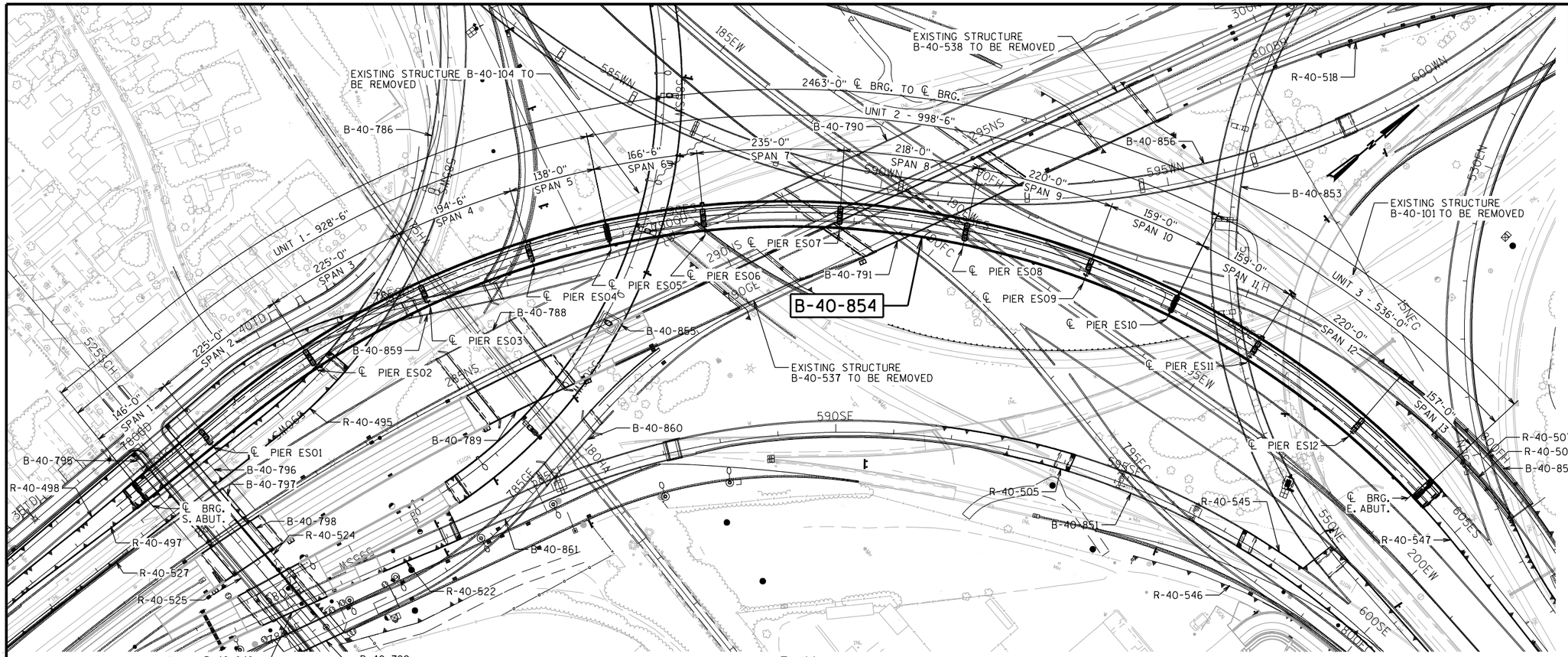
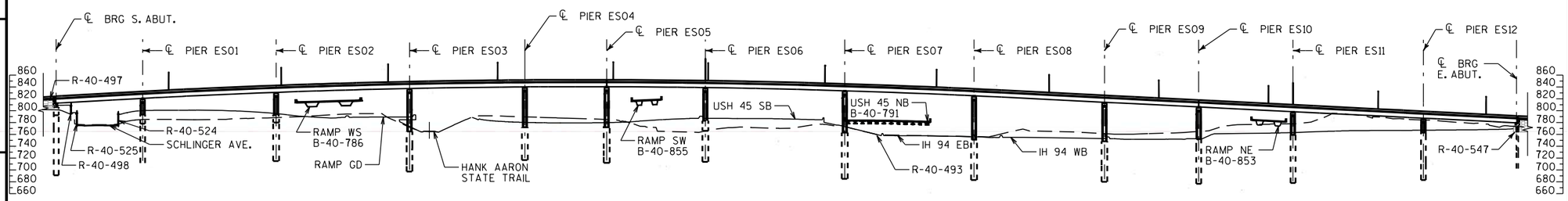


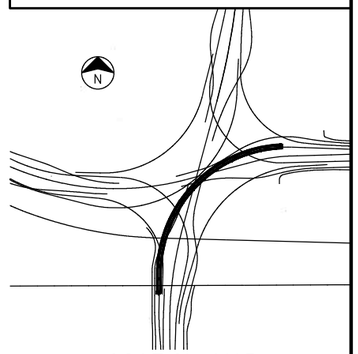
PLAN

13- SPAN CURVED STEEL TRAPEZOIDAL BOX GIRDER, 7 FOOT WEB DEPTH
ABUTMENTS AND PIERS ARE RADIAL TO ℄ ES
DIMENSIONS SHOWN ARE ALONG ℄ ES



ELEVATION

ALONG ℄ ES
(LOOKING NORTHWEST)



LOCATION MAP

STATE PROJECT NUMBER

1060-33-81

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
JAY CARTER (414) 359-2300

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED _____ _____
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-854

ZOO INTERCHANGE RAMP ES

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	ENS	DESIGN CK'D.	JWC	DRAWN BY	ENS	PLANS CK'D.	JWC

GENERAL PLAN & ELEVATION

SHEET 1 OF 122

WISCONSIN
JAMES W. CARTER
E-35165
MILWAUKEE, WIS.
PROFESSIONAL ENGINEER

8 8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Mandatory\080101_gp.dgn PLOT DATE : 01-MAR-2015 18:47 PLOT BY : MSCKTM PLOT NAME : 080101_gp PLOT SCALE : 200:1

STATE PROJECT NUMBER
1060-33-81

DRAWING LIST

MANDATORY

1. GENERAL PLAN & ELEVATION
2. DRAWING LIST
3. TYPICAL SECTION & DESIGN DATA
4. GENERAL NOTES
5. QUANTITIES
6. ROADWAY GEOMETRY
7. PLAN & ELEVATION SPAN 1
8. PLAN & ELEVATION SPANS 2 & 3
9. PLAN & ELEVATION SPANS 4 & 5
10. PLAN & ELEVATION SPANS 6 & 7
11. PLAN & ELEVATION SPANS 8 & 9
12. PLAN & ELEVATION SPANS 10 & 11
13. PLAN & ELEVATION SPANS 12 & 13
14. SUBSURFACE EXPLORATION (1 OF 7)
15. SUBSURFACE EXPLORATION (2 OF 7)
16. SUBSURFACE EXPLORATION (3 OF 7)
17. SUBSURFACE EXPLORATION (4 OF 7)
18. SUBSURFACE EXPLORATION (5 OF 7)
19. SUBSURFACE EXPLORATION (6 OF 7)
20. SUBSURFACE EXPLORATION (7 OF 7)
21. CONSTRUCTION STAGING NOTES (1 OF 2)
22. CONSTRUCTION STAGING NOTES (2 OF 2)
23. CONSTRUCTION STAGING (1 OF 10)
24. CONSTRUCTION STAGING (2 OF 10)
25. CONSTRUCTION STAGING (3 OF 10)
26. CONSTRUCTION STAGING (4 OF 10)
27. CONSTRUCTION STAGING (5 OF 10)
28. CONSTRUCTION STAGING (6 OF 10)
29. CONSTRUCTION STAGING (7 OF 10)
30. CONSTRUCTION STAGING (8 OF 10)
31. CONSTRUCTION STAGING (9 OF 10)
32. CONSTRUCTION STAGING (10 OF 10)
33. EAST ABUTMENT PLAN & ELEVATION
34. EAST ABUTMENT DETAILS (1 OF 2)
35. EAST ABUTMENT DETAILS (2 OF 2)
36. EAST ABUTMENT PEDESTAL DETAILS
37. EAST ABUTMENT REINFORCEMENT SCHEDULE
38. UNIT 1 BEARING LAYOUT
39. UNIT 2 BEARING LAYOUT
40. UNIT 3 BEARING LAYOUT
41. BEARING DETAILS
42. JACKING PROVISIONS
43. GIRDER SECTION
44. UNIT 1 FRAMING PLAN
45. UNIT 2 FRAMING PLAN
46. UNIT 3 FRAMING PLAN
47. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 1 & 2
48. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 3 & 4
49. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 5 & 6
50. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 7 & 8
51. GIRDER PLAN AND ELEVATION: FIELD SECTION 9
52. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 10 & 11
53. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 12 & 13
54. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 14 & 15
55. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 16 & 17
56. GIRDER PLAN AND ELEVATION: FIELD SECTION 18
57. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 19 & 20
58. GIRDER PLAN AND ELEVATION: FIELD SECTIONS 21 & 22
59. GIRDER PLAN AND ELEVATION: FIELD SECTION 23
60. ACCESS HATCH DETAILS
61. ACCESS DOOR DETAILS

MANDATORY-CONTINUED

62. MISCELLANEOUS GIRDER DETAILS
63. INTERMEDIATE K-FRAMES, STRUTS, & STIFFENERS
64. LATERAL BRACING DETAILS
65. FIELD SPLICE DETAILS (1 OF 2)
66. FIELD SPLICE DETAILS (2 OF 2)
67. ABUTMENT DIAPHRAGM
68. TYPICAL PIER DIAPHRAGM
69. PIER END DIAPHRAGM
70. INTERMEDIATE DIAPHRAGM
71. DIAPHRAGM DETAILS (1 OF 2)
72. DIAPHRAGM DETAILS (2 OF 2)
73. CAMBER DIAGRAM UNIT 1
74. CAMBER DIAGRAM UNIT 2
75. CAMBER DIAGRAM UNIT 3
76. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 1 & 2
77. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 3
78. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 4
79. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 5 & 6
80. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 7 & 8
81. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 9 & 10
82. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 11 & 12
83. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 13 & 14
84. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 15 & 16
85. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 17 & 18
86. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 19 & 20
87. CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 21 & 22
88. CAMBER AND DECK ELEVATIONS: FIELD SECTION 23
89. SUPERSTRUCTURE CROSS SECTION
90. DECK REINFORCEMENT (1 OF 5)
91. DECK REINFORCEMENT (2 OF 5)
92. DECK REINFORCEMENT (3 OF 5)
93. DECK REINFORCEMENT (4 OF 5)
94. DECK REINFORCEMENT (5 OF 5)
95. DECK DETAILS
96. DECK POURING SEQUENCE AND NOTES
97. DECK REINFORCEMENT SCHEDULE
98. ABUTMENT MODULAR EXPANSION JOINT LAYOUT
99. PIER MODULAR EXPANSION JOINT LAYOUT
100. MODULAR EXPANSION JOINT SECTIONS
101. MODULAR EXPANSION JOINT COVER PLATES
102. MODULAR EXPANSION JOINT DETAILS
103. STRUCTURAL APPROACH SLAB
104. STRUCTURAL APPROACH SLAB DETAILS
105. STRUCTURAL APPROACH SLAB REINFORCEMENT SCHEDULE
106. UNIT 1 PARAPET EMBEDDED WORK (1 OF 2)
107. UNIT 1 PARAPET EMBEDDED WORK (2 OF 2)
108. UNIT 1 PARAPET ELEVATIONS
109. UNIT 2 PARAPET EMBEDDED WORK
110. UNIT 2 PARAPET ELEVATIONS
111. UNIT 3 PARAPET EMBEDDED WORK
112. UNIT 3 PARAPET ELEVATIONS
113. PARAPET SECTIONS & DETAILS
114. LIGHT SUPPORT DETAILS (1 OF 2)
115. LIGHT SUPPORT DETAILS (2 OF 2)
116. SIGN STRUCTURE BASE (1 OF 2)
117. SIGN STRUCTURE BASE (2 OF 2)
118. PARAPET REINFORCEMENT SCHEDULE
119. FLOOR DRAIN SPECIAL
120. FLOOR DRAIN PIPING (1 OF 2)
121. FLOOR DRAIN PIPING (2 OF 2)
122. AESTHETIC DETAILS

PIERS-OPTION A

A1. OPTION A QUANTITIES
A2. OPTION A FOUNDATION LAYOUT (1 OF 5)
A3. OPTION A FOUNDATION LAYOUT (2 OF 5)
A4. OPTION A FOUNDATION LAYOUT (3 OF 5)
A5. OPTION A FOUNDATION LAYOUT (4 OF 5)
A6. OPTION A FOUNDATION LAYOUT (5 OF 5)
A7. OPTION A EXCAVATION PLAN (1 OF 8)
A8. OPTION A EXCAVATION PLAN (2 OF 8)
A9. OPTION A EXCAVATION PLAN (3 OF 8)
A10. OPTION A EXCAVATION PLAN (4 OF 8)
A11. OPTION A EXCAVATION PLAN (5 OF 8)
A12. OPTION A EXCAVATION PLAN (6 OF 8)
A13. OPTION A EXCAVATION PLAN (7 OF 8)
A14. OPTION A EXCAVATION PLAN (8 OF 8)
A15. OPTION A DRILLED SHAFT DETAILS (1 OF 3)
A16. OPTION A DRILLED SHAFT DETAILS (2 OF 3)
A17. OPTION A DRILLED SHAFT DETAILS (3 OF 3)
A18. OPTION A DRILLED SHAFT REINFORCEMENT SCHEDULE
A19. OPTION A SOUTH ABUTMENT PLAN & ELEVATION
A20. OPTION A SOUTH ABUTMENT DETAILS (1 OF 2)
A21. OPTION A SOUTH ABUTMENT DETAILS (2 OF 2)
A22. OPTION A SOUTH ABUTMENT PEDESTAL DETAILS
A23. OPTION A SOUTH ABUTMENT REINFORCEMENT SCHEDULE
A24. OPTION A TYPICAL PIER CAP LAYOUT
A25. OPTION A TYPICAL PIER CAP DETAILS
A26. OPTION A PIER ES 01 DETAILS
A27. OPTION A PIER ES 02 DETAILS
A28. OPTION A PIER ES 03 DETAILS
A29. OPTION A PIER ES 04 DETAILS
A30. OPTION A PIER ES 05 DETAILS
A31. OPTION A PIER ES 06 DETAILS
A32. OPTION A PIER ES 07 DETAILS
A33. OPTION A PIER ES 08 DETAILS
A34. OPTION A PIER ES 09 DETAILS
A35. OPTION A PIER ES 10 DETAILS
A36. OPTION A PIER ES 11 DETAILS
A37. OPTION A PIER ES 12 DETAILS
A38. OPTION A TYPICAL PIER PEDESTAL REINFORCEMENT
A39. OPTION A PIER REINFORCEMENT SCHEDULE (1 OF 2)
A40. OPTION A PIER REINFORCEMENT SCHEDULE (2 OF 2)

PIERS-OPTION B

B1. OPTION B QUANTITIES
B2. OPTION B FOUNDATION LAYOUT (1 OF 5)
B3. OPTION B FOUNDATION LAYOUT (2 OF 5)
B4. OPTION B FOUNDATION LAYOUT (3 OF 5)
B5. OPTION B FOUNDATION LAYOUT (4 OF 5)
B6. OPTION B FOUNDATION LAYOUT (5 OF 5)
B7. OPTION B EXCAVATION PLAN (1 OF 8)
B8. OPTION B EXCAVATION PLAN (2 OF 8)
B9. OPTION B EXCAVATION PLAN (3 OF 8)
B10. OPTION B EXCAVATION PLAN (4 OF 8)
B11. OPTION B EXCAVATION PLAN (5 OF 8)
B12. OPTION B EXCAVATION PLAN (6 OF 8)
B13. OPTION B EXCAVATION PLAN (7 OF 8)
B14. OPTION B EXCAVATION PLAN (8 OF 8)
B15. OPTION B DRILLED SHAFT DETAILS (1 OF 3)
B16. OPTION B DRILLED SHAFT DETAILS (2 OF 3)
B17. OPTION B DRILLED SHAFT DETAILS (3 OF 3)
B18. OPTION B DRILLED SHAFT REINFORCEMENT SCHEDULE
B19. OPTION B SOUTH ABUTMENT PLAN & ELEVATION
B20. OPTION B SOUTH ABUTMENT DETAILS (1 OF 2)
B21. OPTION B SOUTH ABUTMENT DETAILS (2 OF 2)
B22. OPTION B SOUTH ABUTMENT PEDESTAL DETAILS
B23. OPTION B SOUTH ABUTMENT REINFORCEMENT SCHEDULE
B24. OPTION B TYPICAL PIER CAP LAYOUT
B25. OPTION B TYPICAL PIER CAP DETAILS
B26. OPTION B PIER ES 01 DETAILS
B27. OPTION B PIER ES 02 DETAILS
B28. OPTION B PIER ES 03 DETAILS
B29. OPTION B PIER ES 04 DETAILS
B30. OPTION B PIER ES 04 FOOTING
B31. OPTION B PIER ES 05 DETAILS
B32. OPTION B PIER ES 05 FOOTING
B33. OPTION B PIER ES 06 DETAILS
B34. OPTION B PIER ES 06 FOOTING
B35. OPTION B PIER ES 07 DETAILS
B36. OPTION B PIER ES 08 DETAILS
B37. OPTION B PIER ES 08 FOOTING
B38. OPTION B PIER ES 09 DETAILS
B39. OPTION B PIER ES 09 FOOTING
B40. OPTION B PIER ES 10 DETAILS
B41. OPTION B PIER ES 10 FOOTING
B42. OPTION B PIER ES 11 DETAILS
B43. OPTION B PIER ES 11 FOOTING
B44. OPTION B PIER ES 12 DETAILS
B45. OPTION B PIER ES 12 FOOTING
B46. OPTION B TYPICAL PIER PEDESTAL REINFORCEMENT
B47. OPTION B PIER REINFORCEMENT SCHEDULE (1 OF 2)
B48. OPTION B PIER REINFORCEMENT SCHEDULE (2 OF 2)

NOTES

THIS CONTRACT CONTAINS TWO OPTIONS FOR SOUTH ABUTMENT AND PIER CONSTRUCTION. THE CONTRACTOR MUST BID EITHER OPTION A OR OPTION B.

SOUTH ABUTMENT AND PIERS - OPTION A
DRILLED SHAFT FOUNDATION AT ALL LOCATIONS SHEETS A1 THRU A38

SOUTH ABUTMENT AND PIERS - OPTION B
DRIVEN PILE FOUNDATION AT PIERS ES04, ES05, ES06, ES08, ES09, ES10, ES11, AND ES12
DRILLED SHAFT FOUNDATION AT ALL OTHER LOCATIONS SHEETS B1 THRU B46



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY SR | PLANS CK'D. JWC

DRAWING LIST

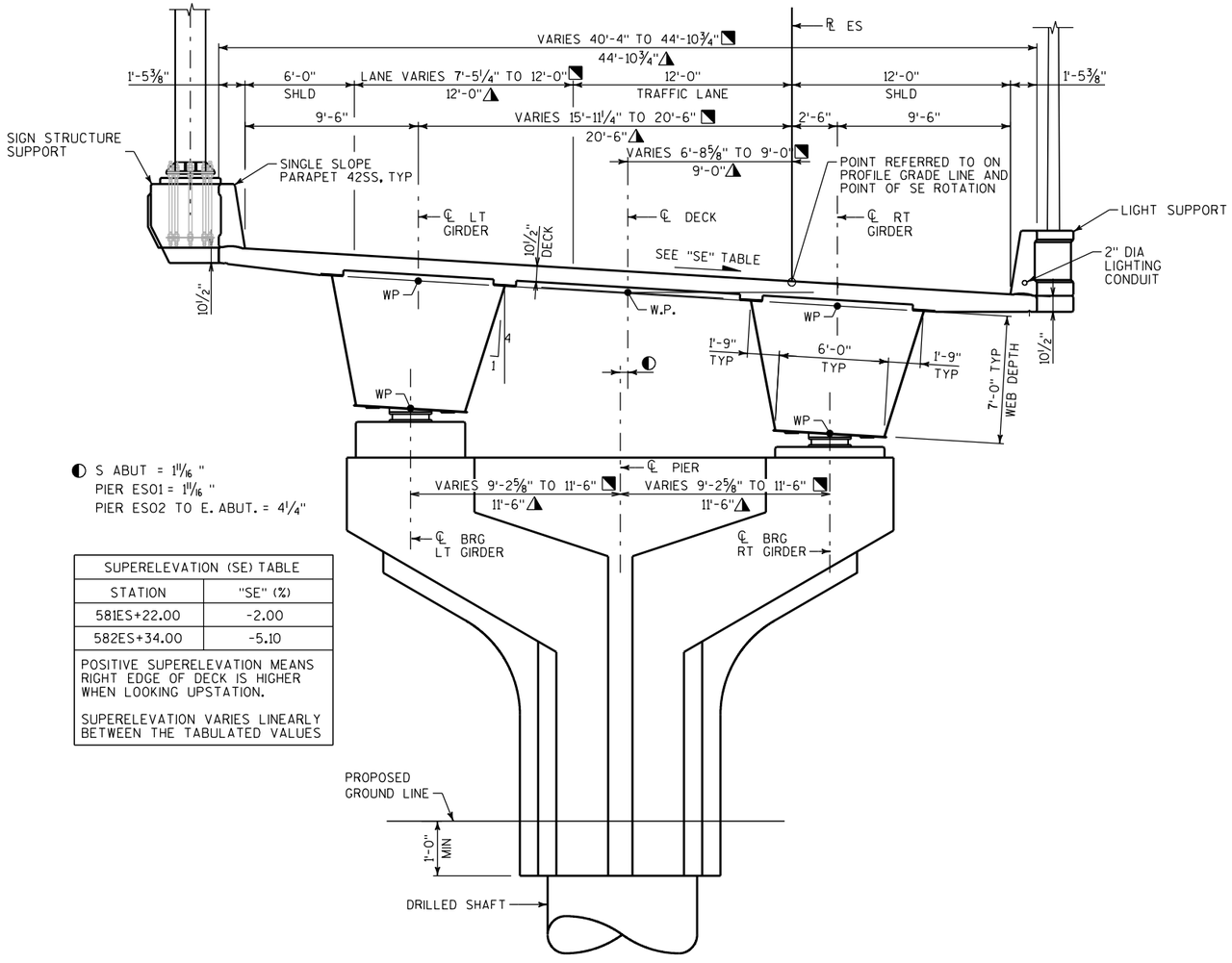
SHEET 2 OF 122

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STATE PROJECT NUMBER
1060-33-81



◐ S ABUT = 1 11/16 "
PIER ES01 = 1 11/16 "
PIER ES02 TO E. ABUT. = 4¼"

SUPERELEVATION (SE) TABLE	
STATION	"SE" (%)
581ES+22.00	-2.00
582ES+34.00	-5.10
POSITIVE SUPERELEVATION MEANS RIGHT EDGE OF DECK IS HIGHER WHEN LOOKING UPSTATION. SUPERELEVATION VARIES LINEARLY BETWEEN THE TABULATED VALUES	

TYPICAL SECTION THRU ES RAMP

LOOKING UPSTATION

DESIGN DATA

LIVE LOAD

DESIGN LOADING: HL-93

CONTROLLING RATINGS FOR UNIT 1
- INVENTORY RATING FACTOR: RF = 1.31
- OPERATING RATING FACTOR: RF = 1.62
- WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

CONTROLLING RATINGS FOR UNIT 2
- INVENTORY RATING FACTOR: RF = 1.39
- OPERATING RATING FACTOR: RF = 1.71
- WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

CONTROLLING RATINGS FOR UNIT 3
- INVENTORY RATING FACTOR: RF = 1.49
- OPERATING RATING FACTOR: RF = 1.85
- 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, PIERS ____ f'c = 5,000 PSI
- SUBSTRUCTURE, ABUTMENTS ____ f'c = 4,000 PSI
- DRILLED SHAFTS ____ f'c = 4,000 PSI
- C.I.P. CONCRETE PILING ____ f'c = 3,500 PSI

BAR STEEL REINFORCEMENT ____ fy = 60,000 PSI

STRUCTURAL STEEL
- ASTM A709 (AASHTO M270) GRADE HPS 70W ____ Fy = 70,000 PSI
- ASTM A709 (AASHTO M270) GRADE HPS 50W ____ Fy = 50,000 PSI
- ASTM A709 (AASHTO M270) GRADE 50 ____ Fy = 50,000 PSI

TRAFFIC DATA					
ROUTE	RAMP ES	IH 94 EB	IH 94 WB	USH 45 NB	USH 45 SB
A.A.D.T.	18,700	41,000	41,000	50,000	50,000
YEAR	2035	2035	2035	2035	2035
R.D.S. (MPH)	50	60	60	60	60

LEGEND

◩ STA. 579ES+45.32 TO 581ES+72.50

◭ STA. 581ES+72.50 TO 604ES+08.32

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY ENS | PLANS CK'D. JWC

TYPICAL SECTION & DESIGN DATA

SHEET 3 OF 122

STATE PROJECT NUMBER

1060-33-81

GENERAL

G.1. DRAWINGS SHALL NOT BE SCALED.

G.2. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.

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 NOTED OTHERWISE.

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 THEIR OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. UTILITIES LABELED AS PROPOSED MAY BE INSTALLED BY OTHERS PRIOR TO THIS CONTRACT.

G.7. EXISTING BRIDGES B-40-101 AND B-40-104 ARE 4-SPAN AND 3-SPAN CONTINUOUS CONCRETE VOIDED SLAB STRUCTURES, RESPECTIVELY. EXISTING BRIDGES B-40-537 AND B-40-538 ARE SINGLE SPAN 45W-INCH PRESTRESSED GIRDER STRUCTURES. ALL FOUR BRIDGES WILL BE REMOVED IN THEIR ENTIRETY.

G.8. THE CONTRACTOR MUST COORDINATE THE REMOVAL OF EXISTING BRIDGES B-40-101, B-40-104, B-40-537 AND B-40-538 AND THE CONSTRUCTION OF BRIDGE B-40-854 WITH NUMEROUS PROPOSED WALLS, PROPOSED BRIDGES, PROPOSED SIGN STRUCTURES, EXISTING BRIDGES, AND EXISTING WALLS AS NOTED ON THE PLAN & ELEVATION SHEETS IN THIS PLAN SET. SEE STRUCTURE PLANS OF NEARBY STRUCTURES FOR ADDITIONAL DETAILS.

G.9. STRUCTURE PLANS OF EXISTING STRUCTURES ARE AVAILABLE FOR REVIEW AT WISDOT SE REGION OFFICE, 141 NW BARSTOW STREET, WAUKESHA, WI, OR THROUGH THE WISDOT STRUCTURES WEBSITE.

G.10. SEE CONSTRUCTION STAGING SHEETS FOR INFORMATION ON ASSUMED DEMOLITION AND CONSTRUCTION SEQUENCES.

G.11. THIS CONTRACT CONTAINS TWO OPTIONS FOR SOUTH ABUTMENT AND PIER CONSTRUCTION. THE CONTRACTOR MUST BID EITHER OPTION A OR OPTION B. SEE NOTE ON SHEET 2.

EXCAVATION AND BACKFILL

EB.1. THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES, BRIDGES B-40-854" SHALL BE AS FOLLOWS:
PIERS: AS DEFINED ON THE EXCAVATION PLAN SHEETS

EB.2. AT THE BACK FACE OF THE EAST ABUTMENT, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW BRIDGE OR RETAINING WALL REINFORCED ZONE SHALL BE BACKFILLED WITH "BASE AGGREGATE DENSE 1¼-INCH".

DESIGN

D.1. DESIGN IS IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 6TH EDITION, 2012, UNLESS NOTED OTHERWISE.

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 200 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. DESIGN ASSUMED 160 PLF PER BOX GIRDER TO ACCOUNT FOR TEMPORARY FORMWORK, SCREED RAIL AT EDGE OF DECK, AND OVERHANG BRACKETS.

D.8. DESIGN ASSUMED A SCREED MACHINE TOTAL WEIGHT OF 10,000 POUNDS.

D.9. LIVE LOAD DEFLECTION LIMIT = SPAN/800 (HL93)

D.10. LOAD RATINGS REPORTED ON SHEET 3 INCLUDE THE FOLLOWING SYSTEM FACTORS: 0.85 FOR FLEXURE, 1.00 FOR SHEAR

STRUCTURAL STEEL

SS.1. STEEL GRADE FOR WEBS AND FLANGES OF GIRDERS, AND DIAPHRAGMS; SPLICE PLATES; AND ALL PLATES WELDED TO GIRDER WEBS; SHALL BE ASTM A709 GRADE HPS 50W, UNLESS NOTED AS HPS 70W ON STRUCTURAL STEEL SHEETS.

SS.2. STEEL GRADE FOR ACCESS HOLE STIFFENERS, DIAPHRAGM BEARING STIFFENERS AND JACKING STIFFENERS, K-FRAMES, STRUTS, LATERAL BRACING, AND JACKING PADS SHALL BE ASTM A709 GRADE 50.

SS.3. STEEL GRADE FOR MASONRY PLATES, SOLE PLATES, AND BEVELED TOP PLATES 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, ALL WEB STIFFENERS, AND ALL INTERNAL AND EXTERNAL DIAPHRAGM PLATES SHALL BE CLASSIFIED AS FRACTURE CRITICAL MEMBERS (FCM). ALL WEBS 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 FORMS WITHOUT WELDING.

SS.7. ALL BOLTS SHALL BE ASTM A325-X TYPE 1. BOLTS SHALL BE 1" DIAMETER UNLESS NOTED OTHERWISE. ALL HOLES SHALL BE STANDARD DIAMETER - NO OVERSIZED HOLES. ALL CONNECTIONS SHALL BE FABRICATED AND ASSEMBLED AS SLIP-CRITICAL CONNECTIONS. DESIGN ASSUMED CLASS B FAYING SURFACE FOR SLIP RESISTANCE.

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 4" 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. TEMPORARY SUPPORTS AND FALSE WORK (INCLUDING OVERHANG BRACKETS) SHALL NOT BEAR ON GIRDER WEBS, EXCEPT WITHIN 8 INCHES OF THE BOTTOM FLANGE.

SS.11. ALL PLAN DIMENSIONS ARE BASED ON THE FINAL DEFLECTED SHAPE AT 60° F.

CONCRETE

C.1. THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH DEPTH OF 4" 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 APPROACH SLAB SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

C.4. CONCRETE ABOVE THE ABUTMENT UPPER BACKWALL CONSTRUCTION JOINT SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES". THE REMAINING CONCRETE QUANTITY FOR 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. CHAMFER ALL EXPOSED OUTSIDE CORNERS ¾" UNLESS NOTED OTHERWISE.

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 SHALL BE EMBEDDED 2" CLEAR UNLESS NOTED OTHERWISE.

RS.3. FOR BARS NOTED IN THE BILL OF BAR TABLES AS STAINLESS STEEL, PROVIDE STAINLESS STEEL REINFORCEMENT PER THE STANDARD SPECIAL PROVISION "BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES".

FOUNDATION DATA

DRILLED SHAFTS:

FD.1. THE SOUTH ABUTMENT AND PIERS SHALL BE SUPPORTED ON BASE GROUTED DRILLED SHAFTS. SHAFT DIAMETERS, FACTORED AXIAL RESISTANCES, TOP OF DRILLED SHAFT AND BOTTOM OF DRILLED SHAFT ELEVATIONS, AND CORRESPONDING SHAFT LENGTHS FOR EACH DRILLED SHAFT ARE GIVEN IN THE TABLE ON THIS SHEET.

FD.2. THE MINIMUM FACTORED AXIAL RESISTANCE OF DRILLED SHAFTS IN COMPRESSION USED FOR DESIGN IS THE REQUIRED AXIAL RESISTANCE MULTIPLIED BY A SHAFT RESISTANCE FACTOR OF 0.56. THE RESISTANCE FACTOR INCLUDES A 20% REDUCTION FOR NON-REDUNDANCY.

FD.3. SUCCESSFUL INSTALLATION AND ENGINEER ACCEPTANCE OF THE ITEM "TRIAL DRILLED FOUNDATION SHAFT 118.11-INCH" IS REQUIRED PRIOR TO BEGINNING THE CONSTRUCTION OF THE ITEMS "DRILLED FOUNDATION SHAFT 98.43-INCH" AND "DRILLED FOUNDATION SHAFT 118.11-INCH".

DRIVEN PILES:

FD.4. THE EAST ABUTMENT SHALL BE SUPPORTED ON 16" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

FD.5. 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 ACCEPTANCE METHOD TO DETERMINE DRIVEN PILE CAPACITY.

FD.6. ESTIMATED PILE LENGTHS:

PIER ES04:	55 FEET (BID OPTION B ONLY)
PIER ES05:	60 FEET (BID OPTION B ONLY)
PIER ES06:	70 FEET (BID OPTION B ONLY)
PIER ES08:	45 FEET (BID OPTION B ONLY)
PIER ES09:	30 FEET (BID OPTION B ONLY)
PIER ES10:	35 FEET (BID OPTION B ONLY)
PIER ES11:	50 FEET (BID OPTION B ONLY)
PIER ES12:	50 FEET (BID OPTION B ONLY)
EAST ABUTMENT:	50 FEET

DRILLED SHAFT DATA

SHAFT LOCATION	SHAFT DIA (IN)	MINIMUM FACTORED AXIAL RESIST (KIP)	TOP OF DRILLED SHAFT EL	BOTTOM OF DRILLED SHAFT EL	SHAFT LENGTH (FT)
S. ABT.	98.43	1800	792	676	116
PIER ES01	98.43	5000	778	678	100
PIER ES02	118.11	5900	780	676	104
PIER ES03	118.11	5900	765	691	74
PIER ES04*	118.11	5200	772	698	74
PIER ES05*	118.11	3900	772	706	66
PIER ES06*	118.11	5900	766	696	70
PIER ES07	118.11	6300	763	715	48
PIER ES08*	118.11	6000	751	693	58
PIER ES09*	118.11	5800	748.5	722.5	26
PIER ES10 *	98.43	3800	752	721	31
PIER ES11 *	98.43	5400	759	688	71
PIER ES12 *	98.43	5200	763	706	57

* BID OPTION A ONLY

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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GENERAL NOTES

SHEET 4 OF 122

STATE PROJECT NUMBER

1060-33-81

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	SOUTH APPR.	SOUTH ABUT.	PIER ES01	PIER ES02	PIER ES03	PIER ES04	PIER ES05	PIER ES06	PIER ES07	PIER ES08	PIER ES09	PIER ES10	PIER ES11	PIER ES12	EAST ABUT.	EAST APPR.	SUPER UNIT 1	SUPER UNIT 2	SUPER UNIT 3	TOTAL
203.0200	REMOVING OLD STRUCTURE STA. 589ES+60	LS																				1
203.0200	REMOVING OLD STRUCTURE STA. 600ES+80	LS																				1
203.0200	REMOVING OLD STRUCTURE STA. 591ES+22	LS																				1
203.0200	REMOVING OLD STRUCTURE STA. 596ES+71	LS																				1
210.0100	BACKFILL STRUCTURE	CY		130													111					241
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	128															142				270
502.0100	CONCRETE MASONRY BRIDGES	CY	7														97	8				112
502.3200	PROTECTIVE SURFACE TREATMENT	SY	97															109	5,123	5,633	3,024	13,986
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1390														6340	1650				9,380
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	7280														1600	8090	492440	530900	287260	1,327,570
506.0605	STRUCTURAL STEEL HS	LB																	2,239,360	2,482,750	1,292,490	6,014,600
506.3015	WELDED STUD SHEAR CONNECTORS 7/8X6-INCH	EACH																	204	204	204	612
506.3025	WELDED STUD SHEAR CONNECTORS 7/8X8-INCH	EACH																	9,964	10,712	5,752	26,428
514.2608	DOWNSPOUT 8-INCH	LF			50	60				60	90	100	90	80								530
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY		7													4					11
517.0650.S.0003	PAINTING POLYSILOXANE SYSTEM STRUCTURE B-40-854	LS																				1
517.1010.S.0011	CONCRETE STAINING B-40-854	SF	50.67	472	953	1,416	2,674	3,071	3,083	2,622	3,164	3,293	2,982	2,555	2,005	895	224	79	18,493	19,887	10,675	78,593
550.2168	PILING CIP CONCRETE 16 X 0.50-INCH	LF															600					600
604.0400	SLOPE PAVING CONCRETE	SY		13														15				28
606.0200	RIPRAP MEDIUM	CY					1				1			1	1	1						5
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF			13	16				16		16	16									77
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF																	43	6	31	80
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF																	902	983	524	2,409
653.0220	JUNCTION BOXES 18X6X6-INCH	EACH																			1	1
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH																	5	6	3	14
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH																	5	6	3	14
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	68	16													15	74	1,607	1,729	928	4,436
SPV.0060.4105	ANCHOR ASSEMBLIES SIGN BRIDGE STRUCTURES	EACH																		1	1	2
SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH																2				2
SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH																2				2
SPV.0060.4120	BEARINGS HIGH-LOAD MULTI-ROTATIONAL FIXED	EACH				2	2				2	2			2	2						12
SPV.0060.4125	BEARINGS HIGH-LOAD MULTI-ROTATIONAL GUIDED	EACH		2	2			2	4	2			2	4			2					20
SPV.0060.4130	FLOOR DRAIN SPECIAL	EACH																	4	2	2	8
SPV.0105.4545	EXPANSION DEVICE MODULAR LRFD B-40-854	LS																				1
SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	702															827	37,960	41,937	22,512	103,939
	NON-BID ITEM																					
	NAME PLATE	EACH																				1
	BRIDGE SEAT PROTECTION	LS																				1
	PREFORMED JOINT FILLER	SIZE																				3/4", 1 1/2", 2
	EXPANDED POLYSTYRENE	SIZE																				1"
	SIZE 2 COARSE AGGREGATE	CY		11													11					22

ALL ITEMS ARE CATEGORY 2100

8

NOTES

THIS CONTRACT CONTAINS TWO OPTIONS FOR PIER CONSTRUCTION. THE CONTRACTOR MUST BID EITHER OPTION A OR OPTION B.

ITEMS ON THIS SHEET ARE MANDATORY AND ARE REQUIRED WITH PIER OPTION A AND PIER OPTION B. FOR ADDITIONAL ITEMS AND QUANTITIES, SEE SHEET A1 FOR OPTION A AND SHEET B1 FOR OPTION B.

* THE STATION GIVEN FOR REMOVING OLD STRUCTURE CORRESPONDS TO THE FOLLOWING EXISTING STRUCTURE NUMBER:
STA 589ES+60.00: B-40-104

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

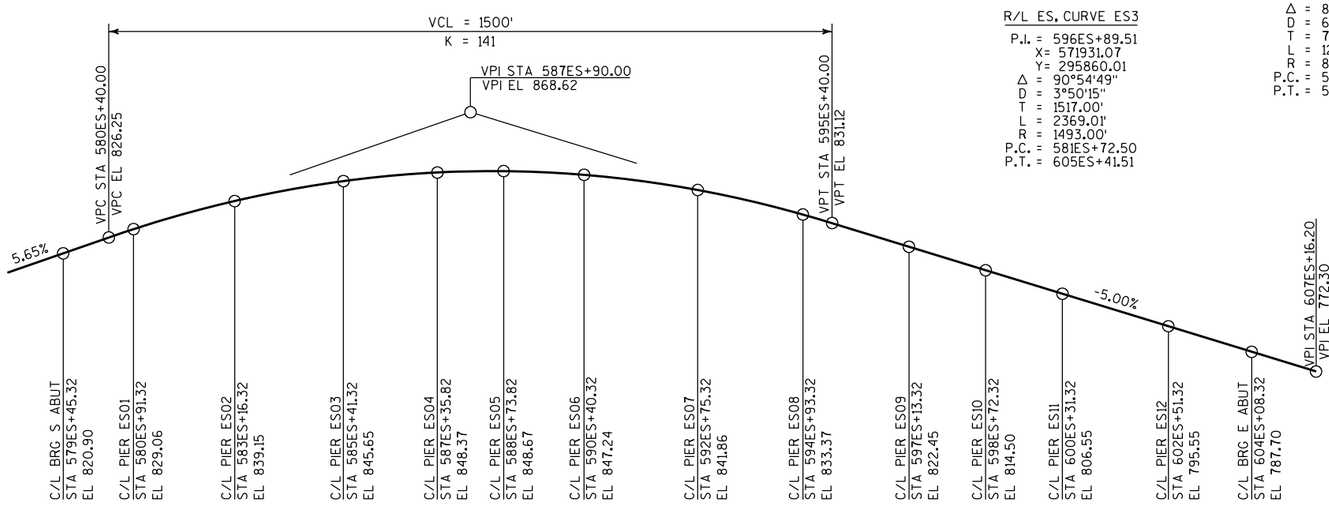
STRUCTURE B-40-854

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QUANTITIES

SHEET 5 OF 122

STATE PROJECT NUMBER
1060-33-81



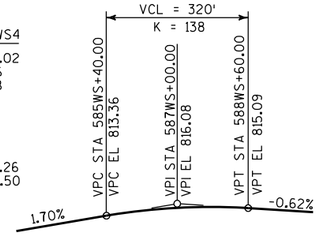
PROFILE GRADE LINE RAMP ES

R/L ES, CURVE ES3

P.I. = 596ES+89.51
X= 571931.07
Y= 295860.01
Δ = 90°54'49"
D = 3°50'15"
T = 1517.00'
L = 2369.01'
R = 1493.00'
P.C. = 581ES+72.50
P.T. = 605ES+41.51

R/L WS, CURVE WS4

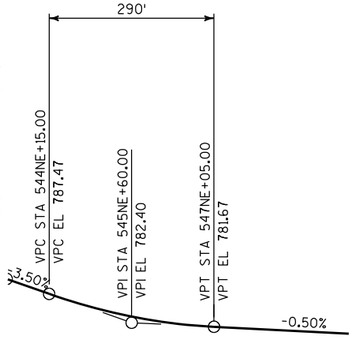
P.I. = 585WS+62.02
X= 571970.66
Y= 295140.58
Δ = 87°09'52"
D = 6°52'42"
T = 792.76'
L = 1267.25'
R = 833.00'
P.C. = 577WS+69.26
P.T. = 590WS+36.50



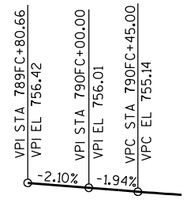
PROFILE GRADE LINE RAMP WS

R/L NE, CURVE NE2

P.I. = 546NE+38.67
X= 572282.83
Y= 295594.76
Δ = 103°43'15"
D = 6°51'42"
T = 1063.40'
L = 1511.58'
R = 835.00'
P.C. = 535NE+75.27
P.T. = 550NE+86.84



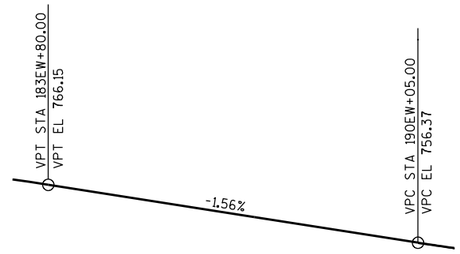
PROFILE GRADE LINE RAMP NE



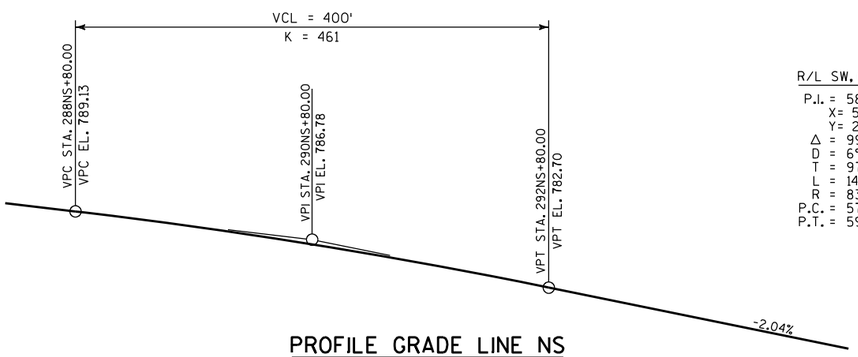
RAMP FC, CURVE FC1

P.I. = 791FC+16.82
X= 572568.98
Y= 295447.84
Δ = 14°25'01"
D = 4°14'39"
T = 170.75'
L = 339.69'
R = 1350.00'
P.C. = 789FC+46.08
P.T. = 792FC+85.77

PROFILE GRADE LINE RAMP FC



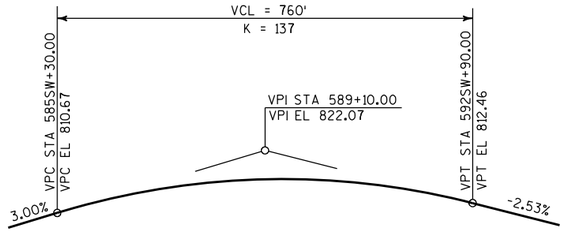
PROFILE GRADE LINE EW WB



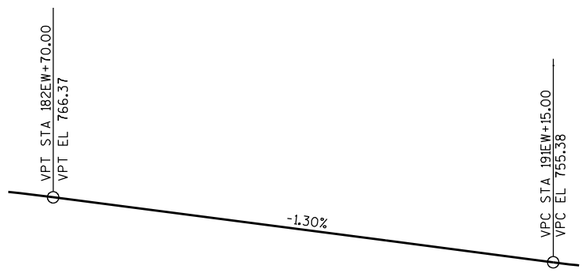
PROFILE GRADE LINE NS

R/L SW, CURVE SW3

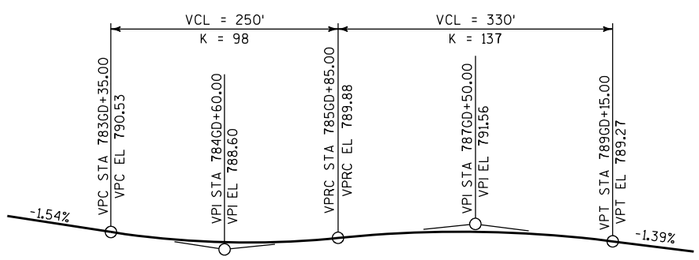
P.I. = 589SW+15.47
X= 572417.85
Y= 295407.63
Δ = 99°06'01"
D = 6°51'42"
T = 979.39'
L = 1444.24'
R = 835.00'
P.C. = 579SW+36.07
P.T. = 593SW+80.31



PROFILE GRADE LINE RAMP SW



PROFILE GRADE LINE EW EB



PROFILE GRADE LINE - RAMP GD

R/L GD, CURVE GD5

P.I. = 783GD+09.01
X= 571841.37
Y= 294479.81
Δ = 28°29'51"
D = 9°57'52"
T = 146.02'
L = 285.99'
R = 575.00'
P.C. = 781GD+62.99
P.T. = 784GD+48.99

R/L GD, CURVE GD6

P.I. = 789GD+70.98
X= 572156.84
Y= 295068.65
Δ = 13°05'48"
D = 2°01'54"
T = 323.71'
L = 644.59'
R = 2820.00'
P.C. = 786GD+47.28
P.T. = 792GD+91.87

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NO.	DATE	REVISION	BY

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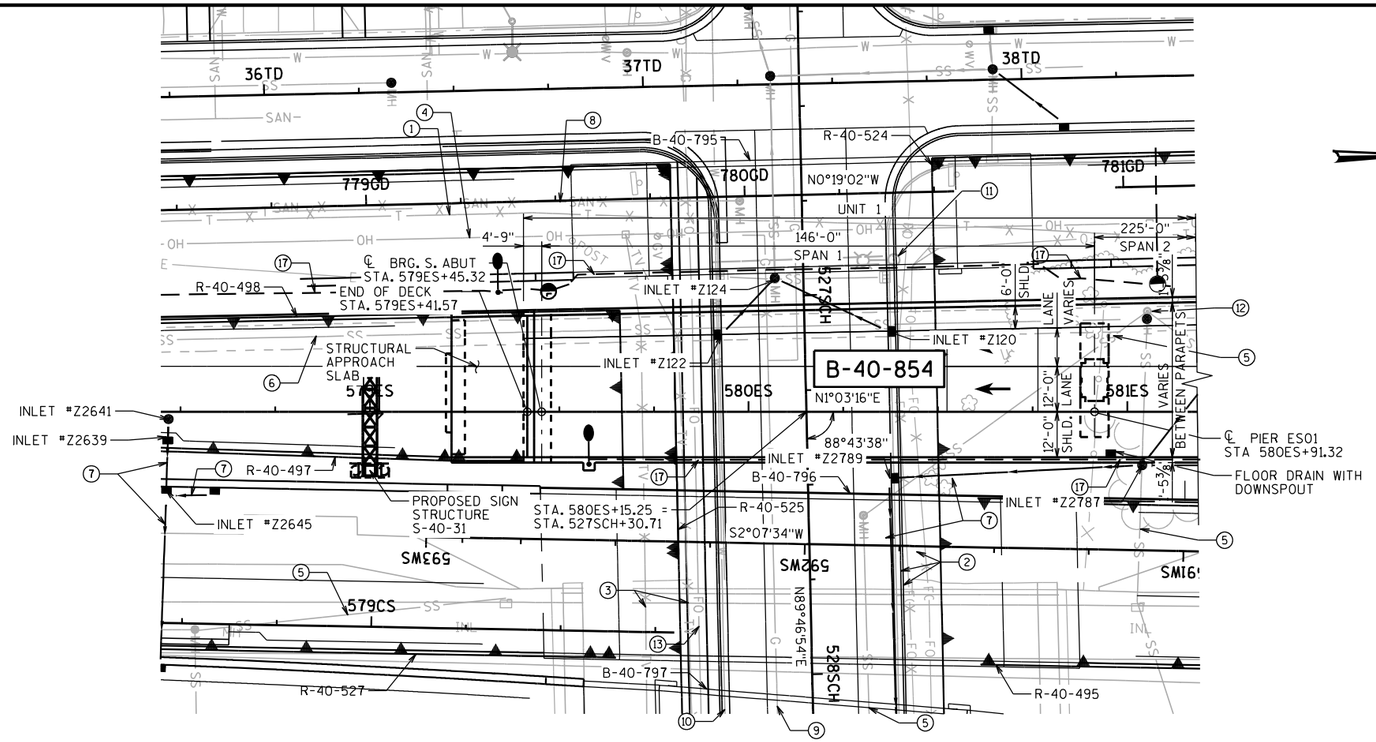
STRUCTURE B-40-854

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ROADWAY GEOMETRY

SHEET 6 OF 122

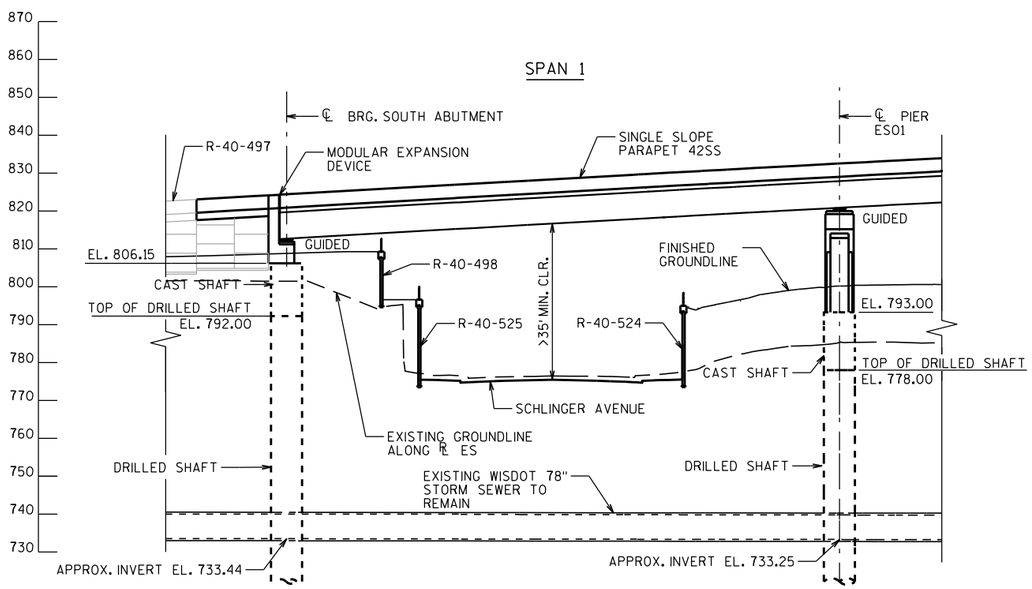
STATE PROJECT NUMBER
1060-33-81



PLAN

UTILITY NOTES

1. EXISTING AT&T UNDERGROUND LINE TO BE RELOCATED
2. ABANDONED AT&T CORP, TCG, FIBER OPTIC
3. ABANDONED TIME WARNER CABLE TV LINES
4. EXISTING WE ENERGIES OVERHEAD LINE TO BE RELOCATED
5. EXISTING WISDOT STORM SEWER TO BE REMOVED
6. EXISTING WISDOT 78" STORM SEWER TO REMAIN
7. PROPOSED WISDOT 24" STORM SEWER
8. ABANDONED WEST ALLIS SANITARY SEWER
9. EXISTING WE ENERGIES GAS LINE TO REMAIN
10. EXISTING WEST ALLIS WATER MAIN TO REMAIN
11. EXISTING WEST ALLIS LIGHTING TO BE RELOCATED
12. EXISTING WISDOT STORM SEWER MANHOLE TO REMAIN
13. EXISTING TCA FIBER OPTIC LINE TO REMAIN
17. PROPOSED WISDOT LIGHTING



ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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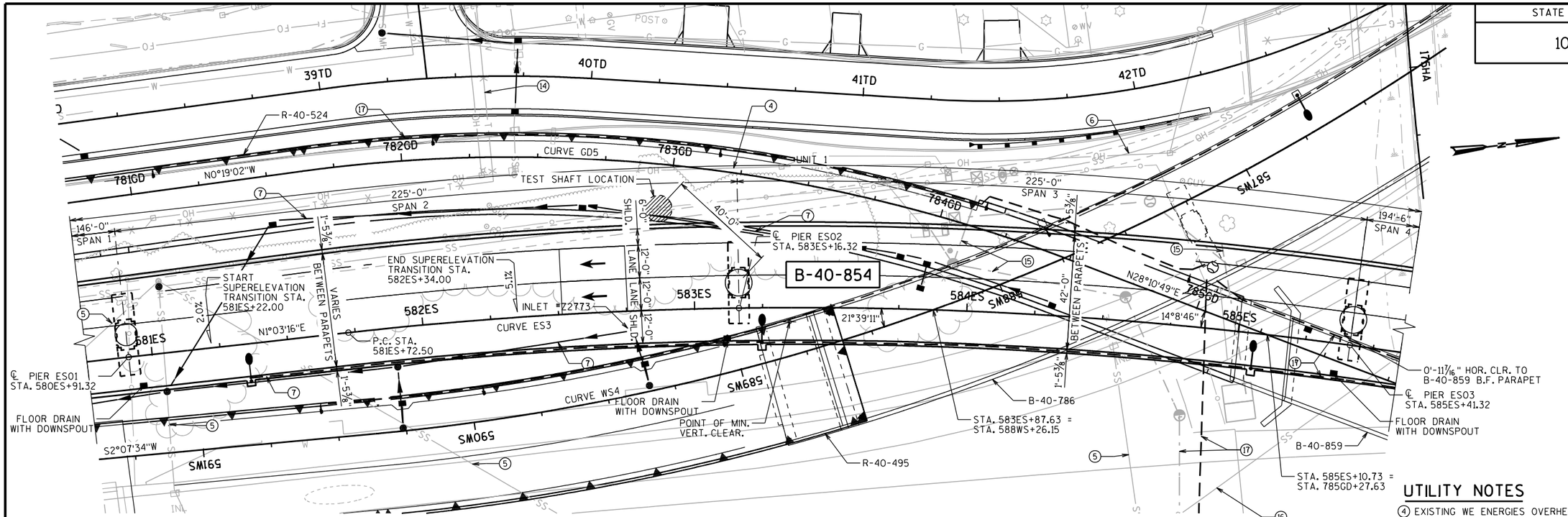
PLAN & ELEVATION SPAN 1

SHEET 7 OF 122

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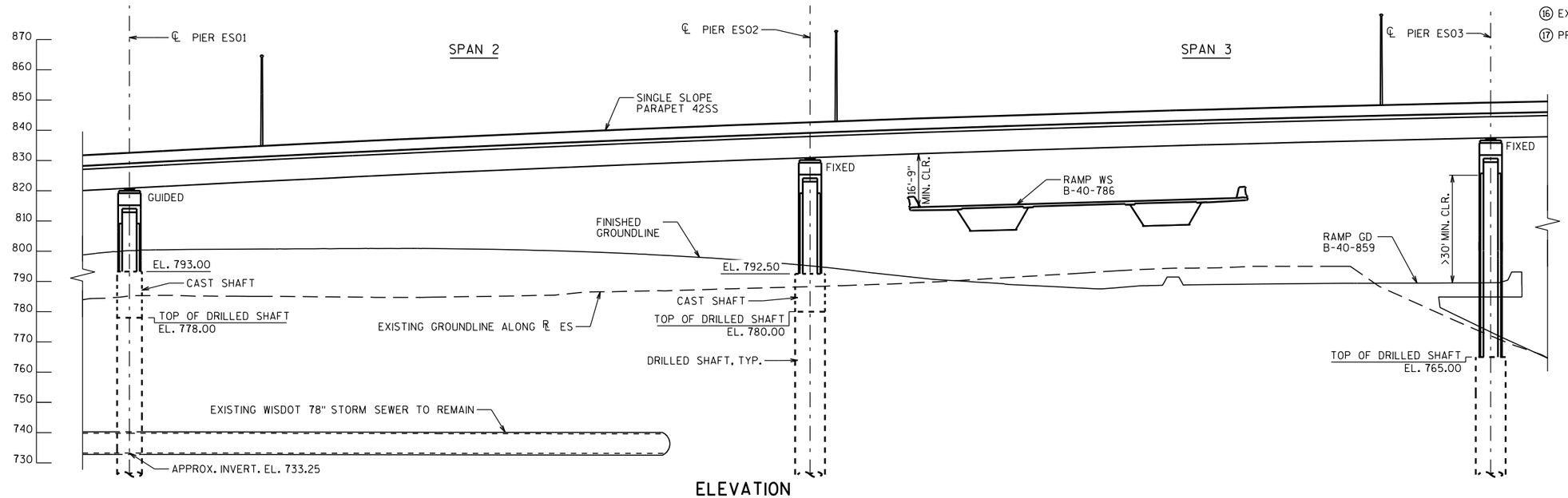
STATE PROJECT NUMBER
1060-33-81



PLAN

UTILITY NOTES

(4) EXISTING WE ENERGIES OVERHEAD LINE TO BE RELOCATED
(5) EXISTING WISDOT STORM SEWER TO BE REMOVED
(6) EXISTING WISDOT 78" STORM SEWER TO REMAIN
(7) PROPOSED WISDOT 24" STORM SEWER
(14) ABANDONED TCA UNDERGROUND LINE
(15) EXISTING WISDOT LIGHTING TO BE RELOCATED
(16) EXISTING WISDOT 66" STORM SEWER TO REMAIN
(17) PROPOSED WISDOT LIGHTING



ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-854

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PLAN & ELEVATION SPANS 2 & 3

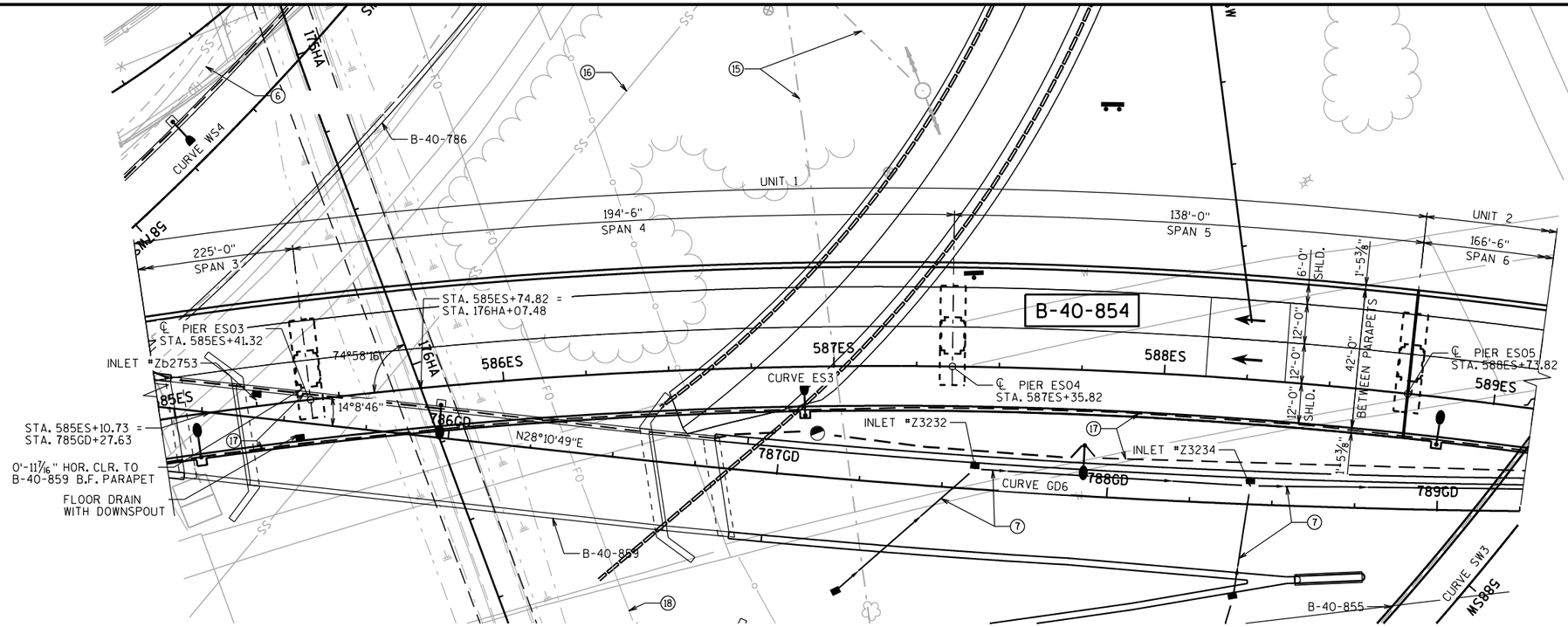
SHEET 8 OF 122

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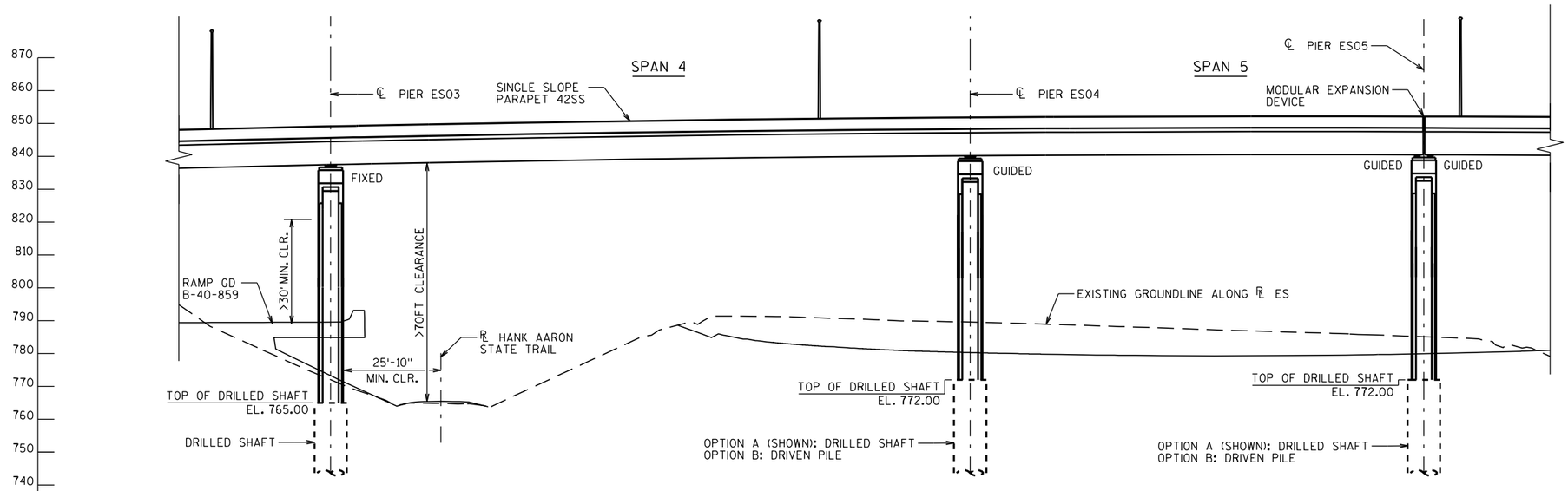
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STATE PROJECT NUMBER
1060-33-81



PLAN



ELEVATION

UTILITY NOTES

(6) EXISTING WISDOT 78" STORM SEWER TO REMAIN
(7) PROPOSED WISDOT 24" STORM SEWER
(15) EXISTING WISDOT LIGHTING TO BE RELOCATED
(16) EXISTING WISDOT 66" STORM SEWER TO REMAIN
(17) PROPOSED WISDOT LIGHTING
(18) EXISTING AT&T CORP FIBER OPTIC TO REMAIN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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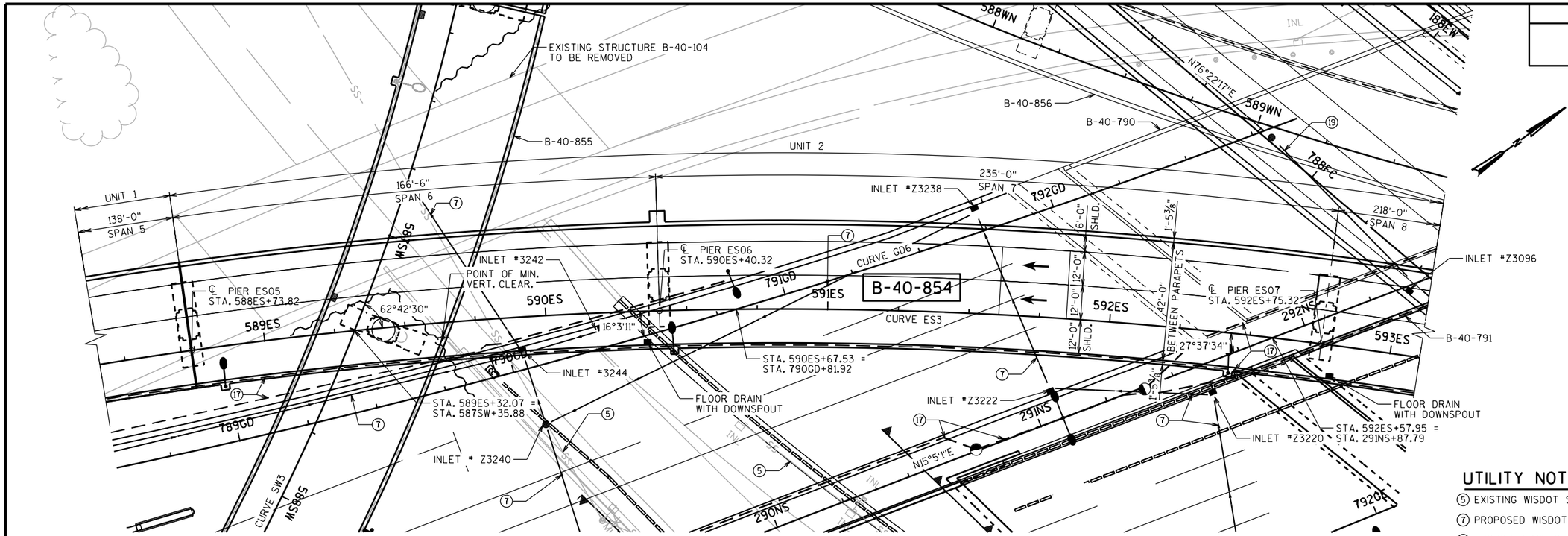
PLAN & ELEVATION SPANS 4 & 5

SHEET 9 OF 122

8

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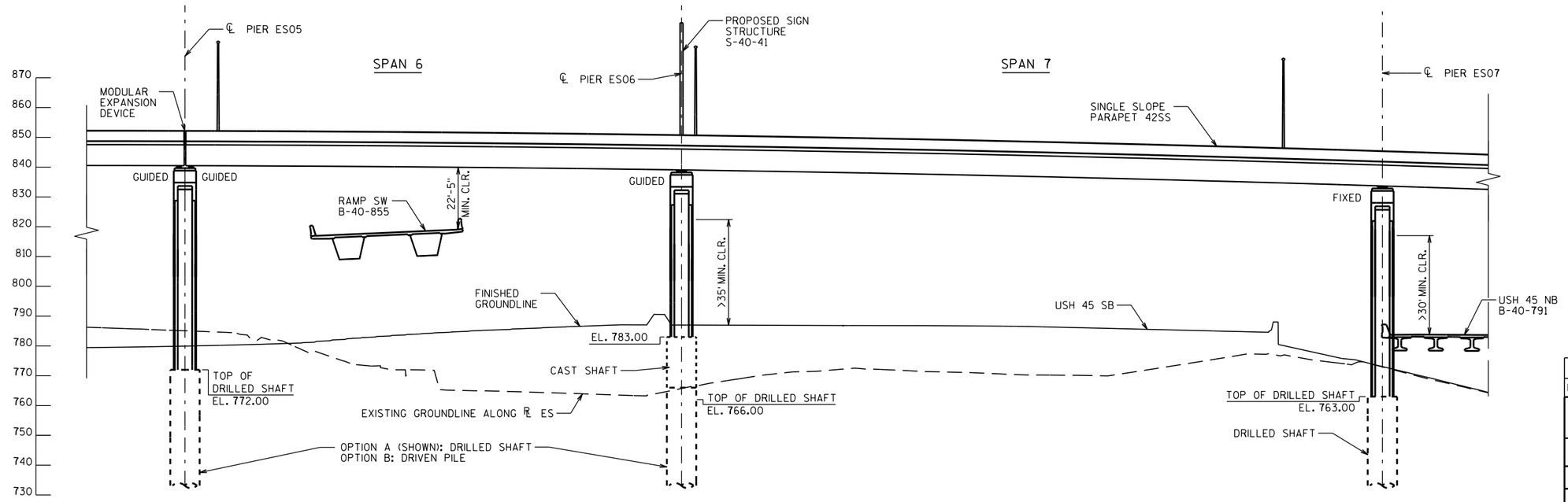
STATE PROJECT NUMBER
1060-33-81



PLAN

UTILITY NOTES

(5) EXISTING WISDOT STORM SEWER TO BE REMOVED
(7) PROPOSED WISDOT 24" STORM SEWER
(17) PROPOSED WISDOT LIGHTING
(19) PROPOSED WISDOT 36" STORM SEWER



ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-854

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PLAN & ELEVATION SPANS 6 & 7

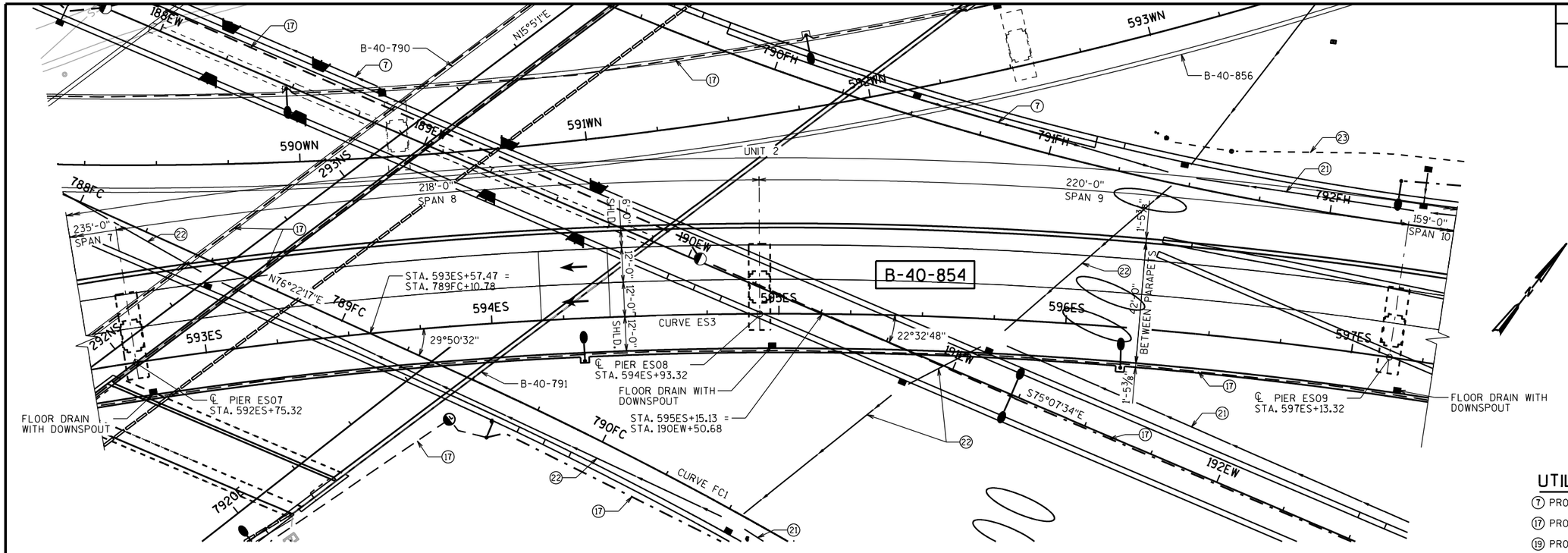
SHEET 10 OF 122

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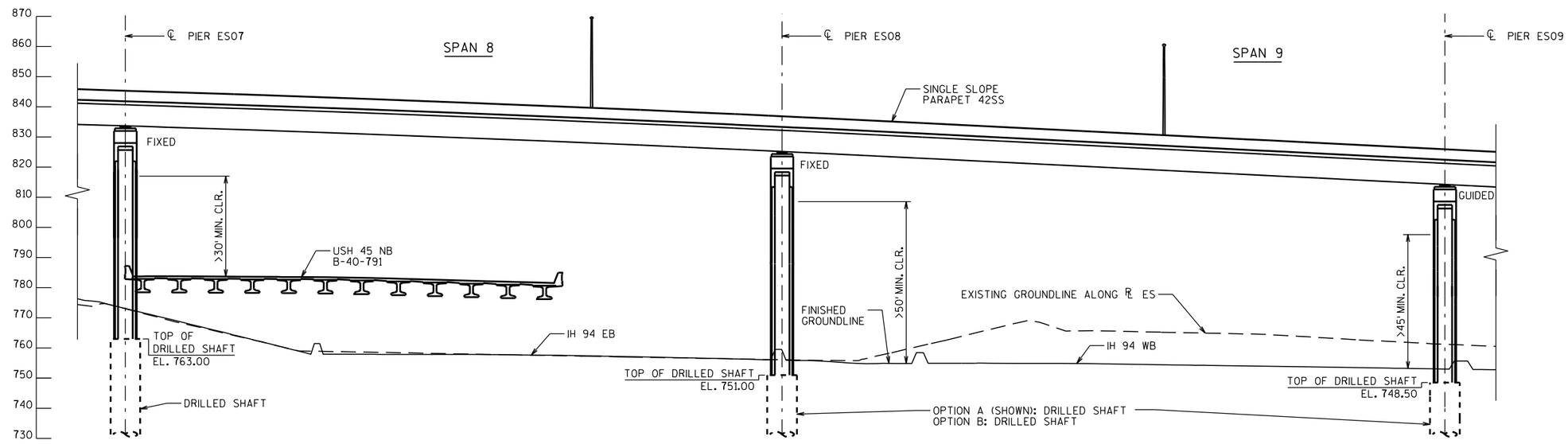
STATE PROJECT NUMBER
1060-33-81



PLAN

UTILITY NOTES

(7) PROPOSED WISDOT 24" STORM SEWER
(17) PROPOSED WISDOT LIGHTING
(19) PROPOSED WISDOT 36" STORM SEWER
(20) PROPOSED WISDOT 48" STORM SEWER
(21) PROPOSED WISDOT 30" STORM SEWER
(22) PROPOSED WISDOT 54" STORM SEWER
(23) PROPOSED WISDOT FTMS CONDUIT



ELEVATION

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

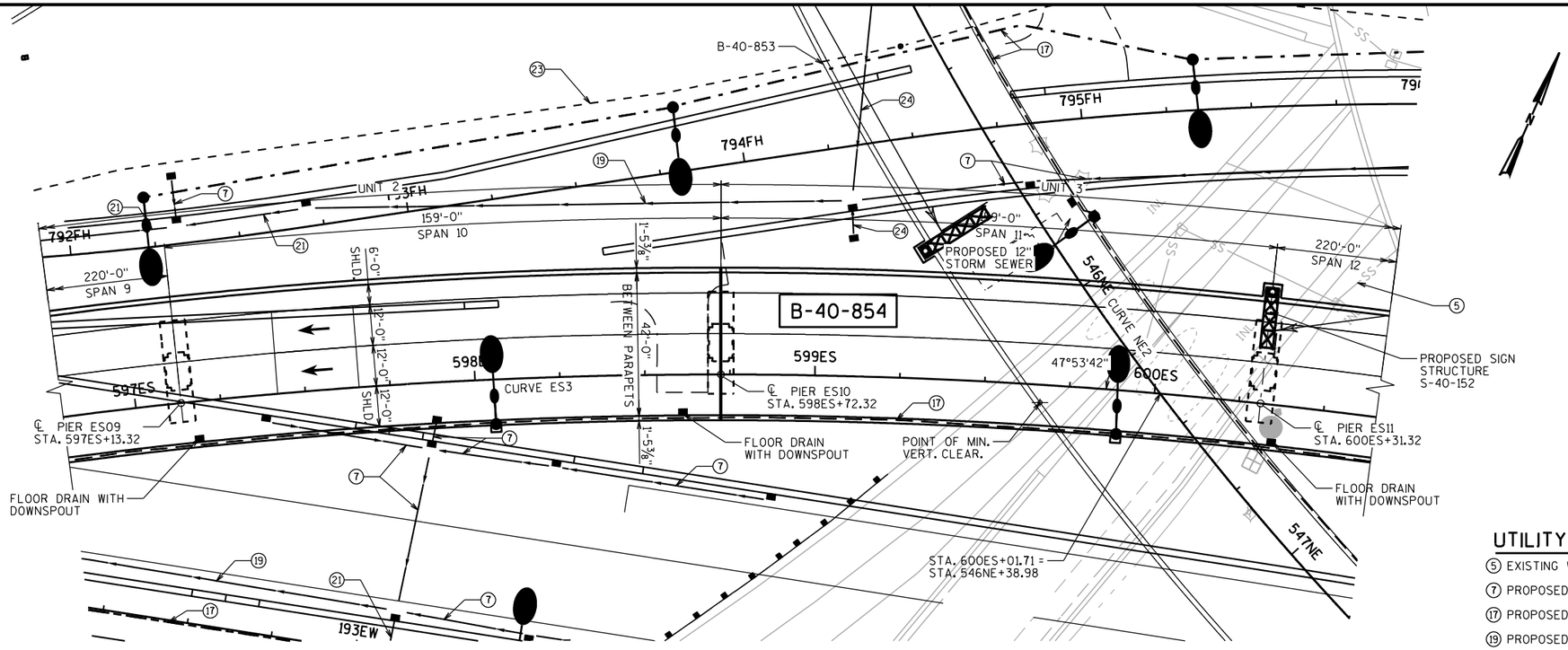
DRAWN BY ENS | PLANS CK'D. JWC

PLAN & ELEVATION SPANS 8 & 9

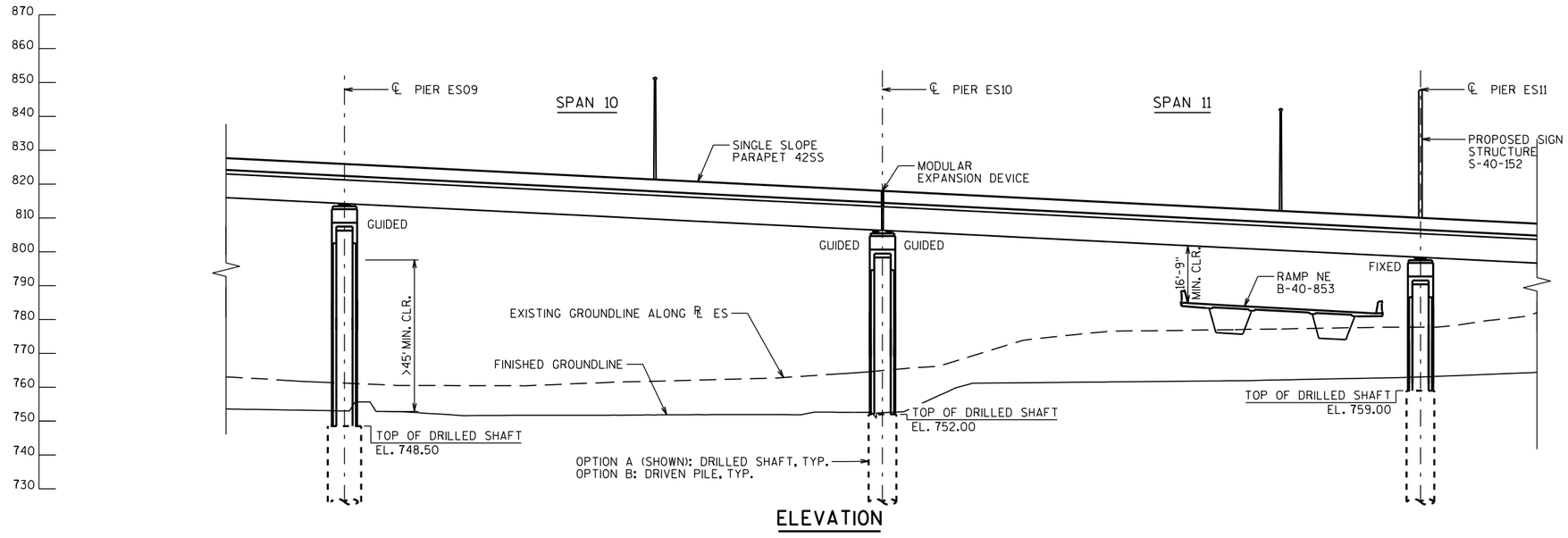
SHEET 11 OF 122

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PLOT BY : MSCKTM
PLOT NAME : 080111_pe
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-81



PLAN



ELEVATION

UTILITY NOTES

(5) EXISTING WISDOT STORM SEWER TO BE REMOVED
(7) PROPOSED WISDOT 24" STORM SEWER
(17) PROPOSED WISDOT LIGHTING
(19) PROPOSED WISDOT 36" STORM SEWER
(21) PROPOSED WISDOT 30" STORM SEWER
(23) PROPOSED WISDOT FTMS CONDUIT
(24) PROPOSED WISDOT 18" STORM SEWER

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

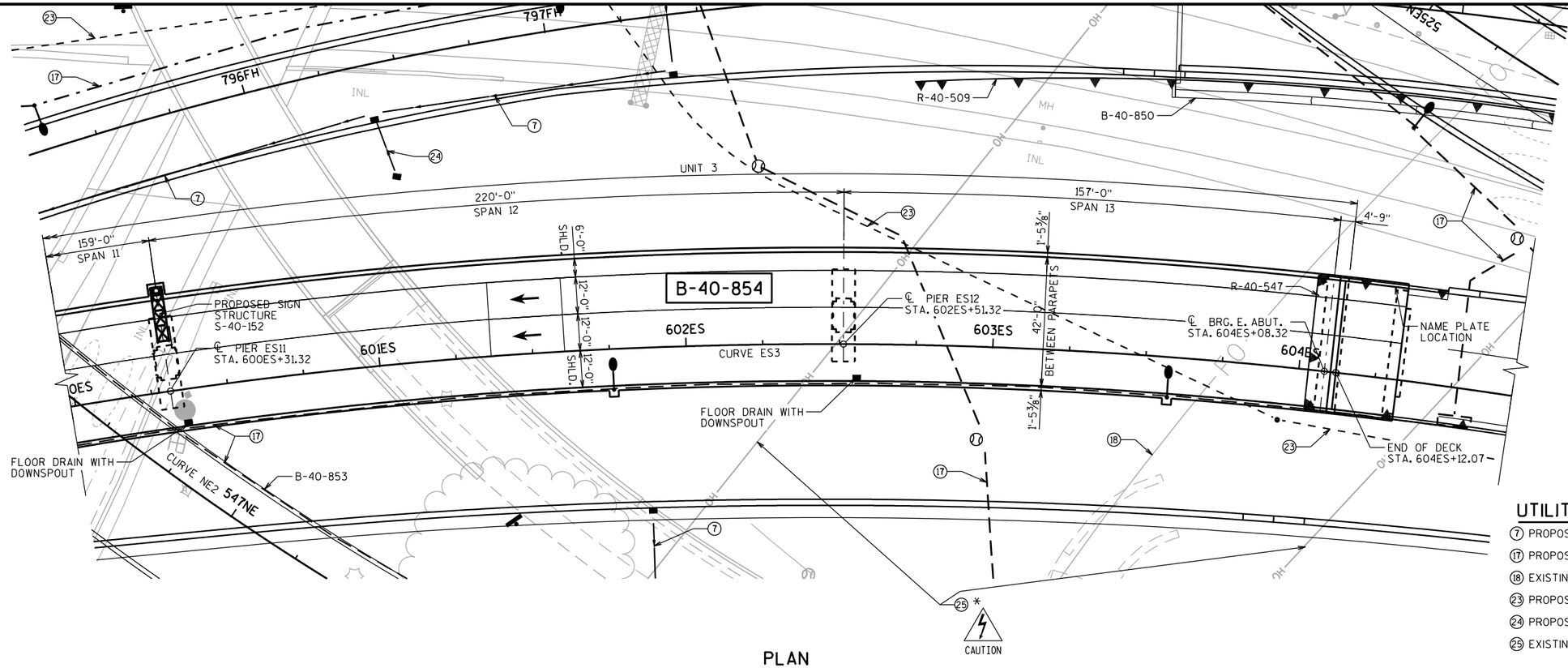
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PLAN & ELEVATION SPANS 10 & 11

SHEET 12 OF 122

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STATE PROJECT NUMBER
1060-33-81

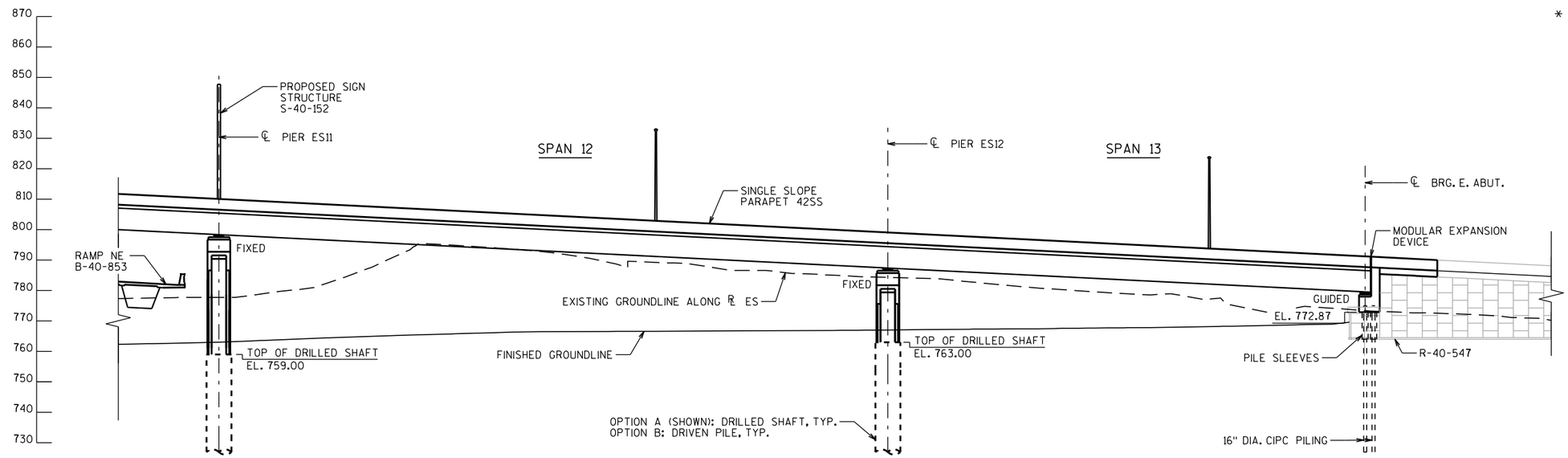


PLAN

UTILITY NOTES

(7) PROPOSED WISDOT 24" STORM SEWER
(17) PROPOSED WISDOT LIGHTING
(18) EXISTING AT&T CORP FIBER OPTIC TO REMAIN
(23) PROPOSED WISDOT FTMS CONDUIT
(24) PROPOSED WISDOT 18" STORM SEWER
(25) EXISTING ATC OVERHEAD TRANSMISSION LINES TO REMAIN

* CONSTRUCTION OF THE DRILLED SHAFT FOR B-40-854 PIER ES12 MUST BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC) AND WE ENERGIES. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCE FROM THESE LINES.



ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY ENS | PLANS CK'D. JWC

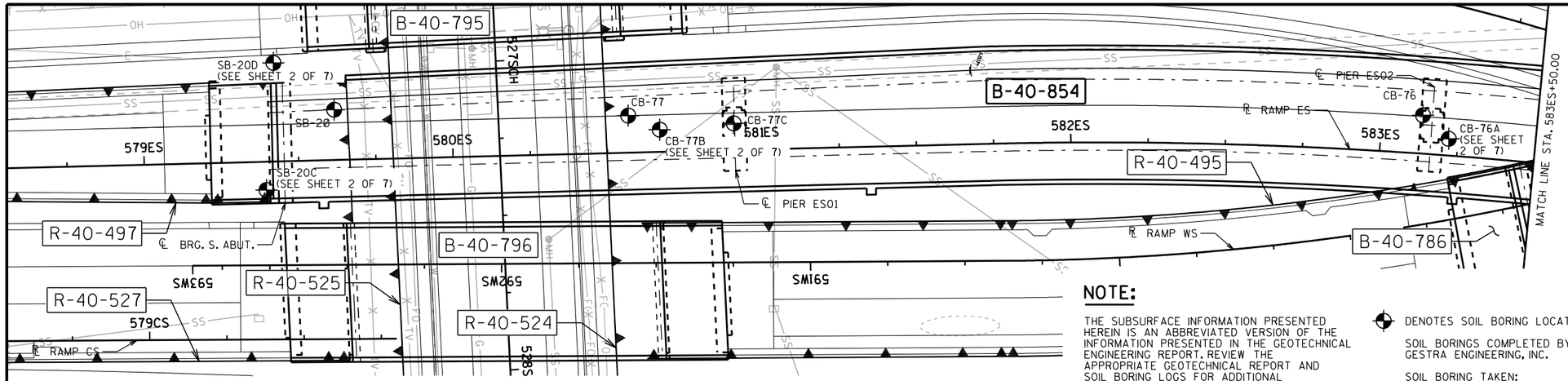
PLAN & ELEVATION SPANS 12 & 13

SHEET 13 OF 122

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PLOT SCALE : 40:1



PLAN

13-SPAN CURVED STEEL TRAPEZOIDAL BOX GIRDER

NOTE:

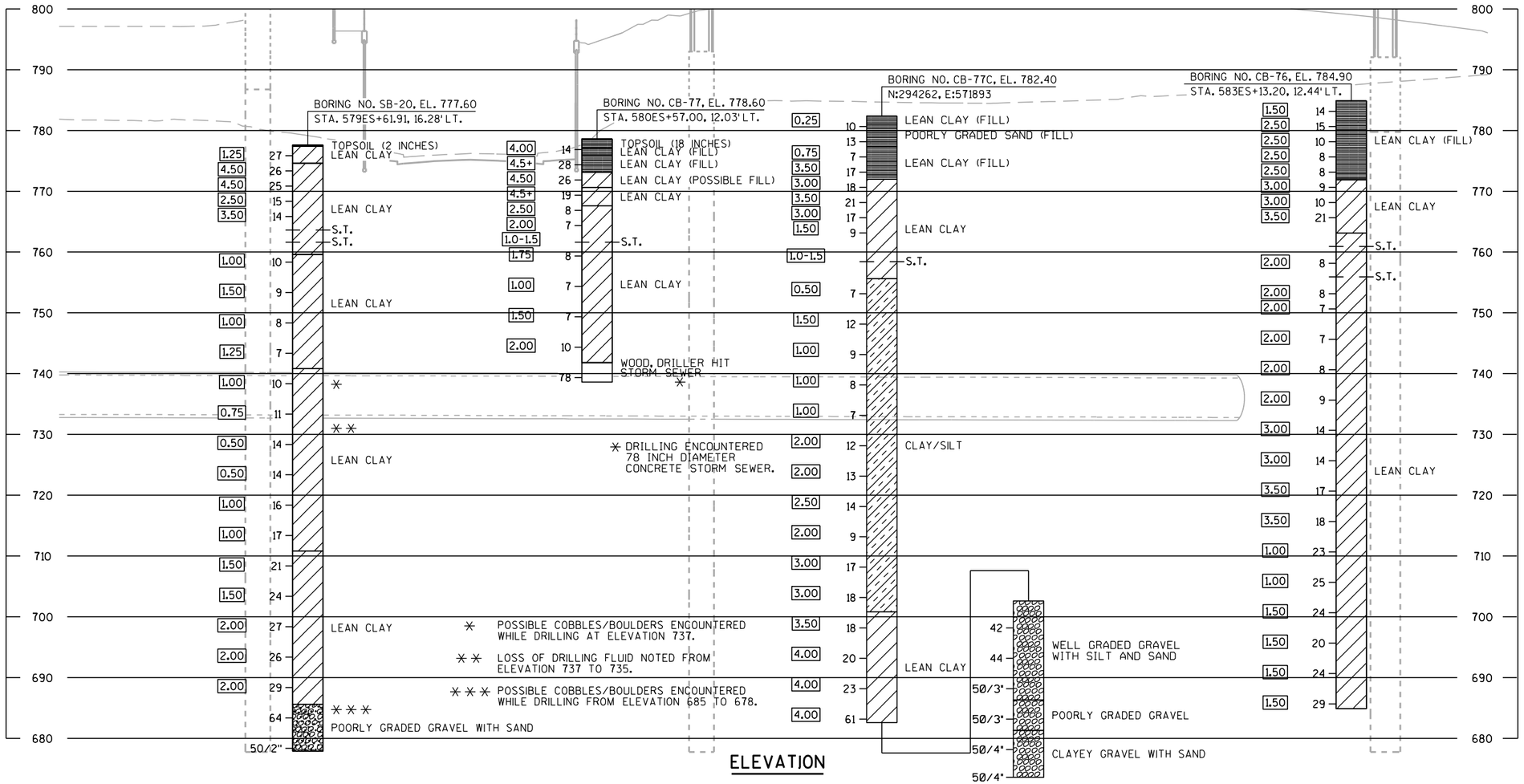
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ RAMP ES.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
MAY 30, 2012 - BORING CB-76
JUNE 6, 2012 - BORING CB-77
FEB. 7, 2012 - BORING SB-20



ELEVATION

STATE PROJECT NUMBER

1060-33-81

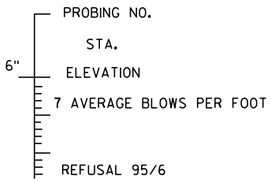
ABBREVIATIONS

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

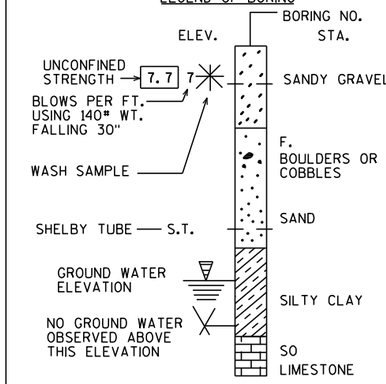
MATERIAL SYMBOLS

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

LEGEND OF PROBING



LEGEND OF BORING



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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS 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-40-854

DRAWN BY KTM | PLANS CK'D. HDA

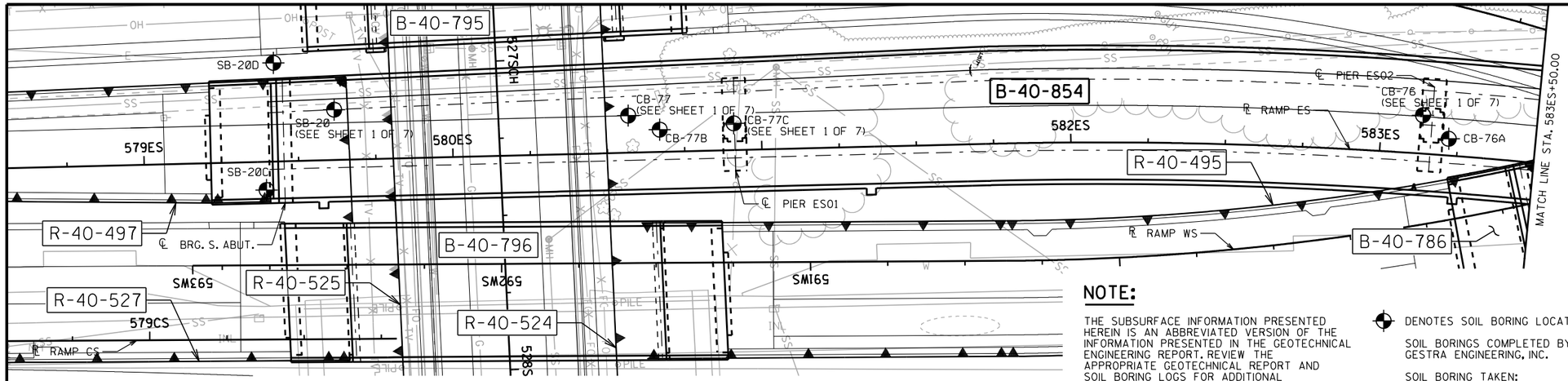
SUBSURFACE EXPLORATION (1 OF 7)

SHEET 14 OF 122

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FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Mandatory\080201_se.dgn PLOT DATE : 01-MAR-2015 18:52 PLOT BY : MSCKTM PLOT NAME : 080201_se PLOT SCALE : 40:1



PLAN

13-SPAN CURVED STEEL TRAPEZOIDAL BOX GIRDER

NOTE:

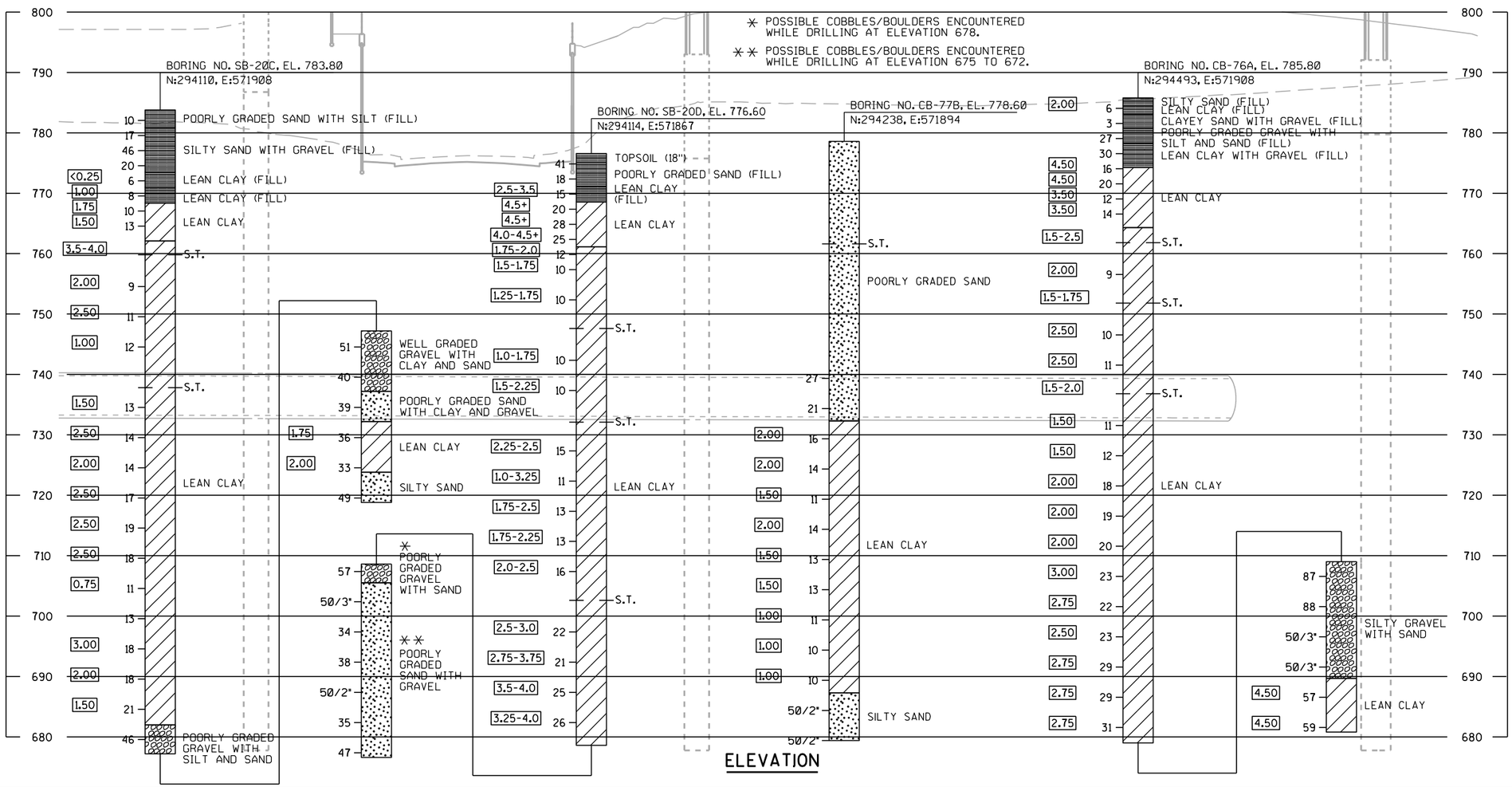
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ RAMP ES.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
MAY 30, 2012 - BORING CB-76
JUNE 6, 2012 - BORING CB-77
FEB. 7, 2012 - BORING SB-20



ELEVATION

STATE PROJECT NUMBER
1060-33-81

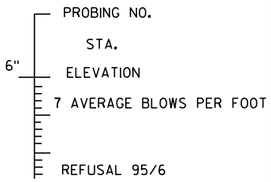
ABBREVIATIONS

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

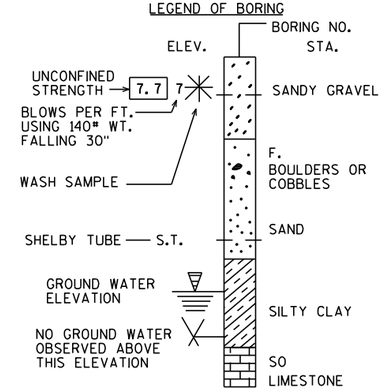
MATERIAL SYMBOLS

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

LEGEND OF PROBING



LEGEND OF BORING



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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS 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

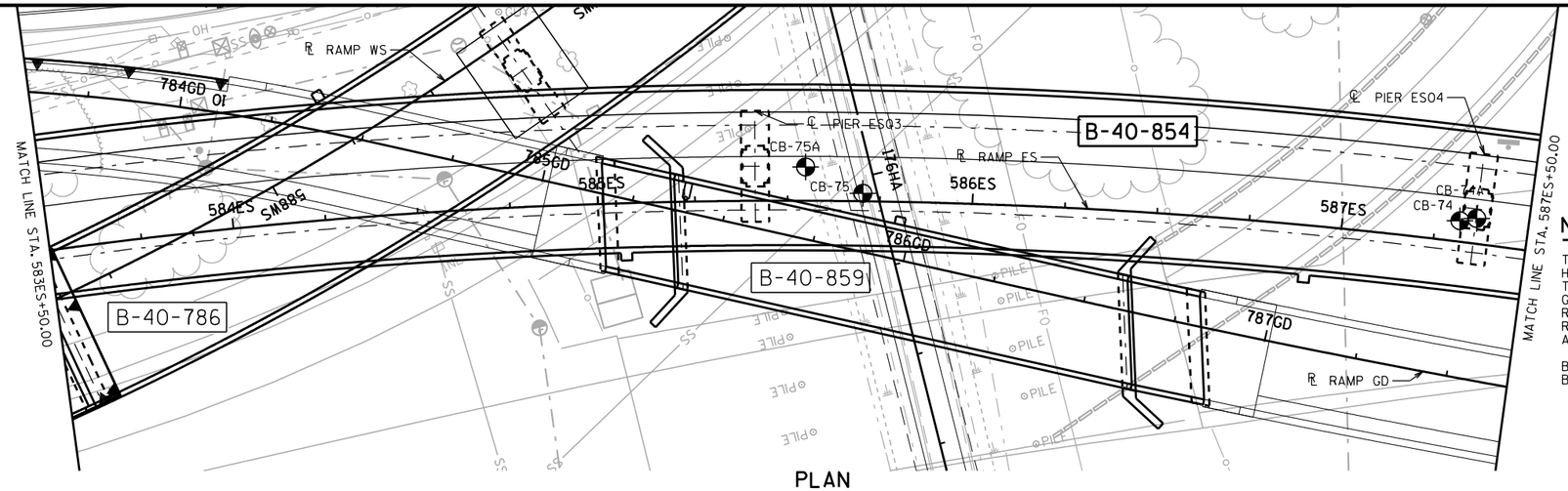
STRUCTURE B-40-854

DRAWN BY KTM | PLANS CK'D. HDA

SUBSURFACE EXPLORATION (2 OF 7)

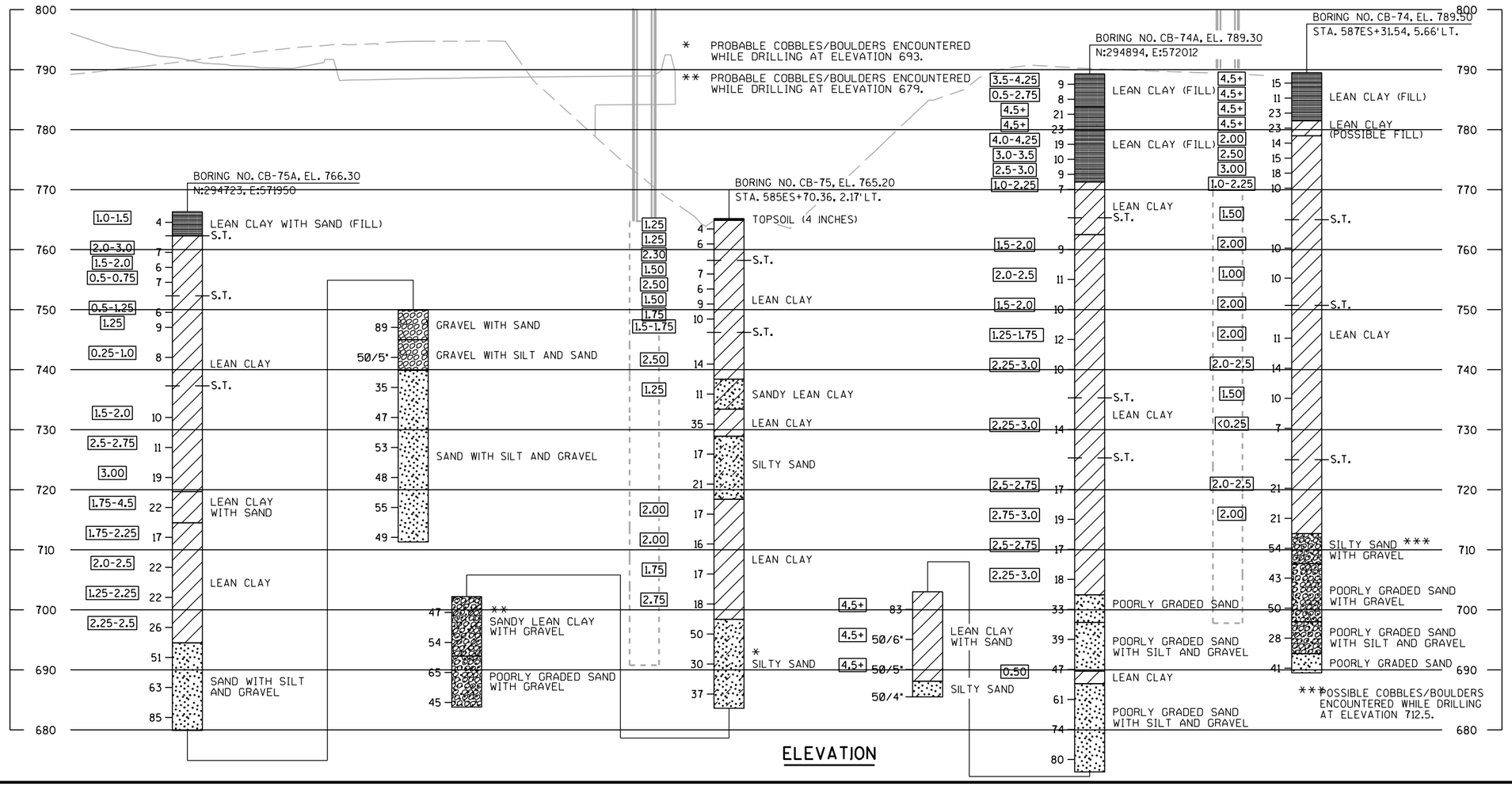
SHEET 15 OF 122

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PLAN

13-SPAN CURVED STEEL TRAPEZOIDAL BOX GIRDER



ELEVATION

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.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ RAMP ES.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
OCT. 4, 2012 - BORING CB-74
SEPT. 10, 2012 - BORING CB-75

STATE PROJECT NUMBER

1060-33-81

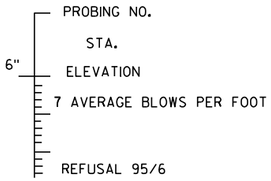
ABBREVIATIONS

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

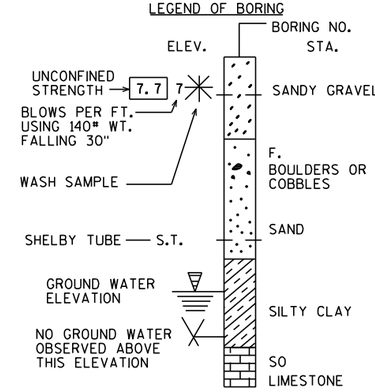
MATERIAL SYMBOLS

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

LEGEND OF PROBING



LEGEND OF BORING



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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY KTM | PLANS CK'D. HDA

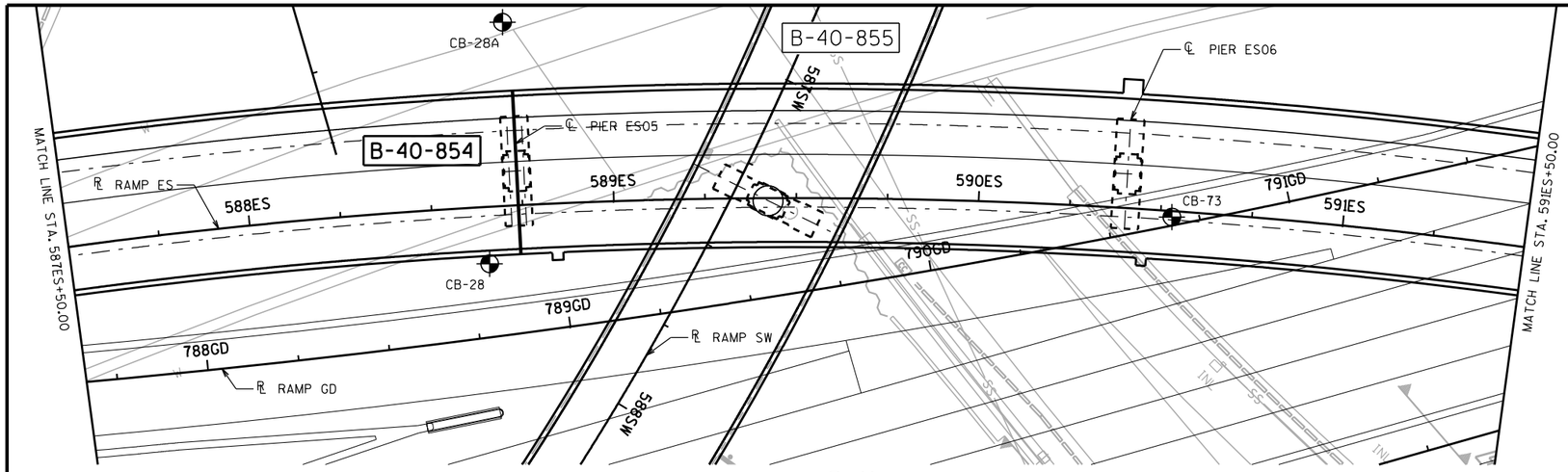
SUBSURFACE EXPLORATION (3 OF 7)

SHEET 16 OF 122

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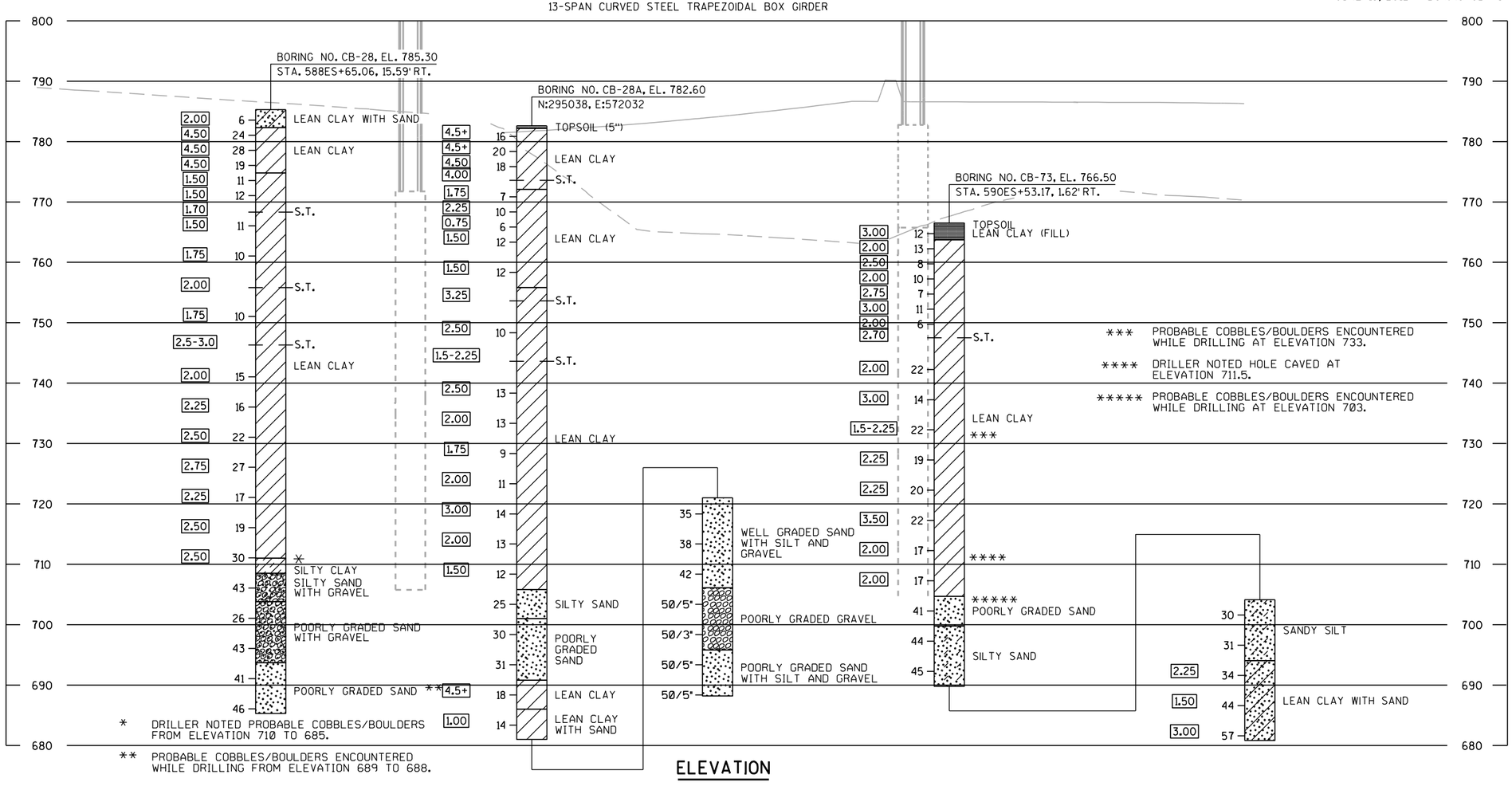
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PLAN

13-SPAN CURVED STEEL TRAPEZOIDAL BOX GIRDER



* DRILLER NOTED PROBABLE COBBLES/BOULDERS FROM ELEVATION 710 TO 685.

** PROBABLE COBBLES/BOULDERS ENCOUNTERED WHILE DRILLING FROM ELEVATION 689 TO 688.

*** PROBABLE COBBLES/BOULDERS ENCOUNTERED WHILE DRILLING AT ELEVATION 733.

**** DRILLER NOTED HOLE CAVED AT ELEVATION 711.5.

***** PROBABLE COBBLES/BOULDERS ENCOUNTERED WHILE DRILLING AT ELEVATION 703.

ELEVATION

NOTE:

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BORING STATIONS AND OFFSETS ARE BASED ON ℄ RAMP ES.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
RIVER VALLEY TESTING CORP.

SOIL BORING TAKEN:
FEB. 27, 2012 - BORING CB-28

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JUNE 18, 2012 - BORING CB-73

STATE PROJECT NUMBER

1060-33-81

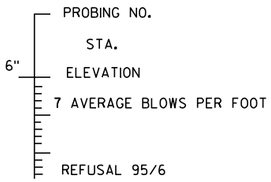
ABBREVIATIONS

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

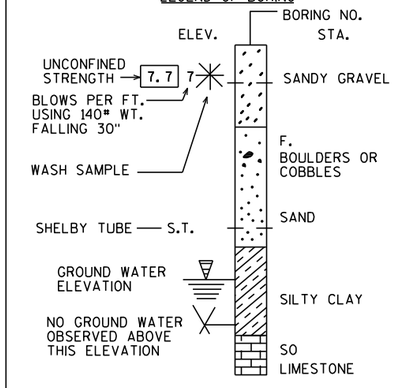
MATERIAL SYMBOLS

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

LEGEND OF PROBING



LEGEND OF BORING



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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

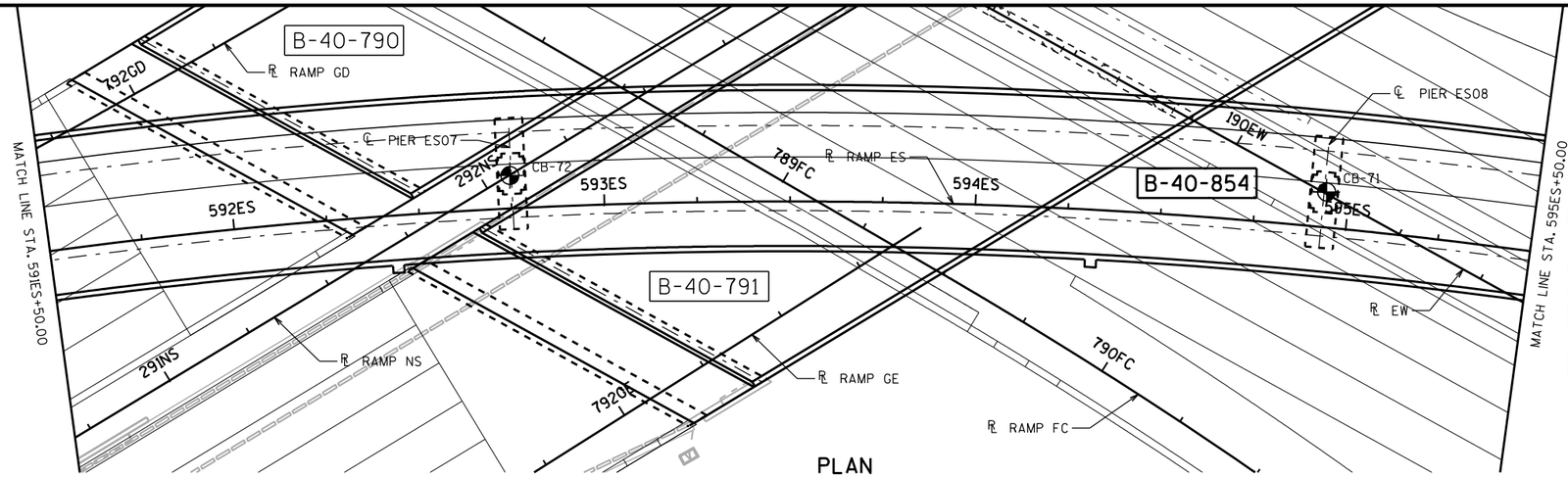
DRAWN BY KTM | PLANS CK'D. HDA

SUBSURFACE EXPLORATION (4 OF 7)

SHEET 17 OF 122

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PLAN

13-SPAN CURVED STEEL TRAPEZOIDAL BOX GIRDER

NOTE:

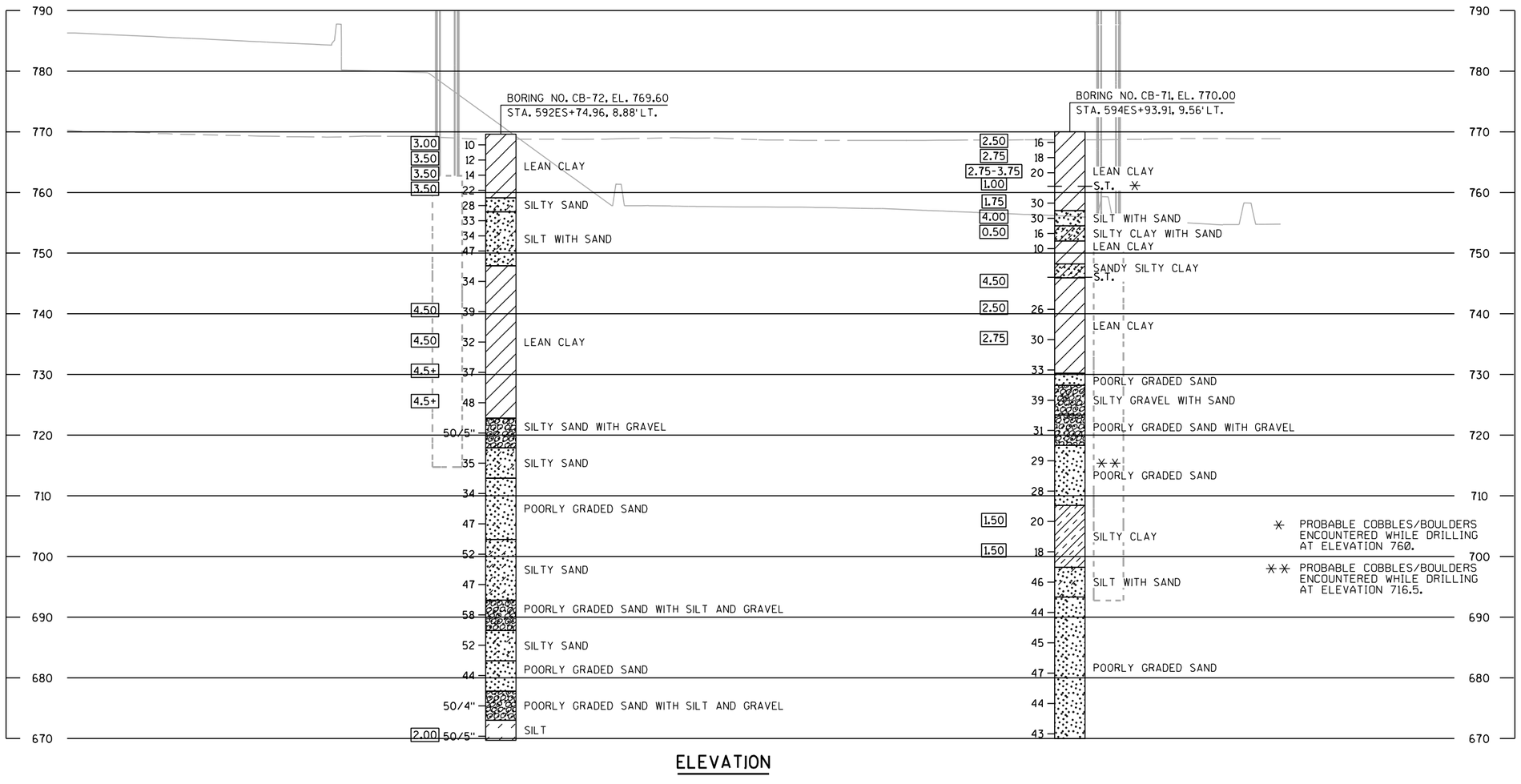
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BORING STATIONS AND OFFSETS ARE BASED ON ℄ RAMP ES.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JUNE 13, 2012 - BORING CB-72
JUNE 7, 2012 - BORING CB-71



✳ PROBABLE COBBLES/BOULDERS ENCOUNTERED WHILE DRILLING AT ELEVATION 760.

✳✳ PROBABLE COBBLES/BOULDERS ENCOUNTERED WHILE DRILLING AT ELEVATION 716.5.

ELEVATION

STATE PROJECT NUMBER

1060-33-81

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

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS 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-40-854

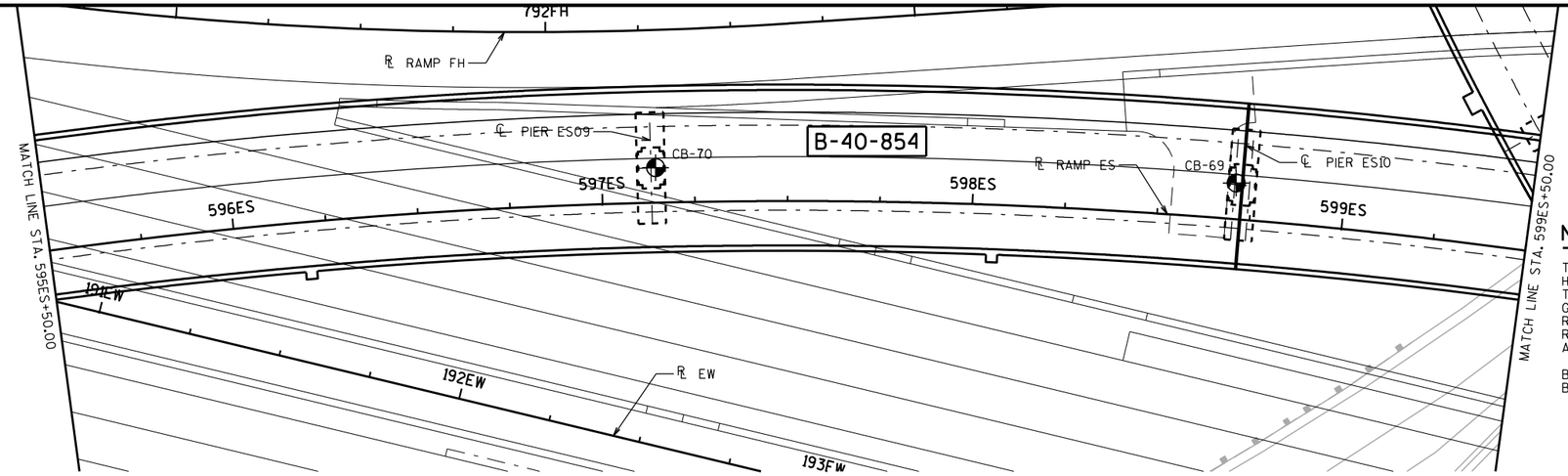
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SUBSURFACE EXPLORATION (5 OF 7)

SHEET 18 OF 122

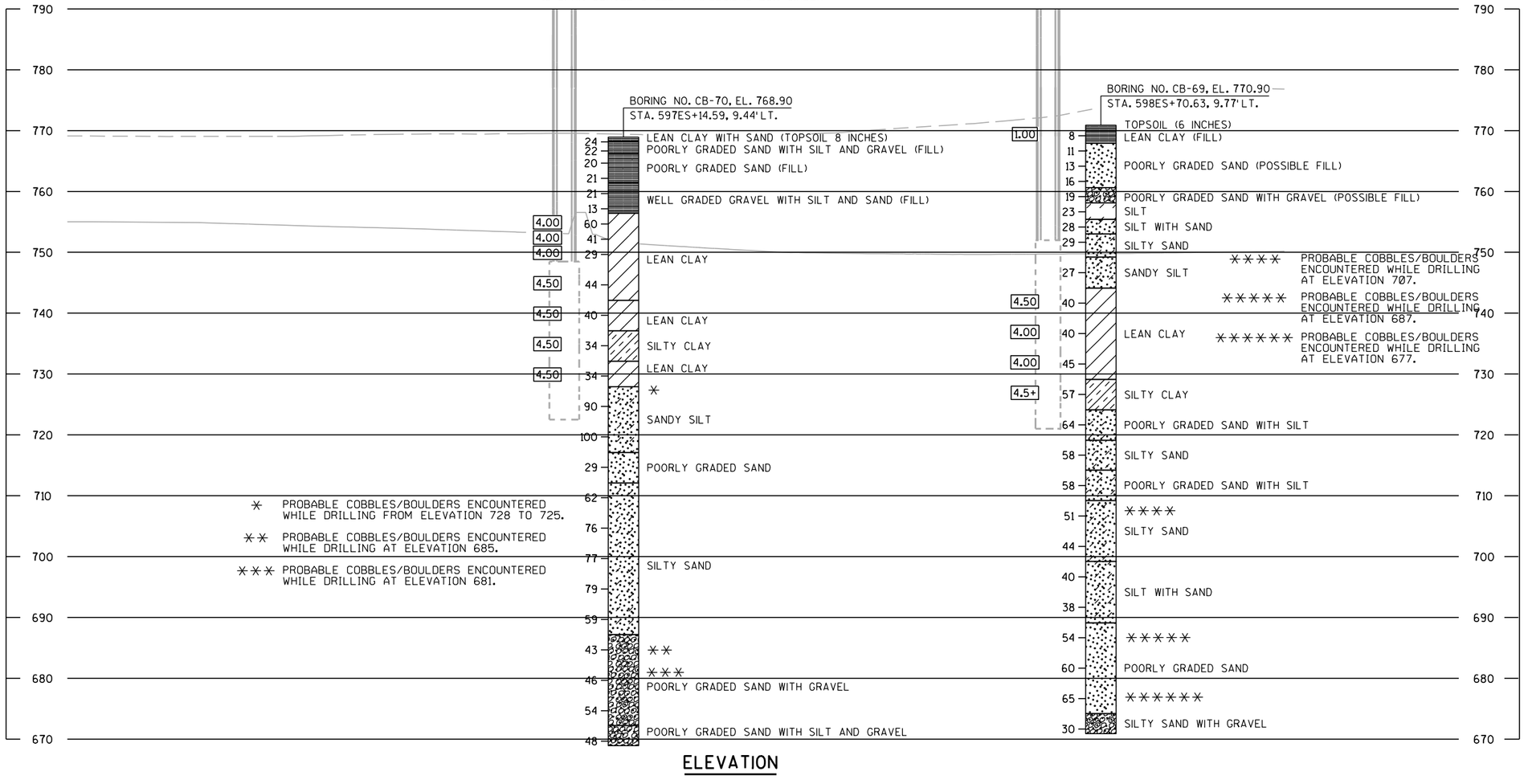
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PLOT BY : MSCKTM
PLOT NAME : 080204_se
PLOT SCALE : 40:1



PLAN

13-SPAN CURVED STEEL TRAPEZOIDAL BOX GIRDER



ELEVATION

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.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ RAMP ES.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JUNE 19, 2012 - BORING CB-69
JUNE 11, 2012 - BORING CB-70

STATE PROJECT NUMBER

1060-33-81

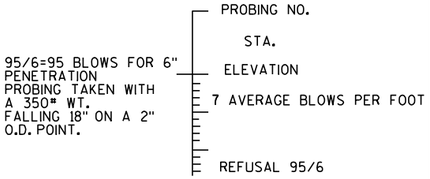
ABBREVIATIONS

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

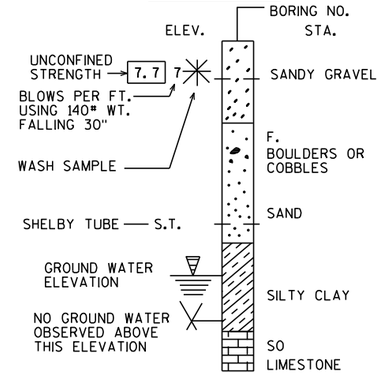
MATERIAL SYMBOLS

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

LEGEND OF PROBING



LEGEND OF BORING



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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS 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-40-854

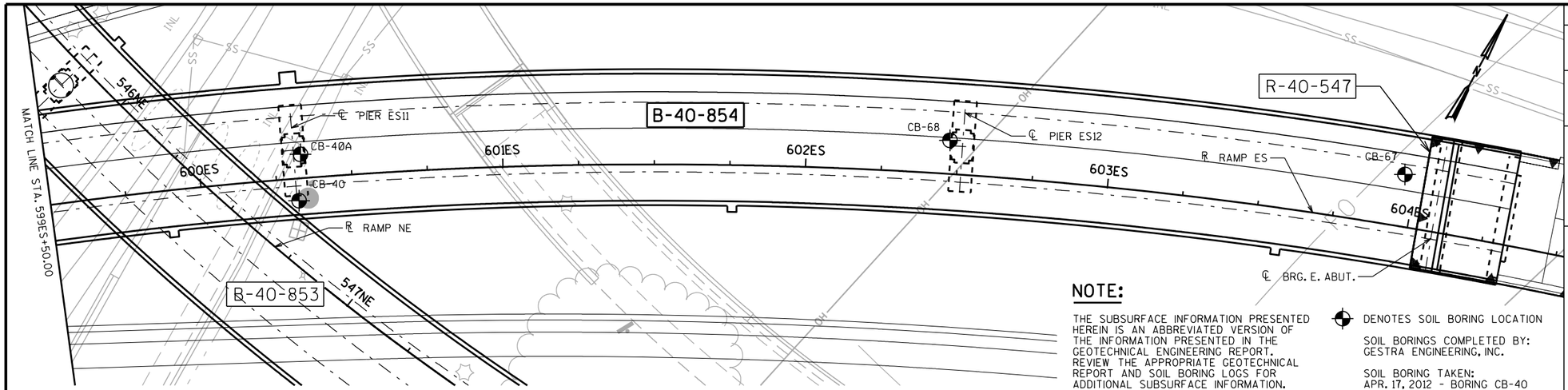
DRAWN BY KTM | PLANS CK'D. HDA

SUBSURFACE EXPLORATION (6 OF 7)

SHEET 19 OF 122

8

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PLAN

13-SPAN CURVED STEEL TRAPEZOIDAL BOX GIRDER

NOTE:

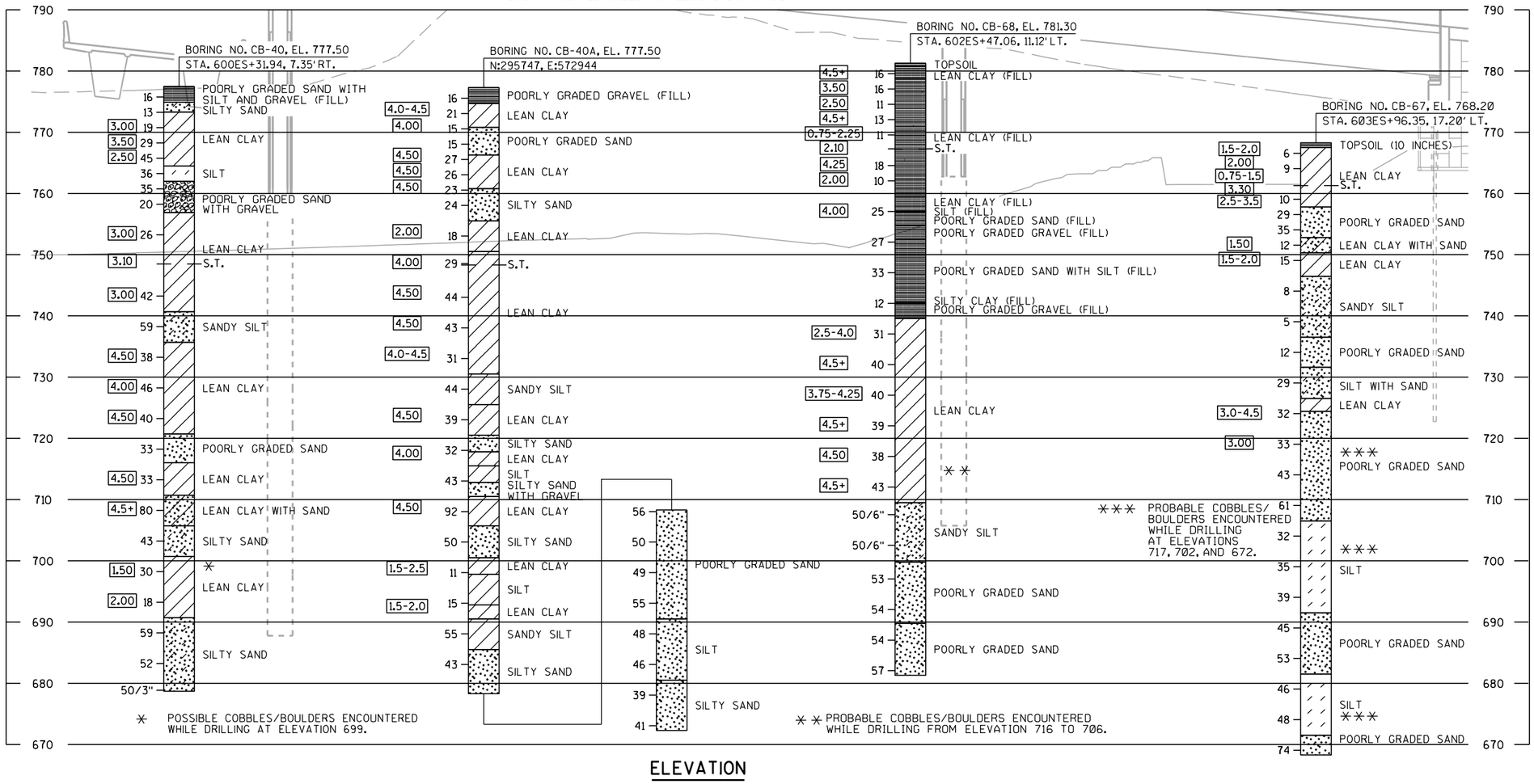
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ RAMP ES.

⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
APR. 17, 2012 - BORING CB-40
SEPT. 6, 2012 - BORING CB-67
JUNE 8, 2012 - BORING CB-68



ELEVATION

STATE PROJECT NUMBER

1060-33-81

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.
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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.
ELEV.
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UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
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.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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SUBSURFACE EXPLORATION (7 OF 7)

SHEET 20 OF 122

8

8

STATE PROJECT NUMBER
1060-33-81

CONSTRUCTION STAGING NOTES

N1. THE CONSTRUCTION STAGING NOTES OUTLINED BELOW APPLY TO ALL CONSTRUCTION STAGING SHEETS.

N2. THE ASSUMED CONSTRUCTION SEQUENCE DESCRIBED AND SHOWN IN THIS PLAN SET IS ONLY ONE POTENTIAL CONSTRUCTION SEQUENCE AND IS PRESENTED FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE SEQUENCE OF CONSTRUCTION EVEN IF THE EXACT SEQUENCE IN THE PLANS IS FOLLOWED.

N3. DETERMINE THE CONSTRUCTION SEQUENCE BEST SUITED TO THE MEANS AND METHODS AVAILABLE AND SUBJECT TO THE RESTRICTIONS PRESENTED BY THE OVERALL PROJECT STAGING, SITE RESTRICTIONS AND OTHER LIMITATIONS.

N4. THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

N5. 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.

N6. THE CONSTRUCTION STAGING PLANS SHOW EXISTING AND PROPOSED STRUCTURES EXPECTED OR ASSUMED TO BE IN PLACE AS CONSTRUCTION PROCEEDS. THE STRUCTURES ACTUALLY IN PLACE MAY VARY FROM THOSE SHOWN DEPENDING ON THE OVERALL SCHEDULE SELECTED BY THE CONTRACTOR. THE CONSTRUCTION SEQUENCE SHOWN IN THIS PLAN SET INCLUDES ONLY MAJOR CONSTRUCTION TASKS AND IS NOT INTENDED TO BE ALL-INCLUSIVE.

N7. ACCESS TO THE CRANE LOCATIONS, ASSEMBLY AND STAGING AREAS SHOWN MAY REQUIRE CONSTRUCTION OF TEMPORARY DRILLING AND WORKING PLATFORMS NOT EXPLICITLY DESCRIBED IN THE CONSTRUCTION SEQUENCE.

N8. ENSURE THE STABILITY OF PARTIALLY ERECTED STEEL THROUGH THE USE OF TEMPORARY CROSS FRAMES, SUPPORTS, BRACES OR OTHER MEANS AND METHODS AS DEEMED NECESSARY. TEMPORARILY LOCK EXPANSION BEARINGS OR PROVIDE ALTERNATIVE MEANS OF RESTRAINT AS REQUIRED TO MAINTAIN STABILITY AT ALL TIMES.

N9. COMPUTE ALL LOADS ON TEMPORARY SHORING TOWERS AND DESIGN ACCORDINGLY. ENSURE THAT THE POTENTIAL FOR UPLIFT IS PROPERLY ASSESSED AND THAT SHORING TOWER DESIGN, FOUNDATION DESIGN AND STEEL CONNECTION DETAILS ACCOUNT FOR ANY EXPECTED UPLIFT FORCES.

N10. CRANE LOADS SPECIFIED IN THE TABLE ARE BASED ON THE NOMINAL FIELD SECTION WEIGHTS SHOWN PLUS A SMALL PERCENTAGE TO ALLOW FOR VARIABILITY IN THE LOAD DISTRIBUTION. THESE LOADS ARE APPROXIMATE AND ARE PROVIDED FOR INFORMATION ONLY. VERIFY ALL CRANE LOADS BASED ON APPROVED SHOP DRAWINGS AND THE FINAL SELECTED ERECTION SEQUENCE.

N11. WHERE TWO TEMPORARY SUPPORT TOWERS ARE SHOWN, ONE COMBINED TOWER MAY BE PROVIDED.

ASSUMED CONSTRUCTION SEQUENCE

REFER TO STAGING SHEETS 1 & 2 OF 10 FOR THE FOLLOWING STAGES:

1. INSTALL TEMPORARY SHORING AT PIERS ES01, ES02 AND ES03.
2. BEGIN GRADING TO DRILLING PLATFORM (SOUTH ABUTMENT, ES01, ES02, ES03, ES04 OPTION A, ES07, ES08 OPTION A), AND ES09 OPTION A)) AND WORKING PLATFORM (PIER ES08 OPTION B AND ES09 OPTION B) FOR SUBSTRUCTURE CONSTRUCTION. SEE ROADWAY GRADING SHEETS FOR FINAL GRADING LIMITS. SEE EXCAVATION PLAN SHEETS FOR DETAILS OF LOCAL EXCAVATION AT EACH PIER.

ASSUMED CONSTRUCTION SEQUENCE, CONT.

3. BEGIN GRADING TO DRILLING PLATFORM (SOUTH ABUTMENT, ES01, ES02, ES03, ES04 OPTION A, ES07, ES08 OPTION A), AND ES09 OPTION A)) AND WORKING PLATFORM (PIER ES08 OPTION B AND ES09 OPTION B) FOR SUBSTRUCTURE CONSTRUCTION. SEE ROADWAY GRADING SHEETS FOR FINAL GRADING LIMITS. SEE EXCAVATION PLAN SHEETS FOR DETAILS OF LOCAL EXCAVATION AT EACH PIER.
4. BEGIN CONSTRUCTION OF DRILLED SHAFTS AT SOUTH ABUTMENT AND PIERS ES01, ES02, ES03, ES04 OPTION A, AND ES07. AT PIERS ES08 AND ES09 BEGIN CONSTRUCTION OF DRILLED SHAFT (OPTION A) OR PILE FOUNDATION (OPTION B). ASSUMED DRILLING ELEVATION OR WORKING PLATFORM ELEVATION FOR ALL PIERS ARE INDICATED ON THE EXCAVATION PLAN SHEETS. WHERE THE DRILLING ELEVATION IS ABOVE TOP OF SHAFT ELEVATION, THE NEED FOR TEMPORARY HOLE BRACING IS ANTICIPATED PRIOR TO COLUMN CONSTRUCTION. TEMPORARY HOLE BRACING MAY CONSIST OF SLIP-IN CASING OR OTHER APPROVED METHOD.
5. CONSTRUCT SOUTH ABUTMENT CAST SHAFT AND CAP. COORDINATE WITH WALLS R-40-525, R-40-497, R-40-498.
6. AFTER INSTALLATION OF THE DRILLED SHAFTS OR PILE FOUNDATION, BEGIN CONSTRUCTION OF THE CAST SHAFTS AT PIERS ES01 AND ES02. CONSTRUCT THE HAMMERHEAD PIER COLUMN AND CAP AT PIERS ES01, ES02, ES03, ES04 OPTION A, ES07, ES08, ES09. UPON COMPLETION OF THE PIER COLUMNS, BACKFILL THE EXCAVATION AS INDICATED ON THE EXCAVATION PLAN SHEETS. THE CONSTRUCTION SEQUENCE ASSUMES THAT THE CONTRACTOR WILL BACKFILL THE EXCAVATION NEAR PIER ES04 AFTER COLUMN CONSTRUCTION TO PROVIDE A PLATFORM FOR GIRDER ERECTION. AT A FUTURE CONSTRUCTION STAGE, THE CONTRACTOR WOULD THEN EXCAVATE DOWN TO PROPOSED GRADE.
7. REMOVE TEMPORARY SHORING AT PIERS ES01, ES02, AND ES03 PRIOR TO GIRDER ERECTION.

REFER TO STAGING SHEET 3 OF 10 FOR THE FOLLOWING STAGES:

8. INSTALL SHORING TOWER T1 UNDER LEFT AND RIGHT GIRDERS.
9. COORDINATE THE FOLLOWING UNIT 2 GIRDER ERECTION WITH THE CONSTRUCTION OF BRIDGES B-40-790 AND B-40-856. THE CONSTRUCTION SEQUENCE ASSUMES THAT B-40-854 UNIT 2 GIRDERS ARE ERECTED PRIOR TO ERECTING NEARBY B-40-856 GIRDERS AND B-40-790 GIRDERS.
10. TRANSPORT FIELD SECTIONS 12, 13, 14, 15, 16 AND 17 AND MAKE READY FOR ERECTION.
11. GROUND ASSEMBLE LEFT GIRDERS OF FIELD SECTIONS 12 AND 13, RIGHT GIRDERS OF FIELD SECTIONS 12 AND 13, AND INSTALL BOLTS IN FIELD SPLICE #11. INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICES.
12. GROUND ASSEMBLE LEFT GIRDERS OF FIELD SECTIONS 14 AND 15, RIGHT GIRDERS OF FIELD SECTIONS 14 AND 15, AND INSTALL BOLTS IN FIELD SPLICE #13. INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICES.
13. GROUND ASSEMBLE LEFT GIRDERS OF FIELD SECTIONS 16 AND 17, RIGHT GIRDERS OF FIELD SECTIONS 16 AND 17, AND INSTALL BOLTS IN FIELD SPLICE #15. INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICES.
14. BEGIN DETOUR OF SB USH 45.
15. INSTALL BEARINGS AT PIER ES07. USING TWO CRANES LOCATED AT POSITIONS L1 AND L2, ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTIONS 12 AND 13 AND THEN THE ASSEMBLY FOR THE LEFT GIRDER. INSTALL DIAPHRAGMS FOR FIELD SECTIONS 12 AND 13 TEMPORARILY BRACE GIRDER FOR STABILITY.
16. INSTALL BEARINGS AT PIER ES08. USING TWO CRANES LOCATED AT POSITIONS L3 AND L4, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTIONS 14 AND 15 AND THEN THE ASSEMBLY FOR THE RIGHT GIRDER. AFTER EACH ERECTION INSTALL BOLTS AT FIELD SPLICE #12 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTIONS 14 AND 15. TEMPORARILY BRACE GIRDER FOR STABILITY.

ASSUMED CONSTRUCTION SEQUENCE, CONT.

17. END DETOUR OF SB USH 45.
18. INSTALL BEARINGS AT PIER ES09. USING TWO CRANES LOCATED AT POSITIONS L5 AND L6, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTIONS 16 AND 17 AND THEN THE ASSEMBLY FOR THE RIGHT GIRDER. AFTER EACH ERECTION INSTALL BOLTS AT FIELD SPLICE #14 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTIONS 16 AND 17. TEMPORARILY BRACE GIRDER FOR STABILITY.

REFER TO STAGING SHEET 4 OF 10 FOR THE FOLLOWING STAGES:

19. START CLOSURE OF EXISTING RAMP WN AND NB USH 45.
20. BEGIN GRADING TO DRILLING PLATFORM (PIERS ES06 OPTION A, ES10 OPTION A, ES11 OPTION A, AND ES12 OPTION A), AND WORKING PLATFORM (PIERS ES10 OPTION B, ES11 OPTION B, ES12 OPTION B) FOR SUBSTRUCTURE CONSTRUCTION. SEE ROADWAY GRADING SHEETS FOR FINAL GRADING LIMITS. SEE EXCAVATION PLAN SHEETS FOR DETAILS OF LOCAL EXCAVATION AT EACH PIER.
21. BEGIN CONSTRUCTION OF DRILLED SHAFTS AT PIER ES06 OPTION A. AT PIERS ES10, ES11, AND ES12. BEGIN CONSTRUCTION OF DRILLED SHAFT (OPTION A) OR PILE FOUNDATION (OPTION B). ASSUMED DRILLING ELEVATION OR WORKING PLATFORM ELEVATION FOR ALL PIERS ARE INDICATED ON THE EXCAVATION PLAN SHEETS. WHERE THE DRILLING ELEVATION IS ABOVE TOP OF SHAFT ELEVATION, THE NEED FOR TEMPORARY HOLE BRACING IS ANTICIPATED PRIOR TO COLUMN CONSTRUCTION. TEMPORARY HOLE BRACING MAY CONSIST OF SLIP-IN CASING OR OTHER APPROVED METHOD.
22. AFTER INSTALLATION OF THE DRILLED SHAFTS OR PILE FOUNDATION, CONSTRUCT THE CAST SHAFT AT ES06 OPTION A AND THE HAMMERHEAD PIER COLUMN AND CAP AT PIERS ES06 OPTION A, ES10, ES11, ES12. UPON COMPLETION OF THE PIER COLUMNS, BACKFILL THE EXCAVATION AS INDICATED ON THE EXCAVATION PLAN SHEETS.

REFER TO STAGING SHEET 5 OF 10 FOR THE FOLLOWING STAGES:

23. START CLOSURE OF EXISTING EB IH 94.
24. BEGIN GRADING TO DRILLING PLATFORM (PIER ES05 OPTION A), AND WORKING PLATFORM (PIERS ES04 OPTION B, ES05 OPTION B, AND ES06 OPTION B) FOR SUBSTRUCTURE CONSTRUCTION. SEE ROADWAY GRADING SHEETS FOR FINAL GRADING LIMITS. SEE EXCAVATION PLAN SHEETS FOR DETAILS OF LOCAL EXCAVATION AT EACH PIER.
25. BEGIN CONSTRUCTION OF DRILLED SHAFT AT PIER ES05 OPTION A. AT PIERS ES04 OPTION B, ES05 OPTION B, AND ES06 OPTION B BEGIN CONSTRUCTION OF PILE FOUNDATION (OPTION B). ASSUMED DRILLING ELEVATION OR WORKING PLATFORM ELEVATION FOR ALL PIERS ARE INDICATED ON THE EXCAVATION PLAN SHEETS. WHERE THE DRILLING ELEVATION IS ABOVE TOP OF SHAFT ELEVATION, THE NEED FOR TEMPORARY HOLE BRACING IS ANTICIPATED PRIOR TO COLUMN CONSTRUCTION. TEMPORARY HOLE BRACING MAY CONSIST OF SLIP-IN CASING OR OTHER APPROVED METHOD.
26. AFTER INSTALLATION OF THE DRILLED SHAFTS OR PILE FOUNDATION, CONSTRUCT THE HAMMERHEAD PIER COLUMN AND CAP AT PIERS ES04 OPTION B, ES05, AND ES06 OPTION B. UPON COMPLETION OF THE PIER COLUMNS, BACKFILL THE EXCAVATION AS INDICATED ON THE EXCAVATION PLAN SHEETS. THE CONSTRUCTION SEQUENCE ASSUMES THAT THE CONTRACTOR WILL BACKFILL THE EXCAVATION NEAR PIERS ES04 AND ES05 AFTER COLUMN CONSTRUCTION TO PROVIDE A PLATFORM FOR GIRDER ERECTION. AT A FUTURE CONSTRUCTION STAGE, THE CONTRACTOR WOULD THEN EXCAVATE DOWN TO PROPOSED GRADE.

REFER TO STAGING SHEET 6 OF 10 FOR THE FOLLOWING STAGES:

27. COORDINATE THE FOLLOWING UNIT 1 GIRDER ERECTION WITH THE CONSTRUCTION OF BRIDGE B-40-859.
28. TRANSPORT FIELD SECTIONS 1, 2, 3, AND 4 AND MAKE READY FOR ERECTION.
29. GROUND ASSEMBLE LEFT GIRDERS OF FIELD SECTIONS 1 AND 2, RIGHT GIRDERS OF FIELD SECTIONS 1 AND 2 AND INSTALL BOLTS IN FIELD SPLICE #1. INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICES.

ASSUMED CONSTRUCTION SEQUENCE, CONT.

30. GROUND ASSEMBLE LEFT GIRDERS OF FIELD SECTIONS 3 AND 4, RIGHT GIRDERS OF FIELD SECTIONS 3 AND 4 AND INSTALL BOLTS IN FIELD SPLICE #3. INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICES.
31. INSTALL BEARINGS AT SOUTH ABUTMENT AND PIER ES01. USING TWO CRANES LOCATED AT POSITIONS L7 AND L8, ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTIONS 1 AND 2 AND THEN THE ASSEMBLY FOR THE LEFT GIRDER. INSTALL DIAPHRAGMS FOR FIELD SECTIONS 1 AND 2 TEMPORARILY BRACE GIRDER FOR STABILITY.
32. BEGIN DETOUR OF RAMP WS TRAFFIC. TEMPORARILY REMOVE LOW-HEIGHT LIGHT FIXTURE.
33. INSTALL BEARINGS AT PIER ES02. USING TWO CRANES LOCATED AT POSITIONS L9 AND L10, ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTIONS 3 AND 4 AND THEN THE ASSEMBLY FOR THE LEFT GIRDER. AFTER EACH ERECTION INSTALL BOLTS AT FIELD SPLICE #2 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTIONS 3 AND 4. TEMPORARILY BRACE GIRDER FOR STABILITY.
34. END DETOUR OF RAMP WS TRAFFIC. REATTACH LOW-WEIGHT LIGHT FIXTURE.
35. CONSTRUCT TEMPORARY CRANE ACCESS RAMP DOWN TO THE HANK AARON STATE TRAIL. INSTALL BEARINGS AT PIER ES03.
36. BEGIN DETOUR OF RAMP WS TRAFFIC.
37. TRANSPORT RIGHT GIRDERS OF FIELD SECTIONS 5 AND 6 AND MAKE READY FOR ERECTION. USING TWO CRANES LOCATED AT POSITIONS L11 AND L12, ERECT RIGHT GIRDER FIELD SECTION 5 AND HOLD IN PLACE. INSTALL BOLTS AT FIELD SPLICE #4 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. USING TWO CRANES AT LOCATED AT POSITIONS L14 AND L15, ERECT RIGHT GIRDER FIELD SECTION 6. INSTALL BOLTS AT FIELD SECTION #5 AND INSTALL LATERAL BRACING MEMBER. TEMPORARILY BRACE GIRDER FOR STABILITY.
38. TRANSPORT LEFT GIRDERS OF FIELD SECTIONS 5 AND 6 AND MAKE READY FOR ERECTION. USING TWO CRANES LOCATED AT POSITIONS L11 AND L13, ERECT LEFT GIRDER FIELD SECTION 5 AND HOLD IN PLACE. INSTALL BOLTS AT FIELD SPLICE #4 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. USING TWO CRANES AT LOCATED AT POSITIONS L14 AND L15, ERECT LEFT GIRDER FIELD SECTION 6. INSTALL BOLTS AT FIELD SECTION #5 AND INSTALL LATERAL BRACING MEMBER. INSTALL DIAPHRAGMS FOR FIELD SECTIONS 5 AND 6. TEMPORARILY BRACE GIRDER FOR STABILITY.
39. END DETOUR OF RAMP WS TRAFFIC.
40. TRANSPORT FIELD SECTIONS 7, 8, AND 9 AND MAKE READY FOR ERECTION.
41. GROUND ASSEMBLE LEFT GIRDERS OF FIELD SECTIONS 7 AND 8, RIGHT GIRDERS OF FIELD SECTIONS 7 AND 8, AND INSTALL BOLTS IN FIELD SPLICE #7. INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICES.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY ENS | PLANS CK'D. JWC

CONSTRUCTION STAGING NOTES (1 OF 2)

SHEET 21 OF 122

STATE PROJECT NUMBER

1060-33-81

ASSUMED CONSTRUCTION SEQUENCE, CONT.

42. INSTALL BEARINGS AT PIER ES04. USING TWO CRANES LOCATED AT POSITIONS L16 AND L17, ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTIONS 7 AND 8 AND THEN THE ASSEMBLY FOR THE LEFT GIRDER. AFTER EACH ERECTION INSTALL BOLTS AT FIELD SPLICE #6 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTIONS 7 AND 8. TEMPORARILY BRACE GIRDER FOR STABILITY.

43. INSTALL BEARINGS AT PIER ES05. USING TWO CRANES LOCATED AT POSITIONS L18 AND L19, ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTION 9 AND THEN THE ASSEMBLY FOR THE LEFT GIRDER. AFTER EACH ERECTION INSTALL BOLTS AT FIELD SPLICE #8 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTION 9. TEMPORARILY BRACE GIRDER FOR STABILITY.

REFER TO STAGING SHEET 7 OF 10 FOR THE FOLLOWING STAGES:

44. BEGIN DETOUR OF RAMP SW.

45. TRANSPORT FIELD SECTIONS 10 AND 11 AND MAKE READY FOR ERECTION.

46. INSTALL BEARINGS AT PIER ES06. USING TWO CRANES LOCATED AT POSITIONS L20 AND L21, ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTION 11 AND THEN THE ASSEMBLY FOR THE LEFT GIRDER. AFTER EACH ERECTION INSTALL BOLTS AT FIELD SPLICE #10 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTION 11. TEMPORARILY BRACE GIRDER FOR STABILITY.

47. INSTALL BEARINGS AT PIER ES05. USING TWO CRANES LOCATED AT POSITIONS L22 AND L23, ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTION 10 AND THEN THE ASSEMBLY FOR THE LEFT GIRDER. AFTER EACH ERECTION INSTALL BOLTS AT FIELD SPLICE #9 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTION 10.

48. END DETOUR OF RAMP SW.

49. TRANSPORT FIELD SECTION 18.

50. INSTALL BEARINGS AT PIER ES10. USING TWO CRANES LOCATED AT POSITIONS L24 AND L25, ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTION 18 AND THEN THE ASSEMBLY FOR THE LEFT GIRDER. AFTER EACH ERECTION INSTALL BOLTS AT FIELD SPLICE #16 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTION 18.

51. REMOVE TEMPORARY SHORING TOWER T1.

REFER TO STAGING SHEET 8 OF 10 FOR THE FOLLOWING STAGES:

52. BEGIN GRADING TO FINAL GROUNDLINES.

53. CONSTRUCT EAST ABUTMENT. DRIVE PILE AND CONSTRUCT PILE CAP. COORDINATE WITH WALL R-40-547.

54. INSTALL SHORING TOWER T2 UNDER LEFT AND RIGHT GIRDERS.

55. TRANSPORT FIELD SECTIONS 19 THROUGH 23 AND MAKE READY FOR ERECTION.

56. INSTALL BEARINGS AT EAST ABUTMENT. USING TWO CRANES LOCATED AT POSITIONS L26 AND L27, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTION 23 AND THEN THE ASSEMBLY FOR THE RIGHT GIRDER. INSTALL DIAPHRAGMS FOR FIELD SECTION 23. TEMPORARILY BRACE GIRDER FOR STABILITY.

57. INSTALL BEARINGS AT PIER ES12. USING TWO CRANES LOCATED AT POSITIONS L28 AND L29, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTION 22 AND THEN THE ASSEMBLY FOR THE RIGHT GIRDER. AFTER EACH ERECTION INSTALL BOLTS AT FIELD SPLICE #20. INSTALL DIAPHRAGMS FOR FIELD SECTION 22. TEMPORARILY BRACE GIRDER FOR STABILITY.

ASSUMED CONSTRUCTION SEQUENCE, CONT.

58. GROUND ASSEMBLE RIGHT GIRDERS OF FIELD SECTIONS 20 AND 21, AND INSTALL BOLTS IN FIELD SPLICE #18. INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICES.

59. BEGIN DETOUR OF RAMP NE.

60. INSTALL BEARINGS AT PIER ES11. USING TWO CRANES LOCATED AT POSITIONS L30 AND L31, ERECT THE ASSEMBLY FOR THE RIGHT GIRDER OF FIELD SECTIONS 20 AND 21 AND THEN THE ASSEMBLY FOR THE LEFT GIRDER. AFTER EACH ERECTION INSTALL BOLTS AT FIELD SPLICE #19 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTIONS 20 AND 21. TEMPORARILY BRACE GIRDER FOR STABILITY.

61. INSTALL BEARINGS AT PIER ES10. USING TWO CRANES LOCATED AT POSITIONS L32 AND L33, ERECT THE ASSEMBLY FOR THE LEFT GIRDER OF FIELD SECTION 19 AND THEN THE ASSEMBLY FOR THE LEFT GIRDER. AFTER EACH ERECTION INSTALL BOLTS AT FIELD SPLICE #17 AND INSTALL LATERAL BRACING MEMBER CROSSING THE SPLICE. INSTALL DIAPHRAGMS FOR FIELD SECTION 19.

62. END DETOUR OF RAMP NE.

63. REMOVE TEMPORARY SHORING TOWER T2.

REFER TO STAGING SHEETS 9 & 10 OF 10 FOR THE FOLLOWING STAGES:

64. POUR THE DECK SLAB IN EACH UNIT USING AN APPROVED POUR SEQUENCE, EXCLUDING THE BLOCKOUTS AT THE EXPANSION JOINTS.

65. POUR THE LEFT AND RIGHT PARAPETS OVER THE FULL LENGTH OF EACH UNIT, EXCLUDING ZONES ADJACENT TO THE EXPANSION JOINTS.

66. INSTALL THE EXPANSION JOINTS AND PLACE CONCRETE IN BLOCKOUTS.

67. CONSTRUCT APPROACH SLABS.

68. POUR THE PARAPETS IN ZONES ADJACENT TO THE EXPANSION JOINTS AND POUR PARAPETS ON APPROACH SLAB.

CRANE LOCATION AND LIFT SUMMARY

LOC'N ID	LIFT DESC'N	SEQ. NO.	WEIGHT (TONS)	RADIUS (FEET)	HEIGHT (FEET)
L1	FS#12R + FS#13R	15	85	50	75
L1	FS#12L + FS#13L	15	90	50	75
L2	FS#12R + FS#13R	15	85	60	75
L2	FS#12L + FS#13L	15	90	60	75
L3	FS#14R + FS#15R	16	70	70	75
L3	FS#14L + FS#15L	16	75	70	75
L4	FS#14R + FS#15R	16	70	50	70
L4	FS#14L + FS#15L	16	75	50	70
L5	FS#16R + FS#17R	18	75	50	65
L5	FS#16L + FS#17L	18	80	50	65
L6	FS#16R + FS#17R	18	75	50	60
L6	FS#16L + FS#17L	18	80	50	60
L7	FS#1R + FS#2R	31	65	40	60
L7	FS#1L + FS#2L	31	65	40	60
L8	FS#1R + FS#2R	31	65	55	60
L8	FS#1L + FS#2L	31	65	40	60
L9	FS#3R + FS#4R	33	85	65	60
L9	FS#3L + FS#4L	33	85	40	60
L10	FS#3R + FS#4R	33	85	50	65
L10	FS#3L + FS#4L	33	85	30	65
L11	FS#5R	37	40	55	65
L11	FS#5L	38	40	50	65
L12	FS#5R	37	40	55	65
L13	FS#5L	38	40	60	65
L14	FS#6R	37	40	55	85
L14	FS#6L	38	40	55	85
L15	FS#6R	37	40	35	85
L15	FS#6L	38	40	55	85
L16	FS#7R + FS#8R	42	55	40	75
L16	FS#7L + FS#8L	42	60	40	75
L17	FS#7R + FS#8R	42	55	40	75
L17	FS#7L + FS#8L	42	60	40	75
L18	FS#9R	43	30	40	75
L18	FS#9L	43	30	40	75
L19	FS#9R	43	30	40	75
L19	FS#9L	43	30	40	75
L20	FS#11R	46	50	45	85
L20	FS#11L	46	50	45	85
L21	FS#11R	46	50	45	85
L21	FS#11L	46	50	45	85

CRANE LOCATION AND LIFT SUMMARY

LOC'N ID	LIFT DESC'N	SEQ. NO.	WEIGHT (TONS)	RADIUS (FEET)	HEIGHT (FEET)
L22	FS#10R	47	30	55	85
L22	FS#10L	47	35	55	85
L23	FS#10R	47	30	55	85
L23	FS#10L	47	35	55	85
L24	FS#18R	50	30	35	70
L24	FS#18L	50	30	35	70
L25	FS#18R	50	30	35	70
L25	FS#18L	50	30	35	70
L26	FS#23L	56	30	35	35
L26	FS#23R	56	30	35	35
L27	FS#23L	56	30	35	35
L27	FS#23R	56	30	35	35
L28	FS#22L	57	45	35	40
L28	FS#22R	57	40	35	40
L29	FS#22L	57	45	35	40
L29	FS#22R	57	40	35	40
L30	FS#20R+FS#21R	60	80	35	50
L30	FS#20L+FS#21L	60	80	35	50
L31	FS#20R+FS#21R	60	80	35	45
L31	FS#20L+FS#21L	60	80	35	45
L32	FS#19L	61	30	50	55
L32	FS#19R	61	30	35	55
L33	FS#19L	61	30	50	55
L33	FS#19R	61	30	35	55

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NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

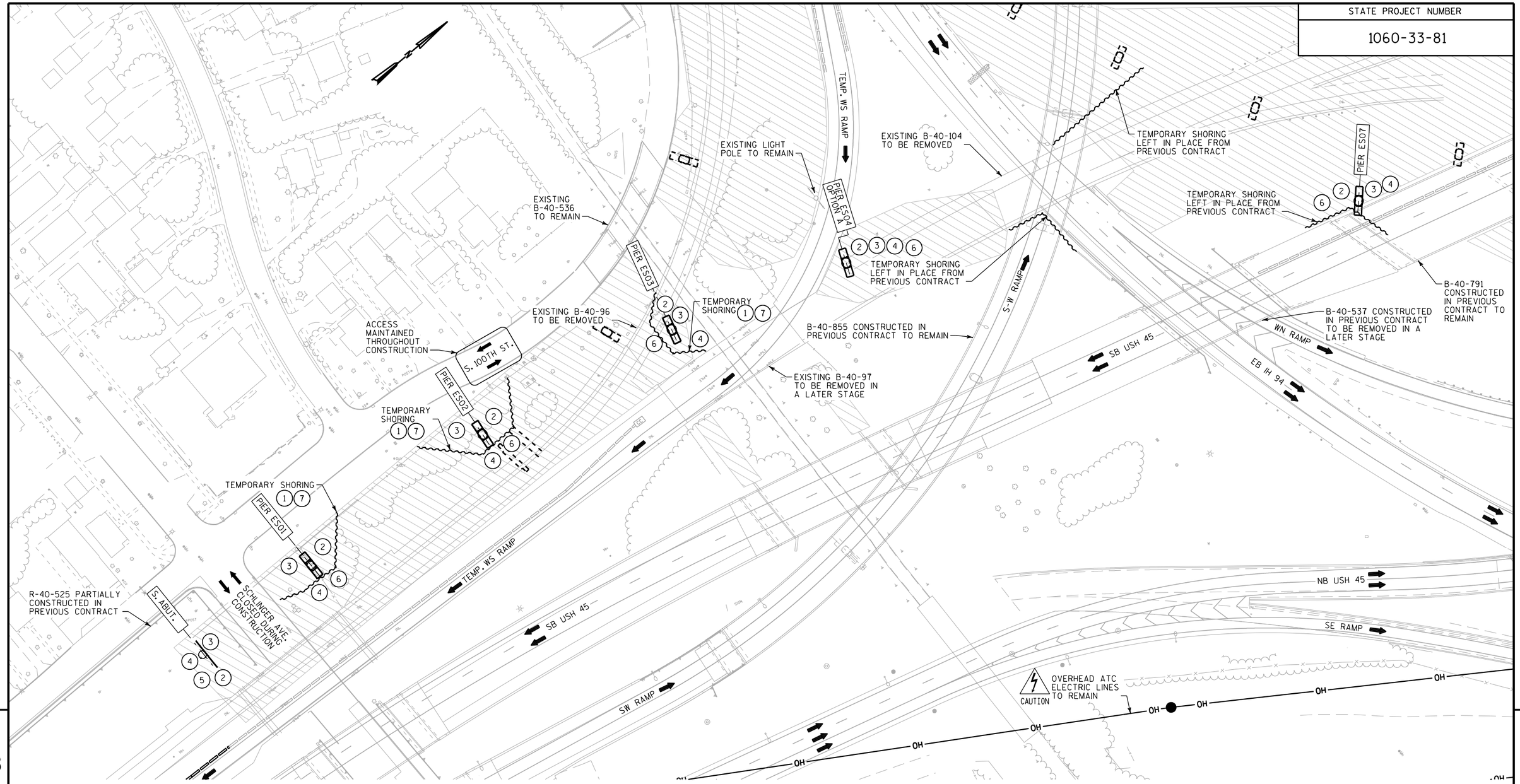
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CONSTRUCTION STAGING NOTES (2 OF 2)

SHEET 22 OF 122

STATE PROJECT NUMBER
1060-33-81



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8

PLAN - UNIT 1 & PARTIAL UNIT 2

CONSTRUCTION STAGE 2 TRAFFIC SHOWN

LEGEND

- (3) CONSTRUCTION SEQUENCE NUMBER
- TEMPORARY SHORING, SEE EXCAVATION PLAN FOR DETAILS
- PROPOSED GRADING, PAVEMENT OR STRUCTURE WORK IN CONSTRUCTION STAGE 1 OR STAGE 2, SEE ROADWAY PLANS

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

PROPOSED SUBSTRUCTURES OF ADJACENT STRUCTURES ARE SHOWN FOR INFORMATION ONLY AND MAY NOT NECESSARILY BE CONSTRUCTED IN THE DEPICTED CONSTRUCTION STAGE. SEE CONSTRUCTION STAGING PLAN FOR EACH STRUCTURE FOR DETAILS AND STAGING INFORMATION.

