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ESTIMATED QUANTITIES BRIDGE FUNDS ELIGIBLE								
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LUMP		LUMP	
202	22900	178	SQ YD	APPROACH SLAB REMOVED				178
503	21101	128	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN	128			
509	10000	23190	POUND	EPOXY COATED REINFORCING STEEL	3991		19199	
509	20001	100	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				100
510	10000	1420	EACH	DOWEL HOLES WITH NON SHRINK, NON METALLIC GROUT	300		1120	
511	34400	44	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE			44	
511	34436	104	CU YD	CLASS S CONCRETE, BRIDGE DECK (PARAPET)			104	
511	45700	44	CU YD	CLASS C CONCRETE, ABUTMENT	44			
SPECIAL	51160000	1161	SQ YD	BRIDGE DECK GROOVING			989	172*
512	10050	791	SQ YD	SEALING OF CONCRETE SURFACES (NON-EPOXY)	74		717	
516	13200	8	SQ FT	1/2" PREFORMED EXPANSION JOINT FILLER			8	
516	13600	17	SQ FT	1" PREFORMED EXPANSION JOINT FILLER			17	
516	13900	145	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	145			
516	14021	75	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN			75	
516	44000	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE): 9"x14"x2 3/16", LOAD PLATE 11"x15"x1 1/2"			10	
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP	
518	21200	48	CU YD	POROUS BACKFILL WITH FILTER FABRIC	48			
518	40000	106	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	106			
518	40010	60	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	60			
519	11101	57	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN		57		
526	25000	198	SQ FT	REINFORCED CONCRETE APPROACH SLABS (T=15")				198
SPECIAL	53000200	LUMP		STRUCTURE, MISC.: SURVEY OF EXISTING STRUCTURE				LUMP
601	20000	52	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION	52			
601	21060	168	SQ YD	TIED CONCRETE MAT, TYPE 2	168			
607	39900	520	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT COATED FABRIC			520	
848	10200	1075	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (3/4" THICK)			1075	
848	20000	1075	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			1075	
848	30200	10	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			10	
848	50000	53	SQ YD	HAND CHIPPING			53	
848	50100	LUMP		TEST SLAB				LUMP
848	50200	3	CU YD	FULL DEPTH REPAIR			3	

134"

SHEET NUMBER 3 / 14

SHEET NUMBER 3 / 14

SHEET NUMBER 3 / 14

SHEET NUMBER 3 / 14

SHEET NUMBER 3 / 14

SHEET NUMBER 3 / 14

SHEET NUMBER 8 / 14

SHEET NUMBER 3 / 14

SHEET NUMBER 3 / 14

SHEET NUMBER 3 / 14

* APPROACH SLAB

DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION
 DISTRICT No. 2
 PRODUCTION DEPARTMENT

DATE: _____
 REVIEWED: _____
 STRUCTURE FILE NUMBER: 4801024

DESIGNED: JML
 CHECKED: JTB

DRAWN: BPN
 REVISED: _____

ESTIMATED QUANTITIES
 LUC-20A-1048
 U.S. 20 OVER I-475

LUC / WOO - 20A / 199
 - 10.48 / 29.04

2 / 14

10
26

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

AS-1-81 DATED 7-19-2002 GR-3.1 DATED 1-19-2007
 DM-4.1 DATED 10-21-2011
 SBR-1-99 DATED 7-19-2002
 VPF-1-90 DATED 4-15-2011

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):
 848 DATED 10-21-2011

DESIGN DATA:

CLASS S - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CLASS C CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996
 GRADE 60 MINIMUM YIELD STRENGTH 60 KSI.

DECK PROTECTION METHOD

SUPERPLASTICIZED DENSE CONCRETE OVERLAY

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND [41 KILOGRAM] CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH [25 MM] 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 [16 KILOGRAMS] FOR REMOVAL WITHIN 18 INCHES [450 MM] F PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH [450 MM] LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS [41 KILOGRAMS] 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.

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, 105.02 AND *513.04.

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.

ITEM 503 UNCLASSIFIED EXCAVATION, AS PER PLAN

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL PLACED IN BEHIND THE ABUTMENTS SHALL BE 703.17 MATERIAL PLACED IN 6 INCH LIFTS AS PER 304.05. UNCLASSIFIED EXCAVATION INCIDENTAL TO REMOVAL OF EXISTING ABUTMENT BACKWALLS AND WINGWALLS SHALL BE INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, LUMP SUM FOR PAYMENT.

ITEM, SPECIAL, BRIDGE DECK GROOVING

CMS 511.20 SHALL APPLY EXCEPT THAT GROOVING SHALL BE CUT INTO THE BRIDGE DECK LONGITUDINALLY AND THE FOLLOWING:

LONGITUDINAL GROOVES SHALL BE CUT INTO THE HARDENED CONCRETE SURFACES USING A MECHANICAL CUTTING DEVICE. LONGITUDINAL GROOVING IS TO BE PERFORMED AFTER ANY SURFACE CORRECTION GRINDING. LONGITUDINAL GROOVING SHALL BE PLACED PARALLEL TO THE CENTERLINE OF THE ROADWAY. OVERLAPPING OF THE GROOVING PATHS IS NOT PERMITTED.

LONGITUDINAL GROOVES SHALL BE 1/8 INCH +/- 1/64 INCH IN WIDTH, 1/8 INCH + 1/32 INCH OR 1/16 INCH IN DEPTH, AND THE GROOVES SHALL BE UNIFORMLY SPACED AT 3/4 INCH INTERVALS MEASURED CENTER TO CENTER OF GROOVE. LONGITUDINAL GROOVING SHALL TERMINATE A MINIMUM OF 6 INCHES TO A MAXIMUM OF 18 INCHES FROM ALL CURBS, PARAPETS AND RAILINGS. IN ADDITION, THE GROOVING SHALL TERMINATE APPROXIMATELY 9 INCHES FROM BRIDGE JOINTS AND DRAINAGE STRUCTURES.

ITEM, SPECIAL, STRUCTURE MISC: SURVEY OF EXISTING STRUCTURE

PRIOR TO PERFORMING ANY STRUCTURAL REMOVAL OPERATIONS AND BRIDGE DECK DEMOLITION, THE CONTRACTOR SHALL MAKE A SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:

1. TAKE ELEVATIONS ALONG ALL BEAM SEATS AND BOTTOM OF BEAMS AT ALL ABUTMENTS TO BE RETROFITTED TO SEMI-INTEGRAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR ESTABLISHING THE NEW BEAM SEAT ELEVATIONS.
2. TAKE ELEVATIONS ON THE BRIDGE DECK ALONG ALL CURBS, CROWNS, CONSTRUCTION JOINTS AND EXPANSION JOINTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR DEVELOPING THE DECK SCREED TABLE.
3. TAKE ELEVATIONS AT BRIDGE APPROACHES. THE CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE PAVEMENT PROFILES. PAVEMENT TRANSITION PROFILES SHALL MEET THE CRITERIA IN THE ODOT LOCATION AND DESIGN MANUAL.

ALL SURVEY AND FIELD INFORMATION SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FINAL PLACEMENT OF ABUTMENT SEATS, BRIDGE DECK OVERLAY, AND APPROACH TRANSITIONS. THE ENGINEER SHALL HAVE THE AUTHORITY TO MAKE REVISIONS TO THE FINAL PLAN.

EXISTING BRIDGE PLANS

EXISTING PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT 2 OFFICE AT 317 EAST POE RD., BOWLING GREEN, OHIO.

ITEM 516 SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN

INSTALL A 3 FOOT [1 METER] WIDE NEOPRENE SHEET AT LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 1 1/4" [32 MM] X #10 GAGE [3 MM] LENGTH X SHANK DIAMETER GALVANIZED BUTTON HEAD SPIKES THROUGH A 1 INCH [25 MM] OUTSIDE DIAMETER, #10 GAGE [3 MM] GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES [225 MM]. USE OF OTHER SIMILAR GALVANIZED DEVICES, WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE, WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES [150 MM], +/-, FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES [150 MM], +/-, FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6 INCHES [150 MM], CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHALL COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAP LENGTHS OF THE HORIZONTAL STRIPS THAT ARE NOT VULCANIZED OR ADHESIVE BONDED, SHALL BE AT LEAST 1 FOOT [0.3 METER] IN LENGTH, OR 6 INCHES [150 MM] IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS. THE NEOPRENE SHEETING SHALL BE 3/32" [2.5 MM] THICK GENERAL PURPOSE, HEAVY-DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, INCHES	D751	0.094 +/- 0.01 [2.5±0.25]
BREAKING STRENGTH, GRAB, LBS, MINIMUM (LONG. X TRANS.)	D751	700 X 700 [3130x3130]
ADHESIVE STRIP, 1" [25MM] WIDE X 2" [50MM] LONG, LBS. [N] MINIMUM	D751	9 [27]
BURST STRENGTH, PSI MINIMUM	D751	1400 [9.65]
HEAT AGING, 70 HR, 212° F [100°C], 180° BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMP. BRITTLINESS, 1 HR, 40° F [-40°C], BEND AROUND 1/4" [6MM] MANDREL	D2136	NO CRACKING OF COATING

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT TO BE SEALED BY THE NUMBER OF FEET.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

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.

ITEM 519, PATCHING CONCRETE STRUCTURE, AS PER PLAN

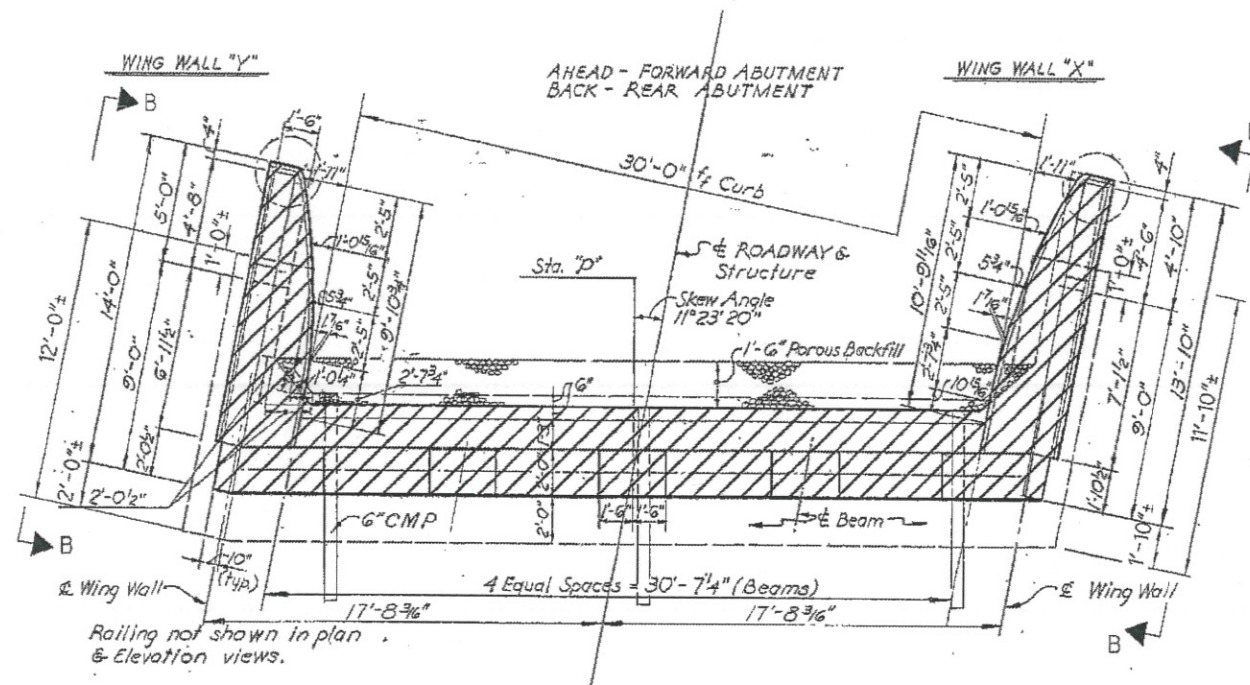
THE QUANTITY GIVEN IN THE ESTIMATED QUANTITY TABLE HAS BEEN ESTIMATED FROM INSPECTION AND ORIGINAL PLANS. THE ACTUAL AREA OF PATCHING SHALL BE DETERMINED BY THE FIELD ENGINEER. PAYMENT SHALL BE MADE PER SQ. FT. AT THE PRICE BID FOR THE ACTUAL AREA PATCHED AND SHALL INCLUDE ALL COST FOR LABOR, MATERIALS AND EQUIPMENT.

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM BLASTING. FLAT PATCHES PLACED ON BRIDGE DECKS, SIDEWALKS, APPROACH SLABS, ETC. SHALL BE PLACED, FINISHED AND CURED AS PER CLASS S CONCRETE, ITEMS 499 AND 511. ON OTHER SURFACES, REMOVE THE FORMS WITHIN 24 HOURS AFTER PLACING CONCRETE AND FINISH ALL EXPOSED SURFACES BY RUBBING TO MATCH THE SURROUNDING SURFACE. APPLY MEMBRANE CURING ACCORDING TO 511.17, METHOD B, IMMEDIATELY AFTER RUBBING THE SURFACES.


AFTER CURING AND BEFORE FINAL ACCEPTANCE, SOUND ALL PATCHED AREAS. REMOVE AND REPLACE ALL UNSOUND OR VISIBLY CRACKED PATCH SURFACES.

