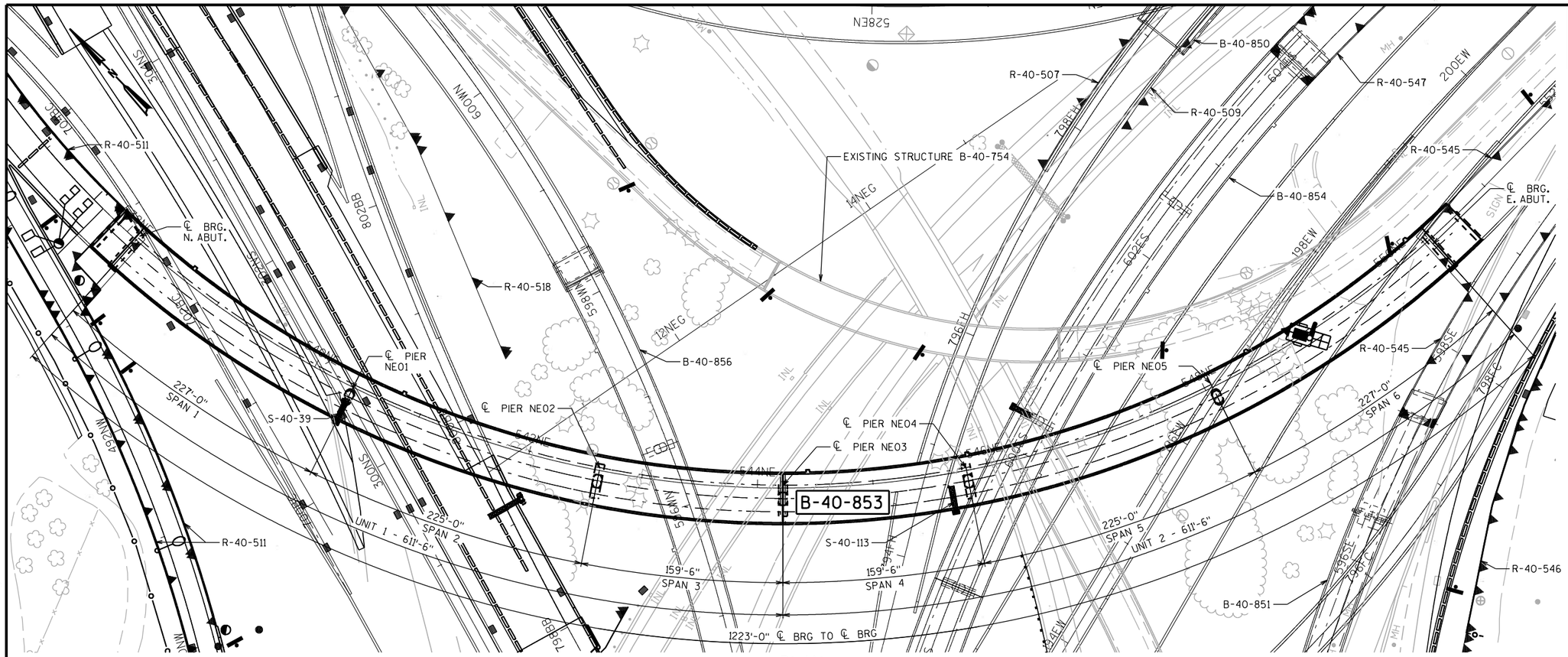
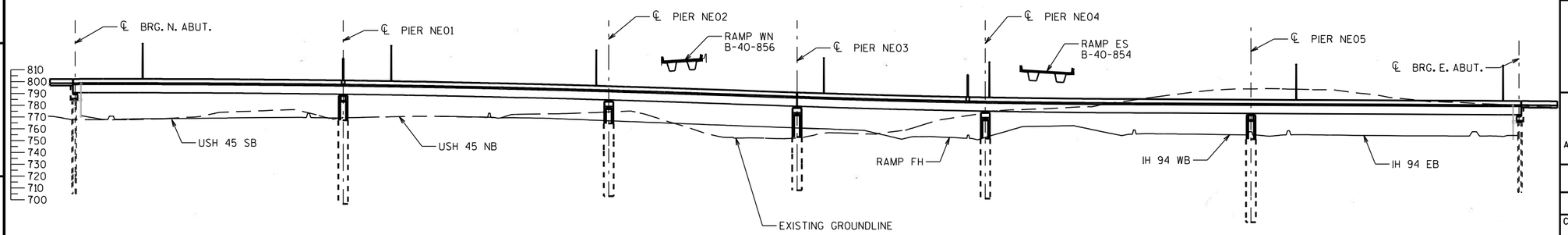


PLAN

6 - SPAN CURVED STEEL TRAPIZOIDAL BOX GIRDER, 7 FOOT WEB DEPTH
ABUTMENTS AND PIERS ARE RADIAL TO ℄ NE
DIMENSIONS SHOWN ARE ALONG ℄ NE

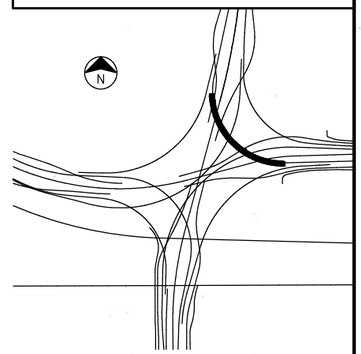


ELEVATION

ALONG ℄ NE
(LOOKING NORTHEAST)

STATE PROJECT NUMBER

1060-33-81



LOCATION MAP

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
PAT CASHIN (414) 359-2300

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher NK 07/23/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-853

Z00 INTERCHANGE RAMP NE

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

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

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

GENERAL PLAN & ELEVATION

SHEET 1 OF 96

2950

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FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080101_gp.dgn PLOT DATE : 19-JUL-2015 22:18 PLOT BY : MSCJJO PLOT NAME : 080101_gp PLOT SCALE : 100:1

STATE PROJECT NUMBER
1060-33-81

DRAWING LIST

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3. TYPICAL SECTIONS & DESIGN DATA
4. GENERAL NOTES
5. QUANTITIES
6. ROADWAY GEOMETRY
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A4. OPTION A EXCAVATION PLAN (1 OF 2)
A5. OPTION A EXCAVATION PLAN (2 OF 2)
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B1. OPTION B QUANTITIES
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B15. OPTION B TYPICAL PIER PEDESTAL REINFORCEMENT
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B18. OPTION B PIER NE05 DETAILS
B19. OPTION B PIERS NE01 & NE05 PEDESTAL REINFORCEMENT
B20. OPTION B PIER REINFORCEMENT SCHEDULE (1 OF 2)
B21. OPTION B PIER REINFORCEMENT SCHEDULE (2 OF 2)

NOTES

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

PIERS - OPTION A
DRILLED SHAFT FOUNDATION AT ALL LOCATIONS SHEETS A1 THRU A20

PIERS - OPTION B
DRIVEN PILE FOUNDATION AT PIER NE02
DRILLED SHAFT FOUNDATION AT ALL OTHER LOCATIONS SHEETS B1 THRU B21

WISCONSIN
JAMES W. CARTER III
E-35165
7-21-15
MILWAUKEE, WIS.
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

DRAWING LIST

SHEET 2 OF 96

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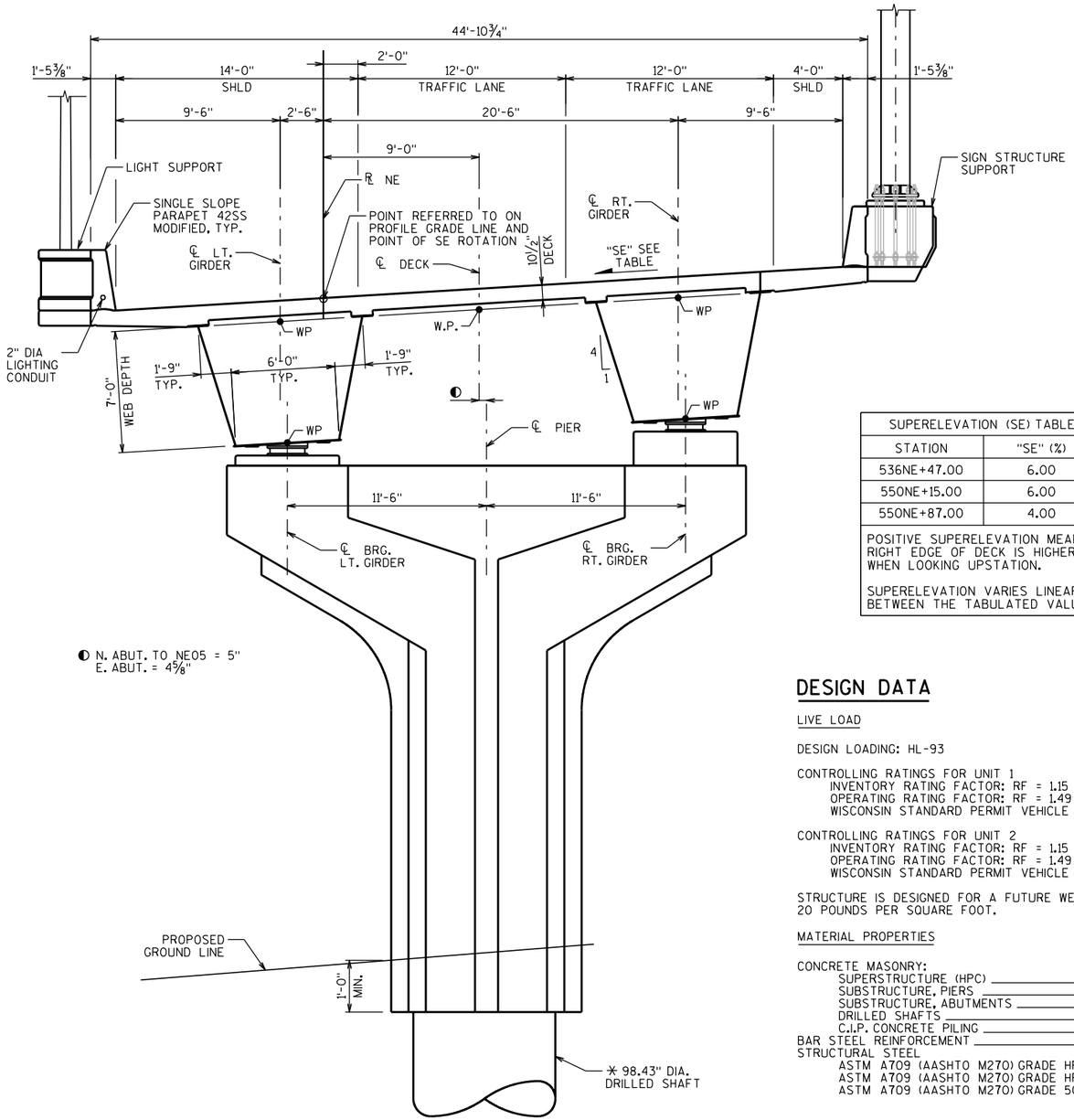
STATE PROJECT NUMBER
1060-33-81



TYPICAL SECTION THRU RAMP NE

LOOKING UPSTATION

✳ DRILLED SHAFT FOUNDATION SHOWN. IF OPTION B IS BID, CONSTRUCT DRIVEN PILE FOUNDATION AT PIER NE02. SEE NOTES ON "DRAWING LIST" SHEET.

SUPERELEVATION (SE) TABLE	
STATION	"SE" (%)
536NE+47.00	6.00
550NE+15.00	6.00
550NE+87.00	4.00
POSITIVE SUPERELEVATION MEANS RIGHT EDGE OF DECK IS HIGHER WHEN LOOKING UPSTATION. SUPERELEVATION VARIES LINEARLY BETWEEN THE TABULATED VALUES	

DESIGN DATA

LIVE LOAD

DESIGN LOADING: HL-93

CONTROLLING RATINGS FOR UNIT 1
- INVENTORY RATING FACTOR: RF = 1.15
- OPERATING RATING FACTOR: RF = 1.49
- WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

CONTROLLING RATINGS FOR UNIT 2
- INVENTORY RATING FACTOR: RF = 1.15
- OPERATING RATING FACTOR: RF = 1.49
- WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS

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

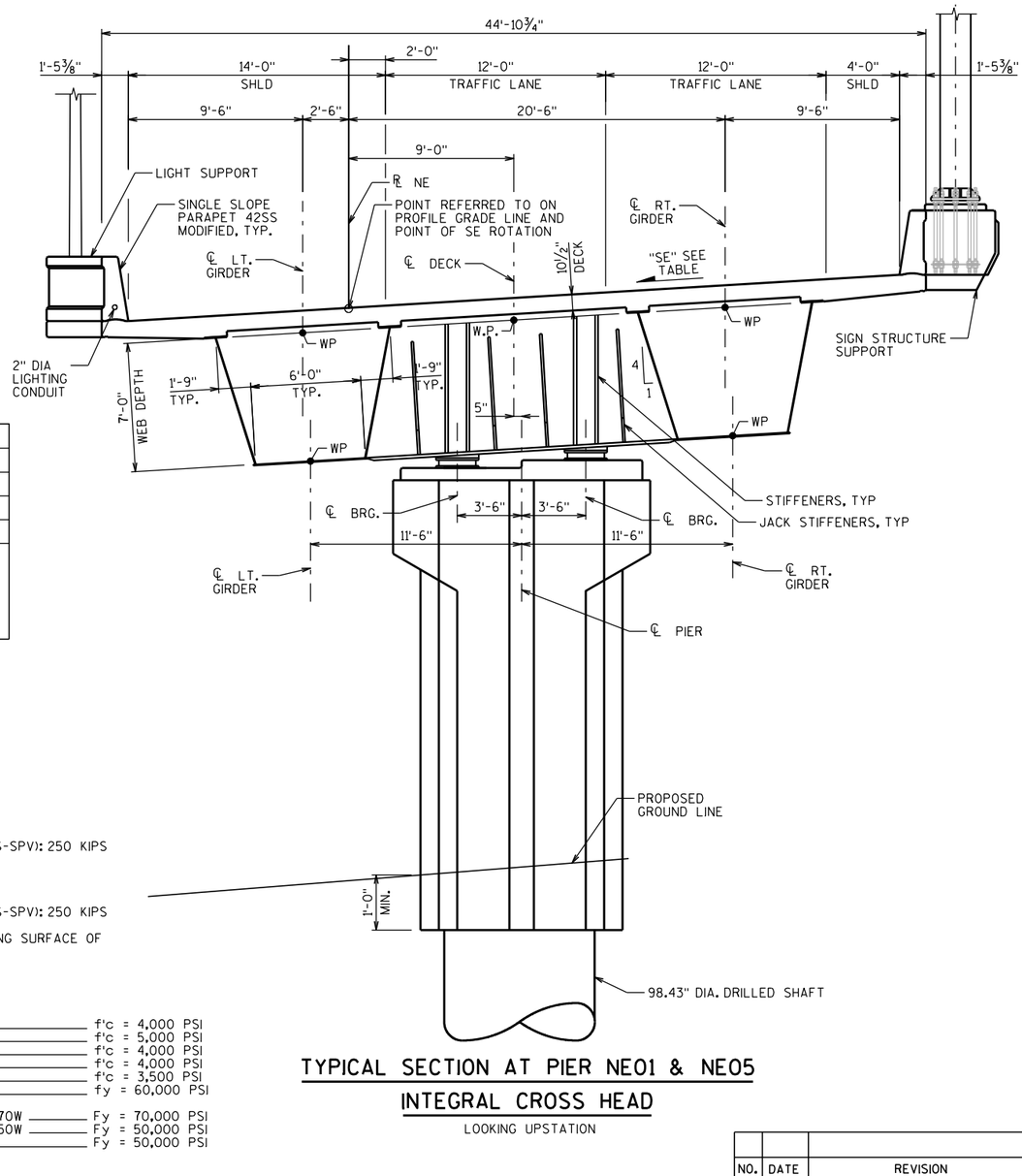
MATERIAL PROPERTIES

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 NE	IH 94 EB	IH 94 WB	USH 45 NB	USH 45 SB
A.A.D.T.	29,000	41,000	41,000	50,000	50,000
YEAR	2035	2035	2035	2035	2035
R.D.S. (MPH)	50	60	60	60	60



TYPICAL SECTION AT PIER NE01 & NE05

INTEGRAL CROSS HEAD

LOOKING UPSTATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY JJO | PLANS CK'D. JWC

TYPICAL SECTIONS & DESIGN DATA

SHEET 3 OF 96

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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 BRIDGE B-40-754 IS A TWO SPAN CONTINUOUS CURVED STEEL PLATE GIRDER STRUCTURE. THE ENTIRETY OF THE STRUCTURE WILL BE REMOVED.

G.8. THE CONTRACTOR MUST COORDINATE THE REMOVAL OF EXISTING BRIDGE B-40-754 AND THE CONSTRUCTION OF BRIDGE B-40-853 WITH PROPOSED WALLS R-40-511 AND R-40-545, PROPOSED BRIDGES B-40-854 AND B-40-856, AND PROPOSED SIGN STRUCTURES S-40-39 AND S-40-113. 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 PIER CONSTRUCTION. THE CONTRACTOR MUST BID EITHER OPTION A OR OPTION B. SEE NOTE ON "DRAWING LIST" SHEET.

G.12. NAME PLATE SHALL BE CONSIDERED INCIDENTAL TO THE ITEM "HPC MASONRY STRUCTURES". FABRICATE ACCORDING TO S.D.D. "NAME PLATE (STRUCTURE)".

EXCAVATION AND BACKFILL

EB.1. THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES, BRIDGES B-40-853" SHALL BE AS FOLLOWS:
NORTH AND EAST ABUTMENTS: EXISTING GROUNDLINE
PIERS: AS DEFINED ON THE EXCAVATION PLAN SHEETS

EB.2. THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

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 BETWEEN BOX GIRDERS.

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 "TYPICAL SECTIONS & DESIGN DATA" SHEET 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, DIAPHRAGMS, AND INTERNAL CROSS HEAD; SPLICE PLATES; INTEGRAL CROSS HEAD BEARING STIFFENERS AND JACKING STIFFENERS; 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, ALL INTERNAL AND EXTERNAL DIAPHRAGM PLATES, AND THE FOLLOWING PLATES AT THE INTEGRAL CROSS HEAD: TOP FLANGE, DOUBLER, EXTERNAL WEB, INTERNAL WEB, BEARING STIFFENERS, AND JACKING STIFFENERS; SHALL BE CLASSIFIED AS FRACTURE CRITICAL MEMBERS (FCM). ALL WELDS FOR THESE ELEMENTS SHALL BE CONSIDERED FRACTURE CRITICAL WELDS.

SS.5. CHARPY V-NOTCH TOUGHNESS REQUIREMENTS FOR ALL STEEL SHALL CONFORM TO THE REQUIREMENTS FOR ZONE 2.

SS.6. FIELD WELDING ON HIGH PERFORMANCE STEEL (HPS) PLATES IN TENSION IS NOT PERMITTED, EXCEPT FOR FIELD WELDED SHEAR CONNECTORS. THE CONTRACTOR WILL NEED TO ESTABLISH A METHOD OF ATTACHING 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 5" 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 5" 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.

C.7. APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK SLAB, TOP OF STRUCTURAL APPROACH SLABS AND TO THE TOP AND INSIDE FACES OF THE PARAPETS, LIGHT AND SIGN STRUCTURE SUPPORTS.

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. 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" INCLUDED IN THIS CONTRACT WITH THE QUANTITIES FOR B-40-854 IS REQUIRED PRIOR TO BEGINNING THE CONSTRUCTION OF THE ITEM "DRILLED FOUNDATION SHAFT 98.43-INCH" FOR B-40-853.

DRIVEN PILES

FD.4. THE FOLLOWING SUBSTRUCTURE UNITS SHALL BE SUPPORTED ON 16" CIP CONCRETE PILING DRIVEN TO THE FOLLOWING REQUIRED DRIVING RESISTANCES AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD:

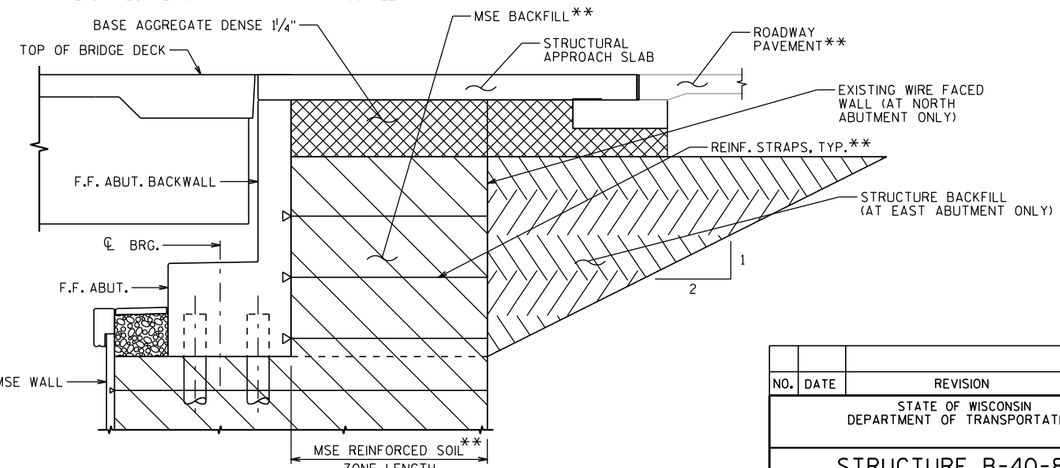
REQUIRED DRIVING RESISTANCE:

NORTH ABUTMENT:	250 TONS
NORTH STRUCTURAL APPROACH SLAB:	250 TONS
PIER NE02:	250 TONS (BID OPTION B ONLY)
EAST ABUTMENT:	220 TONS
EAST STRUCTURAL APPROACH SLAB:	220 TONS

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:

NORTH ABUTMENT:	80 FEET
NORTH STRUCTURAL APPROACH SLAB:	90 FEET
PIER NE02:	55 FEET (BID OPTION B ONLY)
EAST STRUCTURAL APPROACH SLAB:	70 FEET
EAST ABUTMENT:	60 FEET



ABUTMENT BACKFILL LIMITS

DIMENSIONS ARE MEASURED NORMAL TO ABUTMENT

** NOT A BRIDGE ITEM

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)
PIER NE01	98.43	6000	767.50	696.50	71.0
PIER NE02*	98.43	5000	764.50	703.00	61.5
PIER NE03	98.43	3500	753.00	708.00	45.0
PIER NE04	98.43	5000	751.50	701.00	50.5
PIER NE05	98.43	6000	751.00	681.00	70.0

* BID OPTION A ONLY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

GENERAL NOTES

SHEET 4 OF 96

8

8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080104_gn.dgn PLOT DATE : 19-JUL-2015 22:19 PLOT BY : MSCJJO PLOT NAME : 080104_gn PLOT SCALE : 2:1

STATE PROJECT NUMBER
1060-33-81

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	NORTH APPR.	NORTH ABUT.	PIER NE01	PIER NE02	PIER NE03	PIER NE04	PIER NE05	EAST ABUT.	EAST APPR.	SUPER UNIT 1	SUPER UNIT 2	TOTAL
203.0200.0016	REMOVING OLD STRUCTURE STA. 545NE+50	LS												1
210.0100	BACKFILL STRUCTURE	CY								147				147
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	128								125			253
502.0100	CONCRETE MASONRY BRIDGES	CY	11	76						68	14			169
502.3200	PROTECTIVE SURFACE TREATMENT	SY	125								174	3,496	3,496	7,291
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1,850	6,230						6,040	1,740			15,860
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	11,690	1,010						940	16,130	314,460	315,140	659,370
506.0605	STRUCTURAL STEEL HS	LB										1,738,630	1,738,630	3,477,260
506.3015	WELDED STUD SHEAR CONNECTORS 7/8X6-INCH	EACH										1,344	1,344	2,688
506.3030	WELDED STUD SHEAR CONNECTORS 7/8X9-INCH	EACH										7,590	7,590	15,180
514.2608	DOWNSPOUT 8-INCH	LF				40	50	50						140
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY		10						10				20
517.0650.S.0002	PAINTING POLYSILOXANE SYSTEM STRUCTURE B-40-853	LS												1
517.1010.S.0010	CONCRETE STAINING B-40-853	SF	360	300	750	1,140	1,150	1,230	670	300	520	12,390	12,410	31,220
550.2168	PILING CIP CONCRETE 16 X 0.50-INCH	LF	90	1,280						840	70			2,280
604.0400	SLOPE PAVING CONCRETE	SY		11						11				22
606.0200	RIPRAP MEDIUM	CY					1							1
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF				27		20						47
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	23								31	9	9	72
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF										595	595	1,190
653.0220	JUNCTION BOXES 18X6X6-INCH	EACH										1	1	2
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH										3	4	7
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH										3	4	7
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	52								102	1,232	1,235	2,621
SPV.0060.4100	ANCHOR ASSEMBLIES SIGN BRIDGE STRUCTURES	EACH										1	1	2
SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH		2						2				4
SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH		2						2				4
SPV.0060.4116	CASE PILE WAVE ANALYSIS PROGRAM (CAP/WAP) EVALUATION	EACH		1						1				2
SPV.0060.4120	BEARINGS HIGH-LOAD MULTI-ROTATIONAL FIXED	EACH				2		2						4
SPV.0060.4125	BEARINGS HIGH-LOAD MULTI-ROTATIONAL GUIDED	EACH		2	2		4		2	2				12
SPV.0060.4130	FLOOR DRAIN SPECIAL	EACH										2	1	3
SPV.0105.4540	EXPANSION DEVICE MODULAR LRFD B-40-853	LS												1
SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	862								1,202	24,177	24,177	50,418
	NON-BID ITEM													
	NON-BID ITEM	EACH												1
	NAME PLATE	LS												1
	BRIDGE SEAT PROTECTION	SIZE												3/4", 1 1/2", 2

ALL ITEMS ARE CATEGORY 2090

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 545NE+50.00: B-40-754

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

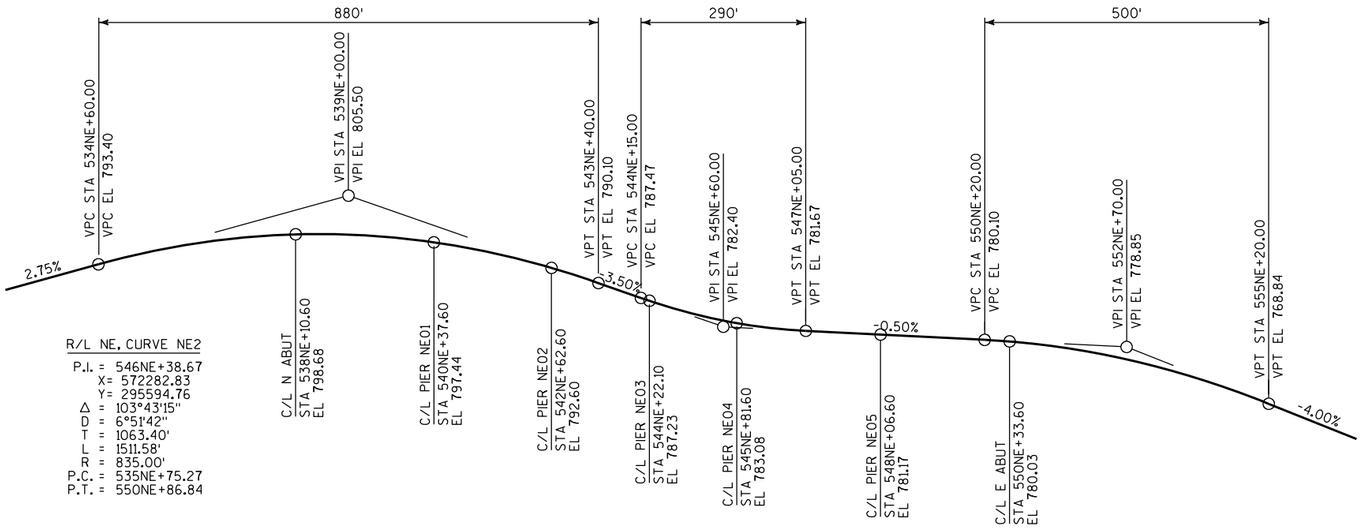
DRAWN BY JJO | PLANS CK'D. JWC

QUANTITIES

SHEET 5 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080105_qu.dgn
PLOT DATE : 19-JUL-2015 22:19
PLOT BY : MSCJJO
PLOT NAME : 080105_qu
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-81



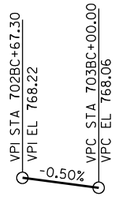
R/L NE, CURVE NE2

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

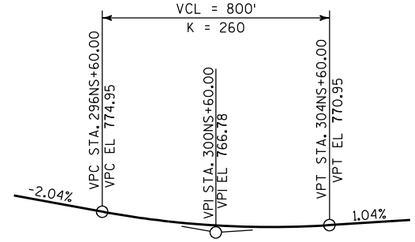
PROFILE GRADE LINE RAMP NE

R/L BC, CURVE BC1

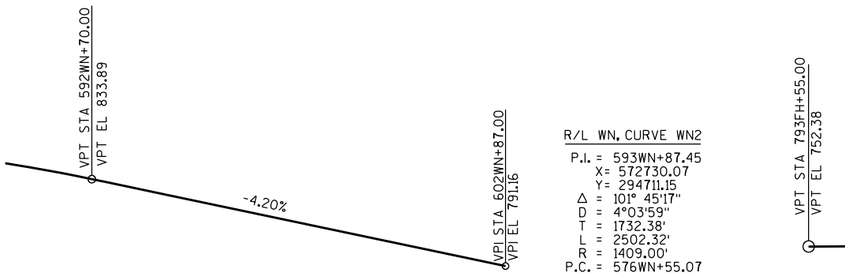
P.I. = 704BC+14.99
X= 572542.43
Y= 296533.71
Δ = 20°01'16"
D = 6°51'42"
T = 147.39'
L = 291.78'
R = 835.00'
P.C. = 702BC+67.60
P.T. = 705BC+59.38



PROFILE GRADE LINE BC



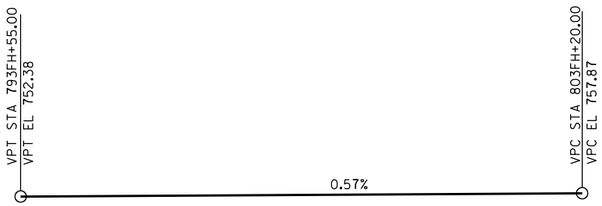
PROFILE GRADE LINE NS



R/L WN, CURVE WN2

P.I. = 593WN+87.45
X= 572730.07
Y= 294711.15
Δ = 101° 45'17"
D = 4°03'59"
T = 1732.38'
L = 2502.32'
R = 1409.00'
P.C. = 576WN+55.07
P.T. = 601WN+57.39

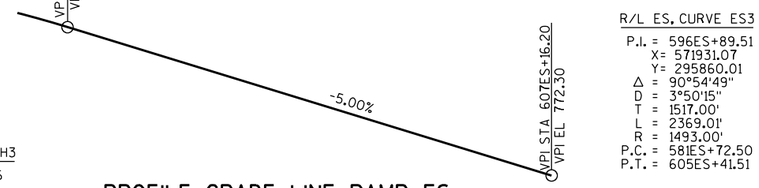
PROFILE GRADE LINE RAMP WN



RAMP FH, CURVE FH3

P.I. = 798FH+46.06
X= 573154.26
Y= 295980.31
Δ = 41°00'29"
D = 5°12'31"
T = 411.36'
L = 787.30'
R = 1100.00'
P.C. = 794FH+34.69
P.T. = 802FH+21.99

PROFILE GRADE LINE RAMP FH



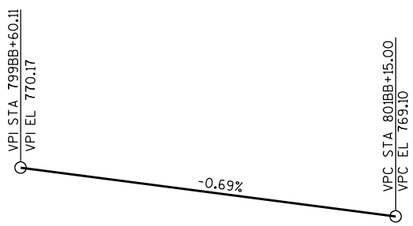
R/L ES, CURVE ES3

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

PROFILE GRADE LINE RAMP ES

R/L BB, CURVE BB1

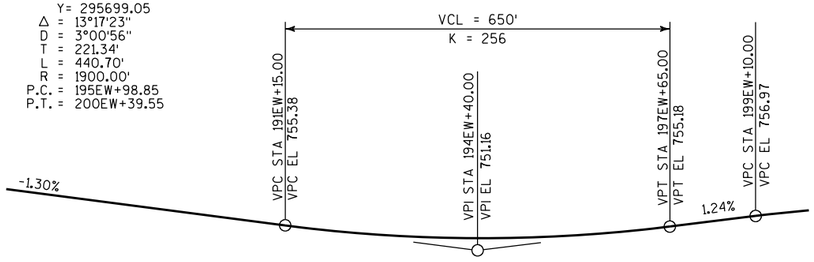
P.I. = 801BB+14.64
X= 572607.14
Y= 296205.29
Δ = 13°40'15"
D = 2°01'54"
T = 338.03'
L = 672.86'
R = 2820.00'
P.C. = 797BB+76.61
P.T. = 804BB+49.47



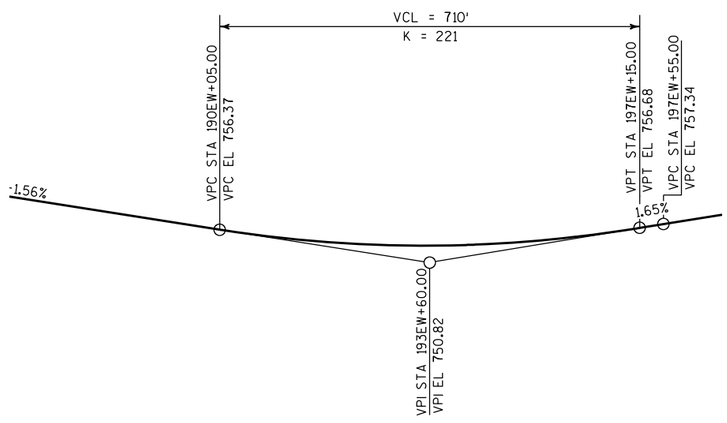
PROFILE GRADE LINE BB

R/L EW, CURVE EW3

P.I. = 198EW+20.19
X= 573232.40
Y= 295699.05
Δ = 13°17'23"
D = 3°00'56"
T = 221.34'
L = 440.70'
R = 1900.00'
P.C. = 195EW+98.85
P.T. = 200EW+39.55



PROFILE GRADE LINE EW EB



PROFILE GRADE LINE EW WB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

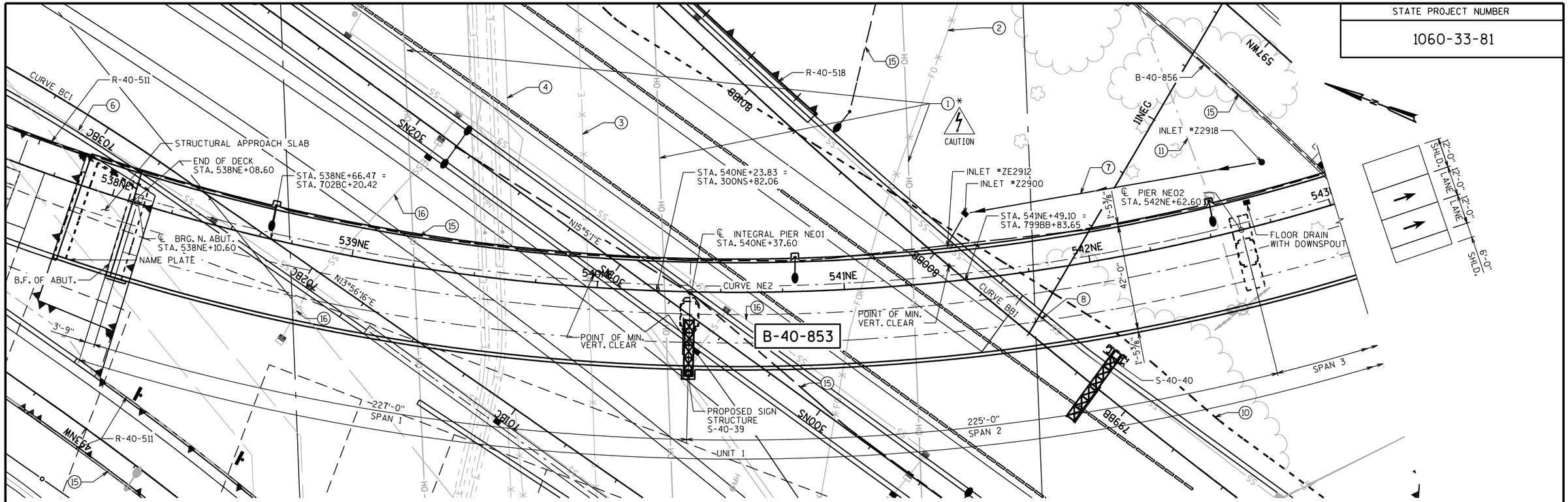
STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

ROADWAY GEOMETRY

SHEET 6 OF 96

STATE PROJECT NUMBER
1060-33-81

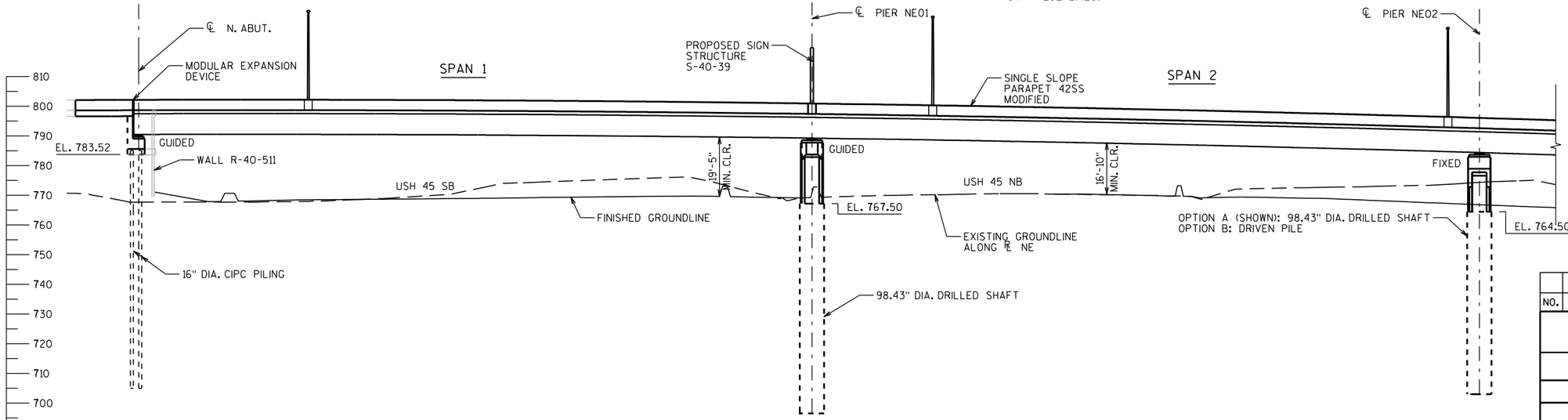


PLAN

* CONSTRUCTION OF THE DRILLED SHAFT FOR B-40-853 PIER NE01 MAY NEED TO BE ACCOMPLISHED BENEATH AND/OR ADJACENT TO ENERGIZED OVERHEAD 138kV ELECTRIC TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). THE HORIZONTAL AND VERTICAL LOCATION OF THESE LINES CAN VARY WITH WIND, AMBIENT TEMPERATURE AND POWER LOADING. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCE FROM THESE LINES.

UTILITY NOTES

1. EXISTING ATC OVERHEAD ELECTRIC LINES TO REMAIN
2. ABANDONED AT&T CORP FIBER OPTIC LINE
3. ABANDONED ATC ELECTRICAL LINE
4. EXISTING WE ENERGIES ELECTRICAL TUNNEL TO REMAIN
6. EXISTING WISDOT 42" STORM SEWER TO REMAIN
7. PROPOSED WISDOT 24" STORM SEWER
8. EXISTING WISDOT 48" STORM SEWER TO REMAIN
10. PROPOSED WISDOT FTMS
11. EXISTING WISDOT LIGHTING TO BE RELOCATED
15. PROPOSED WISDOT LIGHTING
16. EXISTING WISDOT 24" STORM SEWER TO REMAIN



ELEVATION

ALONG ℄ NE
(LOOKING NORTHEAST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

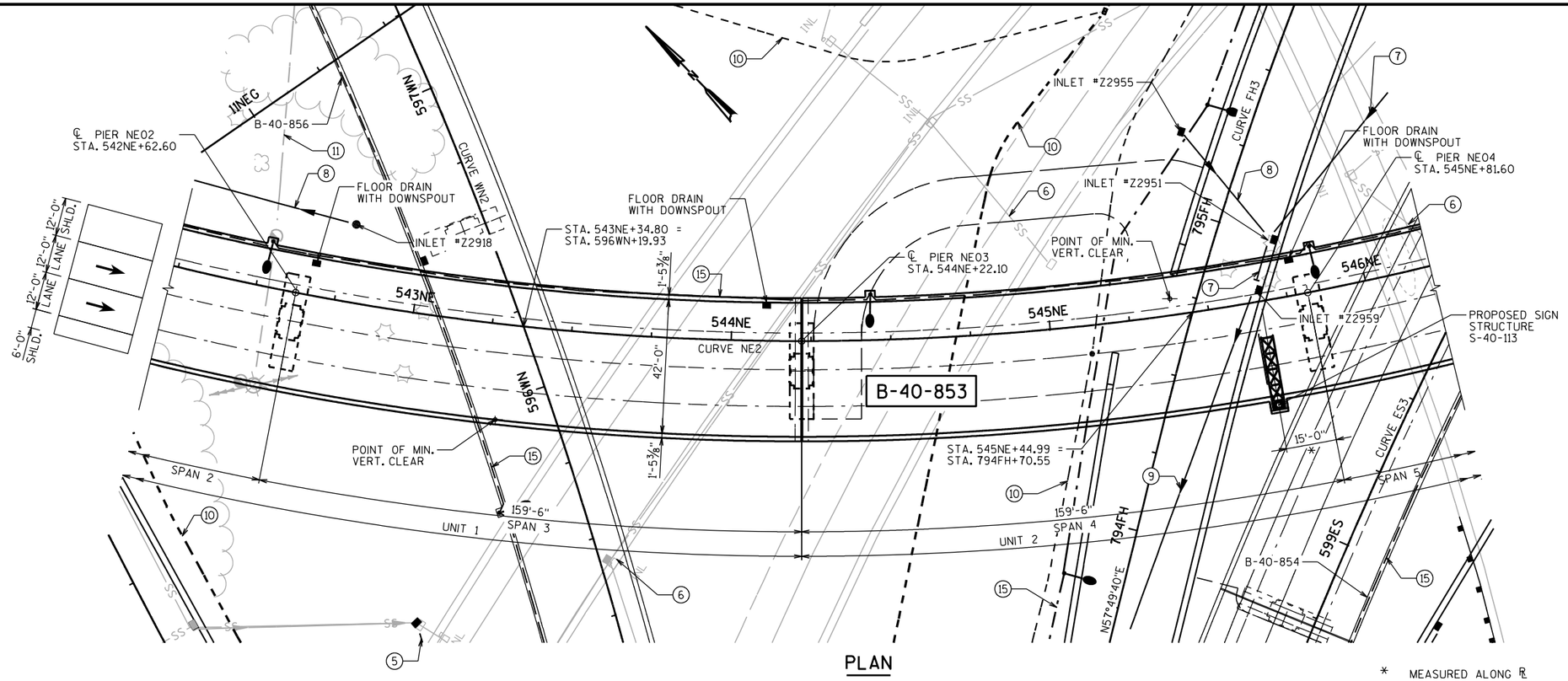
STRUCTURE B-40-853

DRAWN BY JJO | PLANS CK'D. JWC

PLAN & ELEVATION SPANS 1 & 2

SHEET 7 OF 96

STATE PROJECT NUMBER
1060-33-81

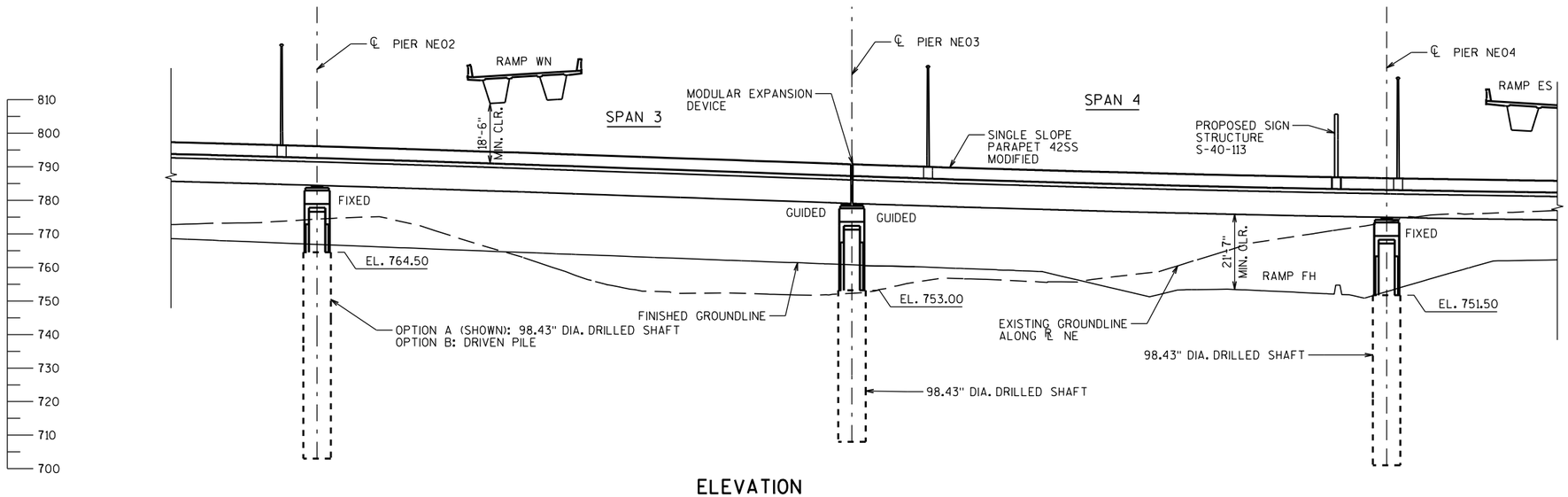


PLAN

* MEASURED ALONG ℄

UTILITY NOTES

(5) PROPOSED WISDOT 48" STORM SEWER
(6) EXISTING WISDOT STORM SEWER TO BE REMOVED
(7) PROPOSED WISDOT 24" STORM SEWER
(8) PROPOSED WISDOT 18" STORM SEWER
(9) PROPOSED WISDOT 30" STORM SEWER
(10) PROPOSED WISDOT FTMS
(11) EXISTING WISDOT LIGHTING TO BE RELOCATED
(15) PROPOSED WISDOT LIGHTING



ELEVATION
ALONG ℄ NE
(LOOKING NORTHEAST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY	JJO	PLANS CK'D.	JWC

PLAN & ELEVATION SPANS 3 & 4

SHEET 8 OF 96

8

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FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080108_pe.dgn PLOT DATE : 19-JUL-2015 22:20 PLOT BY : MSCJJO PLOT NAME : 080108_pe PLOT SCALE : 40:1

STATE PROJECT NUMBER

1060-33-81

EXISTING STRUCTURE B-40-754 TO BE REMOVED

Z2955

Z2951

CURVE FH5

795FH

STA. 545NE+44.99 = STA. 794FH+70.55

FLOOR DRAIN WITH DOWNSPOUT

℄ PIER NE04 STA. 545NE+81.60

S-40-152

B-40-854

60IES

198EW

CAUTION

℄ E. ABUT. STA. 550NE+33.60

R-40-545

551NE

550NE

546NE

547NE

548NE

549NE

INLET #Z2959

INLET #Z2998

INLET #Z2996

CURVE EW3

CURVE NE2

600ES

197EW

POINT OF MIN. VERT. CLEAR

INLET #Z3000

INLET #Z3002

B-40-853

STA. 548NE+22.23 = STA. 196EW+66.93

℄ INTEGRAL PIER NE05 STA. 548NE+06.60

STA. 546NE+38.98 = STA. 600ES+01.71

1'-5⅜"

42'-0"

PROPOSED SIGN STRUCTURE S-40-113

12'-0" SHLD.

12'-0"

12'-0"

12'-0" SHLD.

6'-0" SHLD.

SPAN 4

599ES

CURVE ES3

225'-0" SPAN 5

227'-0" SPAN 6

UNIT 2

196EW

N75°57'34"E

195SEW

INLET #Z3032

INLET #Z3030

599SE

STRUCTURAL APPROACH SLAB

3'-9"

598SE

799FC

PLAN

* CONSTRUCTION OF THE DRILLED SHAFT FOR B-40-853 PIER NE05 AND PILE DRIVING FOR THE EAST ABUTMENT MAY NEED TO BE ACCOMPLISHED BENEATH AND/OR ADJACENT TO ENERGIZED OVERHEAD 138kV ELECTRIC TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). THE HORIZONTAL AND VERTICAL LOCATION OF THESE LINES CAN VARY WITH WIND, AMBIENT TEMPERATURE AND POWER LOADING. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCE FROM THESE LINES.

UTILITY NOTES

(1) EXISTING ATC OVERHEAD ELECTRIC LINES TO REMAIN

(6) EXISTING WISDOT STORM SEWER TO BE REMOVED

(7) PROPOSED WISDOT 24" STORM SEWER

(10) PROPOSED WISDOT FTMS

(12) EXISTING WISDOT LIGHTING TO BE RELOCATED

(15) PROPOSED WISDOT LIGHTING

(17) EXISTING AT&T CORP FIBER OPTIC TO REMAIN

(18) EXISTING WISDOT TEMPORARY LIGHTING TO BE REMOVED

(19) EXISTING WISDOT REMOTE FTMS DEVICE TO BE REMOVED

℄ PIER NE04

RAMP ES

SPAN 5

℄ PIER NE05

SPAN 6

℄ E. ABUT.

SINGLE SLOPE PARAPET 42SS MODIFIED

EXISTING GROUNDLINE ALONG ℞ NE

MODULAR EXPANSION DEVICE

16'-9" MIN. CLR.

FIXED

GUIDED

16'-9" MIN. CLR.

16'-10" MIN. CLR.

GUIDED

EL. 764.88

WALL R-40-545

IH 94 WB

IH 94 EB

EL. 751.50

EL. 751.00

FINISHED GROUNDLINE

16" DIA. CIPC PILING

98.43" DIA. DRILLED SHAFT, TYP.

810 800 790 780 770 760 750 740 730 720 710 700 690 680

ELEVATION

ALONG ℞ NE

(LOOKING NORTHEAST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY JJO | PLANS CK'D. JWC

PLAN & ELEVATION SPANS 5 & 6

SHEET 9 OF 96

8

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FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080109_pe.dgn PLOT DATE : 19-JUL-2015 22:20 PLOT BY : MSCJJO PLOT NAME : 080109_pe PLOT SCALE : 40:1

NOTE:

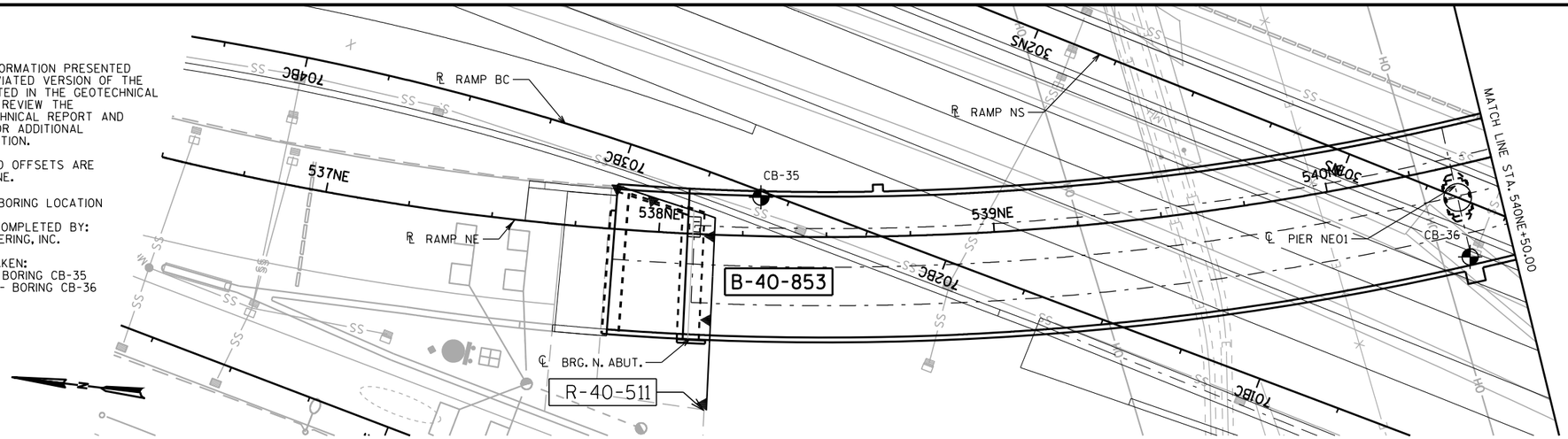
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ RAMP NE.

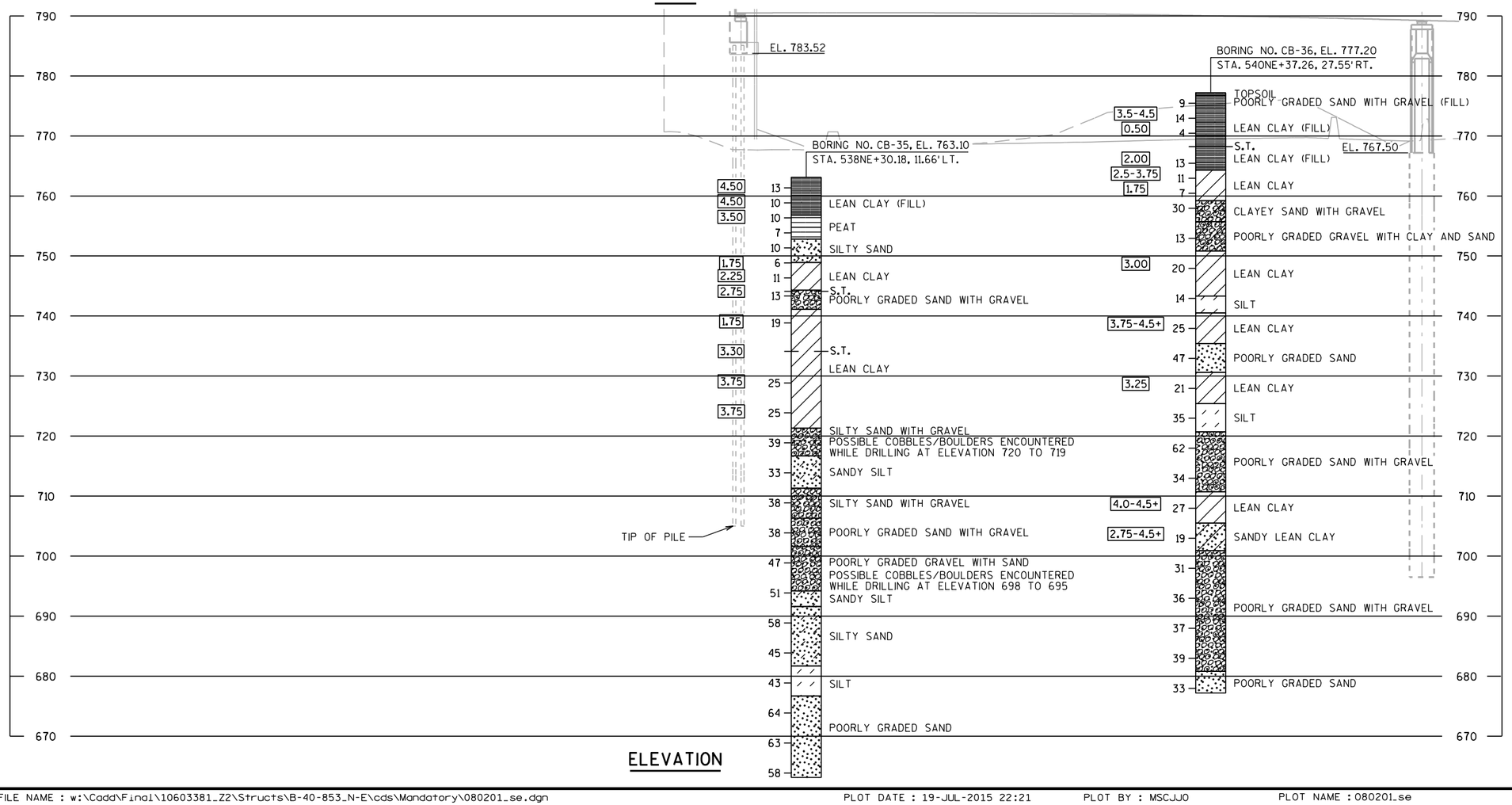
⌖ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
MAY 21, 2012 - BORING CB-35
SEPT. 20, 2012 - BORING CB-36



PLAN



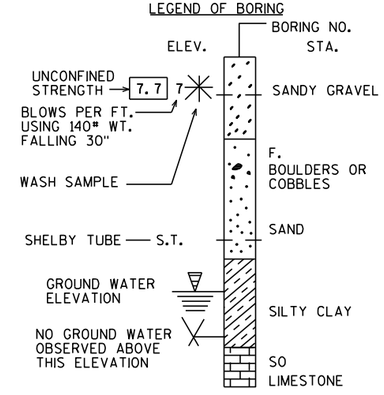
ELEVATION

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

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.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY KTM | PLANS CK'D. HDA

SUBSURFACE EXPLORATION (1 OF 4)

SHEET 10 OF 96

8

8

NOTE:

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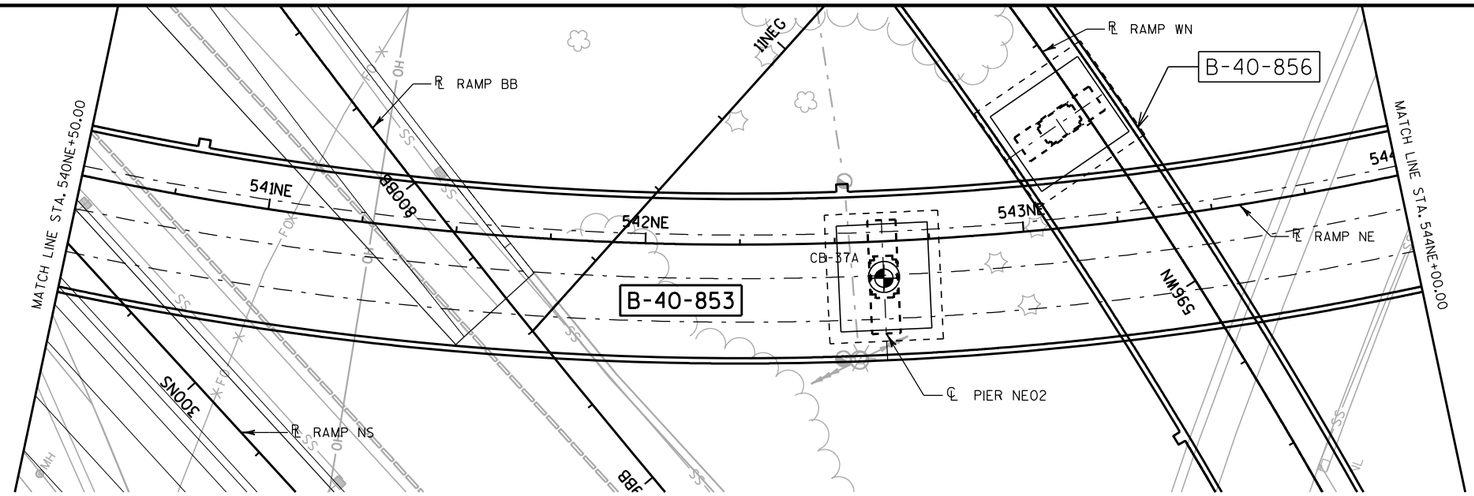
BORING STATIONS AND OFFSETS ARE BASED ON ℄ RAMP NE.

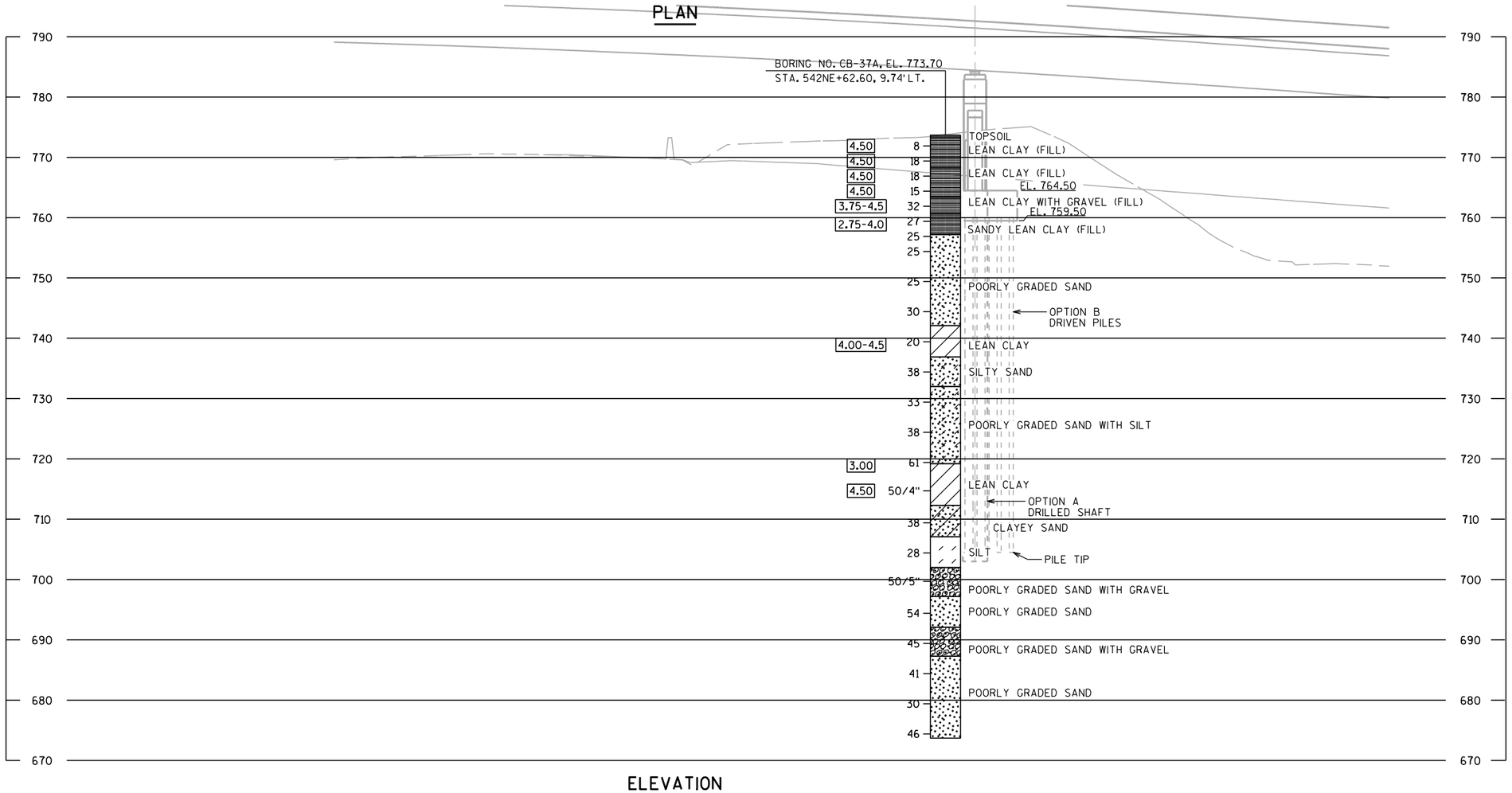
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
NOV. 5, 2012 - BORING CB-37A



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-81

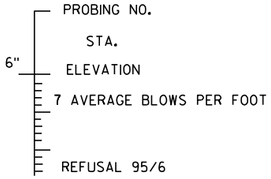
ABBREVIATIONS

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

MATERIAL SYMBOLS

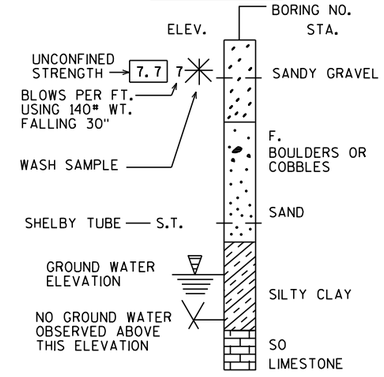
TOPSOIL / FILL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING



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SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY KTM | PLANS CK'D. HDA

SUBSURFACE EXPLORATION (2 OF 4)

SHEET 11 OF 96

8

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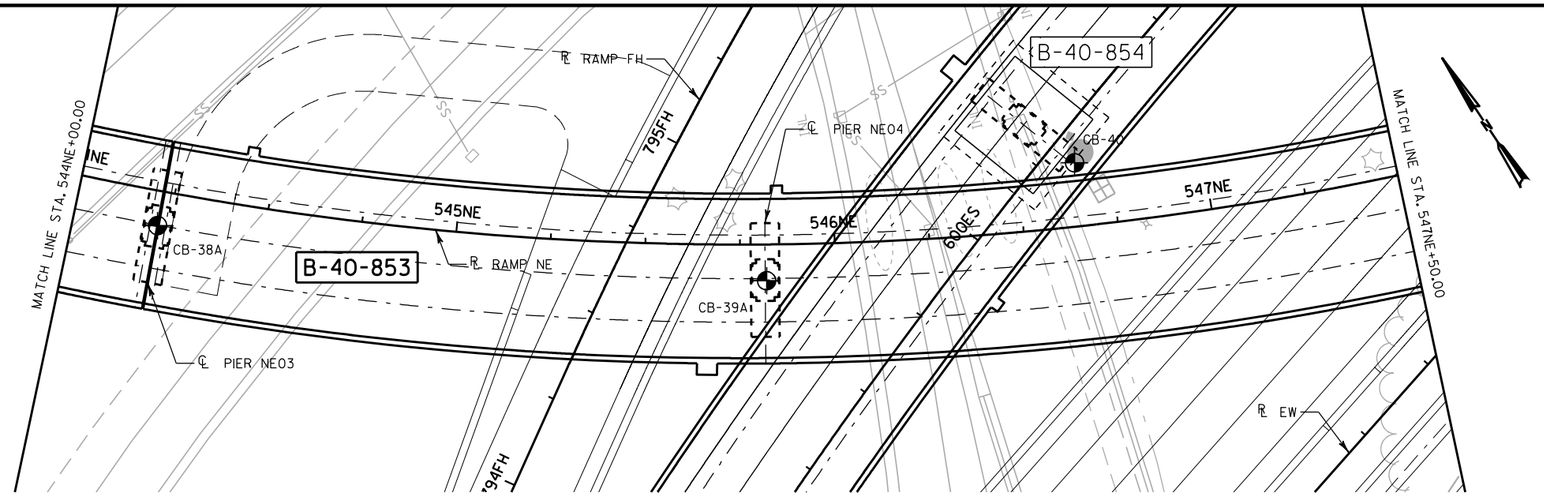
BORING STATIONS AND OFFSETS ARE BASED ON ℄ RAMP NE.

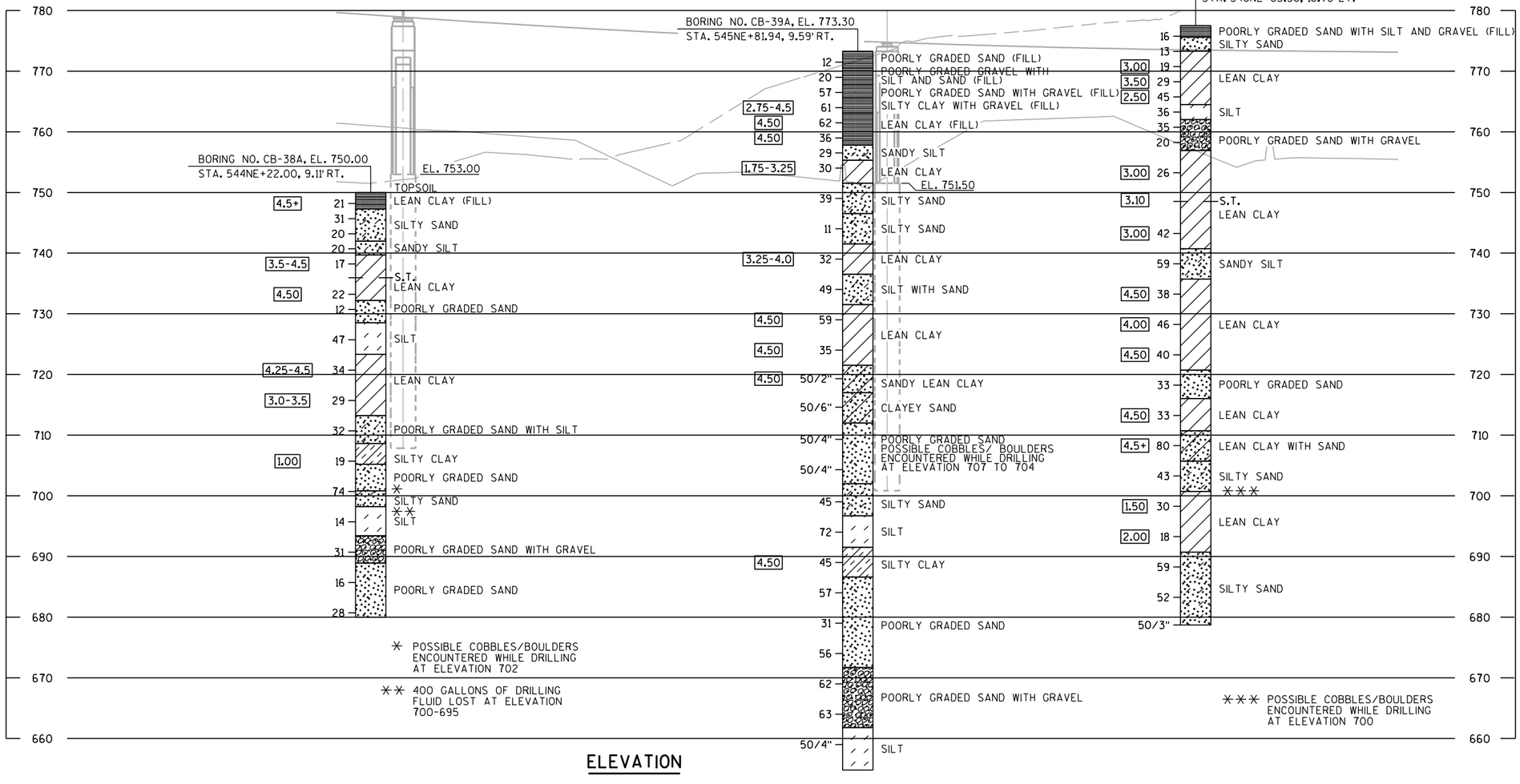
⌖ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
NOV. 9, 2012 - BORING CB-38A
OCT. 30, 2012 - BORING CB-39A
APR. 17, 2012 - BORING CB-40



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-81

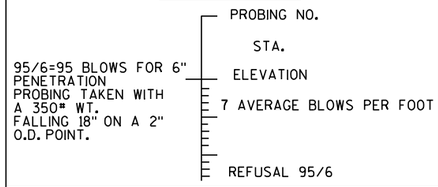
ABBREVIATIONS

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

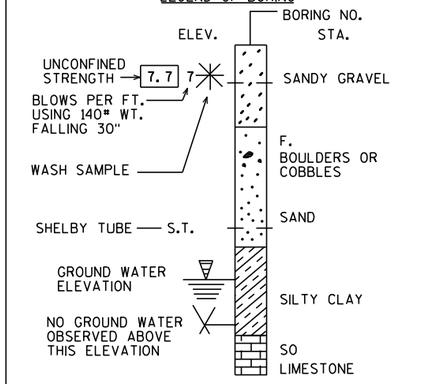
MATERIAL SYMBOLS

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

LEGEND OF PROBING



LEGEND OF BORING



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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY KTM | PLANS CK'D. HDA

SUBSURFACE EXPLORATION (3 OF 4)

SHEET 12 OF 96

8

8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080203_se.dgn PLOT DATE : 19-JUL-2015 22:21 PLOT BY : MSCJJO PLOT NAME : 080203_se PLOT SCALE : 40:1

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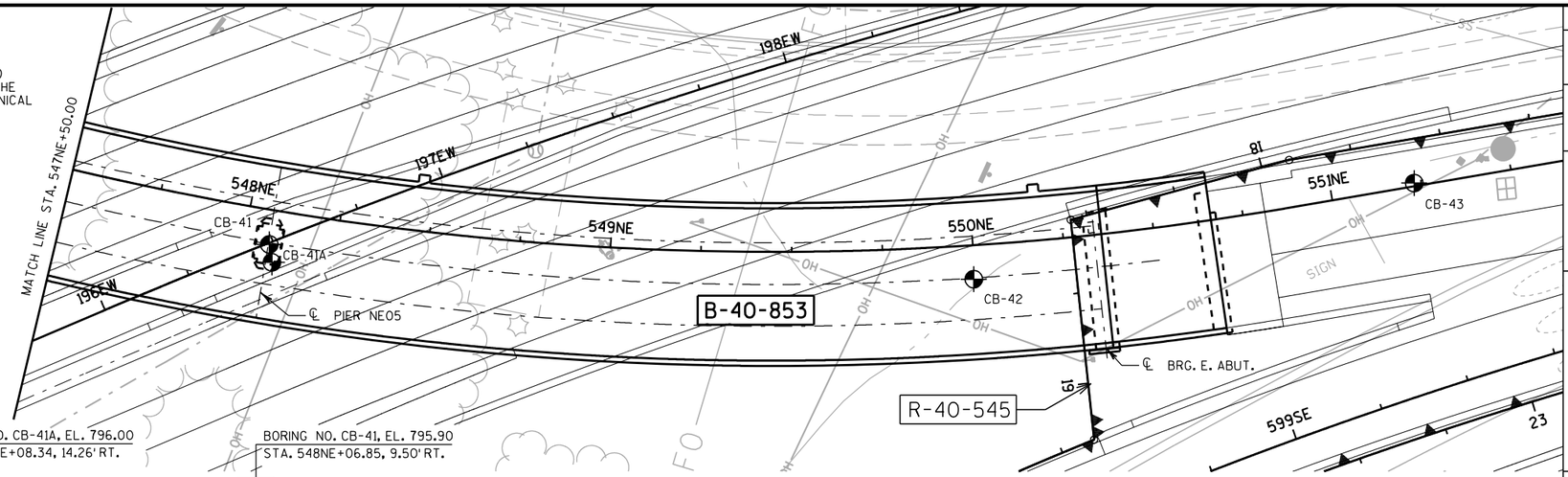
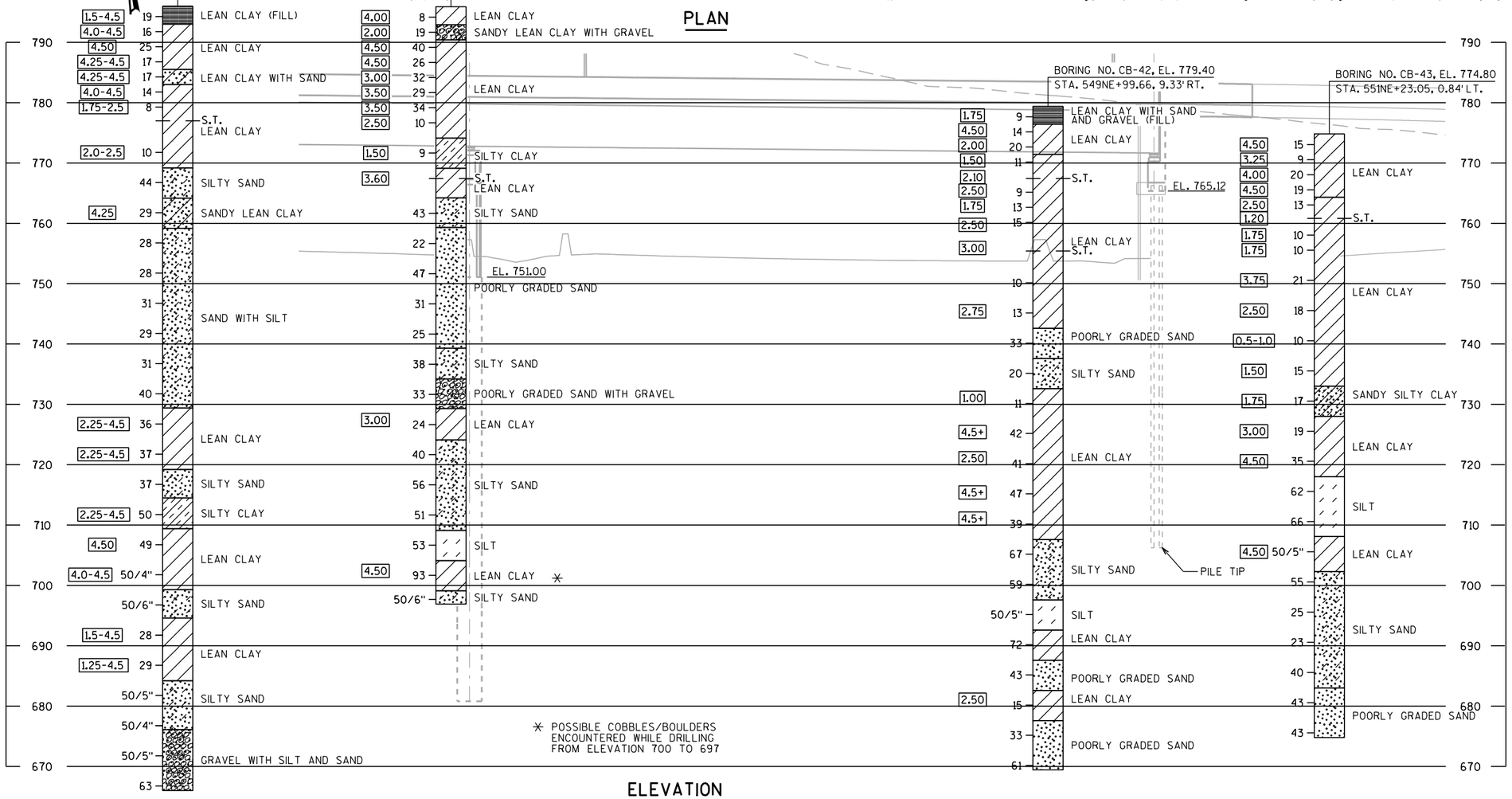
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
APR. 16, 2012 - BORING CB-41
MAR. 12, 2013 - BORING CB-41A
APR. 19, 2012 - BORING CB-42
APR. 24, 2012 - BORING CB-43



PLAN



✳ POSSIBLE COBBLES/BOULDERS ENCOUNTERED WHILE DRILLING FROM ELEVATION 700 TO 697

ELEVATION

STATE PROJECT NUMBER

1060-33-81

ABBREVIATIONS

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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

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY KTM | PLANS CK'D. HDA

SUBSURFACE EXPLORATION (4 OF 4)

SHEET 13 OF 96

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 SHEET 1 OF 5 FOR THE FOLLOWING STAGES:

1. BEGIN GRADING TO DRILLING PLATFORM (PIERS NE01, NE03, AND NE02 OPTION A) AND WORKING PLATFORM (PIER NE02 OPTION B) AND PILE DRIVING PLATFORM (NORTH ABUTMENT) 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.

2. BEGIN CONSTRUCTION OF DRILLED SHAFTS AT PIERS NE01 AND NE03. AT PIER NE02 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. COORDINATE CONSTRUCTION OF PIER NE02 WITH PIER WN12 OF STRUCTURE B-40-856. 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.

3. BEGIN CONSTRUCTION OF NORTH ABUTMENT. DRIVE PILE AND CONSTRUCT PILE CAP. COORDINATE WITH WALL R-40-511.

4. AFTER INSTALLATION OF THE DRILLED SHAFTS OR PILE FOUNDATION, BEGIN CONSTRUCTION OF THE PIER COLUMN AND CAP AT PIERS NE01, NE02 & NE03. UPON COMPLETION OF THE PIER COLUMNS, BACKFILL THE EXCAVATION AS INDICATED ON THE EXCAVATION PLAN SHEETS.

REFER TO STAGING SHEET 2 OF 5 FOR THE FOLLOWING STAGES:

5. START CLOSURE OF EXISTING RAMP WN AND EXISTING RAMP NE.

6. INSTALL TEMPORARY SHORING AT PIER NE04. BEGIN GRADING TO DRILLING PLATFORM (PIERS NE04 AND, NE05) AND PILE DRIVING PLATFORM (EAST ABUTMENT) FOR SUBSTRUCTURE CONSTRUCTION. SEE ROADWAY GRADING SHEETS FOR FINAL GRADING LIMITS. SEE EXCAVATION PLAN SHEETS FOR DETAILS OF LOCAL EXCAVATION AT EACH PIER.

7. BEGIN CONSTRUCTION OF DRILLED SHAFTS AT PIERS NE04 AND NE05. ASSUMED DRILLING 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.

8. BEGIN CONSTRUCTION OF EAST ABUTMENT. DRIVE PILE AND CONSTRUCT PILE CAP. COORDINATE WITH WALL R-40-545.

9. AFTER INSTALLATION OF THE DRILLED SHAFTS OR PILE FOUNDATION, BEGIN CONSTRUCTION OF THE PIER COLUMN AND CAP AT PIERS NE04 & NE05. UPON COMPLETION OF THE PIER COLUMNS, BACKFILL THE EXCAVATION AS INDICATED ON THE EXCAVATION PLAN SHEETS.

REFER TO STAGING SHEET 3 OF 5 FOR THE FOLLOWING STAGES:

10. TRANSPORT FIELD SECTIONS 1, 2 & 3 AND MAKE READY FOR ERECTION.

11. INSTALL TEMPORARY SHORING TOWER T1 UNDER THE LEFT AND RIGHT GIRDERS OF THE INTEGRAL CROSS HEAD AT PIER NE01. PROTECT THE EXISTING DRAINAGE STRUCTURE ON THE SOUTH SIDE OF PIER NE01. DO NOT CONSTRUCT THE TEMPORARY SHORING TOWER IN A WAY THAT WOULD APPLY LOAD TO THE EXISTING DRAINAGE STRUCTURE.

12. INSTALL BEARINGS AT PIER NE01. USING TWO CRANES LOCATED AT POSITIONS L1 AND L2, ERECT ASSEMBLY FOR FIELD SECTION 3 (INTEGRAL CROSS HEAD). TEMPORARY BRACING MAY BE REQUIRED TO MAINTAIN SHAPE AND PREVENT TWIST DURING ERECTION OF INTEGRAL CROSS HEAD.

13. INSTALL TEMPORARY SHORING TOWER T2 UNDER LEFT AND RIGHT GIRDERS.

14. USING TWO CRANES LOCATED AT POSITIONS L3 AND L4, ERECT THE ASSEMBLY FOR THE FIELD SECTION 2 RIGHT GIRDER AND THEN THE LEFT GIRDER. AFTER ERECTING EACH ASSEMBLY INSTALL BOLTS AT FIELD SPLICE #2 AND INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. INSTALL FIELD SECTION 2 EXTERNAL DIAPHRAGMS. TEMPORARILY BRACE GIRDER FOR STABILITY.

ASSUMED CONSTRUCTION SEQUENCE, CONT.

15. INSTALL BEARINGS AT NORTH ABUTMENT. USING TWO CRANES LOCATED AT POSITIONS L5 AND L6, ERECT THE ASSEMBLY FOR THE FIELD SECTION 1 RIGHT GIRDER AND THEN THE LEFT GIRDER. AFTER ERECTING EACH ASSEMBLY INSTALL BOLTS AT FIELD SPLICE #1 AND INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. INSTALL FIELD SECTION 1 EXTERNAL DIAPHRAGMS. TEMPORARILY BRACE GIRDER FOR STABILITY.

16. INSTALL TEMPORARY SHORING TOWER 3 UNDER LEFT AND RIGHT GIRDERS.

17. TRANSPORT FIELD SECTIONS 4 AND 5 AND MAKE READY FOR ERECTION.

18. BEGIN DETOUR OF SB USH 45 TRAFFIC.

19. USING TWO CRANES LOCATED AT POSITIONS L7 AND L8, ERECT THE ASSEMBLY FOR THE FIELD SECTION 4 RIGHT GIRDER AND THEN THE LEFT GIRDER. AFTER ERECTING EACH ASSEMBLY INSTALL BOLTS AT FIELD SPLICE #3 AND INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. INSTALL FIELD SECTION 4 EXTERNAL DIAPHRAGMS. TEMPORARILY BRACE GIRDER FOR STABILITY.

20. USING TWO CRANES LOCATED AT POSITIONS L9 AND L10, ERECT THE ASSEMBLY FOR THE FIELD SECTION 5 RIGHT GIRDER AND THEN THE LEFT GIRDER. AFTER ERECTING EACH ASSEMBLY INSTALL BOLTS AT FIELD SPLICE #4 AND INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. INSTALL FIELD SECTION 5 EXTERNAL DIAPHRAGMS. TEMPORARILY BRACE GIRDER FOR STABILITY.

21. END DETOUR OF SB USH 45 TRAFFIC.

22. TRANSPORT FIELD SECTIONS 6 AND 7 AND MAKE READY FOR ERECTION.

23. INSTALL BEARINGS AT PIER NE02. USING TWO CRANES LOCATED AT POSITIONS L11 AND L12, ERECT THE ASSEMBLY FOR THE FIELD SECTION 6 RIGHT GIRDER AND THEN THE LEFT GIRDER. AFTER ERECTING EACH ASSEMBLY INSTALL BOLTS AT FIELD SPLICE #5 AND INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. INSTALL FIELD SECTION 6 EXTERNAL DIAPHRAGMS. TEMPORARILY BRACE GIRDER FOR STABILITY.

24. BEGIN DETOUR OF WB IH 94.

25. INSTALL BEARINGS AT PIER NE03. USING TWO CRANES LOCATED AT POSITIONS L13 AND L14, ERECT THE ASSEMBLY FOR THE FIELD SECTION 7 RIGHT GIRDER AND THEN THE LEFT GIRDER. AFTER ERECTING EACH ASSEMBLY INSTALL BOLTS AT FIELD SPLICE #6 AND INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. INSTALL FIELD SECTION 7 EXTERNAL DIAPHRAGMS. TEMPORARILY BRACE GIRDER FOR STABILITY.

26. END DETOUR OF WB IH 94.

27. REMOVE SHORING TOWERS T1, T2, AND T3.

REFER TO STAGING SHEET 4 OF 5 FOR THE FOLLOWING STAGES:

28. START CLOSURE OF EXISTING NB USH 45.

29. BEGIN GRADING TO FINAL GROUNDLINES. REMOVE TEMPORARY SHORING AT PIER NE04.

30. TRANSPORT FIELD SECTIONS 12, 13, AND 14 AND MAKE READY FOR ERECTION.

31. INSTALL TEMPORARY SHORING TOWER T4 UNDER THE LEFT AND RIGHT GIRDERS OF THE INTEGRAL CROSS HEAD AT PIER NE05.

32. INSTALL BEARINGS AT PIER NE05. USING TWO CRANES LOCATED AT POSITIONS L15 AND L16, ERECT ASSEMBLY FOR FIELD SECTION 12 (INTEGRAL CROSS HEAD). TEMPORARY BRACING MAY BE REQUIRED TO MAINTAIN SHAPE AND PREVENT TWIST DURING ERECTION OF INTEGRAL CROSS HEAD.

33. INSTALL TEMPORARY SHORING TOWER T5 UNDER LEFT AND RIGHT GIRDERS.

ASSUMED CONSTRUCTION SEQUENCE, CONT.

34. USING TWO CRANES LOCATED AT POSITIONS L17 AND L18, ERECT THE ASSEMBLY FOR THE FIELD SECTION 13 RIGHT GIRDER AND THEN THE LEFT GIRDER. AFTER ERECTING EACH ASSEMBLY INSTALL BOLTS AT FIELD SPLICE #11 AND INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. INSTALL FIELD SECTION 13 EXTERNAL DIAPHRAGMS. TEMPORARILY BRACE GIRDER FOR STABILITY.

35. INSTALL BEARINGS AT EAST ABUTMENT. USING TWO CRANES LOCATED AT POSITIONS L19 AND L20, ERECT THE ASSEMBLY FOR THE FIELD SECTION 14 RIGHT GIRDER AND THEN THE LEFT GIRDER. AFTER ERECTING EACH ASSEMBLY INSTALL BOLTS AT FIELD SPLICE #12 AND INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. INSTALL FIELD SECTION 14 EXTERNAL DIAPHRAGMS. TEMPORARILY BRACE GIRDER FOR STABILITY.

36. INSTALL TEMPORARY SHORING TOWER 6 UNDER LEFT AND RIGHT GIRDERS.

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

38. USING TWO CRANES LOCATED AT POSITIONS L21 AND L22, ERECT THE ASSEMBLY FOR THE FIELD SECTION 11 LEFT GIRDER AND THEN THE RIGHT GIRDER. AFTER ERECTING EACH ASSEMBLY INSTALL BOLTS AT FIELD SPLICE #10 AND INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. INSTALL FIELD SECTION 11 EXTERNAL DIAPHRAGMS. TEMPORARILY BRACE GIRDER FOR STABILITY.

39. USING TWO CRANES LOCATED AT POSITIONS L23 AND L24, ERECT THE ASSEMBLY FOR THE FIELD SECTION 10 LEFT GIRDER AND THEN THE RIGHT GIRDER. AFTER ERECTING EACH ASSEMBLY INSTALL BOLTS AT FIELD SPLICE #9 AND INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. INSTALL FIELD SECTION 10 EXTERNAL DIAPHRAGMS. TEMPORARILY BRACE GIRDER FOR STABILITY.

40. TRANSPORT FIELD SECTIONS 8 AND 9 AND MAKE READY FOR ERECTION.

41. INSTALL BEARINGS AT PIER 04. USING TWO CRANES LOCATED AT POSITIONS L25 AND L26, ERECT THE ASSEMBLY FOR THE FIELD SECTION 9 RIGHT GIRDER AND THEN THE LEFT GIRDER. AFTER ERECTING EACH ASSEMBLY INSTALL BOLTS AT FIELD SPLICE #8 AND INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. INSTALL FIELD SECTION 9 EXTERNAL DIAPHRAGMS. TEMPORARILY BRACE GIRDER FOR STABILITY.

42. BEGIN LANE CLOSURE OF WB IH 94.

43. INSTALL BEARINGS AT PIER NE03. USING TWO CRANES LOCATED AT POSITIONS L27 AND L28, ERECT THE ASSEMBLY FOR THE FIELD SECTION 8 RIGHT GIRDER AND THEN THE LEFT GIRDER. AFTER ERECTING EACH ASSEMBLY INSTALL BOLTS AT FIELD SPLICE #7 AND INSTALL LATERAL BRACING MEMBERS CROSSING THE SPLICE. INSTALL FIELD SECTION 8 EXTERNAL DIAPHRAGMS. TEMPORARILY BRACE GIRDER FOR STABILITY.

44. REMOVE SHORING TOWERS T4, T5, AND T6.

45. END LANE CLOSURE OF WB IH 94.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY ENS | PLANS CK'D. JWC

CONSTRUCTION STAGING NOTES (1 OF 2)

SHEET 14 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080205_cs.dgn PLOT DATE : 19-JUL-2015 22:22 PLOT BY : MSCJJO PLOT NAME : 080205_cs PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-81

ASSUMED CONSTRUCTION SEQUENCE, CONT.

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

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

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

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

49. CONSTRUCT APPROACH SLABS.

50. 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#3	12	25	35	30
L2	FS#3	12	25	35	30
L3	FS#2R	14	40	35	30
L3	FS#2L	14	35	35	30
L4	FS#2R	14	40	35	30
L4	FS#2L	14	35	35	30
L5	FS#1R	15	65	35	30
L5	FS#1L	15	55	35	30
L6	FS#1R	15	65	35	30
L6	FS#1L	15	55	35	30
L7	FS#4R	19	30	35	35
L7	FS#4L	19	30	35	35
L8	FS#4R	19	30	35	35
L8	FS#4L	19	30	35	35
L9	FS#5R	20	35	35	30
L9	FS#5L	20	35	35	30
L10	FS#5R	20	35	35	30
L10	FS#5L	20	35	35	30
L11	FS#6R	23	40	35	35
L11	FS#6L	23	35	35	35
L12	FS#6R	23	40	35	35
L12	FS#6L	23	35	35	35
L13	FS#7R	25	40	35	45
L13	FS#7L	25	35	35	45
L14	FS#7R	25	40	35	45
L14	FS#7L	25	35	35	45
L15	FS#12	32	25	35	30
L16	FS#12	32	25	35	30
L17	FS#13R	34	40	35	30
L17	FS#13L	34	35	35	30
L18	FS#13R	34	40	35	30
L18	FS#13L	34	35	35	30
L19	FS#14R	35	65	35	30
L19	FS#14L	35	55	35	30
L20	FS#14R	35	65	35	30
L20	FS#14L	35	55	35	30
L21	FS#11R	38	30	35	30
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L23	FS#10R	39	35	35	35
L23	FS#10L	39	35	35	35
L24	FS#10R	39	35	35	35
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L25	FS#9R	41	40	35	35
L25	FS#9L	41	35	35	35
L26	FS#9R	41	40	35	35
L26	FS#9L	41	35	35	35
L27	FS#8R	43	40	35	40
L27	FS#8L	43	35	35	40
L28	FS#8R	43	40	35	40
L28	FS#8L	43	35	35	40

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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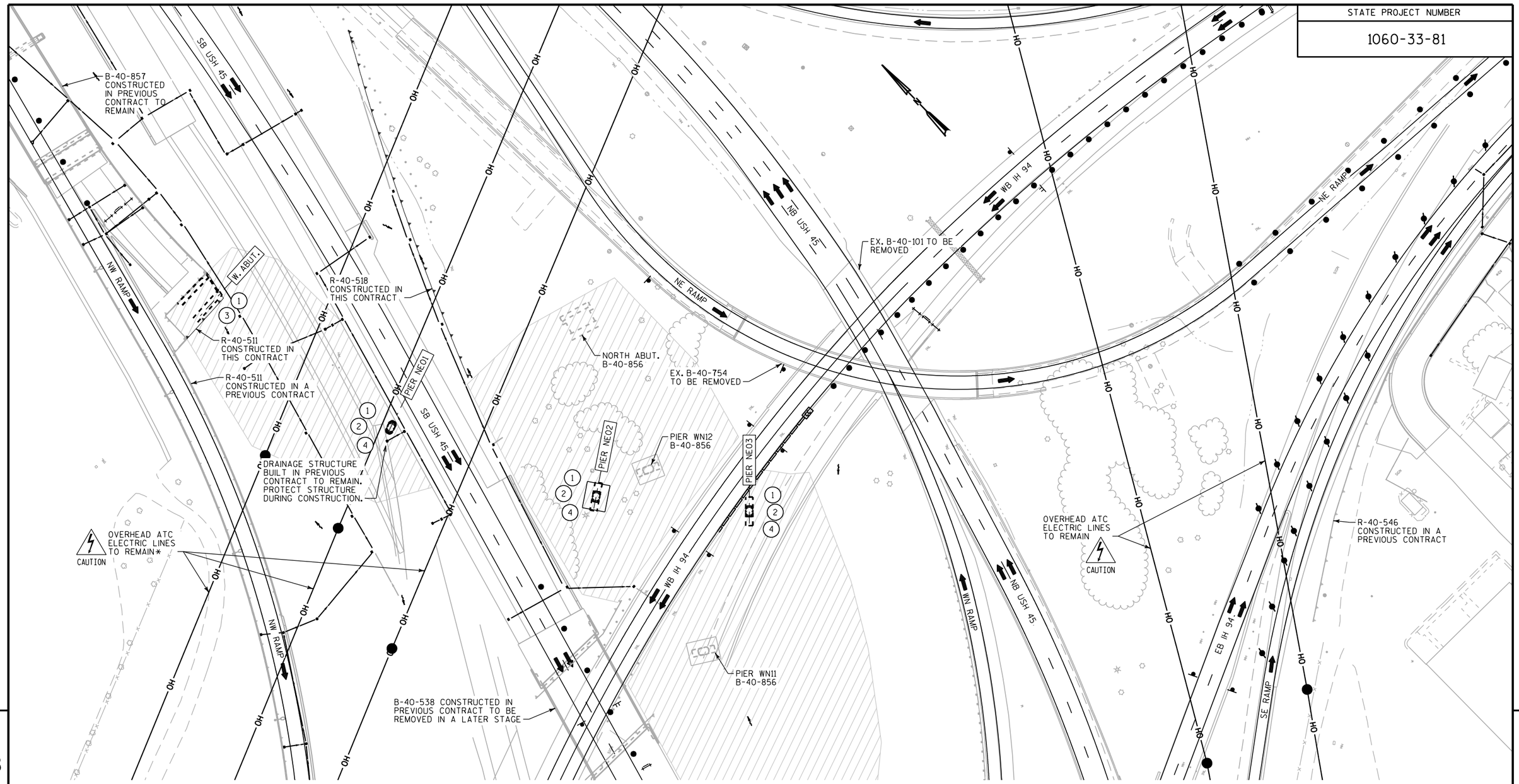
CONSTRUCTION STAGING NOTES (2 OF 2)

SHEET 15 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080206_cs.dgn PLOT DATE : 19-JUL-2015 22:22 PLOT BY : MSCJJO PLOT NAME : 080206_cs PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-81



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8

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.

* BRIDGE CONSTRUCTION NEAR PIER NE01 MAY NEED TO BE ACCOMPLISHED BENEATH AND/OR ADJACENT TO ENERGIZED OVERHEAD 138 KV ELECTRIC TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). THE HORIZONTAL AND VERTICAL LOCATION OF THESE LINES CAN VARY WITH WIND, AMBIENT TEMPERATURE AND POWER LOADING. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

PLAN

CONSTRUCTION STAGE 1 TRAFFIC SHOWN
CONSTRUCTION STAGE 2 TRAFFIC SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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CONSTRUCTION STAGING (1 OF 5)

SHEET 16 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080207_cs.dgn
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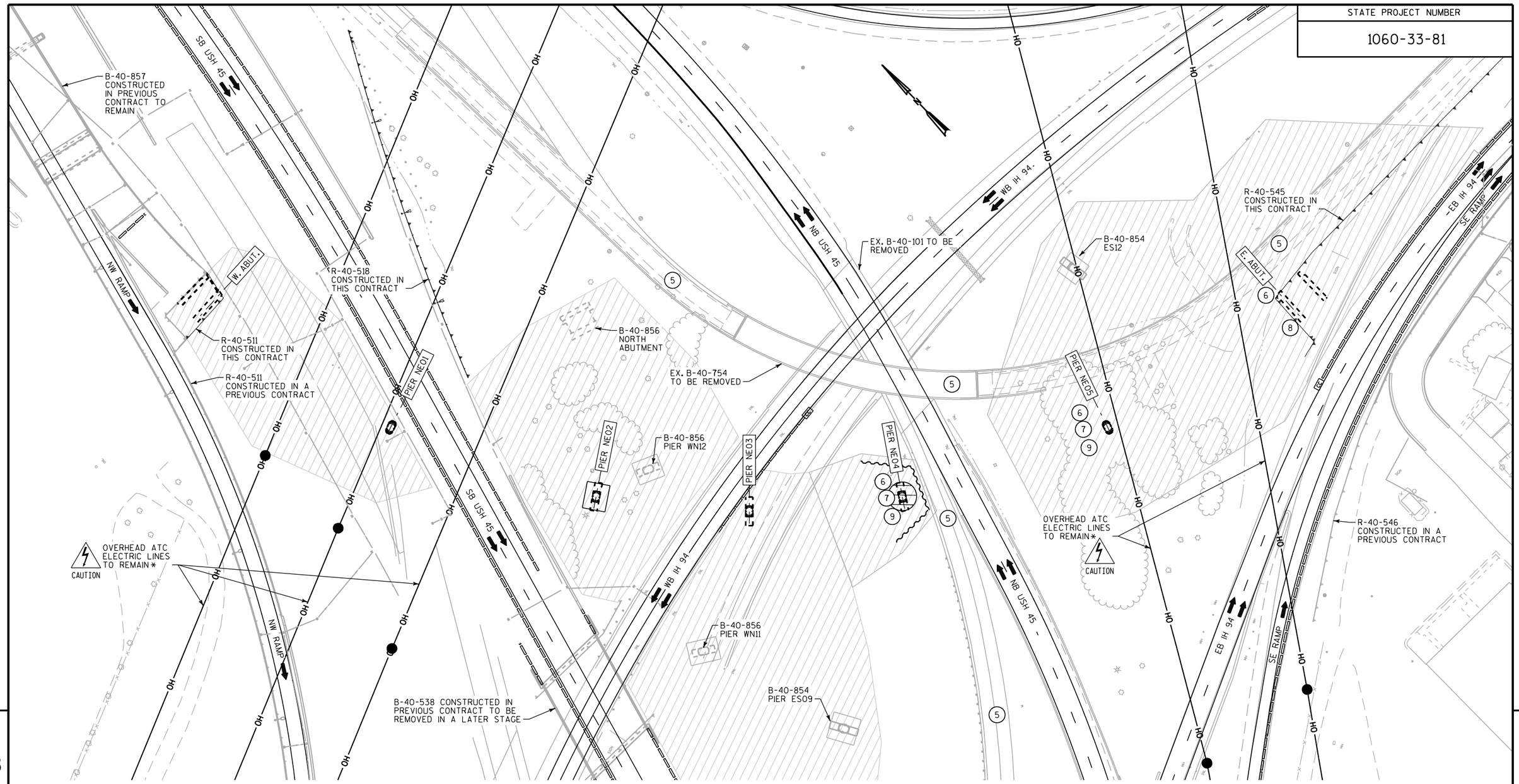
STATE PROJECT NUMBER
1060-33-81



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8

LEGEND

(3) CONSTRUCTION SEQUENCE NUMBER

TEMPORARY SHORING, SEE EXCAVATION PLAN FOR DETAILS

PROPOSED GRADING, PAVEMENT OR STRUCTURE WORK IN CONSTRUCTION STAGE 3B, 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.