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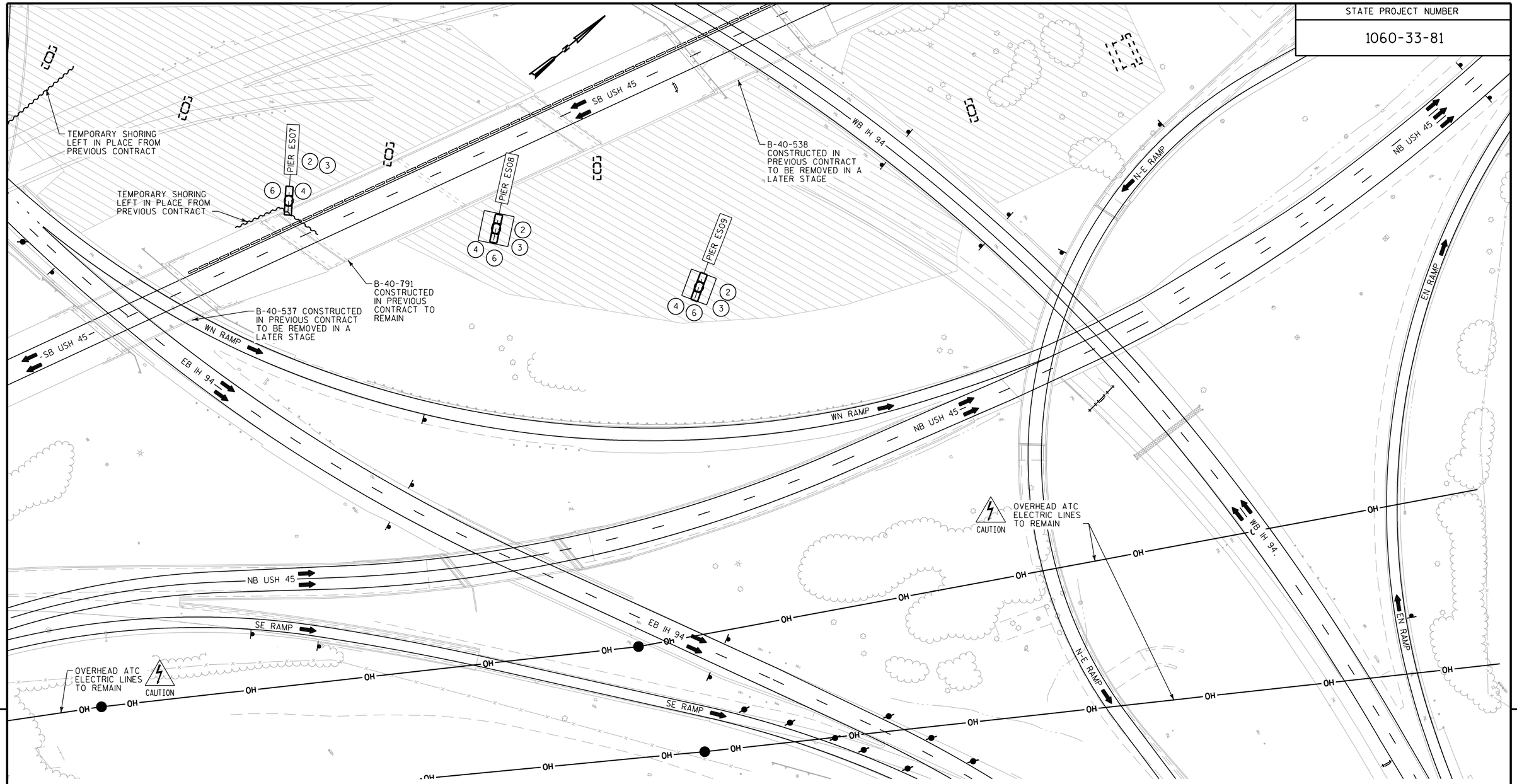
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CONSTRUCTION STAGING (1 OF 10)

SHEET 23 OF 122

STATE PROJECT NUMBER
1060-33-81



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8

PLAN - UNIT 1 & PARTIAL UNIT 2

CONSTRUCTION STAGE 2 TRAFFIC SHOWN

LEGEND

(3) CONSTRUCTION SEQUENCE NUMBER

TEMPORARY SHORING, SEE EXCAVATION PLAN FOR DETAILS

PROPOSED GRADING, PAVEMENT OR STRUCTURE WORK IN CONSTRUCTION STAGE 1 OR STAGE 2, SEE ROADWAY PLANS

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

PROPOSED SUBSTRUCTURES OF ADJACENT STRUCTURES ARE SHOWN FOR INFORMATION ONLY AND MAY NOT NECESSARILY BE CONSTRUCTED IN THE DEPICTED CONSTRUCTION STAGE. SEE CONSTRUCTION STAGING PLAN FOR EACH STRUCTURE FOR DETAILS AND STAGING INFORMATION.

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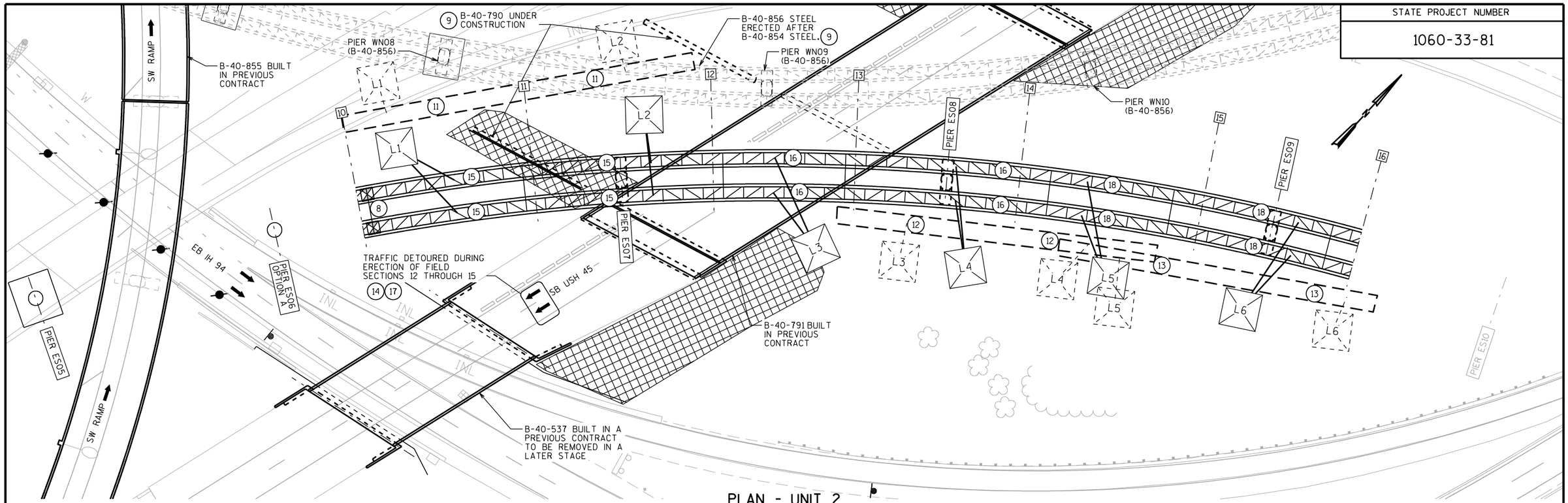
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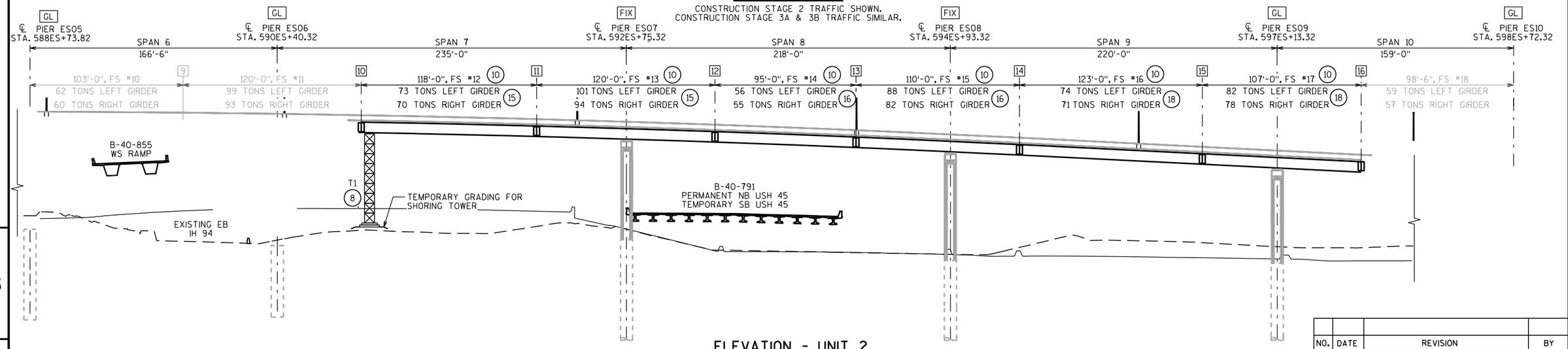
SHEET 24 OF 122

STATE PROJECT NUMBER
1060-33-81



PLAN - UNIT 2

CONSTRUCTION STAGE 2 TRAFFIC SHOWN.
CONSTRUCTION STAGE 3A & 3B TRAFFIC SIMILAR.



ELEVATION - UNIT 2

SPAN AND FIELD SECTION LENGTHS SHOWN ARE TAKEN ALONG THE REFERENCE LINE

LEGEND

- L1 — POTENTIAL CRANE LOCATION
- L1 — CRANE LOCATION IDENTIFIER
- POTENTIAL TEMPORARY SHORING TOWER
- T1 — SHORING TOWER IDENTIFIER
- (3) — CONSTRUCTION SEQUENCE NUMBER
- [1] — FIELD SPLICE NUMBER
- OUTLINE OF TRANSPORTED GIRDER
- CROSSHATCHED AREA INDICATES LOCATIONS WHERE CRANE PLACEMENT MAY BE DIFFICULT DUE TO GRADING

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

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.

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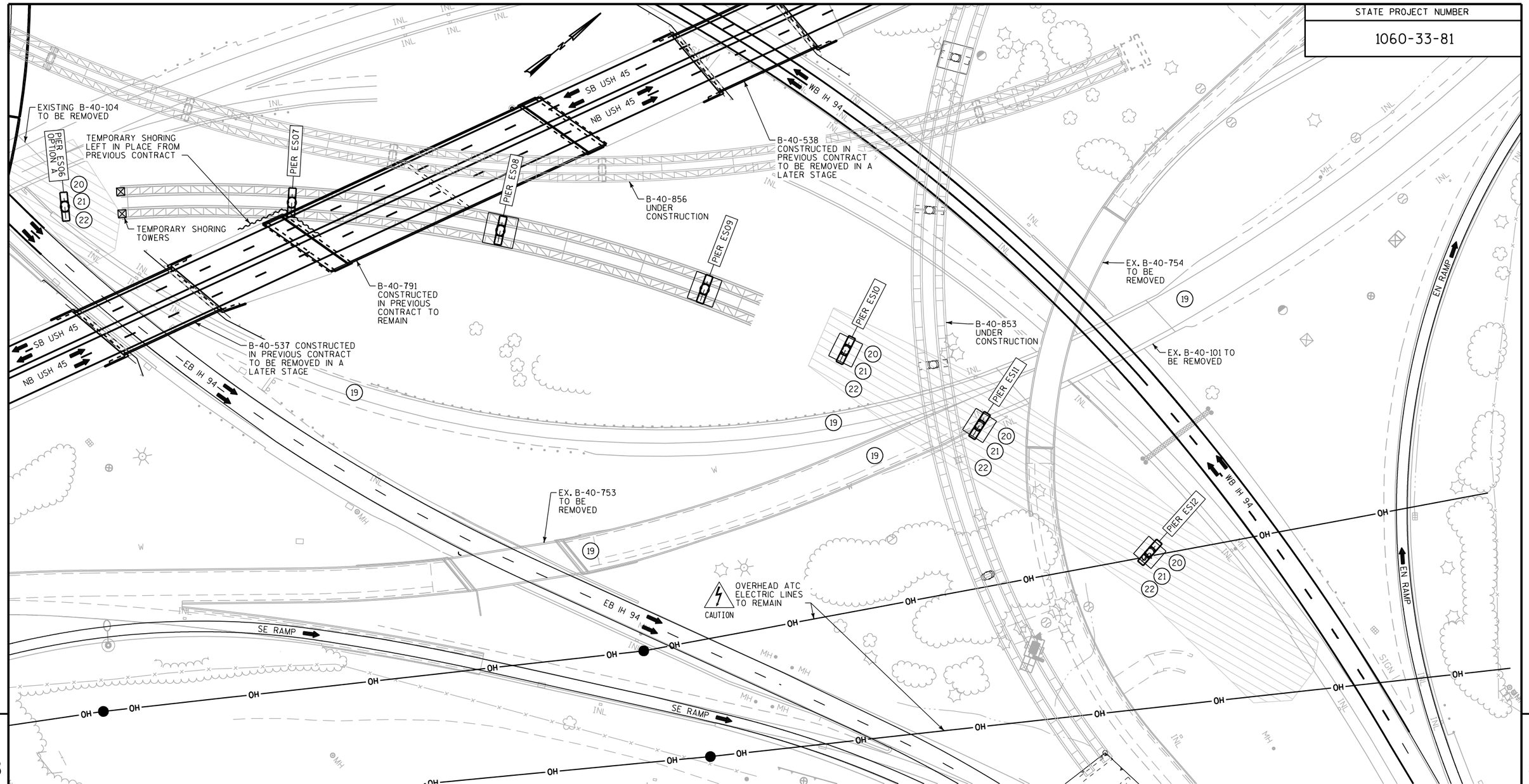
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SHEET 25 OF 122

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STATE PROJECT NUMBER
1060-33-81



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PLAN - PARTIAL UNIT 2 & UNIT 3

CONSTRUCTION STAGE 4A TRAFFIC SHOWN

LEGEND

(3) CONSTRUCTION SEQUENCE NUMBER

TEMPORARY SHORING, SEE EXCAVATION PLAN FOR DETAILS

PROPOSED GRADING, PAVEMENT OR STRUCTURE WORK IN CONSTRUCTION STAGE 4A, SEE ROADWAY PLANS

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

PROPOSED SUBSTRUCTURES OF ADJACENT STRUCTURES ARE SHOWN FOR INFORMATION ONLY AND MAY NOT NECESSARILY BE CONSTRUCTED IN THE DEPICTED CONSTRUCTION STAGE. SEE CONSTRUCTION STAGING PLAN FOR EACH STRUCTURE FOR DETAILS AND STAGING INFORMATION.

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STATE OF WISCONSIN
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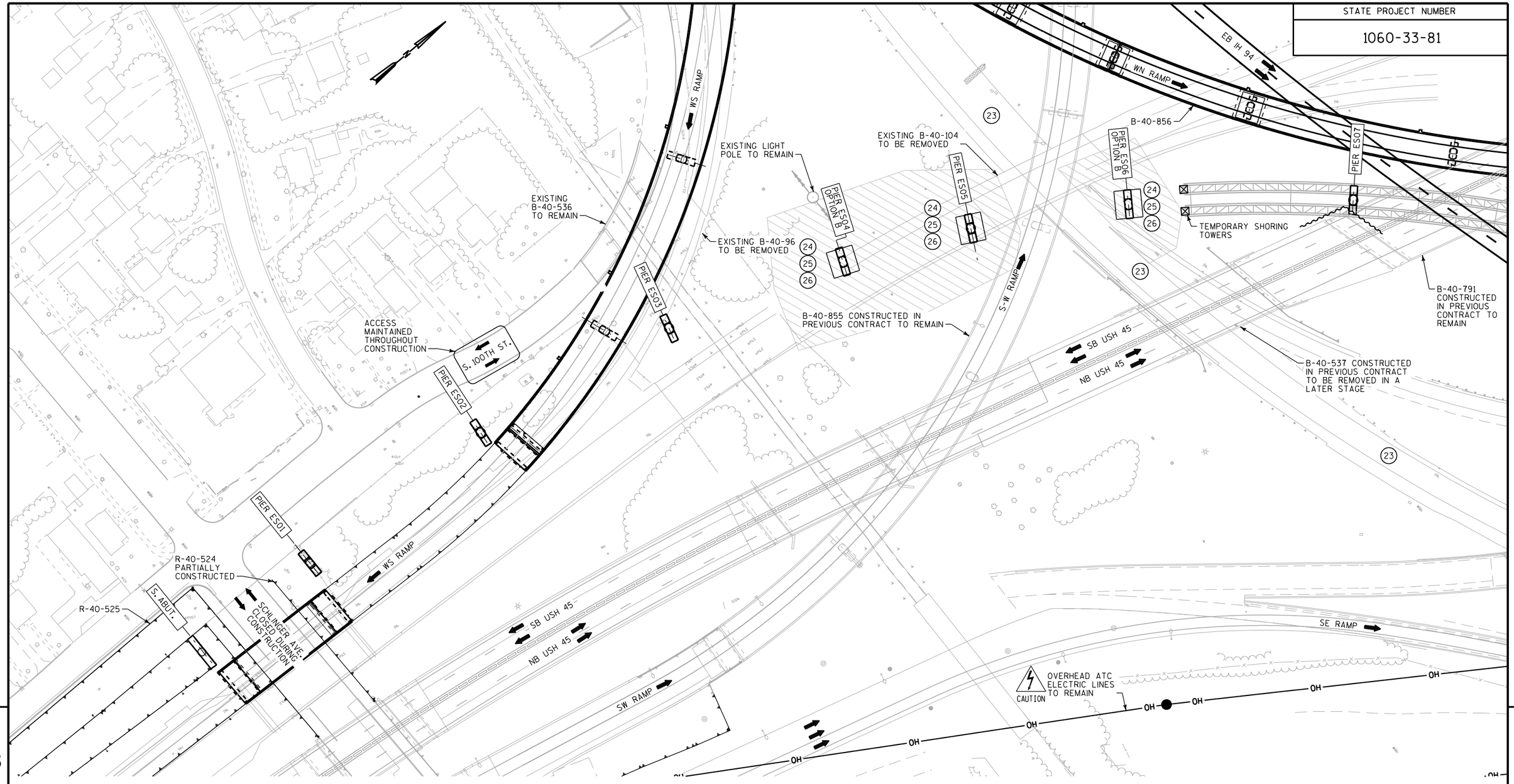
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CONSTRUCTION STAGING (4 OF 10)

SHEET 26 OF 122

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STATE PROJECT NUMBER
1060-33-81



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PLAN - UNIT 1 & PARTIAL UNIT 2

CONSTRUCTION STAGE 5A TRAFFIC SHOWN

LEGEND

- (3) CONSTRUCTION SEQUENCE NUMBER
- TEMPORARY SHORING, SEE EXCAVATION PLAN FOR DETAILS
- PROPOSED GRADING, PAVEMENT OR STRUCTURE WORK IN CONSTRUCTION STAGE 5A, SEE ROADWAY PLANS

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

PROPOSED SUBSTRUCTURES OF ADJACENT STRUCTURES ARE SHOWN FOR INFORMATION ONLY AND MAY NOT NECESSARILY BE CONSTRUCTED IN THE DEPICTED CONSTRUCTION STAGE. SEE CONSTRUCTION STAGING PLAN FOR EACH STRUCTURE FOR DETAILS AND STAGING INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

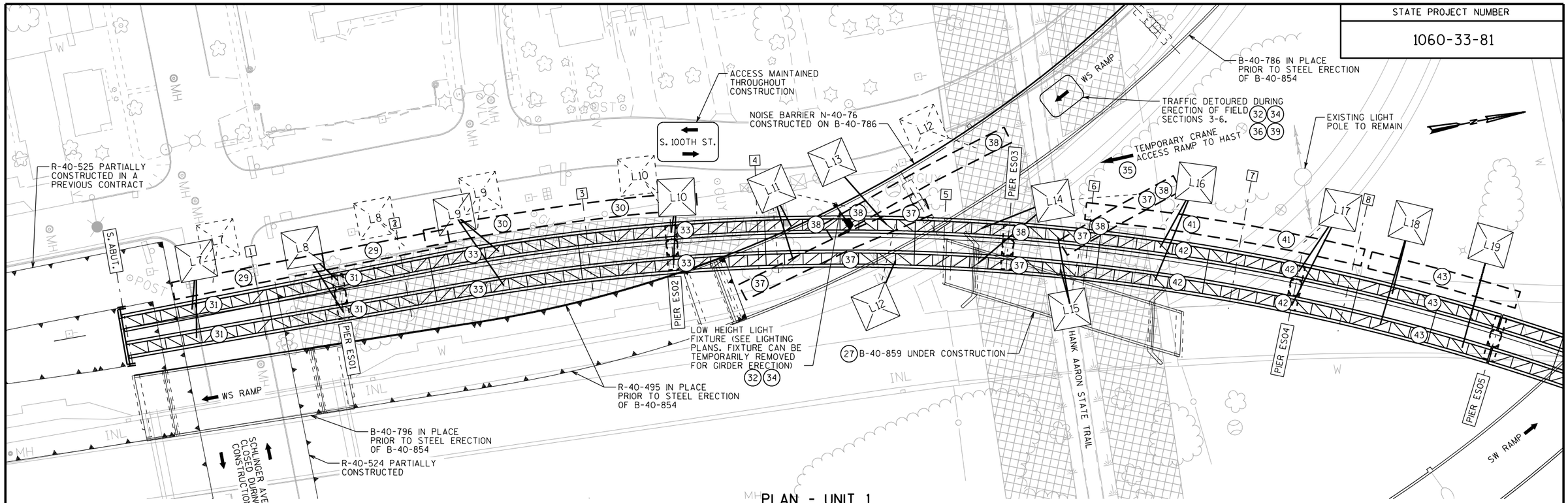
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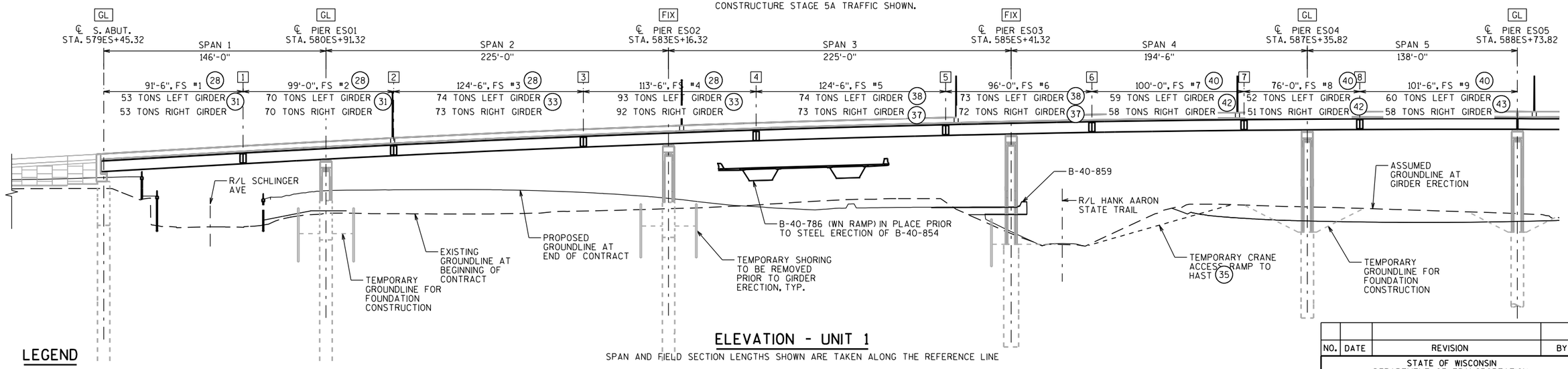
SHEET 27 OF 122

STATE PROJECT NUMBER
1060-33-81



PLAN - UNIT 1

CONSTRUCTURE STAGE 5A TRAFFIC SHOWN.



ELEVATION - UNIT 1

SPAN AND FIELD SECTION LENGTHS SHOWN ARE TAKEN ALONG THE REFERENCE LINE

LEGEND

- L1 — POTENTIAL CRANE LOCATION
- L1 — CRANE LOCATION IDENTIFIER
- POTENTIAL TEMPORARY SHORING TOWER
- T1 — SHORING TOWER IDENTIFIER
- (3) — CONSTRUCTION SEQUENCE NUMBER
- [1] — FIELD SPLICE NUMBER
- OUTLINE OF TRANSPORTED GIRDER
- CROSSHATCHED AREA INDICATES LOCATIONS WHERE CRANE PLACEMENT MAY BE DIFFICULT DUE TO GRADING

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

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.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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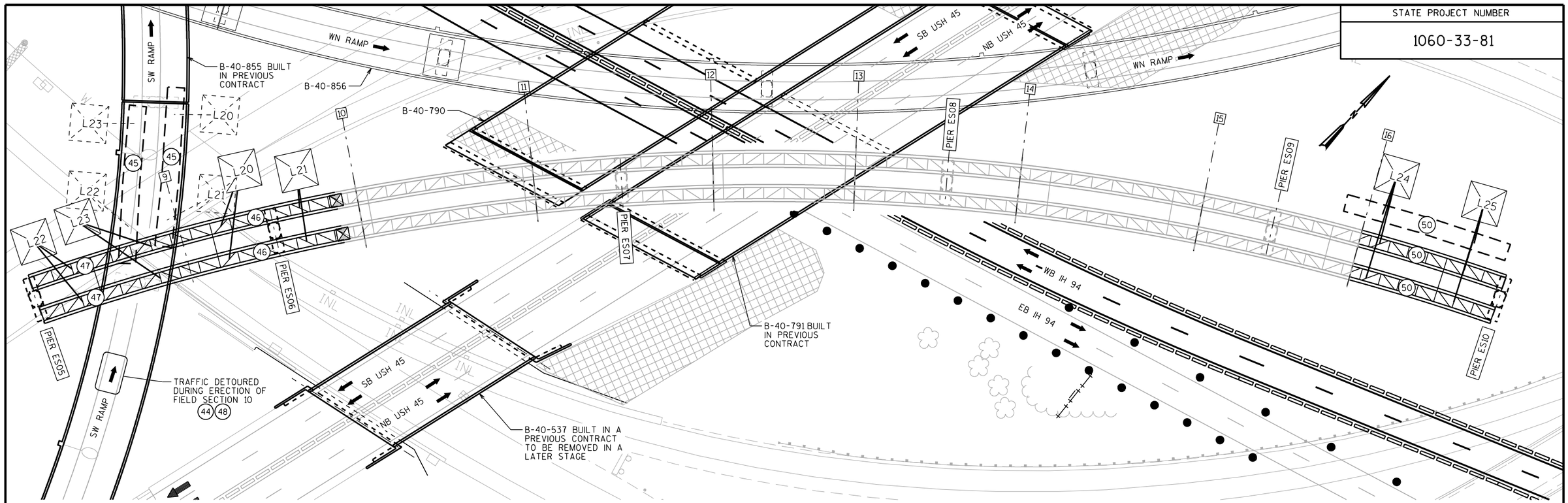
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SHEET 28 OF 122

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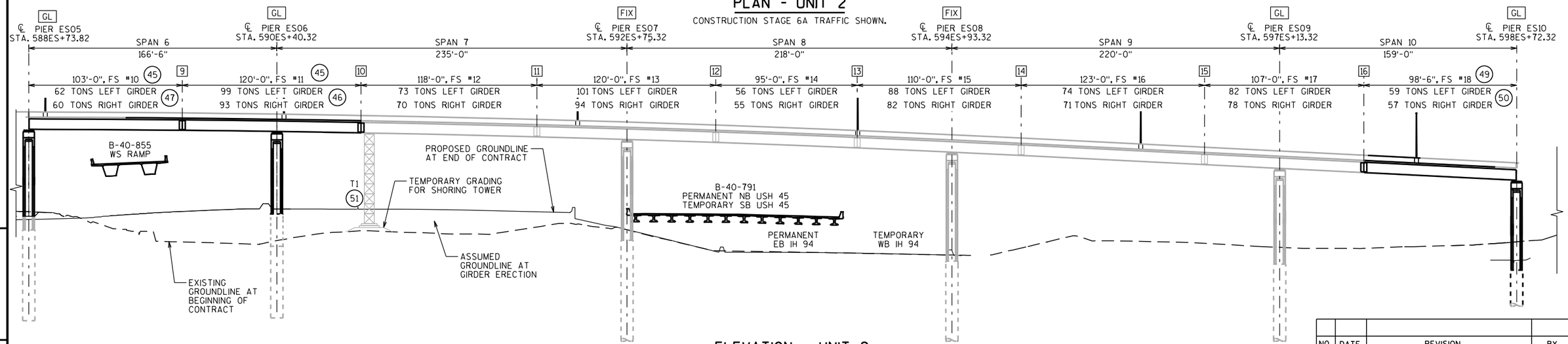
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STATE PROJECT NUMBER
1060-33-81



PLAN - UNIT 2

CONSTRUCTION STAGE 6A TRAFFIC SHOWN.



ELEVATION - UNIT 2

SPAN AND FIELD SECTION LENGTHS SHOWN ARE TAKEN ALONG THE REFERENCE LINE

LEGEND

- L1 — POTENTIAL CRANE LOCATION
- L1 — CRANE LOCATION IDENTIFIER
- POTENTIAL TEMPORARY SHORING TOWER
- T1 — SHORING TOWER IDENTIFIER
- (3) — CONSTRUCTION SEQUENCE NUMBER
- [1] — FIELD SPLICE NUMBER
- OUTLINE OF TRANSPORTED GIRDER
- CROSSHATCHED AREA INDICATES LOCATIONS WHERE CRANE PLACEMENT MAY BE DIFFICULT DUE TO GRADING

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

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.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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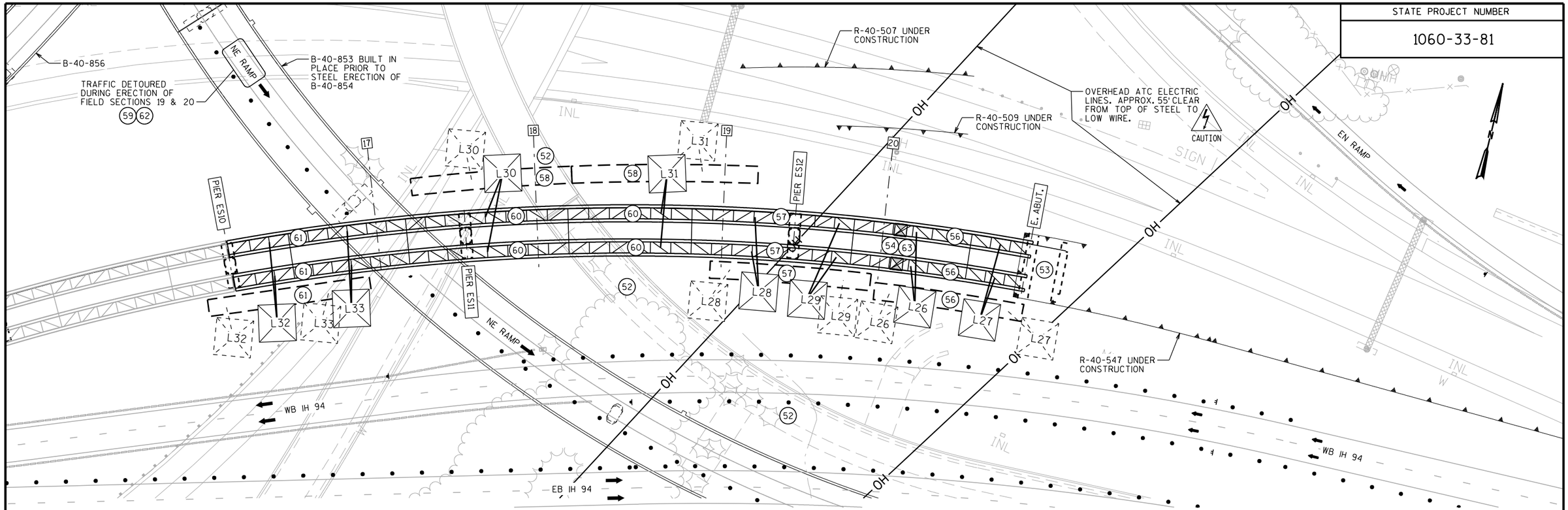
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SHEET 29 OF 122

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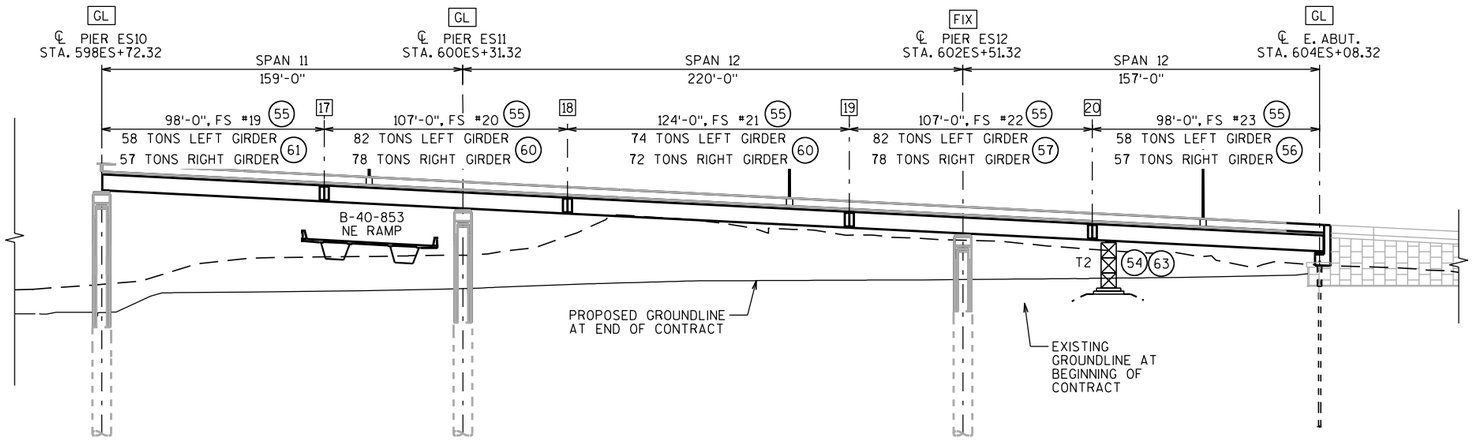
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STATE PROJECT NUMBER
1060-33-81



PLAN - UNIT 3

CONSTRUCTION STAGE 6B TRAFFIC SHOWN



ELEVATION - UNIT 3

SPAN AND FIELD SECTION LENGTHS SHOWN ARE TAKEN ALONG THE REFERENCE LINE

LEGEND

- L1 — POTENTIAL CRANE LOCATION
- L1 — CRANE LOCATION IDENTIFIER
- POTENTIAL TEMPORARY SHORING TOWER
- T1 — SHORING TOWER IDENTIFIER
- (3) — CONSTRUCTION SEQUENCE NUMBER
- [1] — FIELD SPLICE NUMBER
- OUTLINE OF TRANSPORTED GIRDER
- CROSSHATCHED AREA INDICATES LOCATIONS WHERE CRANE PLACEMENT MAY BE DIFFICULT DUE TO GRADING

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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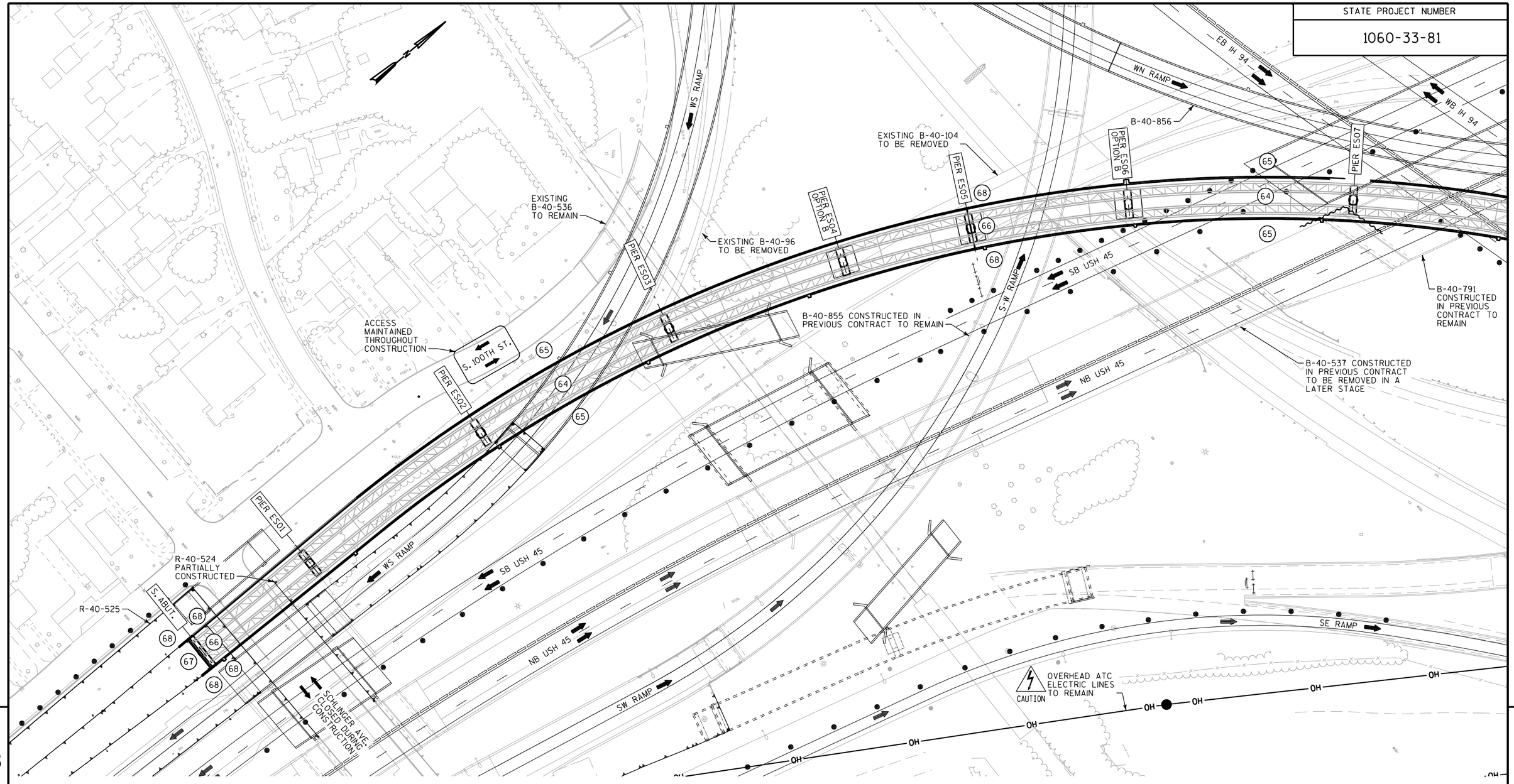
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SHEET 30 OF 122

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STATE PROJECT NUMBER
1060-33-81



8

8

PLAN - UNIT 1 & PARTIAL UNIT 2

CONSTRUCTION STAGE 7 TRAFFIC SHOWN

LEGEND

(3) CONSTRUCTION SEQUENCE NUMBER

TEMPORARY SHORING, SEE EXCAVATION PLAN FOR DETAILS

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY ENS | PLANS CK'D. JWC

CONSTRUCTION STAGING (9 OF 10)

SHEET 31 OF 122

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Mandatory\080217_cs.dgn PLOT DATE : 01-MAR-2015 18:57 PLOT BY : MSCKTM PLOT NAME : 080217_cs PLOT SCALE : 100:1

STATE PROJECT NUMBER

1060-33-81

EXISTING B-40-104 TO BE REMOVED

PIER ES06 OPTION A

TEMPORARY SHORING LEFT IN PLACE FROM PREVIOUS CONTRACT

PIER ES07

PIER ES08

PIER ES09

PIER ES10

PIER ES11

PIER ES12

SB USH 45

NB USH 45

WN RAMP

B-40-538 CONSTRUCTED IN PREVIOUS CONTRACT TO BE REMOVED IN A LATER STAGE

B-40-791 CONSTRUCTED IN PREVIOUS CONTRACT TO REMAIN

EB IH 94

WB IH 94

B-40-537 CONSTRUCTED IN PREVIOUS CONTRACT TO BE REMOVED IN A LATER STAGE

NE RAMP

B-40-853 UNDER CONSTRUCTION

EX. B-40-754 TO BE REMOVED

EX. B-40-101 TO BE REMOVED

EN RAMP

EX. B-40-753 TO BE REMOVED

OVERHEAD ATC ELECTRIC LINES TO REMAIN

CAUTION

SE RAMP

E. ABUT.

R-40-547

OH

INL

MH

SIGN

PLAN - PARTIAL UNIT 2 & UNIT 3

CONSTRUCTION STAGE 7 TRAFFIC SHOWN

LEGEND

(3) CONSTRUCTION SEQUENCE NUMBER

TEMPORARY SHORING, SEE EXCAVATION PLAN FOR DETAILS

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY ENS | PLANS CK'D. JWC

CONSTRUCTION STAGING (10 OF 10)

SHEET 32 OF 122

8

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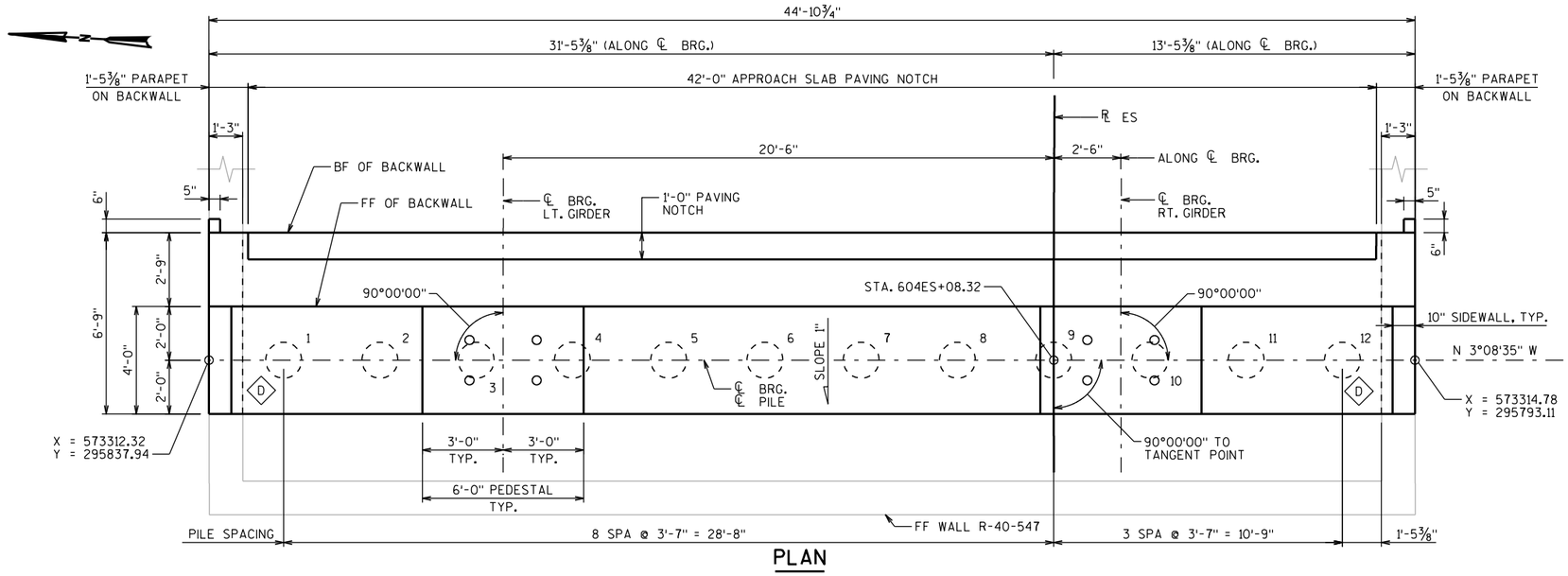
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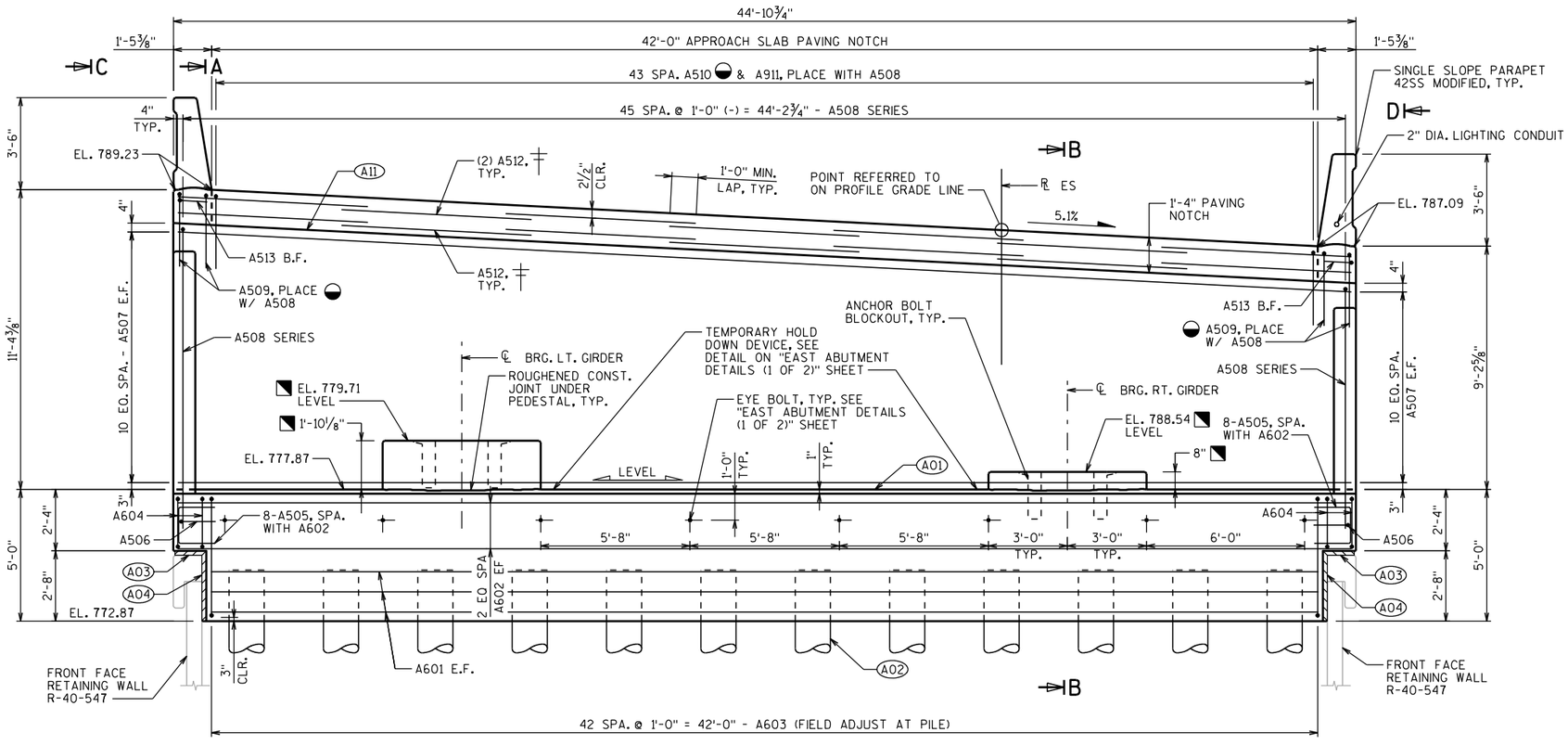
PLOT NAME : 080218_cs

PLOT SCALE : 100:1

STATE PROJECT NUMBER
1060-33-81



PLAN



ELEVATION

LOOKING EAST - DOWNSTATION
ALL DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG FRONT FACE OF BACKWALL
REINFORCEMENT IN PEDESTALS NOT SHOWN FOR CLARITY, SEE "EAST ABUTMENT PEDESTAL DETAILS" SHEET.

LEGEND

- (A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 6" KEYWAY AT BASE OF BACKWALL.
- (A02) ABUTMENT SUPPORTED ON 16" DIA CIP PILING WITH A REQUIRED DRIVING RESISTANCE OF 246 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

  ESTIMATED PILE LENGTH = 50'.
- (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 ABUTMENT. 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"
- (D) DYNAMIC PILE LOAD TESTING
- ANCHOR REBAR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD SPEC FOR MASONRY ANCHOR TYPE S WITH A MIN. PULLOUT CAPACITY OF 20 KIPS AND EMBEDMENT OF 1'-0"
- 8'-0" LONG BAR WITH 1'-0" MIN LAP, CUT IN FIELD TO CLEAR JOINT SUPPORT SYSTEM AS REQUIRED.

NOTES

1. FOR SECTIONS A-A & B-B SEE "EAST ABUTMENT DETAILS (1 OF 2)" SHEET.
2. FOR SECTIONS C-C & D-D, SEE "EAST ABUTMENT DETAILS (2 OF 2)" SHEET.
3. FOR DETAILS OF PEDESTALS, SEE "EAST ABUTMENT PEDESTAL DETAILS" SHEET.
4. FOR DETAILS OF BEARINGS, SEE "BEARING DETAILS" SHEET.
5. FOR DETAILS FOR ANCHOR BOLT BLOCKOUTS, SEE "EAST ABUTMENT PEDESTAL DETAILS" SHEET.
6. FOR DETAILS OF EXPANSION JT, SEE "ABUTMENT MODULAR EXPANSION JOINT LAYOUT" SHEET.
7. FOR DETAILS OF PARAPET ON BACKWALL, SEE PARAPET SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

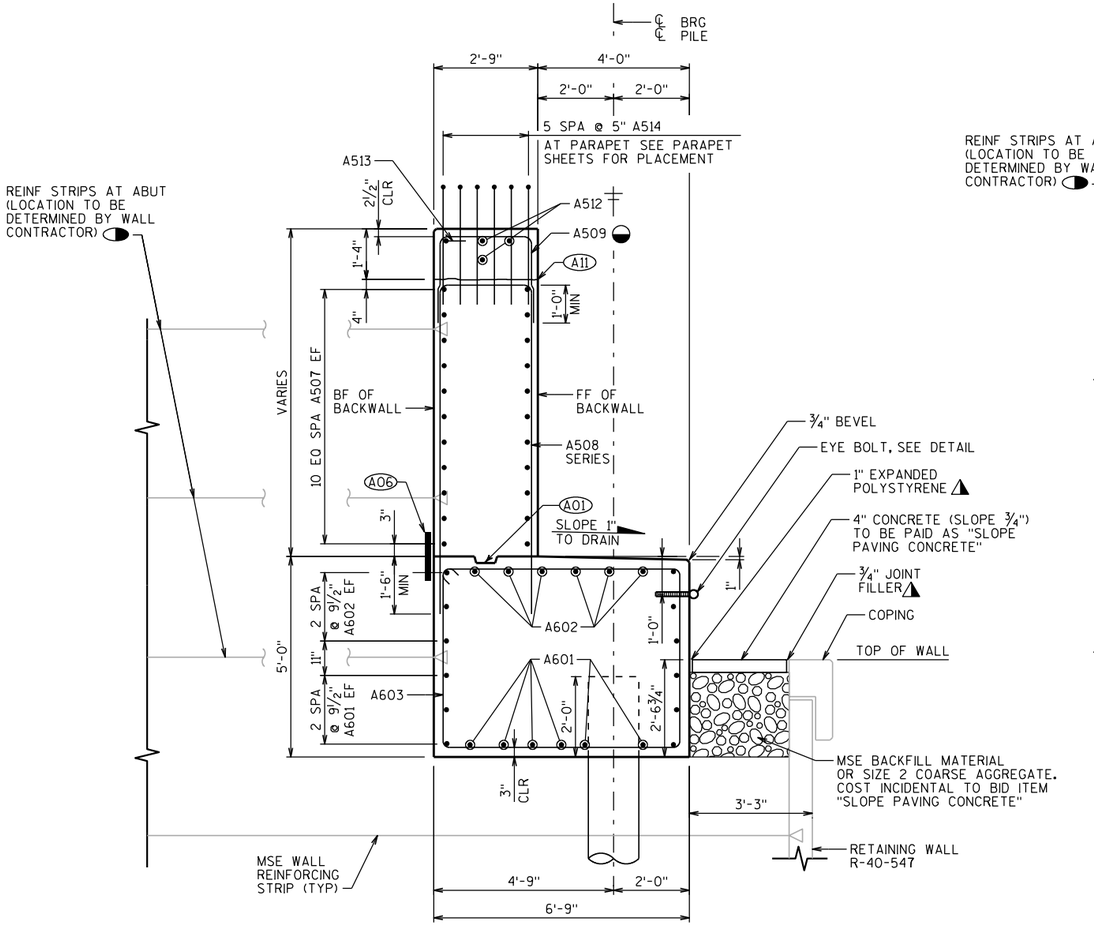
EAST ABUTMENT PLAN & ELEVATION

SHEET 33 OF 122

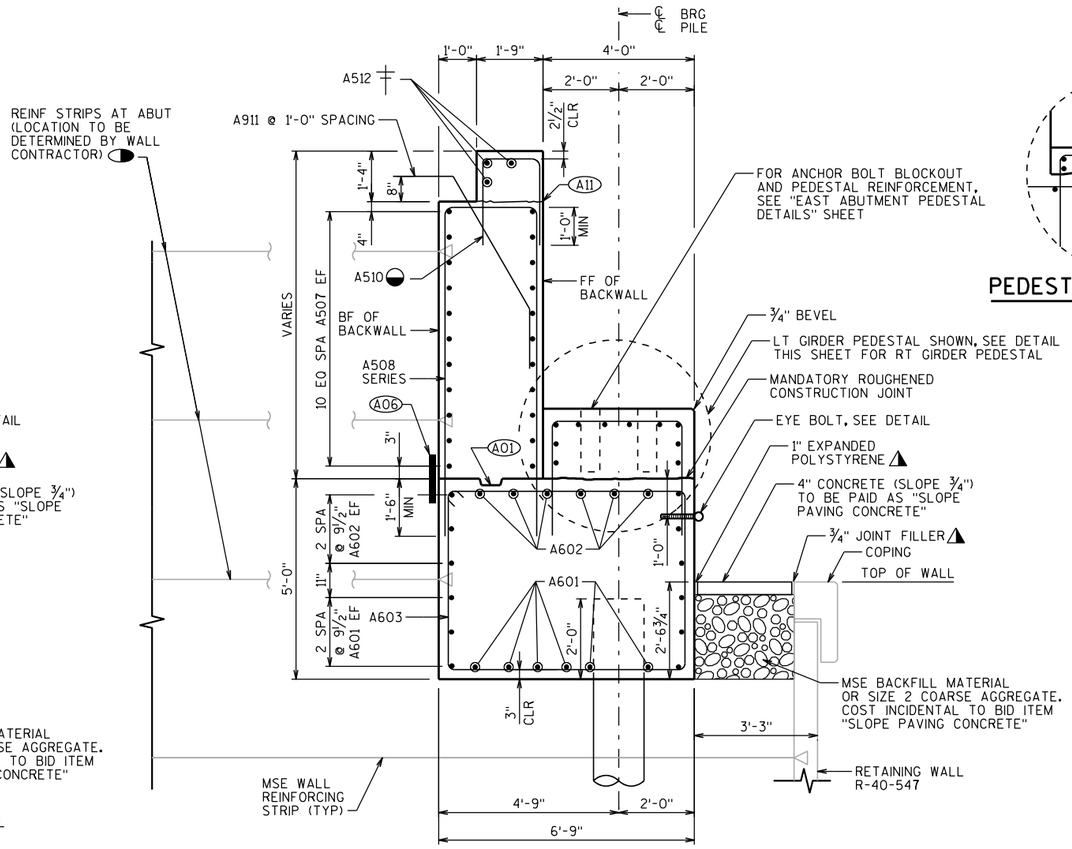
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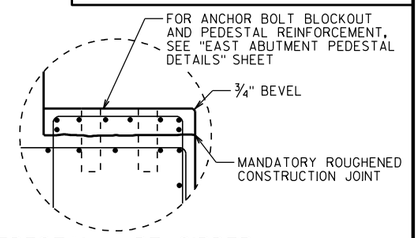
STATE PROJECT NUMBER
1060-33-81



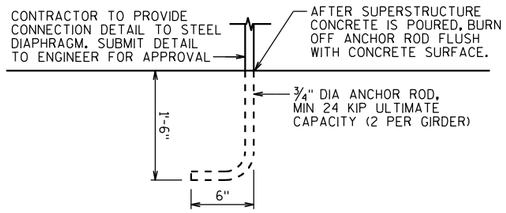
SECTION A-A



SECTION B-B



PEDESTAL - RT GIRDER

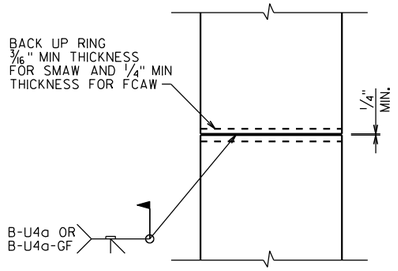


TEMPORARY HOLD DOWN DEVICE

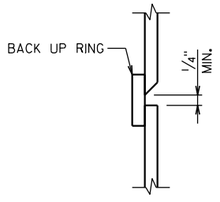
LOCATE WITHIN 1'-6" OF GIRDER BOTTOM FLANGE.
PAYMENT IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES"

LEGEND

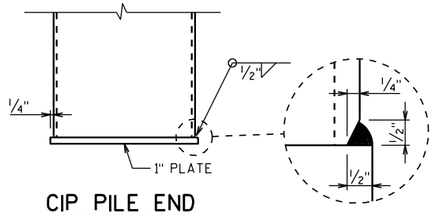
- (A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X6"
- (A06) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.
- (A11) CONST JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- REINFORCING STRIPS SHALL BE DESIGNED TO RESIST AN UNFACTORED SUPERSTRUCTURE LATERAL LINE LOAD OF 2.4 K/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 ⅛" BELOW SURFACE OF CONCRETE).
- ANCHOR REBAR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD SPEC FOR MASONRY ANCHOR TYPE S WITH A MIN PULLOUT CAPACITY OF 20 KIPS AND EMBEDMENT OF 1'-0".
- 8'-0" LONG BAR WITH 1'-0" MIN LAP. CUT IN FIELD TO CLEAR JOINT SUPPORT SYSTEM AS REQUIRED.



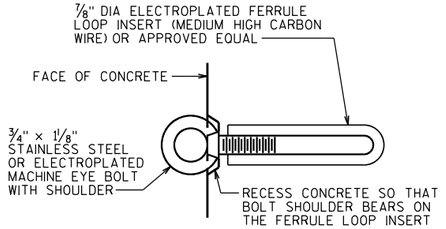
CIP PILE SPLICE DETAIL



CIP PILE WELD DETAIL



CIP PILE END PLATE DETAIL



EYE BOLT 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

EAST ABUTMENT DETAILS (1 OF 2)

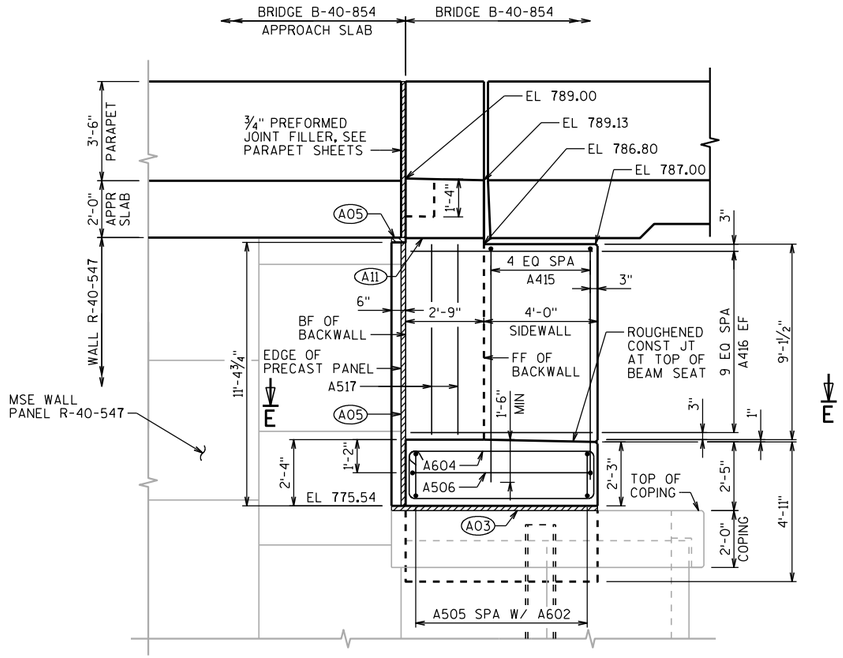
SHEET 34 OF 122

8

8

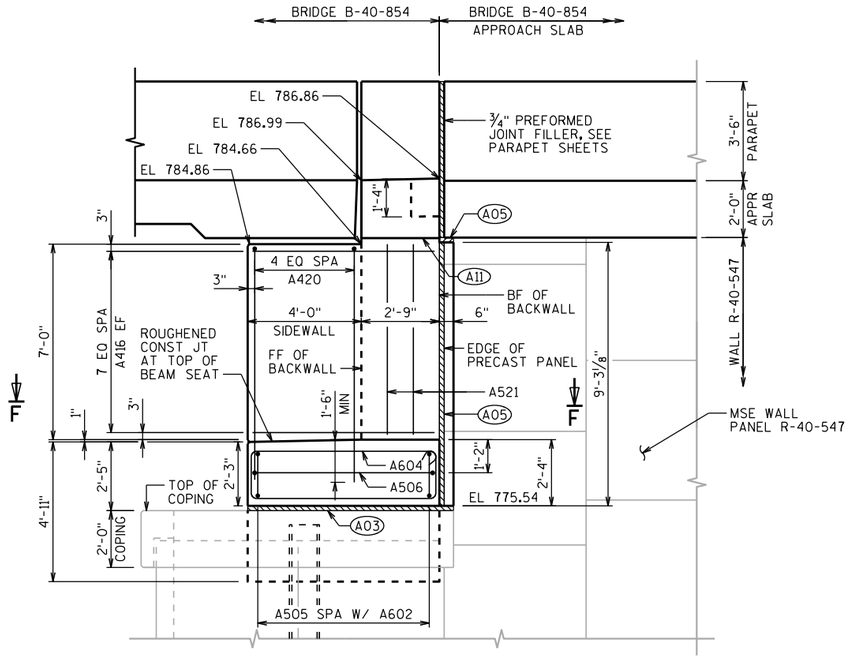
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STATE PROJECT NUMBER
1060-33-81



SECTION C-C

(LOOKING SOUTH)



SECTION D-D

(LOOKING NORTH)

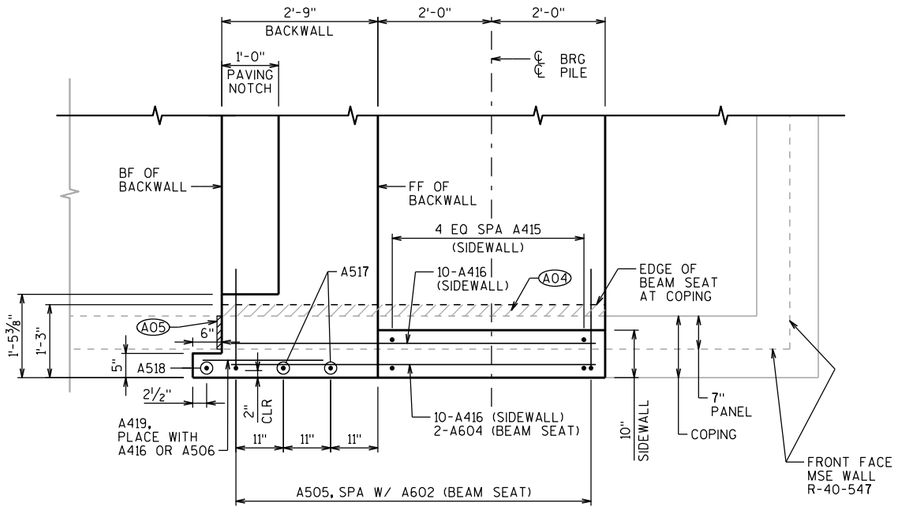
LEGEND

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

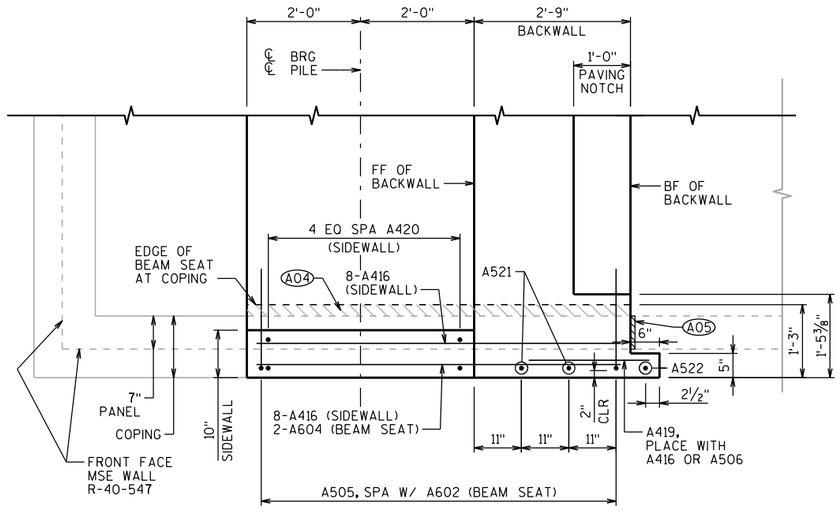
(A04) PREFORMED JOINT FILLER (2"± BASED ON A 7" MSE WALL PANEL THICKNESS) WITH NON-BITUMINOUS JOINT SEALER PLACED BETWEEN COPING/PRECAST PANEL AND EDGE OF BEAM SEAT. COLOR TO MATCH CONCRETE STAIN.

(A05) 3/4" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACKFACE OF BACK WALL AND WALL R-40-547. COLOR TO MATCH CONCRETE STAIN.

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



SECTION E-E



SECTION F-F

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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EAST ABUTMENT DETAILS (2 OF 2)

SHEET 35 OF 122

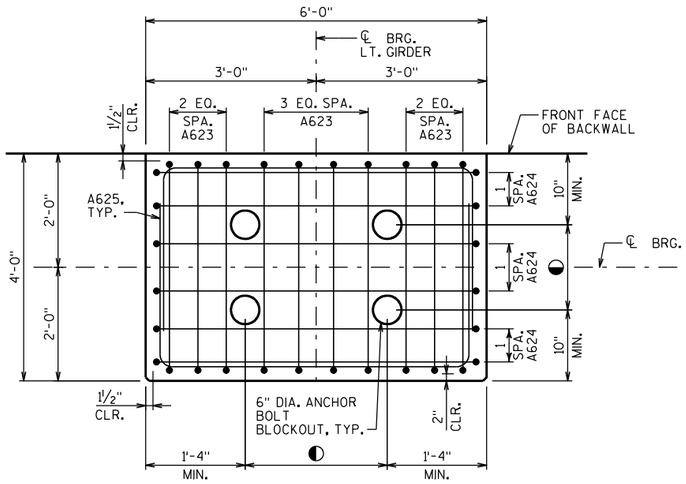
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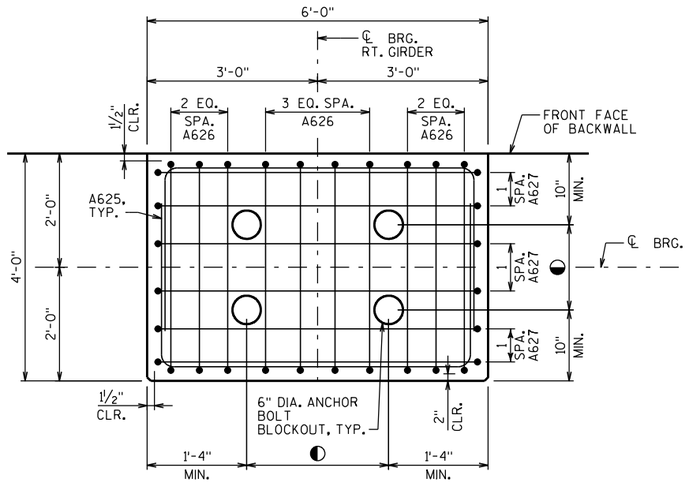
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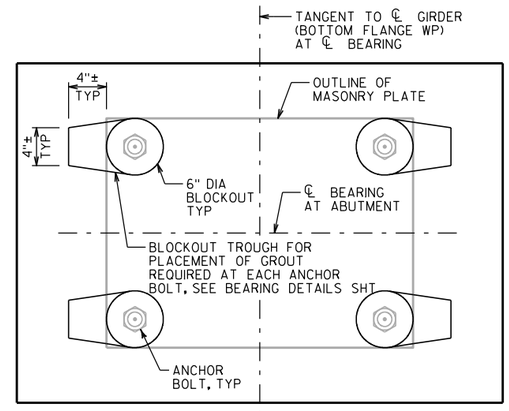
STATE PROJECT NUMBER
1060-33-81



PEDESTAL PLAN - LEFT GIRDER

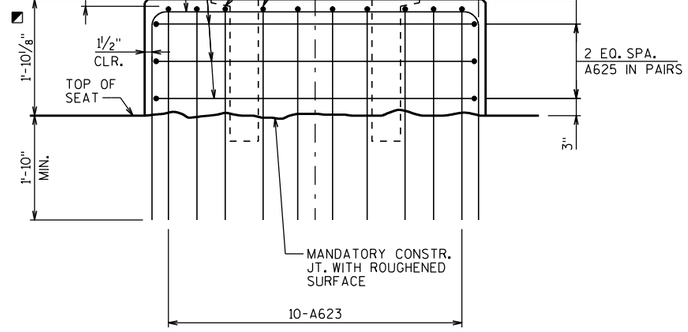


PEDESTAL PLAN - RIGHT GIRDER

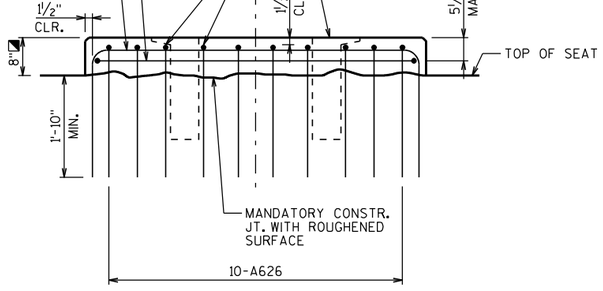


PEDESTAL PLAN - GROUT TROUGHS

SEE BEARING DETAILS SHEET



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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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EAST ABUTMENT PEDESTAL DETAILS

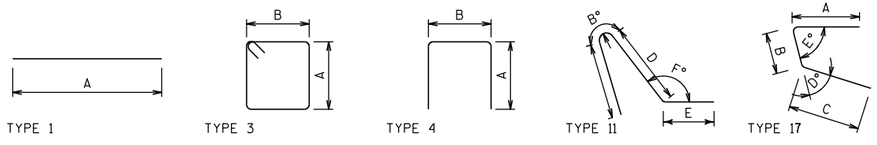
SHEET 36 OF 122

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PLOT DATE : 01-MAR-2015 18:57
PLOT BY : MSCKTM
PLOT NAME : 080304_ab
PLOT SCALE : 2.666667:1

STATE PROJECT NUMBER
1060-33-81

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
A601	E	12	42'-0"			1	42'-0"						BODY - HORIZ.					
A602	E	12	44'-6"			1	44'-6"						BODY - HORIZ.					
A603	E	43	22'-10"	X		3	4'-7"	6'-5"					BODY - STIRRUP					
A604	E	4	17'-8"	X		3	2'-0"	6'-5"					BODY - STIRRUP					
A505	E	16	4'-11"	X		4	1'-9"	1'-8"					BODY - HORIZ.					
A506	E	2	9'-8"	X		4	1'-10"	6'-3"					BODY - HORIZ.					
A507	E	22	44'-6"			1	44'-6"						BACKWALL - HORIZ.					
A508	E	46	22'-10"	X	⚠	4	10'-4"	2'-5"					BACKWALL - VERT.	A	9'-3"	11'-5"	1 SERIES OF 46	20'-8" TO 25'-0"
A509	S	4	6'-10"	X		4	2'-4"	2'-5"					BACKWALL - VERT.					
A510	S	44	5'-8"	X		4	2'-4"	1'-3"					BACKWALL - VERT.					
A911	S	44	7'-0"	X		17	1'-7"	4'-1"	1'-7"	60	150		BACKWALL - APPROACH TIE					
A512	S	21	8'-0"			1	8'-0"						BACKWALL - HORIZ.					
A513	S	2	2'-2"	X		4	0'-8"	1'-1"					BACKWALL - HORIZ.					
A514	S	12	6'-10"	X		11	2'-10"	172	0'-4½"	0'-10"	2'-0"	188	PARAPET TIE					
A415	E	5	21'-4"	X		4	10'-6"	0'-6"					SIDEWALL - VERT.					
A416	E	36	6'-5"			1	6'-5"						SIDEWALL - HORIZ.					
A517	E	2	8'-9"			1	8'-9"						SIDEWALL - VERT.					
A518	E	1	11'-0"			1	11'-0"						SIDEWALL - VERT.					
A419	E	20	2'-5"			1	2'-5"						SIDEWALL - HORIZ.					
A420	E	5	16'-10"	X		4	8'-4"	0'-6"					SIDEWALL - VERT.					
A521	E	2	6'-9"			1	6'-9"						SIDEWALL - VERT.					
A522	E	1	8'-11"			1	8'-11"						SIDEWALL - VERT.					
A623	E	10	10'-7"	X		4	3'-7"	3'-9"					LEFT PEDESTAL					
A624	E	6	12'-5"	X		4	3'-6"	5'-9"					LEFT PEDESTAL					
A625	E	8	11'-1"	X		4	2'-11"	5'-7"					LEFT AND RIGHT PEDESTAL					
A626	E	10	8'-3"	X		4	2'-5"	3'-9"					RIGHT PEDESTAL					
A627	E	6	10'-1"	X		4	2'-4"	5'-9"					RIGHT PEDESTAL					



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
E - STEEL, HIGH STRENGTH, EPOXY COATED.
S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-854

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EAST ABUTMENT REINFORCEMENT SCHEDULE

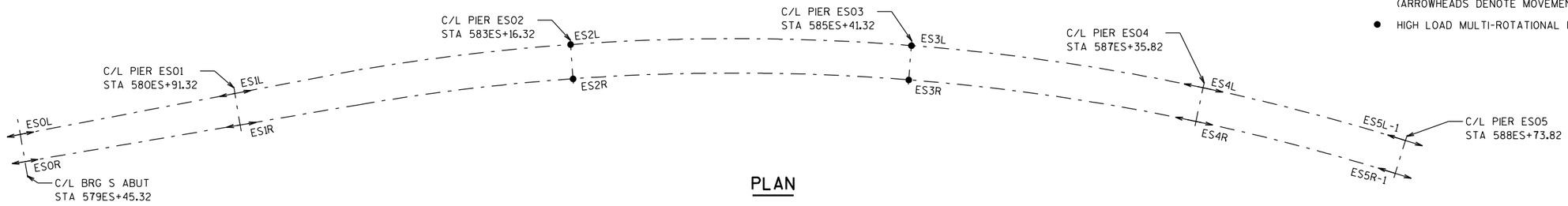
SHEET 37 OF 122

STATE PROJECT NUMBER
1060-33-81

BEARING LEGEND

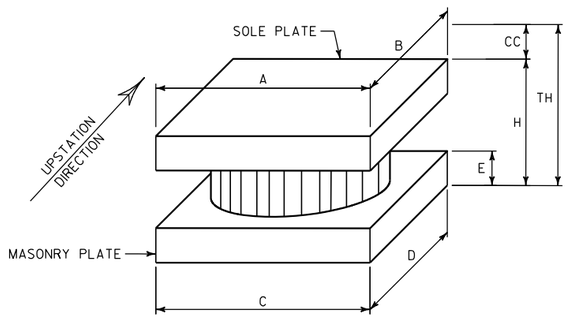
HIGH LOAD MULTI-ROTATIONAL GUIDED (ARROWHEADS DENOTE MOVEMENT DIRECTIONS)

HIGH LOAD MULTI-ROTATIONAL FIXED

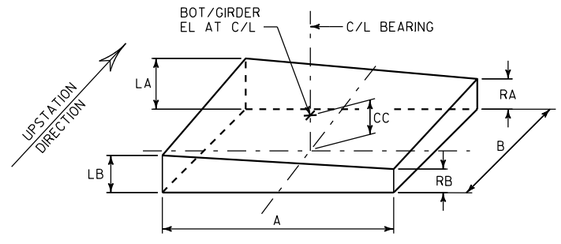


PLAN

BEARING MARK	BEARING TYPE	SKEW ANGLE 'SK'	BOT./ GIRDER EL. AT C/L	TOP OF PEDESTAL EL.	VERTICAL FORCES			TRANSVERSE FORCES		LONGITUDINAL FORCES		MOVEMENT 90° (ONE WAY)		ROTATIONS	NOMINAL BEARING DIMENSIONS												ANCHOR BOLTS
					SERVICE		STRENGTH								BEVELED TOP PLATE THICKNESS					TOP PLATE & SOLE PLATE		MASONRY PLATE			BEARING ASSEMBLY		
					PERMANENT (KIPS)	TOTAL (KIPS)	TOTAL (KIPS)	SERVICE (KIPS)	STRENGTH (KIPS)	SERVICE (KIPS)	STRENGTH (KIPS)	TRANS (IN)	LONGIT (IN)	STRENGTH RADIANS	LB (IN)	RB (IN)	LA (IN)	RA (IN)	CC (IN)	A (IN)	B (IN)	C (IN)	D (IN)	E (IN)	H (IN)	TH (IN)	
ES0L	GUIDED	1°09'06"	813.24	812.18	310	710	930	40	50	30	30	---	4⅝"	0.005	1.720	1.000	3.076	2.356	2.038	36	32	44	40	1¼"	6¾"	8 13/16 "	4 - 1" DIA.
ES0R		0°	812.87	811.81	310	710	930	40	50	30	30	---	4⅝"	0.005	1.720	1.000	3.076	2.356	2.038	36	32	44	40	1¼"	6¾"	8 13/16 "	4 - 1" DIA.
ES1L	GUIDED	1°09'06"	820.97	820.39	1220	1970	2560	60	110	130	130	---	3⅜"	0.014	1.840	1.000	3.109	2.269	2.054	42	38	50	46	1¼"	8⅜"	10 7/16 "	4 - 1½" DIA.
ES1R		0°	820.54	819.96	1220	1970	2560	60	110	130	130	---	3⅜"	0.014	1.840	1.000	3.109	2.269	2.054	42	38	50	46	1¼"	8⅜"	10 7/16 "	4 - 1½" DIA.
ES2L	FIXED	N/A	832.09	831.16	1460	2270	2940	90	180	160	190	---	---	0.017	3.244	1.000	4.129	1.885	2.565	44	40	52	48	1¼"	9⅛"	11 11/16 "	6 - 1½" DIA.
ES2R			830.92	829.99	1460	2270	2940	90	180	160	190	---	---	0.017	3.244	1.000	4.129	1.885	2.565	44	40	52	48	1¼"	9⅛"	11 11/16 "	6 - 1½" DIA.
ES3L	FIXED	0°	838.27	837.66	1260	2040	2640	70	120	100	110	---	---	0.015	3.142	1.000	3.644	1.502	2.322	42	38	50	46	1¼"	9⅛"	11 7/16 "	4 - 1½" DIA.
ES3R			837.10	836.49	1260	2040	2640	70	120	100	110	---	---	0.015	3.142	1.000	3.644	1.502	2.322	42	38	50	46	1¼"	9⅛"	11 7/16 "	4 - 1½" DIA.
ES4L	GUIDED	0°	840.94	840.39	1060	1770	2290	80	140	110	110	---	4⅜"	0.013	3.142	1.000	3.312	1.170	2.156	42	38	50	46	1¼"	8¼"	10 3/8 "	4 - 1½" DIA.
ES4R			839.76	839.21	1060	1770	2290	80	140	110	110	---	4⅜"	0.013	3.142	1.000	3.312	1.170	2.156	42	38	50	46	1¼"	8¼"	10 3/8 "	4 - 1½" DIA.
ES5L-1	GUIDED	0°04'33"	841.64	840.69	300	640	840	50	70	30	30	---	5½"	0.005	2.897	1.061	2.836	1.000	1.949	36	32	44	40	1¼"	6¾"	8 11/16 "	4 - 1" DIA.
ES5R-1		0°04'37"	840.46	839.52	300	640	840	50	70	30	30	---	5½"	0.005	2.897	1.061	2.836	1.000	1.949	36	32	44	40	1¼"	6¾"	8 11/16 "	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

1. FOR TYPICAL BEARING DETAILS, SEE BEARING DETAILS SHEET.
2. 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.
3. FORCES SPECIFIED ARE MAXIMUM EFFECTS FOR LRFD LOAD COMBINATIONS, INCLUDING DYNAMIC LOAD ALLOWANCE.
4. 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.
5. DESIGN BEARINGS FOR THE ROTATION VALUES SHOWN IN THE TABLE OR 0.02 RADIANS, WHICHEVER IS LARGER.

   ROTATION VALUES IN THE TABLE INCLUDE AN ALLOWANCE OF 0.005 RADIANS FOR UNCERTANTIES.

   FOR POT BEARINGS, INCREASE THE ROTATIONAL DEMAND BY AN ADDITIONAL 0.005 RADIANS TO ACCOUNT FOR CONSTRUCTION TOLERANCES.
6. 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-40-854

DRAWN BY SR | PLANS CK'D. JWC

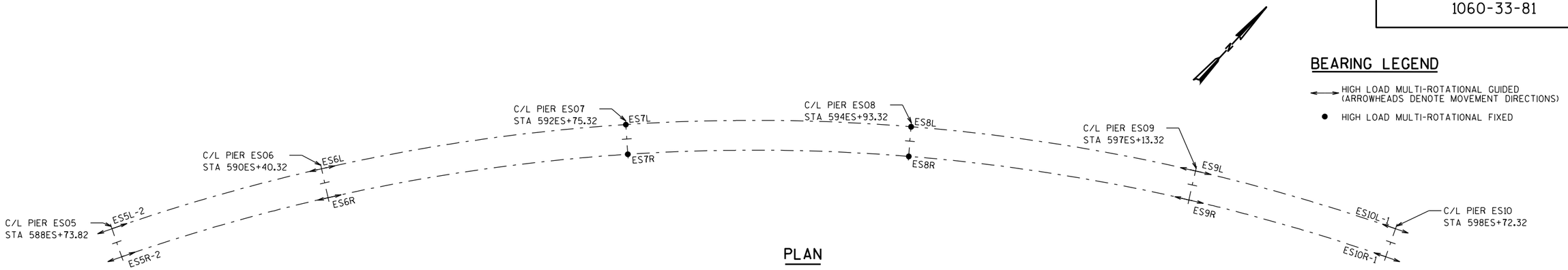
UNIT 1
BEARING
LAYOUT

SHEET 38 OF 122

8

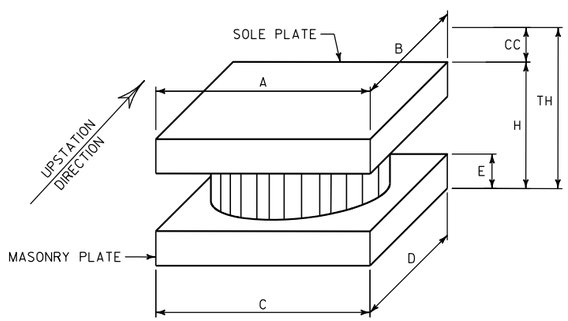
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STATE PROJECT NUMBER
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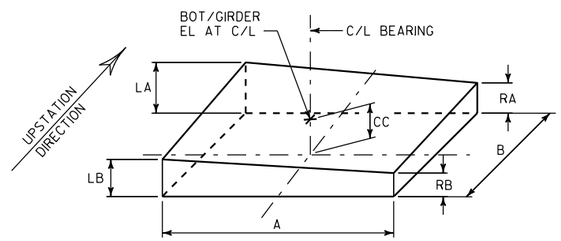


PLAN

BEARING MARK	BEARING TYPE	SKEW ANGLE 'SK'	BOT./ GIRDER EL. AT C/L	TOP OF PEDESTAL EL.	VERTICAL FORCES			TRANSVERSE FORCES		LONGITUDINAL FORCES		MOVEMENT 90° (ONE WAY)		ROTATIONS	NOMINAL BEARING DIMENSIONS													ANCHOR BOLTS
					SERVICE		STRENGTH								BEVELED TOP PLATE THICKNESS					TOP PLATE & SOLE PLATE		MASONRY PLATE			BEARING ASSEMBLY		
					PERMANENT	TOTAL	TOTAL	SERVICE	STRENGTH	SERVICE	STRENGTH	TRANS	LONGIT	STRENGTH	LB	RB	LA	RA	CC	A	B	C	D	E	H	TH	
					(KIPS)	(KIPS)	(KIPS)	(KIPS)	(KIPS)	(KIPS)	(KIPS)	(IN)	(IN)	RADIANS	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	
ES5L-2	GUIDED	-0°04'33"	841.63	840.68	340	720	950	50	70	40	40	---	6"	0.005	2.904	1.068	2.836	1.000	1.952	36	32	44	40	1¼"	6¾"	8¹¹⁄₁₆ "	4 - 1" DIA.
ES5R-2		-0°04'37"	840.46	839.51	340	720	950	50	70	40	40	---	6"	0.005	2.904	1.068	2.836	1.000	1.952	36	32	44	40	1¼"	6¾"	8¹¹⁄₁₆ "	4 - 1" DIA.
ES6L	GUIDED	0°	839.76	839.25	1400	2180	2830	90	170	140	140	---	4½"	0.016	3.491	1.349	3.142	1.000	2.245	42	38	50	46	1¼"	9⅛"	11⅜"	6 - 1½" DIA.
ES6R			838.59	838.08	1400	2180	2830	90	170	140	140	---	4½"	0.016	3.491	1.349	3.142	1.000	2.245	42	38	50	46	1¼"	9⅛"	11⅜"	6 - 1½" DIA.
ES7L	FIXED	N/A	834.72	833.88	1420	2220	2880	80	150	110	120	---	---	0.016	3.993	1.749	3.244	1.000	2.496	44	40	52	48	1¼"	9⅛"	11⅝"	6 - 1½" DIA.
ES7R			833.55	832.71	1420	2220	2880	80	150	110	120	---	---	0.016	3.993	1.749	3.244	1.000	2.496	44	40	52	48	1¼"	9⅛"	11⅝"	6 - 1½" DIA.
ES8L	FIXED	N/A	826.41	825.39	1310	2100	2730	90	170	130	150	---	---	0.015	4.262	2.120	3.142	1.000	2.631	42	38	50	46	1¼"	9⅛"	11¾"	6 - 1½" DIA.
ES8R			825.24	824.22	1310	2100	2730	90	170	130	150	---	---	0.015	4.262	2.120	3.142	1.000	2.631	42	38	50	46	1¼"	9⅛"	11¾"	6 - 1½" DIA.
ES9L	GUIDED	0°	814.54	814.47	1280	2040	2640	90	150	130	130	---	4⅝"	0.015	4.342	2.200	3.142	1.000	2.671	42	38	50	46	1¼"	8⅜"	11¹⁄₁₆ "	4 - 1½" DIA.
ES9R			813.37	813.30	1280	2040	2640	90	150	130	130	---	4⅝"	0.015	4.342	2.200	3.142	1.000	2.671	42	38	50	46	1¼"	8⅜"	11¹⁄₁₆ "	4 - 1½" DIA.
ES10L-1	GUIDED	0°04'33"	806.99	806.62	330	700	920	60	80	40	40	---	5⅞"	0.005	4.036	2.200	2.836	1.000	2.518	36	32	44	40	1¼"	6¾"	9¼"	4 - 1" DIA.
ES10R-1		0°04'37"	805.81	805.44	330	700	920	60	80	40	40	---	5⅞"	0.005	4.036	2.200	2.836	1.000	2.518	36	32	44	40	1¼"	6¾"	9¼"	4 - 1" DIA.



BEARING DIMENSION KEY



BEVELED TOP PLATE DIMENSION KEY

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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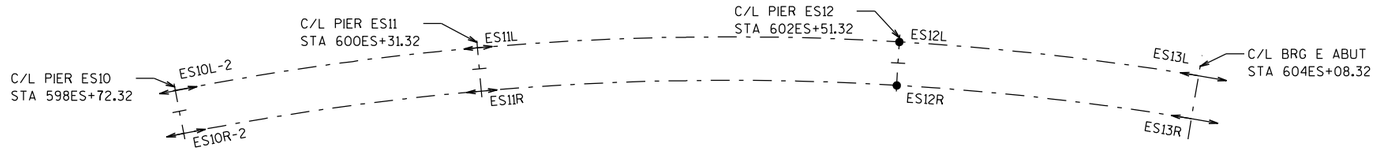
UNIT 2
BEARING
LAYOUT

SHEET 39 OF 122

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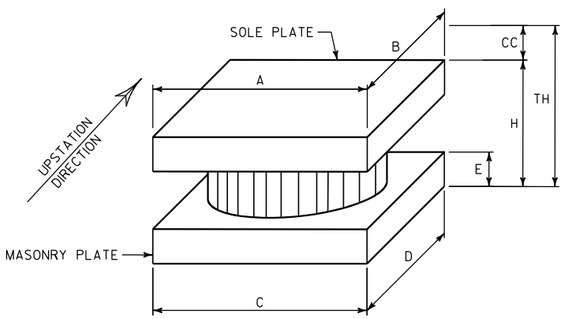


PLAN

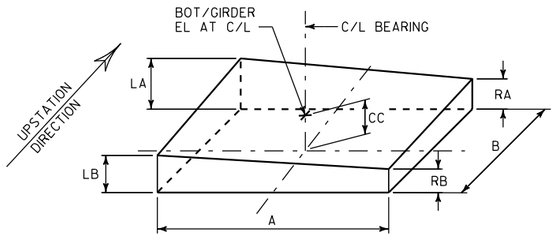
BEARING LEGEND

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

BEARING MARK	BEARING TYPE	SKEW ANGLE 'SK'	BOT./ GIRDER EL. AT C/L	TOP OF PEDESTAL EL.	VERTICAL FORCES			TRANSVERSE FORCES		LONGITUDINAL FORCES		MOVEMENT 90° (ONE WAY)		ROTATIONS	NOMINAL BEARING DIMENSIONS													ANCHOR BOLTS
					SERVICE		STRENGTH								BEVELED TOP PLATE THICKNESS					TOP PLATE & SOLE PLATE		MASONRY PLATE			BEARING ASSEMBLY		
					PERMANENT	TOTAL	TOTAL	SERVICE	STRENGTH	SERVICE	STRENGTH	TRANS	LONGIT	STRENGTH	LB	RB	LA	RA	CC	A	B	C	D	E	H	TH	
					(KIPS)	(KIPS)	(KIPS)	(KIPS)	(KIPS)	(KIPS)	(KIPS)	(IN)	(IN)	RADIANS	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	
ES10L-2	GUIDED	-0°04'33"	806.79	806.42	330	700	910	60	80	40	40	---	3½"	0.005	4.036	2.200	2.836	1.000	2.518	36	32	44	40	1¼"	6¾"	9¼"	4 - 1" DIA.
ES10R-2		-0°04'37"	805.61	805.25	330	700	910	60	80	40	40	---	3½"	0.005	4.036	2.200	2.836	1.000	2.518	36	32	44	40	1¼"	6¾"	9¼"	4 - 1" DIA.
ES11L	GUIDED	0°	799.64	798.57	1280	2040	2640	90	150	130	130	---	2⅛"	0.015	4.342	2.200	3.142	1.000	2.671	42	38	50	46	1¼"	9⅛"	11 13/16 "	4 - 1½" DIA.
ES11R			798.47	797.40	1280	2040	2640	90	150	130	130	---	2⅛"	0.015	4.342	2.200	3.142	1.000	2.671	42	38	50	46	1¼"	9⅛"	11 13/16 "	4 - 1½" DIA.
ES12L	FIXED	N/A	788.64	787.57	1280	2040	2640	70	130	230	260	---	---	0.015	4.342	2.200	3.142	1.000	2.671	42	38	50	46	1¼"	9⅛"	11 13/16 "	6 - 1½" DIA.
ES12R			787.47	786.40	1280	2040	2640	70	130	230	260	---	---	0.015	4.342	2.200	3.142	1.000	2.671	42	38	50	46	1¼"	9⅛"	11 13/16 "	6 - 1½" DIA.
ES13L	GUIDED	0°	780.08	779.71	330	710	930	40	50	40	40	---	2"	0.005	4.036	2.200	2.836	1.000	2.518	36	32	44	40	1¼"	6¾"	9¼"	4 - 1" DIA.
ES13R			788.91	788.54	330	710	930	40	50	40	40	---	2"	0.005	4.036	2.200	2.836	1.000	2.518	36	32	44	40	1¼"	6¾"	9¼"	4 - 1" DIA.



BEARING DIMENSION KEY



BEVELED TOP PLATE DIMENSION KEY

LB = LEFT BACK STATION
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NOTES

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5. DESIGN BEARINGS FOR THE ROTATION VALUES SHOWN IN THE TABLE OR 0.02 RADIANS, WHICHEVER IS LARGER.

   ROTATION VALUES IN THE TABLE INCLUDE AN ALLOWANCE OF 0.005 RADIANS FOR UNCERTANTIES.

   FOR POT BEARINGS, INCREASE THE ROTATIONAL DEMAND BY AN ADDITIONAL 0.005 RADIANS TO ACCOUNT FOR CONSTRUCTION TOLERANCES.
6. 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-40-854

DRAWN BY SR | PLANS CK'D. JWC

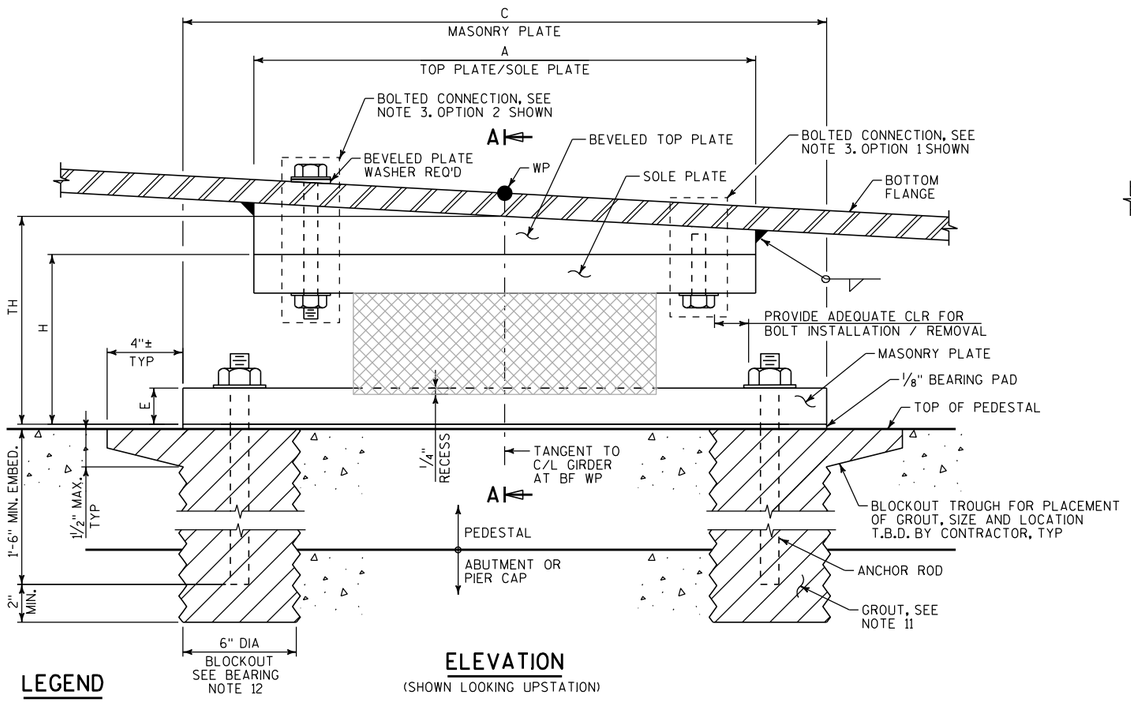
UNIT 3
BEARING
LAYOUT

SHEET 40 OF 122

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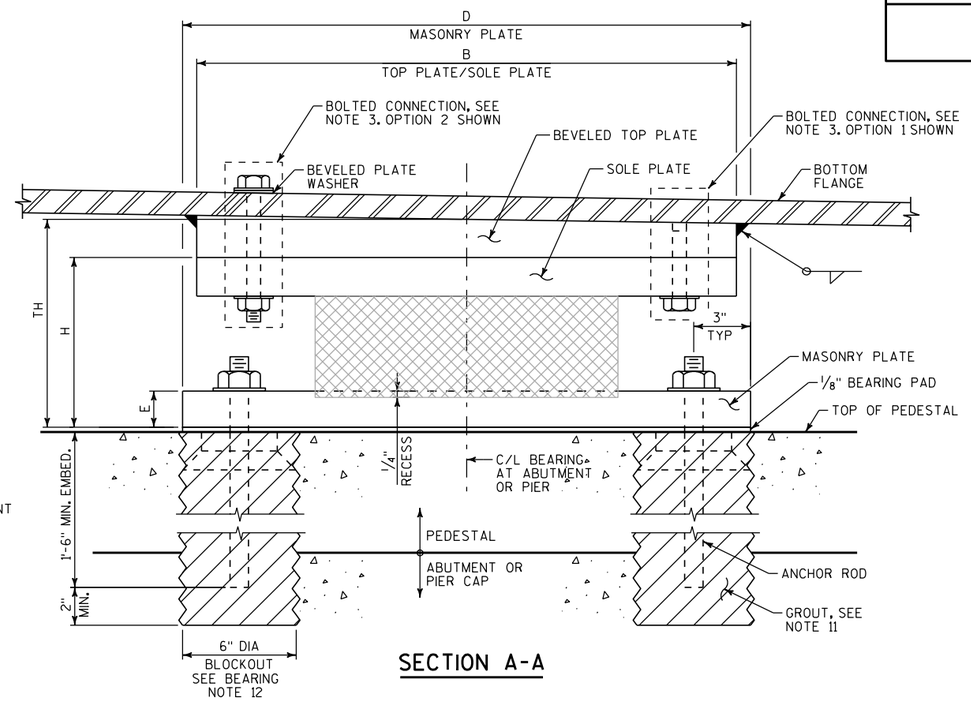
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STATE PROJECT NUMBER
1060-33-81



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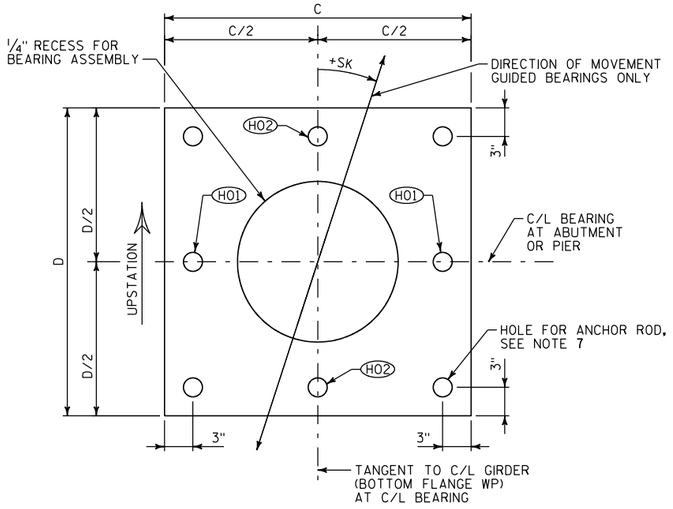
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SECTION A-A

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".

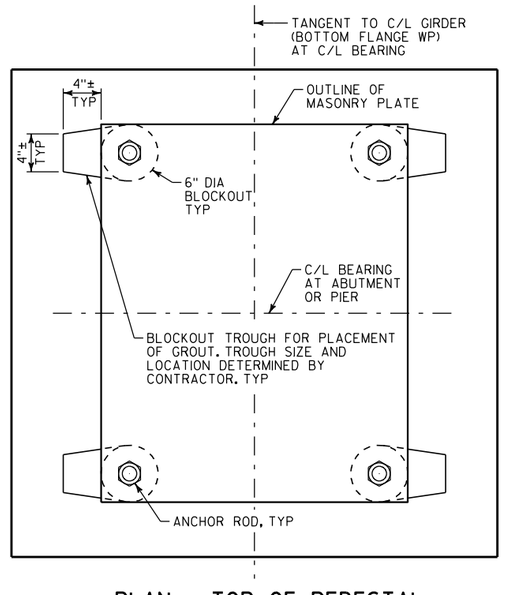


PLAN - MASONRY PLATE

A POSITIVE SKEW ANGLE (+SK) IS SHOWN ABOVE AND INDICATED BY A CLOCKWISE OR LEFT HAND FORWARD ROTATION

(HO1) HOLE REQ'D AT PIERS SW01, SW02 & SW07 ONLY

(HO2) HOLE REQ'D AT PIER SW06 ONLY



PLAN - TOP OF PEDESTAL

BEARING NOTES

1. SEE BEARING LAYOUT SHEETS FOR BEARING LAYOUT AND LOCATION SPECIFIC DIMENSIONS.
2. SEE JACKING PROVISIONS SHEET FOR LOCATION AND SIZE OF BEARING REPLACEMENT JACKING PADS ATTACHED TO BOTTOM OF GIRDER FLANGE.
3. DESIGN BOLTED CONNECTION BETWEEN SOLE PLATE AND BEVELED TOP PLATE FOR A MINIMUM OF 1.25 TIMES THE COMBINED SPECIFIED FACTORED 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.
4. SOLE PLATE THICKNESS TO BE SELECTED BY THE BEARING MANUFACTURER. MINIMUM 1".
5. 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.
6. MASONRY PLATE THICKNESS TO BE CONFIRMED BY THE BEARING DESIGNER AND INCREASED IF REQUIRED. NO REDUCTION PERMITTED.
7. HOLES IN MASONRY PLATE SHALL BE A MAXIMUM OF 1/8" LARGER THAN THE SPECIFIED ANCHOR BOLT DIAMETER. SEE BEARING LAYOUT SHEETS FOR NUMBER AND SIZE OF ANCHOR RODS.

BEARING NOTES, CONTINUED

8. ANCHOR RODS SHALL BE IN ACCORDANCE WITH ASTM F1554 (GRADE 105) AND HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M232.
9. BEARINGS SHALL BE DESIGNED TO PERMIT REPLACEMENT BY JACKING THE BRIDGE A MAXIMUM OF 1/2".
10. PROVIDE 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.
11. 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.
12. 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.
13. 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

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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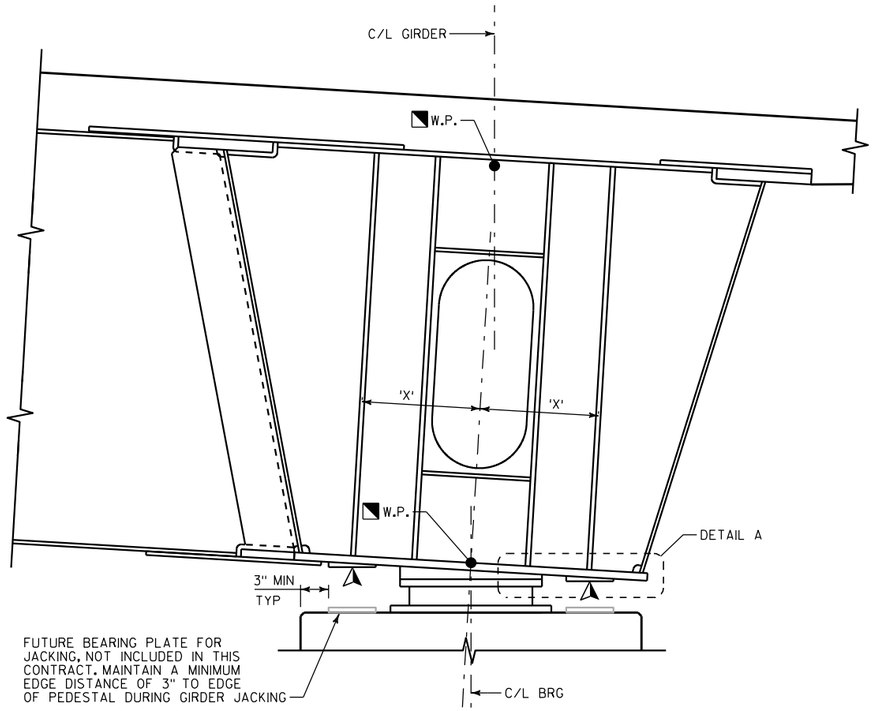
BEARING DETAILS

SHEET 41 OF 122

8

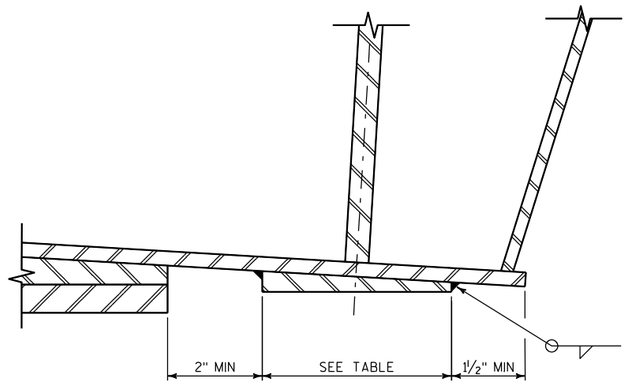
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STATE PROJECT NUMBER
1060-33-81



SECTION AT TYPICAL PIER

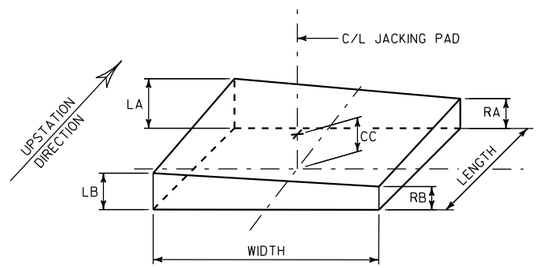
(PIER SW06 SIMILAR)



DETAIL A

LOCATION	UNIT	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)		
SOUTH ABUT	UNIT 1	2	8"	1'-6"	1.160	1.000	2.177	2.017	1.589	2'-1"	155
PIER ES01	UNIT 1	2	8"	2'-0"	1.160	1.000	2.429	2.269	1.714	2'-4"	610
PIER ES02	UNIT 1	2	8"	2'-0"	1.408	1.000	2.293	1.885	1.647	2'-4"	730
PIER ES03	UNIT 1	2	8"	2'-0"	1.408	1.000	1.910	1.502	1.455	2'-4"	630
PIER ES04	UNIT 1	2	8"	2'-0"	1.408	1.000	1.578	1.170	1.289	2'-4"	530
PIER ES05	UNIT 1	2	8"	1'-6"	1.454	1.046	1.408	1.000	1.227	2'-1"	150
PIER ES05	UNIT 2	2	8"	1'-6"	1.459	1.051	1.408	1.000	1.230	2'-1"	170
PIER ES06	UNIT 2	2	8"	2'-0"	1.757	1.349	1.408	1.000	1.378	2'-4"	700
PIER ES07	UNIT 2	2	8"	2'-0"	2.157	1.749	1.408	1.000	1.578	2'-4"	710
PIER ES08	UNIT 2	2	8"	2'-0"	2.528	2.120	1.408	1.000	1.764	2'-4"	655
PIER ES09	UNIT 2	2	8"	2'-0"	2.608	2.200	1.408	1.000	1.804	2'-4"	640
PIER ES10	UNIT 2	2	8"	1'-6"	2.308	1.900	1.408	1.000	1.654	2'-1"	165
PIER ES10	UNIT 3	2	8"	1'-6"	2.308	1.900	1.408	1.000	1.654	2'-1"	165
PIER ES11	UNIT 3	2	8"	2'-0"	2.608	2.200	1.408	1.000	1.804	2'-4"	640
PIER ES12	UNIT 3	2	8"	2'-0"	2.608	2.200	1.408	1.000	1.804	2'-4"	640
EAST ABUT	UNIT 3	2	8"	1'-6"	2.308	1.900	1.408	1.000	1.654	2'-1"	165

* 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

LEGEND

SUGGESTED JACKING LOCATIONS FOR FUTURE BEARING REPLACEMENT

SEE GIRDER SECTION SHEET FOR DEFINITION OF WORKING POINTS

NOTES

1. THIS DRAWING SHOWS DETAILS AND LOCATION OF JACKING PADS AND ADDITIONAL WEB STIFFENERS REQUIRED FOR FUTURE BEARING REPLACEMENT.
2. 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.
3. 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.

   TAKE MEASURES TO CORRECT FOR ANY UNINTENDED SLOPE AND TO ENSURE THAT JACKS ARE POSITIVELY HELD IN POSITION ON THE JACKING PADS.
4. ESTIMATED JACKING FORCE IS GIVEN AT EACH PAD AND IS BASED ON UNFACTORED DEAD LOAD REACTIONS ONLY - NO LIVE LOAD IS INCLUDED AND NO ADDITIONAL ALLOWANCES HAVE BEEN MADE. MULTIPLE JACKS ARE ANTICIPATED AT EACH PAD.

   THESE FORCES MUST BE INCREASED TO ALLOW FOR JACK FRICTION AND OTHER FACTORS. RECOMMENDED MINIMUM JACK CAPACITY IS 2 TIMES THE TABULATED VALUES.
5. FORCES AND RECOMMENDATIONS ARE PROVIDED FOR INFORMATION ONLY AND MUST BE VERIFIED BY THE ENGINEER RESPONSIBLE FOR JACKING OPERATIONS.
6. 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.
7. 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.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

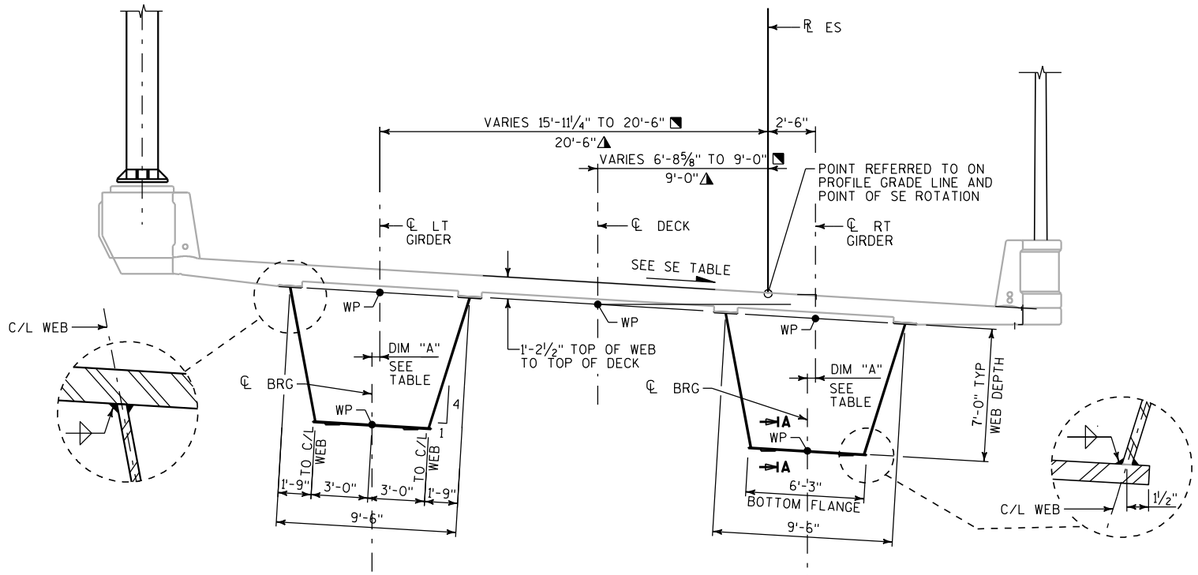
STRUCTURE B-40-854

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JACKING PROVISIONS

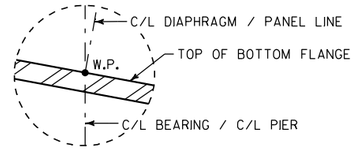
SHEET 42 OF 122

STATE PROJECT NUMBER
1060-33-81



TYPICAL SECTION

LOOKING UPSTATION



SECTION A-A

SUPERELEVATION TABLE		
STATION	SE (%)	DIM. "A"
577ES+24.00	-2.00	-
579ES+45.32 C/L BRG S ABUT	-2.00	1 11/16"
580ES+91.32 C/L PIER ES01	-2.00	1 11/16"
581ES+22.00	-2.00	1 11/16"
582ES+34.00	-5.10	4 1/4"
583ES+16.32 C/L PIER ES02	-5.10	4 1/4"
585ES+41.32 C/L PIER ES03	-5.10	4 1/4"
587ES+35.82 C/L PIER ES04	-5.10	4 1/4"
588ES+73.82 C/L PIER ES05	-5.10	4 1/4"
590ES+40.32 C/L PIER ES06	-5.10	4 1/4"
592ES+75.32 C/L PIER ES07	-5.10	4 1/4"
594ES+93.32 C/L PIER ES08	-5.10	4 1/4"
597ES+13.32 C/L PIER ES09	-5.10	4 1/4"
598ES+72.32 C/L PIER ES10	-5.10	4 1/4"
600ES+31.32 C/L PIER ES11	-5.10	4 1/4"
602ES+51.32 C/L PIER ES12	-5.10	4 1/4"
604ES+08.32 C/L BRG E ABUT	-5.10	4 1/4"
604ES+80.00	-5.10	-

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

SUPERELEVATION VARIES LINEARLY BETWEEN THE TABULATED VALUES.

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 <= ½"	3/16"
½" < T <= ¾"	¼"
¾" < T <= 1½"	5/16"
1½" < T <= 2¼"	⅜"
T > 2¼"	½"

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

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

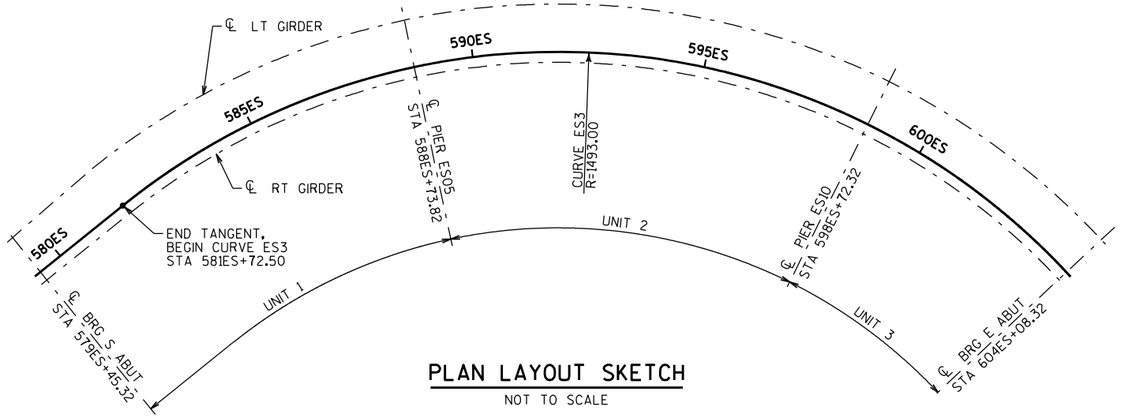
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GIRDER SECTION

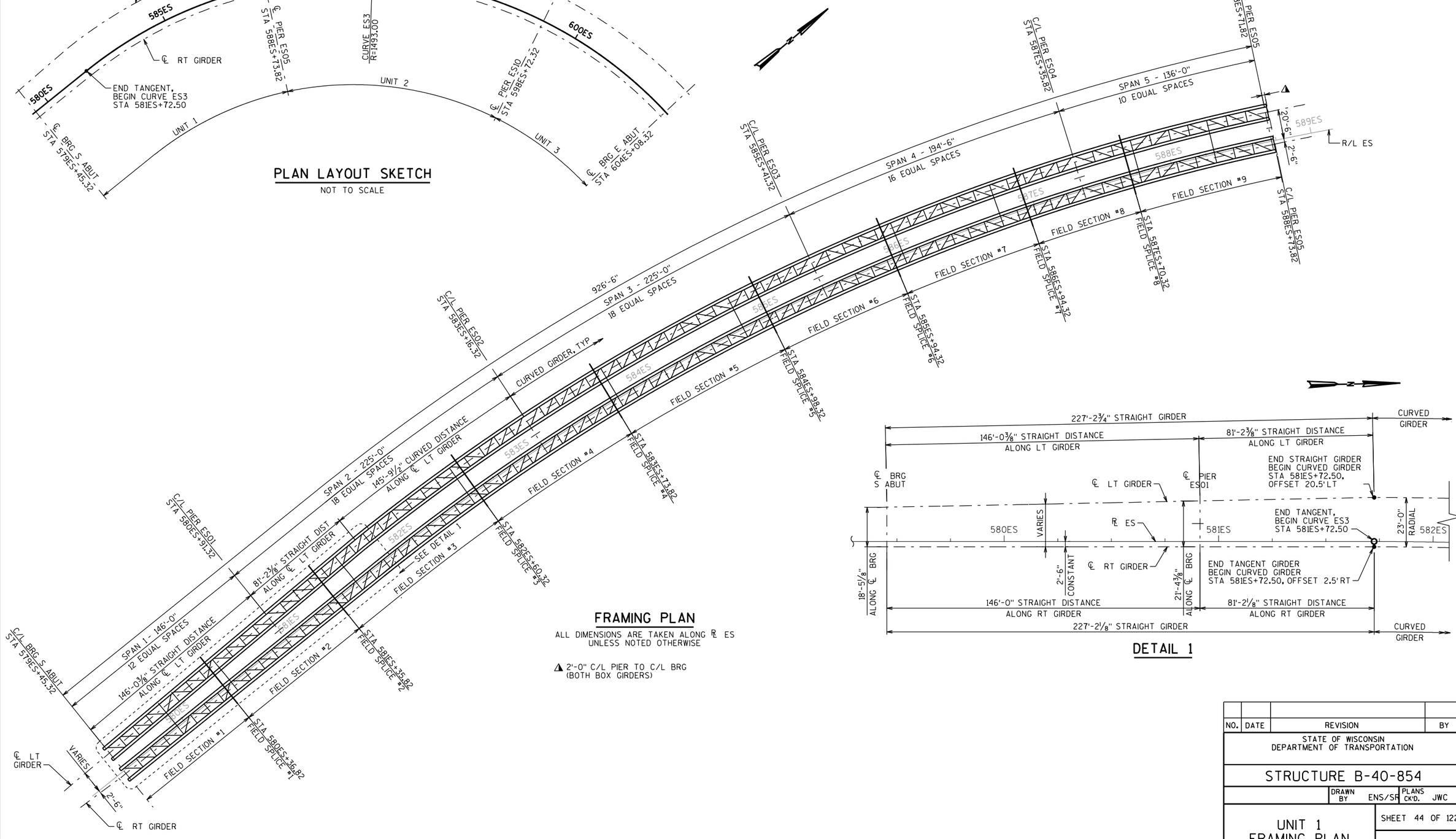
SHEET 43 OF 122

STATE PROJECT NUMBER
1060-33-81



PLAN LAYOUT SKETCH

NOT TO SCALE



FRAMING PLAN

ALL DIMENSIONS ARE TAKEN ALONG ℄ ES UNLESS NOTED OTHERWISE

▲ 2'-0" C/L PIER TO C/L BRG (BOTH BOX GIRDERS)

DETAIL 1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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UNIT 1
FRAMING PLAN

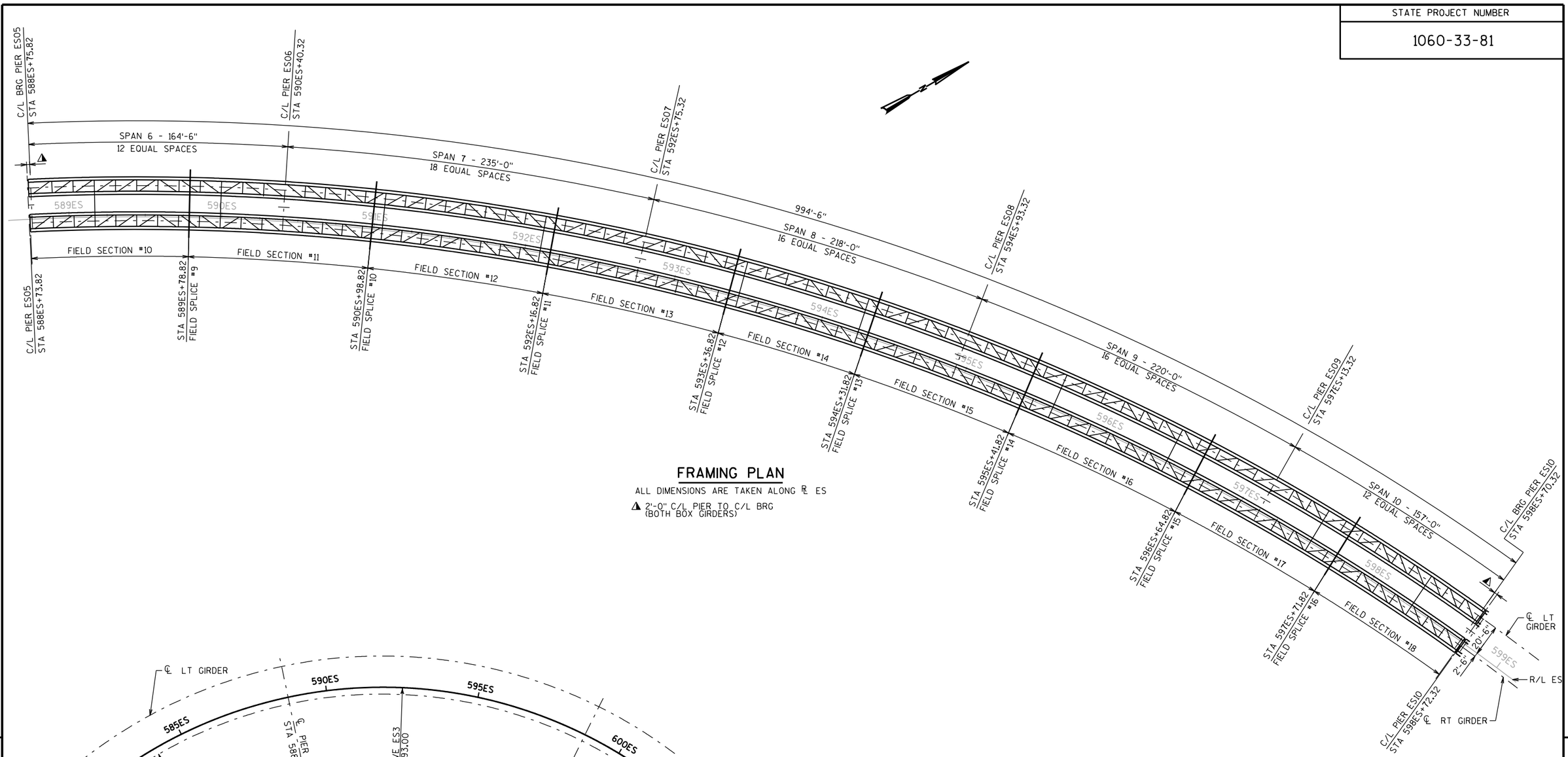
SHEET 44 OF 122

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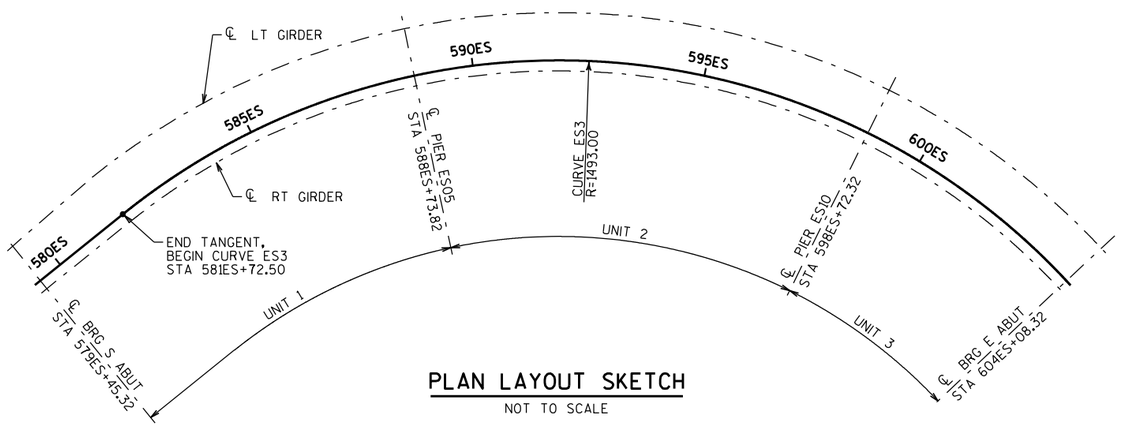
STATE PROJECT NUMBER
1060-33-81



FRAMING PLAN

ALL DIMENSIONS ARE TAKEN ALONG ℄ ES

▲ 2'-0" C/L PIER TO C/L BRG (BOTH BOX GIRDERS)



PLAN LAYOUT SKETCH

NOT TO SCALE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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UNIT 2
FRAMING PLAN

SHEET 45 OF 122

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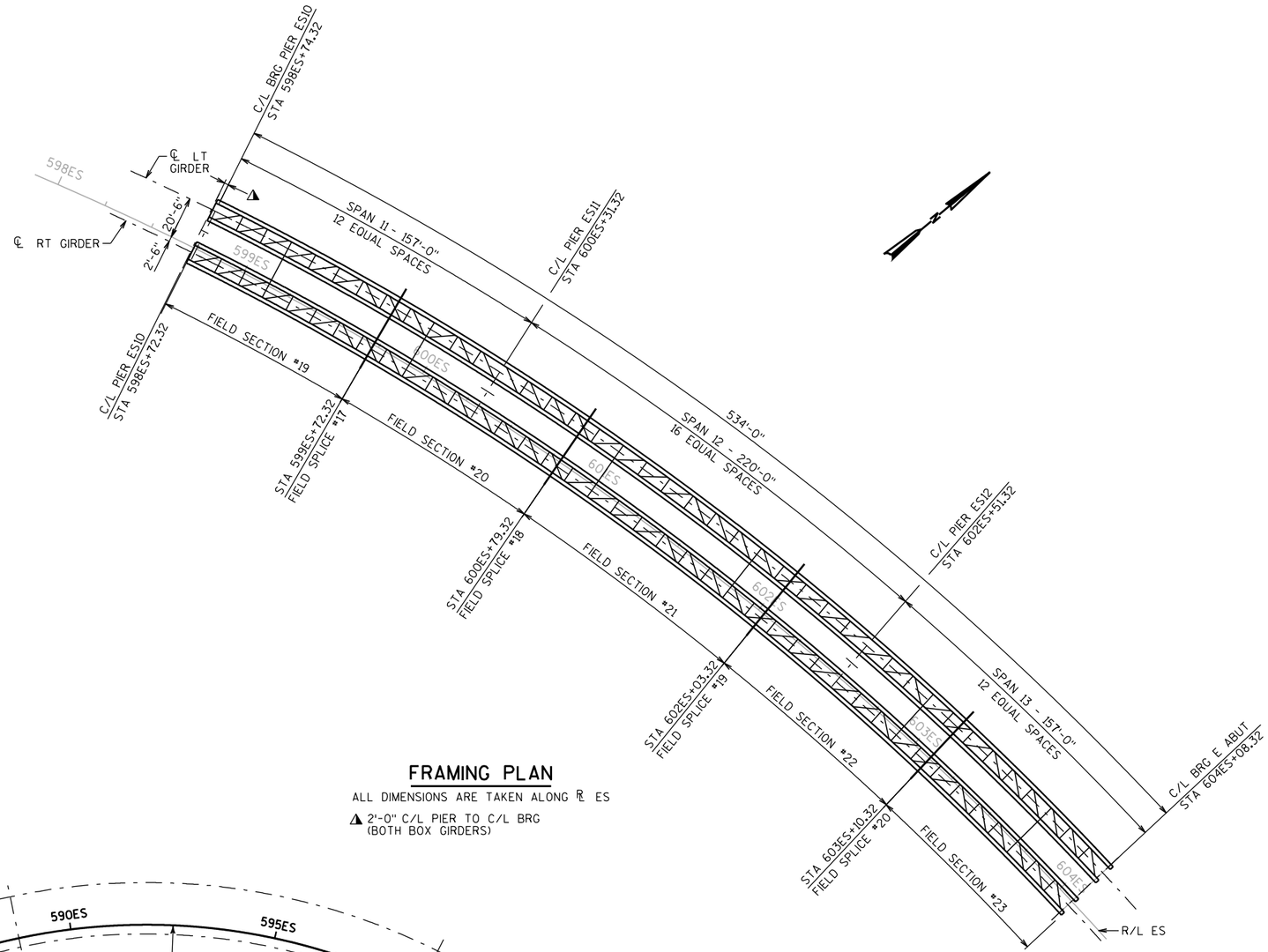
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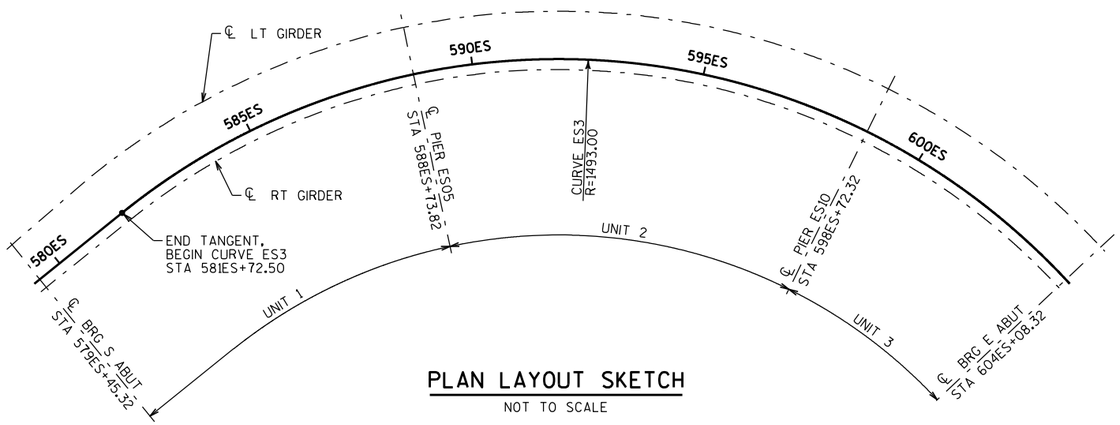
STATE PROJECT NUMBER
1060-33-81



FRAMING PLAN

ALL DIMENSIONS ARE TAKEN ALONG ℄ ES

▲ 2'-0" C/L PIER TO C/L BRG
(BOTH BOX GIRDERS)



PLAN LAYOUT SKETCH

NOT TO SCALE

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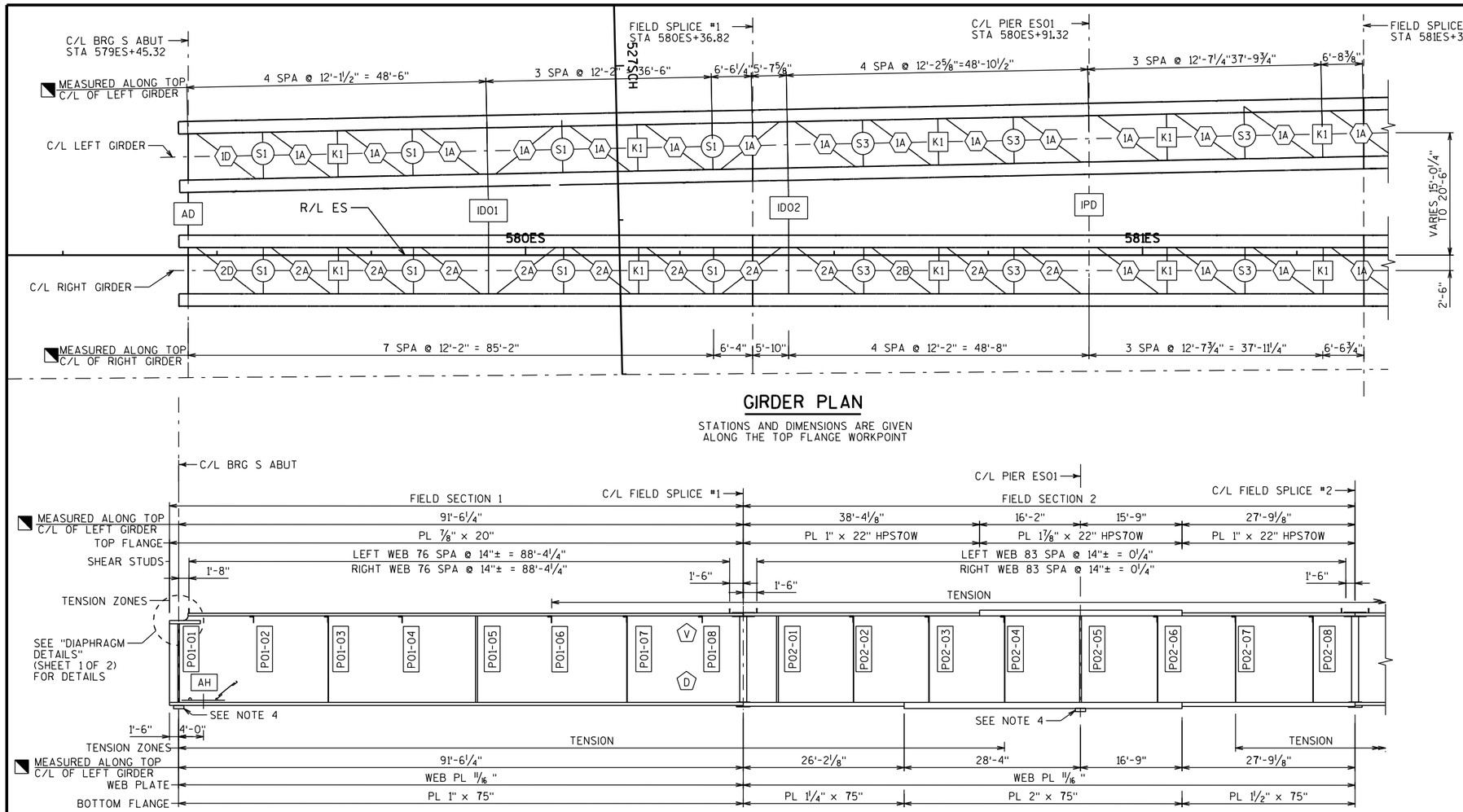
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UNIT 3
FRAMING PLAN

SHEET 46 OF 122

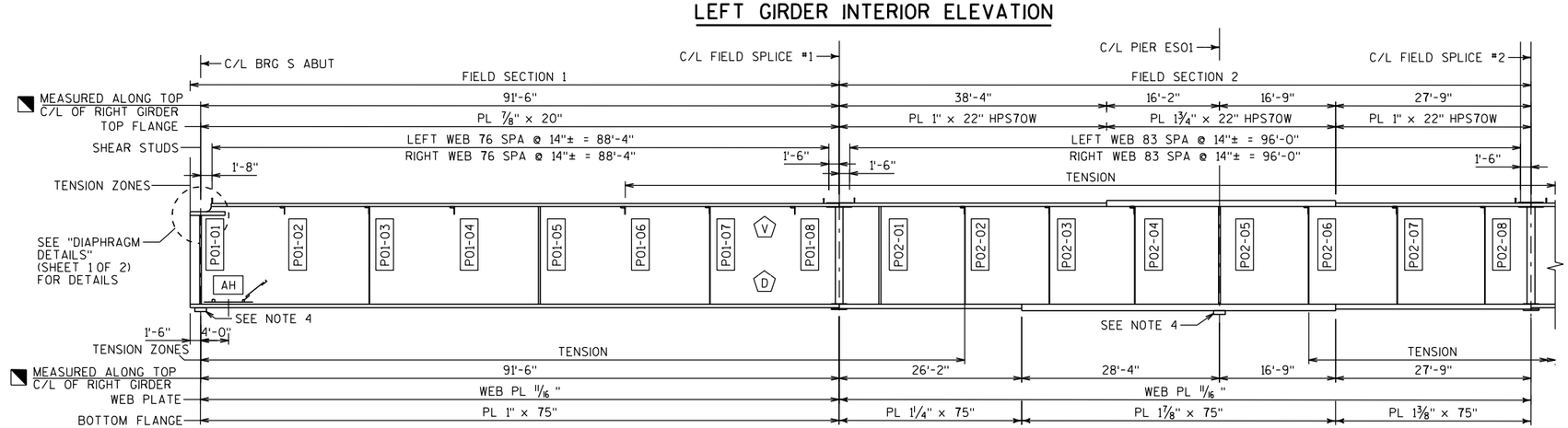
STATE PROJECT NUMBER
1060-33-81



GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT

LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
S1	TRANSVERSE STRUT IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
AD	ABUTMENT DIAPHRAGM, SEE "ABUTMENT DIAPHRAGM" SHEET.
IPD	INTERIOR PIER DIAPHRAGM, SEE "TYPICAL PIER DIAPHRAGM" SHEET.
PED	PIER END DIAPHRAGM, SEE "PIER END DIAPHRAGM" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
1A	LATERAL BRACING IDENTIFIER, SEE "LATERAL BRACING DETAILS" SHEET. FOR MEMBER SIZE AND CONNECTION DETAILS.
D	BOTTOM FLANGE DRAIN HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
V	WEB PLATE VENT HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
AH	BOTTOM FLANGE ACCESS HATCH, SEE "ACCESS HATCH DETAILS" SHEET.
AC	END DIAPHRAGM ACCESS DOOR, SEE "ACCESS DOOR DETAILS" SHEET.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
◥	SEE "GIRDER SECTION" SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET. FOR FIELD SPLICE DETAILS, SEE "FIELD SPLICE DETAILS" SHEET.
2. FOR CAMBER REQUIREMENTS, SEE CAMBER DIAGRAM SHEETS AND CAMBER AND DECK ELEVATIONS SHEETS.
3. '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.
4. FOR 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".
5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATIONS ARE HORIZONTAL DIMENSIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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GIRDER PLAN AND ELEVATION: FIELD SECTIONS 1 & 2

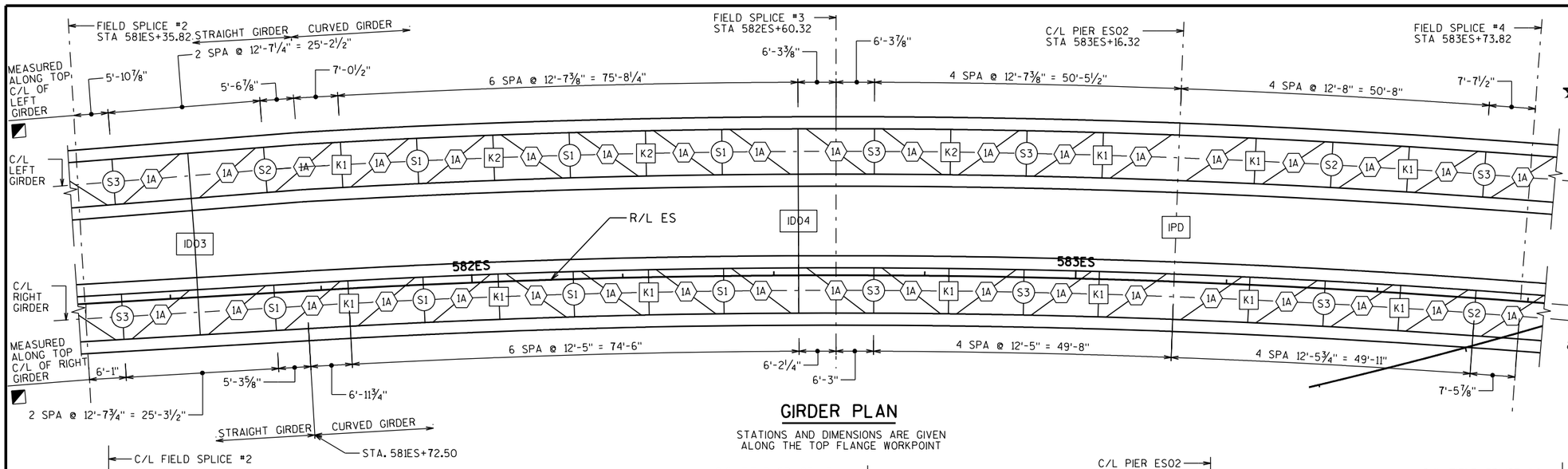
SHEET 47 OF 122

8

8

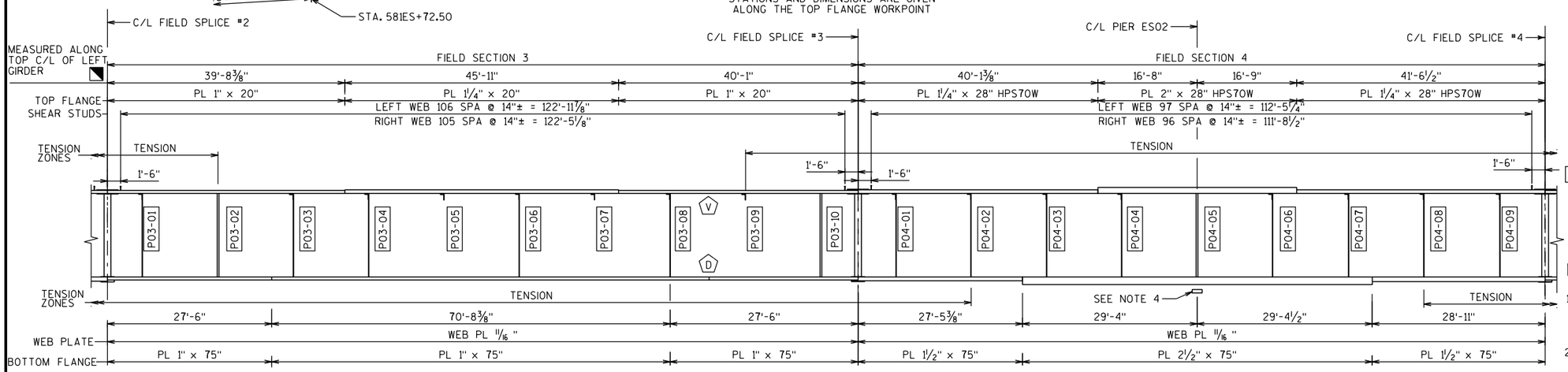
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STATE PROJECT NUMBER
1060-33-81

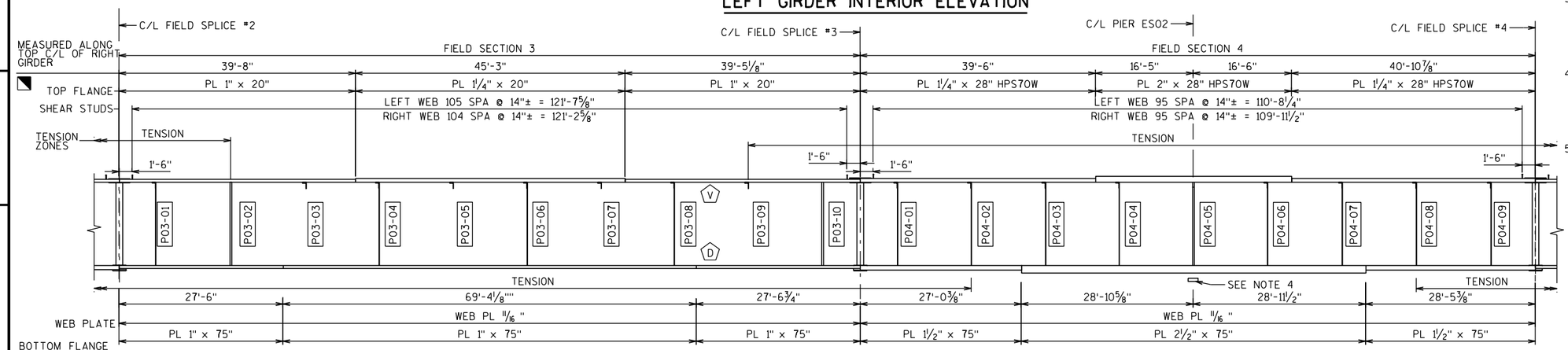


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
S1	TRANSVERSE STRUT IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
AD	ABUTMENT DIAPHRAGM, SEE "ABUTMENT DIAPHRAGM" SHEET.
IPD	INTERIOR PIER DIAPHRAGM, SEE "TYPICAL PIER DIAPHRAGM" SHEET.
PED	PIER END DIAPHRAGM, SEE "PIER END DIAPHRAGM" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
1A	LATERAL BRACING IDENTIFIER, SEE "LATERAL BRACING DETAILS" SHEET. FOR MEMBER SIZE AND CONNECTION DETAILS.
D	BOTTOM FLANGE DRAIN HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
V	WEB PLATE VENT HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
AH	BOTTOM FLANGE ACCESS HATCH, SEE "ACCESS HATCH DETAILS" SHEET.
AC	END DIAPHRAGM ACCESS DOOR, SEE "ACCESS DOOR DETAILS" SHEET.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
◥	SEE "GIRDER SECTION" SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET. FOR FIELD SPLICE DETAILS, SEE "FIELD SPLICE DETAILS" SHEET.
2. FOR CAMBER REQUIREMENTS, SEE CAMBER DIAGRAM SHEETS AND CAMBER AND DECK ELEVATIONS SHEETS.
3. '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.
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5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATIONS ARE HORIZONTAL DIMENSIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-854

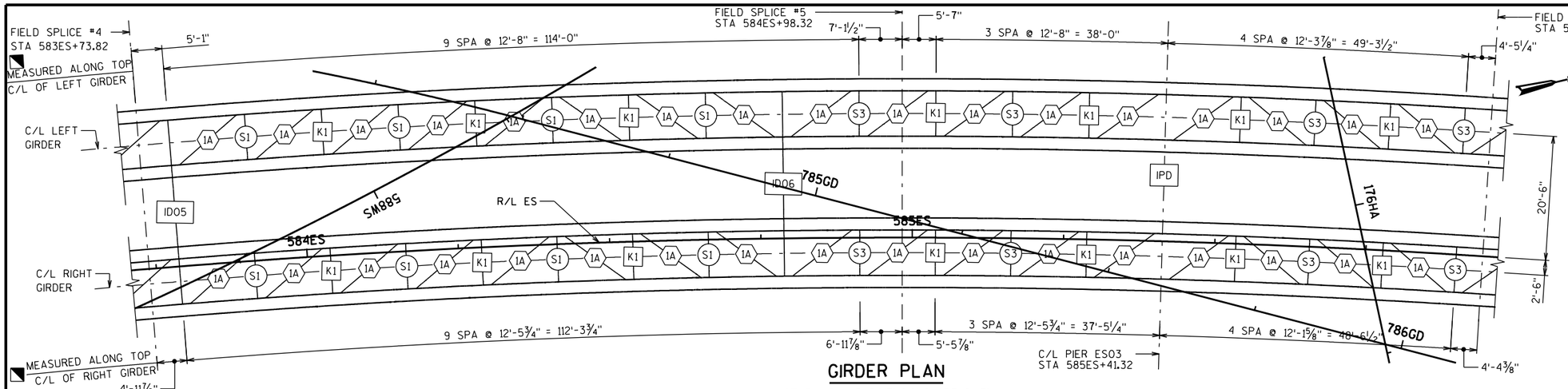
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GIRDER PLAN AND ELEVATION: FIELD SECTIONS 3 & 4

SHEET 48 OF 122

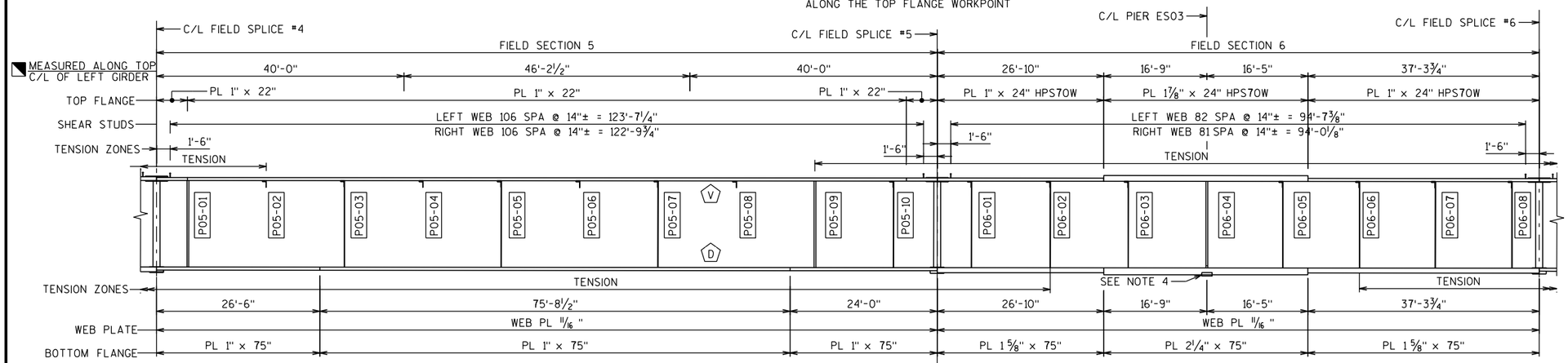
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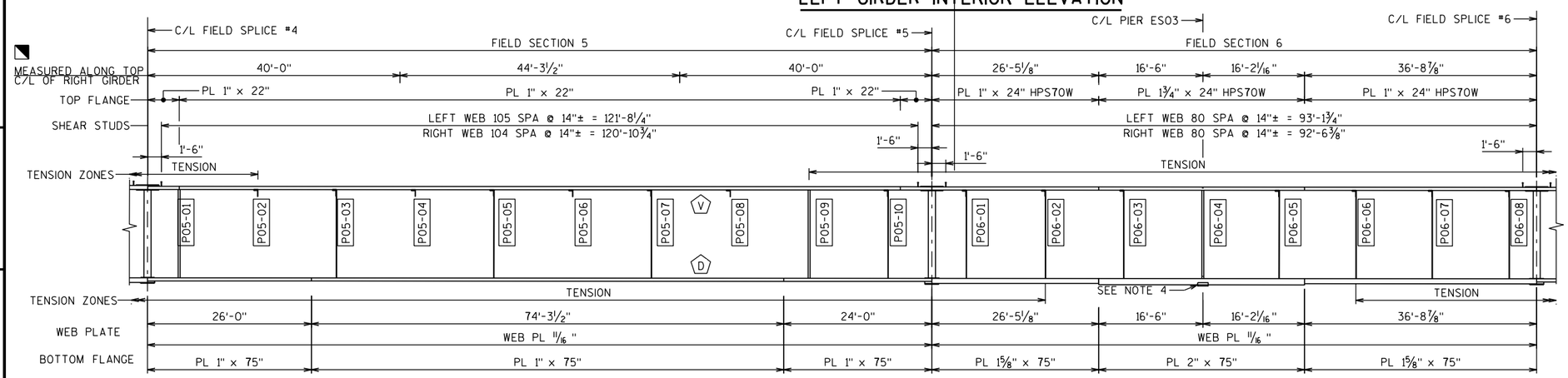


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
S1	TRANSVERSE STRUT IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
AD	ABUTMENT DIAPHRAGM, SEE "ABUTMENT DIAPHRAGM" SHEET.
IPD	INTERIOR PIER DIAPHRAGM, SEE "TYPICAL PIER DIAPHRAGM" SHEET.
PED	PIER END DIAPHRAGM, SEE "PIER END DIAPHRAGM" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
1A	LATERAL BRACING IDENTIFIER, SEE "LATERAL BRACING DETAILS" SHEET. FOR MEMBER SIZE AND CONNECTION DETAILS.
D	BOTTOM FLANGE DRAIN HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
V	WEB PLATE VENT HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
AH	BOTTOM FLANGE ACCESS HATCH, SEE "ACCESS HATCH DETAILS" SHEET.
AC	END DIAPHRAGM ACCESS DOOR, SEE "ACCESS DOOR DETAILS" SHEET.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
	SEE "GIRDER SECTION" SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET. FOR FIELD SPLICE DETAILS, SEE "FIELD SPLICE DETAILS" SHEET.
2. FOR CAMBER REQUIREMENTS, SEE CAMBER DIAGRAM SHEETS AND CAMBER AND DECK ELEVATIONS SHEETS.
3. '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.
4. FOR 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".
5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATIONS ARE HORIZONTAL DIMENSIONS.

STATE PROJECT NUMBER

1060-33-81

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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GIRDER PLAN AND ELEVATION: FIELD SECTIONS 5 & 6

SHEET 49 OF 122

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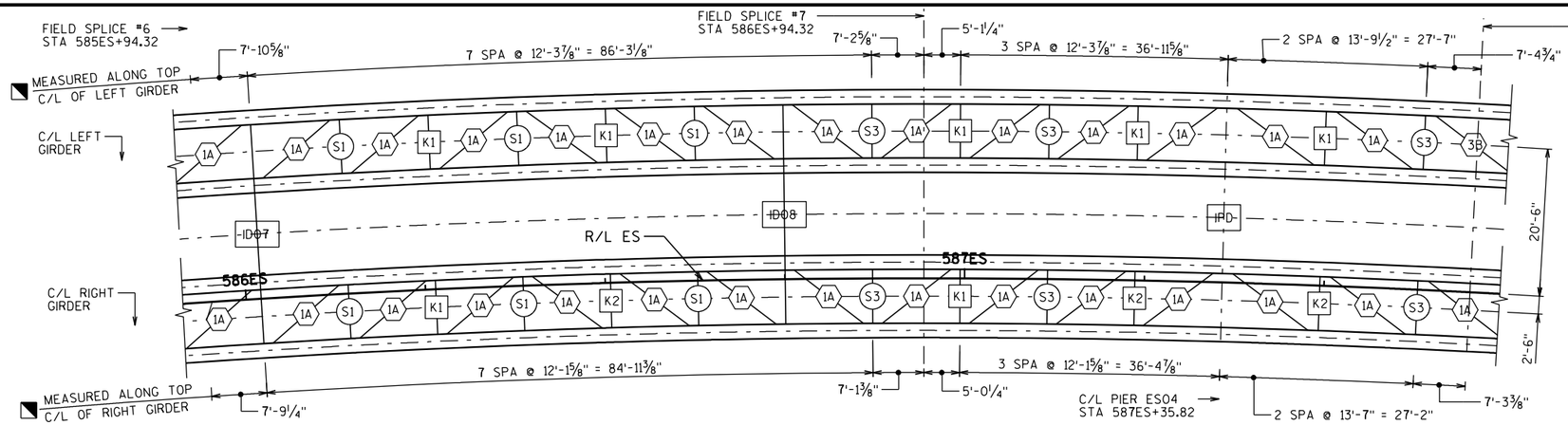
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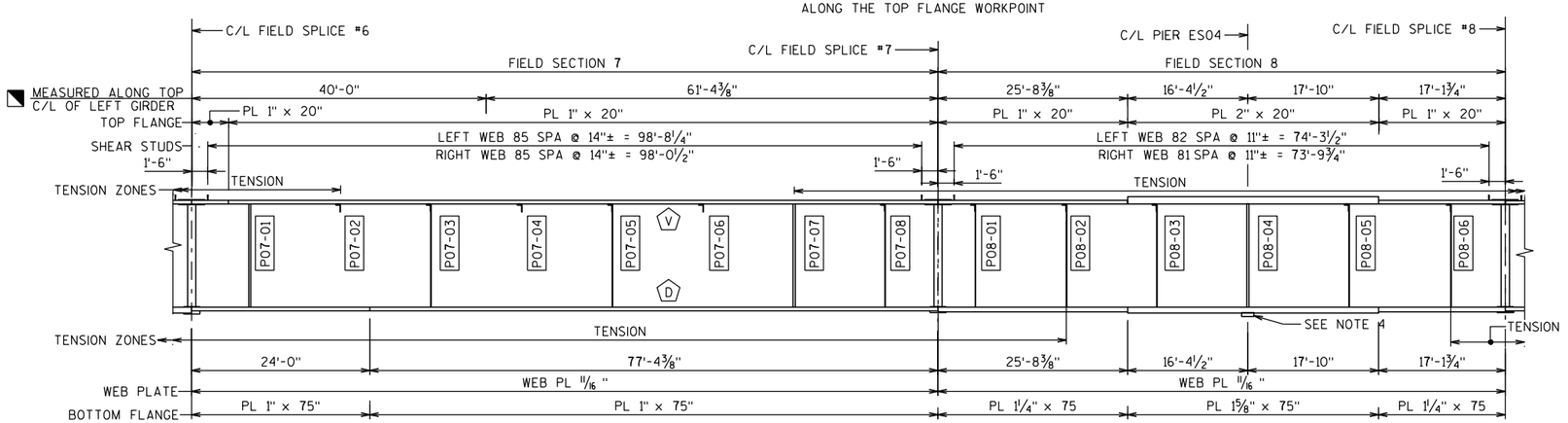
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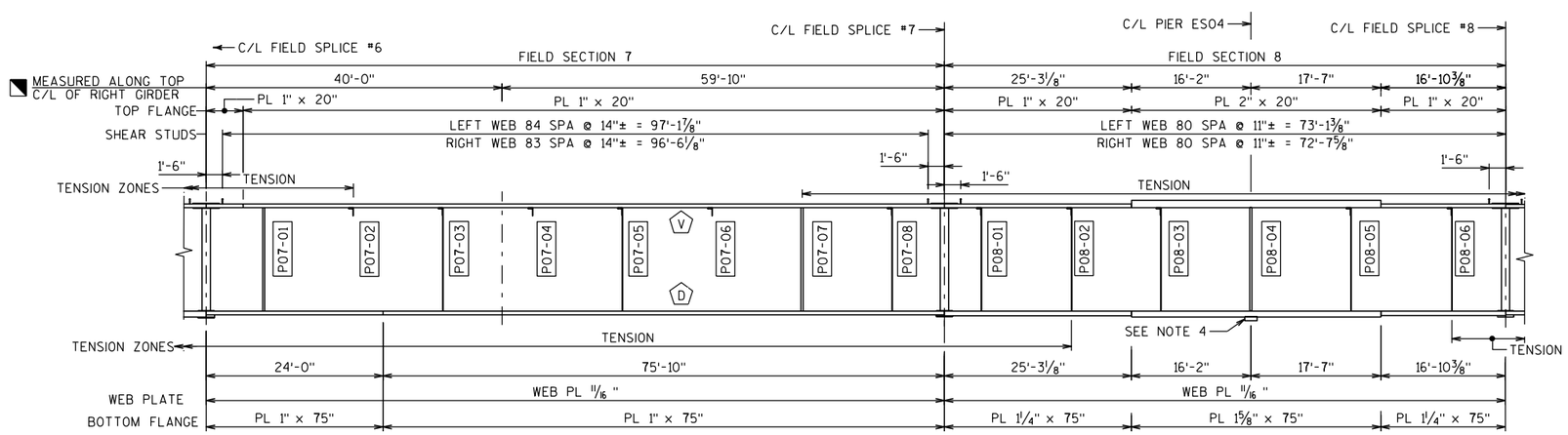


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN
ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

STATE PROJECT NUMBER

1060-33-81

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
S1	TRANSVERSE STRUT IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
AD	ABUTMENT DIAPHRAGM, SEE "ABUTMENT DIAPHRAGM" SHEET.
IPD	INTERIOR PIER DIAPHRAGM, SEE "TYPICAL PIER DIAPHRAGM" SHEET.
PED	PIER END DIAPHRAGM, SEE "PIER END DIAPHRAGM" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
1A	LATERAL BRACING IDENTIFIER, SEE "LATERAL BRACING DETAILS" SHEET. FOR MEMBER SIZE AND CONNECTION DETAILS.
D	BOTTOM FLANGE DRAIN HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
V	WEB PLATE VENT HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
AH	BOTTOM FLANGE ACCESS HATCH, SEE "ACCESS HATCH DETAILS" SHEET.
AC	END DIAPHRAGM ACCESS DOOR, SEE "ACCESS DOOR DETAILS" SHEET.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
◥	SEE "GIRDER SECTION" SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET. FOR FIELD SPLICE DETAILS, SEE "FIELD SPLICE DETAILS" SHEET.
2. FOR CAMBER REQUIREMENTS, SEE CAMBER DIAGRAM SHEETS AND CAMBER AND DECK ELEVATIONS SHEET
3. '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.
4. FOR BEVELED TOP PLATE, SEE BEARING SHEETS FOI 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"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

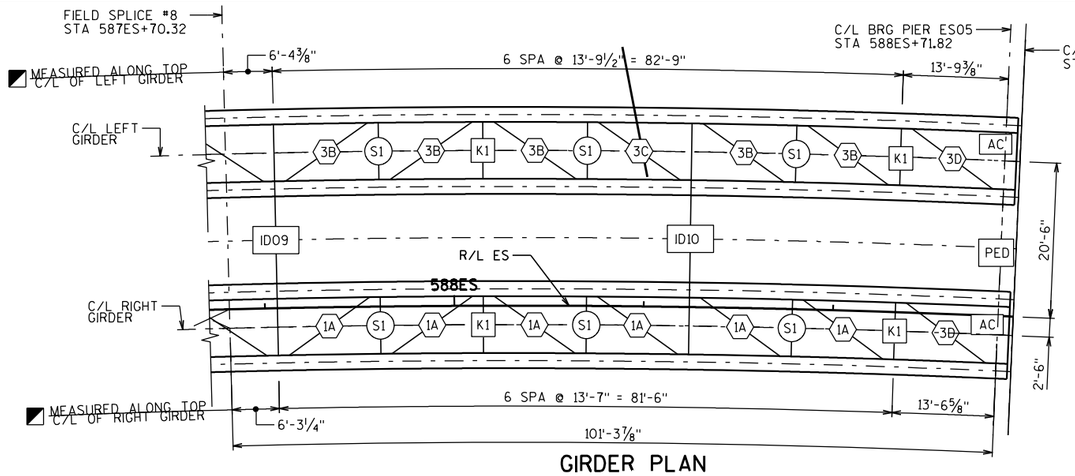
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GIRDER PLAN AND ELEVATION: FIELD SECTIONS 7 & 8

SHEET 50 OF 122

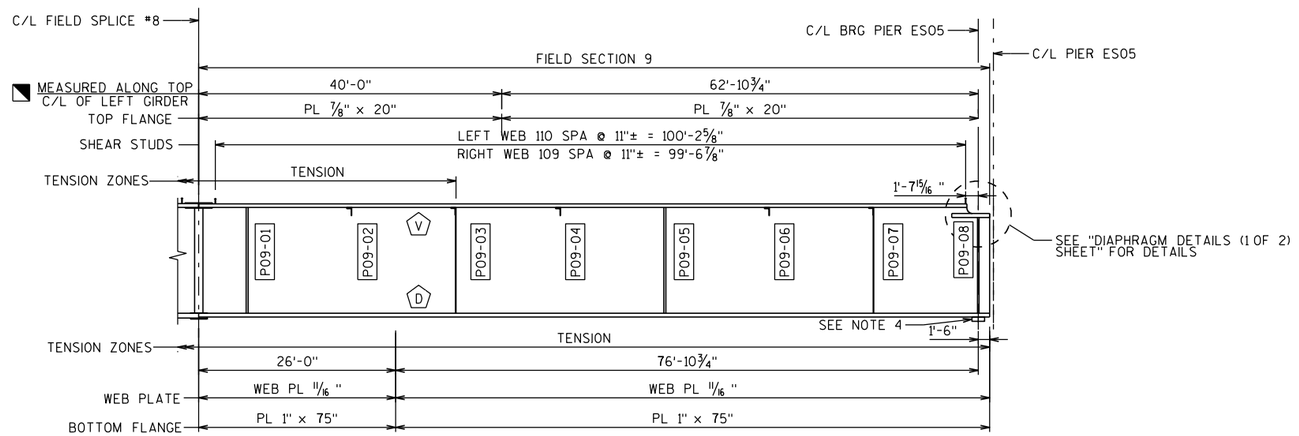
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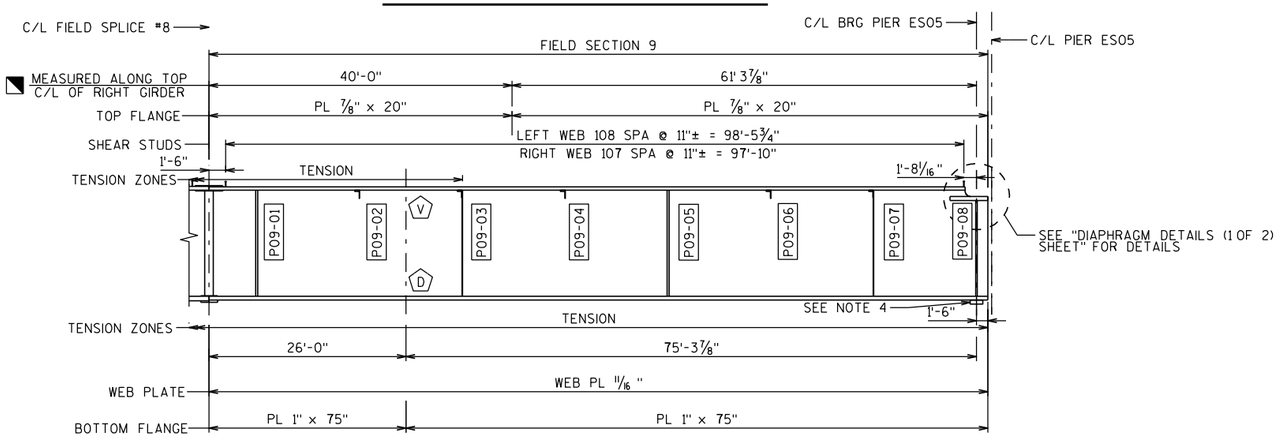


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

STATE PROJECT NUMBER

1060-33-81

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
S1	TRANSVERSE STRUT IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
AD	ABUTMENT DIAPHRAGM, SEE "ABUTMENT DIAPHRAGM" SHEET.
IPD	INTERIOR PIER DIAPHRAGM, SEE "TYPICAL PIER DIAPHRAGM" SHEET.
PED	PIER END DIAPHRAGM, SEE "PIER END DIAPHRAGM" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
1A	LATERAL BRACING IDENTIFIER, SEE "LATERAL BRACING DETAILS" SHEET. FOR MEMBER SIZE AND CONNECTION DETAILS.
D	BOTTOM FLANGE DRAIN HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
V	WEB PLATE VENT HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
AH	BOTTOM FLANGE ACCESS HATCH, SEE "ACCESS HATCH DETAILS" SHEET.
AC	END DIAPHRAGM ACCESS DOOR, SEE "ACCESS DOOR DETAILS" SHEET.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
◥	SEE "GIRDER SECTION" SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET. FOR FIELD SPLICE DETAILS, SEE "FIELD SPLICE DETAILS" SHEET.
2. FOR CAMBER REQUIREMENTS, SEE CAMBER DIAGRAM SHEETS AND CAMBER AND DECK ELEVATIONS SHEETS.
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4. FOR 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".
5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATIONS ARE HORIZONTAL DIMENSIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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GIRDER PLAN AND ELEVATION: FIELD SECTION 9

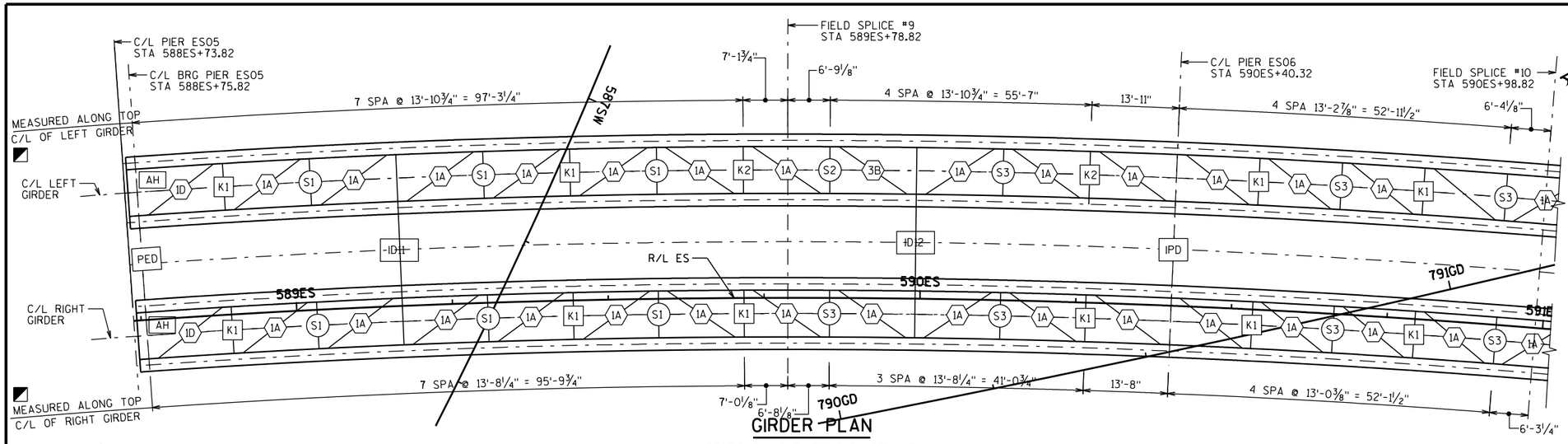
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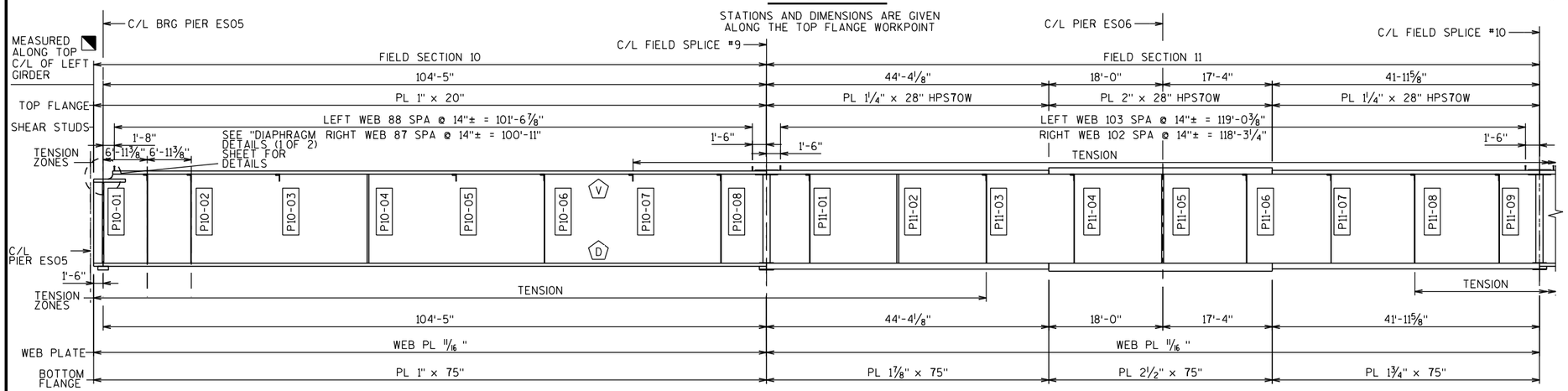
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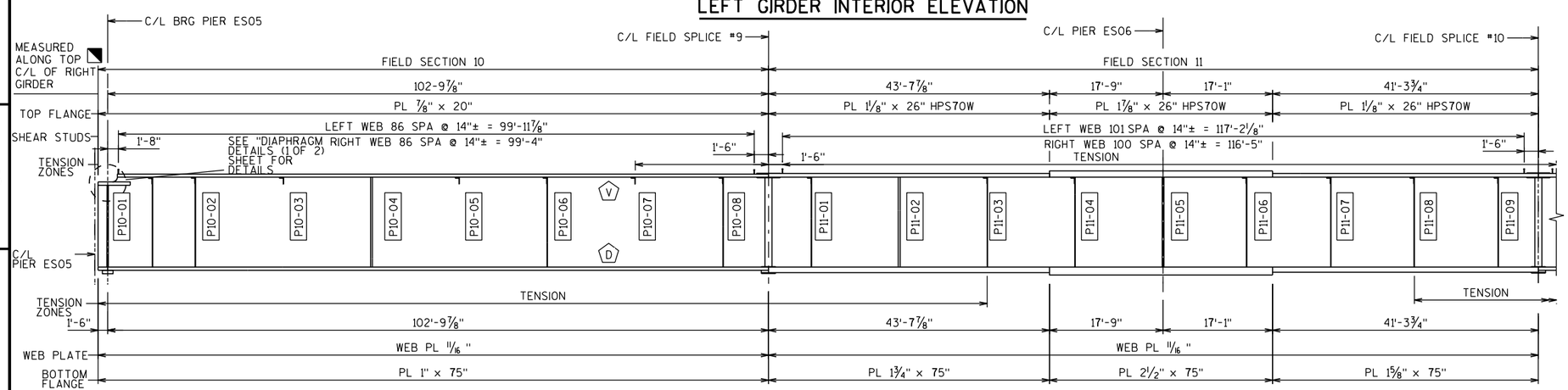
STATE PROJECT NUMBER
1060-33-81



GIRDER PLAN



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
S1	TRANSVERSE STRUT IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
AD	ABUTMENT DIAPHRAGM, SEE "ABUTMENT DIAPHRAGM" SHEET.
IPD	INTERIOR PIER DIAPHRAGM, SEE "TYPICAL PIER DIAPHRAGM" SHEET.
PED	PIER END DIAPHRAGM, SEE "PIER END DIAPHRAGM" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
1A	LATERAL BRACING IDENTIFIER, SEE "LATERAL BRACING DETAILS" SHEET. FOR MEMBER SIZE AND CONNECTION DETAILS.
D	BOTTOM FLANGE DRAIN HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
V	WEB PLATE VENT HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
AH	BOTTOM FLANGE ACCESS HATCH, SEE "ACCESS HATCH DETAILS" SHEET.
AC	END DIAPHRAGM ACCESS DOOR, SEE "ACCESS DOOR DETAILS" SHEET.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
◥	SEE "GIRDER SECTION" SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET. FOR FIELD SPLICE DETAILS, SEE "FIELD SPLICE DETAILS" SHEET.
2. FOR CAMBER REQUIREMENTS, SEE CAMBER DIAGRAM SHEETS AND CAMBER AND DECK ELEVATIONS SHEETS.
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4. FOR 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".
5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATIONS ARE HORIZONTAL DIMENSIONS.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

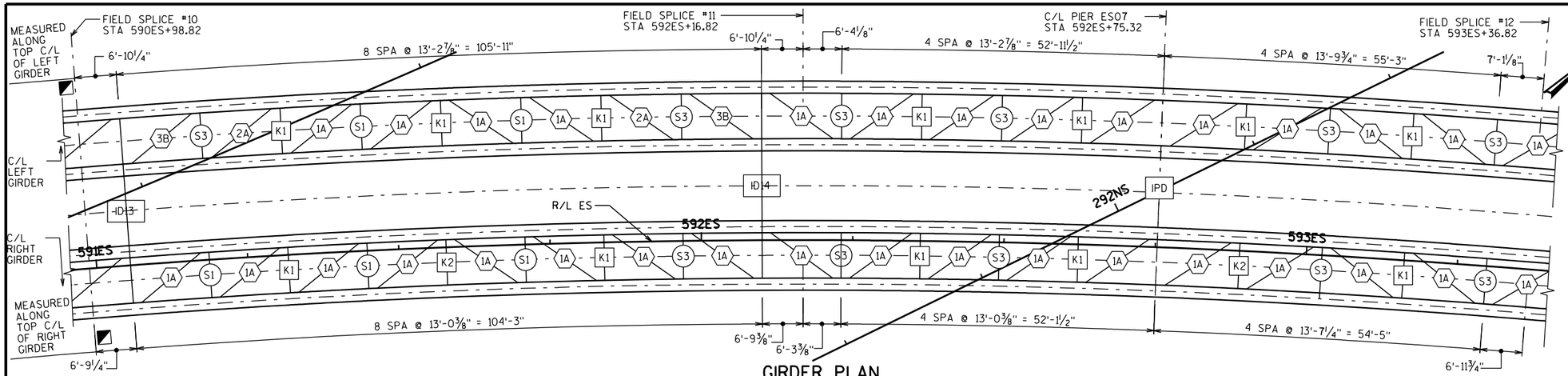
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GIRDER PLAN AND ELEVATION: FIELD SECTIONS 10 & 11

SHEET 52 OF 122

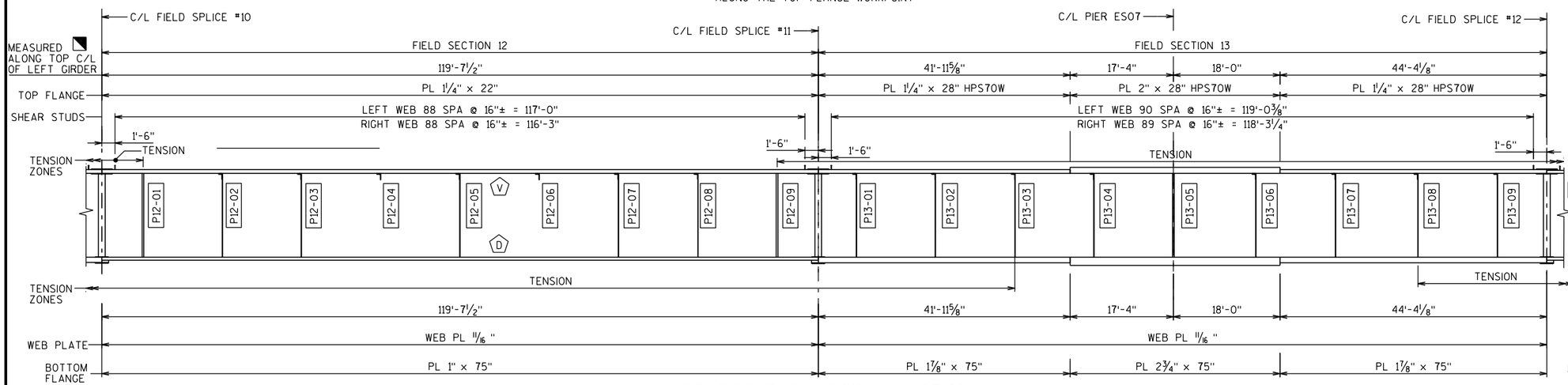
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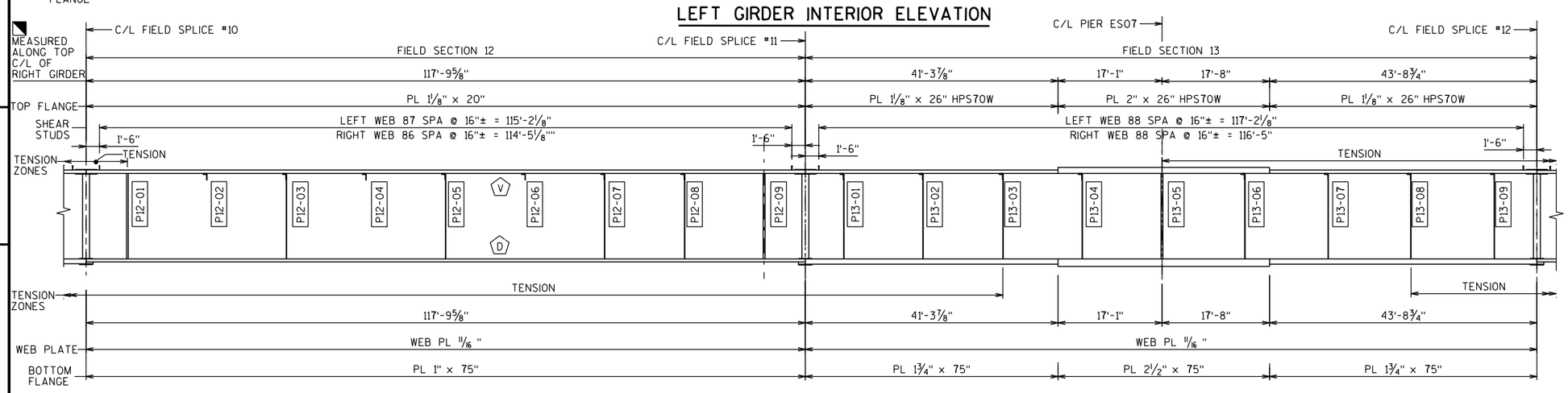


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
S1	TRANSVERSE STRUT IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
AD	ABUTMENT DIAPHRAGM, SEE "ABUTMENT DIAPHRAGM" SHEET.
IPD	INTERIOR PIER DIAPHRAGM, SEE "TYPICAL PIER DIAPHRAGM" SHEET.
PED	PIER END DIAPHRAGM, SEE "PIER END DIAPHRAGM" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
1A	LATERAL BRACING IDENTIFIER, SEE "LATERAL BRACING DETAILS" SHEET. FOR MEMBER SIZE AND CONNECTION DETAILS.
D	BOTTOM FLANGE DRAIN HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
V	WEB PLATE VENT HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
AH	BOTTOM FLANGE ACCESS HATCH, SEE "ACCESS HATCH DETAILS" SHEET.
AC	END DIAPHRAGM ACCESS DOOR, SEE "ACCESS DOOR DETAILS" SHEET.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
◥	SEE "GIRDER SECTION" SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET. FOR FIELD SPLICE DETAILS, SEE "FIELD SPLICE DETAILS" SHEET.
2. FOR CAMBER REQUIREMENTS, SEE CAMBER DIAGRAM SHEETS AND CAMBER AND DECK ELEVATIONS SHEETS.
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5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATIONS ARE HORIZONTAL DIMENSIONS.

