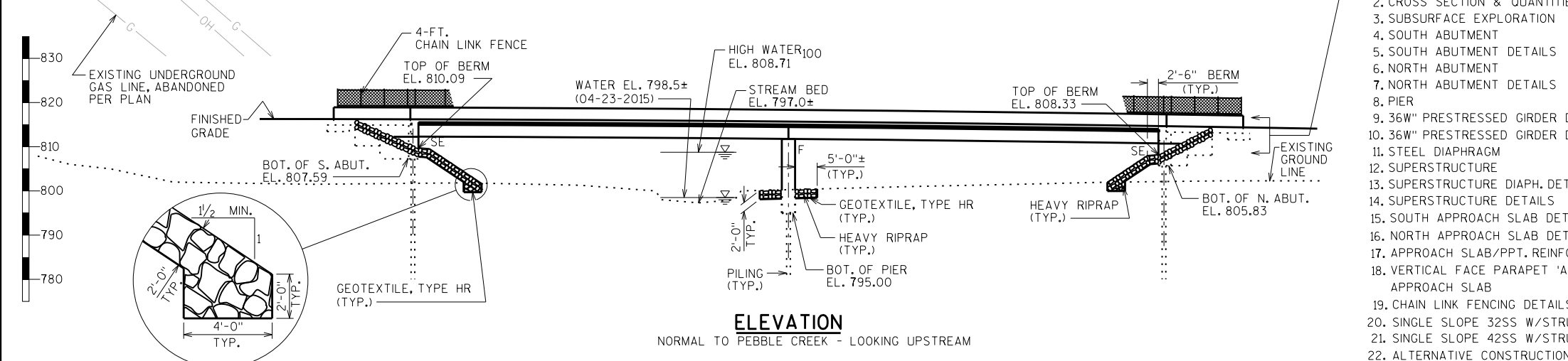
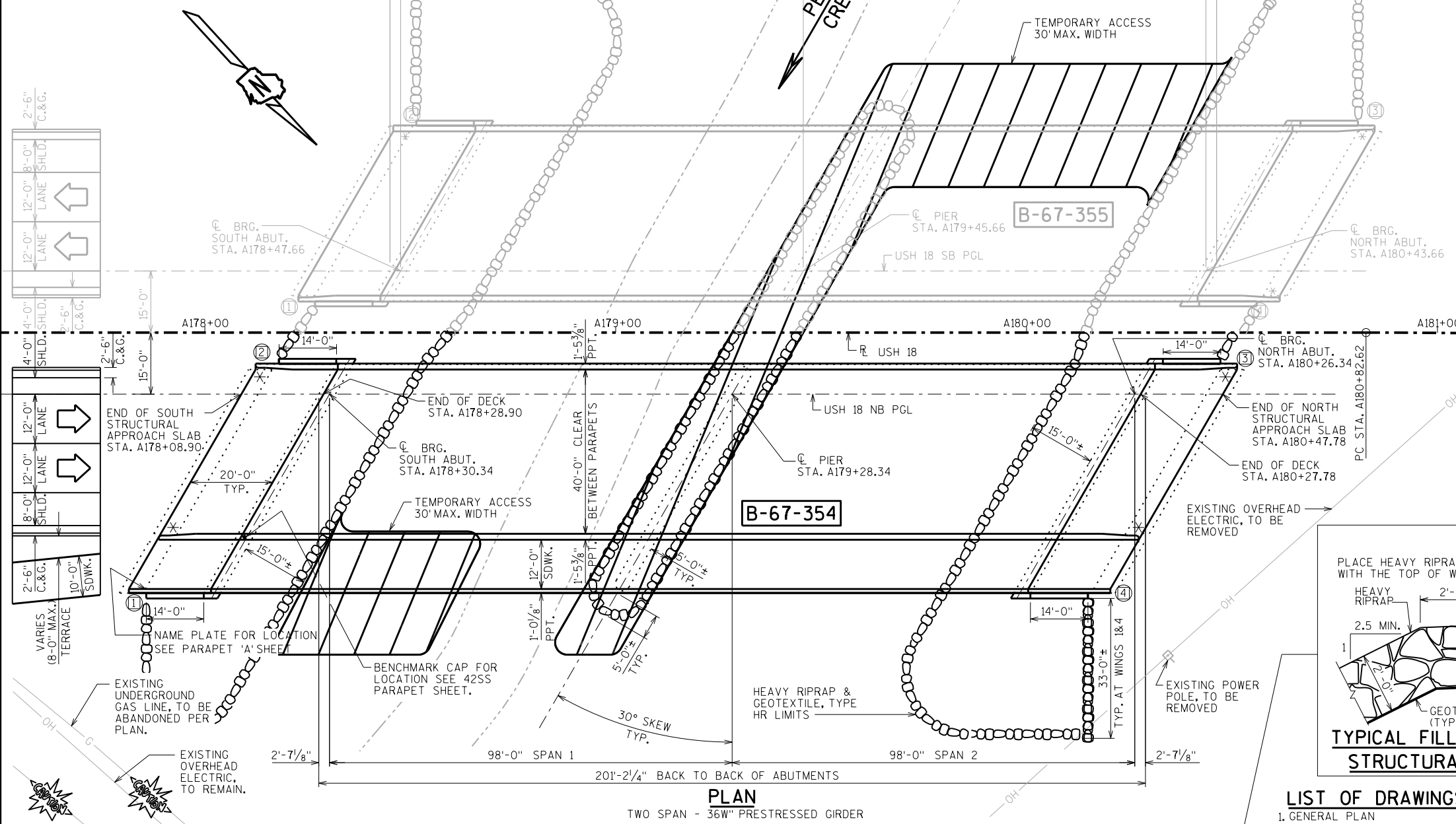


*PROVIDE FOR THRIE BEAM
GUARD RAIL ATTACHMENT
AT UNUSED ANCHOR ASSEMBLIES
CAULK HOLES SHUT WITH
"100% SILICONE CAULK".

INDICATES WING NUMBER



STATE PROJECT NUMBER

2788-00-71

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.03
OPERATING RATING FACTOR: RF=1.34
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

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

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE — F'C = 4,000 P.S.I.
ALL OTHER — F'C = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 — f_y = 60,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — f_y = 60,000 P.S.I.

36W" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP12X53 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
S. ABUT. ESTIMATED 55'-0" LONG (PILE POINTS REQUIRED).
N. ABUT. ESTIMATED 70'-0" LONG (PILE POINTS REQUIRED).

PIER TO BE SUPPORTED ON HP12X53 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 70'-0" LONG (PILE POINTS REQUIRED).

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA

100 YEAR FREQUENCY
Q₁₀₀ = 1765 C.F.S.
VEL. = 1.8 F.P.S.
HW₁₀₀ = EL. 808.71
WATERWAY AREA = 1,010 SQ. FT.
DRAINAGE AREA = 15.8 SQ. MI.
SCOUR CRITICAL CODE = 8
ROAD OVERTOPPING FREQUENCY = NA

2 YEAR FREQUENCY
Q₂ = 350 C.F.S.
HW₂ = EL. 802.92

CURVE DATA

R USH 18
P.I. = A196+18.01
Δ = 75°-01'-36"
D = 02°-51'-53"
T = 1535.39'
L = 2618.92'
R = 2000.00'
P.C. = A180+82.62
P.T. = A207+01.54

TRAFFIC VOLUME

USH 18
A.D.T. = 21,100 (2037)
R.D.S. = 50 M.P.H.

STRUCTURE DESIGN CONTACTS:

DOMINIQUE BECHLE (608) 261-8205
AARON BONK (608) 261-0261

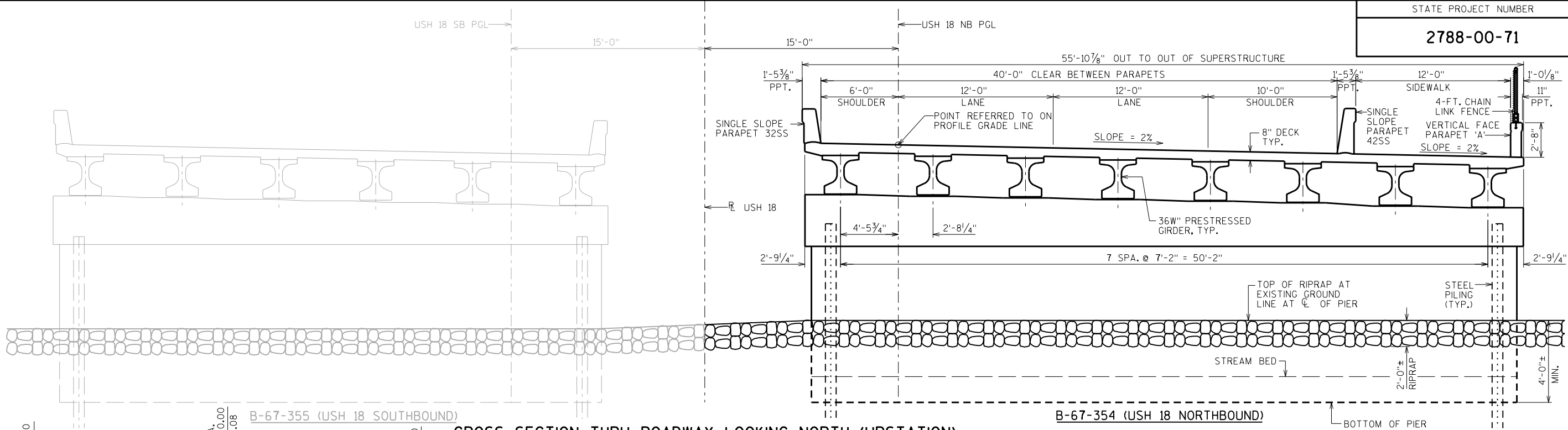
LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. PIER
9. 36W" PRESTRESSED GIRDER DETAILS 1
10. 36W" PRESTRESSED GIRDER DETAILS 2
11. STEEL DIAPHRAGM
12. SUPERSTRUCTURE
13. SUPERSTRUCTURE DIAPH. DETAILS
14. SUPERSTRUCTURE DETAILS
15. SOUTH APPROACH SLAB DETAILS
16. NORTH APPROACH SLAB DETAILS
17. APPROACH SLAB/PPT. REINFORCING DETAILS
18. VERTICAL FACE PARAPET 'A' W/STRUCTURAL APPROACH SLAB
19. CHAIN LINK FENCING DETAILS
20. SINGLE SLOPE 32SS W/STRUCTURAL APPROACH SLAB
21. SINGLE SLOPE 42SS W/STRUCTURAL APPROACH SLAB
22. ALTERNATIVE CONSTRUCTION JOINT

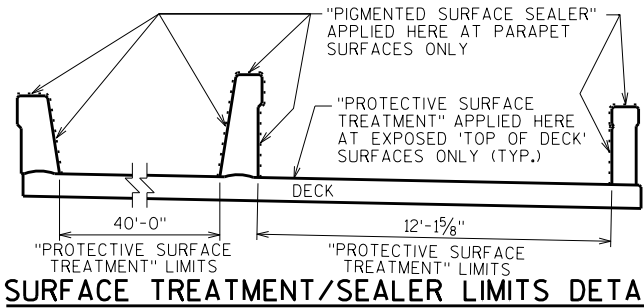
GENERAL PLAN

SHEET 1 OF 22

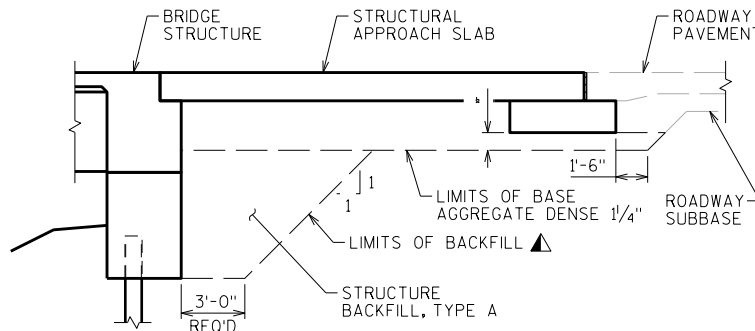
DATE: JUNE 2017



CROSS SECTION THRU ROADWAY LOOKING NORTH (UPSTATION)



SURFACE TREATMENT/SEALER LIMITS DETAIL



STRUCTURAL BACKFILL LIMITS
(TYPICAL SECTION THRU ABUTMENTS)

▲ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH APPROACH	SOUTH ABUT.	PIER 1	NORTH ABUT.	NORTH APPROACH	TOTALS
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-67-354	LS	—	—	—	—	—	—	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	—	—	189	—	173	—	362
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	—	218	—	—	—	218	436
501.1000.S	ICE HOT WEATHER CONCRETING	LB	3,413	593	503	818	473	593	6,393
502.0100	CONCRETE MASONRY BRIDGES	CY	455	79	67	109	63	79	852
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,153	133	—	—	—	133	1,419
502.3210	PIGMENTED SURFACE SEALER	SY	336	34	—	—	—	34	404
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	1,574	—	—	—	—	—	1,574
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	—	—	4,660	—	4,500	—	9,160
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	97,800	13,780	1,690	5,725	1,680	13,780	134,455
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,940	—	—	—	—	—	1,940
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	32	—	—	—	—	—	32
506.4000	STEEL DIAPHRAGMS B-67-354	EACH	28	—	—	—	—	—	28
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	—	15	—	15	—	30
550.0500	PILE POINTS	EACH	—	—	11	19	11	—	41
550.1120	PIILING STEEL HP 12-INCH X 53 LB	LF	—	—	605	1,330	770	—	2,705
606.0300	RIPRAP HEAVY	CY	—	—	230	60	280	—	570
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	—	—	115	—	115	—	230
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	—	2	—	—	—	2	4
645.0120	GEOTEXTILE TYPE HR	SY	—	—	290	90	360	—	740
SPV.0090.02	FENCE CHAIN LINK POLYMER COATED 4-FT.	LF	199	20	—	—	—	20	239
NON-BID ITEMS									
	FILLER	SIZE	—	—	—	—	—	—	1/2", 3/4", 1 1/2"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

AT THE BACK FACE 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. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS SHOWN ON THE STRUCTURAL BACKFILL LIMITS DETAIL.

NON-LAMINATED ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE QUANTITY FOR BACKFILL STRUCTURE, BID ITEM 210.1500, IS CALCULATED BASED ON THE STRUCTURAL BACKFILL LIMITS DETAIL.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK, SIDEWALK, STRUCTURAL APPROACH SLAB SURFACES, AND VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENTS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF EXTERIOR PARAPETS AND TO ALL EXPOSED SURFACES OF THE INTERIOR PARAPET, INCLUDING PARAPETS ON STRUCTURAL APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON "GENERAL PLAN" SHEET AND THE ABUTMENT DETAILS.

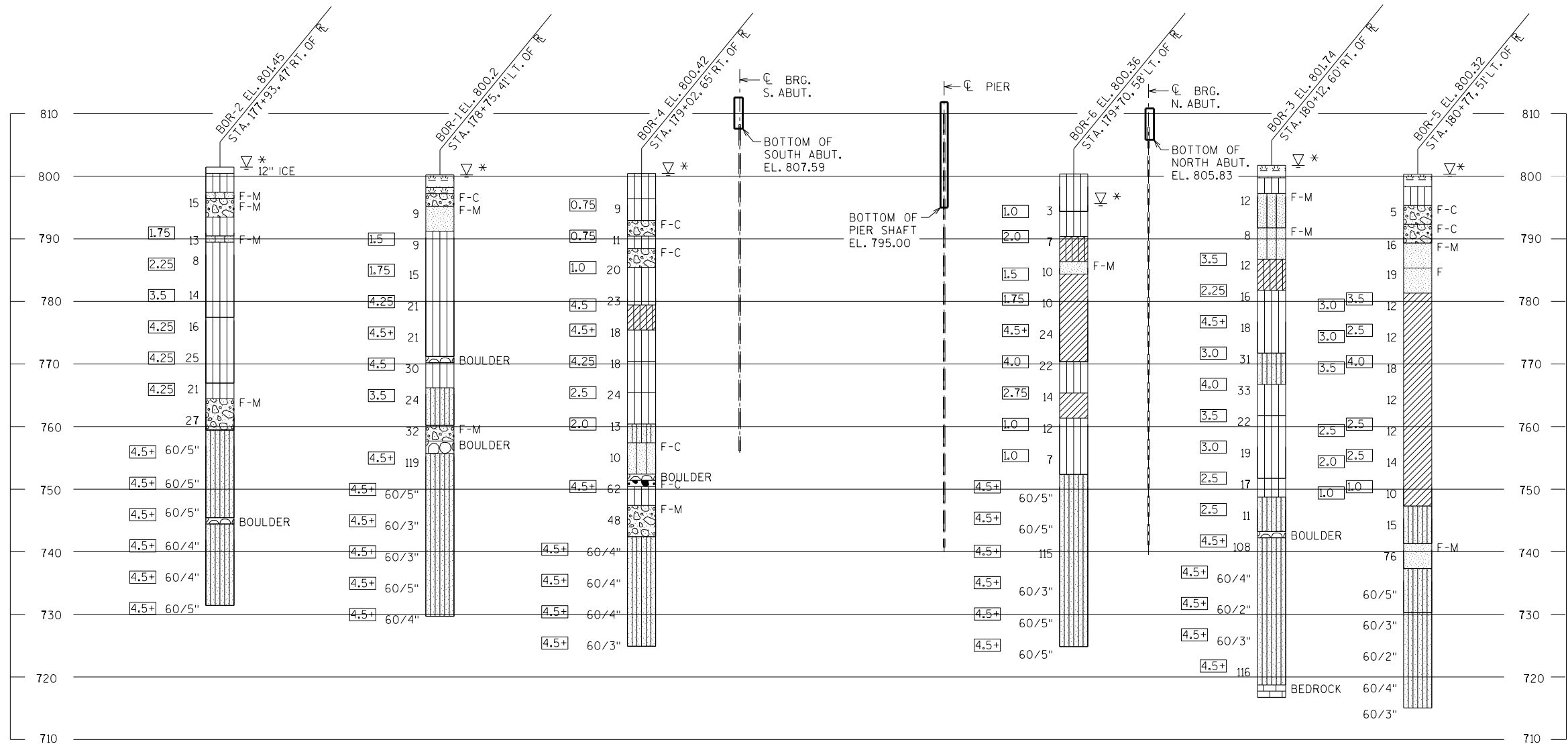
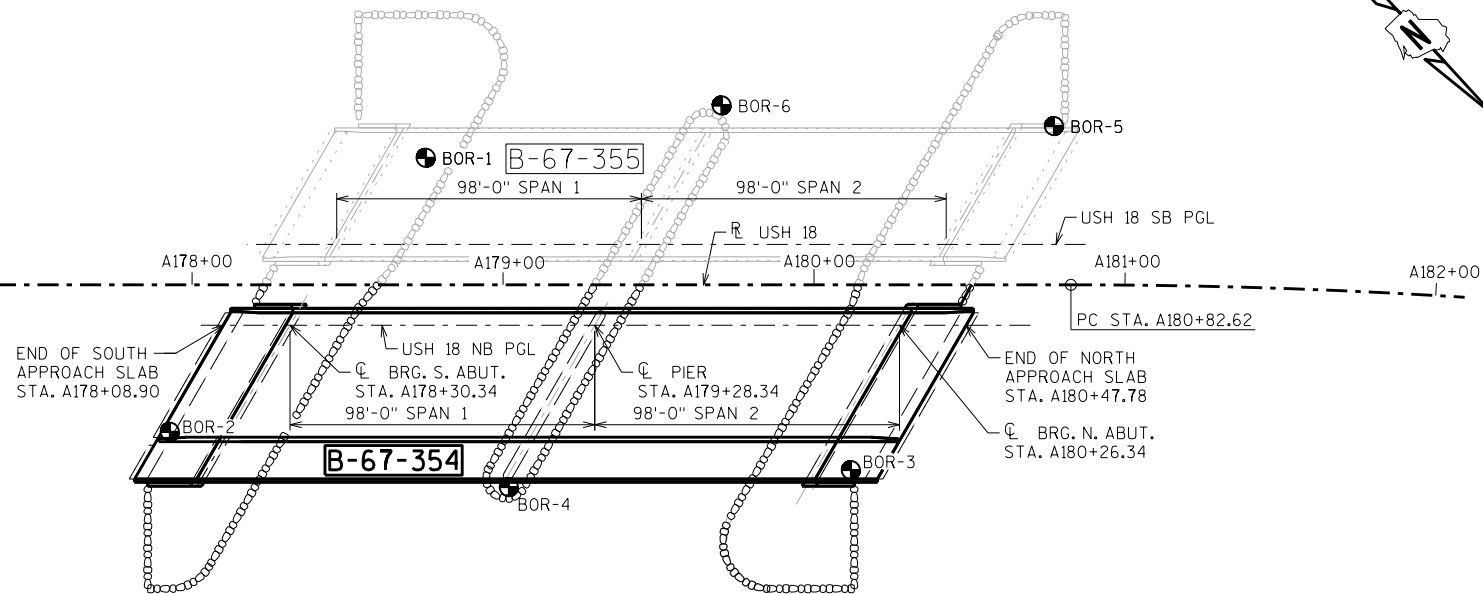
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE THE AVERAGE HAUNCH SHOWN ON THE "36W PRESTRESSED GIRDER DETAILS 2" SHEET.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-67-354" SHALL BE THE EXISTING GROUND LINE.