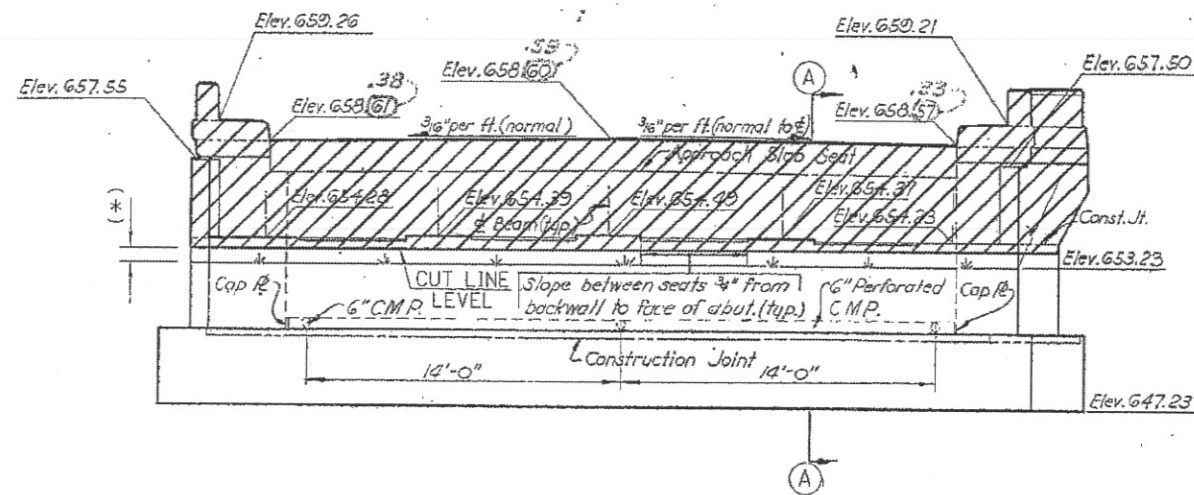
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DESIGN AGENCY: OHO DEPARTMENT OF TRANSPORTATION DISTRICT No. 2 PRODUCTION DEPARTMENT
 DATE: _____ REVIEWED: _____ STRUCTURE FILE NUMBER: 4801024
 DRAWN: BPN CHECKED: JTB
 BRIDGE GENERAL NOTES
 LUC/ WOO - 20A / 199 - 10.48 / 29.04
 LUC-20A-1048 U.S.20 OVER 1-475
 3 / 14
 11 / 26



EXISTING ABUTMENT PLAN

 TO BE REMOVED

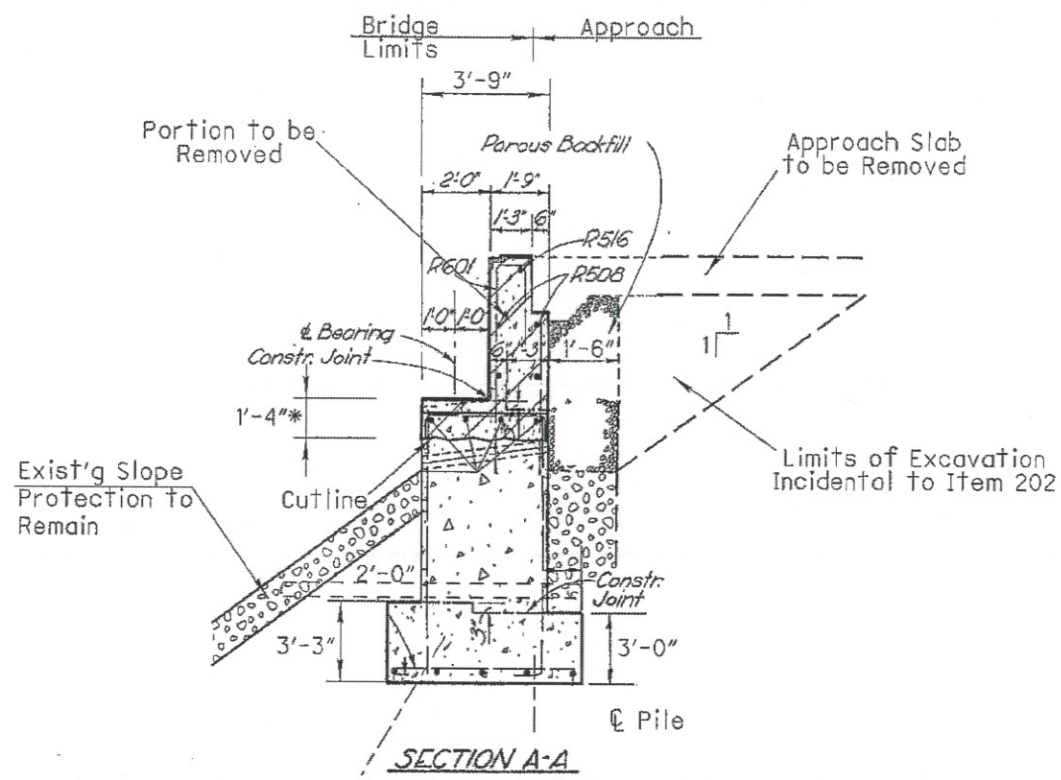


EXISTING ABUTMENT ELEVATION

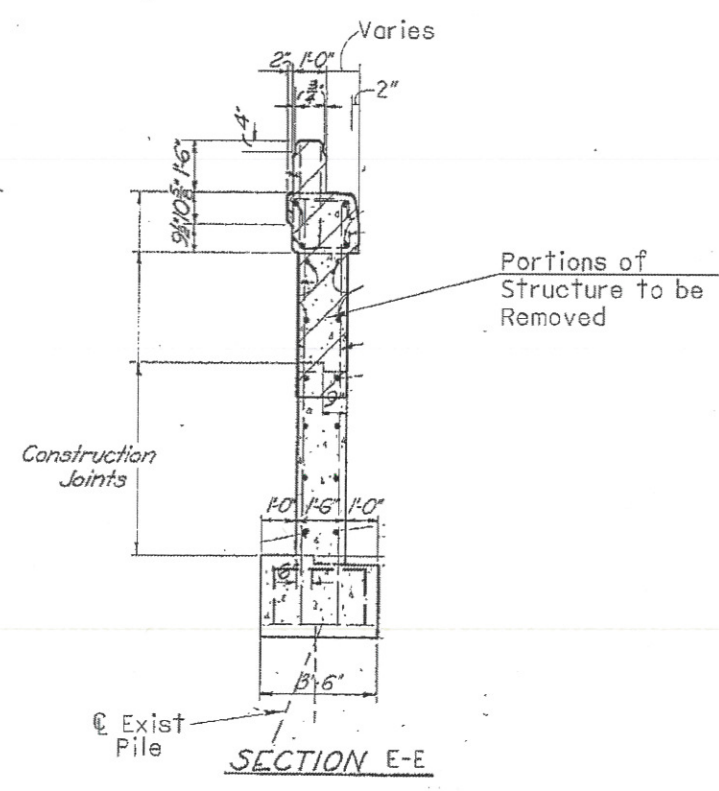
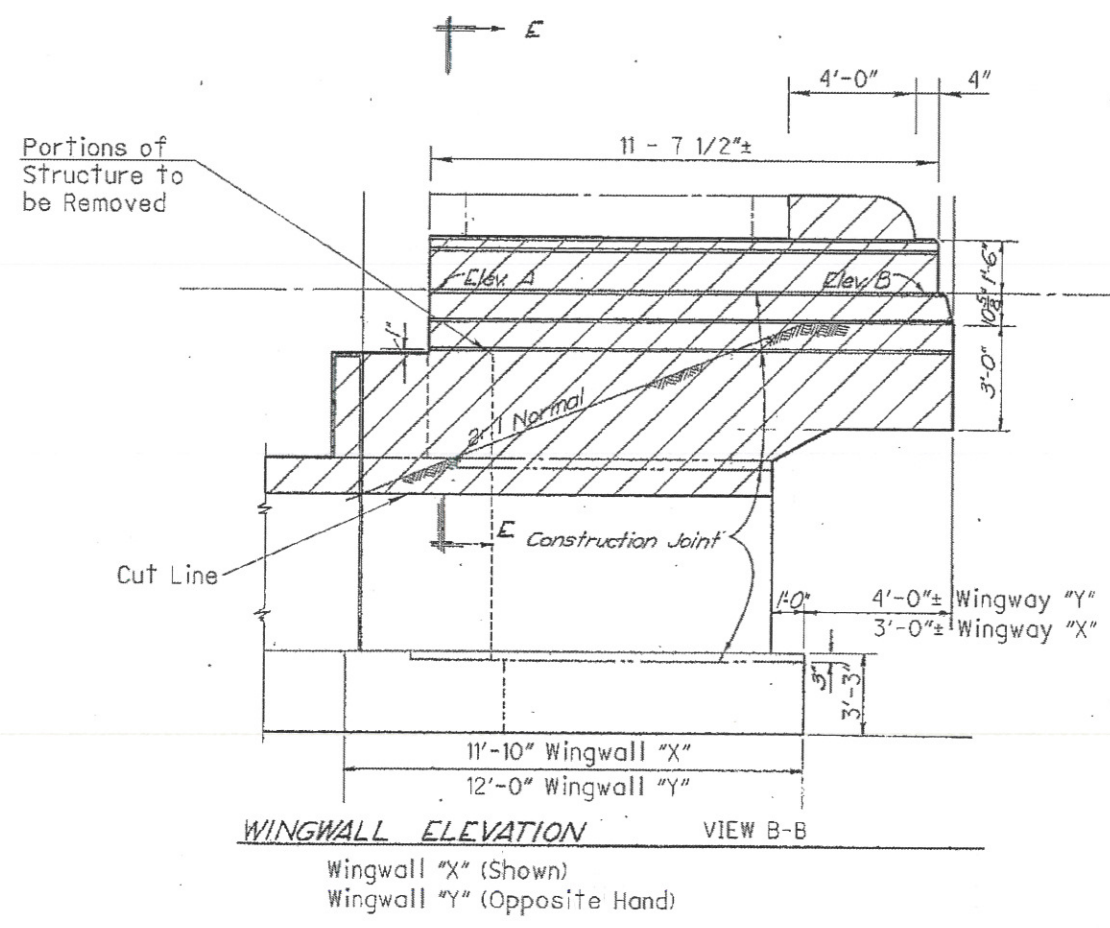
(*) LOCATE CUT LINE 16" BELOW LOWEST BEAM SEAT

DESIGNED		DRAWN		REVIEWED		DATE		DESIGN AGENCY	
JML	JTB	BPN	JTB					OHIO DEPT. OF TRANSPORTATION	DISTRICT TWO
CHECKED		REVIS		STRUCTURE FILE NUMBER		481024			
EXISTING ABUTMENT REMOVAL DETAILS BRIDGE No. LUC-20A-1048 U.S.20 OVER I-475									
LUC/WO0-20A/199		-10.48/29.04		PID No. 90196		4 / 14		12 / 26	