STATE PROJECT NUMBER

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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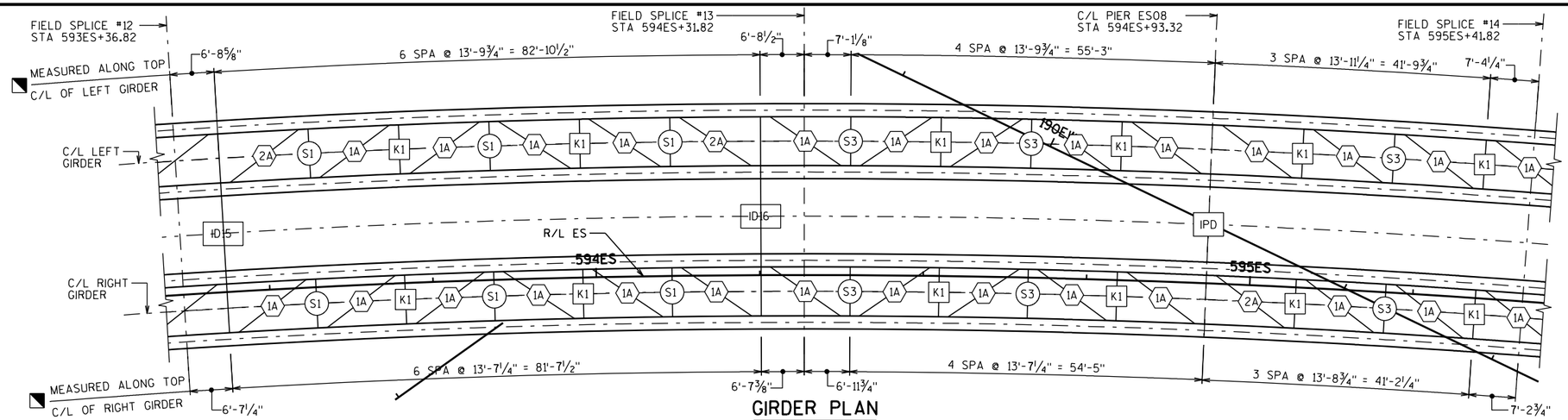
GIRDER PLAN AND ELEVATION: FIELD SECTIONS 12 & 13

SHEET 53 OF 122

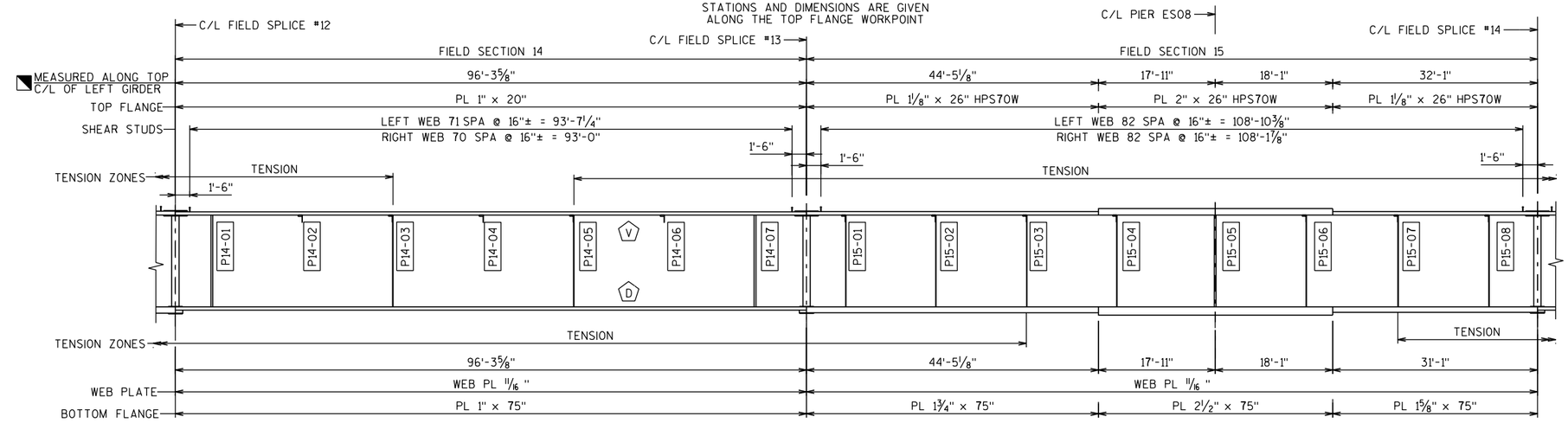
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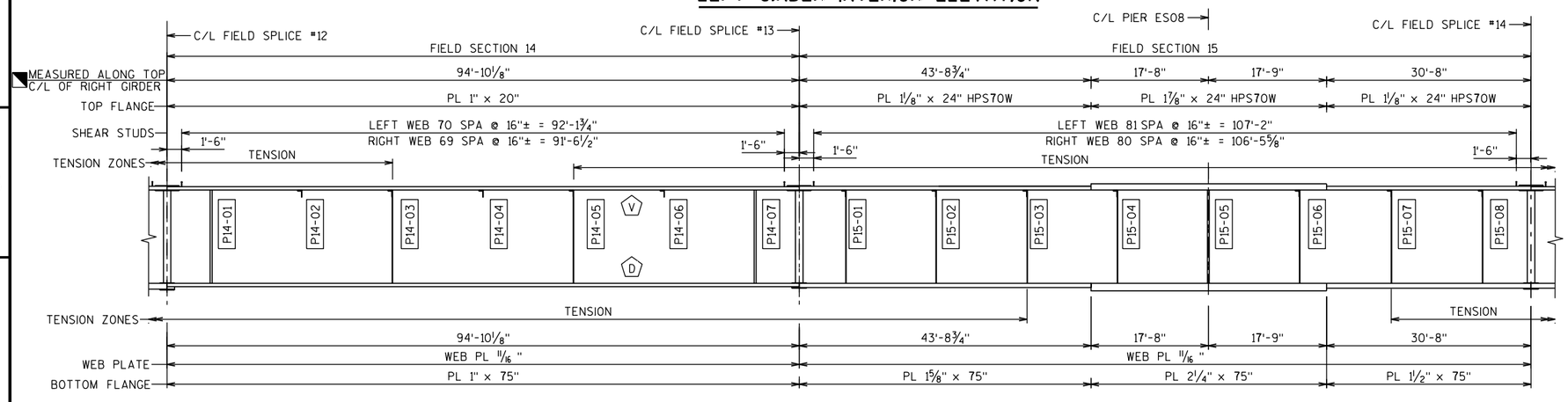
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GIRDER PLAN



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
S1	TRANSVERSE STRUT IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
AD	ABUTMENT DIAPHRAGM, SEE "ABUTMENT DIAPHRAGM" SHEET.
IPD	INTERIOR PIER DIAPHRAGM, SEE "TYPICAL PIER DIAPHRAGM" SHEET.
PED	PIER END DIAPHRAGM, SEE "PIER END DIAPHRAGM" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
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D	BOTTOM FLANGE DRAIN HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
V	WEB PLATE VENT HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
AH	BOTTOM FLANGE ACCESS HATCH, SEE "ACCESS HATCH DETAILS" SHEET.
AC	END DIAPHRAGM ACCESS DOOR, SEE "ACCESS DOOR DETAILS" SHEET.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
	SEE "GIRDER SECTION" SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET. FOR FIELD SPLICE DETAILS, SEE "FIELD SPLICE DETAILS" SHEET.
2. FOR CAMBER REQUIREMENTS, SEE CAMBER DIAGRAM SHEETS AND CAMBER AND DECK ELEVATIONS SHEETS.
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5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATIONS ARE HORIZONTAL DIMENSIONS.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY SR | PLANS CK'D. JWC

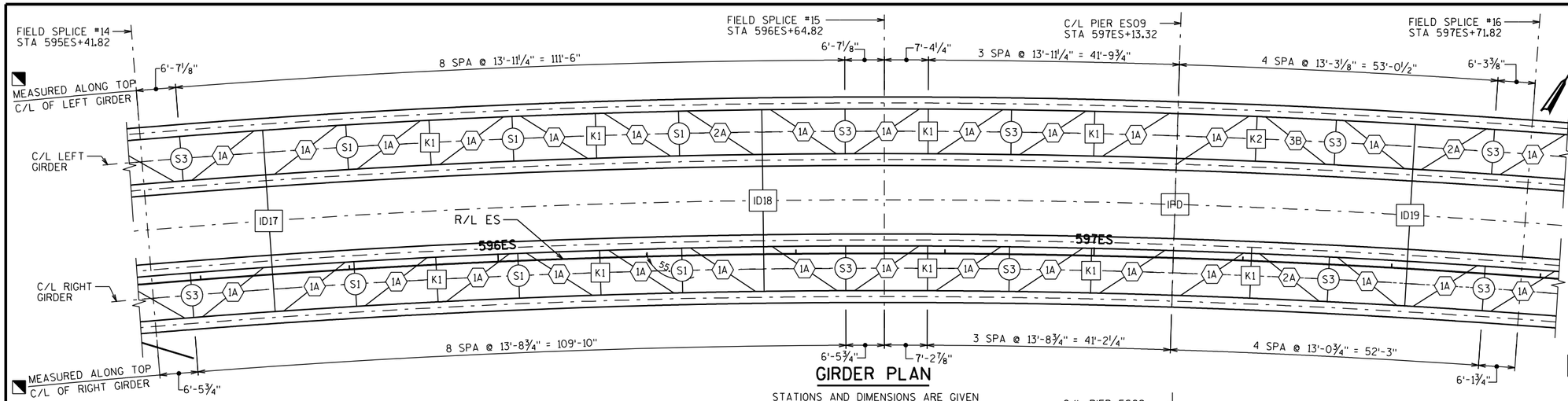
GIRDER PLAN AND ELEVATION: FIELD SECTIONS 14 & 15

SHEET 54 OF 122

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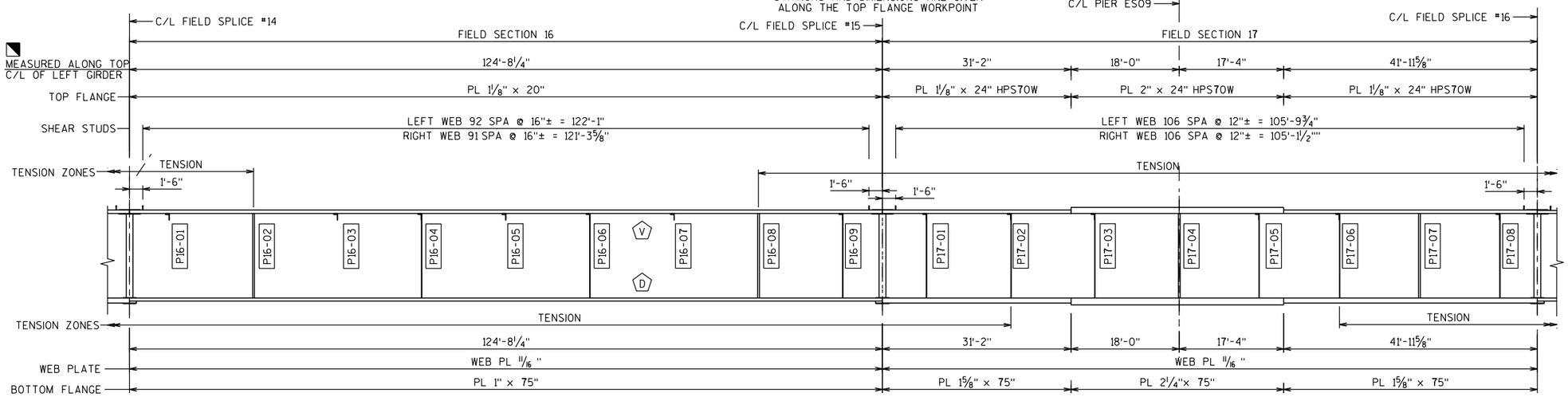
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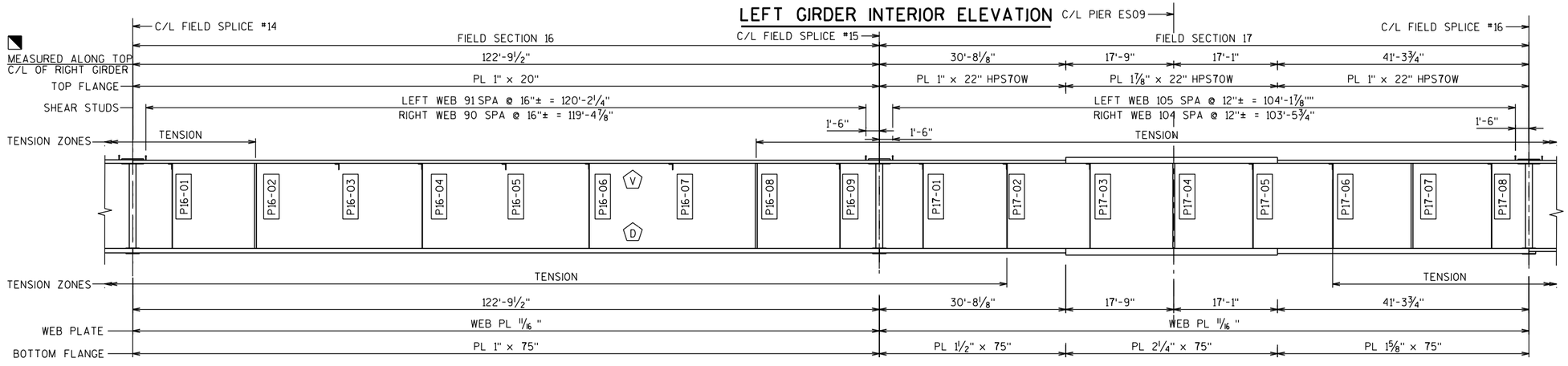


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
S1	TRANSVERSE STRUT IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
AD	ABUTMENT DIAPHRAGM, SEE "ABUTMENT DIAPHRAGM" SHEET.
IPD	INTERIOR PIER DIAPHRAGM, SEE "TYPICAL PIER DIAPHRAGM" SHEET.
PED	PIER END DIAPHRAGM, SEE "PIER END DIAPHRAGM" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
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D	BOTTOM FLANGE DRAIN HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
V	WEB PLATE VENT HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
AH	BOTTOM FLANGE ACCESS HATCH, SEE "ACCESS HATCH DETAILS" SHEET.
AC	END DIAPHRAGM ACCESS DOOR, SEE "ACCESS DOOR DETAILS" SHEET.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
	SEE "GIRDER SECTION" SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET. FOR FIELD SPLICE DETAILS, SEE "FIELD SPLICE DETAILS" SHEET.
2. FOR CAMBER REQUIREMENTS, SEE CAMBER DIAGRAM SHEETS AND CAMBER AND DECK ELEVATIONS SHEETS.
3. '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.
4. FOR 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".
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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE PROJECT NUMBER

1060-33-81

STRUCTURE B-40-854

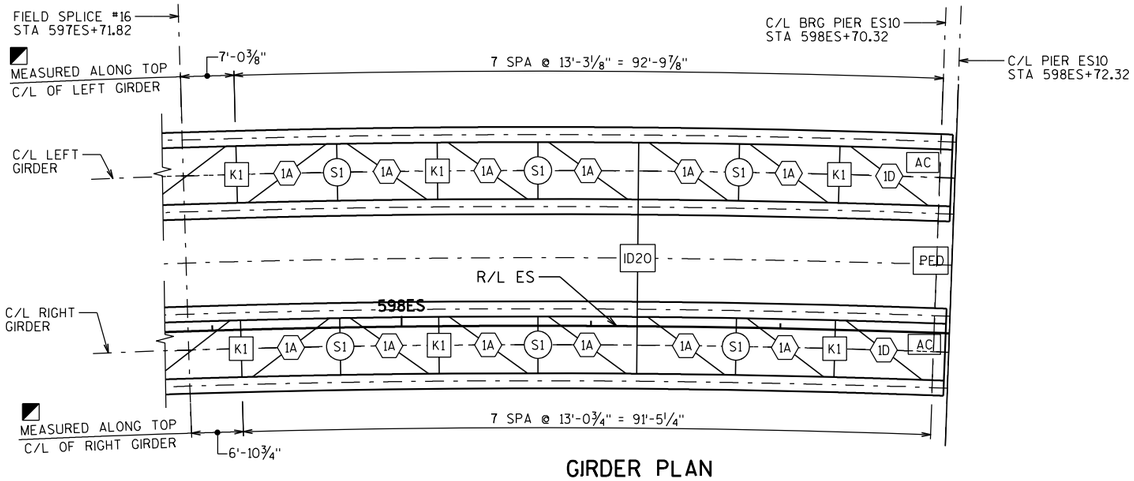
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GIRDER PLAN AND ELEVATION: FIELD SECTIONS 16 & 17

SHEET 55 OF 122

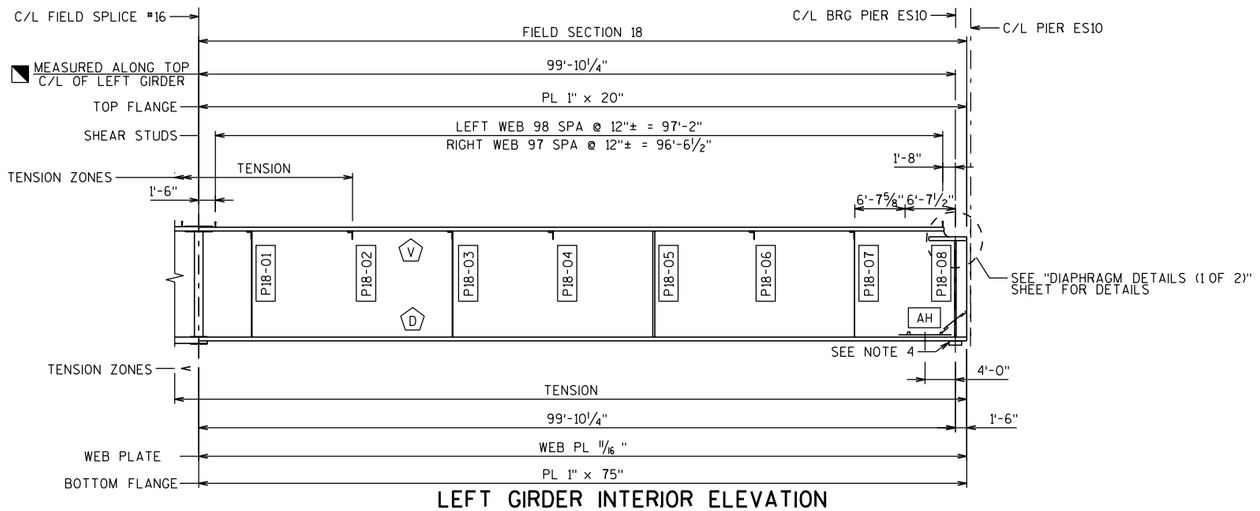
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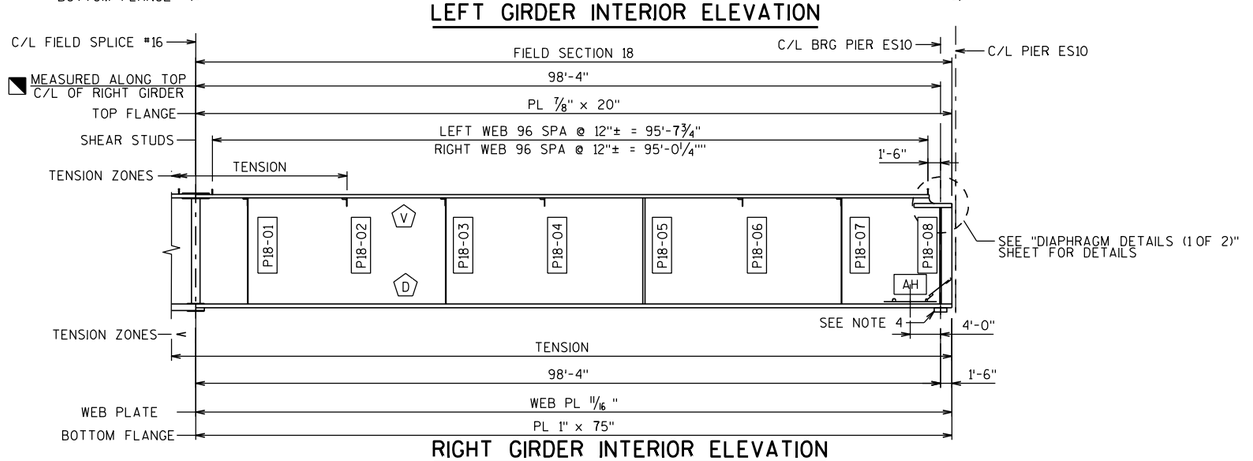


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN
ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

STATE PROJECT NUMBER
1060-33-81

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
S1	TRANSVERSE STRUT IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
AD	ABUTMENT DIAPHRAGM, SEE "ABUTMENT DIAPHRAGM" SHEET.
IPD	INTERIOR PIER DIAPHRAGM, SEE "TYPICAL PIER DIAPHRAGM" SHEET.
PED	PIER END DIAPHRAGM, SEE "PIER END DIAPHRAGM" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
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D	BOTTOM FLANGE DRAIN HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
V	WEB PLATE VENT HOLE, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET.
AH	BOTTOM FLANGE ACCESS HATCH, SEE "ACCESS HATCH DETAILS" SHEET.
AC	END DIAPHRAGM ACCESS DOOR, SEE "ACCESS DOOR DETAILS" SHEET.
PXX-XX	PANEL POINT IDENTIFIER. FIRST "XX" INDICATES FIELD SECTION. SECOND "XX" INDICATES PANEL SEQUENCE WITHIN THE FIELD SECTION.
◥	SEE "GIRDER SECTION" SHEET FOR LOCATION OF WORKING POINT.

NOTES

1. FOR SHOP SPLICE DETAILS AND SHEAR CONNECTOR DETAILS, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET. FOR FIELD SPLICE DETAILS, SEE "FIELD SPLICE DETAILS" SHEET.
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4. FOR 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".
5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATIONS ARE HORIZONTAL DIMENSIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

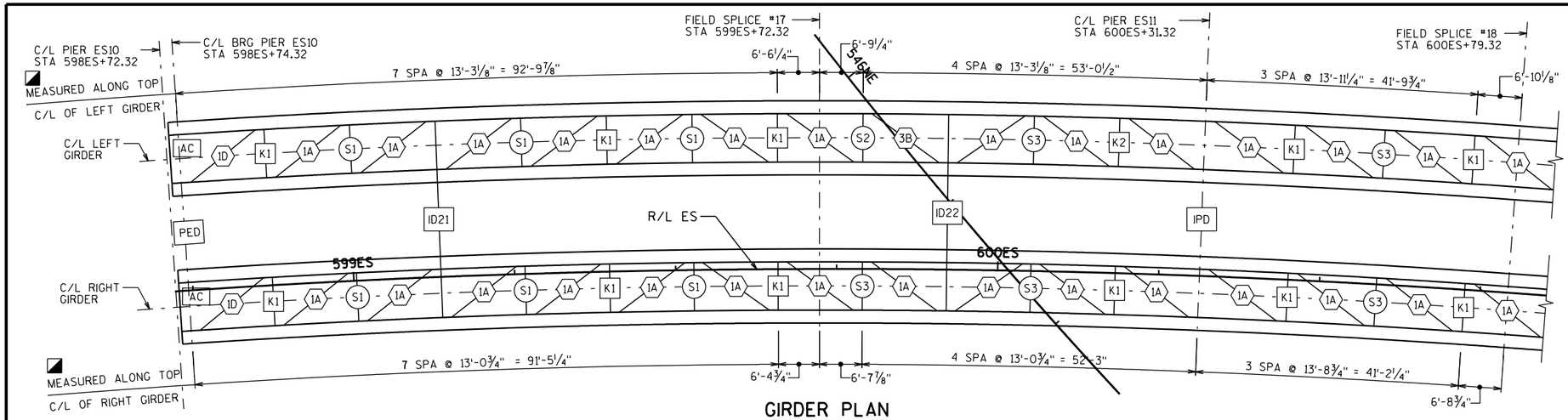
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GIRDER PLAN AND ELEVATION: FIELD SECTIONS 18

SHEET 56 OF 122

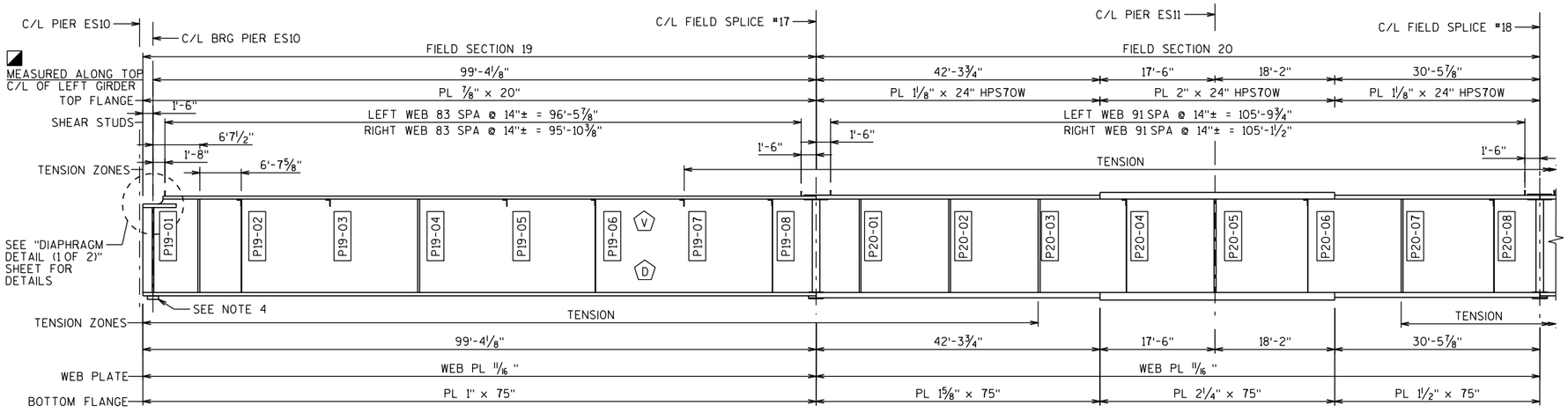
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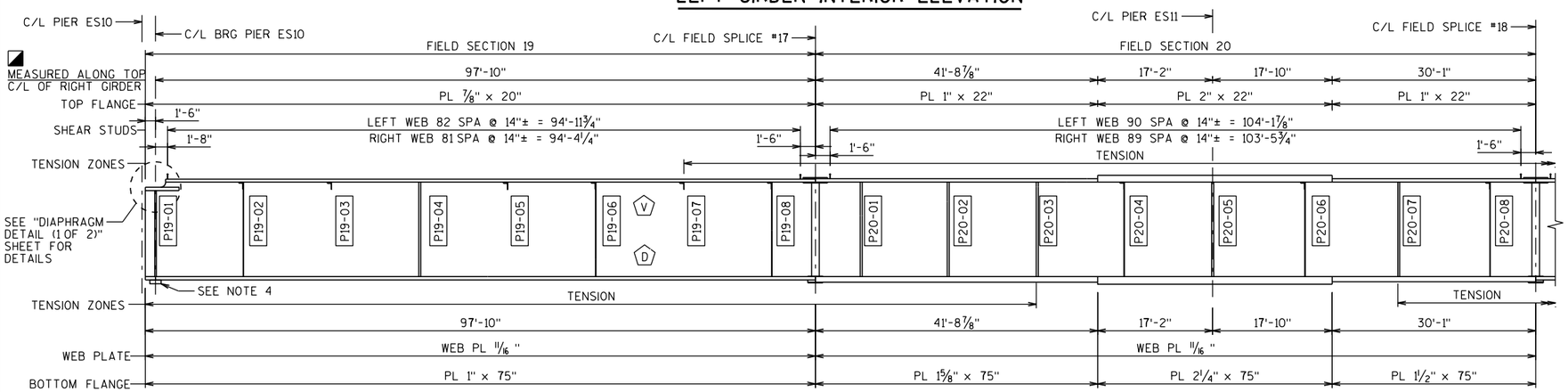


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

STATE PROJECT NUMBER

1060-33-81

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
S1	TRANSVERSE STRUT IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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GIRDER PLAN AND ELEVATION: FIELD SECTIONS 19 & 20

SHEET 57 OF 122

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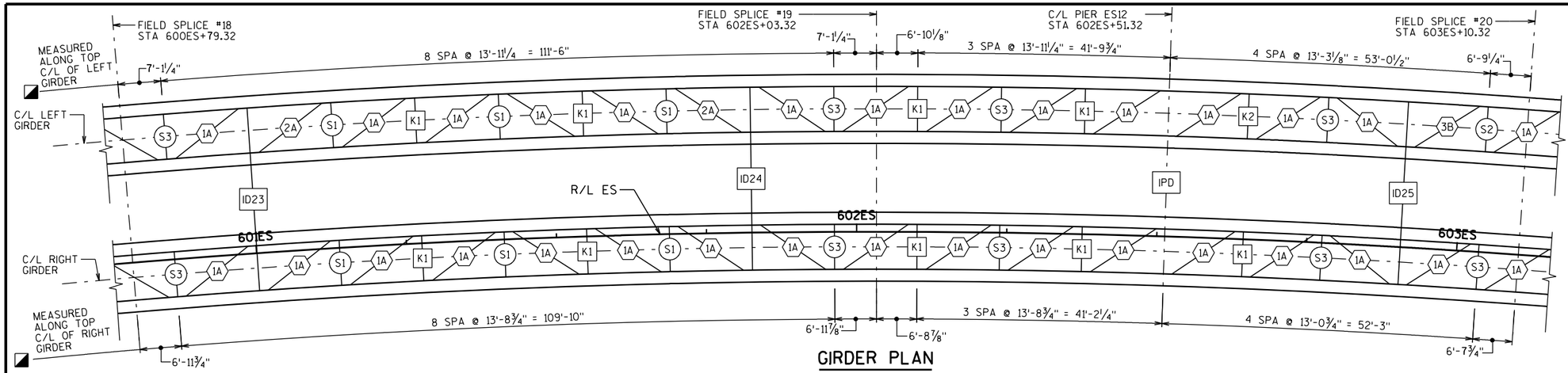
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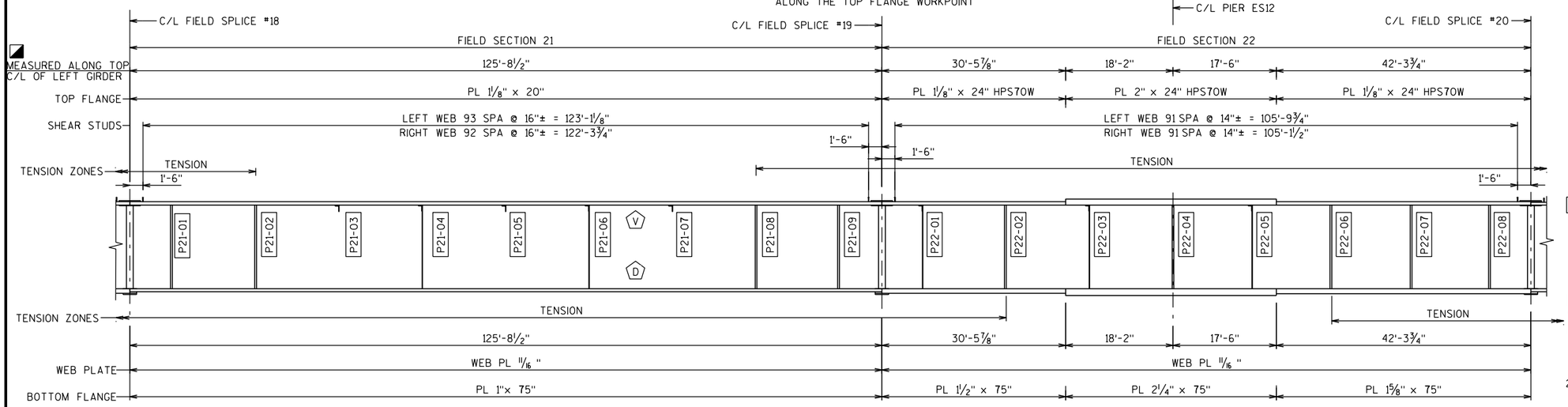
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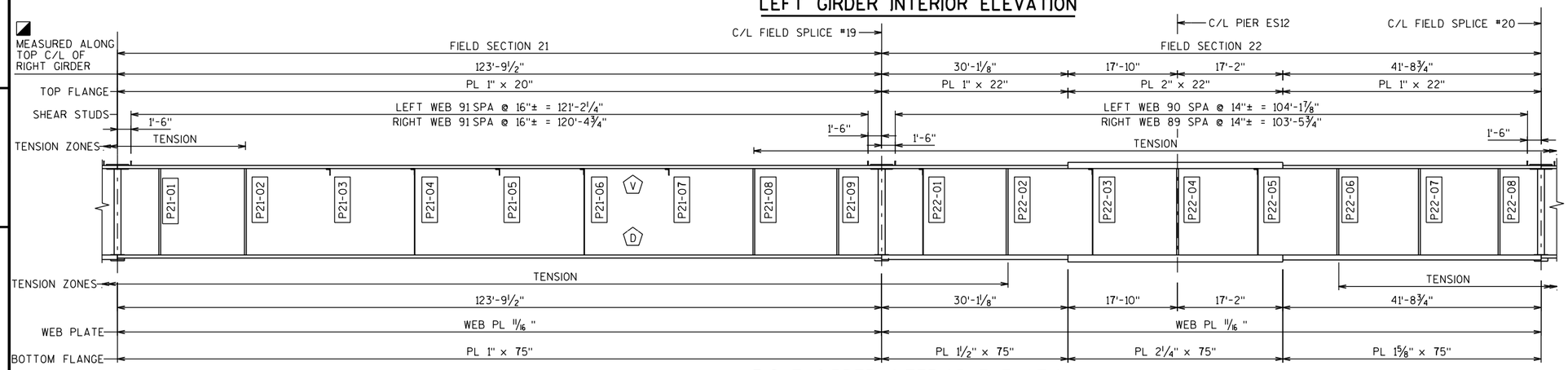


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

STATE PROJECT NUMBER

1060-33-81

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
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	SEE "GIRDER SECTION" SHEET FOR LOCATION OF WORKING POINT.

NOTES

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

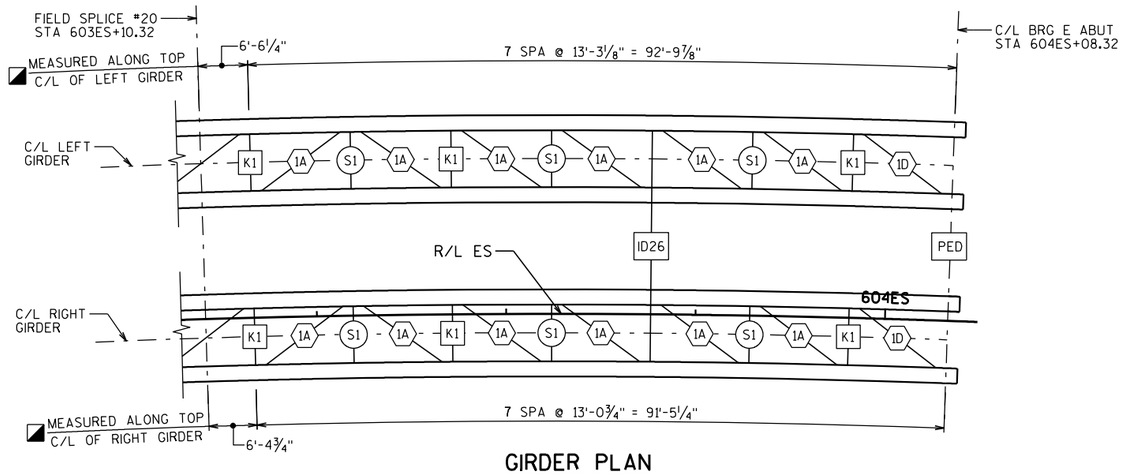
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GIRDER PLAN AND ELEVATION: FIELD SECTIONS 21 & 22

SHEET 58 OF 122

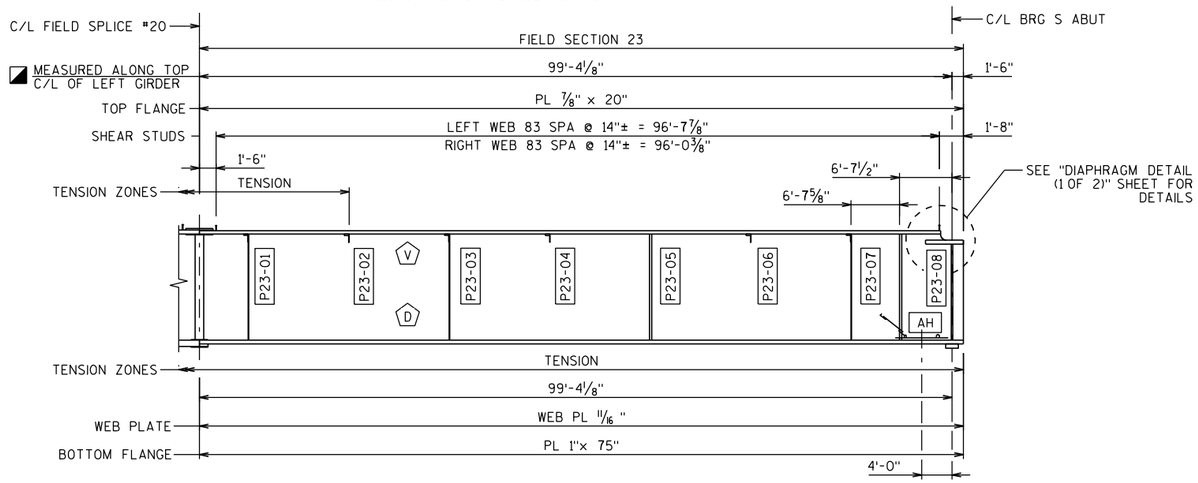
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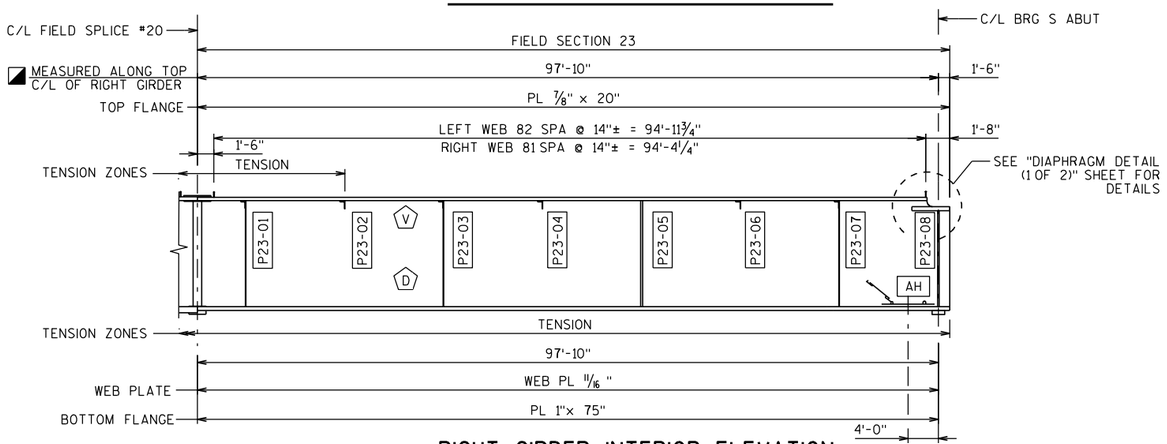


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN
ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER INTERIOR ELEVATION



RIGHT GIRDER INTERIOR ELEVATION

STATE PROJECT NUMBER
1060-33-81

LEGEND

K1	K-FRAME IDENTIFIER, SEE "INTERMEDIATE K-FRAMES, STRUTS, AND STIFFENERS" SHEET.
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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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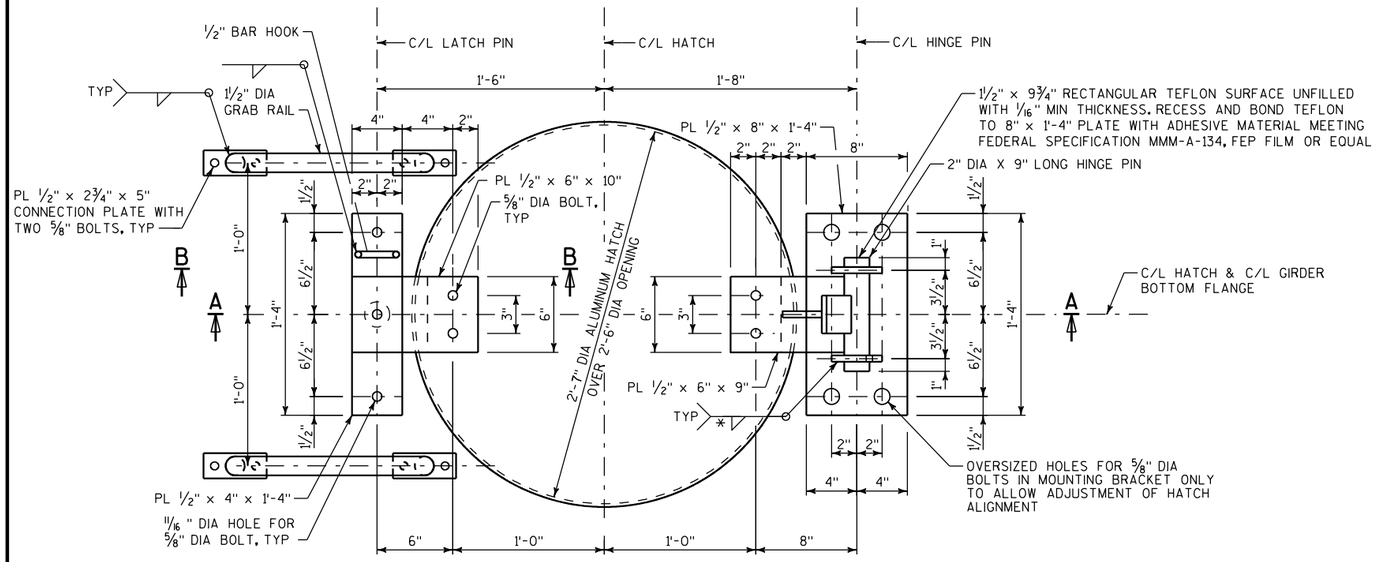
GIRDER PLAN AND ELEVATION: FIELD SECTION 23

SHEET 59 OF 122

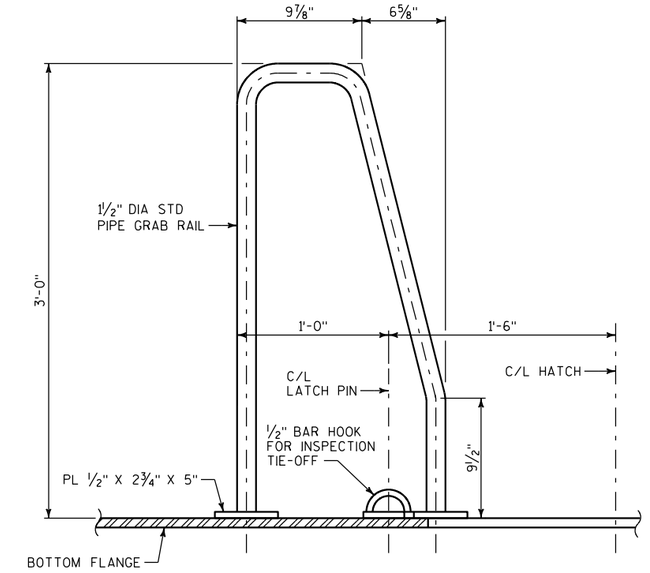
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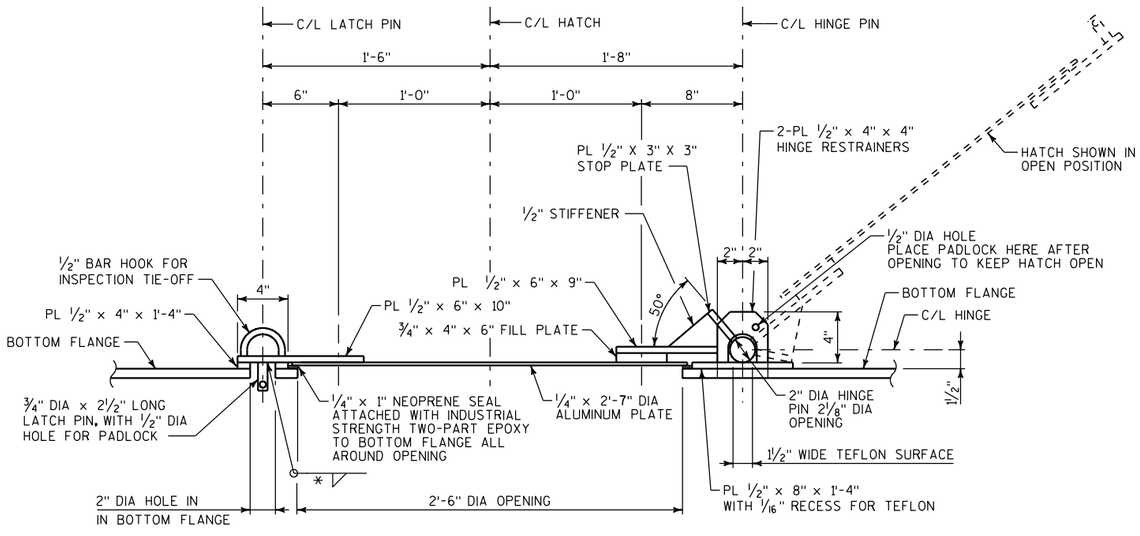
STATE PROJECT NUMBER
1060-33-81



ACCESS HATCH PLAN



SECTION B-B



SECTION A-A

*SEE TABLE OF FILLET WELD SIZES ON GIRDER SECTION SHEET.

NOTES:

1. ALL BOLTS SHOWN ARE ⅝" DIAMETER ASTM A325 TYPE 1.
2. SIX 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. 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-40-854

DRAWN BY	SR	PLANS CK'D.	JWC

ACCESS HATCH DETAILS

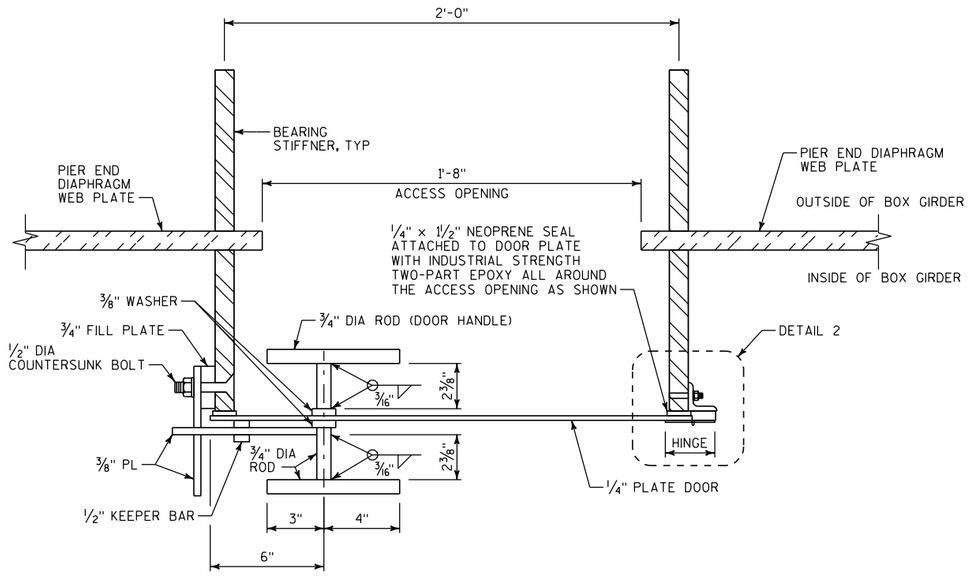
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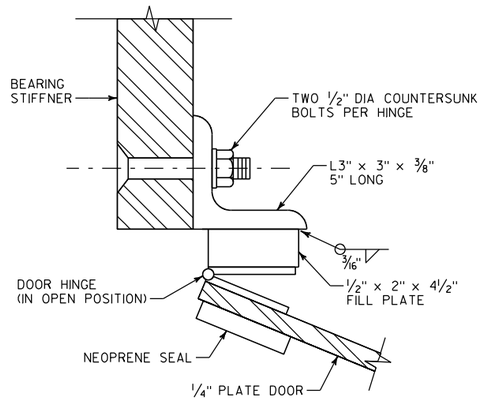
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STATE PROJECT NUMBER

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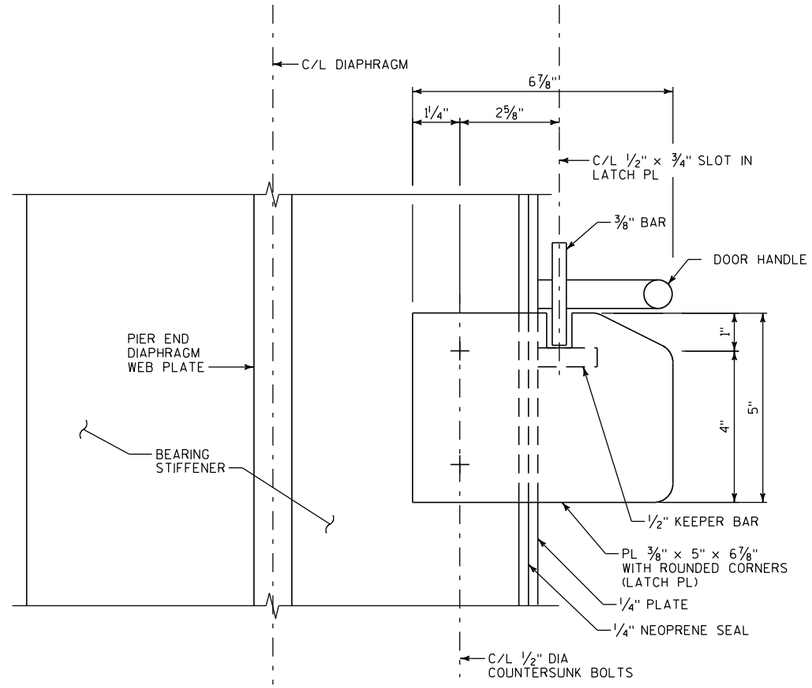


SECTION A-A

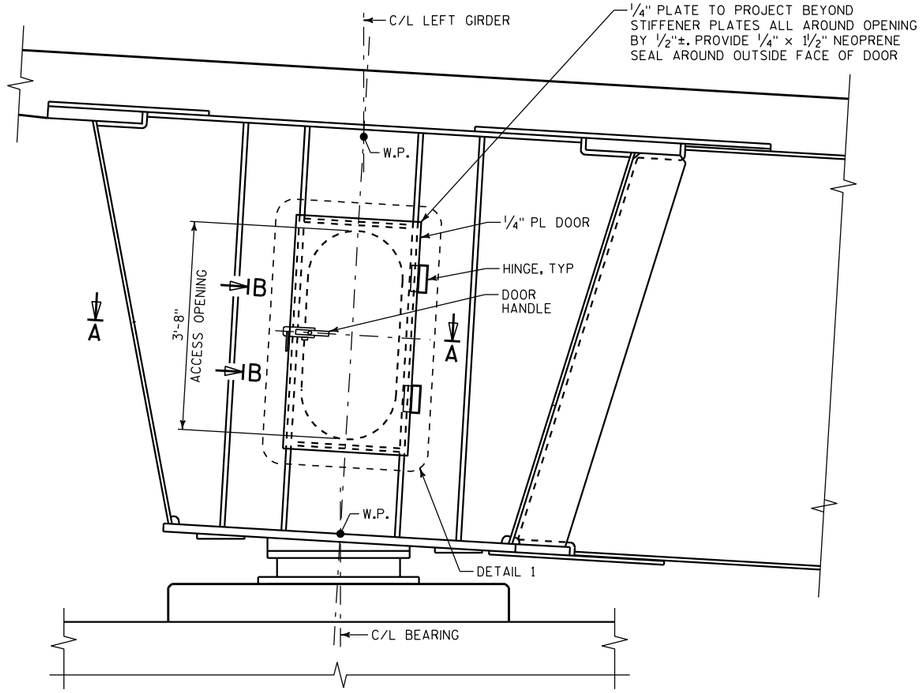


DETAIL 2

(WITH DOOR OPEN)

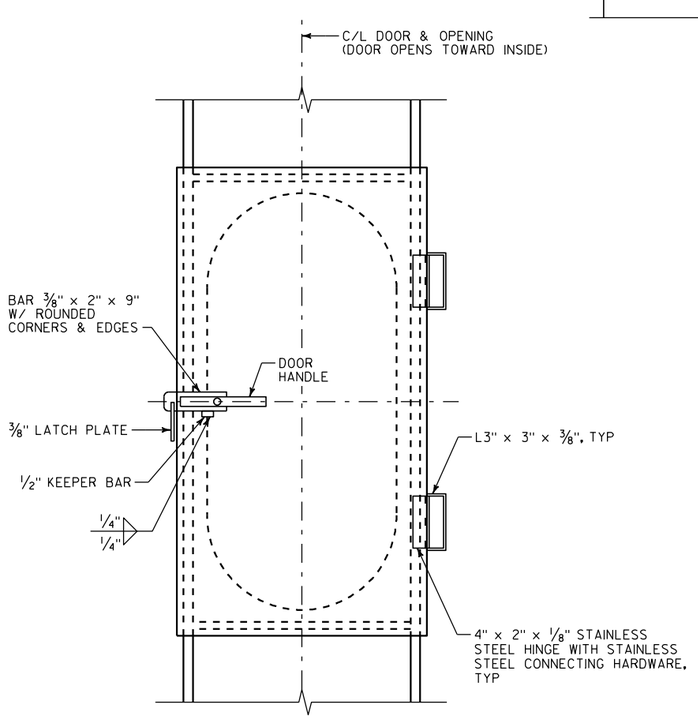


SECTION B-B



ELEVATION

LEFT GIRDER SHOWN, RIGHT GIRDER SIMILAR



DETAIL 1

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

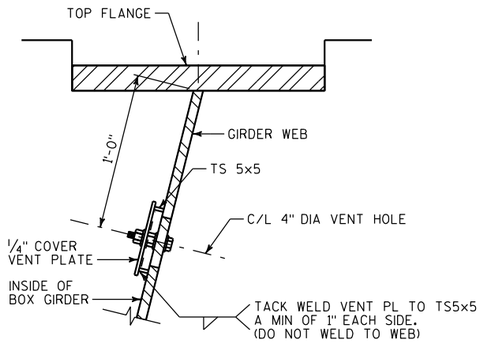
DRAWN BY SR | PLANS CK'D. JWC

ACCESS DOOR DETAILS

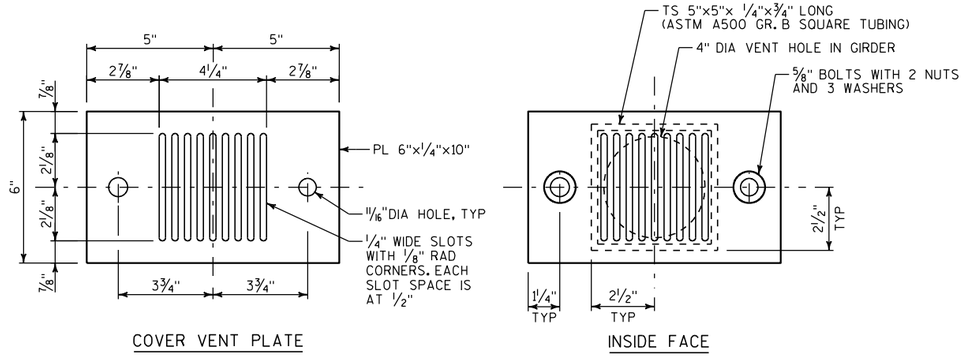
SHEET 61 OF 122

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Mandatory\080524_ss.dgn

PLOT DATE : 01-MAR-2015 19:02 PLOT BY : MSCKTM PLOT NAME : 080524_ss PLOT SCALE : 2.666667:1



VENT HOLE LOCATION

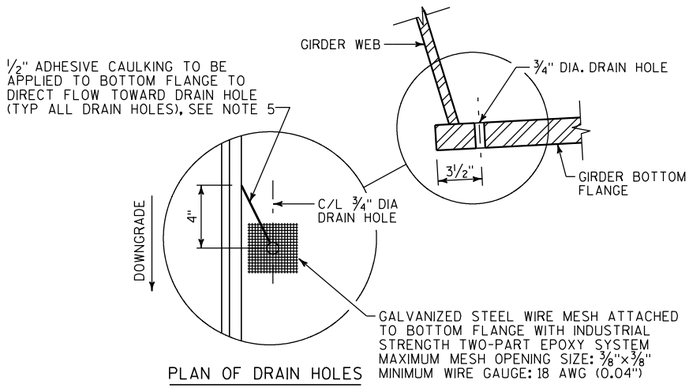


COVER VENT PLATE

INSIDE FACE

VENT HOLE COVER ASSEMBLY

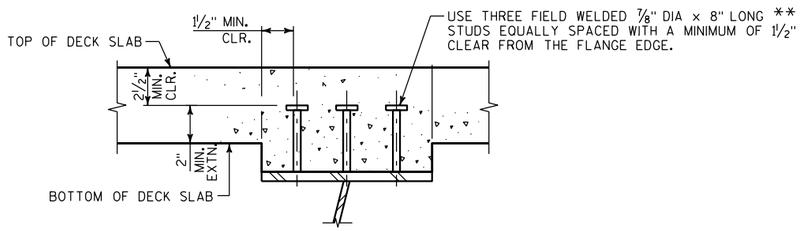
NOT TO SCALE



PLAN OF DRAIN HOLES

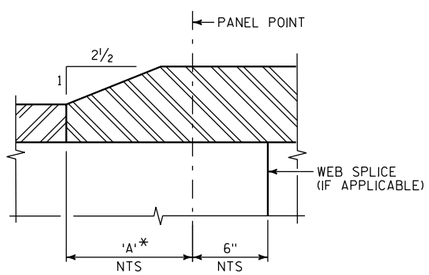
DRAIN HOLE DETAILS

NOT TO SCALE



SHEAR CONNECTOR DETAIL

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



SHOP SPLICE DETAIL

* SEE GIRDER PLAN AND ELEVATION SHEETS FOR INFORMATION TO CALCULATE 'A'

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 IN THE 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-40-854

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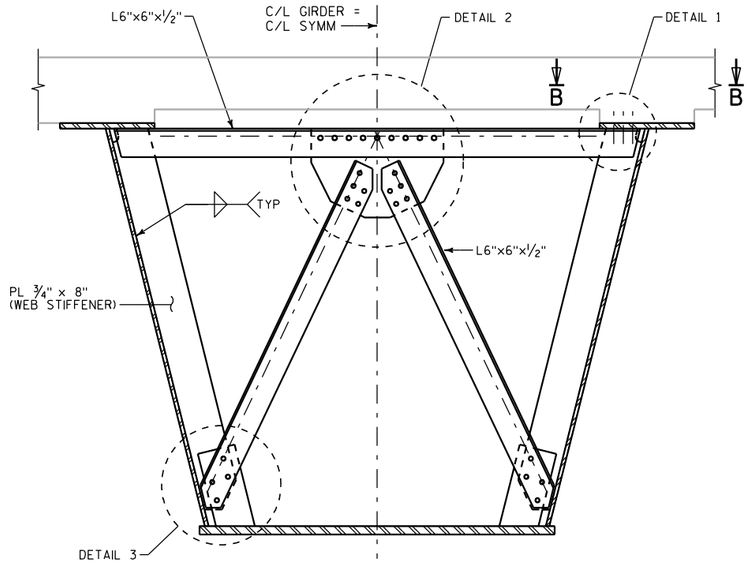
MISCELLANEOUS GIRDER DETAILS

SHEET 62 OF 122

8

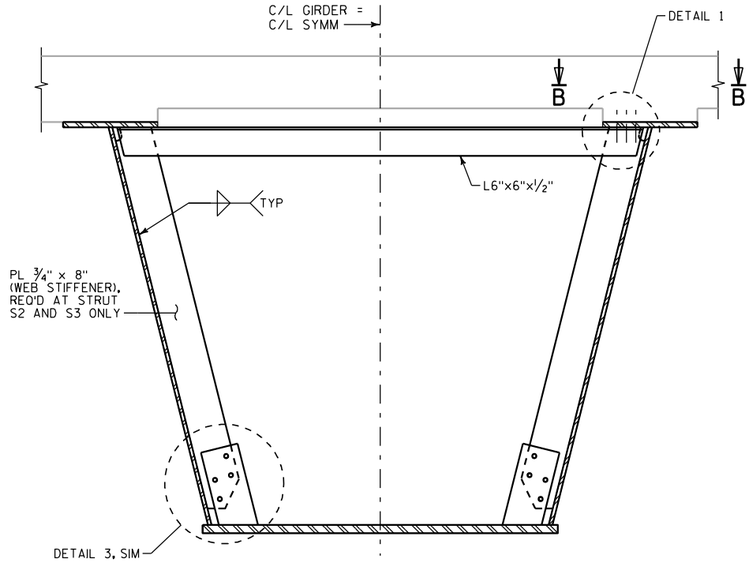
8

STATE PROJECT NUMBER
1060-33-81



TYPICAL SECTION AT K-FRAME

FOR LOCATION OF K-FRAMES K1 AND K2
SEE GIRDER PLAN AND ELEVATION SHEETS

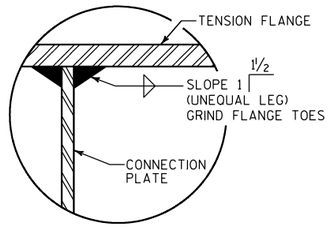


TYPICAL SECTION AT STRUT

FOR LOCATION OF STRUTS S1, S2, AND S3
SEE GIRDER PLAN AND ELEVATION SHEETS

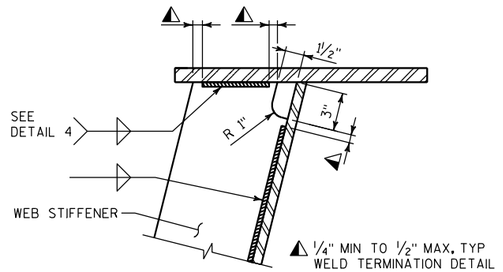
KEY TO K-FRAME AND STRUT IDENTIFIERS

ID	NO. OF BOLTS REQ'D AT DETAIL 1	WEB STIFFENERS REQUIRED
K1	3	YES
K2	6	YES
S1	3	NO
S2	6	YES
S3	3	YES



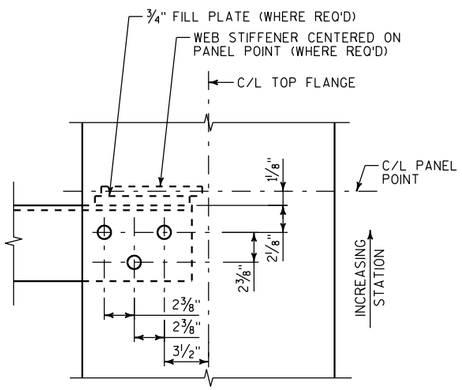
DETAIL 4

WEB STIFFENER DETAIL
AT TENSION FLANGE

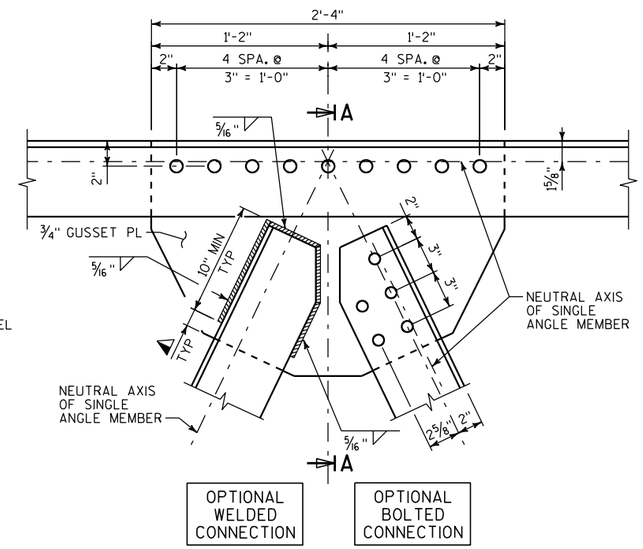


DETAIL 5

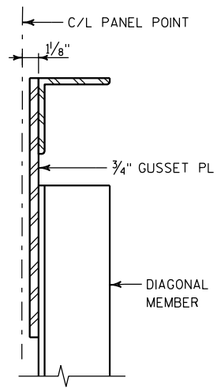
DETAIL 1



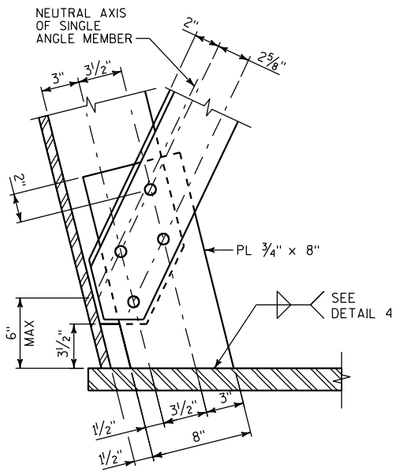
VIEW B-B



DETAIL 2



SECTION A-A



DETAIL 3

NOTES

1. ALL BOLTS IN K-FRAME OR STRUT CONNECTIONS ARE ⅞" DIAMETER ASTM A325 TYPE 1.
2. K-FRAMES AND STRUTS ARE ALIGNED NORMAL TO THE GIRDER BOTTOM FLANGE UNLESS NOTED OTHERWISE.
3. 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-40-854

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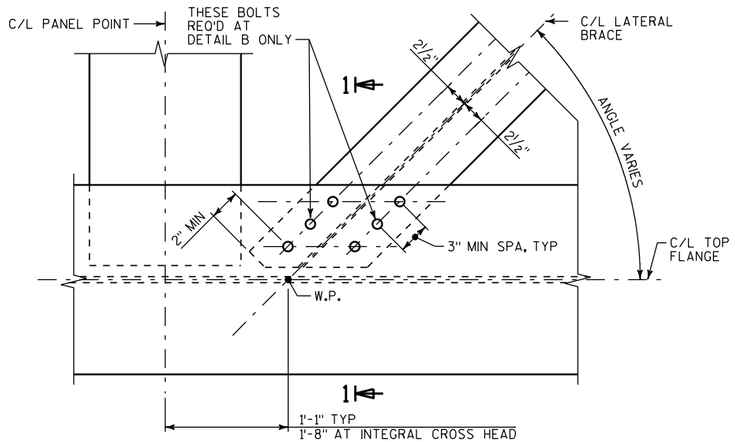
INTERMEDIATE K-FRAMES, STRUTS, & STIFFENERS

SHEET 63 OF 122

8

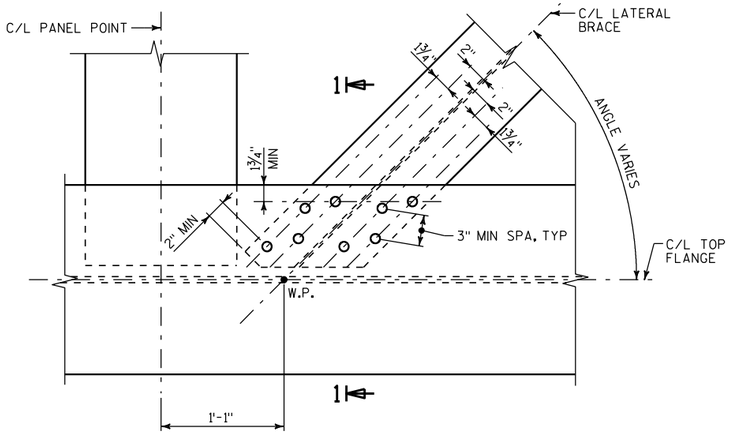
8

STATE PROJECT NUMBER
1060-33-81

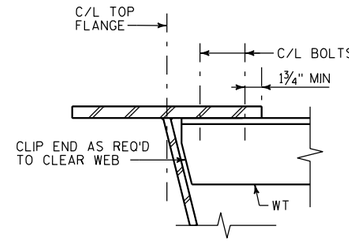


DETAIL A
4 BOLT CONNECTION

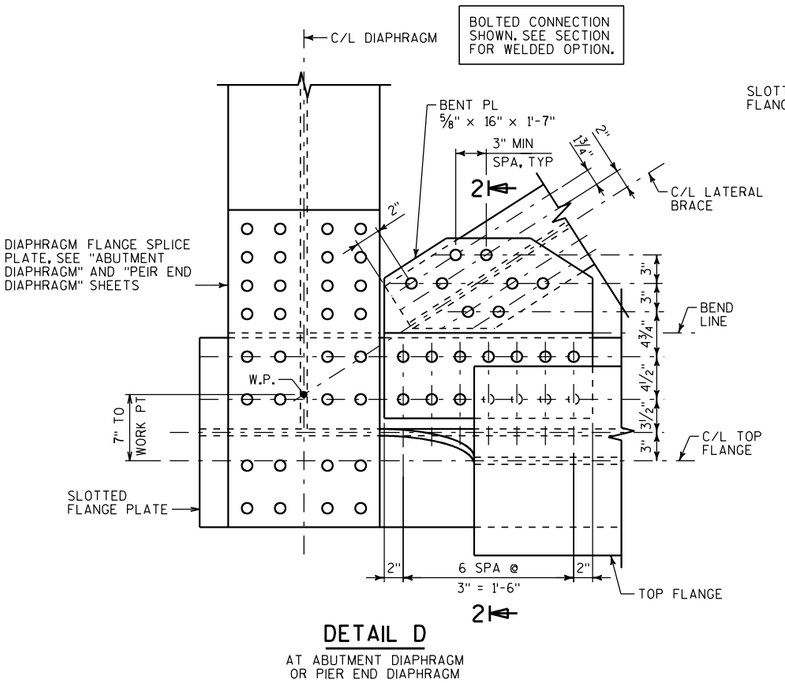
DETAIL B
6 BOLT CONNECTION



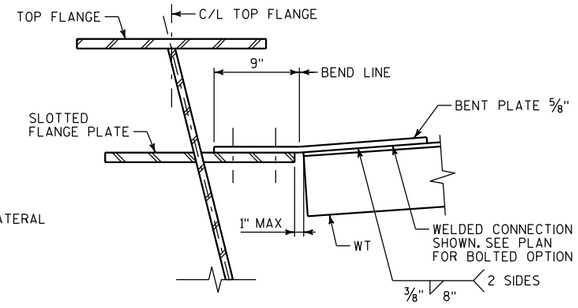
DETAIL C
8 BOLT CONNECTION



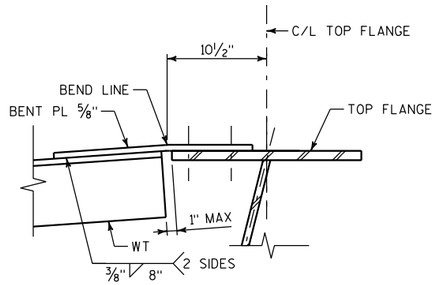
SECTION 1-1



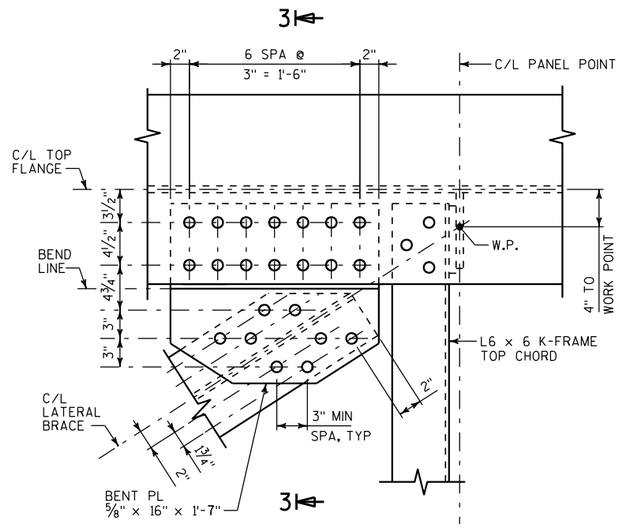
DETAIL D
AT ABUTMENT DIAPHRAGM OR PIER END DIAPHRAGM



SECTION 2-2



SECTION 3-3



DETAIL D
AT FIRST K-FRAME

SECTION MARKS

THE FIRST CHARACTER OF THE LATERAL BRACING INTENTIFIER SPECIFIES THE MEMBER SIZE AS FOLLOWS:

1 WT 7 x 30.5

2 WT 8 x 33.5

3 WT 10.5 x 55.5

THE SECOND CHARACTER OF THE LATERAL BRACING IDENTIFIER SPECIFIES THE END CONNECTION DETAIL AND RELATES DIRECTLY TO DETAILS A THRU D 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 PLAN AND ELEVATION SHEETS FOR ORIENTATION OF EACH LATERAL BRACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

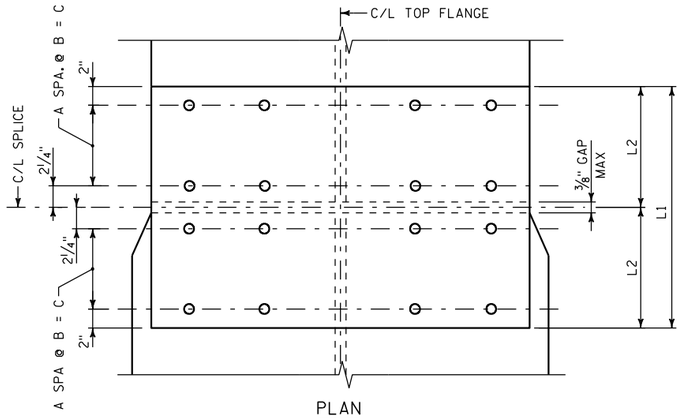
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LATERAL BRACING DETAILS

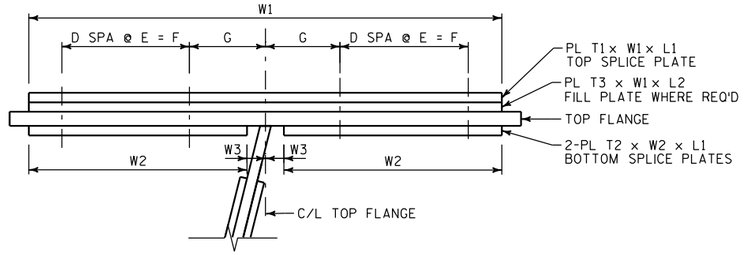
SHEET 64 OF 122

8

8

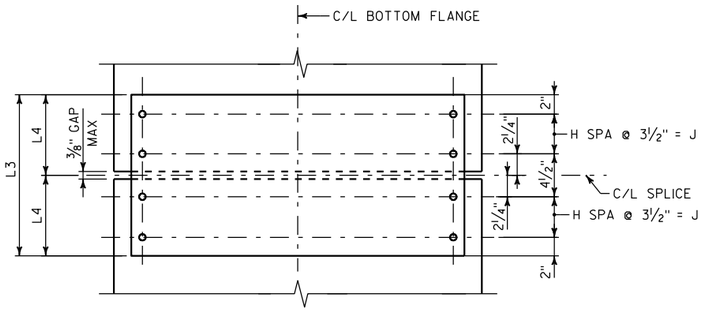


PLAN

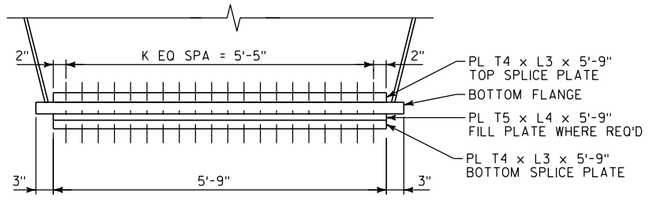


SECTION

TOP FLANGE SPLICE

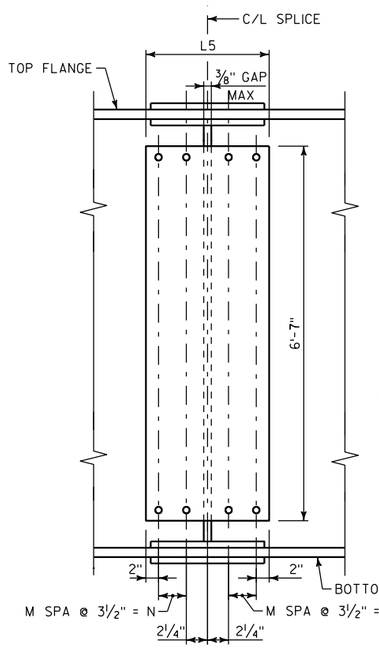


PLAN

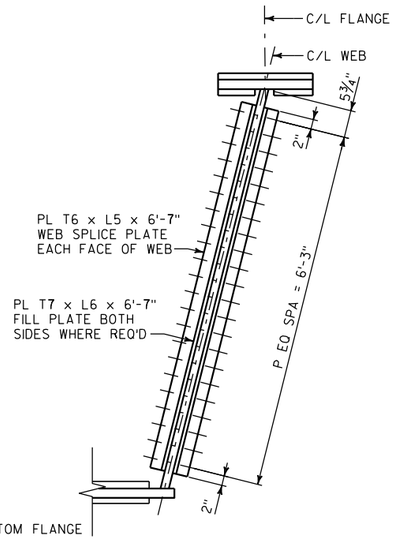


SECTION

BOTTOM FLANGE SPLICE



ELEVATION



SECTION

WEB SPLICE

FIELD SPLICE NOTES

1. ALL BOLTS SHOWN FOR FIELD SPLICES ARE 1" 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.
5. FOR DIMENSIONS AND BOLT SPACING AT INDIVIDUAL FIELD SPLICES, SEE THE FIELD SPLCE TABLE ON "FIELD SPLICE DETAILS (2 OF 2)" SHEET.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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FIELD SPLICE DETAILS (1 OF 2)

SHEET 65 OF 122

8

8

STATE PROJECT NUMBER
1060-33-81

FIELD SPLICE TABLE

FIELD SPLICE NUMBER	GIRDER	TOP FLANGE SPLICE																BOTTOM FLANGE SPLICE							WEB SPLICE				
		T1	T2	T3	L1	L2	W1	W2	W3	A	B	C	D	E	F	G	T4	T5	L3	L4	H	J	K	T6	T7	L5	L6	M	N	P
Splice 1	G1	1/2"	1/2"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/4"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	1/2"	1/2"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/4"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 2	G1	5/8"	5/8"	-	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	3/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	-	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 3	G1	5/8"	5/8"	1/4"	2'-5 1/2"	1'-2 3/4"	1'-8"	9"	1"	3	3 1/2"	10 1/2"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	1/4"	2'-5 1/2"	1'-2 3/4"	1'-8"	9"	1"	3	3 1/2"	10 1/2"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 4	G1	5/8"	5/8"	1/4"	2'-5 1/2"	1'-2 3/4"	1'-8"	9"	1"	3	3 1/2"	10 1/2"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	1/4"	2'-5 1/2"	1'-2 3/4"	1'-8"	9"	1"	3	3 1/2"	10 1/2"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 5	G1	5/8"	5/8"	-	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	-	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 6	G1	5/8"	5/8"	-	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	5/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	-	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	5/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 7	G1	5/8"	5/8"	-	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/4"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	-	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/4"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 8	G1	1/2"	1/2"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/4"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	1/2"	1/2"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/4"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 9	G1	1/2"	1/2"	1/4"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	5/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	1/2"	1/2"	3/8"	2'-5 1/2"	1'-2 3/4"	1'-8"	9"	1"	3	3 1/2"	10 1/2"	1	5"	5"	3"	5/8"	7/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 10	G1	5/8"	5/8"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	5/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	1/4"	2'-5 1/2"	1'-2 3/4"	1'-8"	9"	1"	3	3 1/2"	10 1/2"	1	5"	5"	3"	5/8"	3/4"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 11	G1	5/8"	5/8"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	5/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	1/4"	2'-5 1/2"	1'-2 3/4"	1'-8"	9"	1"	3	3 1/2"	10 1/2"	1	5"	5"	3"	5/8"	7/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 12	G1	5/8"	5/8"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	3/4"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	1/4"	2'-5 1/2"	1'-2 3/4"	1'-8"	9"	1"	3	3 1/2"	10 1/2"	1	5"	5"	3"	5/8"	7/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 13	G1	5/8"	5/8"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	3/4"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 14	G1	5/8"	5/8"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	5/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 15	G1	5/8"	5/8"	-	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	3/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	5/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 16	G1	5/8"	5/8"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	11/16"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	1/4"	2'-5 1/2"	1'-2 3/4"	1'-8"	9"	1"	3	3 1/2"	10 1/2"	1	5"	5"	3"	5/8"	5/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 17	G1	1/2"	1/2"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	5/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	1/2"	1/2"	1/4"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	5/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 18	G1	5/8"	5/8"	-	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 19	G1	5/8"	5/8"	-	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	5/8"	5/8"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	1/2"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
Splice 20	G1	1/2"	1/2"	1/8"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	5/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16
	G2	1/2"	1/2"	1/4"	1'-10 1/2"	11 1/4"	1'-8"	9"	1"	2	3 1/2"	7"	1	5"	5"	3"	5/8"	5/8"	1'-10 1/2"	11 1/4"	2	7"	21	1/2"	-	1'-10 1/2"	-	2	7"	16

FIELD SPLICE NOTES

1. SEE "FIELD SPLICE DETAILS (1 OF 2)" SHEET FOR DIAGRAMS TO CLARIFY THE DATA ON THIS SHEET IN THE FIELD SPLICE TABLE.
2. FOR FIELD SPLICE LOCATIONS, SEE GIRDER PLAN AND ELEVATION SHEETS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

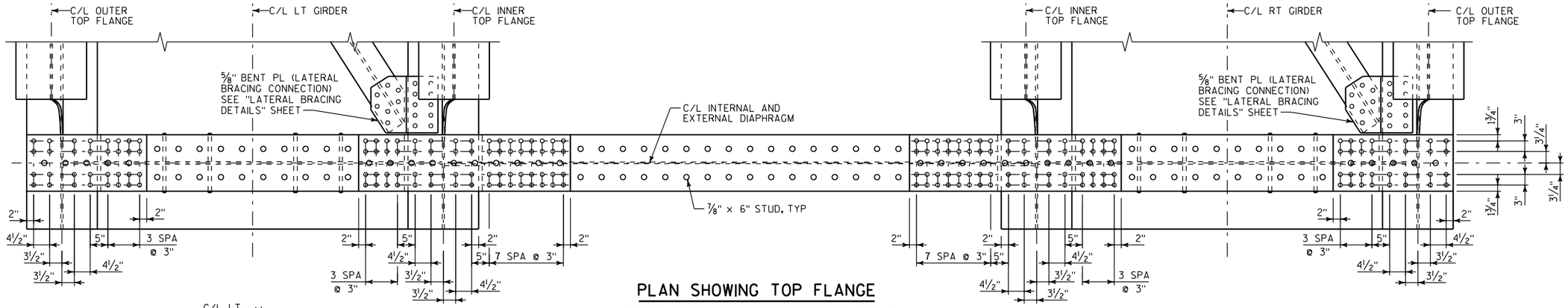
STRUCTURE B-40-854

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FIELD SPLICE DETAILS (2 OF 2)

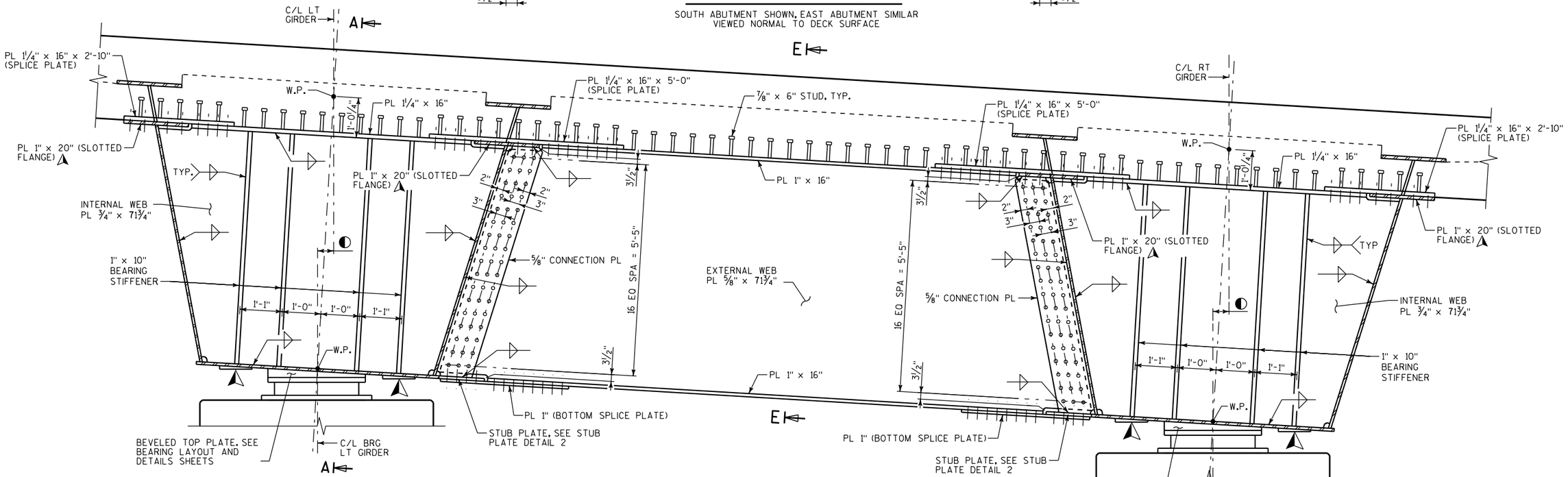
SHEET 66 OF 122

STATE PROJECT NUMBER
1060-33-81



PLAN SHOWING TOP FLANGE

SOUTH ABUTMENT SHOWN, EAST ABUTMENT SIMILAR
VIEWED NORMAL TO DECK SURFACE



ELEVATION

LOOKING UPSTATION

NOTES

1. DIAPHRAGM WEBS ARE ALIGNED NORMAL TO BOX GIRDER BOTTOM FLANGES.
2. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
3. FOR DETAILS OF WELD TERMINATIONS AND STANDARD CLIPS, SEE "DIAPHRAGM DETAILS (2 OF 2)" SHEET.
4. 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.
5. FOR SECTIONS, SEE "DIAPHRAGM DETAILS (1 OF 2)" SHEET. FOR DETAILS, SEE "DIAPHRAGM DETAILS (2 OF 2)" SHEET
6. FOR DEFINITION AND LOCATIONS OF WORKING POINTS, SEE "GIRDER SECTIONS" SHEET

LEGEND

- SUGGESTED JACKING PAD AND STIFFENER LOCATION FOR FUTURE BEARING REPLACEMENT. SEE "JACKING PROVISIONS" SHEET FOR DETAILS.
- SEE "GIRDER SECTION" SHEET FOR INFORMATION
- FOR SLOTTED FLANGE DETAIL, SEE "DIAPHRAGM DERAILS (1 OF 2)" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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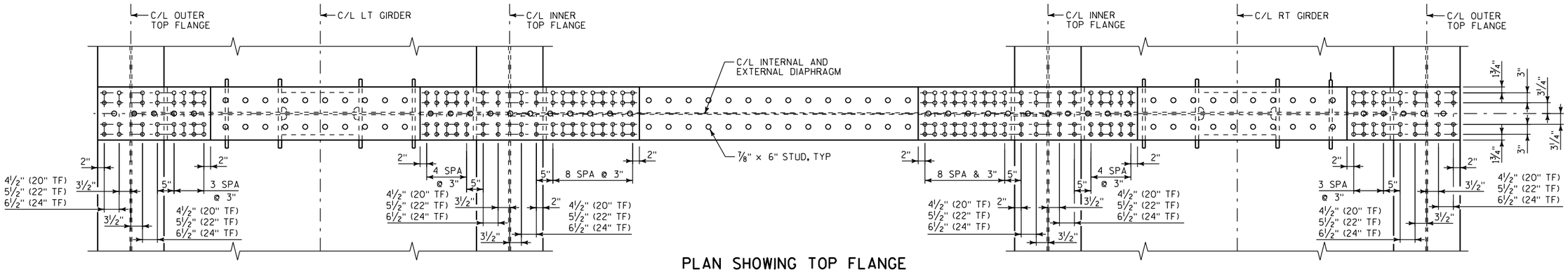
ABUTMENT DIAPHRAGM

SHEET 67 OF 122

8

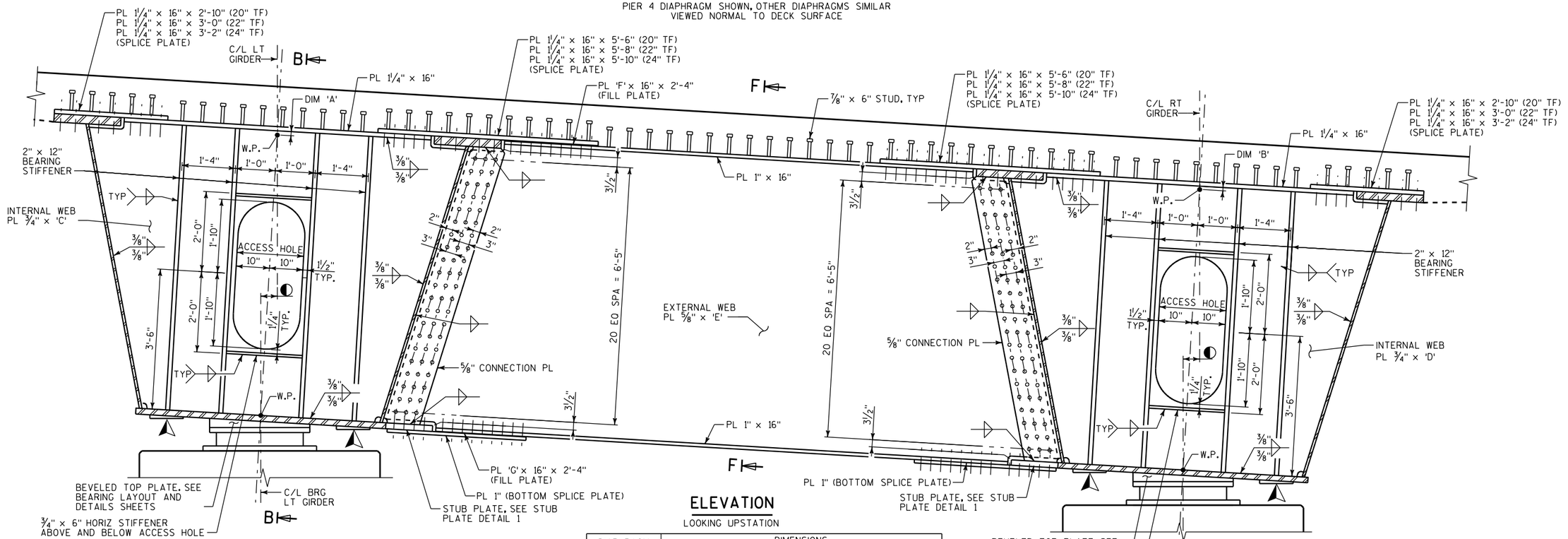
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PLOT BY : MSCKTM
PLOT NAME : 080529_ss
PLOT SCALE : 2.666667:1

STATE PROJECT NUMBER
1060-33-81



PLAN SHOWING TOP FLANGE

PIER 4 DIAPHRAGM SHOWN, OTHER DIAPHRAGMS SIMILAR
VIEWED NORMAL TO DECK SURFACE



ELEVATION

LOOKING UPSTATION

DIAPHRAGM LOCATION	DIMENSIONS						
	'A'*	'B'*	'C'	'D'	'E'	'F'	'G'
ES01	5/8"	1/2"	84 5/8"	84 1/2"	85 5/8"	1/8"	1/8"
ES02	3/4"	3/4"	84 3/4"	84 3/4"	86 1/2"	0"	0"
ES03	5/8"	1/2"	84 5/8"	84 1/2"	85 3/4"	1/8"	1/4"
ES04	3/4"	3/4"	84 3/4"	84 3/4"	85 5/8"	0"	0"
ES06	3/4"	5/8"	84 3/4"	84 5/8"	86 3/8"	1/8"	0"
ES07	3/4"	3/4"	84 3/4"	84 3/4"	86 1/2"	0"	1/4"
ES08	3/4"	5/8"	84 3/4"	84 5/8"	86 1/8"	1/8"	1/4"
ES09	3/4"	5/8"	84 3/4"	84 5/8"	86 1/8"	1/8"	0"
ES11, ES12	3/4"	3/4"	84 3/4"	84 3/4"	86 1/4"	0"	0"

* A NEGATIVE DIMENSION IN DIMENSION 'A' OR 'B' REPRESENTS A DIMENSION TO THE TOP FLANGE WORKING POINT THAT FALLS WITHIN THE DIAPHRAGM TOP FLANGE.

NOTES

1. DIAPHRAGM WEBS ARE ALIGNED NORMAL TO BOX GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
3. FOR DETAILS OF WELD TERMINATIONS AND STANDARD CLIPS, SEE "DIAPHRAGM DETAILS (2 OF 2)" SHEET.
4. 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.
5. FOR SECTIONS SEE "DIAPHRAGM DETAILS (1 OF 2)" SHEET. FOR DETAILS, SEE "DIAPHRAGM DETAILS (2 OF 2)" SHEET.

LEGEND

- SUGGESTED JACKING PAD AND STIFFENER LOCATION FOR FUTURE BEARING REPLACEMENT. SEE "JACKING PROVISIONS" SHEET FOR DETAILS.
- SEE "GIRDER SECTION" SHEET FOR INFORMATION

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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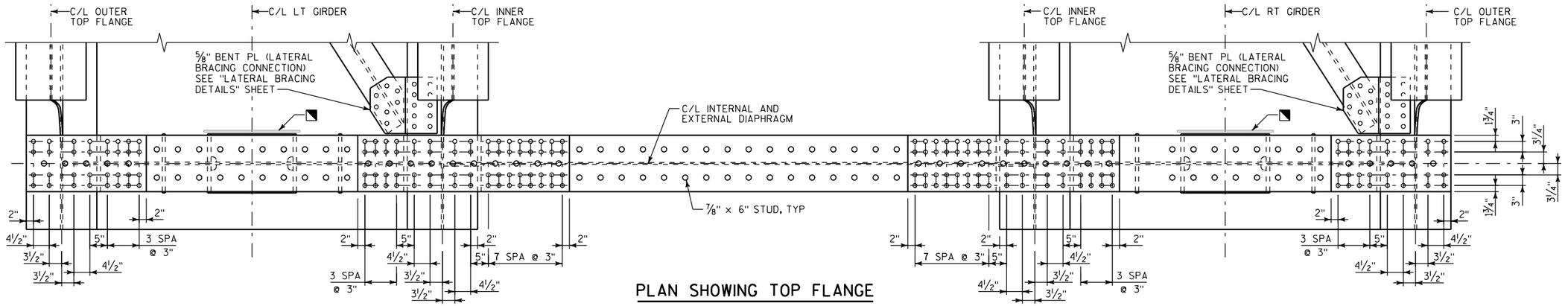
TYPICAL PIER DIAPHRAGM

SHEET 68 OF 122

8

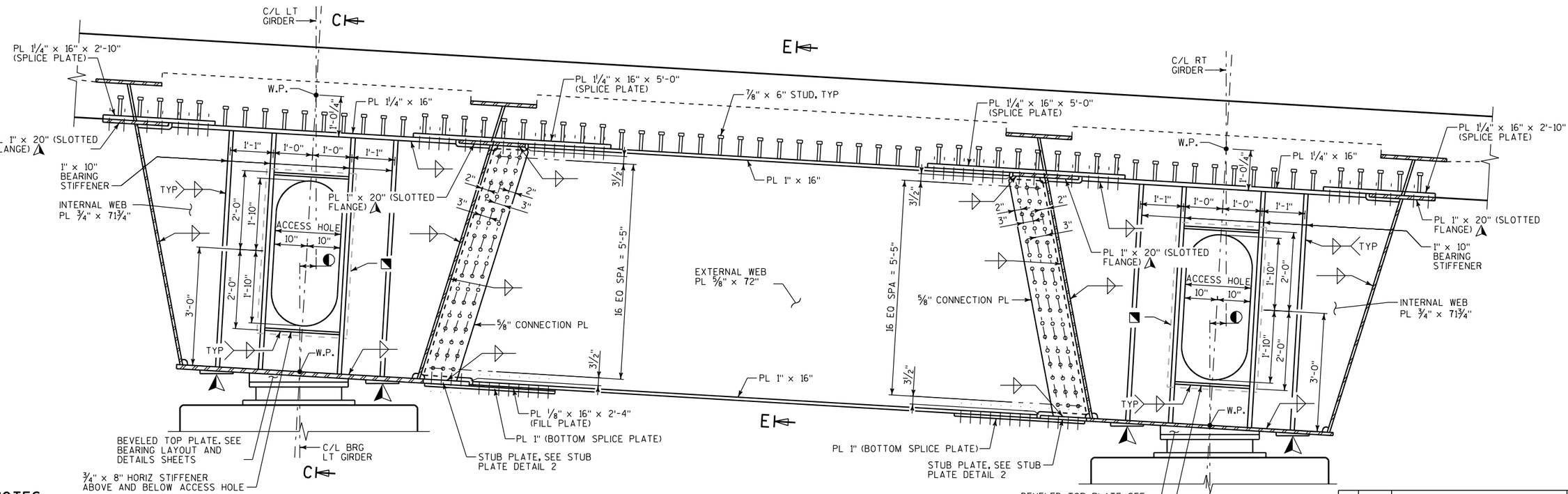
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STATE PROJECT NUMBER
1060-33-81



PLAN SHOWING TOP FLANGE

UNIT 2 DIAPHRAGM SHOWN, UNIT 1 DIAPHRAGM SIMILAR
VIEWED NORMAL TO DECK SURFACE



ELEVATION

LOOKING UPSTATION

NOTES

1. DIAPHRAGM WEBS ARE ALIGNED NORMAL TO BOX GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
3. FOR DETAILS OF WELD TERMINATIONS AND STANDARD CLIPS, SEE "DIAPHRAGM DETAILS (2 OF 2)" SHEET.
4. 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.
5. FOR SECTIONS, SEE "DIAPHRAGM DETAILS (1 OF 2)" SHEET. FOR DETAILS, SEE "DIAPHRAGM DETAILS (2 OF 2)" SHEET.

LEGEND

- SUGGESTED JACKING PAD AND STIFFENER LOCATION FOR FUTURE BEARING REPLACEMENT. SEE "JACKING PROVISIONS" SHEET FOR DETAILS.
- OUTLINE OF ACCESS DOOR. SEE "ACCESS DOOR DETAILS" SHEET. PLACE ACCESS DOOR ON THE INTERIOR SIDE OF THE INTERNAL DIAPHRAGM.
- SEE "GIRDER SECTION" SHEET FOR INFORMATION
- FOR SLOTTED FLANGE DETAIL, SEE "DIAPHRAGM DERAILS (1 OF 2)" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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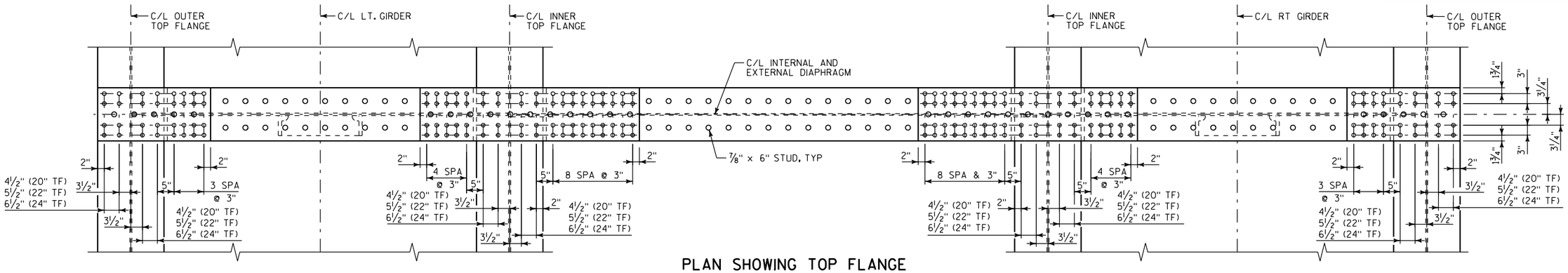
PIER END DIAPHRAGM

SHEET 69 OF 122

8

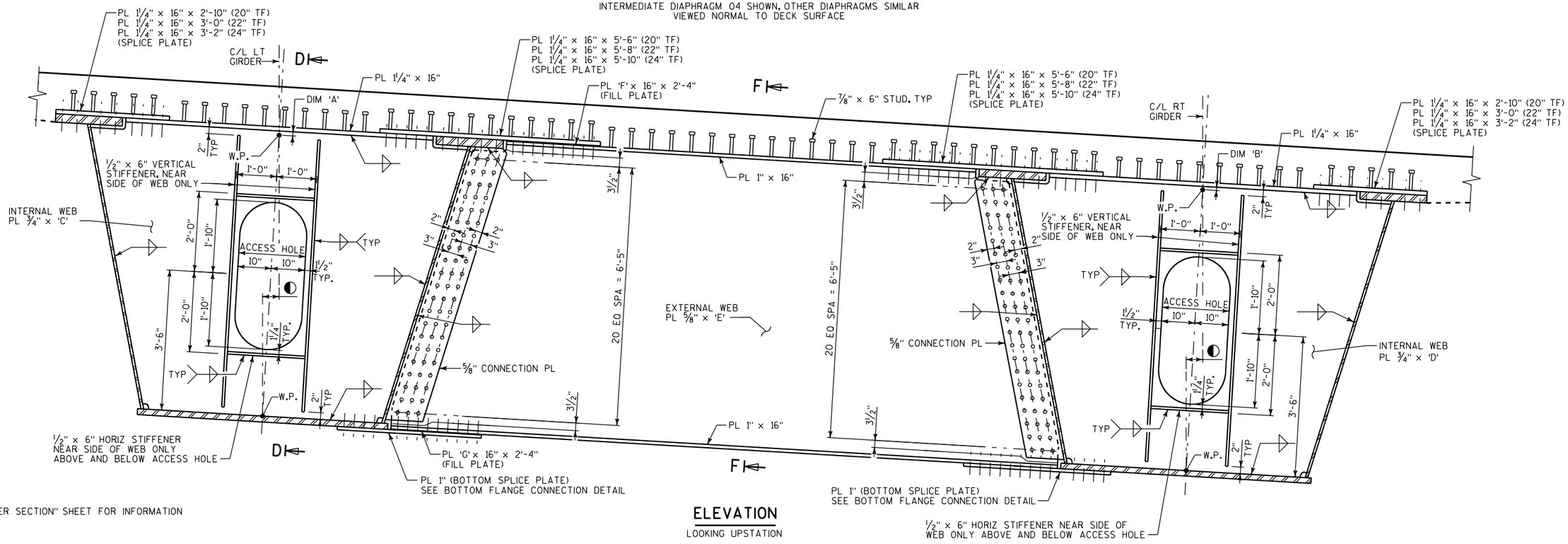
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STATE PROJECT NUMBER
1060-33-81



PLAN SHOWING TOP FLANGE

INTERMEDIATE DIAPHRAGM 04 SHOWN, OTHER DIAPHRAGMS SIMILAR
VIEWED NORMAL TO DECK SURFACE



ELEVATION

LOOKING UPSTATION

LEGEND

◐ SEE "GIRDER SECTION" SHEET FOR INFORMATION

NOTES

1. DIAPHRAGM WEBS ARE ALIGNED NORMAL TO BOX GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
3. FOR DETAILS OF WELD TERMINATIONS AND STANDARD CLIPS, SEE "DIAPHRAGM DETAILS (2 OF 2)" SHEET.
4. 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.
5. FOR SECTIONS, SEE "DIAPHRAGM DETAILS (1 OF 2) SHEET. FOR DETAILS , SEE "DIAPHRAGM DETAILS (2 OF 2)" SHEET.

DIAPHRAGM LOCATION	DIMENSIONS						
	'A'*	'B'*	'C'	'D'	'E'	'F'	'G'
ID01, ID09, ID10, ID21, ID25	-3/8"	-3/8"	83 5/8"	83 5/8"	83 7/8"	0"	0"
ID02	-1/4"	-1/4"	83 3/4"	83 3/4"	84 1/4"	0"	0"
ID03, ID04, ID05, ID06, ID07, ID08, ID15, ID16	-1/4"	-1/4"	83 3/4"	83 3/4"	84"	0"	0"
ID11, ID20	-1/4"	-3/8"	83 3/4"	83 5/8"	83 7/8"	1/8"	0"
ID12	0"	-1/8"	84"	83 7/8"	84 1/8"	1/8"	1/8"
ID13, ID14	0"	-1/8"	84"	83 7/8"	84 1/8"	1/8"	0"
ID17, ID18, ID23, ID24	-1/8"	-1/4"	83 7/8"	83 3/4"	84"	1/8"	0"
ID19, ID22, ID25	-1/8"	-1/4"	83 7/8"	83 3/4"	84 5/8"	1/8"	0"

* A NEGATIVE DIMENSION IN DIMENSION 'A' OR 'B' REPRESENTS A DIMENSION TO THE TOP FLANGE WORKING POINT THAT FALLS WITHIN THE DIAPHRAGM TOP FLANGE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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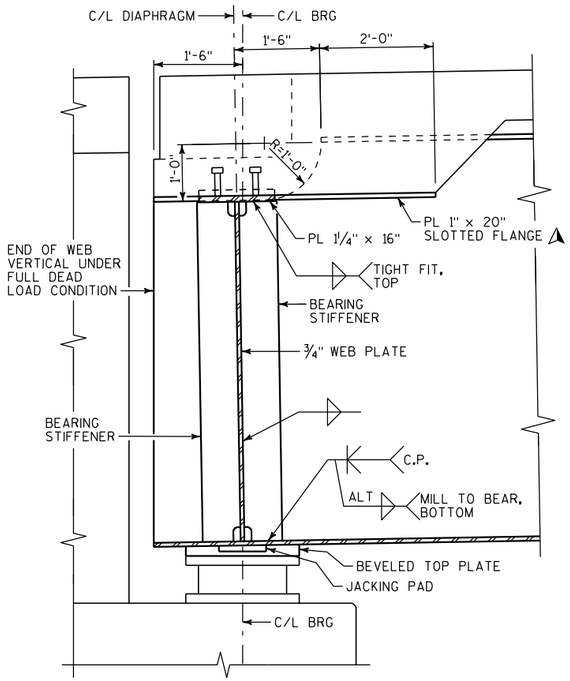
INTERMEDIATE DIAPHRAGM

SHEET 70 OF 122

8

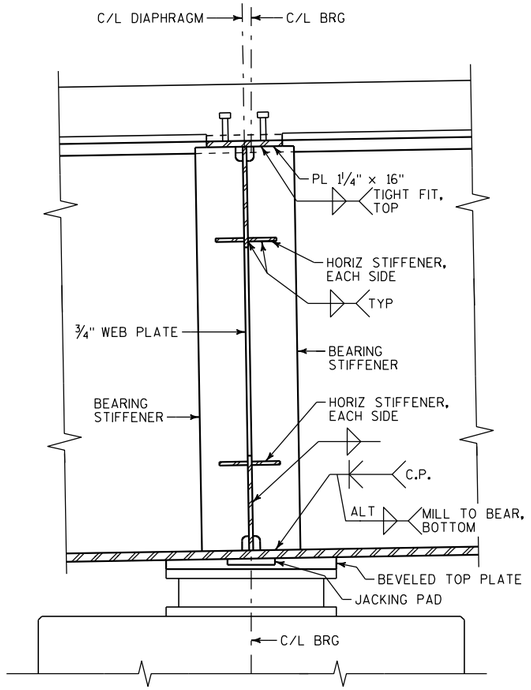
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STATE PROJECT NUMBER
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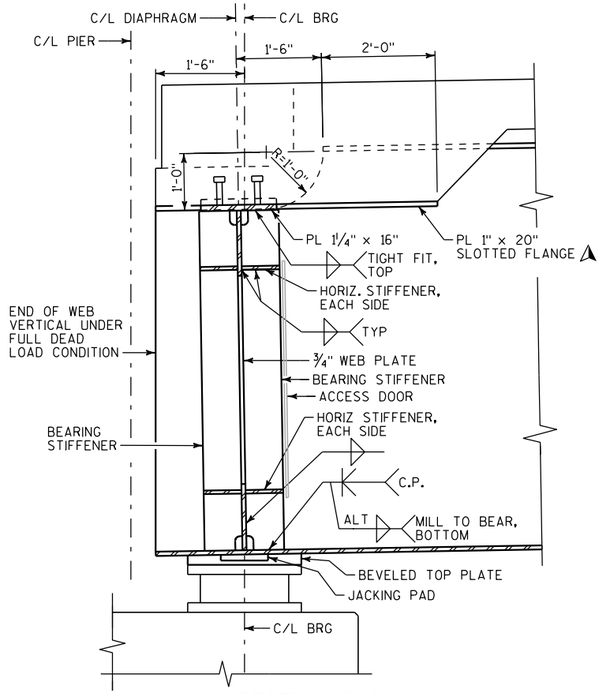
SECTION A-A

INTERNAL DIAPHRAGM AT ABUTMENT DIAPHRAGM



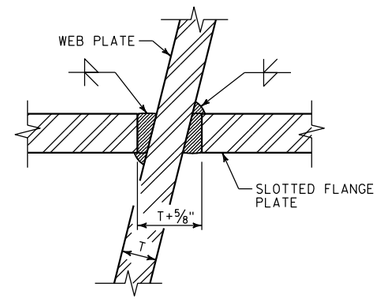
SECTION B-B

INTERNAL DIAPHRAGM AT TYPICAL PIER DIAPHRAGM

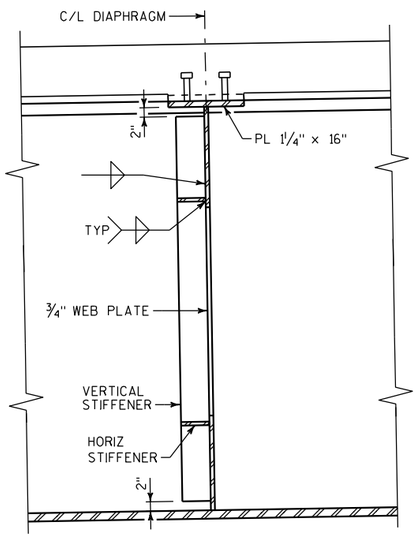


SECTION C-C

INTERNAL DIAPHRAGM AT PIER END DIAPHRAGM

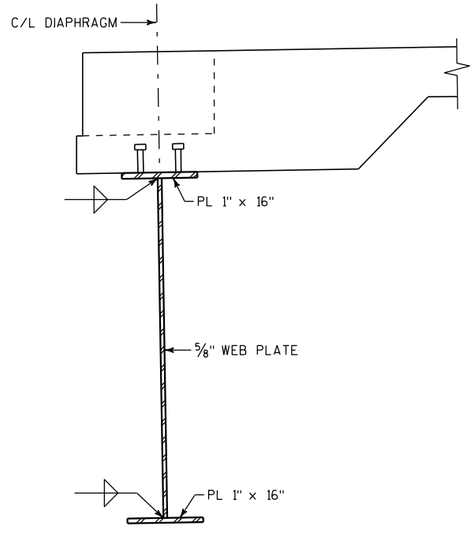


SLOTTED FLANGE DETAIL



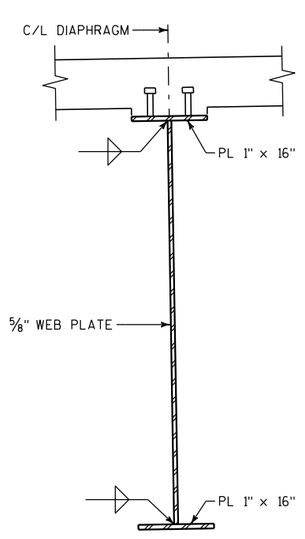
SECTION D-D

INTERNAL DIAPHRAGM AT INTERMEDIATE DIAPHRAGM



SECTION E-E

EXTERNAL DIAPHRAGM AT ABUTMENT DIAPHRAGM AND PIER END DIAPHRAGM



SECTION F-F

EXTERNAL DIAPHRAGM AT TYPICAL PIER DIAPHRAGM AND INTERMEDIATE DIAPHRAGM

NOTES

1. DIAPHRAGM WEBS ARE ALIGNED NORMAL TO BOX GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.
3. FOR DETAILS OF WELD TERMINATIONS AND STANDARD CLIPS, SEE "DIAPHRAGM DETAILS (2 OF 2)" SHEET.
4. LATERAL BRACING CONNECTIONS ARE NOT SHOWN FOR CLARITY. SEE LATERAL BRACING DETAILS SHEET.

LEGEND

⚠ FOR SLOTTED FLANGE DETAIL, SEE "DIAPHRAGM DERAILS (1 OF 2)" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY	SR	PLANS CK'D.	JWC

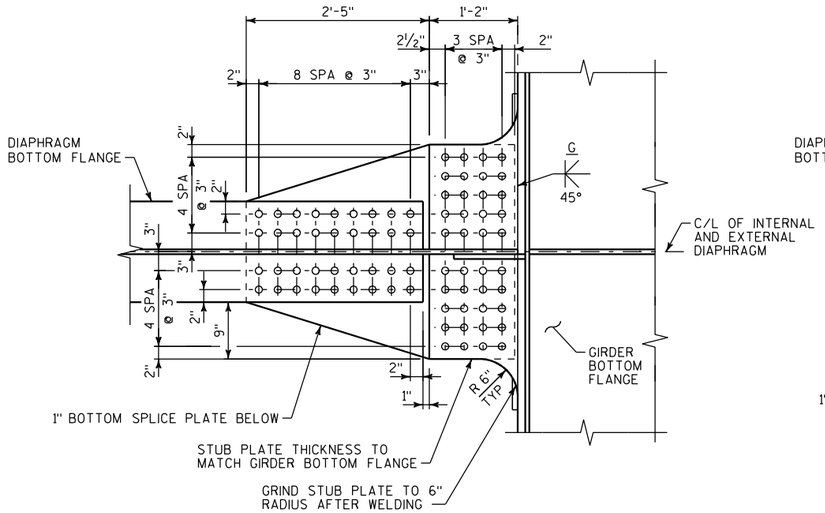
DIAPHRAGM DETAILS (1 OF 2)

SHEET 71 OF 122

8

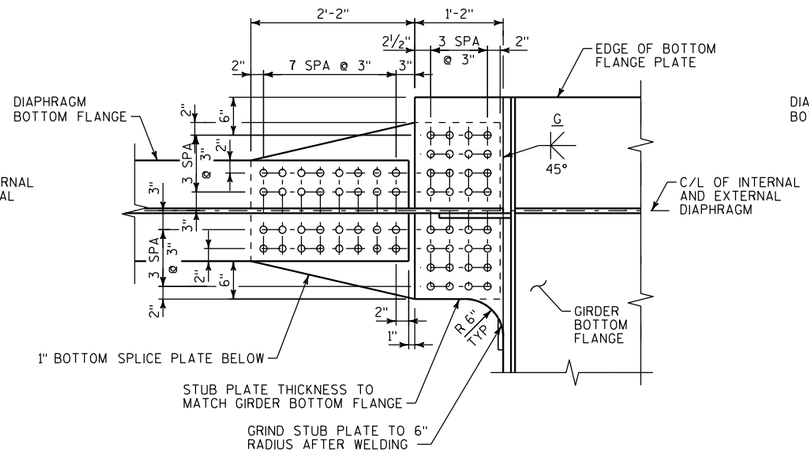
8

STATE PROJECT NUMBER
1060-33-81



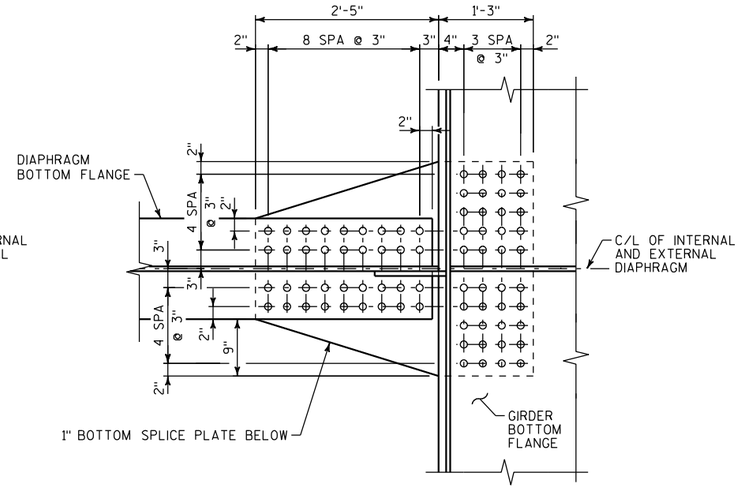
STUB PLATE DETAIL 1

TYPICAL PIER DIAPHRAGM



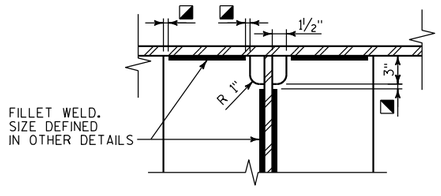
STUB PLATE DETAIL 2

ABUTMENT DIAPHRAGM AND PIER END DIAPHRAGM



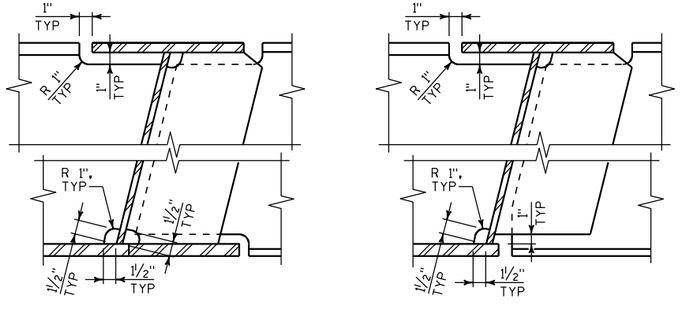
BOTTOM FLANGE CONNECTION DETAIL

INTERMEDIATE DIAPHRAGM ONLY



STANDARD CLIP & WELD TERMINATION DETAIL

◪ ¼" MIN TO ½" MAX, TYP



ABUTMENT & PIER DIAPHRAGMS

INTERMEDIATE DIAPHRAGM

DIAPHRAGM CLIP DETAIL

NOTES:

1. INTERNAL AND EXTERNAL DIAPHRAGMS ARE ALIGNED NORMAL TO THE GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN DIAPHRAGMS ARE 1" DIAMETER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY	SR	PLANS CK'D.	JWC

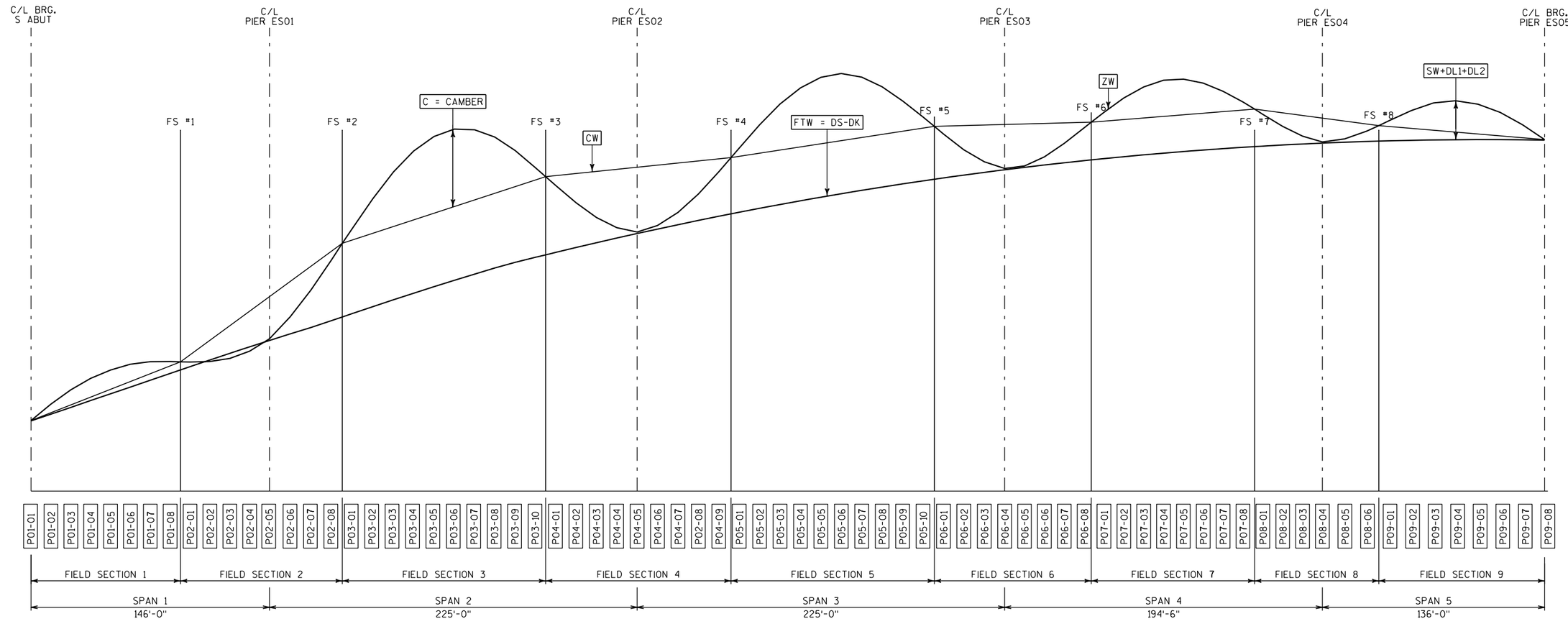
DIAPHRAGM DETAILS (2 OF 2)

SHEET 72 OF 122

8

8

STATE PROJECT NUMBER
1060-33-81



CAMBER DIAGRAM - UNIT 1

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

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

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

1. SEE "CAMBER AND DECK ELEVATIONS SHEETS" FOR ADDITIONAL INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MPM | PLANS CK'D. JWC

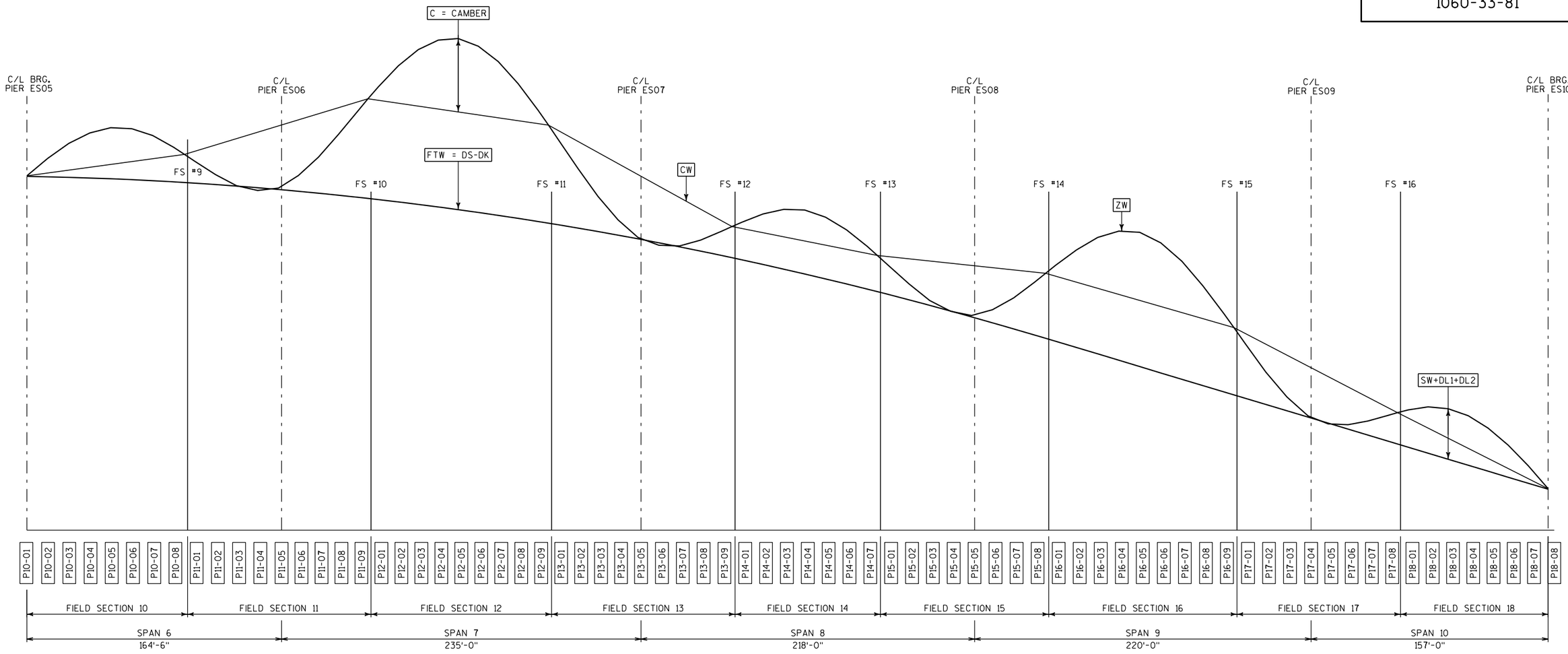
CAMBER DIAGRAM UNIT 1

SHEET 73 OF 122

8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Mandatory\080535_ss.dgn PLOT DATE : 01-MAR-2015 19:02 PLOT BY : MSCKTM PLOT NAME : 080535_ss PLOT SCALE : 60:1

STATE PROJECT NUMBER
1060-33-81



CAMBER DIAGRAM - UNIT 2

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

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

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

1. SEE "CAMBER AND DECK ELEVATIONS SHEETS" FOR ADDITIONAL INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

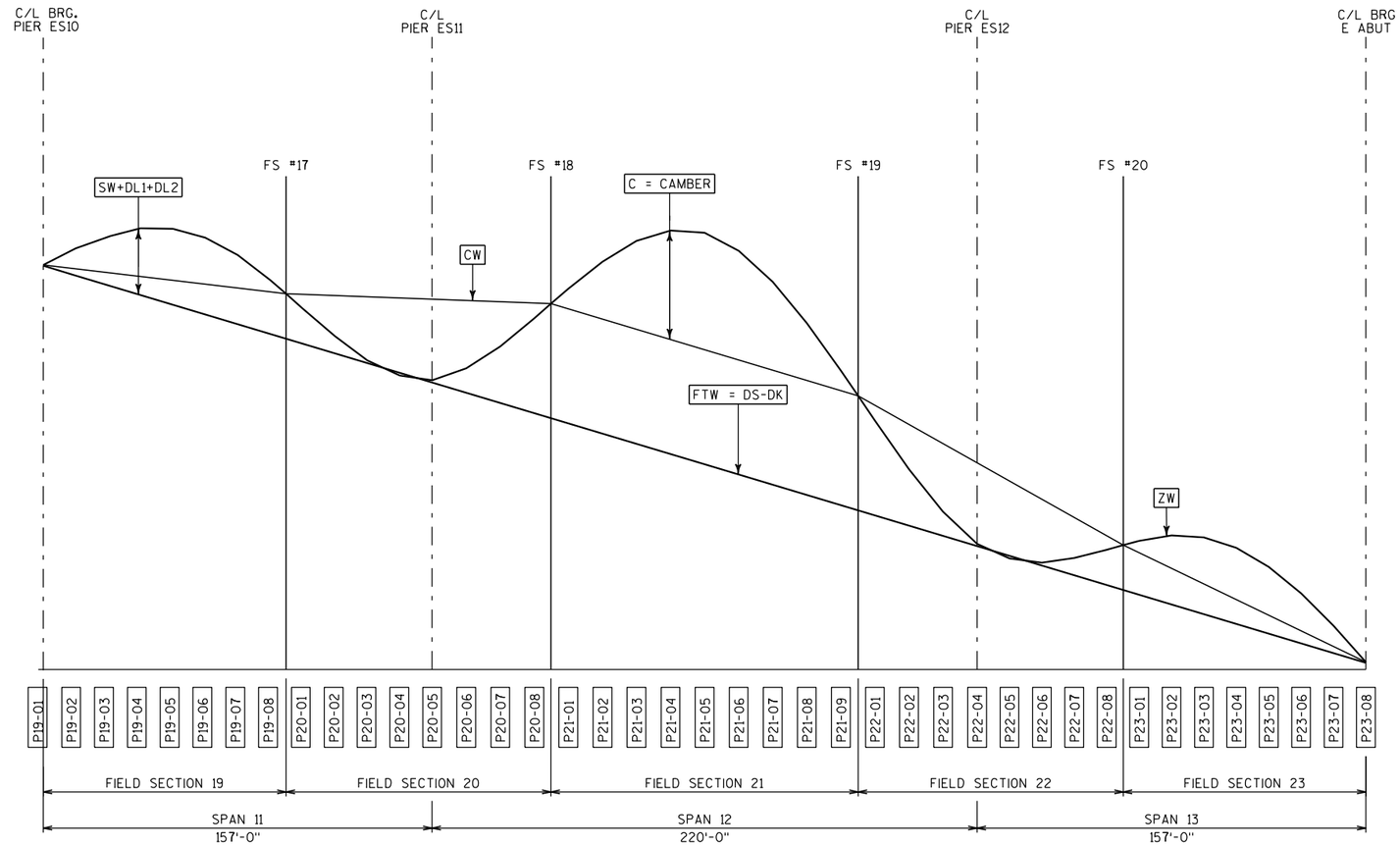
STRUCTURE B-40-854

DRAWN BY	MPM	PLANS CK'D.	JWC

CAMBER DIAGRAM UNIT 2

SHEET 74 OF 122

STATE PROJECT NUMBER
1060-33-81



CAMBER DIAGRAM - UNIT 3

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

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

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' IS THE PANEL POINT WITHIN THIS FIELD SECTION.

NOTES

1. SEE "CAMBER AND DECK ELEVATIONS SHEETS" FOR ADDITIONAL INFORMATION.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER DIAGRAM UNIT 3

SHEET 75 OF 122

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Mandatory\080537_ss.dgn PLOT DATE : 01-MAR-2015 19:02 PLOT BY : MSCKTM PLOT NAME : 080537_ss PLOT SCALE : 60:1

FIELD SECTION #1

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		P01-01	P01-02	P01-03	P01-04	P01-05	P01-06	P01-07	P01-08	FS #1
		579+45.32	579+57.49	579+69.65	579+81.82	579+93.99	580+06.15	580+18.32	580+30.49	580+36.82
FINISHED ELEVATION - TOP OF DECK										
1	DS	821.44	822.13	822.82	823.52	824.21	824.90	825.59	826.28	826.64
2		821.41	822.10	822.79	823.49	824.18	824.87	825.56	826.26	826.62
6		820.90	821.59	822.28	822.96	823.65	824.34	825.03	825.71	826.07
8		820.66	821.35	822.04	822.72	823.41	824.10	824.79	825.47	825.83
9		820.63	821.32	822.01	822.69	823.38	824.07	824.76	825.44	825.80
CAMBER DATA										
3	DS	821.31	822.01	822.70	823.39	824.08	824.78	825.47	826.16	826.52
	TES	820.18	820.90	821.62	822.33	823.03	823.71	824.39	825.06	825.46
LEFT	ZW	820.11	820.84	821.57	822.28	822.98	823.66	824.34	825.00	825.35
GIRDER	CW	820.11	820.81	821.50	822.20	822.90	823.59	824.29	824.98	825.35
	SW	0.00	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.01
LEFT	DL1	0.00	0.03	0.05	0.06	0.07	0.06	0.05	0.03	0.02
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	C	0.00	0.04	0.06	0.08	0.08	0.07	0.05	0.02	0.00
4	DS	821.12	821.82	822.51	823.20	823.89	824.59	825.28	825.97	826.33
	TES	819.99	820.71	821.43	822.14	822.85	823.53	824.21	824.88	825.28
LEFT	ZW	819.92	820.65	821.38	822.09	822.80	823.48	824.16	824.83	825.17
GIRDER	CW	819.92	820.62	821.31	822.01	822.71	823.41	824.11	824.81	825.17
	SW	0.00	0.01	0.02	0.02	0.03	0.03	0.02	0.02	0.01
RIGHT	DL1	0.00	0.03	0.05	0.07	0.08	0.07	0.06	0.04	0.03
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00
	C	0.00	0.03	0.06	0.08	0.09	0.07	0.05	0.02	0.00
5	DS	820.95	821.63	822.32	823.01	823.70	824.38	825.07	825.76	826.12
	TES	819.81	820.53	821.25	821.96	822.66	823.34	824.02	824.69	825.08
RIGHT	ZW	819.74	820.47	821.20	821.91	822.62	823.30	823.97	824.63	824.98
GIRDER	CW	819.74	820.44	821.13	821.83	822.52	823.22	823.92	824.61	824.98
	SW	0.00	0.01	0.02	0.03	0.03	0.03	0.03	0.02	0.02
LEFT	DL1	0.00	0.03	0.06	0.08	0.09	0.09	0.08	0.06	0.05
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00
	C	0.00	0.04	0.07	0.09	0.09	0.08	0.06	0.02	0.00
7	DS	820.76	821.44	822.13	822.82	823.51	824.19	824.88	825.57	825.93
	TES	819.62	820.34	821.06	821.77	822.47	823.15	823.83	824.50	824.89
RIGHT	ZW	819.55	820.28	821.01	821.72	822.43	823.11	823.78	824.44	824.79
GIRDER	CW	819.55	820.24	820.94	821.64	822.33	823.03	823.73	824.42	824.79
	SW	0.00	0.01	0.02	0.03	0.03	0.03	0.03	0.02	0.02
RIGHT	DL1	0.00	0.03	0.06	0.08	0.09	0.09	0.08	0.06	0.05
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00
	C	0.00	0.04	0.07	0.09	0.09	0.08	0.06	0.02	0.00
BLOCKING HEIGHTS										
10	BLK	32.37	33.10	33.83	34.54	35.24	35.93	36.60	37.26	37.61
11		32.56	33.29	34.02	34.73	35.44	36.12	36.80	37.46	37.81
12		33.17	33.91	34.63	35.35	36.05	36.74	37.41	38.07	38.41
13		33.36	34.09	34.82	35.54	36.24	36.92	37.59	38.26	38.60

FIELD SECTION #2

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION									
		FS#1	P02-01	P02-02	P02-03	P02-04	PIER	P02-06	P02-07	P02-08	FS #2
		580+36.82	580+42.65	580+54.82	580+66.99	580+79.15	580+91.32	581+03.97	581+16.62	581+29.26	581+35.82
FINISHED ELEVATION - TOP OF DECK											
1	DS	826.64	826.98	827.66	828.34	829.00	829.65	830.32	830.98	831.68	832.07
2		826.62	826.95	827.63	828.31	828.97	829.62	830.29	830.95	831.65	832.03
6		826.07	826.40	827.08	827.75	828.41	829.06	829.72	830.37	831.01	831.34
8		825.83	826.16	826.84	827.51	828.17	828.82	829.48	830.13	830.75	831.05
9		825.80	826.13	826.81	827.48	828.14	828.79	829.45	830.10	830.71	831.02
CAMBER DATA											
3	DS	826.52	826.85	827.54	828.21	828.87	829.53	830.20	830.85	831.55	831.92
	TES	825.46	825.74	826.41	827.07	827.81	828.48	829.20	829.85	830.63	831.10
LEFT	ZW	825.35	825.66	826.32	826.98	827.65	828.33	829.06	829.80	830.60	831.03
GIRDER	CW	825.35	825.68	826.38	827.08	827.78	828.47	829.20	829.92	830.65	831.03
	SW	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.03	0.05	0.06
LEFT	DL1	0.02	0.01	-0.01	-0.02	-0.01	0.00	0.05	0.12	0.19	0.23
WEB	DL2	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02
	C	0.00	-0.02	-0.06	-0.10	-0.13	-0.15	-0.14	-0.12	-0.05	0.00
4	DS	826.33	826.66	827.35	828.02	828.68	829.34	830.01	830.66	831.34	831.69
	TES	825.28	825.56	826.22	826.88	827.62	828.29	829.00	829.65	830.39	830.85
LEFT	ZW	825.17	825.49	826.15	826.80	827.46	828.13	828.86	829.59	830.36	830.77
GIRDER	CW	825.17	825.50	826.19	826.88	827.57	828.25	828.97	829.68	830.40	830.77
	SW	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.03	0.05	0.06
RIGHT	DL1	0.03	0.02	0.00	-0.01	-0.01	0.00	0.04	0.10	0.17	0.21
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02
	C	0.00	-0.01	-0.04	-0.08	-0.10	-0.12	-0.11	-0.09	-0.04	0.00
5	DS	826.12	826.44	827.12	827.79	828.45	829.10	829.76	830.42	831.06	831.39
	TES	825.08	825.36	826.01	826.66	827.38	828.04	828.74	829.39	830.10	830.52
RIGHT	ZW	824.98	825.29	825.94	826.58	827.23	827.90	828.61	829.33	830.06	830.44
GIRDER	CW	824.98	825.30	825.97	826.64	827.31	827.99	828.68	829.38	830.08	830.44
	SW	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.03	0.04	0.05
LEFT	DL1	0.05	0.04	0.01	0.00	-0.01	0.00	0.04	0.09	0.15	0.19
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02
	C	0.00	-0.01	-0.03	-0.06	-0.08	-0.09	-0.07	-0.05	-0.02	0.00
7	DS	825.93	826.25	826.93	827.60	828.26	828.91	829.57	830.23	830.85	831.16
	TES	824.89	825.17	825.82	826.47	827.19	827.85	828.55	829.20	829.89	830.30
RIGHT	ZW	824.79	825.10	825.75	826.39	827.04	827.71	828.42	829.14	829.85	830.22
GIRDER	CW	824.79	825.11	825.77	826.44	827.11	827.78	828.47	829.16	829.86	830.22
	SW	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.03	0.04	0.05
RIGHT	DL1	0.05	0.04	0.01	0.00	-0.01	0.00	0.04	0.09	0.15	0.19
WEB	DL2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02
	C	0.00	-0.01	-0.03	-0.05	-0.06	-0.07	-0.05	-0.02	0.00	0.00
BLOCKING HEIGHTS											
10	BLK	37.61	37.92	38.58	39.24	39.91	40.59	41.32	42.06	42.85	43.28
11		37.81	38.13	38.78	39.44	40.10	40.77	41.49	42.23	43.00	43.42
12		38.41	38.73	39.37	40.02	40.67	41.33	42.05	42.77	43.50	43.87
13		38.60	38.91	39.56	40.20	40.85	41.52	42.23	42.95	43.67	44.03

STATE PROJECT NUMBER

1060-33-81

LEGEND

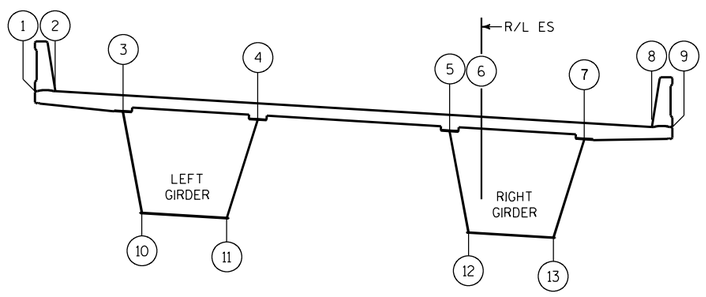
P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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.



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10 1/2" SLAB = 14 1/2" = 1.21 FT

C = CAMBER = ZW - CW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 1 & 2

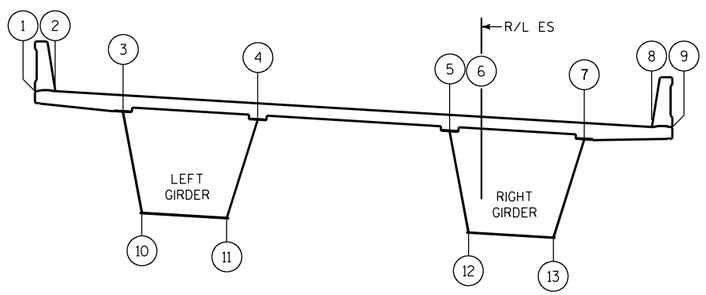
SHEET 76 OF 122

8

8

FIELD SECTION #3

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION											
		FS #2	P03-01	P03-02	P03-03	P03-04	P03-05	P03-06	P03-07	P03-08	P03-09	P03-10	FS #3
		581+35.82	581+41.91	581+54.56	581+67.20	581+79.49	581+91.93	582+04.37	582+16.81	582+29.25	582+41.69	582+54.13	582+60.32
FINISHED ELEVATION - TOP OF DECK													
1	DS	832.07	832.43	833.16	833.88	834.57	835.25	835.92	836.58	837.23	837.80	838.32	838.58
2		832.03	832.39	833.12	833.83	834.52	835.19	835.86	836.52	837.16	837.73	838.25	838.50
6		831.34	831.64	832.26	832.86	833.44	834.01	834.58	835.13	835.67	836.20	836.72	836.97
8		831.05	831.33	831.91	832.47	833.01	833.54	834.06	834.57	835.07	835.59	836.11	836.36
9		831.02	831.30	831.87	832.42	832.96	833.48	834.00	834.51	835.00	835.51	836.03	836.29
CAMBER DATA													
3	DS	831.92	832.27	832.98	833.68	834.35	835.01	835.66	836.30	836.92	837.49	838.01	838.26
	TES	831.10	831.43	832.22	832.98	833.72	834.41	835.06	835.68	836.24	836.74	837.18	837.47
LEFT	ZW	831.03	831.42	832.23	833.01	833.74	834.44	835.09	835.70	836.27	836.75	837.18	837.39
GIRDER	CW	831.03	831.34	831.98	832.63	833.26	833.89	834.53	835.16	835.80	836.43	837.07	837.39
	SW	0.06	0.08	0.10	0.11	0.13	0.13	0.13	0.13	0.12	0.10	0.08	0.07
LEFT	DL1	0.23	0.26	0.33	0.39	0.44	0.46	0.47	0.44	0.40	0.34	0.28	0.24
WEB	DL2	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.02
	C	0.00	0.08	0.24	0.38	0.49	0.55	0.56	0.54	0.47	0.32	0.11	0.00
4	DS	831.69	832.02	832.70	833.37	834.01	834.63	835.25	835.86	836.45	837.00	837.52	837.78
	TES	830.85	831.16	831.91	832.64	833.33	833.98	834.60	835.19	835.72	836.22	836.67	836.96
LEFT	ZW	830.77	831.15	831.92	832.66	833.34	834.00	834.61	835.20	835.75	836.23	836.67	836.87
GIRDER	CW	830.77	831.07	831.69	832.31	832.91	833.52	834.13	834.74	835.35	835.96	836.57	836.87
	SW	0.06	0.07	0.09	0.10	0.12	0.12	0.12	0.12	0.11	0.09	0.07	0.06
RIGHT	DL1	0.21	0.24	0.31	0.36	0.40	0.41	0.41	0.40	0.36	0.31	0.25	0.22
WEB	DL2	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.02	0.02
	C	0.00	0.08	0.23	0.35	0.43	0.48	0.48	0.46	0.40	0.27	0.10	0.00
5	DS	831.39	831.70	832.32	832.93	833.52	834.10	834.67	835.23	835.78	836.31	836.83	837.09
	TES	830.52	830.81	831.50	832.17	832.82	833.42	833.99	834.53	835.02	835.50	835.96	836.25
RIGHT	ZW	830.44	830.79	831.50	832.18	832.82	833.43	834.00	834.53	835.03	835.50	835.94	836.15
GIRDER	CW	830.44	830.72	831.30	831.88	832.44	833.01	833.59	834.16	834.73	835.30	835.87	836.15
	SW	0.05	0.06	0.08	0.10	0.11	0.11	0.11	0.11	0.10	0.08	0.07	0.06
LEFT	DL1	0.19	0.22	0.28	0.33	0.36	0.38	0.39	0.37	0.33	0.28	0.22	0.19
WEB	DL2	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.02	0.02
	C	0.00	0.07	0.20	0.30	0.37	0.41	0.42	0.38	0.31	0.20	0.07	0.00
7	DS	831.16	831.45	832.05	832.63	833.18	833.73	834.27	834.79	835.31	835.83	836.35	836.60
	TES	830.30	830.57	831.23	831.86	832.47	833.05	833.59	834.09	834.55	835.02	835.47	835.77
RIGHT	ZW	830.22	830.55	831.22	831.87	832.48	833.05	833.59	834.10	834.56	835.02	835.45	835.67
GIRDER	CW	830.22	830.48	831.04	831.59	832.13	832.67	833.22	833.76	834.31	834.85	835.40	835.67
	SW	0.05	0.06	0.08	0.10	0.11	0.11	0.11	0.11	0.10	0.08	0.07	0.06
RIGHT	DL1	0.19	0.22	0.28	0.33	0.36	0.38	0.39	0.37	0.33	0.28	0.22	0.19
WEB	DL2	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.02	0.02
	C	0.00	0.06	0.19	0.28	0.35	0.38	0.38	0.33	0.26	0.16	0.06	0.00
BLOCKING HEIGHTS													
10	BLK	43.28	43.67	44.48	45.26	45.98	46.67	47.32	47.92	48.49	48.97	49.39	49.60
11		43.42	43.80	44.57	45.32	46.01	46.67	47.30	47.89	48.44	48.93	49.37	49.57
12		43.87	44.22	44.92	45.60	46.23	46.83	47.40	47.93	48.42	48.89	49.33	49.54
13		44.03	44.37	45.05	45.71	46.32	46.90	47.45	47.96	48.43	48.89	49.33	49.54



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-81

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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' (½").
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 (¼") 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-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTION 3

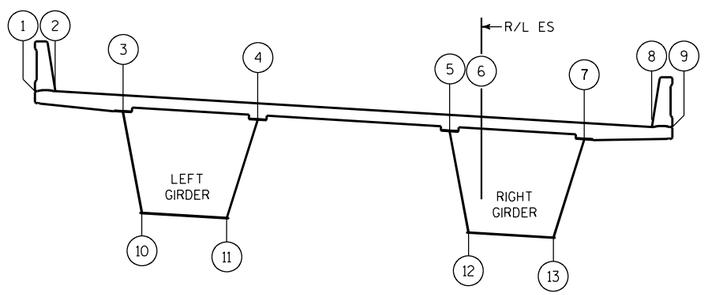
SHEET 77 OF 122

8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Mandatory\080539_ss.dgn PLOT DATE : 01-MAR-2015 19:03 PLOT BY : MSCKTM PLOT NAME : 080539_ss PLOT SCALE : 10.666667:1

FIELD SECTION #4

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION										
		FS #3	P04-01	P04-02	P04-03	P04-04	PIER	P04-06	P04-07	P04-08	P04-09	FS #4
		582+60.32	582+66.57	582+79.01	582+91.45	583+03.89	583+16.32	583+28.82	583+41.32	583+53.82	583+66.32	583+73.82
FINISHED ELEVATION - TOP OF DECK												
1	DS	838.58	838.83	839.33	839.81	840.29	840.75	841.21	841.65	842.09	842.51	842.76
2		838.50	838.76	839.25	839.74	840.22	840.68	841.14	841.58	842.01	842.43	842.68
6		836.97	837.23	837.72	838.21	838.69	839.15	839.61	840.05	840.48	840.90	841.15
8		836.36	836.62	837.11	837.60	838.07	838.54	838.99	839.44	839.87	840.29	840.54
9		836.29	836.54	837.04	837.52	838.00	838.46	838.92	839.36	839.80	840.22	840.47
CAMBER DATA												
3	DS	838.26	838.51	839.01	839.50	839.97	840.44	840.89	841.34	841.77	842.19	842.44
	TES	837.47	837.63	838.06	838.48	838.97	839.40	839.86	840.27	840.75	841.24	841.58
LEFT	ZW	837.39	837.59	837.99	838.40	838.81	839.24	839.70	840.18	840.67	841.17	841.47
GIRDER	CW	837.39	837.61	838.06	838.51	838.95	839.40	839.85	840.30	840.75	841.20	841.47
	SW	0.07	0.06	0.04	0.02	0.01	0.00	0.00	0.01	0.02	0.04	0.05
LEFT	DL1	0.24	0.20	0.14	0.08	0.03	0.00	0.01	0.03	0.08	0.13	0.17
WEB	DL2	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.02	0.02
	C	0.00	-0.02	-0.06	-0.11	-0.14	-0.17	-0.15	-0.12	-0.08	-0.03	0.00
4	DS	837.78	838.03	838.53	839.01	839.49	839.95	840.41	840.85	841.29	841.71	841.96
	TES	836.96	837.13	837.55	837.98	838.47	838.92	839.38	839.80	840.28	840.76	841.09
LEFT	ZW	836.87	837.08	837.48	837.89	838.31	838.75	839.22	839.71	840.20	840.70	840.99
GIRDER	CW	836.87	837.10	837.55	838.00	838.45	838.90	839.36	839.81	840.27	840.72	840.99
	SW	0.06	0.05	0.04	0.02	0.01	0.00	0.00	0.01	0.03	0.04	0.05
RIGHT	DL1	0.22	0.18	0.12	0.06	0.02	0.00	0.01	0.04	0.09	0.14	0.17
WEB	DL2	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.02
	C	0.00	-0.02	-0.07	-0.11	-0.14	-0.15	-0.14	-0.11	-0.07	-0.02	0.00
5	DS	837.09	837.34	837.84	838.33	838.80	839.26	839.72	840.16	840.60	841.02	841.27
	TES	836.25	836.42	836.85	837.28	837.78	838.23	838.69	839.11	839.59	840.07	840.41
RIGHT	ZW	836.15	836.36	836.78	837.20	837.62	838.06	838.53	839.02	839.51	840.01	840.31
GIRDER	CW	836.15	836.38	836.84	837.29	837.75	838.20	838.66	839.12	839.57	840.03	840.31
	SW	0.06	0.05	0.03	0.02	0.01	0.00	0.00	0.01	0.03	0.04	0.05
LEFT	DL1	0.19	0.16	0.11	0.06	0.02	0.00	0.01	0.04	0.09	0.14	0.18
WEB	DL2	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.02
	C	0.00	-0.02	-0.06	-0.09	-0.12	-0.14	-0.13	-0.10	-0.06	-0.02	0.00
7	DS	836.60	836.86	837.36	837.84	838.32	838.78	839.24	839.68	840.11	840.54	840.78
	TES	835.77	835.93	836.37	836.80	837.30	837.74	838.21	838.62	839.10	839.59	839.93
RIGHT	ZW	835.67	835.88	836.30	836.71	837.14	837.58	838.05	838.53	839.03	839.53	839.82
GIRDER	CW	835.67	835.90	836.35	836.81	837.26	837.72	838.18	838.63	839.09	839.55	839.82
	SW	0.06	0.05	0.03	0.02	0.01	0.00	0.00	0.01	0.03	0.04	0.05
RIGHT	DL1	0.19	0.16	0.11	0.06	0.02	0.00	0.01	0.04	0.09	0.14	0.18
WEB	DL2	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.02
	C	0.00	-0.02	-0.06	-0.09	-0.12	-0.14	-0.13	-0.10	-0.06	-0.02	0.00
BLOCKING HEIGHTS												
10	BLK	49.60	49.80	50.21	50.61	51.02	51.45	51.91	52.40	52.89	53.39	53.69
11		49.57	49.78	50.18	50.59	51.01	51.45	51.92	52.40	52.90	53.40	53.69
12		49.54	49.75	50.17	50.59	51.01	51.45	51.92	52.40	52.90	53.40	53.70
13		49.54	49.75	50.17	50.59	51.01	51.45	51.92	52.40	52.90	53.40	53.70



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-81

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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' (½").
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 (¼") 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-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTION 4

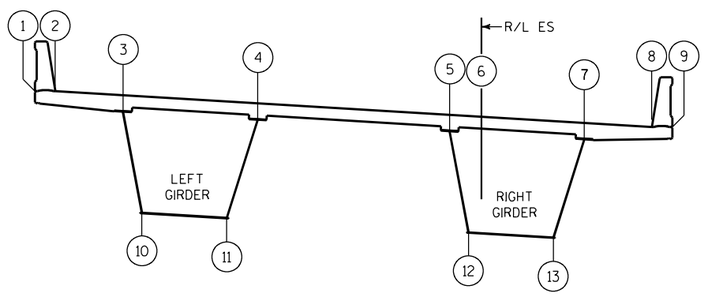
SHEET 78 OF 122

FIELD SECTION #5

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION											
		FS #4	P05-01	P05-02	P05-03	P05-04	P05-05	P05-06	P05-07	P05-08	P05-09	P05-10	FS #5
		583+73.82	583+78.82	583+91.32	584+03.82	584+16.32	584+28.82	584+41.32	584+53.82	584+66.32	584+78.82	584+91.32	584+98.32
FINISHED ELEVATION - TOP OF DECK													
1	DS	842.76	842.92	843.32	843.71	844.09	844.45	844.81	845.15	845.49	845.81	846.12	846.29
2		842.68	842.85	843.25	843.63	844.01	844.38	844.73	845.08	845.41	845.73	846.05	846.22
6		841.15	841.32	841.72	842.10	842.48	842.85	843.20	843.55	843.88	844.20	844.52	844.69
8		840.54	840.70	841.10	841.49	841.87	842.24	842.59	842.94	843.27	843.59	843.90	844.07
9		840.47	840.63	841.03	841.42	841.80	842.16	842.52	842.86	843.20	843.52	843.83	844.00
CAMBER DATA													
3	DS	842.44	842.60	843.00	843.39	843.77	844.14	844.49	844.84	845.17	845.49	845.80	845.97
	TES	841.58	841.69	842.16	842.60	843.02	843.41	843.77	844.09	844.38	844.65	844.89	845.08
LEFT	ZW	841.47	841.67	842.15	842.61	843.04	843.44	843.79	844.11	844.39	844.64	844.87	844.99
GIRDER	CW	841.47	841.61	841.97	842.32	842.67	843.03	843.38	843.73	844.08	844.44	844.79	844.99
	SW	0.05	0.06	0.07	0.09	0.10	0.11	0.11	0.10	0.09	0.07	0.06	0.05
LEFT	DL1	0.17	0.19	0.25	0.30	0.34	0.37	0.37	0.35	0.31	0.25	0.20	0.16
WEB	DL2	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.02
	C	0.00	0.06	0.18	0.29	0.37	0.41	0.42	0.38	0.30	0.20	0.08	0.00
4	DS	841.96	842.12	842.52	842.91	843.29	843.65	844.01	844.35	844.69	845.01	845.32	845.49
	TES	841.09	841.21	841.67	842.11	842.52	842.90	843.25	843.58	843.88	844.15	844.40	844.58
LEFT	ZW	840.99	841.19	841.66	842.11	842.53	842.92	843.27	843.59	843.88	844.14	844.37	844.49
GIRDER	CW	840.99	841.13	841.48	841.83	842.19	842.54	842.89	843.24	843.59	843.94	844.29	844.49
	SW	0.05	0.06	0.07	0.09	0.10	0.10	0.10	0.09	0.09	0.07	0.05	0.04
RIGHT	DL1	0.17	0.20	0.25	0.29	0.32	0.34	0.34	0.32	0.29	0.24	0.18	0.15
WEB	DL2	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
	C	0.00	0.05	0.18	0.28	0.35	0.38	0.38	0.35	0.29	0.20	0.08	0.00
5	DS	841.27	841.43	841.83	842.22	842.60	842.96	843.32	843.66	844.00	844.32	844.63	844.80
	TES	840.41	840.53	840.98	841.42	841.83	842.22	842.57	842.89	843.18	843.45	843.70	843.89
RIGHT	ZW	840.31	840.50	840.98	841.43	841.85	842.24	842.59	842.90	843.18	843.43	843.67	843.79
GIRDER	CW	840.31	840.45	840.80	841.15	841.50	841.85	842.20	842.55	842.90	843.25	843.60	843.79
	SW	0.05	0.06	0.08	0.09	0.10	0.10	0.10	0.10	0.08	0.07	0.05	0.04
LEFT	DL1	0.18	0.20	0.25	0.30	0.33	0.35	0.34	0.32	0.28	0.23	0.18	0.15
WEB	DL2	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
	C	0.00	0.06	0.18	0.28	0.35	0.39	0.39	0.35	0.28	0.19	0.07	0.00
7	DS	840.78	840.95	841.35	841.74	842.11	842.48	842.84	843.18	843.51	843.84	844.15	844.32
	TES	839.93	840.04	840.50	840.94	841.35	841.73	842.09	842.41	842.70	842.97	843.22	843.40
RIGHT	ZW	839.82	840.02	840.49	840.94	841.36	841.75	842.10	842.42	842.70	842.95	843.19	843.31
GIRDER	CW	839.82	839.96	840.31	840.66	841.01	841.36	841.71	842.06	842.41	842.76	843.11	843.31
	SW	0.05	0.06	0.08	0.09	0.10	0.10	0.10	0.10	0.08	0.07	0.05	0.04
RIGHT	DL1	0.18	0.20	0.25	0.30	0.33	0.35	0.34	0.32	0.28	0.23	0.18	0.15
WEB	DL2	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
	C	0.00	0.06	0.18	0.28	0.35	0.39	0.39	0.35	0.28	0.19	0.07	0.00
BLOCKING HEIGHTS													
10	BLK	53.69	53.88	54.37	54.83	55.26	55.65	56.01	56.32	56.60	56.85	57.08	57.20
11		53.69	53.89	54.36	54.81	55.23	55.62	55.97	56.29	56.58	56.84	57.07	57.19
12		53.70	53.89	54.37	54.82	55.24	55.63	55.98	56.29	56.57	56.82	57.06	57.18
13		53.70	53.89	54.37	54.82	55.24	55.63	55.98	56.29	56.57	56.82	57.06	57.18

FIELD SECTION #6

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION									
		FS #5	P06-01	P06-02	P06-03	PIER	P06-05	P06-06	P06-07	P06-08	FS #6
		584+98.32	585+03.82	585+16.32	585+28.82	585+41.32	585+53.48	585+65.64	585+77.79	585+89.95	585+94.32
FINISHED ELEVATION - TOP OF DECK											
1	DS	846.29	846.42	846.71	846.99	847.25	847.50	847.74	847.97	848.19	848.26
2		846.22	846.35	846.64	846.91	847.18	847.43	847.67	847.89	848.11	848.19
6		844.69	844.82	845.11	845.38	845.65	845.90	846.14	846.36	846.58	846.66
8		844.07	844.20	844.49	844.77	845.04	845.29	845.53	845.75	845.97	846.05
9		844.00	844.13	844.42	844.70	844.96	845.21	845.45	845.68	845.90	845.97
CAMBER DATA											
3	DS	845.97	846.10	846.39	846.67	846.94	847.19	847.42	847.65	847.87	847.95
	TES	845.08	845.13	845.35	845.58	845.82	846.07	846.33	846.59	846.85	847.00
LEFT	ZW	844.99	845.08	845.29	845.51	845.73	845.98	846.25	846.53	846.80	846.90
GIRDER	CW	844.99	845.10	845.35	845.60	845.84	846.09	846.33	846.57	846.81	846.90
	SW	0.05	0.04	0.02	0.01	0.00	0.00	0.01	0.02	0.03	0.04
LEFT	DL1	0.16	0.13	0.08	0.03	0.00	0.00	0.02	0.06	0.10	0.11
WEB	DL2	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	-0.02	-0.05	-0.09	-0.11	-0.10	-0.08	-0.04	-0.01	0.00
4	DS	845.49	845.62	845.91	846.19	846.45	846.70	846.94	847.17	847.39	847.46
	TES	844.58	844.63	844.86	845.09	845.33	845.58	845.84	846.10	846.36	846.51
LEFT	ZW	844.49	844.58	844.79	845.02	845.25	845.50	845.77	846.04	846.31	846.40
GIRDER	CW	844.49	844.60	844.85	845.10	845.35	845.59	845.83	846.07	846.32	846.40
	SW	0.04	0.04	0.02	0.01	0.00	0.00	0.01	0.02	0.03	0.03
RIGHT	DL1	0.15	0.12	0.07	0.03	0.00	0.01	0.02	0.05	0.09	0.11
WEB	DL2	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	-0.02	-0.05	-0.08	-0.10	-0.09	-0.07	-0.04	-0.01	0.00
5	DS	844.80	844.93	845.22	845.50	845.76	846.01	846.25	846.48	846.70	846.77
	TES	843.89	843.94	844.17	844.47	844.70	844.95	845.15	845.41	845.67	845.81
RIGHT	ZW	843.79	843.89	844.11	844.33	844.56	844.81	845.07	845.34	845.61	845.71
GIRDER	CW	843.79	843.90	844.15	844.40	844.65	844.89	845.14	845.38	845.62	845.71
	SW	0.04	0.04	0.02	0.01	0.00	0.00	0.01	0.02	0.03	0.03
LEFT	DL1	0.15	0.12	0.07	0.03	0.00	0.00	0.02	0.05	0.09	0.10
WEB	DL2	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	-0.01	-0.05	-0.07	-0.09	-0.09	-0.06	-0.03	-0.01	0.00
7	DS	844.32	844.45	844.74	845.01	845.28	845.53	845.77	846.00	846.21	846.29
	TES	843.40	843.45	843.69	843.98	844.22	844.47	844.67	844.93	845.18	845.33
RIGHT	ZW	843.31	843.41	843.62	843.84	844.08	844.32	844.59	844.86	845.13	845.22
GIRDER	CW	843.31	843.42	843.67	843.92	844.17	844.41	844.65	844.90	845.14	845.22
	SW	0.04	0.04	0.02	0.01	0.00	0.00	0.01	0.02	0.03	0.03
RIGHT	DL1	0.15	0.12	0.07	0.03	0.00	0.00	0.02	0.05	0.09	0.10
WEB	DL2	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	-0.01	-0.05	-0.07	-0.09	-0.09	-0.06	-0.03	-0.01	0.00
BLOCKING HEIGHTS											
10	BLK	57.20	57.30	57.51	57.72	57.95	58.20	58.47	58.74	59.02	59.11
11		57.19	57.28	57.49	57.72	57.95	58.20	58.47	58.74	59.01	59.10
12		57.18	57.28	57.50	57.72	57.95	58.20	58.46	58.73	59.00	59.10
13		57.18	57.28	57.50	57.72	57.95	58.20	58.46	58.73	59.00	59.10



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-81

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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' (½").
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 (¼") 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-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 5 & 6

SHEET 79 OF 122

8

8

FIELD SECTION #7

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION									
		FS #6	P07-01	P07-02	P07-03	P07-04	P07-05	P07-06	P07-07	P07-08	FS #7
		585+94.32	586+02.11	586+14.26	586+26.42	586+38.57	586+50.73	586+62.89	586+75.04	586+87.20	586+94.33
FINISHED ELEVATION - TOP OF DECK											
1	DS	848.26	848.39	848.59	848.78	848.95	849.12	849.27	849.41	849.55	849.62
2		848.19	848.32	848.52	848.70	848.88	849.04	849.20	849.34	849.47	849.55
6		846.66	846.79	846.99	847.17	847.35	847.51	847.67	847.81	847.94	848.02
8		846.05	846.18	846.37	846.56	846.73	846.90	847.05	847.20	847.33	847.40
9		845.97	846.10	846.30	846.49	846.66	846.83	846.98	847.12	847.26	847.33
CAMBER DATA											
3	DS	847.95	848.08	848.27	848.46	848.63	848.80	848.95	849.10	849.23	849.30
	TES	847.00	847.11	847.34	847.56	847.75	847.92	848.05	848.16	848.26	848.36
LEFT	ZW	846.90	847.07	847.31	847.54	847.74	847.90	848.03	848.13	848.22	848.26
GIRDER	CW	846.90	847.00	847.17	847.33	847.50	847.66	847.83	847.99	848.16	848.26
	SW	0.04	0.04	0.05	0.06	0.07	0.07	0.06	0.05	0.04	0.03
LEFT	DL1	0.11	0.14	0.18	0.21	0.22	0.22	0.20	0.17	0.14	0.11
WEB	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.06	0.15	0.21	0.24	0.24	0.20	0.14	0.06	0.00
4	DS	847.46	847.59	847.79	847.98	848.15	848.32	848.47	848.61	848.75	848.82
	TES	846.51	846.61	846.85	847.06	847.25	847.41	847.55	847.67	847.76	847.86
LEFT	ZW	846.40	846.57	846.81	847.03	847.22	847.39	847.53	847.64	847.72	847.76
GIRDER	CW	846.40	846.51	846.68	846.84	847.00	847.17	847.33	847.50	847.66	847.76
	SW	0.03	0.04	0.05	0.06	0.06	0.06	0.06	0.05	0.04	0.03
RIGHT	DL1	0.11	0.13	0.17	0.19	0.20	0.20	0.19	0.17	0.13	0.11
WEB	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.06	0.14	0.19	0.22	0.22	0.19	0.14	0.06	0.00
5	DS	846.77	846.90	847.10	847.29	847.46	847.63	847.78	847.92	848.06	848.13
	TES	845.81	845.92	846.15	846.36	846.55	846.71	846.85	846.97	847.07	847.17
RIGHT	ZW	845.71	845.87	846.11	846.33	846.53	846.69	846.83	846.93	847.02	847.07
GIRDER	CW	845.71	845.81	845.98	846.14	846.31	846.47	846.64	846.80	846.97	847.07
	SW	0.03	0.04	0.05	0.06	0.06	0.06	0.06	0.05	0.04	0.03
LEFT	DL1	0.10	0.13	0.16	0.18	0.20	0.19	0.18	0.16	0.12	0.10
WEB	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.06	0.14	0.19	0.22	0.22	0.19	0.14	0.06	0.00
7	DS	846.29	846.42	846.62	846.80	846.98	847.14	847.30	847.44	847.57	847.65
	TES	845.33	845.43	845.66	845.88	846.07	846.23	846.37	846.49	846.58	846.69
RIGHT	ZW	845.22	845.39	845.63	845.85	846.04	846.21	846.34	846.45	846.54	846.58
GIRDER	CW	845.22	845.33	845.50	845.66	845.83	845.99	846.16	846.32	846.49	846.58
	SW	0.03	0.04	0.05	0.06	0.06	0.06	0.06	0.05	0.04	0.03
RIGHT	DL1	0.10	0.13	0.16	0.18	0.20	0.19	0.18	0.16	0.12	0.10
WEB	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.06	0.14	0.19	0.22	0.22	0.19	0.13	0.05	0.00
BLOCKING HEIGHTS											
10	BLK	59.11	59.28	59.53	59.75	59.95	60.11	60.24	60.35	60.43	60.47
11		59.10	59.27	59.51	59.73	59.92	60.09	60.23	60.34	60.42	60.46
12		59.10	59.26	59.50	59.72	59.92	60.08	60.21	60.32	60.41	60.45
13		59.10	59.26	59.50	59.72	59.92	60.08	60.21	60.32	60.41	60.45

FIELD SECTION #8

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION							
		FS #7	P08-01	P08-02	P08-03	PIER	P08-05	P08-06	FS #8
		586+94.33	586+99.36	587+11.51	587+23.67	587+35.82	587+49.43	587+63.03	587+70.32
FINISHED ELEVATION - TOP OF DECK									
1	DS	849.62	849.67	849.78	849.88	849.98	850.07	850.14	850.18
2		849.55	849.60	849.71	849.81	849.90	849.99	850.07	850.10
6		848.02	848.07	848.18	848.28	848.37	848.46	848.54	848.57
8		847.40	847.45	847.57	847.67	847.76	847.85	847.93	847.96
9		847.33	847.38	847.49	847.60	847.69	847.78	847.85	847.89
CAMBER DATA									
3	DS	849.30	849.35	849.47	849.57	849.66	849.75	849.83	849.86
	TES	848.36	848.34	848.40	848.55	848.62	848.72	848.74	848.83
LEFT	ZW	848.26	848.28	848.34	848.39	848.46	848.56	848.66	848.72
GIRDER	CW	848.26	848.29	848.36	848.43	848.51	848.59	848.68	848.72
	SW	0.03	0.03	0.02	0.01	0.00	0.00	0.01	0.01
LEFT	DL1	0.11	0.10	0.06	0.02	0.00	0.01	0.03	0.05
WEB	DL2	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	DS	848.82	848.87	848.98	849.08	849.18	849.27	849.34	849.38
	TES	847.86	847.84	847.91	848.06	848.14	848.23	848.25	848.34
LEFT	ZW	847.76	847.79	847.84	847.90	847.97	848.07	848.17	848.23
GIRDER	CW	847.76	847.79	847.87	847.94	848.01	848.10	848.18	848.23
	SW	0.03	0.03	0.02	0.01	0.00	0.00	0.01	0.01
RIGHT	DL1	0.11	0.09	0.05	0.02	0.00	0.01	0.03	0.04
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	DS	848.13	848.18	848.29	848.40	848.49	848.58	848.65	848.69
	TES	847.17	847.15	847.22	847.38	847.45	847.54	847.55	847.64
RIGHT	ZW	847.07	847.09	847.16	847.22	847.28	847.38	847.48	847.53
GIRDER	CW	847.07	847.10	847.17	847.24	847.32	847.40	847.48	847.53
	SW	0.03	0.03	0.02	0.01	0.00	0.00	0.01	0.01
LEFT	DL1	0.10	0.09	0.05	0.02	0.00	0.01	0.02	0.03
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	DS	847.65	847.70	847.81	847.91	848.00	848.09	848.17	848.21
	TES	846.69	846.67	846.74	846.89	846.96	847.06	847.07	847.16
RIGHT	ZW	846.58	846.61	846.67	846.73	846.80	846.89	846.99	847.05
GIRDER	CW	846.58	846.61	846.69	846.76	846.83	846.92	847.00	847.05
	SW	0.03	0.03	0.02	0.01	0.00	0.00	0.01	0.01
RIGHT	DL1	0.10	0.09	0.05	0.02	0.00	0.01	0.02	0.03
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLOCKING HEIGHTS									
10	BLK	60.47	60.50	60.55	60.61	60.67	60.77	60.88	60.93
11		60.46	60.48	60.54	60.60	60.67	60.77	60.87	60.93
12		60.45	60.48	60.54	60.61	60.67	60.76	60.86	60.92
13		60.45	60.48	60.54	60.61	60.67	60.76	60.86	60.92

STATE PROJECT NUMBER

1060-33-81

LEGEND

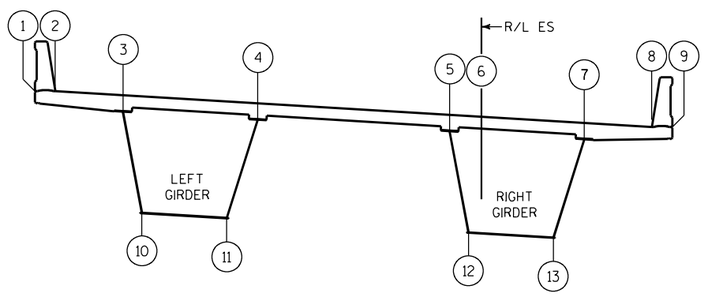
P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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.



