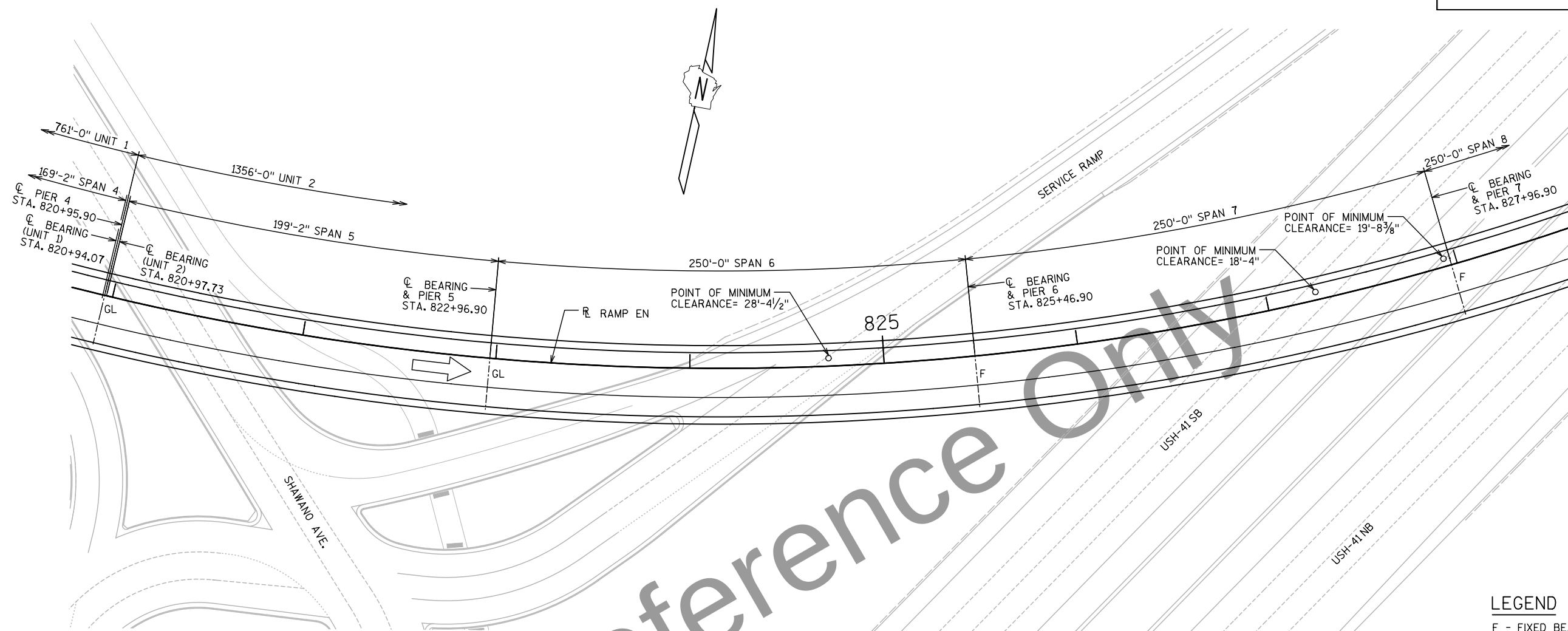
SPAN LENGTHS SHOWN ARE MEASURED ALONG R.

FOR CURVE DATA SEE ALIGNMENT LAYOUT AND
SUPERELEVATION SHEET.

LEGEND

F - FIXED BEARING
GL - GUIDED LONGITUDINAL UNIDIRECTIONAL BEARING

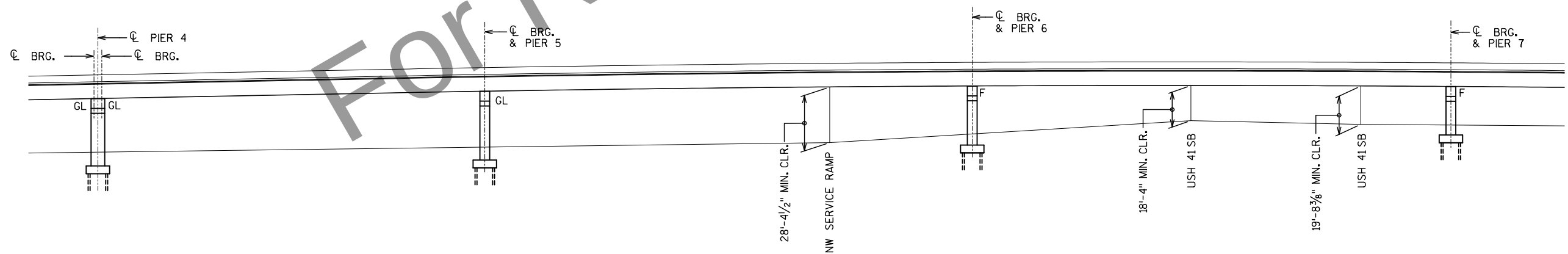
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
GENERAL PLAN & ELEVATION SPANS 1-4			SHEET 3 OF 50



PLAN

LEGEND

F - FIXED BEARING
GL - GUIDED LONGITUDINAL
UNIDIRECTIONAL BEARING



ELEVATION

FOR NOTES, SEE GENERAL PLAN AND
ELEVATION SPANS 1 TO 4 SHEET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
GENERAL PLAN & ELEVATION SPANS 5-7			SHEET 4 OF 50



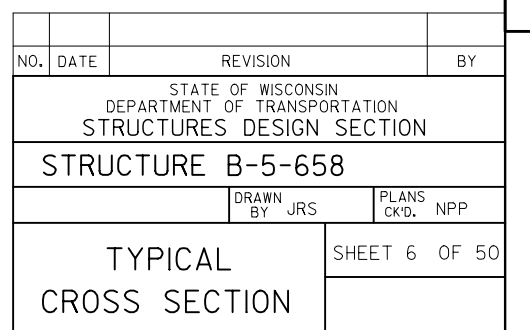
F - FIXED BEARING
GL - GUIDED LONGITUDINAL
UNIDIRECTIONAL BEARING

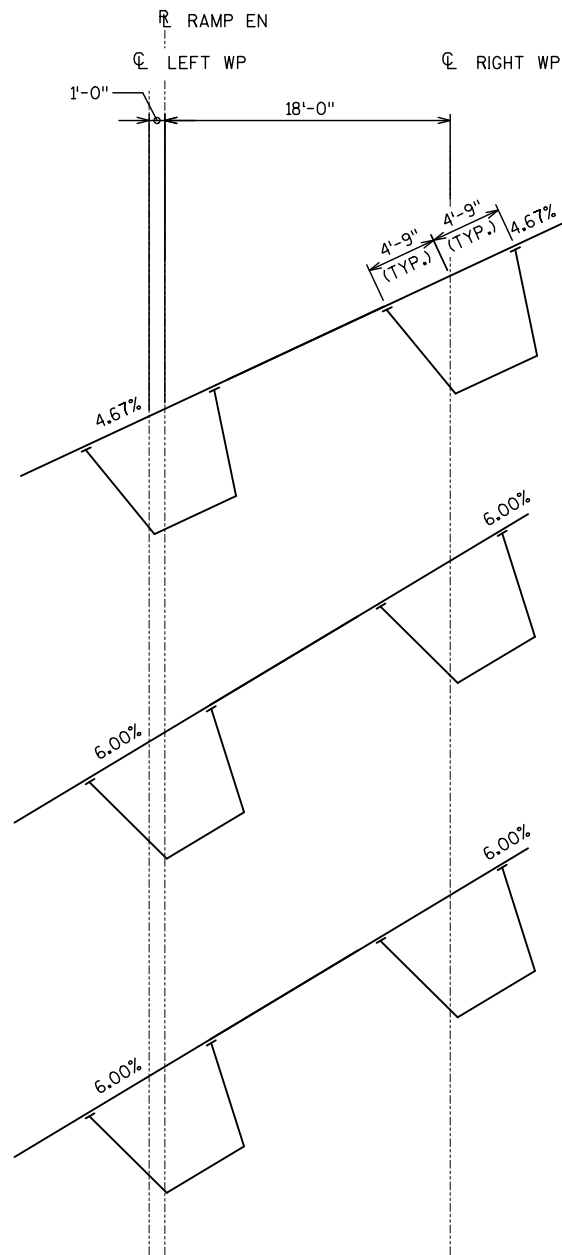


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
		DRAWN BY JRS	PLANS CK'D. NPP
GENERAL PLAN & ELEVATION SPANS 8-10		SHEET 5 OF 50	



CONCRETE DECK, PARAPETS, SHEAR
CONNECTORS AND STAY-IN-PLACE
FORMS SHOWN HERE FOR REFERENCE
ONLY, TO BE PROVIDED BY OTHERS
DURING FUTURE CONTRACT.



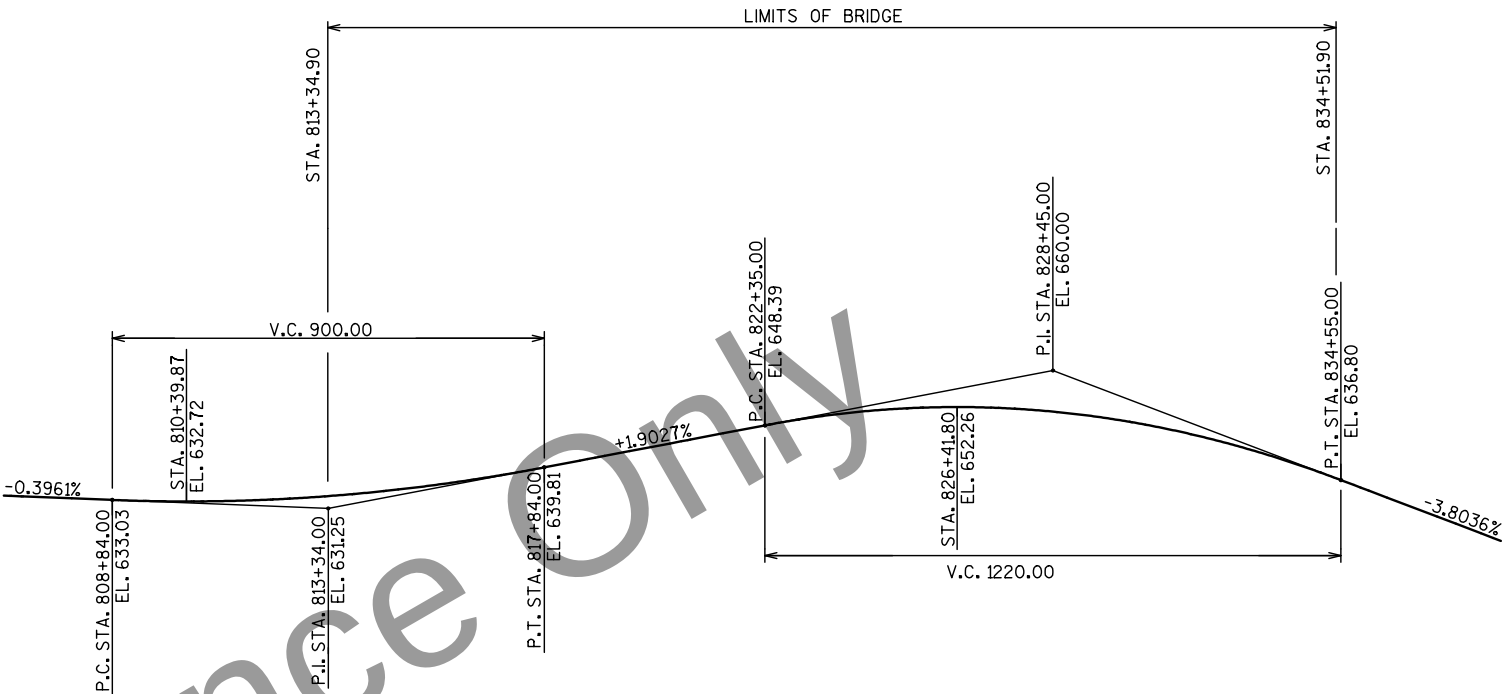


CL BEARING WEST ABUTMENT B-5-658
STA. 813+34.90

BEGIN FULL SUPERELEVATION
STA. 813+79.34

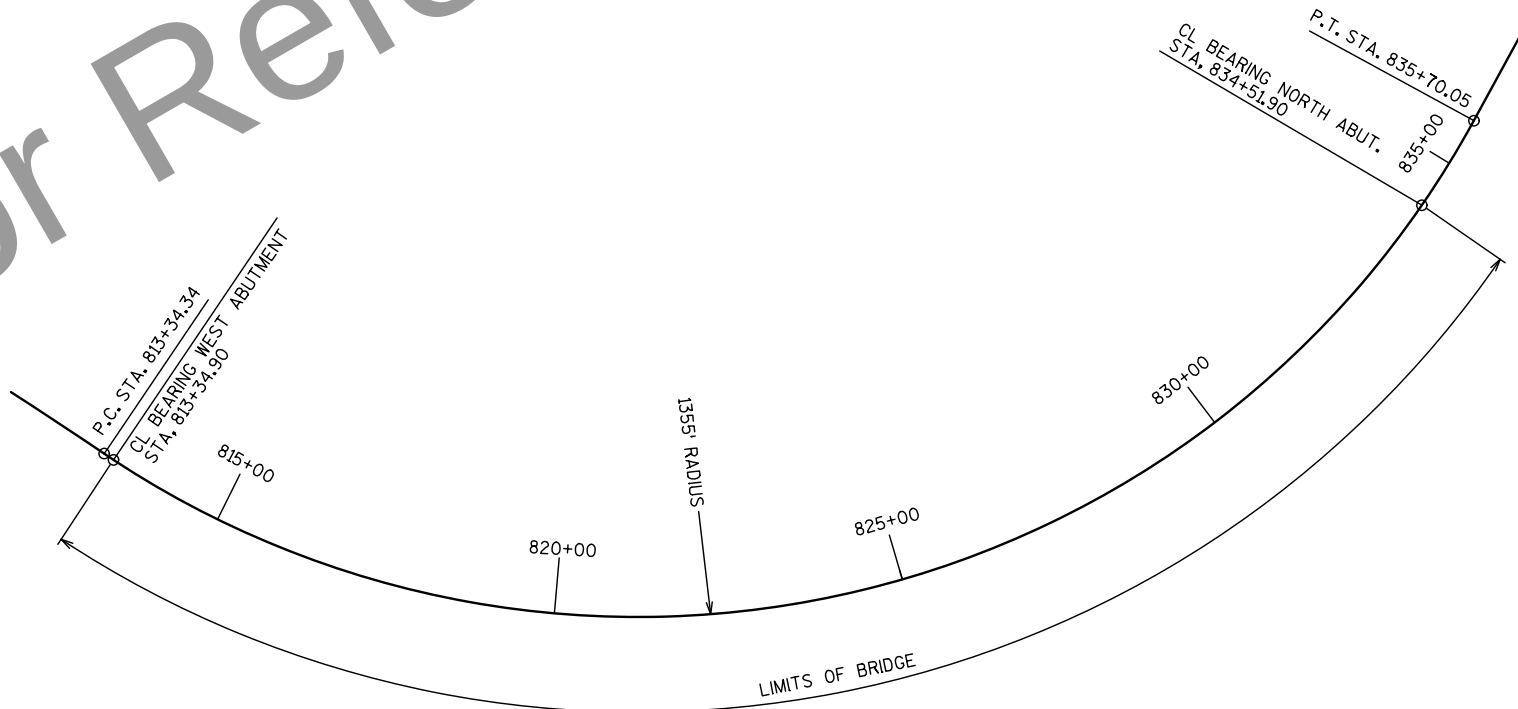
CL BEARING NORTH ABUTMENT B-5-658
STA. 834+51.90

DECK SLOPE TRANSITION



PROFILE GRADE LINE EB STH 29 - NB USH 41 SYSTEM RAMP

EB STH-29 TO
NB USH-41
HORIZONTAL
CURVE DATA
P.I. STA.= 828+03.10
N= 575662.88
E= 83655.58
P.C. STA.= 813+13.34
P.T. STA.= 835+70.05
Δ= 95°25'27.06"
D= 4°13'42.49"
T= 1489.76'
L= 2256.71'
R= 1355.00'

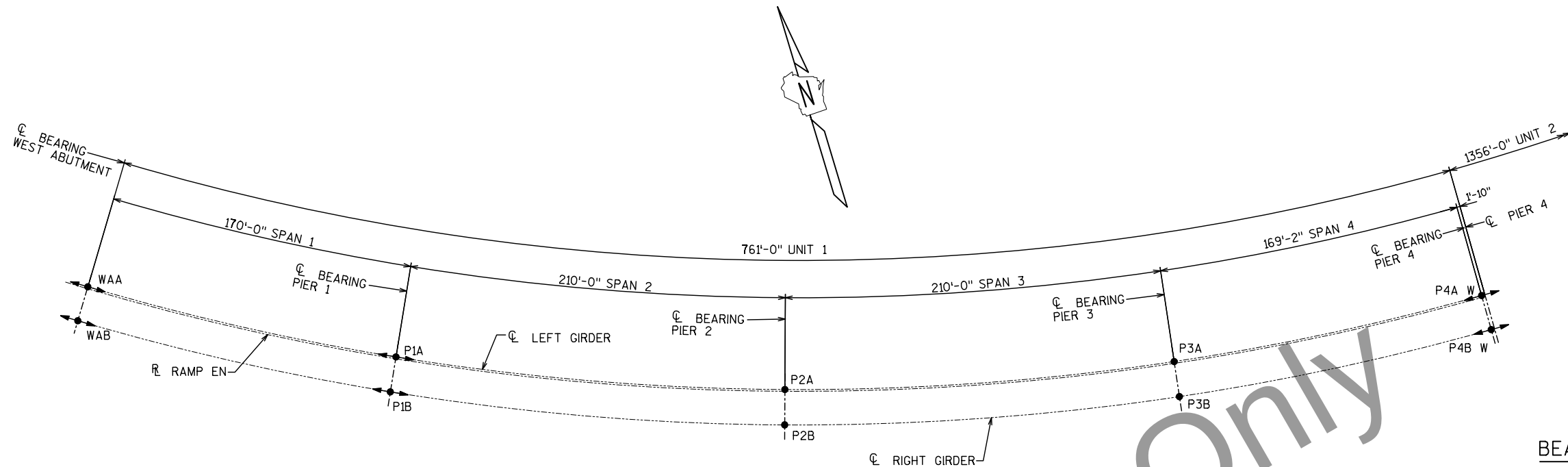


HORIZONTAL ALIGNMENT EB STH 29 - NB USH 41 SYSTEM RAMP

NOTES:

- GIRDER FLANGES ALWAYS PARALLEL TO DECK ABOVE.
- HAUNCH HEIGHT CONSTANT AT 4".
- WP= WORK POINT TO WHICH DIMENSIONS ARE MEASURED.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D. MAD	
ALIGNMENT LAYOUT AND SUPERELEVATION		SHEET 7 OF 50	



BEARING LAYOUT
(LENGTH NOT TO SCALE)

BEARING LEGEND

- MULTIROTATIONAL FIXED
- ◀▶ MULTIROTATIONAL UNIDIRECTIONAL (GUIDED)
ARROWHEADS DENOTE MOVEMENT DIRECTIONS.

NOTES:

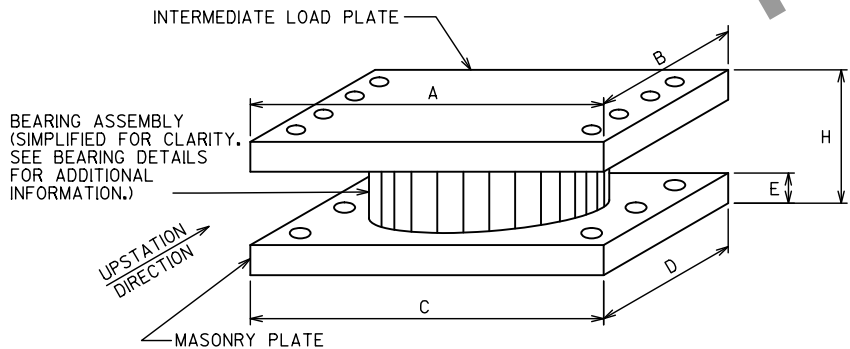
SEE BEARING DETAILS SHEET FOR TYPICAL BEARING DETAILS

BEARING DIMENSIONS SHOWN ARE NOMINAL VALUES ONLY AND MAY VARY WITH THE SELECTED MANUFACTURER. IF BEARING DIMENSIONS VARY FROM THOSE SHOWN HERE, THE BEARING MANUFACTURER SHALL COORDINATE WITH THE STEEL GIRDER FABRICATOR TO ASSURE THERE ARE NO CONFLICTS WITH JACKING PADS OR ANY OTHER STEEL ELEMENTS. THE STEEL GIRDER FABRICATOR IS RESPONSIBLE TO DETERMINE WHAT ELEMENTS REQUIRE RE-DESIGN AND TO RE-DESIGN THEM, SUBJECT TO APPROVAL BY THE ENGINEER.

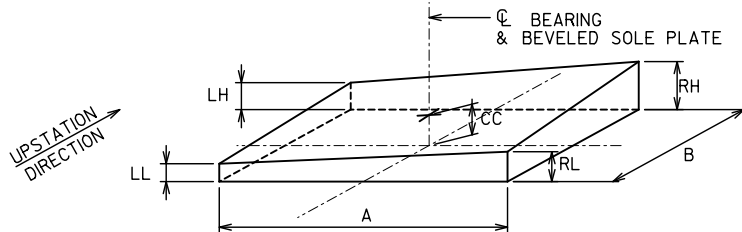
HORIZONTAL FORCES SPECIFIED IN THE TABLE ARE THE EXPECTED APPLIED FORCES. DESIGN BEARINGS AND CONNECTIONS FOR THESE VALUES OR 10 PERCENT OF THE VERTICAL DEAD LOAD, WHICHEVER IS LARGER.

ROTATIONS SPECIFIED IN THE TABLE ARE THE EXPECTED APPLIED ROTATIONS FROM APPLICABLE STRENGTH LOAD COMBINATIONS. DESIGN BEARINGS FOR AN ADDITIONAL 0.005 RADIAN FOR FABRICATION AND INSTALLATION TOLERANCES, AND 0.005 RADIAN FOR UNCERTAINTIES. DESIGN ALL BEARINGS FOR A MINIMUM 0.020 RADIAN OF TOTAL ROTATION.

BEARING MARK	BEARING TYPE	SERVICE I LIMIT STATE VERTICAL LOADS		SERVICE I LIMIT STATE HORIZ. LOADS		ROTATIONS		MOVEMENT RANGE (FOR 180 DEG.) LONGIT. (IN)	TAPERED SOLE PLATE THICKNESS					NOMINAL BEARING DIMENSIONS						MIN. ANCHOR BOLTS	MIN. TOP BOLTS
		DEAD LOAD (KIPS)	TOTAL LOAD (KIPS)	TRAN. LOAD (KIPS)	LONGIT. LOAD (KIPS)	X-AXIS TORSION (RAD)	Y-AXIS FLEXURE (RAD)		LL (IN)	RL (IN)	LH (IN)	RH (IN)	CC (IN)	A (IN)	B (IN)	C (IN)	D (IN)	E (IN)	H (IN)		
WAA	GUIDED	294	541	45	35	0.0028	0.0038	6.81	1.00	2.54	1.16	2.70	1.85	33	21.75	28.625	20.625	1.75	7.125	4-1" DIA.	4-1" DIA.
WAB	GUIDED	294	541	45	35	0.0028	0.0038	6.81	1.00	2.54	1.28	2.82	1.91	33	21.75	28.625	20.625	1.75	7.125	4-1" DIA.	4-1" DIA.
P1A	GUIDED	901	1372	64	44	0.0002	0.0017	4.42	1.00	3.31	1.36	3.67	2.33	38.5	30.25	36.25	28.25	1.75	9	4-1" DIA.	4-1" DIA.
P1B	GUIDED	901	1372	64	44	0.0002	0.0017	4.42	1.00	3.31	1.36	3.67	2.33	38.5	30.25	36.25	28.25	1.75	9	4-1" DIA.	4-1" DIA.
P2A	FIXED	888	1371	60	206	0.0002	0.0016		1.00	3.24	1.50	3.74	2.37	37.25	29.25	41.25	33.25	1.75	11.5	4-1 1/2" DIA.	8-1" DIA.
P2B	FIXED	888	1371	60	206	0.0002	0.0016		1.00	3.24	1.50	3.74	2.37	37.25	29.25	41.25	33.25	1.75	11.5	4-1 1/2" DIA.	8-1" DIA.
P3A	FIXED	900	1371	57	204	0.0002	0.0014		1.00	3.24	1.56	3.79	2.40	37.25	29.25	41.25	33.25	1.75	11.5	4-1 1/2" DIA.	8-1" DIA.
P3B	FIXED	900	1371	57	204	0.0002	0.0014		1.00	3.24	1.56	3.79	2.40	37.25	29.25	41.25	33.25	1.75	11.5	4-1 1/2" DIA.	8-1" DIA.
P4A W	GUIDED	292	540	45	35	0.0014	0.0047	3.85	1.00	2.98	1.41	3.39	2.20	33	21.75	28.625	20.625	1.75	7.125	4-1" DIA.	4-1" DIA.
P4B W	GUIDED	292	540	45	35	0.0014	0.0047	3.85	1.00	2.98	1.41	3.39	2.20	33	21.75	28.625	20.625	1.75	7.125	4-1" DIA.	4-1" DIA.



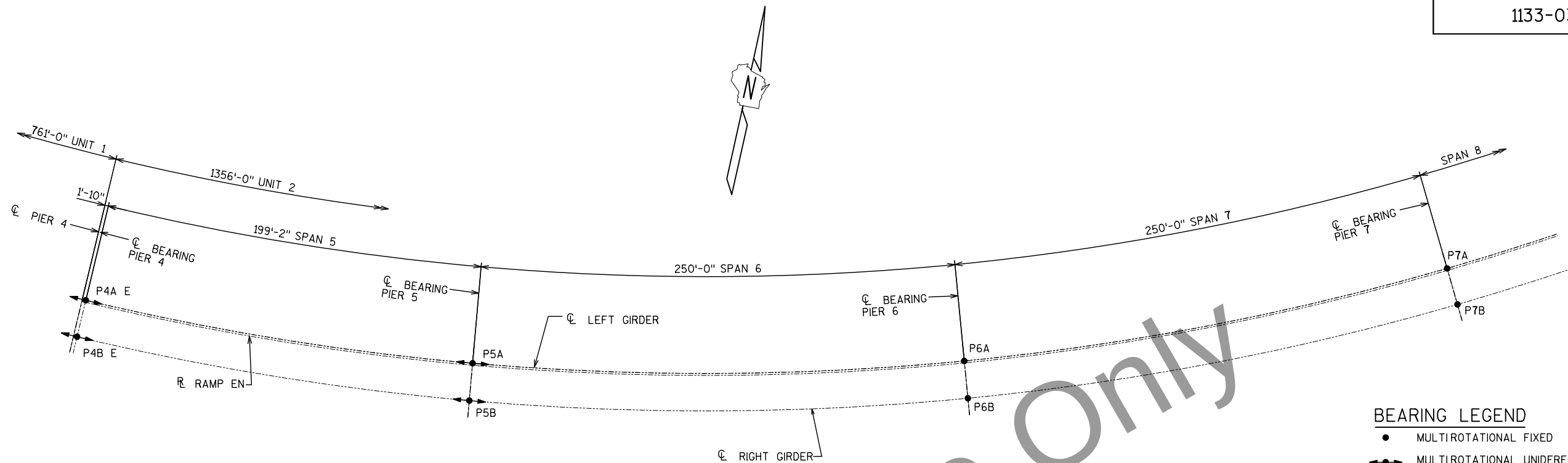
BEARING DIMENSION KEY



BEVELED SOLE PLATE DIMENSION KEY

(HOLES MATCHING INTERMEDIATE LOAD PLATE NOT SHOWN FOR CLARITY)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		ZMG	PLANS CK'D. MAD
BEARING LAYOUT UNIT 1		SHEET 8 OF 50	

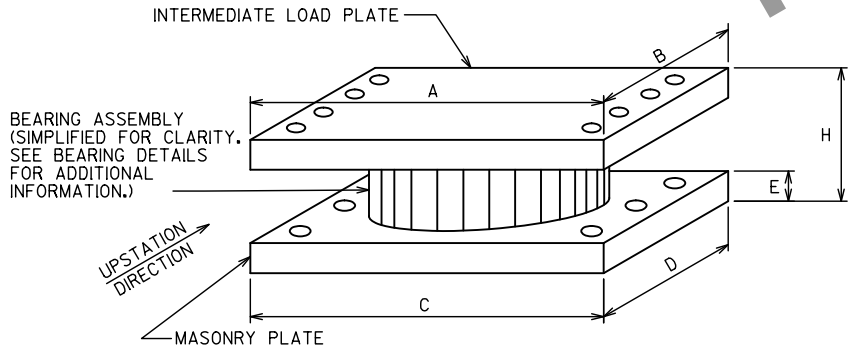


BEARING LAYOUT
GIRDER LENGTH NOT TO SCALE

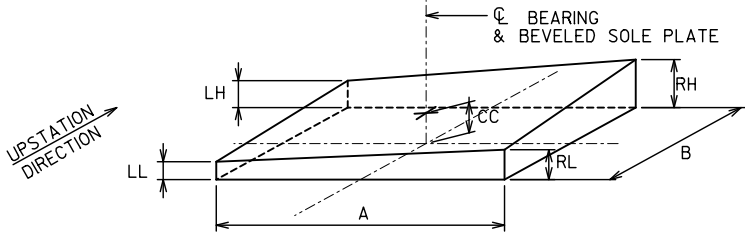
- BEARING LEGEND
- MULTIROTATIONAL FIXED
 - ◀▶ MULTIROTATIONAL UNIDIRECTIONAL (GUIDED)
ARROWHEADS DENOTE MOVEMENT DIRECTIONS.

BEARING MARK	BEARING TYPE	SERVICE I LIMIT STATE VERTICAL LOADS		SERVICE I LIMIT STATE HORIZ. LOADS		ROTATIONS		MOVEMENT RANGE (FOR 180 DEG.) LONGIT. (IN)	TAPERED SOLE PLATE THICKNESS					NOMINAL BEARING DIMENSIONS						MIN. ANCHOR BOLTS	MIN. TOP BOLTS
		DEAD LOAD (KIPS)	TOTAL LOAD (KIPS)	TRAN. LOAD (KIPS)	LONGIT. LOAD (KIPS)	X-AXIS TORSION (RAD)	Y-AXIS FLEXURE (RAD)		LL (IN)	RL (IN)	LH (IN)	RH (IN)	CC (IN)	A (IN)	B (IN)	C (IN)	D (IN)	E (IN)	H (IN)		
P4A E	GUIDED	348	612	49	34	0.0058	0.0037	8.06	1.00	2.98	1.43	3.41	2.20	33	22.5	29.5	17.5	1.75	7.5	4-1" DIA.	4-1" DIA.
P4B E	GUIDED	348	612	49	34	0.0058	0.0037	8.06	1.00	2.98	1.43	3.41	2.20	33	22.5	29.5	17.5	1.75	7.5	4-1" DIA.	4-1" DIA.
P5A	GUIDED	1089	1604	64	40	0.0010	0.0026	5.27	1.00	3.46	1.53	3.99	2.49	41	32.75	38.625	26.625	1.75	9.5	4-1" DIA.	4-1" DIA.
P5B	GUIDED	1089	1604	64	40	0.0010	0.0026	5.27	1.00	3.46	1.53	3.99	2.49	41	32.75	38.625	26.625	1.75	9.5	4-1" DIA.	4-1" DIA.
P6A	FIXED	1055	1586	66	233	0.0005	0.0024		1.00	3.40	1.14	3.54	2.27	40	32	44	32	1.75	12.375	4-1 1/2" DIA.	8-1" DIA.
P6B	FIXED	1055	1586	66	233	0.0005	0.0024		1.00	3.40	1.14	3.54	2.27	40	32	44	32	1.75	12.375	4-1 1/2" DIA.	8-1" DIA.
P7A	FIXED	1075	1609	66	237	0.0002	0.0024		1.23	3.63	1.00	3.40	2.32	40	32	44	32	1.75	12.375	4-1 1/2" DIA.	8-1" DIA.
P7B	FIXED	1075	1609	66	237	0.0002	0.0024		1.23	3.63	1.00	3.40	2.32	40	32	44	32	1.75	12.375	4-1 1/2" DIA.	8-1" DIA.

NOTES:
SEE BEARING LAYOUT UNIT 1 SHEET FOR TYPICAL NOTES.

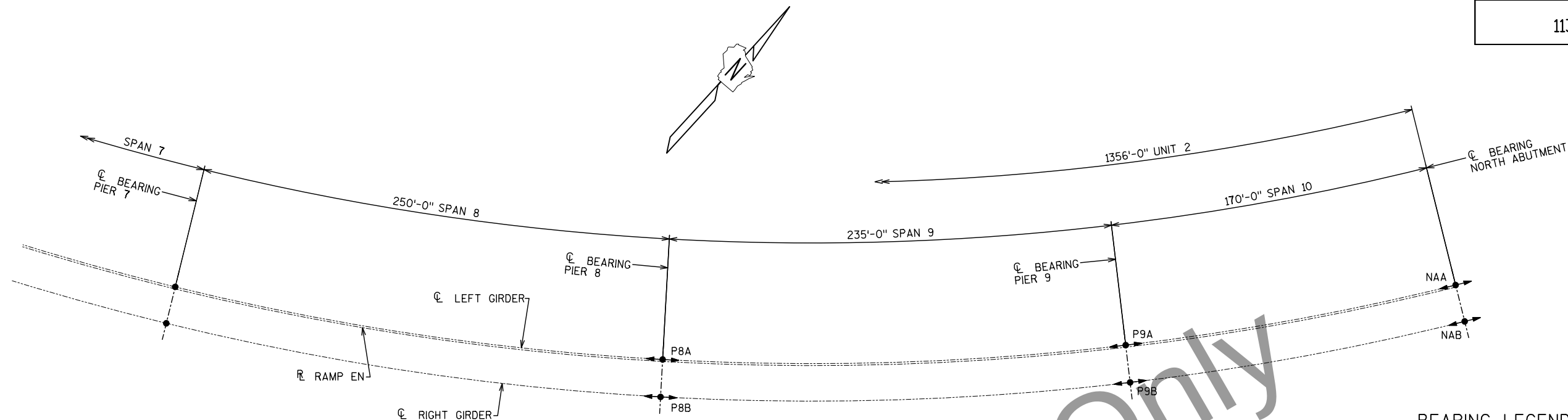


BEARING DIMENSION KEY



BEVELED SOLE PLATE DIMENSION KEY
(HOLES MATCHING INTERMEDIATE LOAD PLATE NOT SHOWN FOR CLARITY)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D. MAD	
BEARING LAYOUT UNIT 2 - SHEET 1			SHEET 9 OF 50



BEARING LAYOUT
GIRDER LENGTH NOT TO SCALE

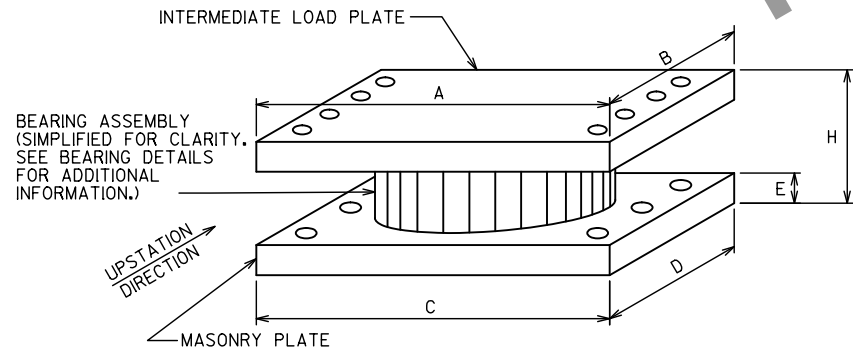
BEARING LEGEND

- MULTIROTATIONAL FIXED
- ◄●► MULTIROTATIONAL UNIDIRECTIONAL (GUIDED)
ARROWHEADS DENOTE MOVEMENT DIRECTIONS.

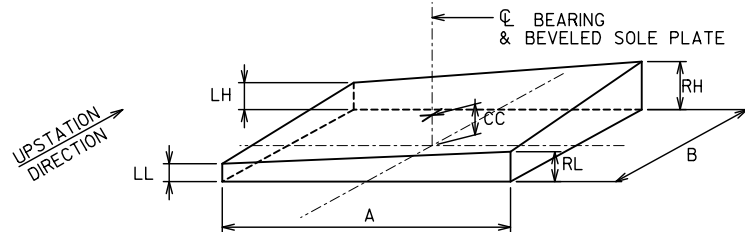
NOTES:

SEE BEARING LAYOUT UNIT 1 SHEET
FOR TYPICAL NOTES.