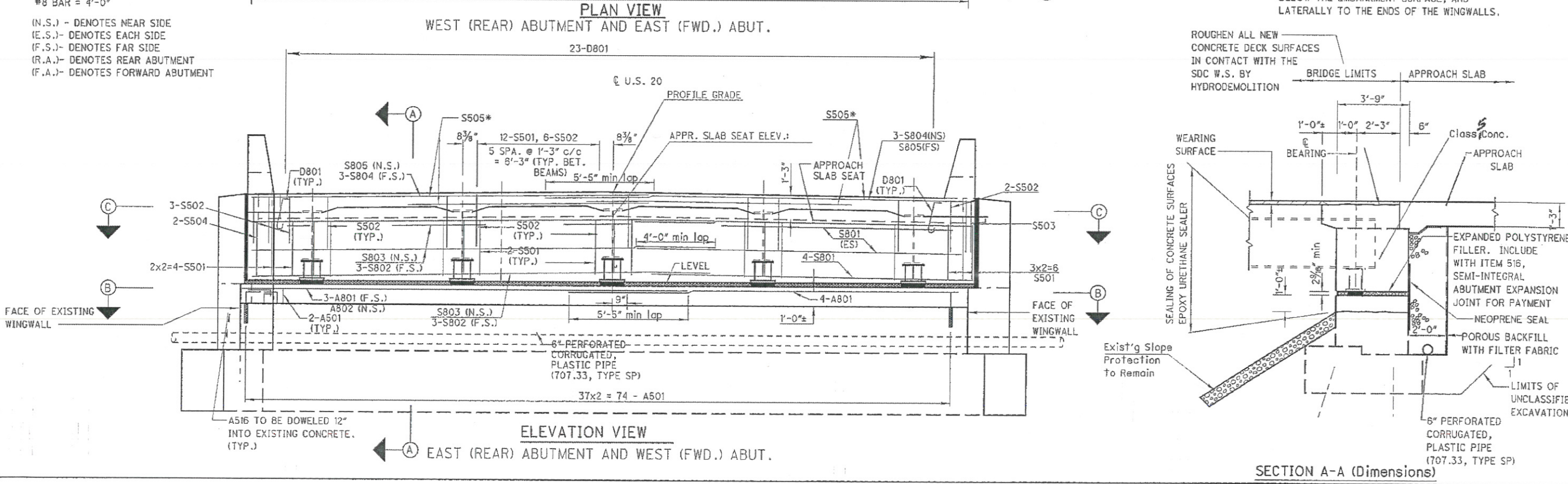
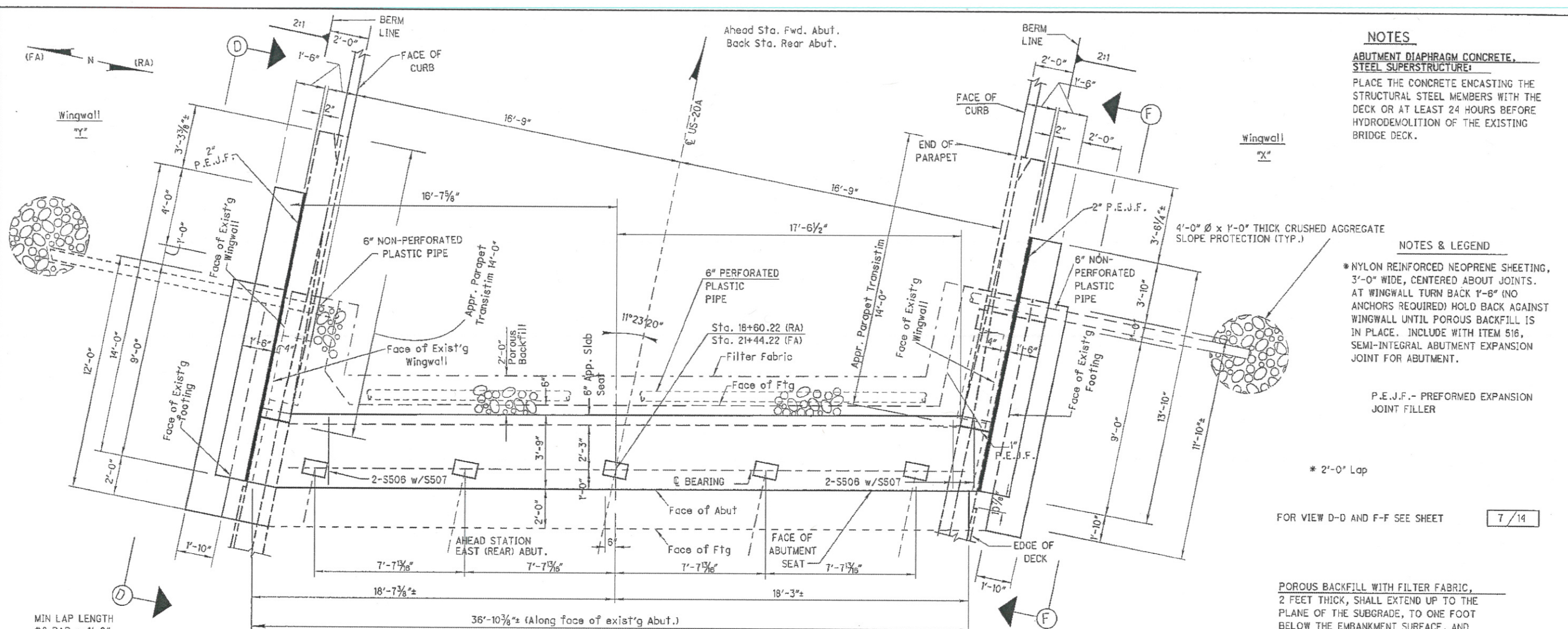
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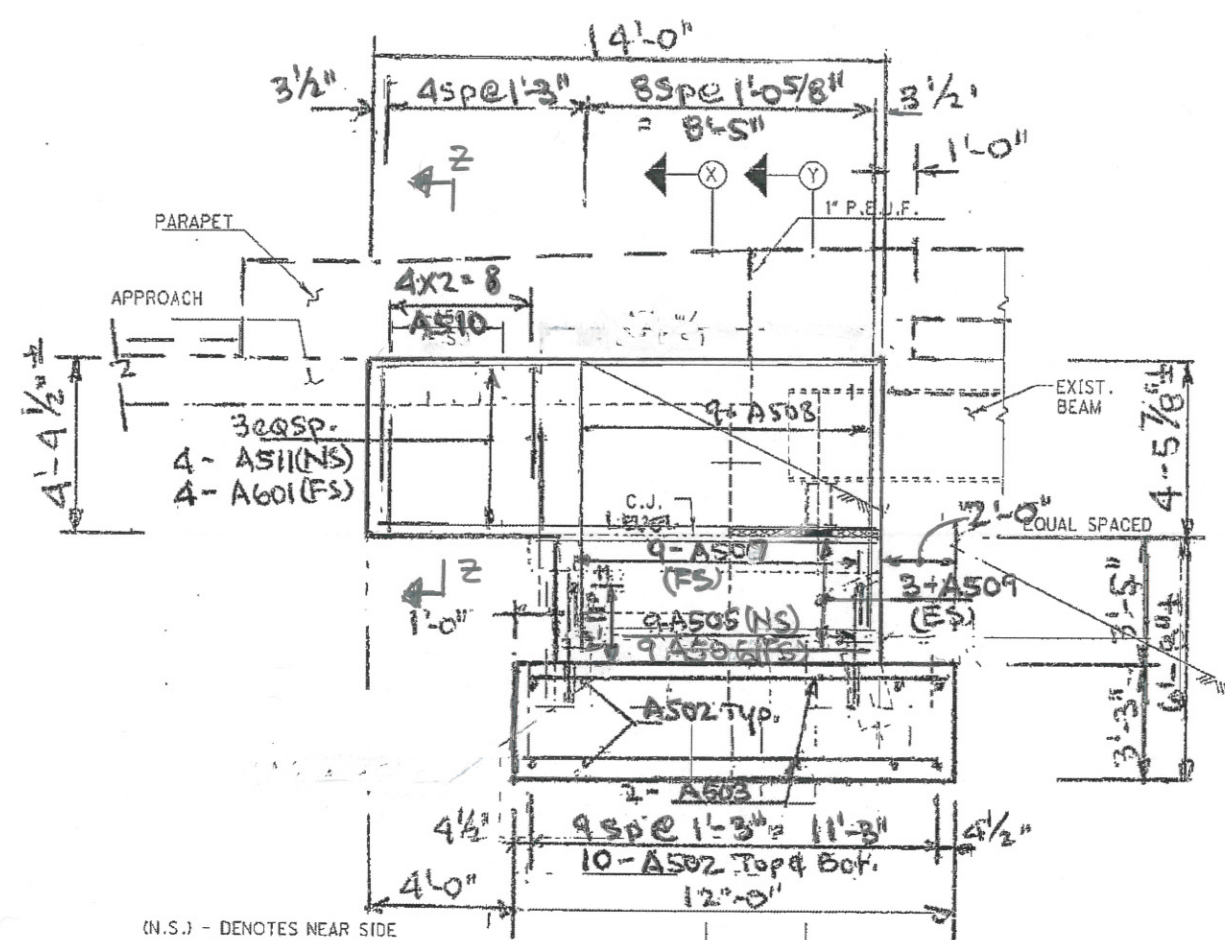
(*) Locate Cut Line 16" below Lowest Beam Seat. Saw Cut is Level Along Length of Abut.



DESIGNED		DRAWN		REVIEWED		DATE		DESIGN AGENCY	
JML		BPN						OHIO DEPT. OF TRANSPORTATION	
CHECKED		REVISED						DISTRICT TWO	
JTB								STRUCTURE FILE NUMBER 481024	
EXISTING ABUTMENT REMOVAL DETAILS					BRIDGE No. LUC-20A-1048				
LUC/WOO-20A/199					U.S. 20 OVER I-475				
-10.48/29.04									
PID No. 90196									
5/14									
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26									

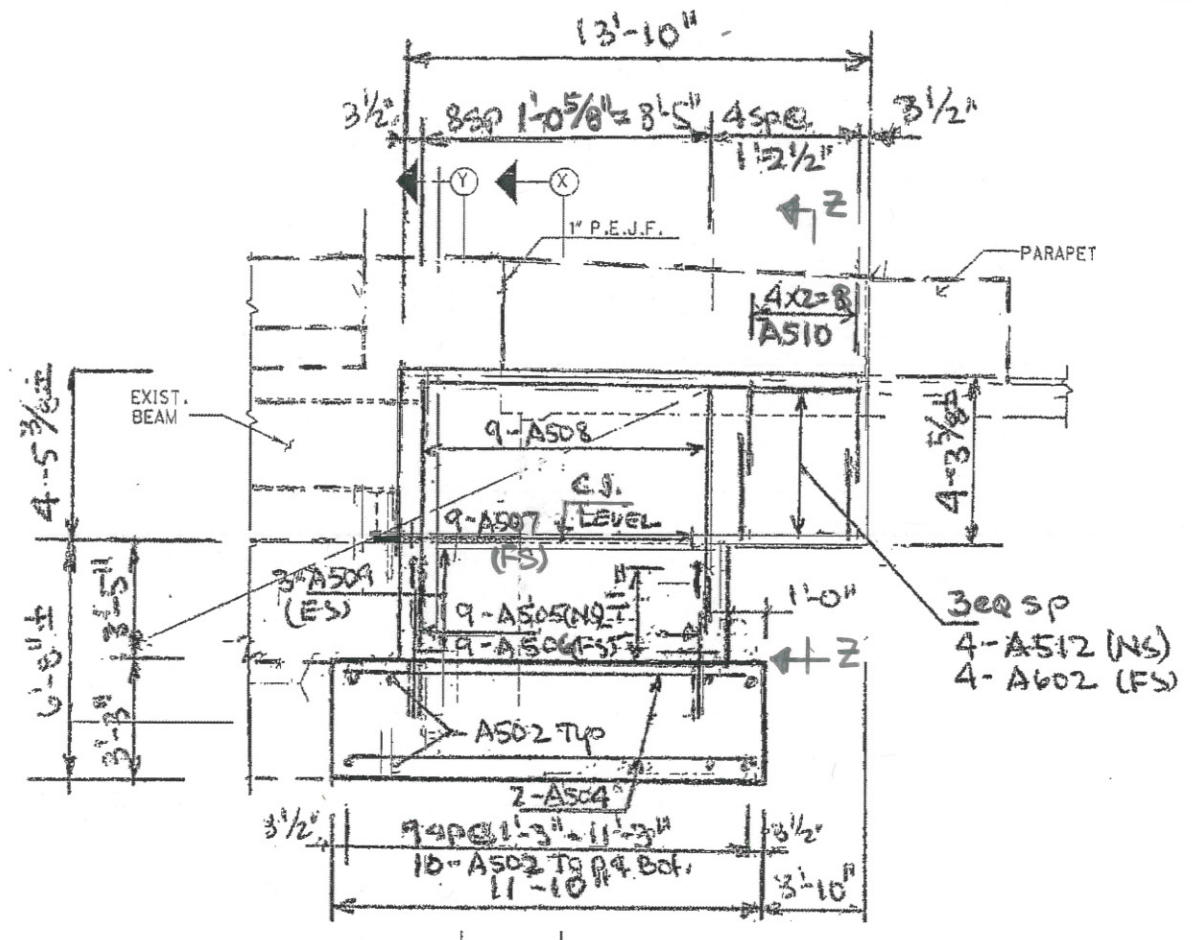


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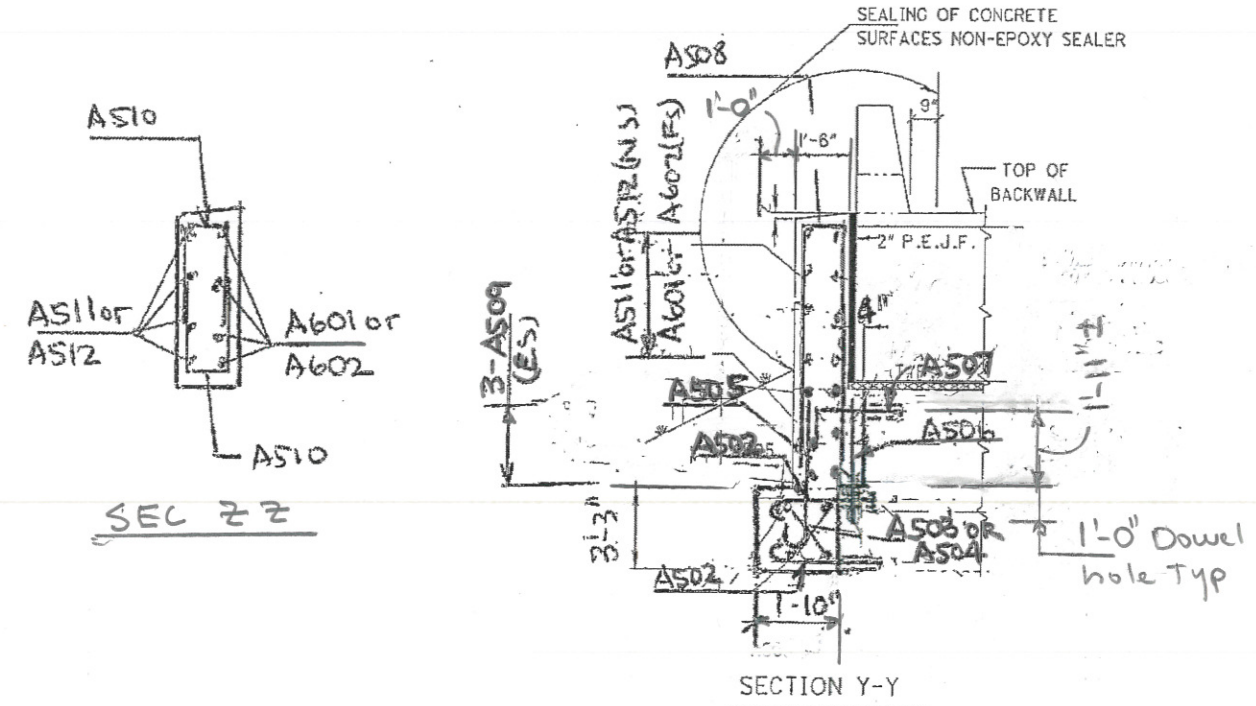


(N.S.) - DENOTES NEAR SIDE
 (E.S.) - DENOTES EACH SIDE
 (F.S.) - DENOTES FAR SIDE
 (R.A.) - DENOTES REAR ABUTMENT
 (F.A.) - DENOTES FORWARD ABUTMENT

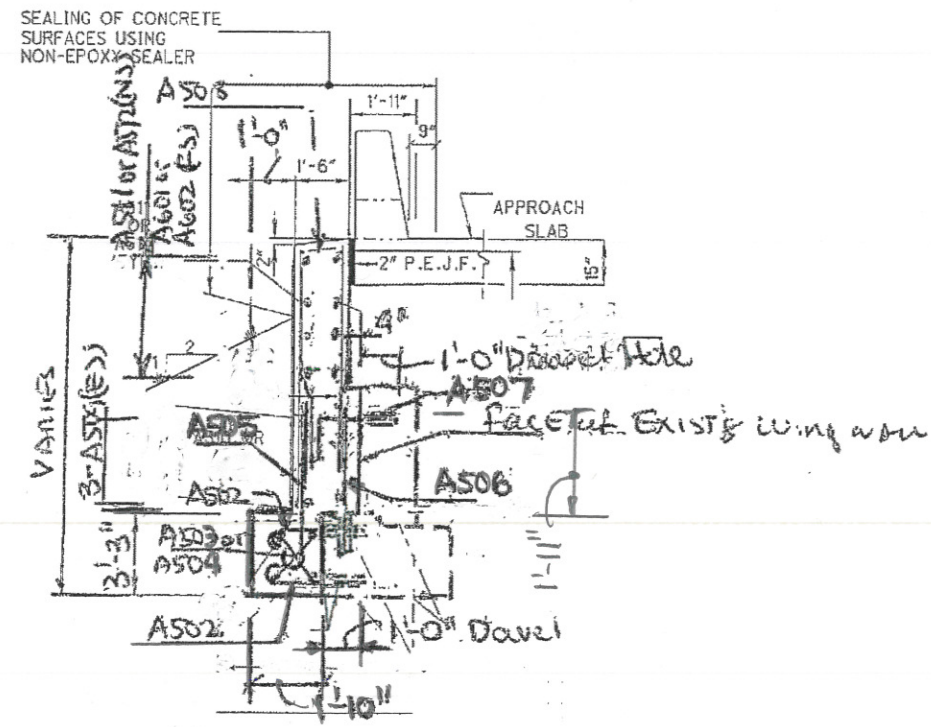
VIEW D-D (Wingwall 'Y')
 WINGWALL ELEVATION