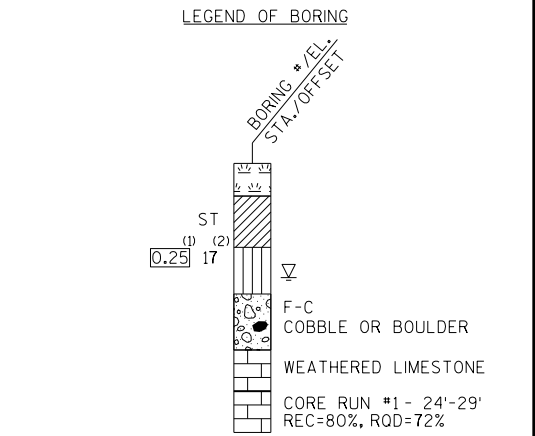
AT ABUTMENTS AND PIER(S), CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH STANDARD SPEC. 502.3.5.3.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY: ABS/JPH		PLANS CK'D: DMB	
CROSS SECTION & QUANTITIES			SHEET 2

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	2/24/2016	154674.270	667484.398
2	2/25/2016	154683.573	667604.608
3	3/2/2016	154840.714	667451.555
4	3/8/2016	154770.409	667536.305
5	3/15/2016	154803.325	667328.643
6	3/9/2016	154726.187	667402.892
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) WAUKESHA COUNTY			



STATE PROJECT NUMBER			
2788-00-71			
MATERIAL SYMBOLS			
ASPHALT	TOPSOIL	PEAT	
CONCRETE	FILL	GRAVEL	
SAND	CLAY	SILT	
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)	
SHALE	SANDSTONE	IGNEOUS/META	



- (1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
- (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▽ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY TLP/DD		PLANS CKD. DMB	
SUBSURFACE EXPLORATION		SHEET 3	

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

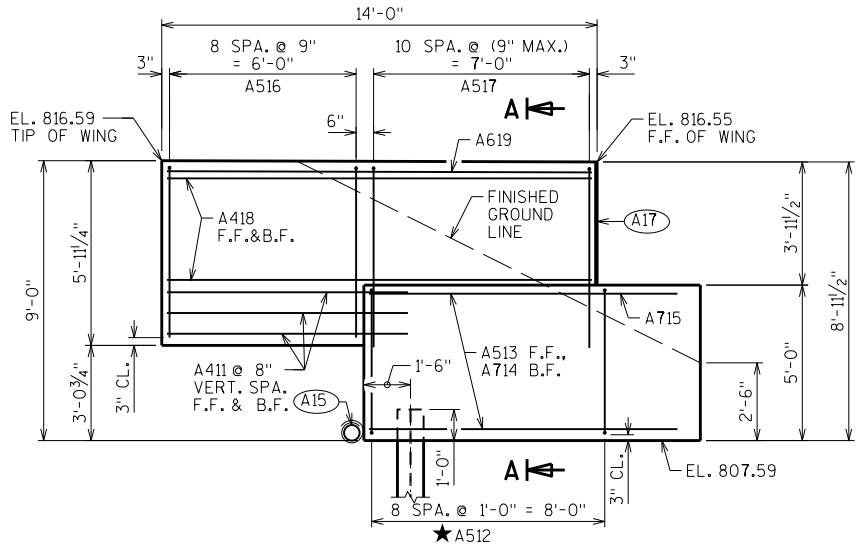
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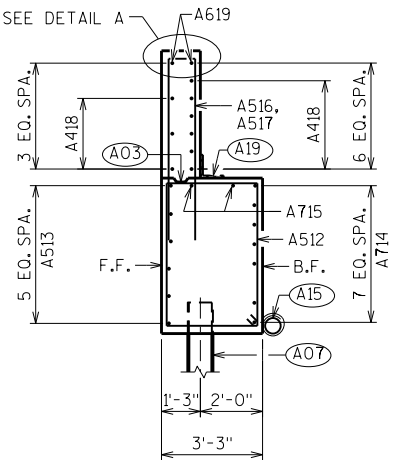
BILL OF BARS

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

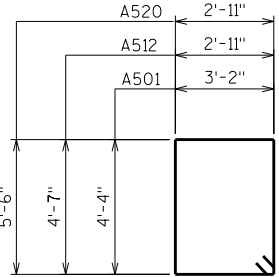
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		76	15'-8"	X		BODY - STIRRUP
A402		18	2'-3"			AT PILES - VERT. - 2 PER BODY PILE
A403		9	28'-0"	X		AT PILES - SPIRAL - 1 PER BODY PILE
A604		24	35'-0"			BODY - HORIZ.
A805		12	37'-0"	X		BODY - HORIZ. - B.F.
A506		41	6'-9"	X		BODY - VERT.
A407		5	42'-4"			BODY - HORIZ. - AT GIRDERS 1-5
A408		28	4'-3"	X		BODY - VERT. - TOP - BTWN. GIRDERS
A409		14	6'-3"			BODY - HORIZ. - TOP - BTWN. GIRDERS
A510		20	9'-11"	X		BODY - VERT. - END
A411	X	12	7'-9"			WINGS 1&2 - HORIZ. - F.F. & B.F.
A512	X	9	15'-8"	X		WING 1 - STIRRUP
A513	X	6	9'-11"			WING 1 - HORIZ. - F.F.
A714	X	8	11'-2"			WING 1 - HORIZ. - B.F.
A715	X	2	10'-7"			WING 1 - HORIZ. - TOP
A516	X	9	11'-8"	X		WING 1 - VERT.
A517	X	11	12'-4"	X		WING 1 - VERT.
A418	X	18	13'-8"			WINGS 1&2 - HORIZ. - F.F.&B.F.
A619	X	4	13'-8"			WINGS 1&2 - HORIZ. - TOP
A520	X	9	17'-6"	X		WING 2 - STIRRUP
A521	X	7	11'-1"			WING 2 - HORIZ. - F.F.
A722	X	8	9'-1"			WING 2 - HORIZ. - B.F.
A723	X	2	10'-2"			WING 2 - HORIZ. - TOP
A524	X	9	12'-0"	X		WING 2 - VERT.
A525	X	11	12'-6"	X		WING 2 - VERT.



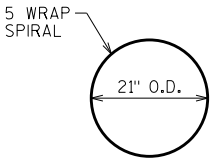
ELEVATION - WING 1



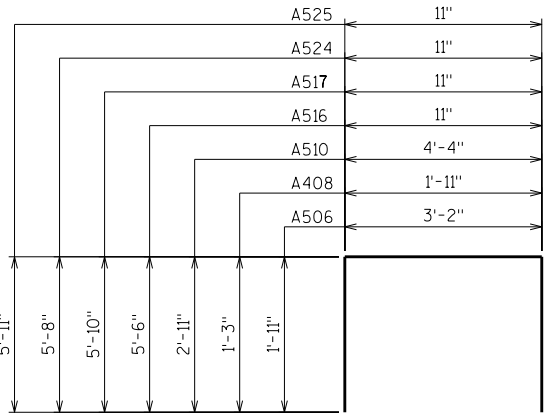
SECTION A-A



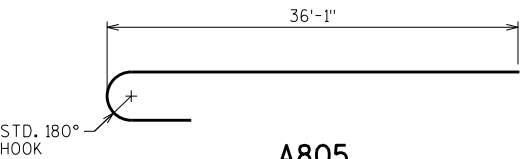
A501, A512, A520



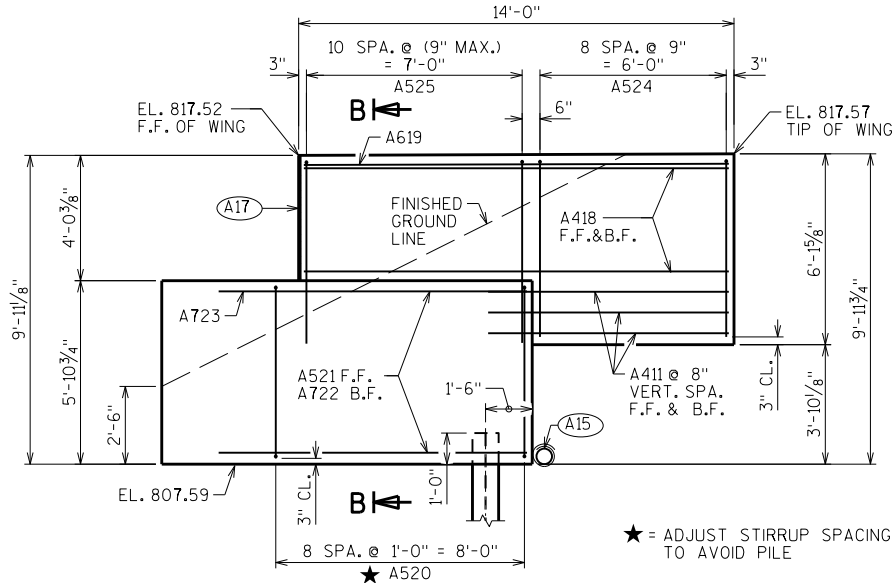
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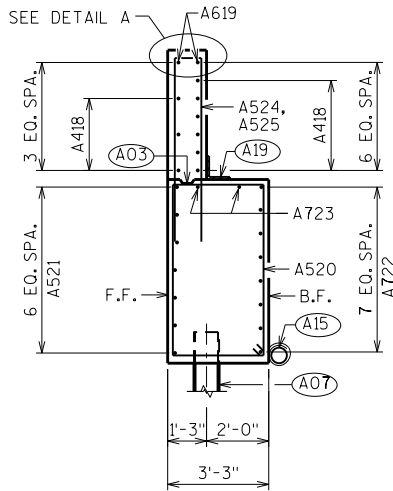
A506, A408, A510, A516, A517, A524, A525



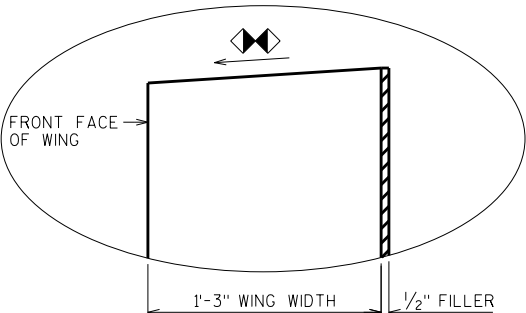
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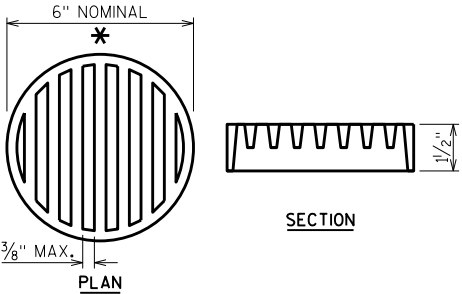
ELEVATION - WING 2



SECTION B-B



DETAIL A

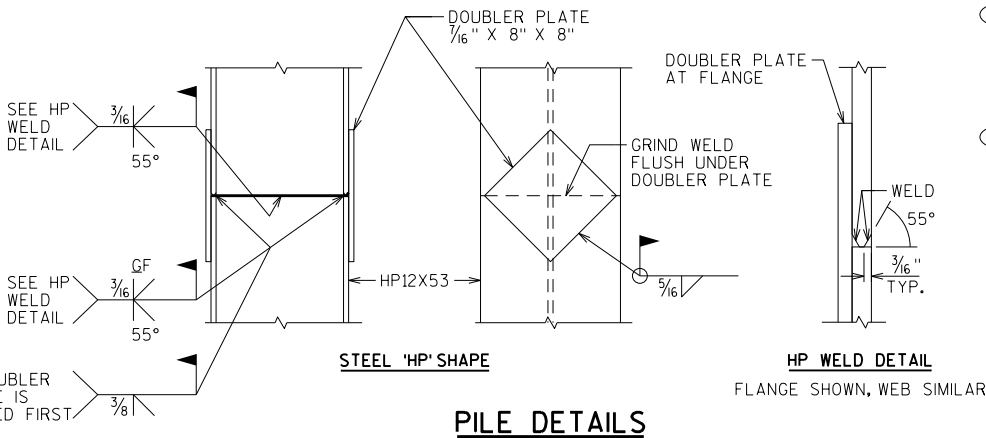


RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHEMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



PILE DETAILS

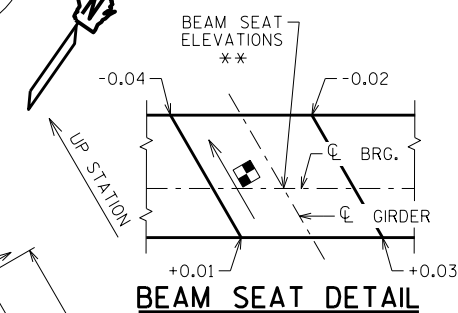
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A07) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQ'D.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 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.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
SOUTH ABUTMENT DETAILS		SHEET 5	

STEEL TROWEL TOP SURFACE OF ABUTMENT.
PLACE MULTIPLE LAYERS OF POLYETHYLENE
SHEETS OVER ENTIRE ABUTMENT TOP BEFORE
PLACING BEARING PADS. TOTAL THICKNESS OF
SHEETS SHALL BE AT LEAST 0.03".



 = DIRECTION OF BEAM SEAT SLOPE



- (A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2×8 , $3/4"$ "V" GROOVE @ THE FRONT FACE AND $18"$ RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.
- (A07) SUPPORT ABUTMENT ON HP 12×53 STEEL PILING, ESTIMATED $70'-0"$ LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQ'D.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) $1/2"$ 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.
- (A18) $3/4"$ CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- (A19) $18"$ (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

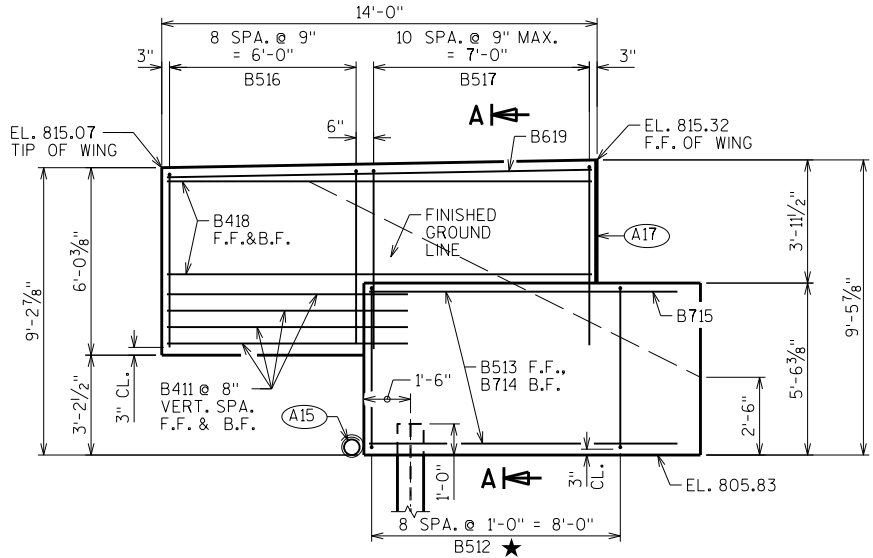
NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION					
STRUCTURE B-67-354					
DRAWN BY			DDS	PLANS CK'D.	DMB
NORTH ABUTMENT			SHEET 6		

SCALE = 4.00

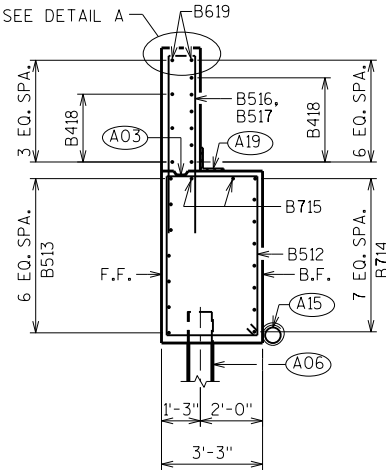
BILL OF BARS

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

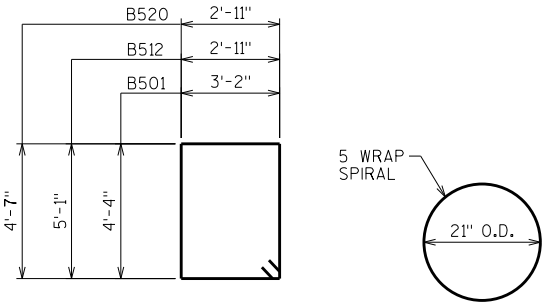
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		76	15'-8"	X		BODY - STIRRUP
B402		18	2'-3"			AT PILES - VERT. - 2 PER BODY PILE
B403		9	28'-0"	X		AT PILES - SPIRAL - 1 PER BODY PILE
B604		24	35'-1"			BODY - HORIZ.
B805		12	37'-0"	X		BODY - HORIZ. - B.F.
B506		26	6'-9"	X		BODY - VERT.
B407		5	25'-7"			BODY - HORIZ. - AT GIRDERS 1-3
B408		28	4'-3"	X		BODY - VERT. - TOP - BTWN. GIRDERS
B409		14	6'-3"			BODY - HORIZ. - TOP - BTWN. GIRDERS
B510		20	9'-11"	X		BODY - VERT. - END
B411	X	14	7'-9"			WINGS 3&4 - HORIZ. - F.F. & B.F.
B512	X	9	16'-8"	X		WING 3 - STIRRUP
B513	X	7	9'-11"			WING 3 - HORIZ. - F.F.
B714	X	8	11'-2"			WING 3 - HORIZ. - B.F.
B715	X	2	10'-7"			WING 3 - HORIZ. - TOP
B516	X	9	11'-10"	X		WING 3 - VERT.
B517	X	11	12'-4"	X		WING 3 - VERT.
B418	X	18	13'-8"			WINGS 3&4 - HORIZ. - F.F. & B.F.
B619	X	4	13'-8"			WINGS 3&4 - HORIZ. - TOP
B520	X	9	15'-8"	X		WING 4 - STIRRUP
B521	X	6	11'-1"			WING 4 - HORIZ. - F.F.
B722	X	8	9'-1"			WING 4 - HORIZ. - B.F.
B723	X	2	10'-2"			WING 4 - HORIZ. - TOP
B524	X	9	11'-2"	X		WING 4 - VERT.
B525	X	11	12'-4"	X		WING 4 - VERT.



ELEVATION - WING 3

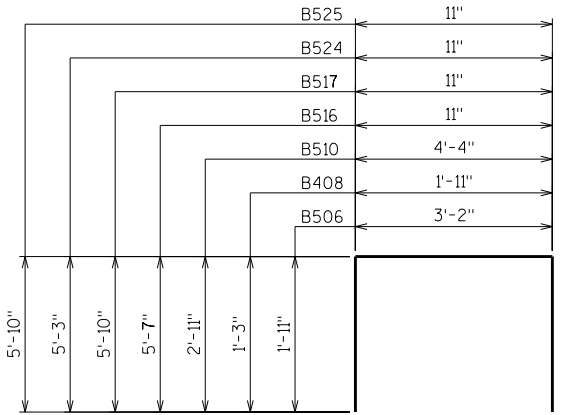


SECTION A-A

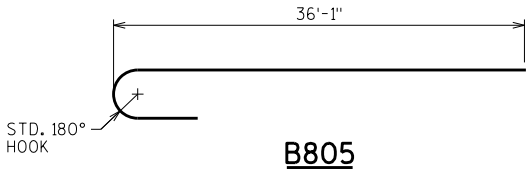


B501, B512, B520

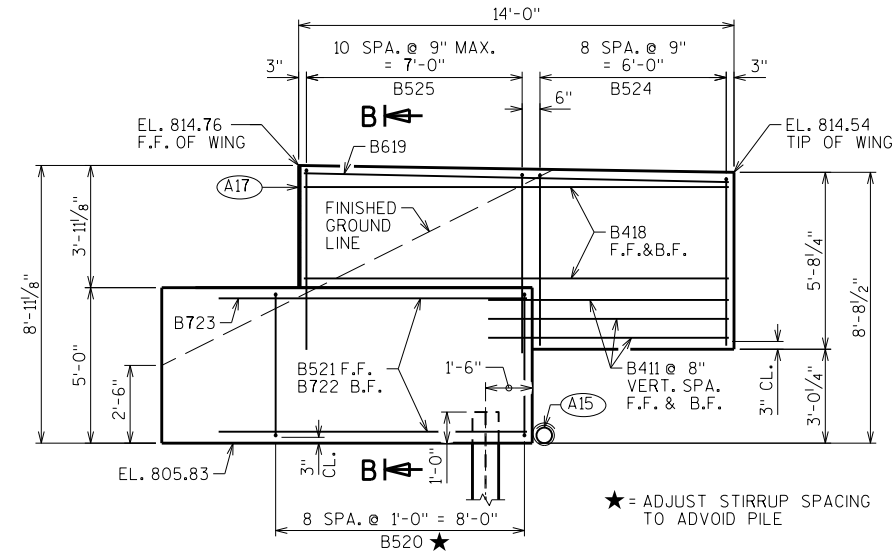
B403



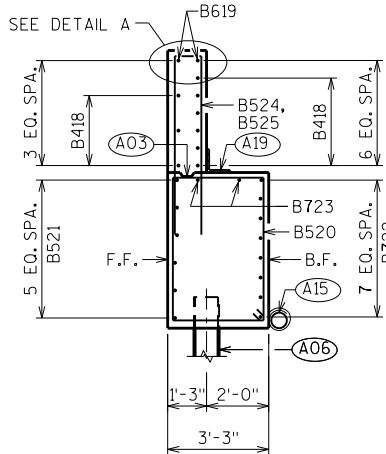
B506, B408, B510, B516, B517, B524, B525



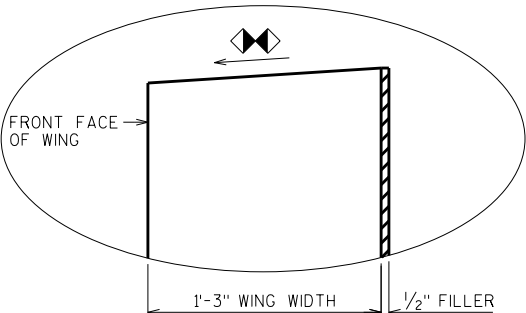
B805



ELEVATION - WING 4

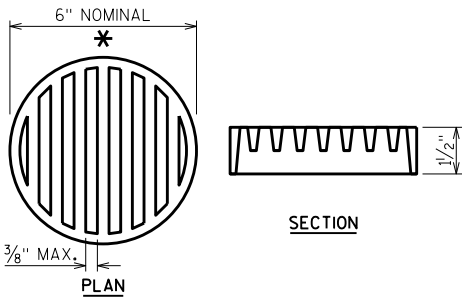


SECTION B-B



DETAIL A

1/8" = SLOPE TOP OF WING A MIN. OF 1/8" PER FOOT AWAY FROM APPROACH SLAB.

