

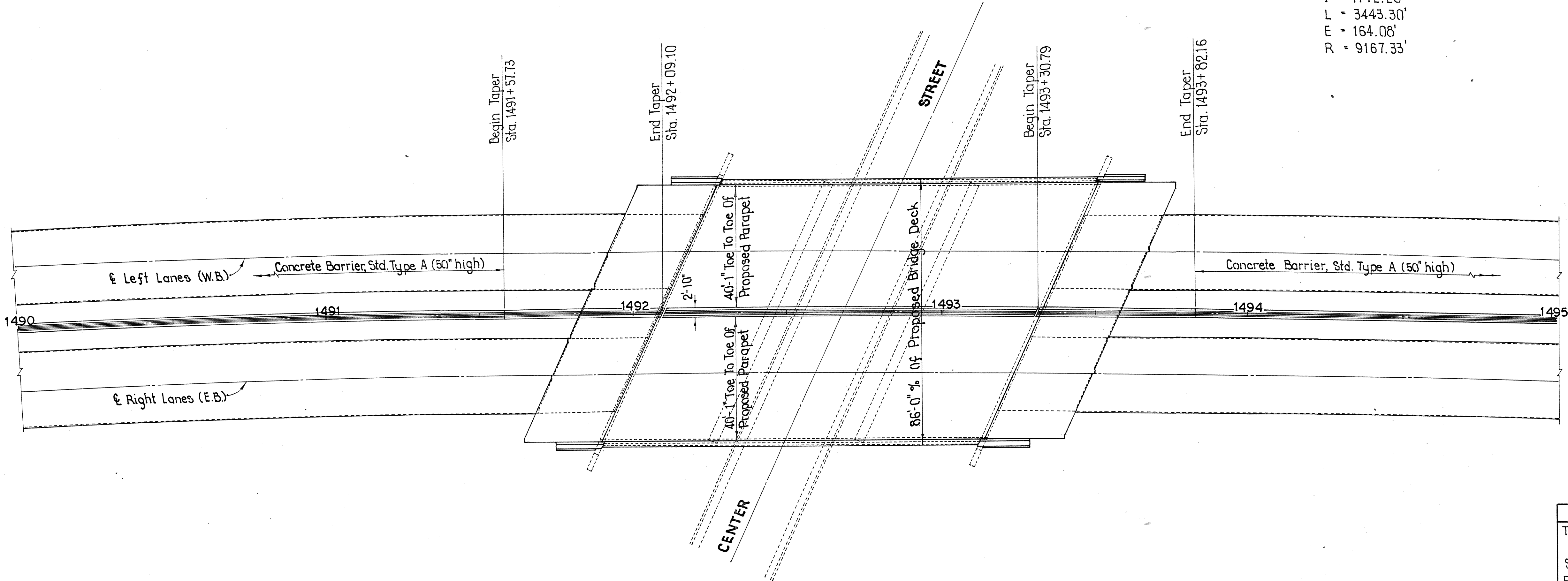
FHWA REGION	STATE	PROJECT
5	OHIO	

31
85

SCI-52-26.80

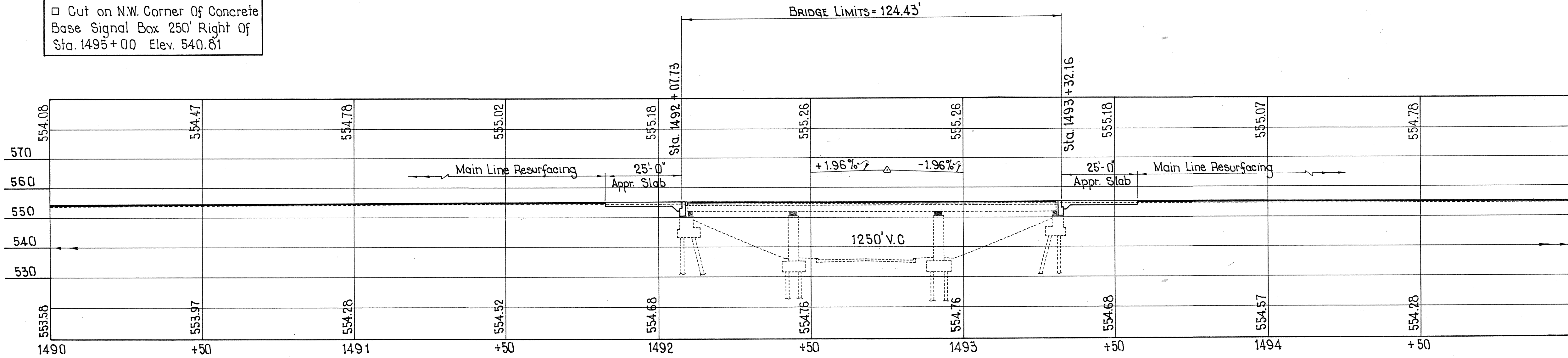
EXISTING CURVE DATA

P.C. = 1487 + 34.63
P.I. = 1504 + 76.82
P.T. = 1521 + 77.93
Δ = 21°-31'-15" Rt.
D = 0°-37.5'
T = 1742.20'
L = 3443.30'
E = 164.08'
R = 9167.33'



BENCH MARK

□ Cut on N.W. Corner Of Concrete
Base Signal Box 250' Right Of
Sta. 1495+00 Elev. 540.81



EXISTING STRUCTURE DATA

Type: Continuous Steel Beam with Reinforced
Concrete Deck and Substructure
Spans: 34'-47.5'-38' 1/2" Bearings
Roadway: 84'-0" f/p Concrete Parapets with 1'-0"
Curbs & 6'-0" Raised Median
Load Frequency: CF-2000 (57)
Skew: 24°-03' Left Forward
Wearing Surface: 3 1/2" Asphalt Concrete
Approach Slabs: AS-1-54 (25'-0" long)
Alignment: 0°-37'-30" Curve Right
Date Built: 1968

PROPOSED STRUCTURE DATA

Type: Continuous Steel Beam with Reinforced
Concrete Deck with New 2 1/2" Overlay
Spans: 34'-47.5'-38' 1/2" Bearings
Roadway: 83'-0" Toe to Toe Of Parapets
Load Frequency: HS 20-44
Skew: 24°-03' Left Forward
Wearing Surface: 3 1/2" Micro-Silica or LMC Concrete
Approach Slabs: AS-1-81 (25'-0" long)
Alignment: 0°-37'-30" Curve Right