VIEW F-F (Wingwall 'X')
 WINGWALL ELEVATION

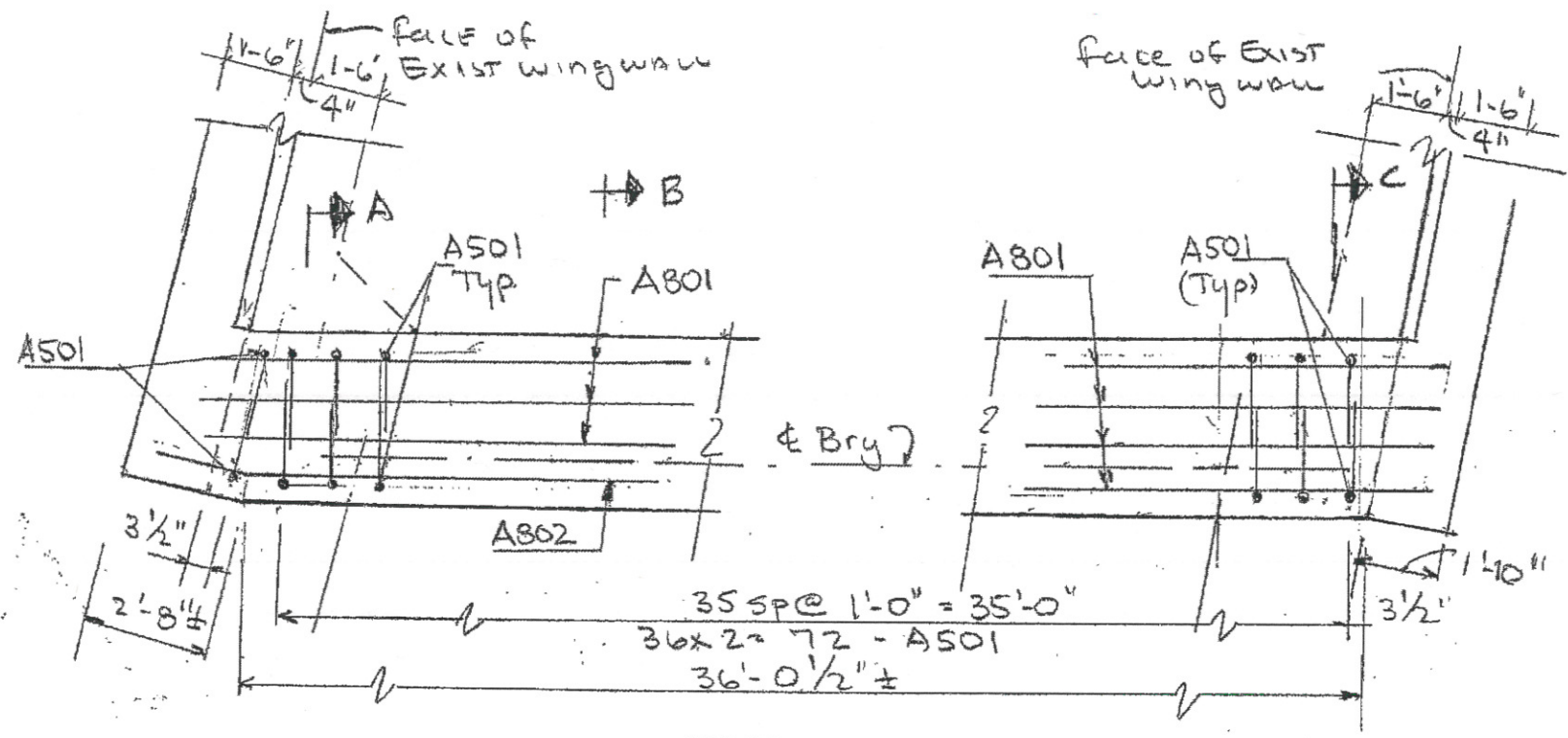


SECTION Y-Y

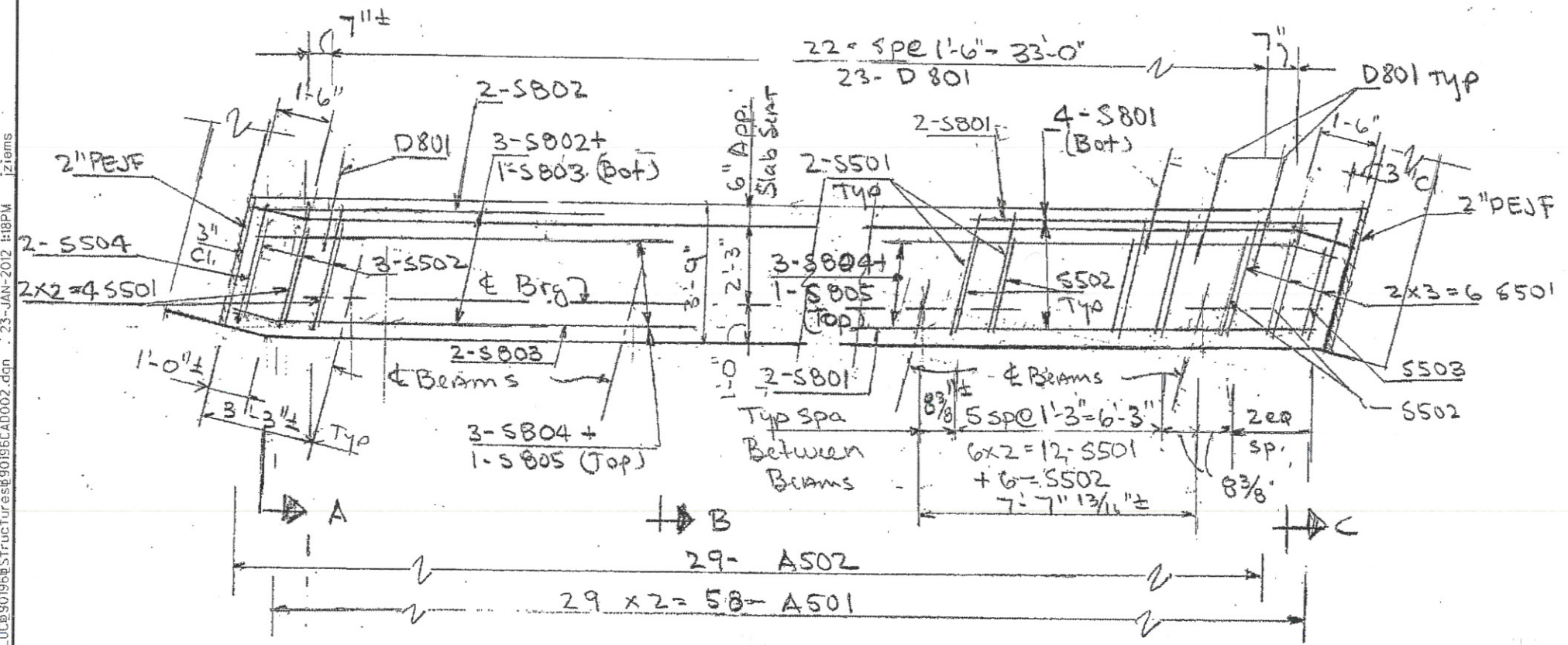


SECTION X-X

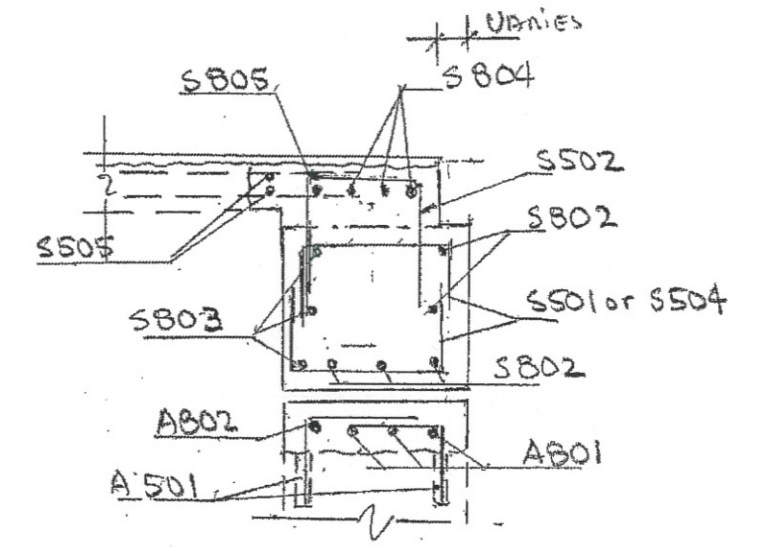
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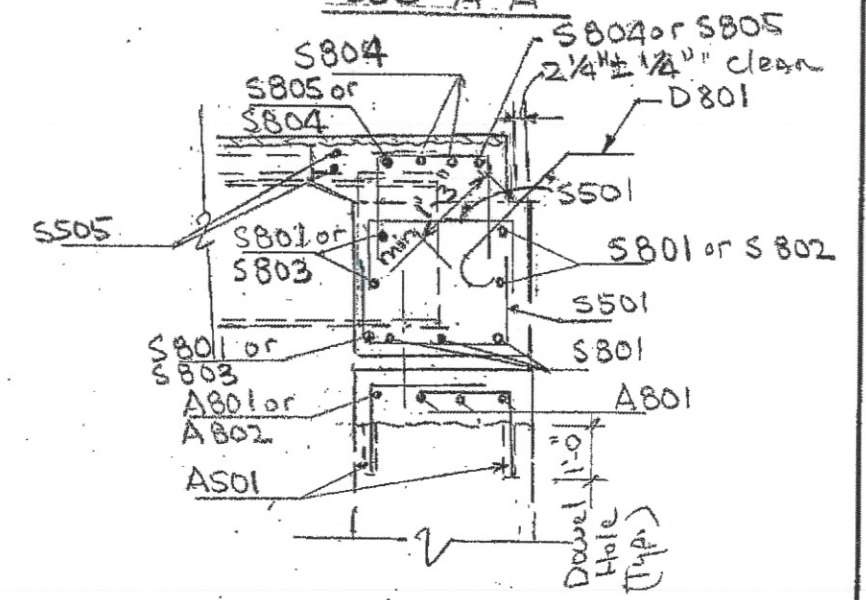
SECTION B-B



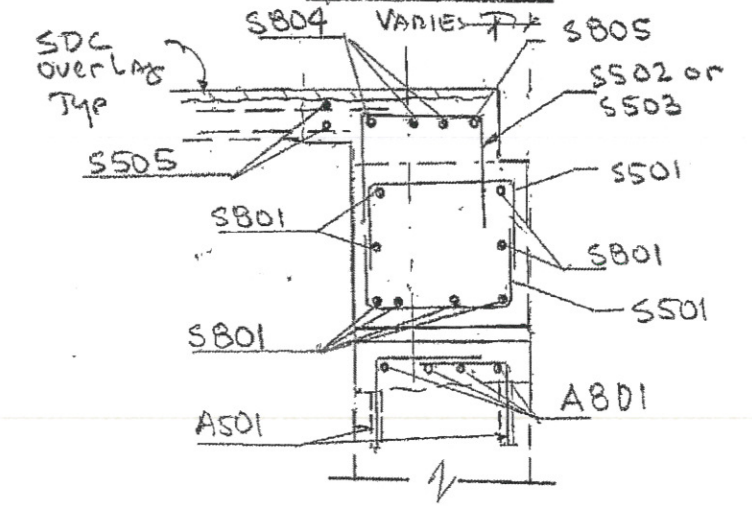
SECTION C-C



SEC A-A

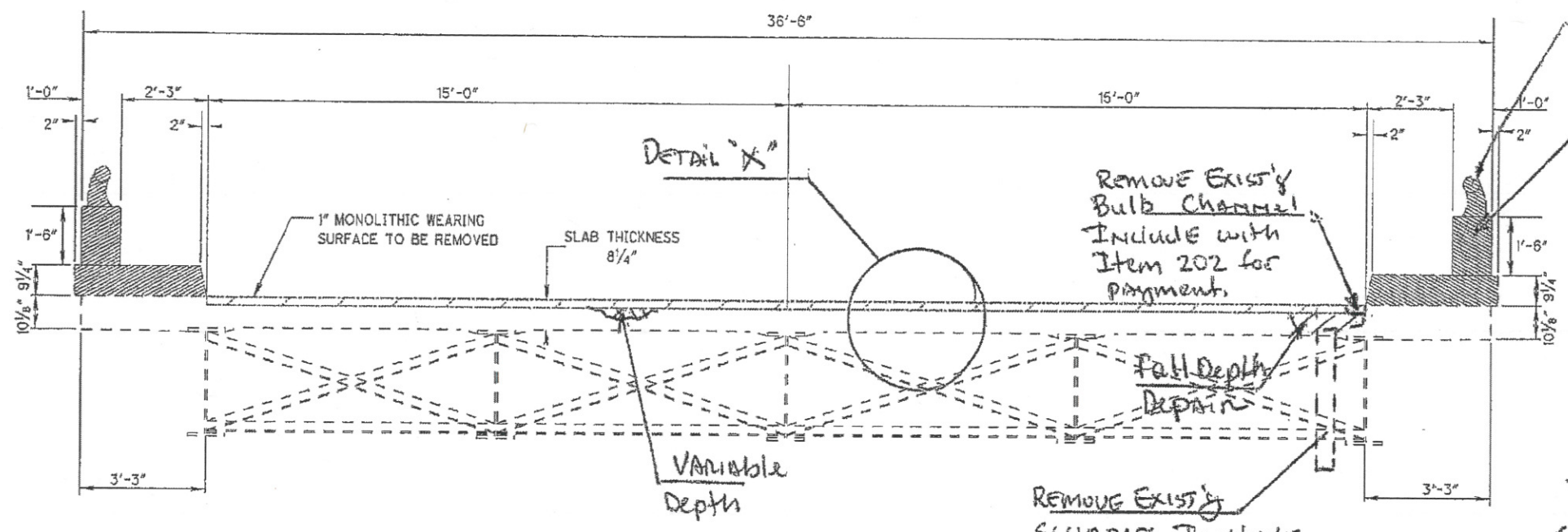


SEC B-B

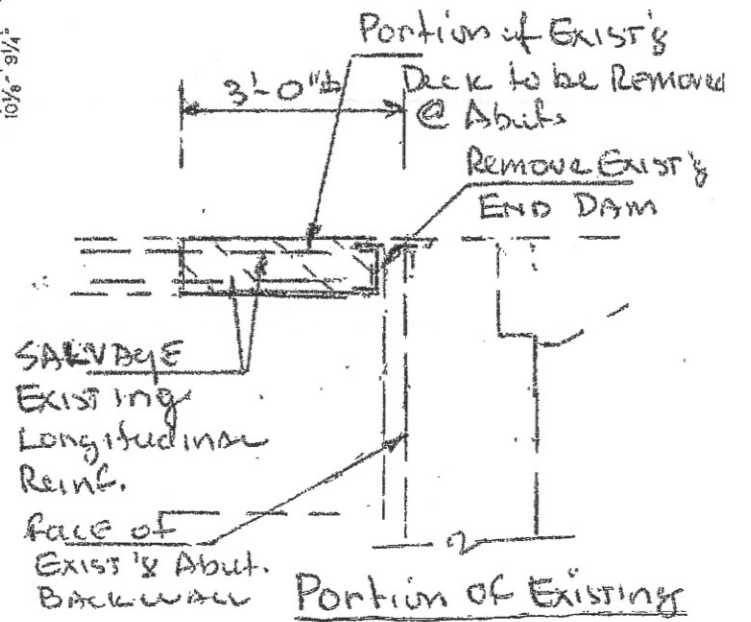


SEC C-C

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EXISTING TRANSVERSE CROSS-SECTION

