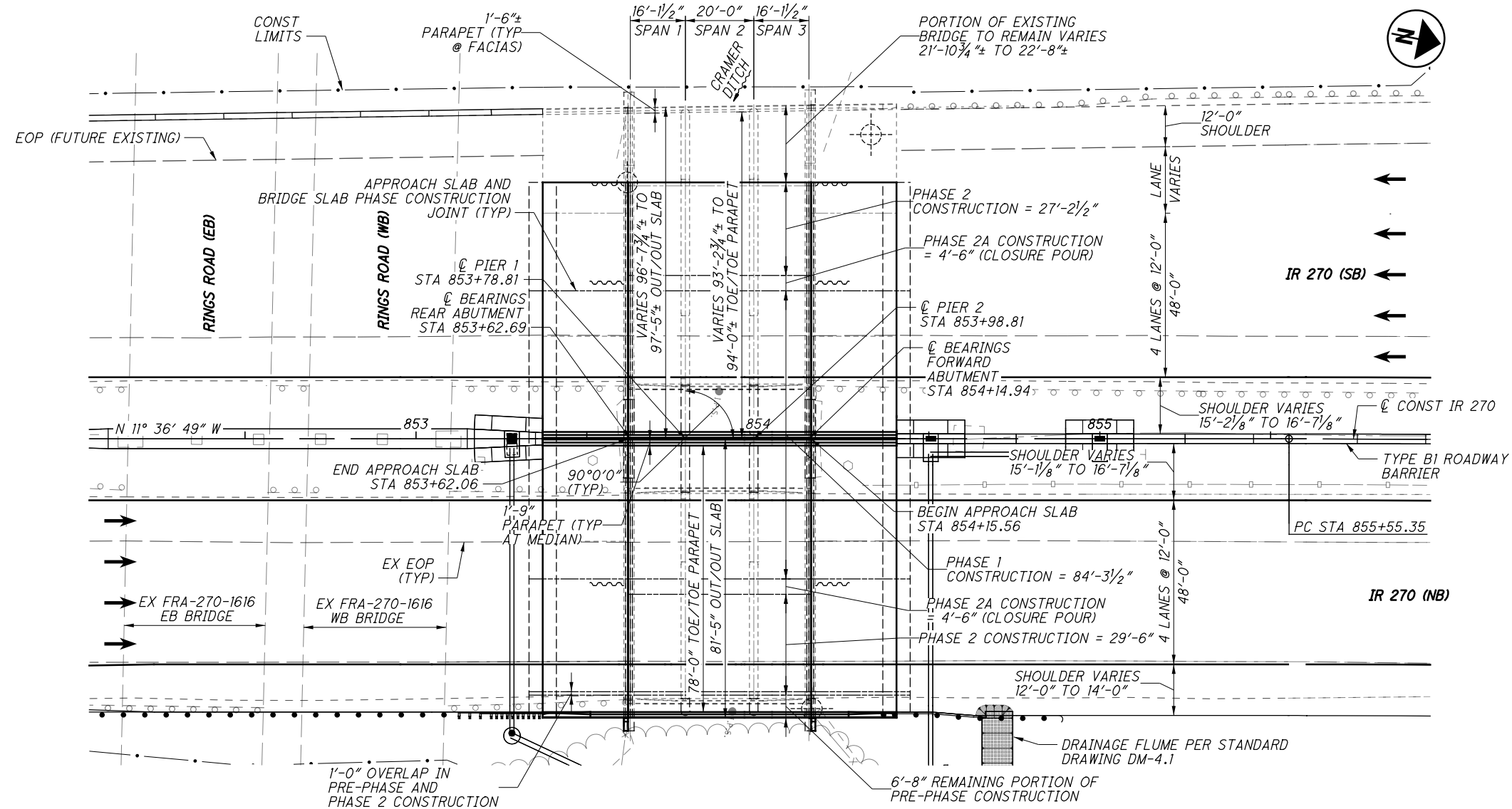




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**PLAN**  
(ROCK CHANNEL PROTECTION NOT SHOWN FOR CLARITY)

**NOTES**

1. FOR SITE PLAN, SEE SHEET 1/40.
2. FOR PHASED CONSTRUCTION PLANS, SEE SHEETS 7/40 & 8/40.

**LEGEND**

HISTORIC BORING LOCATION

	DESIGN AGENCY <b>EMIT</b> <small>Engineering, Maintenance, Inspection, and Traffic</small>	DATE 7-18-16	STRUCTURE FILE NUMBER 2510200/2510235
DRAWN RJE	REVIEWED CJS	CHECKED TDA	REVISIONS REVISED
<b>GENERAL PLAN</b> BRIDGE NO. FRA-270-1619 L/R IR 270 OVER CRAMER DITCH			
FRA-270-9.15 PID No. 76469		2 / 40	
1268 1306			

**REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:**

AS-1-15	REVISED	7-17-15
AS-2-15	REVISED	7-17-15
CPP-1-08	REVISED	7-19-13
GS-1-03	REVISED	4-18-03 (ARCHIVED)
PCB-91	REVISED	1-18-13
SBR-1-13	REVISED	1-17-14
SBR-2-13	REVISED	1-17-14

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, 2002, AND THE ODOT BRIDGE DESIGN MANUAL, 2004.

**DESIGN LOADING:**

HS25, CASE 1 AND THE ALTERNATE MILITARY LOADING (SUPERSTRUCTURE)  
HS20, CASE 1 AND THE ALTERNATE MILITARY LOADING (SUBSTRUCTURE)  
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT. (SUPERSTRUCTURE AND SUBSTRUCTURE)

**DESIGN DATA:**

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)  
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)  
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI.

**DECK PROTECTION METHOD:**

EPOXY COATED REINFORCING STEEL  
2 1/2" CONCRETE COVER  
SEALING OF CONCRETE SURFACES

**MONOLITHIC WEARING SURFACE:**

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

**MAINTENANCE OF TRAFFIC:**

TRAFFIC WILL BE MAINTAINED DURING BRIDGE CONSTRUCTION. BRIDGE MUST BE BUILT IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC GENERAL NOTES, PLANS, AND AS DIMENSIONED HEREIN. ALL COSTS ASSOCIATED WITH MAINTAINING TRAFFIC SHALL BE PAID FOR UNDER ROADWAY QUANTITY, ITEM 614.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

CONSTRUCTION PLANS FOR THE EXISTING BRIDGE ARE ON FILE AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 6 OFFICE, 400 E. WILLIAM STREET, DELAWARE, OH 43015 AND ARE AVAILABLE FOR REFERENCE.

**UTILITY LINES:**

THE UTILITY(IES) SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

**ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:**

THIS STRUCTURE IS SUBJECT TO TESTING FOR ASBESTOS. THE CONTRACTOR SHALL USE A STATE CERTIFIED ASBESTOS INSPECTOR TO INSPECT AND SAMPLE THE BRIDGE FOR THE PRESENCE OF ASBESTOS. THE SAMPLES WILL BE PROVIDED TO THE CONTRACTOR FOR TESTING. THE COST TO INSPECT AND SAMPLE THE BRIDGE FOR THE PRESENCE OF ASBESTOS, TO DELIVER THE SAMPLES TO A TEST LAB, AND TO TEST THE SAMPLES FOR ASBESTOS WILL BE INCLUDED IN THIS PAY ITEM. THE CONTRACTOR SHALL COMPLETE THE "OHIO ENVIRONMENTAL PROTECTION AGENCY NOTIFICATION OF DEMOLITION AND RENOVATION" AFTER THE TESTING IS COMPLETE AND SEND THE FORM TO THE OHIO EPA 10 DAYS PRIOR TO DEMOLITION OR RENOVATION ACTIVITIES.

**DESCRIPTION:**

THIS WORK CONSISTS OF THE REMOVAL OF PORTIONS OF THE EXISTING CONCRETE SLAB, PARAPETS, SCUPPERS, PIERS, ABUTMENTS, AND WINGWALLS AS SHOWN IN THE PLANS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SHOWN ON THE PLANS AND AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

**REMOVAL METHODS:** THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

**CUT LINE CONSTRUCTION JOINT PREPARATION:**

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

**SUBSTRUCTURE CONCRETE REMOVAL:**

REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

**CLEAN-UP OF DEBRIS:**

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN-UP ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN-UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

**MEASUREMENT AND PAYMENT:**

THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

**PILE DESIGN LOADS (ULTIMATE BEARING VALUE):**

THE ULTIMATE BEARING VALUE IS 65 TONS PER PILE FOR THE ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 65 TONS PER PILE FOR THE PIER PILES.

**REAR ABUTMENT PILES:**

5 PILES, 25 FEET LONG, ORDER LENGTH  
1 DYNAMIC LOAD TESTING ITEM (APPLIES TO REAR AND FORWARD ABUTMENT PILES AND PIER 1 AND 2 PILES. DYNAMIC LOAD TEST IS PAID FOR IN THE FRA-270-1619R QUANTITIES).

**PIER 1 PILES:**

7 PILES, 30 FEET LONG, ORDER LENGTH

**PIER 2 PILES:**

7 PILES, 45 FEET LONG, ORDER LENGTH

**FORWARD ABUTMENT PILES:**

5 PILES, 30 FEET LONG, ORDER LENGTH

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION  
8 WOOD HOLLOW RD. PLAZA 1  
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

**ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN:**

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT. THE FOLLOWING CONTINGENCY QUANTITY IS PROVIDED FOR USE AS DIRECTED BY THE ENGINEER FOR THE USE IN THE WORK NOTED ABOVE:

ITEM 509, REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN: 100 POUNDS.

**ITEM SPECIAL - PILE ENCASEMENT:**

ENCASE ALL STEEL H-PILES FOR THE CAPPED PILE PIERS IN CONFORMANCE TO C&MS ITEM 511 (F'c = 4.0 KSI). PROVIDE A CONCRETE SLUMP BETWEEN 6 TO 8 INCHES WITH THE USE OF A SUPERPLASTICIZER. PLACE THE CONCRETE WITHIN A FORM THAT CONSIST OF POLYETHYLENE PIPE (707.33), OR PVC PIPE (707.42). THE ENCASEMENT SHALL EXTEND FROM 3 FEET BELOW THE FINISHED GROUND SURFACE UP TO THE CONCRETE PIER CAP. POSITION THE PIPE SO THAT AT LEAST 3 INCHES OF CONCRETE COVER IS PROVIDED AROUND THE EXTERIOR OF THE PILE.

THE DEPARTMENT WILL MEASURE PILE ENCASEMENT BY THE NUMBER OF FEET. THE DEPARTMENT WILL DETERMINE THE SUM AS THE LENGTH MEASURED ALONG THE AXIS OF EACH PILE FROM THE BOTTOM OF THE ENCASEMENT TO THE BOTTOM OF THE PIER CAP. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR THE ITEM 507 - SPECIAL, PILE ENCASEMENT.

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DESIGN AGENCY  
EMH  
DATE 7-18-16  
REVIEWED CJS  
STRUCTURE FILE NUMBER 2510200/2510235

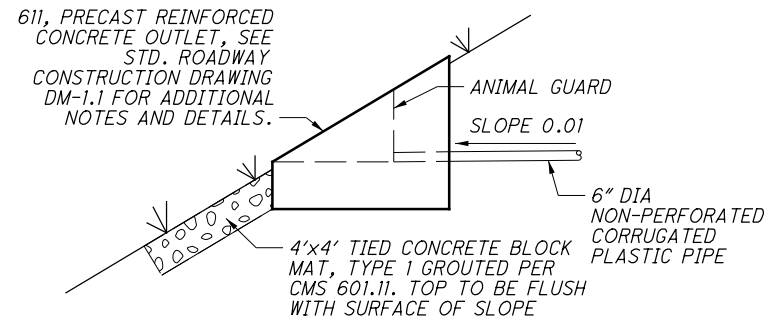
DRAWN RJE  
CHECKED TDA  
REVISED

GENERAL NOTES  
BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAWLER DITCH

FRA-270-9.15  
PID No. 76469

**ITEM 518, 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN**

PAYMENT FOR ALL ITEMS SHOWN FOR PIPE TERMINATION ARE INCLUDED WITH ITEM 518, 6" NON-PERFORATED CORRUGATED PLASTIC PIPE.



**TERMINATION OF 6" NPCPP DETAIL**

**ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15'), AS PER PLAN**

THIS ITEM SHALL INCLUDE ALL THE COST OF ALL CONCRETE AND REINFORCING STEEL FOR THE APPROACH SLABS AND PARAPETS ON APPROACH SLABS. SEALING OF THE PARAPETS SHALL BE PAID FOR UNDER ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY). DRAINAGE DETAILS SHALL BE MODIFIED AS SHOWN ON THE APPROACH SLAB DRAINAGE DETAILS SHEET. ALL OTHER APPROACH SLAB DETAILS NOT SHOWN IN THE PLANS SHALL BE PER STANDARD DRAWINGS AS-1-15 AND AS-2-15.

**PROPOSED BRIDGE WORK:**

THIS WORK TO BE PERFORMED UNDER THIS CONTRACT, WHILE MAINTAINING TRAFFIC, IS AS SHOWN IN THE CONSTRUCTION PLANS AND IN GENERAL, INCLUDES THE FOLLOWING:

1. REMOVE ROADWAY APPROACH PAVEMENT.
2. CONSTRUCT COFFERDAMS AND EXCAVATION BRACING.
3. SURVEY EXISTING TOP OF SLAB ELEVATIONS.
4. SAWCUT AND REMOVE PORTIONS OF EXISTING SLABS.
5. SAWCUT AND REMOVE PORTIONS OF ABUTMENTS AND PIERS.
6. DRIVE ABUTMENT AND PIER PILES.
7. ENCASE ALL NEW AND EXISTING EXPOSED PILES.
7. CONSTRUCT ABUTMENT AND PIER EXTENSIONS.
8. CONSTRUCT SUPERSTRUCTURE SLABS.
9. CONSTRUCT APPROACH SLABS.

**ABBREVIATION LEGEND**

ABUT - ABUTMENT	INT - INTEGRAL
ADT - AVERAGE DAILY TRAFFIC	IR - INTERSTATE ROUTE
ADTT - AVERAGE DAILY TRUCK TRAFFIC	LT - LEFT
ℬ - BASELINE	MAX - MAXIMUM
BM - BENCH MARK	MIN - MINIMUM
C&MS - CONSTRUCTION AND MATERIALS SPECIFICATIONS	MISC - MISCELLANEOUS
C/C - CENTER TO CENTER	NB - NORTHBOUND
CB - CATCH BASIN	NF - NEAR FACE
CJ - CONSTRUCTION JOINT	NO. - NUMBER
℄ - CENTERLINE	PC - POINT OF CURVE
CLR - CLEARANCE	PEJF - PREFORMED EXPANSION JOINT FILLER
CONST - CONSTRUCTION	PROP - PROPOSED
DIA - DIAMETER	RT - RIGHT
EB - EASTBOUND	SB - SOUTHBOUND
EF - EACH FACE	SPA - SPACES
ELEV - ELEVATION	STA - STATION
EOP - EDGE OF PAVEMENT	STD - STANDARD
EX - EXISTING	SUPER - SUPERSTRUCTURE
EXP - EXPANSION	TEMP - TEMPORARY
FF - FAR FACE	T/T - TOE TO TOE
GEN - GENERAL	TYP - TYPICAL
HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE	WB - WESTBOUND

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DESIGNED: RJE  
CHECKED: TDA  
DRAWN: RJE  
REVISED:  
REVIEWED: CJS  
DATE: 7-18-16  
STRUCTURE FILE NUMBER: 2510200/2510235

**GENERAL NOTES**  
BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAMER DITCH

**FRA - 270 - 9.15**  
PID No. 76469

4 / 40

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CALCULATED BY: RMW - 2/15/16

ESTIMATED QUANTITIES

CHECKED BY: RJE

ITEM	EXTENSION	PARTICIPATION		TOTAL	UNIT	DESCRIPTION	ABUT	PIERS	SUPER	GEN	SHEET #
		03/IMS/BR	04/NHS/BR								
202	11203	LS			LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					3   40
202	22900	250		250	SY	APPROACH SLAB REMOVED				250	
202	98300	264		264	SY	REMOVAL MISC.: CRUSHED AGGREGATE SLOPE PROTECTION REMOVED				264	
503	11100	LS			LS	COFFERDAMS AND EXCAVATION BRACING					
503	21300	LS			LS	UNCLASSIFIED EXCAVATION					
505	11100		LS		LS	PILE DRIVING EQUIPMENT MOBILIZATION					
507	00200		335	335	FT	STEEL PILES HP12X53, FURNISHED	110	225			
507	00250		285	285	FT	STEEL PILES HP12X53, DRIVEN	90	195			
SPECIAL	50771200	144	54	198	FT	PILE ENCASEMENT		198			3   40
509	10000	51,203	12,801	64,004	LB	EPOXY COATED REINFORCING STEEL	6588	1435	55,981		
509	20001	100		100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				100	3   40
510	10000	307	77	384	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	200	184			
511	32212	130	33	163	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE			163		
511	34450	13		13	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			13		
511	42510		6	6	CY	CLASS QC1 CONCRETE, PIER CAP		6			
511	45710	11	2	13	CY	CLASS QC1 CONCRETE, ABUTMENT	13				
511	46510		8	8	CY	CLASS QC1 CONCRETE, FOOTING	8				
512	10050	275	49	324	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	62	122	74	66	
* 512	33000	4	3	7	SY	TYPE 2 WATERPROOFING	7				
* 516	13600	13		13	SF	1" PREFORMED EXPANSION JOINT FILLER				13	
518	21200	47	8	55	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	55				
518	40000	127	23	150	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	150				
526	25011	334	83	417	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN				417	4   40
526	90010	121	29	150	FT	TYPE A INSTALLATION				150	
601	32210	209		209	CY	ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER				209	
846	00110	51	12	63	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM				63	

LEGEND

\* - SEE RIGHT BRIDGE QUANTITY FOR PORTIONS LOCATED BETWEEN BRIDGE PAIRS



DESIGN AGENCY  
EMIT  
7-18-16  
STRUCTURE FILE NUMBER  
2510200/2510235

REVIEWED  
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ESTIMATED QUANTITIES (LEFT BRIDGE)  
BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAMER DITCH

FRA-270-9.15  
PID No. 76469

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CALCULATED BY: RMW - 2/15/16

ESTIMATED QUANTITIES

CHECKED BY: RJE

ITEM	EXTENSION	PARTICIPATION		TOTAL	UNIT	DESCRIPTION	ABUT	PIERS	SUPER	GEN	SHEET #
		03/IMS/BR	04/NHS/BR								
202	11203	LS			LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				-	3 / 40
202	22900	200		200	SY	APPROACH SLAB REMOVED				200	
202	98300	290		290	SY	REMOVAL MISC.: CRUSHED AGGREGATE SLOPE PROTECTION REMOVED				290	
503	11100	LS			LS	COFFERDAMS AND EXCAVATION BRACING					
503	21300	LS			LS	UNCLASSIFIED EXCAVATION					
505	11100		LS		LS	PILE DRIVING EQUIPMENT MOBILIZATION					
507	00200		465	465	FT	STEEL PILES HP12X53, FURNISHED	165	300			
507	00250		395	395	FT	STEEL PILES HP12X53, DRIVEN	135	260			
SPECIAL	50771200	144	72	216	FT	PILE ENCASEMENT		216			3 / 40
509	10000	55,483	16,573	72056	LB	EPOXY COATED REINFORCING STEEL	7435	1945	62,676		
509	20001	100		100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				100	3 / 40
510	10000	311	93	404	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	208	196			
511	32212	140	42	182	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE			182		
511	34450	21		21	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			21		
511	42510		8	8	CY	CLASS QC1 CONCRETE, PIER CAP		8			
511	45710	12	3	15	CY	CLASS QC1 CONCRETE, ABUTMENT	15				
511	46510		12	12	CY	CLASS QC1 CONCRETE, FOOTING	12				
512	10050	349	61	410	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	53	104	134	119	
* 512	33000	3	7	10	SY	TYPE 2 WATERPROOFING	10				
* 516	13600	18	8	26	SF	1" PREFORMED EXPANSION JOINT FILLER				26	
518	21200	50	12	62	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	62				
518	40000	137	34	171	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	171				
518	40011	33		33	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	33				4 / 40
* 523	20000		1	1	EACH	DYNAMIC LOAD TESTING				1	
526	25011	350	104	454	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN				454	4 / 40
526	90010	126	38	164	FT	TYPE A INSTALLATION				164	
601	32210	251		251	CY	ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER				251	
846	00110	53	16	69	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM				69	

LEGEND

\* - INCLUDES PORTIONS LOCATED BETWEEN BRIDGE PAIRS

NOTES

1. DYNAMIC LOAD TEST ALSO APPLIES TO THE PILES FOR THE FRA-270-1619L BRIDGE.

DESIGN AGENCY  
EMIT

DATE  
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REVIEWED  
CJS  
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REVISED

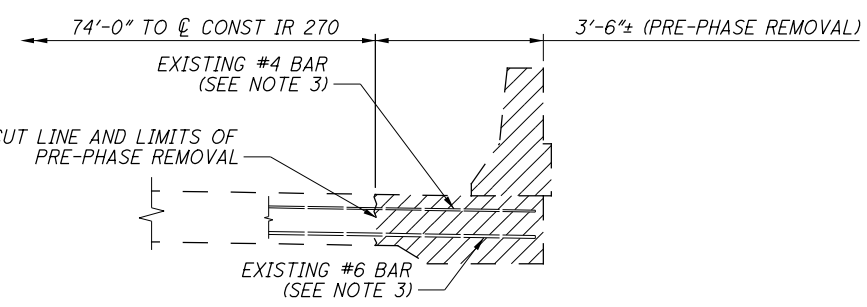
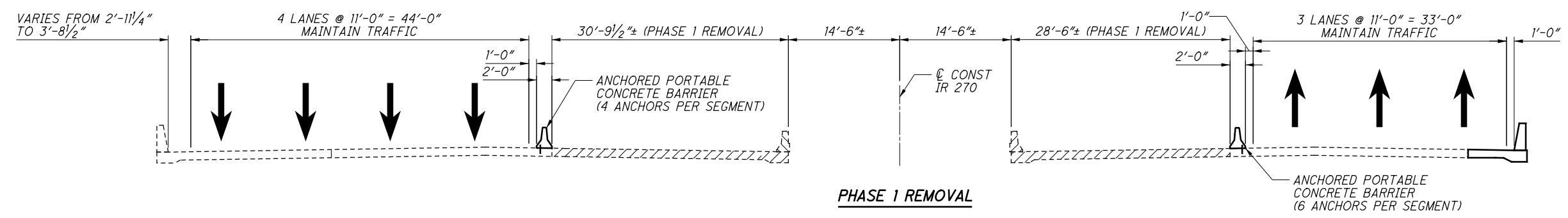
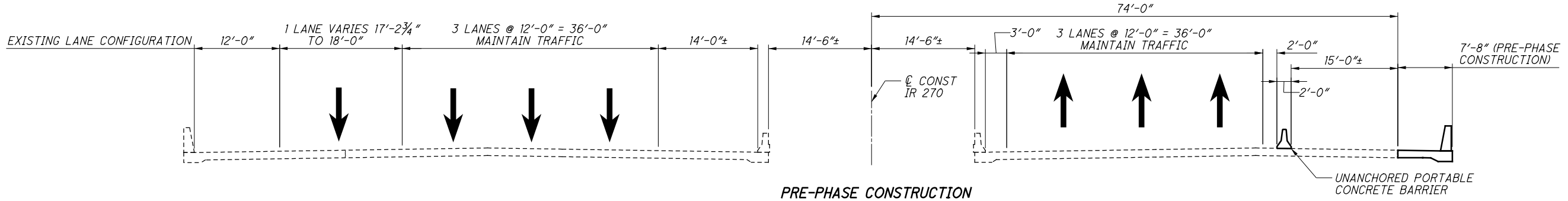
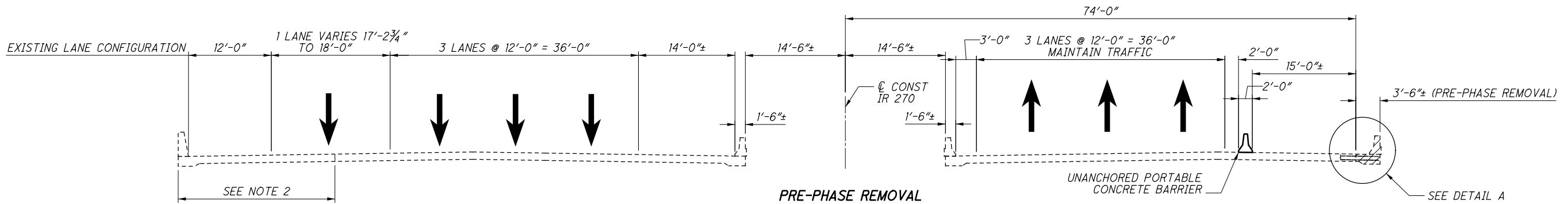
DESIGNED  
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ESTIMATED QUANTITIES (RIGHT BRIDGE)  
BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAMER DITCH

FRA - 270 - 9.15  
PID No. 76469

6 / 40

1272  
1306



**PRE-PHASE**

1. INSTALL UNANCHORED PORTABLE CONCRETE BARRIER ON THE EXISTING SLABS AND MAINTAIN TRAFFIC PER THE MAINTENANCE OF TRAFFIC PLANS.
2. SAWCUT AND REMOVE THE OUTSIDE PORTION OF THE EXISTING NORTHBOUND BRIDGE SLAB AND APPROACH SLABS.
3. INSTALL TEMPORARY SHORING AND REMOVE PORTIONS OF EXISTING ABUTMENTS, WINGWALLS AND PIERS AS SHOWN IN THE PLANS.
4. CONSTRUCT PROPOSED ABUTMENT AND PIER EXTENSIONS TO THE PRE-PHASE LIMITS SHOWN IN THE PLANS.
5. CONSTRUCT PROPOSED BRIDGE SLAB AND APPROACH SLAB TO THE PRE-PHASE LIMITS SHOWN IN THE PLANS.
6. CONSTRUCT OUTSIDE PARAPET ON BRIDGE SLAB AND APPROACH SLAB.

**PHASE 1**

1. INSTALL ANCHORED PORTABLE CONCRETE BARRIER ON THE EXISTING SLABS AND MAINTAIN TRAFFIC PER THE MAINTENANCE OF TRAFFIC PLANS.
2. SAWCUT AND REMOVE THE INSIDE PORTION OF THE EXISTING BRIDGE SLABS AND APPROACH SLABS.
3. INSTALL TEMPORARY SHORING AND REMOVE PORTIONS OF EXISTING ABUTMENTS, WINGWALLS AND PIERS AS SHOWN IN THE PLANS.
4. CONSTRUCT PROPOSED ABUTMENTS AND PIER EXTENSIONS TO THE PHASE 1 LIMITS SHOWN IN THE PLANS.
5. CONSTRUCT PROPOSED BRIDGE SLABS AND APPROACH SLABS TO THE PHASE 1 LIMITS SHOWN IN THE PLANS.
6. CONSTRUCT MEDIAN BARRIER ON BRIDGE SLAB AND APPROACH SLAB.

**DETAIL A**

**PHASE 2 AND 2A**

1. MOVE PORTABLE CONCRETE BARRIERS TO THE PROPOSED SLABS (INSTALL SOUTHBOUND BARRIER WITHOUT ANCHORS, ANCHOR NORTHBOUND BARRIER), INSTALL A THIRD UNANCHORED PORTABLE CONCRETE BARRIER TO THE FUTURE EXISTING SLAB (SEE NOTE 2) AND MAINTAIN TRAFFIC PER THE MAINTENANCE OF TRAFFIC PLANS.
2. SAWCUT AND REMOVE REMAINING PORTIONS OF BRIDGE SLABS AND APPROACH SLABS AS SHOWN IN PLANS.
3. RELOCATE TEMPORARY SHORING AND REMOVE PORTIONS OF EXISTING ABUTMENTS AND PIERS AS SHOWN IN THE PLANS.
4. CONSTRUCT PROPOSED ABUTMENTS TO THE PHASE 2 LIMITS SHOWN IN THE PLANS.
5. CONSTRUCT THE PROPOSED BRIDGE SLABS AND APPROACH SLABS TO THE PHASE 2 AND 2A LIMITS AS SHOWN IN THE PLANS, FOLLOWED BY THE CLOSURE POUR AND APPROACH SLAB CONSTRUCTION TO PHASE 2A LIMITS AS SHOWN IN THE PLANS.
6. CONSTRUCT OUTSIDE PARAPET ON NORTHBOUND BRIDGE SLAB AND APPROACH SLABS.
7. REMOVE ANCHORED PORTABLE BARRIERS, REPAIR DECKS, AND REPAIR ANCHOR HOLES WITH GROUT PER ITEM 705.20. PAYMENT IS INCLUDED WITH ITEM 614, MAINTENANCE OF TRAFFIC, AS PER PLAN.

**NOTES**

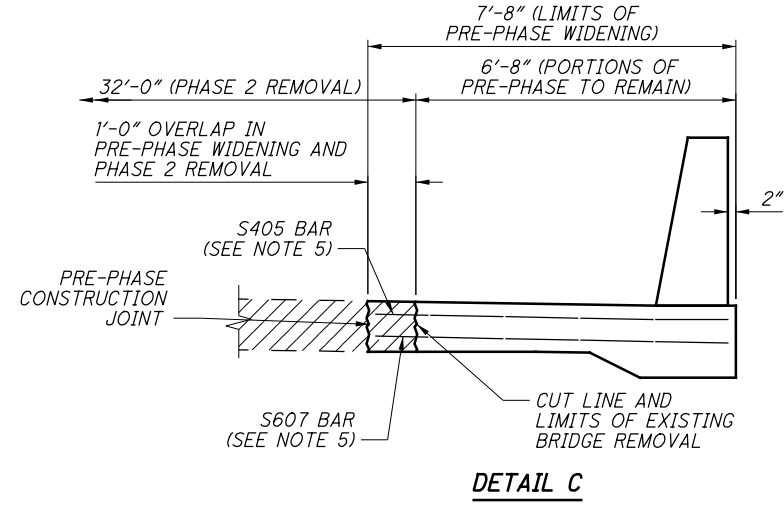
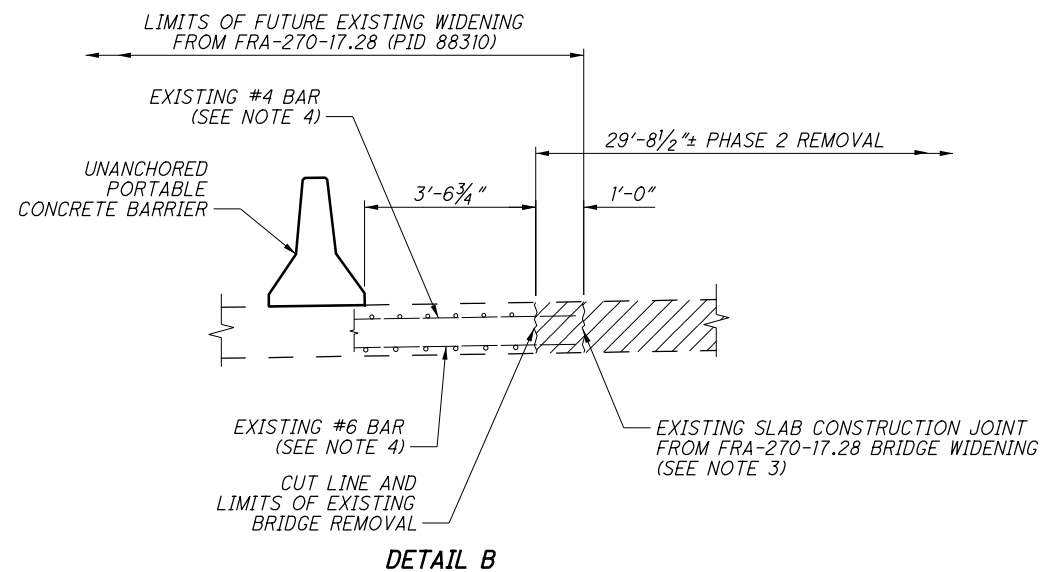
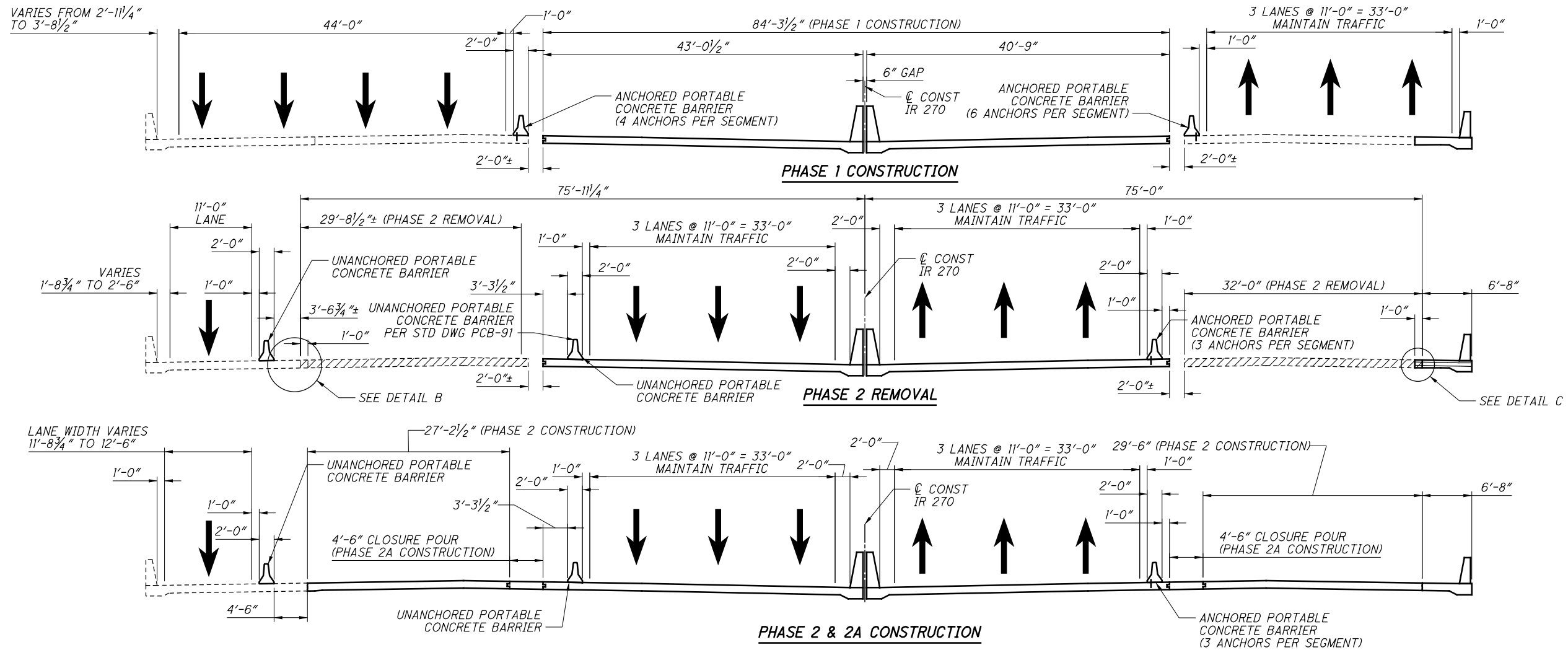
1. PORTIONS OF PROPOSED PIERS, ABUTMENTS AND FOUNDATIONS OUTSIDE THE FOOTPRINT OF THE EXISTING BRIDGE MAY BE CONSTRUCTED PRIOR TO THE PHASE CONSTRUCTION AT THE CONTRACTOR'S DISCRETION.
2. EXISTING SOUTHBOUND BRIDGE (SFN 2510200) TO BE WIDENED TO THE OUTSIDE PRIOR TO CONSTRUCTION OF THIS PROJECT. PLEASE REFER TO PID 88310 PLAN SHEETS 1372/1763 TO 1390/1763.
3. SALVAGE EXISTING #4 (TOP), #6 (BOTTOM), AND #10 (TOP AT PIERS) TRANSVERSE SLAB BARS TO TIE INTO PROPOSED SLAB
4. FOR ADDITIONAL DETAILS ON MAINTENANCE OF TRAFFIC PLANS, SEE ROADWAY SHEETS AND ITEM 614 FOR PAYMENT.

