

DESIGN DATA

LIVE LOAD

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.16
OPERATING RATING FACTOR: RF = 1.50
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

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

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY:
SUPERSTRUCTURE (HPC) $f'_c = 4,000$ PSI
SUBSTRUCTURE $f'_c = 4,000$ PSI
STEEL PILING $F_y = 50,000$ PSI
BAR STEEL REINFORCEMENT $F_y = 60,000$ PSI
STAINLESS STEEL BAR REINFORCEMENT $F_y = 60,000$ PSI
STRUCTURAL STEEL
ASTM A709 GRADE HPS 50W $F_y = 50,000$ PSI
ASTM A709 GRADE 50 $F_y = 50,000$ PSI

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. TYPICAL SECTION
3. GENERAL NOTES
4. PROFILE GRADE LINES AND QUANTITIES
5. SUBSURFACE EXPLORATION (1 OF 2)
6. SUBSURFACE EXPLORATION (2 OF 2)
7. CONSTRUCTION STAGING (1 OF 3)
8. CONSTRUCTION STAGING (2 OF 3)
9. CONSTRUCTION STAGING (3 OF 3)
10. WEST ABUTMENT PLAN AND ELEVATION
11. WEST ABUTMENT DETAILS (1 OF 3)
12. WEST ABUTMENT DETAILS (2 OF 3)
13. WEST ABUTMENT DETAILS (3 OF 3)
14. EAST ABUTMENT PLAN AND ELEVATION
15. EAST ABUTMENT DETAILS (1 OF 3)
16. EAST ABUTMENT DETAILS (2 OF 3)
17. EAST ABUTMENT DETAILS (3 OF 3)
18. PIER 1 (1 OF 4)
19. PIER 1 (2 OF 4)
20. PIER 1 (3 OF 4)
21. PIER 1 (4 OF 4)
22. PIER 2 (1 OF 4)
23. PIER 2 (2 OF 4)
24. PIER 2 (3 OF 4)
25. PIER 2 (4 OF 4)
26. BEARING LAYOUT
27. BEARING DETAILS
28. JACKING PROVISIONS
29. FRAMING PLAN
30. GIRDER PLAN AND ELEVATION (1 OF 2)
31. GIRDER PLAN AND ELEVATION (2 OF 2)
32. GIRDER SECTION
33. ABUTMENT DIAPHRAGM
34. PIER DIAPHRAGM
35. INTERMEDIATE DIAPHRAGM
36. MISCELLANEOUS DIAPHRAGM DETAILS
37. INTERMEDIATE K-FRAMES AND STRUTS
38. LATERAL BRACING DETAILS
39. FIELD SPlice DETAILS
40. MISCELLANEOUS GIRDER DETAILS
41. ACCESS HATCH DETAILS
42. CAMBER DIAGRAM & DECK ELEVATIONS (1 OF 3)
43. CAMBER DIAGRAM & DECK ELEVATIONS (2 OF 3)
44. CAMBER DIAGRAM & DECK ELEVATIONS (3 OF 3)
45. SUPERSTRUCTURE REINFORCEMENT (1 OF 2)
46. SUPERSTRUCTURE REINFORCEMENT (2 OF 2)
47. SUPERSTRUCTURE CROSS SECTION
48. EXPANSION JOINT (1 OF 2)
49. EXPANSION JOINT (2 OF 2)
50. STRUCTURAL APPROACH SLAB
51. STRUCTURAL APPROACH SLAB DETAILS
52. SINGLE SLOPE PARAPET 42SS MODIFIED
53. SINGLE SLOPE PARAPET 32SS MODIFIED
54. LIGHT SUPPORT DETAILS (1 OF 2)
55. LIGHT SUPPORT DETAILS (2 OF 2)
56. AESTHETIC DETAILS

LEGEND

INDICATES LANE LOCATION
AND DIRECTION OF TRAVEL

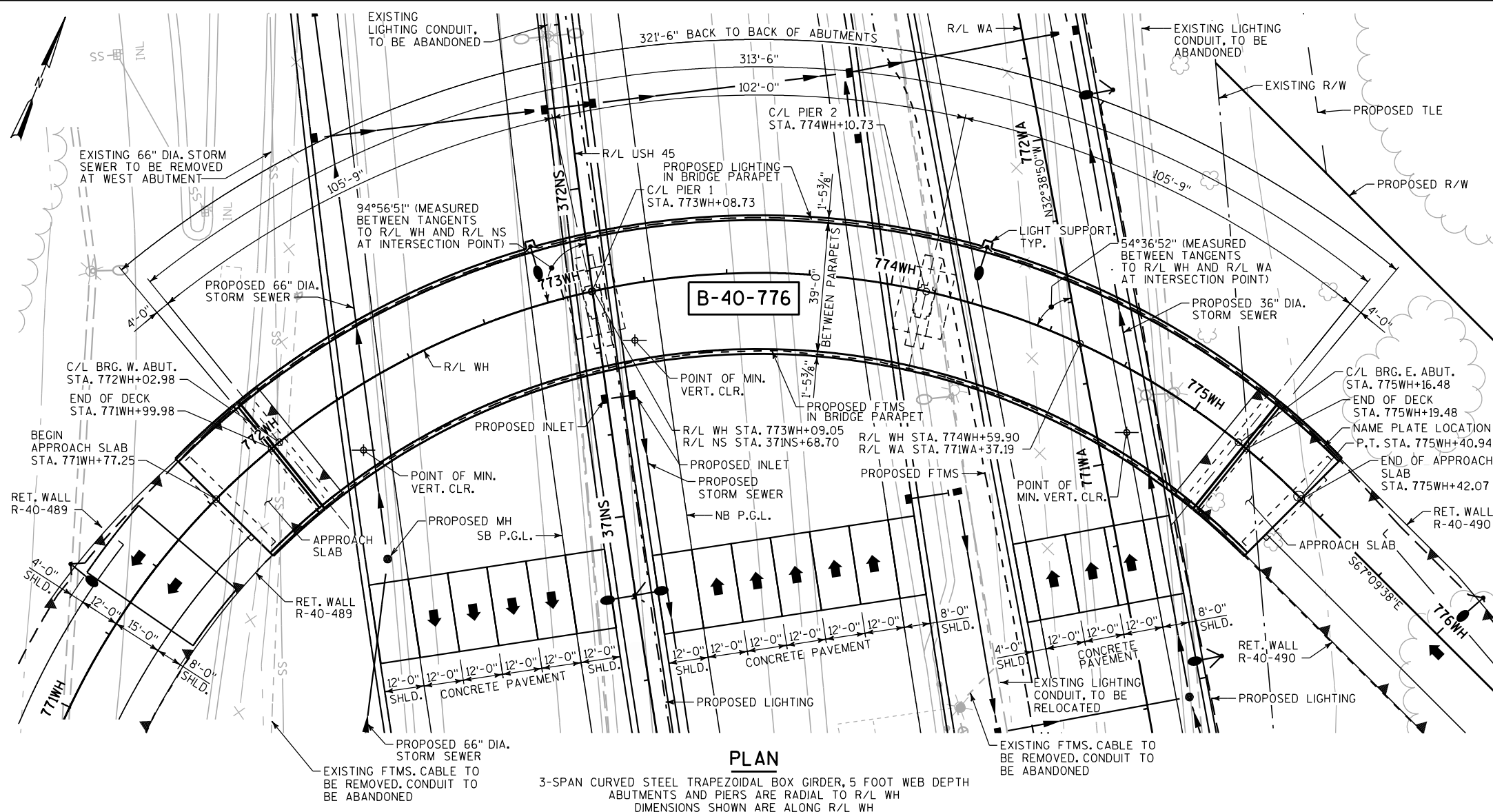
FIX FIXED BEARING

GL GUIDED (LONGITUDINAL) BEARING

STRUCTURES DESIGN CONTACTS

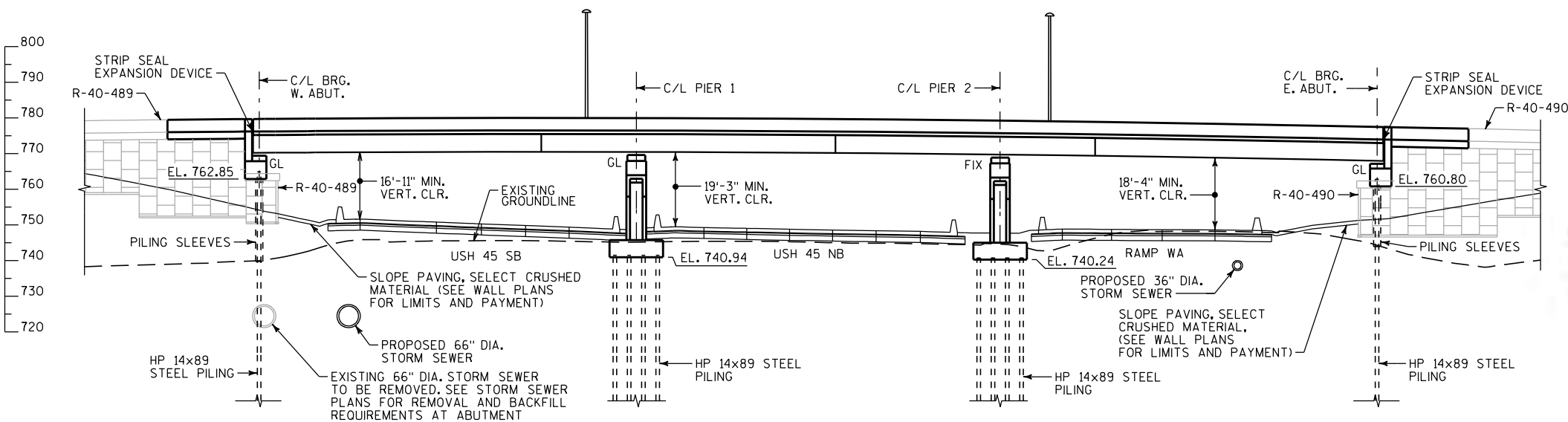
BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (262) 548-8703

NO.	DATE	REVISION	BY
			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i>		DATE 7/10/13	
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-40-776			
WATERTOWN PLANK ROAD RAMP WH OVER USH 45			
COUNTY	MILWAUKEE	TOWN/CITY/VILLAGE	WAUWATOSA
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	CNK	DESIGN CK'D.	BKS
DRAWN BY	GLM	PLANS CK'D.	BKS
GENERAL PLAN AND ELEVATION			SHEET 1 OF 56



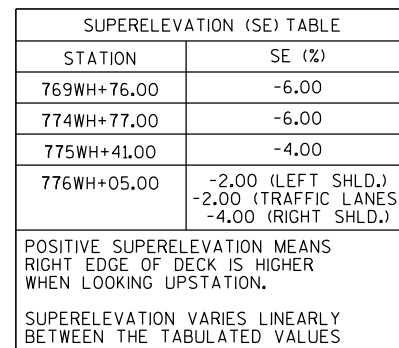
PLAN

3-SPAN CURVED STEEL TRAPEZOIDAL BOX GIRDER, 5 FOOT WEB DEPTH
ABUTMENTS AND PIERS ARE RADIAL TO R/L WH
DIMENSIONS SHOWN ARE ALONG R/L WH



ELEVATION

ALONG R/L WH
(LOOKING NORTH)



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		GLM	PLANS CK'D. BKS
TYPICAL SECTION		SHEET 2 OF 56	

GENERAL

- G.1. DRAWINGS SHALL NOT BE SCALED.
- G.2. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.
- G.3. COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).
- G.4. GIRDERS AND OTHER ELEMENTS OF THE STRUCTURE ARE REFERRED TO AS 'LEFT' AND 'RIGHT'. THESE DIRECTIONS ARE WITH RESPECT TO THE REFERENCE LINE WHEN LOOKING UP STATION.
- G.5. TRANSVERSE DIMENSIONS ARE RADIAL TO THE REFERENCE LINE UNLESS OTHERWISE NOTED.
- G.6. 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 HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.
- UTILITY INFORMATION IS SHOWN MORE CLEARLY ELSEWHERE WITHIN THIS PLAN SET AND WITHIN THE COMPLETE CONTRACT DOCUMENT PACKAGE - ENSURE THAT ALL SOURCES OF UTILITY INFORMATION ARE PROPERLY CONSIDERED.
- G.7. ABUTMENT CAP CONSTRUCTION AND ABUTMENT PILE DRIVING MUST BE COORDINATED WITH THE CONSTRUCTION OF RETAINING WALLS R-40-489 AND R-40-490.
- G.8. FOR DETAILS OF BRIDGE STAGED CONSTRUCTION, REFER TO CONSTRUCTION STAGING SHEETS AND ROADWAY TRAFFIC STAGING PLANS FOR MORE DETAILS.

EXCAVATION AND BACKFILL

- EB.1. THE EXISTING GROUND LINE SHALL BE THE UPPER LIMIT OF "EXCAVATION FOR STRUCTURES, BRIDGES B-40-776".
- EB.2. AT ABUTMENTS, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW BRIDGE OR RETAINING WALL REINFORCED ZONE SHALL BE BACKFILLED AS SHOWN ON THE ROADWAY PLANS FOR RAMP WH.

DESIGN

- D.1. DESIGN SPECIFICATION: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012
- D.2. LOAD MODIFIERS (AASHTO LRFD 1.3)
DUCTILITY: 1.00
REDUNDANCY: 1.05 FOR STEEL BOX GIRDERS AND DIAPHRAGMS
1.00 ALL OTHER ELEMENTS
OPERATIONAL IMPORTANCE: 1.00
- D.3. TEMPERATURE CHANGE USED FOR DETERMINING SUBSTRUCTURE FORCES = 90°F.
- D.4. ABSOLUTE TEMPERATURE RANGE FOR DETERMINING BEARING AND EXPANSION JOINT MOVEMENTS = -30°F TO +120°F.
- D.5. DESIGN ASSUMED 195 LB/FT ON EACH GIRDER FOR STAY-IN-PLACE METAL FORMS, INCLUDING CONCRETE WITHIN FORM FLUTES.
- D.6. DESIGN ASSUMED 10 PSF FOR TEMPORARY FORMWORK IN ADDITION TO STAY-IN-PLACE FORMS.
- D.7. LIVE LOAD DEFLECTION LIMIT = SPAN/800 (HL93)
- D.8. LOAD RATINGS REPORTED ON THE GENERAL PLAN AND ELEVATION SHEET INCLUDE THE FOLLOWING SYSTEM FACTORS:
FLEXURE: 0.85
SHEAR: 1.00

STRUCTURAL STEEL

- SS.1. STEEL GRADE FOR WEBS AND FLANGES OF GIRDERS AND DIAPHRAGMS, INCLUDING SPLICE PLATES AND ALL PLATES WELDED TO GIRDER WEBS, SHALL BE ASTM A709, HPS GRADE 50WF2.
- SS.2. STEEL GRADE FOR K-FRAMES, STRUTS, LATERAL BRACING AND JACKING PADS SHALL BE ASTM A709, GRADE 50.
- SS.3. STEEL GRADE FOR THE MASONRY PLATE, SOLE PLATE, AND BEVELED TOP PLATE FOR THE BEARING ASSEMBLIES SHALL BE ASTM A709, GRADE 50W, FOR STEEL GRADE OF OTHER BEARING COMPONENTS, SEE SPECIAL PROVISIONS FOR BEARINGS.
- SS.4. ALL STRUCTURAL STEEL PLATE FOR BOX GIRDER FLANGES AND WEBS IN TENSION ZONES AS SHOWN ON THE PLANS, ALL SPLICE PLATES IN TENSION ZONES, ALL TRANSVERSE STIFFENERS AND CONNECTION PLATES, AND ALL INTERNAL AND EXTERNAL DIAPHRAGM PLATES SHALL BE CLASSIFIED AS FRACTURE CRITICAL MEMBERS (FCM). ALL WELDS FOR THESE ELEMENTS SHALL BE CONSIDERED FRACTURE CRITICAL WELDS.
- SS.5. CHARPY V-NOTCH TOUGHNESS REQUIREMENTS FOR ALL STEEL SHALL CONFORM TO THE REQUIREMENTS FOR ZONE 2.
- SS.6. FIELD WELDING ON HIGH PERFORMANCE STEEL (HPS) PLATES IN TENSION IS NOT PERMITTED, EXCEPT FOR FIELD WELDED SHEAR CONNECTORS. THE CONTRACTOR WILL NEED TO ESTABLISH A METHOD OF ATTACHING TEMPORARY FORMS WITHOUT WELDING.
- SS.7. ALL BOLTS SHALL BE ASTM A325 TYPE 1. BOLT DIAMETERS SHALL BE AS NOTED FOR EACH CONNECTION. ALL HOLES SHALL BE STANDARD DIAMETER - NO OVERSIZED HOLES. ALL CONNECTIONS SHALL BE FABRICATED AND ASSEMBLED AS SLIP-CRITICAL CONNECTIONS. DESIGN ASSUMED A CLASS B SURFACE.
- SS.8. PAINT ALL STRUCTURAL STEEL, INCLUDING SURFACES AND BRACING MEMBERS ON THE INSIDE OF THE BOX GIRDERS. FINISH COAT FOR EXTERIOR SURFACES SHALL HAVE A COLOR TO MATCH SHERWIN WILLIAMS COLOR "SW6523". FINISH COAT FOR INTERIOR SURFACES SHALL BE WHITE, FEDERAL COLOR #27925.
- SS.9. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING A CONSTANT 3" HAUNCH HEIGHT, MEASURED FROM THE UNDERSIDE OF THE TOP FLANGE TO THE UNDERSIDE OF THE DECK (TOP OF STAY-IN-PLACE METAL FORMS). ANY ADDITIONAL QUANTITIES REQUIRED AS A RESULT OF VARIATION IN THE HAUNCH HEIGHT ARE ASSUMED TO BE INCIDENTAL TO OTHER PAY ITEMS AND WILL NOT BE PAID FOR SEPARATELY. THIS INCLUDES ADDITIONAL CONCRETE IN THE HAUNCH, ADDITIONAL OR MORE COMPLICATED FORM WORK, EXTRA SHEAR STUD LENGTH AND ANY REQUIRED REINFORCEMENT IN THE HAUNCH.
- SS.10. ALL PLAN DIMENSIONS ARE BASED ON THE FINAL DEFLECTED SHAPE.

REINFORCING STEEL

- RS.1. ALL REINFORCING BARS ARE ENGLISH DESIGNATION AND THE FIRST DIGIT OF A 3-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A 4-DIGIT BAR MARK SIGNIFY THE BAR SIZE.
- RS.2. BAR STEEL REINFORCEMENT WILL BE PLACED WITH 2" OF CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.
- RS.3. FOR BARS NOTED IN THE BILL OF BAR TABLES AS STAINLESS STEEL PROVIDE STAINLESS STEEL REINFORCEMENT PER THE SPECIAL PROVISION "BAR STEEL REINFORCEMENT STAINLESS BRIDGES".

CONCRETE

- C.1. THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH DEPTH OF 3" MEASURED FROM TOP OF WEB TO UNDERSIDE OF SLAB (EXCLUDING THE VOLUME TAKEN UP BY THE TOP FLANGE) WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.
- C.2. THE PARAPET CONCRETE QUANTITY FOR PARAPET ON THE DECK, ABUTMENT BACKWALL AND APPROACH SLAB SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".
- C.3. THE CONCRETE QUANTITY FOR APPROACH SLAB FOOTING SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES". THE REMAINING CONCRETE QUANTITY FOR THE APPROACH SLAB SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".
- C.4. THE CONCRETE ABOVE THE UPPER ABUTMENT BACKWALL CONSTRUCTION JOINT SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES". THE REMAINING CONCRETE FOR THE ABUTMENT SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES".
- C.5. THE CONCRETE QUANTITY FOR THE PIERS SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES".
- C.6. BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

FOUNDATION DATA

- FD.1. ABUTMENTS AND PIERS TO BE SUPPORTED ON HP 14x89 STEEL PILING. REQUIRED DRIVING RESISTANCE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD:
- | | |
|---------------------|-------------------|
| WEST ABUTMENT _____ | 245 TONS PER PILE |
| PIER 1 _____ | 255 TONS PER PILE |
| PIER 2 _____ | 255 TONS PER PILE |
| EAST ABUTMENT _____ | 240 TONS PER PILE |
- FD.2. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.65 USING THE PDA/CAPWAP METHOD TO DETERMINE DRIVEN PILE CAPACITY.
- FD.3. ESTIMATED PILE LENGTHS:
- | | |
|---------------------|---------|
| WEST ABUTMENT _____ | 85 FEET |
| PIER 1 _____ | 70 FEET |
| PIER 2 _____ | 75 FEET |
| EAST ABUTMENT _____ | 85 FEET |
- FD.4. MINIMUM PILE TIP ELEVATIONS FOR UPLIFT RESISTANCE
- | | |
|--------------|--------|
| PIER 1 _____ | 690.0' |
| PIER 2 _____ | 686.0' |
- FD.5. PILE SPLICES SHALL BE MADE BY A CERTIFIED WELDER.
- FD.6. PILE POINTS ARE REQUIRED ON THE WEST ABUTMENT PILE FOR DRIVING PILE THRU LOW STRENGTH BACKFILL MATERIAL FROM THE REMOVAL OF THE EXISTING STORM SEWER. SEE STORM SEWER PLANS FOR DETAILS OF THE BACKFILL MATERIAL.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
		DRAWN BY	TEK PLANS CK'D. BKS
GENERAL NOTES		SHEET 3 OF 56	

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	WEST APPR. SLAB	WEST ABUTMENT	PIER 1	PIER 2	EAST ABUTMENT	EAST APPR. SLAB	SUPER	TOTAL
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-776	LS	--	--	--	--	--	--	--	1
502.0100	CONCRETE MASONRY BRIDGES	CY	9.5	71.0	121.0	121.0	70.0	9.5	--	402
502.3100	EXPANSION DEVICE B-40-776	LS	--	--	--	--	--	--	1	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	133	--	--	--	--	132	1,655	1,920
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	--	--	5,940	5,940	--	--	--	11,880
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	870	5,340	16,360	16,360	5,330	870	--	45,130
506.0605	STRUCTURAL STEEL HS	LB	--	--	--	--	--	--	541,100	541,100
506.3020	WELDED STUD SHEAR CONNECTORS 7/8X7-INCH	EACH	--	--	--	--	--	--	6,380	6,380
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	--	11	--	--	11	--	--	22
517.1010.S.0001	CONCRETE STAINING B-40-776	SF	245	300	1,000	1,000	300	245	5,850	8,940
550.0500	PILE POINTS	EACH	--	9	--	--	--	--	--	9
604.0400	SLOPE PAVING CONCRETE	SY	--	11	--	--	11	--	--	22
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	--	--	--	--	--	--	893	893
652.0405	CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH	LF	62	--	--	--	--	62	48	172
653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	--	--	--	--	--	--	2	2
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	--	--	--	--	--	--	4	4
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	48.0	2.5	--	--	2.5	48.0	536.0	637
SPV.0060.4100	ANCHOR ASSEMBLIES LIGHT POLE STRUCTURES SPECIAL	EACH	--	--	--	--	--	--	2	2
SPV.0060.4120	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	--	2	2	2	2	--	--	8
SPV.0060.4130	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	--	2	2	2	2	--	--	8
SPV.0060.4140	BEARINGS HIGH-LOAD MULTI-ROTATIONAL FIXED	EACH	--	--	--	--	--	--	2	2
SPV.0060.4150	BEARINGS HIGH-LOAD MULTI-ROTATIONAL GUIDED	EACH	--	--	--	--	--	--	6	6
SPV.0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	8,600	1,210	--	--	1,210	8,580	156,670	176,270
SPV.0090.4420	PILING SLEEVES	LF	--	207	--	--	136	--	--	343
SPV.0090.4440	PILING STEEL STATE-FURNISHED HP 14-INCH X 89 LB	LF	--	765	1,400	1,500	680	--	--	4,345
SPV.0105.4510	PAINTING POLYSILOXANE SYSTEM B-40-776	LS	--	--	--	--	--	--	1	1
	NON-BID ITEMS									
	BRIDGE SEAT PROTECTION	LS	--	--	--	--	--	--	--	1
	FILLER	SIZE	--	--	--	--	--	--	--	¾", 1", 1½", 2"
	EXPANDED POLYSTYRENE	SIZE	--	--	--	--	--	--	--	1"
	NAME PLATE	EACH	--	--	--	--	--	--	--	1
	SIZE 2 COARSE AGGREGATE	SY	--	--	--	--	--	--	--	--

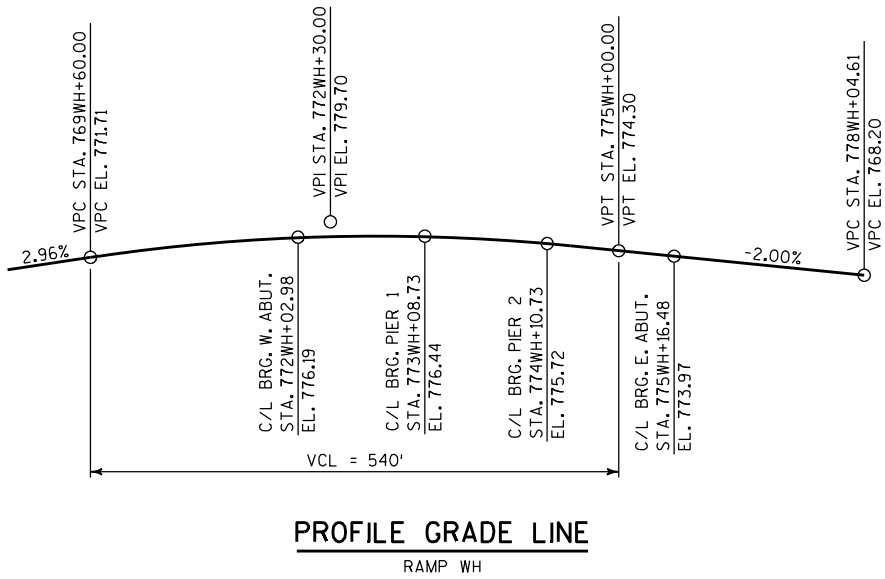
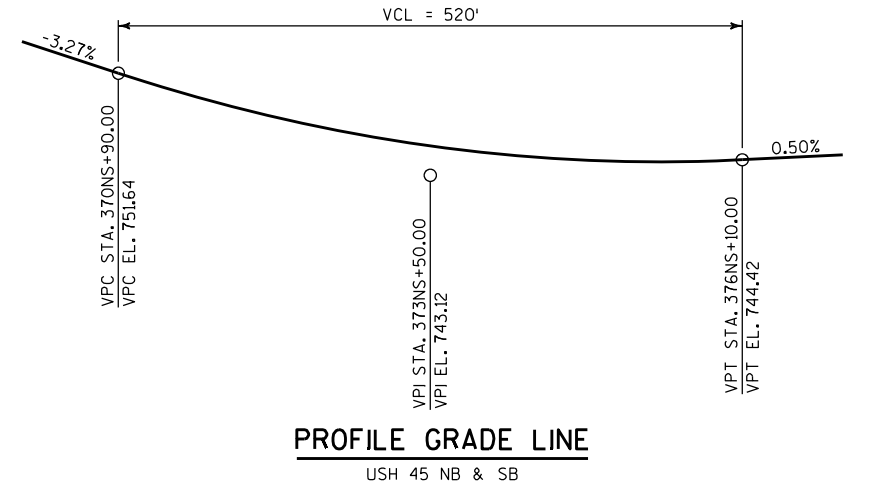
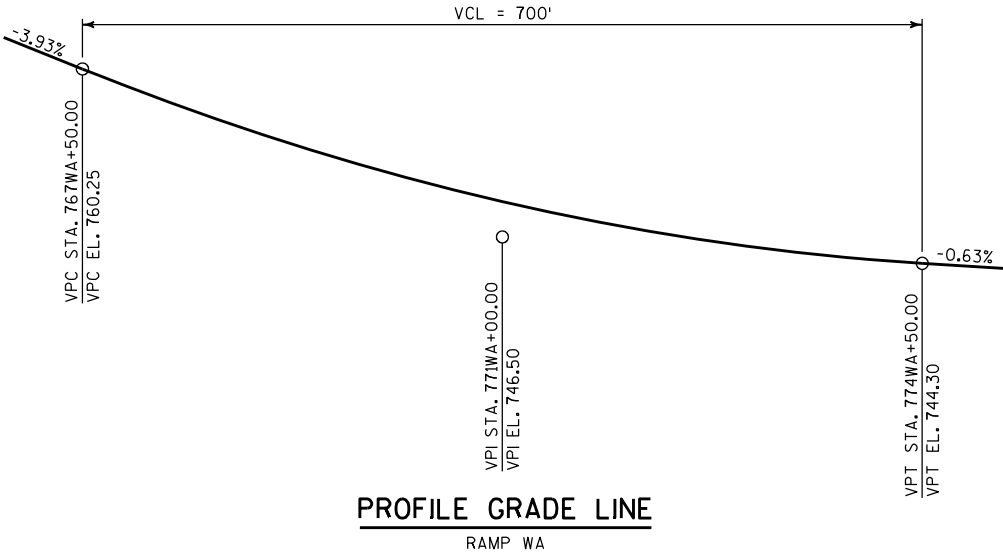
NOTE: ALL ITEMS CATEGORY 2000

HORIZONTAL CURVE DATA

R/L WH	R/L USH 45 (NS)
P.I. = 779WH+97.97	P.I. = 370NS+41.48
X = 570803.89	X = 571636.09
Y = 303311.78	Y = 302749.78
Δ = 155°58'53"	Δ = 7°49'18"
D = 24°48'12"	D = 0°57'03"
T = 1085.91'	T = 411.88'
L = 628.87'	L = 822.49'
R = 231.00'	R = 6025.00'
P.C. = 769WH+12.07	P.C. = 366NS+29.60
P.T. = 775WH+40.94	P.T. = 374NS+52.09

TRAFFIC DATA

USH 45 (AT RAMP WH)
A.A.D.T. = 179,700 (2035)
R.D.S. = 60 MPH
RAMP WH
A.A.D.T. = 12,200 (2035)
R.D.S. = 30 MPH
RAMP WA
A.A.D.T. = 3,700 (2035)
R.D.S. = 40 MPH



8

8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		GLM	PLANS CK'D. BKS
PROFILE GRADE LINES AND QUANTITIES		SHEET 4 OF 56	

NOTE

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

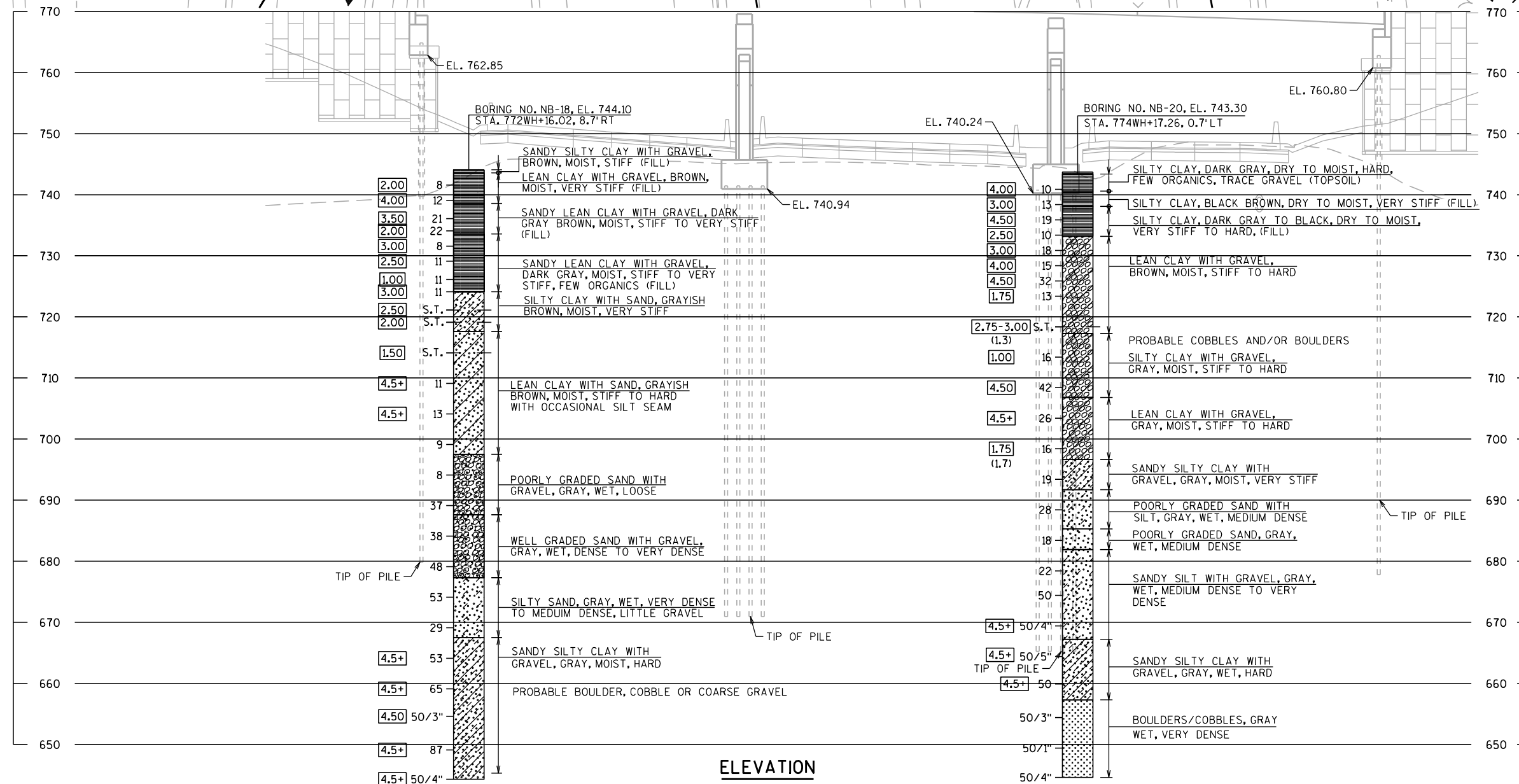
● DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
JULY 25, 2011 - BORING NB-18
JULY 26, 2011 - BORING NB-20

B-40-776

PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-72

ABBREVIATIONS

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

MATERIAL SYMBOLS

TOPSOIL / FILL 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			
STRUCTURE B-40-776			
DRAWN BY		GLM	PLANS CK'D. BKS
SUBSURFACE EXPLORATION (1 OF 2)			SHEET 5 OF 56

8

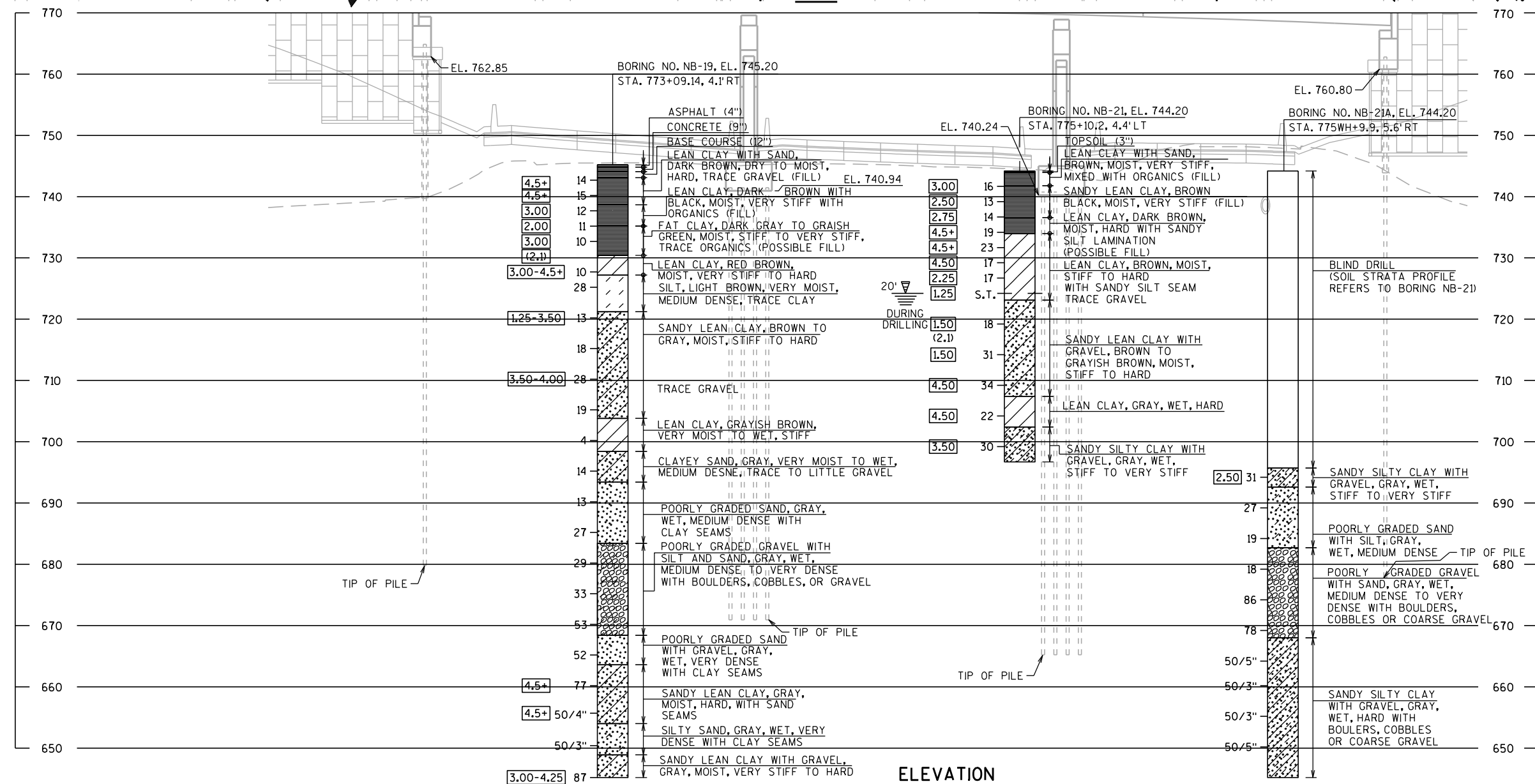
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NOTE

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DENOTES SOIL BORING LOCATION
SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
AUGUST 21, 2011 - BORING NB-19
JULY 21, 2011 - BORING NB-21
JULY 25, 2011 - BORING NB-21A



STATE PROJECT NUMBER

1060-33-72

ABBREVIATIONS

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

MATERIAL SYMBOLS

TOPSOIL / FILL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
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

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 CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS 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			
STRUCTURE B-40-776			
DRAWN BY		GLM	PLANS CK'D. BKS
SUBSURFACE EXPLORATION (2 OF 2)		SHEET 6 OF 56	

LEGEND



POTENTIAL CRANE LOCATION

- L1 CRANE LOCATION IDENTIFIER. FOR CLARITY, CRANES ARE SHOWN IN THE PLAN VIEW ONLY.
- 3 SEQUENCE NUMBER
- 1 FIELD SPLICE NUMBER

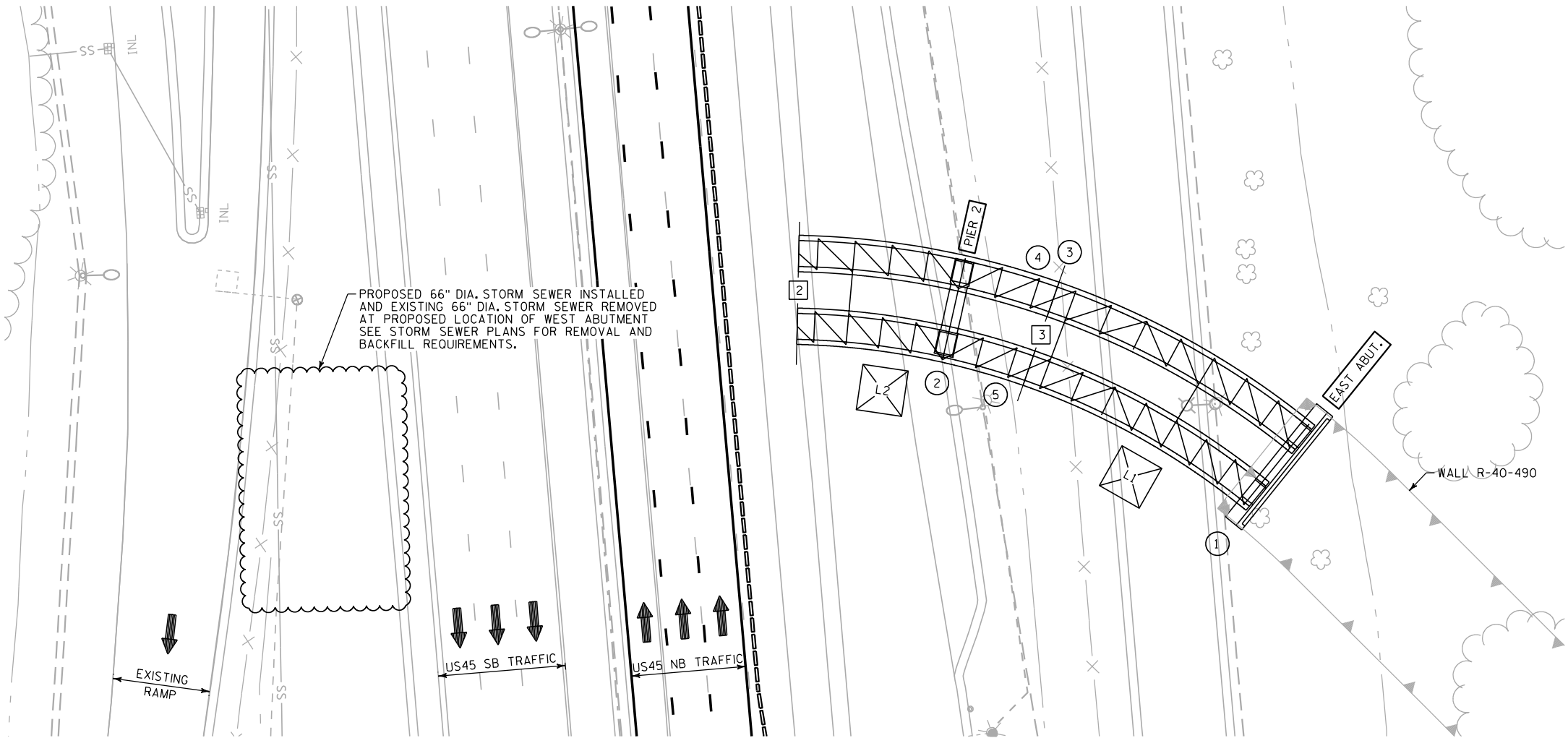
NOTES

- USE THIS DRAWING IN CONJUNCTION WITH THE NOTES AND SEQUENCE DESCRIPTIONS GIVEN ON THIS SHEET.
- THIS DRAWING APPLIES SPECIFICALLY TO SEQUENCE NUMBERS 1 THROUGH 5.
- FOR CLARITY, FIELD SPLICES ARE NOT SHOWN TRUE SIZE.
- FIELD SECTION WEIGHTS SHOWN ARE GIVEN FOR INFORMATION ONLY. VERIFY ALL STEEL WEIGHTS FROM APPROVED SHOP DRAWINGS. THE WEIGHT IS THE APPROXIMATE TOTAL WEIGHT FOR THE LEFT OR RIGHT GIRDER INCLUDING INTERNAL DIAPHRAGMS, STRUTS, K-FRAMES, AND BRACING. THE WEIGHT OF EXTERNAL DIAPHRAGMS IS NOT INCLUDED. VERIFY ALL STEEL WEIGHTS FROM APPROVED SHOP DRAWINGS ONLY.
- SPAN LENGTHS SHOWN ARE TAKEN ALONG THE REFERENCE LINE - ACTUAL FIELD SECTION LENGTHS WILL EXCEED THESE VALUES.
- FOR DISPOSITION OF UTILITIES, SEE GENERAL PLAN AND ELEVATION AND UTILITY PLANS.

SEQUENCE DESCRIPTIONS

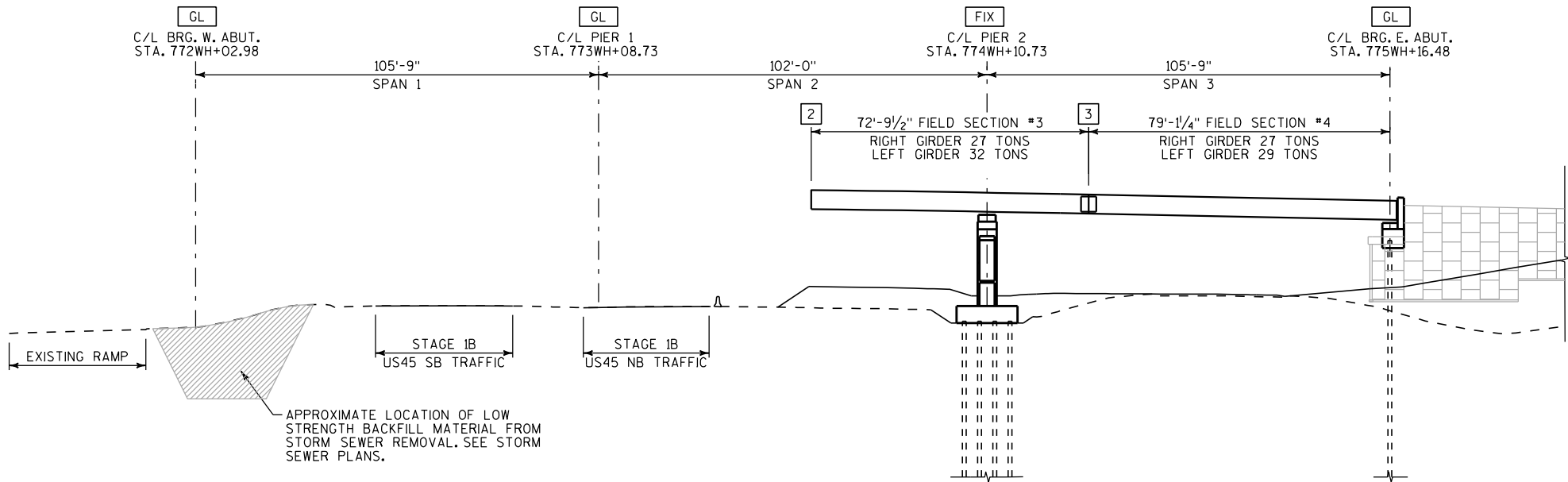
STAGE 1A/1B

- EAST ABUTMENT.
- PIER 2.
- BLOCK FIELD SECTIONS 3 AND 4 FOR LEFT AND RIGHT GIRDER AND COMPLETE FIELD SPLICE NO. 3 ON THE GROUND.
- ERECT LEFT FIELD SECTIONS 3 AND 4.
- ERECT RIGHT FIELD SECTIONS 3 AND 4.



PLAN

CONSTRUCTION STAGE 1B SHOWN



ELEVATION

ALONG R/L WH
(LOOKING NORTH)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
CONSTRUCTION STAGING (1 OF 3)		SHEET 7 OF 56	

LEGEND



POTENTIAL CRANE LOCATION

- L1 CRANE LOCATION IDENTIFIER. FOR CLARITY, CRANES ARE SHOWN IN THE PLAN VIEW ONLY.
- 3 SEQUENCE NUMBER
- 1 FIELD SPLICE NUMBER

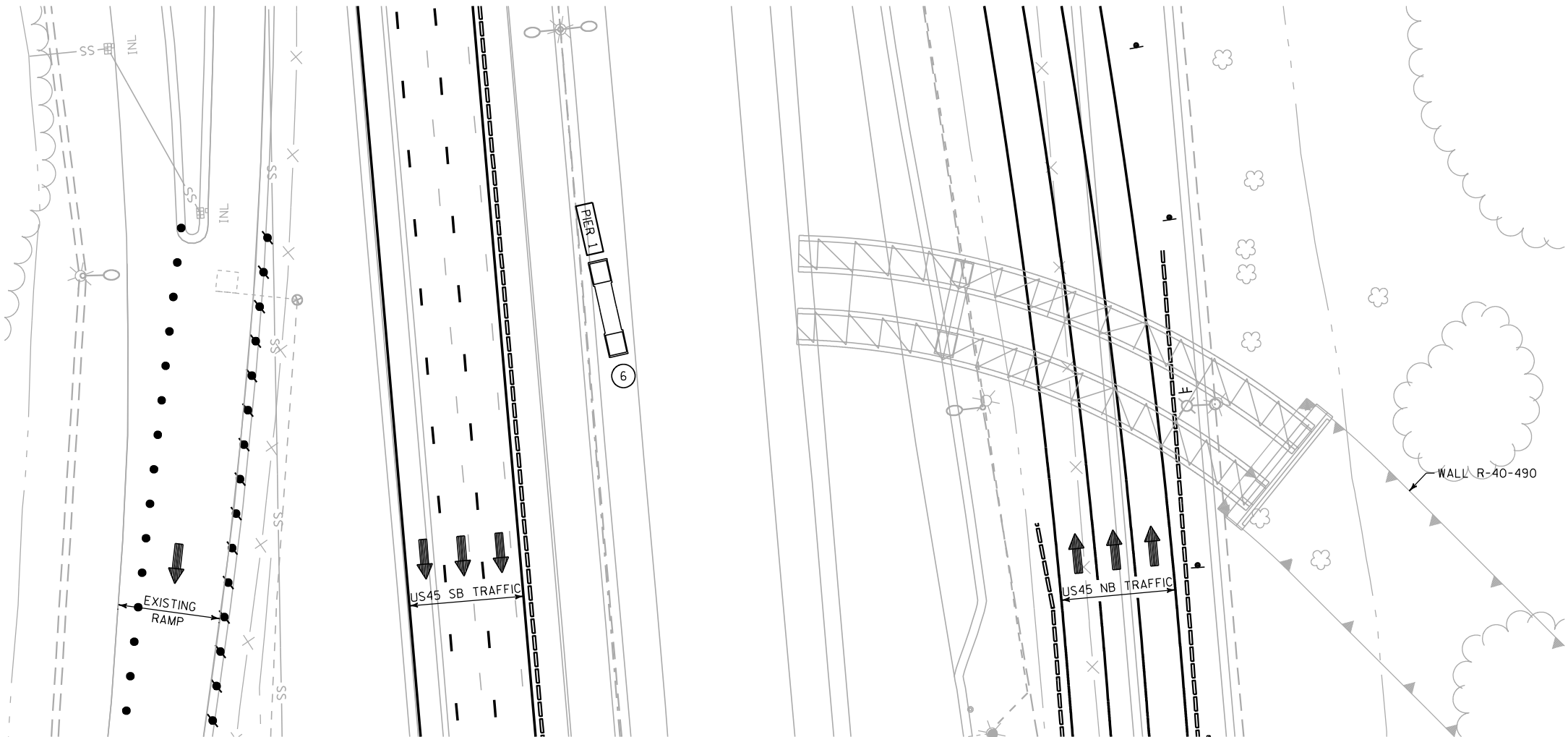
NOTES

1. USE THIS DRAWING IN CONJUNCTION WITH THE NOTES AND SEQUENCE DESCRIPTIONS GIVEN ON THIS SHEET.
2. THIS DRAWING APPLIES SPECIFICALLY TO SEQUENCE NUMBER 6.
3. FOR CLARITY, FIELD SPLICES ARE NOT SHOWN TRUE SIZE.
4. FIELD SECTION WEIGHTS SHOWN ARE GIVEN FOR INFORMATION ONLY. VERIFY ALL STEEL WEIGHTS FROM APPROVED SHOP DRAWINGS. THE WEIGHT IS THE APPROXIMATE TOTAL WEIGHT FOR THE LEFT OR RIGHT GIRDER INCLUDING INTERNAL DIAPHRAGMS, STRUTS, K-FRAMES, AND BRACING. THE WEIGHT OF EXTERNAL DIAPHRAGMS IS NOT INCLUDED. VERIFY ALL STEEL WEIGHTS FROM APPROVED SHOP DRAWINGS ONLY.
5. SPAN LENGTHS SHOWN ARE TAKEN ALONG THE REFERENCE LINE - ACTUAL FIELD SECTION LENGTHS WILL EXCEED THESE VALUES.
6. FOR DISPOSITION OF UTILITIES, SEE GENERAL PLAN AND ELEVATION AND UTILITY PLANS.