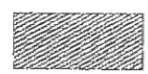


Portion of Existing Bridge Deck to be Removed AT ABUTMENTS

REMOVAL NOTES

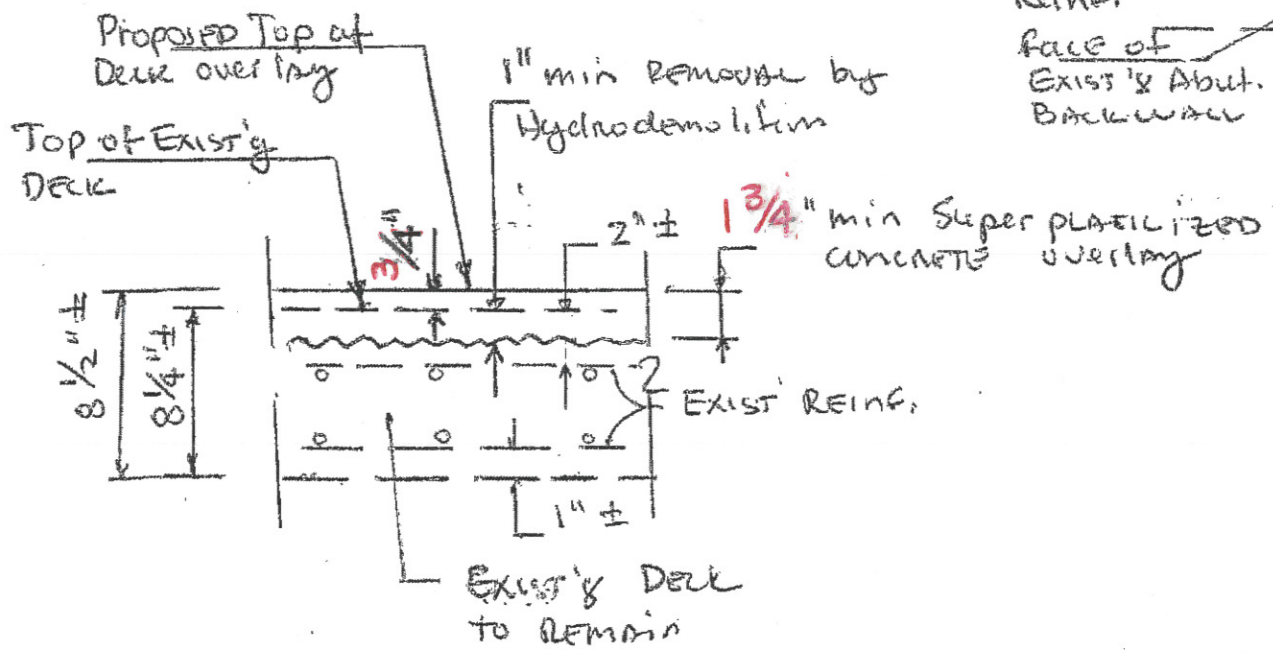
FIELD VERIFY ALL EXISTING DIMENSIONS.

ALL DIMENSIONS ARE ± ON THE EXISTING STRUCTURE.

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

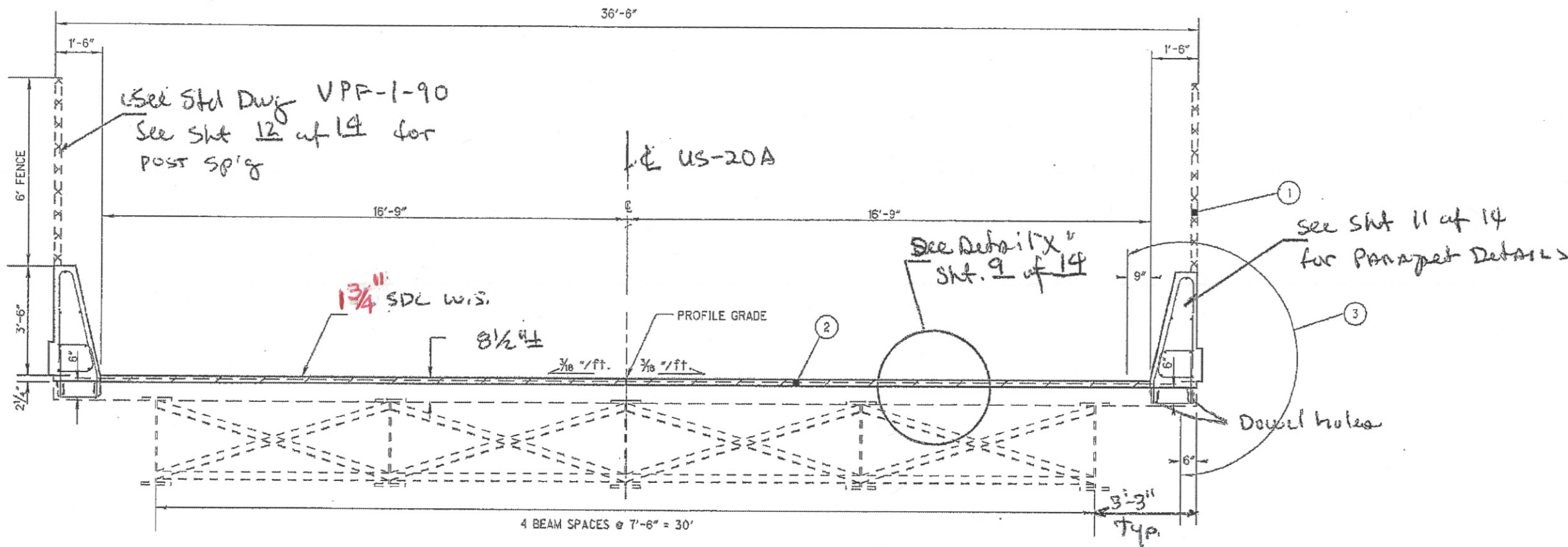
SCUPPER SUPPORT AND ANCHORING BOLTS AND ANGLES SHALL BE REMOVED AND GROUND FLUSH TO WEB SPLICE PLATES DURING CONCRETE DECK REMOVAL. GRINDING SHALL BE DONE IN A HORIZONTAL DIRECTION. PAYMENT IS INCLUDED WITH ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

1" OF THE EXISTING MONOLITHIC DECK SURFACE IS TO BE REMOVED USING HYDRODEMOLITION.



DETAIL "X"

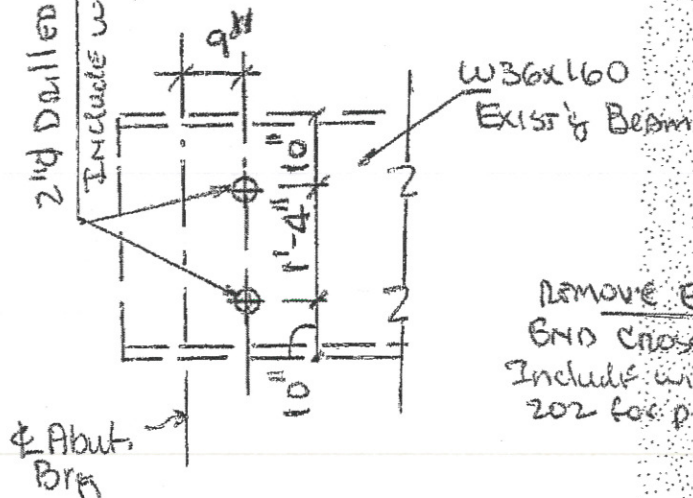
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TRANSVERSE CROSS-SECTION

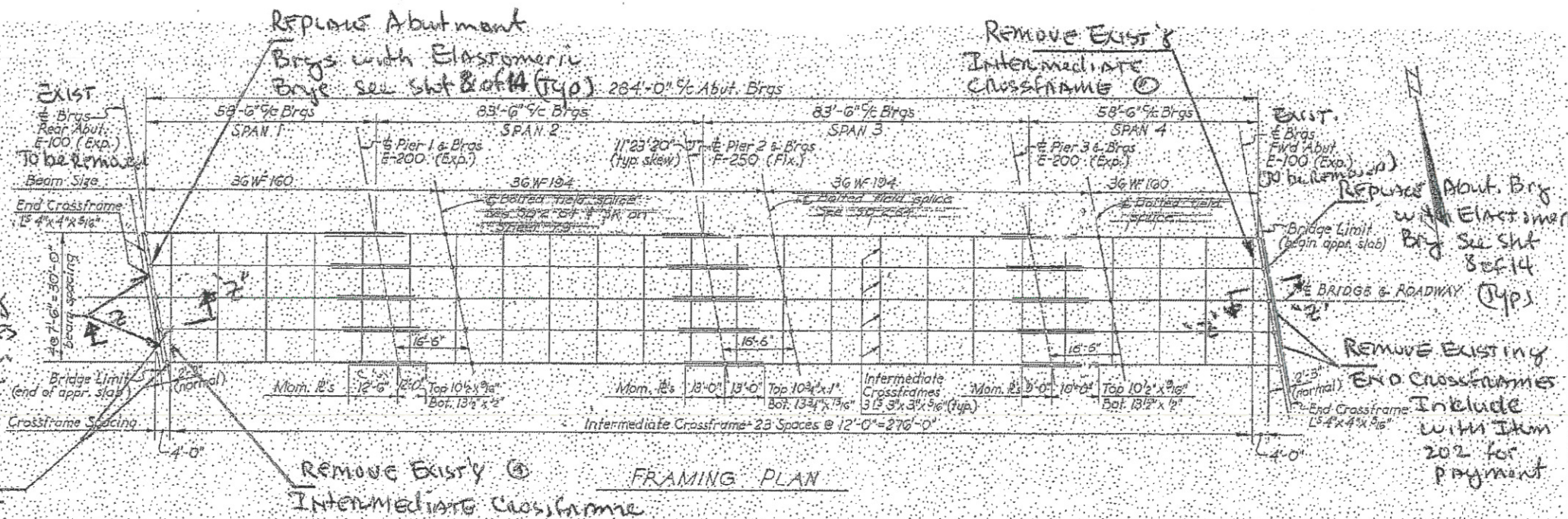
- ① BID ITEM 607: VANDAL PROTECTION FENCE
- ② 848 SDL WEARING SURFACE
- ③ SEALING OF CONCRETE SURFACES (NON-EPOXY SEALER)

2" Drilled Holes
Include with Item 504 for Payment

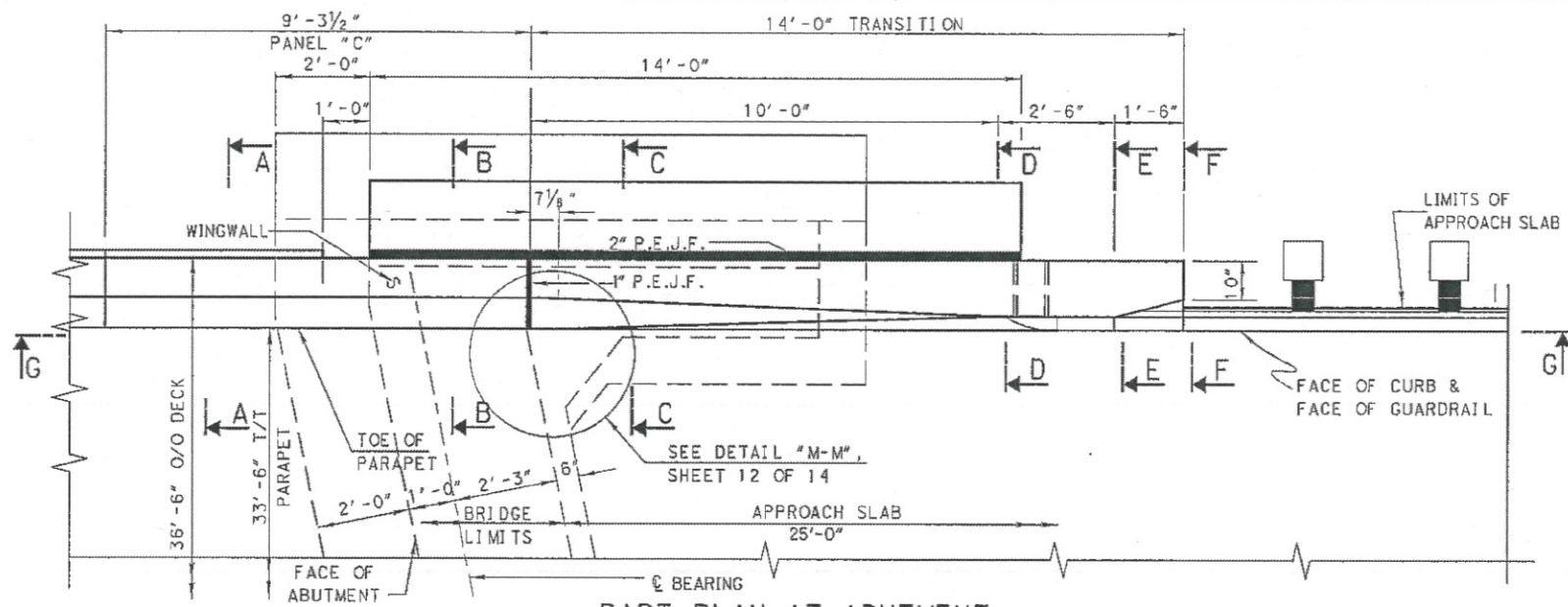


REMOVE EXISTING END CROSSFRAMES Include with Item 202 for payment

REPAIR PAINT SYSTEM As per Item 514 (Typ.)