**LEGEND**

 DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN


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- NOTES**
1. PORTIONS OF PROPOSED PIERS, ABUTMENTS AND FOUNDATIONS OUTSIDE THE FOOTPRINT OF THE EXISTING BRIDGE MAY BE CONSTRUCTED PRIOR TO THE PHASE CONSTRUCTION AT THE CONTRACTOR'S DISCRETION.
  2. EXISTING SOUTHBOUND BRIDGE TO BE WIDENED TO THE OUTSIDE PRIOR TO CONSTRUCTION OF THIS PROJECT. PLEASE REFER TO PID 88310 PLAN SHEETS 1372/1763 TO 1390/1763.
  3. THE EXISTING SLAB CONSTRUCTION JOINT DUE TO BRIDGE WIDENING FROM FRA-270-17.28 (PID 88310) PROJECT SHALL BE FIELD LOCATED. THE EXISTING SLAB CUT LINE SHALL BE LOCATED 1'-0" FROM THIS JOINT AS SHOWN.
  4. SALVAGE EXISTING #4 (TOP), #6 (BOTTOM), AND #10 (TOP AT PIERS) TRANSVERSE SLAB BARS TO TIE INTO PROPOSED SLAB.
  5. SALVAGE S405 (TOP), S607 (BOTTOM), AND S1004 (TOP AT PIERS) TRANSVERSE SLAB BARS FROM PRE-PHASE CONSTRUCTION TO TIE INTO REMAINING SLAB.

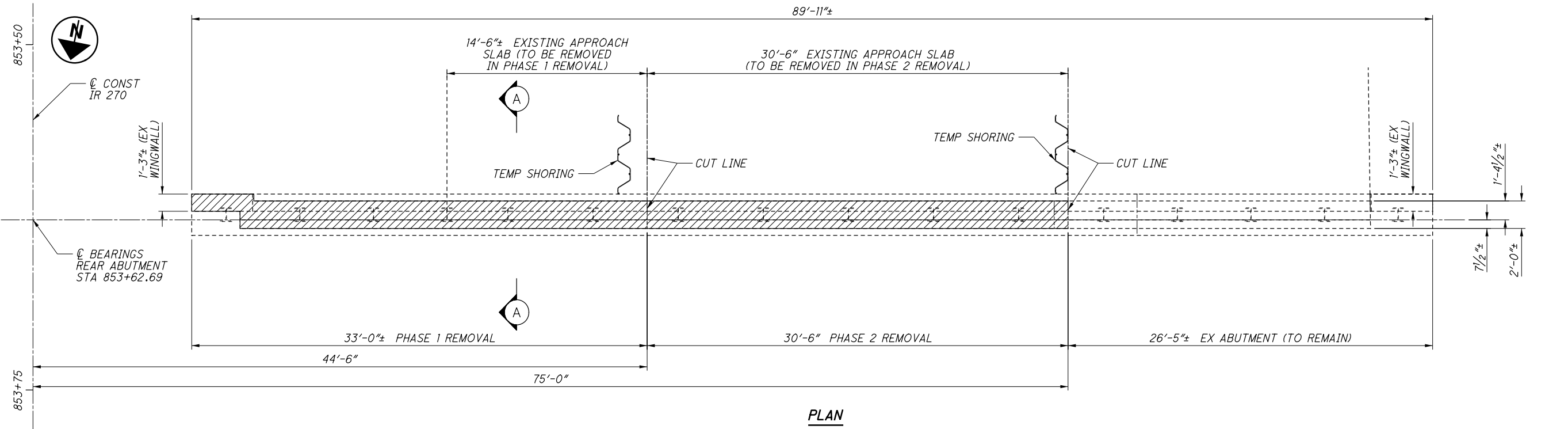
**LEGEND**

 DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

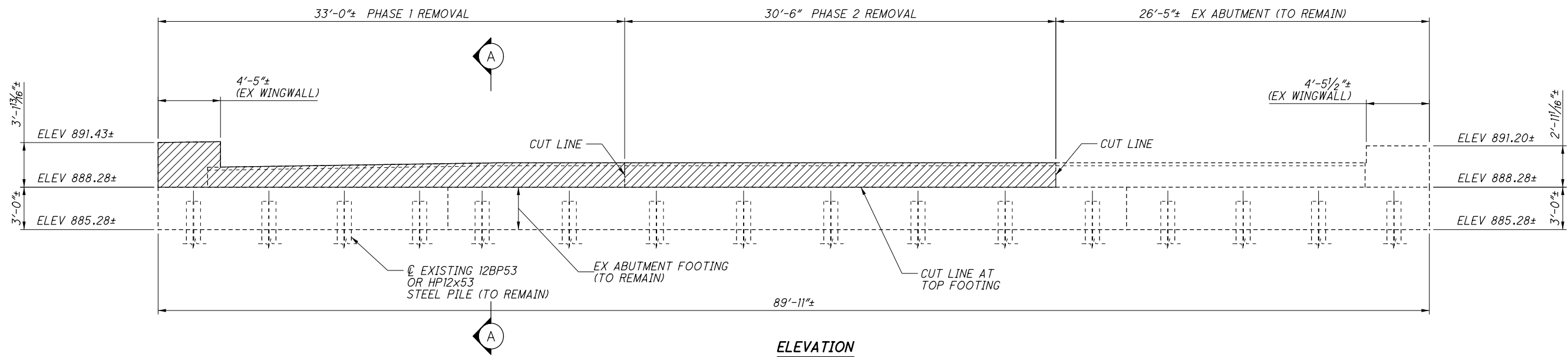
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DATE 7-18-16
REVIEWED CJS
DRAWN RJE
DESIGNED RJE
CHECKED TDA
STRUCTURE FILE NUMBER 2510200/2510235
BRIDGE NO. FRA-270-1619 L/R IR 270 OVER CRAMER DITCH
PHASE CONSTRUCTION AND SLAB REMOVAL DETAILS
FRA-270-9.15 PID No. 76469
8 / 40
1274 1306



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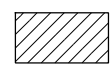


**PLAN**



**ELEVATION**

**LEGEND**

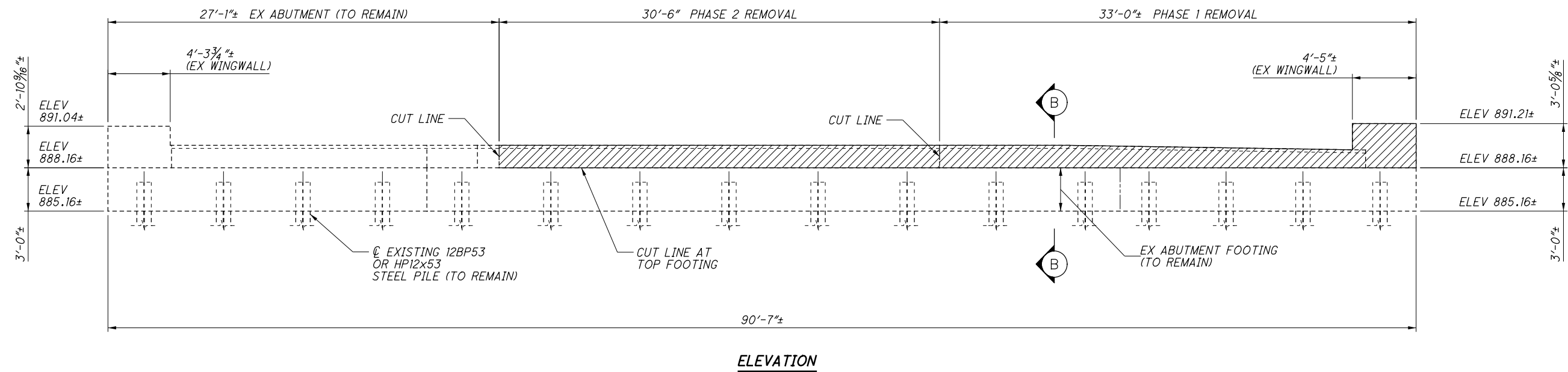
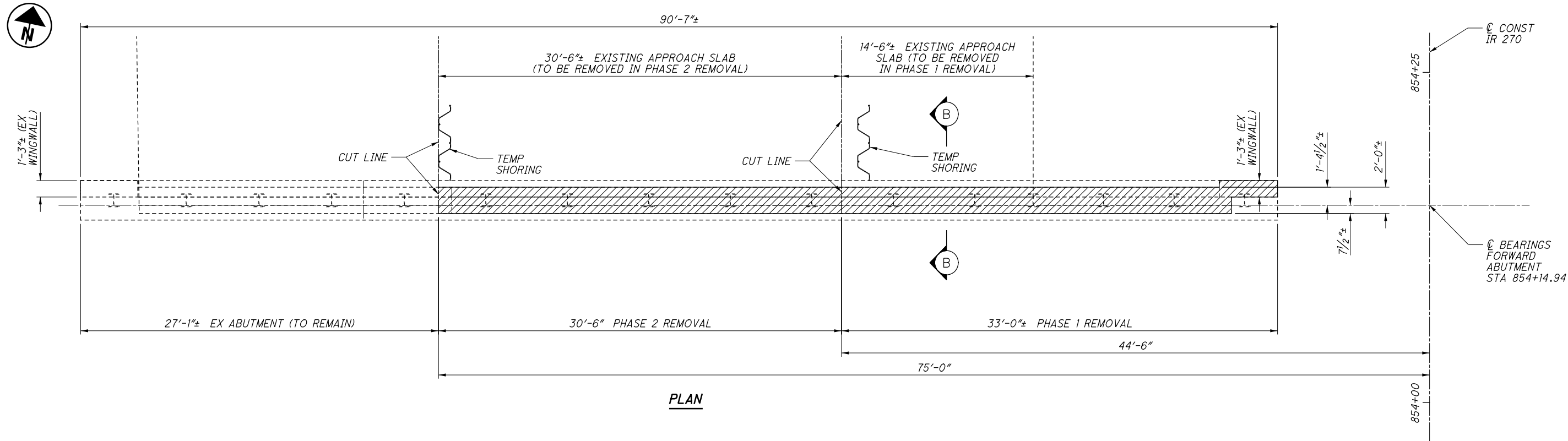


DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

**NOTES**

1. SEE SHEET 11/40 FOR SECTION A-A.

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**LEGEND**



DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

**NOTES**

1. SEE SHEET 12/40 FOR SECTION B-B.

FRA - 270 - 9.15  
PID No. 76469

FORWARD ABUTMENT REMOVAL DETAILS (LEFT BRIDGE)

BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAMER DITCH

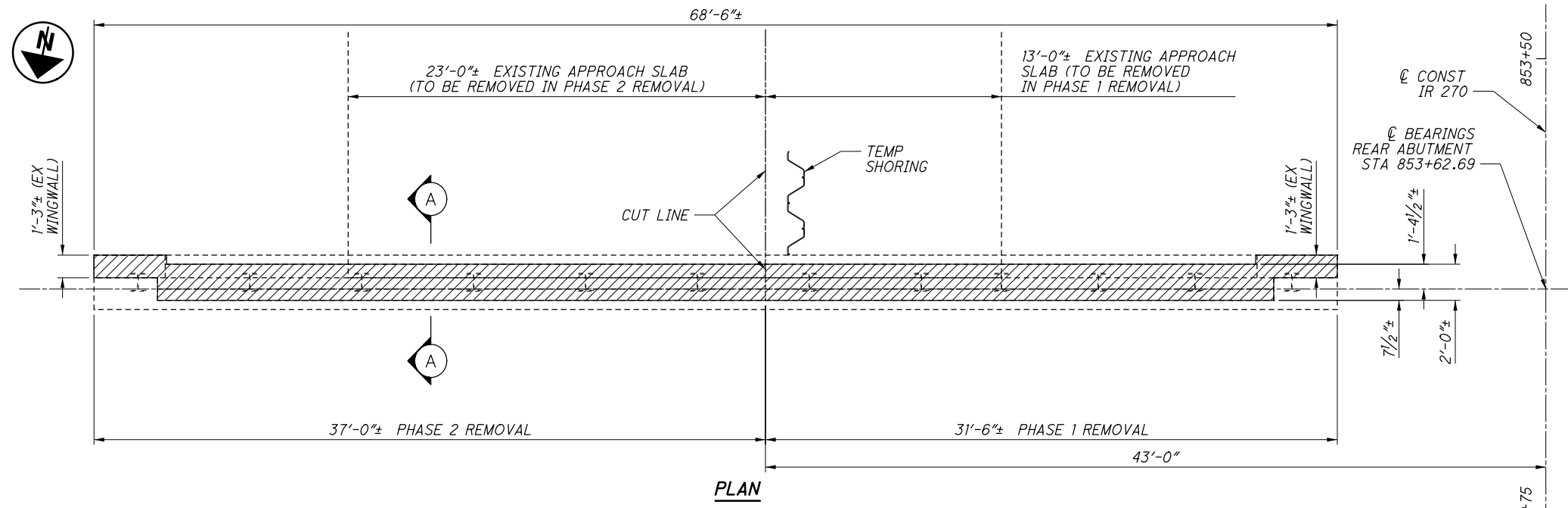
DESIGNED	RJE	CHECKED	TDA
DRAWN	GB	REVISED	
REVIEWED	CJS	DATE	7-18-16
DESIGN AGENCY	EMIT		

2510200/2510235  
STRUCTURE FILE NUMBER

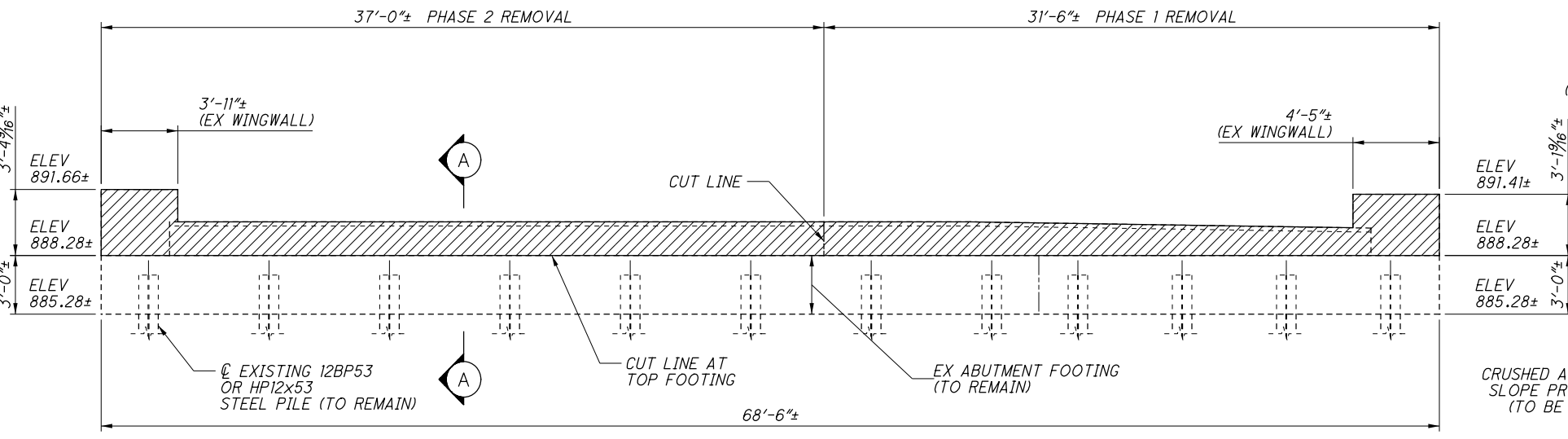
10/40

1276  
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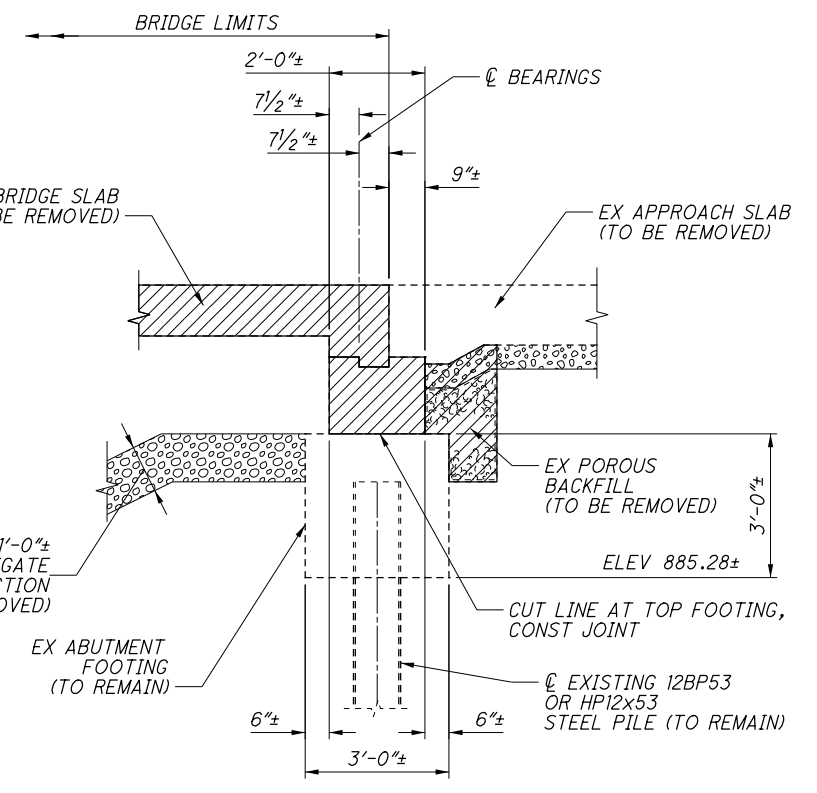
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**PLAN**



**ELEVATION**



**SECTION A-A**

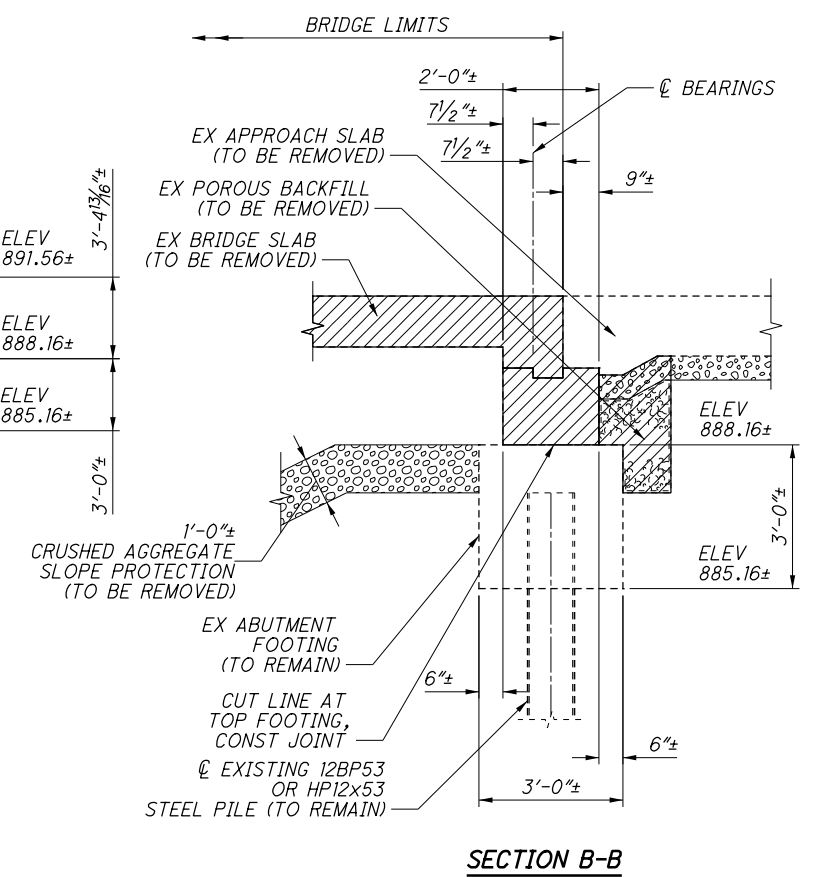
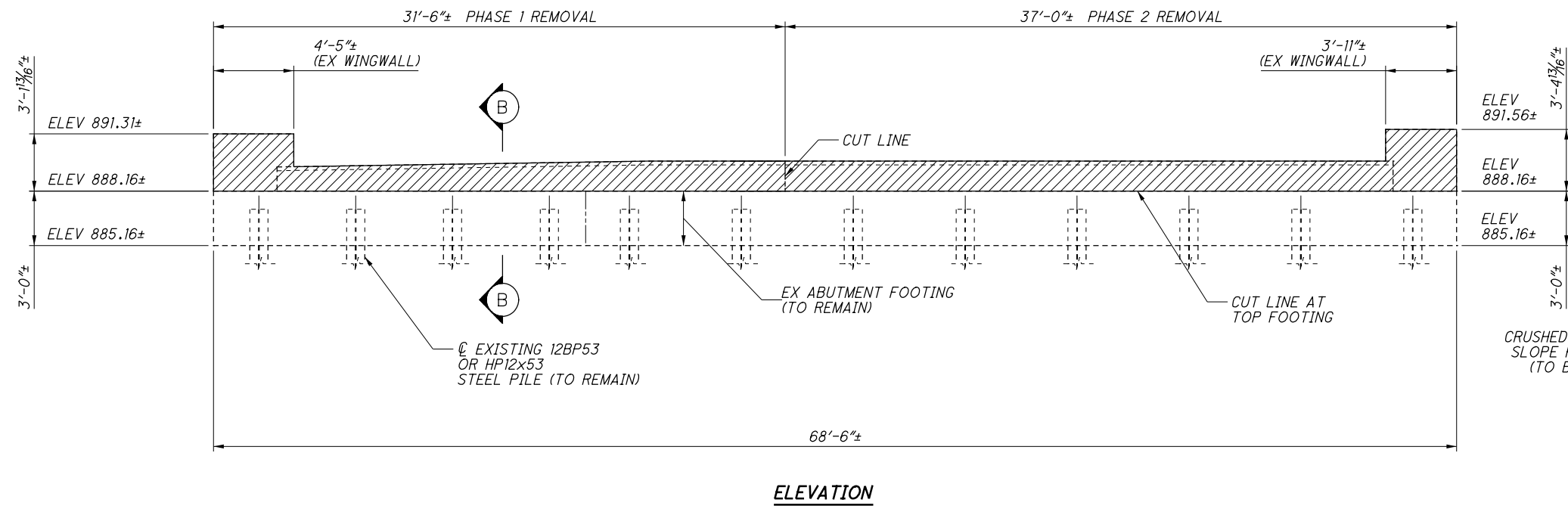
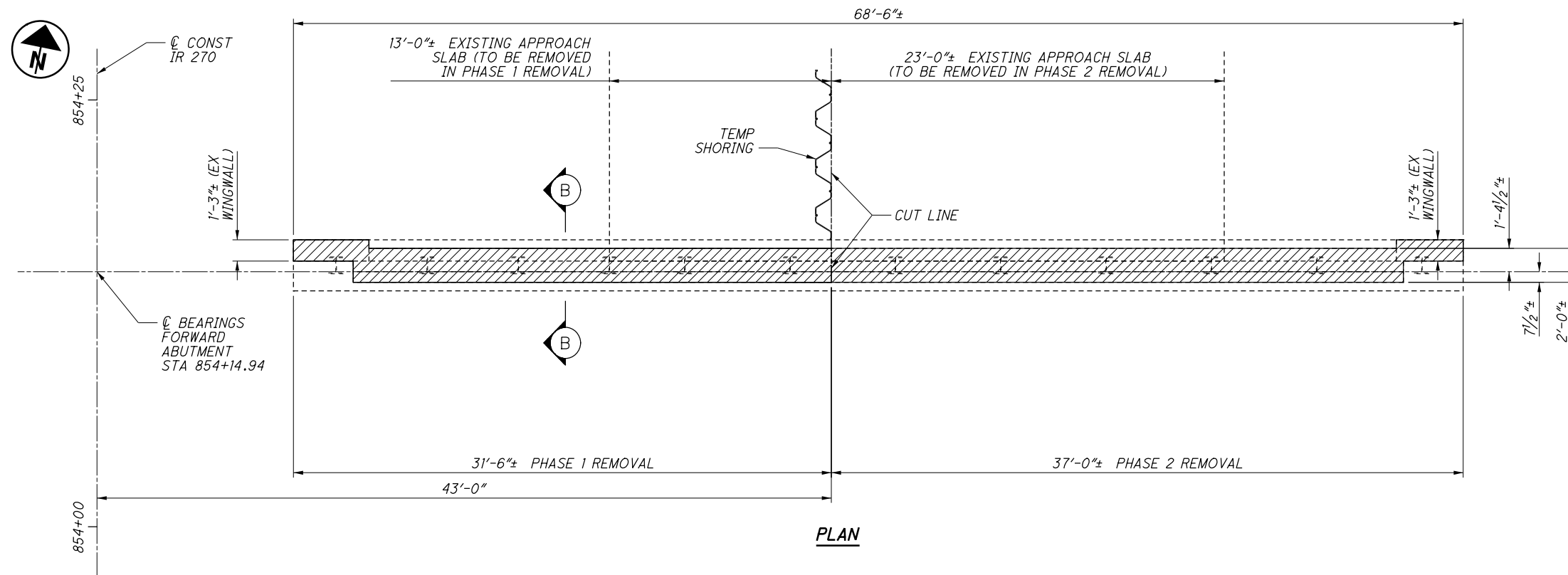
**LEGEND**

DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

**NOTES**

- EXISTING APPROACH SLAB TO BE REMOVED PER ITEM 202 - APPROACH SLAB REMOVED.

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**LEGEND**

DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

DESIGN AGENCY		DATE	
EMIT		7-18-16	
DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CJS	7-18-16
CHECKED	REVISED	STRUCTURE FILE NUMBER	2510200/2510235
TDA			

**FORWARD ABUTMENT REMOVAL DETAILS (RIGHT BRIDGE)**

BRIDGE NO. FRA-270-1619 L/R

IR 270 OVER CRAMER DITCH

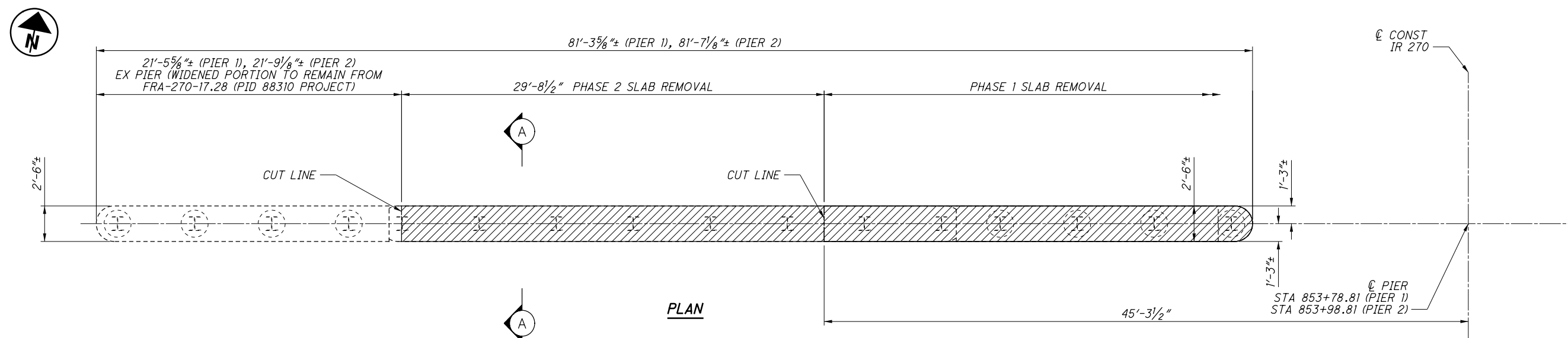
**FRA-270-9.15**

**PID No. 76469**

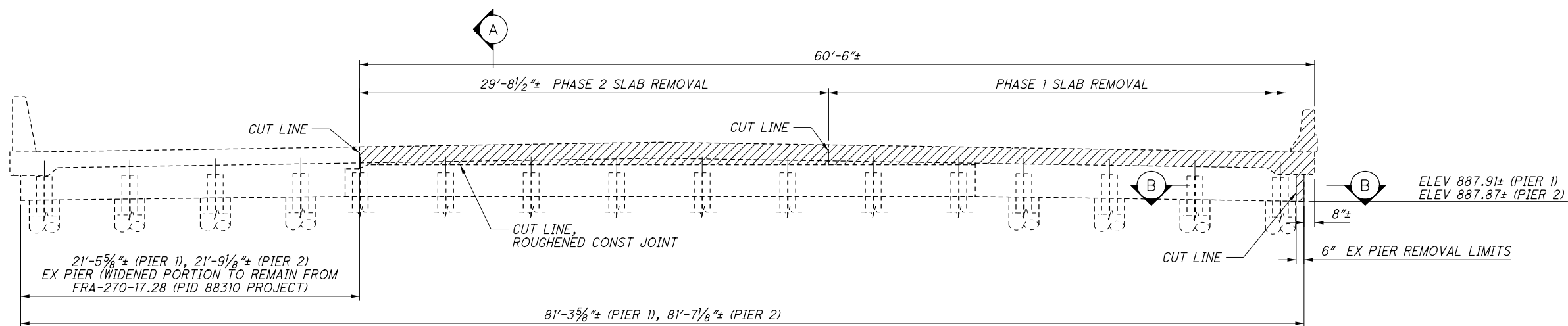
12/40

1278

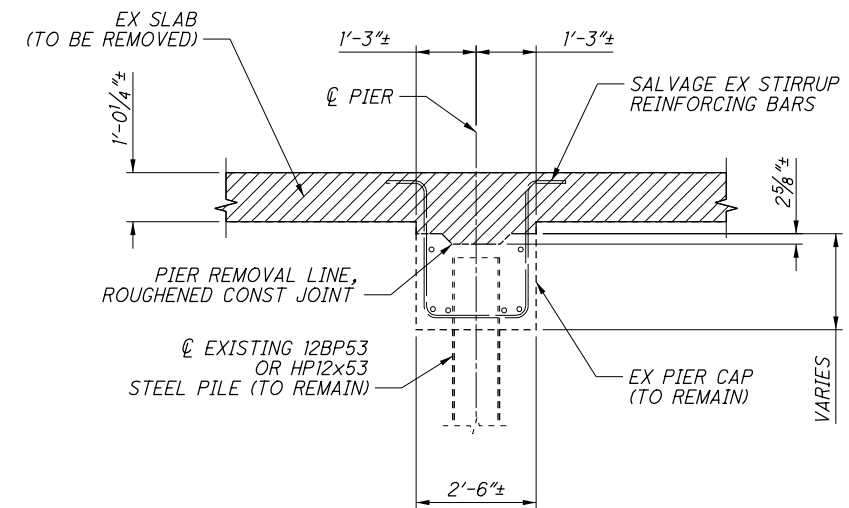
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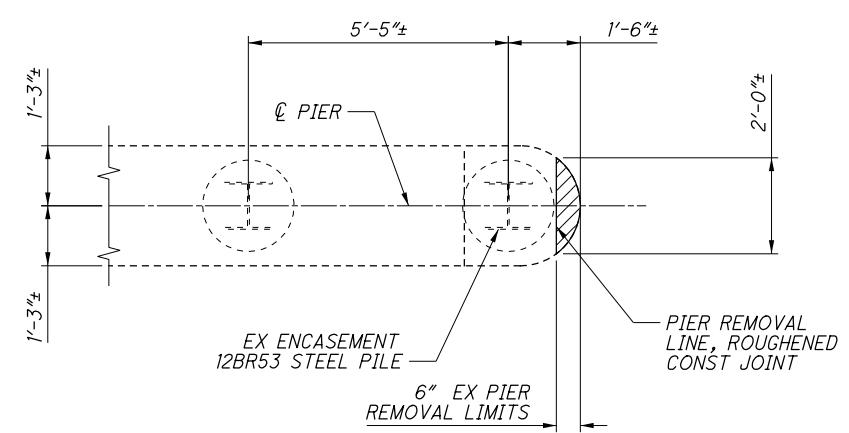
**PLAN**



**ELEVATION**



**SECTION A-A**

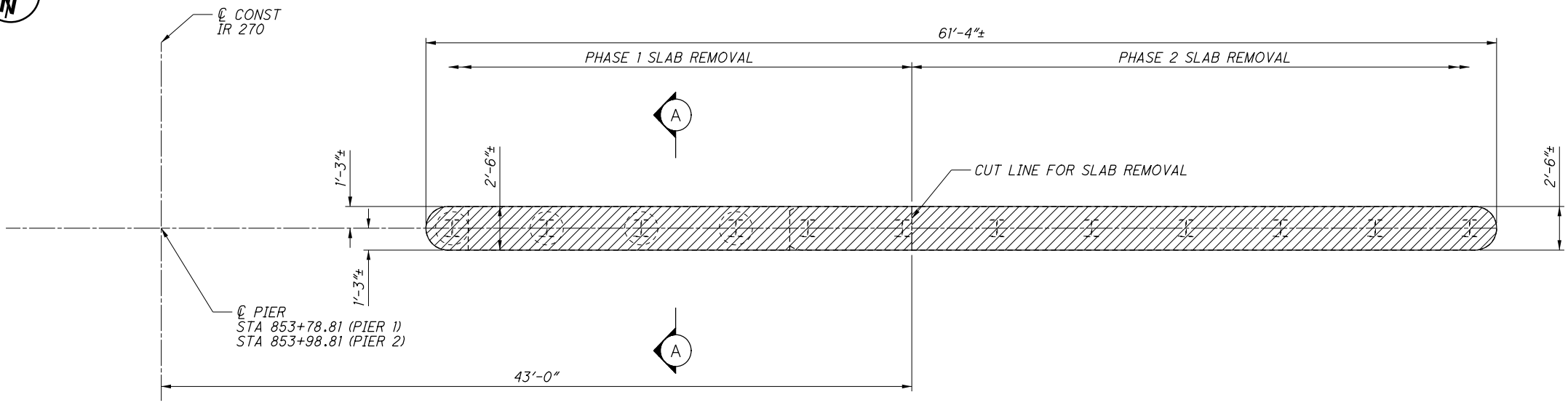


**SECTION B-B**

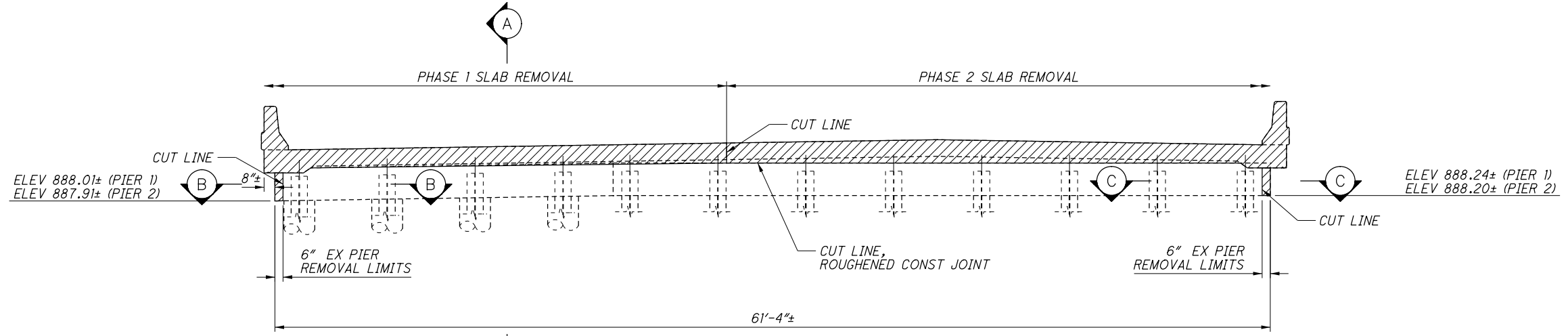
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DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

