

DESIGN DATA

LIVE LOAD:

DESIGN RATING; HS-25
INVENTORY RATING; HS-33
OPERATIONAL RATING; HS-56
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

Concrete Slab Strength (f'c)

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

Steel Reinf. Strength (Fy)

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON 10 3/4" C.I.P. CONCRETE PILING (MIN. T = 0.365") DRIVEN TO A MINIMUM BEARING VALUE OF 55 TONS PER PILE. ESTIMATED 65 FEET LONG AT THE NORTH ABUT. ESTIMATED 100 FEET LONG AT THE SOUTH ABUT.

PIER TO BE SUPPORTED ON 10 3/4" C.I.P. CONCRETE PILING (MIN. T = 0.365") DRIVEN TO A MINIMUM BEARING VALUE OF 55 TONS PER PILE. ESTIMATED 110 FEET LONG.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q100 = 7,100 C.F.S.
QBR = 5381 C.F.S.
QRDWH = 1216 C.F.S.
VEL. = 6.5 F.P.S.
HW. = EL. 868.9
WATERWAY AREA = 829 SQ. FT.
DRAINAGE AREA = 68.5 SQ. MI.
ROAD OVERTOPPING = NA
SCOUR CRITICAL CODE = 5
REGULATORY HW. 100 = EL. 870.2 (BARABOO RIVER BACKWATER)

2 YEAR FREQUENCY

Q2 = 1730 C.F.S.
HW.2 = EL. 860.2

OVERTOPPING FREQUENCY

Q25 = 5340 C.F.S.
HW.25 = EL. 866.9

TRAFFIC VOLUME

S.T.H. 136
A.D.T. = 2600 (2027)
R.D.S. = 30 M.P.H.

STRUCTURES DESIGN CONTACTS:
MATT COUPAR (608) 266-5083
WARNER RISSER (608) 266-5081

Bridge ID Number

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. NORTH ABUTMENT
5. NORTH ABUTMENT DETAILS
6. SOUTH ABUTMENT
7. SOUTH ABUTMENT DETAILS
8. PIER
9. SUPERSTRUCTURE
10. SUPERSTRUCTURE DETAILS
11. SUPERSTRUCTURE BAR DETAILS
12. STEEL COMBINATION RAILING, TYPE C1 & EAST PARAPET 'A'
13. STEEL COMBINATION RAILING, TYPE C1 & NW PARAPET 'A'
14. STEEL COMBINATION RAILING, TYPE C1 & SW PARAPET 'A'
15. STEEL COMBINATION RAILING, TYPE C1 DETAILS

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

APPROVED *William C. Dierker SDR* 6-25-07
CHIEF STRUCTURAL DESIGN ENGINEER DATE

STRUCTURE B-56-183

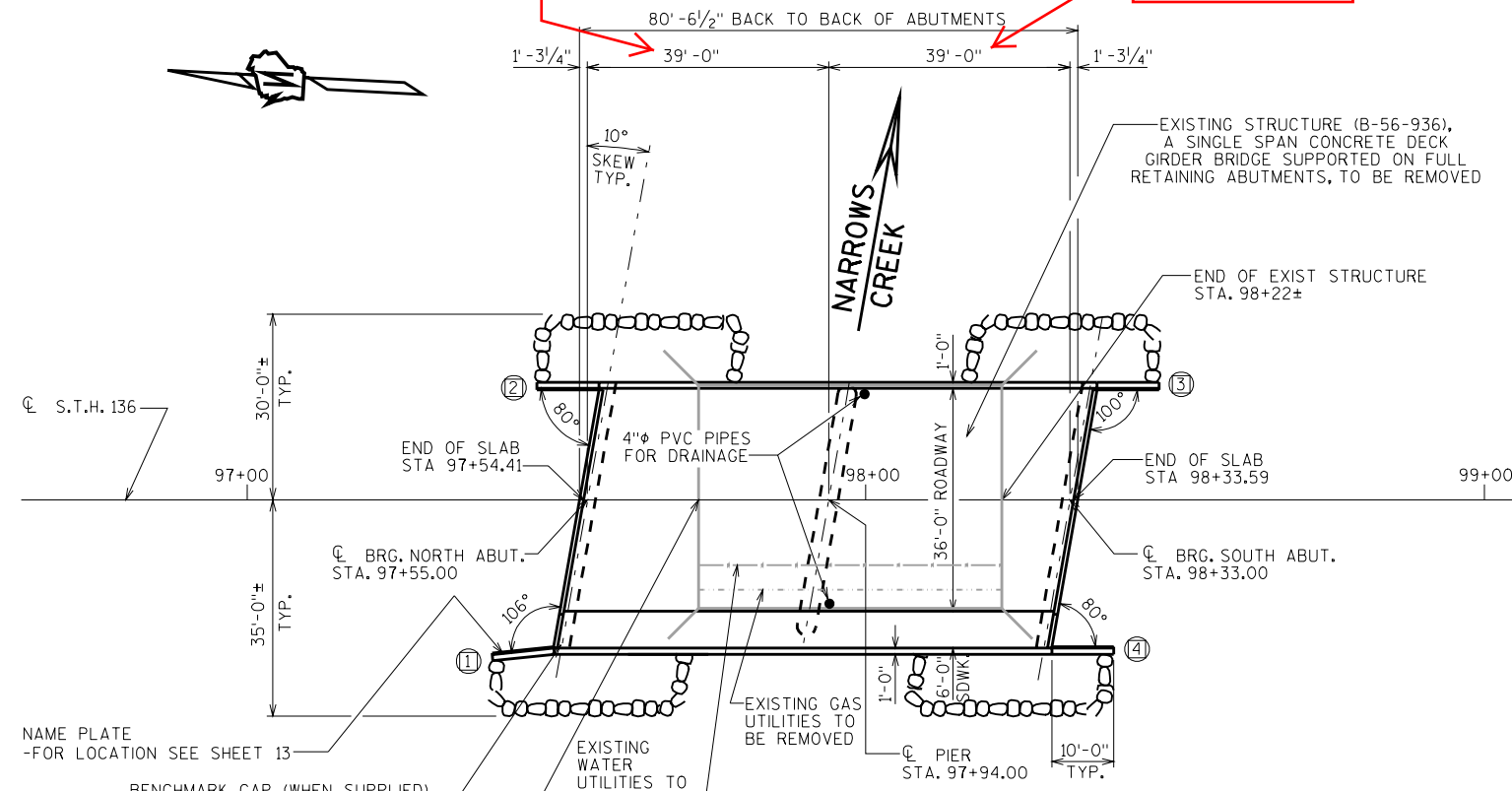
S.T.H. 136 OVER NARROWS CREEK

COUNTY	SAUK	VILLAGE	ROCK SPRINGS
DESIGN SPEC.	AASHTO STD. SPEC. 2003	LOAD	HS-25
DESIGNED BY	MSC	DRAWN BY	JPH
CONST. SPEC.	2003	PLANS	WWR
GENERAL PLAN		SHEET 1 OF 15	

INDICATES WING NUMBER

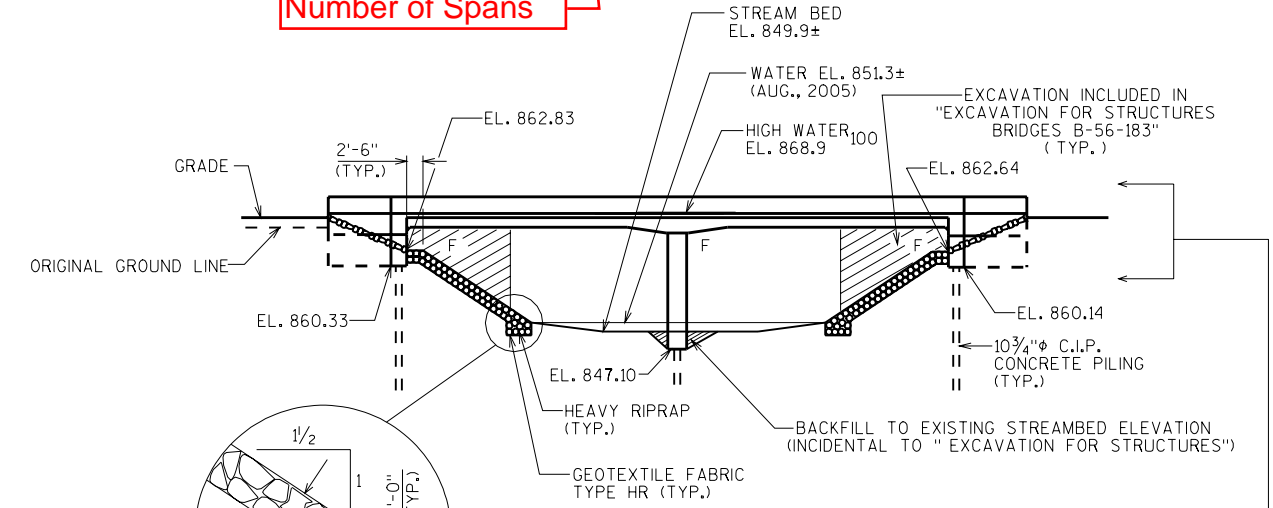
Span 1 Length

Span 2 Length

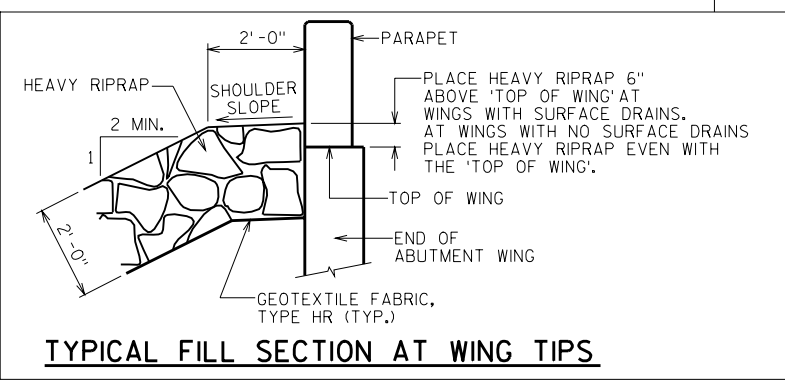


Haunched Slab

Number of Spans



ELEVATION NORMAL TO NARROWS CREEK



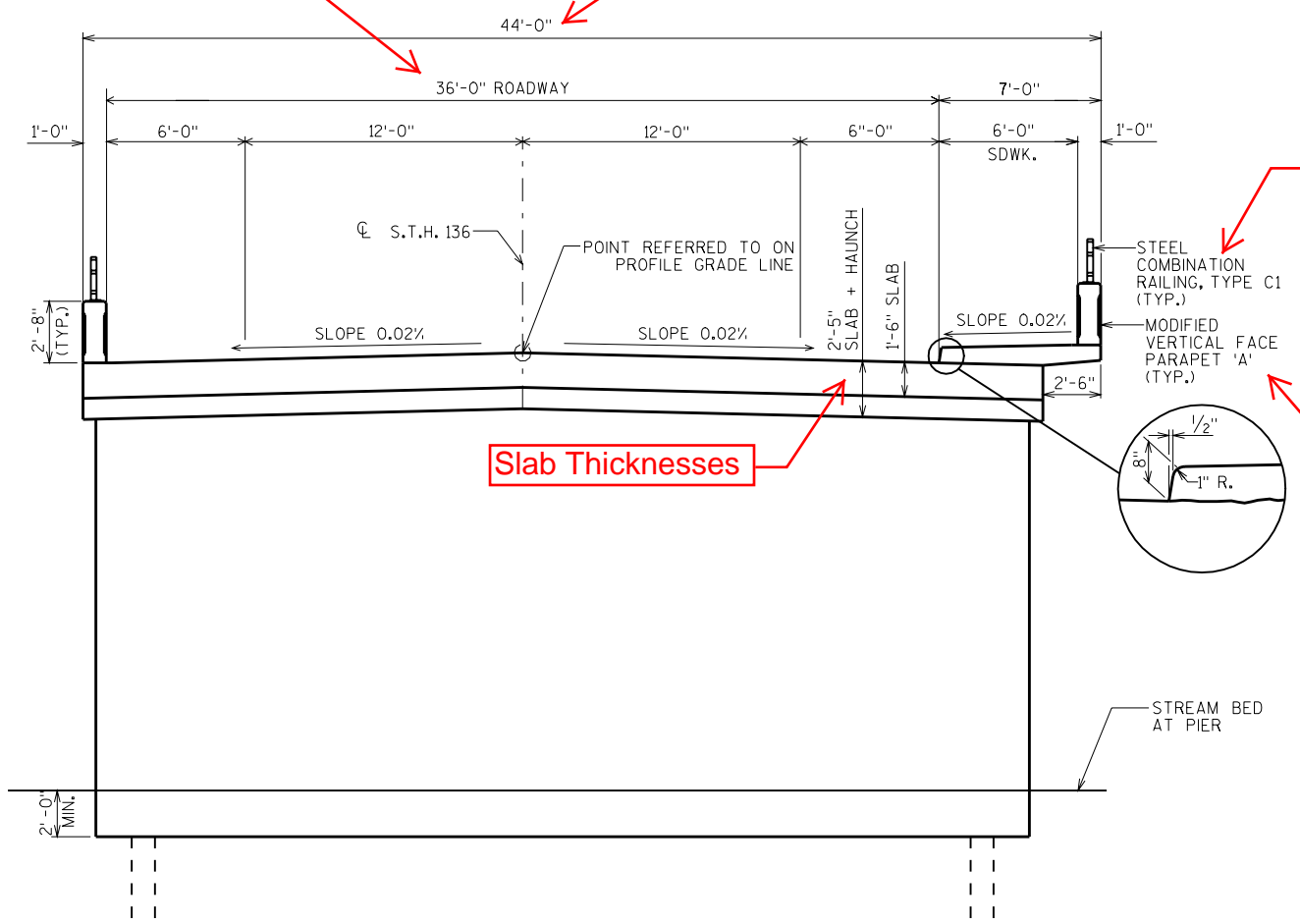
TYPICAL FILL SECTION AT WING TIPS

Roadway Clear Width

Out-to-Out Width

STATE PROJECT NUMBER

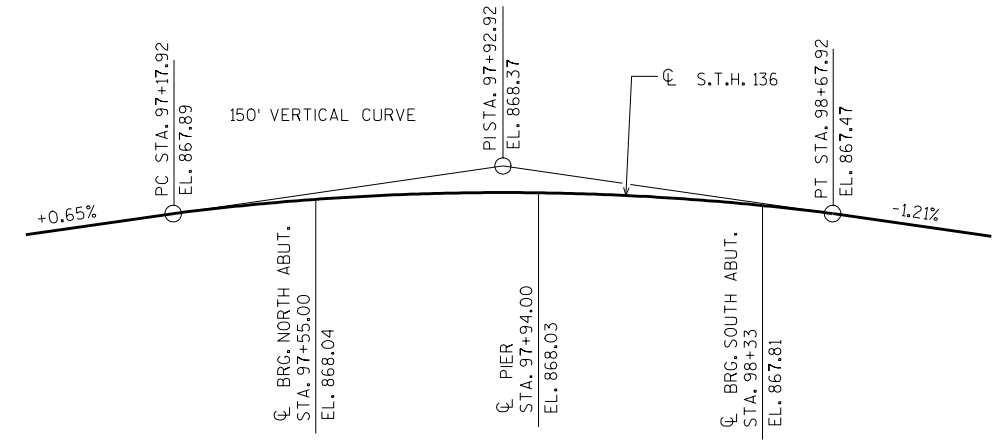
5573-01-72



Slab Thicknesses

Railing Type

Parapet Type



PROFILE GRADE LINE S.T.H. 136

CROSS SECTION THRU ROADWAY LOOKING SOUTH

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	NORTH ABUT.	SOUTH ABUT.	PIER	TOTALS
REMOVING OLD STRUCTURE OVER WATERWAY STA. 97+94.00	LS	—	—	—	—	1
EXCAVATION FOR STRUCTURES BRIDGES B-56-183	LS	—	—	—	—	1
BACKFILL STRUCTURE	CY	—	105	105	—	210
CONCRETE MASONRY BRIDGES	CY	234	38	38	77	387
PROTECTIVE SURFACE TREATMENT	SY	464	—	—	—	464
BAR STEEL REINFORCEMENT HS BRIDGES	LB	—	2180	2160	3260	7600
BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	48,300	1390	1380	—	51,070
PILING CIP CONCRETE DELIVERED AND DRIVEN 10 3/4-INCH	LF	—	390	600	1210	2200
RAILING STEEL TYPE C1 B-56-183	LS	—	—	—	—	1
RUBBERIZED MEMBRANE WATERPROOFING	SY	—	12	12	—	24
RIPRAP HEAVY	CY	—	155	155	—	310
PIPE UNDERDRAIN 6-INCH	LF	—	57	57	—	114
PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	—	20	20	—	40
GEOTEXTILE FABRIC TYPE DF (SCHEDULE A)	SY	—	48	48	—	96
GEOTEXTILE FABRIC TYPE HR	SY	—	250	250	—	500
NON-BID ITEMS						
FILLER	SIZE	—	—	—	—	1/2" & 3/4"
PLASTIC OR ZINC PLATE	SIZE	—	—	—	—	1/8"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
 AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.
 THE EXISTING STREAM BED SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.
 THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
 SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.
 AT ABUTMENTS AND PIER(S), CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.
 THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.
 PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF SLAB SURFACE, SIDEWALK FACE, TOP OF SIDEWALK, AND THE FRONT FACE AND TOP OF WING AND SLAB PARAPETS.
 EXISTING WATER AND GAS UTILITIES ARE TO BE REMOVED FROM UNDER THE EXISTING BRIDGE.