BEARING MARK	BEARING TYPE	SERVICE I LIMIT STATE VERTICAL LOADS		SERVICE I LIMIT STATE HORIZ. LOADS		ROTATIONS		MOVEMENT RANGE (FOR 180 DEG.) LONGIT. (IN)	TAPERED SOLE PLATE THICKNESS					NOMINAL BEARING DIMENSIONS						MIN. ANCHOR BOLTS	MIN. TOP BOLTS
		DEAD LOAD (KIPS)	TOTAL LOAD (KIPS)	TRAN. LOAD (KIPS)	LONGIT. LOAD (KIPS)	X-AXIS TORSION (RAD)	Y-AXIS FLEXURE (RAD)		LL (IN)	RL (IN)	LH (IN)	RH (IN)	CC (IN)	A (IN)	B (IN)	C (IN)	D (IN)	E (IN)	H (IN)		
P8A	GUIDED	1044	1568	66	41	0.0005	0.0023	5.27	1.62	4.08	1.00	3.46	2.54	41	32.75	38.625	26.625	1.75	9.5	4-1" DIA.	4-1" DIA.
P8B	GUIDED	1044	1568	66	41	0.0005	0.0023	5.27	1.62	4.08	1.00	3.46	2.54	41	32.75	38.625	26.625	1.75	9.5	4-1" DIA.	4-1" DIA.
P9A	GUIDED	966	1459	61	39	0.0007	0.0017	8.56	1.96	4.37	1.00	3.42	2.69	40.25	32	37.875	25.875	1.75	9.5	4-1" DIA.	4-1" DIA.
P9B	GUIDED	966	1459	61	39	0.0007	0.0017	8.56	1.96	4.37	1.00	3.42	2.69	40.25	32	37.875	25.875	1.75	9.5	4-1" DIA.	4-1" DIA.
NAA	GUIDED	281	528	42	33	0.0019	0.0035	10.95	1.82	3.80	1.00	2.98	2.40	33	21.75	28.625	16.625	1.75	7.125	4-1" DIA.	4-1" DIA.
NAB	GUIDED	281	528	42	33	0.0019	0.0035	10.95	1.82	3.80	1.00	2.98	2.40	33	21.75	28.625	16.625	1.75	7.125	4-1" DIA.	4-1" DIA.



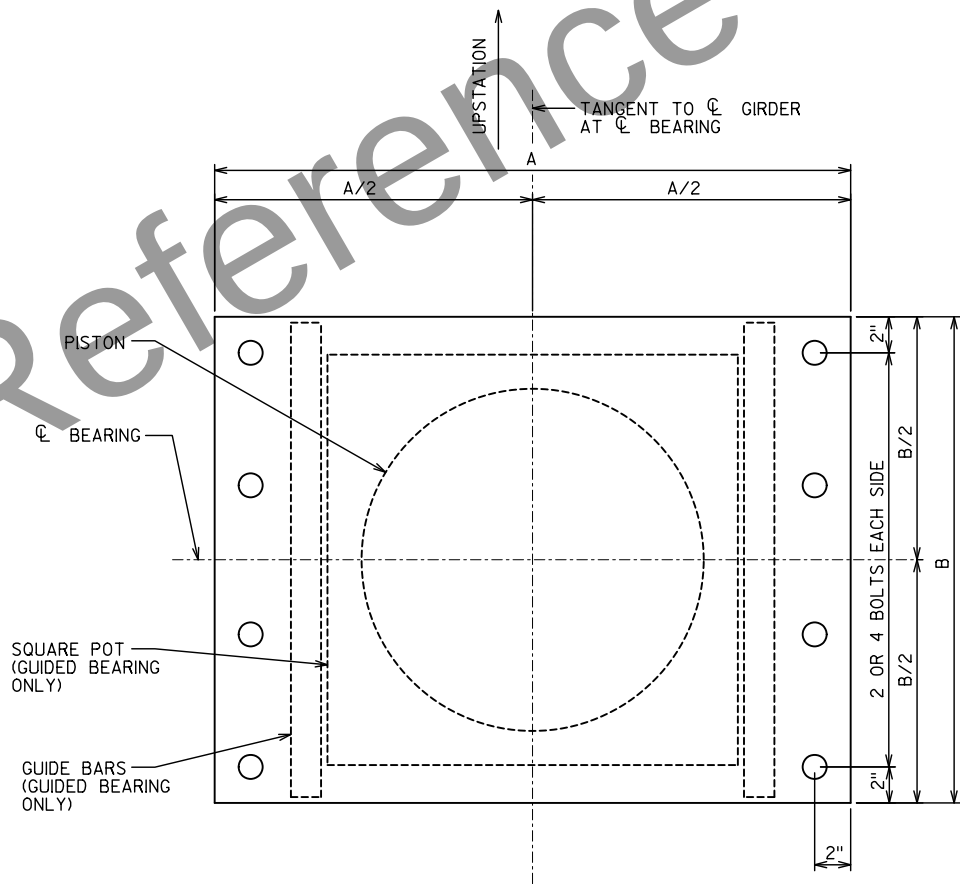
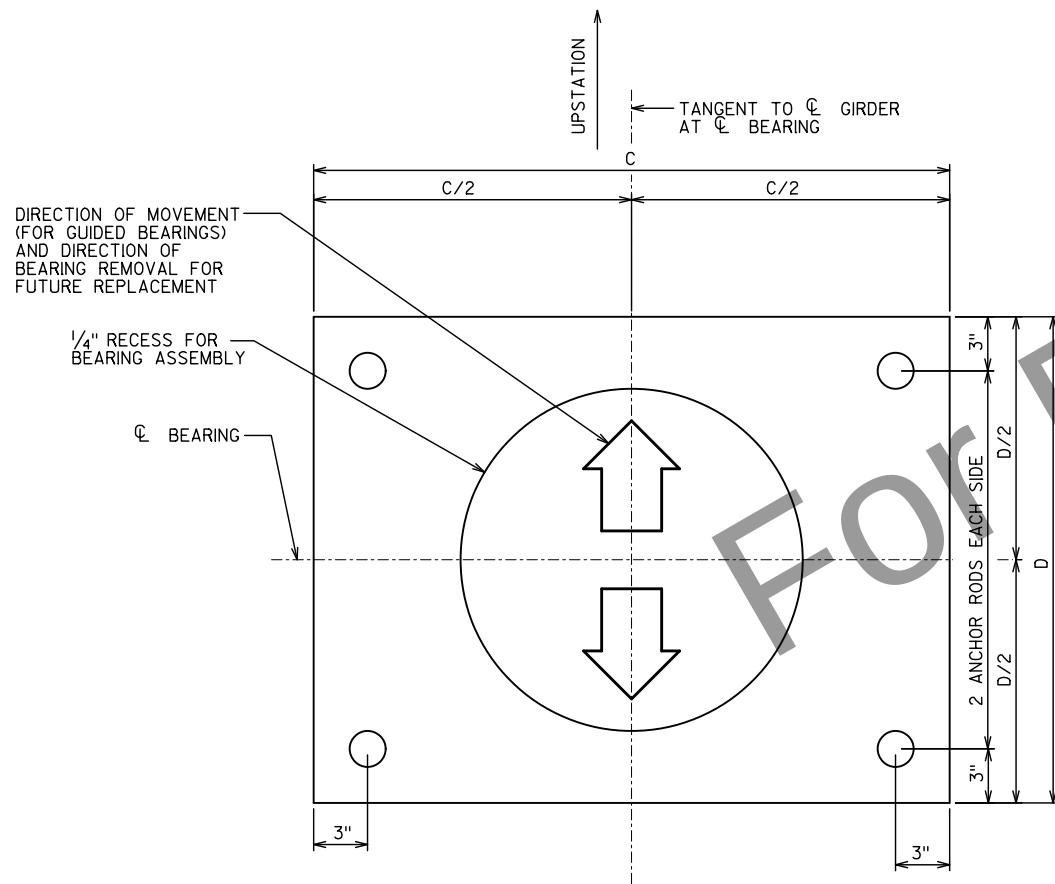
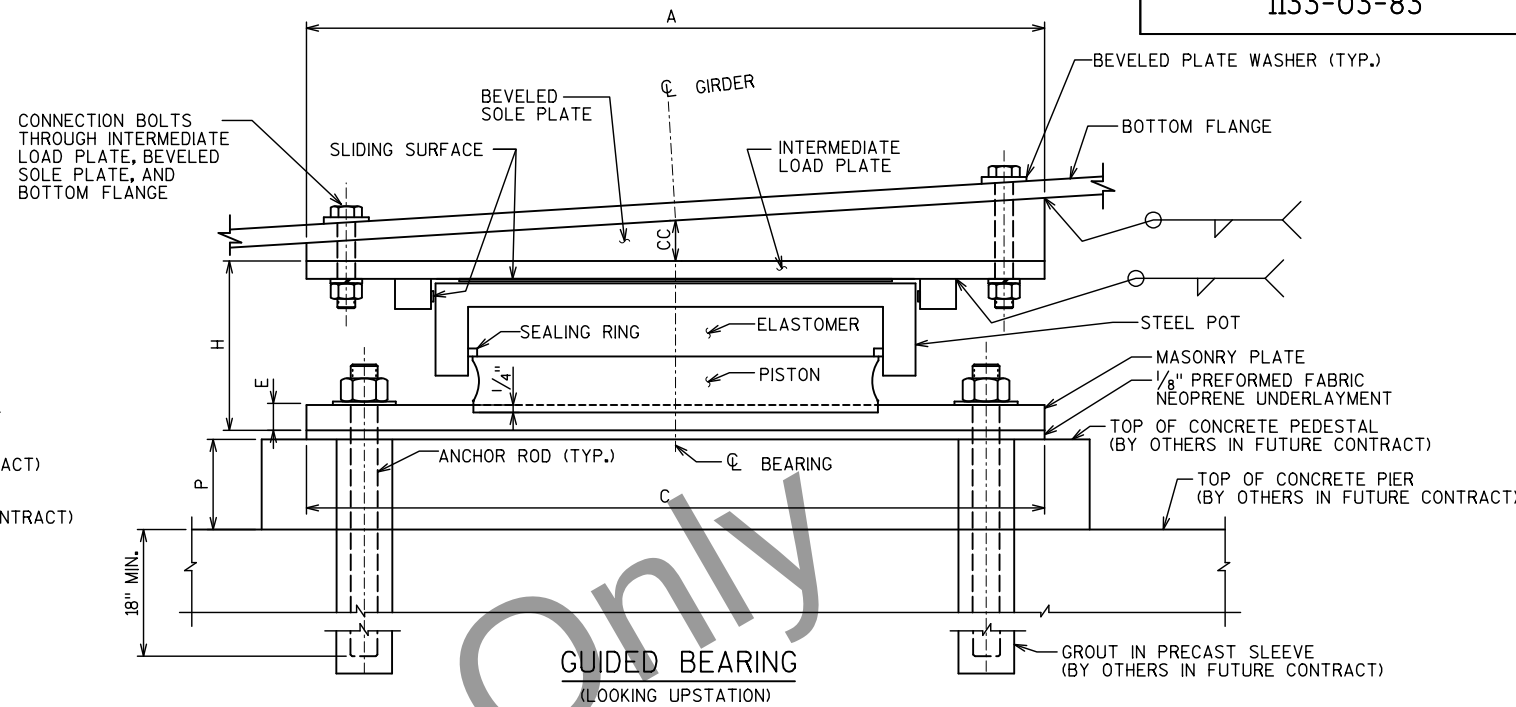
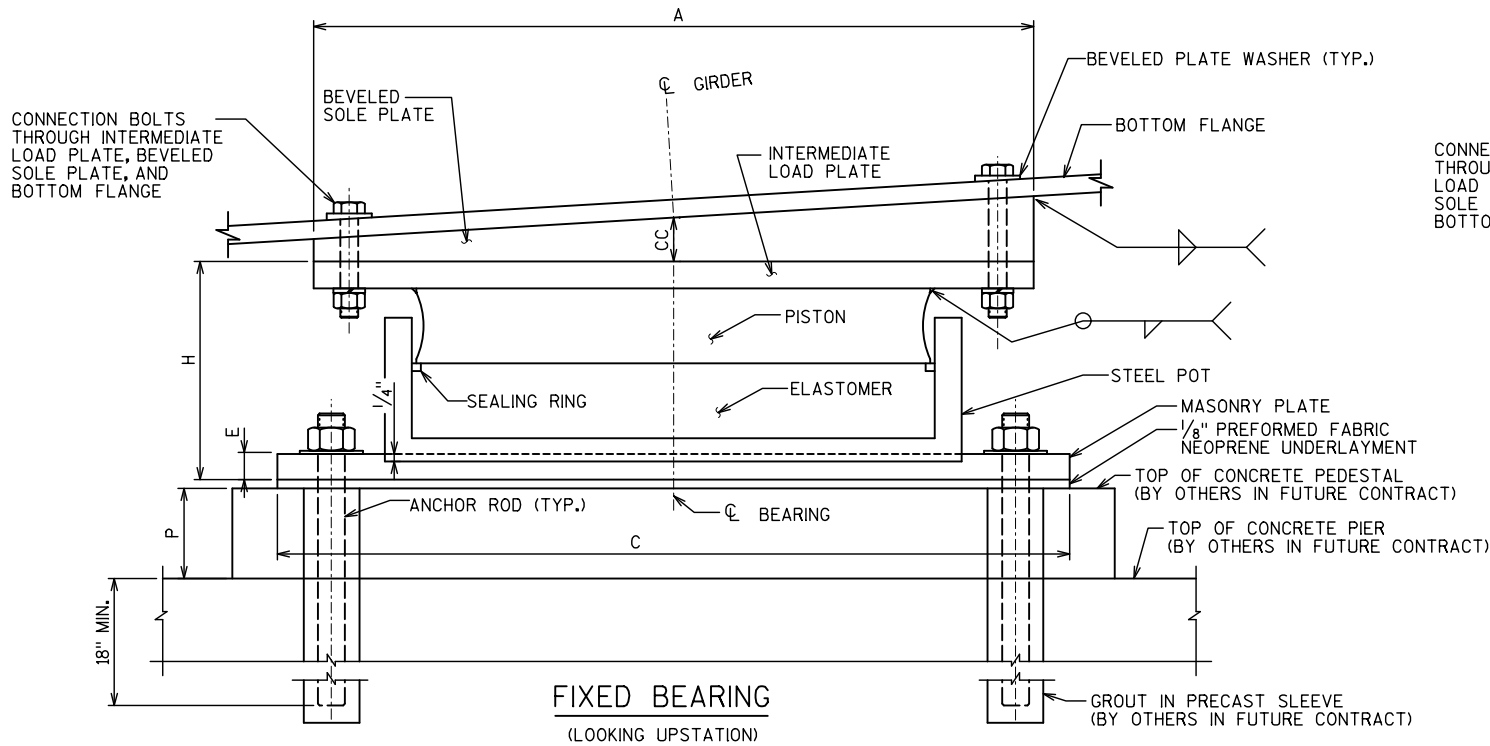
BEARING DIMENSION KEY



BEVELED SOLE PLATE DIMENSION KEY

(HOLES MATCHING INTERMEDIATE LOAD PLATE
NOT SHOWN FOR CLARITY)

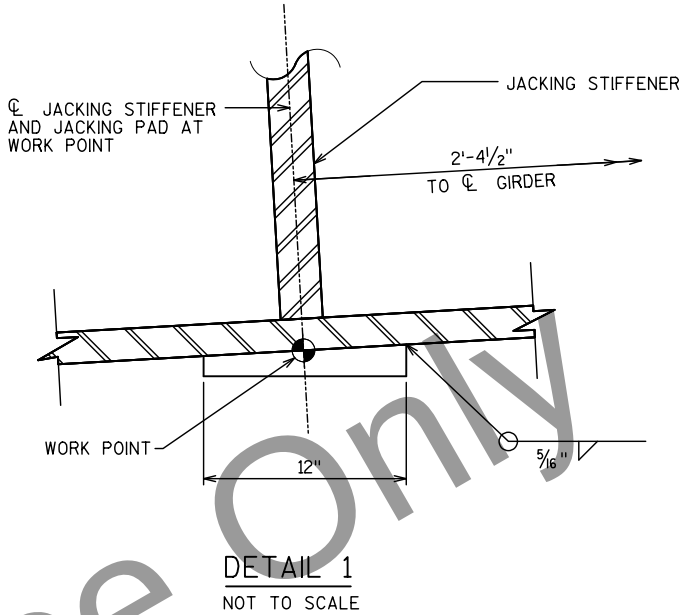
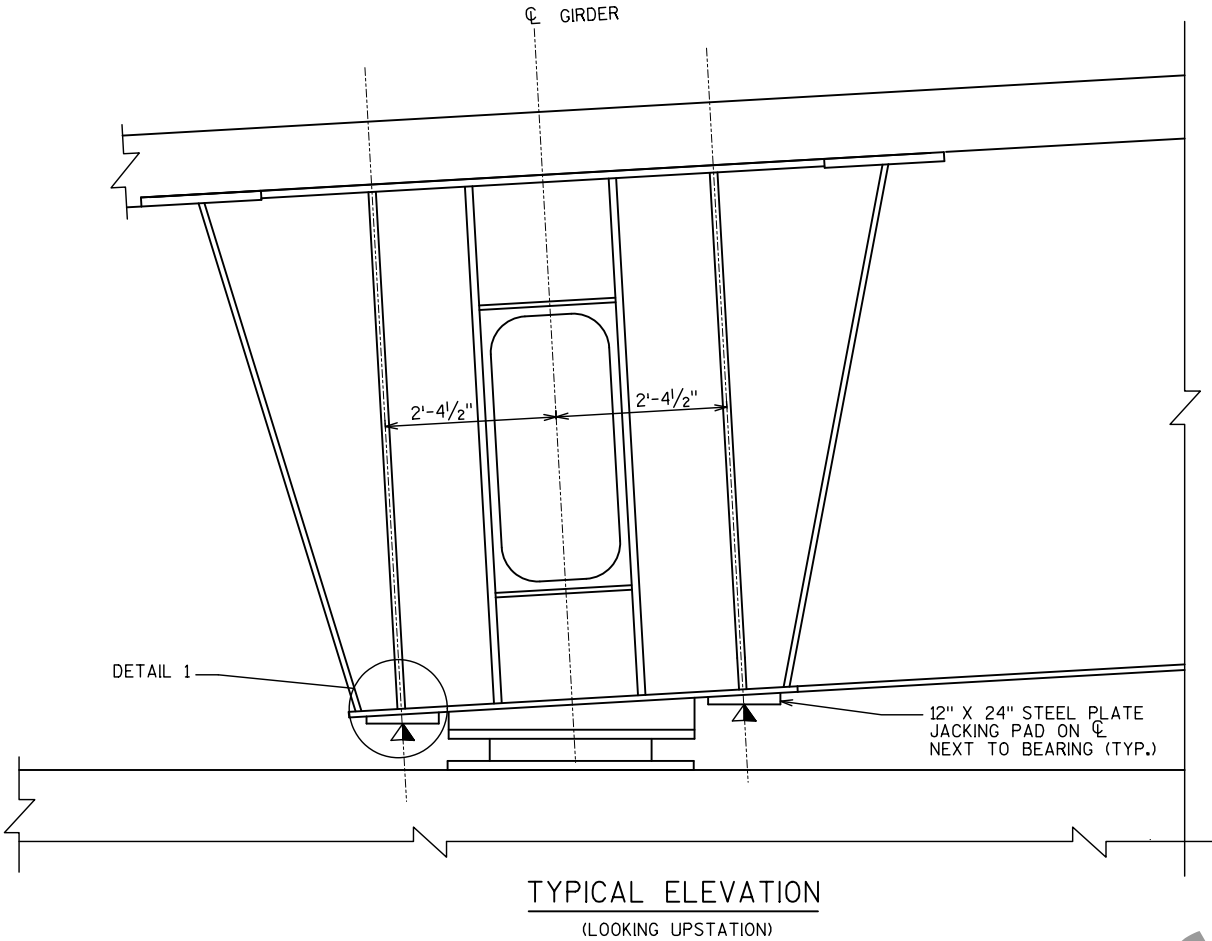
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D. MAD	
BEARING LAYOUT UNIT 2 - SHEET 2			SHEET 10 OF 50



NOTES:

- SEE BEARING LAYOUT SHEETS FOR LOCATION-SPECIFIC DIMENSIONS.
- SEE JACKING PROVISIONS SHEET FOR LOCATION AND SIZE OF BEARING REPLACEMENT JACKING PADS ATTACHED TO BOTTOM OF GIRDER FLANGE.
- DESIGN BOLTED CONNECTION BETWEEN BEVELED SOLE PLATE AND INTERMEDIATE LOAD PLATE FOR THE COMBINED SPECIFIED HORIZONTAL LOADS SHOWN ON THE BEARING LAYOUT SHEETS PER AASHTO LRFD AND THE WISDOT BRIDGE MANUAL. FOR FUTURE BEARING REPLACEMENT, ARRANGE THE CONNECTION TO ENSURE ALL BOLTS CAN BE REMOVED WITHOUT INTERFERENCE FROM ANCHOR BOLTS OR OTHER OBSTRUCTIONS AFTER BEARING IS INSTALLED.
- HOLES IN TOP PLATE MAY BE SLOTTED OR OVERSIZED AS REQUIRED TO FACILITATE STEEL ERECTION. IF OVERSIZED OR SLOTTED HOLES ARE USED, DESIGN CONNECTION AS SLIP-RESISTANT PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
- HOLES IN MASONRY PLATE SHALL BE A MAXIMUM OF 1/8" LARGER THAN THE SPECIFIED ANCHOR BOLT DIAMETER.
- BEVELED SOLE PLATE, INTERMEDIATE LOAD PLATE AND MASONRY PLATES ARE ALIGNED WITH THE GIRDER AND THE SUBSTRUCTURE BELOW.
- BEVELED SOLE PLATE AND INTERMEDIATE LOAD PLATE THICKNESSES TO BE SELECTED BY THE BEARING DESIGNER. MINIMUM 1".
- MASONRY PLATE THICKNESS TO BE CONFIRMED BY THE BEARING DESIGNER AND INCREASED IF REQUIRED, BUT NOT DECREASED FROM 1.75".
- PROVIDE ANCHOR BOLTS IN ACCORDANCE WITH ASTM F1554 (GRADE 105) AND HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M232.
- DESIGN BEARINGS TO PERMIT REPLACEMENT BY JACKING THE BRIDGE A MAXIMUM OF 1/2".
- FINAL DISTANCE BETWEEN BOTTOM OF STEEL GIRDER AND TOP OF PIER IS THE SUMMATION OF "CC", THE ACTUAL "H" OF THE BEARING, 1/8" UNDERLAYMENT AND THE ACTUAL PEDESTAL HEIGHT "P". HEIGHT "P" IS ASSUMED TO BE 10" FOR ALL LOCATIONS.
- ALL ELEMENTS SHOWN ARE PROVIDED BY THE BEARING MANUFACTURER (UNLESS OTHERWISE NOTED) AND COORDINATED WITH THE STEEL FABRICATOR.
- THE CONTRACTOR IS RESPONSIBLE DURING STORAGE AND FUTURE ERECTION OF THE BEARING TO PREVENT OVER-ROTATION OR SLIDING OF THE BEARING. CONSTRUCTION ROTATIONS MUST NOT EXCEED THE ALLOWABLE ROTATIONS SHOWN.
- DO NOT DISASSEMBLE ANY BEARING WITHOUT THE PRESENCE OF THE TECHNICAL REPRESENTATIVE OF THE BEARING MANUFACTURER.
- A TECHNICAL REPRESENTATIVE FROM THE BEARING MANUFACTURER MUST BE PRESENT DURING INSTALLATION OF THE BEARINGS IN A FUTURE ERECTION AND CONSTRUCTION CONTRACT BY OTHERS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D. MAD	
BEARING DETAILS			SHEET 11 OF 50



LEGEND:

▲ SUGGESTED JACKING LOCATIONS FOR FUTURE BEARING REPLACEMENT.

NOTES:

THIS DRAWING SHOWS DETAILS AND LOCATION OF JACKING PADS AND ADDITIONAL JACKING STIFFENERS REQUIRED FOR FUTURE BEARING REPLACEMENT.

JACKING PAD DIMENSIONS AND LOCATIONS ARE BASED ON THE MINIMUM CLEARANCES SHOWN AND THE NOMINAL BEARING DIMENSIONS GIVEN ON BEARING LAYOUT SHEETS. MAKE ADJUSTMENTS AS REQUIRED TO ACCOMMODATE ACTUAL BEARINGS SUPPLIED.

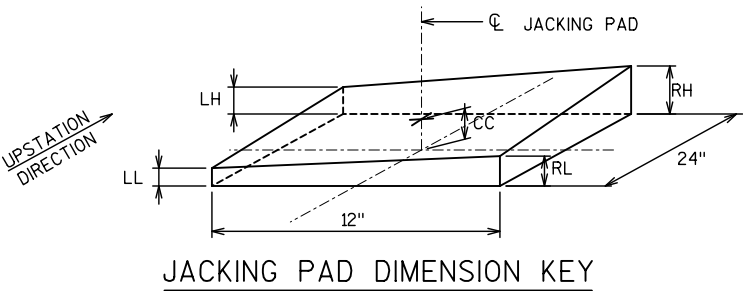
JACKING PADS ARE PROVIDED TO GIVE A JACKING SURFACE THAT IS APPROXIMATELY LEVEL AND TO ENSURE THAT JACKING LOADS ARE APPLIED TO THE CORRECT LOCATION.

ADDITIONAL MEASURES SHALL BE TAKEN TO CORRECT FOR ANY UNINTENDED SLOPE AND TO ENSURE THAT JACKS ARE POSITIVELY HELD IN POSITION ON THE JACKING PADS.

ESTIMATED JACKING FORCES ARE GIVEN AT EACH PAD AND ARE BASED ON DEAD LOAD AND LIVE LOAD REACTIONS ONLY AND NO ADDITIONAL ALLOWANCES HAVE BEEN MADE. THESE FORCES MUST BE INCREASED TO ALLOW FOR JACK FRICTION AND OTHER FACTORS. RECOMMENDED MINIMUM JACK CAPACITY IS 2 TIMES THE TABULATED VALUES.

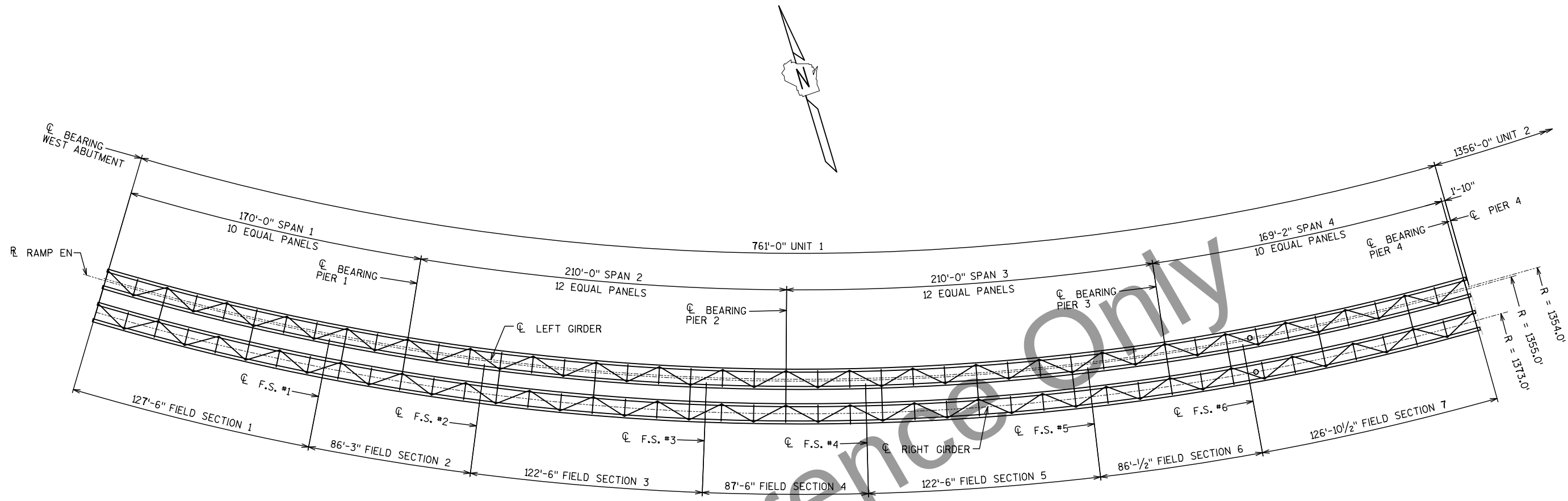
FORCES AND RECOMMENDATIONS ARE PROVIDED FOR INFORMATION ONLY AND MUST BE VERIFIED BY THE ENGINEER RESPONSIBLE FOR JACKING OPERATIONS.

CONTROL JACKS TO ENSURE THAT FORCES APPLIED TO ALL JACKING PADS AT A SINGLE BEARING LOCATION ARE APPROXIMATELY EQUAL. IF THIS REQUIREMENT IS NOT MET, A COMPLETE ANALYSIS OF THE PIER DIAPHRAGM SYSTEM WILL BE REQUIRED IN ORDER TO ACCOUNT FOR THE REDISTRIBUTION OF FORCES WITHIN THE SYSTEM.



LOCATION	NUMBER OF PADS PER BOX	LEFT BOX JACKING PAD DIMENSIONS					RIGHT BOX JACKING PAD DIMENSIONS					MIN. JACK FORCE (KIP)
		LL (IN)	RL (IN)	LH (IN)	RH (IN)	CC (IN)	LL (IN)	RL (IN)	LH (IN)	RH (IN)	CC (IN)	
W. ABUT	2	1	1.56	1.17	1.73	1.37	1	1.56	1.31	1.73	1.40	280
PIER 1	2	1	1.72	1.28	2.00	1.50	1	1.72	1.28	2.00	1.50	690
PIER 2	2	1	1.72	1.41	2.13	1.57	1	1.72	1.41	2.13	1.57	690
PIER 3	2	1	1.72	1.46	2.18	1.59	1	1.72	1.46	2.18	1.59	690
PIER 4W	2	1	1.72	1.46	2.18	1.59	1	1.72	1.46	2.18	1.59	270
PIER 4E	2	1	1.72	1.46	2.18	1.59	1	1.72	1.46	2.18	1.59	310
PIER 5	2	1	1.72	1.39	2.11	1.55	1	1.72	1.39	2.11	1.55	810
PIER 6	2	1	1.72	1.11	1.83	1.41	1	1.72	1.11	1.83	1.41	800
PIER 7	2	1.17	1.89	1	1.72	1.45	1.17	1.89	1	1.72	1.45	810
PIER 8	2	1.45	2.17	1	1.72	1.59	1.45	2.17	1	1.72	1.59	790
PIER 9	2	1.72	2.44	1	1.72	1.72	1.72	2.44	1	1.72	1.72	730
N. ABUT	2	1.91	2.63	1	1.72	1.81	1.91	2.63	1	1.72	1.81	270

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
		DRAWN BY ZMG	PLANS CK'D. MAD
JACKING PROVISIONS		SHEET 12 OF 50	

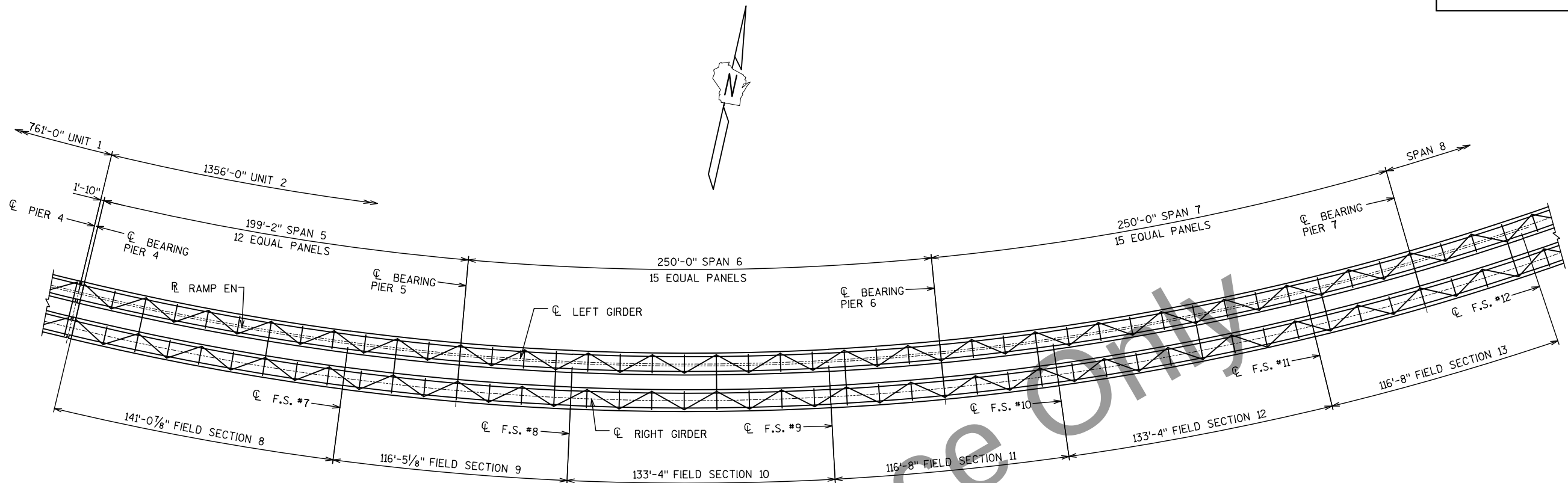


FRAMING PLAN - UNIT 1

LEGEND
F.S. = BOLTED FIELD SPLICE

For Reference Only

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
FRAMING PLAN UNIT 1 SPANS 1 - 4			SHEET 13 OF 50

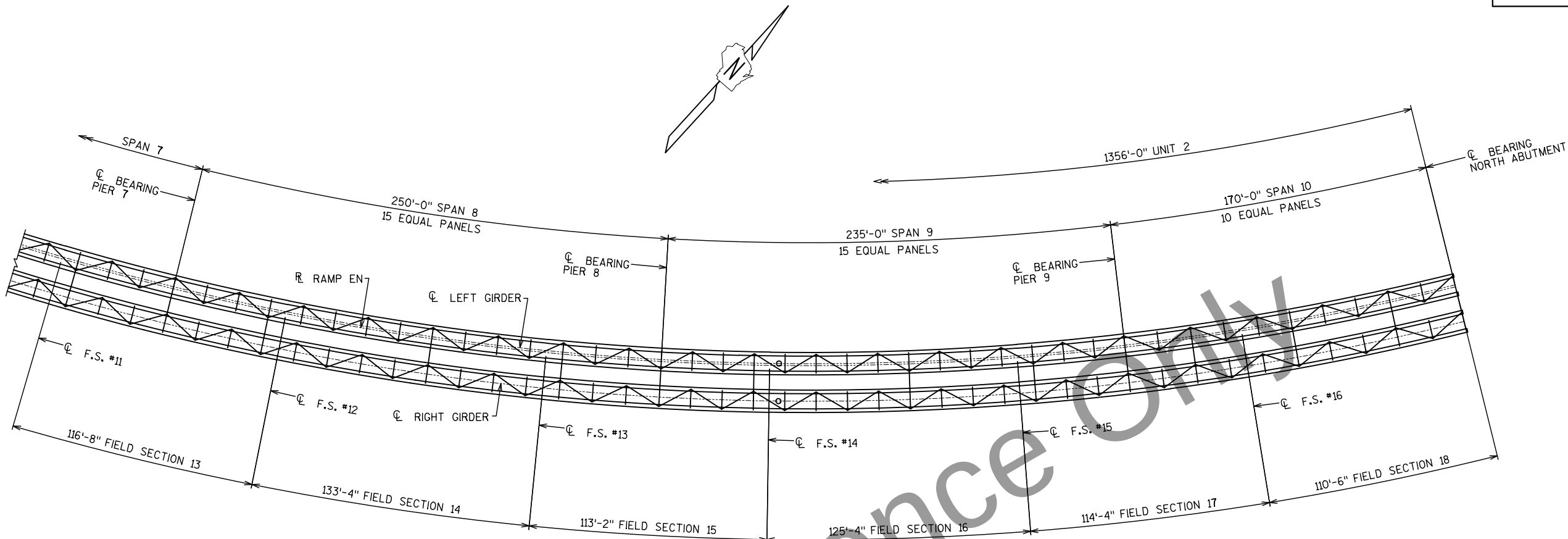


FRAMING PLAN - UNIT 2

LEGEND

F.S.= BOLTED FIELD SPLICE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
FRAMING PLAN UNIT 2 SPANS 5 - 7			SHEET 14 OF 50