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10 1/2" SLAB = 14 1/2" = 1.21 FT

C = CAMBER = ZW - CW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 7 & 8

SHEET 80 OF 122

8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Mandatory\080542_ss.dgn
PLOT DATE : 01-MAR-2015 19:03
PLOT BY : MSCKTM
PLOT NAME : 080542_ss
PLOT SCALE : 10.666667:1

FIELD SECTION #9

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		FS #8	P09-01	P09-02	P09-03	P09-04	P09-05	P09-06	P09-07	P09-08
		587+70.32	587+76.63	587+90.23	588+03.83	588+17.43	588+31.03	588+44.63	588+58.24	588+71.82
FINISHED ELEVATION - TOP OF DECK										
1	DS	850.18	850.21	850.26	850.29	850.32	850.33	850.33	850.31	850.28
2		850.10	850.13	850.18	850.22	850.24	850.26	850.25	850.24	850.21
6		848.57	848.60	848.65	848.69	848.71	848.73	848.72	848.71	848.68
8		847.96	847.99	848.04	848.08	848.10	848.11	848.11	848.10	848.07
9		847.89	847.92	847.97	848.00	848.03	848.04	848.04	848.02	847.99
CAMBER DATA										
3	DS	849.86	849.89	849.94	849.98	850.00	850.01	850.01	850.00	849.97
	TES	848.83	848.82	848.91	848.97	849.00	849.00	848.97	848.91	848.83
LEFT	ZW	848.72	848.77	848.86	848.93	848.96	848.96	848.92	848.85	848.76
GIRDER	CW	848.72	848.72	848.73	848.73	848.74	848.74	848.75	848.76	848.76
	SW	0.01	0.02	0.03	0.03	0.03	0.03	0.02	0.01	0.00
LEFT	DL1	0.05	0.06	0.09	0.11	0.12	0.11	0.08	0.05	0.00
WEB	DL2	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.04	0.13	0.19	0.22	0.21	0.17	0.10	0.00
4	DS	849.38	849.41	849.46	849.49	849.52	849.53	849.53	849.51	849.48
	TES	848.34	848.33	848.41	848.47	848.50	848.50	848.48	848.42	848.35
LEFT	ZW	848.23	848.27	848.36	848.42	848.46	848.46	848.43	848.36	848.28
GIRDER	CW	848.23	848.23	848.24	848.24	848.25	848.26	848.26	848.27	848.28
	SW	0.01	0.02	0.02	0.03	0.03	0.03	0.02	0.01	0.00
RIGHT	DL1	0.04	0.05	0.08	0.10	0.11	0.10	0.08	0.04	0.00
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.04	0.12	0.18	0.21	0.20	0.16	0.09	0.00
5	DS	848.69	848.72	848.77	848.81	848.83	848.84	848.84	848.82	848.79
	TES	847.64	847.63	847.71	847.77	847.80	847.80	847.78	847.73	847.66
RIGHT	ZW	847.53	847.57	847.66	847.72	847.76	847.76	847.73	847.67	847.59
GIRDER	CW	847.53	847.53	847.54	847.55	847.56	847.56	847.57	847.58	847.59
	SW	0.01	0.01	0.02	0.03	0.03	0.03	0.02	0.01	0.00
LEFT	DL1	0.03	0.05	0.07	0.09	0.10	0.09	0.07	0.04	0.00
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.04	0.12	0.17	0.20	0.19	0.15	0.09	0.00
7	DS	848.21	848.23	848.28	848.32	848.35	848.36	848.35	848.34	848.31
	TES	847.16	847.15	847.23	847.29	847.32	847.32	847.30	847.25	847.18
RIGHT	ZW	847.05	847.09	847.17	847.24	847.27	847.27	847.24	847.18	847.10
GIRDER	CW	847.05	847.05	847.06	847.06	847.07	847.08	847.09	847.10	847.10
	SW	0.01	0.01	0.02	0.03	0.03	0.03	0.02	0.01	0.00
RIGHT	DL1	0.03	0.05	0.07	0.09	0.10	0.09	0.07	0.04	0.00
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.04	0.12	0.17	0.20	0.19	0.15	0.09	0.00
BLOCKING HEIGHTS										
10	BLK	60.93	60.98	61.07	61.14	61.17	61.17	61.13	61.07	60.98
11		60.93	60.97	61.06	61.12	61.16	61.16	61.13	61.06	60.98
12		60.92	60.96	61.05	61.11	61.14	61.15	61.11	61.06	60.98
13		60.92	60.96	61.05	61.11	61.14	61.15	61.11	61.06	60.98

FIELD SECTION #10

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		P10-01	P10-02	P10-03	P10-04	P10-05	P10-06	P10-07	P10-08	FS #9
		588+75.82	588+89.53	589+03.24	589+16.95	589+30.66	589+44.37	589+58.06	589+71.79	589+78.82
FINISHED ELEVATION - TOP OF DECK										
1	DS	850.27	850.23	850.17	850.10	850.01	849.91	849.80	849.67	849.60
2		850.20	850.15	850.09	850.02	849.94	849.84	849.73	849.60	849.53
6		848.67	848.62	848.56	848.49	848.41	848.31	848.20	848.07	848.00
8		848.06	848.01	847.95	847.88	847.79	847.70	847.58	847.46	847.39
9		847.98	847.94	847.88	847.81	847.72	847.62	847.51	847.38	847.31
CAMBER DATA										
3	DS	849.96	849.91	849.85	849.78	849.69	849.60	849.48	849.36	849.29
	TES	848.83	848.85	848.85	848.82	848.75	848.65	848.52	848.36	848.33
LEFT	ZW	848.75	848.79	848.80	848.78	848.72	848.62	848.48	848.31	848.21
GIRDER	CW	848.75	848.68	848.61	848.53	848.46	848.39	848.32	848.24	848.21
	SW	0.00	0.02	0.03	0.04	0.05	0.05	0.04	0.03	0.03
LEFT	DL1	0.00	0.06	0.11	0.15	0.17	0.17	0.15	0.11	0.09
WEB	DL2	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.11	0.19	0.24	0.26	0.23	0.16	0.06	0.00
4	DS	849.47	849.43	849.37	849.30	849.21	849.11	849.00	848.87	848.80
	TES	848.35	848.37	848.36	848.33	848.26	848.16	848.02	847.87	847.84
LEFT	ZW	848.27	848.30	848.31	848.29	848.22	848.12	847.98	847.81	847.72
GIRDER	CW	848.27	848.19	848.12	848.05	847.97	847.90	847.83	847.76	847.72
	SW	0.00	0.02	0.03	0.04	0.05	0.04	0.04	0.03	0.03
RIGHT	DL1	0.00	0.06	0.11	0.14	0.16	0.16	0.14	0.11	0.09
WEB	DL2	0.00	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01
	C	0.00	0.11	0.19	0.24	0.25	0.22	0.15	0.06	0.00
5	DS	848.78	848.74	848.68	848.61	848.52	848.42	848.31	848.18	848.11
	TES	847.65	847.67	847.66	847.63	847.57	847.47	847.34	847.18	847.15
RIGHT	ZW	847.58	847.61	847.62	847.60	847.54	847.44	847.31	847.14	847.05
GIRDER	CW	847.58	847.51	847.44	847.36	847.29	847.22	847.15	847.08	847.05
	SW	0.00	0.02	0.03	0.04	0.05	0.05	0.04	0.04	0.03
LEFT	DL1	0.00	0.06	0.11	0.14	0.16	0.17	0.15	0.12	0.10
WEB	DL2	0.00	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01
	C	0.00	0.10	0.18	0.23	0.25	0.22	0.16	0.06	0.00
7	DS	848.30	848.25	848.20	848.12	848.04	847.94	847.83	847.70	847.63
	TES	847.17	847.18	847.18	847.15	847.08	846.99	846.86	846.70	846.67
RIGHT	ZW	847.09	847.13	847.13	847.11	847.06	846.96	846.83	846.66	846.56
GIRDER	CW	847.09	847.02	846.95	846.88	846.81	846.74	846.67	846.60	846.56
	SW	0.00	0.02	0.03	0.04	0.05	0.05	0.04	0.04	0.03
RIGHT	DL1	0.00	0.06	0.11	0.14	0.16	0.17	0.15	0.12	0.10
WEB	DL2	0.00	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01
	C	0.00	0.10	0.18	0.23	0.25	0.22	0.16	0.06	0.00
BLOCKING HEIGHTS										
10	BLK	60.97	61.00	61.01	60.99	60.93	60.83	60.69	60.52	60.42
11		60.97	61.00	61.01	60.99	60.92	60.82	60.68	60.51	60.42
12		60.97	61.00	61.01	60.99	60.93	60.83	60.70	60.53	60.43
13		60.97	61.00	61.01	60.99	60.93	60.83	60.70	60.53	60.43

STATE PROJECT NUMBER

1060-33-81

LEGEND

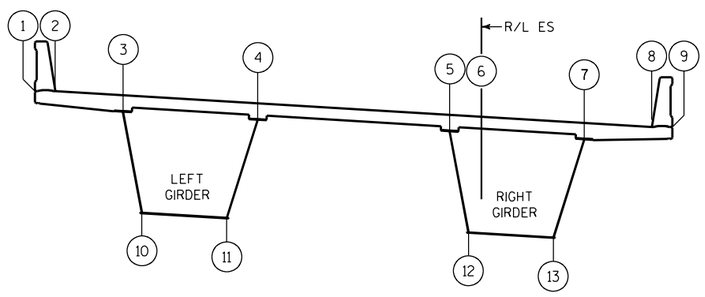
P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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.



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10 1/2" SLAB = 14 1/2" = 1.21 FT

C = CAMBER = ZW - CW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 9 & 10

SHEET 81 OF 122

8

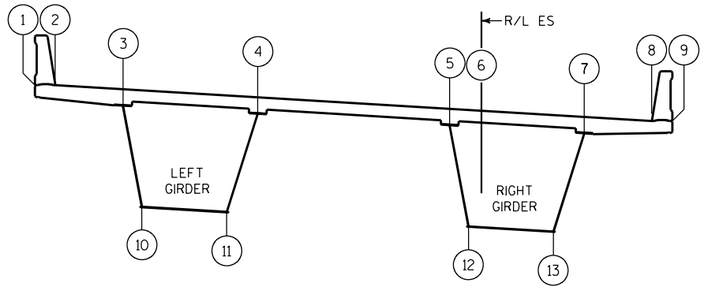
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FIELD SECTION #11

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION										
		FS #9	P11-01	P11-02	P11-03	P11-04	PIER	P11-06	P11-07	P11-08	P11-09	FS #10
		589+78.82	589+85.50	589+99.21	590+12.92	590+26.63	590+40.32	590+53.38	590+66.44	590+79.49	590+92.55	590+98.82
FINISHED ELEVATION - TOP OF DECK												
1	DS	849.60	849.53	849.38	849.22	849.04	848.84	848.65	848.44	848.22	847.99	847.87
2		849.53	849.46	849.31	849.14	848.96	848.77	848.58	848.37	848.15	847.92	847.80
6		848.00	847.93	847.78	847.61	847.43	847.24	847.05	846.84	846.62	846.39	846.27
8		847.39	847.32	847.17	847.00	846.82	846.63	846.43	846.23	846.01	845.77	845.66
9		847.31	847.24	847.09	846.93	846.75	846.56	846.36	846.15	845.93	845.70	845.58
CAMBER DATA												
3	DS	849.29	849.22	849.07	848.90	848.72	848.53	848.33	848.12	847.90	847.67	847.56
	TES	848.33	848.19	848.00	847.80	847.67	847.49	847.35	847.15	847.02	846.88	846.86
LEFT	ZW	848.21	848.11	847.90	847.69	847.50	847.33	847.20	847.08	846.97	846.86	846.80
GIRDER	CW	848.21	848.13	847.97	847.81	847.65	847.49	847.33	847.18	847.03	846.87	846.80
	SW	0.03	0.02	0.01	0.00	0.00	0.00	0.02	0.04	0.06	0.09	0.10
LEFT	DL1	0.09	0.07	0.03	0.00	-0.01	0.00	0.05	0.11	0.19	0.28	0.32
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.03	0.04
	C	0.00	-0.02	-0.07	-0.11	-0.15	-0.16	-0.14	-0.10	-0.05	-0.01	0.00
4	DS	848.80	848.73	848.58	848.42	848.24	848.04	847.85	847.64	847.42	847.19	847.07
	TES	847.84	847.71	847.52	847.32	847.19	847.01	846.85	846.65	846.51	846.37	846.35
LEFT	ZW	847.72	847.62	847.42	847.22	847.02	846.84	846.70	846.58	846.46	846.35	846.29
GIRDER	CW	847.72	847.64	847.48	847.31	847.15	846.98	846.83	846.67	846.52	846.36	846.29
	SW	0.03	0.02	0.01	0.00	0.00	0.00	0.01	0.03	0.06	0.08	0.09
RIGHT	DL1	0.09	0.07	0.04	0.01	0.00	0.00	0.04	0.10	0.17	0.25	0.29
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.03
	C	0.00	-0.01	-0.05	-0.09	-0.13	-0.14	-0.13	-0.10	-0.05	-0.02	0.00
5	DS	848.11	848.04	847.89	847.73	847.55	847.36	847.16	846.95	846.73	846.50	846.38
	TES	847.15	847.02	846.82	846.62	846.49	846.31	846.15	845.94	845.80	845.65	845.62
RIGHT	ZW	847.05	846.95	846.74	846.53	846.33	846.15	846.01	845.88	845.75	845.63	845.56
GIRDER	CW	847.05	846.96	846.79	846.62	846.45	846.28	846.12	845.96	845.80	845.64	845.56
	SW	0.03	0.02	0.01	0.00	0.00	0.00	0.01	0.03	0.05	0.07	0.08
LEFT	DL1	0.10	0.08	0.04	0.01	0.00	0.00	0.04	0.09	0.16	0.23	0.27
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.03
	C	0.00	-0.01	-0.05	-0.09	-0.12	-0.13	-0.12	-0.08	-0.05	-0.01	0.00
7	DS	847.63	847.56	847.41	847.24	847.06	846.87	846.68	846.47	846.25	846.02	845.90
	TES	846.67	846.54	846.34	846.14	846.01	845.82	845.67	845.46	845.31	845.16	845.14
RIGHT	ZW	846.56	846.47	846.26	846.05	845.85	845.67	845.52	845.39	845.27	845.14	845.08
GIRDER	CW	846.56	846.48	846.31	846.14	845.97	845.80	845.64	845.48	845.32	845.15	845.08
	SW	0.03	0.02	0.01	0.00	0.00	0.00	0.01	0.03	0.05	0.07	0.08
RIGHT	DL1	0.10	0.08	0.04	0.01	0.00	0.00	0.04	0.09	0.16	0.23	0.27
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.03
	C	0.00	-0.01	-0.05	-0.09	-0.12	-0.13	-0.12	-0.08	-0.05	-0.01	0.00
BLOCKING HEIGHTS												
10	BLK	60.42	60.32	60.12	59.91	59.71	59.54	59.41	59.29	59.19	59.07	59.02
11		60.42	60.32	60.12	59.92	59.72	59.54	59.40	59.28	59.16	59.04	58.98
12		60.43	60.34	60.13	59.92	59.72	59.54	59.40	59.27	59.14	59.01	58.95
13		60.43	60.34	60.13	59.92	59.72	59.54	59.40	59.27	59.14	59.01	58.95

FIELD SECTION #12

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION										
		FS #10	P12-01	P12-02	P12-03	P12-04	P12-05	P12-06	P12-07	P12-08	P12-09	FS #11
		590+98.82	591+05.60	591+18.66	591+31.71	591+44.77	591+57.82	591+70.88	591+83.94	591+96.99	592+10.05	592+16.82
FINISHED ELEVATION - TOP OF DECK												
1	DS	847.87	847.75	847.49	847.22	846.94	846.65	846.34	846.03	845.70	845.36	845.18
2		847.80	847.67	847.42	847.15	846.87	846.57	846.27	845.95	845.62	845.28	845.10
6		846.27	846.14	845.89	845.62	845.34	845.04	844.74	844.42	844.09	843.75	843.57
8		845.66	845.53	845.27	845.00	844.72	844.43	844.13	843.81	843.48	843.14	842.96
9		845.58	845.46	845.20	844.93	844.65	844.36	844.05	843.74	843.41	843.07	842.89
CAMBER DATA												
3	DS	847.56	847.43	847.17	846.90	846.62	846.33	846.03	845.71	845.38	845.04	844.86
	TES	846.86	846.72	846.55	846.35	846.11	845.84	845.51	845.15	844.76	844.33	844.15
LEFT	ZW	846.80	846.73	846.58	846.40	846.17	845.90	845.57	845.20	844.78	844.34	844.10
GIRDER	CW	846.80	846.65	846.35	846.05	845.75	845.45	845.15	844.85	844.55	844.25	844.10
	SW	0.10	0.11	0.13	0.15	0.16	0.17	0.16	0.15	0.13	0.11	0.10
LEFT	DL1	0.32	0.36	0.43	0.49	0.53	0.55	0.53	0.49	0.43	0.36	0.31
WEB	DL2	0.04	0.04	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.04	0.03
	C	0.00	0.09	0.24	0.35	0.43	0.45	0.42	0.35	0.23	0.09	0.00
4	DS	847.07	846.95	846.69	846.42	846.14	845.85	845.54	845.23	844.90	844.56	844.37
	TES	846.35	846.21	846.03	845.82	845.57	845.29	844.97	844.62	844.24	843.82	843.65
LEFT	ZW	846.29	846.21	846.05	845.86	845.62	845.34	845.02	844.66	844.26	843.82	843.58
GIRDER	CW	846.29	846.13	845.83	845.53	845.23	844.93	844.63	844.33	844.03	843.73	843.58
	SW	0.09	0.10	0.12	0.14	0.15	0.15	0.15	0.14	0.12	0.10	0.09
RIGHT	DL1	0.29	0.34	0.40	0.45	0.48	0.49	0.48	0.45	0.40	0.33	0.29
WEB	DL2	0.03	0.04	0.05	0.05	0.05	0.06	0.05	0.05	0.04	0.04	0.03
	C	0.00	0.09	0.22	0.33	0.39	0.41	0.39	0.32	0.22	0.08	0.00
5	DS	846.38	846.26	846.00	845.73	845.45	845.16	844.85	844.54	844.21	843.87	843.69
	TES	845.62	845.48	845.30	845.09	844.85	844.57	844.25	843.89	843.50	843.09	842.92
RIGHT	ZW	845.56	845.48	845.32	845.13	844.89	844.62	844.29	843.93	843.52	843.09	842.85
GIRDER	CW	845.56	845.40	845.10	844.81	844.51	844.21	843.91	843.61	843.31	843.01	842.85
	SW	0.08	0.09	0.11	0.13	0.14	0.14	0.14	0.13	0.11	0.09	0.08
LEFT	DL1	0.27	0.31	0.37	0.42	0.46	0.47	0.46	0.42	0.37	0.30	0.26
WEB	DL2	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03
	C	0.00	0.08	0.22	0.32	0.39	0.41	0.39	0.32	0.21	0.08	0.00
7	DS	845.90	845.77	845.52	845.25	844.97	844.67	844.37	844.05	843.72	843.38	843.20
	TES	845.14	845.00	844.82	844.61	844.36	844.08	843.76	843.41	843.02	842.61	842.43
RIGHT	ZW	845.08	845.00	844.84	844.64	844.41	844.13	843.81	843.44	843.04	842.60	842.37
GIRDER	CW	845.08	844.92	844.62	844.32	844.02	843.72	843.42	843.12	842.82	842.52	842.37
	SW	0.08	0.09	0.11	0.13	0.14	0.14	0.14	0.13	0.11	0.09	0.08
RIGHT	DL1	0.27	0.31	0.37	0.42	0.46	0.47	0.46	0.42	0.37	0.30	0.26
WEB	DL2	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03
	C	0.00	0.08	0.22	0.32	0.39	0.41	0.39	0.32	0.21	0.08	0.00
BLOCKING HEIGHTS												
10	BLK	59.02	58.95	58.80	58.61	58.39	58.11	57.79	57.41	57.00	56.55	56.31
11		58.98	58.91	58.75	58.56	58.32	58.04	57.72	57.36	56.96	56.52	56.28
12		58.95	58.87	58.71	58.51	58.28	58.01	57.68	57.31	56.91	56.48	56.24
13		58.95	58.87	58.71	58.51	58.28	58.01	57.68	57.31	56.91	56.48	56.24



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-81

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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' (½").
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 (¼") 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-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 11 & 12

SHEET 82 OF 122

8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Mandatory\080544_ss.dgn
PLOT DATE : 01-MAR-2015 19:03
PLOT BY : MSCKTM
PLOT NAME : 080544_ss
PLOT SCALE : 10.666667:1

FIELD SECTION #13

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION										
		FS #11	P13-01	P13-02	P13-03	P13-04	PIER	P13-06	P13-07	P13-08	P13-09	FS #12
		592+16.82	592+23.10	592+36.16	592+49.21	592+62.27	592+75.32	592+88.95	593+02.57	593+16.20	593+29.82	593+36.82
FINISHED ELEVATION - TOP OF DECK												
1	DS	845.18	845.00	844.64	844.26	843.87	843.47	843.04	842.59	842.14	841.66	841.42
2		845.10	844.93	844.56	844.19	843.80	843.40	842.97	842.52	842.06	841.59	841.34
6		843.57	843.40	843.03	842.66	842.27	841.87	841.44	840.99	840.53	840.06	839.81
8		842.96	842.79	842.42	842.05	841.66	841.26	840.82	840.38	839.92	839.45	839.20
9		842.89	842.71	842.35	841.97	841.58	841.18	840.75	840.30	839.85	839.38	839.13
CAMBER DATA												
3	DS	844.86	844.69	844.32	843.95	843.56	843.15	842.72	842.28	841.82	841.35	841.10
	TES	844.15	843.89	843.43	842.97	842.57	842.12	841.67	841.18	840.75	840.33	840.16
LEFT	ZW	844.10	843.87	843.38	842.90	842.42	841.95	841.50	841.07	840.66	840.25	840.03
GIRDER	CW	844.10	843.88	843.44	843.00	842.56	842.12	841.65	841.19	840.73	840.27	840.03
	SW	0.10	0.08	0.06	0.03	0.01	0.00	0.00	0.00	0.01	0.02	0.03
LEFT	DL1	0.31	0.27	0.19	0.11	0.05	0.00	-0.01	0.00	0.03	0.07	0.09
WEB	DL2	0.03	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.02
	C	0.00	-0.02	-0.06	-0.10	-0.14	-0.16	-0.15	-0.12	-0.07	-0.02	0.00
4	DS	844.37	844.20	843.84	843.46	843.07	842.67	842.24	841.79	841.34	840.86	840.62
	TES	843.65	843.38	842.92	842.47	842.08	841.63	841.20	840.71	840.28	839.85	839.68
LEFT	ZW	843.58	843.35	842.87	842.39	841.92	841.47	841.03	840.61	840.19	839.78	839.56
GIRDER	CW	843.58	843.37	842.93	842.49	842.06	841.62	841.16	840.71	840.25	839.80	839.56
	SW	0.09	0.08	0.05	0.03	0.01	0.00	0.00	0.01	0.02	0.03	0.03
RIGHT	DL1	0.29	0.25	0.17	0.10	0.04	0.00	0.00	0.01	0.04	0.08	0.10
WEB	DL2	0.03	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	-0.02	-0.06	-0.10	-0.14	-0.15	-0.13	-0.10	-0.06	-0.02	0.00
5	DS	843.69	843.51	843.15	842.77	842.38	841.98	841.55	841.10	840.65	840.18	839.93
	TES	842.92	842.66	842.21	841.76	841.38	840.94	840.50	840.00	839.59	839.16	839.00
RIGHT	ZW	842.85	842.63	842.16	841.69	841.23	840.78	840.34	839.91	839.51	839.10	838.89
GIRDER	CW	842.85	842.65	842.21	841.78	841.35	840.92	840.47	840.02	839.57	839.12	838.89
	SW	0.08	0.07	0.05	0.03	0.01	0.00	0.00	0.01	0.02	0.03	0.04
LEFT	DL1	0.26	0.23	0.16	0.09	0.04	0.00	0.00	0.01	0.05	0.09	0.12
WEB	DL2	0.03	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	-0.01	-0.05	-0.09	-0.12	-0.14	-0.13	-0.11	-0.06	-0.02	0.00
7	DS	843.20	843.03	842.67	842.29	841.90	841.50	841.07	840.62	840.16	839.69	839.44
	TES	842.43	842.17	841.72	841.27	840.90	840.46	840.02	839.52	839.10	838.68	838.51
RIGHT	ZW	842.37	842.15	841.68	841.21	840.74	840.29	839.85	839.43	839.02	838.62	838.40
GIRDER	CW	842.37	842.16	841.73	841.30	840.87	840.44	839.99	839.54	839.09	838.64	838.40
	SW	0.08	0.07	0.05	0.03	0.01	0.00	0.00	0.01	0.02	0.03	0.04
RIGHT	DL1	0.26	0.23	0.16	0.09	0.04	0.00	0.00	0.01	0.05	0.09	0.12
WEB	DL2	0.03	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	-0.01	-0.05	-0.09	-0.12	-0.14	-0.13	-0.11	-0.06	-0.02	0.00
BLOCKING HEIGHTS												
10	BLK	56.31	56.08	55.60	55.11	54.63	54.17	53.72	53.29	52.88	52.46	52.25
11		56.28	56.05	55.57	55.09	54.62	54.17	53.73	53.31	52.89	52.48	52.26
12		56.24	56.02	55.55	55.08	54.62	54.17	53.73	53.30	52.90	52.49	52.28
13		56.24	56.02	55.55	55.08	54.62	54.17	53.73	53.30	52.90	52.49	52.28

FIELD SECTION #14

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		FS #12	P14-01	P14-02	P14-03	P14-04	P14-05	P14-06	P14-07	FS #13
		593+36.82	593+43.45	593+57.07	593+70.70	593+84.32	593+97.95	594+11.57	594+25.20	594+31.82
FINISHED ELEVATION - TOP OF DECK										
1	DS	841.42	841.18	840.68	840.17	839.65	839.11	838.56	838.00	837.72
2		841.34	841.11	840.61	840.10	839.57	839.04	838.49	837.92	837.64
6		839.81	839.58	839.08	838.57	838.04	837.51	836.96	836.39	836.11
8		839.20	838.96	838.47	837.96	837.43	836.89	836.34	835.78	835.50
9		839.13	838.89	838.39	837.88	837.36	836.82	836.27	835.71	835.43
CAMBER DATA										
3	DS	841.10	840.86	840.37	839.85	839.33	838.79	838.24	837.68	837.40
	TES	840.16	839.87	839.42	838.94	838.43	837.89	837.31	836.70	836.47
LEFT	ZW	840.03	839.83	839.39	838.92	838.41	837.87	837.28	836.66	836.36
GIRDER	CW	840.03	839.78	839.25	838.72	838.20	837.67	837.14	836.61	836.36
	SW	0.03	0.04	0.05	0.06	0.06	0.06	0.05	0.04	0.04
LEFT	DL1	0.09	0.12	0.16	0.19	0.20	0.19	0.17	0.13	0.11
WEB	DL2	0.02	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.02
	C	0.00	0.05	0.14	0.20	0.22	0.20	0.14	0.05	0.00
4	DS	840.62	840.38	839.88	839.37	838.85	838.31	837.76	837.20	836.92
	TES	839.68	839.40	838.94	838.45	837.94	837.40	836.83	836.23	835.99
LEFT	ZW	839.56	839.35	838.90	838.43	837.92	837.37	836.80	836.19	835.88
GIRDER	CW	839.56	839.30	838.78	838.25	837.72	837.19	836.67	836.14	835.88
	SW	0.03	0.04	0.05	0.06	0.06	0.06	0.06	0.05	0.04
RIGHT	DL1	0.10	0.12	0.16	0.18	0.19	0.19	0.17	0.14	0.12
WEB	DL2	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	C	0.00	0.05	0.13	0.18	0.19	0.18	0.13	0.05	0.00
5	DS	839.93	839.69	839.19	838.68	838.16	837.62	837.07	836.51	836.23
	TES	839.00	838.72	838.27	837.79	837.28	836.73	836.16	835.55	835.31
RIGHT	ZW	838.89	838.68	838.24	837.77	837.27	836.72	836.13	835.52	835.21
GIRDER	CW	838.89	838.63	838.10	837.58	837.05	836.52	835.99	835.47	835.21
	SW	0.04	0.04	0.06	0.07	0.07	0.07	0.06	0.05	0.04
LEFT	DL1	0.12	0.14	0.18	0.21	0.22	0.21	0.19	0.15	0.13
WEB	DL2	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	C	0.00	0.05	0.14	0.19	0.22	0.20	0.14	0.05	0.00
7	DS	839.44	839.21	838.71	838.20	837.67	837.14	836.59	836.02	835.74
	TES	838.51	838.24	837.78	837.30	836.79	836.25	835.67	835.07	834.83
RIGHT	ZW	838.40	838.20	837.76	837.29	836.78	836.23	835.65	835.03	834.73
GIRDER	CW	838.40	838.15	837.62	837.09	836.56	836.04	835.51	834.98	834.73
	SW	0.04	0.04	0.06	0.07	0.07	0.07	0.06	0.05	0.04
RIGHT	DL1	0.12	0.14	0.18	0.21	0.22	0.21	0.19	0.15	0.13
WEB	DL2	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	C	0.00	0.05	0.14	0.19	0.22	0.20	0.14	0.05	0.00
BLOCKING HEIGHTS										
10	BLK	52.25	52.04	51.60	51.13	50.63	50.08	49.50	48.88	48.57
11		52.26	52.05	51.60	51.13	50.62	50.07	49.50	48.89	48.58
12		52.28	52.07	51.63	51.16	50.65	50.11	49.52	48.91	48.60
13		52.28	52.07	51.63	51.16	50.65	50.11	49.52	48.91	48.60

STATE PROJECT NUMBER

1060-33-81

LEGEND

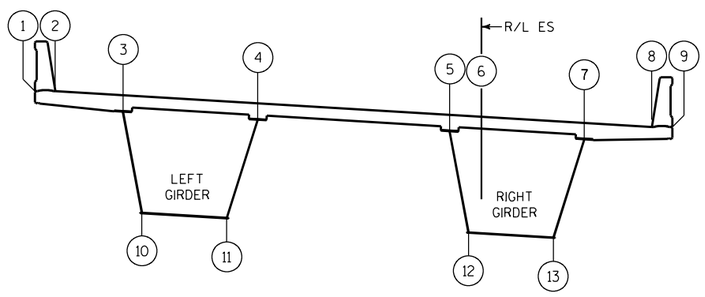
P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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.



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10 1/2" SLAB = 14 1/2" = 1.21 FT

C = CAMBER = ZW - CW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 13 & 14

SHEET 83 OF 122

8

8

FIELD SECTION #15

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION									
		FS #13	P15-01	P15-02	P15-03	P15-04	PIER	P15-06	P15-07	P15-08	FS #14
		594+31.82	594+38.82	594+52.45	594+66.07	594+79.70	594+93.32	595+07.07	595+20.82	595+34.57	595+41.82
FINISHED ELEVATION - TOP OF DECK											
1	DS	837.72	837.42	836.83	836.23	835.61	834.98	834.33	833.67	832.99	832.63
2		837.64	837.35	836.76	836.15	835.54	834.91	834.26	833.60	832.92	832.56
6		836.11	835.82	835.23	834.62	834.01	833.38	832.73	832.07	831.39	831.03
8		835.50	835.20	834.61	834.01	833.39	832.76	832.12	831.45	830.78	830.42
9		835.43	835.13	834.54	833.94	833.32	832.69	832.04	831.38	830.70	830.34
CAMBER DATA											
3	DS	837.40	837.10	836.51	835.91	835.29	834.66	834.02	833.35	832.68	832.32
	TES	836.47	836.09	835.45	834.81	834.25	833.63	833.02	832.35	831.75	831.49
LEFT	ZW	836.36	836.03	835.38	834.72	834.08	833.46	832.87	832.28	831.71	831.40
GIRDER	CW	836.36	836.04	835.43	834.81	834.20	833.59	832.97	832.35	831.73	831.40
	SW	0.04	0.03	0.02	0.01	0.00	0.00	0.01	0.03	0.05	0.06
LEFT	DL1	0.11	0.09	0.05	0.01	0.00	0.00	0.04	0.10	0.18	0.22
WEB	DL2	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.02	0.02
	C	0.00	-0.01	-0.05	-0.09	-0.12	-0.13	-0.10	-0.06	-0.02	0.00
4	DS	836.92	836.62	836.03	835.43	834.81	834.18	833.53	832.87	832.19	831.83
	TES	835.99	835.62	834.98	834.34	833.77	833.14	832.53	831.85	831.25	830.98
LEFT	ZW	835.88	835.56	834.91	834.26	833.61	832.98	832.37	831.78	831.20	830.89
GIRDER	CW	835.88	835.57	834.95	834.33	833.71	833.09	832.47	831.84	831.22	830.89
	SW	0.04	0.03	0.02	0.01	0.00	0.00	0.01	0.02	0.04	0.06
RIGHT	DL1	0.12	0.10	0.06	0.02	0.00	0.00	0.04	0.09	0.16	0.19
WEB	DL2	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.02
	C	0.00	-0.01	-0.04	-0.07	-0.10	-0.12	-0.10	-0.06	-0.02	0.00
5	DS	836.23	835.93	835.34	834.74	834.12	833.49	832.84	832.18	831.50	831.14
	TES	835.31	834.94	834.30	833.65	833.07	832.44	831.82	831.15	830.54	830.27
RIGHT	ZW	835.21	834.88	834.22	833.56	832.92	832.29	831.68	831.08	830.49	830.18
GIRDER	CW	835.21	834.89	834.27	833.64	833.02	832.40	831.77	831.14	830.51	830.18
	SW	0.04	0.04	0.02	0.01	0.00	0.00	0.01	0.02	0.04	0.05
LEFT	DL1	0.13	0.11	0.06	0.02	0.00	0.00	0.03	0.08	0.14	0.18
WEB	DL2	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.02
	C	0.00	-0.01	-0.04	-0.08	-0.10	-0.11	-0.09	-0.06	-0.02	0.00
7	DS	835.74	835.45	834.86	834.25	833.64	833.01	832.36	831.70	831.02	830.66
	TES	834.83	834.45	833.81	833.16	832.59	831.96	831.34	830.67	830.06	829.79
RIGHT	ZW	834.73	834.39	833.74	833.08	832.43	831.80	831.19	830.60	830.01	829.69
GIRDER	CW	834.73	834.41	833.78	833.16	832.54	831.91	831.28	830.65	830.03	829.69
	SW	0.04	0.04	0.02	0.01	0.00	0.00	0.01	0.02	0.04	0.05
RIGHT	DL1	0.13	0.11	0.06	0.02	0.00	0.00	0.03	0.08	0.14	0.18
WEB	DL2	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.02
	C	0.00	-0.01	-0.04	-0.08	-0.10	-0.11	-0.09	-0.06	-0.02	0.00
BLOCKING HEIGHTS											
10	BLK	48.57	48.24	47.59	46.94	46.30	45.68	45.08	44.50	43.92	43.62
11		48.58	48.25	47.61	46.96	46.31	45.68	45.07	44.48	43.90	43.59
12		48.60	48.27	47.61	46.95	46.31	45.68	45.07	44.47	43.88	43.57
13		48.60	48.27	47.61	46.95	46.31	45.68	45.07	44.47	43.88	43.57

FIELD SECTION #16

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION										
		FS #14	P16-01	P16-02	P16-03	P16-04	P16-05	P16-06	P16-07	P16-08	P16-09	FS #15
		595+41.82	595+48.32	595+62.07	595+75.82	595+89.57	596+03.32	596+17.07	596+30.82	596+44.57	596+58.32	596+64.82
FINISHED ELEVATION - TOP OF DECK												
1	DS	832.63	832.31	831.62	830.93	830.25	829.56	828.87	828.18	827.50	826.81	826.48
2		832.56	832.23	831.55	830.86	830.17	829.48	828.80	828.11	827.42	826.73	826.41
6		831.03	830.70	830.02	829.33	828.64	827.95	827.27	826.58	825.89	825.20	824.88
8		830.42	830.09	829.40	828.72	828.03	827.34	826.65	825.97	825.28	824.59	824.27
9		830.34	830.02	829.33	828.64	827.96	827.27	826.58	825.89	825.21	824.52	824.19
CAMBER DATA												
3	DS	832.32	831.99	831.30	830.62	829.93	829.24	828.55	827.87	827.18	826.49	826.17
	TES	831.49	831.15	830.54	829.92	829.28	828.61	827.91	827.18	826.42	825.66	825.35
LEFT	ZW	831.40	831.13	830.54	829.94	829.31	828.64	827.94	827.19	826.42	825.64	825.26
GIRDER	CW	831.40	831.08	830.39	829.71	829.02	828.33	827.65	826.96	826.27	825.59	825.26
	SW	0.06	0.07	0.09	0.11	0.12	0.13	0.12	0.11	0.09	0.07	0.06
LEFT	DL1	0.22	0.25	0.32	0.39	0.43	0.44	0.43	0.39	0.33	0.26	0.22
WEB	DL2	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.03	0.03	0.02	0.02
	C	0.00	0.05	0.15	0.23	0.29	0.31	0.29	0.23	0.15	0.05	0.00
4	DS	831.83	831.51	830.82	830.13	829.45	828.76	828.07	827.38	826.70	826.01	825.68
	TES	830.98	830.64	830.03	829.40	828.75	828.08	827.38	826.66	825.92	825.15	824.84
LEFT	ZW	830.89	830.62	830.02	829.41	828.77	828.10	827.40	826.67	825.91	825.13	824.75
GIRDER	CW	830.89	830.57	829.88	829.19	828.51	827.82	827.14	826.45	825.76	825.08	824.75
	SW	0.06	0.07	0.09	0.10	0.11	0.11	0.11	0.10	0.09	0.07	0.06
RIGHT	DL1	0.19	0.23	0.30	0.35	0.39	0.40	0.39	0.36	0.31	0.24	0.20
WEB	DL2	0.02	0.02	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.02	0.02
	C	0.00	0.05	0.14	0.21	0.26	0.27	0.26	0.22	0.15	0.05	0.00
5	DS	831.14	830.82	830.13	829.44	828.76	828.07	827.38	826.69	826.01	825.32	824.99
	TES	830.27	829.92	829.30	828.67	828.02	827.35	826.65	825.93	825.19	824.43	824.12
RIGHT	ZW	830.18	829.90	829.30	828.68	828.04	827.38	826.67	825.94	825.18	824.41	824.04
GIRDER	CW	830.18	829.85	829.17	828.48	827.80	827.11	826.42	825.74	825.05	824.37	824.04
	SW	0.05	0.06	0.08	0.09	0.10	0.11	0.10	0.09	0.08	0.06	0.05
LEFT	DL1	0.18	0.21	0.27	0.32	0.36	0.37	0.36	0.33	0.28	0.22	0.19
WEB	DL2	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02
	C	0.00	0.04	0.13	0.20	0.25	0.27	0.25	0.20	0.13	0.04	0.00
7	DS	830.66	830.33	829.65	828.96	828.27	827.58	826.90	826.21	825.52	824.83	824.51
	TES	829.79	829.44	828.82	828.19	827.54	826.87	826.17	825.45	824.70	823.95	823.64
RIGHT	ZW	829.69	829.41	828.81	828.20	827.56	826.89	826.19	825.46	824.70	823.93	823.56
GIRDER	CW	829.69	829.37	828.68	828.00	827.31	826.63	825.94	825.25	824.57	823.88	823.56
	SW	0.05	0.06	0.08	0.09	0.10	0.11	0.10	0.09	0.08	0.06	0.05
RIGHT	DL1	0.18	0.21	0.27	0.32	0.36	0.37	0.36	0.33	0.28	0.22	0.19
WEB	DL2	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02
	C	0.00	0.04	0.13	0.20	0.25	0.27	0.25	0.20	0.13	0.04	0.00
BLOCKING HEIGHTS												
10	BLK	43.62	43.34	42.75	42.15	41.52	40.86	40.15	39.41	38.64	37.85	37.48
11		43.59	43.31	42.72	42.11	41.47	40.80	40.10	39.37	38.61	37.83	37.45
12		43.57	43.28	42.68	42.07	41.43	40.76	40.06	39.33	38.57	37.80	37.43
13		43.57	43.28	42.68	42.07	41.43	40.76	40.06	39.33	38.57	37.80	37.43

STATE PROJECT NUMBER

1060-33-81

LEGEND

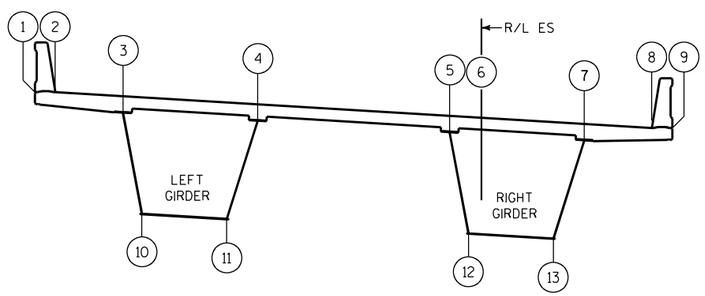
P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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.



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10 1/2" SLAB = 14 1/2" = 1.21 FT

C = CAMBER = ZW - CW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 15 & 16

SHEET 84 OF 122

8

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FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Mandatory\080546_ss.dgn

PLOT DATE : 01-MAR-2015 19:03 PLOT BY : MSCKTM PLOT NAME : 080546_ss PLOT SCALE : 10.666667:1

FIELD SECTION #17

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION									
		FS #15	P17-01	P17-02	P17-03	PIER	P17-05	P17-06	P17-07	P17-08	FS #16
		596+64.82	596+72.07	596+85.82	596+99.57	597+13.32	597+26.41	597+39.49	597+52.58	597+65.66	597+71.82
FINISHED ELEVATION - TOP OF DECK											
1	DS	826.48	826.12	825.43	824.75	824.06	823.40	822.75	822.09	821.44	821.13
2		826.41	826.05	825.36	824.67	823.98	823.33	822.68	822.02	821.37	821.06
6		824.88	824.52	823.83	823.14	822.45	821.80	821.15	820.49	819.84	819.53
8		824.27	823.90	823.22	822.53	821.84	821.19	820.53	819.88	819.23	818.92
9		824.19	823.83	823.14	822.46	821.77	821.11	820.46	819.81	819.15	818.84
CAMBER DATA											
3	DS	826.17	825.80	825.12	824.43	823.74	823.09	822.43	821.78	821.12	820.82
	TES	825.35	824.89	824.12	823.44	822.70	822.04	821.33	820.71	820.10	819.87
LEFT	ZW	825.26	824.84	824.06	823.28	822.54	821.88	821.24	820.63	820.03	819.75
GIRDER	CW	825.26	824.89	824.18	823.47	822.76	822.09	821.42	820.74	820.07	819.75
	SW	0.06	0.05	0.03	0.01	0.00	0.00	0.00	0.01	0.03	0.03
LEFT	DL1	0.22	0.18	0.11	0.05	0.00	0.00	0.01	0.04	0.08	0.10
WEB	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	-0.05	-0.13	-0.19	-0.23	-0.21	-0.17	-0.11	-0.03	0.00
4	DS	825.68	825.32	824.63	823.95	823.26	822.60	821.95	821.29	820.64	820.33
	TES	824.84	824.38	823.62	822.94	822.22	821.56	820.85	820.23	819.61	819.37
LEFT	ZW	824.75	824.34	823.55	822.79	822.05	821.40	820.76	820.15	819.54	819.25
GIRDER	CW	824.75	824.38	823.67	822.97	822.26	821.59	820.92	820.24	819.57	819.25
	SW	0.06	0.05	0.03	0.01	0.00	0.00	0.01	0.01	0.02	0.03
RIGHT	DL1	0.20	0.16	0.09	0.04	0.00	0.00	0.02	0.04	0.08	0.09
WEB	DL2	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.04	-0.12	-0.18	-0.21	-0.19	-0.15	-0.10	-0.03	0.00
5	DS	824.99	824.63	823.94	823.26	822.57	821.91	821.26	820.61	819.95	819.64
	TES	824.12	823.67	822.91	822.24	821.52	820.86	820.15	819.53	818.91	818.67
RIGHT	ZW	824.04	823.63	822.86	822.10	821.36	820.70	820.07	819.46	818.85	818.57
GIRDER	CW	824.04	823.67	822.97	822.26	821.56	820.89	820.22	819.55	818.88	818.57
	SW	0.05	0.04	0.03	0.01	0.00	0.00	0.01	0.01	0.02	0.03
LEFT	DL1	0.19	0.15	0.09	0.04	0.00	0.00	0.01	0.04	0.08	0.09
WEB	DL2	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.04	-0.11	-0.17	-0.20	-0.19	-0.15	-0.09	-0.03	0.00
7	DS	824.51	824.15	823.46	822.77	822.08	821.43	820.78	820.12	819.47	819.16
	TES	823.64	823.19	822.43	821.76	821.04	820.38	819.67	819.04	818.43	818.19
RIGHT	ZW	823.56	823.15	822.37	821.61	820.88	820.22	819.59	818.98	818.37	818.08
GIRDER	CW	823.56	823.19	822.48	821.78	821.08	820.41	819.74	819.07	818.40	818.08
	SW	0.05	0.04	0.03	0.01	0.00	0.00	0.01	0.01	0.02	0.03
RIGHT	DL1	0.19	0.15	0.09	0.04	0.00	0.00	0.01	0.04	0.08	0.09
WEB	DL2	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.04	-0.11	-0.17	-0.20	-0.19	-0.15	-0.09	-0.03	0.00
BLOCKING HEIGHTS											
10	BLK	37.48	37.06	36.27	35.50	34.75	34.09	33.46	32.85	32.25	31.96
11		37.45	37.04	36.25	35.49	34.75	34.10	33.46	32.85	32.24	31.95
12		37.43	37.02	36.25	35.49	34.75	34.09	33.46	32.85	32.24	31.96
13		37.43	37.02	36.25	35.49	34.75	34.09	33.46	32.85	32.24	31.96

FIELD SECTION #18

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		FS #16	P18-01	P18-02	P18-03	P18-04	P18-05	P18-06	P18-07	P18-08
		597+71.82	597+78.75	597+91.83	598+04.92	598+18.00	598+31.08	598+44.17	598+57.25	598+70.32
FINISHED ELEVATION - TOP OF DECK										
1	DS	821.13	820.79	820.13	819.48	818.82	818.17	817.52	816.86	816.21
2		821.06	820.71	820.06	819.40	818.75	818.10	817.44	816.79	816.13
6		819.53	819.18	818.53	817.87	817.22	816.57	815.91	815.26	814.60
8		818.92	818.57	817.92	817.26	816.61	815.95	815.30	814.65	813.99
9		818.84	818.50	817.84	817.19	816.53	815.88	815.23	814.57	813.92
CAMBER DATA										
3	DS	820.82	820.47	819.82	819.16	818.51	817.85	817.20	816.54	815.89
	TES	819.87	819.48	818.86	818.22	817.56	816.88	816.19	815.48	814.77
LEFT	ZW	819.75	819.43	818.82	818.18	817.52	816.84	816.14	815.42	814.69
GIRDER	CW	819.75	819.39	818.72	818.05	817.38	816.70	816.03	815.36	814.69
	SW	0.03	0.04	0.04	0.05	0.05	0.04	0.03	0.02	0.00
LEFT	DL1	0.10	0.12	0.15	0.16	0.16	0.14	0.10	0.06	0.00
WEB	DL2	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.00
	C	0.00	0.04	0.10	0.13	0.15	0.14	0.11	0.06	0.00
4	DS	820.33	819.99	819.33	818.68	818.02	817.37	816.72	816.06	815.41
	TES	819.37	818.98	818.35	817.72	817.06	816.39	815.70	815.00	814.28
LEFT	ZW	819.25	818.93	818.31	817.68	817.02	816.35	815.65	814.93	814.20
GIRDER	CW	819.25	818.90	818.23	817.56	816.89	816.21	815.54	814.87	814.20
	SW	0.03	0.03	0.04	0.05	0.05	0.04	0.03	0.02	0.00
RIGHT	DL1	0.09	0.11	0.13	0.15	0.15	0.13	0.10	0.06	0.00
WEB	DL2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.03	0.08	0.12	0.14	0.13	0.11	0.06	0.00
5	DS	819.64	819.30	818.64	817.99	817.33	816.68	816.03	815.37	814.72
	TES	818.67	818.28	817.66	817.02	816.36	815.69	814.99	814.29	813.58
RIGHT	ZW	818.57	818.25	817.63	816.99	816.33	815.65	814.95	814.23	813.51
GIRDER	CW	818.57	818.21	817.54	816.87	816.20	815.53	814.85	814.18	813.51
	SW	0.03	0.03	0.04	0.05	0.04	0.04	0.03	0.02	0.00
LEFT	DL1	0.09	0.11	0.14	0.15	0.15	0.13	0.10	0.05	0.00
WEB	DL2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.03	0.09	0.12	0.13	0.13	0.10	0.05	0.00
7	DS	819.16	818.81	818.16	817.50	816.85	816.20	815.54	814.89	814.23
	TES	818.19	817.80	817.17	816.53	815.88	815.20	814.51	813.81	813.10
RIGHT	ZW	818.08	817.76	817.14	816.51	815.85	815.17	814.47	813.75	813.03
GIRDER	CW	818.08	817.73	817.06	816.38	815.71	815.04	814.37	813.70	813.03
	SW	0.03	0.03	0.04	0.05	0.04	0.04	0.03	0.02	0.00
RIGHT	DL1	0.09	0.11	0.14	0.15	0.15	0.13	0.10	0.05	0.00
WEB	DL2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.03	0.09	0.12	0.13	0.13	0.10	0.05	0.00
BLOCKING HEIGHTS										
10	BLK	31.96	31.65	31.03	30.40	29.74	29.05	28.35	27.63	26.90
11		31.95	31.63	31.01	30.38	29.72	29.05	28.35	27.63	26.90
12		31.96	31.63	31.02	30.38	29.72	29.04	28.34	27.62	26.90
13		31.96	31.63	31.02	30.38	29.72	29.04	28.34	27.62	26.90

STATE PROJECT NUMBER

1060-33-81

LEGEND

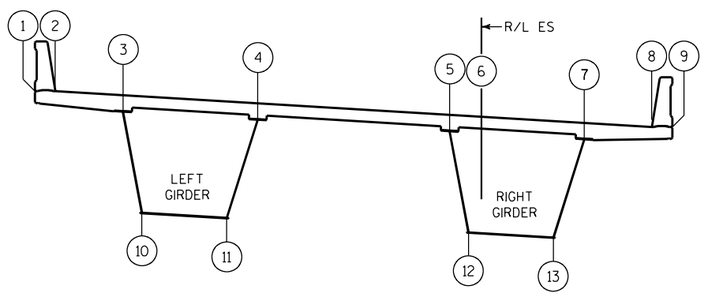
P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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.



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10 1/2" SLAB = 14 1/2" = 1.21 FT

C = CAMBER = ZW - CW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 17 & 18

SHEET 85 OF 122

8

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FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Mandatory\080547_ss.dgn PLOT DATE : 01-MAR-2015 19:03 PLOT BY : MSCKTM PLOT NAME : 080547_ss PLOT SCALE : 10.666667:1

FIELD SECTION #19

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		P19-01	P19-02	P19-03	P19-04	P19-05	P19-06	P19-07	P19-08	FS #17
		598+74.32	598+87.40	599+01.57	599+13.57	599+26.65	599+39.73	599+52.82	599+65.90	599+72.32
FINISHED ELEVATION - TOP OF DECK										
1	DS	816.01	815.35	814.65	814.05	813.39	812.74	812.08	811.43	811.11
2		815.93	815.28	814.57	813.97	813.32	812.66	812.01	811.36	811.03
6		814.40	813.75	813.04	812.44	811.79	811.13	810.48	809.83	809.50
8		813.79	813.14	812.43	811.83	811.18	810.52	809.87	809.21	808.89
9		813.72	813.06	812.36	811.76	811.10	810.45	809.79	809.14	808.82
CAMBER DATA										
3	DS	815.69	815.04	814.33	813.73	813.07	812.42	811.77	811.11	810.79
	TES	814.56	813.96	813.30	812.74	812.11	811.46	810.78	810.10	809.82
LEFT	ZW	814.49	813.91	813.26	812.71	812.08	811.43	810.75	810.05	809.71
GIRDER	CW	814.49	813.85	813.16	812.57	811.93	811.30	810.66	810.02	809.71
	SW	0.00	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.03
LEFT	DL1	0.00	0.06	0.10	0.13	0.15	0.15	0.14	0.11	0.09
WEB	DL2	0.00	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01
	C	0.00	0.06	0.10	0.13	0.14	0.13	0.09	0.03	0.00
4	DS	815.21	814.55	813.85	813.25	812.59	811.94	811.28	810.63	810.31
	TES	814.07	813.48	812.82	812.25	811.61	810.96	810.29	809.60	809.33
LEFT	ZW	814.00	813.42	812.77	812.22	811.58	810.93	810.25	809.56	809.22
GIRDER	CW	814.00	813.36	812.67	812.09	811.45	810.81	810.17	809.53	809.22
	SW	0.00	0.02	0.03	0.04	0.04	0.04	0.04	0.03	0.03
RIGHT	DL1	0.00	0.05	0.10	0.13	0.15	0.14	0.13	0.10	0.09
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	C	0.00	0.06	0.10	0.13	0.14	0.12	0.08	0.03	0.00
5	DS	814.52	813.86	813.16	812.56	811.90	811.25	810.59	809.94	809.62
	TES	813.38	812.78	812.12	811.56	810.93	810.28	809.61	808.92	808.64
RIGHT	ZW	813.31	812.73	812.08	811.53	810.90	810.25	809.58	808.89	808.54
GIRDER	CW	813.31	812.67	811.98	811.40	810.76	810.13	809.49	808.85	808.54
	SW	0.00	0.01	0.03	0.04	0.04	0.04	0.04	0.03	0.03
LEFT	DL1	0.00	0.05	0.10	0.13	0.15	0.15	0.14	0.11	0.09
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	C	0.00	0.05	0.09	0.12	0.13	0.12	0.09	0.03	0.00
7	DS	814.03	813.38	812.67	812.07	811.42	810.76	810.11	809.46	809.13
	TES	812.90	812.30	811.64	811.08	810.44	809.79	809.12	808.44	808.15
RIGHT	ZW	812.83	812.24	811.60	811.04	810.41	809.76	809.09	808.40	808.06
GIRDER	CW	812.83	812.19	811.50	810.92	810.28	809.64	809.01	808.37	808.06
	SW	0.00	0.01	0.03	0.04	0.04	0.04	0.04	0.03	0.03
RIGHT	DL1	0.00	0.05	0.10	0.13	0.15	0.15	0.14	0.11	0.09
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	C	0.00	0.05	0.09	0.12	0.13	0.12	0.09	0.03	0.00
BLOCKING HEIGHTS										
10	BLK	26.70	26.12	25.48	24.92	24.29	23.64	22.97	22.27	21.92
11		26.70	26.12	25.47	24.92	24.28	23.63	22.95	22.26	21.92
12		26.70	26.12	25.47	24.91	24.29	23.64	22.96	22.27	21.93
13		26.70	26.12	25.47	24.91	24.29	23.64	22.96	22.27	21.93

FIELD SECTION #20

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION									
		FS #17	P20-01	P20-02	P20-03	P20-04	PIER	P20-06	P20-07	P20-08	FS #18
		599+72.32	599+78.99	599+92.07	600+05.16	600+18.24	600+31.32	600+45.07	600+58.82	600+72.57	600+79.32
FINISHED ELEVATION - TOP OF DECK											
1	DS	811.11	810.77	810.12	809.47	808.81	808.16	807.47	806.78	806.10	805.76
2		811.03	810.70	810.05	809.39	808.74	808.08	807.40	806.71	806.02	805.68
6		809.50	809.17	808.52	807.86	807.21	806.55	805.87	805.18	804.49	804.15
8		808.89	808.56	807.90	807.25	806.60	805.94	805.25	804.57	803.88	803.54
9		808.82	808.48	807.83	807.18	806.52	805.87	805.18	804.49	803.81	803.47
CAMBER DATA											
3	DS	810.79	810.46	809.80	809.15	808.50	807.84	807.15	806.47	805.78	805.44
	TES	809.82	809.42	808.73	808.04	807.45	806.80	806.17	805.48	804.87	804.63
LEFT	ZW	809.71	809.35	808.64	807.95	807.28	806.64	806.01	805.42	804.84	804.55
GIRDER	CW	809.71	809.39	808.76	808.13	807.50	806.87	806.20	805.54	804.88	804.55
	SW	0.03	0.02	0.01	0.00	0.00	0.00	0.01	0.03	0.06	0.07
LEFT	DL1	0.09	0.07	0.03	0.00	-0.01	0.00	0.05	0.11	0.19	0.23
WEB	DL2	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.02	0.02
	C	0.00	-0.04	-0.11	-0.18	-0.22	-0.23	-0.19	-0.13	-0.04	0.00
4	DS	810.31	809.97	809.32	808.67	808.01	807.36	806.67	805.98	805.30	804.96
	TES	809.33	808.94	808.25	807.56	806.97	806.32	805.67	804.98	804.37	804.12
LEFT	ZW	809.22	808.86	808.16	807.47	806.80	806.15	805.52	804.91	804.32	804.04
GIRDER	CW	809.22	808.90	808.26	807.63	807.00	806.36	805.70	805.03	804.37	804.04
	SW	0.03	0.02	0.01	0.00	0.00	0.00	0.01	0.03	0.05	0.06
RIGHT	DL1	0.09	0.07	0.04	0.01	0.00	0.00	0.04	0.10	0.17	0.21
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02
	C	0.00	-0.03	-0.10	-0.16	-0.20	-0.21	-0.18	-0.12	-0.04	0.00
5	DS	809.62	809.28	808.63	807.98	807.32	806.67	805.98	805.29	804.61	804.27
	TES	808.64	808.24	807.55	806.86	806.28	805.63	804.98	804.27	803.65	803.41
RIGHT	ZW	808.54	808.18	807.48	806.78	806.11	805.46	804.82	804.21	803.62	803.33
GIRDER	CW	808.54	808.22	807.58	806.94	806.30	805.67	805.00	804.32	803.65	803.33
	SW	0.03	0.02	0.01	0.00	0.00	0.00	0.01	0.03	0.05	0.06
LEFT	DL1	0.09	0.08	0.04	0.01	0.00	0.00	0.04	0.09	0.16	0.19
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02
	C	0.00	-0.03	-0.10	-0.16	-0.19	-0.20	-0.17	-0.11	-0.04	0.00
7	DS	809.13	808.80	808.15	807.49	806.84	806.18	805.50	804.81	804.12	803.78
	TES	808.15	807.76	807.07	806.38	805.79	805.15	804.50	803.78	803.17	802.92
RIGHT	ZW	808.06	807.70	807.00	806.30	805.63	804.98	804.34	803.73	803.13	802.84
GIRDER	CW	808.06	807.73	807.09	806.46	805.82	805.18	804.51	803.84	803.17	802.84
	SW	0.03	0.02	0.01	0.00	0.00	0.00	0.01	0.03	0.05	0.06
RIGHT	DL1	0.09	0.08	0.04	0.01	0.00	0.00	0.04	0.09	0.16	0.19
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02
	C	0.00	-0.03	-0.10	-0.16	-0.19	-0.20	-0.17	-0.11	-0.04	0.00
BLOCKING HEIGHTS											
10	BLK	21.92	21.56	20.86	20.16	19.49	18.85	18.23	17.63	17.05	16.77
11		21.92	21.56	20.86	20.17	19.50	18.85	18.22	17.61	17.02	16.74
12		21.93	21.57	20.87	20.17	19.50	18.85	18.21	17.60	17.00	16.71
13		21.93	21.57	20.87	20.17	19.50	18.85	18.21	17.60	17.00	16.71

STATE PROJECT NUMBER

1060-33-81

LEGEND

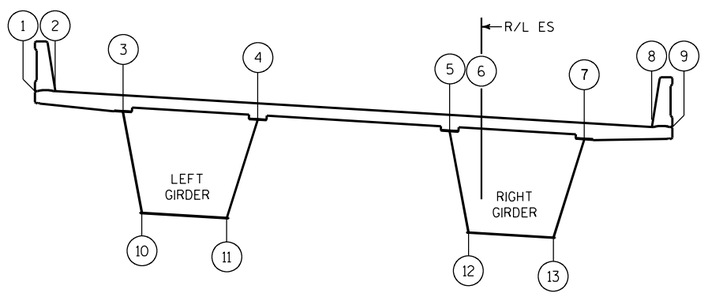
P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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.



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10 1/2" SLAB = 14 1/2" = 1.21 FT

C = CAMBER = ZW - CW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 19 & 20

SHEET 86 OF 122

8

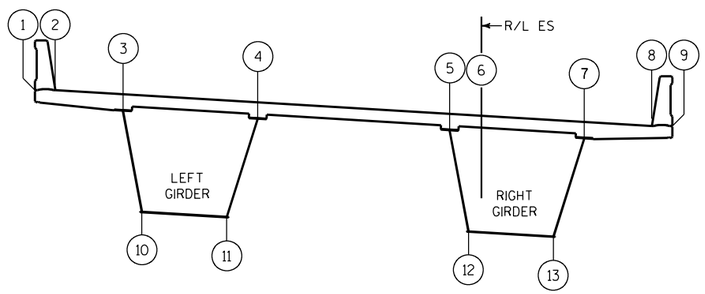
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FIELD SECTION #21

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION										
		FS #18	P21-01	P21-02	P21-03	P21-04	P21-05	P21-06	P21-07	P21-08	P21-09	FS #19
		600+79.32	600+86.32	601+00.07	601+13.82	601+27.57	601+41.32	601+55.07	601+68.82	601+82.57	601+96.32	602+03.32
FINISHED ELEVATION - TOP OF DECK												
1	DS	805.76	805.41	804.72	804.03	803.35	802.66	801.97	801.28	800.60	799.91	799.56
2		805.68	805.33	804.65	803.96	803.27	802.58	801.90	801.21	800.52	799.83	799.48
6		804.15	803.80	803.12	802.43	801.74	801.05	800.37	799.68	798.99	798.30	797.95
8		803.54	803.19	802.50	801.82	801.13	800.44	799.75	799.07	798.38	797.69	797.34
9		803.47	803.12	802.43	801.74	801.06	800.37	799.68	798.99	798.31	797.62	797.27
CAMBER DATA												
3	DS	805.44	805.09	804.40	803.72	803.03	802.34	801.65	800.97	800.28	799.59	799.24
	TES	804.63	804.28	803.67	803.05	802.41	801.74	801.03	800.30	799.54	798.78	798.43
LEFT	ZW	804.55	804.26	803.68	803.08	802.45	801.78	801.07	800.33	799.55	798.76	798.35
GIRDER	CW	804.55	804.20	803.52	802.83	802.14	801.45	800.77	800.08	799.39	798.70	798.35
	SW	0.07	0.08	0.10	0.12	0.13	0.14	0.13	0.12	0.10	0.08	0.07
LEFT	DL1	0.23	0.27	0.35	0.41	0.45	0.47	0.45	0.41	0.35	0.27	0.23
WEB	DL2	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.02
	C	0.00	0.06	0.16	0.25	0.31	0.33	0.31	0.25	0.16	0.06	0.00
4	DS	804.96	804.61	803.92	803.23	802.55	801.86	801.17	800.48	799.80	799.11	798.76
	TES	804.12	803.77	803.16	802.53	801.88	801.20	800.50	799.78	799.03	798.27	797.92
LEFT	ZW	804.04	803.75	803.16	802.55	801.90	801.23	800.53	799.80	799.03	798.25	797.84
GIRDER	CW	804.04	803.69	803.00	802.32	801.63	800.94	800.25	799.57	798.88	798.19	797.84
	SW	0.06	0.07	0.09	0.11	0.12	0.12	0.12	0.11	0.09	0.07	0.06
RIGHT	DL1	0.21	0.25	0.32	0.38	0.41	0.42	0.41	0.38	0.32	0.25	0.21
WEB	DL2	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.03	0.03	0.02	0.02
	C	0.00	0.06	0.16	0.23	0.28	0.29	0.28	0.23	0.16	0.06	0.00
5	DS	804.27	803.92	803.23	802.54	801.86	801.17	800.48	799.79	799.11	798.42	798.07
	TES	803.41	803.04	802.43	801.80	801.15	800.47	799.77	799.05	798.30	797.54	797.21
RIGHT	ZW	803.33	803.02	802.43	801.81	801.18	800.51	799.80	799.06	798.30	797.52	797.13
GIRDER	CW	803.33	802.98	802.29	801.60	800.91	800.23	799.54	798.85	798.16	797.48	797.13
	SW	0.06	0.07	0.09	0.10	0.11	0.12	0.11	0.10	0.09	0.07	0.06
LEFT	DL1	0.19	0.23	0.29	0.34	0.38	0.39	0.38	0.34	0.29	0.23	0.19
WEB	DL2	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.03	0.03	0.02	0.02
	C	0.00	0.05	0.14	0.21	0.26	0.28	0.26	0.21	0.14	0.05	0.00
7	DS	803.78	803.43	802.75	802.06	801.37	800.68	800.00	799.31	798.62	797.93	797.58
	TES	802.92	802.56	801.94	801.31	800.66	799.99	799.29	798.56	797.82	797.06	796.72
RIGHT	ZW	802.84	802.54	801.94	801.33	800.69	800.02	799.32	798.58	797.82	797.04	796.64
GIRDER	CW	802.84	802.49	801.80	801.12	800.43	799.74	799.05	798.37	797.68	796.99	796.64
	SW	0.06	0.07	0.09	0.10	0.11	0.12	0.11	0.10	0.09	0.07	0.06
RIGHT	DL1	0.19	0.23	0.29	0.34	0.38	0.39	0.38	0.34	0.29	0.23	0.19
WEB	DL2	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.03	0.03	0.02	0.02
	C	0.00	0.05	0.14	0.21	0.26	0.28	0.26	0.21	0.14	0.05	0.00
BLOCKING HEIGHTS												
10	BLK	16.77	16.48	15.89	15.29	14.66	14.00	13.29	12.54	11.77	10.98	10.57
11		16.74	16.45	15.86	15.25	14.60	13.93	13.23	12.50	11.73	10.95	10.54
12		16.71	16.41	15.82	15.20	14.56	13.90	13.19	12.45	11.69	10.91	10.51
13		16.71	16.41	15.82	15.20	14.56	13.90	13.19	12.45	11.69	10.91	10.51

FIELD SECTION #22

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION										
		FS #19	P22-01	P22-02	P22-03	PIER	P22-05	P22-06	P22-07	P22-08	FS #20	
		602+03.32	602+10.07	602+23.82	602+37.57	602+51.32	602+64.41	602+77.49	602+90.57	603+03.66	603+10.32	
FINISHED ELEVATION - TOP OF DECK												
1	DS	799.56	799.22	798.53	797.85	797.16	796.50	795.85	795.20	794.54	794.21	
2		799.48	799.15	798.46	797.77	797.08	796.43	795.78	795.12	794.47	794.13	
6		797.95	797.62	796.93	796.24	795.55	794.90	794.25	793.59	792.94	792.60	
8		797.34	797.00	796.32	795.63	794.94	794.29	793.63	792.98	792.33	791.99	
9		797.27	796.93	796.24	795.56	794.87	794.21	793.56	792.91	792.25	791.92	
CAMBER DATA												
3	DS	799.24	798.90	798.22	797.53	796.84	796.19	795.53	794.88	794.22	793.89	
	TES	798.43	798.00	797.23	796.54	795.80	795.14	794.42	793.80	793.19	792.92	
LEFT	ZW	798.35	797.96	797.17	796.39	795.64	794.97	794.33	793.72	793.12	792.81	
GIRDER	CW	798.35	798.00	797.29	796.58	795.87	795.19	794.51	793.83	793.15	792.81	
	SW	0.07	0.06	0.03	0.01	0.00	0.00	0.00	0.01	0.02	0.03	
LEFT	DL1	0.23	0.19	0.11	0.05	0.00	-0.01	0.00	0.03	0.07	0.09	
WEB	DL2	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.01	
	C	0.00	-0.04	-0.13	-0.19	-0.23	-0.22	-0.18	-0.11	-0.04	0.00	
4	DS	798.76	798.42	797.73	797.05	796.36	795.70	795.05	794.40	793.74	793.41	
	TES	797.92	797.49	796.73	796.05	795.32	794.66	793.95	793.32	792.70	792.43	
LEFT	ZW	797.84	797.45	796.66	795.89	795.15	794.49	793.86	793.24	792.63	792.32	
GIRDER	CW	797.84	797.49	796.78	796.07	795.36	794.69	794.01	793.34	792.66	792.32	
	SW	0.06	0.05	0.03	0.01	0.00	0.00	0.00	0.01	0.02	0.03	
RIGHT	DL1	0.21	0.17	0.10	0.04	0.00	0.00	0.01	0.04	0.07	0.09	
WEB	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.04	-0.12	-0.18	-0.21	-0.20	-0.16	-0.10	-0.03	0.00	
5	DS	798.07	797.73	797.04	796.36	795.67	795.01	794.36	793.71	793.05	792.72	
	TES	797.21	796.78	796.02	795.36	794.63	793.97	793.25	792.63	792.01	791.74	
RIGHT	ZW	797.13	796.74	795.96	795.20	794.46	793.80	793.17	792.56	791.95	791.64	
GIRDER	CW	797.13	796.78	796.07	795.37	794.67	793.99	793.32	792.65	791.98	791.64	
	SW	0.06	0.05	0.03	0.01	0.00	0.00	0.00	0.01	0.02	0.03	
LEFT	DL1	0.19	0.16	0.09	0.04	0.00	0.00	0.01	0.04	0.08	0.09	
WEB	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.04	-0.11	-0.17	-0.20	-0.19	-0.16	-0.10	-0.03	0.00	
7	DS	797.58	797.25	796.56	795.87	795.18	794.53	793.88	793.22	792.57	792.23	
	TES	796.72	796.29	795.53	794.87	794.15	793.49	792.76	792.14	791.53	791.25	
RIGHT	ZW	796.64	796.26	795.48	794.72	793.98	793.32	792.68	792.07	791.47	791.16	
GIRDER	CW	796.64	796.30	795.59	794.89	794.18	793.51	792.84	792.17	791.50	791.16	
	SW	0.06	0.05	0.03	0.01	0.00	0.00	0.00	0.01	0.02	0.03	
RIGHT	DL1	0.19	0.16	0.09	0.04	0.00	0.00	0.01	0.04	0.08	0.09	
WEB	DL2	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	
	C	0.00	-0.04	-0.11	-0.17	-0.20	-0.19	-0.16	-0.10	-0.03	0.00	
BLOCKING HEIGHTS												
10	BLK	10.57	10.18	9.38	8.60	7.85	7.19	6.55	5.93	5.33	5.02	
11		10.54	10.15	9.36	8.59	7.85	7.19	6.56	5.94	5.33	5.02	
12		10.51	10.13	9.35	8.59	7.85	7.19	6.56	5.95	5.34	5.03	
13		10.51	10.13	9.35	8.59	7.85	7.19	6.56	5.95	5.34	5.03	



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-81

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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' (½").
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 (¼") 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-40-854

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 21 & 22

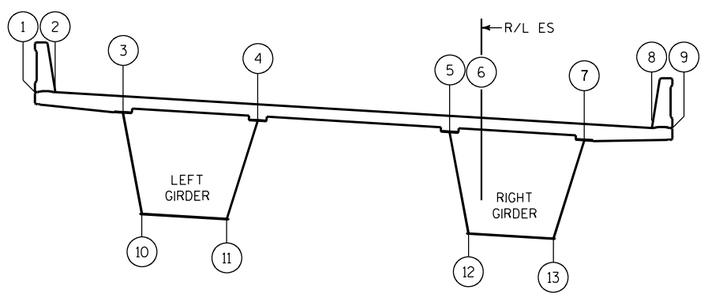
SHEET 87 OF 122

8

8

FIELD SECTION #23

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		FS #20	P23-01	P23-02	P23-03	P23-04	P23-05	P23-06	P23-07	P23-08
		603+10.32	603+16.74	603+29.82	603+42.91	602+51.32	603+69.07	603+82.16	603+95.24	604+08.32
FINISHED ELEVATION - TOP OF DECK										
1	DS	794.21	793.89	793.23	792.58	797.16	791.27	790.62	789.96	789.31
2		794.13	793.81	793.16	792.50	797.08	791.20	790.54	789.89	789.23
6		792.60	792.28	791.63	790.97	795.55	789.67	789.01	788.36	787.70
8		791.99	791.67	791.02	790.36	794.94	789.05	788.40	787.75	787.09
9		791.92	791.60	790.94	790.29	794.87	788.98	788.33	787.67	787.02
CAMBER DATA										
3	DS	793.89	793.57	792.92	792.26	796.84	790.95	790.30	789.65	788.99
	TES	792.92	792.55	791.93	791.30	795.80	789.97	789.28	788.57	787.86
LEFT	ZW	792.81	792.51	791.90	791.27	795.64	789.93	789.23	788.51	787.79
GIRDER	CW	792.81	792.48	791.81	791.14	795.87	789.80	789.13	788.46	787.79
	SW	0.03	0.03	0.04	0.04	0.00	0.04	0.03	0.02	0.00
LEFT	DL1	0.09	0.11	0.14	0.15	0.00	0.13	0.10	0.06	0.00
WEB	DL2	0.01	0.01	0.01	0.02	0.00	0.01	0.01	0.01	0.00
	C	0.00	0.03	0.09	0.13	-0.23	0.13	0.10	0.06	0.00
4	DS	793.41	793.09	792.43	791.78	796.36	790.47	789.82	789.16	788.51
	TES	792.43	792.06	791.44	790.80	795.32	789.48	788.79	788.08	787.37
LEFT	ZW	792.32	792.02	791.40	790.77	795.15	789.44	788.74	788.03	787.30
GIRDER	CW	792.32	791.99	791.32	790.65	795.36	789.31	788.64	787.97	787.30
	SW	0.03	0.03	0.04	0.04	0.00	0.04	0.03	0.02	0.00
RIGHT	DL1	0.09	0.10	0.13	0.14	0.00	0.13	0.10	0.05	0.00
WEB	DL2	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.00
	C	0.00	0.03	0.08	0.12	-0.21	0.13	0.10	0.06	0.00
5	DS	792.72	792.40	791.74	791.09	795.67	789.78	789.13	788.47	787.82
	TES	791.74	791.38	790.76	790.12	794.63	788.79	788.09	787.39	786.68
RIGHT	ZW	791.64	791.34	790.73	790.09	794.46	788.75	788.05	787.33	786.61
GIRDER	CW	791.64	791.31	790.64	789.97	794.67	788.63	787.95	787.28	786.61
	SW	0.03	0.03	0.04	0.04	0.00	0.04	0.03	0.01	0.00
LEFT	DL1	0.09	0.11	0.14	0.15	0.00	0.13	0.10	0.05	0.00
WEB	DL2	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.00
	C	0.00	0.03	0.09	0.12	-0.20	0.12	0.10	0.05	0.00
7	DS	792.23	791.91	791.26	790.61	795.18	789.30	788.64	787.99	787.33
	TES	791.25	790.90	790.27	789.63	794.15	788.30	787.61	786.91	786.20
RIGHT	ZW	791.16	790.86	790.24	789.60	793.98	788.27	787.57	786.85	786.13
GIRDER	CW	791.16	790.83	790.16	789.48	794.18	788.14	787.47	786.80	786.13
	SW	0.03	0.03	0.04	0.04	0.00	0.04	0.03	0.01	0.00
RIGHT	DL1	0.09	0.11	0.14	0.15	0.00	0.13	0.10	0.05	0.00
WEB	DL2	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.00
	C	0.00	0.03	0.09	0.12	-0.20	0.12	0.10	0.05	0.00
BLOCKING HEIGHTS										
10	BLK	5.02	4.73	4.12	3.48	7.85	2.15	1.45	0.73	0.00
11		5.02	4.72	4.10	3.47	7.85	2.14	1.44	0.73	0.00
12		5.03	4.73	4.11	3.48	7.85	2.14	1.44	0.72	0.00
13		5.03	4.73	4.11	3.48	7.85	2.14	1.44	0.72	0.00



HORIZONTAL LOCATION KEY

LOOKING UPSTATION

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

= 4" HAUNCH + 10½" SLAB = 14½" = 1.21 FT

C = CAMBER = ZW - CW

STATE PROJECT NUMBER

1060-33-81

LEGEND

P14-04 INTERMEDIATE ELEVATION POINT (PANEL POINT).

IN THIS EXAMPLE, '14' IS THE FIELD SECTION NUMBER AND '04' 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' (½").
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 (¼") 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-40-854

DRAWN BY MPM | PLANS CK'D. JWC

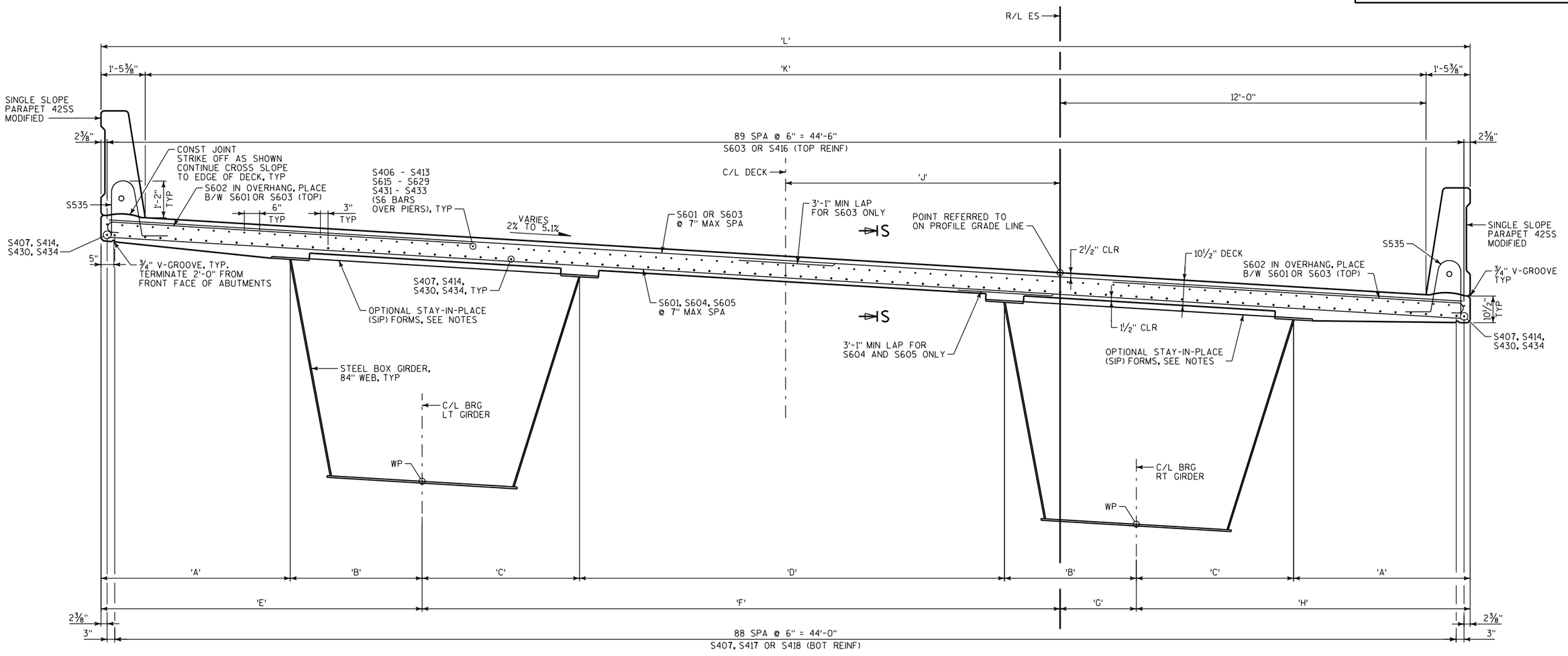
CAMBER AND DECK ELEVATIONS: FIELD SECTION 23

SHEET 88 OF 122

8

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PLOT BY : MSCKTM
PLOT NAME : 080550_ss
PLOT SCALE : 10.666667:1

STATE PROJECT NUMBER
1060-33-81



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.

   TOP OF STAY-IN-PLACE METAL FORMS SHALL BE ALIGNED WITH THE UNDERSIDE OF THE 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 SEPARATELY.

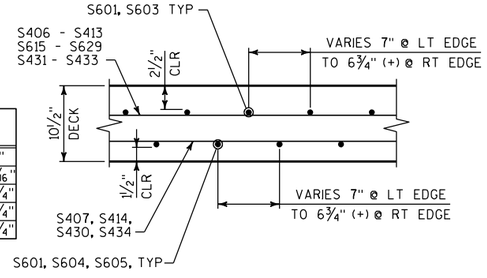
2. TO AVOID OVERSTRESSING THE EXTERIOR GIRDER WEBS DURING DECK PLACEMENT, DECK OVERHANG FORMWORK BRACKETS MUST CONTACT THE GIRDER WEB WITHIN 8" OF THE TOP OF THE BOTTOM FLANGE.

CROSS SECTION THRU SUPERSTRUCTURE

(LOOKING UPSTATION - DIMENSIONS ARE NORMAL TO R/L ES)

TABLE OF DIMENSIONS

STATION	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	DIM 'E'	DIM 'F'	DIM 'G'	DIM 'H'	DIM 'J'	DIM 'K'	DIM 'L'
579ES+45.32	6'-2⅜"	4'-7⅝"	4'-10 11/16"	8'-11¼"	10'-9 11/16"	16'-0 5/16"	2'-4⅝"	11'-1 1/16"	6'-8⅜"	37'-5¼"	40'-4"
581ES+22.00	6'-2⅜"	4'-7⅝"	4'-10 11/16"	12'-5⅛"	10'-9 11/16"	19'-7½"	2'-4⅝"	11'-1 1/16"	8'-5⅛"	40'-11⅛"	43'-10⅜"
581ES+72.50	6'-2 1/16"	4'-6⅛"	4'-11 3/16"	13'-6 1/16"	10'-8½"	20'-8⅞"	2'-3⅛"	11'-2¼"	9'-0"	42'-0"	44'-10¾"
582ES+34.00	6'-2 1/16"	4'-4⅝"	5'-1 3/16"	13'-6⅛"	10'-7⅛"	20'-10¼"	2'-1¾"	11'-3⅝"	9'-0"	42'-0"	44'-10¾"
604ES+08.32	6'-2 1/16"	4'-4⅝"	5'-1 3/16"	13'-6⅛"	10'-7⅛"	20'-10¼"	2'-1¾"	11'-3⅝"	9'-0"	42'-0"	44'-10¾"



SECTION S-S

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

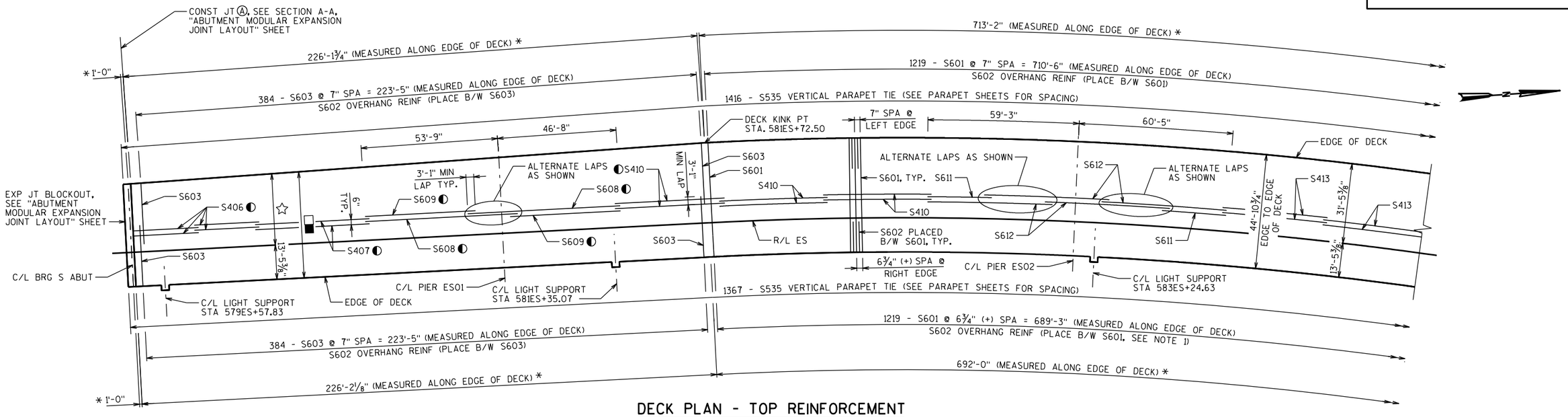
SUPERSTRUCTURE CROSS SECTION

SHEET 89 OF 122

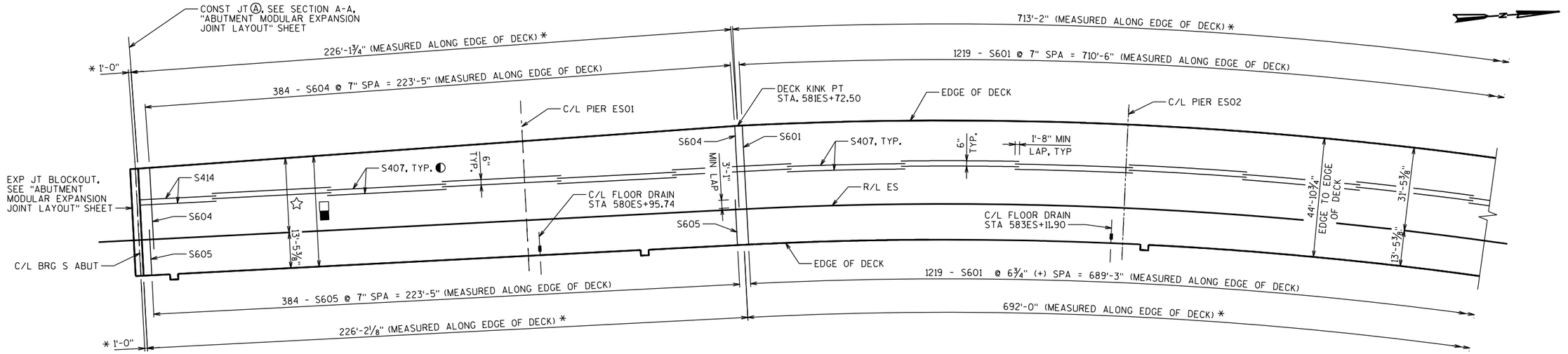
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PLOT NAME : 080551_ss
PLOT SCALE : 3.333333:1

STATE PROJECT NUMBER
1060-33-81



DECK PLAN - TOP REINFORCEMENT



DECK PLAN - BOTTOM REINFORCEMENT

LEGEND

- ☆ VARIES 26'-10⅛" TO 31'-5⅜" R/L TO EDGE OF DECK
- ■ VARIES 40'-3½" TO 44'-10¾" EDGE TO EDGE OF DECK
- ✳ MEASURED AT 60 DEG F
- ◐ FLARE BARS TO FIT AT EQUAL SPACES

NOTES

1. AT EACH LIGHT SUPPORT, 6-S602 BARS ARE NOT REQUIRED. THE S602 BARS ARE REPLACED BY THE R623 BARS AS INDICATED ON THE LIGHT SUPPORT DETAILS SHEETS. R514 SHALL BE PLACED IN LIEU OF S535.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY SR | PLANS CK'D. MSS

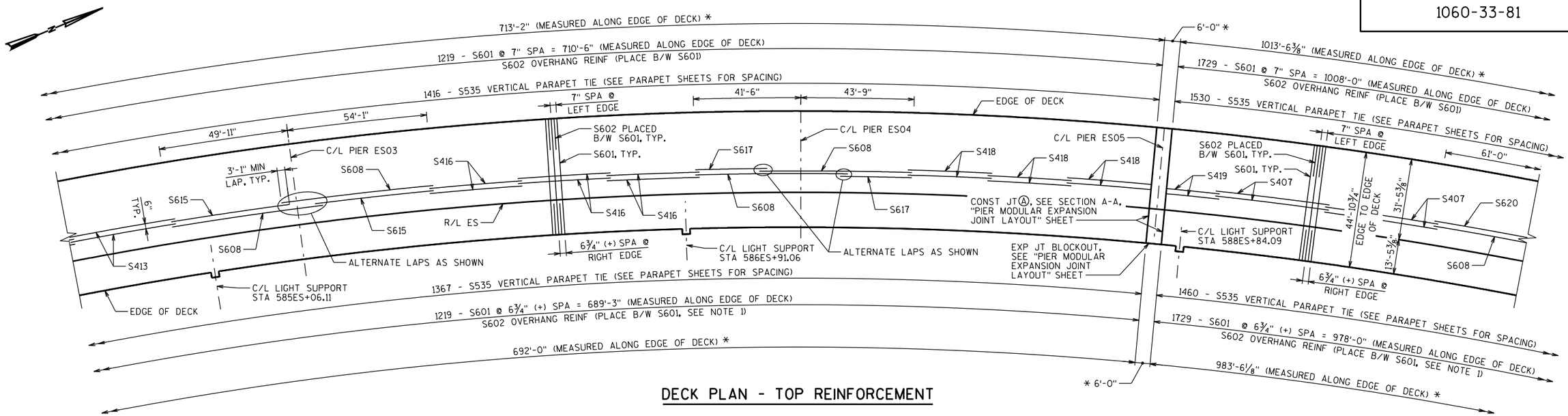
DECK REINFORCEMENT (1 OF 5)

SHEET 90 OF 122

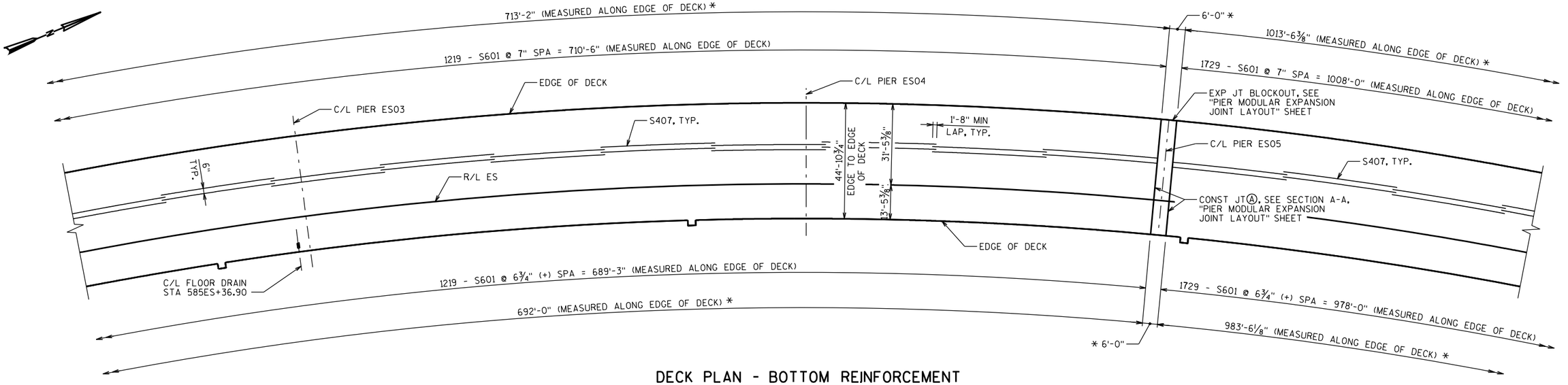
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PLOT NAME : 080552_de
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-81



DECK PLAN - TOP REINFORCEMENT



DECK PLAN - BOTTOM REINFORCEMENT

LEGEND

✳ MEASURED AT 60 DEG F

NOTES

1. AT EACH LIGHT SUPPORT, 6-S602 BARS ARE NOT REQUIRED. THE S602 BARS ARE REPLACED BY THE R623 BARS AS INDICATED ON THE LIGHT SUPPORT DETAILS SHEETS. R514 SHALL BE PLACED IN LIEU OF S535.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY	SR	PLANS CK'D.	MSS

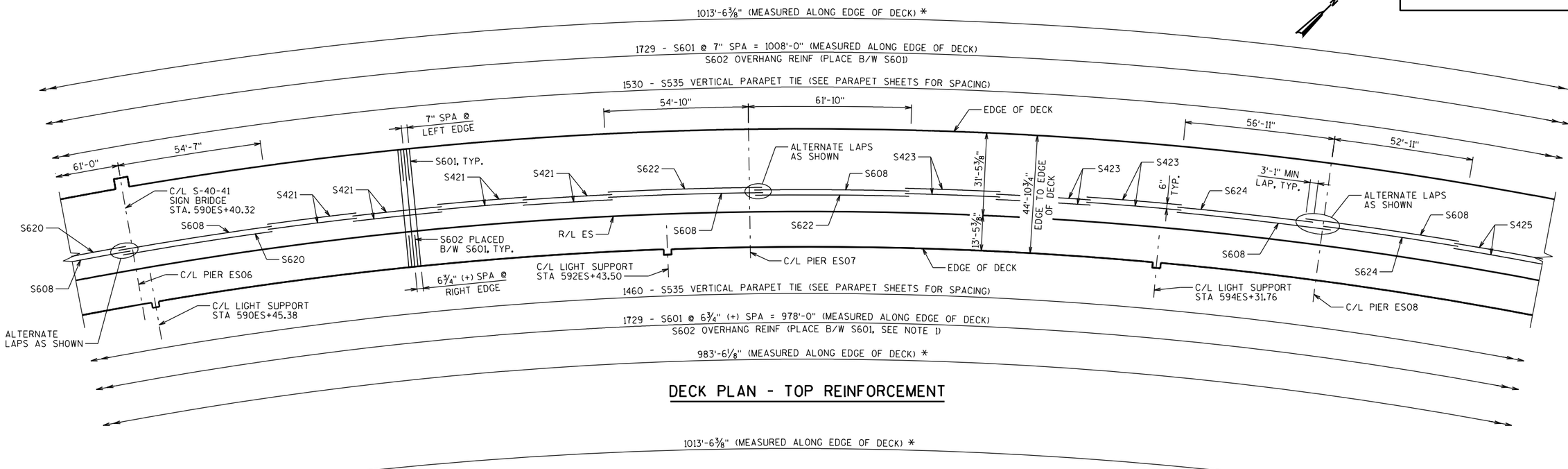
DECK REINFORCEMENT (2 OF 5)

SHEET 91 OF 122

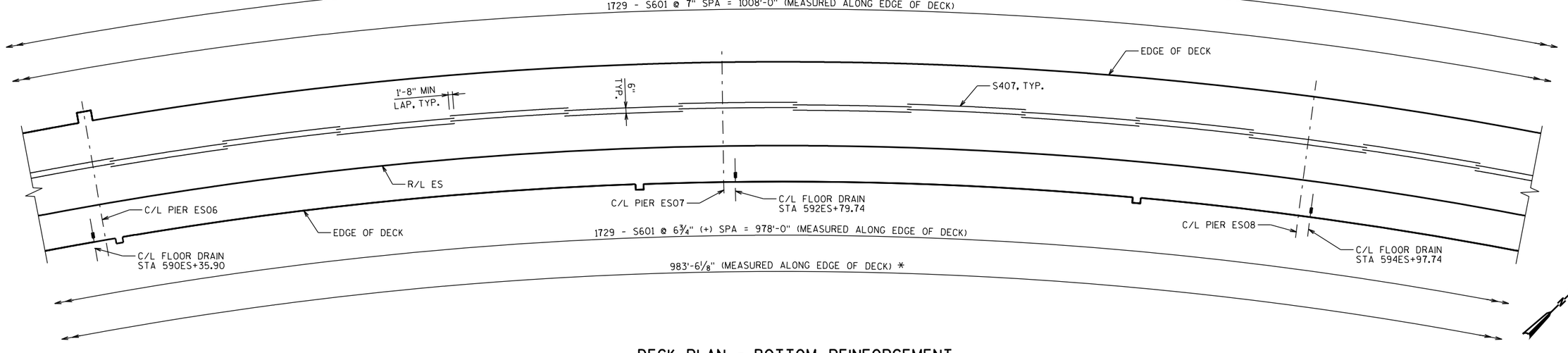
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PLOT NAME : 080553_de
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-81



DECK PLAN - TOP REINFORCEMENT



DECK PLAN - BOTTOM REINFORCEMENT

LEGEND

⚹ MEASURED AT 60 DEG F

NOTES

1. AT EACH LIGHT SUPPORT, 6-S602 BARS ARE NOT REQUIRED. THE S602 BARS ARE REPLACED BY THE R623 BARS AS INDICATED ON THE LIGHT SUPPORT DETAILS SHEETS. R514 SHALL BE PLACED IN LIEU OF S535.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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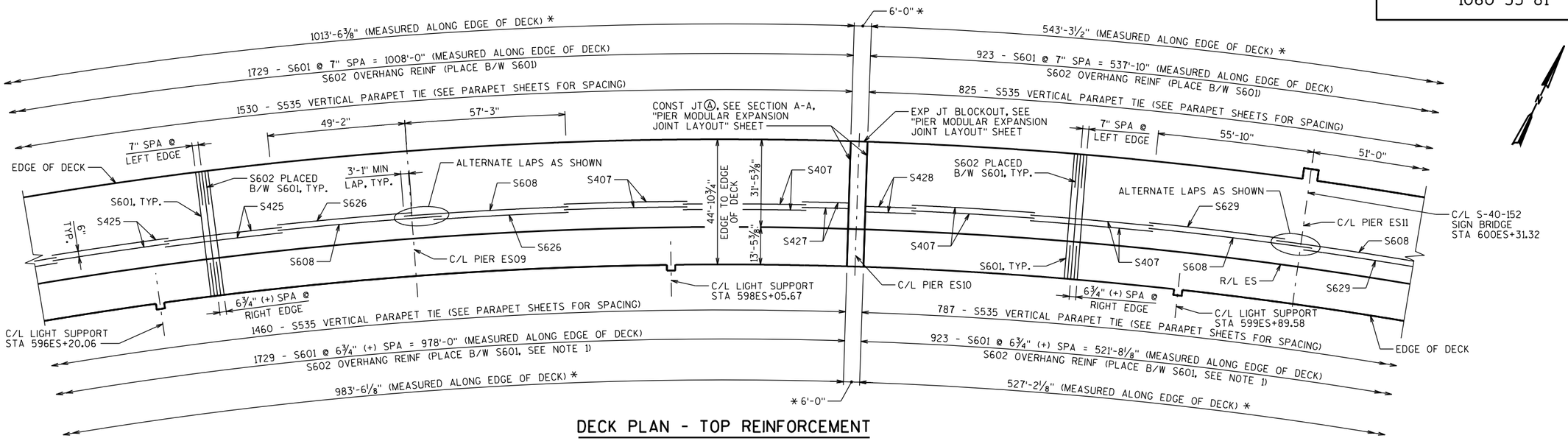
DECK REINFORCEMENT (3 OF 5)

SHEET 92 OF 122

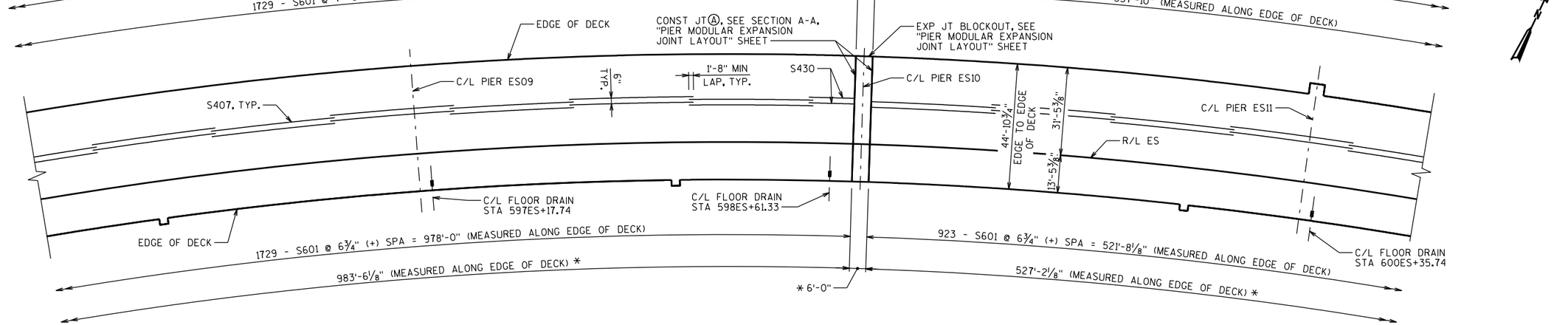
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PLOT NAME : 080554_de
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STATE PROJECT NUMBER
1060-33-81



DECK PLAN - TOP REINFORCEMENT



DECK PLAN - BOTTOM REINFORCEMENT

LEGEND

✳ MEASURED AT 60 DEG F

NOTES

1. AT EACH LIGHT SUPPORT, 6-S602 BARS ARE NOT REQUIRED. THE S602 BARS ARE REPLACED BY THE R623 BARS AS INDICATED ON THE LIGHT SUPPORT DETAILS SHEETS. R514 SHALL BE PLACED IN LIEU OF S535.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY SR | PLANS CK'D. MSS

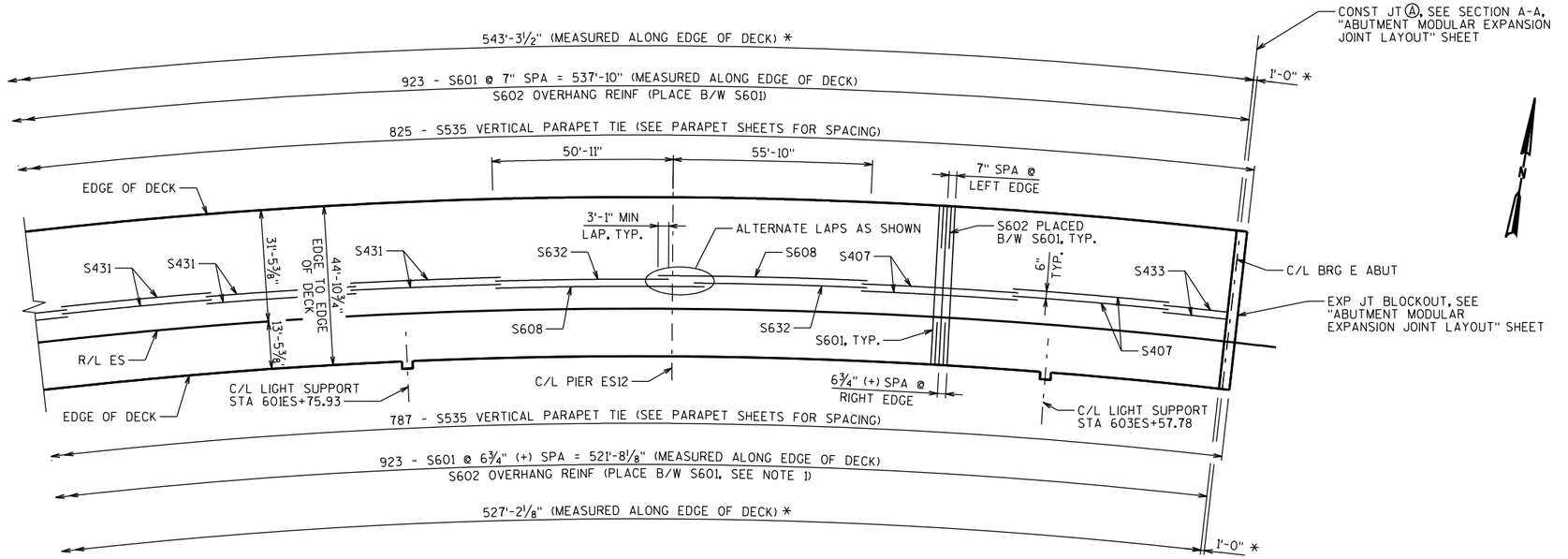
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SHEET 93 OF 122

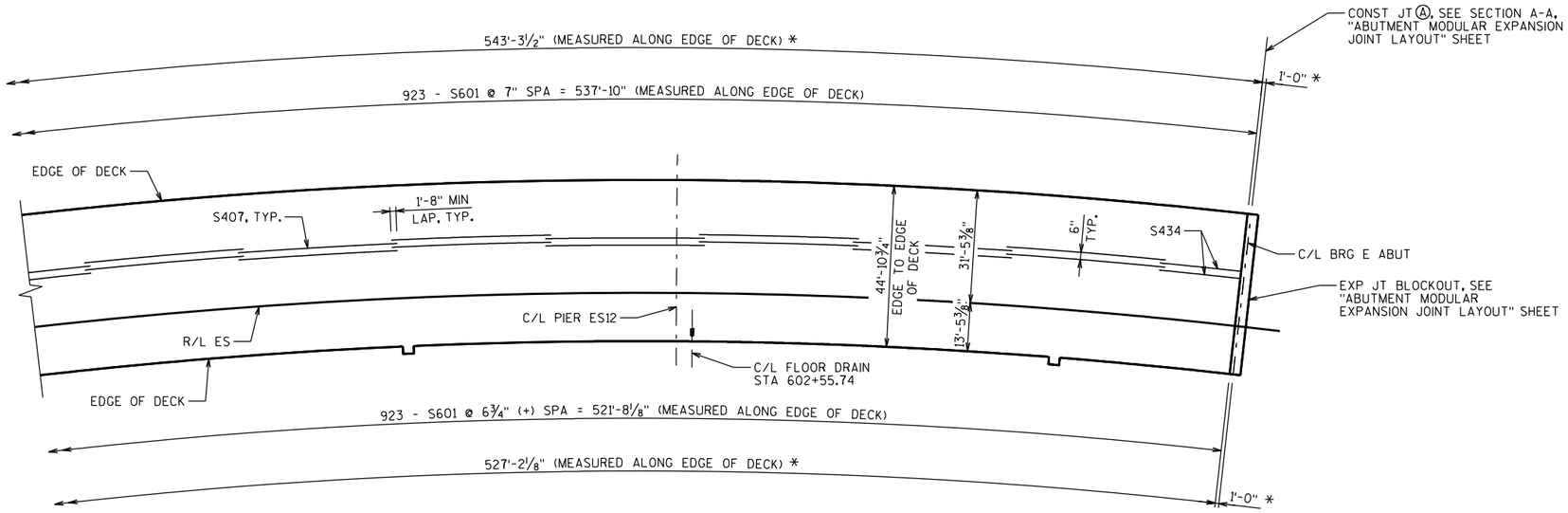
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PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-81



DECK PLAN - TOP REINFORCEMENT



DECK PLAN - BOTTOM REINFORCEMENT

LEGEND

⁎ MEASURED AT 60 DEG F

NOTES

1. AT EACH LIGHT SUPPORT, 6-S602 BARS ARE NOT REQUIRED. THE S602 BARS ARE REPLACED BY THE R623 BARS AS INDICATED ON THE LIGHT SUPPORT DETAILS SHEETS. R514 SHALL BE PLACED IN LIEU OF S535.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-854

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DECK REINFORCEMENT (5 OF 5)

SHEET 94 OF 122

8

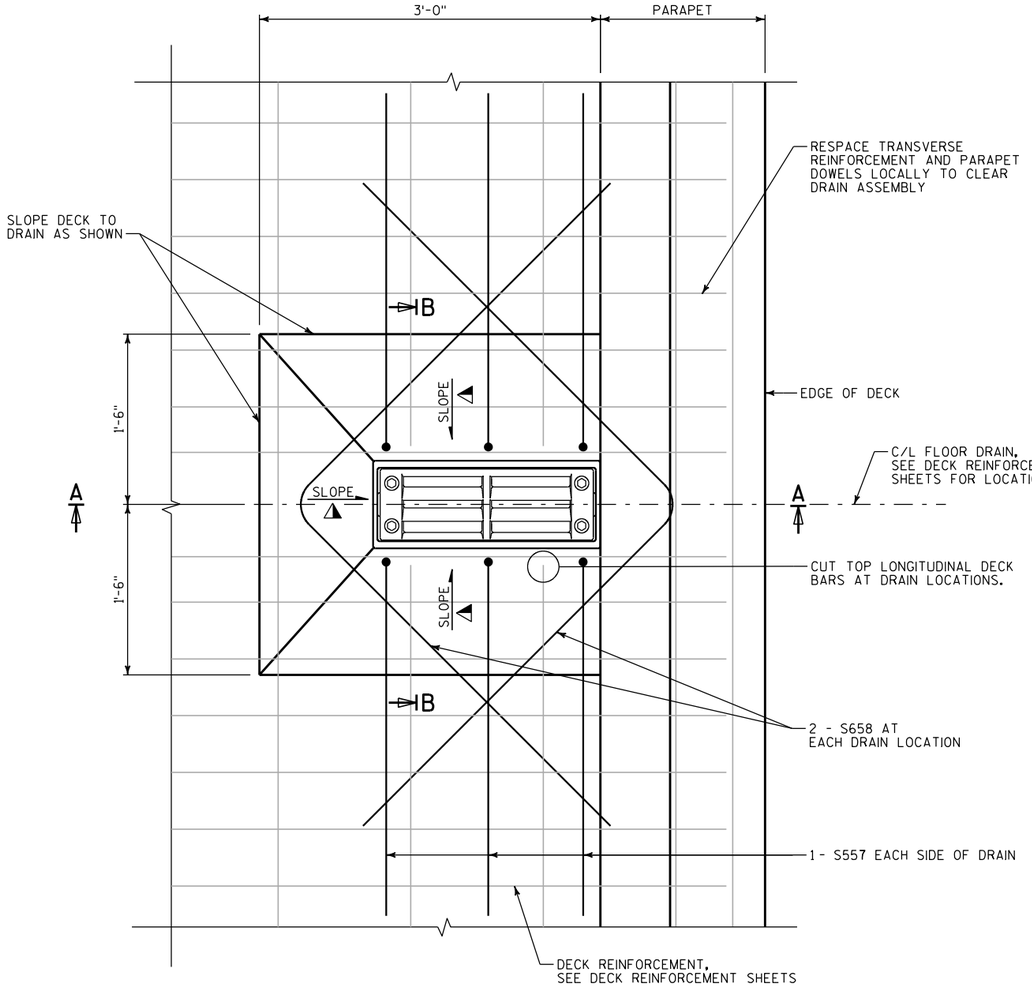
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STATE PROJECT NUMBER
1060-33-81

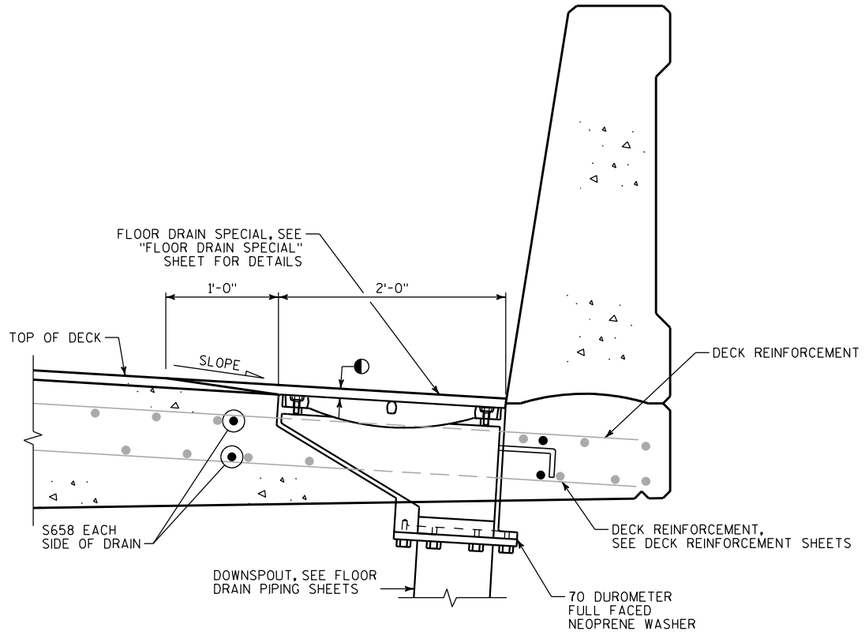
LEGEND

◐ SET TOP OF FLOOR DRAIN 1/2" BELOW TOP OF DECK

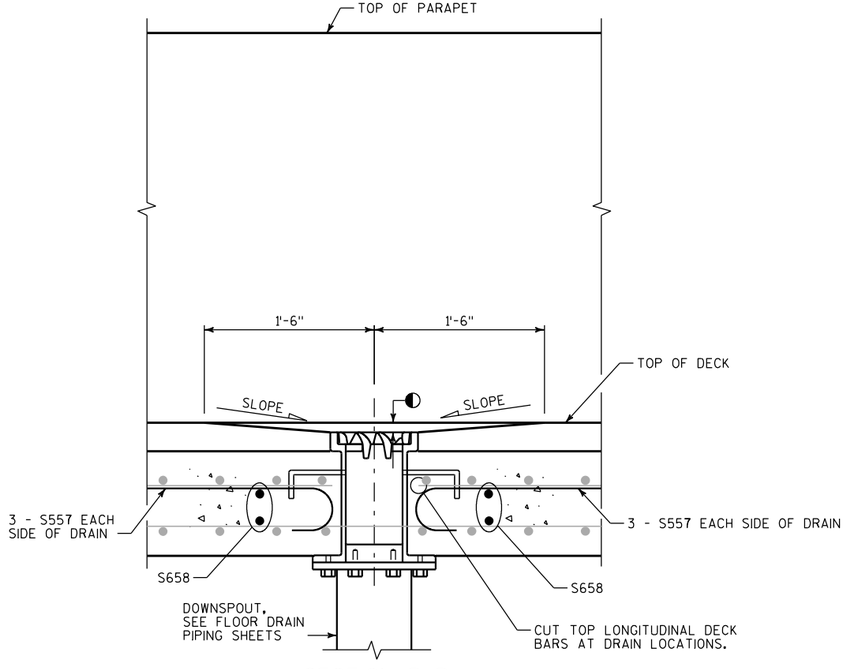
◭ HAND-FINISH SLAB WITHIN THE SLOPED AREA.



PART PLAN AT FLOOR DRAIN



SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

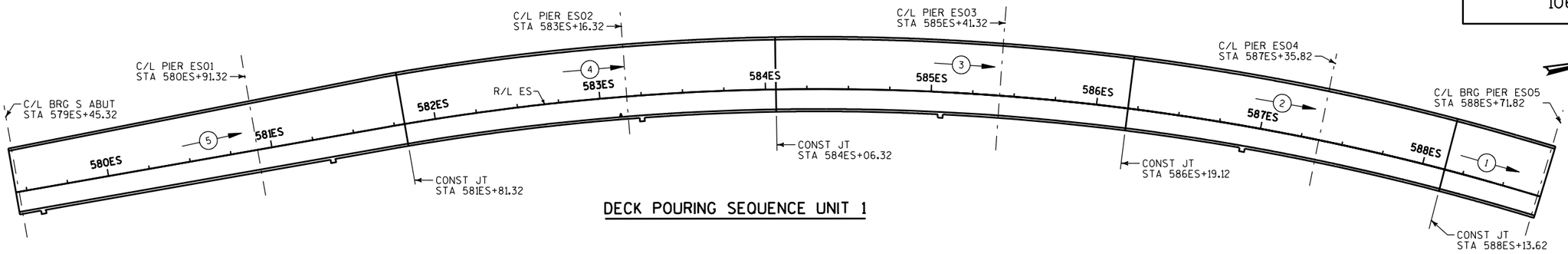
DECK DETAILS

SHEET 95 OF 122

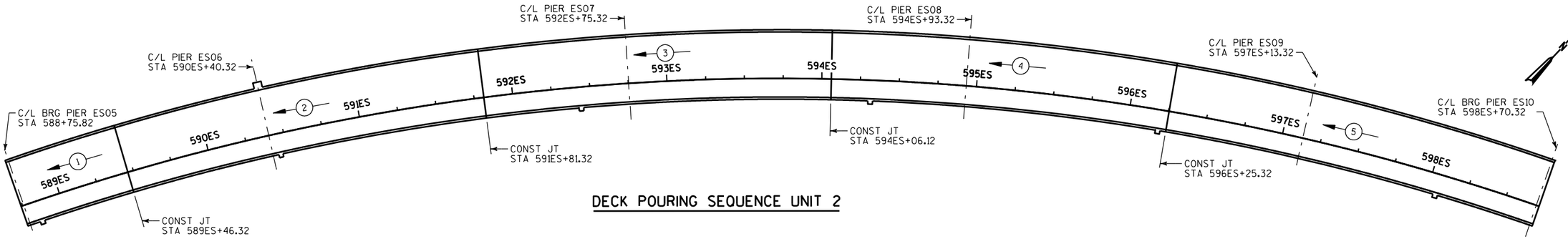
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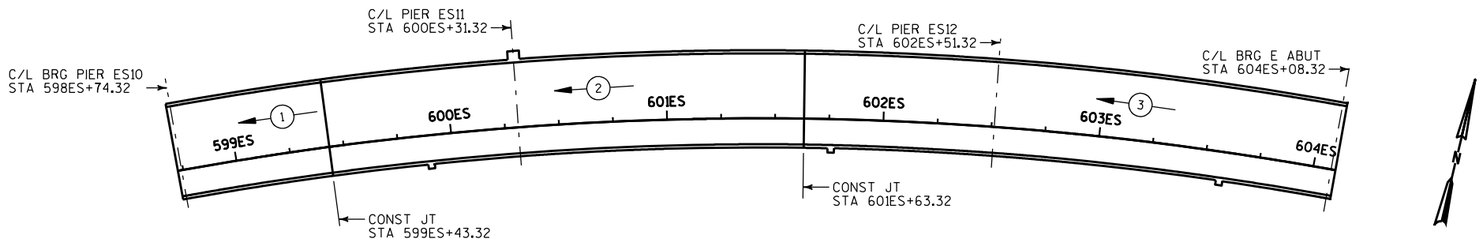
STATE PROJECT NUMBER
1060-33-81



DECK POURING SEQUENCE UNIT 1



DECK POURING SEQUENCE UNIT 2



DECK POURING SEQUENCE UNIT 3

8

DECK POURING SEQUENCE NOTES

THE RATE OF PLACING CONCRETE SHALL EQUAL OR EXCEED ½ 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.

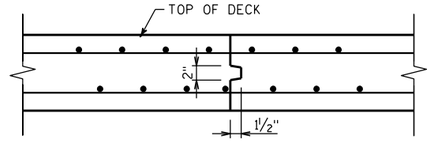
DEPOSIT FRESH CONCRETE FIRST IN THE AREA BETWEEN THE GIRDERS FOLLOWED BY THE OVERHANG AREA TO INSIDE OF THE CURVE AND THEN BY THE OVERHANG AREA TO THE OUTSIDE OF THE CURVE.

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.

SOME POUR SEQUENCES COULD TEND TO CAUSE UPLIFT AT ENDS OF UNITS. THEREFORE, TEMPORARY HOLD DOWN DEVICES ARE REQUIRED AT ALL ABUTMENT DIAPHRAGMS AND AT ALL PIER END DIAPHRAGMS.

(1) → INDICATES POUR NUMBER AND DIRECTION OF POUR



TRANSVERSE CONSTRUCTION JOINT DETAIL

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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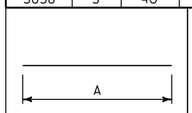
DECK POURING SEQUENCE AND NOTES

SHEET 96 OF 122

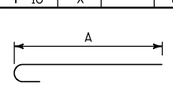
STATE PROJECT NUMBER
1060-33-81

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
S601	S	7742	44'-7"			1	44'-7"						DECK TRANSVERSE					
S602	S	8320	12'-7"			2	11'-11"						DECK TRANSVERSE AT OVERHANG					
S603	S	768	23'-10"			1	23'-10"						DECK TRANSVERSE TOP					
S604	S	384	30'-7"			1	30'-7"						DECK TRANSVERSE BOT.					
S605	S	384	17'-1"			1	17'-1"						DECK TRANSVERSE BOT.					
S406	S	180	25'-7"			1	25'-7"						DECK LONG. TOP SPAN 1					
S407	S	5906	45'-0"			1	45'-0"						DECK LONG. TOP & BOT.					
S608	S	810	60'-0"			1	60'-0"						DECK LONG. TOP OVER PIER					
S609	S	90	43'-6"			1	43'-6"						DECK LONG. TOP OVER PIER					
S410	S	270	43'-3"			1	43'-3"						DECK LONG. TOP SPAN 2					
S611	S	90	25'-9"			1	25'-9"						DECK LONG. TOP OVER PIER					
S612	S	180	50'-0"			1	50'-0"						DECK LONG. TOP OVER PIER					
S413	S	270	42'-1"			1	42'-1"						DECK LONG. TOP SPAN 3					
S414	S	90	28'-8"			1	28'-8"						DECK LONG. BOT. SPAN 1					
S615	S	90	47'-0"			1	47'-0"						DECK LONG. TOP OVER PIER					
S416	S	270	36'-7"			1	36'-7"						DECK LONG. TOP SPAN 4					
S617	S	90	28'-4"			1	28'-4"						DECK LONG. TOP OVER PIER					
S418	S	270	33'-1"			1	33'-1"						DECK LONG. TOP SPAN 5					
S419	S	90	20'-11"			1	20'-11"						DECK LONG. TOP SPAN 6					
S620	S	90	58'-8"			1	58'-8"						DECK LONG. TOP OVER PIER					
S421	S	360	34'-9"			1	34'-9"						DECK LONG. TOP SPAN 7					
S622	S	90	59'-8"			1	59'-8"						DECK LONG. TOP OVER PIER					
S423	S	270	36'-11"			1	36'-11"						DECK LONG. TOP SPAN 8					
S624	S	90	52'-10"			1	52'-10"						DECK LONG. TOP OVER PIER					
S425	S	270	43'-2"			1	43'-2"						DECK LONG. TOP SPAN 9					
S626	S	90	49'-5"			1	49'-5"						DECK LONG. TOP OVER PIER					
S427	S	90	17'-0"			1	17'-0"						DECK LONG. TOP SPAN 10					
S428	S	90	18'-5"			1	18'-5"						DECK LONG. TOP SPAN 11					
S629	S	90	49'-11"			1	49'-11"						DECK LONG. TOP OVER PIER					
S430	S	90	16'-5"			1	16'-5"						DECK LONG. BOT. SPAN 10					
S431	S	270	43'-2"			1	43'-2"						DECK LONG. TOP SPAN 12					
S632	S	90	49'-9"			1	49'-9"						DECK LONG. TOP OVER PIER					
S433	S	90	18'-5"			1	18'-5"						DECK LONG. TOP SPAN 13					
S434	S	90	22'-11"			1	22'-11"						DECK LONG. BOT. SPAN 13					
S535	S	7385	4'-9"	X		11	1'-4"	172	0'-4½"	1'-5"	0'-10"	98	PARAPET TIE					
S536	S	80	7'-6"	X	⚠	3	1'-1½"	2'-4"					EXPANSION JOINT STIRRUPS	A	6"	1'-9"	16 SERIES OF 5	6'-3" TO 8'-9"
S537	S	439	8'-9"	X		3	1'-9"	2'-4"					EXPANSION JOINT STIRRUPS					
S438	S	72	4'-10"	X		9	2'-5"	2'-5"	32				EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S639	S	35	44'-7"			1	44'-7"						EXPANSION JOINT TOP OF SLAB TRANSVERSE					
S640	S	84	8'-8"			1	8'-8"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S441	S	471	1'-11"			1	1'-11"						EXPANSION JOINT BLOCKOUT BOT.					
S442	S	942	2'-3"	X		22	0'-4½"	0'-8½"	1'-4"				EXPANSION JOINT BLOCKOUT BOT.					
S443	S	40	39'-8"			1	39'-8"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S544	S	471	8'-2"	X		4	4'-0"	0'-5"					EXPANSION JOINT BOT. OF SLAB LONG.					
S545	S	471	2'-8"	X		4	0'-6"	1'-11"					EXPANSION JOINT BLOCKOUT TOP					
S546	S	439	5'-5"	X		29	1'-9"	1'-11"	45	1'-9"			EXPANSION JOINT SLAB THICKNESS TRANSITION					
S547	S	80	4'-8"	X	⚠	29	1'-9"	1'-2"	45	1'-9"			EXPANSION JOINT SLAB THICKNESS TRANSITION	B	5½"	1'-10½"	16 SERIES OF 5	3'-10" TO 5'-3"
S448	S	10	44'-7"	X		1	44'-7"						EXPANSION JOINT BLOCKOUT TOP					
S649	S	56	4'-0"			1	4'-0"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S650	S	35	13'-4"			1	13'-4"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S551	S	439	5'-3"	X		8	4'-6"	0'-10"					EXPANSION JOINT BLOCKOUT TOP					
S652	S	28	6'-0"			1	6'-0"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S653	S	7	40'-0"			1	40'-0"						EXPANSION JOINT TRANSVERSE - S. ABUT.					
S454	S	8	40'-0"			1	40'-0"						EXPANSION JOINT TRANSVERSE - S. ABUT.					
S455	S	2	40'-0"			1	40'-0"						EXPANSION JOINT TRANSVERSE - S. ABUT.					
S656	S	7	8'-9"			1	8'-9"						EXPANSION JOINT TRANSVERSE - S. ABUT.					
S557	S	60	4'-7"	X		2	4'-0"						FLOOR DRAIN					
S658	S	40	7'-10"	X		8	4'-0"	4'-0"					FLOOR DRAIN					

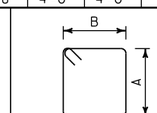
BAR MARK BREAKDOWN					
BAR MARK	UNIT 1	UNIT 2	UNIT 3	TOTAL NO	WEIGHT
S601	2,438	3,458	1,846	7,742	518,437
S602	3,020	3,456	1,844	8,320	157,249
S603	768			768	27,493
S604	384			384	17,639
S605	384			384	9,853
S406	180			180	3,076
S407	2,001	2,453	1,452	5,906	177,534
S608	270	360	180	810	72,997
S609	90			90	5,880
S410	270			270	7,801
S611	90			90	3,481
S612	180			180	13,518
S413	270			270	7,590
S414	90			90	1,723
S615	90			90	6,353
S416	270			270	6,598
S617	90			90	3,830
S418	270			270	5,967
S419		90		90	1,258
S620		90		90	7,931
S421		360		360	8,357
S622		90		90	8,066
S423		270		270	6,658
S624		90		90	7,142
S425		270		270	7,786
S626		90		90	6,680
S427		90		90	1,022
S428			90	90	1,107
S629			90	90	6,748
S430		90		90	987
S431			270	270	7,786
S632			90	90	6,725
S433			90	90	1,107
S434			90	90	1,378
S535	2,783	2,990	1,612	7,385	36,587
S536	20	40	20	80	626
S537	147	136	156	439	4,006
S438	18	36	18	72	232
S639	7	14	14	35	2,344
S640	28	28	28	84	1,093
S441	151	160	160	471	603
S442	302	320	320	942	1,416
S443	8	16	16	40	1,060
S544	151	160	160	471	4,012
S545	151	160	160	471	1,310
S546	147	136	156	439	2,480
S547	20	40	20	80	389
S448	2	4	4	10	298
S649	14	28	14	56	336
S650	7	14	14	35	701
S551	147	136	156	439	2,404
S652	14		14	28	252
S653	7			7	421
S454	8			8	214
S455	2			2	53
S656	7			7	92
S557	18	30	12	60	287
S658	12	20	8	40	471



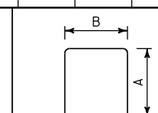
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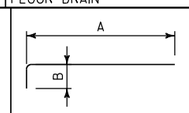
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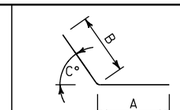
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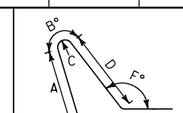
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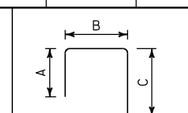
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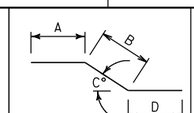
TYPE 9



TYPE 11



TYPE 22



TYPE 29

NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

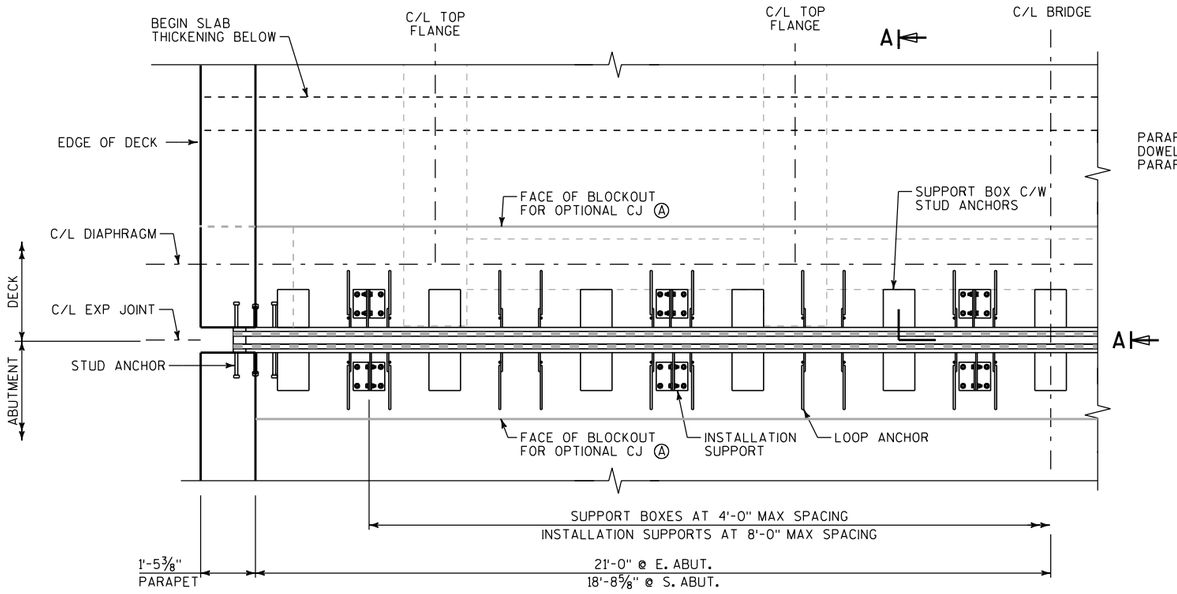
DECK REINFORCEMENT SCHEDULE

SHEET 97 OF 122

8

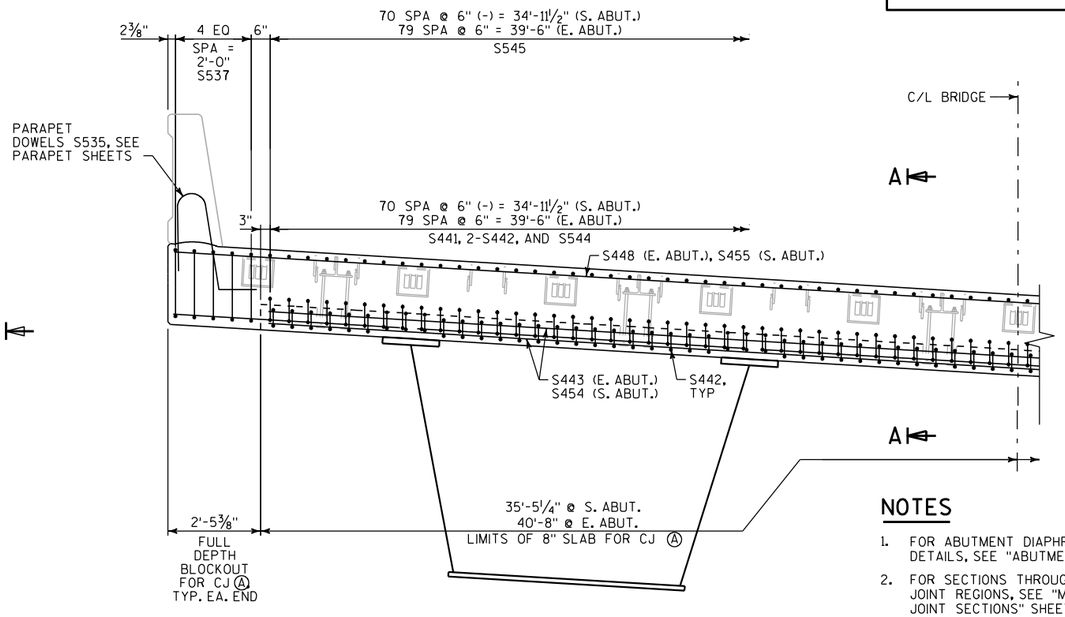
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STATE PROJECT NUMBER
1060-33-81



PLAN - JOINT AT ABUTMENT

MODULAR JOINT SYMMETRICAL ABOUT C/L EXP JOINT



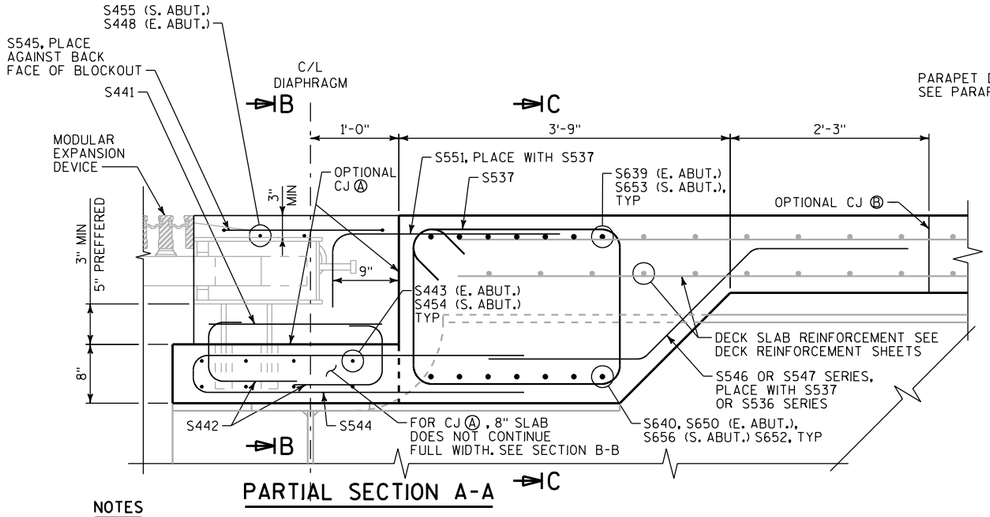
SECTION B-B

DECK REINFORCEMENT NOT SHOWN FOR CLARITY

NOTES

1. FOR ABUTMENT DIAPHRAGM DETAILS, SEE "ABUTMENT DIAPHRAGM" SHEET.
2. FOR SECTIONS THROUGH EXPANSION JOINT REGIONS, SEE "MODULAR EXPANSION JOINT SECTIONS" SHEET.
3. FOR DETAILS OF THEMODULAR EXPANSION DEVICES INCLUDING REQUIRED MOVEMENT CAPACITY, NUMBER OF SEALS, ANCHORAGES AND TEMPORARY SUPPORTS, SEE "MODULAR EXPANSION JOINT DETAILS" SHEET.
4. FOR DETAILS OF THE PARAPET COVER PLATES, SEE "MODULAR EXPANSION JOINT COVER PLATES" SHEET.

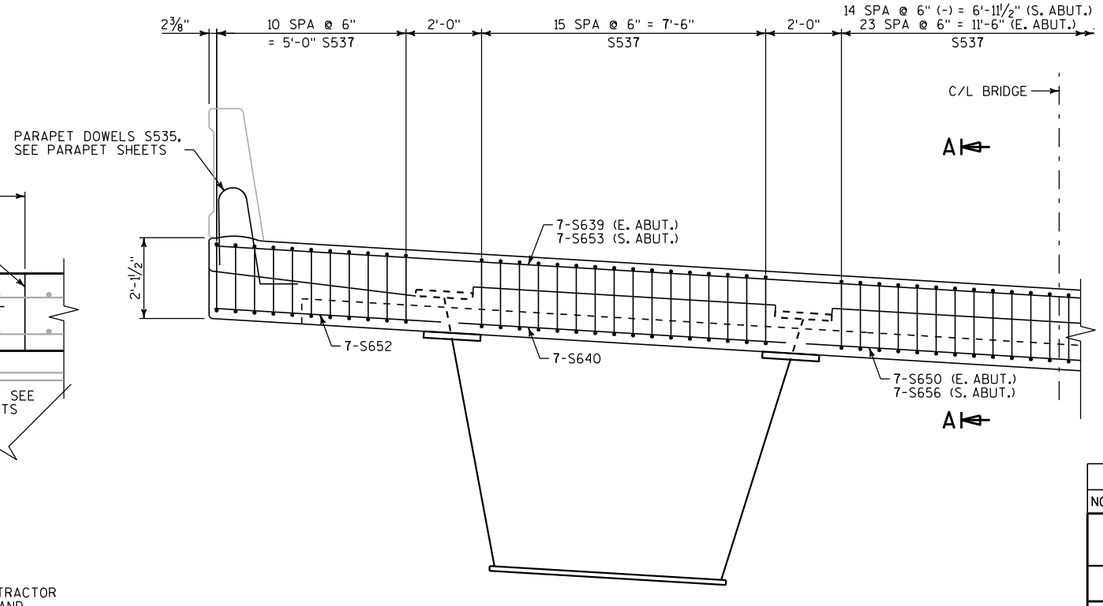
   COVER PLATES ARE REQUIRED AT ALL PARAPETS BUT FOR CLARITY ARE NOT SHOWN ON THIS DRAWING.
5. SUPPORT BOX SIZE AS SHOWN IS APPROXIMATE ONLY AND IS BASED ON A 2-CELL EXPANSION DEVICE. DIMENSIONS WILL VARY FOR DIFFERENT JOINT SIZES AND MANUFACTURERS.
6. EXPANSION DEVICE DETAILS SHOWN ON THIS DRAWING (INCLUDING SIZE AND SPACING OF SUPPORT BOXES, LOOP ANCHORS AND INSTALLATION SUPPORTS) ARE PICTORIAL ONLY.
7. ALL CONSTRUCTION SHALL BE CARRIED OUT USING THE APPROVED EXPANSION JOINT SHOP DRAWINGS ONLY.



PARTIAL SECTION A-A

NOTES

1. THE MODULAR EXPANSION DEVICE SHALL NOT BE POSITIONED IN ITS FINAL LOCATION UNTIL AFTER THE ADJACENT SPANS OF THE DECK HAVE BEEN POURED.
2. THE CONTRACTOR MAY INSTALL EITHER CONSTRUCTION JOINT A (CJ A) OR CONSTRUCTION JOINT H (CJ H) TO FACILITATE THE POSITIONING AND INSTALLATION OF THE MODULAR EXPANSION DEVICE.
3. IF CONSTRUCTION JOINT H IS CHOSEN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FABRICATION AND INSTALLATION OF A SUITABLE SUPPORT SYSTEM FOR THE MODULAR EXPANSION DEVICE THAT PROPERLY LOCATES AND SECURES THE DEVICE IN POSITION, AND PROVIDES SUPPORT POINTS IN ACCORDANCE WITH THE SPECIFICATIONS. PAYMENT FOR ANY SUPPORT SYSTEM SHALL BE INCIDENTAL TO THE BID ITEM "EXPANSION DEVICE MODULAR LRFD B-40-854".



SECTION C-C

DECK REINFORCEMENT NOT SHOWN FOR CLARITY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY	MSS	PLANS CK'D.	JWC

ABUTMENT MODULAR EXPANSION JOINT LAYOUT

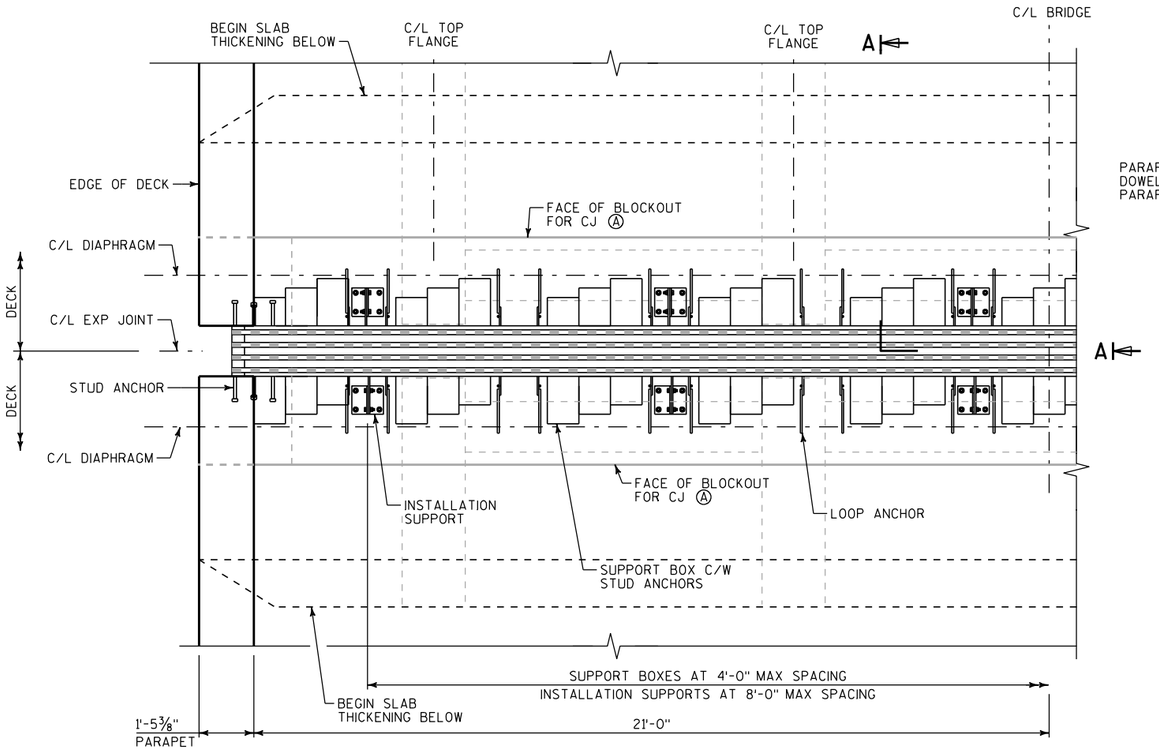
SHEET 98 OF 122

8

8

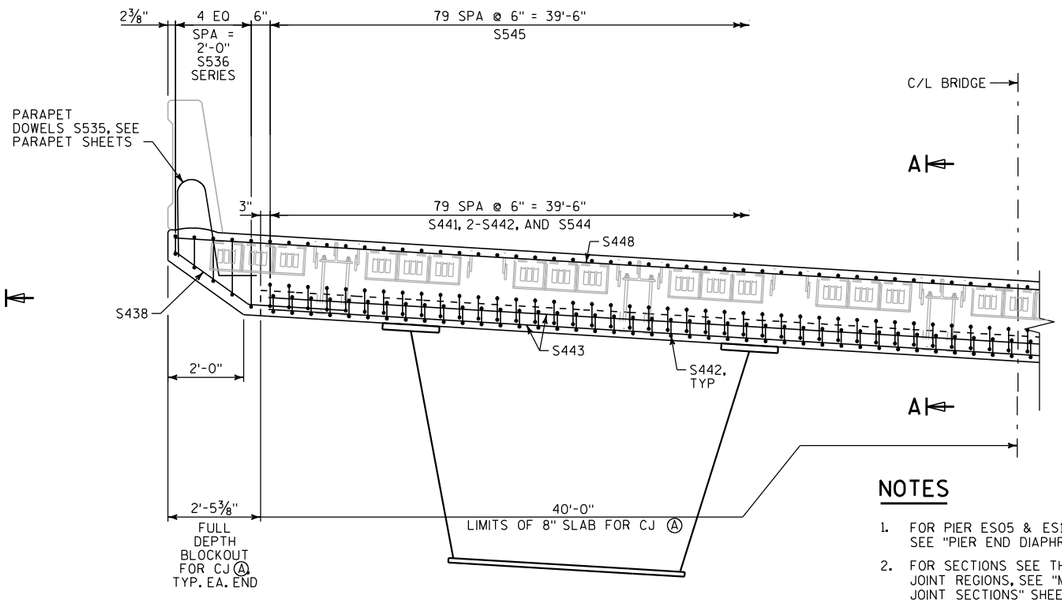
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STATE PROJECT NUMBER
1060-33-81



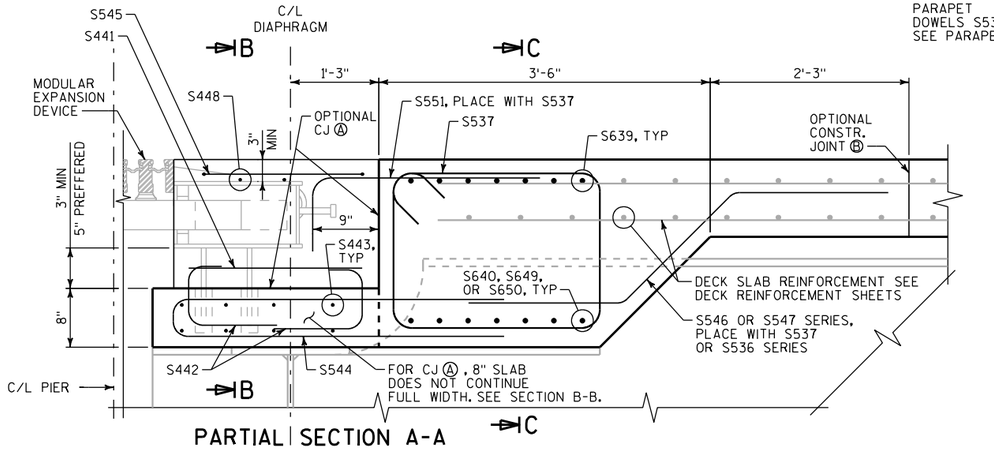
PLAN - JOINT AT PIER

JOINT SYMMETRICAL ABOUT C/L EXP JOINT



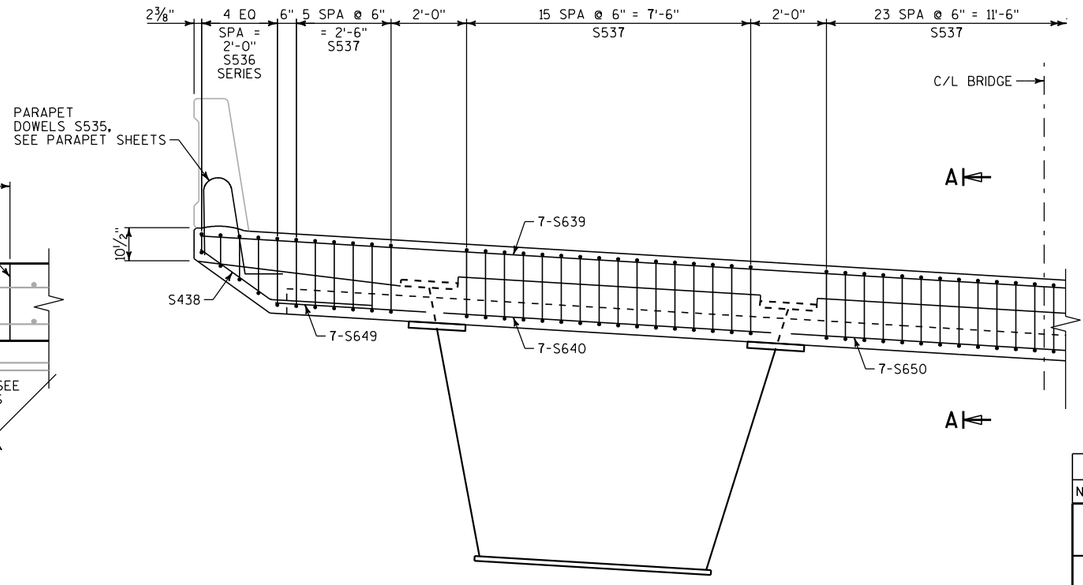
SECTION B-B

DECK REINFORCEMENT NOT SHOWN FOR CLARITY
SEE PARTIAL SECTION A-A FOR ADDITIONAL DETAIL



PARTIAL SECTION A-A

SYMMETRICAL ABOUT C/L PIER



SECTION C-C

DECK REINFORCEMENT NOT SHOWN FOR CLARITY

NOTES

1. FOR PIER ES05 & ES10 DIAPHRAGM DETAILS, SEE "PIER END DIAPHRAGM" SHEET.
2. FOR SECTIONS SEE THROUGH EXPANSION JOINT REGIONS, SEE "MODULAR EXPANSION JOINT SECTIONS" SHEET.
3. FOR DETAILS OF THE MODULAR EXPANSION DEVICES INCLUDING REQUIRED MOVEMENT CAPACITY, NUMBER OF SEALS, ANCHORAGES AND TEMPORARY SUPPORTS, SEE " MODULAR EXPANSION JOINT DETAILS" SHEET.
4. FOR DETAILS OF THE PARAPET COVER PLATES, SEE "MODULAR EXPANSION JOINT COVER PLATES" SHEET.

   COVER PLATES ARE REQUIRED AT ALL PARAPETS BUT FOR CLARITY ARE NOT SHOWN ON THIS DRAWING.
5. SUPPORT BOX SIZE AS SHOWN IS APPROXIMATE ONLY AND IS BASED ON A 4-CELL EXPANSION DEVICE. DIMENSIONS WILL VARY FOR DIFFERENT JOINT SIZES AND MANUFACTURERS.
6. EXPANSION DEVICE DETAILS SHOWN ON THIS DRAWING (INCLUDING SIZE AND SPACING OF SUPPORT BOXES, LOOP ANCHORS AND INSTALLATION SUPPORTS) ARE PICTORIAL ONLY.
7. ALL CONSTRUCTION SHALL BE CARRIED OUT USING THE APPROVED EXPANSION JOINT SHOP DRAWINGS ONLY.