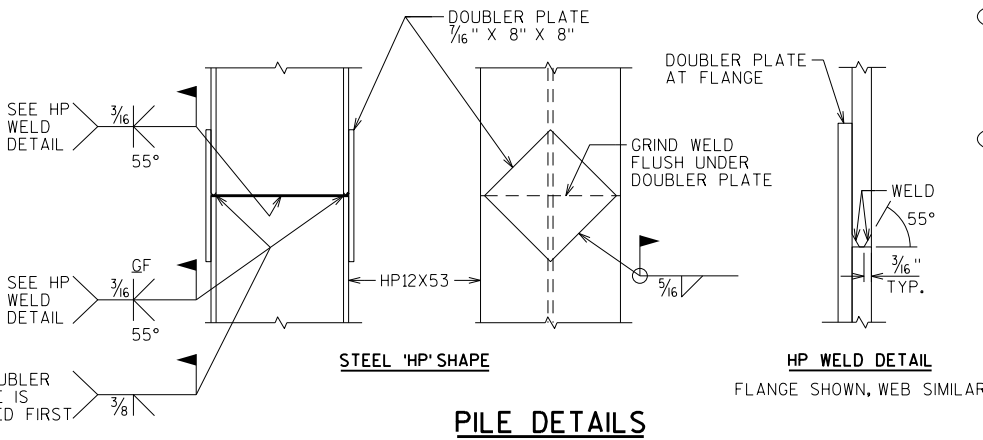


RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



PILE DETAILS

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6, (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

A06 SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 70'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE. PILE POINTS REQ'D.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

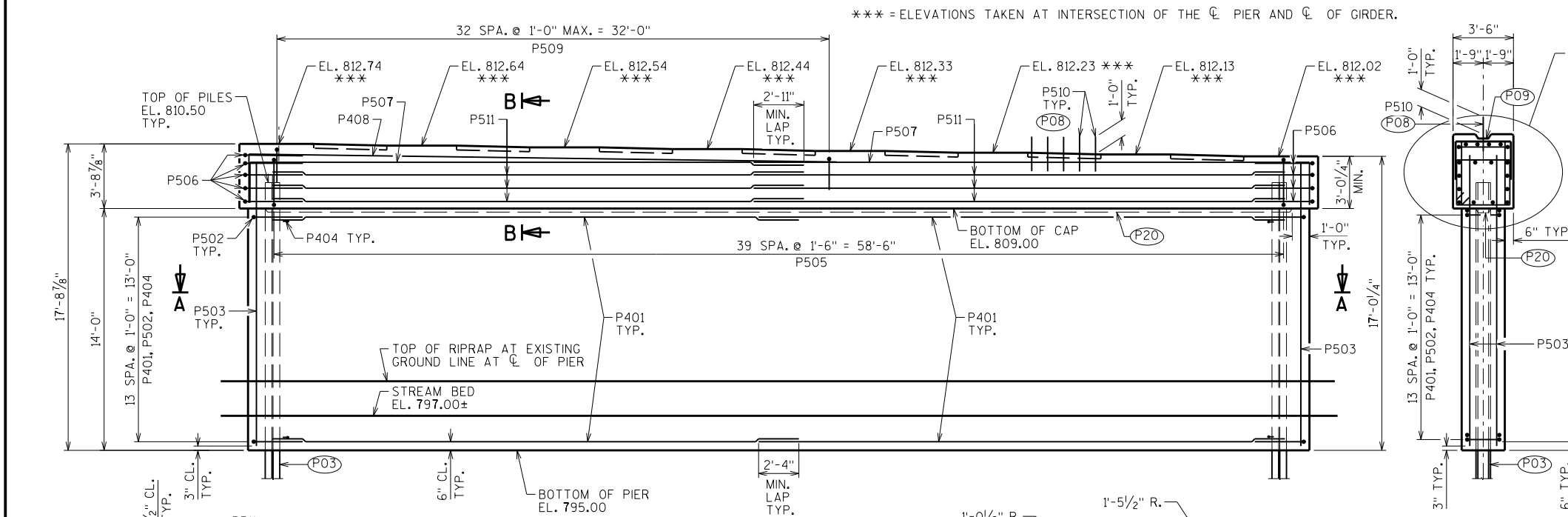
A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

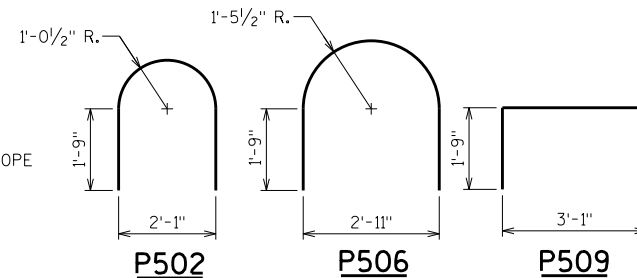
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
NORTH ABUTMENT DETAILS		SHEET 7	

BILL OF BARS

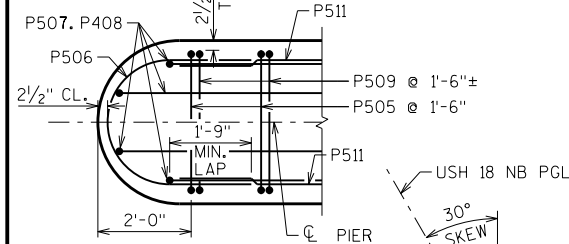
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P401	X	56	30'-6"			PIER - HORIZ.
P502	X	28	6'-10"	X		PIER - HORIZ. - ENDS
P503	X	126	16'-3"			PIER - VERT.
P404	X	266	2'-8"	X		PIER - HORIZ. - TIE BARS
P505	X	40	12'-0"	X		PIER CAP - STIRRUP
P506	X	9	8'-1"	X		PIER CAP - HORIZ. - ENDS
P507	X	8	35'-0"	X		PIER CAP - HORIZ. - TOP
P408	X	4	37'-3"	X		PIER CAP - HORIZ. - TOP
P509	X	33	6'-4"	X		PIER CAP - VERT. - TOP
P510	X	35	2'-0"			PIER CAP - DOWEL BARS
P511	X	16	30'-9"			PIER CAP - HORIZ.



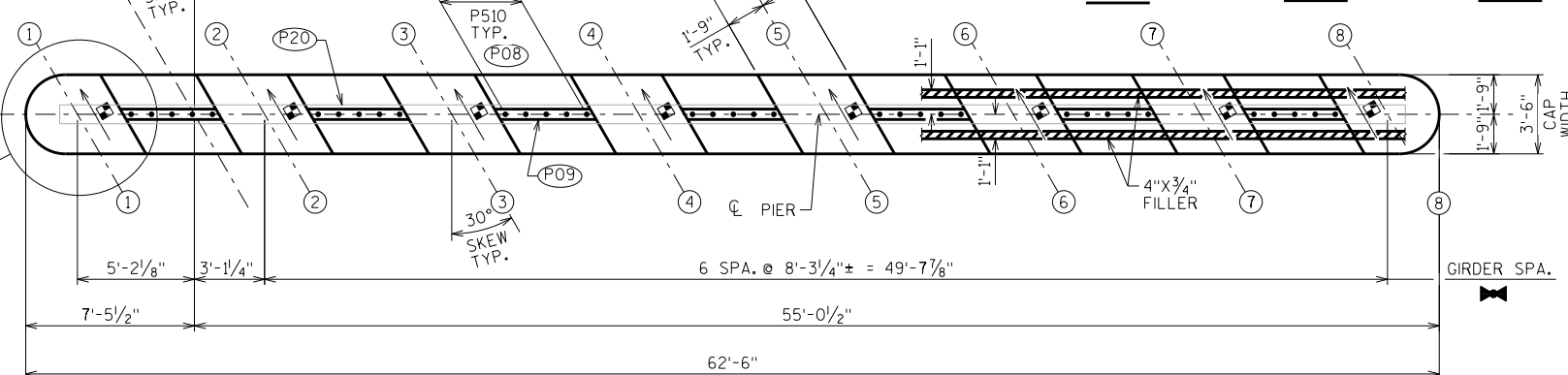
 = DIRECTION OF BEAM SEAT SLOPE



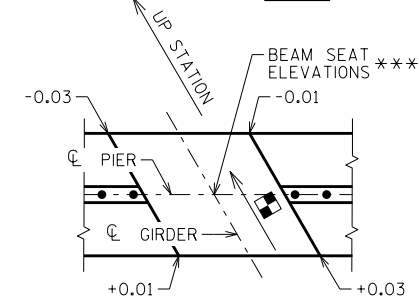
P505



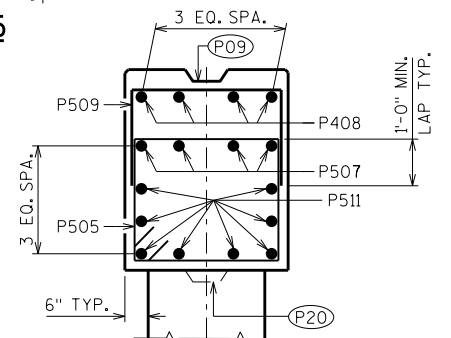
SEE DETAIL A -
TYP. - BOTH
ENDS



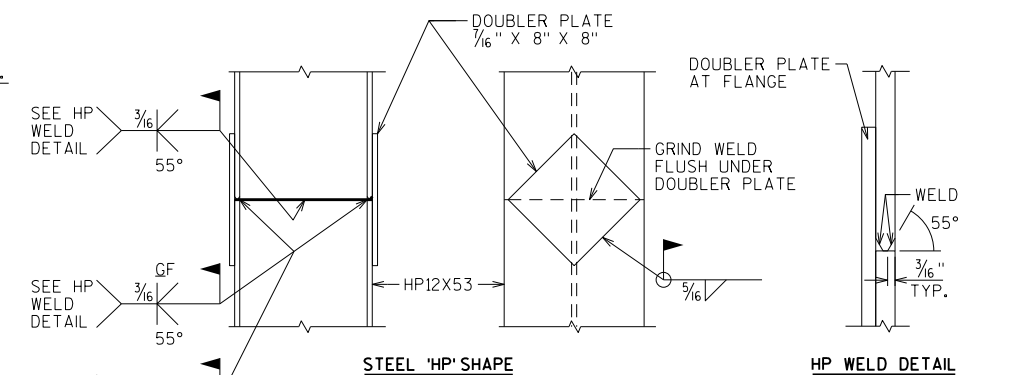
BEAM SEAT DETAIL



SECTION B-B THRU CAP

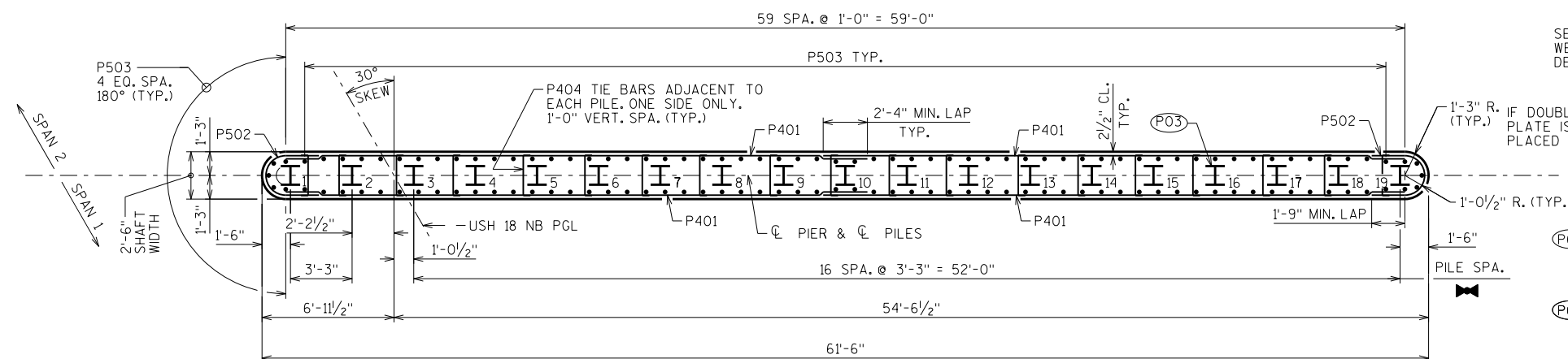


PILE DETAILS



SECTION A-A - PILE PLAN

 = MEASURED ALONG $\mathbb{C}$ BRG.



- (P03) SUPPORT PIER ON HP 12 x 53
STEEL PILING, ESTIMATED 70'-0" LONG
WITH A REQUIRED DRIVING RESISTANCE OF
220 TONS PER PILE. PILE POINTS REQ'D.
- (P08) P510 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS.
MAY BE PLACED AFTER CONCRETE IS POURED
BUT BEFORE INITIAL SET HAS TAKEN PLACE.
(EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONST. JOINT-FORMED BY
BEVELED 2 x 6 BETWEEN BEAM SEATS.
- (P20) 59'-6" x 10" x 3 1/2" DEEP KEYED CONST.
JOINT-FORMED BY BEVELED 4 x 12.

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
PIER		SHEET 8	

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH, AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

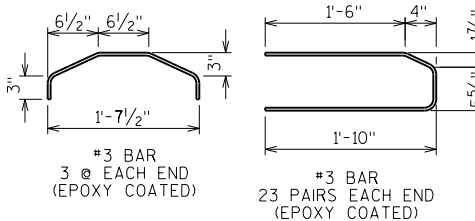
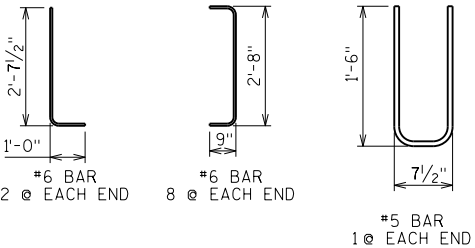
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

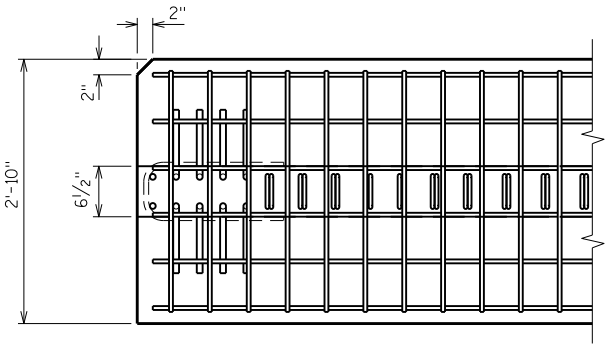
AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

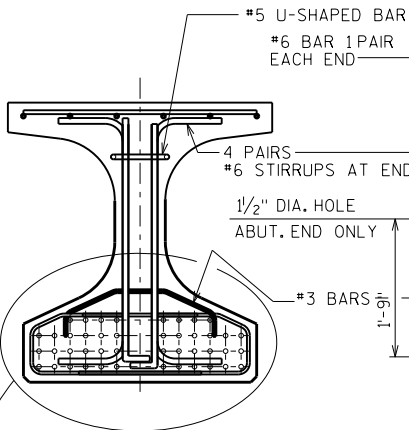
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



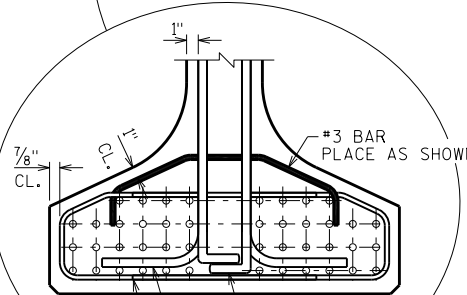
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
36W" PRESTRESSED GIRDER DETAILS			SHEET 9
1			



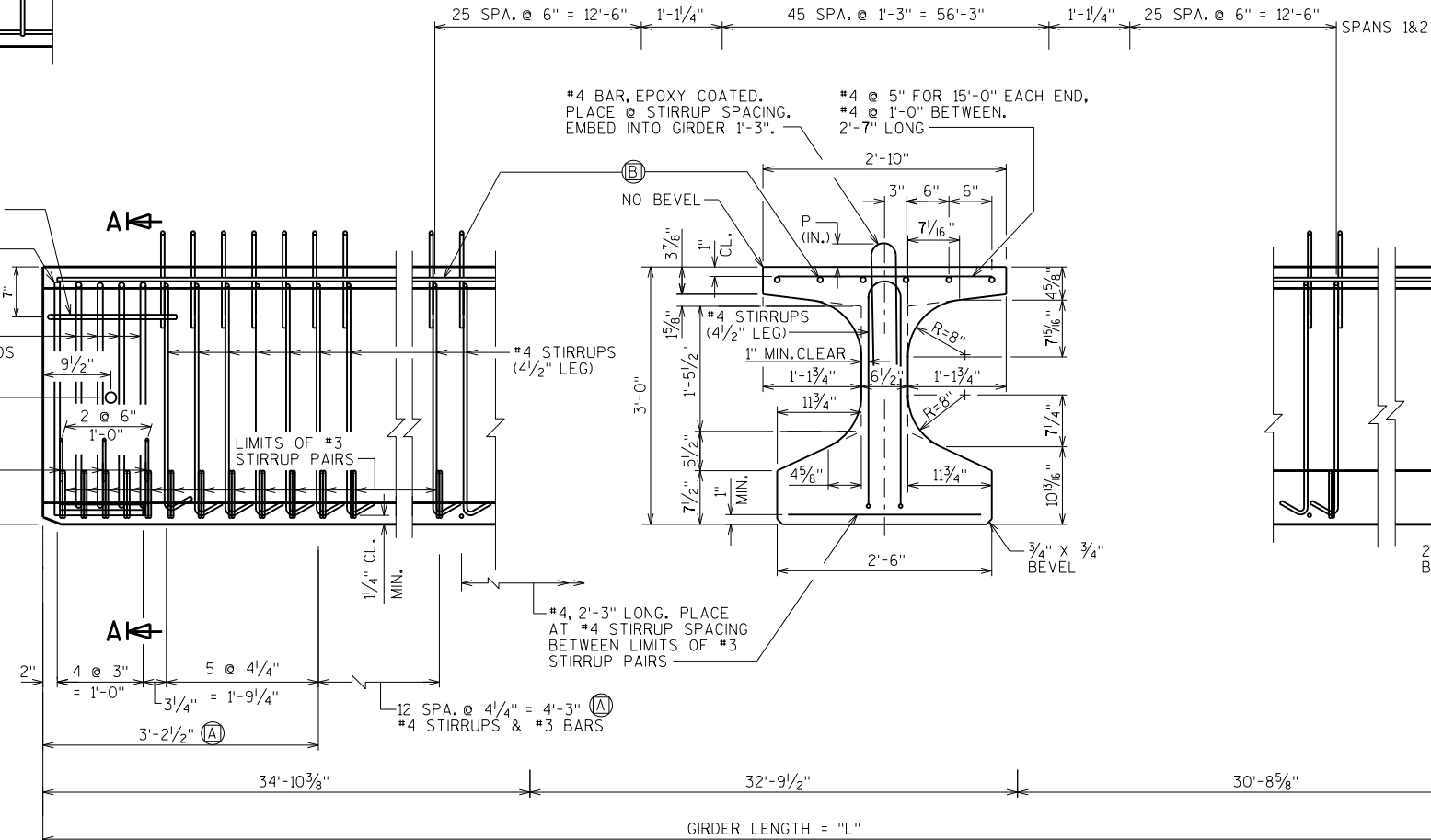
TOP FLANGE
AT ABUTMENT END ONLY



SECTION A-A



BOTTOM FLANGE

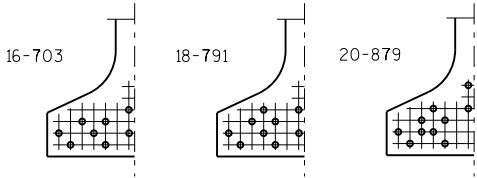


SIDE VIEW & TYPICAL SECTION IN SPAN

- (A) DETAIL TYP. AT EACH END
(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

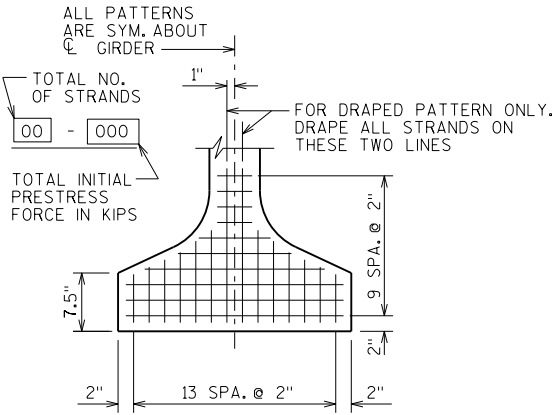
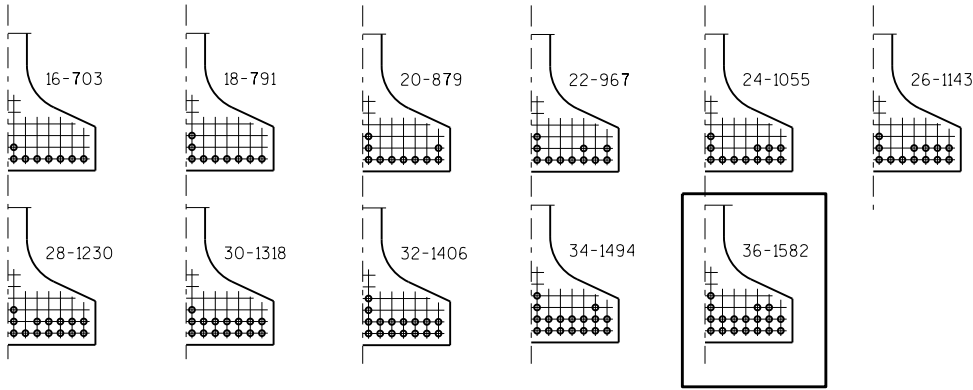
* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA																								
SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEF. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" 1/3 1ST 1/3 OF GIRDER	"P" 1/3 MID 1/3 OF GIRDER	"P" 1/3 END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10						TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.)				TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
																			"A"	"B" MIN.	"B" MAX.	"C"		
1	1&8	98.375	0.8	1.6	2.1	2.5	2.6	2.5	2.1	1.5	0.8	8000	7"	7"	7"	0.6	36	6700	31	11.5	14.5	5		
1	2-7	98.375	0.9	1.7	2.3	2.7	2.8	2.6	2.2	1.6	0.9	8000	7"	7"	7"	0.6	36	6700	31	11.5	14.5	5		
2	1&8	98.375	0.8	1.5	2.1	2.5	2.6	2.5	2.1	1.6	0.8	8000	7"	7"	7"	0.6	36	6700	31	11.5	14.5	5		
2	2-7	98.375	0.9	1.6	2.2	2.6	2.8	2.7	2.3	1.7	0.9	8000	7"	7"	7"	0.6	36	6700	31	11.5	14.5	5		

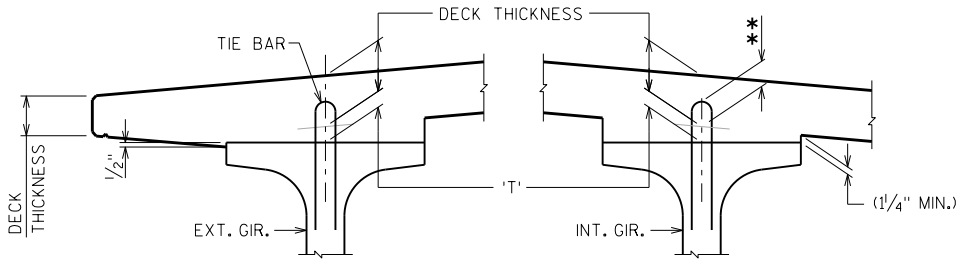


STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY
TO AVOID DRAPING OF STRANDS