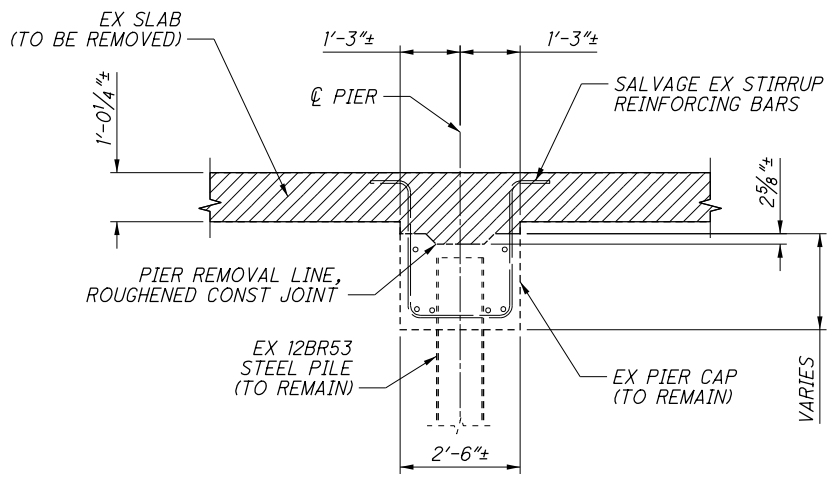
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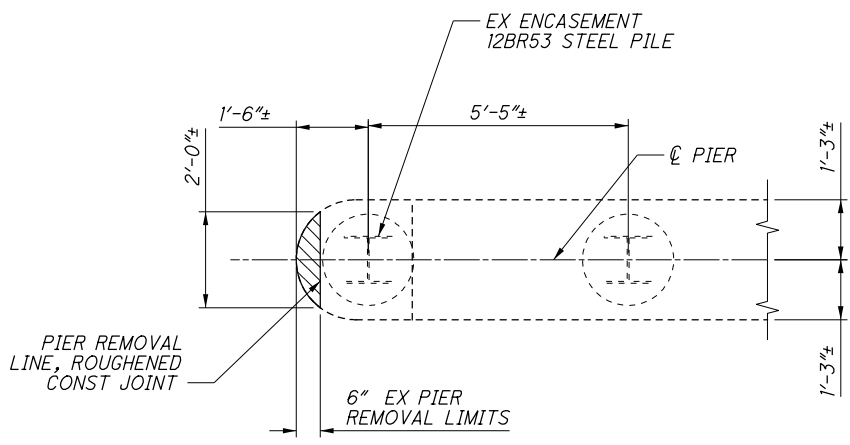
**PLAN**



**ELEVATION**

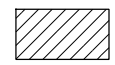


**SECTION A-A**



**SECTION B-B**  
SECTION B-B SHOWN  
SECTION C-C SIMILAR (MIRROR)

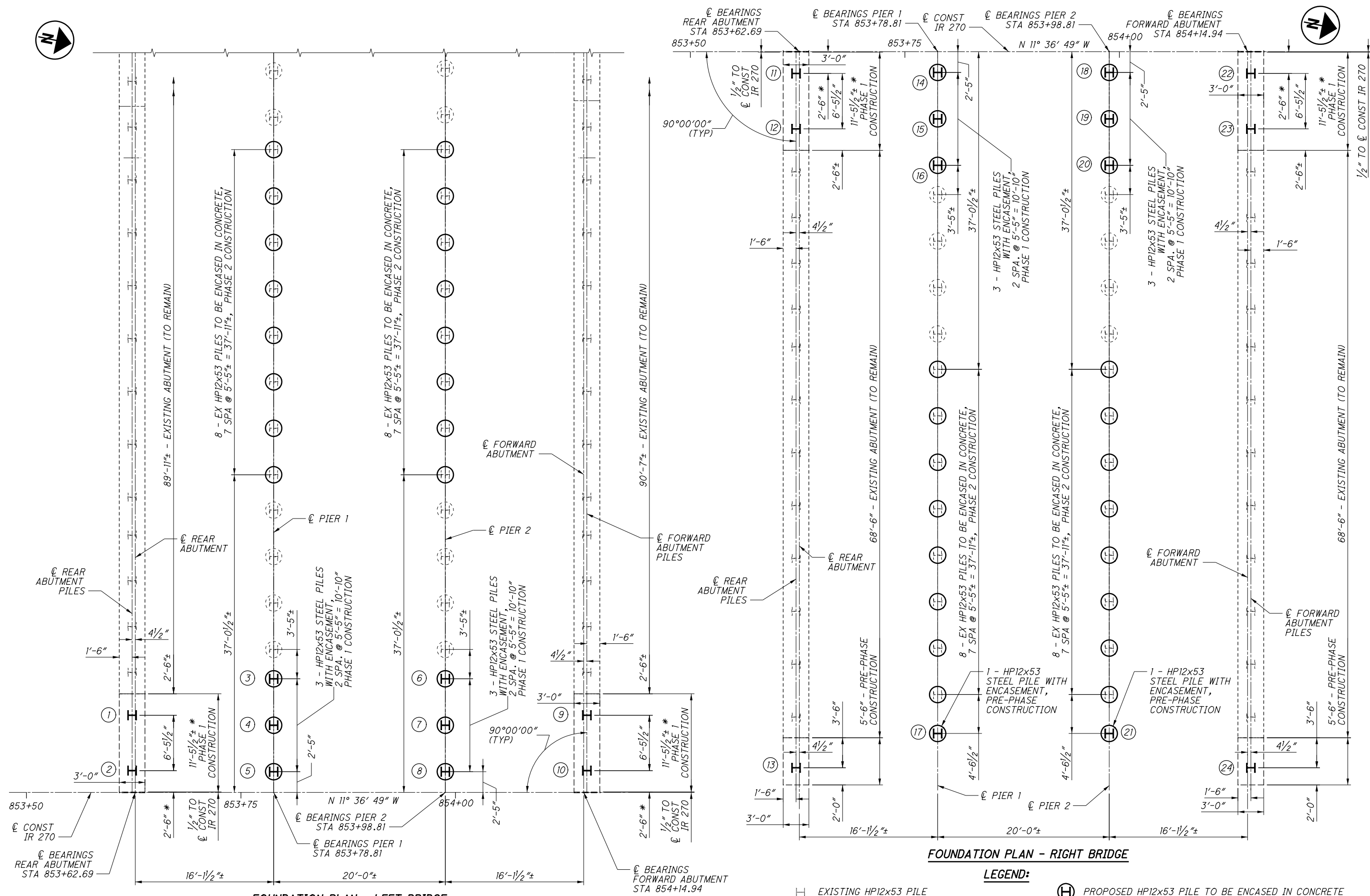
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DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

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FOUNDATION PLAN - LEFT BRIDGE

FOUNDATION PLAN - RIGHT BRIDGE

- LEGEND:**
- EXISTING HP12x53 PILE
  - EXISTING HP12x53 PILE ENCASED IN CONCRETE
  - PROPOSED HP12x53 PILE
  - PROPOSED HP12x53 PILE TO BE ENCASED IN CONCRETE
  - PILE NUMBER
  - EXISTING HP12x53 PILE TO BE ENCASED IN CONCRETE
  - \* - MEASURED TO EDGE OF PROPOSED FOUNDATION

DESIGN AGENCY  
**EMHT**  
Engineering, Measurement & Health Technology

DESIGNED  
RJE  
CHECKED  
TDA

DRAWN  
GB  
REVISED

REVIEWED  
CJS

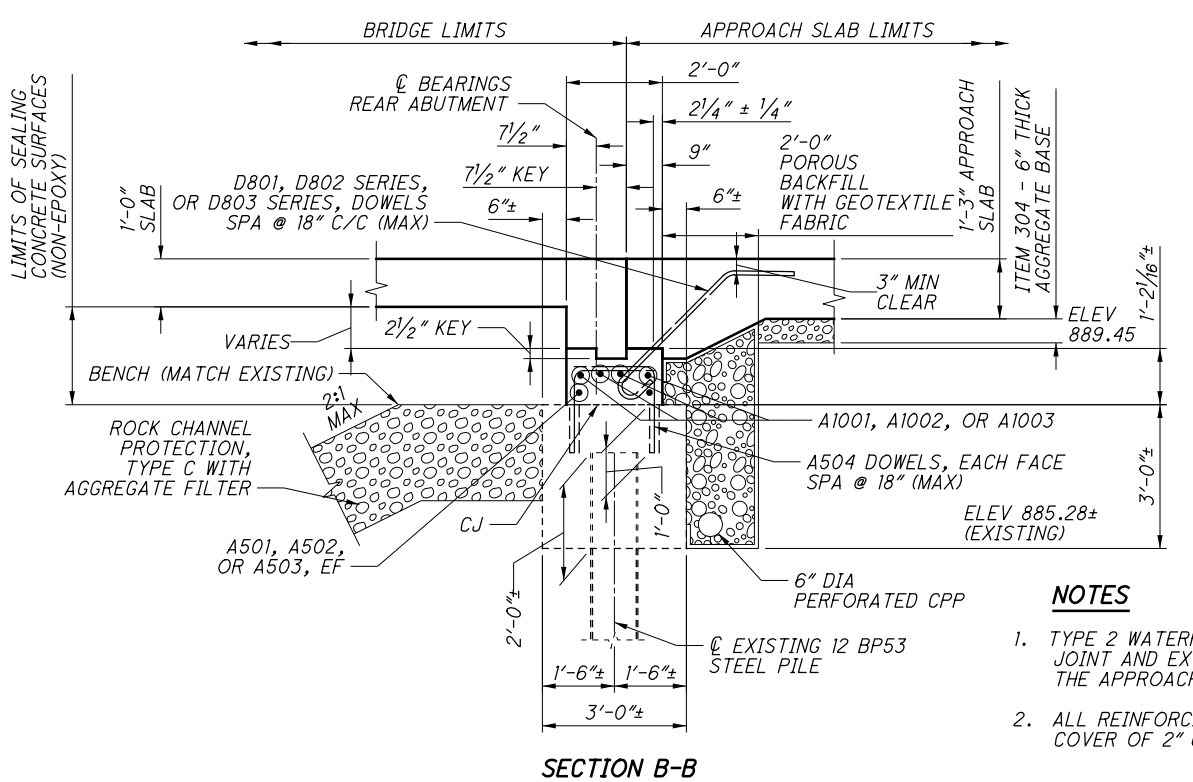
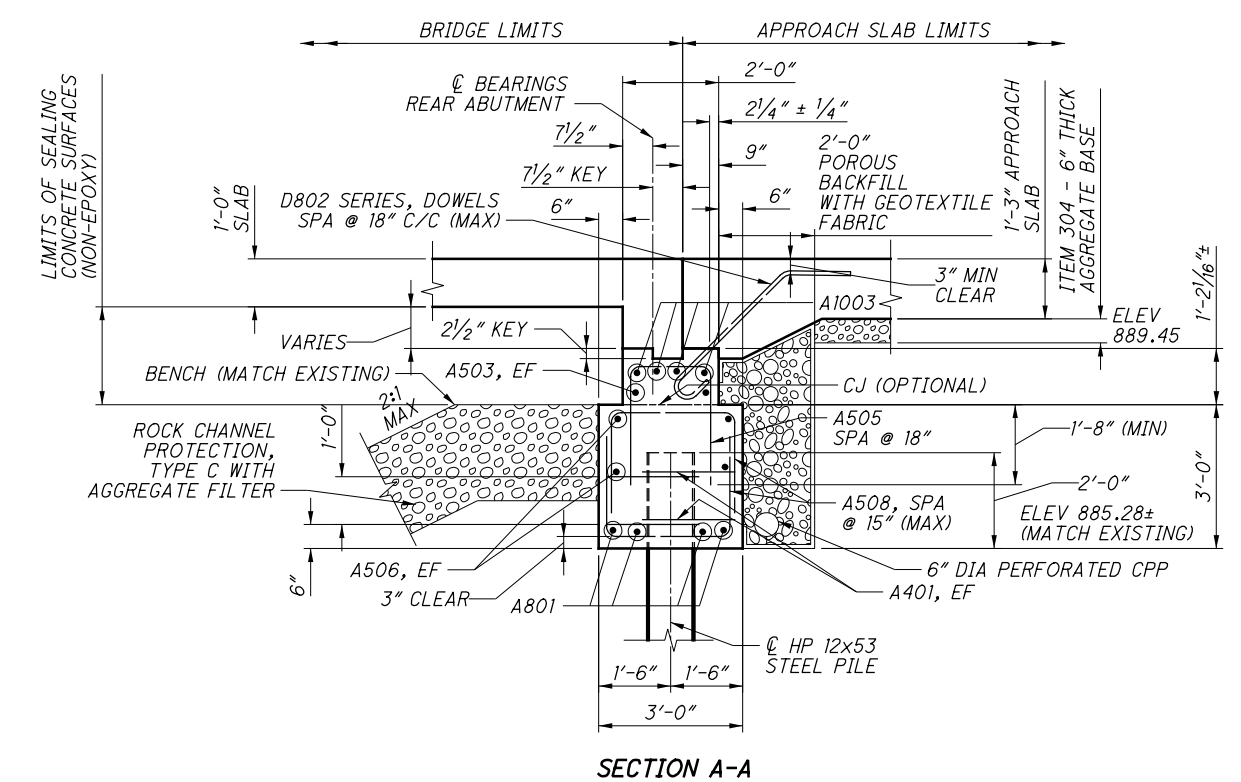
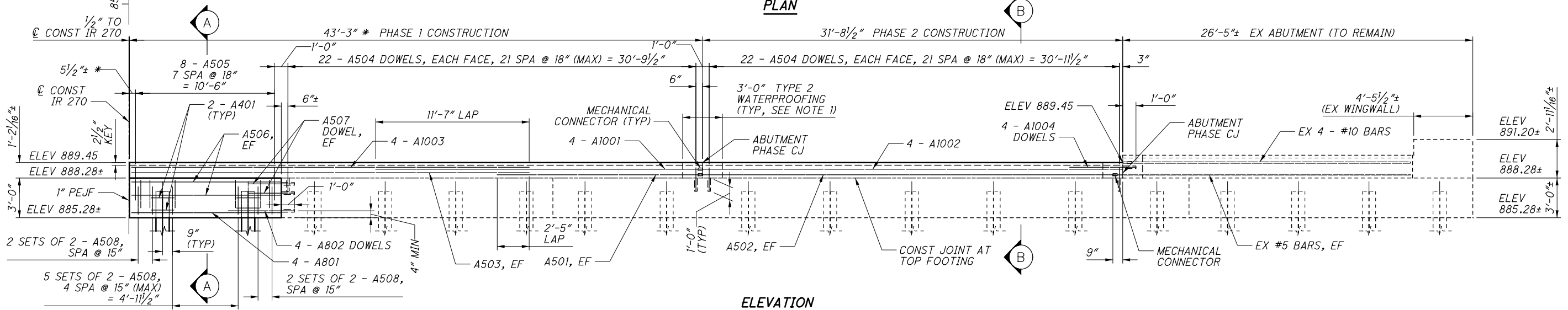
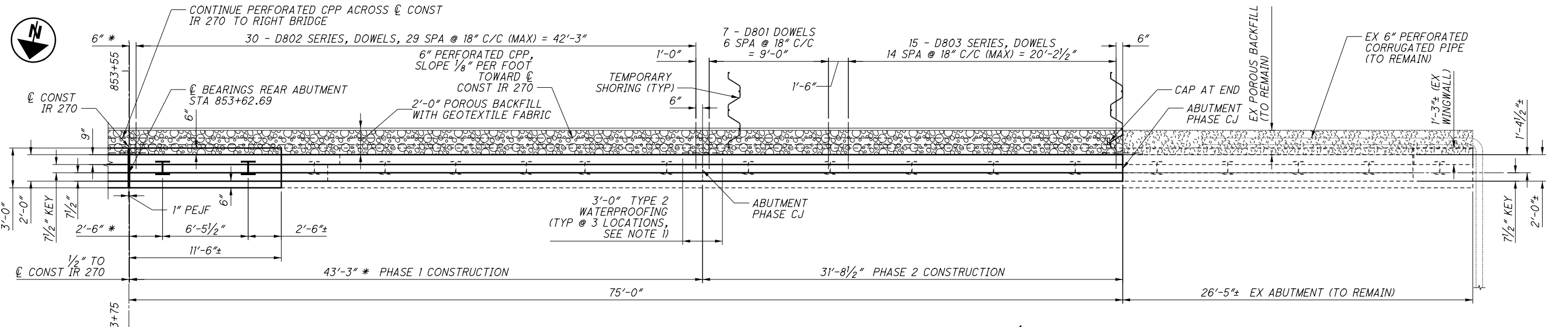
DATE  
7-18-16

STRUCTURE FILE NUMBER  
2510200/2510235

**FOUNDATION PLAN**  
BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAMER DITCH

**FRA-270-9.15**  
PID No. 76469

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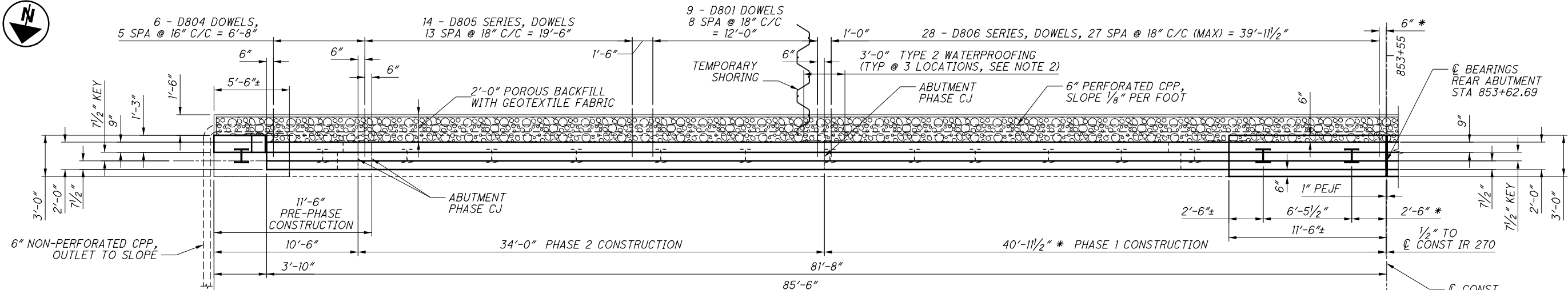


**LEGEND**  
\* - MEASURED TO EDGE OF PROPOSED FOUNDATION

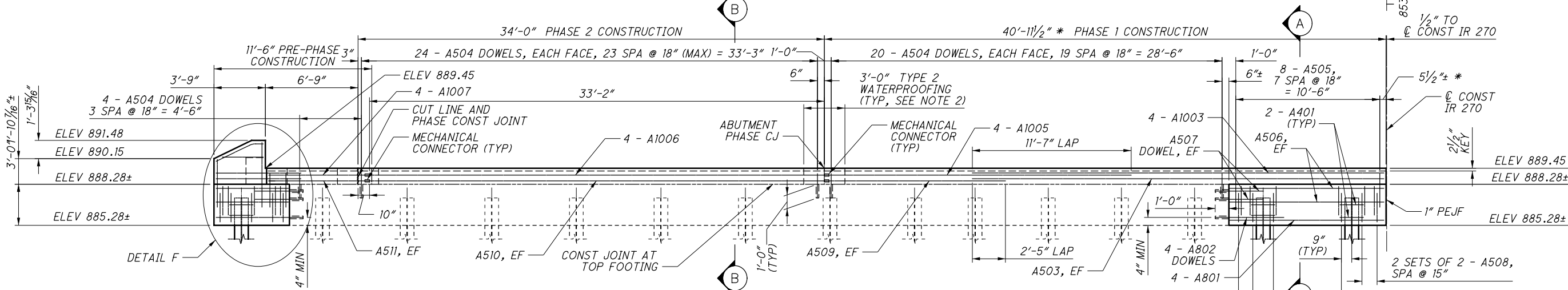
**NOTES**  
1. TYPE 2 WATERPROOFING SHALL BE CENTERED ON JOINT AND EXTEND FROM THE TOP OF FOOTING TO THE APPROACH SLAB SEAT.  
2. ALL REINFORCING BARS SHALL HAVE CONCRETE COVER OF 2" UNLESS NOTED OTHERWISE.

DESIGNED	RJE	CHECKED	TDA
DRAWN	GB	REVISED	
REVIEWED	CJS	DATE	7-18-16
STRUCTURE FILE NUMBER	2510200/2510235		
DESIGN AGENCY	EMIT		
<b>REAR ABUTMENT (LEFT BRIDGE)</b> BRIDGE NO. FRA-270-1619 L/R IR 270 OVER CRAMER DITCH			
FRA-270-9.15 PID No. 76469			
16 / 40 1282 1306			

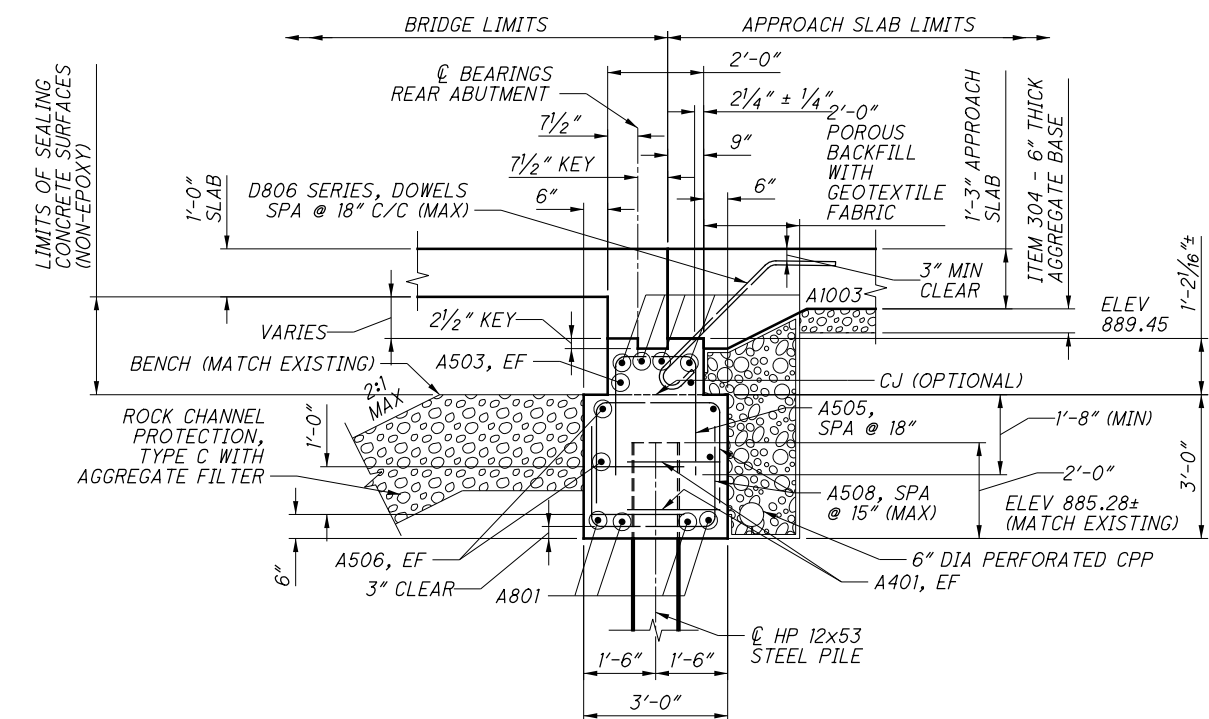




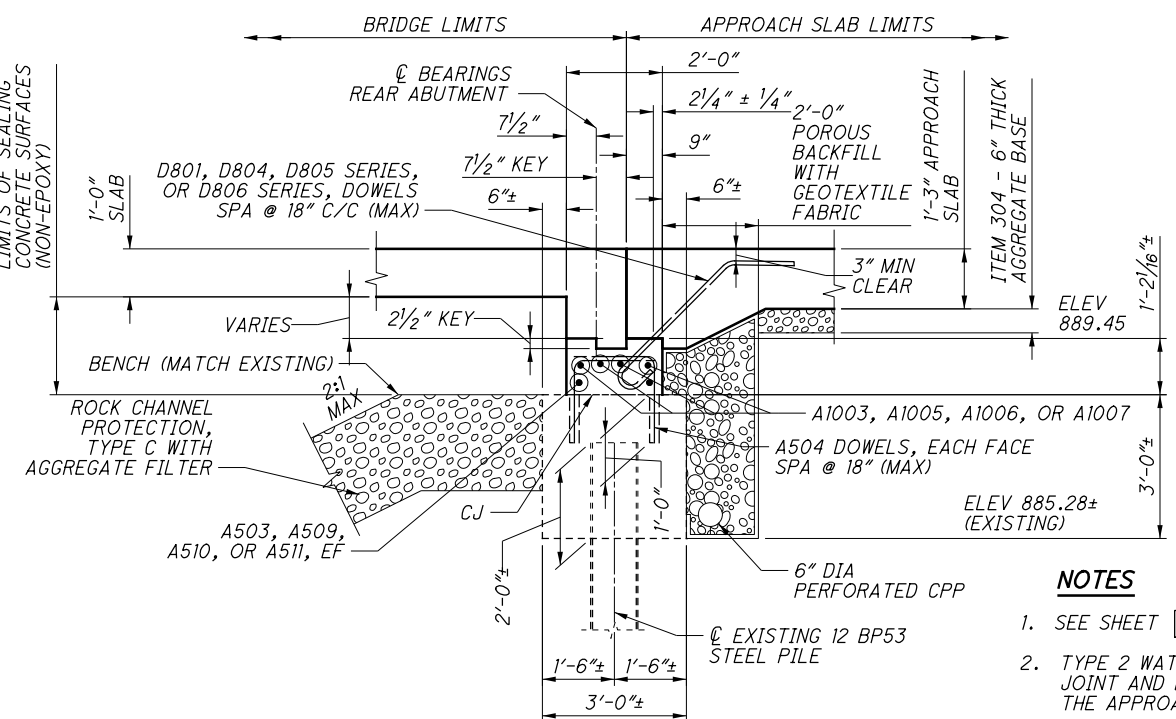
PLAN



ELEVATION



SECTION A-A



SECTION B-B

**LEGEND**  
 \* - MEASURED TO EDGE OF PROPOSED FOUNDATION

- NOTES**
- SEE SHEET 20/40 FOR DETAIL F.
  - TYPE 2 WATERPROOFING SHALL BE CENTERED ON JOINT AND EXTEND FROM THE TOP OF FOOTING TO THE APPROACH SLAB SEAT.
  - ALL REINFORCING BARS SHALL HAVE CONCRETE COVER OF 2" UNLESS NOTED OTHERWISE.

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DESIGN AGENCY  
**EMIT**  
 ENGINEERING, ARCHITECTURE, INTERIOR DESIGN

DATE  
 7-18-16  
 STRUCTURE FILE NUMBER  
 2510200/2510235

DRAWN  
 GB  
 REVISIONS

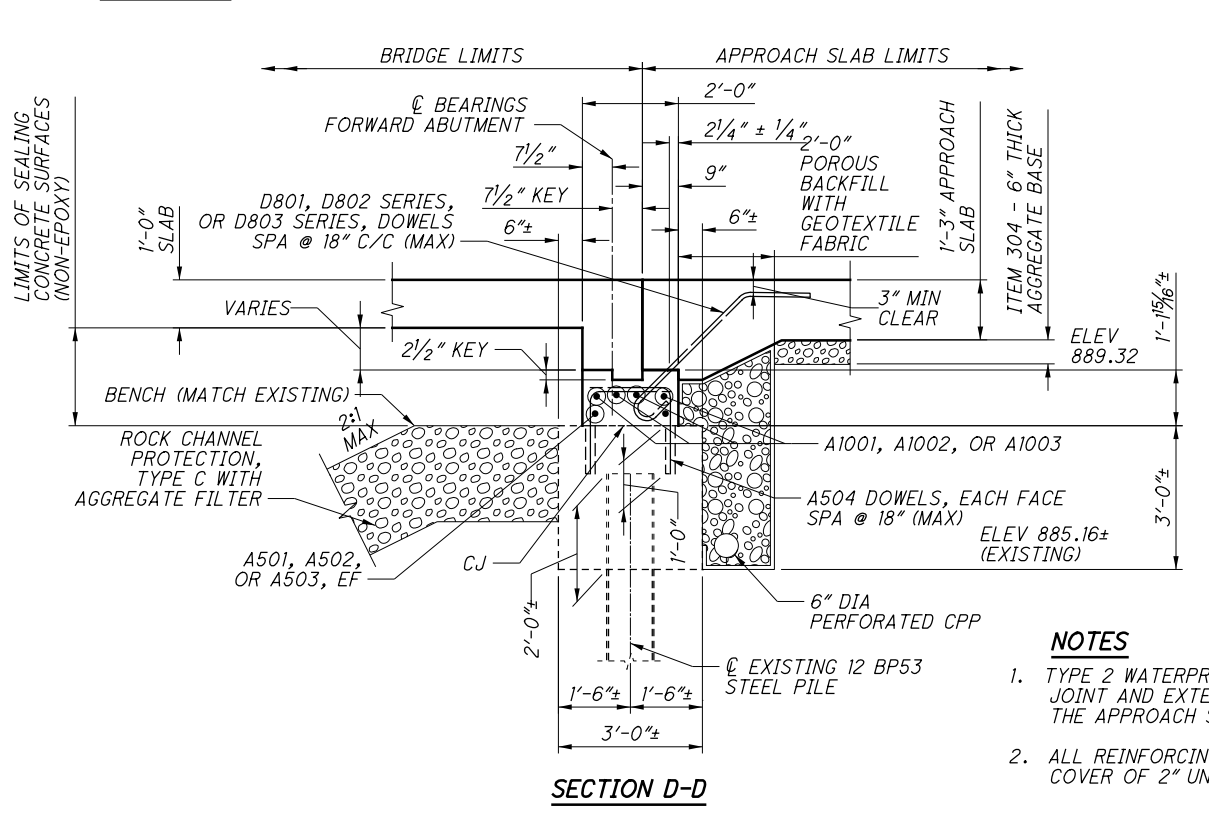
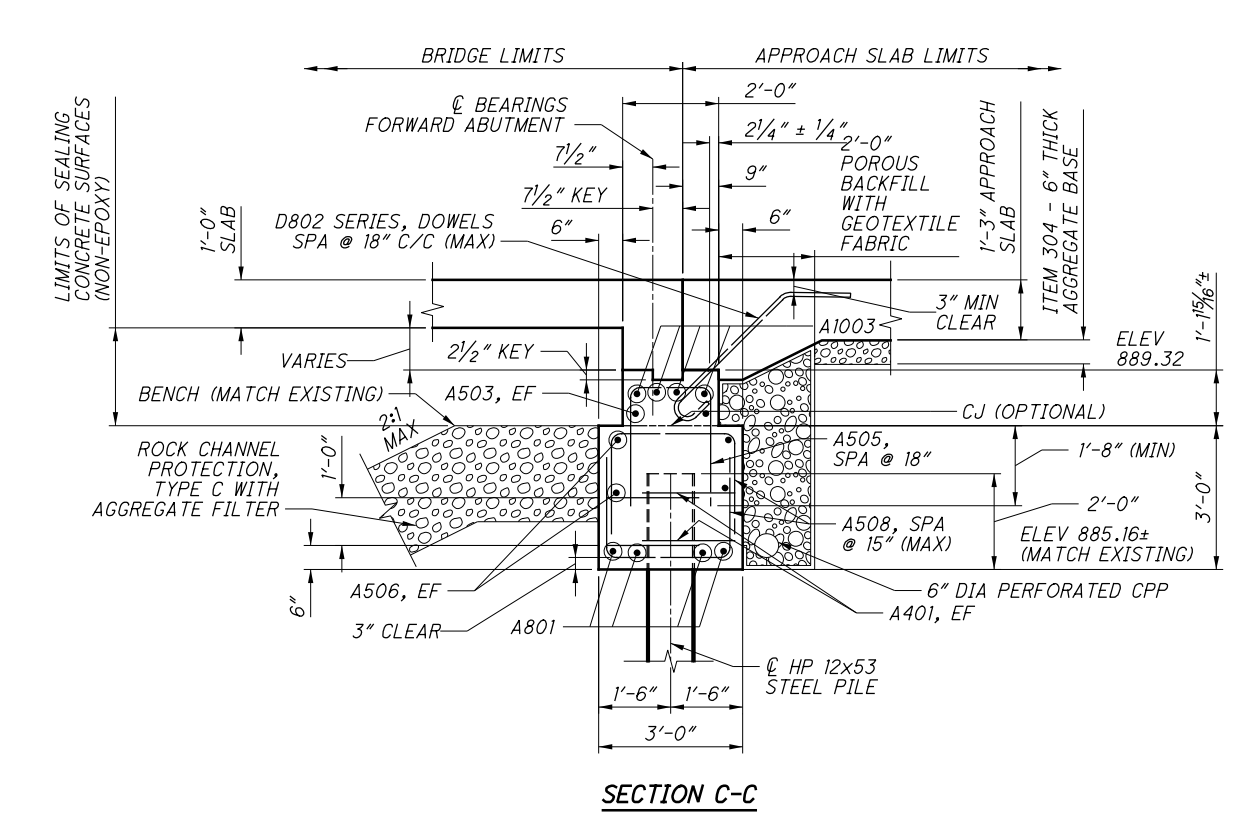
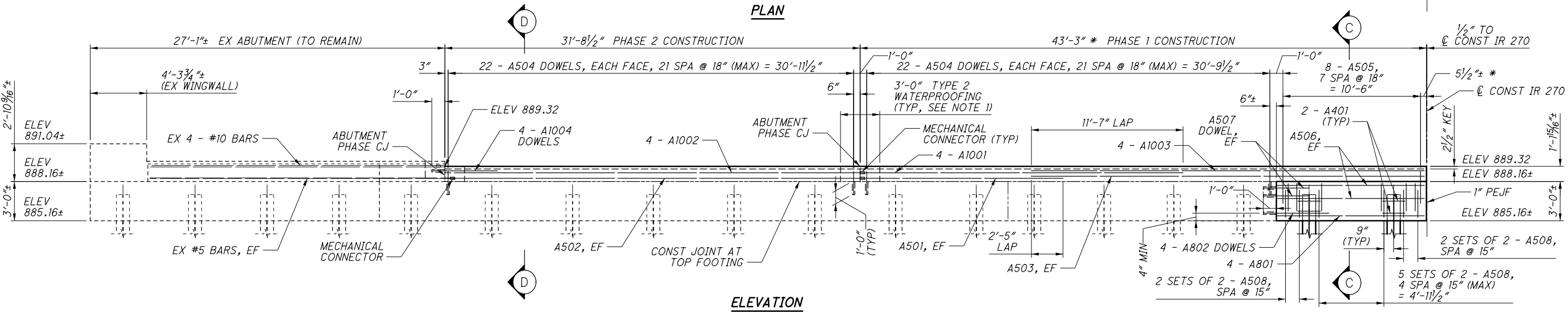
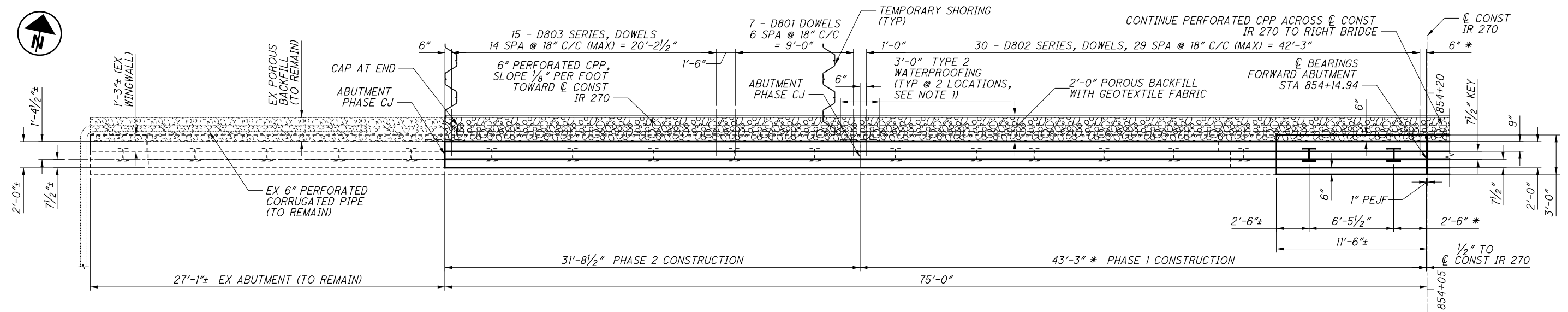
DESIGNED  
 RJE  
 CHECKED  
 TDA