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION
DISTRICT 9 BRIDGES

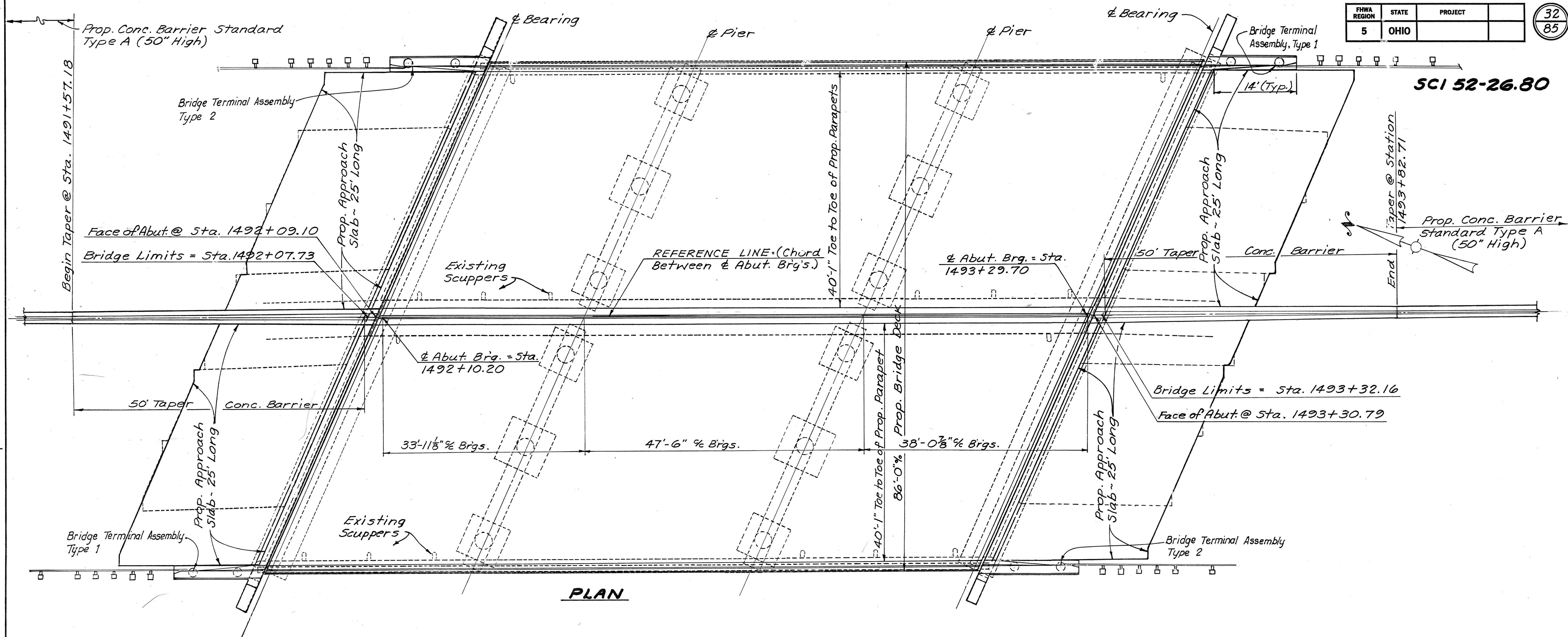
SITE PLAN

BRIDGE NO SCI-52-2859
U.S.R. 52 OVER CENTER ST.

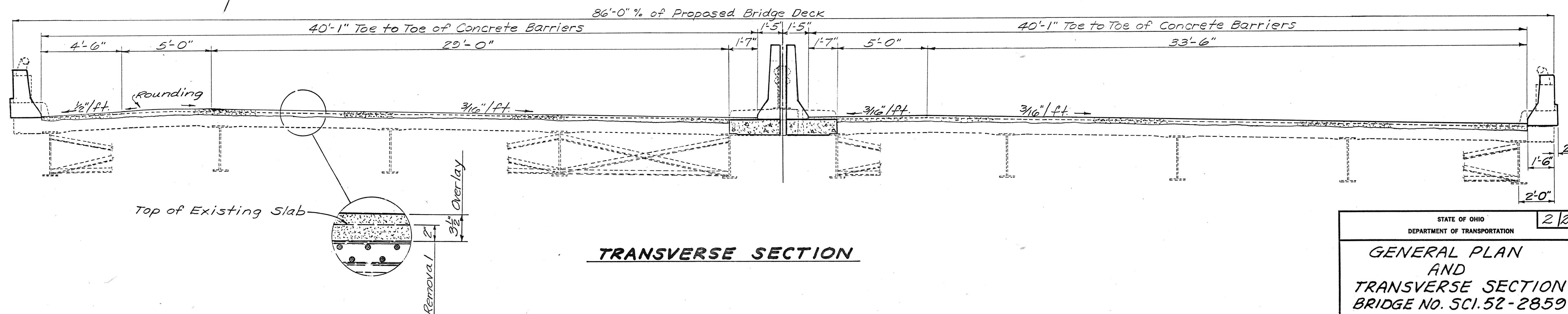
SCIOTO COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M. G. H.	M. G. H.	M. G. H.	GLB	M. G. H.	3-18-92	