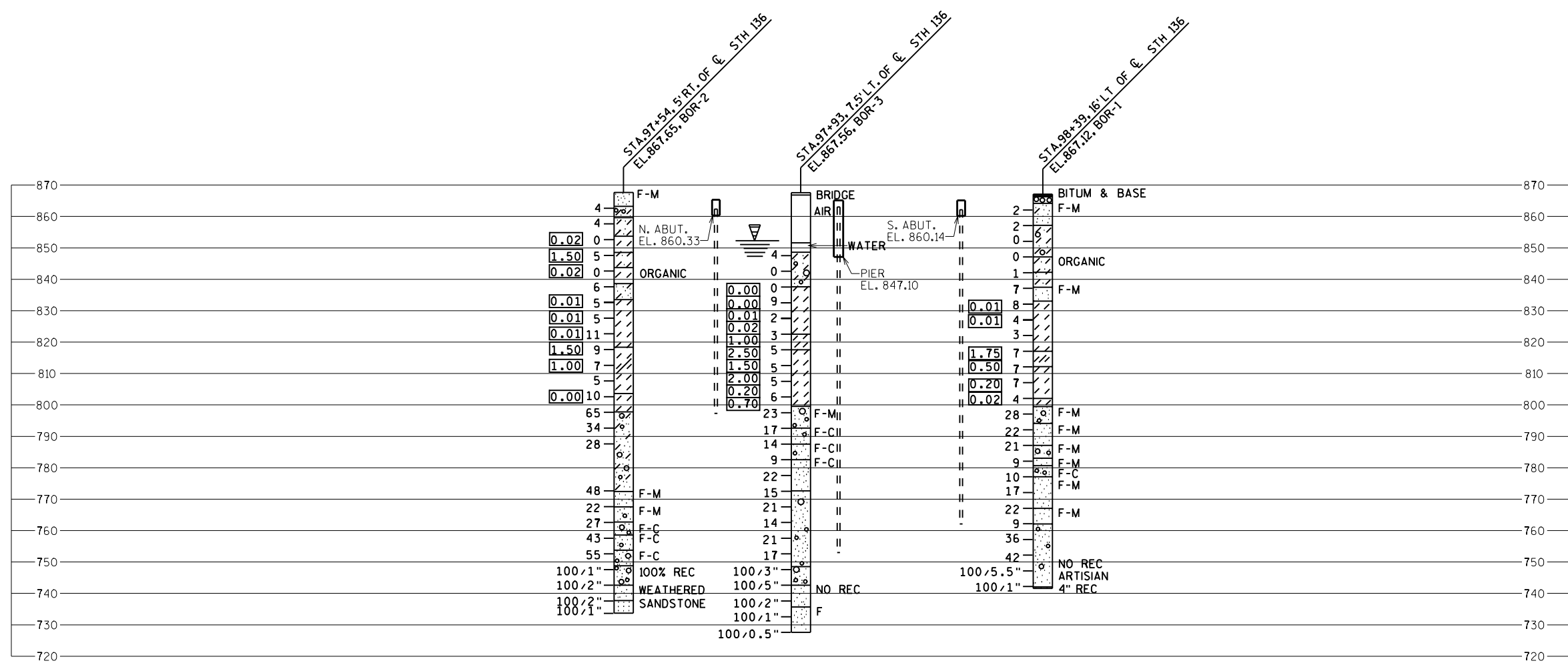
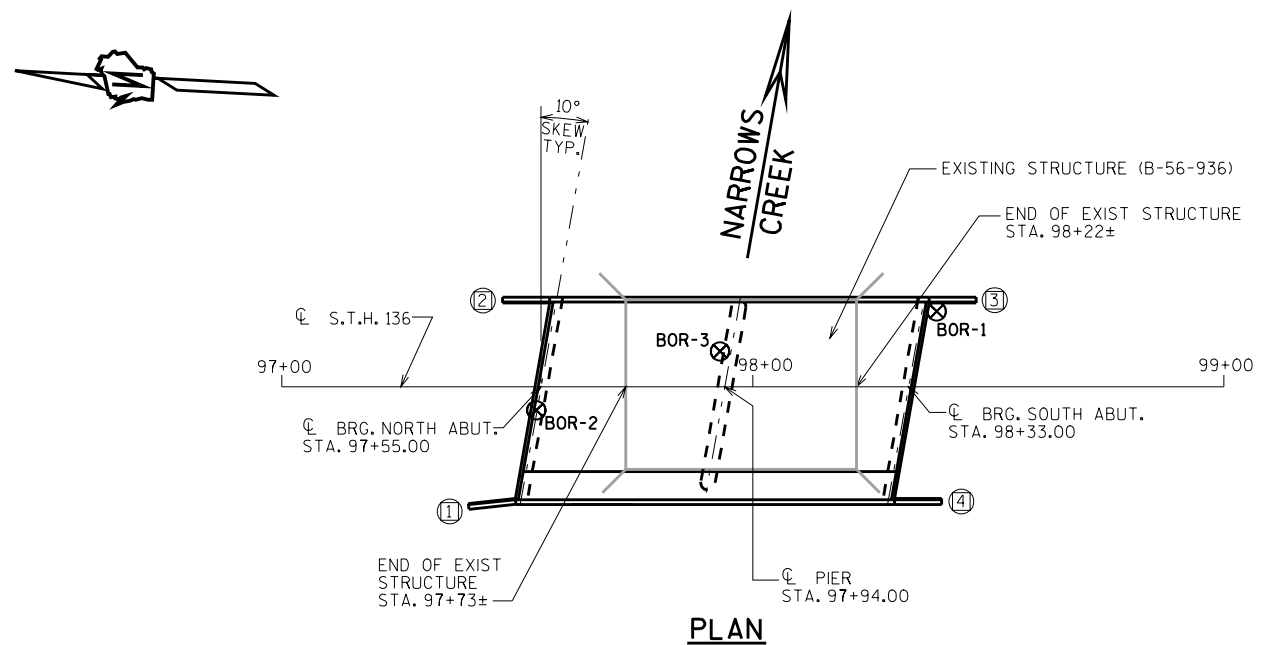
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-56-183			
DRAWN BY CRJ		PLANS CK'D. WWR	
CROSS SECTION & QUANTITIES			SHEET 2

8

8

SCALE = 4

STH 136 OVER NARROWS CREEK
VILLAGE OF ROCK SPRINGS, SAUK COUNTY



STATE PROJECT NUMBER
5573-01-72

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

MATERIAL SYMBOLS

TOPSOIL SAND SANDSTONE
SILT PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING

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

LEGEND OF BORING

ELEV. BORING NO.
STA.

UNCONFINED STRENGTH → 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"

WASH SAMPLE

SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO
LIMESTONE

SHELBY TUBE — S.T.

GROUND WATER ELEVATION

NO GROUND WATER OBSERVED ABOVE THIS ELEVATION

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

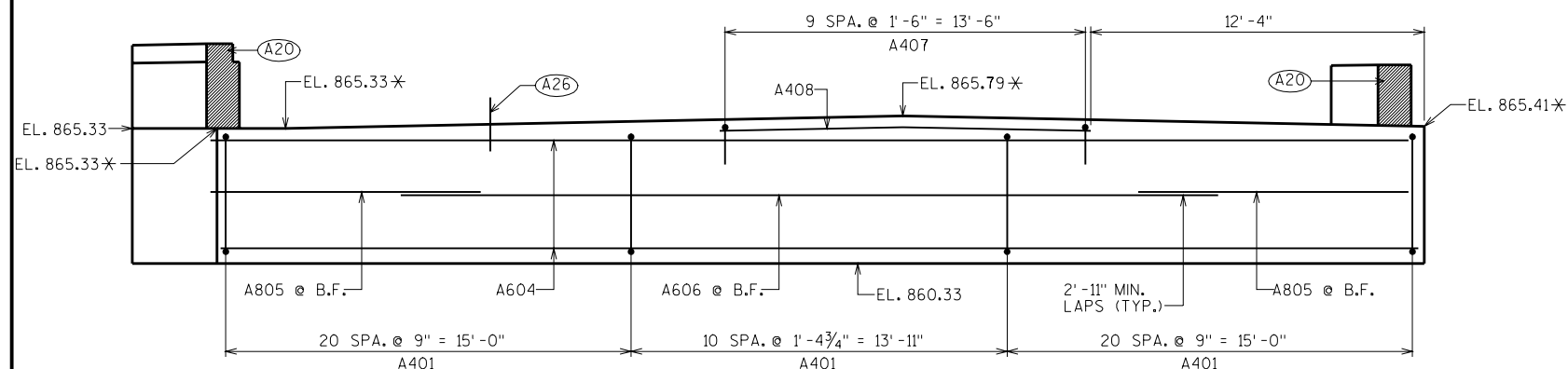
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-56-183			
DRAWN BY JPH		PLANS CK'D. WWR	
SUBSURFACE EXPLORATION		SHEET 3	

8

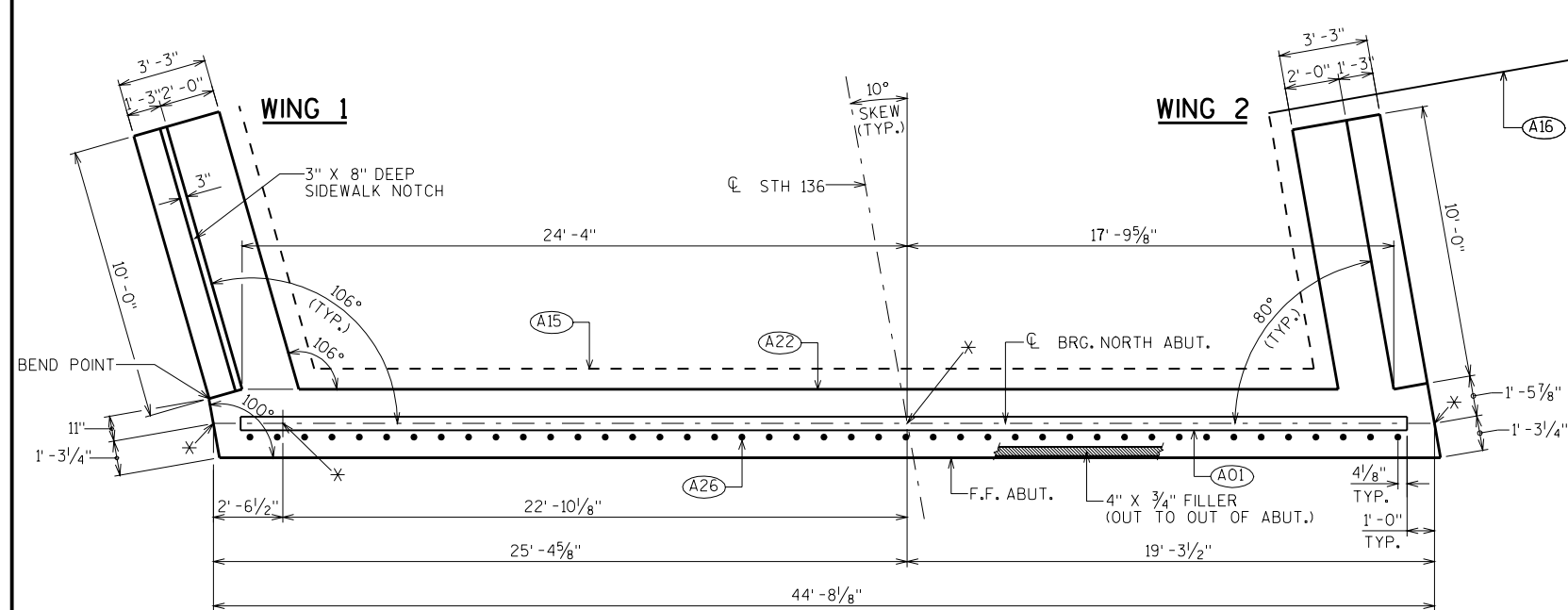
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SCALE = 20

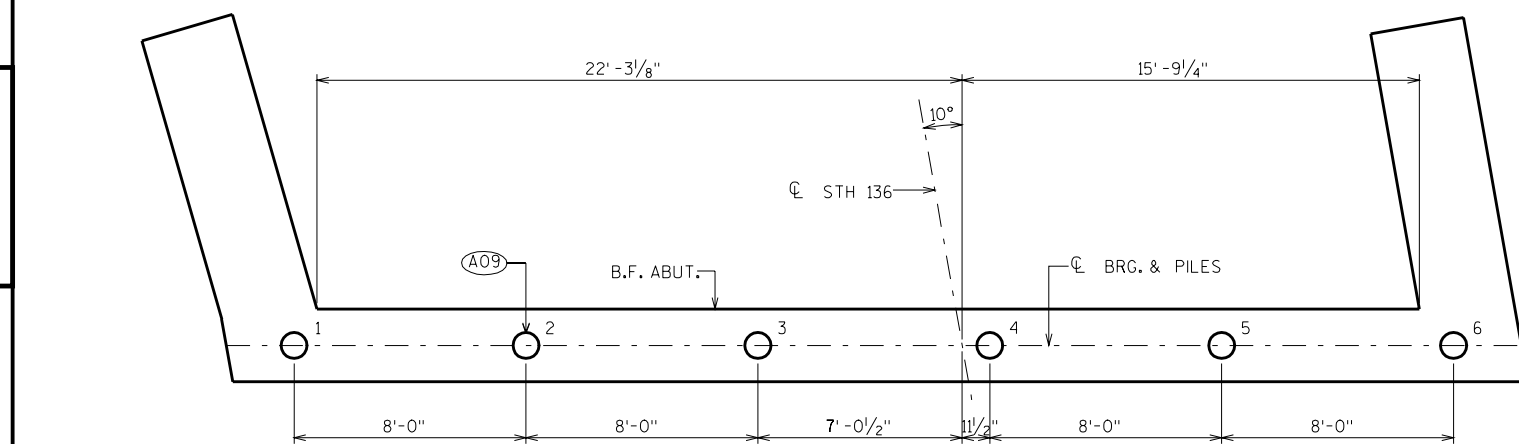
*ELEVATIONS ARE GIVEN HERE.



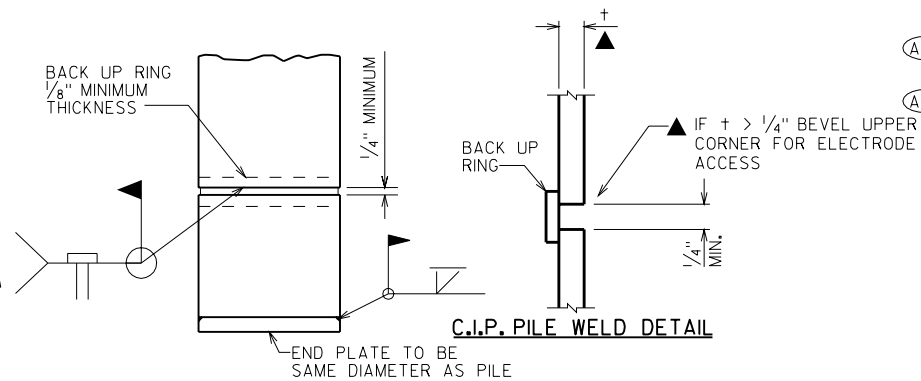
ELEVATION
LOOKING NORTH @ F.F.