**REAR ABUTMENT (RIGHT BRIDGE)**  
 BRIDGE NO. FRA-270-1619 L/R  
 IR 270 OVER CRAMER DITCH

**FRA-270-9.15**  
 PID No. 76469

17 / 40

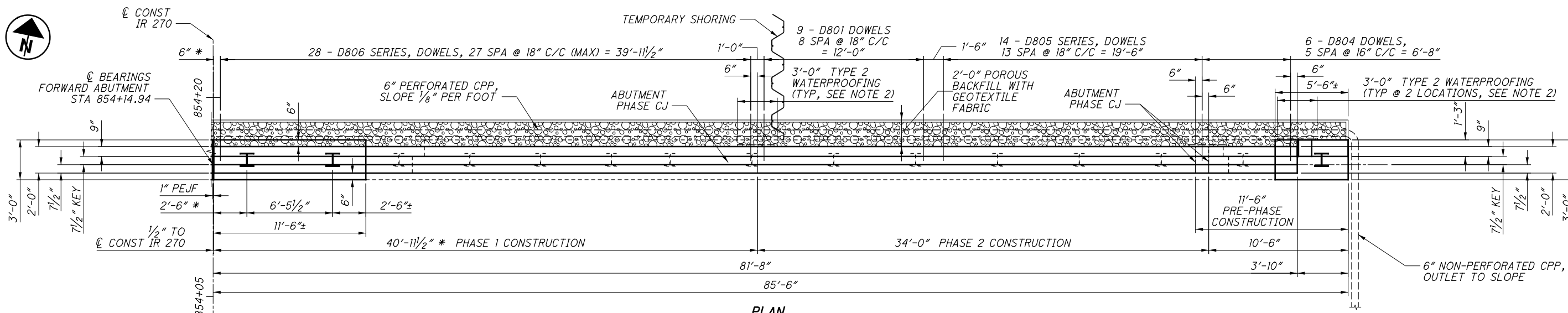
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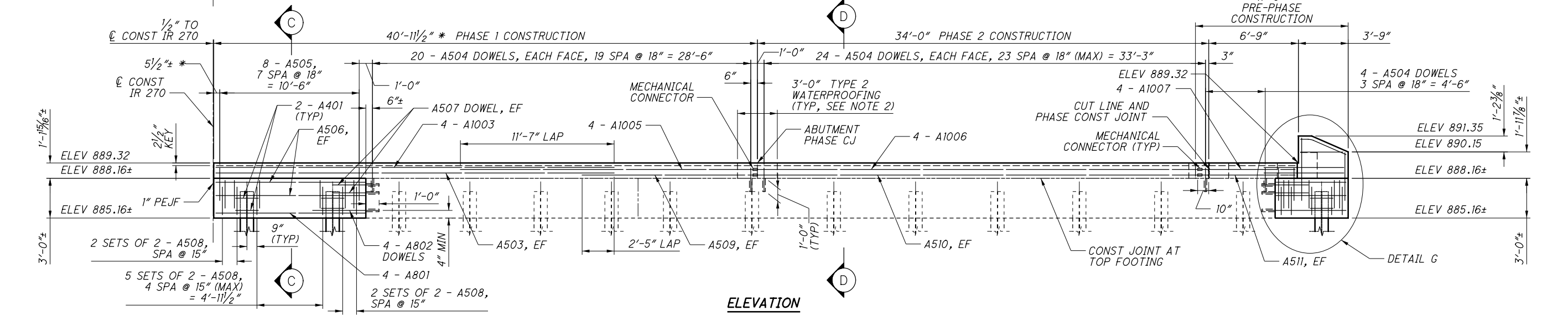
**LEGEND**  
\* - MEASURED TO EDGE OF PROPOSED FOUNDATION

- NOTES**
- TYPE 2 WATERPROOFING SHALL BE CENTERED ON JOINT AND EXTEND FROM THE TOP OF FOOTING TO THE APPROACH SLAB SEAT.
  - ALL REINFORCING BARS SHALL HAVE CONCRETE COVER OF 2" UNLESS NOTED OTHERWISE.

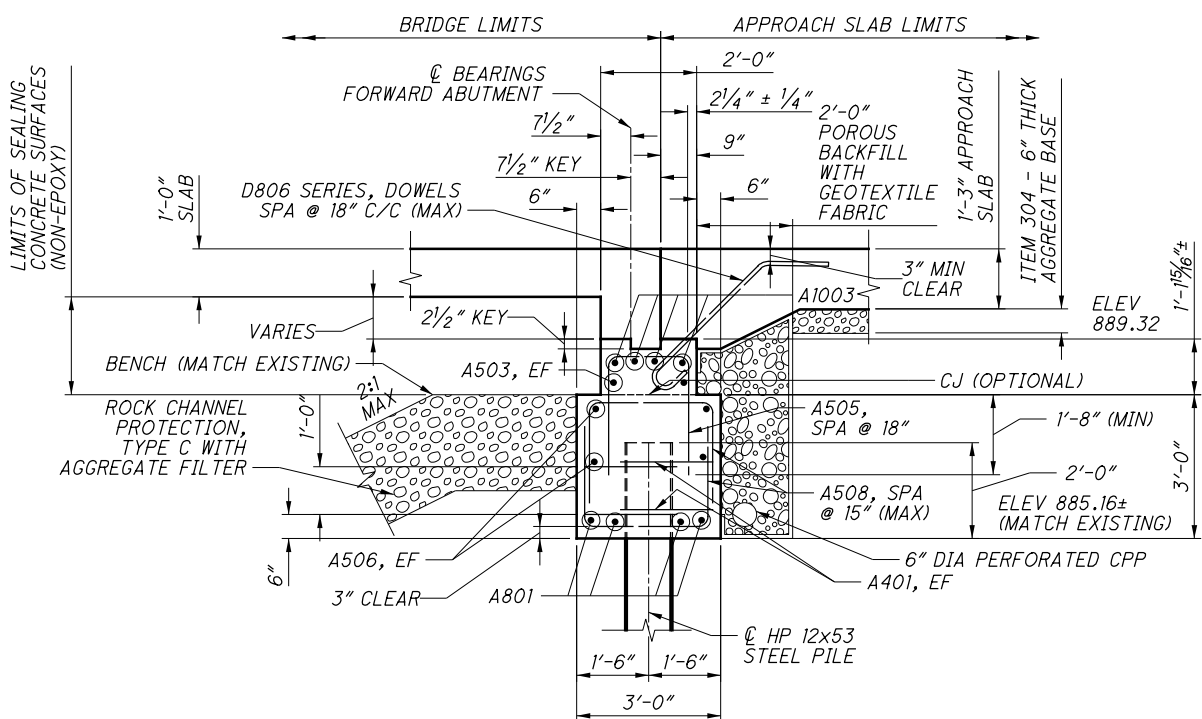
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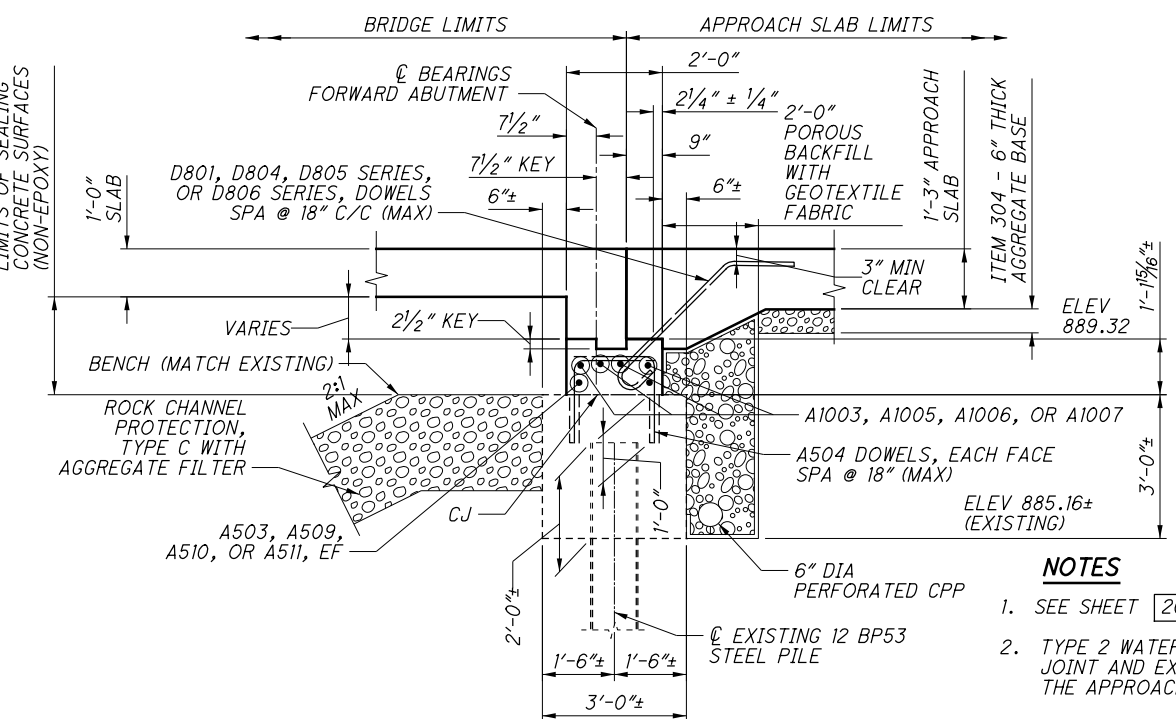
PLAN



ELEVATION



SECTION C-C



SECTION D-D

**LEGEND**  
 \* - MEASURED TO EDGE OF PROPOSED FOUNDATION

- NOTES**
- SEE SHEET 20/40 FOR DETAIL G.
  - TYPE 2 WATERPROOFING SHALL BE CENTERED ON JOINT AND EXTEND FROM THE TOP OF FOOTING TO THE APPROACH SLAB SEAT.
  - ALL REINFORCING BARS SHALL HAVE CONCRETE COVER OF 2" UNLESS NOTED OTHERWISE.

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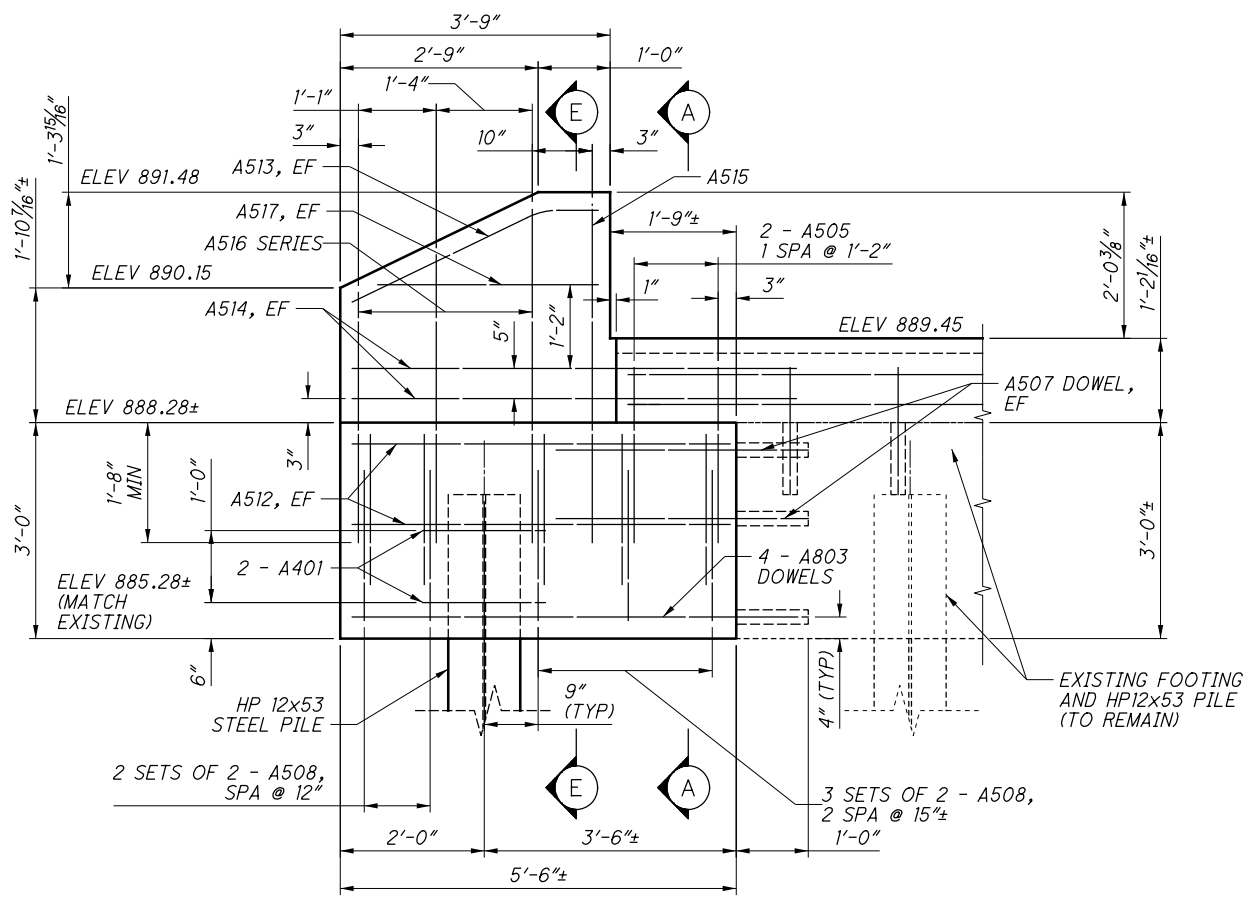
DESIGN AGENCY  
**EMIT**  
 ENGINEERING, ARCHITECTURE, INTERIOR DESIGN

DATE 7-18-16  
 REVIEWED CJS  
 DRAWN GB  
 DESIGNED RJE  
 CHECKED TDA  
 STRUCTURE FILE NUMBER 2510200/2510235

**FORWARD ABUTMENT (RIGHT BRIDGE)**  
 BRIDGE NO. FRA-270-1619 L/R  
 IR 270 OVER CRAMER DITCH

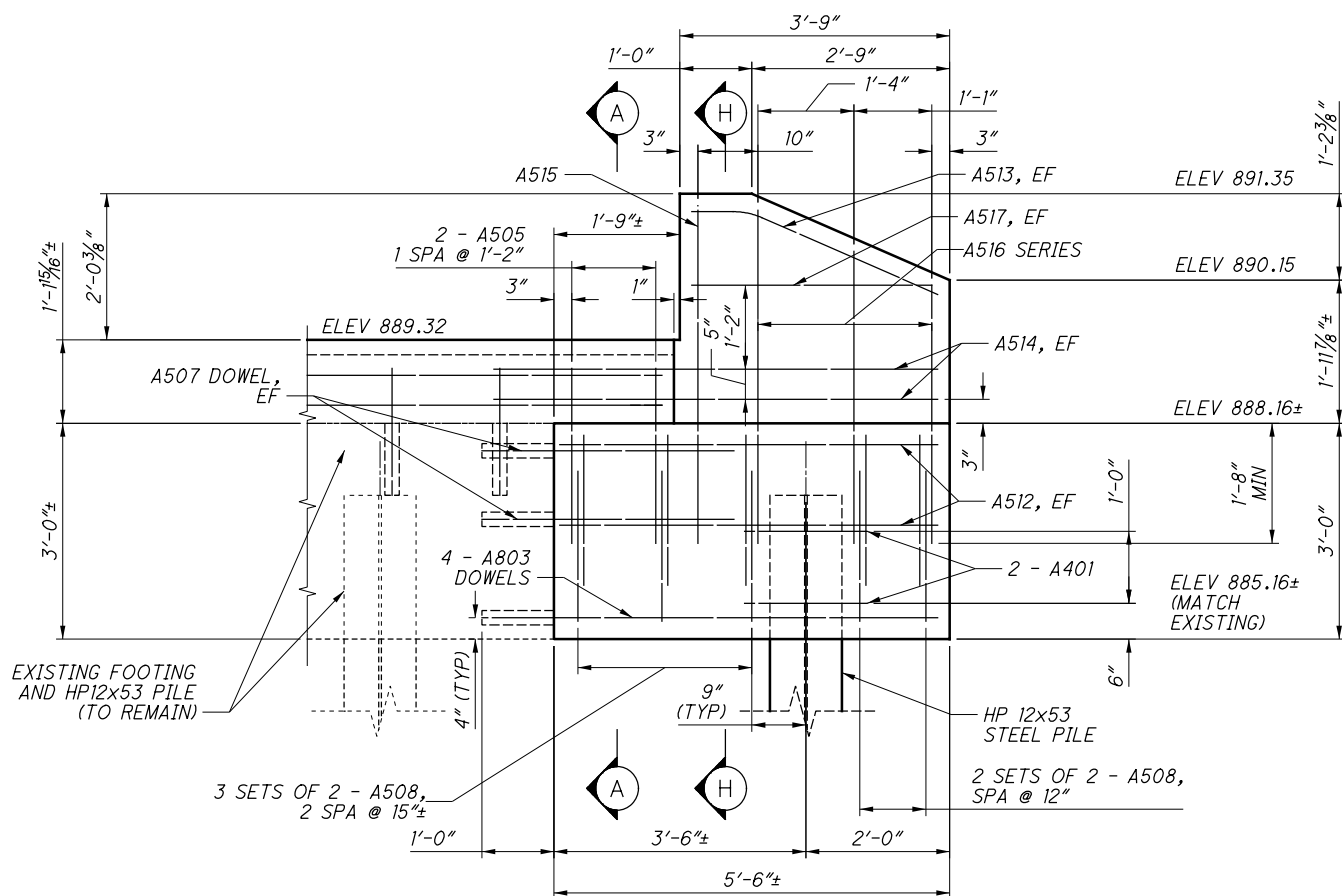
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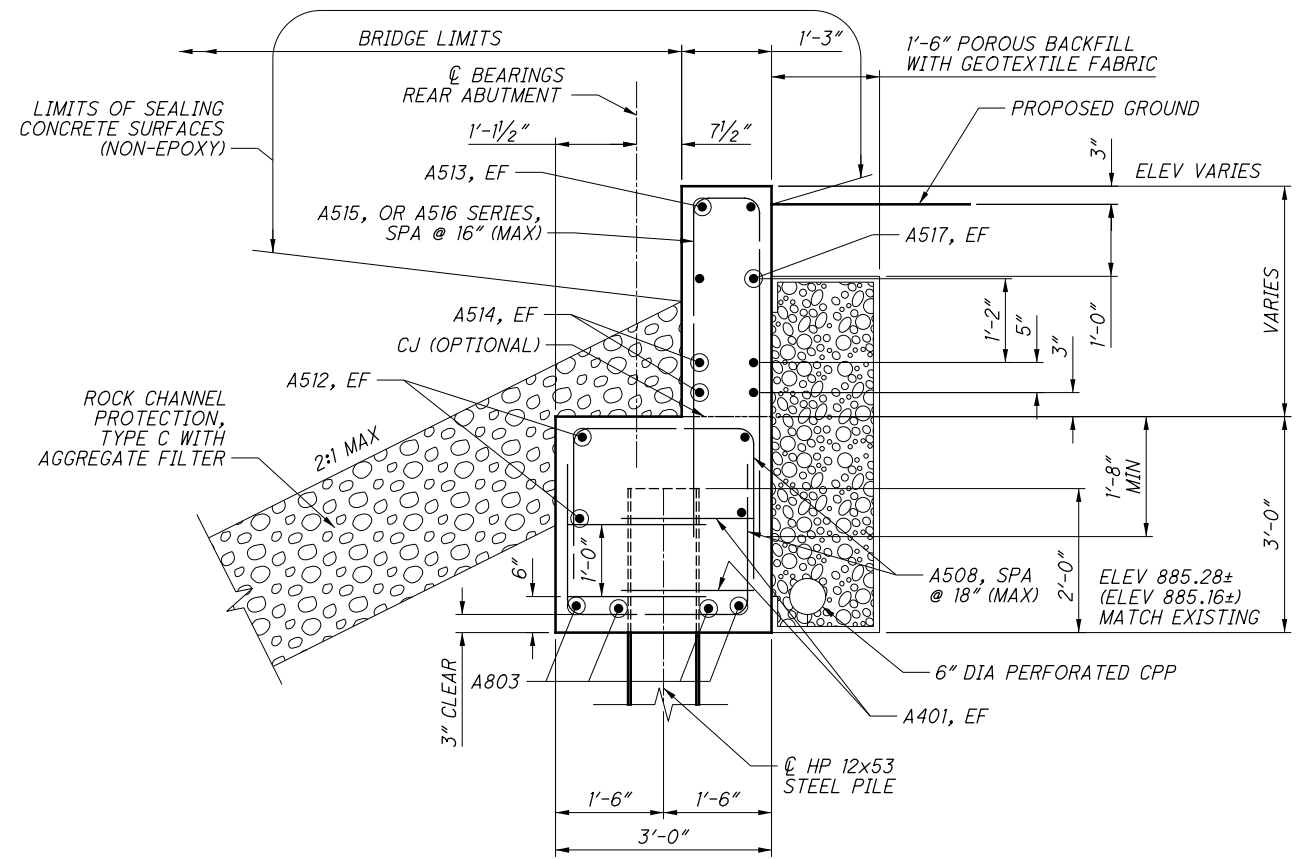
**DETAIL F**

TYPE 2 WATERPROOFING NOT SHOWN FOR CLARITY



**DETAIL G**

TYPE 2 WATERPROOFING NOT SHOWN FOR CLARITY

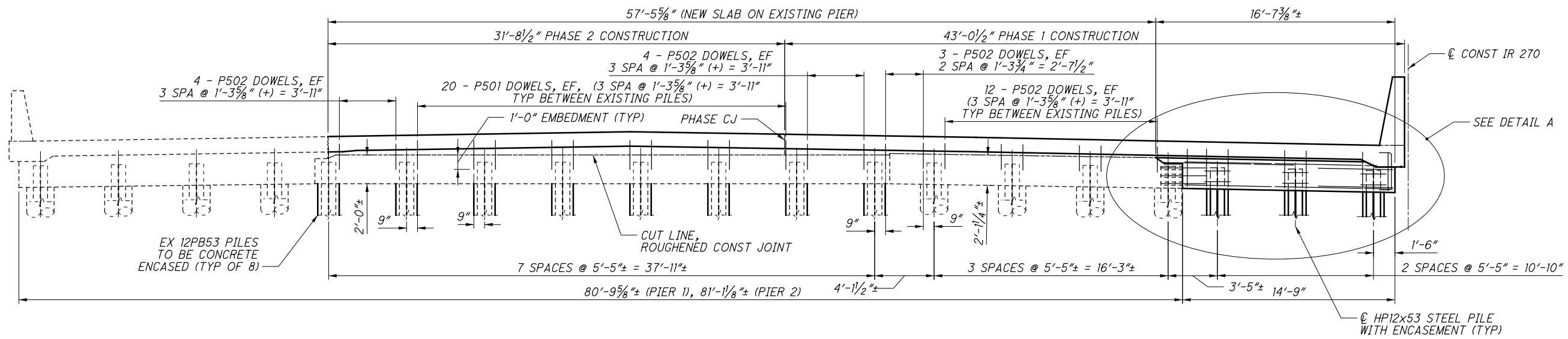


**SECTION E-E (H-H)**

**NOTES**

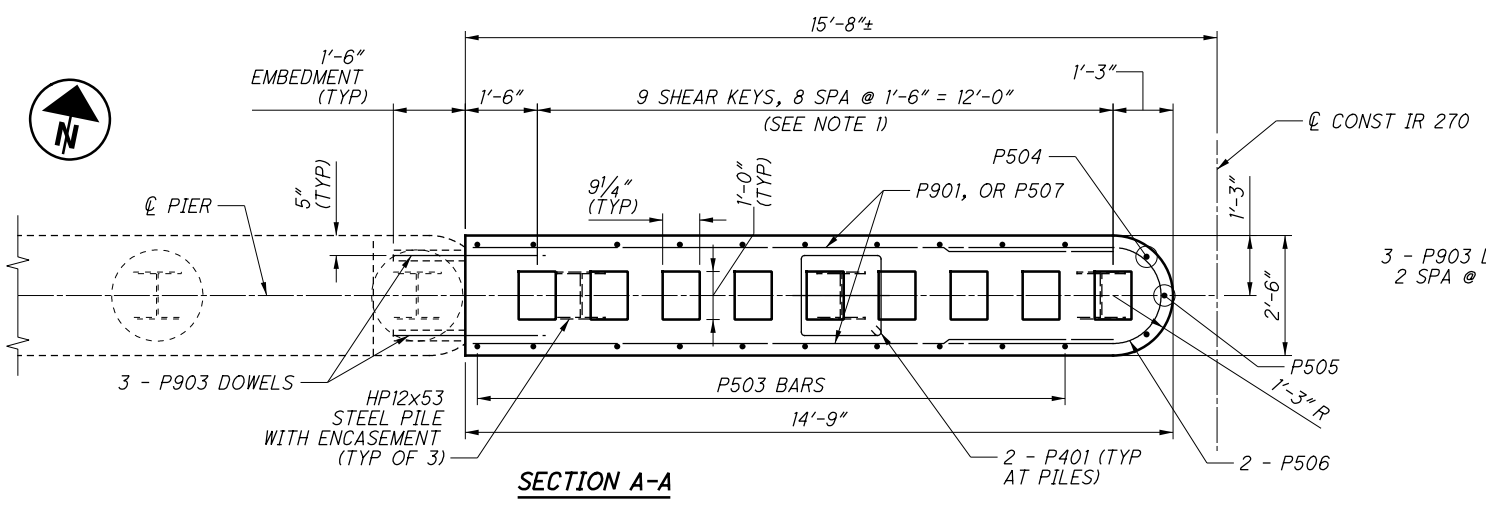
1. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN EDGE OF EXISTING FOOTING THAT IS TO BE COVERED WITH NEW CONCRETE TO REMOVE LOOSE AND DISINTEGRATED CONCRETE. THOROUGHLY CLEAN THE JOINT SURFACE OF ALL DIRT OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. ANY WORK PERFORMED INCLUDE WITH ITEM 511 - CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING.
2. THE CONTRACTOR SHALL USE NON-DESTRUCTIVE MEANS TO LOCATE AND AVOID THE EXISTING REINFORCING DURING DRILLING.
3. SEE SHEET **17/40** FOR SECTION A-A.
4. ALL REINFORCING BARS SHALL HAVE CONCRETE COVER OF 2" UNLESS NOTED OTHERWISE.

DESIGN AGENCY		DATE	
EMIT		7-18-16	
DRAWN	GB	REVIEWED	CJS
DESIGNED	RJE	CHECKED	TDA
ABUTMENT DETAILS (LEFT AND RIGHT BRIDGE)		STRUCTURE FILE NUMBER	
BRIDGE NO. FRA-270-1619 L/R		2510200/2510235	
IR 270 OVER CRAMER DITCH		PID No. 76469	
FRA-270-9.15		20/40	
PID No. 76469		1286	
		1306	

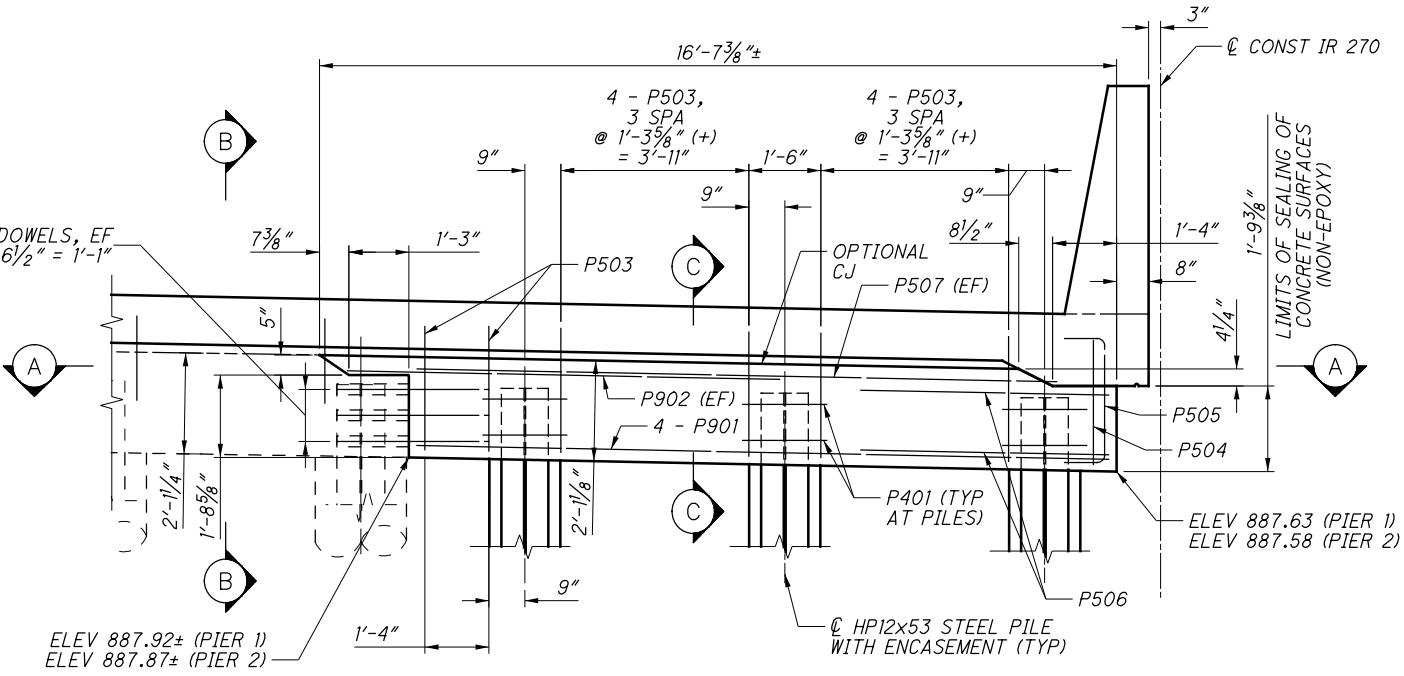


**ELEVATION**

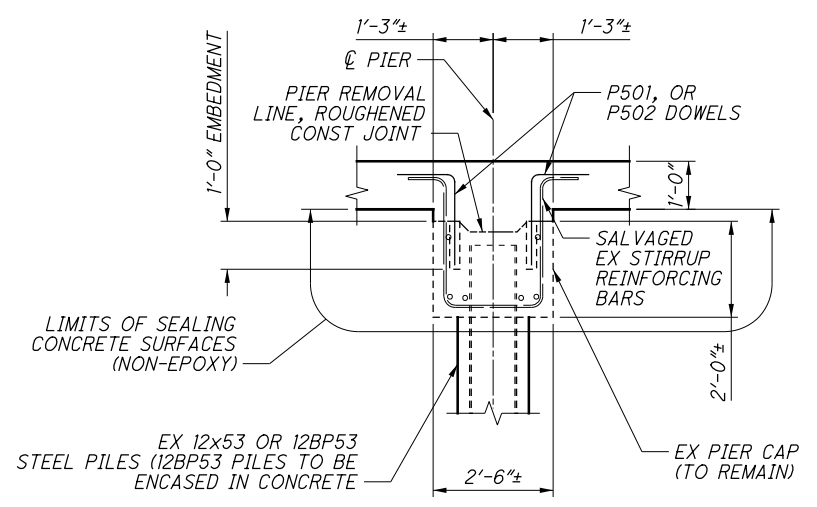
(SALVAGED EXISTING STIRRUP BARS IN PIER CAP NOT SHOWN FOR CLARITY)