SEQUENCE DESCRIPTIONS

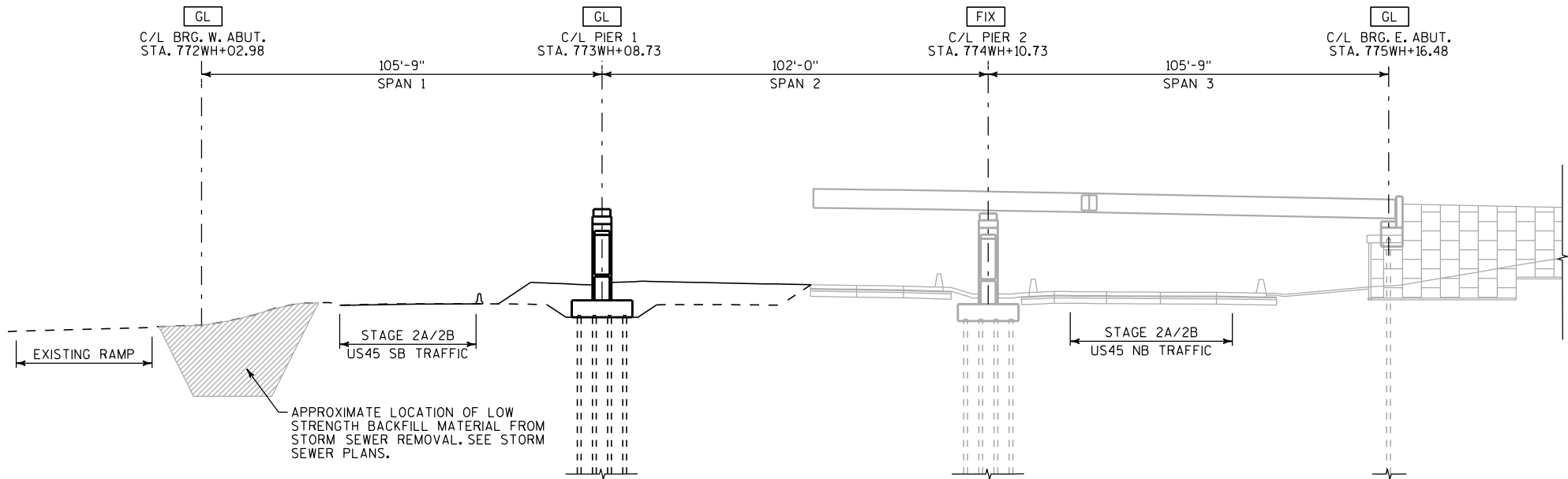
STAGE 2

6. PIER 1



PLAN

CONSTRUCTION STAGE 2A/2B SHOWN



ELEVATION

ALONG R/L WH
(LOOKING NORTH)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
CONSTRUCTION STAGING (2 OF 3)		SHEET 8 OF 56	

LEGEND



POTENTIAL CRANE LOCATION

L1 CRANE LOCATION IDENTIFIER. FOR CLARITY, CRANES ARE SHOWN IN THE PLAN VIEW ONLY.

3 SEQUENCE NUMBER

1 FIELD SPLICE NUMBER

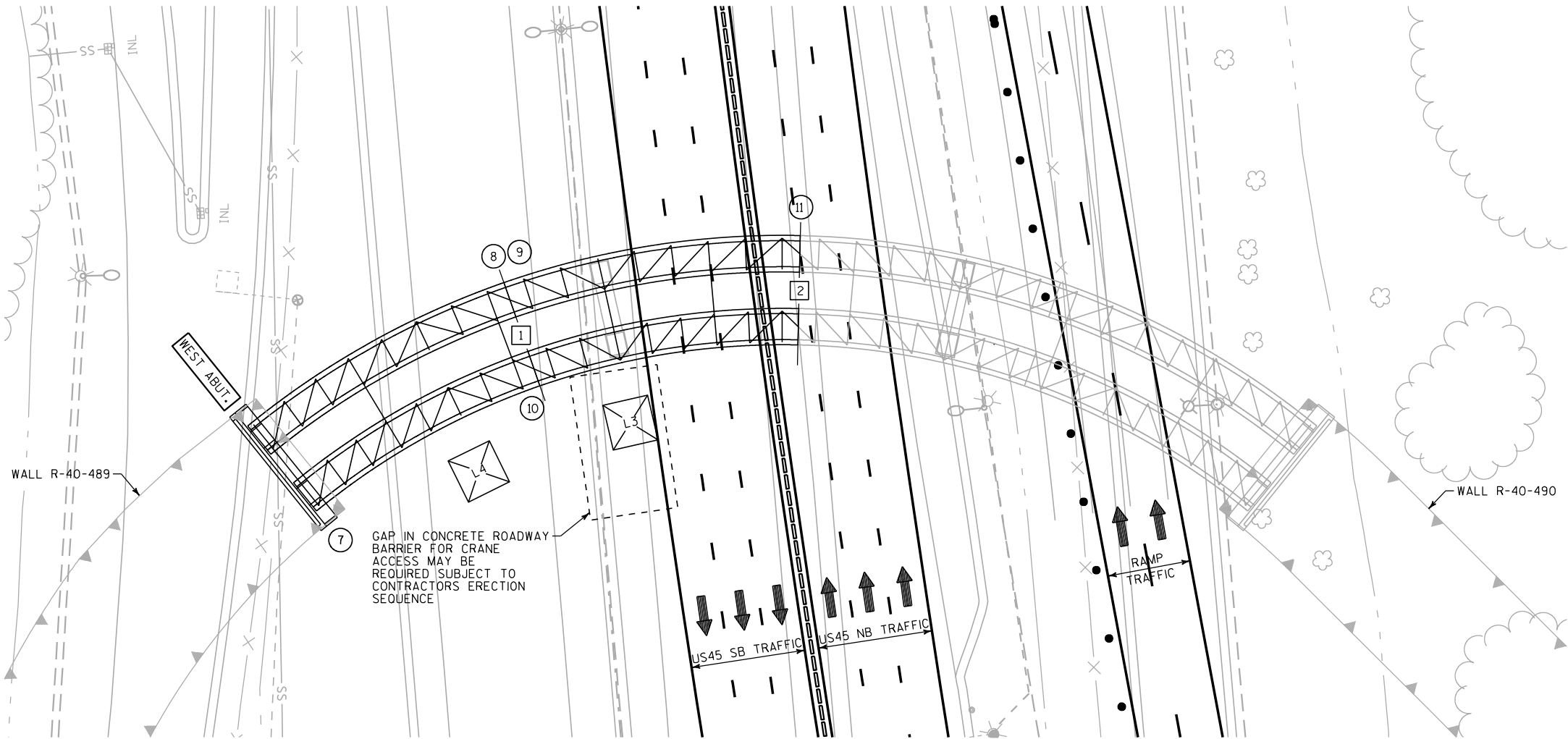
NOTES

1. USE THIS DRAWING IN CONJUNCTION WITH THE NOTES AND SEQUENCE DESCRIPTIONS GIVEN ON THIS SHEET.
2. THIS DRAWING APPLIES SPECIFICALLY TO SEQUENCE NUMBERS 7 THROUGH 12.
3. FOR CLARITY, FIELD SPLICES ARE NOT SHOWN TRUE SIZE.
4. FIELD SECTION WEIGHTS SHOWN ARE GIVEN FOR INFORMATION ONLY. VERIFY ALL STEEL WEIGHTS FROM APPROVED SHOP DRAWINGS. THE WEIGHT IS THE APPROXIMATE TOTAL WEIGHT FOR THE LEFT OR RIGHT GIRDER INCLUDING INTERNAL DIAPHRAGMS, STRUTS, K-FRAMES, AND BRACING. THE WEIGHT OF EXTERNAL DIAPHRAGMS IS NOT INCLUDED. VERIFY ALL STEEL WEIGHTS FROM APPROVED SHOP DRAWINGS ONLY.
5. SPAN LENGTHS SHOWN ARE TAKEN ALONG THE REFERENCE LINE - ACTUAL FIELD SECTION LENGTHS WILL EXCEED THESE VALUES.
6. FOR DISPOSITION OF UTILITIES, SEE GENERAL PLAN AND ELEVATION AND UTILITY PLANS.

SEQUENCE DESCRIPTIONS

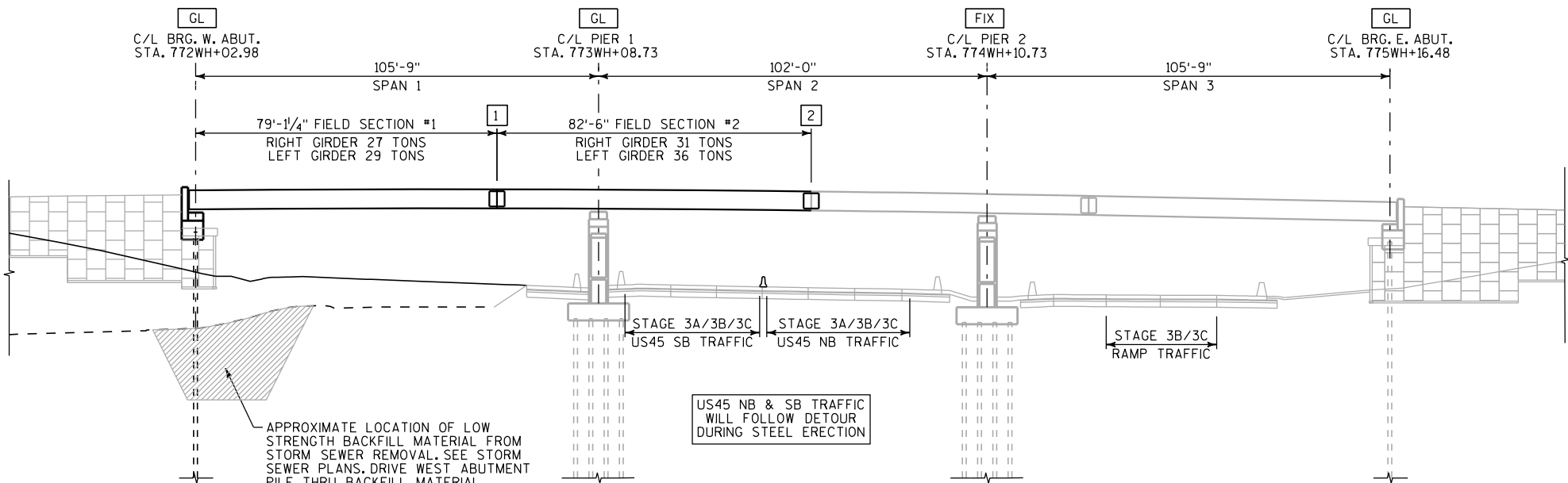
STAGE 3A/3B/3C

7. WEST ABUTMENT.
8. BLOCK FIELD SECTIONS 1 AND 2 FOR LEFT AND RIGHT GIRDERS AND COMPLETE FIELD SPLICE NO. 1 ON THE GROUND
9. ERECT LEFT FIELD SECTIONS 1 AND 2.
10. ERECT RIGHT FIELD SECTIONS 1 AND 2.
11. COMPLETE FIELD SPLICE NO. 2 IN THE AIR.
12. FORM AND PLACE CONCRETE DECK AND APPROACH SLABS.



PLAN

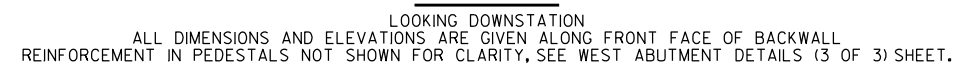
CONSTRUCTION STAGE 3A/3B/3C SHOWN



ELEVATION

ALONG R/L WH
(LOOKING NORTH)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
CONSTRUCTION STAGING (3 OF 3)		SHEET 9 OF 56	



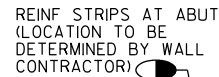
$\rightarrow IB$



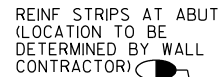
 DYNAMIC PILE LOAD TESTING

FOR DETAILS OF PARAPET ON BACKWALL, SEE SINGLE
SLOPE PARAPET 42SS MODIFIED SHEET AND SINGLE
SLOPE PARAPET 32SS MODIFIED SHEET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
		DRAWN BY	TEK
		PLANS CK'D.	BKS
WEST ABUTMENT PLAN AND ELEVATION		SHEET 10 OF 56	

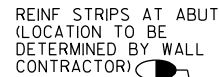


SEE SHEET 10 FOR LOCATION

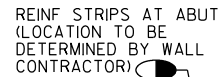


SEE SHEET 10 FOR LOCATION

1. PILING SLEEVES MUST BE USED AT LOCATIONS SHOWN ON THE PLANS. THE PILING SLEEVES SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "PILING SLEEVES," AND ARE INCLUDED UNDER BID ITEM "PILING SLEEVES."
2. PILING SLEEVES SHALL BE CONSTRUCTED AS STATED IN THE SPECIAL PROVISION. IF THE PILE SLEEVE MATERIAL IS CORRUGATED STEEL PIPE, THEN 24" DIA. PIPE SHALL BE USED.
3. COORDINATE SLEEVE LOCATIONS WITH RETAINING WALL R-40-489.
4. PILING SLEEVES SHALL BE PLACED FROM EXISTING GROUND AT APPROXIMATE ELEVATION 740.00 TO THE BOTTOM OF THE ABUTMENT.



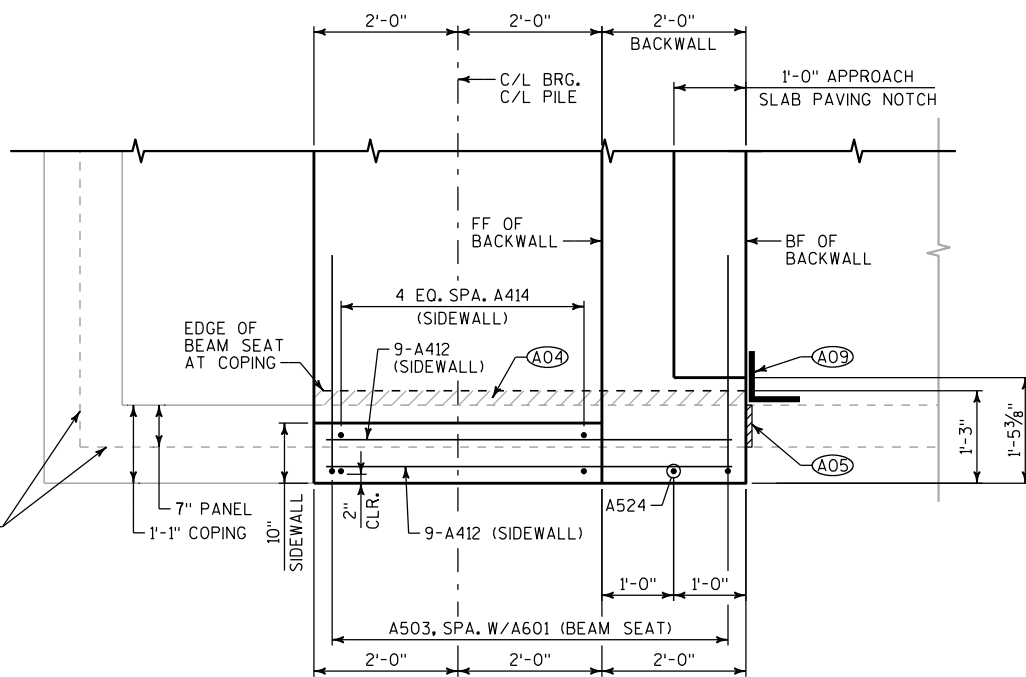
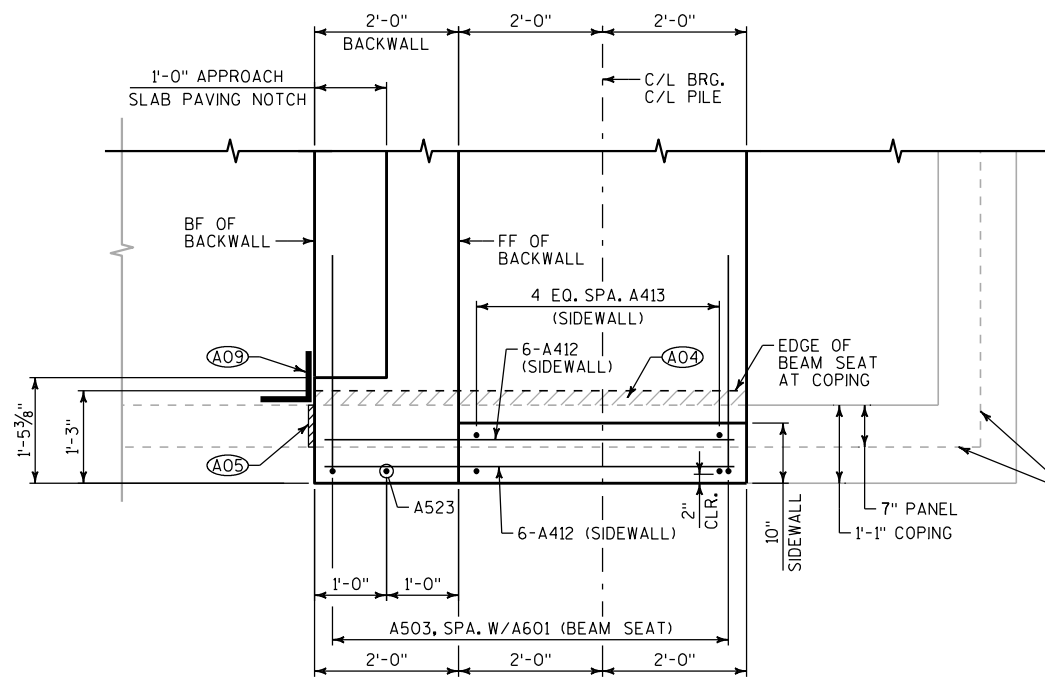
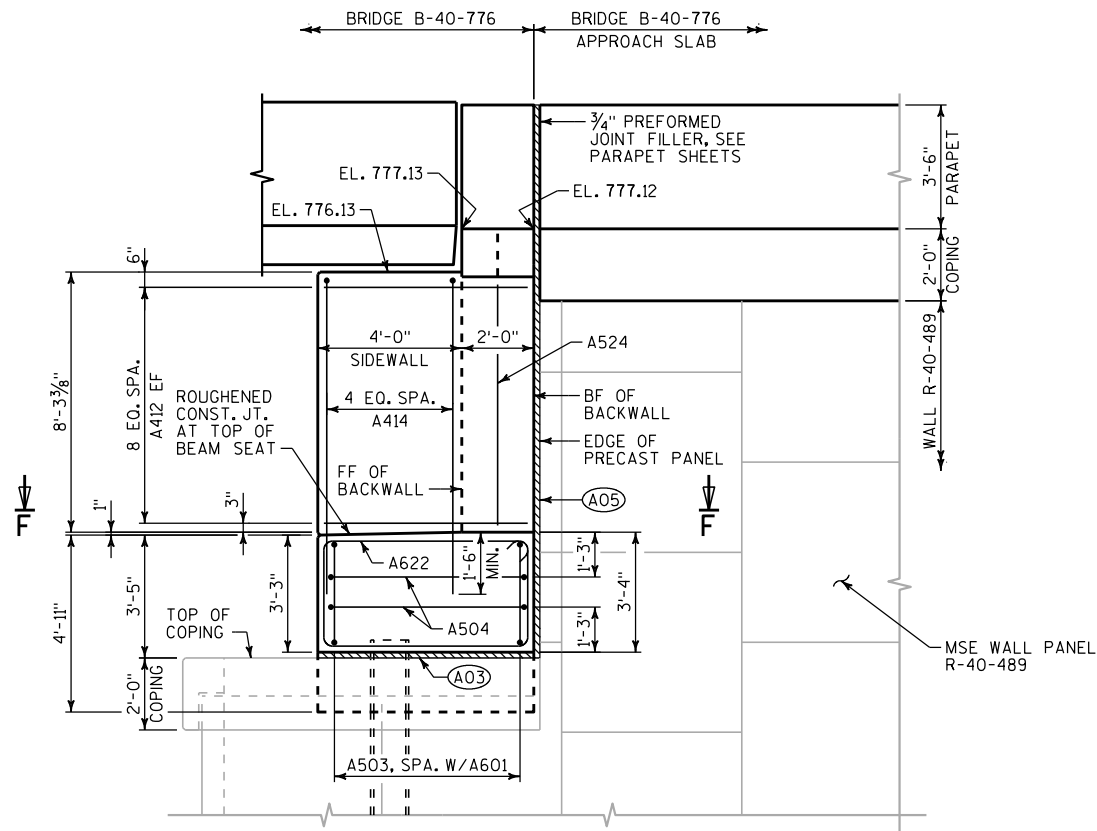
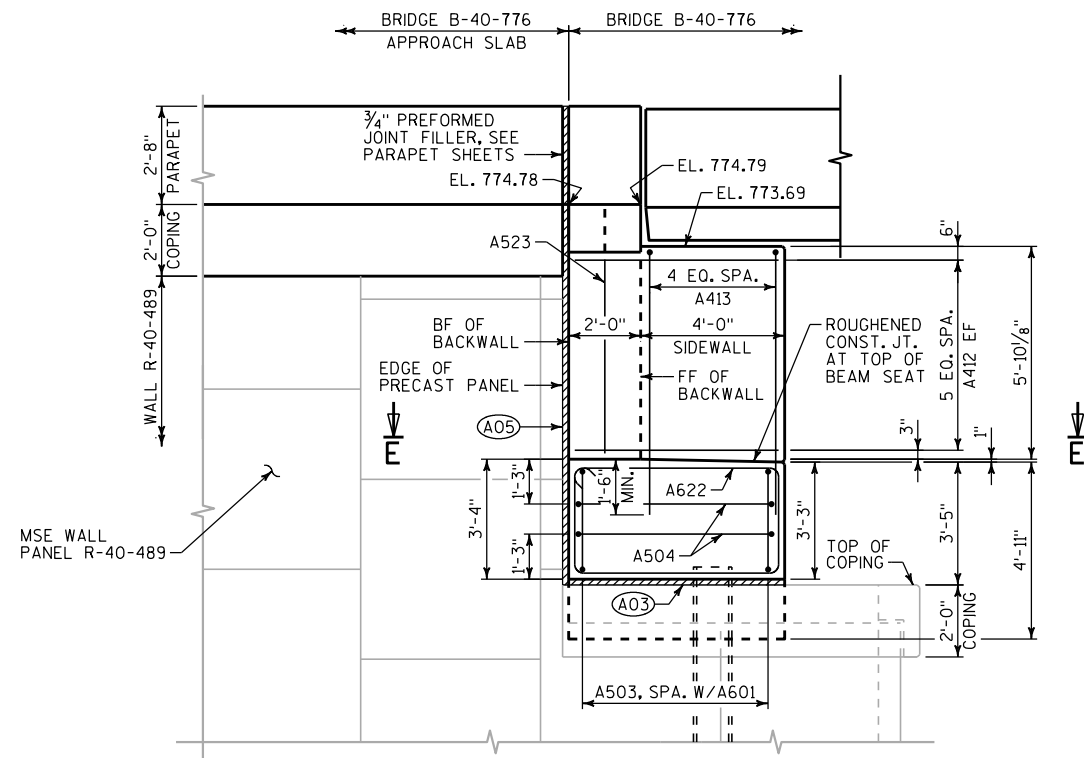
PILE SPLICE DETAIL



EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED
IN THE BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM
STRENGTH OF EYE BOLT AND LOOP INSERT IS 3500 LB.

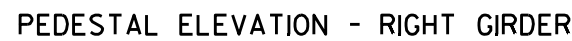
- (A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"x6"
- (A06) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- (A11) CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- REINFORCING STRIPS SHALL BE DESIGNED TO RESIST AN UNFACTORED SUPERSTRUCTURE LATERAL LINE LOAD OF 2.5K/LF OF ABUTMENT LENGTH. THE LINE LOAD IS A SUMMATION OF AASHTO LOADS BR, WS, WL, AND TU.
- SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
		DRAWN BY	CNK
		PLANS CK'D.	BKS
WEST ABUTMENT DETAILS (1 OF 3)		SHEET 11 OF 56	

**LEGEND**

- (A03) 2" PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- (A04) PREFORMED JOINT FILLER (2"± BASED ON A 7" MSE WALL PANEL THICKNESS) WITH NON-BITUMINOUS JOINT SEALER PLACED BETWEEN COPING/PRECAST PANEL AND EDGE OF BEAM SEAT. COLOR TO MATCH CONCRETE STAIN.
- (A05) ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACKFACE OF BACK WALL AND WALL R-40-489. COLOR TO MATCH CONCRETE STAIN.
- (A09) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL VERTICAL JOINT BETWEEN BF OF BACKWALL AND MSE WALL PRECAST PANEL (R-40-489). SEAL FROM BOTTOM OF ABUTMENT TO BOTTOM OF APPROACH SLAB (B-40-776).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		CKN	PLANS CK'D. BKS
WEST ABUTMENT DETAILS (2 OF 3)			SHEET 12 OF 56

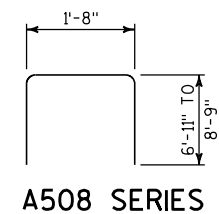


BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A601	X	13	41'-6"			BODY HORIZONTAL
A602	X	40	21'-2"	X		BODY STIRRUP
A503	X	14	5'-9"	X		BODY HORIZONTAL
A504	X	8	8'-9"	X		BODY HORIZONTAL
A505	X	18	41'-6"			BACKWALL HORIZONTAL
A508	X	43	17'-9"	X		BACKWALL VERTICAL
A412	X	30	5'-8"			SIDEWALL HORIZONTAL
A413	X	5	14'-4"	X		SIDEWALL VERTICAL
A414	X	5	19'-0"	X		SIDEWALL VERTICAL
A615	X	2	11'-1"			RIGHT PEDESTAL
A616	X	6	10'-7"	X		RIGHT PEDESTAL
A617	X	10	8'-8"	X		RIGHT PEDESTAL
A618	X	6	11'-1"	X		LEFT PEDESTAL
A619	X	6	13'-3"	X		LEFT PEDESTAL
A620	X	10	11'-4"	X		LEFT PEDESTAL
A622	X	4	17'-6"	X		BODY STIRRUP
A623	X	9	39'-0"			BODY HORIZONTAL
A524	X	1	5'-3"			BACKWALL VERTICAL
A525	X	1	7'-8"			BACKWALL VERTICAL

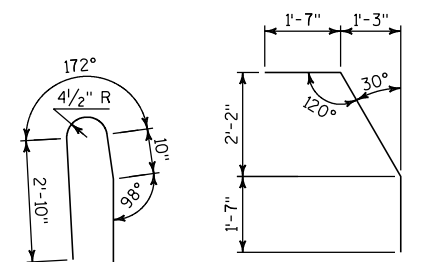
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A506		18	7'-10"			BACKWALL HORIZONTAL
A507		2	2'-2"	X		BACKWALL HORIZONTAL
A509		4	6'-9"	X		BACKWALL VERTICAL
A510		39	5'-9"	X		BACKWALL VERTICAL
A911		39	5'-5"	X		BACKWALL APPROACH TIE
A521		10	6'-10"	X		PARAPET TIE

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
A508	1 SERIES OF 43	15'-3" TO 18'-11"



BAR MARK	DIM 'A'	DIM 'B'
A503	1'-9"	2'-6"
A504	1'-9"	5'-6"
A507	8"	1'-1"
A509	2'-8"	1'-8"
A510	2'-8"	8"
A413	7'-0"	6"
A414	9'-4"	6"
A615	2'-11"	5'-7"
A616	2'-7"	5'-9"
A617	2'-8"	3'-8"
A618	2'-11"	5'-7"
A619	3'-11"	5'-9"
A620	4'-0"	3'-8"



SEE BEARING DETAILS SHEET

■ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING
 DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED
 TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS.
 MINIMUM PEDESTAL HEIGHT = 6"
 MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

- FOR DETAILS OF ANCHOR BOLT BLOCKOUTS,
SEE BEARING DETAILS SHEET.

A521

A911

NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE B-40-776					
		DRAWN BY	CNK	PLANS CK'D.	BKS
WEST ABUTMENT DETAILS (3 OF 3)				SHEET 13 OF 56	

LEGEND

(A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"x6" KEYWAY AT BASE OF BACKWALL.

(A02) ABUTMENT SUPPORTED ON HP14x89 PILING WITH A REQUIRED DRIVING RESISTANCE OF 240 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

ESTIMATED PILE LENGTH = 85'.

PILING SLEEVES NOT SHOWN FOR CLARITY, BUT ARE REQUIRED.

(A03) 2" PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITUMINUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.

(A04) PREFORMED JOINT FILLER (2"± BASED ON A 7" MSE WALL PANEL THICKNESS) WITH NON-BITUMINUS JOINT SEALER PLACED BETWEEN COPING/PRECAST PANEL AND EDGE OF BEAM SEAT. COLOR TO MATCH CONCRETE STAIN.

(A11) CONST. JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

■ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS. MINIMUM PEDESTAL HEIGHT = 6" MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

◇ DYNAMIC PILE LOAD TESTING

NOTES

FOR SECTIONS A-A & B-B, SEE EAST ABUTMENT DETAILS (1 OF 3).

FOR SECTIONS C-C & D-D, SEE EAST ABUTMENT DETAILS (2 OF 3).

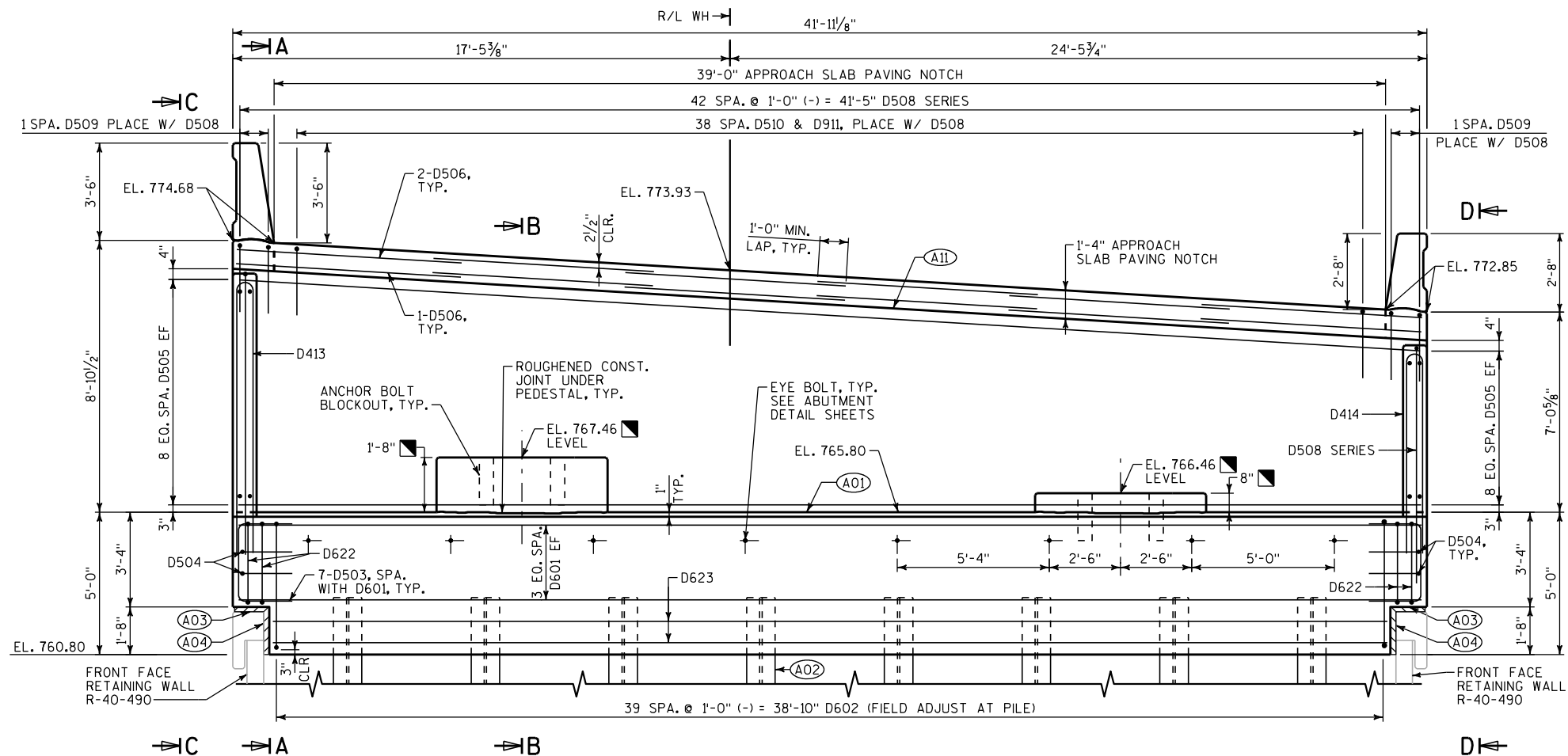
FOR DETAILS OF PEDESTALS, SEE EAST ABUTMENT DETAILS (3 OF 3).

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT AND BEARING DETAILS SHEETS.

FOR DETAILS FOR ANCHOR BOLT BLOCKOUTS, SEE WEST ABUTMENT DETAILS (3 OF 3).

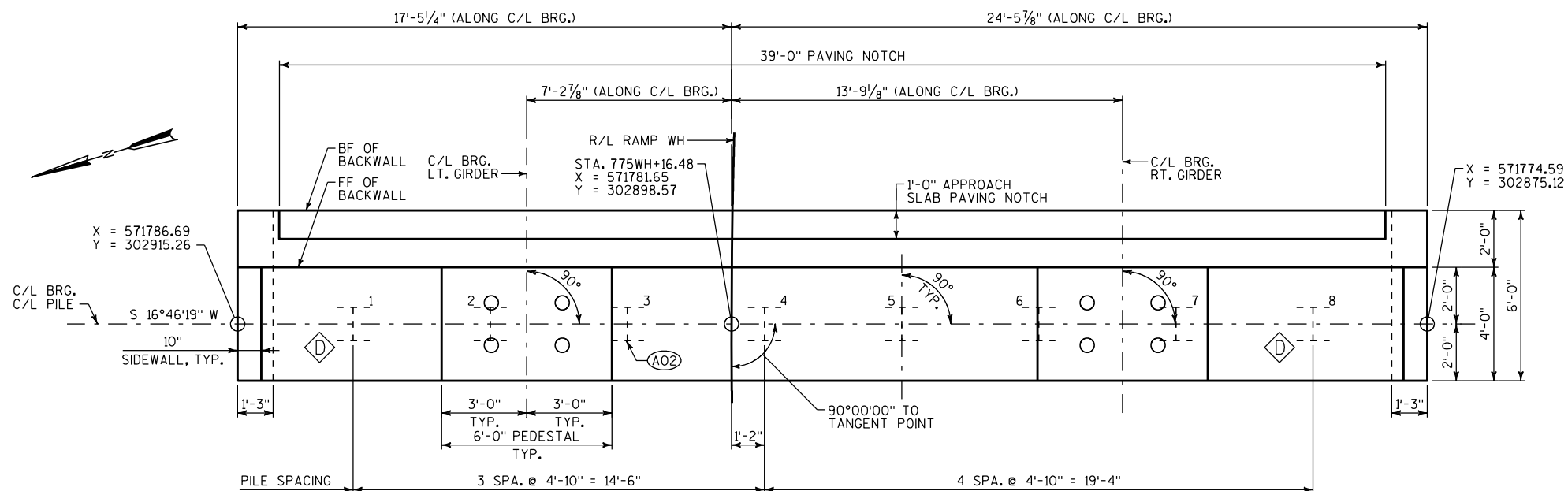
FOR DETAILS OF EXPANSION JT, SEE EXPANSION JOINT (1 OF 2) AND EXPANSION JOINT (2 OF 2) SHEETS.

FOR DETAILS OF PARAPET ON BACKWALL, SEE SINGLE SLOPE PARAPET 42SS MODIFIED SHEET AND SINGLE SLOPE PARAPET 32SS MODIFIED SHEET.

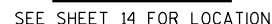
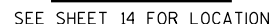
**ELEVATION**

LOOKING UPSTATION

ALL DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG FRONT FACE OF BACKWALL.
REINFORCEMENT IN PEDESTALS NOT SHOWN FOR CLARITY, SEE EAST ABUTMENT DETAILS (3 OF 3) SHEET.

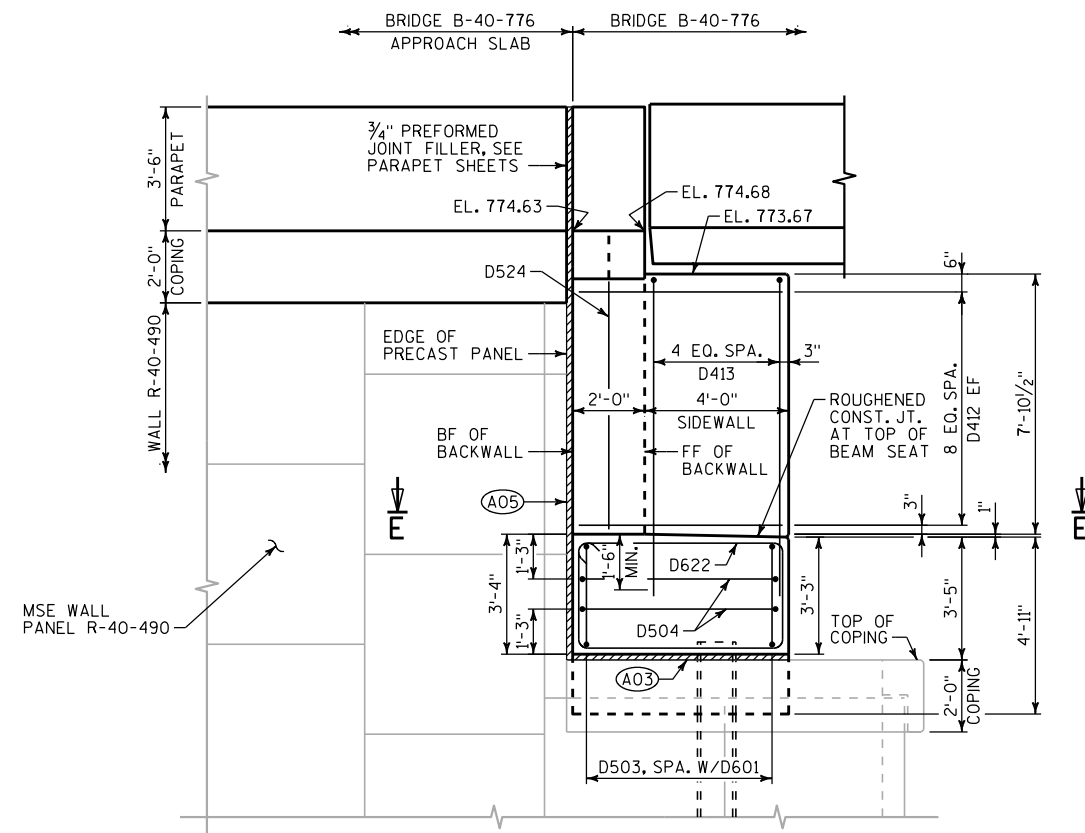
**PLAN**

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		CNK	PLANS CK'D. BKS
EAST ABUTMENT PLAN AND ELEVATION			SHEET 14 OF 56



EYE BOLTS AND FERRULE LOOP INSERTS ARE INCLUDED
IN THE BID ITEM "CONCRETE MASONRY BRIDGES". MINIMUM
STRENGTH OF EYE BOLT AND LOOP INSERT IS 3500 LB.

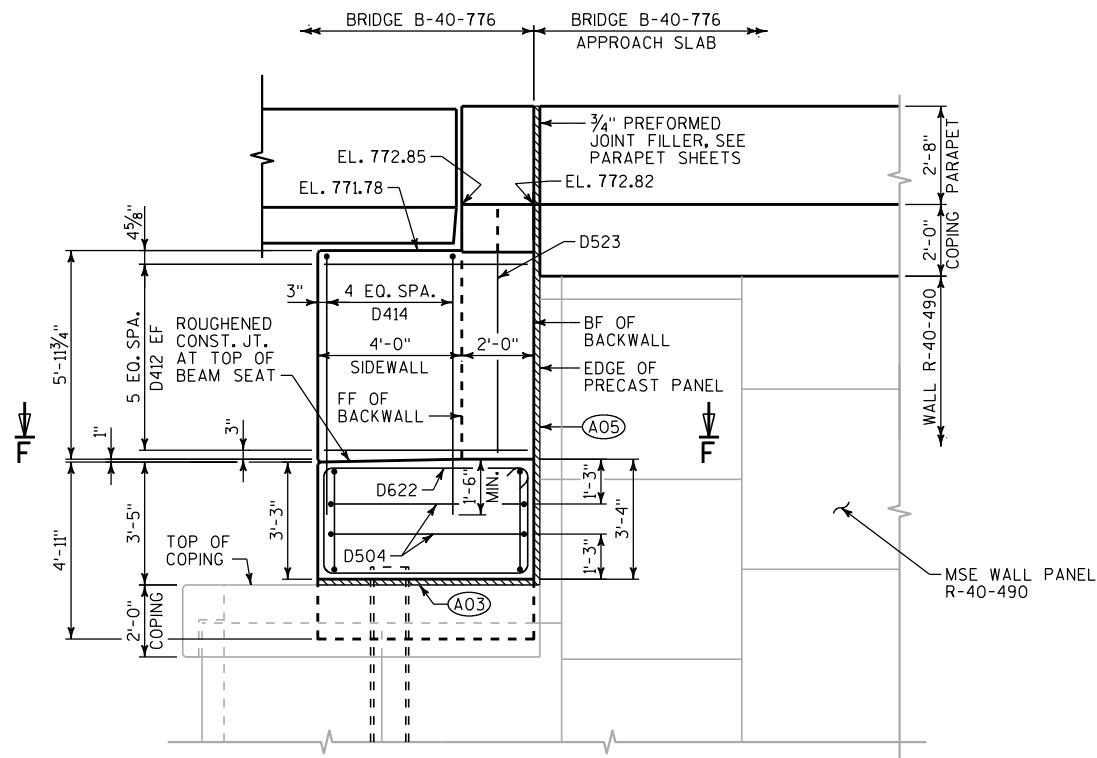
NO.	DATE	REVISION						BY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION									
STRUCTURE B-40-776									
				DRAWN BY	CNK	PLANS CK'D.		BKS	
EAST ABUTMENT DETAILS (1 OF 3)						SHEET 15 OF 56			



SECTION C-C

(LOOKING SOUTH)

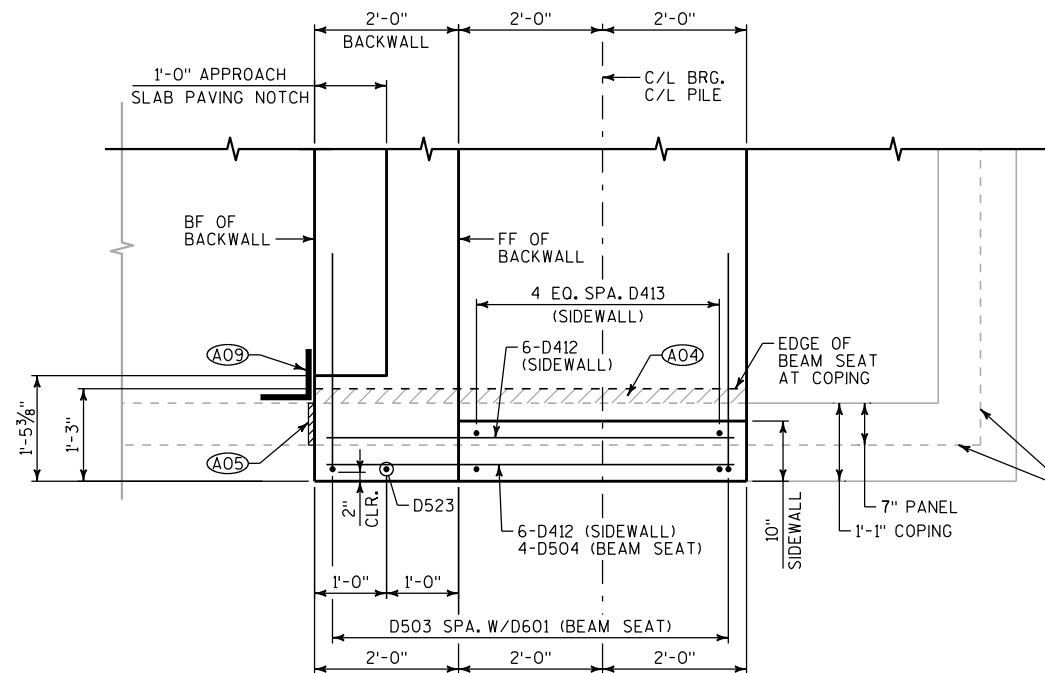
(SEE EAST ABUTMENT PLAN AND ELEVATION SHEET FOR LOCATION)



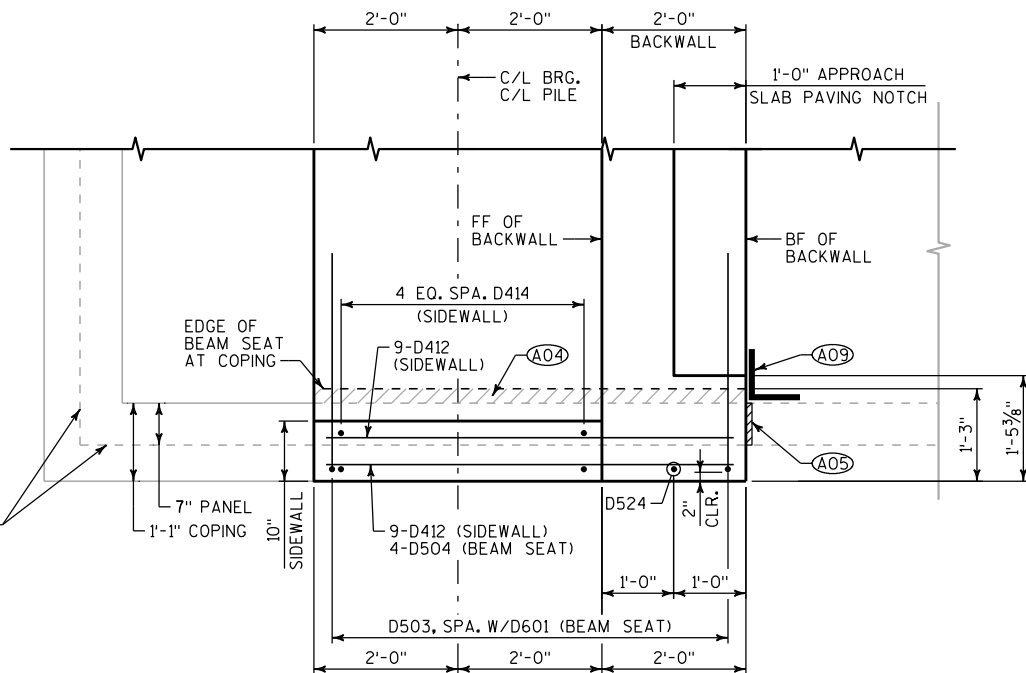
SECTION D-D

(LOOKING NORTH)

(SEE EAST ABUTMENT PLAN AND ELEVATION SHEET FOR LOCATION)



SECTION E-E

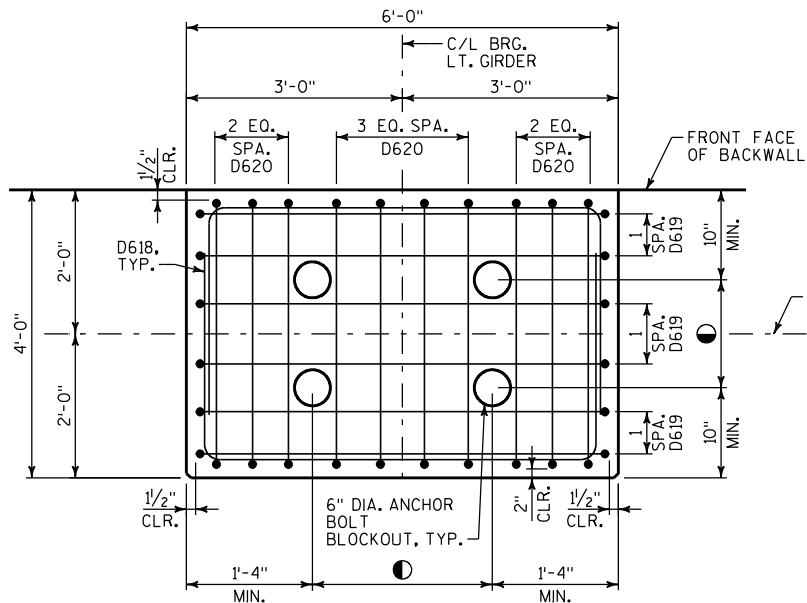


SECTION F-F

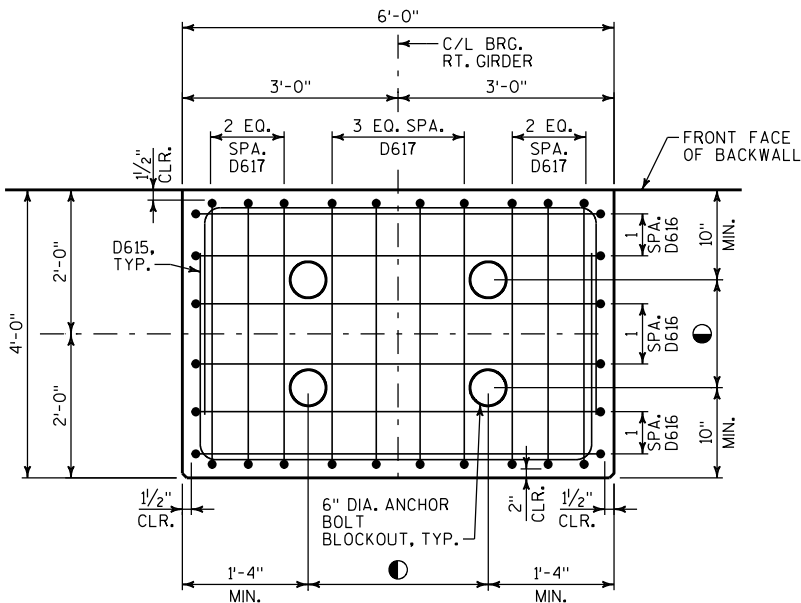
LEGEND

- (A03) 2" PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- (A04) PREFORMED JOINT FILLER (2"± BASED ON A 7" MSE WALL PANEL THICKNESS) WITH NON-BITUMINOUS JOINT SEALER PLACED BETWEEN COPING/PRECAST PANEL AND EDGE OF BEAM SEAT. COLOR TO MATCH CONCRETE STAIN.
- (A05) 3/4" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER PLACED BETWEEN BACKFACE OF BACK WALL AND WALL R-40-490 COLOR TO MATCH CONCRETE STAIN.
- (A09) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL VERTICAL JOINT BETWEEN BF OF BACKWALL AND MSE WALL PRECAST PANEL (R-40-490). SEAL FROM BOTTOM OF ABUTMENT TO BOTTOM OF APPROACH SLAB (B-40-776).