PLAN

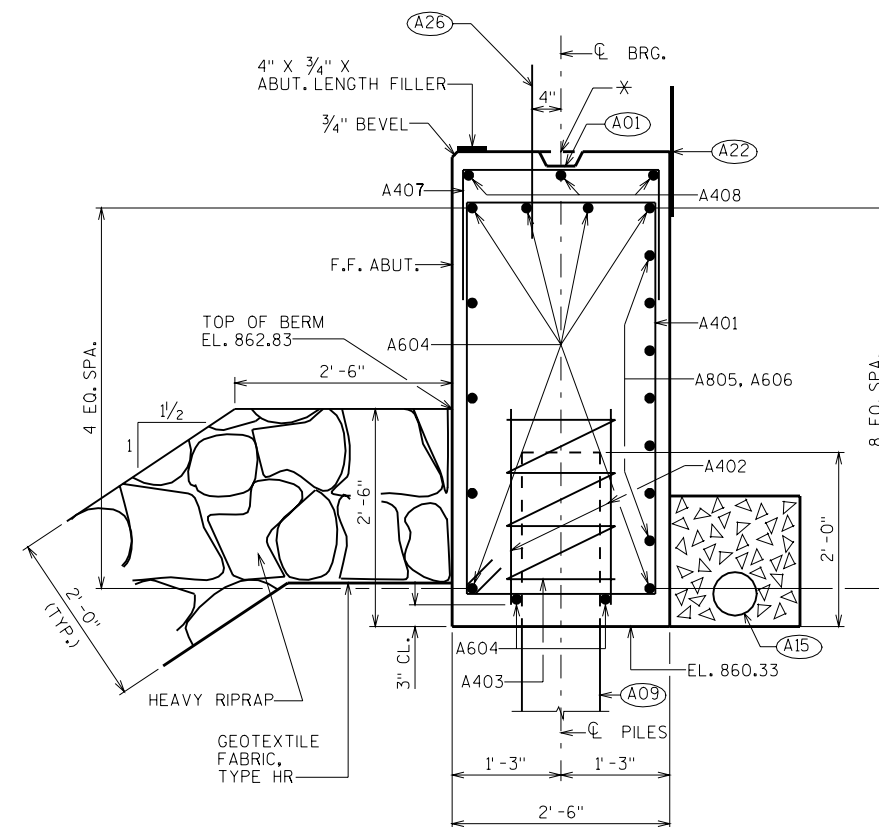


PILE PLAN



CAST-IN-PLACE 'PIPE PILE'

PILE DETAILS



SECTION THRU BODY

- (A01) CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" X 6".
- (A09) SUPPORT ABUTMENT ON 10 3/4" DIA. CAST-IN-PLACE CONCRETE PILING, 0.365" MIN. WALL THICKNESS, ESTIMATED 65 FEET LONG, AND DRIVEN TO A MIN. BRG. VALUE OF 55 TONS PER PILE.
- (A15) PIPE UNDERDRAINS, 6 INCH, SLOPE 0.5% MIN. TO DRAIN. ENCLOSED IN 1'-6" X 1'-6" AREA OF SIZE 1 COARSE AGGREGATE (INCLUDED IN UNDERDRAIN BID ITEM) WRAPPED IN GEOTEXTILE FABRIC, TYPE DF (SCHEDULE A), WITH 1'-6" OVERLAP.
- (A16) PIPE UNDERDRAIN, 6 INCH, UNPERFORATED. TO SUITABLE DRAINAGE.
- (A20) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A22) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A26) A509 BARS @ 1'-0" CTRS. AT TOP OF ABUT. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

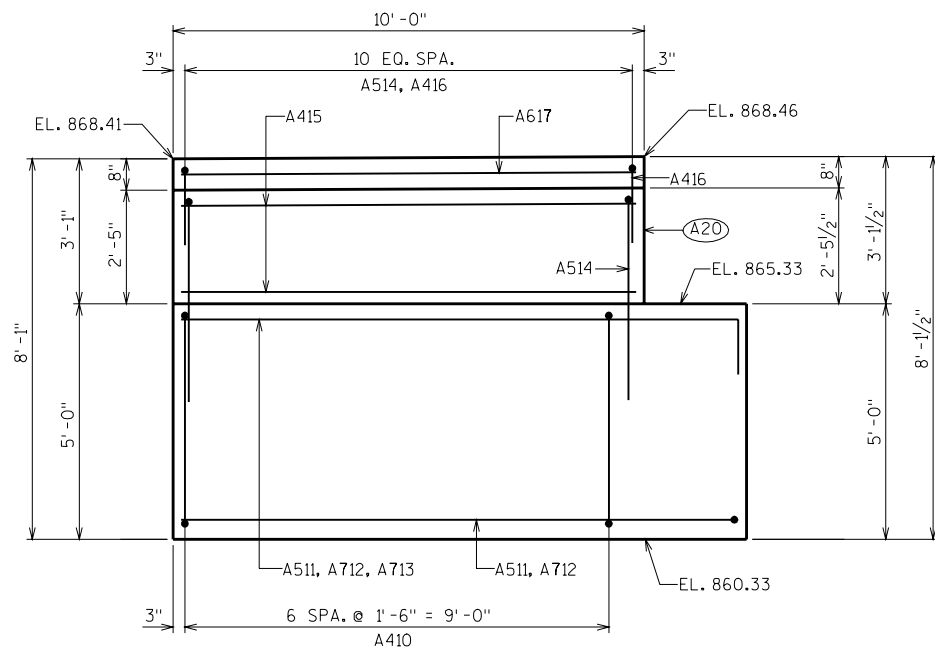
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-56-183			
DRAWN BY JPH		PLANS CK'D. WWR	
NORTH ABUTMENT		SHEET 4	

- (A02) OPTIONAL CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6", (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A20) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A25) FOR PPT. BARS & DIMENSION SEE PARAPET SHEET 13.
- (A26) FOR PPT. BARS & DIMENSION SEE PARAPET SHEET 12.

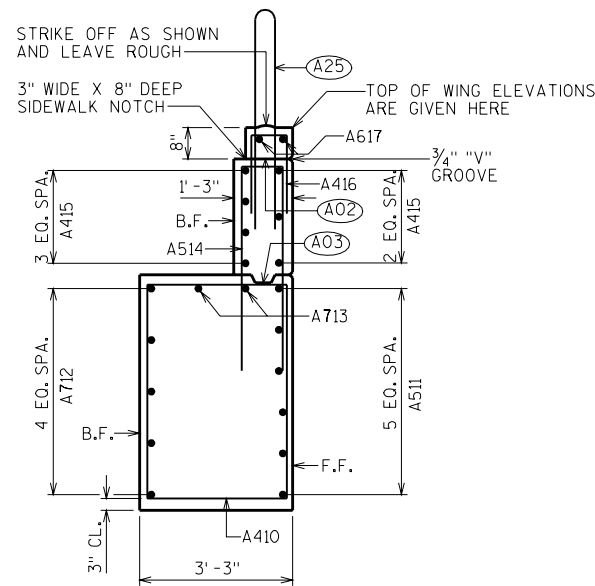
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

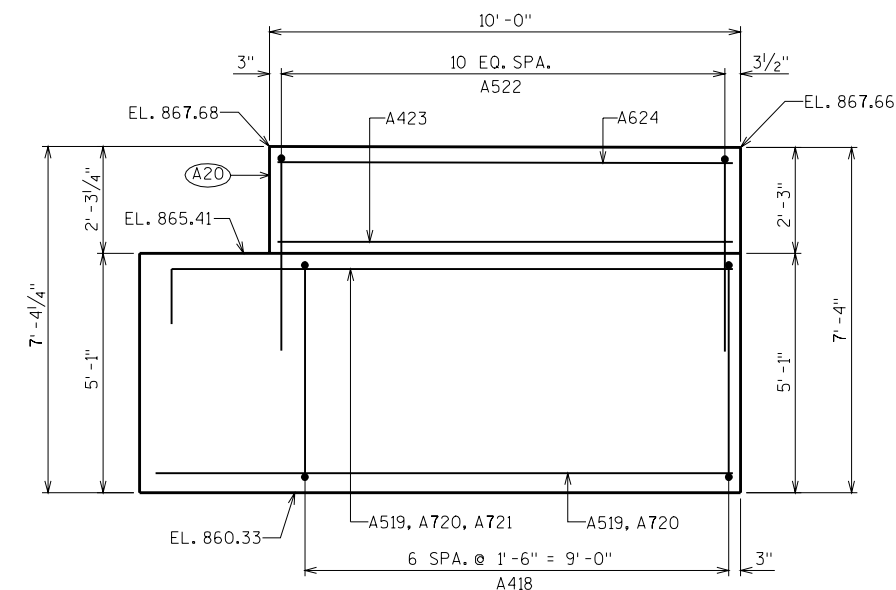
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		51	13-10	X		BODY - STIRRUP - VERT.
A402		12	2-3			BODY - 2 PER PILE - VERT.
A403		6	28-0	X		BODY - SPIRAL - 1 PER PILE - VERT.
A604		11	44-4			BODY - HORIZ.
A805		14	10-0			BODY - HORIZ. - B.F. - AT ENDS
A606		7	30-3			BODY - HORIZ. - B.F. - AT CENTER
A407		10	5-0	X		BODY - TOP - VERT.
A408		3	13-9			BODY - TOP - HORIZ.
A509		43	2-0			BODY - TOP - VERT. - STAB BAR
A410	X	7	15-6	X		WING 1 - STIRRUP - BOT. - VERT.
A511	X	6	11-10			WING 1 - HORIZ. - F.F.
A712	X	5	13-8	X		WING 1 - HORIZ. - B.F.
A713	X	2	13-1	X		WING 1 - HORIZ.
A514	X	11	9-4	X		WING 1 - TOP - VERT.
A415	X	7	9-8			WING 1 - HORIZ. - F.F. & B.F.
A416	X	11	3-10	X		WING 1 - TOP - VERT.
A617	X	2	9-8			WING 1 - TOP - HORIZ. - F.F. & B.F.
A418	X	7	15-8	X		WING 2 - STIRRUP - BOT. - VERT.
A519	X	6	12-3			WING 2 - HORIZ. - F.F.
A720	X	5	12-9	X		WING 2 - HORIZ. - B.F.
A721	X	2	12-11	X		WING 2 - HORIZ.
A522	X	11	9-0	X		WING 2 - TOP - VERT.
A423	X	5	9-8			WING 2 - HORIZ. - F.F. & B.F.
A624	X	2	9-8			WING 2 - TOP - HORIZ. - F.F. & B.F.



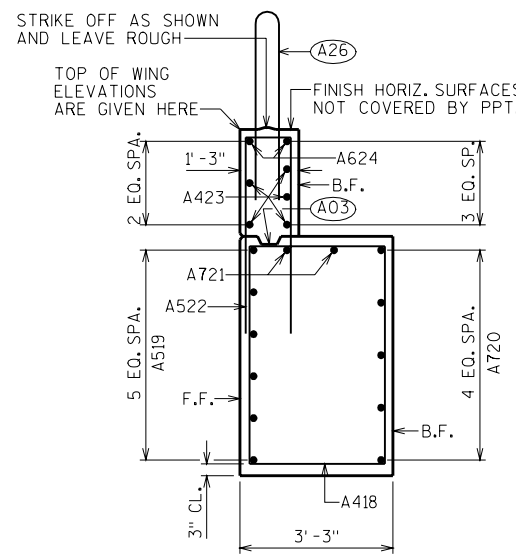
WING 1 ELEVATION
LOOKING @ F.F. WING



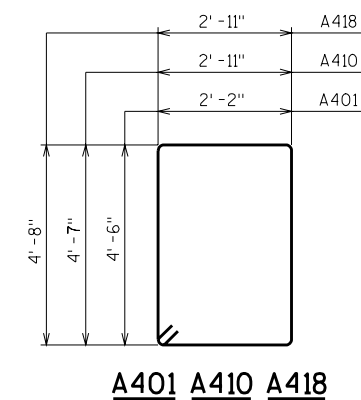
SECTION THRU WING 1



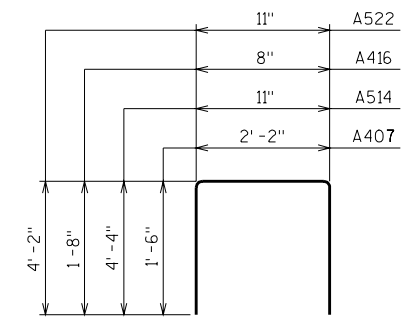
WING 2 ELEVATION
LOOKING @ F.F. WING



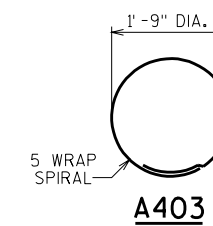
SECTION THRU WING 2



A401 A410 A418



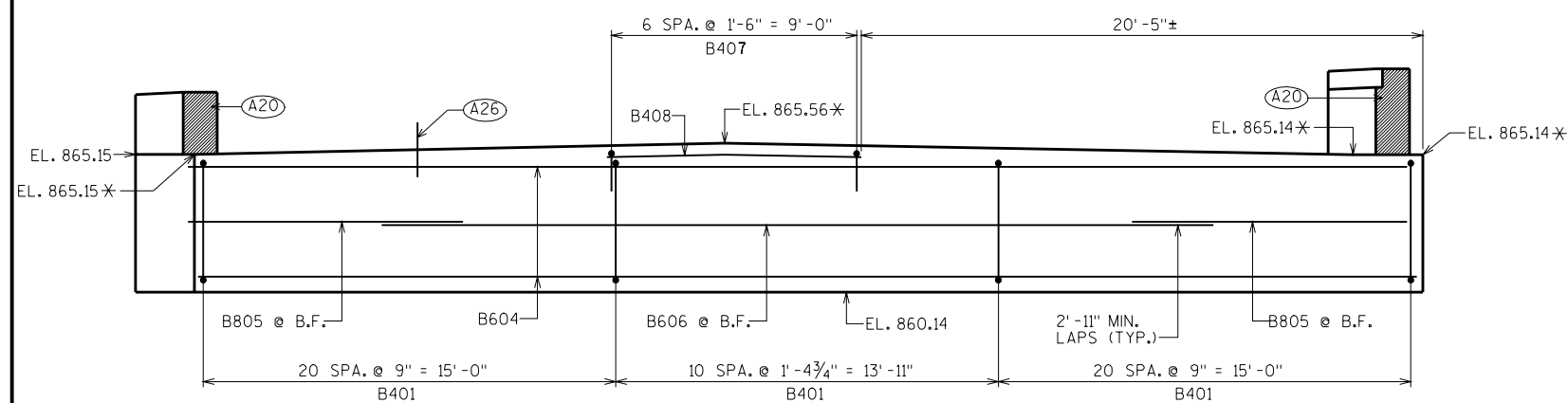
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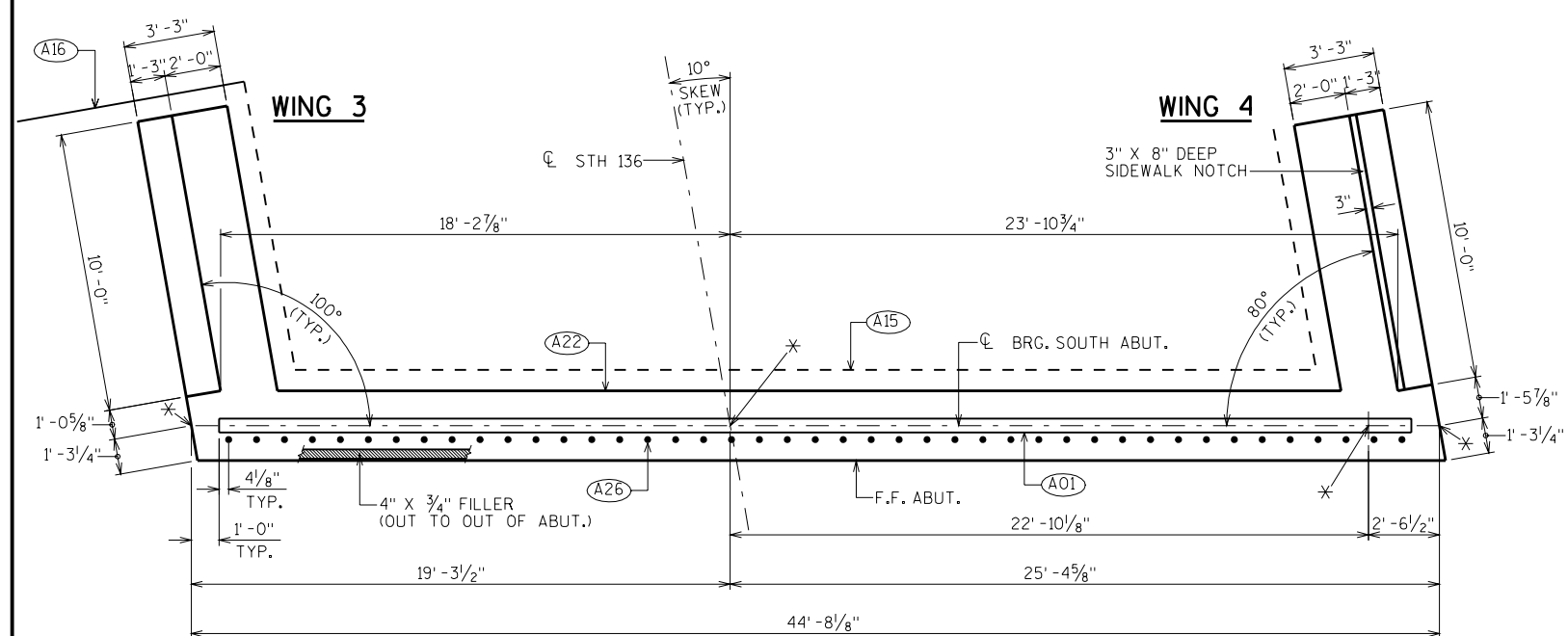
A403

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-56-183			
DRAWN BY JPH		PLANS CK'D. WWR	
NORTH ABUTMENT DETAILS			SHEET 5

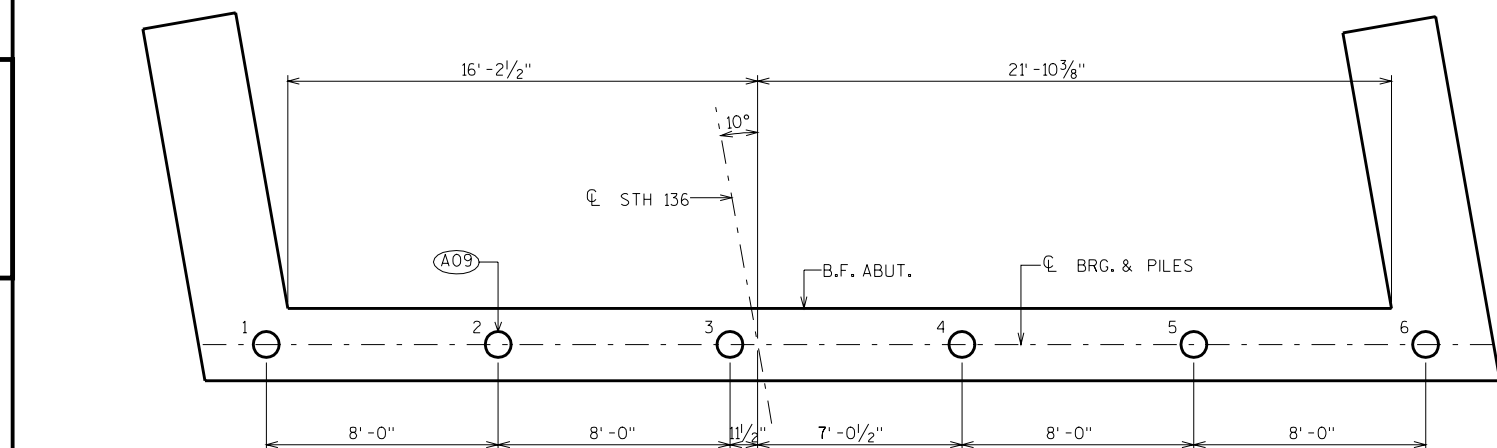
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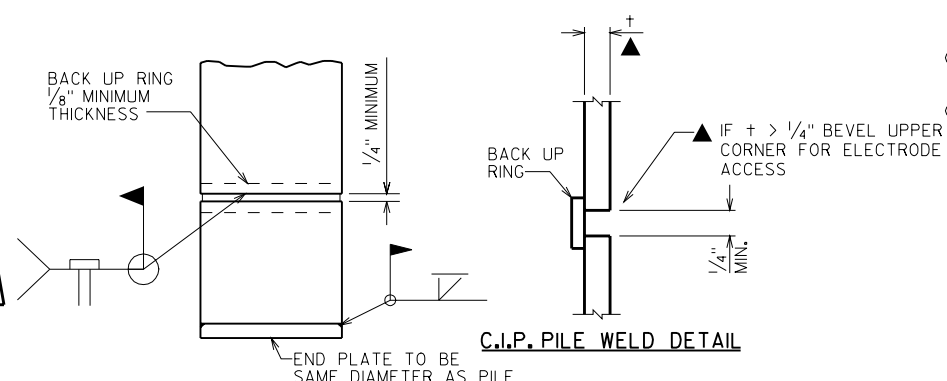
ELEVATION
LOOKING SOUTH @ F.F.