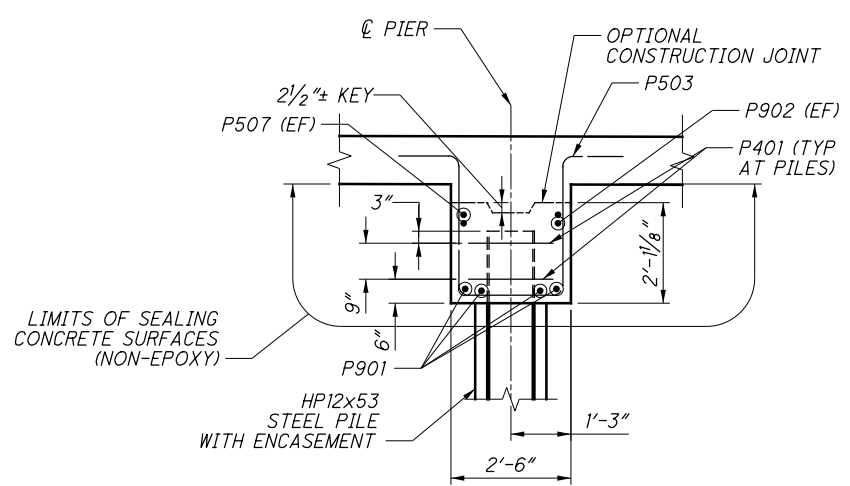
**SECTION A-A**



**DETAIL A**



**SECTION B-B**



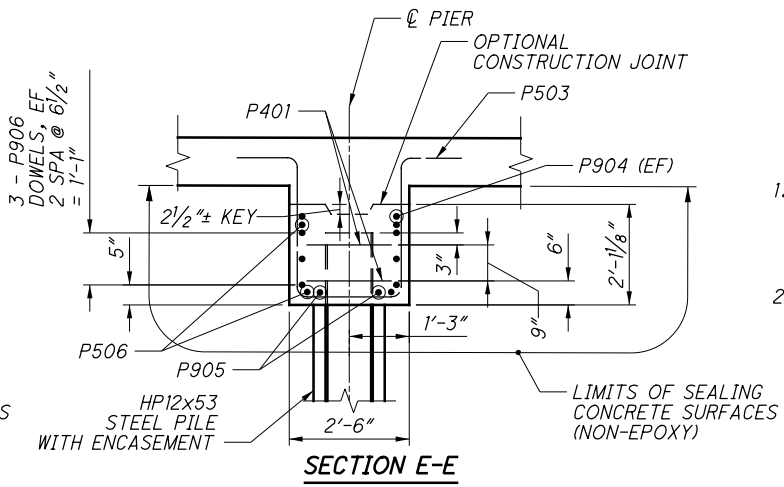
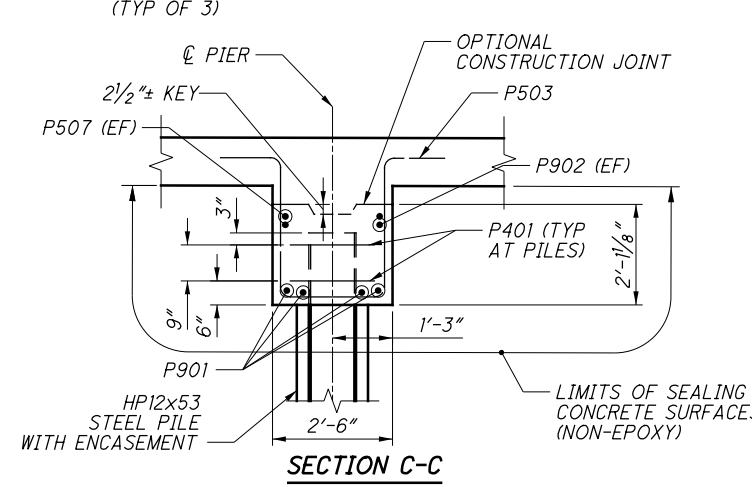
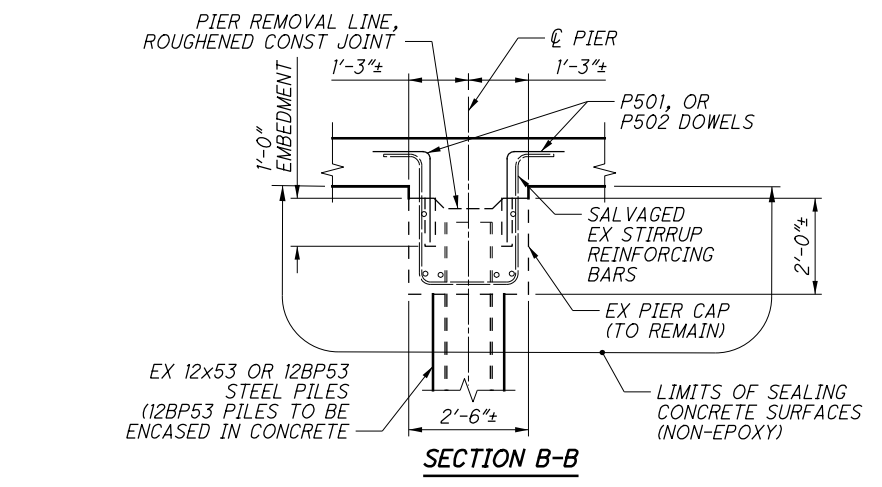
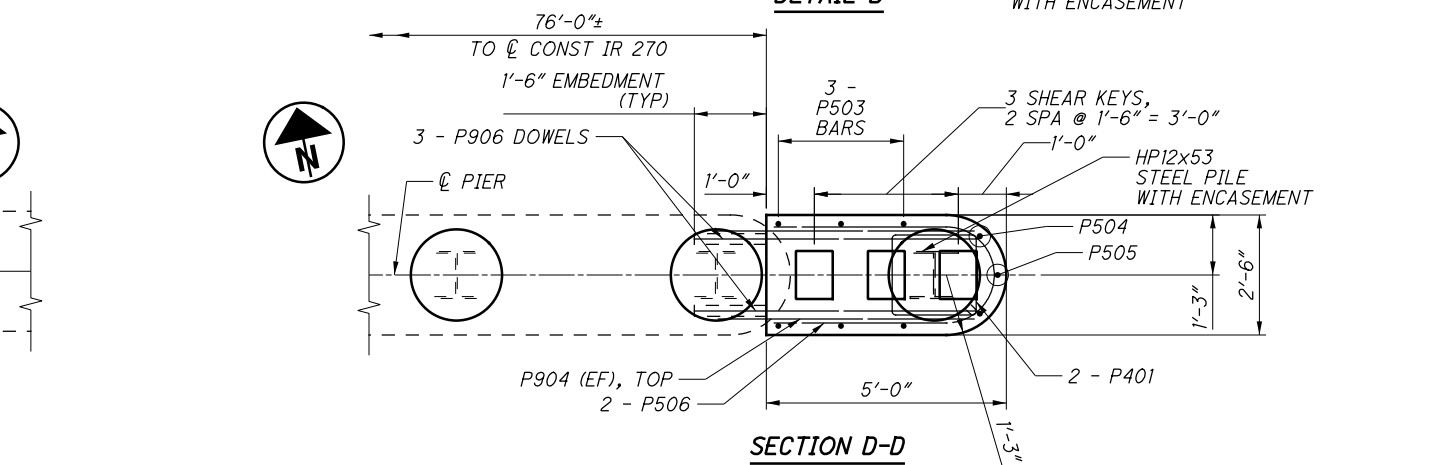
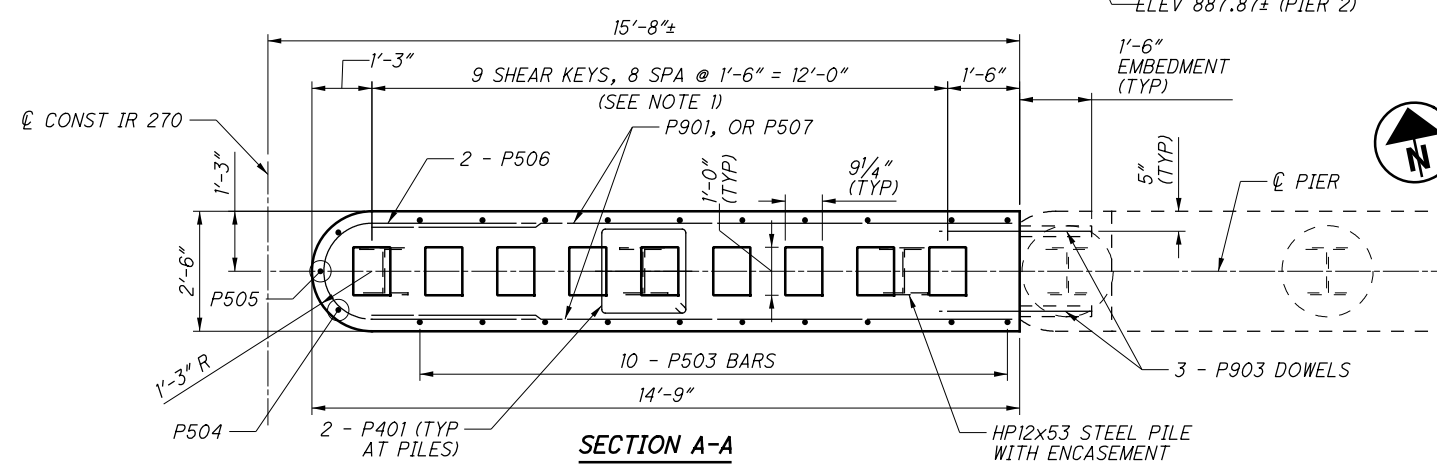
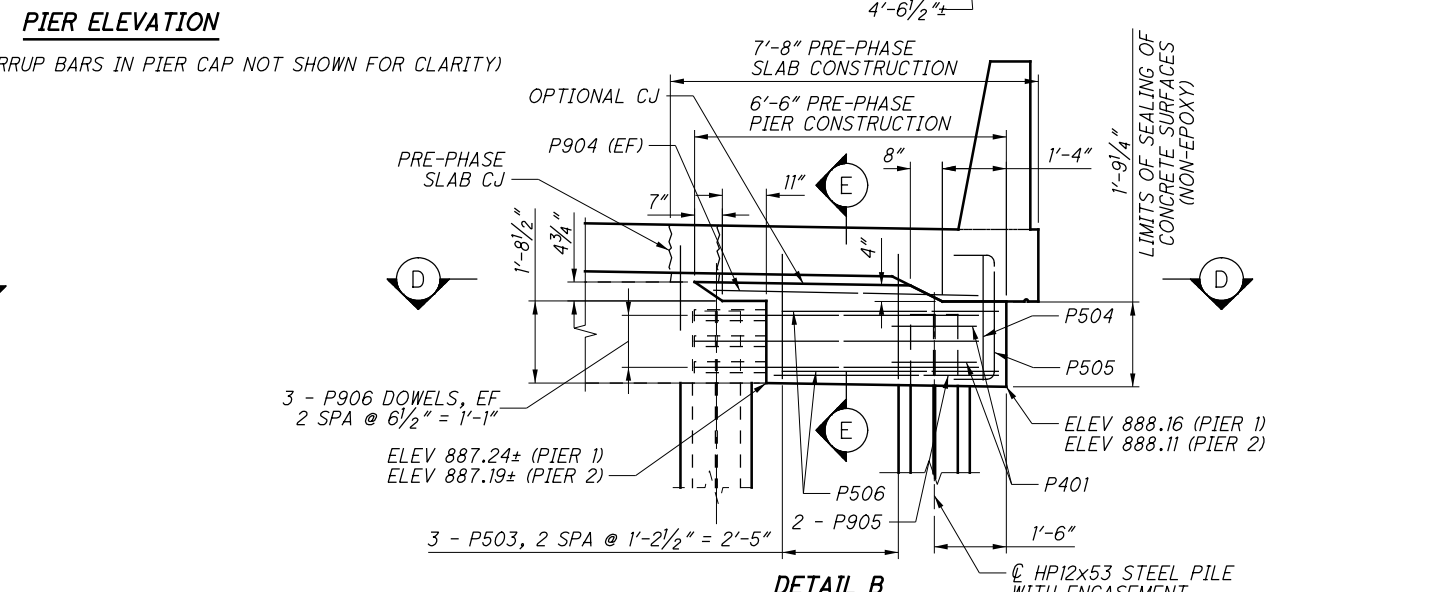
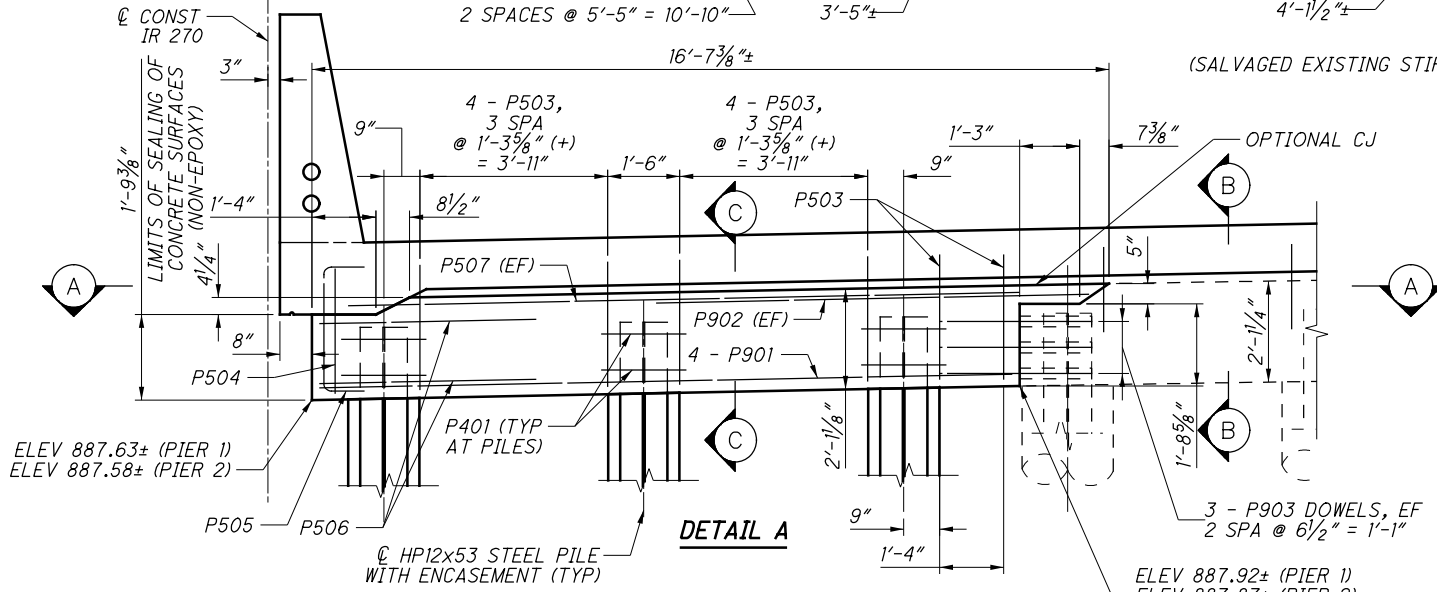
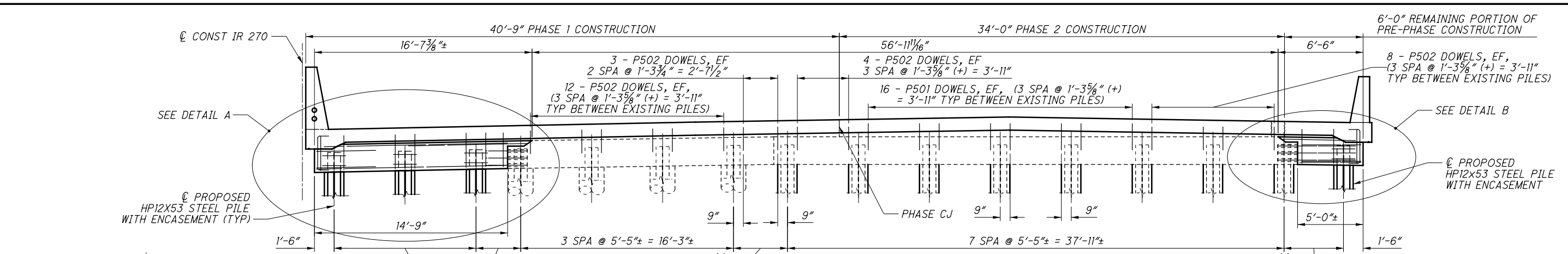
**SECTION C-C**

**NOTES**

1. SHEAR KEYS MAY BE FORMED WITH 12" LENGTHS OF 3"x10" PLANK. SHEAR KEYS MAY BE ELIMINATED IF BRIDGE SLAB AND PIER CAP ARE POURED SIMULTANEOUSLY.
2. SEE STANDARD DRAWING CPP-1-08 FOR ADDITIONAL DETAILS AND NOTES NOT SHOWN IN THE PLANS.

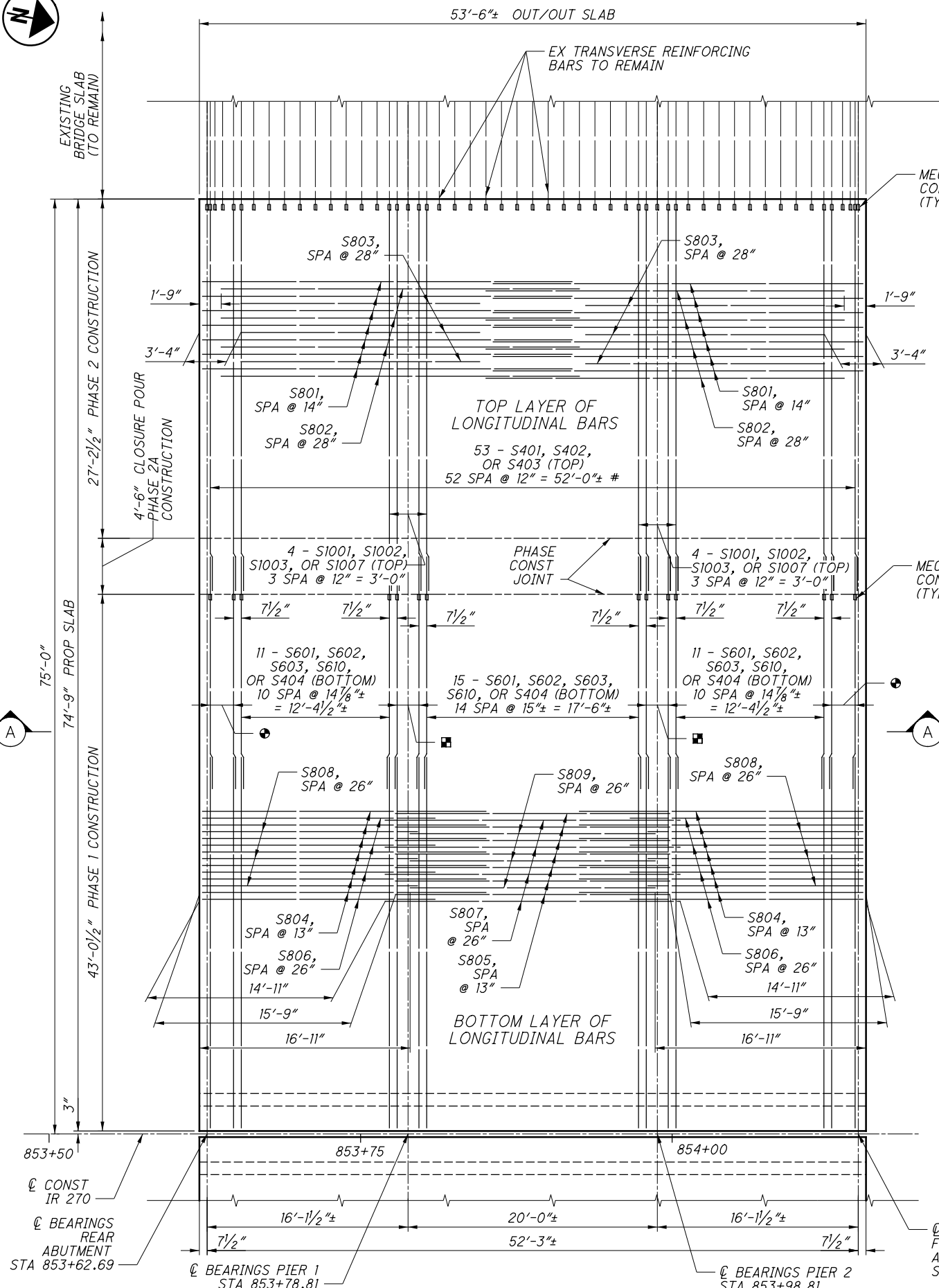
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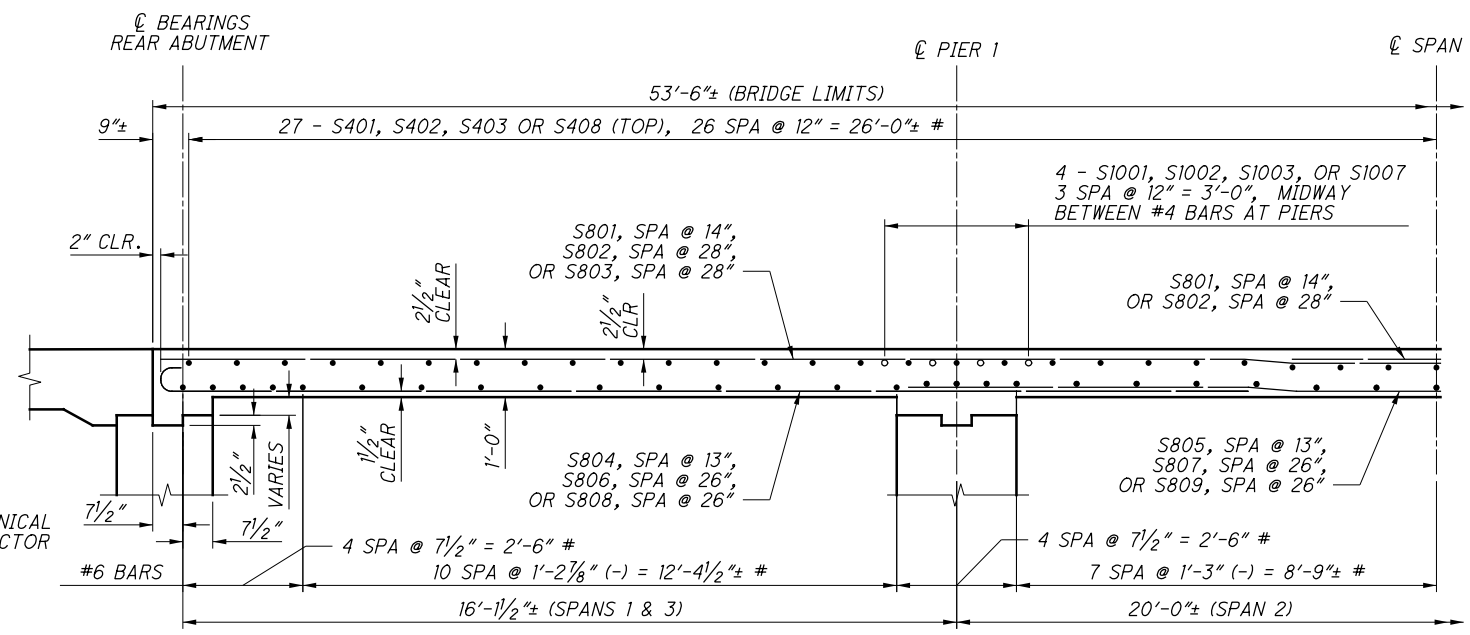


- NOTES**
1. SHEAR KEYS MAY BE FORMED WITH 12" LENGTHS OF 3"x10" PLANK. SHEAR KEYS MAY BE ELIMINATED IF BRIDGE SLAB AND PIER CAP ARE POURED SIMULTANEOUSLY.
  2. SEE STANDARD DRAWING CPP-1-08 FOR ADDITIONAL DETAILS AND NOTES NOT SHOWN IN THE PLANS.

DESIGN AGENCY <b>EMIT</b>	DATE	7-18-16
	REVIEWED	CJS
DRAWN	GB	REVIS
	RUJ	TDA
STRUCTURE FILE NUMBER	2510200/2510235	
<b>PIER DETAILS (RIGHT BRIDGE)</b> BRIDGE NO. FRA-270-1619 L/R IR 270 OVER CRAMER DITCH		
<b>FRA-270-9.15</b> PID No. 76469		
22 / 40		
1288 1306		



**SLAB PLAN**



**SECTION A-A**  
(SYMMETRIC ABOUT C SPAN 2)

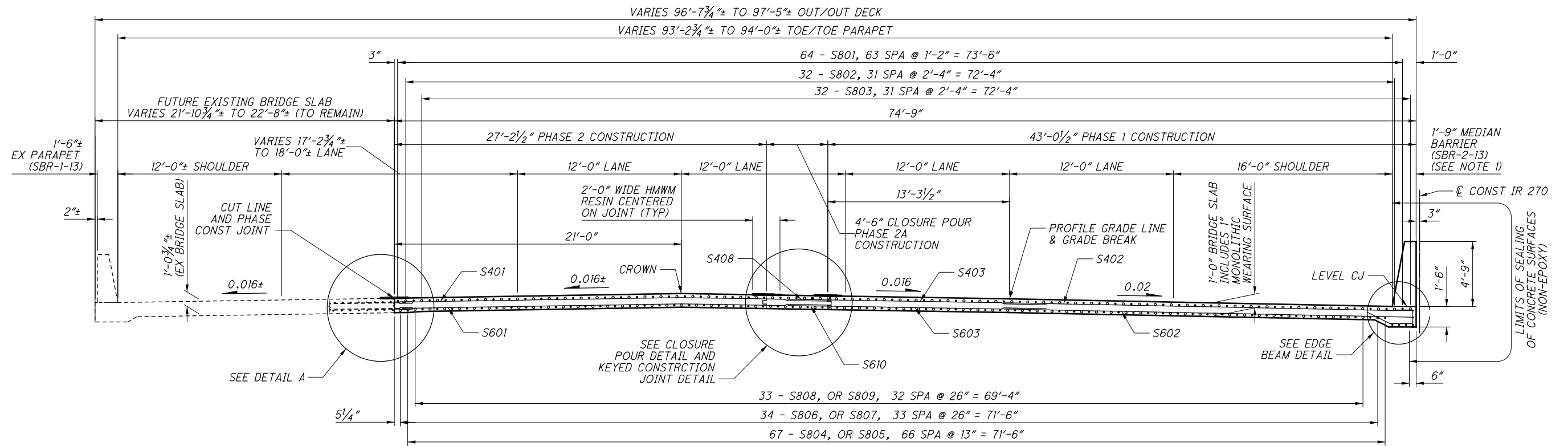
**LEGEND**

- # = SPACING GIVEN IS BASED ON EXISTING PLANS. ALL TRANSVERSE BARS TO BE SPACED WITH EXISTING TRANSVERSE BARS.
- ⊕ = 4 - S601, S602, S603, S610, OR S404 (BOTTOM)  
3 SPA @ 7 1/2" = 1'-10 1/2"
- ⊞ = 3 - S601, S602, S603, S610 OR S404 (BOTTOM)  
2 SPA @ 7 1/2" = 1'-3"

**NOTES**

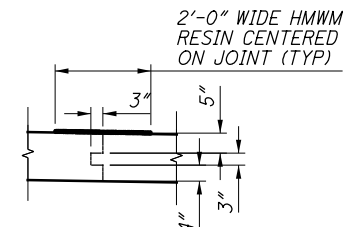
1. SEE SHEET 24/40 FOR TRANSVERSE SECTION.
2. SALVAGE EXISTING #4 (TOP), #6 (BOTTOM), AND #10 (TOP AT PIERS) TRANSVERSE SLAB BARS.
3. LAP LONGITUDINAL REINFORCING STEEL THE FOLLOWING MINIMUM LENGTHS: #8 BARS = 7'-3"

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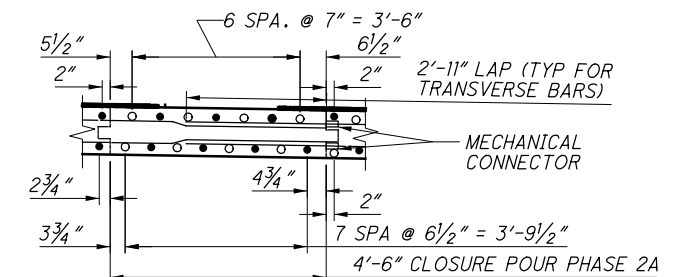
**TYPICAL TRANSVERSE SECTION**

(ADJUST BAR SPACING AT CLOSURE POUR PER CLOSURE POUR DETAIL BELOW)

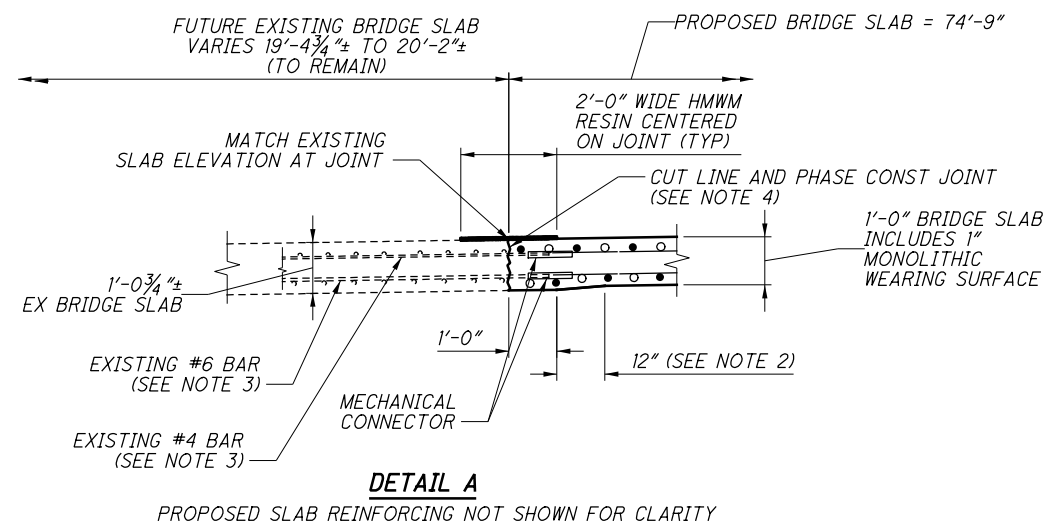


**KEYED CONSTRUCTION JOINT DETAIL**

TYP @ TWO JOINT LOCATIONS

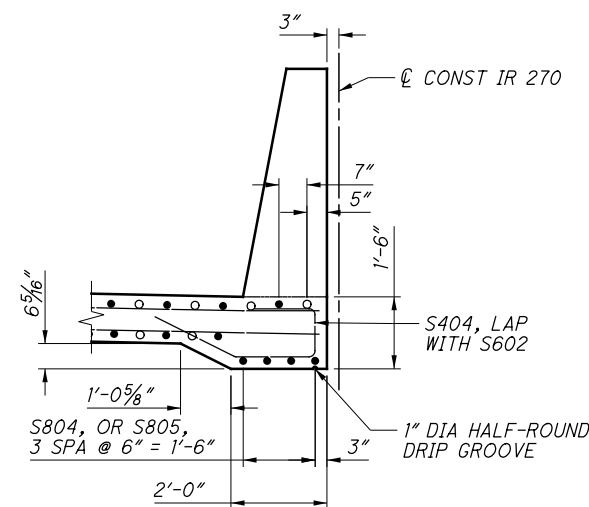


**CLOSURE POUR DETAIL**



**DETAIL A**

PROPOSED SLAB REINFORCING NOT SHOWN FOR CLARITY



**EDGE BEAM DETAIL**

**LEGEND**

- S801 (TOP), S804, OR S805 (BOTTOM)
- S802, OR S803 (TOP), S806, S807, S808, OR S809 (BOTTOM)

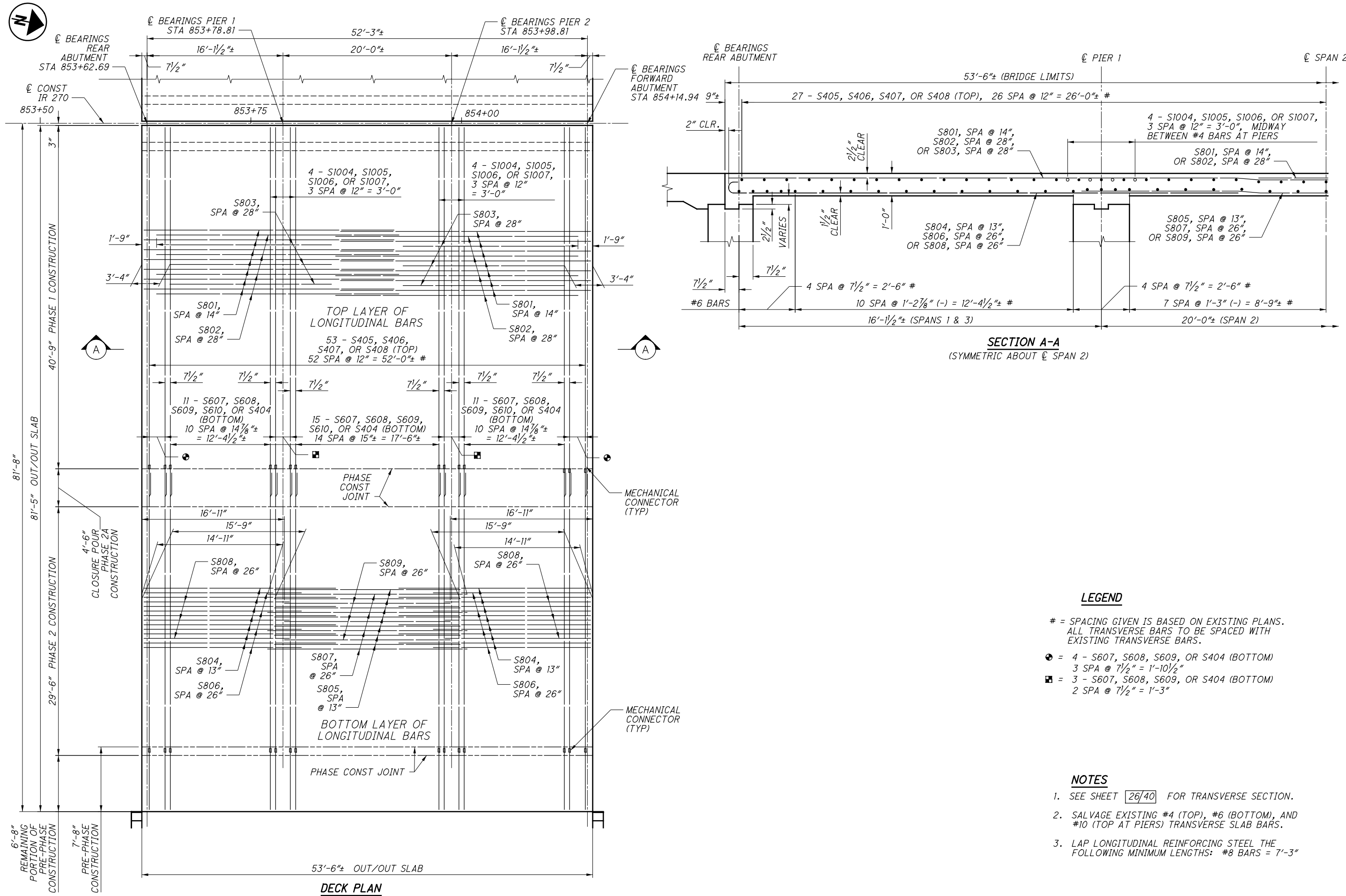
**NOTES**

1. FOR ADDITIONAL PARAPET AND MEDIAN BARRIER DETAILS SEE STANDARD DRAWINGS SBR-1-13 AND SBR-2-13, RESPECTIVELY
2. TRANSITION PROPOSED SLAB THICKNESS FROM 1'-0\"/>