FRAMING PLAN - UNIT 2

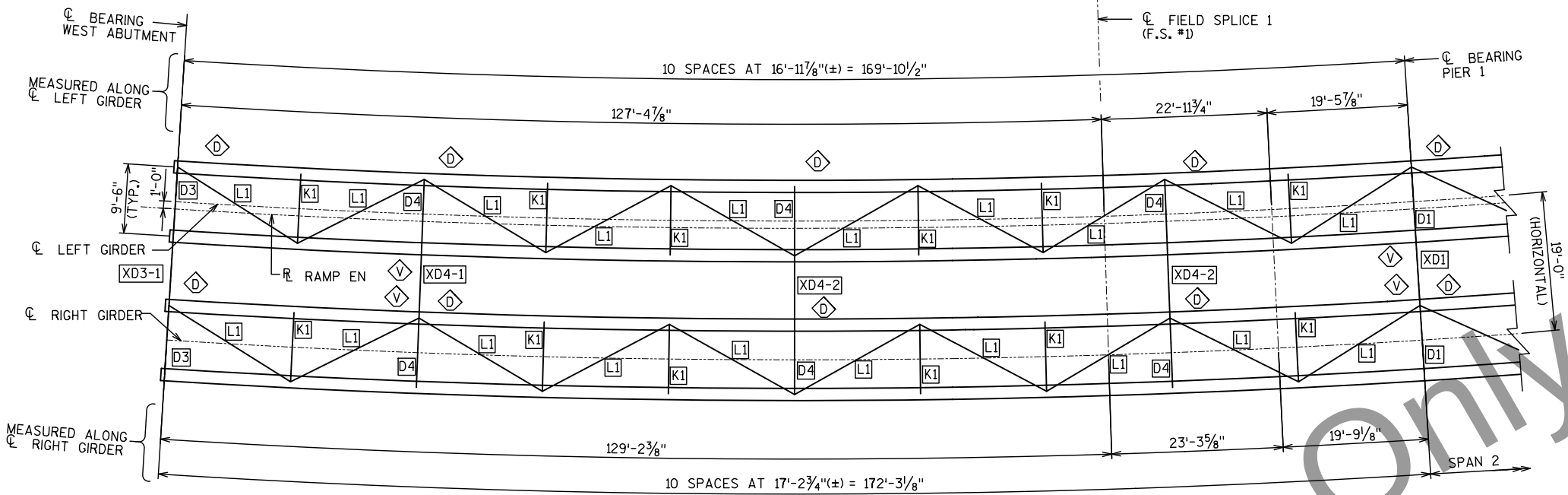
LEGEND

F.S.= BOLTED FIELD SPLICE

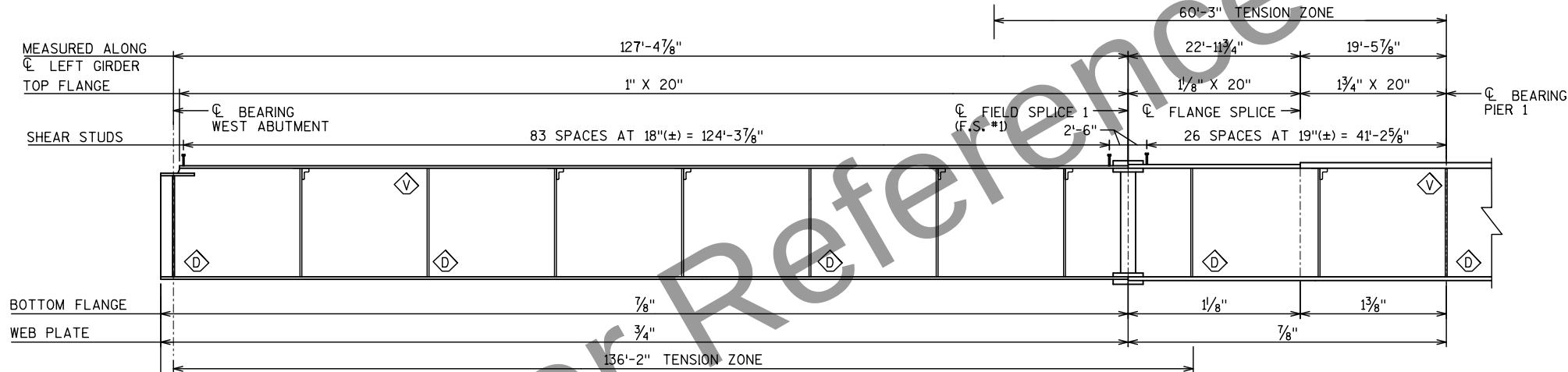
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
FRAMING PLAN UNIT 2 SPANS 8 - 10			SHEET 15 OF 50

LEGEND

- D1 INTERIOR DIAPHRAGM OVER PIER FOR CONTINUOUS SPAN
- D2 INTERIOR DIAPHRAGM OVER PIER AT UNIT BREAK
- D3 INTERIOR DIAPHRAGM AT ABUTMENT
- D4 INTERIOR INTERMEDIATE DIAPHRAGM
- XDA-B EXTERIOR DIAPHRAGM (WHERE 'A' INDICATES CORRESPONDING INTERIOR DIAPHRAGM NUMBER AND 'B' INDICATES SEQUENTIAL NUMBER WHICH VARIES DUE TO CHANGE IN CROSS SLOPE)
- K1 INTERIOR K FRAME
- L1 TOP FLANGE LATERAL BRACING MARK NUMBER
- XF EXTERIOR INTERMEDIATE CROSS FRAME
- V VENT HOLE LOCATION
- D DRAIN HOLE LOCATION

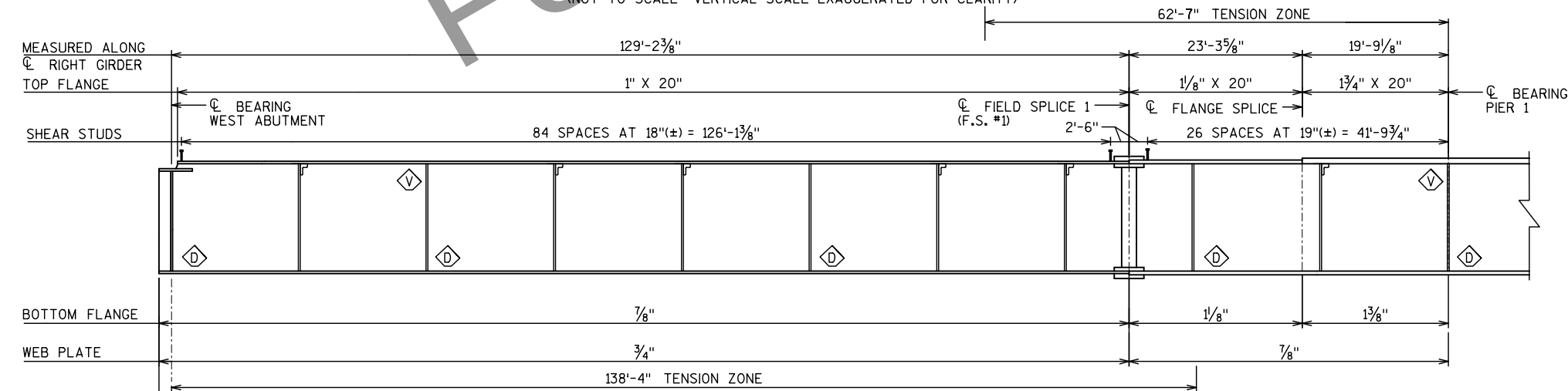


GIRDER PLAN - UNIT 1 SPAN 1



LEFT GIRDER ELEVATION - UNIT 1 SPAN 1

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)



RIGHT GIRDER ELEVATION - UNIT 1 SPAN 1

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

NOTES:

SHEAR STUDS FURNISHED AND INSTALLED BY OTHERS DURING FUTURE ERECTION CONTRACT.

ALL LONGITUDINAL DIMENSIONS SHOWN ARE MEASURED HORIZONTALLY ALONG CENTERLINE OF EACH GIRDER. CONTRACTOR SHALL MAKE ADJUSTMENTS FOR CAMBER AND GRADE.

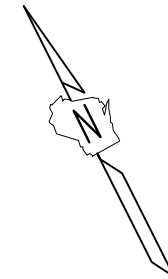
FOR SHOP WELDED BUTT SPLICES OF FLANGES, FABRICATOR MAY CHOOSE TO ELIMINATE SPLICE AND CONTINUE THICKER PLATE TO END OF SECTION AT FIELD SPLICE AT NO ADDITIONAL COST TO THE OWNER. ADJUST CAMBER IF PLATE SIZES ARE CHANGED.

TENSION ZONES SHOWN ABOVE THE GIRDER ELEVATION INDICATE TENSION ZONES FOR TOP FLANGE AND UPPER PORTION OF WEB.

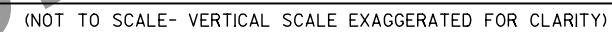
TENSION ZONES SHOWN BELOW THE GIRDER ELEVATION INDICATE TENSION ZONES FOR BOTTOM FLANGE AND LOWER PORTION OF WEB.

FOR OPTIONAL SHOP SPLICE DETAIL AS REQUIRED DUE TO MAXIMUM PLATE LENGTHS AVAILABLE FROM MILL, SEE MISCELLANEOUS GIRDER DETAILS SHEET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
GIRDER PLAN & ELEVATION UNIT 1 - SPAN 1			SHEET 16 OF 50



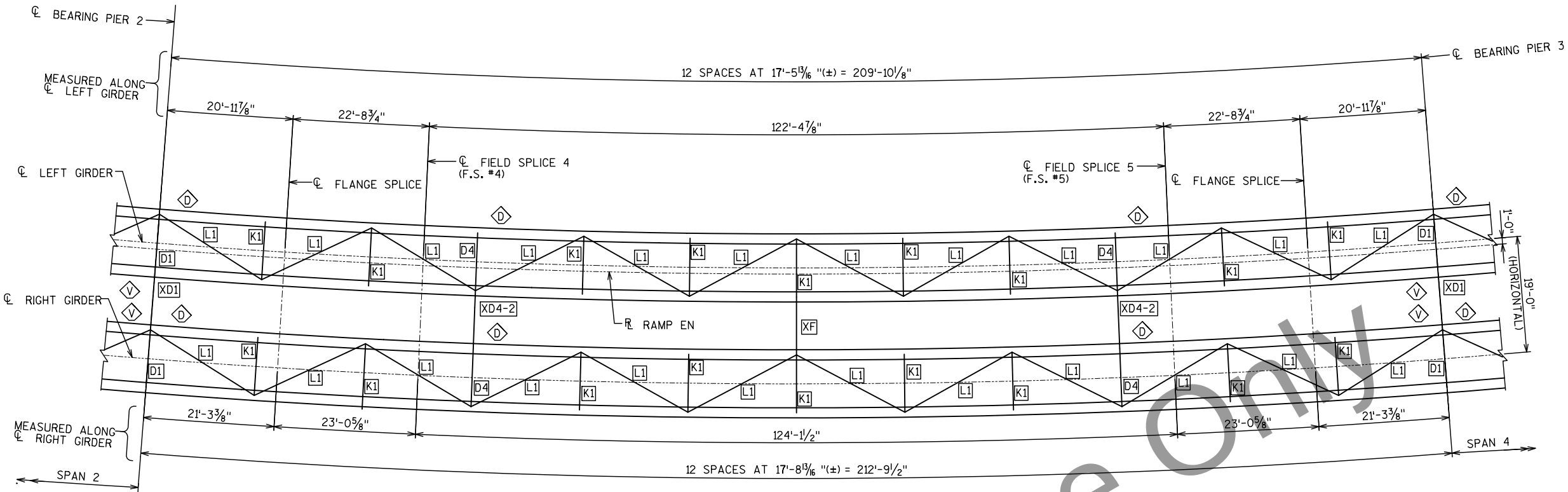
LEFT GIRDER ELEVATION - UNIT 1 SPAN 2



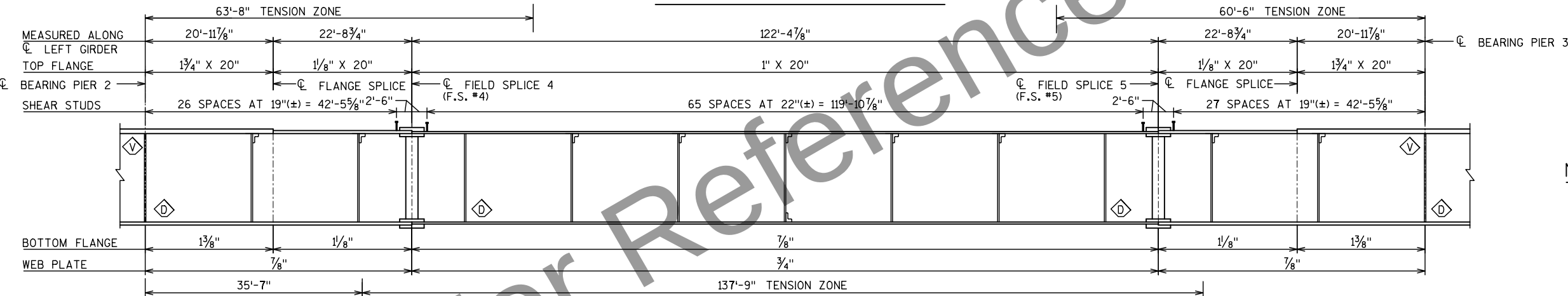
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FOR NOTES AND LEGEND SEE GIRDER
PLAN & ELEVATION UNIT 1- SPAN 1
SHEET

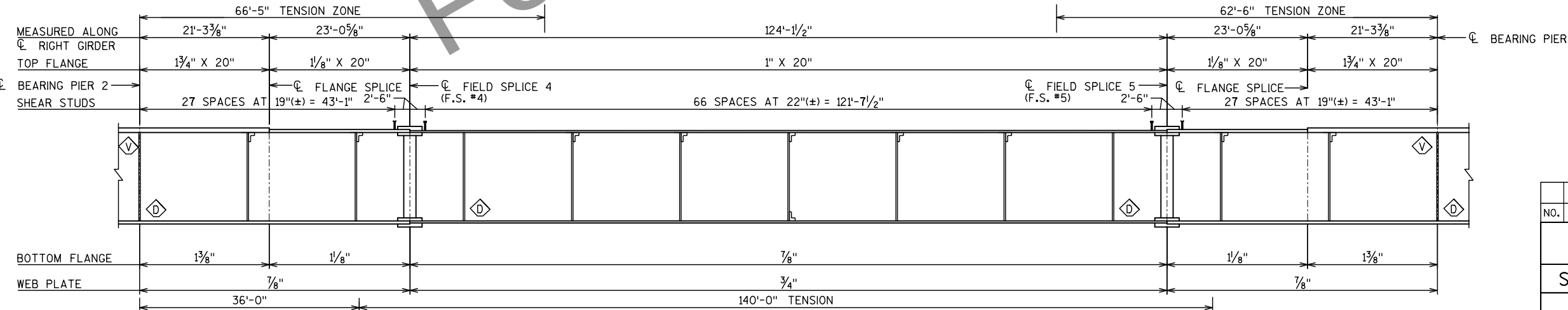
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
		DRAWN BY	JRS
		PLANS CK'D.	NPP
GIRDER PLAN & ELEVATION		SHEET 17 OF 50	
UNIT 1 - SPAN 2			



GIRDER PLAN - UNIT 1 SPAN 3



LEFT GIRDER ELEVATION - UNIT 1 SPAN 3
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

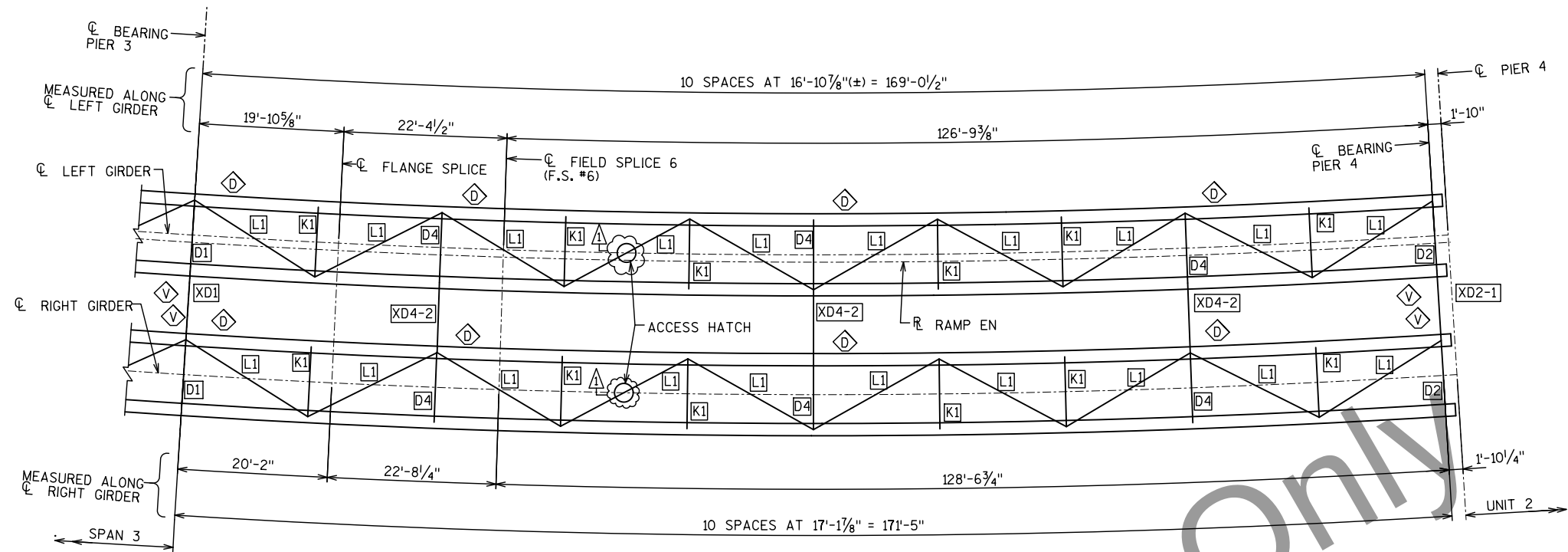


RIGHT GIRDER ELEVATION - UNIT 1 SPAN 3
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

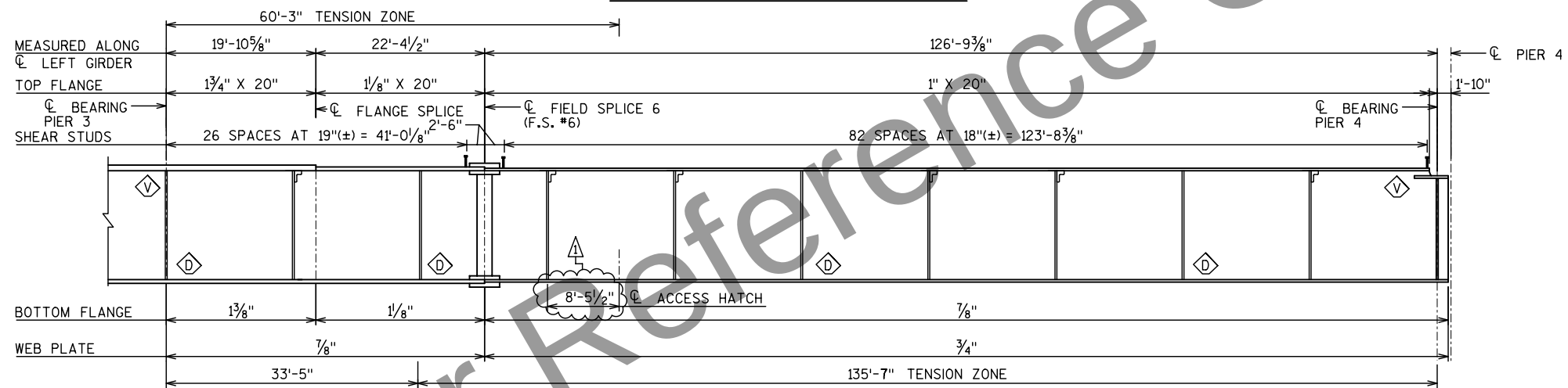
NOTES:

FOR NOTES AND LEGEND SEE GIRDER
PLAN & ELEVATION UNIT 1- SPAN 1
SHEET

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
GIRDER PLAN & ELEVATION UNIT 1 - SPAN 3			SHEET 18 OF 50

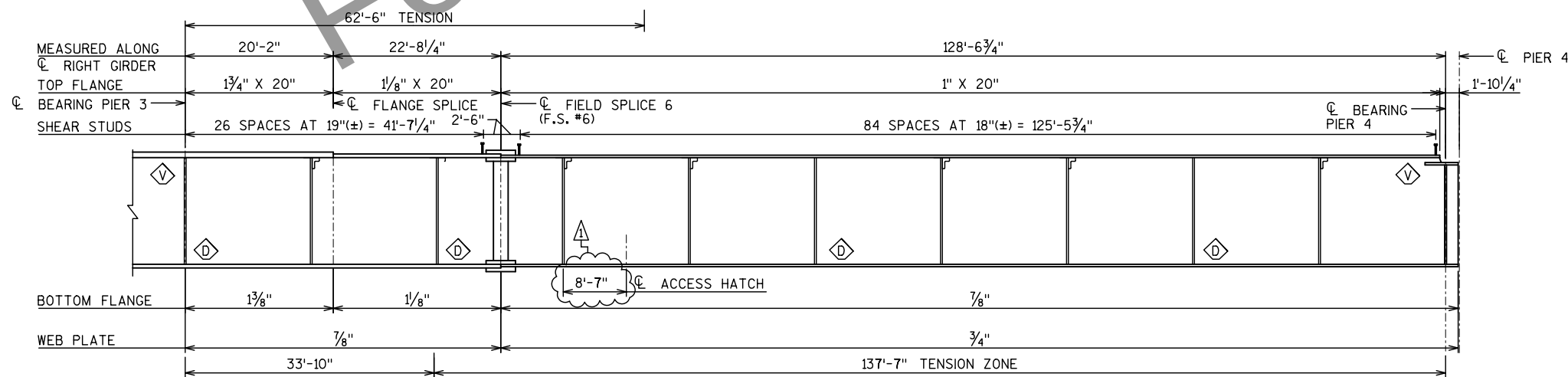


GIRDER PLAN - UNIT 1 SPAN 4



LEFT GIRDER ELEVATION - UNIT 1 SPAN 4

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)



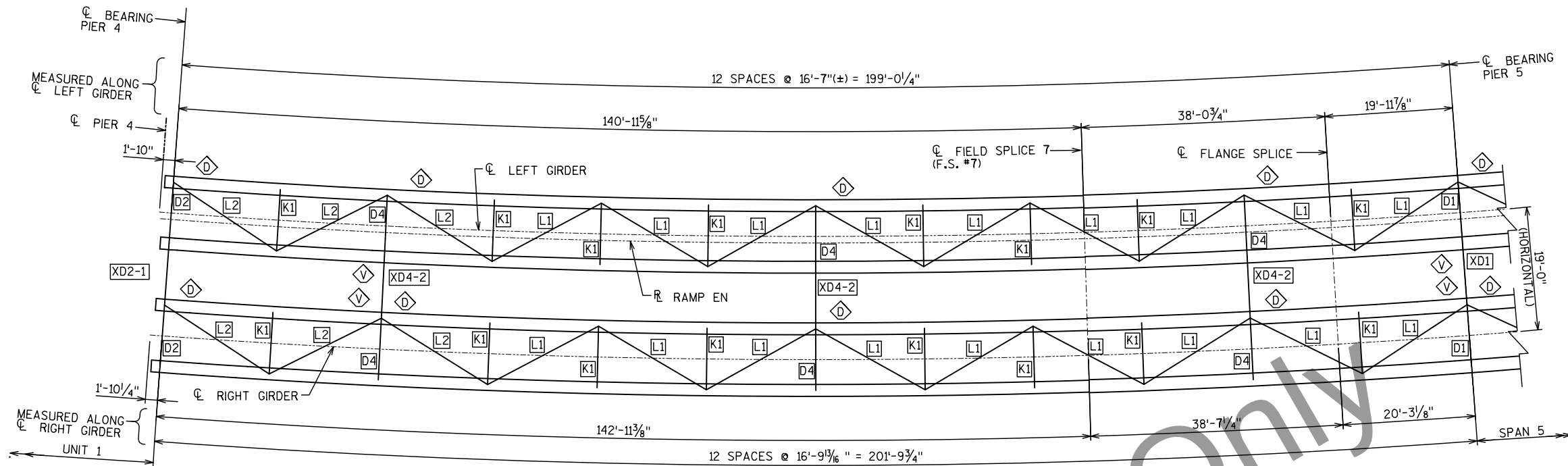
RIGHT GIRDER ELEVATION - UNIT 1 SPAN 4

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

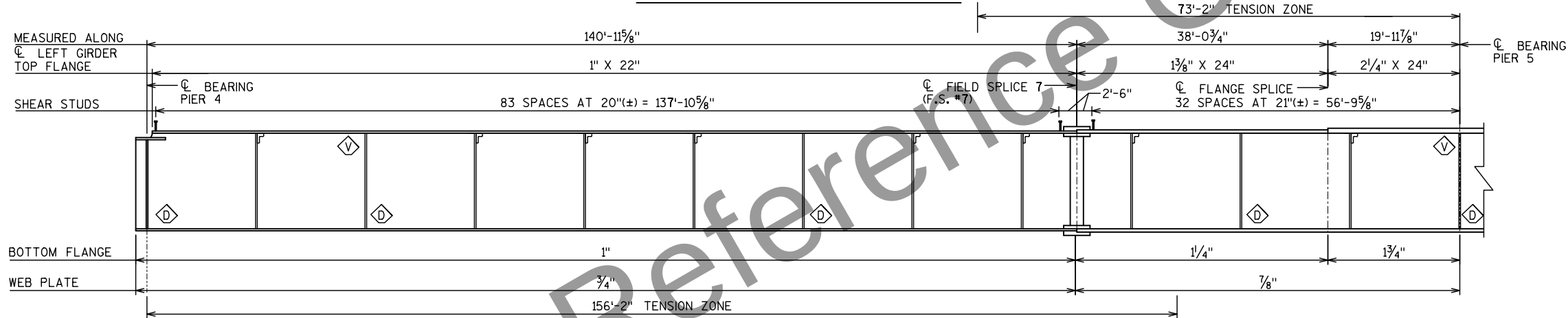
NOTES:

FOR NOTES AND LEGEND SEE GIRDER
PLAN & ELEVATION UNIT 1 - SPAN 1
SHEET

1	5/20/10	ADDENDUM #1	JRS
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
GIRDER PLAN & ELEVATION UNIT 1 - SPAN 4			SHEET 19 OF 50

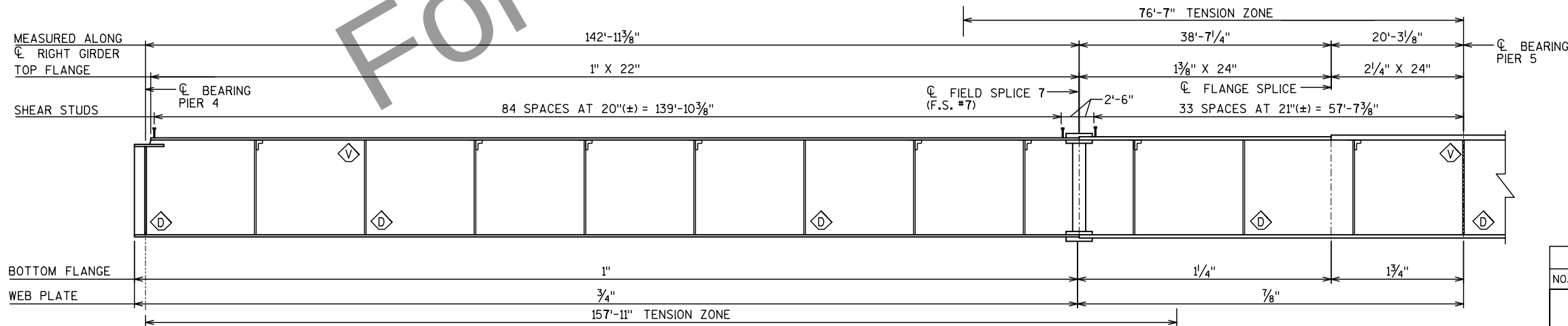


GIRDER PLAN - UNIT 2 SPAN 5



LEFT GIRDER ELEVATION - UNIT 2 SPAN 5

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)



RIGHT GIRDER ELEVATION - UNIT 2 SPAN 5

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)



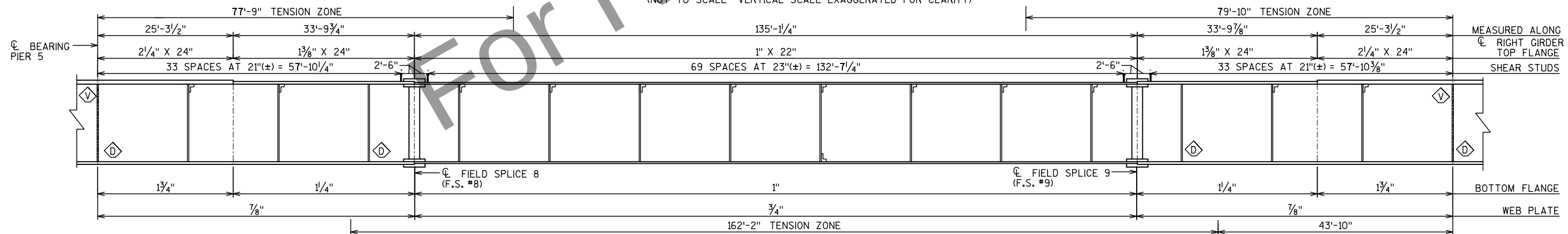
NOTES:

FOR NOTES AND LEGEND SEE GIRDER
PLAN & ELEVATION UNIT 1 - SPAN 1
SHEET

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
GIRDER PLAN & ELEVATION UNIT 2 - SPAN 5			SHEET 20 OF 50

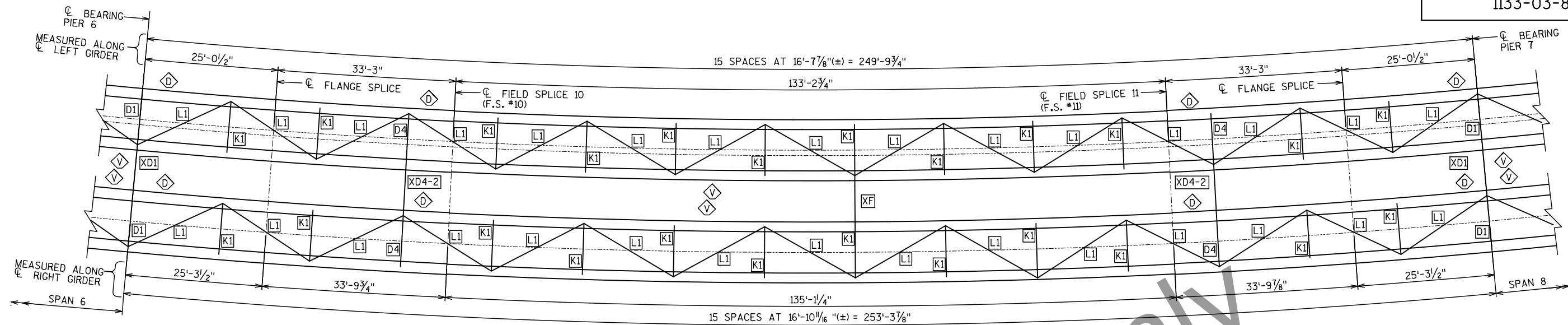


T GIRDER ELEVATION - UNIT 2 SPAN 6

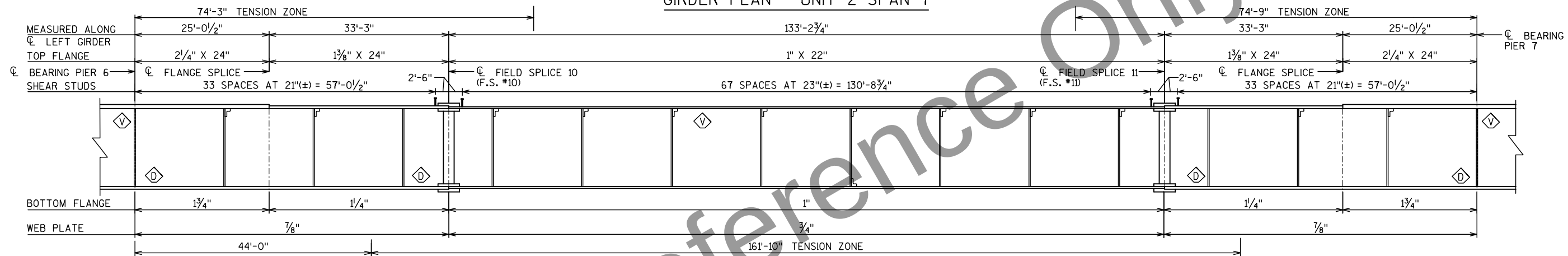
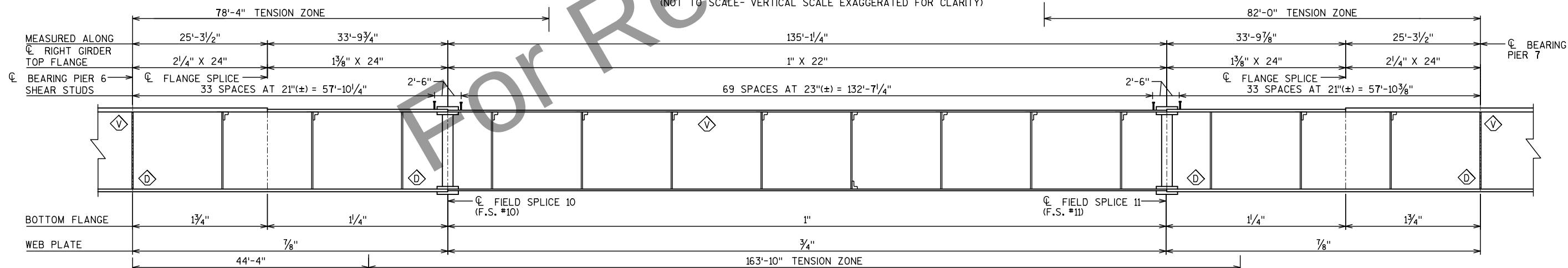


(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
		DRAWN BY	JRS
		PLANS CK'D.	NPP
GIRDER PLAN & ELEVATION		SHEET 21 OF 50	
UNIT 2 - SPAN 6			



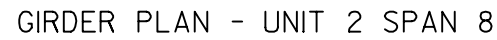
GIRDER PLAN - UNIT 2 SPAN 7

LEFT GIRDER ELEVATION - UNIT 2 SPAN 7
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)RIGHT GIRDER ELEVATION - UNIT 2 SPAN 7
(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

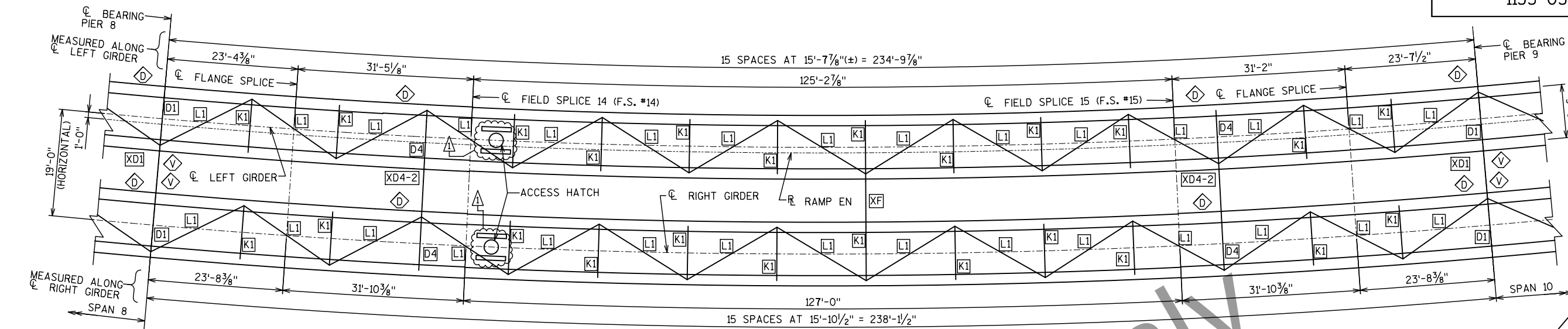
NOTES:

FOR NOTES AND LEGEND SEE GIRDER
PLAN & ELEVATION UNIT 1 - SPAN 1
SHEET

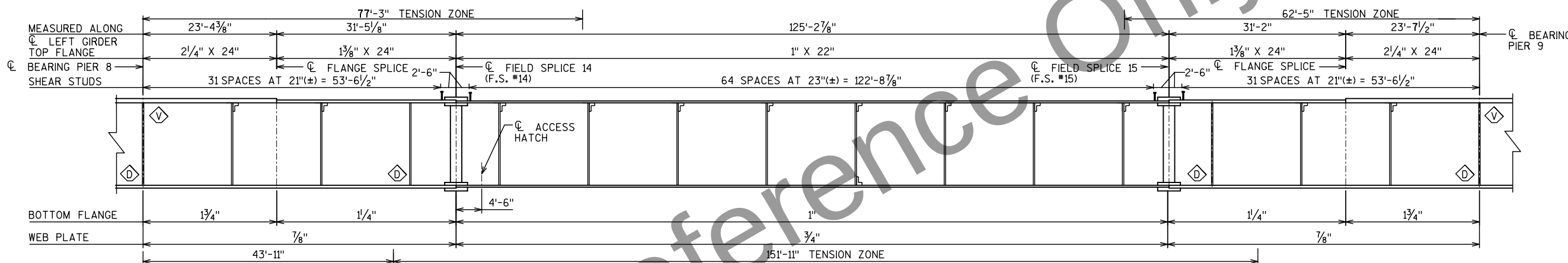
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
GIRDER PLAN & ELEVATION UNIT 2 - SPAN 7			SHEET 22 OF 50



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
		DRAWN BY	JRS
		PLANS CK'D.	NPP
GIRDER PLAN & ELEVATION UNIT 2 - SPAN 8		SHEET 23 OF 50	