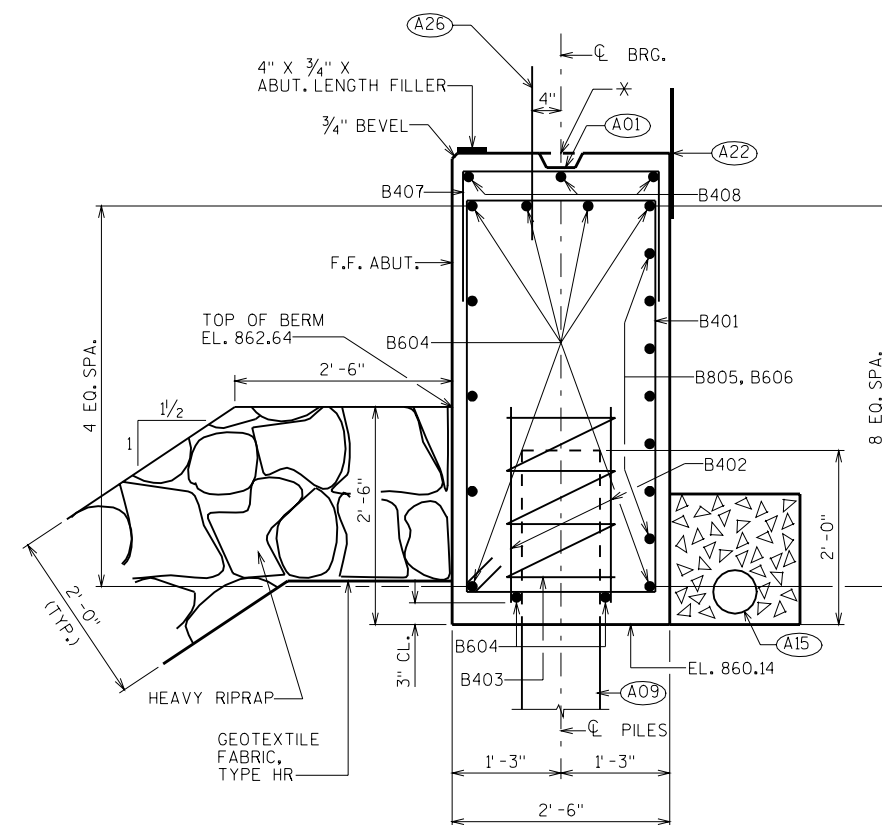
PLAN



PILE PLAN



CAST-IN-PLACE 'PIPE PILE'
PILE DETAILS



SECTION THRU BODY

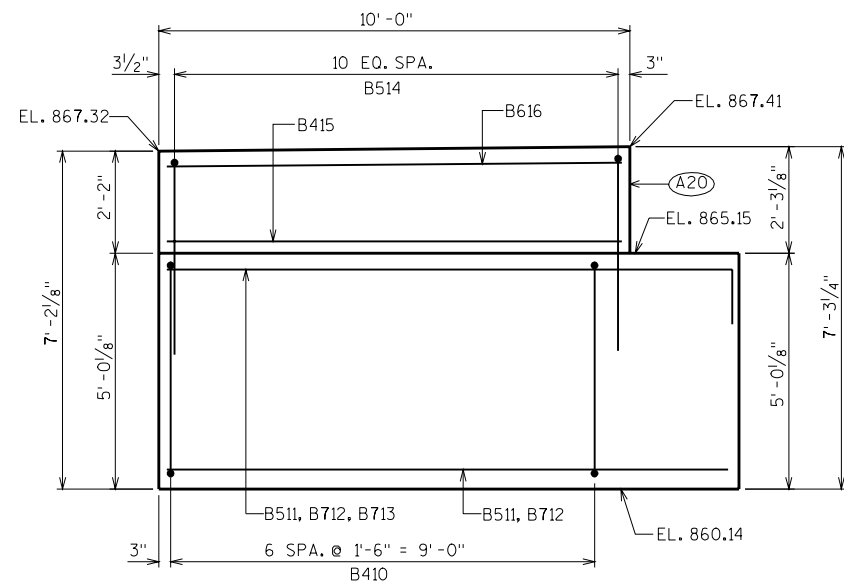
- (A01) CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" x 6".
- (A09) SUPPORT ABUTMENT ON 10 3/4" DIA. CAST-IN-PLACE CONCRETE PILING, 0.365" MIN. WALL THICKNESS, ESTIMATED 100 FEET LONG, AND DRIVEN TO A MIN. BRG. VALUE OF 55 TONS PER PILE.
- (A15) PIPE UNDERDRAINS, 6 INCH. SLOPE 0.5% MIN. TO DRAIN. ENCLOSED IN 1'-6" X 1'-6" AREA OF SIZE 1 COARSE AGGREGATE (INCLUDED IN UNDERDRAIN BID ITEM) WRAPPED IN GEOTEXTILE FABRIC, TYPE DF (SCHEDULE A), WITH 1'-6" OVERLAP.
- (A16) PIPE UNDERDRAIN, 6 INCH, UNPERFORATED, TO SUITABLE DRAINAGE.
- (A20) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A22) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A26) B509 BARS @ 1'-0" CTRS. AT TOP OF ABUT. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-56-183			
DRAWN BY		JPH	PLANS CK'D. WWR
SOUTH ABUTMENT			SHEET 6

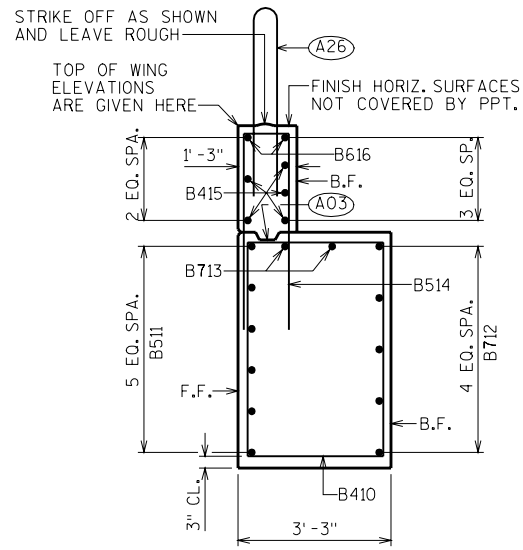
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		51	13-10	X		BODY - STIRRUP - VERT.
B402		12	2-3			BODY - 2 PER PILE - VERT.
B403		6	28-0	X		BODY - SPIRAL - 1 PER PILE - VERT.
B604		11	44-4			BODY - HORIZ.
B805		14	10-0			BODY - HORIZ. - B.F. - AT ENDS
B606		7	30-3			BODY - HORIZ. - B.F. - AT CENTER
B407		7	5-0	X		BODY - TOP - VERT.
B408		3	9-3			BODY - TOP - HORIZ.
B509		43	2-0			BODY - TOP - VERT. - STAB BAR
B410	X	14	15-6	X		WINGS 3 & 4 - STIRRUP - BOT. - VERT.
B511	X	6	11-11			WING 3 - HORIZ. - F.F.
B712	X	5	13-4	X		WING 3 - HORIZ. - B.F.
B713	X	2	13-0	X		WING 3 - HORIZ.
B514	X	11	9-0	X		WING 3 - TOP - VERT.
B415	X	5	9-8			WING 3 - HORIZ. - F.F. & B.F.
B616	X	2	9-8			WING 3 - TOP - HORIZ. - F.F. & B.F.
B517	X	6	12-3			WING 4 - HORIZ. - F.F.
B718	X	5	12-9	X		WING 4 - HORIZ. - B.F.
B719	X	2	13-0	X		WING 4 - HORIZ.
B520	X	11	9-4	X		WING 4 - TOP - VERT.
B421	X	7	9-8			WING 4 - TOP - HORIZ. - F.F. & B.F.
B422	X	11	3-10	X		WING 4 - TOP - VERT.
B623	X	2	9-8			WING 4 - TOP - HORIZ. - F.F. & B.F.

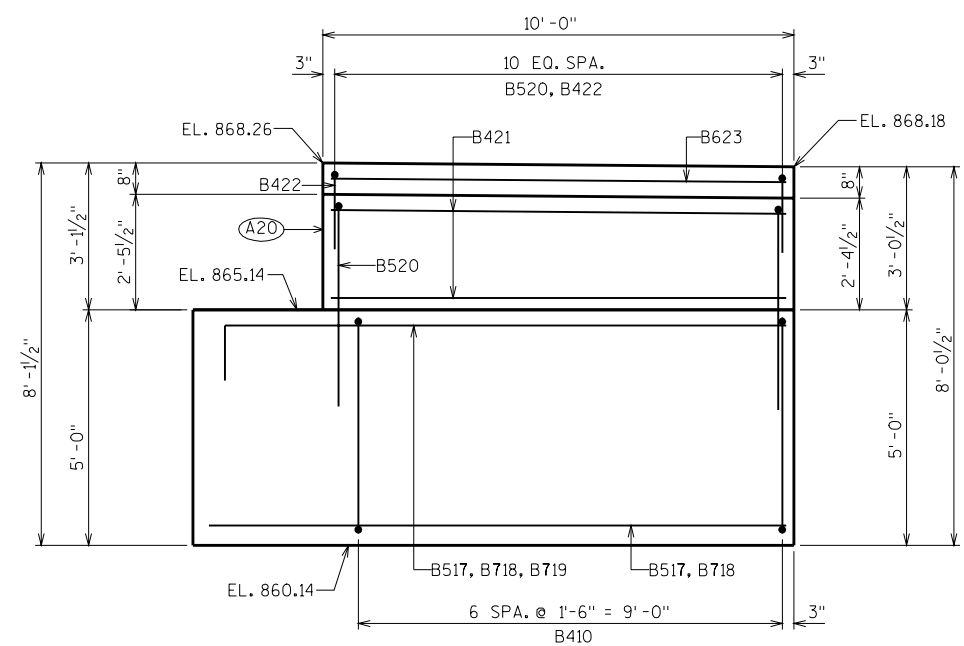


WING 3 ELEVATION
LOOKING @ F.F. WING

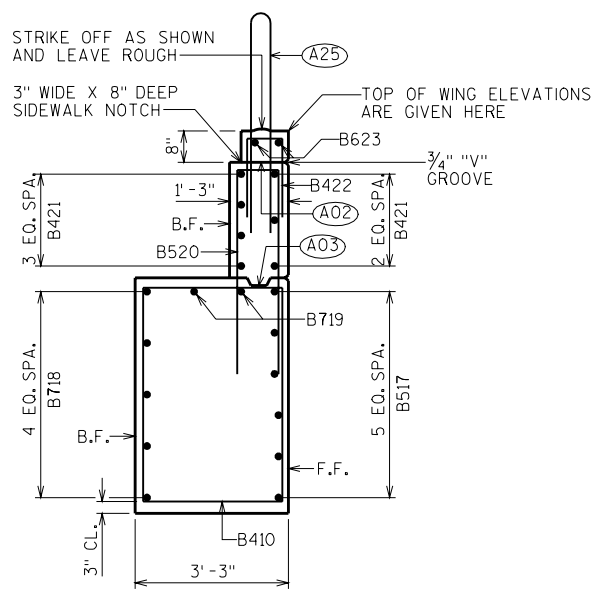


SECTION THRU WING 3

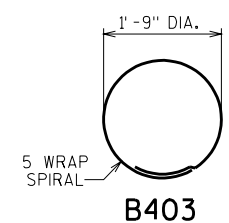
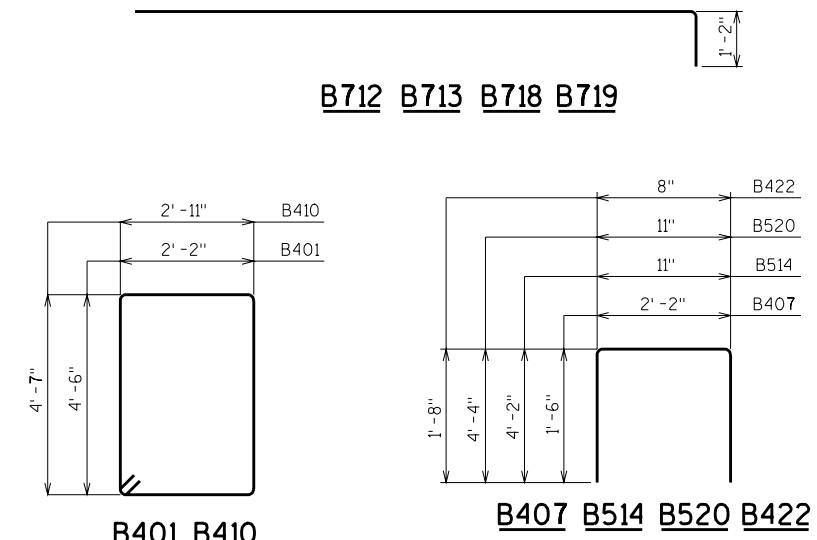
- (A02) OPTIONAL CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6", (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A20) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A25) FOR PPT. BARS & DIMENSION SEE PARAPET SHEET 14.
- (A26) FOR PPT. BARS & DIMENSION SEE PARAPET SHEET 12.



WING 4 ELEVATION
LOOKING @ F.F. WING



SECTION THRU WING 4



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-56-183			
DRAWN BY JPH		PLANS CK'D. WWR	
SOUTH ABUTMENT DETAILS			SHEET 7

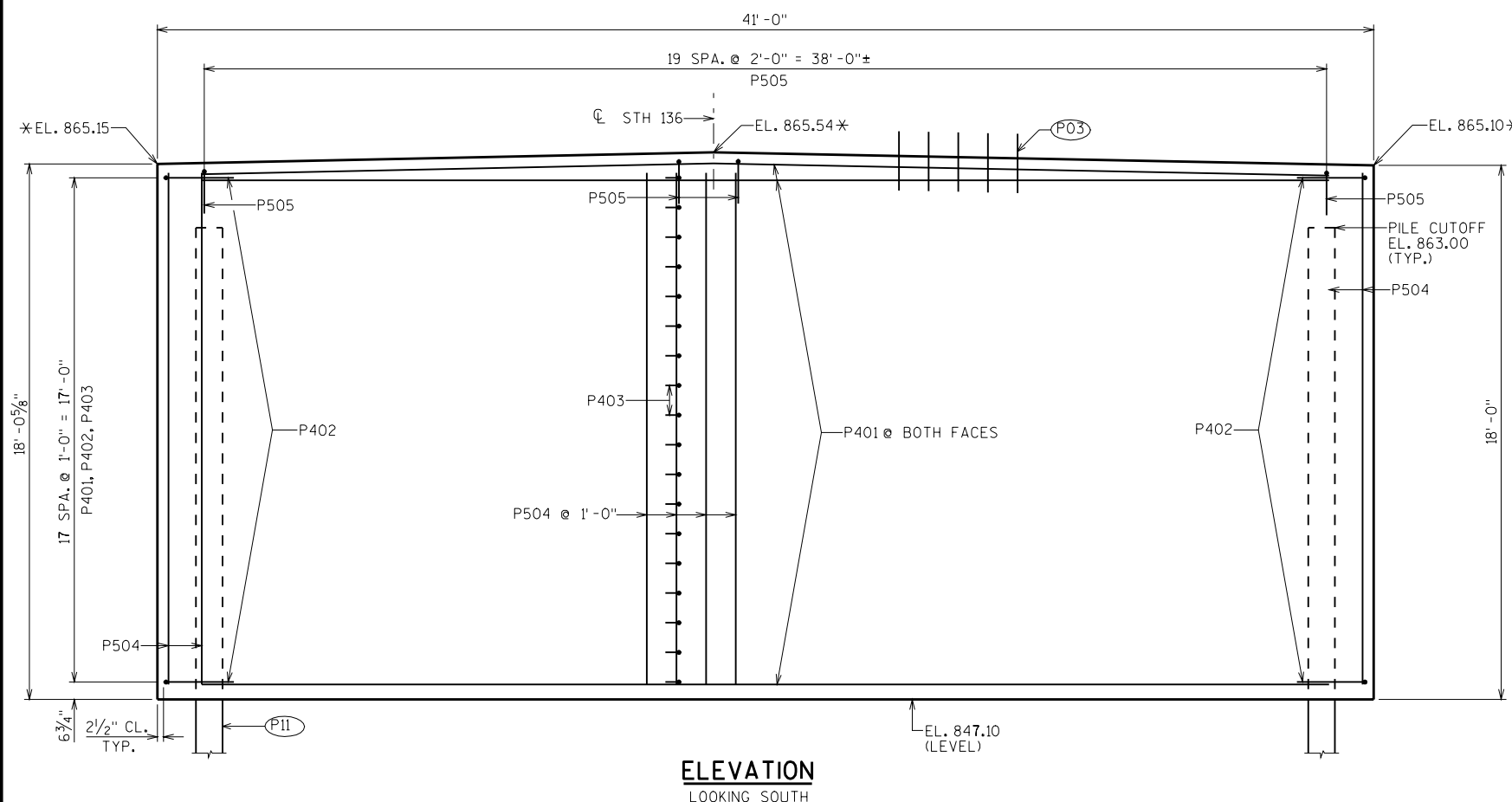
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8