④ GRIND ALL WELDS FLUSH TO EXISTING STEEL SURFACES TO REMAIN AFTER REMOVAL



PART PLAN AT ABUTMENT
LEFT FORWARD (WEST) ABUTMENT AND RIGHT REAR (EAST) ABUTMENT (ROTATED 180°)

NOTES

QUANTITIES OF CONCRETE FOR THE APPROACH SLAB ARE INCLUDED WITH ITEM 526 REINFORCED CONCRETE (APPROACH SLAB), (T=15").

FOR BRIDGE TERMINAL ASSEMBLY, SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.

MIN. LAP SPLICES: #5 BAR = 2'-0"
#6 BAR = 3'-4"

LEGEND: N.S. = NEAR SIDE
F.S. = FAR SIDE

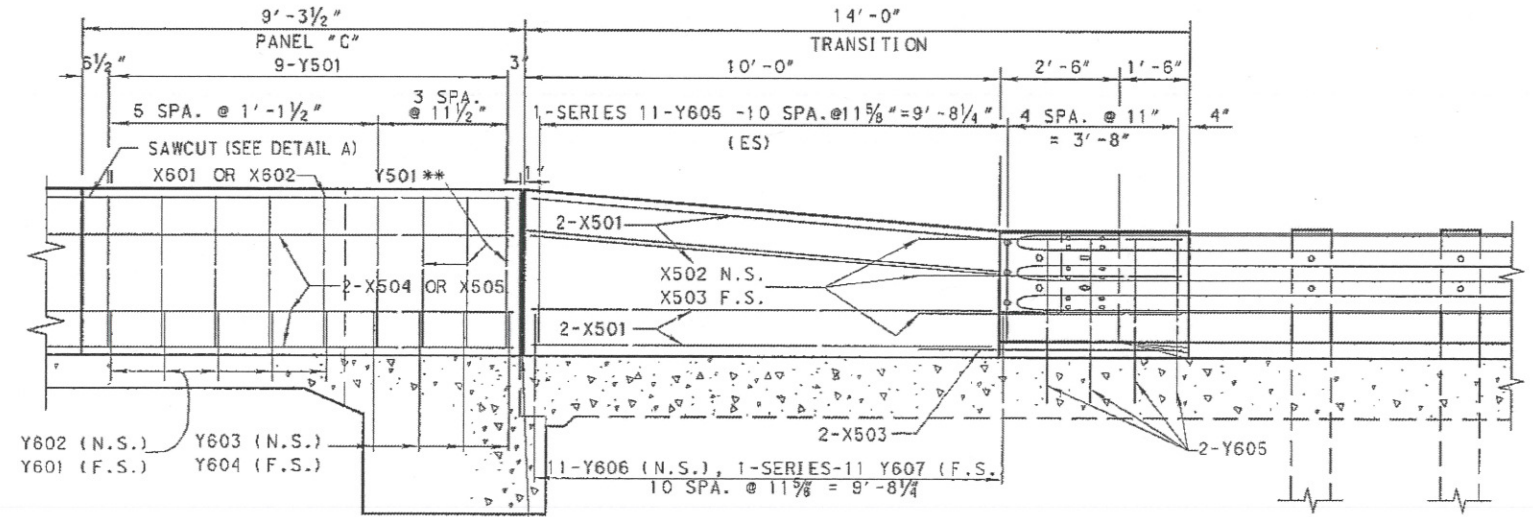
FOR ADDITIONAL REINFORCING DETAILS, SEE PLAN SHEET 14/14.

SECTIONS J-J, K-K, L-L, M-M, N-N, AND P-P REFER TO PLAN SHEET 12/14.

QUANTITIES FOR THE PARAPET TRANSITION CONCRETE ARE INCLUDED WITH ITEM 511, CLASS S CONCRETE BRIDGE DECK (PARAPET).

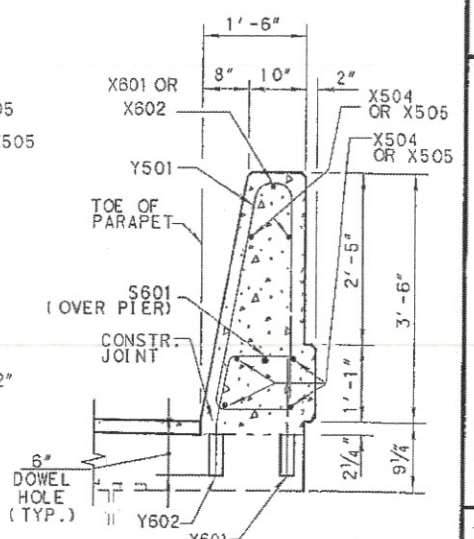
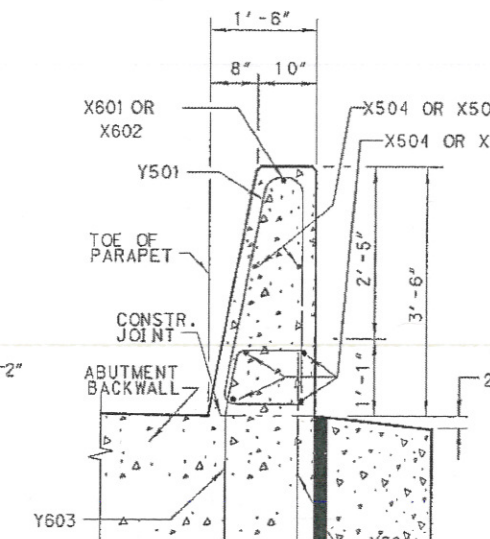
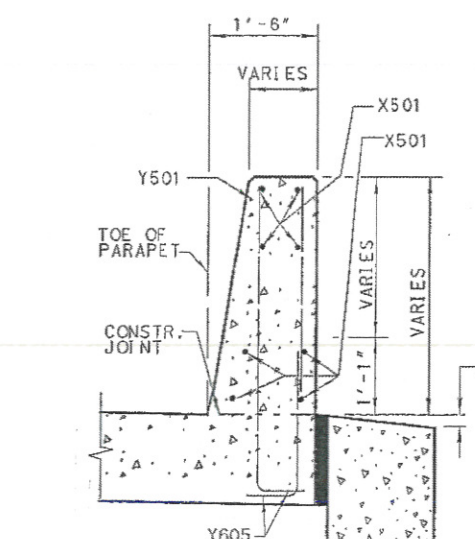
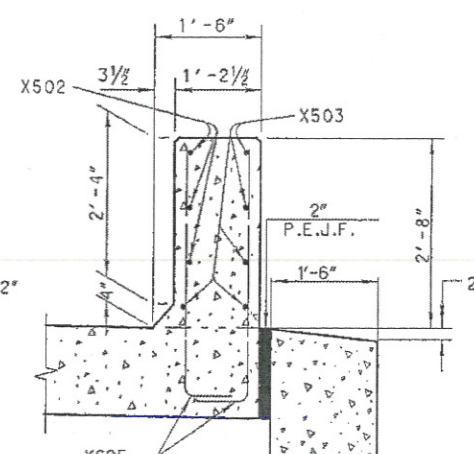
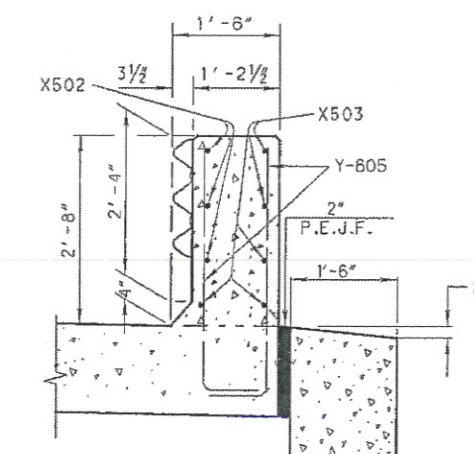
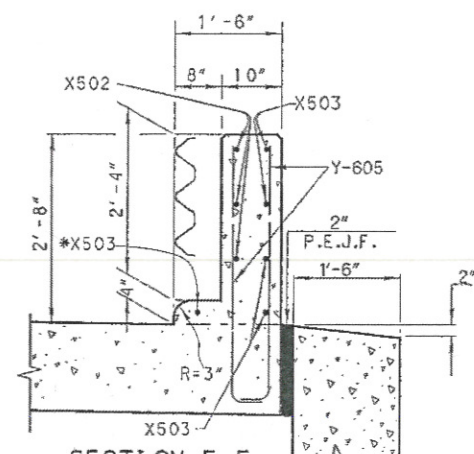
QUANTITIES FOR THE PARAPET TRANSITION CONCRETE ARE INCLUDED WITH ITEM 511, CLASS S CONCRETE BRIDGE DECK (PARAPET).

QUANTITIES FOR THE PARAPET TRANSITION REINFORCEMENT ARE INCLUDED WITH ITEM 509, EPOXY COATED REINFORCING STEEL.



VIEW G-G
PREFORMED ELASTOMERIC COMPRESSION SEAL INCLUDED WITH APPR. SLAB FOR PAYMENT.

PANEL "C"
(2 REQUIRED)
(REFER TO PLAN SHEET 12/14)



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DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION DISTRICT NO. 2 PRODUCTION DEPARTMENT

DATE: XXXXXXXX STRUCTURE FILE NUMBER: 4801024

REVISIONS: 1. JML 2. JTB

DRAWN: BPN REVISIONS: 1. JML 2. JTB

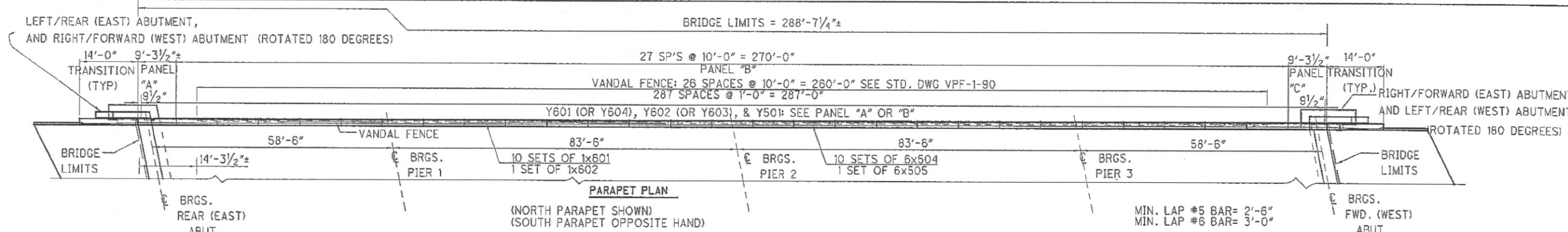
APPROACH SLAB PARAPET DETAILS

LUC/ WOO -20A/ 199 - 10.48 / 29.04

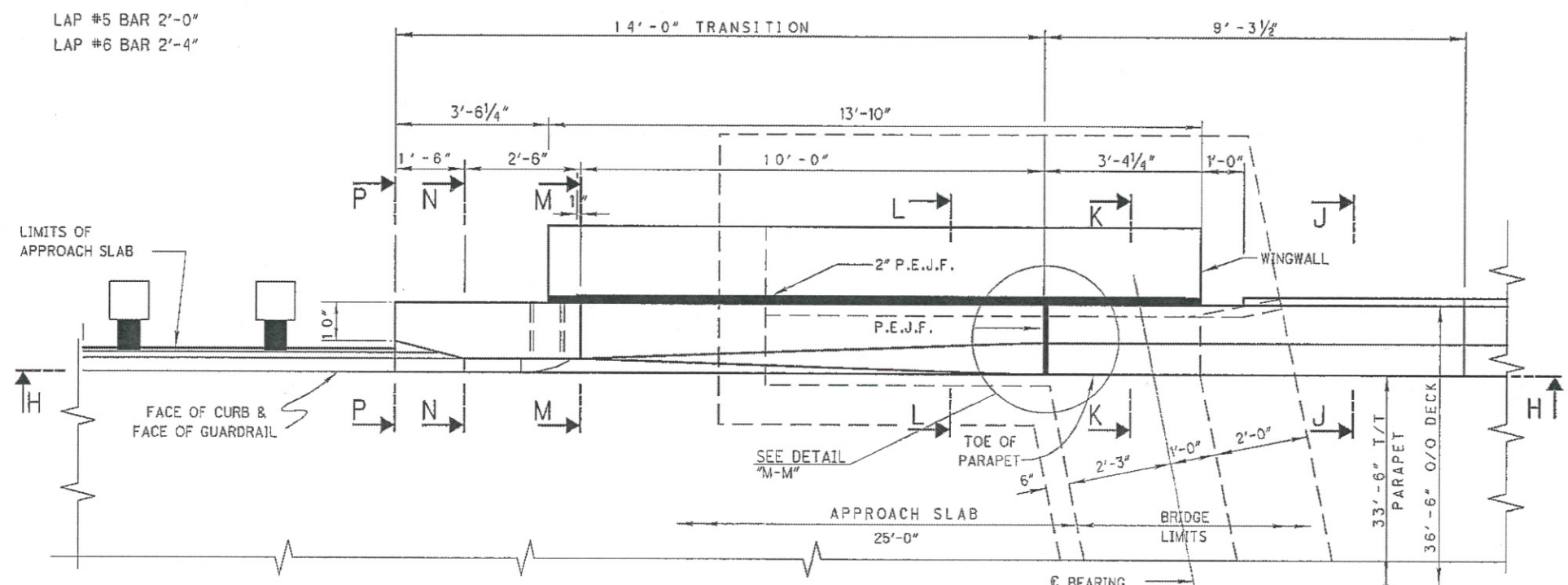
LUC-20A-1048 U.S. 20 OVER I-475

11 / 14

19 / 26



LAP #5 BAR 2'-0"
LAP #6 BAR 2'-4"