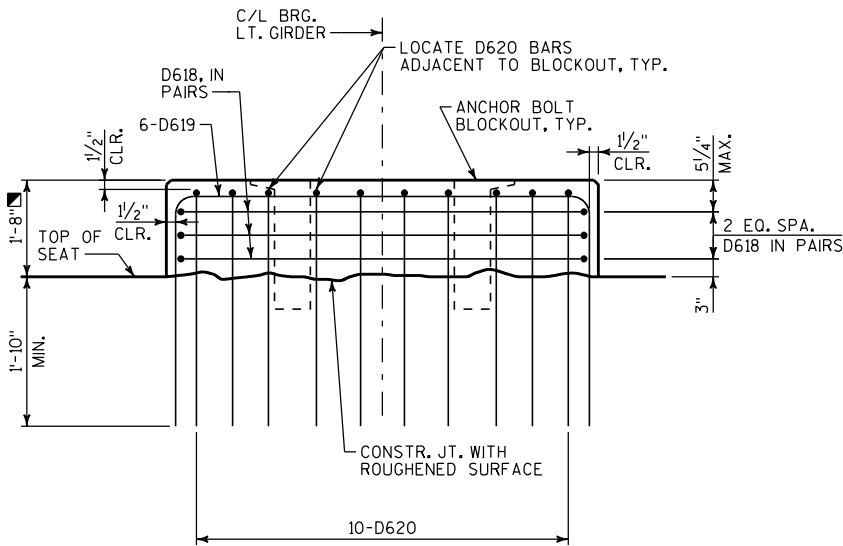
NO.	DATE	REVISION	BY
		STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
		STRUCTURE B-40-776	
		DRAWN BY CNK	PLANS CK'D. BKS
		EAST ABUTMENT DETAILS (2 OF 3)	SHEET 16 OF 56



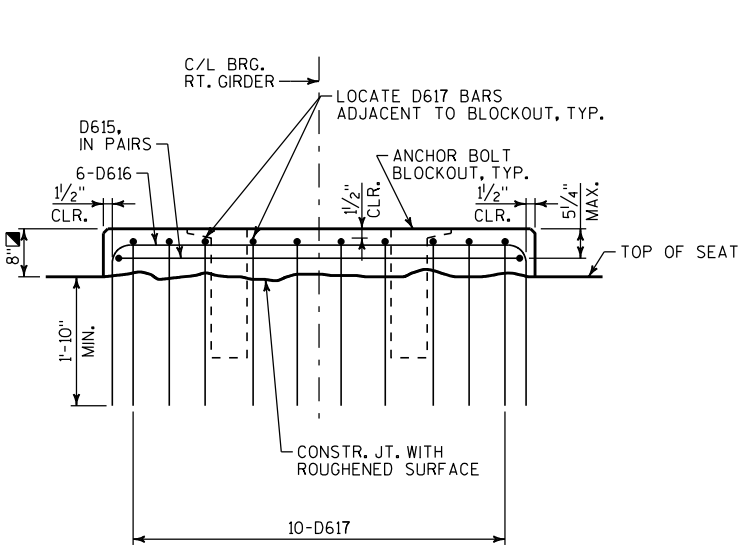
PEDESTAL PLAN - LEFT GIRDER



PEDESTAL PLAN - RIGHT GIRDER



PEDESTAL ELEVATION - LEFT GIRDER



PEDESTAL ELEVATION - RIGHT GIRDER

BILL OF BARS

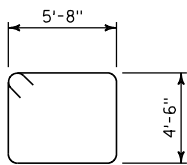
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D601	X	13	41'-6"			BODY HORIZONTAL
D602	X	40	21'-2"	X		BODY STIRRUP
D503	X	14	5'-9"	X		BODY HORIZONTAL
D504	X	8	8'-9"			BODY HORIZONTAL
D505	X	18	41'-6"			BACKWALL HORIZONTAL
D508	X	43	17'-11"	X		BACKWALL VERTICAL
D412	X	30	5'-8"			SIDEWALL HORIZONTAL
D413	X	5	18'-8"	X		SIDEWALL VERTICAL
D414	X	5	15'-0"	X		SIDEWALL VERTICAL
D615	X	2	11'-1"			RIGHT PEDESTAL
D616	X	6	10'-7"	X		RIGHT PEDESTAL
D617	X	10	8'-8"	X		RIGHT PEDESTAL
D618	X	6	11'-1"	X		LEFT PEDESTAL
D619	X	6	12'-7"	X		LEFT PEDESTAL
D620	X	10	10'-8"	X		LEFT PEDESTAL
D622	X	4	17'-6"	X		BODY STIRRUP
D623	X	9	39'-0"			BODY HORIZONTAL
D524	X	1	5'-3"			BACKWALL VERTICAL
D525	X	1	7'-1"			BACKWALL VERTICAL

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D506		18	7'-10"			BACKWALL HORIZONTAL
D507		2	2'-2"	X		BACKWALL HORIZONTAL
D509		4	6'-9"	X		BACKWALL VERTICAL
D510		39	5'-9"	X		BACKWALL VERTICAL
D911		39	5'-5"	X		BACKWALL APPROACH TIE
D521		10	6'-10"	X		PARAPET TIE

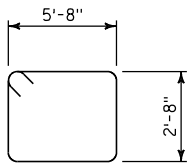
▲ LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

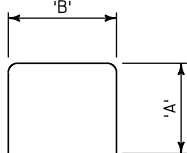
BAR MARK	NO REQ'D.	LENGTH
D508	1 SERIES OF 43	16'-1" TO 19'-9"



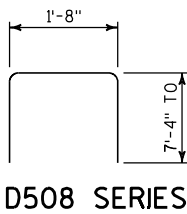
D602



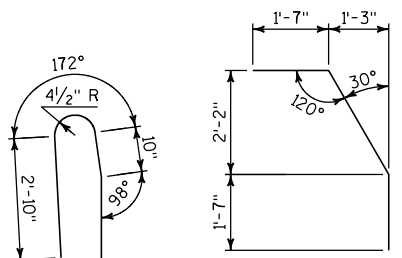
D622



BAR MARK	DIM 'A'	DIM 'B'
D503	1'-9"	2'-6"
D504	1'-9"	5'-6"
D507	8"	1'-1"
D509	2'-8"	1'-8"
D510	2'-8"	8"
D413	7'-4"	6"
D414	9'-2"	6"
D615	2'-11"	5'-7"
D616	2'-7"	5'-9"
D617	2'-8"	3'-8"
D618	2'-11"	5'-7"
D619	3'-7"	5'-9"
D620	3'-8"	3'-8"

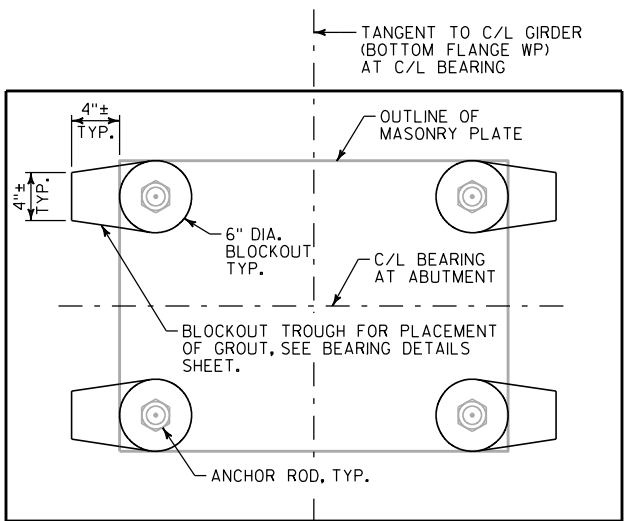


D508 SERIES



D521

D911



PLAN - TOP OF PEDESTAL

SEE BEARING DETAILS SHEET

NOTES

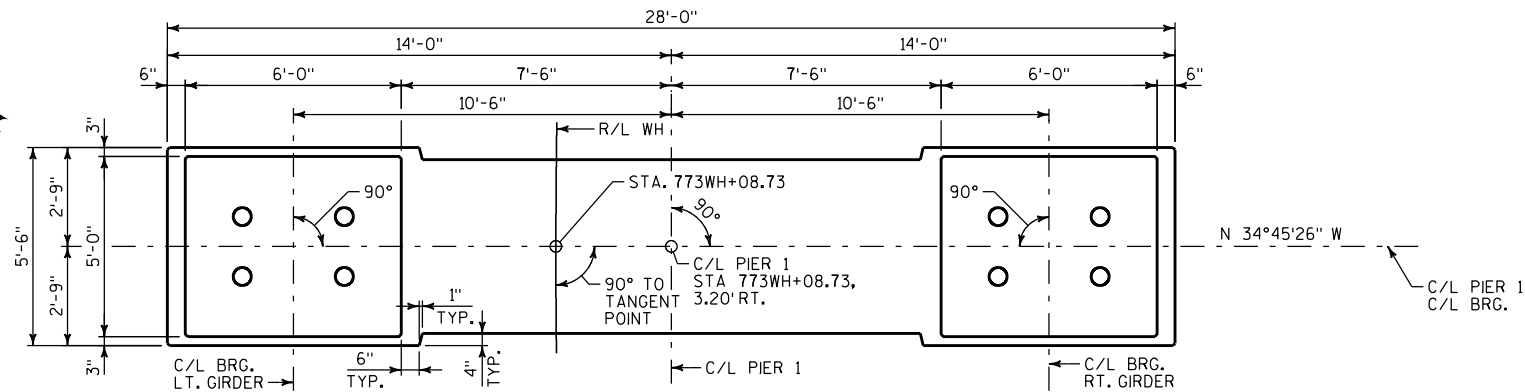
FOR DETAILS OF ANCHOR BOLT BLOCKOUTS, SEE BEARING DETAILS SHEET.

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT SHEET AND BEARING DETAILS SHEET.

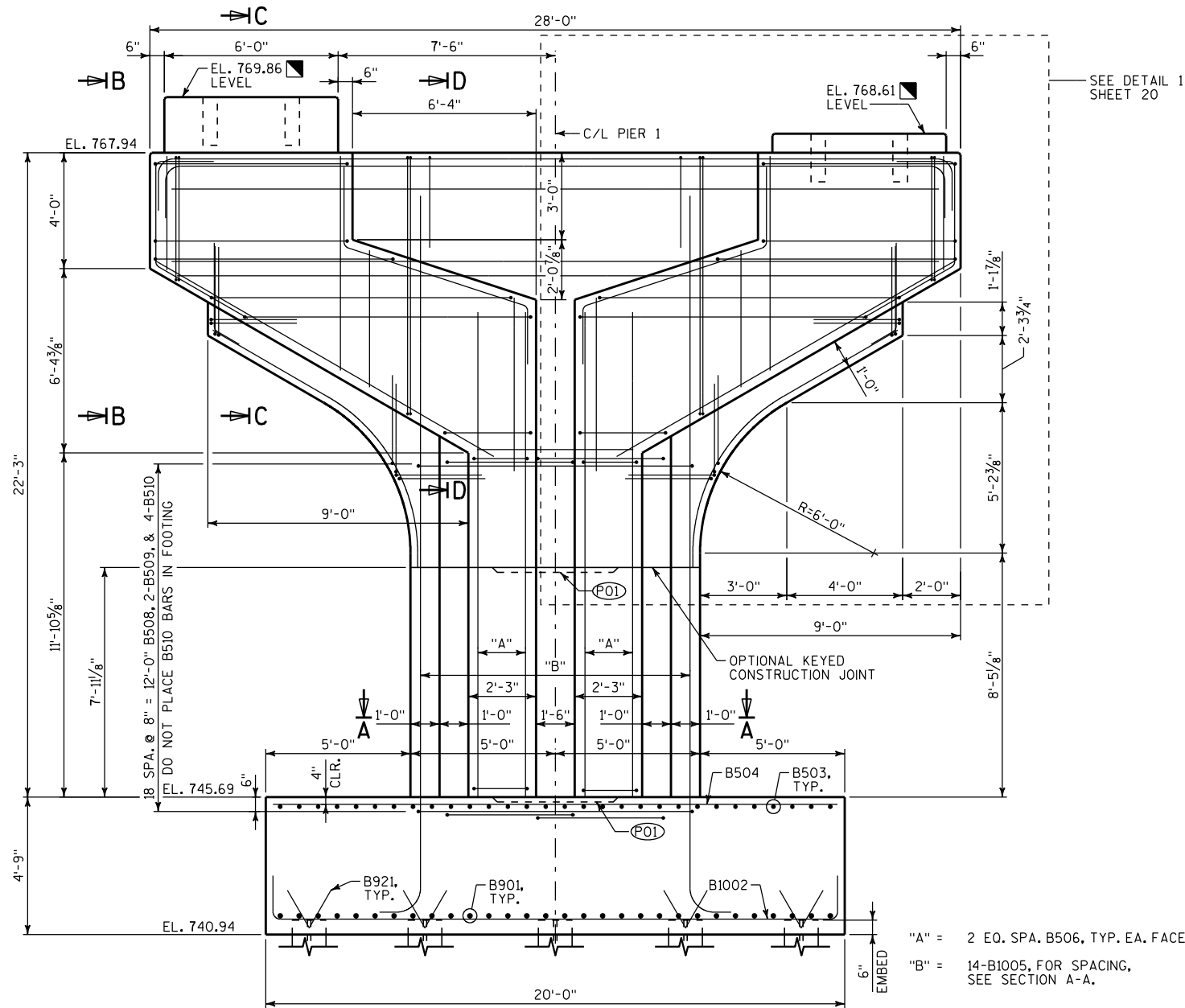
LEGEND

■ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS. MINIMUM PEDESTAL HEIGHT = 6". MAXIMUM PEDESTAL HEIGHT INCREASE = 3".

● SEE BEARING LAYOUT SHEET FOR ANCHOR BOLT BLOCKOUT LOCATION. VERIFY LOCATIONS WITH BEARING MANUFACTURER.



PLAN SHOWING BEAM SEAT

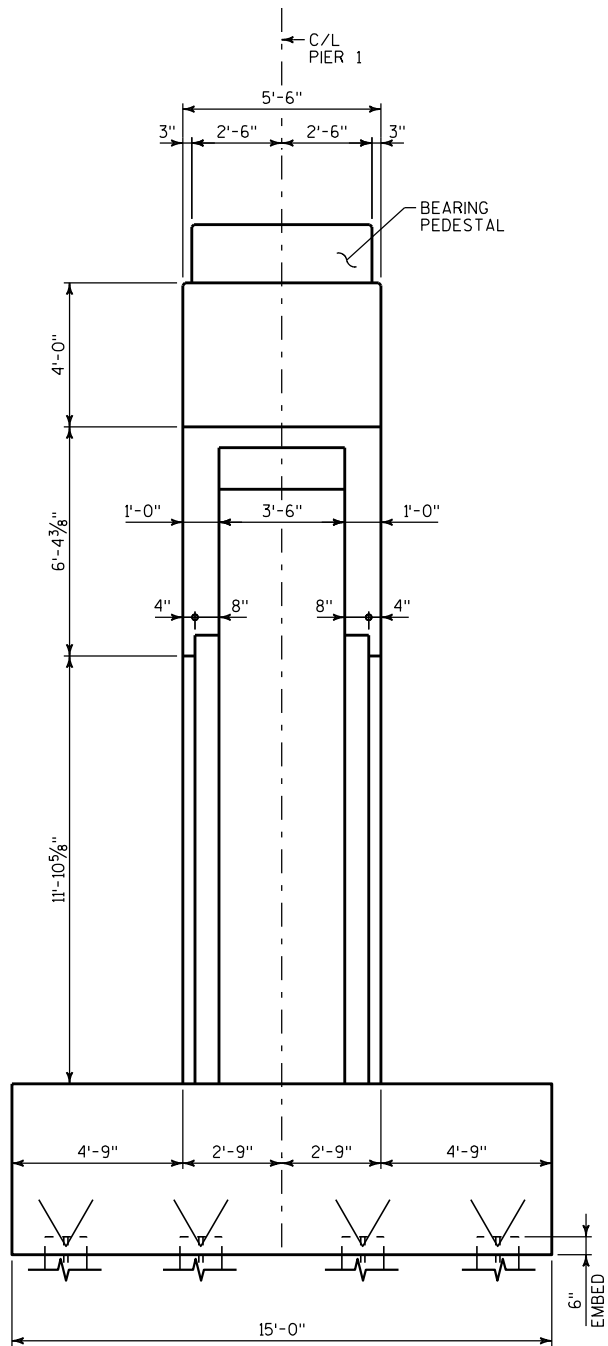


ELEVATION

(LOOKING UPSTATION)

DIMENSIONS AND REINFORCEMENT ARE SYMMETRIC ABOUT C/L OF PIER.

"A" = 2 EQ. SPA. B506, TYP. EA. FACE
"B" = 14-B1005, FOR SPACING,
SEE SECTION A-A.



END VIEW

(LOOKING IN DIRECTION OF SECTION B-B)

NOTES

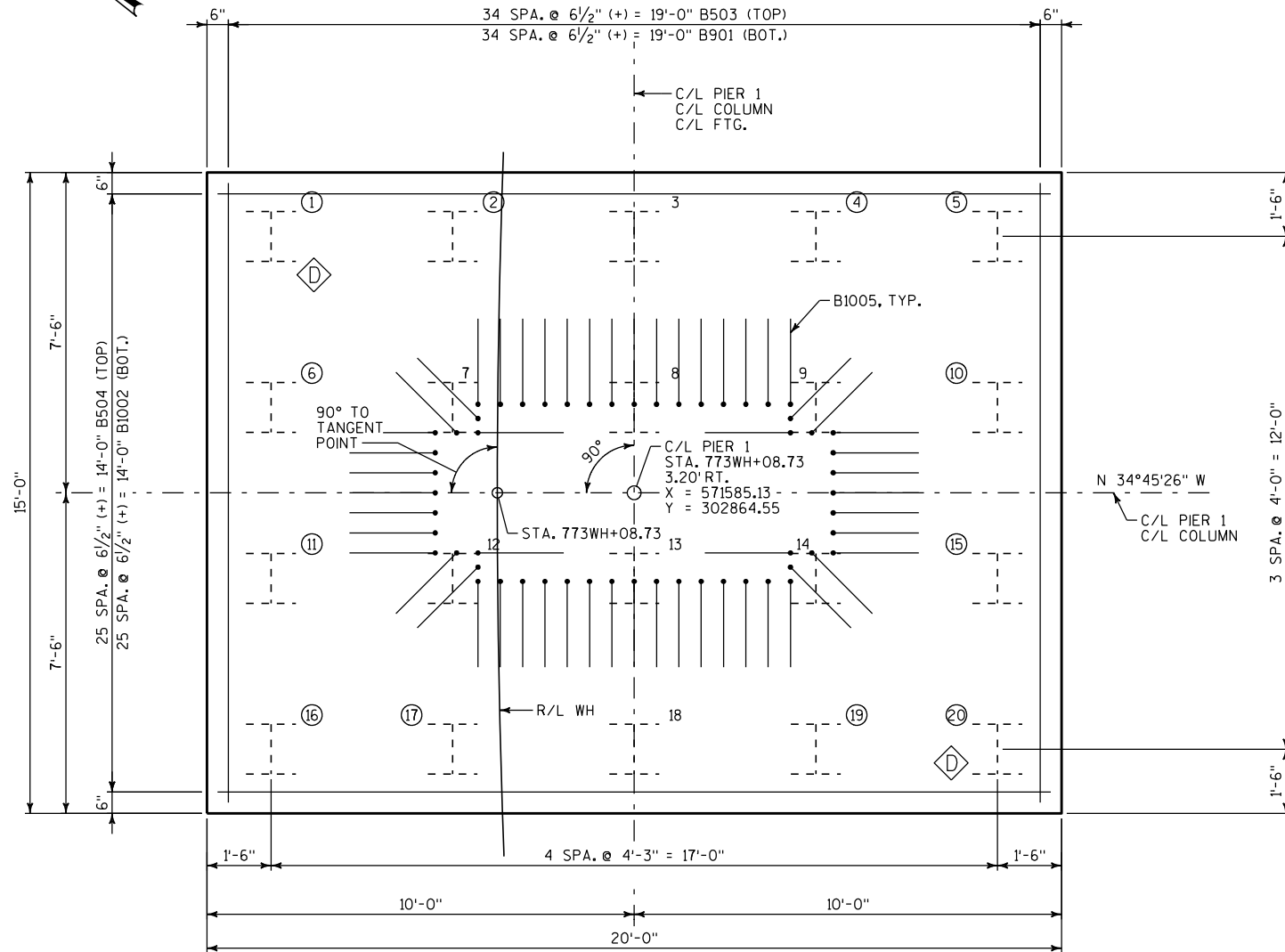
FOR SECTIONS A-A, B-B, C-C, D-D & DETAIL 1
SEE OTHER PIER 1 SHEETS

LEGEND

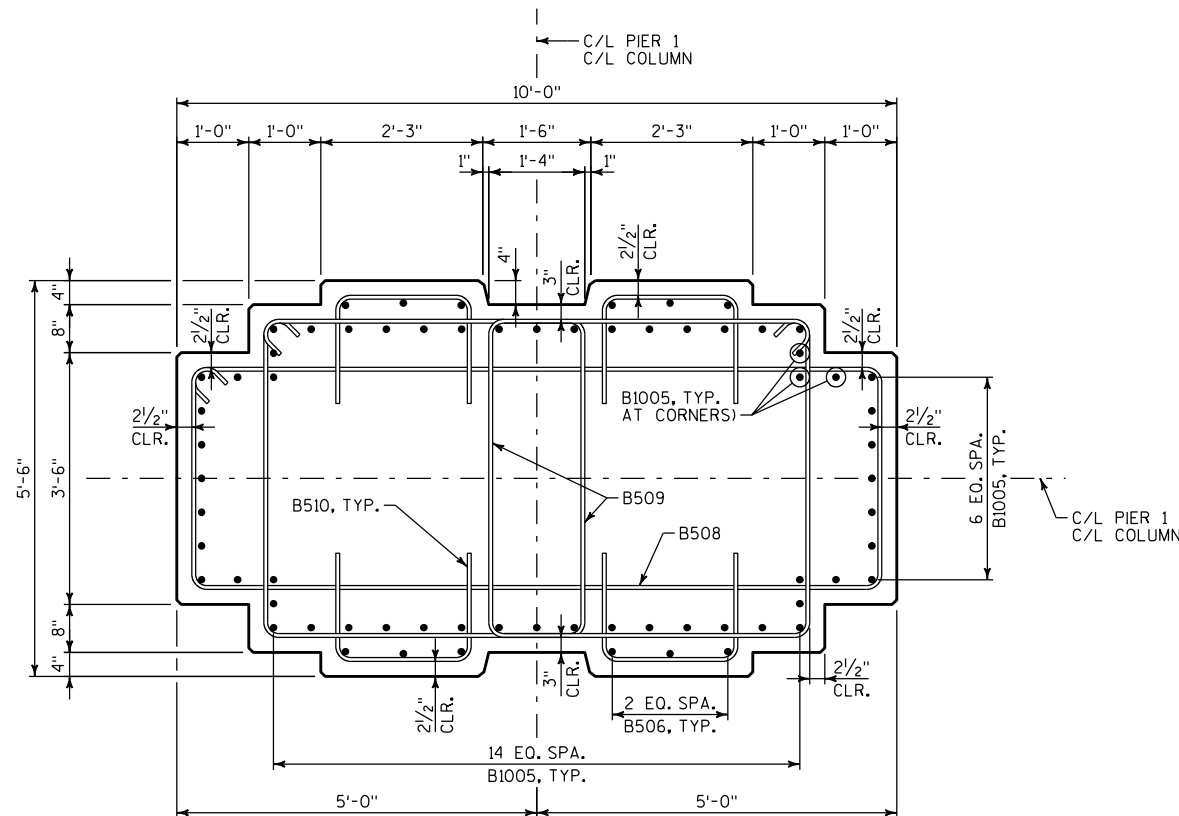
(PO1) KEYED CONSTRUCTION JOINT FORMED BY
SURFACED BEVELED 4"x1'-4"x6'-0"

■ ELEVATIONS AND DIMENSIONS DEPEND ON
THE ASSUMED BEARING DIMENSIONS SHOWN
ON BEARING LAYOUT SHEET. ADJUST AS
REQUIRED TO SUIT THE ACTUAL SELECTED
BEARING DIMENSIONS.
MINIMUM PEDESTAL HEIGHT = 6".
MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

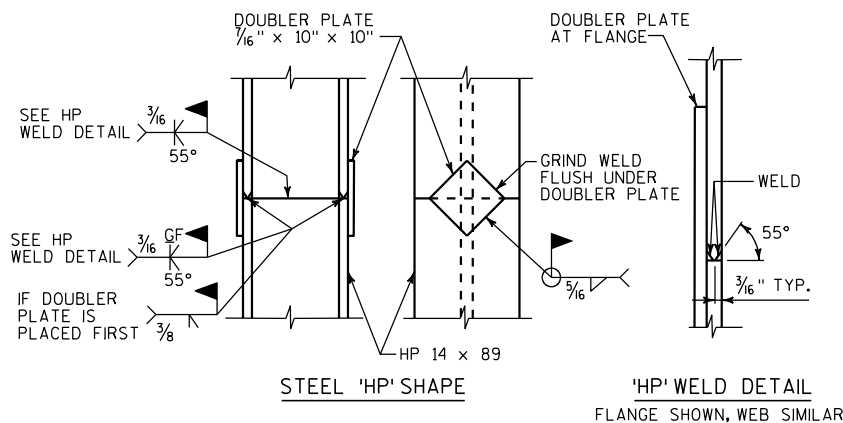
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		CNK	PLANS CK'D. BKS
PIER 1 (1 OF 4)		SHEET 18 OF 56	



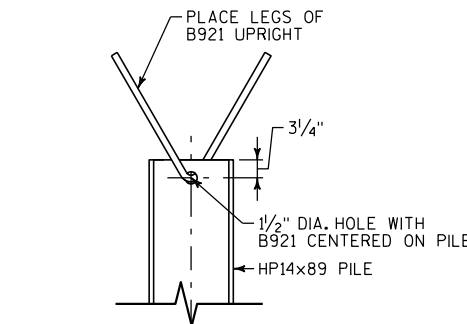
FOOTING PLAN VIEW



SECTION A-A



PILE SPLICE DETAIL

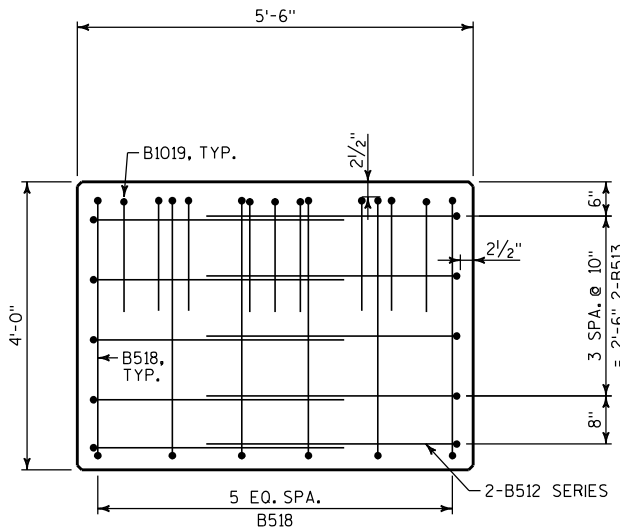


PILE HOLD DOWN DEVICE

LEGEND

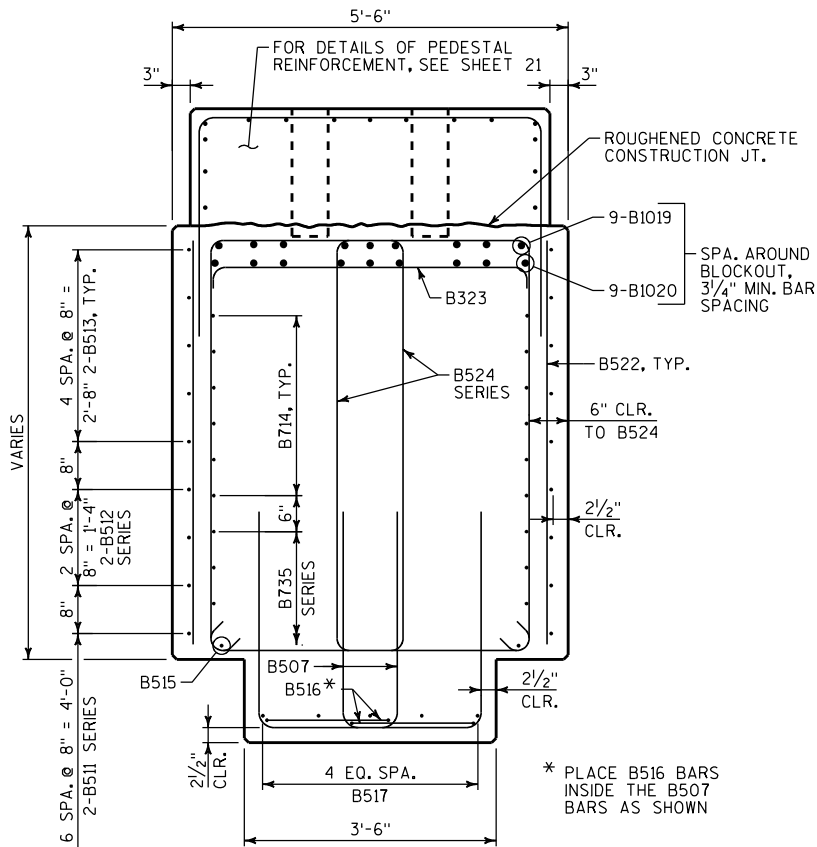
- ⬡ DYNAMIC PILE LOAD TESTING
- ⊗ PILE REQUIRING PILE HOLD DOWN DEVICE.
- x PILE NOT REQUIRING PILE HOLD DOWN DEVICE.
- ⌚ PIER SUPPORTED ON HP14x89 PILING WITH A REQUIRED DRIVING RESISTANCE OF 255 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.
- ESTIMATED PILE LENGTH = 70'.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		CNK	PLANS CK'D. BKS
PIER 1 (2 OF 4)		SHEET 19 OF 56	



SECTION B-B

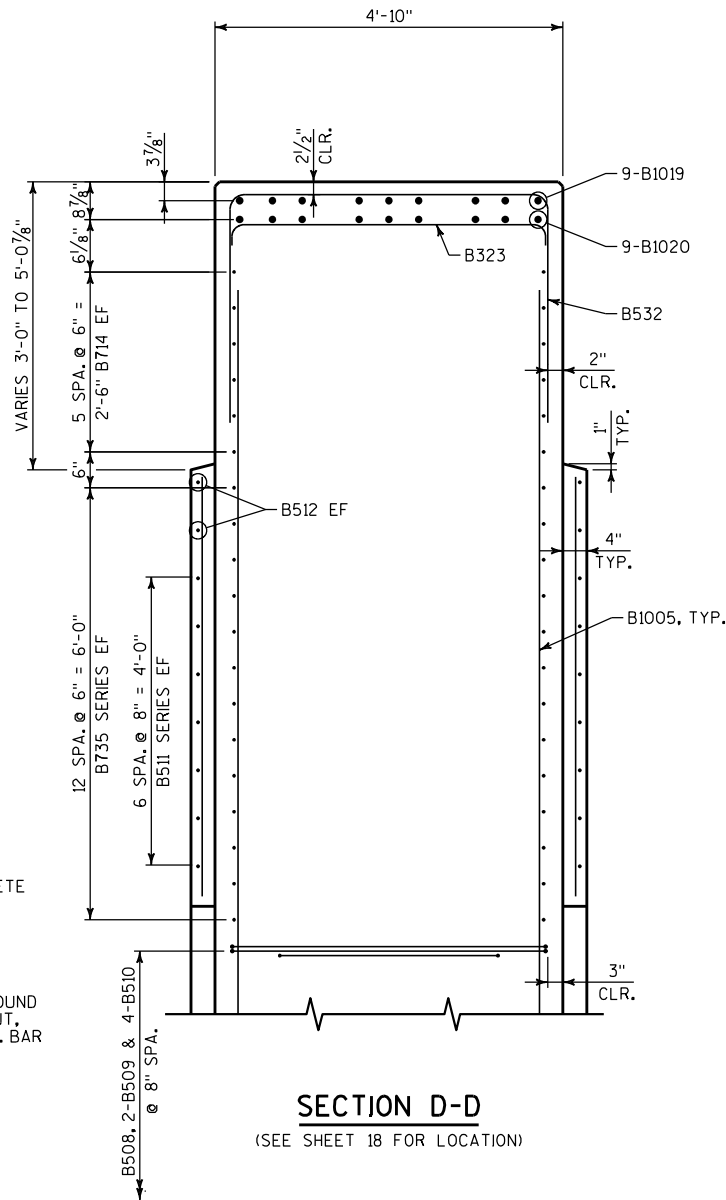
(SEE SHEET 18 FOR LOCATION)



SECTION C-C

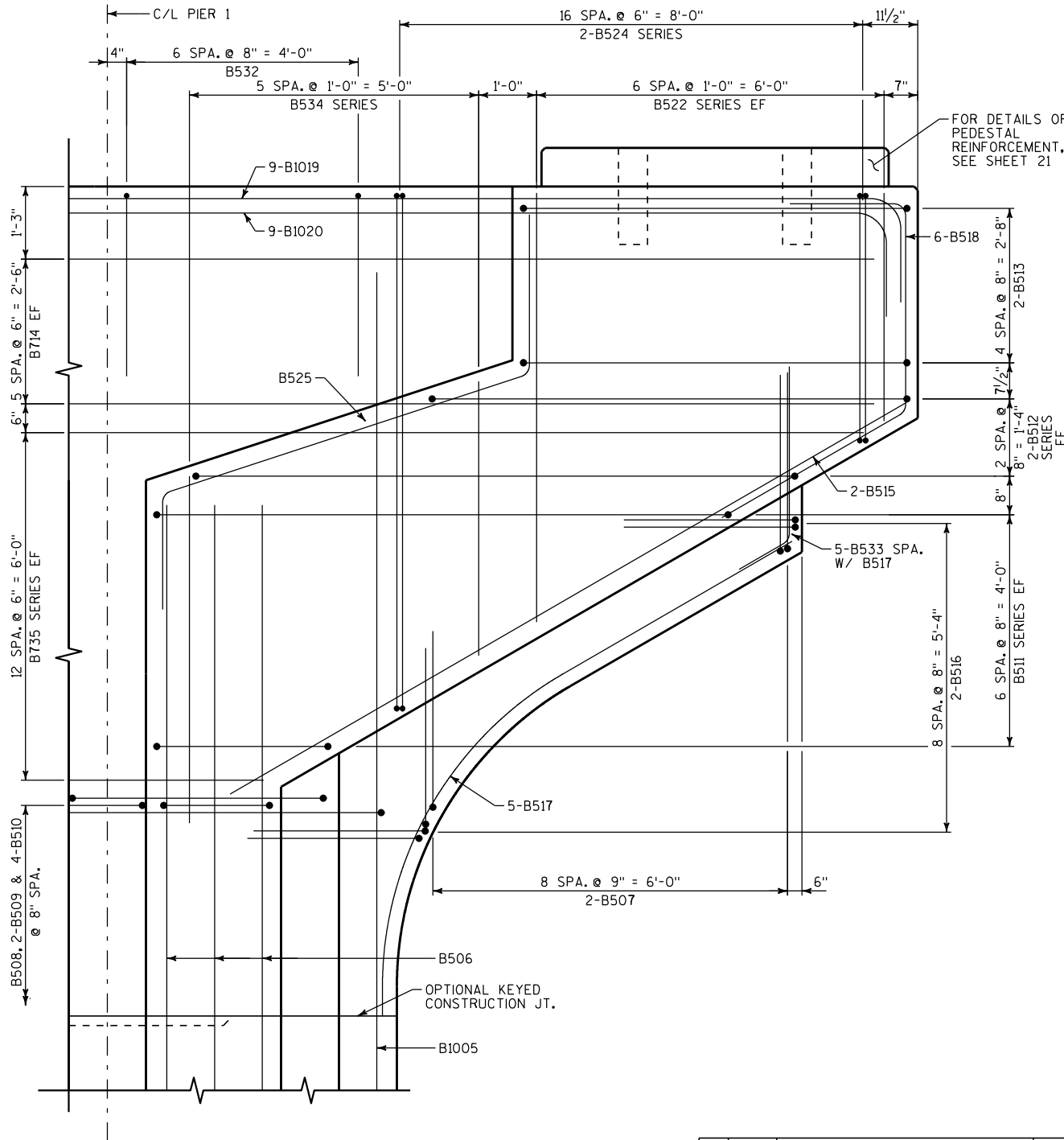
(SEE SHEET 18 FOR LOCATION)
(LAYOUT IS SYMMETRIC ABOUT C/L PIER 1)

* PLACE B516 BARS
INSIDE THE B507
BARS AS SHOWN



SECTION D-D

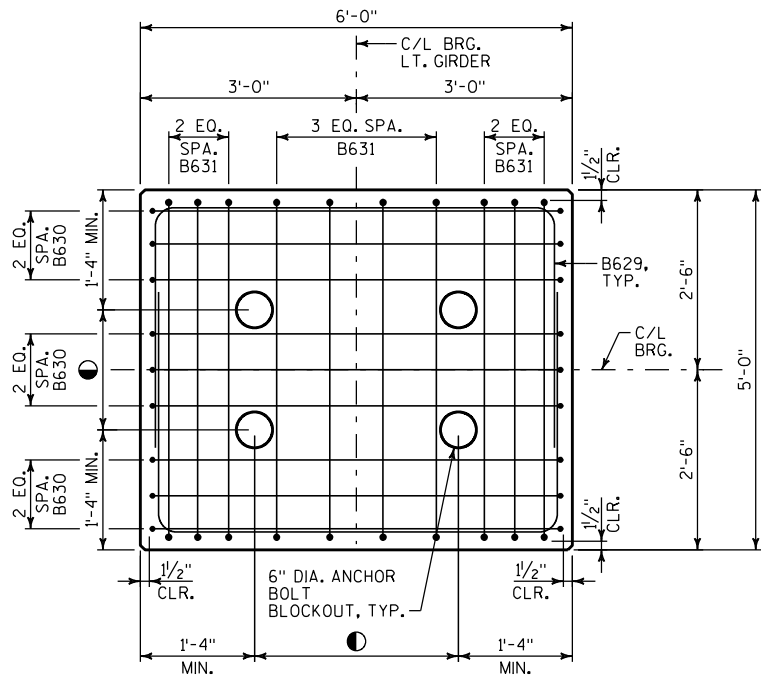
(SEE SHEET 18 FOR LOCATION)



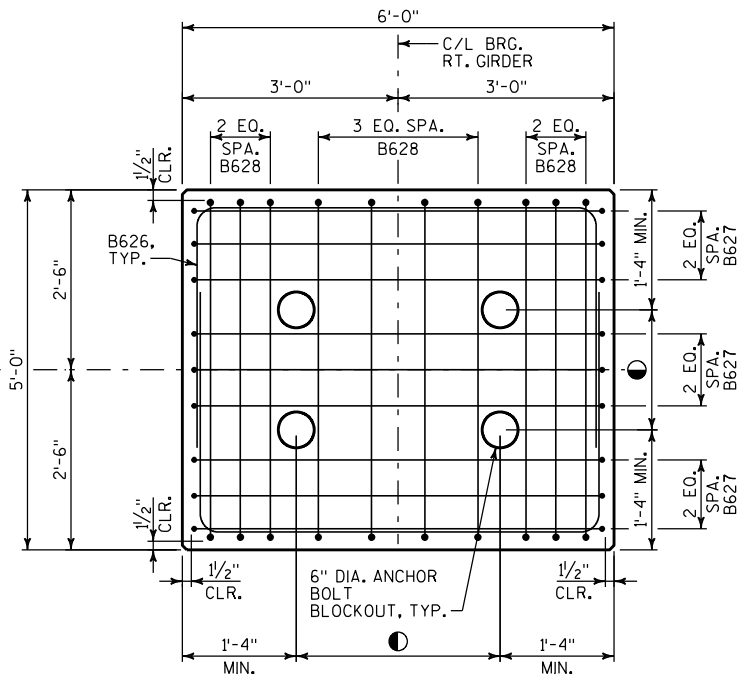
DETAIL 1

REINFORCEMENT AT TOP OF HAMMERHEAD
(REINFORCEMENT IS SYMMETRICAL ABOUT C/L PIER)

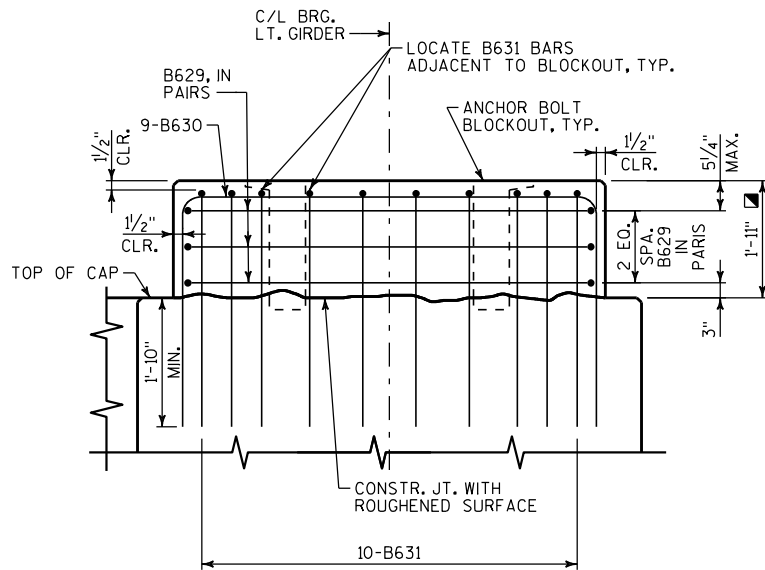
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		CNK	PLANS CK'D. BKS
PIER 1 (3 OF 4)		SHEET 20 OF 56	



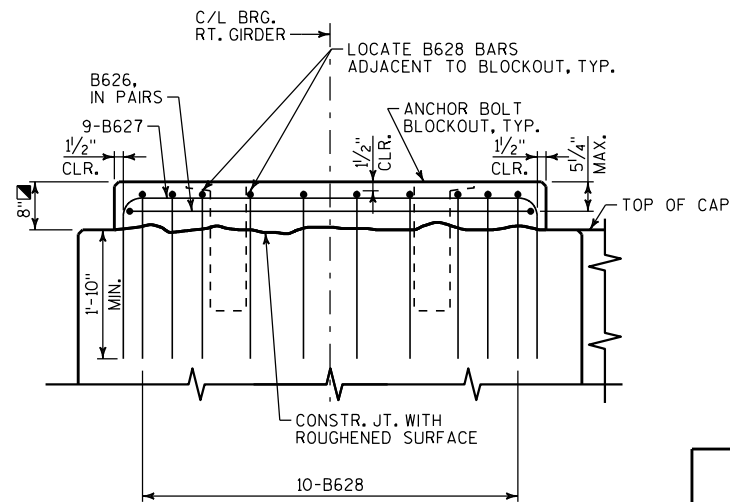
PEDESTAL PLAN - LEFT GIRDER



PEDESTAL PLAN - RIGHT GIRDER



PEDESTAL ELEVATION - LEFT GIRDER



PEDESTAL ELEVATION - RIGHT GIRDER

NOTES

FOR DETAILS OF ANCHOR BOLT BLOCKOUTS, SEE BEARING DETAILS SHEET.

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT SHEET AND BEARING DETAILS SHEET.

LEGEND

■ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS. MINIMUM PEDESTAL HEIGHT = 6". MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

● SEE BEARING LAYOUT SHEET FOR ANCHOR BOLT BLOCKOUT LOCATION. VERIFY LOCATIONS WITH BEARING MANUFACTURER.