* BRIDGE CONSTRUCTION NEAR PIERS NE01 & NE05 MAY NEED TO BE ACCOMPLISHED BENEATH AND/OR ADJACENT TO ENERGIZED OVERHEAD 138 KV ELECTRIC TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). THE HORIZONTAL AND VERTICAL LOCATION OF THESE LINES CAN VARY WITH WIND, AMBIENT TEMPERATURE AND POWER LOADING. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

PLAN

CONSTRUCTION STAGE 3B TRAFFIC SHOWN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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CONSTRUCTION STAGING (2 OF 5)

SHEET 17 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080208_cs.dgn
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PLOT BY : MSCJJO
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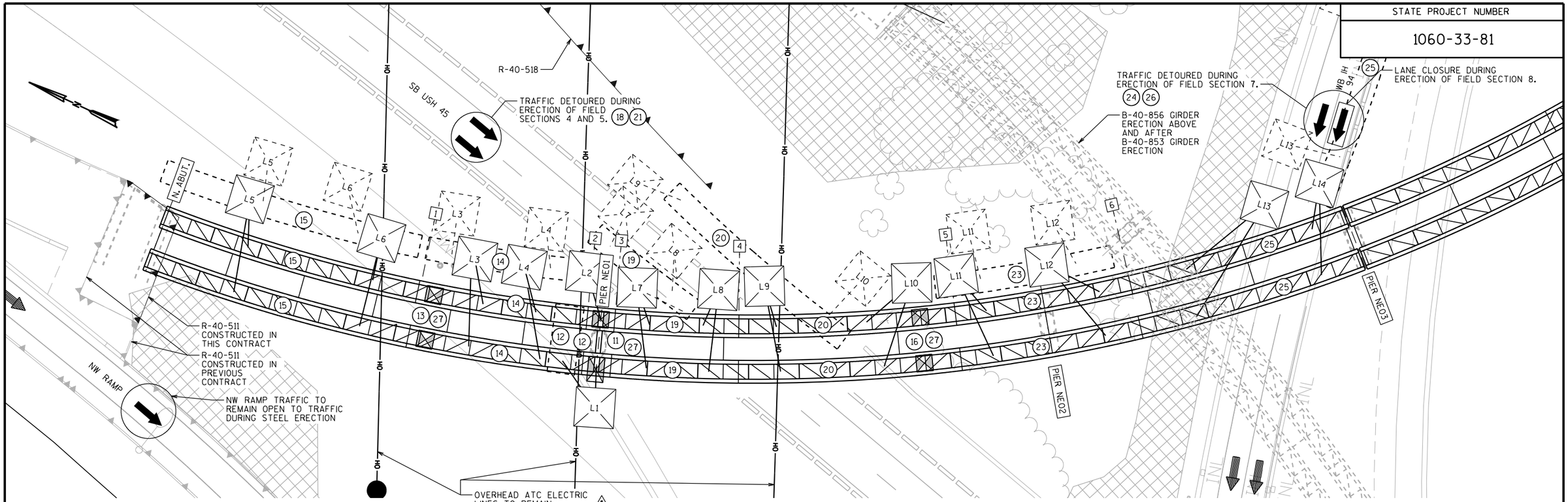
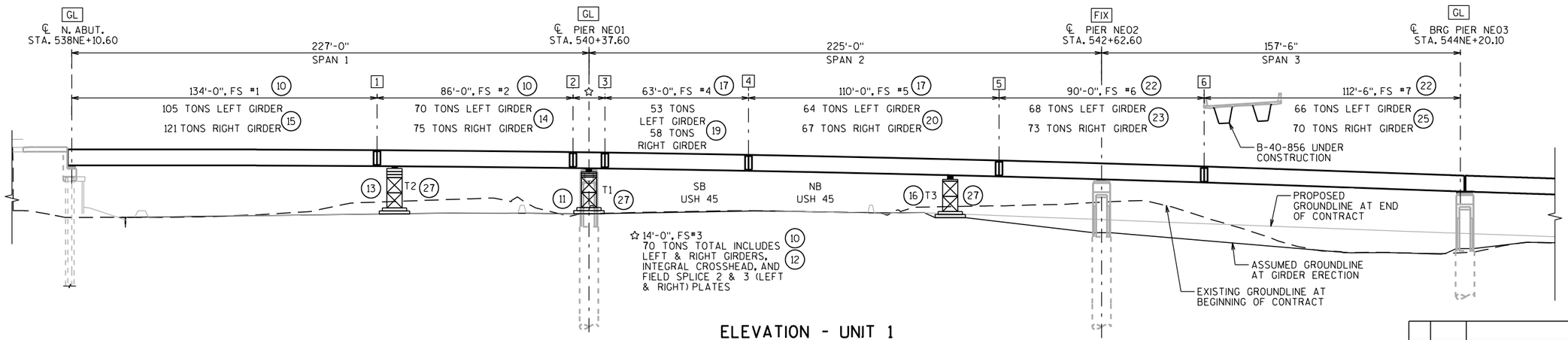
STATE PROJECT NUMBER
1060-33-81



PLAN - UNIT 1

CONSTRUCTION STAGE 2 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.

* GIRDER ERECTION MAY NEED TO BE ACCOMPLISHED BENEATH AND/OR ADJACENT TO ENERGIZED OVERHEAD 138 KV ELECTRIC TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). THE HORIZONTAL AND VERTICAL LOCATION OF THESE LINES CAN VARY WITH WIND, AMBIENT TEMPERATURE AND POWER LOADING. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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CONSTRUCTION STAGING (3 OF 5)

SHEET 18 OF 96

8

STATE PROJECT NUMBER
1060-33-81

TRAFFIC DETOURED DURING ERECTION OF FIELD SECTION 7.

WB IH 94

LANE CLOSURE DURING ERECTION OF FIELD SECTION 8. (42) (45)

EX. B-40-101 TO BE REMOVED

EX. B-40-754 TO BE REMOVED

B-40-854 PIER ES11 UNDER CONSTRUCTION

PIER NE03

PIER NE04

PIER NE05

E. ABUT.

PIER ES10 UNDER CONSTRUCTION

OVERHEAD ATC ELECTRIC LINES TO REMAIN. *

CAUTION

R-40-545

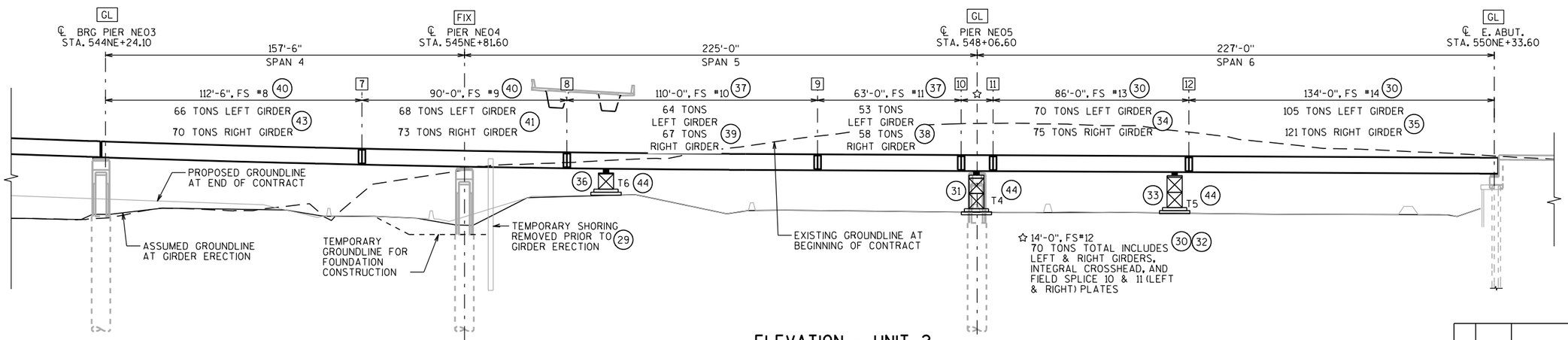
EASTBOUND IH 94 AND SE RAMP TRAFFIC TO REMAIN OPEN TO TRAFFIC DURING STEEL ERECTION*

EB IH 94

SE RAMP

PLAN - UNIT 2

CONSTRUCTION STAGE 4A TRAFFIC SHOWN.
CONSTRUCTION STAGE 4B 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.

* GIRDER ERECTION MAY NEED TO BE ACCOMPLISHED BENEATH AND/OR ADJACENT TO ENERGIZED OVERHEAD 138 KV ELECTRIC TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). THE HORIZONTAL AND VERTICAL LOCATION OF THESE LINES CAN VARY WITH WIND, AMBIENT TEMPERATURE AND POWER LOADING. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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CONSTRUCTION STAGING (4 OF 5)

SHEET 19 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080210_cs.dgn PLOT DATE : 19-JUL-2015 22:23 PLOT BY : MSCJJO PLOT NAME : 080210_cs PLOT SCALE : 50:1

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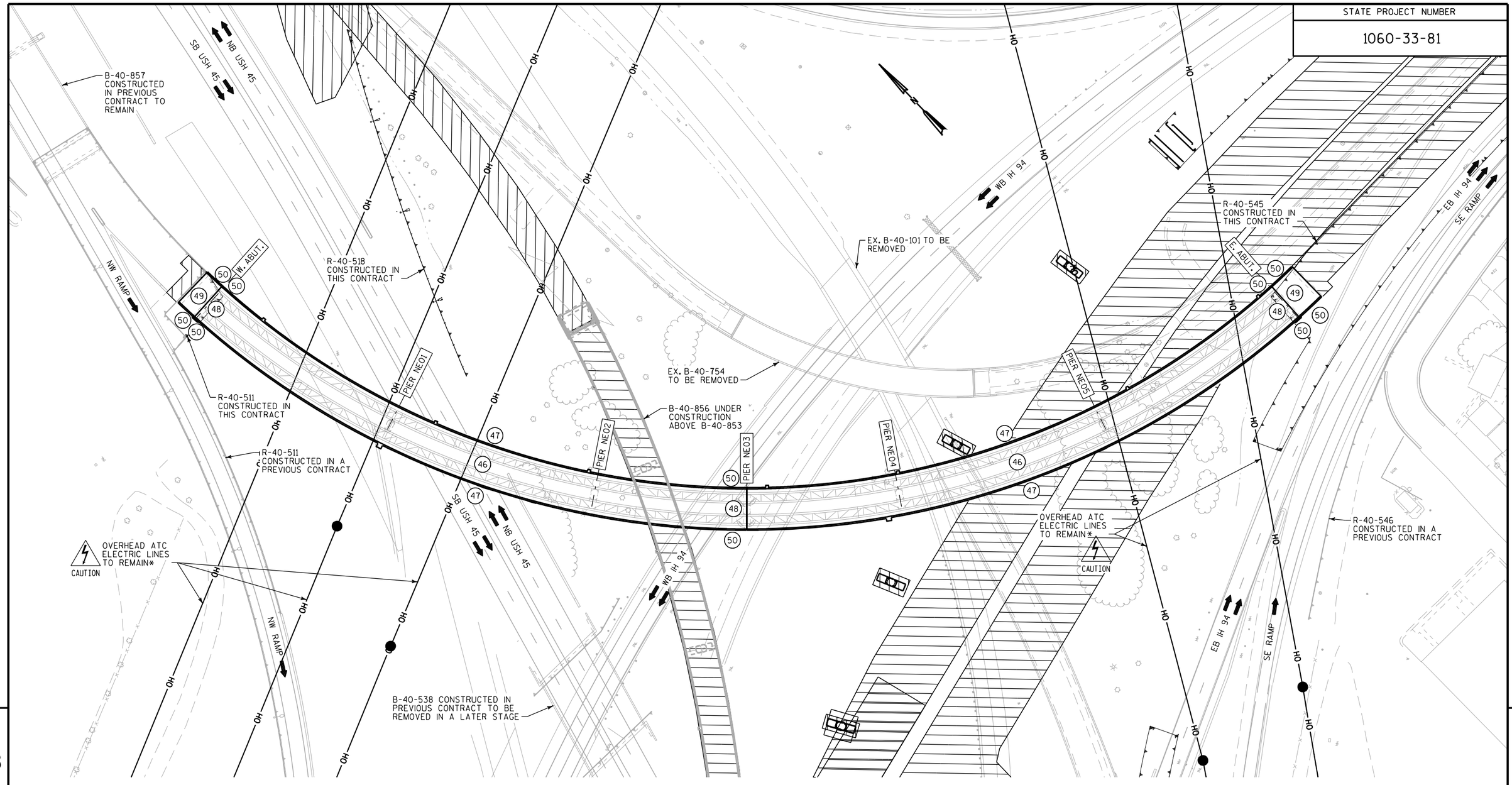
8

STATE PROJECT NUMBER
1060-33-81



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PLAN

CONSTRUCTION STAGE 4B TRAFFIC SHOWN

LEGEND

(3) CONSTRUCTION SEQUENCE NUMBER

TEMPORARY SHORING, SEE EXCAVATION PLAN FOR DETAILS

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

NOTES

SEE CONSTRUCTION STAGING NOTES SHEETS FOR GENERAL CONSTRUCTION STAGING NOTES.

* BRIDGE CONSTRUCTION NEAR PIERS NE01 & NE05 MAY NEED TO BE ACCOMPLISHED BENEATH AND/OR ADJACENT TO ENERGIZED OVERHEAD 138 KV ELECTRIC TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). THE HORIZONTAL AND VERTICAL LOCATION OF THESE LINES CAN VARY WITH WIND, AMBIENT TEMPERATURE AND POWER LOADING. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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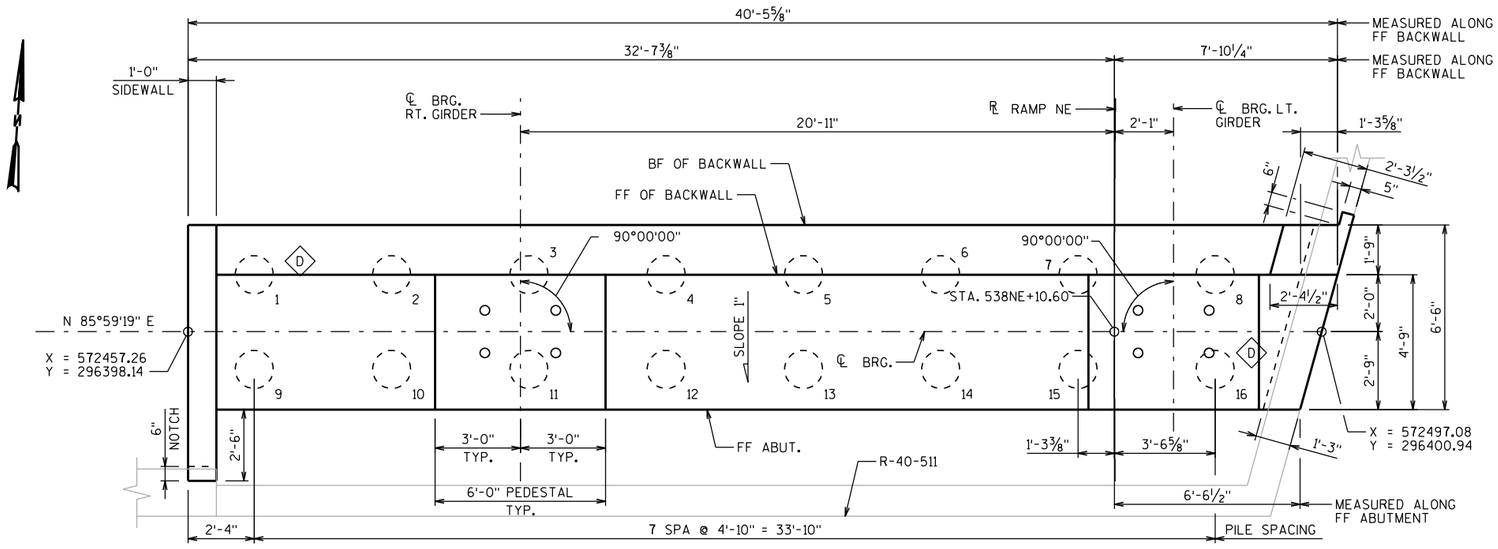
CONSTRUCTION STAGING (5 OF 5)

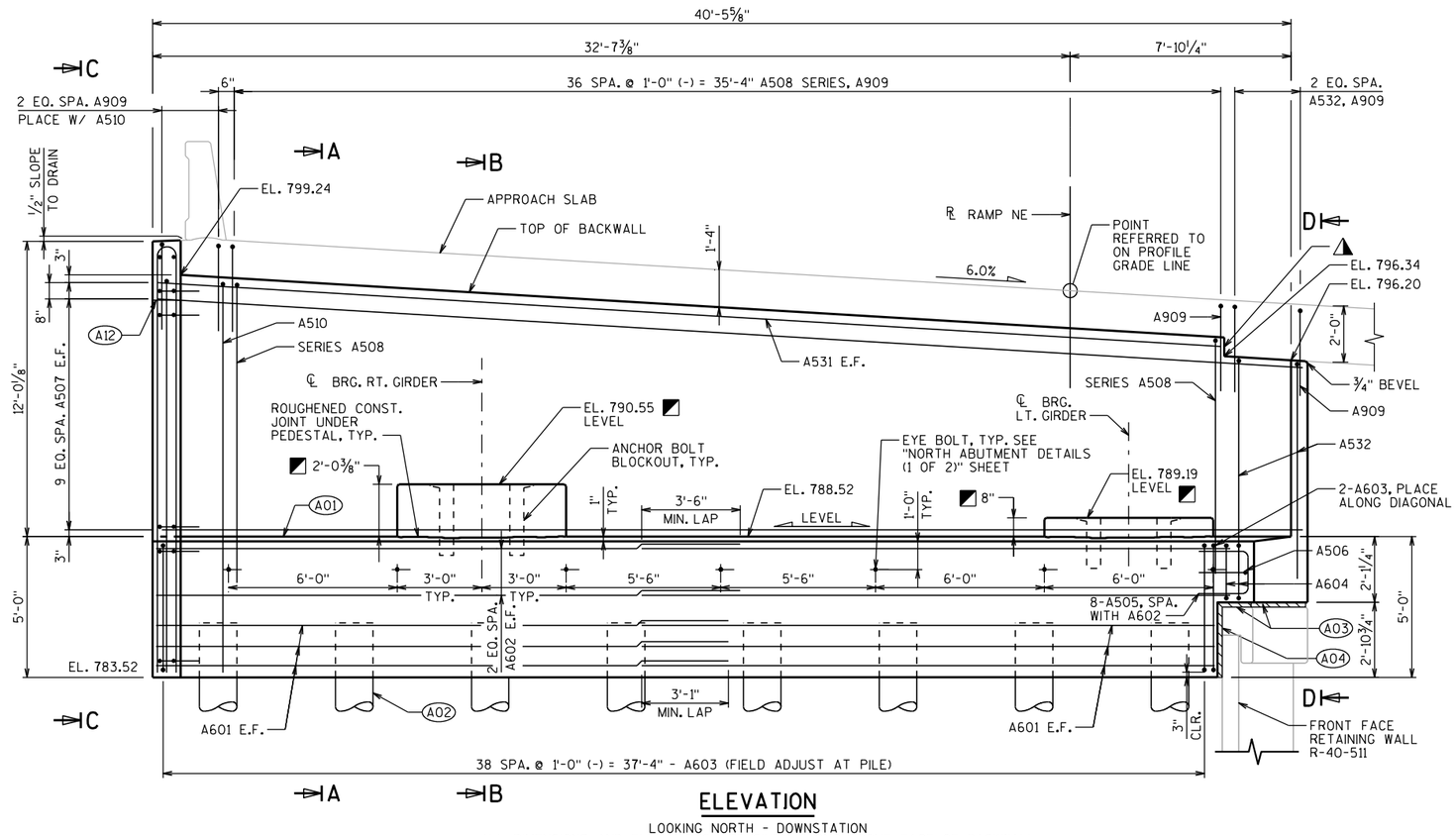
SHEET 20 OF 96

2969

STATE PROJECT NUMBER
1060-33-81



PLAN



ELEVATION

LOOKING NORTH - DOWNSTATION
ALL DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG FRONT FACE OF BACKWALL
REINFORCEMENT IN PEDESTALS NOT SHOWN FOR CLARITY, SEE "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 250 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

  ESTIMATED PILE LENGTH = 80'.
- (A03) 2" PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITUMINUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- (A04) PREFORMED JOINT FILLER (1½"± BASED ON A 7½" MSE WALL PANEL THICKNESS) WITH NON-BITUMINUS JOINT SEALER PLACED BETWEEN COPING/PRECAST PANEL AND EDGE OF ABUTMENT. COLOR TO MATCH CONCRETE STAIN.
- (A12) OPTIONAL CONST JT ADJUST VERTICALLY AS NECESSARY TO FACILITATE DECK PLACEMENT. PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING OVER JOINT.
- ◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON "UNIT 1 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
- ◭ PROVIDE ½" PREFORMED FILLER BETWEEN EDGE OF APPROACH SLAB AND EDGE OF BACKWALL.

NOTES

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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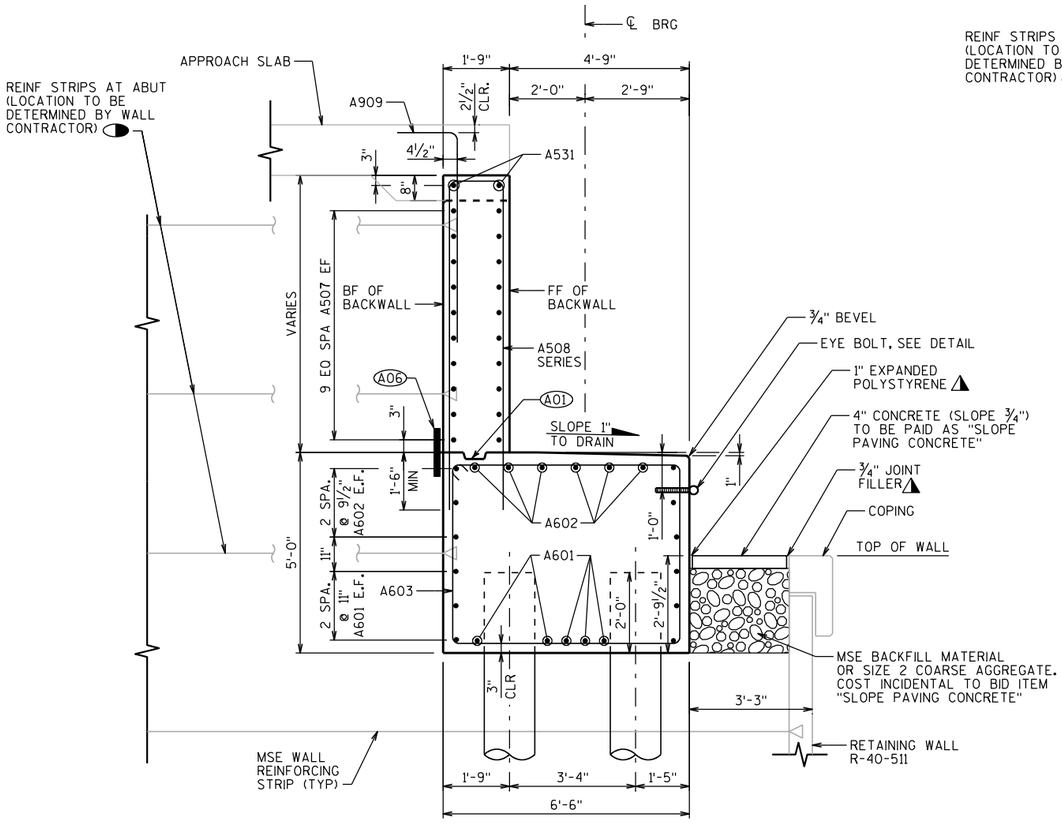
NORTH ABUTMENT PLAN & ELEVATION

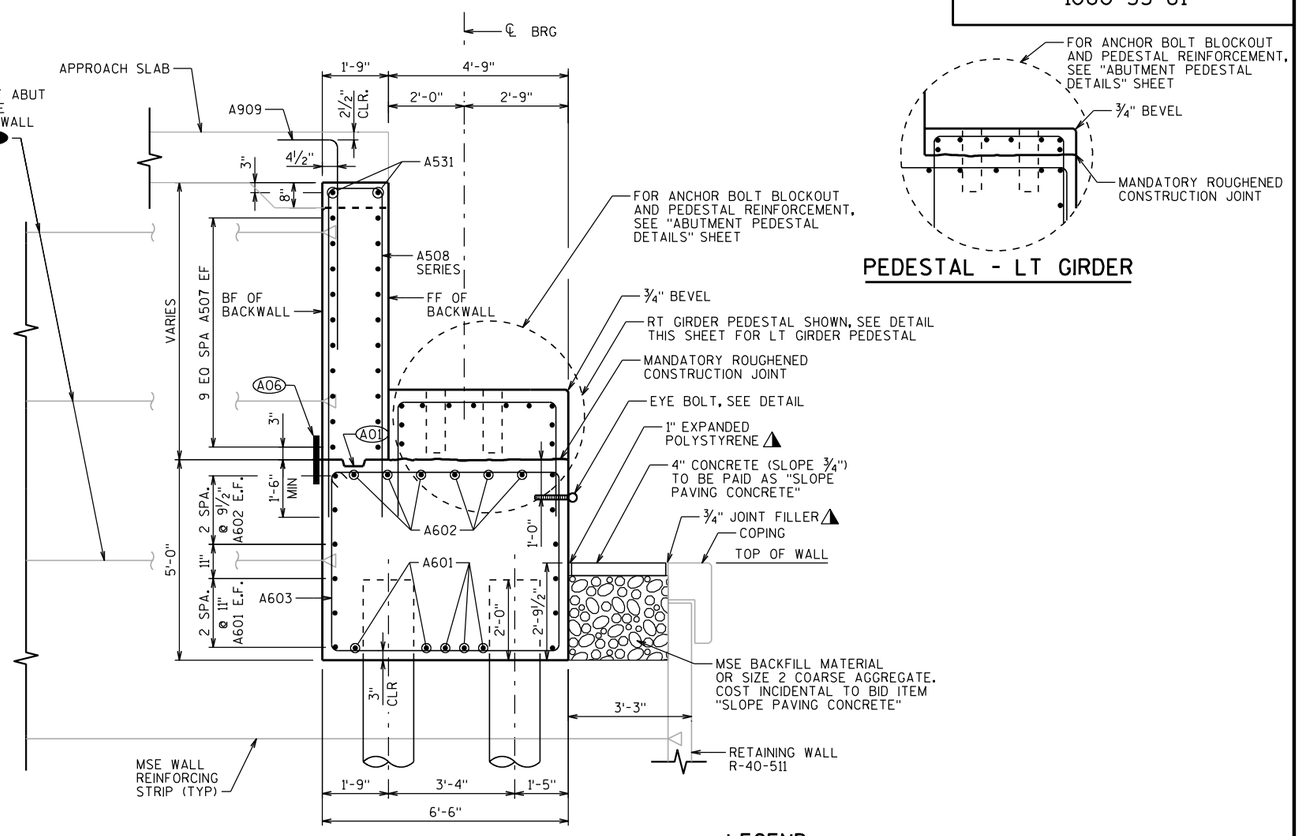
SHEET 21 OF 96

8

STATE PROJECT NUMBER
1060-33-81



SECTION A-A



SECTION B-B

PEDESTAL - LT GIRDER

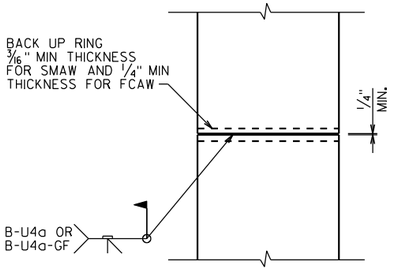
LEGEND

(A01) KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X6"

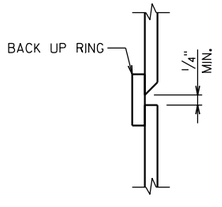
(A06) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENTS.

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.

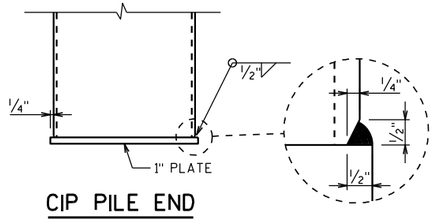
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE)



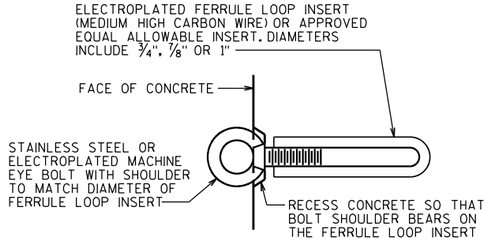
CIP PILE SPLICE DETAIL



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-40-853

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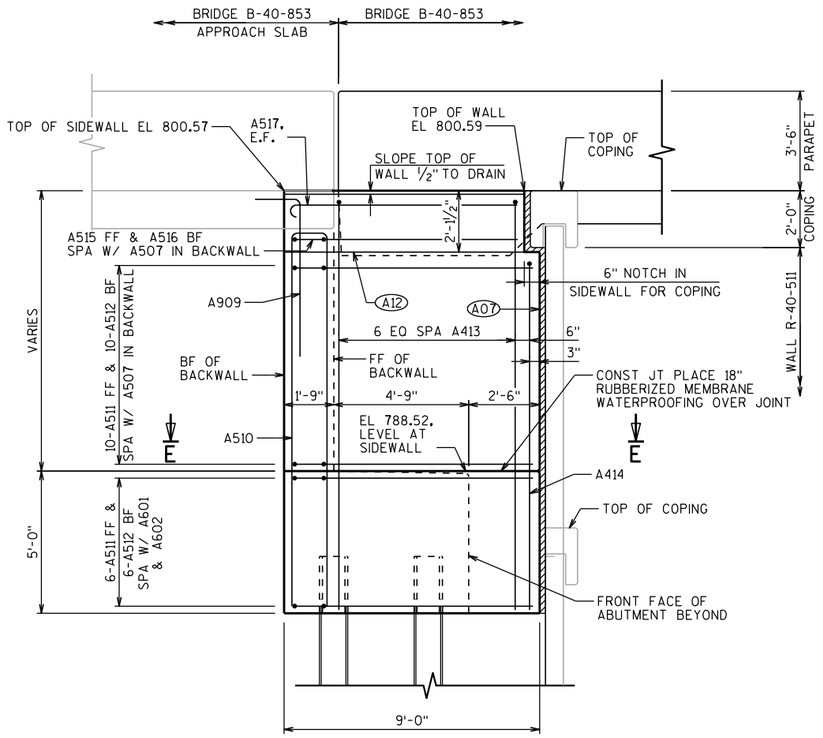
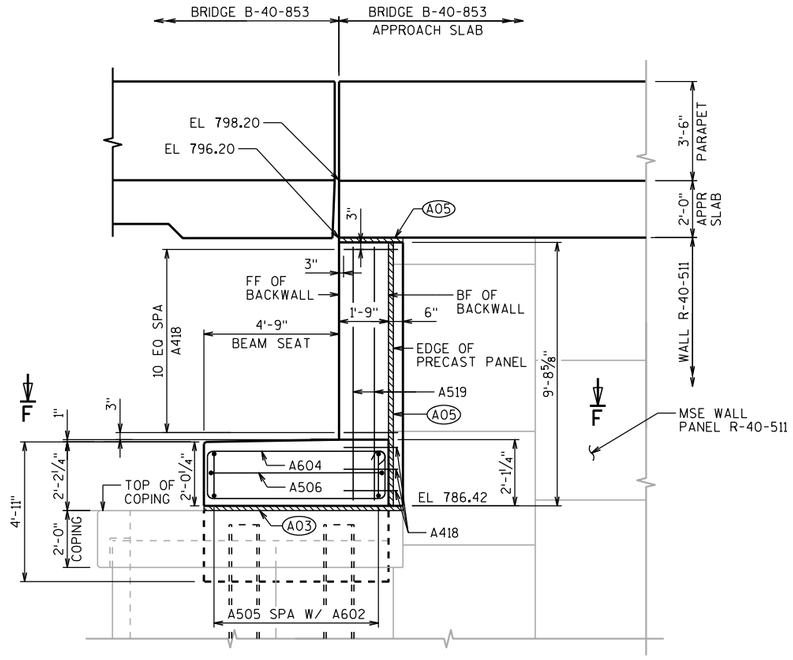
NORTH ABUTMENT DETAILS (1 OF 2)

SHEET 22 OF 96

STATE PROJECT NUMBER
1060-33-81



SECTION C-C
(LOOKING EAST)



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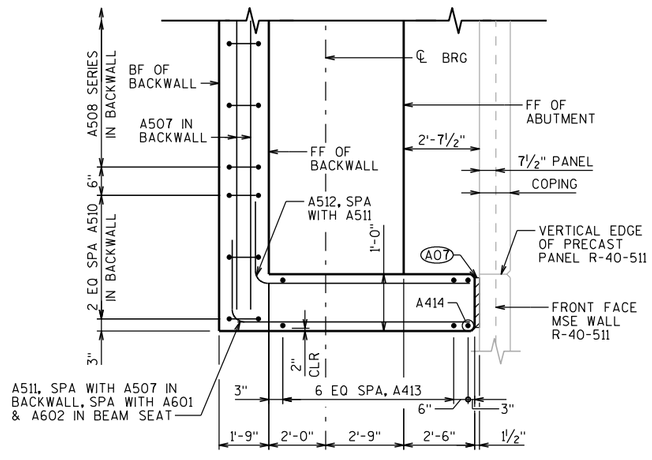
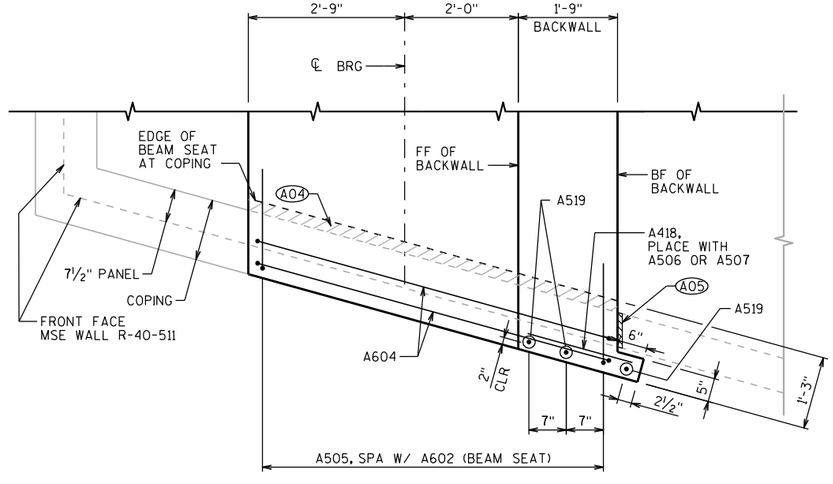
(LOOKING WEST)



SECTION E-E



SECTION F-F

LEGEND

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

(A04) PREFORMED JOINT FILLER (1 1/2"± BASED ON A 7 1/2" 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-40-511. COLOR TO MATCH CONCRETE STAIN.

(A07) PREFORMED JOINT FILLER (1 1/2"± BASED ON A 7 1/2" MSE WALL PANEL THICKNESS) WITH NON-BITUMINOUS JOINT SEALER PLACED BETWEEN ABUTMENT SIDEWALL AND WALL R-40-511. COLOR TO MATCH CONCRETE STAIN.

(A12) OPTIONAL CONST JT ADJUST VERTICALLY AS NECESSARY TO FACILITATE DECK PLACEMENT. PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING OVER JOINT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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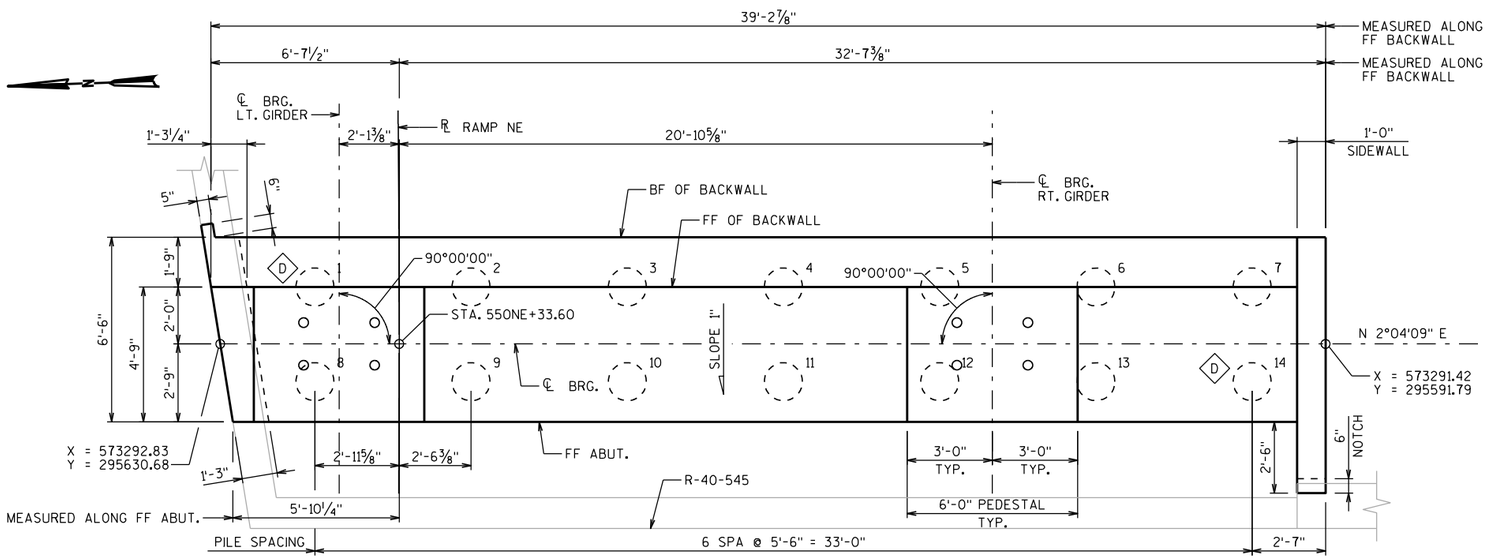
NORTH ABUTMENT DETAILS (2 OF 2)

SHEET 23 OF 96

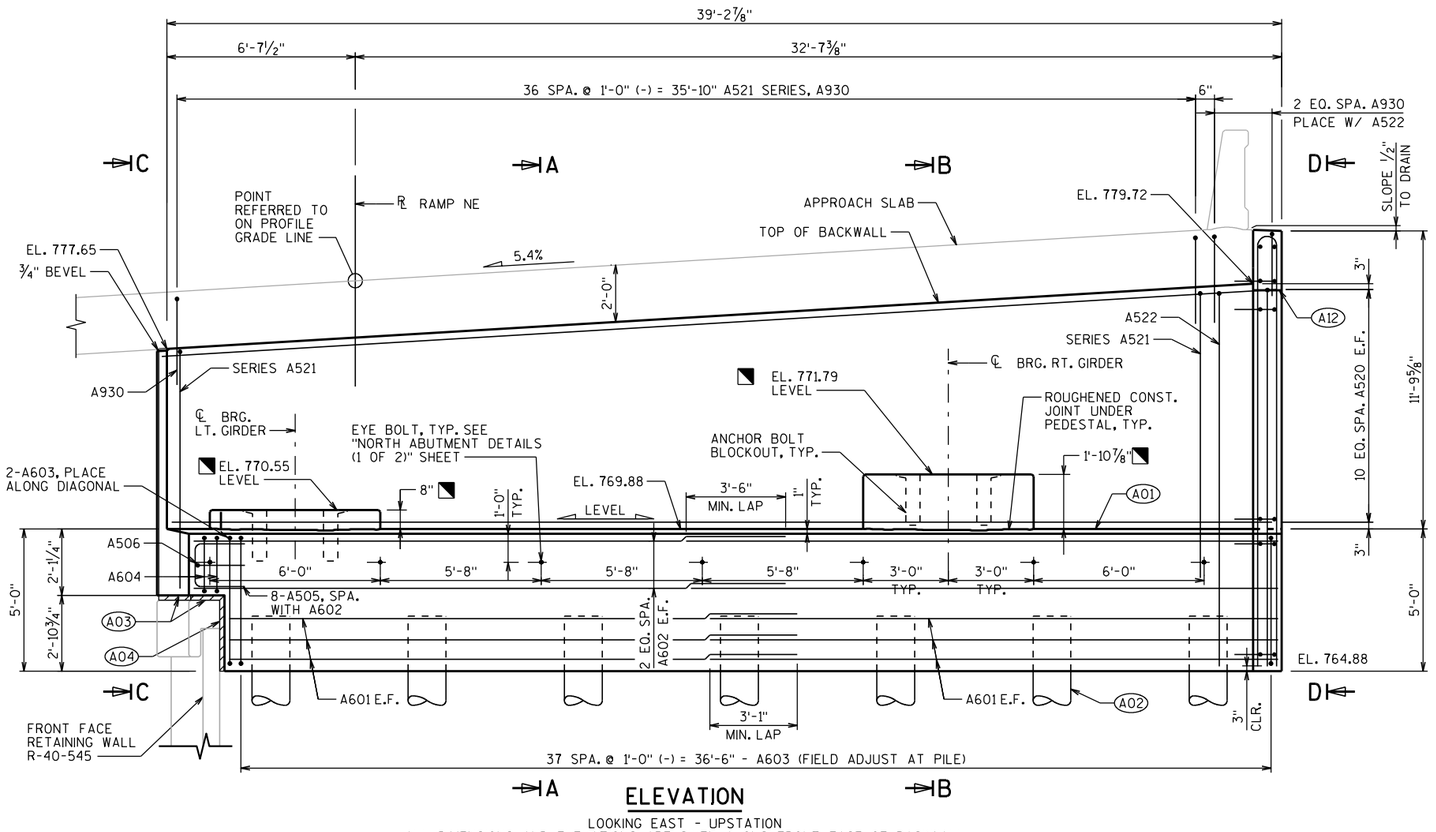
8

8

STATE PROJECT NUMBER
1060-33-81



PLAN



ELEVATION

LOOKING EAST - UPSTATION
ALL DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG FRONT FACE OF BACKWALL
REINFORCEMENT IN PEDESTALS NOT SHOWN FOR CLARITY, SEE "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 220 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

  ESTIMATED PILE LENGTH = 60'.
- (A03) 2" PREFORMED JOINT FILLER ABOVE COPING WITH NON-BITUMINUS JOINT SEALER. COLOR TO MATCH CONCRETE STAIN.
- (A04) PREFORMED JOINT FILLER (1½"± BASED ON A 7½" MSE WALL PANEL THICKNESS) WITH NON-BITUMINUS JOINT SEALER PLACED BETWEEN COPING/PRECAST PANEL AND EDGE OF ABUTMENT. COLOR TO MATCH CONCRETE STAIN.
- (A12) OPTIONAL CONST. JT. ADJUST VERTICALLY AS NECESSARY TO FACILITATE DECK PLACEMENT. PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING OVER JOINT.
- ◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON "UNIT 2 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

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 "ABUTMENT PEDESTAL DETAILS" SHEET.
4. FOR DETAILS OF BEARINGS, SEE "BEARING DETAILS" SHEET.
5. FOR DETAILS FOR ANCHOR BOLT BLOCKOUTS, SEE "ABUTMENT PEDESTAL DETAILS" SHEET.
6. FOR DETAILS OF EXPANSION JT, SEE "ABUTMENT MODULAR EXPANSION JOINT LAYOUT" SHEET.
7. FOR DETAILS OF APPROACH SLAB, SEE "STRUCTURAL EAST APPROACH SLAB" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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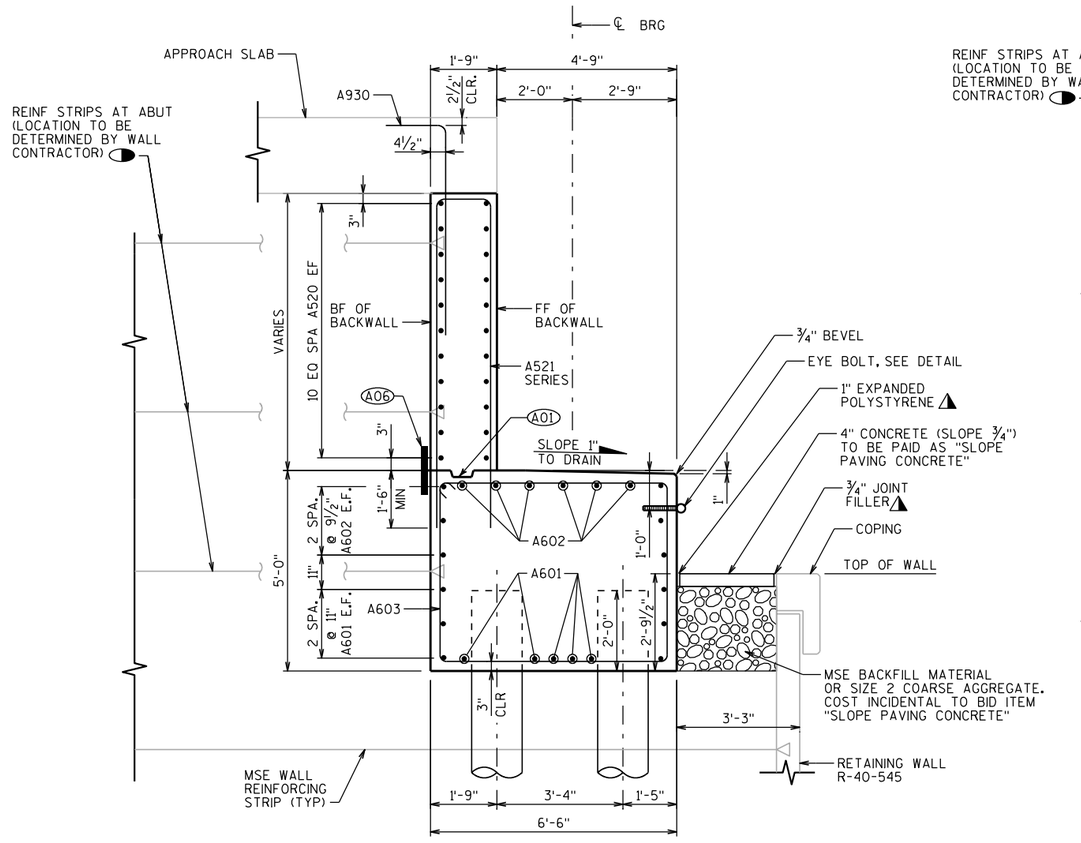
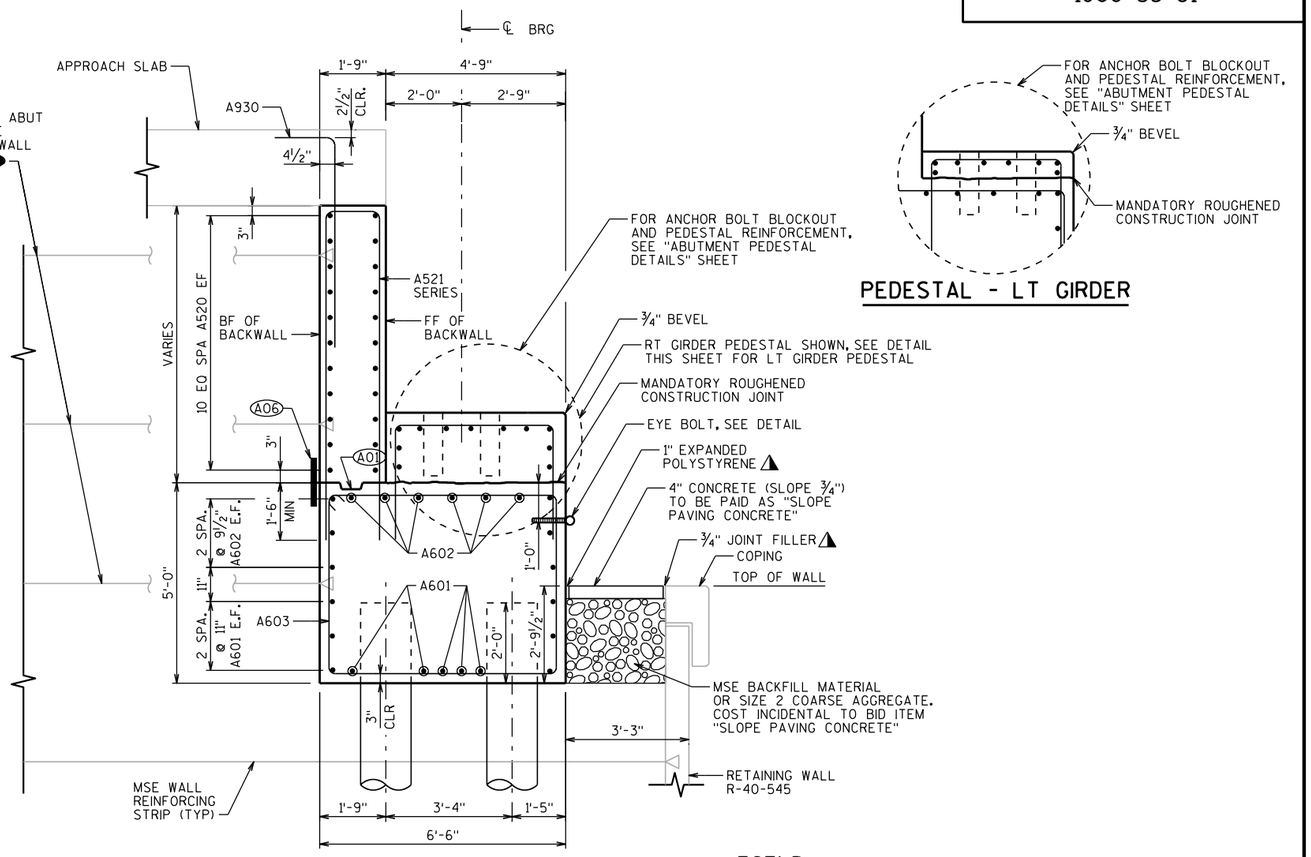
EAST ABUTMENT PLAN & ELEVATION

SHEET 24 OF 96

STATE PROJECT NUMBER
1060-33-81



SECTION A-A



SECTION B-B

PEDESTAL - LT GIRDER

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.
- 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).

NOTES

1. FOR PILE SPLICE AND PILE END PLATE DETAILS SEE "NORTH ABUTMENT DETAILS (1 OF 2)" SHEET.
2. FOR EYE BOLT DETAIL, SEE "NORTH ABUTMENT DETAILS (1 OF 2)" SHEET.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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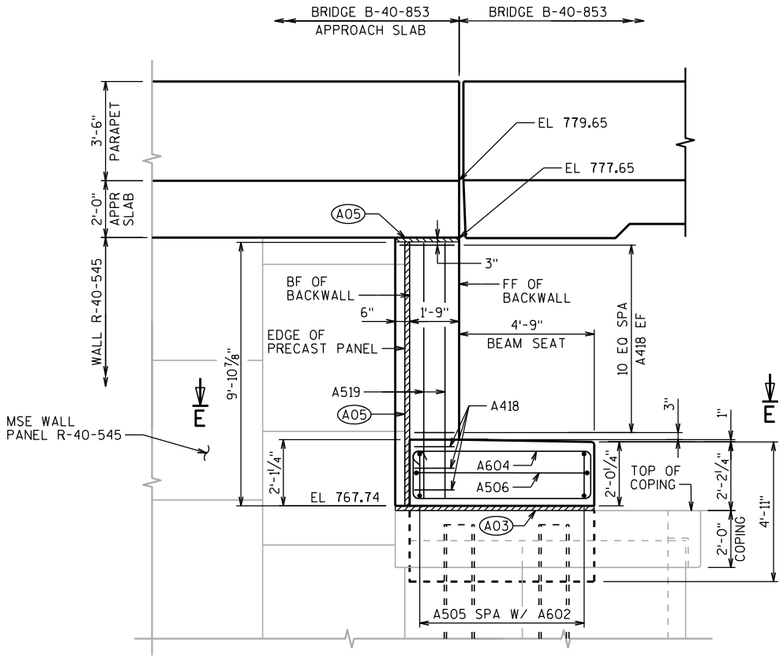
EAST ABUTMENT DETAILS (1 OF 2)

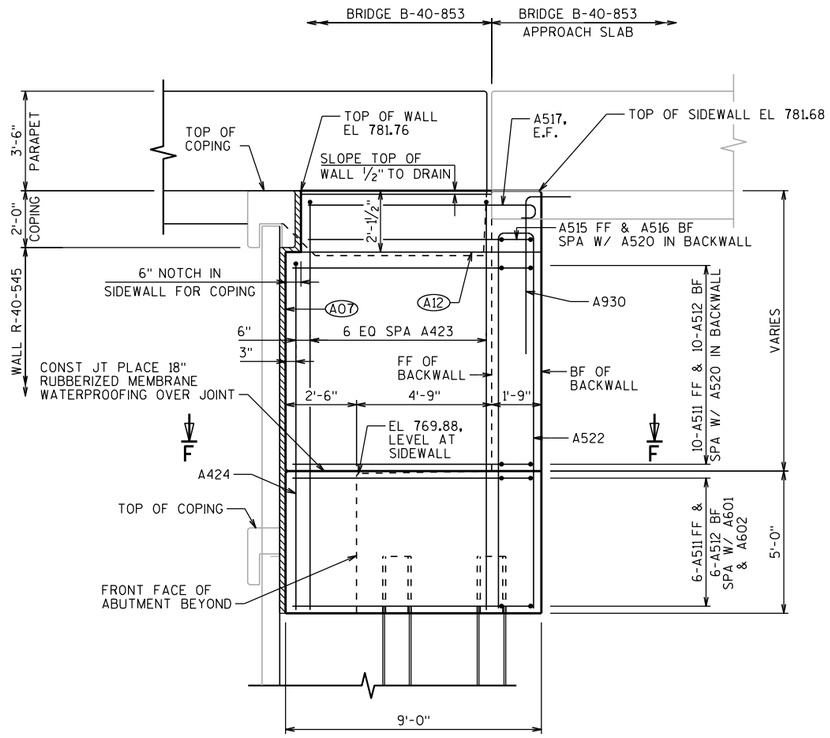
SHEET 25 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080305_ab.dgn PLOT DATE : 19-JUL-2015 22:23 PLOT BY : MSCJJO PLOT NAME : 080305_ab PLOT SCALE : 4:1

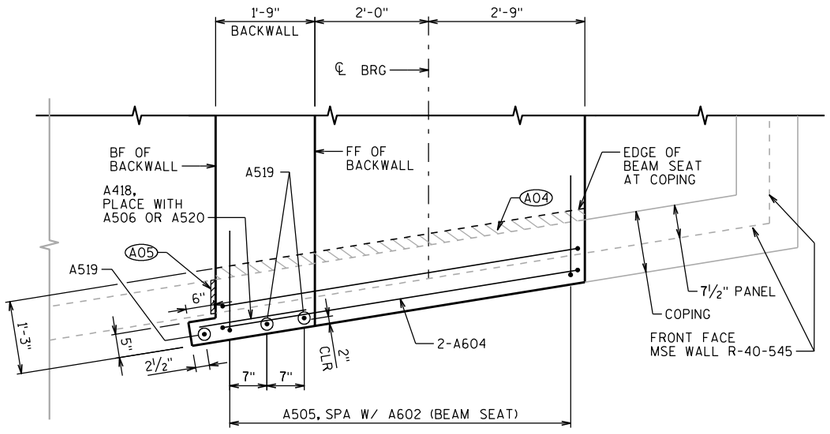
STATE PROJECT NUMBER
1060-33-81



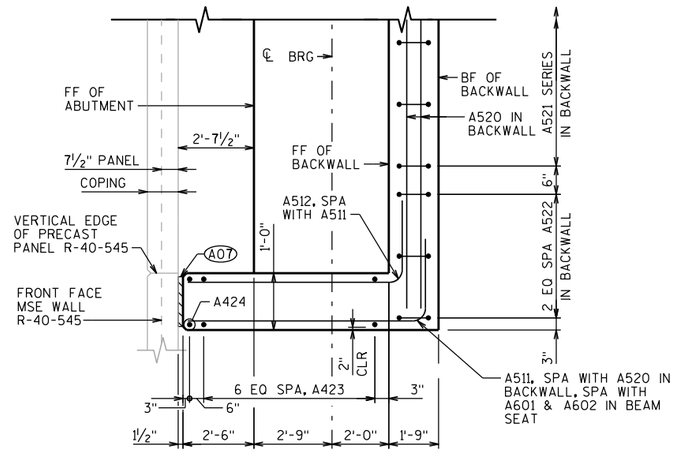
SECTION C-C
(LOOKING SOUTH)



SECTION D-D
(LOOKING NORTH)



SECTION E-E



SECTION F-F

LEGEND

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

(A04) PREFORMED JOINT FILLER (1½"± BASED ON A 7½" MSE WALL PANEL THICKNESS) WITH NON-BITUMINOUS JOINT SEALER PLACED BETWEEN COPING/PRECAST PANEL AND EDGE OF BEAM SEAT. COLOR TO MATCH CONCRETE STAIN.

(A05) ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACKFACE OF BACK WALL AND WALL R-40-545. COLOR TO MATCH CONCRETE STAIN.

(A07) PREFORMED JOINT FILLER (1½"± BASED ON A 7½" MSE WALL PANEL THICKNESS) WITH NON-BITUMINOUS JOINT SEALER PLACED BETWEEN ABUTMENT SIDEWALL AND WALL R-40-545. COLOR TO MATCH CONCRETE STAIN.

(A12) OPTIONAL CONST JT ADJUST VERTICALLY AS NECESSARY TO FACILITATE DECK PLACEMENT. PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING OVER JOINT.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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EAST ABUTMENT DETAILS (2 OF 2)

SHEET 26 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080306_ab.dgn
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PLOT BY : MSCJJO
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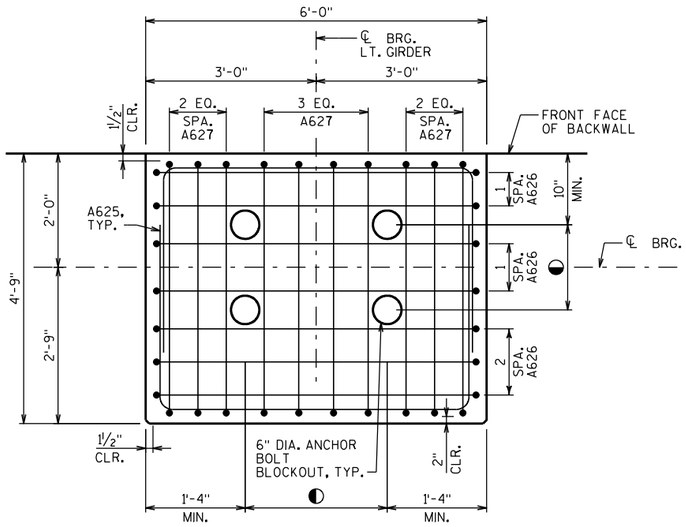
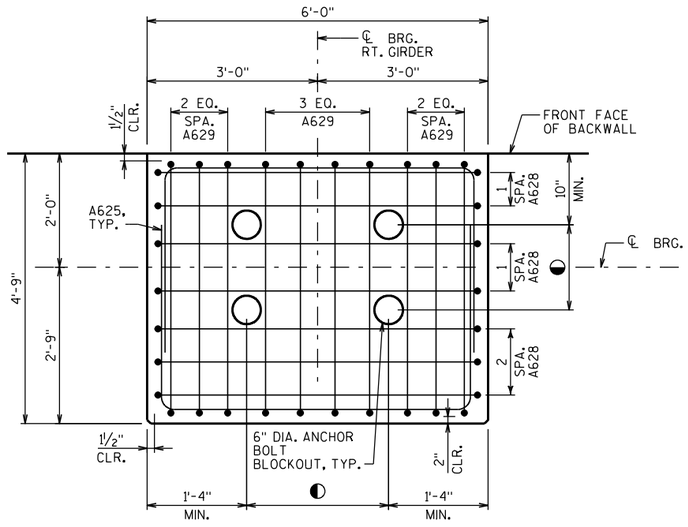
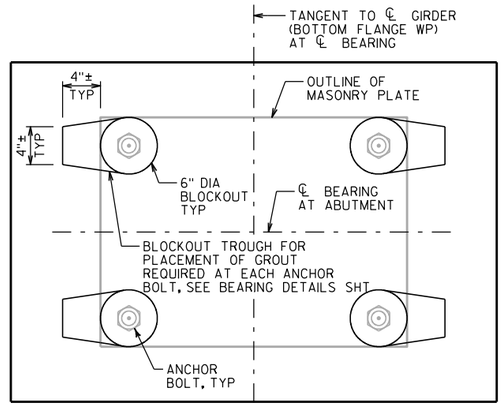
STATE PROJECT NUMBER
1060-33-81



PEDESTAL PLAN - LEFT GIRDER

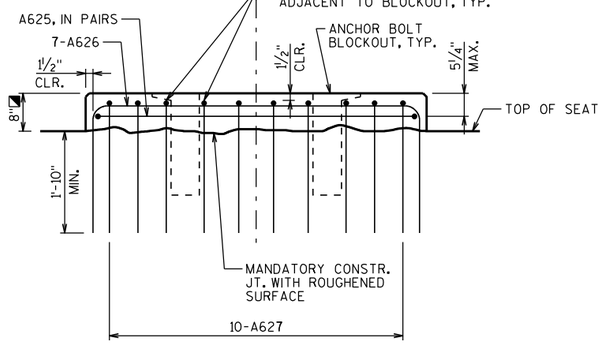


PEDESTAL PLAN - RIGHT GIRDER

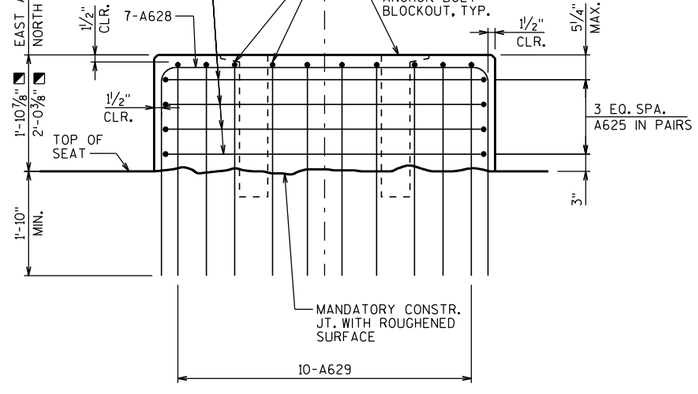


PEDESTAL PLAN - GROUT TROUGHS

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 SHEETS AND "BEARING DETAILS" SHEET.

LEGEND

◥ ELEVATIONS AND DIMENSIONS DEPEND ON THE ASSUMED BEARING DIMENSIONS SHOWN ON BEARING LAYOUT SHEETS. 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.

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STATE OF WISCONSIN
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STRUCTURE B-40-853

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ABUTMENT PEDESTAL DETAILS

SHEET 27 OF 96

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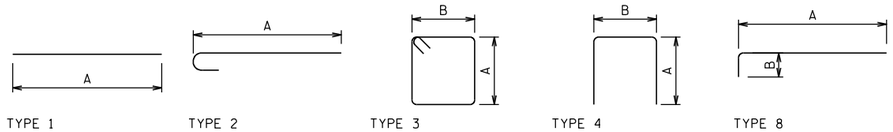
FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080307_ab.dgn
PLOT DATE : 19-JUL-2015 22:24
PLOT BY : MSCJJO
PLOT NAME : 080307_ab
PLOT SCALE : 2.666667:1

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	44	21'-4"			1	21'-4"						BODY - HORIZ.					
A602	E	48	22'-3"			1	22'-3"						BODY - HORIZ.					
A603	E	81	22'-4"	X		3	4'-7"	6'-2"					BODY - STIRRUP					
A604	E	4	17'-0"	X		3	1'-8"	6'-5"					BODY - STIRRUP					
A505	E	16	4'-8"	X		4	1'-9"	1'-5"					BODY - HORIZ.					
A506	E	2	14'-1"	X		4	6'-3"	1'-10"					BODY - HORIZ.					
A507	E	20	40'-2"			1	40'-2"						BACKWALL - HORIZ.					
A508	E	37	23'-1"	X	⚠	4	11'-0"	1'-5"					BACKWALL - VERT.	A	9'-10"	12'-1"	1 SERIES OF 37	20'-10" TO 25'-4"
A909	S	43	6'-11"	X		8	5'-7"	1'-7"					BACKWALL - VERT.					
A510	E	3	31'-8"	X		4	15'-3"	1'-5"					BACKWALL - VERT.					
A511	E	32	9'-3"	X		8	8'-6"	0'-10"					SIDEWALL - HORIZ.					
A512	E	32	8'-1"	X		8	7'-4"	0'-10"					SIDEWALL - HORIZ.					
A413	E	7	33'-4"	X		4	16'-5"	0'-8"					SIDEWALL - VERT.					
A414	E	1	29'-2"	X		4	14'-4"	0'-8"					SIDEWALL - VERT.					
A515	E	2	8'-8"	X		8	7'-11"	0'-10"					SIDEWALL - HORIZ.					
A516	E	2	7'-6"	X		8	6'-9"	0'-10"					SIDEWALL - HORIZ.					
A517	E	4	8'-9"	X		2	8'-2"						SIDEWALL - HORIZ.					
A418	E	28	1'-10"			1	1'-10"						BACKWALL - HORIZ.					
A519	E	6	9'-4"			1	9'-4"						BACKWALL - VERT.					
A520	E	22	38'-11"			1	38'-11"						BACKWALL - HORIZ.					
A521	E	37	21'-5"	X	⚠	4	10'-2"	1'-5"					BACKWALL - VERT.	A	9'-2"	11'-1"	1 SERIES OF 37	19'-6" TO 23'-4"
A522	E	3	29'-10"	X		4	14'-4"	1'-5"					BACKWALL - VERT.					
A423	E	7	32'-10"	X		4	16'-2"	0'-8"					SIDEWALL - VERT.					
A424	E	1	28'-6"	X		4	14'-0"	0'-8"					SIDEWALL - VERT.					
A625	E	20	11'-11"	X		4	3'-4"	5'-7"					RIGHT AND LEFT PEDESTAL					
A626	E	14	10'-1"	X		4	2'-4"	5'-9"					LEFT PEDESTAL					
A627	E	20	9'-0"	X		4	2'-5"	4'-6"					LEFT PEDESTAL					
A628	E	14	12'-9"	X		4	3'-8"	5'-9"					RIGHT PEDESTAL					
A629	E	20	11'-8"	X		4	3'-9"	4'-6"					RIGHT PEDESTAL					
A930	S	40	6'-11"	X		8	5'-7"	1'-7"					BACKWALL - VERT.					
A531	E	2	37'-9"			1	37'-9"						BACKWALL - HORIZ.					
A532	E	3	19'-8"	X		4	9'-3"	1'-5"					BACKWALL - VERT.					

BAR MARK BREAKDOWN				
BAR MARK	NORTH ABUTMENT	EAST ABUTMENT	TOTAL NO	WEIGHT
A601	22	22	44	1,410
A602	24	24	48	1,604
A603	41	40	81	2,717
A604	2	2	4	102
A505	8	8	16	78
A506	1	1	2	29
A507	20		20	838
A508	37		37	891
A909	43		43	1,011
A510	3		3	99
A511	16	16	32	309
A512	16	16	32	270
A413	7		7	156
A414	1		1	19
A515	1	1	2	18
A516	1	1	2	16
A517	2	2	4	37
A418	14	14	28	34
A519	3	3	6	58
A520		22	22	893
A521		37	37	826
A522		3	3	93
A423		7	7	154
A424		1	1	19
A625	10	10	20	358
A626	7	7	14	212
A627	10	10	20	270
A628	7	7	14	268
A629	10	10	20	350
A930		40	40	941
A531	2		2	79
A532	3		3	62



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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.

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NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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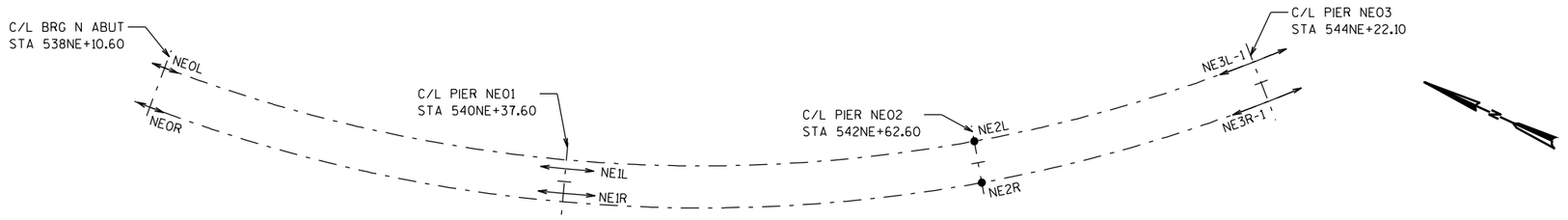
ABUTMENT REINFORCEMENT SCHEDULE

SHEET 28 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080308_ab.dgn PLOT DATE : 19-JUL-2015 22:24 PLOT BY : MSCJJO PLOT NAME : 080308_ab PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-81



PLAN

BEARING LEGEND

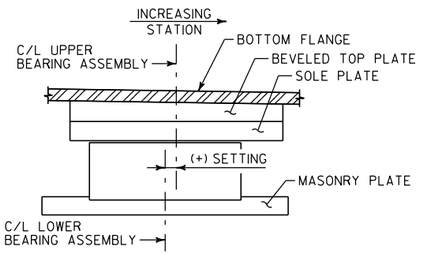
HIGH LOAD MULTI-ROTATIONAL GUIDED (ARROWHEADS DENOTE MOVEMENT DIRECTIONS)

HIGH LOAD MULTI-ROTATIONAL FIXED

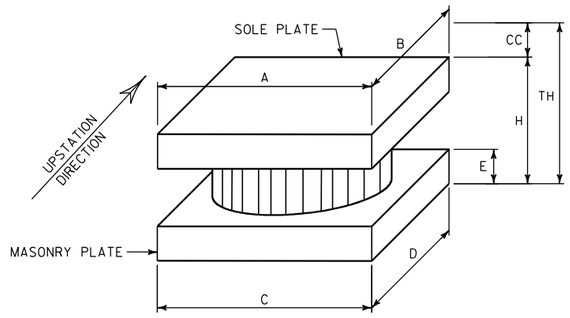
BEARING MARK	BEARING TYPE	SKEW ANGLE 'SK'	BOT./ GIRDER EL. AT C/L	TOP OF PEDESTAL EL.	VERTICAL FORCES			TRANSVERSE FORCES		LONGITUDINAL FORCES		MOVEMENT 90° (ONE WAY)		ROTATIONS	NOMINAL BEARING DIMENSIONS													ANCHOR BOLTS
					SERVICE		STRENGTH								BEVELED TOP PLATE THICKNESS					TOP PLATE & 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)	
NE0L	GUIDED	0°	790.10	789.19	710	1190	1550	80	90	80	80	---	4 1/8"	0.032	1.000	3.280	1.062	3.342	2.171	38"	32"	46"	32"	1 1/4"	8 5/8"	10 13/16 "	4 - 1 1/2" DIA.
NE0R			791.46	790.55	710	1190	1550	80	90	80	80	---	4 1/8"	0.037	1.000	3.280	1.062	3.342	2.171	38"	32"	46"	32"	1 1/4"	8 5/8"	10 13/16 "	4 - 1 1/2" DIA.
NE1L	GUIDED	0°	789.30	788.06	1730	3180	4140	100	160	180	180	---	2 1/4"	0.015	1.325	4.625	1.000	4.300	2.812	55"	48"	48"	41"	1 1/4"	11 7/8"	14 11/16 "	6 - 1 1/2" DIA.
NE1R			789.72	788.48	1730	3180	4140	100	160	180	180	---	2 1/4"	0.016	1.325	4.625	1.000	4.300	2.812	55"	48"	48"	41"	1 1/4"	11 7/8"	14 11/16 "	6 - 1 1/2" DIA.
NE2L	FIXED	N/A	784.00	782.64	1220	1970	2560	120	240	270	300	---	---	0.009	1.708	4.288	1.000	3.580	2.644	43"	39"	50"	41"	1 1/4"	13 1/2"	16 1/8"	6 - 1 1/2" DIA.
NE2R			785.36	784.00	1220	1970	2560	120	240	270	300	---	---	0.009	1.708	4.288	1.000	3.580	2.644	43"	39"	50"	41"	1 1/4"	13 1/2"	16 1/8"	6 - 1 1/2" DIA.
NE3L-1	GUIDED	0°	778.78	777.81	370	740	970	60	80	40	40	---	2 1/2"	0.018	1.827	3.687	1.000	2.860	2.344	31"	27"	32"	22"	1 1/4"	9 1/4"	11 5/8"	4 - 1" DIA.
NE3R-1			780.16	779.19	370	740	970	60	80	40	40	---	2 1/2"	0.020	1.827	3.687	1.000	2.860	2.344	31"	27"	32"	22"	1 1/4"	9 1/4"	11 5/8"	4 - 1" DIA.

BEARING TEMPERATURE SETTING DATA

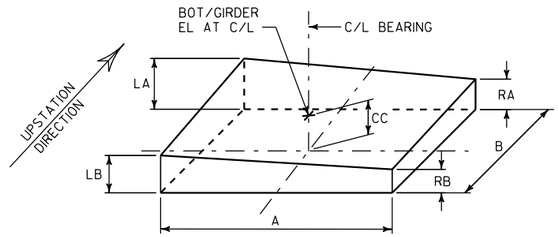
TEMP (°F)	NORTH ABUT (IN)	NE01 (IN)	NE03 (IN)
120°	-2.75	-1.45	1.65
110°	-2.29	-1.21	1.37
100°	-1.83	-0.97	1.10
90°	-1.37	-0.73	0.82
80°	-0.92	-0.48	0.55
70°	-0.46	-0.24	0.27
60°	0.00	0.00	0.00
50°	0.46	0.24	-0.27
40°	0.92	0.48	-0.55
30°	1.37	0.73	-0.82
20°	1.83	0.97	-1.10
10°	2.29	1.21	-1.37
0°	2.75	1.45	-1.65
-10°	3.21	1.69	-1.92
-20°	3.66	1.93	-2.20
-30°	4.12	2.18	-2.47



NOTE:
DATA IS PROVIDED FOR BEARING MANUFACTURER. FIELD SETTING SHALL BE BASED ON TABLE IN FINAL APPROVED SHOP DRAWINGS PER SPECIAL PROVISION FOR HLMR BEARINGS.



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.
7. ALL C/L BEARINGS ARE RADIAL OR NORMAL TO R/L AT ALL PIERS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

UNIT 1
BEARING
LAYOUT

SHEET 29 OF 96

8

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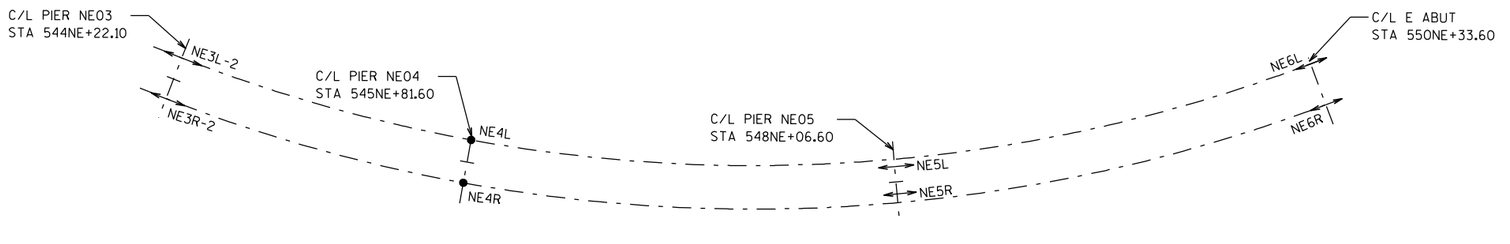
STATE PROJECT NUMBER
1060-33-81



PLAN

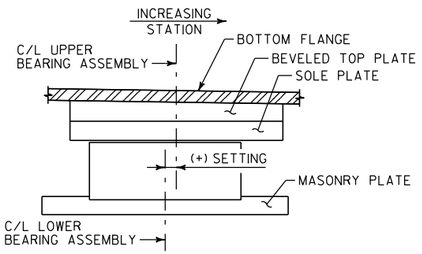
BEARING LEGEND

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

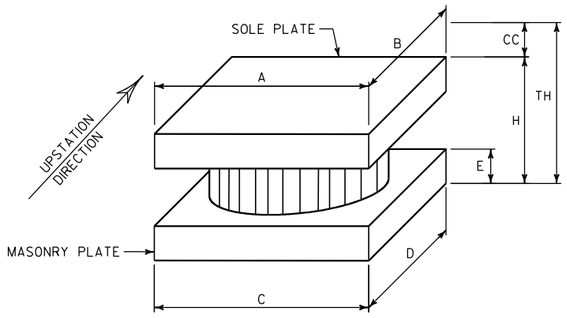
BEARING MARK	BEARING TYPE	SKEW ANGLE 'SK'	BOT./ GIRDER EL. AT C/L	TOP OF PEDESTAL EL.	VERTICAL FORCES			TRANSVERSE FORCES		LONGITUDINAL FORCES		MOVEMENT 90° (ONE WAY)		ROTATIONS	NOMINAL BEARING DIMENSIONS														ANCHOR BOLTS
					SERVICE		STRENGTH								BEVELED TOP PLATE THICKNESS					TOP PLATE & 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)	
NE3L-2	GUIDED	0°	778.65	777.81	370	740	970	60	80	40	40	---	2 3/8"	0.018	1.817	3.677	1.000	2.860	2.339	31"	27"	32"	22"	1 1/4"	7 5/8"	9 15/16 "	4 - 1" DIA.
NE3R-2			780.03	779.19	370	740	970	60	80	40	40	---	2 3/8"	0.020	1.817	3.677	1.000	2.860	2.339	31"	27"	32"	22"	1 1/4"	7 5/8"	9 15/16 "	4 - 1" DIA.
NE4L	FIXED	N/A	774.48	773.14	1220	1970	2560	90	140	250	290	---	---	0.009	1.426	4.006	1.000	3.580	2.503	43"	39"	50"	41"	1 1/4"	13 1/2"	16"	6 - 1 1/2" DIA.
NE4R			775.84	774.50	1220	1970	2560	90	140	250	290	---	---	0.009	1.426	4.006	1.000	3.580	2.503	43"	39"	50"	41"	1 1/4"	13 1/2"	16"	6 - 1 1/2" DIA.
NE5L	GUIDED	0°	773.03	771.80	1730	3180	4140	90	140	180	180	---	2 1/8"	0.015	1.120	4.420	1.000	4.300	2.710	55"	48"	48"	41"	1 1/4"	11 7/8"	14 9/16 "	6 - 1 1/2" DIA.
NE5R			773.45	772.22	1730	3180	4140	90	140	180	180	---	2 1/8"	0.016	1.120	4.420	1.000	4.300	2.710	55"	48"	48"	41"	1 1/4"	11 7/8"	14 9/16 "	6 - 1 1/2" DIA.
NE6L	GUIDED	0°	771.46	770.55	710	1190	1550	70	90	80	80	---	4 1/8"	0.032	1.143	3.227	1.000	3.084	2.113	38"	32"	46"	32"	1 1/4"	8 5/8"	10 3/4"	4 - 1 1/2" DIA.
NE6R			772.70	771.79	710	1190	1550	70	90	80	80	---	4 1/8"	0.037	1.143	3.227	1.000	3.084	2.113	38"	32"	46"	32"	1 1/4"	8 5/8"	10 3/4"	4 - 1 1/2" DIA.

BEARING TEMPERATURE SETTING DATA

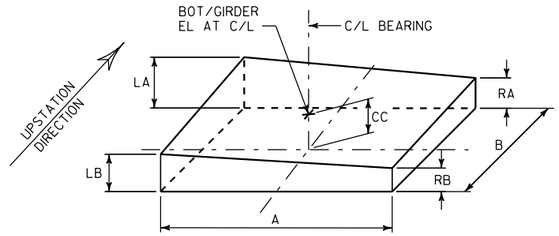
TEMP (°F)	NE03 (IN)	NE05 (IN)	EAST ABUT (IN)
120°	-1.52	1.40	2.70
110°	-1.26	1.17	2.25
100°	-1.01	0.93	1.80
90°	-0.76	0.70	1.35
80°	-0.51	0.47	0.90
70°	-0.25	0.23	0.45
60°	0.00	0.00	0.00
50°	0.25	-0.23	-0.45
40°	0.51	-0.47	-0.90
30°	0.76	-0.70	-1.35
20°	1.01	-0.93	-1.80
10°	1.26	-1.17	-2.25
0°	1.52	-1.40	-2.70
-10°	1.77	-1.64	-3.15
-20°	2.02	-1.87	-3.60
-30°	2.27	-2.10	-4.05



NOTE:
DATA IS PROVIDED FOR BEARING MANUFACTURER. FIELD SETTING SHALL BE BASED ON TABLE IN FINAL APPROVED SHOP DRAWINGS PER SPECIAL PROVISION FOR HLMR BEARINGS.



BEARING DIMENSION KEY



BEVELED TOP PLATE DIMENSION KEY

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

1. FOR TYPICAL BEARING DETAILS, SEE BEARING DETAILS SHEET.
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   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.
7. ALL C/L BEARINGS ARE RADIAL OR NORMAL TO R/L AT ALL PIERS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

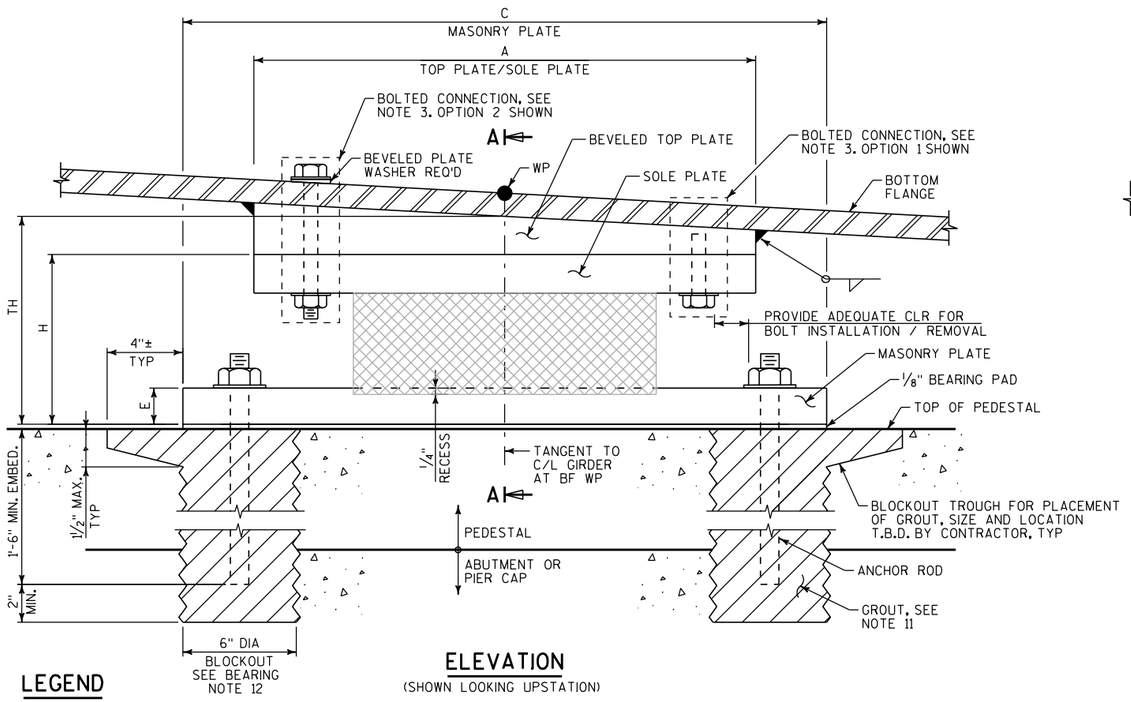
UNIT 2
BEARING
LAYOUT

SHEET 30 OF 96

8

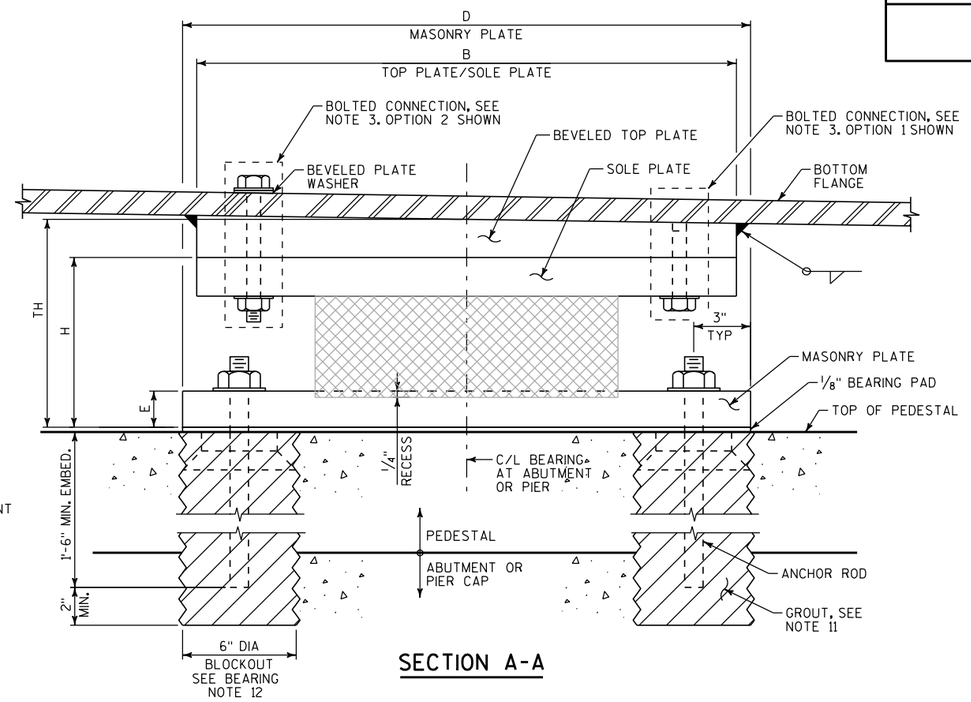
8

STATE PROJECT NUMBER
1060-33-81



ELEVATION

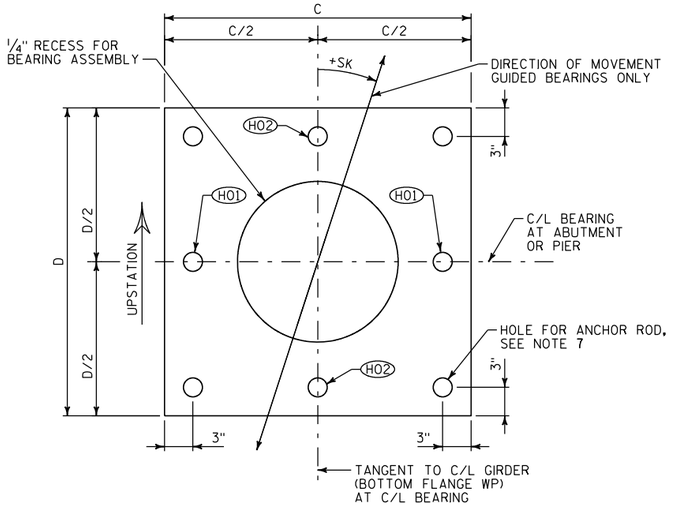
(SHOWN LOOKING UPSTATION)



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".

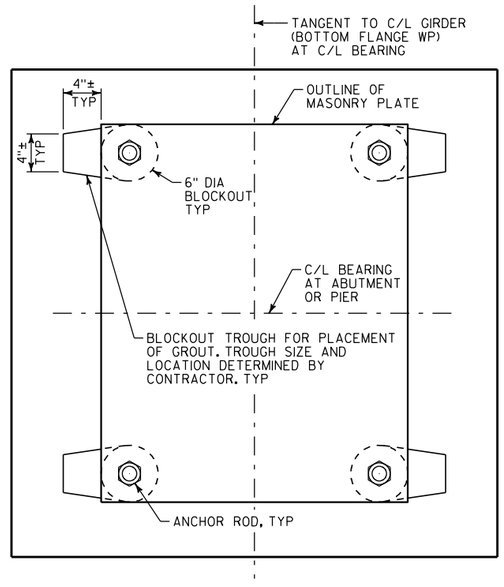


PLAN - MASONRY PLATE

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

(HO1) HOLE REQ'D AT PIERS NE02 & NE04 ONLY

(HO2) HOLE REQ'D AT PIERS NE01 & NE05 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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY	SR	PLANS CK'D.	JWC

BEARING DETAILS

SHEET 31 OF 96

8

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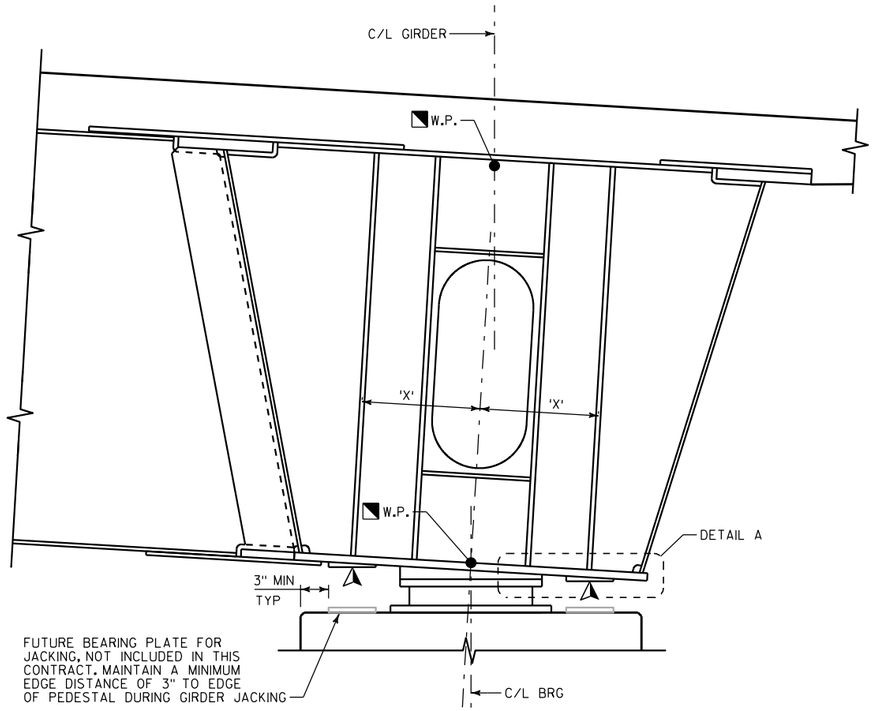
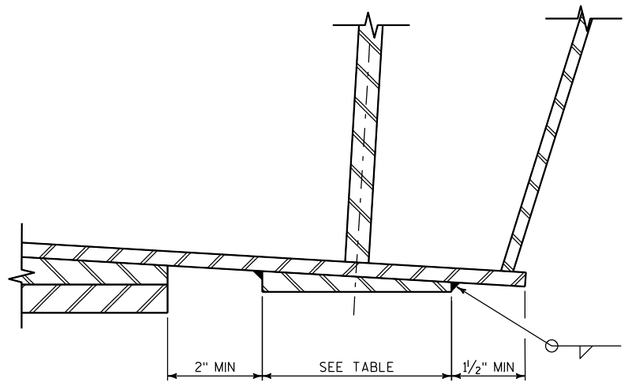
STATE PROJECT NUMBER
1060-33-81



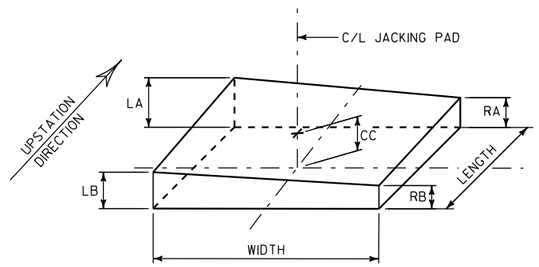
SECTION AT TYPICAL PIER



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)		
NORTH ABUT	UNIT 1	2	8"	1'-6"	1.000	1.480	1.047	1.527	1.263	2'-1"	355
PIER NE01	UNIT 1	2	8"	2'-4"	1.379	1.859	1.000	1.480	1.429	***	865
PIER NE02	UNIT 1	2	8"	2'-0"	1.708	2.188	1.000	1.480	1.594	2'-4"	610
PIER NE03	UNIT 1	2	8"	1'-6"	1.621	2.101	1.000	1.480	1.550	2'-1"	185
PIER NE03	UNIT 2	2	8"	1'-6"	1.613	2.093	1.000	1.480	1.547	2'-1"	185
PIER NE04	UNIT 2	2	8"	2'-0"	1.426	1.906	1.000	1.480	1.453	2'-4"	610
PIER NE05	UNIT 2	2	8"	2'-4"	1.140	1.620	1.000	1.480	1.310	***	865
EAST ABUT	UNIT 2	2	8"	1'-6"	1.107	1.546	1.000	1.439	1.273	2'-1"	355

* SEE NOTE 2
** SEE NOTE 4, FORCE SHOWN IS PER PAD
*** SEE "PIER NE01 & NE05 INTEGRAL CROSS HEAD" SHEET FOR JACKING PAD LOCATIONS.



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.

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

   THESE FORCES MUST BE INCREASED TO ALLOW FOR JACK FRICTION AND OTHER FACTORS.
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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

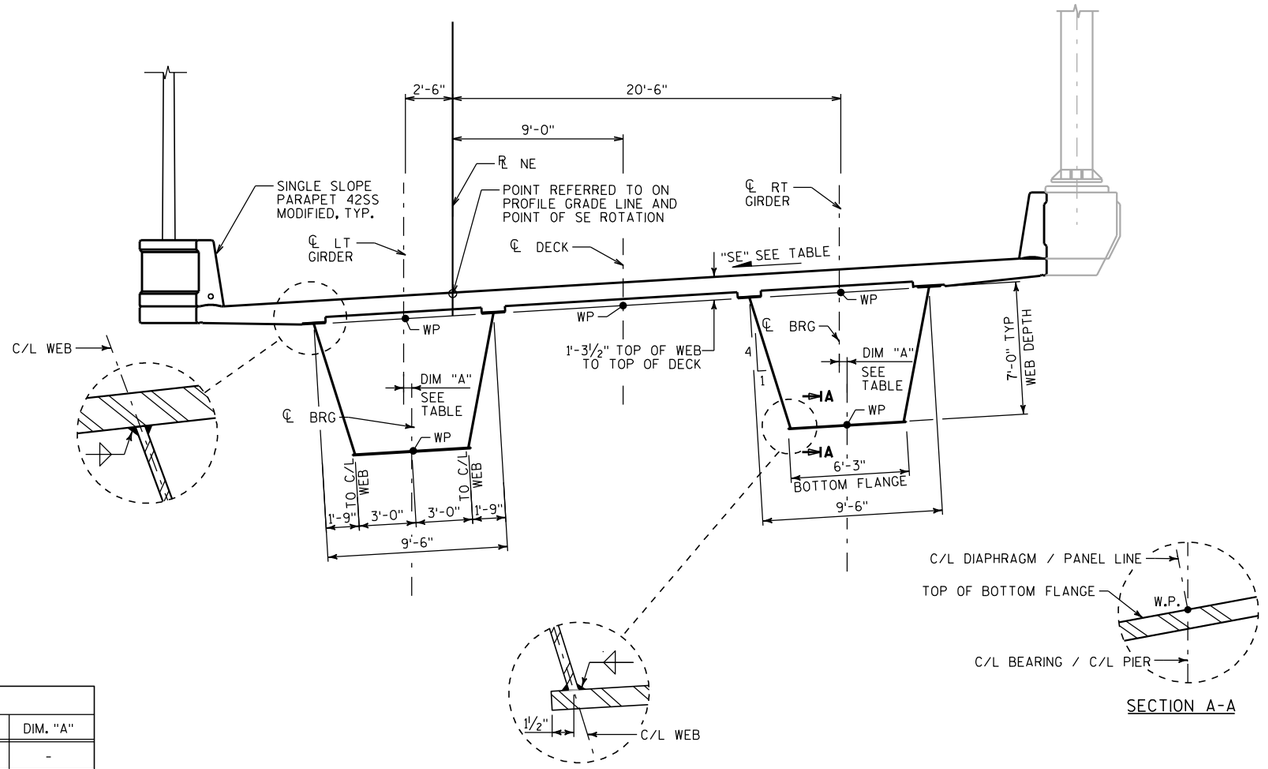
DRAWN BY SR | PLANS CK'D. JWC

JACKING PROVISIONS

SHEET 32 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080504_ss.dgn PLOT DATE : 19-JUL-2015 22:27 PLOT BY : MSCJJO PLOT NAME : 080504_ss PLOT SCALE : 2.666667:1

STATE PROJECT NUMBER
1060-33-81



SECTION A-A

SUPERELEVATION TABLE		
STATION	SE (%)	DIM. "A"
536NE+47	6.00	-
538NE+10.60 C/L BRG N ABUT	6.00	5 "
540NE+37.60 C/L PIER NE01	6.00	5 "
542NE+62.60 C/L PIER NE02	6.00	5 "
544NE+22.10 C/L PIER NE03	6.00	5 "
545NE+81.60 C/L PIER NE04	6.00	5 "
548NE+06.60 C/L PIER NE05	6.00	5 "
550NE+15	6.00	5 "
550NE+33.60 C/L BRG E ABUT	5.48	4⅝"
550NE+87	4.00	-

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"	3/8"
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 3/16".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

GIRDER SECTION

SHEET 33 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080505_ss.dgn
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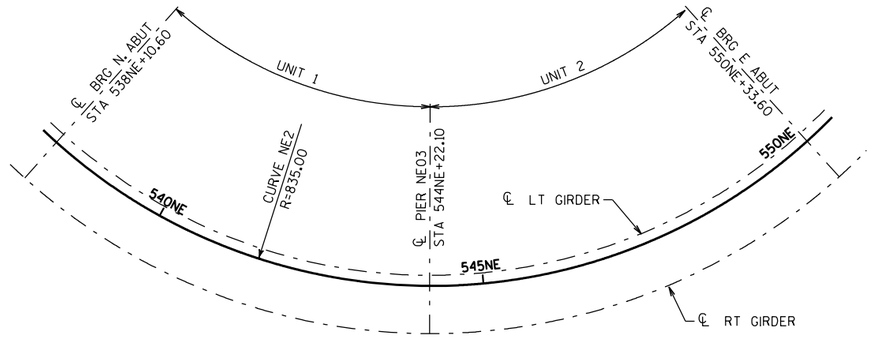
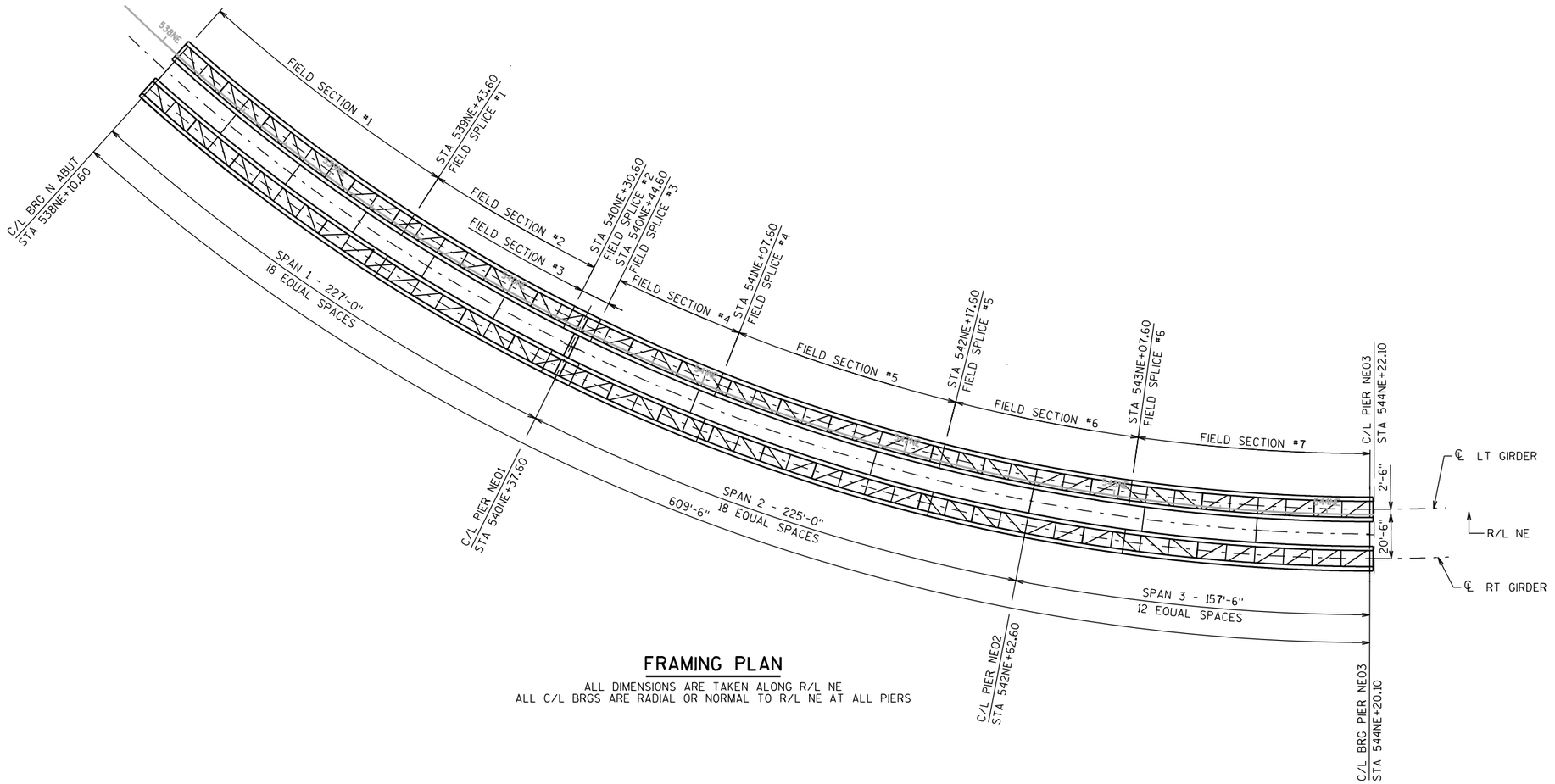
STATE PROJECT NUMBER
1060-33-81



PLAN LAYOUT SKETCH

NOT TO SCALE



FRAMING PLAN

ALL DIMENSIONS ARE TAKEN ALONG R/L NE
ALL C/L BRGS ARE RADIAL OR NORMAL TO R/L NE AT ALL PIERS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY ENS | PLANS CK'D. JWC

UNIT 1
FRAMING PLAN

SHEET 34 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080506_fp.dgn
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STATE PROJECT NUMBER
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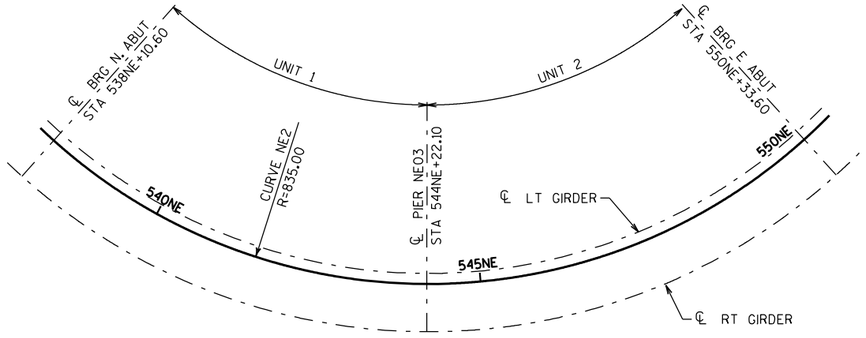
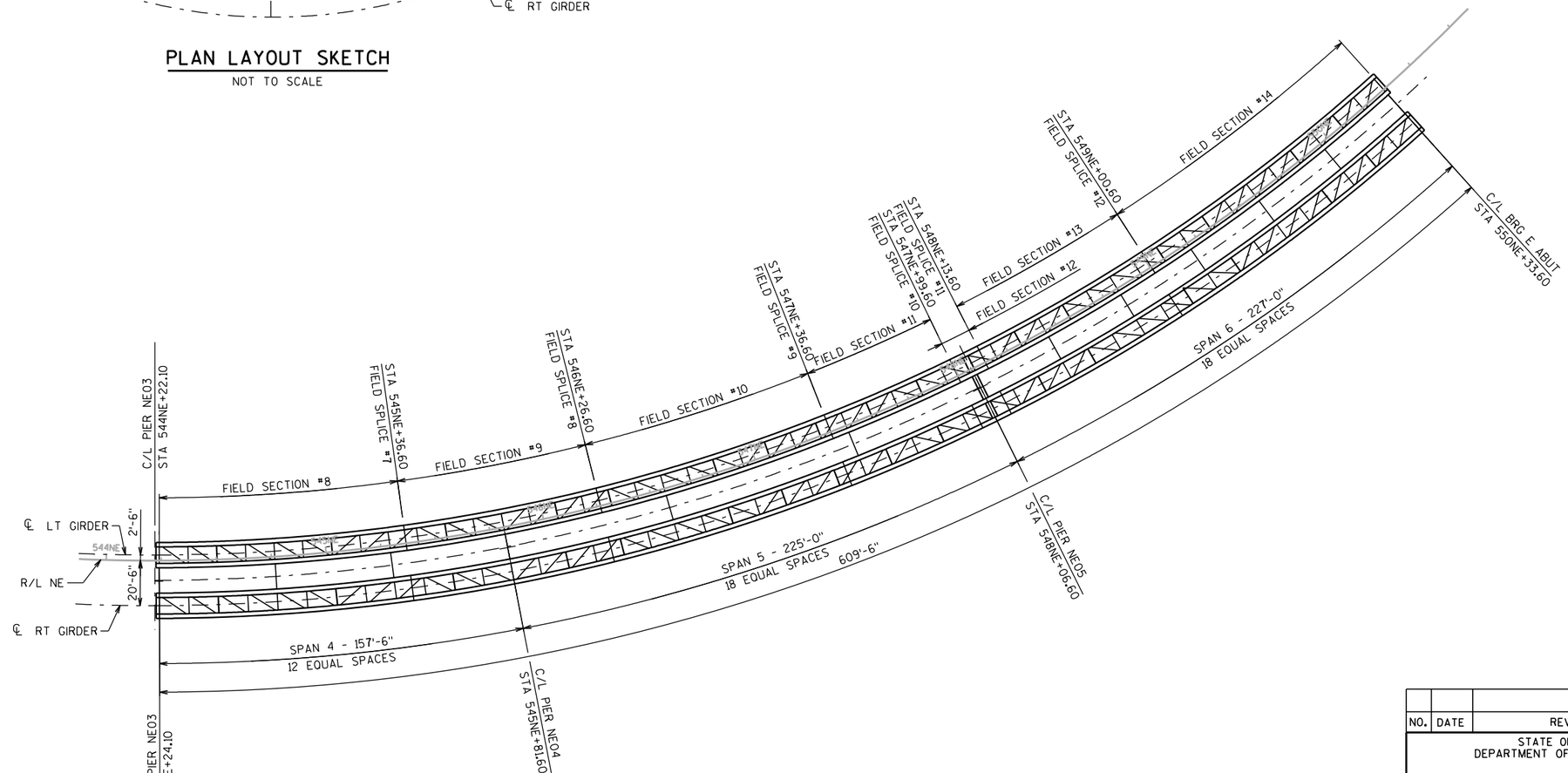


PLAN LAYOUT SKETCH

NOT TO SCALE



FRAMING PLAN

ALL DIMENSIONS ARE TAKEN ALONG R/L NE
ALL C/L BRGS ARE RADIAL OR NORMAL TO R/L NE AT ALL PIERS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY ENS/SR | PLANS CK'D. JWC

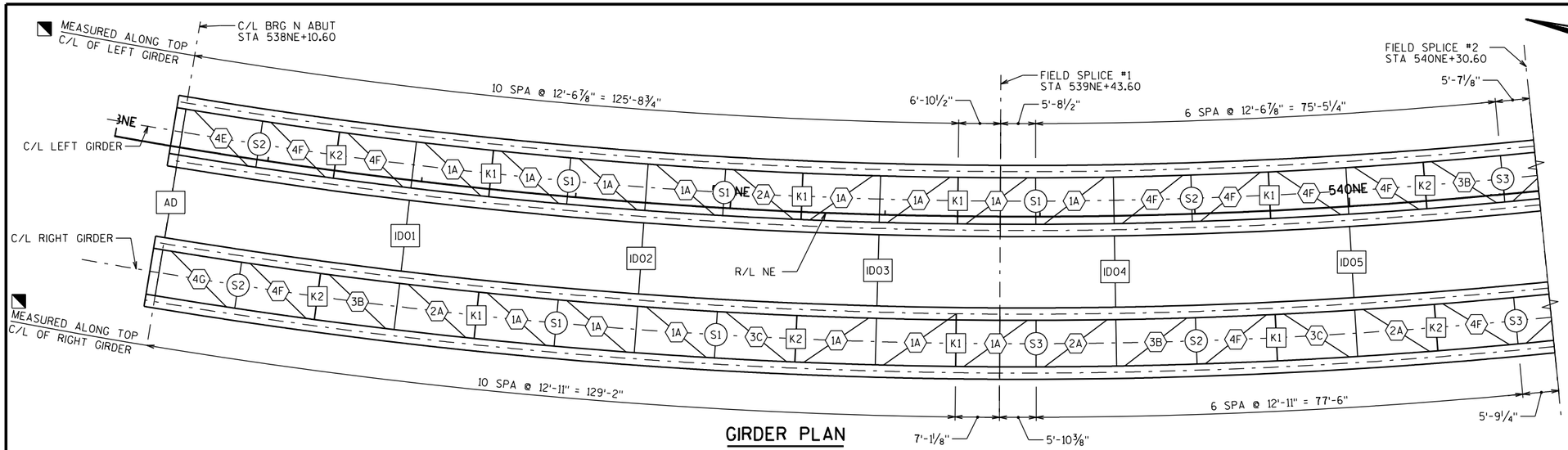
UNIT 2
FRAMING PLAN

SHEET 35 OF 96

8

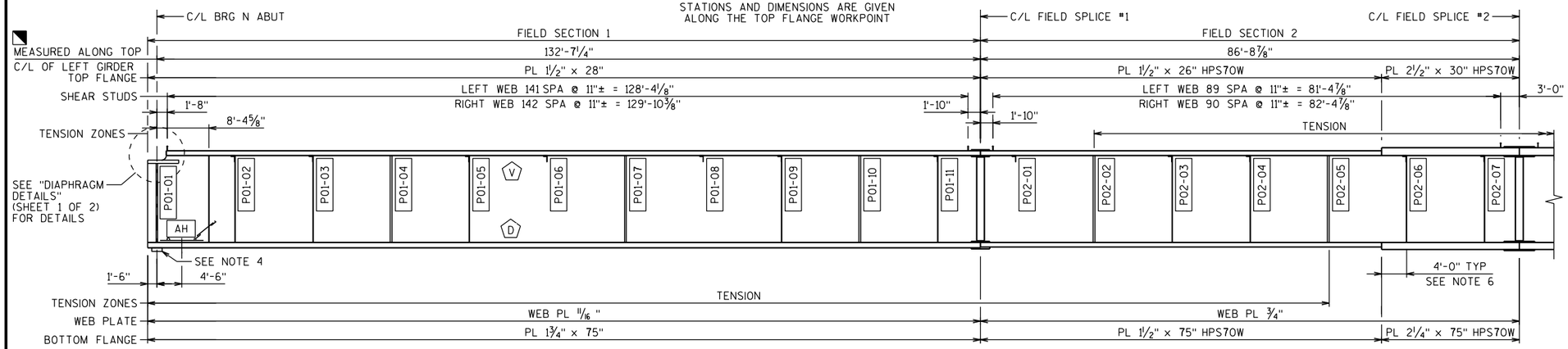
8

STATE PROJECT NUMBER
1060-33-81

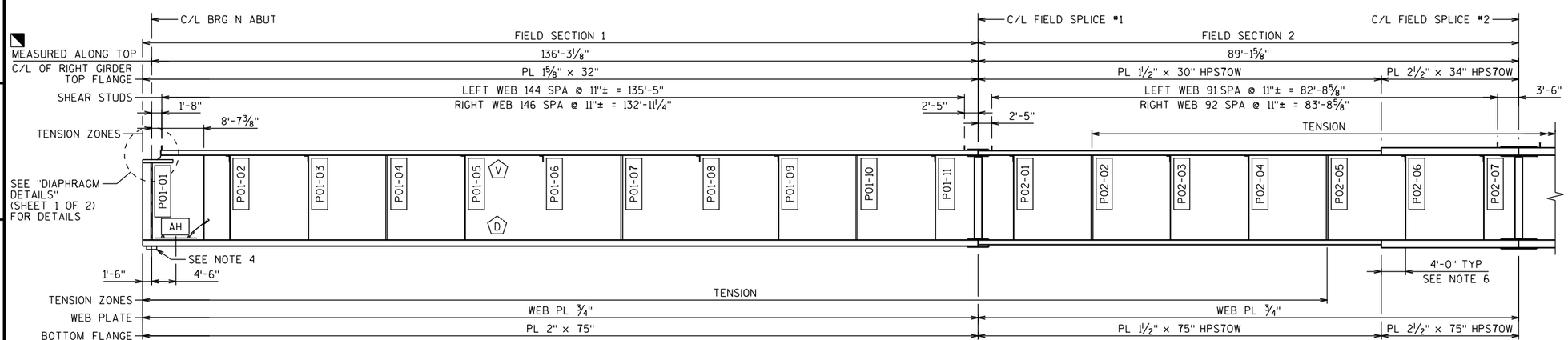


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER EXTERIOR ELEVATION



RIGHT GIRDER EXTERIOR ELEVATION

LEGEND

K2	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.
ICH	PIER INTEGRAL CROSS HEAD, SEE "PIER NE01 & NE05 INTEGRAL CROSS HEAD" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
1A	LATERAL BRACING IDENTIFIER, SEE "LATERAL BRACING DETAILS" SHEETS 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 DETAIL AND SHEAR CONNECTOR DETAIL, 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.
6. LOCATE FLANGE SHOP SPLICE THE DIMENSION SHOWN FROM PANEL POINT, TYP. SEE DETAIL ON "MISCELLANEOUS GIRDER DETAILS" SHEET.