NOTES

1. THE MODULAR EXPANSION DEVICE SHALL NOT BE POSITIONED IN ITS FINAL LOCATION UNTIL AFTER THE ADJACENT SPANS OF THE DECK HAVE BEEN POURED.
2. THE CONTRACTOR MAY INSTALL EITHER CONSTRUCTION JOINT Ⓐ (CJ Ⓐ) OR CONSTRUCTION JOINT Ⓗ (CJ Ⓗ) TO FACILITATE THE POSITIONING AND INSTALLATION OF THE MODULAR EXPANSION DEVICE.
3. IF CONSTRUCTION JOINT Ⓗ IS CHOSEN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FABRICATION AND INSTALLATION OF A SUITABLE SUPPORT SYSTEM FOR THE MODULAR EXPANSION DEVICE THAT PROPERLY LOCATES AND SECURES THE DEVICE IN POSITION, AND PROVIDES SUPPORT POINTS IN ACCORDANCE WITH THE SPECIFICATIONS. PAYMENT FOR ANY SUPPORT SYSTEM SHALL BE INCIDENTAL TO THE BID ITEM "EXPANSION DEVICE MODULAR LRFD B-40-854".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY	MSS	PLANS CK'D.	JWC

PIER MODULAR EXPANSION JOINT LAYOUT

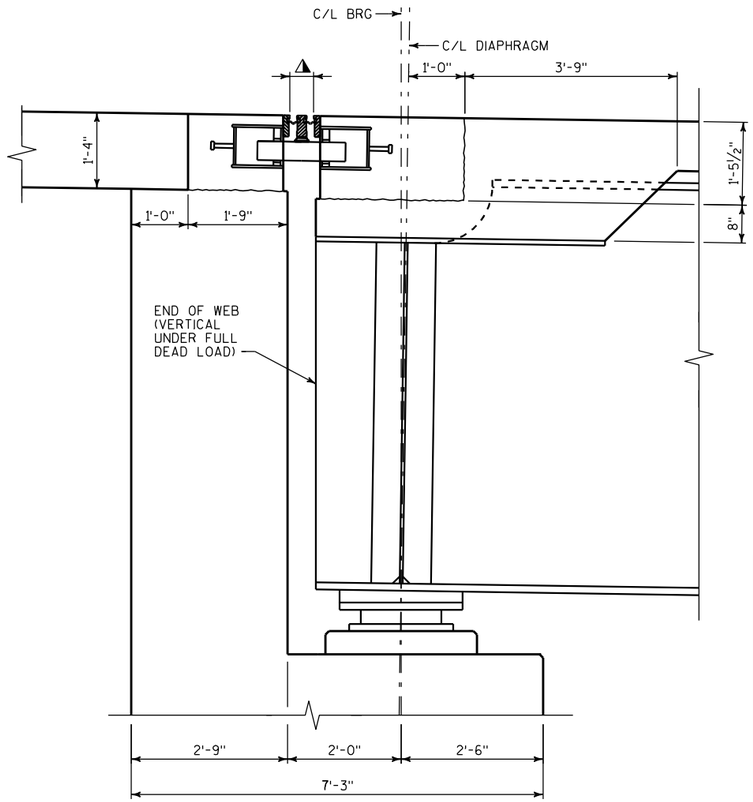
SHEET 99 OF 122

8

8

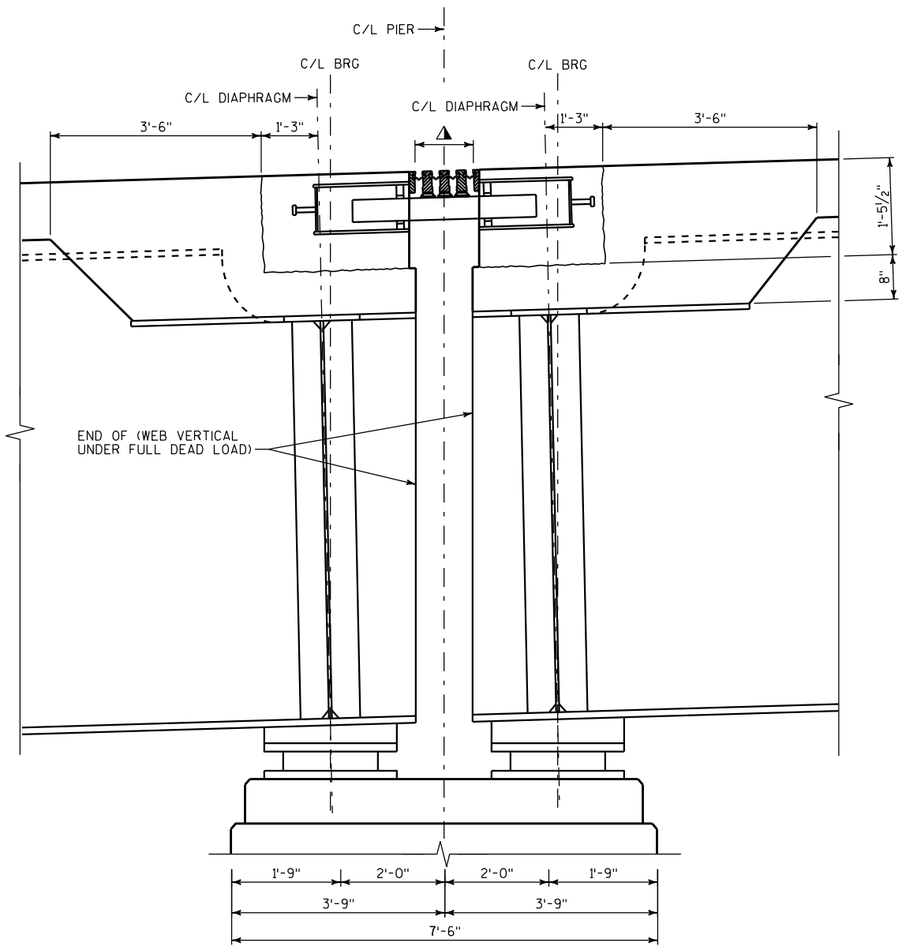
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STATE PROJECT NUMBER
1060-33-81



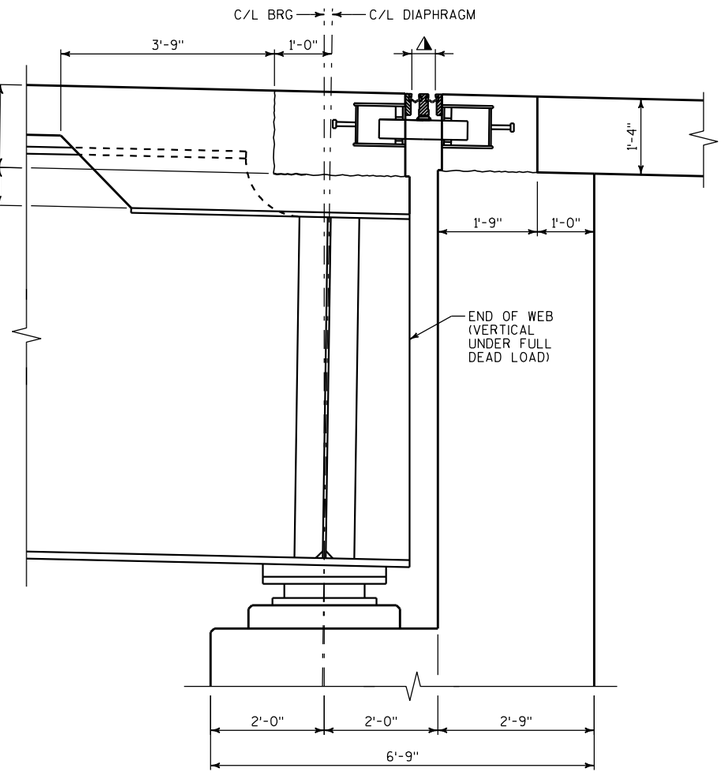
SECTION AT S ABUT

⚠ SEE TEMPERATURE SETTING TABLE



SECTION AT PIER ES05 & ES10

⚠ SEE TEMPERATURE SETTING TABLE



SECTION AT E ABUT

⚠ SEE TEMPERATURE SETTING TABLE

TEMPERATURE SETTING TABLE

PREPARE AND SUBMIT A TABLE FOR SETTING EACH JOINT OPENING BASED ON THE FOLLOWING CRITERIA:

1. JOINT OPENING SHALL BE AT THE MEDIAN VALUE FOR A TEMPERATURE OF 45°F.
2. ESTIMATED MOVEMENT PER 10°F CHANGE IN TEMPERATURE AS FOLLOWS:

S ABUT	=	3/8"
PIER ES05	=	1"
PIER ES10	=	7/8"
S ABUT	=	1/4"

3. THESE VALUES RELATE TO THE NET OPENING OF THE JOINT AND INCLUDE CONTRIBUTIONS FROM BOTH SIDES.
4. INCLUDE VALUES IN THE TABLE FOR AMBIENT TEMPERATURES FROM -5°F TO 95°F.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

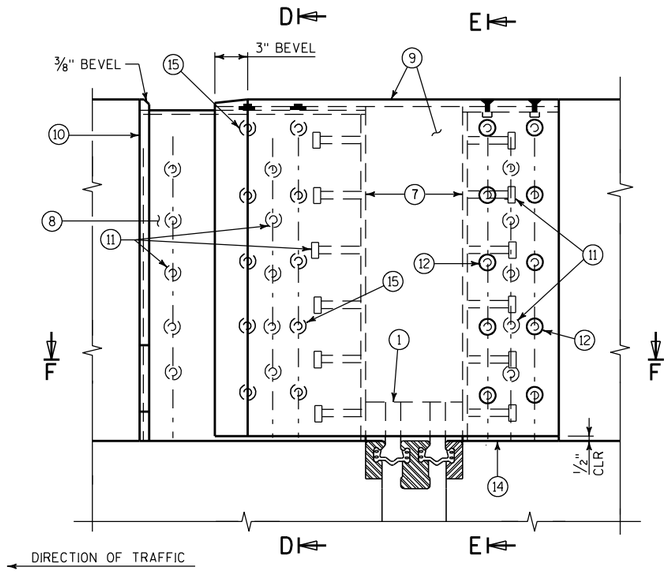
STRUCTURE B-40-854

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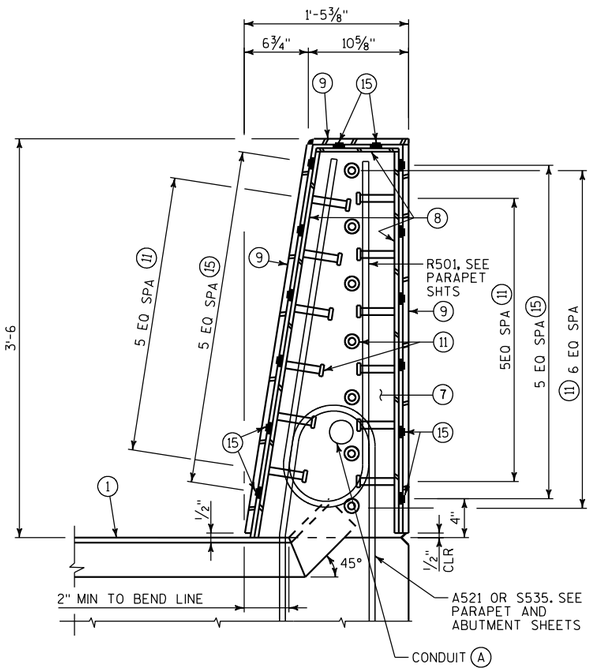
MODULAR EXPANSION JOINT SECTIONS

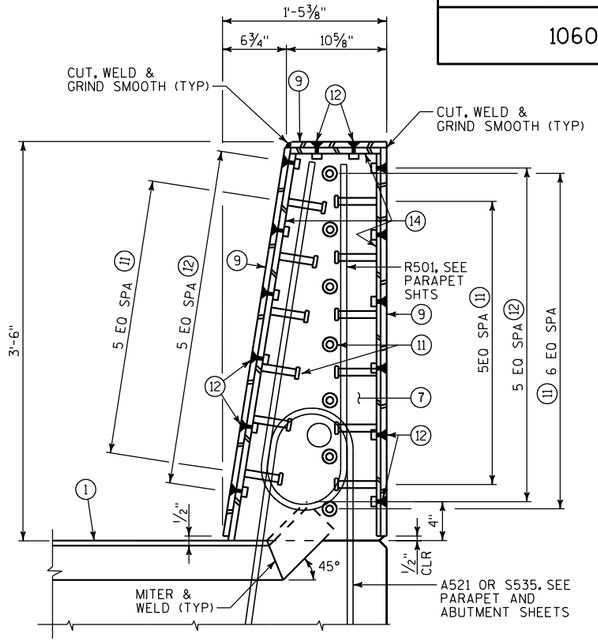
SHEET 100 OF 122

STATE PROJECT NUMBER
1060-33-81

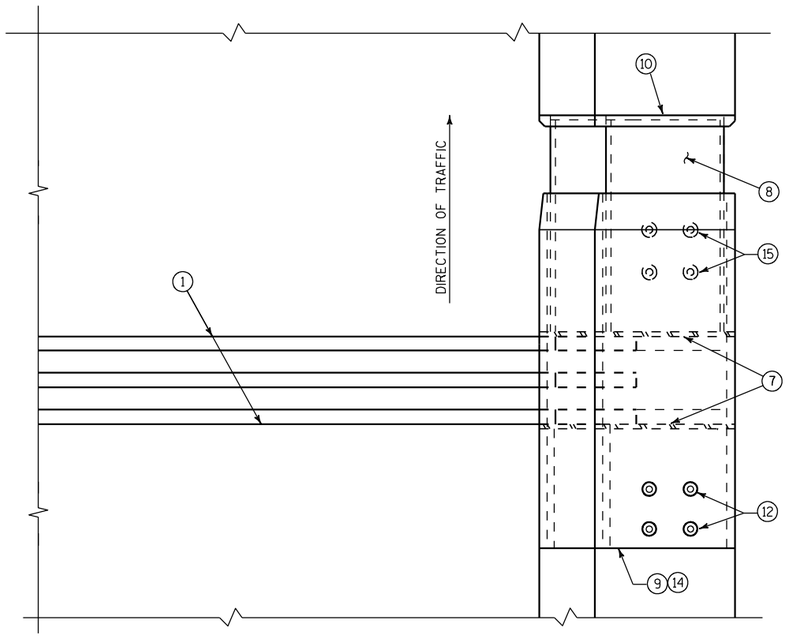


INSIDE ELEVATION OF SINGLE SLOPE PARAPET



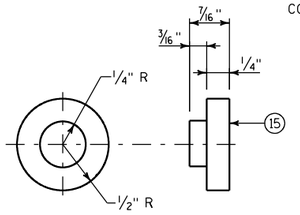


SECTION E-E

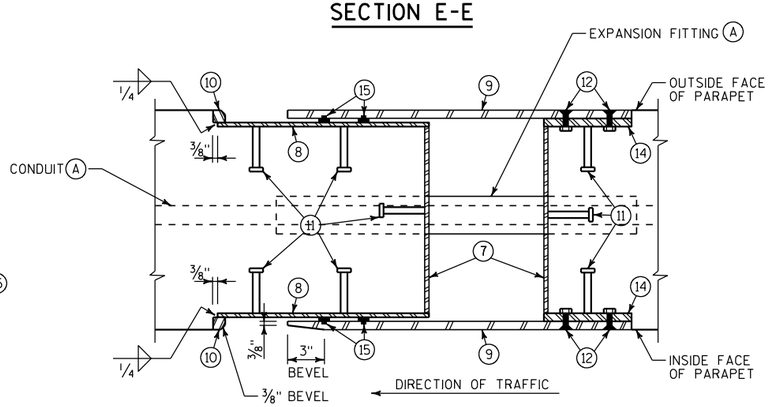


PLAN OF SINGLE SLOPE PARAPET

SECTION D-D



ADIPRENE BUTTON DETAIL



SECTION F-F

NOTES

FOR NUMBERED CALLOUTS ON THE DETAILS OF THIS SHEET,

1. SEE LEGEND ON "MODULAR EXPANSION JOINT DETAILS" SHEET.
2. SEE MODULAR EXPANSION JOINT LAYOUT SECTIONS AND DETAILS SHEETS FOR JOINT ORIENTATION, CAPACITY AND TEMPERATURE SETTING TABLE.
3. SEE PARAPET SHEETS FOR PARAPET REINFORCEMENT.

(A) FOR OCCURENCE, LOCATION, NUMBER OF CONDUITS, AND EXPANSION FITTING DETAILS SEE "PARAPET SECTIONS AND DETAILS" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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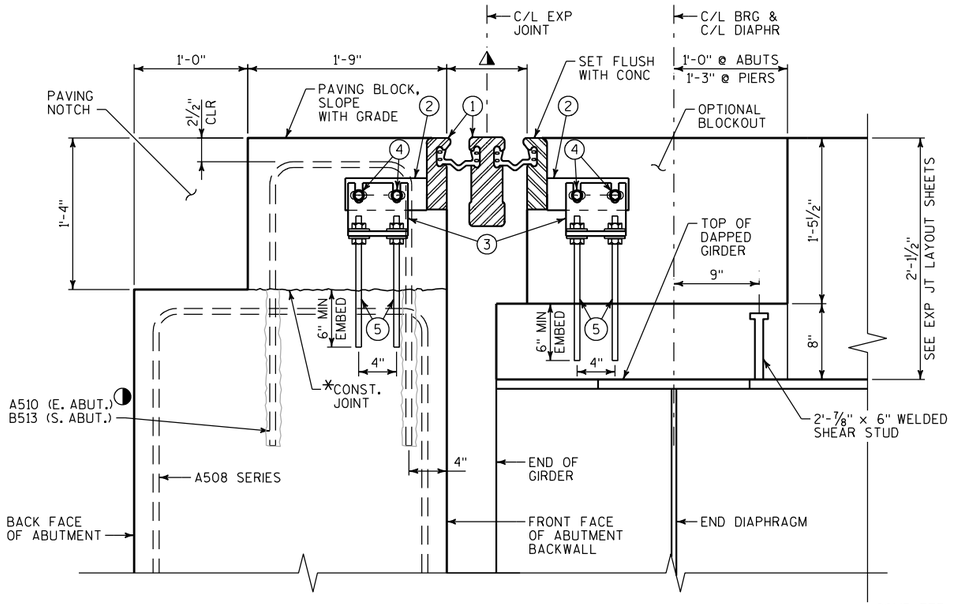
MODULAR EXPANSION JOINT COVER PLATES

SHEET 101 OF 122

8

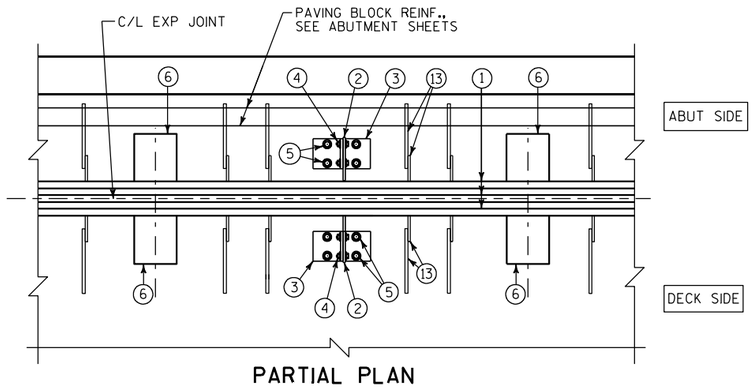
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STATE PROJECT NUMBER
1060-33-81



SECTION THRU JOINT @ ABUTMENT

NORMAL TO C/L SUBSTRUCTURE



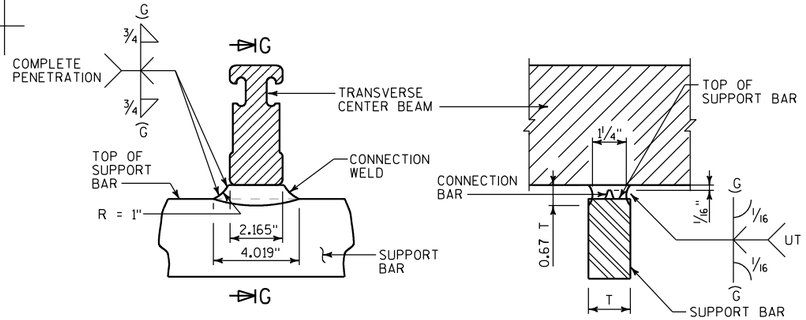
PARTIAL PLAN

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

SUPPORT BOXES ARE SHOWN FOR GENERAL INFORMATION AND LOCATION MAY VARY ACCORDING TO FABRICATOR DESIGN. SPACE SUPPORT BOXES NOT TO EXCEED MAXIMUM SPACING PER SPECIAL PROVISIONS.

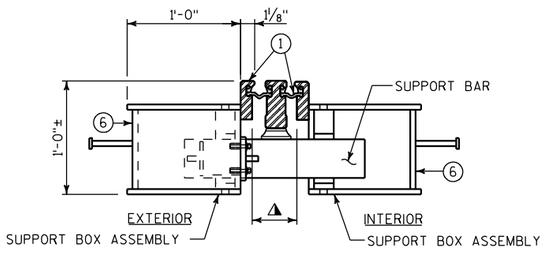
LEGEND

1. MODULAR EXPANSION JOINT DEVICE.
2. ½" PLATE, 8'-0" SPA MAX. PROVIDE 2 - 1" X 2" MIN. SLOTTED HOLES PLACED HORIZONTALLY FOR NO. 4.
3. WT 6 X 29 (OR EQUIVALENT BUILT UP T-SECTION). SPA AT 8'-0" MAX. PROVIDE 2 - 1" X 3" MIN. SLOTTED HOLES PLACED VERTICALLY IN WEB OF WT FOR BOLTS NO. 4.
4. ¾" DIA. HIGH STRENGTH BOLTS WITH NUTS & WASHERS. (A325 GALV.)
5. ¾" DIA. THREADED ROD WITH 2 NUTS & WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES. (GALV.)
6. SUPPORT BOX ASSEMBLY FOR SUPPORT BAR (SPA. PER MANUFACTURER). FABRICATE BOX FROM ½" PLATES.
7. ⅜" BULKHEAD PLATE. WELD TO NO. 1, NO. 8 AND NO. 14. WHEN CONDUIT IS PRESENT IN PARAPET, ACCOMMODATE FOR BY PROVIDING OPENING IN NO. 7.
8. INSIDE PLATE. FABRICATE FROM ⅜" PLATE.
9. OUTSIDE PLATE. FABRICATE FROM ⅝" PLATE.
10. ⅞" SQUARE BAR. WELD TO NO. 8 AS SHOWN.
11. ¾" DIA. X 4" LONG STUDS. WELD TO NO. 8 , NO. 7 & NO. 14 AS SHOWN.
12. ¾" DIA. X 2" STAINLESS STEEL FLAT CTSK. SLOTTED HEAD CAP SCREWS WITH ANTI-SEIZE LUBRICANT. RECESS 1/16" BELOW PLATE SURFACE.
13. ½" PLATE WITH ⅝" DIA. LOOP ANCHOR FABRICATED AS SHOWN. SPACED AT MANUFACTURER'S SPEC.
14. INSIDE PLATE. FABRICATE FROM ⅝" PLATE.
15. ADIPRENE BUTTON. SEE DETAIL. SET IN OUTSIDE PLATE.



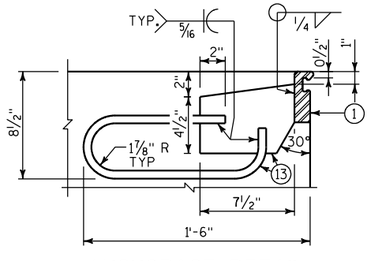
MODULAR EXPANSION JOINT CONNECTION DETAIL AND WELD SPECIFICATION

SECTION G-G



JOINT DETAIL

AT SUPPORT BAR & SUPPORT BOX ASSEMBLY



ANCHORAGE DETAIL

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

* POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH.

⚠ MANUFACTURER'S RECOMMENDED JOINT OPENING BASED ON THE TEMPERATURE ON THE DAY OF PLACEMENT PER TEMPERATURE TABLE. THE MODULAR EXPANSION DEVICE SHALL HAVE THE NUMBER OF CELLS AS INDICATED BELOW:

SOUTH ABUTMENT	3 CELLS
PIER ES05	7 CELLS
PIER ES10	6 CELLS
EAST ABUTMENT	2 CELLS

EACH CELL IS EXPECTED TO PROVIDE 3" OF MOVEMENT RANGE.

◑ COORDINATE THE PLACEMENT OF PAVING BLOCK VERTICAL REINFORCEMENT IN ABUTMENT BACKWALL WITH THE INSTALLATION OF THE JOINT ASSEMBLY. ALTERNATIVELY, DOWEL IN PAVING BLOCK VERTICAL REINFORCEMENT FOLLOWING STANDARD SPECIFICATION FOR MASONRY ANCHOR TYPE S, COST IS INCIDENTAL TO "EXPANSION DEVICE MODULAR LRFD B-40-854".

GENERAL NOTES

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

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

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

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

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

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

COST OF FURNISHING & PLACING OF THE EXPANSION JOINTS COMPLETE WITH PARAPET PLATES SHALL BE PAID FOR UNDER THE PRICE BID FOR "EXPANSION DEVICE MODULAR LRFD B-40-854".

BAR STEEL REINF. IN DECK AND PAVING BLOCK SHALL BE RESPACED AS NECESSARY TO ALLOW PLACEMENT OF JOINT ASSEMBLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-854

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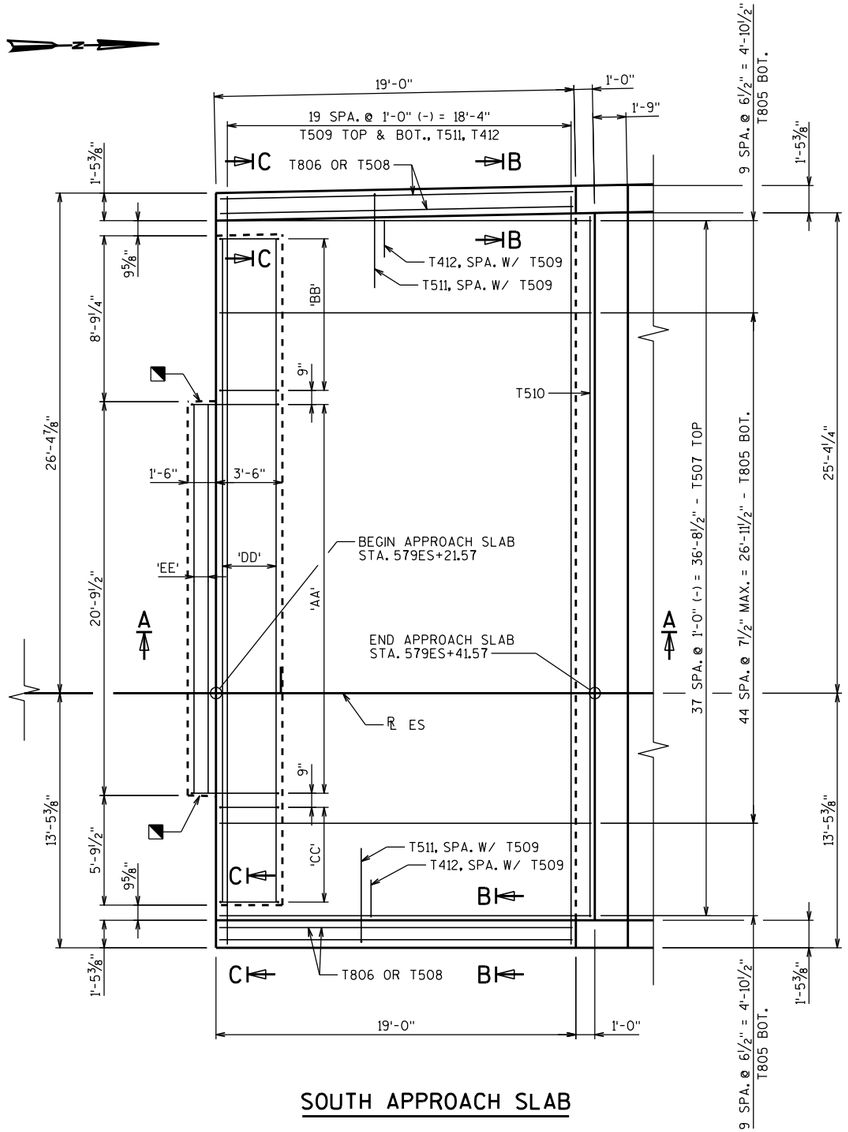
MODULAR EXPANSION JOINT DETAILS

SHEET 102 OF 122

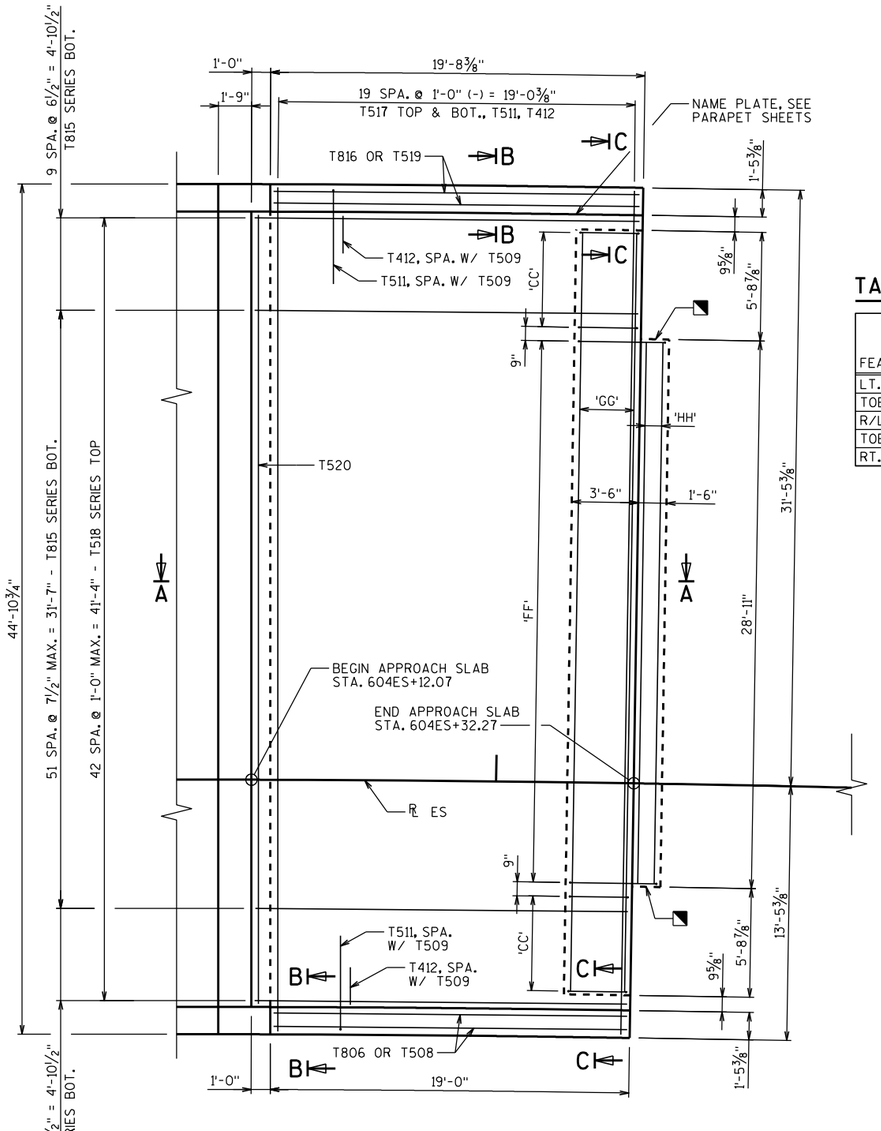
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8

STATE PROJECT NUMBER
1060-33-81



SOUTH APPROACH SLAB



EAST APPROACH SLAB

TABLE OF ELEVATIONS

FEATURE	STA. 579ES+21.57	579ES+41.57	604ES+12.07	604ES+32.27
LT. EDGE OF SLAB	820.08	821.22	789.12	788.11
TOE OF 42SS BARRIER	820.05	821.19	789.05	788.04
R/L ES	819.55	820.68	787.52	786.51
TOE OF 42SS BARRIER	819.31	820.44	786.91	785.90
RT. EDGE OF SLAB	819.28	820.41	786.83	785.82

LEGEND

▪ PROVIDE ½" PREFORMED JOINT FILLER BETWEEN EDGE OF APPROACH SLAB FOOTING AND RETAINING WALL MOMENT SLAB.

NOTES

FOR SECTIONS A-A, B-B, AND C-C SEE "STRUCTURAL APPROACH SLAB DETAILS" SHEET

'AA' = 21 SPA. @ 1'-0" (-) = 20'-6", T501
'BB' = 8 SPA. @ 1'-0" = 8'-0", T502
'CC' = 5 SPA. @ 1'-0" = 5'-0", T502
'DD' = 3 SPA. @ 1'-0" = 3'-0", T803
'EE' = 1 SPA. @ 9", T804
'FF' = 29 SPA. @ 1'-0" (-) = 28'-7", T501
'GG' = 3 SPA. @ 1'-0" = 3'-0", T813
'HH' = 1 SPA. @ 9", T814

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

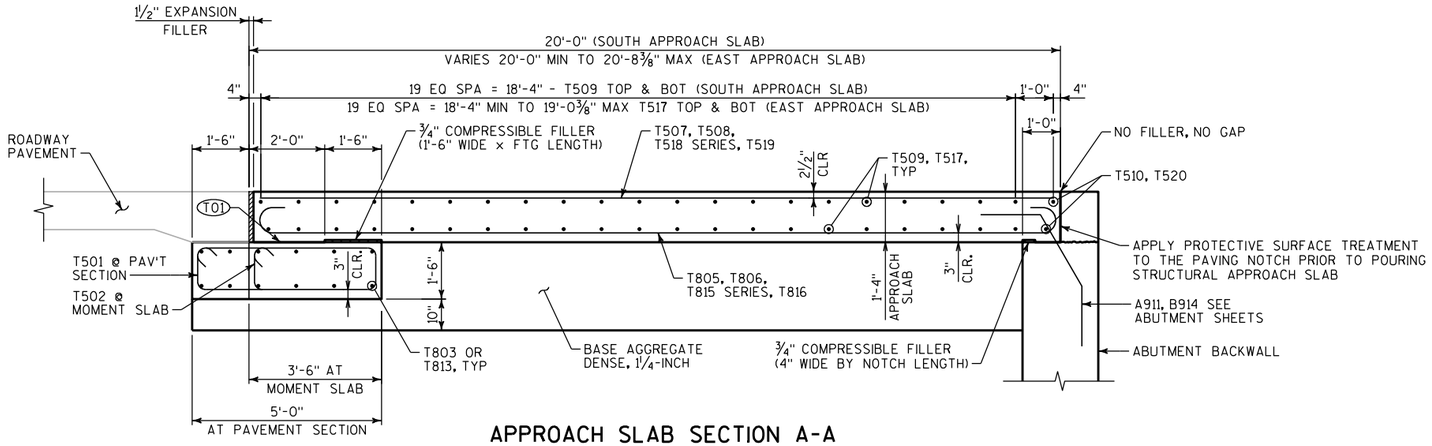
STRUCTURAL APPROACH SLAB

SHEET 103 OF 122

8

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PLOT DATE : 01-MAR-2015 19:03
PLOT BY : MSCKTM
PLOT NAME : 080565_as
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-81



APPROACH SLAB SECTION A-A

(SOUTH APPROACH SHOWN,
EAST APPROACH SIMILAR BUT OPPOSITE)

LEGEND

(T01) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T02) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE. POLYETHYLENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

(T03) ¾" CONT. DRIP GROOVE. TERMINATE 2'-0" FROM ABUTMENT BACKWALL.

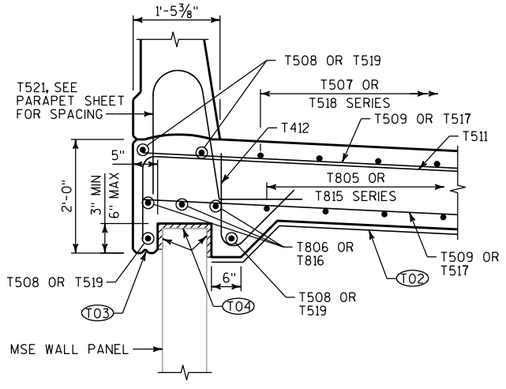
(T04) 1" EXPANDED POLYSTYRENE

APPROACH SLAB NOTES

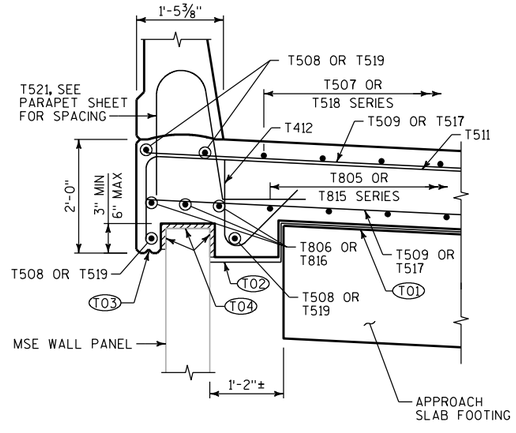
PROVIDE LONGITUDINAL GROOVING ON APPROACH SLABS.

SEE PARAPET SHEETS FOR PARAPET REINFORCING TIE PLACEMENT REQUIRED IN APPROACH SLABS.

IN ADDITION TO THE AREAS OUTLINED IN THE STANDARD SPECIFICATIONS, APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF APPROACH SLAB SURFACE, TOPS OF PARAPETS, INSIDE FACES OF PARAPETS, AND AREAS SHOWN IN THE APPROACH SLAB SECTION.



SECTION B-B



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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STRUCTURAL APPROACH SLAB DETAILS

SHEET 104 OF 122

8

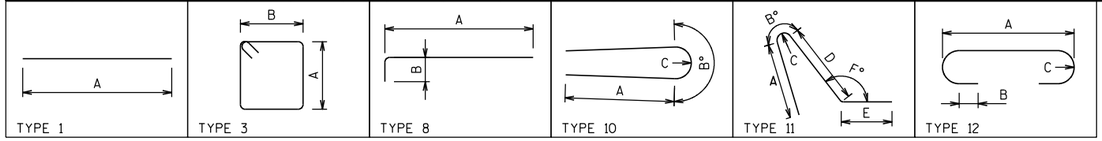
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STATE PROJECT NUMBER

1060-33-81

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
T501	E	52	12'-1"	X		3	1'-1"	4'-8"					FOOTING - STIRRUP					
T502	E	27	9'-1"	X		3	1'-1"	3'-2"					FOOTING - STIRRUP					
T803	E	8	35'-0"			1	35'-0"						FOOTING - LONG.					
T804	E	4	20'-6"			1	20'-6"						FOOTING - LONG.					
T805	S	63	21'-6"	X		12	19'-8"	0'-4"	0'-3"				APPROACH SLAB - LONG. BOT.					
T806	S	9	20'-6"	X		12	18'-8"	0'-4"	0'-3"				APPROACH SLAB - LONG. BOT.					
T507	S	38	19'-8"			1	19'-8"						APPROACH SLAB - LONG. TOP					
T508	S	12	18'-8"			1	18'-8"						APPROACH SLAB - LONG. AT BARRIER					
T509	S	40	39'-6"			1	39'-6"						APPROACH SLAB - TRANS. TOP & BOT.					
T510	S	2	37'-0"			1	37'-0"						APPROACH SLAB - TRANS. TOP & BOT.					
T511	S	80	6'-3"	X		8	5'-0"	1'-4"					APPROACH SLAB - TRANS.					
T412	S	80	3'-0"	X		10	1'-3"	135	0'-3"				APPROACH SLAB - TRANS. AT MSE WALL					
T813	E	8	40'-0"			1	40'-0"						FOOTING - LONG.					
T814	E	4	28'-7"			1	28'-7"						FOOTING - LONG.					
T815	S	70	21'-10"	X	⚠	12	20'-0"	0'-4"	0'-3"				APPROACH SLAB - LONG. BOT.	A	19'-8"	20'-4"	1 SERIES OF 70	21'-6" TO 22'-2"
T816	S	3	21'-2"	X		12	19'-4"	0'-4"	0'-3"				APPROACH SLAB - LONG. BOT.					
T517	S	40	44'-6"			1	44'-6"						APPROACH SLAB - TRANS. TOP & BOT.					
T518	S	43	20'-0"		⚠	1	20'-0"						APPROACH SLAB - LONG. TOP	A	19'-8"	20'-4"	1 SERIES OF 43	19'-8" TO 20'-4"
T519	S	4	19'-4"			1	19'-4"						APPROACH SLAB - LONG. AT BARRIER					
T520	S	2	41'-8"			1	41'-8"						APPROACH SLAB - TRANS. TOP & BOT.					
T521	S	116	5'-7"	X		11	1'-8"	172	0'-4½"	1'-9"	1'-0"	99	PARAPET TIE					

BAR MARK BREAKDOWN				
BAR MARK	SOUTH APPROACH SLAB	EAST APPROACH SLAB	TOTAL NO	WEIGHT
T501	22	30	52	655
T502	15	12	27	256
T803	8		8	748
T804	4		4	219
T805	63		63	3,617
T806	6	3	9	493
T507	38		38	779
T508	8	4	12	234
T509	40		40	1,648
T510	2		2	77
T511	40	40	80	522
T412	40	40	80	160
T813		8	8	854
T814		4	4	305
T815		70	70	4,081
T816		3	3	170
T517		40	40	1,857
T518		43	43	897
T519		4	4	81
T520		2	2	87
T521	58	58	116	676



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
E - STEEL, HIGH STRENGTH, EPOXY COATED.
S - STAINLESS STEEL.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

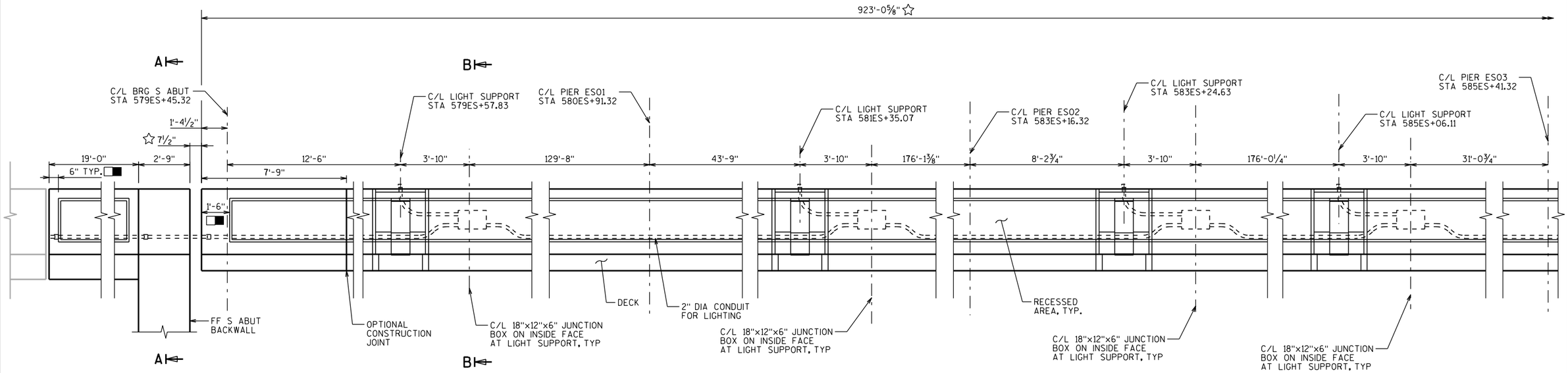
STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

STRUCTURAL APPROACH SLAB REINFORCEMENT SCHEDULE

SHEET 105 OF 122

STATE PROJECT NUMBER
1060-33-81



RIGHT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT EXTERIOR FACE)

LEGEND

☆ PARAPET DIMENSIONS SHOWN ARE BASED ON A 7½" CONCRETE OPENING (5" JOINT OPENING) AT THE ABUTMENT AND AN 1'-0" OPENING (9½" JOINT OPENING) AT PIER ES05 AS SHOWN ON "MODULAR EXPANSION JOINT SECTIONS" SHEET.

DIMENSIONS RELATING TO THE AESTHETIC RELIEF ARE SIMILAR FOR THE LEFT SIDE AS FOR THE RIGHT SIDE SHOWN.

NOTES

FOR SECTIONS A-A AND B-B, SEE "PARAPET SECTIONS & DETAILS" SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

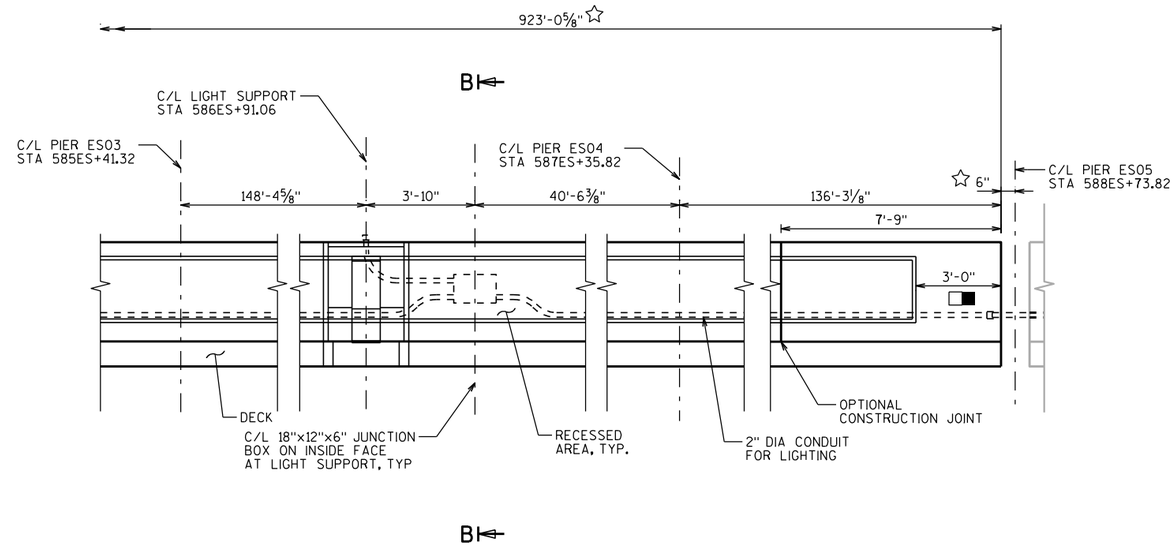
STRUCTURE B-40-854

DRAWN BY SR | PLANS CK'D. MSS

UNIT 1 PARAPET EMBEDDED WORK (1 OF 2)

SHEET 106 OF 122

STATE PROJECT NUMBER
1060-33-81



RIGHT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT EXTERIOR FACE)

8

LEGEND

☆ PARAPET DIMENSIONS SHOWN ARE BASED ON A 7 1/2" CONCRETE OPENING (5" JOINT OPENING) AT THE ABUTMENT AND AN 1'-0" OPENING (9 1/2" JOINT OPENING) AT PIER ES05 AS SHOWN ON "MODULAR EXPANSION JOINT SECTIONS" SHEET.

◨ DIMENSIONS RELATING TO THE AESTHETIC RELIEF ARE SIMILAR FOR THE LEFT SIDE AS FOR THE RIGHT SIDE SHOWN.

NOTES

FOR SECTION B-B, SEE
"PARAPET SECTIONS & DETAILS" SHEET

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

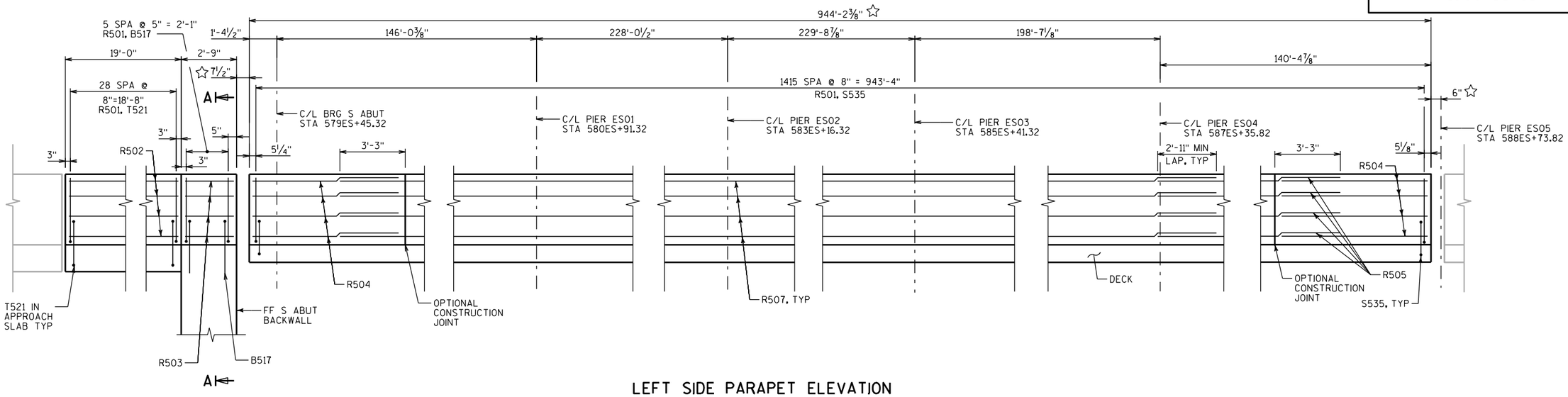
STRUCTURE B-40-854

DRAWN BY SR | PLANS CK'D. MSS

UNIT 1 PARAPET
EMBEDDED WORK
(2 OF 2)

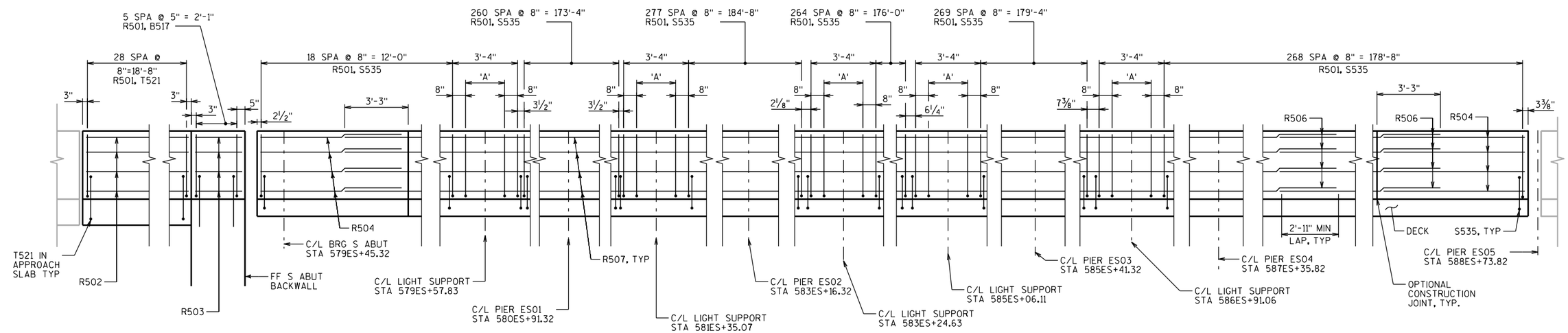
SHEET 107 OF 122

STATE PROJECT NUMBER
1060-33-81



LEFT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT INTERIOR FACE)



'A' = 3 SPA @ 8" = 2'-0", R501

RIGHT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT EXTERIOR FACE)

NOTES

FOR SECTION A-A, SEE "PARAPET SECTIONS & DETAILS" SHEET

LEGEND

☆ PARAPET DIMENSIONS SHOWN ARE BASED ON A 7 1/2" CONCRETE OPENING (5" JOINT OPENING) AT THE ABUTMENT AND AN 1'-0" OPENING (9 1/2" JOINT OPENING) AT PIER ES05 AS SHOWN ON "MODULAR EXPANSION JOINT SECTIONS" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY SR | PLANS CK'D. MSS

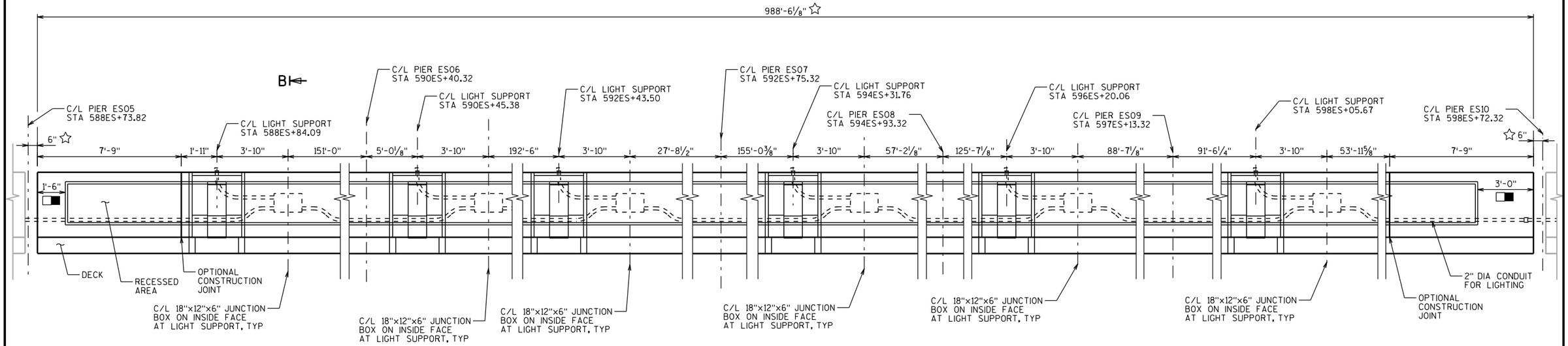
UNIT 1 PARAPET ELEVATIONS

SHEET 108 OF 122

8

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STATE PROJECT NUMBER
1060-33-81



RIGHT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT EXTERIOR FACE)

8

LEGEND

☆ PARAPET DIMENSIONS SHOWN ARE BASED ON A 1'-0" CONCRETE OPENING (9½" JOINT OPENING) AT PIER ES05 AND A 1'-0" OPENING (9½" JOINT OPENING) AT PIER ES10 AS SHOWN ON "MODULAR EXPANSION JOINT SECTIONS" SHEET.

DIMENSIONS RELATING TO THE AESTHETIC RELIEF ARE SIMILAR FOR THE LEFT SIDE AS FOR THE RIGHT SIDE SHOWN.

NOTES

FOR SECTION B-B, SEE "PARAPET SECTIONS & DETAILS" SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

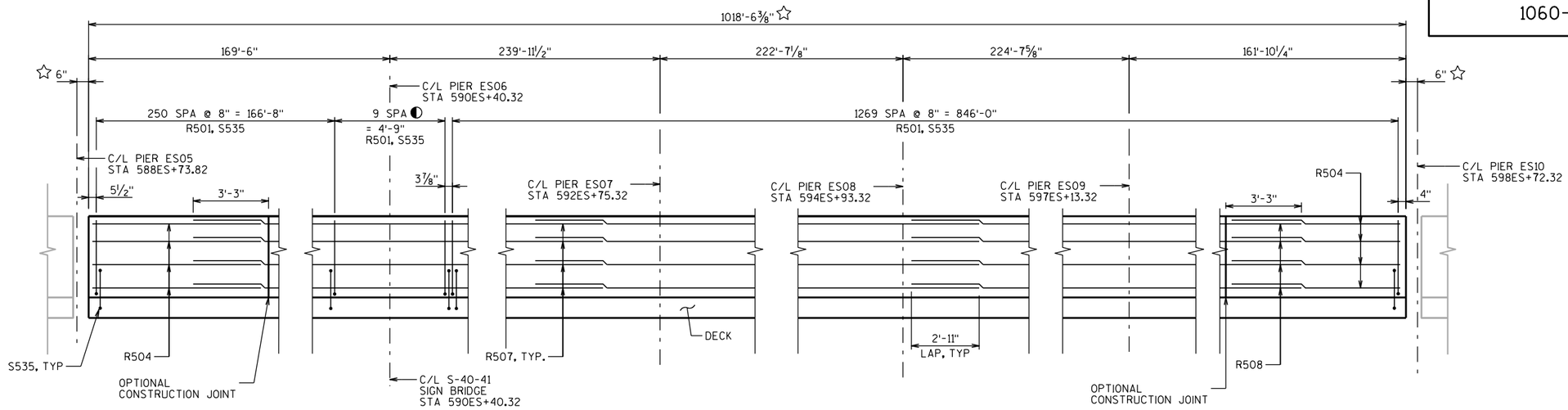
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UNIT 2 PARAPET EMBEDDED WORK

SHEET 109 OF 122

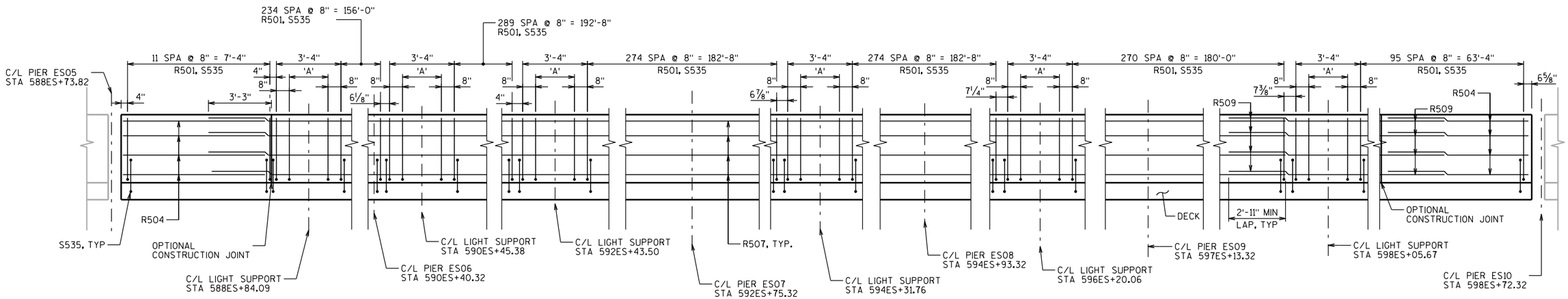
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STATE PROJECT NUMBER
1060-33-81



LEFT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT INTERIOR FACE)



'A' = 3 SPA @ 8" = 2'-0", R501

RIGHT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT EXTERIOR FACE)

LEGEND

◐ REFER TO SIGN BRIDGE BASE SHEETS FOR REINFORCEMENT SPACING

☆ PARAPET DIMENSIONS SHOWN ARE BASED ON A 1'-0" CONCRETE OPENING (91"±2" JOINT OPENING) AT PIER ES05 AND A 1'-0" OPENING (91"±2" JOINT OPENING) AT PIER ES10 AS SHOWN ON "MODULAR EXPANSION JOINT SECTIONS" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY SR | PLANS CK'D. MSS

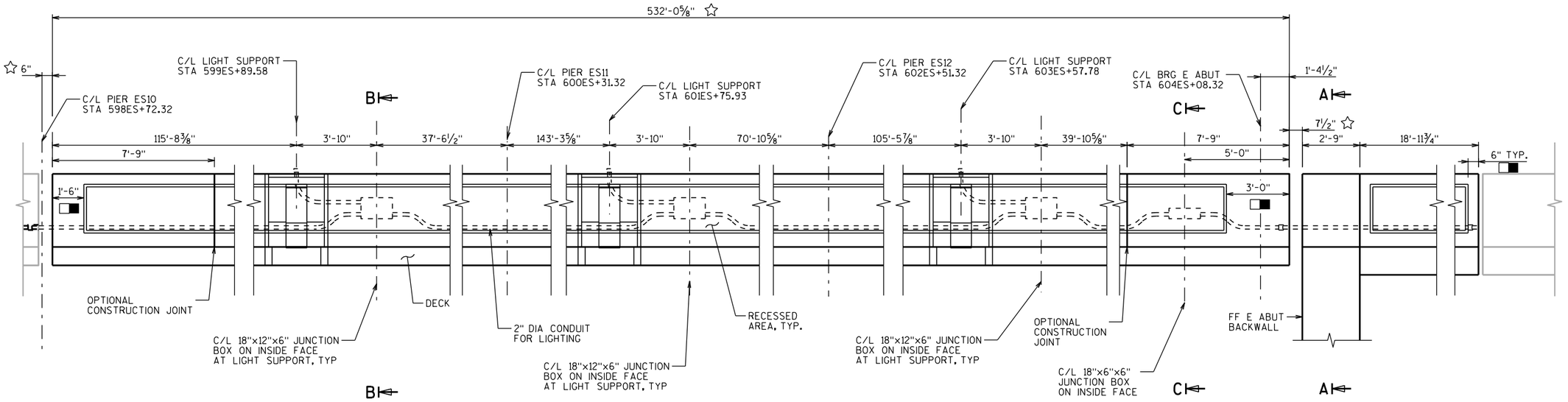
UNIT 2 PARAPET ELEVATIONS

SHEET 110 OF 122

8

8

STATE PROJECT NUMBER
1060-33-81



RIGHT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT EXTERIOR FACE)

8

LEGEND

☆ PARAPET DIMENSIONS SHOWN ARE BASED ON A 1'-0" CONCRETE OPENING (9½" JOINT OPENING) AT PIER ES10 AND A 7½" OPENING (5" JOINT OPENING) AT THE EAST ABUTMENT AS SHOWN ON "MODULAR EXPANSION JOINT SECTIONS" SHEET.

DIMENSIONS RELATING TO THE AESTHETIC RELIEF ARE SIMILAR FOR THE LEFT SIDE AS FOR THE RIGHT SIDE SHOWN.

NOTES

FOR SECTIONS A-A, B-B, AND C-C SEE "PARAPET SECTIONS & DETAILS" SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

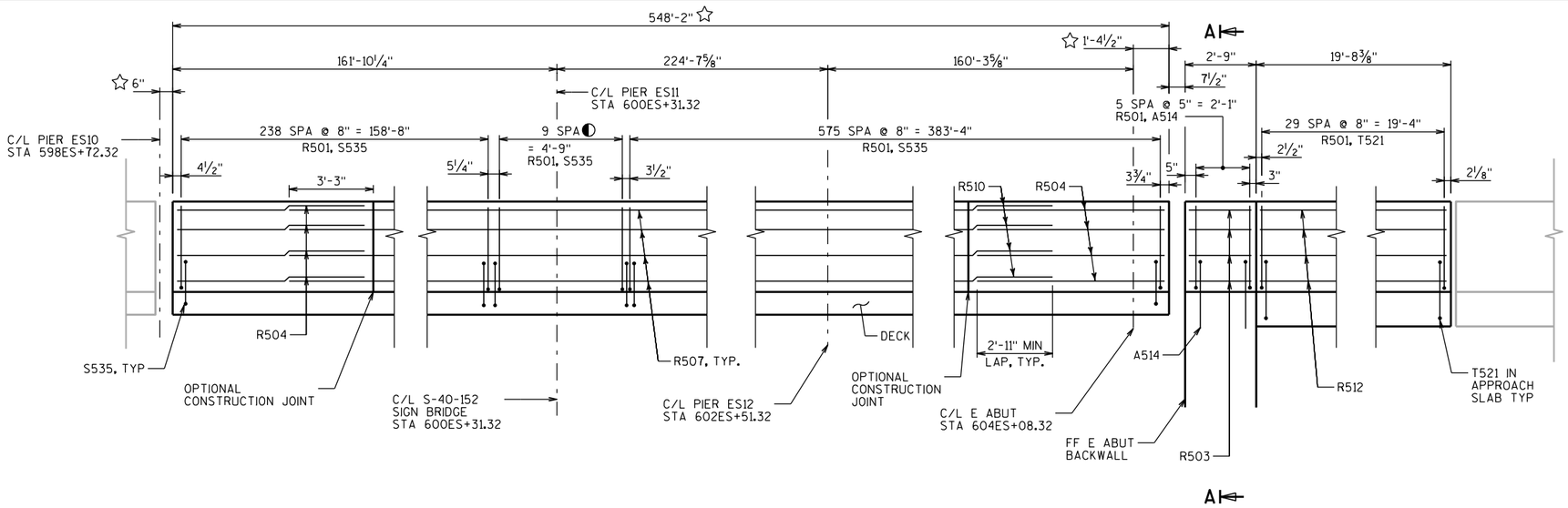
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UNIT 3 PARAPET EMBEDDED WORK

SHEET 111 OF 122

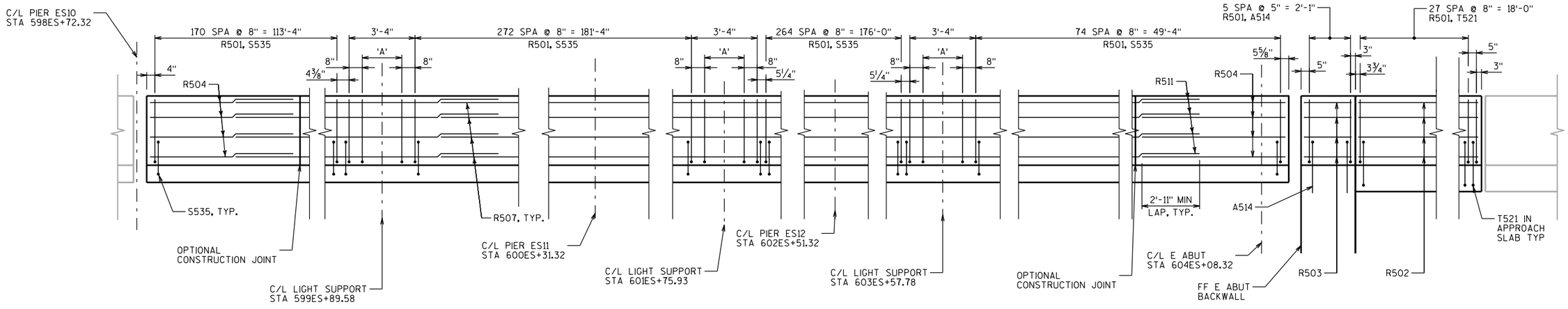
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STATE PROJECT NUMBER
1060-33-81



LEFT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT INTERIOR FACE)



'A' = 3 SPA @ 8" = 2'-0", R501

RIGHT SIDE PARAPET ELEVATION

DIMENSIONS MEASURED ALONG
EDGE OF DECK / EXTERIOR FACE OF PARAPET
(LOOKING AT EXTERIOR FACE)

LEGEND

◐ REFER TO SIGN BRIDGE BASE SHEETS FOR REINFORCEMENT SPACING

☆ PARAPET DIMENSIONS SHOWN ARE BASED ON A 1'-0" CONCRETE OPENING (9½" JOINT OPENING) AT PIER ES10 AND A 7½" OPENING (5" JOINT OPENING) AT THE EAST ABUTMENT AS SHOWN ON "MODULAR EXPANSION JOINT SECTIONS" SHEET.

NOTES

FOR SECTION A-A, SEE "PARAPET SECTIONS & DETAILS" SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

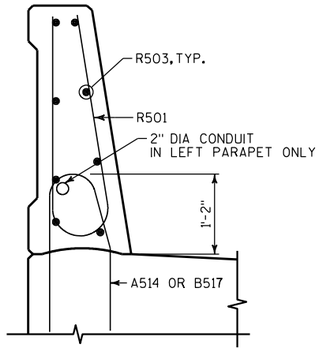
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UNIT 3 PARAPET ELEVATIONS

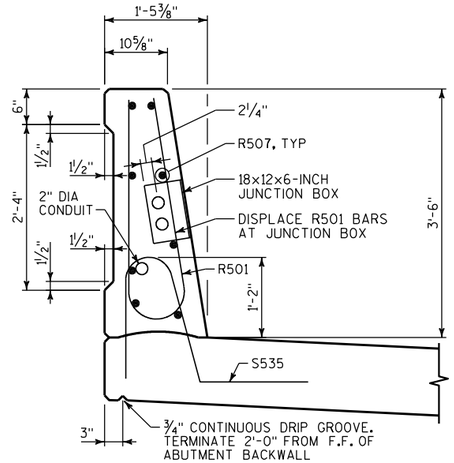
SHEET 112 OF 122

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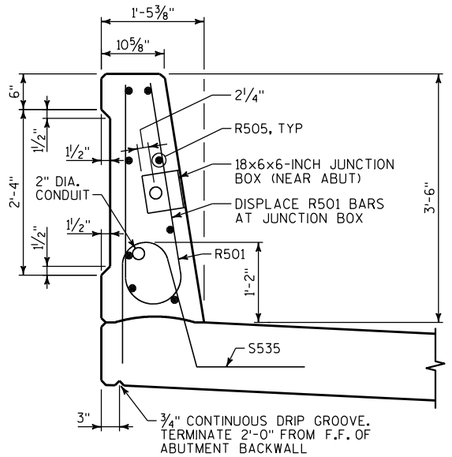
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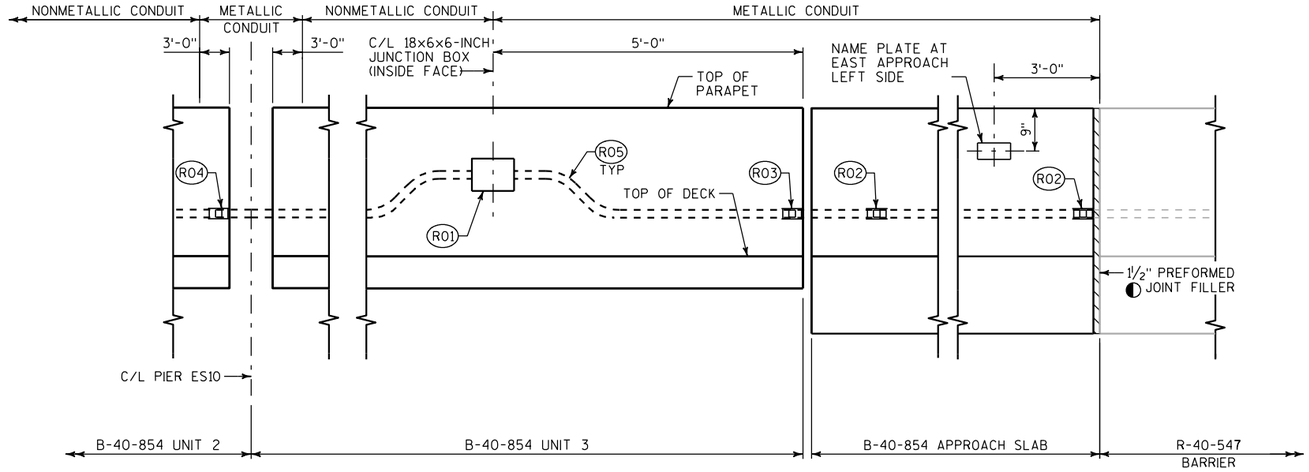
SECTION A



SECTION B

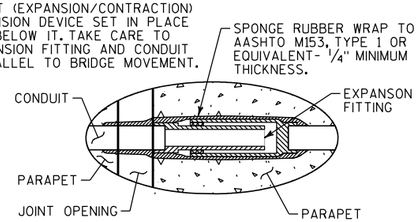


SECTION C



RIGHT SIDE PARAPET INTERIOR ELEVATION AT ABUTMENT SHOWING CONDUITS

POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.



EXPANSION FITTING DETAIL

LEGEND

(R01) CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE

(R02) EXPANSION FITTING WITH 4" TOTAL CONDUIT MOVEMENT, O-Z/GEDNEY TYPE AX-200 OR EQUIVALENT SUBJECT TO DEPARTMENT APPROVAL

(R03) EXPANSION FITTING WITH 8" TOTAL CONDUIT MOVEMENT, O-Z/GEDNEY TYPE AX-8-200 OR EQUIVALENT SUBJECT TO DEPARTMENT APPROVAL

(R04) EXPANSION FITTING WITH 10" TOTAL CONDUIT MOVEMENT, O-Z/GEDNEY TYPE EX-200 WITH PBS-200-12S OR EQUIVALENT SUBJECT TO DEPARTMENT APPROVAL

(R05) 45° BEND IN CONDUIT. USE MINIMUM BENDING RADIUS PER WISCONSIN ELECTRIC CODE.

◐ PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.

NOTES

EXPANSION FITTINGS, SPONGE RUBBER WRAP, ANGLES, AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, USE ADAPTER FITTINGS LISTED BY UL OR NRTL FOR ELECTRICAL USE.

FOR APPROVED MANUFACTURERS OF JUNCTION BOXES, SEE APPROVED MATERIAL LIST.

STATE PROJECT NUMBER
1060-33-81

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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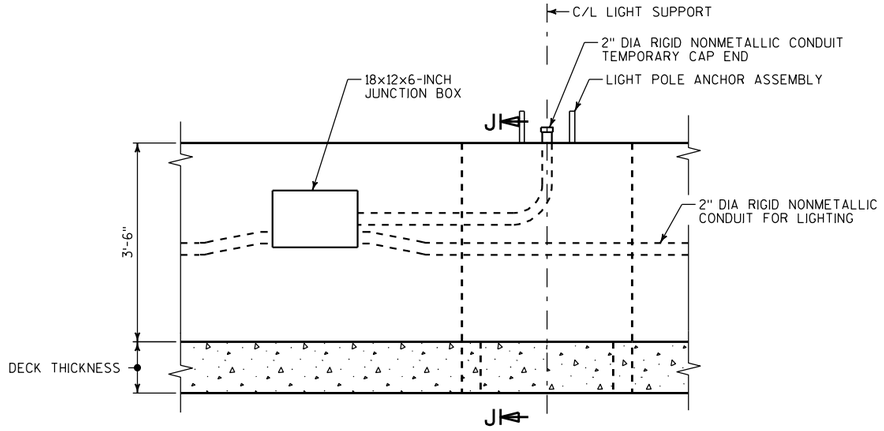
PARAPET SECTIONS & DETAILS

SHEET 113 OF 122

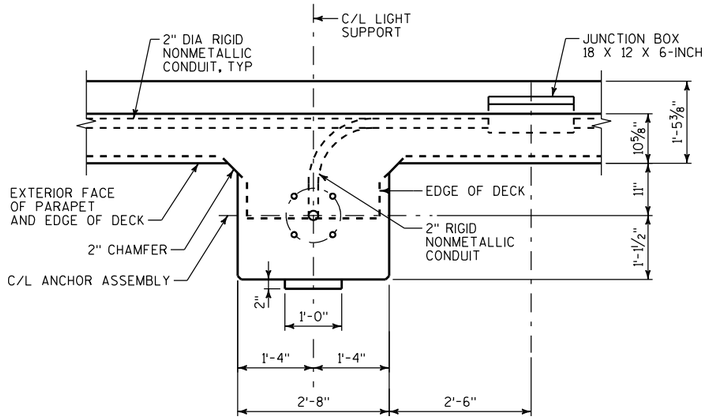
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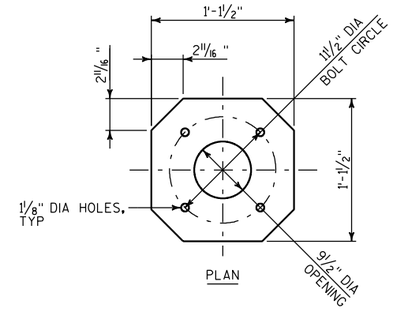
STATE PROJECT NUMBER
1060-33-81



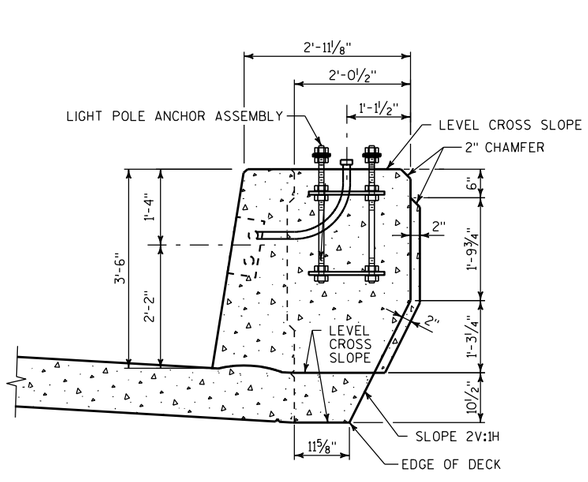
INTERIOR ELEVATION



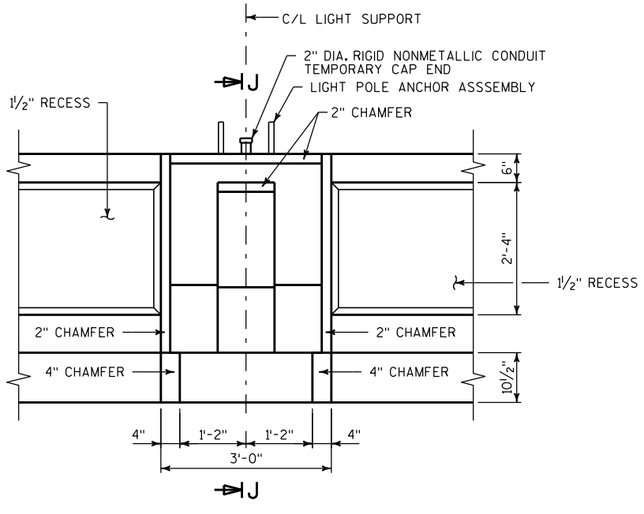
PLAN



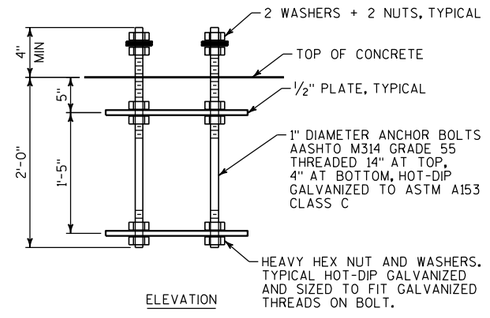
PLAN



SECTION J-J



EXTERIOR ELEVATION



ELEVATION

ANCHOR ASSEMBLY
LIGHT POLE ON STRUCTURES

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

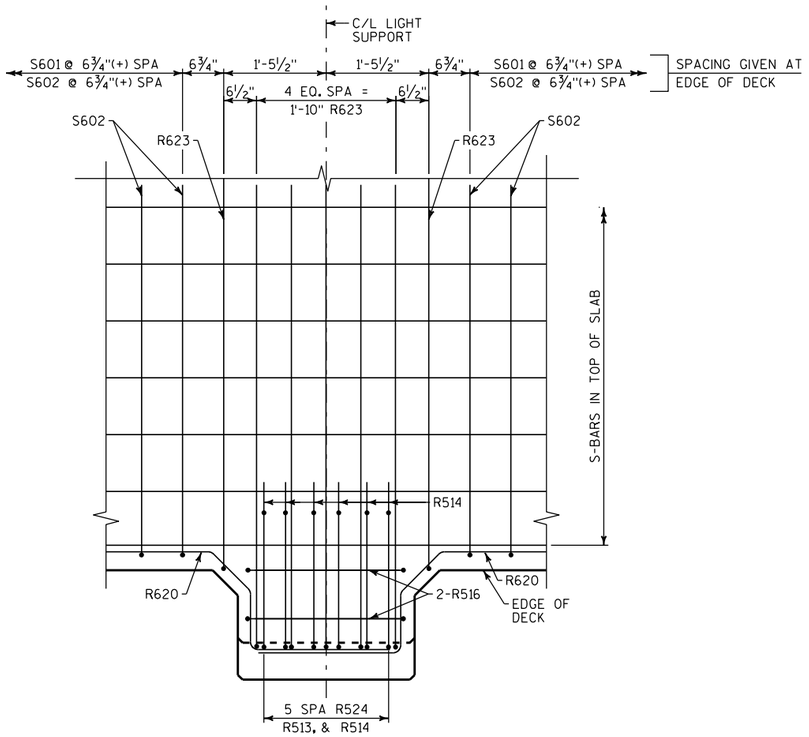
STRUCTURE B-40-854

DRAWN BY SR | PLANS CK'D. MSS

LIGHT SUPPORT DETAILS (1 OF 2)

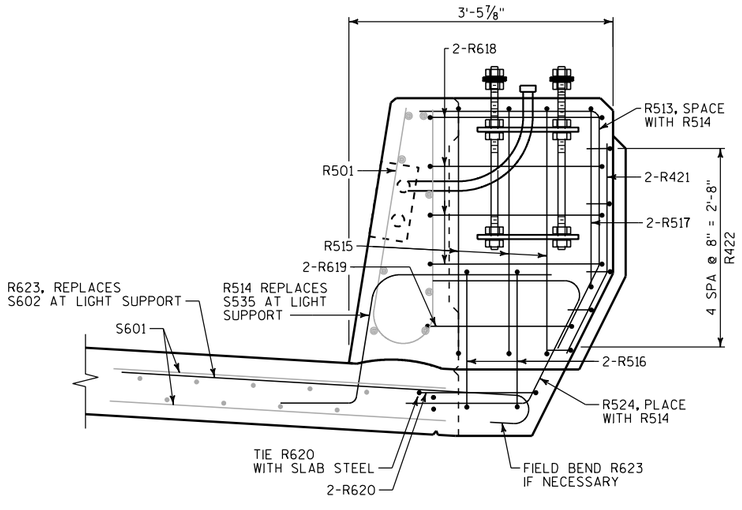
SHEET 114 OF 122

STATE PROJECT NUMBER
1060-33-81



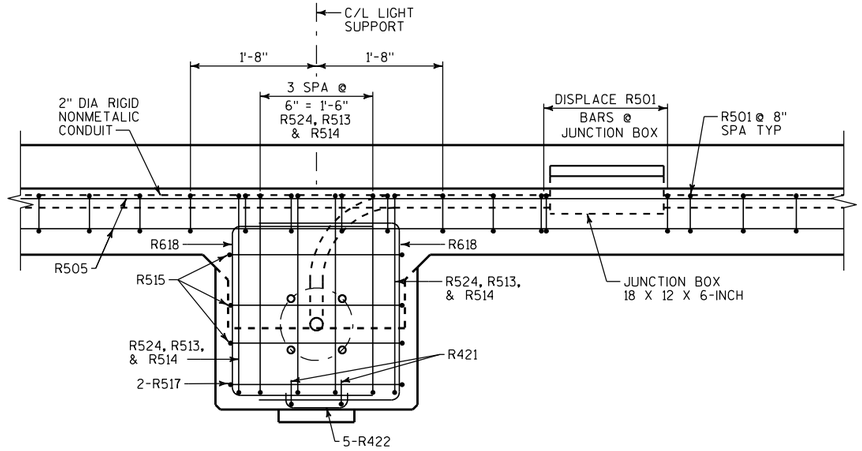
PLAN SHOWING REINFORCEMENT IN DECK

(S535 NOT SHOWN FOR CLARITY)

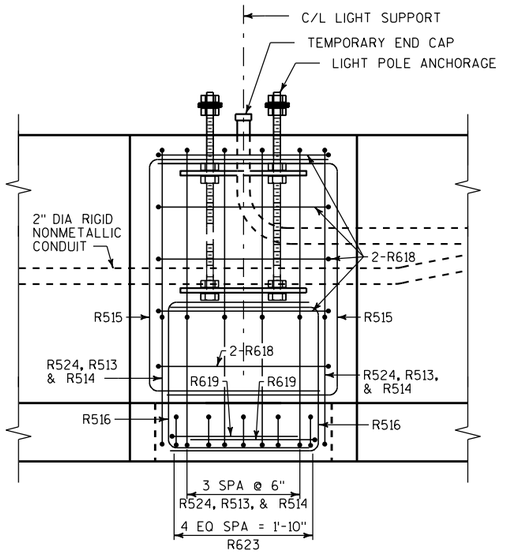


SIDE VIEW SHOWING REINFORCEMENT

CROSS SECTION AT LIGHT SUPPORT



PLAN SHOWING REINFORCEMENT



INTERIOR ELEVATION SHOWING REINFORCEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY SR | PLANS CK'D. MSS

LIGHT SUPPORT DETAILS (2 OF 2)

SHEET 115 OF 122

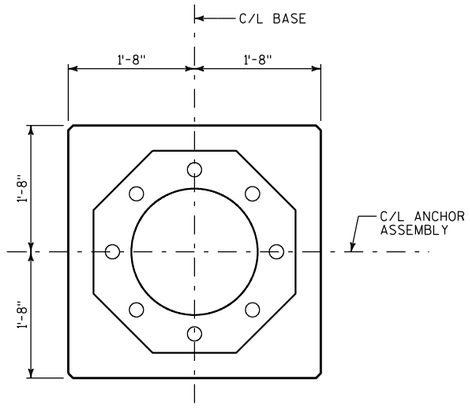
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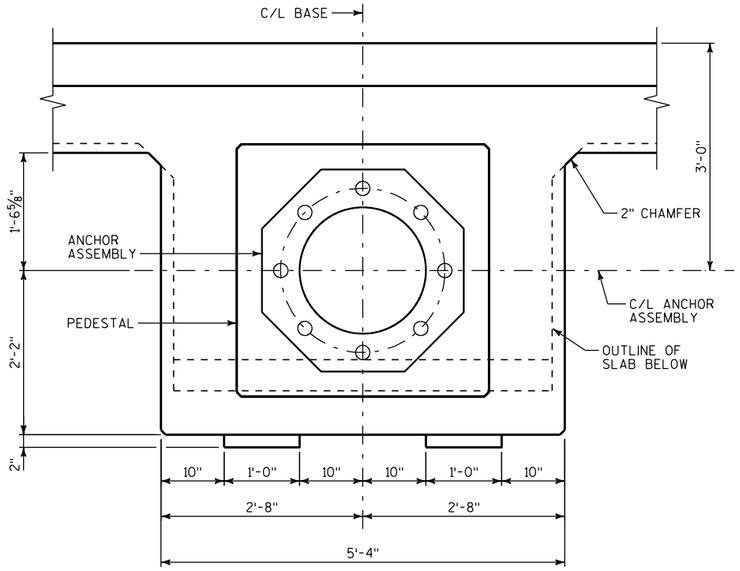
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STATE PROJECT NUMBER

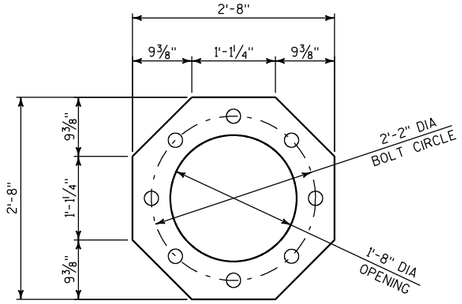
1060-33-81



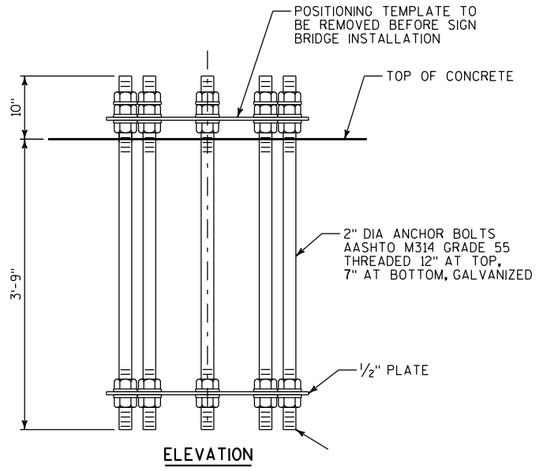
PEDESTAL PLAN



PLAN



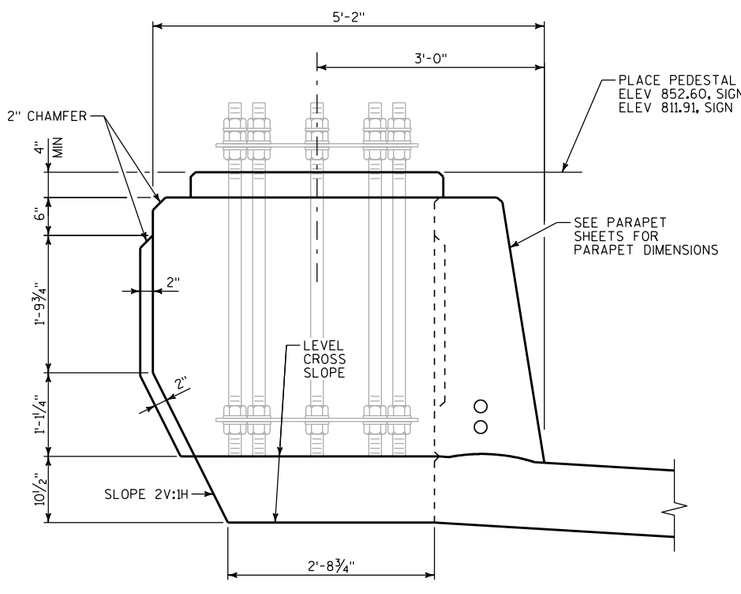
PLAN



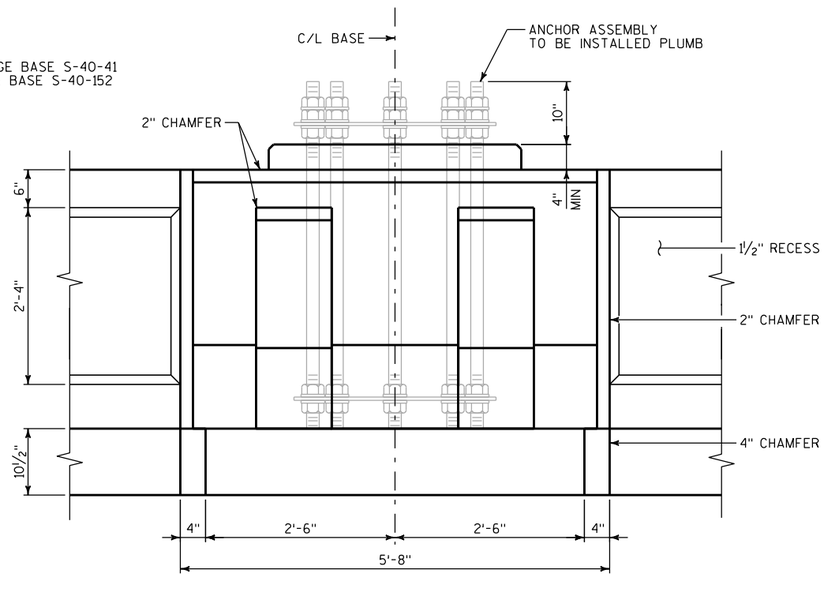
ELEVATION

ANCHOR ASSEMBLY SIGN BRIDGE STRUCTURES

NOTE:
AN ALTERNATIVE ANCHOR ASSEMBLY MAY BE SUBMITTED FOR REVIEW AND POSSIBLE ACCEPTANCE BY THE ENGINEER. UPON ACCEPTANCE, THE SIGN BRIDGE FABRICATION DRAWINGS MUST MATCH THE EXACT SIZE, NUMBER, AND ORIENTATION OF THE ALTERNATIVE ANCHORAGE ASSEMBLY.



SIDE VIEW



EXTERIOR ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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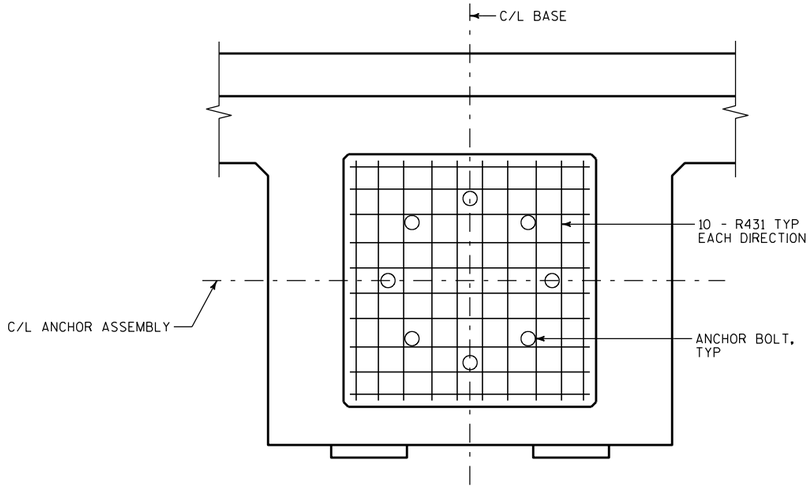
SIGN STRUCTURE BASE (1 OF 2)

SHEET 116 OF 122

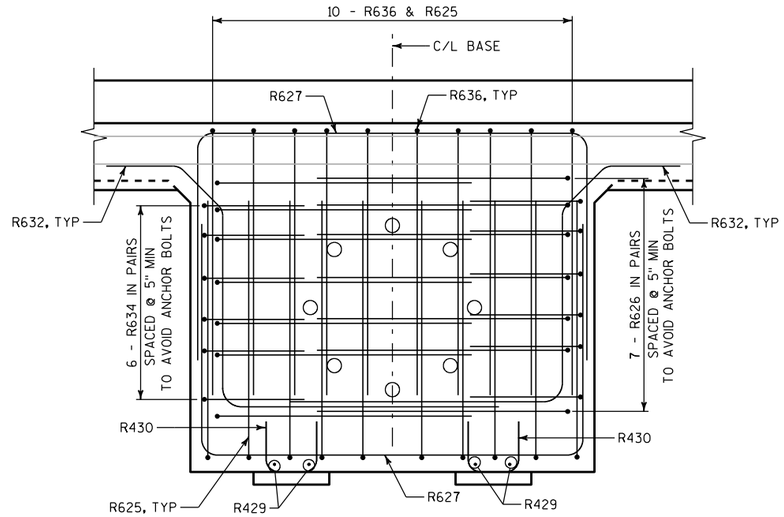
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8

STATE PROJECT NUMBER
1060-33-81

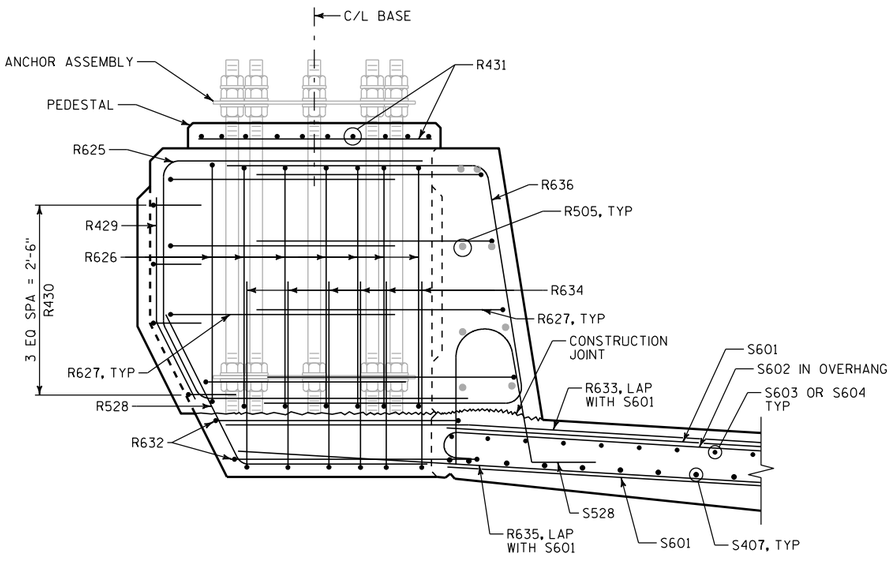


PEDESTAL PLAN SHOWING REINFORCEMENT

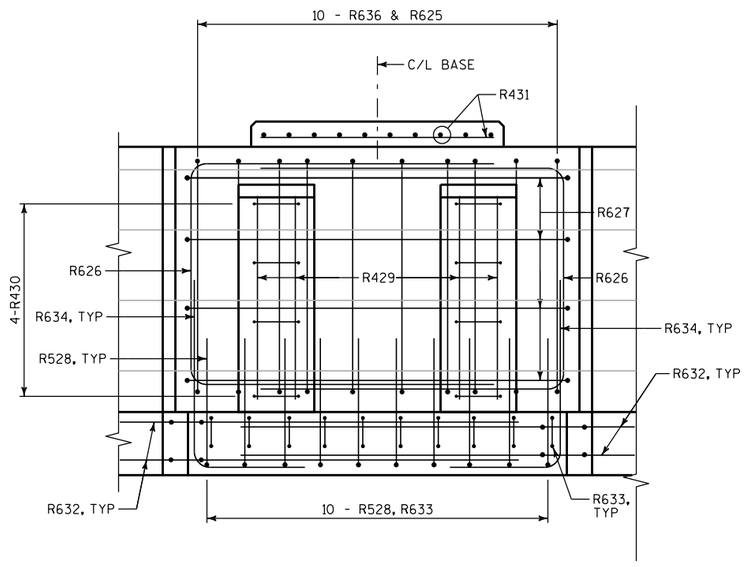


PLAN SHOWING REINFORCEMENT

PEDESTAL REINFORCEMENT NOT SHOWN - SEE PEDESTAL PLAN



SIDE VIEW SHOWING REINFORCEMENT



EXTERIOR ELEVATION SHOWING REINFORCEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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SIGN STRUCTURE BASE (2 OF 2)

SHEET 117 OF 122

8

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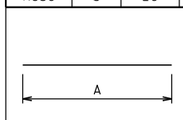
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STATE PROJECT NUMBER

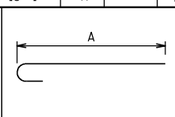
1060-33-81

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
R501	S	7581	8'-8"	X		10	2'-8"	189	0'-4 1/2"				PARAPET - VERT.					
R502	S	24	18'-8"			1	18'-8"						PARAPET - HORIZ. (APPROACH)					
R503	S	32	2'-5"			1	2'-5"						PARAPET - HORIZ. (BACKWALL)					
R504	S	96	7'-7"			1	7'-7"						PARAPET - HORIZ. (ENDS)					
R505	S	8	21'-11"			1	21'-11"						PARAPET - HORIZ. (UNIT 1 LEFT)					
R506	S	16	30'-5"			1	30'-5"						PARAPET - HORIZ. (UNIT 1 RIGHT)					
R507	S	656	60'-0"			1	60'-0"						PARAPET - HORIZ.					
R508	S	8	39'-2"			1	39'-2"						PARAPET - HORIZ. (UNIT 2 LEFT)					
R509	S	16	34'-7"			1	34'-7"						PARAPET - HORIZ. (UNIT 2 RIGHT)					
R510	S	8	25'-5"			1	25'-5"						PARAPET - HORIZ. (UNIT 3 LEFT)					
R511	S	8	9'-4"			1	9'-4"						PARAPET - HORIZ. (UNIT 3 RIGHT)					
R512	S	8	19'-4"			1	19'-4"						PARAPET - HORIZ. (E. APPROACH LEFT)					
R513	S	84	5'-2"	X		17	2'-4"	2'-0"	1'-1"	90	27		LIGHT BLISTER - VERTICAL (OUTSIDE WITH SLAB)					
R514	S	84	4'-11"	X		11	2'-0"	81	0'-4 1/2"	1'-5"	1'-0"	99	LIGHT BLISTER - VERTICAL (WITH SLAB)					
R515	S	84	7'-5"	X		4	2'-3"	3'-2"					LIGHT BLISTER - VERTICAL (BODY)					
R516	S	56	5'-8"	X		4	2'-0"	1'-11"					LIGHT BLISTER - VERTICAL (LOWER BODY)					
R517	S	28	6'-6"	X		4	2'-3"	2'-3"					LIGHT BLISTER - VERTICAL (OUTSIDE)					
R618	S	112	6'-5"	X		4	2'-3"	2'-3"					LIGHT BLISTER - HORIZONTAL (TOP)					
R619	S	28	6'-1"	X		4	2'-3"	1'-11"					LIGHT BLISTER - HORIZONTAL (BODY)					
R620	S	28	4'-9"	X		20	1'-9"	0'-10"	0'-10"	1'-8"	135	270	LIGHT BLISTER - HORIZONTAL (BOTTOM)					
R421	S	28	3'-5"	X		9	1'-8"	1'-9"	19				LIGHT BLISTER - OUTSIDE FACE					
R422	S	70	1'-1"	X		4	0'-4"	0'-7"					LIGHT BLISTER - OUTSIDE FACE					
R623	S	98	12'-4"	X		2	11'-8"						LIGHT BLISTER - DECK OVERHANG					
R524	S	84	5'-3"	X		17	2'-0"	2'-0"	1'-6"	67	67		LIGHT BLISTER - VERTICAL (OUTSIDE)					
R625	S	20	10'-2"	X		41	3'-8"	2'-1"	1'-1"	3'-8"	153	117	SIGN BASE SUPPORT - TIE					
R626	S	28	10'-7"	X		4	4'-0"	2'-11"					SIGN BASE SUPPORT - VERTICAL TIE					
R627	S	16	12'-0"	X		4	3'-8"	5'-0"					SIGN BASE SUPPORT - HORIZONTAL TIE					
R528	S	20	4'-7"	X		9	2'-5"	2'-2"	116				SIGN BASE SUPPORT - VERTICAL TIE					
R429	S	8	2'-10"	X		9	1'-8"	1'-2"	27				SIGN BASE SUPPORT - VERTICAL					
R430	S	16	1'-10"	X		4	0'-8"	0'-8"					SIGN BASE SUPPORT - HORIZONTAL					
R431	S	40	3'-0"			1	3'-0"						SIGN BASE SUPPORT - PEDESTAL					
R632	S	8	8'-10"	X		20	1'-10"	0'-10"	2'-8"	3'-10"	135	270	SIGN BASE SUPPORT - DECK					
R633	S	20	7'-6"	X		9	3'-0"	4'-6"	4				SIGN BASE SUPPORT - TRANSVERSE DECK					
R634	S	24	3'-11"	X		9	2'-5"	1'-6"	90				SIGN BASE SUPPORT - TIE					
R635	S	20	7'-0"			1	7'-0"						SIGN BASE SUPPORT - TRANSVERSE DECK					
R636	S	20	10'-1"	X		17	3'-8"	3'-1"	3'-8"	99	99		SIGN BASE SUPPORT - TIE					

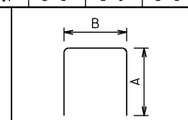
BAR MARK BREAKDOWN					
BAR MARK	UNIT 1	UNIT 2	UNIT 3	TOTAL NO	WEIGHT
R501	2,873	3,013	1,695	7,581	68,527
R502	16		8	24	467
R503	16		16	32	81
R504	32	32	32	96	759
R505	8			8	183
R506	16			16	508
R507	248	264	144	656	41,052
R508		8		8	327
R509		16		16	577
R510			8	8	212
R511			8	8	78
R512			8	8	161
R513	30	36	18	84	453
R514	30	36	18	84	431
R515	30	36	18	84	650
R516	20	24	12	56	331
R517	10	12	6	28	190
R618	40	48	24	112	1,079
R619	10	12	6	28	256
R620	10	12	6	28	200
R421	10	12	6	28	64
R422	25	30	15	70	51
R623	35	42	21	98	1,815
R524	30	36	18	84	460
R625		10	10	20	305
R626		14	14	28	445
R627		8	8	16	288
R528		10	10	20	96
R429		4	4	8	15
R430		8	8	16	20
R431		20	20	40	80
R632		4	4	8	106
R633		10	10	20	225
R634		12	12	24	141
R635		10	10	20	210
R636		10	10	20	303



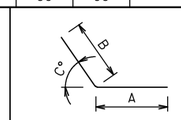
TYPE 1



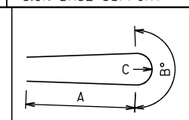
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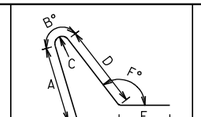
TYPE 4



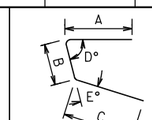
TYPE 9



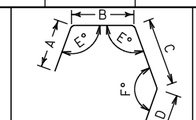
TYPE 10



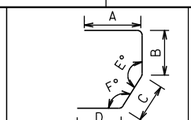
TYPE 11



TYPE 17



TYPE 20



TYPE 41

NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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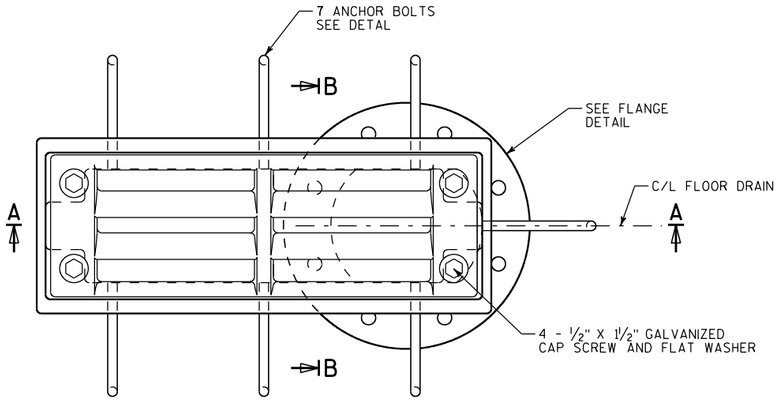
PARAPET REINFORCEMENT SCHEDULE

SHEET 118 OF 122

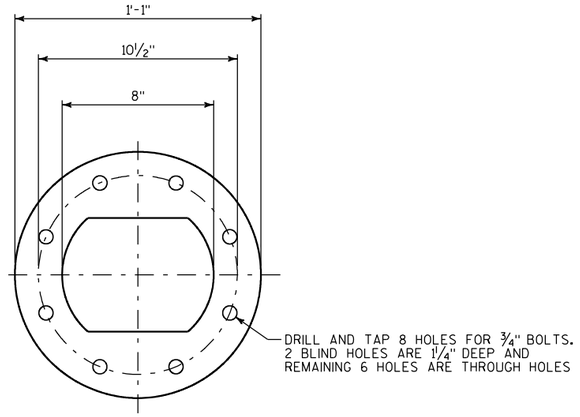
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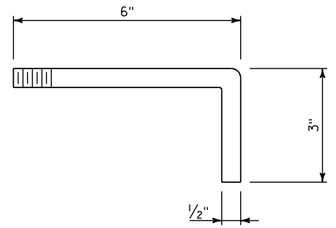
STATE PROJECT NUMBER
1060-33-81



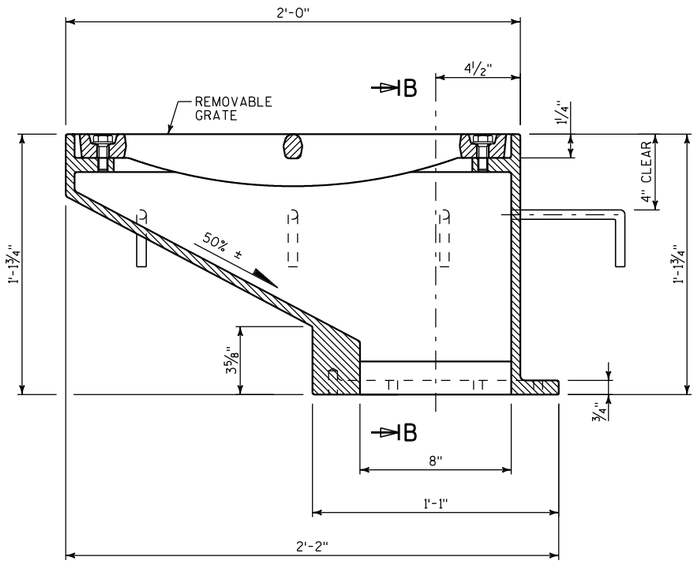
PLAN



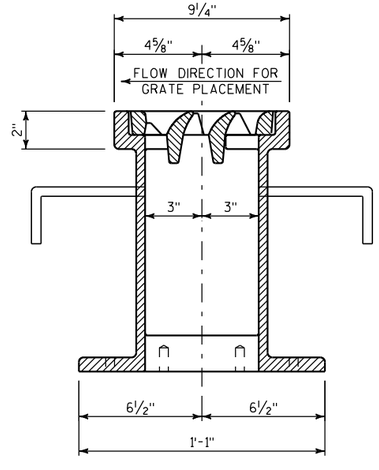
PLAN - FLANGE



ANCHOR BOLT DETAIL



SECTION A-A



SECTION B-B

NOTES

1. THE DRAIN CASTING SHOWN IS BASED ON PART NUMBER R-3921-V1 FROM THE NEENAH FOUNDRY COMPANY WITH MODIFICATIONS AS REQUIRED TO PERMIT AN 8" DOWNSPOUT TO BE USED.
2. A FABRICATED DRAIN ASSEMBLY MAY BE SUBSTITUTED IF THE HYDRAULIC PROPERTIES OF THE SPECIFIED CASTING CAN BE MAINTAINED. IF THE GEOMETRY OF THE PLACEMENT IS ACCEPTABLE AND IF APPROVED BY THE ENGINEER. FABRICATED DRAINS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

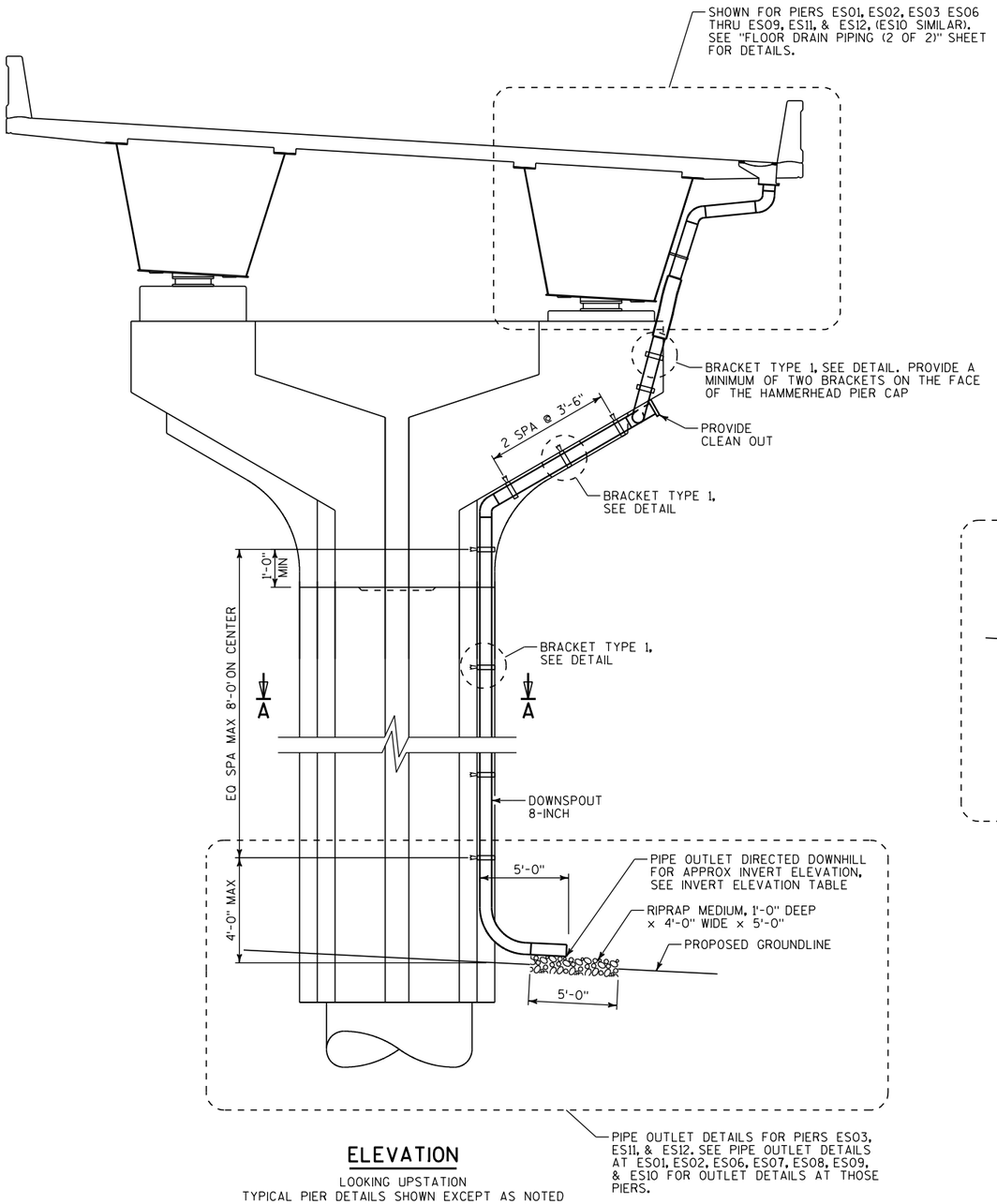
STRUCTURE B-40-854

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FLOOR DRAIN
SPECIAL

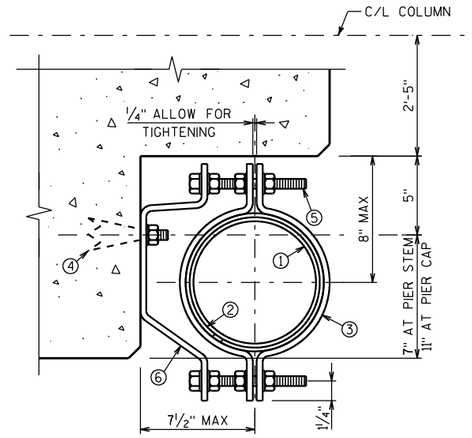
SHEET 119 OF 122

STATE PROJECT NUMBER
1060-33-81



ELEVATION

LOOKING UPSTATION
TYPICAL PIER DETAILS SHOWN EXCEPT AS NOTED



BRACKET TYPE 1

LEGEND

① 8" DIA DOWNSPOUT

② 6" LONG SPLIT RTRP STRIP, BOND TO #1, PLACE AT ALL BRACKET LOCATIONS

③ 2½" X ⅜" BAR

④ ⅝" DIA TYPE S ANCHOR WITH 1 NUT & 1 WASHER LOCATED TO AVOID CONFLICT WITH REINFORCEMENT IN PIER

⑤ ⅝" DIA HEADED BOLT WITH 3 NUTS & 4 WASHERS

⑥ 2½" X ⅜" BAR WITH 11/16 " X 1 3/16" HORIZ SLOTTED HOLE AT MASONRY ANCHOR

NOTES

FOR ADDITIONAL DETAILS AND SECTIONS, SEE "FLOOR DRAIN PIPING (2 OF 2)" SHEET.

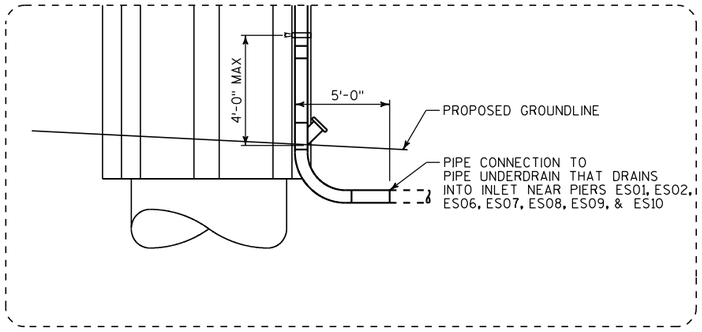
FOR FLOOR DRAIN LOCATIONS, SEE DECK REINFORCEMENT SHEETS.

INSTALL PIPING AT THE STEEPEST GRADE POSSIBLE, MINIMUM 2 PERCENT.

ALL FITTINGS, ELBOWS, CLEANOUTS, MASONRY ANCHORS, BOLTS, AND OTHER HARDWARE REQUIRED FOR MOUNTING THE DOWNSPOUT SHALL BE INCLUDED IN PAYMENT FOR "DOWNSPOUT 8-INCH".

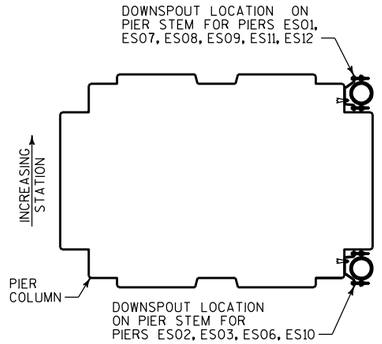
ALL DOWNSPOUT PIPE SHALL BE COLOR MATCHED TO THE OBJECT IT IS ATTACHED TO. FOR SECTIONS ATTACHED TO STEEL TUB GIRDER USE SHERWIN WILLIAMS COLOR SW6523. FOR SECTIONS ATTACHED TO CONCRETE PIER COLUMN USE FEDERAL COLOR 33564.

ALL FASTENERS, INCLUDING BOLTS, NUTS, WASHERS, AND MASONRY ANCHORS, SHALL BE STAINLESS STEEL MEETING THE MATERIAL REQUIREMENTS IN THE STANDARD SPECIFICATIONS. BARS SHALL BE STAINLESS STEEL MEETING ASTM A276, TYPE 304.



PIPE OUTLET DETAILS AT PIERS ES01, ES02, ES06, ES07, ES08, ES09, & ES10

INVERT ELEVATION TABLE		
LOCATION	INLET ID	INVERT ELEV
PIER ES01	Z2787	791.00
PIER ES02	Z2773	790.50
PIER ES06	Z3242	781.00
PIER ES07	Z3096	757.00
PIER ES08	Z3090	751.00
PIER ES09	Z3026	747.00
PIER ES10	Z3022	748.00



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-854

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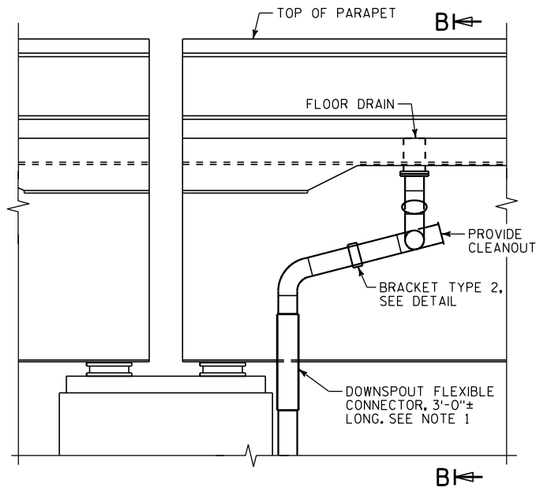
FLOOR DRAIN PIPING (1 OF 2)

SHEET 120 OF 122

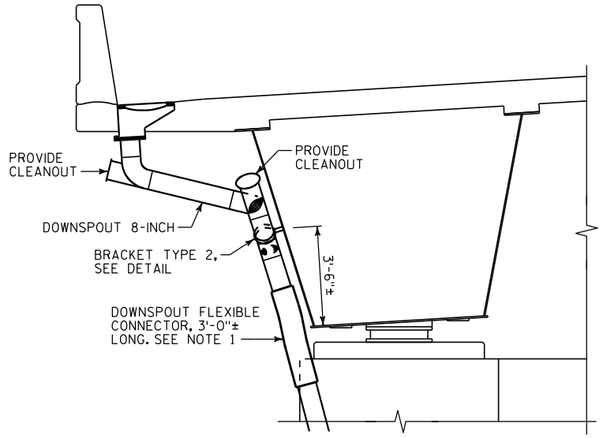
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STATE PROJECT NUMBER
1060-33-81



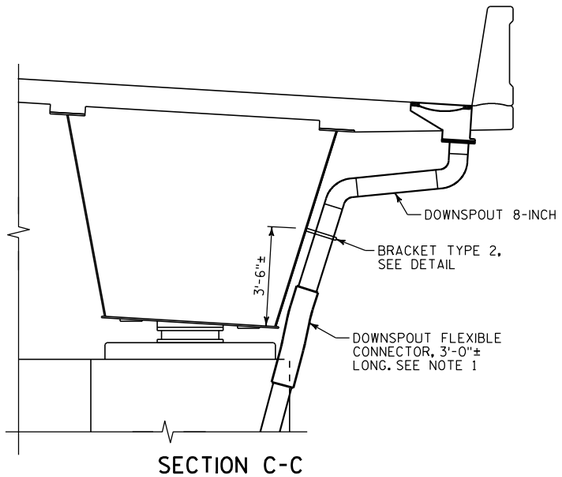
PARTIAL ELEVATION - PIER ES05 & ES10



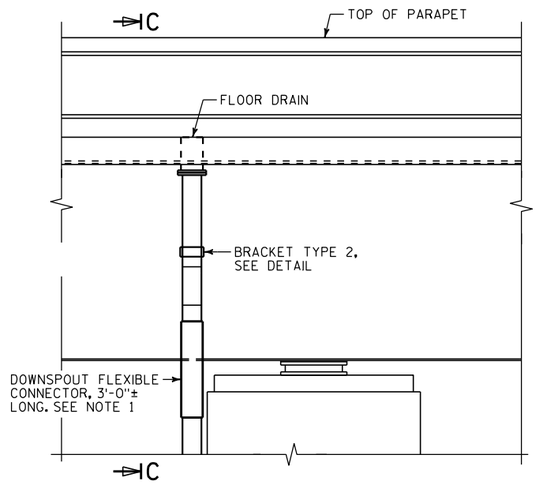
SECTION B-B

NOTES

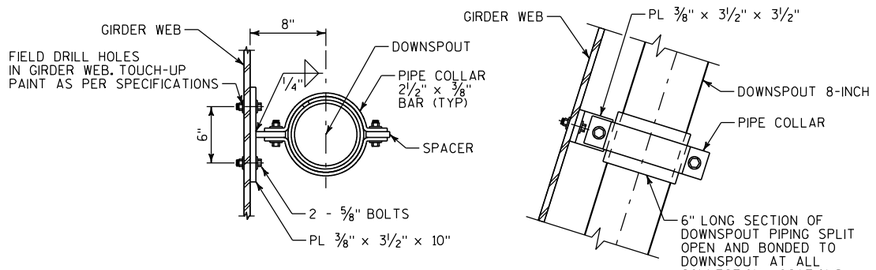
1. PROVIDE FLEXIBLE CONNECTOR THAT IS CAPABLE OF HANDLING THE MOVEMENT GIVEN ON THE BEARING LAYOUT SHEETS. THE MOVEMENT RANGE SHALL PROVIDE FOR TWO WAY MOVEMENT.



SECTION C-C



TYPICAL PARTIAL ELEVATION AT PIERS



BRACKET TYPE 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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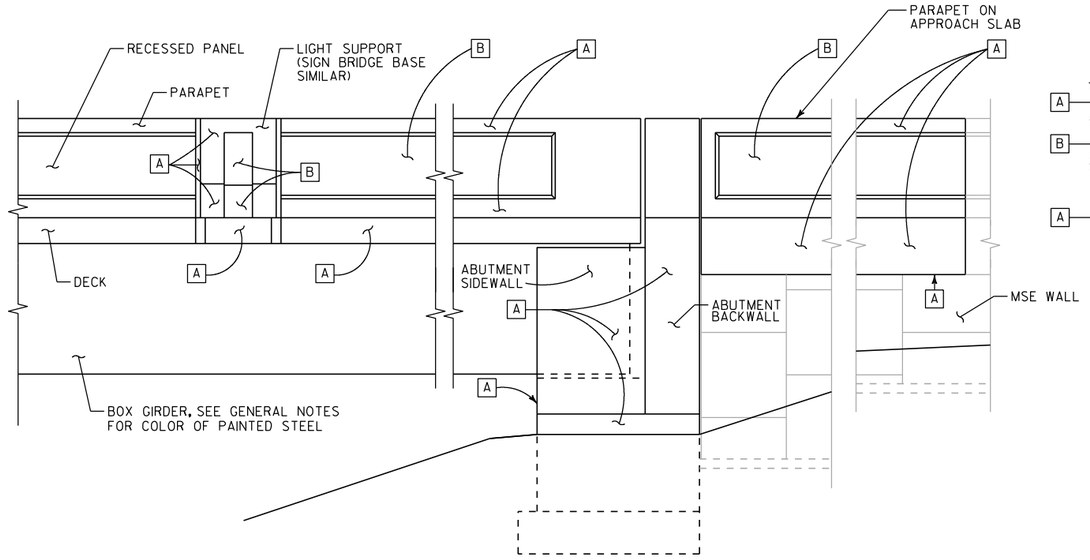
FLOOR DRAIN PIPING (2 OF 2)

SHEET 121 OF 122

8

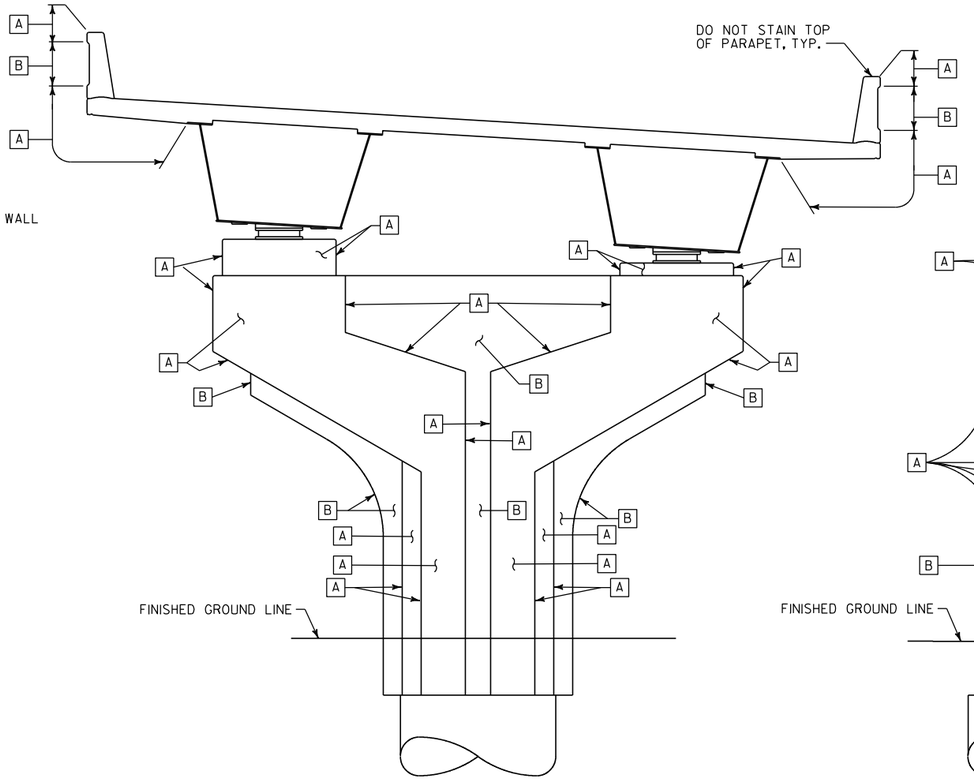
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STATE PROJECT NUMBER
1060-33-81



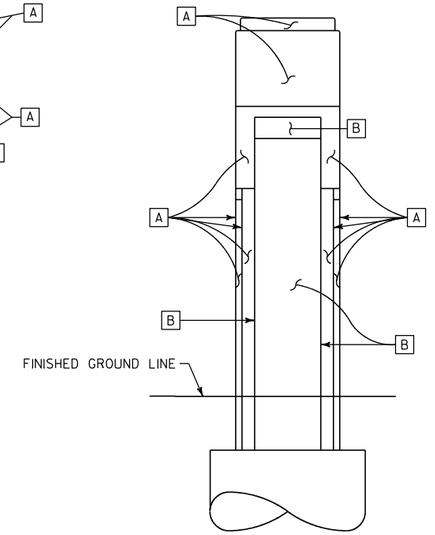
OUTSIDE ELEVATION OF RIGHT PARAPET

(LEFT 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

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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AESTHETIC DETAILS

SHEET 122 OF 122

STATE PROJECT NUMBER
1060-33-81

ESTIMATED QUANTITIES - PIER OPTION A

ITEM NO.	BID ITEM	UNIT	SOUTH ABUT.	PIER ES01	PIER ES02	TRIAL SHAFT	PIER ES03	PIER ES04	PIER ES05	PIER ES06	PIER ES07	PIER ES08	PIER ES09	PIER ES10	PIER ES11	PIER ES12	TOTAL
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-854	LS															1
209.0100	BACKFILL GRANULAR	CY						34				5	7				46
502.0100	CONCRETE MASONRY BRIDGES	CY	138	143	181		277	258	260	242	276	286	258	191	148	106	2,765
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	40,790	36,390	51,110		42,510	32,440	28,930	32,470	30,440	33,310	17,760	23,970	36,270	27,340	433,730
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	20,620	35,640	43,010		70,810	63,480	63,620	65,340	82,180	85,620	68,500	46,610	32,720	24,790	702,940
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB		1,430													1,430
505.0911	BAR COUPLERS NO.11	EACH	44	48													92
511.1200.0017	TEMPORARY SHORING B-40-854	SF		990	1,155		1,092										3,237
SPV.0060.4150	DRILLED FOUNDATION SHAFT BASE GROUTING	EACH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14
SPV.0060.4160	THERMAL INTEGRITY PROFILER (TIP) TESTING DRILLED FOUNDATION SHAFT 98.43-INCH	EACH	1	1			1	1	1					1	1	1	8
SPV.0060.4162	THERMAL INTEGRITY PROFILER (TIP) TESTING DRILLED FOUNDATION SHAFT 118.11-INCH	EACH			1	1				1	1	1	1				6
SPV.0060.4181	BAR COUPLERS NO.18	EACH			30		40	30	30	60							190
SPV.0075.4200	OBSTRUCTIONS DRILLED FOUNDATION SHAFT	HRS	4	4	4	4	4	4	4	4	4	4	4	4	4	4	56
SPV.0090.4435	DRILLED FOUNDATION SHAFT 98.43-INCH	LF	116	100										35	71	57	379
SPV.0090.4440	DRILLED FOUNDATION SHAFT 118.11-INCH	LF			104		74	74	66	70	53	58	41				540
SPV.0105.4520	TRIAL DRILLED FOUNDATION SHAFT 118.11-INCH	LS															1

ALL ITEMS ARE CATEGORY 2101

NOTES

THIS CONTRACT CONTAINS TWO OPTIONS FOR PIER CONSTRUCTION.
THE CONTRACTOR MUST BID EITHER OPTION A OR OPTION B.

ITEMS ON THIS SHEET ARE FOR PIER OPTION A ONLY. FOR ADDITIONAL ITEMS AND QUANTITIES, SEE SHEET 5.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

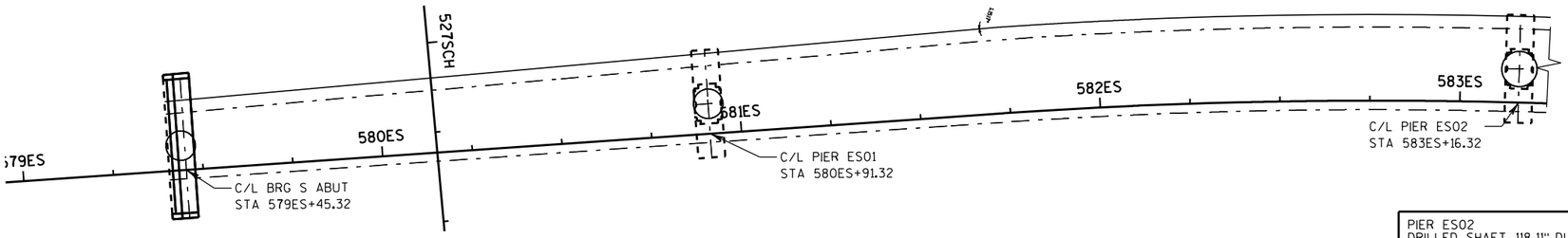
DRAWN BY SR | PLANS CK'D. JWC

OPTION A QUANTITIES

SHEET A1 OF A41

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Option A\080201A_qu.dgn PLOT DATE : 03-MAR-2015 13:56 PLOT BY : MSCJJO PLOT NAME : 080201A_qu PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-81



SOUTH ABUT
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 579ES+44.20, 6.83'LT
X=571892.12, Y=294115.12
RP SA1
STA 579ES+45.32, 26.88'LT
X=571872.10, Y=294116.62
RP SA2
STA 579ES+45.32, 13.45'RT
X=571912.42, Y=294115.87
BOTTOM OF ABUT. EL. = 806.15
TOP OF SHAFT EL. = 792.00
BOTTOM OF SHAFT EL. = 676.00

PIER ES01
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 580ES+91.32, 8.32'LT
X=571893.34, Y=294262.25
BOTTOM OF PIER EL. = 795.00
TOP OF SHAFT EL. = 778.00
BOTTOM OF SHAFT EL. = 678.00

PIER ES02
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 583ES+16.32, 9.36'LT
X=571903.42, Y=294487.78
BOTTOM OF PIER EL. = 792.50
TOP OF SHAFT EL. = 780.00
BOTTOM OF SHAFT EL. = 676.00

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

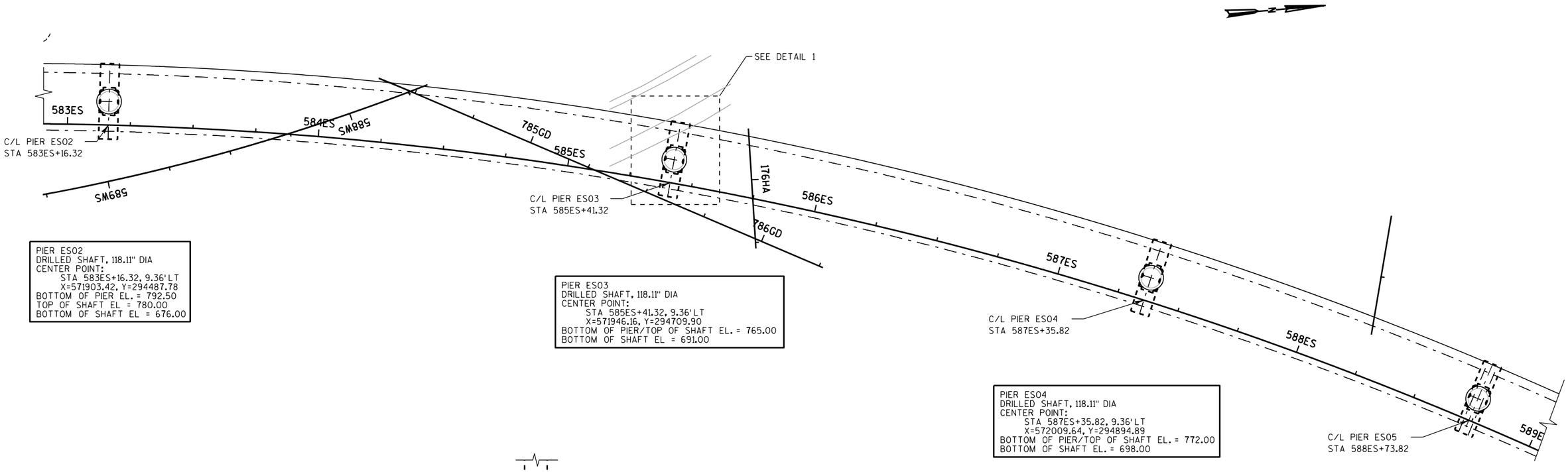
STRUCTURE B-40-854

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OPTION A
FOUNDATION LAYOUT
(1 OF 5)

SHEET A2 OF A41

STATE PROJECT NUMBER
1060-33-81

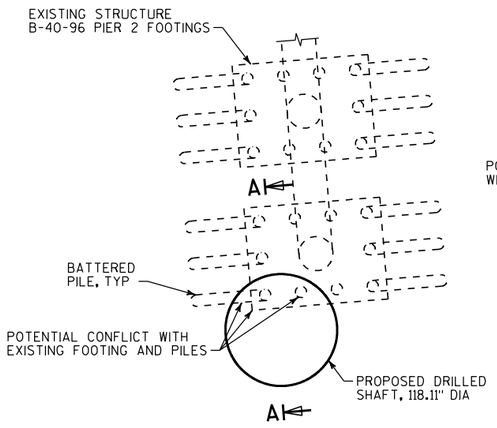


PIER ES02
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 583ES+16.32, 9.36'LT
X=571903.42, Y=294487.78
BOTTOM OF PIER EL. = 792.50
TOP OF SHAFT EL = 780.00
BOTTOM OF SHAFT EL = 676.00

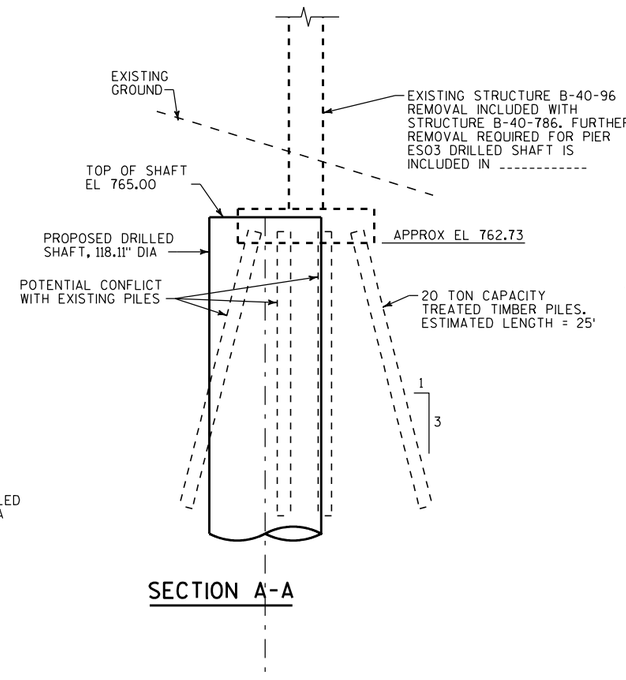
PIER ES03
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 585ES+41.32, 9.36'LT
X=571946.16, Y=294709.90
BOTTOM OF PIER/TOP OF SHAFT EL. = 765.00
BOTTOM OF SHAFT EL = 691.00

PIER ES04
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 587ES+35.82, 9.36'LT
X=572009.64, Y=294894.89
BOTTOM OF PIER/TOP OF SHAFT EL. = 772.00
BOTTOM OF SHAFT EL. = 698.00

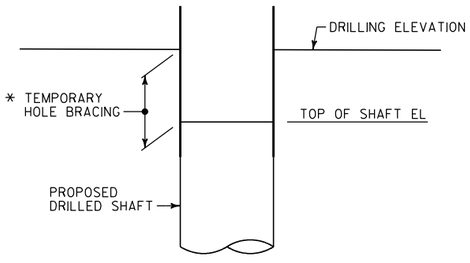
PIER ES05
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 588ES+73.82, 9.36'LT
X=572069.01, Y=295020.37
BOTTOM OF PIER/TOP OF SHAFT EL. = 772.00
BOTTOM OF SHAFT EL. = 706.00



DETAIL 1



SECTION A-A



TEMPORARY HOLE BRACING
AT PIER ES04

* TEMPORARY HOLE BRACING MAY CONSIST OF SLIP-IN CASING OR OTHER APPROVED METHOD. COST OF TEMPORARY HOLE BRACING SHALL BE INCLUDED WITH COST OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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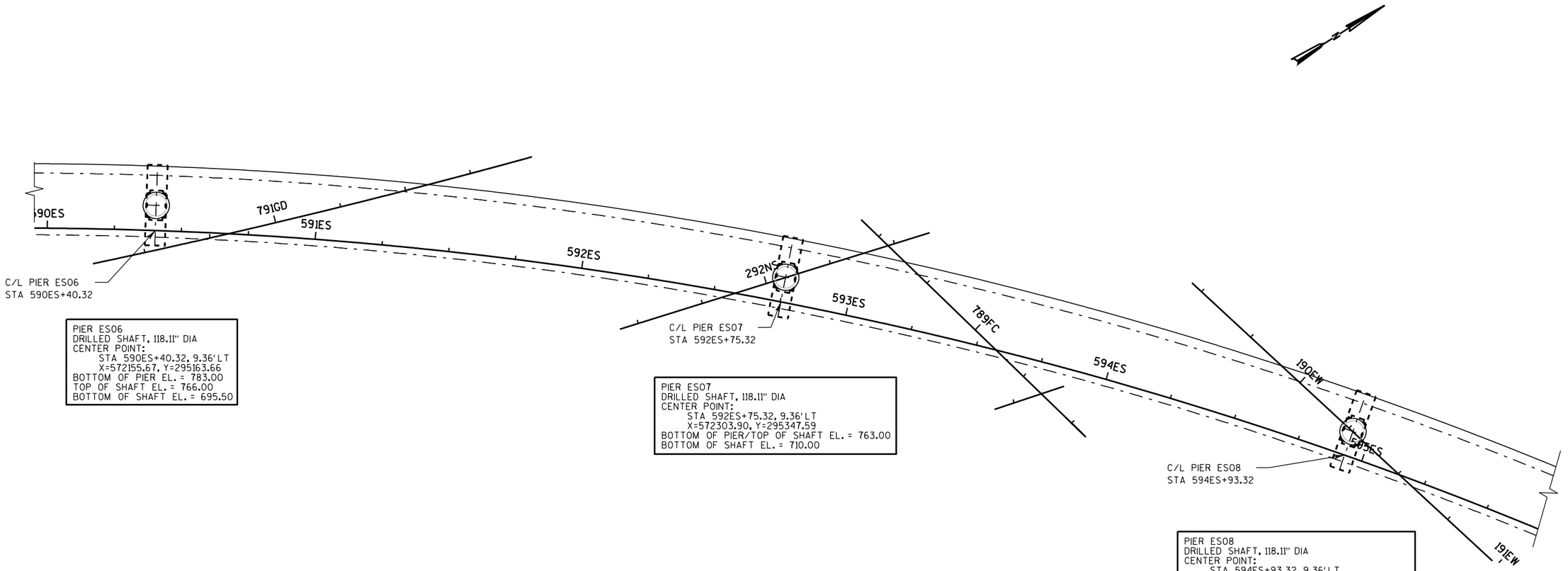
OPTION A
FOUNDATION LAYOUT
(2 OF 5)

SHEET A3 OF A41

8

8

STATE PROJECT NUMBER
1060-33-81



C/L PIER ES06
STA 590ES+40.32

PIER ES06
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 590ES+40.32, 9.36'LT
X=572155.67, Y=295163.66
BOTTOM OF PIER EL. = 783.00
TOP OF SHAFT EL. = 766.00
BOTTOM OF SHAFT EL. = 695.50

C/L PIER ES07
STA 592ES+75.32

PIER ES07
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 592ES+75.32, 9.36'LT
X=572303.90, Y=295347.59
BOTTOM OF PIER/TOP OF SHAFT EL. = 763.00
BOTTOM OF SHAFT EL. = 710.00

C/L PIER ES08
STA 594ES+93.32

PIER ES08
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 594ES+93.32, 9.36'LT
X=572465.65, Y=295495.49
BOTTOM OF PIER/TOP OF SHAFT EL. = 751.00
BOTTOM OF SHAFT EL. = 693.00

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

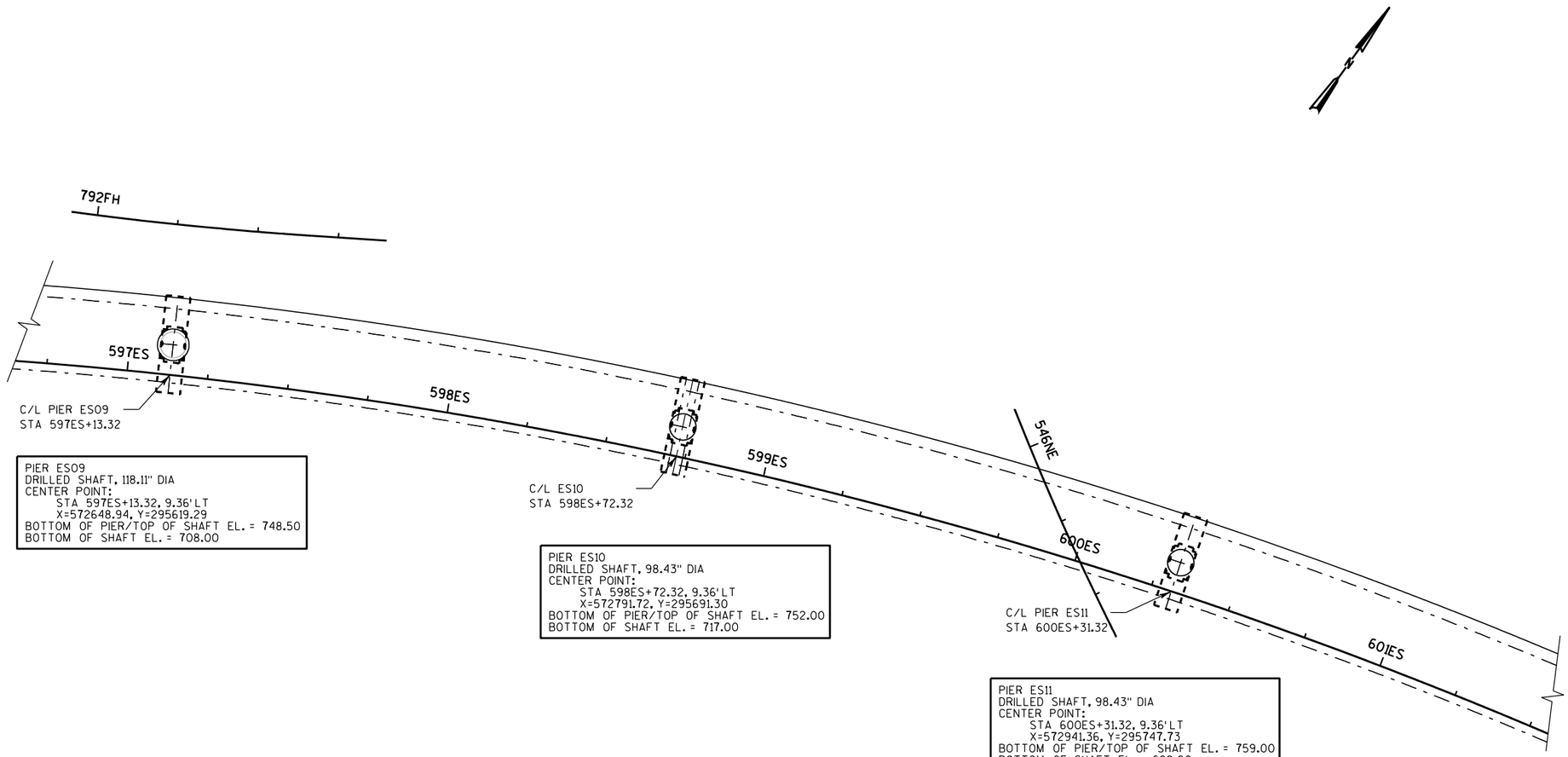
STRUCTURE B-40-854

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OPTION A
FOUNDATION LAYOUT
(3 OF 5)

SHEET A4 OF A41

STATE PROJECT NUMBER
1060-33-81



PIER ES09
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 597ES+13.32, 9.36'LT
X=572648.94, Y=295619.29
BOTTOM OF PIER/TOP OF SHAFT EL. = 748.50
BOTTOM OF SHAFT EL. = 708.00

PIER ES10
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 598ES+72.32, 9.36'LT
X=572791.72, Y=295691.30
BOTTOM OF PIER/TOP OF SHAFT EL. = 752.00
BOTTOM OF SHAFT EL. = 717.00

PIER ES11
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 600ES+31.32, 9.36'LT
X=572941.36, Y=295747.73
BOTTOM OF PIER/TOP OF SHAFT EL. = 759.00
BOTTOM OF SHAFT EL. = 688.00

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

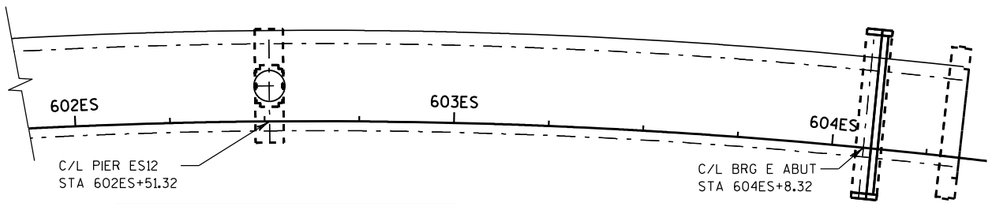
DRAWN BY SR | PLANS CK'D. JWC

OPTION A
FOUNDATION LAYOUT
(4 OF 5)

SHEET A5 OF A41

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PLOT DATE : 01-MAR-2015 21:55
PLOT BY : MSCKTM
PLOT NAME : 080205A_f1
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-81



PIER ES12
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 600ES+31.32, 9.36' LT
X=573156.53, Y=295798.95
BOTTOM OF PIER/TOP OF SHAFT EL. = 763.00
BOTTOM OF SHAFT EL. = 705.50

EAST ABUT
11 CIPC PILES, 16" DIA
RP EA1
STA 604ES+08.32, 31.44' LT
X=573312.32, Y=295837.94
RP EA2
STA 604ES+08.32, 13.45' RT
X=573314.78, Y=295793.11
BOTTOM OF ABUT. EL. = 772.87
ESTIMATED PILE LENGTH = 50 FT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

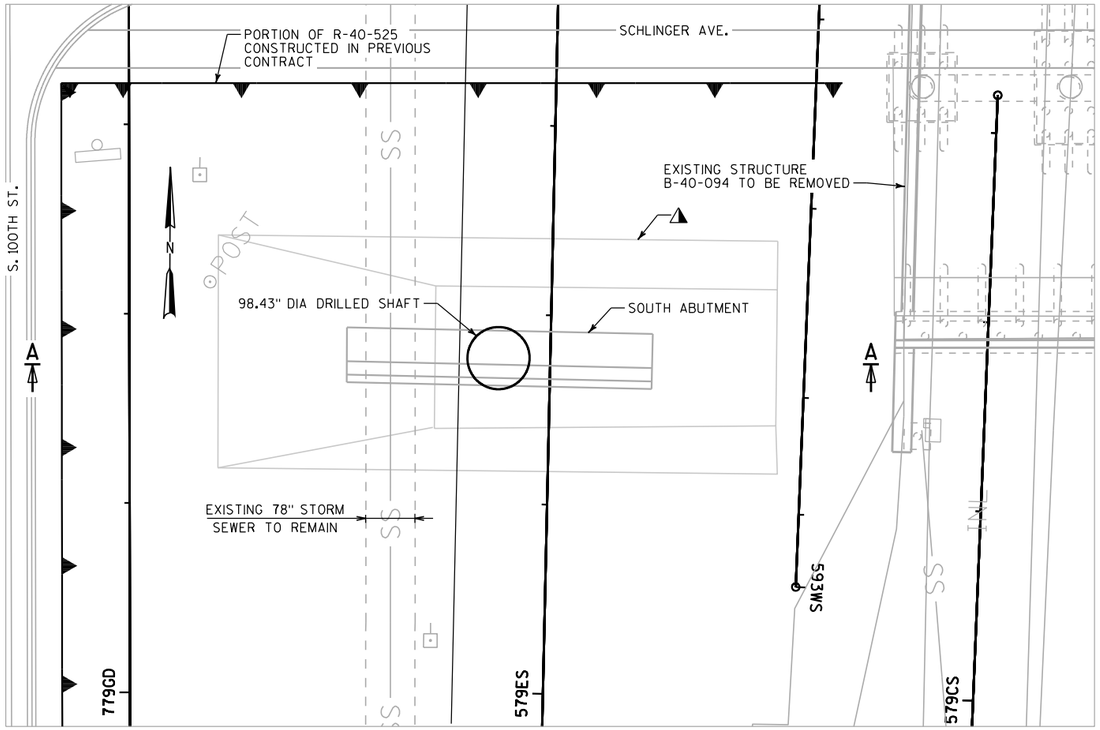
STRUCTURE B-40-854

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OPTION A
FOUNDATION LAYOUT
(5 OF 5)

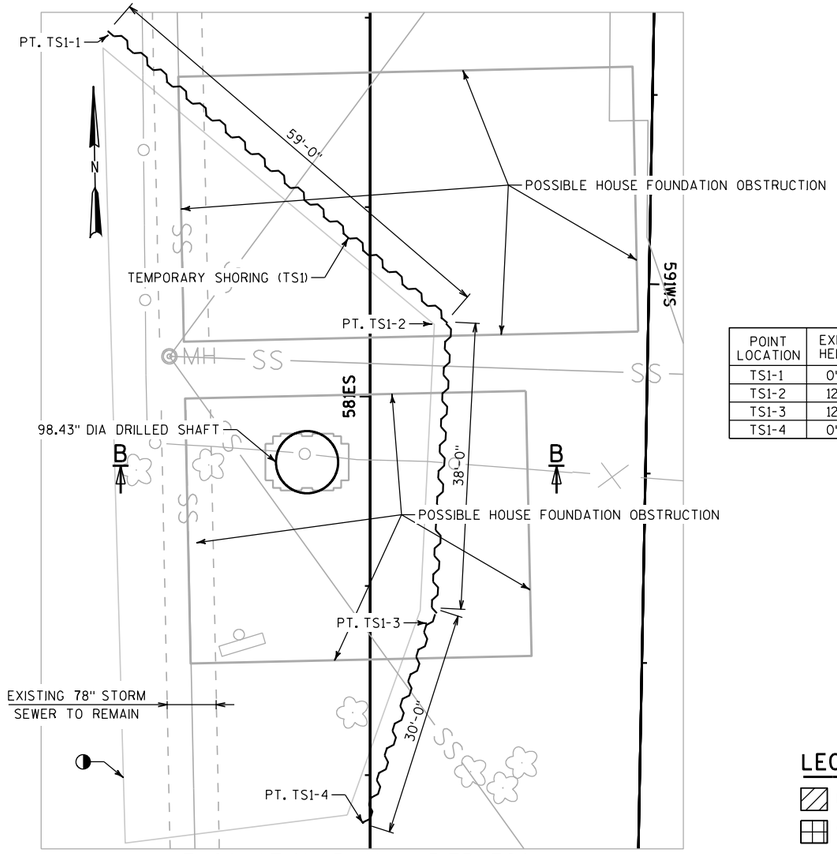
SHEET A6 OF A41

STATE PROJECT NUMBER
1060-33-81



EXCAVATION PLAN - SOUTH ABUTMENT

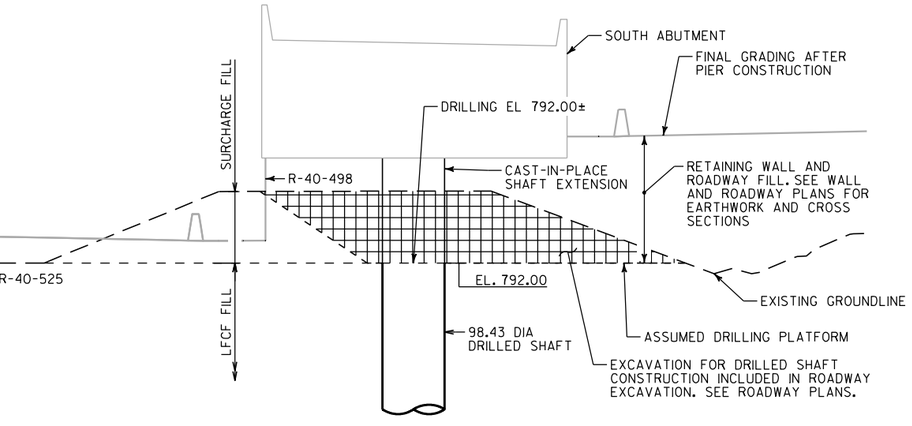
STA 579ES+45.32



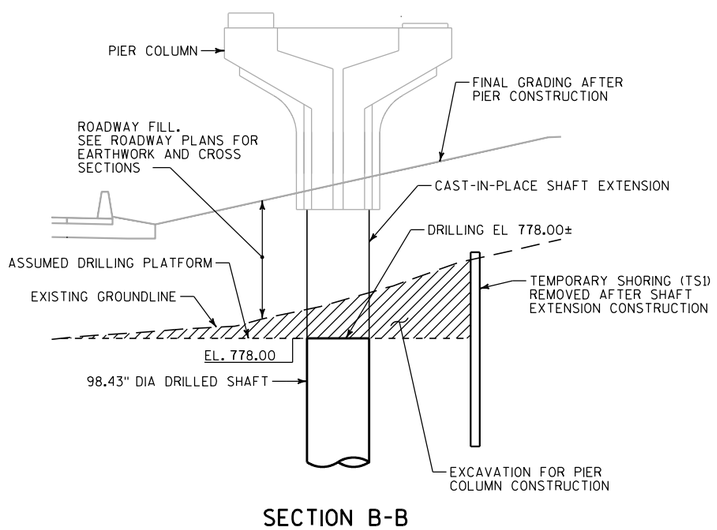
POINT LOCATION	EXPOSED HEIGHT
TS1-1	0'-0"
TS1-2	12'-0"
TS1-3	12'-0"
TS1-4	0'-0"

EXCAVATION PLAN - PIER ES01

STA 580ES+91.32



SECTION A-A



SECTION B-B

LEGEND

- EXCAVATION FOR STRUCTURES
- SURCHARGE FILL EXCAVATION
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".
- APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.
- EXCAVATION OF SURCHARGE FILL IS INCLUDED IN ROADWAY EXCAVATION. SEE ROADWAY PLANS.

NOTES

THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION A
EXCAVATION PLAN
(1 OF 8)

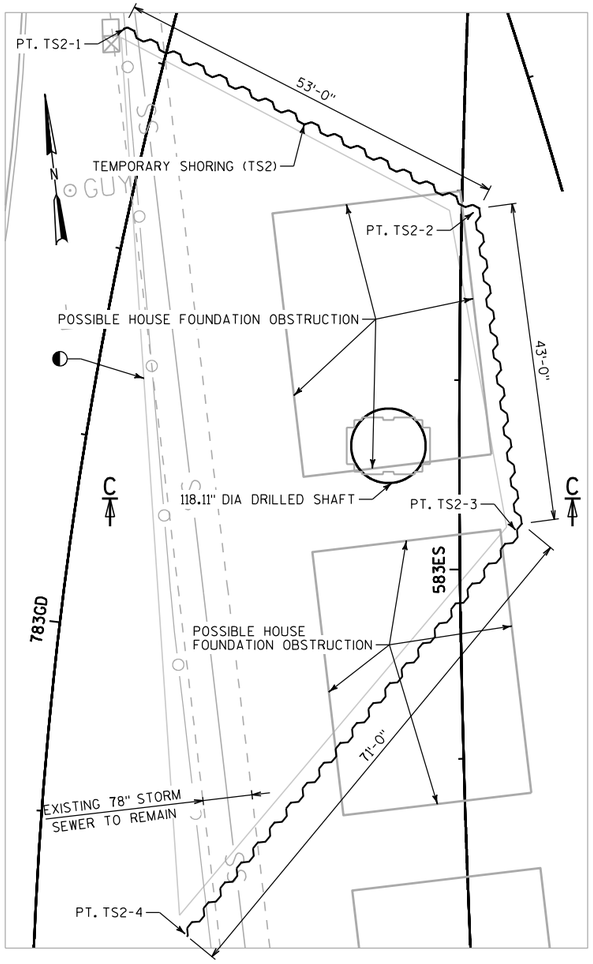
SHEET A7 OF A41

8

8

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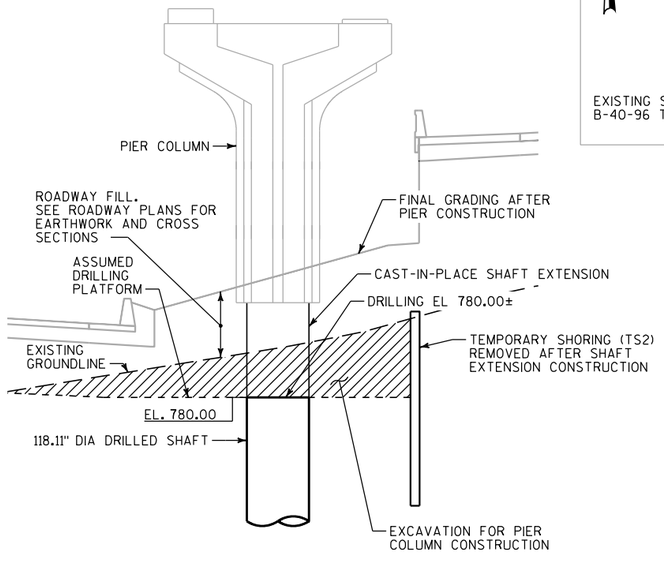
STATE PROJECT NUMBER
1060-33-81



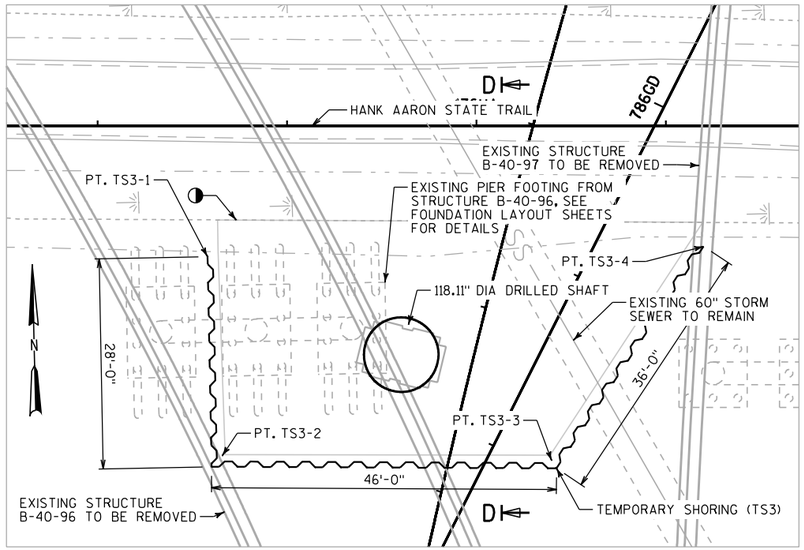
EXCAVATION PLAN - PIER ES02

STA 583ES+16.32

POINT LOCATION	EXPOSED HEIGHT ◥
TS2-1	0'-0"
TS2-2	11'-0"
TS2-3	11'-0"
TS2-4	0'-0"



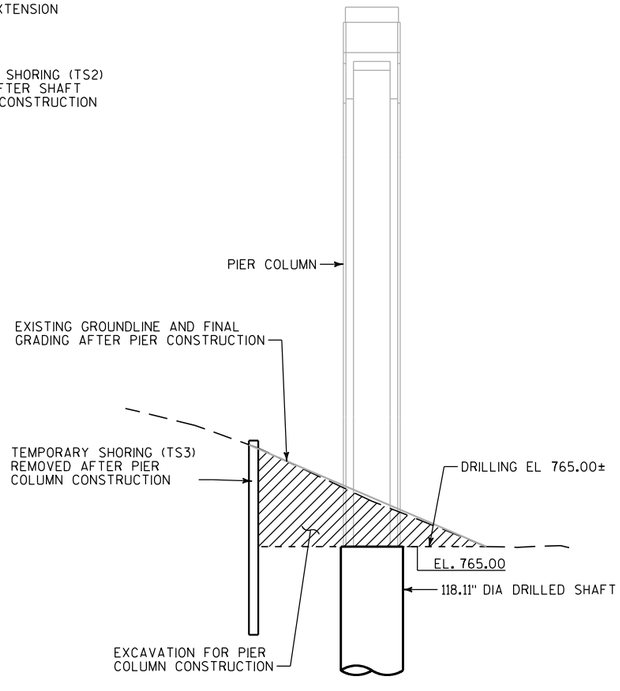
SECTION C-C



EXCAVATION PLAN - PIER ES03

STA 585ES+41.32

POINT LOCATION	EXPOSED HEIGHT ◥
TS3-1	0'-0"
TS3-2	14'-0"
TS3-3	14'-0"
TS3-4	0'-0"



SECTION D-D

LEGEND

EXCAVATION FOR STRUCTURES

◐ APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

◥ APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.

NOTES

THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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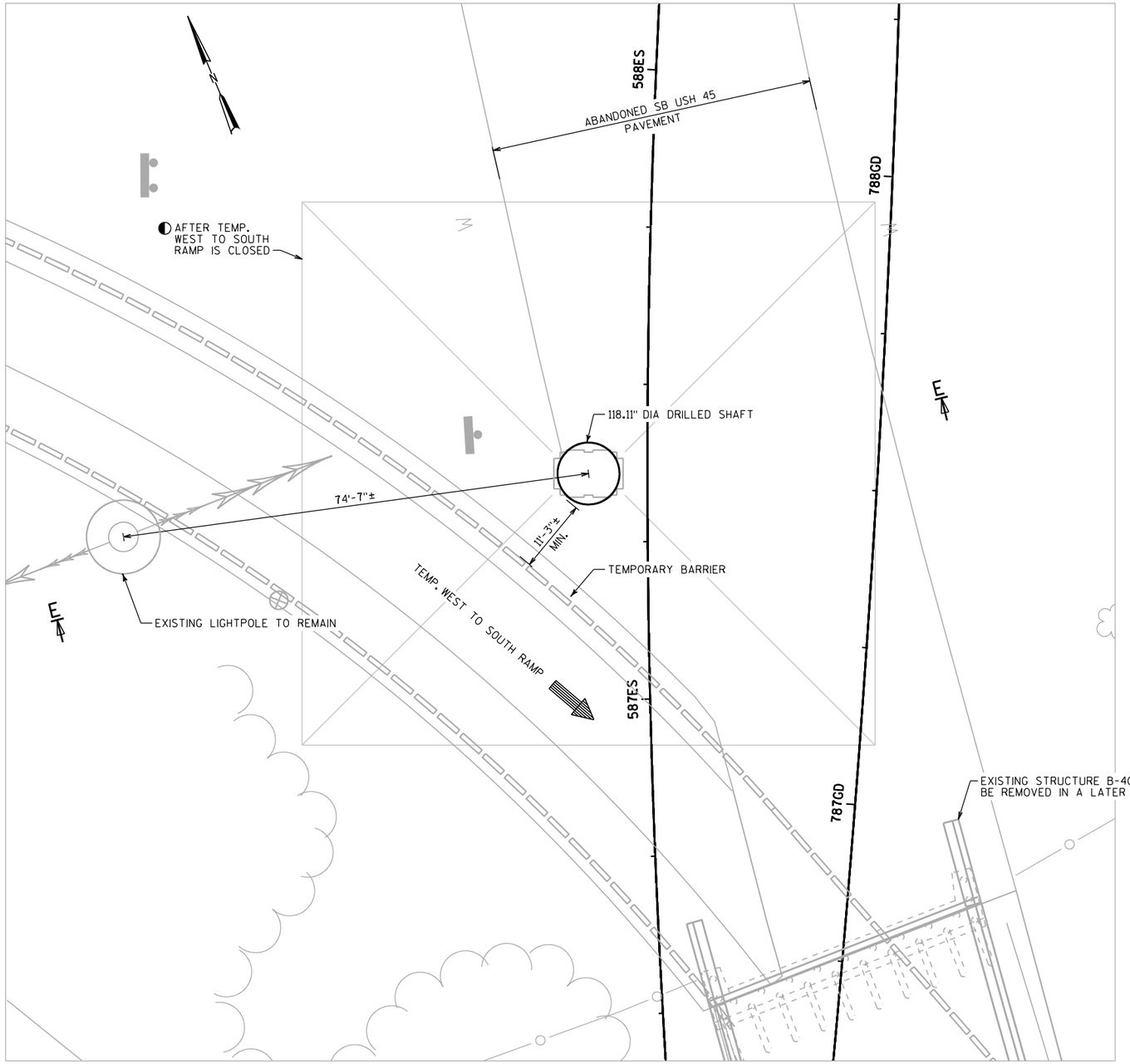
OPTION A
EXCAVATION PLAN
(2 OF 8)

SHEET A8 OF A41

8

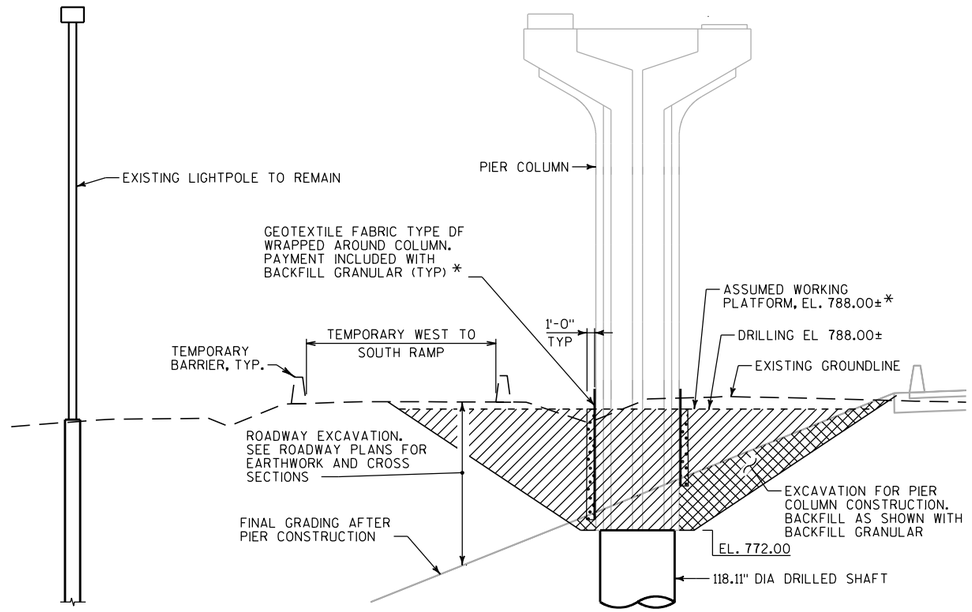
8

STATE PROJECT NUMBER
1060-33-81



EXCAVATION PLAN - PIER ES04

STA 587ES+35.82



SECTION E-E

* THE EXCAVATION PLAN ASSUMES THAT THE CONTRACTOR WILL BACKFILL THE EXCAVATION AFTER COLUMN CONSTRUCTION AND LATER EXCAVATE DOWN TO FINAL GRADING. PROVIDE SAND BACKFILL AND GEOTEXTILE FABRIC TYPE DF AROUND COLUMN TO PROTECT COLUMN FROM BACKFILL MATERIAL. IF CONTRACTOR CHOOSES TO LEAVE THE EXCAVATION OPEN THEN SAND BACKFILL AND GEOTEXTILE FABRIC TYPE DF IS NOT REQUIRED.

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR
- 1'-0" SAND BACKFILL AROUND COLUMN. PAYMENT INCLUDED WITH BACKFILL GRANULAR.
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

NOTES

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY	ENS	PLANS CK'D.	JWC

OPTION A
EXCAVATION PLAN
(3 OF 8)

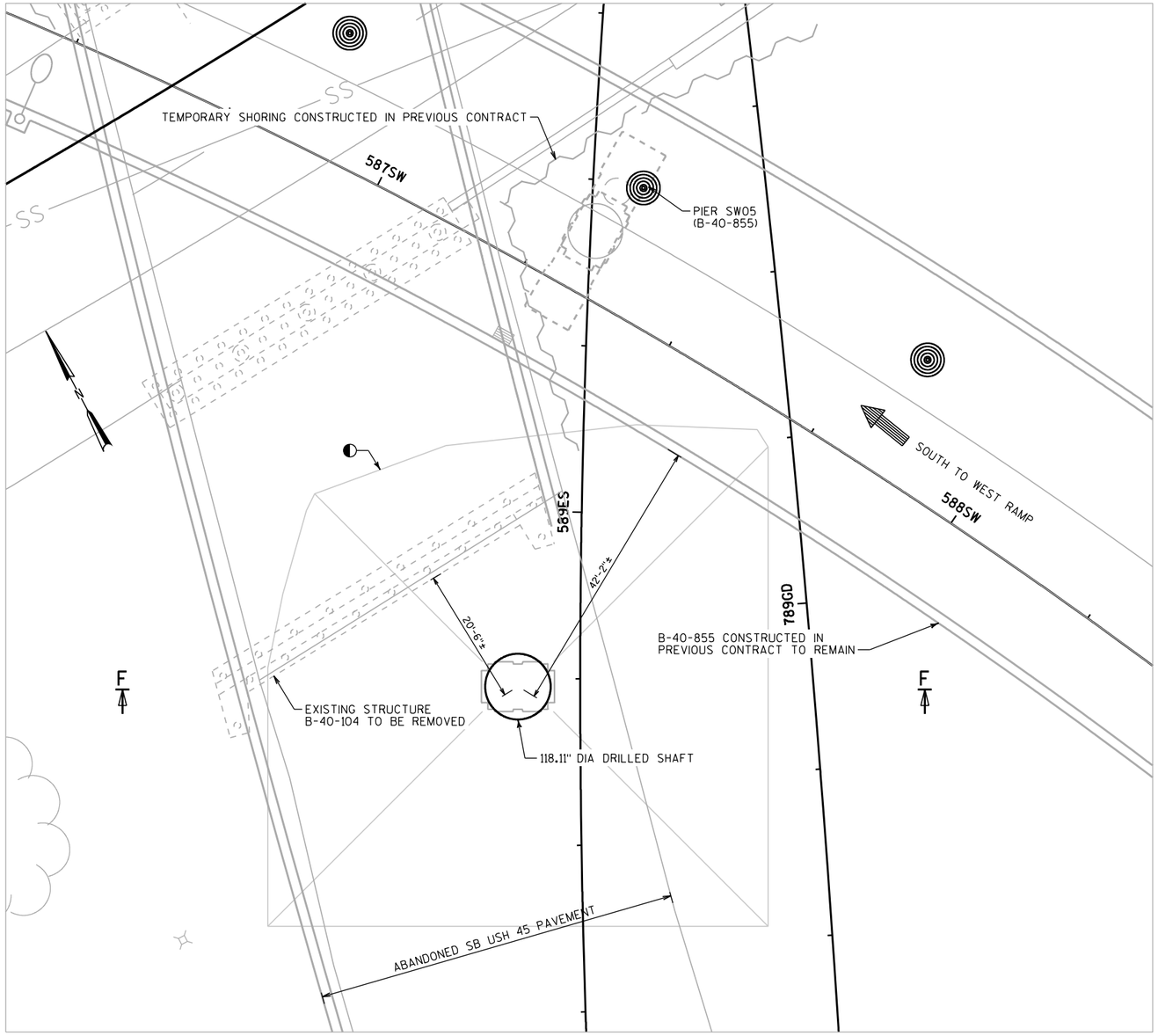
SHEET A9 OF A41

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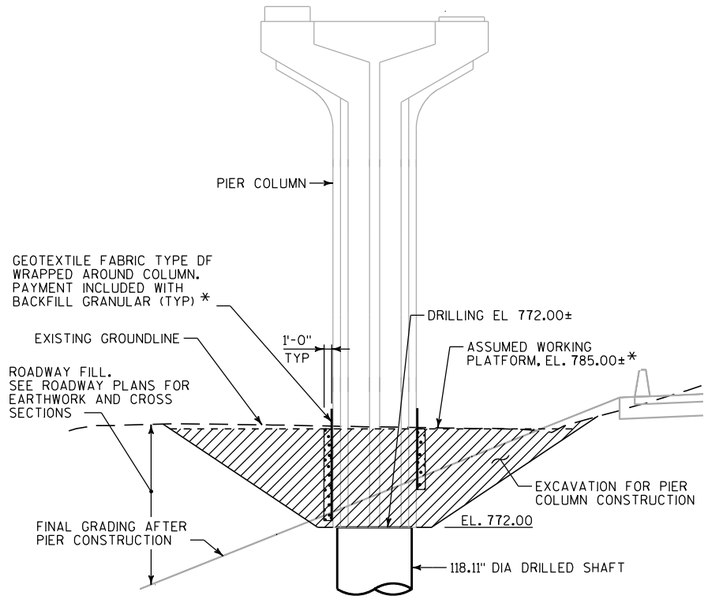
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STATE PROJECT NUMBER
1060-33-81



EXCAVATION PLAN - PIER ES05

STA 588ES+73.82



SECTION F-F

* THE EXCAVATION PLAN ASSUMES THAT THE CONTRACTOR WILL BACKFILL THE EXCAVATION AFTER COLUMN CONSTRUCTION AND LATER EXCAVATE DOWN TO FINAL GRADING. PROVIDE SAND BACKFILL AND GEOTEXTILE FABRIC TYPE DF AROUND COLUMN TO PROTECT COLUMN FROM BACKFILL MATERIAL. IF CONTRACTOR CHOOSES TO LEAVE THE EXCAVATION OPEN THEN SAND BACKFILL AND GEOTEXTILE FABRIC TYPE DF IS NOT REQUIRED.