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**LEGEND**

- # = SPACING GIVEN IS BASED ON EXISTING PLANS. ALL TRANSVERSE BARS TO BE SPACED WITH EXISTING TRANSVERSE BARS.
- ⊕ = 4 - S607, S608, S609, OR S404 (BOTTOM)  
3 SPA @ 7 1/2" = 1'-10 1/2"
- ⊞ = 3 - S607, S608, S609, OR S404 (BOTTOM)  
2 SPA @ 7 1/2" = 1'-3"

**NOTES**

1. SEE SHEET [26/40] FOR TRANSVERSE SECTION.
2. SALVAGE EXISTING #4 (TOP), #6 (BOTTOM), AND #10 (TOP AT PIERS) TRANSVERSE SLAB BARS.
3. LAP LONGITUDINAL REINFORCING STEEL THE FOLLOWING MINIMUM LENGTHS: #8 BARS = 7'-3"

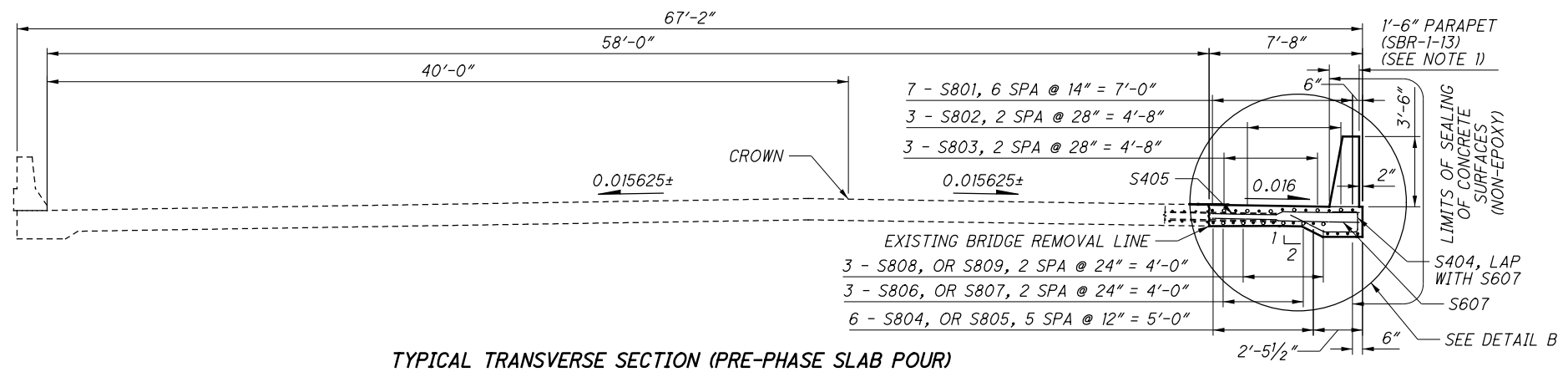


DESIGNED	RJE	CHECKED	TDA
DRAWN	GB	REVISED	
REVIEWED	CJS	DATE	7-18-16
STRUCTURE FILE NUMBER	2510200/2510235		

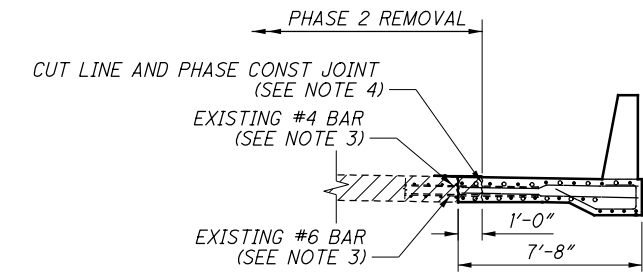
**SLAB PLAN (RIGHT BRIDGE)**  
BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAMER DITCH

**FRA-270-9.15**  
PID No. 76469

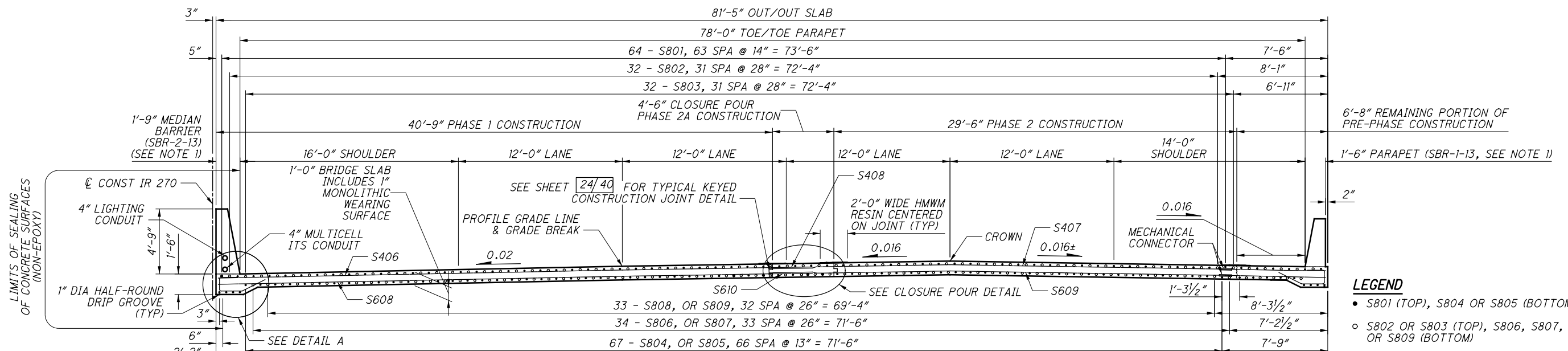
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TYPICAL TRANSVERSE SECTION (PRE-PHASE SLAB POUR)



PHASE 2 REMOVAL (PARTIAL REMOVAL OF SLAB CONSTRUCTED IN PRE-PHASE)  
SEE PHASE CONSTRUCTION AND SLAB REMOVAL DETAILS SHEETS FOR ADDITIONAL DETAILS

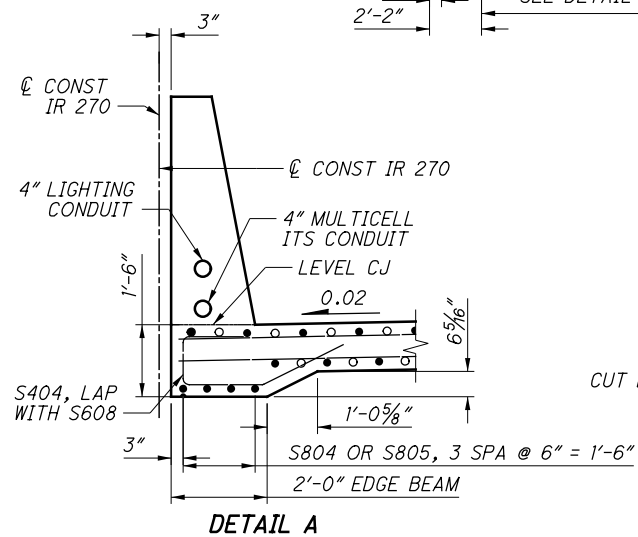


TYPICAL TRANSVERSE SECTION (FINAL CONDITION)

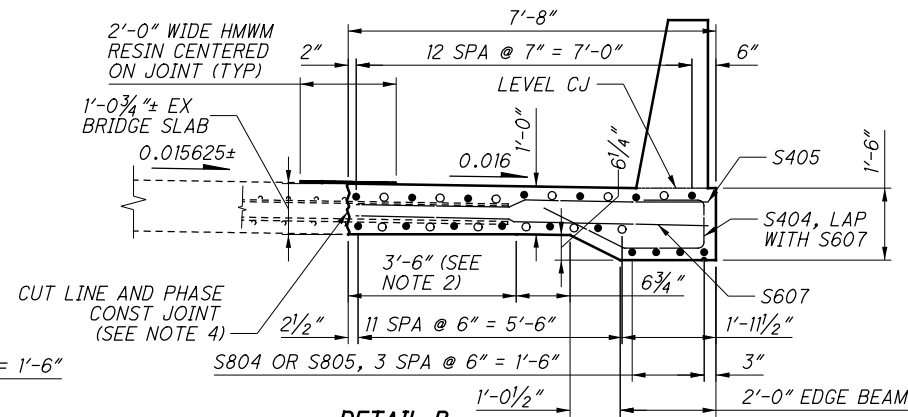
(ADJUST BAR SPACING AT CLOSURE POUR PER CLOSURE POUR DETAIL BELOW)

LEGEND

- S801 (TOP), S804 OR S805 (BOTTOM)
- S802 OR S803 (TOP), S806, S807, S808, OR S809 (BOTTOM)

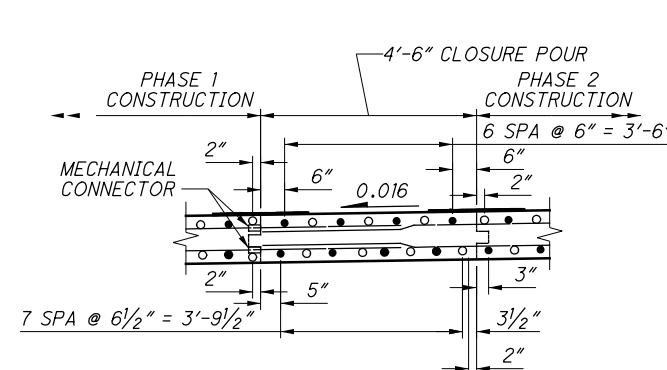


DETAIL A



DETAIL B

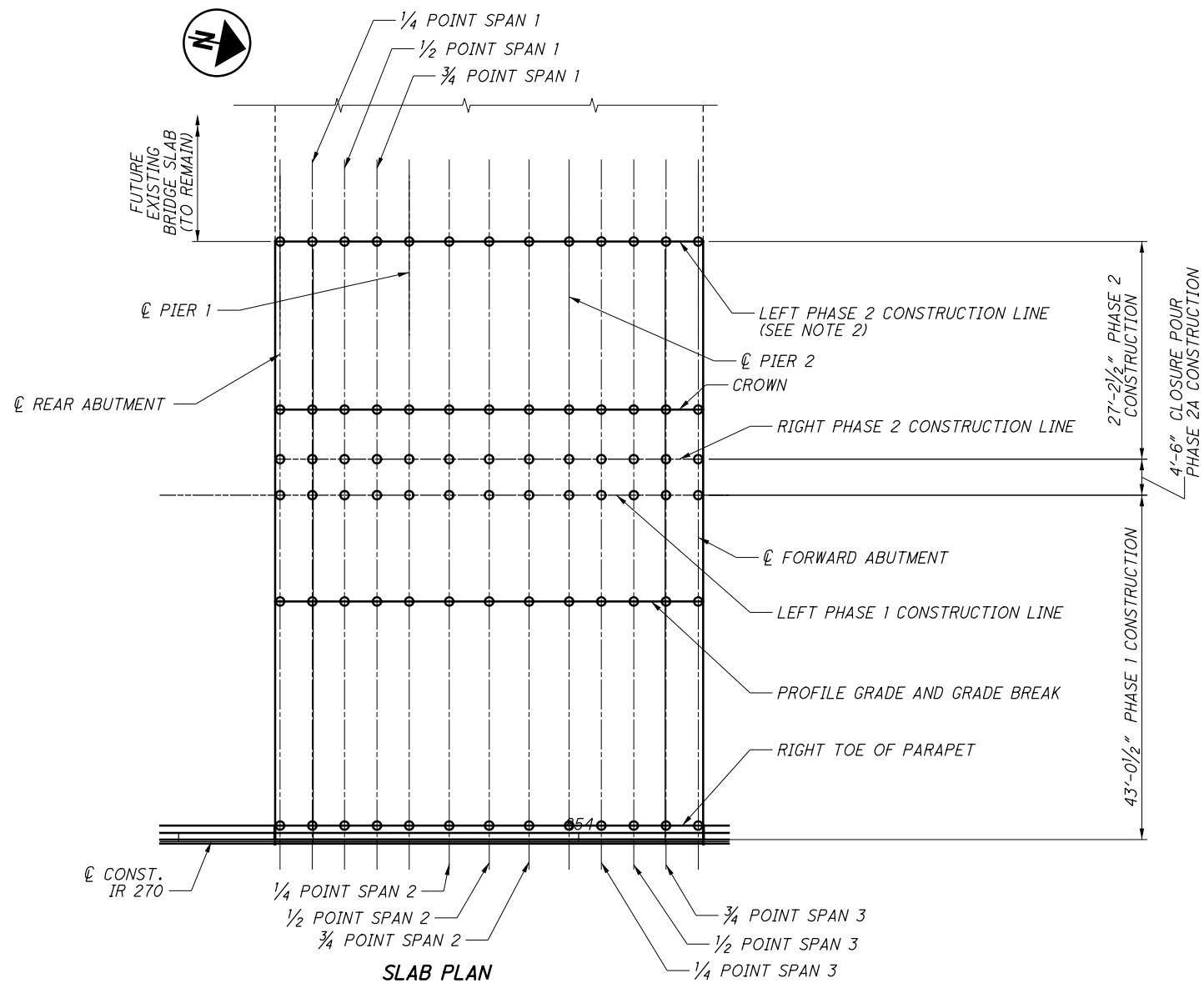
(PRE-PHASE SLAB POUR)



CLOSURE POUR DETAIL

NOTES

- FOR ADDITIONAL PARAPET AND MEDIAN BARRIER DETAILS SEE STANDARD DRAWINGS SBR-1-13 AND SBR-2-13, RESPECTIVELY.
- TRANSITION PROPOSED SLAB THICKNESS FROM 1'-0" TO 1'-0 3/4" ± TO MATCH EXISTING SLAB THICKNESS AT EXISTING SLAB JOINT.
- SALVAGE S405 (TOP), S607 (BOTTOM), AND S1004 (TOP AT PIERS) TRANSVERSE SLAB BARS INSTALLED IN THE PRE-PHASE TO TIE INTO REMAINING PROPOSED SLAB.
- THE EXPOSED EXISTING VERTICAL CONCRETE SLAB SURFACE TO BE COVERED WITH NEW CONCRETE SHALL BE ROUGH AND IRREGULAR WITH AN AMPLITUDE OF 1/4" OR MORE.
- PER C&MS 511.19, THE 2'-0" OF HMWM CENTERED ON THE PHASE CONSTRUCTION JOINT IS CONSIDERED INCIDENTAL TO ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE.



**SLAB PLAN**

**FINAL SLAB SURFACE ELEVATIONS**

LOCATION	LEFT BRIDGE											
	LEFT PHASE 2 CONSTRUCTION LINE (SEE NOTE 2)		CROWN		RIGHT PHASE 2 CONSTRUCTION LINE		LEFT PHASE 1 CONSTRUCTION LINE		PROFILE GRADE AND GRADE BREAK		RIGHT TOE OF PARAPET	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
◌ BEARING REAR ABUTMENT	853+62.69	891.56	853+62.69	891.89	853+62.69	891.79	853+62.69	891.72	853+62.69	891.51	853+62.69	890.95
1/4 SPAN	853+66.72	891.55	853+66.72	891.88	853+66.72	891.78	853+66.72	891.71	853+66.72	891.50	853+66.72	890.94
1/2 SPAN	853+70.75	891.54	853+70.75	891.87	853+70.75	891.77	853+70.75	891.70	853+70.75	891.49	853+70.75	890.93
3/4 SPAN	853+74.78	891.53	853+74.78	891.86	853+74.78	891.77	853+74.78	891.69	853+74.78	891.48	853+74.78	890.92
◌ BEARING REAR PIER	853+78.81	891.52	853+78.81	891.85	853+78.81	891.76	853+78.81	891.68	853+78.81	891.47	853+78.81	890.91
1/4 SPAN	853+83.81	891.51	853+83.81	891.84	853+83.81	891.74	853+83.81	891.67	853+83.81	891.46	853+83.81	890.90
1/2 SPAN	853+88.81	891.49	853+88.81	891.83	853+88.81	891.73	853+88.81	891.66	853+88.81	891.45	853+88.81	890.89
3/4 SPAN	853+93.81	891.48	853+93.81	891.82	853+93.81	891.72	853+93.81	891.65	853+93.81	891.43	853+93.81	890.87
◌ BEARING FORWARD PIER	853+98.81	891.47	853+98.81	891.81	853+98.81	891.71	853+98.81	891.64	853+98.81	891.42	853+98.81	890.86
1/4 SPAN	854+02.84	891.46	854+02.84	891.80	854+02.84	891.70	854+02.84	891.63	854+02.84	891.41	854+02.84	890.85
1/2 SPAN	854+06.88	891.45	854+06.88	891.79	854+06.88	891.69	854+06.88	891.62	854+06.88	891.40	854+06.88	890.84
3/4 SPAN	854+10.91	891.44	854+10.91	891.78	854+10.91	891.68	854+10.91	891.61	854+10.91	891.39	854+10.91	890.83
◌ BEARING FORWARD ABUTMENT	854+14.94	891.43	854+14.94	891.77	854+14.94	891.67	854+14.94	891.60	854+14.94	891.38	854+14.94	890.82

**LEGEND**

- ◌ - FINAL SLAB SURFACE ELEVATIONS

**NOTES**

- FINAL SLAB SURFACE ELEVATIONS SHOWN REPRESENT THE SLAB SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
- ELEVATIONS GIVEN ALONG THE LEFT PHASE 2 CONSTRUCTION LINE ARE APPROXIMATE AND ARE FOR INFORMATION ONLY. THE CONTRACTOR SHALL MATCH THE EXISTING SLAB ELEVATIONS. PRIOR TO PHASE 1 SLAB REMOVAL, SURVEY THE EXISTING TOP OF SLAB ELEVATIONS AT THIS LOCATION AT BEARING POINTS AND AT QUARTER POINTS WITHIN THE SPAN. NOTIFY THE ENGINEER IF THE SURVEYED ELEVATIONS DO NOT AGREE WITH THE FINAL SLAB ELEVATION SHALL WITHIN A TOLERANCE OF (+0.02', -0.01'). INCLUDE SURVEYING EXISTING TOP OF SLAB ELEVATIONS WITH ITEM 511 - CLASS QC2 CONCRETE SUPERSTRUCTURE, AS PER PLAN FOR PAYMENT.
- CAMBER: TO COMPENSATE FOR FALSEWORK DEFLECTION AND FOR THE DEFLECTION OF THE SLAB AFTER FALSEWORK IS REMOVED, BUILD CAMBER INTO THE FALSEWORK ACCORDING TO CMS 508.02.

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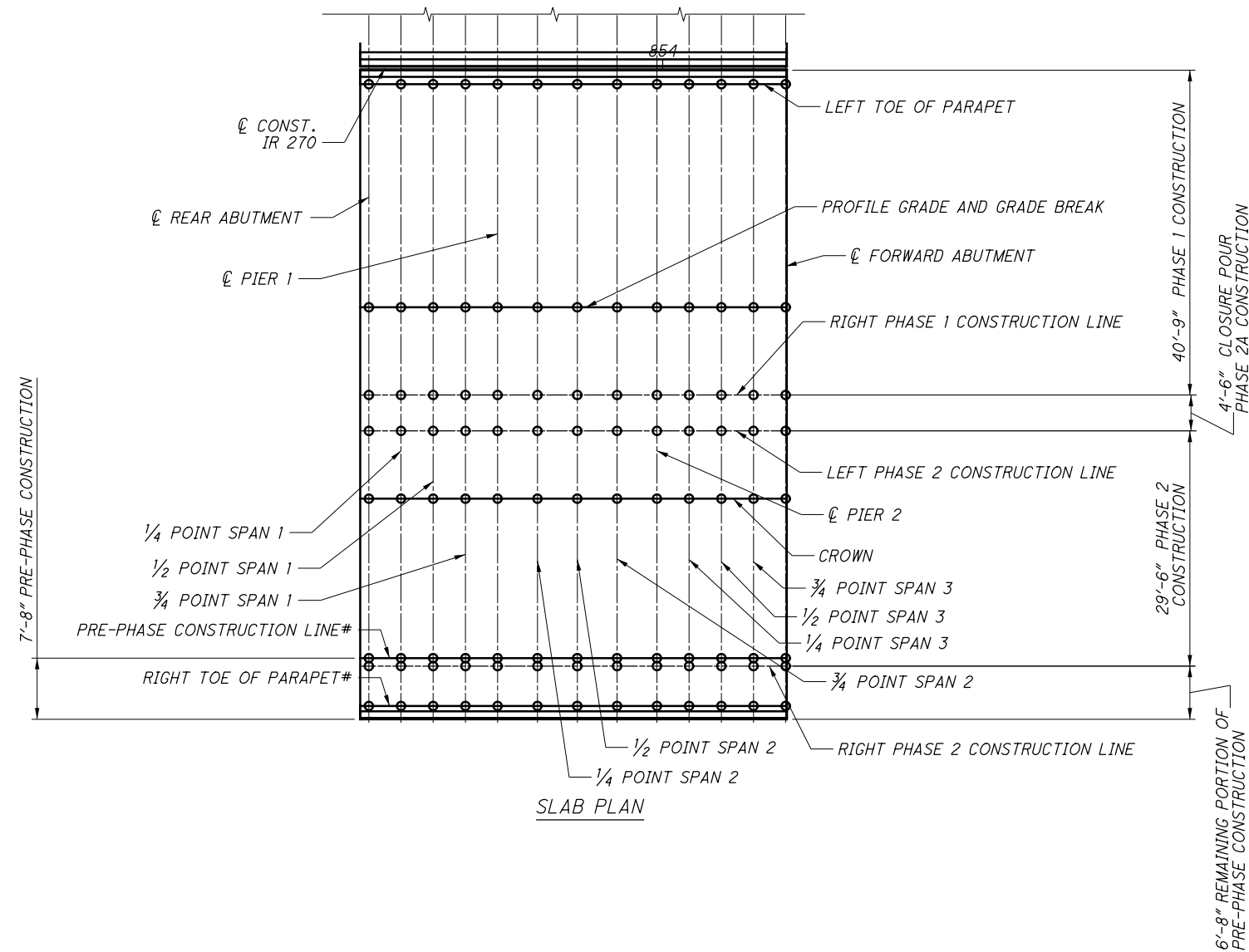


DESIGN AGENCY  
EIMT  
REVIEWED DATE 7-18-16  
CJS STRUCTURE FILE NUMBER 2510200/2510235

DRAWN RJE  
RJE CHECKED TDA  
REVISED

**FINAL SLAB ELEVATIONS (LEFT BRIDGE)**  
BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAMER DITCH

**FRA-270-9.15**  
PID No. 76469



- LEGEND**
- - FINAL SLAB SURFACE ELEVATIONS
  - # - SLAB LOCATIONS TO BE POURED DURING PRE-PHASE CONSTRUCTION

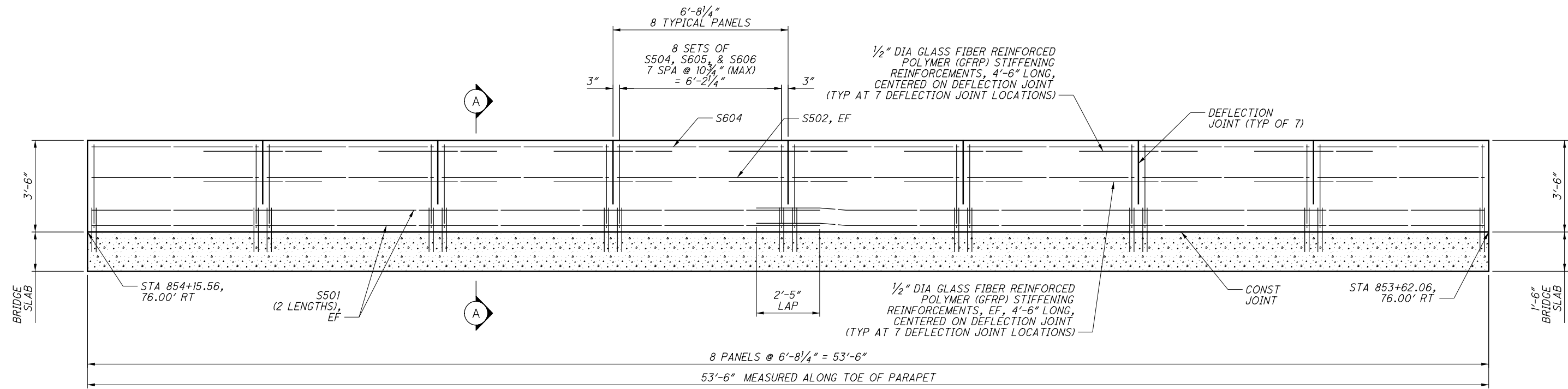
- NOTES**
1. FINAL SLAB SURFACE ELEVATIONS SHOWN REPRESENT THE SLAB SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
  2. ELEVATIONS GIVEN ALONG THE PRE-PHASE CONSTRUCTION LINE ARE APPROXIMATE AND ARE FOR INFORMATION ONLY. THE CONTRACTOR SHALL MATCH THE EXISTING SLAB ELEVATIONS. PRIOR TO PRE-PHASE SLAB REMOVAL, SURVEY THE EXISTING TOP OF SLAB ELEVATIONS AT THIS LOCATION AT BEARING POINTS AND AT QUARTER POINTS WITHIN THE SPAN. NOTIFY THE ENGINEER IF THE SURVEYED ELEVATIONS DO NOT AGREE WITH THE FINAL SLAB ELEVATION SHALL WITHIN A TOLERANCE OF (+0.02', -0.01'). INCLUDE SURVEYING EXISTING TOP OF SLAB ELEVATIONS WITH ITEM 511 - CLASS QC2 CONCRETE SUPERSTRUCTURE, AS PER PLAN FOR PAYMENT.
  3. CAMBER: TO COMPENSATE FOR FALSEWORK DEFLECTION AND FOR THE DEFLECTION OF THE SLAB AFTER FALSEWORK IS REMOVED, BUILD CAMBER INTO THE FALSEWORK ACCORDING TO CMS 508.02.

**FINAL SLAB SURFACE ELEVATIONS**

LOCATION	RIGHT BRIDGE															
	LEFT TOE OF PARAPET		PROFILE GRADE AND GRADE BREAK		RIGHT PHASE 1 CONSTRUCTION LINE		LEFT PHASE 2 CONSTRUCTION LINE		CROWN		LEFT PRE-PHASE CONSTRUCTION LINE#		RIGHT PHASE 2 CONSTRUCTION LINE		RIGHT TOE OF PARAPET#	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
◻ BEARING REAR ABUTMENT	853+62.69	890.95	853+62.69	891.51	853+62.69	891.69	853+62.69	891.76	853+62.69	891.89	853+62.69	891.57	853+62.69	891.56	853+62.69	891.48
1/4 SPAN	853+66.72	890.94	853+66.72	891.50	853+66.72	891.68	853+66.72	891.75	853+66.72	891.88	853+66.72	891.56	853+66.72	891.55	853+66.72	891.47
1/2 SPAN	853+70.75	890.93	853+70.75	891.49	853+70.75	891.67	853+70.75	891.74	853+70.75	891.87	853+70.75	891.55	853+70.75	891.54	853+70.75	891.46
3/4 SPAN	853+74.78	890.92	853+74.78	891.48	853+74.78	891.66	853+74.78	891.73	853+74.78	891.86	853+74.78	891.54	853+74.78	891.53	853+74.78	891.45
◻ BEARING REAR PIER	853+78.81	890.91	853+78.81	891.47	853+78.81	891.65	853+78.81	891.72	853+78.81	891.85	853+78.81	891.53	853+78.81	891.52	853+78.81	891.44
1/4 SPAN	853+83.81	890.90	853+83.81	891.46	853+83.81	891.63	853+83.81	891.71	853+83.81	891.84	853+83.81	891.52	853+83.81	891.51	853+83.81	891.43
1/2 SPAN	853+88.81	890.89	853+88.81	891.45	853+88.81	891.62	853+88.81	891.69	853+88.81	891.83	853+88.81	891.51	853+88.81	891.49	853+88.81	891.41
3/4 SPAN	853+93.81	890.87	853+93.81	891.43	853+93.81	891.61	853+93.81	891.68	853+93.81	891.82	853+93.81	891.50	853+93.81	891.48	853+93.81	891.40
◻ BEARING FORWARD PIER	853+98.81	890.86	853+98.81	891.42	853+98.81	891.60	853+98.81	891.67	853+98.81	891.81	853+98.81	891.49	853+98.81	891.47	853+98.81	891.39
1/4 SPAN	854+02.84	890.85	854+02.84	891.41	854+02.84	891.59	854+02.84	891.66	854+02.84	891.80	854+02.84	891.48	854+02.84	891.46	854+02.84	891.38
1/2 SPAN	854+06.88	890.84	854+06.88	891.40	854+06.88	891.58	854+06.88	891.65	854+06.88	891.79	854+06.88	891.47	854+06.88	891.45	854+06.88	891.37
3/4 SPAN	854+10.91	890.83	854+10.91	891.39	854+10.91	891.57	854+10.91	891.64	854+10.91	891.78	854+10.91	891.46	854+10.91	891.44	854+10.91	891.36
◻ BEARING FORWARD ABUTMENT	854+14.94	890.82	854+14.94	891.38	854+14.94	891.56	854+14.94	891.63	854+14.94	891.77	854+14.94	891.45	854+14.94	891.43	854+14.94	891.35

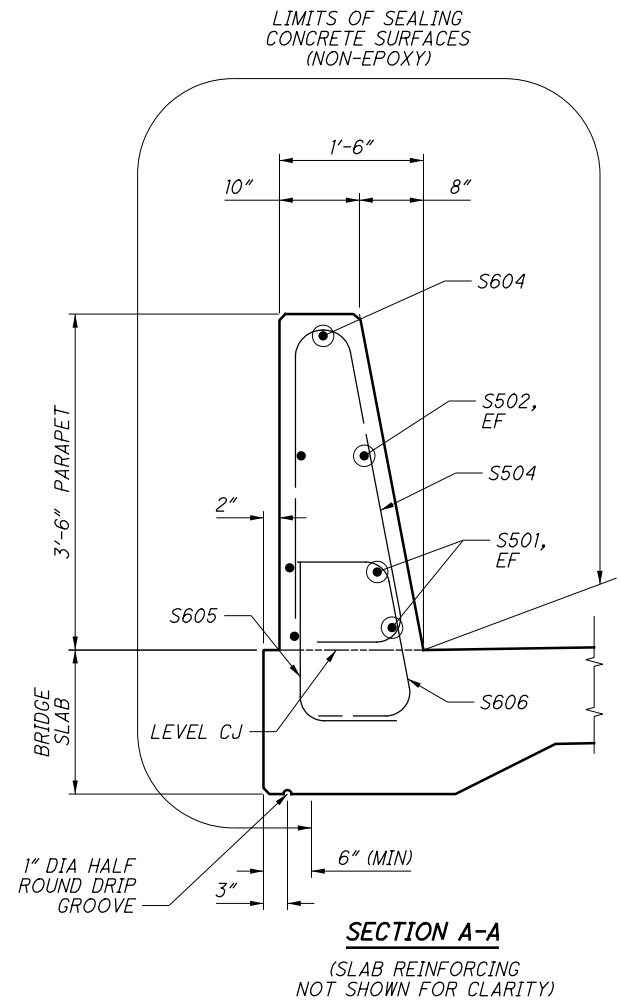
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J:\20130771\ODOT\FRA\76469\structures\FRA-270-1619C\sheets\270\_1619CRA001.dgn 9/16/2016 12:16:22 PM mrahall

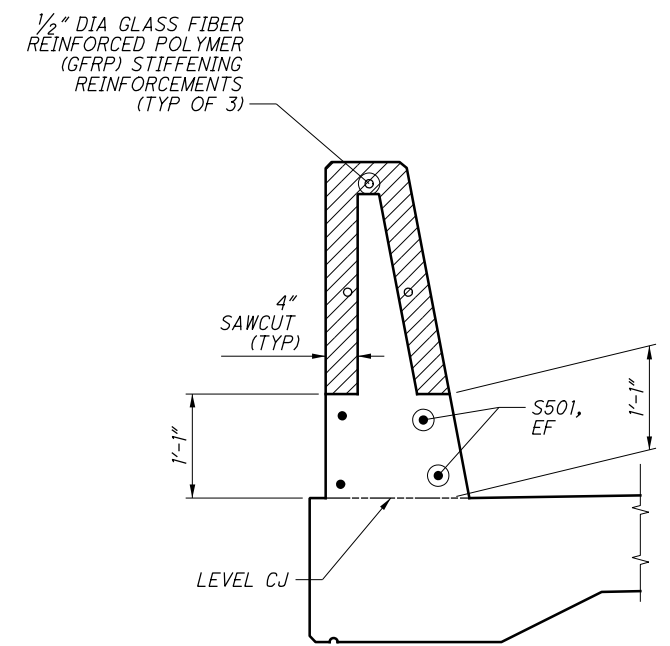


**ELEVATION**

(SLAB REINFORCING NOT SHOWN FOR CLARITY, ROADWAY FACE OF CONCRETE PARAPET SHOWN)