SCI 52-26.80

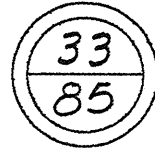


PLAN



GENERAL SUMMARY

CALC: D.W.S.	DATE: 11/18/91	FHWA REGION	STATE	PROJECT
CHKD: G.L.B.	DATE: 12/29/91		OHIO	



SCI. 52-26.80

ITEM	BRIDGE NUMBER SCI. 52-28.59								ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
	ABUTMENTS	PARAPETS	MEDIAN BARRIERS	STRUCTURE	WINGWALL	DECK	GENERAL	PIERS					
202	LUMP	LUMP			LUMP	LUMP			202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20FOOT SPAN,AS PER PLAN (SEE SHEET 4 OF 20)
503							LUMP		503	11100	LUMP		COFFERDAMS,CRIBS & SHEETING
503							LUMP		503	21300	LUMP		UNCLASSIFIED EXCAVATION
509	5629	3759	5356		189	4806	2476		509	15801	22215	POUND	EPOXY COATED REINFORCED STEEL, GRADE 60, AS PER PLAN
510	266	368			28				510	11101	662	EACH	DOWEL HOLE, AS PER PLAN (SEE SHEETS 9,11,14 & 15 OF 20)
512	76								512	44400	76	SQ. YD.	TYPE B WATERPROOFING
SPECIAL	94	244	250		11		205	433	SPECIAL	51267502	1237	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY)##
SPECIAL				54					SPECIAL	51273000	54	SQ. YD.	TREATING CONCRETE BRIDGE DECKS WITH HMWM RESIN
SPECIAL				12,418					SPECIAL	51400050	12,418	SQ. FT.	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU ##
SPECIAL				12,418					SPECIAL	51400056	12,418	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU #
SPECIAL				12,418					SPECIAL	51400060	12,418	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU ##
SPECIAL				12,418					SPECIAL	51400066	12,418	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU ##
516							185		516	11211	185	LIN FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL,As Per Plan (SEE SHEET 7 OF 20)
516		30							516	13000	30	SQ FT	1/4" PREFORMED EXPANSION JOINT FILLER
516							73		516	13200	73	SQ FT	1/2" PREFORMED EXPANSION JOINT FILLER
516			40						516	13400	40	SQ FT	3/4" PREFORMED EXPANSION JOINT FILLER
516				40					516	46900	40	EACH	BEARING DEVICE, MISC.
518							51		518	21201	51	CU YD	POROUS BACKFILL WITH FILTER FABRIC,AS PER PLAN
						16			518	12900	16	EACH	SCUPPER, LENGTHENING
SPECIAL						1078			SPECIAL	51922006	1078	SQ YD	MICRO-SILICA MODIFIED CONCRETE OVERLAY (3 1/2" THICK) #
SPECIAL						52			SPECIAL	51922100	52	CU YD	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) #
SPECIAL							LUMP		SPECIAL	51922300	LUMP		TEST SLAB ##
SPECIAL	94	244	250		11		205	433	SPECIAL	51271500	1237	SQ YD	URETHANE TOPCOAT SEALER
									SPECIAL	53000200	LUMP		STRUCTURE MISC.: RAISING,SUPPORTING AND LOWERING OF EXISTING SUPERSTRUCTURE
SPECIAL						1078			SPECIAL	84550000	1078	SQ YD	CONCRETE BRIDGE DECK SURFACE PREPARATION USING HYDRODEMOLITION
SPECIAL		27.7	28.51			21.16	17.8		SPECIAL	85050040	96	CU YD	SUPERPLASTIZED CONCRETE, SUPERSTRUCTURE USING #8 AGGREGATE
SPECIAL	50.04				3.56				SPECIAL	85050050	54	CU YD	SUPERPLASTIZED CONCRETE, SUBSTRUCTURE USING #8 AGGREGATE
SPECIAL						1078			SPECIAL	85050070	1078	SQ YD	BRIDGE DECK GROOVING

NOTES:

SEE PROPOSAL NOTE

BRIDGE No. SCI-52-2859
U.S.R. 52 OVER CENTER ST.

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REFERENCE:

Reference shall be made to Standard Drawings:

AS-1-81 dated 11-27-81
SD-1-69 dated 6-12-69
EXJ-4-87 dated 1-5-89
GR-3.1 dated 5-6-91
GR-3.2 dated 5-6-91
BR-1 dated 5-29-79

DESIGN SPECIFICATIONS:

This structure modification conforms to "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" adopted by the American Association of State Highway and Transportation Officials, 1989, and the Ohio "Supplement" to these specifications.

DESIGN DATA:

Design Loading - HS-20-44 & Alternate Military

Concrete Class S - 4500 psi Compressive Strength

Reinforcing Steel - ASTM A615, A616, or A617 Grade 60, yield strength 60,000 psi minimum

DECK PROTECTION METHOD - Micro-Silica Modified Concrete Overlay (3 1/2" Thk.)

EXISTING STRUCTURE VERIFICATION:

Details and dimensions shown on these plans pertaining to the existing structure have been obtained 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 513.02.