0.6"φ STRANDS



TYP. STRAND PATTERN



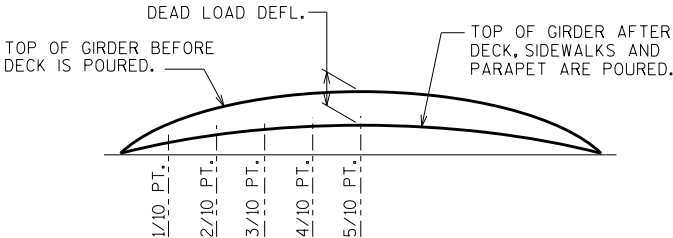
DECK HAUNCH DETAIL

IF 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR, ** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C.G. OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

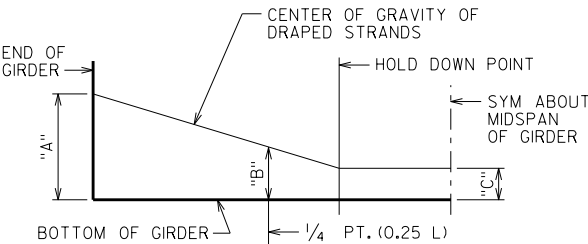
NOTE: AN AVERAGE HAUNCH ('T') OF 2.7" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM

ARRANGEMENT AT C.G. SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"φ STRANDS



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	4.47
2	4.47

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T'.
USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
36W" PRESTRESSED GIRDER DETAILS		SHEET 10	
2			

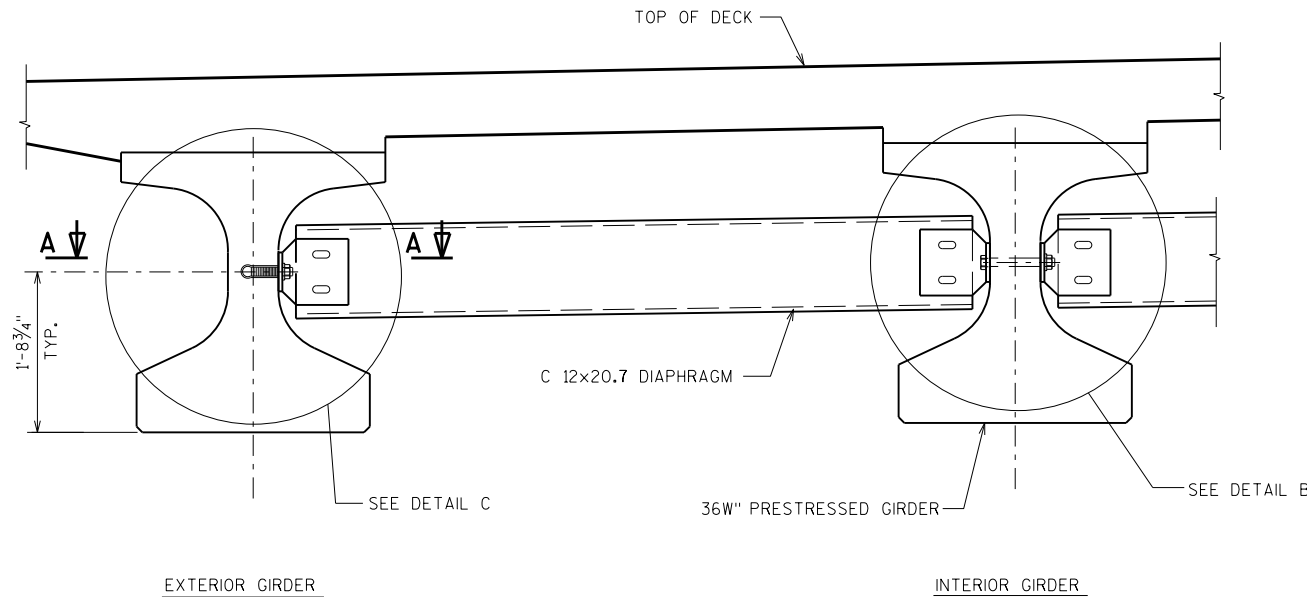
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-67-354", EACH.

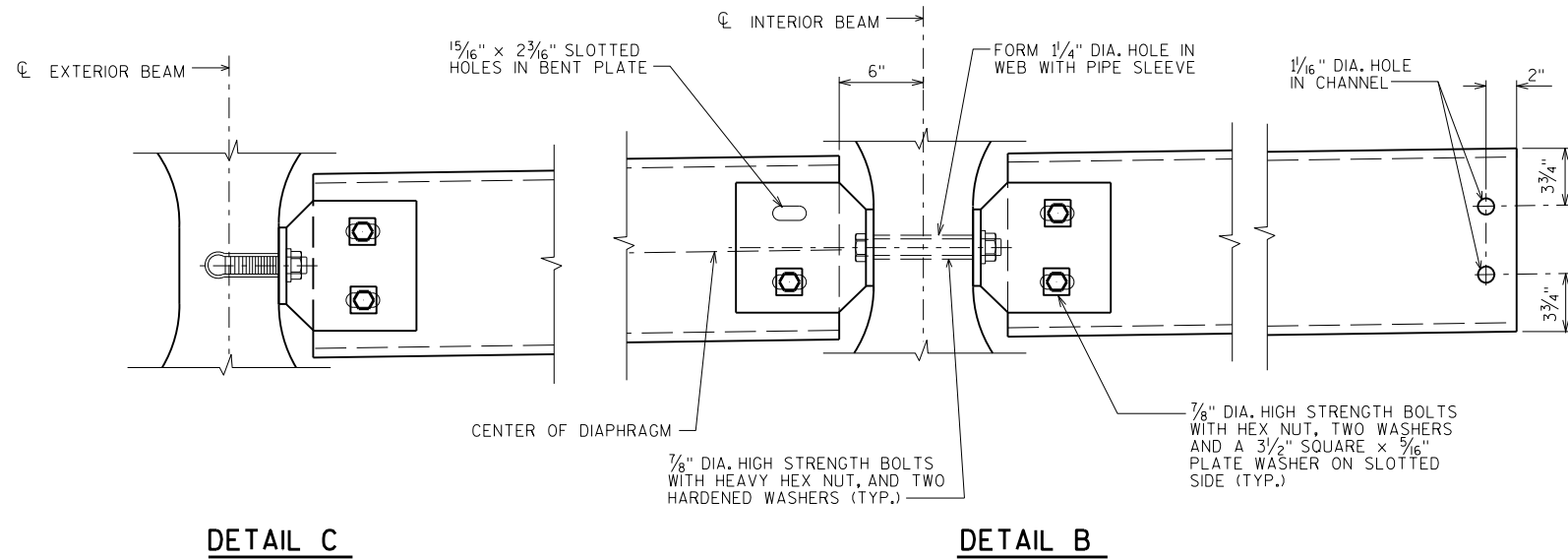
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

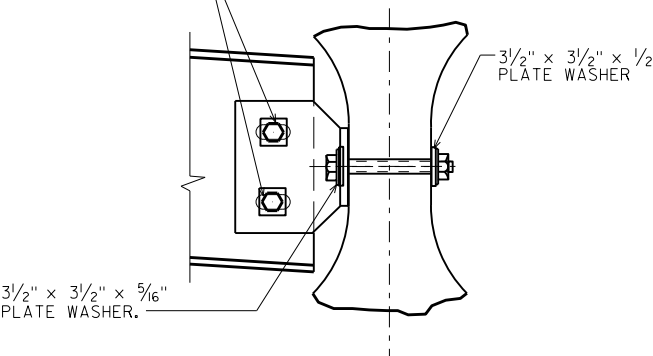
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



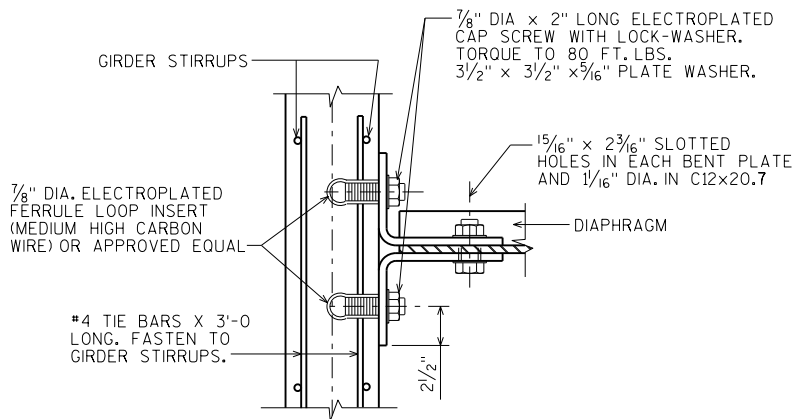
PART TRANSVERSE SECTION AT DIAPHRAGM



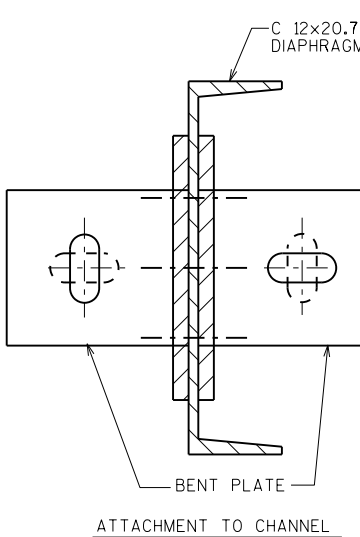
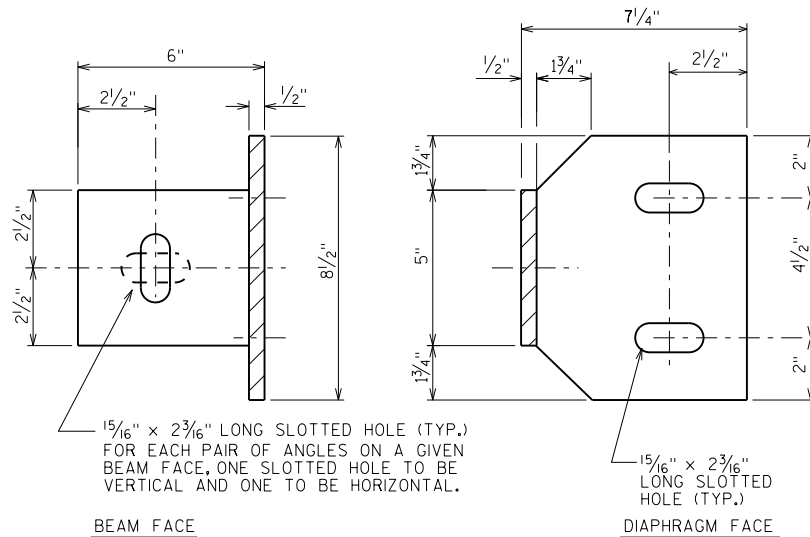
7/8" DIA HIGH STRENGTH BOLTS WITH HEX NUT, TWO WASHERS AND A 3 1/2" SQUARE x 5/16" PLATE WASHER ON SLOTTED SIDE.



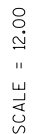
SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°

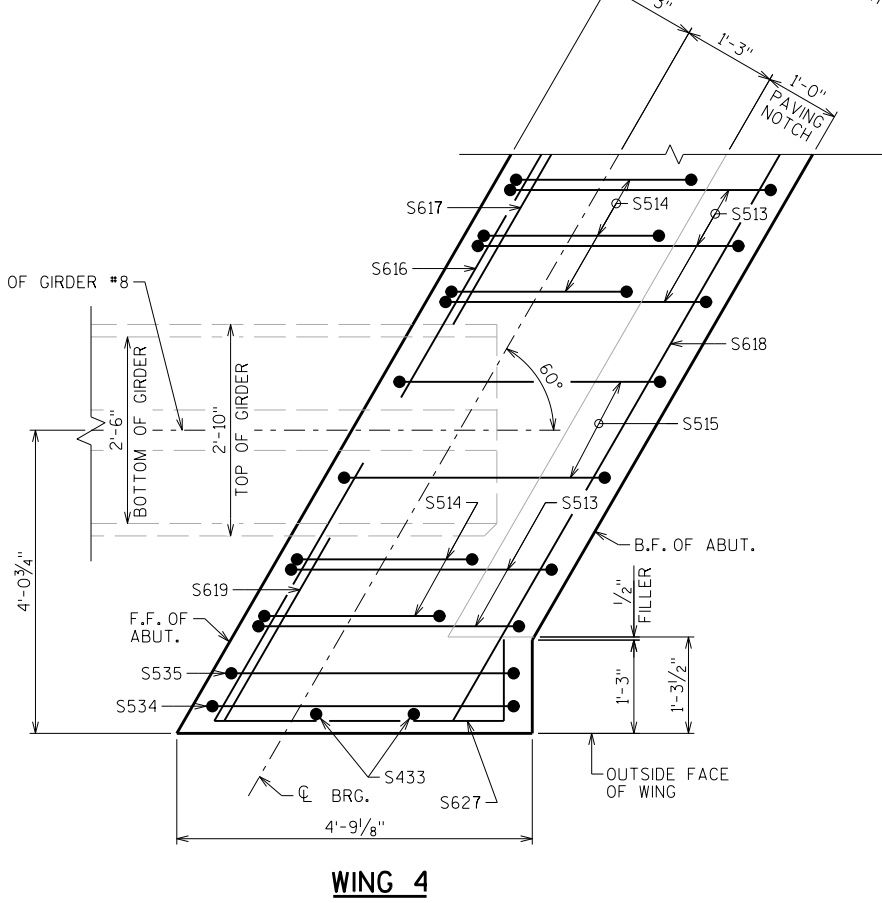
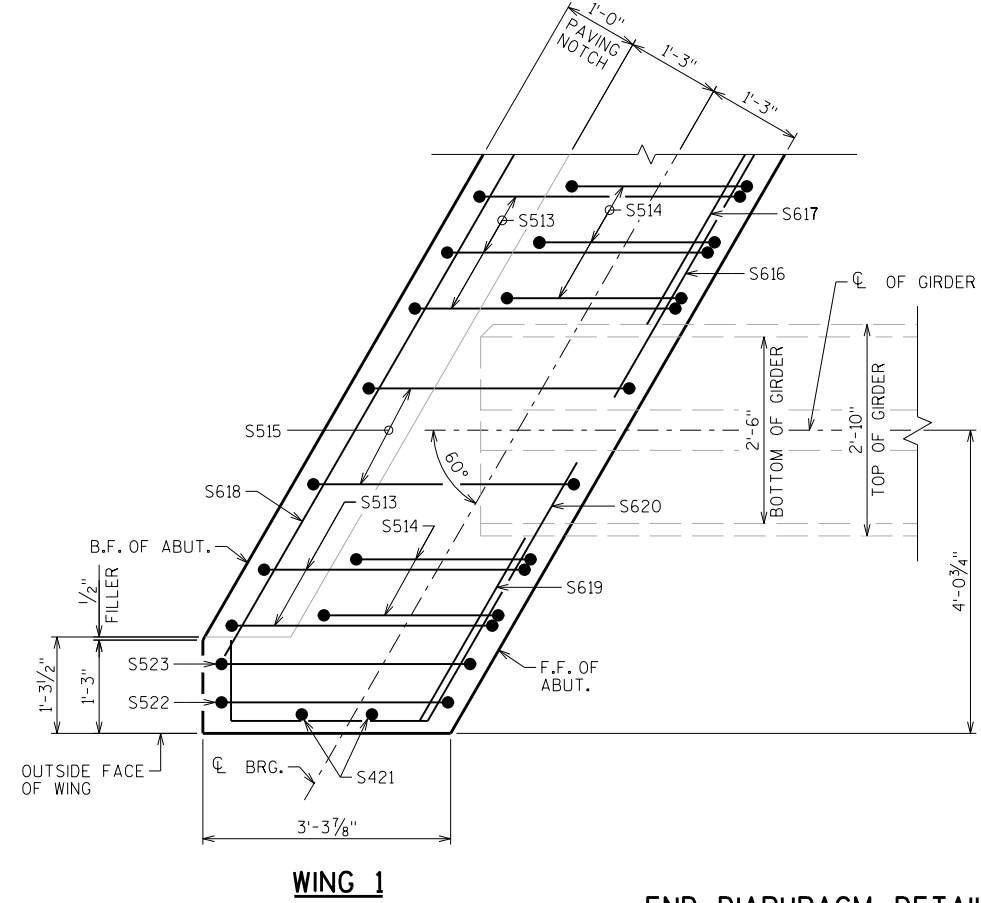
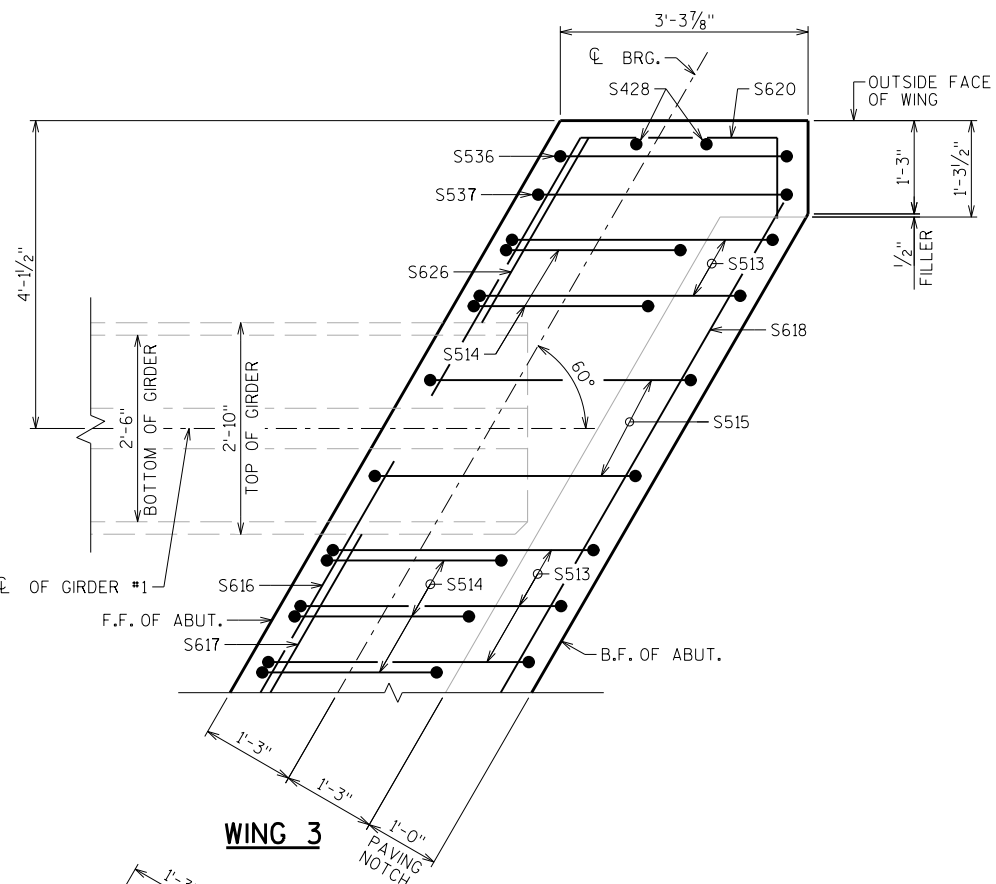
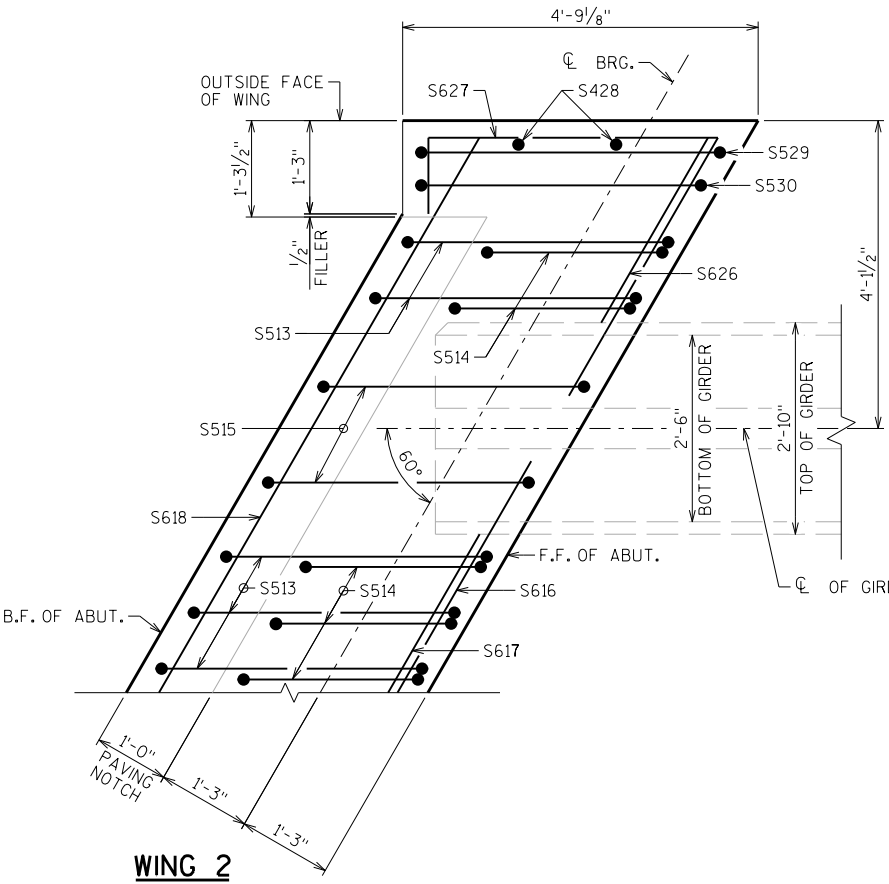


SECTION A-A
(FOR EXTERIOR ATTACHMENT)