NO.	DATE	REVISION	BY

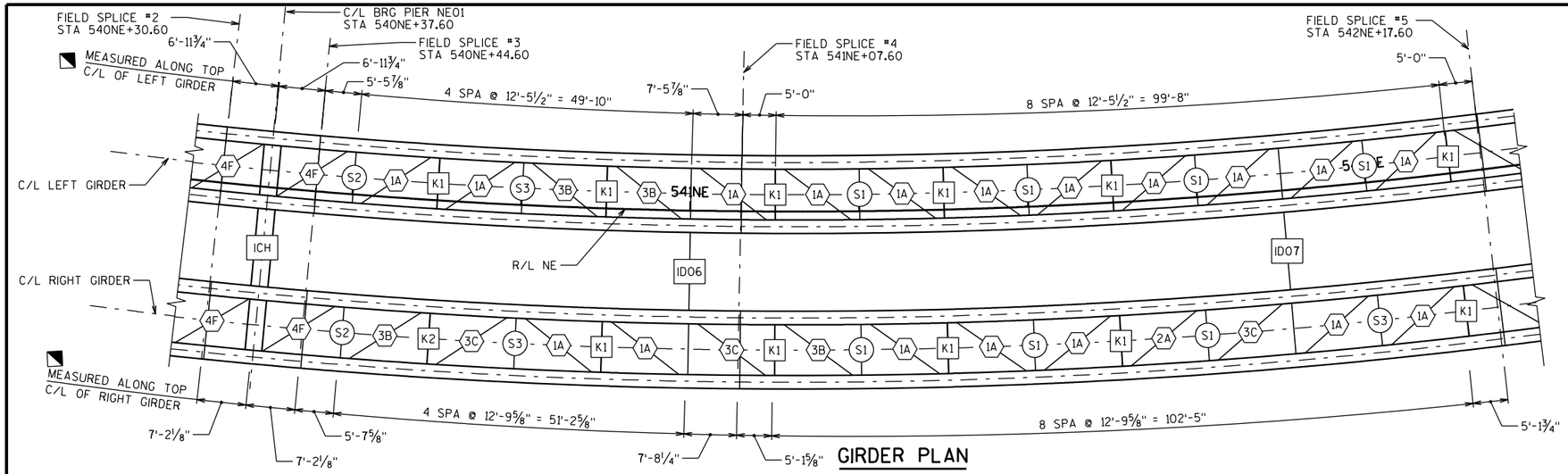
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY JJO | PLANS CK'D. JWC

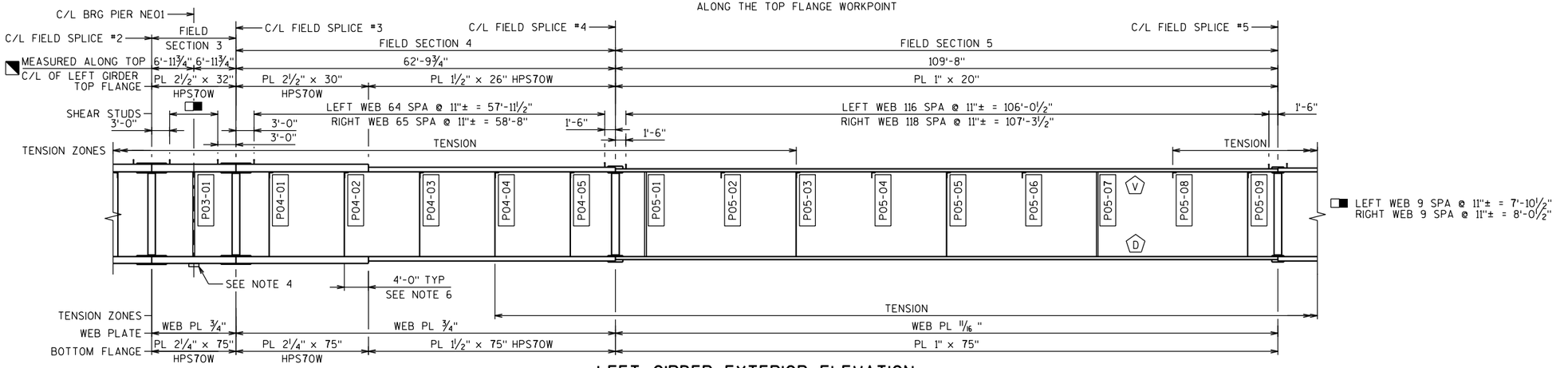
GIRDER PLAN AND ELEVATION: FIELD SECTIONS 1 & 2

SHEET 36 OF 96

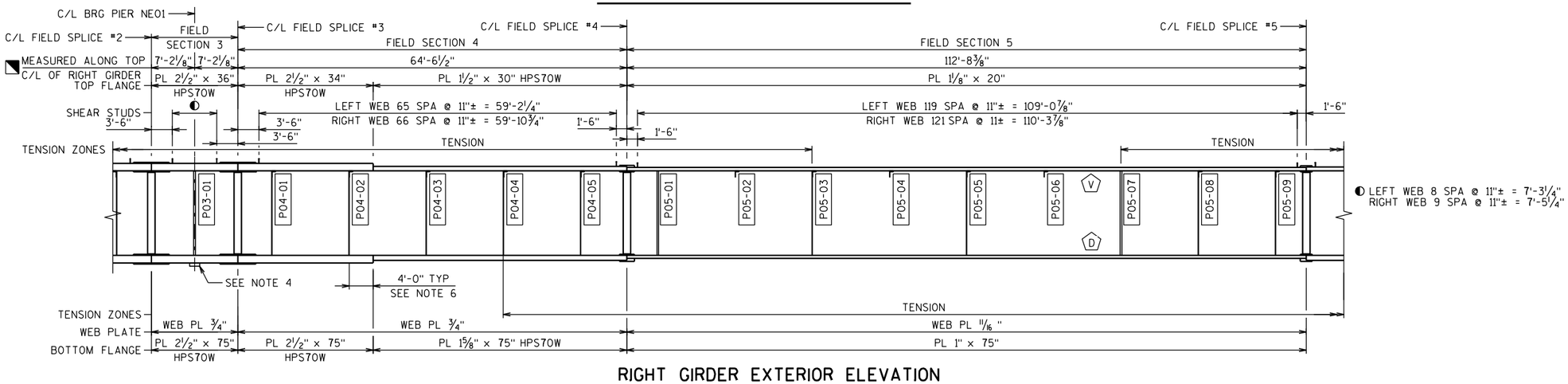


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER EXTERIOR ELEVATION



RIGHT GIRDER EXTERIOR ELEVATION

STATE PROJECT NUMBER

1060-33-81

LEGEND

K2	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.
ICH	PIER INTEGRAL CROSS HEAD, SEE "PIER NE01 & NE05 INTEGRAL CROSS HEAD" 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 DETAIL AND SHEAR CONNECTOR DETAIL, 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.
6. LOCATE FLANGE SHOP SPLICE THE DIMENSION SHOWN FROM PANEL POINT, TYP. SEE DETAIL ON "MISCELLANEOUS GIRDER DETAILS" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

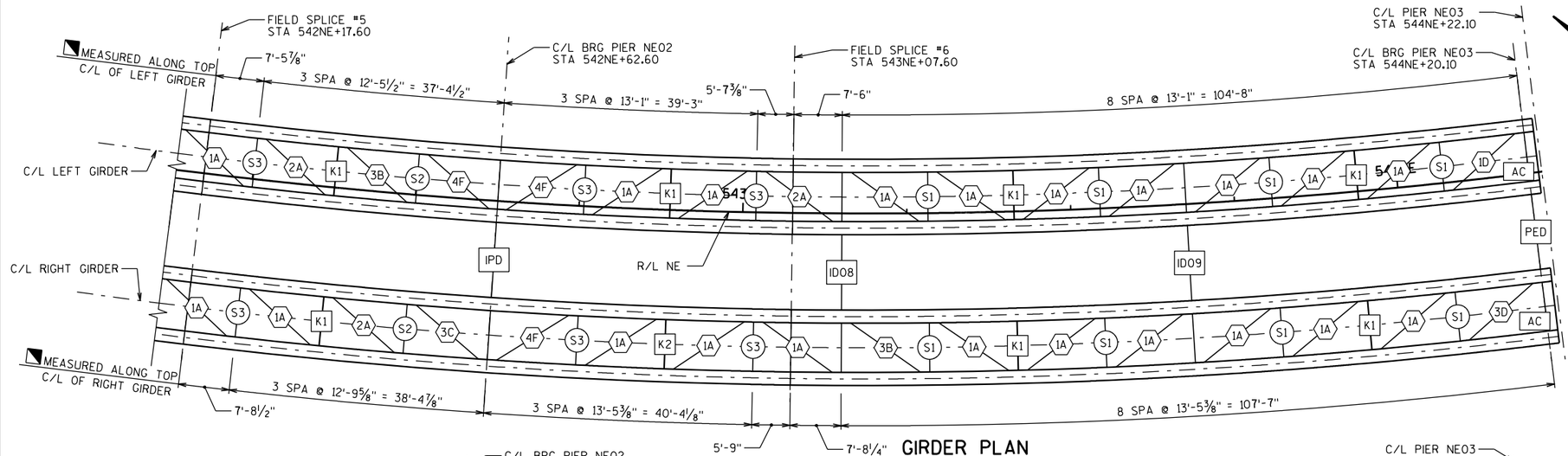
DRAWN BY	PLANS CK'D.
JJO	JWC

GIRDER PLAN AND ELEVATION: FIELD SECTIONS 3 THRU 5

SHEET 37 OF 96

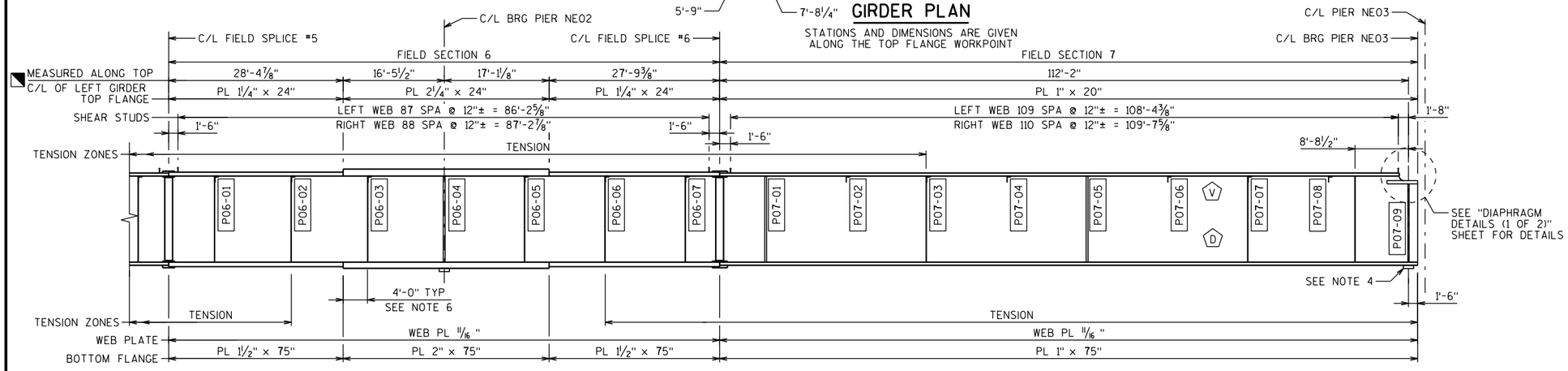
8

8

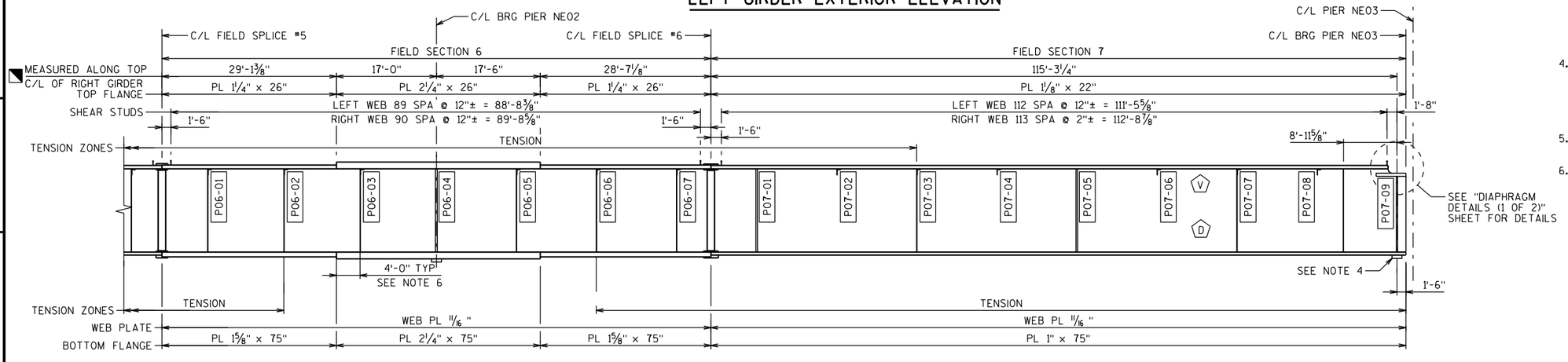


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER EXTERIOR ELEVATION



RIGHT GIRDER EXTERIOR ELEVATION

STATE PROJECT NUMBER

1060-33-81

LEGEND

K2	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.
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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 DETAIL AND SHEAR CONNECTOR DETAIL, SEE "MISCELLANEOUS GIRDER DETAILS" SHEET. FOR FIELD SPLICE DETAILS, SEE "FIELD SPLICE DETAILS" SHEET.
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5. DIMENSIONS SHOWN IN GIRDER PLAN AND ELEVATIONS ARE HORIZONTAL DIMENSIONS.
6. LOCATE FLANGE SHOP SPLICE THE DIMENSION SHOWN FROM PANEL POINT, TYP. SEE DETAIL ON "MISCELLANEOUS GIRDER DETAILS" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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GIRDER PLAN AND ELEVATION: FIELD SECTIONS 6 & 7

SHEET 38 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080510_fp.dgn
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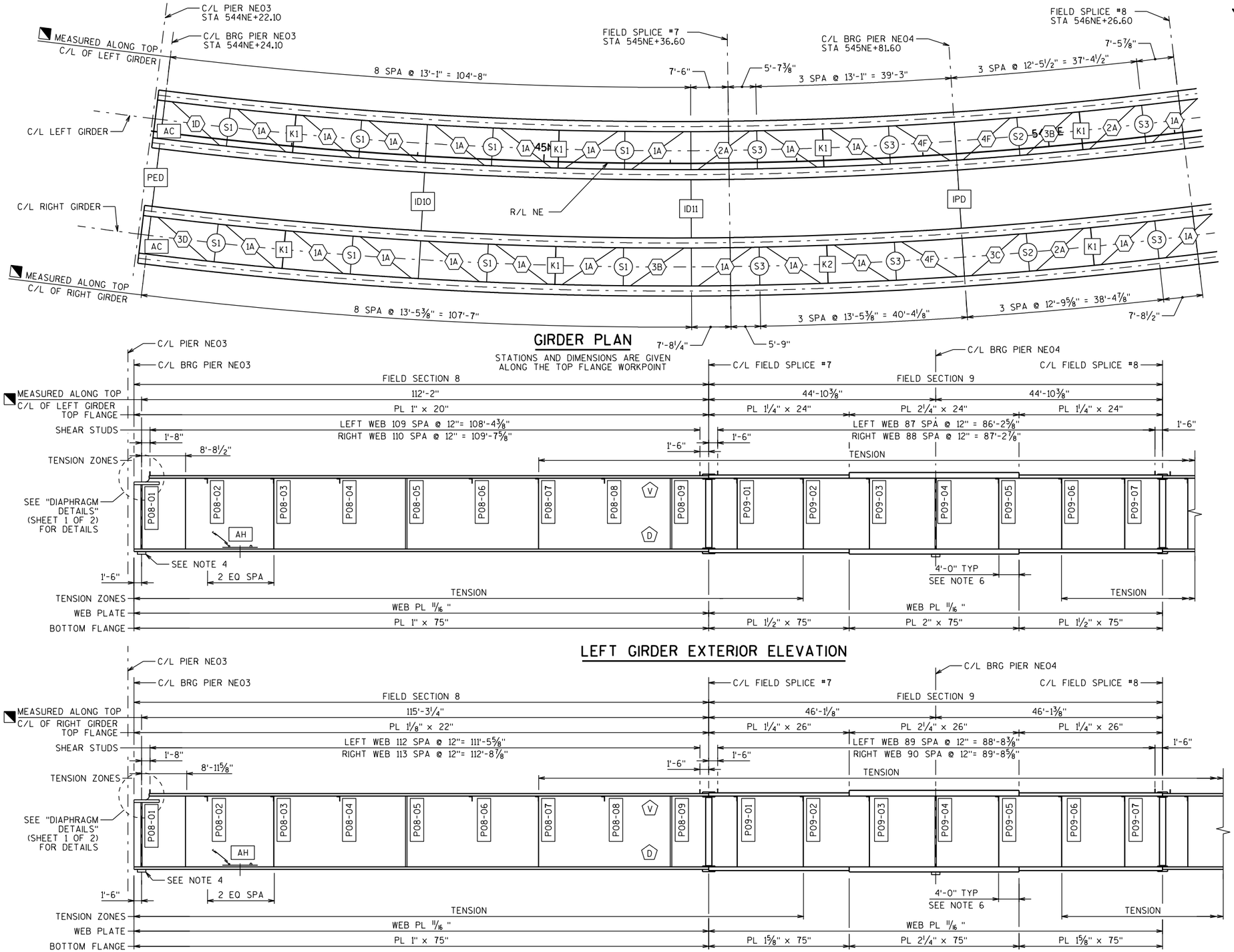

RIGHT GIRDER EXTERIOR ELEVATION

STATE PROJECT NUMBER

1060-33-81

LEGEND

K2	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-40-853

DRAWN BY JJO | PLANS CK'D. JWC

GIRDER PLAN AND ELEVATION: FIELD SECTIONS 8 & 9

SHEET 39 OF 96

8

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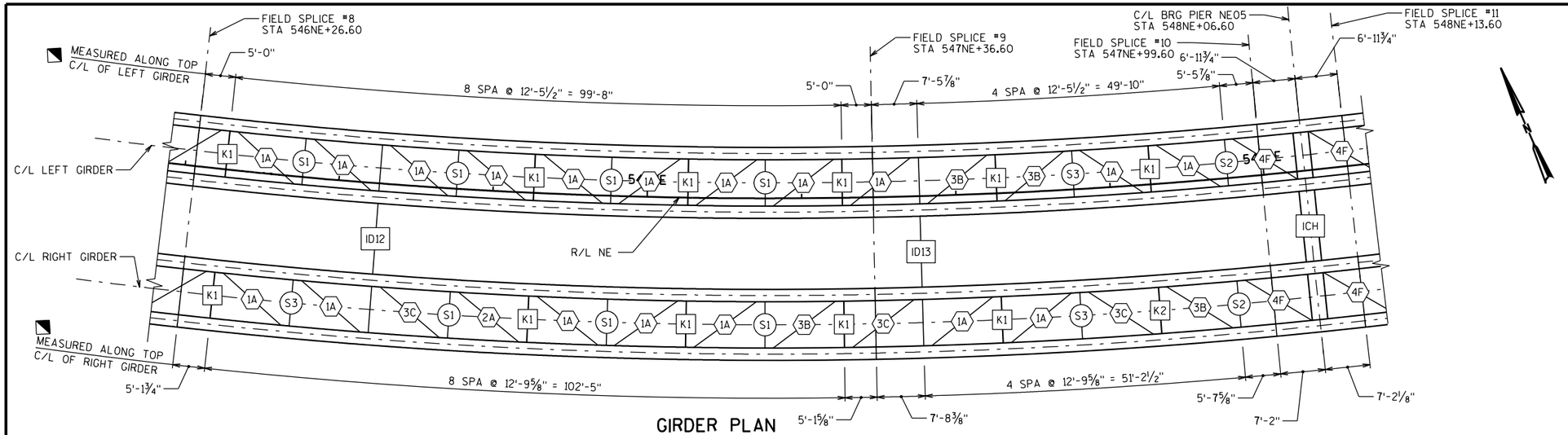
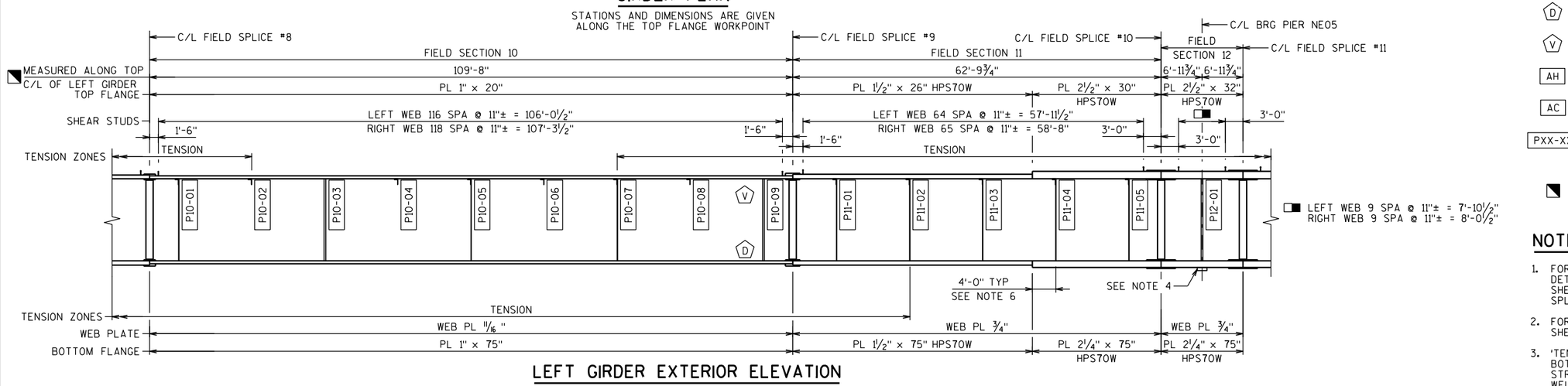
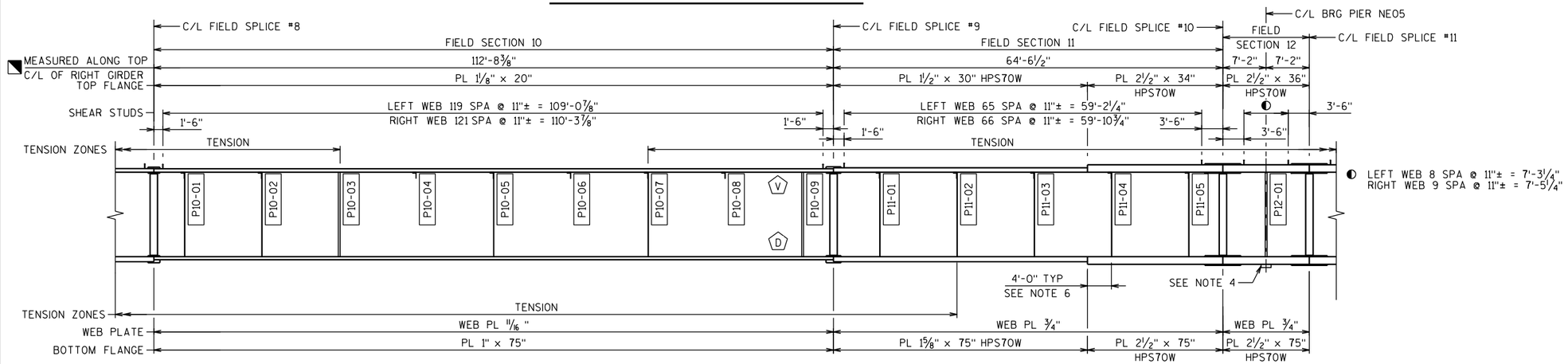


GIRDER PLAN

STATIONS AND DIMENSIONS ARE GIVEN ALONG THE TOP FLANGE WORKPOINT



LEFT GIRDER EXTERIOR ELEVATION



LEFT GIRDER EXTERIOR ELEVATION

STATE PROJECT NUMBER

1060-33-81

LEGEND

K2	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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PED	PIER END DIAPHRAGM, SEE "PIER END DIAPHRAGM" SHEET.
ICH	PIER INTEGRAL CROSS HEAD, SEE "PIER NE01 & NE05 INTEGRAL CROSS HEAD" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
1A	LATERAL BRACING IDENTIFIER, SEE "LATERAL BRACING DETAILS" SHEETS 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 DETAIL AND SHEAR CONNECTOR DETAIL, 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.
6. LOCATE FLANGE SHOP SPLICE THE DIMENSION SHOWN FROM PANEL POINT, TYP. SEE DETAIL ON "MISCELLANEOUS GIRDER DETAILS" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY JJO | PLANS CK'D. JWC

GIRDER PLAN AND ELEVATION: FIELD SECTIONS 10 THRU 12

SHEET 40 OF 96

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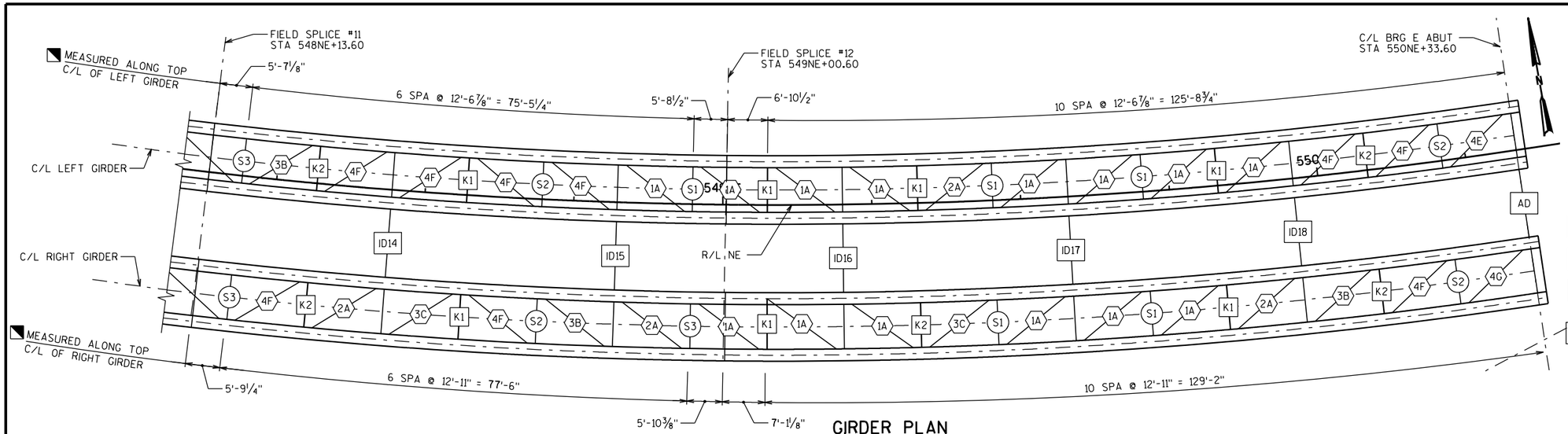
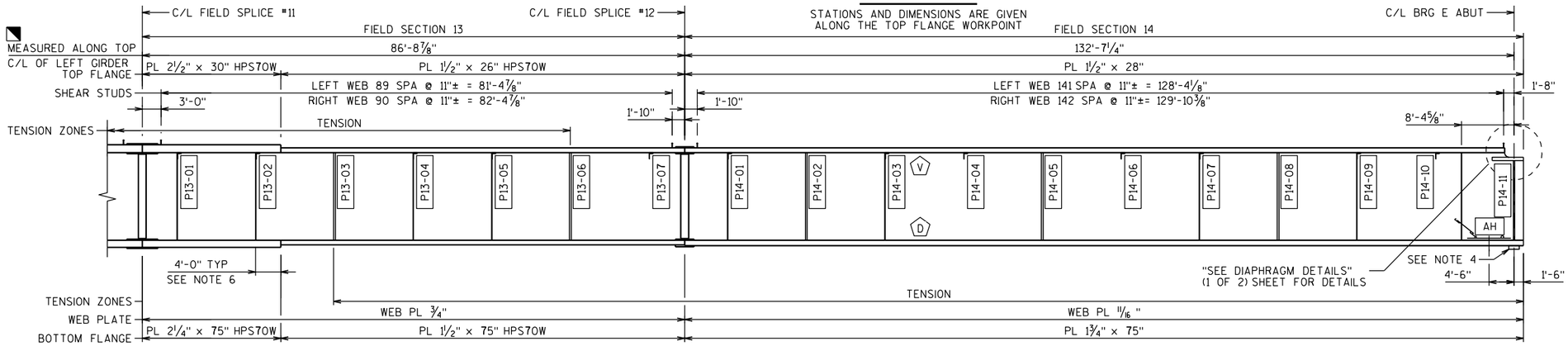
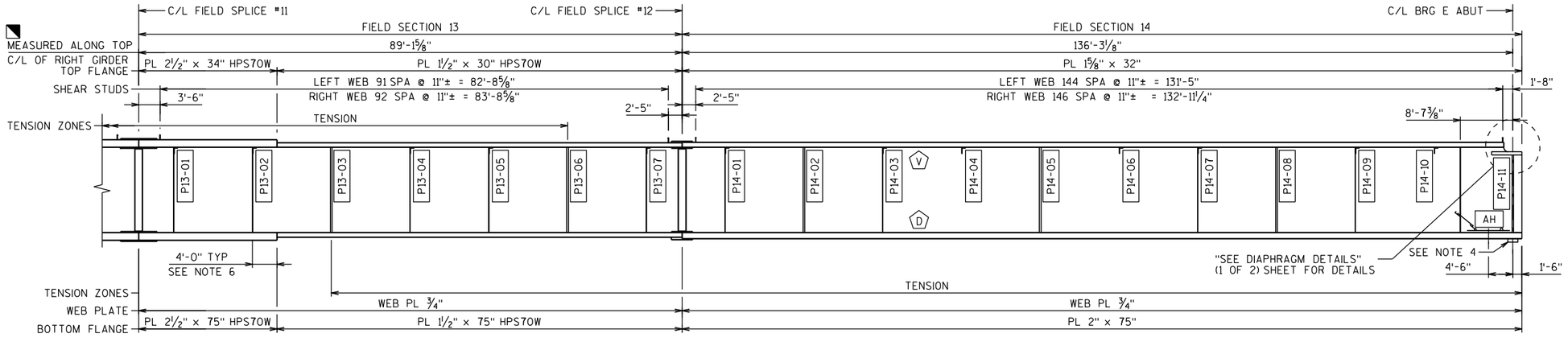


GIRDER PLAN



LEFT GIRDER EXTERIOR ELEVATION



RIGHT GIRDER EXTERIOR ELEVATION

LEGEND

K2	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.
ICH	PIER INTEGRAL CROSS HEAD, SEE "PIER NE01 & NE05 INTEGRAL CROSS HEAD" SHEET.
IDXX	INTERMEDIATE DIAPHRAGM, SEE "INTERMEDIATE DIAPHRAGM" SHEET. "XX" INDICATES DIAPHRAGM NUMBER.
1A	LATERAL BRACING IDENTIFIER, SEE "LATERAL BRACING DETAILS" SHEETS 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 DETAIL AND SHEAR CONNECTOR DETAIL, 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.
6. LOCATE FLANGE SHOP SPLICE THE DIMENSION SHOWN FROM PANEL POINT, TYP. SEE DETAIL ON "MISCELLANEOUS GIRDER DETAILS" SHEET.

STATE PROJECT NUMBER

1060-33-81

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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GIRDER PLAN AND ELEVATION: FIELD SECTIONS 13 & 14

SHEET 41 OF 96

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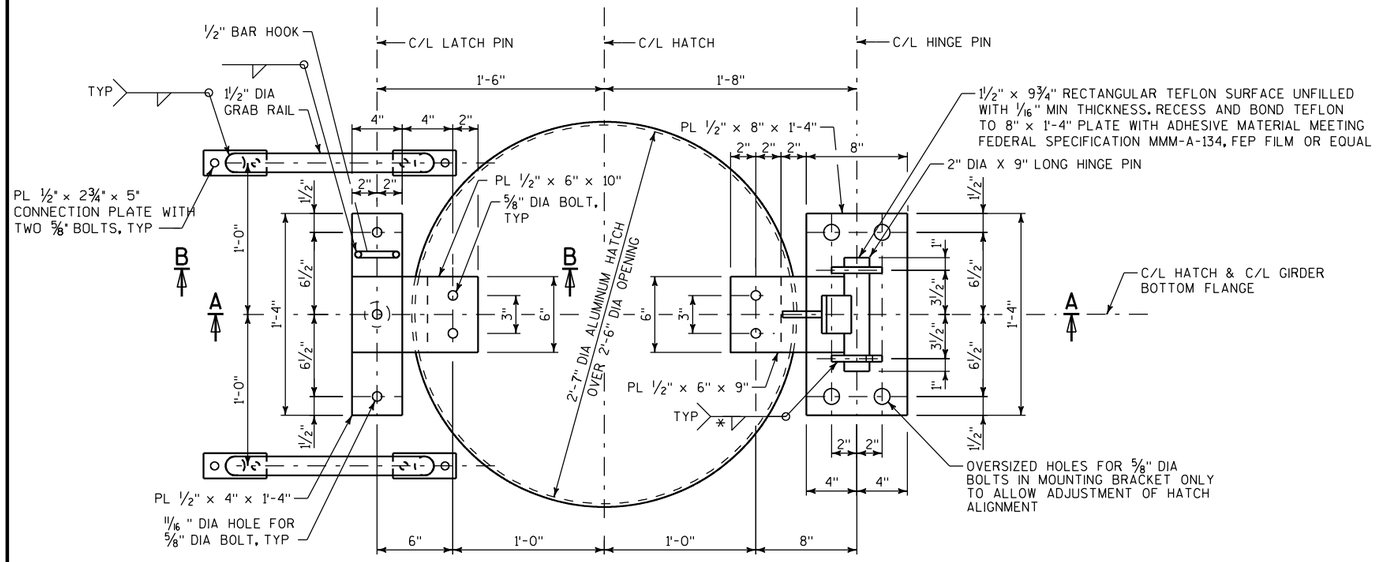
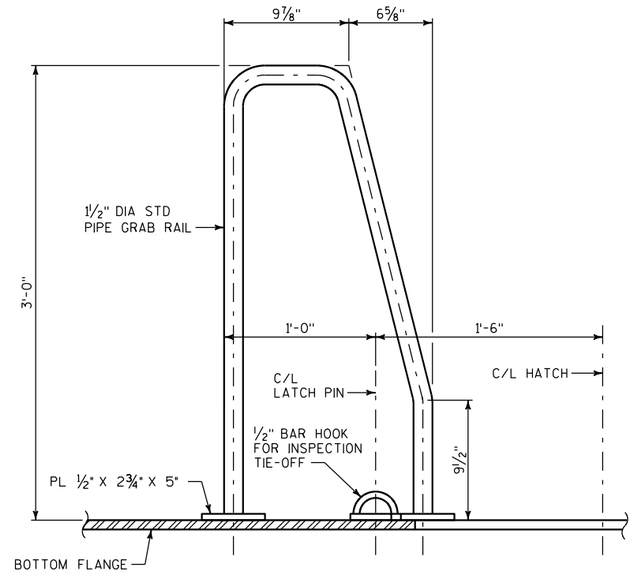
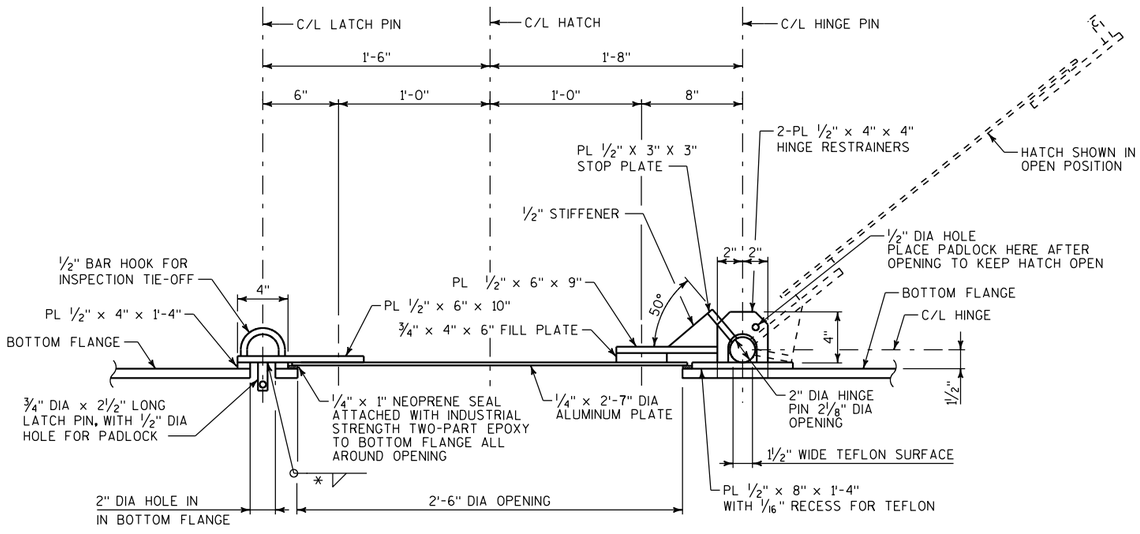
STATE PROJECT NUMBER
1060-33-81



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-40-853

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ACCESS HATCH DETAILS

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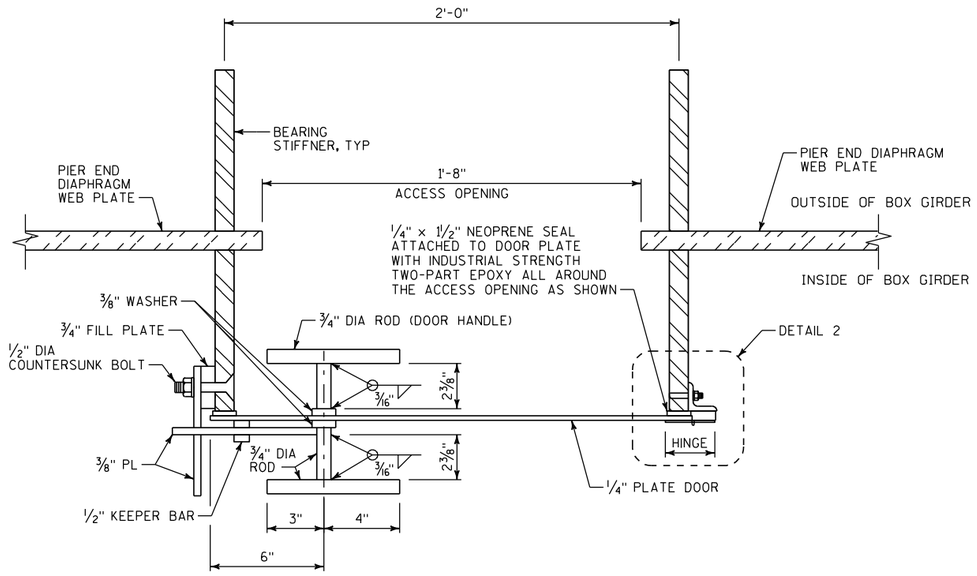
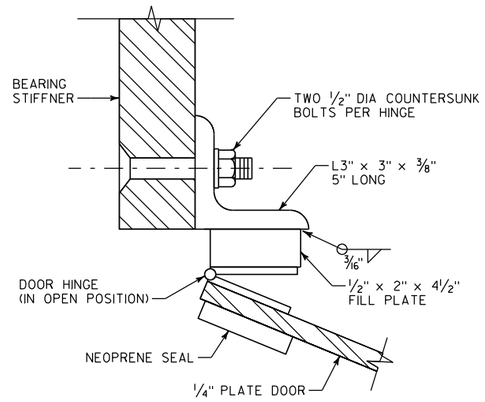
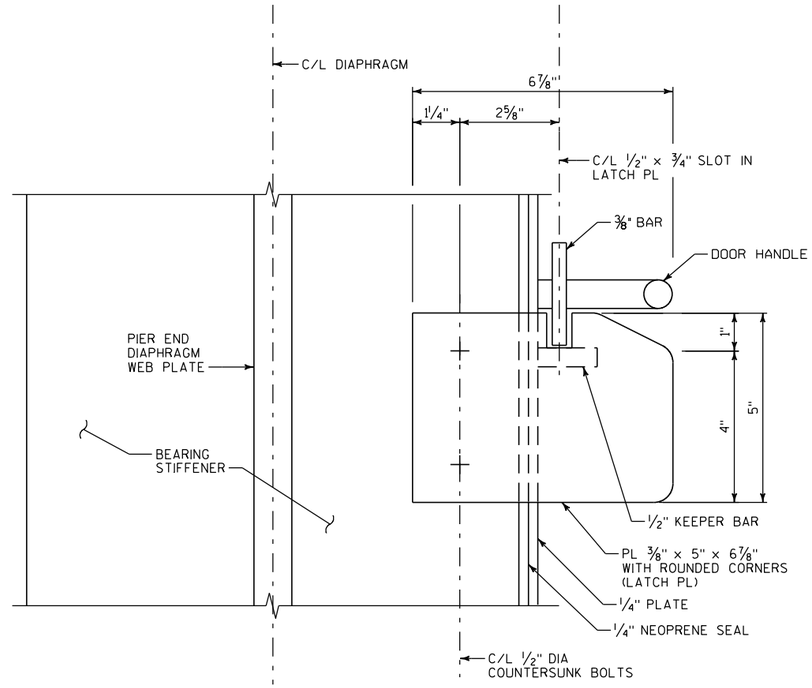


SECTION A-A

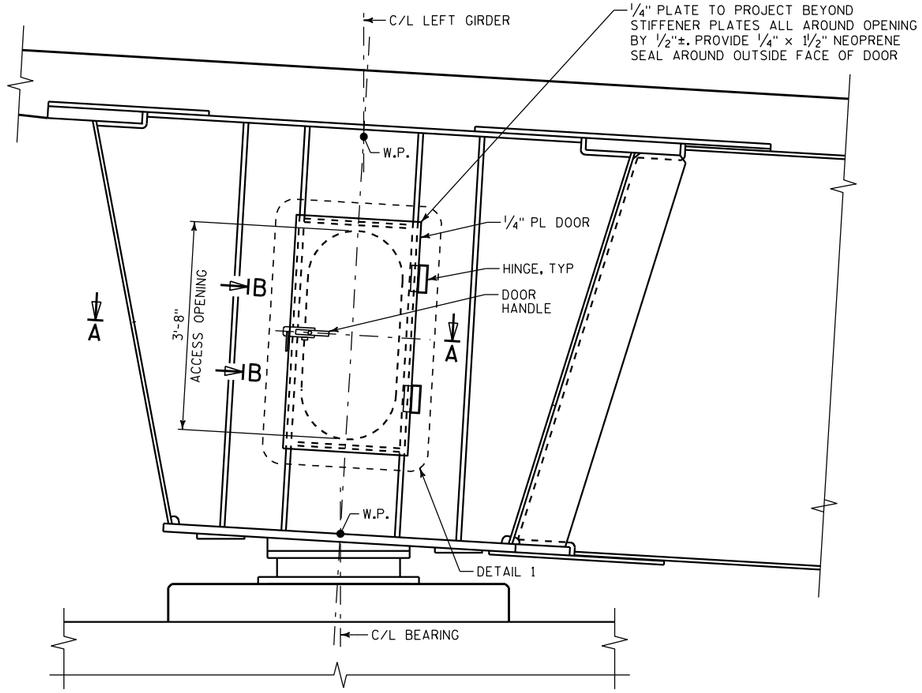


DETAIL 2

(WITH DOOR OPEN)

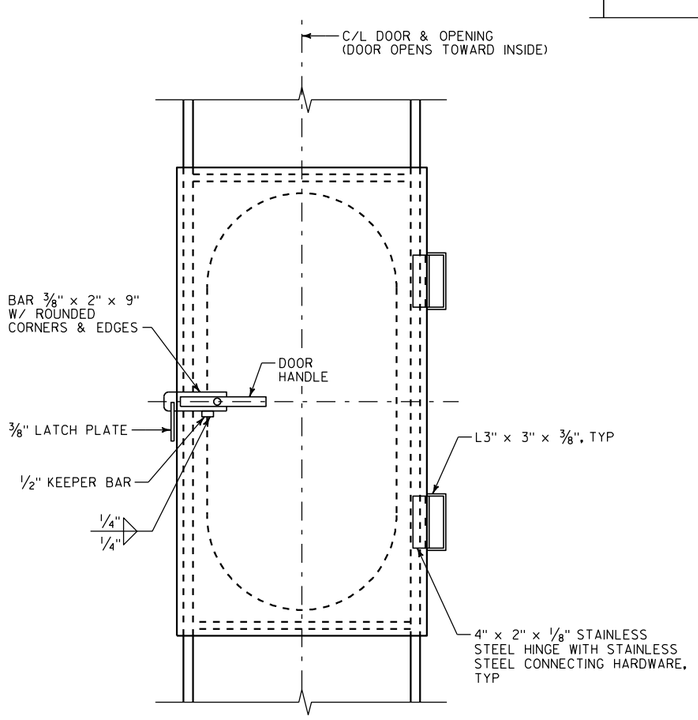


SECTION B-B



ELEVATION

LEFT GIRDER SHOWN, RIGHT GIRDER SIMILAR



DETAIL 1

8

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NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

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ACCESS DOOR DETAILS

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FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080515_ss.dgn
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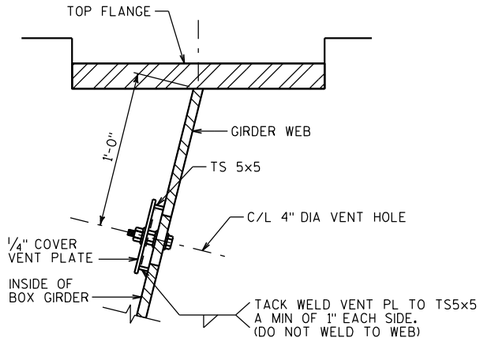
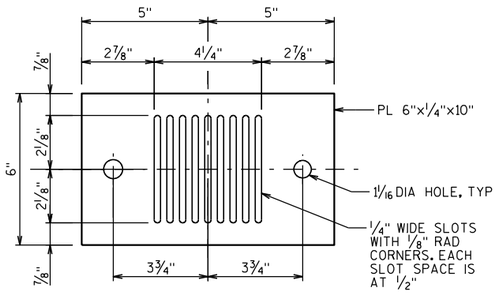
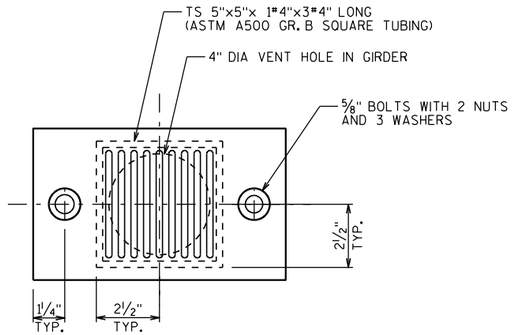
1060-33-81



VENT HOLE LOCATION



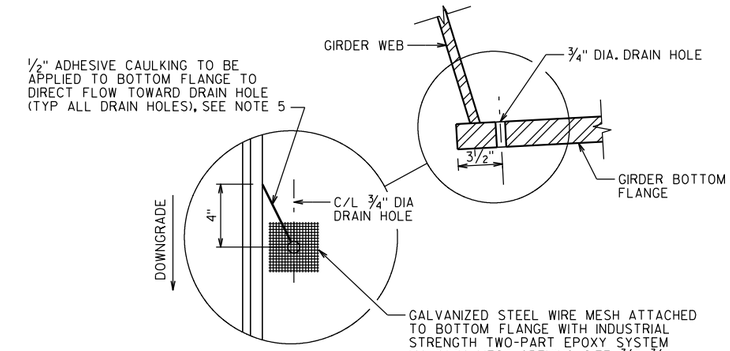
COVER VENT PLATE



INSIDE FACE

VENT HOLE COVER ASSEMBLY

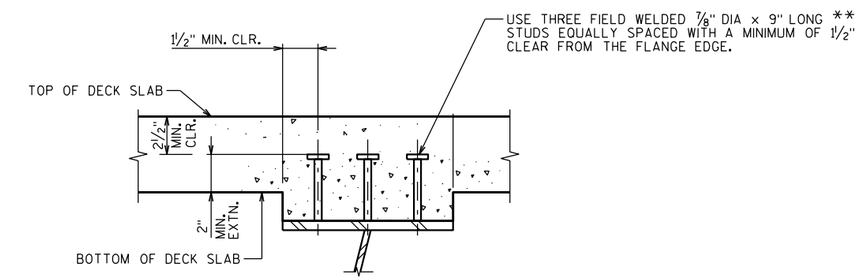
NOT TO SCALE



PLAN OF DRAIN HOLES

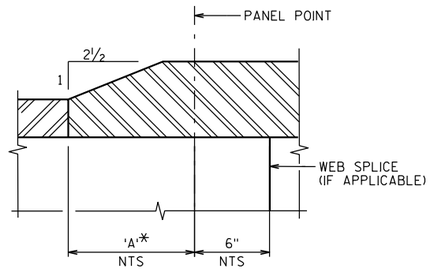
DRAIN HOLE DETAILS

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 'A' DIMENSION MEASURED FROM PANEL POINTS AT INDIVIDUAL SHOP SPLICE LOCATIONS

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".

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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MISCELLANEOUS GIRDER DETAILS

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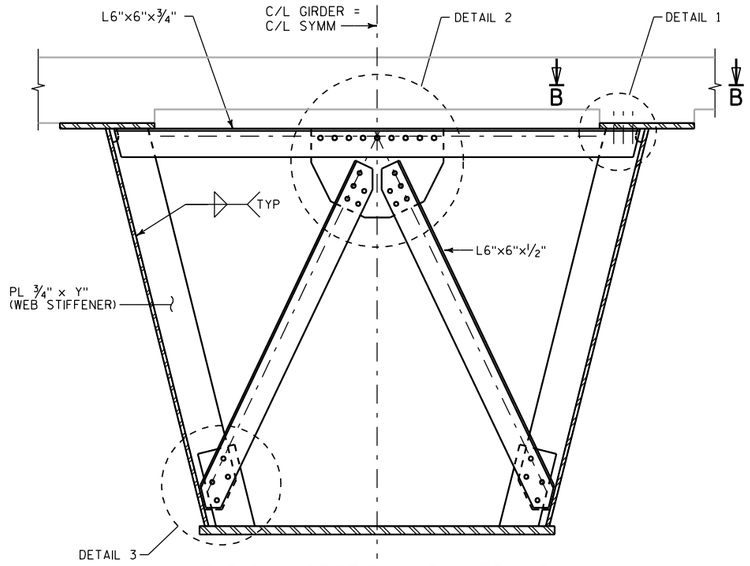
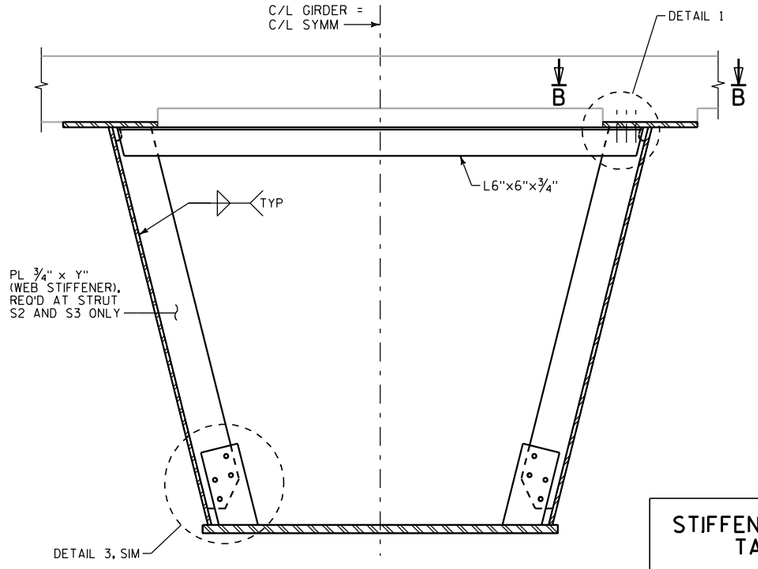


TYPICAL SECTION AT K-FRAME

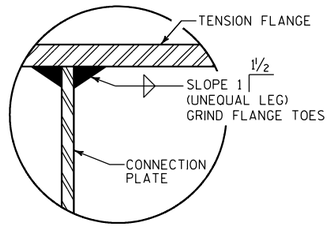
FOR LOCATION OF K-FRAMES K1 AND K2
SEE GIRDER PLAN AND ELEVATION SHEETS



TYPICAL SECTION AT STRUT

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

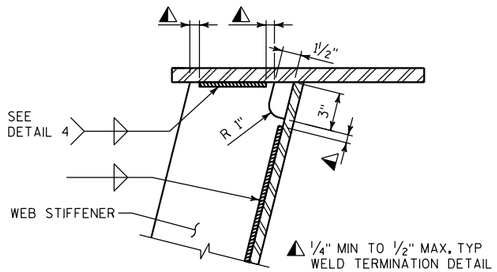
KEY TO K-FRAME AND STRUT IDENTIFIERS		
ID	NO. OF BOLTS REQ'D AT DETAIL 1	WEB STIFFENERS REQUIRED
K1	3	YES
K2	6	YES
S1	3	NO
S2	6	YES
S3	3	YES



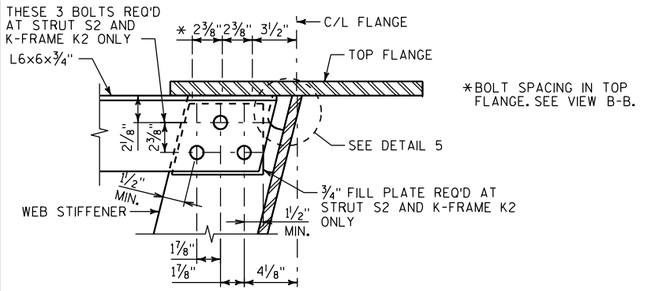
DETAIL 4

WEB STIFFENER DETAIL
AT TENSION FLANGE

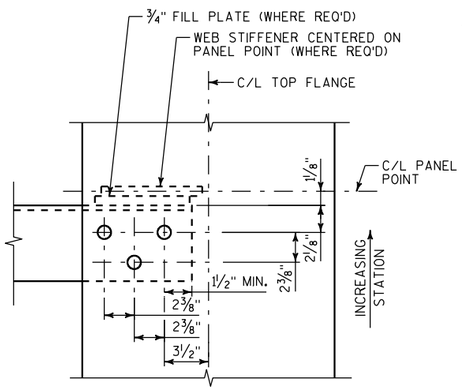
STIFFENER WIDTH TABLE	
FIELD SECTION	Y
1 THROUGH 4	10"
5 THROUGH 7	8"
8 THROUGH 10	8"
11 THROUGH 14	10"



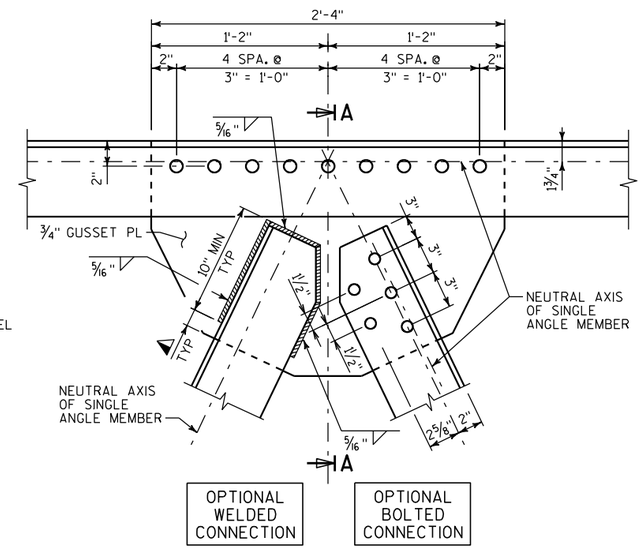
DETAIL 5



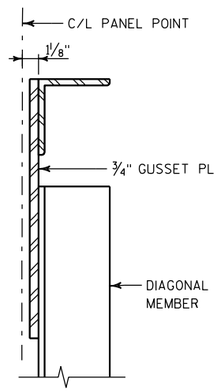
DETAIL 1



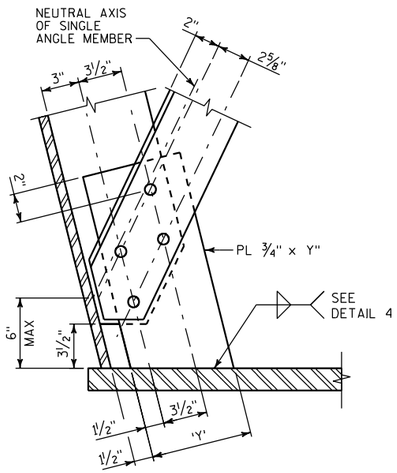
VIEW B-B



DETAIL 2



SECTION A-A



DETAIL 3

NOTES

1. ALL BOLTS IN K-FRAME OR STRUT CONNECTIONS ARE 1" 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-40-853

DRAWN BY SR | PLANS CK'D. JWC

INTERMEDIATE K-FRAMES, STRUTS, & STIFFENERS

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FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080517_ss.dgn
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PLOT SCALE : 2:1

STATE PROJECT NUMBER
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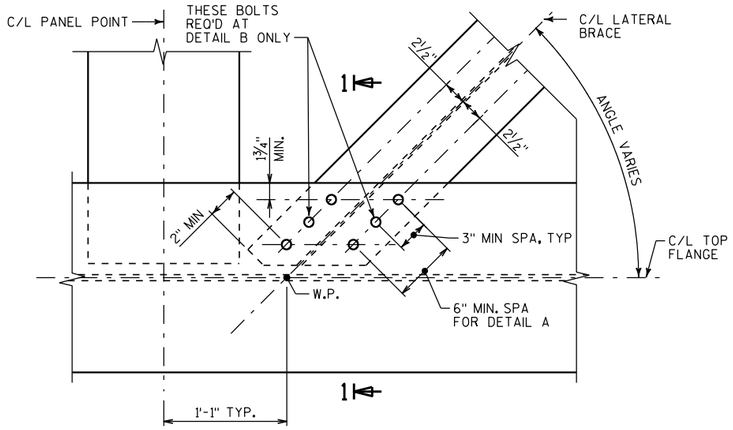
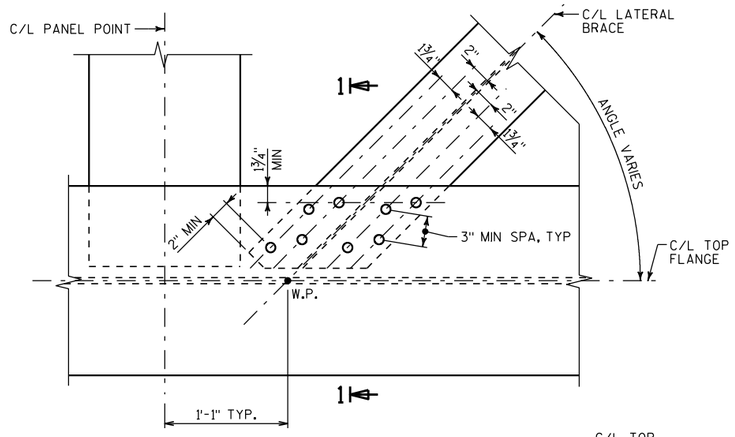
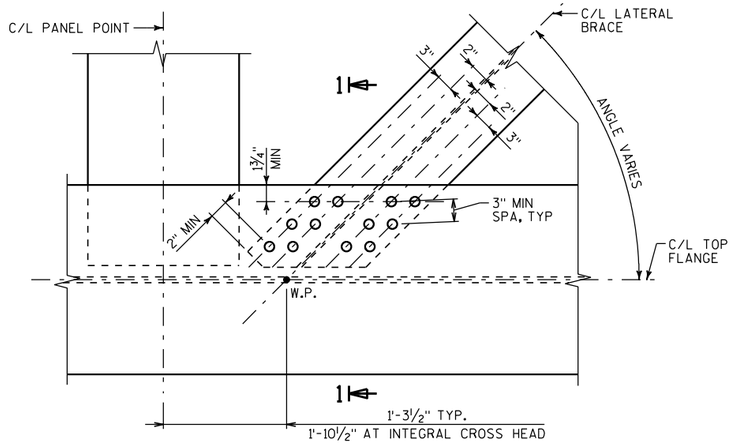


DETAIL A
4 BOLT CONNECTION

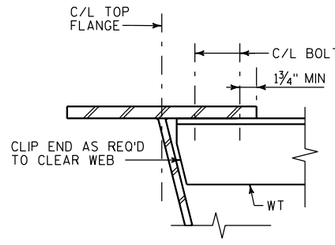
DETAIL B
6 BOLT CONNECTION



DETAIL C
8 BOLT CONNECTION



DETAIL F
12 BOLT CONNECTION



SECTION 1-1

SECTION MARKS

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

1 WT 7 × 30.5

2 WT 8 × 33.5

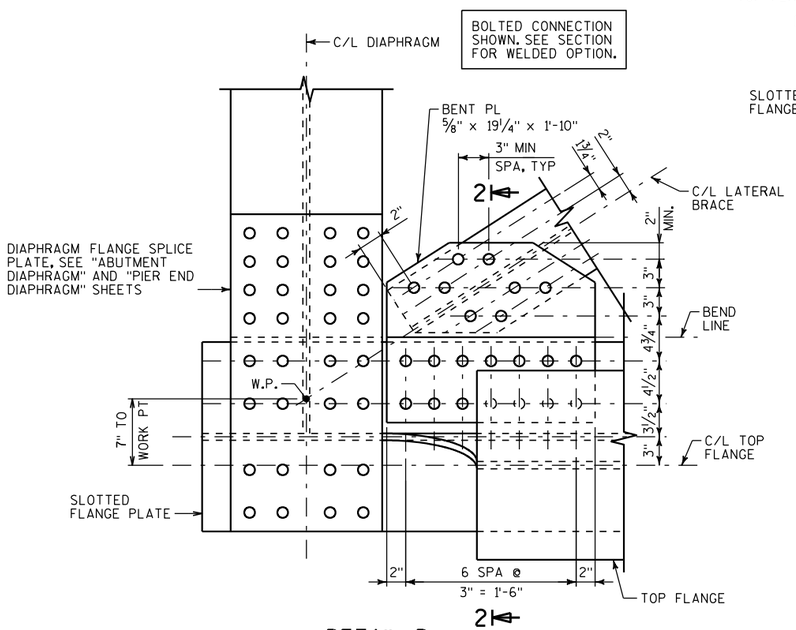
3 WT 10.5 × 55.5

4 WT 15 × 95.5

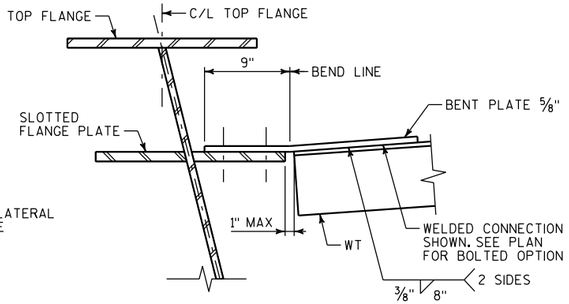
THE SECOND CHARACTER OF THE LATERAL BRACING IDENTIFIER SPECIFIES THE END CONNECTION DETAIL AND RELATES DIRECTLY TO DETAILS A THRU G ON THIS SHEET AND "LATERAL BRACING DETAILS (2 OF 2)" SHEET.

NOTES:

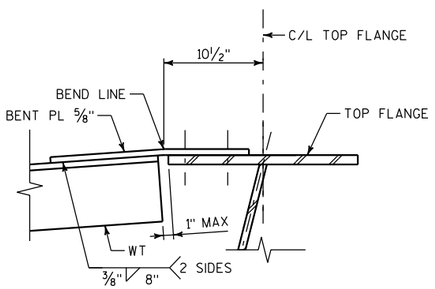
1. ALL BOLTS CONNECTING LATERAL BRACING MEMBERS ARE 1" DIAMETER ASTM A325 TYPE 1.
2. ALL HOLES ARE STD. HOLES.
3. DETAILS ON THIS SHEET SHOW TYPICAL DIMENSIONS ONLY AND WILL HAVE TO BE MIRRORED OR REVERSED AS REQUIRED.
4. SEE GIRDER PLAN AND ELEVATION SHEETS FOR ORIENTATION OF EACH LATERAL BRACE.



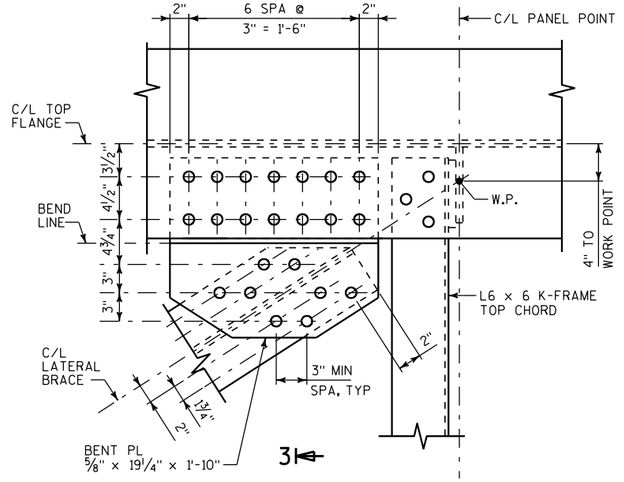
DETAIL D
AT PIER END DIAPHRAGM



SECTION 2-2



SECTION 3-3



DETAIL D
AT FIRST STRUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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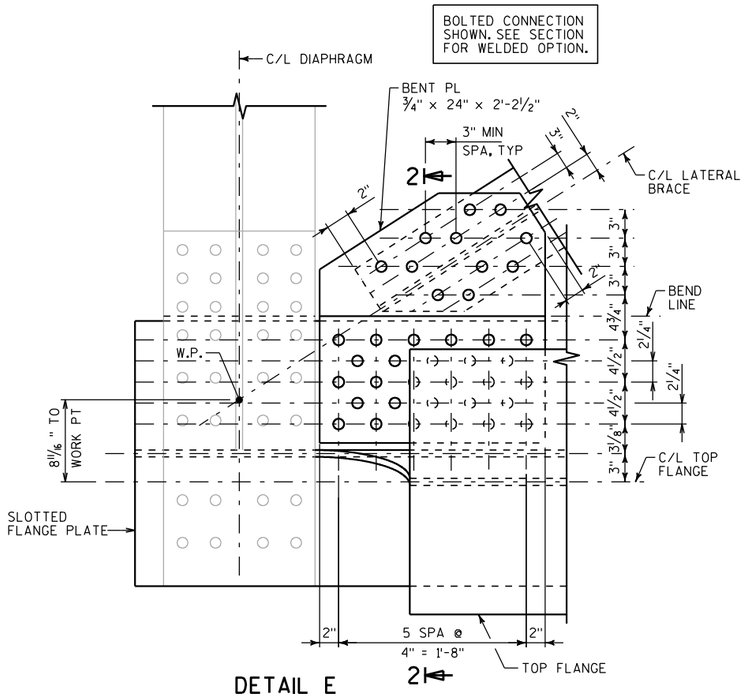
LATERAL BRACING DETAILS (1 OF 2)

SHEET 46 OF 96

8

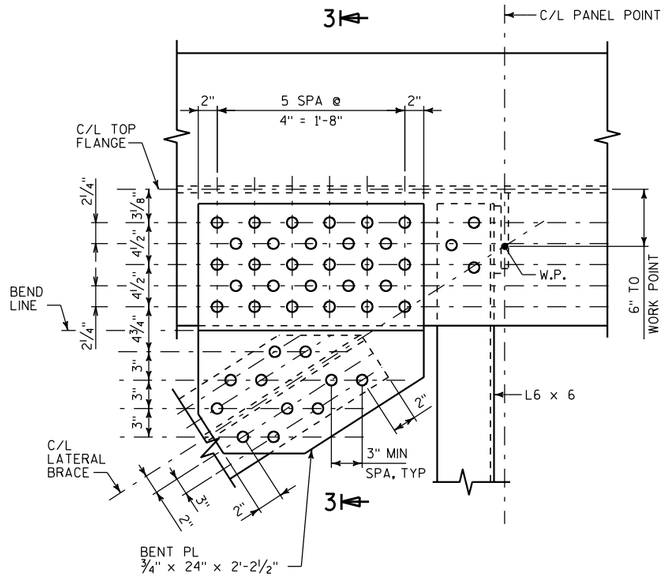
8

STATE PROJECT NUMBER
1060-33-81



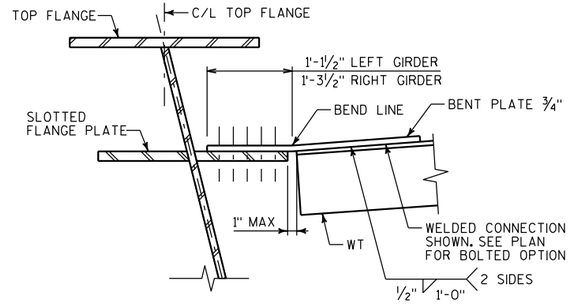
DETAIL E

AT ABUTMENT DIAPHRAGM, LEFT GIRDER



DETAIL E

AT FIRST STRUT, LEFT GIRDER



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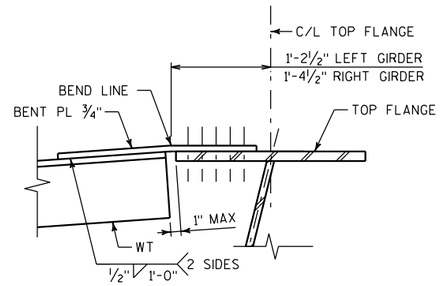

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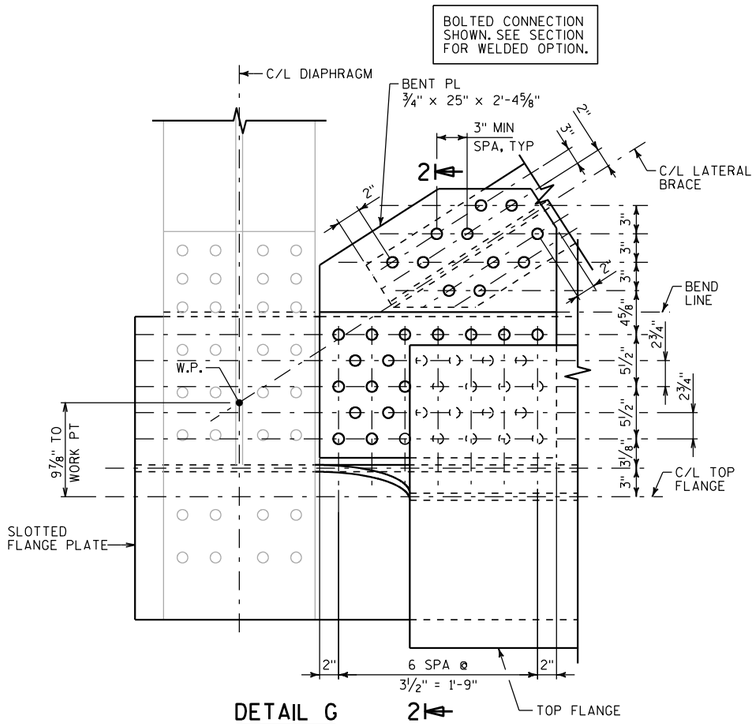
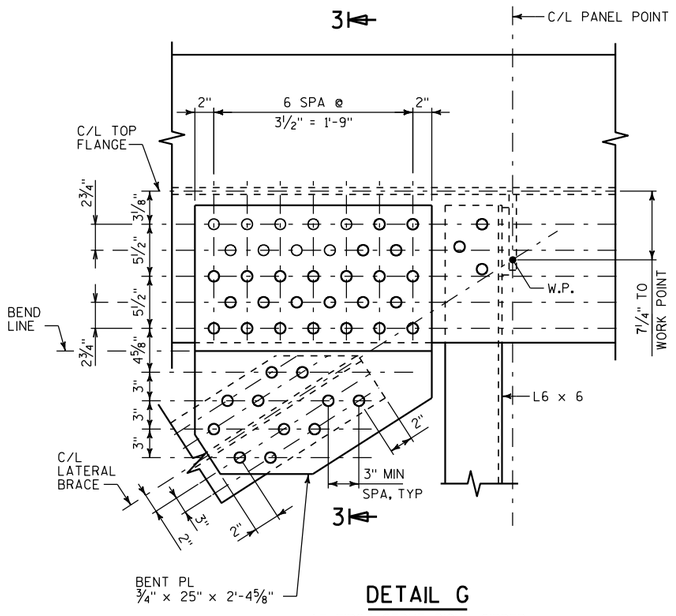


DETAIL G

AT ABUTMENT DIAPHRAGM, RIGHT GIRDER



DETAIL G

AT FIRST STRUT, RIGHT GIRDER

NOTES:

1. SEE "LATERAL BRACING DETAILS (1 OF 2)" SHEET FOR NOTES AND SECTION MARK DESCRIPTIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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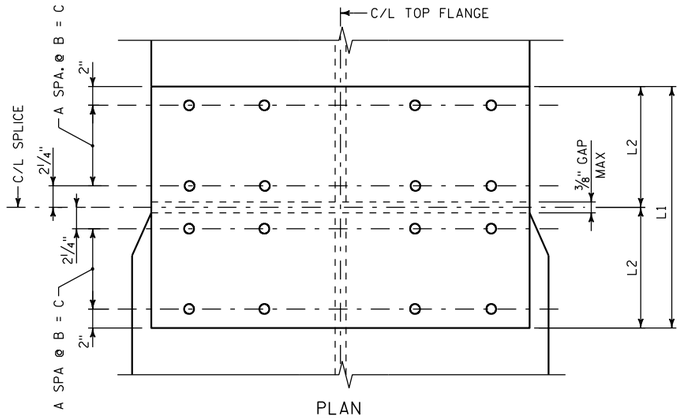
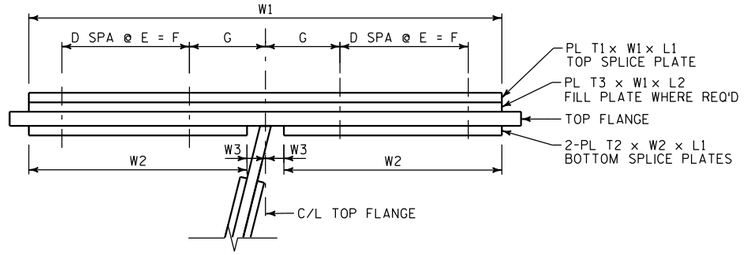
LATERAL BRACING DETAILS (2 OF 2)

SHEET 47 OF 96

STATE PROJECT NUMBER
1060-33-81

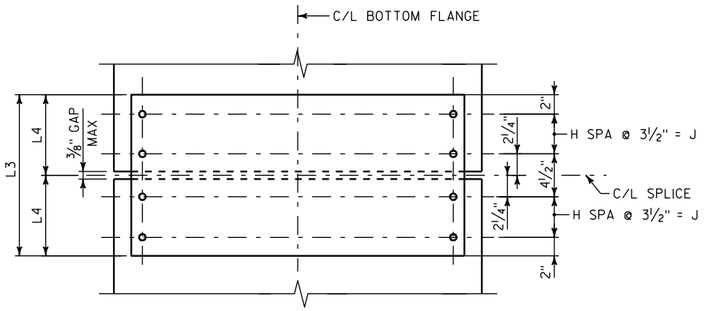


PLAN



SECTION

TOP FLANGE SPLICE



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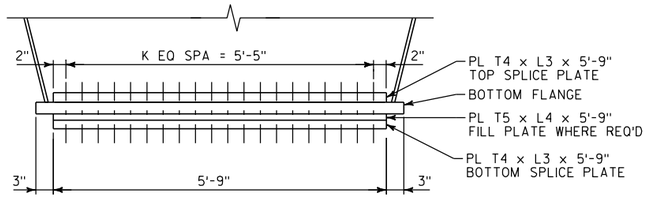

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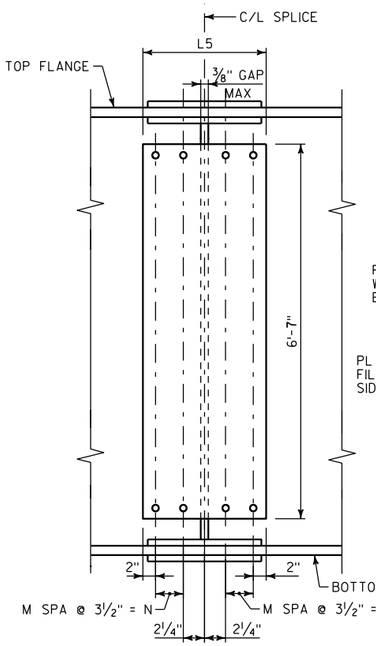
BOTTOM FLANGE SPLICE



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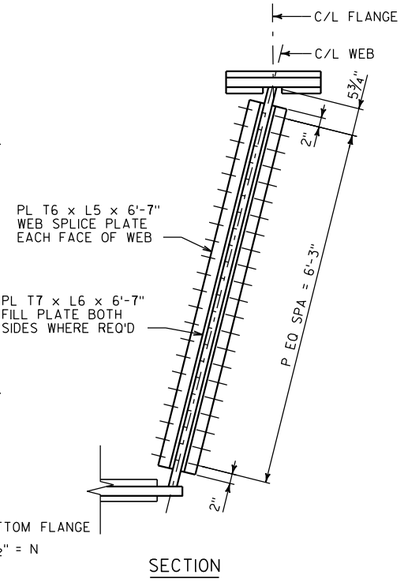

SECTION

WEB SPLICE

FLANGE 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	RIGHT	1¼"	1¼"	⅛"	4'-9½"	2'-4¾"	2'-6"	1'-2"	1"	7	3½"	2'-½"	2	5"	10"	3"	1⅛"	½"	4'-2½"	2'-1¼"	6	1'-9"	21	⅝"	-	1'-10½"	-	2	7"	20
	LEFT	1⅛"	1⅛"	-	3'-7½"	-	2'-2"	1'-0"	1"	5	3½"	1'-5½"	2	4"	8"	3"	1"	¼"	3'-½"	1'-6¼"	4	1'-2"	21	⅝"	-	1'-10½"	-	2	7"	17
SPLICE 2	RIGHT	1¾"	1¾"	-	6'-6½"	-	2'-10"	1'-4"	1"	10	3½"	2'-11"	2	6"	1'-0"	3"	1¾"	-	4'-2½"	-	6	1'-9"	21	⅝"	-	2'-5½"	-	3	10½"	16
	LEFT	1¾"	1¾"	-	5'-4½"	-	2'-6"	1'-2"	1"	8	3½"	2'-4"	2	5"	10"	3"	1½"	-	3'-7½"	-	5	1'-5½"	21	⅝"	-	2'-5½"	-	3	10½"	16
SPLICE 3	RIGHT	1¾"	1¾"	-	6'-6½"	-	2'-10"	1'-4"	1"	10	3½"	2'-11"	2	6"	1'-0"	3"	1¾"	-	4'-2½"	-	6	1'-9"	21	⅝"	-	2'-5½"	-	3	10½"	16
	LEFT	1¾"	1¾"	-	5'-4½"	-	2'-6"	1'-2"	1"	8	3½"	2'-4"	2	5"	10"	3"	1⅝"	-	3'-7½"	-	5	1'-5½"	21	⅝"	-	2'-5½"	-	3	10½"	16
SPLICE 4	RIGHT	⅝"	⅝"	⅜"	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	5"	5"	3"	⅝"	⅝"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	-	2	7"	16
	LEFT	⅝"	⅝"	½"	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	5"	5"	3"	⅝"	½"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	-	2	7"	16
SPLICE 5	RIGHT	⅝"	⅝"	⅛"	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	5"	5"	3"	⅝"	⅝"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	-	2	7"	16
	LEFT	⅝"	⅝"	¼"	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	5"	5"	3"	⅝"	½"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	-	2	7"	16
SPLICE 6	RIGHT	⅝"	⅝"	⅛"	2'-5½"	1'-2¾"	1'-10"	10"	1"	3	3½"	10½"	1	6"	6"	3"	⅝"	⅝"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	-	2	7"	16
	LEFT	⅝"	⅝"	¼"	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	5"	5"	3"	⅝"	½"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	-	2	7"	16
SPLICE 7	RIGHT	⅝"	⅝"	⅛"	2'-5½"	1'-2¾"	1'-10"	10"	1"	3	3½"	10½"	1	6"	6"	3"	⅝"	⅝"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	-	2	7"	16
	LEFT	⅝"	⅝"	¼"	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	5"	5"	3"	⅝"	½"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	-	2	7"	16
SPLICE 8	RIGHT	⅝"	⅝"	⅛"	1'-10½"	11¼"	1'-8"	9"	1"	2	3½"	7"	1	5"	5"	3"	⅝"	⅝"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	-	2	7"	16
	LEFT	⅝"	⅝"	¼"	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	5"	5"	3"	⅝"	½"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	-	2	7"	16
SPLICE 9	RIGHT	⅝"	⅝"	⅜"	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	5"	5"	3"	⅝"	⅝"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	-	2	7"	16
	LEFT	⅝"	⅝"	½"	2'-5½"	1'-2¾"	1'-8"	9"	1"	3	3½"	10½"	1	5"	5"	3"	⅝"	½"	1'-10½"	11¼"	2	7"	21	½"	-	1'-10½"	-	2	7"	16
SPLICE 10	RIGHT	1¾"	1¾"	-	6'-6½"	-	2'-10"	1'-4"	1"	10	3½"	2'-11"	2	6"	1'-0"	3"	1¾"	-	4'-2½"	-	6	1'-9"	21	⅝"	-	2'-5½"	-	3	10½"	16
	LEFT	1¾"	1¾"	-	5'-4½"	-	2'-6"	1'-2"	1"	8	3½"	2'-4"	2	5"	10"	3"	1⅝"	-	3'-7½"	-	5	1'-5½"	21	⅝"	-	2'-5½"	-	3	10½"	16
SPLICE 11	RIGHT	1¾"	1¾"	-	6'-6½"	-	2'-10"	1'-4"	1"	10	3½"	2'-11"	2	6"	1'-0"	3"	1¾"	-	4'-2½"	-	6	1'-9"	21	⅝"	-	2'-5½"	-	3	10½"	16
	LEFT	1¾"	1¾"	-	5'-4½"	-	2'-6"	1'-2"	1"	8	3½"	2'-4"	2	5"	10"	3"	1½"	-	3'-7½"	-	5	1'-5½"	21	⅝"	-	2'-5½"	-	3	10½"	16
SPLICE 12	RIGHT	1¼"	1¼"	⅛"	4'-9½"	2'-4¾"	2'-6"	1'-2"	1"	7	3½"	2'-½"	2	5"	10"	3"	1⅛"	½"	4'-2½"	2'-1¼"	6	1'-9"	21	⅝"	-	1'-10½"	-	2	7"	20
	LEFT	1⅛"	1⅛"	-	3'-7½"	-	2'-2"	1'-0"	1"	5	3½"	1'-5½"	2	4"	8"	3"	1"	¼"	3'-½"	1'-6¼"	4	1'-2"	21	⅝"	-	1'-10½"	-	2	7"	17

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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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FIELD SPLICE DETAILS

SHEET 48 OF 96

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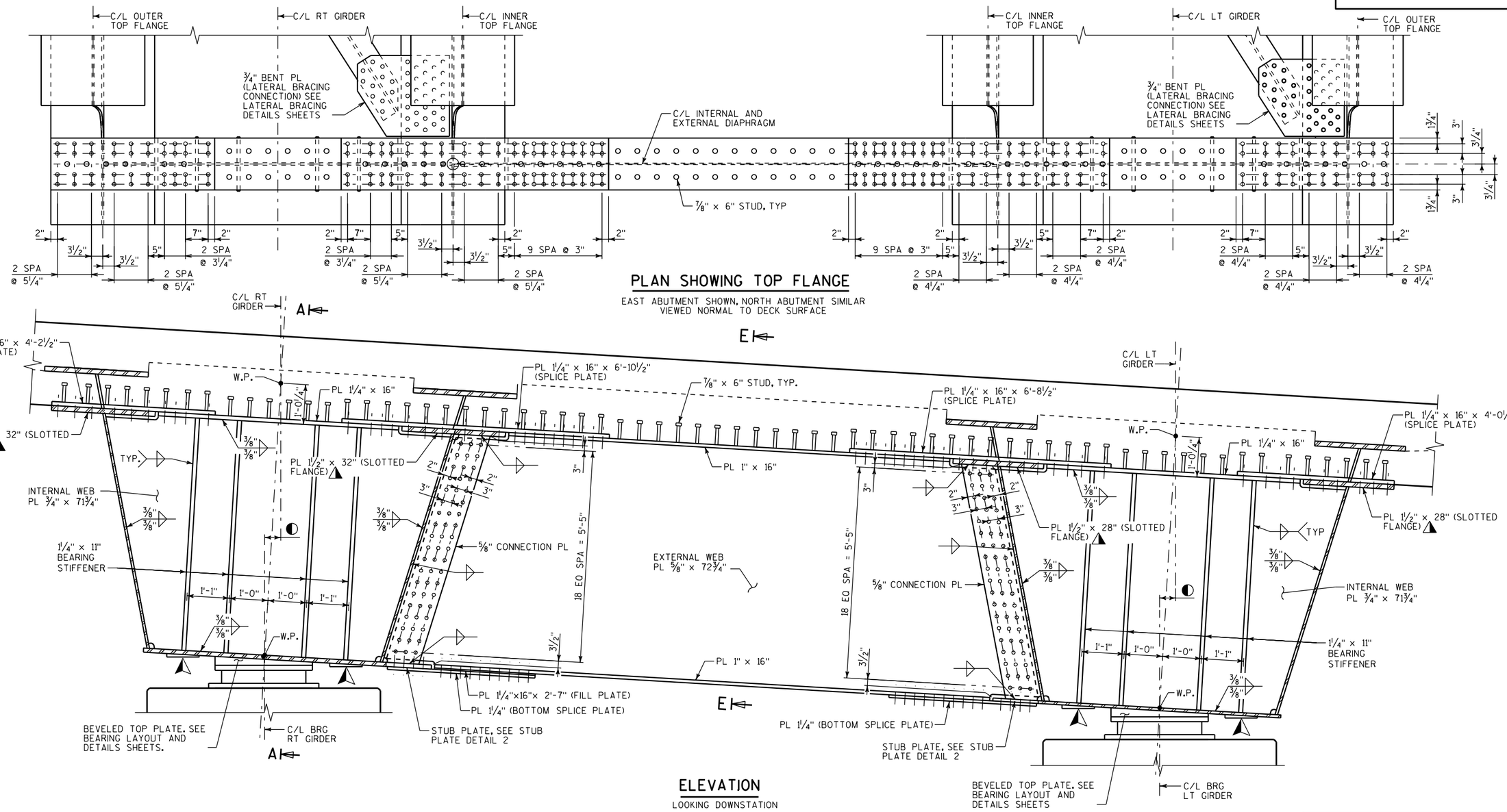
STATE PROJECT NUMBER
1060-33-81



PLAN SHOWING TOP FLANGE

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

ELEVATION

LOOKING DOWNSTATION

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.

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 DETAILS (1 OF 2)" SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

ABUTMENT DIAPHRAGM

SHEET 49 OF 96

2998

8

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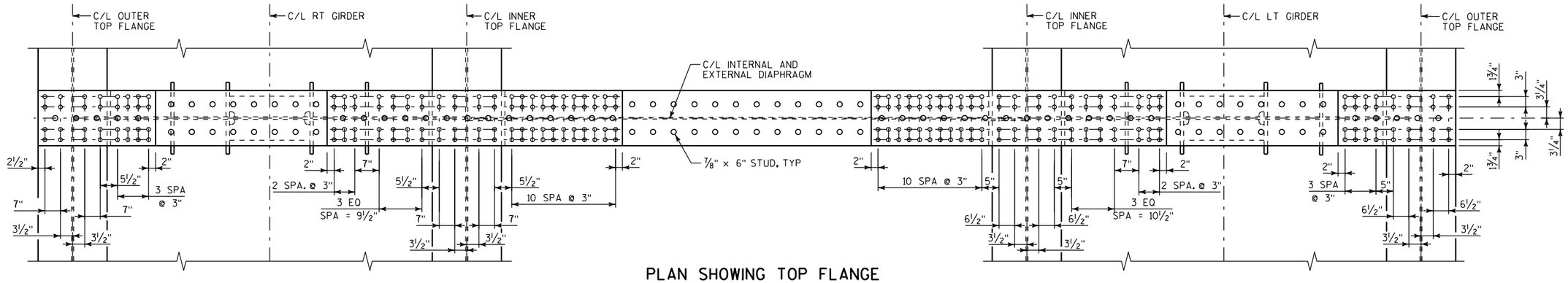
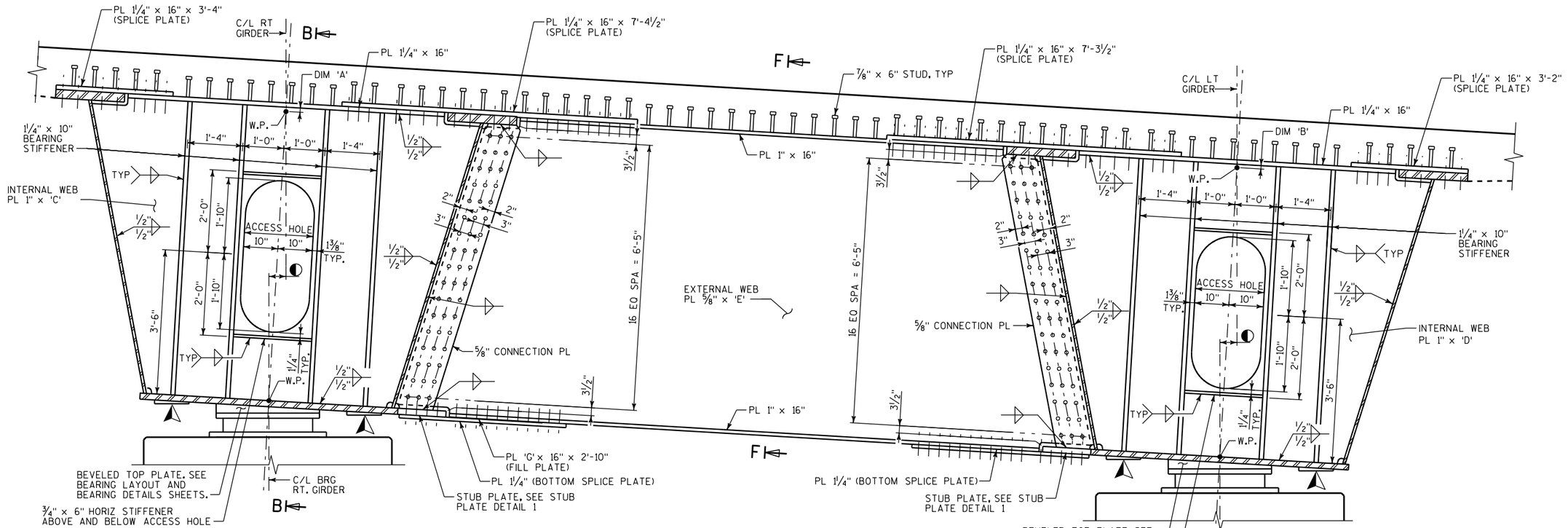
STATE PROJECT NUMBER
1060-33-81



PLAN SHOWING TOP FLANGE

PIER NE01 DIAPHRAGM SHOWN, OTHER DIAPHRAGMS SIMILAR
VIEWED NORMAL TO DECK SURFACE



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 DETAIL (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.