BILL OF BARS

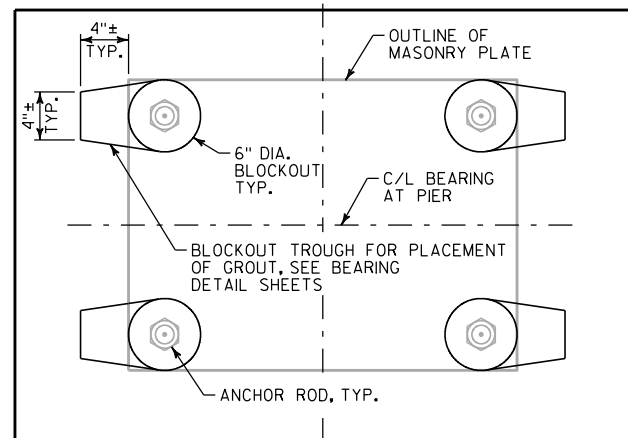
NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B901		35	17'-2"	X		FOOTING BOTTOM
B1002		26	22'-6"	X		FOOTING BOTTOM
B503		35	14'-6"			FOOTING TOP
B504		26	19'-6"			FOOTING TOP
B1005	X	56	26'-3"	X		FOOTING DOWEL
B506	X	12	16'-9"			COLUMN VERTICAL
B507	X	36	8'-8"	X		COLUMN FLARE VERTICAL STIRRUP
B508	X	19	25'-11"	X		COLUMN HORIZONTAL
B509	X	38	18'-2"	X		COLUMN HORIZONTAL
B510	X	72	4'-7"	X		COLUMN HORIZONTAL
B511	X	28	13'-1"	X	▲	COLUMN FLARE HORIZONTAL
B512	X	12	15'-11"	X	▲	COLUMN FLARE HORIZONTAL
B513	X	20	13'-3"	X		COLUMN FLARE HORIZONTAL
B714	X	12	26'-6"			COLUMN FLARE HORIZONTAL
B515	X	4	11'-6"			COLUMN FLARE DIAGONAL
B516	X	36	7'-5"	X		COLUMN FLARE HORIZONTAL
B517	X	10	11'-8"	X		COLUMN RADIUS
B518	X	12	7'-6"	X		COLUMN ENDS
B1019	X	9	30'-5"	X		COLUMN TOP REINFORCEMENT
B1020	X	9	29'-11"	X		COLUMN TOP REINFORCEMENT
B921		12	7'-9"	X		FOOTING PILE HOLD DOWN
B522	X	28	5'-9"		▲	COLUMN FLARE VERTICAL
B323	X	13	4'-11"	X		TOP REINF SUPPORT
B524	X	68	18'-9"	X	▲	COLUMN FLARE STIRRUP
B525	X	4	12'-4"	X		COLUMN FLARE REVEAL
B626	X	2	12'-1"	X		RIGHT BEAM SEAT PEDESTAL
B627	X	9	10'-5"	X		RIGHT BEAM SEAT PEDESTAL
B628	X	10	9'-7"	X		RIGHT BEAM SEAT PEDESTAL
B629	X	6	12'-1"	X		LEFT BEAM SEAT PEDESTAL
B630	X	9	13'-3"	X		LEFT BEAM SEAT PEDESTAL
B631	X	10	12'-3"	X		LEFT BEAM SEAT PEDESTAL
B532	X	14	10'-6"	X		VERTICAL TIE
B533	X	10	3'-11"	X		BOTTOM OF CAP FLARE
B534	X	24	5'-5"		▲	COLUMN FLARE VERTICAL
B735	X	26	15'-10"		▲	COLUMN FLARE HORIZONTAL

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
B511	4 SERIES OF 7	8'-10" TO 16'-7"
B512	4 SERIES OF 3	14'-11" TO 19'-2"
B524	4 SERIES OF 17	14'-1" TO 23'-5"
B522	4 SERIES OF 7	4'-0" TO 7'-5"
B534	4 SERIES OF 6	4'-9" TO 6'-0"
B735	2 SERIES OF 13	5'-5" TO 26'-2"

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

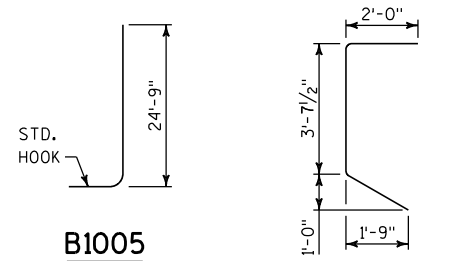


PLAN - TOP OF PEDESTAL

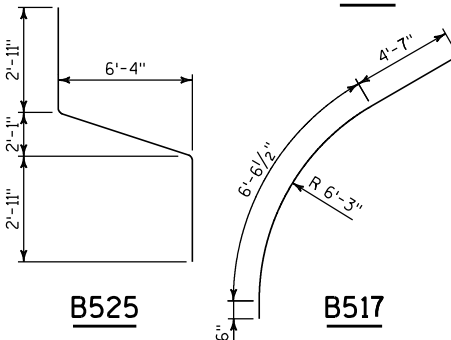
SEE BEARING DETAILS SHEET

STATE PROJECT NUMBER

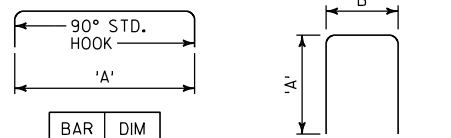
1060-33-72



B1005

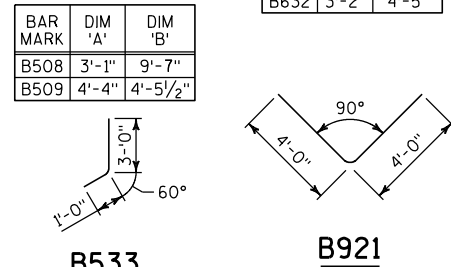


B518



B525

BAR MARK	DIM 'A'	DIM 'B'
B901	14'-6"	
B1002	19'-6"	
B1019	27'-5"	
B1020	26'-11"	
B323	4'-5"	
B507	3'-6"	1'-11"
B510	1'-6"	1'-10"
B513	3'-6"	6'-6"
B516	3'-0"	1'-8"
B626	3'-5"	5'-7"
B627	2'-6"	5'-9"
B628	2'-7"	4'-9"
B629	3'-5"	5'-7"
B630	3'-11"	5'-9"
B631	3'-11"	4'-9"
B632	3'-2"	4'-5"



B524

BAR MARK	DIM 'A'	DIM 'B'
B508	3'-1"	9'-7"
B509	4'-4"	4'-5 1/2"

BAR MARK	DIM 'A'	DIM 'B'
B508	3'-1"	9'-7"
B509	4'-4"	4'-5 1/2"

BAR MARK	DIM 'A'	DIM 'B'
B508	3'-1"	9'-7"
B509	4'-4"	4'-5 1/2"

BAR MARK	DIM 'A'	DIM 'B'
B508	3'-1"	9'-7"
B509	4'-4"	4'-5 1/2"

BAR MARK	DIM 'A'	DIM 'B'
B508	3'-1"	9'-7"
B509	4'-4"	4'-5 1/2"

BAR MARK	DIM 'A'	DIM 'B'
B508	3'-1"	9'-7"
B509	4'-4"	4'-5 1/2"

BAR MARK	DIM 'A'	DIM 'B'
B508	3'-1"	9'-7"
B509	4'-4"	4'-5 1/2"



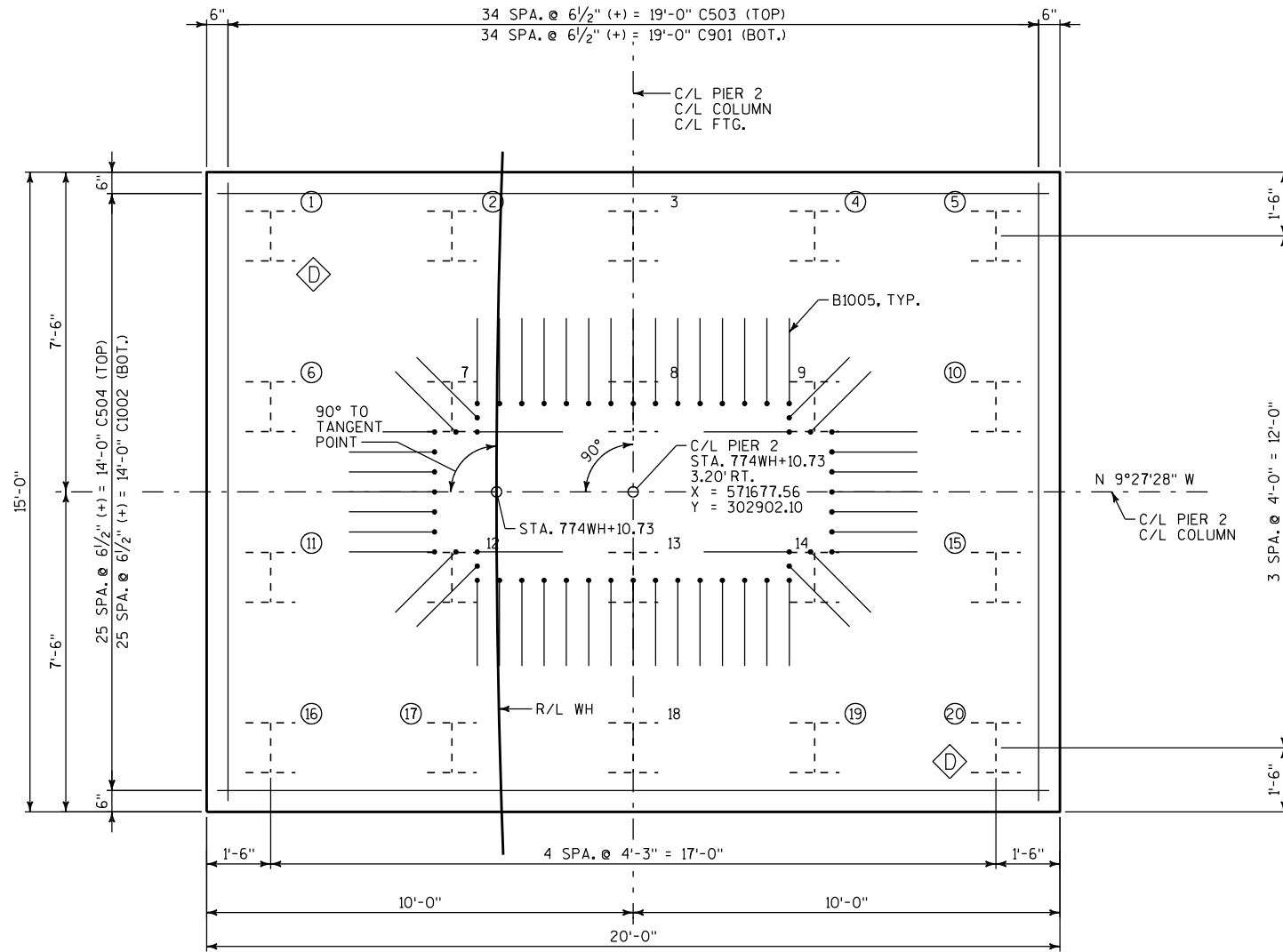
DIMENSIONS AND REINFORCEMENT ARE SYMMETRIC ABOUT C/L OF PIER.



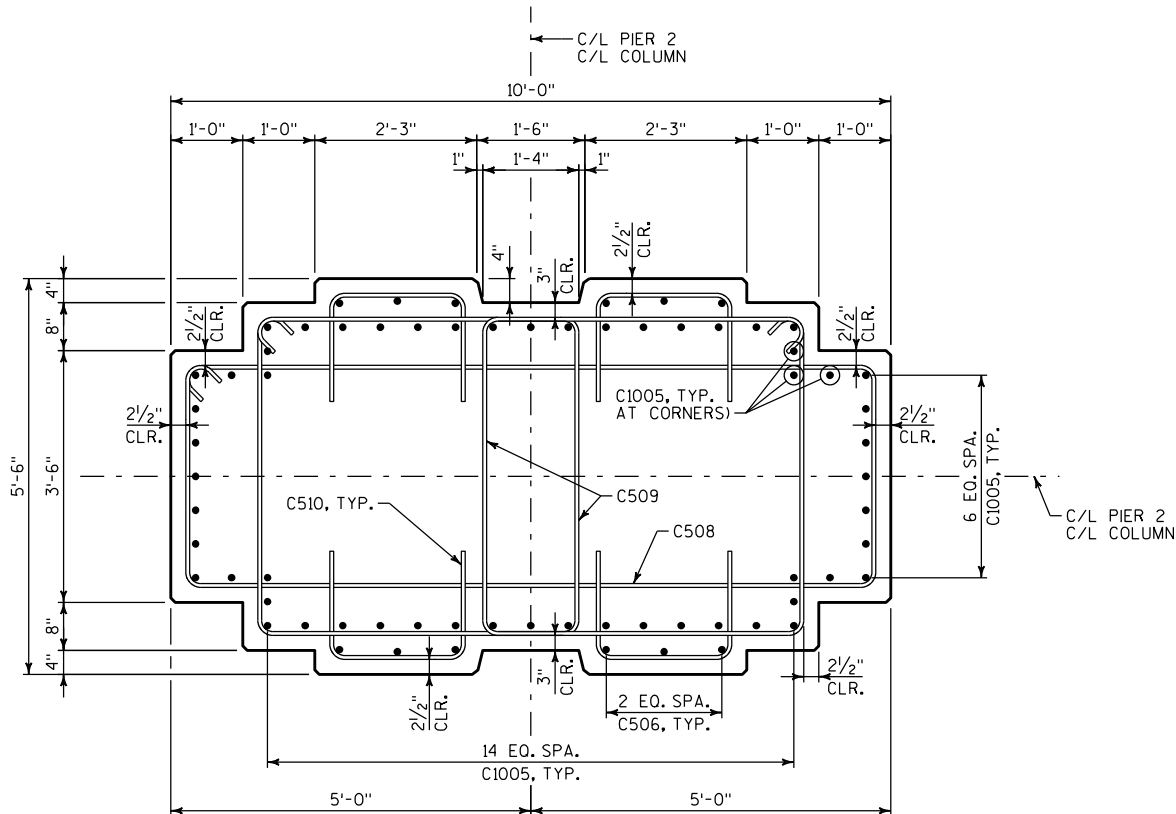
(LOOKING IN DIRECTION OF SECTION B-B)

 ELEVATIONS AND DIMENSIONS DEPEND ON
 THE ASSUMED BEARING DIMENSIONS SHOWN
 ON BEARING LAYOUT SHEET. ADJUST AS
 REQUIRED TO SUIT THE ACTUAL SELECTED
 BEARING DIMENSIONS.
 MINIMUM PEDESTAL HEIGHT = 6".
 MAXIMUM PEDESTAL HEIGHT INCREASE = 3"

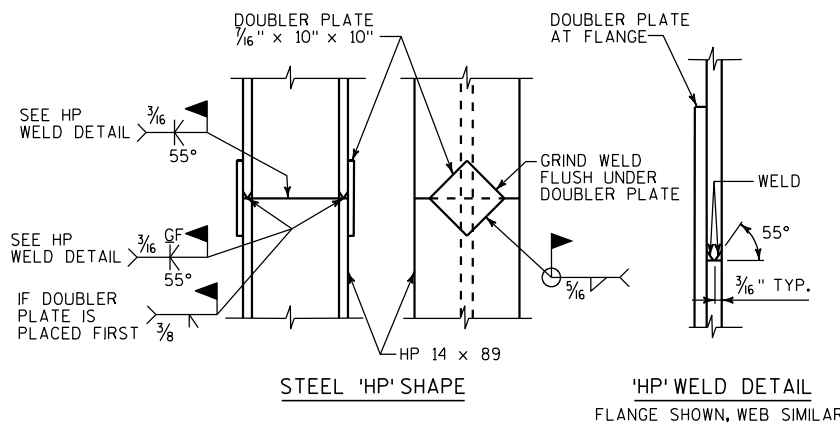
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		CNK	PLANS CK'D. BKS
PIER 2 (1 OF 4)		SHEET 22 OF 56	



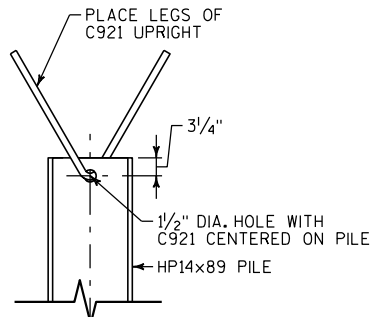
FOOTING PLAN VIEW



SECTION A-A



PILE SPLICE DETAIL

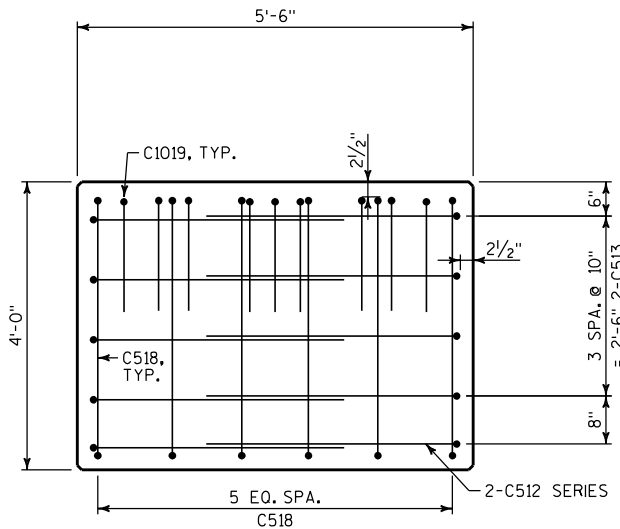


PILE HOLD DOWN DEVICE

LEGEND

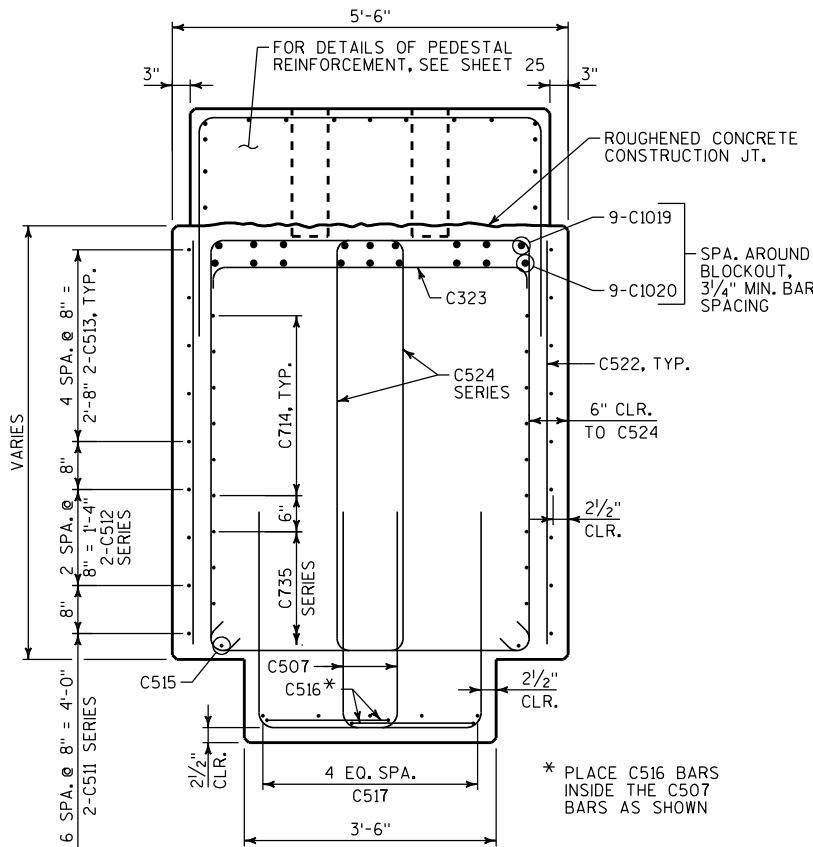
- DYNAMIC PILE LOAD TESTING
 - PILE REQUIRING PILE HOLD DOWN DEVICE.
 - PILE NOT REQUIRING PILE HOLD DOWN DEVICE.
 - PIER SUPPORTED ON HP14x89 PILING WITH A REQUIRED DRIVING RESISTANCE OF 255 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.
- ESTIMATED PILE LENGTH = 75'.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY CNK		PLANS CK'D. BKS	
PIER 2 (2 OF 4)		SHEET 23 OF 56	



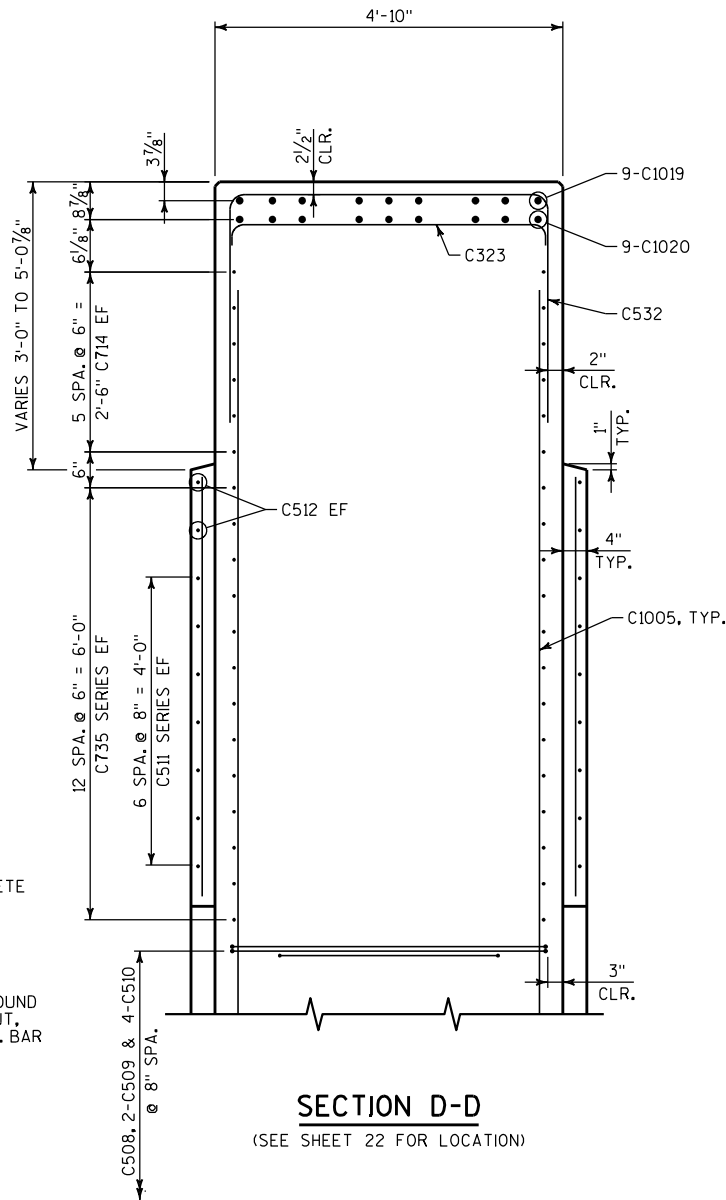
SECTION B-B

(SEE SHEET 22 FOR LOCATION)



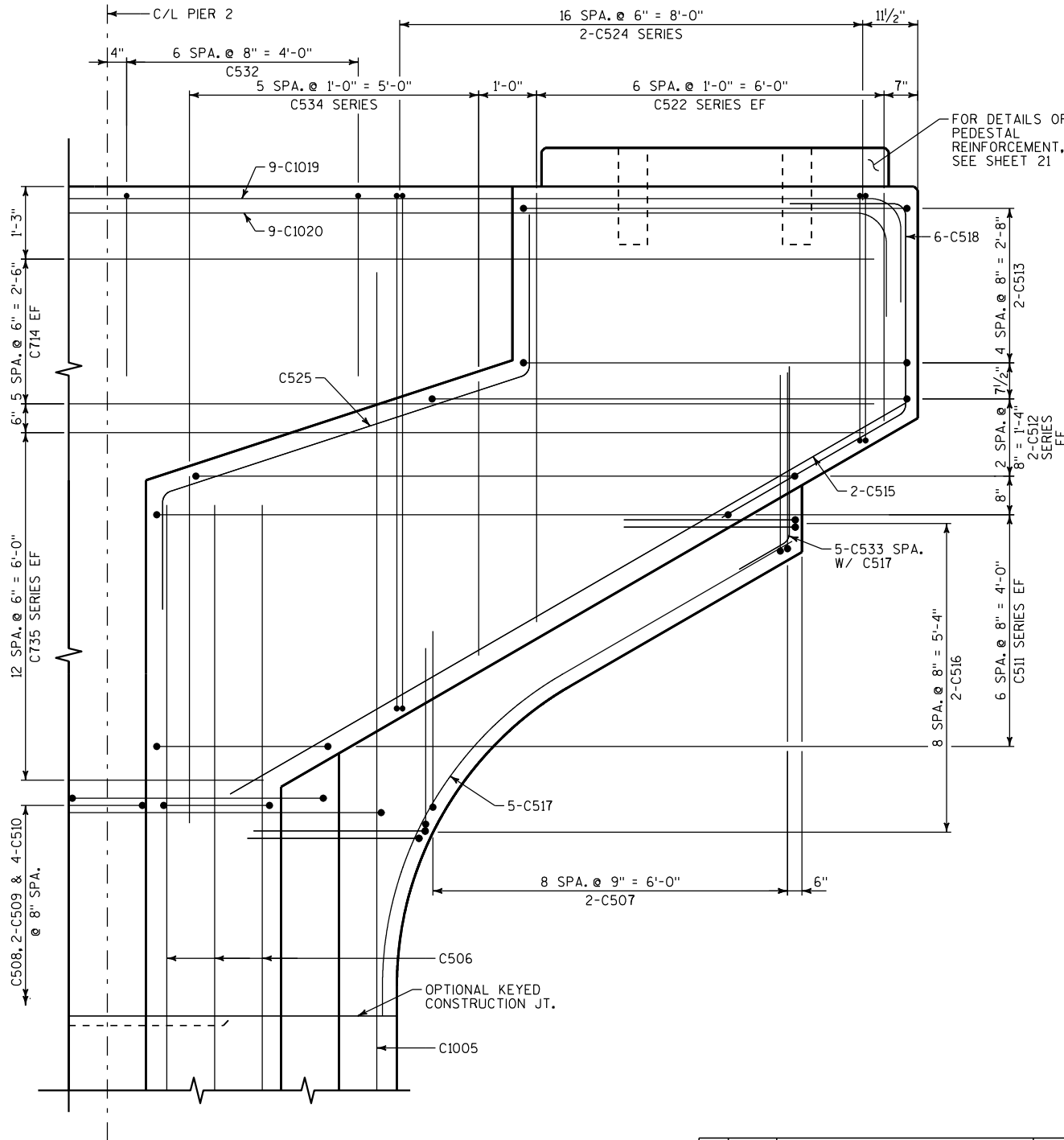
SECTION C-C

(SEE SHEET 22 FOR LOCATION)
(LAYOUT IS SYMMETRIC ABOUT C/L PIER 2)



SECTION D-D

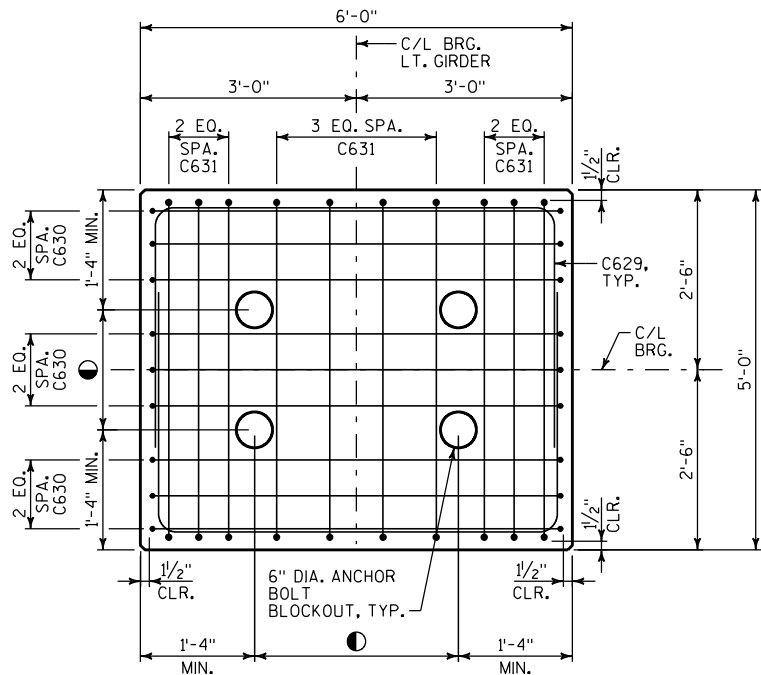
(SEE SHEET 22 FOR LOCATION)



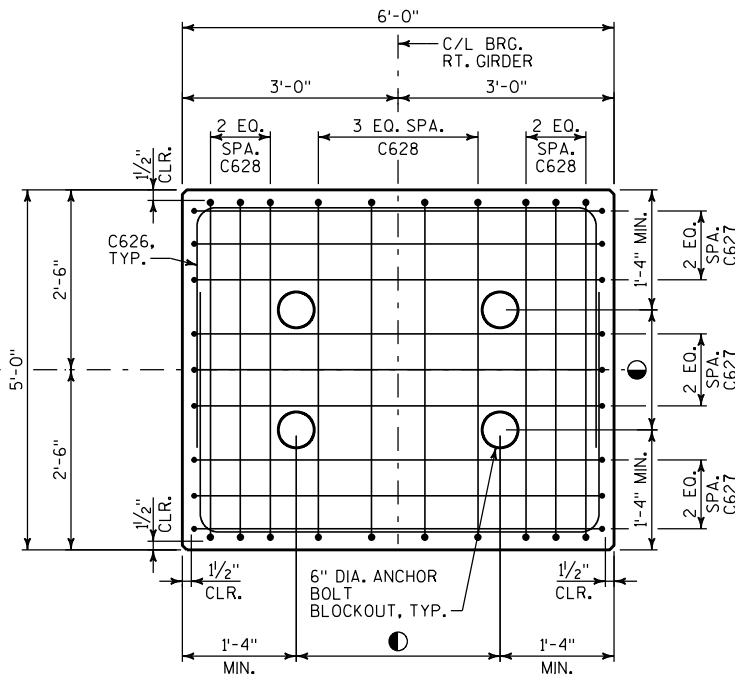
DETAIL 1

REINFORCEMENT AT TOP OF HAMMERHEAD
(REINFORCEMENT IS SYMMETRICAL ABOUT C/L PIER)

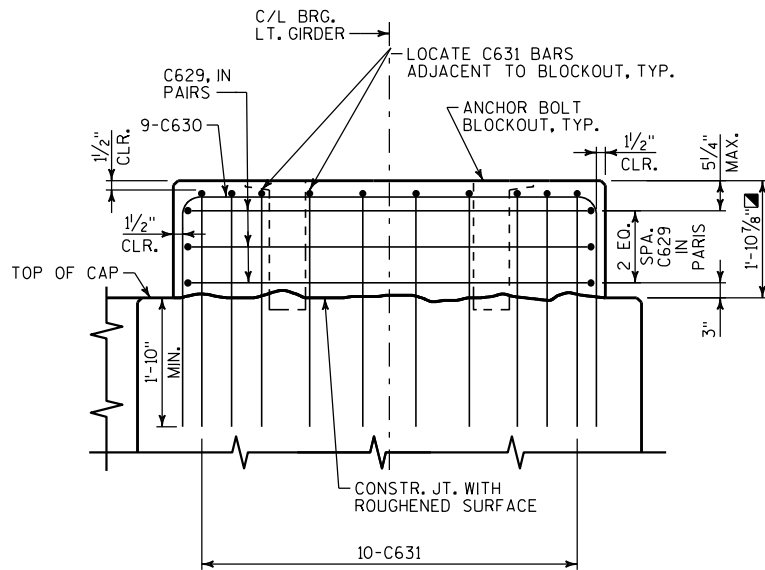
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		CNK	PLANS CK'D. BKS
PIER 2 (3 OF 4)		SHEET 24 OF 56	



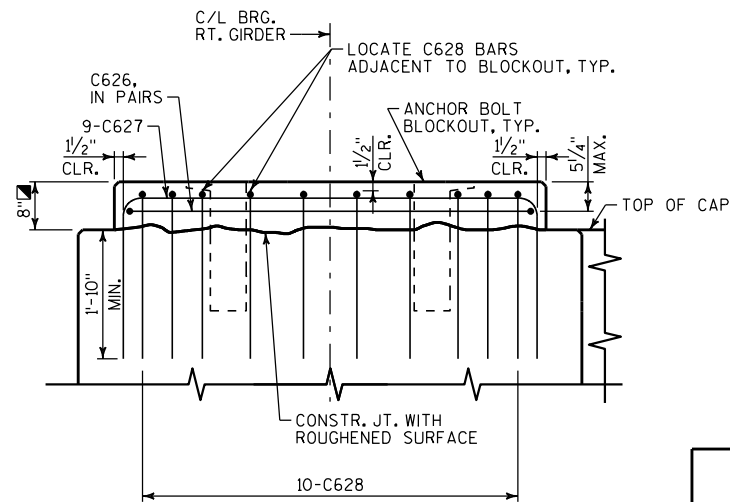
PEDESTAL PLAN - LEFT GIRDER



PEDESTAL PLAN - RIGHT GIRDER



PEDESTAL ELEVATION - LEFT GIRDER



PEDESTAL ELEVATION - RIGHT GIRDER

NOTES

FOR DETAILS OF ANCHOR BOLT BLOCKOUTS, SEE BEARING DETAILS SHEET.

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT SHEET AND BEARING DETAILS SHEET.

LEGEND

■ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEET. ADJUST AS REQUIRED TO SUIT THE ACTUAL SELECTED BEARING DIMENSIONS. MINIMUM PEDESTAL HEIGHT = 6". MAXIMUM PEDESTAL HEIGHT INCREASE = 3".

● SEE BEARING LAYOUT SHEET FOR ANCHOR BOLT BLOCKOUT LOCATION. VERIFY LOCATIONS WITH BEARING MANUFACTURER.

BILL OF BARS

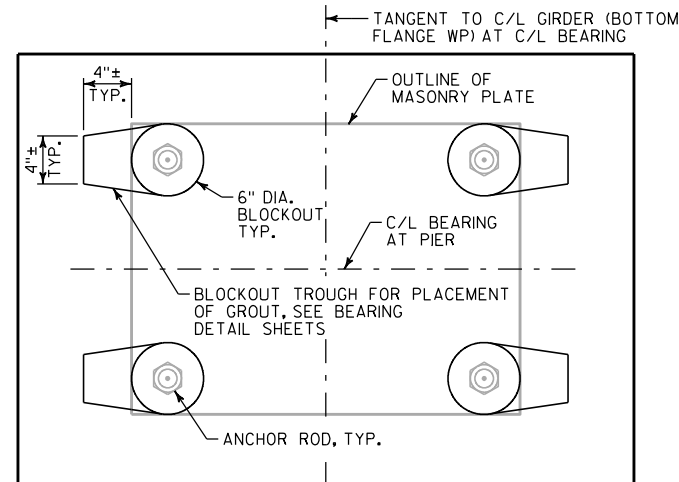
NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
C901		35	17'-2"	X		FOOTING BOTTOM
C1002		26	22'-6"	X		FOOTING BOTTOM
C503		35	14'-6"			FOOTING TOP
C504		26	19'-6"			FOOTING TOP
C1005	X	56	26'-3"	X		FOOTING DOWEL
C506	X	12	16'-9"			COLUMN VERTICAL
C507	X	36	8'-8"	X		COLUMN FLARE VERTICAL STIRRUP
C508	X	19	25'-11"	X		COLUMN HORIZONTAL
C509	X	38	18'-2"	X		COLUMN HORIZONTAL
C510	X	72	4'-7"	X		COLUMN HORIZONTAL
C511	X	28	13'-1"	X	▲	COLUMN FLARE HORIZONTAL
C512	X	12	15'-11"	X	▲	COLUMN FLARE HORIZONTAL
C513	X	20	13'-3"	X		COLUMN FLARE HORIZONTAL
C714	X	12	26'-6"			COLUMN FLARE HORIZONTAL
C515	X	4	11'-6"			COLUMN FLARE DIAGONAL
C516	X	36	7'-5"	X		COLUMN FLARE HORIZONTAL
C517	X	10	11'-8"	X		COLUMN RADIUS
C518	X	12	7'-6"	X		COLUMN ENDS
C1019	X	9	30'-5"	X		COLUMN TOP REINFORCEMENT
C1020	X	9	29'-11"	X		COLUMN TOP REINFORCEMENT
C921		12	7'-9"	X		FOOTING PILE HOLD DOWN
C522	X	28	5'-9"		▲	COLUMN FLARE VERTICAL
C323	X	13	4'-11"	X		TOP REINF SUPPORT
C524	X	68	18'-9"	X	▲	COLUMN FLARE STIRRUP
C525	X	4	12'-4"	X		COLUMN FLARE REVEAL
C626	X	2	12'-1"	X		RIGHT BEAM SEAT PEDESTAL
C627	X	9	10'-5"	X		RIGHT BEAM SEAT PEDESTAL
C628	X	10	9'-7"	X		RIGHT BEAM SEAT PEDESTAL
C629	X	6	12'-1"	X		LEFT BEAM SEAT PEDESTAL
C630	X	9	13'-3"	X		LEFT BEAM SEAT PEDESTAL
C631	X	10	12'-3"	X		LEFT BEAM SEAT PEDESTAL
C532	X	14	10'-6"	X		VERTICAL TIE
C533	X	10	3'-11"	X		BOTTOM OF CAP FLARE
C534	X	24	5'-5"		▲	COLUMN FLARE VERTICAL
C735	X	26	15'-10"		▲	COLUMN FLARE HORIZONTAL

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

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
C511	4 SERIES OF 7	8'-10" TO 16'-7"
C512	4 SERIES OF 3	14'-11" TO 19'-2"
C524	4 SERIES OF 17	14'-1" TO 23'-5"
C522	4 SERIES OF 7	4'-0" TO 7'-5"
C534	4 SERIES OF 6	4'-9" TO 6'-0"
C735	2 SERIES OF 13	5'-5" TO 26'-2"

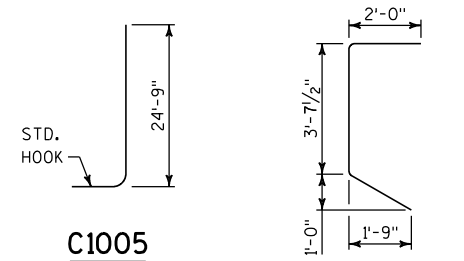


PLAN - TOP OF PEDESTAL

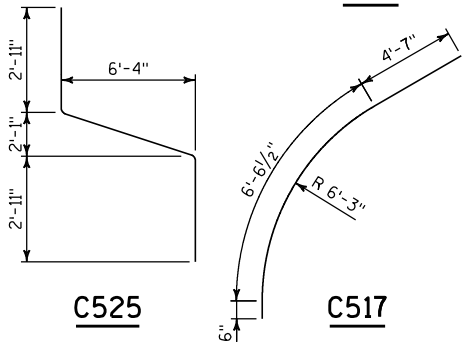
SEE BEARING DETAILS SHEET

STATE PROJECT NUMBER

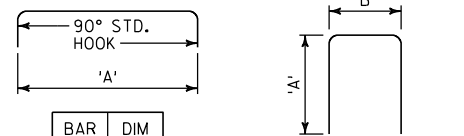
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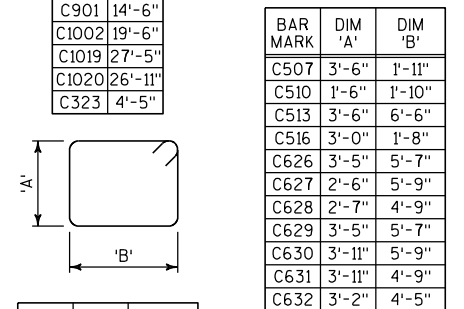
C1005



C518



C525



C517

BAR MARK	DIM 'A'	DIM 'B'
C901	14'-6"	
C1002	19'-6"	
C1019	27'-5"	
C1020	26'-11"	
C323	4'-5"	

BAR MARK	DIM 'A'	DIM 'B'
C507	3'-6"	1'-11"
C510	1'-6"	1'-10"
C513	3'-6"	6'-6"
C516	3'-0"	1'-8"
C626	3'-5"	5'-7"
C627	2'-6"	5'-9"
C628	2'-7"	4'-9"
C629	3'-5"	5'-7"
C630	3'-11"	5'-9"
C631	3'-11"	4'-9"
C632	3'-2"	4'-5"



C921

BAR MARK	DIM 'A'	DIM 'B'
C508	3'-1"	9'-7"
C509	4'-5"	4'-5 1/2"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-776

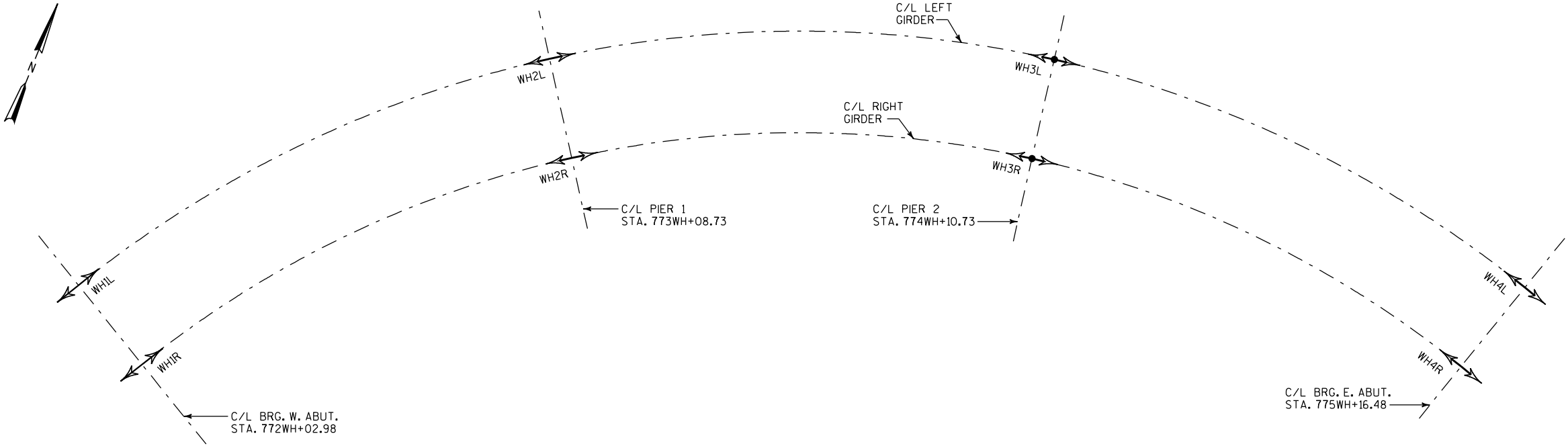
DRAWN BY CNK PLANS CK'D. BKS

PIER 2
(4 OF 4)

SHEET 25 OF 56

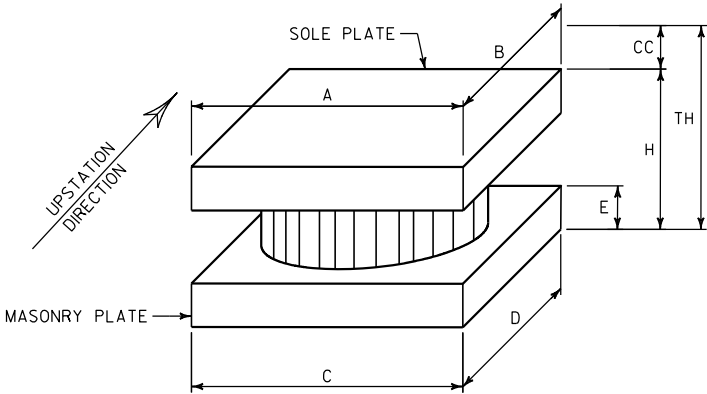
BEARING LEGEND

- ↔ HIGH LOAD MULTI-ROTATIONAL GUIDED (ARROWHEADS DENOTE MOVEMENT DIRECTIONS)
- HIGH LOAD MULTI-ROTATIONAL FIXED

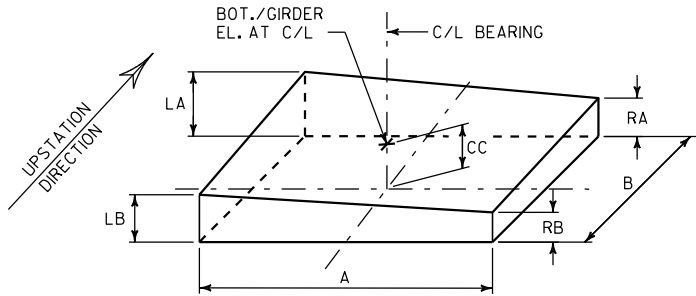


PLAN

BEARING MARK	BEARING TYPE	SKEW ANGLE 'SK'	BOT./ GIRDER EL. AT C/L	TOP OF PEDESTAL EL.	NOMINAL BEARING DIMENSIONS																				ANCHOR BOLTS			
					VERTICAL FORCES				TRANSVERSE		LONGITUDINAL		MOVEMENT 90° (ONE WAY)		ROTATIONS	BEVELED TOP PLATE THICKNESS					TOP PLATE & SOLE PLATE		MASONRY PLATE			BEARING ASSEMBLY		
					SERVICE		STRENGTH									LB	RB	LA	RA	CC	A	B	C	D		E	H	TH
					PERMANENT (KIPS)	TOTAL (KIPS)	PERMANENT (KIPS)	TOTAL (KIPS)	SERVICE (KIPS)	STRENGTH (KIPS)	SERVICE (KIPS)	STRENGTH (KIPS)	TRANS (IN)	LONGIT (IN)	STRENGTH RADIAN	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)		(IN)	(IN)	
WH1L	GUIDED	0°	770.49	769.78	260	500	330	740	75	105	50	50	---	1¾"	0.008	2⅞"	1"	3"	1¼"	2"	30"	24"	36"	24"	1¼"	6⅜"	8⅜"	4 - 1" DIA.
WH1R			769.23	768.52	140	330	180	500	75	105	50	50	---	1¾"	0.008	2⅞"	1"	3"	1¼"	2"	30"	24"	36"	24"	1¼"	6⅜"	8⅜"	4 - 1" DIA.
WH2L	GUIDED	0°	770.69	769.86	570	960	720	1410	55	70	85	85	---	⅞"	0.007	3¼"	1⅞"	3¼"	1"	2⅞"	36"	28"	42"	28"	1¼"	7¾"	9⅞"	4 - 1" DIA.
WH2R			769.44	768.61	520	860	660	1260	55	70	85	85	---	⅞"	0.007	3¼"	1⅞"	3¼"	1"	2⅞"	36"	28"	42"	28"	1¼"	7¾"	9⅞"	4 - 1" DIA.
WH3L	FIXED	N/A	769.97	769.15	570	960	720	1410	65	80	105	115	---	---	0.007	3¼"	1⅜"	3"	1"	2⅞"	32"	26"	38"	28"	1¼"	7½"	9⅝"	4 - 1¼" DIA.
WH3R			768.72	767.90	520	860	660	1260	65	80	105	115	---	---	0.007	3¼"	1⅜"	3"	1"	2⅞"	32"	26"	38"	28"	1¼"	7½"	9⅝"	4 - 1¼" DIA.
WH4L	GUIDED	0°	768.17	767.46	260	500	330	740	75	90	50	50	---	1⅞"	0.008	3"	1½"	2½"	1"	2"	30"	24"	36"	24"	1¼"	6⅜"	8⅜"	4 - 1" DIA.
WH4R			767.17	766.46	140	330	180	500	75	90	50	50	---	1⅞"	0.008	3"	1½"	2½"	1"	2"	30"	24"	36"	24"	1¼"	6⅜"	8⅜"	4 - 1" DIA.



BEARING DIMENSION KEY



BEVELED TOP PLATE DIMENSION KEY

LB = LEFT BACK STATION
LA = LEFT AHEAD STATION
RB = RIGHT BACK STATION
RA = RIGHT AHEAD STATION

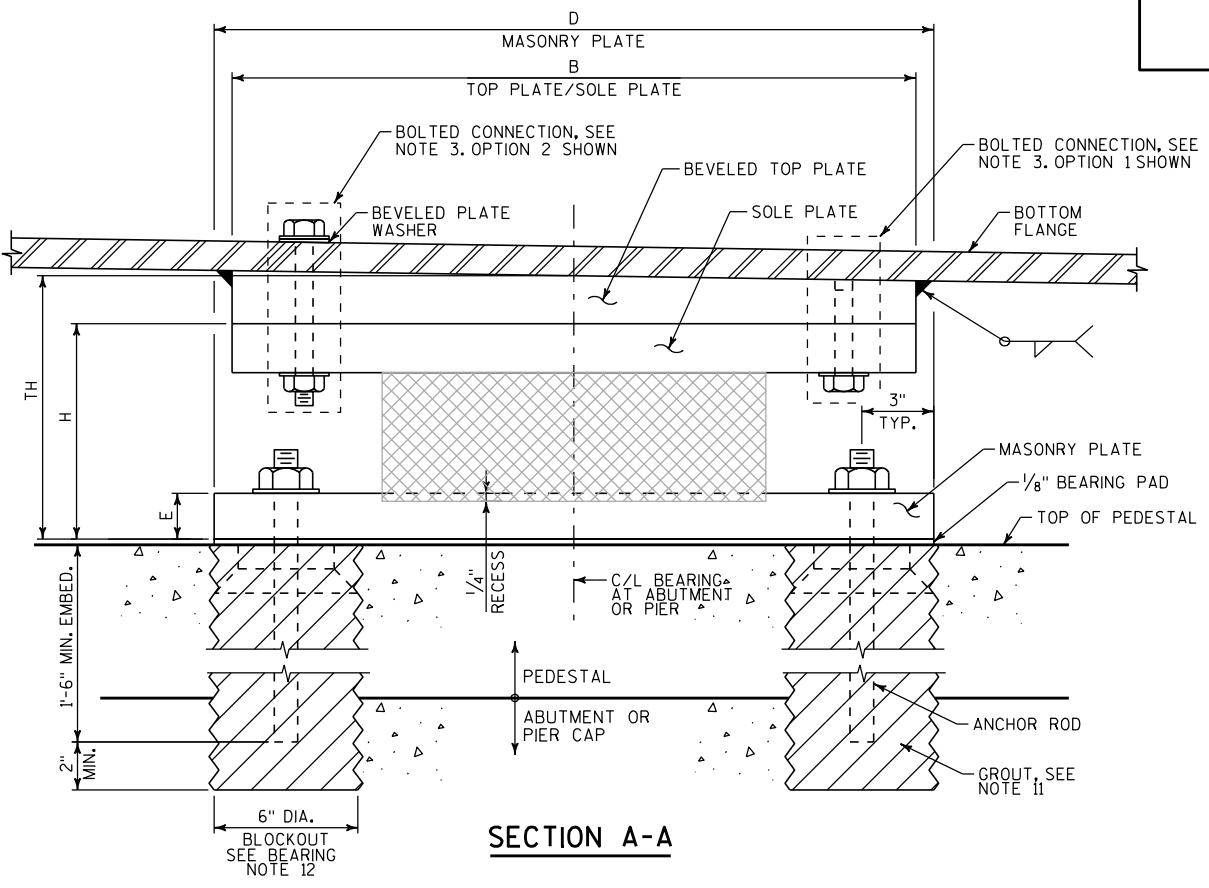
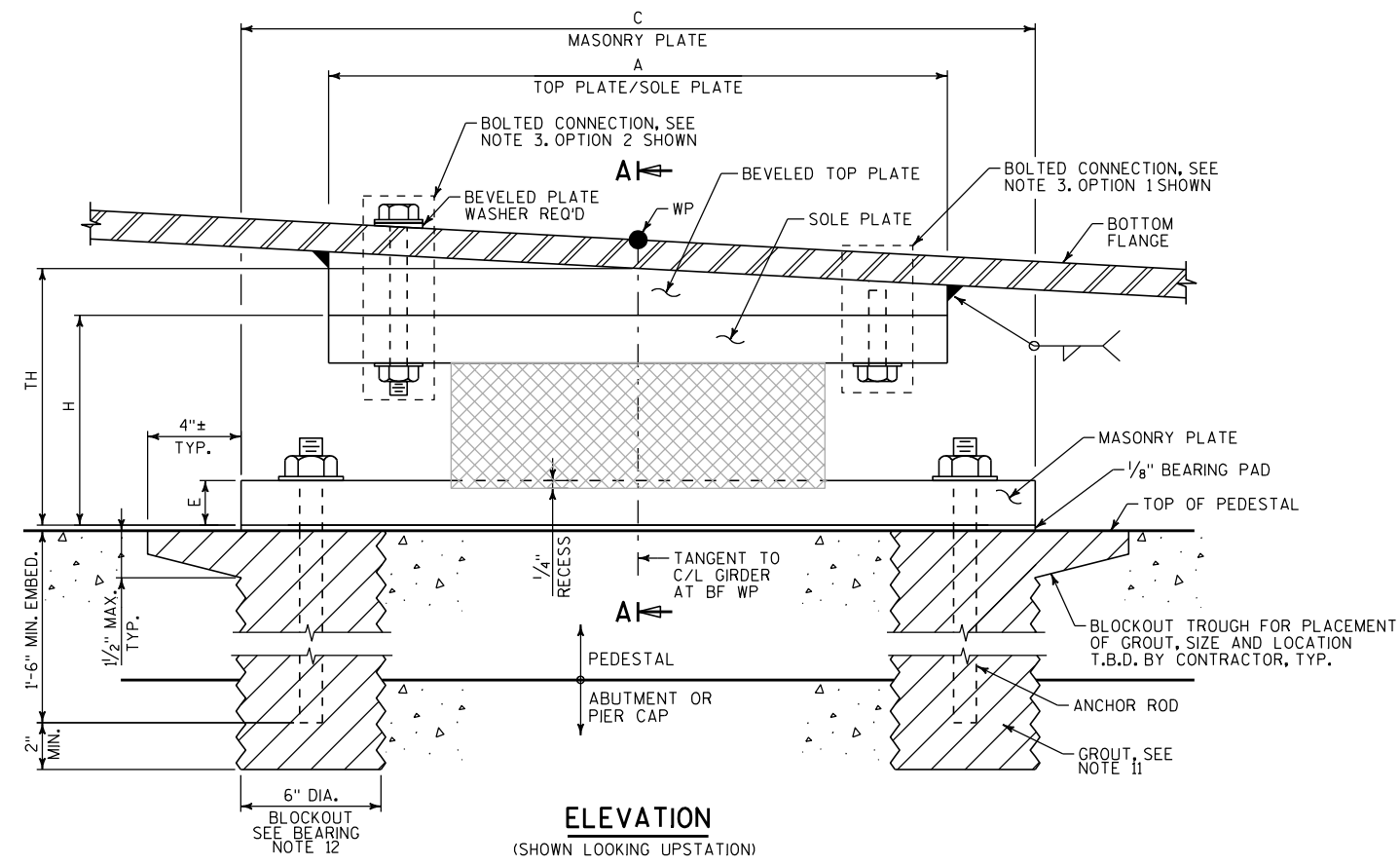
NOTES

- FOR TYPICAL BEARING DETAILS, SEE BEARING DETAILS SHEET.
- BEARING DIMENSIONS SHOWN ARE NOMINAL VALUES ONLY AND WILL VARY WITH THE SELECTED MANUFACTURER. MAKE ALL NECESSARY ADJUSTMENTS TO DIMENSIONS AND ELEVATIONS AS REQUIRED TO INCORPORATE THE SPECIFIC BEARINGS SELECTED.
- FORCES SPECIFIED ARE MAXIMUM EFFECTS FOR LRFD LOAD COMBINATIONS, INCLUDING DYNAMIC LOAD ALLOWANCE.
- HORIZONTAL FORCES SPECIFIED IN THE TABLE ARE THE EXPECTED APPLIED FORCES. DESIGN BEARINGS FOR THESE VALUES OR 15 PERCENT OF THE VERTICAL PERMANENT LOAD, WHICHEVER IS LARGER.