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
STEEL DIAPHRAGM		SHEET 11	





END DIAPHRAGM DETAILS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
SUPERSTRUCTURE DIAPH. DETAILS		SHEET 13	

SCALE = 5.00

BILL OF BARS

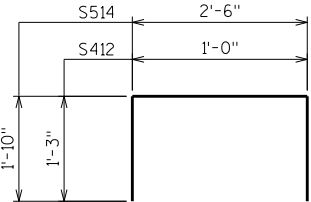
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S901	X	147	52'-0"			CONTINUITY STEEL
S402	X	148	35'-10"			DECK - LONGITUDINAL - TOP
S403	X	148	40'-10"			DECK - LONGITUDINAL - TOP
S404	X	375	41'-1"			DECK - LONGITUDINAL - BOTTOM
S505	X	1030	28'-11"			DECK - TRANSVERSE - TOP & BOT.
S506	X	554	4'-10"			DECK - TRANSVERSE - DECK EDGES
S507	X	42	15'-4"		▲	DECK - TRANSVERSE - TOP ENDS
S508	X	46	15'-2"		▲	DECK - TRANSVERSE - TOP ENDS
S509	X	42	15'-4"		▲	DECK - TRANSVERSE - BOTTOM ENDS
S510	X	44	15'-2"		▲	DECK - TRANSVERSE - BOTTOM ENDS
S411	X	28	3'-10"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S412	X	70	3'-4"	X		ABUT. DIAPH. - VERT. - BTWN. GIRDERS
S513	X	92	12'-6"	X		ABUT. DIAPH. - STIRRUP
S514	X	92	5'-11"	X		ABUT. DIAPH. - VERT.
S515	X	32	11'-0"	X		ABUT. DIAPH. - STIRRUP - AT GIRDERS
S616	X	56	4'-10"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S617	X	28	3'-9"			ABUT. DIAPH. - HORIZ. - BTWN. GIRDERS
S618	X	20	35'-0"			ABUT. DIAPH. - HORIZ. - B.F.
S619	X	4	2'-10"			ABUT. DIAPH. - HORIZ. - F.F. - END
S620	X	4	7'-8"	X		ABUT. DIAPH. - HORIZ. - END
S421	X	2	3'-6"			ABUT. DIAPH. - VERT. - ENDS
S522	X	1	14'-0"	X		ABUT. DIAPH. - STIRRUP - END
S523	X	1	14'-8"	X		ABUT. DIAPH. - STIRRUP - END
S524	X	NOT USED				
S525	X	NOT USED				
S626	X	4	2'-10"			ABUT. DIAPH. - HORIZ. - F.F. - END
S627	X	4	8'-11"	X		ABUT. DIAPH. - HORIZ. - END
S428	X	4	3'-6"			ABUT. DIAPH. - VERT. - ENDS
S529	X	1	16'-0"	X		ABUT. DIAPH. - STIRRUP - END
S530	X	1	15'-6"	X		ABUT. DIAPH. - STIRRUP - END
S531	X	NOT USED				
S532	X	NOT USED				
S433	X	2	3'-6"			ABUT. DIAPH. - VERT. - ENDS
S534	X	1	16'-0"	X		ABUT. DIAPH. - STIRRUP - END
S535	X	1	15'-6"	X		ABUT. DIAPH. - STIRRUP - END
S536	X	1	14'-0"	X		ABUT. DIAPH. - STIRRUP - END
S537	X	1	14'-8"	X		ABUT. DIAPH. - STIRRUP - END
S538	X	32	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIRDERS
S539	X	14	9'-10"	X		PIER DIAPH. - STIRRUP - AT GIRDERS
S540	X	35	11'-3"	X		PIER DIAPH. - VERT. - BTWN. GIRDERS
S441	X	56	4'-4"			PIER - DIAPH. - HORIZ. - BTWN. GIRDERS
S442	X	28	3'-2"			PIER - DIAPH. - HORIZ. - BTWN. GIRDERS
S543	X	299	4'-5"	X		32SS PARAPET - VERT.
S544	X	299	5'-0"	X		32SS PARAPET - VERT.
S545	X	30	41'-2"			32SS PARAPET - HORIZ.
S546	X	299	4'-5"	X		42SS PARAPET - VERT.
S547	X	299	6'-8"	X		42SS PARAPET - VERT.
S548	X	40	41'-2"			42SS PARAPET - HORIZ.
S549	X	200	4'-10"	X		PARAPET - TYPE 'A' - VERT.
S550	X	200	4'-1"	X		PARAPET - TYPE 'A' - VERT.
S451	X	30	41'-2"			PARAPET - TYPE 'A' - HORIZ.

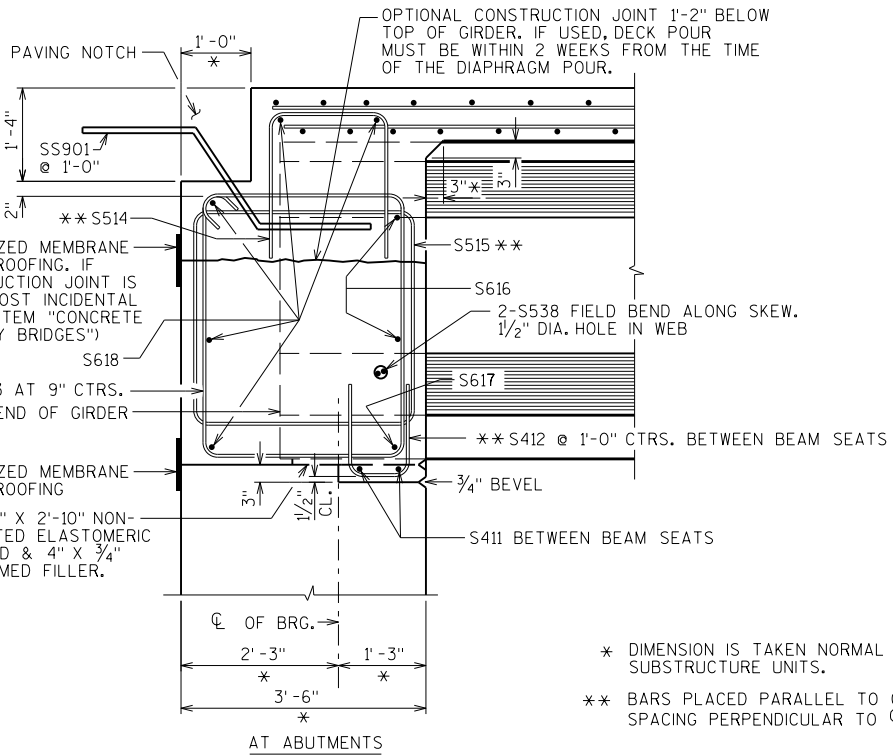
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
S507	2 SERIES OF 21	3'-4" TO 27'-3"
S508	2 SERIES OF 23	1'-6" TO 28'-10"
S509	2 SERIES OF 21	2'-9" TO 27'-11"
S510	2 SERIES OF 22	2'-1" TO 28'-2"

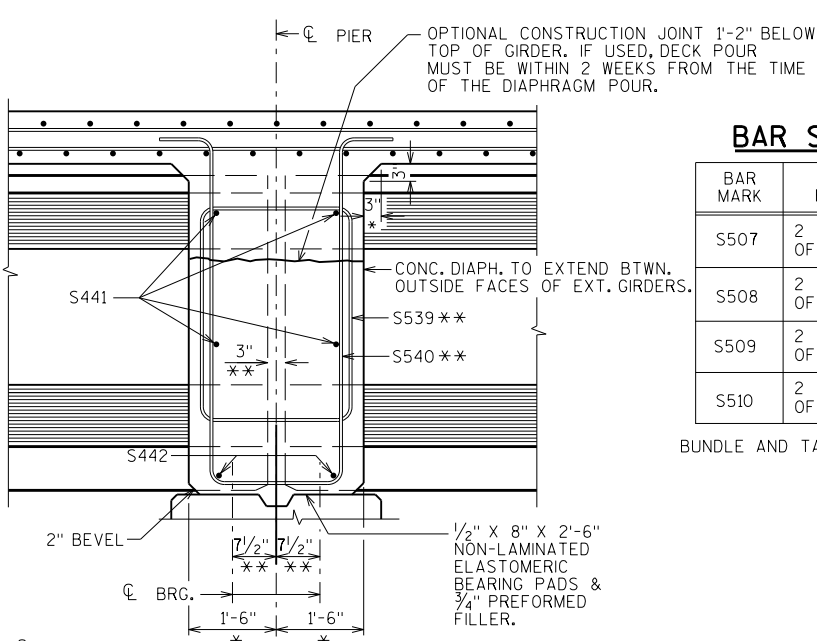
BUNDLE AND TAG EACH SERIES SEPARATELY.



S412, S514



PART LONGIT. SECTION



AT PIER DIAPHRAGM

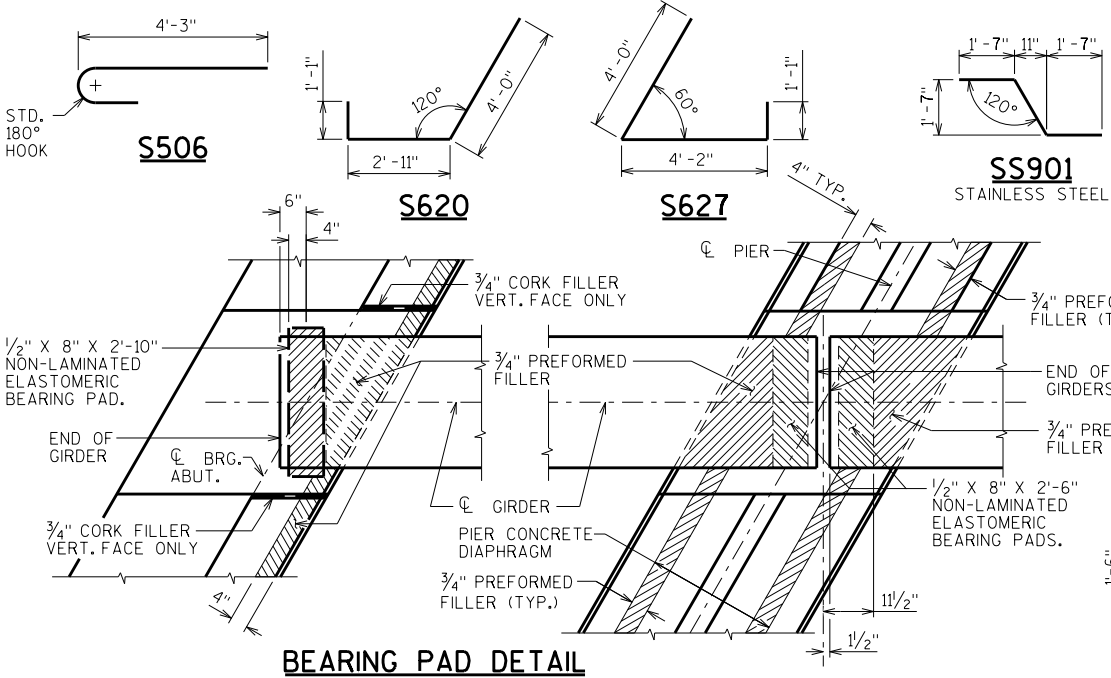
BILL OF BARS

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

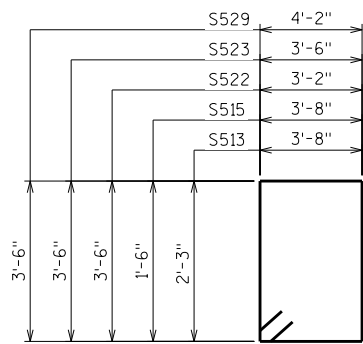
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S901		114	5'-0"	X		ABUT. DIAPH./APPROACH SLAB - TIE BARS

TOP OF DECK ELEVATIONS

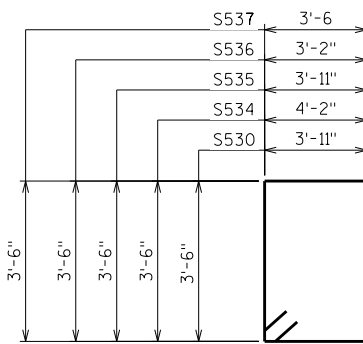
	CL S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL N. ABUT.
LT EOD	817.50	817.45	817.40	817.34	817.27	817.20	817.12	817.03	816.94	816.84	816.74	816.63	816.51	816.39	816.26	816.13	815.98	815.84	815.68	815.52	815.36
GIRDER 1	817.47	817.43	817.37	817.31	817.25	817.17	817.10	817.01	816.92	816.82	816.72	816.61	816.49	816.37	816.24	816.11	815.97	815.82	815.67	815.51	815.34
PGL	817.40	817.35	817.30	817.24	817.18	817.10	817.03	816.94	816.85	816.76	816.66	816.55	816.43	816.31	816.19	816.05	815.92	815.77	815.62	815.46	815.30
GIRDER 2	817.35	817.30	817.25	817.20	817.13	817.06	816.99	816.90	816.82	816.72	816.62	816.51	816.40	816.28	816.15	816.02	815.88	815.74	815.59	815.43	815.27
GIRDER 3	817.22	817.18	817.13	817.08	817.02	816.95	816.88	816.80	816.71	816.62	816.52	816.42	816.30	816.19	816.06	815.94	815.80	815.66	815.51	815.36	815.20
GIRDER 4	817.10	817.06	817.01	816.96	816.90	816.84	816.76	816.69	816.60	816.51	816.42	816.32	816.21	816.09	815.97	815.85	815.71	815.58	815.43	815.28	815.12
GIRDER 5	816.97	816.93	816.89	816.84	816.78	816.72	816.65	816.58	816.50	816.41	816.32	816.22	816.11	816.00	815.88	815.76	815.63	815.49	815.35	815.20	815.04
GIRDER 6	816.84	816.80	816.76	816.72	816.66	816.60	816.54	816.47	816.39	816.30	816.21	816.12	816.01	815.90	815.79	815.67	815.54	815.41	815.27	815.12	814.97
GIRDER 7	816.71	816.68	816.64	816.59	816.54	816.49	816.42	816.35	816.28	816.20	816.11	816.01	815.91	815.81	815.70	815.58	815.45	815.32	815.18	815.04	814.89
GIRDER 8	816.58	816.55	816.51	816.47	816.42	816.37	816.31	816.24	816.17	816.09	816.00	815.91	815.81	815.71	815.60	815.48	815.36	815.23	815.10	814.96	814.81
RT EOD	816.55	816.52	816.48	816.44	816.40	816.34	816.28	816.22	816.14	816.07	815.98	815.89	815.79	815.69	815.58	815.46	815.34	815.21	815.08	814.94	814.79



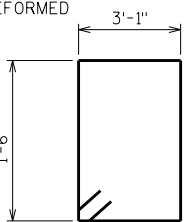
BEARING PAD DETAIL



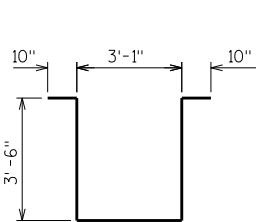
S513, S515, S522, S523, S529



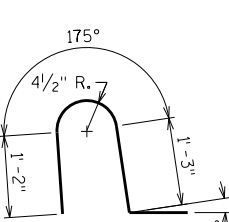
S530, S534, S535, S536, S537



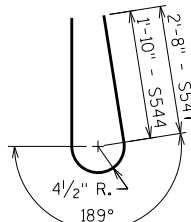
S539



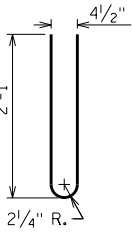
S540



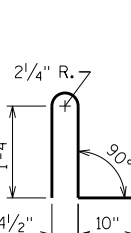
S543, S546



S544, S547

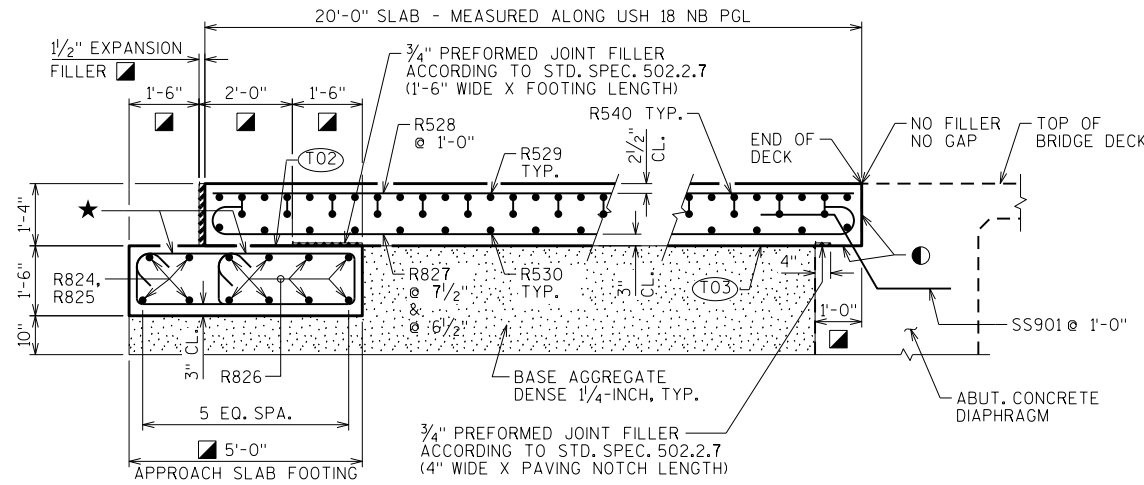


S549



S550

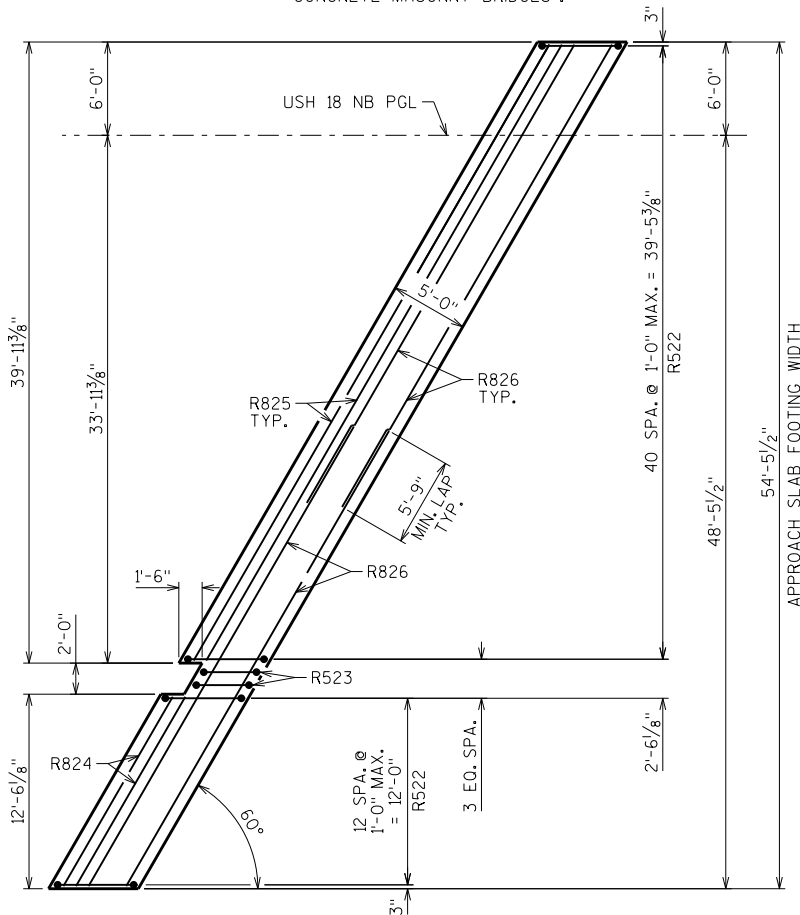
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
SUPERSTRUCTURE DETAILS		SHEET 14	



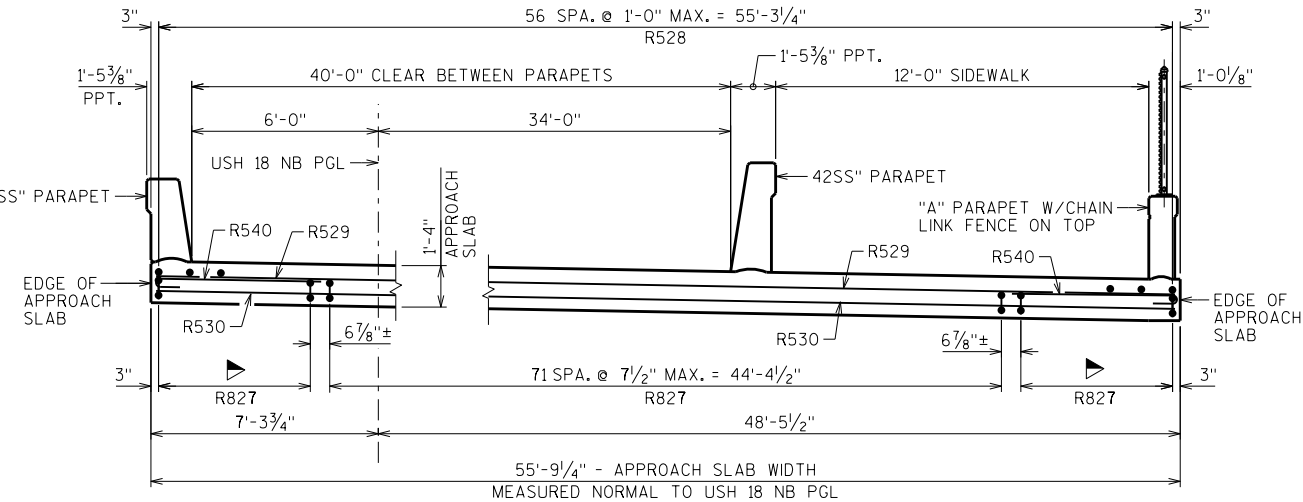
★ = R522, R523 @ 1'-0"

SECTION THRU APPROACH SLAB

- APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCUTRAL APPROACH SLAB.
- MEASURED NORMAL TO ABUTMENT ☒
- (T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING. POLYETHEYLENE SHEETS SHALL BE INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".
- (T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE. POLYETHEYLENE SHEETS SHALL BE INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