Contract bid prices shall be based upon a recognition of the uncertainties described above and upon a prebid examination of the existing structure by the Contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the Contractor in the field.

EXISTING BRIDGE PLANS:

Detail drawings of the existing bridges may be inspected in the District Bridge Office in Chillicothe, or in the Bureau of Bridges at 25 South Front Street in Columbus, Ohio.

COFFERDAMS, CRIBS AND SHEETING:

Any sheet piling required to construct the approach slabs half width while maintaining traffic in the adjacent lane shall be included in this Lump Sum Bid Item.

ITEM SPECIAL-BRIDGE DECK GROOVING:

Quantities include grooving of both bridge and approach slabs.

GENERAL NOTES

REMOVAL OF EXISTING CONCRETE:

When no longer needed to maintain traffic, the existing deck, approach slabs, abutment backwalls & wing walls, and deck railing shall be removed, as per plan. Suitable waste masonry may be placed on the slopes as directed by the Engineer. All other removed material shall become the property of the Contractor, unless otherwise indicated in these plans, and shall be removed from the site by him. This item is included for payment in Item 202.

ITEM SPECIAL - FIELD PAINTING OF EXISTING STEEL:

The field painting of existing steel shall include, but not be limited to, the existing structural steel that is shown on the plans. It is the intent of the plan to paint all structural steel that was previously painted and the new structural steel with the same paint system.

The completeion date (month and year) of the finish coat shall be stenciled in a contrasting color on the outside of the right outside beam next to the rear abutment. The letters "O.Z.E.U." shall precede the date painted.

The color of the finish coat shall be Blue FS-595A - 15450.

This Item shall include painting of all new steel, shim plates.

None of the painting shall delay the opening of the bridge to traffic.

REINFORCING STEEL SAMPLES:

Refer to CMS Sections 106.03, 700, 709.01 through 709.05 and 708.08. Sufficient additional reinforcing steel shall be replaced at random in the structure by additional steel, spliced in accordance with 509.08.

Refer to CMS Section 106.03, 700, 709.01 through 709.05 and 708.08. Sufficient additional reinforcing steel shall be replaced at ramdon in the structure by additional steel, spliced in accordance with 509.08.

ITEM 611 - REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN:

The approach slabs shall be constructed half width in order to maintain traffic as detailed in the plans. The reinforcing steel shall be epoxy coated and the transverse bars shall be joined with mechanical connectors at the construction joint similar to those used in the deck and abutments. The contractor shall broom finish the approach slabs both in the longitudinal and transverse direction to produce a uniform gritty texture. Grooving shall be paid for under Item Special-Bridge Deck Grooving. All of this work shall be included for payment in Item 611-Reinforced Concrete Approach Slabs, As Per Plan.

ESTIMATED QUANTITIES:

Specific locations and usage of some of the estimated quantities set up on these plans to be used as directed by the Engineer shall be incorporated into the final change order governing completion of this project. Estimated quantities of materials shall not be ordered for delivery to the project unless authorized by the Engineer.

FHWA REGION	STATE	PROJECT	
5	OHIO		

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ITEM SPECIAL-SUPERPLASTICIZED CONCRETE, SUPERSTRUCTURE USING #8 AGGREGATE:

This item shall consist of all labor, equipment and materials required to place the bridge deck and deflector parapet and the transition barrier on the approaches. This item shall be paid for under Item Special - Superplasticized Concrete, Superstructure Using #8 Aggregate.

ITEM SPECIAL-SUPERPLASTICIZED CONCRETE, SUBSTRUCTURE USING #8 AGGREGATE:

This item shall consist of all labor, equipment and materials required to place the backwalls in the abutments and widen the bridge seats. Also, included are the footers of the transition barrier on the approaches. This Item shall be paid for under Item Special-Superplasticized Concrete, Substructure Using #8 Aggregate.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9 BRIDGE OFFICE						4 / 20
GENERAL NOTES STRUCTURES OVER 20' SPAN						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.F.	J.F.	J.F.	G.L.B.	<i>Thomas C. Wilts</i>	3-18-92	

52S313N2 1=1

GENERAL NOTES CONTINUED

FHWA REGION	STATE	PROJECT	
5	OHIO		

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ITEM SPECIAL-URETHANE TOP COAT SEALER:

This item shall consist of the application of a urethane top coat sealer over concrete areas coated with epoxy. These areas being as noted in Item Special-Sealing of Concrete Surfaces (Epoxy), As Per Plan. The color of the urethane coating shall be Federal Color Standard No. 37722 (White).