ELEVATION

LOOKING DOWNSTATION

DIAPHRAGM LOCATION	DIMENSIONS					
	'A'*	'B'*	'C'	'D'	'E'	'G'
NE02, NE04	1"	1"	85"	85"	86 1/4"	1/4"

* 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-40-853

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TYPICAL PIER DIAPHRAGM

SHEET 50 OF 96

2999

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080522_ss.dgn
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PLOT BY : MSCJJO
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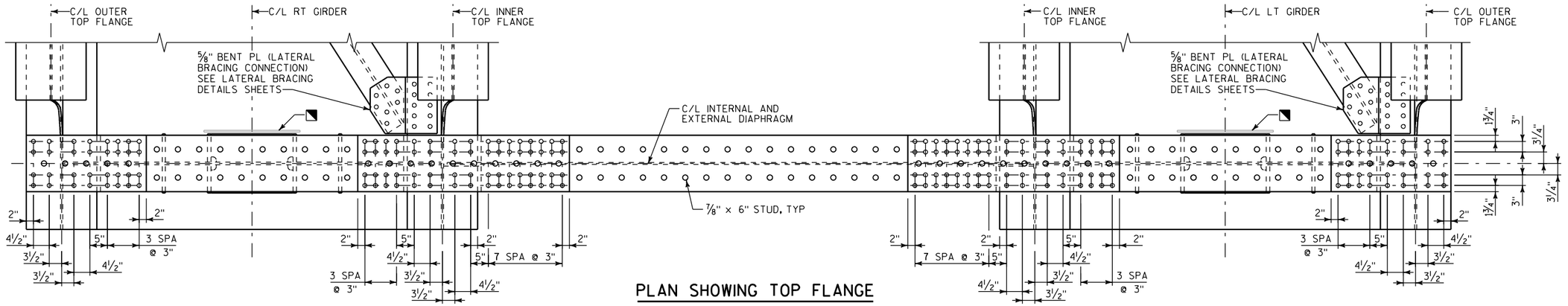
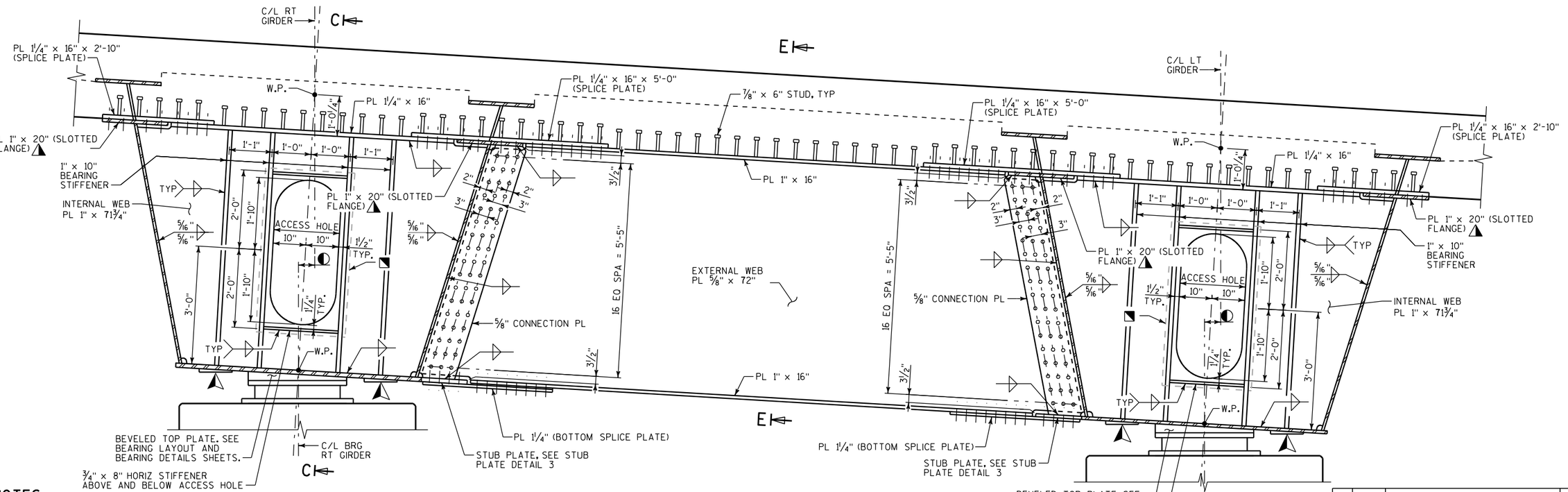
PLOT SCALE : 2.666667:1

STATE PROJECT NUMBER
1060-33-81



PLAN SHOWING TOP FLANGE

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



ELEVATION

LOOKING DOWNSTATION

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 DETAILS (1 OF 2)" SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

PIER END DIAPHRAGM

SHEET 51 OF 96

3000

8

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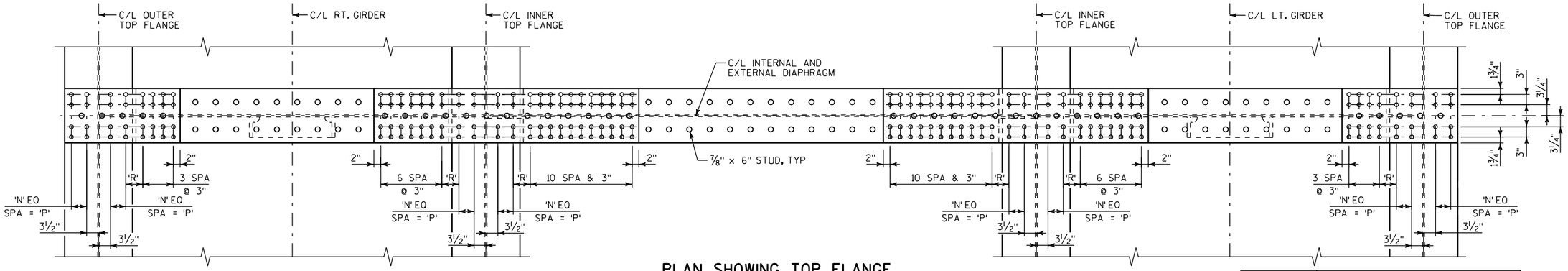
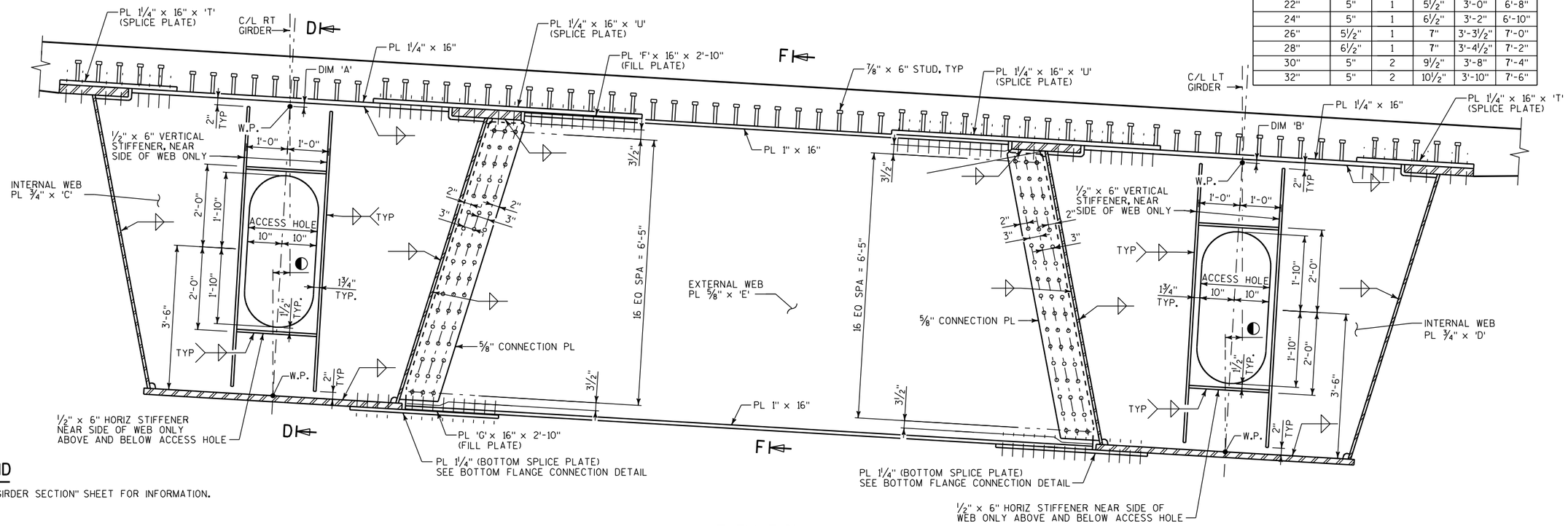
STATE PROJECT NUMBER
1060-33-81



PLAN SHOWING TOP FLANGE

INTERMEDIATE DIAPHRAGM 02 SHOWN, OTHER DIAPHRAGMS SIMILAR
VIEWED NORMAL TO DECK SURFACE

GIRDER TOP FLANGE WIDTH	DIMENSIONS				
	'R'	'N'	'P'	'T'	'U'
20"	5"	1	4 1/2"	2'-10"	6'-6"
22"	5"	1	5 1/2"	3'-0"	6'-8"
24"	5"	1	6 1/2"	3'-2"	6'-10"
26"	5 1/2"	1	7"	3'-3 1/2"	7'-0"
28"	6 1/2"	1	7"	3'-4 1/2"	7'-2"
30"	5"	2	9 1/2"	3'-8"	7'-4"
32"	5"	2	10 1/2"	3'-10"	7'-6"



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.

ELEVATION

LOOKING DOWNSTATION

DIAPHRAGM LOCATION	DIMENSIONS						
	'A'*	'B'*	'C'	'D'	'E'	'F'	'G'
ID01, ID02, ID03, ID16, ID17, ID18	3/8"	1/4"	84 3/8"	84 1/4"	85 1/4"	1/8"	1/4"
ID04, ID05, ID14, ID15	1/4"	1/4"	84 1/4"	84 1/4"	85"	0"	0"
ID06, ID13	1/4"	1/4"	84 1/4"	84 1/4"	85"	0"	1/8"
ID07, ID08, ID09, ID10, ID11, ID12	-1/8"	-1/4"	83 7/8"	83 3/4"	84"	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-40-853

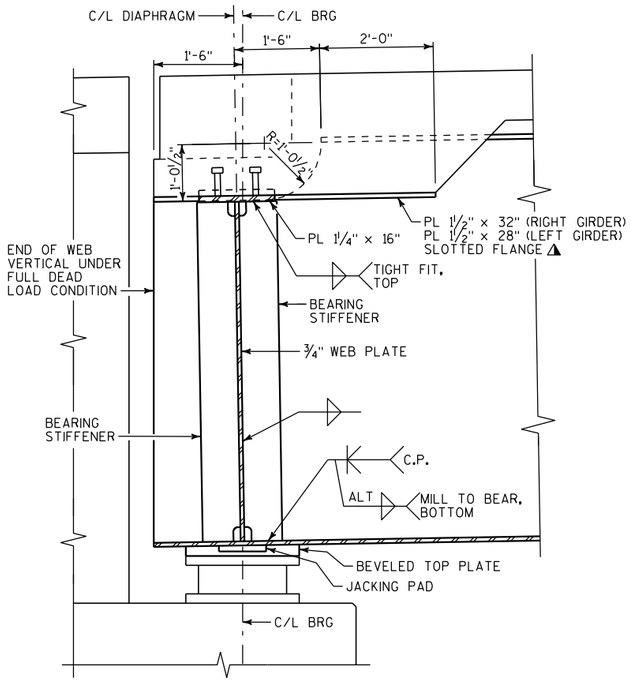
DRAWN BY SR | PLANS CK'D. JWC

INTERMEDIATE DIAPHRAGM

SHEET 52 OF 96

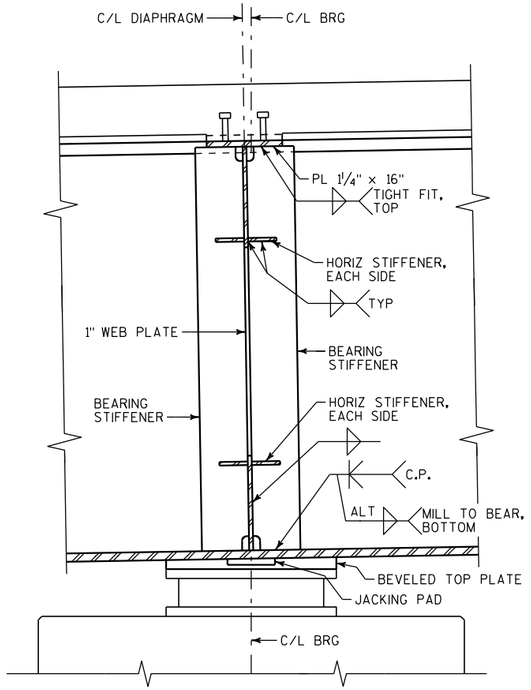
FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080524_ss.dgn
PLOT DATE : 19-JUL-2015 22:27 PLOT BY : MSCJJO PLOT NAME : 080524_ss PLOT SCALE : 2.666667:1

STATE PROJECT NUMBER
1060-33-81



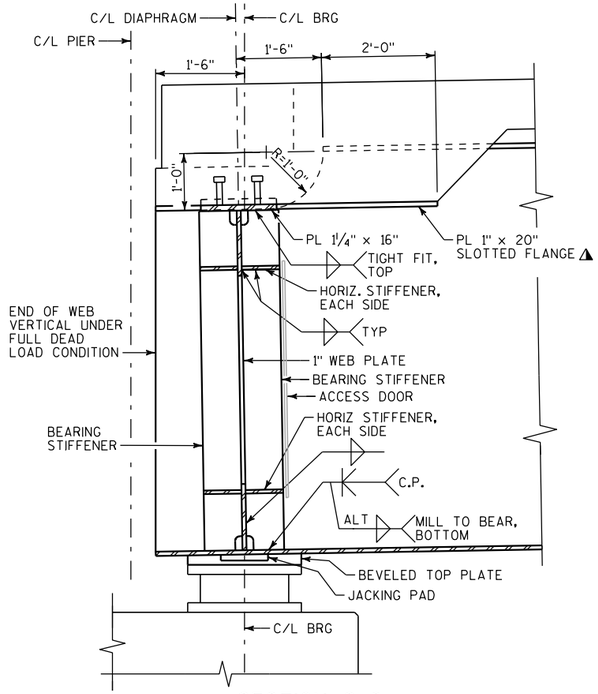
SECTION A-A

INTERNAL DIAPHRAGM AT ABUTMENT DIAPHRAGM



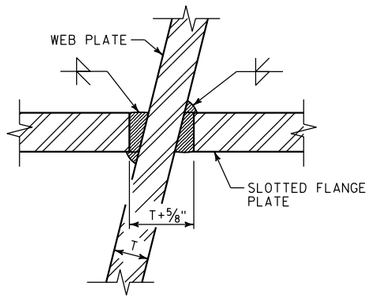
SECTION B-B

INTERNAL DIAPHRAGM AT TYPICAL PIER DIAPHRAGM

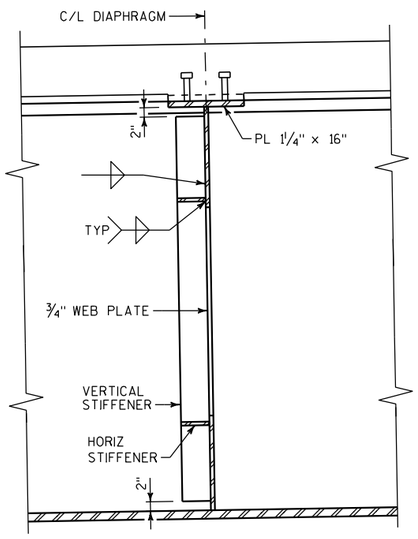


SECTION C-C

INTERNAL DIAPHRAGM AT PIER END DIAPHRAGM

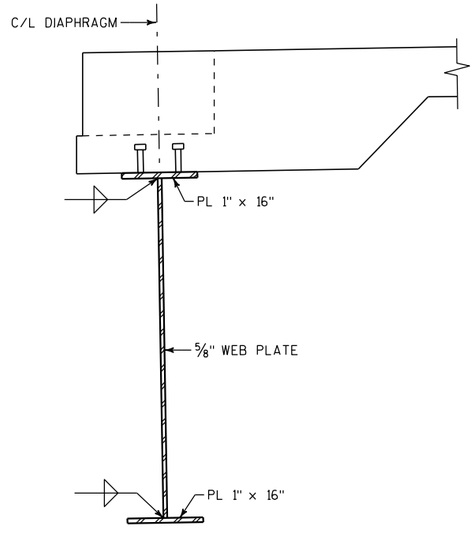


SLOTTED FLANGE DETAIL



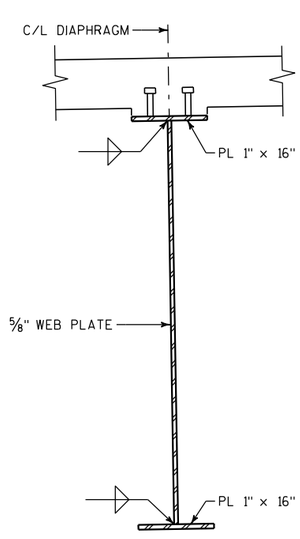
SECTION D-D

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 DETAILS (1 OF 2)" SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

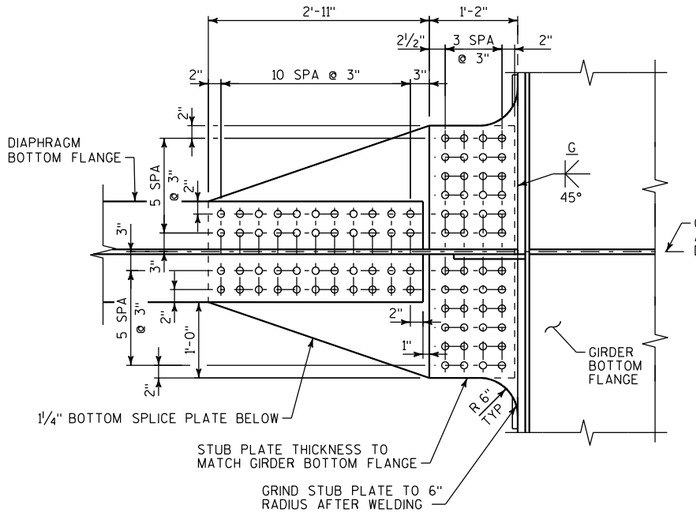
STRUCTURE B-40-853

DRAWN BY	SR	PLANS CK'D.	JWC

DIAPHRAGM DETAILS (1 OF 2)

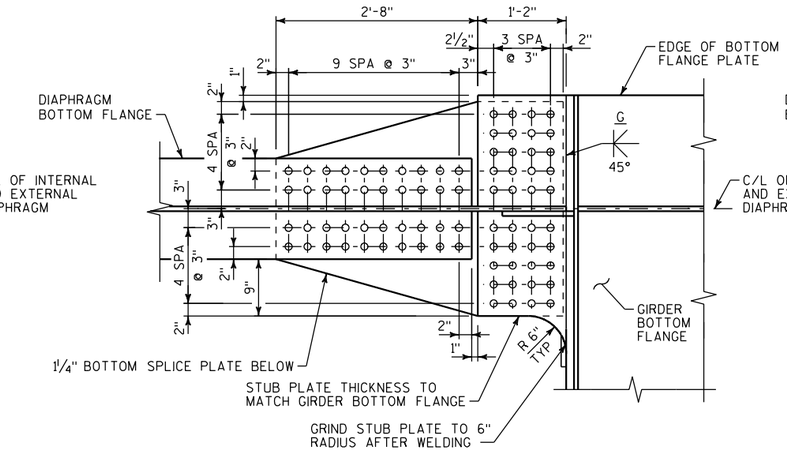
SHEET 53 OF 96

STATE PROJECT NUMBER
1060-33-81



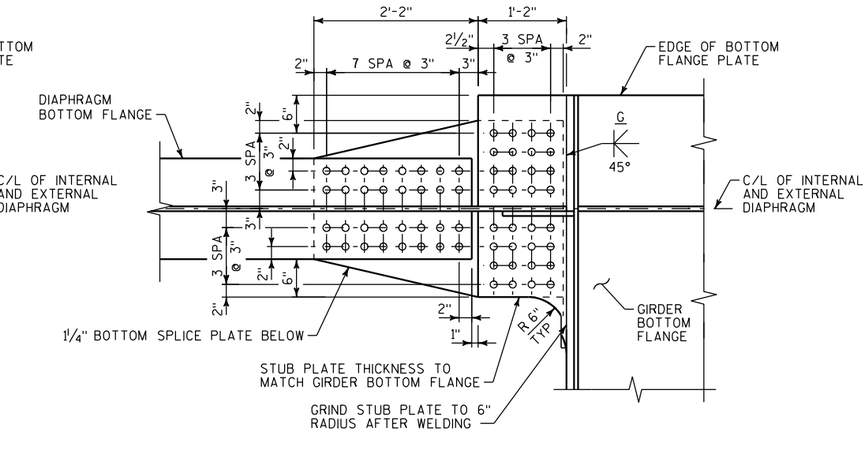
STUB PLATE DETAIL 1

TYPICAL PIER DIAPHRAGM



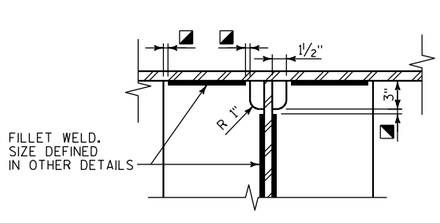
STUB PLATE DETAIL 2

ABUTMENT DIAPHRAGM



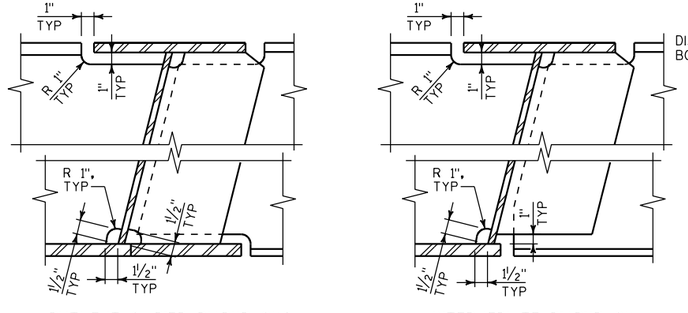
STUB PLATE DETAIL 3

PIER END DIAPHRAGM



STANDARD CLIP & WELD TERMINATION DETAIL

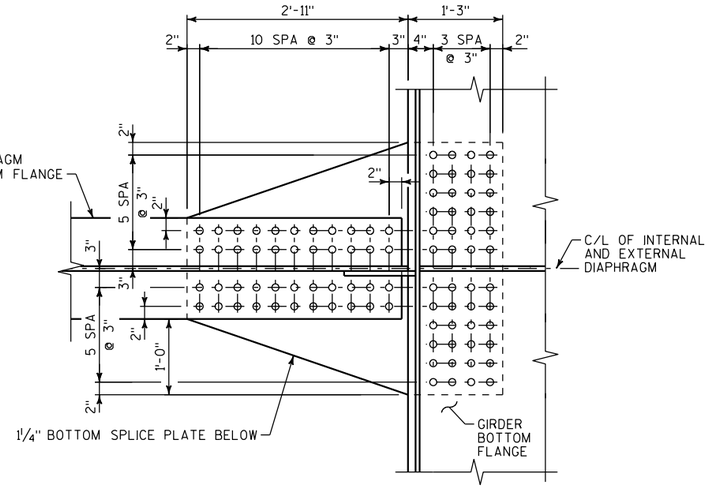
◪ ¼" MIN TO ½" MAX, TYP



ABUTMENT & PIER DIAPHRAGMS

INTERMEDIATE DIAPHRAGM

DIAPHRAGM CLIP DETAIL



BOTTOM FLANGE CONNECTION DETAIL

INTERMEDIATE DIAPHRAGM ONLY

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

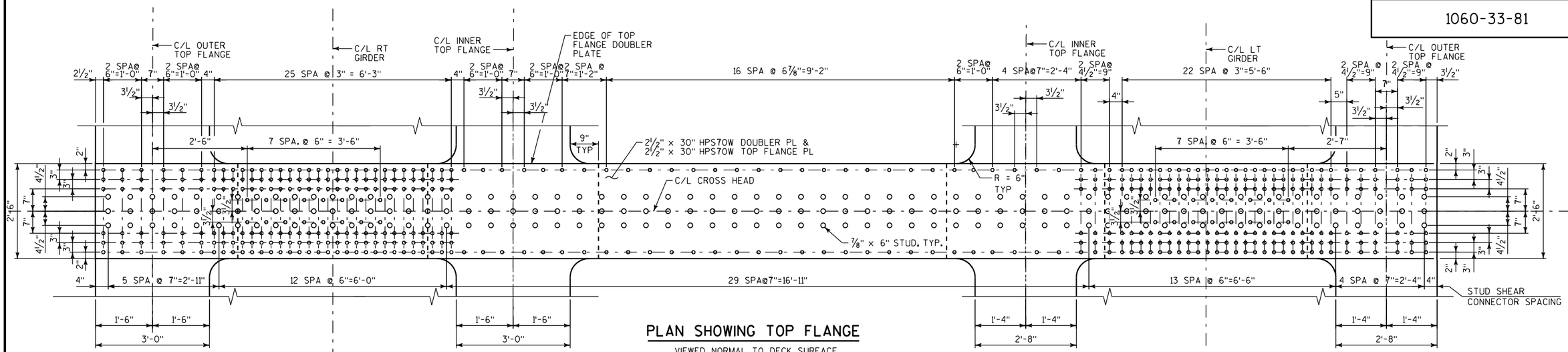
STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

DIAPHRAGM DETAILS (2 OF 2)

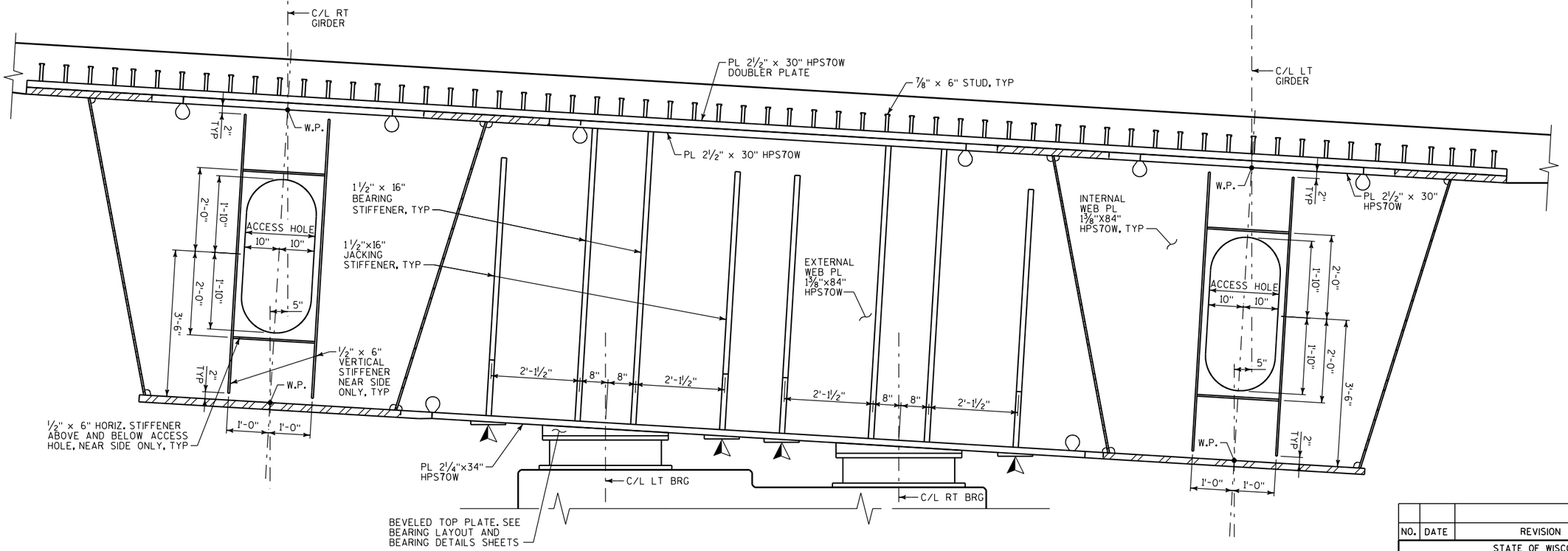
SHEET 54 OF 96

STATE PROJECT NUMBER
1060-33-81



PLAN SHOWING TOP FLANGE

VIEWED NORMAL TO DECK SURFACE
LATERAL BRACING NOT SHOWN FOR CLARITY



INTEGRAL CROSS HEAD ELEVATION

LOOKING DOWNSTATION

LEGEND

⚠ SUGGESTED JACKING PAD AND STIFFENER LOCATION FOR FUTURE BEARING REPLACEMENT. JACKING AT ACCESS HOLE STIFFENERS NOT ALLOWED. SEE JACKING PROVISIONS SHEET FOR DETAILS.

NOTES

1. CROSS HEAD WEB IS ALIGNED NORMAL TO TUB GIRDER BOTTOM FLANGE.
2. ALL BOLTS IN CROSS HEAD ARE 1" DIAMETER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

PIER NE01 & NE05 INTEGRAL CROSS HEAD

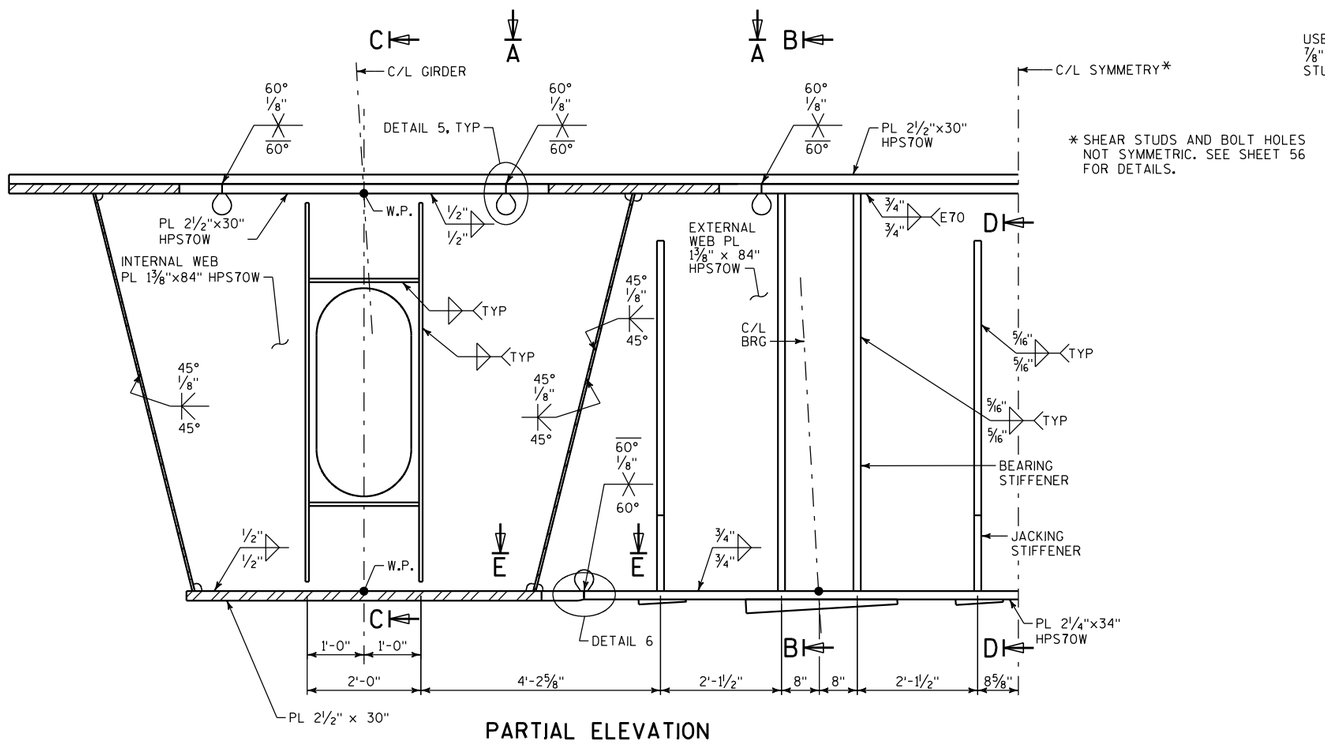
SHEET 55 OF 96

3004

8

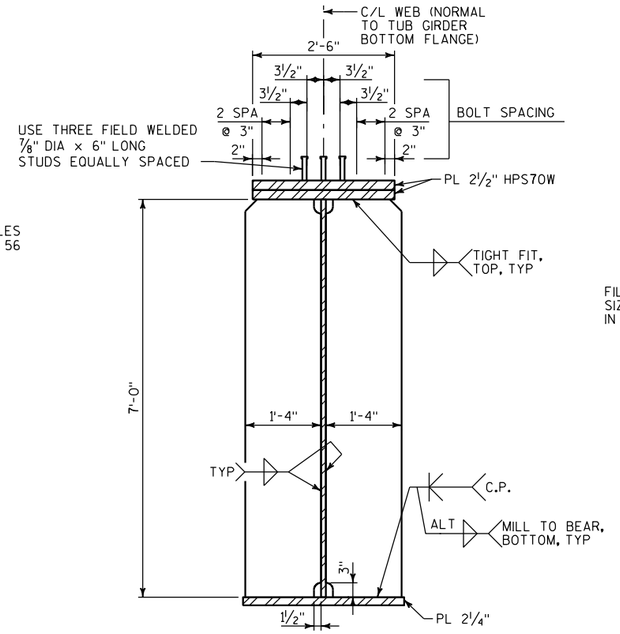
8

STATE PROJECT NUMBER
1060-33-81

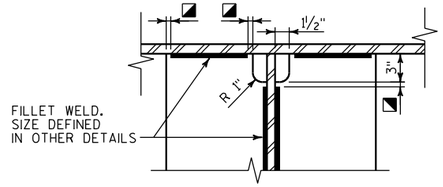


* SHEAR STUDS AND BOLT HOLES NOT SYMMETRIC. SEE SHEET 56 FOR DETAILS.

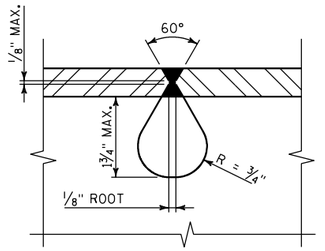
PARTIAL ELEVATION
SHOWING WELDS



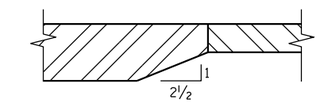
SECTION B-B
BEARING STIFFENERS



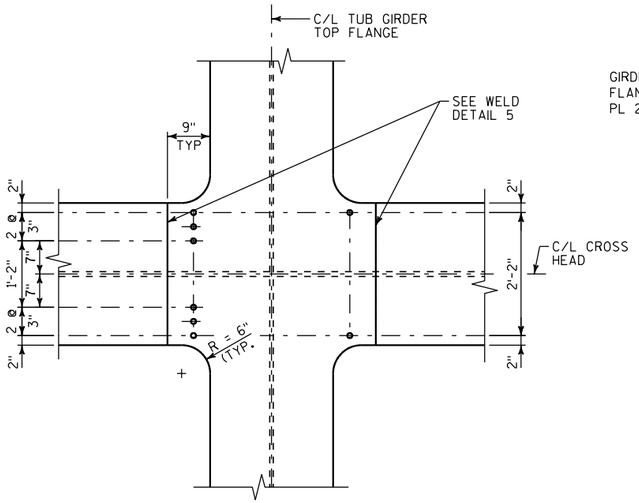
STANDARD CLIP & WELD TERMINATION DETAIL
◪ ¼" MIN TO ½" MAX, TYP



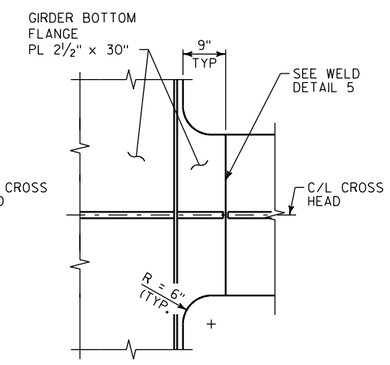
DETAIL 5



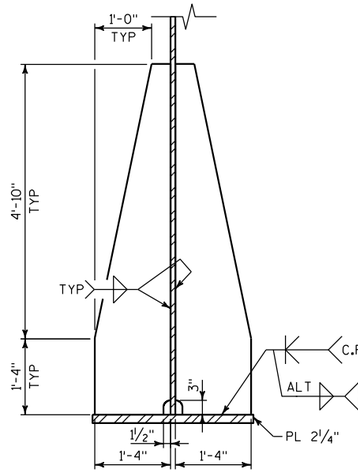
DETAIL 6



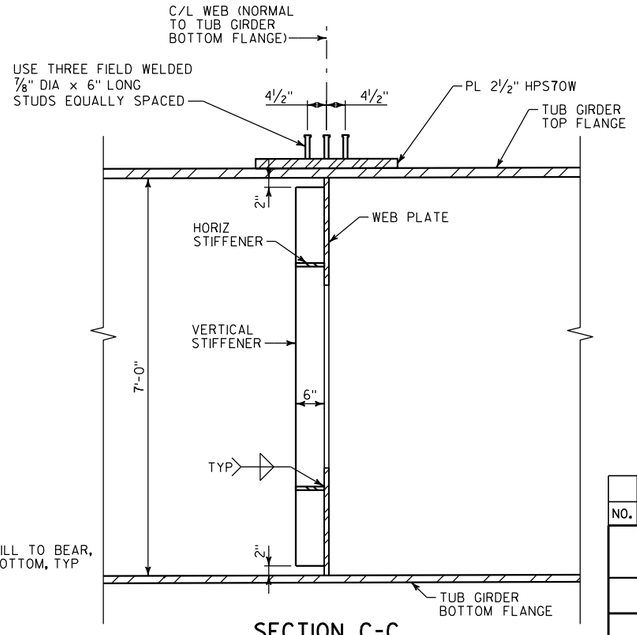
VIEW A-A
(DOUBLER PLATE NOT SHOWN FOR CLARITY)



VIEW E-E



SECTION D-D
JACKING STIFFENERS



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

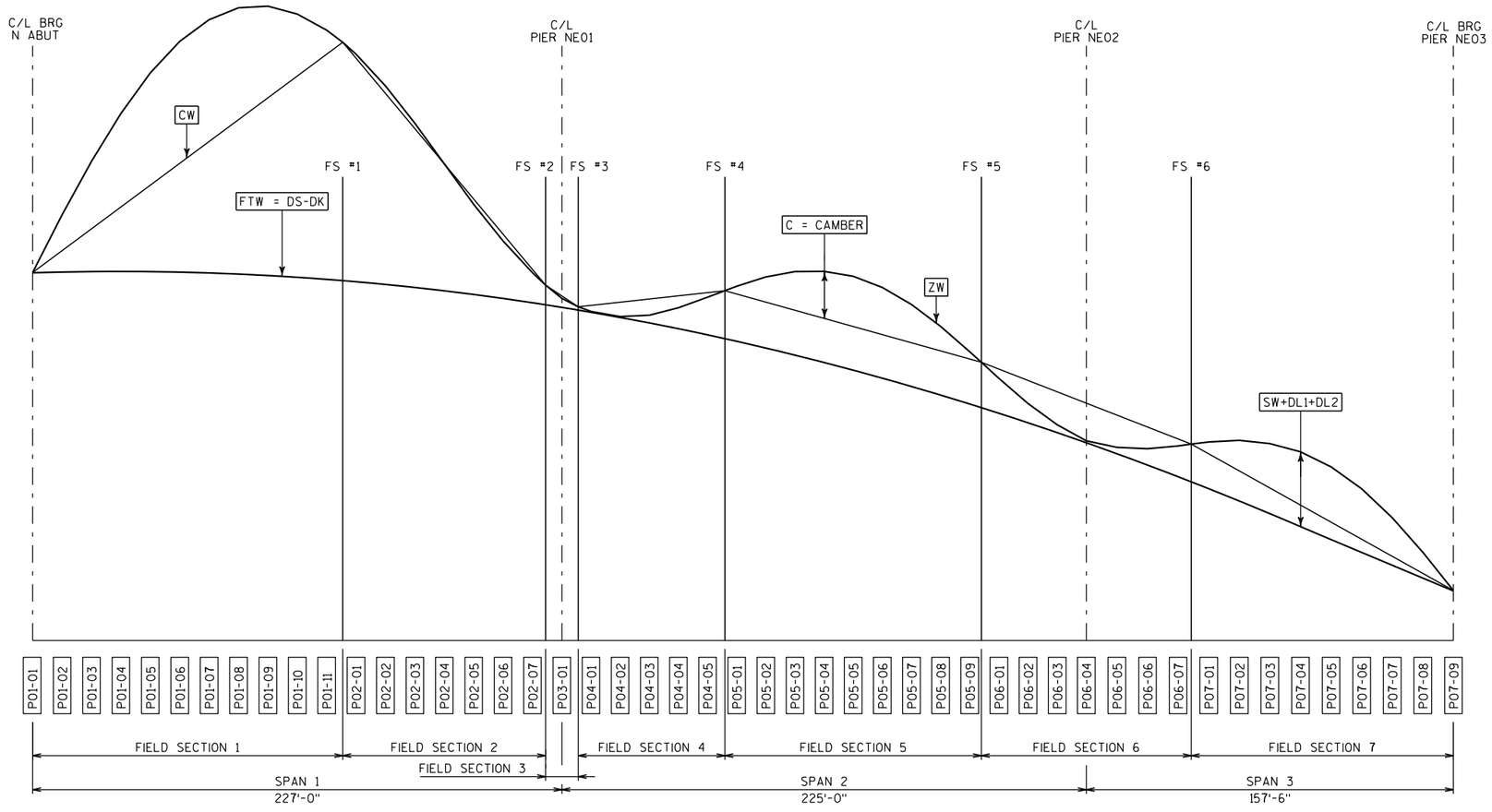
PIER NE01 & NE05 INTEGRAL CROSS HEAD DETAILS

SHEET 56 OF 96

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 NE

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

= 5" HAUNCH + 10½" SLAB = 15½" = 1.29 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-40-853

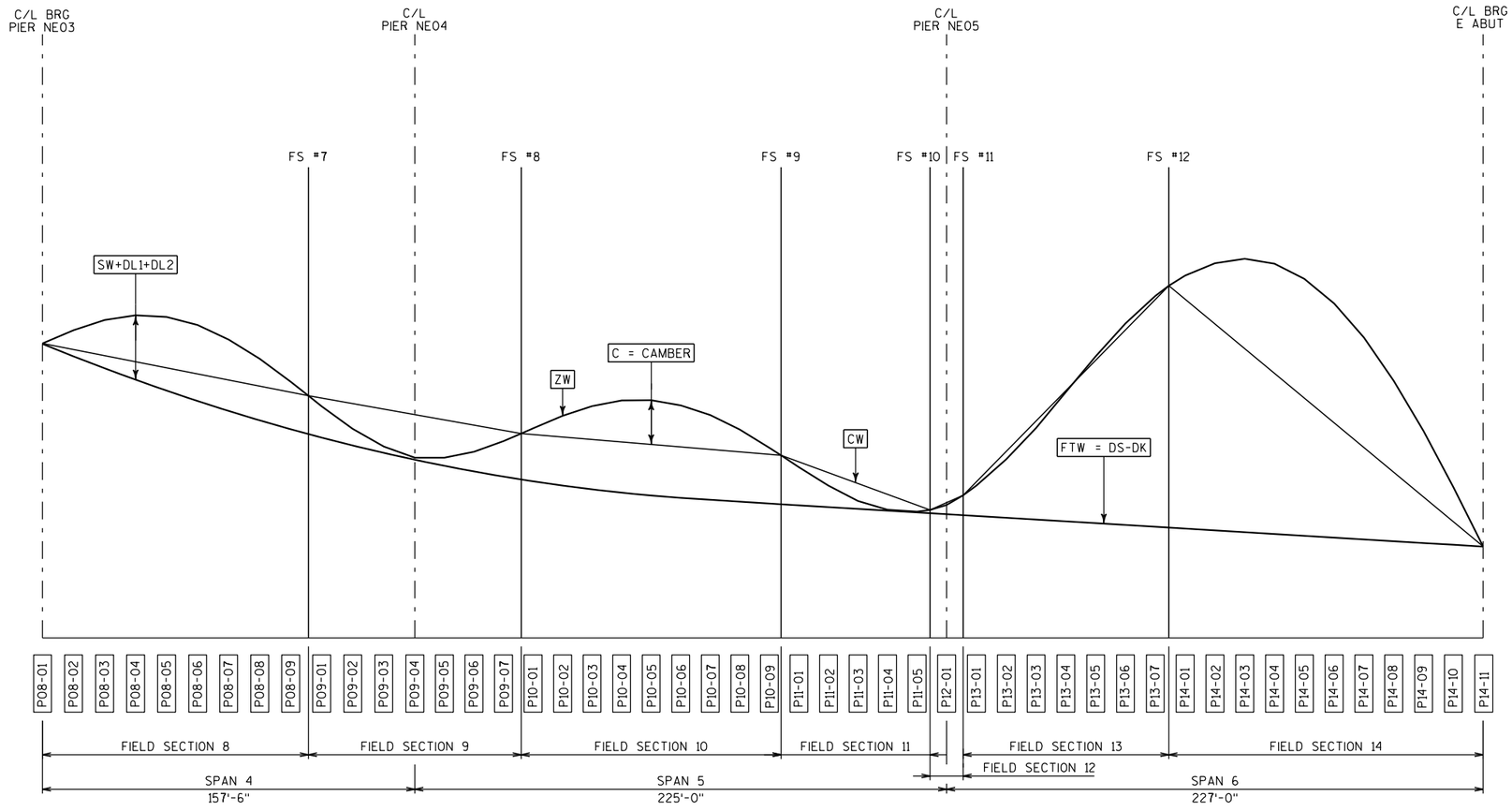
DRAWN BY MPM | PLANS CK'D. JWC

CAMBER DIAGRAM
UNIT 1

SHEET 57 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080529_ss.dgn PLOT DATE : 19-JUL-2015 22:27 PLOT BY : MSCJJO PLOT NAME : 080529_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 NE

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

= 5" HAUNCH + 10½" SLAB = 15½" = 1.29 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-40-853

DRAWN BY	MPM	PLANS CK'D.	JWC

CAMBER DIAGRAM
UNIT 2

SHEET 58 OF 96

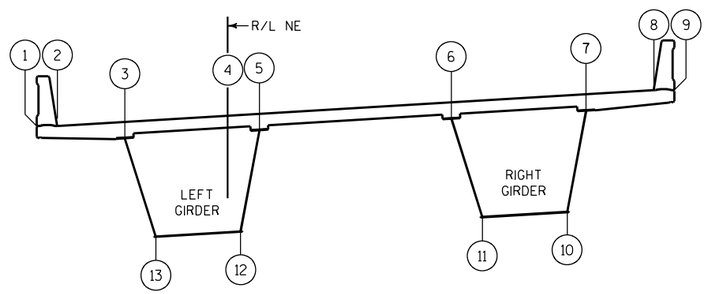
FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080530_ss.dgn PLOT DATE : 19-JUL-2015 22:27 PLOT BY : MSCJJO PLOT NAME : 080530_ss PLOT SCALE : 60:1

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	P01-09	P01-10	P01-11	FS #1
		538+10.60	538+23.21	538+35.82	538+48.44	538+61.05	538+73.66	538+86.27	538+98.88	539+11.49	539+24.10	539+36.71	539+43.60
FINISHED ELEVATION - TOP OF DECK													
1	DS	797.87	797.90	797.91	797.92	797.91	797.89	797.86	797.82	797.77	797.71	797.63	797.59
2		797.96	797.98	798.00	798.00	798.00	797.98	797.95	797.91	797.86	797.79	797.72	797.67
4		798.68	798.70	798.72	798.72	798.72	798.70	798.67	798.63	798.58	798.51	798.44	798.39
8		800.48	800.50	800.52	800.52	800.52	800.50	800.47	800.43	800.38	800.31	800.24	800.19
9		800.56	800.59	800.61	800.61	800.60	800.59	800.56	800.52	800.46	800.40	800.33	800.28
CAMBER DATA													
3	DS	798.24	798.27	798.28	798.29	798.28	798.26	798.24	798.19	798.14	798.08	798.00	797.96
	TES	797.08	797.22	797.35	797.46	797.54	797.59	797.61	797.59	797.55	797.47	797.36	797.39
LEFT	ZW	796.95	797.15	797.32	797.47	797.58	797.66	797.70	797.70	797.65	797.57	797.46	797.38
GIRDER	CW	796.95	796.99	797.03	797.07	797.11	797.15	797.19	797.23	797.28	797.32	797.36	797.38
	SW	0.00	0.05	0.09	0.14	0.17	0.20	0.22	0.23	0.23	0.23	0.22	0.21
LEFT	DL1	0.00	0.11	0.22	0.31	0.39	0.45	0.49	0.52	0.52	0.51	0.48	0.46
WEB	DL2	0.00	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.05	0.04	0.04
	C	0.00	0.16	0.29	0.40	0.47	0.51	0.50	0.46	0.38	0.26	0.10	0.00
5	DS	798.81	798.84	798.85	798.86	798.85	798.83	798.80	798.76	798.71	798.65	798.57	798.53
	TES	797.65	797.80	797.95	798.06	798.15	798.21	798.24	798.23	798.18	798.11	798.00	798.02
LEFT	ZW	797.52	797.73	797.93	798.09	798.22	798.31	798.36	798.37	798.33	798.24	798.12	798.04
GIRDER	CW	797.52	797.57	797.62	797.67	797.72	797.77	797.82	797.86	797.91	797.96	798.01	798.04
	SW	0.00	0.05	0.11	0.15	0.19	0.23	0.25	0.26	0.27	0.26	0.25	0.24
RIGHT	DL1	0.00	0.12	0.24	0.34	0.43	0.50	0.55	0.58	0.59	0.57	0.54	0.52
WEB	DL2	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.04
	C	0.00	0.16	0.31	0.42	0.51	0.55	0.55	0.50	0.41	0.28	0.11	0.00
6	DS	799.62	799.65	799.66	799.67	799.66	799.64	799.62	799.57	799.52	799.46	799.38	799.34
	TES	798.47	798.64	798.80	798.94	799.04	799.11	799.15	799.15	799.10	799.03	798.91	798.94
RIGHT	ZW	798.33	798.57	798.79	798.99	799.14	799.25	799.31	799.32	799.29	799.20	799.07	798.98
GIRDER	CW	798.33	798.39	798.45	798.52	798.58	798.64	798.70	798.76	798.83	798.89	798.95	798.98
	SW	0.00	0.06	0.13	0.18	0.23	0.27	0.30	0.31	0.32	0.31	0.30	0.29
LEFT	DL1	0.00	0.14	0.27	0.40	0.50	0.58	0.64	0.68	0.68	0.67	0.63	0.60
WEB	DL2	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
	C	0.00	0.18	0.34	0.47	0.56	0.61	0.61	0.56	0.46	0.32	0.12	0.00
7	DS	800.19	800.22	800.23	800.24	800.23	800.21	800.18	800.14	800.09	800.03	799.95	799.91
	TES	799.04	799.23	799.40	799.55	799.66	799.74	799.79	799.79	799.75	799.67	799.55	799.57
RIGHT	ZW	798.90	799.16	799.40	799.61	799.78	799.91	799.98	800.00	799.97	799.88	799.75	799.65
GIRDER	CW	798.90	798.97	799.04	799.12	799.19	799.26	799.33	799.40	799.47	799.54	799.61	799.65
	SW	0.00	0.07	0.14	0.20	0.25	0.30	0.33	0.35	0.36	0.35	0.33	0.32
RIGHT	DL1	0.00	0.15	0.30	0.43	0.55	0.64	0.71	0.75	0.76	0.74	0.70	0.66
WEB	DL2	0.00	0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.06	0.06	0.05	0.05
	C	0.00	0.19	0.36	0.50	0.59	0.65	0.65	0.60	0.50	0.34	0.13	0.00
BLOCKING HEIGHTS													
10	BLK	19.11	19.37	19.61	19.82	19.98	20.11	20.18	20.20	20.17	20.09	19.95	19.85
11		18.74	18.99	19.21	19.40	19.55	19.66	19.72	19.74	19.70	19.62	19.49	19.40
12		18.99	19.20	19.39	19.56	19.69	19.78	19.83	19.83	19.79	19.71	19.59	19.50
13		18.62	18.82	19.00	19.14	19.26	19.33	19.37	19.37	19.33	19.25	19.13	19.05

FIELD SECTION #2

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		FS#1	P02-01	P02-02	P02-03	P02-04	P02-05	P02-06	P02-07	FS #2
		539+43.60	539+49.32	539+61.94	539+74.55	539+87.16	539+99.77	540+12.38	540+24.99	540+30.60
FINISHED ELEVATION - TOP OF DECK										
1	DS	797.59	797.55	797.45	797.34	797.22	797.09	796.95	796.79	796.72
2		797.67	797.63	797.54	797.43	797.31	797.18	797.04	796.88	796.81
4		798.39	798.35	798.26	798.15	798.03	797.90	797.76	797.60	797.53
8		800.19	800.15	800.06	799.95	799.83	799.70	799.56	799.40	799.33
9		800.28	800.24	800.14	800.03	799.92	799.78	799.64	799.49	799.42
CAMBER DATA										
3	DS	797.96	797.92	797.82	797.71	797.59	797.46	797.32	797.17	797.10
	TES	797.39	797.23	797.07	796.89	796.69	796.48	796.35	796.15	796.20
LEFT	ZW	797.38	797.31	797.12	796.91	796.68	796.44	796.20	795.96	795.86
GIRDER	CW	797.38	797.28	797.06	796.84	796.62	796.40	796.18	795.96	795.86
	SW	0.21	0.20	0.18	0.15	0.12	0.08	0.05	0.03	0.02
LEFT	DL1	0.46	0.44	0.38	0.31	0.24	0.17	0.11	0.06	0.04
WEB	DL2	0.04	0.04	0.04	0.03	0.02	0.02	0.01	0.01	0.00
	C	0.00	0.03	0.06	0.07	0.06	0.04	0.02	0.01	0.00
5	DS	798.53	798.49	798.39	798.28	798.16	798.03	797.89	797.74	797.66
	TES	798.02	797.86	797.69	797.50	797.29	797.07	796.93	796.71	796.76
LEFT	ZW	798.04	797.96	797.77	797.54	797.29	797.04	796.78	796.52	796.42
GIRDER	CW	798.04	797.93	797.70	797.46	797.23	796.99	796.76	796.52	796.42
	SW	0.24	0.23	0.20	0.17	0.13	0.09	0.06	0.03	0.01
RIGHT	DL1	0.52	0.49	0.43	0.35	0.27	0.18	0.11	0.05	0.03
WEB	DL2	0.04	0.04	0.04	0.03	0.02	0.02	0.01	0.00	0.00
	C	0.00	0.03	0.07	0.08	0.07	0.04	0.02	0.00	0.00
6	DS	799.34	799.30	799.20	799.09	798.97	798.84	798.70	798.55	798.48
	TES	798.94	798.75	798.57	798.36	798.14	797.91	797.76	797.53	797.57
RIGHT	ZW	798.98	798.90	798.69	798.44	798.17	797.89	797.62	797.35	797.24
GIRDER	CW	798.98	798.87	798.62	798.36	798.11	797.86	797.60	797.35	797.24
	SW	0.29	0.27	0.24	0.20	0.16	0.11	0.07	0.03	0.02
LEFT	DL1	0.60	0.57	0.50	0.41	0.31	0.21	0.13	0.06	0.03
WEB	DL2	0.05	0.05	0.04	0.03	0.03	0.02	0.01	0.01	0.00
	C	0.00	0.03	0.07	0.08	0.06	0.04	0.02	0.00	0.00
7	DS	799.91	799.87	799.77	799.66	799.54	799.41	799.27	799.12	799.04
	TES	799.57	799.38	799.19	798.98	798.74	798.50	798.34	798.11	798.15
RIGHT	ZW	799.65	799.56	799.33	799.07	798.79	798.50	798.21	797.94	797.82
GIRDER	CW	799.65	799.53	799.27	799.00	798.74	798.47	798.21	797.94	797.82
	SW	0.32	0.30	0.27	0.22	0.17	0.12	0.08	0.04	0.02
RIGHT	DL1	0.66	0.63	0.55	0.45	0.34	0.24	0.14	0.07	0.04
WEB	DL2	0.05	0.05	0.04	0.04	0.03	0.02	0.01	0.01	0.00
	C	0.00	0.03	0.07	0.07	0.05	0.03	0.01	0.00	0.00
BLOCKING HEIGHTS										
10	BLK	19.85	19.76	19.54	19.28	18.99	18.70	18.41	18.14	18.03
11		19.40	19.31	19.10	18.85	18.58	18.31	18.03	17.77	17.65
12		19.50	19.42	19.23	19.00	18.76	18.50	18.24	17.99	17.88
13		19.05	18.98	18.80	18.59	18.36	18.11	17.87	17.64	17.54



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

= 5" HAUNCH + 10½" SLAB = 15½" = 1.29 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-40-853

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 1 & 2

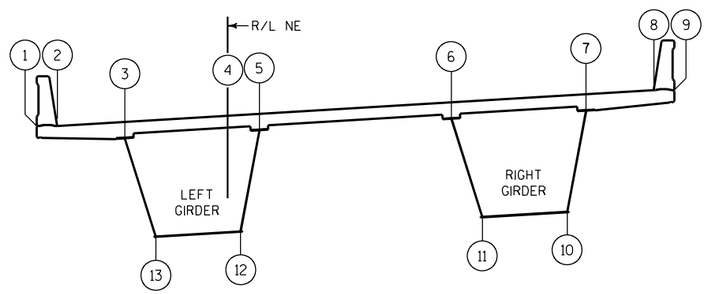
SHEET 59 OF 96

FIELD SECTION #3

POS'N NO.	VALUE	PANEL POINT POSITION/STATION		
		FS #2	PIER	FS #3
		540+30.60	540+37.60	540+44.60
FINISHED ELEVATION - TOP OF DECK				
1	DS	796.72	796.63	796.53
2		796.81	796.72	796.62
4		797.53	797.44	797.34
8		799.33	799.24	799.14
9		799.42	799.32	799.23
CAMBER DATA				
3	DS	797.10	797.00	796.91
	TES	796.20	795.94	795.98
LEFT	ZW	795.86	795.74	795.62
GIRDER	CW	795.86	795.74	795.62
	SW	0.02	0.01	0.00
LEFT	DL1	0.04	0.02	0.01
WEB	DL2	0.00	0.00	0.00
	C	0.00	0.00	0.00
5	DS	797.66	797.57	797.47
	TES	796.76	796.49	796.53
LEFT	ZW	796.42	796.29	796.18
GIRDER	CW	796.42	796.30	796.18
	SW	0.01	0.00	-0.01
RIGHT	DL1	0.03	0.01	0.00
WEB	DL2	0.00	0.00	0.00
	C	0.00	0.00	0.00
6	DS	798.48	798.38	798.29
	TES	797.57	797.31	797.34
RIGHT	ZW	797.24	797.10	796.98
GIRDER	CW	797.24	797.11	796.98
	SW	0.02	0.00	-0.01
LEFT	DL1	0.03	0.01	-0.01
WEB	DL2	0.00	0.00	0.00
	C	0.00	0.00	0.00
7	DS	799.04	798.95	798.85
	TES	798.15	797.89	797.92
RIGHT	ZW	797.82	797.69	797.56
GIRDER	CW	797.82	797.69	797.56
	SW	0.02	0.01	0.00
RIGHT	DL1	0.04	0.02	0.00
WEB	DL2	0.00	0.00	0.00
	C	0.00	0.00	0.00
BLOCKING HEIGHTS				
10	BLK	18.03	17.89	17.77
11		17.65	17.51	17.39
12		17.88	17.75	17.64
13		17.54	17.41	17.30

FIELD SECTION #4

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION						
		FS #3	P04-01	P04-02	P04-03	P04-04	P04-05	FS #4
		540+44.60	540+50.10	540+62.60	540+75.10	540+87.60	541+00.10	541+07.60
FINISHED ELEVATION - TOP OF DECK								
1	DS	796.53	796.46	796.27	796.07	795.86	795.65	795.51
2		796.62	796.54	796.36	796.16	795.95	795.73	795.60
4		797.34	797.26	797.08	796.88	796.67	796.45	796.32
8		799.14	799.06	798.88	798.68	798.47	798.25	798.12
9		799.23	799.15	798.96	798.77	798.56	798.34	798.20
CAMBER DATA								
3	DS	796.91	796.83	796.64	796.45	796.24	796.02	795.88
	TES	795.98	795.75	795.57	795.31	795.14	794.96	794.90
LEFT	ZW	795.62	795.54	795.35	795.18	795.01	794.84	794.73
GIRDER	CW	795.62	795.55	795.37	795.19	795.02	794.84	794.73
	SW	0.00	-0.01	-0.01	-0.01	-0.01	0.00	0.01
LEFT	DL1	0.01	0.01	0.01	0.03	0.06	0.10	0.12
WEB	DL2	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	DS	797.47	797.40	797.21	797.01	796.81	796.59	796.45
	TES	796.53	796.31	796.13	795.87	795.70	795.52	795.47
LEFT	ZW	796.18	796.09	795.91	795.73	795.56	795.39	795.29
GIRDER	CW	796.18	796.10	795.92	795.75	795.57	795.40	795.29
	SW	-0.01	-0.01	-0.02	-0.02	-0.01	0.00	0.00
RIGHT	DL1	0.00	-0.01	0.00	0.02	0.05	0.09	0.12
WEB	DL2	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	DS	798.29	798.21	798.02	797.83	797.62	797.40	797.26
	TES	797.34	797.11	796.93	796.67	796.50	796.33	796.27
RIGHT	ZW	796.98	796.89	796.70	796.52	796.35	796.19	796.09
GIRDER	CW	796.98	796.90	796.73	796.55	796.37	796.20	796.09
	SW	-0.01	-0.01	-0.02	-0.03	-0.02	-0.01	-0.01
LEFT	DL1	-0.01	-0.01	-0.01	0.01	0.04	0.09	0.12
WEB	DL2	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	DS	798.85	798.78	798.59	798.39	798.19	797.97	797.83
	TES	797.92	797.69	797.51	797.25	797.08	796.90	796.85
RIGHT	ZW	797.56	797.47	797.28	797.10	796.93	796.76	796.66
GIRDER	CW	797.56	797.48	797.30	797.13	796.95	796.77	796.66
	SW	0.00	-0.01	-0.02	-0.03	-0.02	-0.02	-0.01
RIGHT	DL1	0.00	0.00	0.00	0.02	0.05	0.09	0.12
WEB	DL2	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLOCKING HEIGHTS								
10	BLK	17.77	17.67	17.48	17.30	17.13	16.96	16.86
11		17.39	17.30	17.11	16.93	16.77	16.60	16.50
12		17.64	17.55	17.37	17.20	17.03	16.86	16.76
13		17.30	17.21	17.03	16.85	16.68	16.51	16.41



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

= 5" HAUNCH + 10½" SLAB = 15½" = 1.29 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-40-853

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 3 & 4

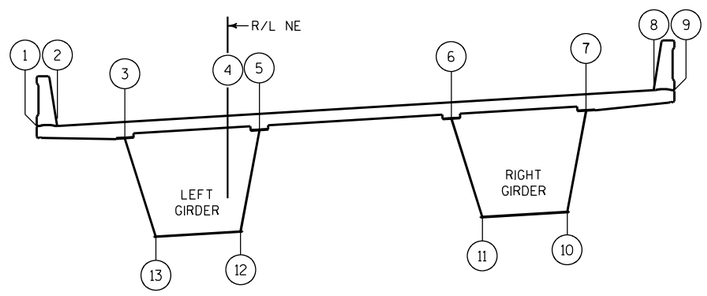
SHEET 60 OF 96

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	FS #5
		541+07.60	541+12.60	541+25.10	541+37.60	541+50.10	541+62.60	541+75.10	541+87.60	542+00.10	542+12.60	542+17.60
FINISHED ELEVATION - TOP OF DECK												
1	DS	795.51	795.42	795.17	794.92	794.66	794.38	794.10	793.80	793.49	793.18	793.05
2		795.60	795.50	795.26	795.01	794.75	794.47	794.19	793.89	793.58	793.26	793.13
4		796.32	796.22	795.98	795.73	795.47	795.19	794.91	794.61	794.30	793.98	793.85
8		798.12	798.02	797.78	797.53	797.27	796.99	796.71	796.41	796.10	795.78	795.65
9		798.20	798.11	797.87	797.62	797.35	797.08	796.79	796.50	796.19	795.87	795.74
CAMBER DATA												
3	DS	795.88	795.79	795.55	795.29	795.03	794.76	794.47	794.17	793.87	793.55	793.42
	TES	794.90	794.73	794.53	794.31	794.06	793.79	793.50	793.18	792.83	792.47	792.40
LEFT	ZW	794.73	794.66	794.47	794.25	794.01	793.75	793.45	793.13	792.78	792.41	792.26
GIRDER	CW	794.73	794.62	794.34	794.06	793.78	793.50	793.22	792.93	792.65	792.37	792.26
	SW	0.01	0.01	0.02	0.03	0.03	0.04	0.04	0.03	0.03	0.02	0.02
LEFT	DL1	0.12	0.14	0.18	0.20	0.22	0.22	0.21	0.19	0.16	0.12	0.11
WEB	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
	C	0.00	0.04	0.13	0.19	0.23	0.25	0.23	0.19	0.13	0.04	0.00
5	DS	796.45	796.36	796.12	795.86	795.60	795.33	795.04	794.74	794.44	794.12	793.99
	TES	795.47	795.30	795.10	794.88	794.64	794.37	794.07	793.75	793.41	793.04	792.97
LEFT	ZW	795.29	795.22	795.03	794.82	794.59	794.32	794.03	793.70	793.35	792.98	792.83
GIRDER	CW	795.29	795.18	794.90	794.62	794.34	794.06	793.78	793.50	793.22	792.94	792.83
	SW	0.00	0.01	0.02	0.03	0.03	0.04	0.04	0.03	0.03	0.02	0.02
RIGHT	DL1	0.12	0.14	0.18	0.21	0.23	0.23	0.22	0.20	0.16	0.12	0.11
WEB	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
	C	0.00	0.04	0.13	0.21	0.25	0.26	0.25	0.20	0.13	0.04	0.00
6	DS	797.26	797.17	796.93	796.67	796.41	796.14	795.85	795.55	795.25	794.93	794.80
	TES	796.27	796.12	795.92	795.70	795.46	795.19	794.90	794.58	794.23	793.87	793.78
RIGHT	ZW	796.09	796.02	795.84	795.63	795.39	795.13	794.84	794.52	794.17	793.79	793.64
GIRDER	CW	796.09	795.98	795.70	795.42	795.14	794.87	794.59	794.31	794.03	793.75	793.64
	SW	-0.01	0.00	0.01	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.02
LEFT	DL1	0.12	0.13	0.18	0.21	0.23	0.23	0.23	0.21	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	0.01
	C	0.00	0.04	0.13	0.20	0.25	0.27	0.25	0.21	0.14	0.04	0.00
7	DS	797.83	797.74	797.50	797.24	796.98	796.71	796.42	796.12	795.82	795.50	795.37
	TES	796.85	796.69	796.50	796.29	796.05	795.78	795.49	795.16	794.81	794.45	794.36
RIGHT	ZW	796.66	796.59	796.41	796.21	795.99	795.72	795.43	795.10	794.74	794.37	794.22
GIRDER	CW	796.66	796.55	796.27	795.99	795.72	795.44	795.16	794.88	794.61	794.33	794.22
	SW	-0.01	-0.01	0.01	0.02	0.03	0.03	0.03	0.03	0.02	0.02	0.01
RIGHT	DL1	0.12	0.14	0.18	0.22	0.25	0.25	0.24	0.22	0.18	0.13	0.12
WEB	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.04	0.14	0.22	0.27	0.28	0.26	0.21	0.14	0.04	0.00
BLOCKING HEIGHTS												
10	BLK	16.86	16.79	16.61	16.42	16.19	15.93	15.63	15.30	14.95	14.57	14.42
11		16.50	16.44	16.25	16.04	15.80	15.54	15.25	14.93	14.58	14.21	14.05
12		16.76	16.68	16.50	16.29	16.05	15.79	15.49	15.16	14.81	14.44	14.29
13		16.41	16.33	16.14	15.93	15.69	15.42	15.12	14.80	14.45	14.09	13.93

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	FS #6
		542+17.60	542+25.10	542+37.60	542+50.10	542+62.60	542+75.73	542+88.85	543+01.98	543+07.60
FINISHED ELEVATION - TOP OF DECK										
1	DS	793.05	792.85	792.50	792.15	791.79	791.40	790.99	790.57	790.39
2		793.13	792.93	792.59	792.24	791.88	791.48	791.08	790.66	790.48
4		793.85	793.65	793.31	792.96	792.60	792.20	791.80	791.38	791.20
8		795.65	795.45	795.11	794.76	794.40	794.00	793.60	793.18	793.00
9		795.74	795.54	795.20	794.85	794.48	794.09	793.68	793.27	793.08
CAMBER DATA										
3	DS	793.42	793.22	792.88	792.53	792.16	791.77	791.36	790.95	790.76
	TES	792.40	792.12	791.74	791.44	791.06	790.68	790.21	789.82	789.71
LEFT	ZW	792.26	792.03	791.64	791.26	790.88	790.50	790.12	789.75	789.58
GIRDER	CW	792.26	792.04	791.67	791.29	790.92	790.53	790.14	789.75	789.58
	SW	0.02	0.01	0.01	0.00	0.00	0.01	0.02	0.03	0.03
LEFT	DL1	0.11	0.08	0.05	0.02	0.00	0.01	0.03	0.06	0.07
WEB	DL2	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.01	-0.02	-0.04	-0.05	-0.04	-0.02	0.00	0.00
5	DS	793.99	793.79	793.45	793.09	792.73	792.34	791.93	791.51	791.33
	TES	792.97	792.69	792.31	792.01	791.63	791.24	790.78	790.40	790.29
LEFT	ZW	792.83	792.60	792.21	791.82	791.44	791.06	790.69	790.33	790.16
GIRDER	CW	792.83	792.61	792.24	791.87	791.50	791.11	790.72	790.33	790.16
	SW	0.02	0.01	0.01	0.00	0.00	0.01	0.02	0.03	0.04
RIGHT	DL1	0.11	0.08	0.04	0.02	0.00	0.01	0.03	0.07	0.08
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	C	0.00	-0.01	-0.03	-0.04	-0.05	-0.04	-0.03	-0.01	0.00
6	DS	794.80	794.60	794.26	793.91	793.54	793.15	792.74	792.33	792.14
	TES	793.78	793.50	793.12	792.82	792.44	792.06	791.60	791.22	791.11
RIGHT	ZW	793.64	793.41	793.02	792.63	792.25	791.88	791.51	791.15	790.99
GIRDER	CW	793.64	793.42	793.05	792.68	792.32	791.93	791.55	791.16	790.99
	SW	0.02	0.01	0.00	0.00	0.00	0.01	0.02	0.04	0.04
LEFT	DL1	0.11	0.08	0.04	0.02	0.00	0.01	0.04	0.08	0.10
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.01	-0.04	-0.05	-0.06	-0.05	-0.03	-0.01	0.00
7	DS	795.37	795.17	794.83	794.47	794.11	793.72	793.31	792.89	792.71
	TES	794.36	794.08	793.69	793.39	793.01	792.63	792.18	791.80	791.69
RIGHT	ZW	794.22	793.98	793.59	793.20	792.82	792.45	792.09	791.74	791.58
GIRDER	CW	794.22	794.00	793.63	793.27	792.90	792.51	792.13	791.75	791.58
	SW	0.01	0.01	0.00	0.00	0.00	0.01	0.02	0.04	0.05
RIGHT	DL1	0.12	0.09	0.05	0.02	0.00	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
	C	0.00	-0.01	-0.04	-0.06	-0.08	-0.06	-0.04	-0.01	0.00
BLOCKING HEIGHTS										
10	BLK	14.42	14.19	13.79	13.41	13.03	12.66	12.30	11.94	11.78
11		14.05	13.82	13.43	13.04	12.67	12.29	11.93	11.56	11.41
12		14.29	14.06	13.67	13.29	12.91	12.53	12.16	11.79	11.63
13		13.93	13.70	13.32	12.93	12.55	12.17	11.79	11.42	11.26



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

= 5" HAUNCH + 10½" SLAB = 15½" = 1.29 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-40-853

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 5 & 6

SHEET 61 OF 96

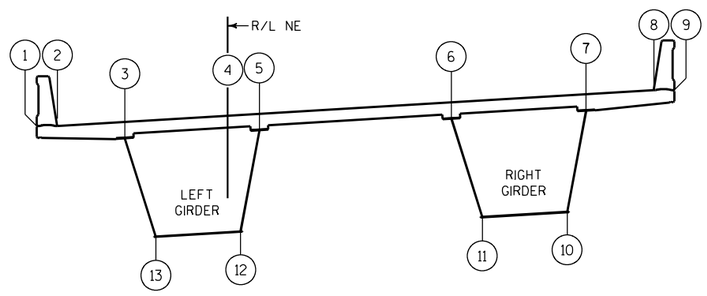
FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080533_ss.dgn PLOT DATE : 19-JUL-2015 22:27 PLOT BY : MSCJJO PLOT NAME : 080533_ss PLOT SCALE : 10.666667:1

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	P07-09
		543+07.60	543+15.10	543+28.23	543+41.35	543+54.48	543+67.60	543+80.73	543+93.85	544+06.98	544+20.10
FINISHED ELEVATION - TOP OF DECK											
1	DS	790.39	790.14	789.70	789.25	788.79	788.33	787.87	787.41	786.95	786.49
2		790.48	790.23	789.79	789.33	788.87	788.41	787.95	787.50	787.04	786.58
4		791.20	790.95	790.51	790.05	789.59	789.13	788.67	788.22	787.76	787.30
8		793.00	792.75	792.31	791.85	791.39	790.93	790.47	790.02	789.56	789.10
9		793.08	792.84	792.39	791.94	791.48	791.02	790.56	790.10	789.64	789.18
CAMBER DATA											
3	DS	790.76	790.51	790.07	789.62	789.16	788.70	788.24	787.78	787.32	786.86
	TES	789.71	789.41	789.00	788.57	788.12	787.65	787.17	786.68	786.17	785.66
LEFT	ZW	789.58	789.36	788.96	788.54	788.09	787.62	787.14	786.63	786.11	785.57
GIRDER	CW	789.58	789.32	788.85	788.38	787.91	787.44	786.98	786.51	786.04	785.57
	SW	0.03	0.04	0.05	0.05	0.06	0.05	0.05	0.03	0.02	0.00
LEFT	DL1	0.07	0.09	0.12	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	0.01	0.00	0.00
	C	0.00	0.05	0.11	0.16	0.18	0.18	0.16	0.12	0.07	0.00
5	DS	791.33	791.08	790.64	790.19	789.73	789.27	788.81	788.35	787.89	787.43
	TES	790.29	789.99	789.58	789.15	788.70	788.24	787.75	787.25	786.74	786.22
LEFT	ZW	790.16	789.95	789.55	789.13	788.68	788.21	787.72	787.21	786.68	786.14
GIRDER	CW	790.16	789.90	789.43	788.96	788.49	788.02	787.55	787.08	786.61	786.14
	SW	0.04	0.04	0.05	0.06	0.06	0.06	0.05	0.04	0.02	0.00
RIGHT	DL1	0.08	0.10	0.14	0.16	0.17	0.17	0.14	0.11	0.06	0.00
WEB	DL2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.05	0.12	0.17	0.20	0.19	0.17	0.13	0.07	0.00
6	DS	792.14	791.89	791.45	791.00	790.54	790.08	789.62	789.16	788.70	788.24
	TES	791.11	790.83	790.42	789.99	789.55	789.08	788.60	788.09	787.57	787.05
RIGHT	ZW	790.99	790.78	790.39	789.97	789.52	789.06	788.56	788.04	787.50	786.95
GIRDER	CW	790.99	790.73	790.25	789.78	789.31	788.84	788.37	787.90	787.42	786.95
	SW	0.04	0.05	0.06	0.07	0.07	0.07	0.06	0.04	0.02	0.00
LEFT	DL1	0.10	0.12	0.16	0.18	0.19	0.19	0.16	0.12	0.06	0.00
WEB	DL2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
	C	0.00	0.06	0.13	0.19	0.21	0.22	0.19	0.15	0.08	0.00
7	DS	792.71	792.46	792.02	791.57	791.11	790.65	790.19	789.73	789.27	788.81
	TES	791.69	791.41	791.01	790.59	790.14	789.67	789.18	788.67	788.15	787.62
RIGHT	ZW	791.58	791.37	790.99	790.57	790.13	789.65	789.15	788.62	788.08	787.52
GIRDER	CW	791.58	791.31	790.84	790.36	789.89	789.42	788.94	788.47	788.00	787.52
	SW	0.05	0.06	0.07	0.08	0.08	0.08	0.06	0.05	0.02	0.00
RIGHT	DL1	0.11	0.13	0.18	0.21	0.22	0.21	0.18	0.13	0.07	0.00
WEB	DL2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
	C	0.00	0.06	0.15	0.21	0.24	0.23	0.21	0.15	0.08	0.00
BLOCKING HEIGHTS											
10	BLK	11.78	11.57	11.19	10.78	10.33	9.85	9.35	8.83	8.28	7.73
11		11.41	11.19	10.80	10.38	9.94	9.47	8.97	8.45	7.91	7.37
12		11.63	11.41	11.02	10.60	10.15	9.68	9.19	8.67	8.14	7.61
13		11.26	11.04	10.64	10.21	9.76	9.30	8.81	8.30	7.78	7.25

FIELD SECTION #8

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION									
		P08-01	P08-02	P08-03	P08-04	P08-05	P08-06	P08-07	P08-08	P08-09	FS #7
		544+24.10	544+37.23	544+50.35	544+63.48	544+76.60	544+89.73	545+02.85	545+15.98	545+29.10	545+36.60
FINISHED ELEVATION - TOP OF DECK											
1	DS	786.35	785.92	785.50	785.09	784.71	784.34	783.99	783.66	783.35	783.18
2		786.44	786.00	785.58	785.18	784.80	784.43	784.08	783.75	783.43	783.26
4		787.16	786.72	786.30	785.90	785.52	785.15	784.80	784.47	784.15	783.98
8		788.96	788.52	788.10	787.70	787.32	786.95	786.60	786.27	785.95	785.78
9		789.05	788.61	788.19	787.79	787.40	787.04	786.69	786.36	786.04	785.87
CAMBER DATA											
3	DS	786.73	786.29	785.87	785.47	785.08	784.71	784.36	784.03	783.72	783.55
	TES	785.52	785.14	784.77	784.40	784.04	783.67	783.31	782.96	782.61	782.49
LEFT	ZW	785.44	785.07	784.72	784.36	784.01	783.65	783.28	782.92	782.57	782.37
GIRDER	CW	785.44	785.08	784.72	784.36	784.01	783.65	783.29	782.93	782.57	782.37
	SW	0.00	0.02	0.03	0.05	0.05	0.06	0.05	0.05	0.04	0.03
LEFT	DL1	0.00	0.05	0.10	0.13	0.15	0.15	0.14	0.12	0.09	0.07
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	DS	787.30	786.86	786.44	786.03	785.65	785.28	784.93	784.60	784.29	784.12
	TES	786.09	785.71	785.34	784.98	784.62	784.26	783.90	783.54	783.19	783.07
LEFT	ZW	786.00	785.64	785.29	784.95	784.60	784.24	783.88	783.51	783.15	782.95
GIRDER	CW	786.00	785.65	785.29	784.94	784.58	784.22	783.87	783.51	783.16	782.95
	SW	0.00	0.02	0.04	0.05	0.06	0.06	0.06	0.05	0.04	0.04
RIGHT	DL1	0.00	0.06	0.11	0.14	0.17	0.17	0.16	0.14	0.10	0.08
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	DS	788.11	787.67	787.25	786.85	786.46	786.09	785.74	785.41	785.10	784.93
	TES	786.91	786.54	786.18	785.82	785.46	785.10	784.74	784.38	784.03	783.90
RIGHT	ZW	786.82	786.47	786.13	785.79	785.44	785.08	784.71	784.35	783.99	783.78
GIRDER	CW	786.82	786.46	786.11	785.75	785.40	785.05	784.69	784.34	783.98	783.78
	SW	0.00	0.02	0.04	0.06	0.07	0.07	0.07	0.06	0.05	0.04
LEFT	DL1	0.00	0.06	0.12	0.16	0.19	0.19	0.18	0.16	0.12	0.10
WEB	DL2	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	DS	788.68	788.24	787.82	787.41	787.03	786.66	786.31	785.98	785.67	785.50
	TES	787.48	787.11	786.76	786.41	786.05	785.70	785.34	784.97	784.61	784.48
RIGHT	ZW	787.39	787.05	786.71	786.38	786.03	785.68	785.32	784.95	784.58	784.37
GIRDER	CW	787.39	787.03	786.68	786.33	785.98	785.63	785.27	784.92	784.57	784.37
	SW	0.00	0.02	0.05	0.06	0.08	0.08	0.08	0.07	0.06	0.05
RIGHT	DL1	0.00	0.07	0.13	0.18	0.21	0.22	0.21	0.18	0.13	0.11
WEB	DL2	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLOCKING HEIGHTS											
10	BLK	7.59	7.25	6.91	6.58	6.24	5.88	5.52	5.15	4.78	4.57
11		7.23	6.88	6.54	6.20	5.85	5.49	5.13	4.76	4.40	4.19
12		7.47	7.11	6.76	6.41	6.06	5.70	5.34	4.98	4.62	4.42
13		7.11	6.75	6.39	6.04	5.68	5.32	4.96	4.60	4.24	4.04



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

= 5" HAUNCH + 10½" SLAB = 15½" = 1.29 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-40-853

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 7 & 8

SHEET 62 OF 96

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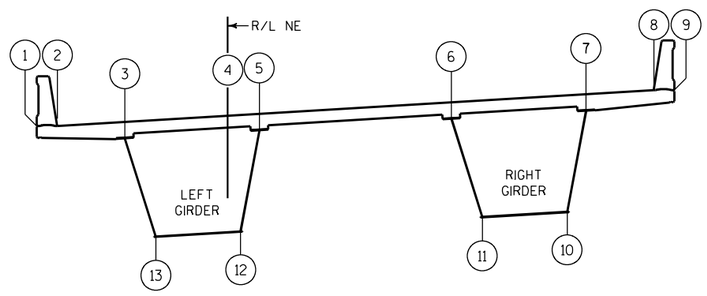
FIELD SECTION #9

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		FS #7	P09-01	P09-02	P09-03	PIER	P09-05	P09-06	P09-07	FS #8
		545+36.60	545+42.23	545+55.35	545+68.48	545+81.60	545+94.10	546+06.60	546+19.10	546+26.60
FINISHED ELEVATION - TOP OF DECK										
1	DS	783.18	783.05	782.77	782.51	782.27	782.06	781.86	781.68	781.58
2		783.26	783.14	782.86	782.60	782.36	782.15	781.95	781.77	781.66
4		783.98	783.86	783.58	783.32	783.08	782.87	782.67	782.49	782.38
8		785.78	785.66	785.38	785.12	784.88	784.67	784.47	784.29	784.18
9		785.87	785.75	785.47	785.21	784.97	784.75	784.55	784.37	784.27
CAMBER DATA										
3	DS	783.55	783.42	783.15	782.89	782.65	782.43	782.23	782.05	781.95
	TES	782.49	782.30	781.99	781.80	781.55	781.35	781.10	780.95	780.93
LEFT	ZW	782.37	782.23	781.90	781.61	781.36	781.16	781.00	780.86	780.79
GIRDER	CW	782.37	782.27	782.04	781.81	781.58	781.36	781.14	780.93	780.79
	SW	0.03	0.03	0.02	0.01	0.00	0.00	0.01	0.01	0.02
LEFT	DL1	0.07	0.06	0.03	0.01	0.00	0.02	0.05	0.08	0.11
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	-0.05	-0.14	-0.20	-0.22	-0.20	-0.14	-0.06	0.00
5	DS	784.12	783.99	783.72	783.46	783.21	783.00	782.80	782.62	782.52
	TES	783.07	782.88	782.57	782.36	782.11	781.91	781.66	781.52	781.50
LEFT	ZW	782.95	782.81	782.48	782.18	781.93	781.73	781.56	781.43	781.36
GIRDER	CW	782.95	782.85	782.62	782.39	782.16	781.94	781.71	781.49	781.36
	SW	0.04	0.03	0.02	0.01	0.00	0.00	0.01	0.01	0.02
RIGHT	DL1	0.08	0.07	0.03	0.01	0.00	0.02	0.04	0.08	0.11
WEB	DL2	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.05	-0.14	-0.21	-0.23	-0.21	-0.15	-0.06	0.00
6	DS	784.93	784.80	784.53	784.27	784.03	783.81	783.61	783.43	783.33
	TES	783.90	783.70	783.38	783.18	782.92	782.72	782.47	782.33	782.31
RIGHT	ZW	783.78	783.63	783.30	783.00	782.74	782.54	782.37	782.24	782.17
GIRDER	CW	783.78	783.68	783.45	783.21	782.98	782.75	782.53	782.31	782.17
	SW	0.04	0.04	0.02	0.01	0.00	0.00	0.00	0.01	0.02
LEFT	DL1	0.10	0.08	0.04	0.01	0.00	0.02	0.04	0.08	0.11
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	C	0.00	-0.05	-0.15	-0.21	-0.24	-0.22	-0.16	-0.07	0.00
7	DS	785.50	785.37	785.10	784.84	784.59	784.38	784.18	784.00	783.90
	TES	784.48	784.28	783.96	783.75	783.49	783.30	783.05	782.91	782.89
RIGHT	ZW	784.37	784.22	783.88	783.57	783.31	783.11	782.95	782.82	782.75
GIRDER	CW	784.37	784.27	784.03	783.80	783.56	783.33	783.11	782.88	782.75
	SW	0.05	0.04	0.02	0.01	0.00	0.00	0.00	0.01	0.01
RIGHT	DL1	0.11	0.09	0.05	0.02	0.00	0.02	0.05	0.09	0.12
WEB	DL2	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	C	0.00	-0.05	-0.15	-0.22	-0.25	-0.23	-0.16	-0.07	0.00
BLOCKING HEIGHTS										
10	BLK	4.57	4.42	4.08	3.78	3.51	3.31	3.15	3.02	2.95
11		4.19	4.04	3.71	3.41	3.15	2.95	2.78	2.65	2.58
12		4.42	4.27	3.94	3.65	3.39	3.19	3.03	2.89	2.83
13		4.04	3.90	3.58	3.29	3.03	2.84	2.67	2.54	2.47

FIELD SECTION #10

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION										
		FS #8	P10-01	P10-02	P10-03	P10-04	P10-05	P10-06	P10-07	P10-08	P10-09	FS #9
		546+26.60	546+31.60	546+44.10	546+56.60	546+69.10	546+81.60	546+94.10	547+06.60	547+19.10	547+31.60	547+36.60
FINISHED ELEVATION - TOP OF DECK												
1	DS	781.58	781.51	781.36	781.23	781.11	781.01	780.93	780.86	780.80	780.74	780.71
2		781.66	781.60	781.45	781.32	781.20	781.10	781.02	780.95	780.88	780.82	780.80
4		782.38	782.32	782.17	782.04	781.92	781.82	781.74	781.67	781.60	781.54	781.52
8		784.18	784.12	783.97	783.84	783.72	783.62	783.54	783.47	783.40	783.34	783.32
9		784.27	784.21	784.06	783.93	783.81	783.71	783.62	783.55	783.49	783.43	783.40
CAMBER DATA												
3	DS	781.95	781.89	781.74	781.60	781.49	781.39	781.30	781.23	781.17	781.11	781.08
	TES	780.93	780.81	780.70	780.61	780.51	780.42	780.33	780.25	780.15	780.05	780.10
LEFT	ZW	780.79	780.75	780.65	780.56	780.47	780.37	780.28	780.19	780.09	779.98	779.93
GIRDER	CW	780.79	780.75	780.66	780.56	780.46	780.36	780.27	780.17	780.07	779.97	779.93
	SW	0.02	0.02	0.03	0.03	0.04	0.04	0.03	0.03	0.02	0.01	0.01
LEFT	DL1	0.11	0.12	0.16	0.19	0.21	0.22	0.22	0.20	0.18	0.14	0.12
WEB	DL2	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	DS	782.52	782.46	782.31	782.17	782.06	781.95	781.87	781.80	781.74	781.68	781.65
	TES	781.50	781.38	781.28	781.18	781.09	781.00	780.91	780.82	780.72	780.62	780.67
LEFT	ZW	781.36	781.32	781.22	781.13	781.04	780.95	780.86	780.76	780.66	780.54	780.49
GIRDER	CW	781.36	781.32	781.22	781.12	781.03	780.93	780.83	780.73	780.63	780.53	780.49
	SW	0.02	0.02	0.03	0.03	0.04	0.04	0.03	0.03	0.02	0.01	0.00
RIGHT	DL1	0.11	0.12	0.16	0.20	0.22	0.23	0.23	0.21	0.18	0.14	0.12
WEB	DL2	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	DS	783.33	783.27	783.12	782.98	782.87	782.77	782.68	782.61	782.55	782.49	782.46
	TES	782.31	782.21	782.10	782.01	781.92	781.82	781.73	781.64	781.54	781.44	781.48
RIGHT	ZW	782.17	782.13	782.04	781.95	781.86	781.76	781.66	781.56	781.46	781.34	781.29
GIRDER	CW	782.17	782.13	782.03	781.93	781.83	781.73	781.63	781.53	781.43	781.33	781.29
	SW	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.00	-0.01
LEFT	DL1	0.11	0.13	0.17	0.21	0.23	0.23	0.23	0.21	0.18	0.13	0.12
WEB	DL2	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	DS	783.90	783.84	783.69	783.55	783.44	783.33	783.25	783.18	783.12	783.06	783.03
	TES	782.89	782.79	782.68	782.59	782.50	782.41	782.32	782.23	782.12	782.01	782.05
RIGHT	ZW	782.75	782.71	782.61	782.53	782.44	782.35	782.26	782.15	782.03	781.91	781.86
GIRDER	CW	782.75	782.71	782.61	782.51	782.41	782.31	782.20	782.10	782.00	781.90	781.86
	SW	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.02	0.01	-0.01	-0.01
RIGHT	DL1	0.12	0.13	0.18	0.22	0.24	0.25	0.25	0.22	0.18	0.14	0.12
WEB	DL2	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLOCKING HEIGHTS												
10	BLK	2.95	2.91	2.82	2.73	2.64	2.55	2.46	2.35	2.24	2.11	2.06
11		2.58	2.54	2.45	2.36	2.27	2.17	2.07	1.98	1.87	1.75	1.70
12		2.83	2.78	2.68	2.59	2.51	2.42	2.32	2.23	2.12	2.00	1.96
13		2.47	2.42	2.32	2.23	2.14	2.05	1.96	1.86	1.76	1.65	1.61



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

= 5" HAUNCH + 10½" SLAB = 15½" = 1.29 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-40-853

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 9 & 10

SHEET 63 OF 96

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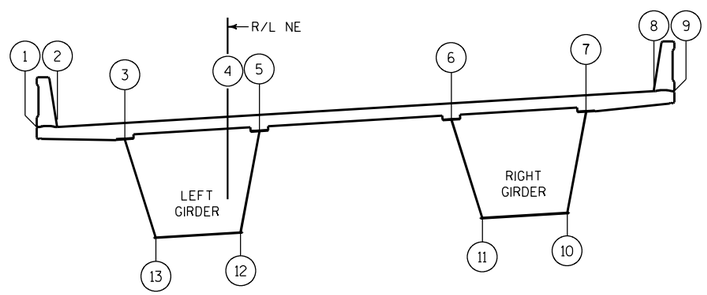
FIELD SECTION #11

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION						
		FS #9	P11-01	P11-02	P11-03	P11-04	P11-05	FS #10
		547+36.60	547+44.10	547+56.60	547+69.10	547+81.60	547+94.10	547+99.60
FINISHED ELEVATION - TOP OF DECK								
1	DS	780.71	780.67	780.61	780.55	780.49	780.42	780.40
2		780.80	780.76	780.70	780.63	780.57	780.51	780.48
4		781.52	781.48	781.42	781.35	781.29	781.23	781.20
8		783.32	783.28	783.22	783.15	783.09	783.03	783.00
9		783.40	783.37	783.30	783.24	783.18	783.12	783.09
CAMBER DATA								
3	DS	781.08	781.05	780.98	780.92	780.86	780.80	780.77
	TES	780.10	779.99	779.89	779.79	779.79	779.72	779.84
LEFT	ZW	779.93	779.87	779.75	779.65	779.57	779.51	779.49
GIRDER	CW	779.93	779.88	779.79	779.70	779.61	779.52	779.49
	SW	0.01	0.00	-0.01	-0.01	-0.01	-0.01	0.00
LEFT	DL1	0.12	0.10	0.06	0.03	0.01	0.01	0.01
WEB	DL2	0.01	0.01	0.01	0.00	0.00	0.00	0.00
	C	0.00	-0.02	-0.04	-0.05	-0.04	-0.02	0.00
5	DS	781.65	781.61	781.55	781.49	781.43	781.36	781.34
	TES	780.67	780.55	780.44	780.35	780.35	780.28	780.40
LEFT	ZW	780.49	780.42	780.31	780.21	780.12	780.06	780.04
GIRDER	CW	780.49	780.44	780.35	780.26	780.17	780.08	780.04
	SW	0.00	0.00	-0.01	-0.02	-0.02	-0.01	-0.01
RIGHT	DL1	0.12	0.09	0.05	0.02	0.00	-0.01	0.00
WEB	DL2	0.01	0.01	0.01	0.00	0.00	0.00	0.00
	C	0.00	-0.02	-0.04	-0.05	-0.05	-0.02	0.00
6	DS	782.46	782.43	782.36	782.30	782.24	782.18	782.15
	TES	781.48	781.35	781.24	781.14	781.14	781.08	781.20
RIGHT	ZW	781.29	781.22	781.10	780.99	780.91	780.86	780.84
GIRDER	CW	781.29	781.24	781.15	781.06	780.97	780.88	780.84
	SW	-0.01	-0.01	-0.02	-0.03	-0.02	-0.01	-0.01
LEFT	DL1	0.12	0.09	0.04	0.01	-0.01	-0.01	-0.01
WEB	DL2	0.01	0.01	0.01	0.00	0.00	0.00	0.00
	C	0.00	-0.02	-0.05	-0.07	-0.06	-0.02	0.00
7	DS	783.03	782.99	782.93	782.87	782.81	782.74	782.72
	TES	782.05	781.93	781.82	781.72	781.72	781.66	781.78
RIGHT	ZW	781.86	781.79	781.67	781.57	781.49	781.44	781.42
GIRDER	CW	781.86	781.81	781.72	781.64	781.55	781.46	781.42
	SW	-0.01	-0.02	-0.02	-0.03	-0.02	-0.01	0.00
RIGHT	DL1	0.12	0.09	0.05	0.02	0.00	0.00	0.00
WEB	DL2	0.01	0.01	0.01	0.00	0.00	0.00	0.00
	C	0.00	-0.02	-0.05	-0.06	-0.06	-0.02	0.00
BLOCKING HEIGHTS								
10	BLK	2.06	1.99	1.88	1.78	1.70	1.64	1.63
11		1.70	1.63	1.51	1.41	1.33	1.27	1.25
12		1.96	1.89	1.77	1.67	1.59	1.52	1.50
13		1.61	1.54	1.43	1.33	1.24	1.18	1.16

FIELD SECTION #12

POS'N NO.	VALUE	PANEL POINT POSITION/STATION		
		FS #10	PIER	FS #11
		547+99.60	548+06.60	548+13.60
FINISHED ELEVATION - TOP OF DECK				
1	DS	780.40	780.36	780.33
2		780.48	780.45	780.41
4		781.20	781.17	781.13
8		783.00	782.97	782.93
9		783.09	783.05	783.02
CAMBER DATA				
3	DS	780.77	780.73	780.70
	TES	779.84	779.67	779.80
LEFT	ZW	779.49	779.47	779.46
GIRDER	CW	779.49	779.47	779.46
	SW	0.00	0.01	0.02
LEFT	DL1	0.01	0.02	0.04
WEB	DL2	0.00	0.00	0.00
	C	0.00	0.00	0.00
5	DS	781.34	781.30	781.27
	TES	780.40	780.22	780.36
LEFT	ZW	780.04	780.02	780.02
GIRDER	CW	780.04	780.03	780.02
	SW	-0.01	0.00	0.01
RIGHT	DL1	0.00	0.01	0.03
WEB	DL2	0.00	0.00	0.00
	C	0.00	0.00	0.00
6	DS	782.15	782.11	782.08
	TES	781.20	781.04	781.18
RIGHT	ZW	780.84	780.83	780.84
GIRDER	CW	780.84	780.84	780.84
	SW	-0.01	0.00	0.02
LEFT	DL1	-0.01	0.01	0.03
WEB	DL2	0.00	0.00	0.00
	C	0.00	0.00	0.00
7	DS	782.72	782.68	782.65
	TES	781.78	781.62	781.76
RIGHT	ZW	781.42	781.42	781.42
GIRDER	CW	781.42	781.42	781.42
	SW	0.00	0.01	0.02
RIGHT	DL1	0.00	0.02	0.04
WEB	DL2	0.00	0.00	0.00
	C	0.00	0.00	0.00
BLOCKING HEIGHTS				
10	BLK	1.63	1.62	1.63
11		1.25	1.24	1.25
12		1.50	1.48	1.48
13		1.16	1.14	1.14



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

= 5" HAUNCH + 10½" SLAB = 15½" = 1.29 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-40-853

DRAWN BY MPM | PLANS CK'D. JWC

CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 11 & 12

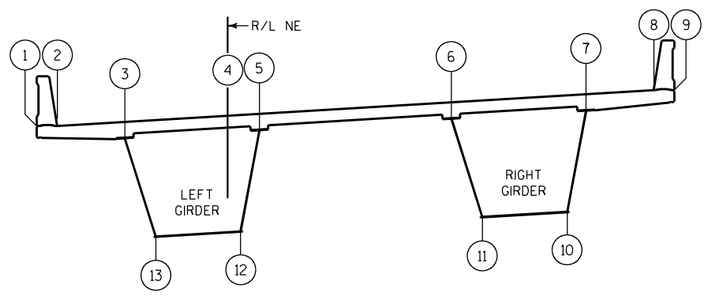
SHEET 64 OF 96

FIELD SECTION #13

POS'N NO.	VALUE	PANEL POINT POSITION AND STATION								
		FS #11	P13-01	P13-02	P13-03	P13-04	P13-05	P13-06	P13-07	FS #12
		548+13.60	548+19.21	548+31.82	548+44.43	548+57.04	548+69.66	548+82.27	548+94.88	549+00.60
FINISHED ELEVATION - TOP OF DECK										
1	DS	780.33	780.30	780.23	780.17	780.11	780.04	779.98	779.92	779.89
2		780.41	780.38	780.32	780.26	780.19	780.13	780.07	780.01	779.98
4		781.13	781.10	781.04	780.98	780.91	780.85	780.79	780.73	780.70
8		782.93	782.90	782.84	782.78	782.71	782.65	782.59	782.53	782.50
9		783.02	782.99	782.93	782.86	782.80	782.74	782.68	782.61	782.58
CAMBER DATA										
3	DS	780.70	780.67	780.61	780.54	780.48	780.42	780.35	780.29	780.26
	TES	779.80	779.65	779.64	779.56	779.58	779.59	779.60	779.60	779.69
LEFT	ZW	779.46	779.47	779.49	779.52	779.57	779.62	779.65	779.68	779.68
GIRDER	CW	779.46	779.48	779.51	779.54	779.57	779.60	779.64	779.67	779.68
	SW	0.02	0.03	0.05	0.08	0.12	0.15	0.18	0.20	0.21
LEFT	DL1	0.04	0.06	0.11	0.17	0.24	0.31	0.38	0.44	0.46
WEB	DL2	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.04
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	DS	781.27	781.24	781.18	781.11	781.05	780.99	780.92	780.86	780.83
	TES	780.36	780.21	780.21	780.15	780.17	780.20	780.22	780.23	780.32
LEFT	ZW	780.02	780.03	780.06	780.12	780.18	780.24	780.30	780.33	780.34
GIRDER	CW	780.02	780.04	780.09	780.13	780.18	780.23	780.27	780.32	780.34
	SW	0.01	0.03	0.06	0.09	0.13	0.17	0.20	0.23	0.24
RIGHT	DL1	0.03	0.05	0.11	0.18	0.27	0.35	0.43	0.49	0.52
WEB	DL2	0.00	0.00	0.01	0.02	0.02	0.03	0.04	0.04	0.04
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	DS	782.08	782.05	781.99	781.92	781.86	781.80	781.73	781.67	781.64
	TES	781.18	781.03	781.04	780.99	781.03	781.07	781.10	781.12	781.24
RIGHT	ZW	780.84	780.86	780.91	780.97	781.06	781.14	781.22	781.27	781.29
GIRDER	CW	780.84	780.87	780.93	781.00	781.06	781.13	781.19	781.26	781.29
	SW	0.02	0.03	0.07	0.11	0.16	0.20	0.24	0.27	0.29
LEFT	DL1	0.03	0.06	0.13	0.21	0.31	0.41	0.50	0.57	0.60
WEB	DL2	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.05
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	DS	782.65	782.62	782.56	782.49	782.43	782.37	782.30	782.24	782.21
	TES	781.76	781.61	781.63	781.58	781.63	781.68	781.72	781.75	781.87
RIGHT	ZW	781.42	781.44	781.50	781.58	781.68	781.78	781.87	781.93	781.95
GIRDER	CW	781.42	781.46	781.54	781.61	781.69	781.77	781.84	781.92	781.95
	SW	0.02	0.04	0.08	0.12	0.17	0.22	0.27	0.30	0.32
RIGHT	DL1	0.04	0.07	0.14	0.24	0.34	0.45	0.55	0.63	0.66
WEB	DL2	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05	0.05
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLOCKING HEIGHTS										
10	BLK	1.63	1.64	1.70	1.78	1.88	1.98	2.07	2.14	2.16
11		1.25	1.27	1.32	1.39	1.47	1.56	1.63	1.68	1.70
12		1.48	1.49	1.53	1.58	1.64	1.71	1.76	1.80	1.81
13		1.14	1.14	1.16	1.19	1.24	1.29	1.33	1.35	1.36

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	P14-08	P14-09	P14-10	P14-11
		549+00.60	549+07.49	549+20.10	549+32.71	549+45.32	549+57.93	549+70.54	549+83.16	549+95.77	550+08.38	550+20.99	550+33.60
FINISHED ELEVATION - TOP OF DECK													
1	DS	779.89	779.86	779.79	779.73	779.67	779.60	779.54	779.48	779.41	779.35	779.31	779.29
2		779.98	779.94	779.88	779.82	779.75	779.69	779.63	779.56	779.50	779.44	779.40	779.37
4		780.70	780.66	780.60	780.54	780.47	780.41	780.35	780.28	780.22	780.16	780.10	780.03
8		782.50	782.46	782.40	782.34	782.27	782.21	782.15	782.08	782.02	781.96	781.85	781.67
9		782.58	782.55	782.49	782.42	782.36	782.30	782.23	782.17	782.11	782.04	781.93	781.75
CAMBER DATA													
3	DS	780.26	780.23	780.17	780.10	780.04	779.98	779.91	779.85	779.79	779.72	779.67	779.63
	TES	779.69	779.59	779.55	779.50	779.44	779.35	779.24	779.11	778.96	778.79	778.63	778.46
LEFT	ZW	779.68	779.68	779.66	779.61	779.54	779.44	779.31	779.15	778.97	778.76	778.55	778.34
GIRDER	CW	779.68	779.61	779.48	779.36	779.23	779.10	778.97	778.85	778.72	778.59	778.46	778.34
	SW	0.21	0.22	0.23	0.23	0.23	0.22	0.20	0.17	0.14	0.09	0.05	0.00
LEFT	DL1	0.46	0.48	0.51	0.52	0.52	0.49	0.45	0.39	0.31	0.22	0.11	0.00
WEB	DL2	0.04	0.04	0.05	0.05	0.05	0.04	0.04	0.03	0.03	0.02	0.01	0.00
	C	0.00	0.07	0.17	0.26	0.31	0.34	0.33	0.30	0.25	0.17	0.09	0.00
5	DS	780.83	780.80	780.73	780.67	780.61	780.54	780.48	780.42	780.36	780.29	780.23	780.15
	TES	780.32	780.22	780.19	780.14	780.07	779.98	779.86	779.72	779.56	779.38	779.19	778.98
LEFT	ZW	780.34	780.34	780.33	780.29	780.21	780.10	779.96	779.79	779.59	779.37	779.12	778.86
GIRDER	CW	780.34	780.26	780.12	779.98	779.84	779.70	779.56	779.42	779.28	779.14	779.00	778.86
	SW	0.24	0.25	0.26	0.27	0.26	0.25	0.23	0.19	0.15	0.11	0.05	0.00
RIGHT	DL1	0.52	0.54	0.57	0.59	0.58	0.55	0.50	0.43	0.34	0.24	0.12	0.00
WEB	DL2	0.04	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03	0.02	0.01	0.00
	C	0.00	0.08	0.21	0.30	0.37	0.40	0.40	0.37	0.31	0.23	0.12	0.00
6	DS	781.64	781.61	781.55	781.48	781.42	781.36	781.29	781.23	781.17	781.10	781.01	780.89
	TES	781.24	781.13	781.11	781.06	780.99	780.89	780.76	780.61	780.44	780.24	780.01	779.73
RIGHT	ZW	781.29	781.30	781.29	781.25	781.17	781.05	780.90	780.70	780.48	780.23	779.94	779.60
GIRDER	CW	781.29	781.20	781.04	780.88	780.72	780.56	780.40	780.24	780.08	779.92	779.76	779.60
	SW	0.29	0.30	0.31	0.32	0.31	0.30	0.27	0.23	0.18	0.13	0.06	0.00
LEFT	DL1	0.60	0.63	0.67	0.68	0.68	0.64	0.58	0.50	0.40	0.27	0.14	0.00
WEB	DL2	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03	0.02	0.01	0.00
	C	0.00	0.10	0.25	0.37	0.45	0.49	0.50	0.47	0.40	0.31	0.18	0.00
7	DS	782.21	782.18	782.11	782.05	781.99	781.92	781.86	781.80	781.74	781.67	781.57	781.41
	TES	781.87	781.77	781.75	781.71	781.63	781.53	781.39	781.23	781.05	780.84	780.58	780.26
RIGHT	ZW	781.95	781.97	781.97	781.93	781.85	781.72	781.55	781.35	781.11	780.84	780.51	780.12
GIRDER	CW	781.95	781.86	781.68	781.51	781.34	781.16	780.99	780.82	780.64	780.47	780.30	780.12
	SW	0.32	0.33	0.35	0.36	0.35	0.33	0.30	0.25	0.20	0.14	0.07	0.00
RIGHT	DL1	0.66	0.70	0.74	0.76	0.75	0.71	0.64	0.55	0.43	0.30	0.15	0.00
WEB	DL2	0.05	0.05	0.06	0.06	0.06	0.05	0.05	0.04	0.03	0.02	0.01	0.00
	C	0.00	0.11	0.28	0.42	0.51	0.56	0.56	0.53	0.47	0.37	0.22	0.00
BLOCKING HEIGHTS													
10	BLK	2.16	2.17	2.17	2.13	2.05	1.92	1.76	1.55	1.31	1.05	0.72	0.33
11		1.70	1.71	1.70	1.66	1.58	1.46	1.31	1.12	0.89	0.65	0.35	0.00
12		1.81	1.81	1.79	1.75	1.67	1.57	1.43	1.25	1.05	0.83	0.59	0.33
13		1.36	1.35	1.33	1.29	1.21	1.11	0.98	0.82	0.64	0.43	0.22	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

= 5" HAUNCH + 10½" SLAB = 15½" = 1.29 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-40-853

DRAWN BY MPM | PLANS CK'D. JWC

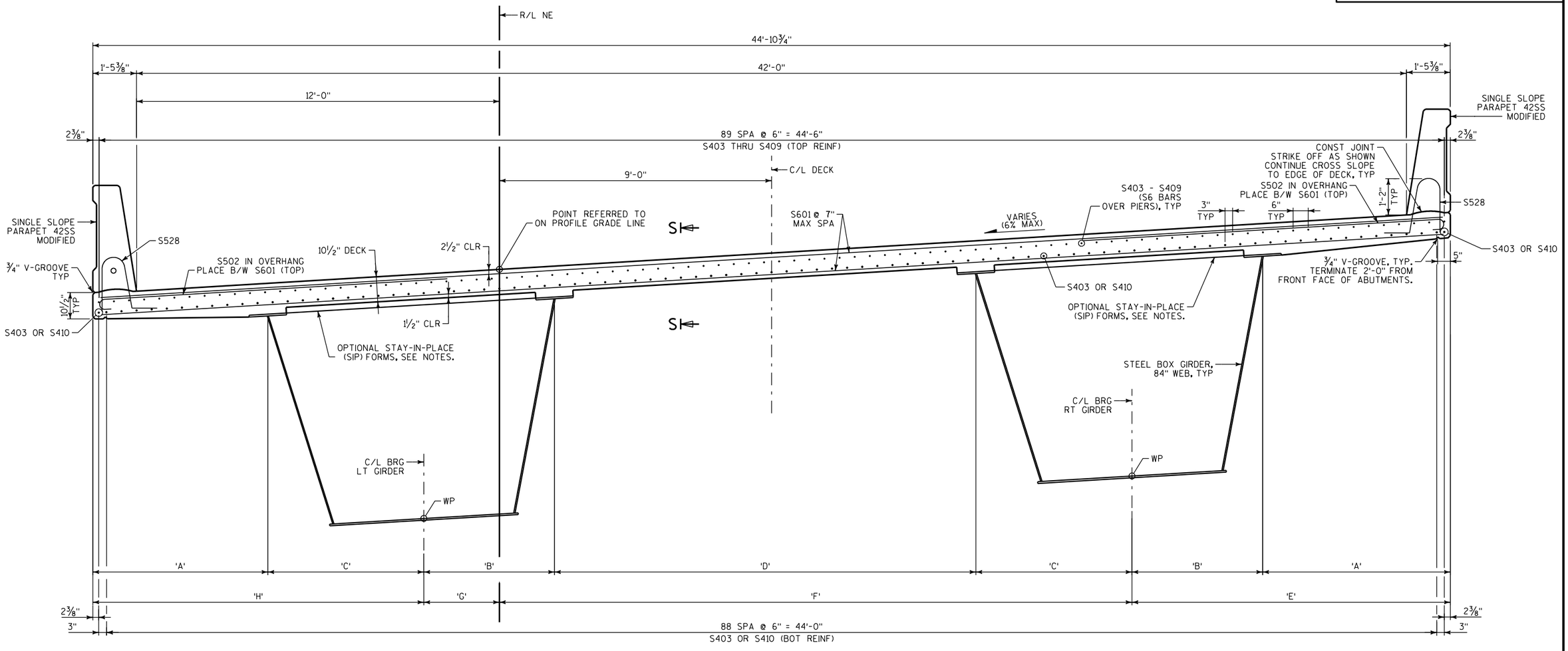
CAMBER AND DECK ELEVATIONS: FIELD SECTIONS 13 & 14

SHEET 65 OF 96

8

8

STATE PROJECT NUMBER
1060-33-81



CROSS SECTION THRU SUPERSTRUCTURE

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

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.