BILL OF BARS

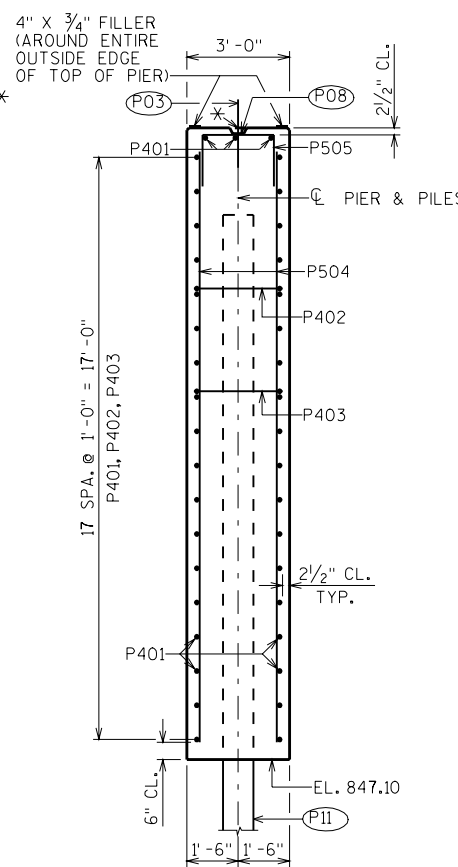
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P401		39	38-0			SHAFT - HORIZ. - AT BOTH FACES
P402		36	6-2	X		SHAFT - HORIZ. - AT BOTH ENDS
P403		198	3-2	X		SHAFT - HORIZ. - AT EACH PILE
P504		84	17-3			SHAFT - VERT. - AT BOTH FACES
P505		20	5-3	X		SHAFT - TOP - VERT.
P506		40	2-0			SHAFT - TOP - VERT. - CENTER

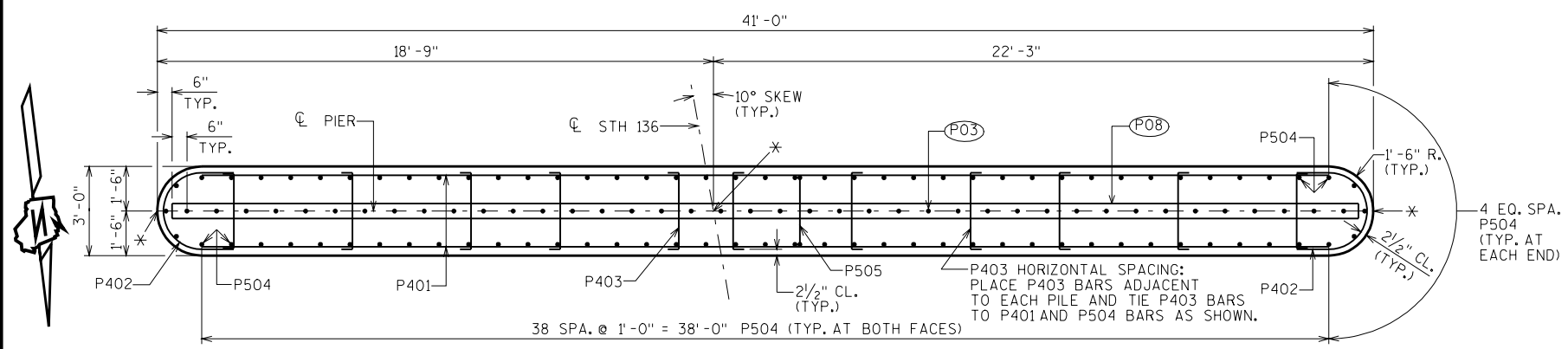
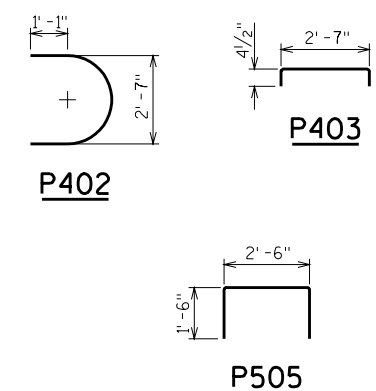


ELEVATION
LOOKING SOUTH

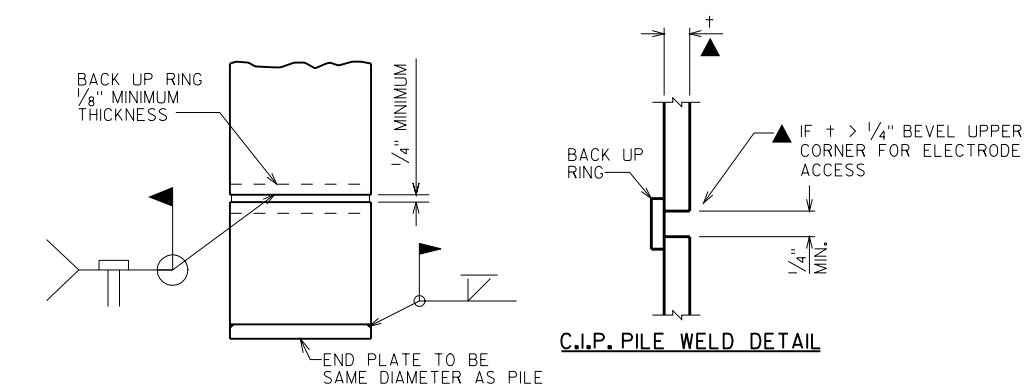
*ELEVATIONS ARE GIVEN HERE



SECTION THRU PIER



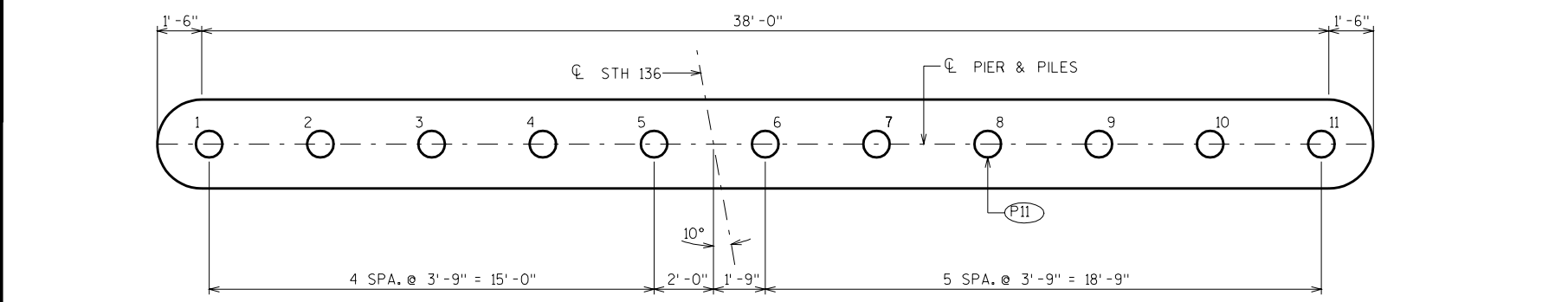
PLAN



CAST-IN-PLACE 'PIPE PILE'

C.I.P. PILE WELD DETAIL

PILE DETAILS



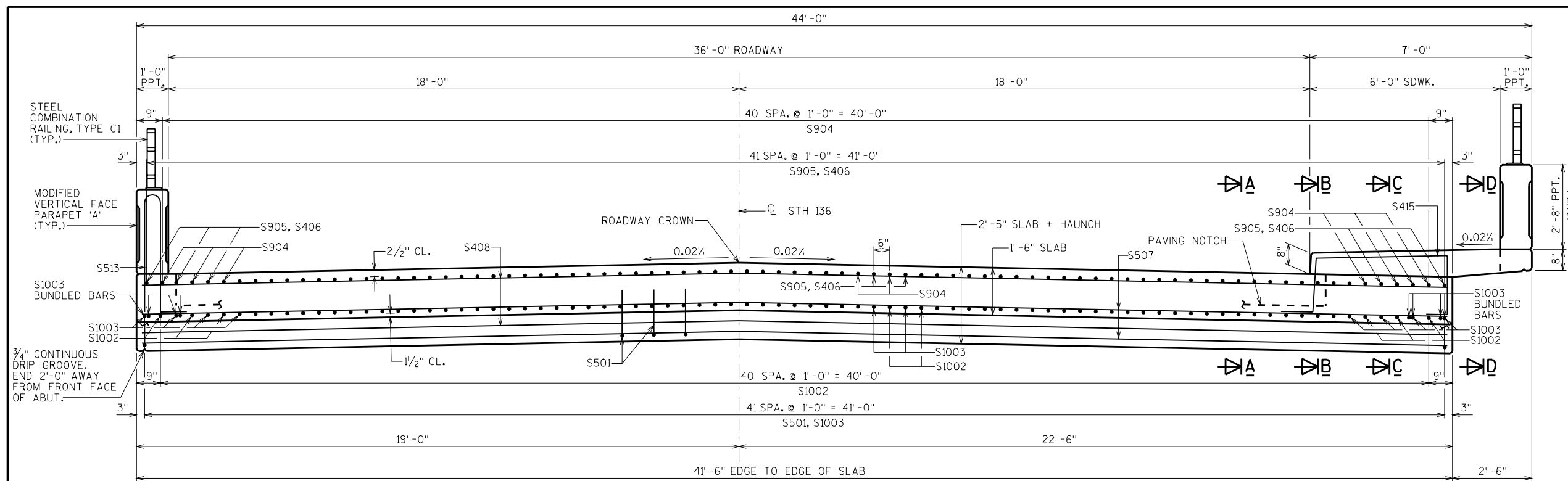
PILE PLAN

- (P03) P506 BARS @ 1'-0" CTRS. AT TOP OF PIER. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P08) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6".
- (P11) SUPPORT PIER ON 10 3/4" DIA. CAST-IN-PLACE CONCRETE PILING, 0.365" MIN. WALL THICKNESS, ESTIMATED 110 FEET LONG, AND DRIVEN TO A MIN. BRG. VALUE OF 55 TONS PER PILE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-56-183			
DRAWN BY JPH		PLANS CK'D. WWR	
PIER			SHEET 8

8

8



CROSS SECTION THRU ROADWAY

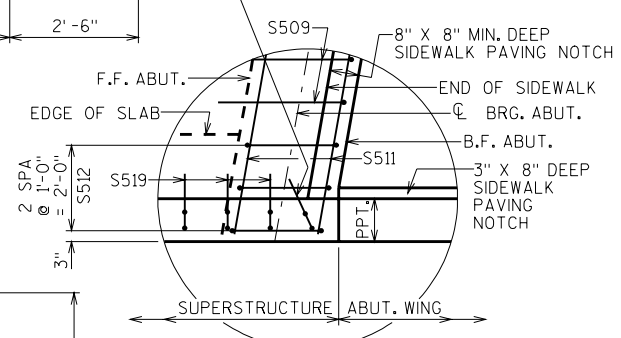
LOOKING SOUTH

WIRE BARS TOGETHER @ 2'-0" CTR'S.



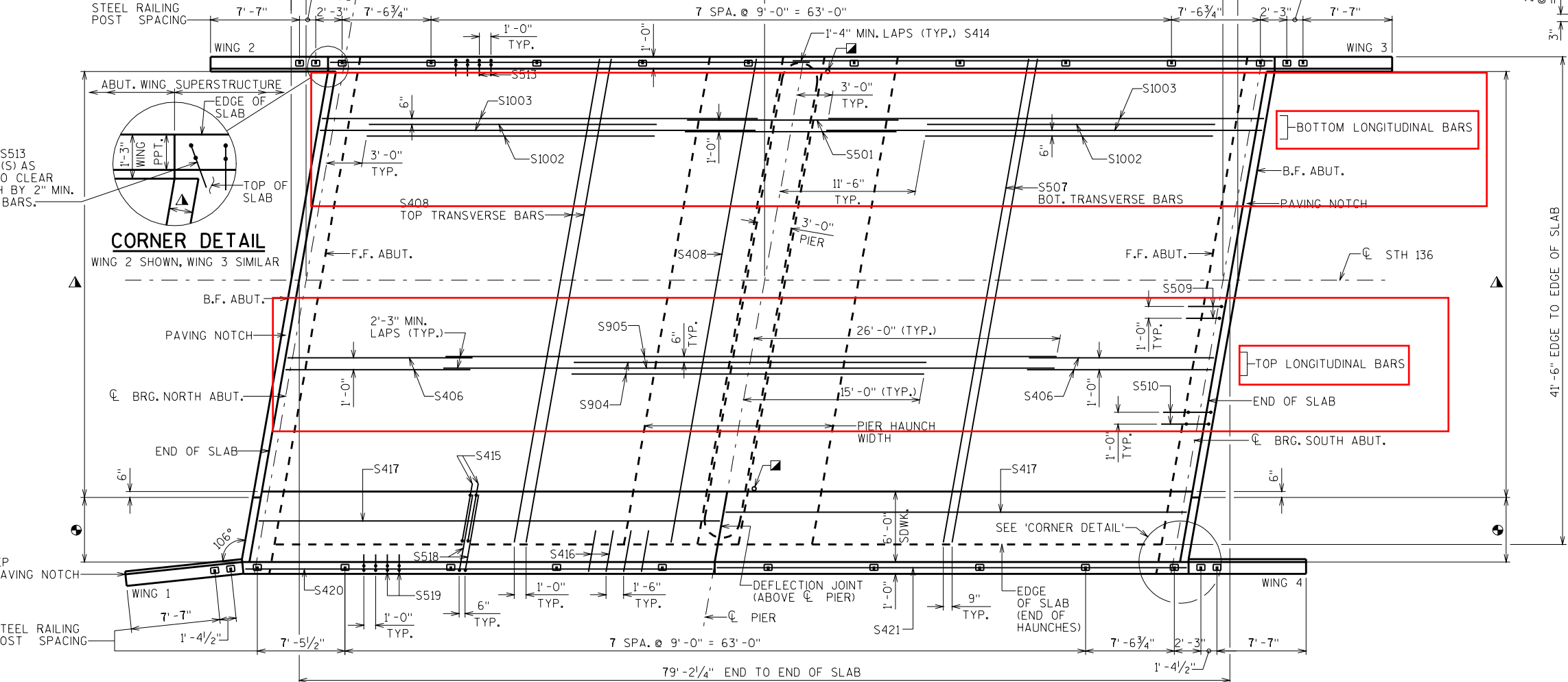
NOTE: SECTIONS A-A, B-B, C-C AND D-D ARE TAKEN THRU THE ABUTMENT AT THE LOCATIONS SHOWN. SEE SHEET 10 FOR SECTION DETAILS.

ROTATE END S519 PARAPET BARS AS NECESSARY TO CLEAR PAVING NOTCH BY 2" MIN. DO NOT CUT BARS.



CORNER DETAIL

WING 4 SHOWN, WING 1 SIMILAR



PLAN

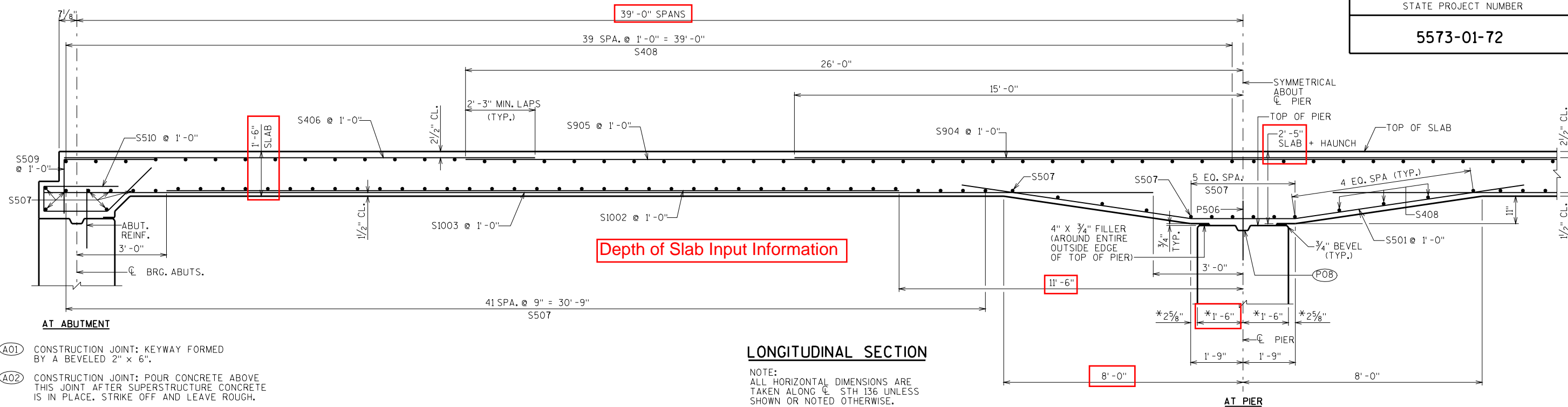
4" PVC PIPES FOR DRAINAGE: SEE SHEET 10 FOR DETAILS. CENTER OF PIPE LOCATIONS: STA. 97+99.38, OFFSET 17'-9" LEFT OF C/S TH 136. STA. 97+93.11, OFFSET 17'-9" RIGHT OF C/S TH 136.