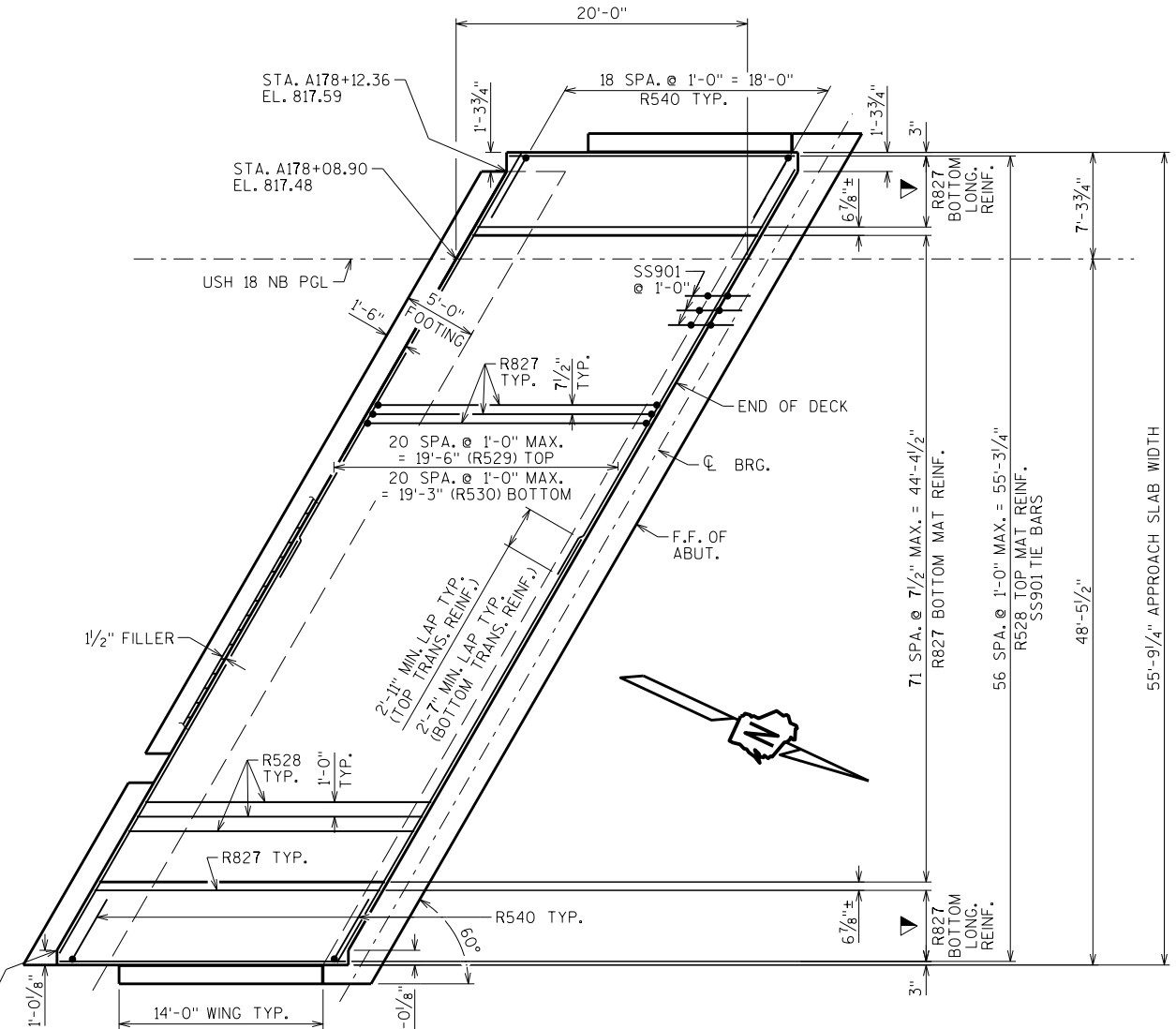


PLAN VIEW - APPROACH SLAB FOOTING



SECTION THRU APPROACH SLAB

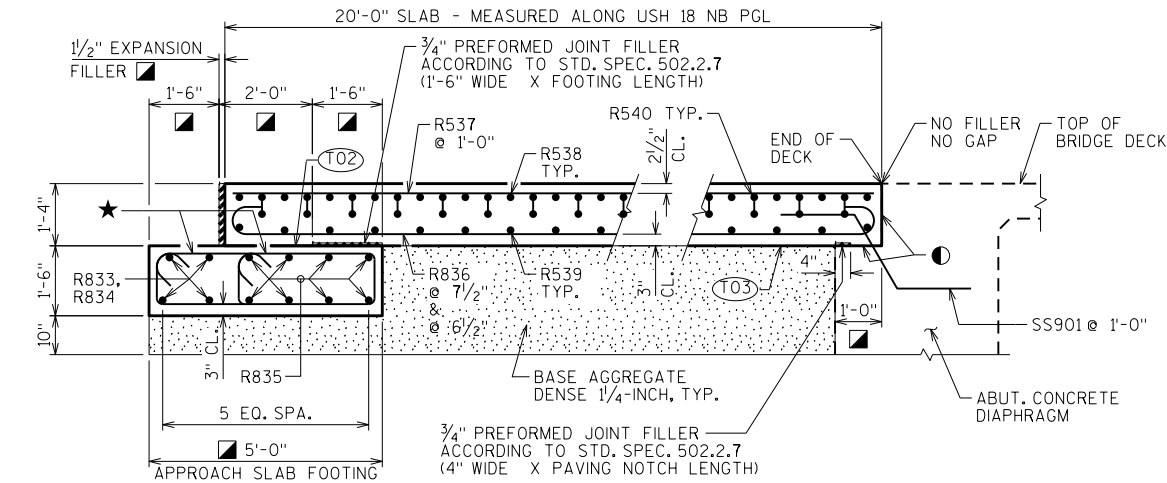
LOOKING NORTH



PLAN VIEW - APPROACH SLAB

▶ = 9 SPA. @ 6 1/2" = 4'-10 1/2"

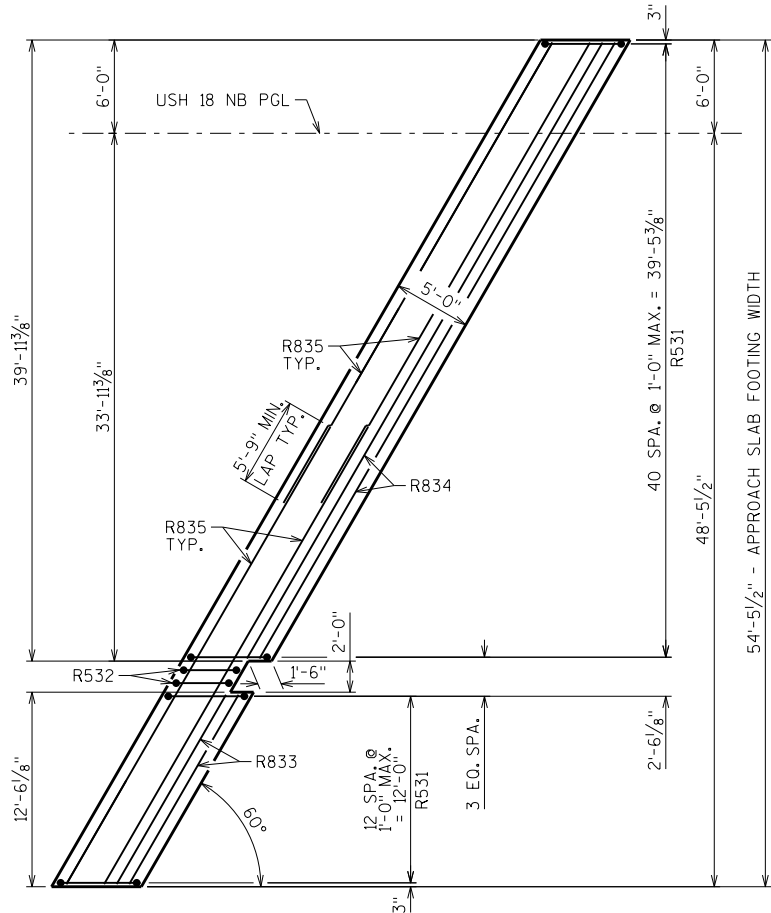
NO. DATE REVISION BY			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
SOUTH APPROACH SLAB DETAILS			SHEET 15



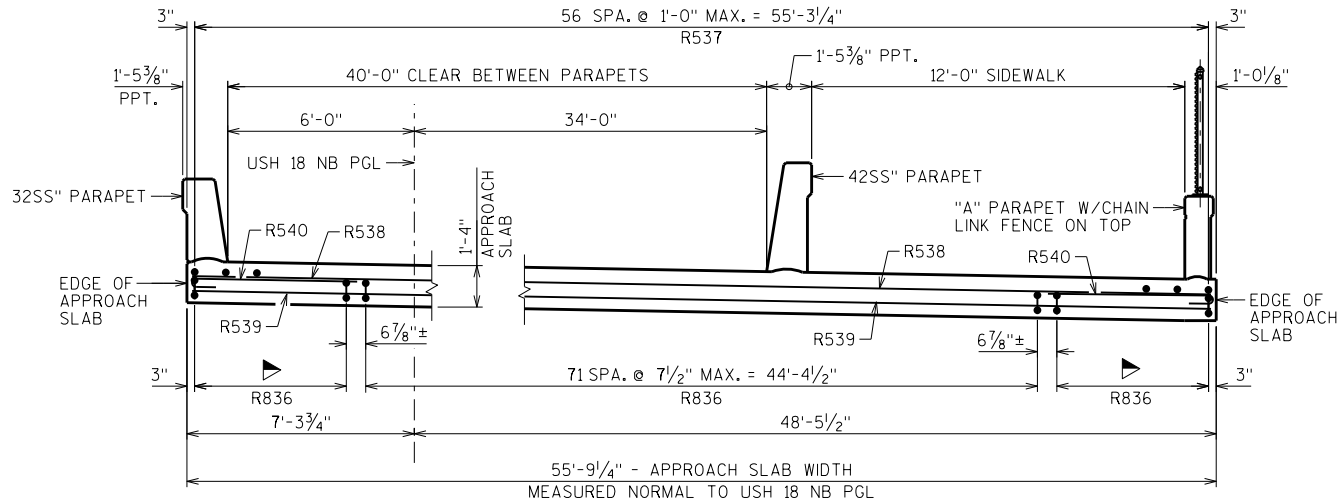
★ = R531, R532 @ 1'-0"

SECTION THRU APPROACH SLAB

- APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCUTRAL APPROACH SLAB.
- MEASURED NORMAL TO ABUTMENT CL
- (T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING. POLYETHEYLENE SHEETS SHALL BE INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".
- (T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE. POLYETHEYLENE SHEETS SHALL BE INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

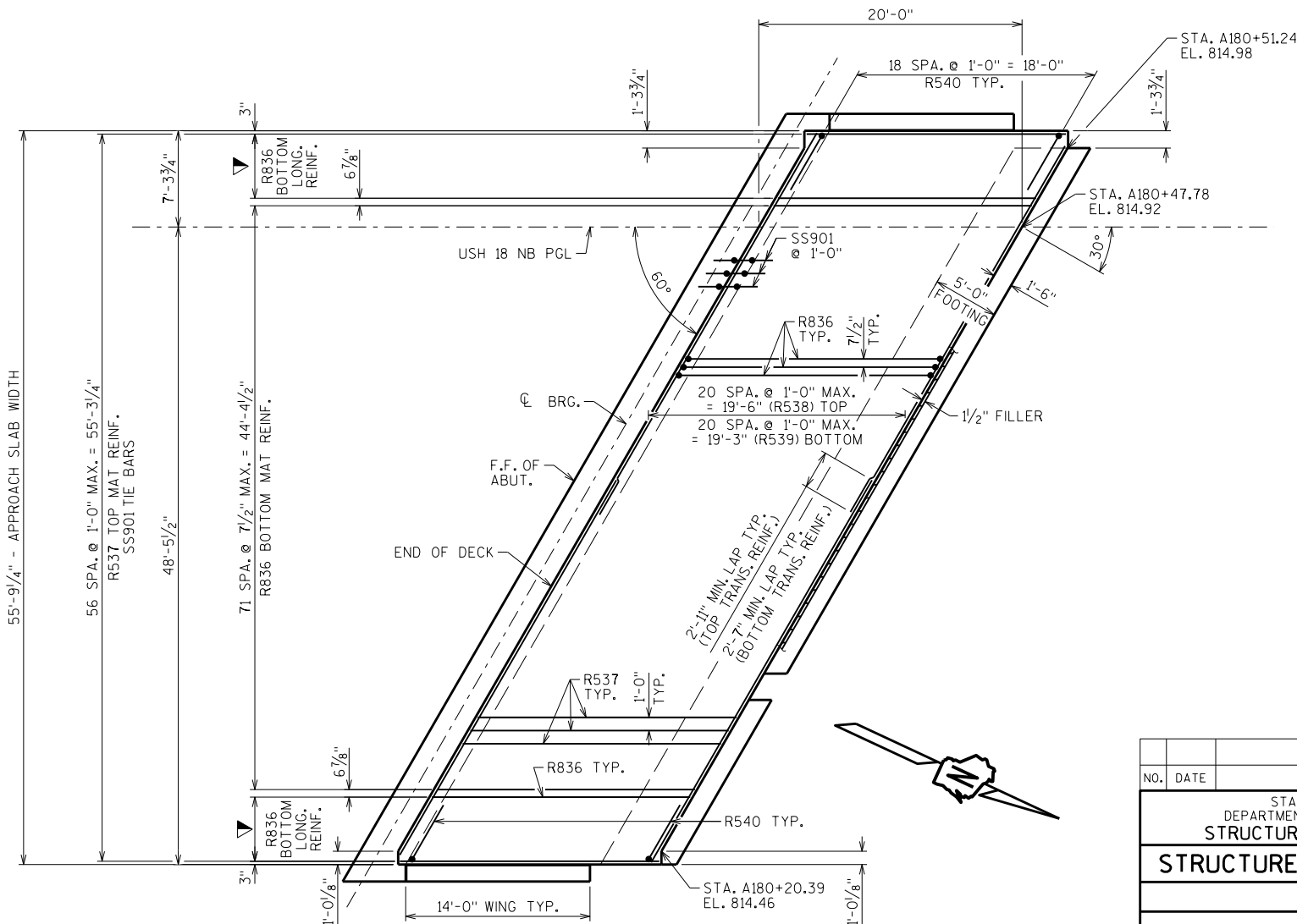


PLAN VIEW - APPROACH SLAB FOOTING



SECTION THRU APPROACH SLAB

LOOKING NORTH



PLAN VIEW - APPROACH SLAB

▶ = 9 SPA. @ 6 1/2" = 4'-10 1/2"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
NORTH APPROACH SLAB DETAILS			SHEET 16

BILL OF BARS

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

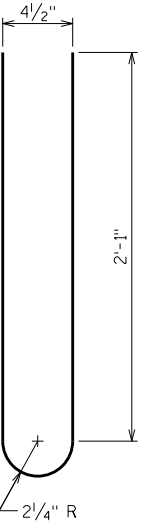
BAR MARK	COAT	S. APPR. SLAB	N. APPR. SLAB	LENGTH	BENT	BAR SERIES	LOCATION
R401	X	6	6	19-7			PARAPET A - HORIZ.
R502	X	24	24	4-10	X		PARAPET A - VERT.
R503	X	24	24	4-1	X		PARAPET A - VERT.
R504	X	17	17	4-5	X		PARAPET 32SS - VERT.
R505	X	17	17	5-0	X		PARAPET 32SS - VERT.
R506	X	12	12	2-9	X		PARAPET 32SS - VERT.
R507	X	17	17	4-4	X		PARAPET 32SS - VERT.
R508	X	11	11	4-9	X		PARAPET 32SS - VERT.
R509	X	6	6	4-10	X		PARAPET 32SS - VERT.
R510	X	1	1	19-7	X		PARAPET 32SS - HORIZ.
R511	X	5	5	19-7			PARAPET 32SS - HORIZ.
R512	X	17	17	4-5	X		PARAPET 42SS - VERT.
R513	X	17	17	6-8	X		PARAPET 42SS - VERT.
R514	X	11	11	2-9	X		PARAPET 42SS - VERT.
R515	X	17	17	4-4	X		PARAPET 42SS - VERT.
R516	X	5	5	6-5	X		PARAPET 42SS - VERT.
R517	X	6	6	6-6	X		PARAPET 42SS - VERT.
R518	X	1	1	19-7	X		PARAPET 42SS - HORIZ.
R519	X	5	5	19-7			PARAPET 42SS - HORIZ.
R520	X	6	6	5-5	X	▲	PARAPET 42SS - VERT.
R521	X	2	2	19-7	X		PARAPET 42SS - HORIZ.
R522	X	54	—	13-8	X		S. APPROACH SLAB FOOTING - STIRRUP
R523	X	2	—	10-2	X		S. APPROACH SLAB FOOTING - STIRRUP
R824	X	4	—	14-1			S. APPROACH SLAB FOOTING - TRANSVERSE
R825	X	4	—	45-9			S. APPROACH SLAB FOOTING - TRANSVERSE
R826	X	16	—	34-2			S. APPROACH SLAB FOOTING - TRANSVERSE
R827	X	92	—	21-5	X		S. APPROACH SLAB - LONGITUDINAL - BOTTOM
R528	X	57	—	19-7			S. APPROACH SLAB - LONGITUDINAL - TOP
R529	X	42	—	33-7			S. APPROACH SLAB - TRANSVERSE - TOP
R530	X	42	—	33-4			S. APPROACH SLAB - TRANSVERSE - BOTTOM
R531	X	—	54	13-8	X		N. APPROACH SLAB FOOTING - STIRRUP
R532	X	—	2	10-2	X		N. APPROACH SLAB FOOTING - STIRRUP
R833	X	—	4	14-1			N. APPROACH SLAB FOOTING - TRANSVERSE
R834	X	—	4	45-9			N. APPROACH SLAB FOOTING - TRANSVERSE
R835	X	—	16	34-2			N. APPROACH SLAB FOOTING - TRANSVERSE
R836	X	—	92	21-5	X		N. APPROACH SLAB - LONGITUDINAL - BOTTOM
R537	X	—	57	19-7			N. APPROACH SLAB - LONGITUDINAL - TOP
R538	X	—	42	33-7			N. APPROACH SLAB - TRANSVERSE - TOP
R539	X	—	42	33-4			N. APPROACH SLAB - TRANSVERSE - BOTTOM
R540	X	38	38	4-1	X		S.&N. APPROACH SLAB - TRANSVERSE - TOP EDGES

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

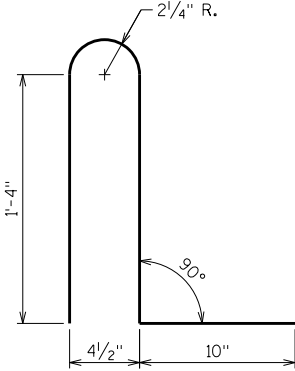
BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
R520	4 SERIES OF 6	4'-9" TO 6'-1"

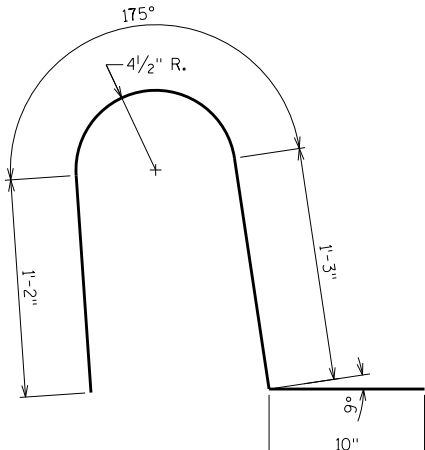
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
APPROACH SLAB/ PPT. REINFORCING DETAILS			SHEET 17