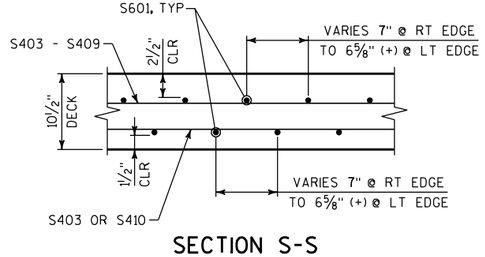
   TOP OF STAY-IN-PLACE METAL FORMS SHALL BE ALIGNED WITH THE UNDERSIDE OF THE DECK SLAB.

   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.

TABLE OF DIMENSIONS

STATION	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	DIM 'E'	DIM 'F'	DIM 'G'	DIM 'H'
538NE+10.60	6'-2½"	4'-3⅞"	5'-1⅝"	13'-6⅜"	10'-6⅜"	20'-11"	2'-1"	11'-4⅜"
550NE+15.00	6'-2½"	4'-3⅞"	5'-1⅝"	13'-6⅜"	10'-6⅜"	20'-11"	2'-1"	11'-4⅜"
550NE+33.60	6'-2⅞"	4'-4⅝"	5'-1½"	13'-6⅜"	10'-6¾"	20'-10⅝"	2'-1⅜"	11'-4"



SECTION S-S

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

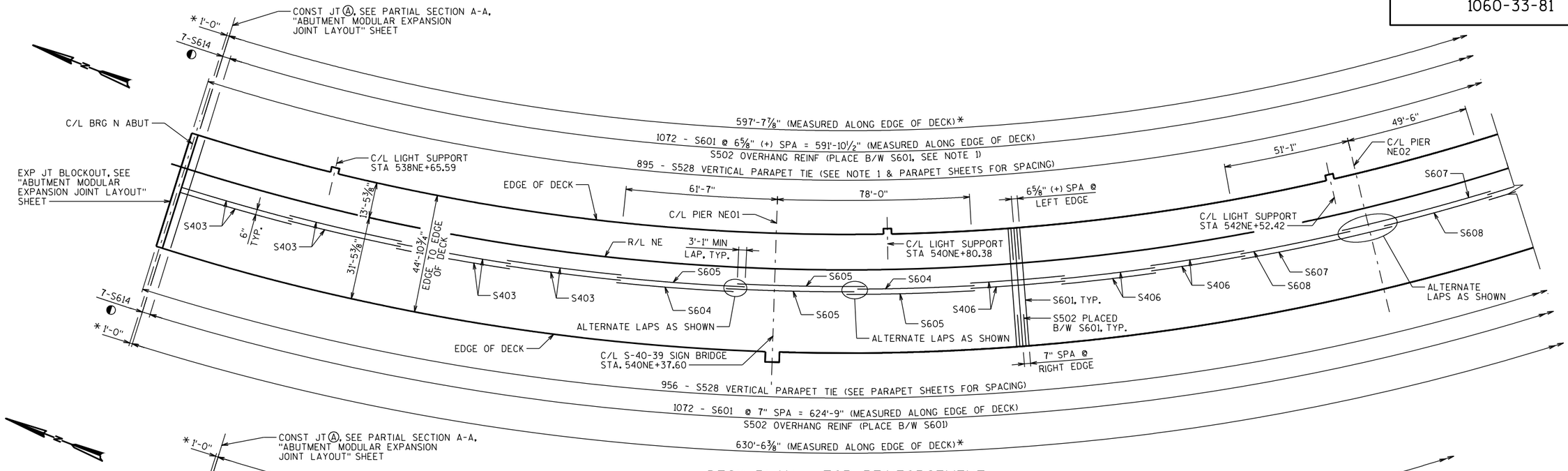
STRUCTURE B-40-853

DRAWN BY MSS | PLANS CK'D. JWC

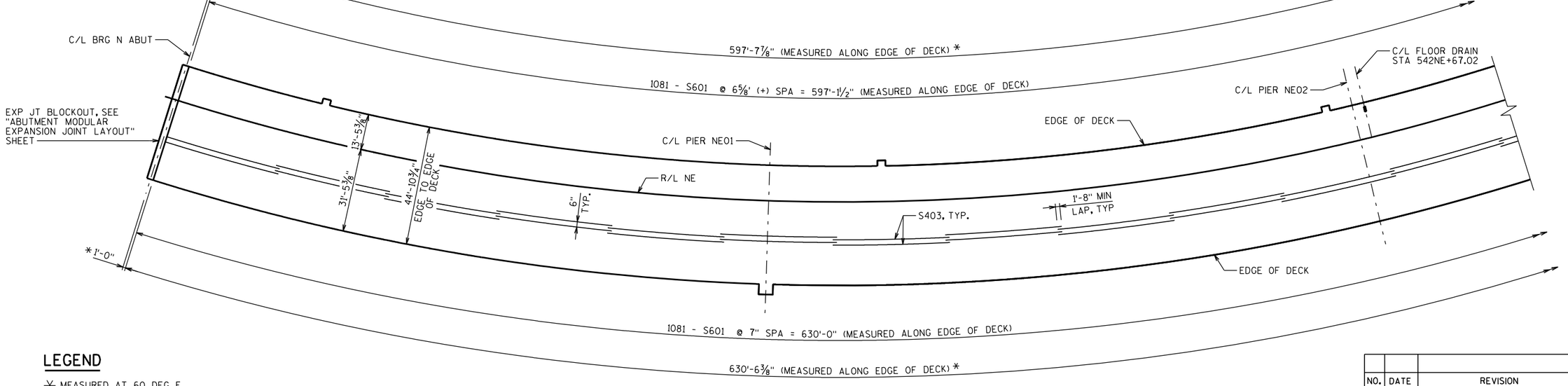
SUPERSTRUCTURE CROSS SECTION

SHEET 66 OF 96

STATE PROJECT NUMBER
1060-33-81



DECK PLAN - TOP REINFORCEMENT



DECK PLAN - BOTTOM REINFORCEMENT

LEGEND

⚹ MEASURED AT 60 DEG F

◐ REFER TO "ABUTMENT MODULAR EXPANSION JOINT LAYOUT" SHEET

NOTES

1. AT EACH LIGHT SUPPORT, 6-S502 BARS ARE NOT REQUIRED. THE S502 BARS ARE REPLACED BY THE R623 BARS AS INDICATED ON THE LIGHT SUPPORT DETAILS SHEETS. R514 SHALL BE PLACED IN LIEU OF S528.
2. AT EACH SIGN STRUCTURE SUPPORT, S502 BARS ARE NOT REQUIRED. THE S502 BARS ARE REPLACED BY THE R633 BARS AS INDICATED ON THE SIGN SUPPORT BASE SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

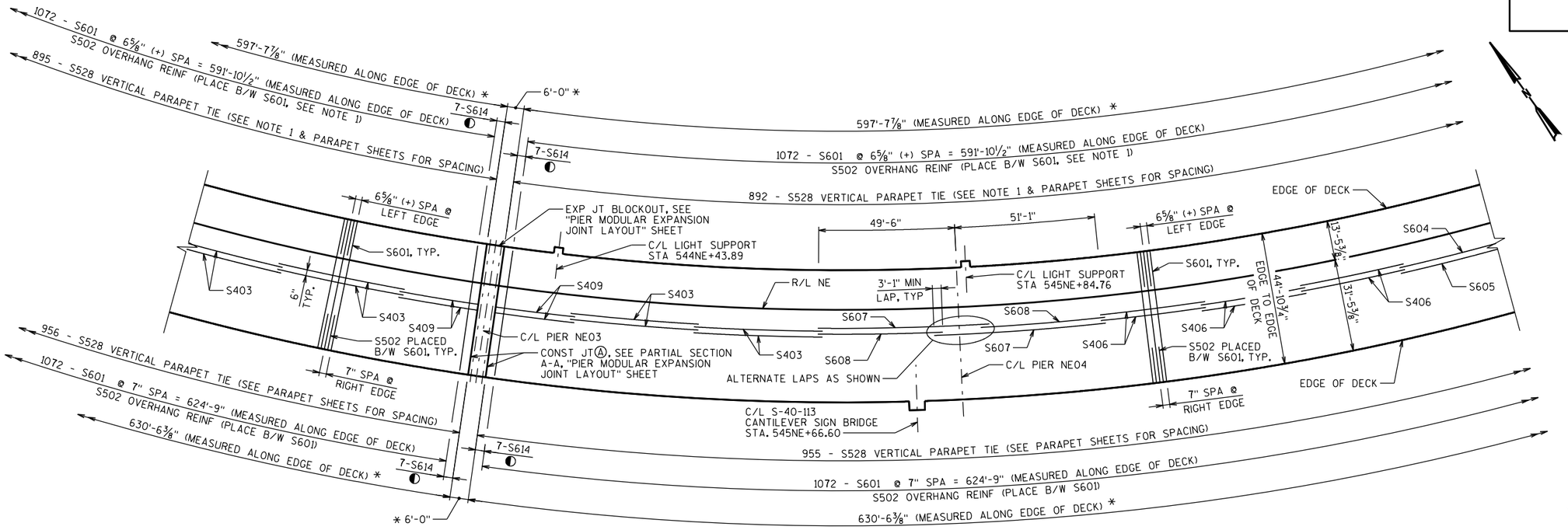
DRAWN BY MSS | PLANS CK'D. EAJ

DECK REINFORCEMENT (1 OF 3)

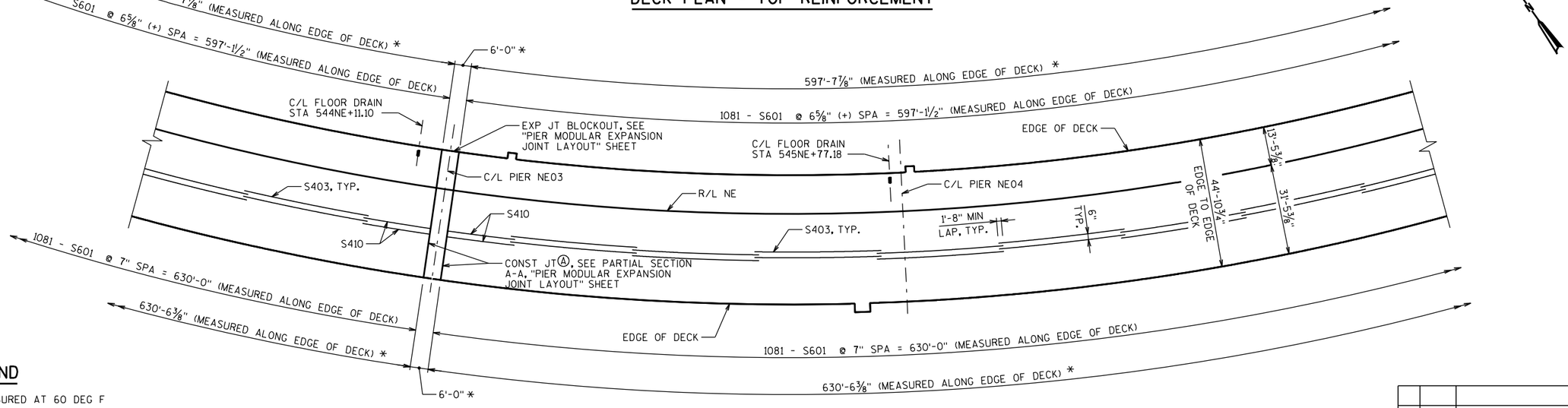
SHEET 67 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080539_de.dgn PLOT DATE : 19-JUL-2015 22:27 PLOT BY : MSCJJO PLOT NAME : 080539_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

◐ REFER TO "PIER MODULAR EXPANSION JOINT LAYOUT" SHEET

NOTES

1. AT EACH LIGHT SUPPORT, 6-S502 BARS ARE NOT REQUIRED. THE S502 BARS ARE REPLACED BY THE R623 BARS AS INDICATED ON THE LIGHT SUPPORT DETAILS SHEETS. R514 SHALL BE PLACED IN LIEU OF S528.
2. AT EACH SIGN STRUCTURE SUPPORT, S502 BARS ARE NOT REQUIRED. THE S502 BARS ARE REPLACED BY THE R633 BARS ARE INDICATED ON THE SIGN SUPPORT BASE SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

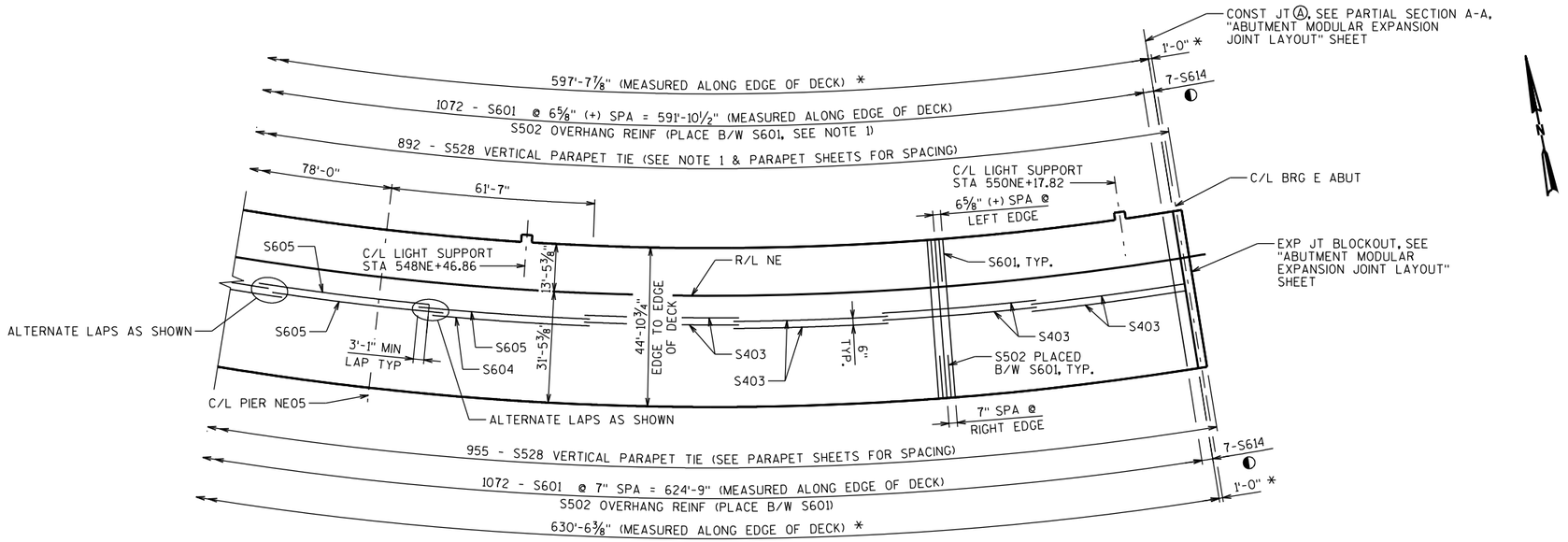
STRUCTURE B-40-853

DRAWN BY MSS | PLANS CK'D. EAJ

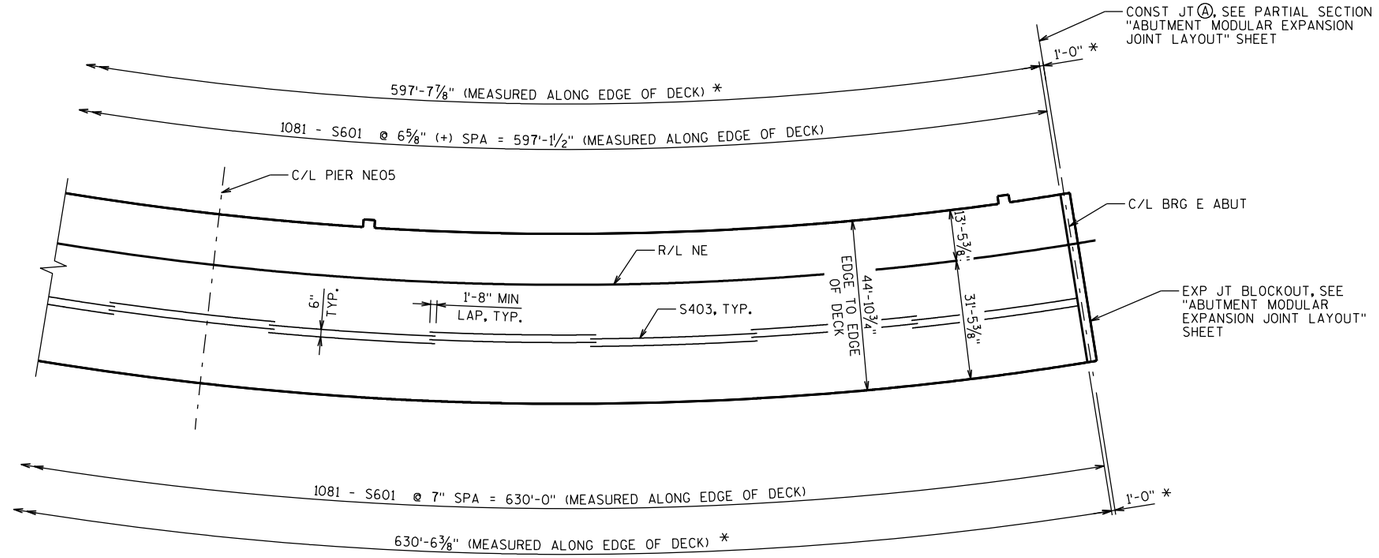
DECK REINFORCEMENT (2 OF 3)

SHEET 68 OF 96

STATE PROJECT NUMBER
1060-33-81



DECK PLAN - TOP REINFORCEMENT



DECK PLAN - BOTTOM REINFORCEMENT

LEGEND

⚹ MEASURED AT 60 DEG F

◐ REFER TO "ABUTMENT MODULAR EXPANSION JOINT LAYOUT" SHEET

NOTES

1. AT EACH LIGHT SUPPORT, 6-S502 BARS ARE NOT REQUIRED. THE S502 BARS ARE REPLACED BY THE R623 BARS AS INDICATED ON THE LIGHT SUPPORT DETAILS SHEETS. R514 SHALL BE PLACED IN LIEU OF S528.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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DECK REINFORCEMENT (3 OF 3)

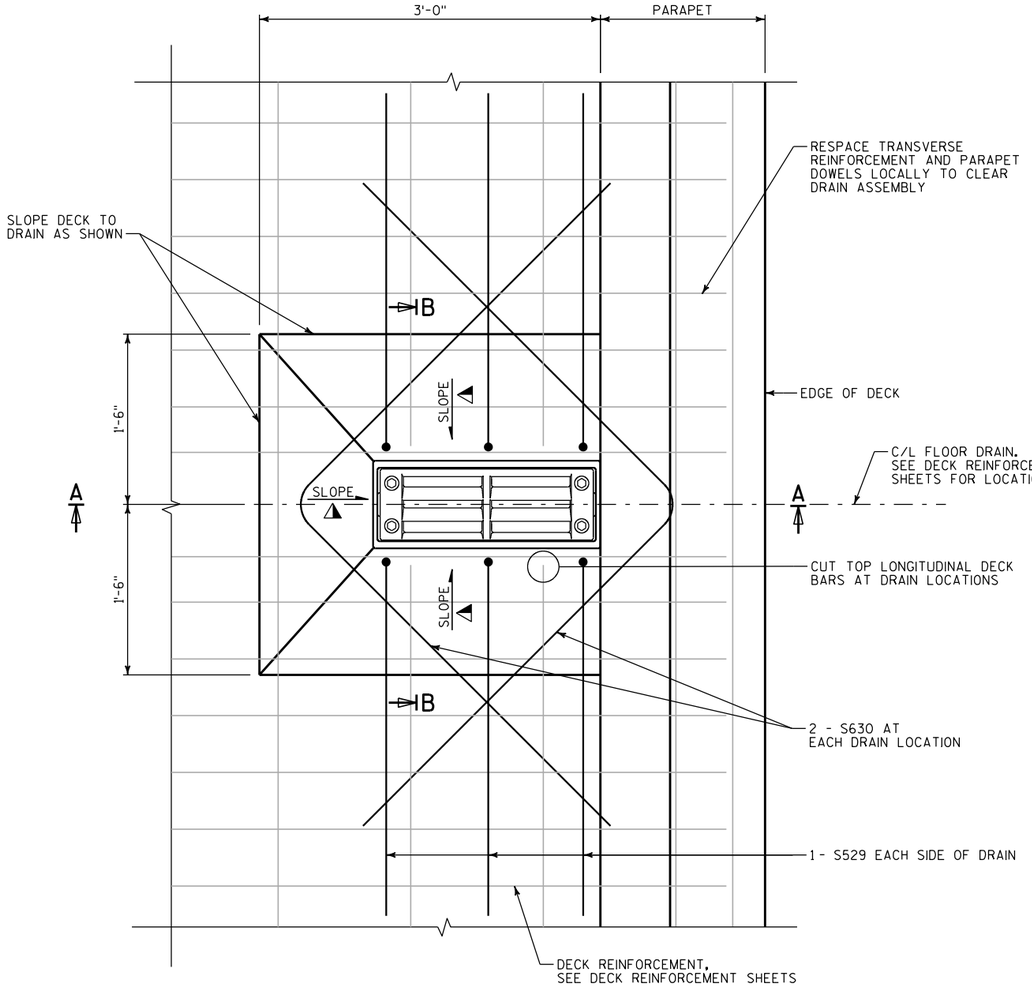
SHEET 69 OF 96

STATE PROJECT NUMBER
1060-33-81

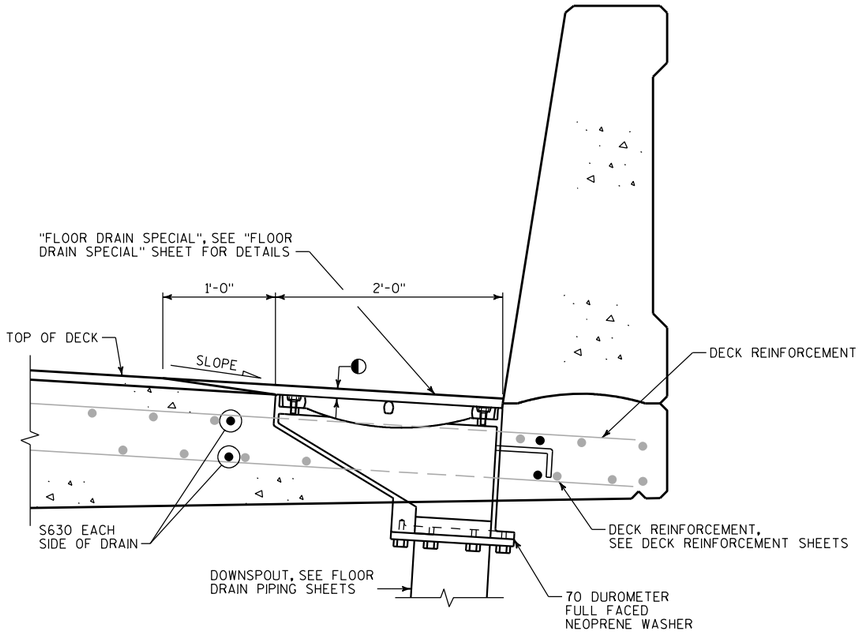
LEGEND

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

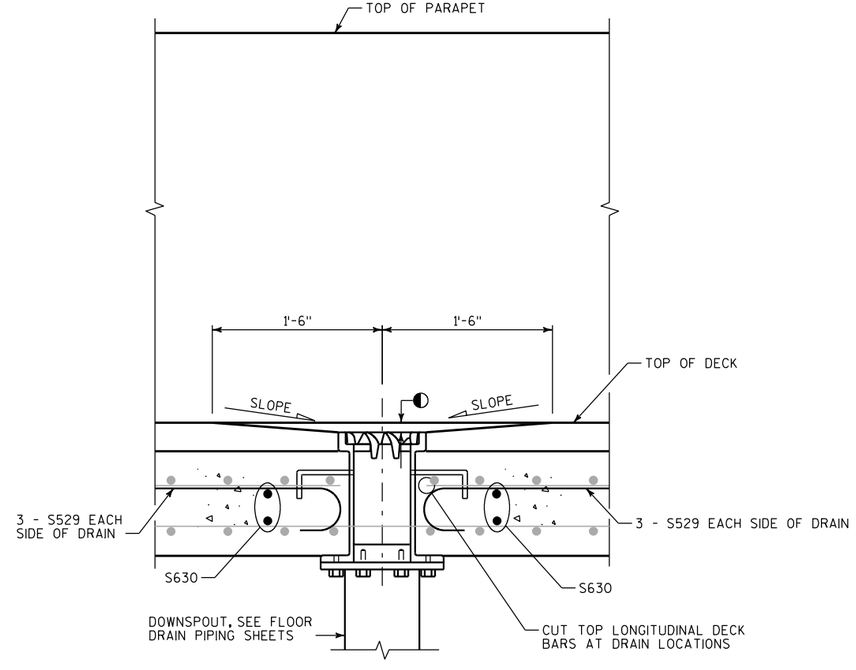
◭ HAND-FINISH SLAB WITHIN THE SLOPED AREA.



PART PLAN AT FLOOR DRAIN



SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY MSS | PLANS CK'D. JWC

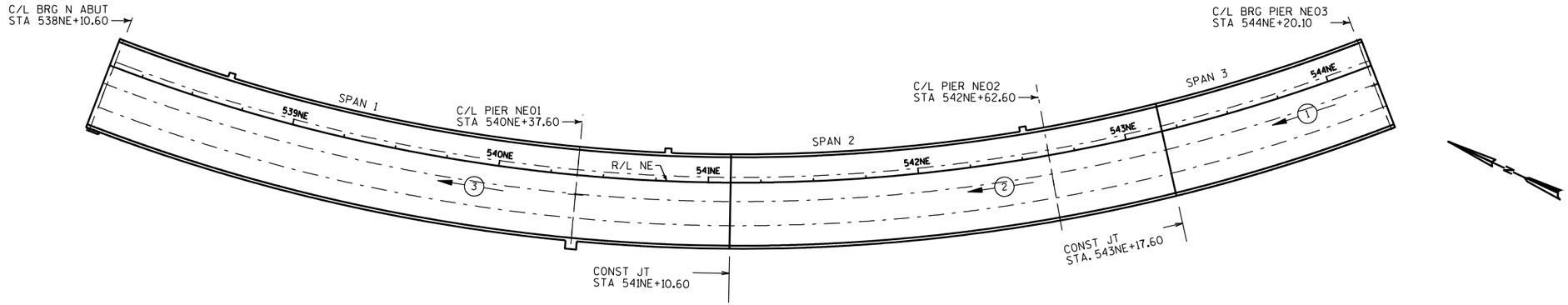
DECK DETAILS

SHEET 70 OF 96

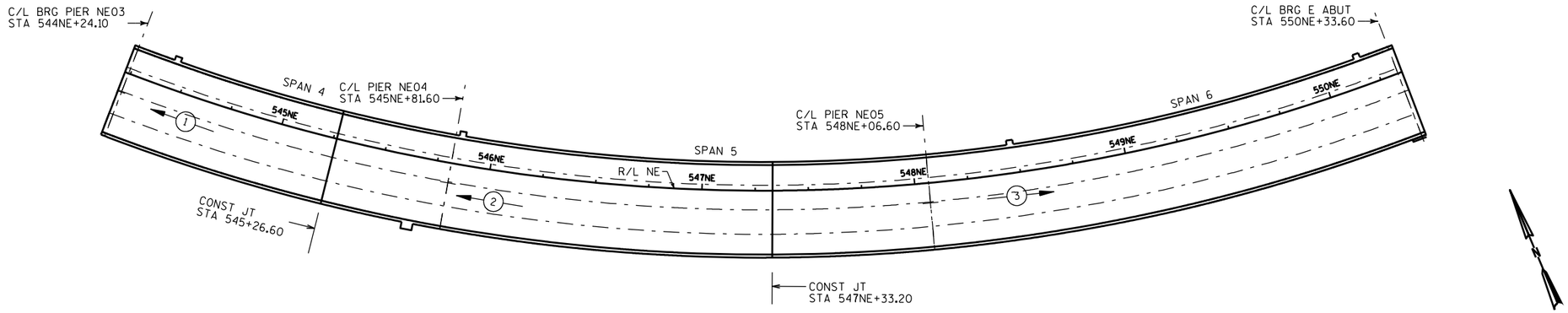
8

8

STATE PROJECT NUMBER
1060-33-81



DECK POURING SEQUENCE UNIT 1



DECK POURING SEQUENCE UNIT 2

(1) → INDICATES POUR NUMBER AND DIRECTION OF POUR

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 FOR EACH UNIT ONLY IF THE POUR STARTS AT PIER NE03 AND ENDS AT THE ABUTMENTS 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.

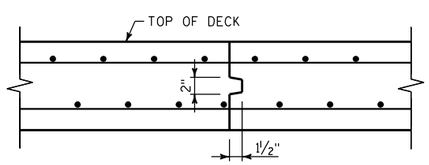
DEPOSIT FRESH CONCRETE FIRST IN THE AREA BETWEEN THE GIRDERS FOLLOWED BY THE OVERHANG AREA TO INSIDE OF THE CURVE AND THEN BY THE OVERHANG AREA TO THE OUTSIDE OF THE CURVE.

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.

THE GIRDERS, K-FRAMES, TRANSVERSE STRUTS, AND LATERAL BRACING WERE DESIGNED ASSUMING THAT THE DECK IS NOT POURED FROM THE ABUTMENTS TO PIER NE03. USING THIS SEQUENCE OR A SIMILAR ONE WHERE SPAN 1 (UNIT 1) AND SPAN 6 (UNIT 2) ARE POURED PRIOR TO SPAN 2 (UNIT 1) AND SPAN 5 (UNIT 2) MAY OVERSTRESS THE GIRDERS AND BRACING MEMBERS. TO USE THIS SEQUENCE OR A SIMILAR ONE, CONTRACTOR MUST SUBMIT DETAILED CALCULATIONS SIGNED AND STAMPED BY A WISCONSIN PROFESSIONAL ENGINEER EVALUATING THE STRUCTURAL ADEQUANCY OF THE GIRDERS AND THE BRACING MEMBERS FOR THE PROPOSED SEQUENCE.



TRANSVERSE CONSTRUCTION JOINT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY ENS | PLANS CK'D. JWC

DECK POURING SEQUENCE AND NOTES

SHEET 71 OF 96

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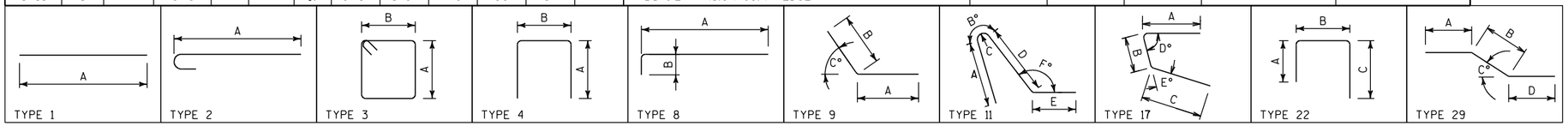
PLOT DATE : 19-JUL-2015 22:27
PLOT BY : MSCJJO
PLOT NAME : 080543_ps
PLOT SCALE : 60:1

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
S601	S	4306	44'-7"			1	44'-7"						DECK TRANSVERSE					
S502	S	4282	10'-5"			2	9'-10"						DECK TRANSVERSE AT OVERHANG					
S403	S	3628	45'-0"			1	45'-0"						DECK LONG. TOP & BOT.					
S604	S	180	45'-9"			1	45'-9"						DECK LONG. TOP OVER PIER					
S605	S	360	50'-0"			1	50'-0"						DECK LONG. TOP OVER PIER					
S406	S	540	37'-0"			1	37'-0"						DECK LONG. TOP SPANS 2 & 5					
S607	S	180	60'-0"			1	60'-0"						DECK LONG. TOP OVER PIER					
S608	S	180	43'-8"			1	43'-8"						DECK LONG. TOP OVER PIER					
S409	S	180	27'-10"			1	27'-10"						DECK LONG. TOP SPANS 3 & 4					
S410	S	182	24'-0"			1	24'-0"						DECK LONG. BOT. SPANS 3 & 4					
S511	S	40	7'-8"	X	⚠	3	1'-2"	2'-4"					PIER EXPANSION JOINT STIRRUPS	A	6"	1'-10"	8 SERIES OF 5	6'-4" TO 9'-0"
S512	S	312	8'-9"	X		3	1'-9"	2'-4"					EXPANSION JOINT STIRRUPS					
S413	S	44	4'-10"	X		9	2'-5"	2'-5"	34				PIER EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S614	S	28	44'-7"			1	44'-7"						EXPANSION JOINT TOP OF SLAB TRANSVERSE					
S615	S	56	8'-8"			1	8'-8"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S416	S	320	1'-11"			1	1'-11"						EXPANSION JOINT BLOCKOUT BOT.					
S417	S	640	2'-4"	X		22	0'-4½"	0'-9½"	1'-4"				EXPANSION JOINT BLOCKOUT BOT.					
S418	S	32	39'-8"			1	39'-8"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S519	S	320	8'-2"	X		4	4'-0"	0'-5"					EXPANSION JOINT BOT. OF SLAB LONG.					
S520	S	320	2'-8"	X		4	0'-6"	1'-11"					EXPANSION JOINT BLOCKOUT TOP					
S521	S	312	5'-5"	X		29	1'-9"	1'-11"	45	1'-9"			EXPANSION JOINT SLAB THICKNESS TRANSITION					
S522	S	40	4'-8"	X	⚠	29	1'-9"	1'-2"	45	1'-9"			PIER EXPANSION JOINT SLAB THICKNESS TRANSITION	B	5½"	1'-10½"	8 SERIES OF 5	3'-10" TO 5'-3"
S423	S	8	44'-7"			1	44'-7"						EXPANSION JOINT BLOCKOUT TOP					
S624	S	28	4'-0"			1	4'-0"						PIER EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S625	S	28	13'-4"			1	13'-4"						EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S526	S	312	5'-3"	X		8	4'-6"	0'-10"					EXPANSION JOINT BLOCKOUT TOP					
S627	S	28	6'-0"			1	6'-0"						ABUT. EXPANSION JOINT BOT. OF SLAB TRANSVERSE					
S528	S	3698	4'-9"	X		11	1'-4"	172	0'-4½"	1'-5"	0'-10"	98	PARAPET TIE					
S529	S	18	4'-7"	X		2	4'-0"						FLOOR DRAIN					
S630	S	12	7'-10"	X		8	4'-0"	4'-0"					FLOOR DRAIN					
S431	S	44	6'-0"	X		17	0'-8"	1'-6"	4'-0"	90	87		ABUT. EXPANSION JOINT EDGE					

BAR MARK BREAKDOWN				
BAR MARK	UNIT 1	UNIT 2	TOTAL NO	WEIGHT
S601	2,153	2,153	4,306	288,348
S502	2,144	2,138	4,282	46,522
S403	1,814	1,814	3,628	109,058
S604	90	90	180	12,369
S605	180	180	360	27,036
S406	270	270	540	13,347
S607	90	90	180	16,222
S608	90	90	180	11,806
S409	90	90	180	3,347
S410	91	91	182	2,918
S511	20	20	40	320
S512	156	156	312	2,847
S413	22	22	44	142
S614	14	14	28	1,875
S615	28	28	56	729
S416	160	160	320	410
S417	320	320	640	998
S418	16	16	32	848
S519	160	160	320	2,726
S520	160	160	320	890
S521	156	156	312	1,763
S522	20	20	40	195
S423	4	4	8	238
S624	14	14	28	168
S625	14	14	28	561
S526	156	156	312	1,708
S627	14	14	28	252
S528	1,851	1,847	3,698	18,321
S529	12	6	18	86
S630	8	4	12	141
S431	22	22	44	176



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.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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DECK REINFORCEMENT SCHEDULE

SHEET 72 OF 96

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STATE PROJECT NUMBER
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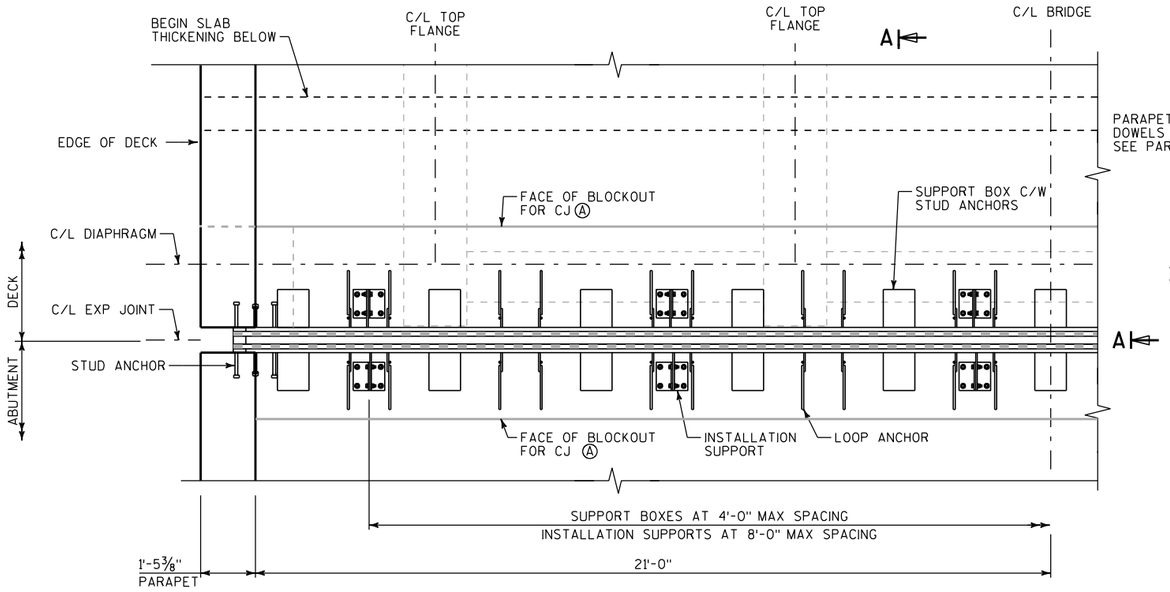
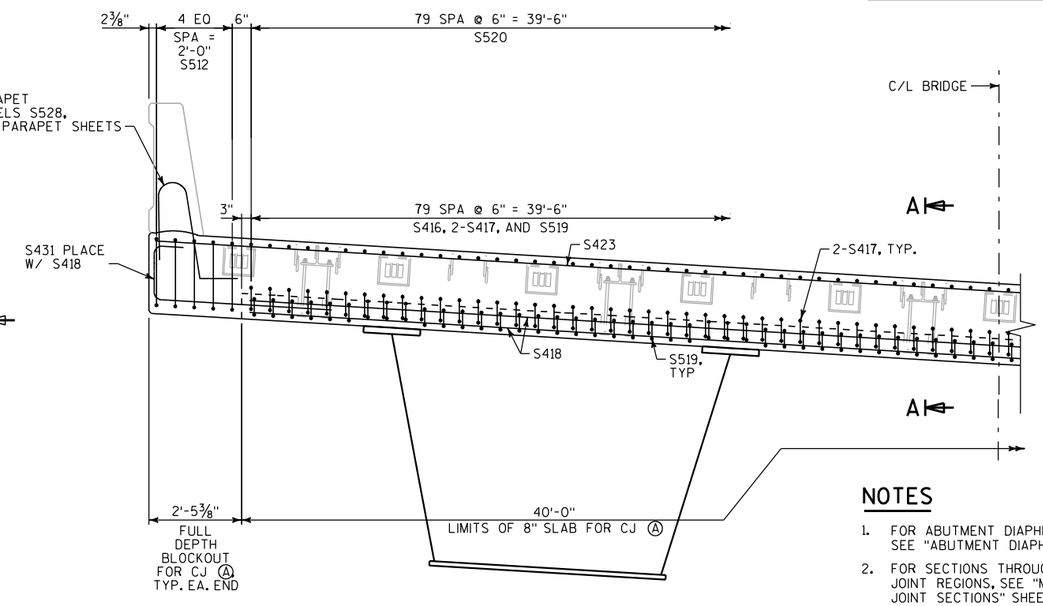


PLAN - JOINT AT ABUTMENT

MODULAR JOINT SYMMETRICAL ABOUT C/L EXP JT



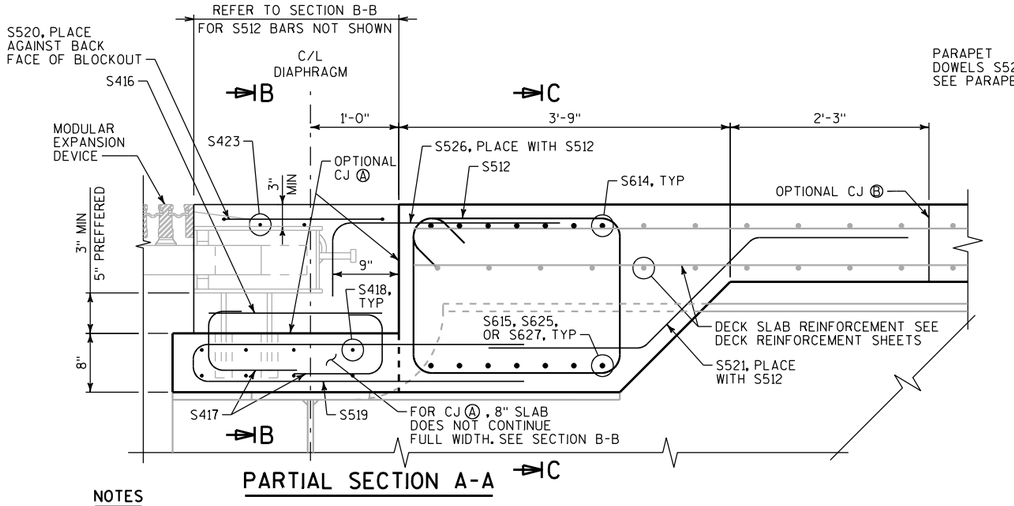
SECTION B-B

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 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.

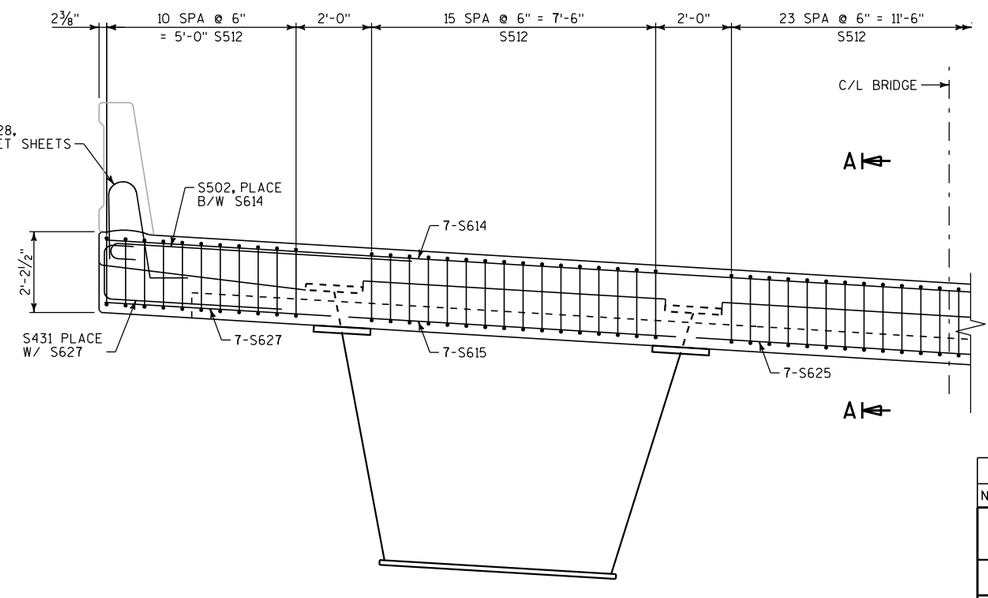
   COVER PLATES ARE REQUIRED AT ALL PARAPETS BUT FOR CLARITY ARE NOT SHOWN ON THIS DRAWING.
5. SUPPORT BOX SIZE AS SHOWN IS APPROXIMATE ONLY AND IS BASED ON A 2-CELL EXPANSION DEVICE. DIMENSIONS WILL VARY FOR DIFFERENT JOINT SIZES AND MANUFACTURERS.
6. EXPANSION DEVICE DETAILS SHOWN ON THIS DRAWING (INCLUDING 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 Ⓐ (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-40-853".



SECTION C-C

DECK REINFORCEMENT NOT SHOWN FOR CLARITY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY	MSS	PLANS CK'D.	EAJ

ABUTMENT MODULAR EXPANSION JOINT LAYOUT

SHEET 73 OF 96

8

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FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080545_ss.dgn
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PLOT BY : MSCJJO
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PLOT SCALE : 4:1

STATE PROJECT NUMBER
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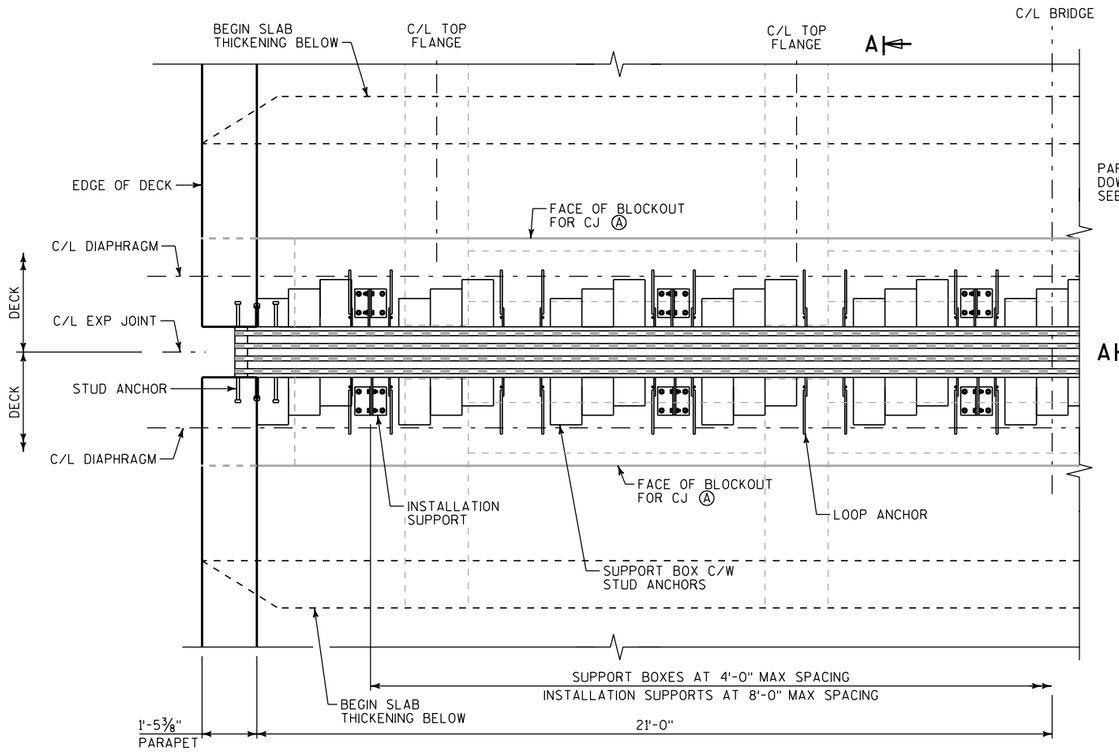
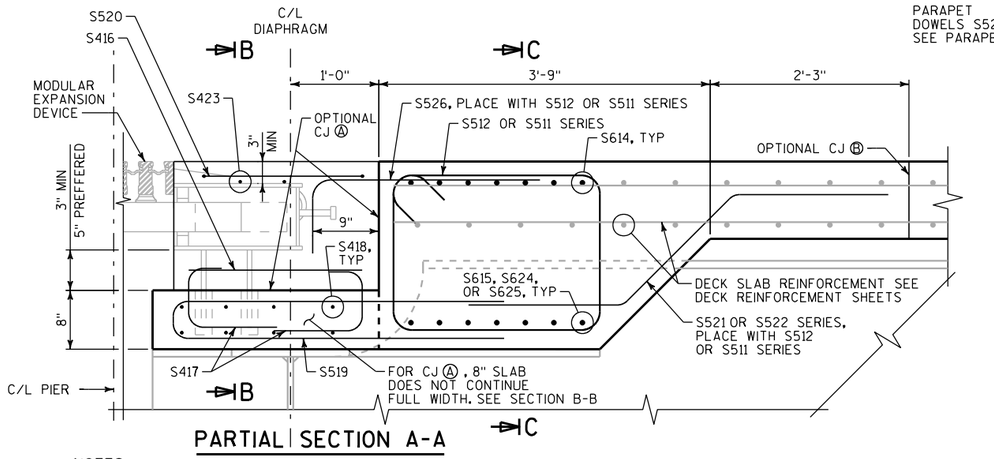


PLAN - JOINT AT PIER

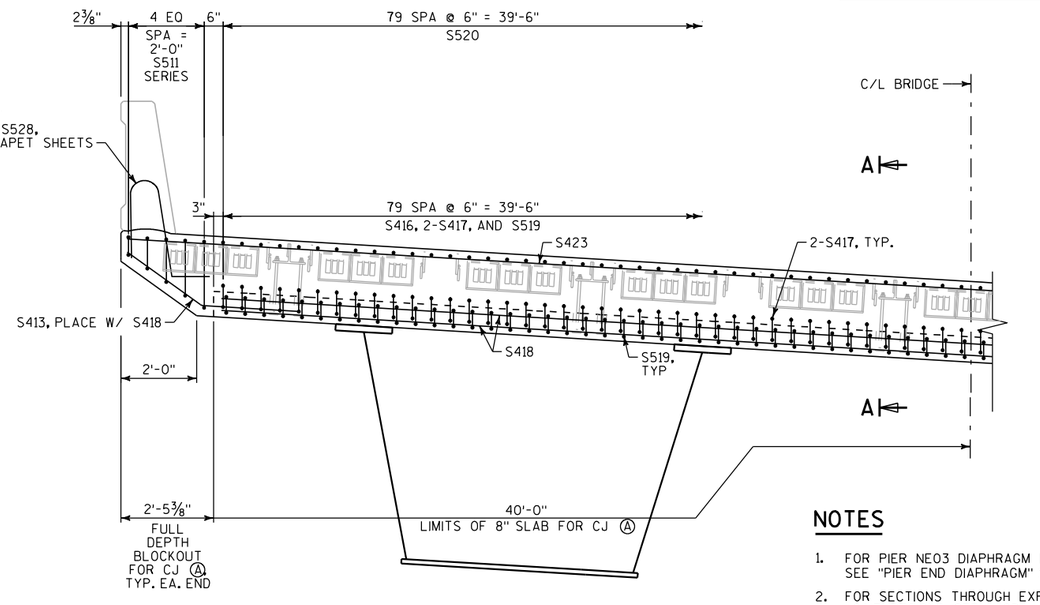
MODULAR JOINT SYMMETRICAL ABOUT C/L EXP JT



PARTIAL SECTION A-A

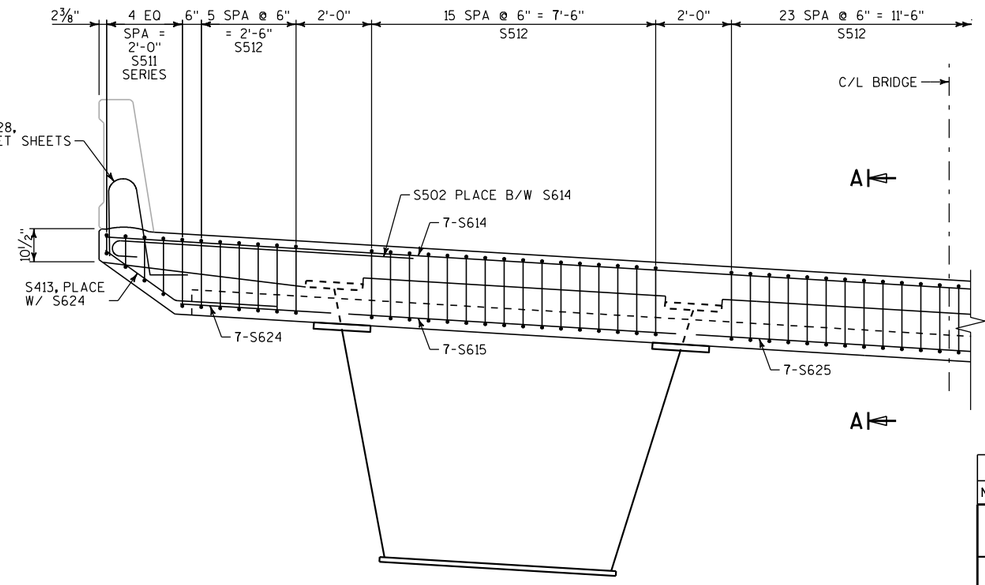
NOTES

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 (B) (CJ (B)) TO FACILITATE THE POSITIONING AND INSTALLATION OF THE MODULAR EXPANSION DEVICE.
3. IF CONSTRUCTION JOINT (B) 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-40-853".



SECTION B-B

DECK REINFORCEMENT NOT SHOWN FOR CLARITY



SECTION C-C

DECK REINFORCEMENT NOT SHOWN FOR CLARITY

NOTES

1. FOR PIER NE03 DIAPHRAGM DETAILS, SEE "PIER END DIAPHRAGM" SHEET.
2. FOR SECTIONS 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY	MSS	PLANS CK'D.	EAJ

PIER MODULAR EXPANSION JOINT LAYOUT

SHEET 74 OF 96

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STATE PROJECT NUMBER
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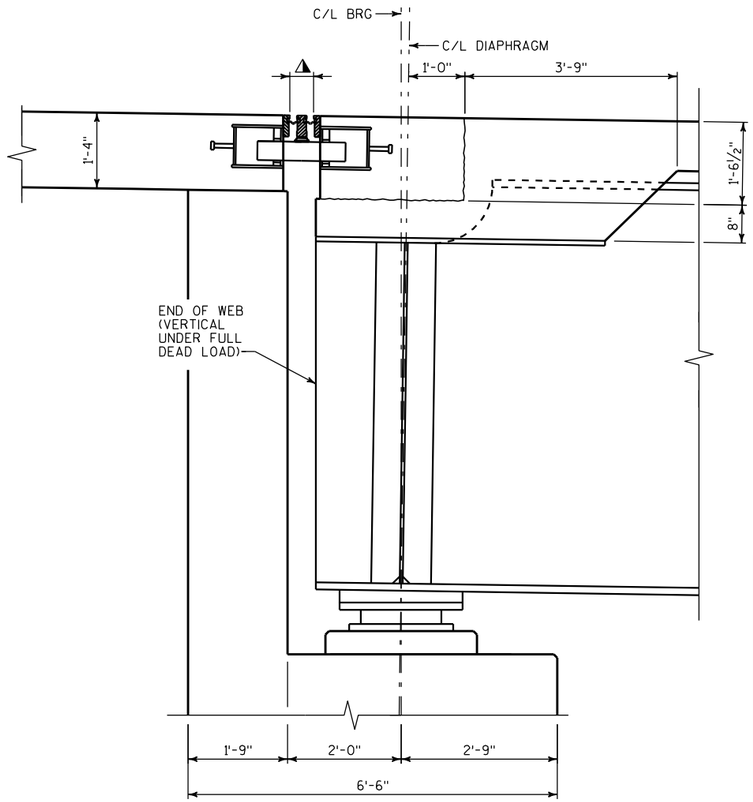
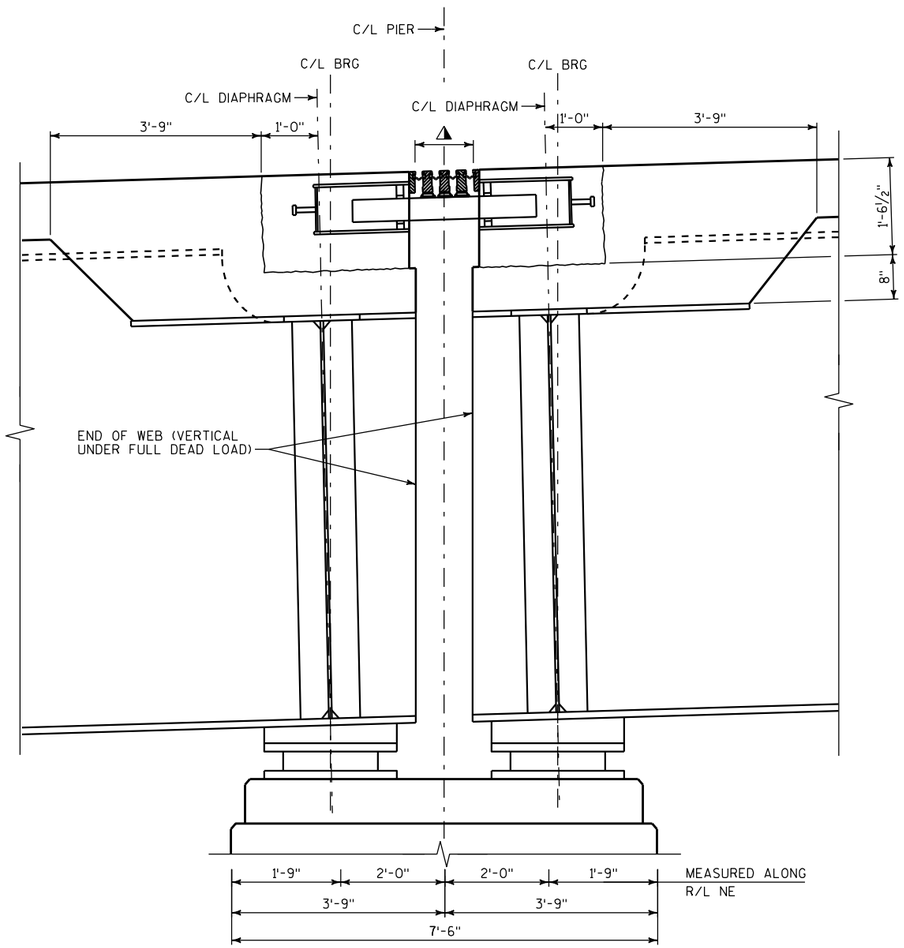


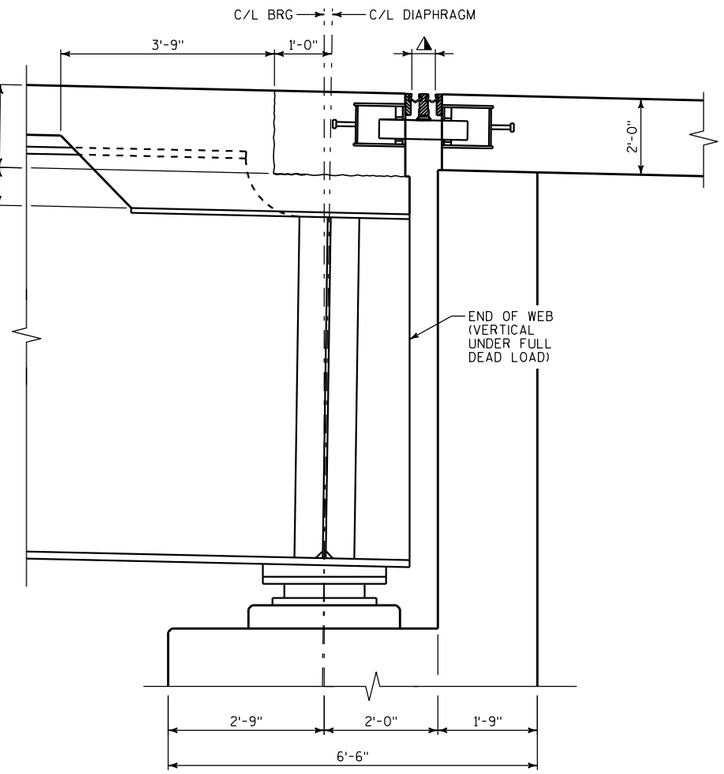
SECTION AT N ABUT

⚠ JOINT OPENING, SEE TEMPERATURE SETTING TABLE



SECTION AT PIER NE03

⚠ JOINT OPENING, SEE TEMPERATURE SETTING TABLE



SECTION AT E ABUT

⚠ JOINT OPENING, 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:

N ABUT	=	3/8"
PIER NE03	=	1/2"
E ABUT	=	3/8"

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.

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STRUCTURE B-40-853

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MODULAR EXPANSION JOINT SECTIONS

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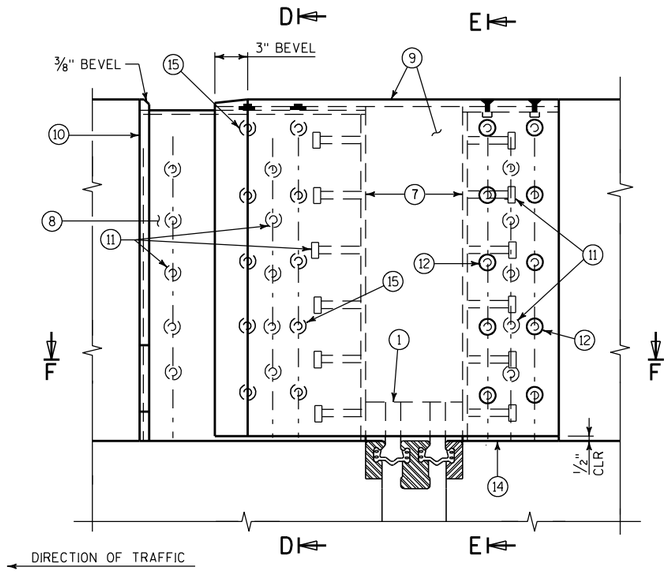
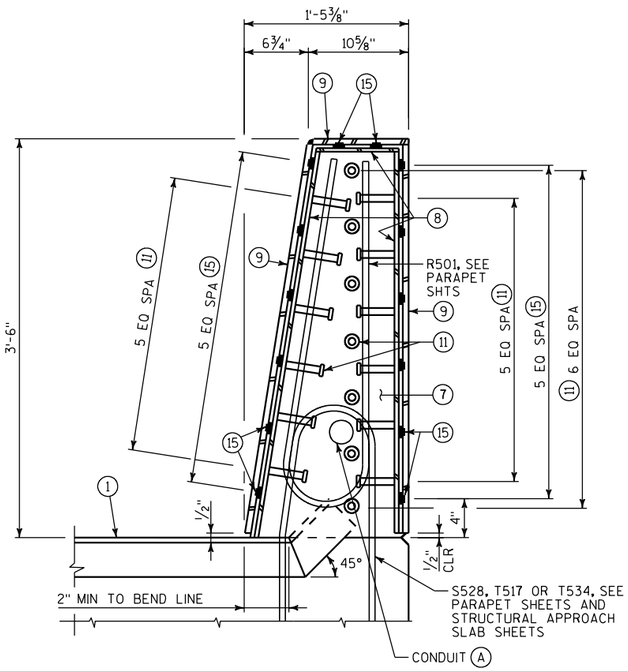
3024

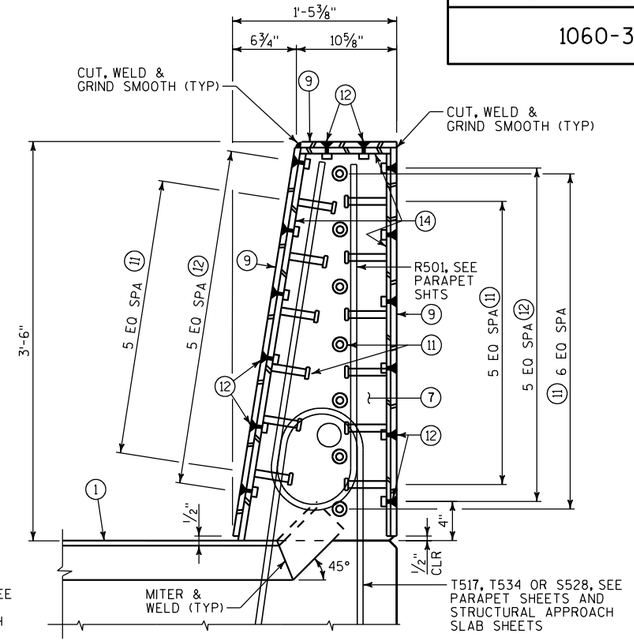
FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080547_ss.dgn PLOT DATE : 19-JUL-2015 22:28 PLOT BY : MSCJJO PLOT NAME : 080547_ss PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-81

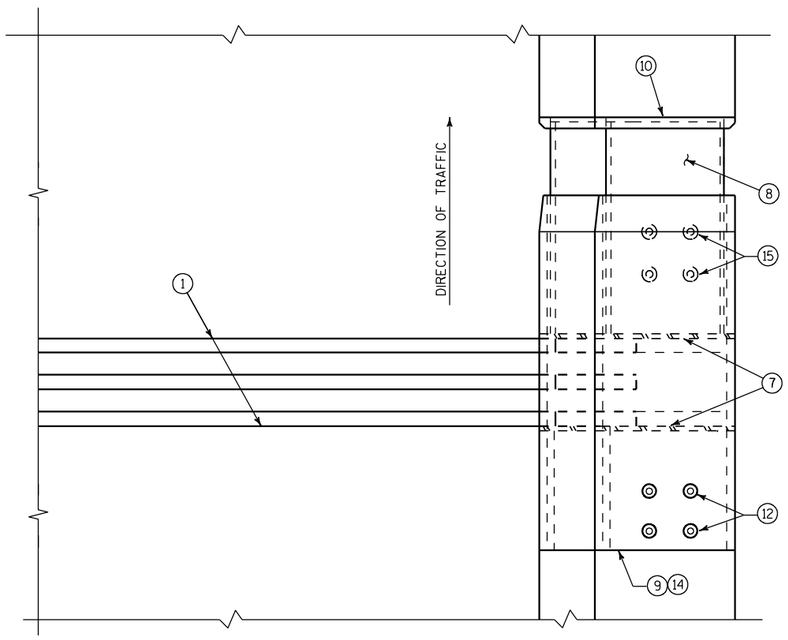


INSIDE ELEVATION OF SINGLE SLOPE PARAPET



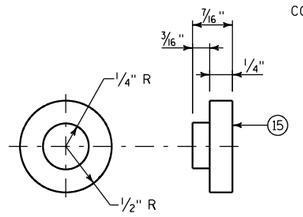


SECTION E-E

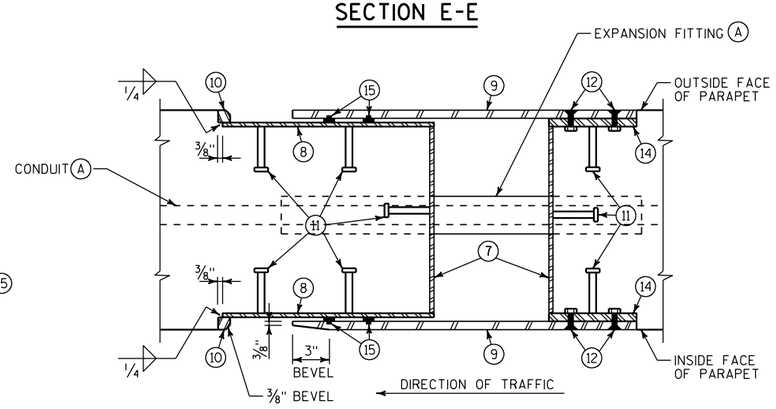


PLAN OF SINGLE SLOPE PARAPET

SECTION D-D



ADIPRENE BUTTON DETAIL



SECTION F-F

NOTES

1. SEE LEGEND ON "MODULAR EXPANSION JOINT DETAILS" SHEET FOR NUMBERED CALLOUTS ON THE DETAILS OF THIS 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.

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STRUCTURE B-40-853

DRAWN BY	MSS	PLANS CK'D.	JWC

MODULAR EXPANSION JOINT COVER PLATES

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FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080548_ss.dgn PLOT DATE : 19-JUL-2015 22:28 PLOT BY : MSCJJO PLOT NAME : 080548_ss PLOT SCALE : 1.333333:1

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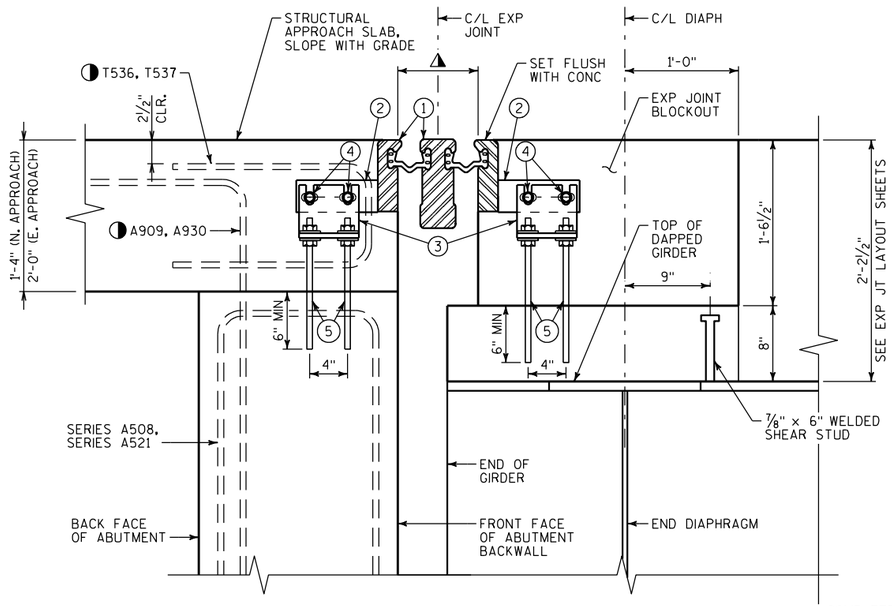
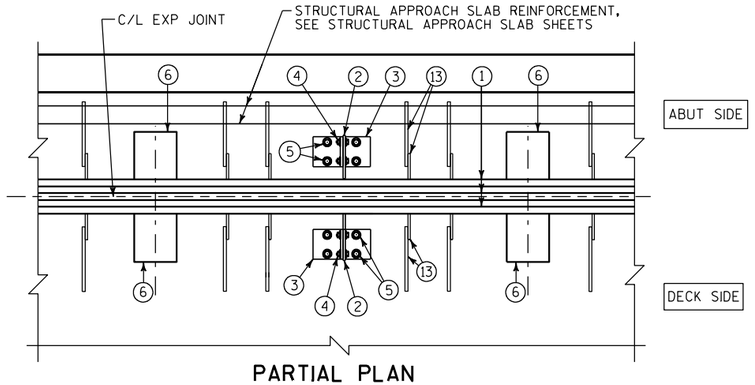


SECTION THRU JOINT @ ABUTMENT

NORMAL TO C/L SUBSTRUCTURE



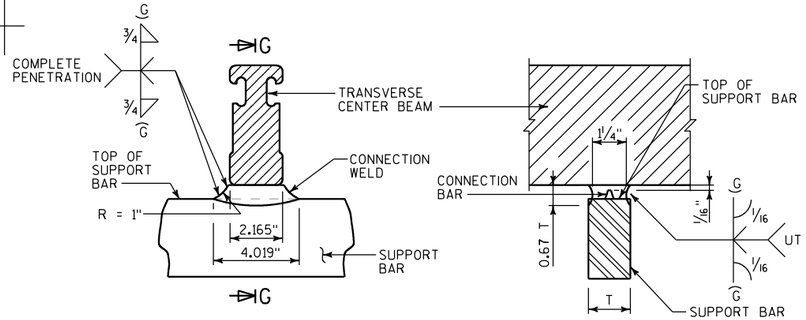
PARTIAL PLAN

PARTIAL PLAN NOTES:
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 ON "MODULAR EXPANSION JOINT COVER PLATES" SHEET. SET IN OUTSIDE PLATE.



MODULAR EXPANSION JOINT CONNECTION DETAIL AND WELD SPECIFICATION

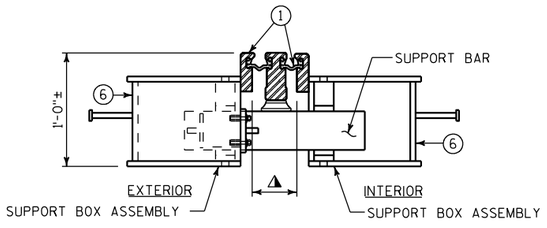
SECTION G-G

▲ 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:

NORTH ABUTMENT	3 CELLS
PIER NE03	3 CELLS
EAST ABUTMENT	3 CELLS

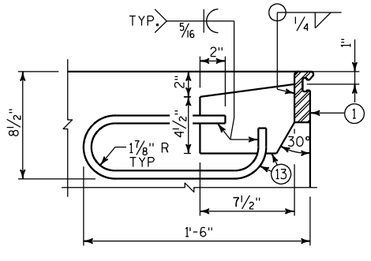
EACH CELL IS EXPECTED TO PROVIDE 3" OF MOVEMENT RANGE.

◑ COORDINATE THE PLACEMENT OF ABUTMENT BACKWALL DOWELS AND STRUCTURAL APPROACH SLAB HORIZONTAL REINFORCEMENT WITH THE INSTALLATION OF THE JOINT ASSEMBLY.



JOINT DETAIL

AT SUPPORT BAR & SUPPORT BOX ASSEMBLY



ANCHORAGE DETAIL

PLACE ADJACENT TO SUPPORT BOXES IN STR. APPR. SLAB @ ABUT. & IN DECK @ CONC. DIAPH.

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-40-853".

BAR STEEL REINF. IN DECK AND STRUCTURAL APPROACH SLAB SHALL BE RESPACED AS NECESSARY TO ALLOW PLACEMENT OF JOINT ASSEMBLY.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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MODULAR EXPANSION JOINT DETAILS

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FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080549_ss.dgn
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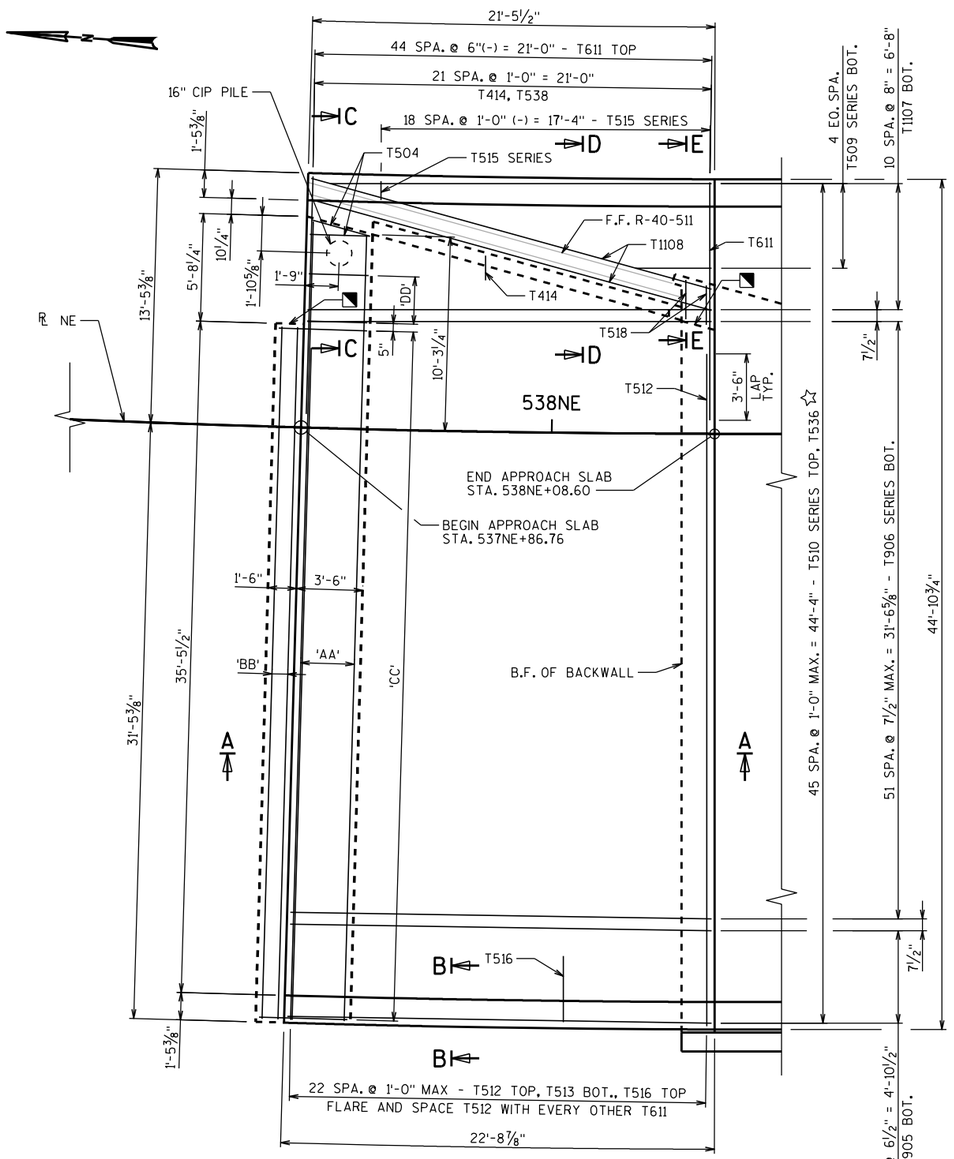
STATE PROJECT NUMBER

1060-33-81



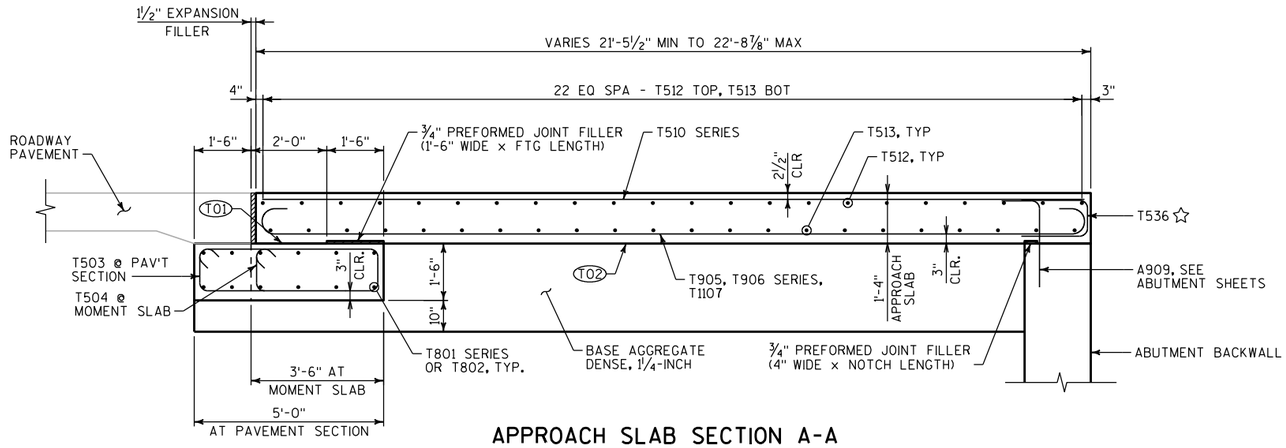
NORTH APPROACH SLAB

'AA' = 3 SPA. @ 1'-0" = 3'-0", T801 SERIES

'BB' = 1 SPA. @ 9", T802

'CC' = 37 SPA. @ 1'-0" (-) = 36'-5", T503

'DD' = 6 SPA. @ 5" = 2'-6", T504



APPROACH SLAB SECTION A-A

TABLE OF ELEVATIONS

FEATURE	STA. 537NE+86.76	STA. 538NE+08.60
LT. EDGE OF SLAB	797.78	797.86
TOE OF 42SS PARAPET	797.87	797.95
R/L NE	798.59	798.67
TOE OF 42SS PARAPET	800.39	800.47
RT. EDGE OF SLAB	800.48	800.56

LEGEND

▙ PROVIDE ½" PREFORMED JOINT FILLER BETWEEN EDGE OF APPROACH SLAB FOOTING AND RETAINING WALL MOMENT SLAB, AND BETWEEN EDGE OF APPROACH SLAB AND ABUTMENT BACKWALL NOTCH.

☆ PLACE BARS AFTER EXPANSION JOINT IS IN PLACE. ADJUST SPACING AS NEEDED.

(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 BENEATH SLAB. POLYETHYLENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO "HPC MASONRY STRUCTURES".

NOTES

FOR SECTIONS B-B, C-C, D-D, AND E-E SEE "STRUCTURAL NORTH APPROACH SLAB DETAILS" SHEET

FOR CIP PILE SPLICE DETAIL, SEE "NORTH ABUTMENT DETAILS (1 OF 2)" SHEET

STRUCTURAL APPROACH SLAB OVERHANG SUPPORTED ON 16" DIA CIP PILING WITH A REQUIRED DRIVING RESISTANCE OF 250 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

ESTIMATED PILE LENGTH = 90'

THE CONTRACTOR SHALL SUBMIT ANY CHANGES TO THE REINFORCEMENT IN ORDER TO ACCOMMODATE THE MODULAR EXPANSION JOINT TO THE ENGINEER FOR REVIEW AND APPROVAL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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STRUCTURAL NORTH APPROACH SLAB

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STATE PROJECT NUMBER
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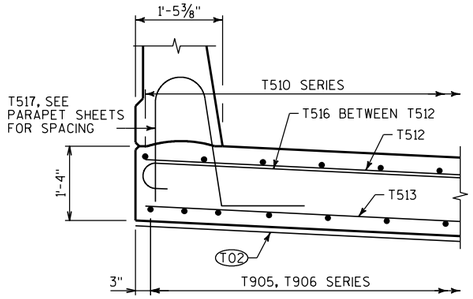
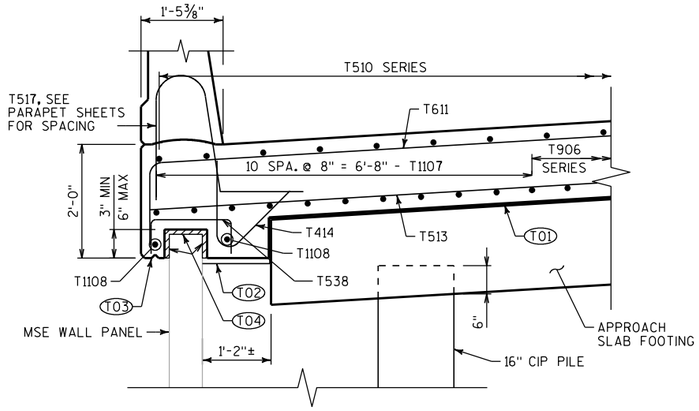


SECTION B-B

(AT WEST EDGE OF APPROACH SLAB)



SECTION C-C

(AT EAST EDGE OF APPROACH SLAB AT FOOTING)

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 BENEATH SLAB. POLYETHYLENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO "HPC MASONRY STRUCTURES".

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

(T04) 1" EXPANDED POLYSTYRENE

◥ PROVIDE ½" PREFORMED JOINT FILLER BETWEEN EDGE OF APPROACH SLAB AND ABUTMENT BACKWALL NOTCH.

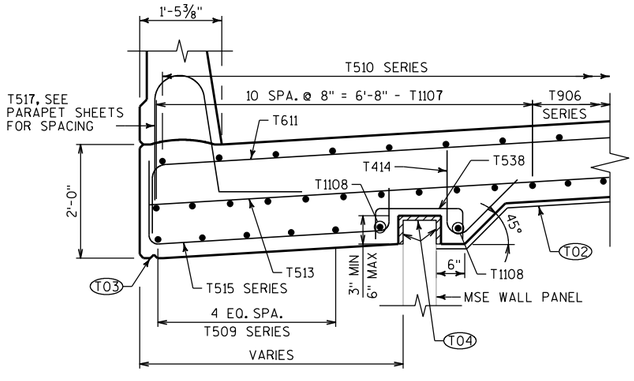
◐ ¾" x 4" FILLER BETWEEN APPROACH SLAB AND ABUTMENT BACKWALL. PLACE FULL BACKWALL WIDTH.

APPROACH SLAB NOTES

PROVIDE LONGITUDINAL GROOVING ON APPROACH SLABS.

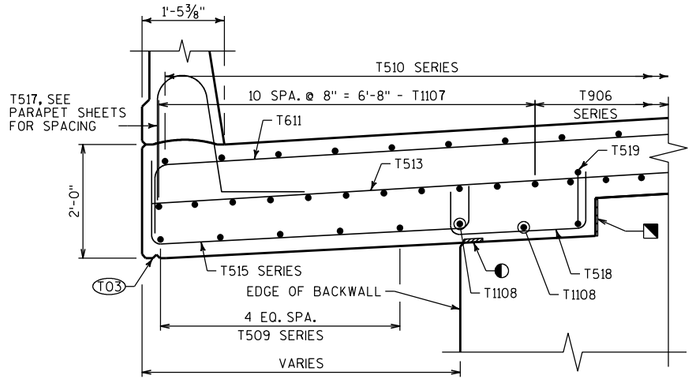
SEE PARAPET SHEETS FOR PARAPET REINFORCING TIE PLACEMENT REQUIRED IN APPROACH SLABS.

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 D-D

(AT EAST EDGE OF APPROACH SLAB OVERHANG)



SECTION E-E

(AT EAST EDGE OF APPROACH SLAB OVERHANG AT ABUTMENT)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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STRUCTURAL NORTH APPROACH SLAB DETAILS

SHEET 79 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080551_as.dgn PLOT DATE : 19-JUL-2015 22:28 PLOT BY : MSCJJO PLOT NAME : 080551_as PLOT SCALE : 4:1

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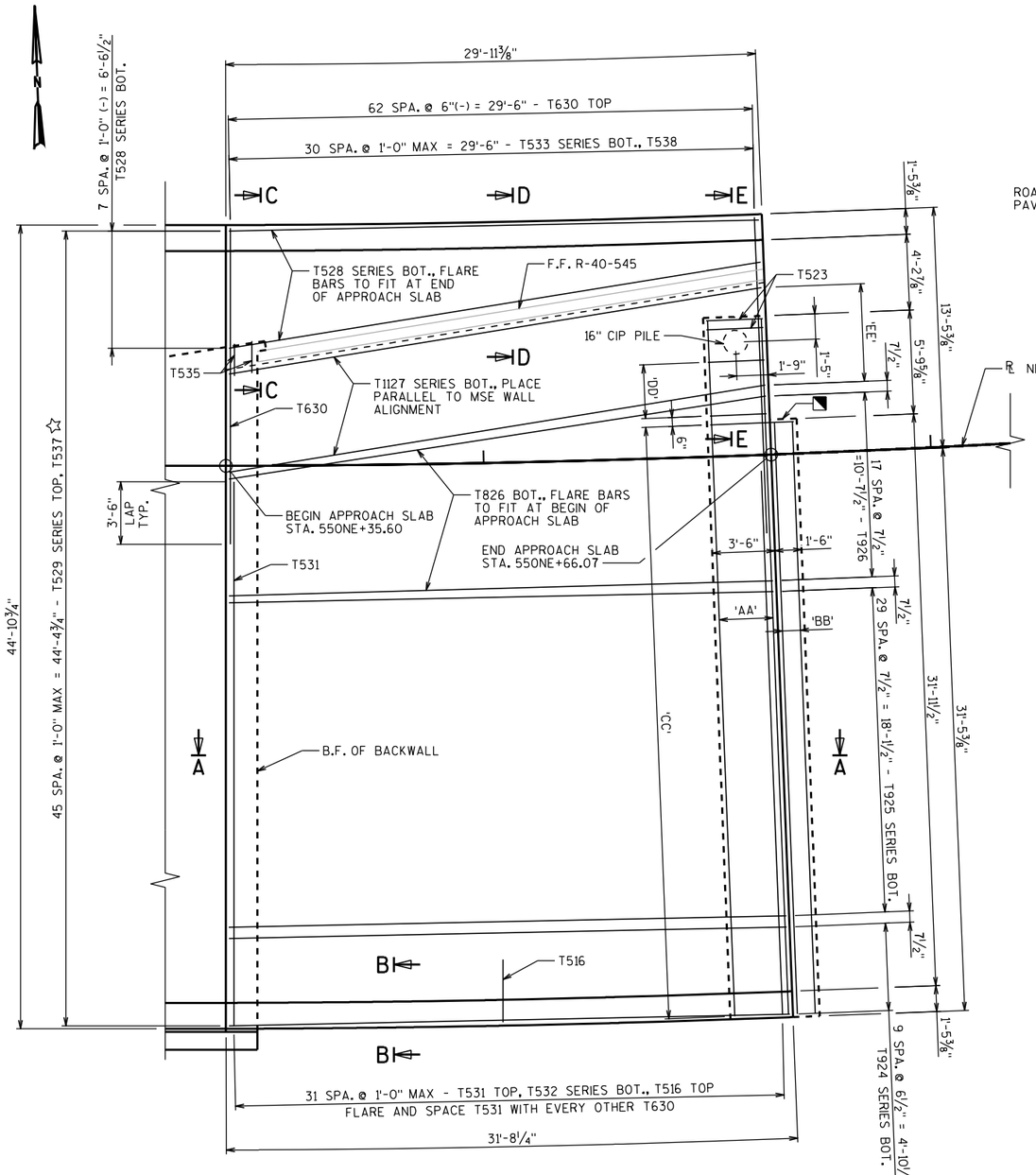
1060-33-81



EAST APPROACH SLAB

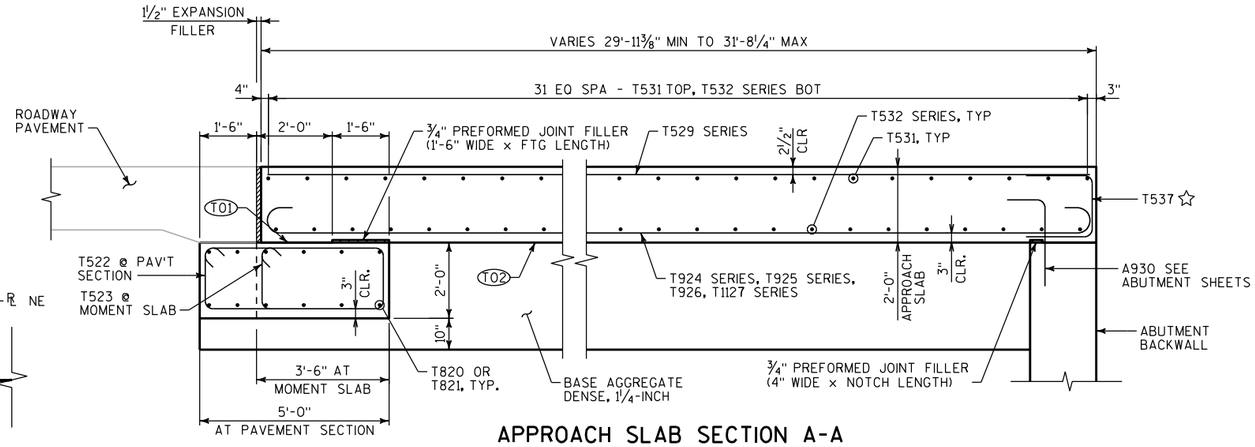
'AA' = 3 SPA. @ 1'-0" = 3'-0", T820

'BB' = 1 SPA. @ 9", T821

'CC' = 33 SPA. @ 1'-0" = 33'-0", T522

'DD' = 6 SPA. @ 6" = 3'-0", T523

'EE' = 13 SPA. @ 5" = 5'-5", T1127 SERIES BOT.



APPROACH SLAB SECTION A-A

LEGEND

- ◥ PROVIDE ½" PREFORMED JOINT FILLER BETWEEN EDGE OF APPROACH SLAB FOOTING AND RETAINING WALL MOMENT SLAB, AND BETWEEN EDGE OF APPROACH SLAB AND ABUTMENT BACKWALL NOTCH.
- ☆ PLACE BARS AFTER EXPANSION JOINT IS IN PLACE. ADJUST SPACING AS NEEDED.
- (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 BENEATH SLAB. POLYETHYLENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO "HPC MASONRY STRUCTURES".

TABLE OF ELEVATIONS

FEATURE	STA. 550NE+35.60	STA. 550NE+66.07
LT. EDGE OF SLAB	779.28	779.18
TOE OF 42SS PARAPET	779.36	779.25
R/L NE	780.01	779.80
TOE OF 42SS PARAPET	781.64	781.17
RT. EDGE OF SLAB	781.72	781.24

NOTES

FOR SECTIONS B-B, C-C, D-D, AND E-E SEE "STRUCTURAL EAST APPROACH SLAB DETAILS" SHEET

FOR CIP PILE SPLICE DETAIL, SEE "NORTH ABUTMENT DETAILS (1 OF 2)" SHEET

STRUCTURAL APPROACH SLAB OVERHANG SUPPORTED ON 16" DIA CIP PILING WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

ESTIMATED PILE LENGTH = 70'

THE CONTRACTOR SHALL SUBMIT ANY CHANGES TO THE REINFORCEMENT IN ORDER TO ACCOMMODATE THE MODULAR EXPANSION JOINT TO THE ENGINEER FOR REVIEW AND APPROVAL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY MSS | PLANS CK'D. JWC

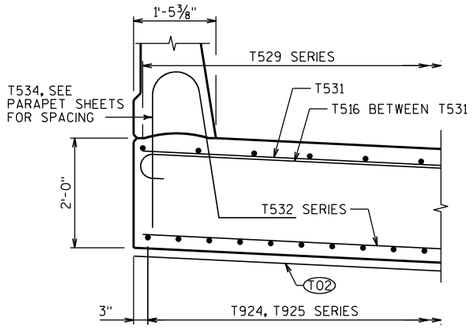
STRUCTURAL EAST APPROACH SLAB

SHEET 80 OF 96

8

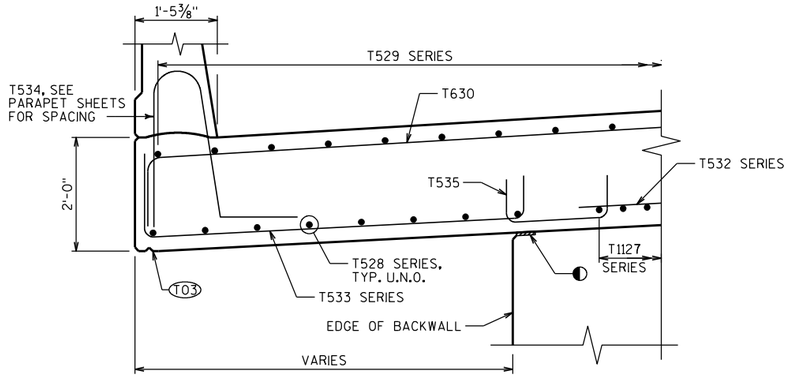
8

STATE PROJECT NUMBER
1060-33-81



SECTION B-B

(AT SOUTH EDGE OF APPROACH SLAB)



SECTION C-C

(AT NORTH EDGE OF APPROACH SLAB)

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 BENEATH SLAB. POLYETHYLENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO "HPC MASONRY STRUCTURES".

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

(T04) 1" EXPANDED POLYSTYRENE

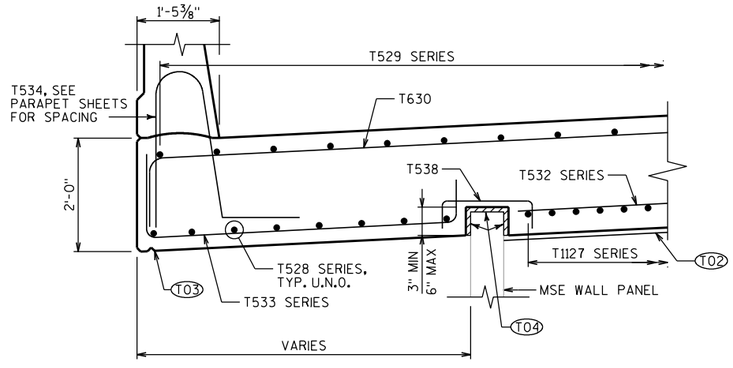
◐ ¾" x 4" FILLER BETWEEN APPROACH SLAB AND ABUTMENT BACKWALL. PLACE FULL BACKWALL WIDTH.