- AREA OF 8" X 8" MIN. DEEP SIDEWALK PAVING NOTCH
- AREA OF 8" X 1'-0" DEEP ROADWAY PAVING NOTCH

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-56-183			
DRAWN BY JPH		PLANS CKD. WWR	
SUPERSTRUCTURE		SHEET 9	

8

8

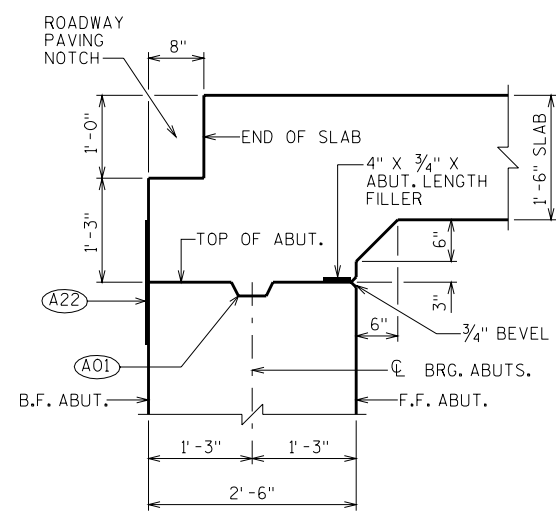


LONGITUDINAL SECTION

NOTE:
ALL HORIZONTAL DIMENSIONS ARE TAKEN ALONG ϕ STH 136 UNLESS SHOWN OR NOTED OTHERWISE.

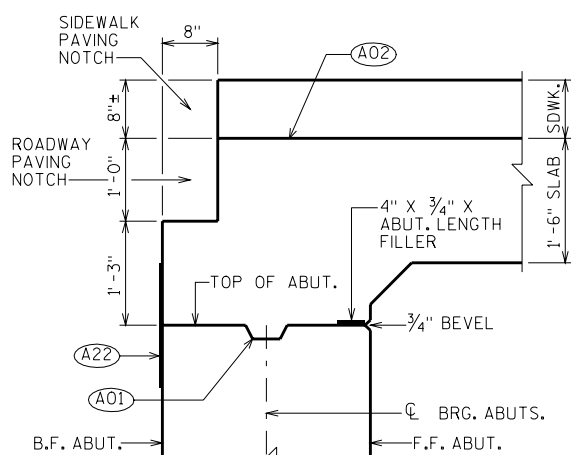
*DIMENSIONS ARE TAKEN PERPENDICULAR TO THE ϕ PIER.

- (A01) CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" X 6".
- (A02) CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- (A22) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (PO8) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" X 6".



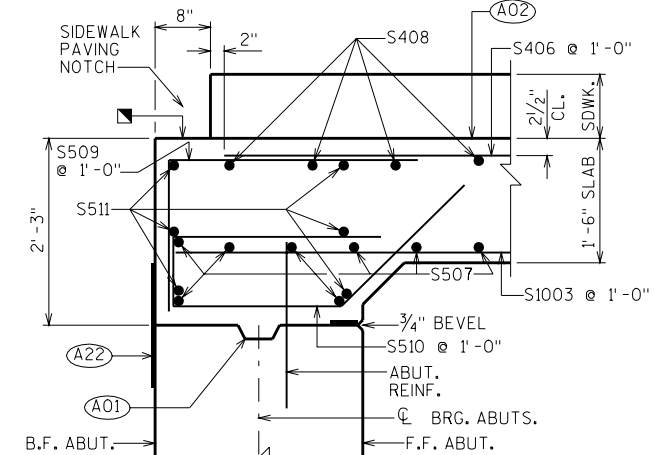
SECTION A-A

TYPICAL SECTION THRU ABUTMENT HAUNCH BETWEEN CURBS.
STEEL REINFORCEMENT NOT SHOWN; SEE 'LONGITUDINAL SECTION' FOR REINFORCEMENT DETAILS.
ALL HORIZONTAL DIMENSIONS ARE TAKEN PERPENDICULAR TO THE ϕ BRG. ABUT.



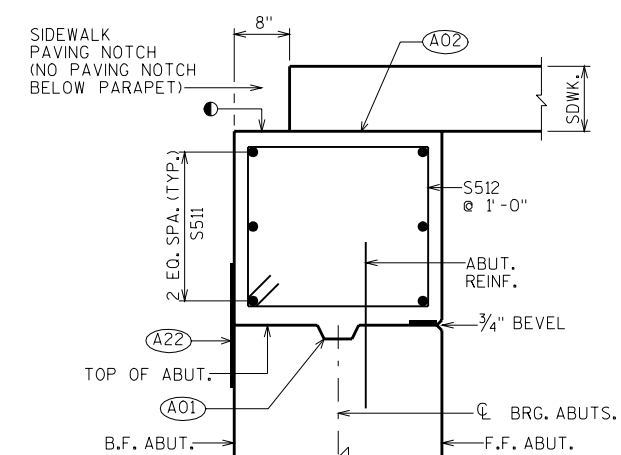
SECTION B-B

SECTION THRU ABUTMENT HAUNCH AT SIDEWALK AND ROADWAY PAVING NOTCH (6" WIDE AREA).
STEEL REINFORCEMENT NOT SHOWN; SEE 'LONGITUDINAL SECTION' FOR REINFORCEMENT DETAILS.
ALL HORIZONTAL DIMENSIONS ARE TAKEN PERPENDICULAR TO THE ϕ BRG. ABUT.
SEE 'SECTION A-A' FOR DIMENSIONS NOT SHOWN.



SECTION C-C

TYPICAL SECTION THRU ABUTMENT HAUNCH AT SIDEWALK INSIDE EDGE OF SLAB (4" WIDE AREA).
SIDEWALK REINFORCEMENT NOT SHOWN.
ALL HORIZONTAL DIMENSIONS ARE TAKEN PERPENDICULAR TO THE ϕ BRG. ABUT.
SEE 'SECTION A-A' FOR DIMENSIONS NOT SHOWN.

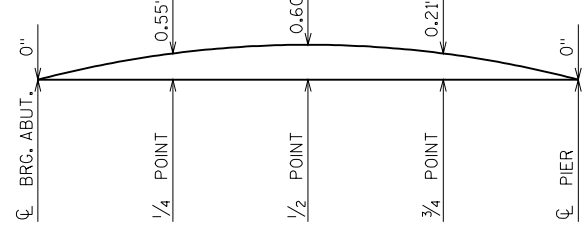


SECTION D-D

TYPICAL SECTION THRU ABUTMENT HAUNCH AT SIDEWALK OUTSIDE EDGE OF SLAB (2" WIDE AREA).
SIDEWALK REINFORCEMENT NOT SHOWN.
ALL HORIZONTAL DIMENSIONS ARE TAKEN PERPENDICULAR TO THE ϕ BRG. ABUT.

GENERAL NOTES

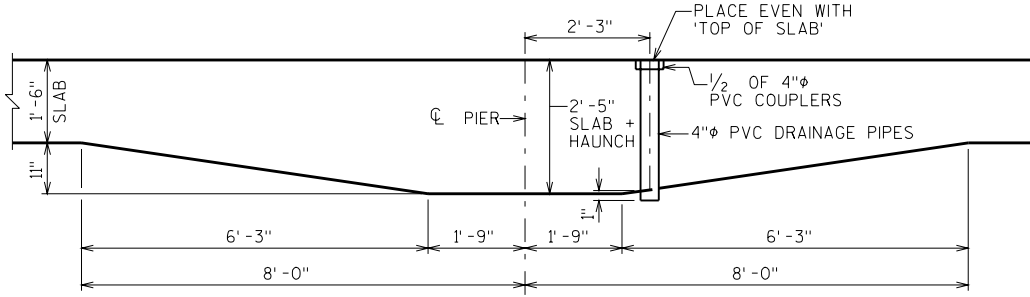
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.
ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).
PARAPETS ABOVE THE HORIZONTAL CONSTRUCTION JOINT SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.



CAMBER DIAGRAM

SYMMETRICAL ABOUT ϕ PIER

NOTE:
CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

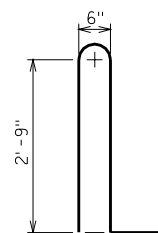
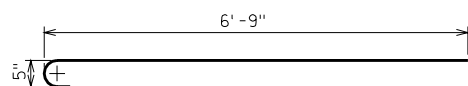
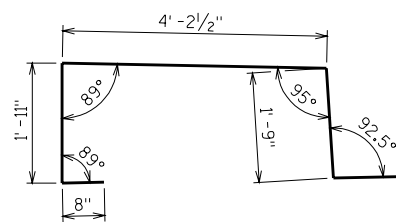
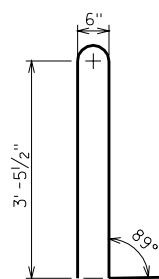
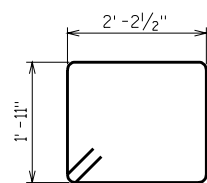
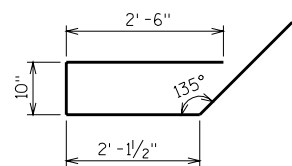
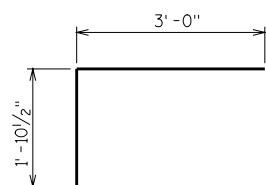
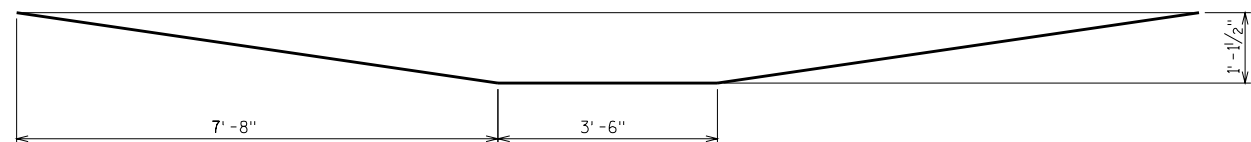


PART LONGITUDINAL SECTION & DRAINAGE PIPE DETAILS

SECTION THRU PIER HAUNCH OUTSIDE OF PIER ENDS.
ALL HORIZONTAL DIMENSIONS ARE TAKEN PARALLEL TO ϕ STH 136.
STEEL REINFORCEMENT NOT SHOWN; SEE 'LONGITUDINAL SECTION' FOR REINFORCEMENT DETAILS.
DRAINAGE PIPES SHALL BE INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES". (2 REQUIRED)

- MATCH BOTTOM OF SIDEWALK PAVING NOTCH WITH SLOPE OF TOP OF SLAB INSIDE THE EDGE OF SLAB.
- MATCH BOTTOM OF SIDEWALK PAVING NOTCH WITH SLOPE OF BOTTOM OF SIDEWALK OUTSIDE THE EDGE OF SLAB.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-56-183			
DRAWN BY JPH		PLANS CK'D. WWR	
SUPERSTRUCTURE DETAILS		SHEET 10	

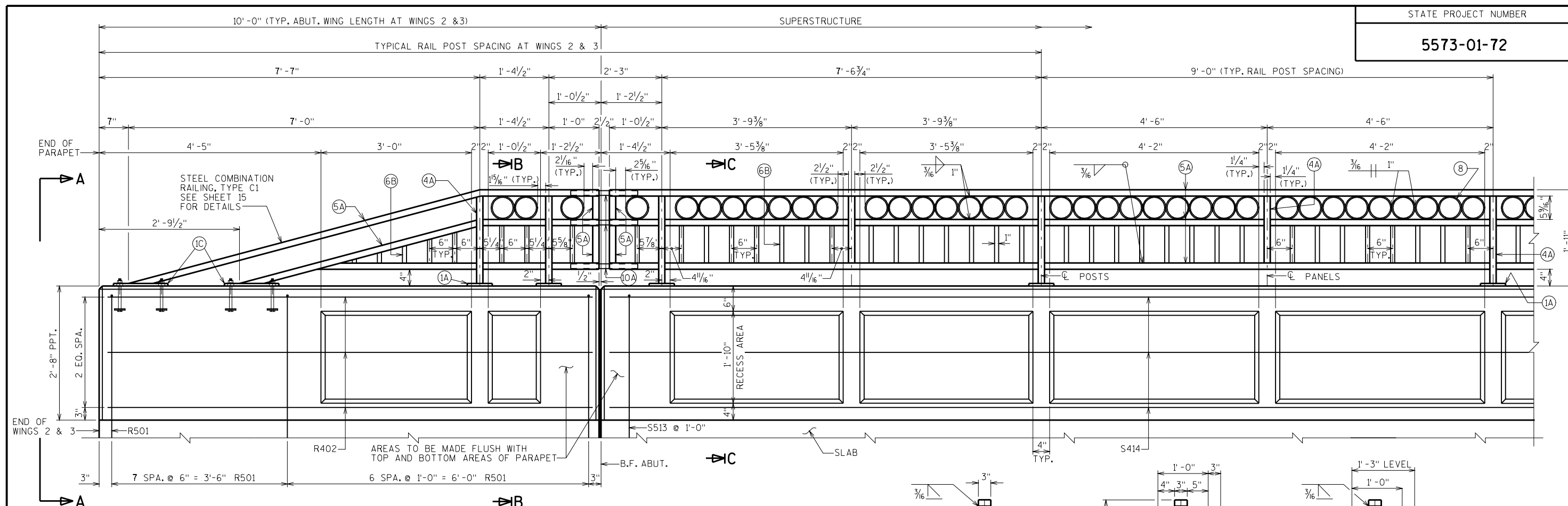


BILL OF BARS

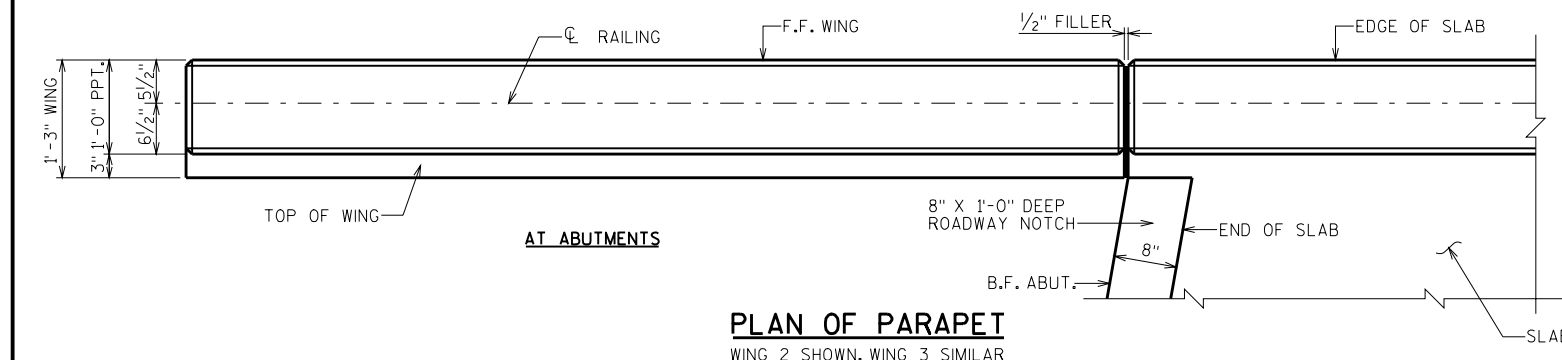
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	X	42	19-0	X	PIER HAUNCH - LONGIT. - VERT. - BOT.
S1002	X	82	24-6		SLAB - LONGIT. - HORIZ. - BOT. - SPANS 1 & 2
S1003	X	84	37-1		SLAB - LONGIT. - HORIZ. - BOT. - SPANS 1 & 2
S904	X	41	30-0		SLAB - LONGIT. - HORIZ. - TOP - ABOVE PIER
S905	X	42	52-0		SLAB - LONGIT. - HORIZ. - TOP - ABOVE PIER
S406	X	84	15-9		SLAB - LONGIT. - HORIZ. - TOP - SPANS 1 & 2
S507	X	98	41-10		SLAB, ABUT. HAUNCH & PIER HANCH - TRANS. - HORIZ. - BOT.
S408	X	86	41-10		TOP OF SLAB & BOT. OF PIER HAUNCH - TRANS. - HORIZ.
S509	X	84	4-9	X	ABUT. HAUNCH & SLAB - VERT.
S510	X	84	7-3	X	ABUT. HAUNCH & SLAB - VERT - BOT.
S511	X	12	6-3		ABUT HAUNCH - TRANS. - HORIZ. - UNDER SIDEWALK
S512	X	6	8-11	X	ABUT. HAUNCH - STIRRUP - VERT. - OUTSIDE EDGE OF SLAB - UNDER SDWK.
S513	X	81	8-5	X	SLAB & EAST PARAPET - TRANS. - VERT.
S414	X	12	40-10		EAST PARAPET - LONGIT. - HORIZ.
S415	X	159	9-3	X	SLAB & SIDEWALK - TRANS. - VERT.
S416	X	54	3-7		SIDEWALK - TRANS. - HORIZ. - BOT.
S417	X	30	39-3		SIDEWALK - LONGIT. - HORIZ. - TOP & BOT. - SPANS 1 & 2
S518	X	159	7-4	X	SIDEWALK - TRANS. - HORIZ.
S519	X	81	7-0	X	SIDEWALK & WEST PARAPET - TRANS. - VERT.
S420	X	6	39-9		WEST PARAPET - LONGIT. - HORIZ. - SPAN 1
S421	X	6	40-0		WEST PARAPET - LONGIT. - HORIZ. - SPAN 2