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR
- 1'-0" SAND BACKFILL AROUND COLUMN. PAYMENT INCLUDED WITH BACKFILL GRANULAR.
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

NOTES

THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

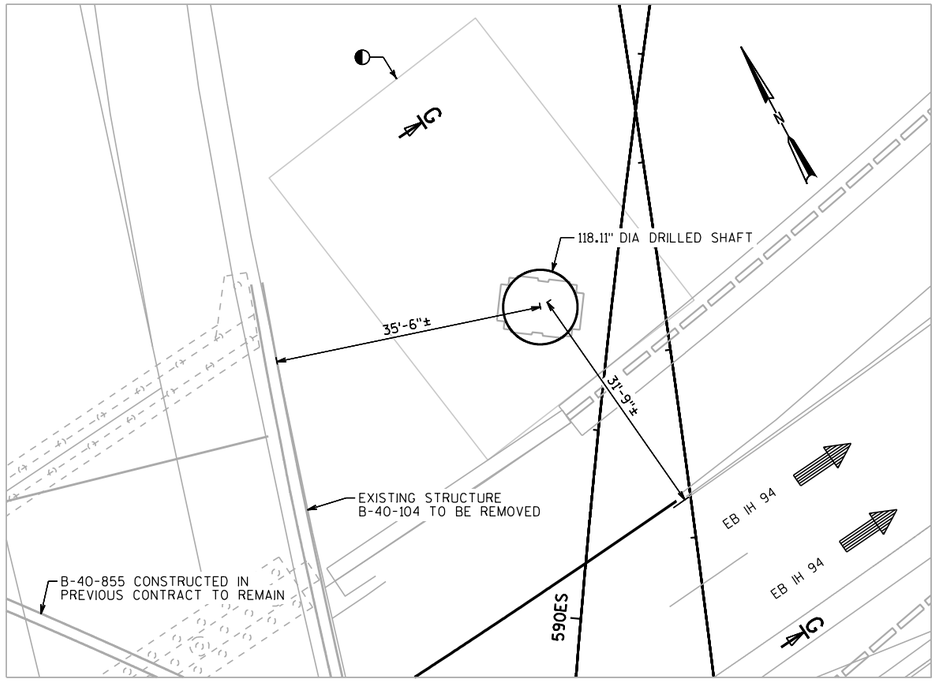
DRAWN BY	ENS	PLANS CK'D.	JWC

OPTION A
EXCAVATION PLAN
(4 OF 8)

SHEET A10 OF A41

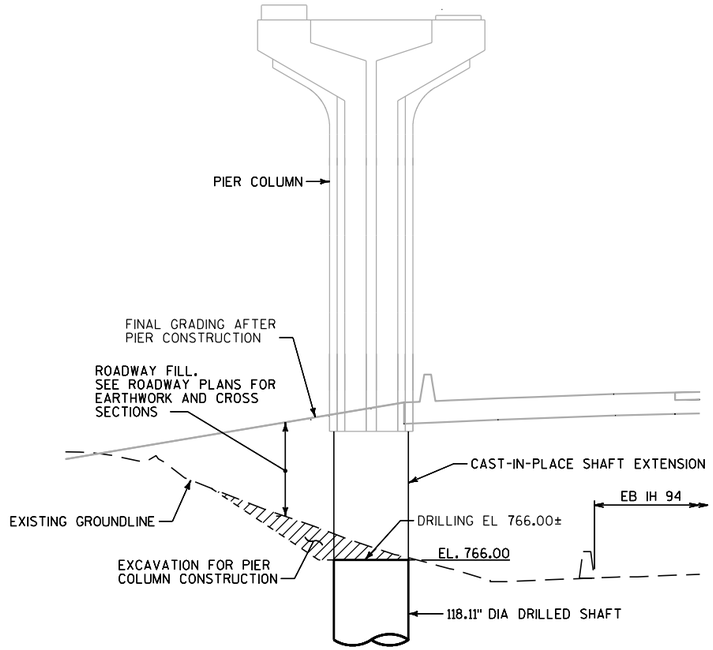
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STATE PROJECT NUMBER
1060-33-81

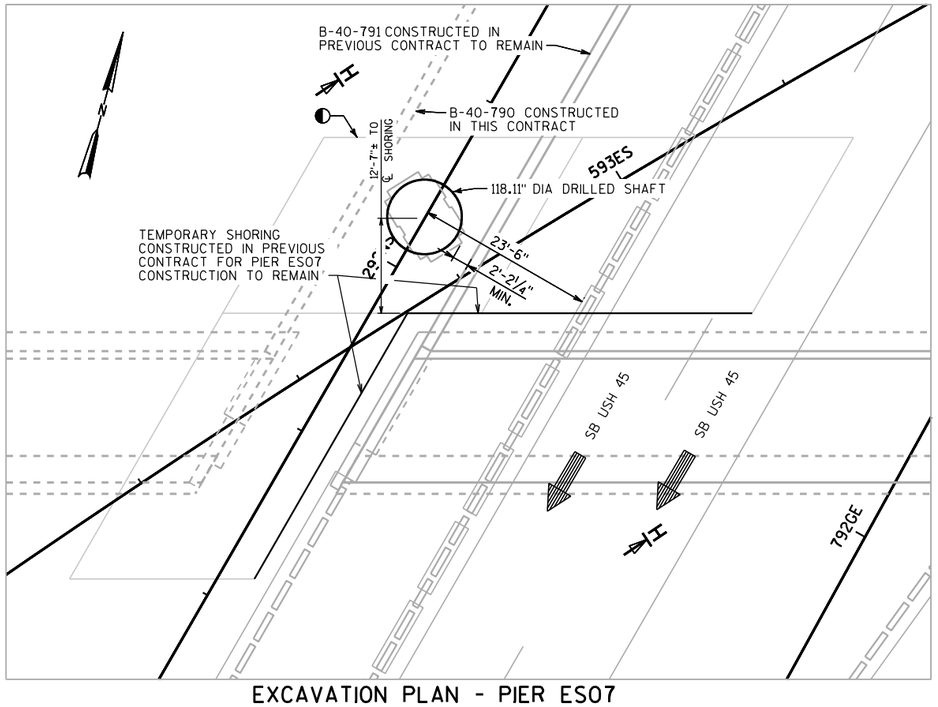


EXCAVATION PLAN - PIER ES06

STA 590ES+40.32

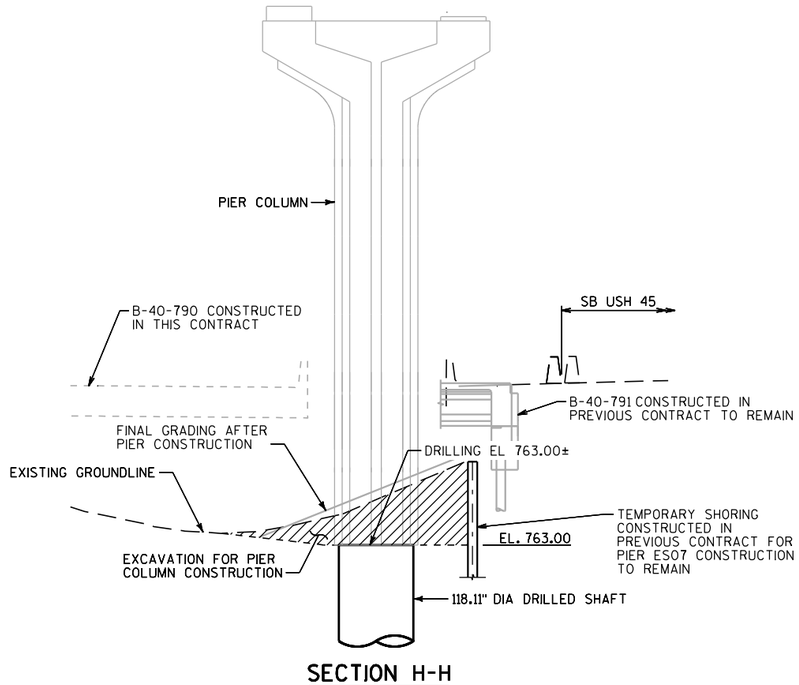


SECTION G-G



EXCAVATION PLAN - PIER ES07

STA 592ES+75.32



SECTION H-H

LEGEND

EXCAVATION FOR STRUCTURES

◐ APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

NOTES

THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY ENS | PLANS CK'D. JWC

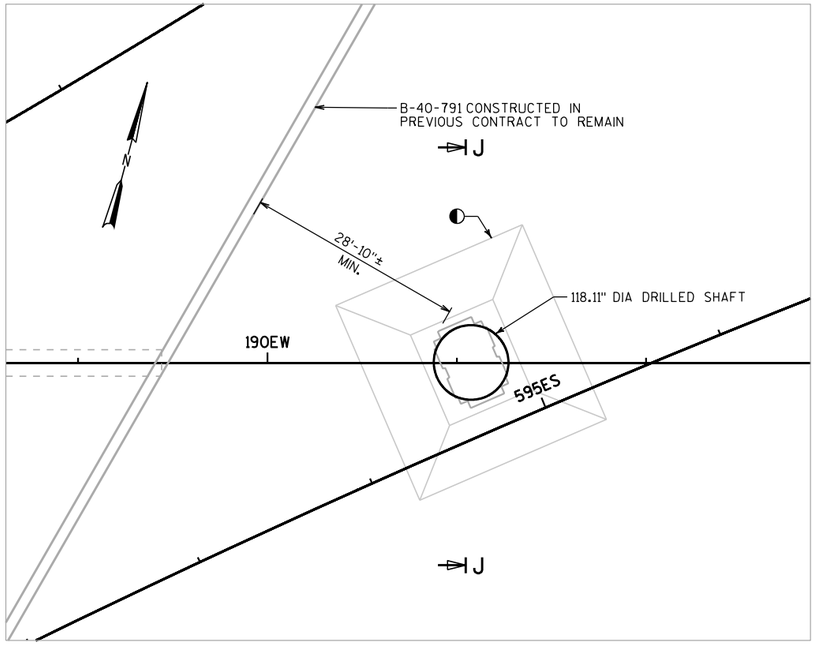
OPTION A
EXCAVATION PLAN
(5 OF 8)

SHEET A11 OF A41

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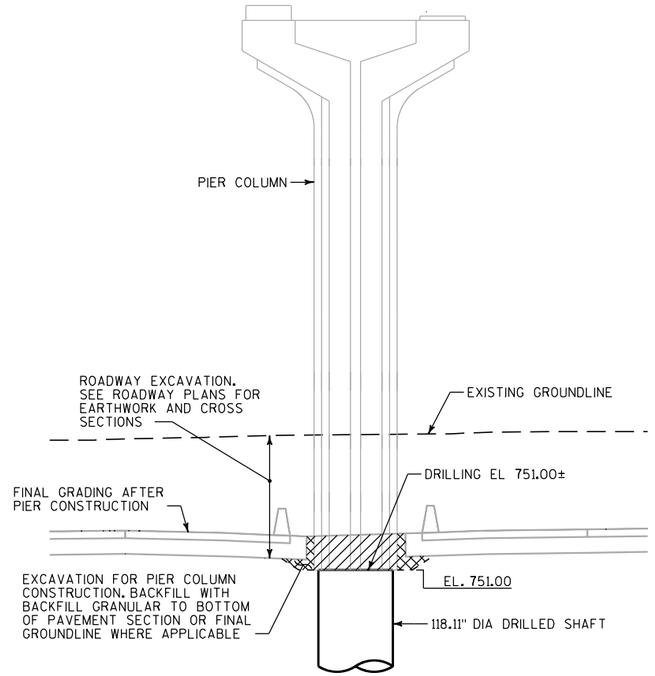
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STATE PROJECT NUMBER
1060-33-81

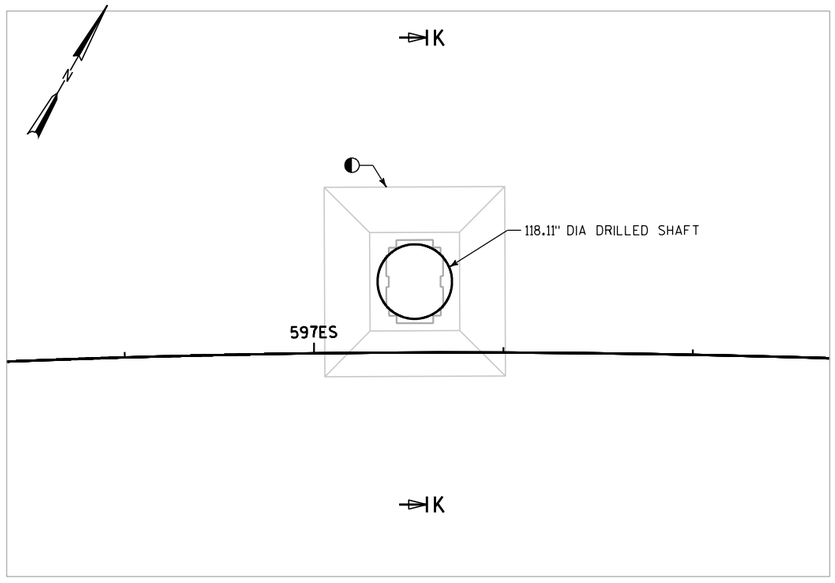


EXCAVATION PLAN - PIER ES08

STA 594ES+93.32

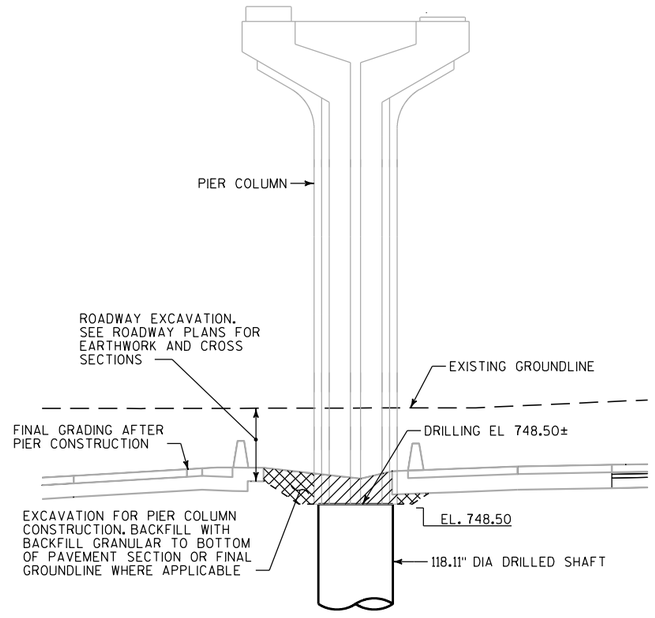


SECTION J-J



EXCAVATION PLAN - PIER ES09

STA 597ES+13.32



SECTION K-K

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR

◐ APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

NOTES

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY	ENS	PLANS CK'D.	JWC

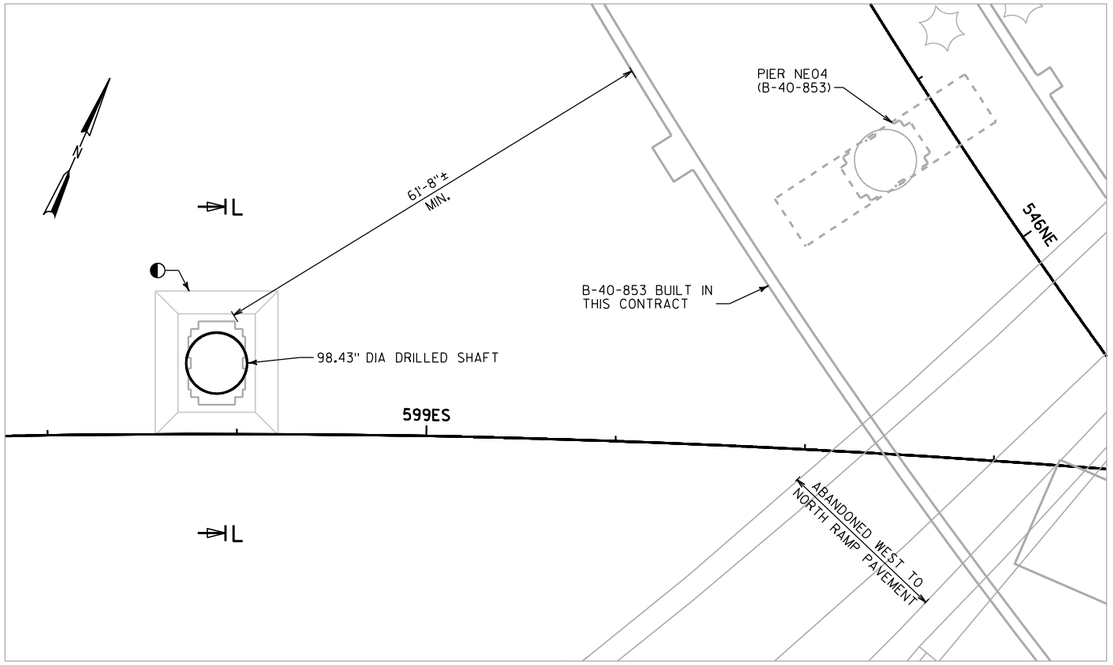
OPTION A
EXCAVATION PLAN
(6 OF 8)

SHEET A12 OF A41

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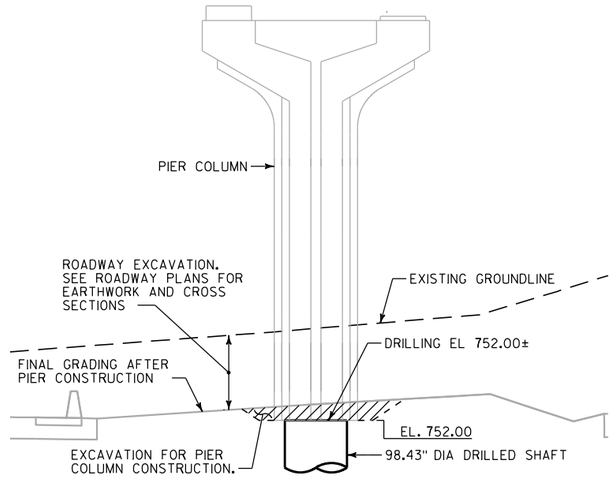
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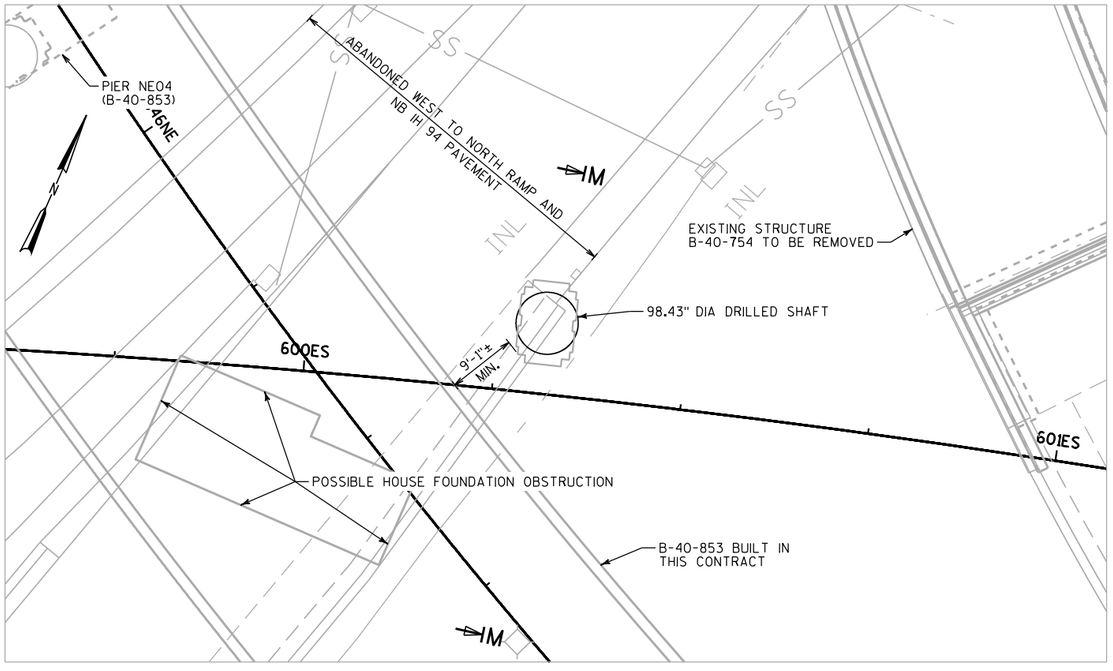


EXCAVATION PLAN - PIER ES10

STA 598ES+72.32

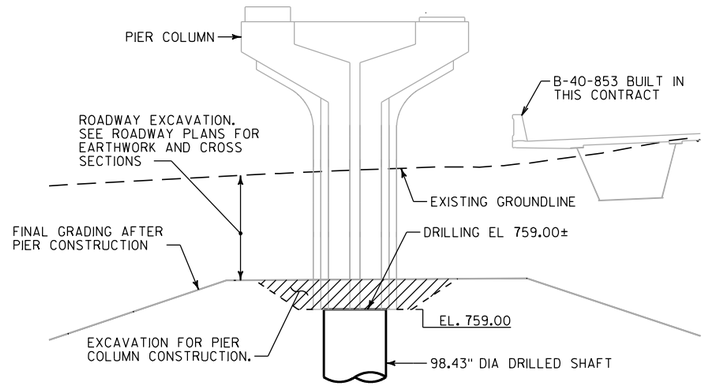


SECTION L-L



EXCAVATION PLAN - PIER ES11

STA 600ES+31.32



SECTION M-M

LEGEND

EXCAVATION FOR STRUCTURES

◐ APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

NOTES

THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION A
EXCAVATION PLAN
(7 OF 8)

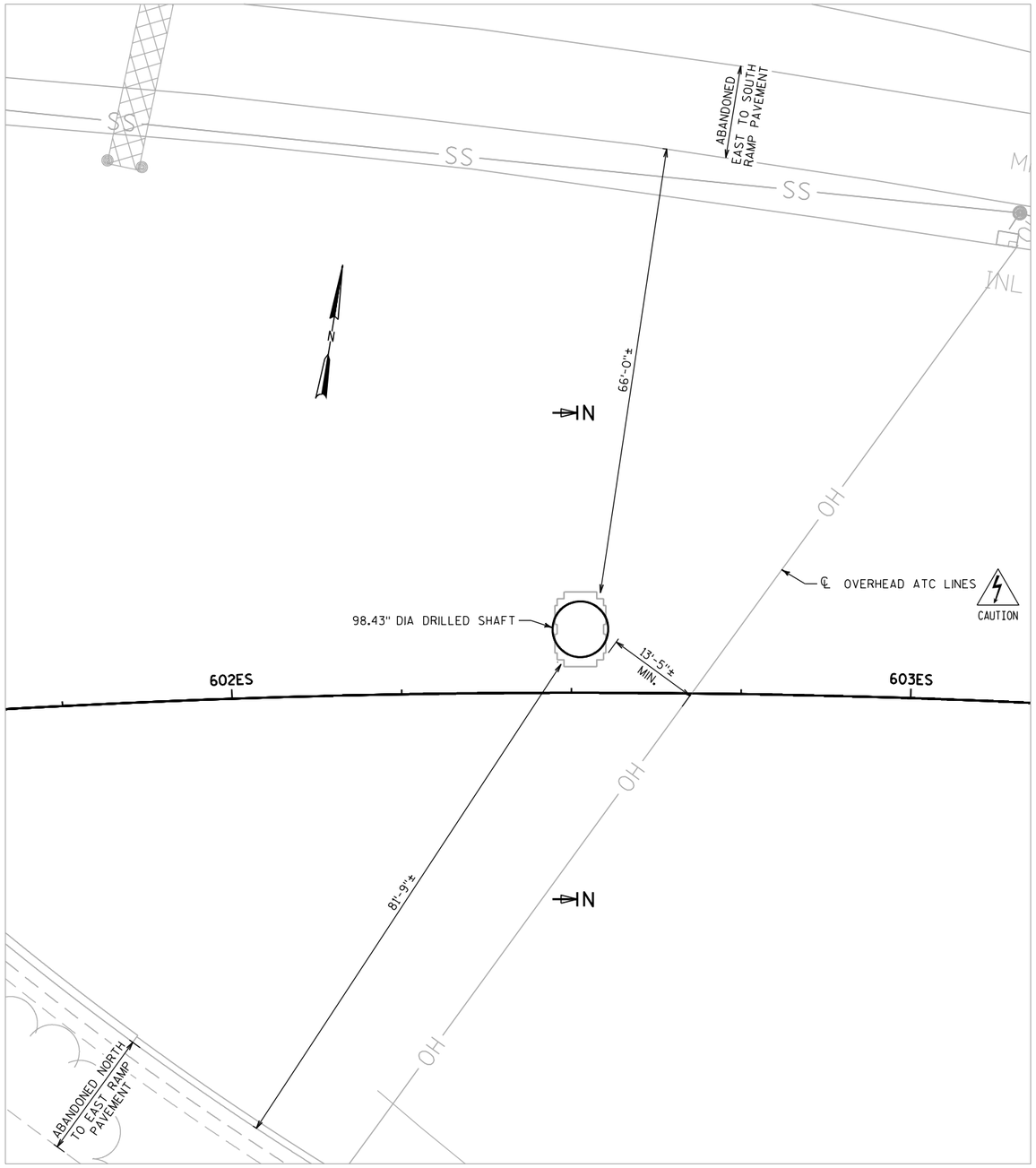
SHEET A13 OF A41

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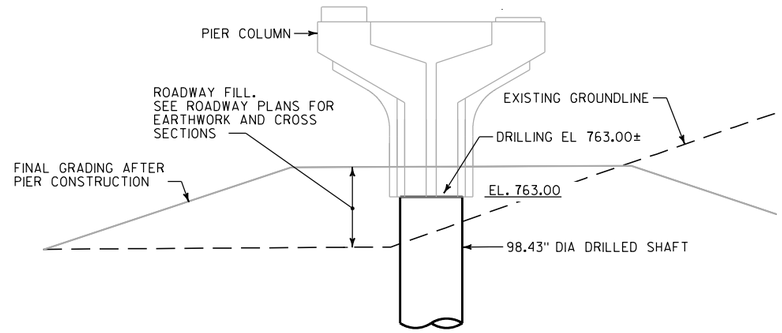
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STATE PROJECT NUMBER
1060-33-81



EXCAVATION PLAN - PIER ES12

STA 602ES+51.32



SECTION N-N

NOTES

THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY ENS | PLANS CK'D. JWC

OPTION A
EXCAVATION PLAN
(8 OF 8)

SHEET A14 OF A41

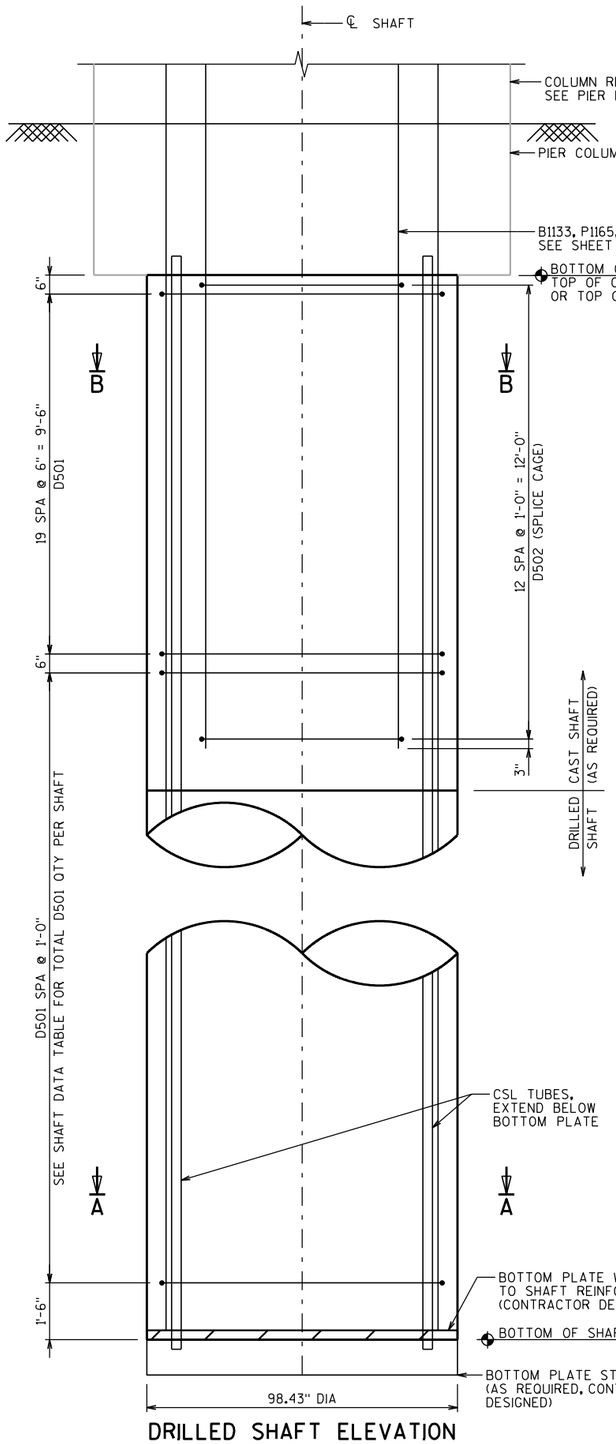
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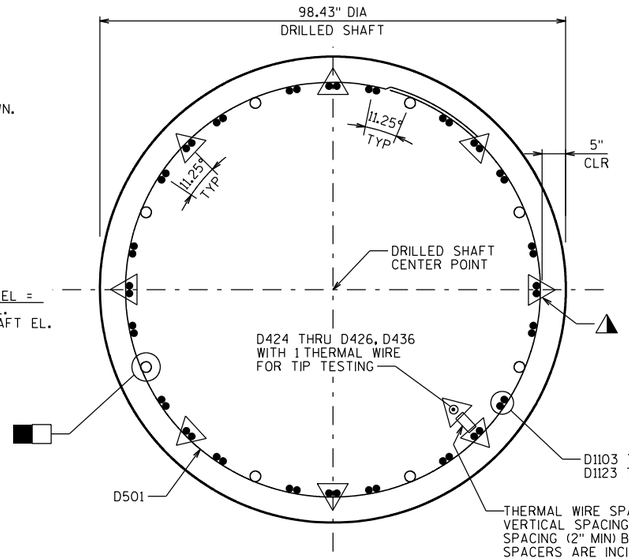
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STATE PROJECT NUMBER

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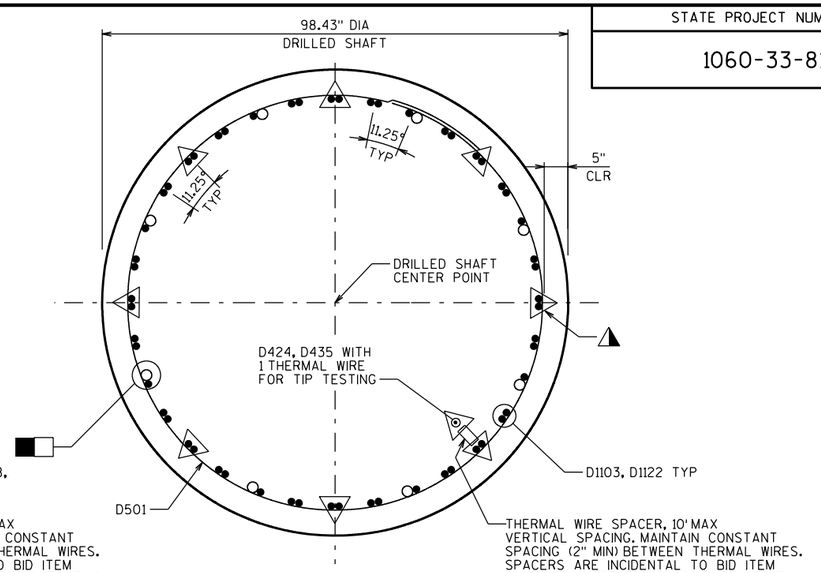


DRILLED SHAFT ELEVATION



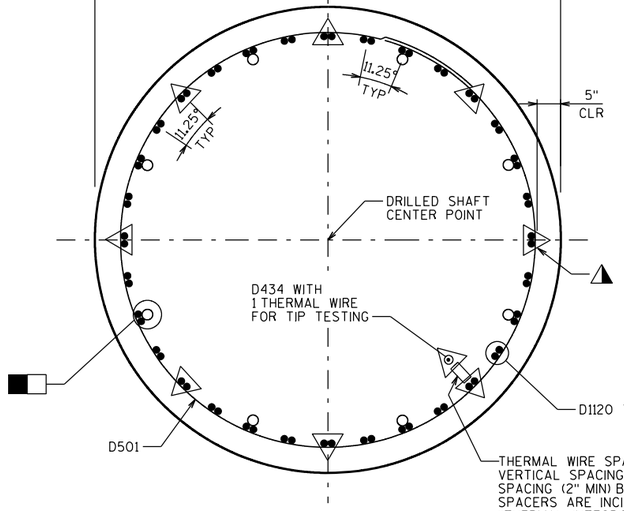
SECTION A-A

S. ABUT, ES01, ES12



SECTION A-A

ES11



SECTION A-A

ES10

SHAFT DATA

SHAFT NO	SHAFT ℄ "X"	SHAFT ℄ "Y"	ASSUMED DRILLING EL	TOP OF SHAFT EL	BOTTOM OF SHAFT EL	SHAFT LENGTH (FT)	TOP OF CAST SHAFT EL	SHAFT VOLUME (CY)	TIE NO. REQ'D (EACH)	INSTRUMENTATION	MAXIMUM BASE GROUTING PRESSURE (PSI)
S. ABUT.	571892.12	294115.12	792.00	792.00	676.00	116	804.64	227.0	138	CSL TUBES/TIP TESTING	575
PIER ES01	571893.34	294262.25	778.00	778.00	678.00	100	795.00	195.7	126	CSL TUBES/TIP TESTING	355
PIER ES10	572791.72	295691.30	752.00	752.00	717.00	35	-	68.5	44	CSL TUBES/TIP TESTING	265
PIER ES11	572941.36	295747.73	759.00	759.00	688.00	71	-	139.0	80	CSL TUBES/TIP TESTING	420
PIER ES12	573156.53	295798.95	763.00	763.00	705.50	57.5	-	111.6	67	CSL TUBES/TIP TESTING	285

NOTES

SEE SHEET "OPTION A DRILLED SHAFT DETAILS (2 OF 4)" FOR SECTION B-B.

LEGEND

8 - 2" DIA CSL TUBES FULL LENGTH OF SHAFT TIED TO INSIDE AND SPACED AROUND THE PERIMETER OF REINFORCEMENT AS SHOWN. AFTER TESTING, USE CSL TUBES TO BASE-GROUT THE PIER DRILLED SHAFTS.

9 - THERMAL WIRES FOR TIP TESTING. DISTRIBUTE 8 THERMAL WIRES EVENLY AROUND THE PERIMETER OF REINFORCMENT TIED TO VERTICAL BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY KTM | PLANS CK'D. MSS

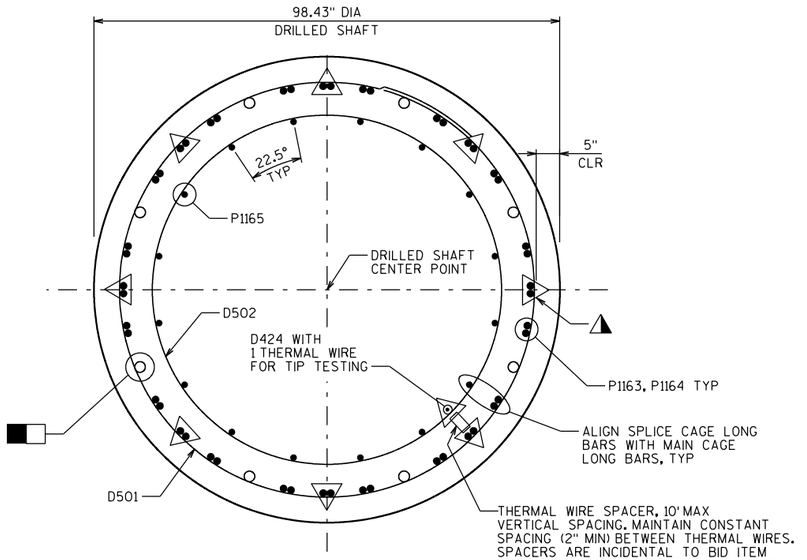
OPTION A DRILLED SHAFT DETAILS (1 OF 4)

SHEET A15 OF A41

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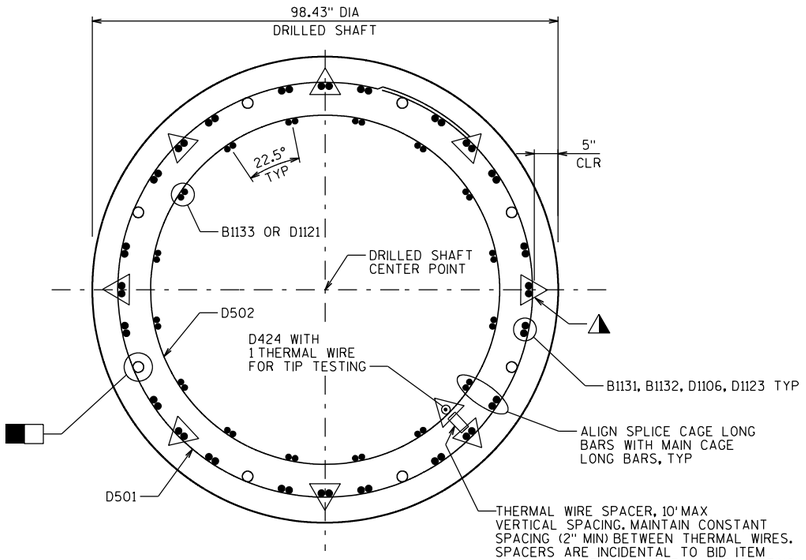
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STATE PROJECT NUMBER
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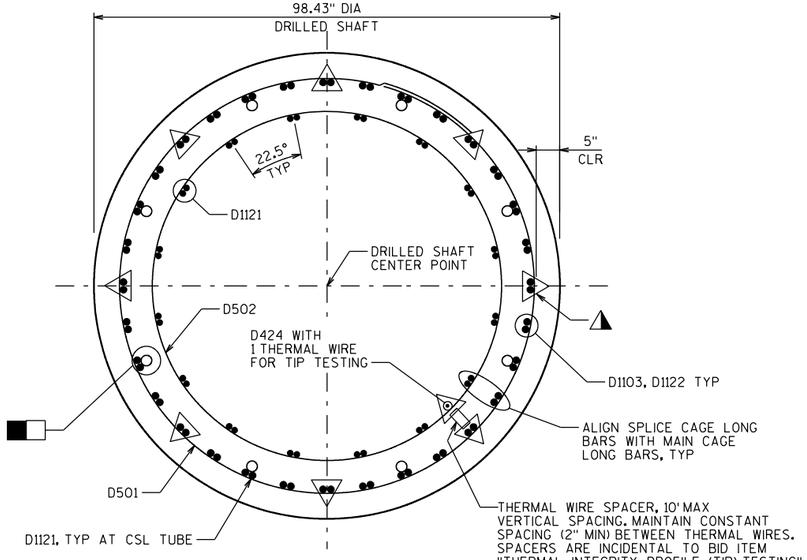
SECTION B-B

ES01



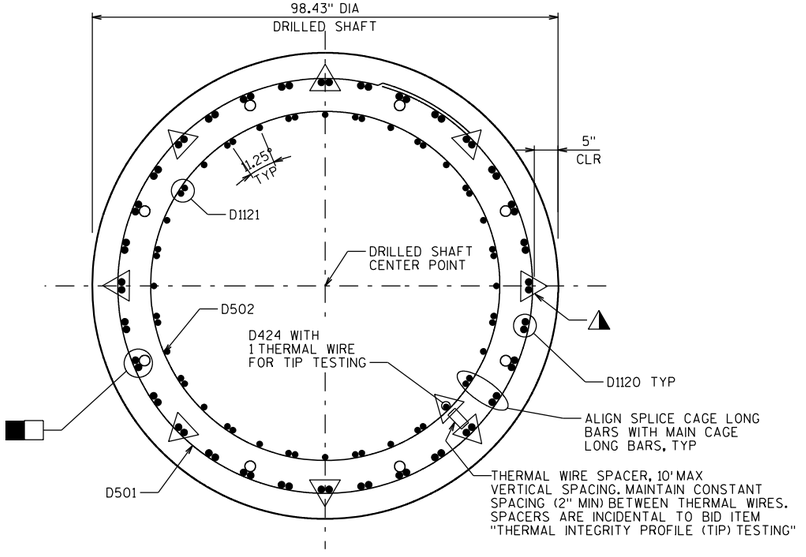
SECTION B-B

S. ABUT, ES12



SECTION B-B

ES11



SECTION B-B

ES10

NOTES

SEE SHEET "OPTION A DRILLED SHAFT DETAILS (1 OF 4)" FOR LOCATION OF SECTION B-B.

LEGEND

- 8 - 2" DIA CSL TUBES FULL LENGTH OF SHAFT TIED TO INSIDE AND SPACED AROUND THE PERIMETER OF REINFORCEMENT AS SHOWN. AFTER TESTING, USE CSL TUBES TO BASE-GROUT THE PIER DRILLED SHAFTS.
- 9 - THERMAL WIRES FOR TIP TESTING. DISTRIBUTE 8 THERMAL WIRES EVENLY AROUND THE PERIMETER OF REINFORCMENT TIED TO VERTICAL BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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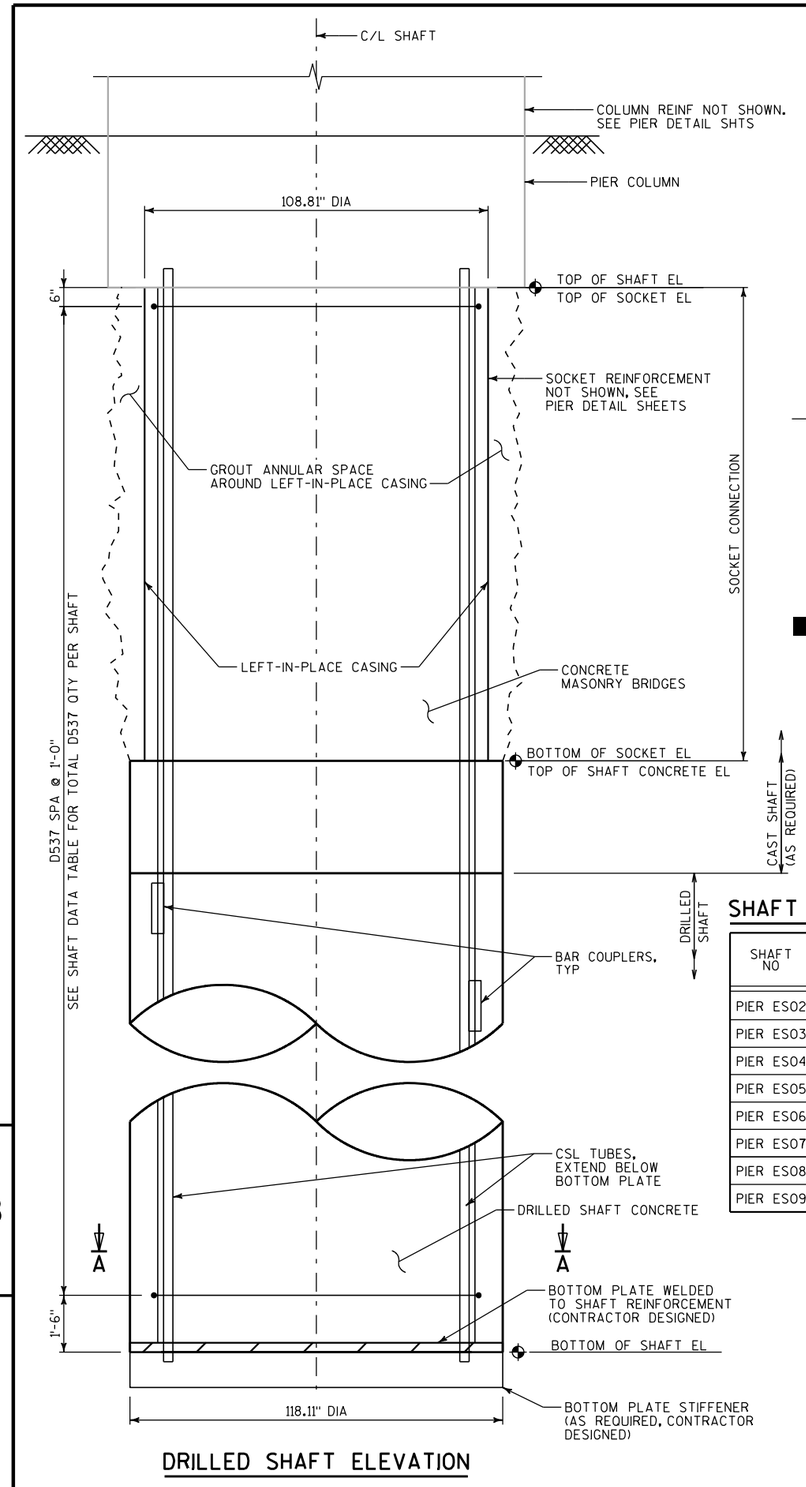
OPTION A DRILLED SHAFT DETAILS (2 OF 4)

SHEET A16 OF A41

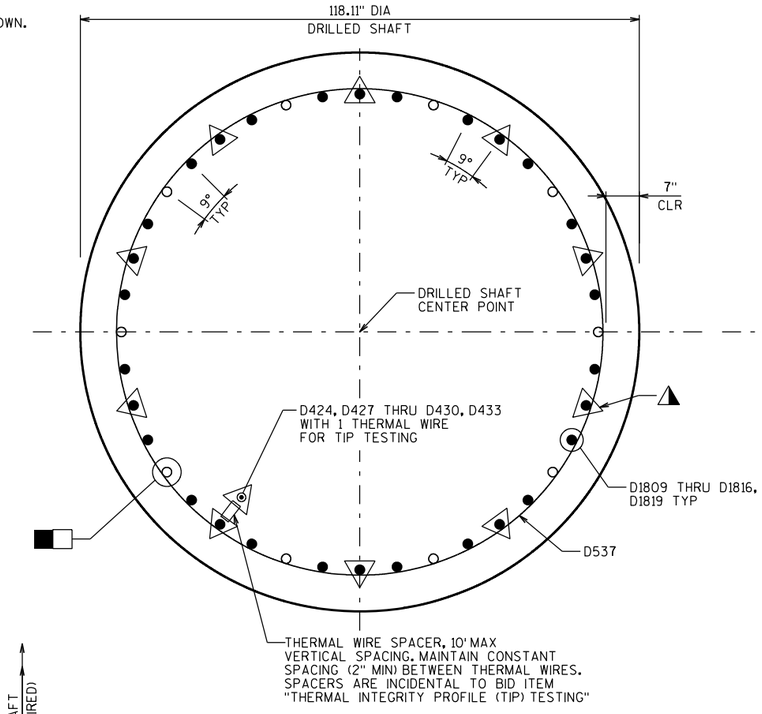
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STATE PROJECT NUMBER
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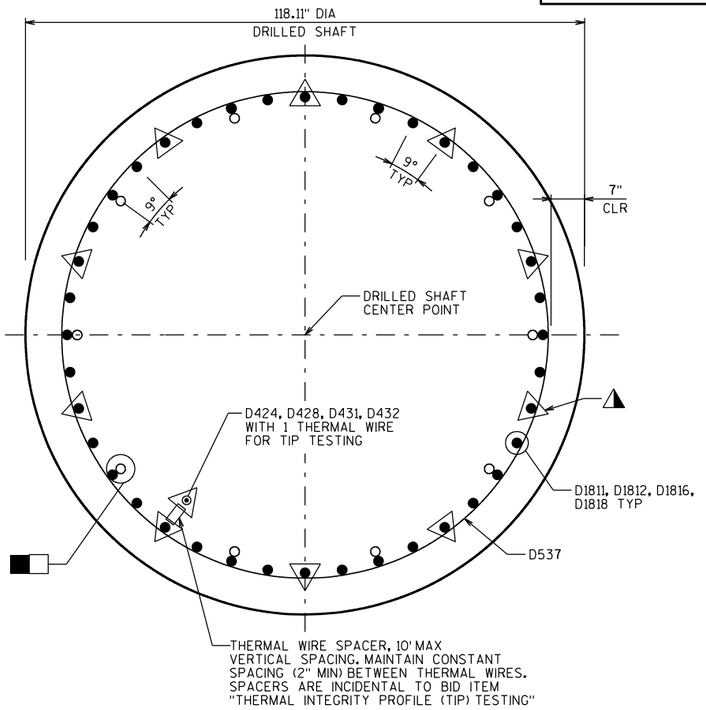


DRILLED SHAFT ELEVATION



SECTION A-A

ES02, ES04, ES05, ES06 & ES09



SECTION A-A

ES03, ES07 & ES08

SHAFT DATA

SHAFT NO	SHAFT ℄ "X"	SHAFT ℄ "Y"	ASSUMED DRILLING EL	TOP OF SHAFT EL	BOTTOM OF SHAFT EL	SHAFT LENGTH (FT)	TOP OF CAST SHAFT EL	BOTTOM OF SOCKET EL	SHAFT VOLUME (CY)	TIE NO. REQ'D (EACH)	INSTRUMENTATION	MAXIMUM BASE GROUTING PRESSURE (PSI)
PIER ES02	571903.42	294487.78	780.00	780.00	676.00	104	792.50	-	293.1	116	CSL TUBES/TIP TESTING	445
PIER ES03	571946.16	294709.90	765.00	765.00	691.00	74	-	750.00	208.5	73	CSL TUBES/TIP TESTING	575
PIER ES04	572009.64	294894.89	788.00	772.00	698.00	74	-	759.50	208.5	73	CSL TUBES/TIP TESTING	200
PIER ES05	572069.01	295020.37	772.00	772.00	706.00	66	-	759.50	186.0	65	CSL TUBES/TIP TESTING	250
PIER ES06	572155.67	295163.66	766.00	766.00	695.50	70.5	783.00	-	197.3	87	CSL TUBES/TIP TESTING	320
PIER ES07	572303.90	295347.59	763.00	763.00	710.00	53	-	746.00	149.4	52	CSL TUBES/TIP TESTING	310
PIER ES08	572465.65	295495.49	751.00	751.00	693.00	58	-	734.00	163.4	57	CSL TUBES/TIP TESTING	275
PIER ES09	572648.94	295619.29	748.50	748.50	708.00	40.5	-	733.50	115.5	40	CSL TUBES/TIP TESTING	150

LEGEND

10 - 2" DIA CSL TUBES FULL LENGTH OF SHAFT TIED TO INSIDE AND SPACED AROUND THE PERIMETER OF REINFORCEMENT AS SHOWN. AFTER TESTING, USE CSL TUBES TO BASE-GROUT THE PIER DRILLED SHAFTS.

11 - THERMAL WIRES FOR TIP TESTING. DISTRIBUTE 10 THERMAL WIRES EVENLY AROUND THE PERIMETER OF REINFORCMENT TIED TO VERTICAL BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

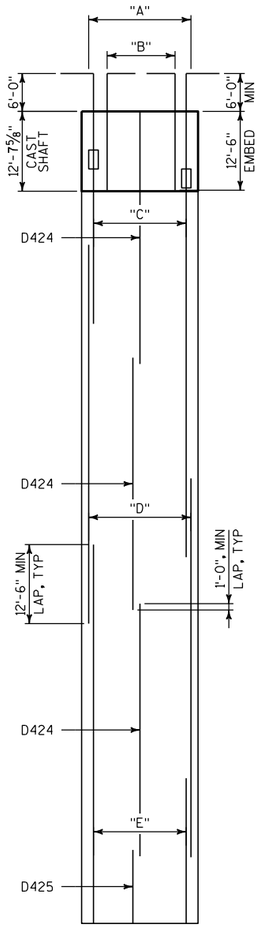
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OPTION A
DRILLED SHAFT
DETAILS (3 OF 4)

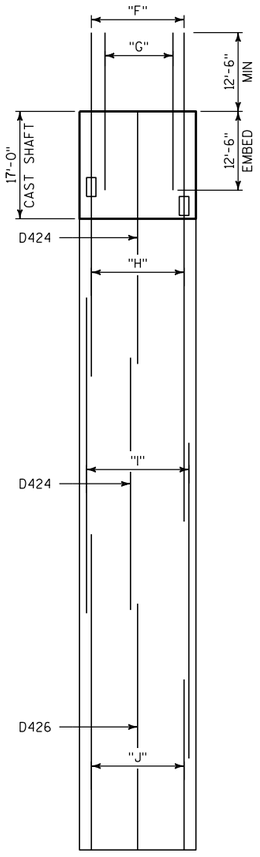
SHEET A17 OF A41

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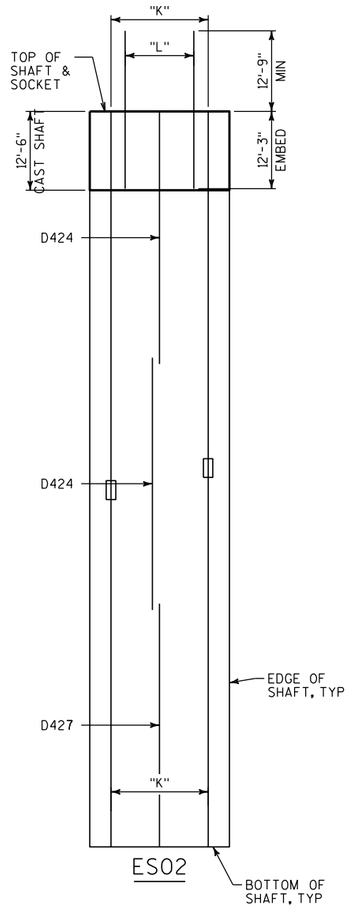
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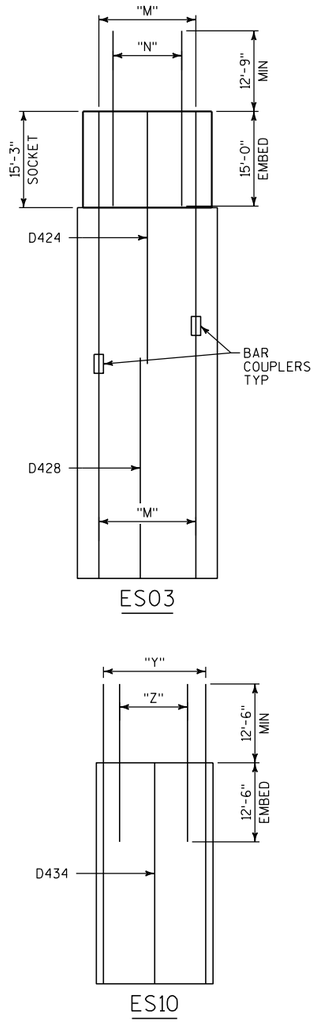
S. ABUT



ES01

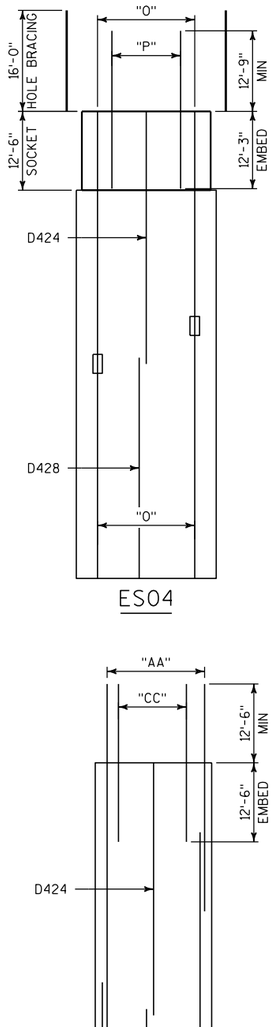


ES02



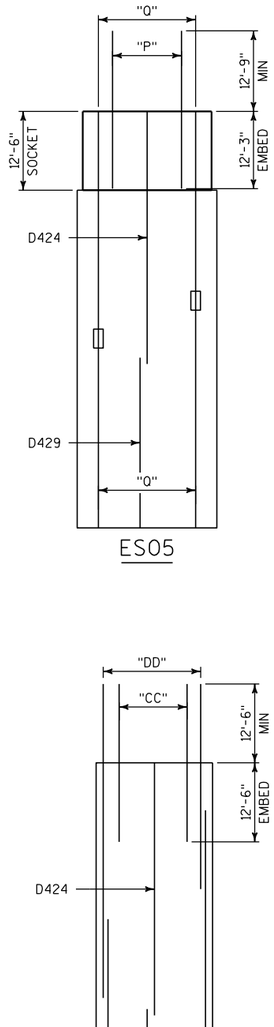
ES10

ES03



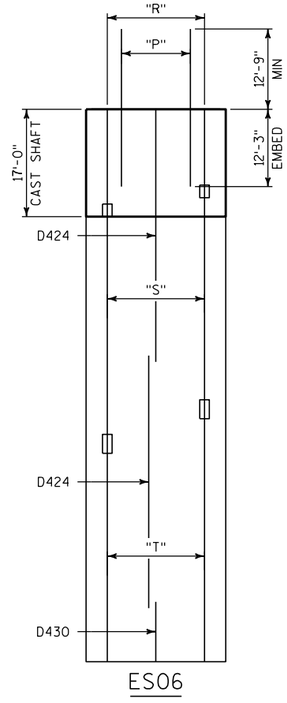
ES04

ES11

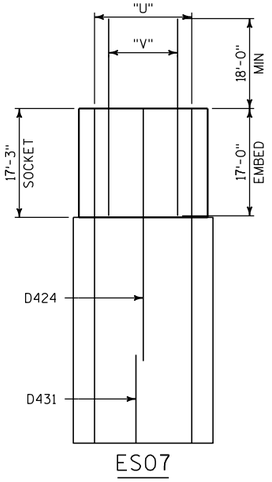


ES05

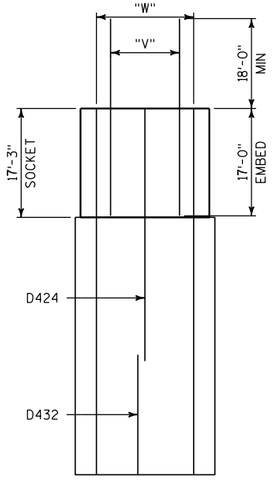
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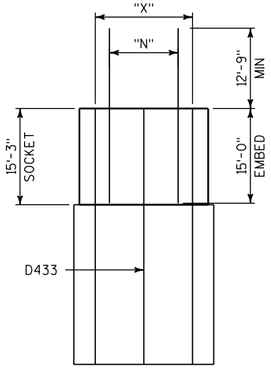
ES06



ES07



ES08



ES09

"A" = 22-B1131 & 22-B1132
"B" = 32-B1133
"C" = 24-D1103 & 24-D1105
"D" = 48-D1103
"E" = 24-D1103 & 24-D1104
"F" = 24-P1163 & 24-P1164
"G" = 16-P1165
"H" = 24-D1106 & 24-D1108
"I" = 48-D1106
"J" = 24-D1106 & 24-D1107
"K" = 15-D1809 & 15-D1810
"L" = 66-P1166 & 16-P1167
"M" = 20-D1811 & 20-D1812
"N" = 66-P1168 & 30-P1169
"O" = 15-D1811 & 15-D1812
"P" = 66-P1166 & 16-P1170
"Q" = 15-D1813 & 15-D1814
"R" = 15-P1871 & 15-P1872
"S" = 15-D1815 & 15-D1816
"T" = 15-D1812 & 15-D1815
"U" = 40-D1816
"V" = 36-P1873 & 30-P1174

"W" = 40-D1818
"X" = 30-D1819
"Y" = 64-D1120
"Z" = 48-D1121
"AA" = 24-D1103 & 32-D1122 & 8-D1121
"BB" = 32-D1103 & 24-D1122
"CC" = 32-D1121
"DD" = 24-D1106 & 24-D1123

DRILLED SHAFT MAIN REINFORCEMENT SCHEMATIC

STATE PROJECT NUMBER

1060-33-81

NOTES:

1. STAGGER LAPS AND COUPLERS AS SHOWN SO AS TO LAP OR COUPLE NO MORE THAN HALF OF THE BARS PER SECTION.
2. WELDMENT OF BOTTOM PLATE AND REINFORCING BAR CAGE NOT SHOWN FOR CLARITY. SEE DETAIL ON SHEET "OPTION A DRILLED SHAFT DETAILS (1 OF 4)" AND OPTION A DRILLED SHAFT DETAILS (3 OF 4)".
3. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
4. THE SOCKET CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION A
DRILLED SHAFT
DETAILS (4 OF 4)

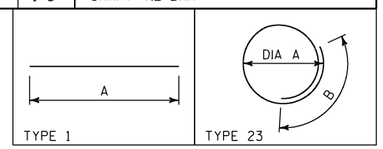
SHEET A18 OF A41

8

8

STATE PROJECT NUMBER
1060-33-81

BAR INFORMATION						BAR DIM'S		LOCATION
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BEND TYPE	A	B	
D501	U	455	24'-9"	X	23	7'-5"	1'-5"	SHAFT TIE BAR
D502	U	65	21'-1"	X	23	6'-3"	1'-5"	SPLICE CAGE TIE BAR
D1103	U	152	60'-0"		1	60'-0"		LONGITUDINAL BAR S ABUT, ES11
D1104	U	24	23'-0"		1	23'-0"		LONGITUDINAL BAR S ABUT
D1105	U	24	26'-0"		1	26'-0"		LONGITUDINAL BAR S ABUT
D1106	U	144	50'-0"		1	50'-0"		LONGITUDINAL BAR ES01, ES12
D1107	U	24	27'-0"		1	27'-0"		LONGITUDINAL BAR ES01
D1108	U	24	30'-0"		1	30'-0"		LONGITUDINAL BAR ES01
D1809	U	30	56'-6"		1	56'-6"		LONGITUDINAL BAR ES02
D1810	U	30	60'-0"		1	60'-0"		LONGITUDINAL BAR
D1811	U	70	34'-0"		1	34'-0"		LONGITUDINAL BAR ES03 & ES04
D1812	U	85	40'-0"		1	40'-0"		LONGITUDINAL BAR ES03, ES04, ES06
D1813	U	30	30'-0"		1	30'-0"		LONGITUDINAL BAR ES05
D1814	U	30	36'-0"		1	36'-0"		LONGITUDINAL BAR ES05
D1815	U	30	34'-6"		1	34'-6"		LONGITUDINAL BAR ES06
D1816	U	15	37'-0"		1	37'-0"		LONGITUDINAL BAR ES06
D1817	U	40	53'-0"		1	53'-0"		LONGITUDINAL BAR ES07
D1818	U	40	58'-0"		1	58'-0"		LONGITUDINAL BAR ES08
D1819	U	30	40'-6"		1	40'-6"		LONGITUDINAL BAR ES09
D1120	U	64	47'-6"		1	47'-6"		LONGITUDINAL BAR ES10
D1121	U	120	25'-0"		1	25'-0"		LONGITUDINAL BAR ES10, ES11, ES12
D1122	U	56	36'-0"		1	36'-0"		LONGITUDINAL BAR ES11
D1123	U	48	32'-6"		1	32'-6"		LONGITUDINAL BAR ES12
D424	U	16	40'-0"		1	40'-0"		LONGITUDINAL THERMAL BAR
D425	U	1	11'-8"		1	11'-8"		LONGITUDINAL THERMAL BAR S ABUT
D426	U	1	39'-0"		1	39'-0"		LONGITUDINAL THERMAL BAR ES01
D427	U	1	38'-6"		1	38'-6"		LONGITUDINAL THERMAL BAR ES02
D428	U	2	35'-0"		1	35'-0"		LONGITUDINAL THERMAL BAR ES03, ES04
D429	U	1	27'-0"		1	27'-0"		LONGITUDINAL THERMAL BAR ES05
D430	U	1	9'-6"		1	9'-6"		LONGITUDINAL THERMAL BAR ES06
D431	U	1	14'-0"		1	14'-0"		LONGITUDINAL THERMAL BAR ES07
D432	U	1	19'-0"		1	19'-0"		LONGITUDINAL THERMAL BAR ES08
D433	U	1	40'-6"		1	40'-6"		LONGITUDINAL THERMAL BAR ES09
D434	U	1	35'-0"		1	35'-0"		LONGITUDINAL THERMAL BAR ES10
D435	U	1	32'-0"		1	32'-0"		LONGITUDINAL THERMAL BAR ES11
D436	U	1	18'-6"		1	18'-6"		LONGITUDINAL THERMAL BAR ES12
D537	U	563	28'-11"	X	23	8'-9"	1'-5"	SHAFT TIE BAR



BAR MARK BREAKDOWN															
BAR MARK	S ABUT	PIER ES01	PIER ES02	PIER ES03	PIER ES04	PIER ES05	PIER ES06	PIER ES07	PIER ES08	PIER ES09	PIER ES10	PIER ES11	PIER ES12	TOTAL NO	WEIGHT
D501	138	126									44	80	67	455	11,745
D502	13	13									13	13	13	65	1,429
D1103	96											56		152	48,455
D1104	24													24	2,933
D1105	24													24	3,315
D1106		96											48	144	38,254
D1107		24												24	3,443
D1108		24												24	3,825
D1809			30											30	23,052
D1810			30											30	24,480
D1811				40	30									70	32,368
D1812				40	30		15							85	46,240
D1813						30								30	12,240
D1814						30								30	14,688
D1815							30							30	14,076
D1816							15							15	7,548
D1817								40						40	28,832
D1818									40					40	31,552
D1819										30				30	16,524
D1120											64			64	16,152
D1121											48	40	32	120	15,939
D1122												56		56	10,711
D1123													48	48	8,288
D424	3	2	2	1	1	1	2	1	1			1	1	16	428
D425	1													1	8
D426		1												1	26
D427			1											1	26
D428				1	1									2	47
D429						1								1	18
D430							1							1	6
D431								1						1	9
D432									1					1	13
D433										1				1	27
D434											1			1	23
D435												1		1	21
D436													1	1	12
D537			116	73	73	65	87	52	57	40				563	16,980

NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
- U - STEEL, HIGH STRENGTH, UNCOATED.
- E - STEEL, HIGH STRENGTH, EPOXY COATED.
- S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

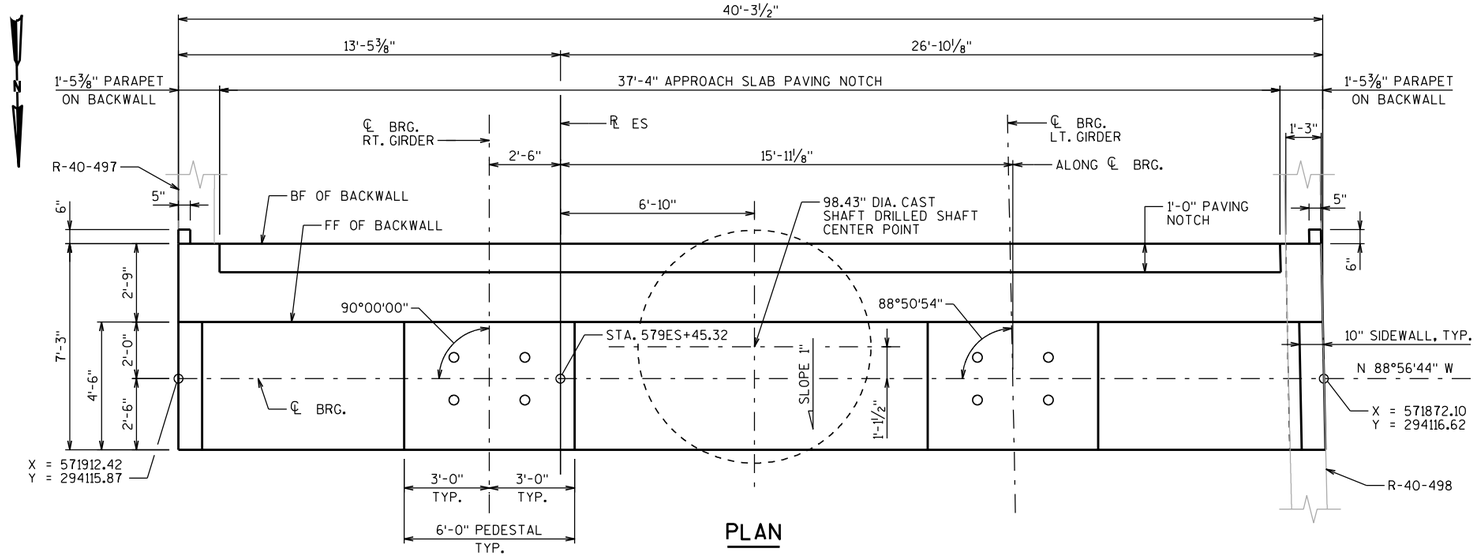
STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

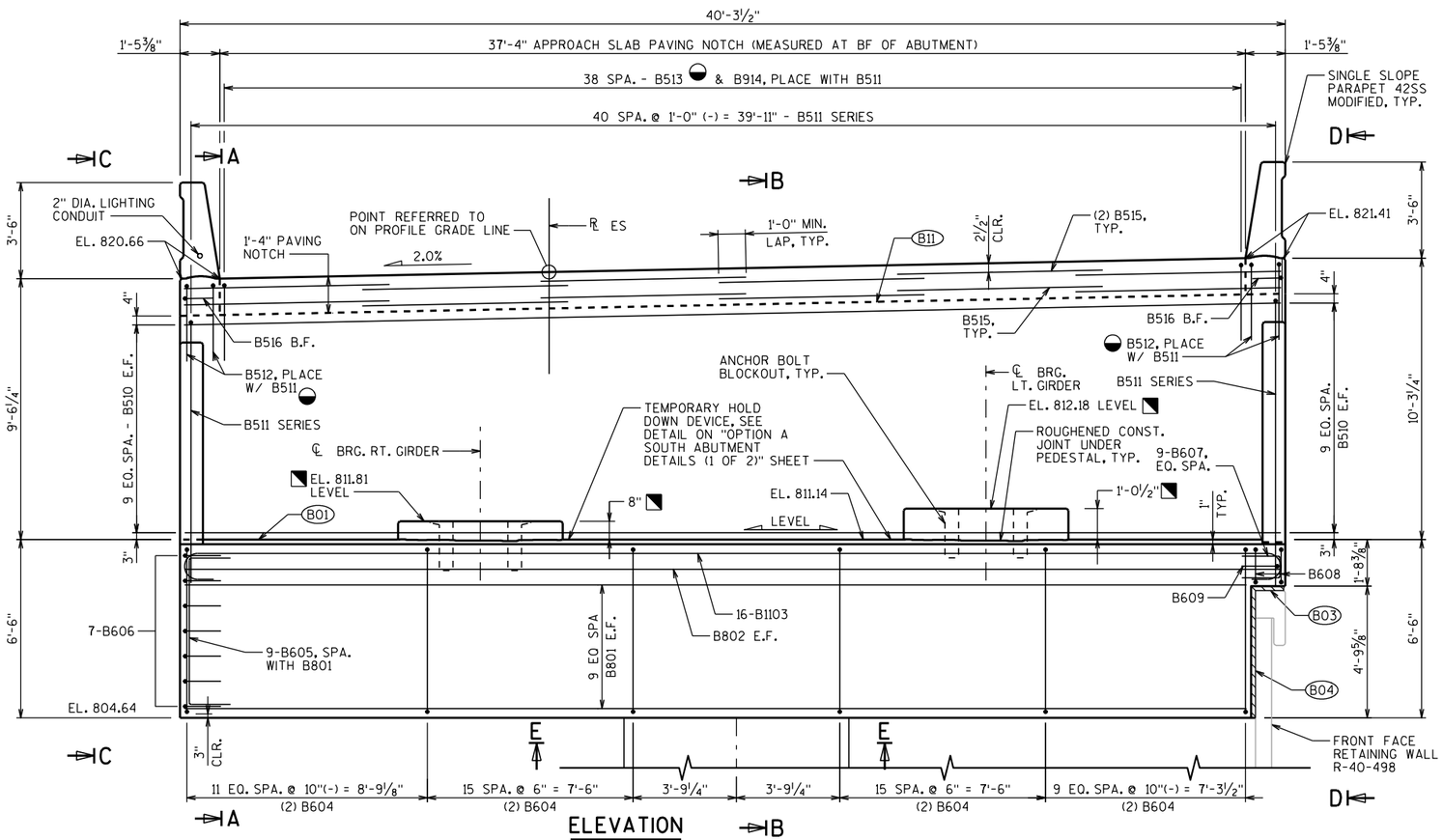
OPTION A
DRILLED SHAFT
REINFORCEMENT
SCHEDULE

SHEET A19 OF A41

STATE PROJECT NUMBER
1060-33-81

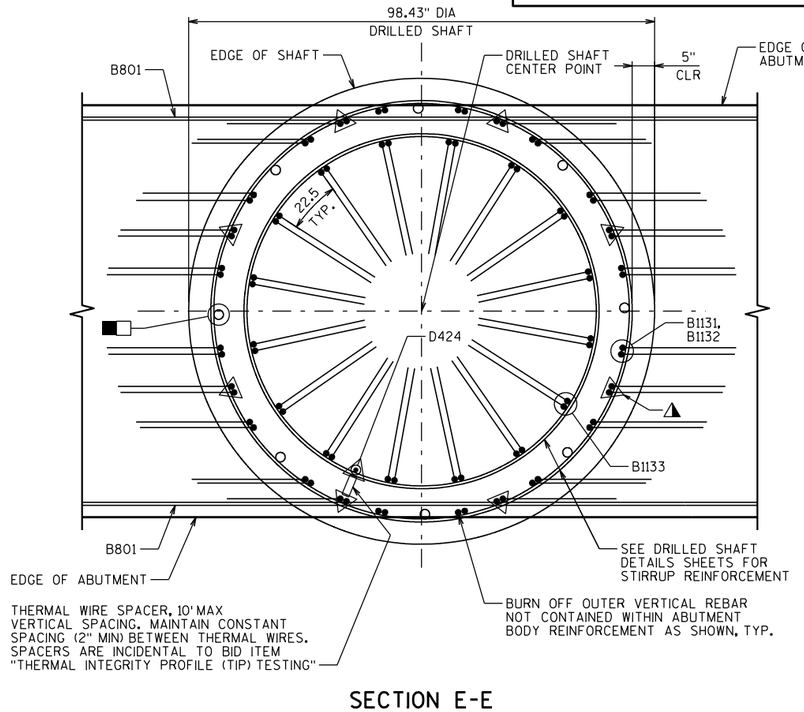


PLAN



ELEVATION

LOOKING SOUTH - DOWNSTATION
ALL DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG FRONT FACE OF BACKWALL
REINFORCEMENT IN PEDESTALS NOT SHOWN FOR CLARITY, SEE "OPTION A SOUTH ABUTMENT PEDESTAL DETAILS" SHEET.



SECTION E-E

SEE SECTION B-B, SHEET A20 FOR ELEVATION VIEW

LEGEND

- (B01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 6" KEYWAY AT BASE OF BACKWALL.
- (B03) 2" PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITUMINUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- (B04) 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 ABUTMENT. COLOR TO MATCH CONCRETE STAIN.
- (B11) 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"
- ◒ ANCHOR REBAR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD SPEC FOR MASONRY ANCHOR TYPE S WITH A MIN. PULLOUT CAPACITY OF 20 KIPS AND EMBEDMENT OF 1'-0"
- ⫩ 8'-0" LONG BAR WITH 1'-0" MIN LAP, CUT IN FIELD TO CLEAR JOINT SUPPORT SYSTEM AS REQUIRED.
- ◧ 8 - 2" DIA CSL TUBES FULL LENGTH OF SHAFT TIED TO INSIDE AND SPACED AROUND THE PERIMETER OF REINFORCEMENT AS SHOWN. AFTER TESTING, USE CSL TUBES TO BASE-GROUT THE ABUTMENT DRILLED SHAFT.
- ◭ 9 - THERMAL WIRES FOR TIP TESTING. DISTRIBUTE 8 THERMAL WIRES EVENLY AROUND THE PERIMETER OF REINFORCEMENT TIED TO VERTICAL BARS.

NOTES

1. FOR SECTIONS A-A & B-B SEE "OPTION A SOUTH ABUTMENT DETAILS (1 OF 2)" SHEET.
2. FOR SECTIONS C-C & D-D, SEE "OPTION A SOUTH ABUTMENT DETAILS (1 OF 2)" SHEET.
3. FOR DETAILS OF PEDESTALS, SEE "OPTION A SOUTH ABUTMENT PEDESTAL DETAILS" SHEET.
4. FOR DETAILS OF BEARINGS, SEE "BEARING DETAILS" SHEET.
5. FOR DETAILS FOR ANCHOR BOLT BLOCKOUTS, SEE "OPTION A SOUTH ABUTMENT PEDESTAL DETAILS" SHEET.
6. FOR DETAILS OF EXPANSION JT, SEE "ABUTMENT MODULAR EXPANSION JOIN LAYOUT" SHEET.
7. FOR DETAILS OF PARAPET ON BACKWALL, SEE PARAPET SHEETS.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION A
SOUTH ABUTMENT
PLAN & ELEVATION

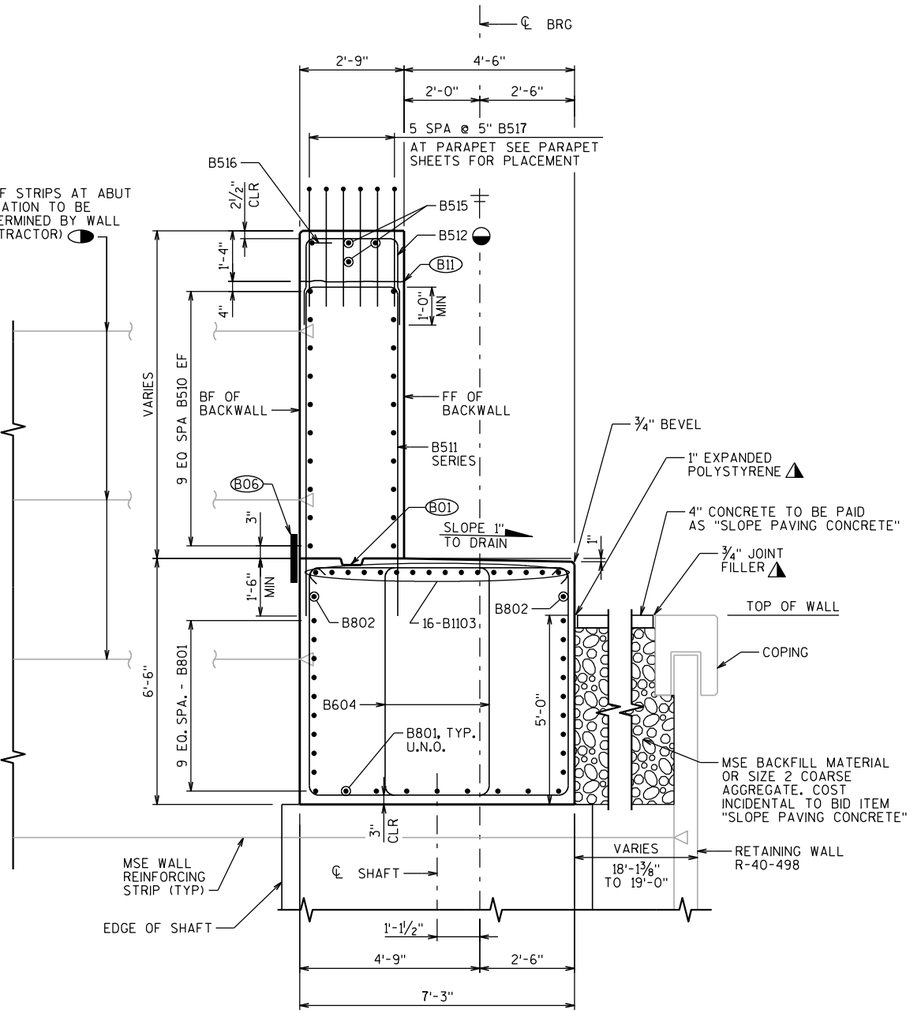
SHEET A20 OF A41

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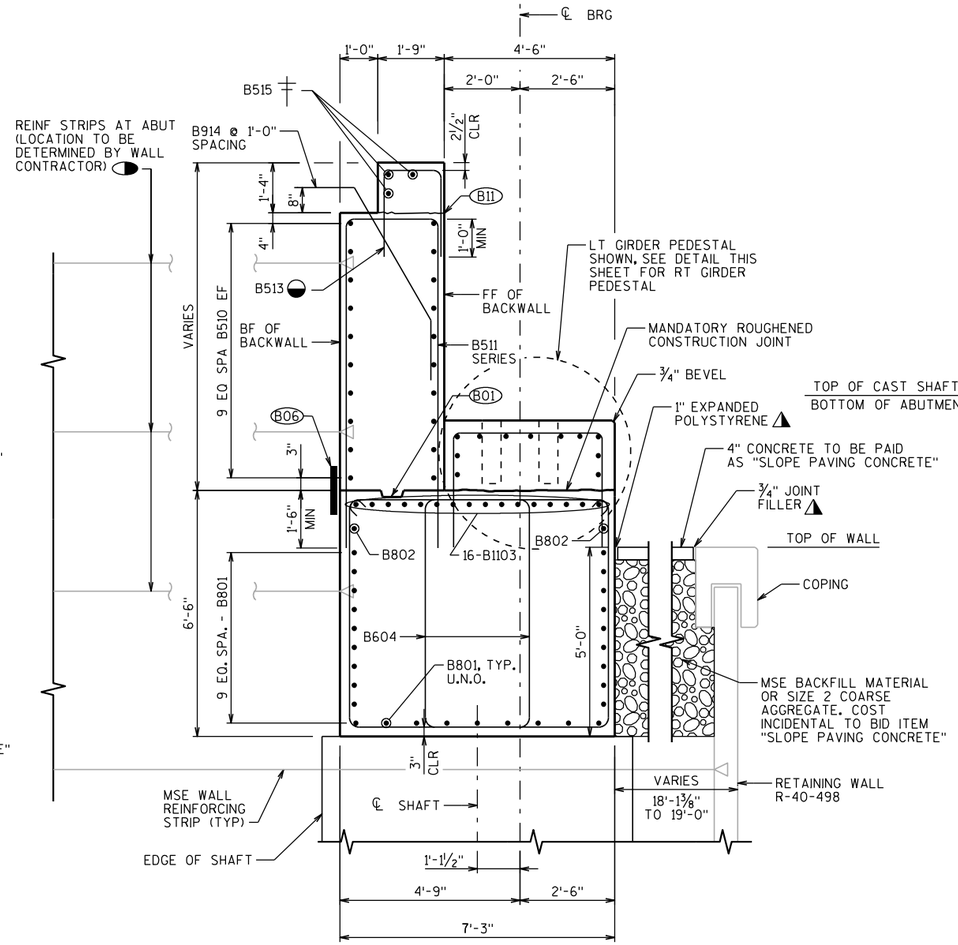
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STATE PROJECT NUMBER

1060-33-81

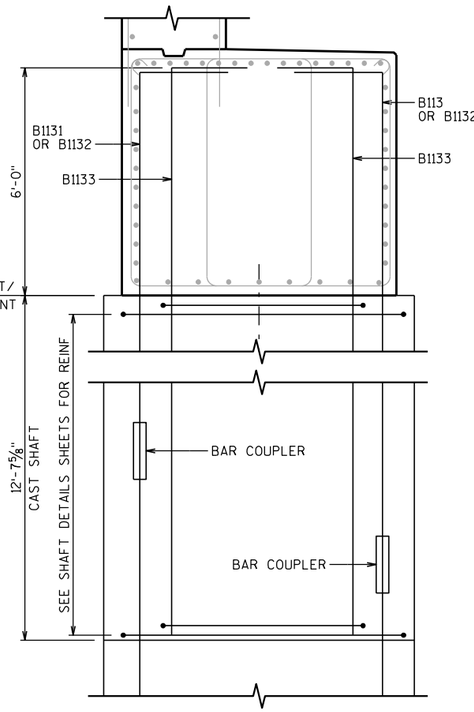


SECTION A-A



SECTION B-B

SHAFT REINF NOT SHOWN FOR CLARITY



SECTION B-B

SHOWING SHAFT REINFORCEMENT
SEE SECTION E-E, SHEET A19 FOR CROSS-SECTION

LEGEND

(B01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X6"

(B06) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.

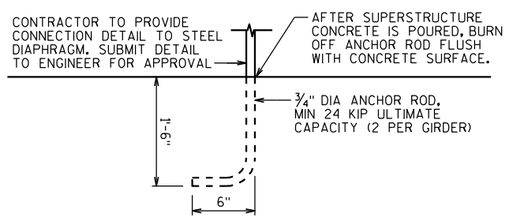
(B11) CONST JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

REINFORCING STRIPS SHALL BE DESIGNED TO RESIST AN UNFACTORED SUPERSTRUCTURE LATERAL LINE LOAD OF 2.4 K/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 ⅛" BELOW SURFACE OF CONCRETE).

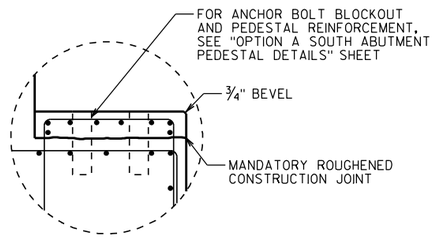
ANCHOR REBAR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD SPEC FOR MASONRY ANCHOR TYPE S WITH A MIN PULLOUT CAPACITY OF 20 KIPS AND EMBEDMENT OF 1'-0".

8'-0" LONG BAR WITH 1'-0" MIN LAP, CUT IN FIELD TO CLEAR JOINT SUPPORT SYSTEM AS REQUIRED.



TEMPORARY HOLD DOWN DEVICE

LOCATE WITHIN 1'-6" OF GIRDER BOTTOM FLANGE.
PAYMENT IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES"



PEDESTAL - RT GIRDER

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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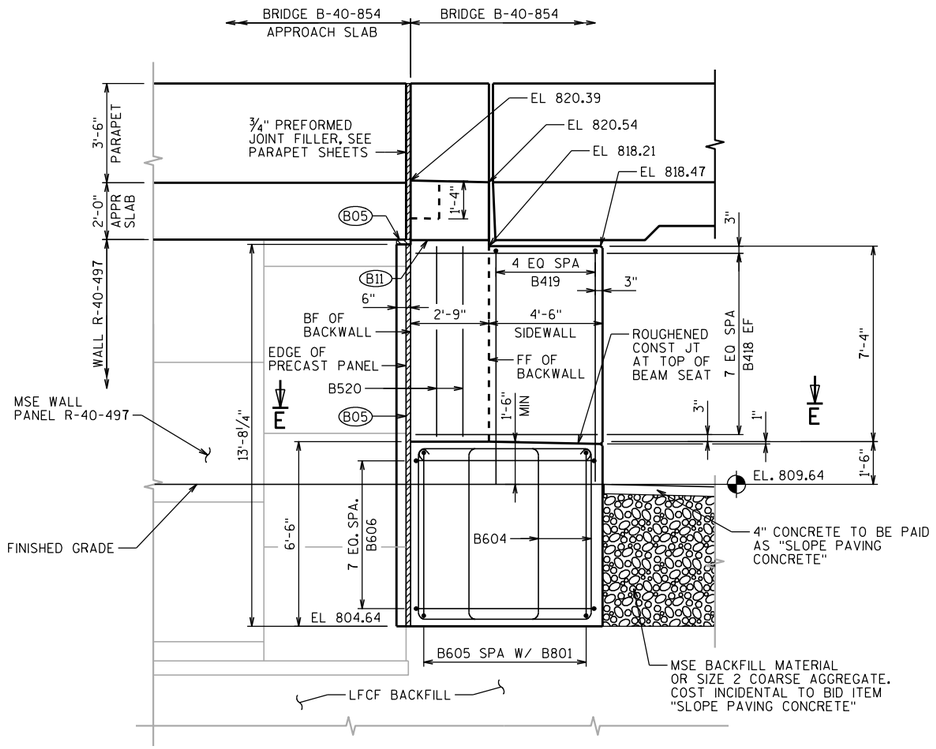
OPTION A
SOUTH ABUTMENT
DETAILS (1 OF 2)

SHEET A21 OF A41

8

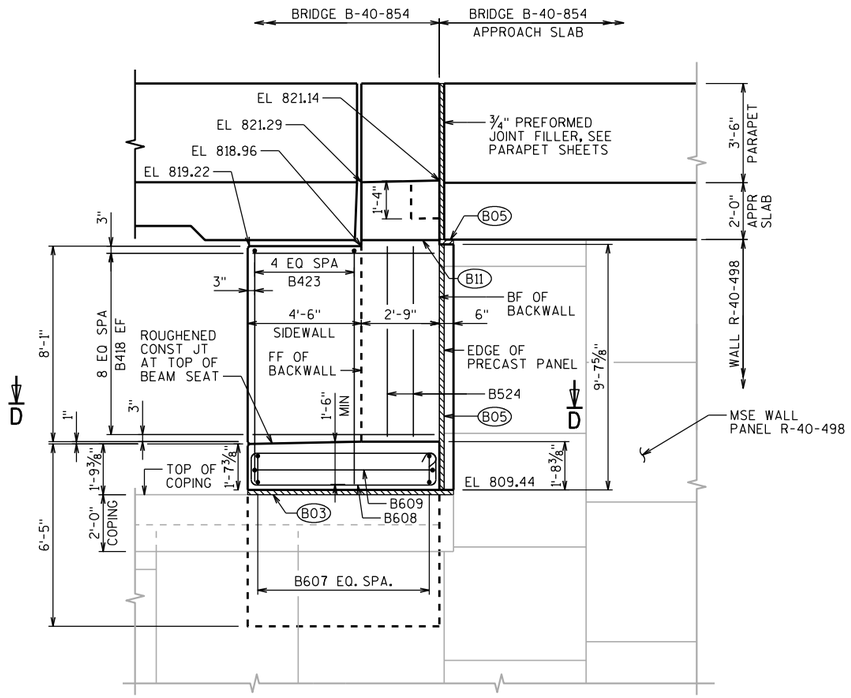
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STATE PROJECT NUMBER
1060-33-81



SECTION C-C

(LOOKING WEST)
(SHAFT NOT SHOWN FOR CLARITY)



SECTION D-D

(LOOKING EAST)
(SHAFT NOT SHOWN FOR CLARITY)

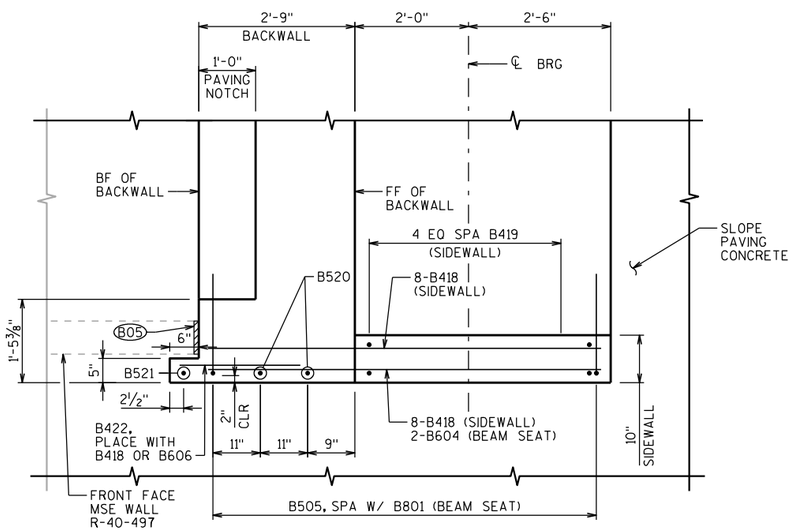
LEGEND

(B03) 2" PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.

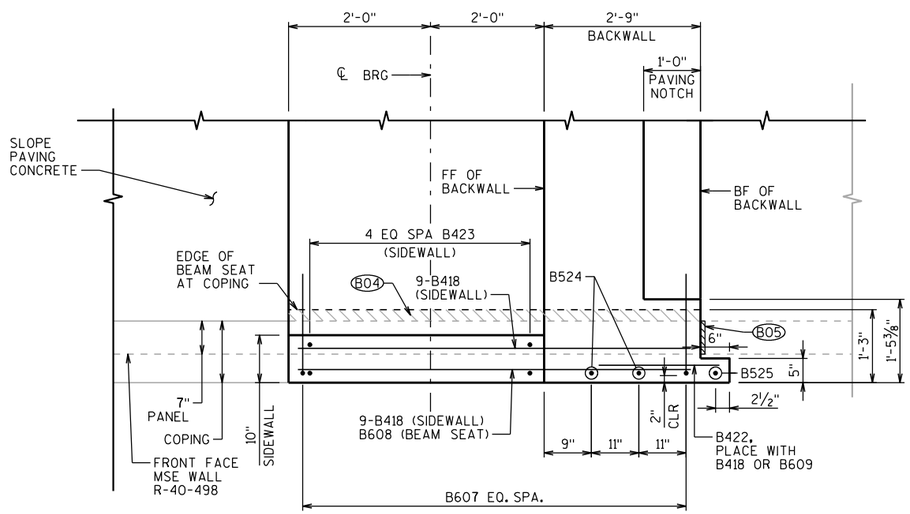
(B04) PREFORMED JOINT FILLER (2"± BASED ON A 7" MSE WALL PANEL THICKNESS) WITH NON-BITUMINOUS JOINT SEALER PLACED BETWEEN COPING/PRECAST PANEL AND EDGE OF BEAM SEAT. COLOR TO MATCH CONCRETE STAIN.

(B05) ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACKFACE OF BACK WALL AND WALL R-40-498. COLOR TO MATCH CONCRETE STAIN.

(B11) CONST JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.



SECTION E-E



SECTION F-F

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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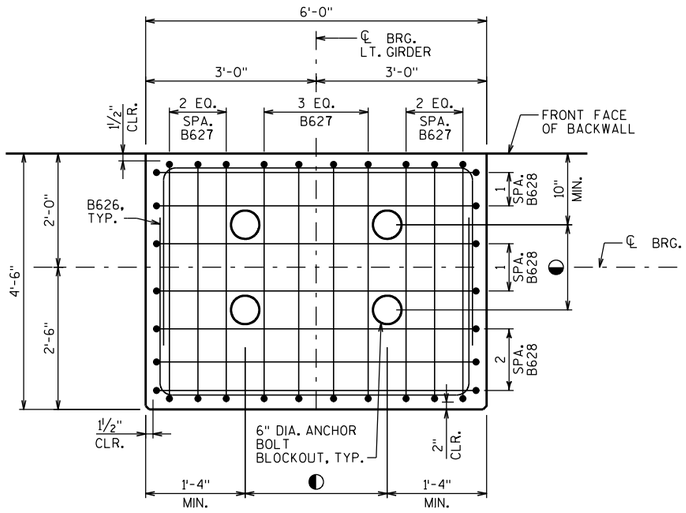
OPTION A
SOUTH ABUTMENT
DETAILS (2 OF 2)

SHEET A22 OF A41

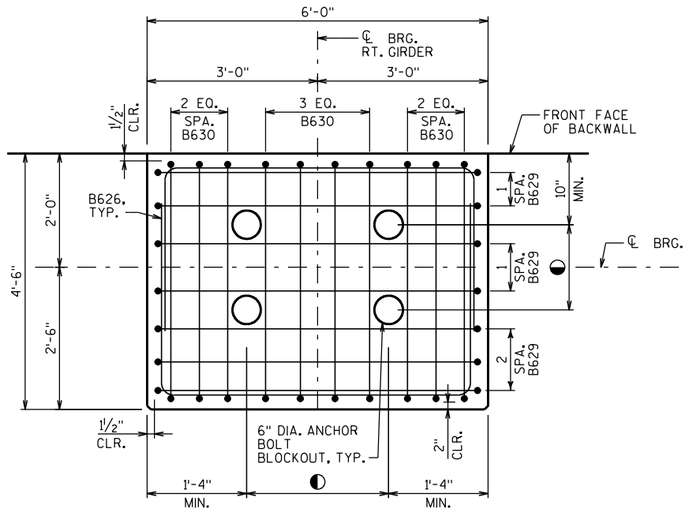
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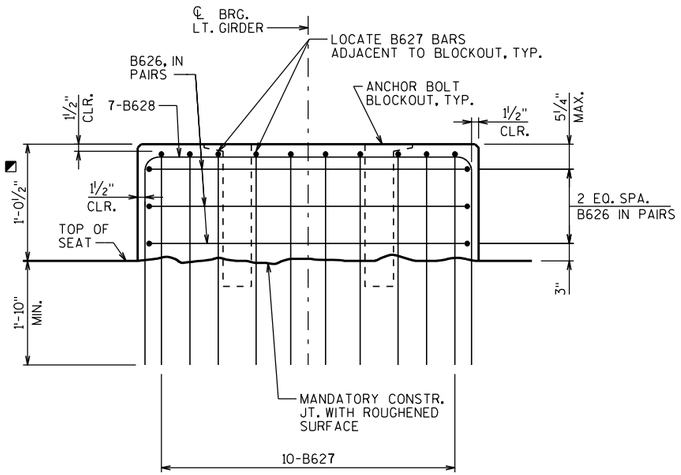
STATE PROJECT NUMBER
1060-33-81



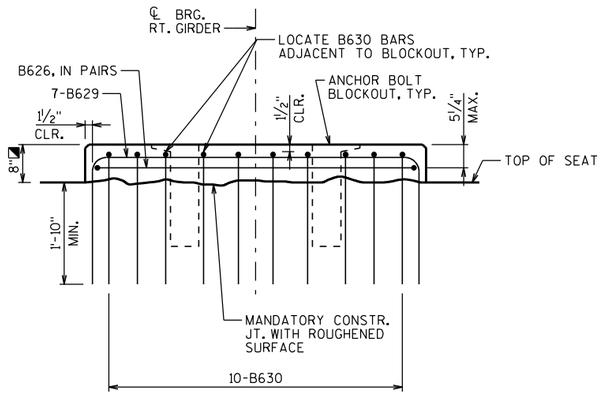
PEDESTAL PLAN - LEFT GIRDER



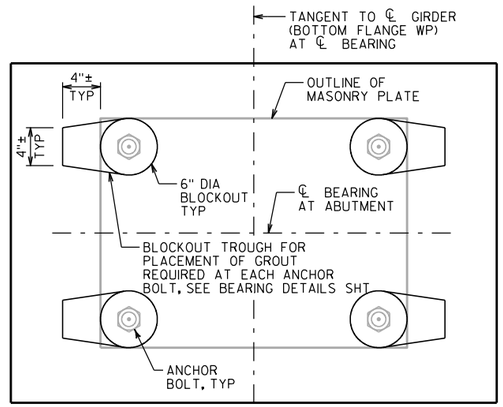
PEDESTAL PLAN - RIGHT GIRDER



PEDESTAL ELEVATION - LEFT GIRDER



PEDESTAL ELEVATION - RIGHT GIRDER



PEDESTAL PLAN - GROUT TROUGHS

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.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

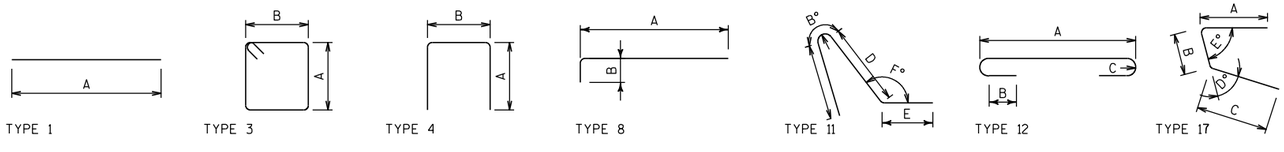
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OPTION A
SOUTH ABUTMENT
PEDESTAL DETAILS

SHEET A23 OF A41

STATE PROJECT NUMBER
1060-33-81

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
B801	E	27	38'-8"			1	38'-8"						BODY - HORIZ.					
B802	E	2	39'-11"			1	39'-11"						BODY - HORIZ.					
B1103	E	16	43'-1"	X		12	39'-11"	0'-8"	11¼"				BODY - HORIZ.					
B604	E	104	22'-6"	X		3	6'-0"	4'-10"					BODY - STIRRUP					
B605	E	9	9'-0"	X		4	1'-9"	5'-10"					BODY - VERT.					
B606	E	7	9'-11"	X		4	1'-9"	6'-9"					BODY - HORIZ.					
B607	E	9	4'-4"	X		4	1'-9"	1'-2"					BODY - VERT.					
B608	E	2	17'-4"	X		3	1'-4"	6'-11"					BODY - STIRRUP	A	9'-7"	10'-4"	1 SERIES OF 41	21'-4" TO 22'-10"
B609	E	1	10'-1"	X		4	1'-10"	6'-9"					BODY - HORIZ.					
B510	E	10	39'-11"			1	39'-11"						BACKWALL - HORIZ.					
B511	E	41	22'-1"	X	⚠	4	10'-0"	2'-5"					BACKWALL - VERT.					
B512	S	4	6'-10"	X		4	2'-4"	2'-5"					BACKWALL - VERT.					
B513	S	39	5'-8"	X		4	2'-4"	1'-3"					BACKWALL - VERT.					
B914	S	39	7'-0"	X		17	1'-7"	4'-1"	1'-7"	60	150		BACKWALL - APPROACH TIE					
B515	S	18	8'-0"			1	8'-0"						BACKWALL - HORIZ.					
B516	S	2	2'-2"	X		4	0'-8"	1'-1"					BACKWALL - HORIZ.					
B517	S	12	6'-10"	X		11	2'-10"	172	0'-4½"	0'-10"	2'-0"	188	PARAPET TIE					
B418	E	34	6'-11"			1	6'-11"						SIDEWALL - HORIZ.					
B419	E	5	17'-8"	X		4	8'-8"	0'-6"					SIDEWALL - VERT.					
B520	E	2	6'-11"			1	6'-11"						SIDEWALL - VERT.					
B521	E	1	13'-4"			1	13'-4"						SIDEWALL - VERT.					
B422	E	26	2'-5"			1	2'-5"						SIDEWALL - HORIZ.					
B423	E	5	19'-2"	X		4	9'-5"	0'-6"					SIDEWALL - VERT.					
B524	E	2	7'-8"			1	7'-8"						SIDEWALL - VERT.					
B525	E	1	9'-3"			1	9'-3"						SIDEWALL - VERT.					
B626	E	8	11'-7"	X		4	3'-2"	5'-7"					LEFT AND RIGHT PEDESTAL					
B627	E	10	9'-5"	X		4	2'-9"	4'-3"					LEFT PEDESTAL					
B628	E	7	10'-11"	X		4	2'-9"	5'-9"					LEFT PEDESTAL					
B629	E	7	10'-3"	X		4	2'-5"	5'-9"					RIGHT PEDESTAL					
B630	E	10	8'-9"	X		4	2'-5"	4'-3"					RIGHT PEDESTAL					
B1131	E	24	15'-3"	X		8	13'-7"	2'-0"					CAST SHAFT VERTICAL					
B1132	E	24	18'-3"	X		8	16'-7"	2'-0"					CAST SHAFT VERTICAL					
B1133	E	32	20'-3"	X		8	18'-7"	2'-0"					CAST SHAFT VERTICAL					



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
E - STEEL, HIGH STRENGTH, EPOXY COATED.
S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

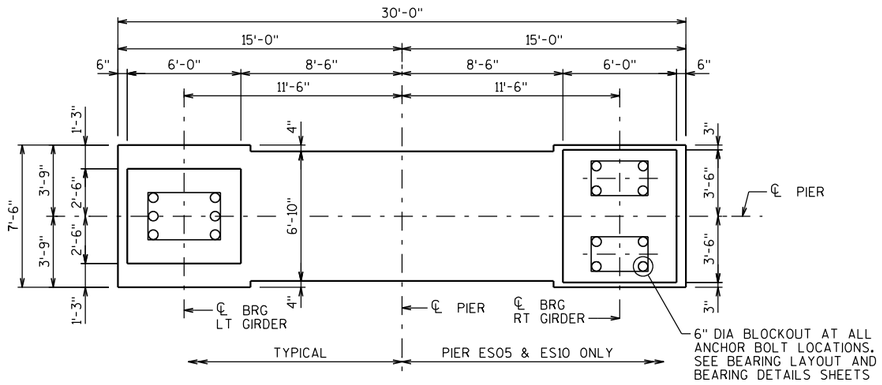
STRUCTURE B-40-854

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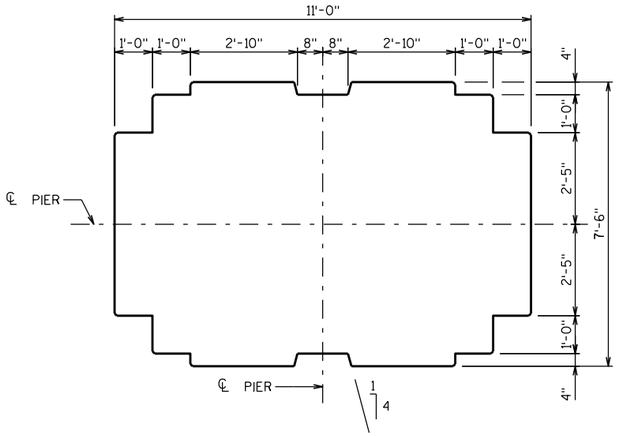
OPTION A
SOUTH ABUTMENT
REINFORCEMENT
SCHEDULE

SHEET A24 OF A41

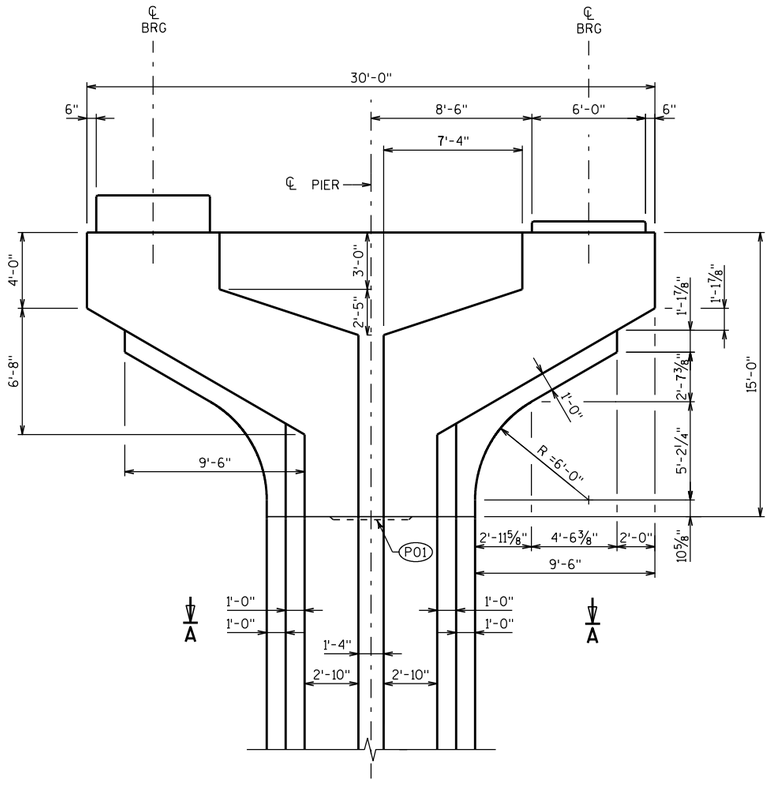
STATE PROJECT NUMBER
1060-33-81



PLAN

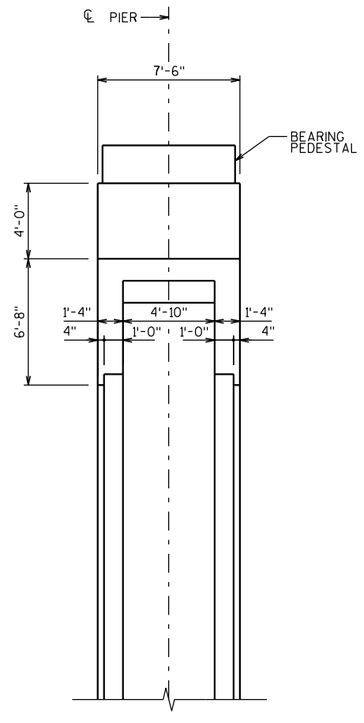


SECTION A-A



FRONT ELEVATION

(LOOKING UPSTATION)



SIDE ELEVATION

LEGEND

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION A
TYPICAL PIER CAP
LAYOUT

SHEET A25 OF A41

8

8

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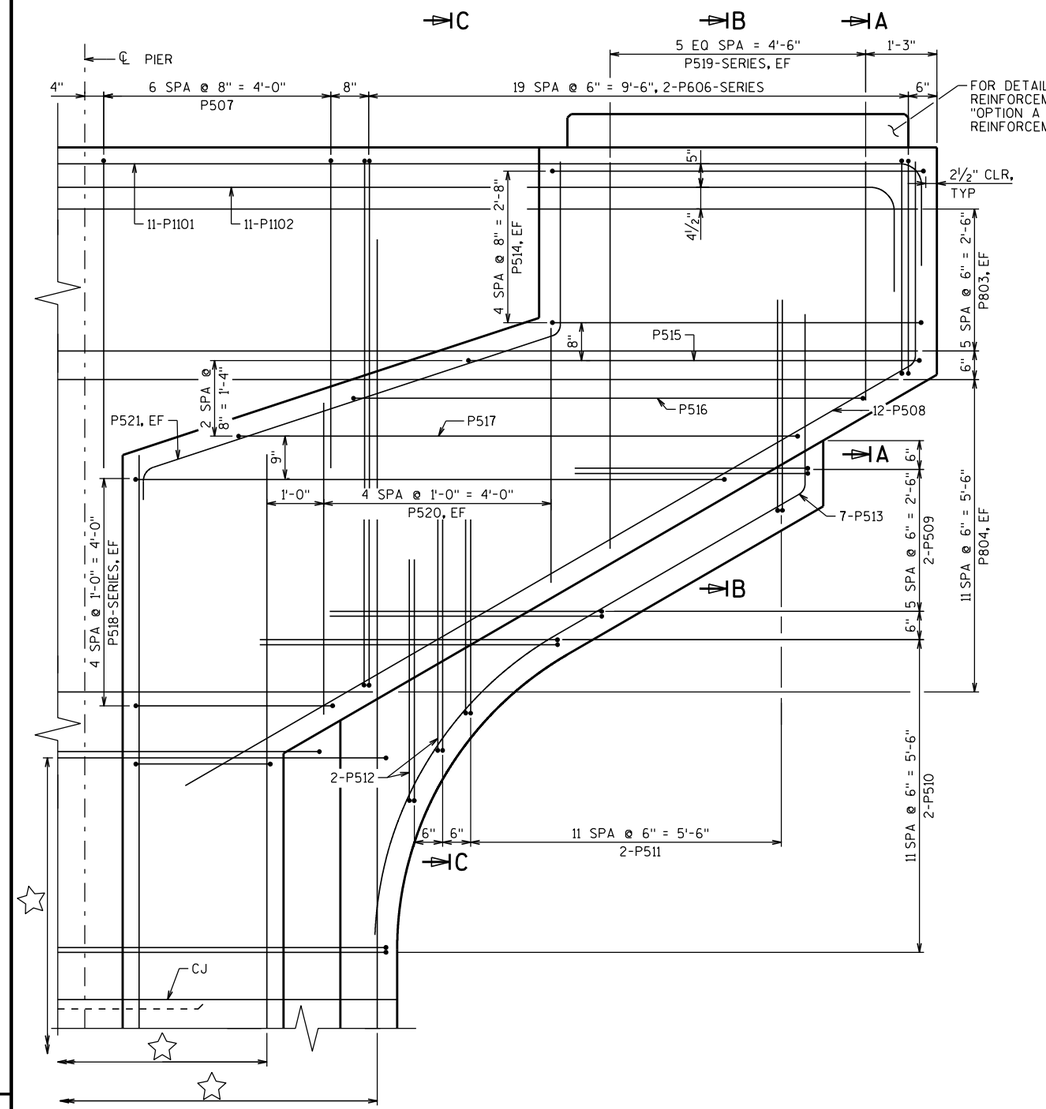
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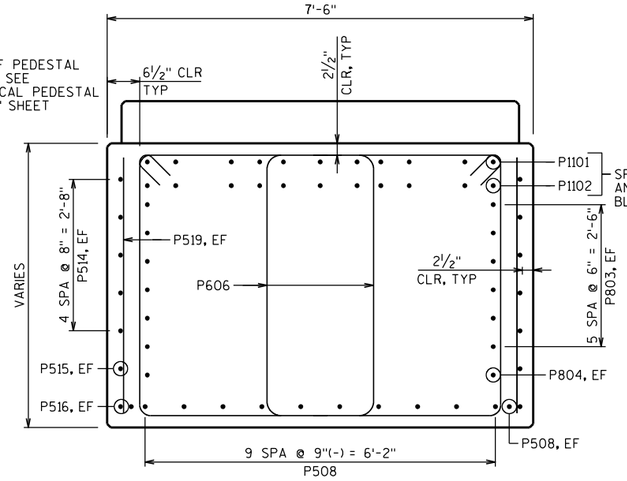
STATE PROJECT NUMBER

1060-33-81



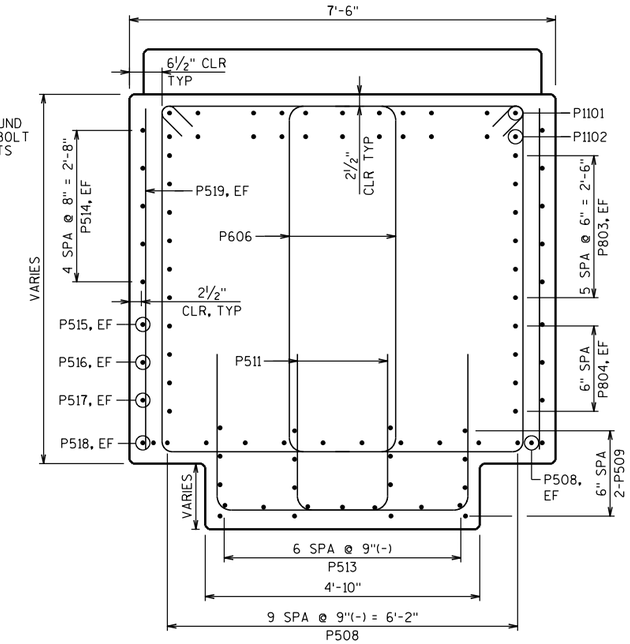
PARTIAL ELEVATION

(REINFORCEMENT IS SYMMETRICAL ABOUT ℄ PIER)



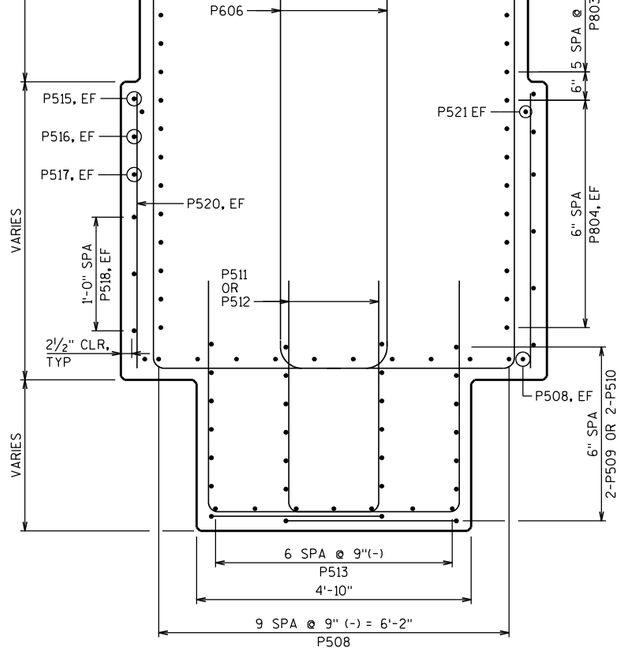
SECTION A-A

(PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY)



SECTION B-B

(PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY)



SECTION C-C

LEGEND

☆ COLUMN REINFORCEMENT VARIES BY PIER. SEE PIER DETAIL SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION A
TYPICAL PIER
CAP DETAILS

SHEET A26 OF A41

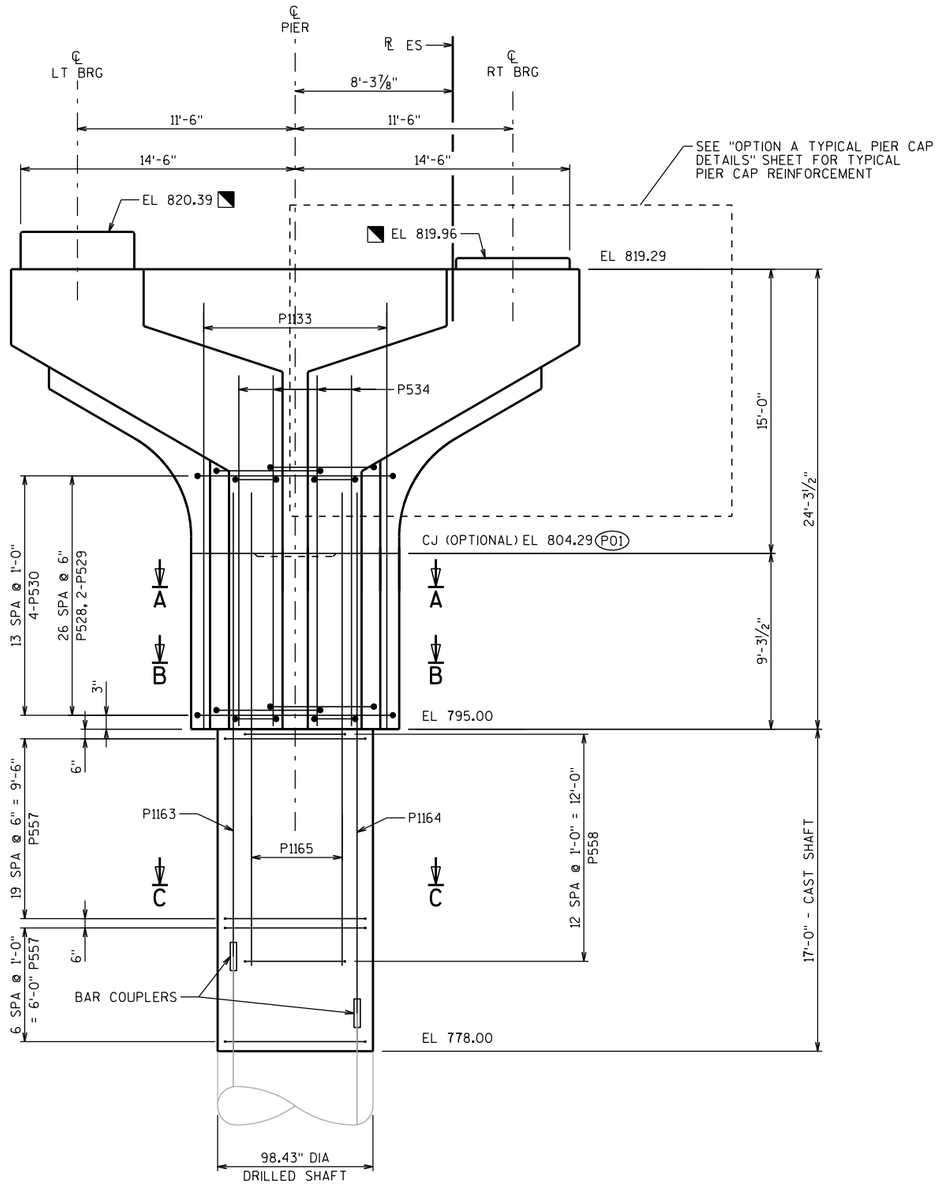
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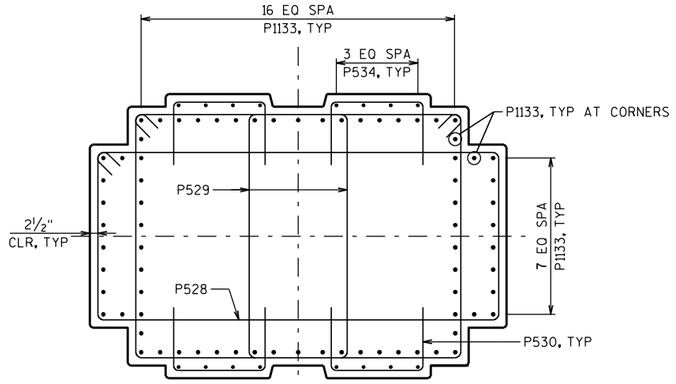
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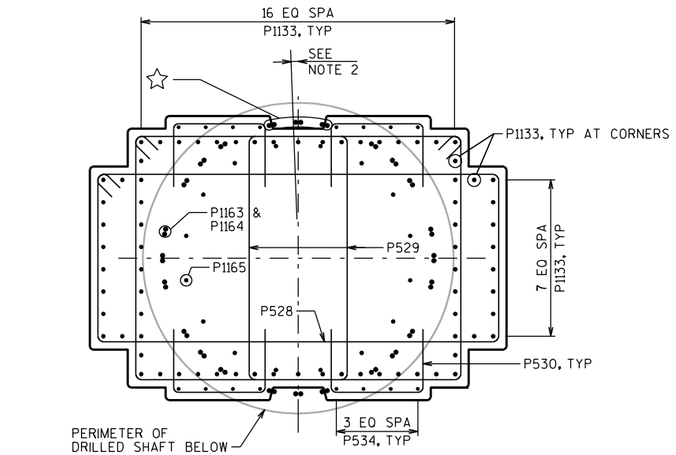
STATE PROJECT NUMBER
1060-33-81



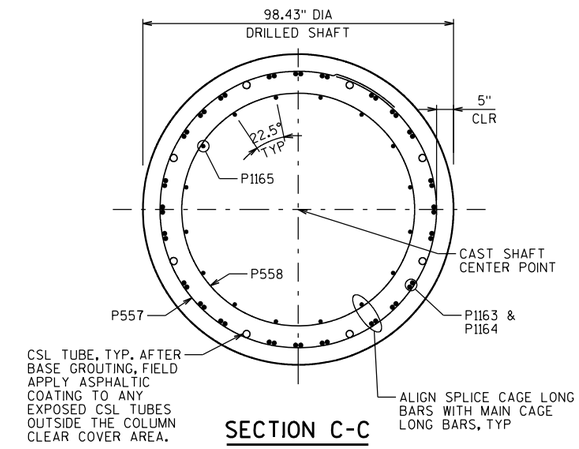
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION.
2. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
3. DRILLED SHAFT CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

☆ BURN OFF ALL PROTRUDING DRILLED SHAFT BARS NOT COMPLETELY INSIDE THE CLEAR COVER AREA OF THE COLUMN PLAN LOCATION. BURN OFF BARS FLUSH WITH TOP OF DRILLED SHAFT AND FIELD APPLY ASPHALTIC COATING MATERIAL CONFORMING TO AASHTO M190 TO ALL EXPOSED AREAS OF CUT BARS, TYP. COST SHALL BE INCLUDED WITH COST OF "DRILLED FOUNDATION SHAFT 98.43-INCH".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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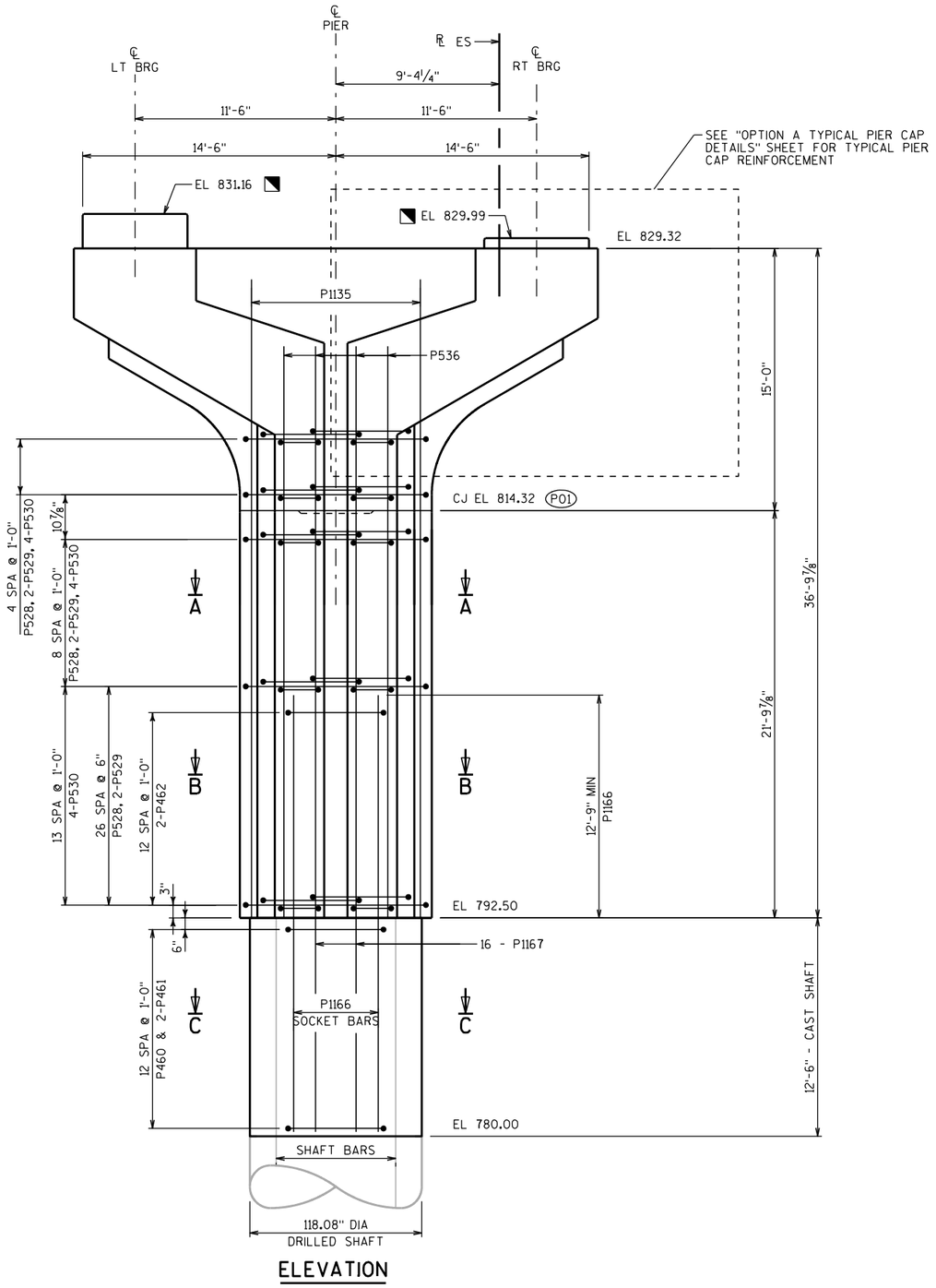
OPTION A
PIER ES01
DETAILS

SHEET A27 OF A41

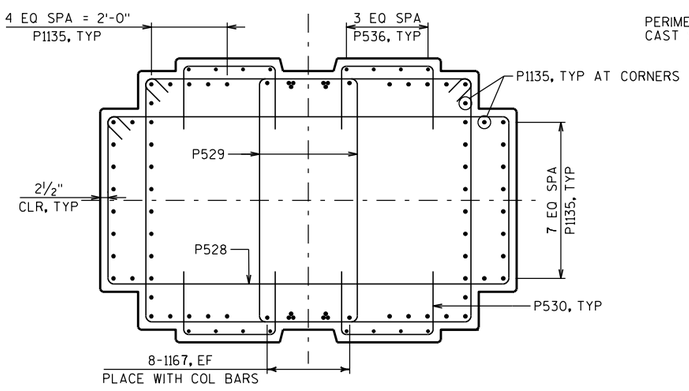
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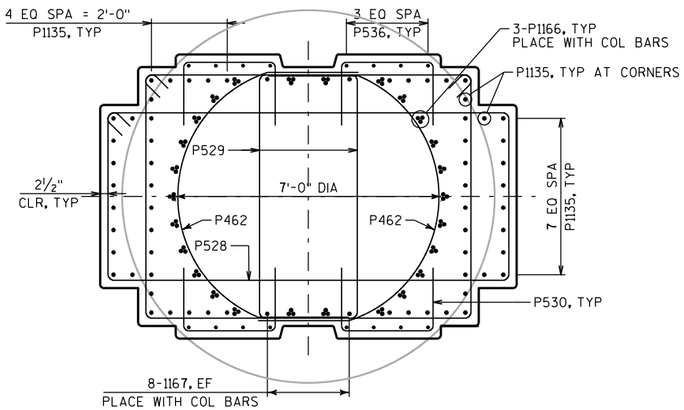
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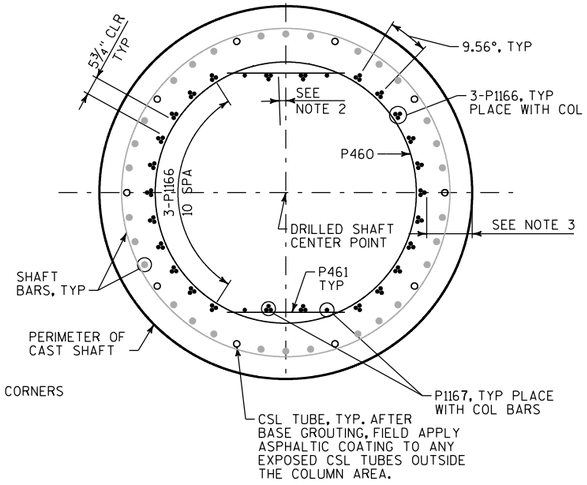
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION.
2. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
3. THE SOCKET CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION A
PIER ES02
DETAILS

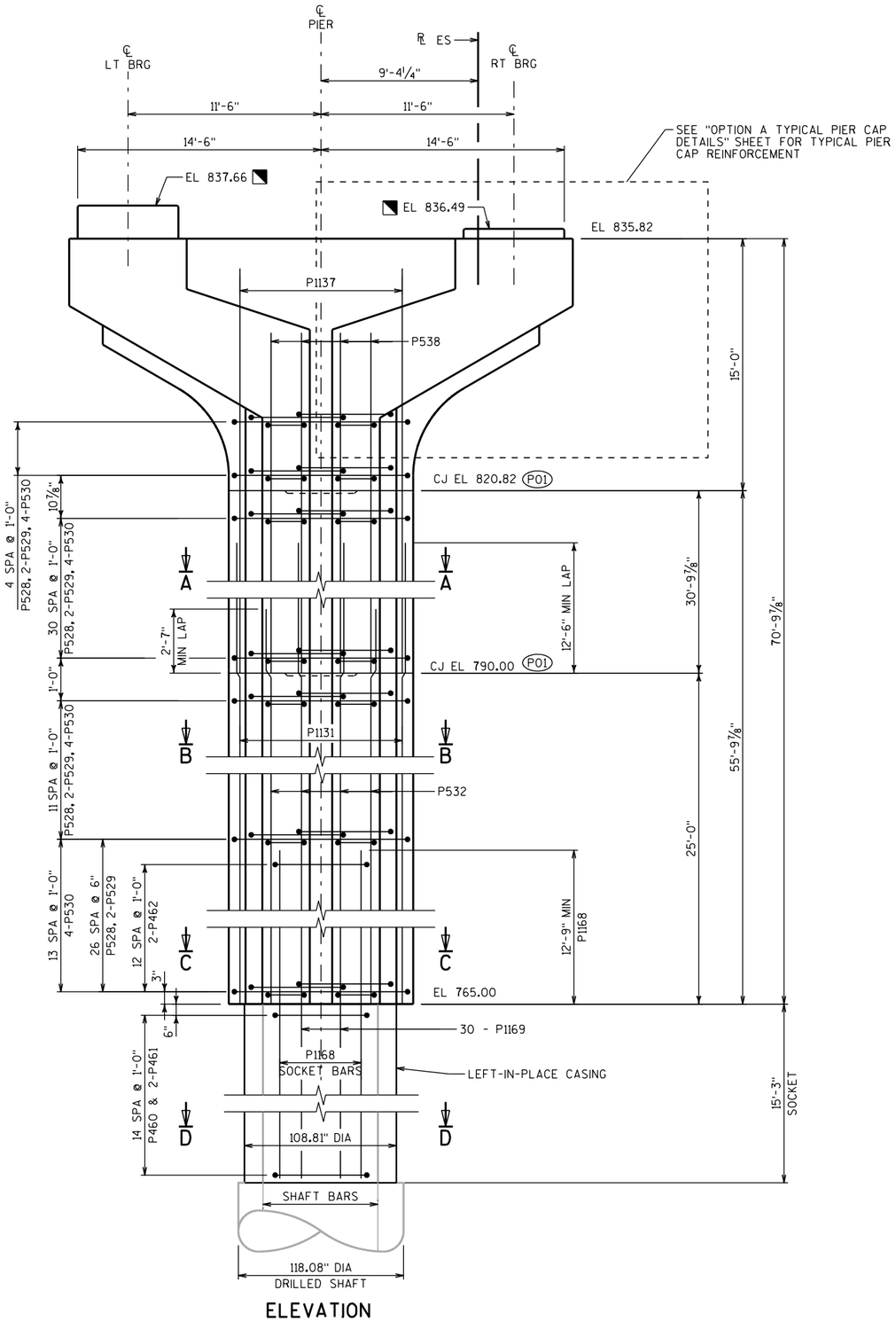
SHEET A28 OF A41

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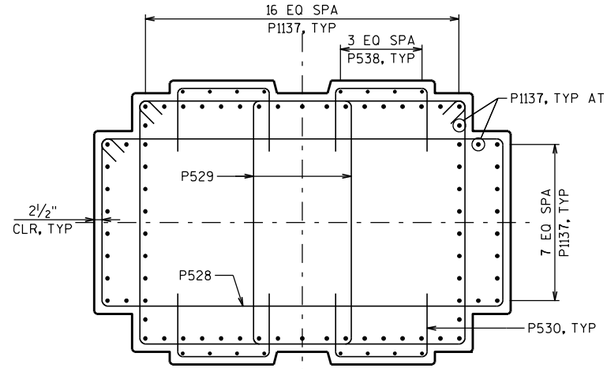
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STATE PROJECT NUMBER

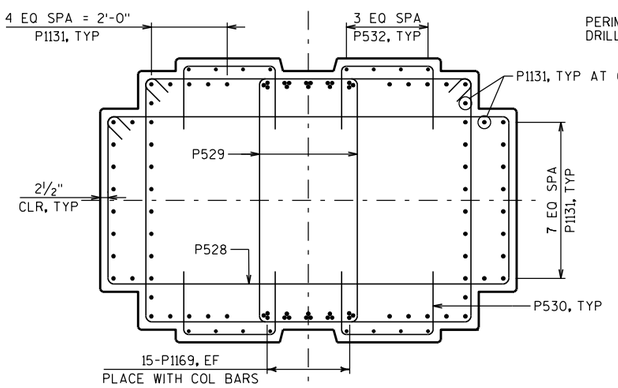
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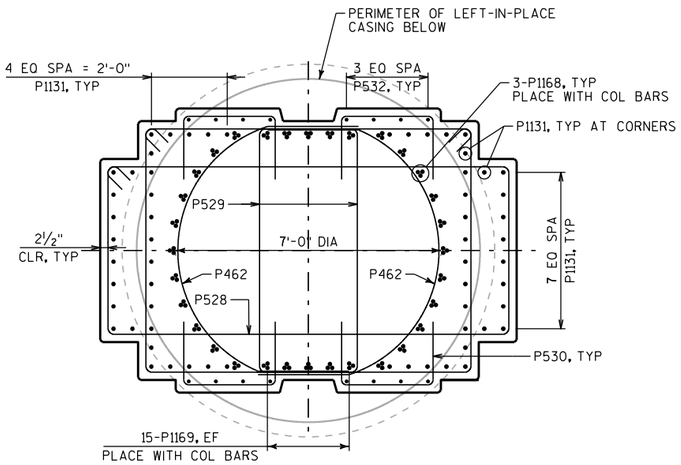
ELEVATION



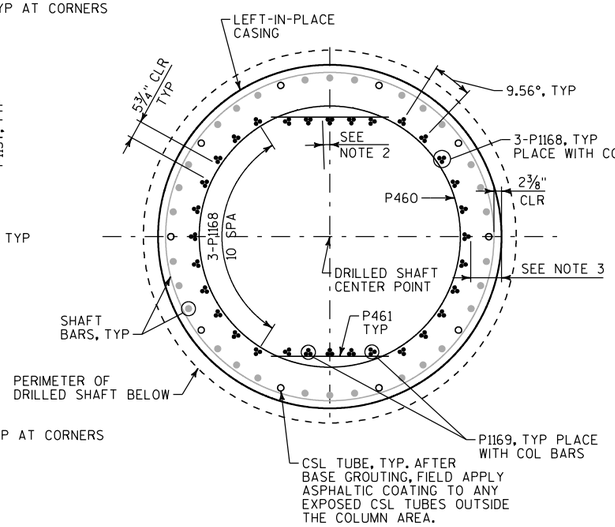
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION.
2. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
3. THE SOCKET CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

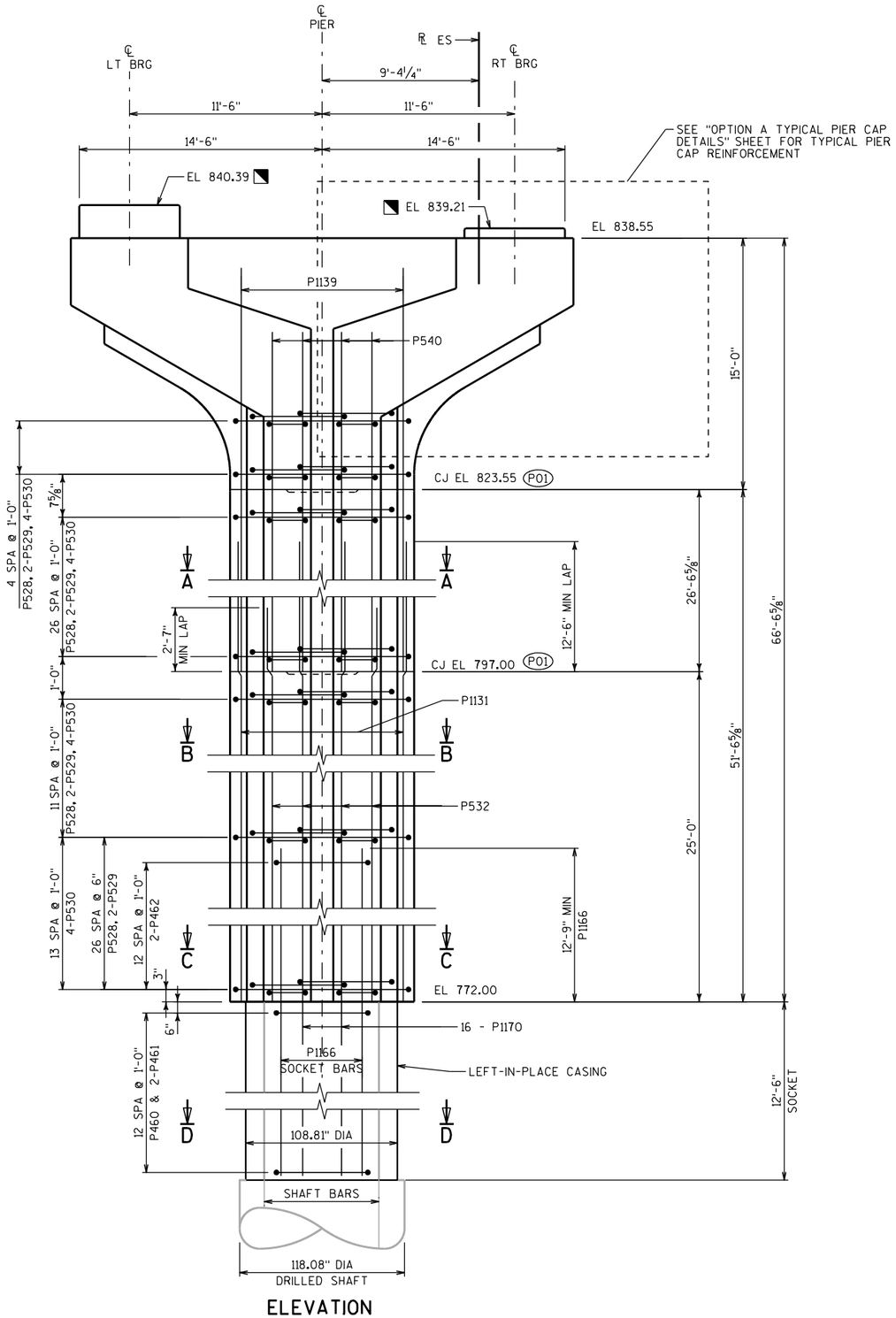
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OPTION A
PIER ES03
DETAILS

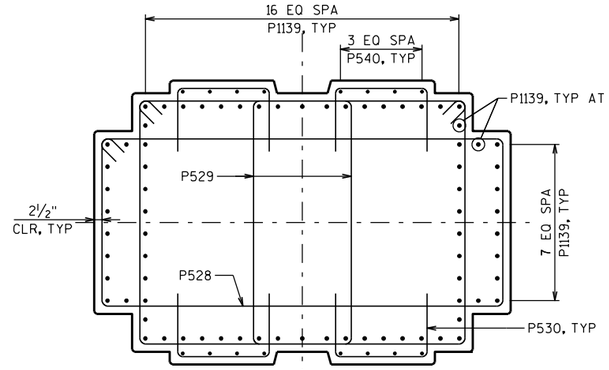
SHEET A29 OF A41

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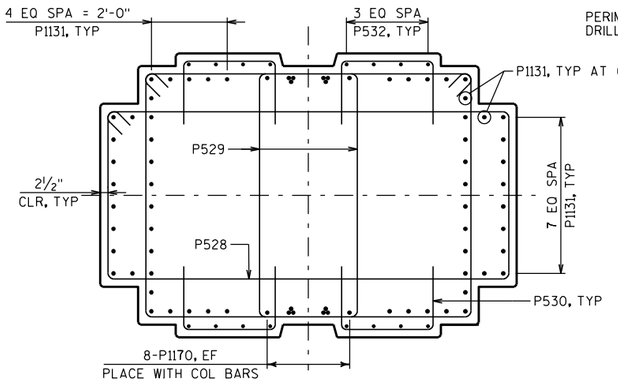
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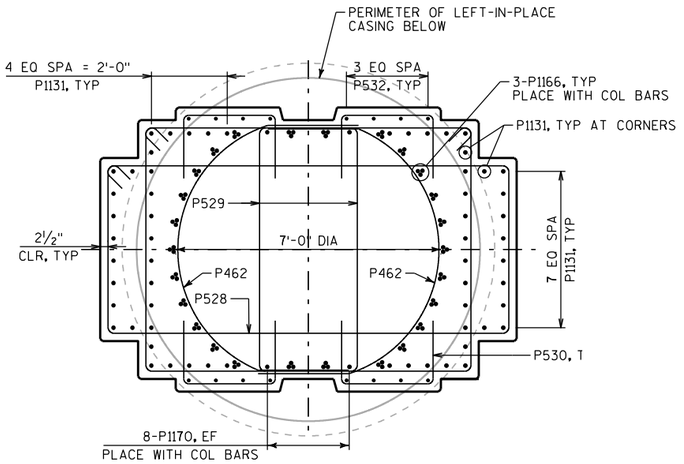
ELEVATION



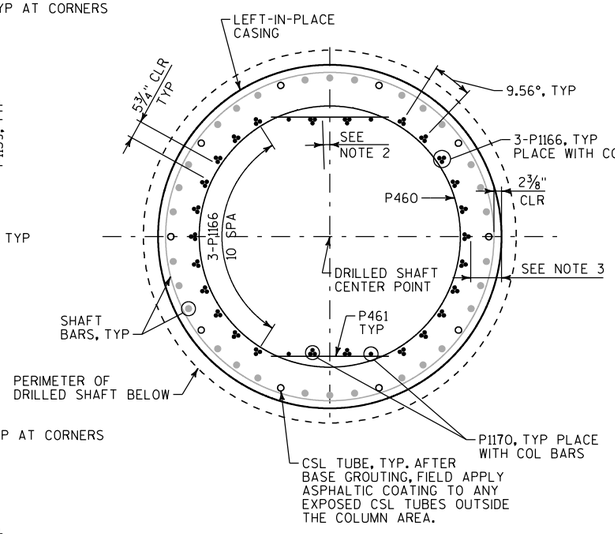
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION.
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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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

STATE PROJECT NUMBER
1060-33-81

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY JJO | PLANS CK'D. JWC

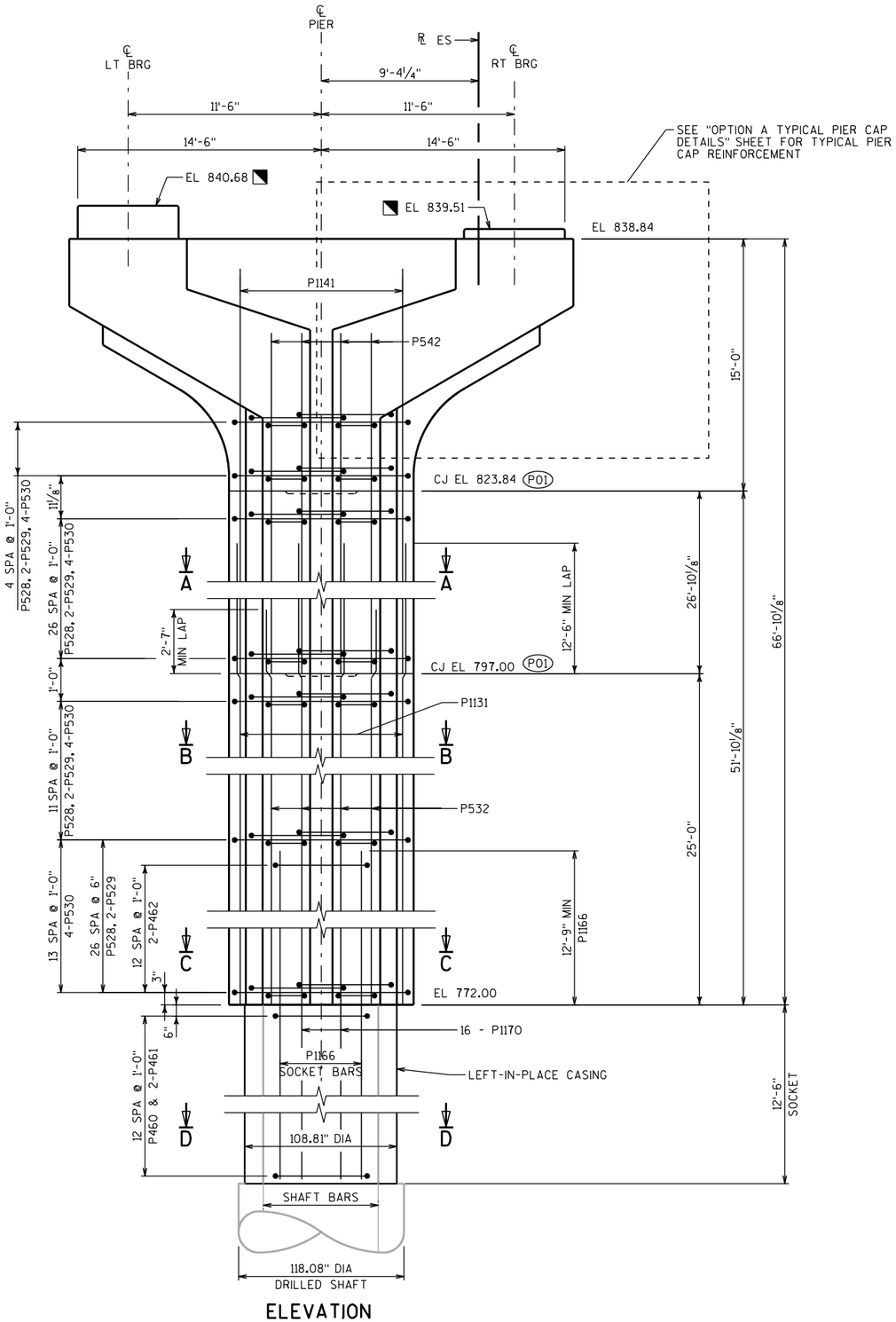
OPTION A
PIER ES04
DETAILS

SHEET A30 OF A41

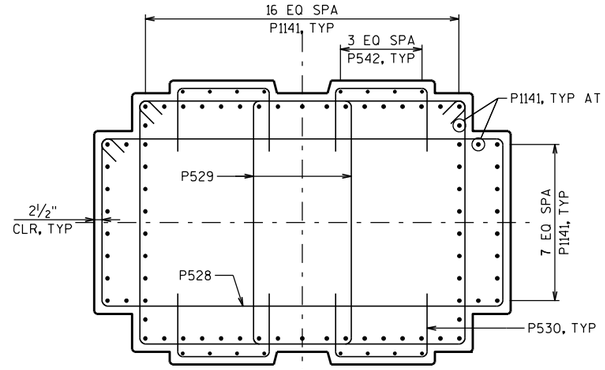
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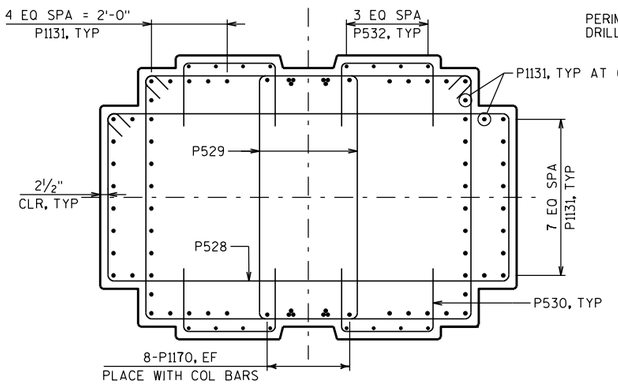
STATE PROJECT NUMBER
1060-33-81



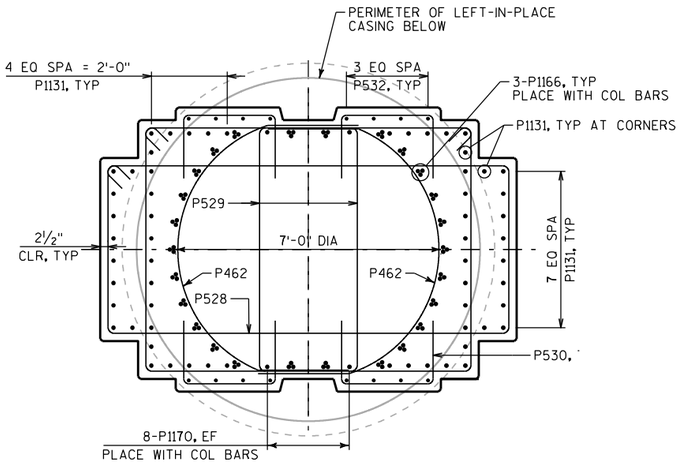
ELEVATION



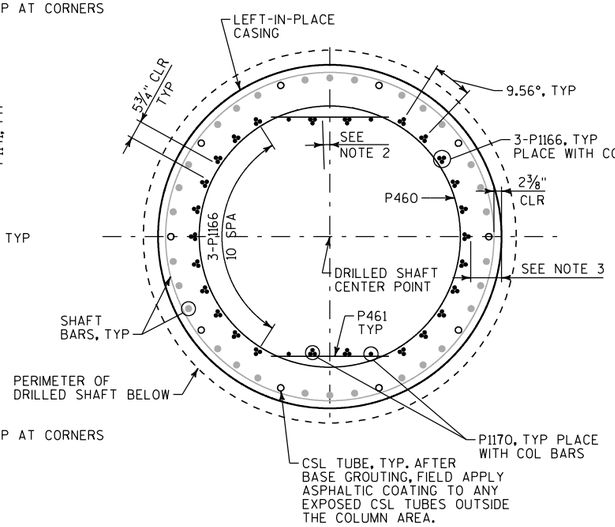
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION A
PIER ES05
DETAILS

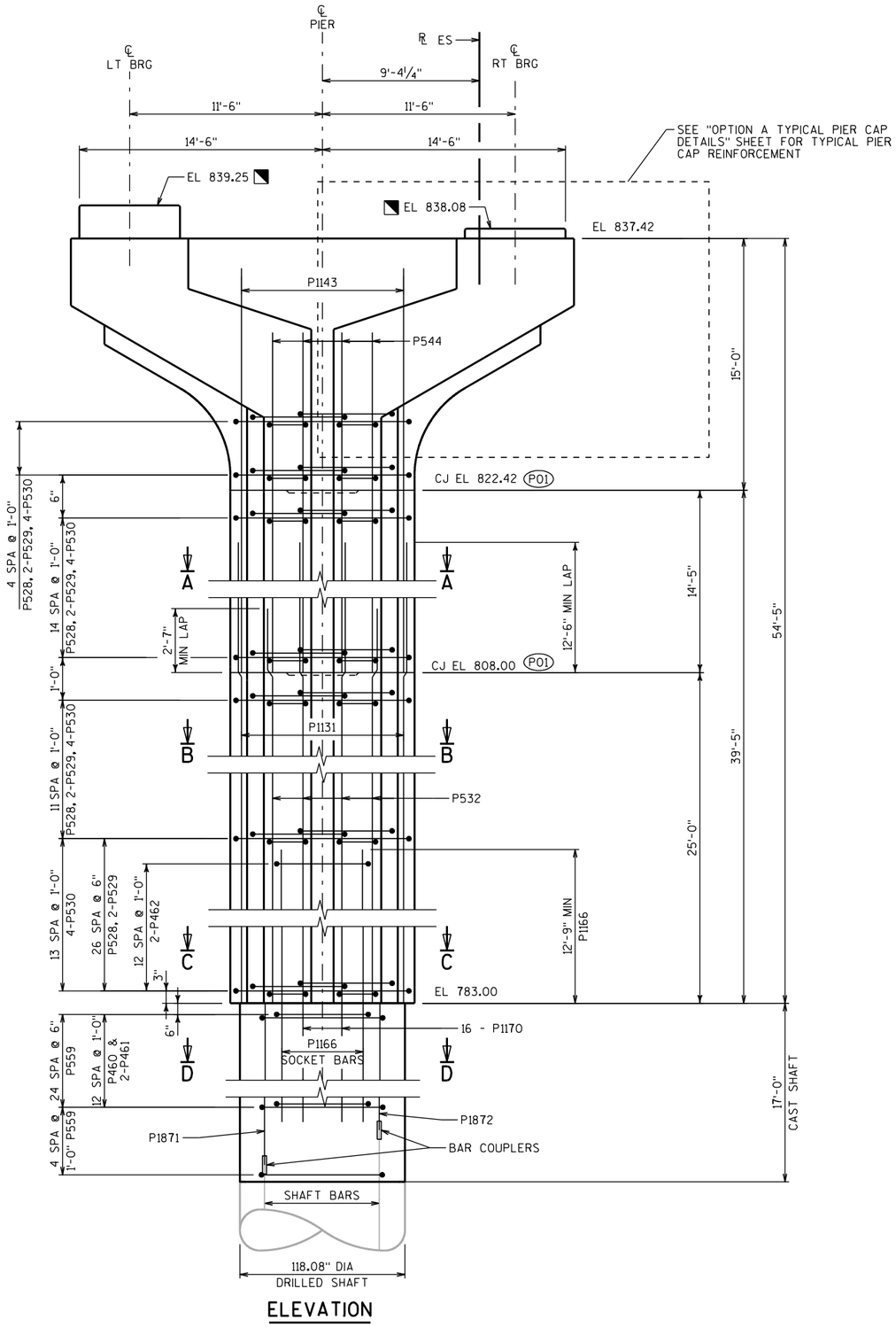
SHEET A31 OF A41

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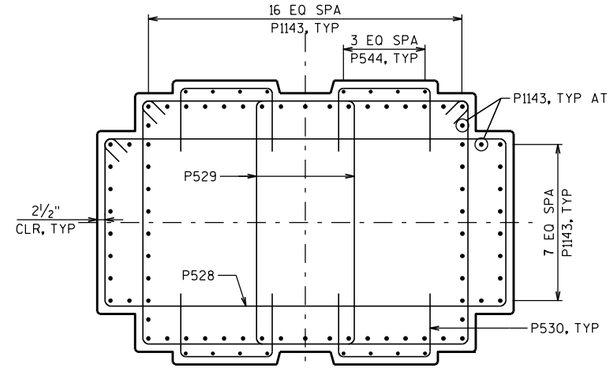
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STATE PROJECT NUMBER

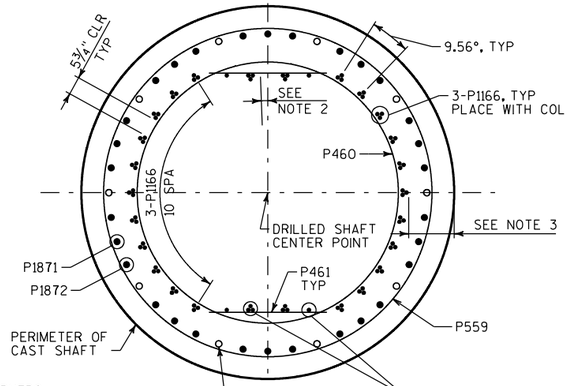
1060-33-81



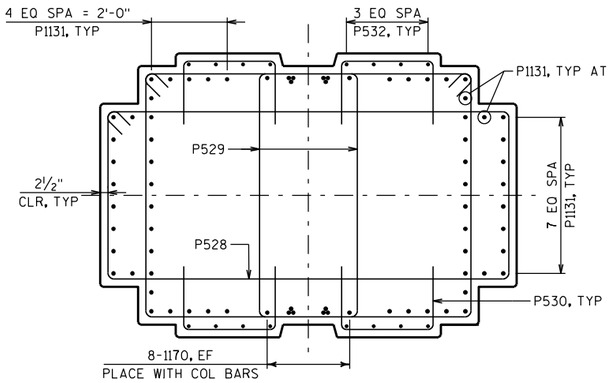
ELEVATION



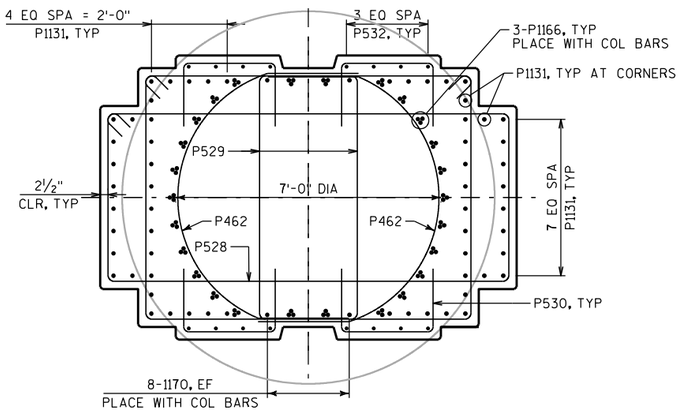
SECTION A-A



SECTION D-D



SECTION B-B



SECTION C-C

NOTES:

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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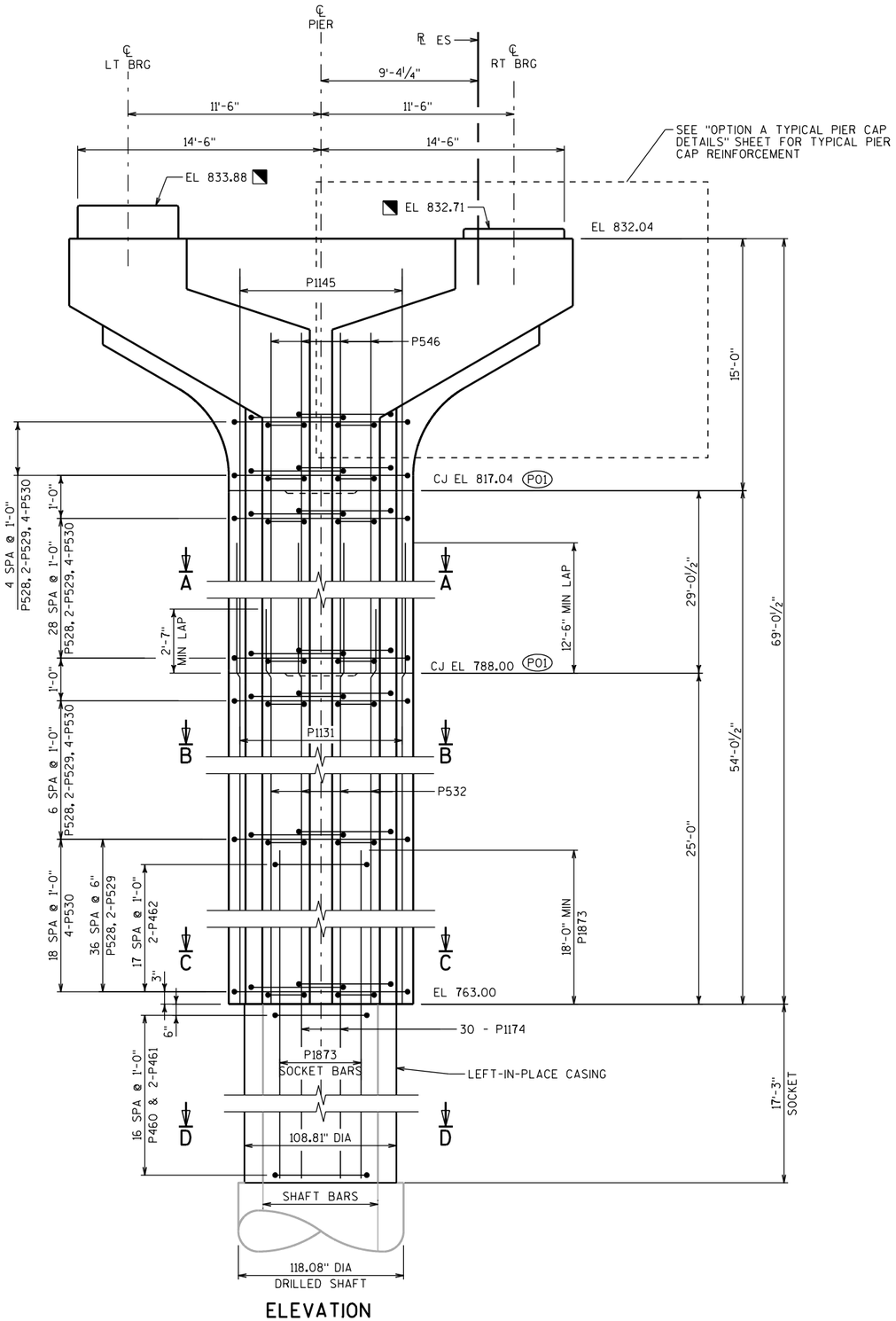
OPTION A
PIER ES06
DETAILS

SHEET A32 OF A41

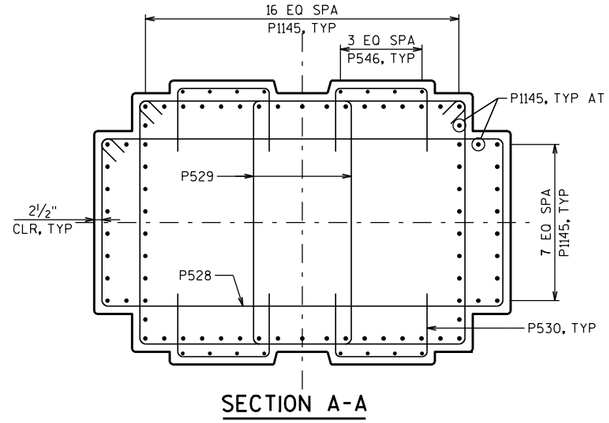
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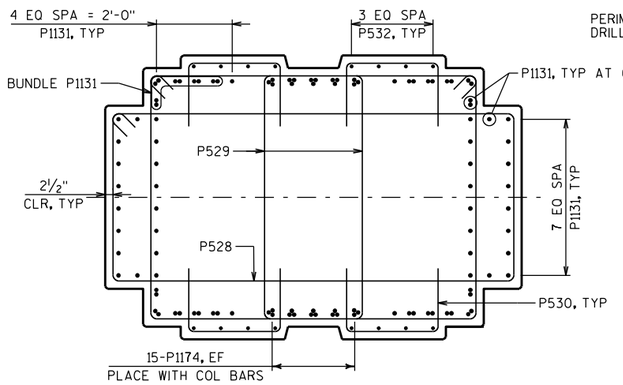
STATE PROJECT NUMBER
1060-33-81



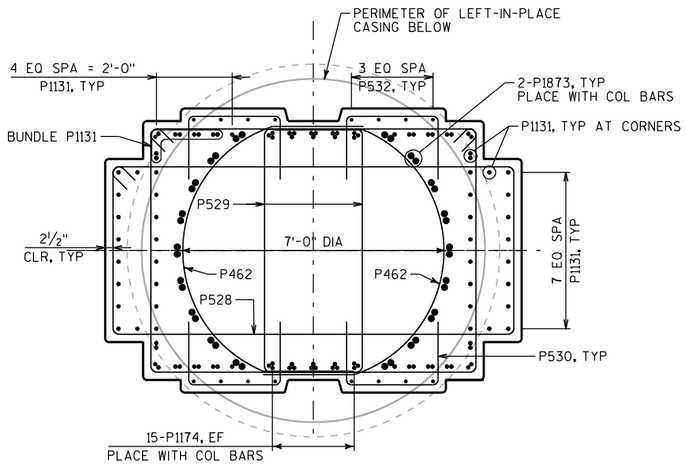
ELEVATION



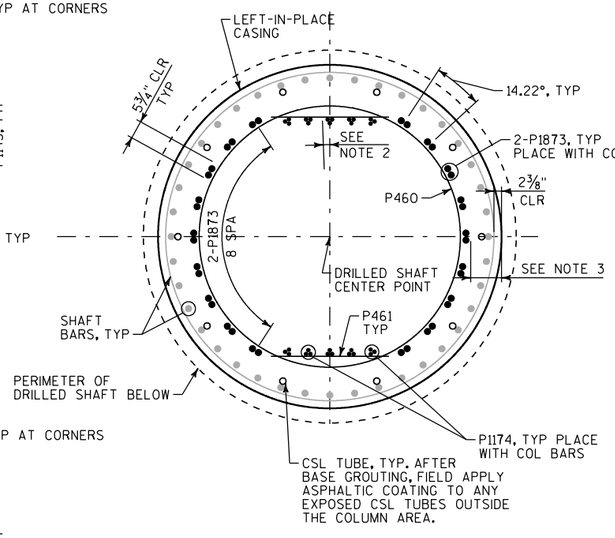
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY JJO | PLANS CK'D. JWC

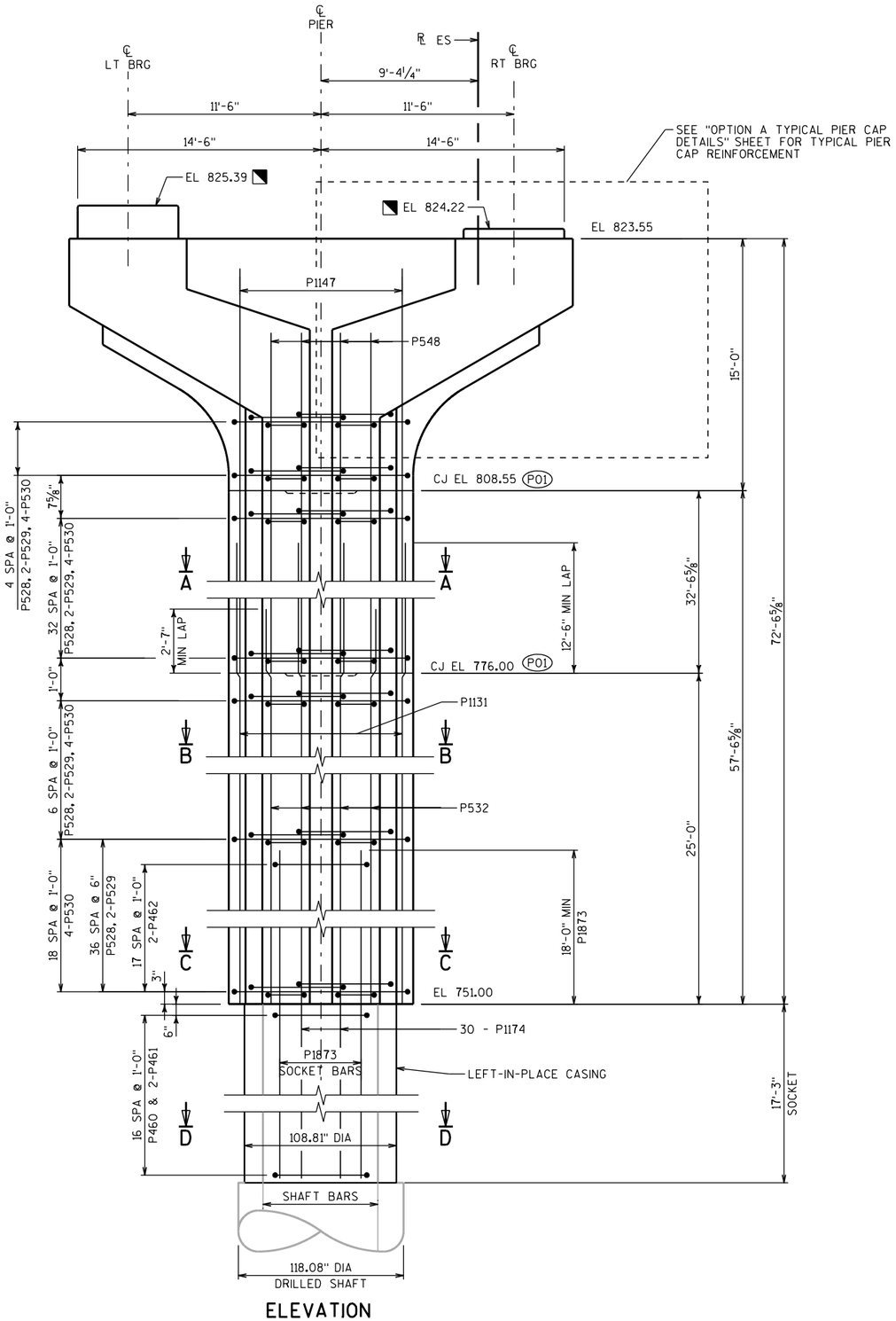
OPTION A
PIER ES07
DETAILS

SHEET A33 OF A41

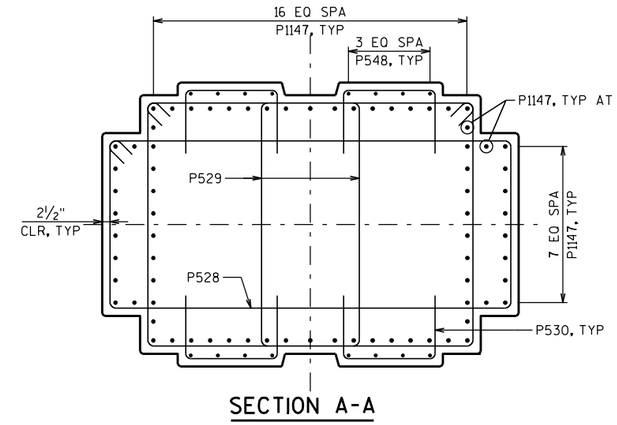
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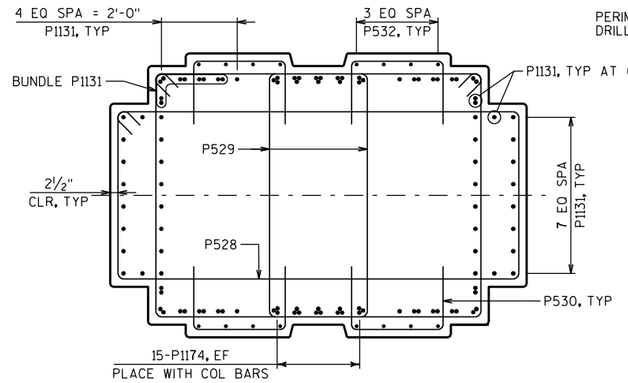
STATE PROJECT NUMBER
1060-33-81