APPROACH SLAB NOTES

PROVIDE LONGITUDINAL GROOVING ON APPROACH SLABS.

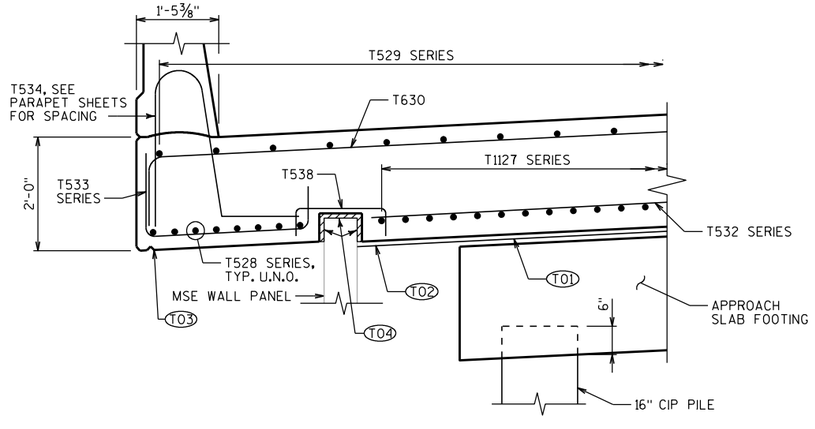
SEE PARAPET SHEETS FOR PARAPET REINFORCING TIE PLACEMENT REQUIRED IN APPROACH SLABS.

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 D-D

(AT NORTH EDGE OF APPROACH SLAB)



SECTION E-E

(AT NORTH EDGE OF APPROACH SLAB)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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STRUCTURAL EAST APPROACH SLAB DETAILS

SHEET 81 OF 96

8

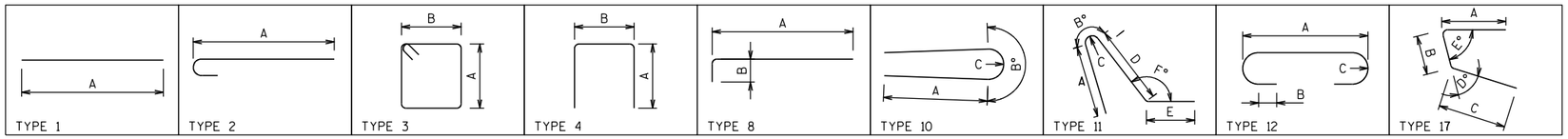
8

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	F		DIM	MIN	MAX	NO REQ'D	LENGTH
T801	E	8	41'-10"		⚠	1	41'-10"						FOOTING - LONG.	A	41'-5"	42'-2"	2 SERIES OF 4	41'-5" TO 42'-2"
T802	E	4	36'-6"			1	36'-6"						FOOTING - LONG.					
T503	E	38	12'-1"	X		3	1'-1"	4'-8"					FOOTING - HORIZ.					
T504	E	9	9'-1"	X		3	1'-1"	3'-2"					FOOTING - HORIZ.					
T905	S	10	24'-8"	X		12	22'-3"	0'-4½"	0'-4½"				APPROACH SLAB - LONG. BOT.					
T906	S	52	24'-3"	X	⚠	12	21'-10"	0'-4½"	0'-4½"				APPROACH SLAB - LONG. BOT.	A	21'-4"	22'-3"	1 SERIES OF 52	23'-2" TO 24'-1"
T1107	S	11	24'-4"	X		12	21'-2"	0'-6"	0'-6"				OVERHANG - LONG. BOT.					
T1108	S	2	25'-1"	X		12	21'-11"	0'-6"	0'-6"				OVERHANG - LONG. BOT.					
T509	S	5	12'-1"		⚠	1	12'-1"						OVERHANG - LONG. BOT.	A	4'-0"	20'-1"	1 SERIES OF 5	4'-0" TO 20'-1"
T510	S	46	21'-9"		⚠	1	21'-9"						APPROACH SLAB - LONG. TOP	A	21'-1"	22'-4"	1 SERIES OF 46	21'-1" TO 22'-4"
T611	S	45	14'-0"	X		8	12'-7"	1'-6"					OVERHANG - TRANS. TOP					
T512	S	23	35'-6"			1	35'-6"						APPROACH SLAB - TRANS. TOP					
T513	S	23	44'-6"			1	44'-6"						APPROACH SLAB - TRANS. BOT.					
T414	S	22	3'-0"	X		10	1'-3"	135	0'-3"				APPROACH SLAB - TRANS. AT MSE WALL					
T515	S	19	5'-3"	X	⚠	17	0'-9"	3'-4"	1'-5"	87	87		OVERHANG - TRANS.	B	1'-0"	5'-7"	1 SERIES OF 19	2'-11" TO 7'-6"
T516	S	55	4'-1"	X		2	3'-6"						APPROACH SLAB - TRANS. TOP					
T517	S	66	5'-7"	X		11	1'-8"	172	0'-4½"	1'-9"	1'-0"	99	PARAPET TIE					
T518	S	2	3'-11"	X		17	0'-9"	2'-5"	1'-0"	87	87		APPROACH SLAB - TRANS. AT BACKWALL					
T519	S	1	5'-5"	X		3	1'-0"	1'-5"					APPROACH SLAB - TRANS. AT BACKWALL					
T820	E	8	38'-10"			1	38'-10"						FOOTING - LONG.					
T821	E	4	33'-0"			1	33'-0"						FOOTING - LONG.					
T522	E	34	13'-1"	X		3	1'-7"	4'-8"					FOOTING - TRANS.					
T523	E	9	10'-1"	X		3	1'-7"	3'-2"					FOOTING - TRANS.					
T924	S	10	33'-8"	X	⚠	12	31'-3"	0'-4½"	0'-4½"				APPROACH SLAB - LONG. BOT.	A	31'-1"	31'-4"	1 SERIES OF 10	32'-11" TO 33'-2"
T925	S	30	33'-2"	X	⚠	12	30'-9"	0'-4½"	0'-4½"				APPROACH SLAB - LONG. BOT.	A	30'-5"	31'-1"	1 SERIES OF 30	32'-3" TO 32'-11"
T926	S	18	32'-9"	X		12	30'-4"	0'-4½"	0'-4½"				APPROACH SLAB - LONG. BOT.					
T1127	S	14	33'-5"	X	⚠	12	30'-3"	0'-6"	0'-6"				APPROACH SLAB - LONG. BOT.	A	30'-1"	30'-4"	1 SERIES OF 14	33'-3" TO 33'-6"
T528	S	8	29'-10"		⚠	1	29'-10						OVERHANG - LONG. BOT.	A	29'-7"	30'-1"	1 SERIES OF 8	29'-7" TO 30'-1"
T529	S	46	30'-6"		⚠	1	30'-6"						APPROACH SLAB - LONG. TOP	A	29'-7"	31'-4"	1 SERIES OF 46	29'-7" TO 31'-4"
T630	S	63	19'-0"	X		8	17'-8"	1'-6"					OVERHANG - TRANS. TOP					
T531	S	32	30'-5"			1	30'-5"						APPROACH SLAB - TRANS. TOP					
T532	S	32	38'-7"		⚠	1	38'-7"						APPROACH SLAB - TRANS. BOT.	A	36'-5"	40'-8"	1 SERIES OF 32	36'-5" TO 40'-8"
T533	S	31	6'-7"	X	⚠	17	1'-0"	4'-10"	1'-0"	93	93		OVERHANG - TRANS.	B	2'-8"	6'-11"	1 SERIES OF 31	4'-5" TO 8'-8"
T534	S	93	6'-6"	X		11	2'-2"	172	0'-4½"	2'-2"	1'-0"	90	PARAPET TIE					
T535	S	2	2'-11"	X		17	0'-9"	1'-8"	0'-9"	87	87		APPROACH SLAB - TRANS.					
T536	S	46	4'-2"	X		4	1'-9"	0'-11"					APPROACH SLAB - TRANS. AT EXPANSION JT.					
T537	S	46	4'-10"	X		4	1'-9"	1'-7"					APPROACH SLAB - TRANS. AT EXPANSION JT.					
T538	S	53	2'-5"	X		4	0'-7"	1'-6"					APPROACH SLAB - OVER MSE PANEL					

BAR MARK BREAKDOWN				
BAR MARK	NORTH APPROACH SLAB	EAST APPROACH SLAB	TOTAL NO	WEIGHT
T801	8		8	894
T802	4		4	390
T503	38		38	479
T504	9		9	85
T905	10		10	839
T906	52		52	4,287
T1107	11		11	1,422
T1108	2		2	267
T509	5		5	63
T510	46		46	1,044
T611	45		45	946
T512	23		23	852
T513	23		23	1,068
T414	22		22	44
T515	19		19	104
T516	23	32	55	234
T517	66		66	384
T518	2		2	8
T519	1		1	6
T820		8	8	829
T821		4	4	352
T522		34	34	464
T523		9	9	95
T924		10	10	1,145
T925		30	30	3,383
T926		18	18	2,004
T1127		14	14	2,486
T528		8	8	249
T529		46	46	1,463
T630		63	63	1,798
T531		32	32	1,015
T532		32	32	1,288
T533		31	31	213
T534		93	93	630
T535		2	2	6
T536	46		46	200
T537		46	46	232
T538	22	31	53	134



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-40-853

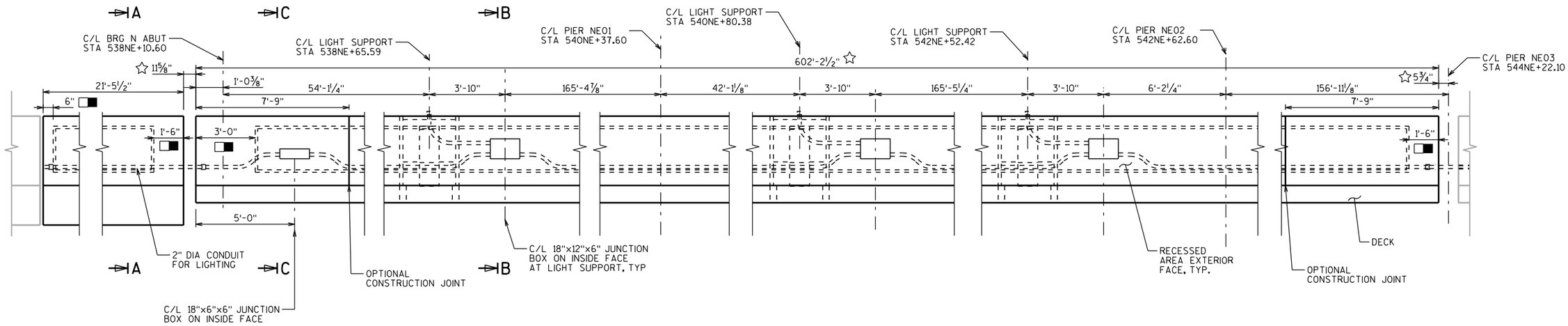
DRAWN BY MSS | PLANS CK'D. JWC

STRUCTURAL APPROACH SLAB REINFORCEMENT SCHEDULE

SHEET 82 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080554_as.dgn PLOT DATE : 19-JUL-2015 22:28 PLOT BY : MSCJJO PLOT NAME : 080554_as PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-81



LEFT SIDE PARAPET ELEVATION

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

8

LEGEND

☆ PARAPET DIMENSIONS SHOWN ARE BASED ON A 11⅝" CONCRETE OPENING (9⅛" JOINT OPENING) AT THE ABUTMENT AND AN 11½" OPENING (9" JOINT OPENING) AT PIER NE03 AS SHOWN ON "MODULAR EXPANSION JOINT SECTIONS" SHEET.

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

NOTES

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

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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UNIT 1 PARAPET
EMBEDDED WORK

SHEET 83 OF 96

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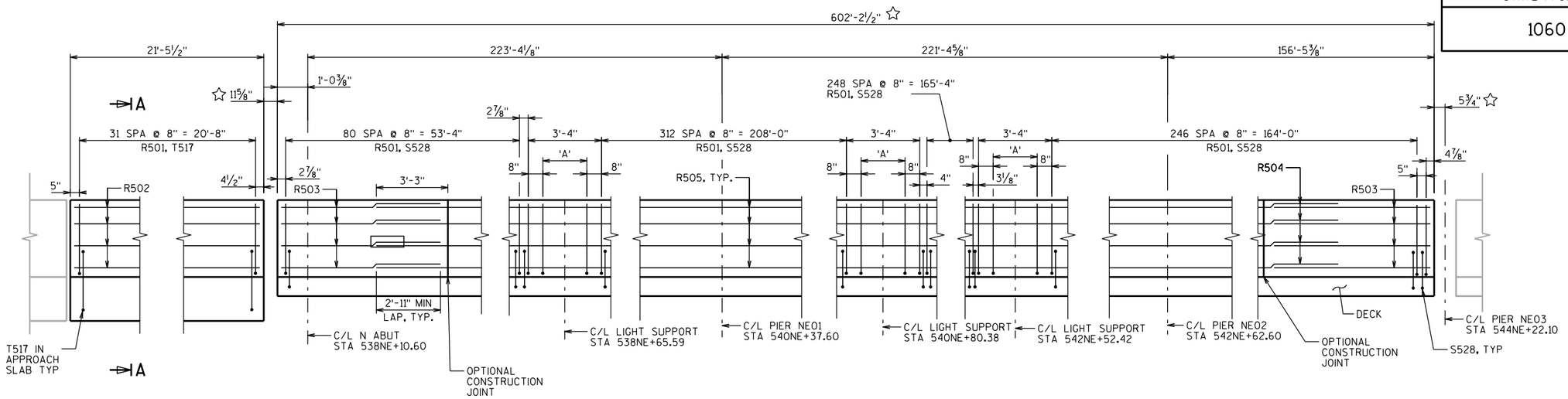
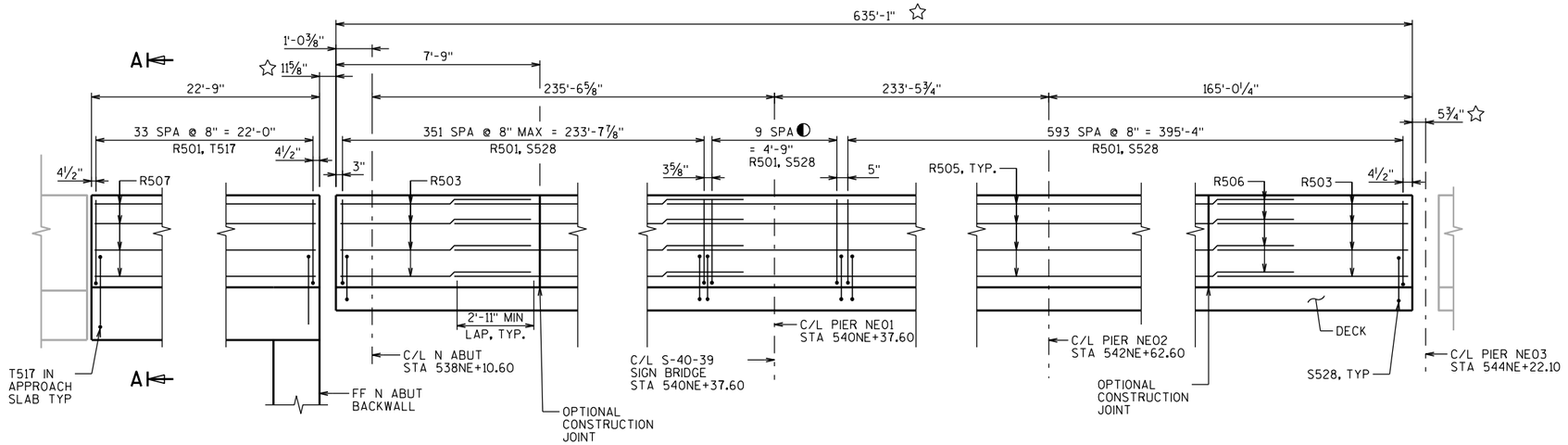


'A' = 3 SPA. @ 8" = 2'-0", R501

LEFT SIDE PARAPET ELEVATION

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



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 11⅝" CONCRETE OPENING (9⅛" JOINT OPENING) AT THE ABUTMENT AND AN 11½" OPENING (9" JOINT OPENING) AT PIER NE03 AS SHOWN ON "MODULAR EXPANSION JOINT SECTIONS" SHEET.

NOTES

FOR SECTION A-A SEE "PARAPET SECTIONS AND DETAILS" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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UNIT 1 PARAPET ELEVATIONS

SHEET 84 OF 96

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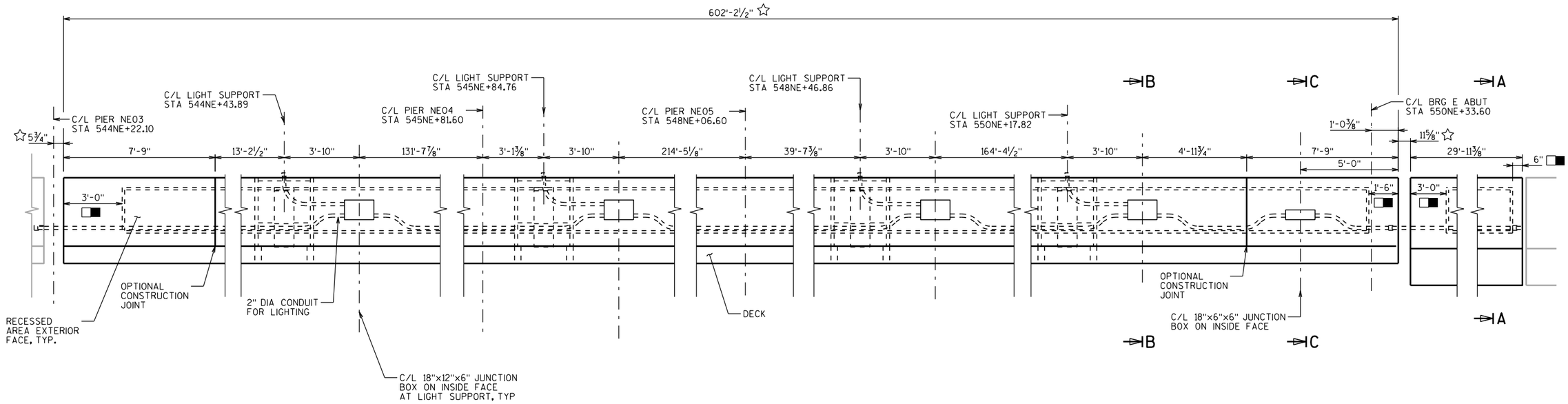
STATE PROJECT NUMBER
1060-33-81



LEFT SIDE PARAPET ELEVATION

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

8

LEGEND

☆ PARAPET DIMENSIONS SHOWN ARE BASED ON A 11⅝" CONCRETE OPENING (9⅛" JOINT OPENING) AT THE ABUTMENT AND AN 11½" OPENING (9" JOINT OPENING) AT PIER NE03 AS SHOWN ON "MODULAR EXPANSION JOINT SECTIONS" SHEET.

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

NOTES

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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UNIT 2 PARAPET EMBEDDED WORK

SHEET 85 OF 96

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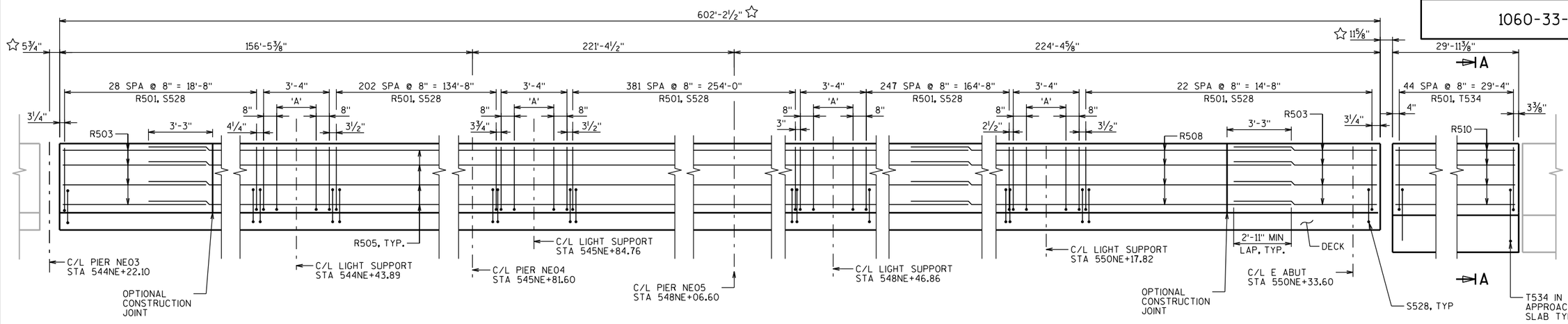
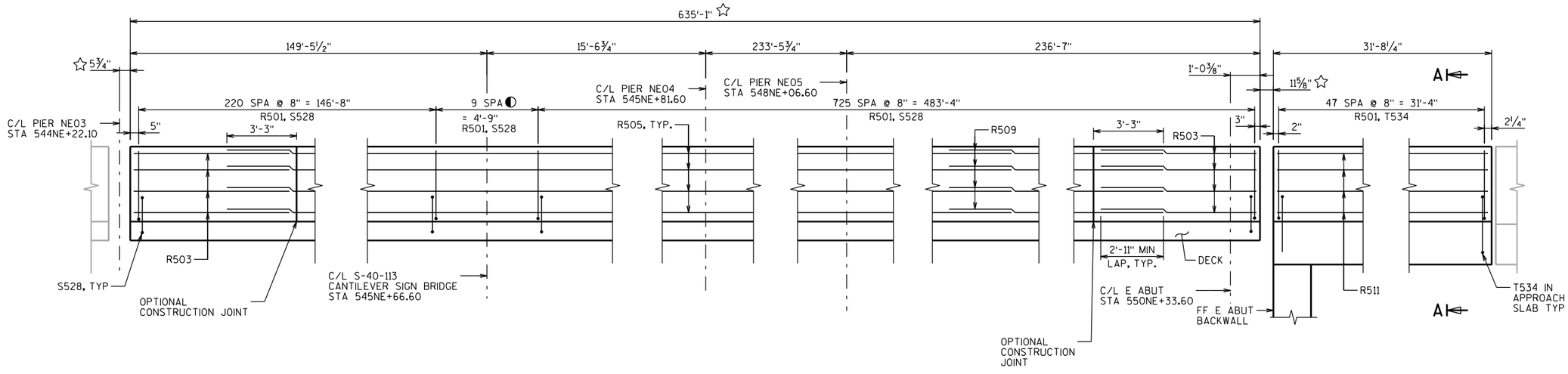


'A' = 3 SPA. @ 8" = 2'-0", R501

LEFT SIDE PARAPET ELEVATION

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



LEGEND

◐ REFER TO SIGN BRIDGE BASE SHEETS FOR REINFORCEMENT SPACING

☆ PARAPET DIMENSIONS SHOWN ARE BASED ON AN 11⅝" CONCRETE OPENING (9⅛" JOINT OPENING) AT THE ABUTMENT AND AN 11½" OPENING (9" JOINT OPENING) AT PIER NE03 AS SHOWN ON "MODULAR EXPANSION JOINT SECTIONS" SHEET.

NOTES

FOR SECTIONS A-A SEE "PARAPET SECTIONS AND DETAILS" SHEET.

RIGHT SIDE PARAPET ELEVATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

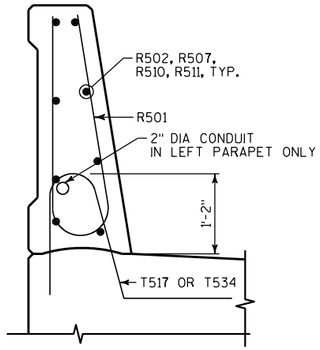
STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. MSS

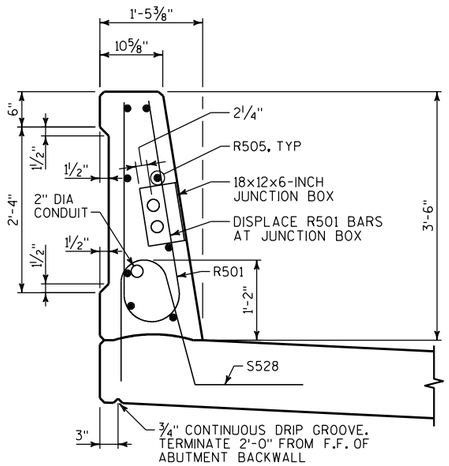
UNIT 2 PARAPET ELEVATIONS

SHEET 86 OF 96

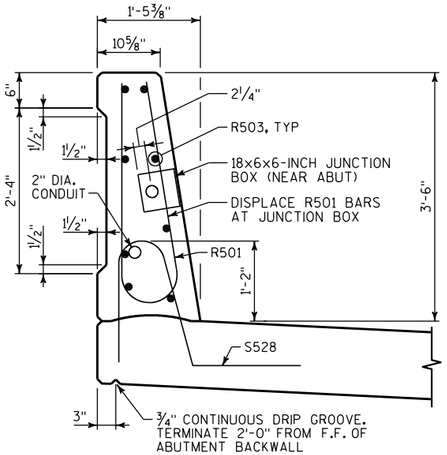
STATE PROJECT NUMBER
1060-33-81



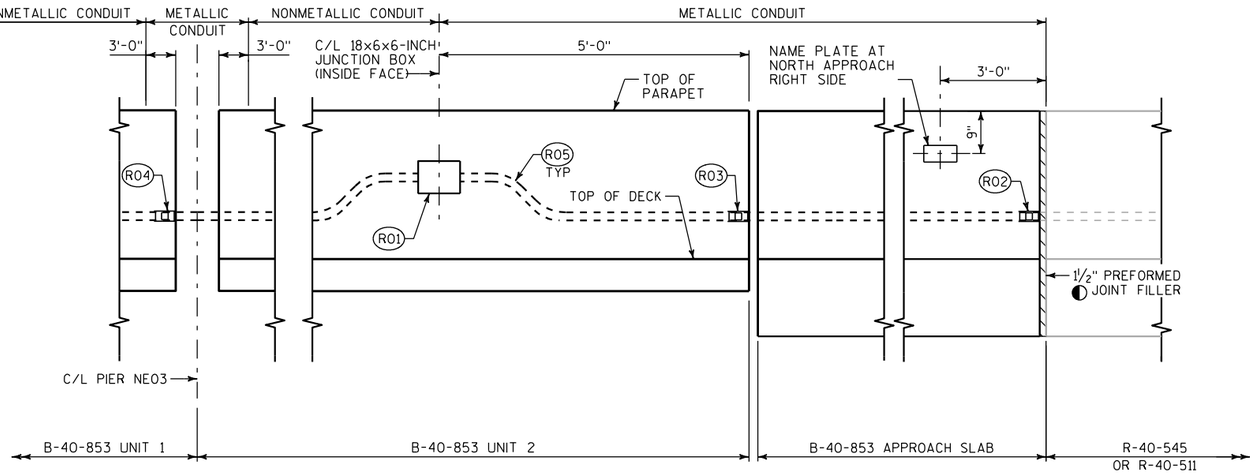
SECTION A-A



SECTION B-B



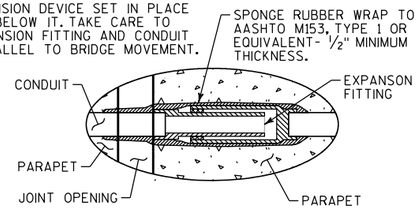
SECTION C-C



LEFT SIDE PARAPET INTERIOR ELEVATION AT ABUTMENT SHOWING CONDUITS

EAST ABUTMENT SHOWN, NORTH ABUTMENT SIMILAR

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.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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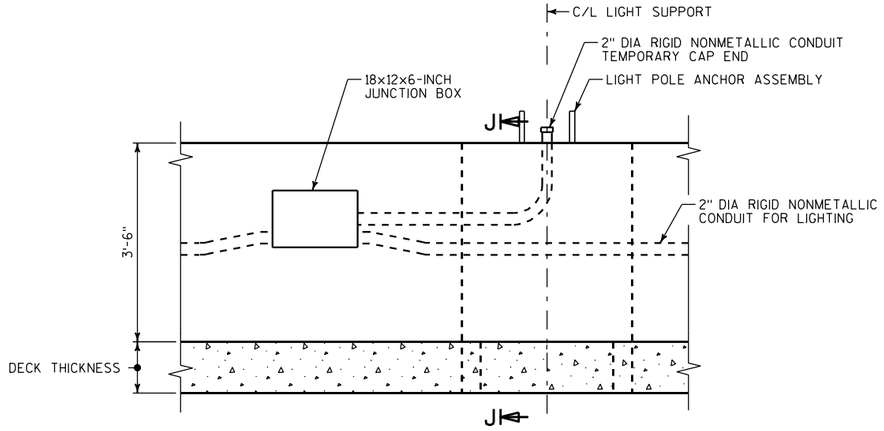
PARAPET SECTIONS & DETAILS

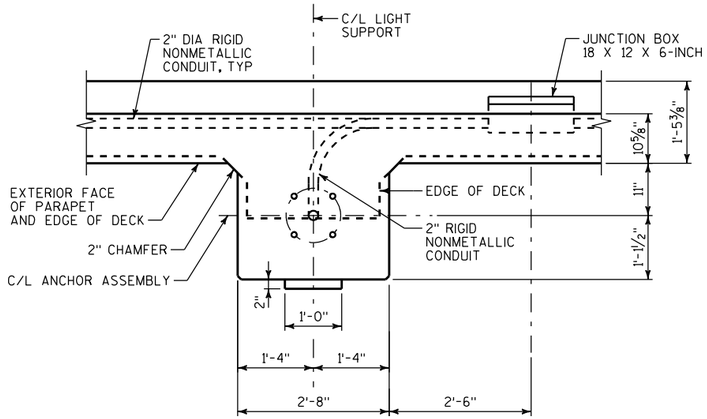
SHEET 87 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080605_rp.dgn PLOT DATE : 19-JUL-2015 22:29 PLOT BY : MSCJJO PLOT NAME : 080605_rp PLOT SCALE : 5.333333:1

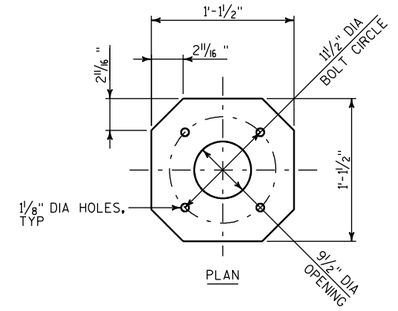
STATE PROJECT NUMBER
1060-33-81

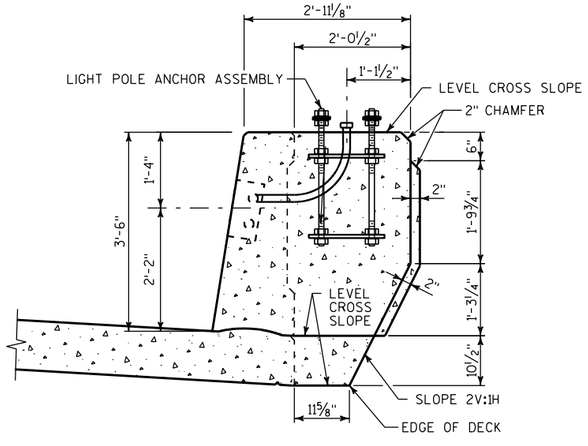


INTERIOR ELEVATION

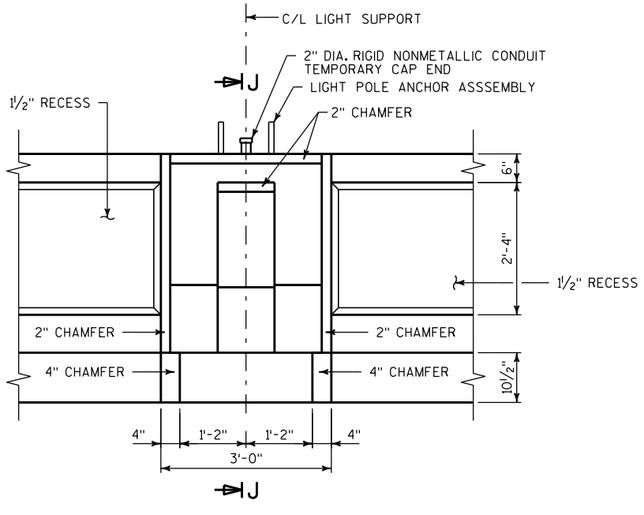


PLAN

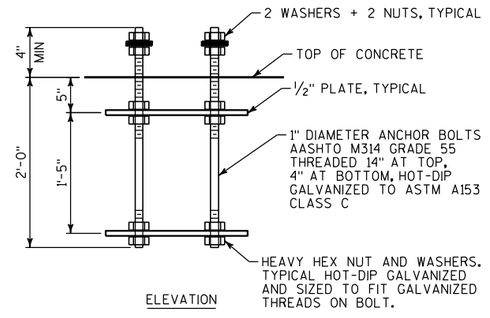




SECTION J-J



EXTERIOR ELEVATION



ANCHOR ASSEMBLY
LIGHT POLE ON STRUCTURES

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

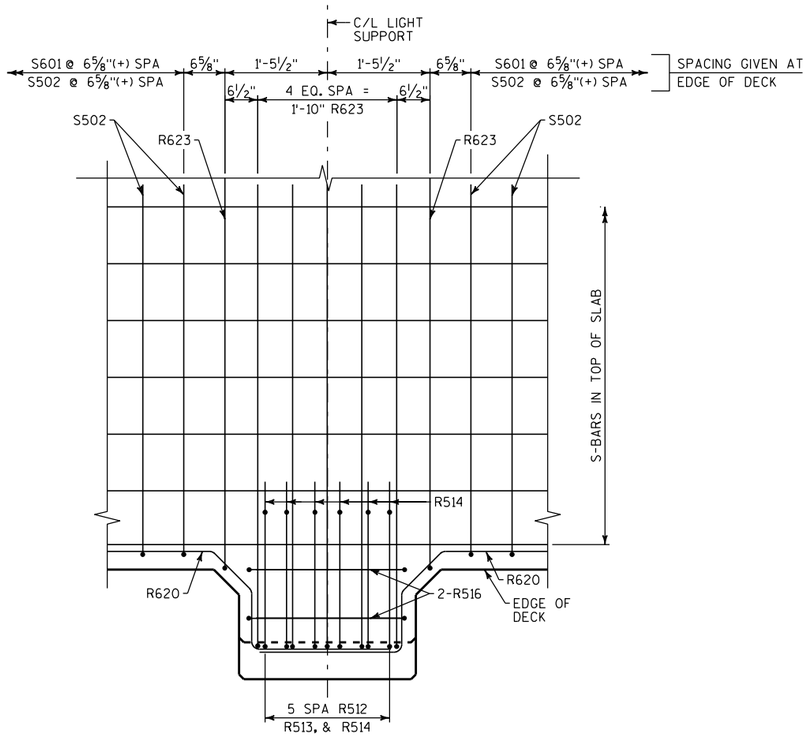
DRAWN BY SR | PLANS CK'D. MSS

LIGHT SUPPORT DETAILS (1 OF 2)

SHEET 88 OF 96

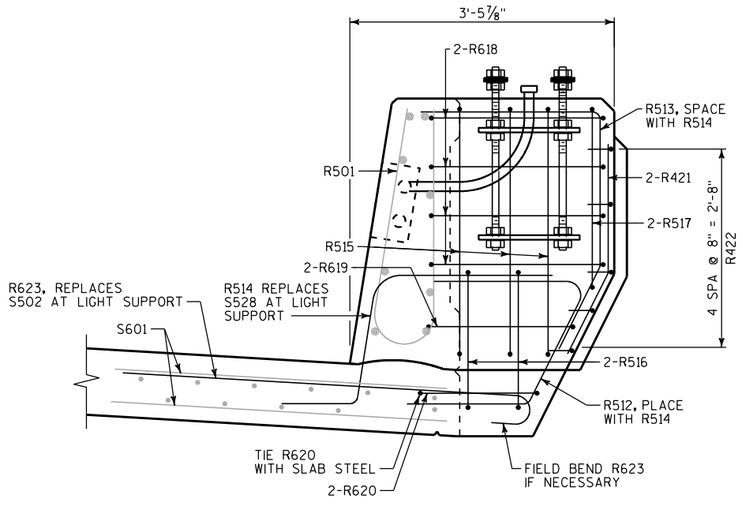
FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080606_rp.dgn PLOT DATE : 19-JUL-2015 22:29 PLOT BY : MSCJJO PLOT NAME : 080606_rp PLOT SCALE : 2.666667:1

STATE PROJECT NUMBER
1060-33-81



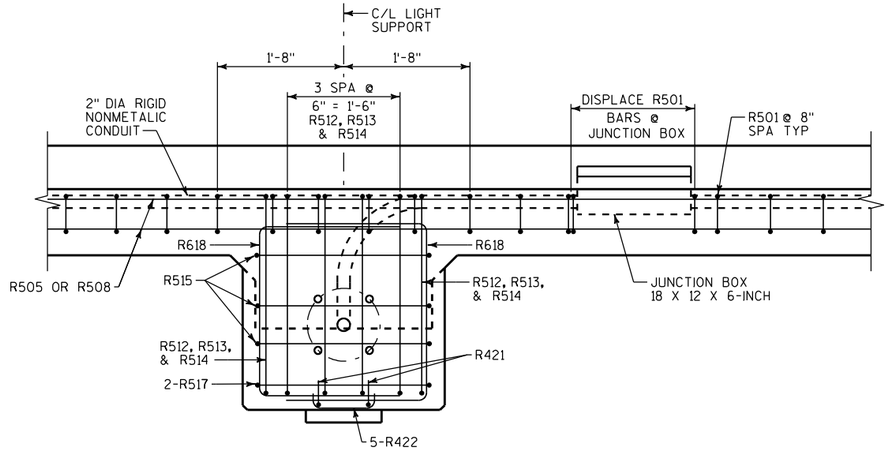
PLAN SHOWING REINFORCEMENT IN DECK

(S528 NOT SHOWN FOR CLARITY)

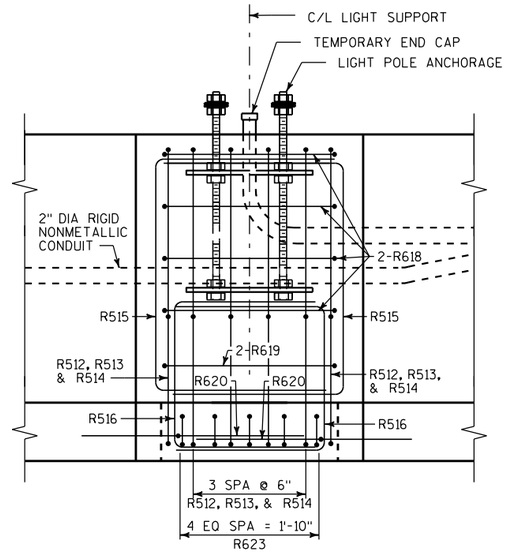


SIDE VIEW SHOWING REINFORCEMENT

CROSS SECTION AT LIGHT SUPPORT



PLAN SHOWING REINFORCEMENT



INTERIOR ELEVATION SHOWING REINFORCEMENT

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

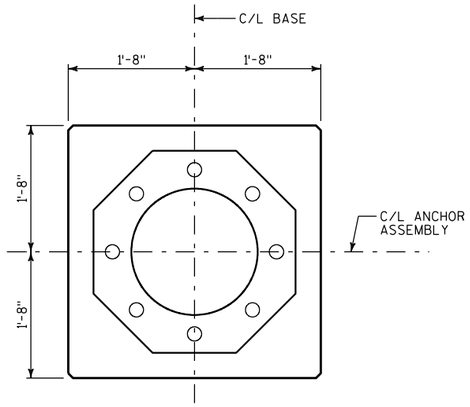
DRAWN BY SR | PLANS CK'D. MSS

LIGHT SUPPORT DETAILS (2 OF 2)

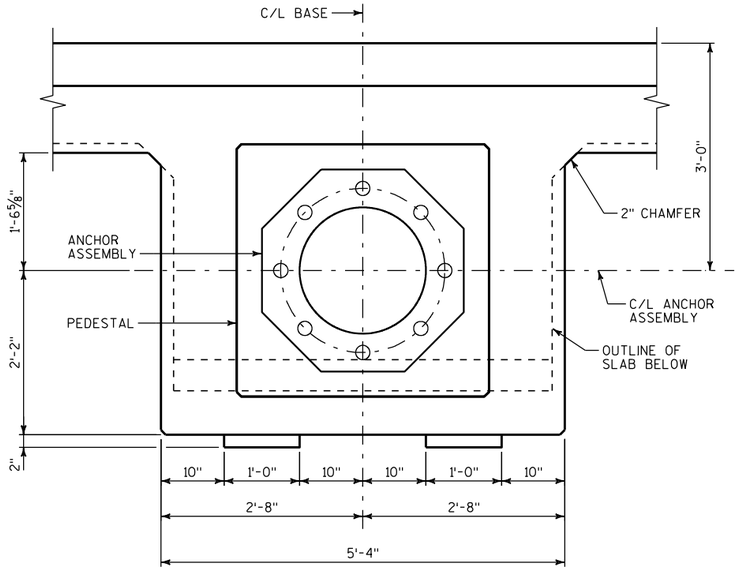
SHEET 89 OF 96

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080607_rp.dgn PLOT DATE : 19-JUL-2015 22:29 PLOT BY : MSCJJO PLOT NAME : 080607_rp PLOT SCALE : 2:1

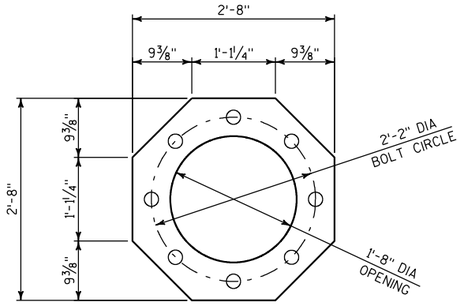
STATE PROJECT NUMBER
1060-33-81



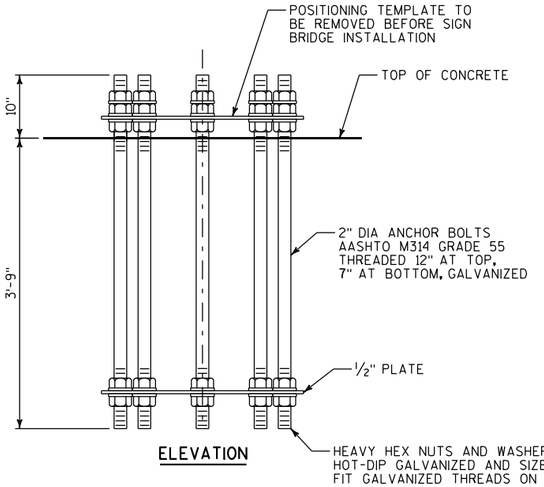
PEDESTAL PLAN



PLAN



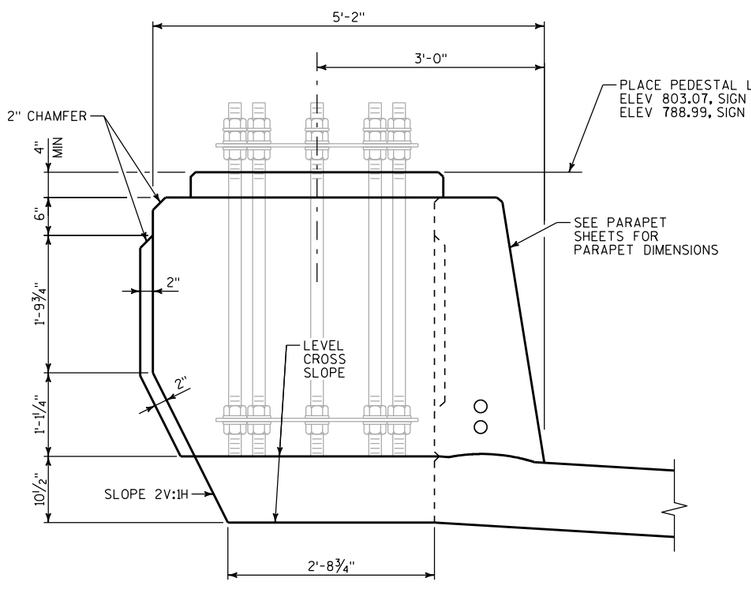
PLAN



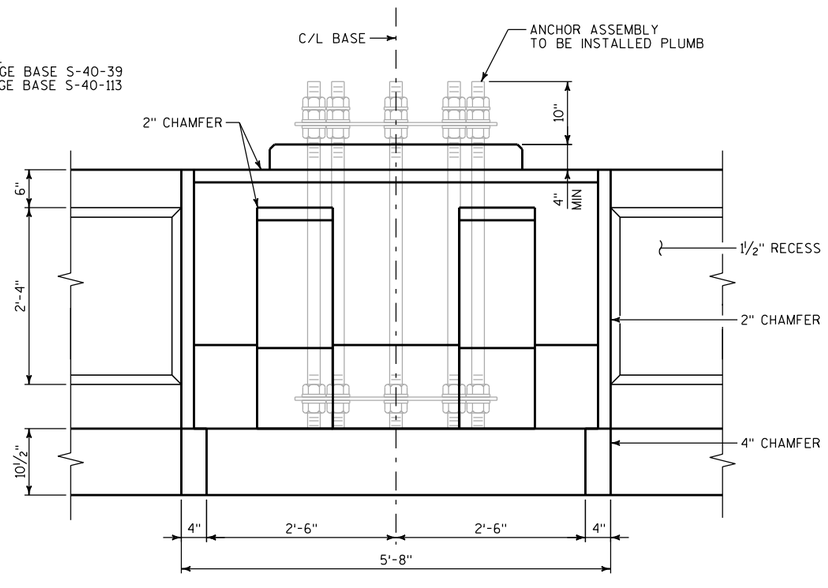
ELEVATION

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-40-853

DRAWN BY SR | PLANS CK'D. MSS

SIGN STRUCTURE BASE (1 OF 2)

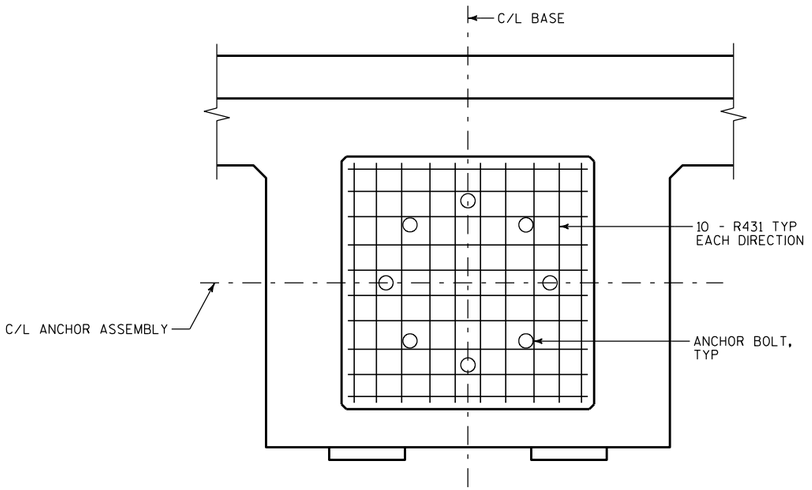
SHEET 90 OF 96

8

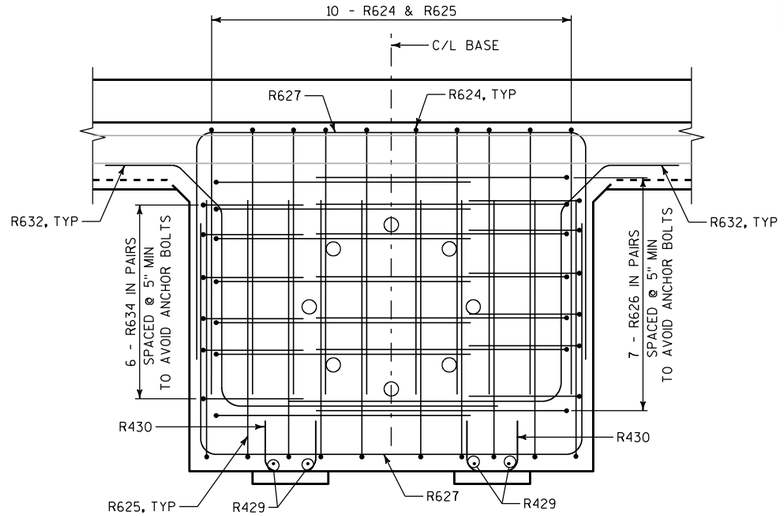
8

STATE PROJECT NUMBER

1060-33-81

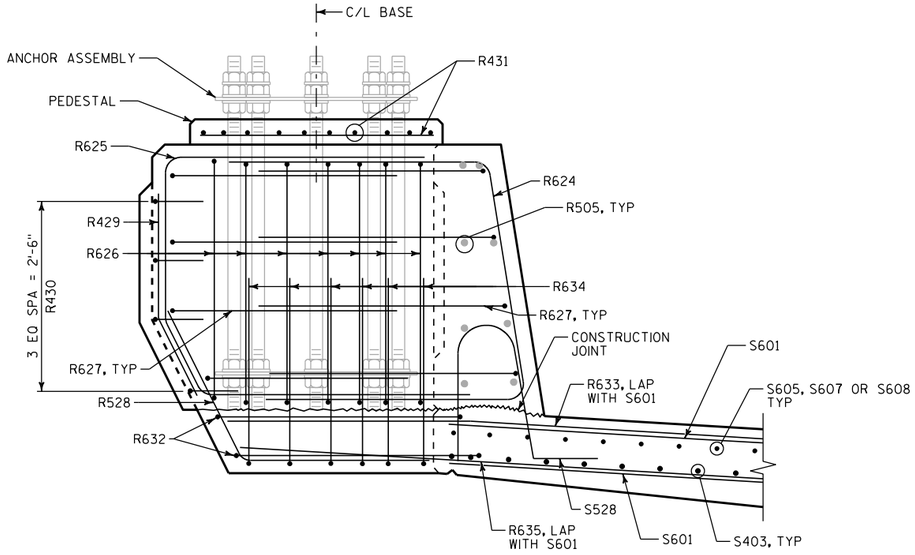


PEDESTAL PLAN SHOWING REINFORCEMENT

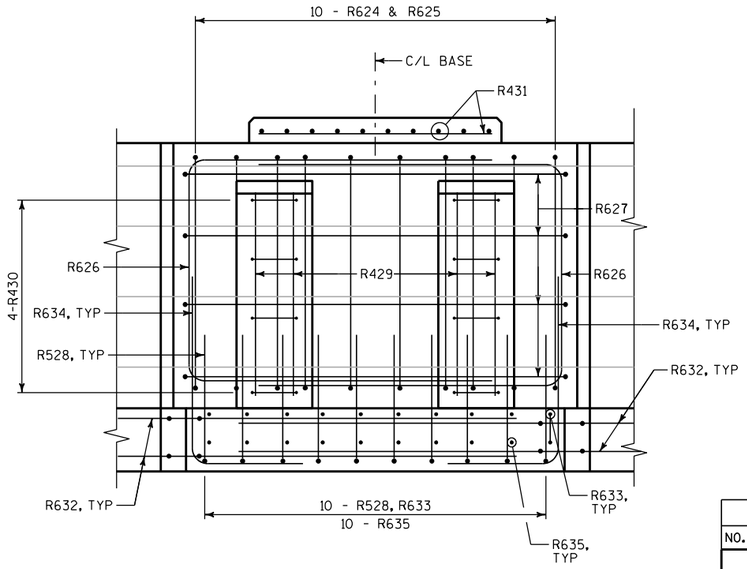


PLAN SHOWING REINFORCEMENT

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-40-853

DRAWN BY SR | PLANS CK'D. MSS

SIGN STRUCTURE
BASE
(2 OF 2)

SHEET 91 OF 96

8

8

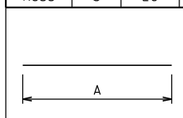
FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080609_rp.dgn
PLOT DATE : 19-JUL-2015 22:29
PLOT BY : MSCJJO
PLOT NAME : 080609_rp
PLOT SCALE : 2:1

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
R501	S	3882	8'-8"	X		10	2'-8"	189	0'-4½"				PARAPET - VERT.					
R502	S	8	21'-1"			1	21'-1"						PARAPET - HORIZ. (N. APPROACH LEFT)					
R503	S	64	7'-5"			1	7'-5"						PARAPET - HORIZ. (ENDS)					
R504	S	8	22'-10"			1	22'-10"						PARAPET - HORIZ. (END UNIT 1 LEFT)					
R505	S	320	60'-0"			1	60'-0"						PARAPET - HORIZ.					
R506	S	8	55'-7"			1	55'-7"						PARAPET - HORIZ. (END UNIT 1 RIGHT)					
R507	S	8	22'-5"			1	22'-5"						PARAPET - HORIZ. (N. APPROACH RIGHT)					
R508	S	8	22'-10"			1	22'-9"						PARAPET - HORIZ. (END UNIT 2 LEFT)					
R509	S	8	55'-7"			1	55'-7"						PARAPET - HORIZ. (END UNIT 2 RIGHT)					
R510	S	8	29'-7"			1	29'-7"						PARAPET - HORIZ. (E. APPROACH LEFT)					
R511	S	8	31'-4"			1	31'-4"						PARAPET - HORIZ. (E. APPROACH RIGHT)					
R512	S	42	5'-3"	X		17	2'-0"	2'-0"	1'-6"	63	63		LIGHT BLISTER - VERTICAL (OUTSIDE)					
R513	S	42	5'-2"	X		17	2'-4"	2'-0"	1'-1"	90	27		LIGHT BLISTER - VERTICAL (OUTSIDE WITH SLAB)					
R514	S	42	4'-11"	X		11	2'-0"	81	0'-4½"	1'-5"	1'-0"	99	LIGHT BLISTER - VERTICAL (WITH SLAB)					
R515	S	42	7'-5"	X		4	2'-3"	3'-2"					LIGHT BLISTER - VERTICAL (BODY)					
R516	S	28	5'-8"	X		4	2'-0"	1'-11"					LIGHT BLISTER - VERTICAL (LOWER BODY)					
R517	S	14	6'-6"	X		4	2'-3"	2'-3"					LIGHT BLISTER - VERTICAL (OUTSIDE)					
R618	S	56	6'-5"	X		4	2'-3"	2'-3"					LIGHT BLISTER - HORIZONTAL (TOP)					
R619	S	14	6'-1"	X		4	2'-3"	1'-11"					LIGHT BLISTER - HORIZONTAL (BODY)					
R620	S	14	4'-9"	X		20	1'-9"	0'-10"	0'-10"	1'-8"	135	270	LIGHT BLISTER - HORIZONTAL (BOTTOM)					
R421	S	14	3'-5"	X		9	1'-8"	1'-9"	19				LIGHT BLISTER - OUTSIDE FACE					
R422	S	35	1'-1"	X		4	0'-4"	0'-7"					LIGHT BLISTER - OUTSIDE FACE					
R623	S	49	12'-4"	X		2	11'-8"						LIGHT BLISTER - DECK OVERHANG					
R624	S	20	10'-1"	X		17	3'-8"	3'-1"	3'-8"	99	99		SIGN BASE SUPPORT - TIE					
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"	63				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	14'-9"	X		9	3'-0"	11'-9"	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					

BAR MARK BREAKDOWN				
BAR MARK	UNIT 1	UNIT 2	TOTAL NO	WEIGHT
R501	1,926	1,956	3,882	35,091
R502	8		8	176
R503	32	32	64	495
R504	8		8	191
R505	160	160	320	20,026
R506	8		8	464
R507	8		8	187
R508		8	8	191
R509		8	8	464
R510		8	8	247
R511		8	8	261
R512	18	24	42	230
R513	18	24	42	226
R514	18	24	42	215
R515	18	24	42	325
R516	12	16	28	165
R517	6	8	14	95
R618	24	32	56	540
R619	6	8	14	128
R620	6	8	14	100
R421	6	8	14	32
R422	15	20	35	25
R623	21	28	49	908
R624	10	10	20	303
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	443
R634	12	12	24	141
R635	10	10	20	210



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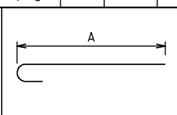

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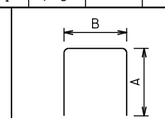

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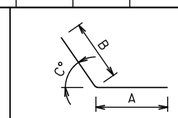
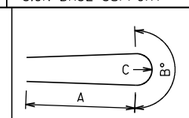
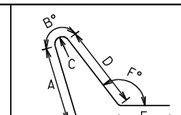


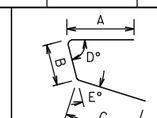
TYPE 9



TYPE 10



TYPE 11



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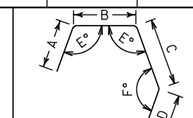
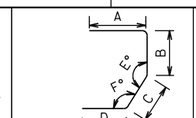


TYPE 20



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-40-853

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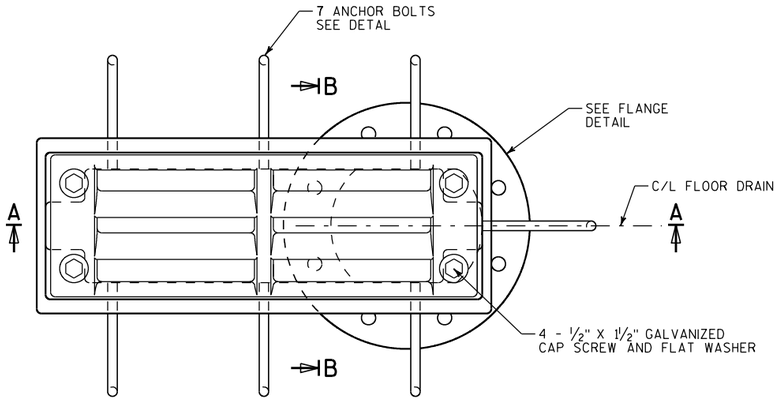
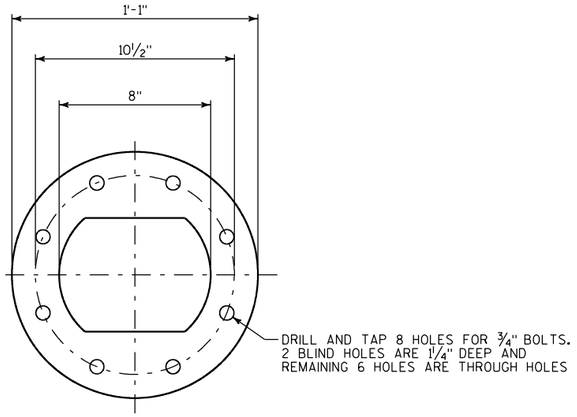
PARAPET REINFORCEMENT SCHEDULE

SHEET 92 OF 96

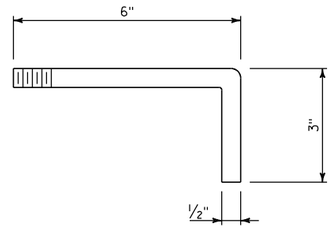
STATE PROJECT NUMBER
1060-33-81



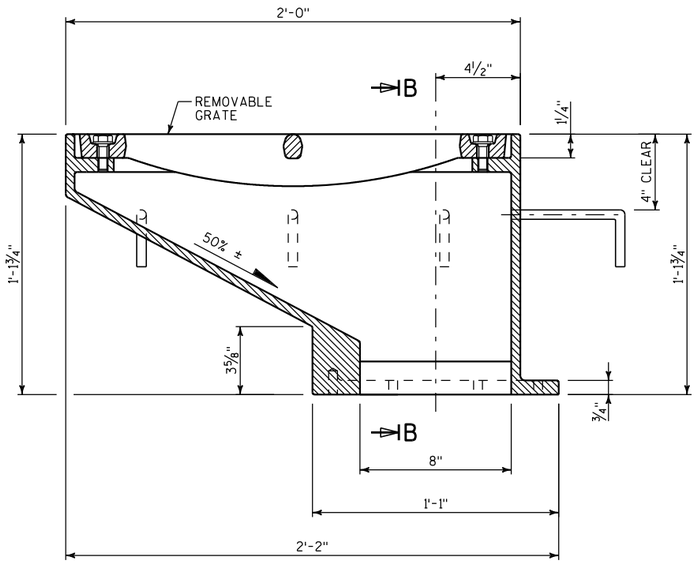
PLAN



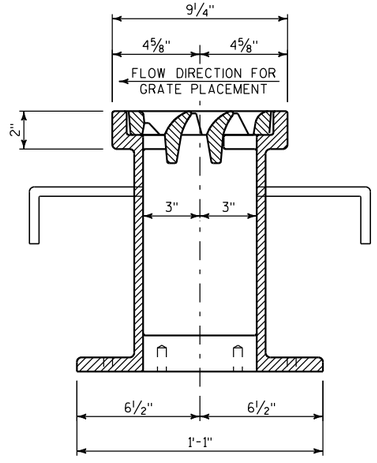
PLAN - FLANGE



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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY	SR	PLANS CK'D.	JWC

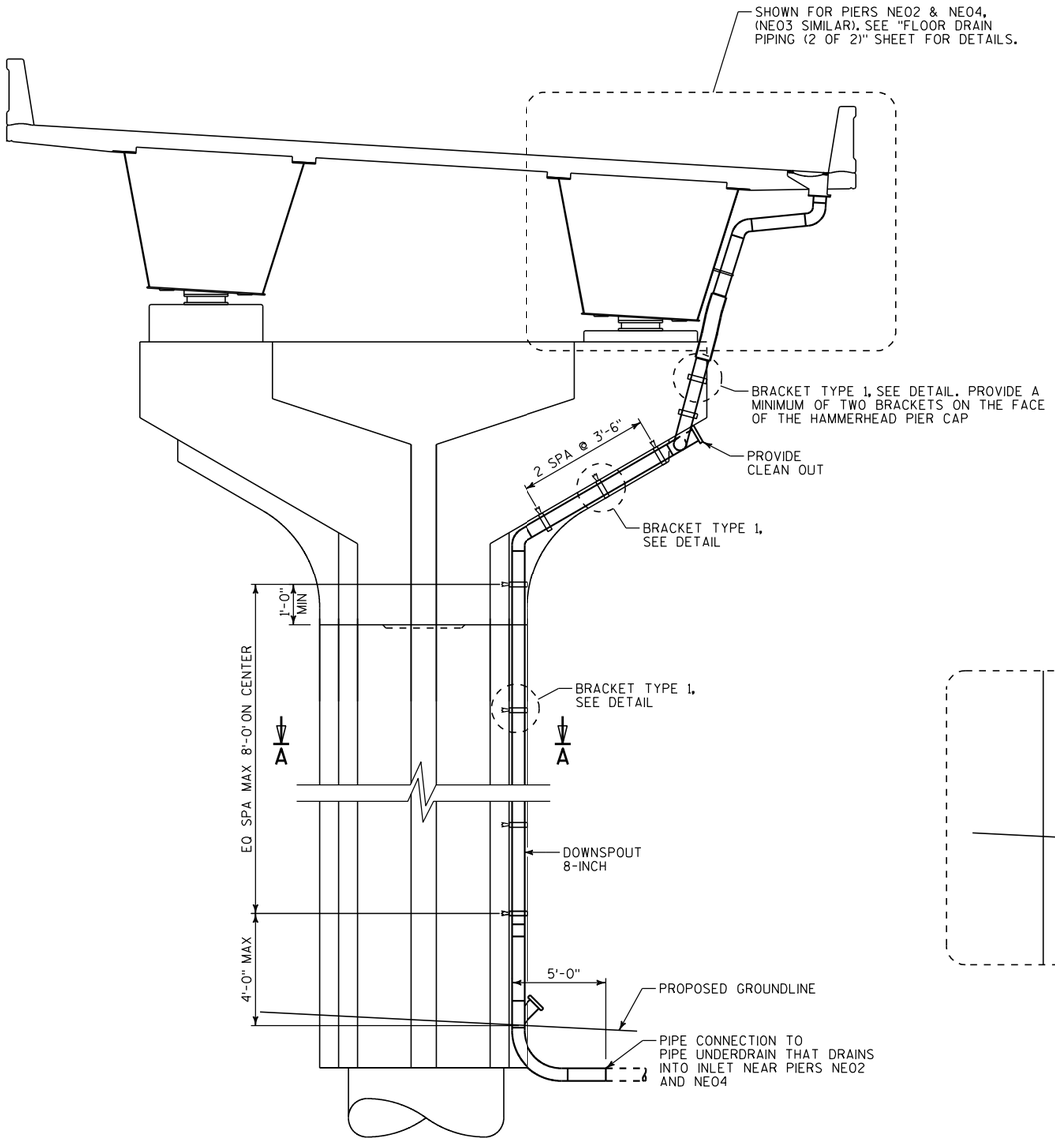
FLOOR DRAIN
SPECIAL

SHEET 93 OF 96

8

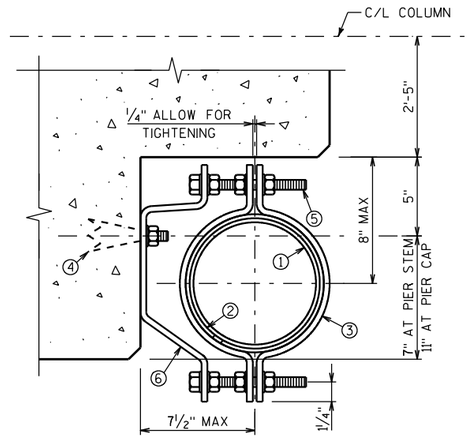
8

STATE PROJECT NUMBER
1060-33-81



ELEVATION

LOOKING DOWNSTATION
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.

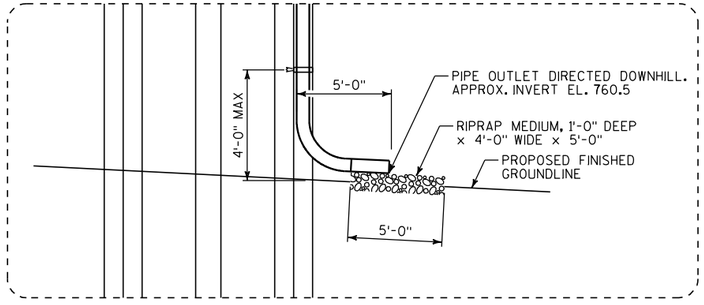
FOR FLOOR DRAIN LOCATIONS, SEE DECK REINFORCEMENT SHEETS.

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".

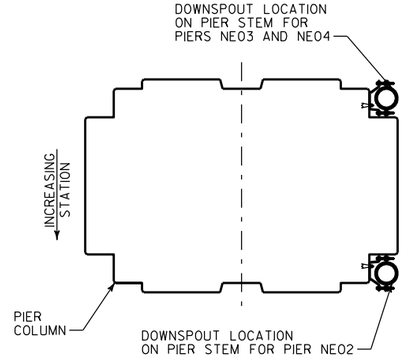
ALL DOWNSPOUT PIPE SHALL BE COLOR MATCHED TO THE OBJECT IT IS ATTACHED TO. FOR SECTIONS ATTACHED TO STEEL TUB GIRDER USE SHERWIN WILLIAMS COLOR SW6523. FOR SECTIONS ATTACHED TO CONCRETE PIER COLUMN USE FEDERAL COLOR 33564.

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 DETAIL AT PIER NE03

INVERT ELEVATION TABLE		
LOCATION	INLET ID	INVERT ELEV
PIER NE02	Z2918	761.50
PIER NE04	Z2951	748.00



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

FLOOR DRAIN PIPING (1 OF 2)

SHEET 94 OF 96

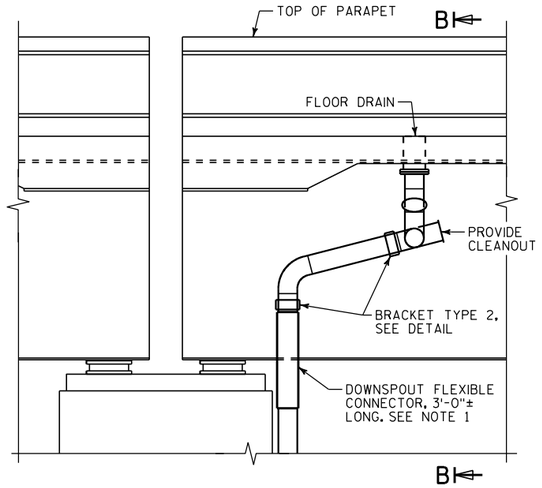
3043

8

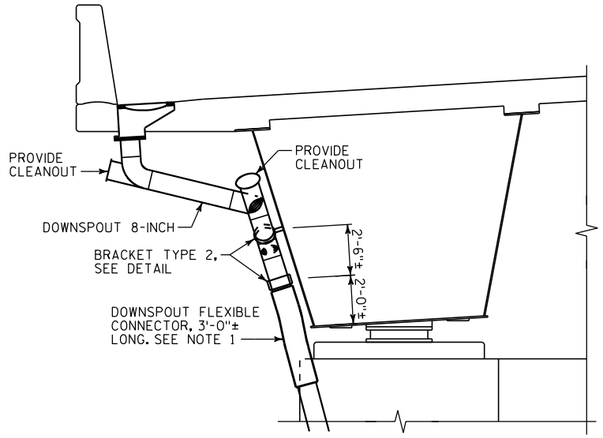
8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080612_rp.dgn PLOT DATE : 19-JUL-2015 22:29 PLOT BY : MSCJJO PLOT NAME : 080612_rp PLOT SCALE : 16:1

STATE PROJECT NUMBER
1060-33-81



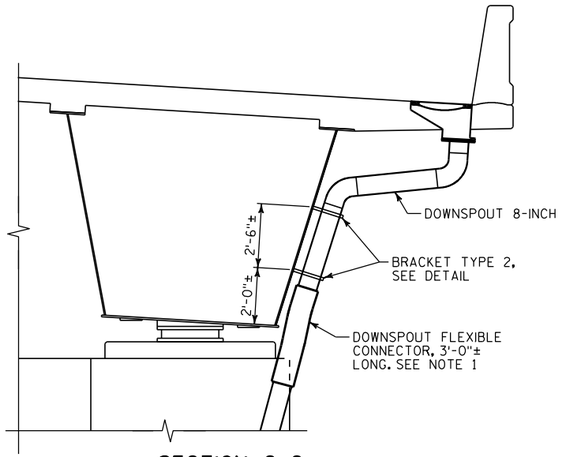
PARTIAL ELEVATION - PIER NE03



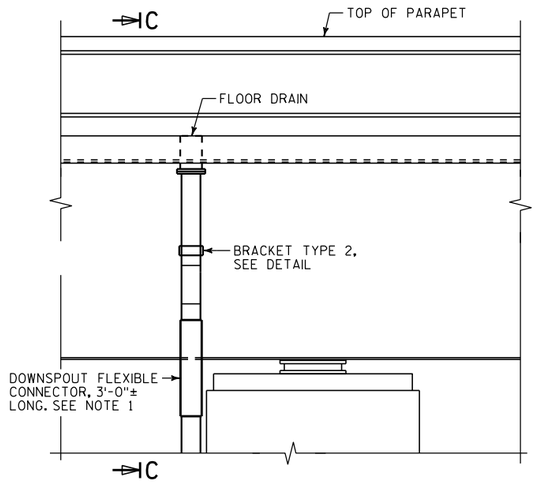
SECTION B-B

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.

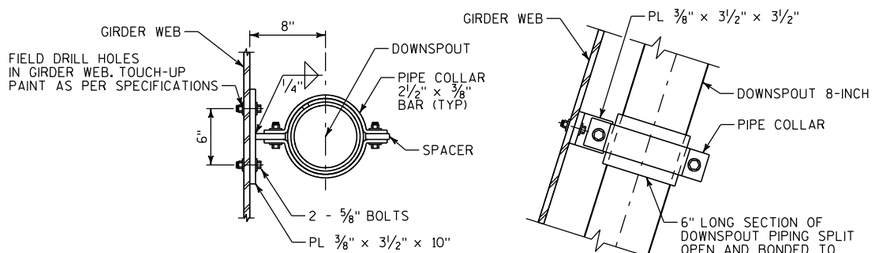


SECTION C-C



PARTIAL ELEVATION - PIERS NE02 & NE04

DETAIL SHOWN FOR PIER NE02
OPPOSITE HAND FOR PIER NE04



BRACKET TYPE 2

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. JWC

FLOOR DRAIN PIPING (2 OF 2)

SHEET 95 OF 96

3044

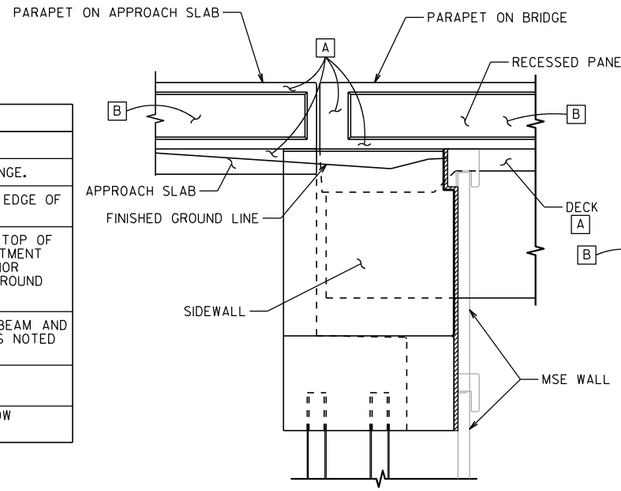
FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Mandatory\080613_rp.dgn PLOT DATE : 19-JUL-2015 22:29 PLOT BY : MSCJJO PLOT NAME : 080613_rp PLOT SCALE : 16:1

STATE PROJECT NUMBER
1060-33-81

CONCRETE STAINING SCHEDULE

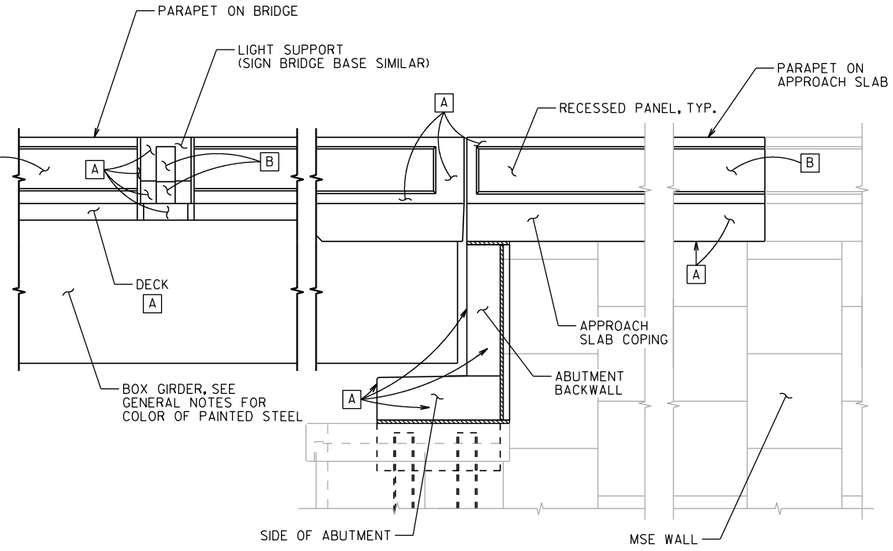
MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	EXTERIOR FACE, EXCEPT AS NOTED FOR ACCENT COLORS.
		DECK	FASCIA AND EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE.
		APPROACH SLAB	FASCIA AND UNDERSIDE OF COPING/OVERHANG OR EXPOSED EDGE OF APPROACH SLAB TO 1 FOOT BELOW FINISHED GROUND LINE.
		ABUTMENT	FRONT 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, EXTERIOR EXPOSED FACE OF SIDEWALL TO 1 FOOT BELOW FINISHED GROUND LINE, AND EACH SIDE OF GIRDER PEDESTAL.
		PIERS	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	RECESSED AREAS AND REVEALS ON PIERS TO 1 FOOT BELOW FINISHED GROUND LINE.

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



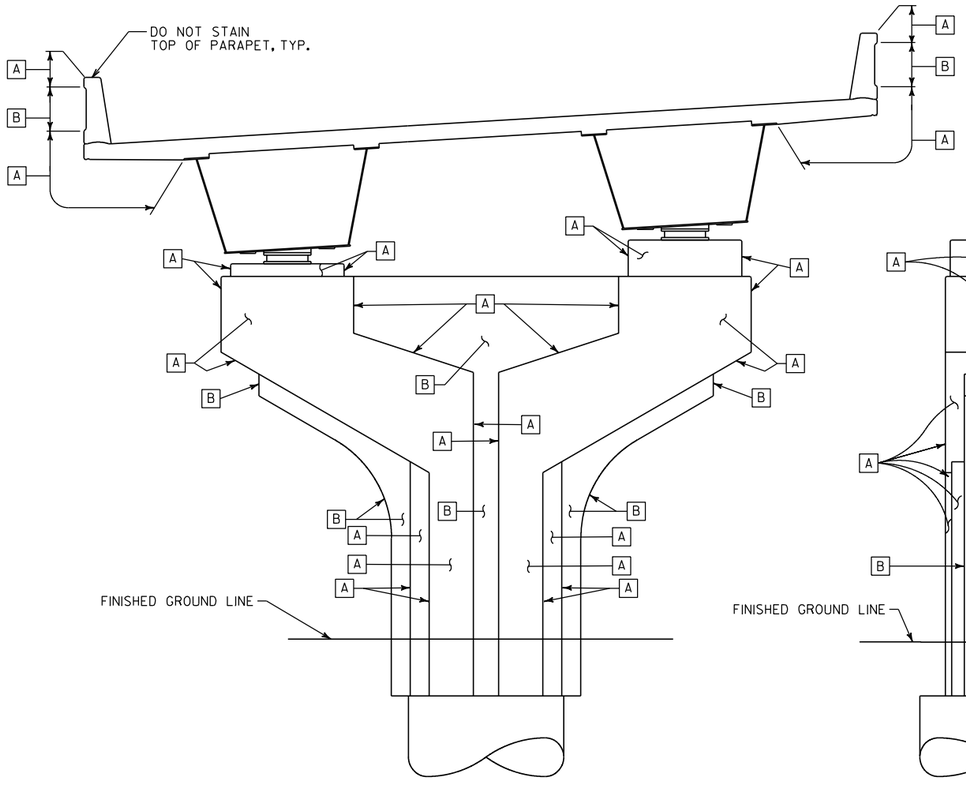
OUTSIDE ELEVATION OF RIGHT PARAPET

NORTH END SHOWN, EAST END OPPOSITE



OUTSIDE ELEVATION OF LEFT PARAPET

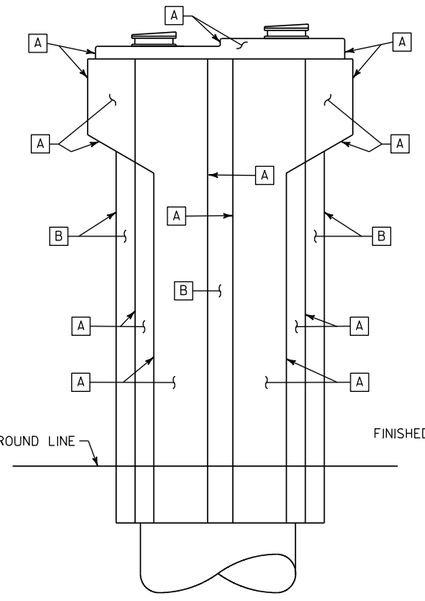
NORTH END SHOWN, EAST END OPPOSITE



ELEVATION OF PIER (TYPICAL)

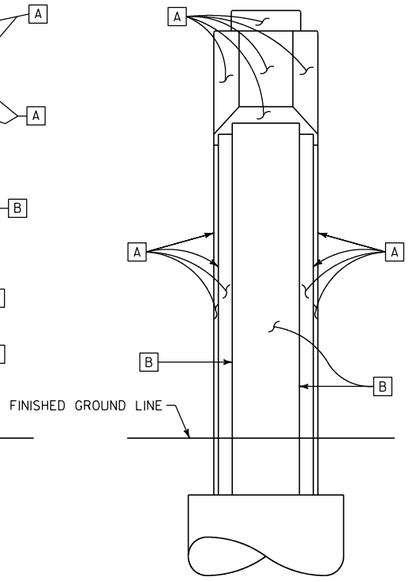
(LOOKING UP STATION)

END VIEW OF PIER (TYPICAL)



ELEVATION OF PIER (NE01 & NE05)

(LOOKING UP STATION)
(REFER TO ELEVATION OF PIER (TYPICAL) DETAIL FOR DECK AND PARAPET STAINING)



END VIEW OF PIER (NE01 & NE05)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY EAJ | PLANS CK'D. HDA

AESTHETIC DETAILS

SHEET 96 OF 96

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8

STATE PROJECT NUMBER
1060-33-81

ESTIMATED QUANTITIES - PIER OPTION A

ITEM NO.	BID ITEM	UNIT	PIER NE01	PIER NE02	PIER NE03	PIER NE04	PIER NE05	TOTAL
206.1000.0009	EXCAVATION FOR STRUCTURES BRIDGES B-40-853	LS						1
209.0100	BACKFILL GRANULAR	CY	13				27	40
502.0100	CONCRETE MASONRY BRIDGES	CY	61	93	111	102	61	428
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	27,940	28,470	24,130	29,650	27,660	137,850
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	14,550	21,780	25,610	23,780	14,660	100,380
505.0911	BAR COUPLERS NO. 11	EACH	48				48	96
511.1200.0011	TEMPORARY SHORING B-40-853	SF				2,740		2,740
SPV.0060.4150	DRILLED FOUNDATION SHAFT BASE GROUTING	EACH	1	1	1	1	1	5
SPV.0060.4160	THERMAL INTEGRITY PROFILER (TIP) TESTING DRILLED FOUNDATION SHAFT 98.43-INCH	EACH	1	1	1	1	1	5
SPV.0075.4200	OBSTRUCTIONS DRILLED FOUNDATION SHAFT	HRS	4	4	4	4	4	20
SPV.0090.4435	DRILLED FOUNDATION SHAFT 98.43-INCH	LF	71	61.5	45	50.5	70	298

ALL ITEMS ARE CATEGORY 2091

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-40-853

DRAWN BY SR | PLANS CK'D. MSS

OPTION A QUANTITIES

SHEET A1 OF A20

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option A\080201a_qu.dgn
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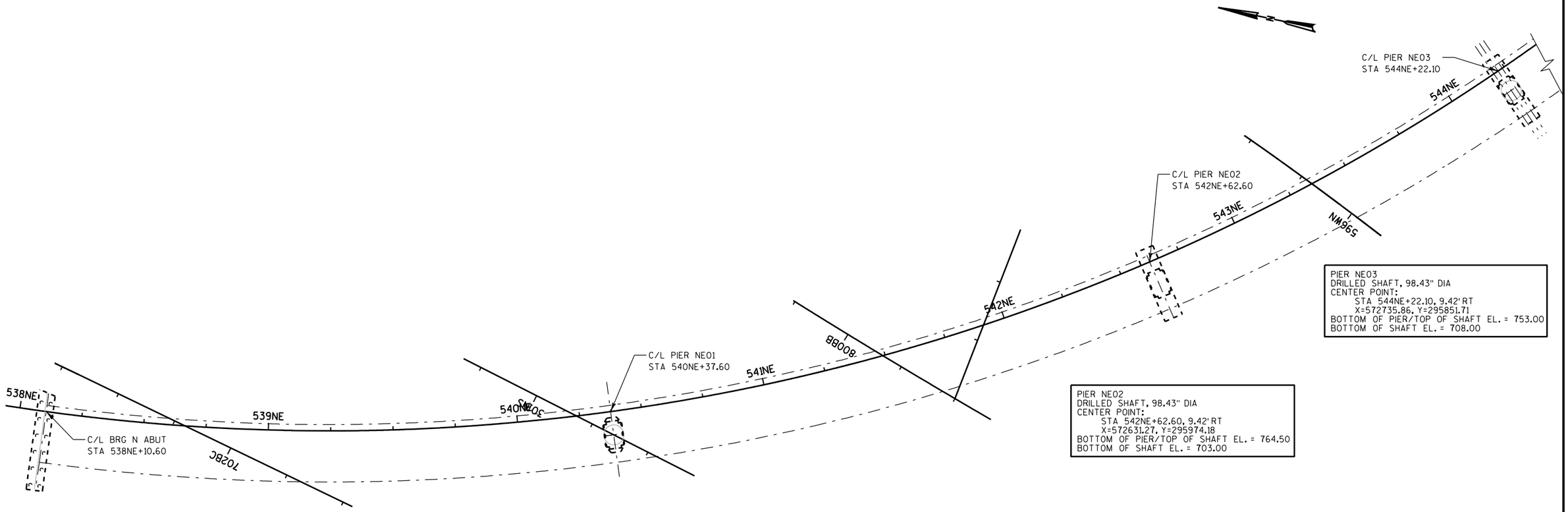
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-81



NORTH ABUT
16 CIPC PILES, 16" DIA
RP NA1
STA 538NE+10.60, 7.30' LT
X=572497.08, Y=296400.94
RP NA2
STA 538NE+10.60, 32.61' RT
X=572457.26, Y=296398.14
BOTTOM OF FOOTING EL. = 783.52
ESTIMATED PILE LENGTH = 75 FT.

PIER NE01
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 540NE+37.60, 9.42' RT
X=572527.20, Y=296175.75
BOTTOM OF PIER/TOP OF SHAFT EL. = 767.50
BOTTOM OF SHAFT EL. = 696.50

PIER NE02
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 542NE+62.60, 9.42' RT
X=572631.27, Y=295974.18
BOTTOM OF PIER/TOP OF SHAFT EL. = 764.50
BOTTOM OF SHAFT EL. = 703.00

PIER NE03
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 544NE+22.10, 9.42' RT
X=572735.86, Y=295851.71
BOTTOM OF PIER/TOP OF SHAFT EL. = 753.00
BOTTOM OF SHAFT EL. = 708.00

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY MSS | PLANS CK'D. JWC

OPTION A
FOUNDATION LAYOUT
(1 OF 2)

SHEET A2 OF A20

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option A\080202a_f1.dgn
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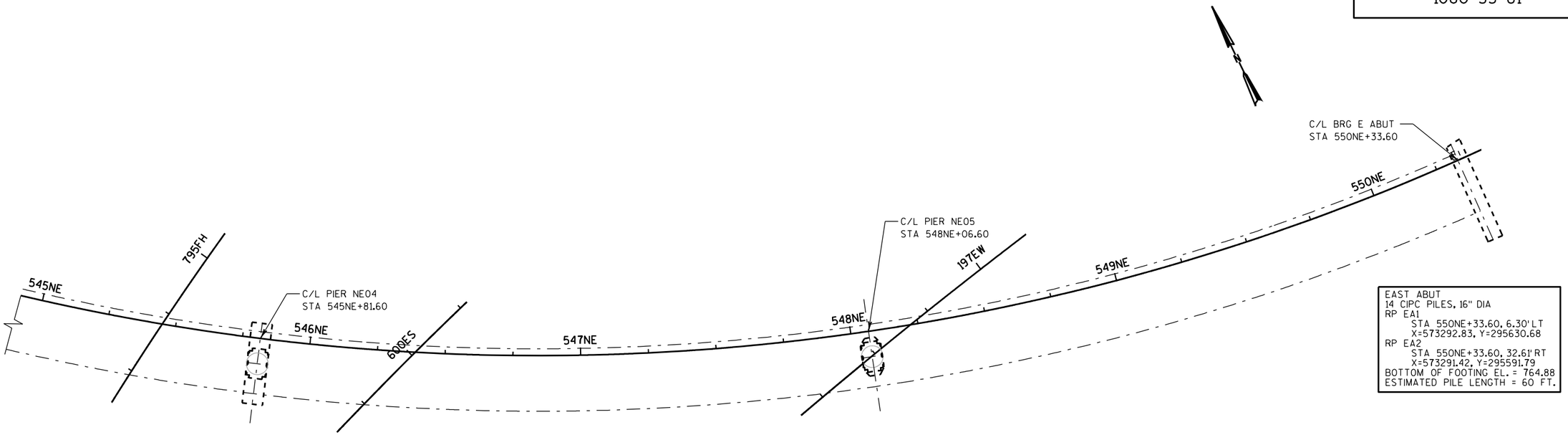
PLOT SCALE : 40:1

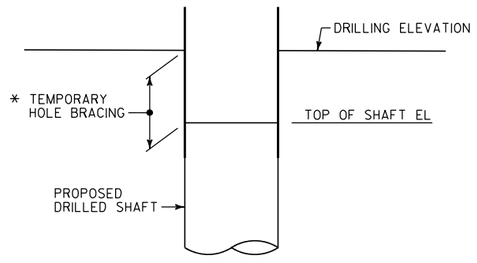
STATE PROJECT NUMBER
1060-33-81



EAST ABUT
14 CIPC PILES, 16" DIA
RP EA1
STA 550NE+33.60, 6.30'LT
X=573292.83, Y=295630.68
RP EA2
STA 550NE+33.60, 32.61'RT
X=573291.42, Y=295591.79
BOTTOM OF FOOTING EL. = 764.88
ESTIMATED PILE LENGTH = 60 FT.

PIER NE04
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 545NE+81.60, 9.42'RT
X=572861.80, Y=295751.33
BOTTOM OF PIER/TOP OF SHAFT EL. = 751.50
BOTTOM OF SHAFT EL. = 701.00

PIER NE05
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 548NE+06.60, 9.42'RT
X=573066.79, Y=295654.15
BOTTOM OF PIER/TOP OF SHAFT EL. = 751.00
BOTTOM OF SHAFT EL. = 681.00



TEMPORARY HOLE BRACING

AT PIER NE04

* 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-40-853".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY MSS | PLANS CK'D. JWC

OPTION A
FOUNDATION LAYOUT
(2 OF 2)

SHEET A3 OF A20

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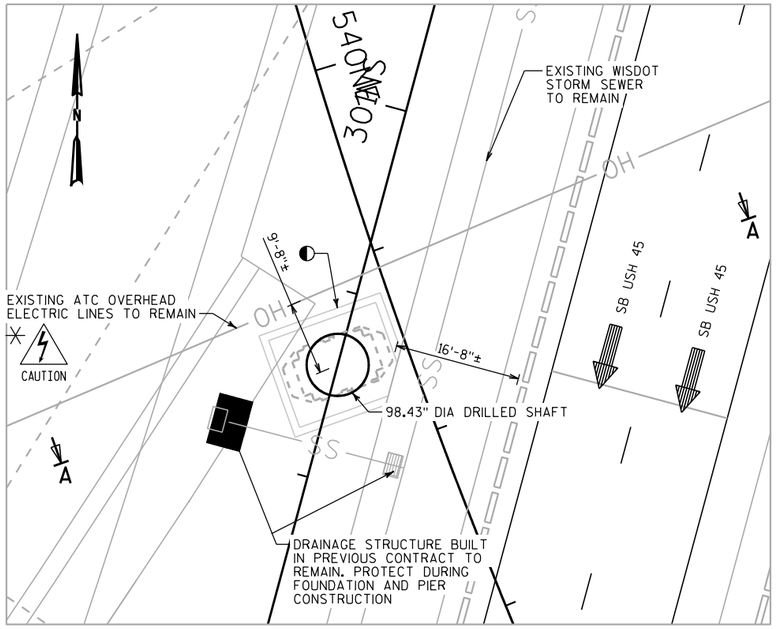
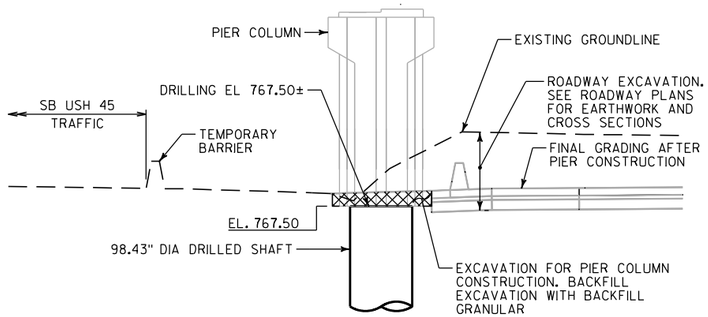
STATE PROJECT NUMBER
1060-33-81

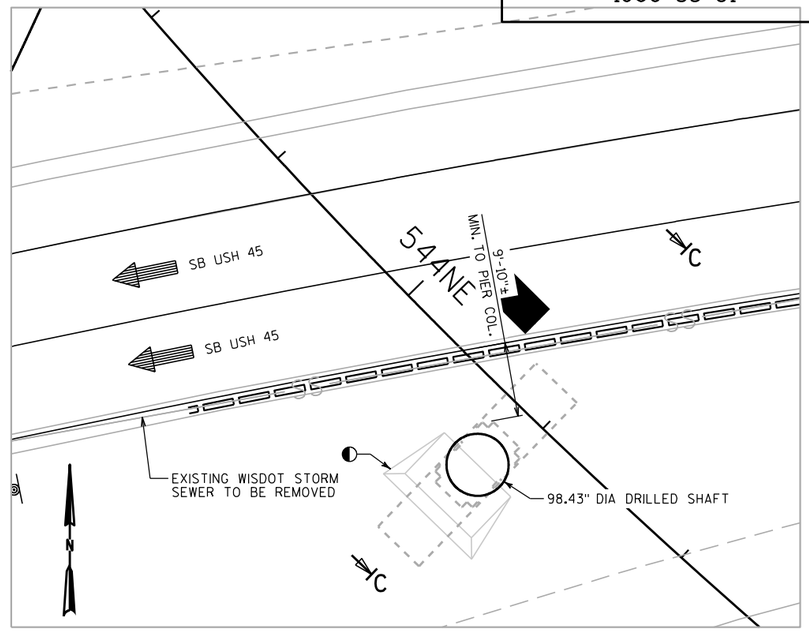


EXCAVATION PLAN - PIER NE01

STA 540NE+37.60

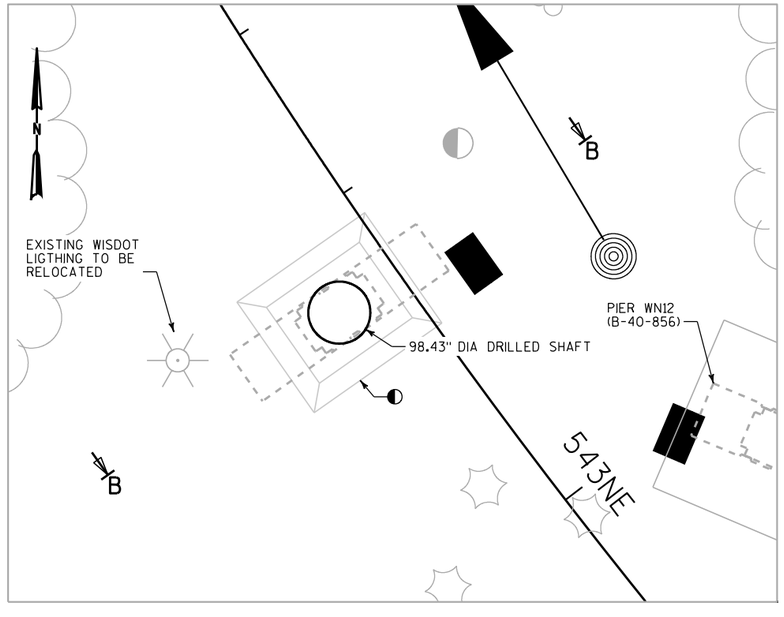


SECTION A-A



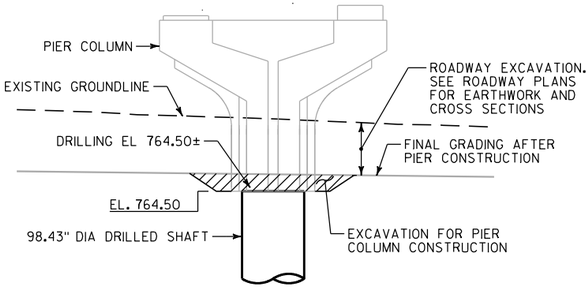
EXCAVATION PLAN - PIER NE03

STA 544NE+22.10

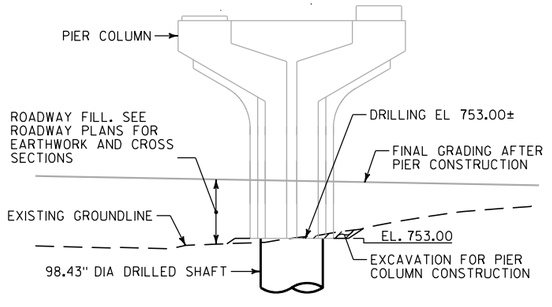


EXCAVATION PLAN - PIER NE02

STA 542ES+62.60



SECTION B-B



SECTION C-C

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-40-853".
- BRIDGE CONSTRUCTION NEAR PIER NE01 MAY NEED TO BE ACCOMPLISHED BENEATH AND/OR ADJACENT TO ENERGIZED OVERHEAD 138 KV ELECTRIC TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). THE HORIZONTAL AND VERTICAL LOCATION OF THESE LINES CAN VARY WITH WIND, AMBIENT TEMPERATURE AND POWER LOADING. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

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-40-853

DRAWN BY	ENS	PLANS CK'D.	JWC

OPTION A
EXCAVATION PLAN
(1 OF 2)

SHEET A4 OF A20

8

8

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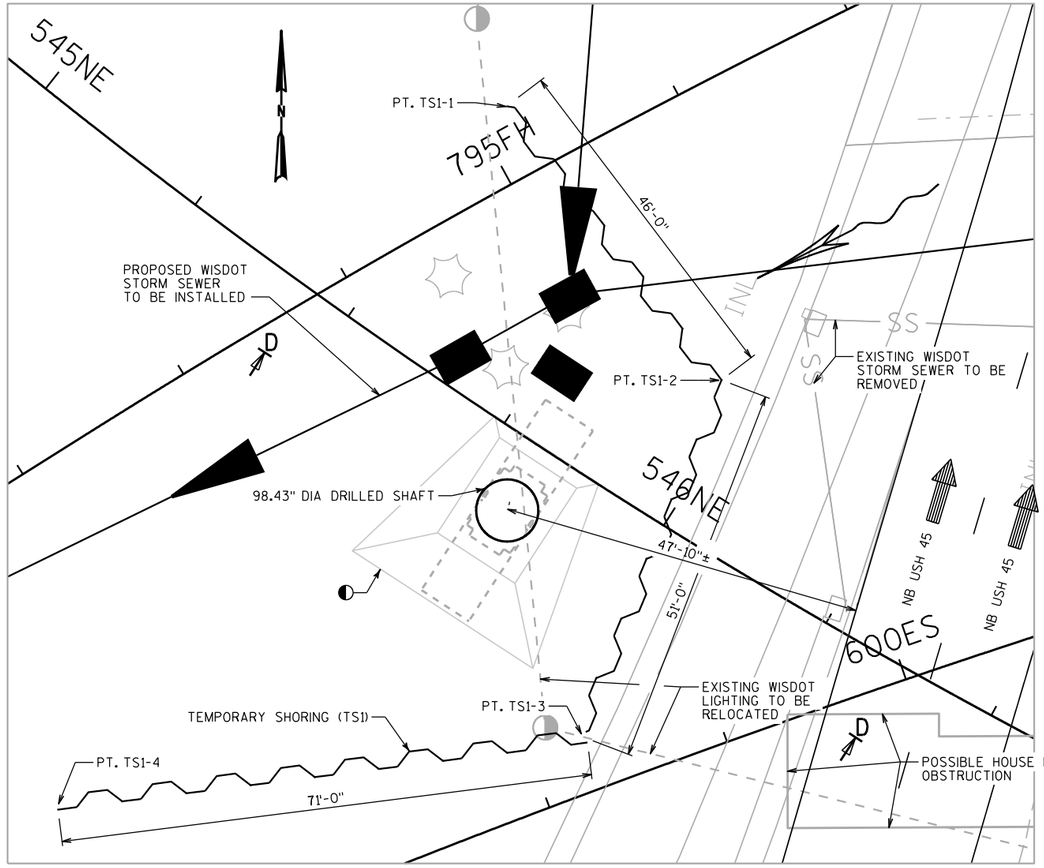
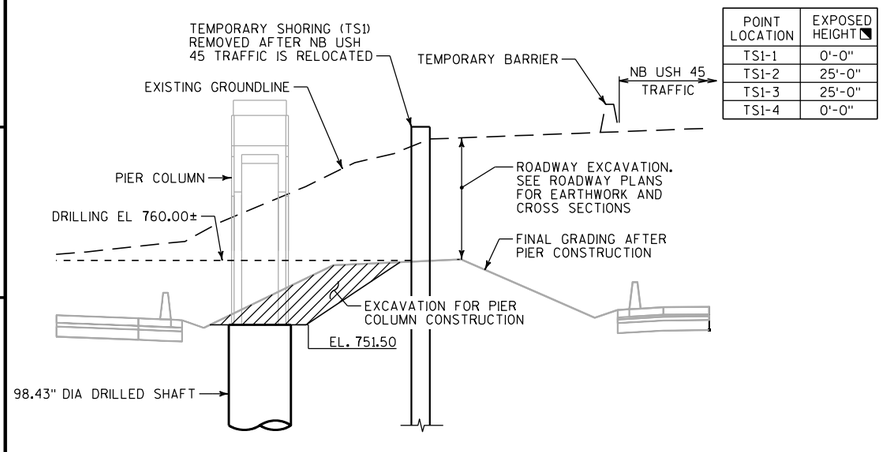
PLOT BY : MSCJJO
PLOT NAME : 080204a_ex
PLOT SCALE : 20:1

STATE PROJECT NUMBER
1060-33-81



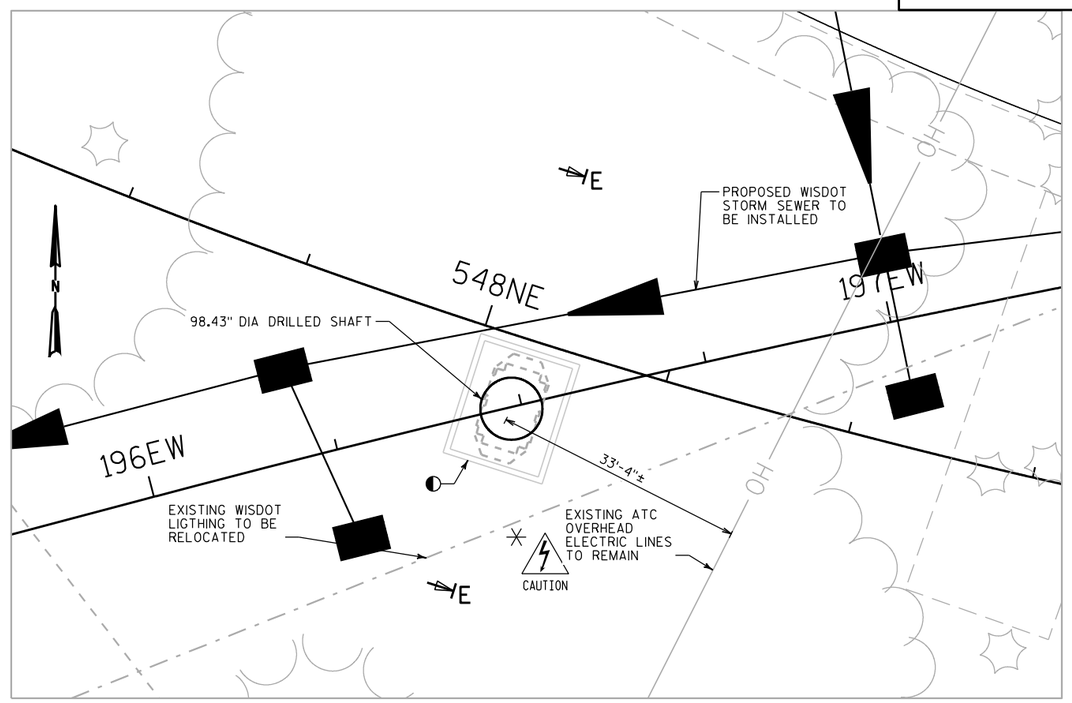
EXCAVATION PLAN - PIER NE04

STA 545NE+81.60



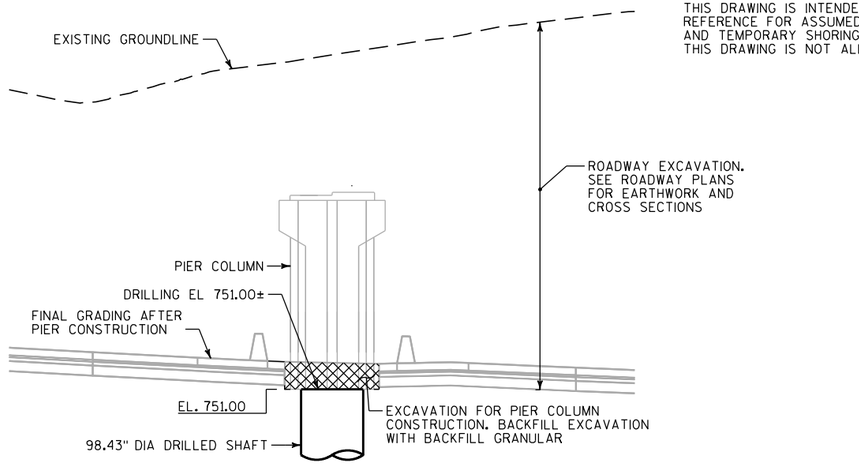
POINT LOCATION	EXPOSED HEIGHT ◥
TS1-1	0'-0"
TS1-2	25'-0"
TS1-3	25'-0"
TS1-4	0'-0"

SECTION D-D



EXCAVATION PLAN - PIER NE05

STA 548NE+06.60



SECTION E-E

NOTES

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

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-40-853".
- ◥ APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.
- ✳ BRIDGE CONSTRUCTION NEAR PIER NE05 MAY NEED TO BE ACCOMPLISHED BENEATH AND/OR ADJACENT TO ENERGIZED OVERHEAD 138 KV ELECTRIC TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). THE HORIZONTAL AND VERTICAL LOCATION OF THESE LINES CAN VARY WITH WIND, AMBIENT TEMPERATURE AND POWER LOADING. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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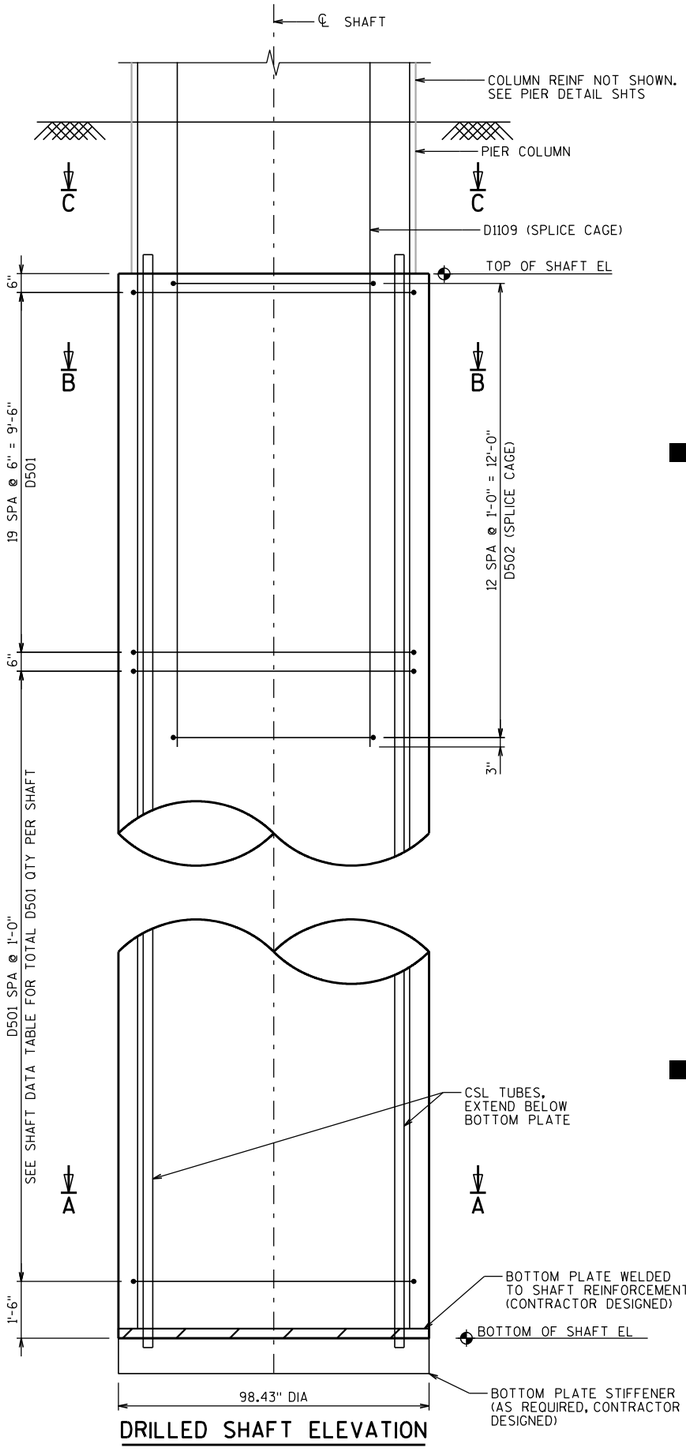
OPTION A
EXCAVATION PLAN
(2 OF 2)

SHEET A5 OF A20

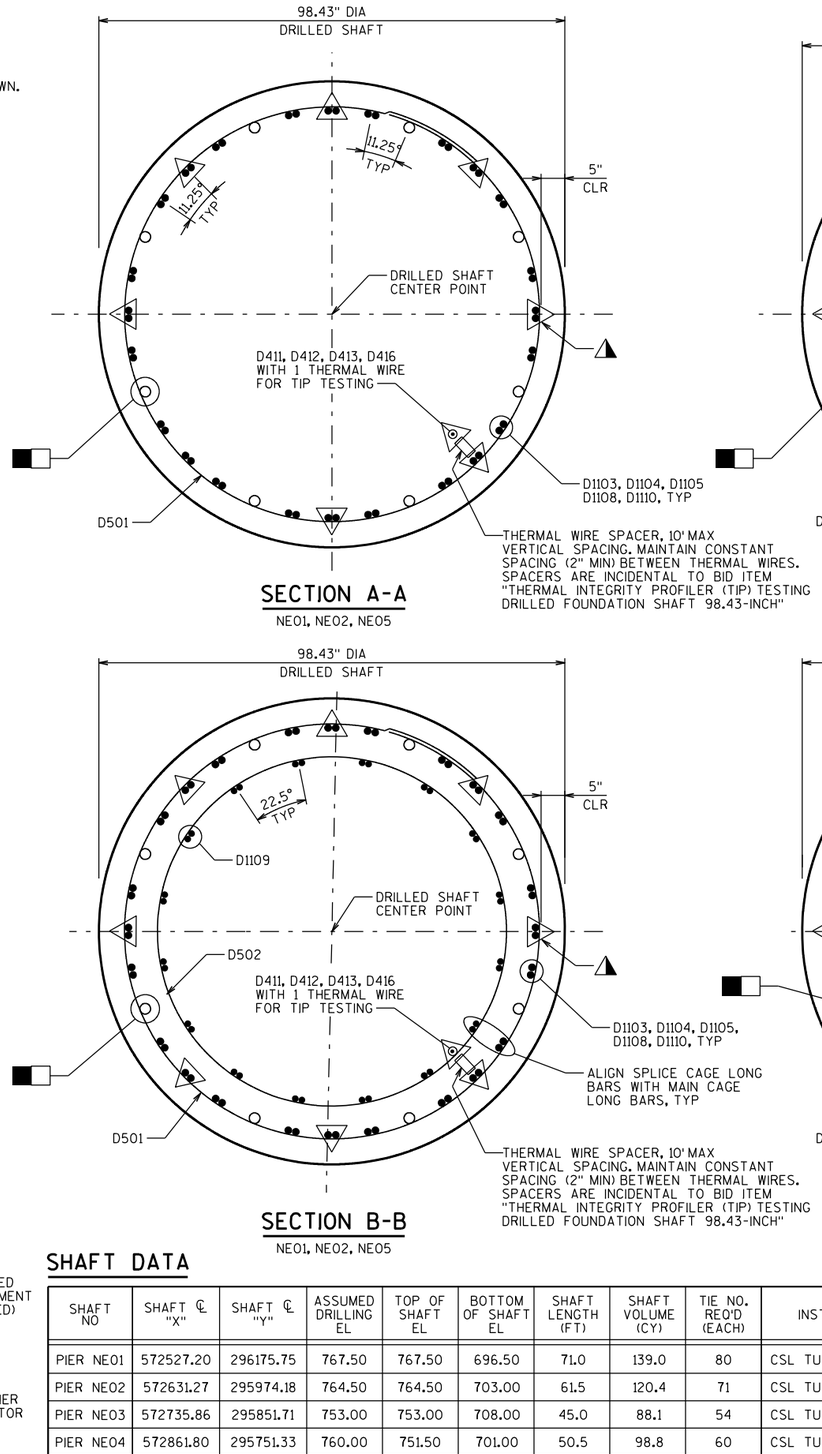
8

8

STATE PROJECT NUMBER
1060-33-81

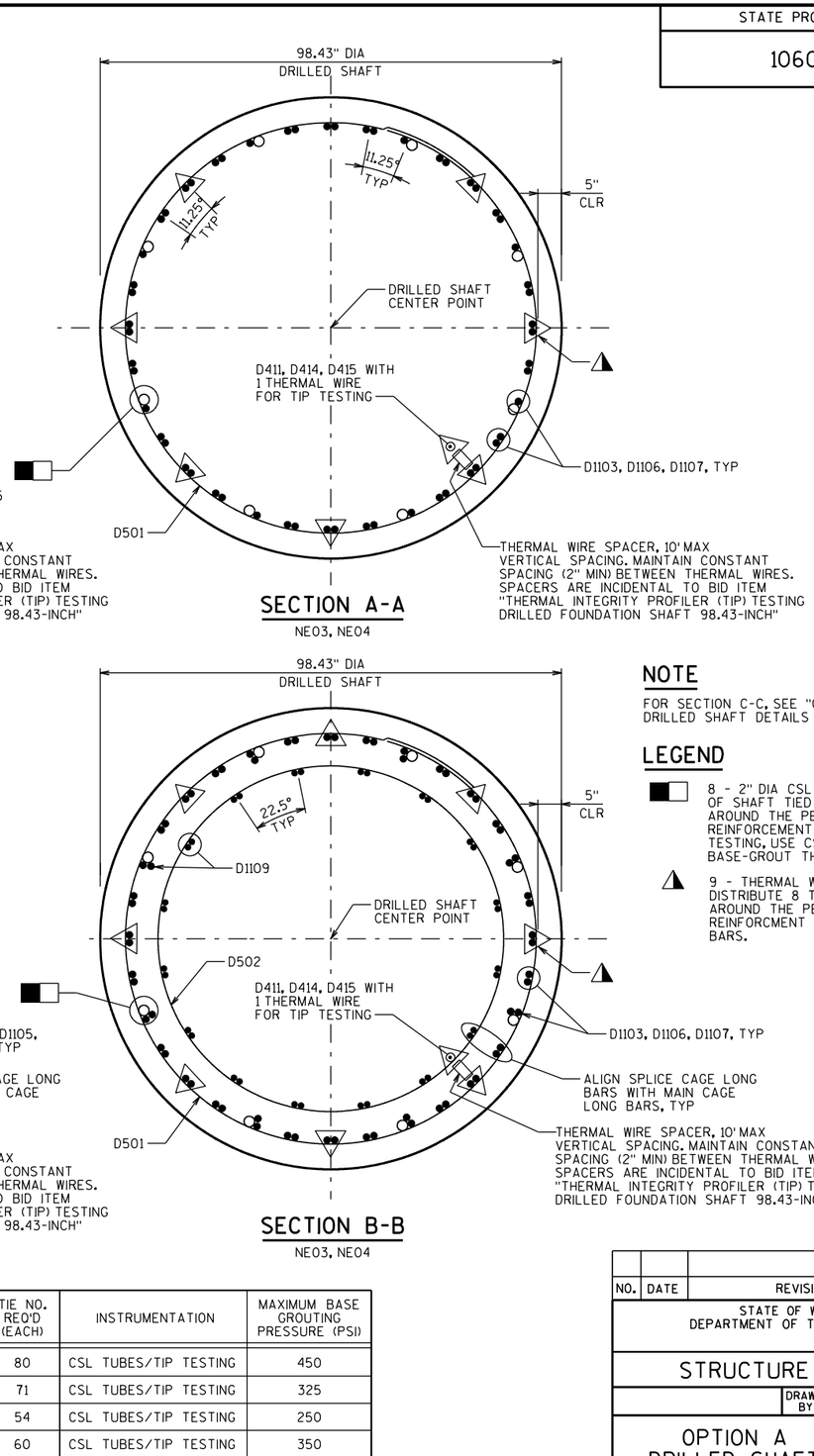


DRILLED SHAFT ELEVATION



SECTION A-A

NE01, NE02, NE05



SECTION A-A

NE03, NE04

SECTION B-B

NE01, NE02, NE05

SECTION B-B

NE03, NE04

NOTE

FOR SECTION C-C, SEE "OPTION A DRILLED SHAFT DETAILS (2 OF 2)" SHEET

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.