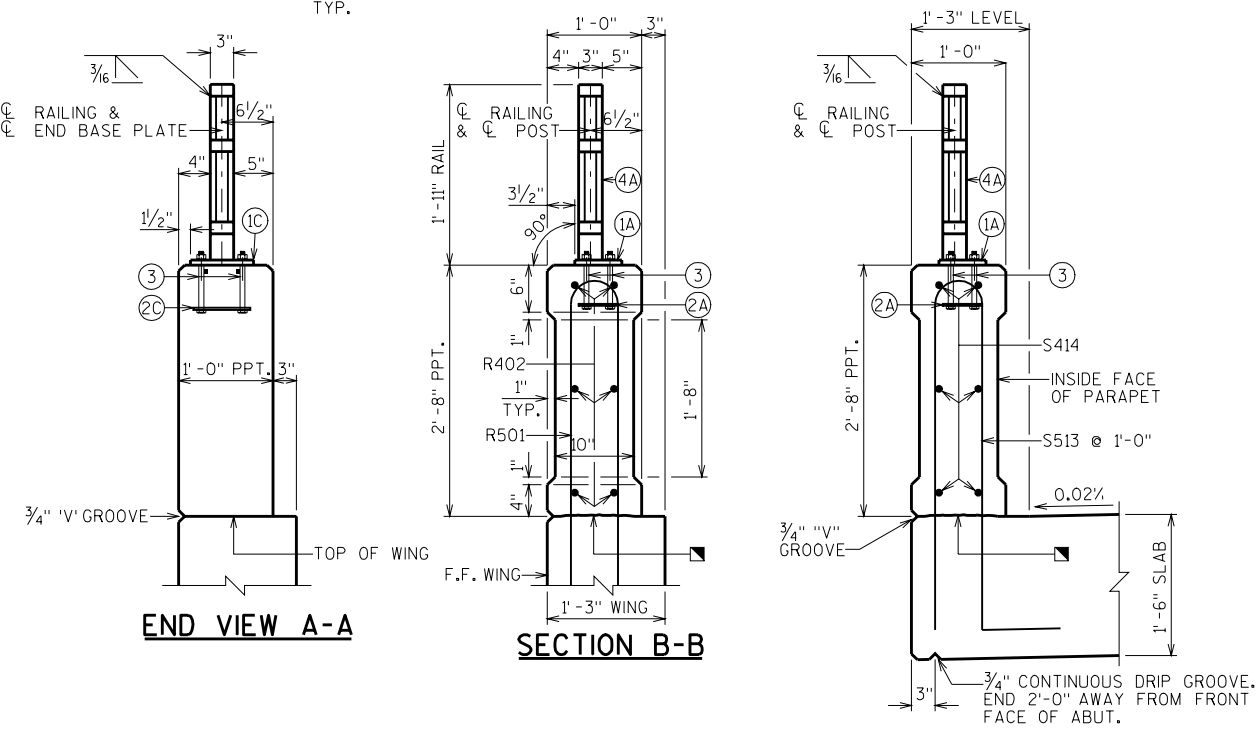
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-56-183			
DRAWN BY JPH		PLANS CK'D. WWR	
SUPERSTRUCTURE BAR DETAILS			SHEET 11



INSIDE AND OUTSIDE ELEVATION OF PARAPET
(MODIFIED VERTICAL FACE PARAPET 'A')



PLAN OF PARAPET
WING 2 SHOWN, WING 3 SIMILAR



END VIEW A-A

SECTION B-B

SECTION C-C

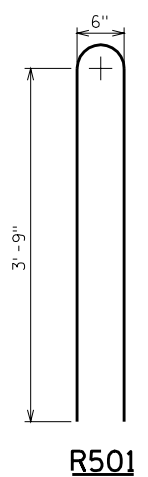
SEE SECTION B-B FOR PARAPET AND RAILING DIMENSIONS.
SEE SHEET 11 FOR THE BILL OF BARS AND BAR DETAILS.

BILL OF BARS

FOR WINGS 2 & 3 PARAPETS ONLY

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	CO.	NO. REQUIRED	LENGTH	BENT	LOCATION
		N. ABUT. S. ABUT.			
R501	X	14 14	8-3	X	EAST PARAPET - VERT. - AT WINGS 2 & 3
R402	X	6 6	9-8		EAST PARAPET - HORIZ. - AT WINGS 2 & 3

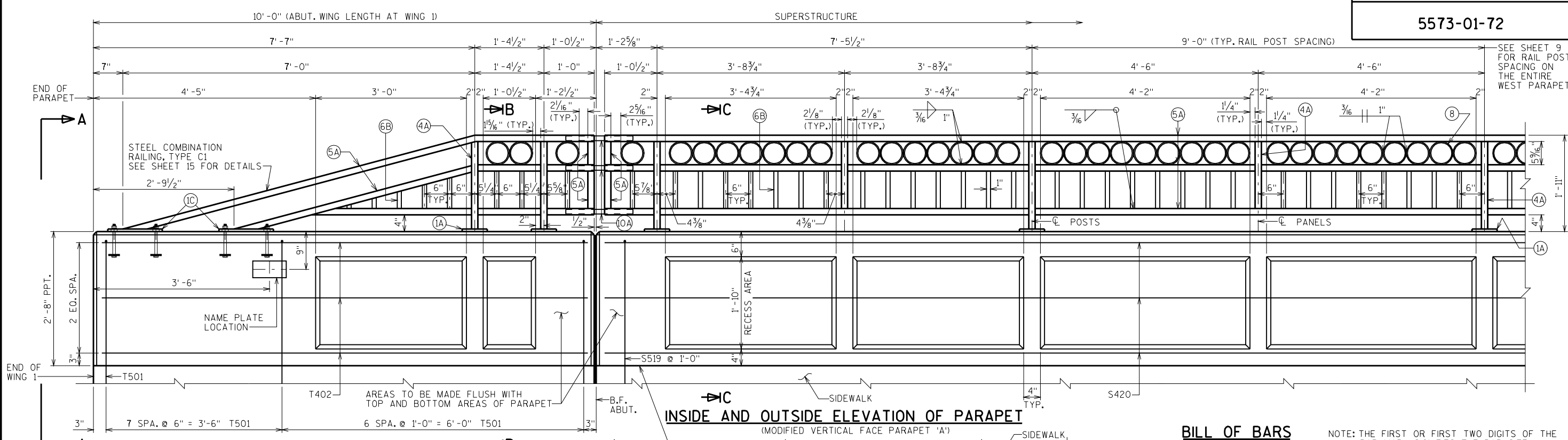


R501

■ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-56-183			
DRAWN BY JPH		PLANS CK'D. WWR	
STEEL COMBINATION RAILING, TYPE C1 & EAST PARAPET 'A'			SHEET 12

SEE SHEET 9 FOR RAIL POST SPACING ON THE ENTIRE WEST PARAPET



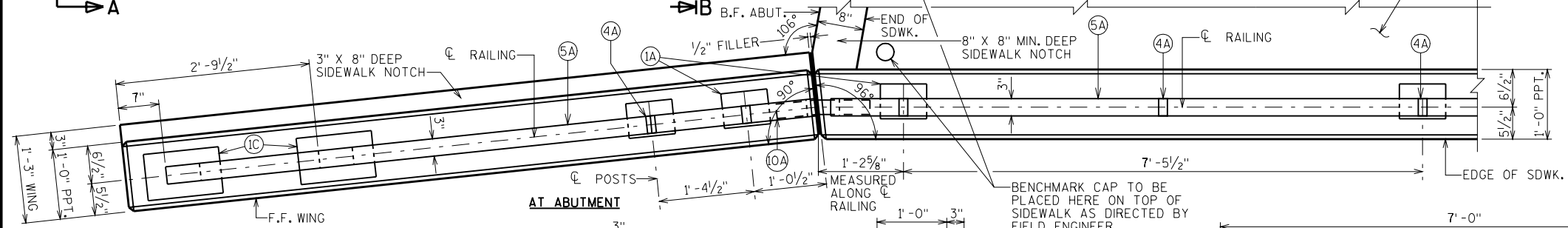
INSIDE AND OUTSIDE ELEVATION OF PARAPET
(MODIFIED VERTICAL FACE PARAPET 'A')

BILL OF BARS

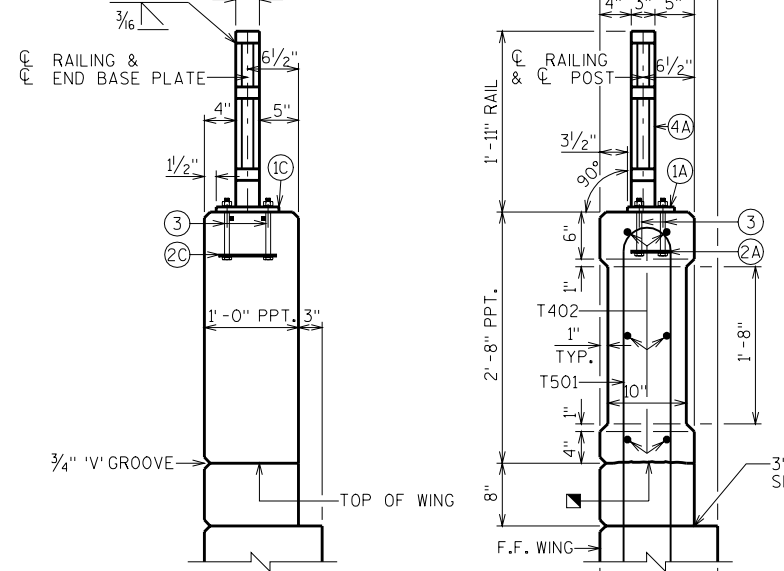
FOR WING 1 PARAPET ONLY

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

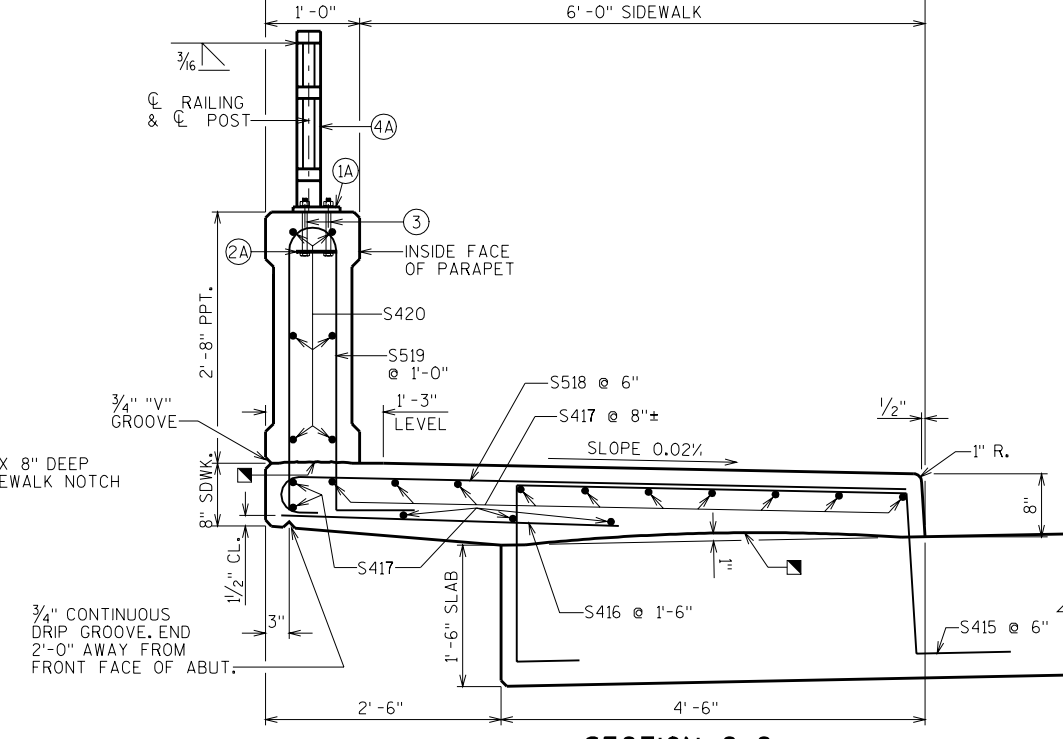
BAR MARK	COA	NO. REQ'D N. ABUT.	LENGTH	BENT	LOCATION
T501	X	14	9-7	X	WEST PARAPET - VERT. - AT WING 1
T402	X	6	9-8		WEST PARAPET - HORIZ. - AT WING 1



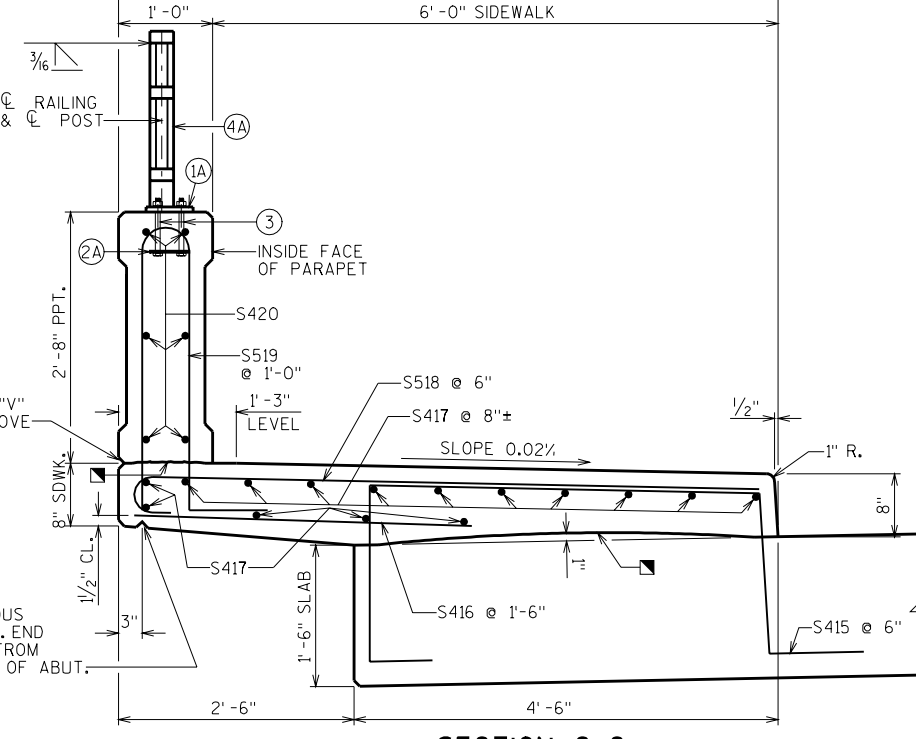
PLAN OF PARAPET
(WING 1)



END VIEW A-A

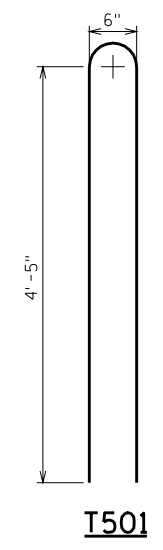


SECTION B-B



SECTION C-C

SEE SECTION B-B FOR PARAPET AND RAILING DIMENSIONS. SEE SHEET 11 FOR THE BILL OF BARS AND BAR DETAILS.



T501

■ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-56-183

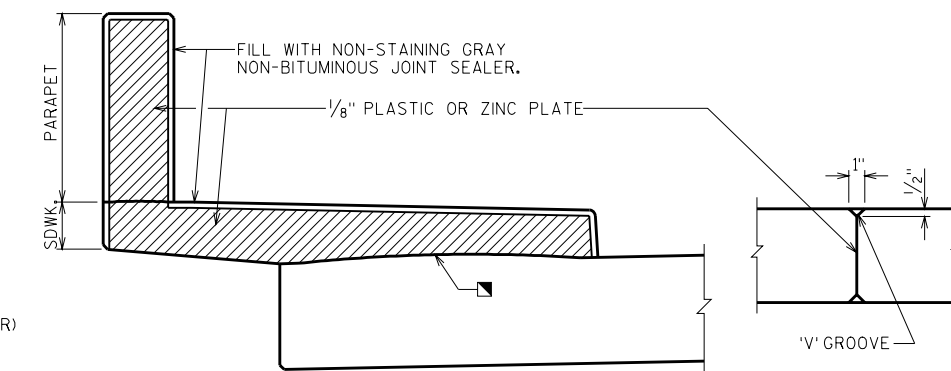
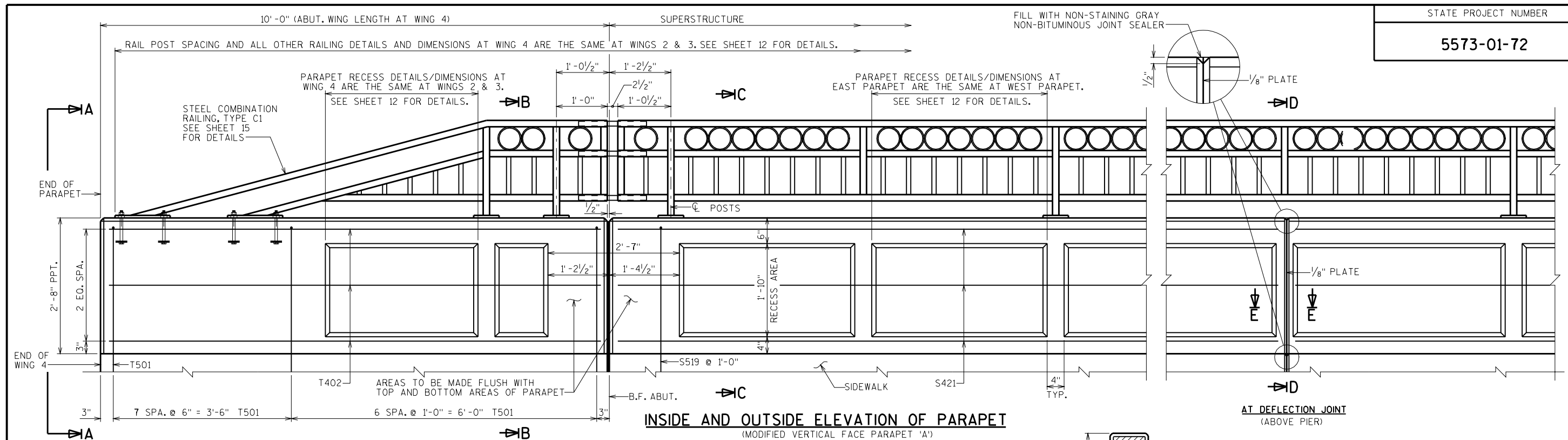
DRAWN BY JPH PLANS CK'D. WWR