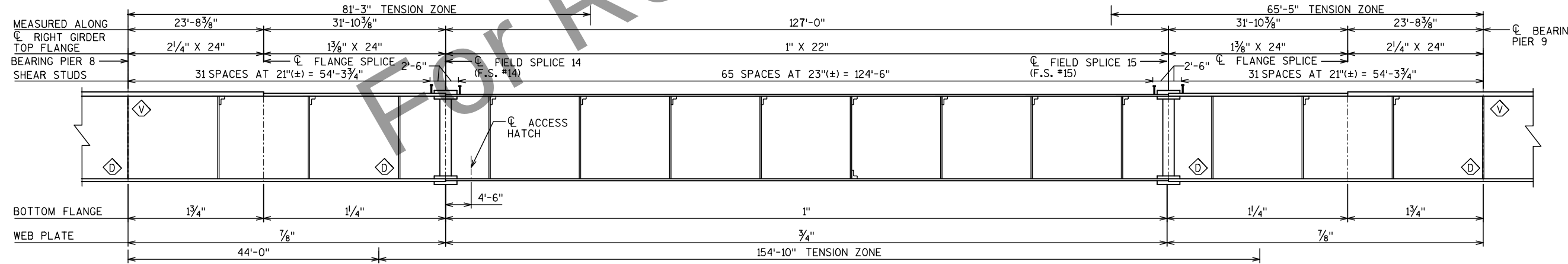


GIRDER PLAN - UNIT 2 SPAN 9



LEFT GIRDER ELEVATION - UNIT 2 SPAN 9

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)



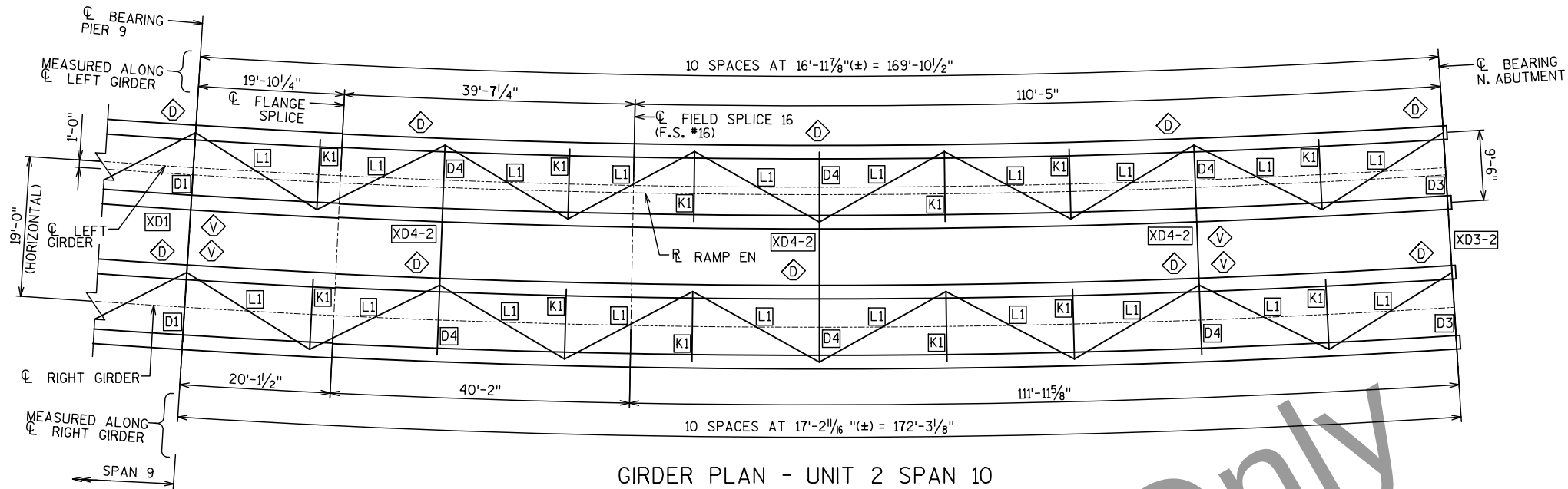
RIGHT GIRDER ELEVATION - UNIT 2 SPAN 9

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

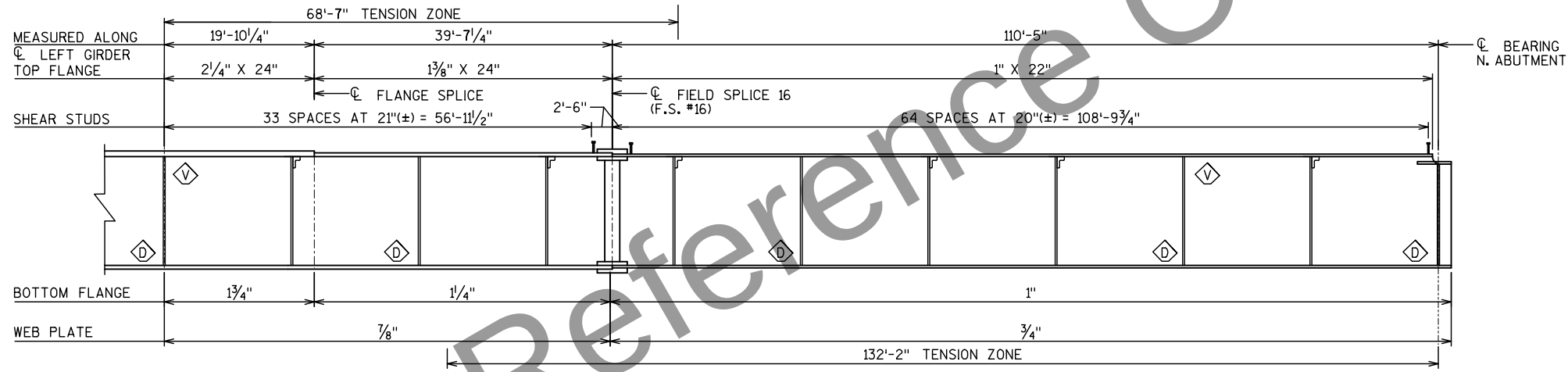
NOTES:

FOR NOTES AND LEGEND SEE GIRDER
PLAN & ELEVATION UNIT 1- SPAN 1
SHEET

1	5/20/10	ADDENDUM #1	JRS
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
GIRDER PLAN & ELEVATION UNIT 2 - SPAN 9			SHEET 24 OF 50

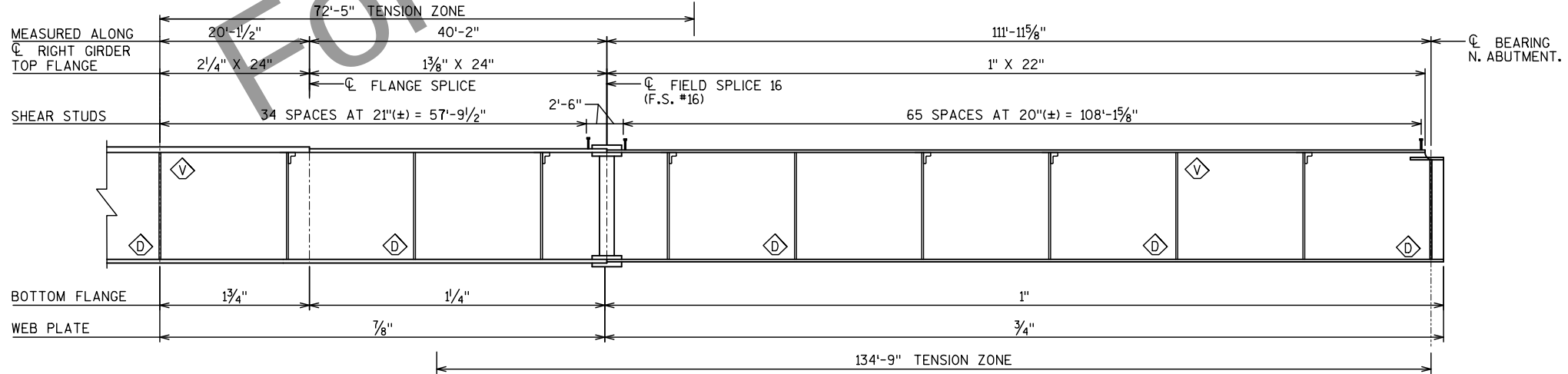


GIRDER PLAN - UNIT 2 SPAN 10



LEFT GIRDER ELEVATION - UNIT 2 SPAN 10

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)



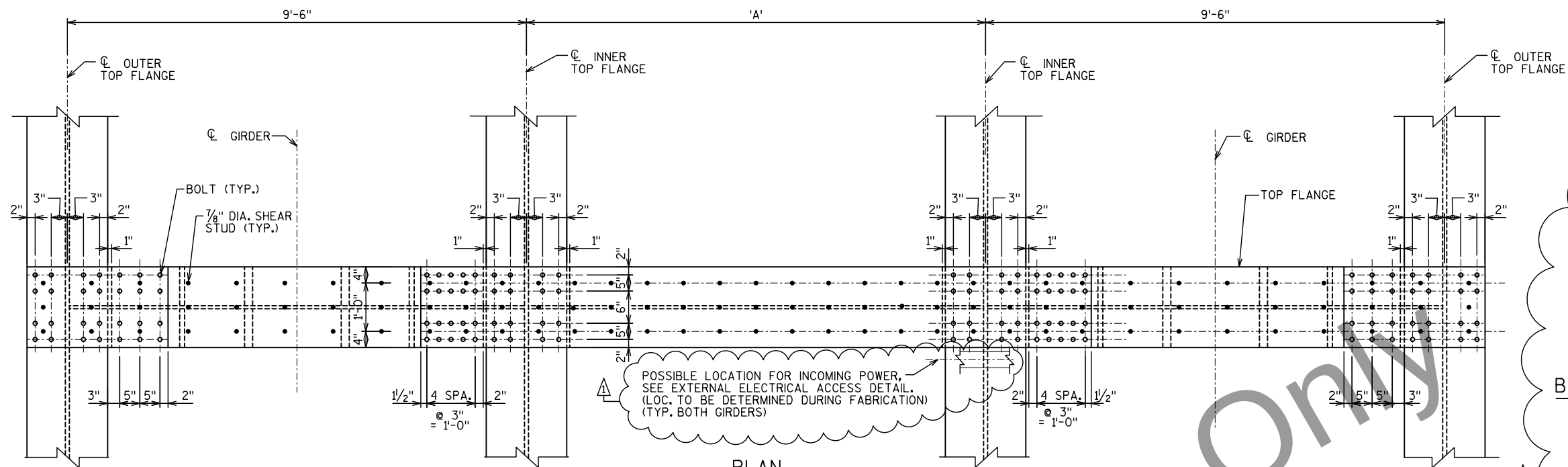
RIGHT GIRDER ELEVATION - UNIT 2 SPAN 10

(NOT TO SCALE- VERTICAL SCALE EXAGGERATED FOR CLARITY)

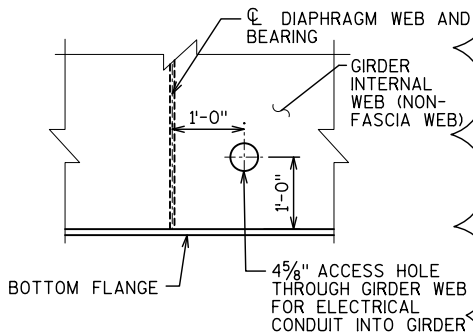
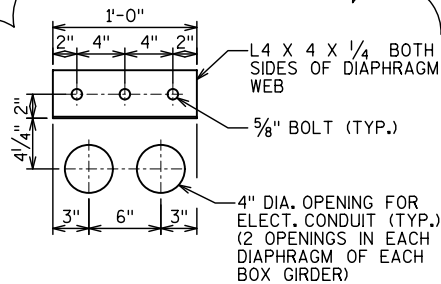
NOTES:

FOR NOTES AND LEGEND SEE GIRDER
PLAN & ELEVATION UNIT 1- SPAN 1
SHEET

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
GIRDER PLAN & ELEVATION UNIT 2 - SPAN 10			SHEET 25 OF 50



OPENINGS AND CONNECTION BRACKET DETAILS FOR ELECTRICAL



EXTERNAL ELECTRICAL ACCESS DETAIL

TWO ACCESS LOCATIONS FOR INCOMING POWER TO INTERIOR OF GIRDER (LOC. TO BE DETERMINED DURING FABRICATION) (TYP. BOTH GIRDERS)

NOTES:

SHEAR STUDS FURNISHED AND INSTALLED BY OTHERS DURING ERECTION.

ALL BOLTS SHOWN SHALL BE 7/8" DIAMETER, EXCEPT WHERE NOTED OTHERWISE.

TOP OF DIAPHRAGM TOP FLANGE PLATE TO BE PROVIDED WITH 3 MIL OF ORGANIC ZINC RICH PRIMER.

SEE MISCELLANEOUS DIAPHRAGM DETAILS SHEET FOR DETAILS 1, 2, 4 AND 6 AND SECTIONS.

UNLESS OTHERWISE NOTED, ALL DIMENSIONS GIVEN ARE PARALLEL OR PERPENDICULAR TO SUPERELEVATION.

1	5/20/10	ADDENDUM #1	JRS
NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-658

DRAWN BY JRS PLANS CK'D. NPP

INTERMEDIATE
PIER DIAPHRAGMS
XD1 AND D1

SHEET 26 OF 50

TABLE OF VARIABLES

	A	B	C
XD1	9'-6 7/16"	13'-17/16"	+6.00%

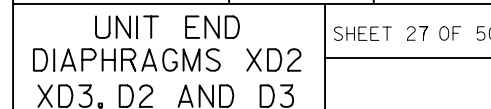
+SLOPE 'C'

-SLOPE 'C'

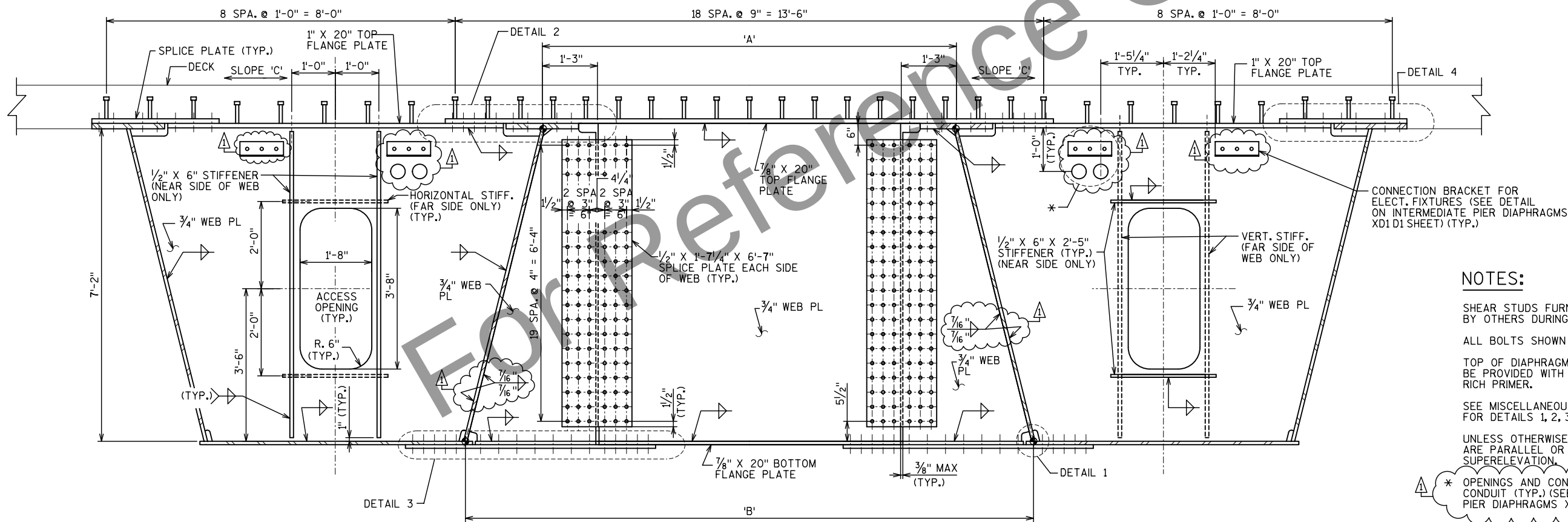
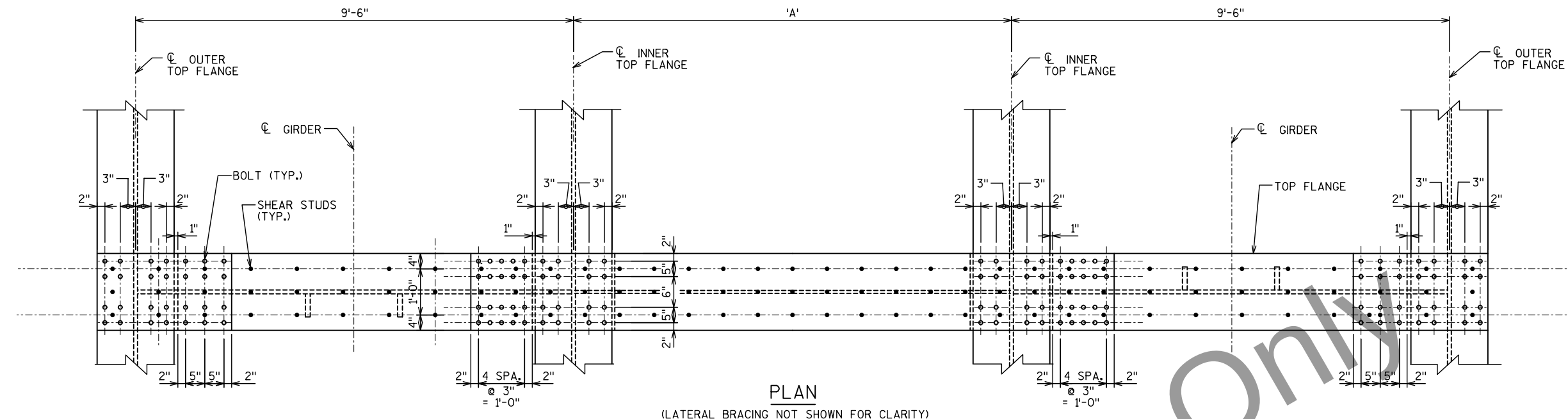
DIMENSIONS ARE MEASURED ALONG SUPERELEVATION.

ELEVATION

(SUPERELEVATION NOT SHOWN)
(LOOKING UPSTATION)



OPENINGS AND CONN.
BRACKET FOR ELECT.
CONDUIT (TYP.) (SEE
DETAIL THIS SHEET)



NOTES:

SHEAR STUDS FURNISHED AND INSTALLED BY OTHERS DURING ERECTION.

ALL BOLTS SHOWN SHALL BE $\frac{7}{8}$ " DIAMETER.

TOP OF DIAPHRAGM TOP FLANGE PLATE TO BE PROVIDED WITH 3 MIL OF ORGANIC ZINC RICH PRIMER.

SEE MISCELLANEOUS DIAPHRAGM DETAILS SHEET FOR DETAILS 1, 2, 3 AND 4 AND SECTIONS.

UNLESS OTHERWISE NOTED, ALL DIMENSIONS GIVEN ARE PARALLEL OR PERPENDICULAR TO SUPERELEVATION.

* OPENINGS AND CONNECTION BRACKET FOR ELECT. CONDUIT (TYP.) (SEE DETAIL ON INTERMEDIATE PIER DIAPHRAGMS XD1 D1 SHEET)

TABLE OF VARIABLES

	A	B	C
XD4-1	9'-6 $\frac{3}{8}$ "	13'-13 $\frac{3}{8}$ "	+5.70%
XD4-2	9'-6 $\frac{7}{16}$ "	13'-17 $\frac{1}{16}$ "	+6.00%

DIMENSIONS ARE MEASURED ALONG SUPERELEVATION.

+SLOPE 'C'

-SLOPE 'C'

1	5/20/10	ADDENDUM #1	JRS
NO.	DATE	REVISION	BY

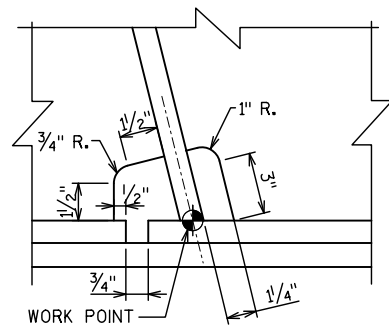
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-658

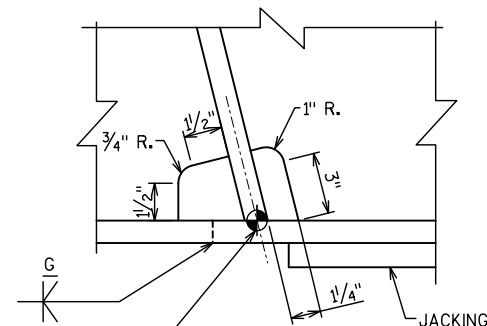
DRAWN BY JRS PLANS CK'D. NPP

INTERMEDIATE
DIAPHRAGMS XD4
AND D4

SHEET 28 OF 50

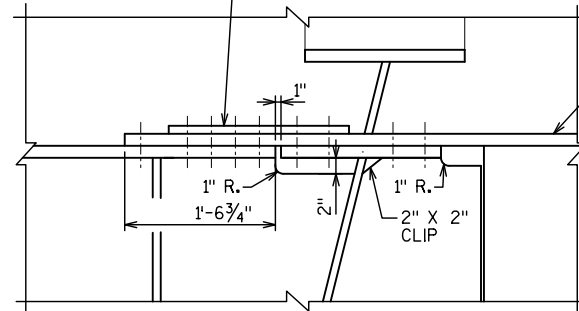


DETAIL 1
DIAPHRAGM XD4/D4

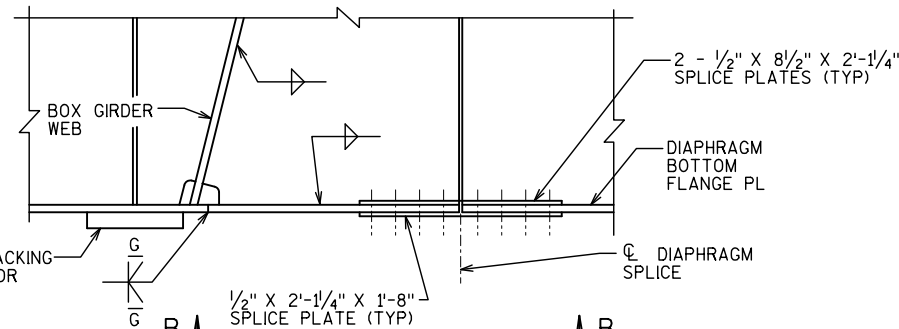


DETAIL 1
DIAPHRAGMS XD1/D1 AND XD2/D2/XD3/D3

5/8" X 1'-10" X 1'-11 5/8" FOR 1'-8" TOP FLANGE
5/8" X 1'-11" X 1'-11 5/8" FOR 1'-10" TOP FLANGE
BENT CONNECTION PLATE



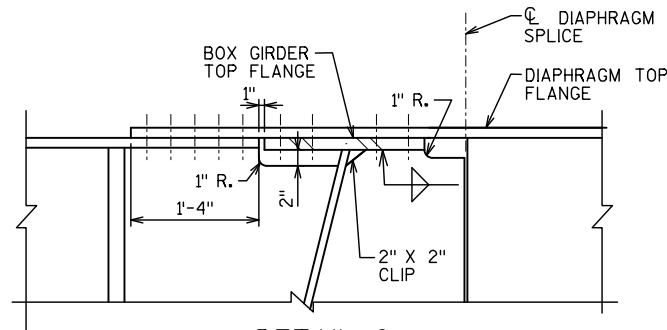
DETAIL 5
DIAPHRAGMS XD2/D2/XD3/D3



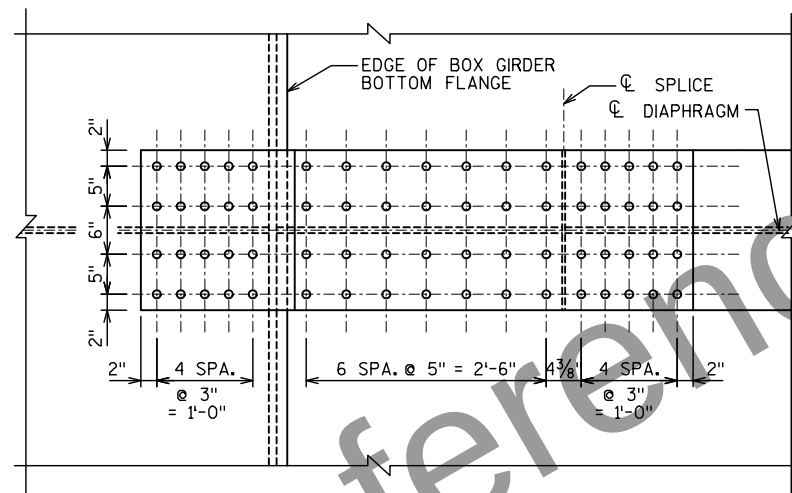
DETAIL 6

DIAPHRAGMS XD1/D1, XD2/D2 AND XD3/D3

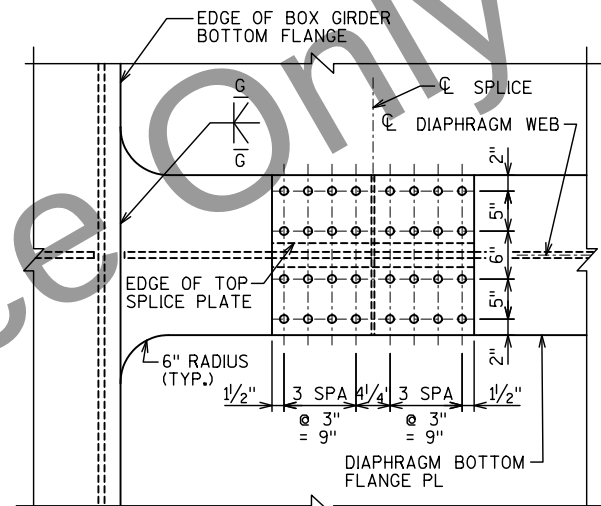
* SEE MISC. GIRDER DETAILS SHEET 2



DETAIL 2
SHEET XD1/D1 AND XD4/D4

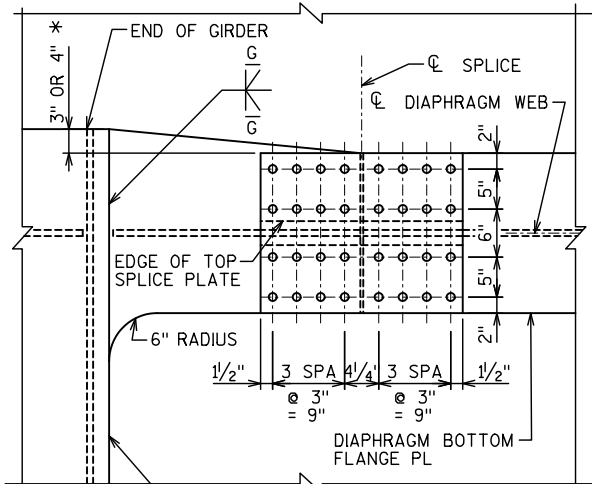


SECTION A-A
THIS SHEET



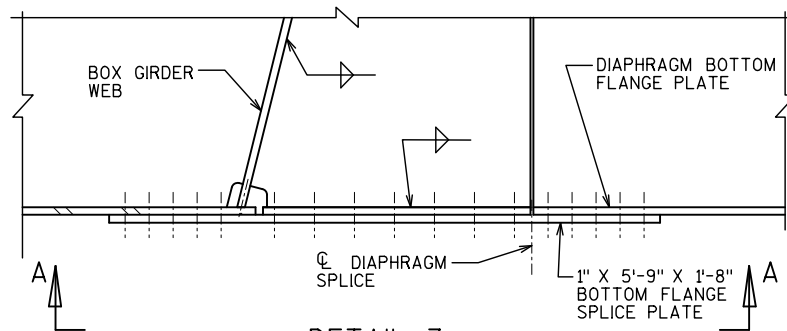
SECTION B-B

THIS SHEET
(DIAPHRAGM XD1/D1)



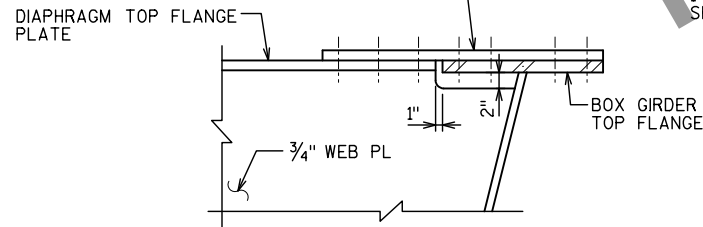
SECTION B-B

THIS SHEET
(DIAPHRAGM XD2/D2 AND XD3/D3)



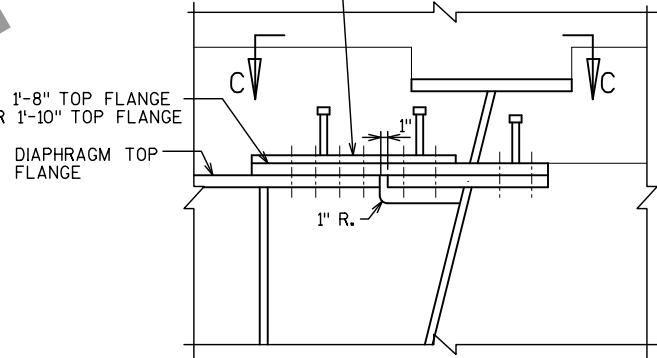
DETAIL 3
DIAPHRAGM XD4/D4

1" X 2'-11" X 1'-8" FOR 1'-8" TOP FLANGE
1" X 3'-1" X 1'-8" FOR 1'-10" TOP FLANGE
1" X 3'-3" X 1'-8" FOR 2'-0" TOP FLANGE
SPICE PLATE

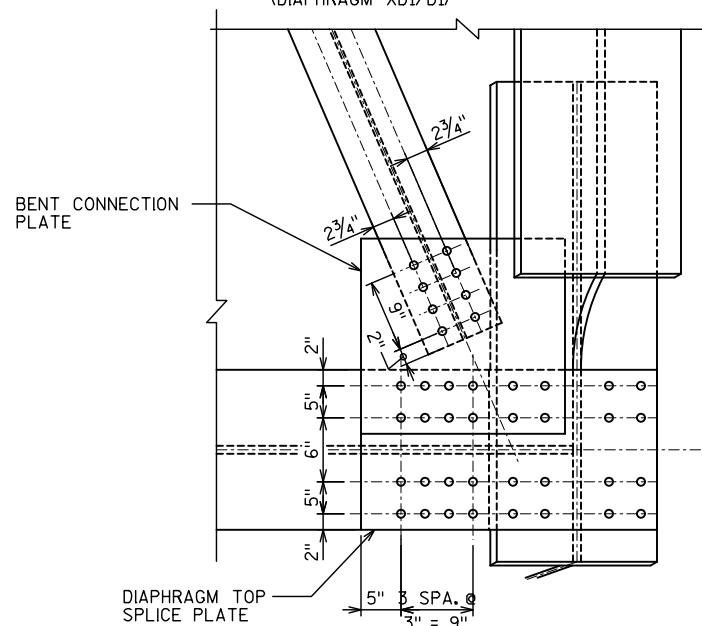


DETAIL 4
DIAPHRAGMS XD1/D1 AND XD4/D4

5/8" X 2'-1" X 1'-11 5/8" FOR 1'-8" TOP FLANGE
5/8" X 2'-2" X 1'-11 5/8" FOR 1'-10" TOP FLANGE
BENT CONNECTION PLATE

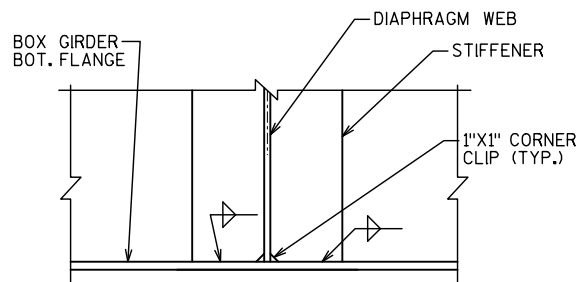


DETAIL 7
DIAPHRAGMS XD2/D2/XD3/D3



SECTION C-C

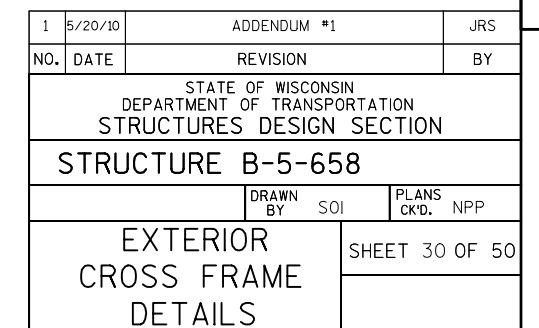
THIS SHEET
(SHEAR STUDS NOT SHOWN FOR CLARITY)

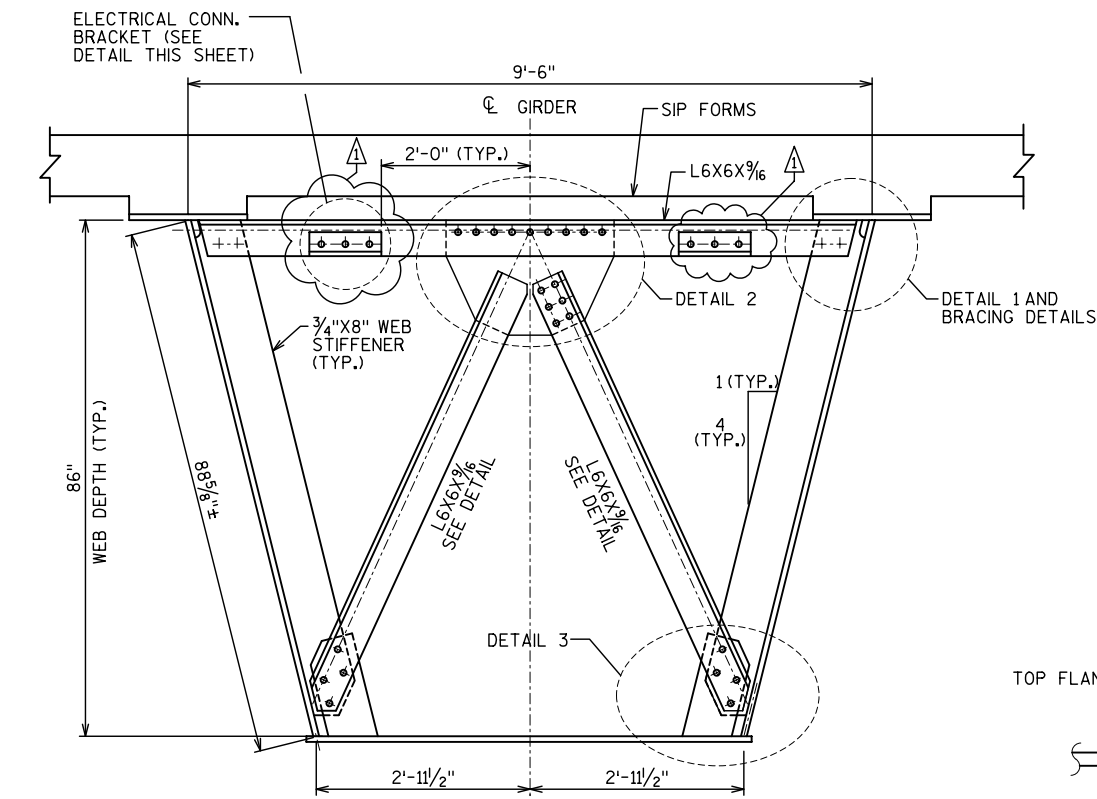


STIFFENER TO FLANGE DETAIL

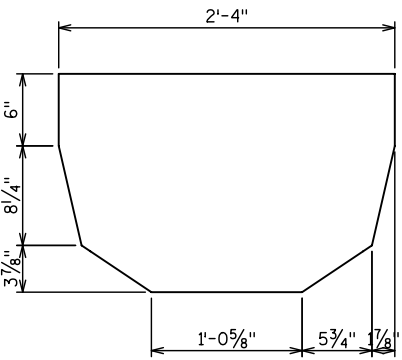
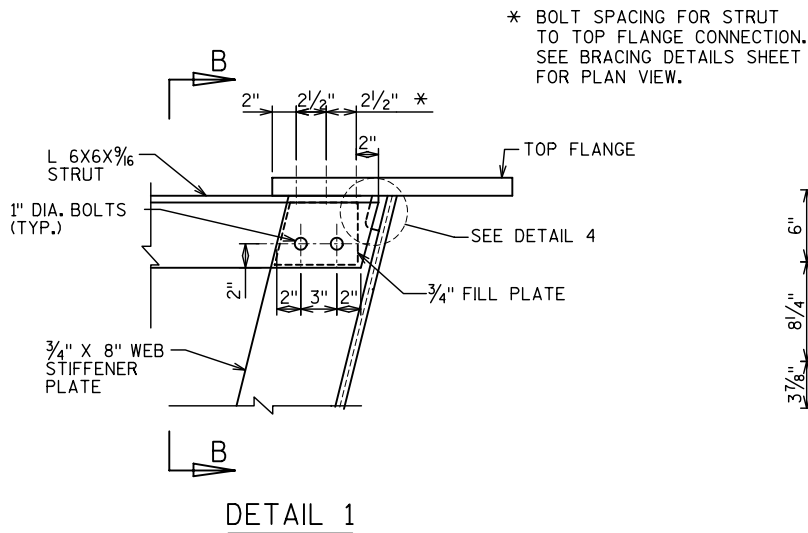
ALL DIAPHRAGMS AND ALL STIFFENERS
NO WELD AT TOP OF STIFFENERS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
MISCELLANEOUS DIAPHRAGM DETAILS		SHEET 29 OF 50	