SHAFT DATA

SHAFT NO	SHAFT ℄ "X"	SHAFT ℄ "Y"	ASSUMED DRILLING EL	TOP OF SHAFT EL	BOTTOM OF SHAFT EL	SHAFT LENGTH (FT)	SHAFT VOLUME (CY)	TIE NO. REQ'D (EACH)	INSTRUMENTATION	MAXIMUM BASE GROUTING PRESSURE (PSI)
PIER NE01	572527.20	296175.75	767.50	767.50	696.50	71.0	139.0	80	CSL TUBES/TIP TESTING	450
PIER NE02	572631.27	295974.18	764.50	764.50	703.00	61.5	120.4	71	CSL TUBES/TIP TESTING	325
PIER NE03	572735.86	295851.71	753.00	753.00	708.00	45.0	88.1	54	CSL TUBES/TIP TESTING	250
PIER NE04	572861.80	295751.33	760.00	751.50	701.00	50.5	98.8	60	CSL TUBES/TIP TESTING	350
PIER NE05	573066.79	295654.15	751.00	751.00	681.00	70.0	137.0	79	CSL TUBES/TIP TESTING	425

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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OPTION A
DRILLED SHAFT
DETAILS (1 OF 2)

SHEET A6 OF A20

8

8

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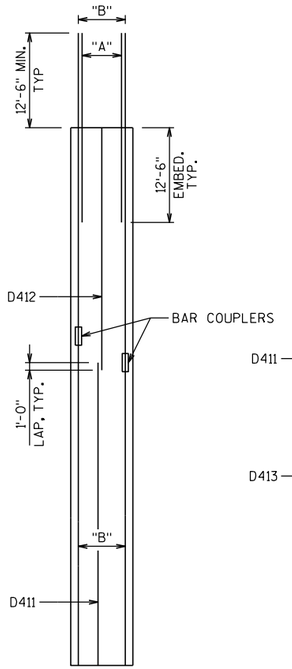
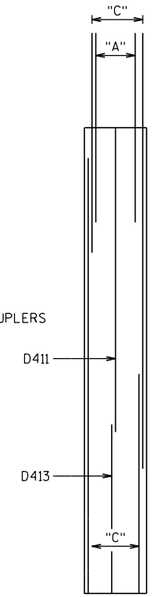


NE01



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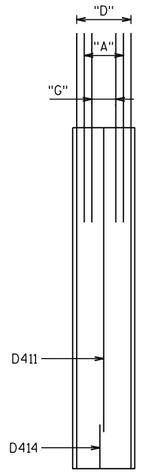
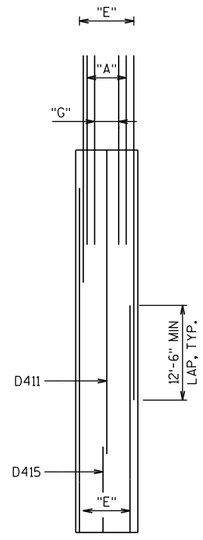
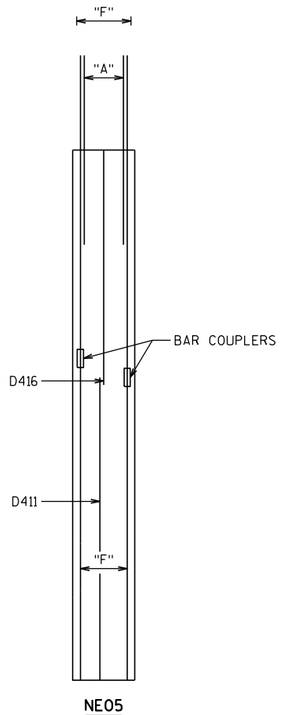


NE03



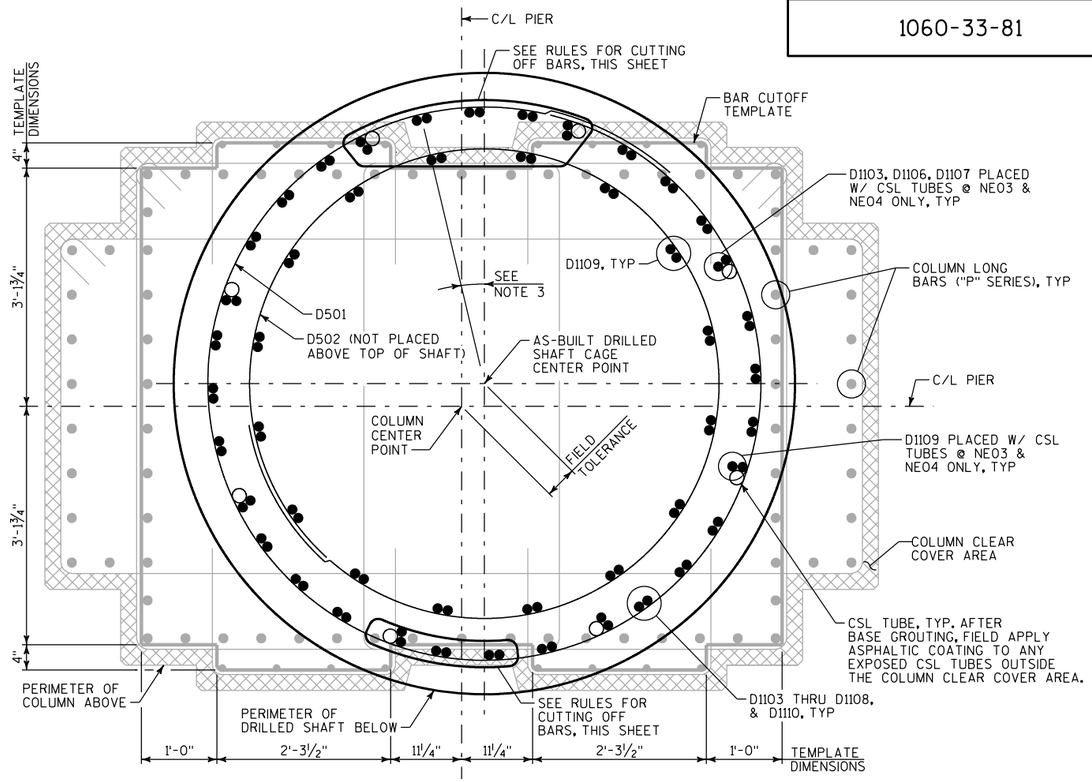
NE04



NE05

"A" = 32-D1109 BARS
"B" = 24-D1104 & 24-D1110 BARS
"C" = 24-D1103 & 24-D1105 BARS
"D" = 56-D1103 BARS
"E" = 28-D1106 & 28-D1107 BARS
"F" = 24-D1108 & 24-D1110 BARS
"G" = 8-D1109 BARS, TIE BAR WITH CSL TUBES

DRILLED SHAFT MAIN REINFORCEMENT SCHEMATIC



SECTION C-C

DRILLED SHAFT CONNECTION DETAIL

DRILLED SHAFT SHOWN IN AS-BUILT CONDITION TO ILLUSTRATE CONSTRUCTION TOLERANCE

RULES FOR CUTTING OFF BARS

1. SELECT AND CUT OFF PROTRUDING DRILLED SHAFT BARS IN ACCORDANCE WITH THE FOLLOWING RULES. VIOLATING THESE RULES MAY RESULT IN A DRILLED SHAFT WITH INADEQUATE CAPACITY.
2. SURVEY AND MARK CENTER POINT OF PIER COLUMN ON TOP OF DRILLED SHAFT.
3. MARK CENTER POINT OF AS-BUILT DRILLED SHAFT REBAR CAGE ON TOP OF DRILLED SHAFT.
4. IF C/L SHAFT CAGE IS MORE THAN 4" FROM C/L PIER COLUMN, THE CAGE IS OUT OF TOLERANCE. ALERT THE DESIGN ENGINEER FOR FURTHER INSTRUCTIONS. DO NOT CONTINUE WITH STEPS BELOW.
5. LOCATE AND MARK THE OUTLINE OF THE BAR CUTOFF TEMPLATE AS SHOWN. THE BAR CUTOFF TEMPLATE LIES 3¼" INSIDE THE COLUMN PERIMETER.
6. DO NOT ALTER BARS THAT FALL COMPLETELY INSIDE THE BAR CUTOFF TEMPLATE. BARS THAT FALL OUTSIDE THE BAR CUTOFF TEMPLATE CAN BE CUT OFF, SUBJECT TO THE LIMITATIONS BELOW.
7. CUT OFF NO MORE THAN 6 BARS PER SIDE IN THE OUTER RING FOR NE01, NE02 & NE05. CUT OFF NO MORE THAN 10 BARS PER SIDE IN THE OUTER RING FOR NE03 & NE04.
8. CUT OFF NO MORE THAN 12 BARS TOTAL IN THE OUTER RING FOR NE01, NE02 & NE05. CUT OFF NO MORE THAN 16 BARS TOTAL IN THE OUTER RING FOR NE03 & NE04.
9. CUT OFF NO MORE THAN 4 BARS IN THE INNER RING.
10. CUT OFF BARS FLUSH WITH TOP OF DRILLED SHAFT AND APPLY ASPHALTIC COATING TO ALL EXPOSED AREAS OF CUT BARS.

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION. STAGGER LAPS WITHIN BUNDLES.
2. WELDMENT OF BOTTOM PLATE AND REINFORCING BAR CAGE NOT SHOWN FOR CLARITY. SEE "OPTION A DRILLED SHAFT DETAILS (1 OF 2)" SHEET.
3. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
4. 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.
5. SEE "OPTION A DRILLED SHAFT DETAILS (1 OF 2)" SHEET FOR LOCATION OF SECTION C-C.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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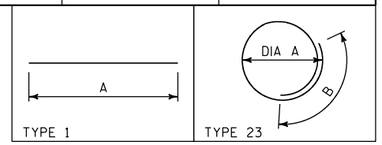
OPTION A
DRILLED SHAFT
DETAILS (2 OF 2)

SHEET A7 OF A20

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
D501	U	344	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	104	57'-6"			1	57'-6"						LONGITUDINAL BAR NE02, NE03					
D1104	U	48	43'-6"			1	43'-6"						LONGITUDINAL BAR NE01					
D1105	U	48	29'-0"			1	29'-0"						LONGITUDINAL BAR NE02					
D1106	U	56	45'-6"			1	45'-6"						LONGITUDINAL BAR NE04					
D1107	U	56	30'-0"			1	30'-0"						LONGITUDINAL BAR NE04					
D1108	U	48	42'-6"			1	42'-6"						LONGITUDINAL BAR NE05					
D1109	U	176	25'-0"			1	25'-0"						SPLICE CAGE LONGITUDINAL BAR					
D1110	U	96	40'-0"			1	40'-0"						LONGITUDINAL BAR NE01, NE05					
D411	U	5	40'-0"			1	40'-0"						LONGITUDINAL THERMAL BAR					
D412	U	1	31'-10"			1	31'-10"						LONGITUDINAL THERMAL BAR NE01					
D413	U	1	22'-4"			1	22'-4"						LONGITUDINAL THERMAL BAR NE02					
D414	U	1	5'-10"			1	5'-10"						LONGITUDINAL THERMAL BAR NE03					
D415	U	1	11'-4"			1	11'-4"						LONGITUDINAL THERMAL BAR NE04					
D416	U	1	30'-10"			1	30'-10"						LONGITUDINAL THERMAL BAR NE05					



BAR MARK BREAKDOWN

BAR MARK	PIER NE01	PIER NE02	PIER NE03	PIER NE04	PIER NE05	TOTAL NO	WEIGHT
D501	80	71	54	60	79	344	8,880
D502	13	13	13	13	13	65	1,429
D1103		48	56			104	31,772
D1104	48					48	11,094
D1105		48				48	7,396
D1106				56		56	13,538
D1107				56		56	8,926
D1108					48	48	10,839
D1109	32	32	40	40	32	176	23,377
D1110	48				48	96	20,402
D411	1	1	1	1	1	5	134
D412	1					1	21
D413		1				1	15
D414			1			1	4
D415				1		1	8
D416					1	1	21

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.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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OPTION A
DRILLED SHAFT
REINFORCEMENT
SCHEDULE

SHEET A8 OF A20

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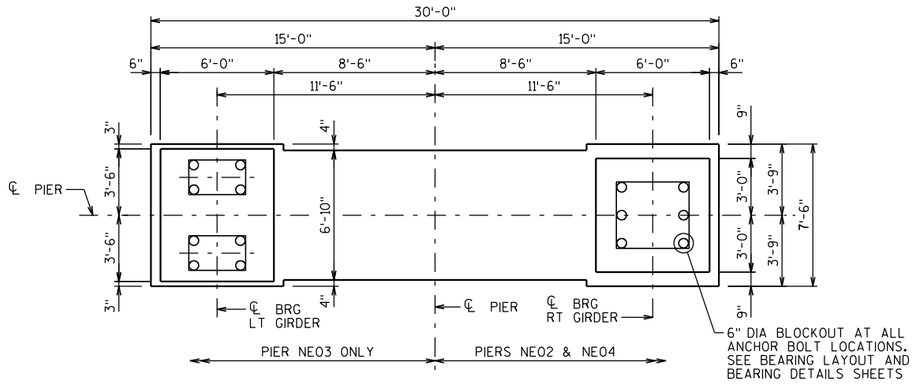
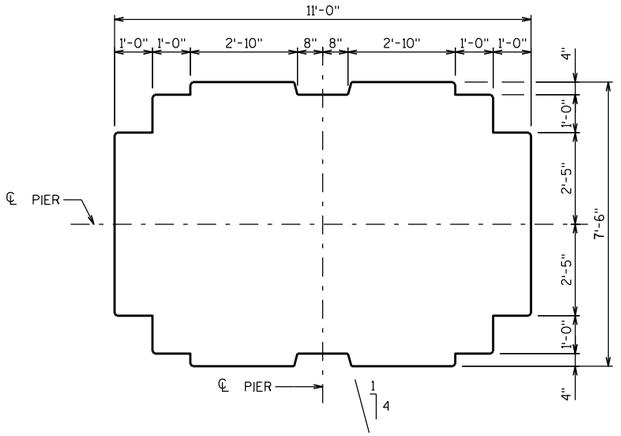
STATE PROJECT NUMBER

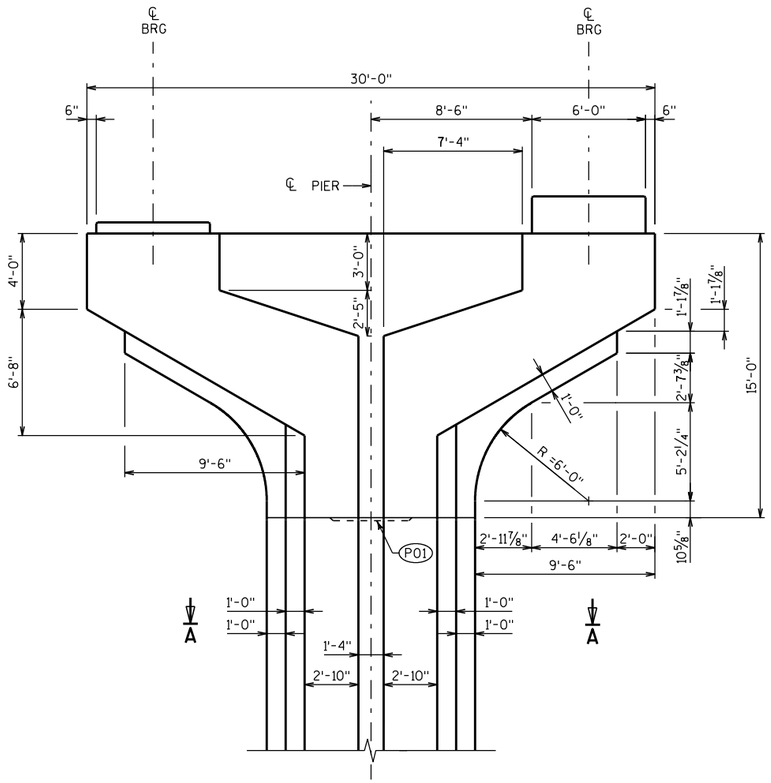
1060-33-81



PLAN

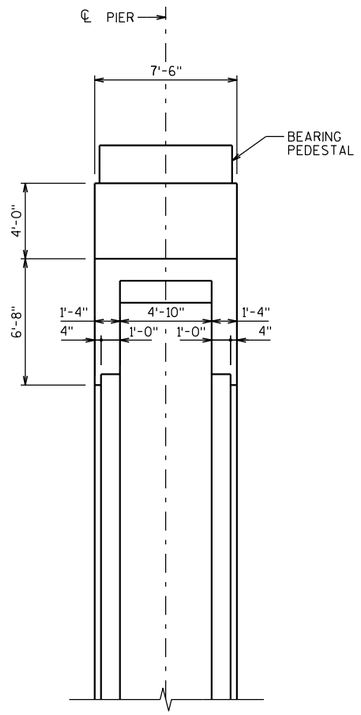


SECTION A-A



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-40-853

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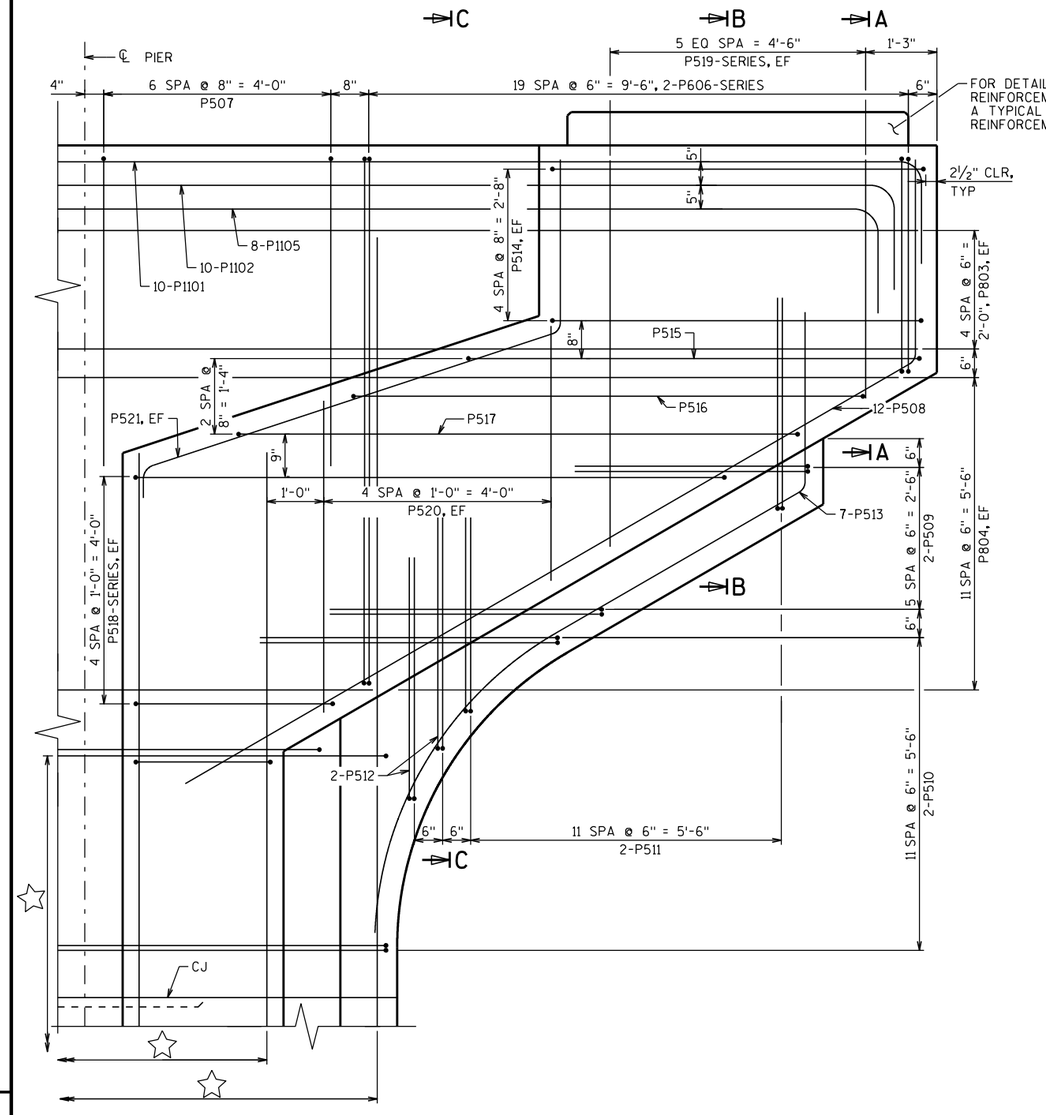
OPTION A
TYPICAL PIER CAP
LAYOUT

SHEET A9 OF A20

8

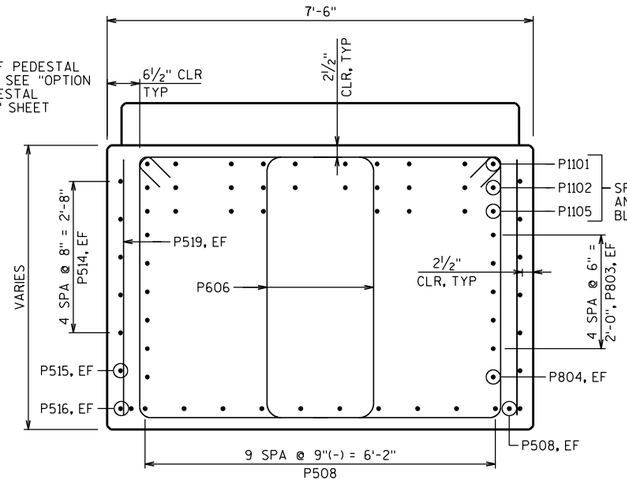
8

STATE PROJECT NUMBER
1060-33-81



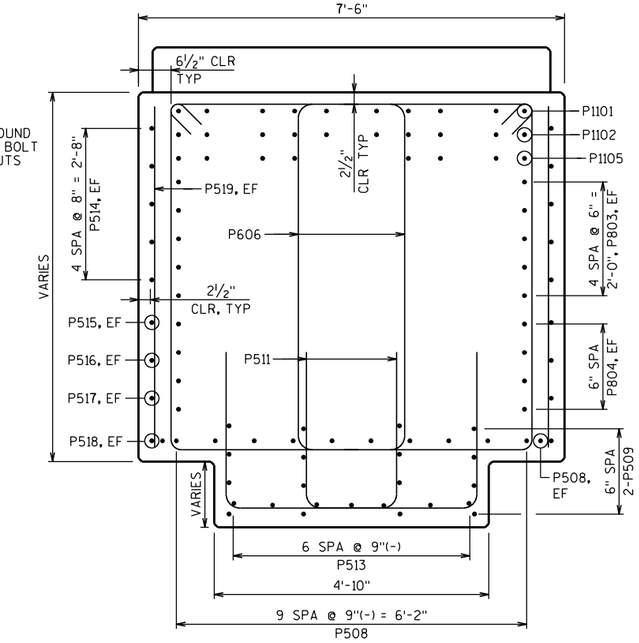
PARTIAL ELEVATION

(REINFORCEMENT IS SYMMETRICAL ABOUT ℄ PIER)



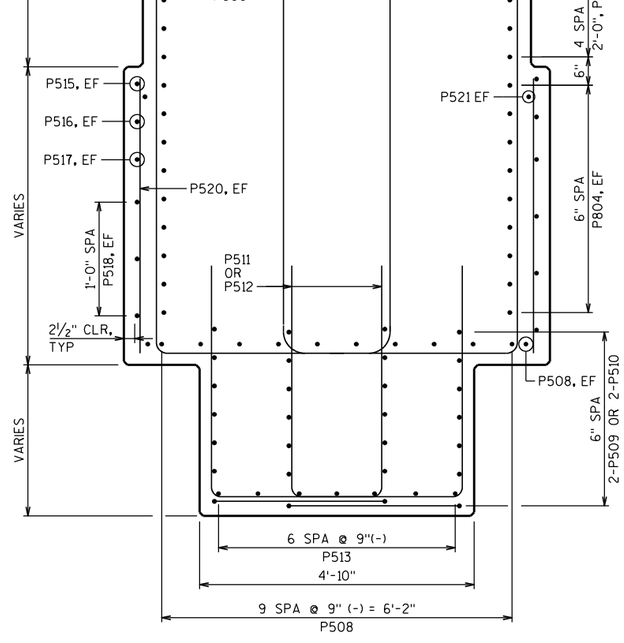
SECTION A-A

(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-40-853

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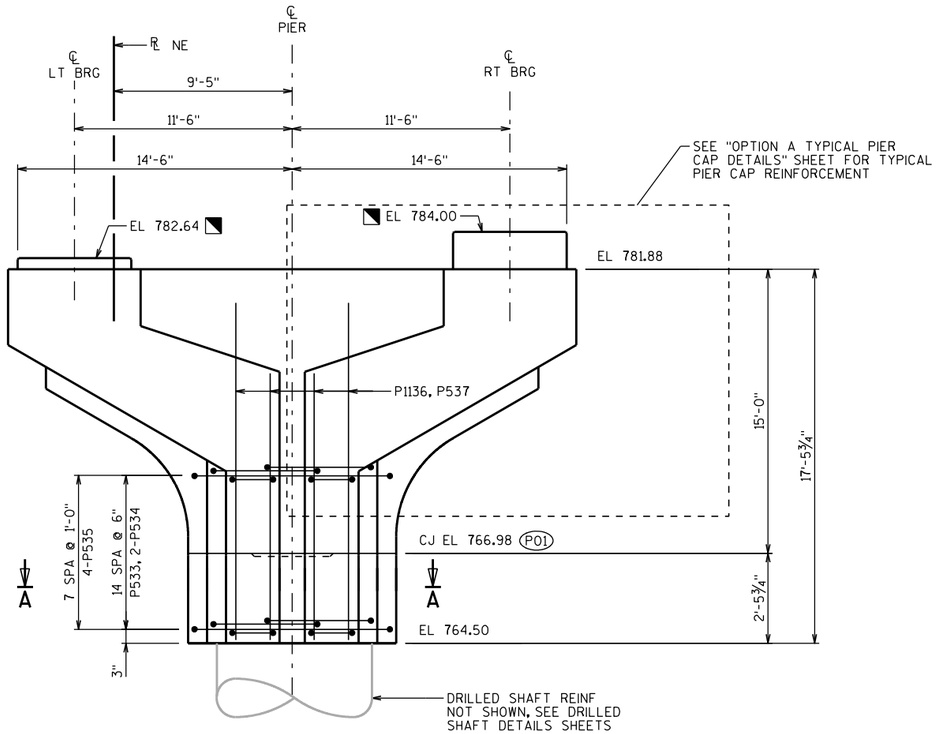
OPTION A TYPICAL PIER CAP DETAILS

SHEET A10 OF A20

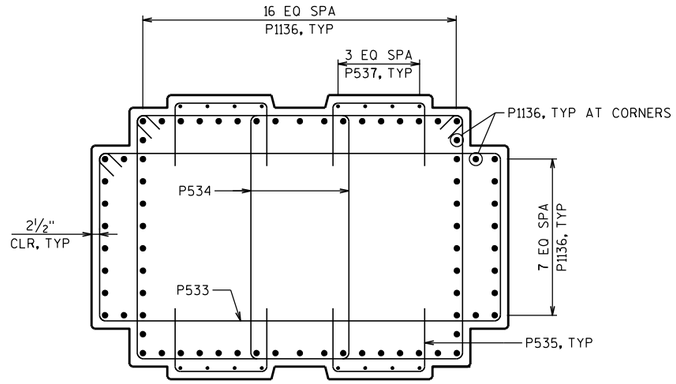
8

8

STATE PROJECT NUMBER
1060-33-81



ELEVATION



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".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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OPTION A
PIER NE02
DETAILS

SHEET A11 OF A20

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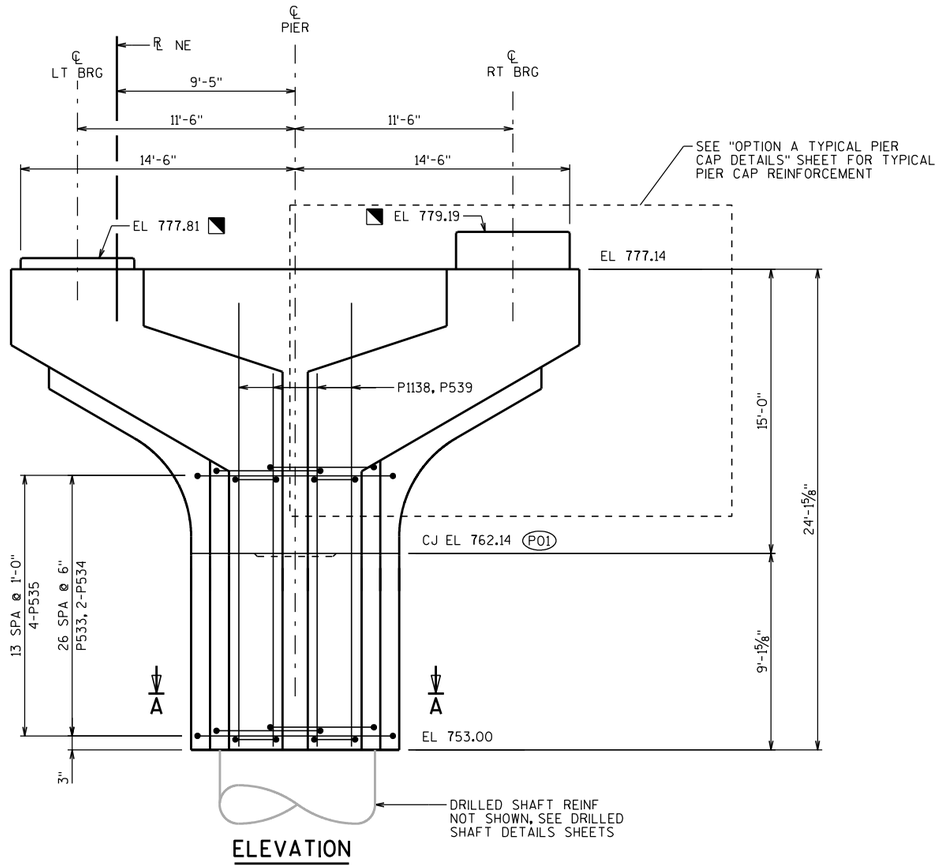
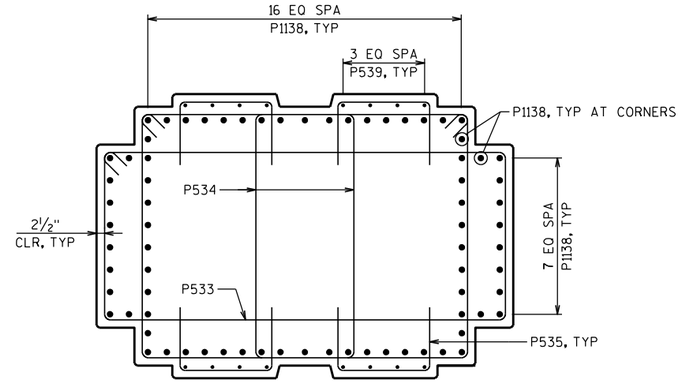
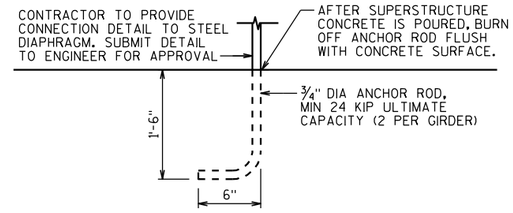


ELEVATION



SECTION A-A



TEMPORARY HOLD DOWN DEVICE

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

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".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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OPTION A
PIER NE03
DETAILS

SHEET A12 OF A20

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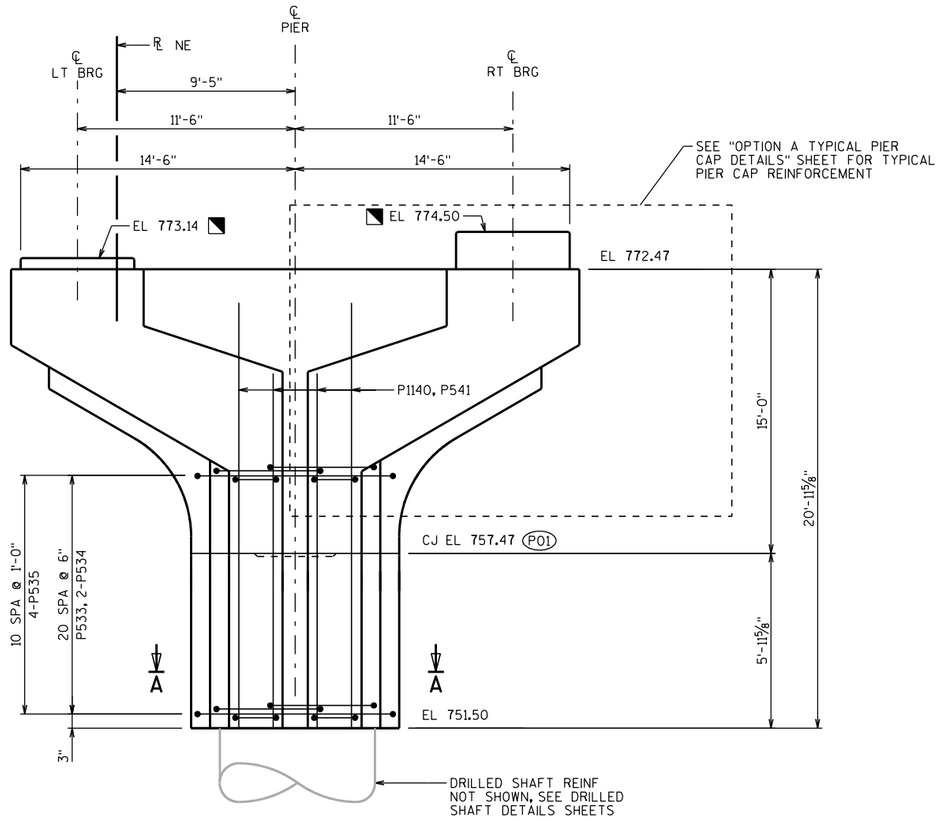
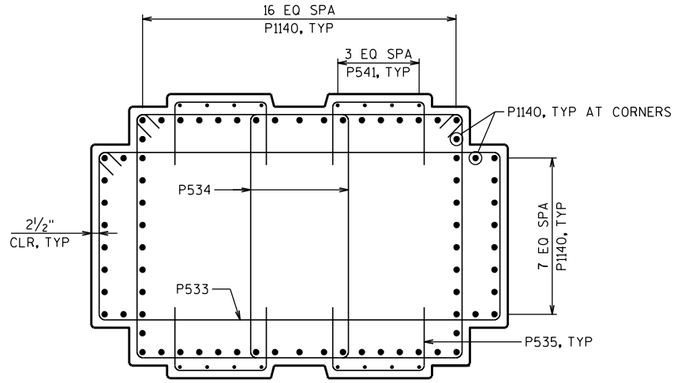


ELEVATION



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".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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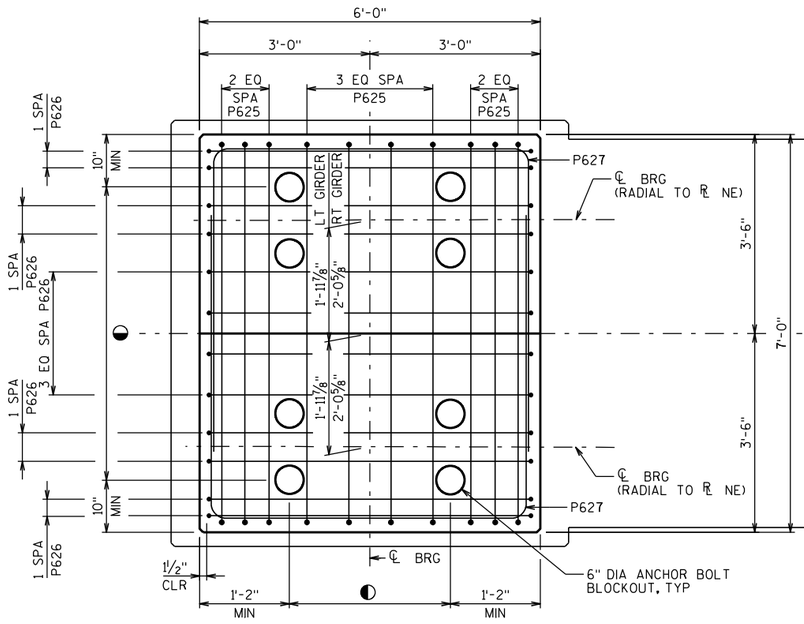
OPTION A
PIER NE04
DETAILS

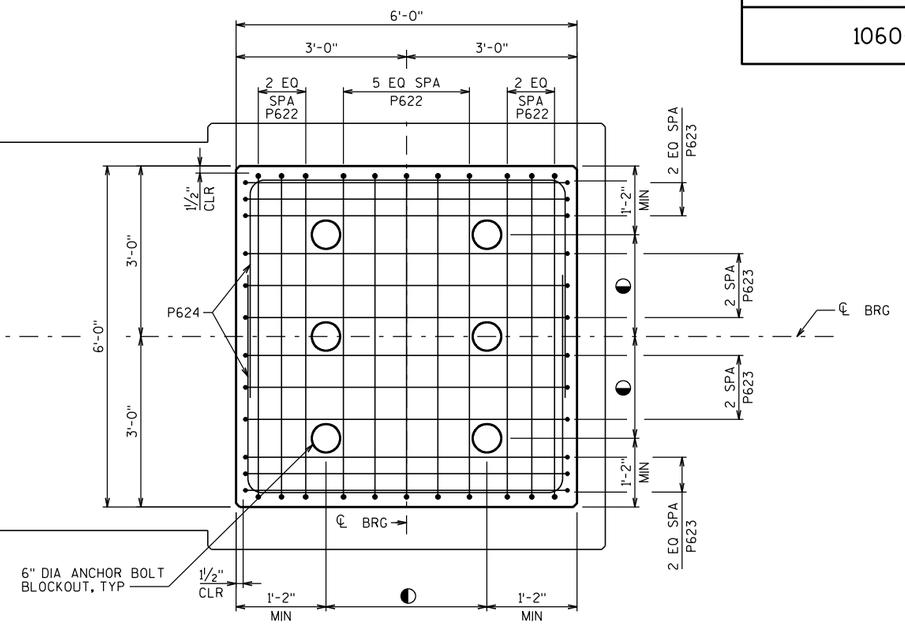
SHEET A13 OF A20

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option A\080405a_pi.dgn
PLOT DATE : 19-JUL-2015 22:34
PLOT BY : MSCJJO
PLOT NAME : 080405a_pi
PLOT SCALE : 8:1

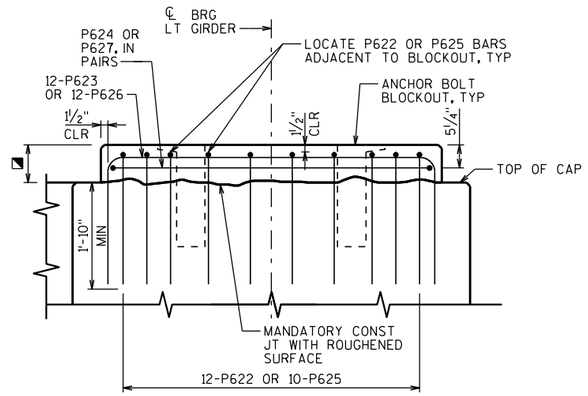
STATE PROJECT NUMBER
1060-33-81



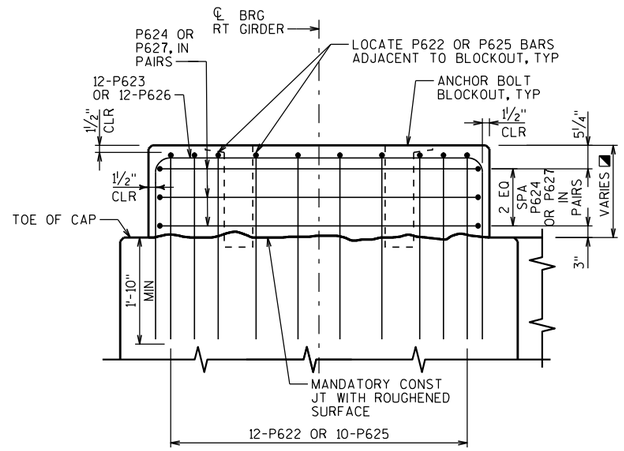
PEDESTAL PLAN
(PIER NE03 ONLY)



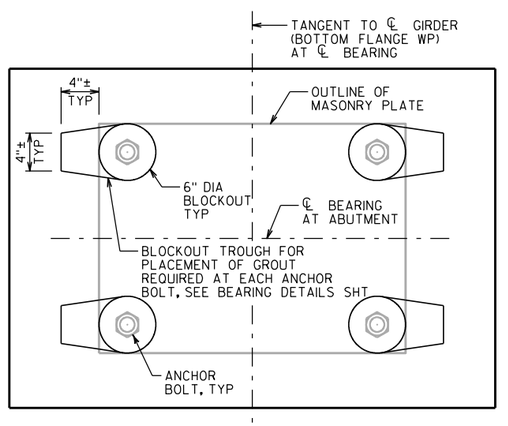
PEDESTAL PLAN
(PIERS NE02 & NE04)



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-40-853

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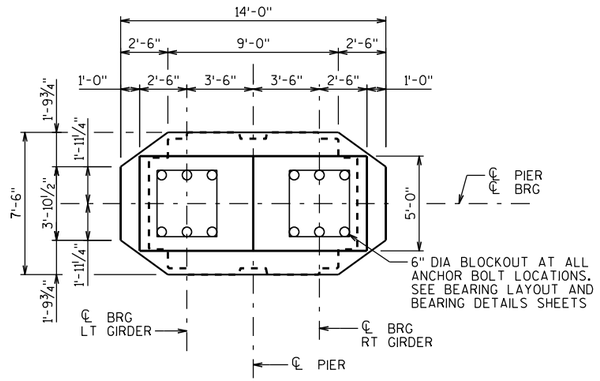
OPTION A
TYPICAL PIER
PEDESTAL
REINFORCEMENT

SHEET A14 OF A20

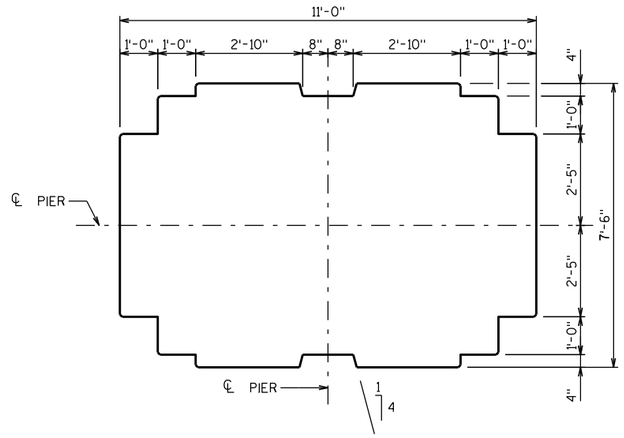
8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option A\080406a_pi.dgn
PLOT DATE : 19-JUL-2015 22:35
PLOT BY : MSCJJO
PLOT NAME : 080406a_pi
PLOT SCALE : 2.666667:1

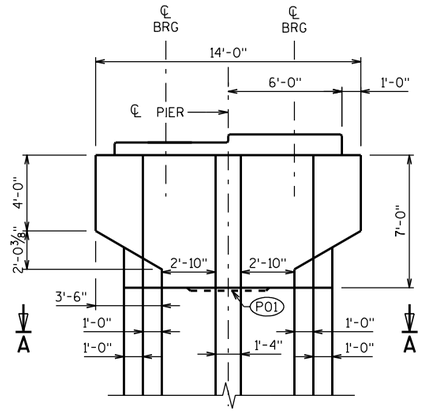
STATE PROJECT NUMBER
1060-33-81



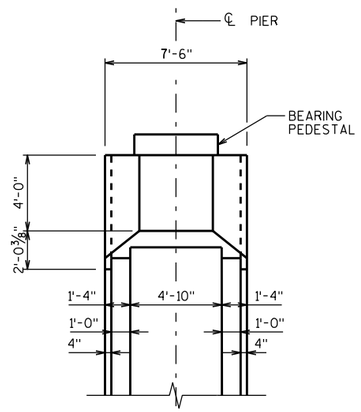
PLAN



SECTION A-A



FRONT ELEVATION



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-40-853

DRAWN BY MSS | PLANS CK'D. JWC

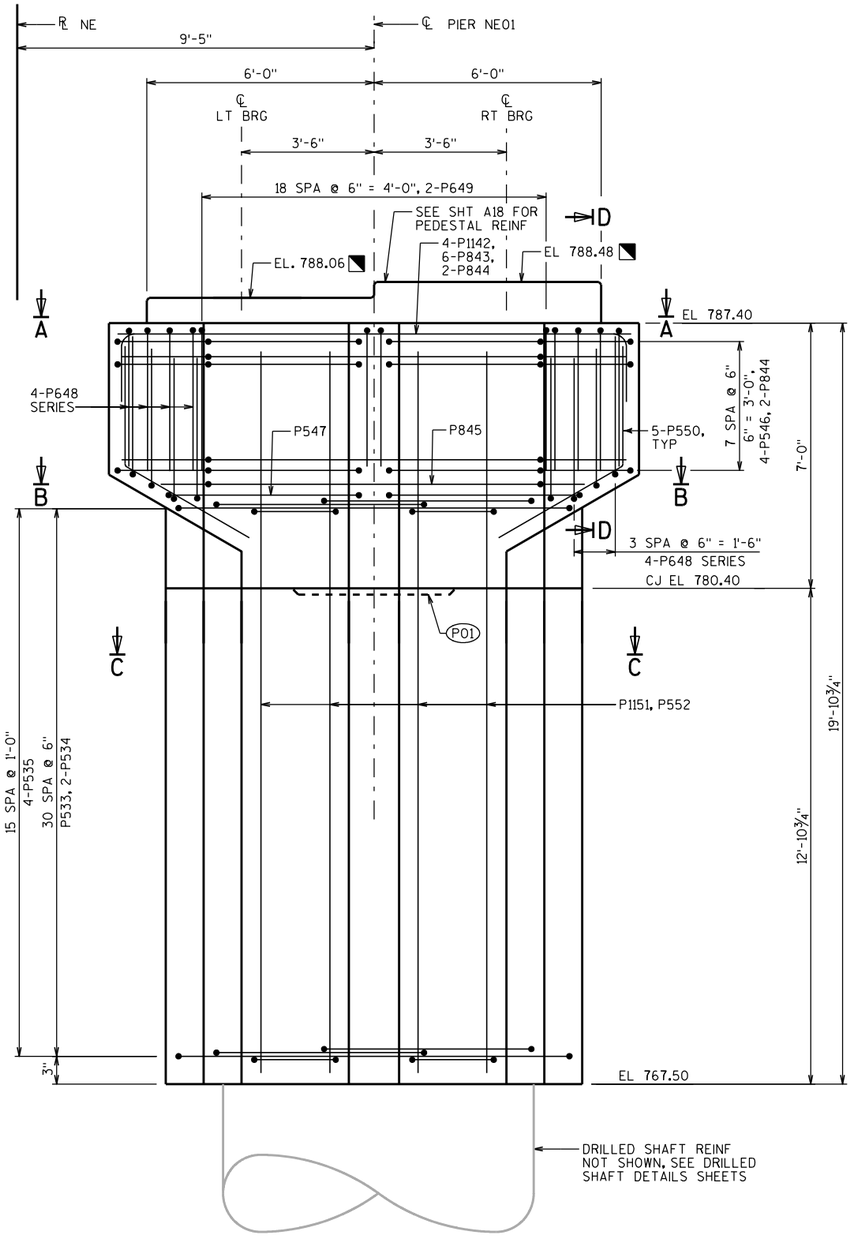
OPTION A
PIERS NE01 & NE05
LAYOUT

SHEET A15 OF A20

8

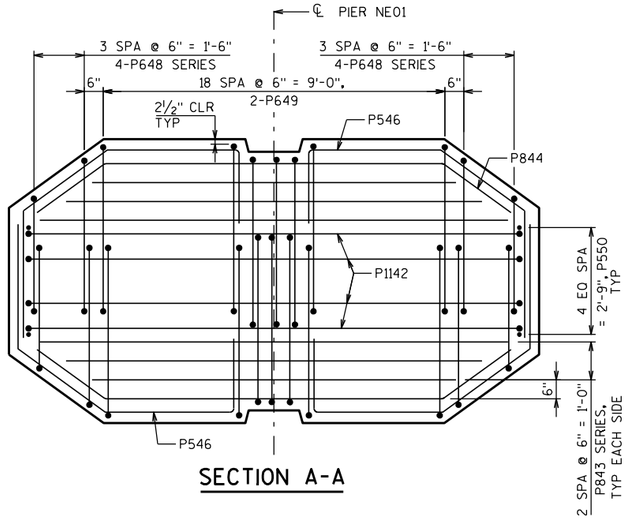
8

STATE PROJECT NUMBER
1060-33-81

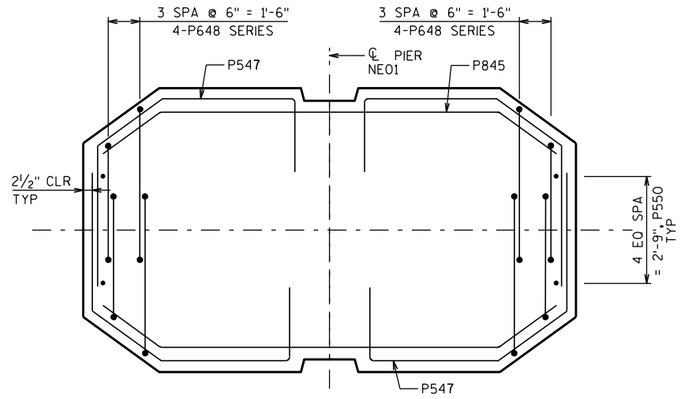


ELEVATION

(REINFORCEMENT IS SYMMETRICAL ABOUT ℄ OF PIER)

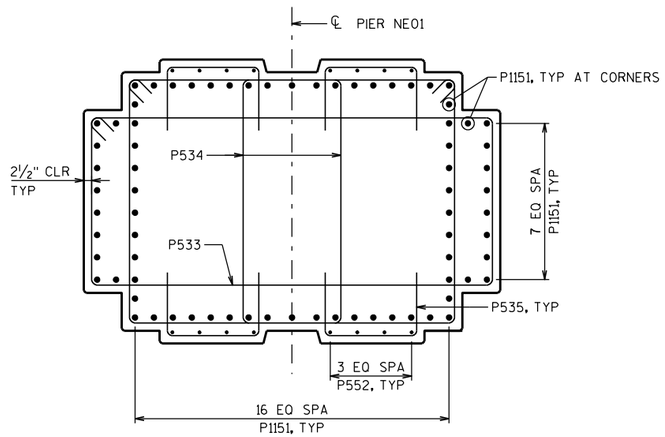


SECTION A-A

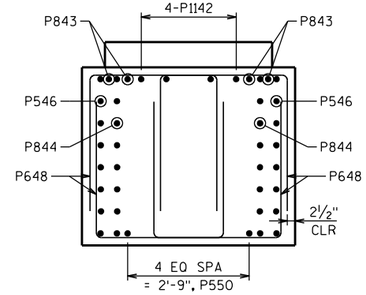


SECTION B-B

COLUMN REINFORCEMENT NOT SHOWN FOR CLARITY



SECTION C-C



SECTION D-D

FOR PEDESTAL REINFORCEMENT SEE SHT A18

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-40-853

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OPTION A
PIER NE01
DETAILS

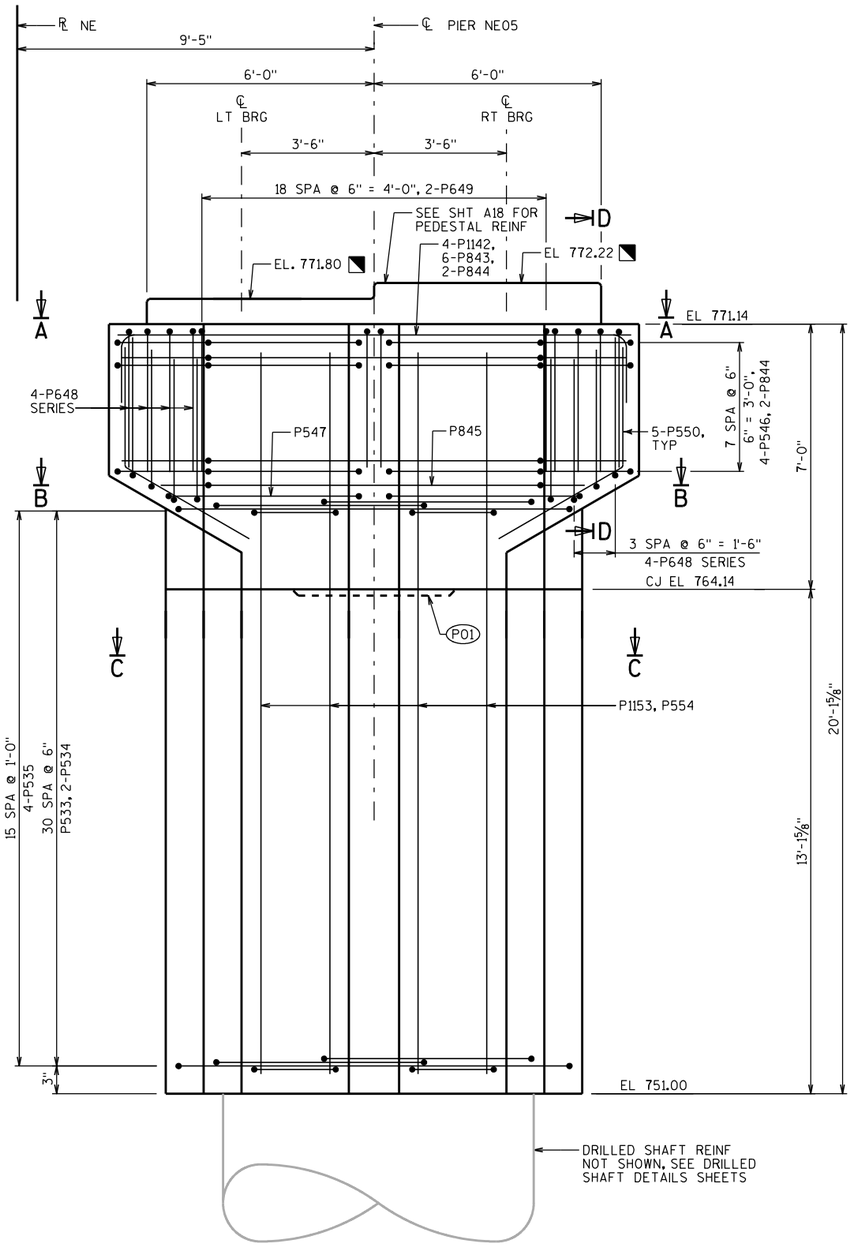
SHEET A16 OF A20

8

8

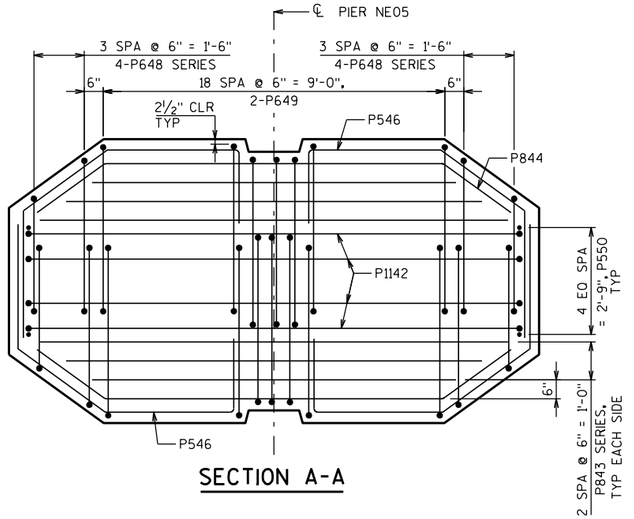
FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option A\080408a_pi.dgn
PLOT DATE : 19-JUL-2015 22:35
PLOT BY : MSCJJO
PLOT NAME : 080408a_pi
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-81

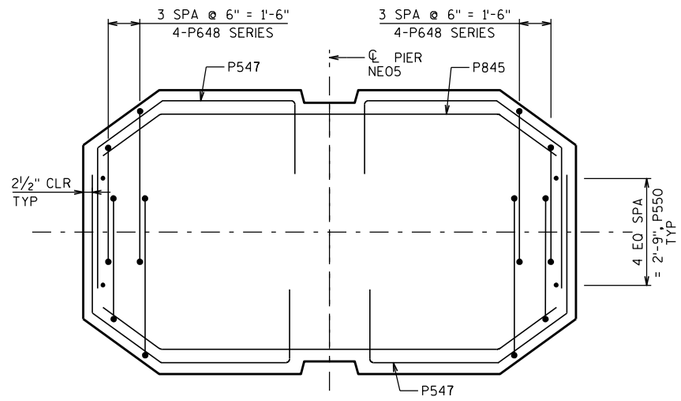


ELEVATION

(REINFORCEMENT IS SYMMETRICAL ABOUT ℄ OF PIER)

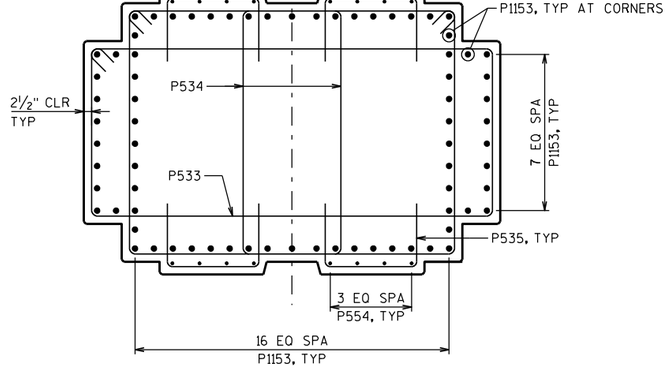


SECTION A-A

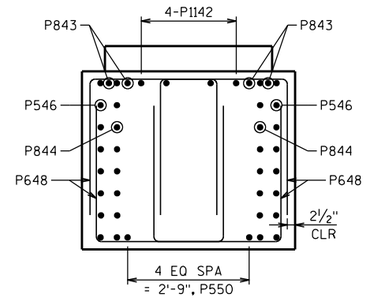


SECTION B-B

COLUMN REINFORCEMENT NOT SHOWN FOR CLARITY



SECTION C-C



SECTION D-D

FOR PEDESTAL REINFORCEMENT SEE SHT A18

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-40-853

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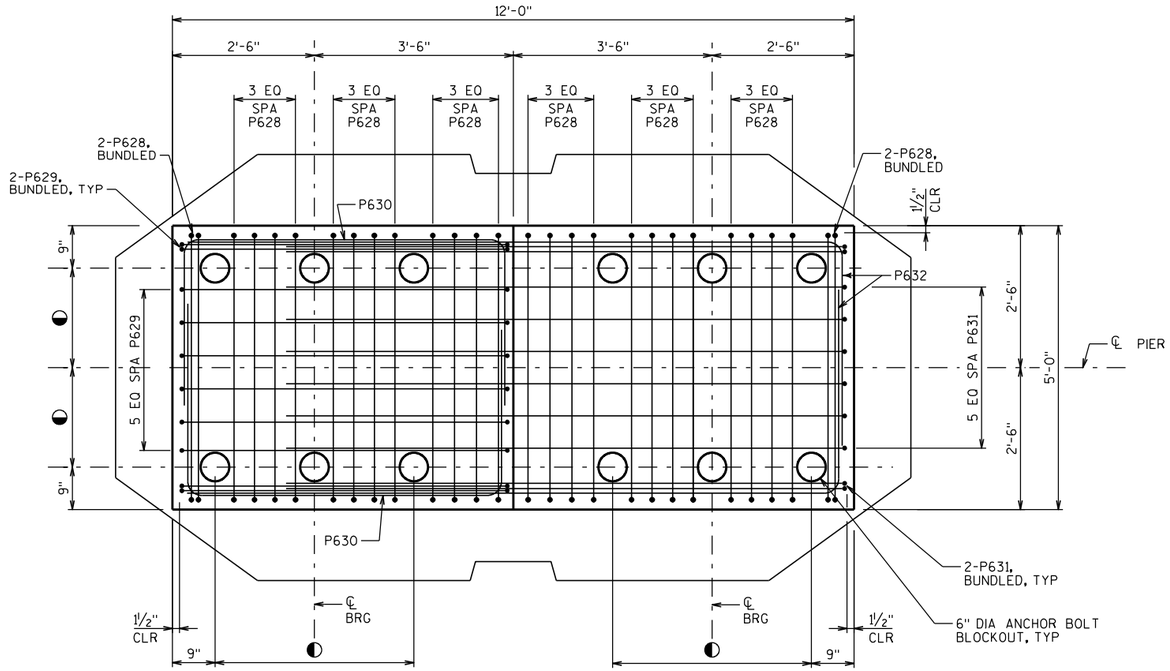
OPTION A
PIER NE05
DETAILS

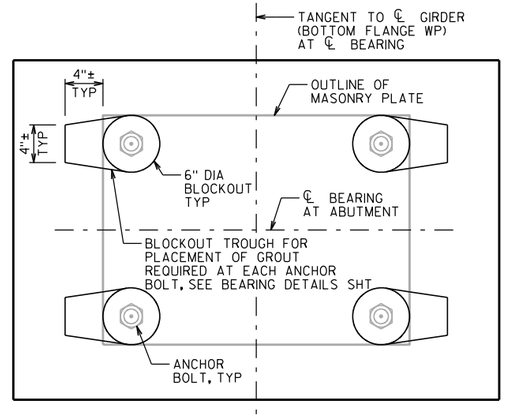
SHEET A17 OF A20

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option A\080409a_pi.dgn
PLOT DATE : 19-JUL-2015 22:35
PLOT BY : MSCJJO
PLOT NAME : 080409a_pi
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-81

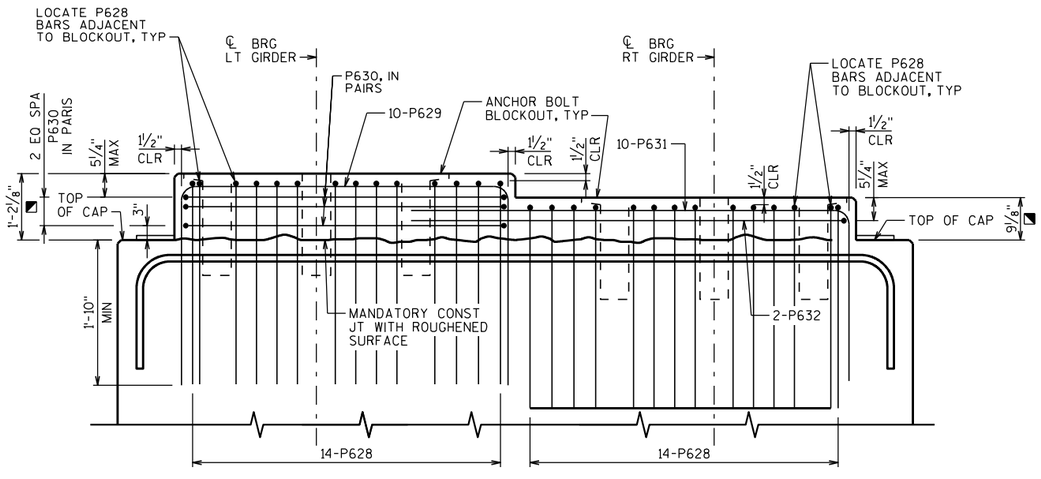


PEDESTAL PLAN



PEDESTAL PLAN - GROUT TROUGHS

SEE BEARING DETAILS SHEET



PEDESTAL ELEVATION

LOOKING DOWNSTATION

NOTES

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

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT SHEETS 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-40-853

DRAWN BY MSS | PLANS CK'D. JWC

OPTION A
PIERS NE01 & NE05
PEDESTAL
REINFORCEMENT

SHEET A18 OF A20

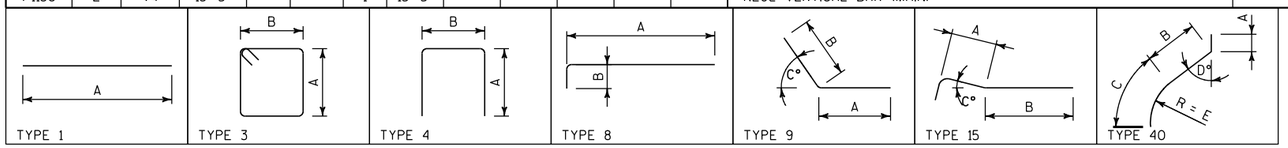
8

8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option A\080410a_pi.dgn
PLOT DATE : 19-JUL-2015 22:35
PLOT BY : MSCJJO
PLOT NAME : 080410a_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	F		DIM	MIN	MAX	NO REQ'D	LENGTH
P1101	E	30	32'-8"	X		4	2'-0"	29'-4"					TOP TIE BAR					
P1102	E	30	31'-10"	X		4	2'-0"	28'-6"					TOP TIE BAR					
P803	E	30	29'-4"			1	29'-4"						SKIN STEEL - TOP OF CAP					
P804	E	72	19'-5"		⚠	1	19'-5"						SKIN STEEL - MIDDLE OF CAP (SERIES)	A	10'-0"	28'-10"	6 SERIES OF 12	10'-0" TO 28'-10"
P1105	E	24	31'-0"	X		4	2'-0"	27'-8"					TOP TIE BAR					
P606	E	240	21'-11"	X	⚠	3	4'-2"	6'-4½"					STIRRUPS - TOP EDGES OF CAP (SERIES)	A	3'-7"	9'-2"	12 SERIES OF 20	16'-4" TO 27'-6"
P507	E	42	17'-0"	X		4	5'-6"	6'-4"					TIE - TOP CENTER OF CAP					
P508	E	72	18'-9"	X		9	3'-6"	15'-3"	60				OUTSIDE FACE OF PIER CAP - TOP					
P509	E	72	11'-3"	X		4	4'-3"	3'-0"					HORIZONTAL TIE - BOTTOM OF CAP (TOP SEC)					
P510	E	144	13'-3"	X		4	5'-3"	3'-0"					HORIZONTAL TIE - BOTTOM OF CAP (BOT SEC)					
P511	E	144	10'-3"	X		4	3'-9"	3'-0"					VERTICAL TIE - BOTTOM OF CAP (TOP SEC)					
P512	E	24	11'-3"	X		4	4'-3"	3'-0"					VERTICAL TIE - BOTTOM OF CAP (BOT SEC)					
P513	E	42	14'-5"	X		40	3'-0"	5'-0"	6'-5"	60	6'-5"		OUTSIDE FACE OF PIER CAP - BOT					
P514	E	60	16'-5"	X		4	5'-1"	6'-6"					TIE - ARCHITECTURAL REVEAL - HORIZ - TOP					
P515	E	12	18'-1"	X		4	5'-1"	8'-2"					TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P516	E	12	18'-10"	X		4	5'-1"	8'-11"					TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P517	E	12	19'-9"	X		4	5'-1"	9'-10"					TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P518	E	60	11'-4"	X	⚠	4	2'-4"	6'-10½"					TIE - ARCHITECTURAL REVEAL - HORIZ - BOT (SERIES)	B	3'-5"	10'-4"	12 SERIES OF 5	7'-10" TO 14'-9"
P519	E	72	5'-6"		⚠	1	5'-6"						ARCHITECTURAL REVEAL - VERT - TOP (SERIES)	A	4'-2"	6'-9"	12 SERIES OF 6	4'-2" TO 6'-9"
P520	E	60	4'-11"		⚠	1	4'-11"						ARCHITECTURAL REVEAL - VERT - MID (SERIES)	A	4'-5"	5'-5"	12 SERIES OF 5	4'-5" TO 5'-5"
P521	E	12	11'-6"	X		15	7'-9"	3'-0"	72				ARCHITECTURAL REVEAL - VERT - INSIDE FACE					
P622	E	48	13'-1"	X		4	3'-10"	5'-9"					PEDESTAL REINFORCEMENT - TYP - TOP FACE					
P623	E	48	12'-11"	X		4	3'-9"	5'-9"					PEDESTAL REINFORCEMENT - TYP - TOP FACE					
P624	E	16	13'-5"	X		4	4'-1"	5'-7"					PEDESTAL REINFORCEMENT - TYP - SIDE					
P625	E	20	14'-1"	X		4	3'-10"	6'-9"					PEDESTAL REINFORCEMENT - NE03 - TOP FACE					
P626	E	24	12'-11"	X		4	3'-9"	5'-9"					PEDESTAL REINFORCEMENT - NE03 - TOP FACE					
P627	E	8	14'-5"	X		4	4'-7"	5'-7"					PEDESTAL REINFORCEMENT - NE03 - SIDE					
P628	E	56	11'-7"	X		4	3'-7"	4'-9"					PEDESTAL REINFORCEMENT - NE01 & NE05 - TOP FACE					
P629	E	20	12'-5"	X		4	3'-6"	5'-9"					PEDESTAL REINFORCEMENT - NE01 & NE05 - TOP FACE					
P630	E	12	12'-3"	X		4	3'-6"	5'-7"					PEDESTAL REINFORCEMENT - NE01 & NE05 - SIDE					
P631	E	20	11'-0"	X		8	8'-2"	3'-0"					PEDESTAL REINFORCEMENT - NE01 & NE05 - TOP FACE - LEFT SIDE					
P632	E	4	11'-6"	X		8	8'-2"	3'-6"					PEDESTAL REINFORCEMENT - NE01 & NE05 - SIDE - LEFT SIDE					
P533	E	125	30'-7"	X		3	10'-7"	4'-5"					COLUMN TRANSVERSE (MAIN)					
P534	E	250	24'-7"	X		3	6'-5"	5'-7"					COLUMN TRANSVERSE (MAIN)					
P535	E	260	5'-6"	X		4	1'-8"	2'-5"					COLUMN TRANSVERSE (SECONDARY)					
P1136	E	74	15'-5"			1	15'-5"						NE02 VERTICAL BAR (MAIN)					



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-40-853

DRAWN BY MSS | PLANS CK'D. JWC

OPTION A
PIER REINFORCEMENT
SCHEDULE (1 OF 2)

SHEET A19 OF A20

8

8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option A\080411a_pi.dgn
PLOT DATE : 19-JUL-2015 22:35
PLOT BY : MSCJJO
PLOT NAME : 080411a_pi
PLOT SCALE : 8:1

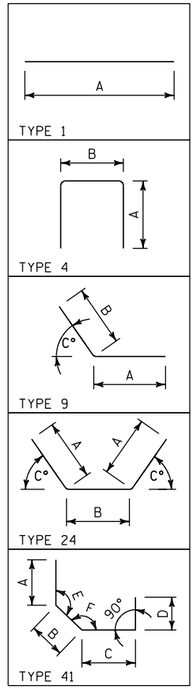
BAR INFORMATION							BAR DIMENSIONS						LOCATION	BAR SERIES INFORMATION				
BAR MARK	MATL	NO. REQ'D	LENGTH	BENT	BAR SERIES	BEND TYPE	A	B	C	D	E	F		DIM	MIN	MAX	NO REQ'D	LENGTH
P537	E	16	11'-11"			1	11'-11"						NE02 VERTICAL BAR (SECONDARY)					
P1138	E	74	22'-1"			1	22'-1"						NE03 VERTICAL BAR (MAIN)					
P539	E	16	18'-7"			1	18'-7"						NE03 VERTICAL BAR (SECONDARY)					
P1140	E	74	18'-11"			1	18'-11"						NE04 VERTICAL BAR (MAIN)					
P541	E	16	15'-4"			1	15'-4"						NE04 VERTICAL BAR (SECONDARY)					
P1142	E	8	16'-8"	X		4	2'-0"	13'-4"					NE01 & NE05 PIER CAP - TOP TIE BAR					
P843	E	12	12'-3"		◭	1	12'-3"						NE01 & NE05 PIER CAP - TOP FACE BAR (SERIES)	A	11'-4"	13'-2"	4 SERIES OF 3	11'-4" TO 13'-2"
P844	E	36	14'-3"	X		24	2'-3"	9'-9"	36				NE01 & NE05 PIER CAP - HORIZ SKIN STEEL					
P845	E	4	13'-1"	X		24	1'-8"	9'-9"	36				NE01 & NE05 PIER CAP - HORIZ SKIN STEEL - BOT					
P546	E	64	10'-6"	X		41	3'-3"	2'-10"	3'-5"	1'-3"	126	144	NE01 & NE05 PIER CAP - FACE SKIN STEEL					
P547	E	8	10'-3"	X		41	3'-7"	2'-3"	3'-5"	1'-3"	126	144	NE01 & NE05 PIER CAP - FACE SKIN STEEL - BOT					
P648	E	64	10'-4"	X	◭	4	3'-7"	3'-6"					NE01 & NE05 PIER CAP - SHEAR STEEL - EDGE (SERIES)	B	3'-0"	4'-0"	16 SERIES OF 4	9'-10" TO 10'-10"
P649	E	76	11'-2"	X		4	3'-7"	4'-4"					NE01 & NE05 PIER CAP - SHEAR STEEL - CENTER					
P550	E	20	7'-0"	X		9	3'-2"	3'-10"	70				NE01 & NE05 PIER CAP - OUTSIDE FACE					
P1151	E	74	18'-10"			1	18'-10"						NE01 VERTICAL BAR (MAIN)					
P552	E	16	18'-10"			1	18'-10"						NE01 VERTICAL BAR (SECONDARY)					
P1153	E	74	19'-1"			1	19'-1"						NE05 VERTICAL BAR (MAIN)					
P554	E	16	19'-1"			1	19'-1"						NE05 VERTICAL BAR (SECONDARY)					

BAR MARK BREAKDOWN							
MARK	PIER NE01	PIER NE02	PIER NE03	PIER NE04	PIER NE05	TOTAL NO	WEIGHT
P1101		10	10	10		30	5,207
P1102		10	10	10		30	5,074
P803		10	10	10		30	2,350
P804		24	24	24		72	3,733
P1105		8	8	8		24	3,953
P606		80	80	80		240	7,901
P507		14	14	14		42	785
P508		24	24	24		72	1,408
P509		24	24	24		72	845
P510		48	48	48		144	1,990
P511		48	48	48		144	1,539
P512		8	8	8		24	282
P513		14	14	14		42	632
P514		20	20	20		60	1,027
P515		4	4	4		12	226
P516		4	4	4		12	236
P517		4	4	4		12	247
P518		20	20	20		60	709
P519		24	24	24		72	375
P520		20	20	20		60	308
P521		4	4	4		12	144
P622		24		24		48	943
P623		24		24		48	931
P624		8		8		16	322
P625			20			20	423
P626			24			24	466
P627			8			8	173
P628	28				28	56	974
P629	10				10	20	373
P630	6				6	12	221

BAR MARK BREAKDOWN							
MARK	PIER NE01	PIER NE02	PIER NE03	PIER NE04	PIER NE05	TOTAL NO	WEIGHT
P631	10				10	20	330
P632	2				2	4	69
P533	31	15	27	21	31	125	3,987
P534	62	30	54	42	62	250	6,410
P535	64	32	56	44	64	260	1,491
P1136		74				74	6,061
P537		16				16	199
P1138			74			74	8,682
P539			16			16	310
P1140				74		74	7,437
P541				16		16	256
P1142	4				4	8	708
P843	6				6	12	392
P844	18				18	36	1,370
P845	2				2	4	140
P546	32				32	64	701
P547	4				4	8	86
P648	32				32	64	993
P649	38				38	76	1,275
P550	10				10	20	146
P1151	74					74	7,405
P552	16					16	314
P1153					74	74	7,503
P554					16	16	318

STATE PROJECT NUMBER

1060-33-81



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-40-853

DRAWN BY MSS | PLANS CK'D. JWC

OPTION A
PIER REINFORCEMENT
SCHEDULE (2 OF 2)

SHEET A20 OF A20

8

8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option A\080412a_pi.dgn
PLOT DATE : 19-JUL-2015 22:35
PLOT BY : MSCJJO
PLOT NAME : 080412a_pi
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-81

ESTIMATED QUANTITIES - PIER OPTION B

ITEM NO.	BID ITEM	UNIT	PIER NE01	PIER NE02	PIER NE03	PIER NE04	PIER NE05	TOTAL
206.1000.0009	EXCAVATION FOR STRUCTURES BRIDGES B-40-853	LS						1
209.0100	BACKFILL GRANULAR	CY	13				27	40
502.0100	CONCRETE MASONRY BRIDGES	CY	61	224	111	102	61	559
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	27,940	20,060	24,130	29,650	27,660	129,440
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	14,090	24,530	25,750	24,090	14,090	102,550
505.0911	BAR COUPLERS NO. 11	EACH	48				48	96
511.1200.0011	TEMPORARY SHORING B-40-853	SF				2,740		2,740
550.2168	PILING CIP CONCRETE 16 X 0.50-INCH	LF		1,650				1,650
SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH		2				2
SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH		2				2
SPV.0060.4116	CASE PILE WAVE ANALYSIS PROGRAM (CAP/WAP) EVALUATION	EACH		1				1
SPV.0060.4150	DRILLED FOUNDATION SHAFT BASE GROUTING	EACH	1		1	1	1	4
SPV.0060.4160	THERMAL INTEGRITY PROFILER (TIP) TESTING DRILLED FOUNDATION SHAFT 98.43-INCH	EACH	1		1	1	1	4
SPV.0075.4200	OBSTRUCTIONS DRILLED FOUNDATION SHAFT	HRS	4		4	4	4	16
SPV.0090.4435	DRILLED FOUNDATION SHAFT 98.43-INCH	LF	71		45.0	50.5	70	236.5

ALL ITEMS ARE CATEGORY 2092

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-40-853

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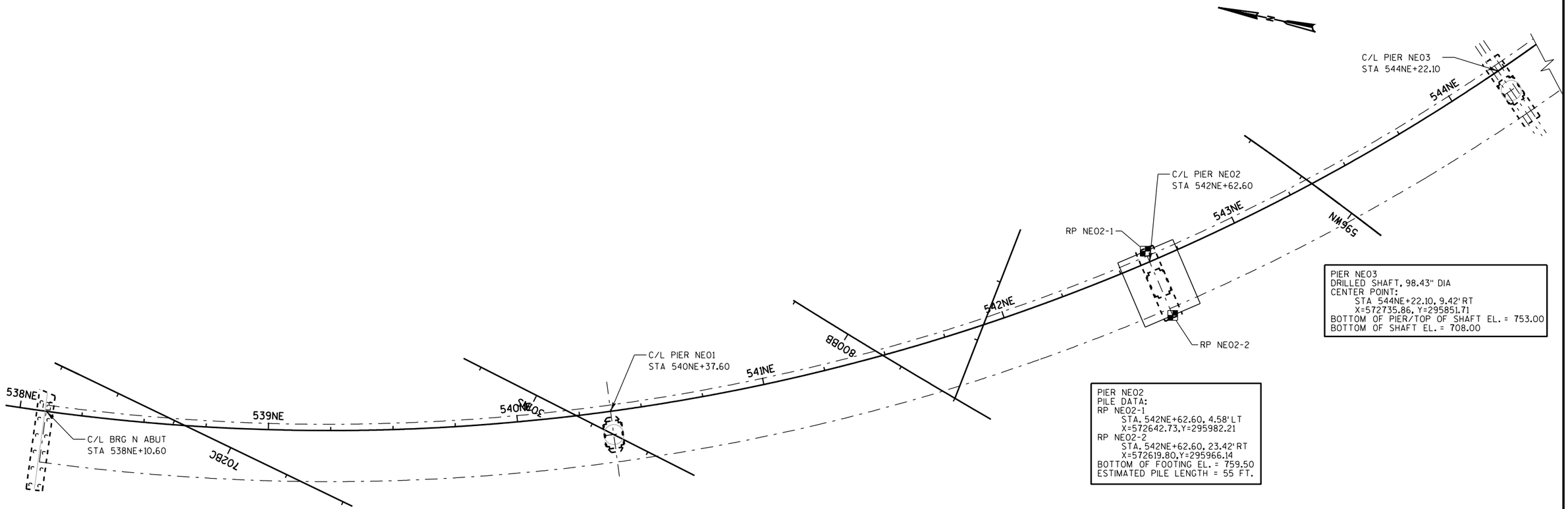
OPTION B QUANTITIES

SHEET B1 OF B21

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option B\080201b_qu.dgn
PLOT DATE : 19-JUL-2015 22:38
PLOT BY : MSCJJO
PLOT NAME : 080201b_qu
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-81



NORTH ABUT
16 CIPC PILES, 16" DIA
RP NA1
STA 538NE+10.60, 7.30' LT
X=572497.08, Y=296400.94
RP NA2
STA 538NE+10.60, 32.61' RT
X=572457.26, Y=296398.14
BOTTOM OF FOOTING EL. = 783.52
ESTIMATED PILE LENGTH = 75 FT.

PIER NE01
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 540NE+37.60, 9.42' RT
X=572527.20, Y=296175.75
BOTTOM OF PIER/TOP OF SHAFT EL. = 767.50
BOTTOM OF SHAFT EL. = 696.50

PIER NE02
PILE DATA:
RP NE02-1
STA. 542NE+62.60, 4.58' LT
X=572642.73,Y=295982.21
RP NE02-2
STA. 542NE+62.60, 23.42' RT
X=572619.80,Y=295966.14
BOTTOM OF FOOTING EL. = 759.50
ESTIMATED PILE LENGTH = 55 FT.

PIER NE03
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 544NE+22.10, 9.42' RT
X=572735.86, Y=295851.71
BOTTOM OF PIER/TOP OF SHAFT EL. = 753.00
BOTTOM OF SHAFT EL. = 708.00

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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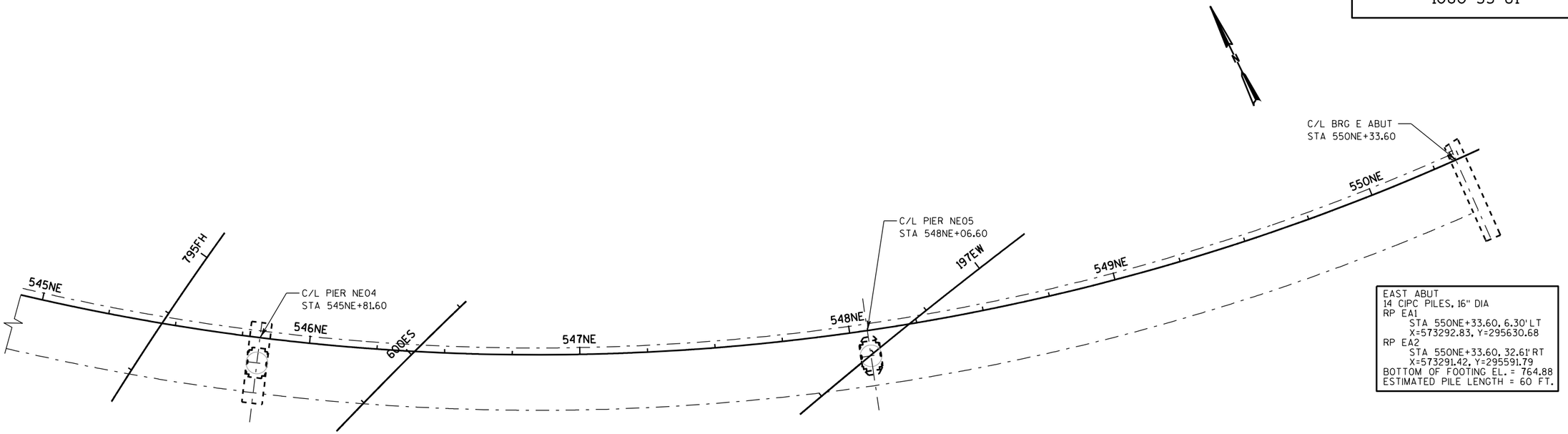
OPTION B
FOUNDATION LAYOUT
(1 OF 2)

SHEET B2 OF B21

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option B\080202b_f1.dgn
PLOT DATE : 19-JUL-2015 22:38
PLOT BY : MSCJJO
PLOT NAME : 080202b_f1
PLOT SCALE : 40:1

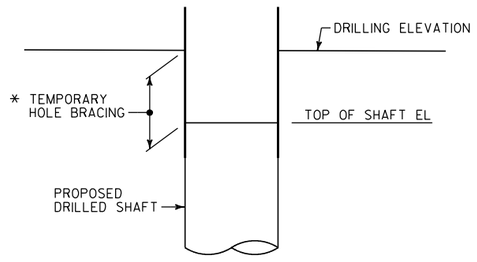
STATE PROJECT NUMBER
1060-33-81



EAST ABUT
14 CIPC PILES, 16" DIA
RP EA1
STA 550NE+33.60, 6.30'LT
X=573292.83, Y=295630.68
RP EA2
STA 550NE+33.60, 32.61'RT
X=573291.42, Y=295591.79
BOTTOM OF FOOTING EL. = 764.88
ESTIMATED PILE LENGTH = 60 FT.