ROTATION VALUES IN THE TABLE INCLUDE AN ALLOWANCE OF 0.005 RADIAN FOR UNCERTAINTIES.

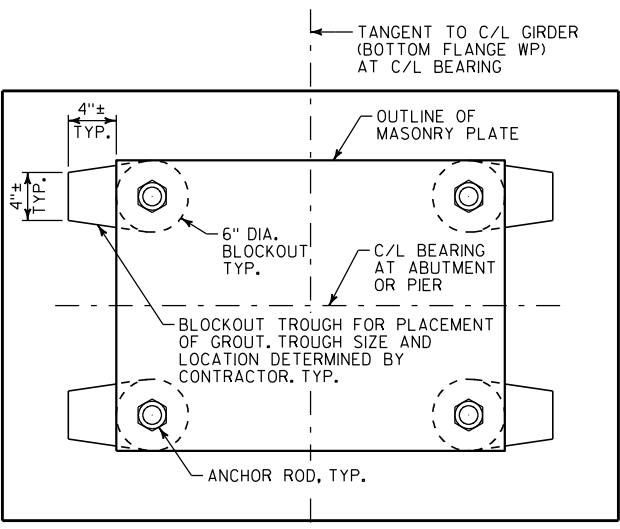
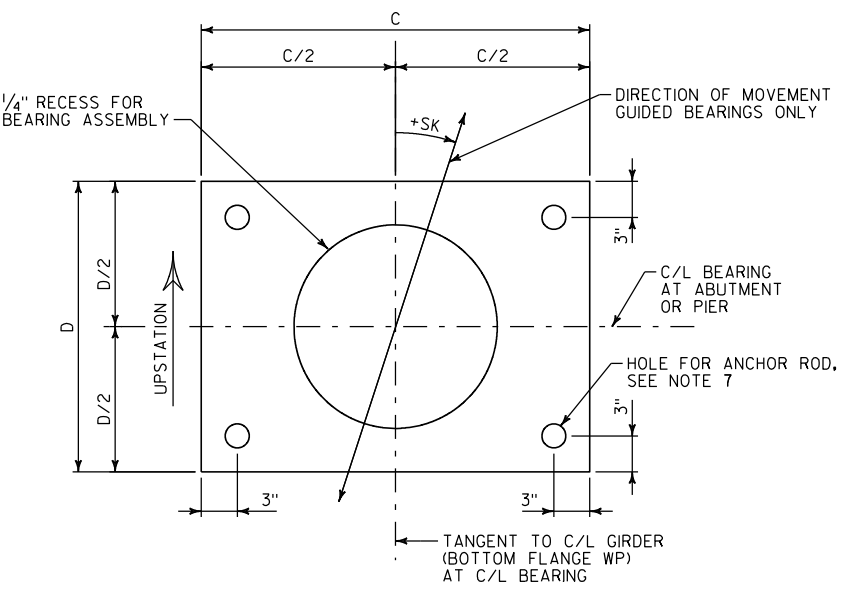
FOR POT BEARINGS, INCREASE THE ROTATIONAL DEMAND BY AN ADDITIONAL 0.005 RADIAN TO ACCOUNT FOR CONSTRUCTION TOLERANCES.
- FOR DEFINITION OF SKEW ANGLE 'SK', SEE "PLAN - MASONRY PLATE" ON THE BEARING DETAILS SHEET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
BEARING LAYOUT		SHEET 26 OF 56	



LEGEND

CROSSHATCHING INDICATES PART OF THE BEARING ASSEMBLY THAT IS TO BE SUPPLIED AND DESIGNED BY THE BEARING MANUFACTURER. THE MASONRY PLATE AND SOLE PLATE ARE TO BE PROVIDED BY THE BEARING MANUFACTURER AND SIZED ACCORDING TO BEARING NOTES 4 & 6. THE BEVELED TOP PLATE DIMENSIONS SHOULD BE COORDINATED BETWEEN THE STEEL FABRICATOR AND THE BEARING MANUFACTURER. THE BEVELED TOP PLATE IS INCLUDED IN THE QUANTITY FOR "STRUCTURAL STEEL HS".



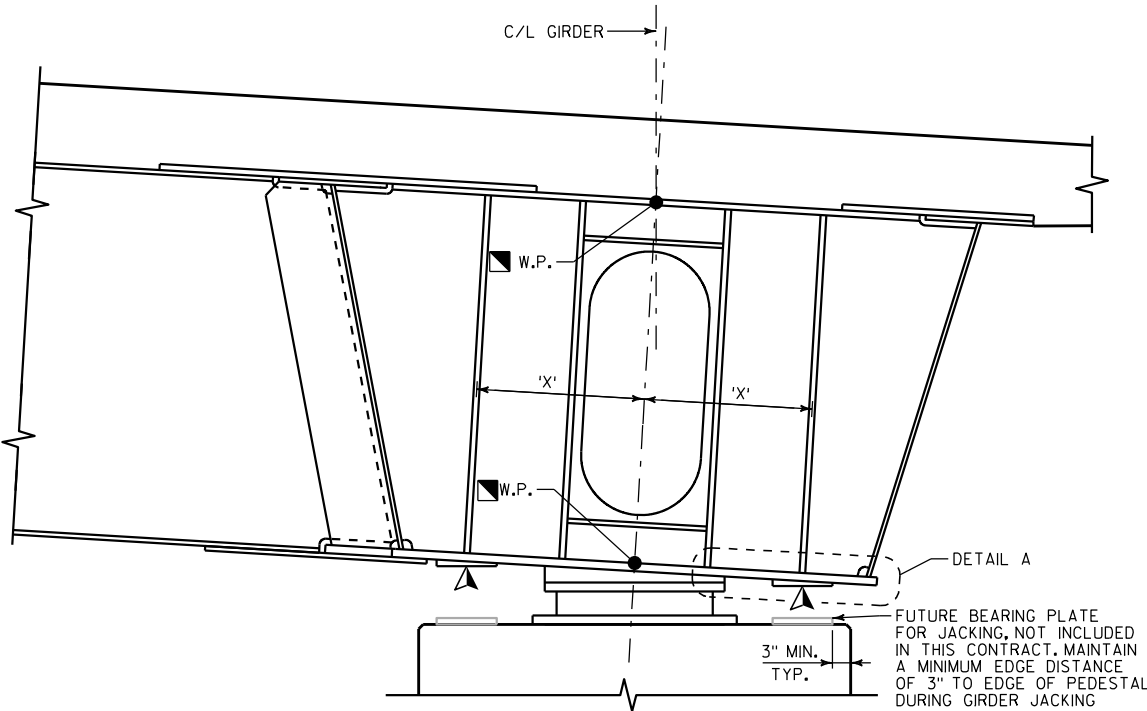
BEARING NOTES

- SEE BEARING LAYOUT SHEETS FOR BEARING LAYOUT AND LOCATION SPECIFIC DIMENSIONS.
- SEE JACKING PROVISION SHEET FOR LOCATION AND SIZE OF BEARING REPLACEMENT JACKING PADS ATTACHED TO BOTTOM OF GIRDER FLANGE.
- DESIGN BOLTED CONNECTION BETWEEN SOLE PLATE AND BEVELED TOP PLATE FOR A MINIMUM OF 1.25 TIMES THE COMBINED SPECIFIED HORIZONTAL LOADS. ARRANGE CONNECTION TO ENSURE ALL BOLTS CAN BE REMOVED WITHOUT INTERFERENCE FROM ANCHOR RODS OR OTHER OBSTRUCTIONS AFTER BEARING IS INSTALLED.
BOLTED CONNECTION OPTION 1: TAP HOLES COMPLETELY THROUGH TOP PLATE. ENGAGE BOLTS TO WITHIN 1/4" OF BOTTOM FLANGE.
BOLTED CONNECTION OPTION 2: BOLT DOWNWARD THROUGH BOTTOM FLANGE, BEVELED TOP PLATE, & SOLE PLATE.
- SOLE PLATE THICKNESS TO BE SELECTED BY THE BEARING MANUFACTURER. MINIMUM 1".
- HOLES IN SOLE PLATE MAY BE SLOTTED OR OVERSIZED AS REQUIRED TO FACILITATE STEEL ERECTION. IF OVERSIZED OR SLOTTED HOLES ARE USED, THE CONNECTION SHALL BE DESIGNED AS SLIP-RESISTANT.
- MASONRY PLATE THICKNESS TO BE CONFIRMED BY THE BEARING DESIGNER AND INCREASED IF REQUIRED. NO REDUCTION PERMITTED.
- HOLES IN MASONRY PLATE SHALL BE A MAXIMUM OF 1/8" LARGER THAN THE SPECIFIED ANCHOR BOLT DIAMETER.

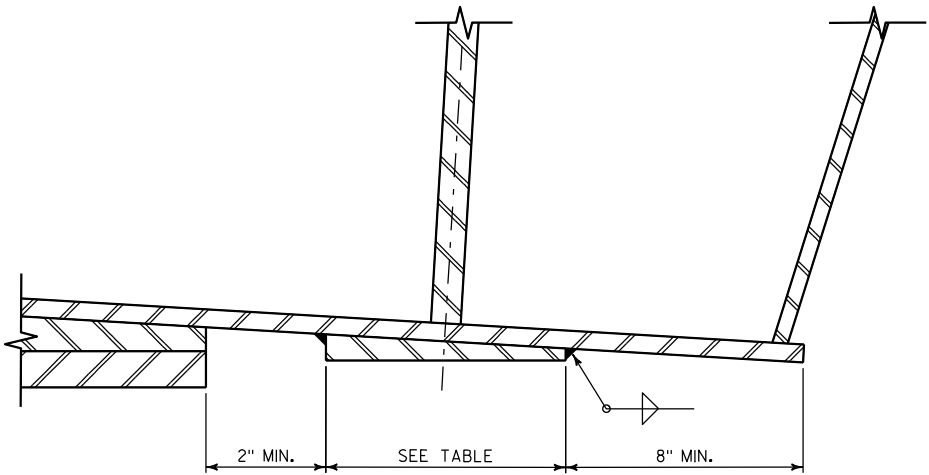
BEARING NOTES, CONTINUED

- ANCHOR RODS SHALL BE IN ACCORDANCE WITH ASTM F1554 (GRADE 105) AND HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M232.
- BEARINGS SHALL BE DESIGNED TO PERMIT REPLACEMENT BY JACKING THE BRIDGE A MAXIMUM OF 1/2".
- PROVIDED A 1/8" THICK BEARING PAD THE SAME SIZE AS THE MASONRY PLATE, THE THICKNESS OF THE PAD IS NOT INCLUDED IN THE HEIGHT ("H" OR "TH") OF THE BEARING ASSEMBLY.
- NON-SHRINK GROUT USED IN FILLING THE ANCHOR BOLT BLOCKOUTS SHALL BE PROVIDED AS STATED IN THE BEARING SPECIAL PROVISION. THE MINIMUM 28-DAY COMPRESSIVE STRENGTH SHALL BE 6.0 KSI. GROUTING MATERIALS AND INSTALLATION ARE CONSIDERED INCIDENTAL TO THE PAY ITEM FOR THE BEARING ASSEMBLY.
- THE TYPE OF BLOCKOUT SHALL BE DETERMINED BY THE CONTRACTOR. TEMPORARY BLOCKOUTS OR BLOCKOUTS WITH STAY-IN-PLACE FORMS ARE ALLOWED. IF BLOCKOUTS CONSISTING OF STAY-IN-PLACE FORMS ARE USED, THE TOP OF THE FORM MUST BE AT OR BELOW THE TOP OF THE PEDESTAL CONCRETE. THE CONTRACTOR SHALL PREVENT WATER FROM FREEZING AND EXPANDING WITHIN THE BLOCKOUT.
- THE BEARING ASSEMBLIES SHALL BE PAINTED OR ZINC METALIZED AS OUTLINED IN THE BEARING SPECIAL PROVISION. IF BEARING ASSEMBLIES ARE PAINTED, THE COLOR SHALL MATCH THE COLOR OF THE EXTERIOR OF THE BOX GIRDER.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
BEARING DETAILS			SHEET 27 OF 56



SECTION AT C/L OF PIER
(ABUTMENT SIMILAR)



DETAIL A

LEGEND

- ▲ SUGGESTED JACKING LOCATIONS FOR FUTURE BEARING REPLACEMENT
- SEE GIRDER SECTION SHEET FOR DEFINITION OF WORKING POINTS

NOTES

- THIS DRAWING SHOWS DETAILS AND LOCATION OF JACKING PADS AND ADDITIONAL WEB 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 SHEET. 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.

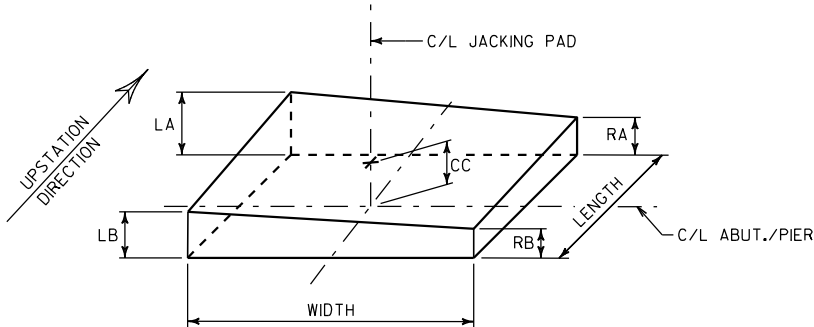
ADDITIONAL MEASURES SHALL BE TAKEN TO CORRECT FOR ANY UNINTENDED SLOPE AND TO ENSURE THAT JACKS ARE POSITIVELY HELD IN POSITION ON THE JACKING PADS.
- ESTIMATED JACKING FORCES ARE GIVEN AT EACH PAD AND ARE BASED ON UNFACTORED DEAD LOAD REACTIONS ONLY - NO LIVE LOAD IS INCLUDED AND NO ADDITIONAL ALLOWANCES 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.
- JACKING PROVISIONS HAVE BEEN DESIGNED ASSUMING THAT THE STRUCTURE IS CLOSED TO TRAFFIC AT ALL TIMES THAT THE STRUCTURE IS NOT RESTING ON THE PERMANENT BEARINGS.
- 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 ABUTMENT AND PIER DIAPHRAGM SYSTEM WILL BE REQUIRED IN ORDER TO ACCOUNT FOR THE REDISTRIBUTION OF FORCES WITHIN THE SYSTEM.

LOCATION	NUMBER OF PADS PER GIRDER	JACKING PAD DIMENSIONS							OFFSET 'X' *	MIN. JACK FORCE (KIPS) **
		WIDTH (IN) *	LENGTH (IN) *	LB (IN)	RB (IN)	LA (IN)	RA (IN)	CC (IN)		
WEST ABUT.	2	10"	24"	1 ⁵ / ₈ "	1"	1 ¹³ / ₁₆ "	1 ³ / ₁₆ "	1 ³ / ₈ "	2'-4"	140
PIER 1	2	10"	24"	1 ¹¹ / ₁₆ "	1 ¹ / ₁₆ "	1 ⁵ / ₈ "	1"	1 ⁹ / ₁₆ "	2'-4"	295
PIER 2	2	10"	24"	1 ⁵ / ₁₆ "	1 ³ / ₁₆ "	1 ⁵ / ₈ "	1"	1 ¹ / ₁₆ "	2'-4"	295
EAST ABUT.	2	10"	24"	2"	1 ¹ / ₂ "	1 ¹ / ₂ "	1"	1 ¹ / ₂ "	2'-4"	140

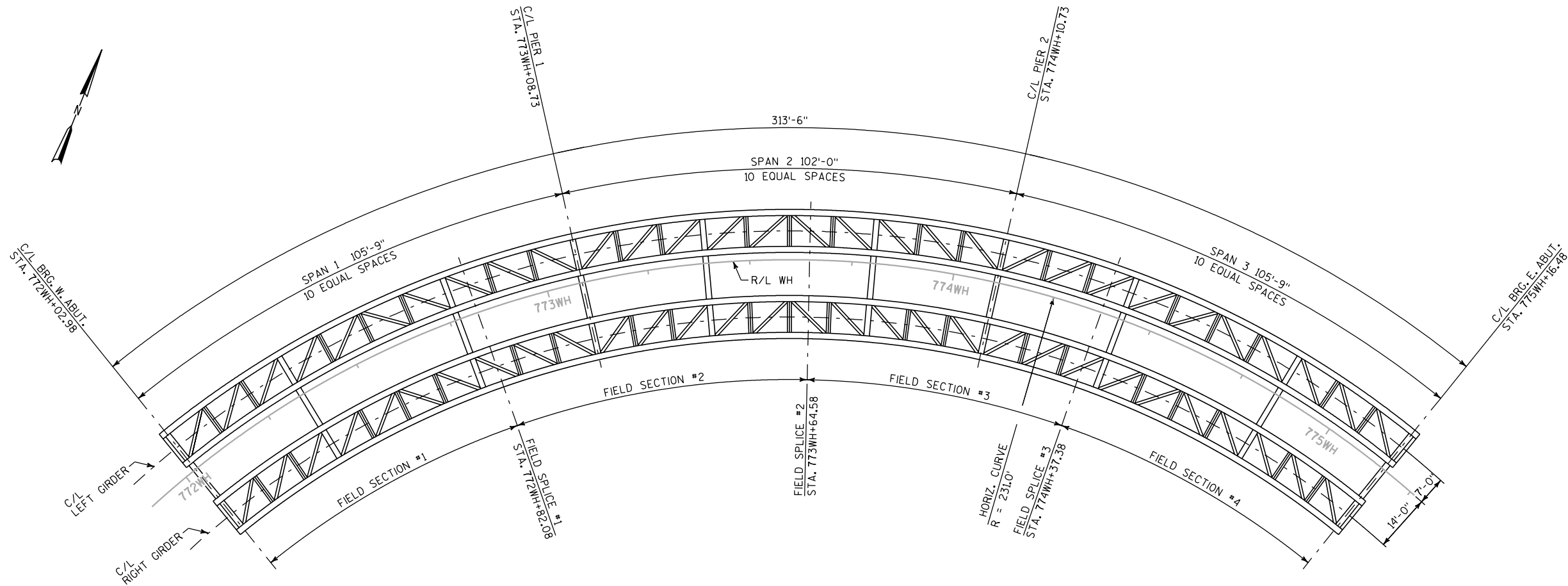
* SEE NOTE 2
** SEE NOTE 4, FORCE SHOWN IS PER PAD



JACKING PAD DIMENSION KEY

LB = LEFT BACK STATION
LA = LEFT AHEAD STATION
RB = RIGHT BACK STATION
RA = RIGHT AHEAD STATION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
JACKING PROVISIONS			SHEET 28 OF 56



FRAMING PLAN

ALL DIMENSIONS ARE TAKEN ALONG R/L WH

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
		DRAWN BY	GLM
		PLANS CK'D.	BKS
FRAMING PLAN		SHEET 29 OF 56	

LEGEND

- K1** K-FRAME LOCATION, SEE DETAILS ON INTERMEDIATE K-FRAME AND STRUT SHEET.
- ST** TRANSVERSE STRUT LOCATION, SEE DETAILS ON INTERMEDIATE K-FRAME AND STRUT SHEET.
- AD** ABUTMENT DIAPHRAGM LOCATION, SEE DETAILS ON ABUTMENT DIAPHRAGM SHEET.
- PD** PIER DIAPHRAGM LOCATION, SEE DETAILS ON PIER DIAPHRAGM SHEET.
- IDX** INTERMEDIATE DIAPHRAGM LOCATION, SEE DETAILS ON INTERMEDIATE DIAPHRAGM SHEET. THE "X" REPRESENTS THE INTERMEDIATE DIAPHRAGM NUMBER.
- 1A** LATERAL BRACING MARK NUMBER, SEE LATERAL BRACING DETAILS SHEET FOR MEMBER SIZE AND CONNECTION DETAILS.
- D** BOTTOM FLANGE DRAIN HOLE LOCATION, SEE DETAILS ON MISCELLANEOUS GIRDER DETAILS SHEET.
- V** WEB PLATE VENT HOLE LOCATION, SEE DETAILS ON MISCELLANEOUS GIRDER DETAILS SHEET.
- AH** BOTTOM FLANGE ACCESS HATCH LOCATION, SEE DETAILS ON ACCESS HATCH DETAILS SHEET.
- PX-X** PANEL POINT IDENTIFIER, FIRST "X" REPRESENTS FIELD SECTION, SECOND "X" REPRESENTS A POINT WITHIN THE FIELD SECTION.
- SEE GIRDER SECTION SHEET FOR LOCATION OF WORKING POINT.

NOTES

- FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE MISCELLANEOUS GIRDER DETAILS SHEET.
- FOR CAMBER REQUIREMENTS, SEE CAMBER DIAPHRAGM SHEET AND CAMBER AND DECK ELEVATIONS SHEETS.
- 'TENSION ZONE' DENOTES ZONES OF TOP AND BOTTOM FLANGES ASSUMED TO CARRY TENSILE STRESS IN THE COMPLETED STRUCTURE. FIELD WELDING TO TENSION FLANGES AND WEB IS PROHIBITED, EXCEPT FOR SHEAR STUD CONNECTIONS TO THE TOP FLANGE.
- BEVELED TOP PLATE, SEE BEARING SHEETS FOR DETAILS. THE DIMENSIONS OF THE BEVELED TOP PLATE SHALL BE COORDINATED WITH THE BEARING MANUFACTURER. PAYMENT FOR THE BEVELED TOP PLATE IS INCLUDED WITH THE BID ITEM "STRUCTURAL STEEL HS".
- DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATION ARE HORIZONTAL DIMENSIONS.

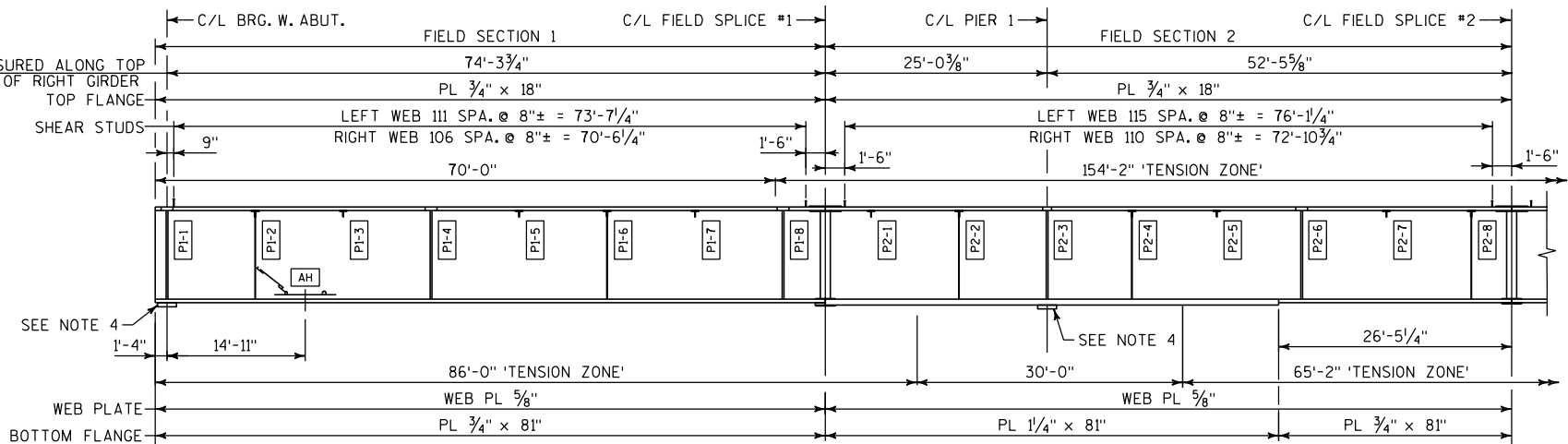
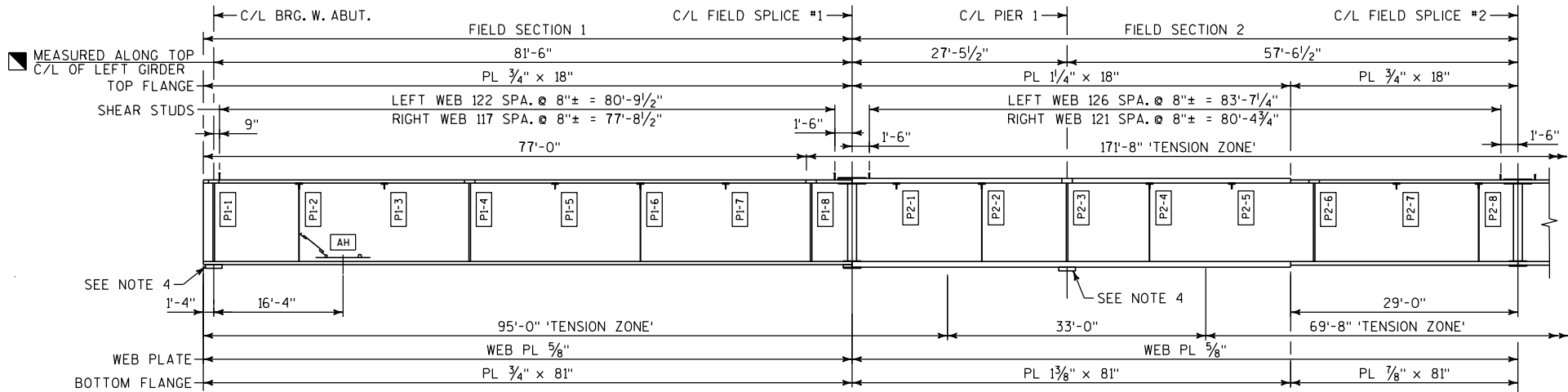
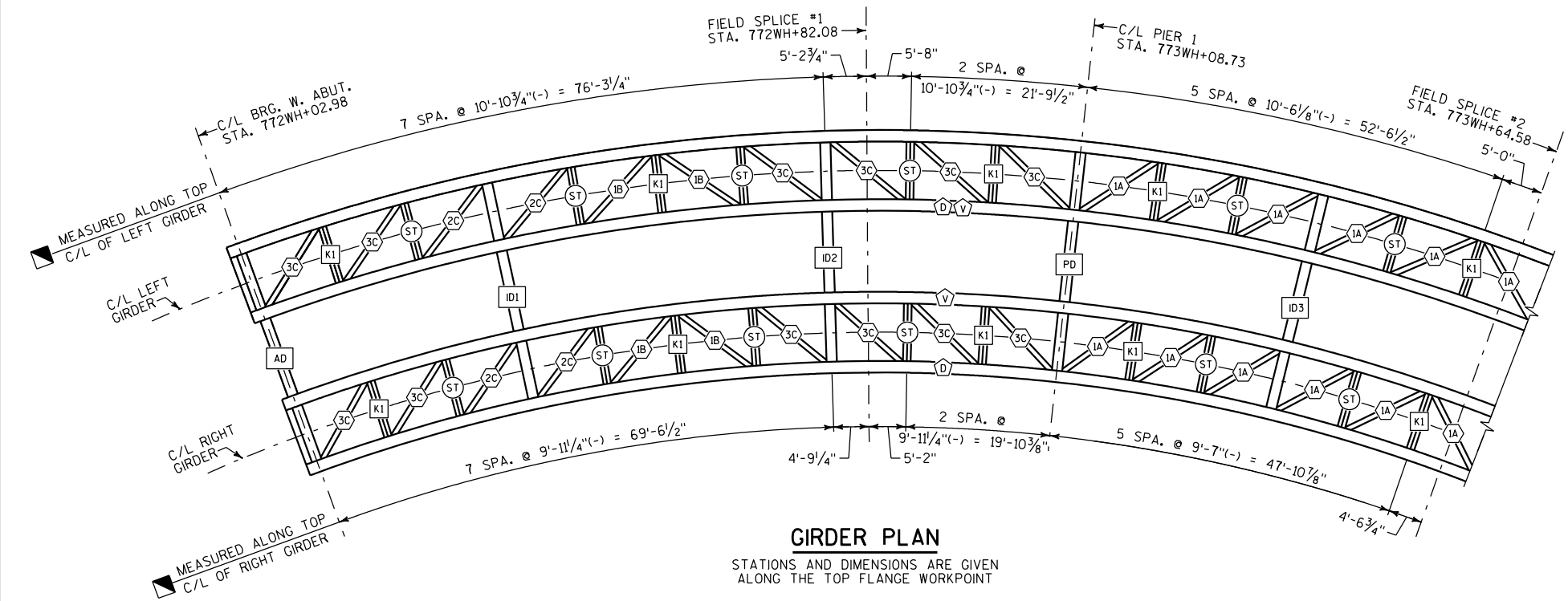
GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN
ALONG THE TOP FLANGE WORKPOINT

LEFT GIRDER INTERIOR ELEVATION

RIGHT GIRDER INTERIOR ELEVATION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		GLM	PLANS CK'D. BKS
GIRDER PLAN AND ELEVATION (1 OF 2)			SHEET 30 OF 56



LEGEND

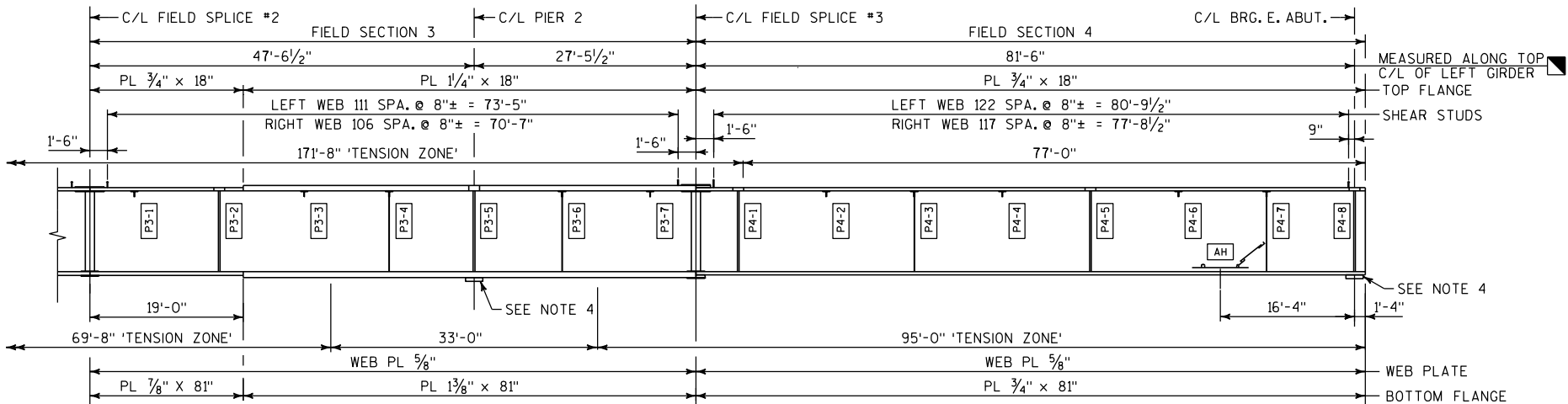
- K1** K-FRAME LOCATION, SEE DETAILS ON INTERMEDIATE K-FRAME AND STRUT SHEET.
- ST** TRANSVERSE STRUT LOCATION, SEE DETAILS ON INTERMEDIATE K-FRAME AND STRUT SHEET.
- AD** ABUTMENT DIAPHRAGM LOCATION, SEE DETAILS ON ABUTMENT DIAPHRAGM SHEET.
- PD** PIER DIAPHRAGM LOCATION, SEE DETAILS ON PIER DIAPHRAGM SHEET.
- IDX** INTERMEDIATE DIAPHRAGM LOCATION, SEE DETAILS ON INTERMEDIATE DIAPHRAGM SHEET. THE "X" REPRESENTS THE INTERMEDIATE DIAPHRAGM NUMBER.
- 1A** LATERAL BRACING MARK NUMBER, SEE LATERAL BRACING DETAILS SHEET FOR MEMBER SIZE AND CONNECTION DETAILS.
- D** BOTTOM FLANGE DRAIN HOLE LOCATION, SEE DETAILS ON MISCELLANEOUS GIRDER DETAILS SHEET.
- V** WEB PLATE VENT HOLE LOCATION, SEE DETAILS ON MISCELLANEOUS GIRDER DETAILS SHEET.
- AH** BOTTOM FLANGE ACCESS HATCH LOCATION, SEE DETAILS ON ACCESS HATCH DETAILS SHEET.
- PX-X** PANEL POINT IDENTIFIER, FIRST "X" REPRESENTS FIELD SECTION, SECOND "X" REPRESENTS A POINT WITHIN THE FIELD SECTION.
- SEE GIRDER SECTION SHEET FOR LOCATION OF WORKING POINT.

NOTES

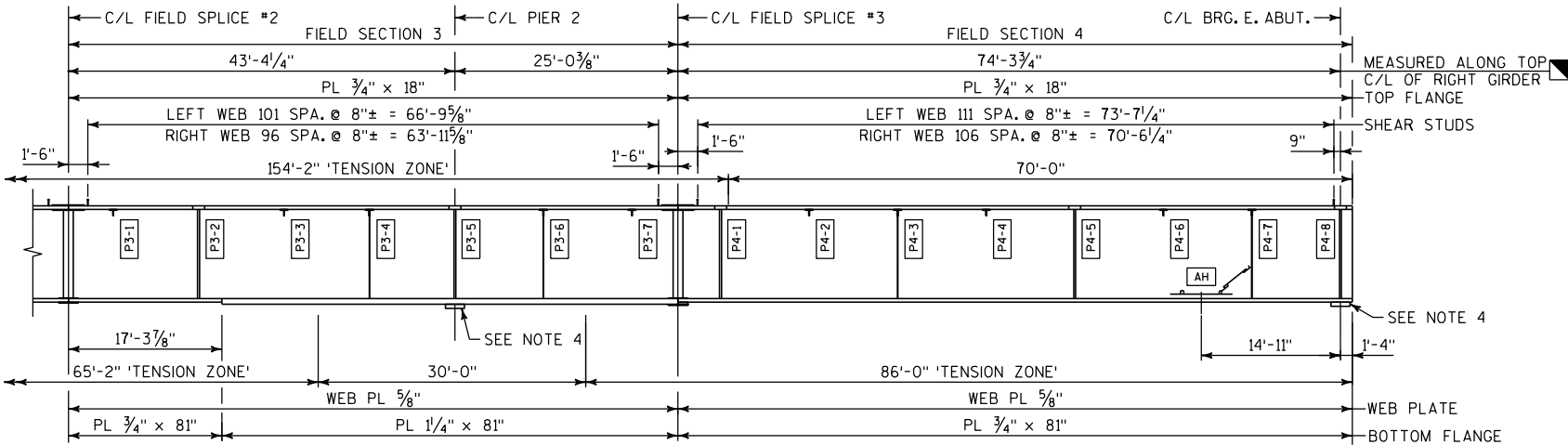
- FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE MISCELLANEOUS GIRDER DETAILS SHEET.
- FOR CAMBER REQUIREMENTS, SEE CAMBER DIAPHRAGM SHEET AND CAMBER AND DECK ELEVATIONS SHEETS.
- 'TENSION ZONE' DENOTES ZONES OF TOP AND BOTTOM FLANGES ASSUMED TO CARRY TENSILE STRESS IN THE COMPLETED STRUCTURE. FIELD WELDING TO TENSION FLANGES AND WEB IS PROHIBITED, EXCEPT FOR SHEAR STUD CONNECTIONS TO THE TOP FLANGE.
- BEVELED TOP PLATE, SEE BEARING SHEETS FOR DETAILS. THE DIMENSIONS OF THE BEVELED TOP PLATE SHALL BE COORDINATED WITH THE BEARING MANUFACTURER. PAYMENT FOR THE BEVELED TOP PLATE IS INCLUDED WITH THE BID ITEM "STRUCTURAL STEEL HS".
- DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATION ARE HORIZONTAL DIMENSIONS.

GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		GLM	PLANS CK'D. BKS
GIRDER PLAN AND ELEVATION (2 OF 2)			SHEET 31 OF 56

NOTES

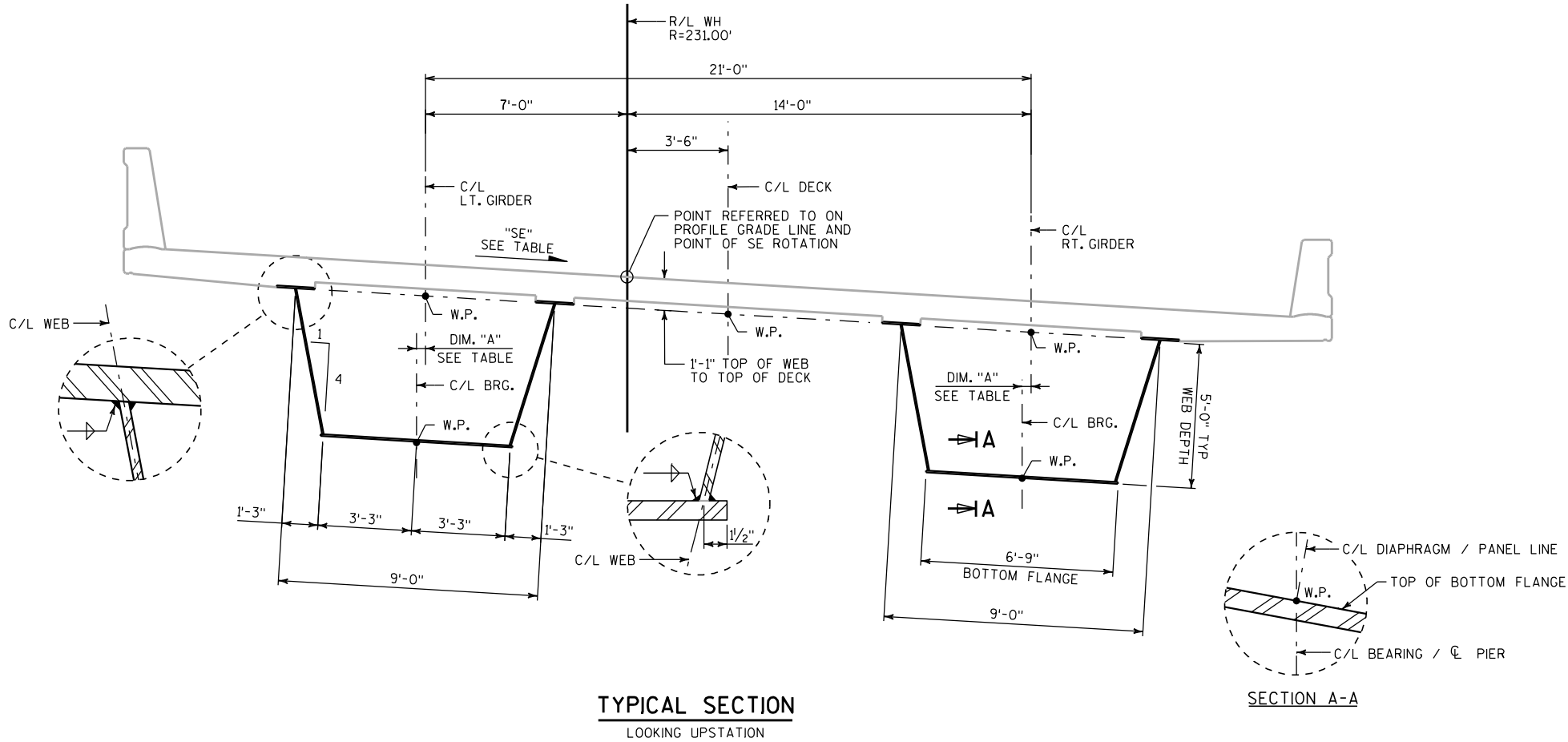
1. FOR ADDITIONAL STRUCTURAL STEEL NOTES, SEE GENERAL NOTES SHEET.
2. ENSURE THE STABILITY OF ALL COMPONENTS DURING FABRICATION, HANDLING, TRANSPORTATION AND ERECTION UNTIL THE STRUCTURAL STEEL IS IN FINAL POSITION WITH ALL PERMANENT BRACING, CONNECTIONS AND SUPPORTS IN PLACE AND THE CONCRETE IN THE DECK HAS REACHED THE SPECIFIED DESIGN STRENGTH.
- DESIGN AND USE TEMPORARY CROSS FRAMES, SUPPORTS, BRACES OR WHATEVER OTHER MEANS AND METHODS DEEMED NECESSARY.
3. CARRY OUT DESIGN CALCULATIONS AS REQUIRED TO VERIFY MATERIAL STRESSES AND SUPPORT FORCES (INCLUDING UPLIFT) DURING ALL STAGES OF ERECTION AS REQUIRED BY AASHTO LRFD SPECIFICATIONS.
4. MINIMUM FILLET WELD SIZE:

THICKNESS OF THICKER PART JOINED, "T"	MINIMUM FILLET WELD SIZE
$T \leq \frac{1}{2}"$	$\frac{3}{16}"$
$\frac{1}{2}" < T \leq \frac{3}{4}"$	$\frac{1}{4}"$
$\frac{3}{4}" < T \leq 1\frac{1}{2}"$	$\frac{5}{16}"$
$1\frac{1}{2}" < T \leq 2\frac{1}{4}"$	$\frac{3}{8}"$
$T > 2\frac{1}{4}"$	$\frac{1}{2}"$

MINIMUM WELD SIZES SHOWN IN TABLE ABOVE 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 $\frac{5}{16}"$ OR LARGER, THE MINIMUM PASS SIZE SHALL BE $\frac{3}{16}"$.

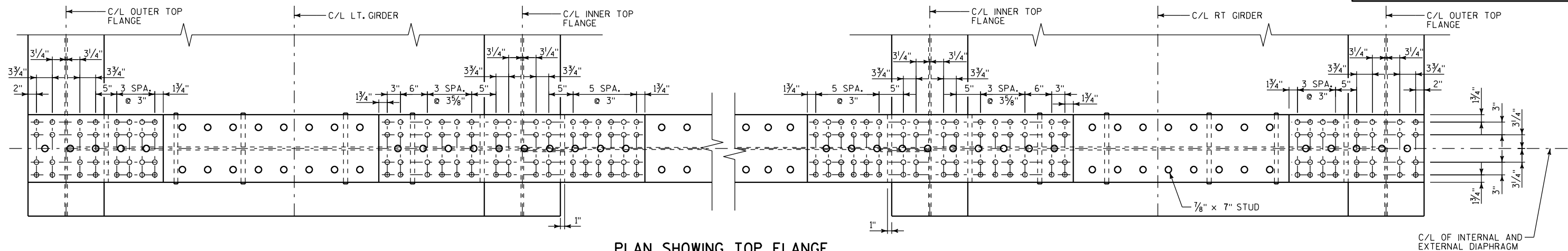


SUPERELEVATION "SE" TABLE		
STATION	"SE" (%)	DIM. "A"
769WH+76.00	-6.00	—
772WH+02.98 C/L BRG. W. ABUT.	-6.00	$3\frac{3}{16}"$
773WH+08.73 C/L PIER 1	-6.00	$3\frac{3}{16}"$
774WH+10.73 C/L PIER 2	-6.00	$3\frac{3}{16}"$
774WH+77.00	-6.00	$3\frac{3}{16}"$
775WH+16.48 C/L BRG. E. ABUT.	-4.77	$2\frac{7}{8}"$
775WH+41.00	-4.00	—
776WH+05.00	-2.00 LEFT SHLD. -2.00 TRAFFIC LANES -4.00 RIGHT SHLD.	—

POSITIVE SUPERELEVATION MEANS RIGHT EDGE OF DECK IS HIGHER WHEN LOOKING UPSTATION.

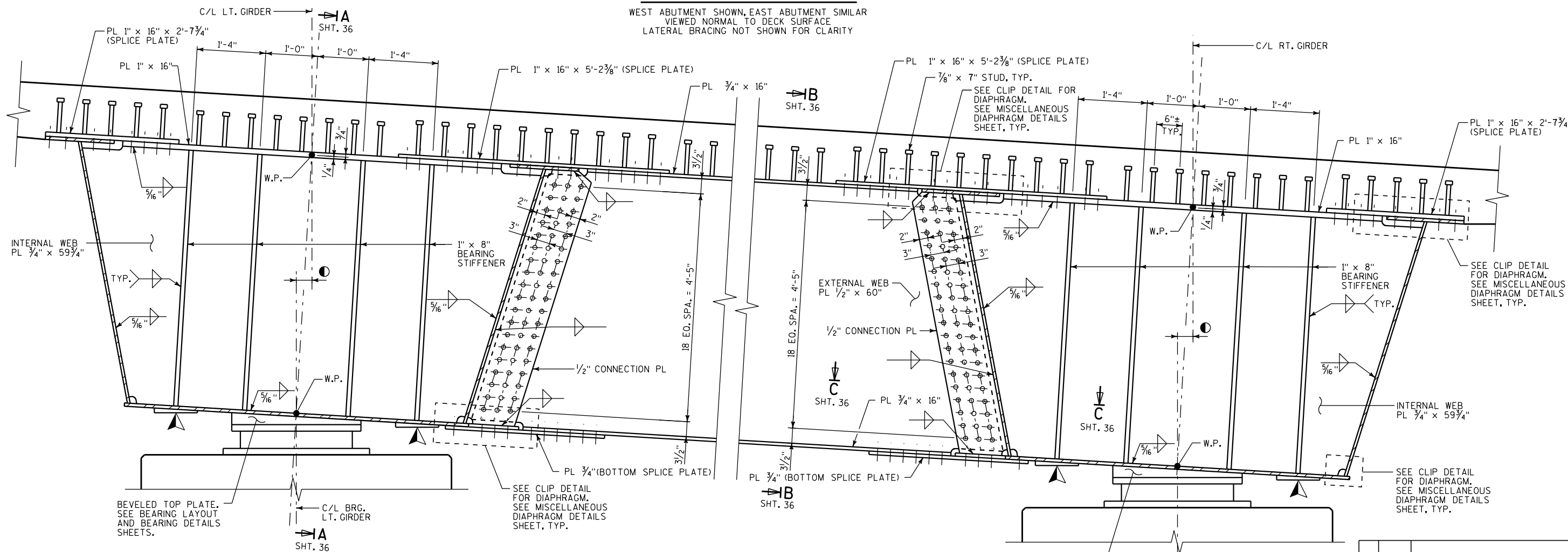
SUPERELEVATION VARIES LINEARLY BETWEEN THE TABULATED VALUES.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
GIRDER SECTION		SHEET 32 OF 56	



PLAN SHOWING TOP FLANGE

WEST ABUTMENT SHOWN, EAST ABUTMENT SIMILAR
VIEWED NORMAL TO DECK SURFACE
LATERAL BRACING NOT SHOWN FOR CLARITY



NOTES:

- INTERNAL AND EXTERNAL DIAPHRAGMS ARE ALIGNED NORMAL TO THE GIRDER.
- ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
- SHEAR STUD CONNECTORS SHALL BE PROVIDED ON THE TOP FLANGE AND TOP FLANGE SPLICE PLATE AT ABOUT 6" CENTERS. PROVIDE TWO STUDS PER ROW ON THE TOP FLANGE AND ONE STUD PER ROW CENTERED ON THE TOP FLANGE SPLICE PLATES.