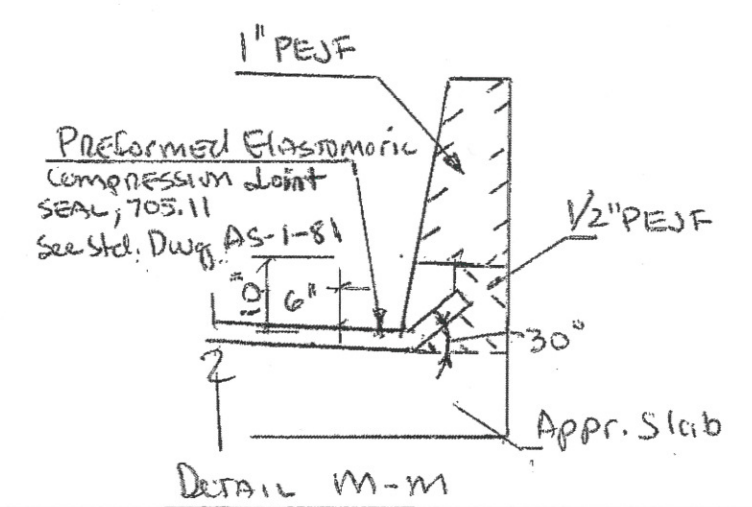
(N.S.) - DENOTES NEAR SIDE
(F.S.) - DENOTES FAR SIDE

NOTES

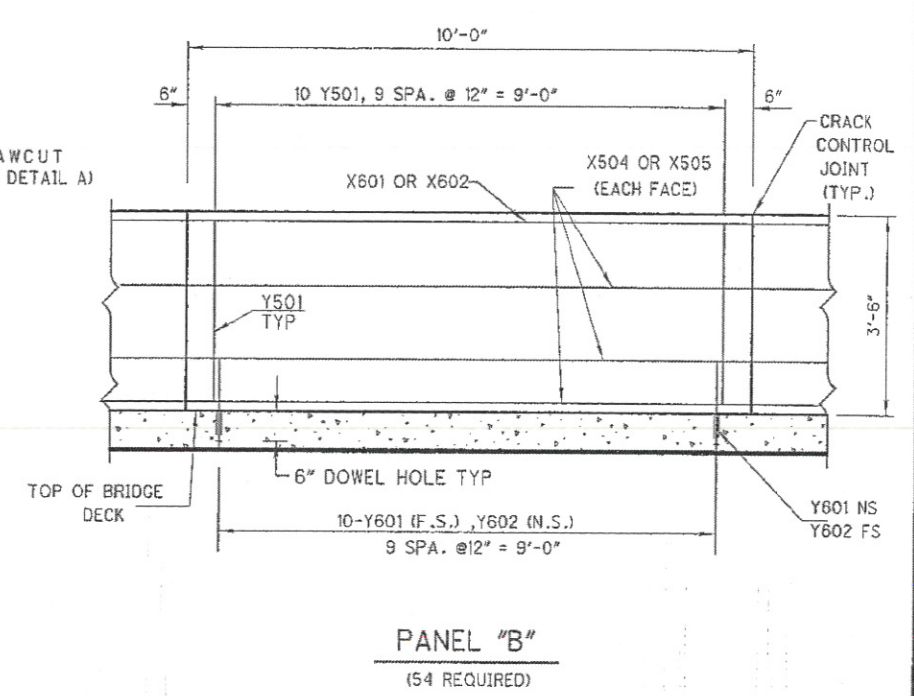
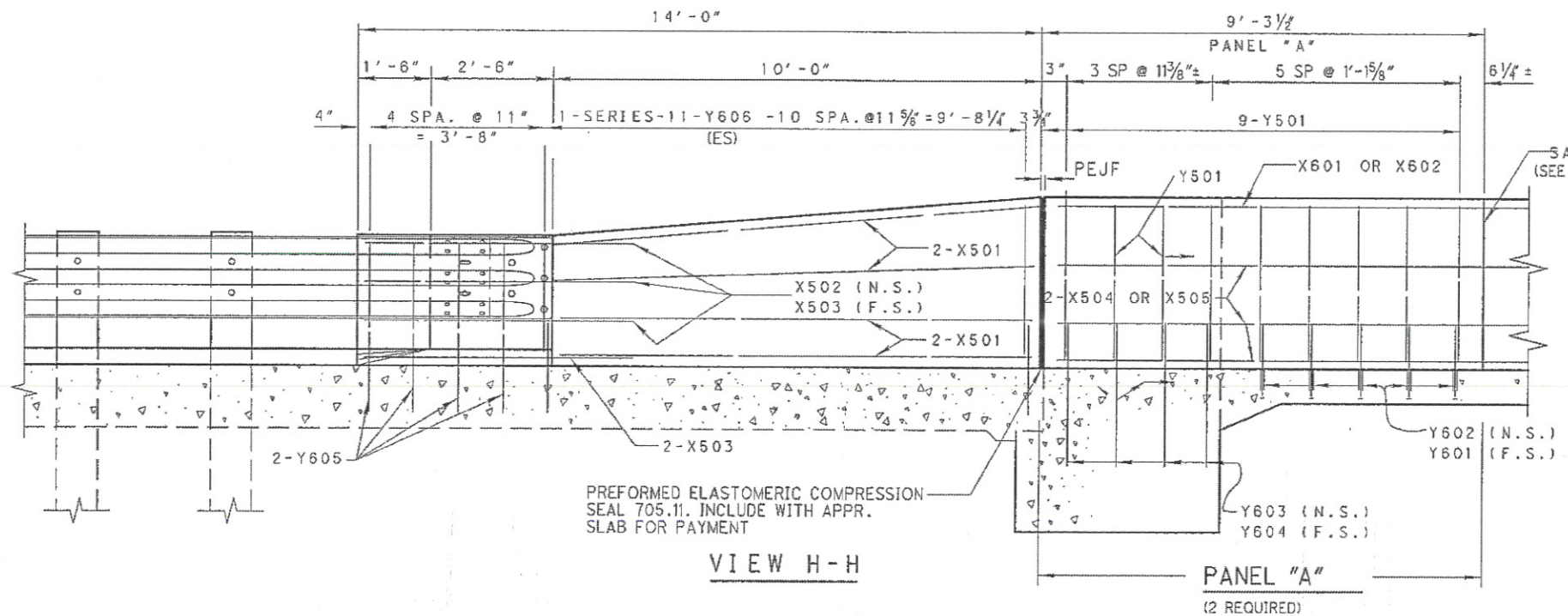
FOR PANEL "C", SEE SHEET 11 / 14

FOR SECTIONS J-J, K-K, L-L, M-M, N-N, AND P-P, SEE SHEET 11 / 14

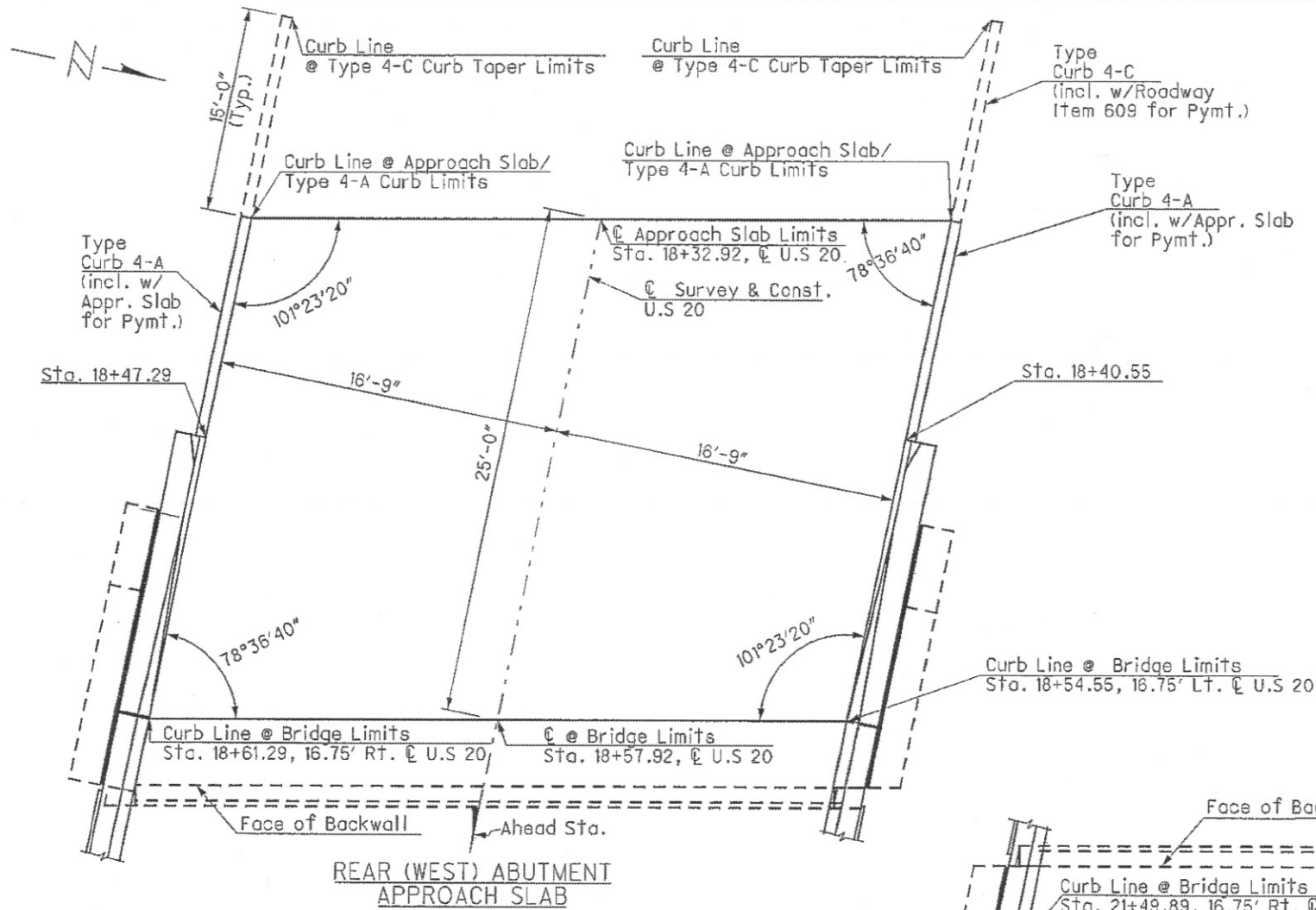
SEE DETAIL A ON SHEET 11 / 14



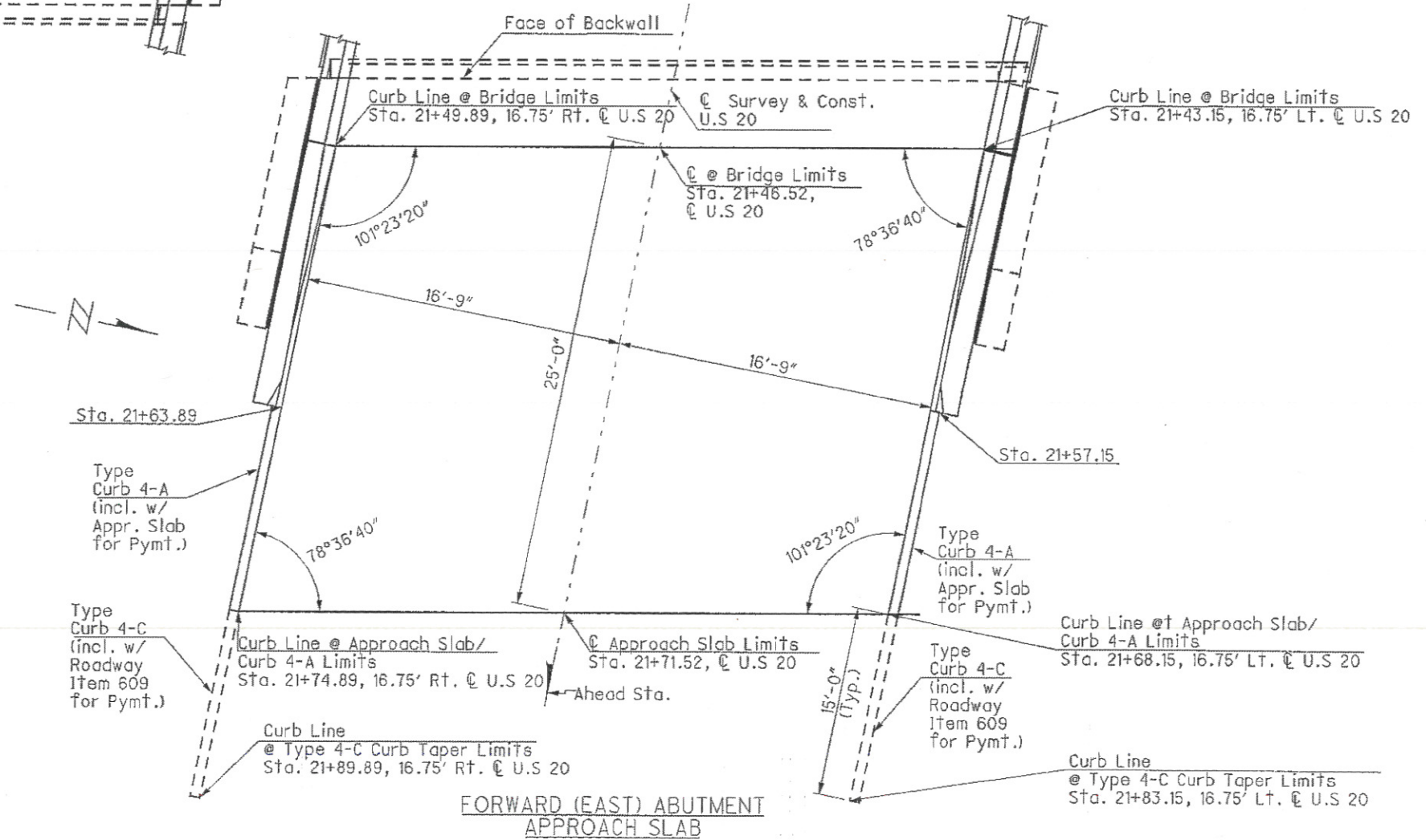
PART PLAN AT ABUTMENT
LEFT/REAR (EAST) ABUTMENT AND RIGHT/FORWARD (WEST) ABUTMENT (ROTATED 180°)



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REAR (WEST) ABUTMENT
APPROACH SLAB



FORWARD (EAST) ABUTMENT
APPROACH SLAB

NOTE: CONTRACTOR WILL BE RESPONSIBLE FOR FINAL GRADE ELEVATIONS AS PER ITEM SPECIAL, SURVEY OF EXISTING STRUCTURE.