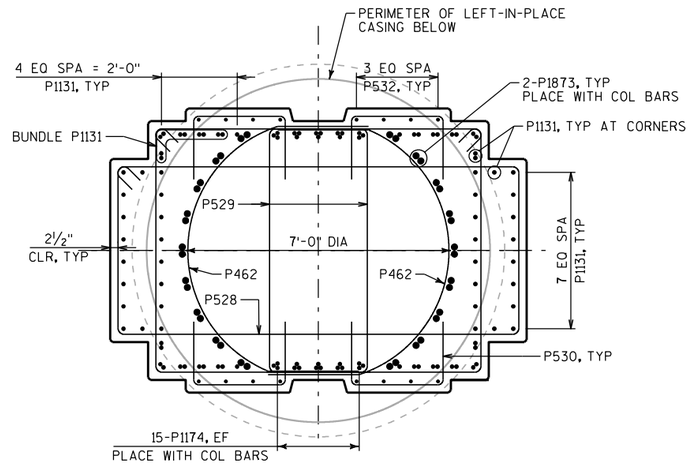
ELEVATION



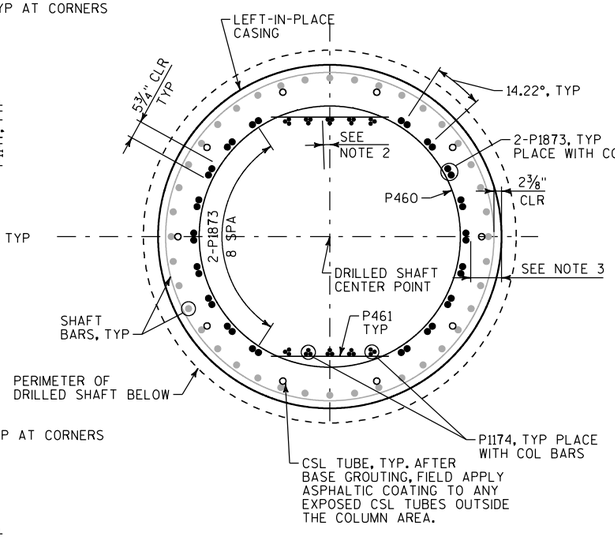
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY	JJO	PLANS CK'D.	JWC

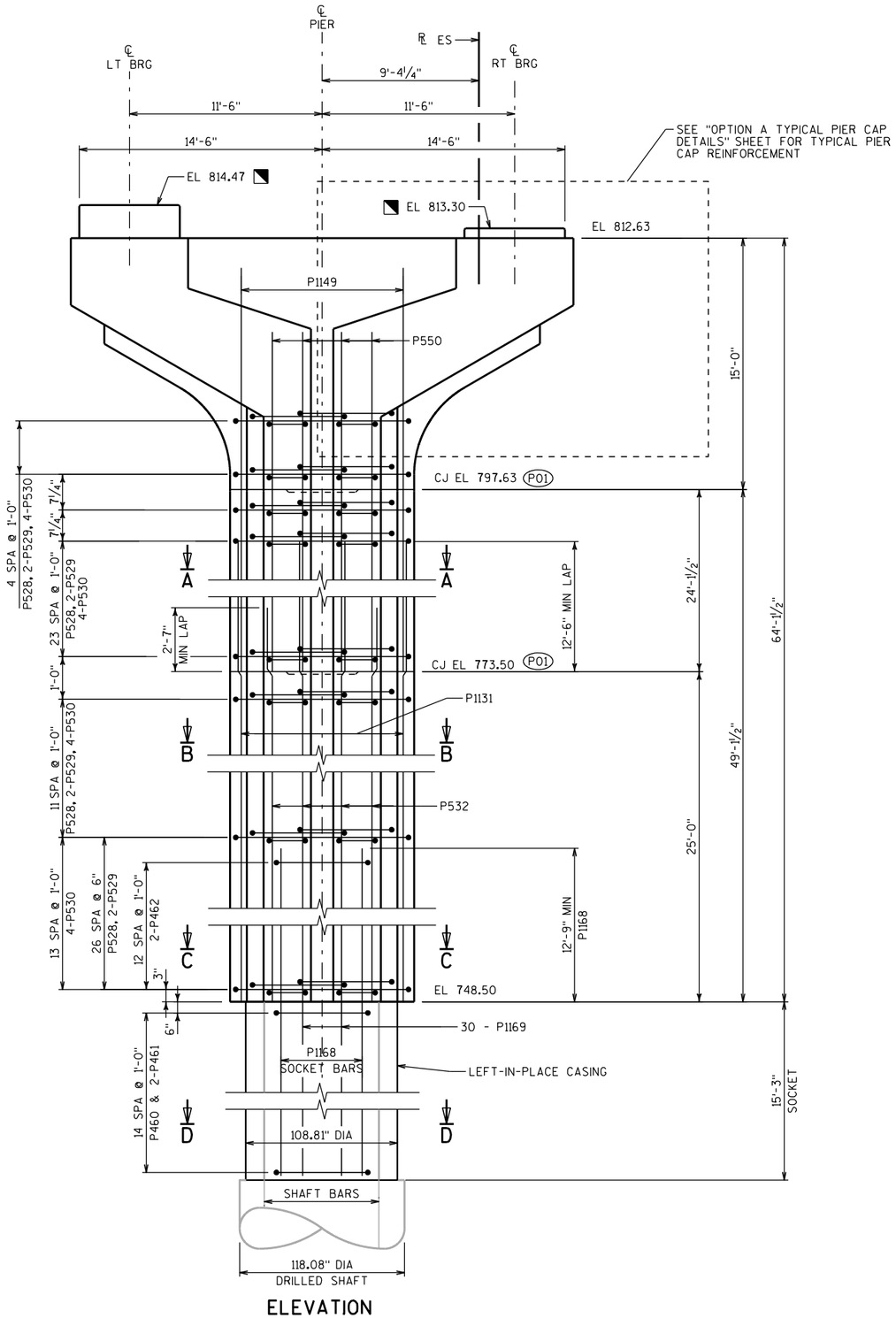
OPTION A
PIER ES08
DETAILS

SHEET A34 OF A41

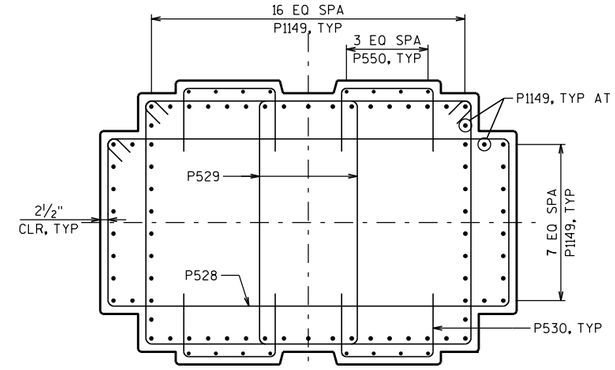
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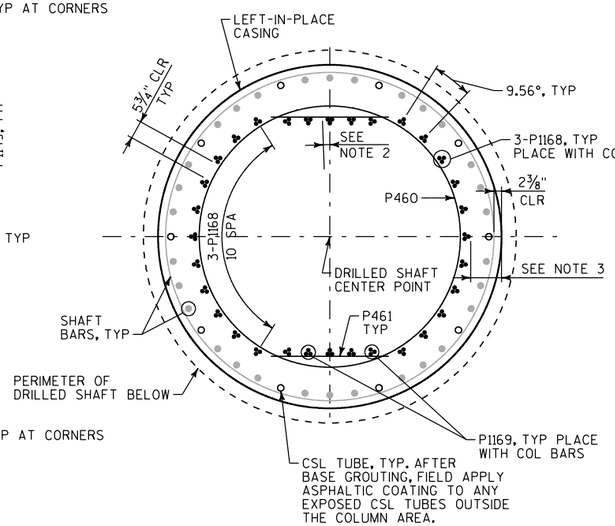
STATE PROJECT NUMBER
1060-33-81



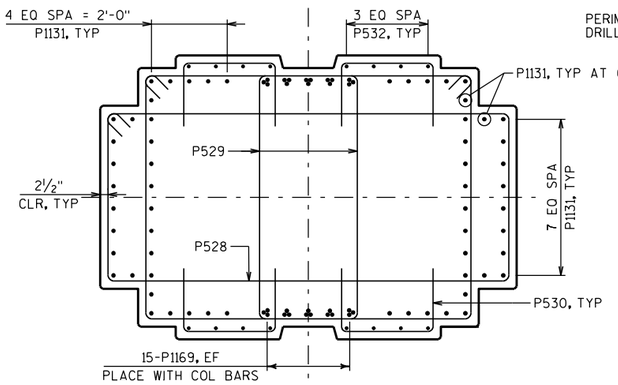
ELEVATION



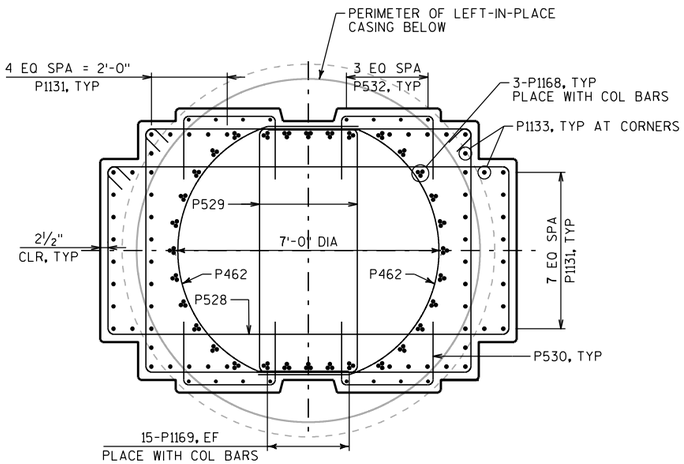
SECTION A-A



SECTION D-D



SECTION B-B



SECTION C-C

NOTES:

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STRUCTURE B-40-854

DRAWN BY JJO | PLANS CK'D. JWC

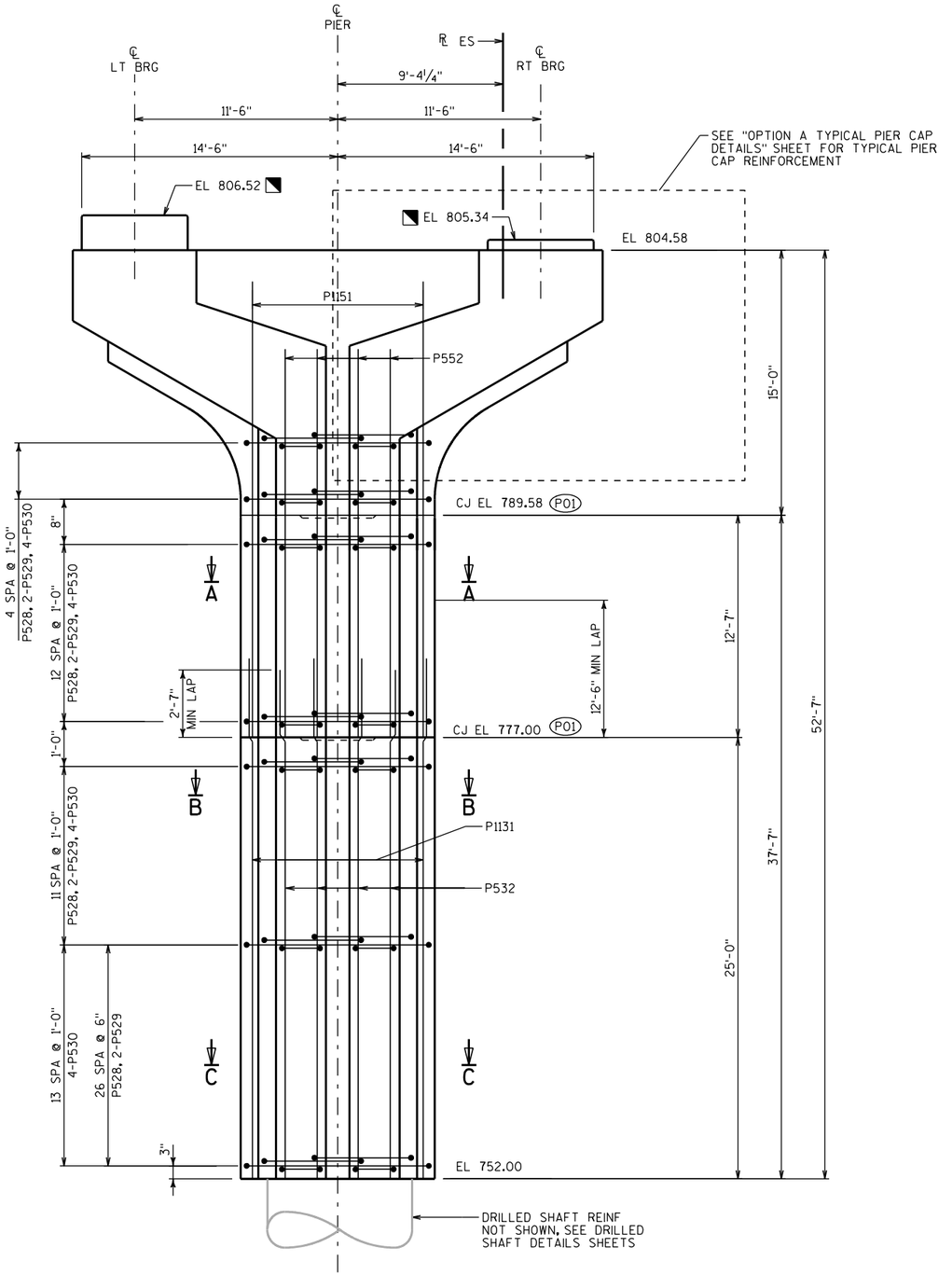
OPTION A
PIER ES09
DETAILS

SHEET A35 OF A41

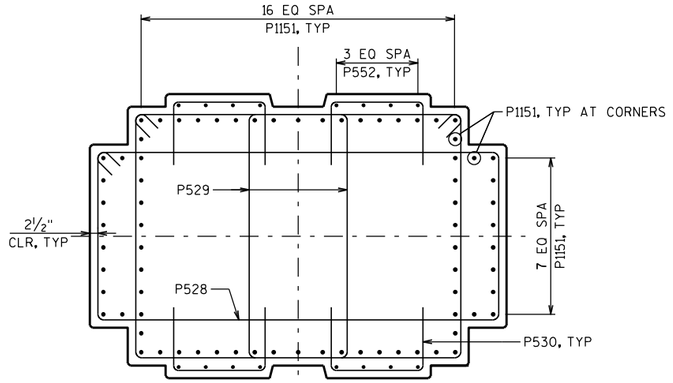
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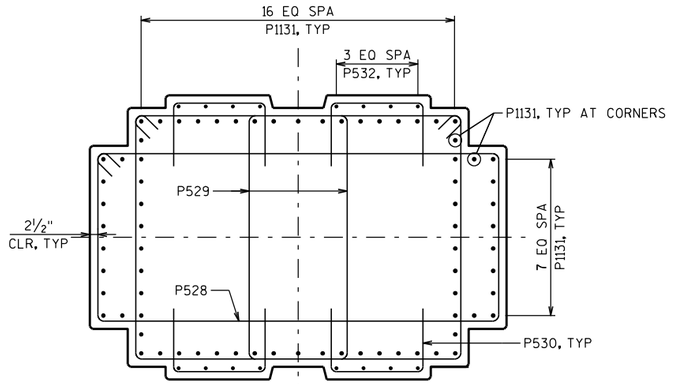
STATE PROJECT NUMBER
1060-33-81



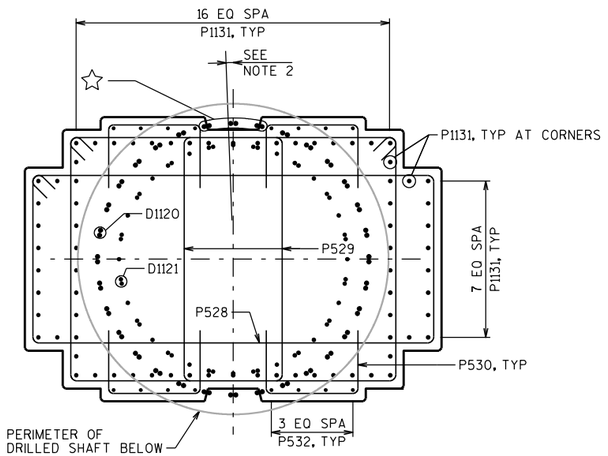
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

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☆ BURN OFF ALL PROTRUDING DRILLED SHAFT BARS NOT COMPLETELY INSIDE THE CLEAR COVER AREA OF THE COLUMN PLAN LOCATION. BURN OFF BARS FLUSH WITH TOP OF DRILLED SHAFT AND FIELD APPLY ASPHALTIC COATING MATERIAL CONFORMING TO AASHTO M190 TO ALL EXPOSED AREAS OF CUT BARS, TYP. COST SHALL BE INCLUDED WITH COST OF "DRILLED FOUNDATION SHAFT 98.43-INCH".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-854

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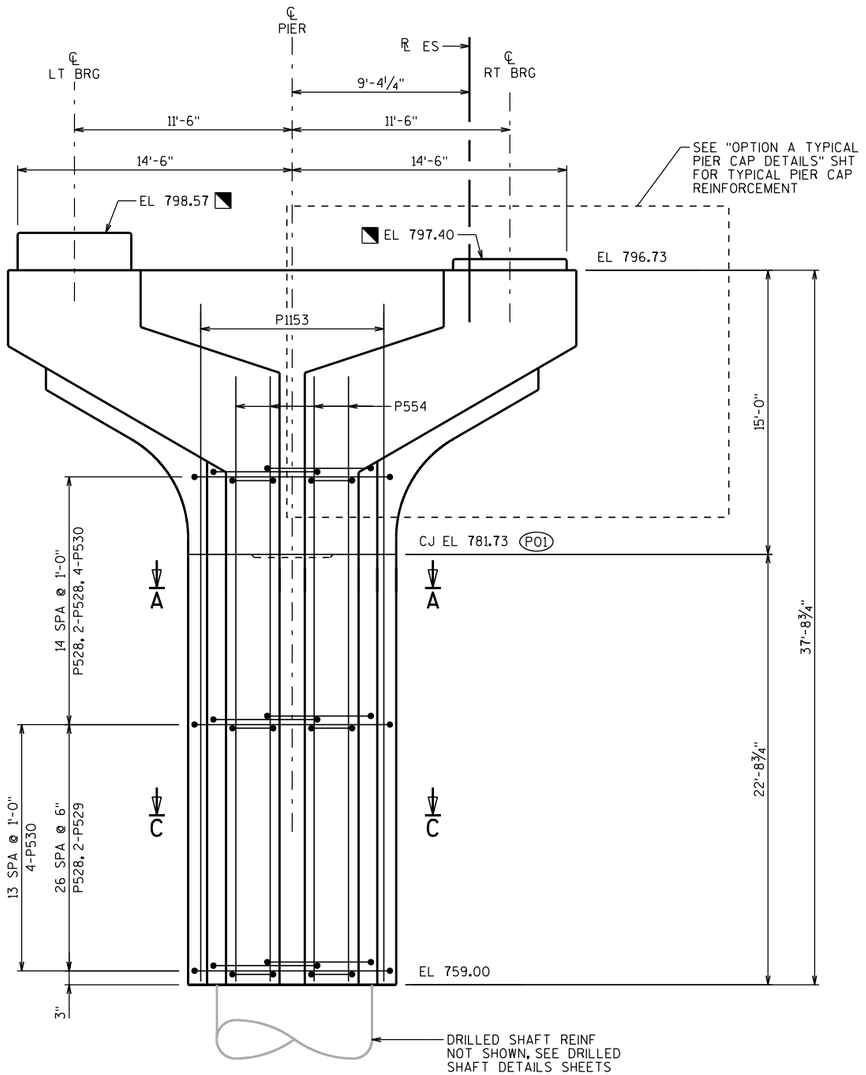
OPTION A
PIER ES10
DETAILS

SHEET A36 OF A41

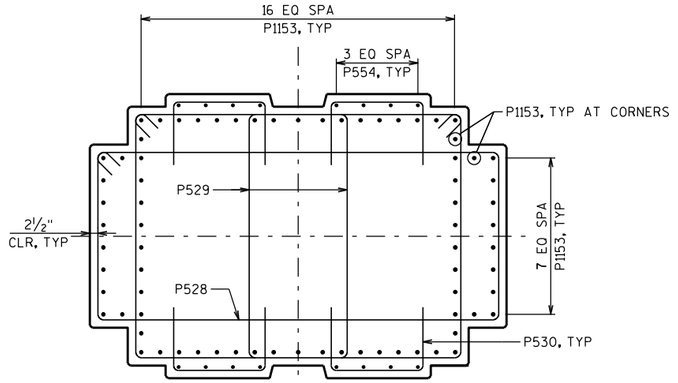
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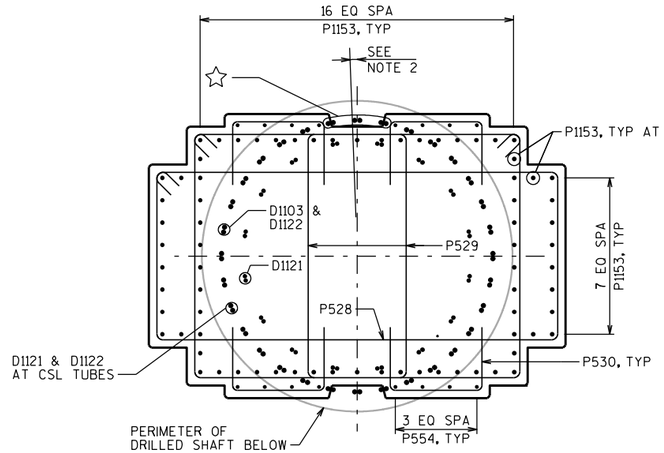
STATE PROJECT NUMBER
1060-33-81



ELEVATION



SECTION A-A



SECTION B-B

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION.
2. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
3. DRILLED SHAFT CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

☆ BURN OFF ALL PROTRUDING DRILLED SHAFT BARS NOT COMPLETELY INSIDE THE CLEAR COVER AREA OF THE COLUMN PLAN LOCATION. BURN OFF BARS FLUSH WITH TOP OF DRILLED SHAFT AND FIELD APPLY ASPHALTIC COATING MATERIAL CONFORMING TO AASHTO M190 TO ALL EXPOSED AREAS OF CUT BARS, TYP. COST SHALL BE INCLUDED WITH COST OF "DRILLED FOUNDATION SHAFT 98.43-INCH".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY	JJO	PLANS CK'D.	JWC

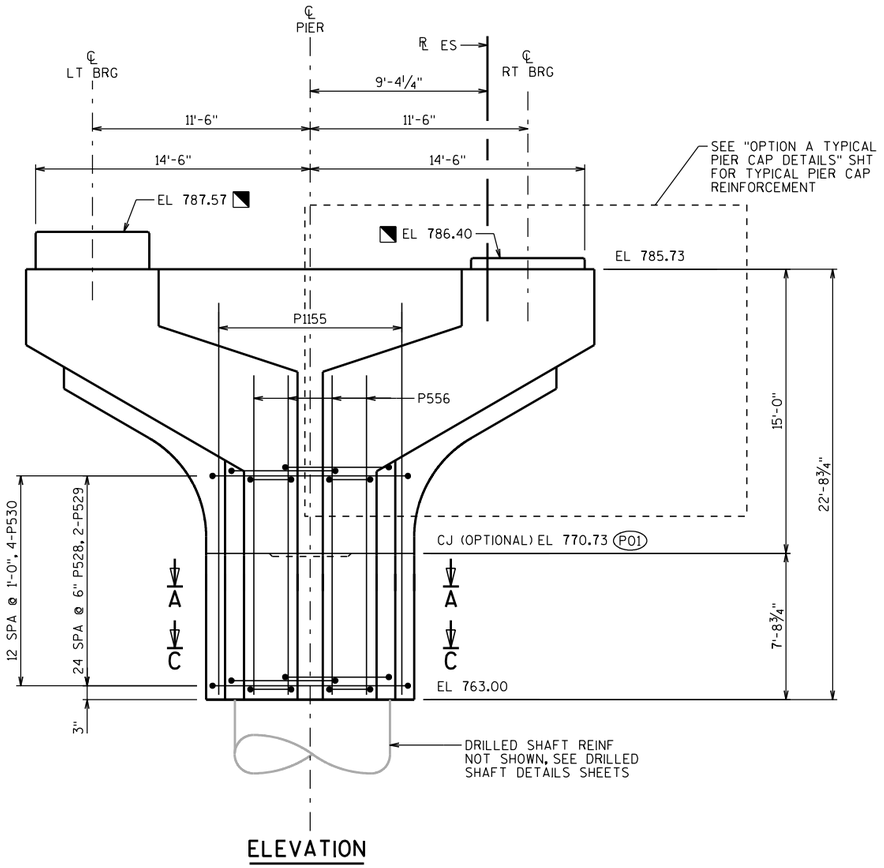
OPTION A
PIER ES11
DETAILS

SHEET A37 OF A41

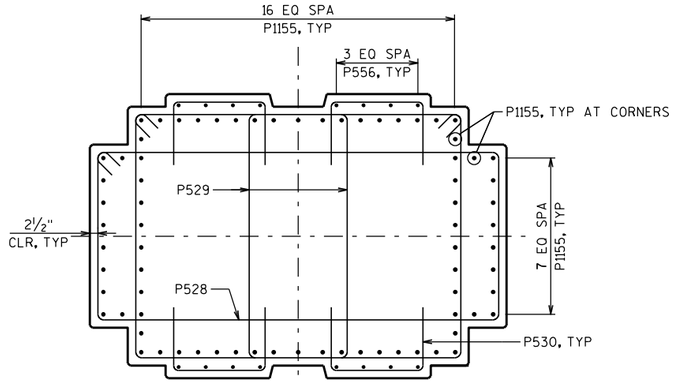
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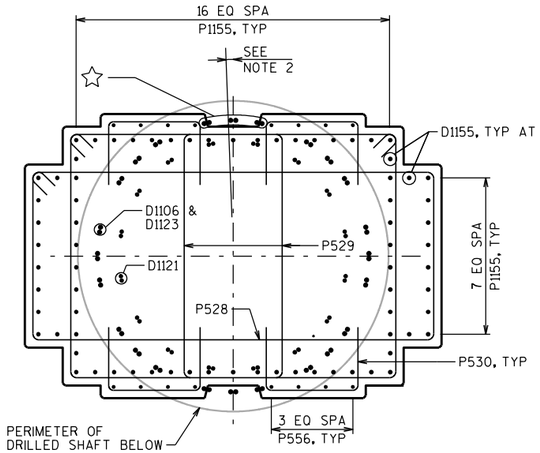
STATE PROJECT NUMBER
1060-33-81



ELEVATION



SECTION A-A



SECTION B-B

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION.
2. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
3. DRILLED SHAFT CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

☆ BURN OFF ALL PROTRUDING DRILLED SHAFT BARS NOT COMPLETELY INSIDE THE CLEAR COVER AREA OF THE COLUMN PLAN LOCATION. BURN OFF BARS FLUSH WITH TOP OF DRILLED SHAFT AND FIELD APPLY ASPHALTIC COATING MATERIAL CONFORMING TO AASHTO M190 TO ALL EXPOSED AREAS OF CUT BARS, TYP. COST SHALL BE INCLUDED WITH COST OF "DRILLED FOUNDATION SHAFT 98.43-INCH".

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

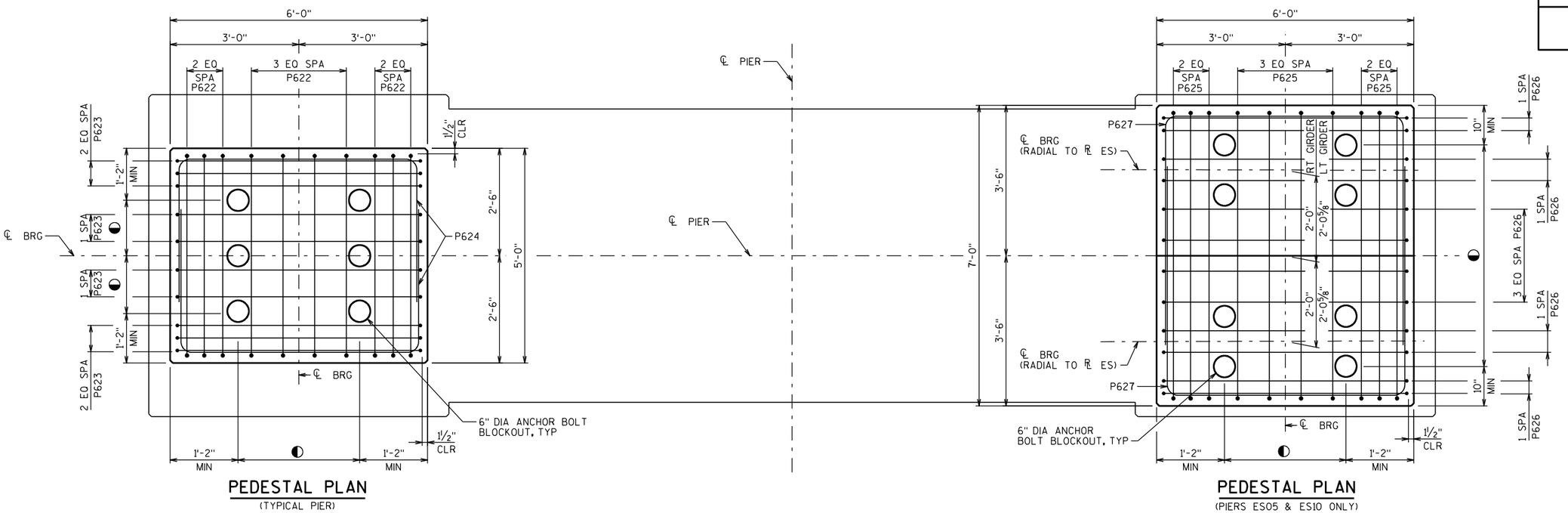
STRUCTURE B-40-854

DRAWN BY JJO | PLANS CK'D. JWC

OPTION A
PIER ES12
DETAILS

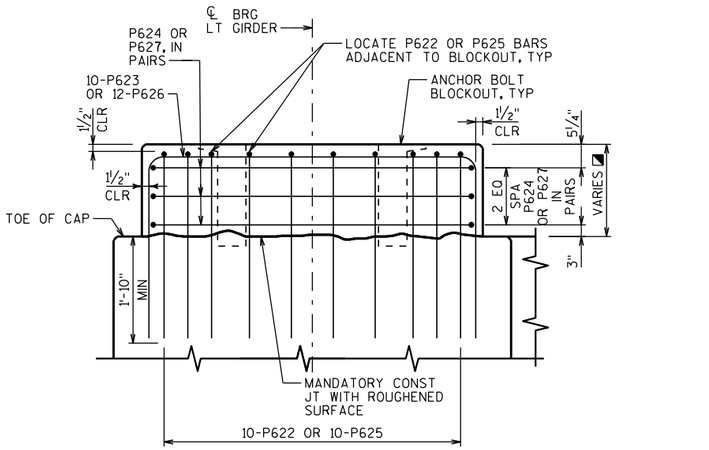
SHEET A38 OF A41

STATE PROJECT NUMBER
1060-33-81

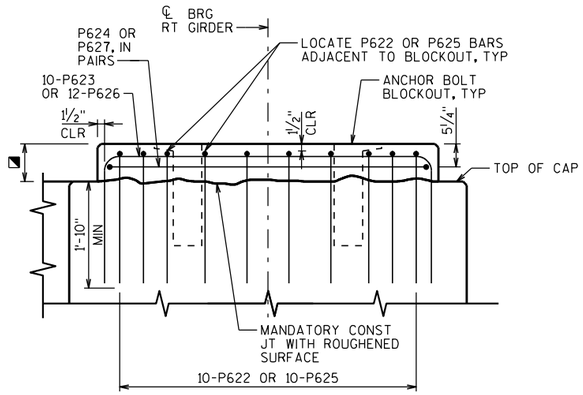


PEDESTAL PLAN
(TYPICAL PIER)

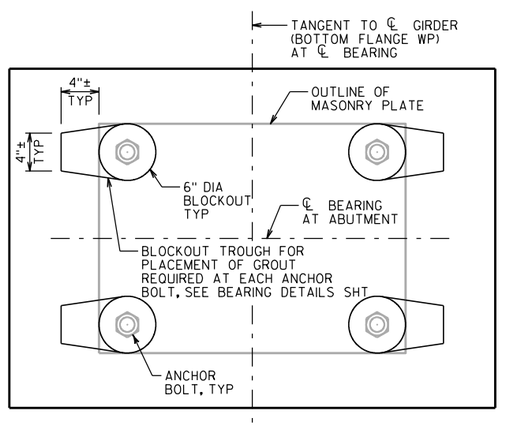
PEDESTAL PLAN
(PIERS ES05 & ES10 ONLY)



PEDESTAL ELEVATION - LEFT GIRDER



PEDESTAL ELEVATION - RIGHT GIRDER



PEDESTAL PLAN - GROUT TROUGHS
SEE BEARING DETAILS SHEET

NOTES

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

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

LEGEND

◥ 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 SHEETS FOR ANCHOR BOLT BLOCKOUT LOCATION. VERIFY LOCATIONS WITH BEARING MANUFACTURER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

OPTION A
TYPICAL PEDESTAL REINFORCEMENT

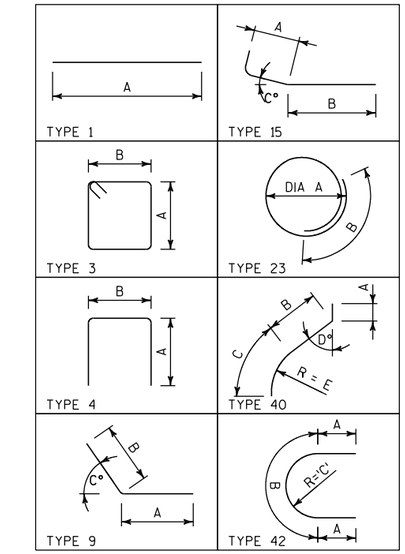
SHEET A39 OF A41

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PLOT BY : MSCKTM
PLOT NAME : 080415A_pi
PLOT SCALE : 2.666667:1

STATE PROJECT NUMBER
1060-33-81

BAR INFORMATION							BAR DIMENSIONS					LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E		DIM	MIN	MAX	NO REQ'D	LENGTH
P1101	E	132	32'-8"	X		4	2'-0"	29'-4"				TOP TIE BAR					
P1102	E	132	31'-10"	X		4	2'-0"	28'-6"				BOTTOM TIE BAR					
P803	E	144	29'-4"			1	29'-4"					SKIN STEEL - TOP OF CAP					
P804	E	288	19'-5"		X	1	19'-5"					SKIN STEEL - MIDDLE OF CAP (SERIES)	A	10'-0"	28'-10"	12 SERIES OF 24	10'-0" TO 28'-10"
P606	E	960	21'-11"	X	X	3	4'-2"	6'-4½"				STIRRUPS - TOP EDGES OF CAP (SERIES)	A	3'-7"	9'-2"	12 SERIES OF 80	16'-4" TO 27'-6"
P507	E	168	17'-11"	X		4	6'-4"	5'-6"				TIE - TOP CENTER OF CAP					
P508	E	288	18'-9"	X		9	3'-6"	15'-3"	60			OUTSIDE FACE OF PIER CAP - TOP					
P509	E	288	11'-3"	X		4	4'-3"	3'-0"				HORIZONTAL TIE - BOTTOM OF CAP (TOP SEC)					
P510	E	576	13'-3"	X		4	5'-3"	3'-0"				HORIZONTAL TIE - BOTTOM OF CAP (BOT SEC)					
P511	E	576	10'-3"	X		4	3'-9"	3'-0"				VERTICAL TIE - BOTTOM OF CAP (TOP SEC)					
P512	E	96	11'-3"	X		4	4'-3"	3'-0"				VERTICAL TIE - BOTTOM OF CAP (BOT SEC)					
P513	E	168	14'-5"	X		40	3'-0"	5'-0"	6'-5"	60	6'-5"	OUTSIDE FACE OF PIER CAP - BOT					
P514	E	240	16'-5"	X		4	5'-1"	6'-6"				TIE - ARCHITECTURAL REVEAL - HORIZ - TOP					
P515	E	48	18'-1"	X		4	5'-1"	8'-2"				TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P516	E	48	18'-10"	X		4	5'-1"	8'-11"				TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P517	E	48	19'-9"	X		4	5'-1"	9'-10"				TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P518	E	240	11'-4"	X	X	4	2'-4"	6'-10½"				TIE - ARCHITECTURAL REVEAL - HORIZ - BOT (SERIES)	B	3'-5"	10'-4"	12 SERIES OF 20	7'-10" TO 14'-9"
P519	E	288	5'-0"		X	1	5'-0"					ARCHITECTURAL REVEAL - VERT - TOP (SERIES)	A	4'-2"	6'-9"	12 SERIES OF 24	4'-2" TO 6'-9"
P520	E	240	4'-11"		X	1	4'-11"					ARCHITECTURAL REVEAL - VERT - MID (SERIES)	A	4'-5"	5'-5"	12 SERIES OF 20	4'-5" TO 5'-5"
P521	E	48	11'-6"	X		15	7'-9"	3'-0"	72			ARCHITECTURAL REVEAL - VERT - INSIDE FACE					
P622	E	240	12'-1"	X		4	3'-10"	4'-9"				PEDESTAL REINFORCEMENT - TYP - TOP FACE					
P623	E	240	12'-1"	X		4	3'-9"	5'-9"				PEDESTAL REINFORCEMENT - TYP - TOP FACE					
P624	E	96	12'-5"	X		4	3'-7"	5'-7"				PEDESTAL REINFORCEMENT - TYP - SIDE					
P625	E	240	14'-1"	X		4	3'-10"	6'-9"				PEDESTAL REINFORCEMENT - ES05 & ES10 - TOP FACE					
P626	E	288	12'-11"	X		4	3'-9"	5'-9"				PEDESTAL REINFORCEMENT - ES05 & ES10 - TOP FACE					
P627	E	96	14'-5"	X		4	4'-7"	5'-7"				PEDESTAL REINFORCEMENT - ES05 & ES10 - SIDE					
P528	E	746	30'-7"	X		3	10'-7"	4'-5"				COLUMN TRANSVERSE (MAIN)					
P529	E	1,492	24'-7"	X		3	6'-5"	5'-7"				COLUMN TRANSVERSE (MAIN)					
P530	E	2,076	5'-6"	X		4	1'-8"	2'-5"				COLUMN TRANSVERSE (SECONDARY)					
P1131	E	534	37'-9"			1	37'-9"					COLUMN - VERTICAL BAR (MAIN)					
P532	E	128	27'-7"			1	27'-7"					COLUMN - VERTICAL BAR (SECONDARY)					
P1133	E	74	22'-3"			1	22'-3"					COLUMN - VERTICAL BAR - ES01 (MAIN)					
P534	E	16	18'-8"			1	18'-8"					COLUMN - VERTICAL BAR - ES01 (SECONDARY)					
P1135	E	60	34'-9"			1	34'-9"					COLUMN - VERTICAL BAR - ES02 (MAIN)					
P536	E	16	31'-2"			1	31'-2"					COLUMN - VERTICAL BAR - ES02 (SECONDARY)					
P1137	E	74	43'-9"			1	43'-9"					COLUMN - VERTICAL BAR - ES03 (MAIN)					
P538	E	16	40'-2"			1	40'-2"					COLUMN - VERTICAL BAR - ES03 (SECONDARY)					
P1139	E	74	39'-6"			1	39'-6"					COLUMN - VERTICAL BAR - ES04 (MAIN)					
P540	E	16	35'-11"			1	35'-11"					COLUMN - VERTICAL BAR - ES04 (SECONDARY)					
P1141	E	74	39'-10"			1	39'-10"					COLUMN - VERTICAL BAR - ES05 (MAIN)					
P542	E	16	36'-3"			1	36'-3"					COLUMN - VERTICAL BAR - ES05 (SECONDARY)					
P1143	E	74	27'-5"			1	27'-5"					COLUMN - VERTICAL BAR - ES06 (MAIN)					
P544	E	16	23'-10"			1	23'-10"					COLUMN - VERTICAL BAR - ES06 (SECONDARY)					
P1145	E	74	42'-0"			1	42'-0"					COLUMN - VERTICAL BAR - ES07 (MAIN)					
P546	E	16	38'-5"			1	38'-5"					COLUMN - VERTICAL BAR - ES07 (SECONDARY)					
P1147	E	74	45'-6"			1	45'-6"					COLUMN - VERTICAL BAR - ES08 (MAIN)					
P548	E	16	41'-11"			1	41'-11"					COLUMN - VERTICAL BAR - ES08 (SECONDARY)					
P1149	E	74	37'-1"			1	37'-1"					COLUMN - VERTICAL BAR - ES09 (MAIN)					
P550	E	16	33'-6"			1	33'-6"					COLUMN - VERTICAL BAR - ES09 (SECONDARY)					
P1151	E	74	25'-6"			1	25'-6"					COLUMN - VERTICAL BAR - ES10 (MAIN)					
P552	E	16	21'-11"			1	21'-11"					COLUMN - VERTICAL BAR - ES10 (SECONDARY)					
P1153	E	74	35'-8"			1	35'-8"					COLUMN - VERTICAL BAR - ES11 (MAIN)					
P554	E	16	32'-1"			1	32'-1"					COLUMN - VERTICAL BAR - ES11 (SECONDARY)					
P1155	E	74	20'-8"			1	20'-8"					COLUMN - VERTICAL BAR - ES12 (MAIN)					
P556	E	16	17'-1"			1	17'-1"					COLUMN - VERTICAL BAR - ES12 (SECONDARY)					
P557	E	27	24'-9"	X		23	7'-5"	1'-5"				CAST SHAFT TIE BAR (8' SHAFTS) - PIER ES01					
P558	E	13	21'-1"	X		23	6'-3"	1'-5"				SPLICE CAGE TIE BAR (8' SHAFTS) - PIER ES01					
P559	E	29	28'-8"	X		23	8'-8"	1'-5"				CAST SHAFT TIE BAR (10' SHAFT) - PIER ES06					
P460	E	116	23'-0"	X		23	7'-0"	1'-0"				SOCKET CONNECTION HORIZONTAL (SHAFT)					
P461	E	232	5'-0"	X		4	1'-0"	3'-2"				SOCKET CONNECTION HORIZONTAL (SHAFT)					
P462	E	224	13'-1"	X		42	2'-6"	8'-1"	3'-5"			SOCKET CONNECTION HORIZONTAL (COLUMN)					
P1163	E	24	25'-0"			1	25'-0"					CAST SHAFT VERTICAL - ES01					
P1164	E	24	28'-0"			1	28'-0"					CAST SHAFT VERTICAL - ES01					
P1165	E	16	25'-6"			1	25'-6"					SPLICE CAGE VERTICAL - ES01					
P1166	E	264	25'-3"			1	25'-3"					SOCKET CONNECTION VERTICAL - ES02, ES04, ES05, ES06					
P1167	E	16	47'-3"			1	47'-3"					SOCKET CONNECTION VERTICAL - ES02					
P1168	E	132	28'-0"			1	28'-0"					SOCKET CONNECTION VERTICAL - ES03, ES09					
P1169	E	60	52'-9"			1	52'-9"					SOCKET CONNECTION VERTICAL - ES03, ES09					
P1170	E	48	50'-0"			1	50'-0"					SOCKET CONNECTION VERTICAL - ES04, ES05, ES06					
P1871	E	15	15'-10"			1	15'-10"					CAST SHAFT VERTICAL - ES06					
P1872	E	15	13'-10"			1	13'-10"					CAST SHAFT VERTICAL - ES06					
P1873	E	72	35'-3"			1	35'-3"					SOCKET CONNECTION VERTICAL - ES07, ES08					
P1174	E	60	54'-9"			1	54'-9"					SOCKET CONNECTION VERTICAL - ES07, ES08					



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
- U - STEEL, HIGH STRENGTH, UNCOATED.
- E - STEEL, HIGH STRENGTH, EPOXY COATED.
- S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY JJO | PLANS CK'D. JWC

OPTION A
PIER REINFORCEMENT
SCHEDULE (1 OF 2)

SHEET A40 OF A41

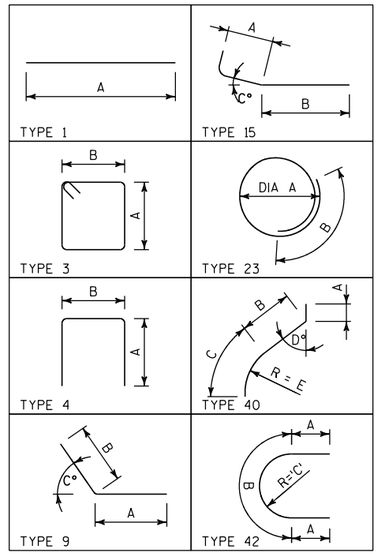
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STATE PROJECT NUMBER
1060-33-81

BAR MARK BREAKDOWN

MARK	PIER ES01	PIER ES02	PIER ES03	PIER ES04	PIER ES05	PIER ES06	PIER ES07	PIER ES08	PIER ES09	PIER ES10	PIER ES11	PIER ES12	TOTAL NO	WEIGHT
P1101	11	11	11	11	11	11	11	11	11	11	11	11	132	22,910
P1102	11	11	11	11	11	11	11	11	11	11	11	11	132	22,325
P803	12	12	12	12	12	12	12	12	12	12	12	12	144	11,278
P804	24	24	24	24	24	24	24	24	24	24	24	24	288	14,931
P606	80	80	80	80	80	80	80	80	80	80	80	80	960	31,602
P507	14	14	14	14	14	14	14	14	14	14	14	14	168	3,139
P508	24	24	24	24	24	24	24	24	24	24	24	24	288	5,632
P509	24	24	24	24	24	24	24	24	24	24	24	24	288	3,379
P510	48	48	48	48	48	48	48	48	48	48	48	48	576	7,960
P511	48	48	48	48	48	48	48	48	48	48	48	48	576	6,158
P512	8	8	8	8	8	8	8	8	8	8	8	8	96	1,126
P513	14	14	14	14	14	14	14	14	14	14	14	14	168	2,526
P514	20	20	20	20	20	20	20	20	20	20	20	20	240	4,109
P515	4	4	4	4	4	4	4	4	4	4	4	4	48	905
P516	4	4	4	4	4	4	4	4	4	4	4	4	48	943
P517	4	4	4	4	4	4	4	4	4	4	4	4	48	989
P518	20	20	20	20	20	20	20	20	20	20	20	20	240	2,837
P519	24	24	24	24	24	24	24	24	24	24	24	24	288	1,502
P520	20	20	20	20	20	20	20	20	20	20	20	20	240	1,231
P521	4	4	4	4	4	4	4	4	4	4	4	4	48	576
P622	20	20	20	20	20	20	20	20	20	20	20	20	240	4,356
P623	20	20	20	20	20	20	20	20	20	20	20	20	240	4,356
P624	8	8	8	8	8	8	8	8	8	8	8	8	96	1,790
P625	20	20	20	20	20	20	20	20	20	20	20	20	240	5,077
P626	24	24	24	24	24	24	24	24	24	24	24	24	288	5,587
P627	8	8	8	8	8	8	8	8	8	8	8	8	96	2,079
P528	27	40	74	70	70	72	77	100	81	70	41	24	746	23,796
P529	54	80	148	140	140	144	154	200	162	140	82	48	1,492	38,256
P530	56	104	244	228	228	180	236	252	216	172	112	48	2,076	11,909
P1131			60	60	60	60	80	80	60	74			534	107,102
P532			16	16	16	16	16	16	16	16			128	3,682
P1133	74												74	8,748
P534	16												16	312
P1135		60											60	11,078
P536		16											16	520
P1137			74										74	17,201
P538			16										16	670
P1139				74									74	15,530
P540				16									16	599
P1141					74								74	15,661
P542					16								16	605
P1143						74							74	10,779
P544						16							16	398
P1145							74						74	16,513
P546							16						16	641
P1147								74					74	17,889
P548								16					16	700
P1149									74				74	14,580
P550									16				16	559
P1151										74			74	10,026
P552										16			16	366
P1153											74		74	14,023
P554											16		16	535
P1155												74	74	8,125
P556												16	16	285
P557	27												27	697
P558	13												13	286
P559						29							29	867
P460		13	15	13	13	13	17	17	15				116	1,782
P461		26	30	26	26	26	34	34	30				232	775
P462		26	26	26	26	26	34	34	26				224	1,958
P1163	24												24	3,188
P1164	24												24	3,570
P1165	16												16	2,168
P1166		66		66	66	66							264	35,416
P1167		16											16	4,017
P1168			66						66				132	19,637
P1169			30						30				60	16,816
P1170				16	16	16							48	12,751
P1871						15							15	3,230
P1872						15							15	2,822
P1873							36	36					72	34,517
P1174							30	30					60	17,453
TOT	849	965	1,317	1,269	1,269	1,286	1,322	1,407	1,310	1,080	843	728	13,645	682,340



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
- U - STEEL, HIGH STRENGTH, UNCOATED.
- E - STEEL, HIGH STRENGTH, EPOXY COATED.
- S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY JJO | PLANS CK'D. JWC

OPTION A
PIER REINFORCEMENT SCHEDULE (2 OF 2)

SHEET A41 OF A41

8

8

STATE PROJECT NUMBER
1060-33-81

ESTIMATED QUANTITIES - PIER OPTION B

ITEM NO.	BID ITEM	UNIT	SOUTH ABUT.	PIER ES01	PIER ES02	TRIAL SHAFT	PIER ES03	PIER ES04	PIER ES05	PIER ES06	PIER ES07	PIER ES08	PIER ES09	PIER ES10	PIER ES11	PIER ES12	TOTAL
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-854	LS															1
209.0100	BACKFILL GRANULAR	CY						34				5	7				46
502.0100	CONCRETE MASONRY BRIDGES	CY	138	143	181		277	414	379	384	276	510	405	308	266	202	3,883
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	40,790	36,390	51,110		42,510	55,010	24,240	35,070	30,440	32,000	25,270	19,370	38,700	30,450	461,350
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	20,620	35,640	43,010		70,810	69,320	68,560	63,430	82,180	94,510	76,950	52,830	39,830	25,560	743,250
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB		1,430													1,430
505.0911	BAR COUPLERS NO.11	EACH	44	48													92
511.1200.0017	TEMPORARY SHORING B-40-854	SF		990	1,155		1,092										3,237
550.2168	PILING CIP CONCRETE 16 X 0.50-INCH	LF						2,090	2,040	2,660		1,800	1,140	980	1,600	1,600	13,910
SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH						2	2	2		2	2	2	2	2	16
SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH						2	2	2		2	2	2	2	2	16
SPV.0060.4150	DRILLED FOUNDATION SHAFT BASE GROUTING	EACH	1	1	1	1	1				1						6
SPV.0060.4160	THERMAL INTEGRITY PROFILER (TIP) TESTING DRILLED FOUNDATION SHAFT 98.43-INCH	EACH	1	1			1	1									4
SPV.0060.4162	THERMAL INTEGRITY PROFILER (TIP) TESTING DRILLED FOUNDATION SHAFT 118.11-INCH	EACH			1	1					1						3
SPV.0060.4181	BAR COUPLERS NO.18	EACH			30		40										70
SPV.0075.4200	OBSTRUCTIONS DRILLED FOUNDATION SHAFT	HRS	4	4	4	4	4				4						24
SPV.0090.4435	DRILLED FOUNDATION SHAFT 98.43-INCH	LF	116	100													216
SPV.0090.4440	DRILLED FOUNDATION SHAFT 118.11-INCH	LF			104		74				53						231
SPV.0105.4520	TRIAL DRILLED FOUNDATION SHAFT 118.11-INCH	LS															1

ALL ITEMS ARE CATEGORY 2102

NOTES

THIS CONTRACT CONTAINS TWO OPTIONS FOR PIER CONSTRUCTION.
THE CONTRACTOR MUST BID EITHER OPTION A OR OPTION B.

ITEMS ON THIS SHEET ARE FOR PIER OPTION B ONLY. FOR ADDITIONAL ITEMS AND QUANTITIES, SEE SHEET 5.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

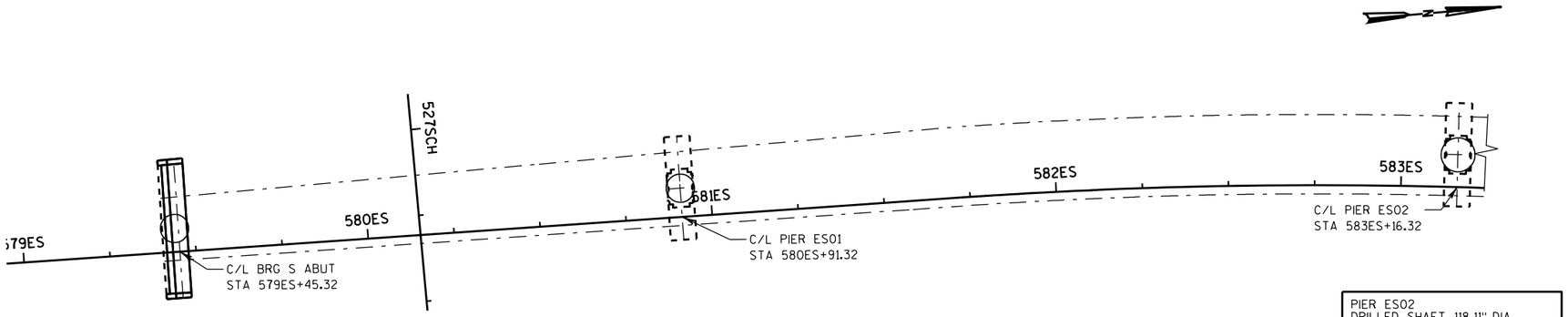
STRUCTURE B-40-854

DRAWN BY SR | PLANS CK'D. JWC

OPTION B QUANTITIES

SHEET B1 OF B48

STATE PROJECT NUMBER
1060-33-81



SOUTH ABUT
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 579ES+44.20, 6.83' LT
X=571892.12, Y=294115.12
RP SA1
STA 579ES+45.32, 26.88' LT
X=571872.10, Y=294116.62
RP SA2
STA 579ES+45.32, 13.45' RT
X=571912.42, Y=294115.87
BOTTOM OF ABUT. EL. = 806.15
TOP OF SHAFT EL. = 792.00
BOTTOM OF SHAFT EL. = 676.00

PIER ES01
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 580ES+91.32, 8.32' LT
X=571893.34, Y=294262.25
BOTTOM OF PIER EL. = 795.00
TOP OF SHAFT EL. = 778.00
BOTTOM OF SHAFT EL. = 678.00

PIER ES02
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 583ES+16.32, 9.36' LT
X=571903.42, Y=294487.78
BOTTOM OF PIER EL. = 792.50
TOP OF SHAFT EL. = 780.00
BOTTOM OF SHAFT EL. = 676.00

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

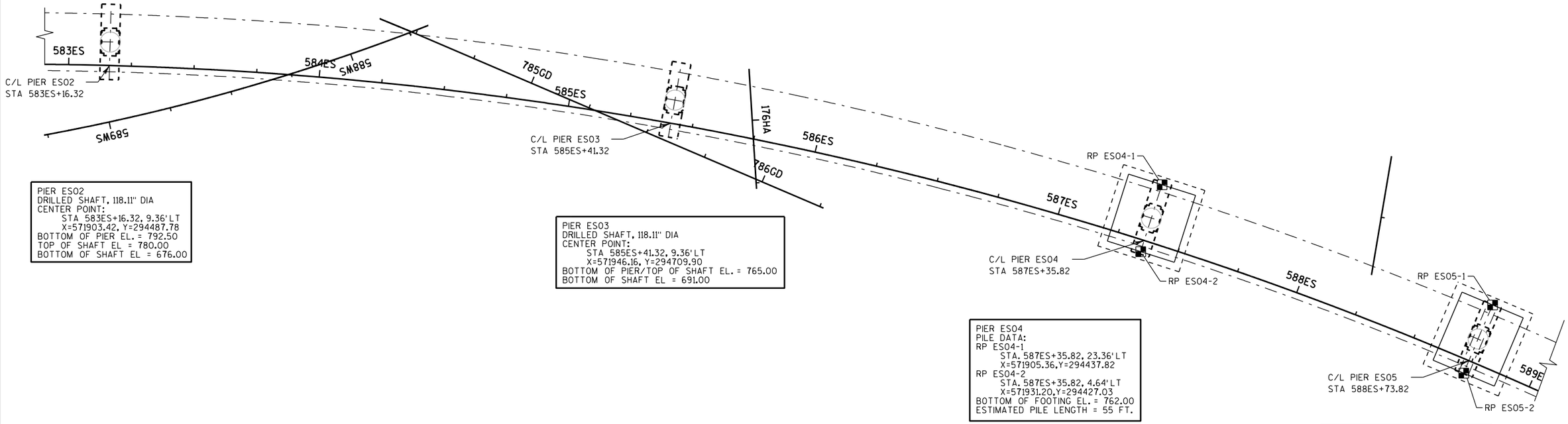
DRAWN BY SR | PLANS CK'D. JWC

OPTION B
FOUNDATION LAYOUT
(1 OF 5)

SHEET B2 OF B48

STATE PROJECT NUMBER

1060-33-81



PIER ES02
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 583ES+16.32, 9.36'LT
X=571903.42, Y=294487.78
BOTTOM OF PIER EL. = 792.50
TOP OF SHAFT EL = 780.00
BOTTOM OF SHAFT EL = 676.00

PIER ES03
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 585ES+41.32, 9.36'LT
X=571946.16, Y=294709.90
BOTTOM OF PIER/TOP OF SHAFT EL. = 765.00
BOTTOM OF SHAFT EL = 691.00

PIER ES04
PILE DATA:
RP ES04-1
STA. 587ES+35.82, 23.36'LT
X=571905.36,Y=294437.82
RP ES04-2
STA. 587ES+35.82, 4.64'LT
X=571931.20,Y=294427.03
BOTTOM OF FOOTING EL. = 762.00
ESTIMATED PILE LENGTH = 55 FT.

PIER ES05
PILE DATA:
RP ES05-1
STA. 588ES+73.82, 24.11'LT
X=571964.62,Y=294564.82
RP ES05-2
STA. 588ES+73.82, 5.39'LT
X=571990.67,Y=294550.99
BOTTOM OF FOOTING EL. = 763.25
ESTIMATED PILE LENGTH = 60 FT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY SR | PLANS CK'D. JWC

OPTION B
FOUNDATION LAYOUT
(2 OF 5)

SHEET B3 OF B48

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-854_E-S\cds\cds Option B\080203b_f1.dgn

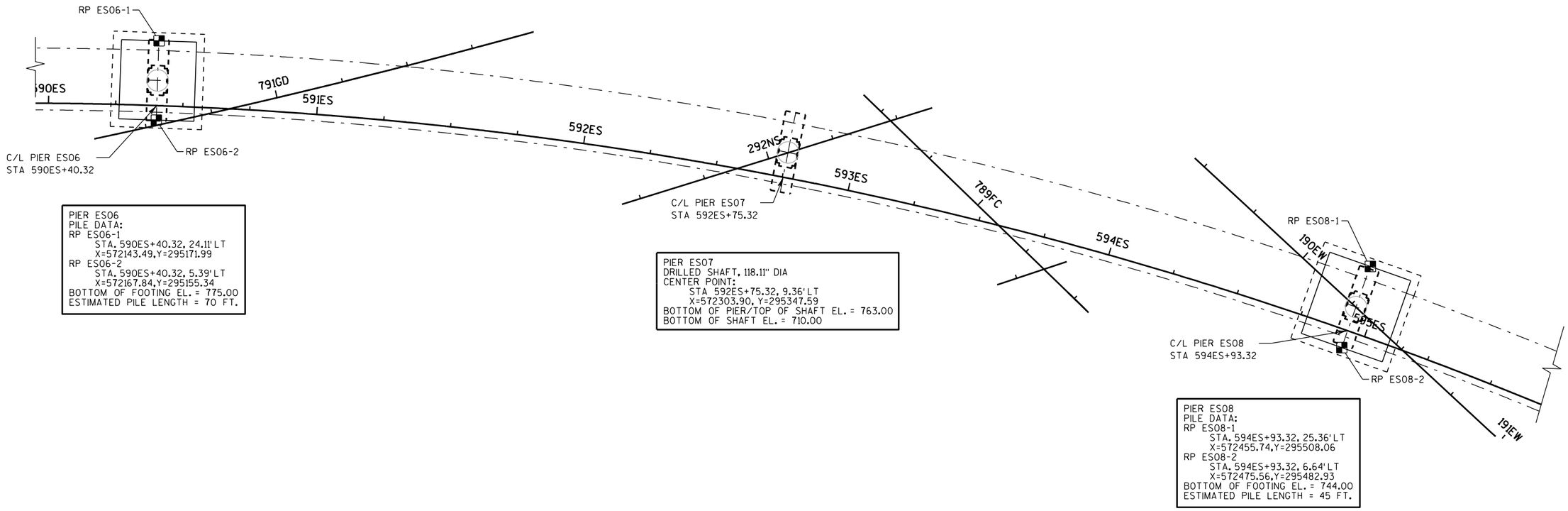
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PLOT BY : MSCKTM

PLOT NAME : 080203b_f1

PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-81



PIER ES06
PILE DATA:
RP ES06-1
STA. 590ES+40.32, 24.11'LT
X=572143.49,Y=295171.99
RP ES06-2
STA. 590ES+40.32, 5.39'LT
X=572167.84,Y=295155.34
BOTTOM OF FOOTING EL. = 775.00
ESTIMATED PILE LENGTH = 70 FT.

PIER ES07
DRILLED SHAFT, 118.11" DIA
CENTER POINT:
STA 592ES+75.32, 9.36'LT
X=572303.90, Y=295347.59
BOTTOM OF PIER/TOP OF SHAFT EL. = 763.00
BOTTOM OF SHAFT EL. = 710.00

PIER ES08
PILE DATA:
RP ES08-1
STA. 594ES+93.32, 25.36'LT
X=572455.74,Y=295508.06
RP ES08-2
STA. 594ES+93.32, 6.64'LT
X=572475.56,Y=295482.93
BOTTOM OF FOOTING EL. = 744.00
ESTIMATED PILE LENGTH = 45 FT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

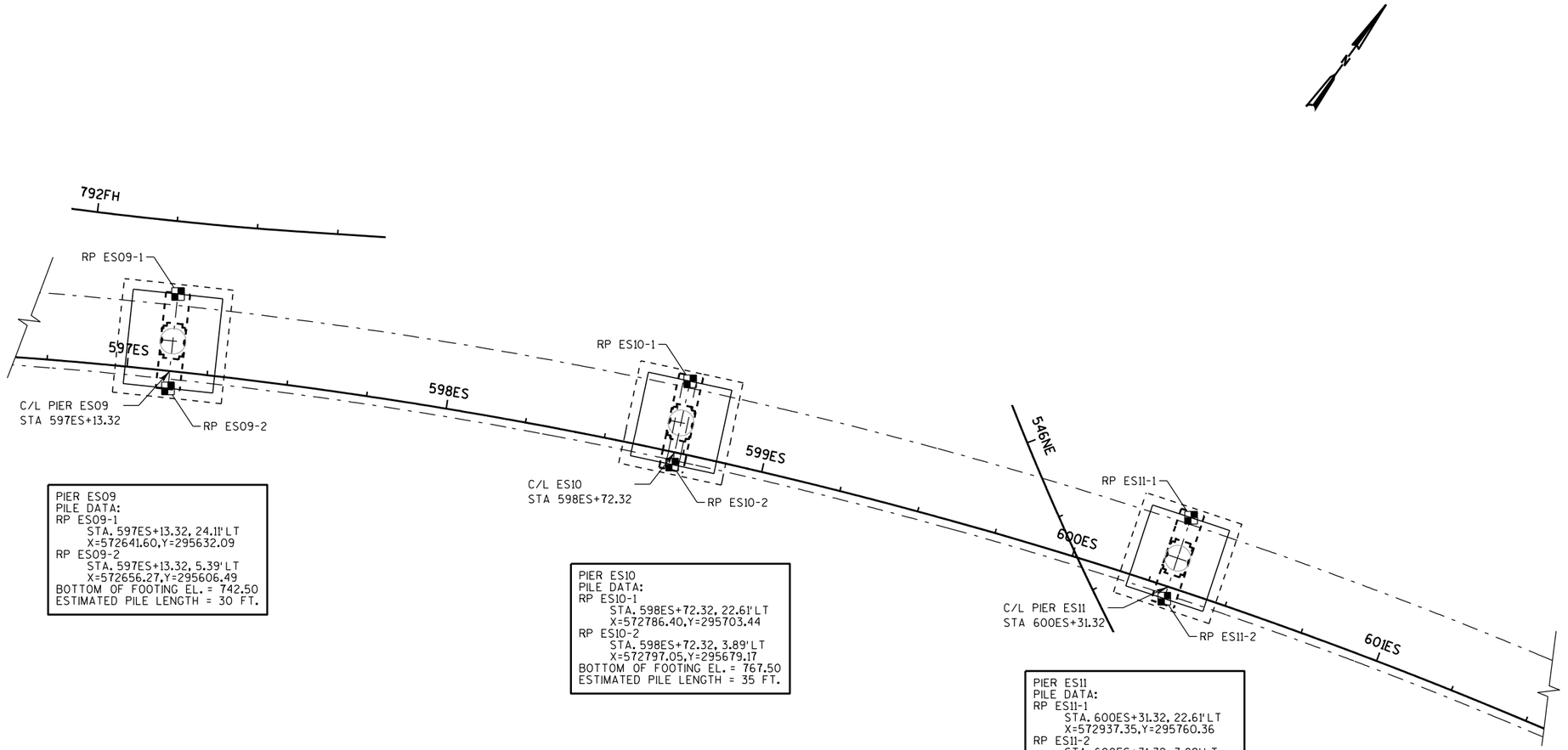
STRUCTURE B-40-854

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OPTION B
FOUNDATION LAYOUT
(3 OF 5)

SHEET B4 OF B48

STATE PROJECT NUMBER
1060-33-81



PIER ES09
PILE DATA:
RP ES09-1
STA. 597ES+13.32, 24.11'LT
X=572641.60,Y=295632.09
RP ES09-2
STA. 597ES+13.32, 5.39'LT
X=572656.27,Y=295606.49
BOTTOM OF FOOTING EL. = 742.50
ESTIMATED PILE LENGTH = 30 FT.

PIER ES10
PILE DATA:
RP ES10-1
STA. 598ES+72.32, 22.61'LT
X=572786.40,Y=295703.44
RP ES10-2
STA. 598ES+72.32, 3.89'LT
X=572797.05,Y=295679.17
BOTTOM OF FOOTING EL. = 767.50
ESTIMATED PILE LENGTH = 35 FT.

PIER ES11
PILE DATA:
RP ES11-1
STA. 600ES+31.32, 22.61'LT
X=572937.35,Y=295760.36
RP ES11-2
STA. 600ES+31.32, 3.89'LT
X=572945.37,Y=295735.10
BOTTOM OF FOOTING EL. = 754.25
ESTIMATED PILE LENGTH = 50 FT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

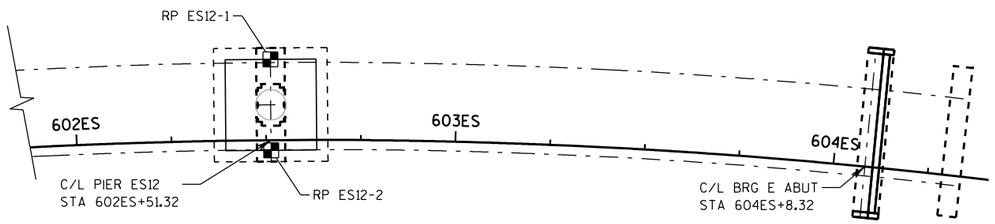
DRAWN BY SR | PLANS CK'D. JWC

OPTION B
FOUNDATION LAYOUT
(4 OF 5)

SHEET B5 OF B48

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PLOT BY : MSCKTM
PLOT NAME : 080205b_fl
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-81



PIER ES12
PILE DATA:
RP ES12-1
STA. 602ES+51.32, 21.36'LT
X=573154.61,Y=295810.80
RP ES12-2
STA. 602ES+51.32, 2.64'LT
X=573158.44,Y=295787.10
BOTTOM OF FOOTING EL. = 757.00
ESTIMATED PILE LENGTH = 50 FT.

EAST ABUT
11 CIPC PILES, 16" DIA
RP EA1
STA 604ES+08.32, 31.44'LT
X=573312.32, Y=295837.94
RP EA2
STA 604ES+08.32, 13.45'RT
X=573314.78, Y=295793.11
BOTTOM OF ABUT. EL. = 772.87
ESTIMATED PILE LENGTH = 50 FT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

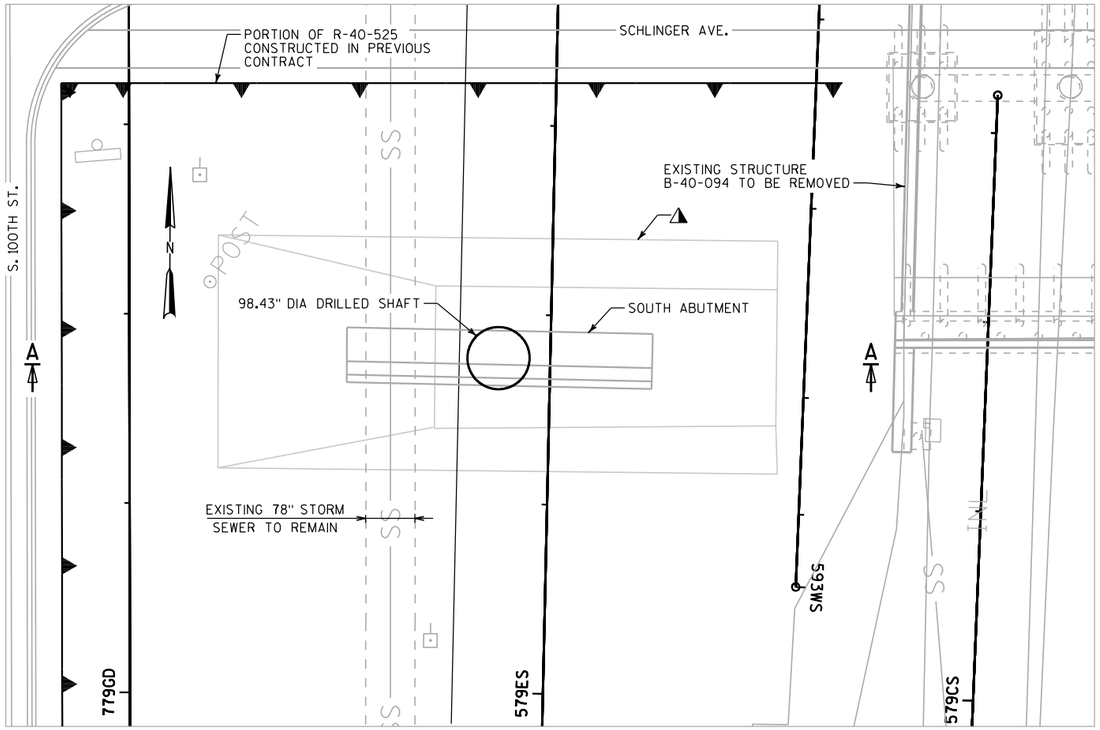
DRAWN BY SR | PLANS CK'D. JWC

OPTION B
FOUNDATION LAYOUT
(5 OF 5)

SHEET B6 OF B48

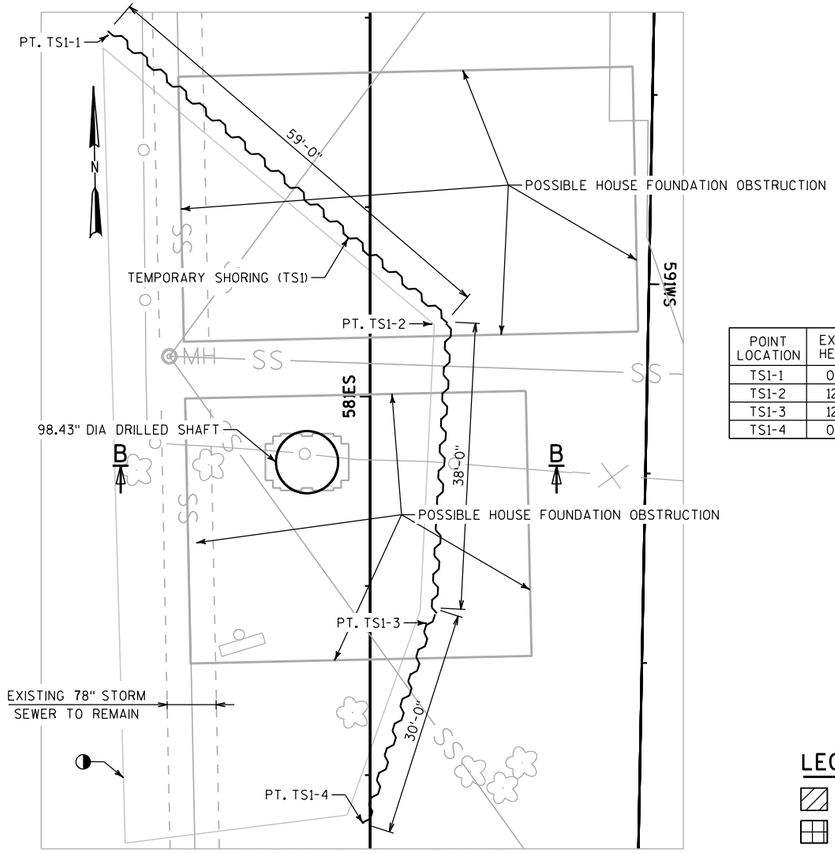
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STATE PROJECT NUMBER
1060-33-81



EXCAVATION PLAN - SOUTH ABUTMENT

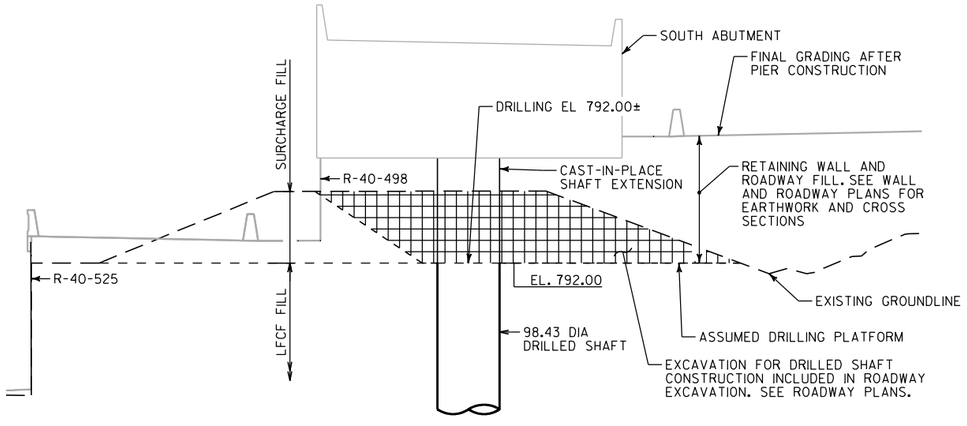
STA 579ES+45.32



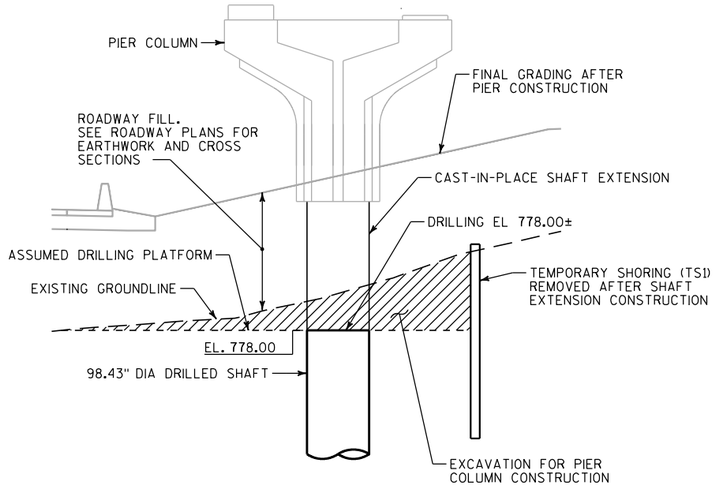
POINT LOCATION	EXPOSED HEIGHT ◥
TS1-1	0'-0"
TS1-2	12'-0"
TS1-3	12'-0"
TS1-4	0'-0"

EXCAVATION PLAN - PIER ES01

STA 580ES+91.32



SECTION A-A



SECTION B-B

LEGEND

- EXCAVATION FOR STRUCTURES
- SURCHARGE FILL EXCAVATION
- ◐ APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".
- ◥ APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.
- ⚠ EXCAVATION OF SURCHARGE FILL IS INCLUDED IN ROADWAY EXCAVATION. SEE ROADWAY PLANS.

NOTES

THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION B
EXCAVATION PLAN
(1 OF 8)

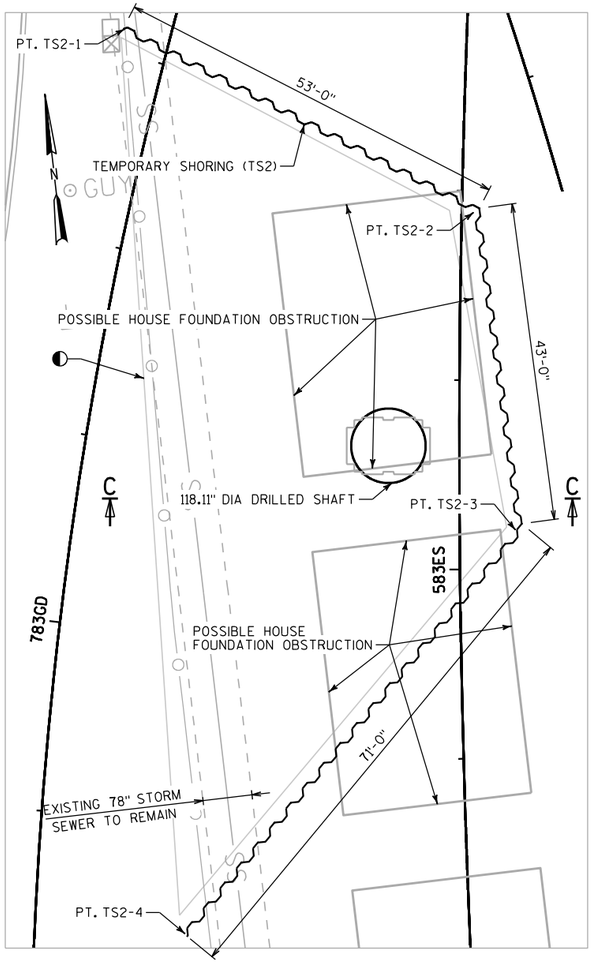
SHEET B7 OF B48

8

8

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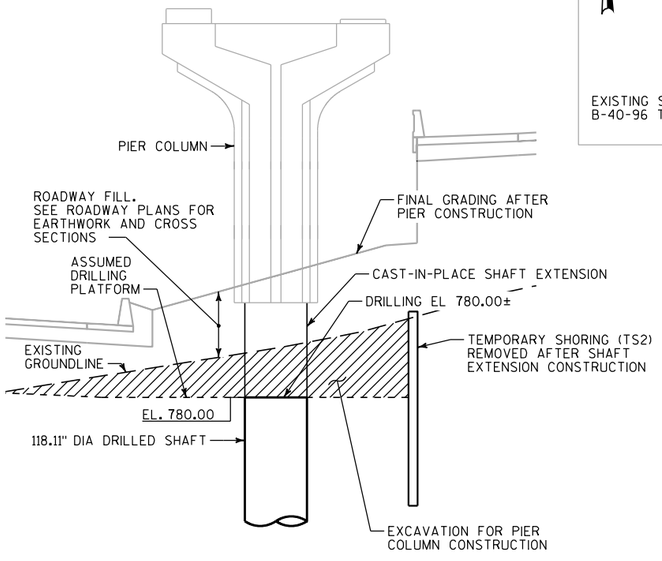
STATE PROJECT NUMBER
1060-33-81



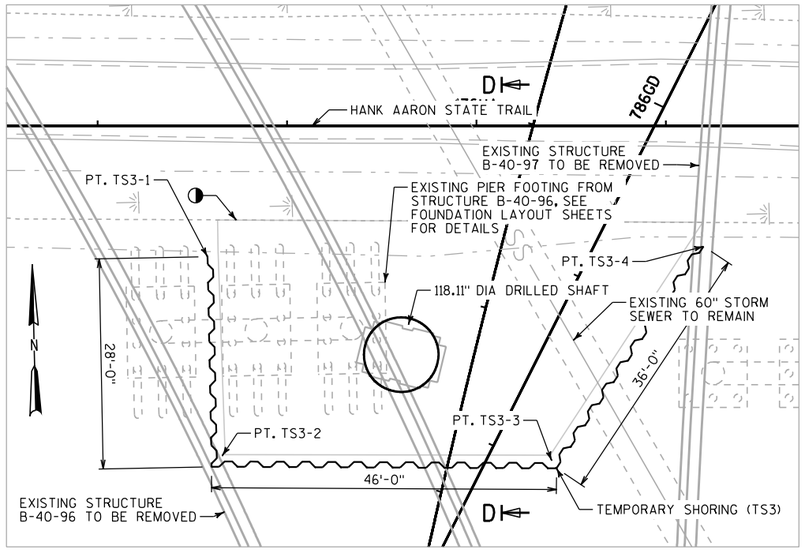
EXCAVATION PLAN - PIER ES02

STA 583ES+16.32

POINT LOCATION	EXPOSED HEIGHT ◥
TS2-1	0'-0"
TS2-2	11'-0"
TS2-3	11'-0"
TS2-4	0'-0"



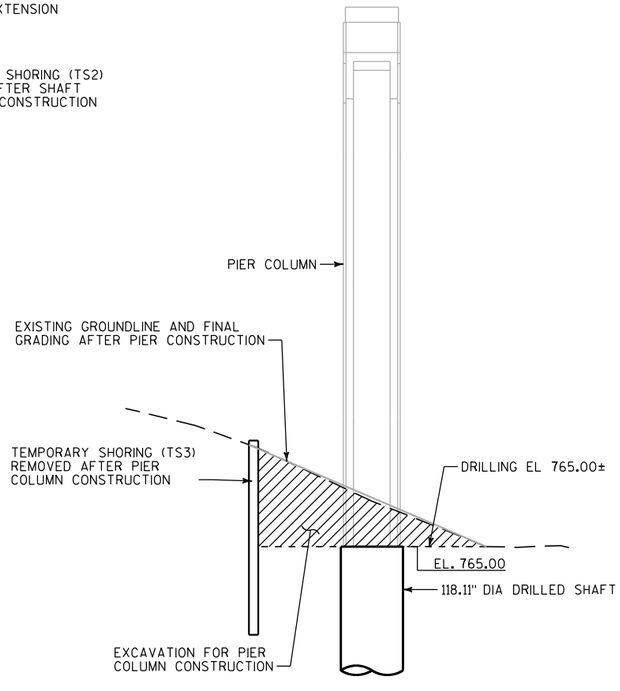
SECTION C-C



EXCAVATION PLAN - PIER ES03

STA 585ES+41.32

POINT LOCATION	EXPOSED HEIGHT ◥
TS3-1	0'-0"
TS3-2	14'-0"
TS3-3	14'-0"
TS3-4	0'-0"



SECTION D-D

LEGEND

EXCAVATION FOR STRUCTURES

◐ APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

◥ APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.

NOTES

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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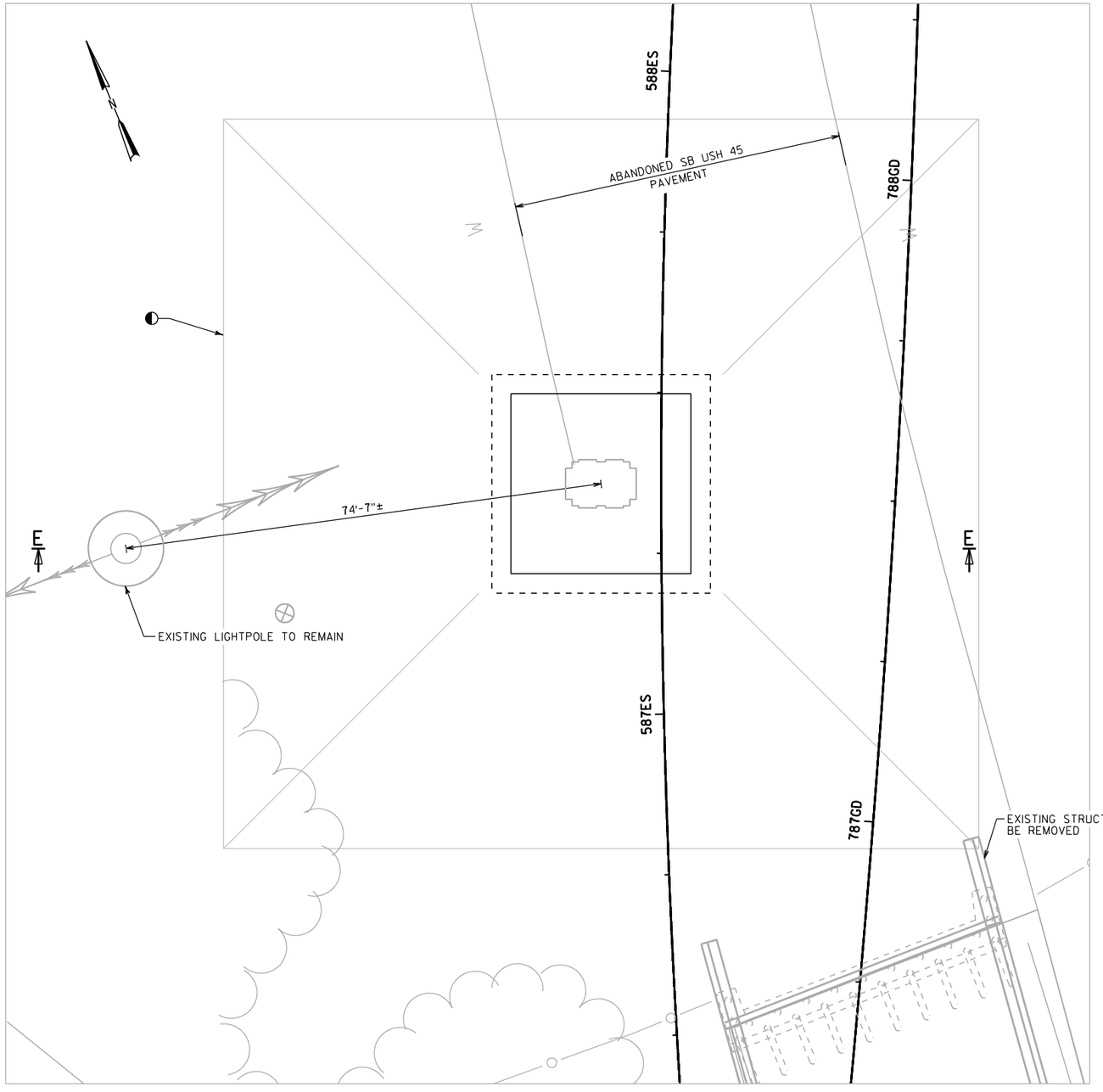
OPTION B
EXCAVATION PLAN
(2 OF 8)

SHEET B8 OF B48

8

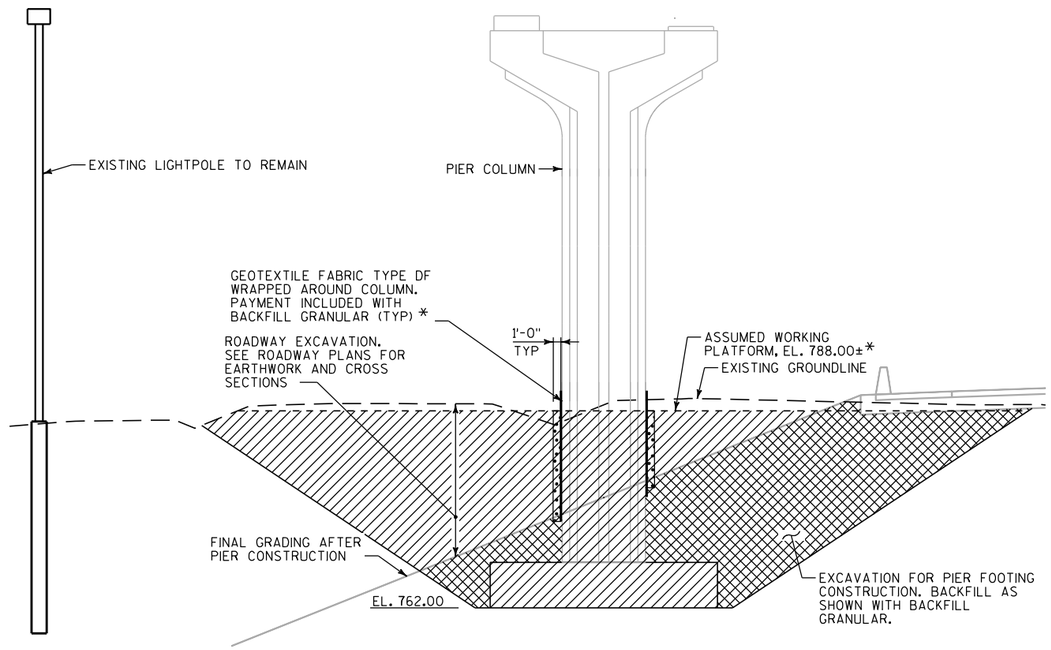
8

STATE PROJECT NUMBER
1060-33-81



EXCAVATION PLAN - PIER ES04

STA. 587ES+35.82



SECTION E-E

* THE EXCAVATION PLAN ASSUMES THAT THE CONTRACTOR WILL BACKFILL THE EXCAVATION AFTER COLUMN CONSTRUCTION AND LATER EXCAVATE DOWN TO FINAL GRADING. PROVIDE SAND BACKFILL AND GEOTEXTILE FABRIC TYPE DF AROUND COLUMN TO PROTECT COLUMN FROM BACKFILL MATERIAL. IF CONTRACTOR CHOOSES TO LEAVE THE EXCAVATION OPEN THEN SAND BACKFILL AND GEOTEXTILE FABRIC TYPE DF IS NOT REQUIRED.

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR
- 1'-0" SAND BACKFILL AROUND COLUMN. PAYMENT INCLUDED WITH BACKFILL GRANULAR.
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

NOTES

THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

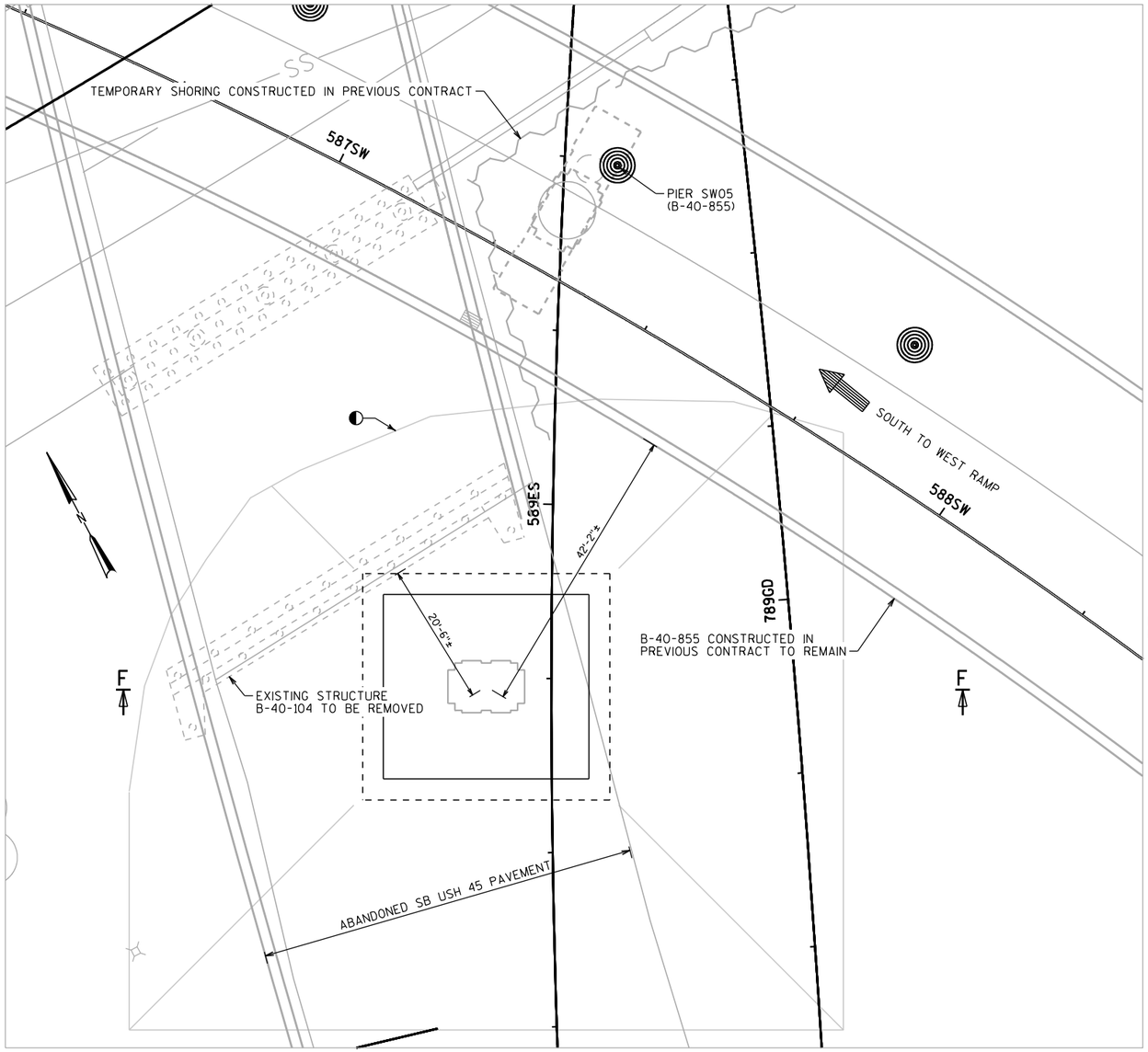
STRUCTURE B-40-854

DRAWN BY ENS | PLANS CK'D. JWC

OPTION B
EXCAVATION PLAN
(3 OF 8)

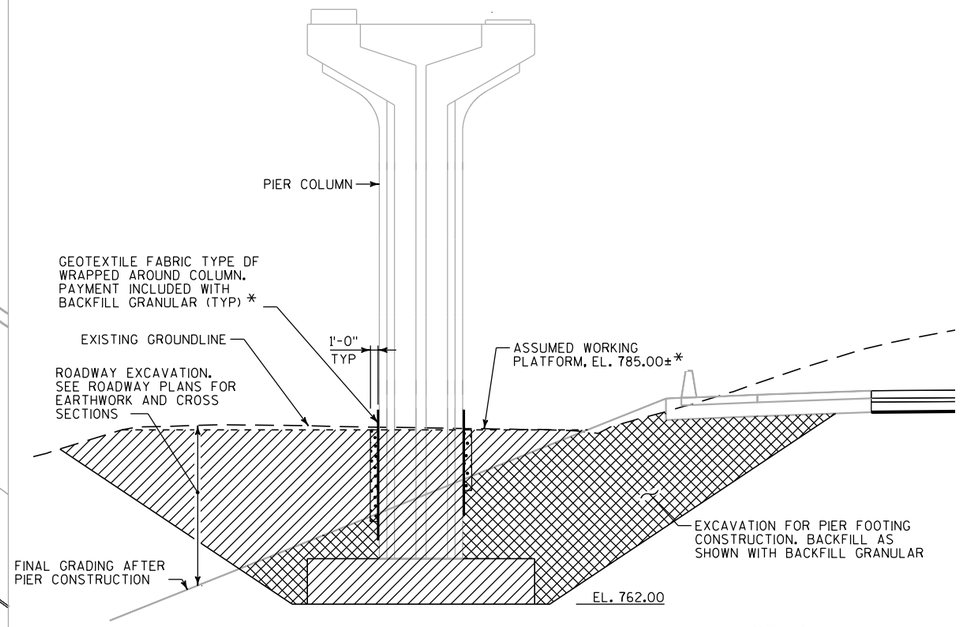
SHEET B9 OF B48

STATE PROJECT NUMBER
1060-33-81



EXCAVATION PLAN - PIER ES05

STA 588ES+73.82



SECTION F-F

* THE EXCAVATION PLAN ASSUMES THAT THE CONTRACTOR WILL BACKFILL THE EXCAVATION AFTER COLUMN CONSTRUCTION AND LATER EXCAVATE DOWN TO FINAL GRADING. PROVIDE SAND BACKFILL AND GEOTEXTILE FABRIC TYPE DF AROUND COLUMN TO PROTECT COLUMN FROM BACKFILL MATERIAL. IF CONTRACTOR CHOOSES TO LEAVE THE EXCAVATION OPEN THEN SAND BACKFILL AND GEOTEXTILE FABRIC TYPE DF IS NOT REQUIRED.

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR
- 1'-0" SAND BACKFILL AROUND COLUMN. PAYMENT INCLUDED WITH BACKFILL GRANULAR.
- APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

NOTES

THIS DRAWING IS INTENDED TO PROVIDE A REFERENCE FOR ASSUMED EXCAVATION LIMITS AND TEMPORARY SHORING REQUIREMENTS. THIS DRAWING IS NOT ALL-INCLUSIVE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY ENS | PLANS CK'D. JWC

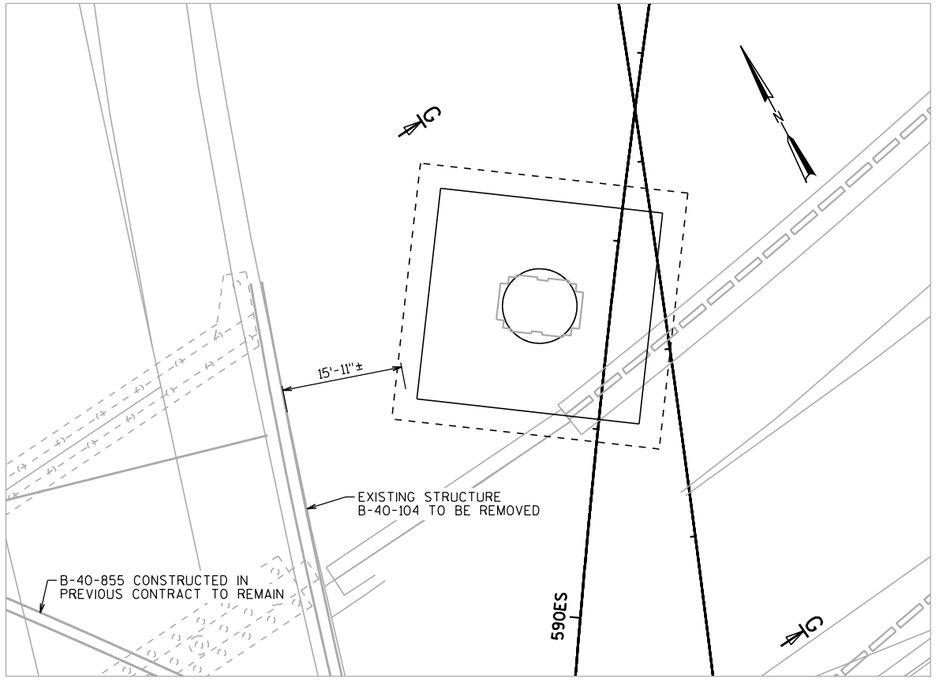
OPTION B
EXCAVATION PLAN
(4 OF 8)

SHEET B10 OF B48

8

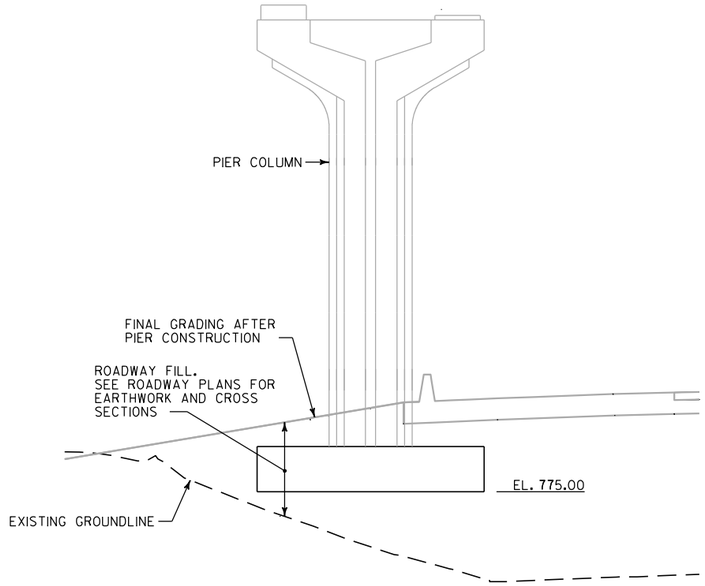
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STATE PROJECT NUMBER
1060-33-81

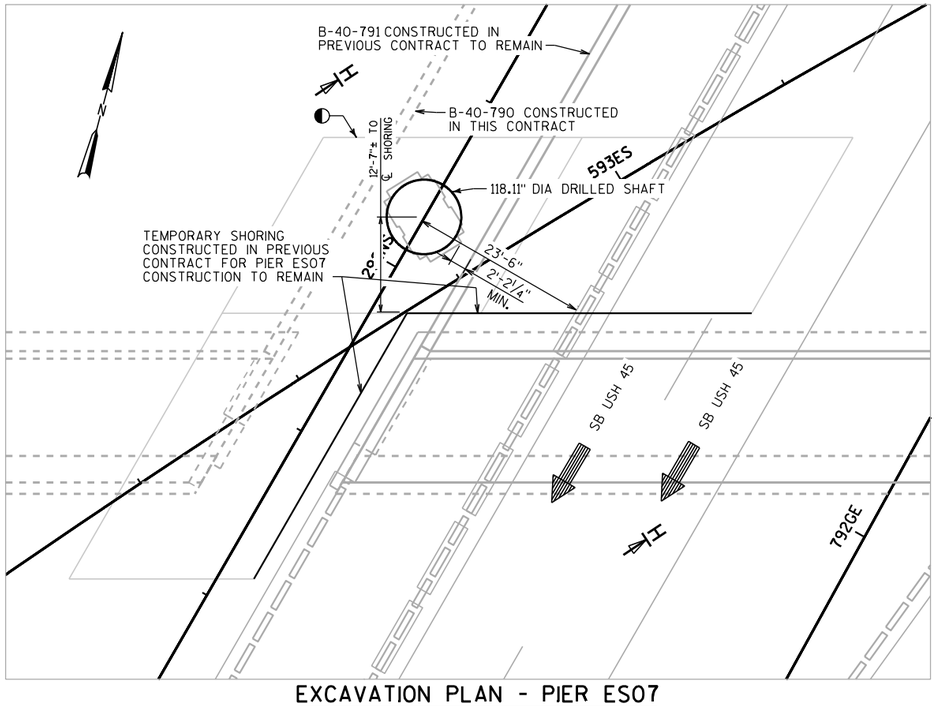


EXCAVATION PLAN - PIER ES06

STA 590ES+40.32

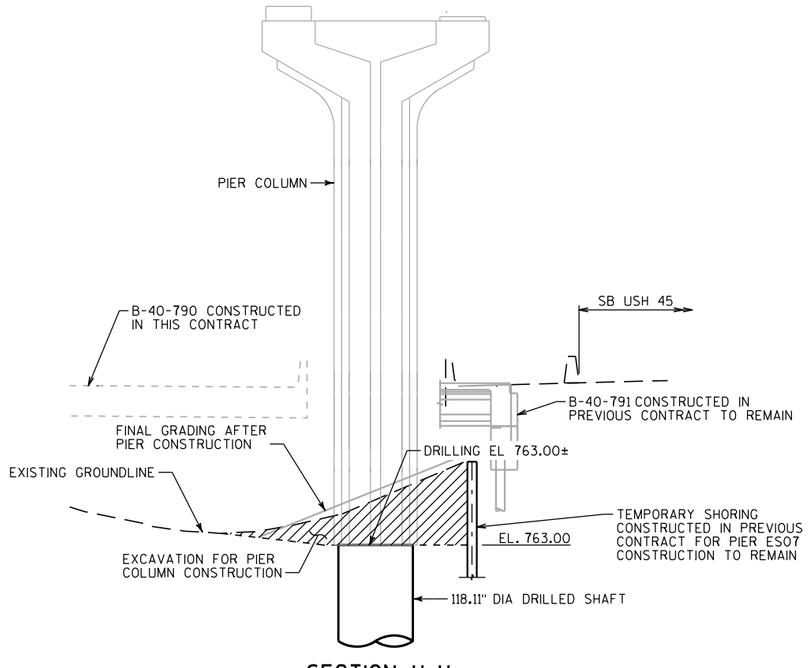


SECTION G-G



EXCAVATION PLAN - PIER ES07

STA 592ES+75.32



SECTION H-H

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR

◐ APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

NOTES

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY ENS | PLANS CK'D. JWC

OPTION B
EXCAVATION PLAN
(5 OF 8)

SHEET B11 OF B48

8

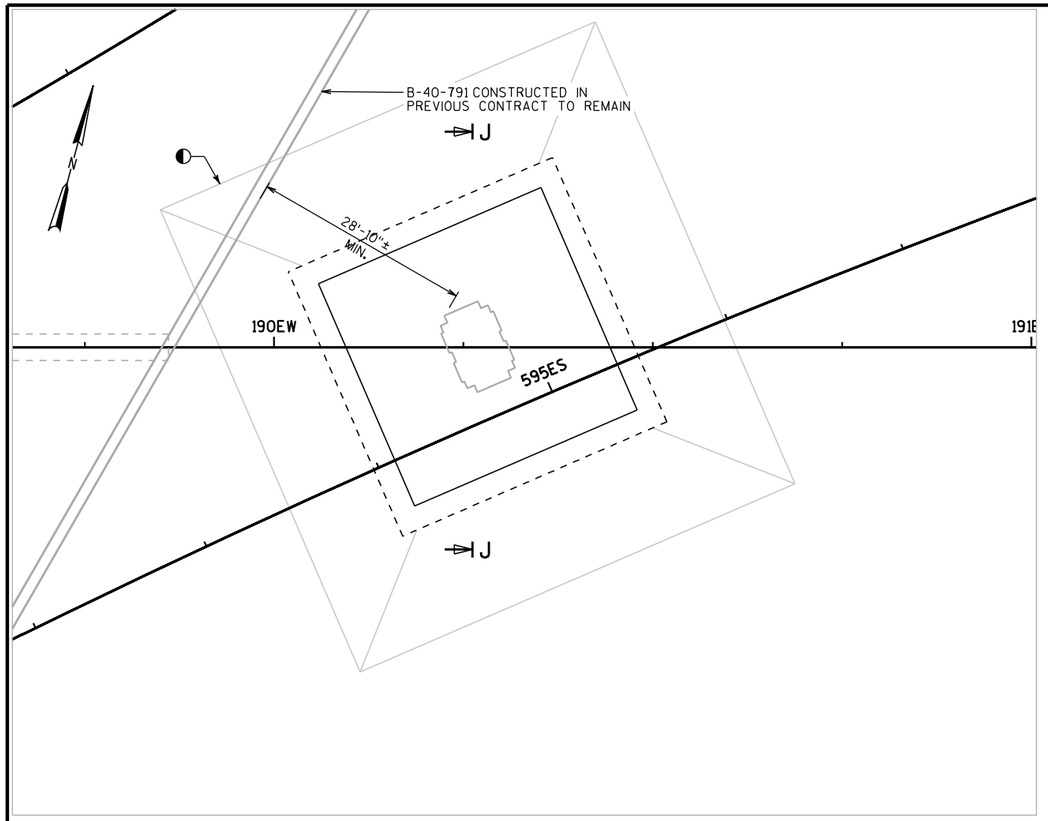
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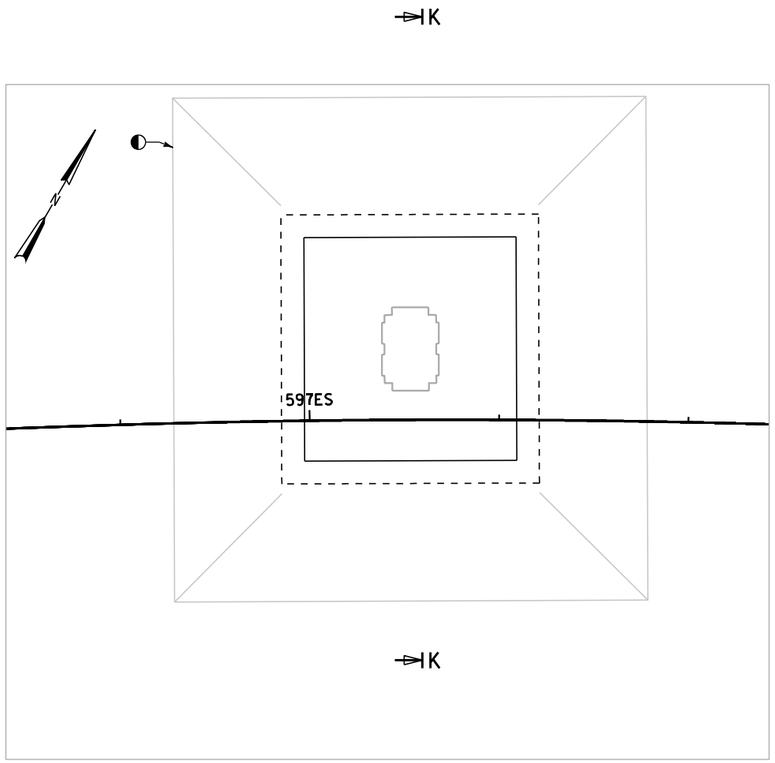
STATE PROJECT NUMBER

1060-33-81



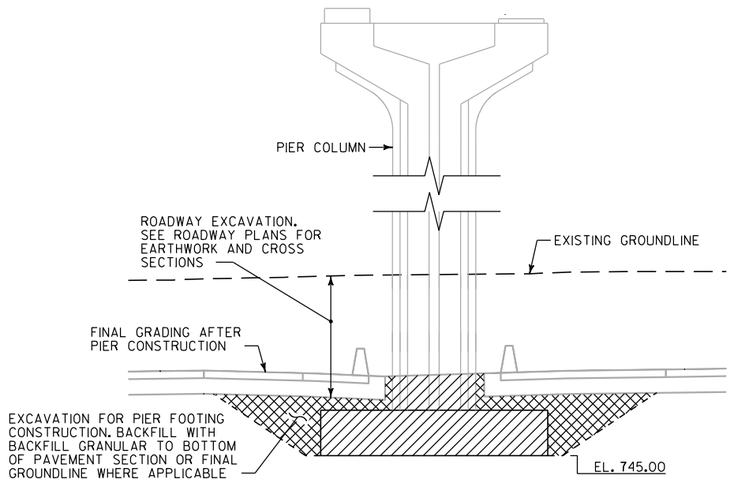
EXCAVATION PLAN - PIER ES08

STA 594ES+93.32

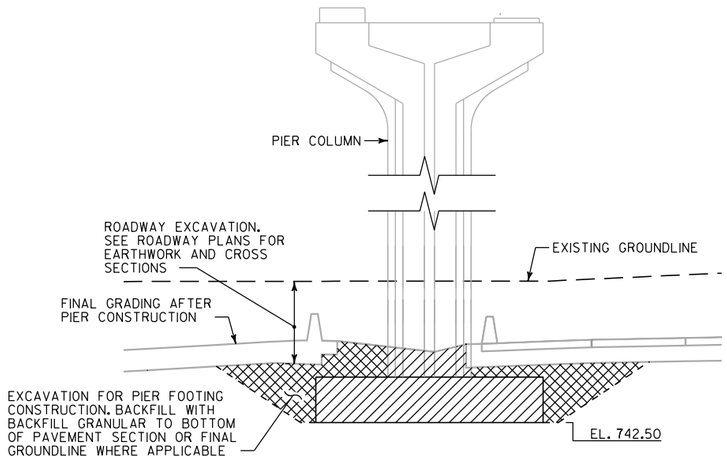


EXCAVATION PLAN - PIER ES09

STA 597ES+13.22



SECTION J-J



SECTION H-H

LEGEND

- EXCAVATION FOR STRUCTURES
- BACKFILL GRANULAR

◐ APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

NOTES

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION B
EXCAVATION PLAN
(6 OF 8)

SHEET B12 OF B48

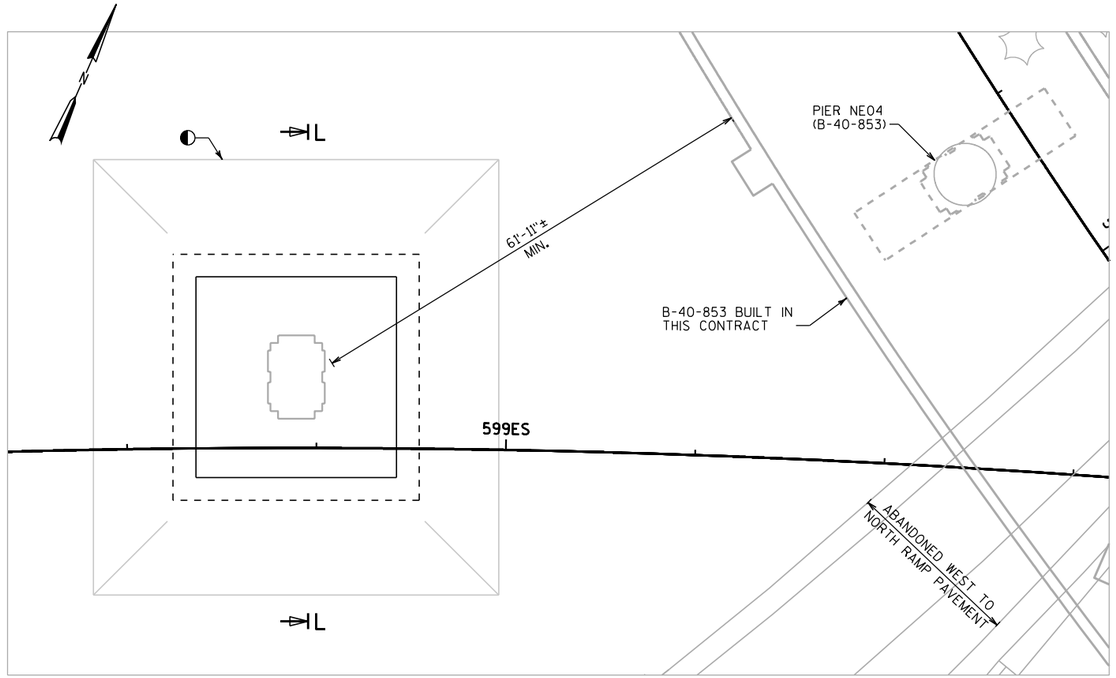
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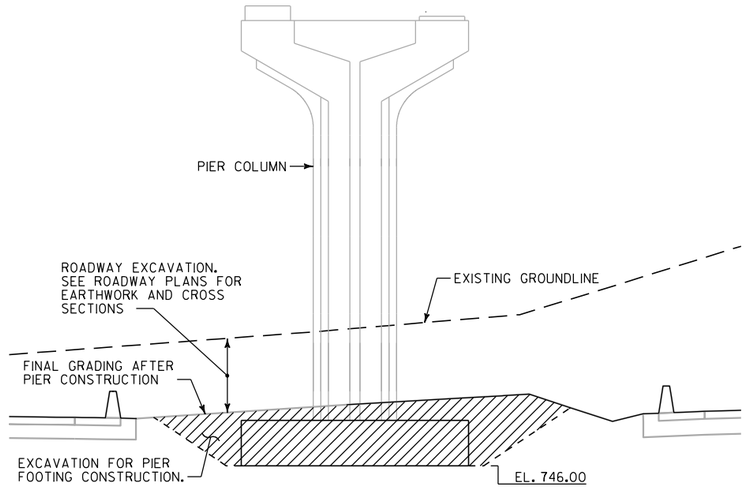
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STATE PROJECT NUMBER
1060-33-81

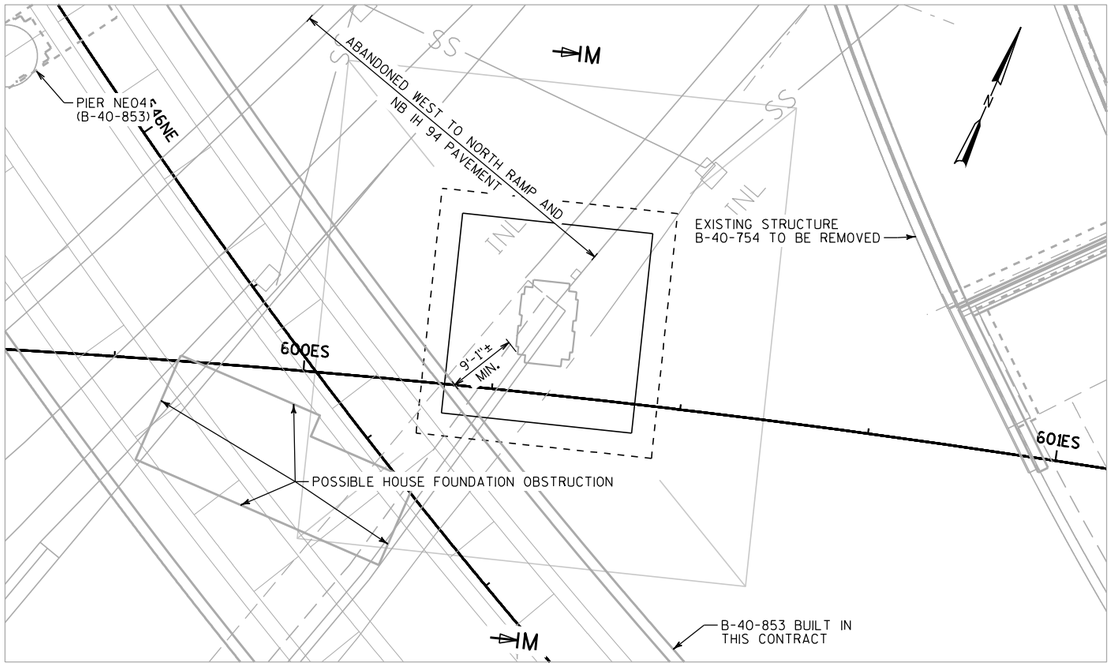


EXCAVATION PLAN - PIER ES10

STA 598ES+72.32

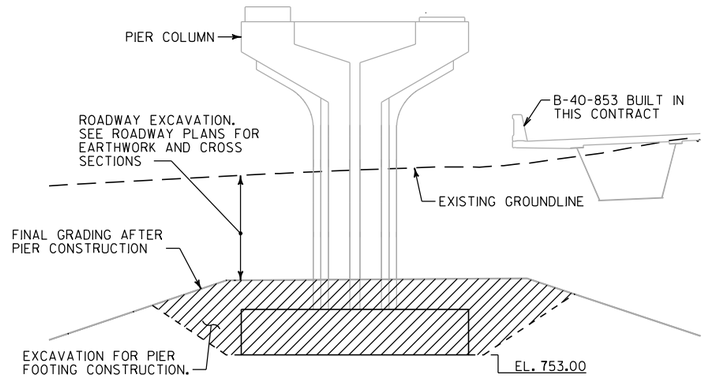


SECTION L-L



EXCAVATION PLAN - PIER ES11

STA 600ES+31.32



SECTION M-M

LEGEND

EXCAVATION FOR STRUCTURES

◐ APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

NOTES

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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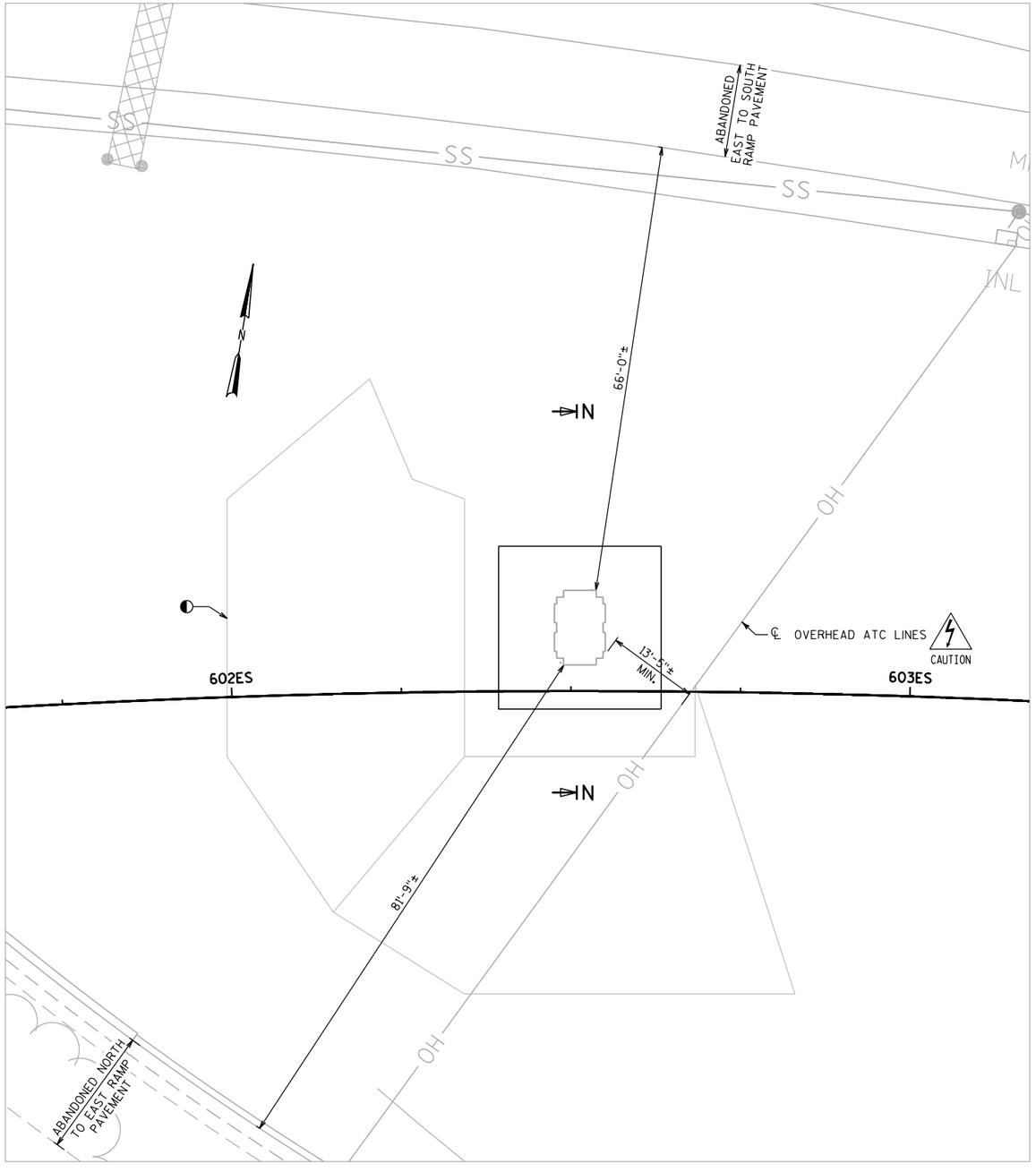
OPTION B
EXCAVATION PLAN
(7 OF 8)

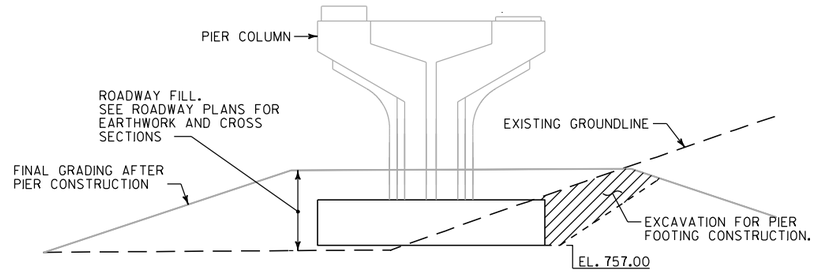
SHEET B13 OF B48

8

8

STATE PROJECT NUMBER
1060-33-81





SECTION N-N

LEGEND

EXCAVATION FOR STRUCTURES

◐ APPROXIMATE EXCAVATION LIMITS. LIMITS WILL VARY BASED ON THE WORKING AREA REQUIRED AND THE MAXIMUM EXCAVATION SLOPE THAT CAN BE SAFELY MAINTAINED. EXCAVATION ON THESE SHEETS IS INCLUDED "EXCAVATION FOR STRUCTURES BRIDGES B-40-854".

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION B
EXCAVATION PLAN
(8 OF 8)

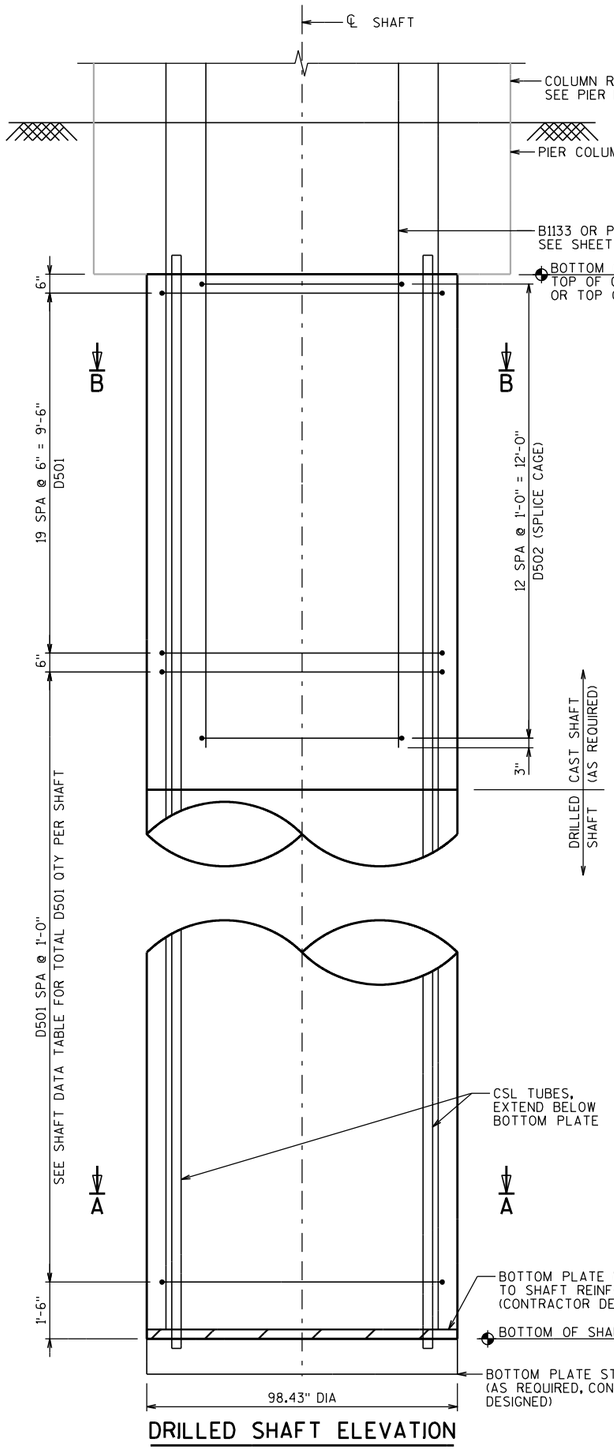
SHEET B14 OF B48

8

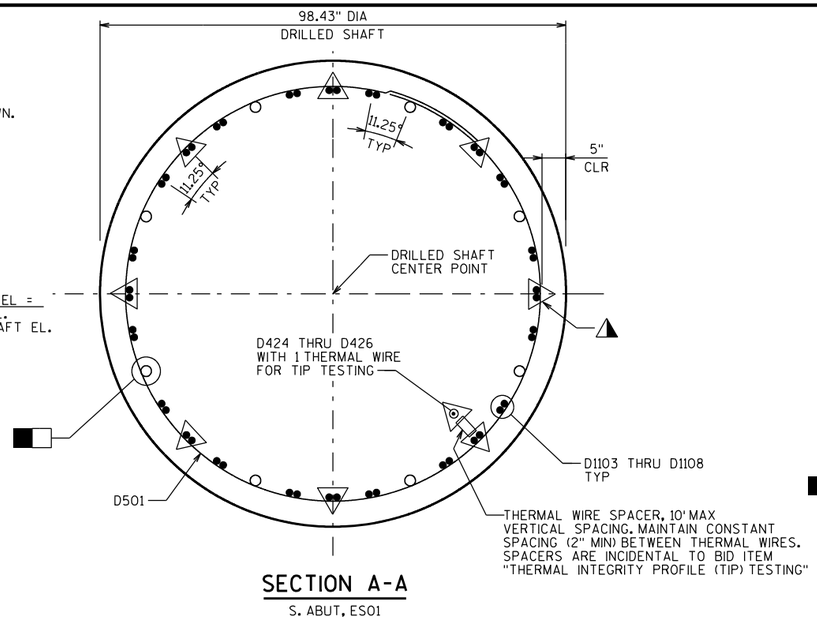
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STATE PROJECT NUMBER

1060-33-81

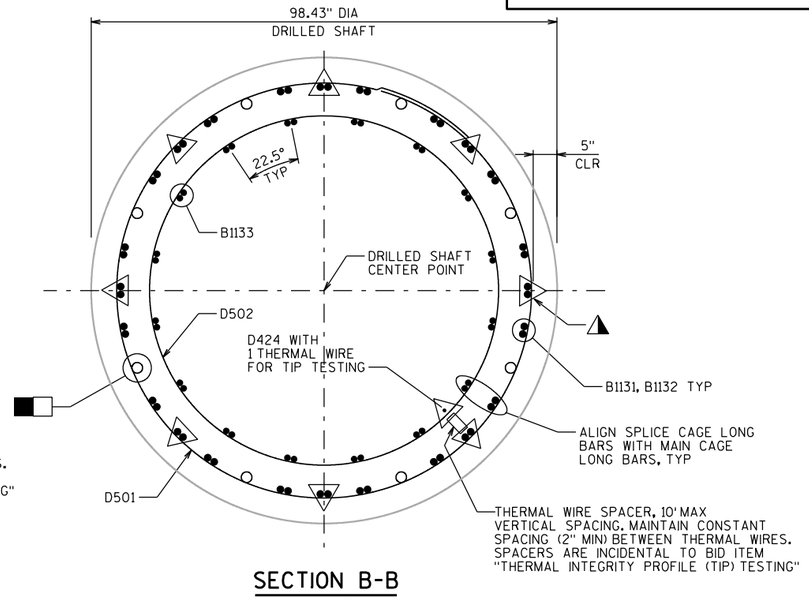


DRILLED SHAFT ELEVATION



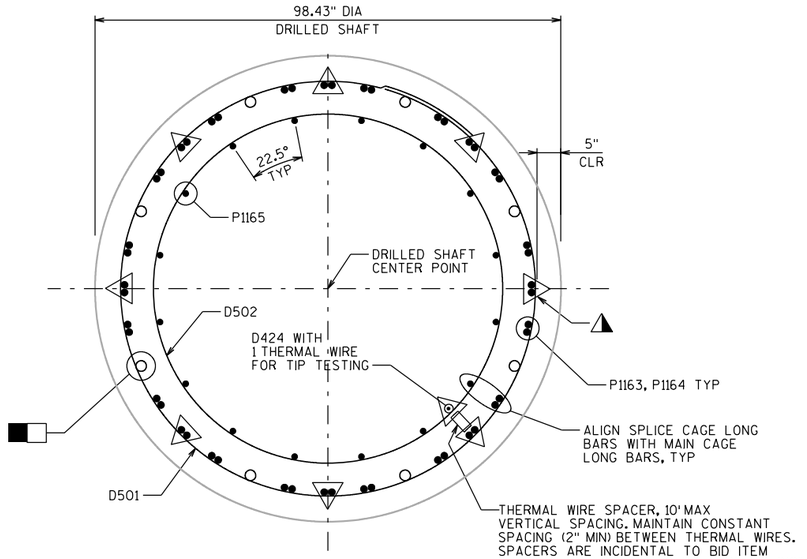
SECTION A-A

S. ABUT. ES01



SECTION B-D

S. ABUT



SECTION B-B

ES01

SHAFT DATA

SHAFT NO	SHAFT ℄ "X"	SHAFT ℄ "Y"	ASSUMED DRILLING EL	TOP OF SHAFT EL	BOTTOM OF SHAFT EL	SHAFT LENGTH (FT)	TOP OF CAST SHAFT EL	SHAFT VOLUME (CY)	TIE NO. REQ'D (EACH)	INSTRUMENTATION	MAXIMUM BASE GROUTING PRESSURE (PSI)
S. ABUT.	571892.12	294115.12	792.00	792.00	676.00	116	804.64	227.0	138	CSL TUBES/TIP TESTING	575
PIER ES01	571893.34	294262.25	778.00	778.00	678.00	100	795.00	195.7	126	CSL TUBES/TIP TESTING	355

LEGEND

- 8 - 2" DIA CSL TUBES FULL LENGTH OF SHAFT TIED TO INSIDE AND SPACED AROUND THE PERIMETER OF REINFORCEMENT AS SHOWN. AFTER TESTING, USE CSL TUBES TO BASE-GROUT THE PIER DRILLED SHAFTS.
- 9 - THERMAL WIRES FOR TIP TESTING. DISTRIBUTE 8 THERMAL WIRES EVENLY AROUND THE PERIMETER OF REINFORCMENT TIED TO VERTICAL BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

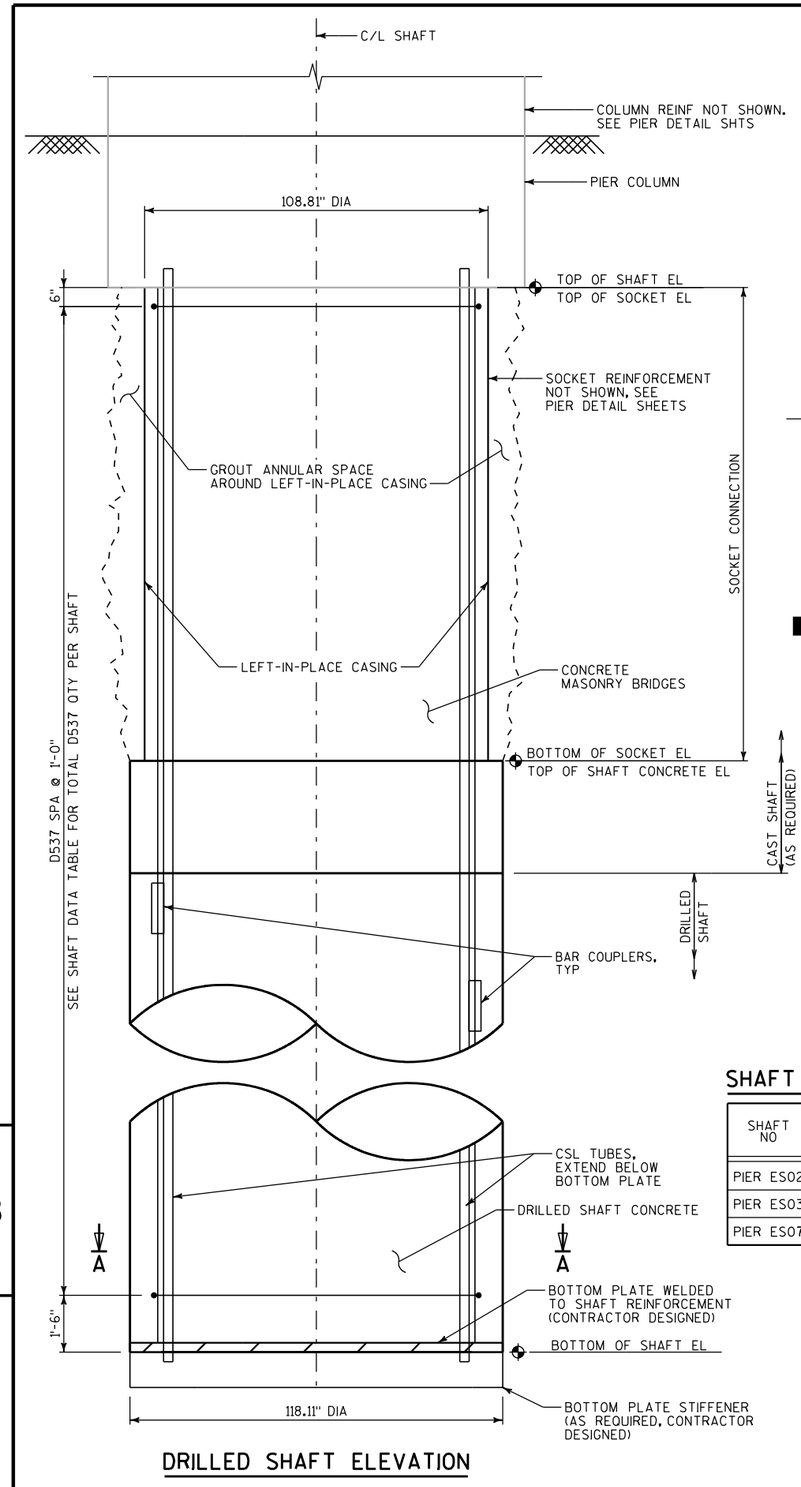
OPTION B
DRILLED SHAFT
DETAILS (1 OF 3)

SHEET B15 OF B48

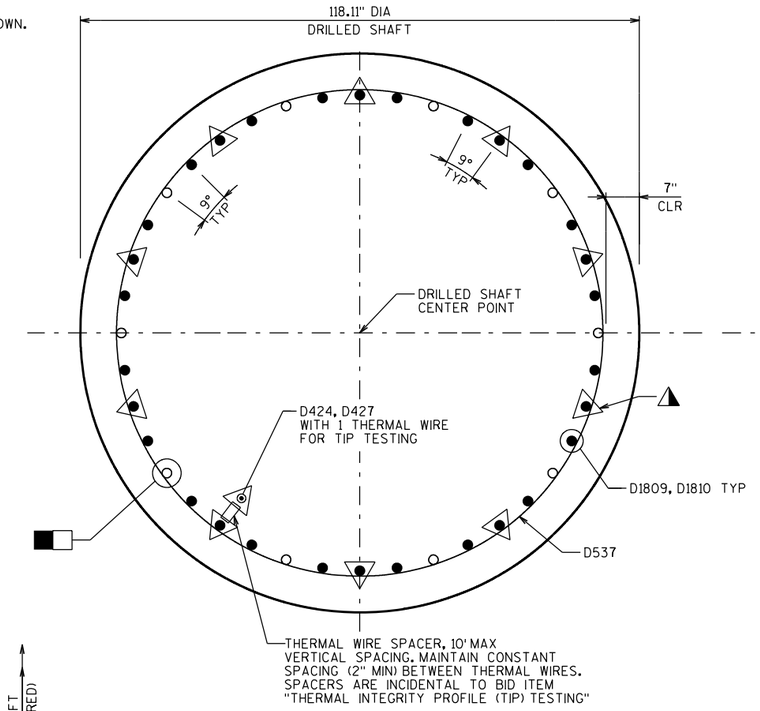
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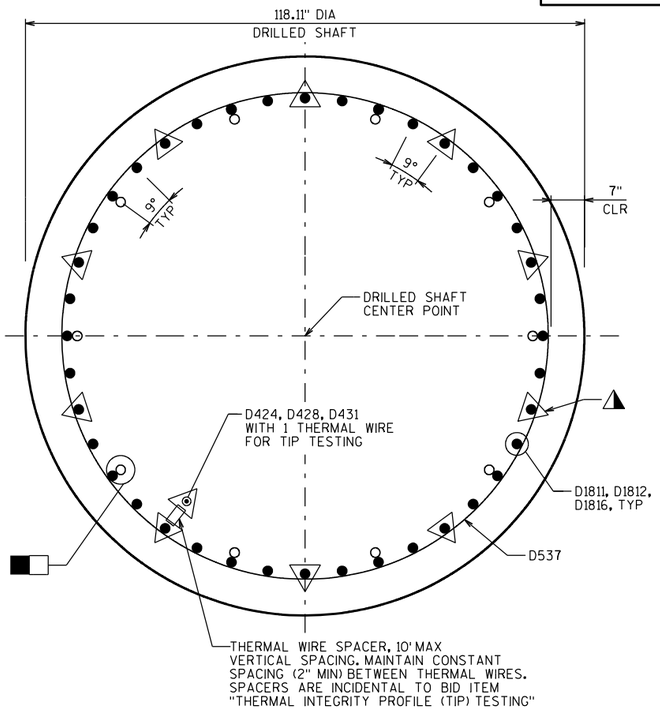
STATE PROJECT NUMBER
1060-33-81



DRILLED SHAFT ELEVATION



SECTION A-A
ES02



SECTION A-A
ES03, ES07

SHAFT DATA

SHAFT NO	SHAFT ℄ "X"	SHAFT ℄ "Y"	ASSUMED DRILLING EL	TOP OF SHAFT EL	BOTTOM OF SHAFT EL	SHAFT LENGTH (FT)	TOP OF CAST SHAFT EL	BOTTOM OF SOCKET EL	SHAFT VOLUME (CY)	TIE NO. REQ'D (EACH)	INSTRUMENTATION	MAXIMUM BASE GROUTING PRESSURE (PSI)
PIER ES02	571903.42	294487.78	780.00	780.00	676.00	104	792.50	-	293.1	116	CSL TUBES/TIP TESTING	445
PIER ES03	571946.16	294709.9	765.00	765.00	691.00	74	-	750.00	208.5	73	CSL TUBES/TIP TESTING	575
PIER ES07	572303.9	295347.59	763.00	763.00	710.00	53	-	746.00	149.4	52	CSL TUBES/TIP TESTING	310

LEGEND

10 - 2" DIA CSL TUBES FULL LENGTH OF SHAFT TIED TO INSIDE AND SPACED AROUND THE PERIMETER OF REINFORCEMENT AS SHOWN. AFTER TESTING, USE CSL TUBES TO BASE-GROUT THE PIER DRILLED SHAFTS.

11 - THERMAL WIRES FOR TIP TESTING. DISTRIBUTE 10 THERMAL WIRES EVENLY AROUND THE PERIMETER OF REINFORCMENT TIED TO VERTICAL BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY JJO | PLANS CK'D. JWC

OPTION B
DRILLED SHAFT
DETAILS (2 OF 3)

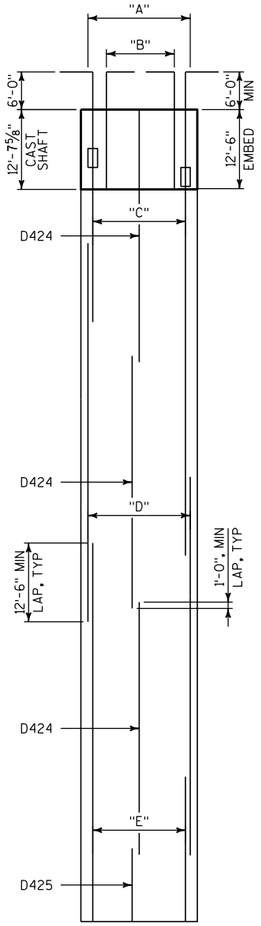
SHEET B16 OF B48

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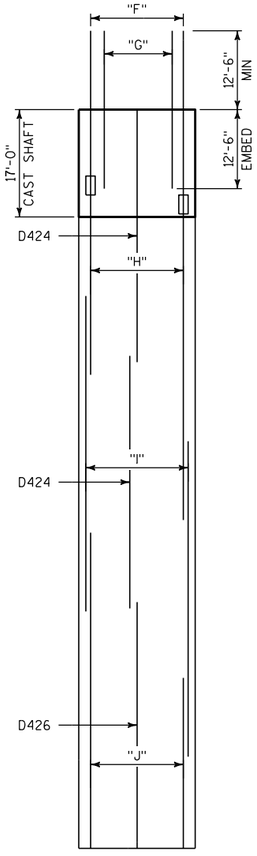
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STATE PROJECT NUMBER

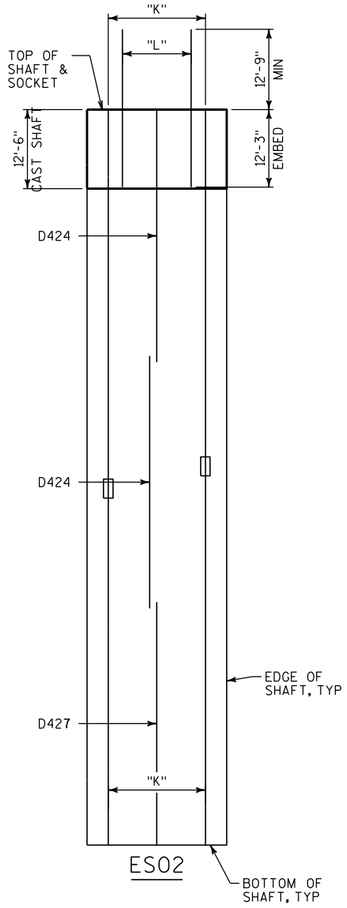
1060-33-81



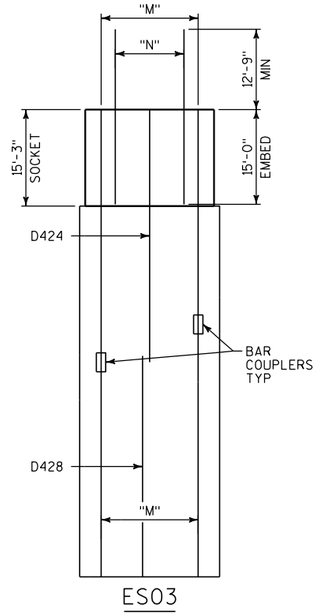
S. ABUT



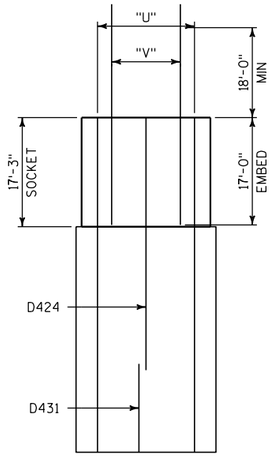
ES01



ES02



ES03



ES07

"A" = 22-B1131 & 22-B1132
"B" = 32-B1133
"C" = 24-D1103 & 24-D1105
"D" = 48-D1103
"E" = 24-D1103 & 24-D1104
"F" = 24-P1163 & 24-P1164
"G" = 16-P1165
"H" = 24-D1106 & 24-D1108
"I" = 48-D1106
"J" = 24-D1106 & 24-D1107
"K" = 15-D1809 & 15-D1810
"L" = 66-P1166 & 16-P1167
"M" = 20-D1811 & 20-D1812
"N" = 66-P1168 & 30-P1169
"U" = 40-D1816
"V" = 36-P1873 & 30-P1174

DRILLED SHAFT MAIN REINFORCEMENT SCHEMATIC

NOTES:

1. STAGGER LAPS AND COUPLERS AS SHOWN SO AS TO LAP OR COUPLE NO MORE THAN HALF OF THE BARS PER SECTION.
2. WELDMENT OF BOTTOM PLATE AND REINFORCING BAR CAGE NOT SHOWN FOR CLARITY. SEE DETAIL ON SHEET "OPTION B DRILLED SHAFT DETAILS (1 OF 3)" AND OPTION A DRILLED SHAFT DETAILS (2 OF 3)".
3. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
4. THE SOCKET CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

OPTION B DRILLED SHAFT DETAILS (3 OF 3)

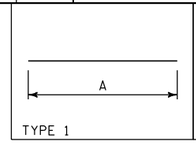
SHEET B17 OF B48

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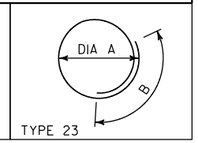
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STATE PROJECT NUMBER
1060-33-81

BAR INFORMATION						BAR DIM'S		LOCATION
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BEND TYPE	A	B	
D501	U	264	24'-9"	X	23	7'-5"	1'-5"	SHAFT TIE BAR
D502	U	26	21'-1"	X	23	6'-3"	1'-5"	SPLICE CAGE TIE BAR
D1103	U	96	60'-0"		1	60'-0"		LONGITUDINAL BAR S ABUT
D1104	U	24	23'-0"		1	23'-0"		LONGITUDINAL BAR S ABUT
D1105	U	24	26'-0"		1	26'-0"		LONGITUDINAL BAR S ABUT
D1106	U	96	50'-0"		1	50'-0"		LONGITUDINAL BAR ES01, ES12
D1107	U	24	27'-0"		1	27'-0"		LONGITUDINAL BAR ES01
D1108	U	24	30'-0"		1	30'-0"		LONGITUDINAL BAR ES01
D1809	U	30	56'-6"		1	56'-6"		LONGITUDINAL BAR ES02
D1810	U	30	60'-0"		1	60'-0"		LONGITUDINAL BAR
D1811	U	40	34'-0"		1	34'-0"		LONGITUDINAL BAR ES03
D1812	U	40	40'-0"		1	40'-0"		LONGITUDINAL BAR ES03
D1817	U	40	53'-0"		1	53'-0"		LONGITUDINAL BAR ES07
D424	U	9	40'-0"		1	40'-0"		LONGITUDINAL THERMAL BAR
D425	U	1	11'-8"		1	11'-8"		LONGITUDINAL THERMAL BAR S ABUT
D426	U	1	39'-0"		1	39'-0"		LONGITUDINAL THERMAL BAR ES01
D427	U	1	38'-6"		1	38'-6"		LONGITUDINAL THERMAL BAR ES02
D428	U	1	35'-0"		1	35'-0"		LONGITUDINAL THERMAL BAR ES03
D431	U	1	14'-0"		1	14'-0"		LONGITUDINAL THERMAL BAR ES07
D537	U	241	28'-11"	X	23	8'-9"	1'-5"	SHAFT TIE BAR



TYPE 1



TYPE 23

BAR MARK BREAKDOWN							
BAR MARK	S ABUT	PIER ES01	PIER ES02	PIER ES03	PIER ES07	TOTAL NO	WEIGHT
D501	138	126				264	6,815
D502	13	13				26	572
D1103	96					96	30,603
D1104	24					24	2,933
D1105	24					24	3,315
D1106		96				96	25,502
D1107		24				24	3,443
D1108		24				24	3,825
D1809			30			30	23,052
D1810			30			30	24,480
D1811				40		40	18,496
D1812				40		40	21,760
D1817					40	40	28,832
D424	3	2	2	1	1	9	240
D425	1					1	8
D426		1				1	26
D427			1			1	26
D428				1		1	23
D431					1	1	9
D537			116	73	52	241	7,269

8

NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
- U - STEEL, HIGH STRENGTH, UNCOATED.
- E - STEEL, HIGH STRENGTH, EPOXY COATED.
- S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

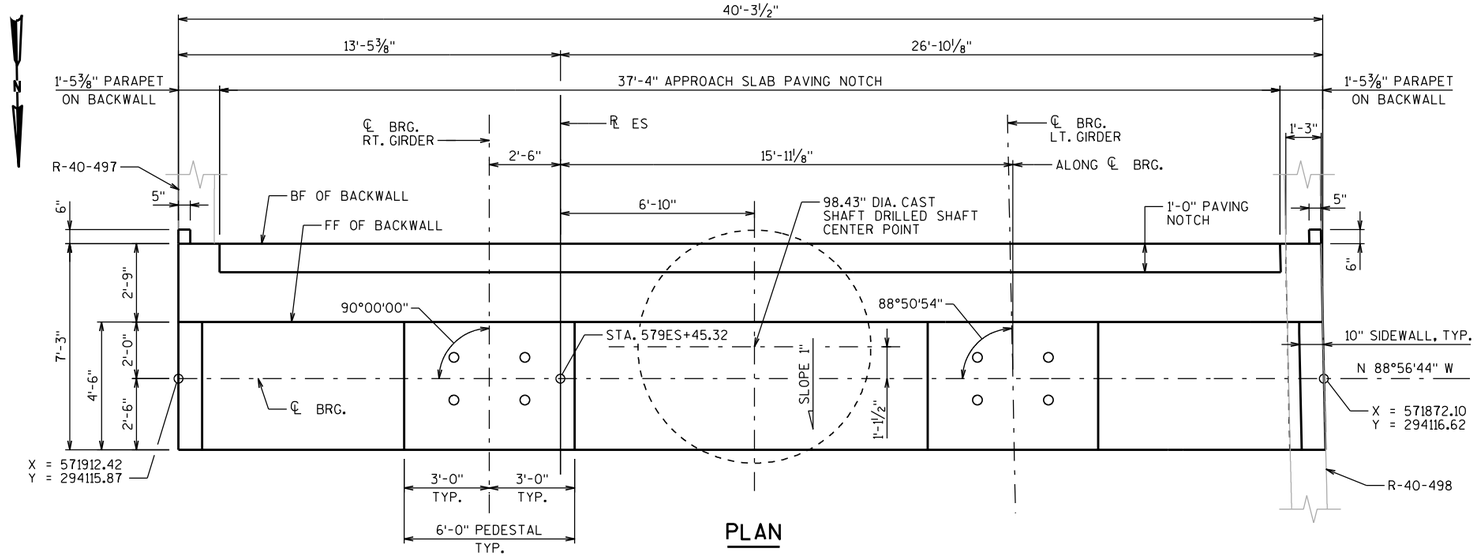
STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

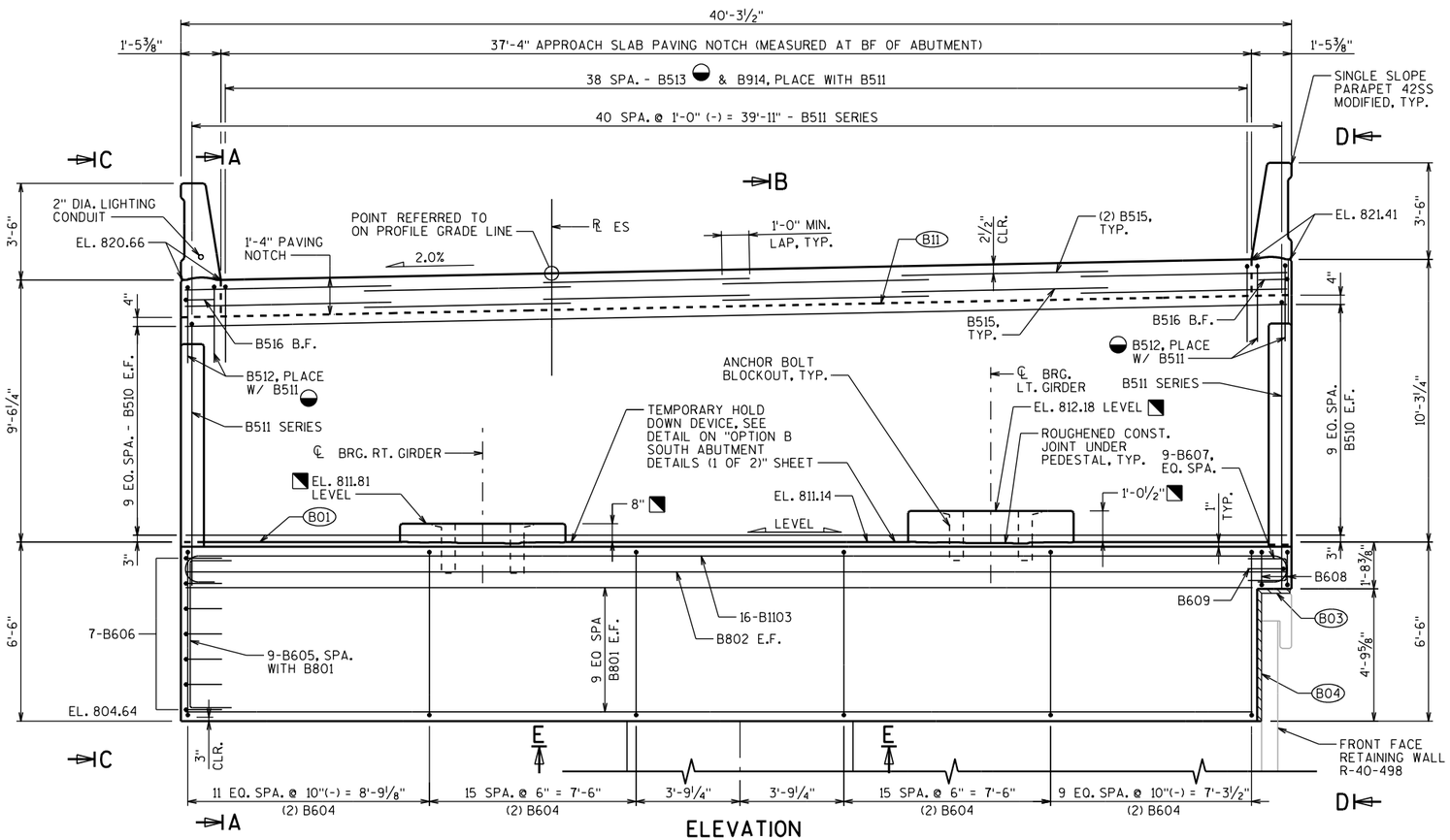
OPTION B
DRILLED SHAFT
REINFORCEMENT
SCHEDULE

SHEET B18 OF B48

STATE PROJECT NUMBER
1060-33-81



PLAN

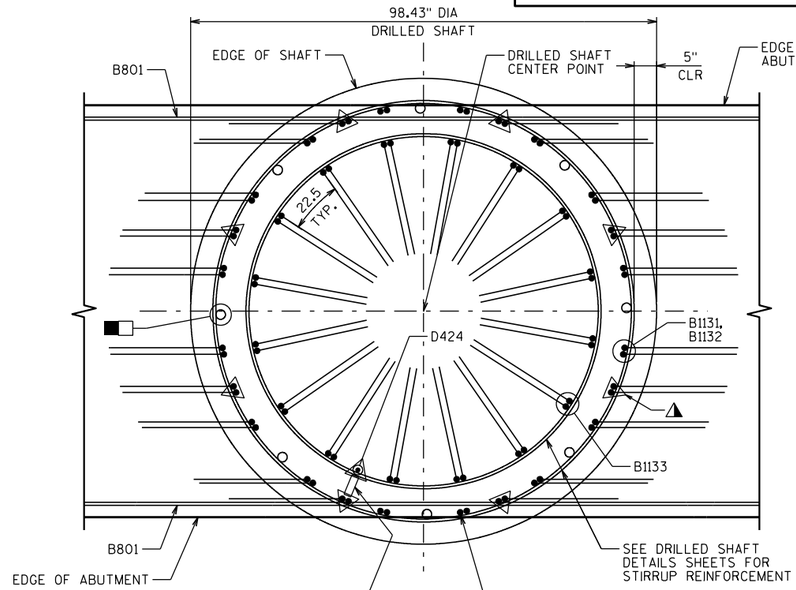


ELEVATION

LOOKING SOUTH - DOWNSTATION

ALL DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG FRONT FACE OF BACKWALL

REINFORCEMENT IN PEDESTALS NOT SHOWN FOR CLARITY, SEE "OPTION B SOUTH ABUTMENT PEDESTAL DETAILS" SHEET.



SECTION E-E

SEE SECTION B-B, SHEET B20 FOR ELEVATION VIEW

LEGEND

- (B01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 6" KEYWAY AT BASE OF BACKWALL.
- (B03) 2" PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITUMINUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- (B04) 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 ABUTMENT. COLOR TO MATCH CONCRETE STAIN.
- (B11) 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"
- ANCHOR REBAR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD SPEC FOR MASONRY ANCHOR TYPE S WITH A MIN. PULLOUT CAPACITY OF 20 KIPS AND EMBEDMENT OF 1'-0"
- 8'-0" LONG BAR WITH 1'-0" MIN LAP, CUT IN FIELD TO CLEAR JOINT SUPPORT SYSTEM AS REQUIRED.
- 8 - 2" DIA CSL TUBES FULL LENGTH OF SHAFT TIED TO INSIDE AND SPACED AROUND THE PERIMETER OF REINFORCEMENT AS SHOWN. AFTER TESTING, USE CSL TUBES TO BASE-GROUT THE ABUTMENT DRILLED SHAFT.
- 9 - THERMAL WIRES FOR TIP TESTING. DISTRIBUTE 8 THERMAL WIRES EVENLY AROUND THE PERIMETER OF REINFORCEMENT TIED TO VERTICAL BARS.

NOTES

1. FOR SECTIONS A-A & B-B SEE "OPTION B SOUTH ABUTMENT DETAILS (1 OF 2)" SHEET.
2. FOR SECTIONS C-C & D-D, SEE "OPTION B SOUTH ABUTMENT DETAILS (1 OF 2)" SHEET.
3. FOR DETAILS OF PEDESTALS, SEE "OPTION B SOUTH ABUTMENT PEDESTAL DETAILS" SHEET.
4. FOR DETAILS OF BEARINGS, SEE "BEARING DETAILS" SHEET.
5. FOR DETAILS FOR ANCHOR BOLT BLOCKOUTS, SEE "OPTION B SOUTH ABUTMENT PEDESTAL DETAILS" SHEET.
6. FOR DETAILS OF EXPANSION JT, SEE "ABUTMENT MODULAR EXPANSION JOIN LAYOUT" SHEET.
7. FOR DETAILS OF PARAPET ON BACKWALL, SEE PARAPET SHEETS.

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STRUCTURE B-40-854

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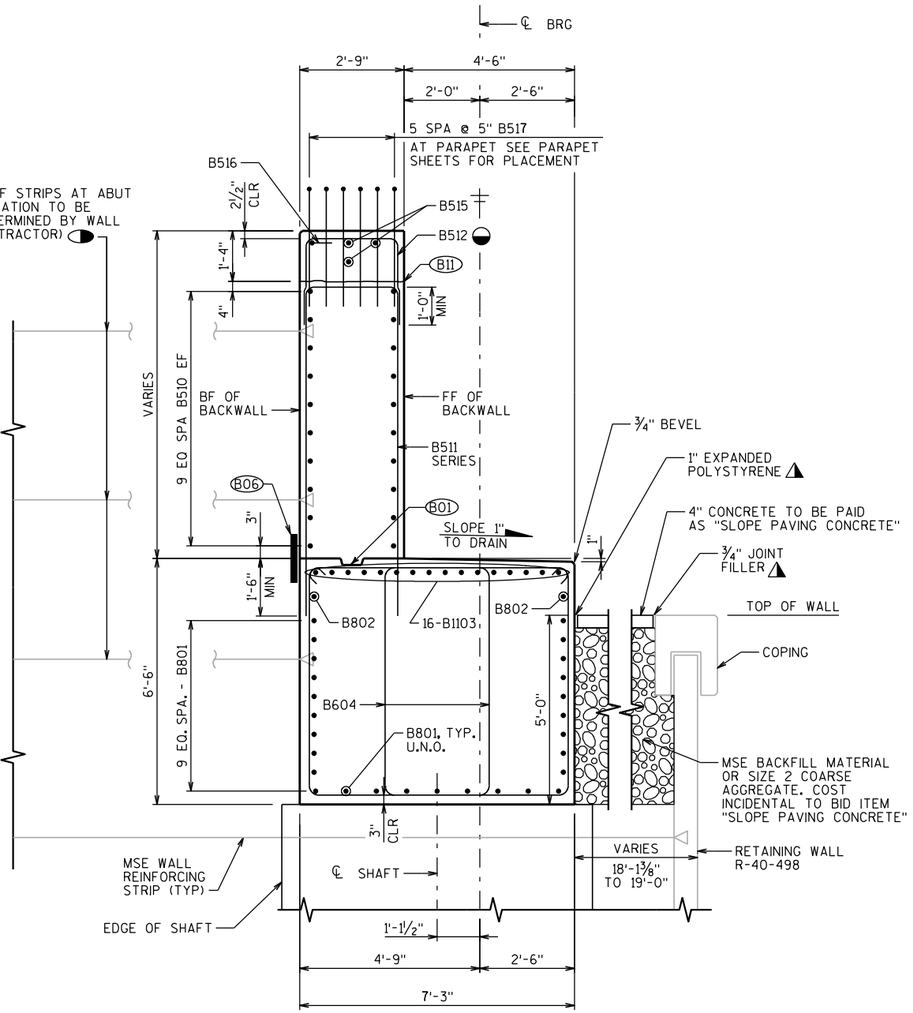
OPTION B
SOUTH ABUTMENT
PLAN & ELEVATION

SHEET B19 OF B48

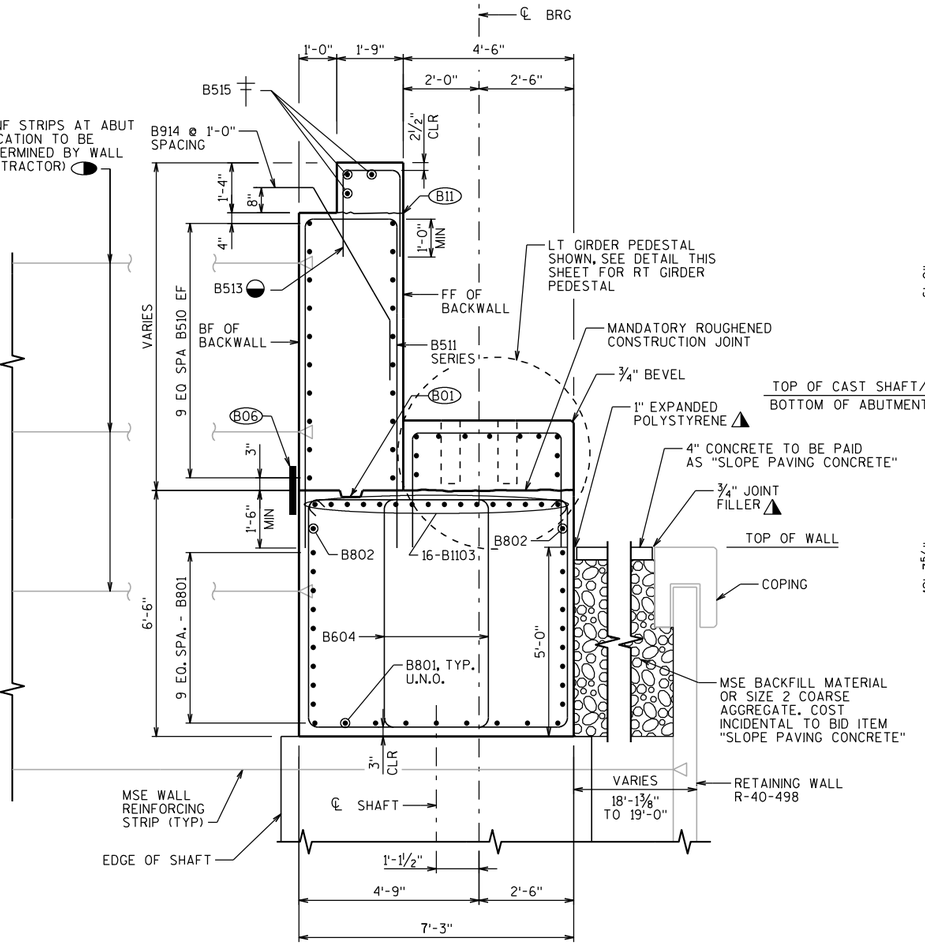
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STATE PROJECT NUMBER
1060-33-81

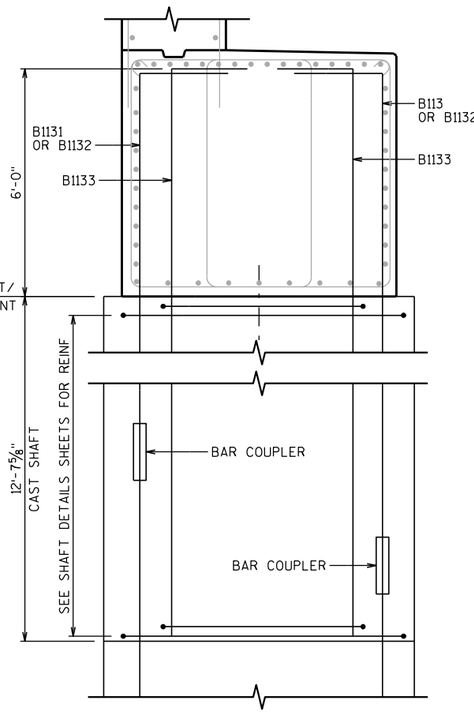


SECTION A-A



SECTION B-B

SHAFT REINF NOT SHOWN FOR CLARITY



SECTION B-B

SHOWING SHAFT REINFORCEMENT
SEE SECTION E-E, SHEET B19 FOR CROSS-SECTION

LEGEND

(B01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X6"

(B06) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.

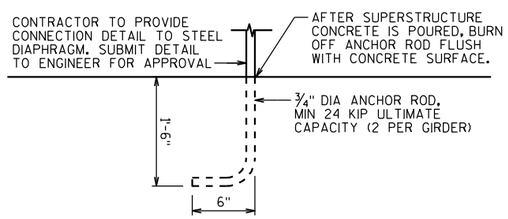
(B11) CONST JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

REINFORCING STRIPS SHALL BE DESIGNED TO RESIST AN UNFACTORED SUPERSTRUCTURE LATERAL LINE LOAD OF 2.4 K/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 ⅛" BELOW SURFACE OF CONCRETE).

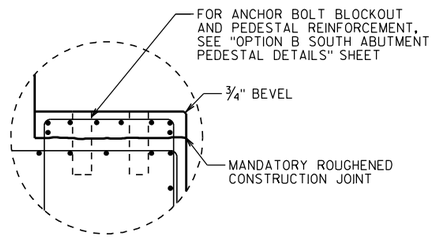
ANCHOR REBAR INTO PLACE W/ EPOXY RESIN AFTER MODULAR JOINT IS IN POSITION. FOLLOW STD SPEC FOR MASONRY ANCHOR TYPE S WITH A MIN PULLOUT CAPACITY OF 20 KIPS AND EMBEDMENT OF 1'-0".

8'-0" LONG BAR WITH 1'-0" MIN LAP, CUT IN FIELD TO CLEAR JOINT SUPPORT SYSTEM AS REQUIRED.