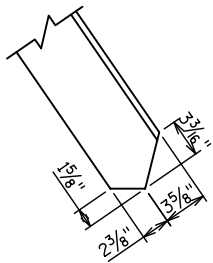




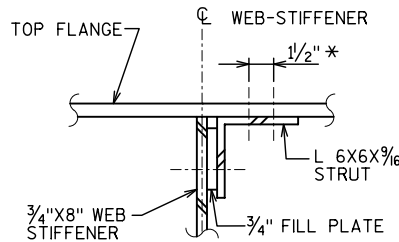
TYPICAL SECTION AT K-FRAME



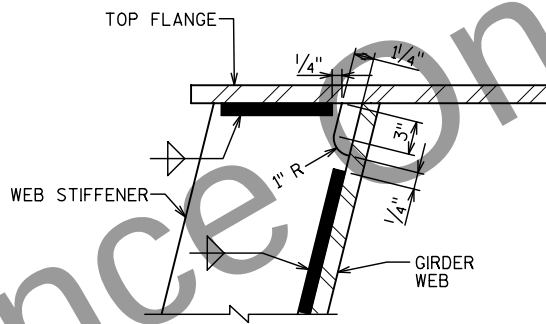
$\frac{3}{4}$ " CONN. PLATE DETAIL



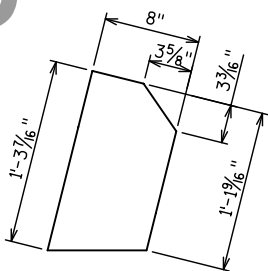
L 6"X6"X $\frac{9}{16}$ " DETAIL



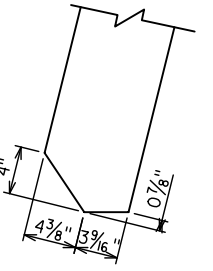
SECTION B-B



DETAIL 4

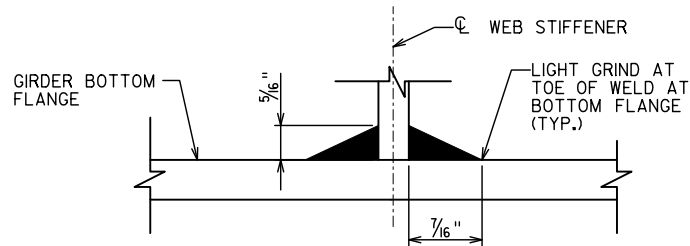
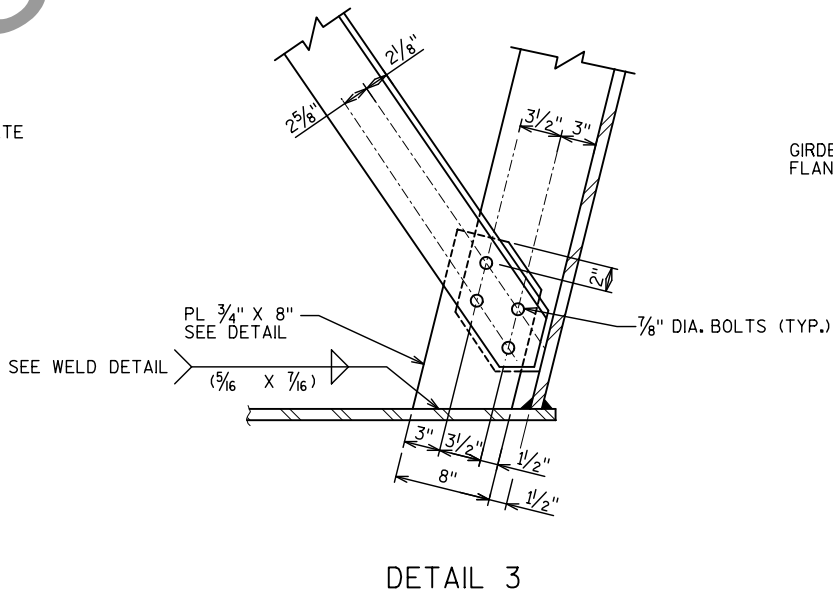
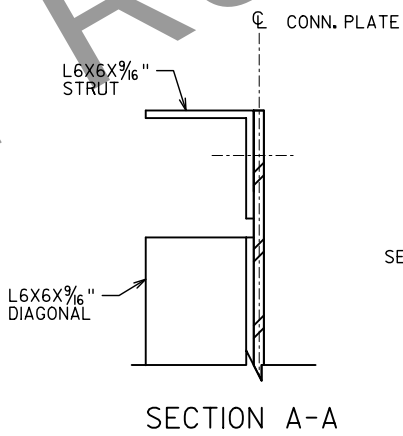
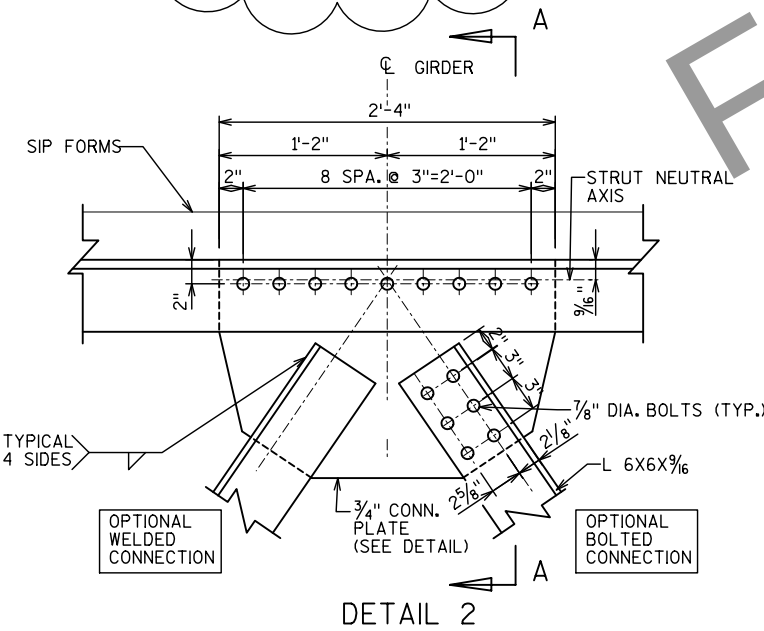
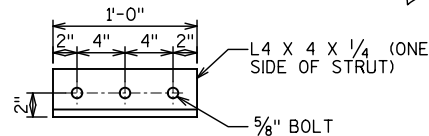


PL $\frac{3}{4}$ "X8" DETAIL



WEB STIFFENER DETAIL

DETAIL FOR ELECTRICAL CONNECTION BRACKET



WEB STIFFENER WELD DETAIL

1	5/20/10	ADDENDUM #1	JRS
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY SOI		PLANS CK'D. NPP	
INTERIOR CROSS FRAME K1 DETAILS		SHEET 31 OF 50	



NOTES:

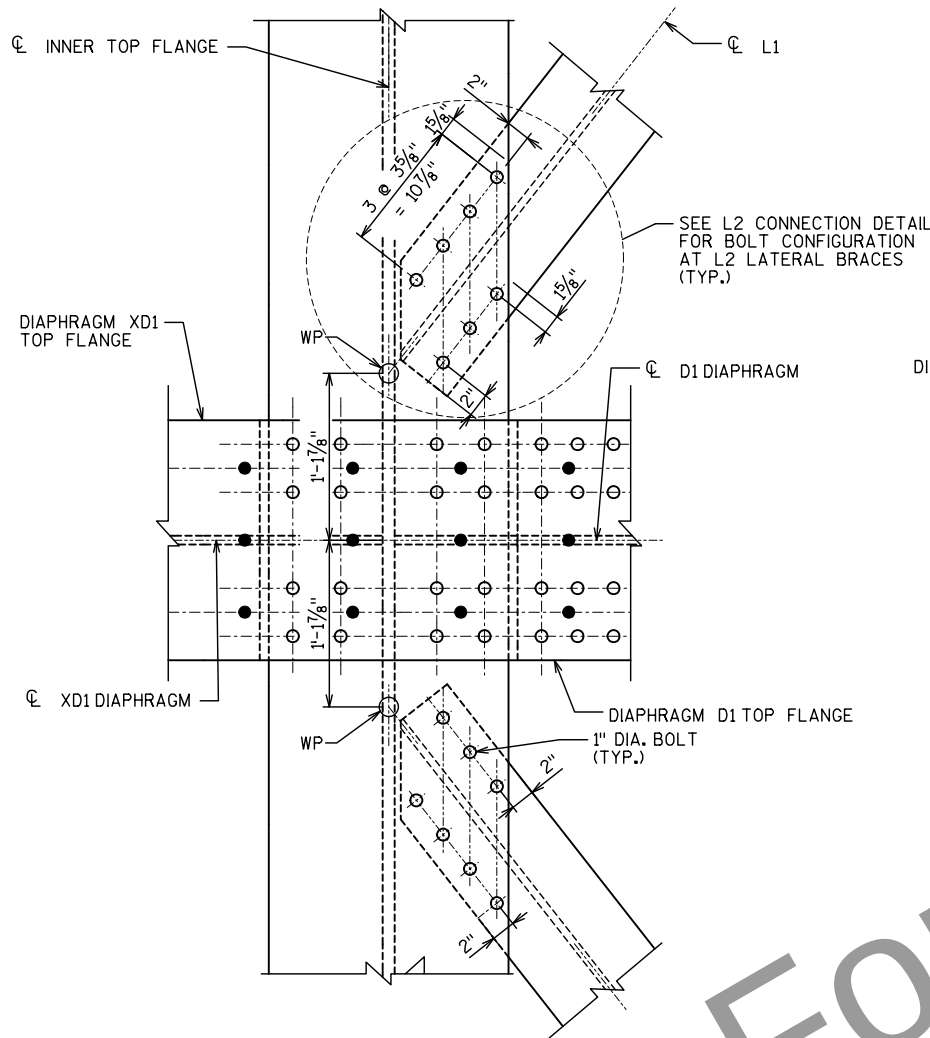
ALL BOLTS SHOWN ARE 7/8" DIAMETER
ASTM A325 TYPE 1.

ALL HOLES SHALL BE STANDARD DIAMETER
NO OVERSIZE HOLES.

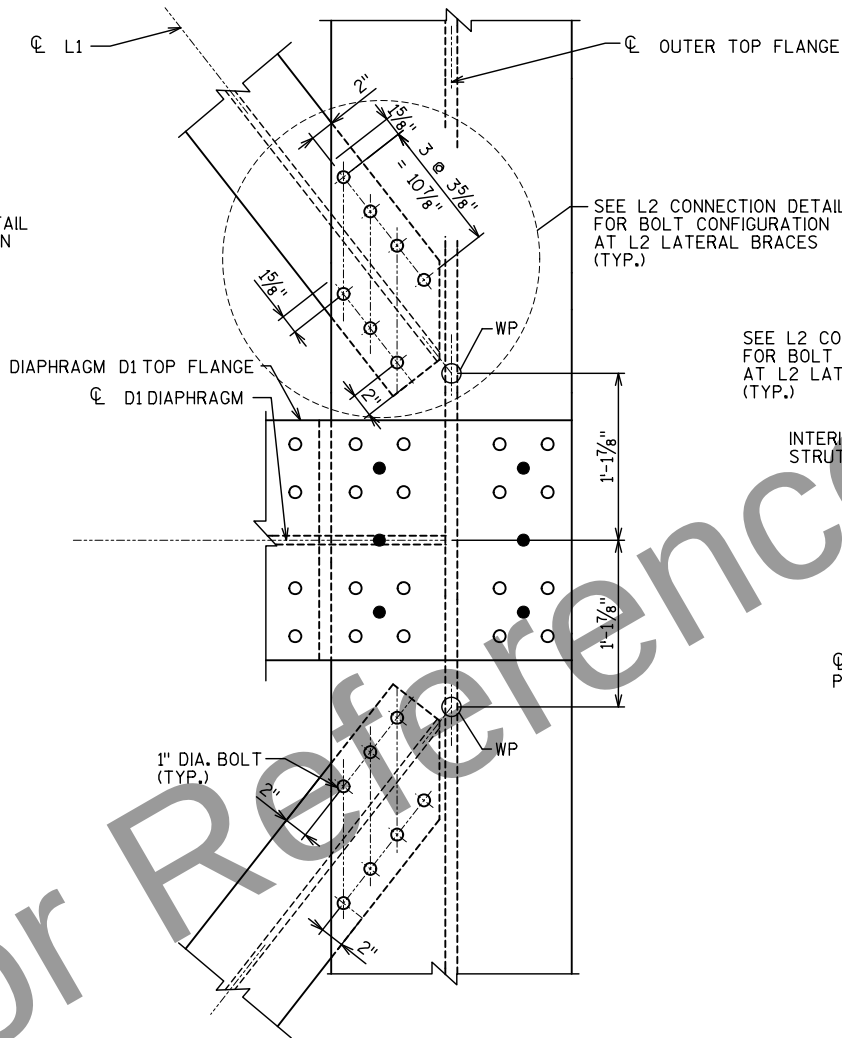
ALL CONNECTIONS SHALL BE FABRICATED
AND ASSEMBLED AS SLIP-CRITICAL CLASS A
CONNECTIONS

ALL SPLICE PLATES SHALL BE ASTM A709
GRADE HPS 50W.

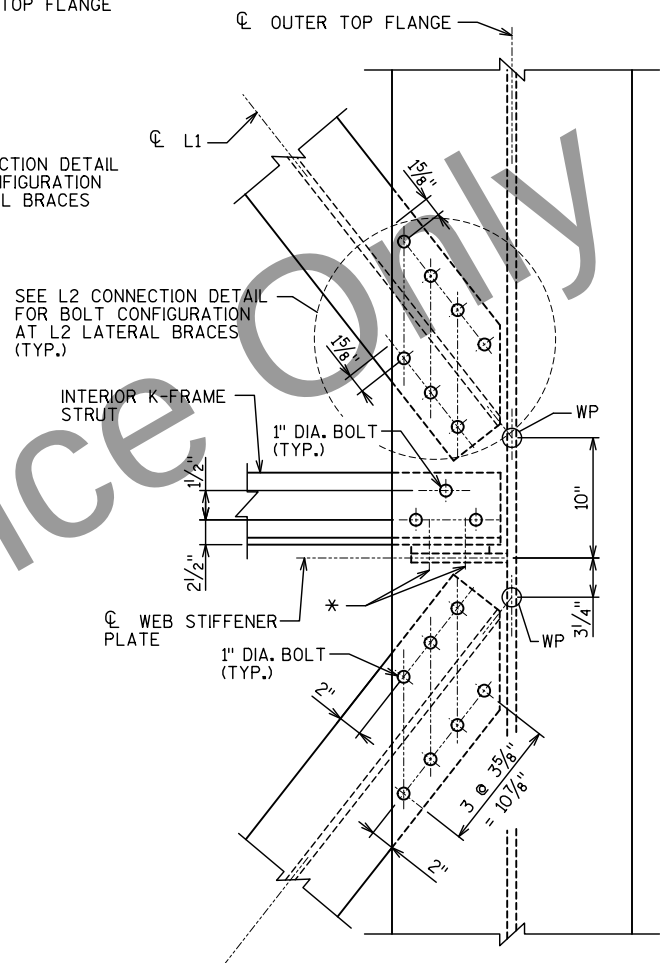
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
		DRAWN BY JRS	PLANS CK'D. NPP
FIELD SPLICE DETAILS		SHEET 32 OF 50	



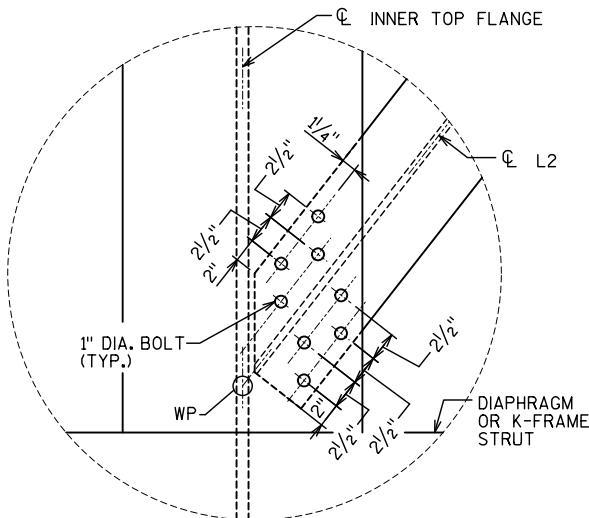
PLAN VIEW AT DIAPHRAGM XD1/D1
(SHOWING INNER TOP FLANGE)
(XD4/D4 SIMILAR)



PLAN VIEW AT DIAPHRAGM XD1/D1
(SHOWING OUTER TOP FLANGE)
(XD4/D4 SIMILAR)



PLAN VIEW AT K-FRAME
(SHOWING OUTER TOP FLANGE)
(INNER TOP FLANGE SIMILAR)



L2 CONNECTION DETAIL
(DETAIL SHOWING CONNECTION AT DIAPHRAGMS
OR K-FRAMES FOR L2 LATERAL BRACES)
(INNER FLANGE SHOWN, OUTER TOP FLANGE SIMILAR)
(WP SHOWN IS SAME WP AS L1 DETAILS)

NOTES:

SEE GIRDER PLAN AND ELEVATION SHEETS
FOR LOCATIONS OF DETAILS.

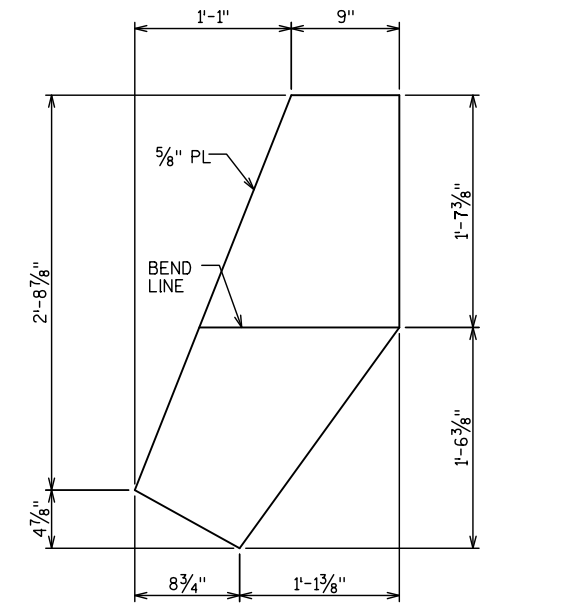
LATERAL BRACE MEMBERS:
L1: WT7X34
L2: WT8X50

* SEE INTERIOR CROSS FRAME K-1 DETAILS
SHEET FOR ADDITIONAL DETAILS FOR
BOLTED CONNECTION OF STRUT ANGLE
LEG TO WEB STIFFENER.

NOTES:

LATERAL BRACE L1 SHALL BE CONNECTED
TO THE DIAPHRAGM TOP FLANGE AND
GIRDER TOP FLANGE WITH 7-1" DIAMETER
BOLTS. LATERAL BRACE L2 SHALL BE
CONNECTED WITH 8-1" DIAMETER BOLTS.

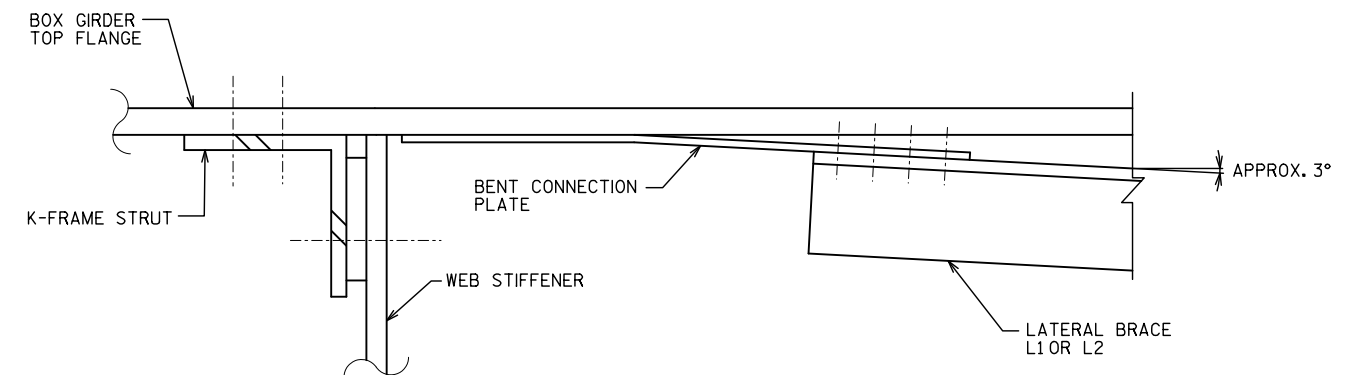
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY JRS		PLANS CK'D. NPP	
BRACING CONNECTION DETAILS		SHEET 33 OF 50	



BENT CONNECTION PLATE DETAIL

SECTION A-A
THIS SHEET

PLAN VIEW AT K-FRAME ADJACENT TO UNIT END

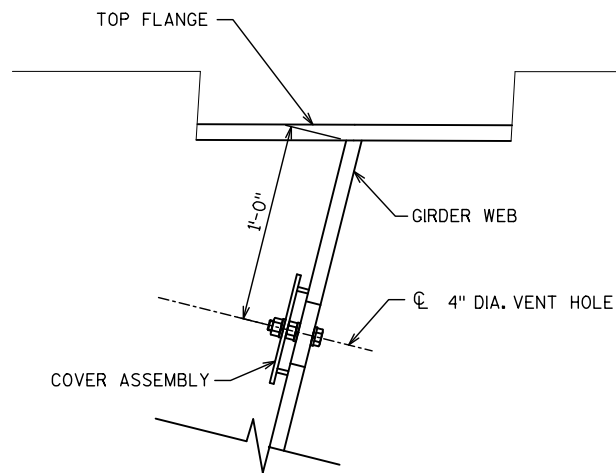


SECTION B-B
THIS SHEET

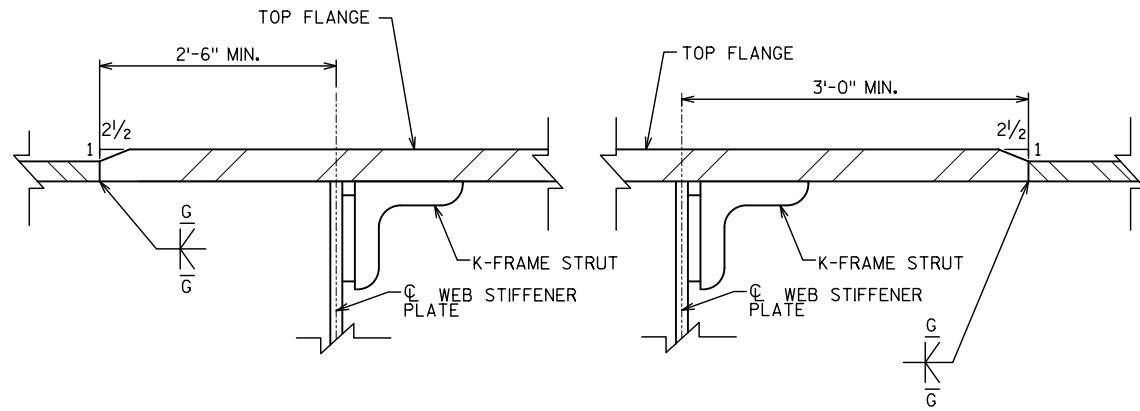
PLAN VIEW AT UNIT END DIAPHRAGM
(EXTERIOR GIRDER SHOWN, INTERIOR GIRDER SIMILAR)

SEE GIRDER PLAN AND ELEVATION SHEETS
FOR LOCATIONS OF DETAILS

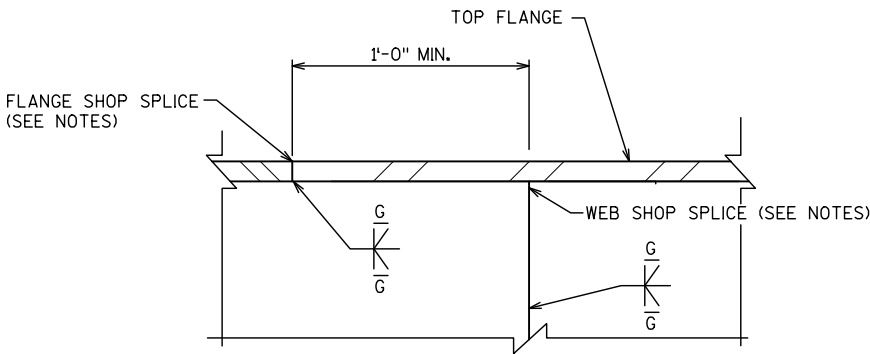
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		JRS	PLANS CK'D. NPP
BRACING CONNECTION DETAILS SHEET 2		SHEET 34 OF 50	



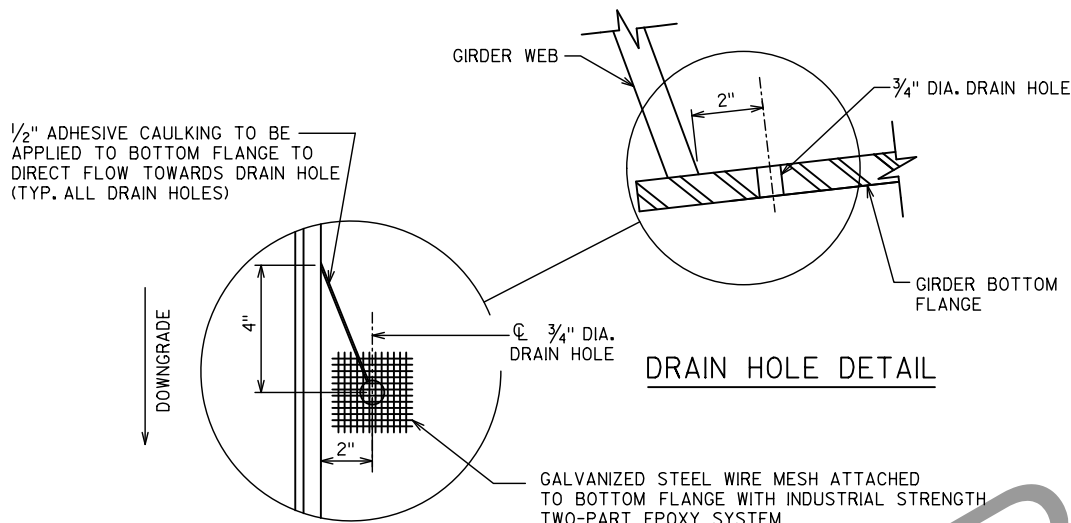
VENT HOLE LOCATION



FLANGE THICKNESS TRANSITION DETAIL
NOT TO SCALE

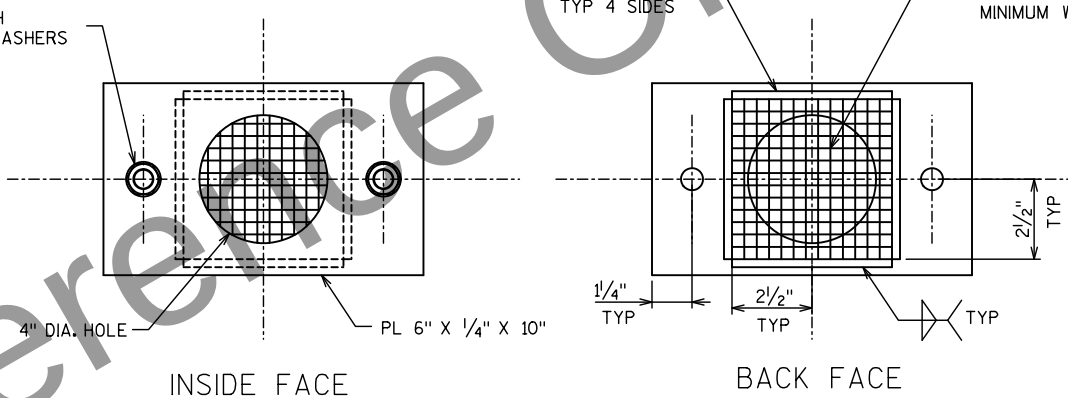


OPTIONAL SHOP SPLICE DETAIL
NOT TO SCALE
(SEE FLANGE THICKNESS TRANSITION DETAIL FOR
MINIMUM SPACING OF SHOP SPLICES TO STIFFENERS AND
K-FRAMES)



PLAN OF DRAIN HOLES

5/8" BOLTS WITH
2 NUTS & 3 WASHERS



VENT HOLE COVER ASSEMBLY
NOT TO SCALE

NOTES:

SEE GIRDER PLAN AND ELEVATION SHEETS
FOR DRAIN AND VENT HOLE LOCATIONS.

LOCATE ALL VENT HOLES ON THE
INTERIOR WEBS - I.E. THE RIGHT WEB OF
THE LEFT GIRDER AND THE LEFT WEB OF
THE RIGHT GIRDER.

VENT HOLE COVER ASSEMBLIES SHALL BE
HOT-DIP GALVANIZED AFTER FABRICATION
AND INSTALLED AFTER GIRDERS ARE
PAINTED.

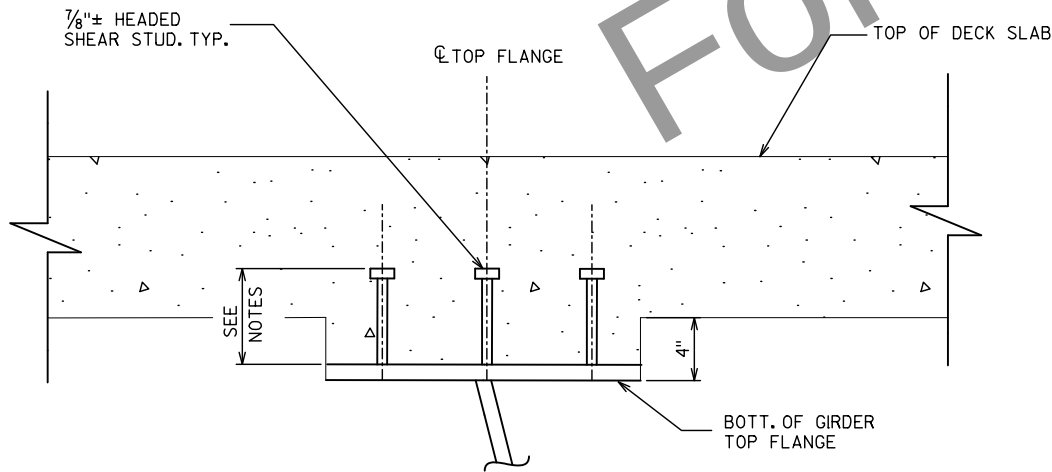
LOCATE ALL DRAIN HOLES ON THE LOW
SIDE OF THE GIRDER AS SHOWN.

COST OF ADHESIVE CAULKING, WIRE MESH
AND ATTACHMENT IS INCLUDED IN THE COST
OF "FABRICATED STRUCTURAL STEEL HPS 50W".

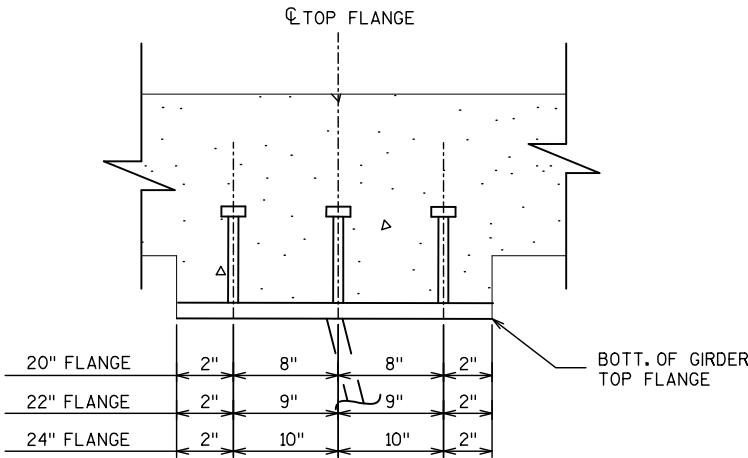
SHEAR STUD CONNECTORS ARE SHOWN FOR
REFERENCE ONLY AND ARE NOT FURNISHED
OR INSTALLED AS PART OF THIS CONTRACT.

SHEAR CONNECTORS PROVIDED IN FUTURE
CONTRACT WILL PENETRATE INTO DECK 2"
ABOVE BOTTOM MAT OF REINFORCING STEEL.

FOR FLANGE AND WEB PLATES 2" THICK AND
UNDER WITH LENGTHS MORE THAN 90'-0", AND
FOR PLATES THICKER THAN 2" WITH LENGTHS
MORE THAN 60'-0", ONE OPTIONAL WELDED
SHOP SPLICE IS ALLOWED. NO ADDITIONAL
PAYMENT WILL BE MADE FOR THESE SPLICES
AS REQUIRED DUE TO MAXIMUM PLATE LENGTHS
AVAILABLE FROM MILL.