STEEL COMBINATION RAILING, TYPE C1 & NW PARAPET 'A'

SHEET 13

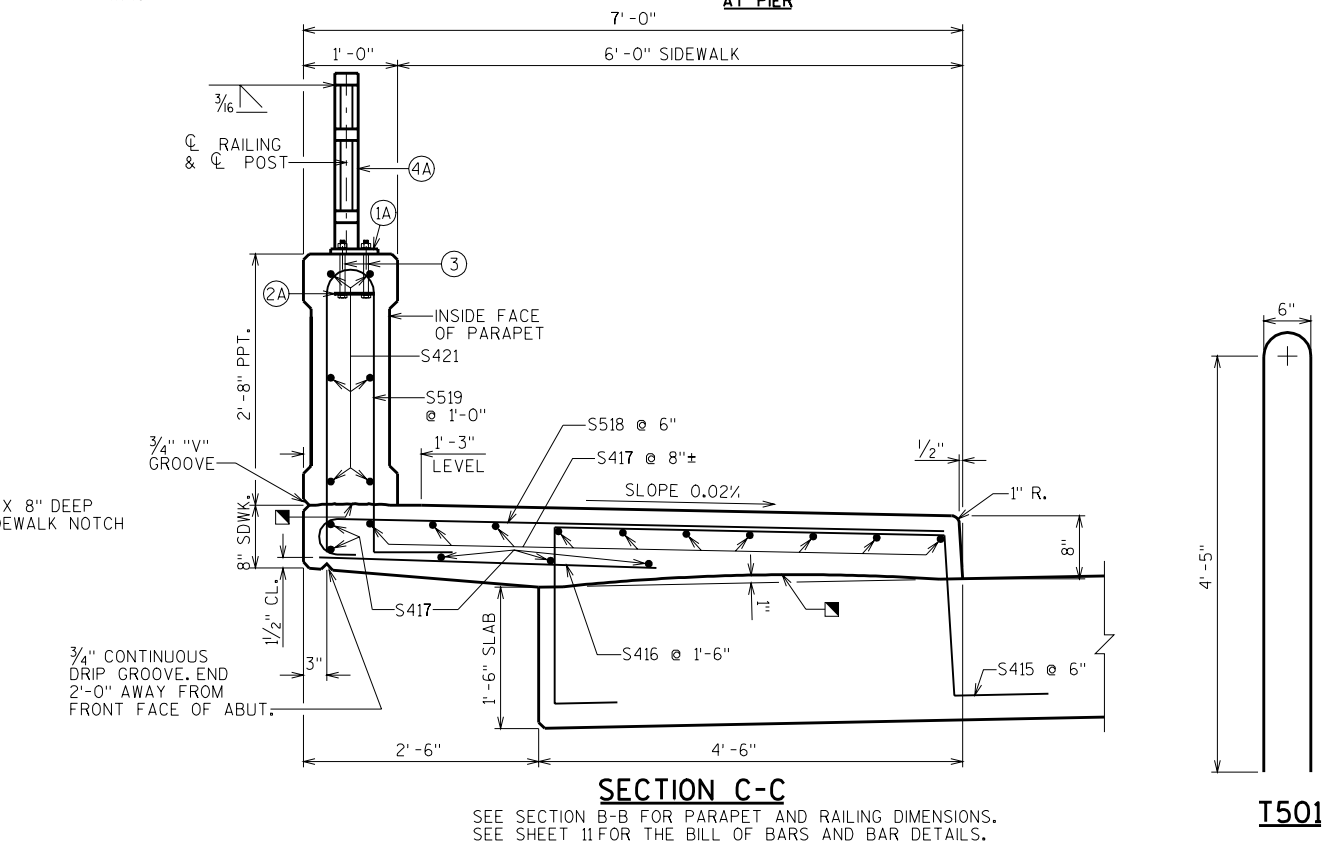
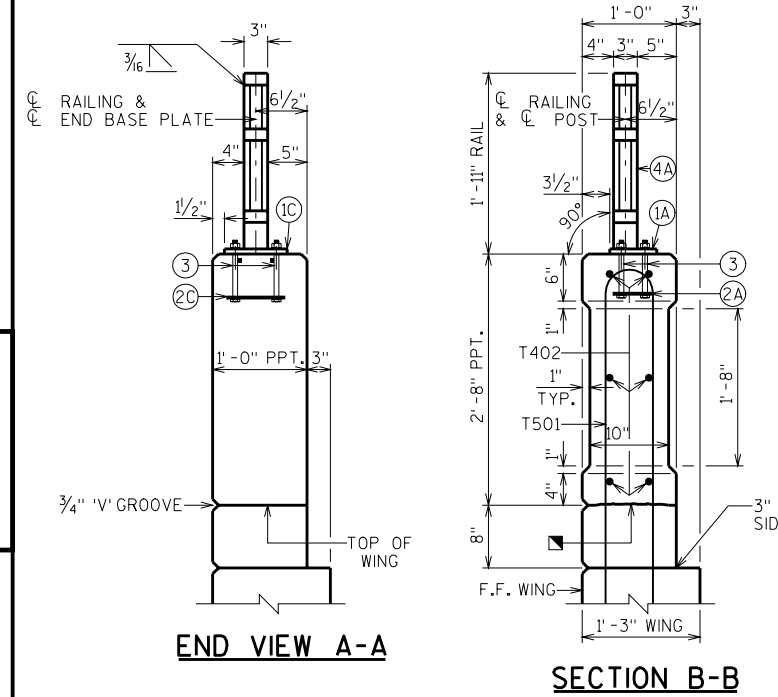
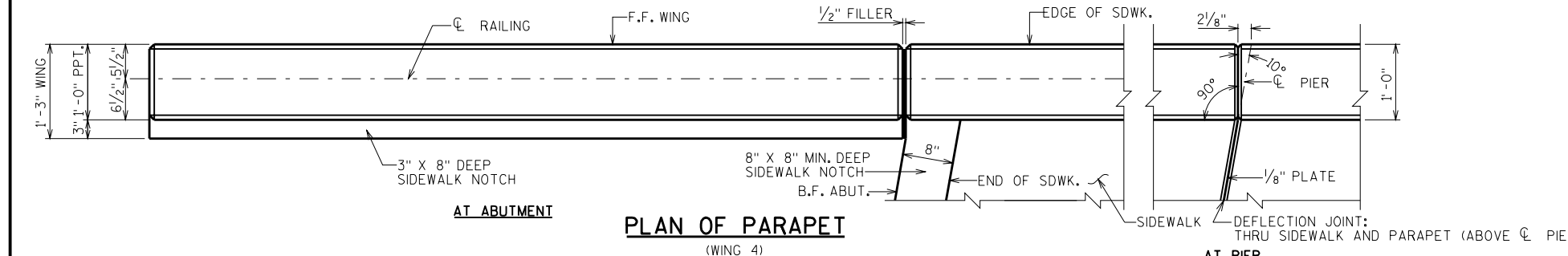
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8



SECTION D-D

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8\"/>



BILL OF BARS FOR WING 4 PARAPET ONLY

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D S. ABUT.	LENGTH	BENT	LOCATION
T501	X	14	9'-7"	X	WEST PARAPET - VERT. - AT WING 4
T402	X	6	9'-8"		WEST PARAPET - HORIZ. - AT WING 4

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-56-183			
DRAWN BY JPH		PLANS CK'D. WWR	
SHEET 14			

STEEL COMBINATION RAILING, TYPE C1 & SW PARAPET 'A'

■ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH

8

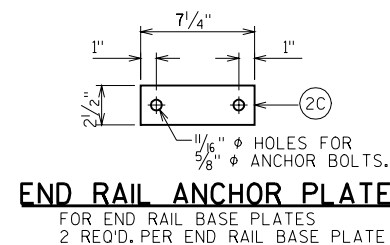
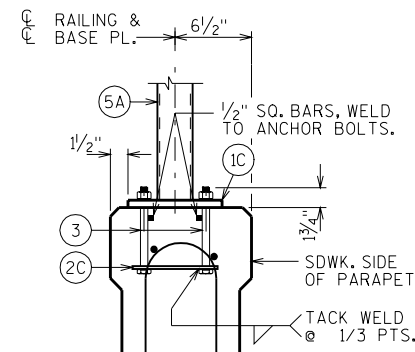
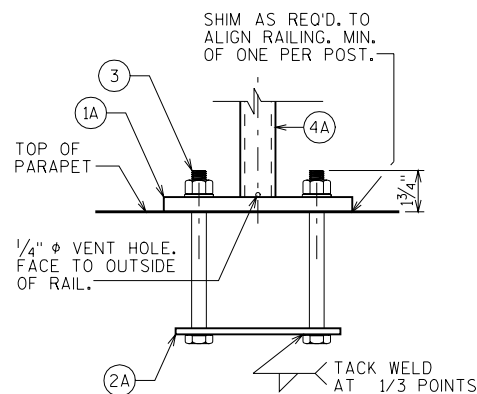
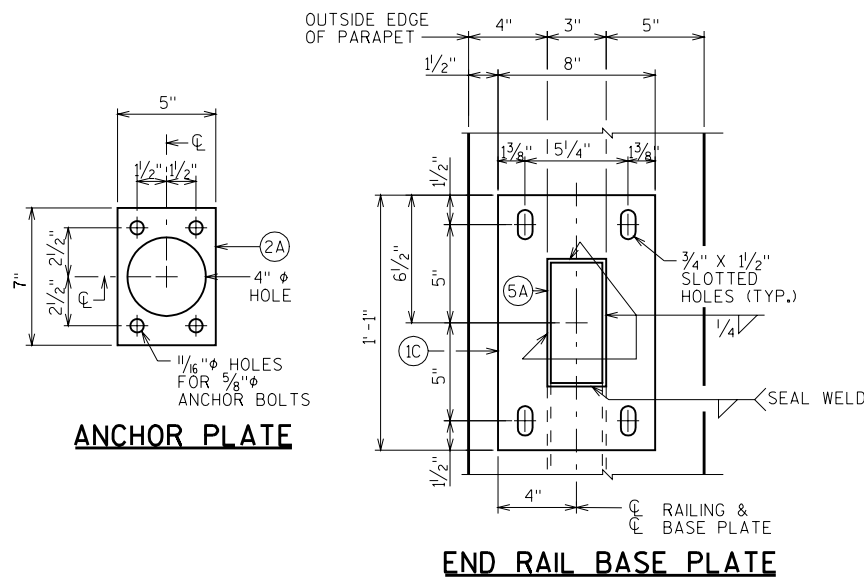
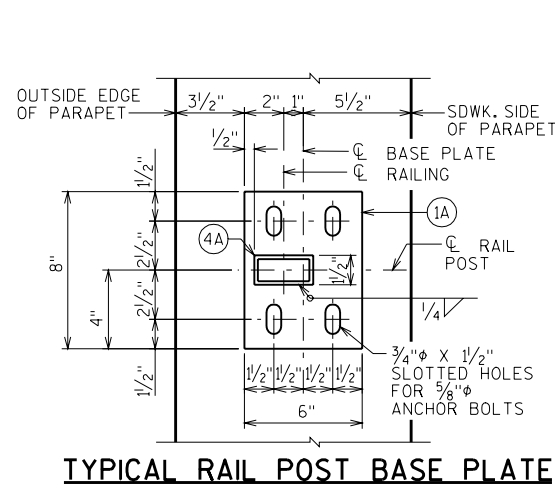
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LEGEND

- 1A) PLATE 5/8" X 6" X 8" WITH 3/4" X 1/2" SLOTTED HOLES.
- 1C) PLATE 5/8" X 8" X 1'-1" WITH 3/4" X 1/2" SLOTTED HOLES.
- 2A) 1/4" X 5" X 7" ANCHOR PLATE WITH 1/16" φ HOLES FOR ANCHOR BOLTS NO. 3.
- 2C) 1/4" X 2 1/2" X 7/4" ANCHOR PLATE WITH 1/16" φ HOLES FOR ANCHOR BOLTS NO. 3.
- 3) 5/8" DIA. X 7 1/2" LONG ASTM F593 TYPE 316 STAINLESS STEEL ANCHOR BOLTS WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 5/8" φ, MINIMUM PULLOUT CAPACITY OF 15 KIPS. EMBED A MIN. OF 7" FOR RAIL POSTS AND 5" FOR END RAILS.)
- 4A) STRUCTURAL TUBING 3" X 1 1/2" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.
- 5A) STRUCTURAL TUBING 3" X 1 1/2" X 3/16" RAILS. WELD TO NO. 1 & NO. 4.
- 6B) STRUCTURAL TUBING 1" X 1 1/2" X 1/8" PICKETS. WELD TO NO. 5. SPACE AT 6" MAX. ∅ TO ∅ SPACING. PLACE VERTICAL.
- 8) 5" φ SCH. 40 PIPE (5 3/16 O.D.) 1/2" LONG SLICES. WELD TO NO. 5A.
- 9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".
- 10A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)

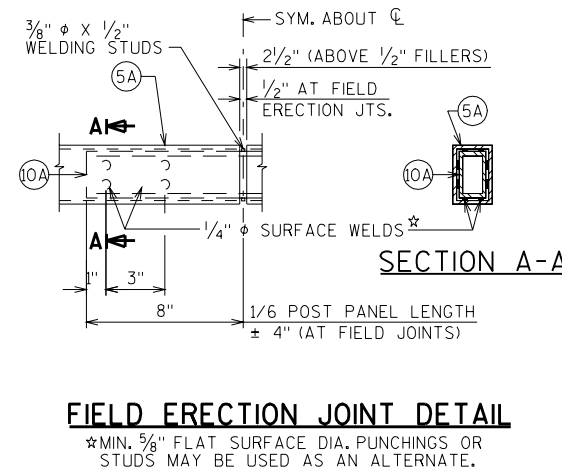
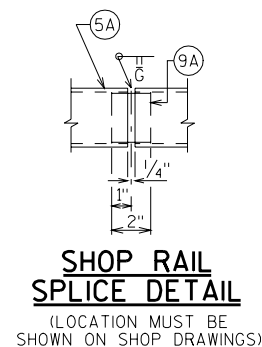
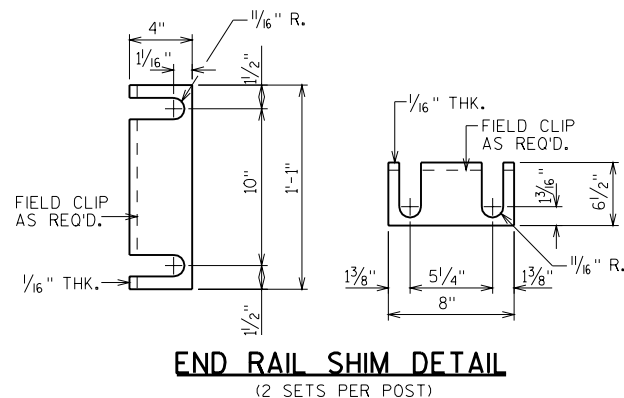
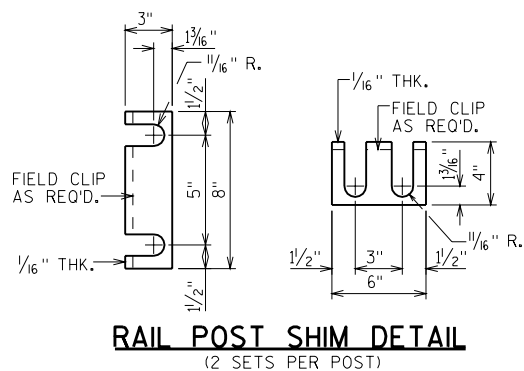
NOTES

- BID ITEM SHALL BE "RAILING STEEL TYPE C1 B-56-183", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, AND PAINTING.
- POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.
- NO. 1, 2, 8, 9 AND NO. 10 SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A709 GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A500 GRADE B (NO. 4, NO. 5, AND NO. 6).
- ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.
- CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.
- STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.
- FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1 AND CAULK AROUND PERIMETER OF PLATE NO. 1 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.
- ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.
- AFTER FABRICATION, ALL MATERIAL, EXCEPT ANCHORAGE (NO. 2 & 3) & SHIMS SHALL BE PAINTED WITH A THREE COAT ZINC-RICH EPOXY SYSTEM PER WISDOT STANDARD SPECIFICATION, SECTION 517, EPOXY SYSTEM. SHIMS SHALL BE GIVEN ONE COAT OF ZINC RICH PRIMER PAINT. THE FINISH COLOR SHALL BE BLACK, FEDERAL COLOR NO. 27038.
- 1/4" φ VENT HOLES LOCATED IN TOP RAIL OVER RAIL POSTS AND AT LOW END OF OTHER RAILS.
- RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.
- TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



ANCHOR BOLTS FOR RAIL POSTS
NOTE: ANCHOR PLATE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED.

ANCHOR BOLTS FOR END RAIL
NOTE: ANCHOR PLATES NOT REQ'D. WHEN TYPE "S" ANCHORS ARE USED.



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STEEL COMBINATION RAILING, TYPE C1 DETAILS			SHEET 15