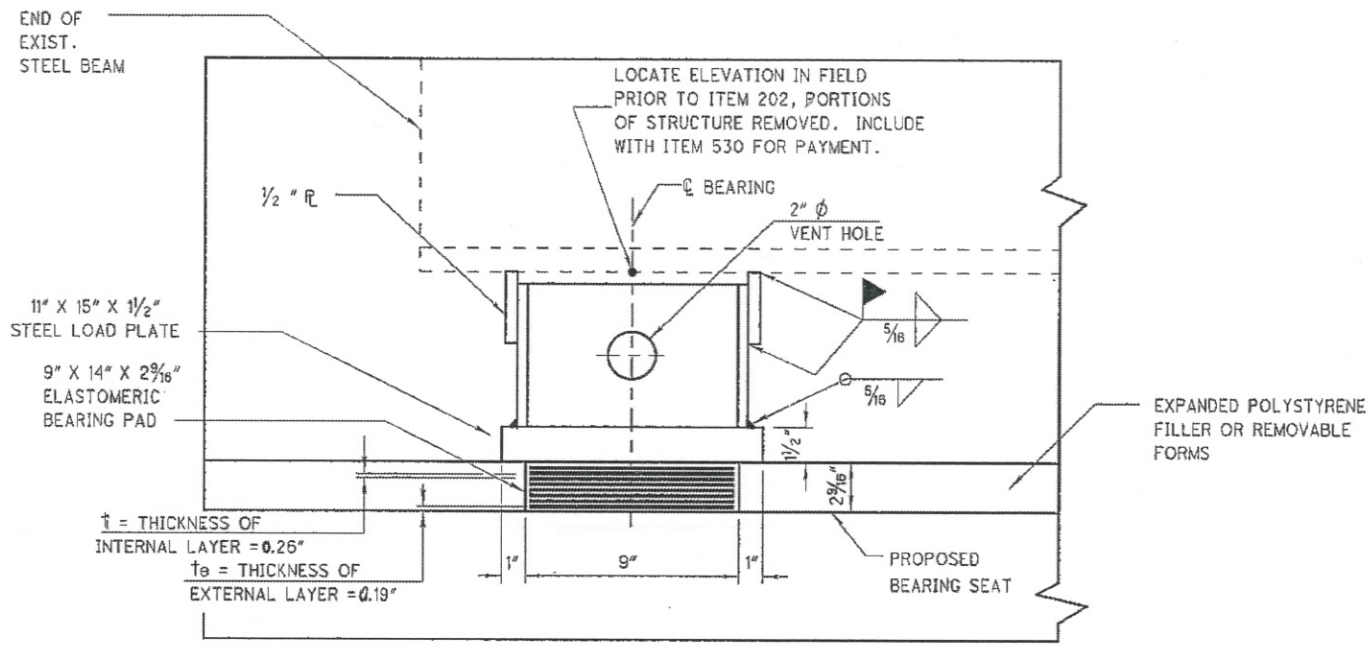
FOR PARAPET REINFORCEMENT SEE SHEET 11 AND 12 OF 14.

CONCRETE FOR PARAPETS ON THE APPROACH SLABS SHALL BE INCLUDED WITH ITEM 511, CLASS S, CONCRETE BRIDGE DECK (PARAPET)

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OHIO DEPARTMENT OF TRANSPORTATION DISTRICT NO. 2 PRODUCTION DEPARTMENT	
DATE	STRUCTURE FILE NUMBER 4801024
REVISION	REVISION
DRAWN BPN	CHECKED JTB
DESIGNED JML	REVISION JTB
APPROACH SLAB DETAILS	
LUC-20A-1048 U.S 20 OVER 1-475	
LUC / WOO-20A / 199 - 10.48 / 29.04	
13 / 14	21 26

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**REAR AND FORWARD ABUTMENT
LAMINATED ELASTOMERIC EXPANSION BEARING**

NO. OF INTERNAL ELASTOMERIC LAYERS @ 0.26" THICK EACH = 7
 NO. OF INTERNAL STEEL LAMINATE PLATES @ 0.0747" THICK EACH (14 GAUGE) = 8

NOTES:

ITEM 516 - ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE):
MATERIALS: THE HP SHAPE (SUPPORT MEMBER) AND STEEL LOAD PLATES MAY BE A307 GRADE 36 OR GRADE 50 STEEL.

STEEL SHALL BE SHOP PRIMED AS PER ITEM 514. PAYMENT SHALL BE INCLUDED WITH ITEM 516. FINAL COATING SHALL BE AS PER ITEM 514 AND INCLUDED WITH ITEM 514 REPAIR AND TOUCH-UP OF EXISTING STRUCTURAL STEEL.

WELDING: WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

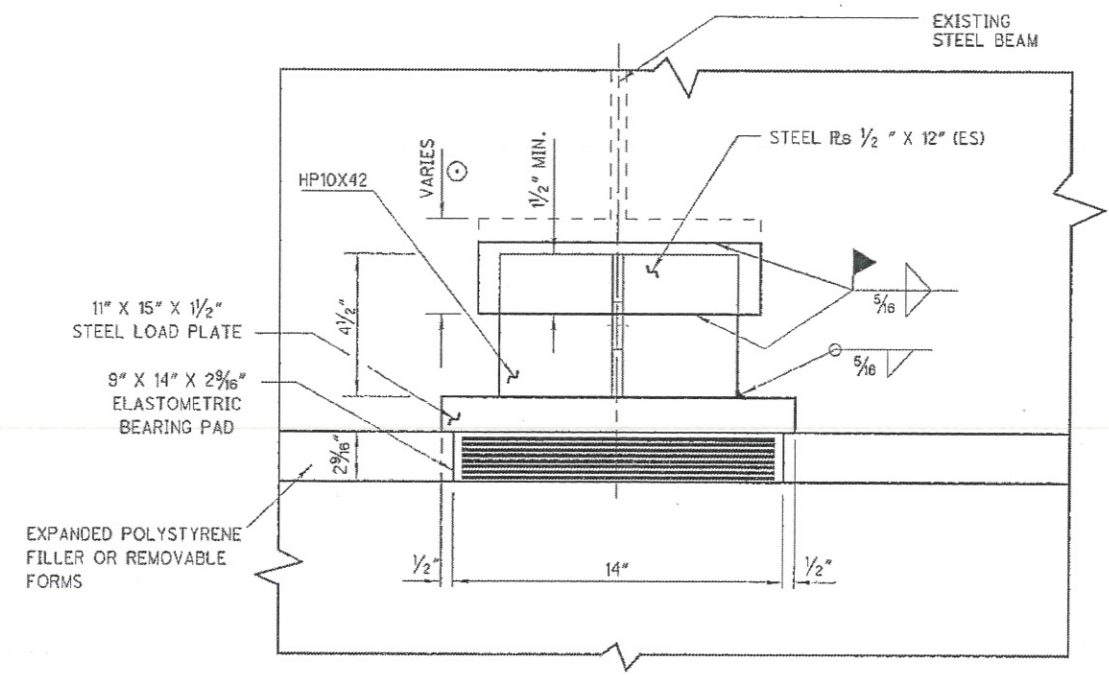
ELASTOMERIC BEARING: SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE.

BEARING REPOSITIONING: IF THE EXISTING STEEL BEAMS ARE AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F WHEN THE BEARINGS ARE PLACED AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE SIXTH OF THE BEARING HEIGHTS AT 60°F ± 10°F, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARING TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ± 10°F.


BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE); AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE):

9"x14"x2 3/16" WITH 11"x15"x1/2" LOAD PLATE, (REAR AND FORWARD ABUTMENTS)

DESIGN LOADS:
 DL= 59.4 KIPS
 LL= 44.3 KIPS
 TOTAL= 103.7 KIPS

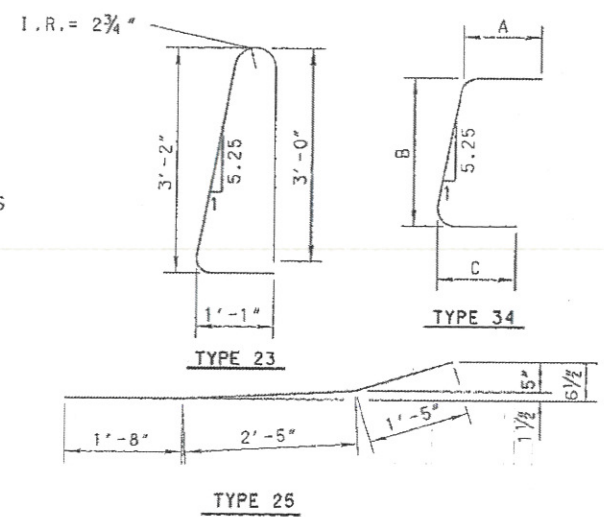
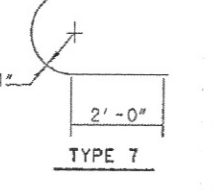
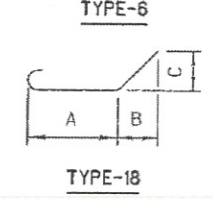
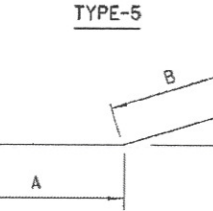
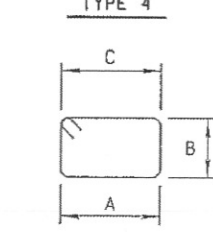
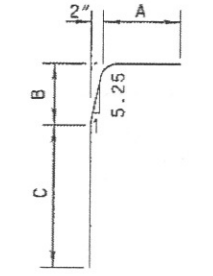
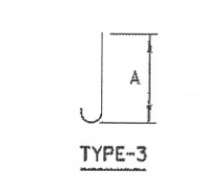
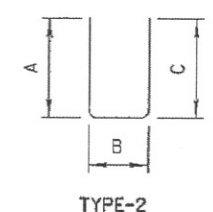
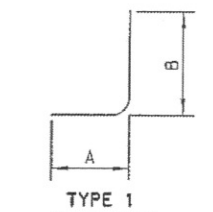


NOTE:
 ○ TO BE DETERMINED IN FIELD
 (ES) DENOTES EACH SIDE

 OHIO DEPARTMENT OF TRANSPORTATION DISTRICT No. 2 PRODUCTION DEPARTMENT
DATE: _____ REVIEWED: _____ DRAWN: _____ DESIGNED: _____
STRUCTURE FILE NUMBER: 4801024 REVISION: _____ CHECKED: JTB
BEARING DETAILS LUC-20A-1048 U.S. 20 OVER I-475
LUC / WOO-20A / 199 -10.48 / 29.04
8 / 14 <div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> 16 26 </div>

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MARK	NUMBER	LENGTH	SHAPE	WEIGHT	TYPE	DIMENSIONS					
						A	B	C	D	R	INC.
ABUTMENTS											
A501	148	4'-5"	BENT	682	1	2'-9"	1'-10"				
A502	80	3'-2"	BENT	264	3	2'-7"					
A503	8	11'-8"	STR	97							
A504	8	11'-6"	STR	96							
A505	36	7'-0"	BENT	263	3	8'-5"					
A506	36	4'-5"	STR	166							
A507	36	2'-8"	BENT	100	1	2'-0"	10"				
A508	36	14'-7"	BENT	548	2	6'-10"	1'-2"	6'-10"			
A509	24	8'-8"	STR	217							
A510	32	6'-11"	BENT	231	2	3'-0"	1'-2"	3'-0"			
A511	6	13'-8"	STR	86							
A512	6	13'-6"	STR	85							
A601	6	13'-8"	STR	123							
A602	6	13'-6"	STR	122							
A801	14	21'-2"	STR	791							
A802	2	22'-5"	BENT	120	6	20'-0"	2'-5"	5 3/4"			
TOTAL, ABUTMENTS = 3991 LBS											



NOTES

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. THE DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.

REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED WITH THE ASSOCIATED CONCRETE ITEM.

MARK	NUMBER	LENGTH	SHAPE	WEIGHT	TYPE	DIMENSIONS					
						A	B	C	D	R	INC.
SUPERSTRUCTURE											
S501	116	11'-0"	BENT	1331	2	3'-11"	3'-5"	3'-11"			
S502	58	7'-6"	BENT	454	2	2'-5"	2'-11"	2'-5"			
S503	2	7'-3"	BENT	15	2	2'-5"	2'-8"	2'-5"			
S504	4	10'-10"	BENT	45	2	3'-11"	3'-3"	3'-11"			
S505	8	19'-5"	STR	162							
D801	46	5'-3"	BENT	645	18	2'-11"	1'-0"	1'-0"			
S801	16	17'-5"	STR	744							
S802	5	23'-5"	STR	313							
S803	6	23'-3"	BENT	373	6	22'-5"	10"	2"			
S804	12	21'-2"	STR	678							
S805	4	21'-1"	BENT	225	6	19'-9"	1'-4"	3 1/4"			
TOTAL, SUPERSTRUCTURES = 4985 LB.											

MARK	NUMBER	LENGTH	SHAPE	WEIGHT	TYPE	DIMENSIONS					
						A	B	C	D	R	INC. TO #"
PARAPETS											
Y501	576	7'-5"	BENT	4458	23						
Y601	560	1'-9"	STR	1472	1						
Y602	560	2'-5"	BENT	2036	4	1'-1"	11"	6"			
Y603	16	3'-11"	BENT	94	4	1'-1"	11"	2'-0"			
Y604	16	2'-11"	STR	70							
Y605	32	4'-0"	BENT	192	1	3'-6"	8"				
Y606	8 SER OF 11	VARIABLES 4'-0" TO 4'-11"	BENT	590	1	3'-6" TO 4'-3"	8"				1/8"
X501	32	9'-10"	STR	328							
X502	12	5'-6"	BENT	69	25						
X503	20	5'-6"	STR	115							
X504	120	30'-0"	STR	3755							
X505	12	8'-0"	STR	100							
X601	20	30'-0"	STR	901							
X602	2	11'-3"	STR	34							
TOTAL, PARAPETS = 14214 LB.											
TOTAL, SUPERSTRUCTURE AND PARAPETS = 19199 LB.											