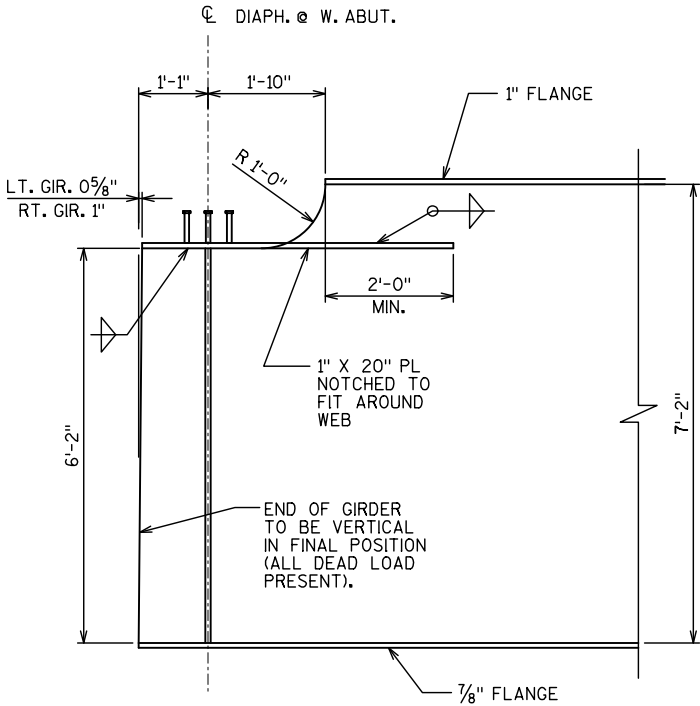


SHEAR STUD DETAIL

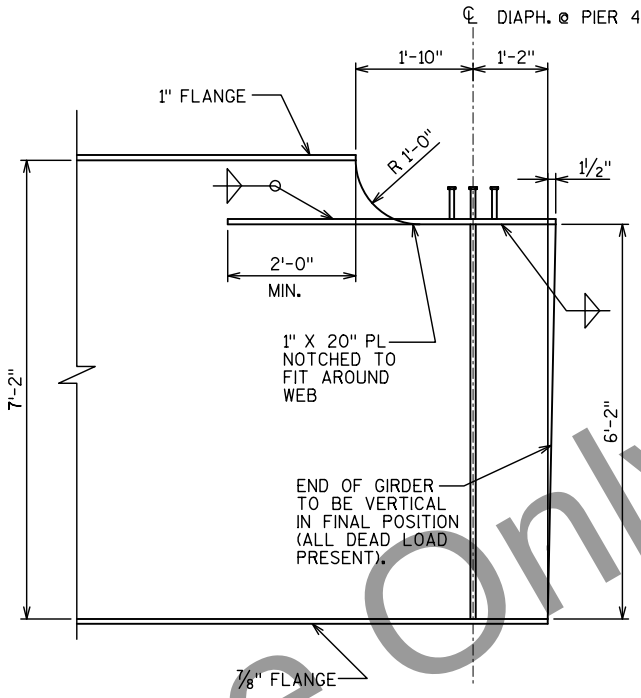


SHEAR STUD SPACING

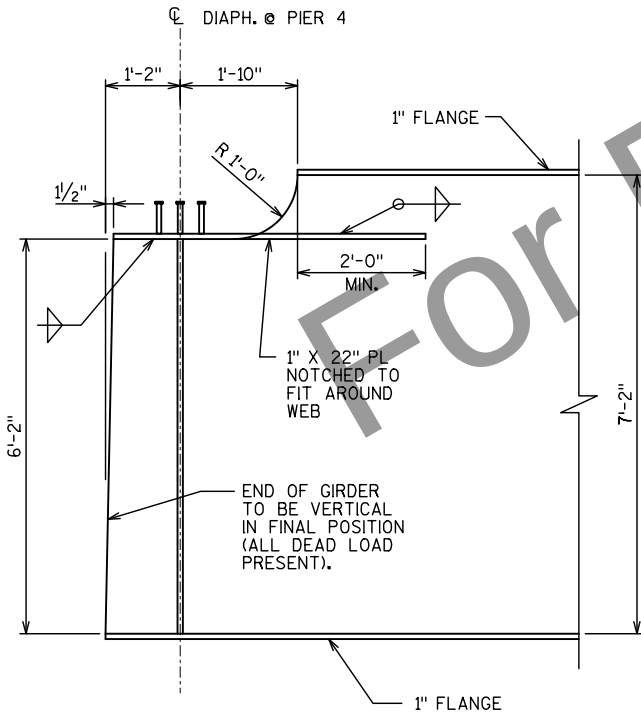
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D. MAD	
MISCELLANEOUS GIRDER DETAILS		SHEET 35 OF 50	



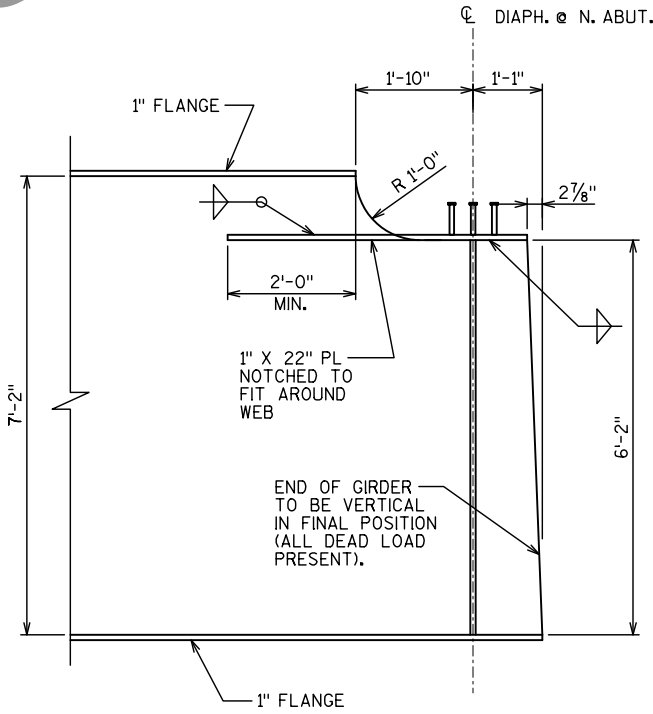
UNIT 1 SPAN 1



UNIT 1 SPAN 4



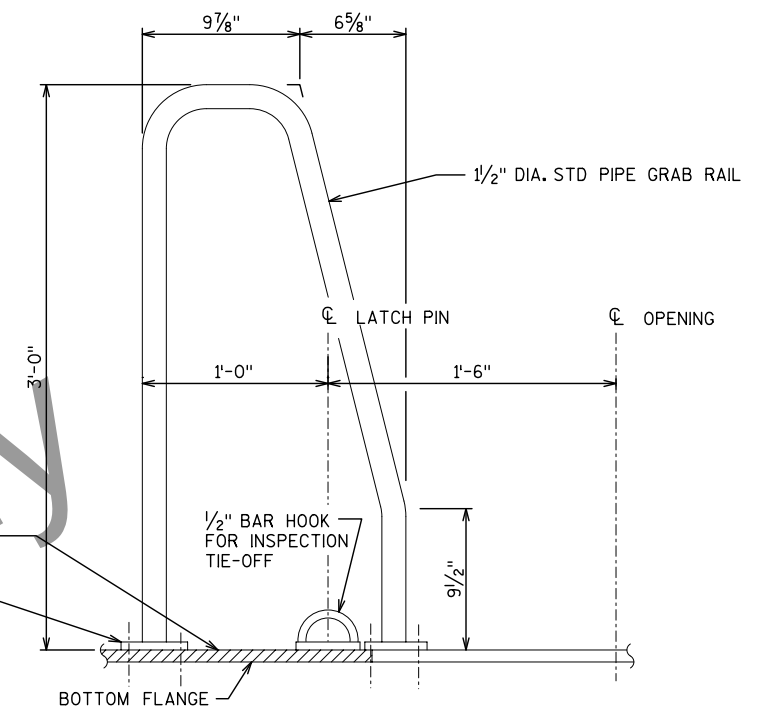
UNIT 2 SPAN 5



UNIT 2 SPAN 10

NOTE:
GIRDER FLANGES ARE NOT
HORIZONTAL, BUT PARALLEL TO
VERTICAL CURVE. DIAPHRAGMS ARE
PERPENDICULAR TO GIRDERS
FLANGES. ONLY ENDS OF GIRDER
WEBS ARE VERTICAL.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY	ZMG	PLANS CK'D.	MAD
MISCELLANEOUS GIRDER DETAILS SHEET 2		SHEET 36 OF 50	



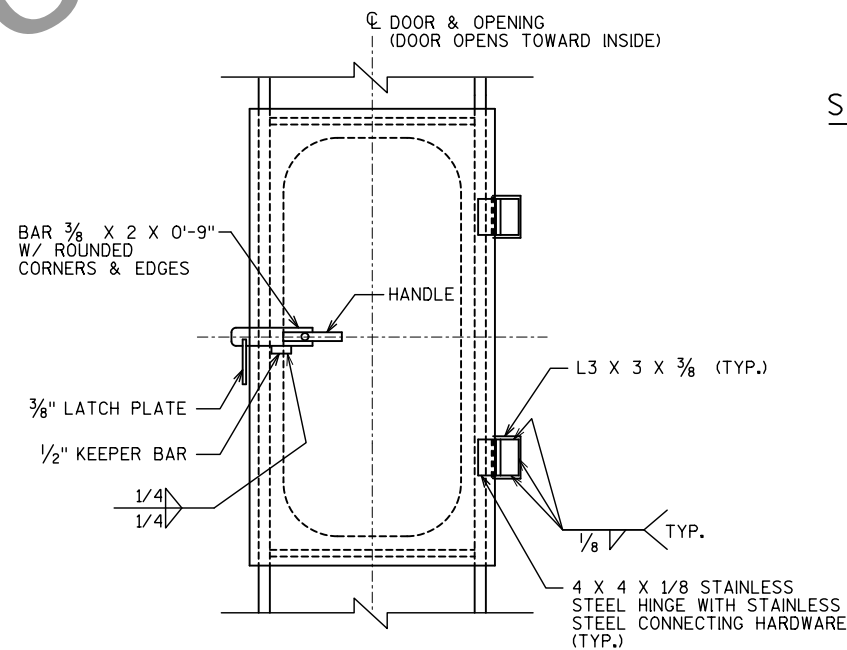
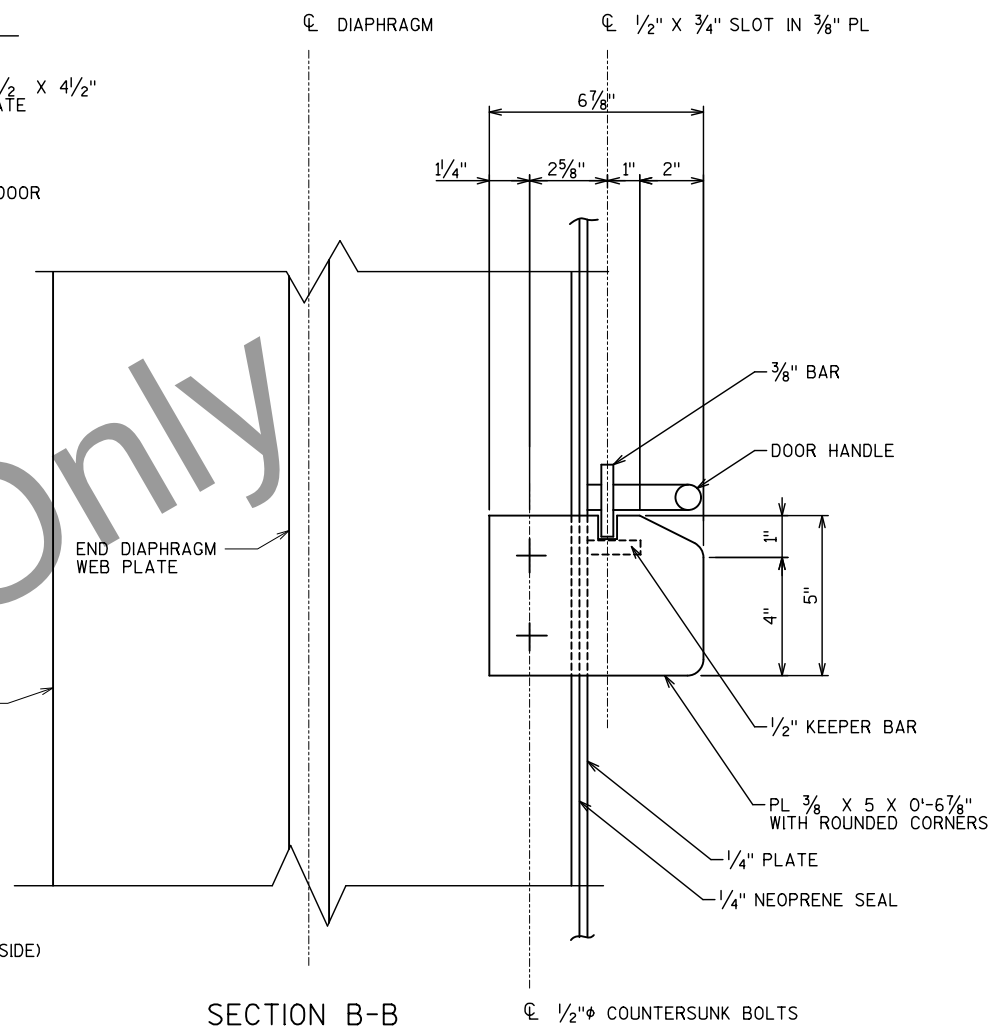
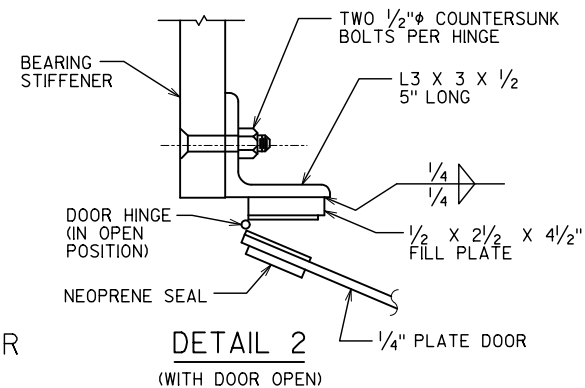
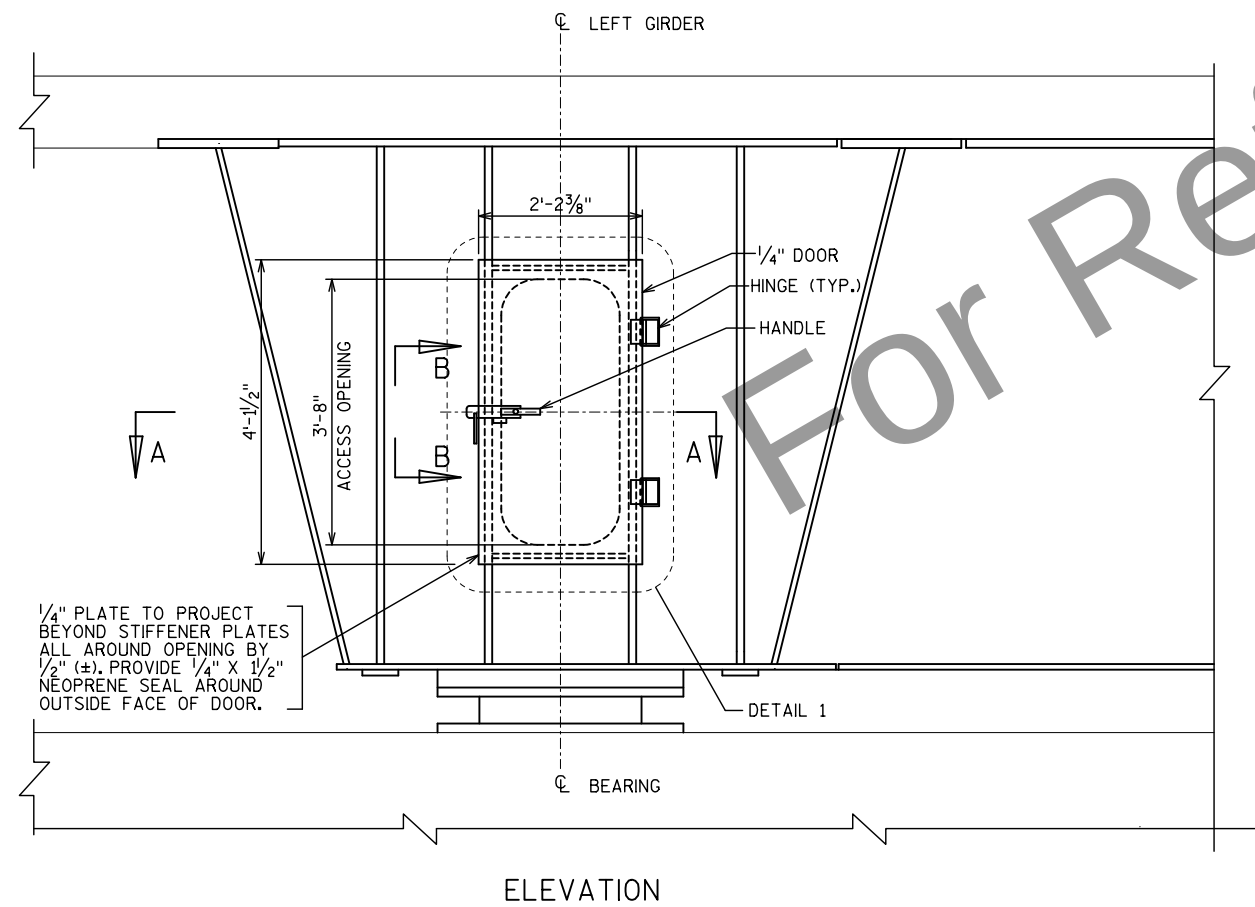
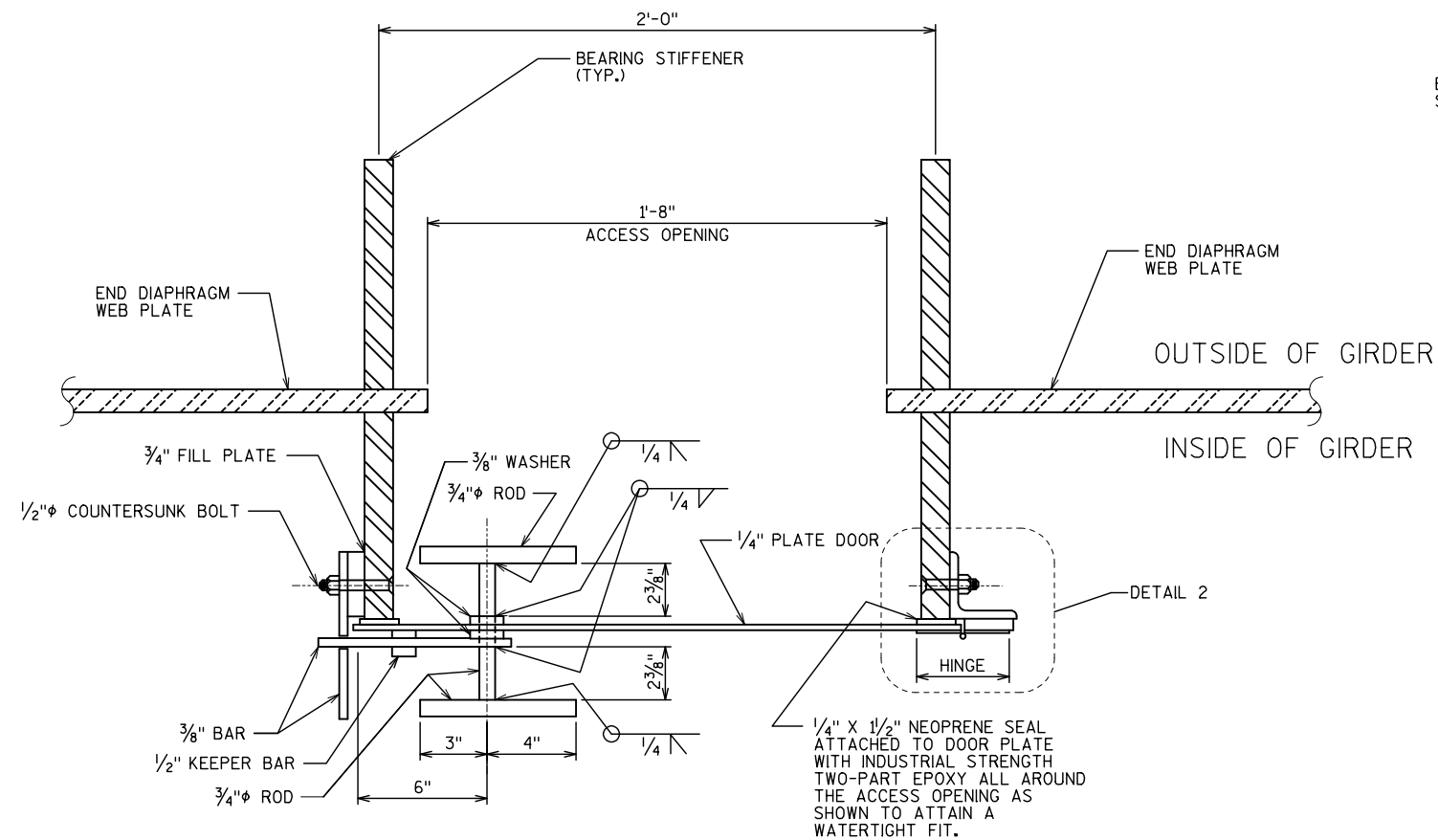
PLAN



* BOTTOM FLANGE STIFFENER PLATES
AND STIFFENER PLATE CONNECTIONS AT
SPAN 9 ACCESS HATCH ONLY.

SECTION A-A

1	5/20/10	ADDENDUM #1	JRS
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D. MAD	
ACCESS HATCH DETAILS		SHEET 37 OF 50	



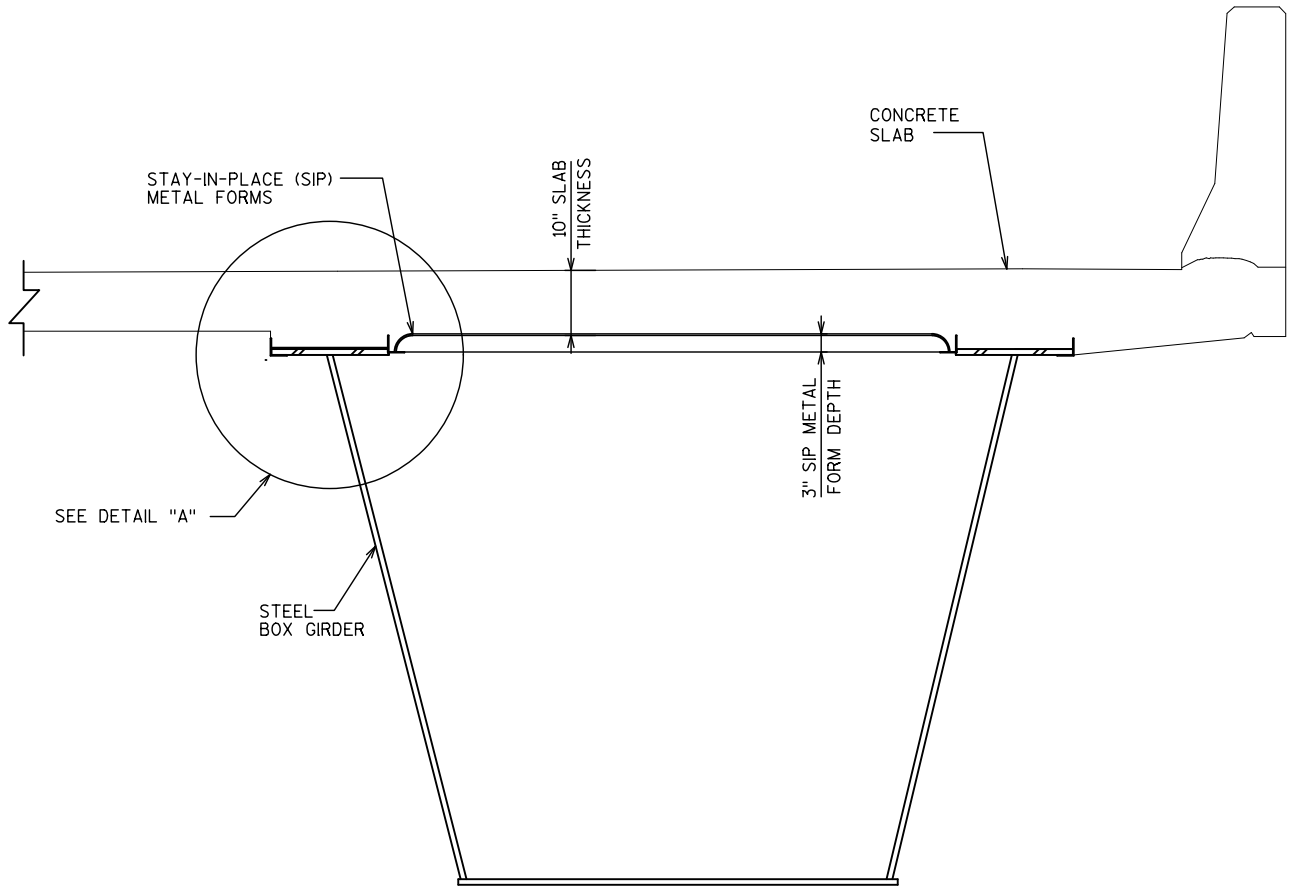
NOTES:

4 DOORS REQUIRED AT PIER 4.

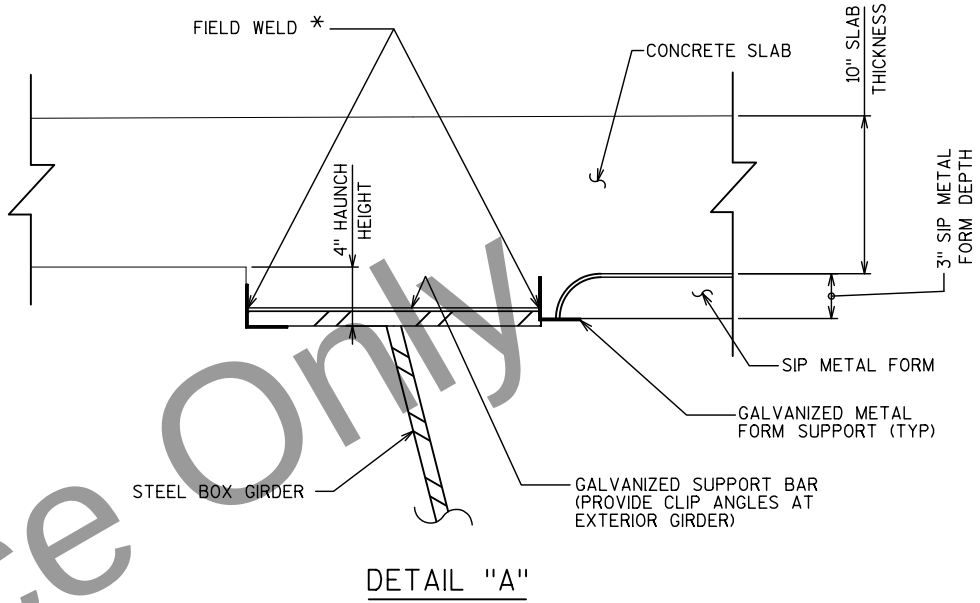
DOORS OPEN TOWARDS THE INSIDE OF THE BOX GIRDERS.

THE COST OF ACCESS DOOR AND ITS ATTACHMENT IS INCLUDED IN THE COST OF "FABRICATED STRUCTURAL STEEL HS".

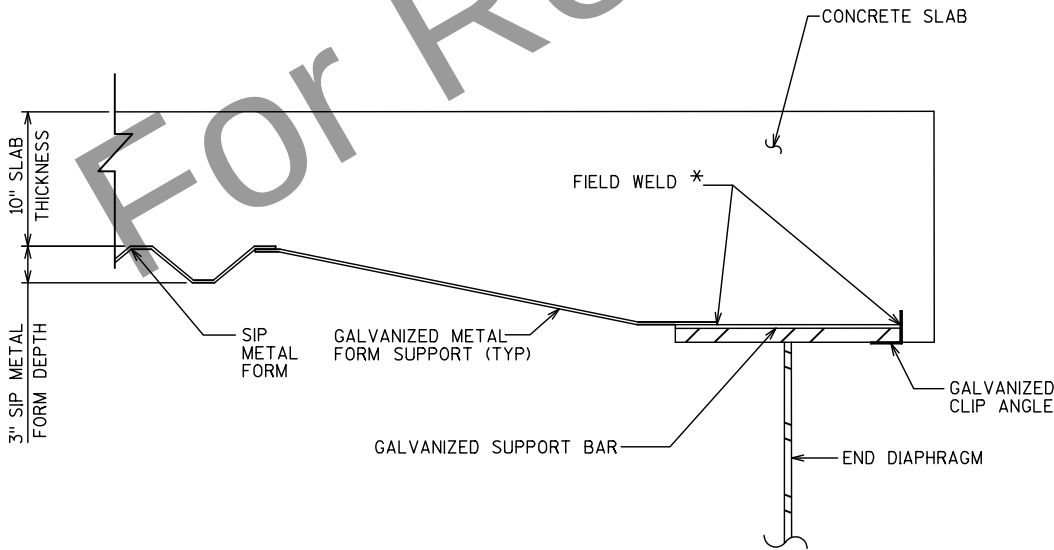
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D. NPP	
ACCESS DOOR DETAILS		SHEET 38 OF 50	



PARTIAL SECTION THROUGH SUPERSTRUCTURE
(SHOWING TYPICAL DETAILS AND NOTES FOR SIP METAL FORMS)



* DO NOT WELD TO NOR PERMIT WELD SPATTER ON SUPPORTING STEEL GIRDER, DIAPHRAGMS, BRACING ETC. ELECTRICAL GROUNDING TO STRUCTURAL STEEL IS PROHIBITED. SEE SPECIFICATIONS FOR FIELD WELDING OF SIP FORMS IN PLACE AND PAINTING OF THE TOP FLANGE.



PARTIAL SECTION THROUGH END OF SPAN
(INTERIOR OF BOXES SHOWN ONLY)

NOTES:

STAY-IN-PLACE (SIP) FORM DETAILS ARE SHOWN FOR REFERENCE ONLY. SIP FORMS, GALVANIZED SUPPORT BARS, FORM SUPPORTS, AND CLIP ANGLES ARE NOT FURNISHED AS PART OF THIS CONTRACT.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D. NPP	
SUPERSTRUCTURE DETAILS		SHEET 39 OF 50	

NOTES:

POSITIVE DEFLECTIONS ARE DOWNWARD.

POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.

TES ELEVATIONS ARE TO TOP OF STEEL (SPlice AND COVER PLATE THICKNESS, IF APPLICABLE, ARE ACCOUNTED FOR) AND THEY ARE FOR THE MATERIAL AS ERECTED. THE ELEVATION OF THE TOP STEEL AT THE FIELD SPlice POINTS SHALL BE CHECKED, AND CORRECTED, IF POSSIBLE, AFTER ERECTION AND BEFORE PERMANENTLY BOLTING THE DIAPHRAGMS IN PLACE.

BECAUSE VERTICAL PROFILE AND DEFLECTIONS ARE EXAGGERATED TO DIFFERENT DEGREES, THE CAMBERS SHOWN ON THIS DIAGRAM ARE SCHEMATIC ONLY.

SPECIFICALLY COMPARING RELATIVE CAMBER MAGNITUDES BETWEEN FIELD SECTIONS MAY BE MISLEADING.

CAMBERS ACCOUNT FOR PERMANENT FORMWORK WEIGHT OF 10.0 PSF INSIDE EACH GIRDER PLUS 13.5 PSF FOR ADDITIONAL CONCRETE IN RIBS OF PERMANENT FORMWORK. THE CONTRACTOR MAY NEED TO REVISE THE CAMBERS IF THE PERMANENT FORMWORK IS USED DIFFERS FROM THAT SHOWN ON THE PLANS.

ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.

TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPICES SHALL BE AFTER ERECTION IS COMPLETE AND BEFORE BOLTED CONNECTIONS ARE FINALLY TORQUED.

IF SURVEYED ELEVATIONS DIFFER FROM THOSE EXPECTED BY MORE THAN 0.02 FT (1/4") AT SUPPORTS OR 0.083 FT (1") AT FIELD SPICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.

CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING A CONSTANT 4" HAUNCH HEIGHT. MEASURED FROM THE UNDERSIDE OF THE TOP FLANGE (TOP OF WEB) TO THE UNDERSIDE OF THE DECK (TOP OF STAY-IN-PLACE METAL FORMS).

LEGEND:

P1-2 INTERMEDIATE ELEVATION POINT AT PANEL POINTS.

IN THIS EXAMPLE, '1' IS THE FIELD SECTION NUMBER AND '2' IS THE PANEL NUMBER WITHIN THIS FIELD SECTION.

TABULATED ELEVATIONS

FTW FINISHED ELEVATION AT TOP OF WEB.
FG FINISHED ELEVATION AT TOP OF DECK SLAB.
TES TOP OF ERECTED STEEL ELEVATION.
= ZW + PL - SW
ZW TOP OF ERECTED WEB ELEVATION NEGLECTING ALL DEFLECTIONS
= FG + SW + DL1 + DL2 - DK
CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION 'ZW' AT FIELD SPICES AND END SUPPORTS.
BLK BLOCKING HEIGHT CORRESPONDING TO THE ERECTED STEEL CONDITION NEGLECTING ALL DEFLECTIONS.

TABULATED DEFLECTIONS

SW SELF -WEIGHT OF STEEL GIRDERS, INCLUDING ALL DIAPHRAGMS, STIFFENERS, BRACING, AND PERMANENT METAL FORMS.
DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED TO BARE STEEL SECTION.
DL2 PARAPETS AND WEARING SURFACE APPLIED TO COMPOSITE SECTION.

CALCULATED VALUES

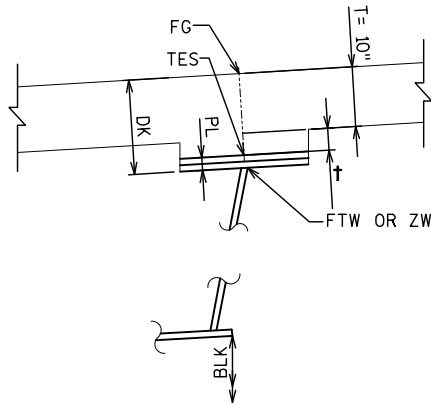
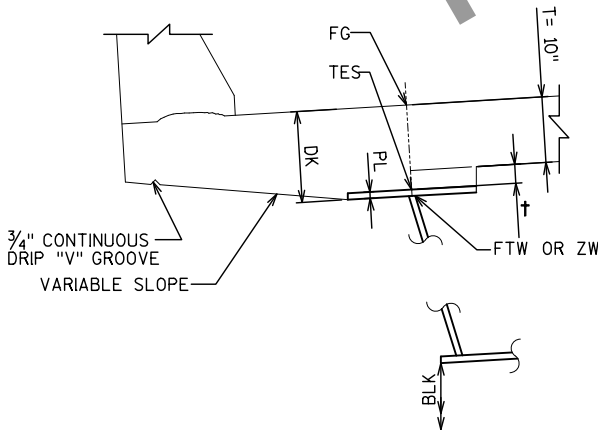
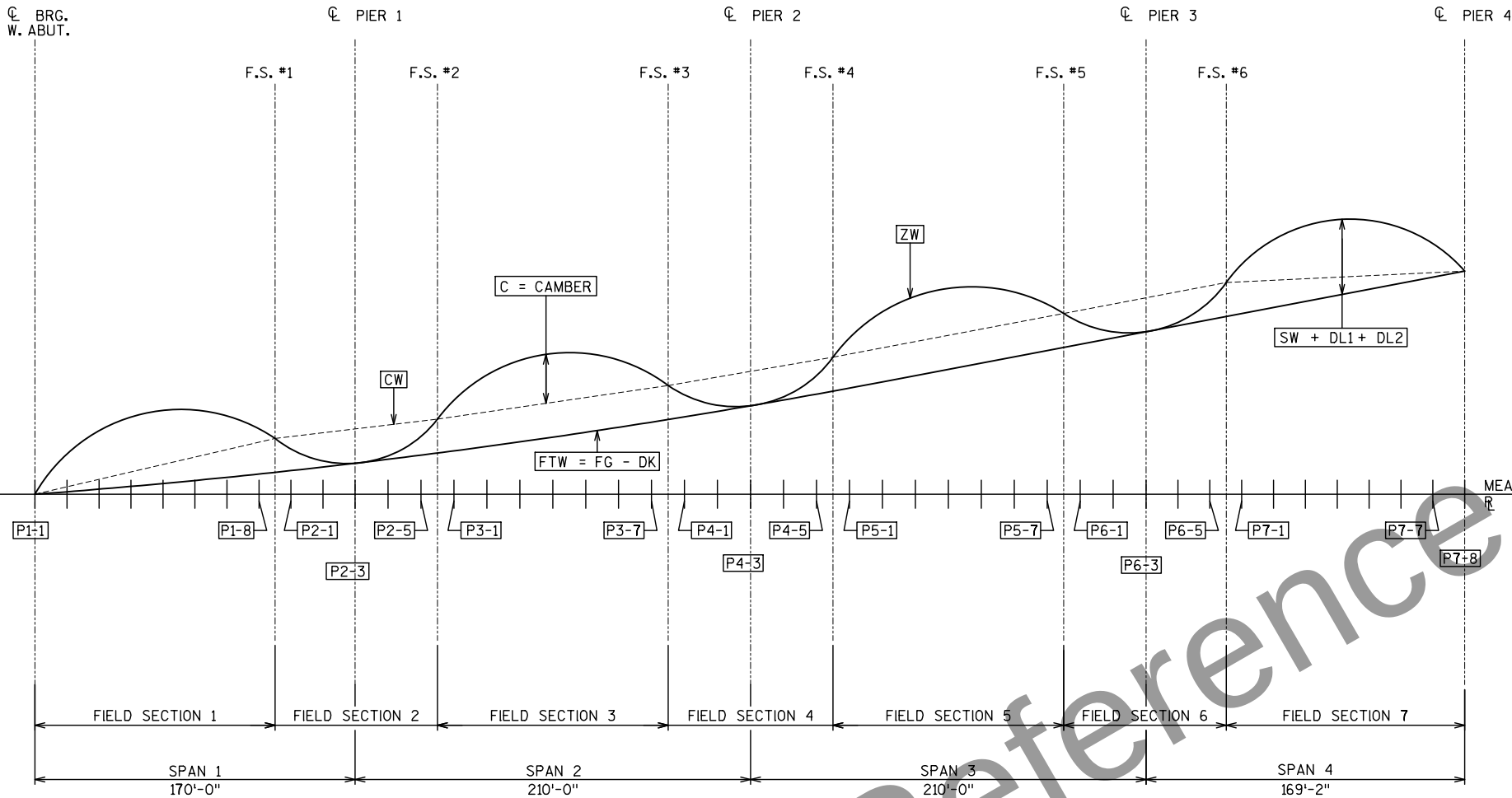
PL =THICKNESS OF TOP FLANGE PLUS ANY FILLER AND SPlice PLATES
DK =DECK ASSEMBLY THICKNESS FROM TOP OF WEB TO FINISHED GRADE
C =CAMBER= ZW - CW

HAUNCH NOTE:

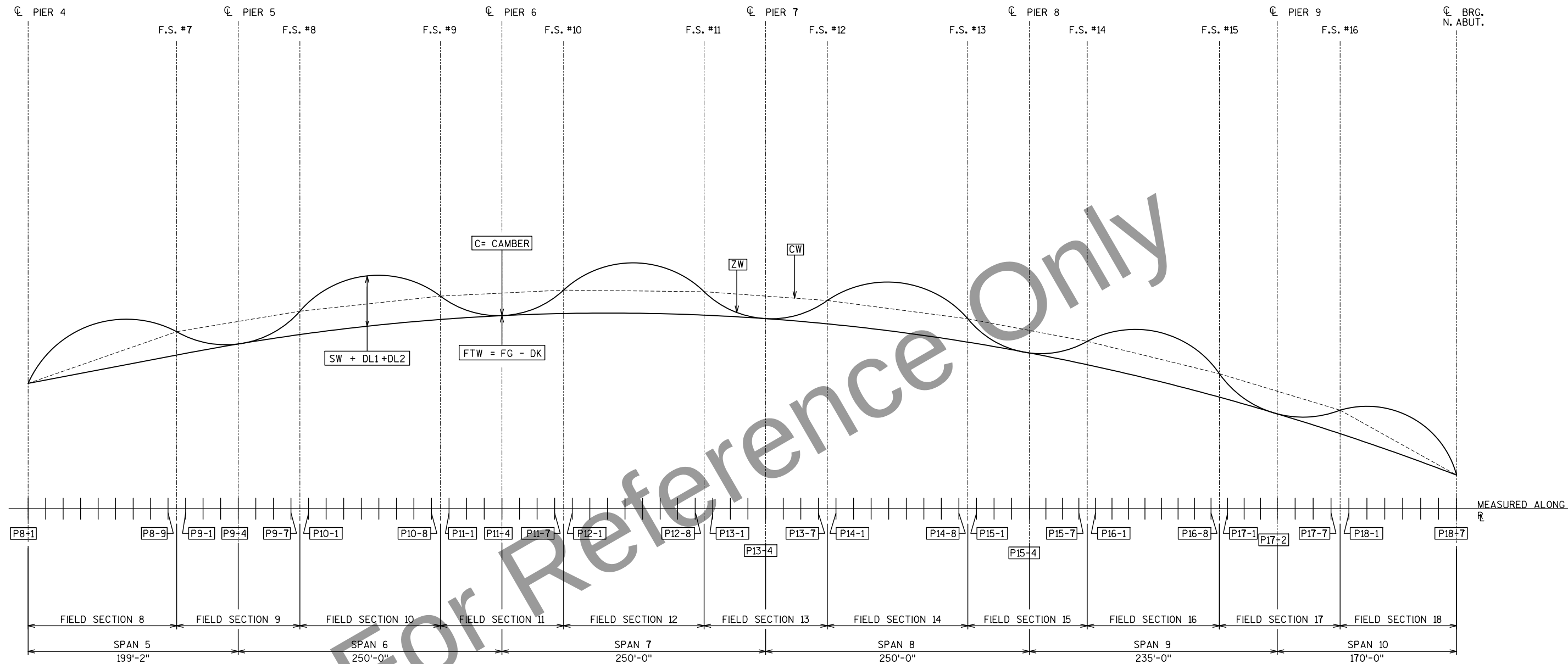
† =HAUNCH HEIGHT AT CENTERLINE OF GIRDER.