**SECTION A-A**  
(SLAB REINFORCING NOT SHOWN FOR CLARITY)



**TYPICAL PARAPET SAWCUT AT DEFLECTION JOINT**  
(SLAB REINFORCING AND NOT SHOWN FOR CLARITY)

**NOTES**

1. SEE STD DWG SBR-1-13 FOR DETAILS NOT SHOWN ON THIS SHEET.

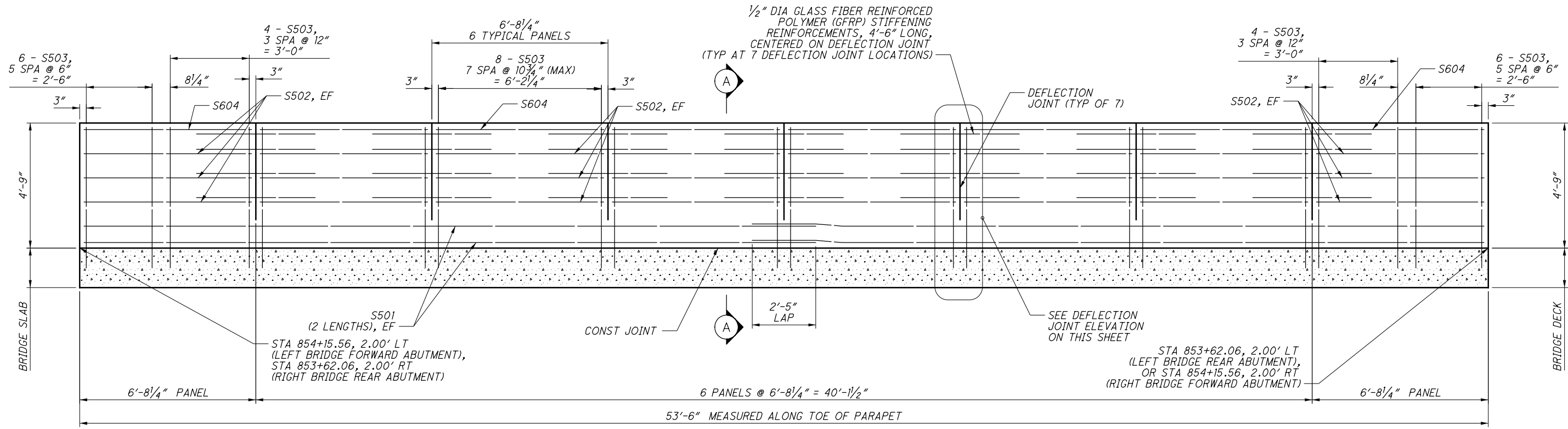


DESIGNED	RJE	CHECKED	TDA
DRAWN	GB	REVISED	
REVIEWED	CJS	DATE	7-18-16
STRUCTURE FILE NUMBER	2510200/2510235		

**EXTERIOR PARAPET DETAILS (RIGHT BRIDGE)**  
BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAMER DITCH

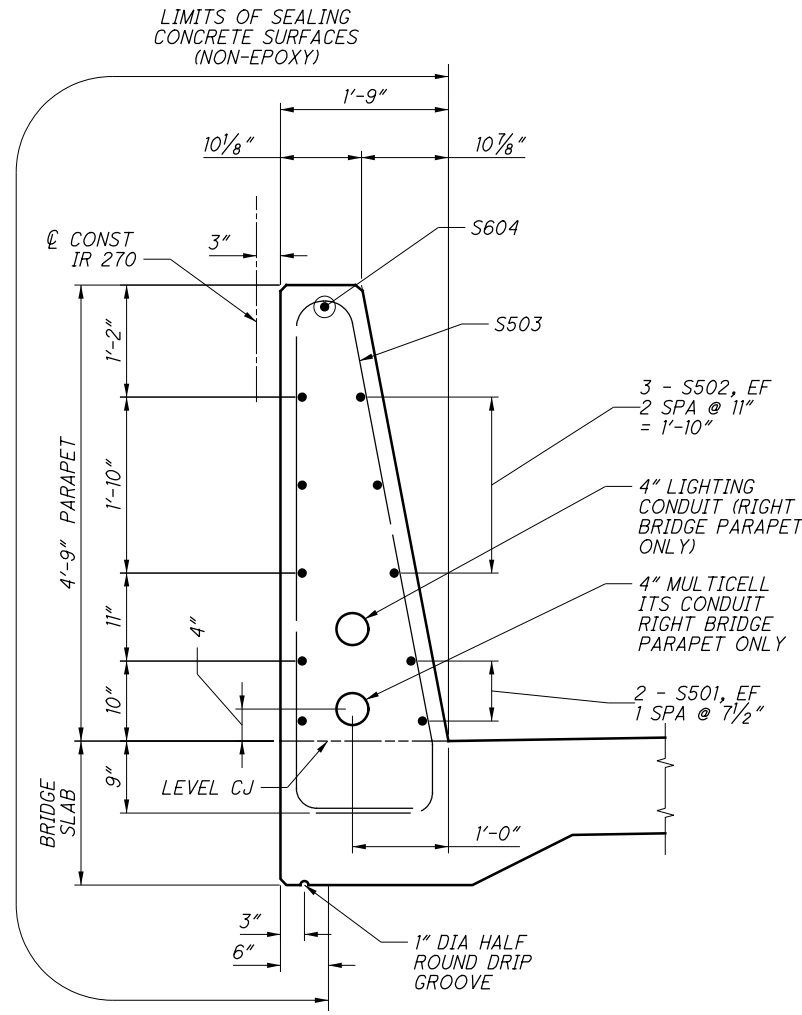
**FRA-270-9.15**  
PID No. 76469

J:\20130771\ODOT\FRA\76469\structures\FRA-270-1619C\sheets\270\_1619CRA003.dgn 9/16/2016 12:16:22 PM mrahall

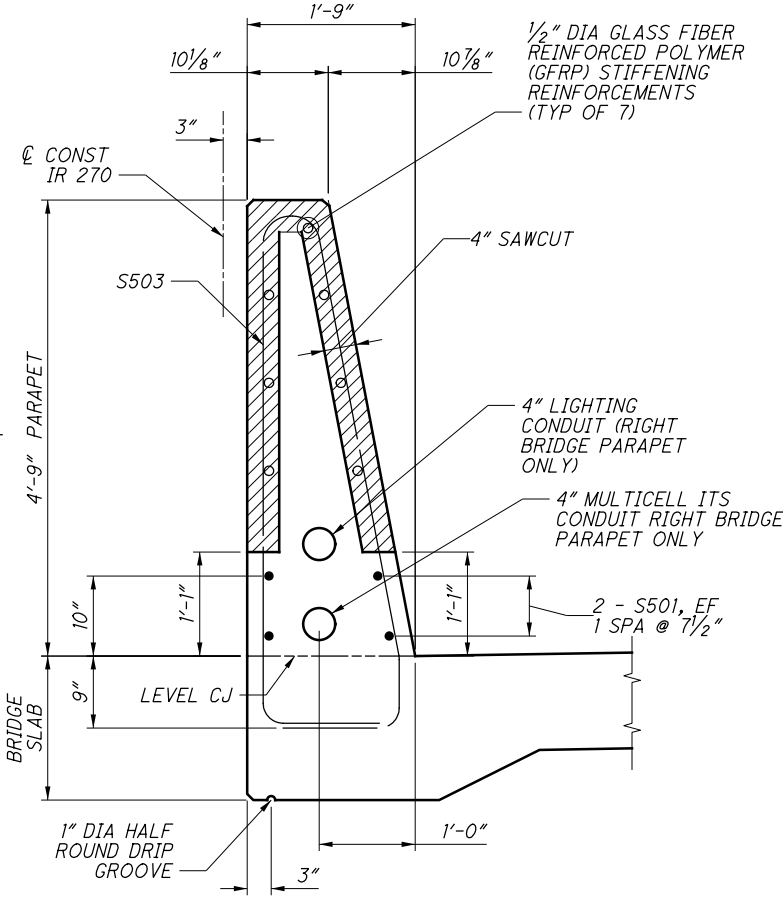


**ELEVATION**

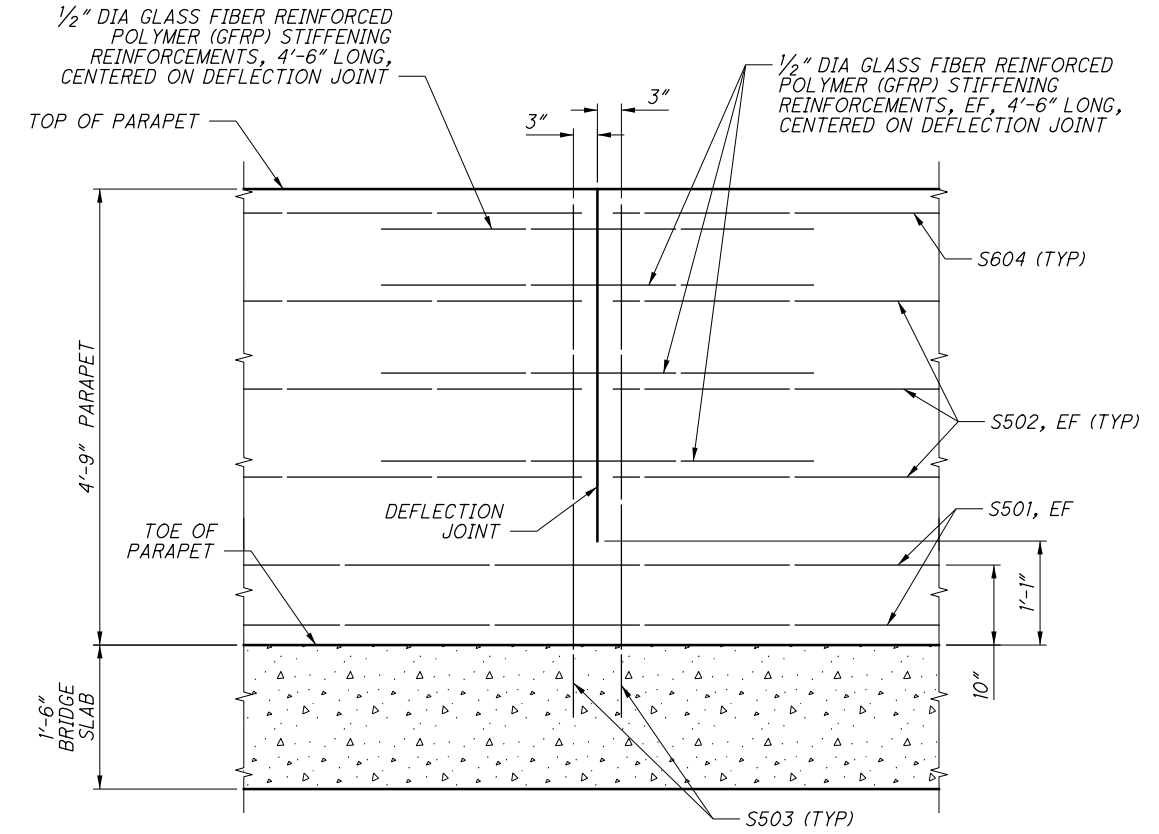
SLAB REINFORCING NOT SHOWN FOR CLARITY.  
ROADWAY FACE OF CONCRETE PARAPET SHOWN.



**SECTION A-A**  
(SLAB REINFORCING NOT SHOWN FOR CLARITY)



**TYPICAL PARAPET SAWCUT AT DEFLECTION JOINT**  
SECTION THROUGH SAWCUT  
(SLAB REINFORCING AND NOT SHOWN FOR CLARITY)



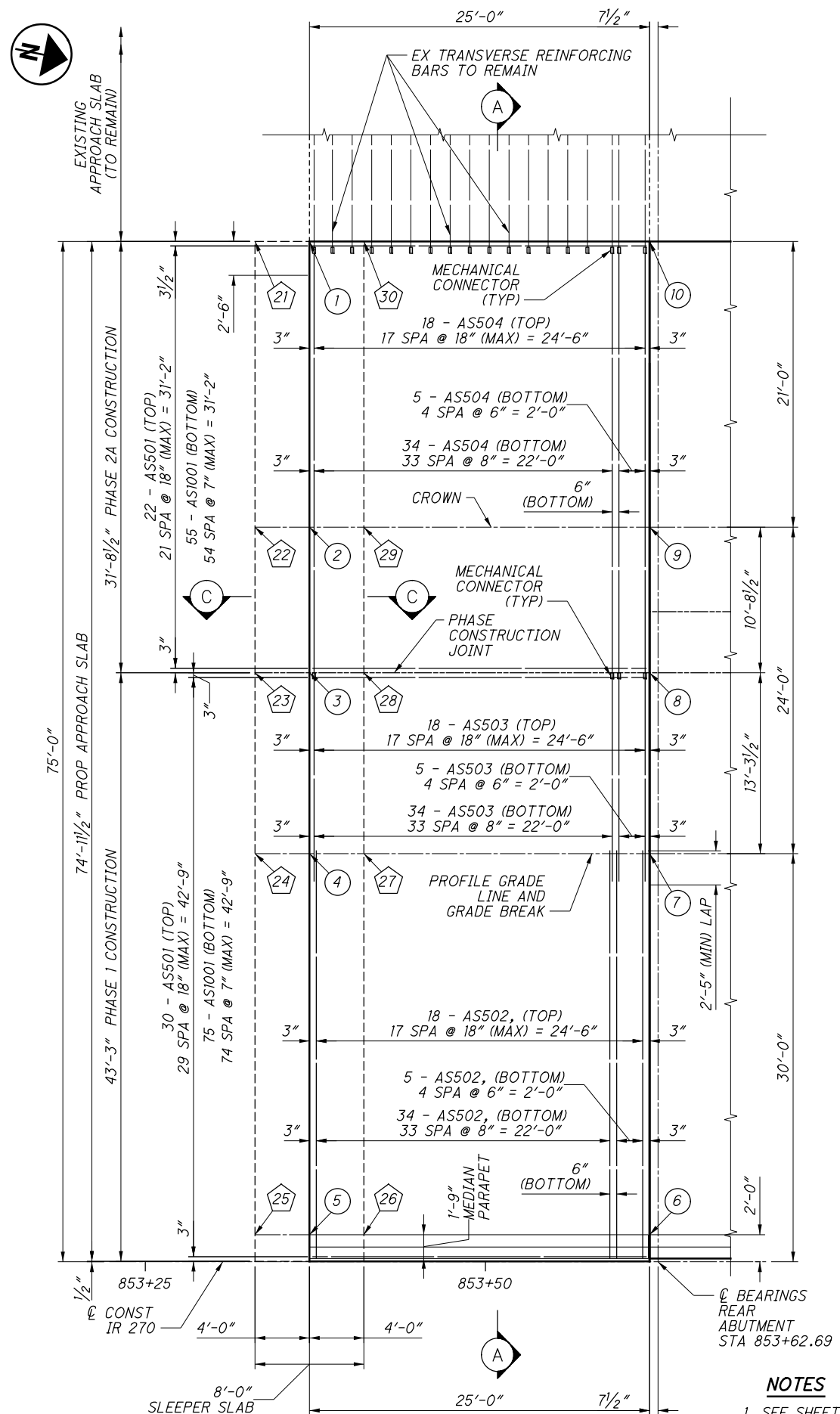
**DEFLECTION JOINT ELEVATION**

**NOTES**

1. SEE STD DWG SBR-2-13 FOR DETAILS NOT SHOWN ON THIS SHEET.

DESIGN AGENCY <b>EMIT</b>	DATE 7-18-16
REVIEWED CJS	STRUCTURE FILE NUMBER 2510200/2510235
DRAWN GB	REVISED
DESIGNED RJE	CHECKED TDA
<b>MEDIAN PARAPET DETAILS (LEFT AND RIGHT BRIDGE)</b>	
BRIDGE NO. FRA-270-1619 L/R IR 270 OVER CRAMER DITCH	
<b>FRA-270-9.15</b>	<b>PID No. 76469</b>
30/40	1296 1306

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REAR APPROACH SLAB PLAN

APPROACH SLAB SURFACE ELEVATIONS

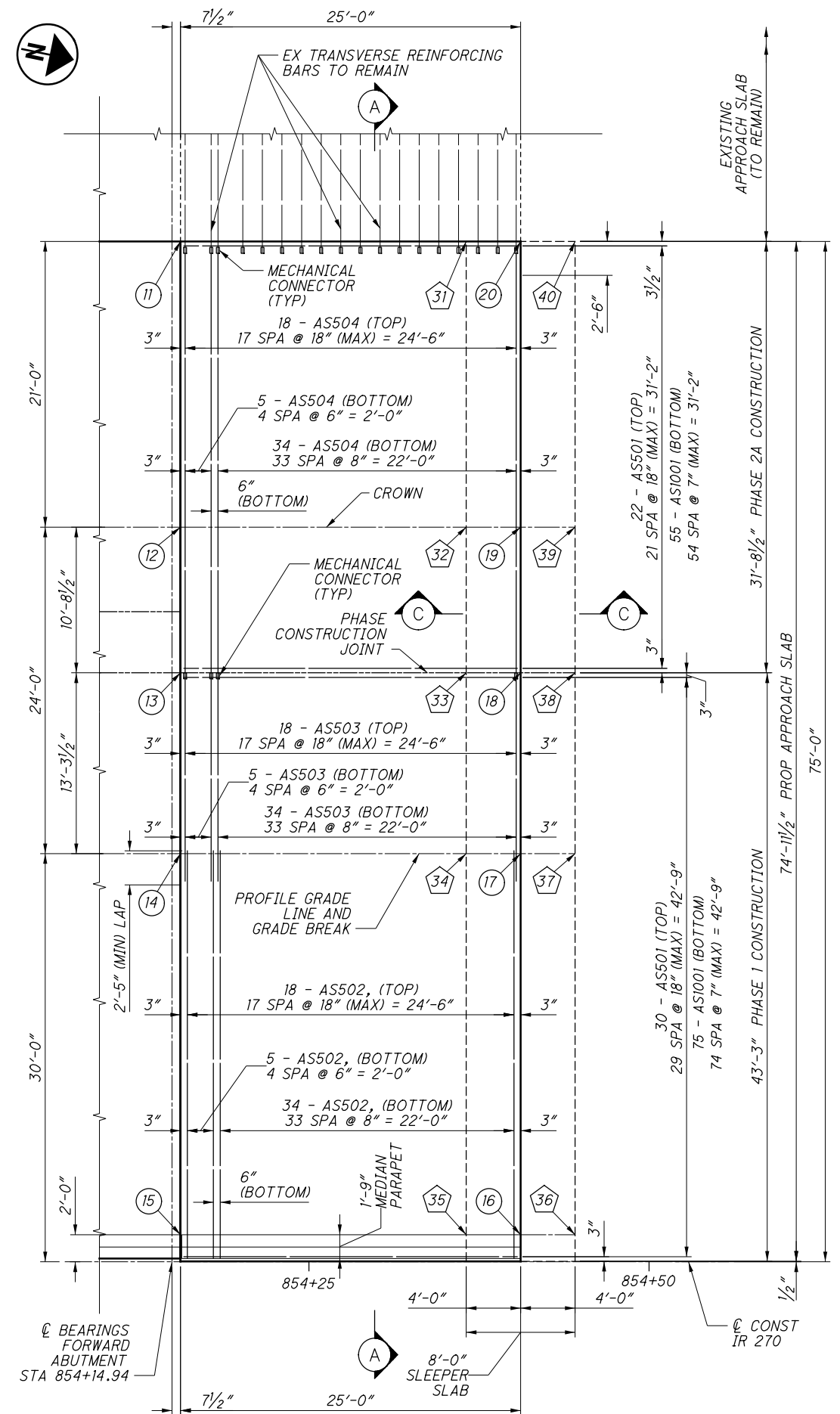
MARK	STATION	OFFSET	ELEVATION
1	853+37.06	75.00' LT	891.62
2	853+37.06	54.00' LT	891.96
3	853+37.06	43.29' LT	891.78
4	853+37.06	30.00' LT	891.57
5	853+37.06	2.00' LT	891.01
6	853+62.06	2.00' LT	890.95
7	853+62.06	30.00' LT	891.51
8	853+62.06	43.29' LT	891.72
9	853+62.06	54.00' LT	891.90
10	853+62.06	75.00' LT	891.56
11	854+15.56	75.00' LT	891.43
12	854+15.56	54.00' LT	891.77
13	854+15.56	43.29' LT	891.60
14	854+15.56	30.00' LT	891.38
15	854+15.56	2.00' LT	890.82
16	854+40.56	2.00' LT	890.76
17	854+40.56	30.00' LT	891.32
18	854+40.56	43.29' LT	891.54
19	854+40.56	54.00' LT	891.71
20	854+40.56	75.00' LT	891.37

SLEEPER SLAB SURFACE ELEVATIONS

MARK	STATION	OFFSET	ELEVATION
21	853+33.06	75.00' LT	890.38
22	853+33.06	54.00' LT	890.71
23	853+33.06	43.29' LT	890.54
24	853+33.06	30.00' LT	890.33
25	853+33.06	2.00' LT	889.77
26	853+41.06	2.00' LT	889.75
27	853+41.06	30.00' LT	890.31
28	853+41.06	43.29' LT	890.52
29	853+41.06	54.00' LT	890.70
30	853+41.06	75.00' LT	890.36
31	854+36.56	75.00' LT	890.13
32	854+36.56	54.00' LT	890.47
33	854+36.56	43.29' LT	890.29
34	854+36.56	30.00' LT	890.08
35	854+36.56	2.00' LT	889.52
36	854+44.56	2.00' LT	889.50
37	854+44.56	30.00' LT	890.06
38	854+44.56	43.29' LT	890.28
39	854+44.56	54.00' LT	890.45
40	854+44.56	75.00' LT	890.11

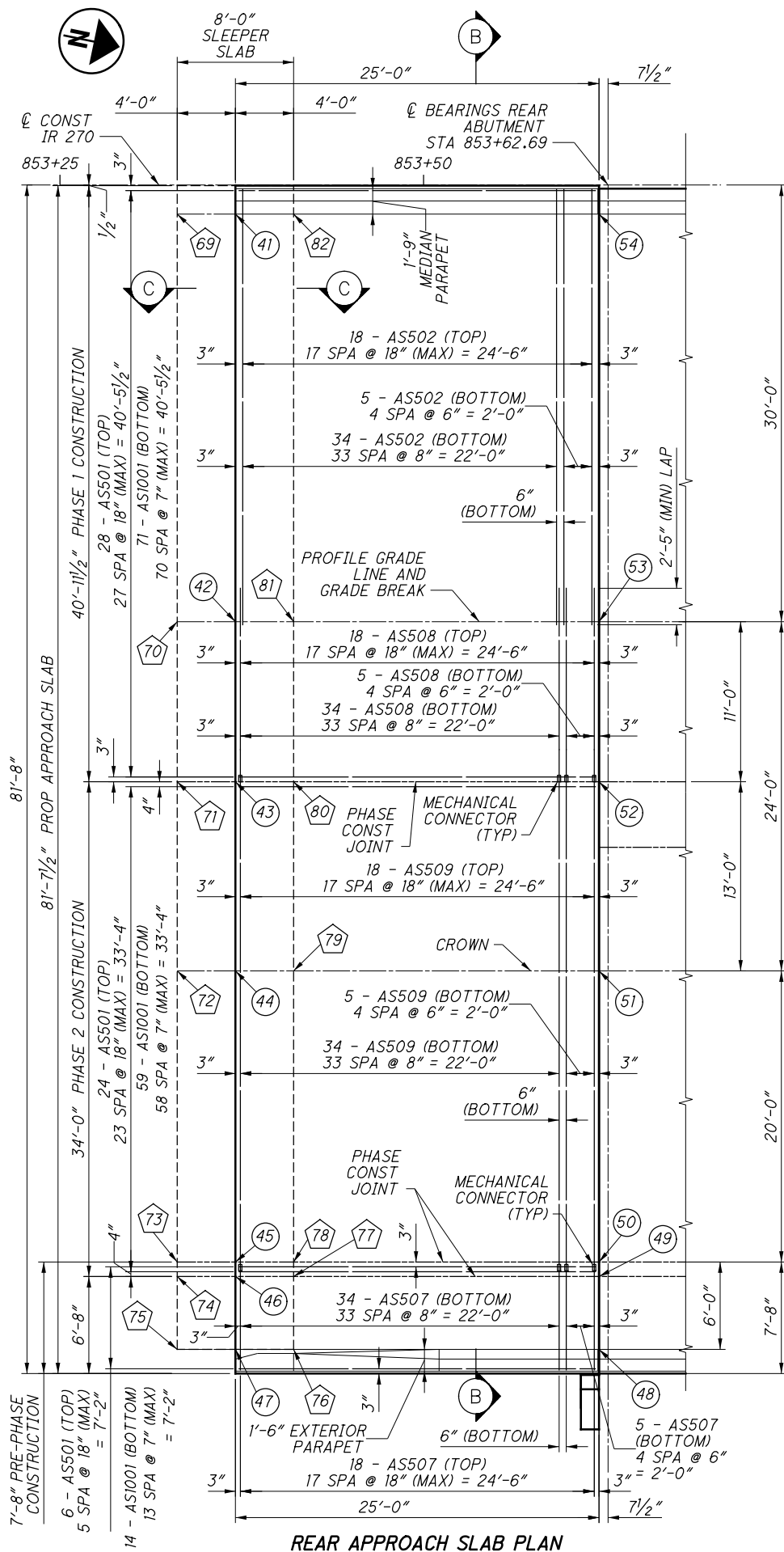
NOTES

- SEE SHEET 33/40 FOR SECTION A-A.
- SEE SHEET 33/40 FOR SECTION C-C.
- SEE STD DWG AS-1-15 AND AS-2-15 FOR DETAILS NOT SHOWN ON THIS SHEET.



FORWARD APPROACH SLAB PLAN

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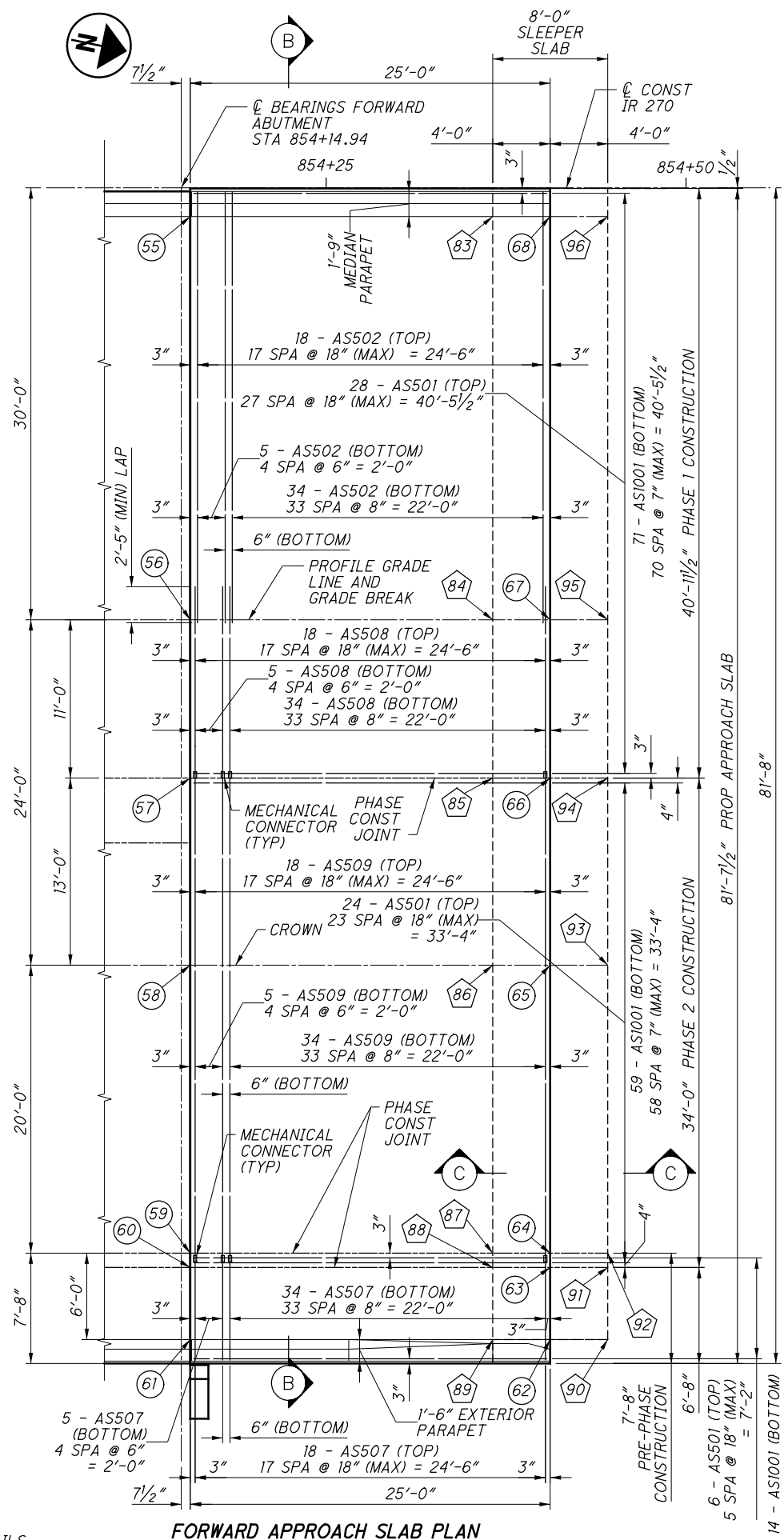
REAR APPROACH SLAB PLAN

APPROACH SLAB SURFACE ELEVATIONS

MARK	STATION	OFFSET	ELEV
41	853+37.06	2.00' RT	891.01
42	853+37.06	30.00' RT	891.57
43	853+37.06	41.00' RT	891.75
44	853+37.06	54.00' RT	891.96
45	853+37.06	74.00' RT	891.64
46	853+37.06	75.00' RT	891.62
47	853+37.06	80.00' RT	891.54
48	853+62.06	80.00' RT	891.48
49	853+62.06	75.00' RT	891.56
50	853+62.06	74.00' RT	891.58
51	853+62.06	54.00' RT	891.90
52	853+62.06	41.00' RT	891.69
53	853+62.06	30.00' RT	891.51
54	853+62.06	2.00' RT	890.95
55	854+15.56	2.00' RT	890.82
56	854+15.56	30.00' RT	891.38
57	854+15.56	41.00' RT	891.56
58	854+15.56	54.00' RT	891.77
59	854+15.56	74.00' RT	891.45
60	854+15.56	75.00' RT	891.43
61	854+15.56	80.00' RT	891.35
62	854+40.56	80.00' RT	891.29
63	854+40.56	75.00' RT	891.37
64	854+40.56	74.00' RT	891.39
65	854+40.56	54.00' RT	891.71
66	854+40.56	41.00' RT	891.50
67	854+40.56	30.00' RT	891.32
68	854+40.56	2.00' RT	890.76

NOTES

- SEE SHEET 33/40 FOR SECTION B-B.
- SEE SHEET 33/40 FOR SECTION C-C.
- SEE STD DWG AS-1-15 AND AS-2-15 FOR DETAILS NOT SHOWN ON THIS SHEET.



FORWARD APPROACH SLAB PLAN

SLEEPER SLAB SURFACE ELEVATIONS

MARK	STATION	OFFSET	ELEV
69	853+33.06	2.00' RT	889.77
70	853+33.06	30.00' RT	890.33
71	853+33.06	41.00' RT	890.51
72	853+33.06	54.00' RT	890.71
73	853+33.06	74.00' RT	890.39
74	853+33.06	75.00' RT	890.38
75	853+33.06	80.00' RT	890.30
76	853+41.06	80.00' RT	890.28
77	853+41.06	75.00' RT	890.36
78	853+41.06	74.00' RT	890.38
79	853+41.06	54.00' RT	890.70
80	853+41.06	41.00' RT	890.49
81	853+41.06	30.00' RT	890.31
82	853+41.06	2.00' RT	889.75
83	854+36.56	2.00' RT	889.52
84	854+36.56	30.00' RT	890.08
85	854+36.56	41.00' RT	890.26
86	854+36.56	54.00' RT	890.47
87	854+36.56	74.00' RT	890.15
88	854+36.56	75.00' RT	890.13
89	854+36.56	80.00' RT	890.05
90	854+44.56	80.00' RT	890.03
91	854+44.56	75.00' RT	890.11
92	854+44.56	74.00' RT	890.13
93	854+44.56	54.00' RT	890.45
94	854+44.56	41.00' RT	890.24
95	854+44.56	30.00' RT	890.06
96	854+44.56	2.00' RT	889.50

APPROACH SLAB DETAILS (RIGHT BRIDGE)

BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAMER DITCH

FRA-270-9.15  
PID No. 76469

32/40

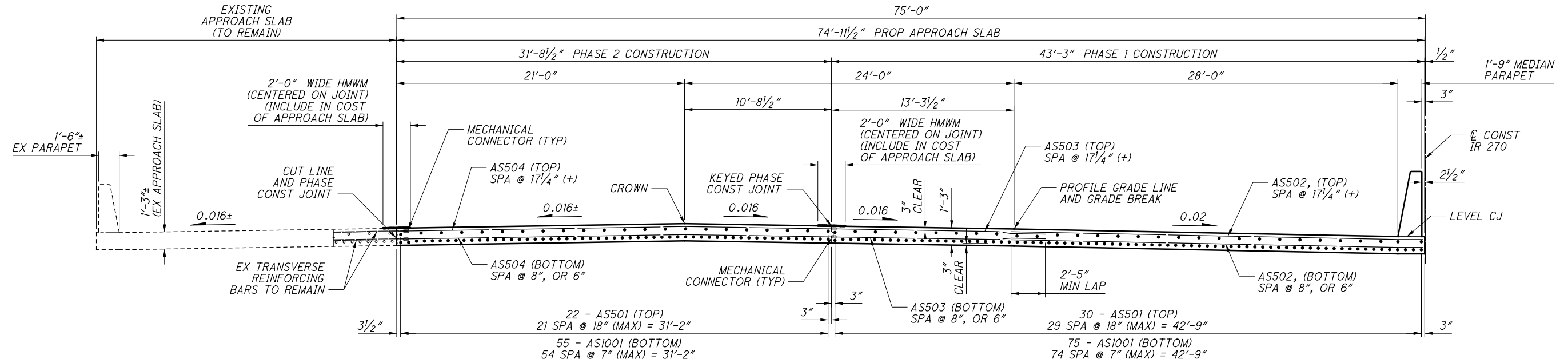
1298  
1306

DESIGN AGENCY  
**EMIT**

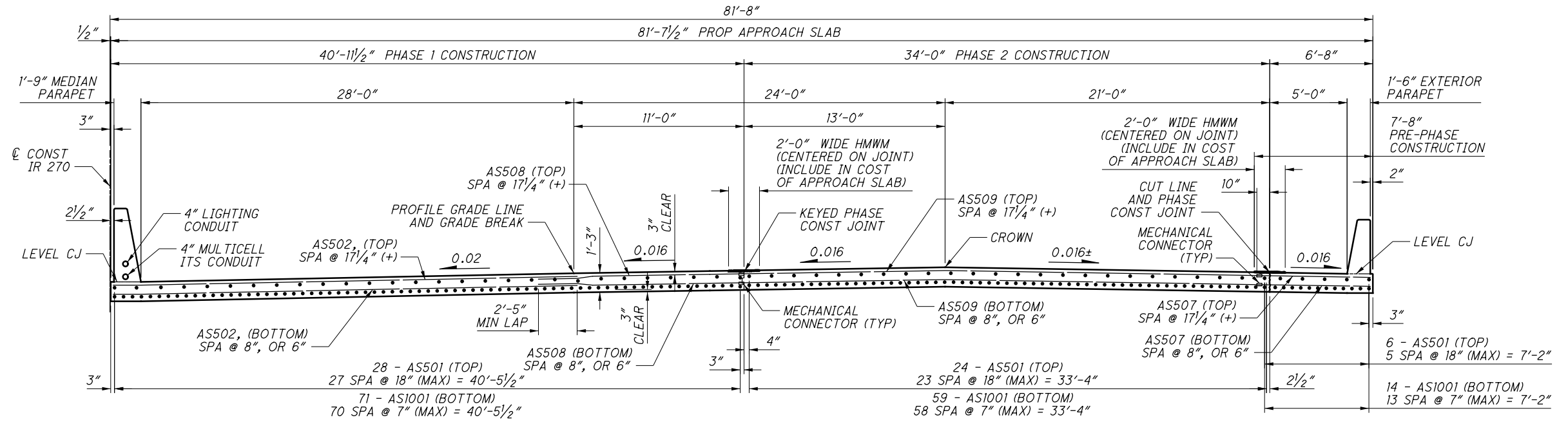
DATE  
7-18-16  
REVIEWED  
CJS  
STRUCTURE FILE NUMBER  
2510200/2510235

DRAWN  
GB  
CHECKED  
TDA

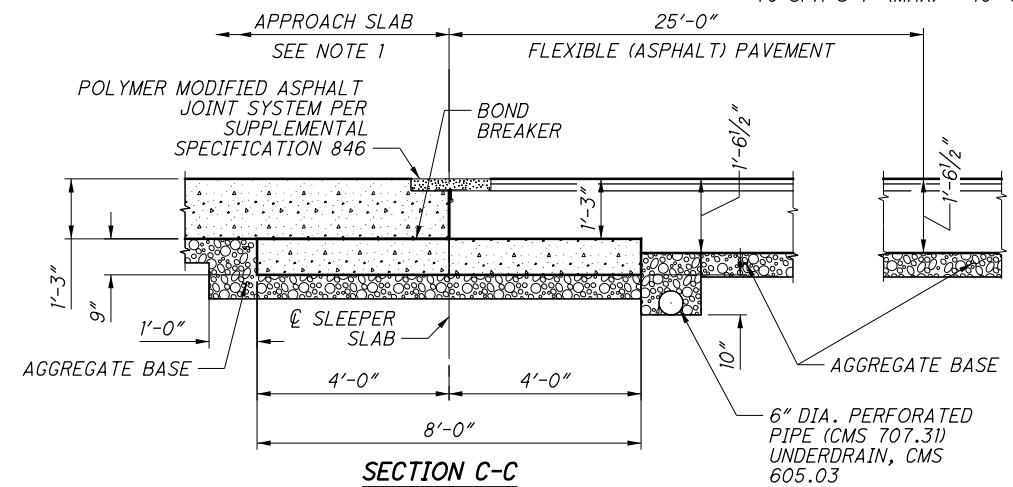




**SECTION A-A**  
SEE PARAPET DETAILS SHEETS  
FOR PARAPET REINFORCING CALLOUTS



**SECTION B-B**  
SEE PARAPET DETAILS SHEETS  
FOR PARAPET REINFORCING CALLOUTS



**SECTION C-C**

- NOTES**
- FOR ADDITIONAL APPROACH SLAB DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWING AS-1-15 AND AS-2-15.
  - ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO CONSTRUCT THE APPROACH SLAB AND AS SHOWN ON THIS SHEET AND AS-1-15 SHALL BE INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN, FOR PAYMENT.
  - APPROACH SLAB CONCRETE SHALL NOT BE PLACED IN THE SAME POUR AS THE BRIDGE SLAB.
  - SEE SHEETS [31/40](#) & [32/40](#) FOR LOCATION OF SECTIONS A-A, B-B, AND C-C.