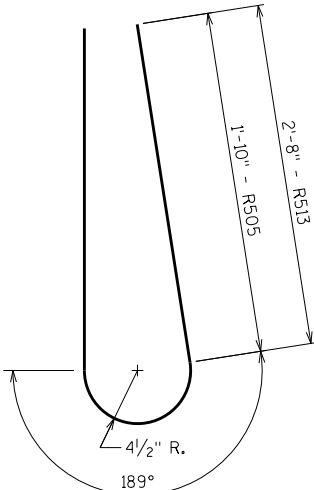
R502



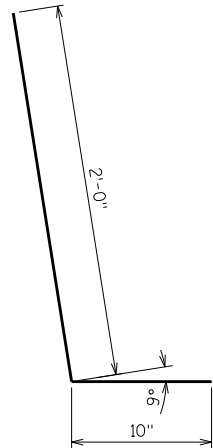
R503



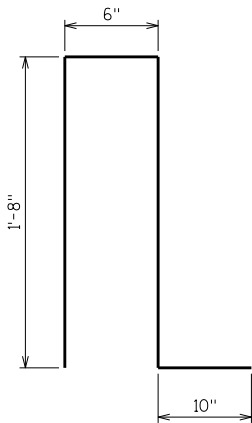
R504, R512



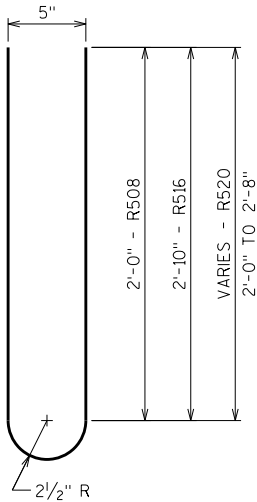
R505, R513



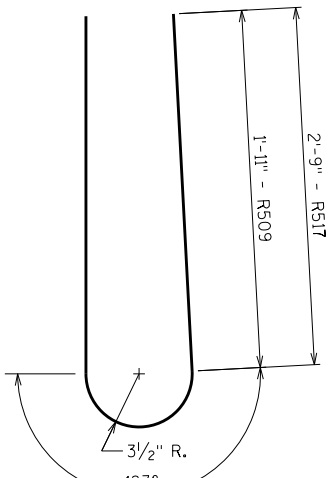
R506, R514



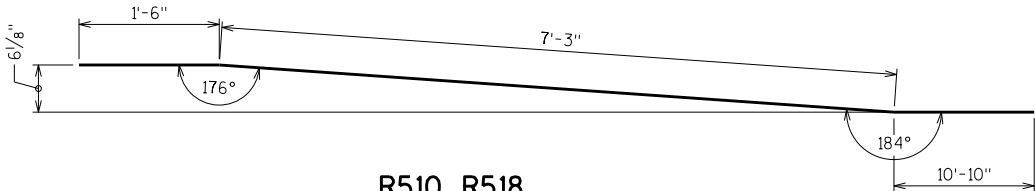
R507, R515



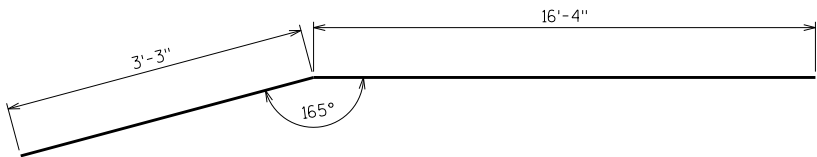
R508, R516, R520



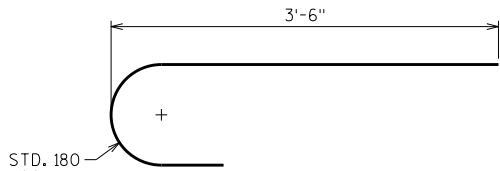
R509, R517



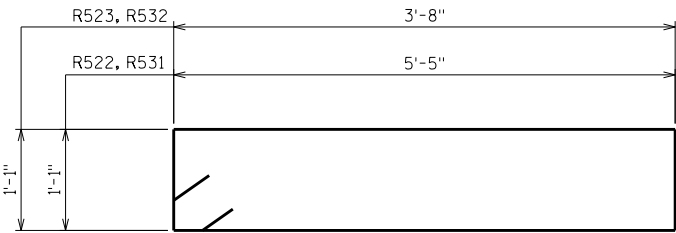
R510, R518



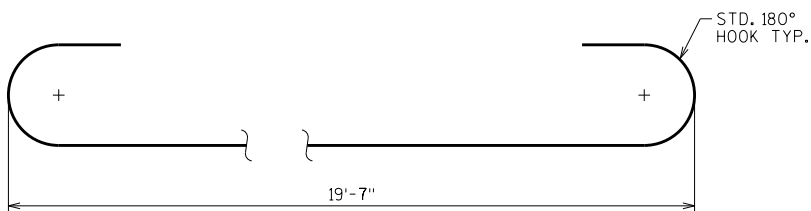
R521



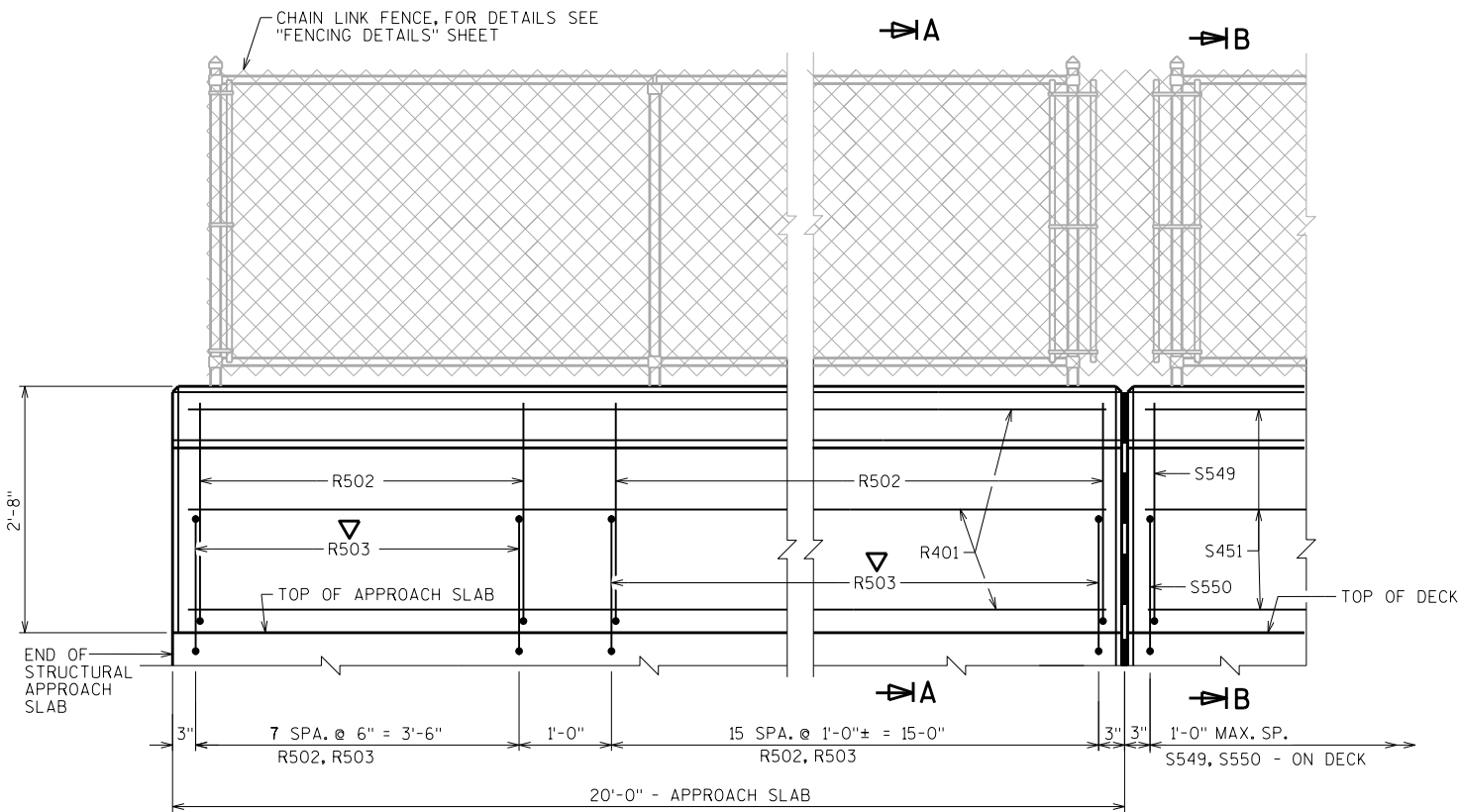
R540



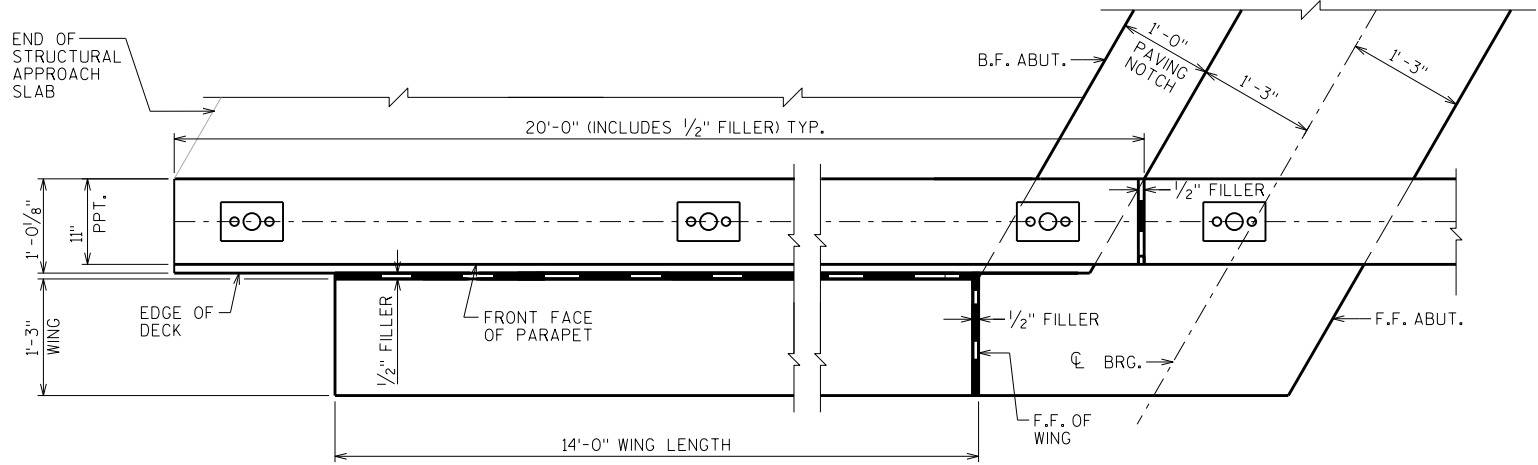
R522, R523, R531, R532



R827, R836

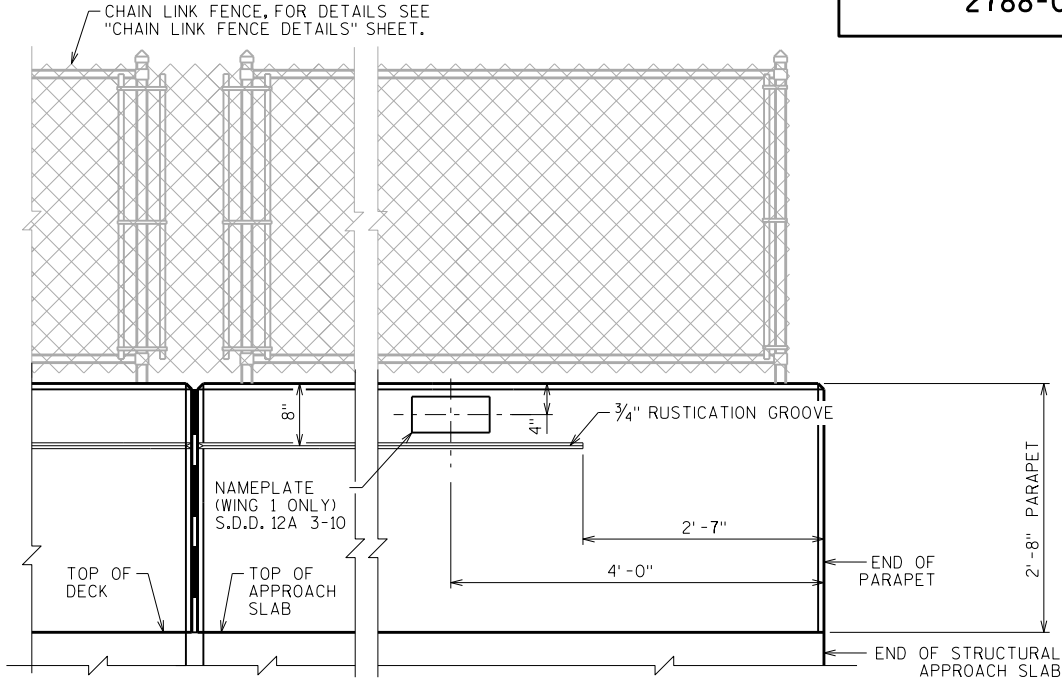


OUTSIDE ELEVATION

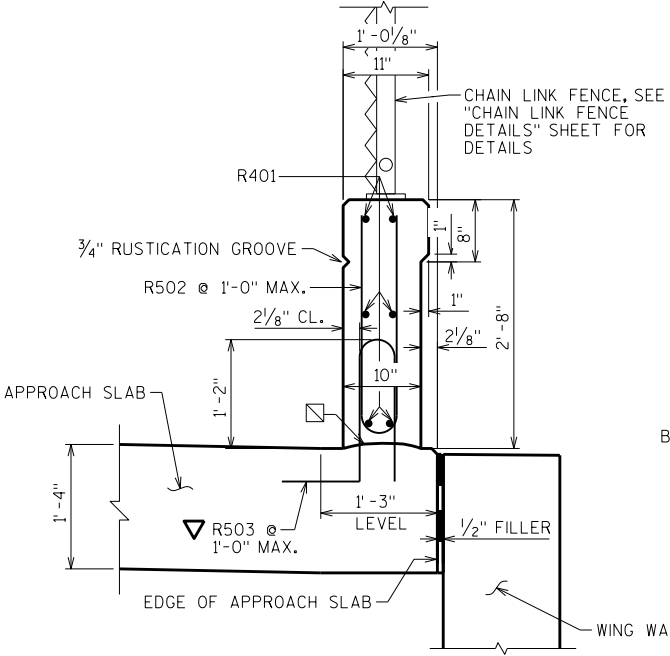


PLAN

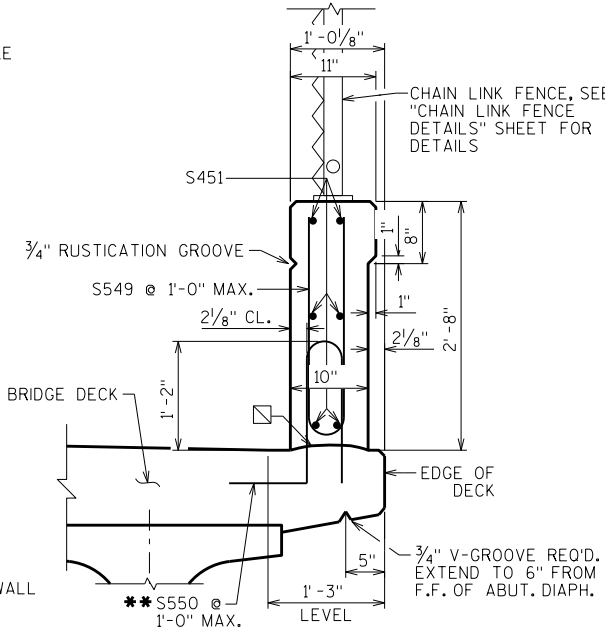
WING 1 SHOWN, WING 4 SIMILAR



INSIDE ELEVATION



SECTION A



SECTION B

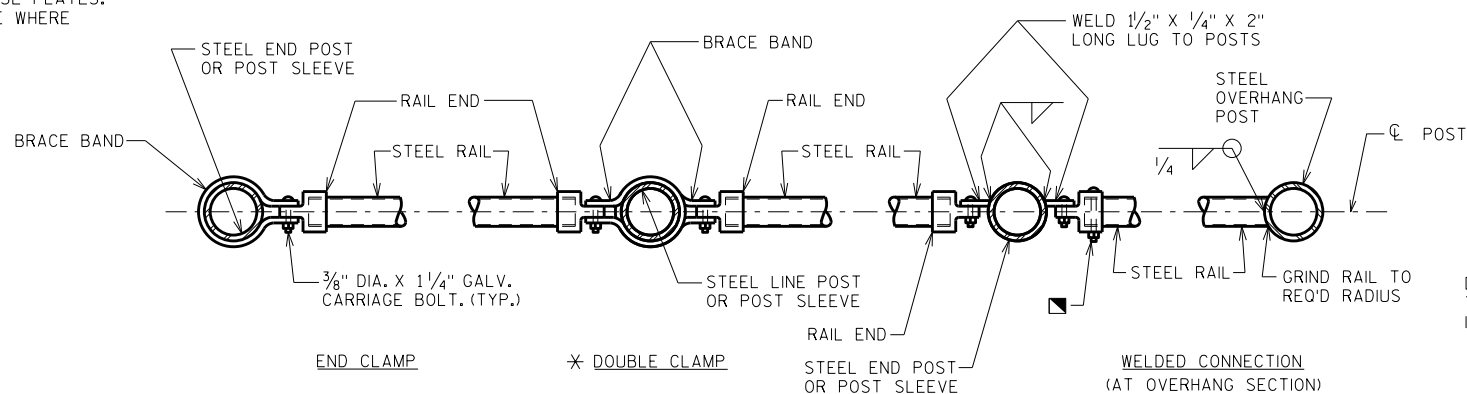
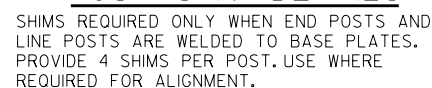
CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH FOR DECK POUR.

** S550 BARS TO BE TIED TO BRIDGE DECK STEEL BEFORE BRIDGE DECK IS POURED.

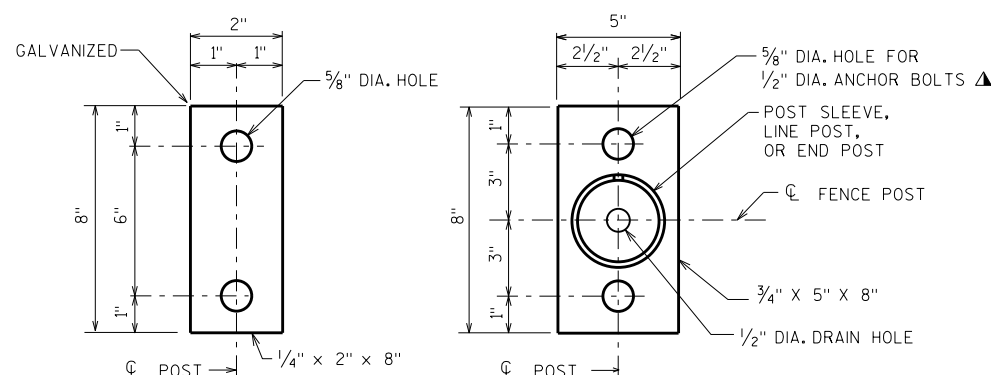
▽ R503 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

REVISION			
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
VERTICAL FACE PARAPET 'A' W/STRUCTURAL APPROACH SLAB		SHEET 18	

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



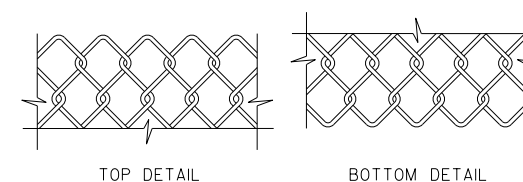
NOTE: PLACE ALL BOLT HEADS ON SIDE OF
FENCE ADJACENT TO PEDESTRIANS



BASE PLATE



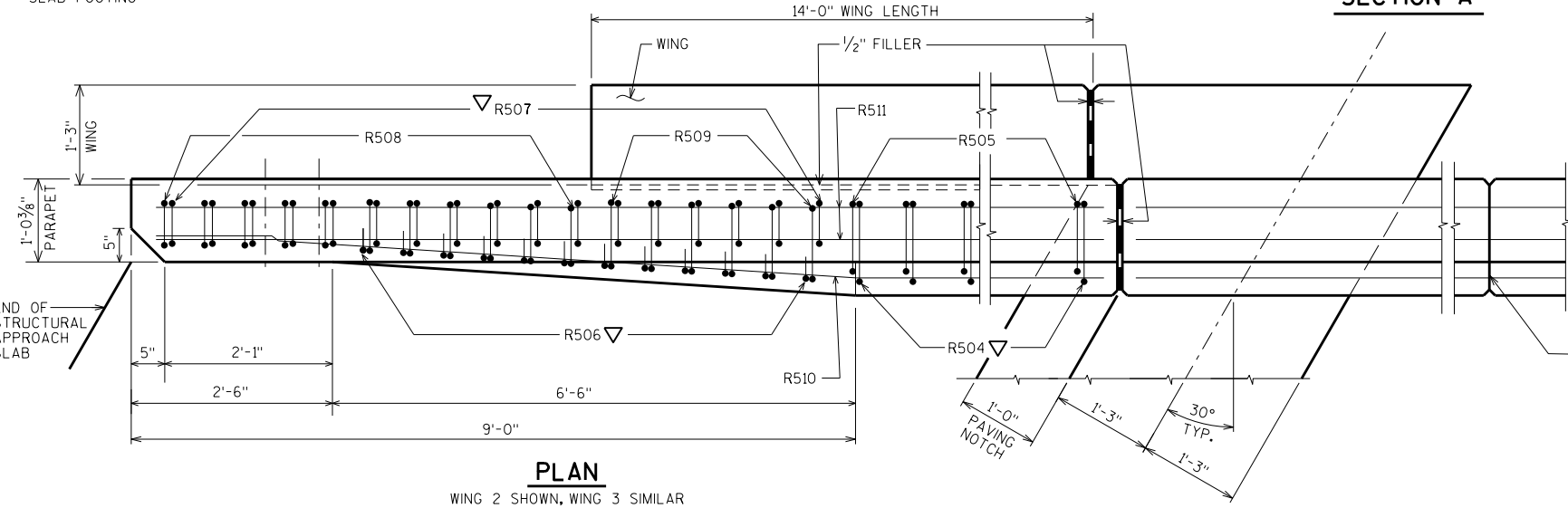
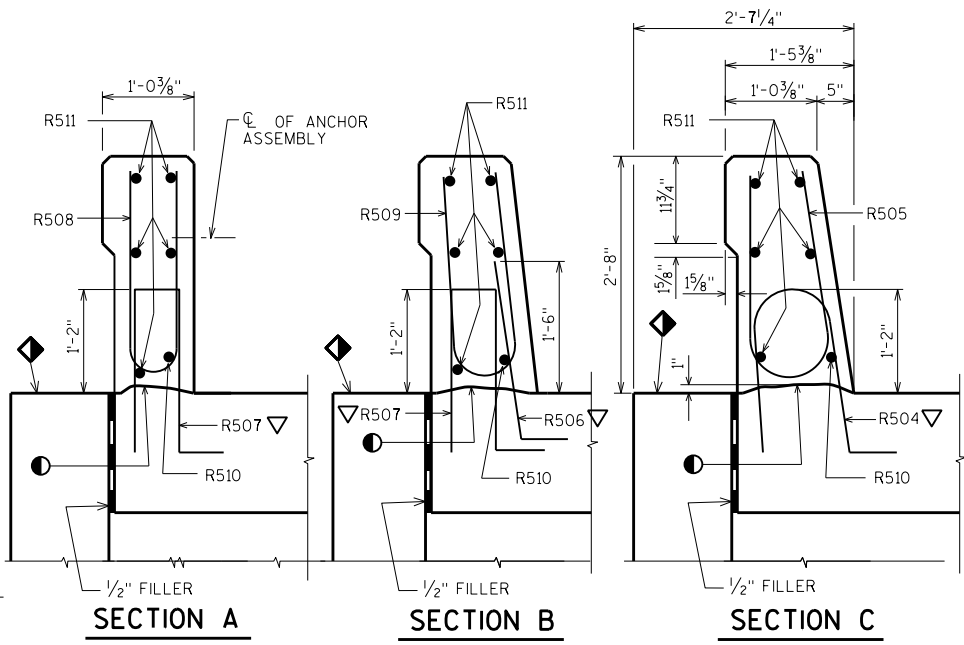
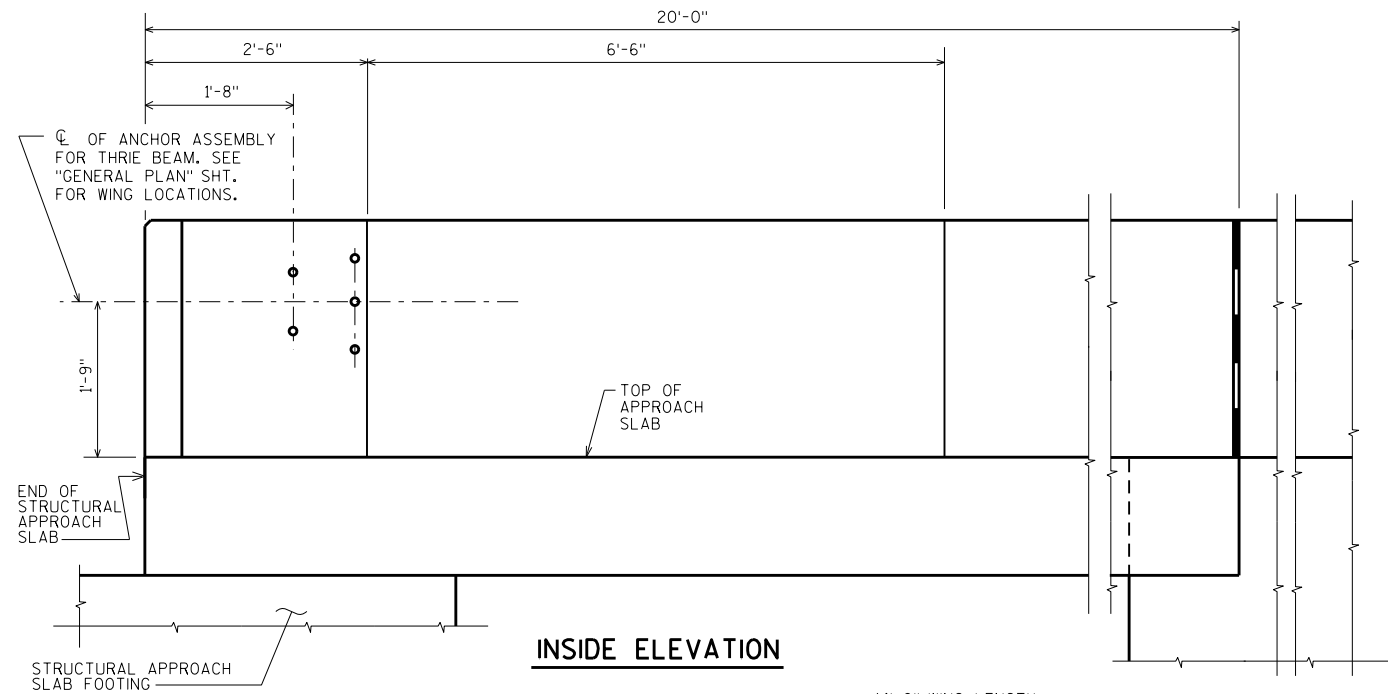
NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.