TO DETERMINE "†" AFTER ALL STRUCURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES, TOP OF SPlice PLATES, OR TOP OF COVER PLATES, WHICHEVER APPLIES, SHALL BE TAKEN.

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF STEEL ELEV. AFTER PLACEMENT
+ CONC. ONLY DEFLECTIONS (DOWNWARD DEFLECTION IS POSITIVE, UPWARD DEFLECTION IS NEGATIVE.)
- SLAB THICKNESS (10")
= "†" VALUE FOR SETTING HAUNCH



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D. MAD	
CAMBER DIAGRAM UNIT 1		SHEET 40 OF 50	



LEGEND:
FOR LEGEND SEE CAMBER DIAGRAM UNIT 1 SHEET.
NOTES:
FOR NOTES SEE CAMBER DIAGRAM UNIT 1 SHEET.
HAUNCH NOTES:
FOR HAUNCH NOTES SEE CAMBER DIAGRAM UNIT 1 SHEET.

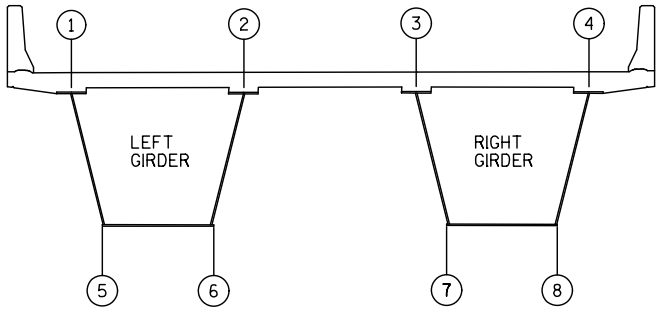
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
		DRAWN BY ZMG	PLANS CK'D. MAD
CAMBER DIAGRAM UNIT 2		SHEET 41 OF 50	

FIELD SECTION 1

HORIZ. LOC.	VALUE	POSITION AND STATION								
		W. ABUT.	P1- 2	P1- 3	P1- 4	P1- 5	P1- 6	P1- 7	P1- 8	FS #1
		813+34.90	813+51.90	813+68.90	813+85.90	814+02.90	814+19.90	814+36.90	814+53.90	814+62.40
CAMBER DATA										
1	FG	633.57	633.68	633.79	633.92	634.07	634.23	634.40	634.58	634.67
	TES	632.49	632.67	632.84	633.02	633.19	633.34	633.48	633.61	633.72
	ZW	632.40	632.61	632.81	633.00	633.17	633.32	633.45	633.56	633.62
	CW	632.40	632.57	632.73	632.89	633.05	633.21	633.37	633.53	633.62
	SW	0.00	0.03	0.05	0.06	0.07	0.06	0.05	0.04	0.03
LEFT GIRDER	DL1	0.00	0.07	0.13	0.17	0.18	0.17	0.14	0.10	0.08
	DL2	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.04	0.08	0.11	0.12	0.11	0.07	0.02	0.00
2	FG	634.02	634.17	634.33	634.49	634.64	634.80	634.97	635.15	635.24
	TES	632.94	633.17	633.39	633.59	633.76	633.92	634.05	634.18	634.29
	ZW	632.85	633.11	633.36	633.57	633.75	633.90	634.02	634.13	634.19
	CW	632.85	633.03	633.21	633.39	633.57	633.74	633.92	634.10	634.19
	SW	0	0.03	0.05	0.06	0.07	0.07	0.05	0.04	0.03
RIGHT GIRDER	DL1	0	0.07	0.13	0.17	0.18	0.18	0.15	0.10	0.08
	DL2	0	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.08	0.15	0.19	0.18	0.15	0.10	0.03	0.00
3	FG	634.47	634.67	634.87	635.06	635.21	635.37	635.54	635.72	635.81
	TES	633.39	633.66	633.94	634.17	634.34	634.49	634.62	634.75	634.87
	ZW	633.30	633.61	633.90	634.15	634.33	634.48	634.60	634.71	634.76
	CW	633.30	633.50	633.69	633.89	634.08	634.28	634.47	634.66	634.76
	SW	0	0.03	0.05	0.07	0.07	0.07	0.06	0.04	0.03
LEFT WEB	DL1	0	0.07	0.13	0.18	0.19	0.18	0.15	0.10	0.08
	DL2	0	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.11	0.21	0.27	0.24	0.20	0.13	0.04	0.00
4	FG	634.92	635.16	635.41	635.63	635.78	635.94	636.11	636.29	636.38
	TES	633.83	634.16	634.48	634.74	634.91	635.07	635.20	635.32	635.44
	ZW	633.75	634.10	634.45	634.73	634.90	635.05	635.17	635.28	635.33
	CW	633.75	633.96	634.17	634.38	634.60	634.81	635.02	635.23	635.33
	SW	0	0.03	0.05	0.07	0.07	0.07	0.06	0.04	0.03
RIGHT GIRDER	DL1	0	0.07	0.14	0.18	0.19	0.19	0.15	0.11	0.08
	DL2	0	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.14	0.28	0.34	0.31	0.25	0.15	0.05	0.00
BLOCKING HEIGHTS										
5	BLK	0								1.21
6		0.30								1.63
7		0.90								2.36
8		1.19								2.78

FIELD SECTION 2

HORIZ. LOC.	VALUE	POSITION AND STATION							
		FS #1	P2-1	P2-2	PIER 1	P2-4	P2-5	FS #2	
		814+62.40	814+70.90	814+87.90	815+04.90	815+22.40	815+39.90	815+48.65	
CAMBER DATA									
1	FG	634.67	634.76	634.95	635.15	635.36	635.58	635.70	
	TES	633.72	633.75	633.95	634.13	634.36	634.57	634.75	
	ZW	633.62	633.67	633.81	633.98	634.23	634.49	634.64	
	CW	633.62	633.72	633.92	634.12	634.33	634.54	634.64	
	SW	0.03	0.02	0.01	0.00	0.01	0.02	0.03	
LEFT GIRDER	DL1	0.08	0.05	0.02	0.00	0.02	0.05	0.07	
	DL2	0.01	0.01	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.04	-0.11	-0.14	-0.10	-0.04	0.00	
2	FG	635.24	635.33	635.52	635.72	635.93	636.15	636.27	
	TES	634.29	634.32	634.52	634.70	634.94	635.14	635.32	
	ZW	634.19	634.25	634.38	634.55	634.80	635.06	635.21	
	CW	634.19	634.29	634.49	634.69	634.90	635.11	635.21	
	SW	0.03	0.02	0.01	0.00	0.01	0.02	0.03	
LEFT WEB	DL1	0.08	0.05	0.02	0.00	0.02	0.05	0.07	
	DL2	0.01	0.01	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.04	-0.11	-0.14	-0.10	-0.04	0.00	
3	FG	635.81	635.90	636.09	636.29	636.50	636.72	636.84	
	TES	634.87	634.89	635.09	635.27	635.51	635.71	635.89	
	ZW	634.76	634.82	634.95	635.12	635.37	635.64	635.78	
	CW	634.76	634.86	635.06	635.27	635.47	635.68	635.78	
	SW	0.03	0.02	0.01	0.00	0.01	0.02	0.03	
RIGHT GIRDER	DL1	0.08	0.06	0.02	0.00	0.02	0.05	0.08	
	DL2	0.01	0.01	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.04	-0.11	-0.14	-0.11	-0.04	0.00	
4	FG	636.38	636.47	636.66	636.86	637.07	637.29	637.41	
	TES	635.44	635.46	635.66	635.84	636.08	636.28	636.46	
	ZW	635.33	635.39	635.52	635.69	635.94	636.21	636.36	
	CW	635.33	635.44	635.64	635.84	636.05	636.25	636.36	
	SW	0.03	0.02	0.01	0.00	0.01	0.02	0.03	
RIGHT WEB	DL1	0.08	0.06	0.02	0.00	0.02	0.05	0.08	
	DL2	0.01	0.01	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.04	-0.11	-0.14	-0.11	-0.05	0.00	
BLOCKING HEIGHTS									
5	BLK	1.21			1.58			2.24	
6		1.63			2.00			2.65	
7		2.36			2.72			3.38	
8		2.78			3.14			3.80	



LEGEND:
FOR LEGEND SEE CAMBER DIAGRAM UNIT 1

NOTES:
FOR NOTES SEE CAMBER DIAGRAM UNIT 1

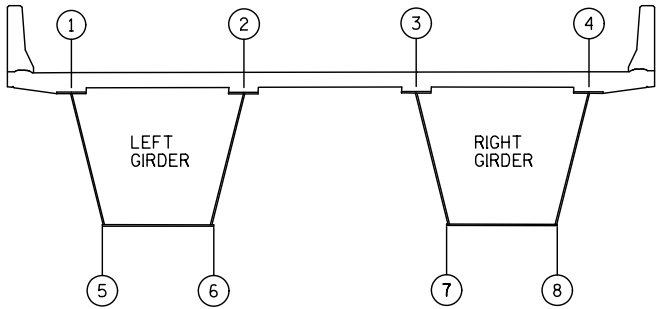
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		ZMG	PLANS CK'D. MAD
CAMBER DATA: FIELD SECTION #1 & #2			SHEET 42 OF 50

FIELD SECTION 3

HORIZ. LOC.	VALUE	POSITION AND STATION									
		FS #2	P3-1	P3-2	P3-3	P3-4	P3-5	P3-6	P3-7	FS #3	
		815+48.65	815+57.40	815+74.90	815+92.40	816+09.90	816+27.40	816+44.90	816+62.40	816+71.15	
CAMBER DATA											
1	FG	635.70	635.81	636.05	636.29	636.54	636.80	637.07	637.34	637.48	
	TES	634.75	634.84	635.12	635.37	635.66	635.91	636.14	636.37	636.54	
	ZW	634.64	634.79	635.09	635.34	635.65	635.89	636.11	636.32	636.43	
	CW	634.64	634.77	635.02	635.28	635.53	635.79	636.05	636.30	636.43	
LEFT GIRDER	SW	0.03	0.04	0.05	0.06	0.07	0.07	0.05	0.04	0.03	
	DL1	0.07	0.10	0.14	0.14	0.18	0.17	0.14	0.10	0.07	
	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.01	
	C	0.00	0.02	0.07	0.06	0.11	0.10	0.07	0.02	0.00	
2	FG	636.27	636.38	636.62	636.86	637.11	637.37	637.64	637.91	638.05	
	TES	635.32	635.41	635.69	635.94	636.24	636.48	636.72	636.94	636.97	
	ZW	635.21	635.36	635.66	635.92	636.22	636.47	636.69	636.90	637.00	
	CW	635.21	635.34	635.60	635.85	636.11	636.36	636.62	636.87	637.00	
LEFT GIRDER	SW	0.03	0.04	0.05	0.06	0.07	0.07	0.06	0.04	0.03	
	DL1	0.07	0.10	0.14	0.15	0.18	0.17	0.14	0.10	0.08	
	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.01	
	C	0.00	0.02	0.07	0.07	0.12	0.10	0.07	0.02	0.00	
3	FG	636.84	636.95	637.19	637.43	637.68	637.94	638.21	638.48	638.62	
	TES	635.89	635.98	636.26	636.55	636.81	637.06	637.29	637.51	637.54	
	ZW	635.78	635.94	636.24	636.53	636.80	637.04	637.26	637.47	637.58	
	CW	635.78	635.91	636.17	636.42	636.68	636.94	637.19	637.45	637.58	
RIGHT GIRDER	SW	0.03	0.04	0.06	0.07	0.07	0.07	0.06	0.04	0.03	
	DL1	0.08	0.10	0.15	0.18	0.19	0.18	0.15	0.10	0.08	
	DL2	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01	
	C	0.00	0.02	0.07	0.11	0.12	0.11	0.07	0.02	0.00	
4	FG	637.41	637.52	637.76	638.00	638.25	638.51	638.78	639.05	639.19	
	TES	636.46	636.55	636.84	637.12	637.39	637.63	637.86	638.09	638.12	
	ZW	636.35	636.51	636.81	637.11	637.38	637.62	637.84	638.04	638.15	
	CW	636.35	636.48	636.74	636.99	637.25	637.51	637.76	638.02	638.15	
RIGHT GIRDER	SW	0.03	0.04	0.06	0.07	0.07	0.07	0.06	0.04	0.03	
	DL1	0.08	0.10	0.15	0.18	0.19	0.18	0.15	0.10	0.08	
	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.01	
	C	0.00	0.03	0.08	0.11	0.13	0.11	0.07	0.02	0.00	
BLOCKING HEIGHTS											
5	BLK	2.24								4.02	
6		2.65								4.44	
7		3.38								5.17	
8		3.80								5.59	

FIELD SECTION 4

HORIZ. LOC.	VALUE	POSITION AND STATION							
		FS #3	P4-1	P4-2	PIER 2	P4-4	P4-5	FS #4	
		816+71.15	816+79.90	816+97.40	817+14.90	817+32.40	817+49.90	817+58.65	
CAMBER DATA									
1	FG	637.48	637.62	637.92	638.21	638.52	638.83	638.99	
	TES	636.54	636.61	636.91	637.19	637.51	637.82	638.05	
	ZW	636.43	636.54	636.77	637.05	637.37	637.74	637.94	
	CW	636.43	636.58	636.88	637.18	637.49	637.79	637.94	
LEFT GIRDER	SW	0.03	0.02	0.01	0.00	0.01	0.02	0.03	
	DL1	0.07	0.05	0.02	0.00	0.01	0.05	0.07	
	DL2	0.01	0.01	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.04	-0.11	-0.14	-0.11	-0.04	0.00	
2	FG	638.05	638.19	638.49	638.78	639.09	639.40	639.56	
	TES	637.11	637.18	637.48	637.76	638.09	638.39	638.62	
	ZW	637.00	637.11	637.34	637.62	637.94	638.32	638.51	
	CW	637.00	637.15	637.45	637.76	638.06	638.36	638.51	
LEFT GIRDER	SW	0.03	0.02	0.01	0.00	0.01	0.02	0.03	
	DL1	0.08	0.05	0.02	0.00	0.01	0.05	0.08	
	DL2	0.01	0.01	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.04	-0.11	-0.14	-0.11	-0.04	0.00	
3	FG	638.62	638.76	639.06	639.35	639.66	639.97	640.13	
	TES	637.68	637.75	638.05	638.33	638.66	638.96	639.19	
	ZW	637.58	637.68	637.92	638.19	638.52	638.89	639.08	
	CW	637.58	637.73	638.03	638.33	638.63	638.93	639.08	
RIGHT GIRDER	SW	0.03	0.02	0.01	0.00	0.01	0.02	0.03	
	DL1	0.08	0.06	0.02	0.00	0.02	0.05	0.08	
	DL2	0.01	0.01	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.04	-0.11	-0.14	-0.12	-0.04	0.00	
4	FG	639.19	639.33	639.63	639.92	640.23	640.54	640.70	
	TES	638.25	638.33	638.62	638.90	639.23	639.53	639.76	
	ZW	638.15	638.25	638.49	638.76	639.09	639.46	639.66	
	CW	638.15	638.30	638.60	638.90	639.20	639.51	639.66	
RIGHT GIRDER	SW	0.03	0.02	0.01	0.00	0.01	0.02	0.03	
	DL1	0.08	0.06	0.02	0.00	0.02	0.06	0.08	
	DL2	0.01	0.01	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.04	-0.11	-0.15	-0.12	-0.05	0.00	
BLOCKING HEIGHTS									
5	BLK	4.02			4.64			5.53	
6		4.44			5.06			5.95	
7		5.17			5.78			6.68	
8		5.59			6.20			7.10	



LEGEND:
FOR LEGEND SEE CAMBER DIAGRAM UNIT 1
NOTES:
FOR NOTES SEE CAMBER DIAGRAM UNIT 1

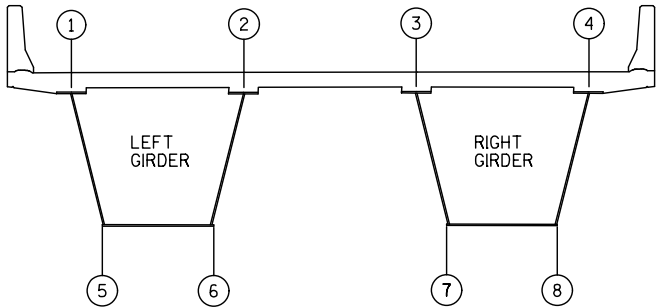
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY ZMG		PLANS CK'D. MAD	
CAMBER DATA: FIELD SECTION #3 & #4			SHEET 43 OF 50

FIELD SECTION 5

HORIZ. LOC.	VALUE	POSITION AND STATION								
		FS #4	P5-1	P5-2	P5-3	P5-4	P5-5	P5-6	P5-7	FS #5
		817+58.65	817+67.40	817+84.90	818+02.40	818+19.90	818+37.40	818+54.90	818+72.40	818+81.15
CAMBER DATA										
1	FG	638.99	639.15	639.48	639.82	640.15	640.48	640.82	641.15	641.32
	TES	638.05	638.18	638.56	638.93	639.27	639.59	639.89	640.18	640.35
	ZW	637.94	638.13	638.53	638.91	639.26	639.57	639.86	640.13	640.24
	CW	637.94	638.10	638.43	638.76	639.09	639.42	639.75	640.08	640.24
LEFT GIRDER	SW	0.03	0.04	0.05	0.06	0.07	0.06	0.05	0.04	0.02
	DL1	0.07	0.10	0.14	0.17	0.18	0.17	0.14	0.10	0.06
	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.03	0.10	0.15	0.17	0.15	0.11	0.05	0.00
2	FG	639.56	639.72	640.05	640.39	640.72	641.05	641.39	641.72	641.89
	TES	638.62	638.75	639.13	639.50	639.85	640.17	640.47	640.75	640.79
	ZW	638.51	638.71	639.10	639.48	639.83	640.15	640.44	640.70	640.81
	CW	638.51	638.68	639.00	639.33	639.66	639.99	640.32	640.65	640.81
LEFT GIRDER	SW	0.03	0.04	0.05	0.07	0.07	0.07	0.05	0.04	0.02
	DL1	0.08	0.10	0.15	0.18	0.19	0.18	0.14	0.10	0.06
	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.03	0.10	0.15	0.17	0.16	0.12	0.05	0.00
3	FG	640.13	640.29	640.62	640.96	641.29	641.62	641.96	642.29	642.46
	TES	639.19	639.33	639.70	640.08	640.42	640.74	641.04	641.32	641.38
	ZW	639.08	639.28	639.68	640.06	640.41	640.73	641.01	641.28	641.41
	CW	639.08	639.25	639.58	639.91	640.24	640.58	640.91	641.24	641.41
RIGHT GIRDER	SW	0.03	0.04	0.06	0.07	0.07	0.07	0.06	0.04	0.03
	DL1	0.08	0.10	0.15	0.18	0.19	0.18	0.15	0.10	0.08
	DL2	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.03	0.10	0.15	0.16	0.15	0.10	0.04	0.00
4	FG	640.70	640.86	641.19	641.53	641.86	642.19	642.53	642.86	643.03
	TES	639.76	639.90	640.28	640.65	641.00	641.32	641.61	641.89	641.95
	ZW	639.65	639.86	640.26	640.64	640.99	641.30	641.59	641.85	641.98
	CW	639.65	639.82	640.15	640.48	640.82	641.15	641.48	641.81	641.98
RIGHT GIRDER	SW	0.03	0.04	0.06	0.07	0.07	0.07	0.06	0.04	0.03
	DL1	0.08	0.11	0.15	0.18	0.20	0.18	0.15	0.10	0.08
	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.04	0.10	0.15	0.17	0.15	0.11	0.04	0.00
BLOCKING HEIGHTS										
5	BLK	5.53								7.84
6		5.95								8.26
7		6.68								9.00
8		7.10								9.43

FIELD SECTION 6

HORIZ. LOC.	VALUE	POSITION AND STATION						
		FS #5	P6-1	P6-2	PIER 3	P6-4	P6-5	FS #6
		818+81.15	818+89.90	819+07.40	819+24.90	819+41.82	819+58.73	819+67.19
CAMBER DATA								
1	FG	641.32	641.48	641.82	642.15	642.47	642.79	642.95
	TES	640.35	640.47	640.81	641.13	641.47	641.78	642.01
	ZW	640.24	640.39	640.67	640.98	641.33	641.71	641.90
	CW	640.24	640.41	640.75	641.08	641.41	641.74	641.90
LEFT GIRDER	SW	0.02	0.02	0.01	0.00	0.01	0.02	0.03
	DL1	0.06	0.05	0.01	0.00	0.02	0.05	0.08
	DL2	0.01	0.01	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.02	-0.08	-0.10	-0.08	-0.03	0.00
2	FG	641.89	642.05	642.39	642.72	643.04	643.36	643.52
	TES	640.93	641.04	641.38	641.70	642.04	642.35	642.58
	ZW	640.81	640.96	641.24	641.55	641.90	642.28	642.47
	CW	640.81	640.98	641.32	641.66	641.98	642.31	642.47
LEFT GIRDER	SW	0.02	0.02	0.01	0.00	0.01	0.02	0.03
	DL1	0.06	0.05	0.01	0.00	0.02	0.06	0.08
	DL2	0.01	0.01	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.02	-0.08	-0.11	-0.08	-0.03	0.00
3	FG	642.46	642.62	642.96	643.29	643.61	643.93	644.09
	TES	641.51	641.61	641.95	642.27	642.61	642.92	643.15
	ZW	641.41	641.54	641.81	642.12	642.47	642.85	643.05
	CW	641.41	641.57	641.91	642.24	642.56	642.88	643.05
RIGHT GIRDER	SW	0.03	0.02	0.01	0.00	0.01	0.02	0.03
	DL1	0.08	0.05	0.01	0.00	0.02	0.06	0.08
	DL2	0.01	0.01	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.04	-0.09	-0.12	-0.09	-0.03	0.00
4	FG	643.03	643.19	643.53	643.86	644.18	644.50	644.66
	TES	642.08	642.18	642.52	642.84	643.18	643.49	643.72
	ZW	641.98	642.11	642.38	642.69	643.04	643.42	643.62
	CW	641.98	642.15	642.48	642.81	643.13	643.46	643.62
RIGHT GIRDER	SW	0.03	0.02	0.01	0.00	0.01	0.02	0.03
	DL1	0.08	0.05	0.02	0.00	0.02	0.06	0.08
	DL2	0.01	0.01	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.04	-0.10	-0.12	-0.09	-0.03	0.00
BLOCKING HEIGHTS								
5	BLK	7.84			8.58			9.49
6		8.26			8.99			9.91
7		9.00			9.72			10.64
8		9.43			10.14			11.07



HORIZONTAL LOCATION KEY
LOOKING UPSTATION

LEGEND:
FOR LEGEND SEE CAMBER DIAGRAM UNIT 1
NOTES:
FOR NOTES SEE CAMBER DIAGRAM UNIT 1

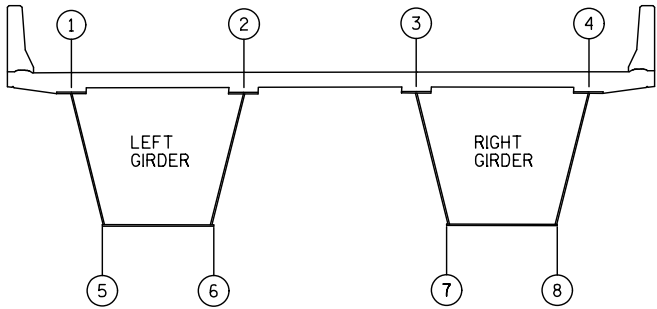
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		ZMG	PLANS CK'D. MAD
CAMBER DATA: FIELD SECTION #5 & #6			SHEET 44 OF 50

FIELD SECTION 7

HORIZ. LOC.	VALUE	POSITION AND STATION									
		FS #6	P7-1	P7-2	P7-3	P7-4	P7-5	P7-6	P7-7	PIER 4	
		819+67.19	819+75.65	819+92.57	820+09.48	820+26.40	820+43.32	820+60.23	820+77.15	820+94.07	
CAMBER DATA											
1	FG	642.95	643.11	643.44	643.76	644.08	644.40	644.72	645.04	645.37	
	TES	642.01	642.14	642.51	642.86	643.19	643.50	643.78	644.04	644.28	
	ZW	641.90	642.09	642.48	642.84	643.18	643.47	643.74	643.98	644.20	
	CW	641.90	642.05	642.36	642.67	642.97	643.28	643.59	643.89	644.20	
LEFT WEB	SW	0.03	0.04	0.05	0.06	0.07	0.06	0.05	0.03	0.00	
	DL1	0.08	0.10	0.14	0.17	0.18	0.16	0.12	0.07	0.00	
	DL2	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.00	
	C	0.00	0.04	0.12	0.18	0.20	0.19	0.15	0.08	0.00	
2	FG	643.52	643.68	644.01	644.33	644.65	644.97	645.29	645.61	645.94	
	TES	642.58	642.71	643.08	643.44	643.77	644.07	644.35	644.61	644.78	
	ZW	642.47	642.67	643.05	643.42	643.75	644.05	644.32	644.55	644.78	
	CW	642.47	642.63	642.93	643.24	643.55	643.86	644.16	644.47	644.78	
RIGHT WEB	SW	0.03	0.04	0.05	0.07	0.07	0.06	0.05	0.03	0.00	
	DL1	0.08	0.10	0.14	0.17	0.18	0.17	0.13	0.07	0.00	
	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
	C	0.00	0.04	0.12	0.18	0.20	0.19	0.15	0.08	0.00	
3	FG	644.09	644.25	644.58	644.90	645.22	645.54	645.86	646.18	646.51	
	TES	643.15	643.29	643.66	644.01	644.34	644.65	644.92	645.18	645.34	
	ZW	643.05	643.24	643.63	644.00	644.33	644.63	644.89	645.12	645.34	
	CW	643.05	643.20	643.50	643.81	644.12	644.42	644.73	645.03	645.34	
LEFT WEB	SW	0.03	0.04	0.06	0.07	0.07	0.06	0.05	0.03	0.00	
	DL1	0.08	0.10	0.15	0.18	0.19	0.17	0.13	0.07	0.00	
	DL2	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.00	
	C	0.00	0.04	0.12	0.19	0.21	0.20	0.16	0.09	0.00	
4	FG	644.66	644.82	645.15	645.47	645.79	646.11	646.43	646.75	647.08	
	TES	643.72	643.86	644.23	644.59	644.92	645.22	645.50	645.75	645.91	
	ZW	643.62	643.82	644.20	644.57	644.91	645.20	645.47	645.70	645.91	
	CW	643.62	643.77	644.07	644.38	644.69	644.99	645.30	645.60	645.91	
RIGHT WEB	SW	0.03	0.04	0.06	0.07	0.07	0.07	0.05	0.03	0.00	
	DL1	0.08	0.11	0.15	0.18	0.19	0.17	0.13	0.07	0.00	
	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.00	
	C	0.00	0.05	0.13	0.19	0.22	0.21	0.17	0.09	0.00	
BLOCKING HEIGHTS											
5	BLK	9.49									11.80
6		9.91								12.22	
7		10.64								12.94	
8		11.07								13.36	

FIELD SECTION 8

HORIZ. LOC.	VALUE	POSITION AND STATION									
		PIER 4	P8- 2	P8- 3	P8- 4	P8- 5	P8- 6	P8- 7	P8- 8	P8- 9	FS #7
		820+97.73	821+14.33	821+30.92	821+47.52	821+64.12	821+80.72	821+97.31	822+13.91	822+30.51	822+38.80
CAMBER DATA											
1	FG	645.44	645.75	646.07	646.38	646.70	647.02	647.33	647.65	647.96	648.12
	TES	644.35	644.78	645.19	645.57	645.93	646.26	646.56	646.83	647.08	647.28
	ZW	644.27	644.73	645.17	645.58	645.96	646.29	646.58	646.84	647.07	647.18
	CW	644.27	644.61	644.95	645.30	645.64	645.98	646.32	646.67	647.01	647.18
LEFT GIRDER	SW	0.00	0.04	0.07	0.09	0.11	0.11	0.11	0.09	0.07	0.06
	DL1	0.00	0.10	0.18	0.24	0.28	0.29	0.28	0.24	0.18	0.15
	DL2	0.00	0.01	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.02
	C	0.00	0.12	0.22	0.29	0.32	0.31	0.26	0.17	0.06	0.00
2	FG	646.01	646.32	646.64	646.95	647.27	647.59	647.90	648.22	648.53	648.69
	TES	644.92	645.35	645.76	646.15	646.51	646.84	647.14	647.41	647.66	647.85
	ZW	644.84	645.30	645.75	646.16	646.54	646.87	647.16	647.42	647.65	647.75
	CW	644.84	645.18	645.53	645.87	646.21	646.55	646.90	647.24	647.58	647.75
LEFT GIRDER	SW	0	0.04	0.07	0.10	0.11	0.12	0.11	0.09	0.07	0.06
	DL1	0	0.10	0.19	0.25	0.29	0.30	0.29	0.24	0.19	0.15
	DL2	0	0.01	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.02
	C	0.00	0.12	0.22	0.29	0.33	0.32	0.27	0.18	0.06	0.00
3	FG	646.58	646.89	647.21	647.52	647.84	648.16	648.47	648.79	649.10	649.26
	TES	645.49	645.92	646.34	646.73	647.09	647.42	647.71	647.98	648.23	648.42
	ZW	645.41	645.88	646.33	646.74	647.12	647.45	647.74	647.99	648.22	648.33
	CW	645.41	645.75	646.10	646.44	646.78	647.13	647.47	647.81	648.16	648.33
RIGHT GIRDER	SW	0	0.04	0.07	0.10	0.11	0.12	0.11	0.10	0.07	0.06
	DL1	0	0.10	0.19	0.26	0.30	0.31	0.29	0.25	0.19	0.16
	DL2	0	0.01	0.02	0.03	0.03	0.04	0.03	0.03	0.02	0.02
	C	0.00	0.12	0.23	0.30	0.34	0.32	0.27	0.18	0.06	0.00
4	FG	647.15	647.46	647.78	648.09	648.41	648.73	649.04	649.36	649.67	649.83
	TES	646.06	646.49	646.91	647.30	647.67	647.99	648.29	648.56	648.80	649.00
	ZW	645.98	646.45	646.90	647.32	647.70	648.03	648.32	648.57	648.79	648.90
	CW	645.98	646.32	646.67	647.01	647.36	647.70	648.04	648.39	648.73	648.90
RIGHT GIRDER	SW	0	0.04	0.07	0.10	0.12	0.12	0.11	0.10	0.07	0.06
	DL1	0	0.10	0.20	0.26	0.31	0.32	0.30	0.25	0.19	0.16
	DL2	0	0.01	0.02	0.03	0.03	0.04	0.03	0.03	0.02	0.02
	C	0.00	0.13	0.24	0.31	0.35	0.33	0.28	0.19	0.06	0.00
BLOCKING HEIGHTS											
5	BLK	11.87									14.78
6		12.24									15.15
7		13.01									15.92
8		13.38									16.30



HORIZONTAL LOCATION KEY
LOOKING UPSTATION

LEGEND:
FOR LEGEND SEE CAMBER DIAGRAM UNIT 1 AND 2
NOTES:
FOR NOTES SEE CAMBER DIAGRAM UNIT 1 AND 2

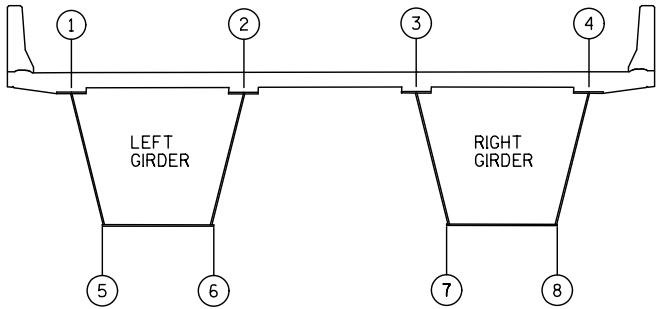
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
		DRAWN BY ZMG	PLANS CK'D. MAD
CAMBER DATA: FIELD SECTION #7 & #8		SHEET 45 OF 50	

FIELD SECTION 9

HORIZ. LOC.	VALUE	POSITION AND STATION									
		FS #7	P9-1	P9-2	P9-3	PIER 5	P9-5	P9-6	P9-7	FS #8	
		822+38.80	822+47.10	822+63.70	822+80.30	822+96.90	823+13.56	823+30.23	823+46.90	823+55.23	
CAMBER DATA											
1	FG	648.12	648.28	648.58	648.86	649.14	649.40	649.65	649.88	650.00	
	TES	647.28	647.36	647.59	647.91	648.16	648.44	648.66	648.97	649.16	
	ZW	647.18	647.29	647.50	647.73	647.97	648.26	648.57	648.90	649.06	
	CW	647.18	647.31	647.58	647.85	648.12	648.39	648.66	648.93	649.06	
LEFT GIRDER	SW	0.06	0.05	0.02	0.01	0.00	0.01	0.02	0.05	0.06	
	DL1	0.15	0.12	0.06	0.02	0.00	0.01	0.06	0.12	0.15	
	DL2	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.02	0.02	
	C	0.00	-0.03	-0.08	-0.13	-0.15	-0.13	-0.09	-0.03	0.00	
2	FG	648.69	648.85	649.15	649.43	649.71	649.97	650.22	650.45	650.57	
	TES	647.85	647.93	648.16	648.47	648.73	649.01	649.23	649.54	649.73	
	ZW	647.75	647.86	648.07	648.29	648.54	648.82	649.14	649.47	649.64	
	CW	647.75	647.88	648.15	648.42	648.69	648.96	649.23	649.50	649.64	
LEFT GIRDER	SW	0.06	0.05	0.02	0.01	0.00	0.01	0.02	0.05	0.06	
	DL1	0.15	0.12	0.06	0.02	0.00	0.01	0.06	0.12	0.15	
	DL2	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.02	0.02	
	C	0.00	-0.02	-0.08	-0.13	-0.15	-0.14	-0.09	-0.03	0.00	
3	FG	649.26	649.42	649.72	650.00	650.28	650.54	650.79	651.02	651.14	
	TES	648.42	648.50	648.73	649.04	649.30	649.58	649.81	650.11	650.30	
	ZW	648.32	648.43	648.64	648.86	649.11	649.40	649.72	650.04	650.21	
	CW	648.32	648.46	648.72	648.99	649.26	649.53	649.80	650.07	650.21	
RIGHT GIRDER	SW	0.06	0.05	0.02	0.01	0.00	0.01	0.03	0.05	0.06	
	DL1	0.15	0.12	0.06	0.02	0.00	0.02	0.06	0.12	0.15	
	DL2	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.02	0.02	
	C	0.00	-0.02	-0.08	-0.13	-0.15	-0.13	-0.09	-0.03	0.00	
4	FG	649.83	649.99	650.29	650.57	650.85	651.11	651.36	651.59	651.71	
	TES	648.99	649.07	649.30	649.61	649.87	650.15	650.38	650.68	650.88	
	ZW	648.89	649.01	649.21	649.43	649.68	649.97	650.29	650.62	650.78	
	CW	648.89	649.03	649.30	649.57	649.83	650.11	650.38	650.65	650.78	
RIGHT GIRDER	SW	0.06	0.05	0.02	0.01	0.00	0.01	0.03	0.05	0.06	
	DL1	0.15	0.12	0.06	0.02	0.00	0.02	0.06	0.12	0.16	
	DL2	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.02	0.02	
	C	0.00	-0.02	-0.08	-0.13	-0.16	-0.14	-0.09	-0.03	0.00	
BLOCKING HEIGHTS											
5	BLK	14.78				15.57				16.66	
6		15.15				15.94				17.04	
7		15.92				16.71				17.81	
8		16.30				17.09				18.19	