LEGEND

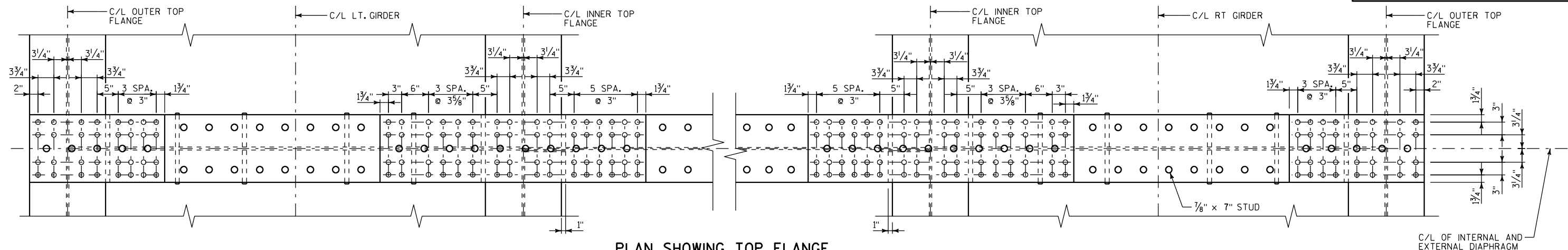
▲ SUGGESTED JACKING PAD AND STIFFENER LOCATION FOR FUTURE BEARING REPLACEMENT. SEE JACKING PROVISIONS SHEET FOR DETAILS.

● 3 3/8" W. ABUT.
2 7/8" E. ABUT.

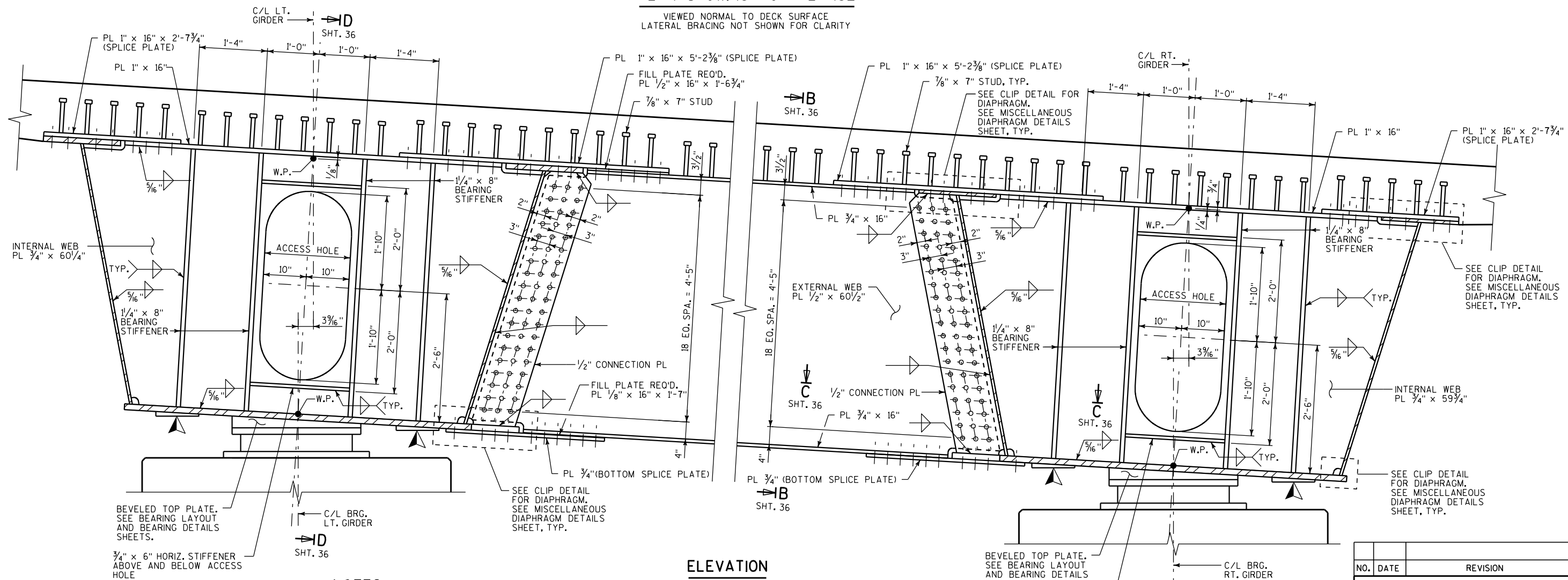
ELEVATION

LOOKING UPSTATION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
ABUTMENT DIAPHRAGM		SHEET 33 OF 56	



PLAN SHOWING TOP FLANGE

VIEWED NORMAL TO DECK SURFACE
LATERAL BRACING NOT SHOWN FOR CLARITY

NOTES:

- INTERNAL AND EXTERNAL DIAPHRAGMS ARE ALIGNED NORMAL TO THE GIRDER.
- ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
- SHEAR STUD CONNECTORS SHALL BE PROVIDED ON THE TOP FLANGE AND TOP FLANGE SPLICE PLATE AT ABOUT 6" CENTERS. PROVIDE TWO STUDS PER ROW ON THE TOP FLANGE AND ONE STUD PER ROW CENTERED ON THE TOP FLANGE SPLICE PLATES.

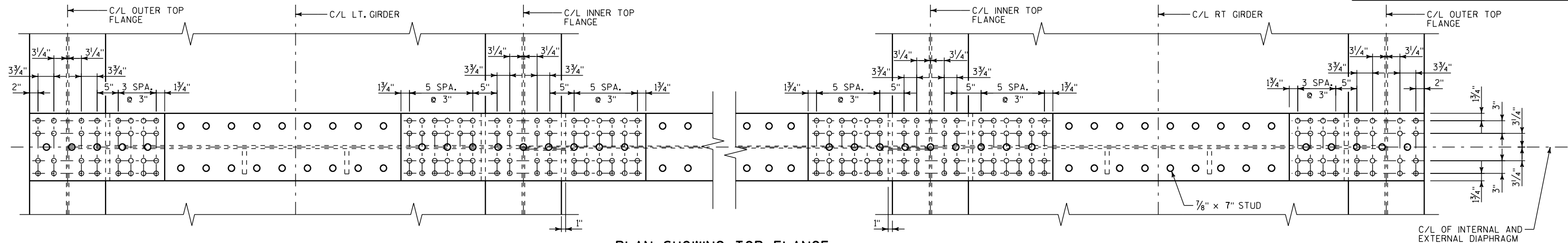
LEGEND

- ▲ SUGGESTED JACKING PAD AND STIFFENER LOCATION FOR FUTURE BEARING REPLACEMENT. SEE JACKING PROVISIONS SHEET FOR DETAILS.

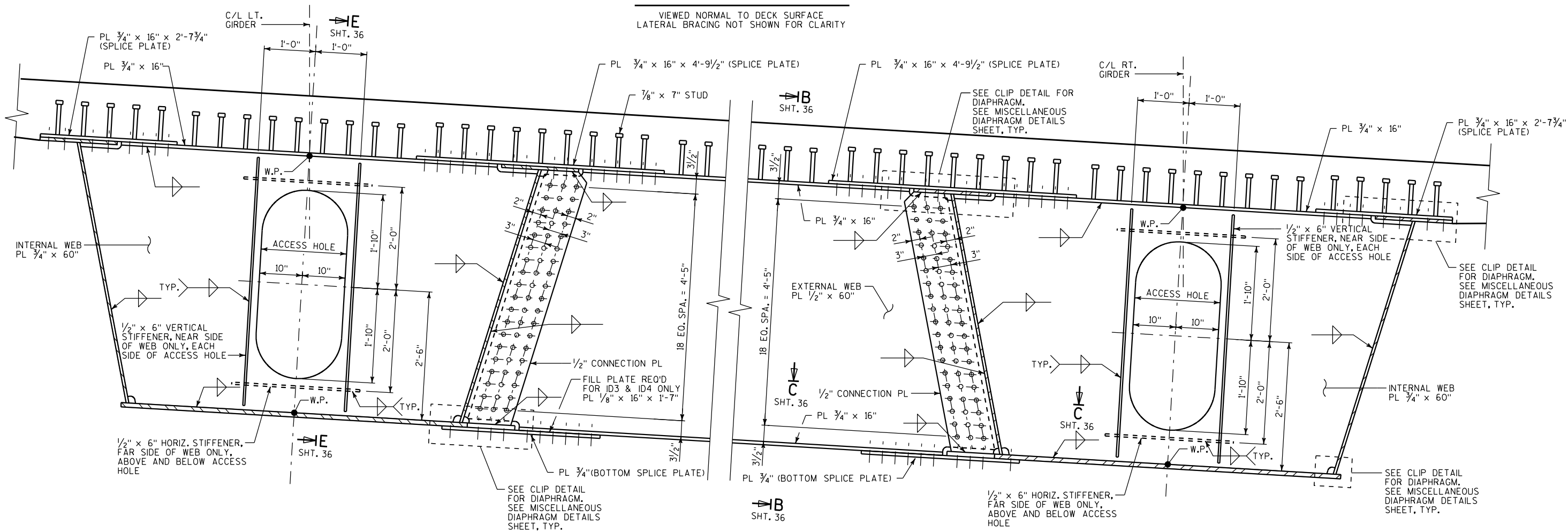
ELEVATION

LOOKING UPSTATION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
PIER DIAPHRAGM		SHEET 34 OF 56	



PLAN SHOWING TOP FLANGE

VIEWED NORMAL TO DECK SURFACE
LATERAL BRACING NOT SHOWN FOR CLARITY

NOTES:

- INTERNAL AND EXTERNAL DIAPHRAGMS ARE ALIGNED NORMAL TO THE GIRDER.
- ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
- SHEAR STUD CONNECTORS SHALL BE PROVIDED ON THE TOP FLANGE AND TOP FLANGE SPLICE PLATE AT ABOUT 6" CENTERS. PROVIDE TWO STUDS PER ROW ON THE TOP FLANGE AND ONE STUD PER ROW CENTERED ON THE TOP FLANGE SPLICE PLATES.

ELEVATION

LOOKING UPSTATION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
INTERMEDIATE DIAPHRAGM			SHEET 35 OF 56



1/4" MIN. TO 1/2" MAX., TYP.



EXTERNAL DIAPHRAGM AT ABUTMENT, PIER AND INTERMEDIATE DIAPHRAGMS

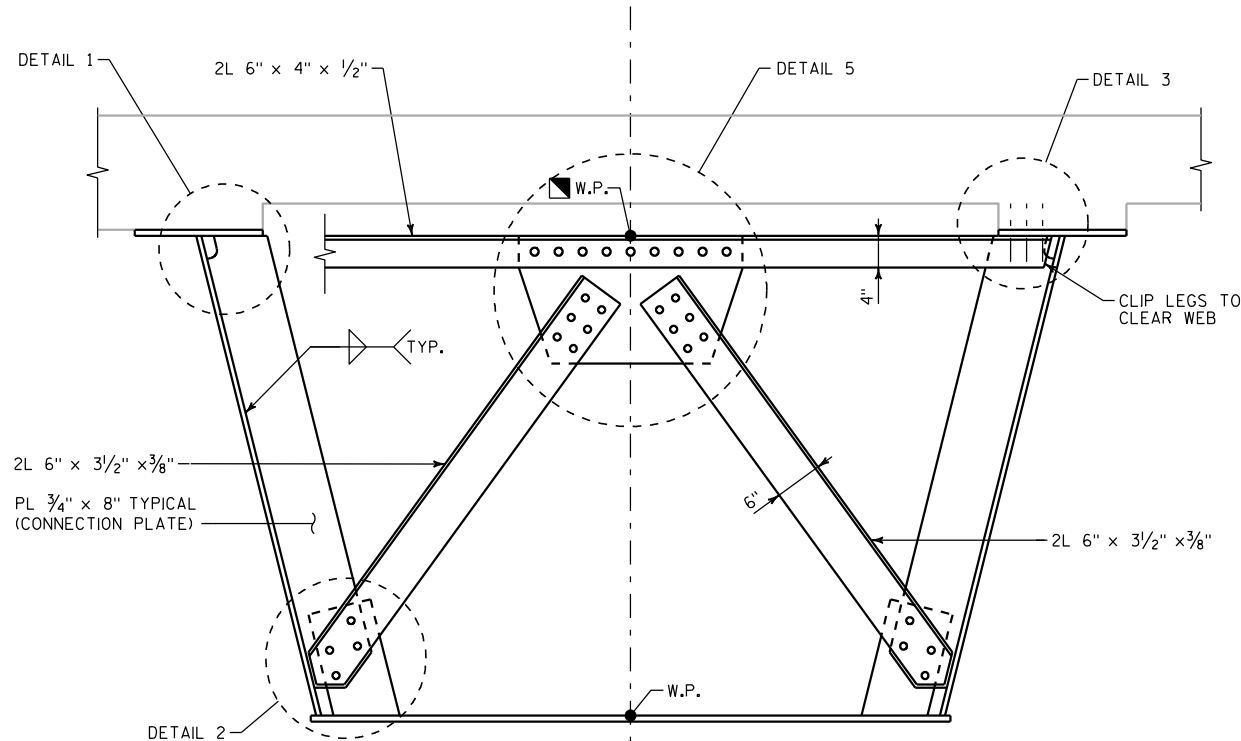


ABUTMENT, PIER AND INTERMEDIATE DIAPHRAGM EXCEPT AS
SHOWN IN STUB PLATE DETAIL AT ABUTMENT DIAPHRAGM

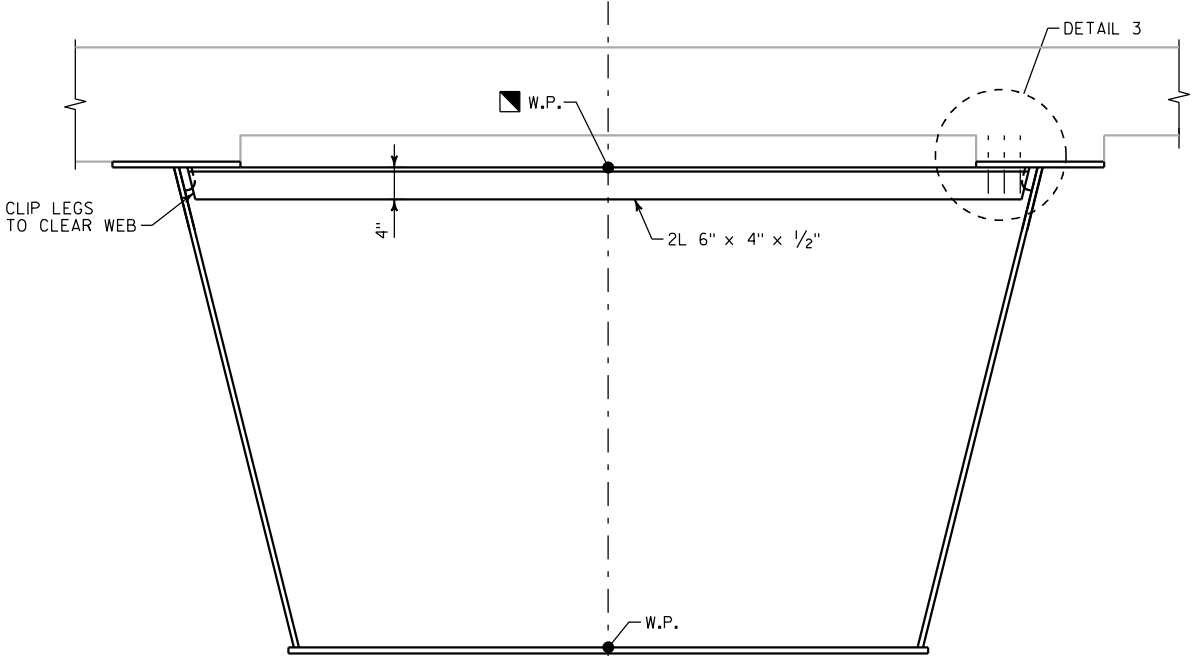


1. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
2. INTERNAL AND EXTERNAL DIAPHRAGMS ARE ALIGNED NORMAL TO THE GIRDER.
3. LATERAL BRACING CONNECTIONS ARE NOT SHOWN FOR CLARITY. SEE LATERAL BRACING DETAILS SHEET.

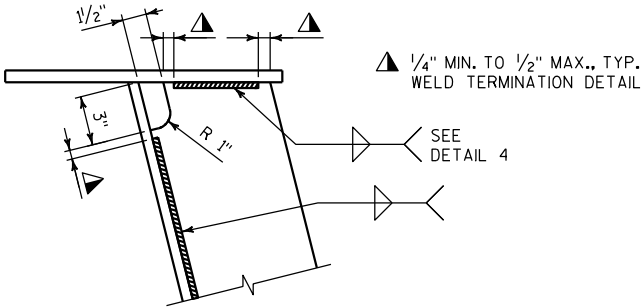
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
MISCELLANEOUS DIAPHRAGM DETAILS		SHEET 36 OF 56	



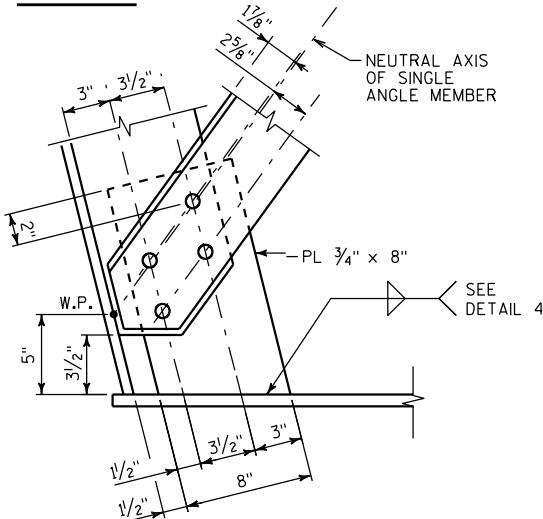
TYPICAL SECTION AT K-FRAME



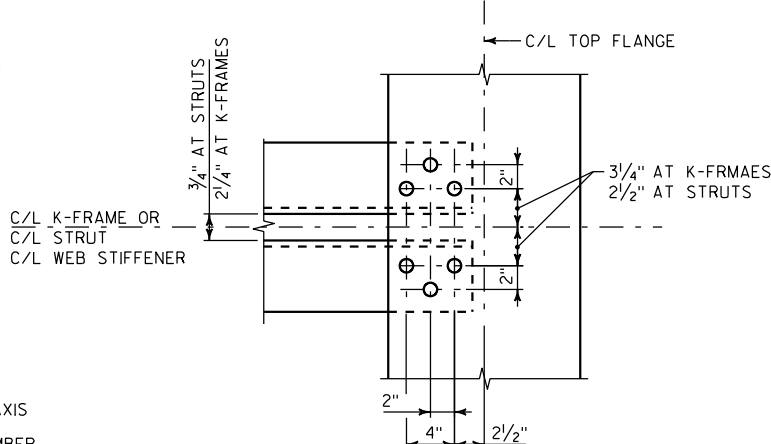
TYPICAL SECTION AT STRUT



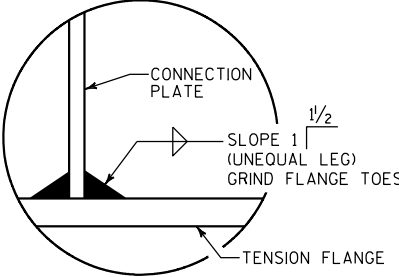
DETAIL 1



DETAIL 2

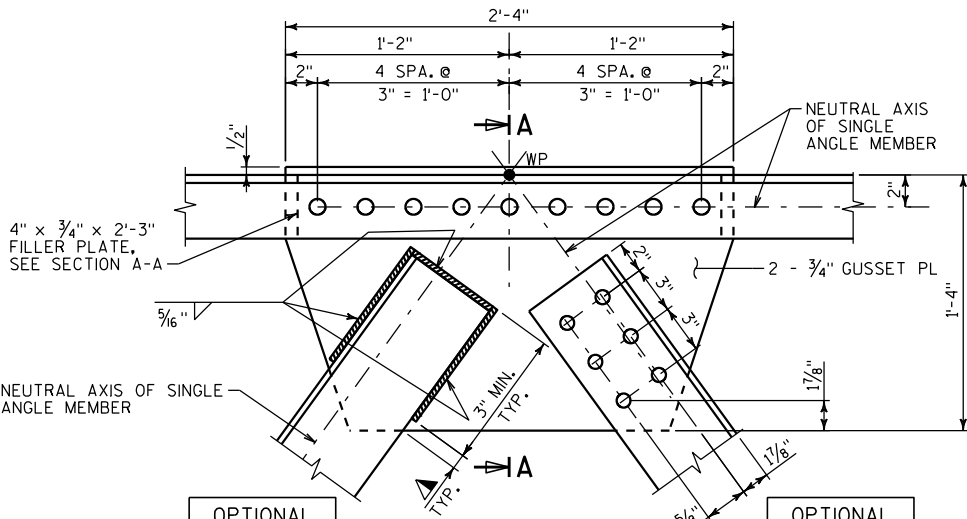


DETAIL 3

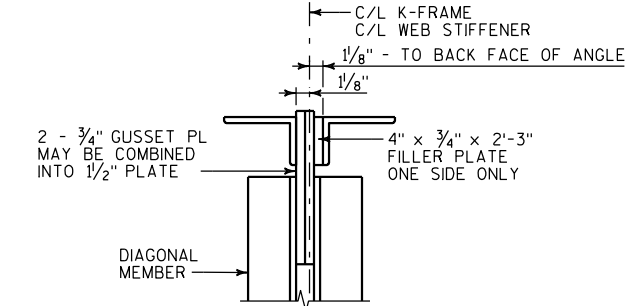


DETAIL 4

CONNECTION PLATE DETAIL AT TENSION FLANGE



DETAIL 5



SECTION A-A

LEGEND

SEE GIRDER SECTION SHEET FOR DEFINITION OF WORKING POINTS

NOTES

1. BOLTS CONNECTING K-FRAMES AND STRUTS TO TOP FLANGE ARE 7/8" DIAMETER ASTM A325 TYPE 1.
2. BOLTS CONNECTING K-FRAME DIAGONALS TO WEB STIFFENERS AND TOP STRUT ARE 7/8" DIAMETER ASTM A325 TYPE 1.
3. K-FRAMES AND STRUTS ARE ALIGNED NORMAL TO THE GIRDER UNLESS OTHERWISE NOTED.
4. CONNECTION PLATES JOINING DIAGONALS TO TOP STRUT ARE SHOWN AS SEPARATE 3/4" PLATES. THESE PLATES MAY BE REPLACED BY A SINGLE 1 1/2" PLATE.
5. ALL DIAGONALS AT EACH SPECIFIC K-FRAME LOCATION SHALL USE THE SAME CONNECTION DETAIL, EITHER BOLTED OR WELDED.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
INTERMEDIATE K-FRAMES AND STRUTS		SHEET 37 OF 56	

SECTION MARKS

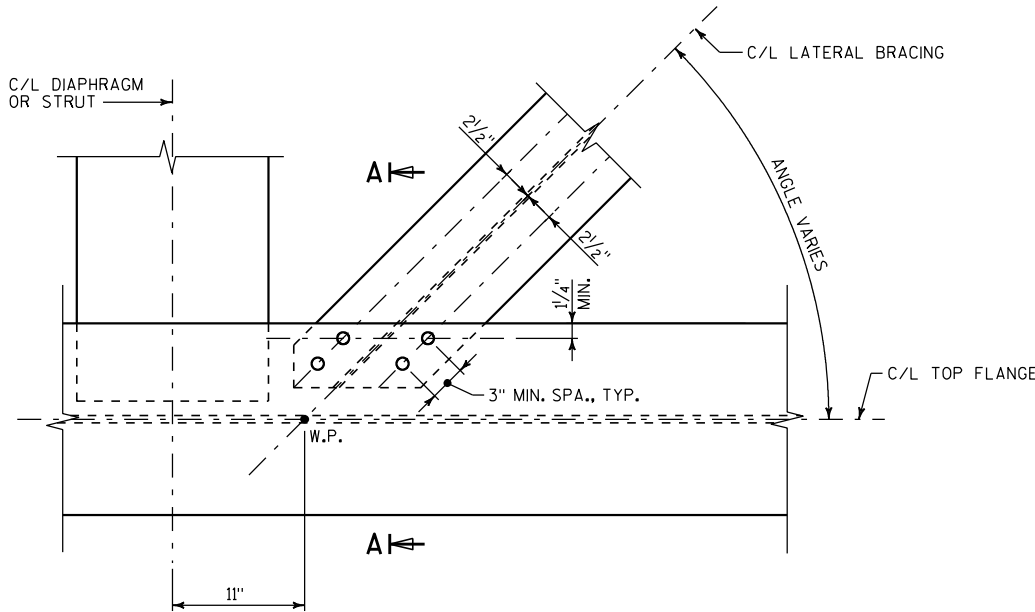
THE FIRST DIGIT OF THE LATERAL BRACING MARK NUMBER IDENTIFIES THE SECTION AS FOLLOWS:

- 1 WT 7 x 30.5
- 2 WT 8 x 33.5
- 3 WT 8 x 38.5

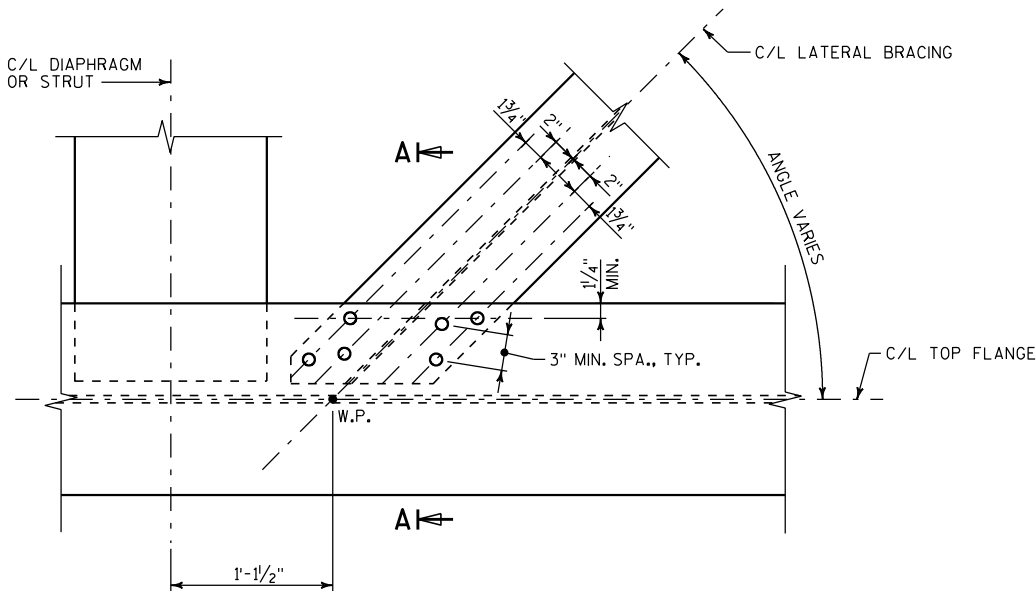
THE SECOND CHARACTER OF THE LATERAL BRACING MARK NUMBER IDENTIFIES THE END CONNECTION DETAIL TO BE USED AND RELATES DIRECTLY TO DETAILS A THRU C AS GIVEN ON THIS SHEET.

NOTES:

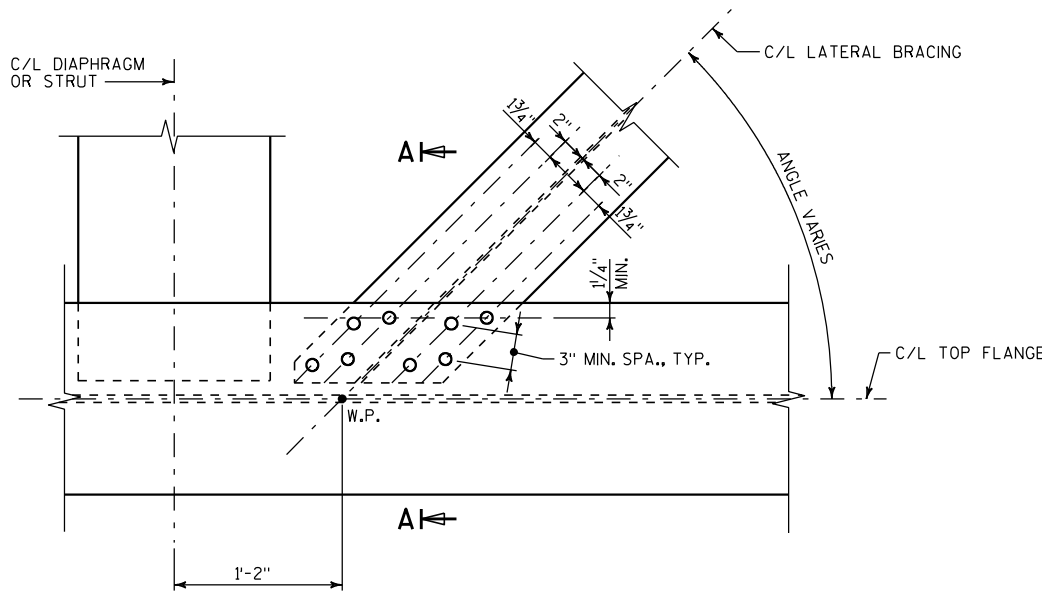
- 1. ALL BOLTS CONNECTING LATERAL BRACING MEMBERS ARE 1" DIAMETER ASTM A325 TYPE 1.
- 2. ALL HOLES ARE STD. HOLES.
- 3. DETAILS ON THIS SHEET SHOW TYPICAL DIMENSIONS ONLY AND WILL HAVE TO BE MIRRORED OR REVERSED AS REQUIRED.
- 4. SEE GIRDER FRAMING PLANS FOR CORRECT ALIGNMENT OF ALL LATERAL BRACE MEMBERS.
- 5. SEE OTHER SHEETS IN THIS PLAN SET FOR DETAILS AND CONNECTIONS FOR THE ABUTMENT DIAPHRAGM, PIER DIAPHRAGM, INTERMEDIATE DIAPHRAGM, INTERMEDIATE K-FRAME AND STRUT.



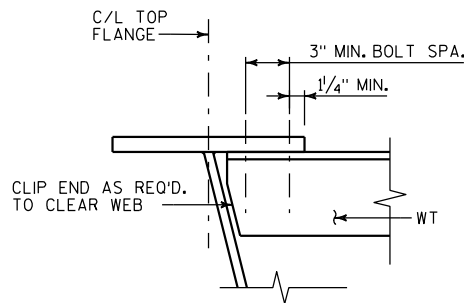
DETAIL A
4 BOLT CONNECTION



DETAIL B
6 BOLT CONNECTION

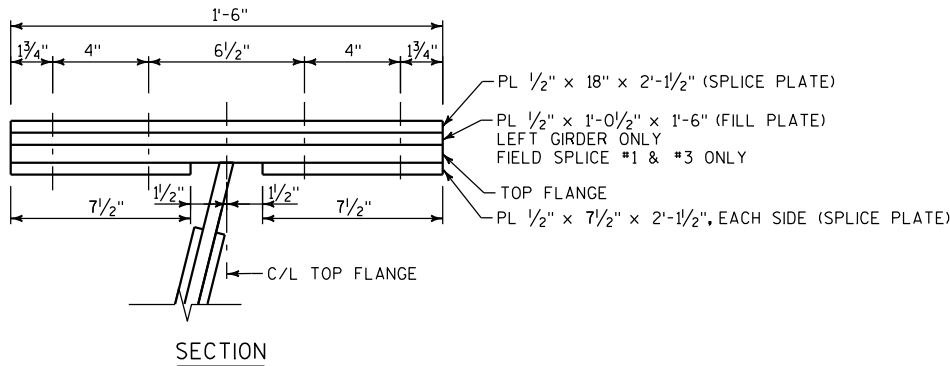
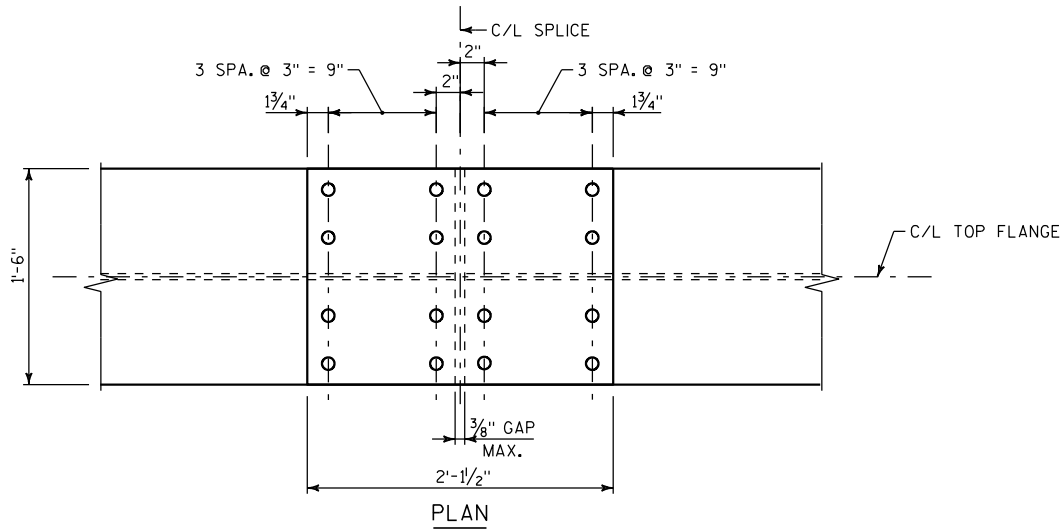


DETAIL C
8 BOLT CONNECTION

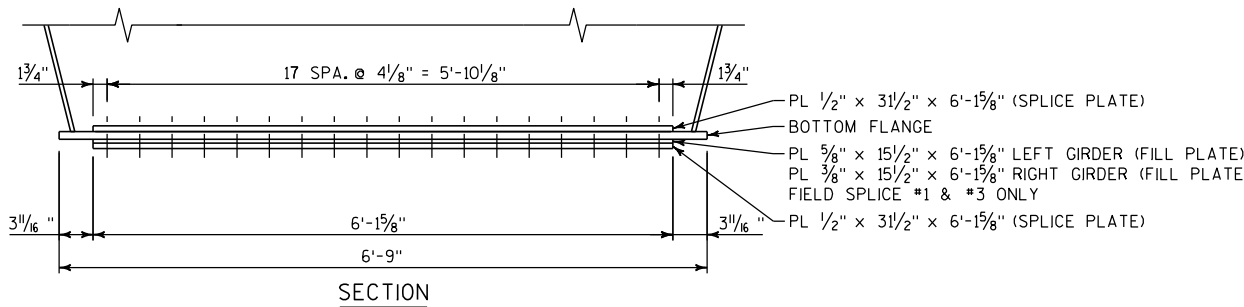
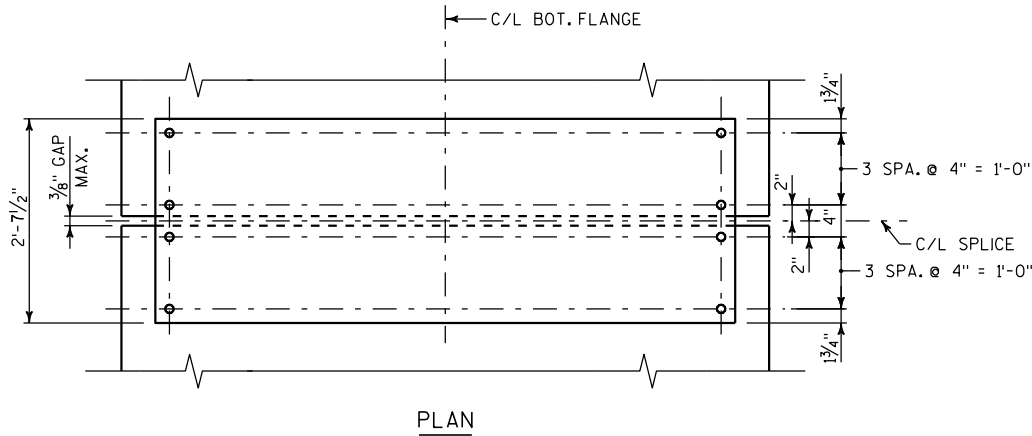


SECTION A-A

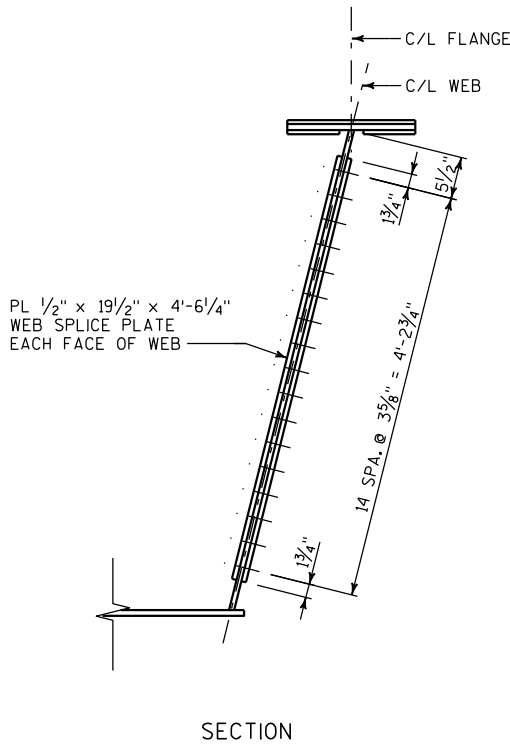
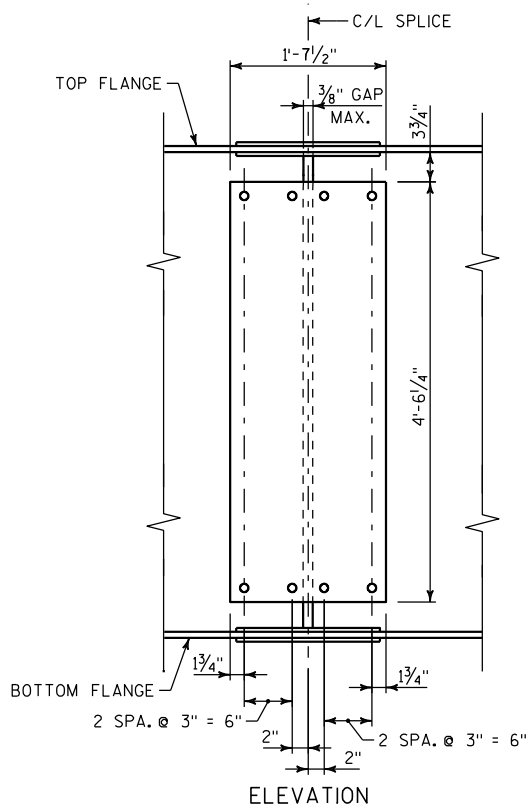
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
LATERAL BRACING DETAILS			SHEET 38 OF 56



TOP FLANGE SPLICE



BOTTOM FLANGE SPLICE

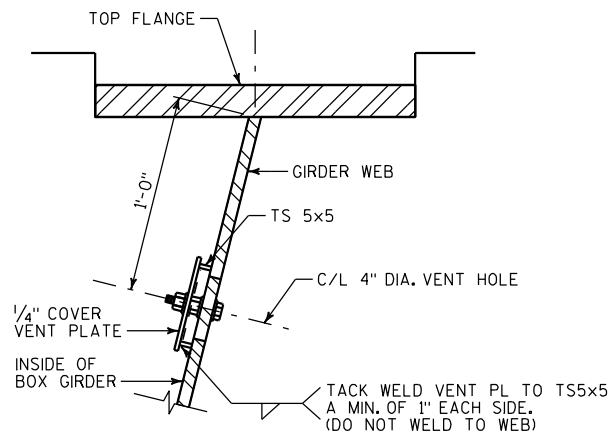


WEB SPLICE

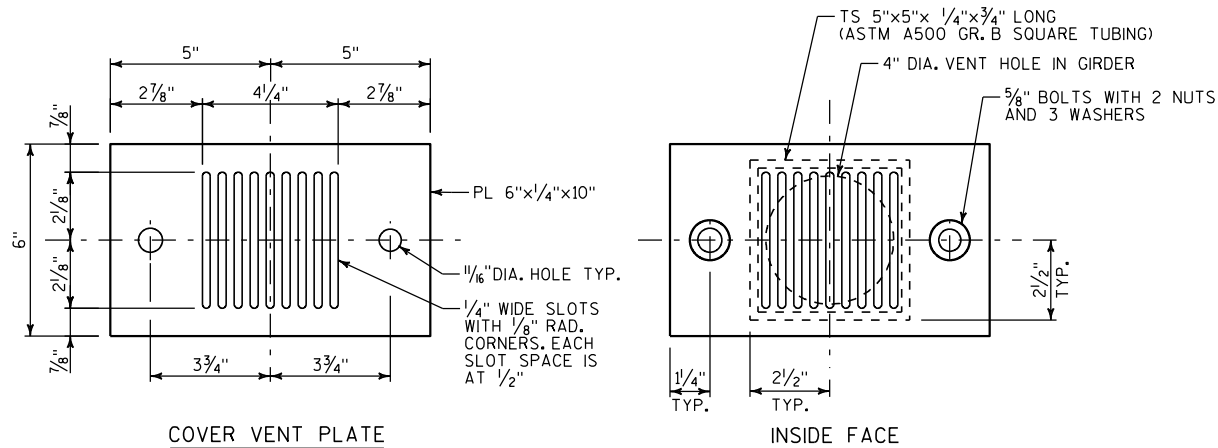
FIELD SPLICE NOTES

1. ALL BOLTS SHOWN FOR FIELD SPLICES ARE 7/8" DIAMETER ASTM A325 TYPE 1.
2. ALL HOLES SHALL BE STANDARD DIAMETER - NO OVERSIZE HOLES.
3. ALL CONNECTIONS SHALL BE FABRICATED AND ASSEMBLED AS SLIP-CRITICAL CONNECTIONS.
4. ALL SPLICE PLATES SHALL BE GRADE HPS 50W.

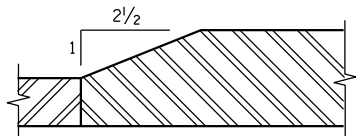
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
FIELD SPLICE DETAILS		SHEET 39 OF 56	



VENT HOLE LOCATION

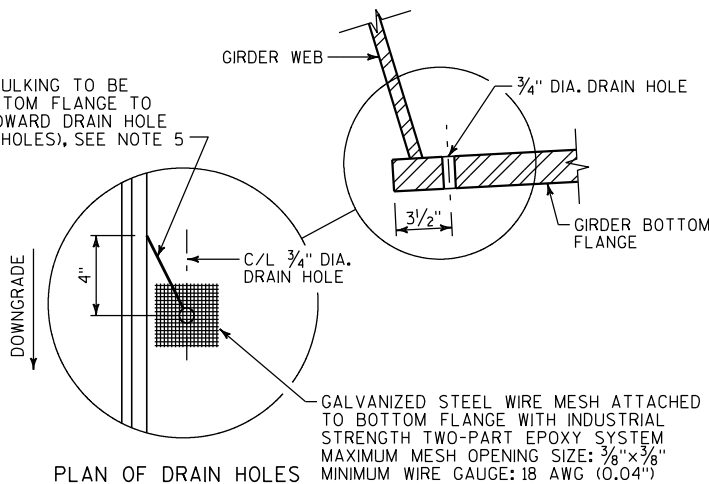


VENT HOLE COVER ASSEMBLY
NOT TO SCALE



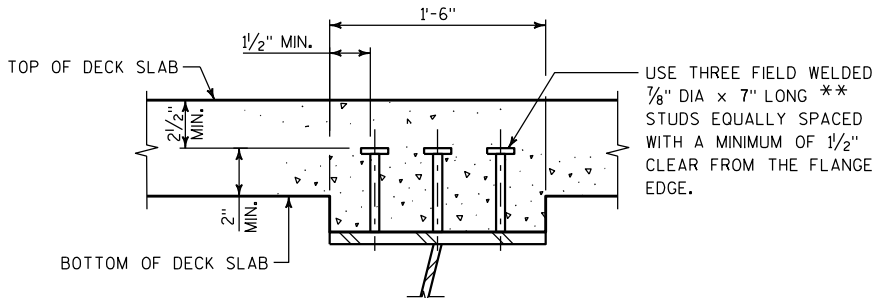
SHOP SPLICE DETAIL

1/2" ADHESIVE CAULKING TO BE APPLIED TO BOTTOM FLANGE TO DIRECT FLOW TOWARD DRAIN HOLE (TYP. ALL DRAIN HOLES), SEE NOTE 5



PLAN OF DRAIN HOLES

DRAIN HOLE DETAILS
NOT TO SCALE



SHEAR CONNECTOR DETAIL

** USE DIFFERENT LENGTH STUDS IF 2 1/2" MIN. CLEARANCE OR 2" EXTENSION CRITERIA IS VIOLATED.

NOTES

1. SEE GIRDER PLAN AND ELEVATION SHEETS FOR DRAIN AND VENT HOLE LOCATION.
2. 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.
3. VENT HOLE COVER ASSEMBLIES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION AND INSTALLED AFTER GIRDERS ARE PAINTED. PAYMENT FOR VENT HOLE COVER ASSEMBLIES IS INCLUDED WITH COST OF "STRUCTURAL STEEL HS".
4. LOCATE ALL DRAIN HOLES ON THE LOW SIDE OF THE GIRDER AS SHOWN.
5. COST OF ADHESIVE CAULKING AND WIRE MESH ATTACHMENT AT DRAIN HOLES IS INCLUDED IN THE COST OF "STRUCTURAL STEEL HS".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY GLM		PLANS CK'D. BKS	
MISCELLANEOUS GIRDER DETAILS			SHEET 40 OF 56



NOTES:

1. ALL BOLTS SHOWN ARE $\frac{5}{8}$ " DIAMETER ASTM A325 TYPE 1.
2. FOUR ACCESS HATCHES REQUIRED. SEE GIRDER PLAN AND ELEVATIONS SHEETS FOR HATCH LOCATIONS.
3. STEEL FOR HATCH IS ASTM A709 GRADE 50, EXCEPT THE HATCH PLATE SHALL BE MADE OF ALUMINUM PLATE CONFORMING TO ASTM B209, ALLOY 6061-T651 AND THE PIPE GRAB RAIL SHALL BE ASTM A53.
4. THE INTERIOR COMPONENTS OF THE HATCH INCLUDING THE PIPE GRAB RAIL SHALL BE PAINTED TO MATCH THE INTERIOR COLOR OF THE BOX GIRDER.
5. THE ALL EXTERIOR COMPONENTS OF THE HATCH AND THE ALUMINUM PLATE SHALL BE PAINTED TO MATCH THE EXTERIOR COLOR OF THE BOX GIRDER. THE CONTRACTOR SHALL FOLLOW THE COATING MANUFACTURER'S RECOMMENDATIONS FOR SURFACE PREPARATION AND PRIMING OF THE ALUMINUM PLATE.
6. ALL MATERIALS SHOWN ON THIS SHEET FOR THE ACCESS HATCH AND GRAB RAIL WILL BE PAID FOR AT THE UNIT BID FOR "STRUCTURAL STEEL HS".