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REAR APPROACH SLAB

WINGWALL

EDGE OF APPROACH SLAB

TOE OF PARAPET

8'-0" SLEEPER SLAB (SEE NOTE 3)

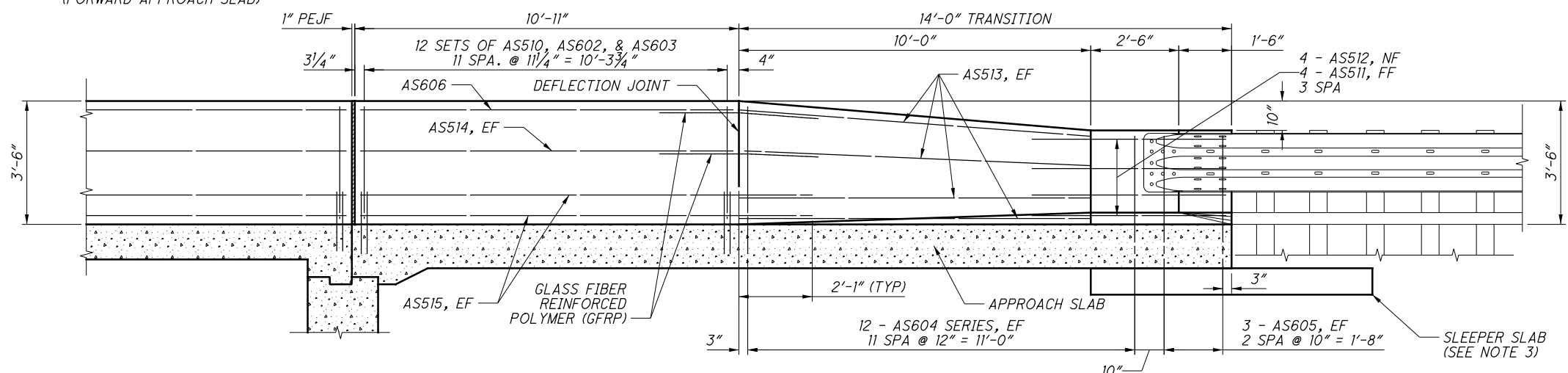
FACE OF CURB AND GUARDRAIL (SEE STD CONST DWG MGS-3.1 AND MGS-3.2 FOR BRIDGE TERMINAL ASSEMBLY)

BRIDGE ROADWAY WIDTH

STA 853+61.98, 76.00' RT (REAR APPROACH SLAB), OR STA 854+15.65, 76.00' RT (FORWARD APPROACH SLAB)

### REAR APPROACH SLAB PARAPET PLAN

STA 853+37.06, 76.00' RT (REAR APPROACH SLAB), OR STA 854+40.56, 76.00' RT (FORWARD APPROACH SLAB)



### REAR APPROACH SLAB PARAPET ELEVATION

APPROACH SLAB REINFORCING NOT SHOWN FOR CLARITY. ROADWAY FACE OF CONCRETE PARAPET SHOWN.

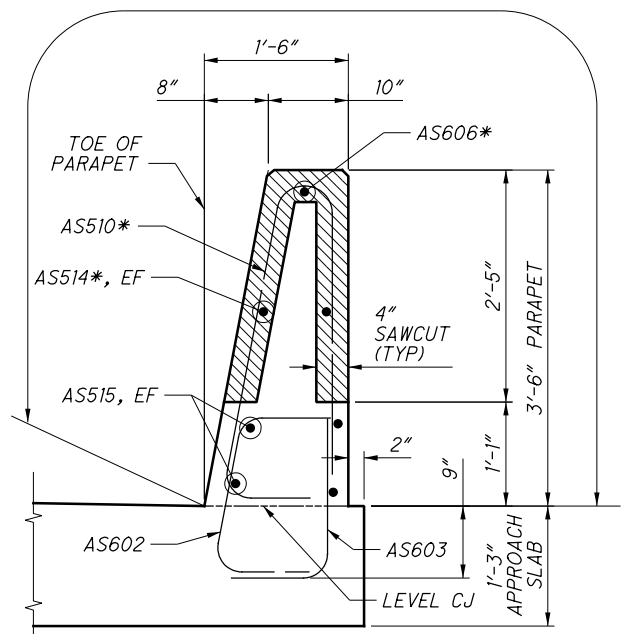
### NOTES

- SEE STD DWG SBR-1-13 FOR DETAILS NOT SHOWN ON THIS SHEET.
- REAR APPROACH SLAB PARAPET SHOWN, FORWARD APPROACH SLAB PARAPET MIRROR.
- SEE SHEET [33/40] AND STD DWG AS-2-15 (TYPE A INSTALLATION) FOR ADDITIONAL SLEEPER SLAB DETAILS.

### LEGEND

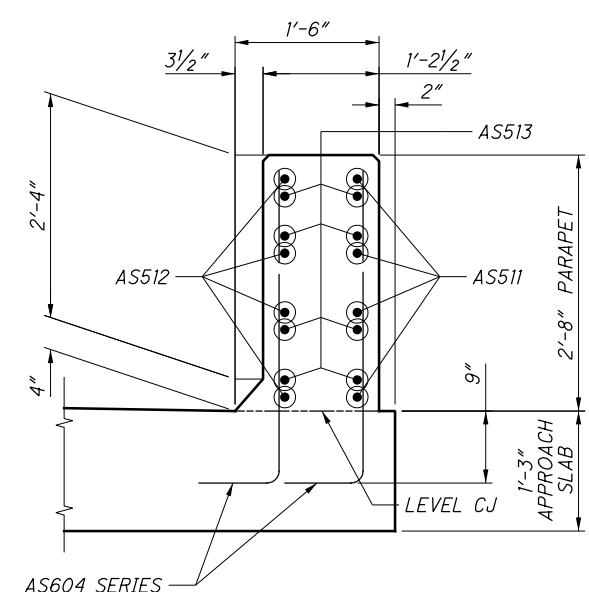
\* - BARS AT SAWCUT ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY

LIMITS OF SEALING CONCRETE SURFACES (NON-EPOXY) (TYP)



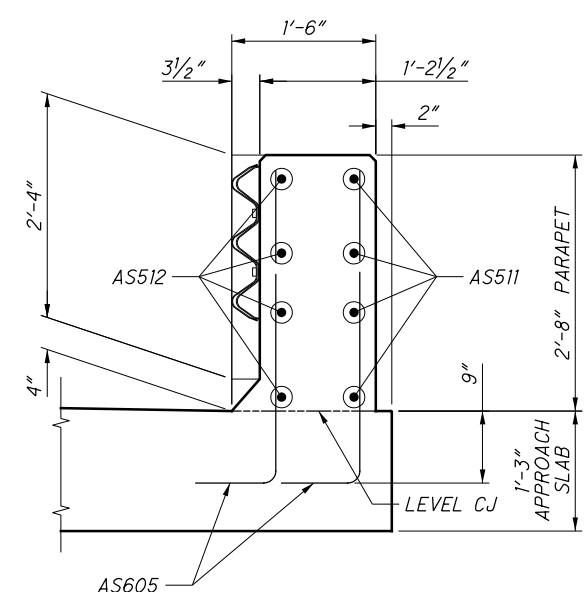
### SECTION A-A

(APPROACH SLAB REINFORCING, AND GLASS FIBER REINFORCED POLYMER (GFRP) NOT SHOWN FOR CLARITY)



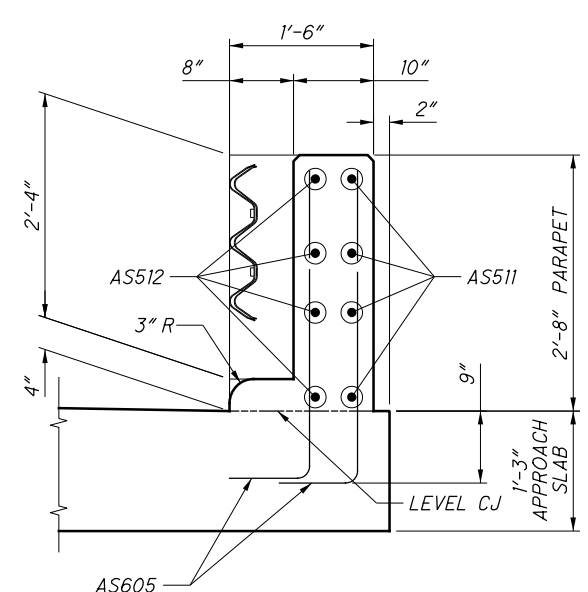
### SECTION B-B

(APPROACH SLAB REINFORCING NOT SHOWN FOR CLARITY)



### SECTION C-C

(APPROACH SLAB REINFORCING NOT SHOWN FOR CLARITY)

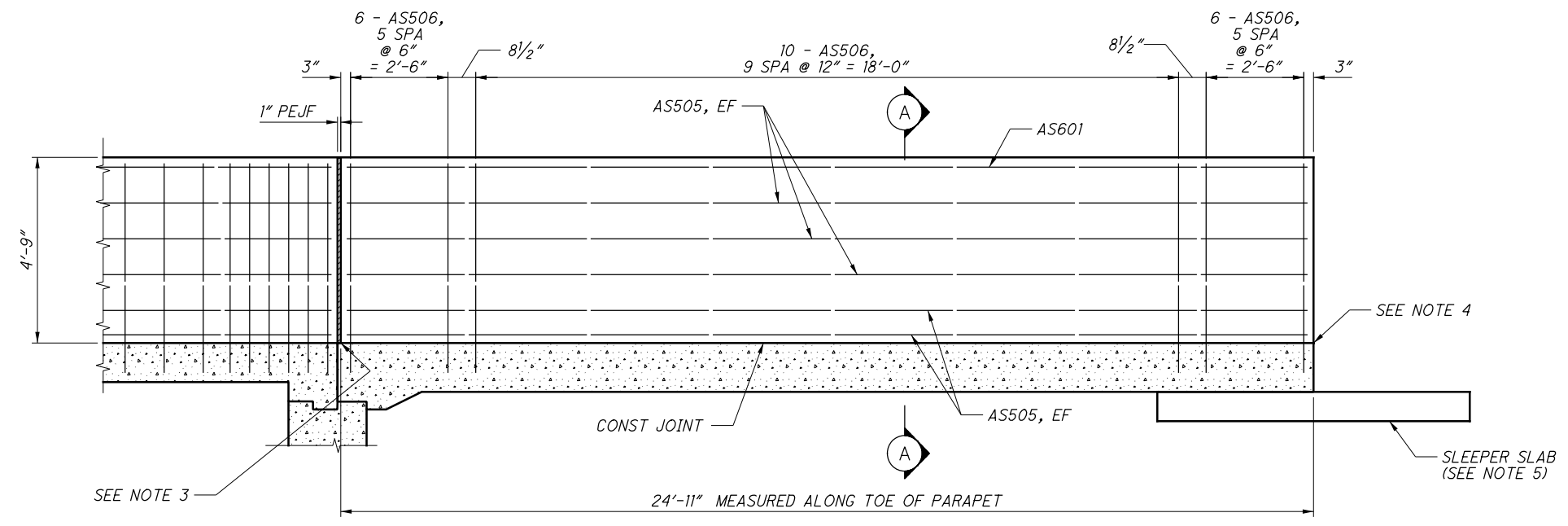


### SECTION D-D

(APPROACH SLAB REINFORCING NOT SHOWN FOR CLARITY)

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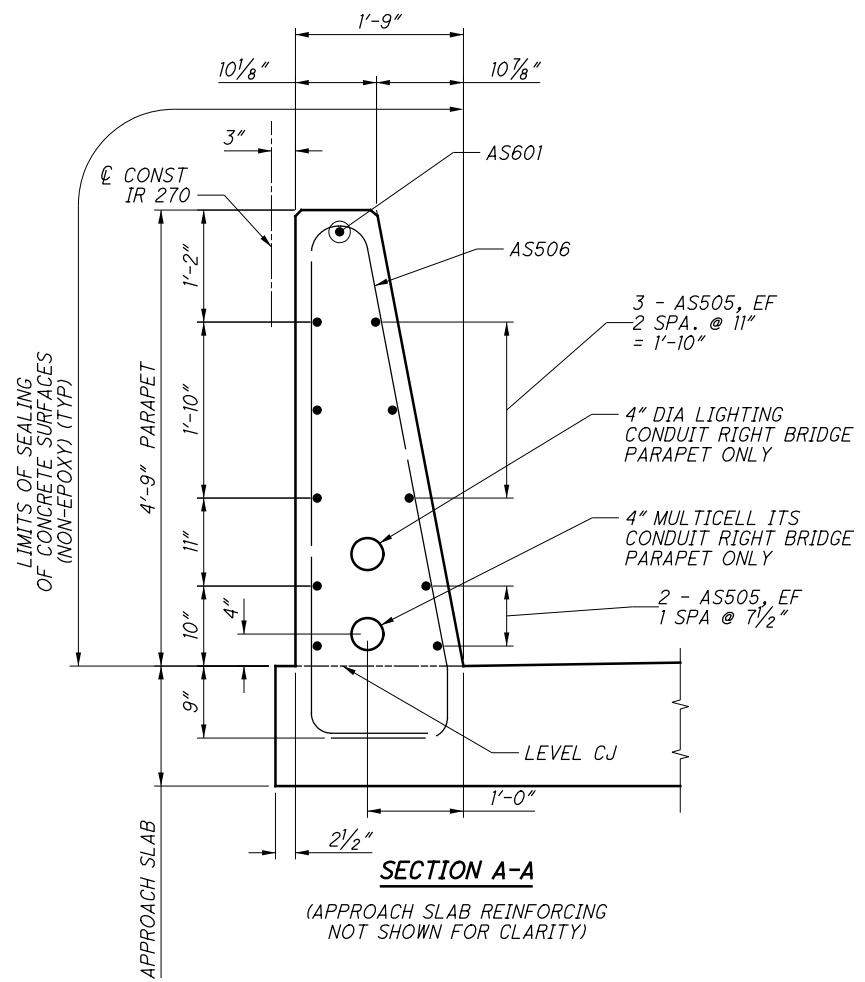
J:\20130771\ODOT\FRA\76469\structures\FRA-270-1619C\sheets\270\_1619CRA004.dgn 9/16/2016 12:16:25 PM mrhall



**ELEVATION**

APPROACH SLAB REINFORCING NOT SHOWN FOR CLARITY  
ROADWAY FACE OF CONCRETE PARAPET SHOWN  
(SEE NOTE 2)

- NOTES**
1. SEE STD DWG SBR-2-13 FOR DETAILS NOT SHOWN ON THIS SHEET.
  2. TYP OF 4 LOCATIONS. RIGHT BRIDGE REAR PARAPET SHOWN. LEFT BRIDGE FORWARD PARAPET SIMILAR. RIGHT BRIDGE FORWARD PARAPET AND LEFT BRIDGE REAR PARAPET MIRROR.
  3. STA 853+61.98, 2.00' LT (REAR ABUTMENT, LEFT BRIDGE), STA 853+61.98, 2.00' RT (REAR ABUTMENT, RIGHT BRIDGE), STA 854+15.65, 2.00' RT (FORWARD ABUTMENT, RIGHT BRIDGE), OR STA 854+15.65, 2.00' LT (FORWARD ABUTMENT, LEFT BRIDGE)
  4. STA 853+37.06, 2.00' LT (REAR ABUTMENT, LEFT BRIDGE), STA 853+37.06, 2.00' RT (REAR ABUTMENT, RIGHT BRIDGE), STA 854+40.56, 2.00' RT (FORWARD ABUTMENT, RIGHT BRIDGE), OR STA 854+40.56, 2.00' LT (FORWARD ABUTMENT, LEFT BRIDGE)
  5. SEE SHEET 33/40 AND STD DWG AS-2-15 (TYPE A INSTALLATION) FOR ADDITIONAL SLEEPER SLAB DETAILS.



**SECTION A-A**

(APPROACH SLAB REINFORCING NOT SHOWN FOR CLARITY)

DESIGN AGENCY  
**EMIT**

DATE  
7-18-16  
REVIEWED  
CJS  
STRUCTURE FILE NUMBER  
2510200/2510235

DRAWN  
GB  
REVISED

DESIGNED  
RJE  
CHECKED  
TDA

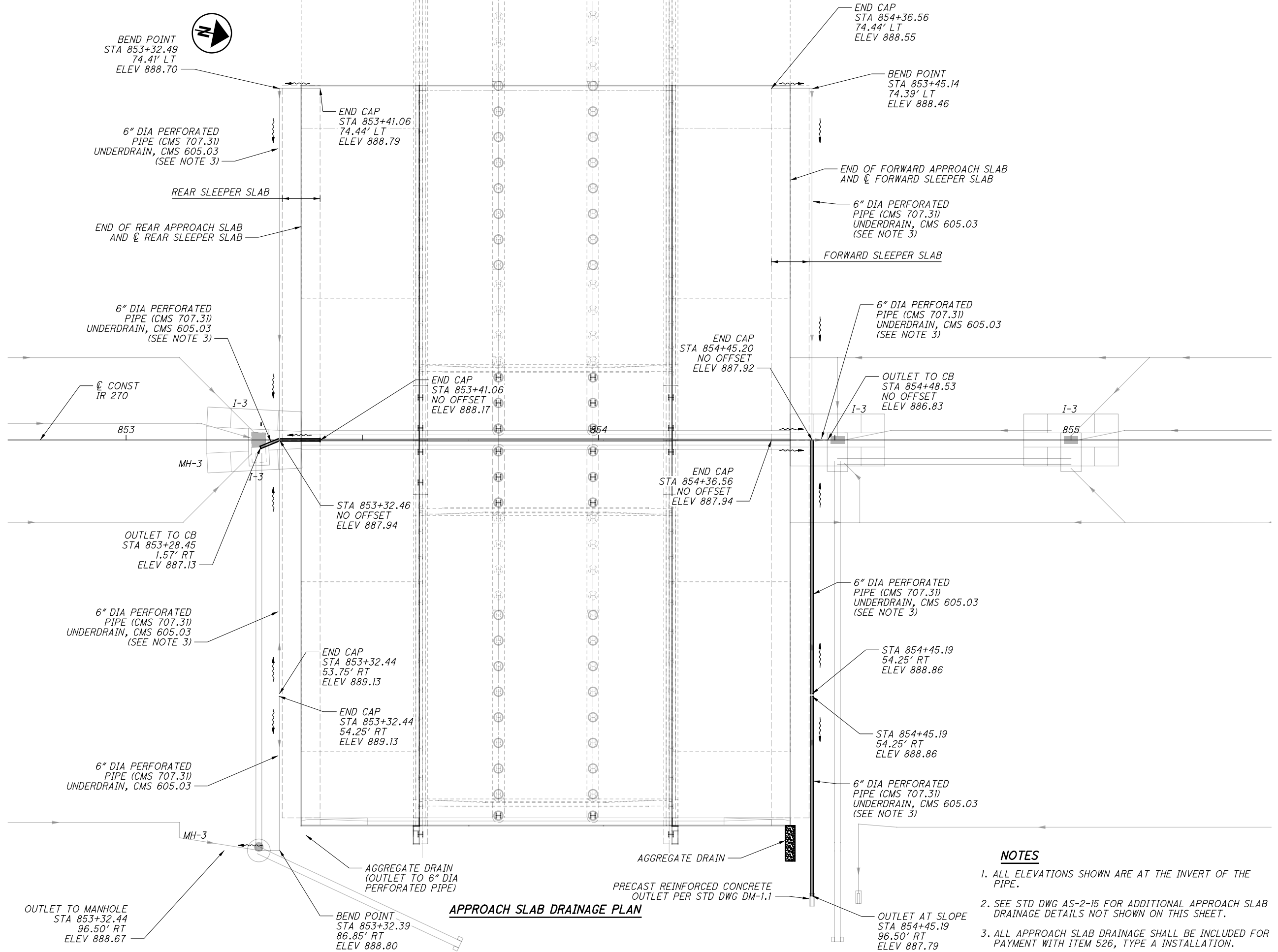
**MEDIAN APPROACH SLAB PARAPET (LEFT AND RIGHT BRIDGE)**  
BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAMER DITCH

**FRA-270-9.15**  
PID No. 76469

35/40

1301  
1306

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**APPROACH SLAB DRAINAGE PLAN**

**NOTES**

1. ALL ELEVATIONS SHOWN ARE AT THE INVERT OF THE PIPE.
2. SEE STD DWG AS-2-15 FOR ADDITIONAL APPROACH SLAB DRAINAGE DETAILS NOT SHOWN ON THIS SHEET.
3. ALL APPROACH SLAB DRAINAGE SHALL BE INCLUDED FOR PAYMENT WITH ITEM 526, TYPE A INSTALLATION.

DESIGN AGENCY <b>EIMHT</b>	
DESIGNED RJE	CHECKED TDA
DRAWN GB	REVISED
REVIEWED CJS	DATE 7-18-16
STRUCTURE FILE NUMBER 2510200/2510235	
<b>APPROACH SLAB DRAINAGE DETAILS</b> BRIDGE NO. FRA-270-1619 L/R IR 270 OVER CRAMER DITCH	
<b>FRA-270-9.15</b> PID No. 76469	
36 / 40 1302 1306	

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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR ABUT	FORWARD ABUT	TOTAL				A	B	C	D	E	R	INC
<b>ABUTMENTS REINFORCING STEEL LIST (LEFT BRIDGE)</b>													
A401	8	8	16	5'-5"	58	2	1'-11"	1'-9"	1'-11"				
A501 *	2	2	4	15'-6"	65	STR							
A502 *	2	2	4	31'-0"	129	STR							
A503	2	2	4	30'-0"	125	STR							
A504	88	88	176	3'-4"	612	1	1'-8"	1'-9 1/2"					
A505	8	8	16	6'-5"	107	2	2'-6"	1'-8"	2'-6"				
A506	4	4	8	11'-2"	93	STR							
A507	4	4	8	3'-6"	29	STR							
A508	18	18	36	6'-7"	247	2	2'-1"	2'-8"	2'-1"				
A509 * THROUGH A517 - NOT USED													
A801	4	4	8	11'-2"	239	STR							
A802	4	4	8	5'-0"	107	STR							
A803 - NOT USED													
A1001 *	4	4	8	24'-8"	849	STR							
A1002 *	4	4	8	31'-8"	1090	STR							
A1003	4	4	8	30'-0"	1033	STR							
A1004	4	4	8	5'-0"	172	STR							
A1005 * - NOT USED													
A1006 * - NOT USED													
A1007 - NOT USED													
D801	7	7	14	6'-2"	231	18	4'-0"	1'-0"	1'-0"				
D802	1 SR OF 30	1 SR OF 30	2 SR OF 30	5'-1" TO 6'-2"	908	18	2'-11" TO 3'-11 3/4"	1'-0"	1'-0"			0'-0 7/16"	
D803	1 SR OF 15	1 SR OF 15	2 SR OF 15	5'-11" TO 6'-5"	494	18	3'-9" TO 4'-3 1/4"	1'-0"	1'-0"			0'-0 7/16"	
D804 - NOT USED													
D805 - NOT USED													
D806 - NOT USED													
<b>TOTAL</b>					<b>6,588</b>								

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR ABUT	FORWARD ABUT	TOTAL				A	B	C	D	E	R	INC
<b>ABUTMENTS REINFORCING STEEL LIST (RIGHT BRIDGE)</b>													
A401	12	12	24	5'-5"	87	2	1'-11"	1'-9"	1'-11"				
A501 * - NOT USED													
A502 * - NOT USED													
A503	2	2	4	30'-0"	125	STR							
A504	96	96	192	3'-4"	668	1	1'-8"	1'-9 1/2"					
A505	10	10	20	6'-5"	134	2	2'-6"	1'-8"	2'-6"				
A506	4	4	8	11'-2"	93	STR							
A507	8	8	16	3'-6"	58	STR							
A508	28	28	56	6'-7"	385	2	2'-1"	2'-8"	2'-1"				
A509 *	2	2	4	13'-3"	55	STR							
A510 *	2	2	4	33'-2"	138	STR							
A511	2	2	4	7'-4"	31	STR							
A512	4	4	8	5'-2"	43	STR							
A513	2	2	4	3'-8"	15	19	0'-9 1/2"	2'-7 1/2"	1'-3"				
A514	4	4	8	6'-3"	52	STR							
A515	1	1	2	10'-2"	21	2	4'-9"	0'-11"	4'-9"				
A516	1 SR OF 3	1 SR OF 3	2 SR OF 3	8'-0" TO 10'-4"	57	2	3'-8" TO 4'-10"	0'-11"	3'-8" TO 4'-10"			0'-7"	
A517	2	2	4	3'-5"	14	STR							
A801	4	4	8	11'-2"	239	STR							
A802	4	4	8	5'-0"	107	STR							
A803	4	4	8	6'-4"	135	STR							
A1001 * - NOT USED													
A1002 * - NOT USED													
A1003	4	4	8	30'-0"	1033	STR							
A1004 - NOT USED													
A1005 *	4	4	8	22'-5"	772	STR							
A1006 *	4	4	8	33'-2"	1142	STR							
A1007	4	4	8	7'-4"	252	STR							
D801	9	9	18	6'-2"	296	18	4'-0"	1'-0"	1'-0"				
D802 - NOT USED													
D803 - NOT USED													
D804	6	6	12	5'-10"	187	18	3'-8"	1'-0"	1'-0"				
D805	1 SR OF 14	1 SR OF 14	2 SR OF 14	5'-10" TO 6'-5"	461	18	3'-9" TO 4'-2 3/4"	1'-0"	1'-0"			0'-0 7/16"	
D806	1 SR OF 28	1 SR OF 28	2 SR OF 28	5'-1" TO 6'-1"	835	18	2'-11" TO 3'-10 3/4"	1'-0"	1'-0"			0'-0 7/16"	
<b>TOTAL</b>					<b>7,435</b>								

**LEGEND**

\* - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.



DESIGN AGENCY  
DATE  
7-18-16  
REVIEWED  
CJS  
DRAWN  
GB  
CHECKED  
TDA  
STRUCTURE FILE NUMBER  
2510200/2510235

REINFORCING STEEL LIST  
BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAMER DITCH

FRA - 270 - 9.15  
PID No. 76469

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
<b>SUPERSTRUCTURE REINFORCING STEEL LIST (LEFT BRIDGE)</b>											
S401 *	53	30'-10"	1092	STR							
S402	53	30'-0"	1062	STR							
S403	53	15'-9"	558	STR							
S404	51	5'-7"	190	12	0'-10"	1'-8"	1'-8"	1'-0"	1'-3"		
S405, S406 *, AND S407 - NOT USED											
S408 *	53	2'-0"	71	STR							
S501	8	27'-10"	232	STR							
S502	48	6'-4"	317	STR							
S503	68	13'-3"	940	35	0'-9"	1'-5"	1'-0"	4'-7"		0'-3"	
S504 - NOT USED											
S601 *	51	30'-10"	2362	STR							
S602	51	30'-0"	2298	STR							
S603	51	15'-9"	1206	STR							
S604	8	6'-4"	76	STR							
S605, S606, AND S607 - NOT USED											
S608 *, AND S609 - NOT USED											
S610 *	51	3'-0"	230	STR							
S801	128	29'-9"	10167	STR							
S802	64	28'-9"	4913	STR							
S803	64	19'-2"	3275	STR							
S804	142	23'-8"	8973	16	22'-10"						
S805	71	22'-0"	4171	STR							
S806	68	19'-7"	3556	16	18'-9"						
S807	34	23'-8"	2148	STR							
S808	66	18'-2"	3201	16	17'-4"						
S809	33	19'-8"	1733	STR							
S1001 *	8	30'-10"	1061	STR							
S1002	8	30'-0"	1033	STR							
S1003	8	24'-5"	841	STR							
S1004, S1005 *, AND S1006 * - NOT USED											
S1007 *	8	8'-0"	275	STR							
TOTAL			55,981								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
<b>SUPERSTRUCTURE REINFORCING STEEL LIST (RIGHT BRIDGE)</b>											
S401 *, S402, AND S403 - NOT USED											
S404	102	5'-7"	380	12	0'-10"	1'-8"	1'-8"	1'-0"	1'-3"		
S405	53	7'-4"	260	STR							
S406 *	53	40'-7"	1437	STR							
S407	53	33'-2"	1174	STR							
S408 *	53	2'-0"	71	STR							
S501	16	27'-10"	464	STR							
S502	64	6'-4"	423	STR							
S503	68	13'-3"	940	35	0'-9"	1'-5"	1'-0"	4'-7"		0'-3"	
S504	64	7'-4"	489	23	0'-11"	3'-3"	3'-0"			0'-3"	
S601 *, S602, AND S603 - NOT USED											
S604	16	6'-4"	152	STR							
S605	64	2'-6"	240	1	1'-0"	1'-8"					
S606	64	3'-4"	320	28	1'-8"	1'-0"					
S607	51	7'-4"	562	STR							
S608 *	51	40'-7"	3109	STR							
S609	51	33'-2"	2541	STR							
S610 *	51	3'-0"	230	STR							
S801	142	29'-9"	11279	STR							
S802	70	28'-9"	5373	STR							
S803	70	19'-2"	3582	STR							
S804	162	23'-8"	10237	16	22'-10"						
S805	81	22'-0"	4758	STR							
S806	74	19'-7"	3869	16	18'-9"						
S807	37	23'-8"	2338	STR							
S808	72	18'-2"	3492	16	17'-4"						
S809	36	19'-8"	1890	STR							
S1001 *, S1002, AND S1003 - NOT USED											
S1004	8	7'-4"	252	STR							
S1005 *	8	40'-7"	1397	STR							
S1006 *	8	33'-2"	1142	STR							
S1007 *	8	8'-0"	275	STR							
TOTAL			62,676								

**LEGEND**

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DESIGNED BY: RJE  
 CHECKED BY: TDA  
 DRAWN BY: GB  
 REVISED BY:  
 REVIEWED BY: CJS  
 DATE: 7-18-16  
 STRUCTURE FILE NUMBER: 2510200/2510235

**REINFORCING STEEL LIST**  
 BRIDGE NO. FRA-270-1619 L/R  
 IR 270 OVER CRAMER DITCH

**FRA - 270 - 9.15**  
**PID No. 76469**



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MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
<b>APPROACH SLAB REINFORCING STEEL LIST (LEFT BRIDGE) **</b>											
AS501	104	24'-6"	2658	STR							
AS502	114	30'-0"	3567	STR							
AS503 *	114	15'-7"	1853	STR							
AS504 *	114	30'-10"	3666	STR							
AS505	20	24'-7"	513	STR							
AS506	44	13'-3"	608	35	0'-9"	1'-5"	1'-0"	4'-7"		0'-3"	
AS507 THROUGH AS515 - NOT USED											
AS601	2	24'-7"	74	STR							
AS602 THROUGH AS606 - NOT USED											
AS1001	260	25'-11"	28995	16	24'-6"						
TOTAL			41,934								

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
<b>APPROACH SLAB REINFORCING STEEL LIST (RIGHT BRIDGE) **</b>											
AS501	116	24'-6"	2964	STR							
AS502	114	30'-0"	3567	STR							
AS503 *, AND AS504 * - NOT USED											
AS505	20	24'-7"	513	STR							
AS506	44	13'-3"	608	35	0'-9"	1'-5"	1'-0"	4'-7"		0'-3"	
AS507	114	7'-4"	872	STR							
AS508 *	114	13'-3"	1575	STR							
AS509 *	114	33'-2"	3944	STR							
AS510	24	7'-4"	184	23	0'-11"	3'-3"	3'-0"			0'-3"	
AS511	8	5'-8"	47	STR							
AS512	8	5'-8"	47	25	1'-10"	2'-5"	1'-4 1/4"	0'-1 1/2"	0'-5"		
AS513	16	10'-0"	167	STR							
AS514	4	10'-7"	44	STR							
AS515	8	12'-10"	107	STR							
AS601	2	24'-7"	74	STR							
AS602	24	3'-4"	120	28	1'-8"	1'-0"					
AS603	24	2'-6"	90	1	1'-0"	1'-8"					
AS604	4 SR OF 12	4'-0" TO 4'-11"	324	1	1'-0"	3'-2" TO 4'-1"				0'-1"	
AS605	12	4'-1"	74	1	1'-0"	3'-3"					
AS606	2	10'-7"	32	STR							
AS1001	288	25'-11"	32118	16	24'-6"						
TOTAL			47,471								

**LEGEND**

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\*\* - REINFORCING INCLUDED WITH APPROACH SLAB FOR PAYMENT

**REINFORCING STEEL LIST**  
BRIDGE NO. FRA-270-1619 L/R  
IR 270 OVER CRAMER DITCH

**FRA - 270 - 9.15**  
PID No. 76469

40 / 40

1306  
1306



DESIGNED BY: RJE  
CHECKED BY: TDA  
DRAWN BY: GB  
REVISED BY:  
REVIEWED BY: CJS  
DATE: 7-18-16  
STRUCTURE FILE NUMBER: 2510200/2510235

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