FIELD SECTION 10

HORIZ. LOC.	VALUE	POSITION AND STATION									
		FS #8	P10-1	P10-2	P10-3	P10-4	P10-5	P10-6	P10-7	P10-8	FS #9
		823+55.23	823+63.56	823+80.23	823+96.90	824+13.56	824+30.23	824+46.90	824+63.56	824+80.23	824+88.56
CAMBER DATA											
1	FG	650.00	650.11	650.32	650.52	650.70	650.87	651.03	651.18	651.31	651.37
	TES	649.16	649.23	649.51	649.76	649.97	650.14	650.27	650.37	650.44	650.53
	ZW	649.06	649.22	649.52	649.79	650.01	650.19	650.31	650.38	650.43	650.44
	CW	649.06	649.15	649.32	649.49	649.66	649.84	650.01	650.18	650.35	650.44
LEFT GIRDER	SW	0.06	0.07	0.10	0.12	0.12	0.13	0.12	0.10	0.08	0.06
	DL1	0.15	0.18	0.24	0.29	0.31	0.32	0.29	0.25	0.19	0.15
	DL2	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.02	0.02
	C	0.00	0.07	0.20	0.30	0.35	0.35	0.30	0.20	0.07	0.00
2	FG	650.57	650.68	650.89	651.09	651.27	651.44	651.60	651.75	651.88	651.94
	TES	649.73	649.81	650.09	650.34	650.55	650.72	650.85	650.95	651.01	651.11
	ZW	649.63	649.80	650.10	650.37	650.59	650.77	650.89	650.96	651.00	651.01
	CW	649.63	649.72	649.89	650.06	650.24	650.41	650.58	650.75	650.93	651.01
LEFT GIRDER	SW	0.06	0.08	0.10	0.12	0.13	0.13	0.12	0.10	0.08	0.06
	DL1	0.15	0.19	0.25	0.29	0.32	0.32	0.30	0.25	0.19	0.16
	DL2	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.02	0.02
	C	0.00	0.08	0.21	0.31	0.36	0.36	0.31	0.21	0.08	0.00
3	FG	651.14	651.25	651.46	651.66	651.84	652.01	652.17	652.32	652.45	652.51
	TES	650.30	650.38	650.66	650.91	651.12	651.30	651.43	651.52	651.58	651.68
	ZW	650.20	650.37	650.68	650.95	651.17	651.34	651.47	651.54	651.58	651.59
	CW	650.20	650.29	650.46	650.63	650.81	650.98	651.15	651.33	651.50	651.59
RIGHT GIRDER	SW	0.06	0.08	0.10	0.12	0.13	0.13	0.12	0.10	0.08	0.06
	DL1	0.15	0.19	0.25	0.30	0.33	0.33	0.30	0.26	0.19	0.16
	DL2	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.02
	C	0.00	0.08	0.21	0.31	0.36	0.36	0.31	0.21	0.08	0.00
4	FG	651.71	651.82	652.03	652.23	652.41	652.58	652.74	652.89	653.02	653.08
	TES	650.87	650.95	651.23	651.49	651.70	651.88	652.00	652.10	652.15	652.25
	ZW	650.77	650.95	651.25	651.53	651.75	651.93	652.04	652.12	652.15	652.16
	CW	650.77	650.86	651.03	651.21	651.38	651.55	651.73	651.90	652.08	652.16
RIGHT GIRDER	SW	0.06	0.08	0.10	0.12	0.13	0.13	0.12	0.10	0.08	0.07
	DL1	0.15	0.19	0.26	0.30	0.33	0.33	0.31	0.26	0.19	0.16
	DL2	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.02
	C	0.00	0.09	0.22	0.32	0.37	0.37	0.32	0.22	0.07	0.00
BLOCKING HEIGHTS											
5	BLK	16.66									18.03
6		17.04									18.42
7		17.81									19.20
8		18.19									19.59



HORIZONTAL LOCATION KEY
LOOKING UPSTATION

LEGEND:
FOR LEGEND SEE CAMBER DIAGRAM UNIT 2
NOTES:
FOR NOTES SEE CAMBER DIAGRAM UNIT 2

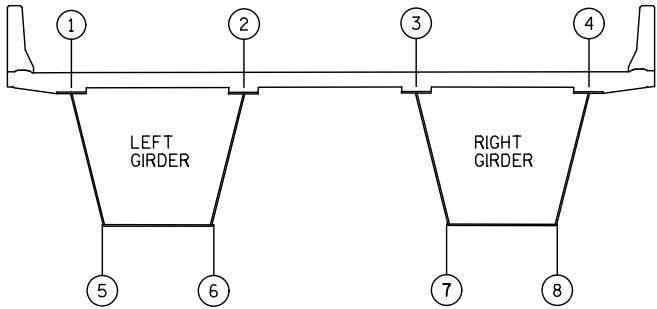
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		ZMG	PLANS CK'D. MAD
CAMBER DATA: FIELD SECTION #9 & #10			SHEET 46 OF 50

FIELD SECTION 11

HORIZ. LOC.	VALUE	POSITION AND STATION									
		FS #9	P11-1	P11-2	P11-3	PIER 6	P11-5	P11-6	P11-7	FS #10	
		824+88.56	824+96.90	825+13.56	825+30.23	825+46.90	825+63.56	825+80.23	825+96.90	826+05.23	
CAMBER DATA											
1	FG	651.37	651.43	651.53	651.63	651.71	651.78	651.83	651.87	651.89	
	TES	650.53	650.51	650.55	650.67	650.73	650.81	650.85	650.96	651.05	
LEFT GIRDER	ZW	650.44	650.45	650.46	650.49	650.54	650.63	650.76	650.89	650.96	
	CW	650.44	650.48	650.55	650.62	650.70	650.77	650.85	650.92	650.96	
LEFT WEB	SW	0.06	0.05	0.03	0.01	0.00	0.01	0.02	0.05	0.06	
	DL1	0.15	0.12	0.06	0.02	0.00	0.02	0.06	0.12	0.16	
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.01	0.01	0.02	
	C	0.00	-0.03	-0.09	-0.14	-0.16	-0.14	-0.09	-0.03	0.00	
2	FG	651.94	652.00	652.10	652.20	652.28	652.35	652.40	652.44	652.46	
	TES	651.10	651.08	651.12	651.24	651.30	651.38	651.42	651.53	651.62	
LEFT GIRDER	ZW	651.01	651.02	651.03	651.06	651.11	651.20	651.33	651.46	651.53	
	CW	651.01	651.05	651.12	651.20	651.27	651.34	651.42	651.49	651.53	
RIGHT WEB	SW	0.06	0.05	0.03	0.01	0.00	0.01	0.02	0.05	0.06	
	DL1	0.15	0.12	0.06	0.02	0.00	0.02	0.06	0.12	0.16	
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.01	0.02	0.02	
	C	0.00	-0.03	-0.09	-0.14	-0.16	-0.14	-0.09	-0.03	0.00	
3	FG	652.51	652.57	652.67	652.77	652.85	652.92	652.97	653.01	653.03	
	TES	651.67	651.66	651.70	651.81	651.87	651.95	651.99	652.10	652.20	
RIGHT GIRDER	ZW	651.58	651.59	651.61	651.63	651.68	651.77	651.90	652.04	652.11	
	CW	651.58	651.62	651.69	651.77	651.84	651.92	651.99	652.07	652.11	
LEFT WEB	SW	0.06	0.05	0.03	0.01	0.00	0.01	0.02	0.05	0.06	
	DL1	0.15	0.13	0.06	0.02	0.00	0.02	0.06	0.13	0.16	
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.01	0.02	0.02	
	C	0.00	-0.02	-0.08	-0.14	-0.16	-0.14	-0.09	-0.03	0.00	
4	FG	653.08	653.14	653.24	653.34	653.42	653.49	653.54	653.58	653.60	
	TES	652.24	652.23	652.27	652.38	652.44	652.52	652.56	652.67	652.77	
RIGHT GIRDER	ZW	652.15	652.17	652.18	652.20	652.25	652.34	652.47	652.61	652.68	
	CW	652.15	652.19	652.26	652.34	652.41	652.49	652.57	652.64	652.68	
RIGHT WEB	SW	0.06	0.05	0.03	0.01	0.00	0.01	0.02	0.05	0.06	
	DL1	0.15	0.13	0.07	0.02	0.00	0.02	0.06	0.13	0.16	
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.01	0.02	0.02	
	C	0.00	-0.02	-0.08	-0.14	-0.16	-0.15	-0.10	-0.03	0.00	
BLOCKING HEIGHTS											
5	BLK	18.03				18.14				18.55	
6		18.42				18.52				18.94	
7		19.20				19.30				19.72	
8		19.59				19.69				20.12	

FIELD SECTION 12

HORIZ. LOC.	VALUE	POSITION AND STATION									
		FS #10	P12-1	P12-2	P12-3	P12-4	P12-5	P12-6	P12-7	P12-8	FS #11
		826+05.23	826+13.56	826+30.23	826+46.90	826+63.56	826+80.23	826+96.90	827+13.56	827+30.23	827+38.56
CAMBER DATA											
1	FG	651.89	651.90	651.92	651.92	651.91	651.88	651.85	651.80	651.74	651.70
	TES	651.05	651.03	651.11	651.17	651.18	651.16	651.09	650.99	650.86	650.86
LEFT GIRDER	ZW	650.96	651.02	651.13	651.21	651.22	651.20	651.13	651.01	650.85	650.77
	CW	650.96	650.94	650.92	650.90	650.87	650.85	650.83	650.80	650.78	650.77
LEFT WEB	SW	0.06	0.07	0.10	0.12	0.12	0.13	0.12	0.10	0.07	0.06
	DL1	0.16	0.19	0.25	0.30	0.32	0.32	0.29	0.25	0.19	0.16
	DL2	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.02	0.02
	C	0.00	0.07	0.21	0.31	0.35	0.35	0.30	0.21	0.07	0.00
2	FG	652.46	652.47	652.49	652.49	652.48	652.45	652.42	652.37	652.31	652.27
	TES	651.62	651.60	651.69	651.75	651.76	651.74	651.67	651.57	651.44	651.44
LEFT GIRDER	ZW	651.63	651.59	651.70	651.79	651.80	651.78	651.71	651.59	651.43	651.34
	CW	651.53	651.51	651.49	651.47	651.45	651.42	651.40	651.38	651.35	651.34
RIGHT WEB	SW	0.06	0.08	0.10	0.12	0.13	0.13	0.12	0.10	0.08	0.06
	DL1	0.16	0.19	0.26	0.31	0.33	0.33	0.30	0.25	0.19	0.16
	DL2	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.02	0.02
	C	0.00	0.08	0.21	0.32	0.36	0.36	0.31	0.21	0.08	0.00
3	FG	653.03	653.04	653.06	653.06	653.05	653.02	652.99	652.94	652.88	652.84
	TES	652.19	652.18	652.26	652.33	652.34	652.31	652.25	652.14	652.01	652.01
RIGHT GIRDER	ZW	652.10	652.17	652.28	652.37	652.38	652.36	652.28	652.16	652.00	651.92
	CW	652.10	652.08	652.06	652.04	652.02	652.00	651.97	651.95	651.93	651.92
LEFT WEB	SW	0.06	0.08	0.10	0.12	0.13	0.13	0.12	0.10	0.08	0.06
	DL1	0.16	0.20	0.26	0.31	0.33	0.33	0.31	0.26	0.19	0.16
	DL2	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.02	0.02
	C	0.00	0.09	0.22	0.33	0.37	0.37	0.31	0.21	0.08	0.00
4	FG	653.60	653.61	653.63	653.63	653.62	653.59	653.56	653.51	653.45	653.41
	TES	652.76	652.75	652.84	652.90	652.92	652.89	652.82	652.72	652.58	652.58
RIGHT GIRDER	ZW	652.67	652.75	652.86	652.94	652.96	652.94	652.86	652.74	652.57	652.49
	CW	652.67	652.66	652.63	652.61	652.59	652.57	652.55	652.52	652.50	652.49
RIGHT WEB	SW	0.06	0.08	0.10	0.12	0.13	0.13	0.12	0.10	0.08	0.07
	DL1	0.16	0.20	0.27	0.32	0.34	0.34	0.31	0.26	0.19	0.16
	DL2	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.02	0.02
	C	0.00	0.09	0.23	0.33	0.38	0.37	0.32	0.22	0.07	0.00
BLOCKING HEIGHTS											
5	BLK	18.55									18.36
6		18.94									18.76
7		19.72									19.55
8		20.12									19.94



HORIZONTAL LOCATION KEY
LOOKING UPSTATION

LEGEND:
FOR LEGEND SEE CAMBER DIAGRAM UNIT 2
NOTES:
FOR NOTES SEE CAMBER DIAGRAM UNIT 2

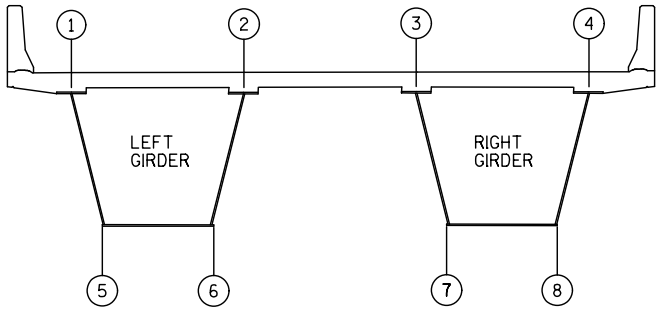
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		ZMG	PLANS CK'D. MAD
CAMBER DATA: FIELD SECTION #11 & #12			SHEET 47 OF 50

FIELD SECTION 13

HORIZ. LOC.	VALUE	POSITION AND STATION									
		FS #11	P13-1	P13-2	P13-3	PIER 7	P13-5	P13-6	P13-7	FS #12	
		827+38.56	827+46.90	827+63.56	827+80.23	827+96.90	828+13.56	828+30.23	828+46.90	828+55.23	
CAMBER DATA											
1	FG	651.70	651.66	651.57	651.47	651.36	651.23	651.09	650.93	650.85	
	TES	650.86	650.74	650.59	650.51	650.38	650.27	650.11	650.02	650.02	
	ZW	650.77	650.68	650.50	650.33	650.19	650.09	650.02	649.96	649.93	
	CW	650.77	650.71	650.59	650.47	650.35	650.23	650.11	649.99	649.93	
	SW	0.06	0.05	0.02	0.01	0.00	0.01	0.03	0.05	0.06	
LEFT WEB	DL1	0.16	0.12	0.06	0.02	0.00	0.02	0.06	0.13	0.16	
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.01	0.02	0.02	
	C	0.00	-0.03	-0.09	-0.14	-0.16	-0.14	-0.09	-0.03	0.00	
	FG	652.27	652.23	652.14	652.04	651.93	651.80	651.66	651.50	651.42	
	TES	651.43	651.32	651.16	651.08	650.95	650.84	650.68	650.60	650.59	
2	ZW	651.34	651.25	651.07	650.90	650.76	650.66	650.59	650.53	650.50	
	CW	651.34	651.28	651.16	651.04	650.92	650.80	650.68	650.56	650.50	
	SW	0.06	0.05	0.02	0.01	0.00	0.01	0.03	0.05	0.06	
	DL1	0.16	0.12	0.06	0.02	0.00	0.02	0.06	0.13	0.16	
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.01	0.02	0.02	
RIGHT WEB	C	0.00	-0.03	-0.09	-0.14	-0.16	-0.14	-0.09	-0.03	0.00	
	FG	652.84	652.80	652.71	652.61	652.50	652.37	652.23	652.07	651.99	
	TES	652.00	651.89	651.73	651.65	651.52	651.41	651.25	651.17	651.17	
	ZW	651.91	651.83	651.65	651.47	651.33	651.23	651.16	651.10	651.08	
	CW	651.91	651.85	651.73	651.61	651.49	651.37	651.25	651.14	651.08	
3	SW	0.06	0.05	0.03	0.01	0.00	0.01	0.03	0.05	0.07	
	DL1	0.16	0.13	0.07	0.02	0.00	0.02	0.06	0.13	0.16	
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.01	0.02	0.02	
	C	0.00	-0.02	-0.09	-0.14	-0.16	-0.15	-0.10	-0.03	0.00	
	FG	653.41	653.37	653.28	653.18	653.07	652.94	652.80	652.64	652.56	
4	TES	652.57	652.46	652.30	652.22	652.09	651.98	651.82	651.74	651.74	
	ZW	652.48	652.40	652.22	652.04	651.90	651.80	651.73	651.68	651.65	
	CW	652.48	652.42	652.30	652.18	652.06	651.95	651.83	651.71	651.65	
	SW	0.06	0.05	0.03	0.01	0.00	0.01	0.03	0.05	0.07	
	DL1	0.16	0.13	0.07	0.02	0.00	0.02	0.06	0.13	0.17	
RIGHT WEB	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.01	0.02	0.02	
	C	0.00	-0.02	-0.08	-0.14	-0.17	-0.15	-0.10	-0.03	0.00	
BLOCKING HEIGHTS											
5	BLK	18.36				17.79				17.52	
6		18.76				18.18				17.93	
7		19.55				18.97				18.71	
8		19.94				19.36				19.11	

FIELD SECTION 14

HORIZ. LOC.	VALUE	POSITION AND STATION									
		FS #12	P14-1	P14-2	P14-3	P14-4	P14-5	P14-6	P14-7	P14-8	FS #13
		828+55.23	828+63.56	828+80.23	828+96.90	829+13.56	829+30.23	829+46.90	829+63.56	829+80.23	829+88.56
CAMBER DATA											
1	FG	650.85	650.77	650.59	650.40	650.19	649.97	649.74	649.50	649.24	649.11
	TES	650.02	649.90	649.79	649.65	649.48	649.26	649.01	648.71	648.39	648.29
	ZW	649.93	649.90	649.81	649.69	649.53	649.31	649.05	648.74	648.39	648.20
	CW	649.93	649.82	649.61	649.39	649.17	648.96	648.74	648.53	648.31	648.20
	SW	0.06	0.08	0.10	0.12	0.13	0.13	0.12	0.11	0.08	0.07
LEFT WEB	DL1	0.16	0.19	0.26	0.30	0.33	0.33	0.31	0.27	0.20	0.17
	DL2	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.02
	C	0.00	0.07	0.21	0.30	0.35	0.36	0.30	0.21	0.08	0.00
	FG	651.42	651.34	651.16	650.97	650.76	650.54	650.31	650.07	649.81	649.68
	TES	650.59	650.48	650.37	650.23	650.06	649.84	649.58	649.29	648.96	648.86
2	ZW	650.50	650.47	650.39	650.27	650.11	649.90	649.63	649.31	648.96	648.78
	CW	650.50	650.39	650.18	649.96	649.75	649.53	649.32	649.10	648.89	648.78
	SW	0.06	0.08	0.10	0.12	0.13	0.14	0.13	0.11	0.08	0.07
	DL1	0.16	0.20	0.26	0.31	0.34	0.34	0.32	0.27	0.21	0.18
	DL2	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.02
RIGHT WEB	C	0.00	0.08	0.21	0.31	0.36	0.36	0.31	0.21	0.08	0.00
	FG	651.99	651.91	651.73	651.54	651.33	651.11	650.88	650.64	650.38	650.25
	TES	651.16	651.05	650.95	650.81	650.64	650.42	650.16	649.87	649.54	649.44
	ZW	651.07	651.05	650.97	650.85	650.69	650.48	650.21	649.89	649.54	649.35
	CW	651.07	650.96	650.75	650.53	650.32	650.10	649.89	649.68	649.46	649.35
3	SW	0.06	0.08	0.11	0.13	0.14	0.14	0.13	0.11	0.09	0.07
	DL1	0.16	0.20	0.27	0.32	0.35	0.35	0.32	0.28	0.21	0.18
	DL2	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.02
	C	0.00	0.08	0.22	0.32	0.37	0.37	0.32	0.22	0.08	0.00
	FG	652.56	652.48	652.30	652.11	651.90	651.68	651.45	651.21	650.95	650.82
4	TES	651.73	651.62	651.52	651.39	651.21	651.00	650.74	650.44	650.11	650.01
	ZW	651.64	651.62	651.55	651.43	651.27	651.06	650.79	650.47	650.11	649.93
	CW	651.64	651.53	651.32	651.10	650.89	650.68	650.46	650.25	650.04	649.93
	SW	0.06	0.08	0.11	0.13	0.14	0.14	0.13	0.11	0.09	0.07
	DL1	0.16	0.20	0.27	0.32	0.35	0.36	0.33	0.28	0.21	0.18
RIGHT WEB	DL2	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.03	0.02
	C	0.00	0.09	0.23	0.33	0.38	0.38	0.32	0.22	0.07	0.00
BLOCKING HEIGHTS											
5	BLK	17.52									15.80
6		17.93									16.21
7		18.71									17.00
8		19.11									17.40



HORIZONTAL LOCATION KEY
LOOKING UPSTATION

LEGEND:
FOR LEGEND SEE CAMBER DIAGRAM UNIT 2
NOTES:
FOR NOTES SEE CAMBER DIAGRAM UNIT 2

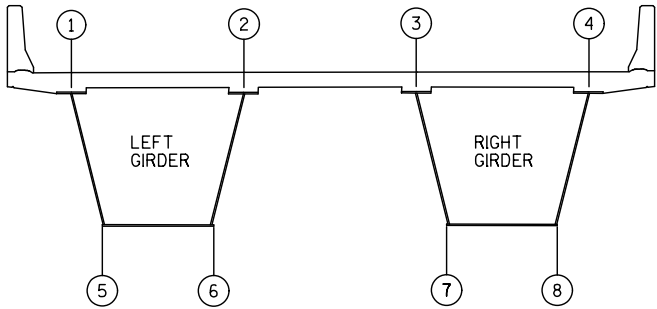
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		ZMG	PLANS CK'D. MAD
CAMBER DATA: FIELD SECTION #13 & #14			SHEET 48 OF 50

FIELD SECTION 15

HORIZ. LOC.	VALUE	POSITION AND STATION									
		FS #13	P15-1	P15-2	P15-3	PIER 8	P15-5	P15-6	P15-7	FS #14	
		829+88.56	829+96.90	830+13.56	830+30.23	830+46.90	830+62.56	830+78.23	830+93.90	831+01.73	
CAMBER DATA											
1	FG	649.11	648.97	648.69	648.39	648.08	647.78	647.46	647.14	646.97	
	TES	648.29	648.07	647.72	647.44	647.10	646.80	646.45	646.17	646.08	
	ZW	648.20	648.02	647.64	647.26	646.91	646.62	646.35	646.09	645.96	
	CW	648.20	648.04	647.71	647.38	647.05	646.74	646.43	646.12	645.96	
	SW	0.07	0.06	0.03	0.01	0.00	0.00	0.01	0.03	0.04	
LEFT WEB	DL1	0.17	0.14	0.08	0.03	0.00	0.00	0.03	0.08	0.10	
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.02	-0.07	-0.11	-0.13	-0.12	-0.08	-0.03	0.00	
	FG	649.68	649.54	649.26	648.96	648.65	648.35	648.03	647.71	647.54	
	TES	648.86	648.65	648.29	648.01	647.67	647.37	647.02	646.75	646.65	
2	ZW	648.77	648.59	648.21	647.83	647.48	647.19	646.92	646.66	646.54	
	CW	648.77	648.61	648.28	647.95	647.62	647.31	647.00	646.69	646.54	
	SW	0.07	0.06	0.03	0.01	0.00	0.00	0.01	0.03	0.04	
	DL1	0.17	0.14	0.08	0.03	0.00	0.00	0.03	0.08	0.11	
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01	
RIGHT WEB	C	0.00	-0.02	-0.07	-0.11	-0.14	-0.12	-0.08	-0.03	0.00	
	FG	650.25	650.11	649.83	649.53	649.22	648.92	648.60	648.28	648.11	
	TES	649.43	649.22	648.86	648.58	648.24	647.94	647.59	647.32	647.22	
	ZW	649.34	649.16	648.78	648.41	648.05	647.76	647.49	647.23	647.11	
	CW	649.34	649.18	648.85	648.52	648.19	647.88	647.57	647.26	647.11	
3	SW	0.07	0.06	0.03	0.01	0.00	0.00	0.01	0.03	0.04	
	DL1	0.17	0.14	0.08	0.03	0.00	0.00	0.03	0.08	0.11	
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.01	-0.07	-0.11	-0.14	-0.12	-0.08	-0.03	0.00	
	FG	650.82	650.68	650.40	650.10	649.79	649.49	649.17	648.85	648.68	
4	TES	650.00	649.79	649.43	649.15	648.81	648.51	648.16	647.89	647.80	
	ZW	649.91	649.74	649.35	648.98	648.62	648.33	648.06	647.81	647.68	
	CW	649.91	649.75	649.42	649.09	648.76	648.45	648.15	647.84	647.68	
	SW	0.07	0.06	0.03	0.01	0.00	0.00	0.01	0.03	0.04	
	DL1	0.17	0.15	0.08	0.03	0.00	0.00	0.04	0.08	0.11	
RIGHT WEB	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.01	0.01	0.01	
	C	0.00	-0.01	-0.07	-0.12	-0.14	-0.13	-0.09	-0.03	0.00	
BLOCKING HEIGHTS											
5	BLK	15.80				14.51				13.56	
6		16.21				14.92				13.97	
7		17.00				15.71				14.76	
8		17.40				16.12				15.17	

FIELD SECTION 16

HORIZ. LOC.	VALUE	POSITION AND STATION									
		FS #14	P16-1	P16-2	P16-3	P16-4	P16-5	P16-6	P16-7	P16-8	FS #15
		831+01.73	831+09.56	831+25.23	831+40.90	831+56.56	831+72.23	831+87.90	832+03.56	832+19.23	832+27.06
CAMBER DATA											
1	FG	646.97	646.80	646.45	646.09	645.72	645.34	644.94	644.54	644.12	643.91
	TES	646.08	645.86	645.57	645.26	644.91	644.54	644.13	643.69	643.22	643.05
	ZW	645.96	645.83	645.56	645.26	644.93	644.55	644.14	643.69	643.20	642.95
	CW	645.96	645.77	645.40	645.02	644.65	644.27	643.89	643.52	643.14	642.95
	SW	0.04	0.05	0.07	0.09	0.10	0.10	0.09	0.08	0.06	0.06
LEFT WEB	DL1	0.10	0.13	0.18	0.22	0.24	0.25	0.24	0.21	0.16	0.14
	DL2	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.02
	C	0.00	0.06	0.16	0.24	0.28	0.28	0.25	0.17	0.06	0.00
	FG	647.54	647.37	647.02	646.66	646.29	645.91	645.51	645.11	644.69	644.48
	TES	646.65	646.44	646.15	645.83	645.49	645.12	644.70	644.26	643.80	643.63
2	ZW	646.63	646.41	646.14	645.84	645.51	645.13	644.72	644.26	643.78	643.53
	CW	646.53	646.34	645.97	645.59	645.22	644.84	644.47	644.09	643.71	643.53
	SW	0.04	0.05	0.07	0.09	0.10	0.10	0.10	0.08	0.07	0.06
	DL1	0.10	0.13	0.18	0.23	0.25	0.26	0.24	0.21	0.17	0.14
	DL2	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.02
RIGHT WEB	C	0.00	0.06	0.17	0.25	0.29	0.29	0.25	0.17	0.06	0.00
	FG	648.11	647.94	647.59	647.23	646.86	646.48	646.08	645.68	645.26	645.05
	TES	647.22	647.01	646.72	646.41	646.07	645.69	645.28	644.84	644.37	644.20
	ZW	647.10	646.98	646.71	646.42	646.08	645.71	645.30	644.84	644.35	644.10
	CW	647.10	646.91	646.54	646.16	645.79	645.41	645.04	644.66	644.29	644.10
3	SW	0.04	0.05	0.07	0.09	0.10	0.10	0.10	0.09	0.07	0.06
	DL1	0.10	0.14	0.19	0.23	0.26	0.26	0.25	0.22	0.17	0.14
	DL2	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.02
	C	0.00	0.07	0.17	0.25	0.30	0.30	0.26	0.18	0.06	0.00
	FG	648.68	648.51	648.16	647.80	647.43	647.05	646.65	646.25	645.83	645.62
4	TES	647.79	647.59	647.30	646.99	646.64	646.27	645.86	645.42	644.94	644.77
	ZW	647.67	647.56	647.29	646.99	646.66	646.29	645.88	645.42	644.92	644.68
	CW	647.67	647.48	647.11	646.74	646.36	645.99	645.61	645.24	644.86	644.68
	SW	0.04	0.05	0.07	0.09	0.10	0.11	0.10	0.09	0.07	0.06
	DL1	0.10	0.14	0.19	0.24	0.26	0.27	0.26	0.22	0.17	0.15
RIGHT WEB	DL2	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.02
	C	0.00	0.07	0.18	0.26	0.30	0.31	0.26	0.18	0.06	0.00
BLOCKING HEIGHTS											
5	BLK	13.56									10.55
6		13.97									10.96
7		14.76									11.77
8		15.17									12.18



HORIZONTAL LOCATION KEY
LOOKING UPSTATION

LEGEND:
FOR LEGEND SEE CAMBER DIAGRAM UNIT 2
NOTES:
FOR NOTES SEE CAMBER DIAGRAM UNIT 2

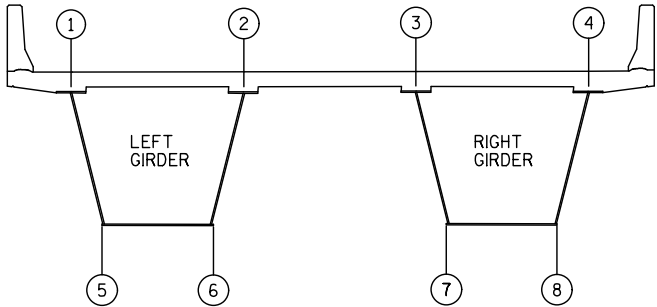
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		ZMG	PLANS CK'D. MAD
CAMBER DATA: FIELD SECTION #15 & #16			SHEET 49 OF 50

FIELD SECTION 17

HORIZ. LOC.	VALUE	POSITION AND STATION								
		FS #15	P17-1	P17-2	P17-3	PIER 9	P17-5	P17-6	P17-7	FS #14
		832+27.06	832+34.90	832+50.56	832+66.23	832+81.90	832+98.90	833+15.90	833+32.90	833+41.40
CAMBER DATA										
1	FG	643.91	643.69	643.25	642.80	642.34	641.82	641.29	640.75	640.47
	TES	643.05	642.77	642.27	641.85	641.36	640.84	640.27	639.76	639.55
	ZW	642.95	642.70	642.18	641.67	641.17	640.66	640.16	639.67	639.43
	CW	642.95	642.71	642.23	641.74	641.26	640.74	640.21	639.69	639.43
LEFT GIRDER	SW	0.06	0.05	0.03	0.01	0.00	0.00	0.01	0.02	0.03
	DL1	0.14	0.11	0.06	0.02	0.00	0.00	0.02	0.06	0.08
	DL2	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.01	-0.04	-0.07	-0.09	-0.08	-0.05	-0.01	0.00
2	FG	644.48	644.26	643.82	643.37	642.91	642.39	641.86	641.32	641.04
	TES	643.62	643.34	642.84	642.42	641.93	641.41	640.84	640.34	640.12
	ZW	643.52	643.27	642.76	642.24	641.74	641.22	640.73	640.25	640.00
	CW	643.52	643.28	642.80	642.31	641.83	641.31	640.78	640.26	640.00
LEFT GIRDER	SW	0.06	0.05	0.03	0.01	0.00	0.00	0.01	0.02	0.03
	DL1	0.14	0.12	0.07	0.02	0.00	0.00	0.03	0.06	0.08
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.01	-0.04	-0.07	-0.09	-0.08	-0.05	-0.01	0.00
3	FG	645.05	644.83	644.39	643.94	643.48	642.96	642.43	641.89	641.61
	TES	644.19	643.91	643.42	642.99	642.50	641.98	641.41	640.91	640.69
	ZW	644.09	643.85	643.33	642.81	642.31	641.80	641.30	640.82	640.57
	CW	644.09	643.85	643.37	642.89	642.40	641.88	641.36	640.83	640.57
RIGHT GIRDER	SW	0.06	0.05	0.03	0.01	0.00	0.00	0.01	0.03	0.03
	DL1	0.14	0.12	0.07	0.03	0.00	0.00	0.03	0.06	0.08
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01
	C	0.00	0.00	-0.04	-0.07	-0.09	-0.09	-0.05	-0.02	0.00
4	FG	645.62	645.40	644.96	644.51	644.05	643.53	643.00	642.46	642.18
	TES	644.76	644.49	643.99	643.56	643.07	642.55	641.98	641.48	641.27
	ZW	644.66	644.42	643.90	643.38	642.88	642.36	641.87	641.39	641.14
	CW	644.66	644.42	643.94	643.46	642.98	642.45	641.93	641.41	641.14
RIGHT GIRDER	SW	0.06	0.05	0.03	0.01	0.00	0.00	0.01	0.03	0.03
	DL1	0.14	0.12	0.07	0.03	0.00	0.00	0.03	0.07	0.09
	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01
	C	0.00	0.00	-0.04	-0.07	-0.10	-0.09	-0.05	-0.02	0.00
BLOCKING HEIGHTS										
5	BLK	10.55				8.77				7.02
6		10.96				9.18				7.44
7		11.77				9.98				8.24
8		12.18				10.40				8.66

FIELD SECTION 18

HORIZ. LOC.	VALUE	POSITION AND STATION								
		FS #14	P18-1	P18-2	P18-3	P18-4	P18-5	P18-6	N. ABUT.	
		833+41.40	833+49.90	833+66.90	833+83.90	834+00.90	834+17.90	834+34.90	834+51.90	
CAMBER DATA										
1	FG	640.47	640.19	639.62	639.04	638.44	637.83	637.21	636.57	
	TES	639.55	639.22	638.68	638.11	637.50	636.86	636.19	635.49	
	ZW	639.43	639.17	638.64	638.08	637.47	636.81	636.12	635.40	
	CW	639.43	639.12	638.50	637.88	637.26	636.64	636.02	635.40	
LEFT GIRDER	SW	0.03	0.04	0.05	0.05	0.05	0.04	0.02	0.00	
	DL1	0.08	0.10	0.12	0.14	0.13	0.10	0.05	0.00	
	DL2	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.00	
	C	0.00	0.06	0.15	0.20	0.21	0.17	0.10	0.00	
2	FG	641.04	640.76	640.19	639.61	639.01	638.40	637.78	637.14	
	TES	640.12	639.79	639.25	638.68	638.07	637.43	636.76	636.06	
	ZW	640.00	639.75	639.22	638.65	638.04	637.39	636.70	635.97	
	CW	640.00	639.69	639.07	638.45	637.83	637.21	636.59	635.97	
LEFT GIRDER	SW	0.03	0.04	0.05	0.05	0.05	0.04	0.02	0.00	
	DL1	0.08	0.10	0.13	0.14	0.13	0.10	0.06	0.00	
	DL2	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.00	
	C	0.00	0.06	0.15	0.20	0.21	0.18	0.10	0.00	
3	FG	641.61	641.33	640.76	640.18	639.58	638.97	638.35	637.71	
	TES	640.69	640.36	639.83	639.26	638.65	638.01	637.33	636.63	
	ZW	640.57	640.32	639.79	639.23	638.62	637.96	637.27	636.54	
	CW	640.57	640.26	639.64	639.02	638.40	637.78	637.16	636.54	
RIGHT GIRDER	SW	0.03	0.04	0.05	0.06	0.05	0.04	0.02	0.00	
	DL1	0.08	0.10	0.13	0.14	0.13	0.11	0.06	0.00	
	DL2	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.00	
	C	0.00	0.06	0.16	0.21	0.22	0.18	0.11	0.00	
4	FG	642.18	641.90	641.33	640.75	640.15	639.54	638.92	638.28	
	TES	641.26	640.94	640.40	639.83	639.22	638.58	637.90	637.20	
	ZW	641.14	640.89	640.37	639.80	639.19	638.54	637.84	637.11	
	CW	641.14	640.83	640.21	639.59	638.97	638.35	637.73	637.11	
RIGHT GIRDER	SW	0.03	0.04	0.05	0.06	0.05	0.04	0.02	0.00	
	DL1	0.08	0.10	0.14	0.15	0.14	0.11	0.06	0.00	
	DL2	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.00	
	C	0.00	0.07	0.16	0.22	0.22	0.19	0.11	0.00	
BLOCKING HEIGHTS										
5	BLK	7.02								3.00
6		7.44								3.42
7		8.24								4.22
8		8.66								4.64



HORIZONTAL LOCATION KEY
LOOKING UPSTATION

LEGEND:
FOR LEGEND SEE CAMBER DIAGRAM UNIT 2
NOTES:
FOR NOTES SEE CAMBER DIAGRAM UNIT 2

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-658			
DRAWN BY		ZMG	PLANS CK'D. MAD
CAMBER DATA: FIELD SECTION #17 & #18			SHEET 50 OF 50