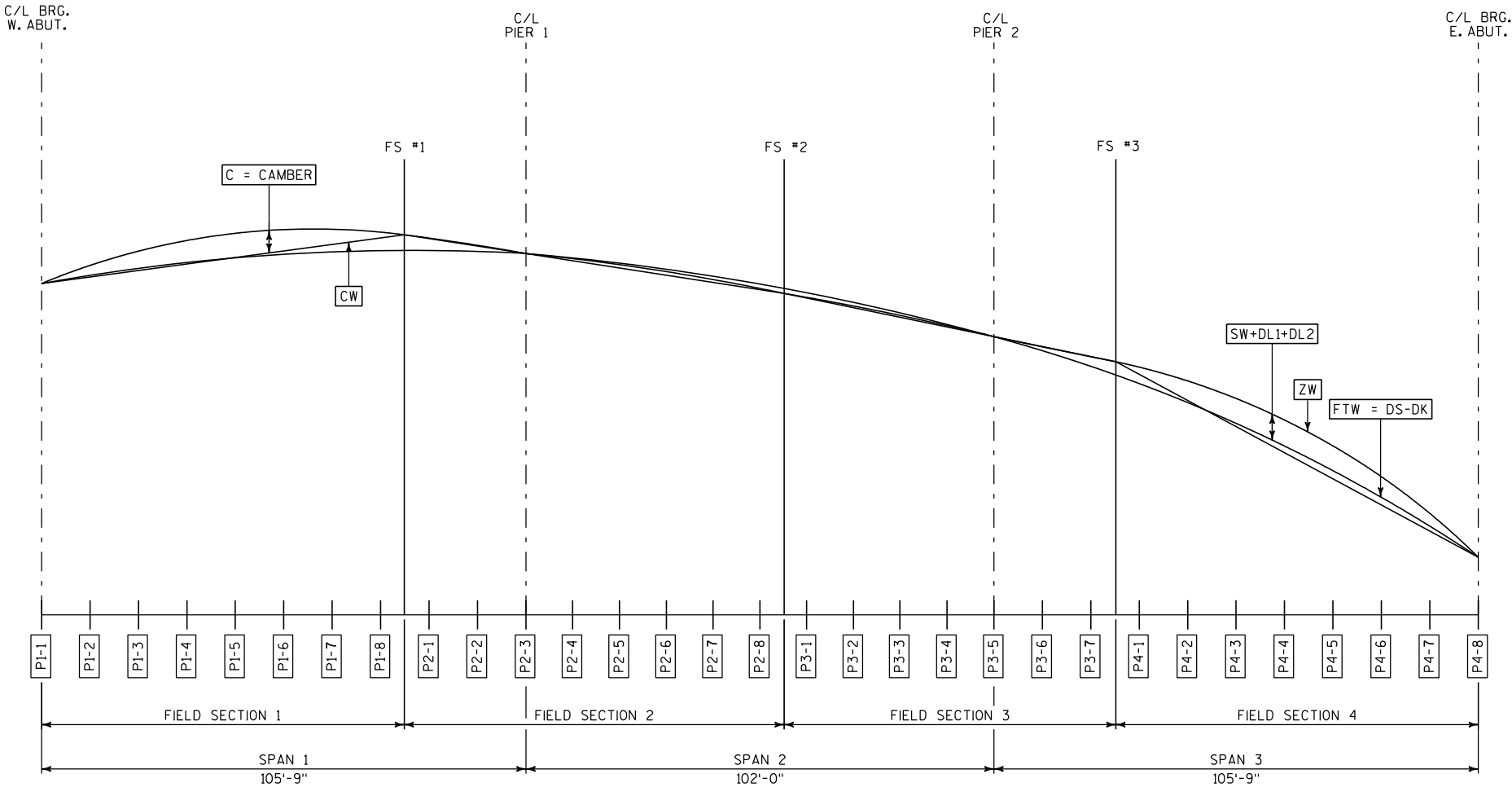
NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE B-40-776					
		DRAWN BY	TEK	PLANS CK'D.	BKS
ACCESS HATCH DETAILS				SHEET 41 OF 56	

LEGEND

- P1-4 INTERMEDIATE ELEVATION POINT (PANEL POINT).
- IN THIS EXAMPLE, '1' IS THE FIELD SECTION NUMBER AND '4' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

- ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
 - POSITIVE DEFLECTIONS ARE DOWNWARD.
 - POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.
 - CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING THAT ALL SLAB WEIGHT, INCLUDING ALLOWANCE FOR PERMANENT STAY-IN-PLACE FORMS, IS APPLIED TO A NON-COMPOSITE STRUCTURE. VERIFY THE VALIDITY OF THIS ASSUMPTION BASED ON THE SELECTED POUR SEQUENCE. ADJUST CAMBER TABLES AS NECESSARY FOR ANY EXPECTED VARIATIONS EXCEEDING .04' (1/2").
 - CAMBER GIRDERS TO THE VALUES SHOWN, AFTER INCORPORATING ANY REQUIRED ADJUSTMENTS FOR THE SELECTED POUR SEQUENCE.
 - TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPLICES SHALL BE CHECKED 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 SPLICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.



CAMBER DIAGRAM

VERTICAL PROFILE AND DEFLECTIONS ARE EXAGGERATED TO DIFFERENT DEGREES. THE CAMBERS SHOWN ON THIS DIAGRAM ARE SCHEMATIC ONLY. DIMENSIONS SHOWN ARE ALONG R/L WH

TABULATED ELEVATIONS

- FTW FINISHED ELEVATION AT TOP OF WEB.
- DS FINISHED ELEVATION AT TOP OF DECK SLAB.
- TES TOP OF ERECTED STEEL ELEVATION.
- = ZW + PL - SW
- ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS.
- = DS + SW + DL1 + DL2 - DK
- CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION AT 'ZW' AT FIELD SPLICES AND END SUPPORTS.
- BLK BLOCKING HEIGHT TO UNDEFLECTED SHAPE. BLOCKING HEIGHT IS MEASURED TO BOTTOM OF WEB AND DOES NOT TAKE INTO ACCOUNT BOTTOM FLANGE THICKNESS, SPLICE PLATES, ETC.

TABULATED DEFLECTIONS

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

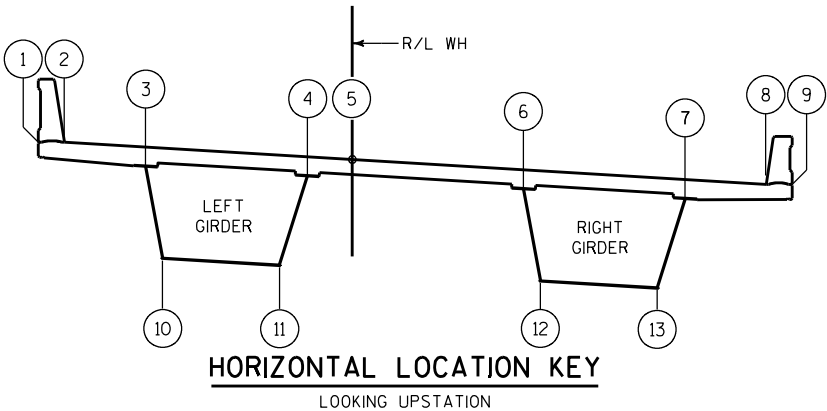
CALCULATED VALUES

- PL = THICKNESS OF TOP FLANGE PLUS ANY FILLER AND SPLICE PLATES
- DK = DECK ASSEMBLY THICKNESS FROM TOP OF WEB TO FINISHED GRADE
- = 3" HAUNCH + 10" SLAB = 13" = 1.08 FT
- C = CAMBER = ZW - CW

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
		DRAWN BY	TEK
		PLANS CK'D.	BKS
CAMBER DIAGRAM & DECK ELEVATIONS (1 OF 3)		SHEET 42 OF 56	

FIELD SECTION #1

POS'N NO.	VALUE	DIAPHRAGM POSITION AND STATION									
		P1-1	P1-2	P1-3	P1-4	P1-5	P1-6	P1-7	P1-8	FS #1	
		772+02.98	772+13.56	772+24.13	772+34.71	772+45.28	772+55.86	772+66.43	772+77.01	772+82.08	
FINISHED ELEVATION - TOP OF DECK											
1	DS	777.23	777.30	777.37	777.42	777.46	777.49	777.51	777.52	777.52	
2		777.15	777.22	777.28	777.33	777.37	777.40	777.42	777.43	777.43	
5		776.19	776.26	776.32	776.37	776.41	776.44	776.46	776.47	776.47	
8		774.81	774.88	774.94	774.99	775.03	775.06	775.08	775.09	775.09	
9		774.72	774.79	774.85	774.90	774.94	774.98	775.00	775.01	775.01	
CAMBER DATA											
3 LEFT GIRDER	DS	776.88	776.95	777.01	777.06	777.10	777.13	777.15	777.16	777.16	
	TES	775.94	776.00	776.13	776.29	776.29	776.32	776.32	776.35	776.36	
	ZW	775.79	775.96	776.10	776.21	776.28	776.31	776.30	776.26	776.23	
	CW	775.79	775.85	775.91	775.97	776.03	776.09	776.15	776.20	776.23	
	LEFT WEB	SW	0.00	0.02	0.03	0.05	0.05	0.05	0.05	0.04	0.03
		DL1	0.00	0.07	0.13	0.17	0.19	0.20	0.17	0.13	0.11
		DL2	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01
		C	0.00	0.10	0.19	0.24	0.25	0.23	0.16	0.06	0.00
	4 LEFT GIRDER	DS	776.34	776.41	776.47	776.52	776.56	776.59	776.61	776.62	776.62
		TES	775.40	775.45	775.57	775.72	775.72	775.74	775.75	775.79	775.80
ZW		775.25	775.40	775.53	775.63	775.70	775.73	775.72	775.70	775.67	
CW		775.25	775.31	775.36	775.42	775.48	775.53	775.59	775.65	775.67	
RIGHT WEB		SW	0.00	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.03
		DL1	0.00	0.06	0.11	0.15	0.16	0.16	0.14	0.12	0.10
		DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
		C	0.00	0.10	0.17	0.21	0.22	0.19	0.14	0.05	0.00
6 RIGHT GIRDER	DS	775.62	775.69	775.75	775.80	775.84	775.87	775.89	775.90	775.90	
	TES	774.68	774.71	774.82	774.96	774.96	774.99	775.00	775.04	775.05	
	ZW	774.53	774.66	774.78	774.87	774.93	774.96	774.97	774.94	774.92	
	CW	774.53	774.58	774.64	774.69	774.74	774.79	774.85	774.90	774.92	
	LEFT WEB	SW	0.00	0.01	0.02	0.03	0.03	0.04	0.03	0.02	0.02
		DL1	0.00	0.05	0.08	0.11	0.13	0.13	0.12	0.09	0.08
		DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
		C	0.00	0.08	0.14	0.18	0.19	0.17	0.12	0.04	0.00
7 RIGHT GIRDER	DS	775.08	775.15	775.21	775.26	775.30	775.33	775.35	775.36	775.36	
	TES	774.14	774.17	774.26	774.40	774.39	774.42	774.43	774.49	774.50	
	ZW	773.99	774.12	774.22	774.30	774.36	774.39	774.40	774.38	774.37	
	CW	773.99	774.04	774.09	774.14	774.19	774.24	774.29	774.34	774.37	
	RIGHT WEB	SW	0.00	0.01	0.02	0.02	0.03	0.03	0.02	0.02	0.02
		DL1	0.00	0.04	0.07	0.09	0.10	0.10	0.09	0.07	0.06
		DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
		C	0.00	0.07	0.13	0.16	0.17	0.15	0.10	0.04	0.00
BLOCKING HEIGHTS											
10	BLK	3.66								4.09	
11		3.27								3.69	
12		2.40								2.79	
13		2.01								2.38	



TABULATED ELEVATIONS

- FTW FINISHED ELEVATION AT TOP OF WEB.
- DS FINISHED ELEVATION AT TOP OF DECK SLAB.
- TES TOP OF ERECTED STEEL ELEVATION.
- = ZW + PL - SW
- ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS.
- = DS + SW + DL1 + DL2 - DK
- CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION AT 'ZW' AT FIELD SPLICES AND END SUPPORTS.
- BLK BLOCKING HEIGHT TO UNDEFLECTED SHAPE. BLOCKING HEIGHT IS MEASURED TO BOTTOM OF WEB AND DOES NOT TAKE INTO ACCOUNT BOTTOM FLANGE THICKNESS, SPLICE PLATES, ETC.

FIELD SECTION #2

POS'N NO.	VALUE	DIAPHRAGM POSITION AND STATION											
		FS#1	P2-1	P2-2	PIER 1	P2-4	P2-5	P2-6	P2-7	P2-8	FS#2		
		772+82.08	772+87.58	772+98.16	773+08.73	773+18.93	773+29.13	773+39.33	773+49.53	773+59.73	773+64.58		
FINISHED ELEVATION - TOP OF DECK													
1	DS	777.52	777.52	777.51	777.49	777.46	777.42	777.37	777.31	777.25	777.21		
2		777.43	777.43	777.42	777.40	777.37	777.33	777.28	777.23	777.16	777.12		
5		776.47	776.47	776.46	776.44	776.41	776.37	776.32	776.27	776.20	776.16		
8		775.09	775.09	775.08	775.06	775.03	774.99	774.94	774.89	774.82	774.78		
9		775.01	775.01	775.00	774.97	774.95	774.91	774.86	774.80	774.73	774.70		
CAMBER DATA													
3	LEFT GIRDER	DS	777.16	777.16	777.15	777.13	777.10	777.06	777.01	776.96	776.89	776.85	
		TES	776.36	776.29	776.23	776.25	776.11	776.07	776.03	775.91	775.85	775.85	
		ZW	776.23	776.20	776.12	776.05	776.00	775.94	775.89	775.83	775.77	775.73	
		CW	776.23	776.20	776.13	776.07	776.01	775.95	775.88	775.82	775.76	775.73	
		SW	0.03	0.02	0.01	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	
	RIGHT GIRDER	DL1	0.11	0.09	0.04	0.00	-0.02	-0.03	-0.03	-0.03	-0.03	-0.03	
		DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
		C	0.00	0.00	-0.01	-0.02	-0.01	0.00	0.01	0.01	0.01	0.00	
		4	DS	776.62	776.62	776.61	776.59	776.56	776.52	776.47	776.42	776.35	776.31
			TES	775.80	775.74	775.68	775.71	775.58	775.53	775.50	775.38	775.31	775.32
ZW	775.67		775.64	775.58	775.51	775.46	775.41	775.36	775.30	775.24	775.20		
CW	775.67		775.64	775.58	775.52	775.46	775.40	775.35	775.29	775.23	775.20		
SW	0.03		0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
5	DL1	0.10	0.08	0.04	0.00	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02		
	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	C	0.00	0.00	0.00	-0.01	0.00	0.01	0.02	0.02	0.01	0.00		
	6	DS	775.90	775.90	775.89	775.87	775.84	775.80	775.75	775.70	775.63	775.59	
		TES	775.05	774.99	774.94	774.98	774.85	774.81	774.78	774.66	774.60	774.60	
ZW		774.92	774.90	774.85	774.79	774.75	774.70	774.66	774.60	774.53	774.50		
CW		774.92	774.89	774.84	774.79	774.73	774.68	774.63	774.57	774.52	774.50		
SW		0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
7	DL1	0.08	0.06	0.03	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
	DL2	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	C	0.00	0.00	0.01	0.01	0.01	0.02	0.03	0.03	0.01	0.00		
	8	DS	775.36	775.36	775.35	775.33	775.30	775.26	775.21	775.16	775.09	775.05	
		TES	774.50	774.44	774.40	774.44	774.32	774.28	774.25	774.14	774.07	774.07	
ZW		774.37	774.35	774.30	774.25	774.21	774.17	774.13	774.07	774.01	773.97		
CW		774.37	774.34	774.29	774.24	774.19	774.14	774.09	774.04	773.99	773.97		
SW		0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
9	DL1	0.06	0.05	0.02	0.00	0.00	-0.01	0.00	0.00	0.00	0.00		
	DL2	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	C	0.00	0.01	0.01	0.01	0.02	0.03	0.04	0.03	0.01	0.00		
	BLOCKING HEIGHTS												
	10	BLK	4.09			3.92						3.60	
11	3.69				3.53						3.21		
12	2.79				2.66						2.36		
13	2.38				2.27						1.98		

TABULATED DEFLECTIONS

- SW SELF-WEIGHT OF STEEL GIRDERS, INCLUDING ALL DIAPHRAGMS, STIFFENERS AND BRACING.
- DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED TO BARE STEEL SECTION INCLUDING PERMANENT STAY-IN-PLACE FORMS.
- DL2 PARAPETS 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
- = 3" HAUNCH + 10" SLAB = 13" = 1.08 FT
- C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-72

LEGEND

- P1-4 INTERMEDIATE ELEVATION POINT (PANEL POINT).
- IN THIS EXAMPLE, '1' IS THE FIELD SECTION NUMBER AND '4' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

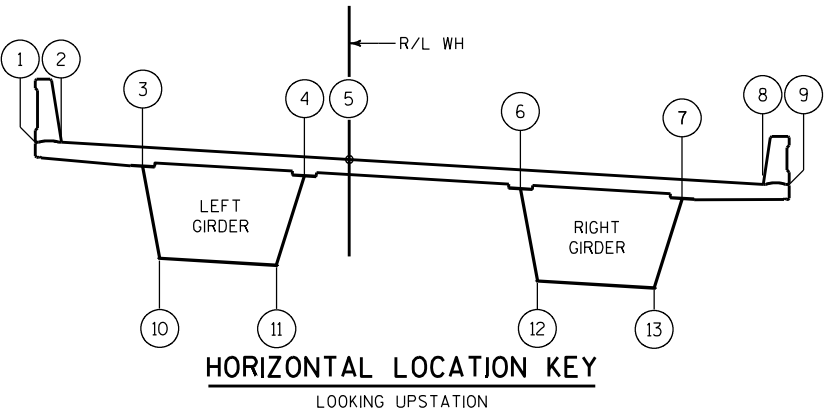
NOTES

1. ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
2. POSITIVE DEFLECTIONS ARE DOWNWARD.
3. POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.
4. CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING THAT ALL SLAB WEIGHT, INCLUDING ALLOWANCE FOR PERMANENT STAY-IN-PLACE FORMS, IS APPLIED TO A NON-COMPOSITE STRUCTURE. VERIFY THE VALIDITY OF THIS ASSUMPTION BASED ON THE SELECTED POUR SEQUENCE. ADJUST CAMBER TABLES AS NECESSARY FOR ANY EXPECTED VARIATIONS EXCEEDING .04' (1/2").
5. CAMBER GIRDERS TO THE VALUES SHOWN, AFTER INCORPORATING ANY REQUIRED ADJUSTMENTS FOR THE SELECTED POUR SEQUENCE.
6. TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPLICES SHALL BE CHECKED 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 SPLICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
		DRAWN BY	TEK
		PLANS CK'D.	BKS
CAMBER DIAGRAM & DECK ELEVATIONS (2 OF 3)		SHEET 43 OF 56	

FIELD SECTION #3

POS'N NO.	VALUE	DIAPHRAGM POSITION AND STATION									
		FS*2	P3-1	P3-2	P3-3	P3-4	PIER 2	P3-6	P3-7	FS*3	
		773+64.58	773+69.93	773+80.13	773+90.33	774+00.53	774+10.73	774+21.31	774+31.88	774+37.38	
FINISHED ELEVATION - TOP OF DECK											
1	DS	777.21	777.17	777.08	776.98	776.88	776.76	776.63	776.49	776.42	
2		777.12	777.08	776.99	776.90	776.79	776.68	776.55	776.41	776.33	
5		776.16	776.12	776.03	775.94	775.83	775.72	775.59	775.45	775.37	
8		774.78	774.74	774.65	774.56	774.45	774.34	774.21	774.07	773.99	
9		774.70	774.65	774.57	774.47	774.36	774.25	774.12	773.98	773.90	
CAMBER DATA											
3 LEFT GIRDER	DS	776.85	776.81	776.72	776.63	776.52	776.41	776.28	776.14	776.06	
	TES	775.85	775.77	775.74	775.63	775.53	775.52	775.35	775.26	775.25	
	ZW	775.73	775.69	775.60	775.51	775.42	775.33	775.25	775.17	775.13	
	CW	775.73	775.69	775.60	775.52	775.43	775.35	775.26	775.17	775.13	
	SW	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.01	0.02	0.03	
	LEFT WEB	DL1	-0.03	-0.03	-0.03	-0.03	-0.02	0.00	0.04	0.09	0.11
		DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
		C	0.00	0.00	0.00	-0.01	-0.02	-0.02	-0.01	0.00	0.00
4 LEFT GIRDER	DS	776.31	776.27	776.18	776.09	775.98	775.87	775.74	775.60	775.52	
	TES	775.32	775.24	775.21	775.10	775.00	774.98	774.81	774.71	774.70	
	ZW	775.20	775.16	775.07	774.98	774.88	774.79	774.70	774.62	774.57	
	CW	775.20	775.15	775.07	774.98	774.89	774.80	774.71	774.61	774.57	
	SW	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	
	RIGHT WEB	DL1	-0.02	-0.02	-0.02	-0.02	-0.01	0.00	0.04	0.08	0.10
		DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
		C	0.00	0.00	0.01	0.00	-0.01	-0.01	0.00	0.00	0.00
6 RIGHT GIRDER	DS	775.59	775.55	775.46	775.37	775.26	775.15	775.02	774.88	774.80	
	TES	774.60	774.52	774.49	774.37	774.27	774.25	774.07	773.96	773.94	
	ZW	774.50	774.45	774.37	774.27	774.17	774.06	773.97	773.87	773.82	
	CW	774.50	774.45	774.35	774.26	774.16	774.07	773.97	773.87	773.82	
	SW	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02	
	LEFT WEB	DL1	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.03	0.06	0.08
		DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
		C	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
7 RIGHT GIRDER	DS	775.05	775.01	774.92	774.83	774.72	774.61	774.48	774.34	774.26	
	TES	774.07	773.99	773.96	773.84	773.74	773.71	773.52	773.41	773.39	
	ZW	773.97	773.93	773.84	773.74	773.63	773.53	773.43	773.32	773.26	
	CW	773.97	773.92	773.82	773.72	773.62	773.52	773.42	773.31	773.26	
	SW	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	
	RIGHT WEB	DL1	0.00	0.00	0.00	-0.01	0.00	0.00	0.02	0.05	0.06
		DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
		C	0.00	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.00
BLOCKING HEIGHTS											
10	BLK	3.60					3.19			2.99	
11		3.21					2.80			2.58	
12		2.36					1.93			1.68	
13		1.98					1.54			1.28	



TABULATED ELEVATIONS

FTW FINISHED ELEVATION AT TOP OF WEB.
DS FINISHED ELEVATION AT TOP OF DECK SLAB.
TES TOP OF ERECTED STEEL ELEVATION.
= ZW + PL - SW
ZW TOP OF WEB ELEVATION NEGLECTING ALL DEFLECTIONS.
= DS + SW + DL1 + DL2 - DK
CW ELEVATION OF CHORD LINES JOINING TOP OF WEB ELEVATION AT 'ZW' AT FIELD SPLICES AND END SUPPORTS.
BLK BLOCKING HEIGHT TO UNDEFLECTED SHAPE. BLOCKING HEIGHT IS MEASURED TO BOTTOM OF WEB AND DOES NOT TAKE INTO ACCOUNT BOTTOM FLANGE THICKNESS, SPLICE PLATES, ETC.

TABULATED DEFLECTIONS

SW SELF-WEIGHT OF STEEL GIRDERS, INCLUDING ALL DIAPHRAGMS, STIFFENERS AND BRACING.
DL1 CONCRETE DECK SLAB AND HAUNCHES APPLIED TO BARE STEEL SECTION INCLUDING PERMANENT STAY-IN-PLACE FORMS.
DL2 PARAPETS 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
= 3" HAUNCH + 10" SLAB = 13" = 1.08 FT
C = CAMBER = ZW - CW

FIELD SECTION #4

POS'N NO.	VALUE	DIAPHRAGM POSITION AND STATION										
		FS#3	P4-1	P4-2	P4-3	P4-4	P4-5	P4-6	P4-7	P4-8		
		774+37.38	774+42.46	774+53.03	774+63.61	774+74.18	774+84.76	774+95.33	775+05.91	775+16.48		
FINISHED ELEVATION - TOP OF DECK												
1	DS	776.42	776.34	776.18	776.01	775.83	775.60	775.34	775.07	774.80		
2		776.33	776.26	776.09	775.92	775.74	775.51	775.26	774.99	774.73		
5		775.37	775.30	775.13	774.96	774.78	774.59	774.39	774.18	773.97		
8		773.99	773.92	773.75	773.58	773.40	773.27	773.14	773.01	772.87		
9		773.90	773.83	773.67	773.50	773.32	773.18	773.06	772.93	772.80		
CAMBER DATA												
3	LEFT GIRDER	DS	776.06	775.98	775.82	775.65	775.47	775.25	775.01	774.76	774.51	
		TES	775.25	775.17	774.99	774.85	774.66	774.48	774.13	773.82	773.58	
		ZW	775.13	775.08	774.97	774.83	774.65	774.40	774.10	773.78	773.43	
		CW	775.13	775.02	774.79	774.57	774.34	774.11	773.89	773.66	773.43	
		SW	0.03	0.04	0.05	0.05	0.05	0.05	0.03	0.02	0.00	
	RIGHT WEB	DL1	0.11	0.13	0.17	0.20	0.19	0.17	0.13	0.07	0.00	
		DL2	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.00	
		C	0.00	0.07	0.18	0.27	0.31	0.29	0.22	0.11	0.00	
		4	DS	775.52	775.45	775.29	775.11	774.93	774.74	774.52	774.31	774.09
			TES	774.70	774.61	774.42	774.27	774.09	773.93	773.62	773.35	773.15
ZW	774.57		774.52	774.40	774.25	774.07	773.85	773.59	773.30	773.00		
RIGHT GIRDER	CW		774.57	774.47	774.26	774.05	773.84	773.63	773.42	773.21	773.00	
	SW		0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.02	0.00	
	LEFT WEB	DL1	0.10	0.12	0.14	0.16	0.16	0.15	0.11	0.06	0.00	
		DL2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	
		C	0.00	0.05	0.14	0.20	0.23	0.22	0.17	0.09	0.00	
6		DS	774.80	774.72	774.56	774.39	774.21	774.04	773.87	773.69	773.51	
		TES	773.94	773.87	773.67	773.51	773.33	773.21	772.94	772.72	772.58	
	ZW	773.82	773.77	773.64	773.49	773.30	773.11	772.90	772.67	772.43		
	RIGHT GIRDER	CW	773.82	773.73	773.54	773.36	773.17	772.99	772.80	772.62	772.43	
		SW	0.02	0.02	0.03	0.04	0.03	0.03	0.02	0.01	0.00	
		LEFT WEB	DL1	0.08	0.09	0.12	0.13	0.13	0.11	0.08	0.05	0.00
			DL2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
C			0.00	0.04	0.09	0.13	0.13	0.13	0.10	0.05	0.00	
7	DS		774.26	774.19	774.03	773.85	773.67	773.53	773.39	773.24	773.09	
	TES		773.39	773.31	773.11	772.95	772.76	772.67	772.44	772.26	772.15	
	ZW	773.26	773.20	773.07	772.91	772.73	772.57	772.40	772.20	772.00		
	RIGHT GIRDER	CW	773.26	773.18	773.01	772.84	772.68	772.51	772.34	772.17	772.00	
		SW	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.01	0.00	
		LEFT WEB	DL1	0.06	0.07	0.09	0.10	0.10	0.09	0.07	0.04	0.00
			DL2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
C			0.00	0.02	0.06	0.07	0.05	0.06	0.06	0.03	0.00	
BLOCKING HEIGHTS												
10	BLK		2.99								1.31	
11		2.58								1.00		
12		1.68								0.31		
13		1.28								0.00		

STATE PROJECT NUMBER

1060-33-72

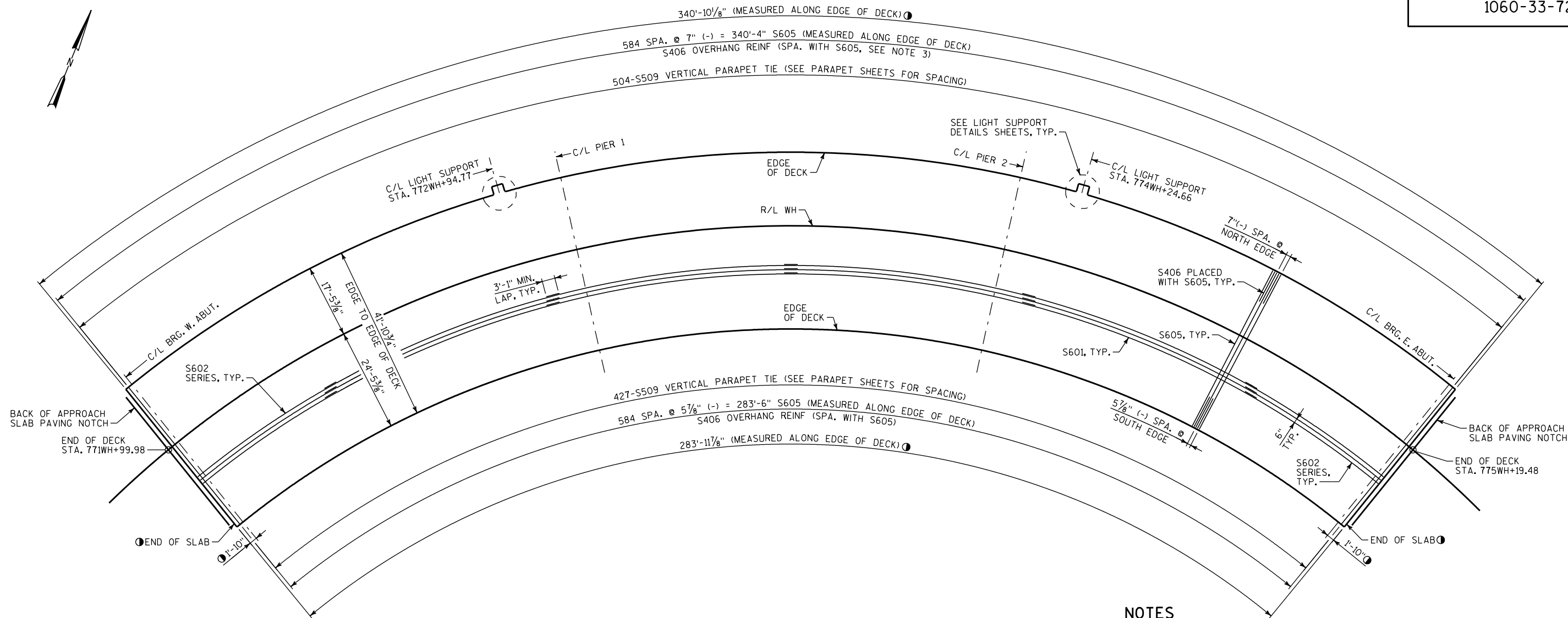
LEGEND

P1-4 INTERMEDIATE ELEVATION POINT (PANEL POINT).
IN THIS EXAMPLE, '1' IS THE FIELD SECTION NUMBER AND '4' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

- ALL TABULATED VALUES ARE IN DECIMALS OF A FOOT.
- POSITIVE DEFLECTIONS ARE DOWNWARD.
- POSITIVE CAMBER IS UPWARD RELATIVE TO A CHORD LINE JOINING THE FIELD SECTION ENDPOINTS.
- CAMBER DIAGRAMS HAVE BEEN DEVELOPED ASSUMING THAT ALL SLAB WEIGHT, INCLUDING ALLOWANCE FOR PERMANENT STAY-IN-PLACE FORMS, IS APPLIED TO A NON-COMPOSITE STRUCTURE. VERIFY THE VALIDITY OF THIS ASSUMPTION BASED ON THE SELECTED POUR SEQUENCE. ADJUST CAMBER TABLES AS NECESSARY FOR ANY EXPECTED VARIATIONS EXCEEDING .04' (1/2").
- CAMBER GIRDERS TO THE VALUES SHOWN, AFTER INCORPORATING ANY REQUIRED ADJUSTMENTS FOR THE SELECTED POUR SEQUENCE.
- TOP OF ERECTED STEEL ELEVATIONS AT SUPPORTS AND FIELD SPLICES SHALL BE CHECKED 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 SPLICES, CORRECTIVE MEASURES SHALL BE TAKEN BEFORE FURTHER CONSTRUCTION OPERATIONS MAY PROCEED.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
		DRAWN BY	TEK
		PLANS CK'D.	BKS
CAMBER DIAGRAM & DECK ELEVATIONS (3 OF 3)		SHEET 44 OF 56	

**LEGEND**

- ① END OF SLAB IS PARALLEL TO CENTERLINE OF BEARING AT ABUTMENT. DIMENSIONS SHOWN ARE BASED ON A 1 3/4" JOINT OPENING AS SHOWN ON EXPANSION JOINT SHEETS.

DECK PLAN - TOP REINFORCEMENT**NOTES**

1. SEE GENERAL NOTES SHEET FOR ADDITIONAL NOTES.
2. SEE EXPANSION JOINT SHEETS FOR ADDITIONAL REINFORCEMENT AT EXPANSION JOINT.
3. AT EACH LIGHT SUPPORT, 6-S406 BARS ARE NOT REQUIRED. THE S406 BARS ARE REPLACED BY THE L601 BARS AS INDICATED ON LIGHT SUPPORT DETAILS SHEETS. L504 BARS SHALL BE PLACED IN LIEU OF S509.
4. THE DECK SHALL HAVE A TINE FINISH AS DEFINED IN THE STANDARD SPECIFICATIONS.

SLAB POURING SEQUENCE NOTES

THE RATE OF PLACING CONCRETE SHALL EQUAL OR EXCEED 1/2 SPAN LENGTH PER HOUR BUT NEED NOT EXCEED 100 CU. YDS. PER HOUR.

THE CONTRACTOR MAY SUBMIT AN ALTERNATE POURING SEQUENCE SUBJECT TO THE APPROVAL OF THE ENGINEER.

THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND COORDINATING DECK POURS TO BEST SUIT THE MEANS AND METHODS AVAILABLE TO HIM.

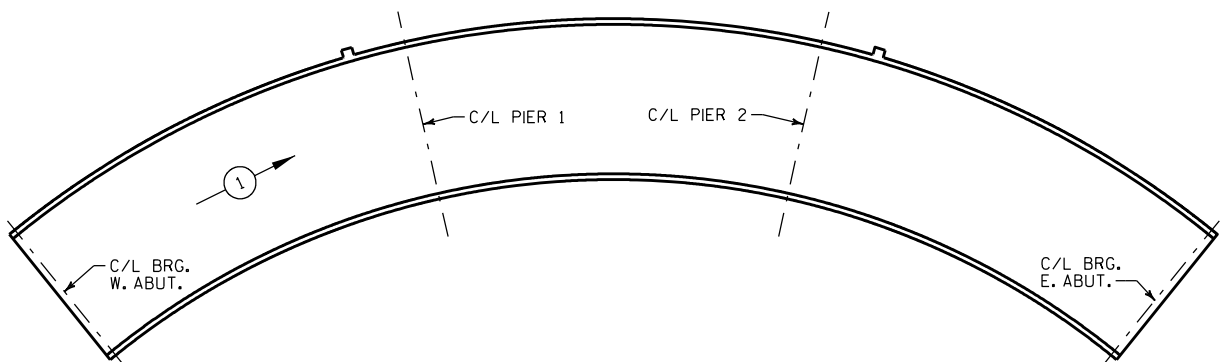
CONTRACTOR MAY PLACE THE DECK CONTINUOUSLY FROM EITHER END OF THE STRUCTURE PROVIDED THAT ALL OTHER REQUIREMENTS ARE MET. IF MORE THAN ONE POUR IS REQUIRED, BULKHEAD LOCATIONS MUST BE APPROVED BY THE ENGINEER.

CONTROL POUR SEQUENCE AND PLACEMENT RATE TO ENSURE THAT BEFORE THE CONCRETE IN ANY PIER AREA REACHES THE INITIAL SET CONDITION, THE CONCRETE IN BOTH ADJACENT 'SPAN' AREAS IS ALREADY IN PLACE.

DEPOSIT FRESH CONCRETE FIRST IN THE AREA BETWEEN THE GIRDERS FOLLOWED BY THE OVERHANG AREA TO INSIDE OF THE CURVE AND THEN BY THE OVERHANG AREA TO THE OUTSIDE OF THE CURVE.

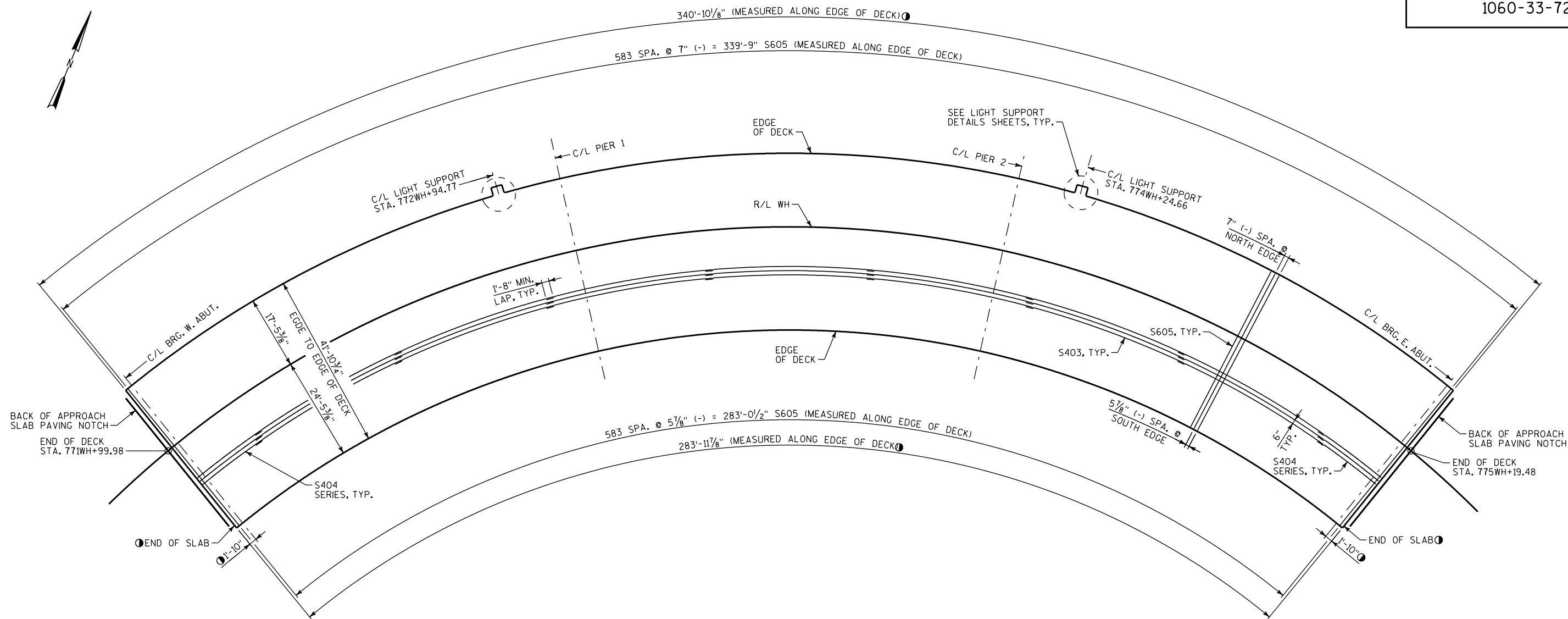
CONTROL THE PLACEMENT TO ENSURE THAT THE FURTHEST PROGRESS OF FRESH CONCRETE VARIES BY NO MORE THAN 10 FEET ACROSS THE WIDTH OF THE DECK.

FOLLOW PROCEDURES OUTLINED IN THE STANDARD SPECIFICATIONS.

**SLAB POURING SEQUENCE**

① INDICATES POUR NUMBER AND DIRECTION OF POUR

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		CNK	PLANS CK'D. BKS
SUPERSTRUCTURE REINFORCEMENT (1 OF 2)			SHEET 45 OF 56

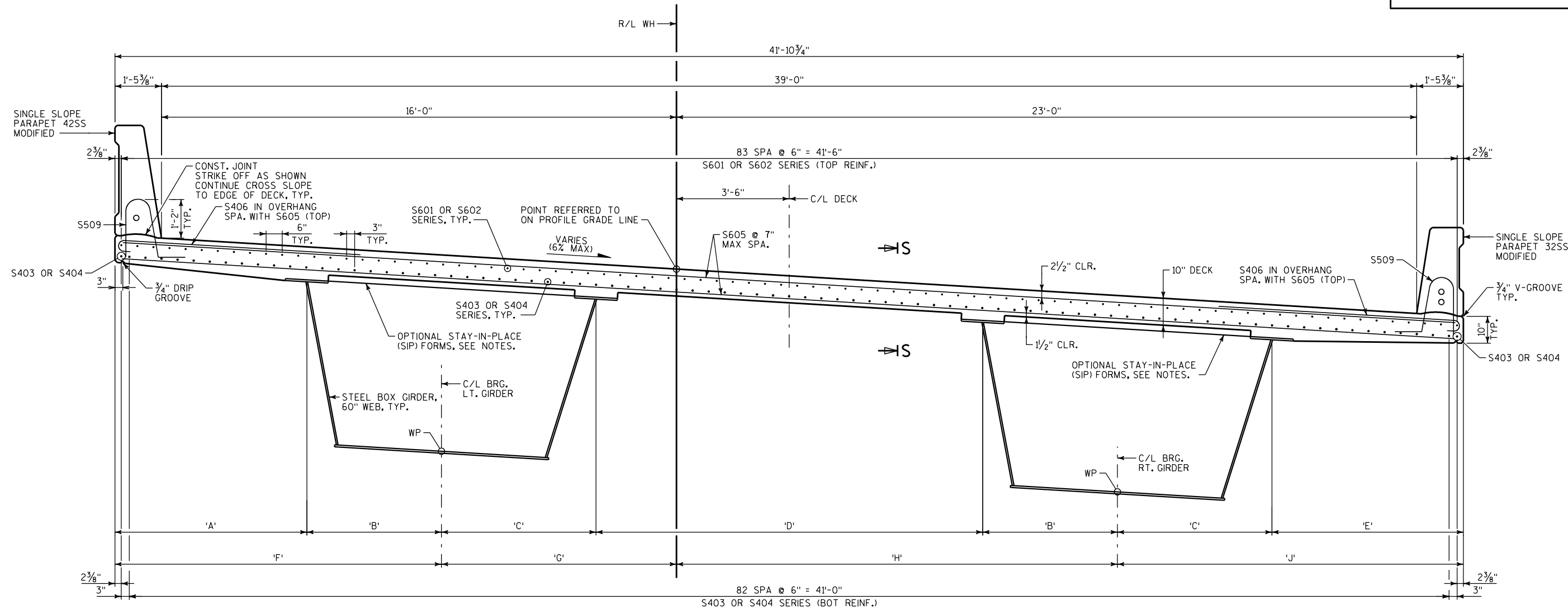


DECK PLAN - BOTTOM REINFORCEMENT

LEGEND

- ① END OF SLAB IS PARALLEL TO CENTERLINE OF BEARING AT ABUTMENT. DIMENSIONS SHOWN ARE BASED ON A 1 3/4" JOINT OPENING AS SHOWN ON EXPANSION JOINT SHEETS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		CNK	PLANS CK'D. BKS
SUPERSTRUCTURE REINFORCEMENT (2 OF 2)			SHEET 46 OF 56



ALL BAR STEEL REINFORCEMENT SHOWN IN TABLE BELOW IS STAINLESS STEEL REINFORCEMENT

CROSS SECTION THRU SUPERSTRUCTURE
(LOOKING UPSTATION - DIMENSIONS ARE NORMAL TO R/L WH)

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S601		336	60'-0"			SLAB TOP LONG
S602		168	44'-3"		▲	SLAB TOP LONG SERIES
S403		595	40'-0"			SLAB BOT LONG
S404		170	23'-3"		▲	SLAB BOT LONG SERIES
S605		1169	41'-6"			SLAB TOP & BOT TRANS
S406		1156	8'-2"	X		SLAB TOP TRANS OVERHANG
S407		8	8'-6"			HORIZONTAL AT EXP. JOINTS
S408		4	11'-6"			HORIZONTAL AT EXP. JOINTS
S509		931	4'-8"	X		PARAPET TIE

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

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
S602	2 SERIES OF 84	30'-0" TO 58'-6"
S404	2 SERIES OF 83	9'-0" TO 37'-6"

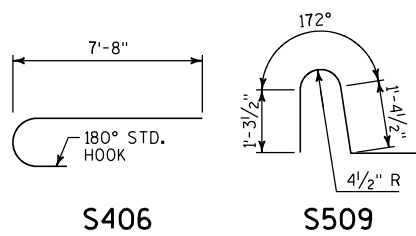
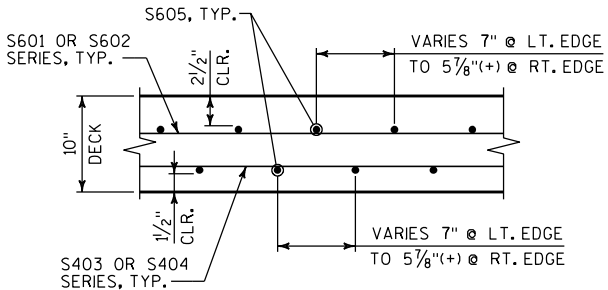


TABLE OF DIMENSIONS

STATION	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	DIM 'E'	DIM 'F'	DIM 'G'	DIM 'H'	DIM 'J'
772WH+02.98 TO 774WH+77.00	5'-10 13/16"	4'-2 3/16"	4'-9 9/16"	12'-0 3/16"	6'-0 1/8"	10'-1"	7'-4 3/8"	13'-7 5/8"	10'-9 3/4"
775WH+00.00 TO 775WH+16.48	5'-10 7/8"	4'-2 1/16"	4'-9 3/16"	12'-0 1/8"	6'-0 1/16"	10'-1 1/2"	7'-3 3/8"	13'-8 1/8"	10'-9 1/4"



SECTION S-S

NOTES

1. STAY-IN-PLACE METAL FORMS WILL ONLY BE PERMITTED INSIDE THE BOX GIRDERS - THE OVERHANGS AND THE ZONE BETWEEN THE GIRDERS SHALL USE CONVENTIONAL TEMPORARY FORMS.

THE USE OF STAY-IN-PLACE METAL FORMS IS OPTIONAL, CONVENTIONAL FORMWORK MAY BE USED INSIDE THE BOXES BUT MUST BE COMPLETELY REMOVED.

DESIGN CONNECTION BETWEEN STAY-IN-PLACE METAL FORMS AND GIRDER FLANGES TO PROVIDE ADJUSTMENT OF VERTICAL POSITION BASED ON THE ACTUAL HAUNCH HEIGHT REQUIRED. WELDED DETAILS SHALL BE FATIGUE STRESS CATEGORY C OR BETTER.

TOP OF STAY-IN-PLACE METAL FORMS SHALL BE ALIGNED WITH THE UNDERSIDE OF THE 10" DECK SLAB.

COST OF PERMANENT STAY-IN-PLACE METAL FORMS IS INCIDENTAL TO THE PAY ITEM "HPC MASONRY STRUCTURES". THE SUPERSTRUCTURE CONCRETE QUANTITY DOES NOT INCLUDE THE CONCRETE WITHIN THE STAY-IN-PLACE METAL FORM FLUTES. SUCH CONCRETE IS CONSIDERED INCIDENTAL AND WILL NOT BE PAID FOR SEPERATELY.