TEMPORARY HOLD DOWN DEVICE

LOCATE WITHIN 1'-6" OF GIRDER BOTTOM FLANGE.
PAYMENT IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES"



PEDESTAL - RT GIRDER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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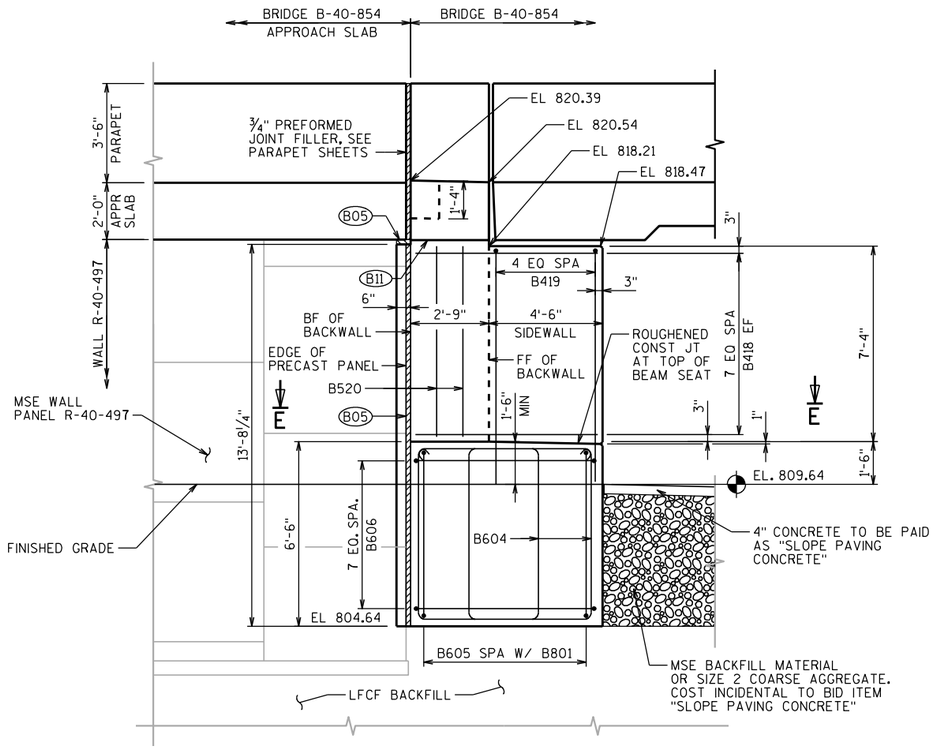
OPTION B
SOUTH ABUTMENT
DETAILS (1 OF 2)

SHEET B20 OF B48

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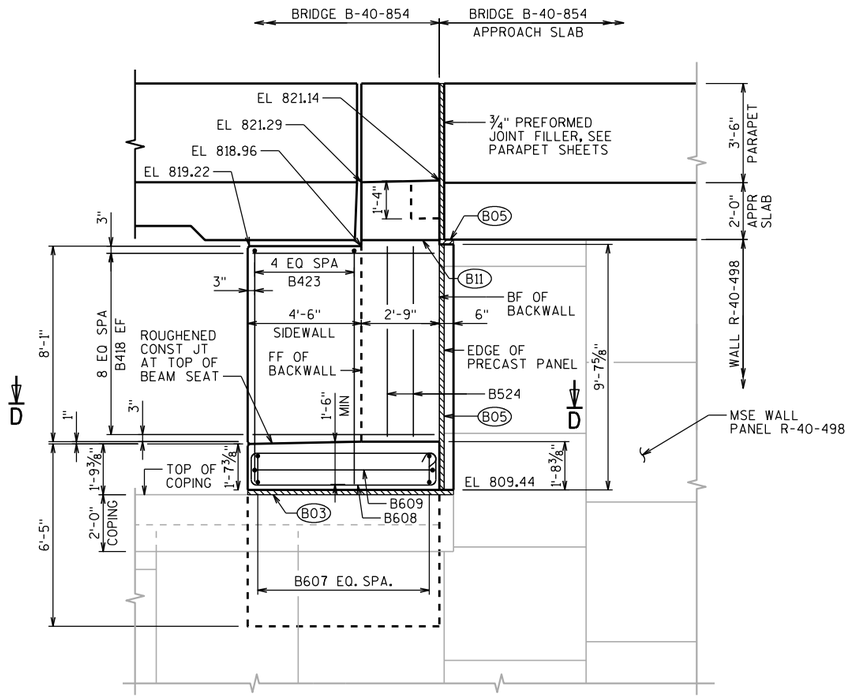
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STATE PROJECT NUMBER
1060-33-81



SECTION C-C

(LOOKING WEST)
(SHAFT NOT SHOWN FOR CLARITY)



SECTION D-D

(LOOKING EAST)
(SHAFT NOT SHOWN FOR CLARITY)

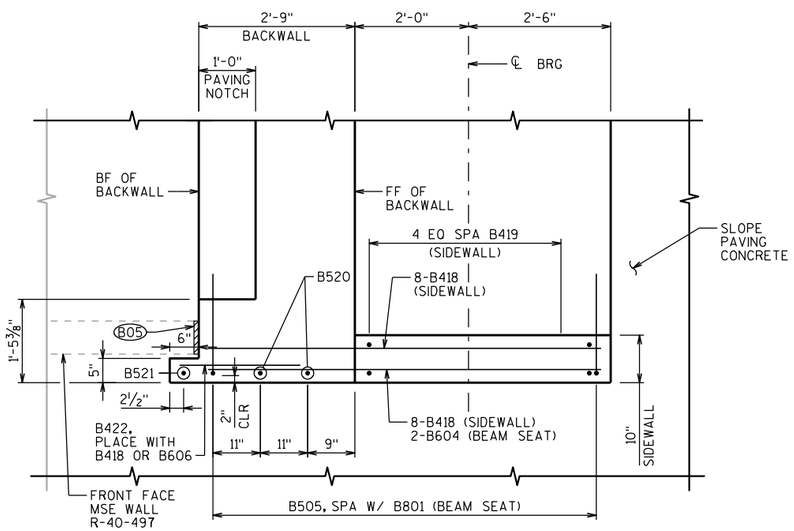
LEGEND

(B03) 2" PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITUMINOUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.

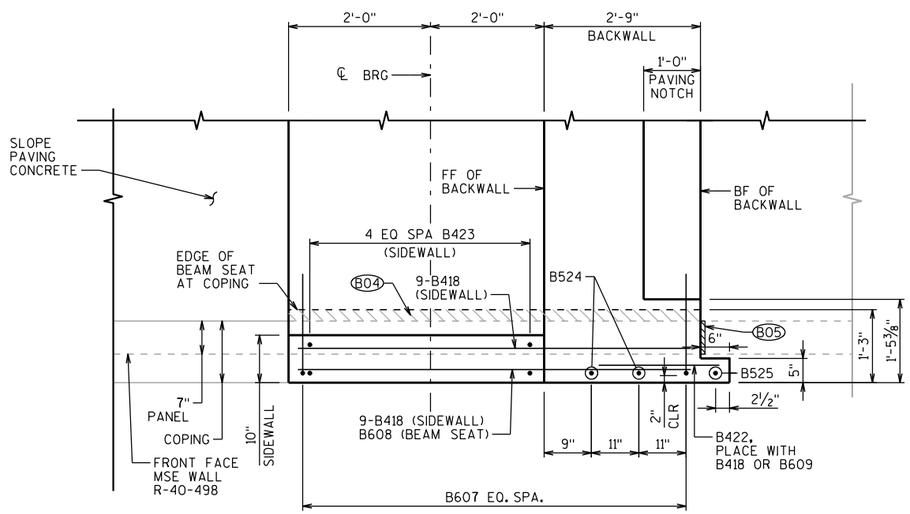
(B04) PREFORMED JOINT FILLER (2"± BASED ON A 7" MSE WALL PANEL THICKNESS) WITH NON-BITUMINOUS JOINT SEALER PLACED BETWEEN COPING/PRECAST PANEL AND EDGE OF BEAM SEAT. COLOR TO MATCH CONCRETE STAIN.

(B05) ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACKFACE OF BACK WALL AND WALL R-40-498. COLOR TO MATCH CONCRETE STAIN.

(B11) CONST JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.



SECTION E-E



SECTION F-F

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION B
SOUTH ABUTMENT
DETAILS (2 OF 2)

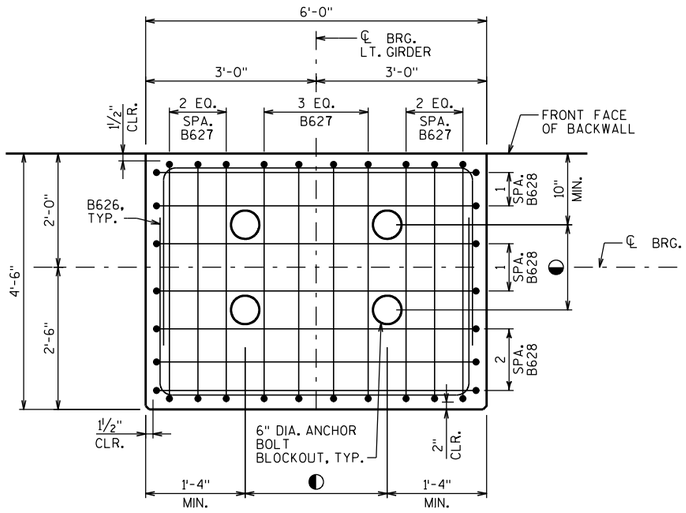
SHEET B21 OF B48

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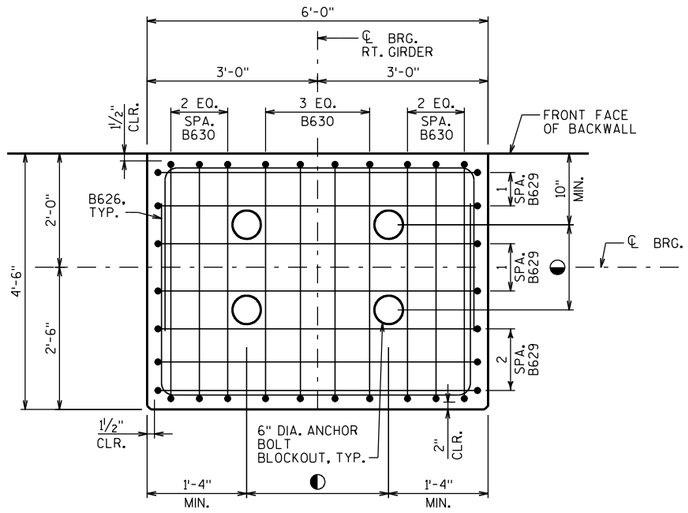
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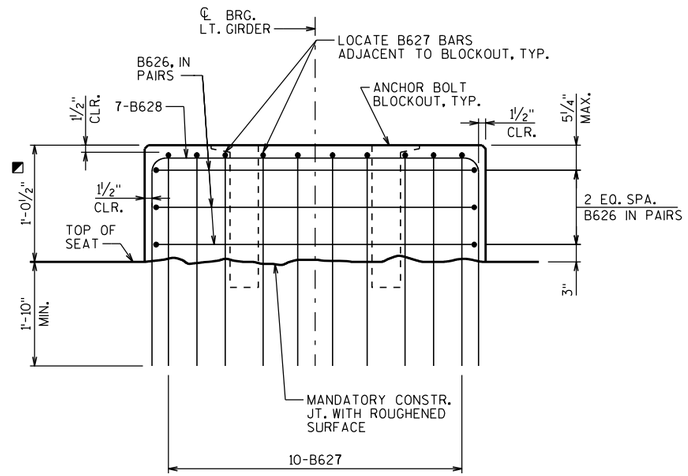
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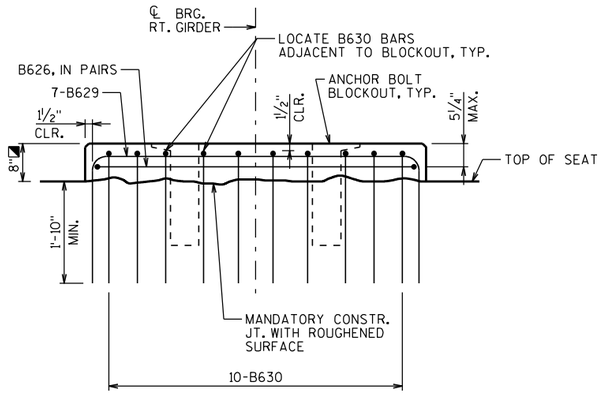
PEDESTAL PLAN - LEFT GIRDER



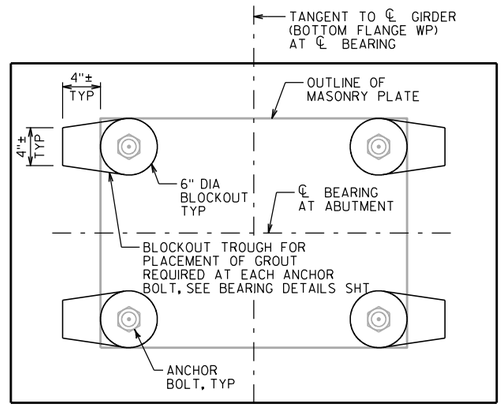
PEDESTAL PLAN - RIGHT GIRDER



PEDESTAL ELEVATION - LEFT GIRDER



PEDESTAL ELEVATION - RIGHT GIRDER



PEDESTAL PLAN - GROUT TROUGHS

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.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

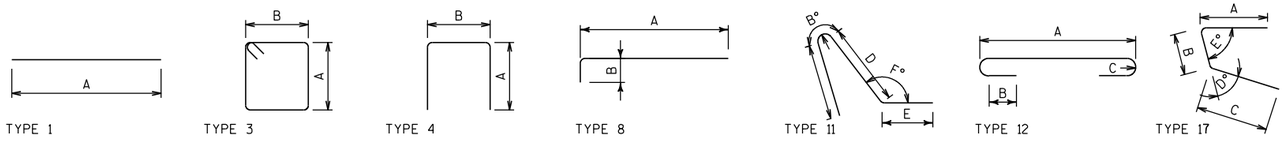
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OPTION B
SOUTH ABUTMENT
PEDESTAL DETAILS

SHEET B22 OF B48

STATE PROJECT NUMBER
1060-33-81

BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
B801	E	27	38'-8"			1	38'-8"						BODY - HORIZ.					
B802	E	2	39'-11"			1	39'-11"						BODY - HORIZ.					
B1103	E	16	43'-1"	X		12	39'-11"	0'-8"	11¼"				BODY - HORIZ.					
B604	E	104	22'-6"	X		3	6'-0"	4'-10"					BODY - STIRRUP					
B605	E	9	9'-0"	X		4	1'-9"	5'-10"					BODY - VERT.					
B606	E	7	9'-11"	X		4	1'-9"	6'-9"					BODY - HORIZ.					
B607	E	9	4'-4"	X		4	1'-9"	1'-2"					BODY - VERT.					
B608	E	2	17'-4"	X		3	1'-4"	6'-11"					BODY - STIRRUP	A	9'-7"	10'-4"	1 SERIES OF 41	21'-4" TO 22'-10"
B609	E	1	10'-1"	X		4	1'-10"	6'-9"					BODY - HORIZ.					
B510	E	10	39'-11"			1	39'-11"						BACKWALL - HORIZ.					
B511	E	41	22'-1"	X	⚠	4	10'-0"	2'-5"					BACKWALL - VERT.					
B512	S	4	6'-10"	X		4	2'-4"	2'-5"					BACKWALL - VERT.					
B513	S	39	5'-8"	X		4	2'-4"	1'-3"					BACKWALL - VERT.					
B914	S	39	7'-0"	X		17	1'-7"	4'-1"	1'-7"	60	150		BACKWALL - APPROACH TIE					
B515	S	18	8'-0"			1	8'-0"						BACKWALL - HORIZ.					
B516	S	2	2'-2"	X		4	0'-8"	1'-1"					BACKWALL - HORIZ.					
B517	S	12	6'-10"	X		11	2'-10"	172	0'-4½"	0'-10"	2'-0"	188	PARAPET TIE					
B418	E	34	6'-11"			1	6'-11"						SIDEWALL - HORIZ.					
B419	E	5	17'-8"	X		4	8'-8"	0'-6"					SIDEWALL - VERT.					
B520	E	2	6'-11"			1	6'-11"						SIDEWALL - VERT.					
B521	E	1	13'-4"			1	13'-4"						SIDEWALL - VERT.					
B422	E	26	2'-5"			1	2'-5"						SIDEWALL - HORIZ.					
B423	E	5	19'-2"	X		4	9'-5"	0'-6"					SIDEWALL - VERT.					
B524	E	2	7'-8"			1	7'-8"						SIDEWALL - VERT.					
B525	E	1	9'-3"			1	9'-3"						SIDEWALL - VERT.					
B626	E	8	11'-7"	X		4	3'-2"	5'-7"					LEFT AND RIGHT PEDESTAL					
B627	E	10	9'-5"	X		4	2'-9"	4'-3"					LEFT PEDESTAL					
B628	E	7	10'-11"	X		4	2'-9"	5'-9"					LEFT PEDESTAL					
B629	E	7	10'-3"	X		4	2'-5"	5'-9"					RIGHT PEDESTAL					
B630	E	10	8'-9"	X		4	2'-5"	4'-3"					RIGHT PEDESTAL					
B1131	E	24	15'-3"	X		8	13'-7"	2'-0"					CAST SHAFT VERTICAL					
B1132	E	24	18'-3"	X		8	16'-7"	2'-0"					CAST SHAFT VERTICAL					
B1133	E	32	20'-3"	X		8	18'-7"	2'-0"					CAST SHAFT VERTICAL					



TYPE 1 TYPE 3 TYPE 4 TYPE 8 TYPE 11 TYPE 12 TYPE 17

NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
E - STEEL, HIGH STRENGTH, EPOXY COATED.
S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-854

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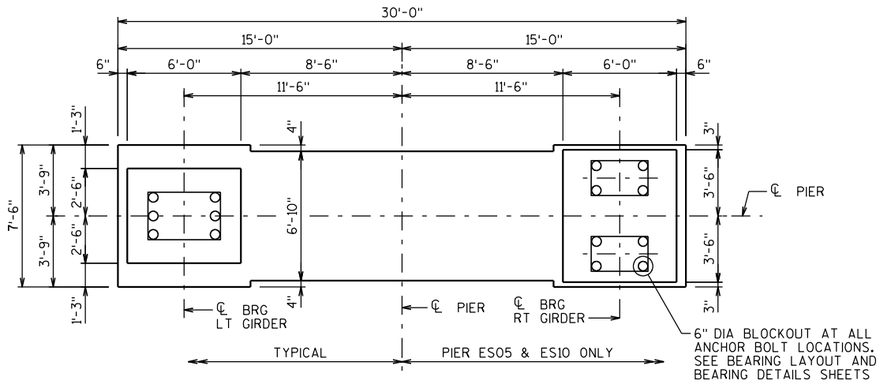
OPTION B
SOUTH ABUTMENT
REINFORCEMENT
SCHEDULE

SHEET B23 OF B48

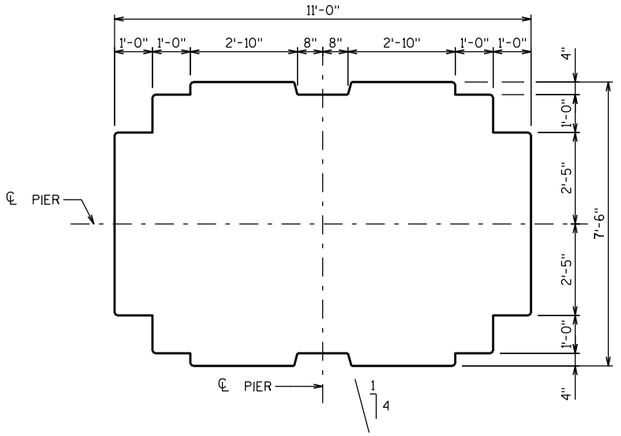
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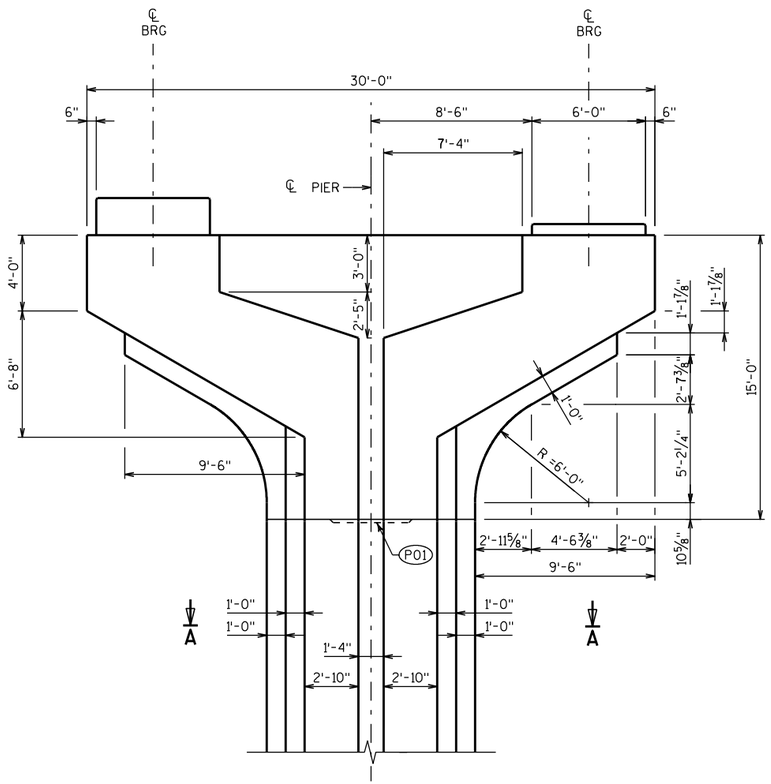
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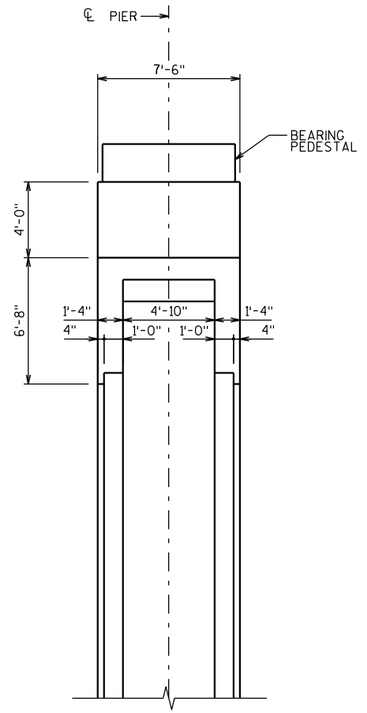


SECTION A-A



FRONT ELEVATION

(LOOKING UPSTATION)



SIDE ELEVATION

LEGEND

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

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STATE OF WISCONSIN
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STRUCTURE B-40-854

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OPTION B
TYPICAL PIER CAP
LAYOUT

SHEET B24 OF B48

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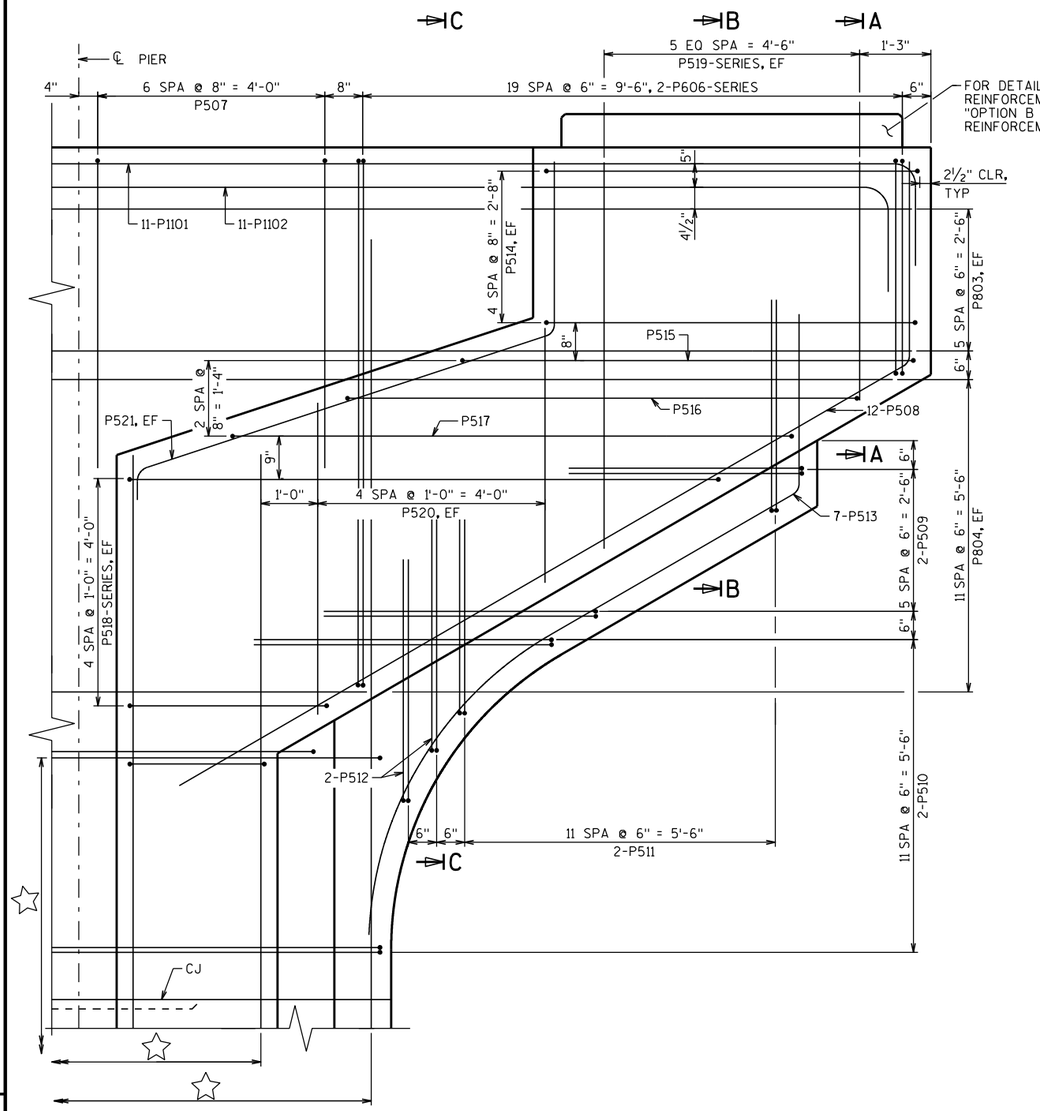
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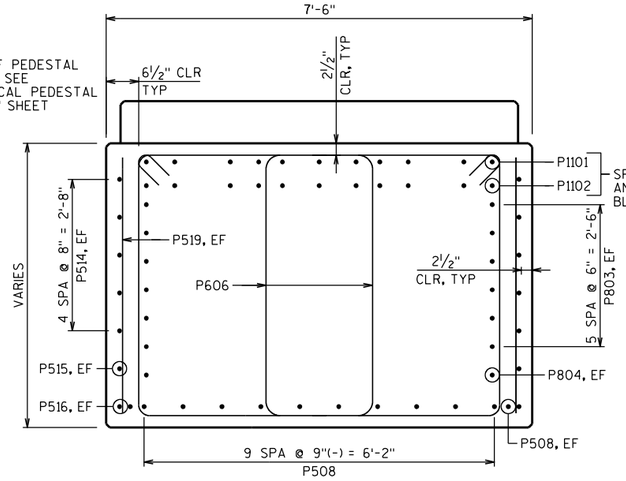
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STATE PROJECT NUMBER
1060-33-81



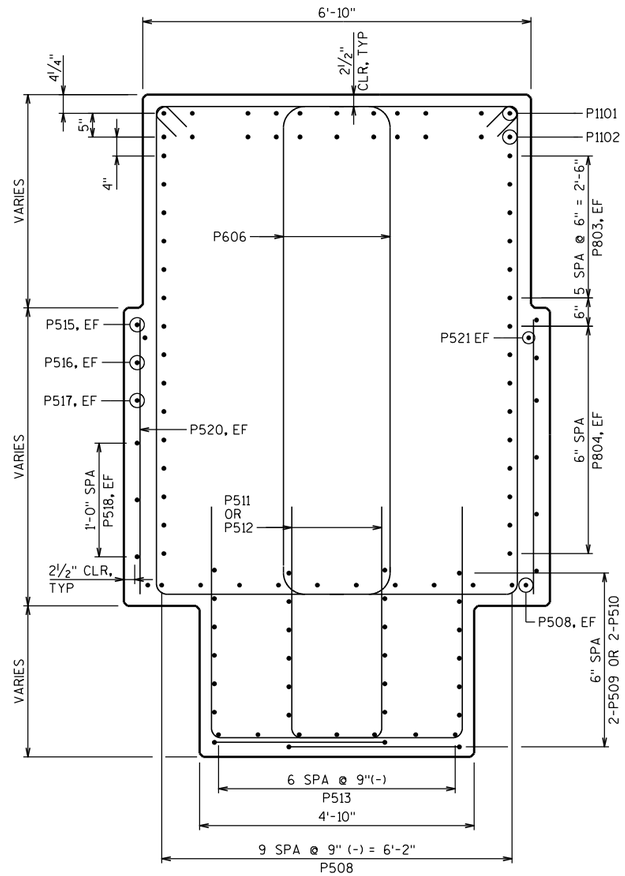
PARTIAL ELEVATION

(REINFORCEMENT IS SYMMETRICAL ABOUT ℄ PIER)

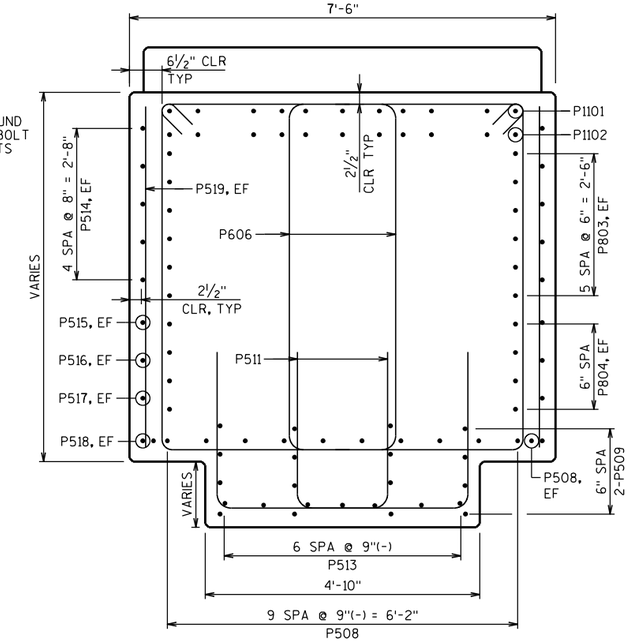


SECTION A-A

(PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY)



SECTION C-C



SECTION B-B

(PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY)

LEGEND

☆ COLUMN REINFORCEMENT VARIES BY PIER. SEE PIER DETAIL SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

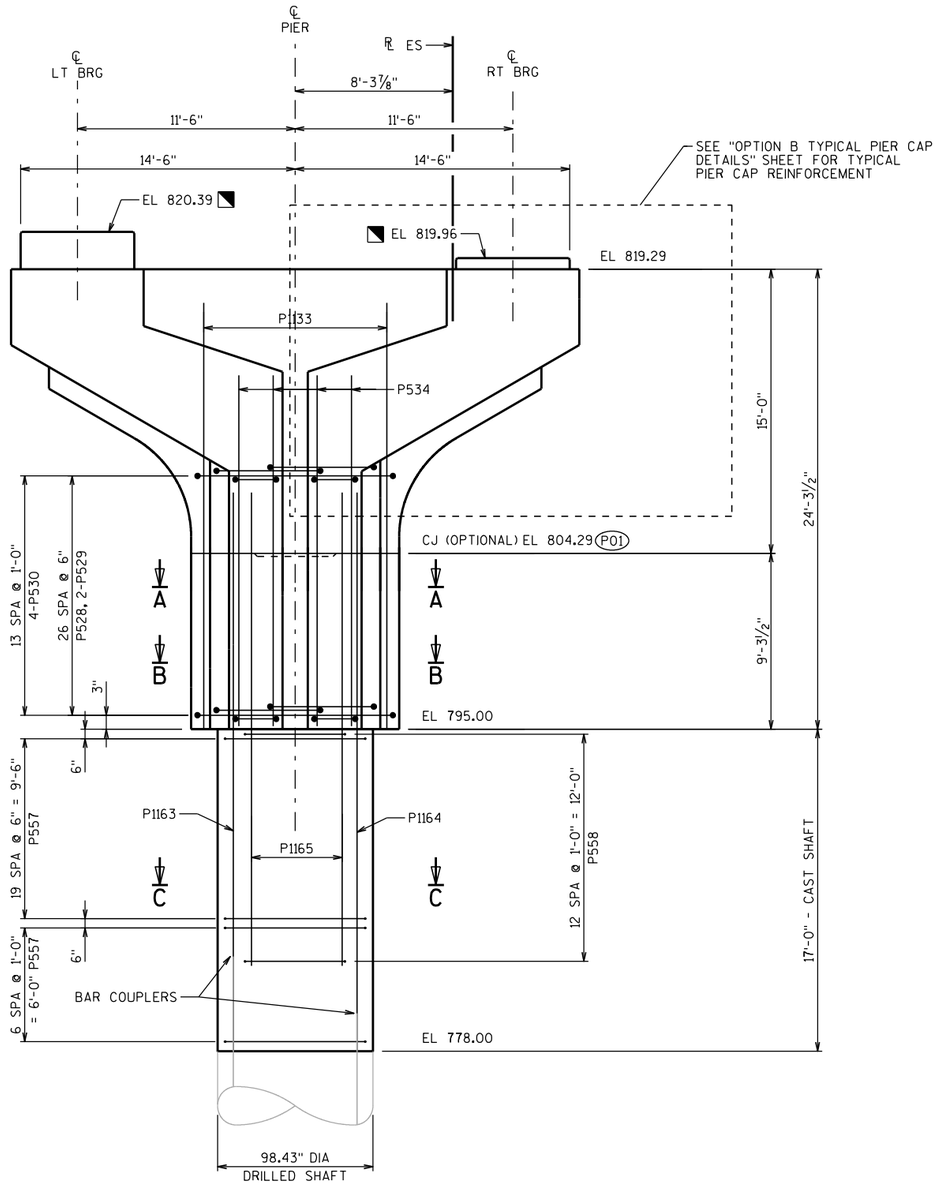
OPTION B
TYPICAL PIER
CAP DETAILS

SHEET B25 OF B48

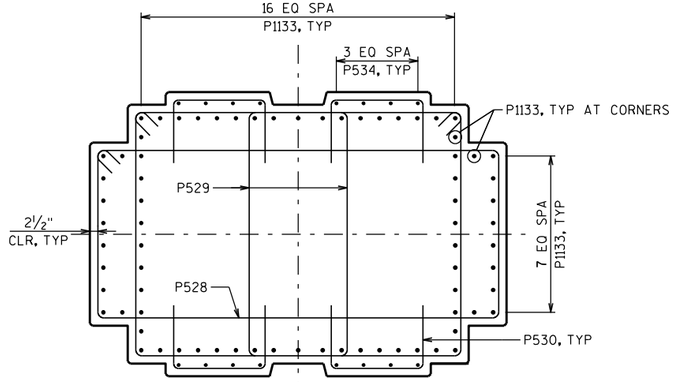
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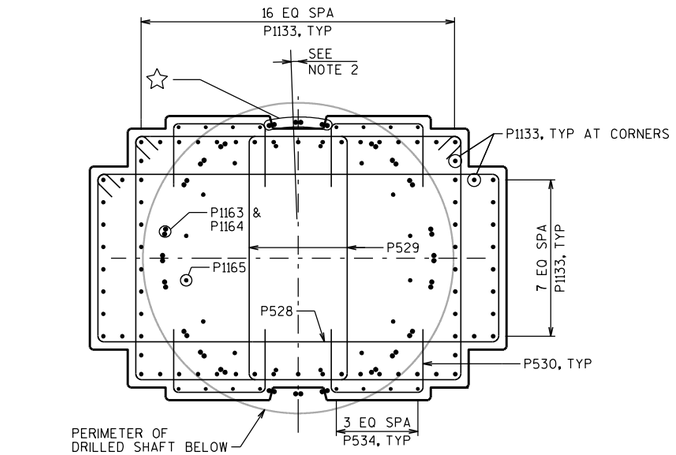
STATE PROJECT NUMBER
1060-33-81



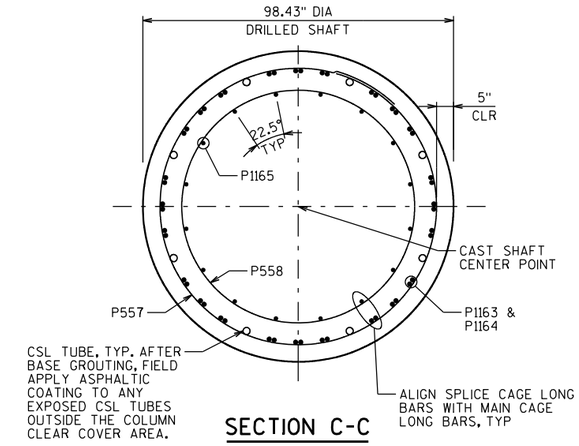
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION.
2. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
3. DRILLED SHAFT CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

☆ BURN OFF ALL PROTRUDING DRILLED SHAFT BARS NOT COMPLETELY INSIDE THE CLEAR COVER AREA OF THE COLUMN PLAN LOCATION. BURN OFF BARS FLUSH WITH TOP OF DRILLED SHAFT AND FIELD APPLY ASPHALTIC COATING MATERIAL CONFORMING TO AASHTO M190 TO ALL EXPOSED AREAS OF CUT BARS, TYP. COST SHALL BE INCLUDED WITH COST OF "DRILLED FOUNDATION SHAFT 98.43-INCH".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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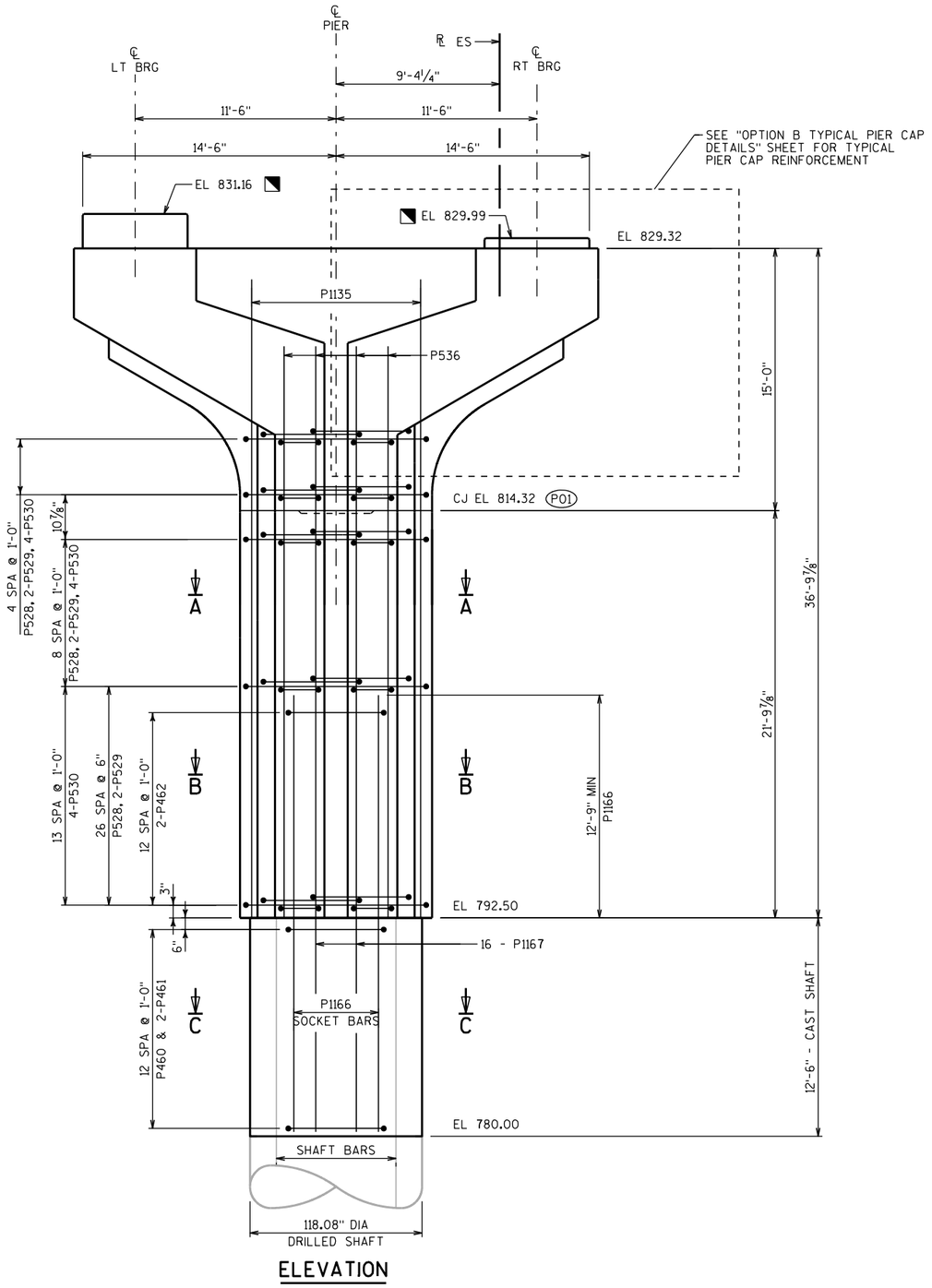
OPTION B
PIER ES01
DETAILS

SHEET B26 OF B48

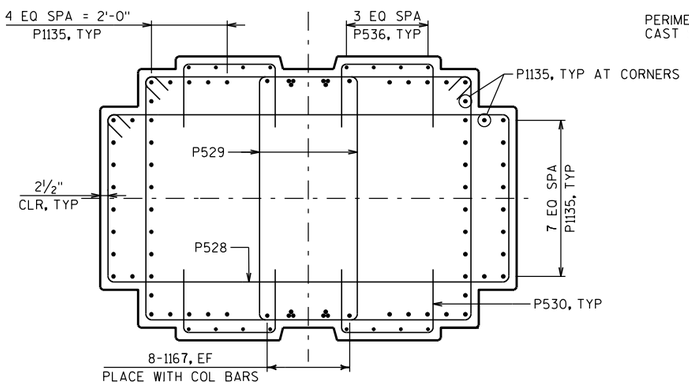
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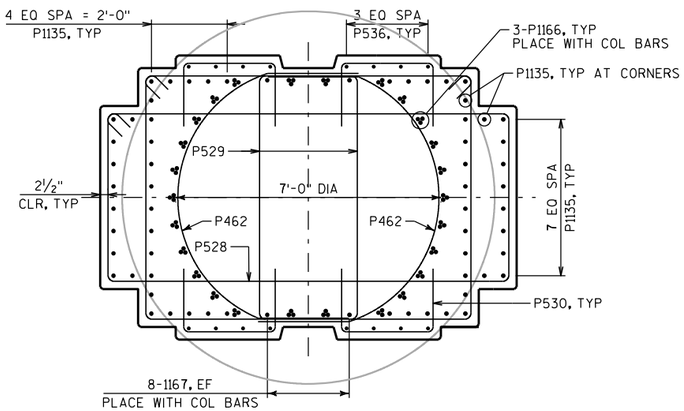
STATE PROJECT NUMBER
1060-33-81



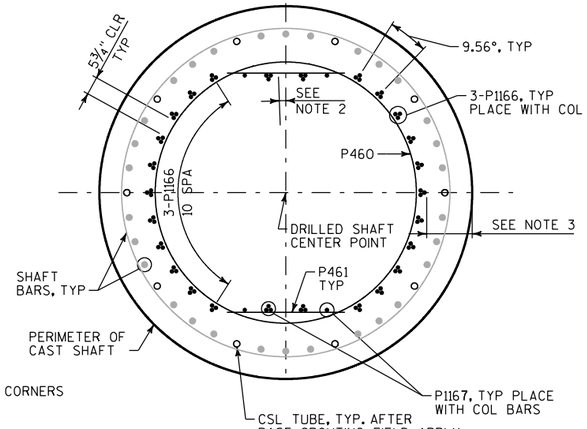
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION.
2. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
3. THE SOCKET CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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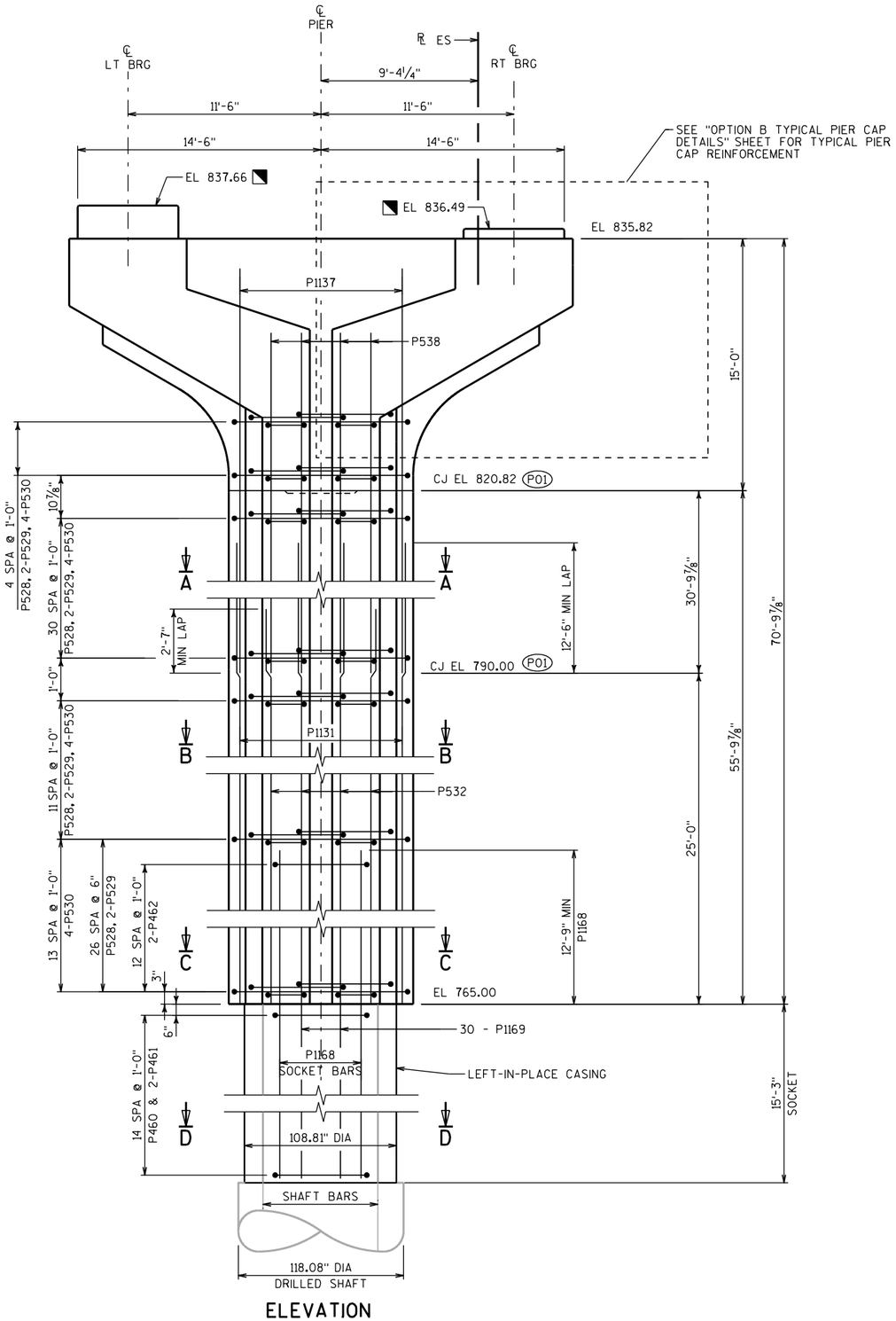
OPTION B
PIER ES02
DETAILS

SHEET B27 OF B48

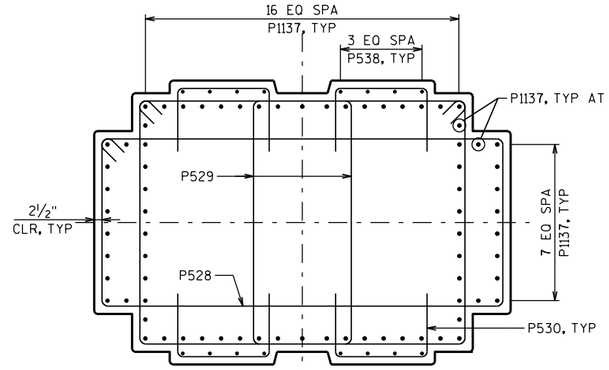
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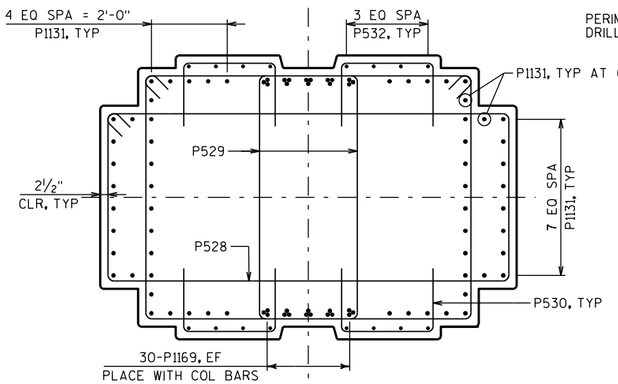
STATE PROJECT NUMBER
1060-33-81



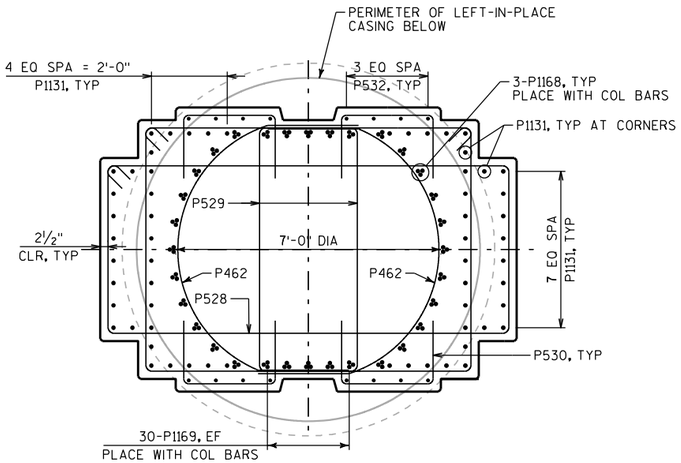
ELEVATION



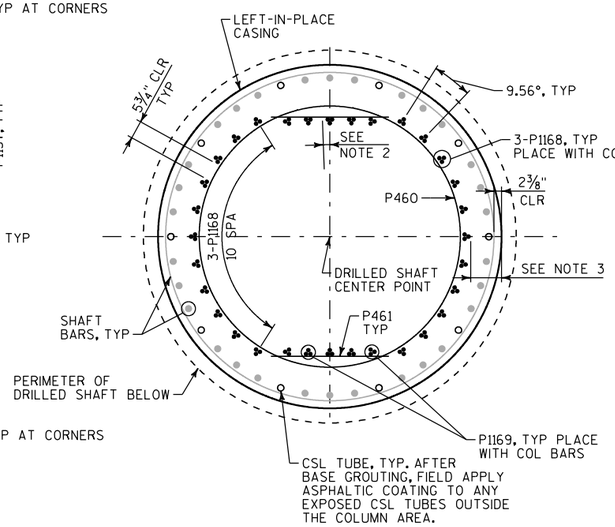
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION.
2. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
3. THE SOCKET CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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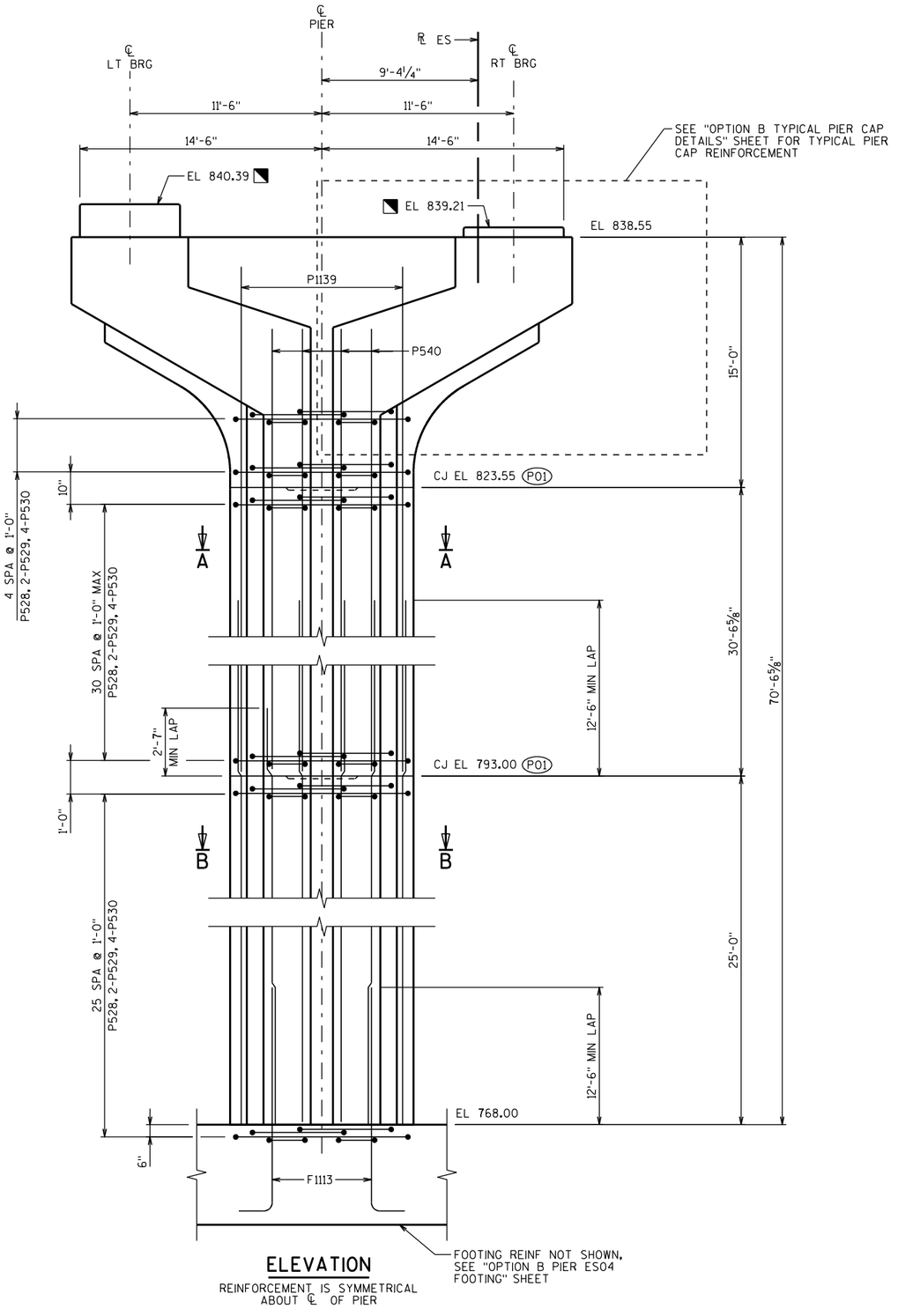
OPTION B
PIER ES03
DETAILS

SHEET B28 OF B48

8

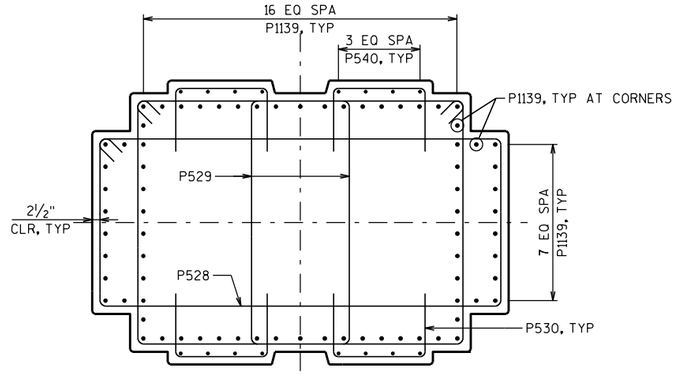
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STATE PROJECT NUMBER
1060-33-81

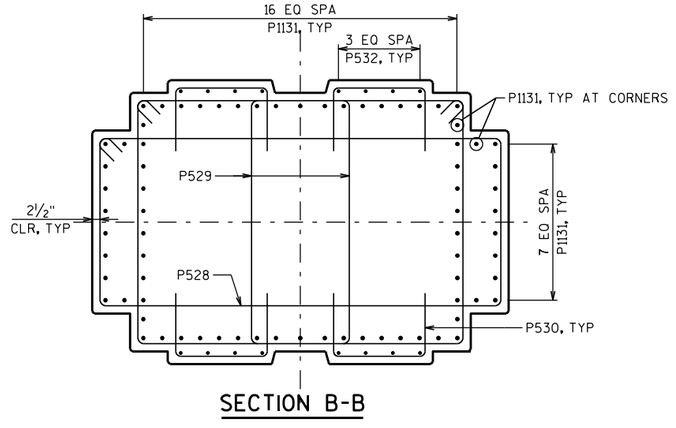


ELEVATION

REINFORCEMENT IS SYMMETRICAL ABOUT ℄ OF PIER



SECTION A-A



SECTION B-B

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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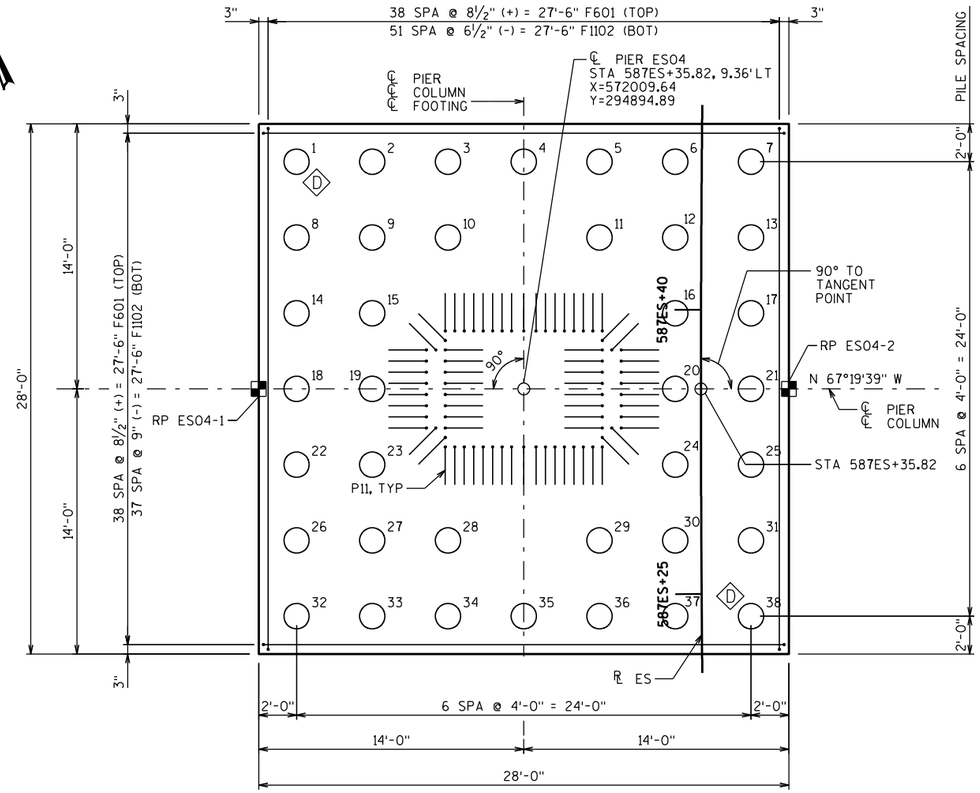
OPTION B
PIER ES04
DETAILS

SHEET B29 OF B48

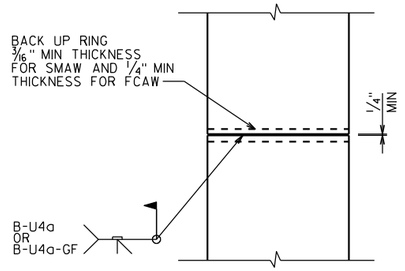
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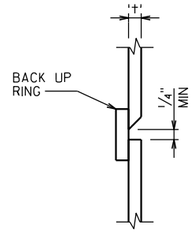
STATE PROJECT NUMBER
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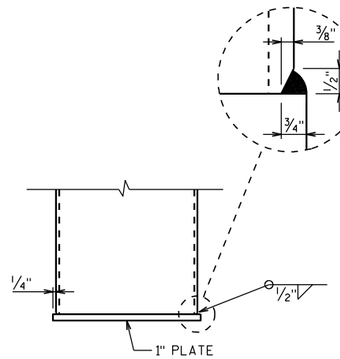
PLAN



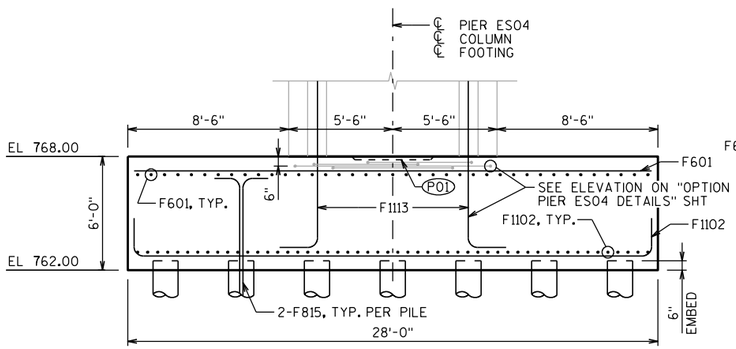
CIP PILE SPLICE DETAIL

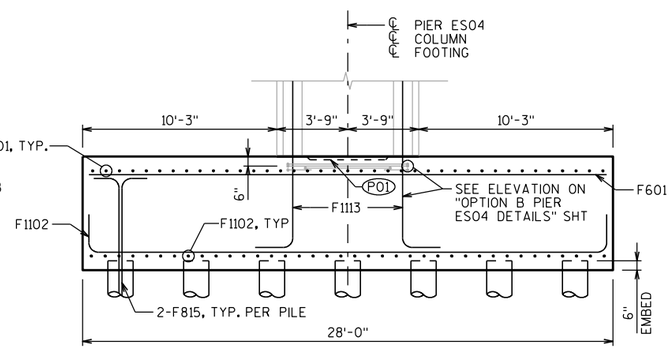


CIP PILE WELD DETAIL



CIP PILE END PLATE DETAIL





ELEVATION

LEGEND

- (P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".
- (D) DYNAMIC PILE LOAD TESTING.
- ○ PIER SUPPORTED ON 16" DIA CIP CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/ CAPWAP ACCEPTANCE METHOD.
- ■ REFERENCE POINT, SEE SHEET B4.

ESTIMATED PILE LENGTH = 70 FT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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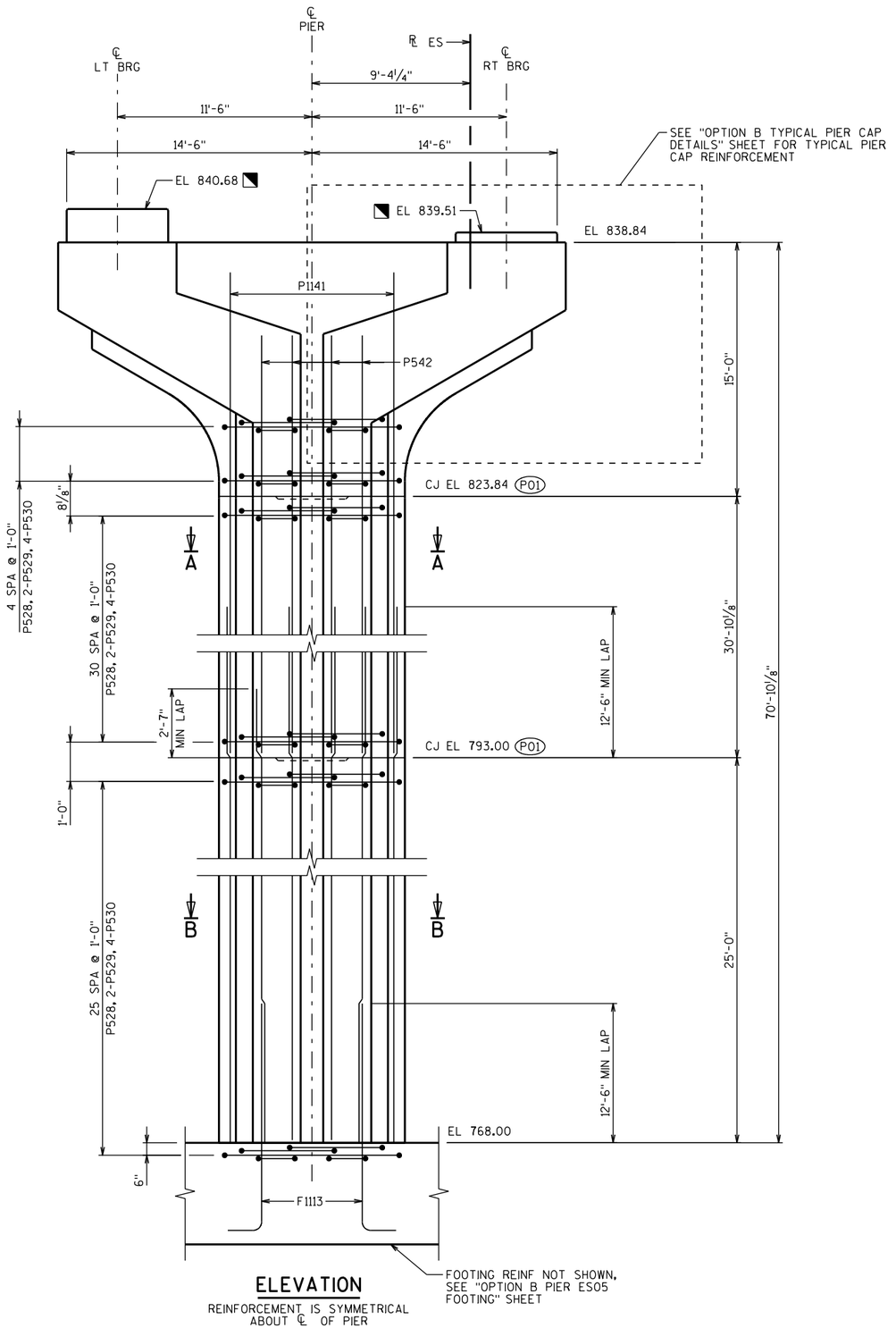
OPTION B
PIER ES04
FOOTING

SHEET B30 OF B48

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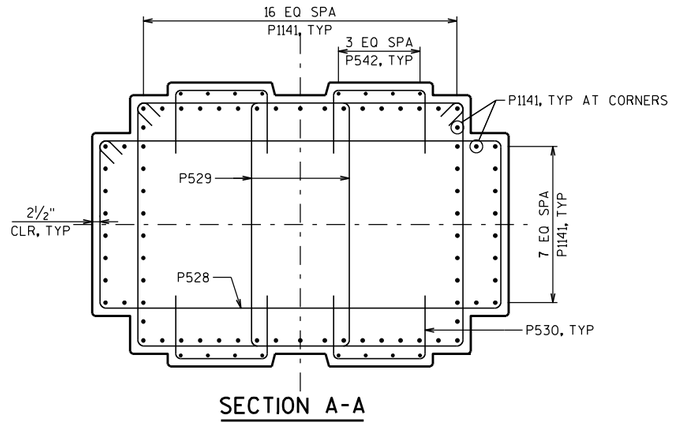
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STATE PROJECT NUMBER
1060-33-81

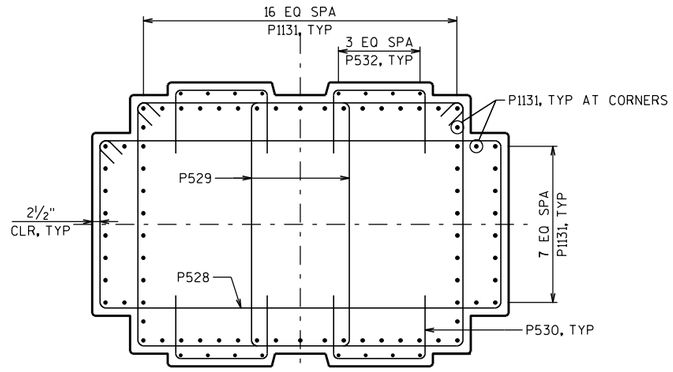


ELEVATION

REINFORCEMENT IS SYMMETRICAL ABOUT ℄ OF PIER



SECTION A-A



SECTION B-B

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

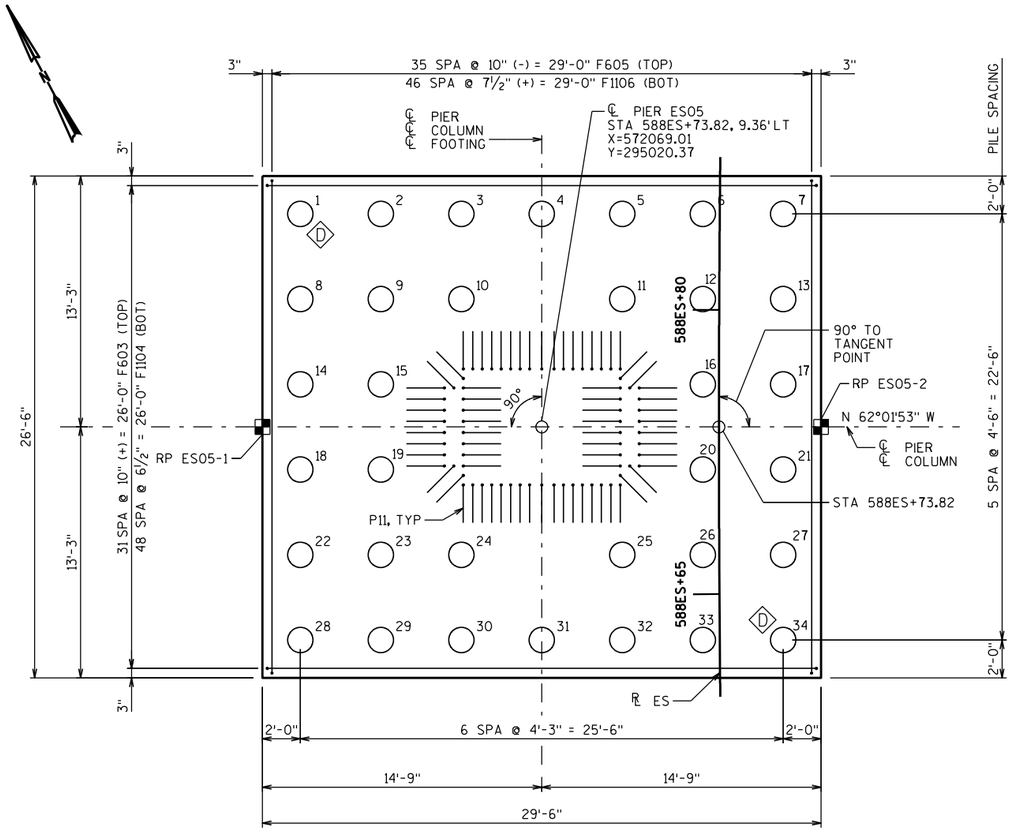
OPTION B
PIER ES05
DETAILS

SHEET B31 OF B48

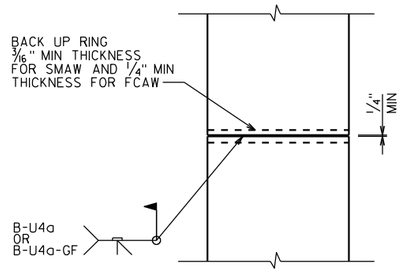
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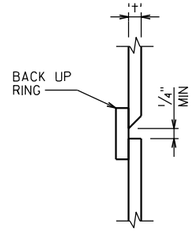
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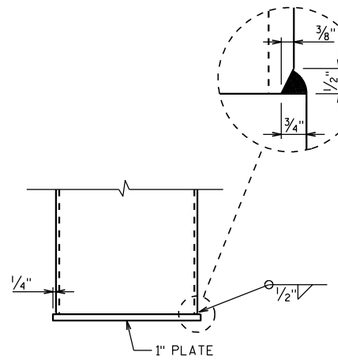
PLAN



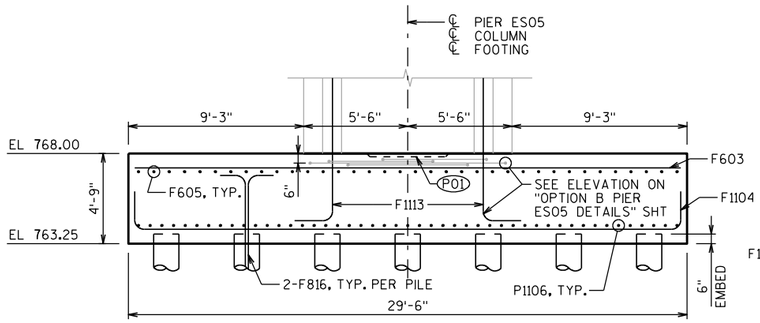
CIP PILE SPLICE DETAIL

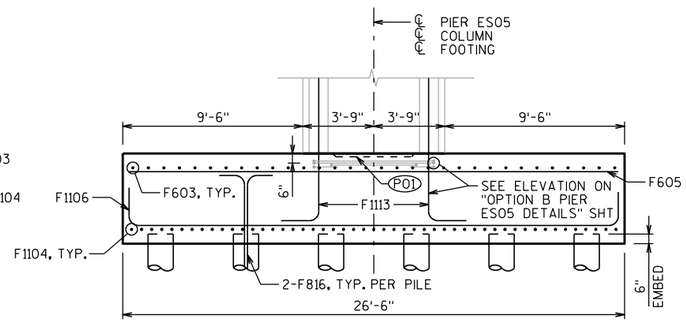


CIP PILE WELD DETAIL



CIP PILE END PLATE DETAIL





ELEVATION

LEGEND

- (P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".
- ◇D DYNAMIC PILE LOAD TESTING.
- ○ PIER SUPPORTED ON 16" DIA CIP CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/ CAPWAP ACCEPTANCE METHOD.
- ■ REFERENCE POINT, SEE SHEET B4.

ESTIMATED PILE LENGTH = 70 FT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY KTM | PLANS CK'D. MSS

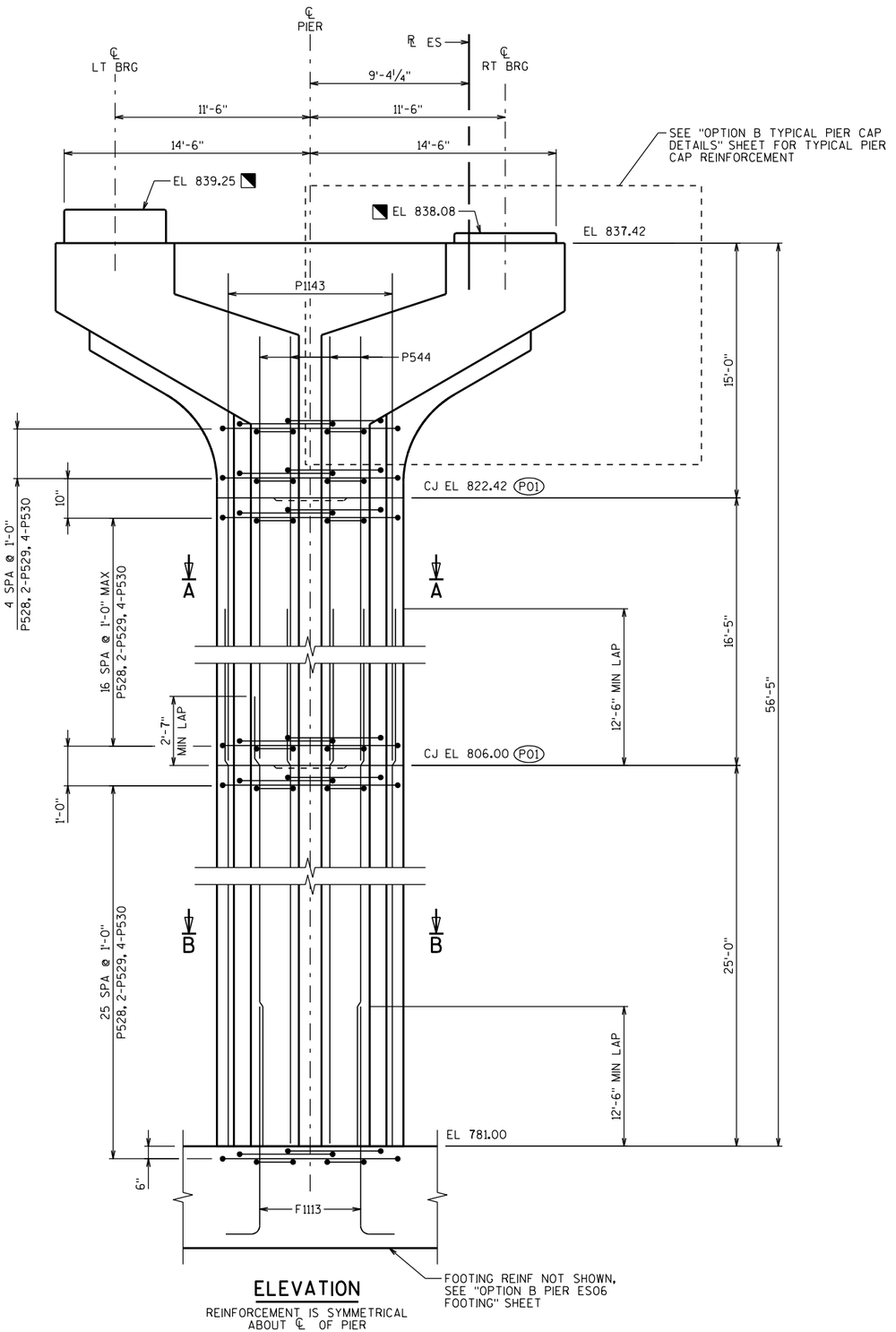
OPTION B
PIER ES05
FOOTING

SHEET B32 OF B48

8

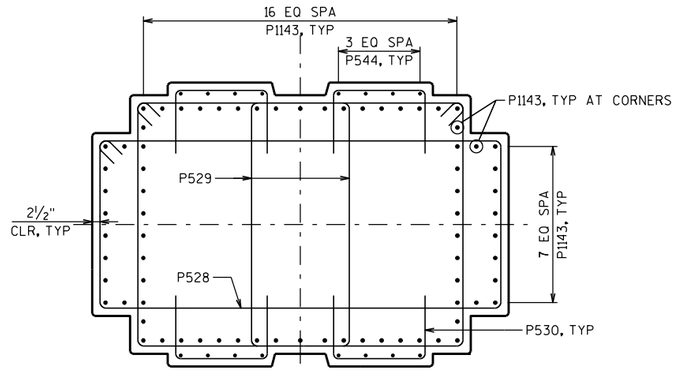
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STATE PROJECT NUMBER
1060-33-81

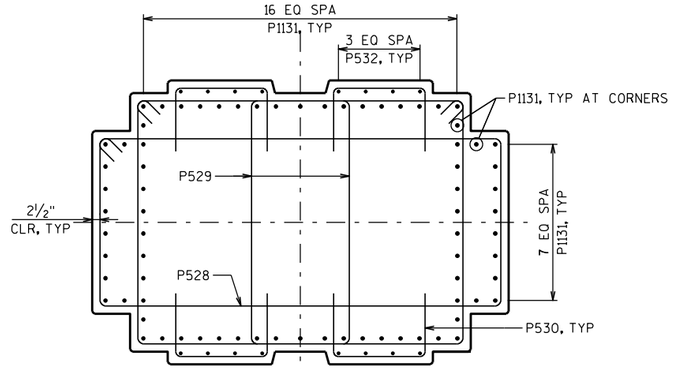


ELEVATION

REINFORCEMENT IS SYMMETRICAL ABOUT ℄ OF PIER



SECTION A-A



SECTION B-B

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

OPTION B
PIER ES06
DETAILS

SHEET B33 OF B48

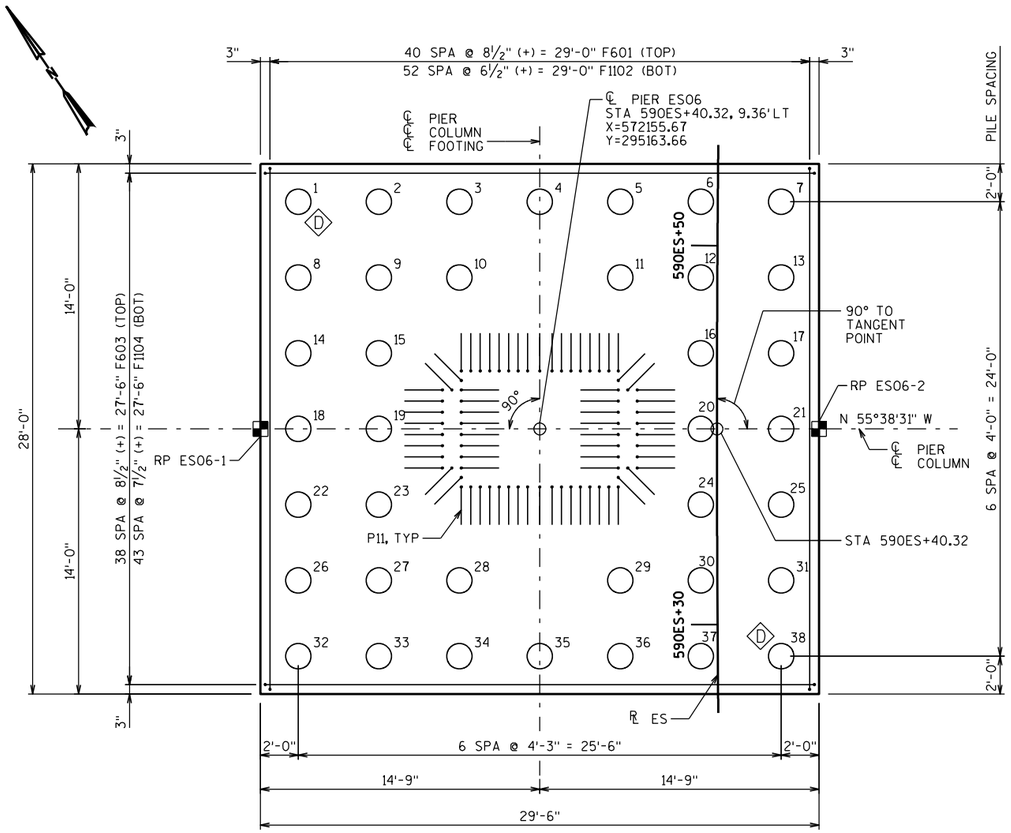
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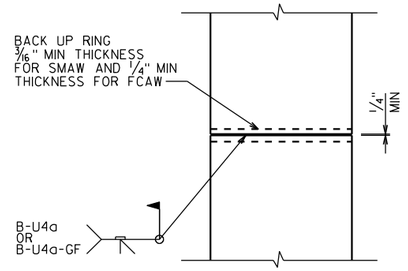
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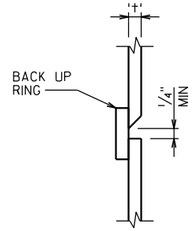
STATE PROJECT NUMBER
1060-33-81



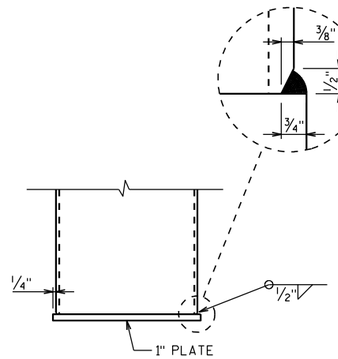
PLAN



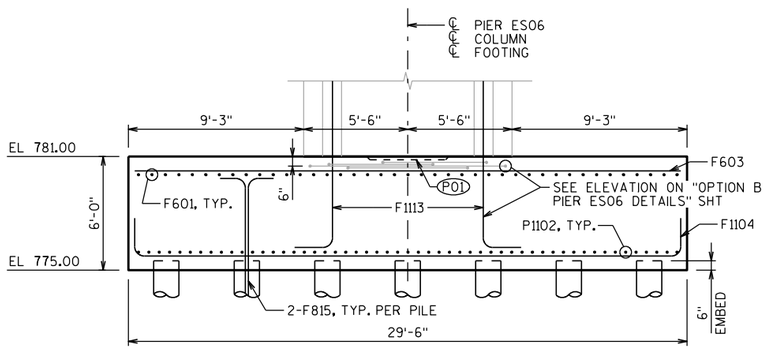
CIP PILE SPLICE DETAIL



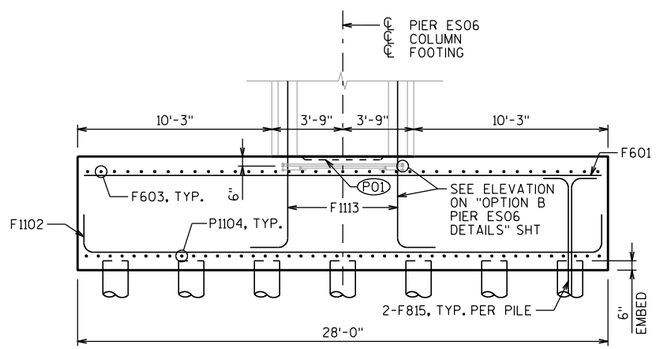
CIP PILE WELD DETAIL



CIP PILE END PLATE DETAIL



ELEVATION



LEGEND

- (P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".
- ◇D DYNAMIC PILE LOAD TESTING.
- ○ PIER SUPPORTED ON 16" DIA CIP CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/ CAPWAP ACCEPTANCE METHOD.
- ▪ REFERENCE POINT, SEE SHEET B4.

ESTIMATED PILE LENGTH = 70 FT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY KTM | PLANS CK'D. JWC

OPTION B
PIER ES06
FOOTING

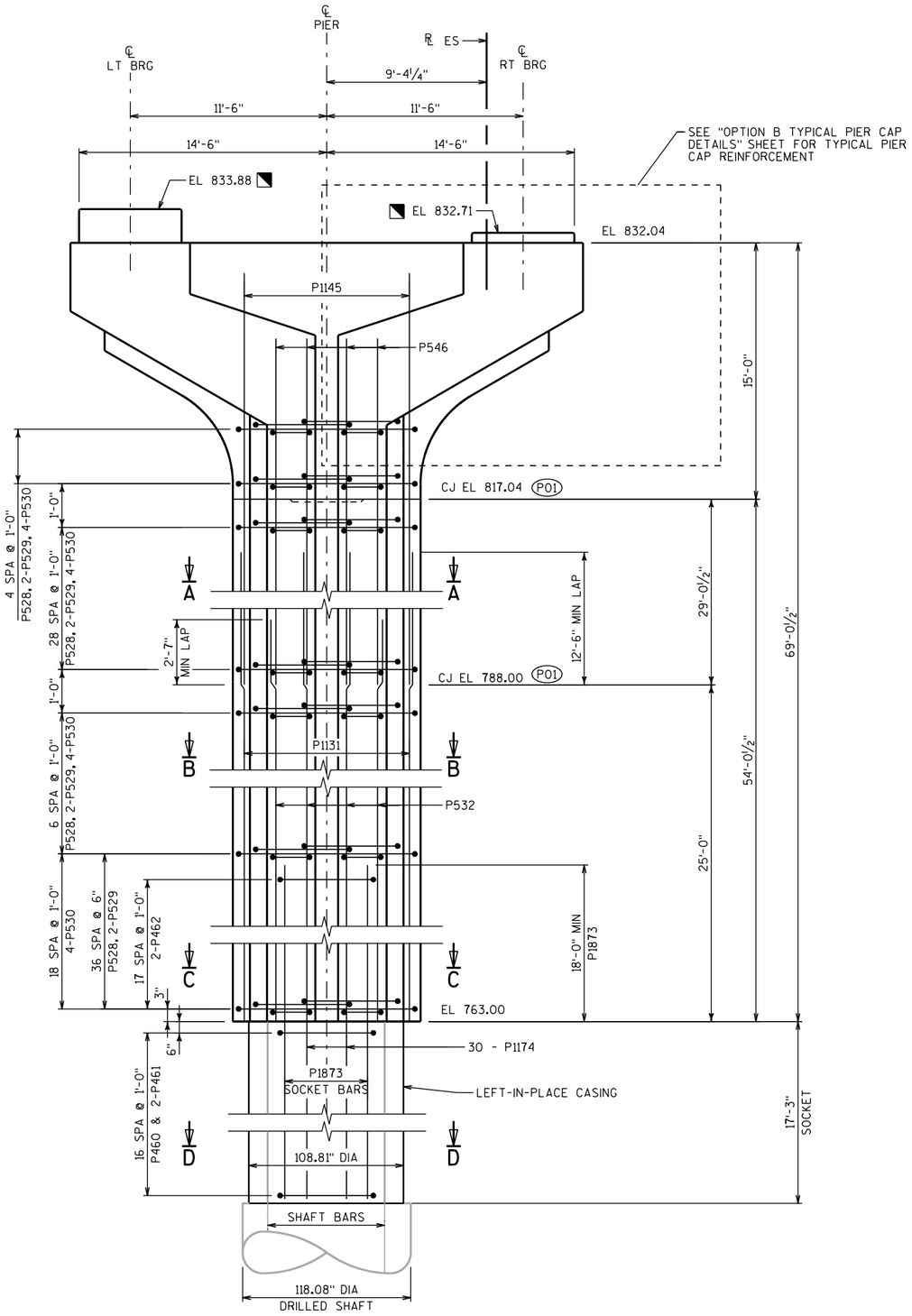
SHEET B34 OF B48

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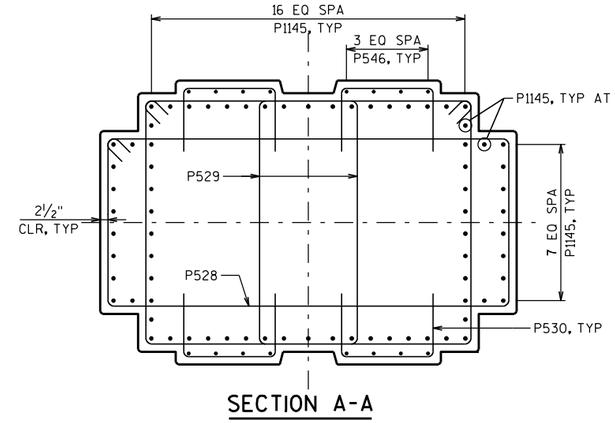
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STATE PROJECT NUMBER

1060-33-81

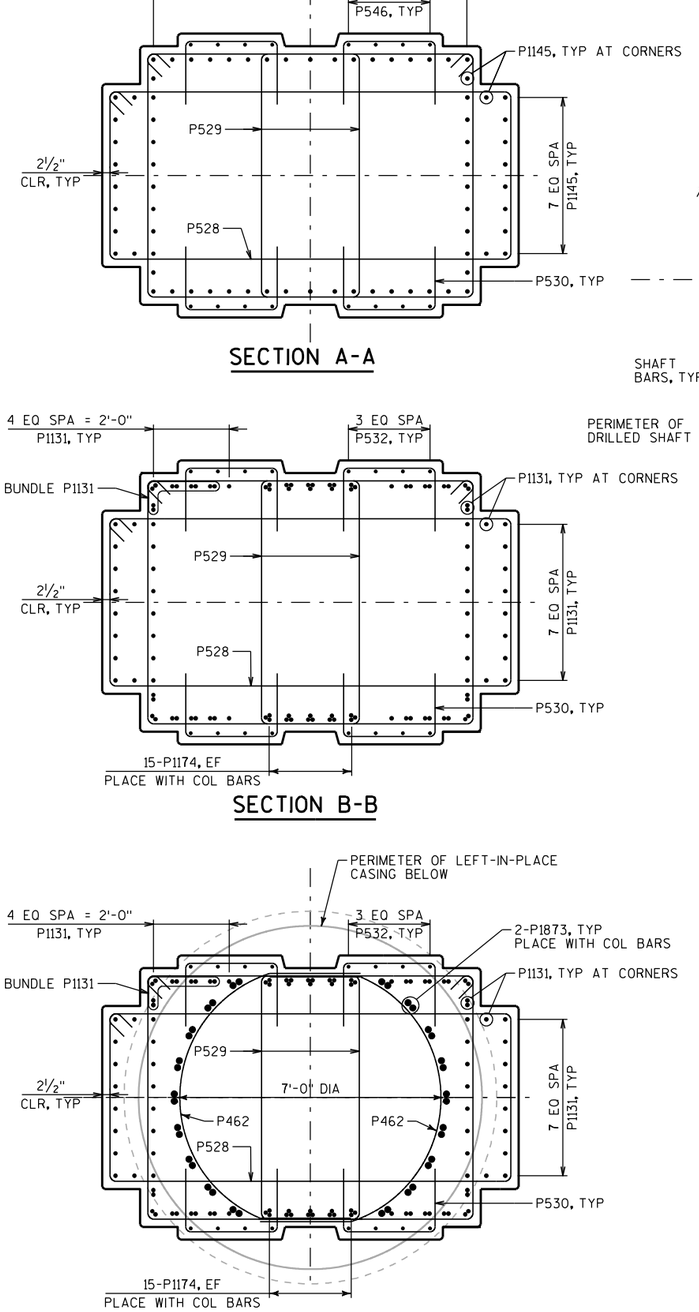


ELEVATION

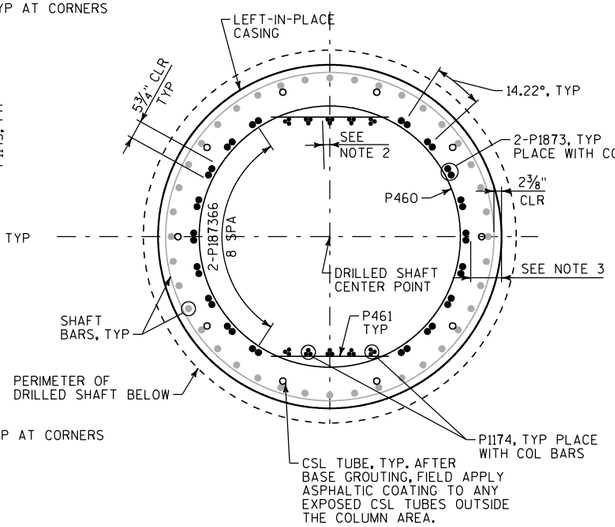


SECTION A-A

SECTION B-B



SECTION C-C



SECTION D-D

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION.
2. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
3. THE SOCKET CONNECTION HAS BEEN DESIGNED TO ACCOMMODATE DRILLED SHAFT CAGE PLACED UP TO 4" OUT OF POSITION HORIZONTALLY IN ANY DIRECTION. IF THE AS-BUILT CONDITION EXCEEDS THIS TOLERANCE, ALERT THE DESIGN ENGINEER.

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

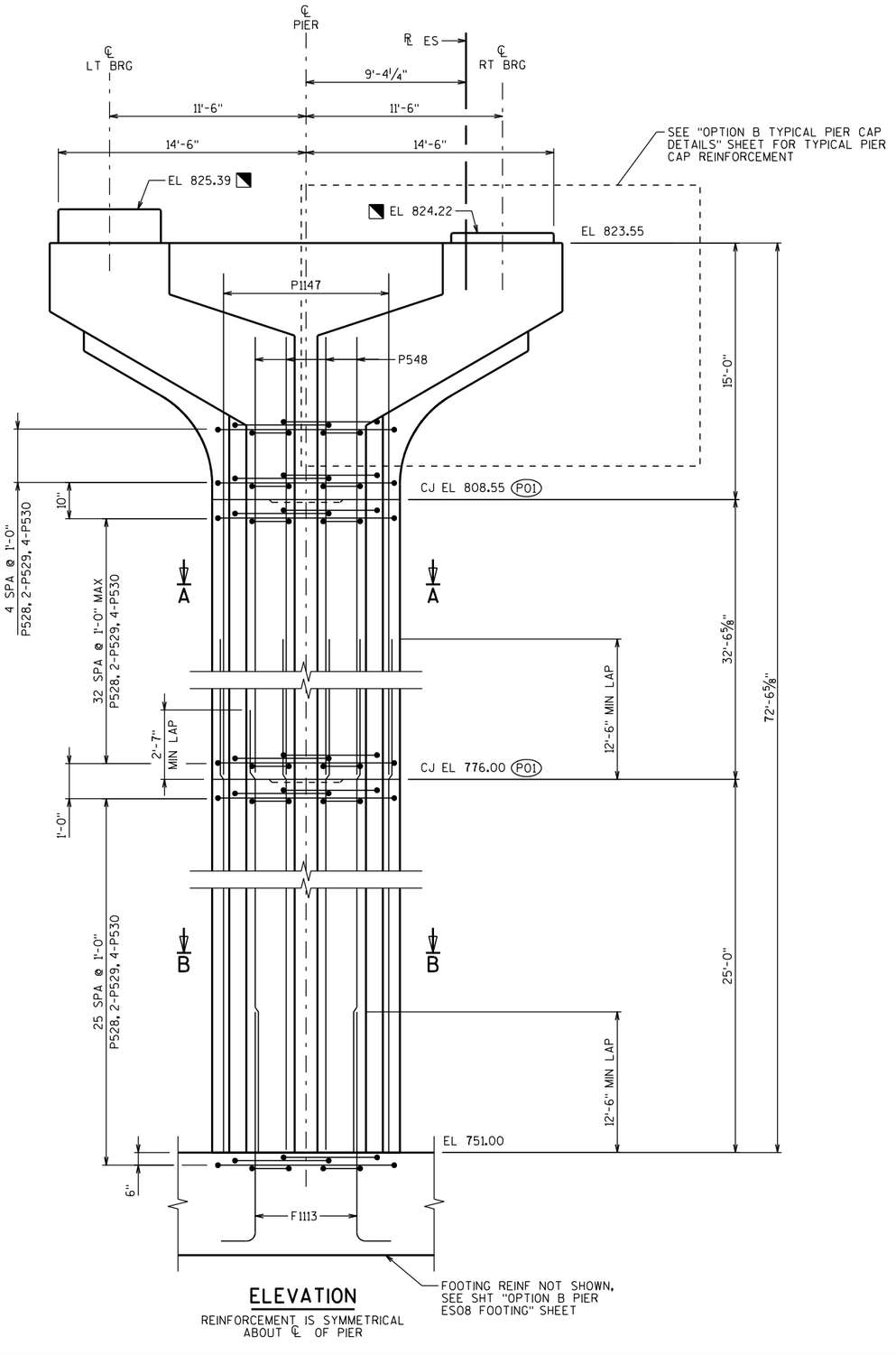
OPTION B
PIER ES07
DETAILS

SHEET B35 OF B48

8

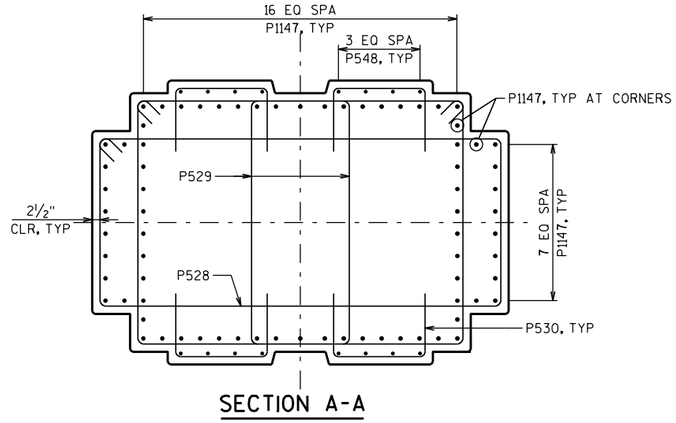
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STATE PROJECT NUMBER
1060-33-81

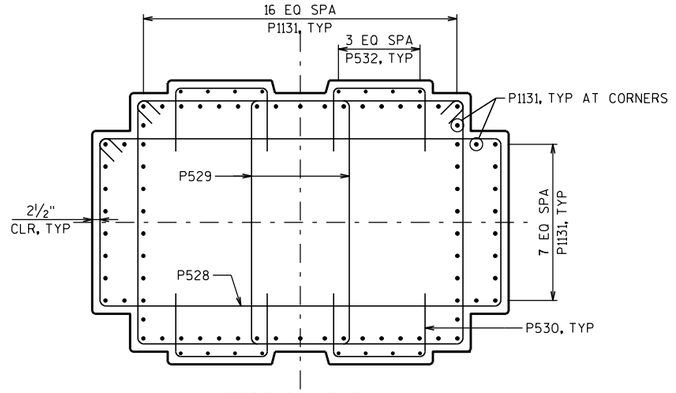


ELEVATION

REINFORCEMENT IS SYMMETRICAL ABOUT ℄ OF PIER



SECTION A-A



SECTION B-B

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.
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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

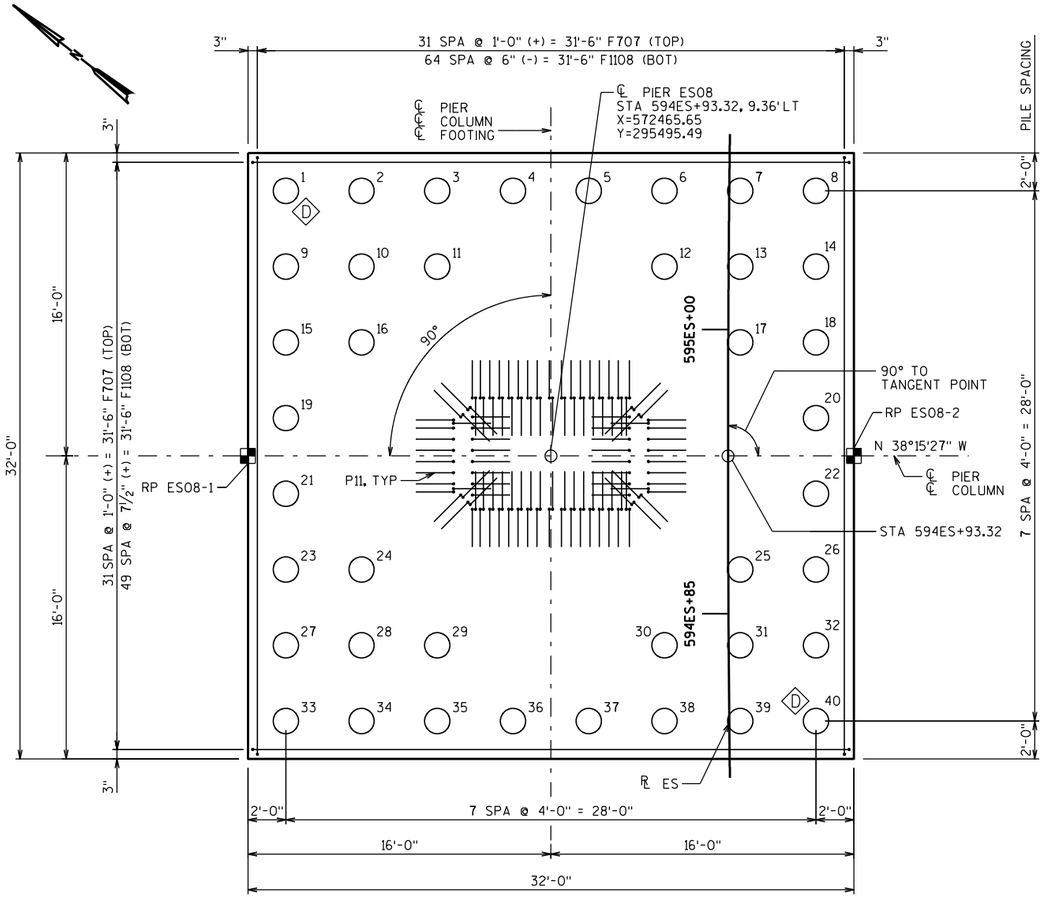
OPTION B
PIER ES08
DETAILS

SHEET B36 OF B48

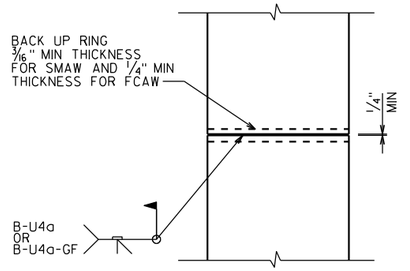
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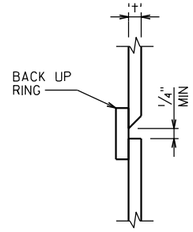
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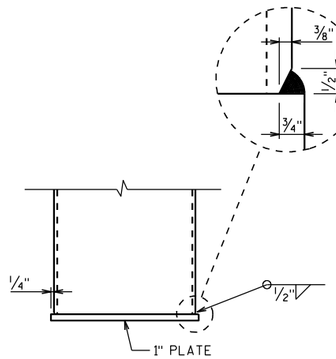
PLAN



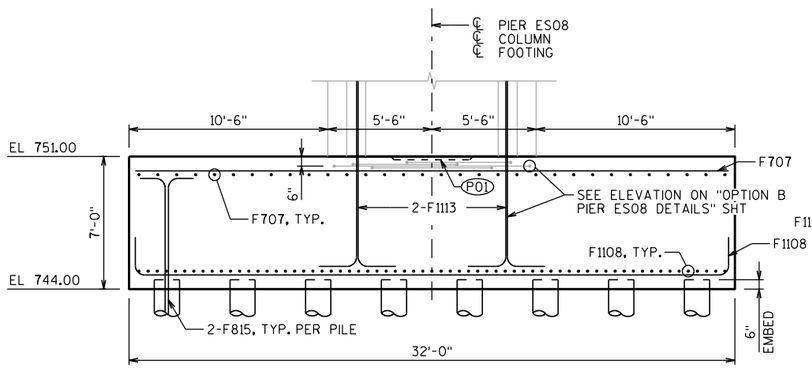
CIP PILE SPLICE DETAIL

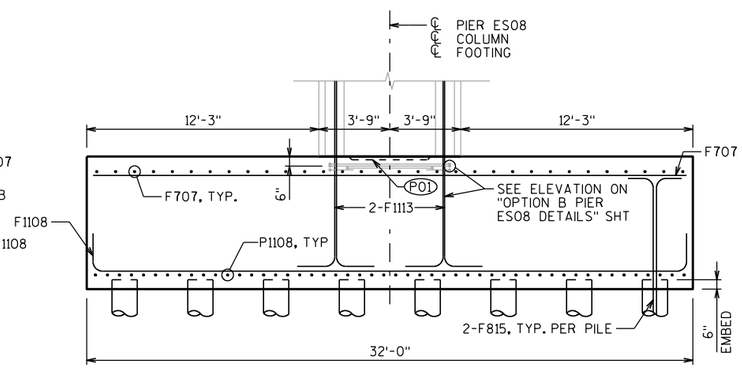


CIP PILE WELD DETAIL



CIP PILE END
PLATE DETAIL





ELEVATION

LEGEND

- (P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".
- ◇D DYNAMIC PILE LOAD TESTING.
- ○ PIER SUPPORTED ON 16" DIA CIP CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/ CAPWAP ACCEPTANCE METHOD.
- ■ REFERENCE POINT, SEE SHEET B4.

ESTIMATED PILE LENGTH = 70 FT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY KTM | PLANS CK'D. JWC

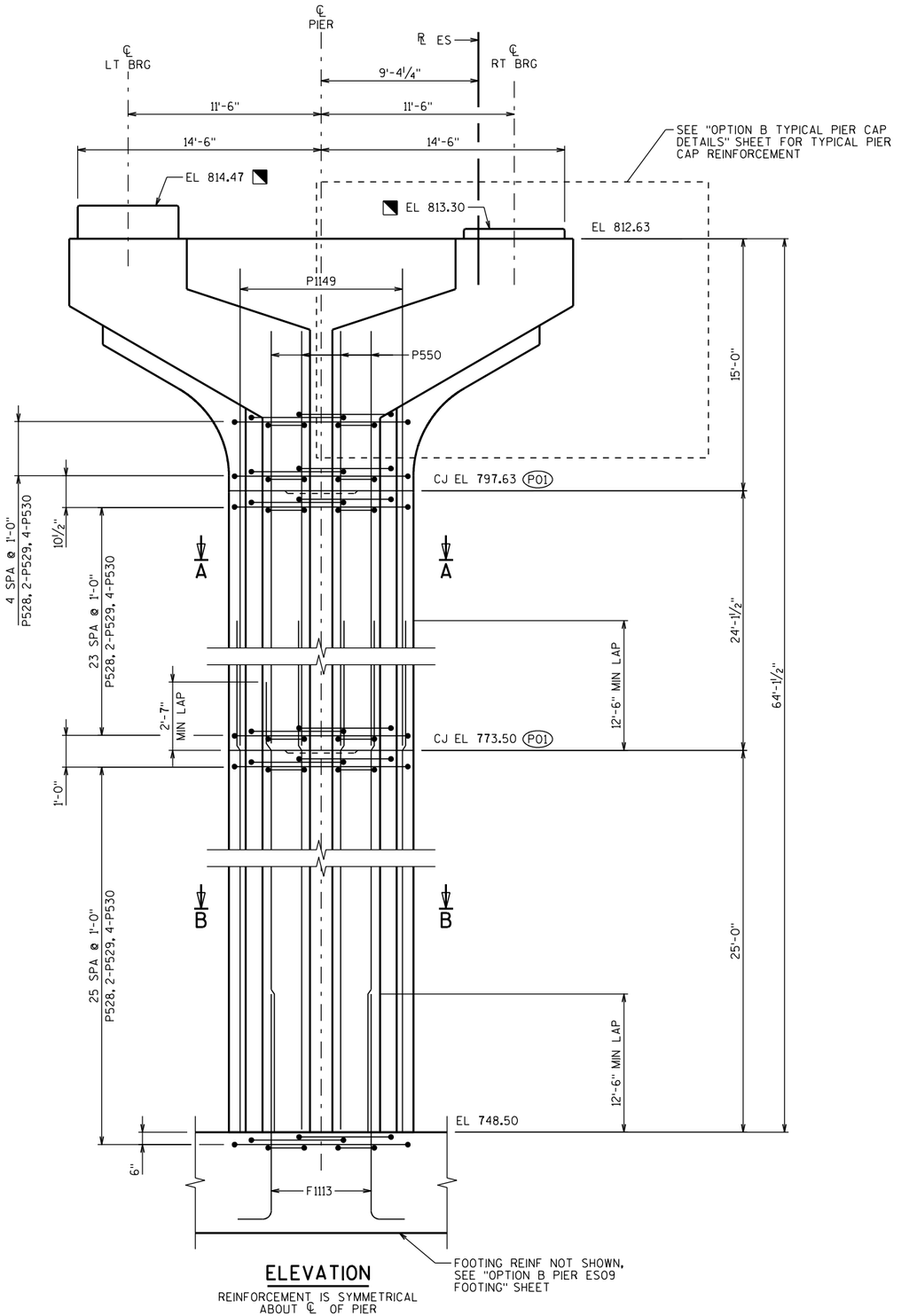
OPTION B
PIER ES08
FOOTING

SHEET B37 OF B48

8

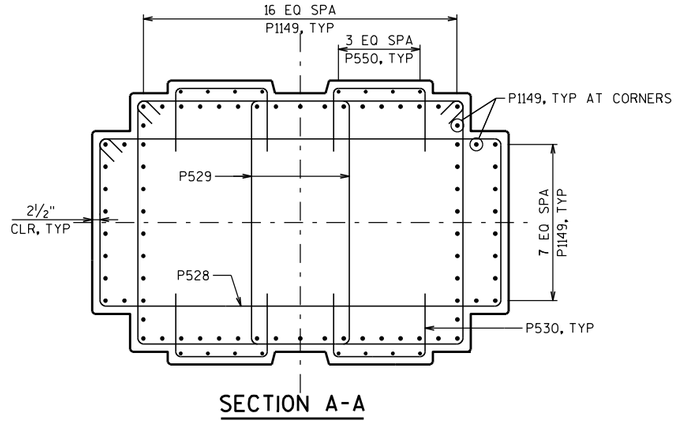
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STATE PROJECT NUMBER
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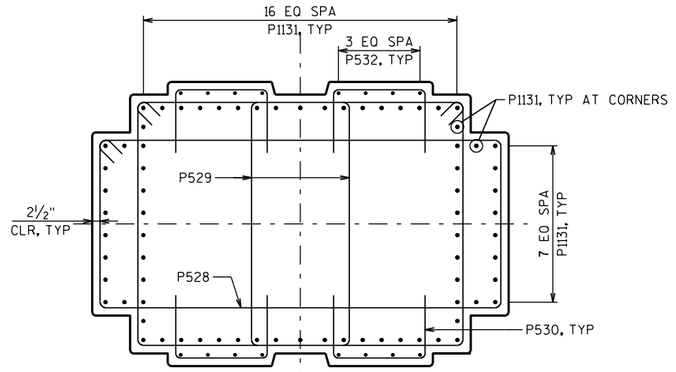


ELEVATION

REINFORCEMENT IS SYMMETRICAL ABOUT ℄ OF PIER



SECTION A-A



SECTION B-B

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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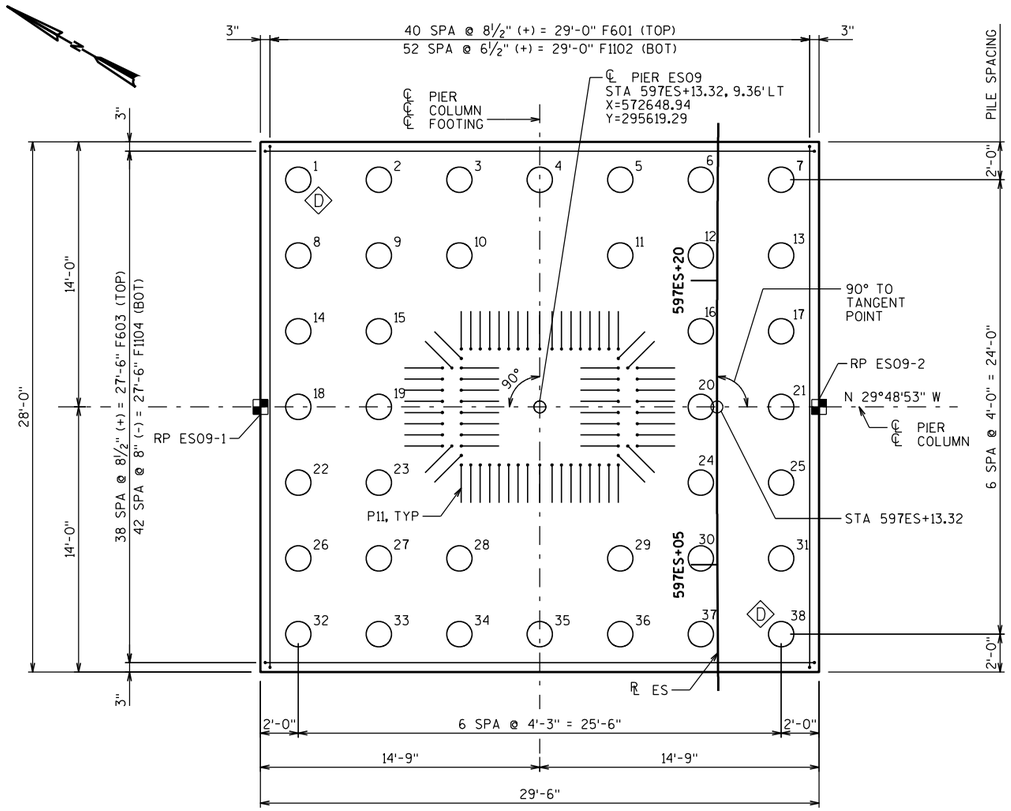
OPTION B
PIER ES09
DETAILS

SHEET B38 OF B48

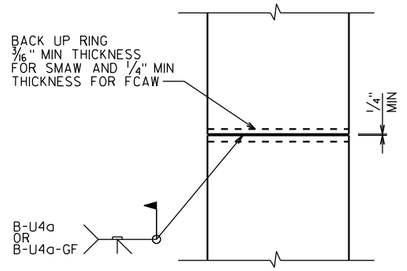
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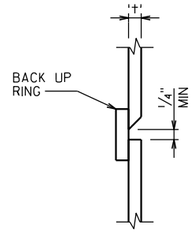
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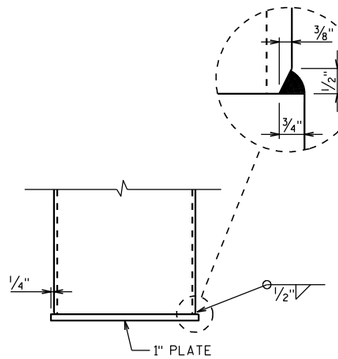
PLAN



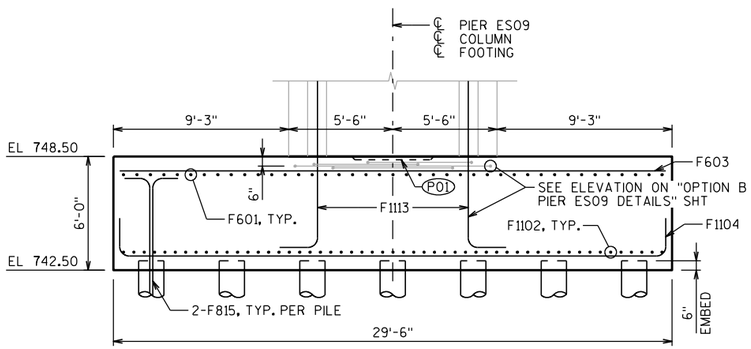
CIP PILE SPLICE DETAIL

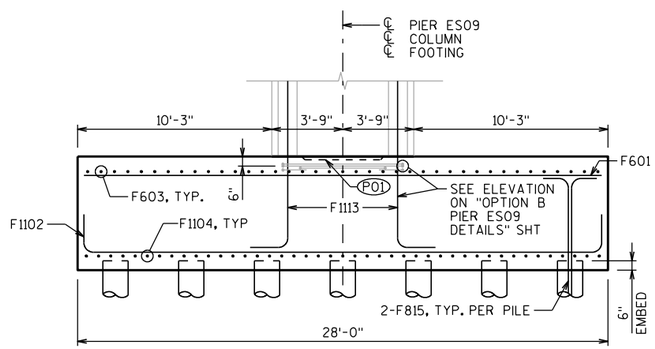


CIP PILE WELD DETAIL



CIP PILE END PLATE DETAIL





ELEVATION

LEGEND

- (P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".
- ◇D DYNAMIC PILE LOAD TESTING.
- ○ PIER SUPPORTED ON 16" DIA CIP CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/ CAPWAP ACCEPTANCE METHOD.
- ▪ REFERENCE POINT, SEE SHEET B4.

ESTIMATED PILE LENGTH = 70 FT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY KTM | PLANS CK'D. JWC

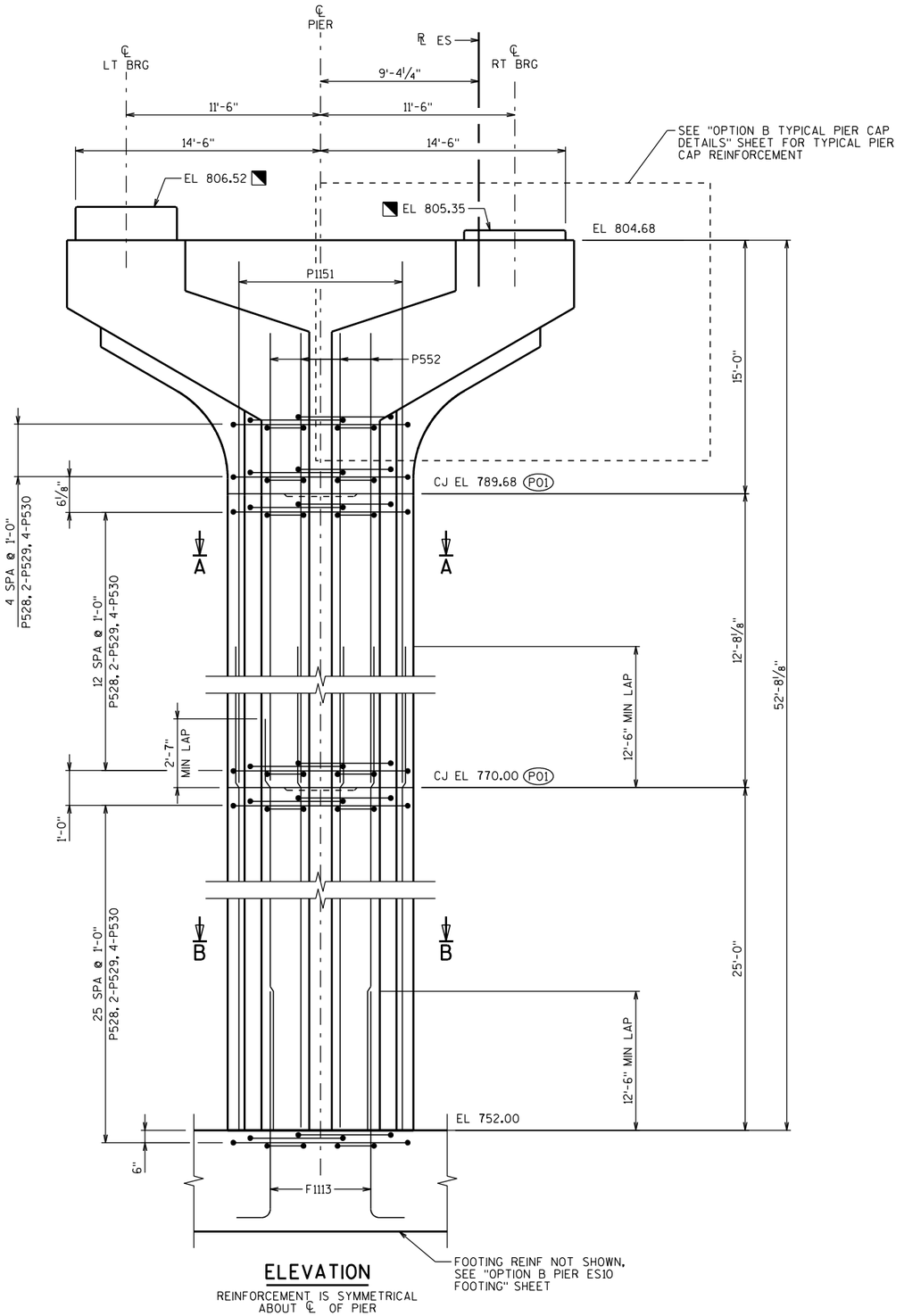
OPTION B
PIER ES09
FOOTING

SHEET B39 OF B48

8

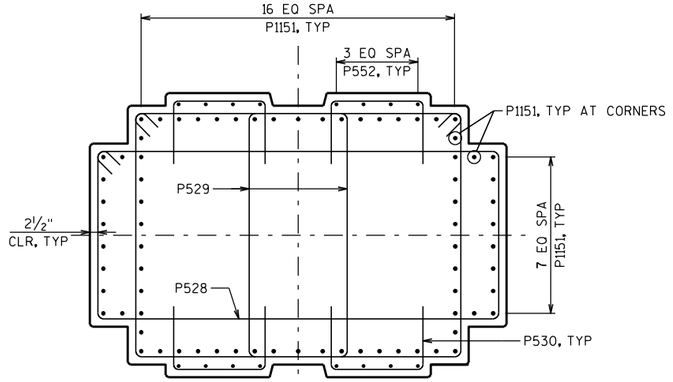
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STATE PROJECT NUMBER
1060-33-81

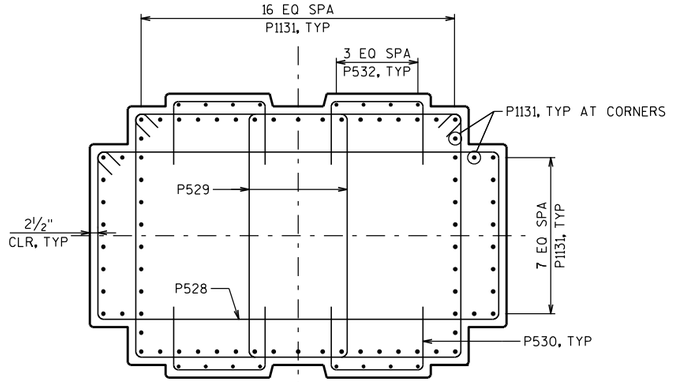


ELEVATION

REINFORCEMENT IS SYMMETRICAL ABOUT ℄ OF PIER



SECTION A-A



SECTION B-B

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"

(P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

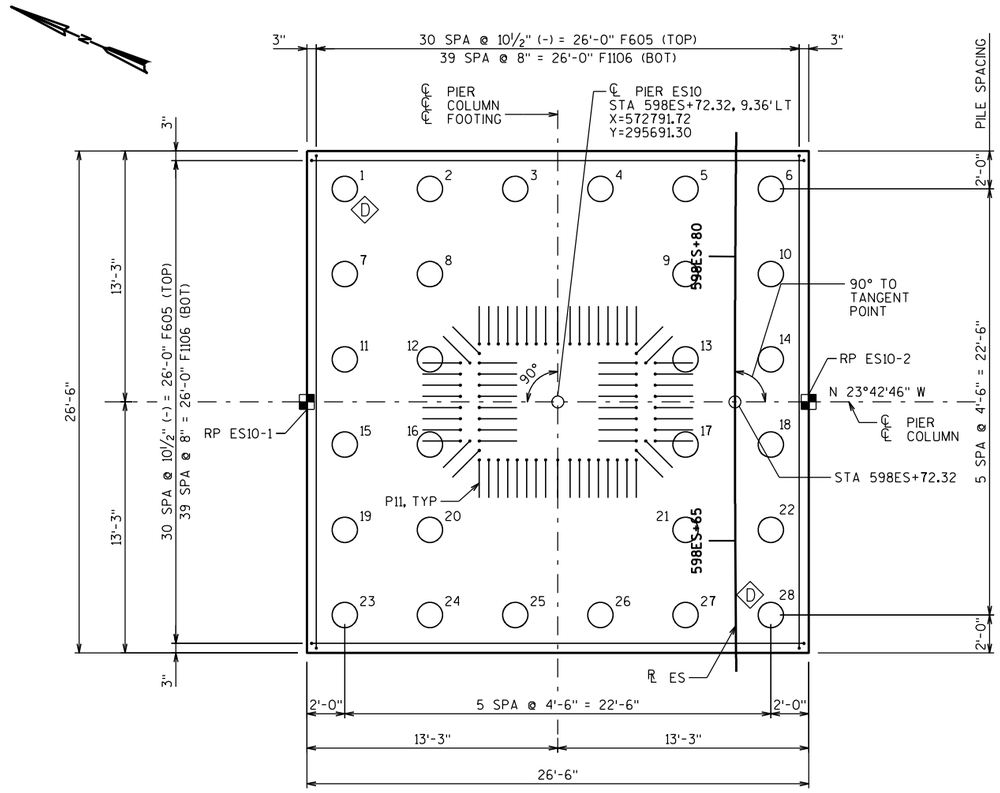
OPTION B
PIER ES10
DETAILS

SHEET B40 OF B48

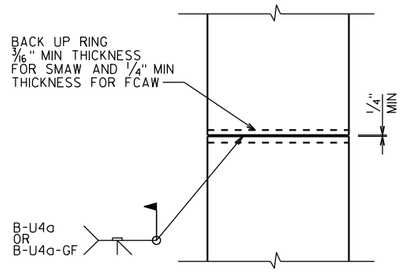
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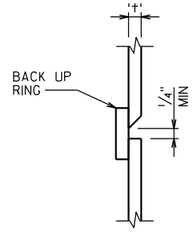
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1060-33-81



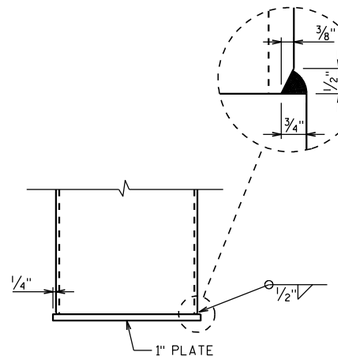
PLAN



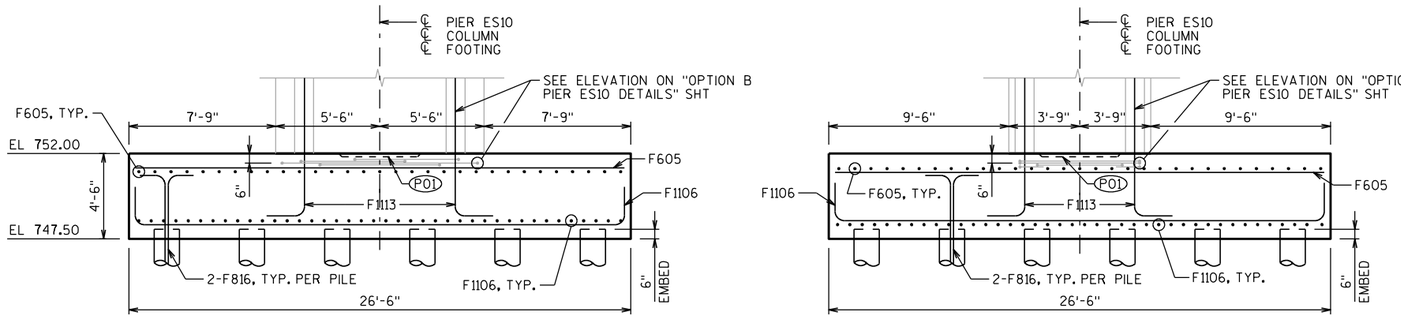
CIP PILE SPLICE DETAIL



CIP PILE WELD DETAIL



CIP PILE END PLATE DETAIL



ELEVATION

LEGEND

- (P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".
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- ■ REFERENCE POINT, SEE SHEET B4.

ESTIMATED PILE LENGTH = 70 FT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY KTM | PLANS CK'D. JWC

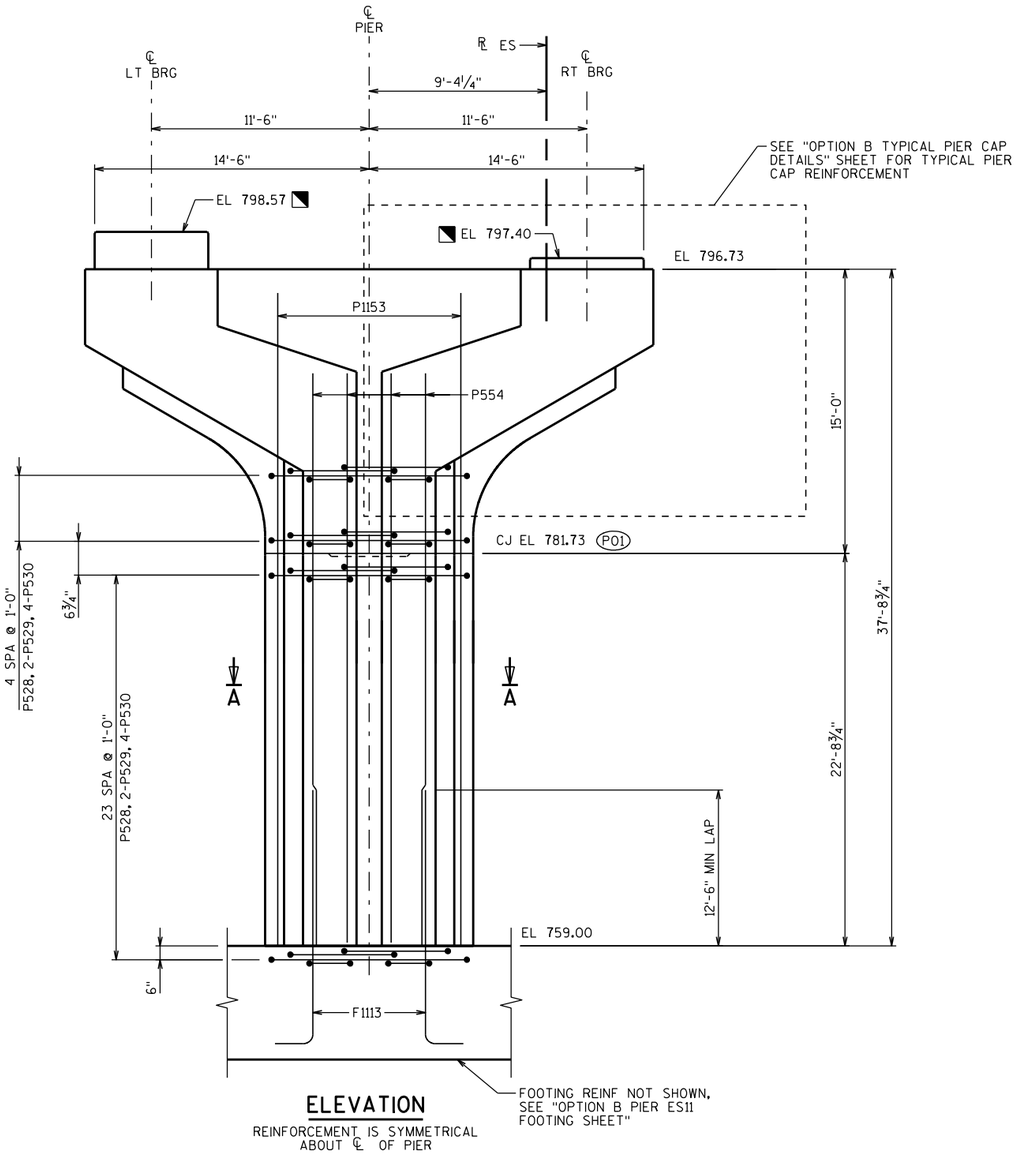
OPTION B
PIER ES10
FOOTING

SHEET B41 OF B48

8

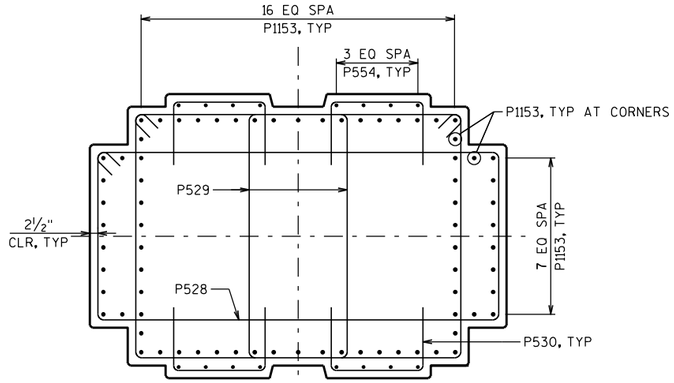
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STATE PROJECT NUMBER
1060-33-81



ELEVATION

REINFORCEMENT IS SYMMETRICAL ABOUT ℄ OF PIER



SECTION A-A

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.
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8

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

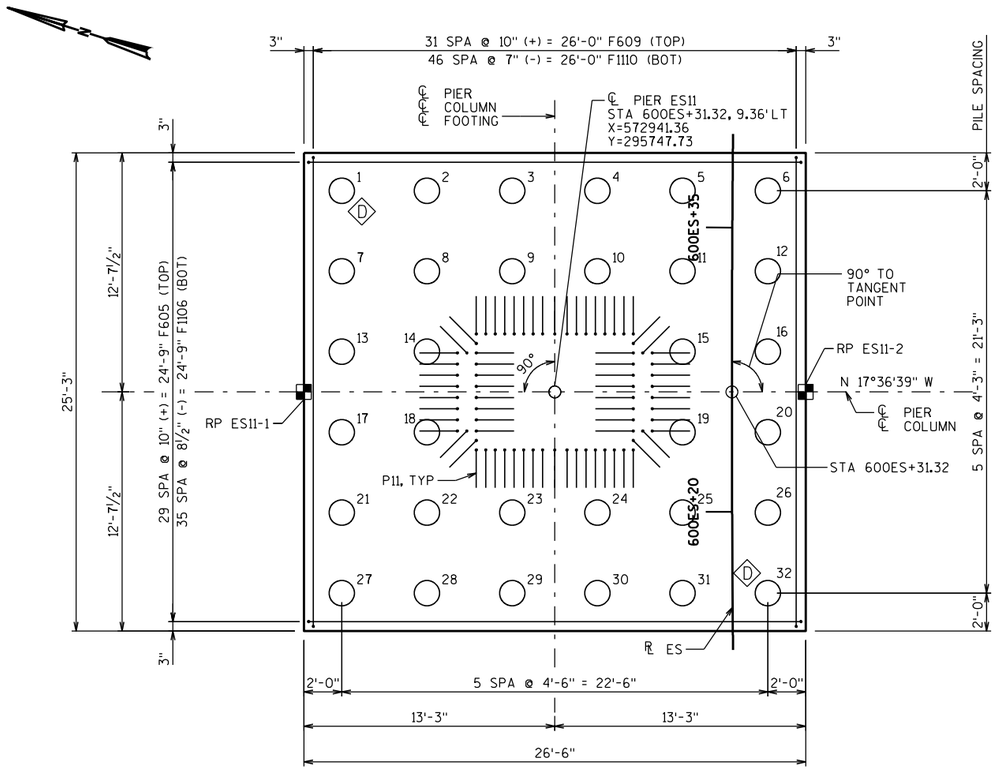
STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

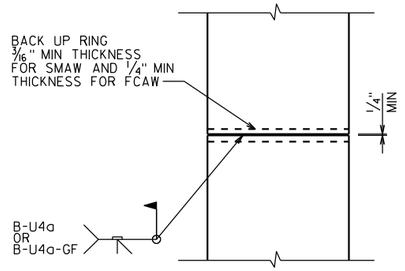
OPTION B
PIER ES11
DETAILS

SHEET B42 OF B48

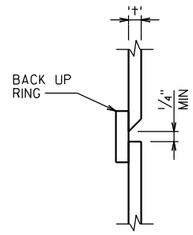
STATE PROJECT NUMBER
1060-33-81



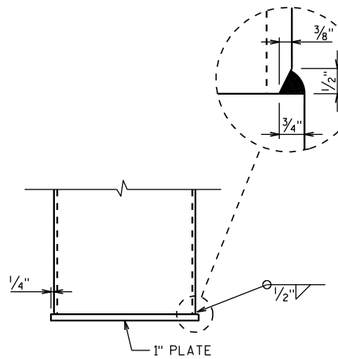
PLAN



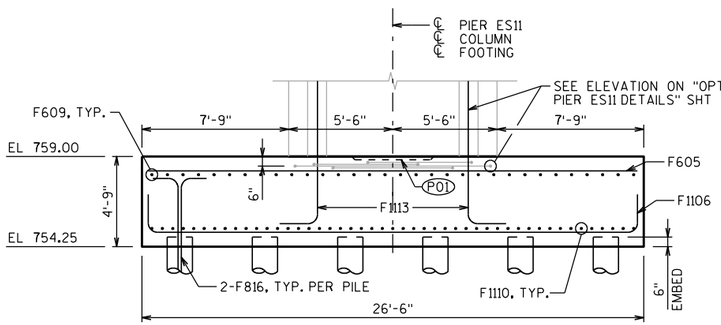
CIP PILE SPLICE DETAIL

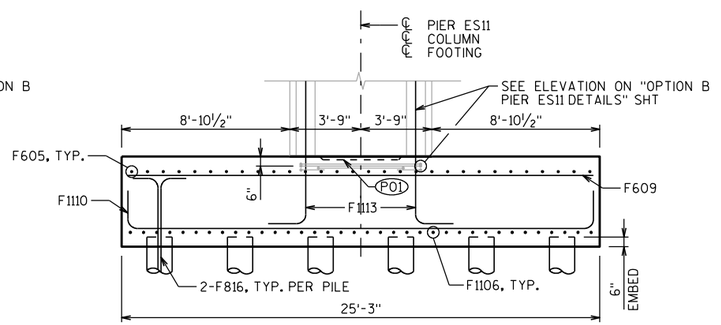


CIP PILE WELD DETAIL



CIP PILE END PLATE DETAIL





ELEVATION

LEGEND

- (P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".
- ◇D DYNAMIC PILE LOAD TESTING.
- ○ PIER SUPPORTED ON 16" DIA CIP CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/ CAPWAP ACCEPTANCE METHOD.
- ■ REFERENCE POINT, SEE SHEET B4.

ESTIMATED PILE LENGTH = 70 FT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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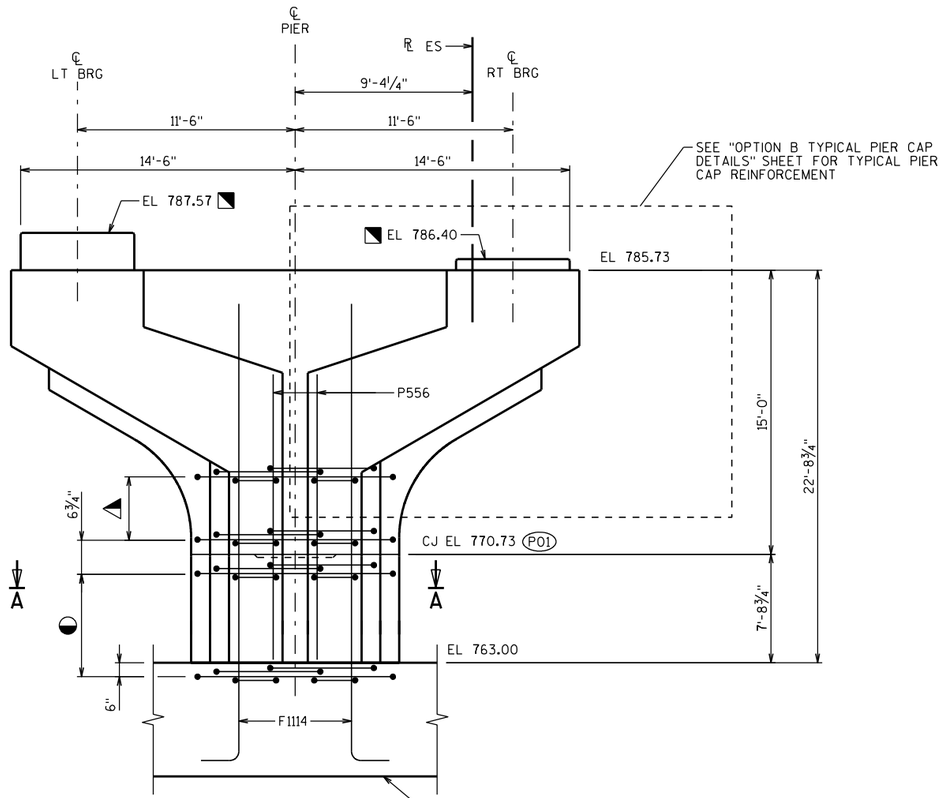
OPTION B
PIER ES11
FOOTING

SHEET B43 OF B48

8

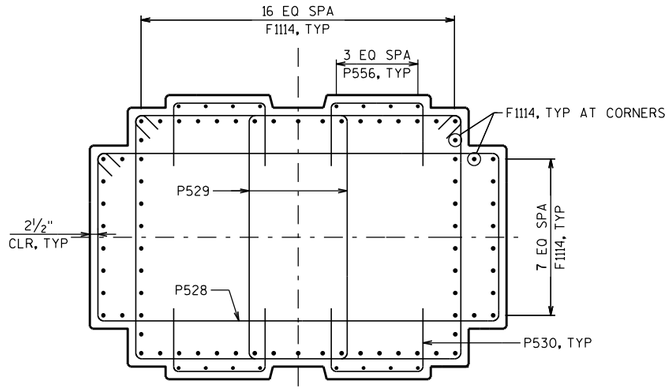
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STATE PROJECT NUMBER
1060-33-81



ELEVATION

REINFORCEMENT IS SYMMETRICAL ABOUT ℄ OF PIER



SECTION A-A

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"

(P01) OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".

◭ 4 SPA. @ 1'-0", P528, 2-P529, 4-P530

◐ 8 SPA. @ 1'-0", P528, 2-P529, 4-P530

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

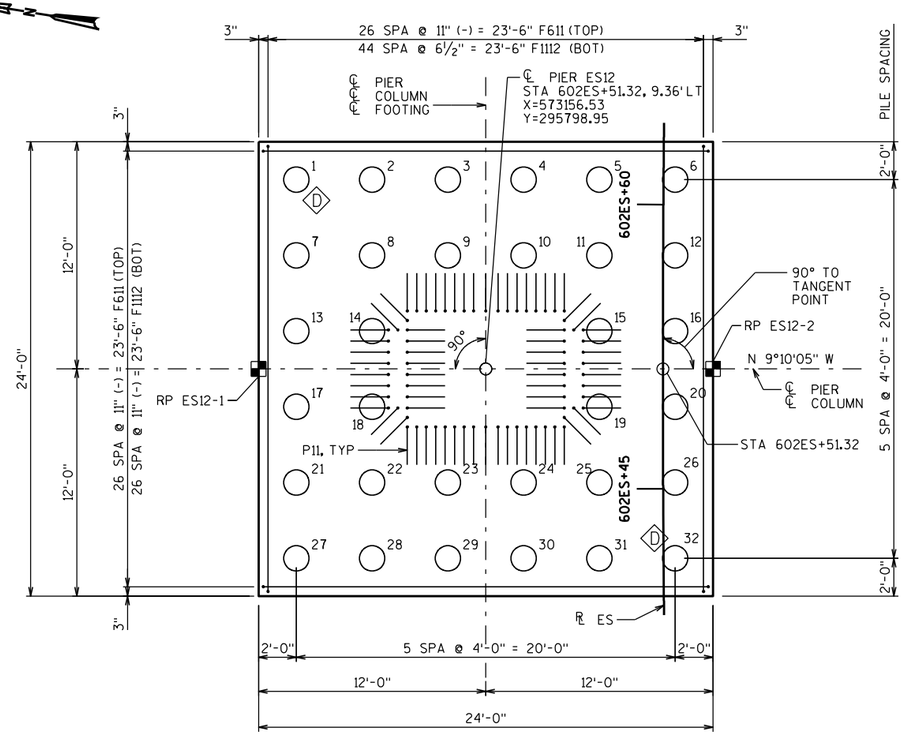
STRUCTURE B-40-854

DRAWN BY MSS | PLANS CK'D. JWC

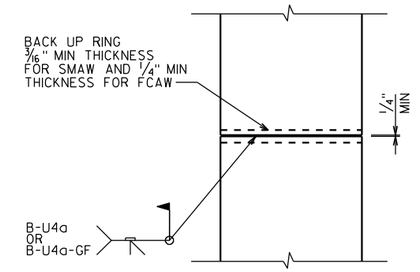
OPTION B
PIER ES12
DETAILS

SHEET B44 OF B48

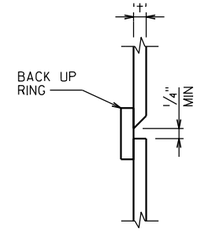
STATE PROJECT NUMBER
1060-33-81



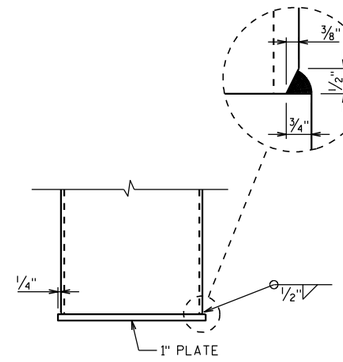
PLAN



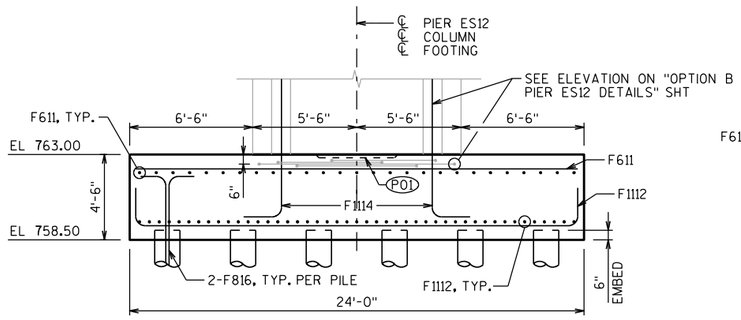
CIP PILE SPLICE DETAIL

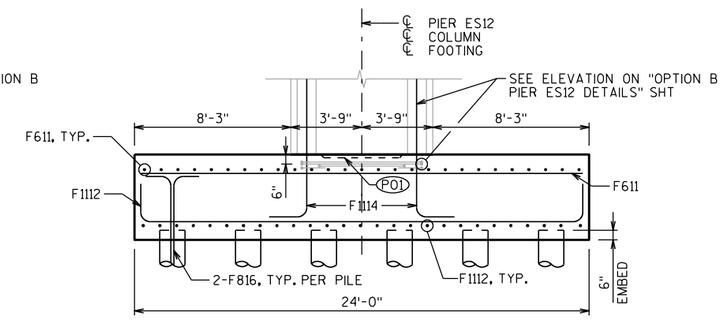


CIP PILE WELD DETAIL



CIP PILE END PLATE DETAIL





ELEVATION

LEGEND

- (P01) KEYED CONSTRUCTION JOINT FORMED BY SURFACED BEVELED 4"x1'-4"x6'-0".
- (D) DYNAMIC PILE LOAD TESTING.
- ○ PIER SUPPORTED ON 16" DIA CIP CONCRETE PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/ CAPWAP ACCEPTANCE METHOD.
- ■ REFERENCE POINT, SEE SHEET B4.

ESTIMATED PILE LENGTH = 70 FT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION B
PIER ES12
FOOTING

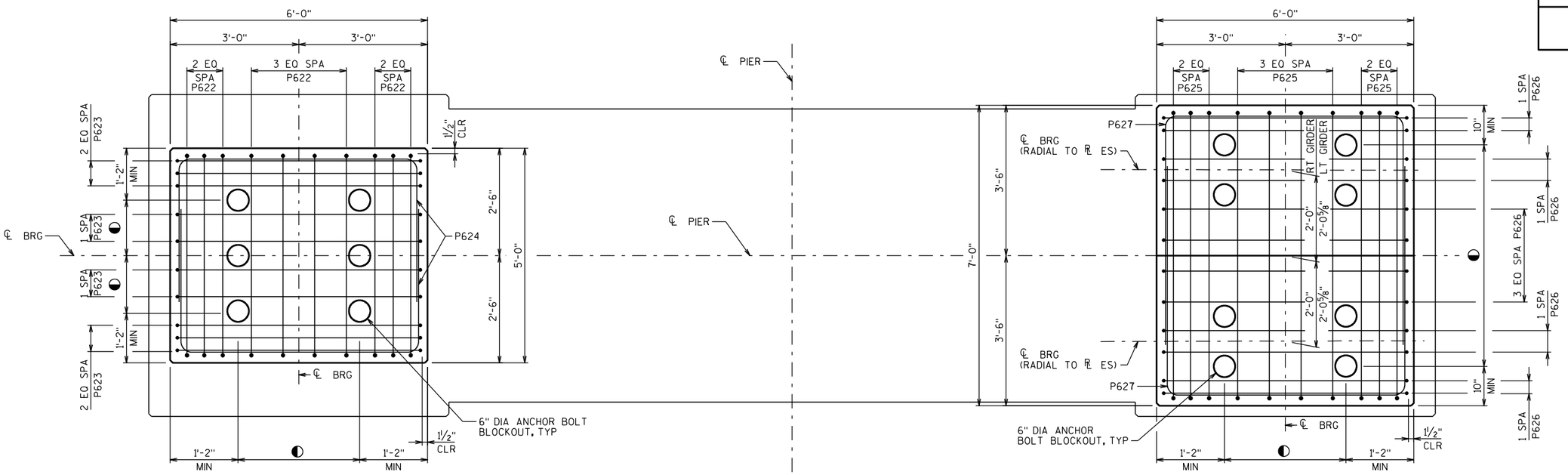
SHEET B45 OF B48

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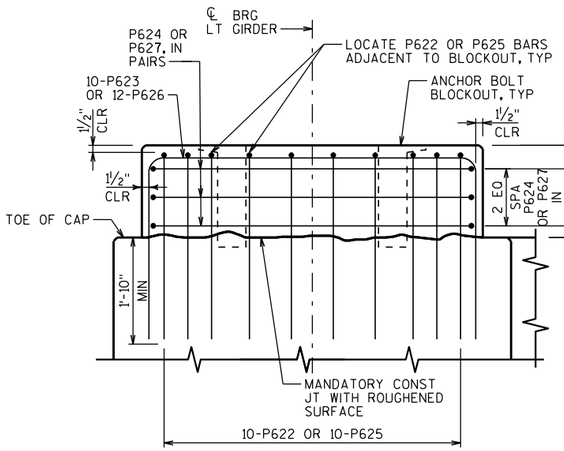
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STATE PROJECT NUMBER
1060-33-81

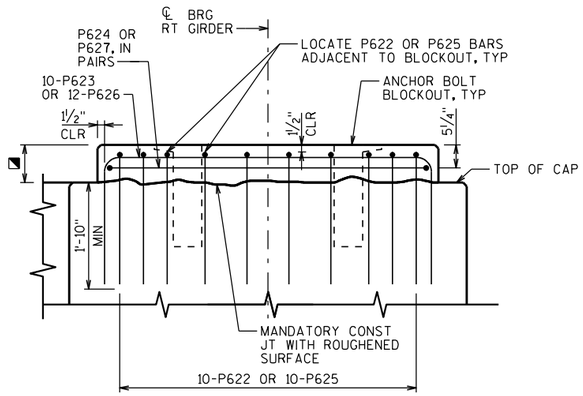


PEDESTAL PLAN
(TYPICAL PIER)

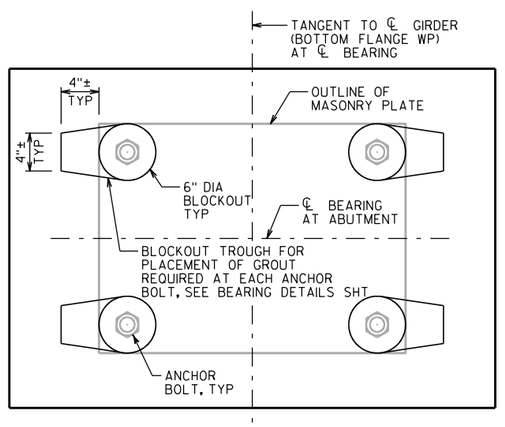
PEDESTAL PLAN
(PIERS ES05 & ES10 ONLY)



PEDESTAL ELEVATION - LEFT GIRDER



PEDESTAL ELEVATION - RIGHT GIRDER



PEDESTAL PLAN - GROUT TROUGHS
SEE BEARING DETAILS SHEET

NOTES

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

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

LEGEND

◥ 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 SHEETS FOR ANCHOR BOLT BLOCKOUT LOCATION. VERIFY LOCATIONS WITH BEARING MANUFACTURER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION B TYPICAL PIER PEDESTAL REINFORCEMENT

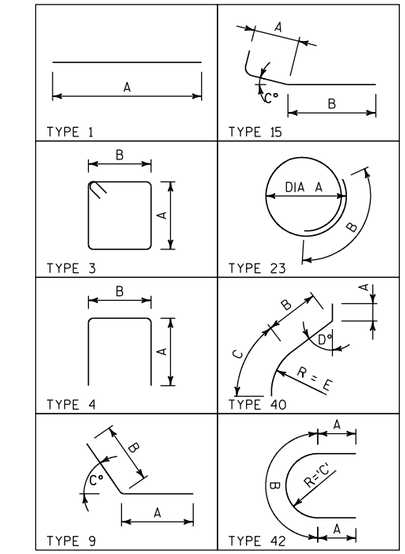
SHEET B46 OF B48

8

8

STATE PROJECT NUMBER
1060-33-81

BAR INFORMATION							BAR DIMENSIONS					LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E		DIM	MIN	MAX	NO REQ'D	LENGTH
P1101	E	132	32'-8"	X		4	2'-0"	29'-4"				TOP TIE BAR					
P1102	E	132	31'-10"	X		4	2'-0"	28'-6"				BOTTOM TIE BAR					
P803	E	144	29'-4"			1	29'-4"					SKIN STEEL - TOP OF CAP					
P804	E	288	19'-5"		X	1	19'-5"					SKIN STEEL - MIDDLE OF CAP (SERIES)	A	10'-0"	28'-10"	12 SERIES OF 24	10'-0" TO 28'-10"
P606	E	960	21'-11"	X	X	3	4'-2"	6'-4½"				STIRRUPS - TOP EDGES OF CAP (SERIES)	A	3'-7"	9'-2"	12 SERIES OF 80	16'-4" TO 27'-6"
P507	E	168	17'-11"	X		4	6'-4"	5'-6"				TIE - TOP CENTER OF CAP					
P508	E	288	18'-9"	X		9	3'-6"	15'-3"	60			OUTSIDE FACE OF PIER CAP - TOP					
P509	E	288	11'-3"	X		4	4'-3"	3'-0"				HORIZONTAL TIE - BOTTOM OF CAP (TOP SEC)					
P510	E	576	13'-3"	X		4	5'-3"	3'-0"				HORIZONTAL TIE - BOTTOM OF CAP (BOT SEC)					
P511	E	576	10'-3"	X		4	3'-9"	3'-0"				VERTICAL TIE - BOTTOM OF CAP (TOP SEC)					
P512	E	96	11'-3"	X		4	4'-3"	3'-0"				VERTICAL TIE - BOTTOM OF CAP (BOT SEC)					
P513	E	168	14'-5"	X		40	3'-0"	5'-0"	6'-5"	60	6'-5"	OUTSIDE FACE OF PIER CAP - BOT					
P514	E	240	16'-5"	X		4	5'-1"	6'-6"				TIE - ARCHITECTURAL REVEAL - HORIZ - TOP					
P515	E	48	18'-1"	X		4	5'-1"	8'-2"				TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P516	E	48	18'-10"	X		4	5'-1"	8'-11"				TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P517	E	48	19'-9"	X		4	5'-1"	9'-10"				TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P518	E	240	11'-4"	X	X	4	2'-4"	6'-10½"				TIE - ARCHITECTURAL REVEAL - HORIZ - BOT (SERIES)	B	3'-5"	10'-4"	12 SERIES OF 20	7'-10" TO 14'-9"
P519	E	288	5'-0"		X	1	5'-0"					ARCHITECTURAL REVEAL - VERT - TOP (SERIES)	A	4'-2"	6'-9"	12 SERIES OF 24	4'-2" TO 6'-9"
P520	E	240	4'-11"		X	1	4'-11"					ARCHITECTURAL REVEAL - VERT - MID (SERIES)	A	4'-5"	5'-5"	12 SERIES OF 20	4'-5" TO 5'-5"
P521	E	48	11'-6"	X		15	7'-9"	3'-0"	72			ARCHITECTURAL REVEAL - VERT - INSIDE FACE					
P622	E	240	12'-1"	X		4	3'-10"	4'-9"				PEDESTAL REINFORCEMENT - TYP - TOP FACE					
P623	E	240	12'-1"	X		4	3'-9"	5'-9"				PEDESTAL REINFORCEMENT - TYP - TOP FACE					
P624	E	96	12'-5"	X		4	3'-7"	5'-7"				PEDESTAL REINFORCEMENT - TYP - SIDE					
P625	E	240	14'-1"	X		4	3'-10"	6'-9"				PEDESTAL REINFORCEMENT - ES05 & ES10 - TOP FACE					
P626	E	288	12'-11"	X		4	3'-9"	5'-9"				PEDESTAL REINFORCEMENT - ES05 & ES10 - TOP FACE					
P627	E	96	14'-5"	X		4	4'-7"	5'-7"				PEDESTAL REINFORCEMENT - ES05 & ES10 - SIDE					
P528	E	596	30'-7"	X		3	10'-7"	4'-5"				COLUMN TRANSVERSE (MAIN)					
P529	E	1,192	24'-7"	X		3	6'-5"	5'-7"				COLUMN TRANSVERSE (MAIN)					
P530	E	2,152	5'-6"	X		4	1'-8"	2'-5"				COLUMN TRANSVERSE (SECONDARY)					
P1131	E	564	37'-9"			1	37'-9"					COLUMN - VERTICAL BAR (MAIN)					
P532	E	128	27'-7"			1	27'-7"					COLUMN - VERTICAL BAR (SECONDARY)					
P1133	E	74	22'-3"			1	22'-3"					COLUMN - VERTICAL BAR - ES01 (MAIN)					
P534	E	16	18'-8"			1	18'-8"					COLUMN - VERTICAL BAR - ES01 (SECONDARY)					
P1135	E	60	34'-9"			1	34'-9"					COLUMN - VERTICAL BAR - ES02 (MAIN)					
P536	E	16	31'-2"			1	31'-2"					COLUMN - VERTICAL BAR - ES02 (SECONDARY)					
P1137	E	74	43'-9"			1	43'-9"					COLUMN - VERTICAL BAR - ES03 (MAIN)					
P538	E	16	40'-2"			1	40'-2"					COLUMN - VERTICAL BAR - ES03 (SECONDARY)					
P1139	E	74	43'-6"			1	43'-6"					COLUMN - VERTICAL BAR - ES04 (MAIN)					
P540	E	16	39'-11"			1	39'-11"					COLUMN - VERTICAL BAR - ES04 (SECONDARY)					
P1141	E	74	43'-10"			1	43'-10"					COLUMN - VERTICAL BAR - ES05 (MAIN)					
P542	E	16	40'-3"			1	40'-3"					COLUMN - VERTICAL BAR - ES05 (SECONDARY)					
P1143	E	74	29'-5"			1	29'-5"					COLUMN - VERTICAL BAR - ES06 (MAIN)					
P544	E	16	25'-10"			1	25'-10"					COLUMN - VERTICAL BAR - ES06 (SECONDARY)					
P1145	E	74	42'-0"			1	42'-0"					COLUMN - VERTICAL BAR - ES07 (MAIN)					
P546	E	16	38'-5"			1	38'-5"					COLUMN - VERTICAL BAR - ES07 (SECONDARY)					
P1147	E	74	45'-6"			1	45'-6"					COLUMN - VERTICAL BAR - ES08 (MAIN)					
P548	E	16	41'-11"			1	41'-11"					COLUMN - VERTICAL BAR - ES08 (SECONDARY)					
P1149	E	74	37'-1"			1	37'-1"					COLUMN - VERTICAL BAR - ES09 (MAIN)					
P550	E	16	33'-6"			1	33'-6"					COLUMN - VERTICAL BAR - ES09 (SECONDARY)					
P1151	E	74	25'-6"			1	25'-6"					COLUMN - VERTICAL BAR - ES10 (MAIN)					
P552	E	16	21'-11"			1	21'-11"					COLUMN - VERTICAL BAR - ES10 (SECONDARY)					
P1153	E	74	35'-8"			1	35'-8"					COLUMN - VERTICAL BAR - ES11 (MAIN)					
P554	E	16	32'-1"			1	32'-1"					COLUMN - VERTICAL BAR - ES11 (SECONDARY)					
P556	E	16	17'-1"			1	17'-1"					COLUMN - VERTICAL BAR - ES12 (SECONDARY)					
P557	E	27	24'-9"	X		23	7'-5"	1'-5"				CAST SHAFT TIE BAR (8' SHAFTS) - PIER ES01					
P558	E	13	21'-1"	X		23	6'-3"	1'-5"				SPLICE CAGE TIE BAR (8' SHAFTS) - PIER ES01					
P460	E	45	23'-0"	X		23	7'-0"	1'-0"				SOCKET CONNECTION HORIZONTAL (SHAFT)					
P461	E	90	5'-0"	X		4	1'-0"	3'-2"				SOCKET CONNECTION HORIZONTAL (SHAFT)					
P462	E	86	13'-1"	X		42	2'-6"	8'-1"	3'-5"			SOCKET CONNECTION HORIZONTAL (COLUMN)					
P1163	E	24	25'-0"			1	25'-0"					CAST SHAFT VERTICAL - ES01					
P1164	E	24	28'-0"			1	28'-0"					CAST SHAFT VERTICAL - ES01					
P1165	E	16	25'-6"			1	25'-6"					SPLICE CAGE VERTICAL - ES01					
P1166	E	66	25'-3"			1	25'-3"					SOCKET CONNECTION VERTICAL - ES02					
P1167	E	16	47'-3"			1	47'-3"					SOCKET CONNECTION VERTICAL - ES02					
P1168	E	66	28'-0"			1	28'-0"					SOCKET CONNECTION VERTICAL - ES03					
P1169	E	30	52'-9"			1	52'-9"					SOCKET CONNECTION VERTICAL - ES03					
P1873	E	36	35'-3"			1	35'-3"					SOCKET CONNECTION VERTICAL - ES07					
P1174	E	30	54'-9"			1	54'-9"					SOCKET CONNECTION VERTICAL - ES07					



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
U - STEEL, HIGH STRENGTH, UNCOATED.
E - STEEL, HIGH STRENGTH, EPOXY COATED.
S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

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OPTION B
PIER REINFORCEMENT
SCHEDULE (1 OF 2)

SHEET B47 OF B48

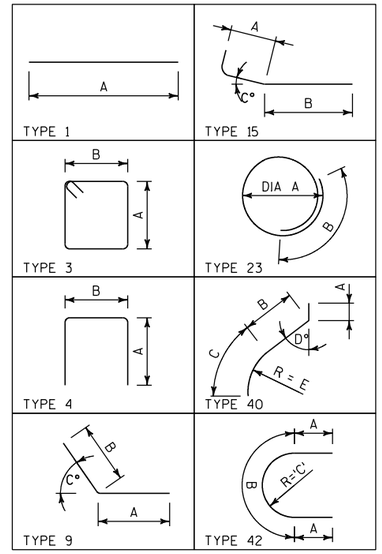
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8

STATE PROJECT NUMBER
1060-33-81

BAR MARK BREAKDOWN

MARK	PIER ES01	PIER ES02	PIER ES03	PIER ES04	PIER ES05	PIER ES06	PIER ES07	PIER ES08	PIER ES09	PIER ES10	PIER ES11	PIER ES12	TOTAL NO	WEIGHT
P1101	11	11	11	11	11	11	11	11	11	11	11	11	132	22,910
P1102	11	11	11	11	11	11	11	11	11	11	11	11	132	22,325
P803	12	12	12	12	12	12	12	12	12	12	12	12	144	11,278
P804	24	24	24	24	24	24	24	24	24	24	24	24	288	14,931
P606	80	80	80	80	80	80	80	80	80	80	80	80	960	31,602
P507	14	14	14	14	14	14	14	14	14	14	14	14	168	3,139
P508	24	24	24	24	24	24	24	24	24	24	24	24	288	5,632
P509	24	24	24	24	24	24	24	24	24	24	24	24	288	3,379
P510	48	48	48	48	48	48	48	48	48	48	48	48	576	7,960
P511	48	48	48	48	48	48	48	48	48	48	48	48	576	6,158
P512	8	8	8	8	8	8	8	8	8	8	8	8	96	1,126
P513	14	14	14	14	14	14	14	14	14	14	14	14	168	2,526
P514	20	20	20	20	20	20	20	20	20	20	20	20	240	4,109
P515	4	4	4	4	4	4	4	4	4	4	4	4	48	905
P516	4	4	4	4	4	4	4	4	4	4	4	4	48	943
P517	4	4	4	4	4	4	4	4	4	4	4	4	48	989
P518	20	20	20	20	20	20	20	20	20	20	20	20	240	2,837
P519	24	24	24	24	24	24	24	24	24	24	24	24	288	1,502
P520	20	20	20	20	20	20	20	20	20	20	20	20	240	1,231
P521	4	4	4	4	4	4	4	4	4	4	4	4	48	576
P622	20	20	20	20	20	20	20	20	20	20	20	20	240	4,356
P623	20	20	20	20	20	20	20	20	20	20	20	20	240	4,356
P624	8	8	8	8	8	8	8	8	8	8	8	8	96	1,790
P625	20	20	20	20	20	20	20	20	20	20	20	20	240	5,077
P626	24	24	24	24	24	24	24	24	24	24	24	24	288	5,587
P627	8	8	8	8	8	8	8	8	8	8	8	8	96	2,079
P528	27	40	74	62	62	48	77	64	55	44	29	14	596	19,011
P529	54	80	148	124	124	96	154	128	110	88	58	28	1,192	30,563
P530	56	104	244	248	248	192	236	256	220	176	116	56	2,152	12,345
P1131			60	74	74	74	60	74	74	74			564	113,119
P532			16	16	16	16	16	16	16	16			128	3,682
P1133	74												74	8,748
P534	16												16	312
P1135		60											60	11,078
P536		16											16	520
P1137			74										74	17,201
P538			16										16	670
P1139				74									74	17,103
P540				16									16	666
P1141					74								74	17,234
P542					16								16	672
P1143						74							74	11,566
P544						16							16	431
P1145							74						74	16,513
P546							16						16	641
P1147								74					74	17,889
P548								16					16	700
P1149									74				74	14,580
P550									16				16	559
P1151										74			74	10,026
P552										16			16	366
P1153											74		74	14,023
P554											16		16	535
P556												16	16	285
P557	27												27	697
P558	13												13	286
P460	0	13	15				17						45	691
P461	0	26	30				34						90	301
P462	0	26	26				34						86	752
P1163	24												24	3,188
P1164	24												24	3,570
P1165	16												16	2,168
P1166		66											66	8,854
P1167		16											16	4,017
P1168			66										66	9,818
P1169			30										30	8,408
P1873							36						36	17,258
P1174							30						30	8,727
TOT	849	965	1,317	1,132	1,132	1,034	1,302	1,146	1,083	1,006	811	632	12,409	579,074



NOTES

THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFY THE BAR SIZE.

DIMENSIONS ARE TO OUTSIDE OF BARS, EXCEPT FOR RADIUS DIMENSIONS WHICH ARE TO INSIDE OF BENDS.

FOR A BAR SERIES, LENGTH SHOWN IN THE FOURTH COLUMN OF TABLE IS THE AVERAGE BAR LENGTH USED TO COMPUTE BAR WEIGHT.

BAR MATERIAL CODES USED IN SECOND COLUMN OF TABLE
- U - STEEL, HIGH STRENGTH, UNCOATED.
- E - STEEL, HIGH STRENGTH, EPOXY COATED.
- S - STAINLESS STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-854

DRAWN BY JJO | PLANS CK'D. JWC

OPTION B
PIER REINFORCEMENT
SCHEDULE (2 OF 2)

SHEET B48 OF B48

8

8