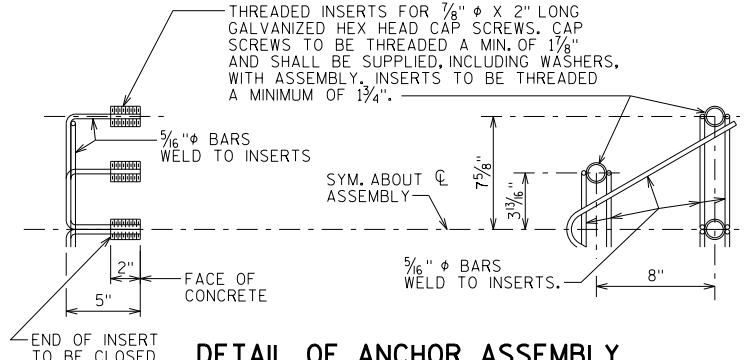
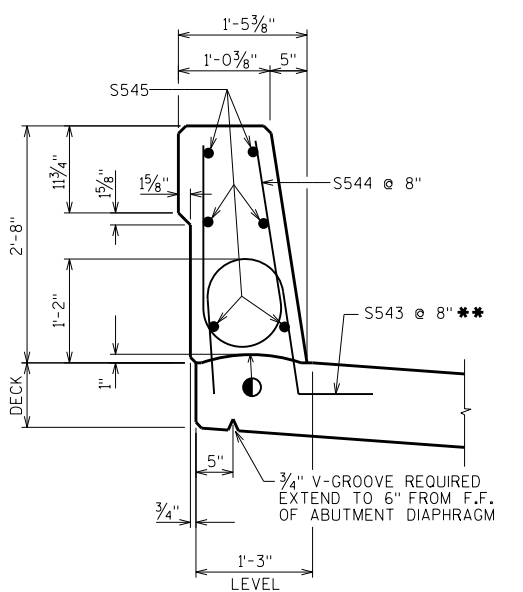
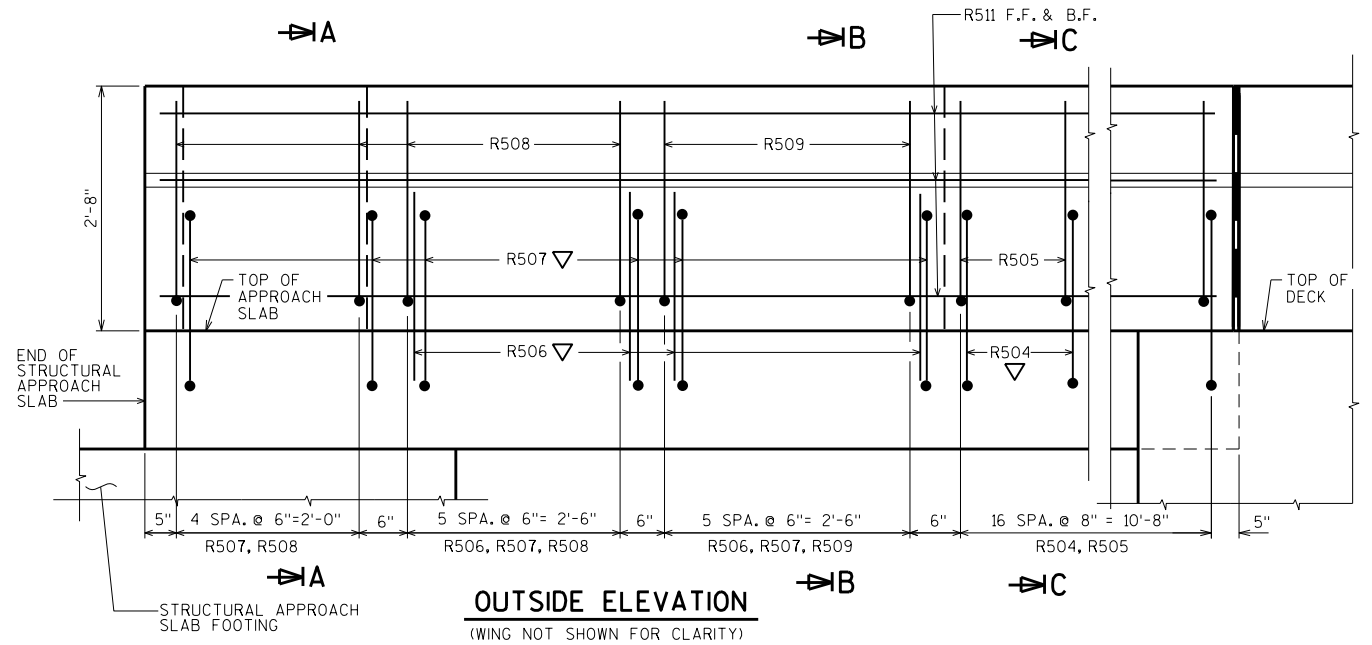
FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 2" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
CHAIN LINK FENCE DETAILS		SHEET 19	

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR $\frac{1}{4}$ POINT OF POST SPACING.



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



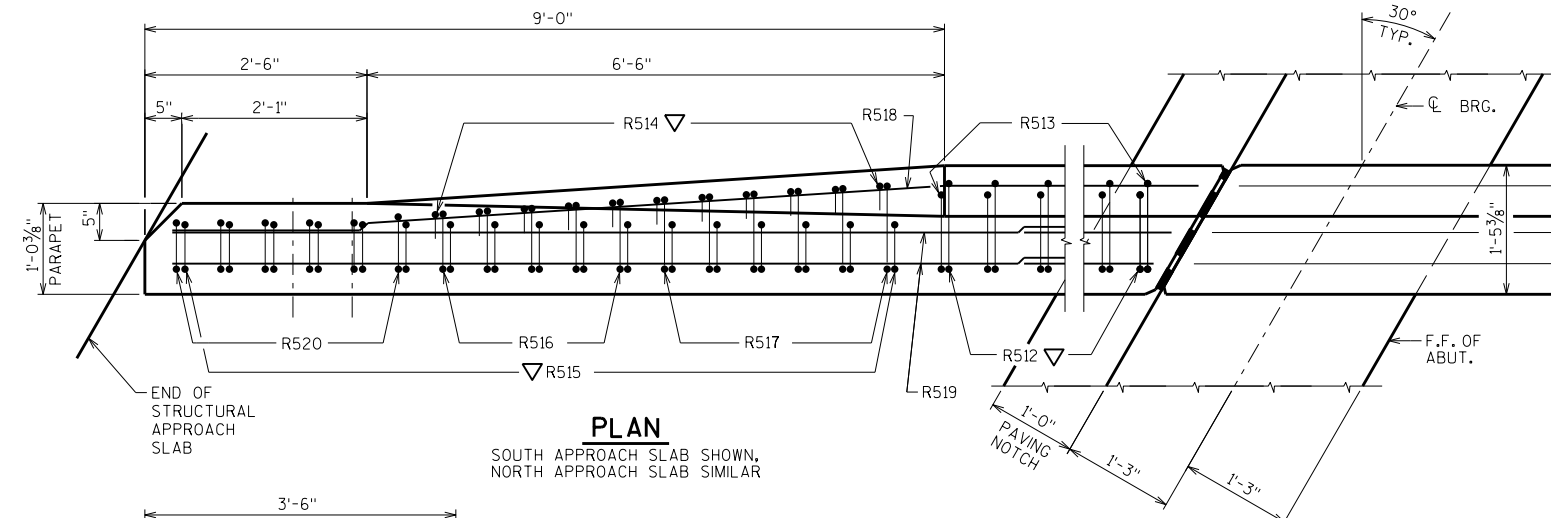
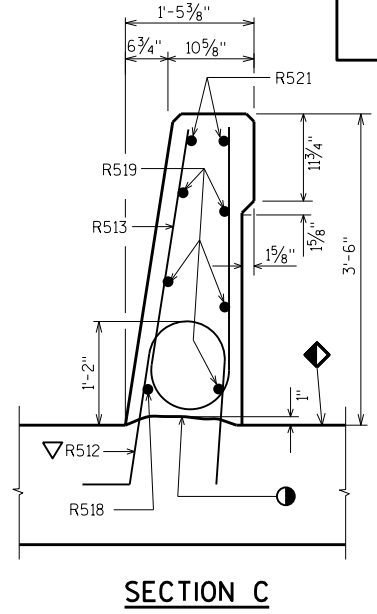
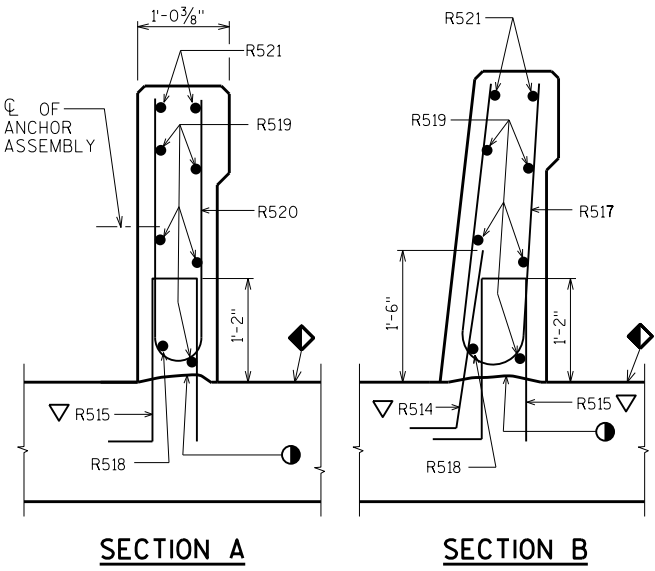
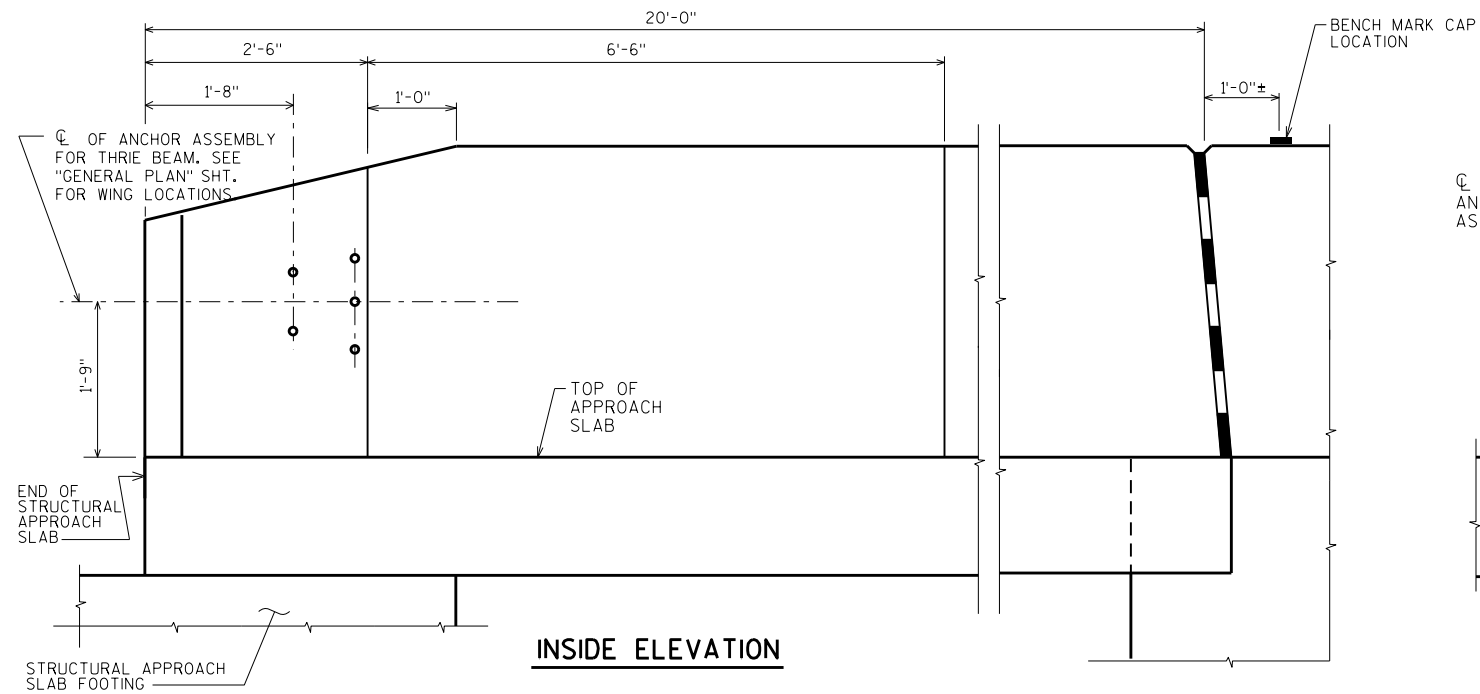
DETAIL OF ANCHOR ASSEMBLY

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

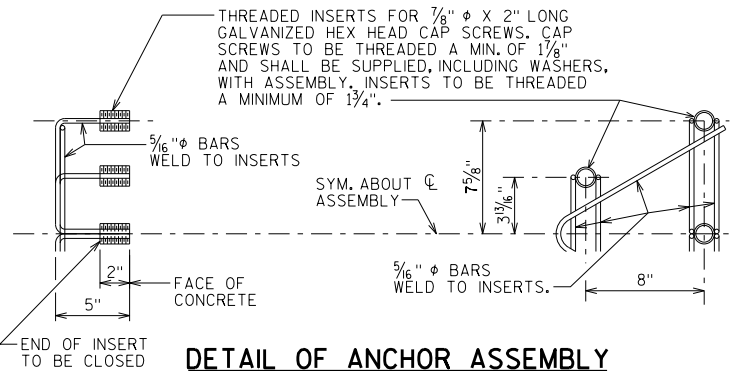
ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

- ◆ SLOPE FOR DRAINAGE
- CONST. JOINT - STRIKE OFF AS SHOWN.
- ▽ R504, R506 AND R507 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.
- ** S543 BARS TO BE TIED TO BRIDGE DECK STEEL BEFORE BRIDGE DECK IS POURED.

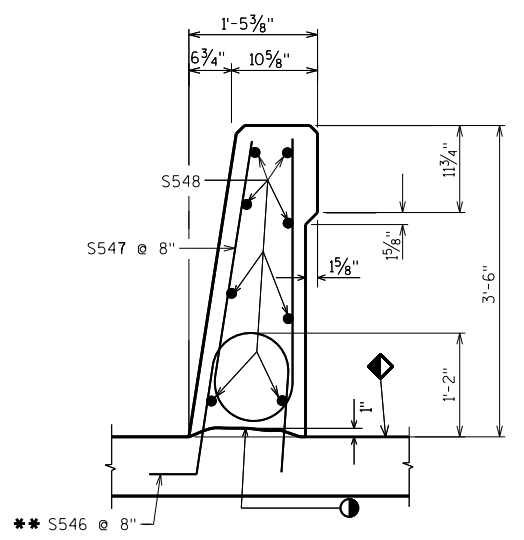
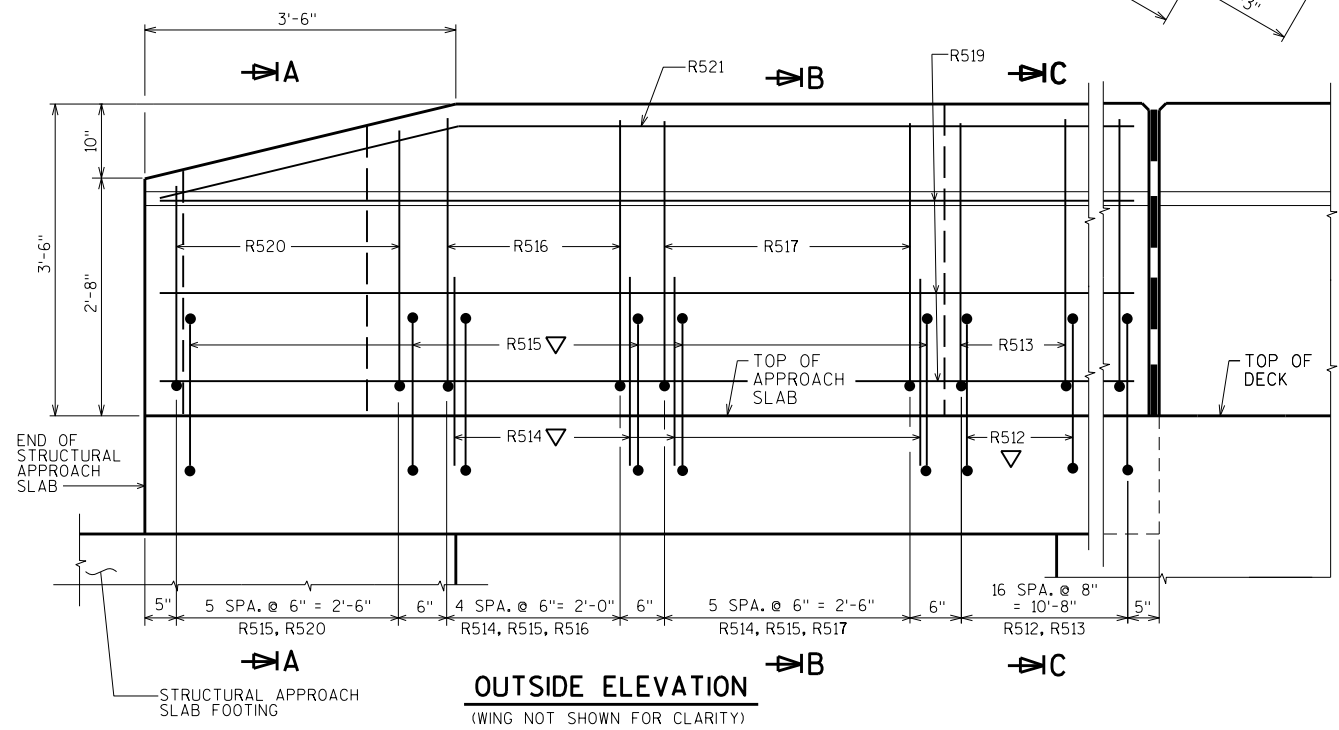
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
SINGLE SLOPE 32SS W/STRUCTURAL APPROACH SLAB			SHEET 20



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



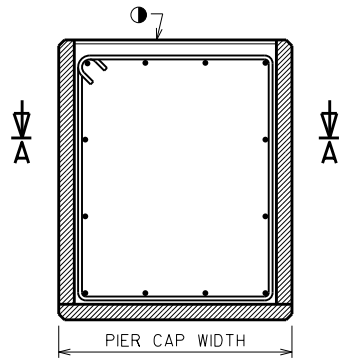
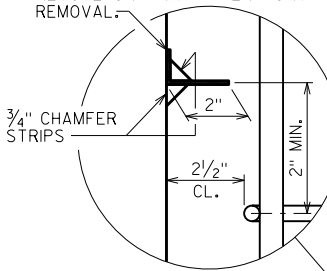
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.
ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



- CONST. JOINT - STRIKE OFF AS SHOWN.
- ◆ MATCH DECK CROSS SLOPE
- ▽ R512, R514 AND R515 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.
- ** S546 BARS TO BE TIED TO BRIDGE DECK STEEL BEFORE BRIDGE DECK IS POURED.

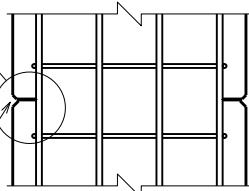
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
SINGLE SLOPE 42SS W/STRUCTURAL APPROACH SLAB		SHEET 21	

BENT ZINC OR PLASTIC STRIP. (1/16" TO 1/8" THICK.) TACK TO FORM WORK. NO WELDING TO REINFORCING STEEL. REMOVE OR TRIM AFTER FORM REMOVAL.



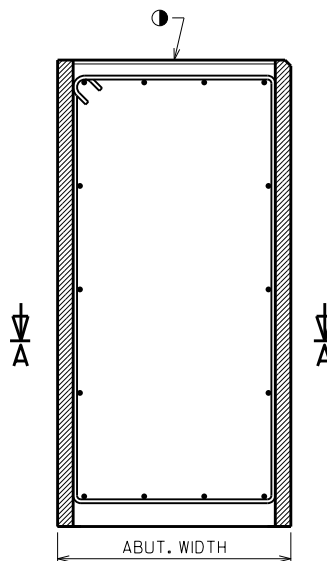
SECTION THRU PIER CAP

FILL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER AFTER TRIMMING OR REMOVING STRIP.



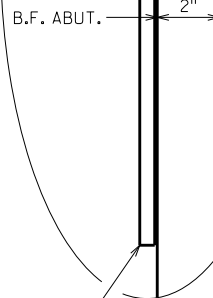
SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT PIER CAP



SECTION THRU ABUTMENT BODY

BENT ZINC OR PLASTIC STRIP. (1/16" TO 1/8" THICK.) TACK TO FORM WORK. (NO WELDING TO REINFORCING STEEL.)



B.F. ABUT.



B.F. ABUT.

F.F. ABUT.

BENT ZINC OR PLASTIC STRIP. (1/16" TO 1/8" THICK.) TACK TO FORM WORK. NO WELDING TO REINFORCING STEEL. REMOVE OR TRIM AFTER FORM REMOVAL.

3/4" CHAMFER STRIPS

2" F.F. ABUT.

2" MIN.

FILL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER AFTER TRIMMING OR REMOVING STRIP.

SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-67-354			
DRAWN BY		DDS	PLANS CK'D. DMB
ALTERNATE CONSTRUCTION JOINT		SHEET 22	