PIER NE04
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 545NE+81.60, 9.42'RT
X=572861.80, Y=295751.33
BOTTOM OF PIER/TOP OF SHAFT EL. = 751.50
BOTTOM OF SHAFT EL. = 701.00

PIER NE05
DRILLED SHAFT, 98.43" DIA
CENTER POINT:
STA 548NE+06.60, 9.42'RT
X=573066.79, Y=295654.15
BOTTOM OF PIER/TOP OF SHAFT EL. = 751.00
BOTTOM OF SHAFT EL. = 681.00



TEMPORARY HOLE BRACING

AT PIER NE04

* 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-40-853".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY SR | PLANS CK'D. MSS

OPTION B
FOUNDATION LAYOUT
(2 OF 2)

SHEET B3 OF B21

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PLOT DATE : 19-JUL-2015 22:38
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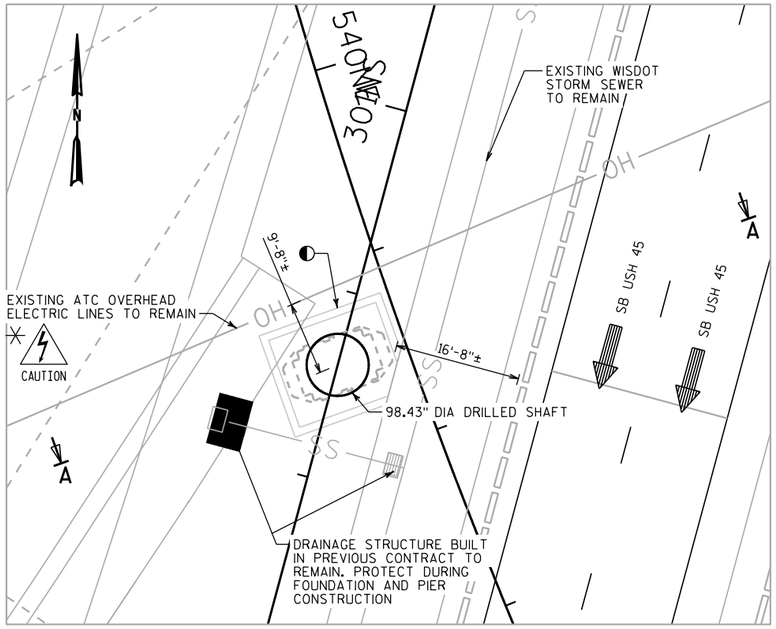
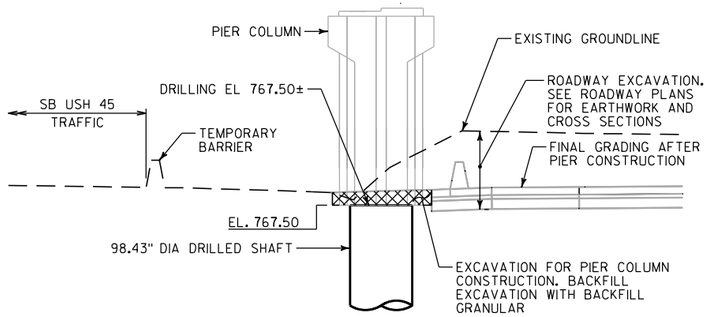
PLOT NAME : 080203b_fl
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-81

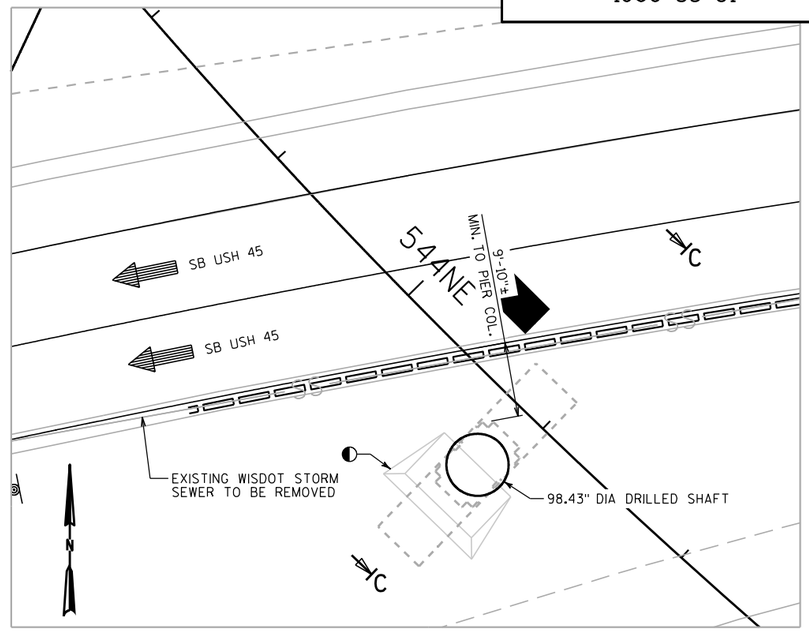


EXCAVATION PLAN - PIER NE01

STA 540NE+37.60

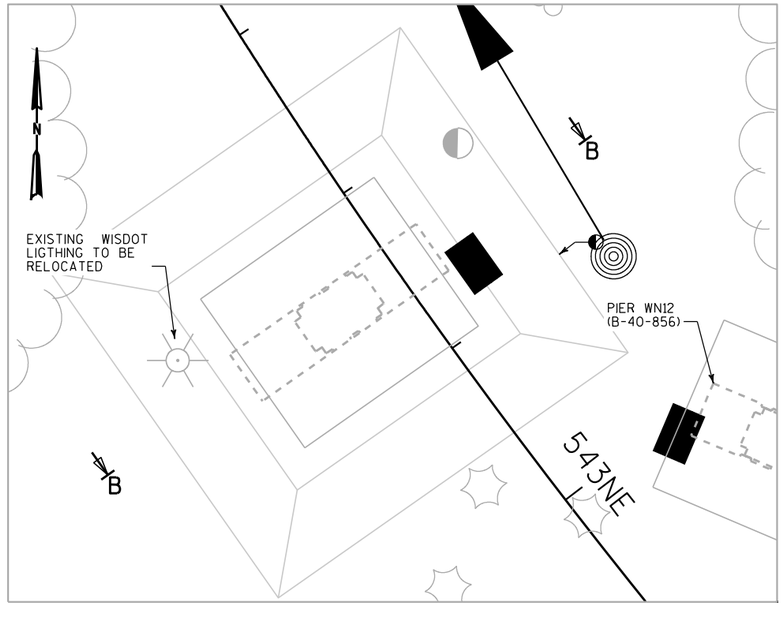


SECTION A-A



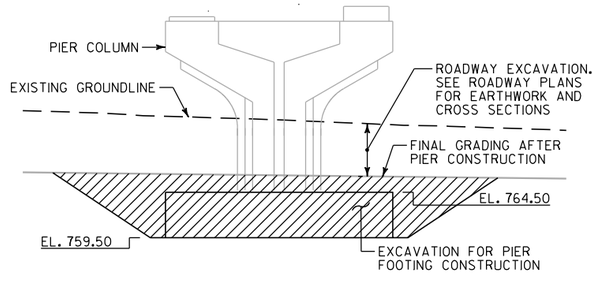
EXCAVATION PLAN - PIER NE03

STA 544NE+22.10

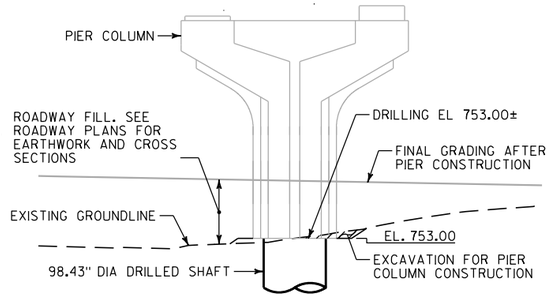


EXCAVATION PLAN - PIER NE02

STA 542ES+62.60



SECTION B-B



SECTION C-C

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-40-853".
- BRIDGE CONSTRUCTION NEAR PIER NE01 MAY NEED TO BE ACCOMPLISHED BENEATH AND/OR ADJACENT TO ENERGIZED OVERHEAD 138 KV ELECTRIC TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). THE HORIZONTAL AND VERTICAL LOCATION OF THESE LINES CAN VARY WITH WIND, AMBIENT TEMPERATURE AND POWER LOADING. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

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-40-853

DRAWN BY	ENS	PLANS CK'D.	JWC

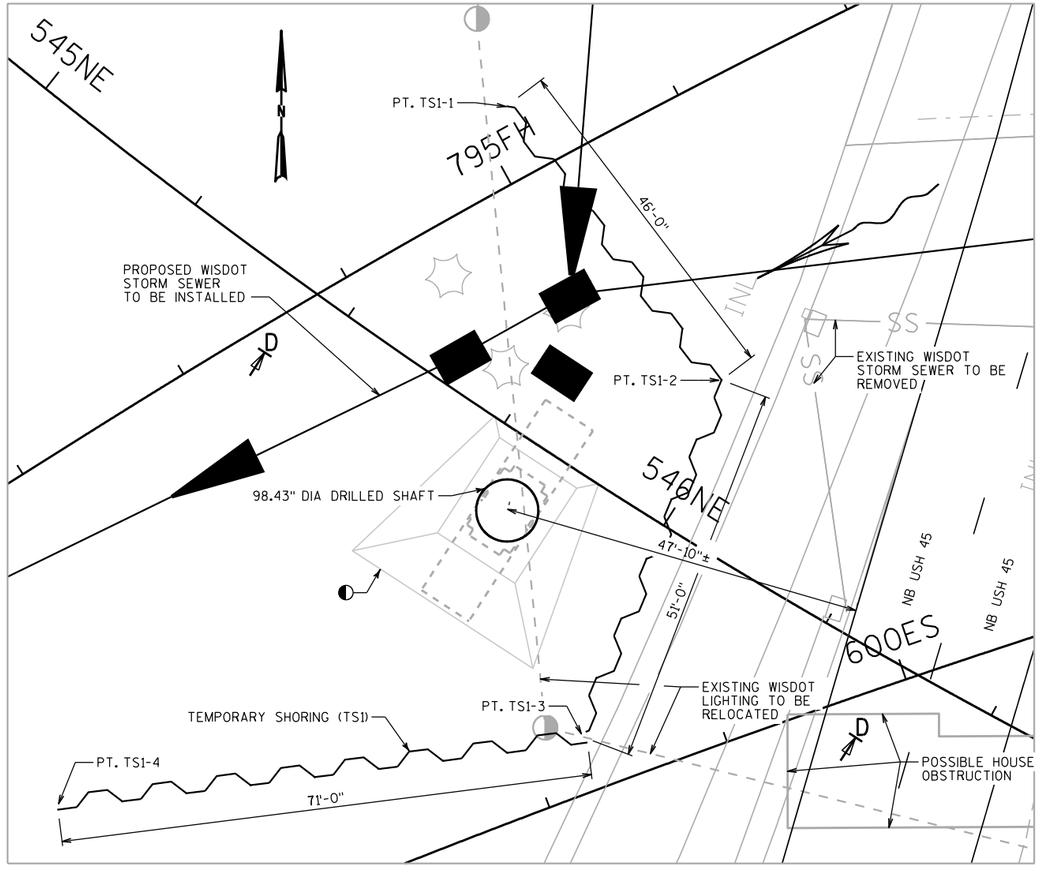
OPTION B
EXCAVATION PLAN
(1 OF 2)

SHEET B4 OF B21

8

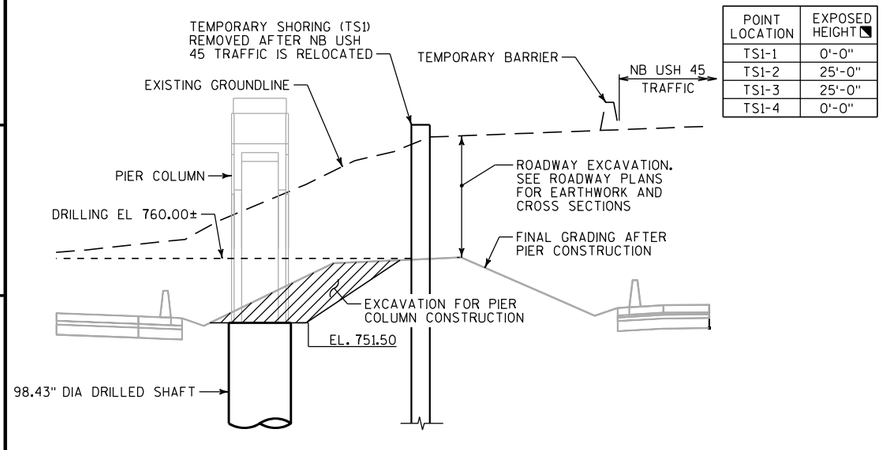
8

STATE PROJECT NUMBER
1060-33-81



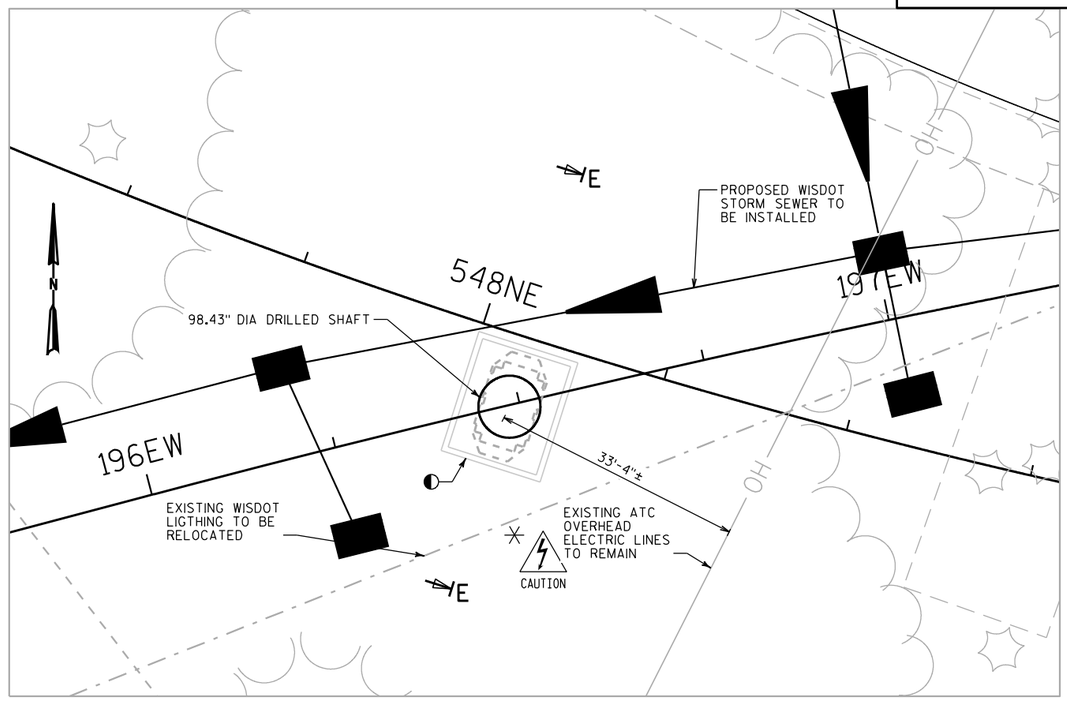
EXCAVATION PLAN - PIER NE04

STA 545NE+81.60



POINT LOCATION	EXPOSED HEIGHT ◥
TS1-1	0'-0"
TS1-2	25'-0"
TS1-3	25'-0"
TS1-4	0'-0"

SECTION D-D



EXCAVATION PLAN - PIER NE05

STA 548NE+06.60

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-40-853".
- ◥ APPROXIMATE EXPOSED TEMPORARY SHORING HEIGHTS. HEIGHTS ARE SHOWN FOR INFORMATION ONLY.
- ✳ BRIDGE CONSTRUCTION NEAR PIER NE05 MAY NEED TO BE ACCOMPLISHED BENEATH AND/OR ADJACENT TO ENERGIZED OVERHEAD 138 KV ELECTRIC TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). THE HORIZONTAL AND VERTICAL LOCATION OF THESE LINES CAN VARY WITH WIND, AMBIENT TEMPERATURE AND POWER LOADING. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES.

NOTES

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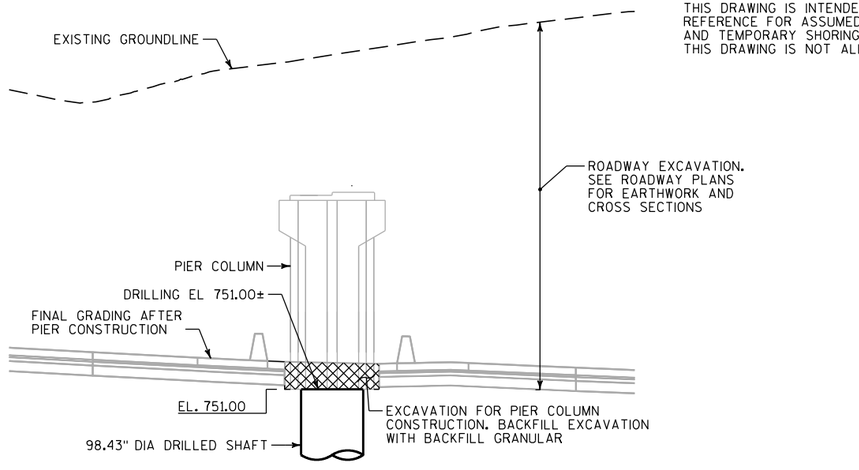


SECTION E-E

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY ENS | PLANS CK'D. JWC

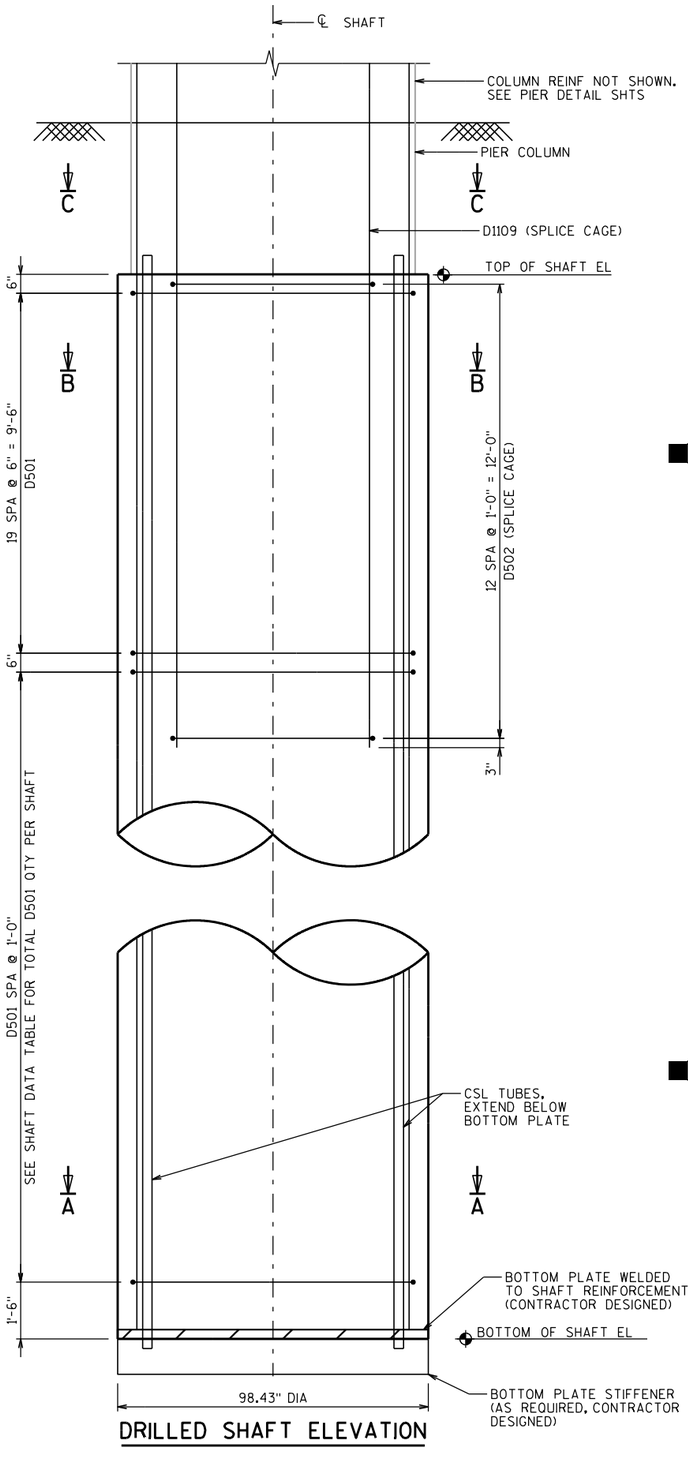
OPTION B
EXCAVATION PLAN
(2 OF 2)

SHEET B5 OF B21

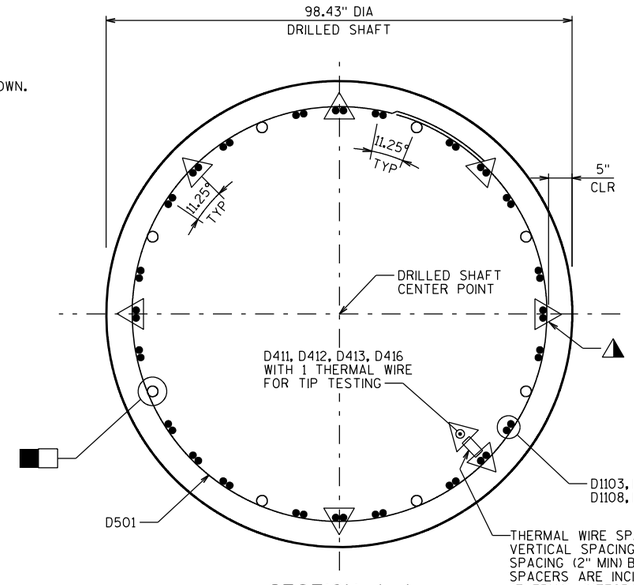
8

8

STATE PROJECT NUMBER
1060-33-81

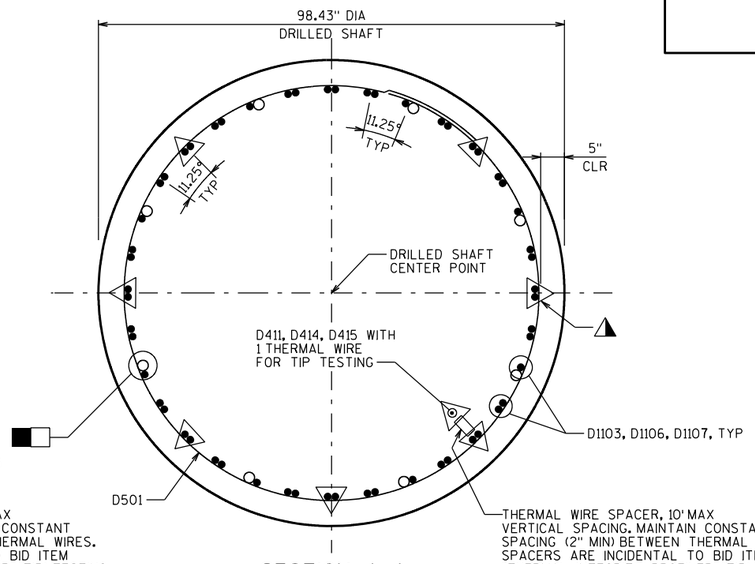


DRILLED SHAFT ELEVATION



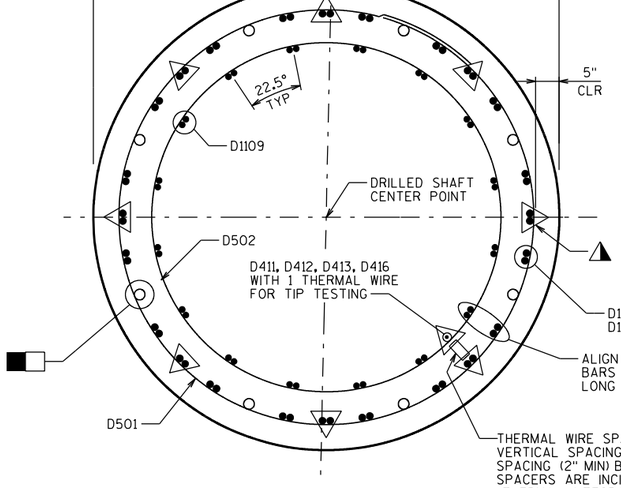
SECTION A-A

NE01, NE05



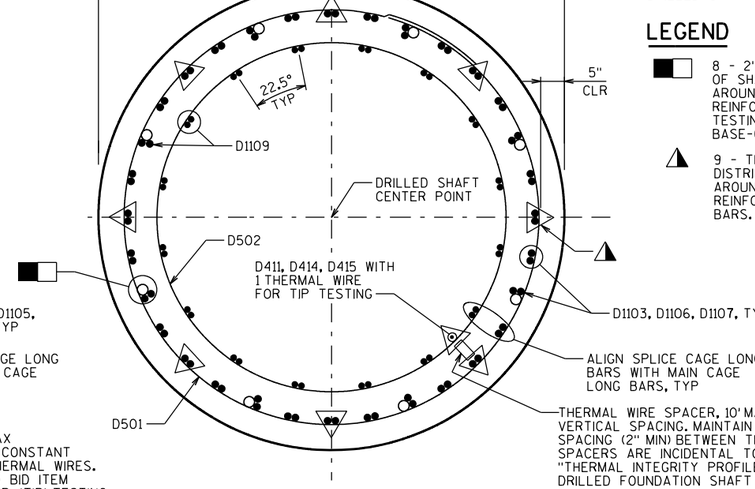
SECTION A-A

NE03, NE04



SECTION B-B

NE01, NE05



SECTION B-B

NE03, NE04

NOTE

FOR SECTION C-C, SEE "OPTION A DRILLED SHAFT DETAILS (2 OF 2)" SHEET

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.

SHAFT DATA

SHAFT NO	SHAFT ℄ "X"	SHAFT ℄ "Y"	ASSUMED DRILLING EL	TOP OF SHAFT EL	BOTTOM OF SHAFT EL	SHAFT LENGTH (FT)	SHAFT VOLUME (CY)	TIE NO. REQ'D (EACH)	INSTRUMENTATION	MAXIMUM BASE GROUTING PRESSURE (PSI)
PIER NE01	572527.2	296175.75	767.5	767.5	696.5	71	139.0	80	CSL TUBES/TIP TESTING	450
PIER NE03	572735.86	295851.71	753	753	708	45	88.1	54	CSL TUBES/TIP TESTING	250
PIER NE04	572861.8	295751.33	760	751.5	701	50.5	98.8	60	CSL TUBES/TIP TESTING	350
PIER NE05	573066.79	295654.15	751	751	681	70	137.0	79	CSL TUBES/TIP TESTING	425

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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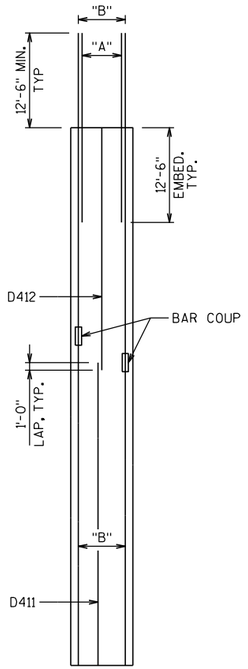
OPTION B
DRILLED SHAFT
DETAILS (1 OF 2)

SHEET B6 OF B21

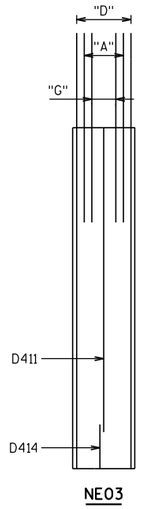
8

8

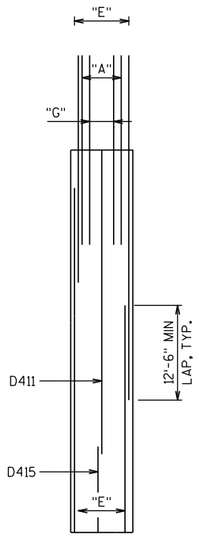
STATE PROJECT NUMBER
1060-33-81



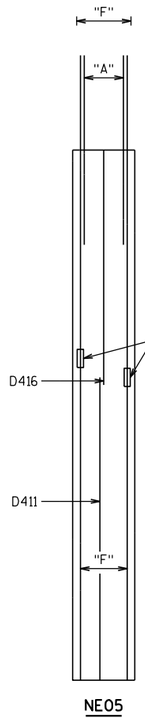
NE01



NE03



NE04

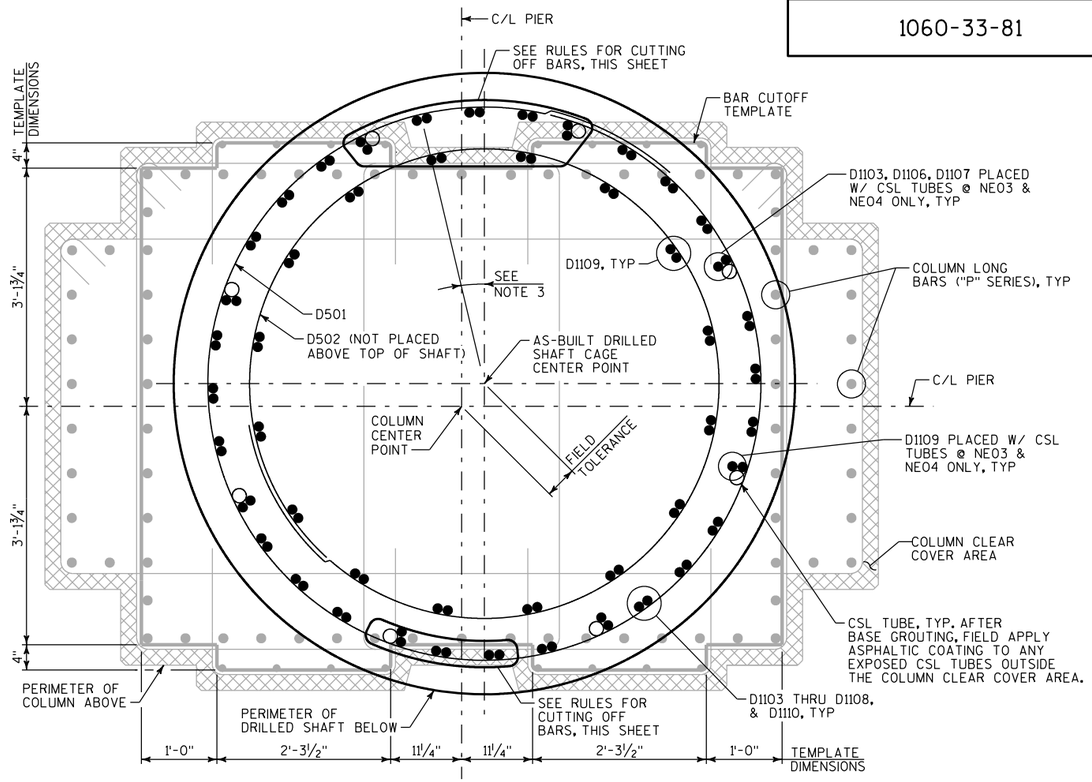


NE05

"A" = 32-D1109 BARS
"B" = 24-D1104 & 24-D1110 BARS

"D" = 56-D1103 BARS
"E" = 28-D1106 & 28-D1107 BARS
"F" = 24-D1108 & 24-D1110 BARS
"G" = 8-D1109 BARS, TIE BAR WITH CSL TUBES

DRILLED SHAFT MAIN REINFORCEMENT SCHEMATIC



SECTION C-C

DRILLED SHAFT CONNECTION DETAIL

DRILLED SHAFT SHOWN IN AS-BUILT CONDITION TO ILLUSTRATE CONSTRUCTION TOLERANCE

RULES FOR CUTTING OFF BARS

1. SELECT AND CUT OFF PROTRUDING DRILLED SHAFT BARS IN ACCORDANCE WITH THE FOLLOWING RULES. VIOLATING THESE RULES MAY RESULT IN A DRILLED SHAFT WITH INADEQUATE CAPACITY.
2. SURVEY AND MARK CENTER POINT OF PIER COLUMN ON TOP OF DRILLED SHAFT.
3. MARK CENTER POINT OF AS-BUILT DRILLED SHAFT REBAR CAGE ON TOP OF DRILLED SHAFT.
4. IF C/L SHAFT CAGE IS MORE THAN 4" FROM C/L PIER COLUMN, THE CAGE IS OUT OF TOLERANCE. ALERT THE DESIGN ENGINEER FOR FURTHER INSTRUCTIONS. DO NOT CONTINUE WITH STEPS BELOW.
5. LOCATE AND MARK THE OUTLINE OF THE BAR CUTOFF TEMPLATE AS SHOWN. THE BAR CUTOFF TEMPLATE LIES 3¼" INSIDE THE COLUMN PERIMETER.
6. DO NOT ALTER BARS THAT FALL COMPLETELY INSIDE THE BAR CUTOFF TEMPLATE. BARS THAT FALL OUTSIDE THE BAR CUTOFF TEMPLATE CAN BE CUT OFF, SUBJECT TO THE LIMITATIONS BELOW.
7. CUT OFF NO MORE THAN 6 BARS PER SIDE IN THE OUTER RING FOR NE01 & NE05. CUT OFF NO MORE THAN 10 BARS PER SIDE IN THE OUTER RING FOR NE03 & NE04.
8. CUT OFF NO MORE THAN 12 BARS TOTAL IN THE OUTER RING FOR NE01 & NE05. CUT OFF NO MORE THAN 16 BARS TOTAL IN THE OUTER RING FOR NE03 & NE04.
9. CUT OFF NO MORE THAN 4 BARS IN THE INNER RING.
10. CUT OFF BARS FLUSH WITH TOP OF DRILLED SHAFT AND APPLY ASPHALTIC COATING TO ALL EXPOSED AREAS OF CUT BARS.

NOTES:

1. STAGGER LAPS AS SHOWN SO AS TO LAP NO MORE THAN HALF OF THE BARS PER SECTION. STAGGER LAPS WITHIN BUNDLES.
2. WELDMENT OF BOTTOM PLATE AND REINFORCING BAR CAGE NOT SHOWN FOR CLARITY. SEE "OPTION B DRILLED SHAFT DETAILS (1 OF 2)" SHEET.
3. ORIENTATION OF DRILLED SHAFT CAGE IS ARBITRARY FOR DESIGN PURPOSES. CONTRACTOR MAY INSTALL CAGE ASSEMBLY IN ANY DESIRED ORIENTATION.
4. 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.
5. SEE "OPTION B DRILLED SHAFT DETAILS (1 OF 2)" SHEET FOR LOCATION OF SECTION C-C.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

DRAWN BY	PLANS CK'D.
MSS	JWC

OPTION B
DRILLED SHAFT
DETAILS (2 OF 2)

SHEET B7 OF B21

8

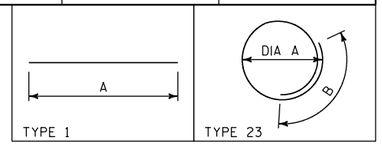
8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option B\080207b_fd.dgn
PLOT DATE : 19-JUL-2015 22:40
PLOT BY : MSCJJO
PLOT NAME : 080207b_fd
PLOT SCALE : 8:1

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
D501	U	273	24'-9"	X		23	7'-5"	1'-5"					SHAFT TIE BAR					
D502	U	52	21'-1"	X		23	6'-3"	1'-5"					SPLICE CAGE TIE BAR					
D1103	U	56	57'-6"			1	57'-6"						LONGITUDINAL BAR NE03					
D1104	U	48	43'-6"			1	43'-6"						LONGITUDINAL BAR NE01					
D1106	U	56	45'-6"			1	45'-6"						LONGITUDINAL BAR NE04					
D1107	U	56	30'-0"			1	30'-0"						LONGITUDINAL BAR NE04					
D1108	U	48	42'-6"			1	42'-6"						LONGITUDINAL BAR NE05					
D1109	U	144	25'-0"			1	25'-0"						SPLICE CAGE LONGITUDINAL BAR					
D1110	U	96	40'-0"			1	40'-0"						LONGITUDINAL BAR NE01, NE05					
D411	U	4	40'-0"			1	40'-0"						LONGITUDINAL THERMAL BAR					
D412	U	1	31'-10"			1	31'-10"						LONGITUDINAL THERMAL BAR NE01					
D414	U	1	5'-10"			1	5'-10"						LONGITUDINAL THERMAL BAR NE03					
D415	U	1	11'-4"			1	11'-4"						LONGITUDINAL THERMAL BAR NE04					
D416	U	1	30'-10"			1	30'-10"						LONGITUDINAL THERMAL BAR NE05					



BAR MARK BREAKDOWN

BAR MARK	PIER NE01	PIER NE03	PIER NE04	PIER NE05	TOTAL NO	WEIGHT
D501	80	54	60	79	273	7,047
D502	13	13	13	13	52	1,143
D1103		56			56	17,108
D1104	48				48	11,094
D1106			56		56	13,538
D1107			56		56	8,926
D1108				48	48	10,839
D1109	32	40	40	32	144	19,127
D1110	48			48	96	20,402
D411	1	1	1	1	4	107
D412	1				1	21
D414		1			1	4
D415			1		1	8
D416				1	1	21

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.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

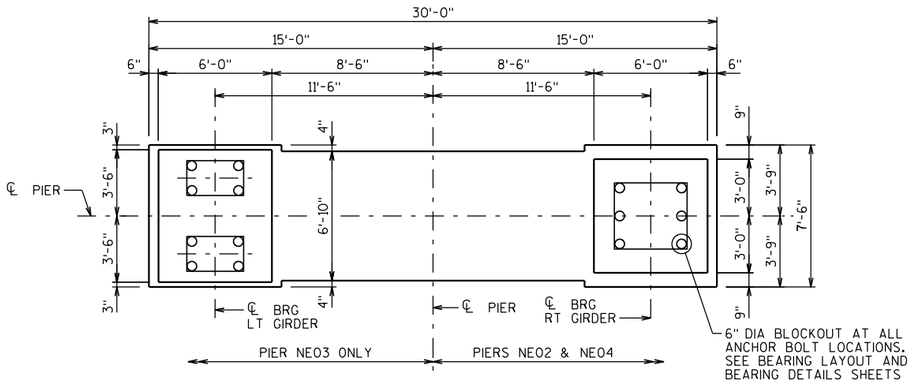
DRAWN BY MSS | PLANS CK'D. JWC

OPTION B
DRILLED SHAFT
REINFORCEMENT
SCHEDULE

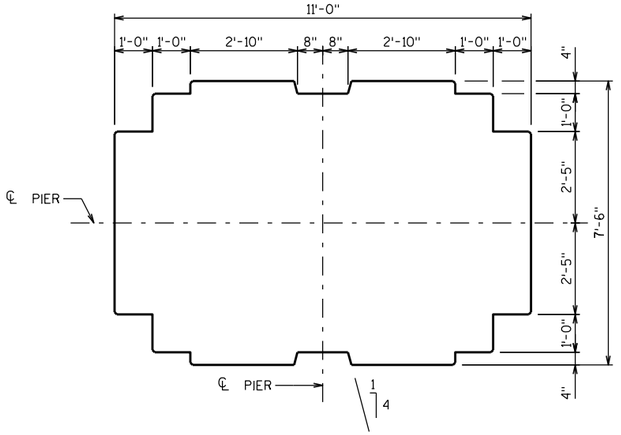
SHEET B8 OF B21

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option B\080208b_fd.dgn PLOT DATE : 19-JUL-2015 22:40 PLOT BY : MSCJJO PLOT NAME : 080208b_fd PLOT SCALE : 8:1

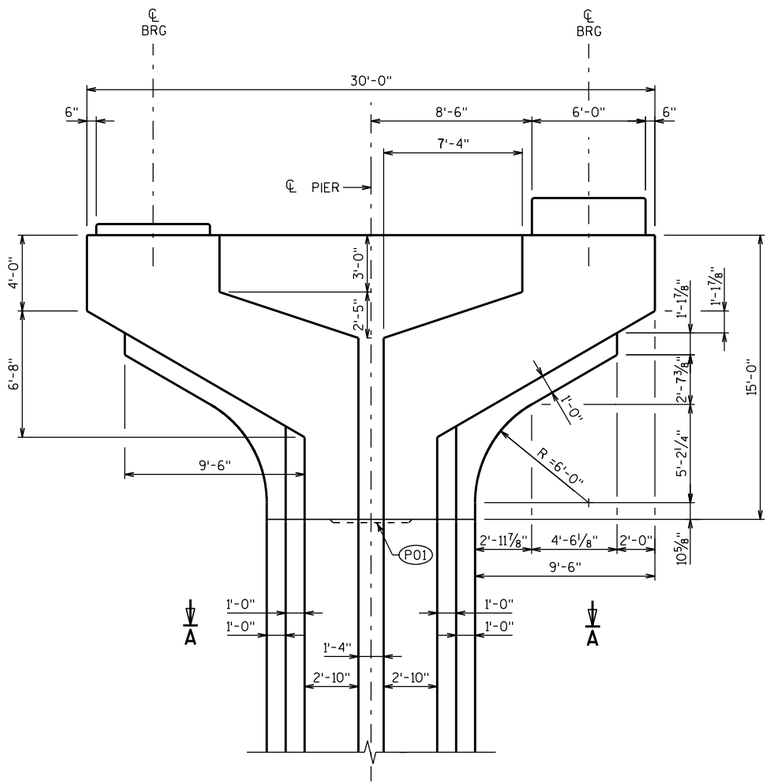
STATE PROJECT NUMBER
1060-33-81



PLAN

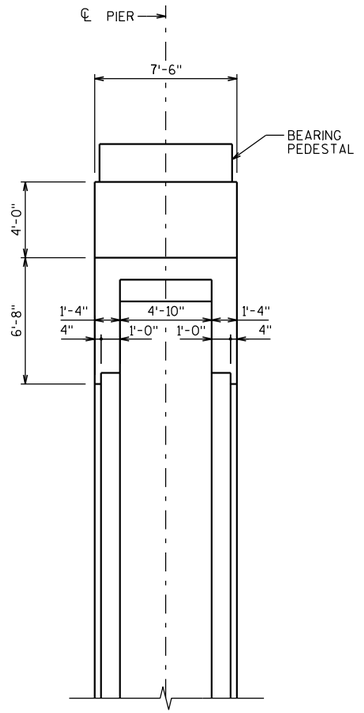


SECTION A-A



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-40-853

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OPTION B
TYPICAL PIER CAP
LAYOUT

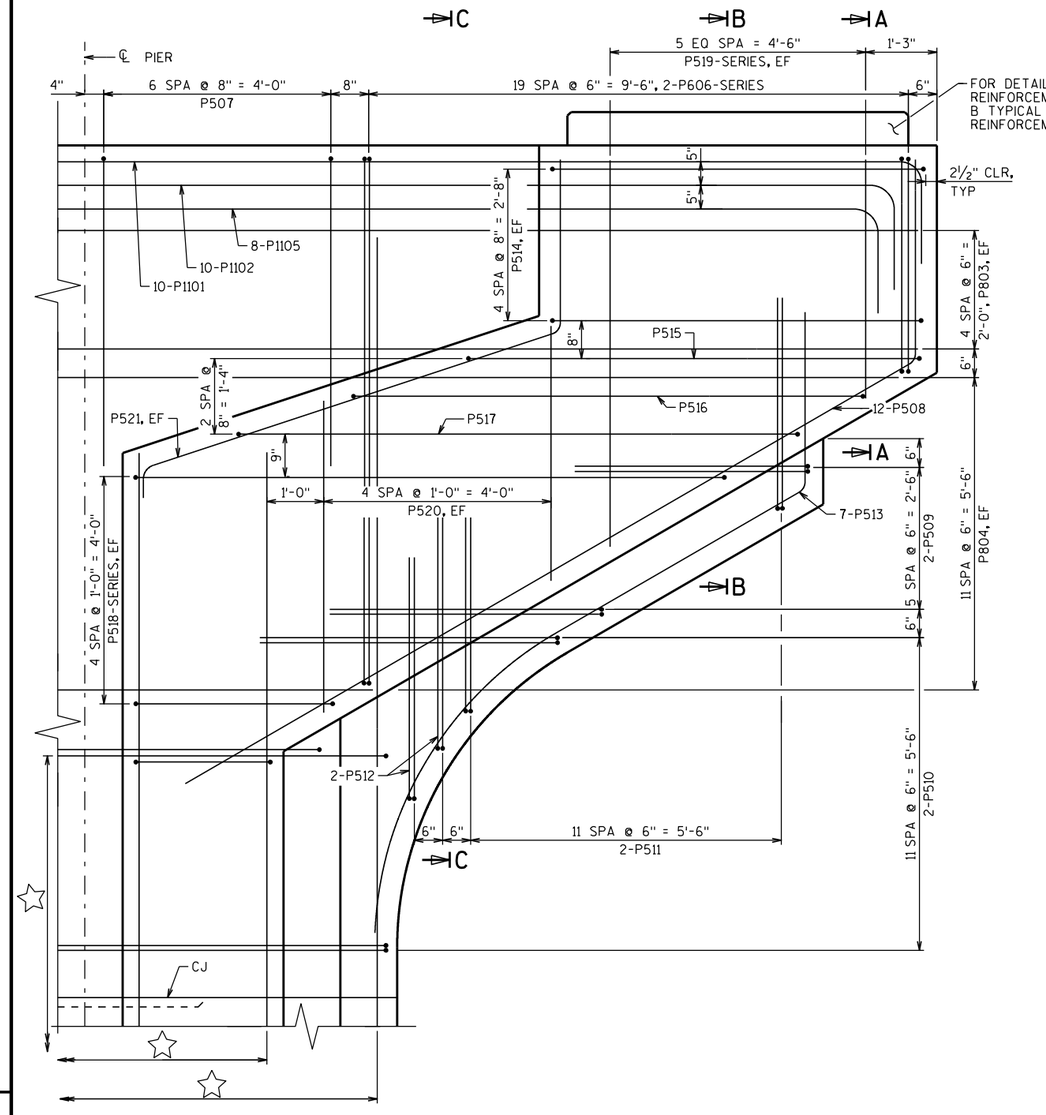
SHEET B9 OF B21

8

8

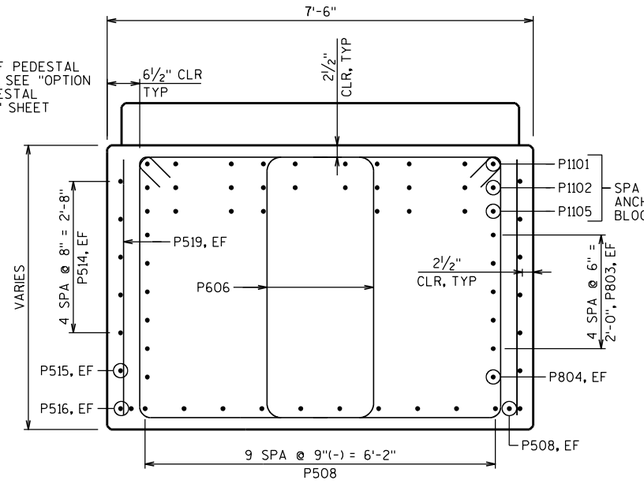
STATE PROJECT NUMBER

1060-33-81



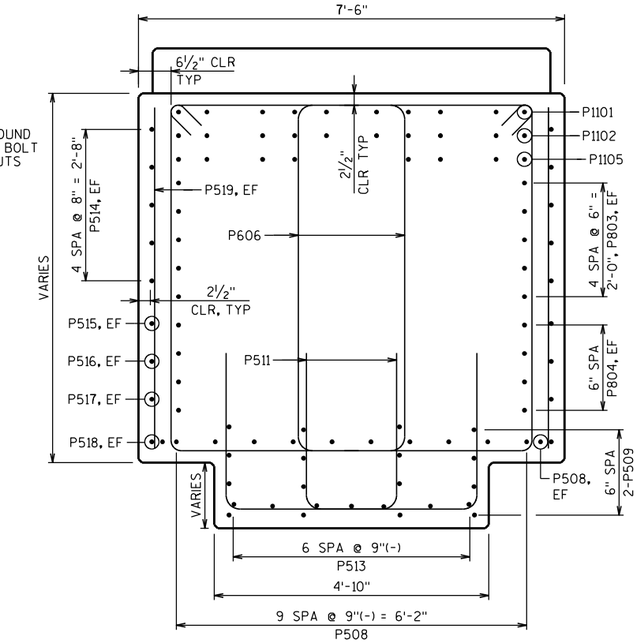
PARTIAL ELEVATION

(REINFORCEMENT IS SYMMETRICAL ABOUT ℄ PIER)



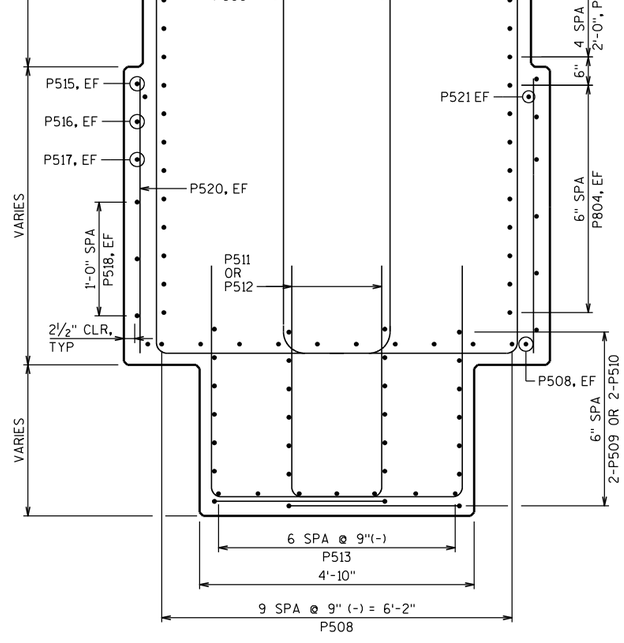
SECTION A-A

(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-40-853

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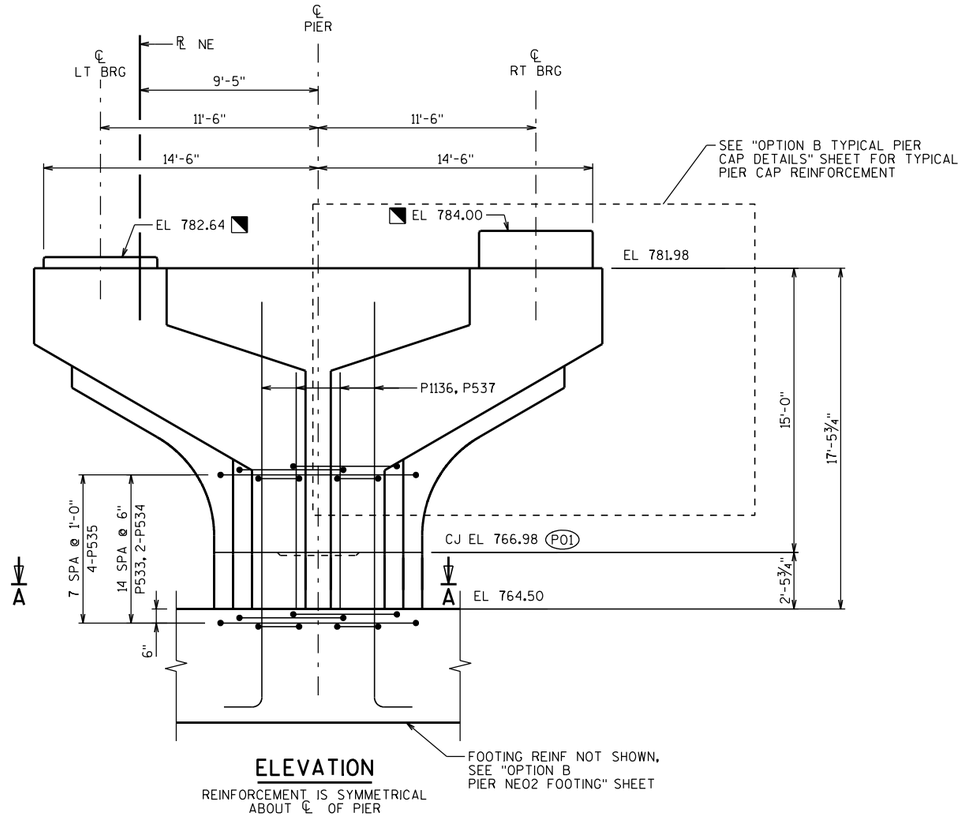
OPTION B
TYPICAL PIER
CAP DETAILS

SHEET B10 OF B21

8

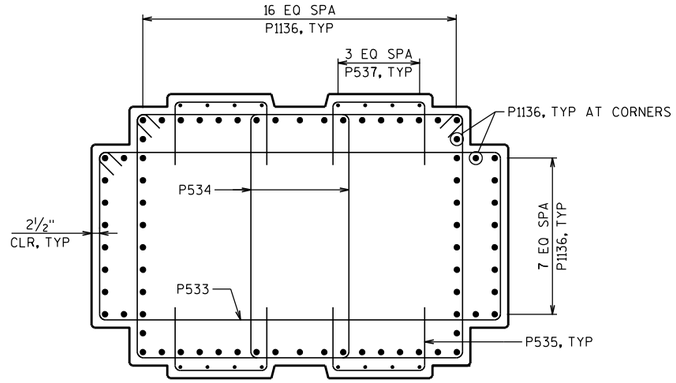
8

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".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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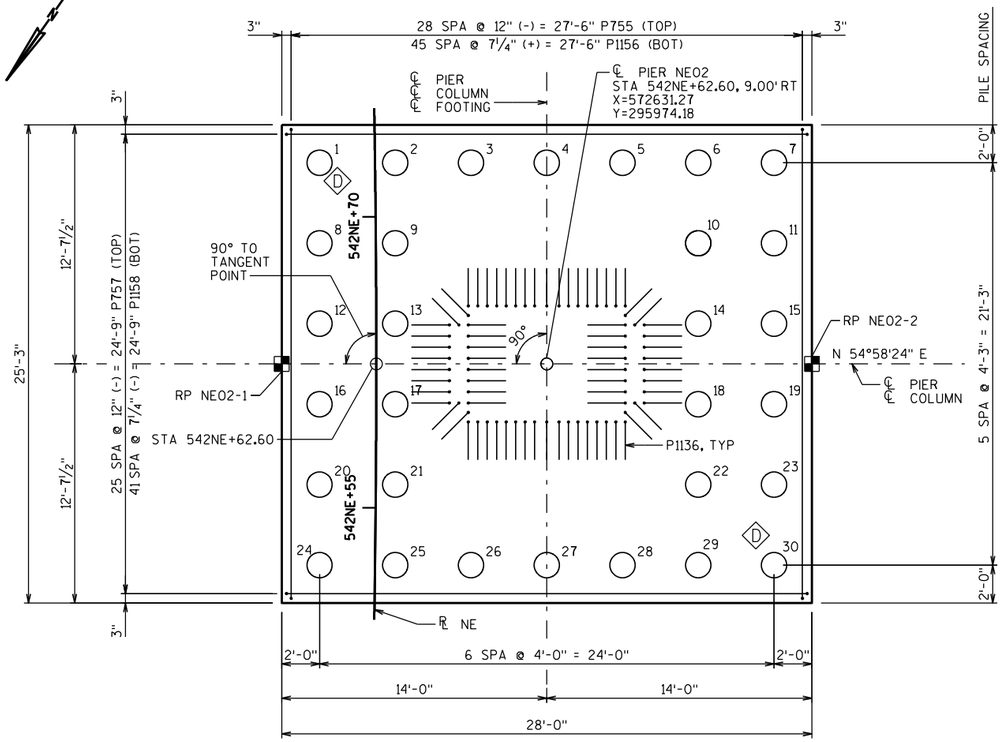
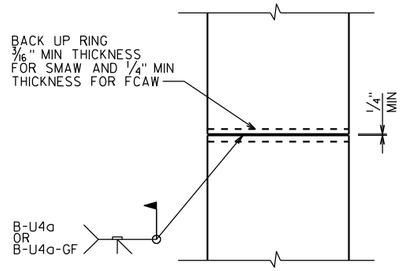
OPTION B
PIER NE02
DETAILS

SHEET B11 OF B21

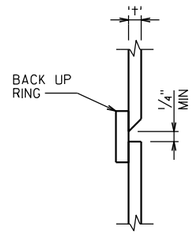
STATE PROJECT NUMBER
1060-33-81



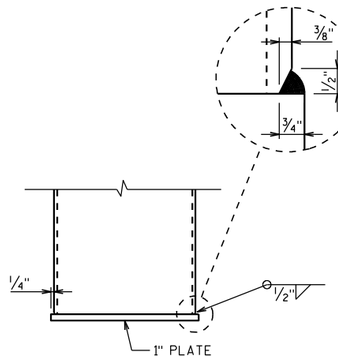
PLAN



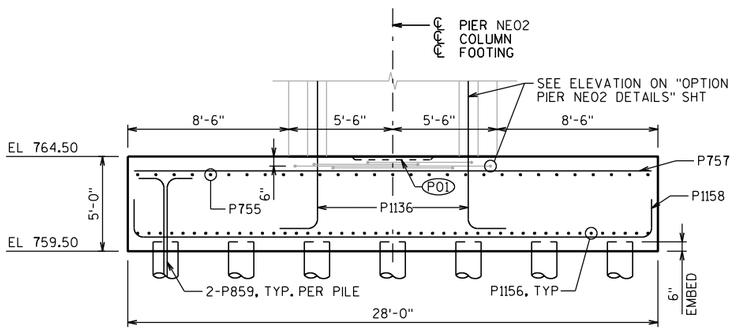
CIP PILE SPLICE DETAIL



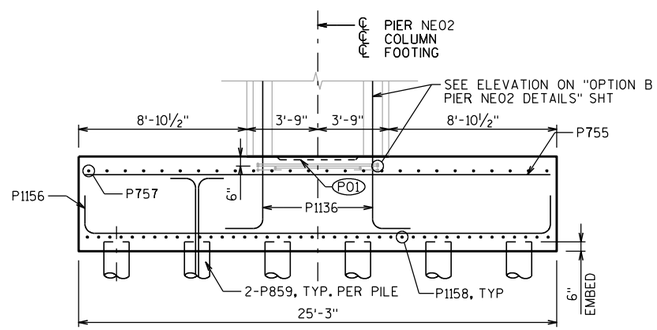
CIP PILE WELD DETAIL



CIP PILE END PLATE DETAIL



ELEVATION



END VIEW

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 B2.

ESTIMATED PILE LENGTH = 55 FT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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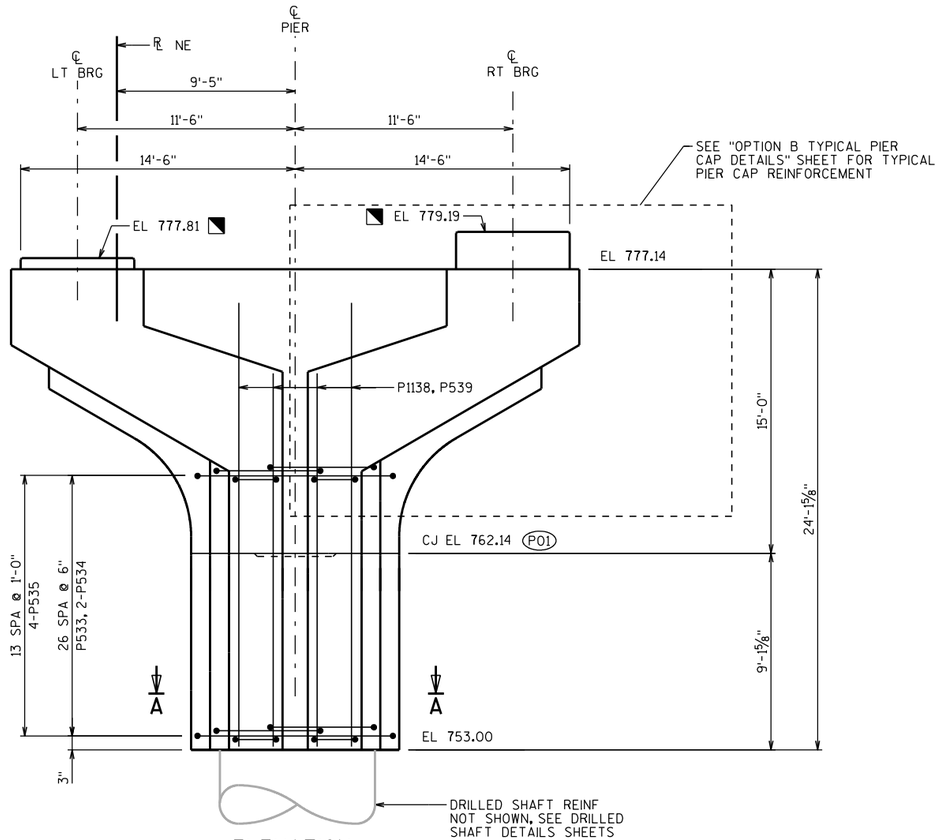
OPTION B
PIER NE02
FOOTING

SHEET B12 OF B21

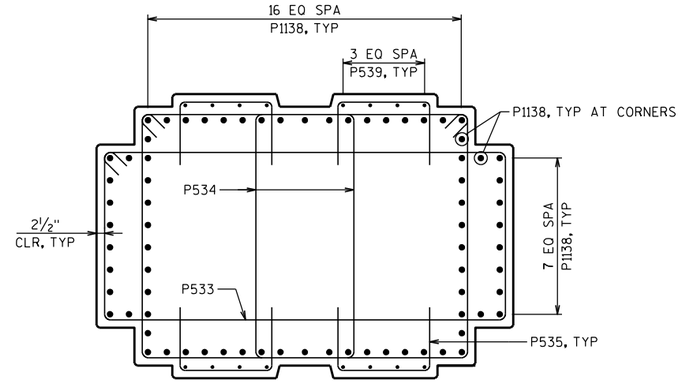
8

8

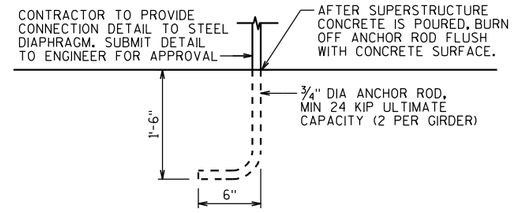
STATE PROJECT NUMBER
1060-33-81



ELEVATION



SECTION A-A



TEMPORARY HOLD DOWN DEVICE

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

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".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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OPTION B
PIER NE03
DETAILS

SHEET B13 OF B21

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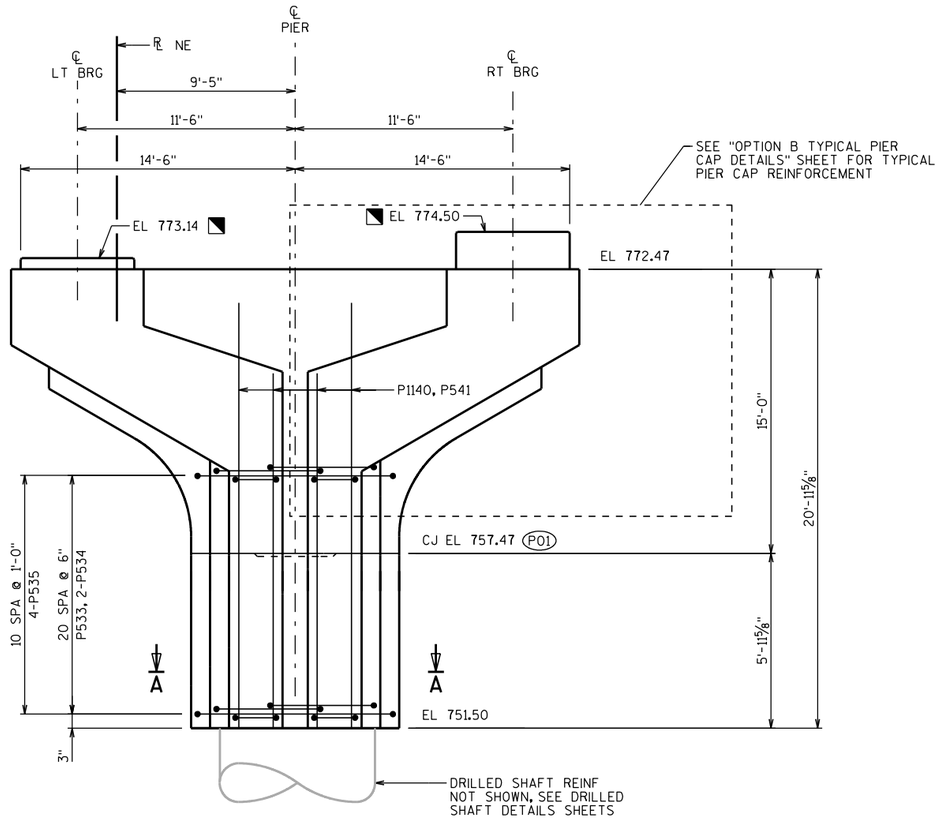
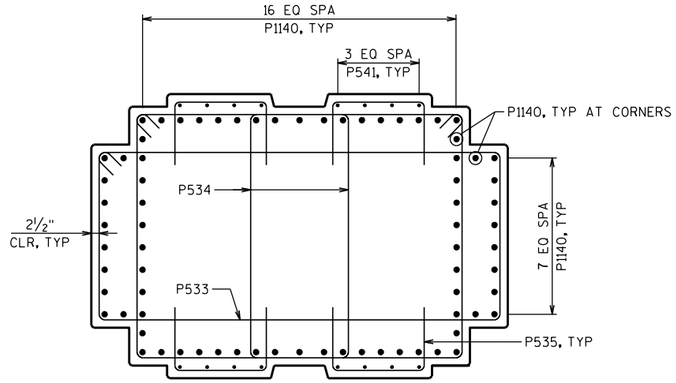
PLOT NAME : 080405b_pi
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-81



ELEVATION



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".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-853

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OPTION B
PIER NE04
DETAILS

SHEET B14 OF B21

3079

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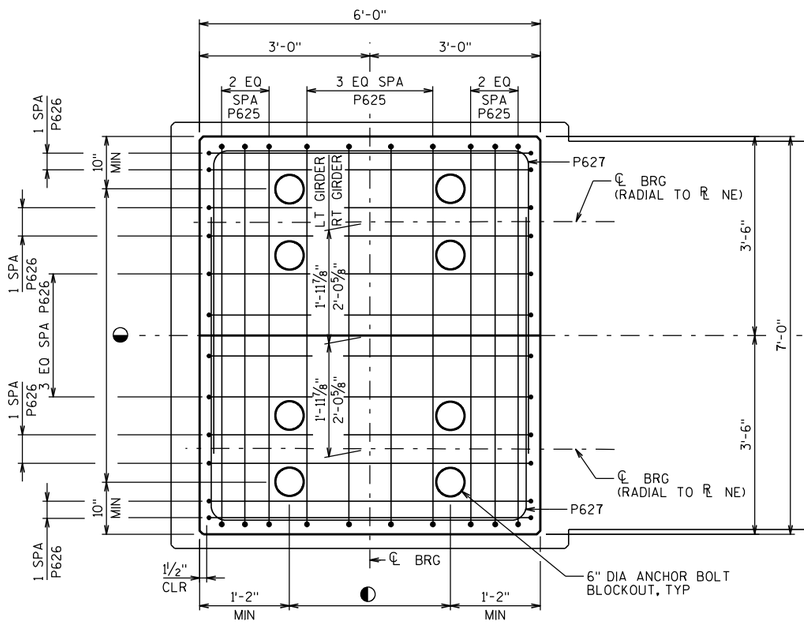
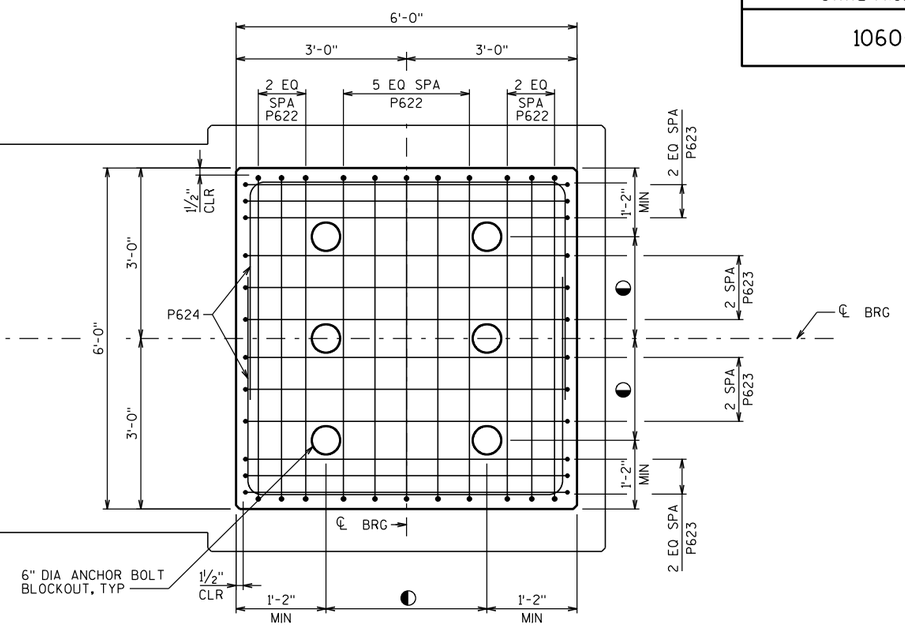
PLOT SCALE : 8:1

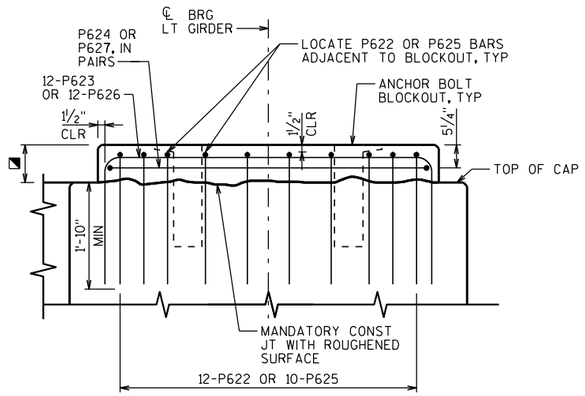
STATE PROJECT NUMBER
1060-33-81



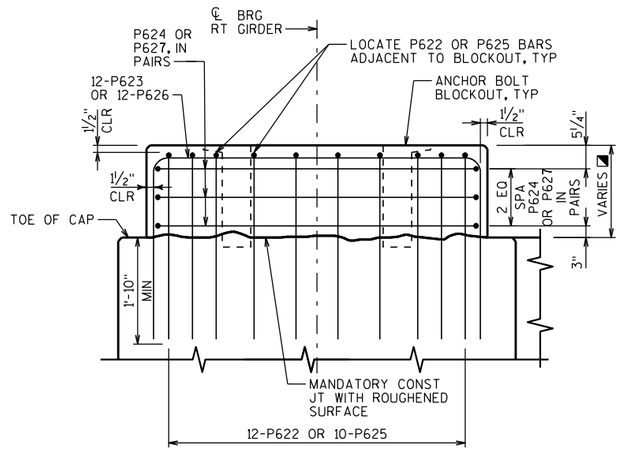
PEDESTAL PLAN
(PIER NE03 ONLY)



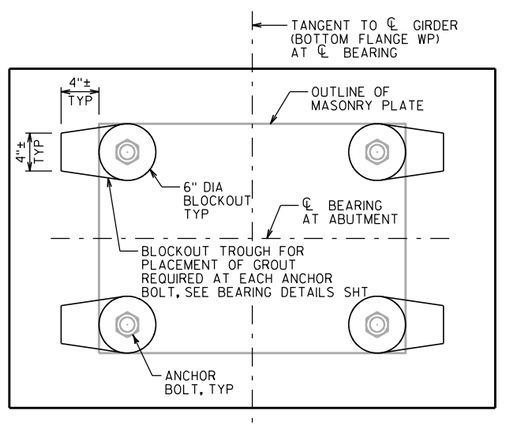
PEDESTAL PLAN
(PIERS NE02 & NE04)



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-40-853

DRAWN BY MSS | PLANS CK'D. JWC

OPTION B
TYPICAL PIER
PEDESTAL
REINFORCEMENT

SHEET B15 OF B21

3080

8

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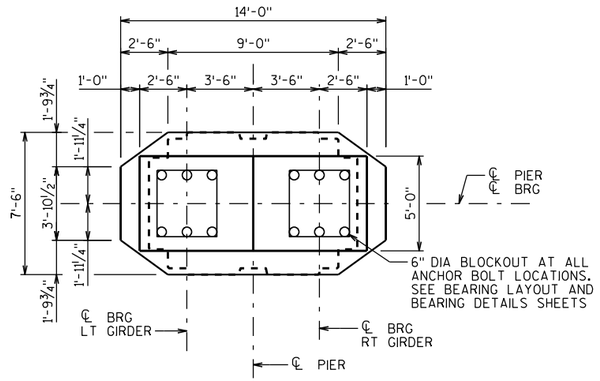
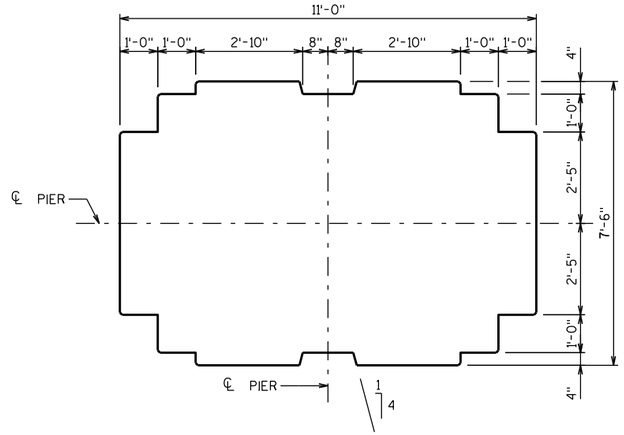
PLOT BY : MSCJJO
PLOT NAME : 080407b_pi
PLOT SCALE : 2.666667:1

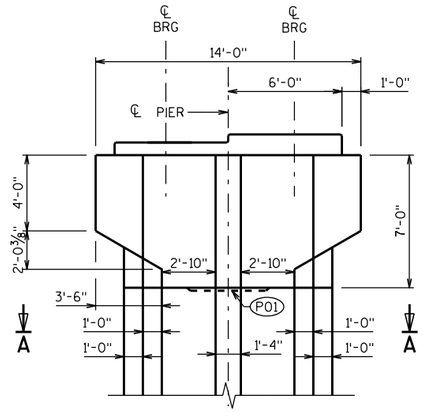
STATE PROJECT NUMBER
1060-33-81



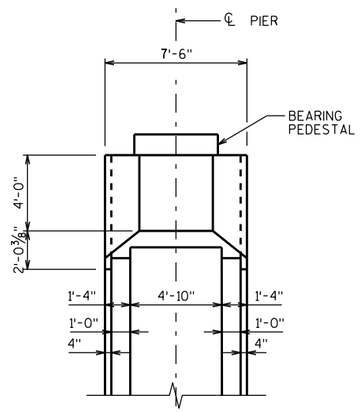
PLAN



SECTION A-A



FRONT ELEVATION



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-40-853

DRAWN BY MSS | PLANS CK'D. JWC

OPTION B
PIERS NE01 & NE05
LAYOUT

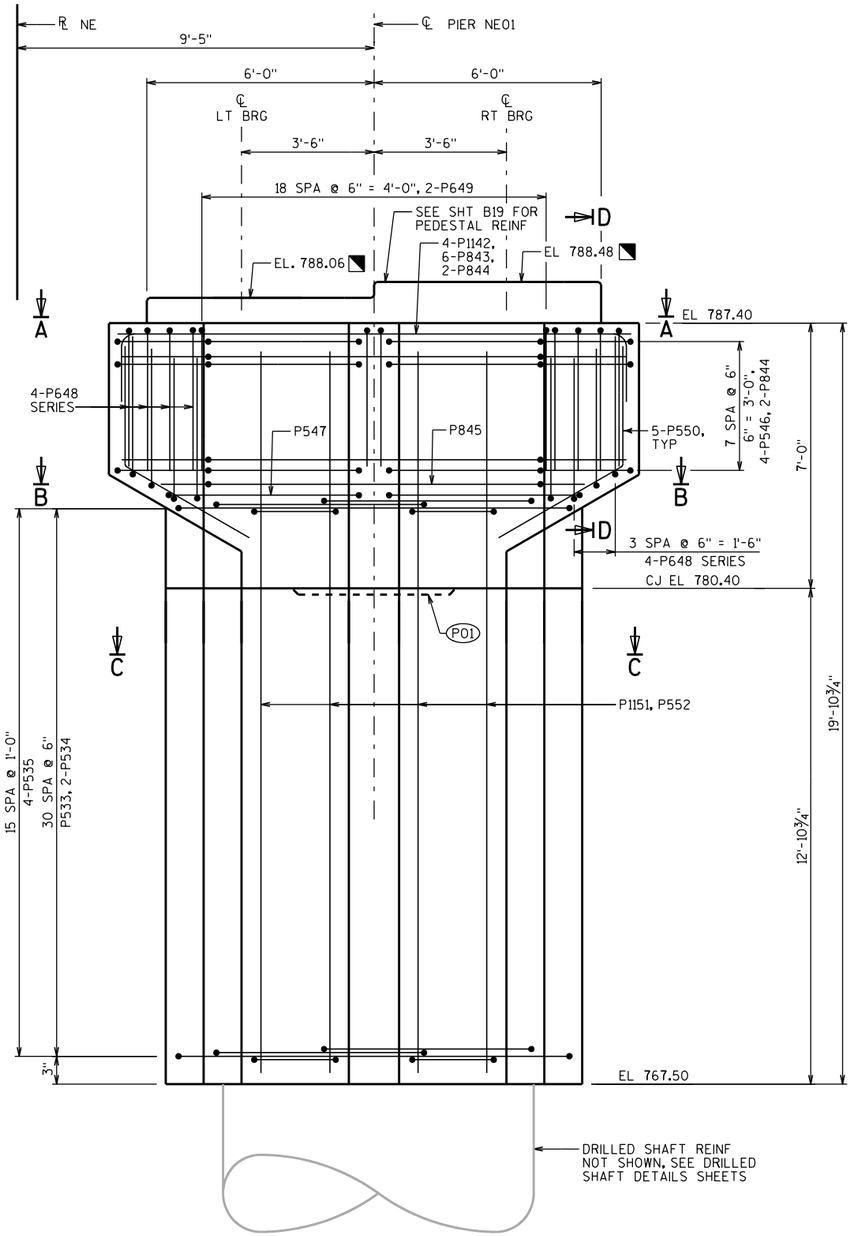
SHEET B16 OF B21

8

8

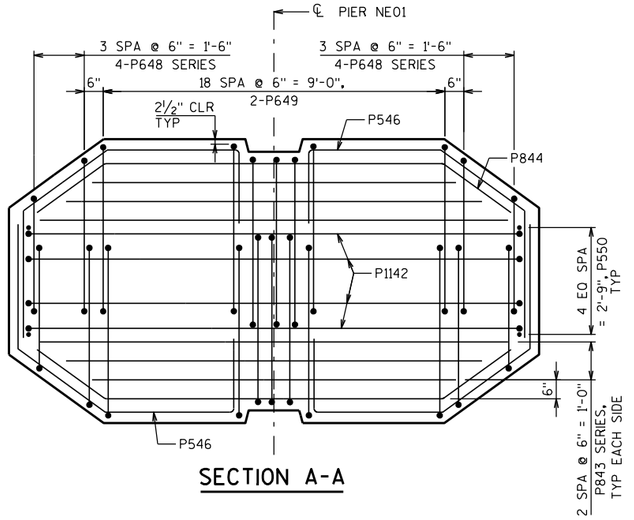
FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option B\080408b_pi.dgn PLOT DATE : 19-JUL-2015 22:40 PLOT BY : MSCJJO PLOT NAME : 080408b_pi PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-81

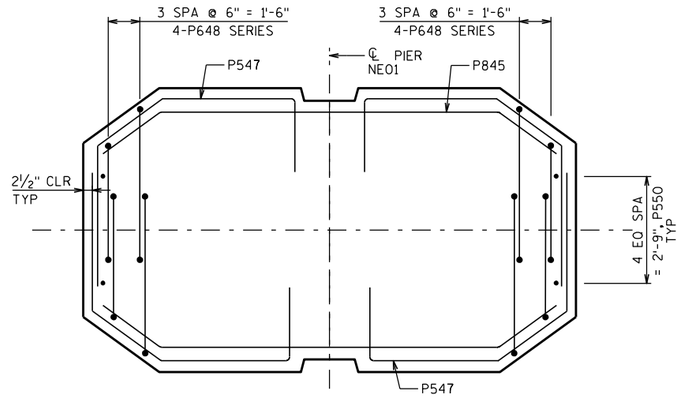


ELEVATION

(REINFORCEMENT IS SYMMETRICAL ABOUT ℄ OF PIER)

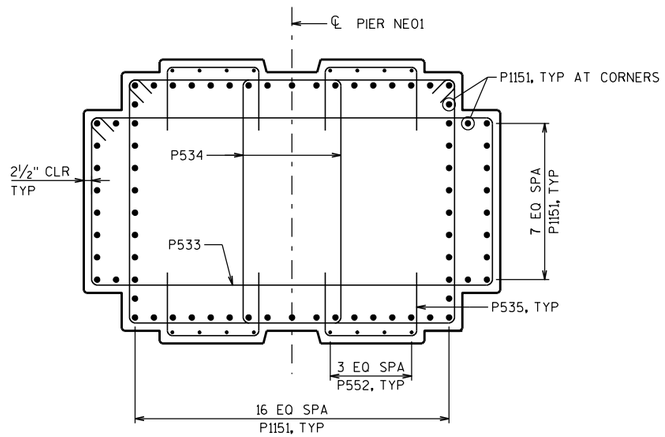


SECTION A-A

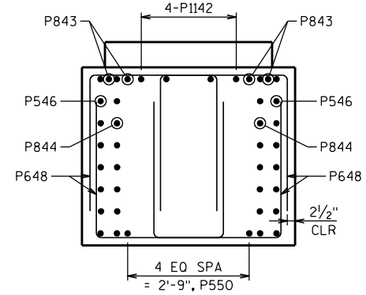


SECTION B-B

COLUMN REINFORCEMENT NOT SHOWN FOR CLARITY



SECTION C-C



SECTION D-D

FOR PEDESTAL REINFORCEMENT SEE SHT B19

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-40-853

DRAWN BY MSS | PLANS CK'D. JWC

OPTION B
PIER NE01
DETAILS

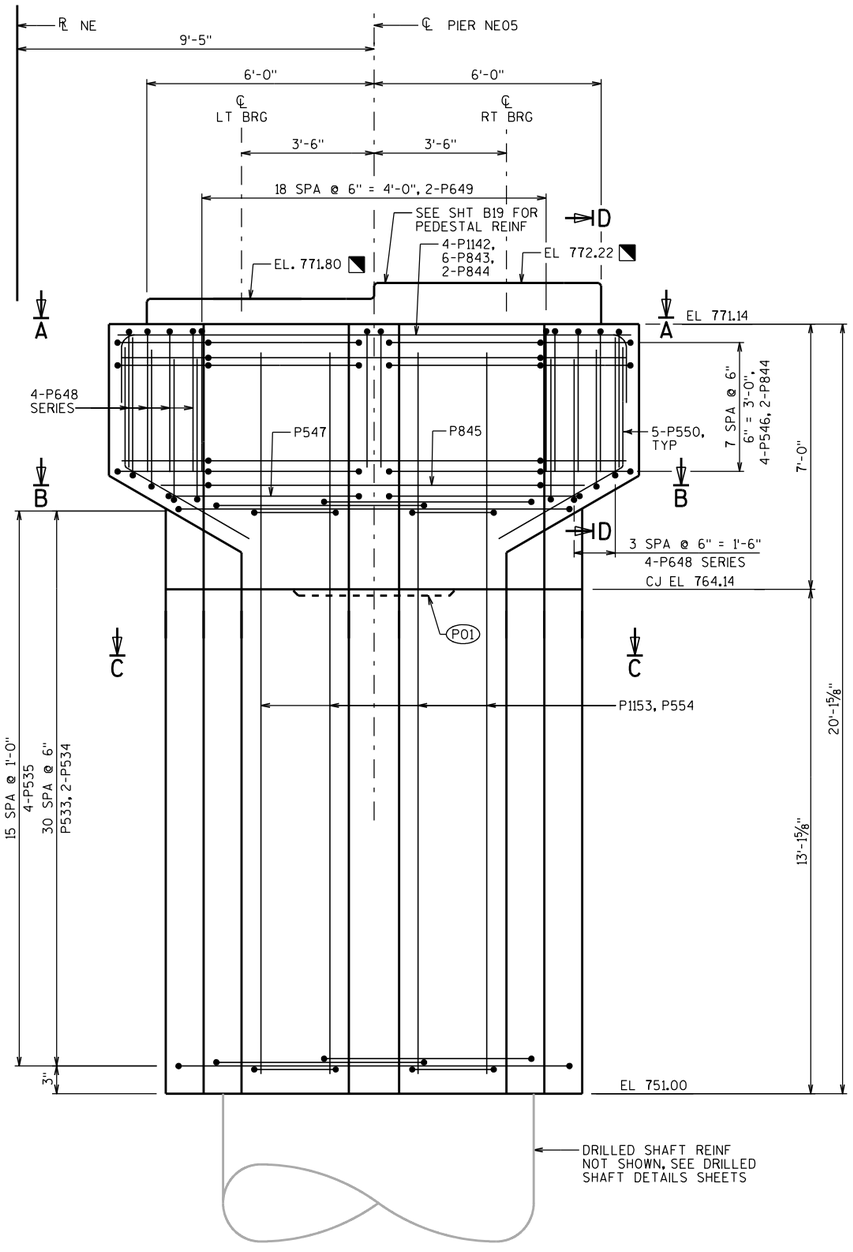
SHEET B17 OF B21

8

8

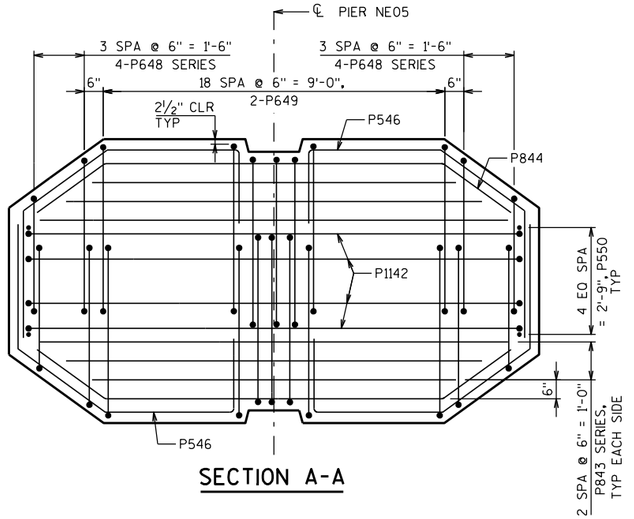
FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option B\080409b_pi.dgn
PLOT DATE : 19-JUL-2015 22:40
PLOT BY : MSCJJO
PLOT NAME : 080409b_pi
PLOT SCALE : 4:1

STATE PROJECT NUMBER
1060-33-81

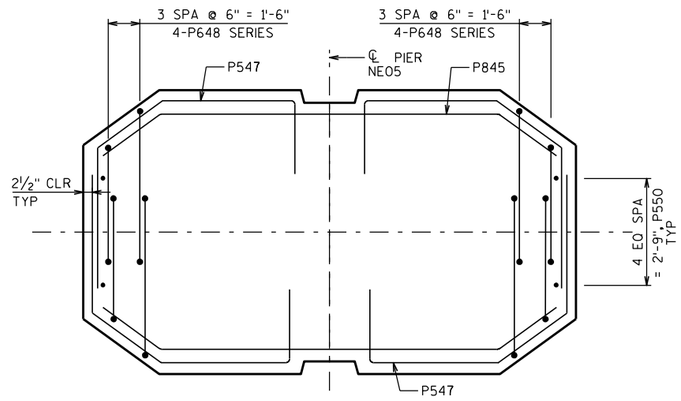


ELEVATION

(REINFORCEMENT IS SYMMETRICAL ABOUT ℄ OF PIER)

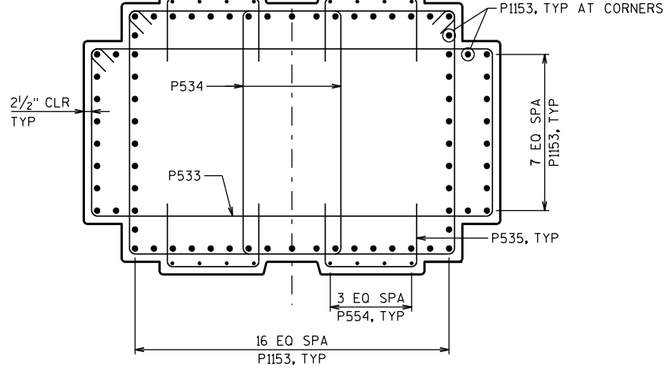


SECTION A-A

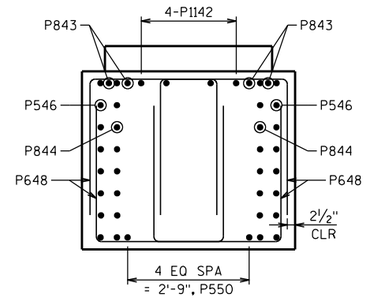


SECTION B-B

COLUMN REINFORCEMENT NOT SHOWN FOR CLARITY



SECTION C-C



SECTION D-D

FOR PEDESTAL REINFORCEMENT SEE SHT B19

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-40-853

DRAWN BY MSS | PLANS CK'D. JWC

OPTION B
PIER NE05
DETAILS

SHEET B18 OF B21

8

8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option B\080410b_pi.dgn
PLOT DATE : 19-JUL-2015 22:40
PLOT BY : MSCJJO
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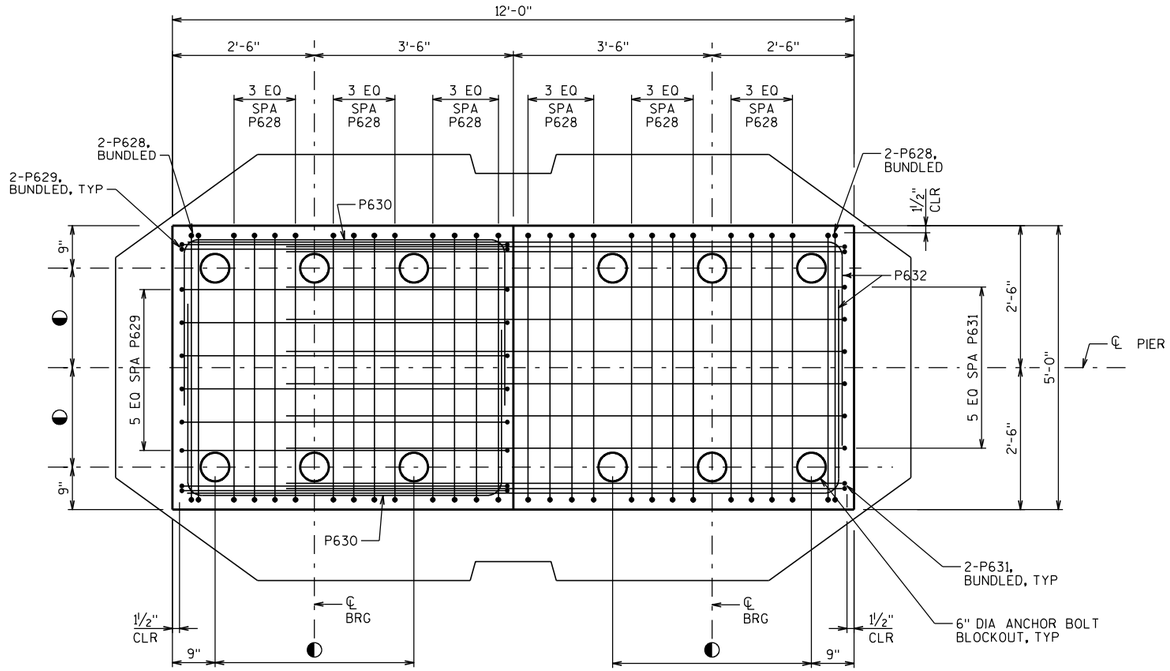
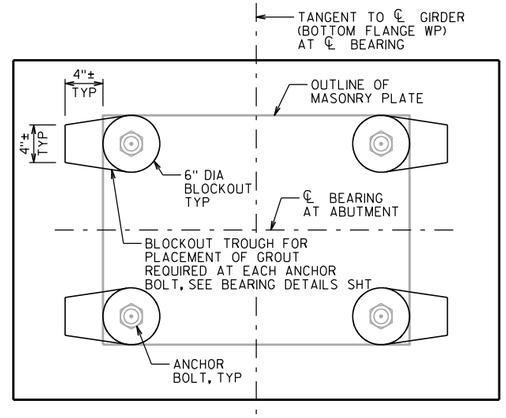
PLOT SCALE : 4:1

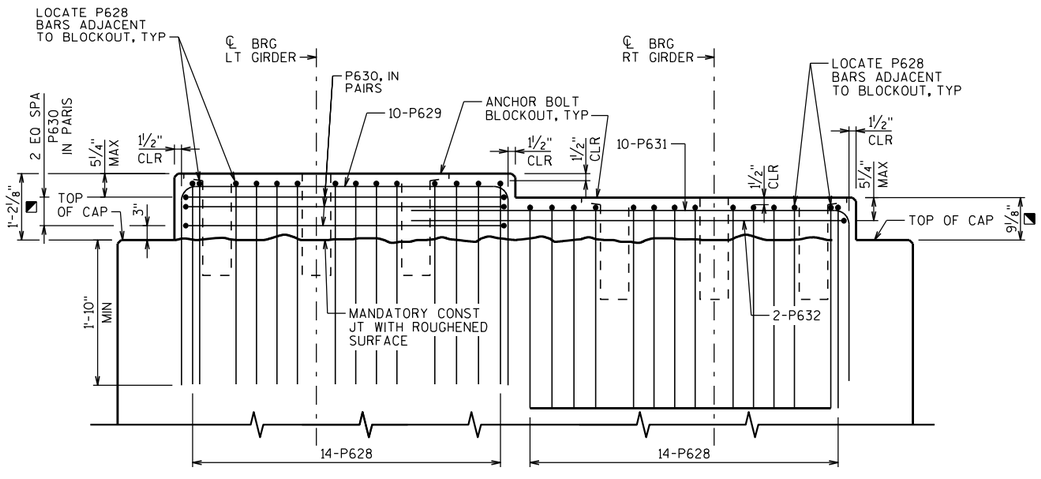


PEDESTAL PLAN



PEDESTAL PLAN - GROUT TROUGHS

SEE BEARING DETAILS SHEET



PEDESTAL ELEVATION

LOOKING DOWNSTATION

NOTES

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

FOR DETAILS OF BEARINGS, SEE BEARING LAYOUT SHEETS 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-40-853

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OPTION B
PIERS NE01 & NE05
PEDESTAL
REINFORCEMENT

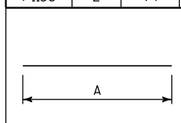
SHEET B19 OF B21

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	F		DIM	MIN	MAX	NO REQ'D	LENGTH
P1101	E	30	32'-8"	X		4	2'-0"	29'-4"					TOP TIE BAR					
P1102	E	30	31'-10"	X		4	2'-0"	28'-6"					TOP TIE BAR					
P803	E	30	29'-4"			1	29'-4"						SKIN STEEL - TOP OF CAP					
P804	E	72	19'-5"		◭	1	19'-5"						SKIN STEEL - MIDDLE OF CAP (SERIES)	A	10'-0"	28'-10"	6 SERIES OF 12	10'-0" TO 28'-10"
P1105	E	24	31'-0"	X		4	2'-0"	27'-8"					TOP TIE BAR					
P606	E	240	21'-11"	X	◭	3	4'-2"	6'-4½"					STIRRUPS - TOP EDGES OF CAP (SERIES)	A	3'-7"	9'-2"	12 SERIES OF 20	16'-4" TO 27'-6"
P507	E	42	17'-0"	X		4	5'-6"	6'-4"					TIE - TOP CENTER OF CAP					
P508	E	72	18'-9"	X		9	3'-6"	15'-3"	60				OUTSIDE FACE OF PIER CAP - TOP					
P509	E	72	11'-3"	X		4	4'-3"	3'-0"					HORIZONTAL TIE - BOTTOM OF CAP (TOP SEC)					
P510	E	144	13'-3"	X		4	5'-3"	3'-0"					HORIZONTAL TIE - BOTTOM OF CAP (BOT SEC)					
P511	E	144	10'-3"	X		4	3'-9"	3'-0"					VERTICAL TIE - BOTTOM OF CAP (TOP SEC)					
P512	E	24	11'-3"	X		4	4'-3"	3'-0"					VERTICAL TIE - BOTTOM OF CAP (BOT SEC)					
P513	E	42	14'-5"	X		40	3'-0"	5'-0"	6'-5"	60	6'-5"		OUTSIDE FACE OF PIER CAP - BOT					
P514	E	60	16'-5"	X		4	5'-1"	6'-6"					TIE - ARCHITECTURAL REVEAL - HORIZ - TOP					
P515	E	12	18'-1"	X		4	5'-1"	8'-2"					TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P516	E	12	18'-10"	X		4	5'-1"	8'-11"					TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P517	E	12	19'-9"	X		4	5'-1"	9'-10"					TIE - ARCHITECTURAL REVEAL - HORIZ - MID					
P518	E	60	11'-4"	X	◭	4	2'-4"	6'-10½"					TIE - ARCHITECTURAL REVEAL - HORIZ - BOT (SERIES)	B	3'-5"	10'-4"	12 SERIES OF 5	7'-10" TO 14'-9"
P519	E	72	5'-6"		◭	1	5'-6"						ARCHITECTURAL REVEAL - VERT - TOP (SERIES)	A	4'-2"	6'-9"	12 SERIES OF 6	4'-2" TO 6'-9"
P520	E	60	4'-11"		◭	1	4'-11"						ARCHITECTURAL REVEAL - VERT - MID (SERIES)	A	4'-5"	5'-5"	12 SERIES OF 5	4'-5" TO 5'-5"
P521	E	12	11'-6"	X		15	7'-9"	3'-0"	72				ARCHITECTURAL REVEAL - VERT - INSIDE FACE					
P622	E	48	13'-1"	X		4	3'-10"	5'-9"					PEDESTAL REINFORCEMENT - TYP - TOP FACE					
P623	E	48	12'-11"	X		4	3'-9"	5'-9"					PEDESTAL REINFORCEMENT - TYP - TOP FACE					
P624	E	16	13'-5"	X		4	4'-1"	5'-7"					PEDESTAL REINFORCEMENT - TYP - SIDE					
P625	E	20	14'-1"	X		4	3'-10"	6'-9"					PEDESTAL REINFORCEMENT - NE03 - TOP FACE					
P626	E	24	12'-11"	X		4	3'-9"	5'-9"					PEDESTAL REINFORCEMENT - NE03 - TOP FACE					
P627	E	8	14'-5"	X		4	4'-7"	5'-7"					PEDESTAL REINFORCEMENT - NE03 - SIDE					
P628	E	56	11'-7"	X		4	3'-7"	4'-9"					PEDESTAL REINFORCEMENT - NE01 & NE05 - TOP FACE					
P629	E	20	12'-5"	X		4	3'-6"	5'-9"					PEDESTAL REINFORCEMENT - NE01 & NE05 - TOP FACE					
P630	E	12	12'-3"	X		4	3'-6"	5'-7"					PEDESTAL REINFORCEMENT - NE01 & NE05 - SIDE					
P631	E	20	11'-0"	X		8	8'-2"	3'-0"					PEDESTAL REINFORCEMENT - NE01 & NE05 - TOP FACE - LEFT SIDE					
P632	E	4	11'-6"	X		8	8'-2"	3'-6"					PEDESTAL REINFORCEMENT - NE01 & NE05 - SIDE - LEFT SIDE					
P533	E	125	30'-7"	X		3	10'-7"	4'-5"					COLUMN TRANSVERSE (MAIN)					
P534	E	250	24'-7"	X		3	6'-5"	5'-7"					COLUMN TRANSVERSE (MAIN)					
P535	E	260	5'-6"	X		4	1'-8"	2'-5"					COLUMN TRANSVERSE (SECONDARY)					
P1136	E	74	22'-5"			8	20'-9"	2'-0"					NE02 VERTICAL BAR (MAIN)					



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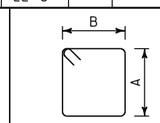

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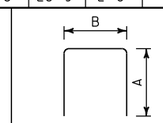

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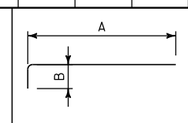
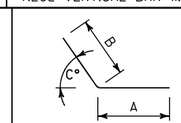


TYPE 8



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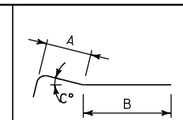

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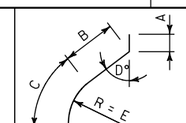

TYPE 40

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-40-853

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OPTION B
PIER REINFORCEMENT
SCHEDULE (1 OF 2)

SHEET B20 OF B21

8

8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option B\080412b_pi.dgn PLOT DATE : 19-JUL-2015 22:40 PLOT BY : MSCJJO PLOT NAME : 080412b_pi PLOT SCALE : 8:1

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
P537	E	16	11'-11"			1	11'-11"						NE02 VERTICAL BAR (SECONDARY)					
P1138	E	74	22'-5"			1	22'-5"						NE03 VERTICAL BAR (MAIN)					
P539	E	16	18'-11"			1	18'-11"						NE03 VERTICAL BAR (SECONDARY)					
P1140	E	74	19'-8"			1	19'-8"						NE04 VERTICAL BAR (MAIN)					
P541	E	16	16'-2"			1	16'-2"						NE04 VERTICAL BAR (SECONDARY)					
P1142	E	8	16'-8"	X		4	2'-0"	13'-4"					NE01 & NE05 PIER CAP - TOP TIE BAR					
P843	E	12	12'-3"		◭	1	12'-3"						NE01 & NE05 PIER CAP - TOP FACE BAR (SERIES)	A	11'-4"	13'-2"	4 SERIES OF 3	11'-4" TO 13'-2"
P844	E	36	14'-3"	X		24	2'-3"	9'-9"	36				NE01 & NE05 PIER CAP - HORIZ SKIN STEEL					
P845	E	4	13'-1"	X		24	1'-8"	9'-9"	36				NE01 & NE05 PIER CAP - HORIZ SKIN STEEL - BOT					
P546	E	64	10'-6"	X		41	3'-3"	2'-10"	3'-5"	1'-3"	126	144	NE01 & NE05 PIER CAP - FACE SKIN STEEL					
P547	E	8	10'-3"	X		41	3'-7"	2'-3"	3'-5"	1'-3"	126	144	NE01 & NE05 PIER CAP - FACE SKIN STEEL - BOT					
P648	E	64	10'-4"	X	◭	4	3'-7"	3'-6"					NE01 & NE05 PIER CAP - SHEAR STEEL - EDGE (SERIES)	B	3'-0"	4'-0"	16 SERIES OF 4	9'-10" TO 10'-10"
P649	E	76	11'-2"	X		4	3'-7"	4'-4"					NE01 & NE05 PIER CAP - SHEAR STEEL - CENTER					
P550	E	20	7'-0"	X		9	3'-2"	3'-10"	70				NE01 & NE05 PIER CAP - OUTSIDE FACE					
P1151	E	74	17'-10"			1	17'-10"						NE01 VERTICAL BAR (MAIN)					
P552	E	16	14'-5"			1	14'-5"						NE01 VERTICAL BAR (SECONDARY)					
P1153	E	74	17'-10"			1	17'-10"						NE05 VERTICAL BAR (MAIN)					
P554	E	16	14'-5"			1	14'-5"						NE05 VERTICAL BAR (SECONDARY)					
P755	U	29	24'-10"			1	24'-10"						FOOTING TOP - HORIZONTAL					
P1156	U	46	28'-2"	X		4	2'-0"	24'-10"					FOOTING BOT - HORIZONTAL					
P757	U	26	27'-7"			1	27'-7"						FOOTING TOP - HORIZONTAL					
P1158	U	42	30'-11"	X		4	2'-0"	27'-7"					FOOTING BOT - HORIZONTAL					
P859	U	60	20'-10"	X		8	19'-8"	1'-4"					PILE HOLDDOWN					

BAR MARK BREAKDOWN

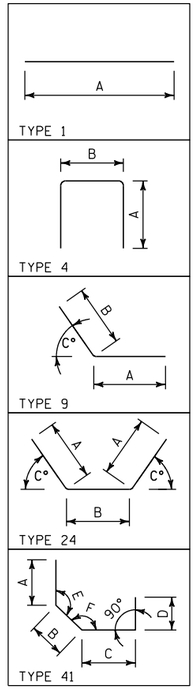
MARK	PIER NE01	PIER NE02	PIER NE03	PIER NE04	PIER NE05	TOTAL NO	WEIGHT
P1101		10	10	10		30	5,207
P1102		10	10	10		30	5,074
P803		10	10	10		30	2,350
P804		24	24	24		72	3,733
P1105		8	8	8		24	3,953
P606		80	80	80		240	7,901
P507		14	14	14		42	785
P508		24	24	24		72	1,408
P509		24	24	24		72	845
P510		48	48	48		144	1,990
P511		48	48	48		144	1,539
P512		8	8	8		24	282
P513		14	14	14		42	632
P514		20	20	20		60	1,027
P515		4	4	4		12	226
P516		4	4	4		12	236
P517		4	4	4		12	247
P518		20	20	20		60	709
P519		24	24	24		72	375
P520		20	20	20		60	308
P521		4	4	4		12	144
P622		24		24		48	943
P623		24		24		48	931
P624		8		8		16	322
P625			20			20	423
P626			24			24	466
P627			8			8	173
P628	28				28	56	974
P629	10				10	20	373
P630	6				6	12	221

BAR MARK BREAKDOWN

MARK	PIER NE01	PIER NE02	PIER NE03	PIER NE04	PIER NE05	TOTAL NO	WEIGHT
P631	10				10	20	330
P632	2				2	4	69
P533	31	15	27	21	31	125	3,987
P534	62	30	54	42	62	250	6,410
P535	64	32	56	44	64	260	1,491
P1136		74				74	8,813
P537		16				16	199
P1138			74			74	8,813
P539			16			16	316
P1140				74		74	7,732
P541				16		16	270
P1142	4				4	8	708
P843	6				6	12	392
P844	18				18	36	1,370
P845	2				2	4	140
P546	32				32	64	701
P547	4				4	8	86
P648	32				32	64	993
P649	38				38	76	1,275
P550	10				10	20	146
P1151	74					74	7,011
P552	16					16	241
P1153					74	74	7,011
P554					16	16	241
P755		29				29	1,472
P1156		46				46	6,884
P757		26				26	1,466
P1158		42				42	6,899
P859		60				60	3,338

STATE PROJECT NUMBER

1060-33-81



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-40-853

DRAWN BY MSS | PLANS CK'D. JWC

OPTION B
PIER REINFORCEMENT
SCHEDULE (2 OF 2)

SHEET B21 OF B21

8

8

FILE NAME : w:\Cadd\Final\10603381_Z2\Structs\B-40-853_N-E\cds\Option B\080413b_pi.dgn
PLOT DATE : 19-JUL-2015 22:40
PLOT BY : MSCJJO
PLOT NAME : 080413b_pi
PLOT SCALE : 8:1