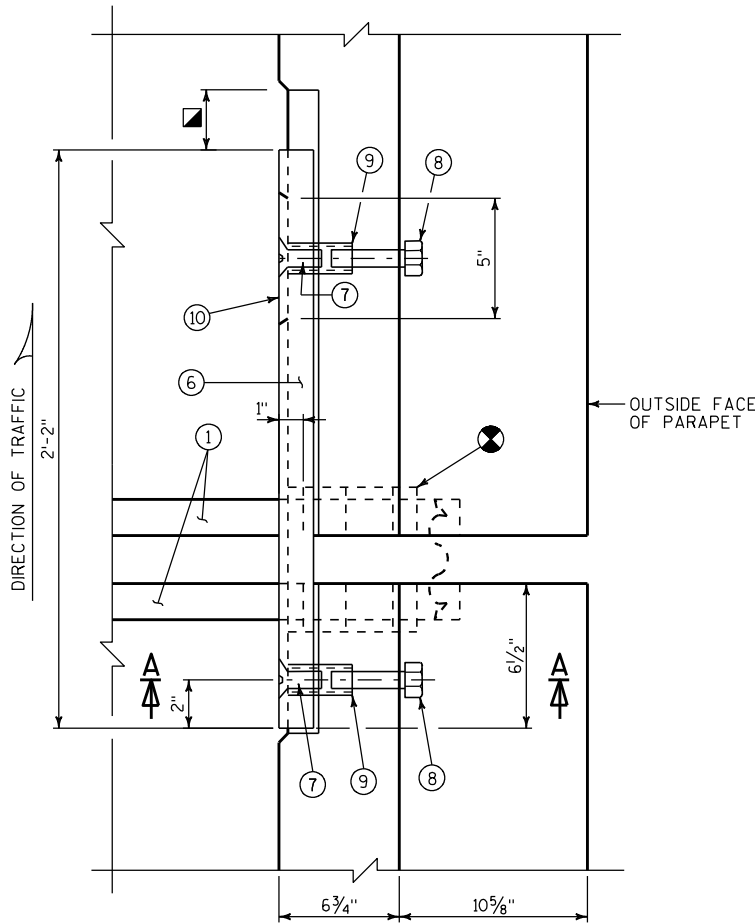
2. TO AVOID OVERSTRESSING THE EXTERIOR GIRDER WEBS DURING DECK PLACEMENT, DECK OVERHANG FORMWORK BRACKETS MUST CONTACT THE GIRDER WEB WITHIN 8" OF THE TOP OF THE BOTTOM FLANGE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		CNK	PLANS CK'D. BKS
SUPERSTRUCTURE CROSS SECTION			SHEET 47 OF 56

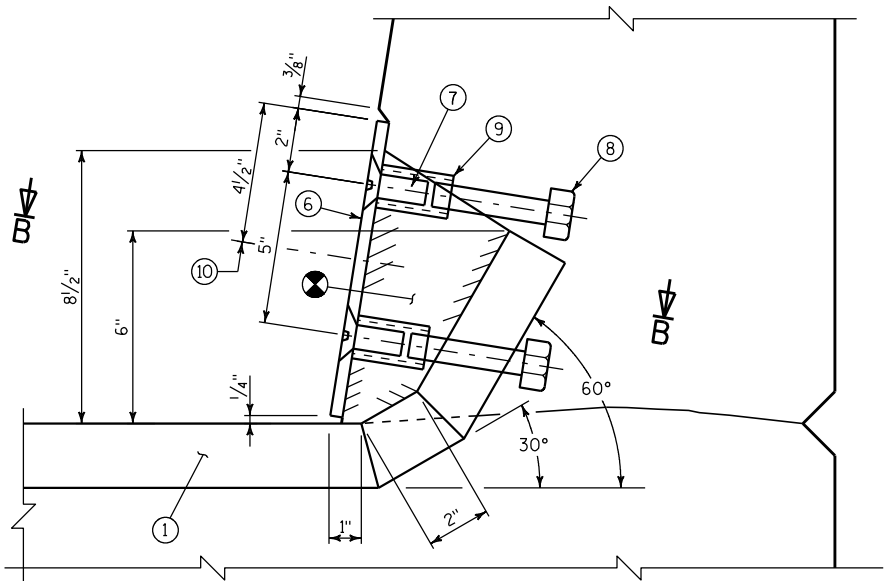
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
EXPANSION JOINT (1 OF 2)		SHEET 48 OF 56	

LEGEND

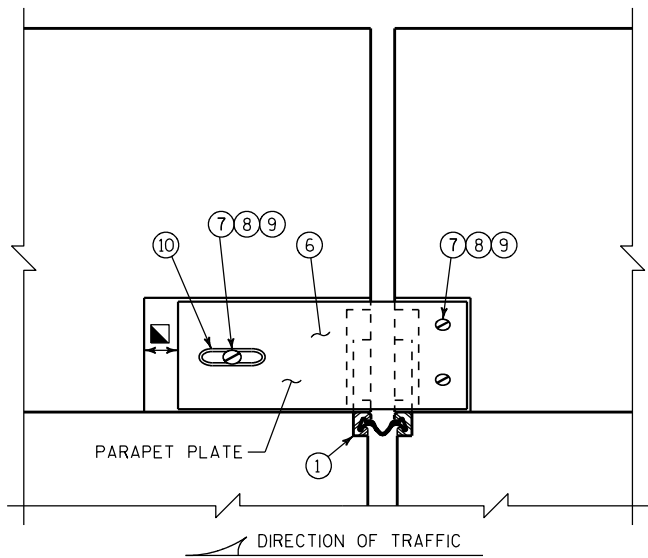
- ①
②
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⑩
- REFER TO EXPANSION JOINT (1 OF 2) SHEET
- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING
- ▣ JOINT OPENING DIMENSION PLUS 1/2"



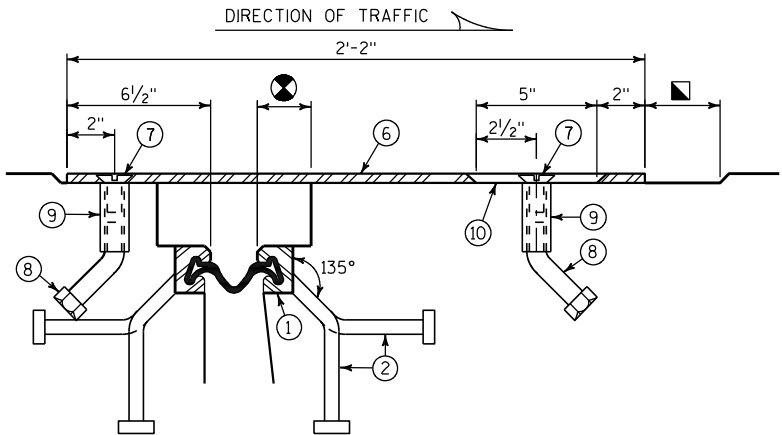
PLAN



SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



SECTION B-B

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
EXPANSION JOINT (2 OF 2)		SHEET 49 OF 56	

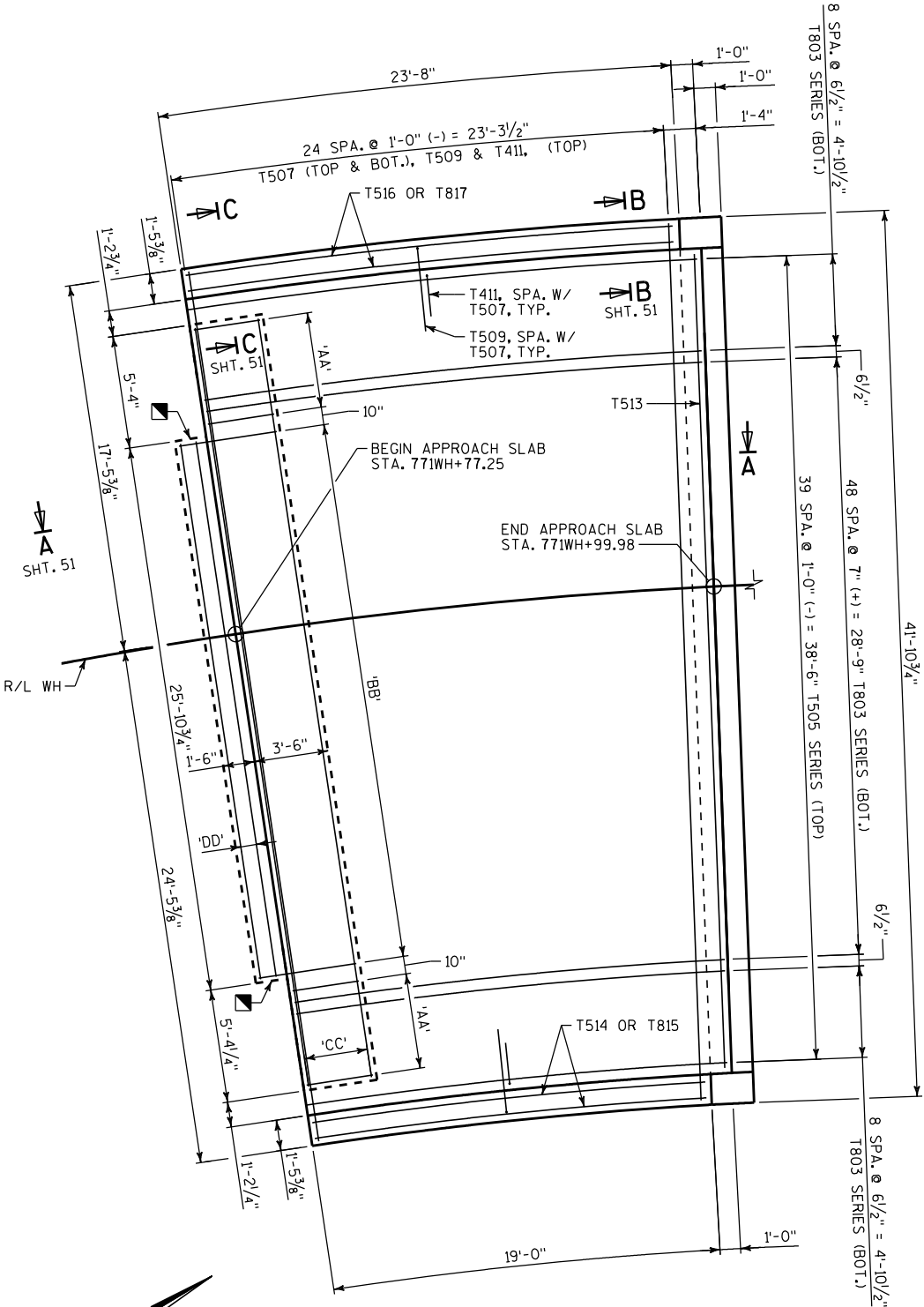
TABLE OF ELEVATIONS

FEATURE	STA.				
	771WH+77.25	771WH+99.98	775WH+19.48	775WH+41.00	775WH+42.07
LT. EDGE OF SLAB	776.93	---	---	774.12	774.09
TOE OF 42SS BARRIER	776.93	777.12	774.65	774.12	774.09
R/L WH	775.97	776.16	773.91	773.48	773.46
TOE OF 32SS BARRIER	774.59	774.78	772.83	772.56	772.54
RT. EDGE OF SLAB	774.59	---	---	772.56	772.54

LT. AND RT. ARE TAKEN AS LOOKING UPSTATION.

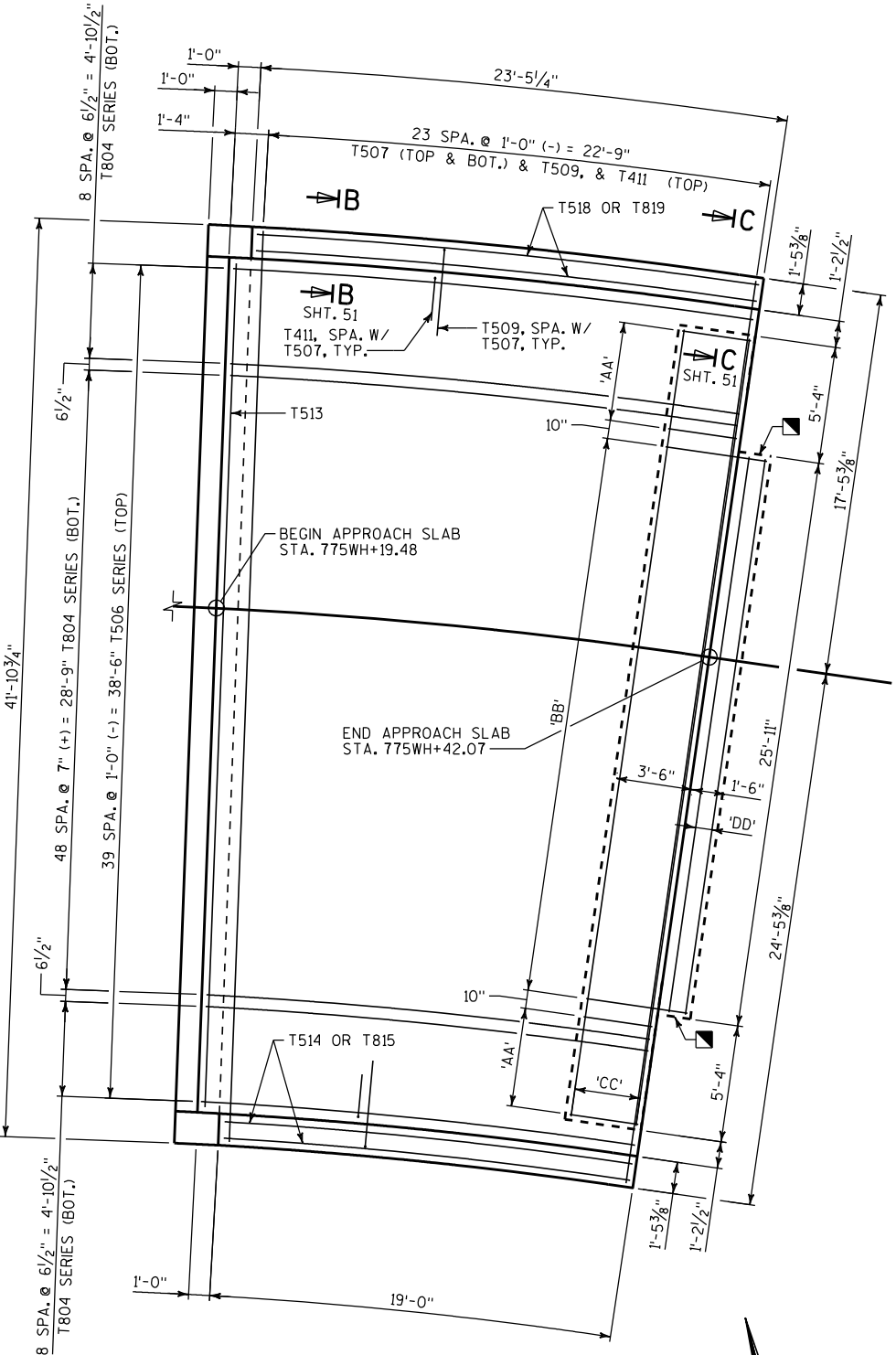
LEGEND

- PROVIDE 1/2" PREFORMED JOINT FILLER BETWEEN EDGE OF APPROACH SLAB FOOTING AND RETAINING WALL MOMENT SLAB.



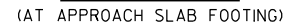
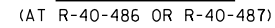
WEST APPROACH SLAB

- 'AA' = 5 SPA. @ 11" (-) = 4'-6" T502
'BB' = 26 SPA. @ 11 1/2" (+) = 25'-5" T501
'CC' = 3 SPA. @ 1'-0" = 3'-0" T510
'DD' = 1 SPA. @ 9" T508

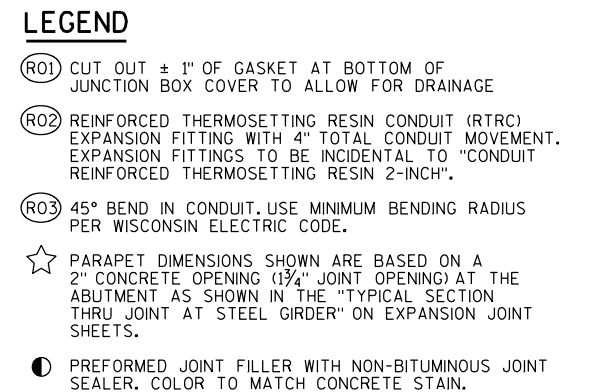


EAST APPROACH SLAB

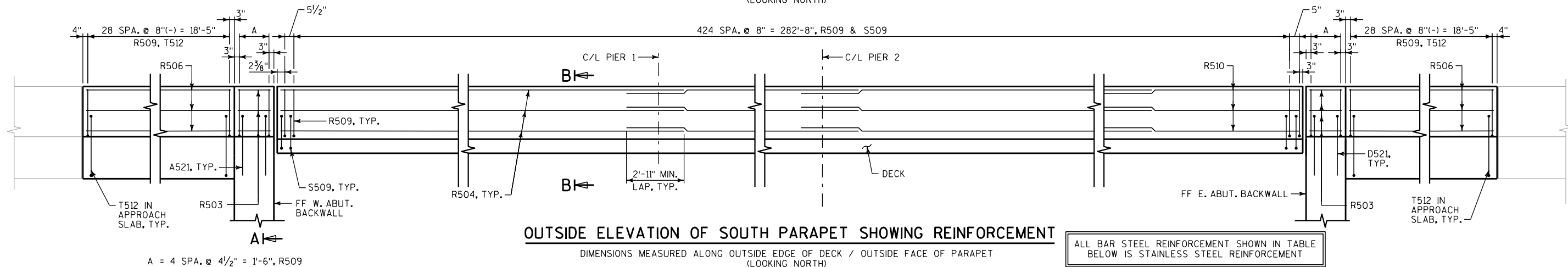
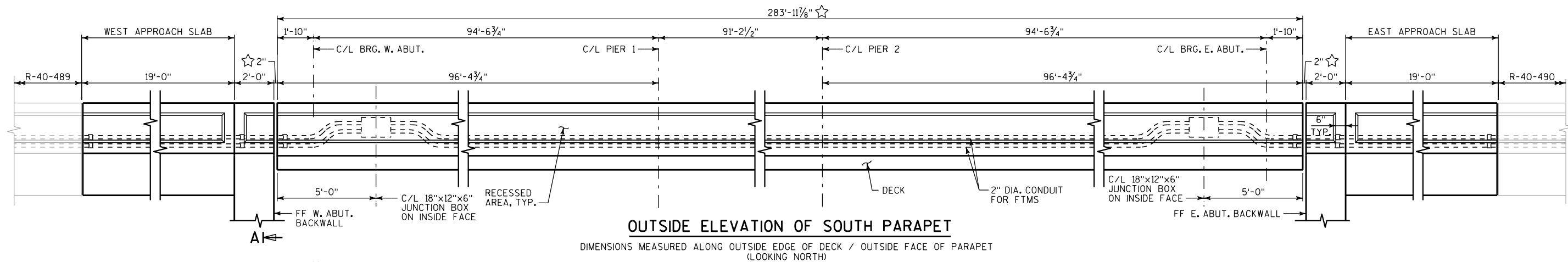
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		CNK	PLANS CK'D. BKS
STRUCTURAL APPROACH SLAB		SHEET 50 OF 56	



PLOT SCALE : 4:1



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
SINGLE SLOPE PARAPET 42SS MODIFIED		SHEET 52 OF 56	

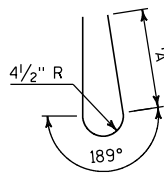


A = 4 SPA. @ 4 1/2" = 1'-6", R509

BILL OF BARS

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

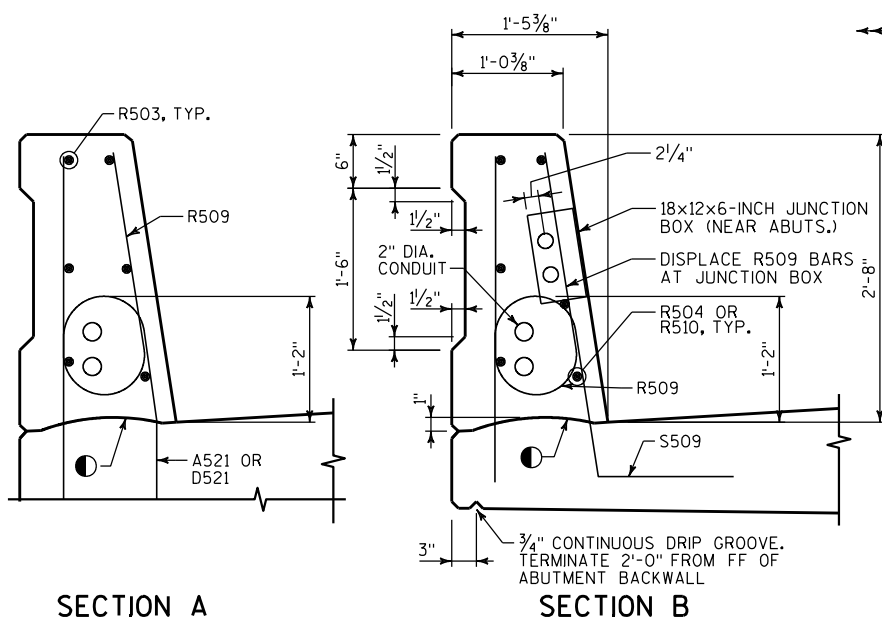
BAR MARK	COAT	NO.	LENGTH	BENT	LOCATION
R501			-		NOT USED
R502		586	6'-7"	X	42SS VERT.
R503		28	1'-8"		BACKWALL HORIZ.
R504		64	60'-0"		PARAPET HORIZ.
R505		8	56'-0"		42SS HORIZ.
R506		12	18'-5"		APPCH SLAB 32SS HORIZ.
R507		8	22'-10"		APPCH SLAB 42SS HORIZ.
R508		8	23'-1"		APPCH SLAB 42SS HORIZ.
R509		495	4'-11"	X	32SS VERT.
R510		6	56'-3"		32SS HORIZ.



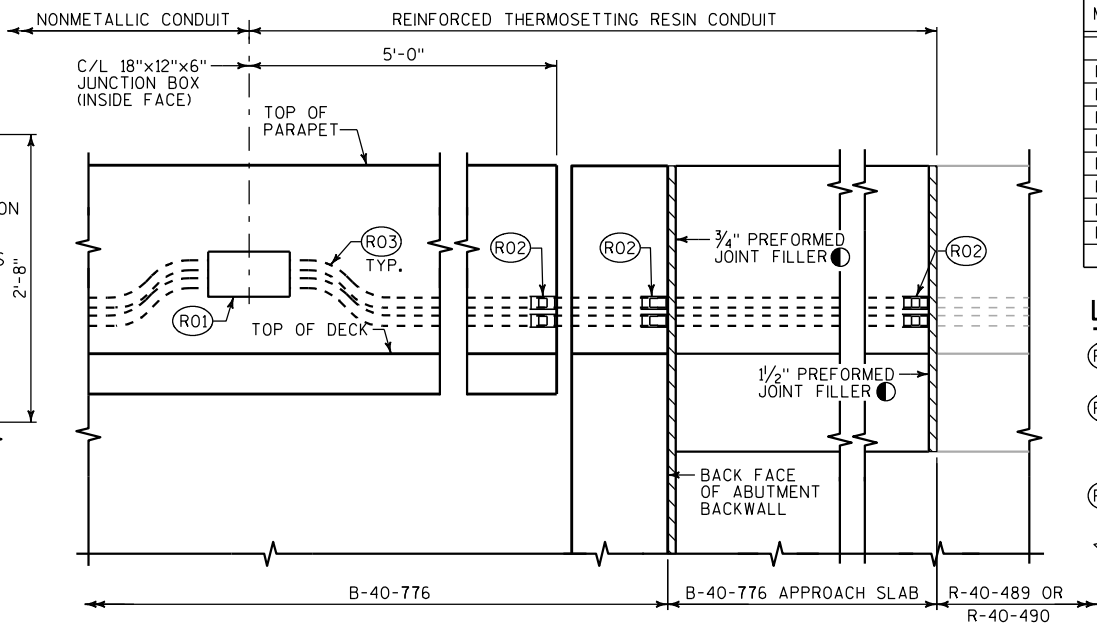
BAR MARK	DIM 'A'
R502	2'-8"
R509	1'-10"

LEGEND

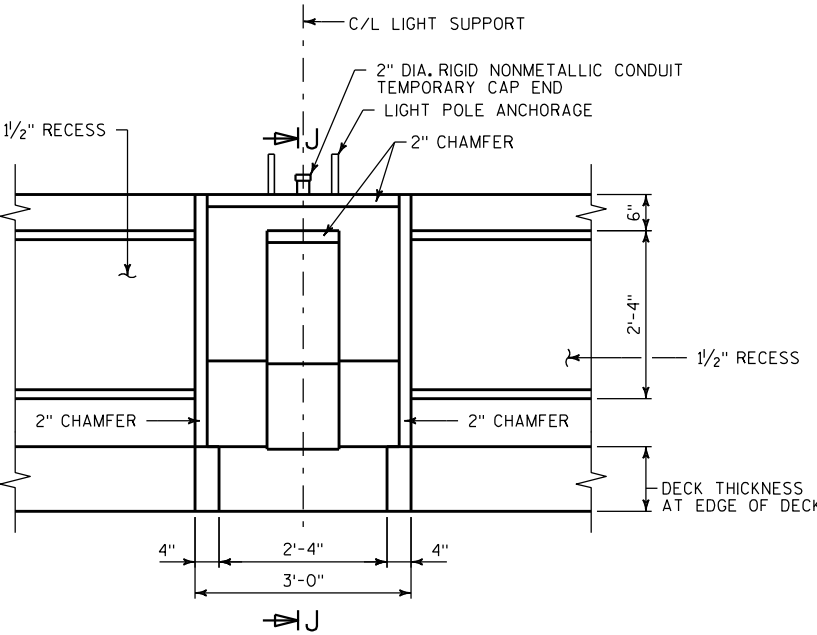
- (R01) CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE
- (R02) REINFORCED THERMOSETTING RESIN CONDUIT (RTRC) EXPANSION FITTING WITH 4" TOTAL CONDUIT MOVEMENT. EXPANSION FITTINGS TO BE INCIDENTAL TO "CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH".
- (R03) 45° BEND IN CONDUIT. USE MINIMUM BENDING RADIUS PER WISCONSIN ELECTRIC CODE.
- ☆ PARAPET DIMENSIONS SHOWN ARE BASED ON A 2" CONCRETE OPENING (1 3/4" JOINT OPENING) AT THE ABUTMENT AS SHOWN IN THE "TYPICAL SECTION THRU JOINT AT STEEL GIRDER" ON EXPANSION JOINT SHEETS.
- PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.



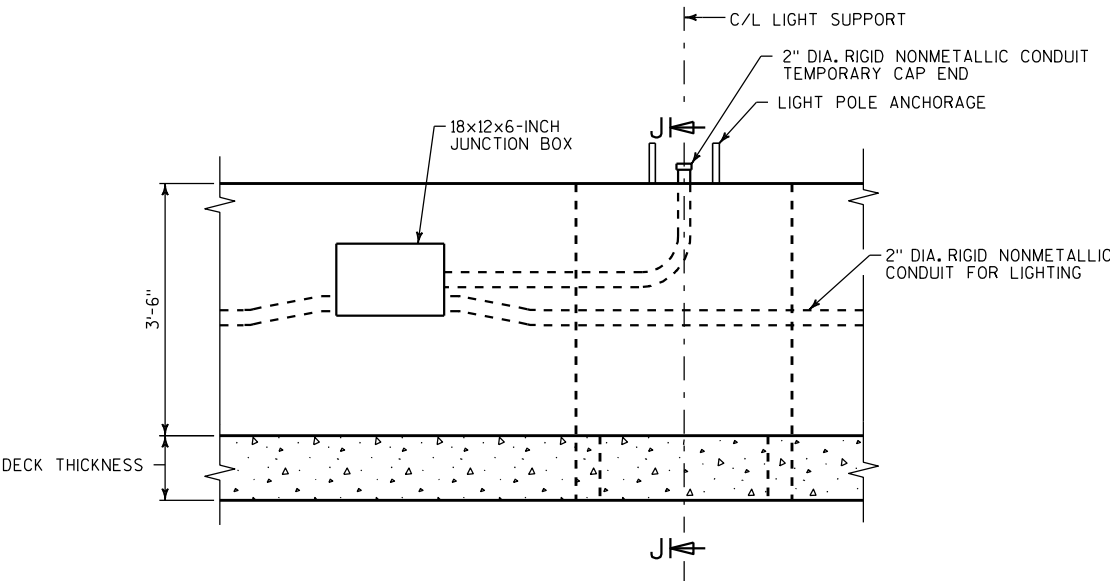
● CONSTRUCTION JOINT - STRIKE OFF AS SHOWN

INSIDE ELEVATION AT ABUTMENT SHOWING CONDUITS

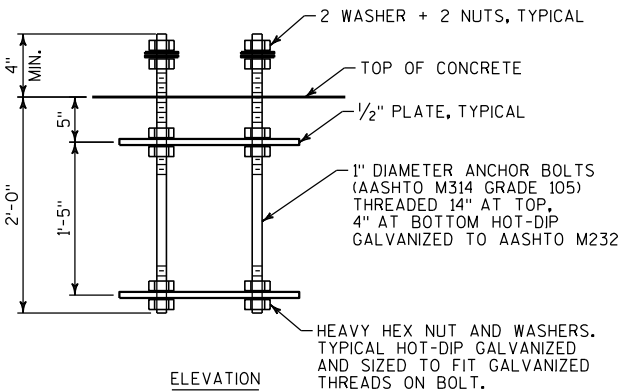
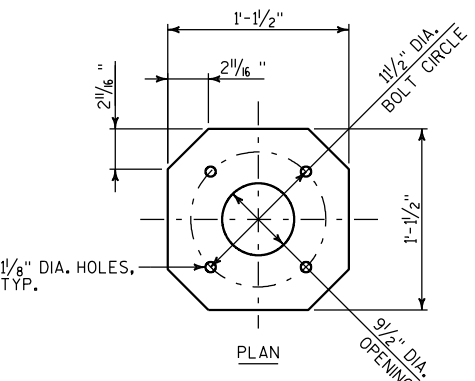
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		CNK	PLANS CK'D. BKS
SINGLE SLOPE PARAPET 32SS MODIFIED			SHEET 53 OF 56



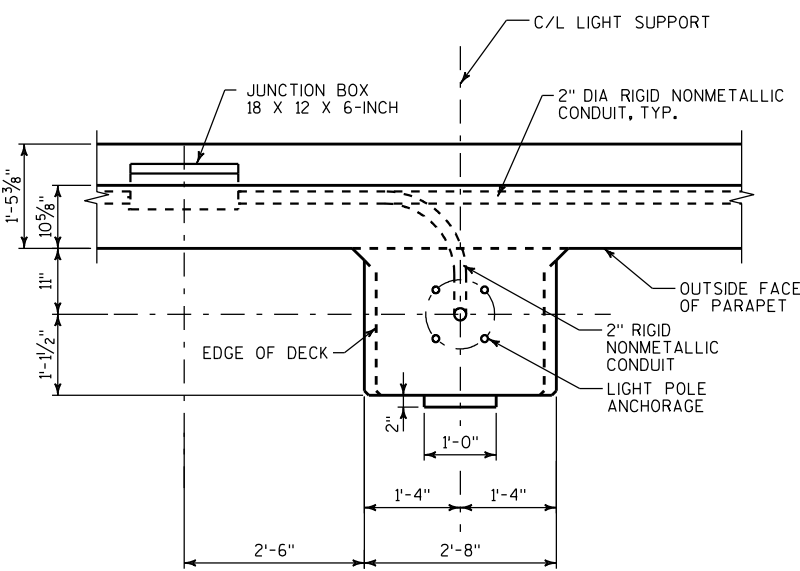
OUTSIDE ELEVATION AT LIGHT SUPPORT



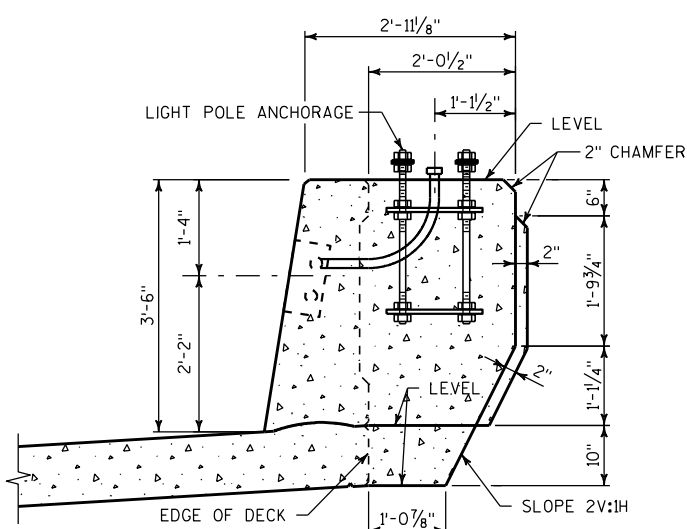
INSIDE ELEVATION AT LIGHT SUPPORT
(NORTH PARAPET SHOWN - SOUTH PARAPET SIMILAR)



ANCHOR ASSEMBLY LIGHT POLE STRUCTURES



PLAN AT LIGHT SUPPORT



SECTION J-J

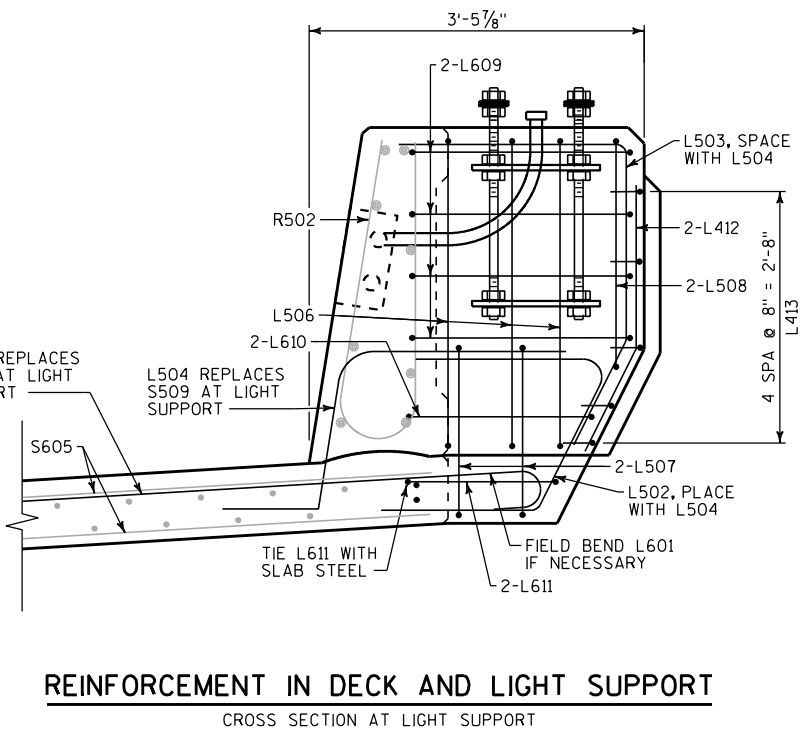
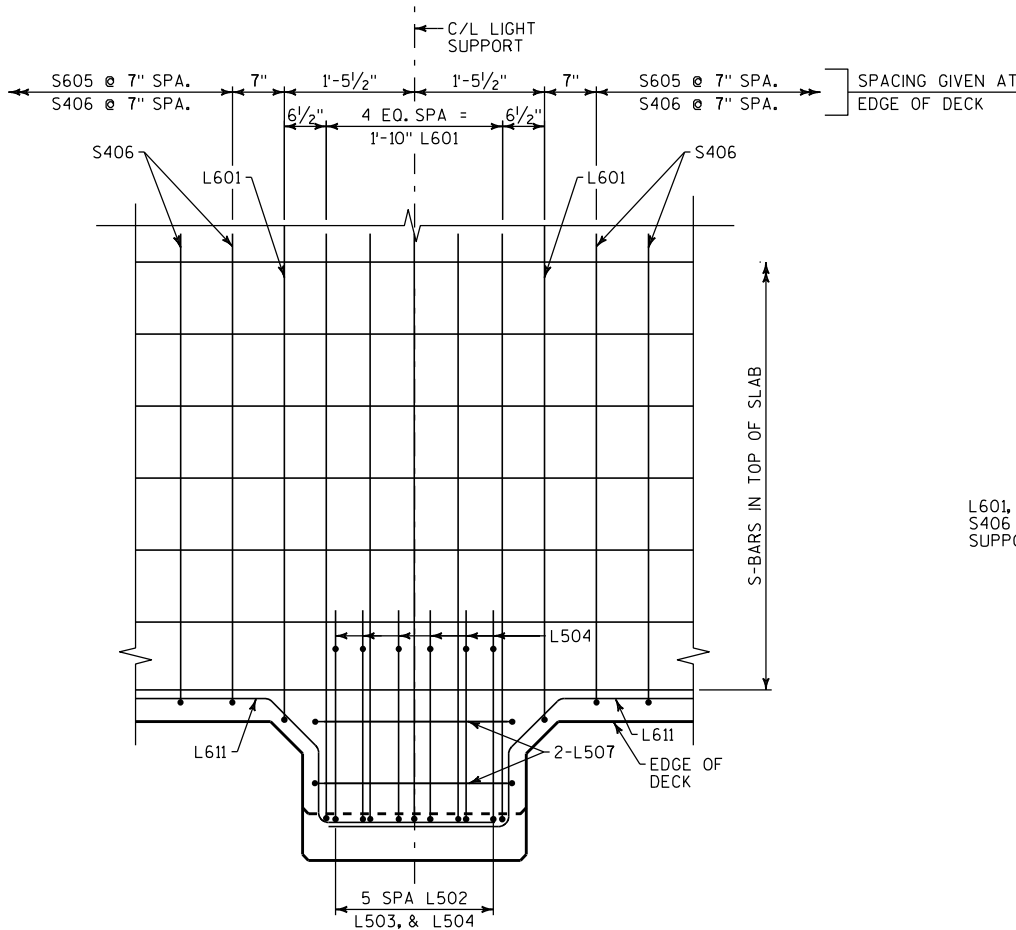
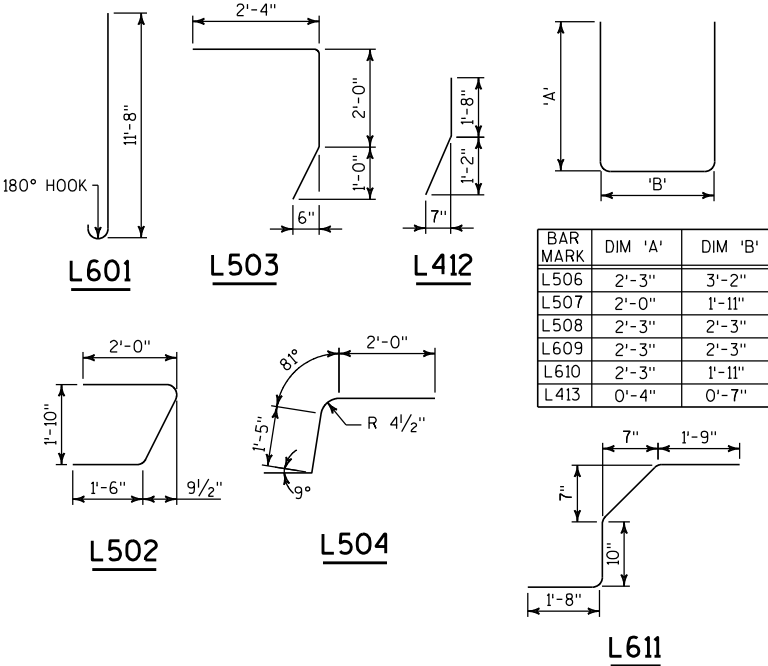
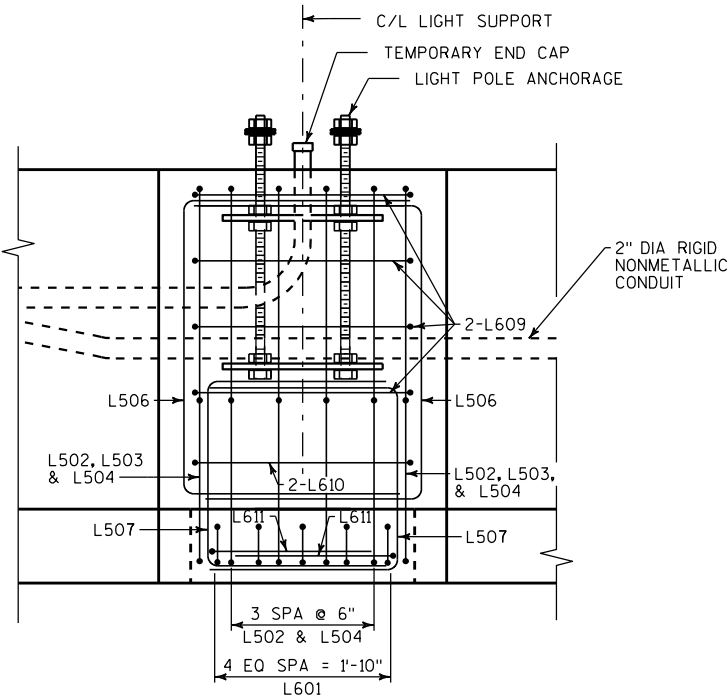
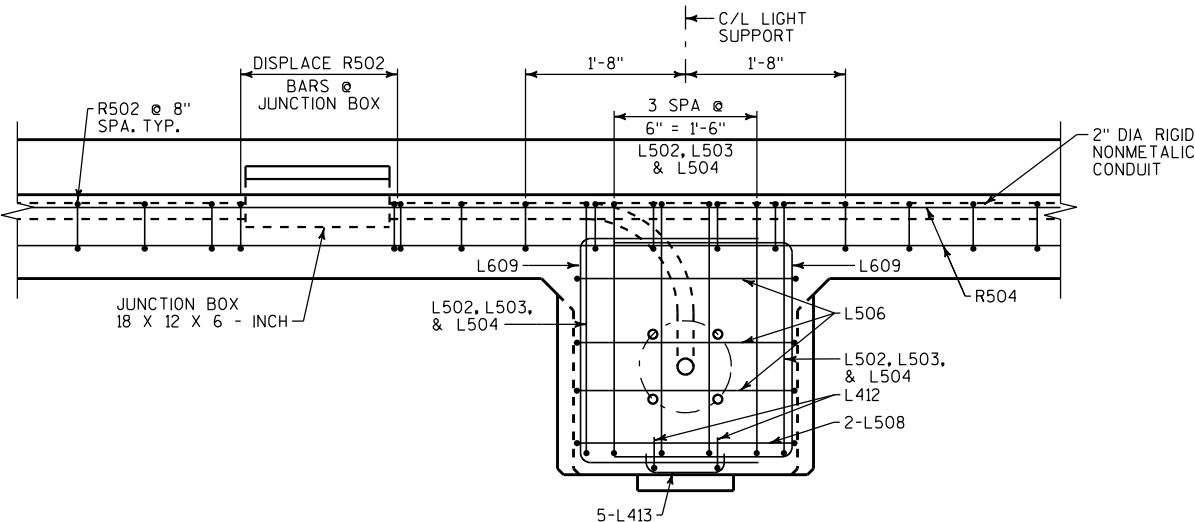
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
LIGHT SUPPORT DETAILS (1 OF 2)			SHEET 54 OF 56

ALL BAR STEEL REINFORCEMENT SHOWN IN TABLE BELOW IS STAINLESS STEEL REINFORCEMENT

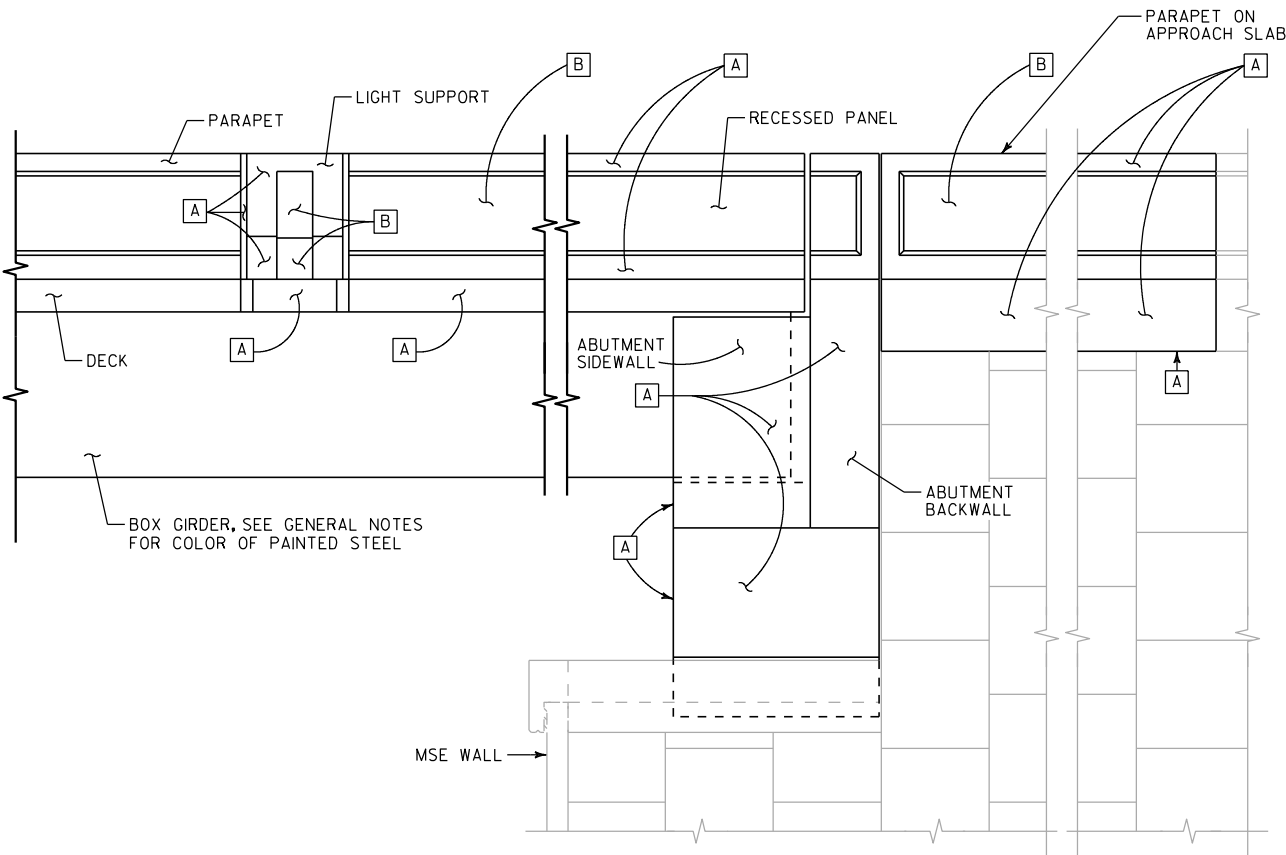
BILL OF BARS

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

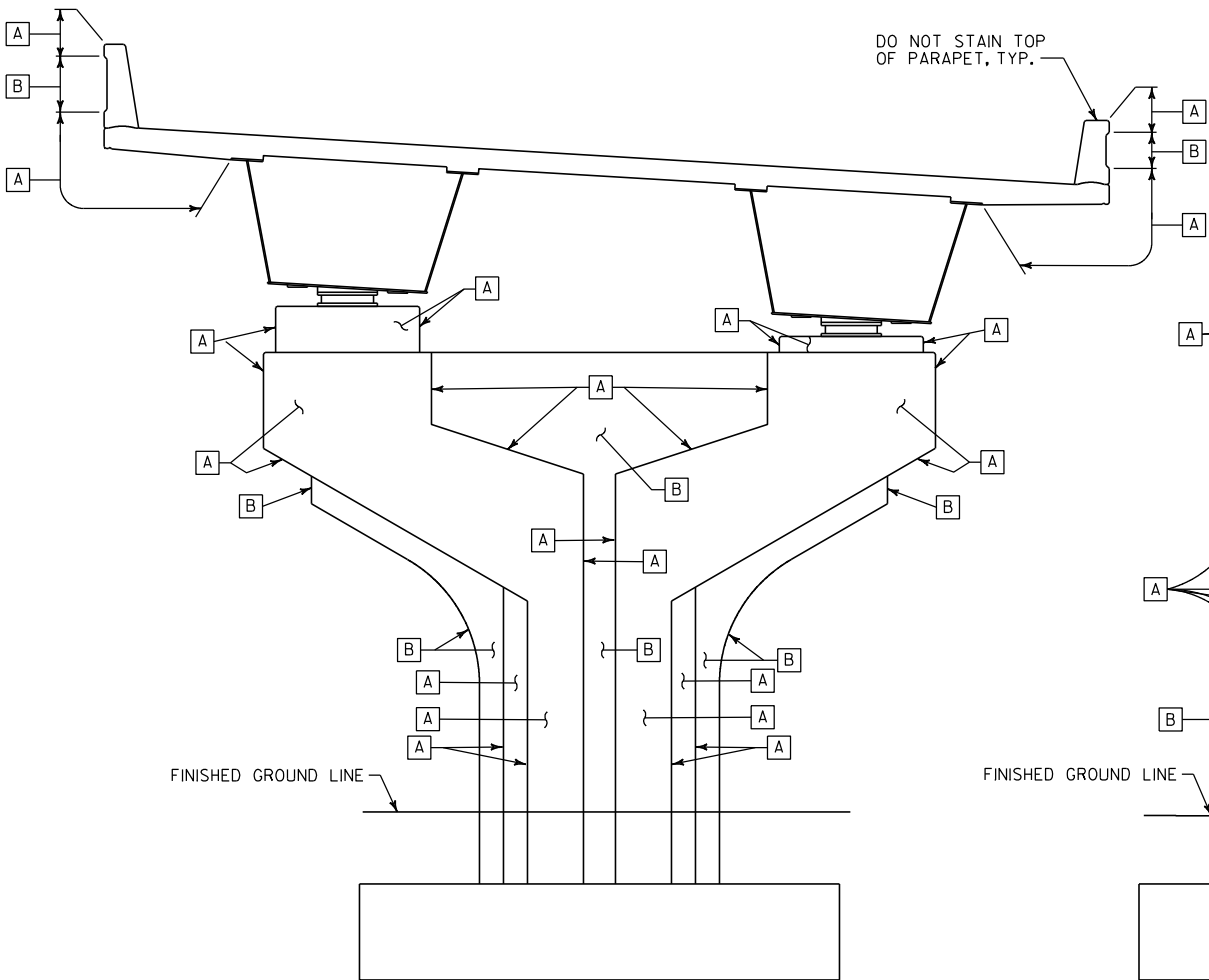
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
L601		14	12'-5"	X	DECK OVERHANG
L502		12	5'-3"	X	VERTICAL - OUTSIDE
L503		12	5'-5"	X	VERTICAL - OUTSIDE WITH SLAB
L504		12	4'-10"	X	VERTICAL - WITH SLAB
L505		-	-	-	NOT USED
L506		12	7'-5"	X	VERTICAL - BODY
L507		8	5'-8"	X	VERTICAL - LOWER BODY
L508		4	6'-6"	X	VERTICAL - OUTSIDE
L609		16	6'-5"	X	HORIZONTAL - TOP
L610		4	6'-1"	X	HORIZONTAL - BODY
L611		4	4'-9"	X	HORIZONTAL - BOTTOM
L412		4	3'-0"	X	OUTSIDE FACE
L413		10	1'-1"	X	OUTSIDE FACE



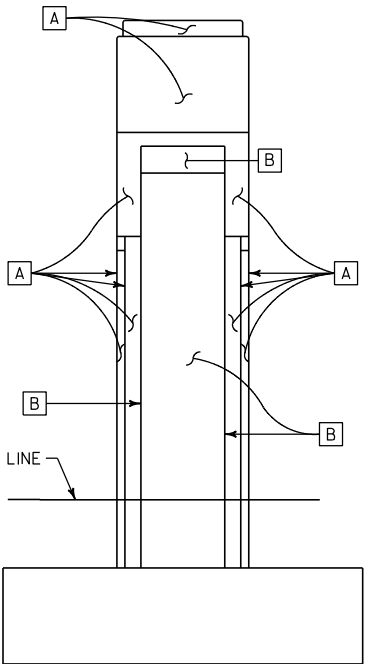
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
LIGHT SUPPORT DETAILS (2 OF 2)			SHEET 55 OF 56



OUTSIDE ELEVATION OF NORTH PARAPET
(SOUTH PARAPET SIMILAR)



ELEVATION OF PIER
(LOOKING UP STATION)



END VIEW OF PIER

CONCRETE STAINING SCHEDULE

MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	EXTERIOR FACE, EXCEPT AS NOTED FOR ACCENT COLORS.
		DECK	FASCIA AND EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE.
		APPROACH SLAB	FASCIA AND UNDERSIDE OF COPING
		ABUTMENT	FRONT FACE OF BEAM SEAT FROM TOP OF ABUTMENT TO TOP OF CONCRETE SLOPE PAVING, EXTERIOR EXPOSED FACE OF ABUTMENT BEAM SEAT, EXTERIOR EXPOSED FACE OF BACKWALL, FRONT FACE AND EXTERIOR EXPOSED FACE OF SIDEWALL, AND EACH SIDE OF GIRDER PEDESTAL.
		PIER	SIDES OF GIRDER PEDESTALS, SIDES AND BOTTOM OF CAP BEAM AND STEM TO 1 FOOT BELOW FINISHED GROUND LINE, EXCEPT AS NOTED FOR ACCENT COLORS.
B	ACCENT COLOR #1	PARAPETS	RECESSED PANELS ON EXTERIOR FACE.
		PIERS	RECESS AREAS AND REVEALS ON PIERS.

THE FINAL COLOR OF THE CONCRTE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW:
BASE COLOR: FEDERAL COLOR - 33564
ACCENT COLOR #1: FEDERAL COLOR - 33448

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-776			
DRAWN BY		TEK	PLANS CK'D. BKS
AESTHETIC DETAILS		SHEET 56 OF 56	