The urethane coating shall be applied between 1 and 10 days after the application of the epoxy. The epoxy shall be clean and dry before the urethane is applied. Application shall be by airless spray.

All work shall be in accordance with the Manufacturer's recommendations and as directed by the Engineer.

The urethane top coat shall be one of the following products:

- 1) Ameron's AMERCOAT 450 H.S.
- 2) Poly-Carb's MARK 73
- 3) Tnemec's SERIES 70 ENDURA SHIELD

The cost of all labor, equipment, and material to accomplish this item of work shall be paid under:

ITEM	UNIT	DESCRIPTION
SPECIAL	SQ. YD.	URETHANE TOP COAT SEALER

ITEM SPECIAL MICRO-SILICA MODIFIED CONCRETE OVERLAY (3 1/2" THICK):

MSC Overlay 3 1/2 inches thick shall conform to the MSC Proposal Note except for the following changes:

- 1. All surface preparation shall be as per Item Special- Concrete Bridge Deck Surface Preparation Using Hydrodemolition, As Per Plan and shall be included for payment under this item and not in the MSC overlay.
- 2. The overlay shall be finished to 1 1/2" above the grade of the original deck
- 3. MSC overlay (3 1/2" thick) shall be measured as per the MSC Proposal Note. The price bid for this item shall include the cost of forming, furnishing, placing, finishing, texturing and curing the 3 1/2 inch thick overlay. It also includes the cost of all other labor, material, and equipment required to complete this work and Item Special, Micro-Silica Modified Concrete Overlay (Variable Thickness), but not specifically included in other items for payment.
- 4. During deck placement, the surface shall be textured by using a broom in the longitudinal or transverse direction so as to produce a uniform gritty texture. Grooving shall be as a seperate pay item-Item Special-Bridge Deck Grooving.

ITEM SPECIAL MICRO-SILICA MODIFIED CONCRETE

OVERLAY (VARIABLE THICKNESS):

MSC overlay variable thickness shall conform to the MSC Proposal Note except payment for this item shall be for the Micro-Silica Concrete (material only), furnished to the job site in place. No separate payment shall be made for placement of the concrete or for any tools, labor, equipment or incidentals necessary for such placement, complete and in conformance with these plan notes and the MSC Proposal Note. The intent of this item is to pay material costs only for all material above that used for Item Special, Micro-Silica Modified Concrete Overlay, (3 1/2" Thick), regardless of the depth of removal incurred and including any material required for grade correction.

ITEM SPECIAL-SEALING OF CONCRETE SURFACES, EPOXY:

This item shall include all labor and material required to seal the concrete surfaces with epoxy sealer which shall be Federal Color Standard No. 26231 (Gray). The estimated quantities that are set up in the plan are to be used to seal the bridge concrete surfaces as follows:

DECK EDGES: Seal the exposed deck edges as detailed in the plan.

ABUTMENTS: Seal all exposed surfaces of the abutments including the backwalls, seats, breastwalls, and wingwalls down to the groundline.

ITEM SPECIAL-RAISING, SUPPORTING AND LOWERING OF EXISTING SUPERSTRUCTURE:

Existing steel beams shall be hydraulically jacked at both abutments and both piers. Approximate necessary lift for working clearance is 9 inches above the bridge seat. Jacking shall be done at each abutment or pier in 1" increments so as to minimize internal stresses. The differential between jacking points shall not exceed 1 inch. Proposed load plates shall be put in place followed by proposed steel fill plates. Plans for a jacking procedure shall be submitted for approval to the Director four (4) weeks prior to jacking of the structure. All labor, tools, equipment and incedentals necessary to complete this work are to be included under Item Special-Raising, Supporting and Lowering Of Existing Superstructure.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9 BRIDGE OFFICE					5 / 20
GENERAL NOTES STRUCTURES OVER 20' SPAN					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
J.F.	J.F.	J.F.	G.L.B.	<i>Thomas A. Will</i>	5-18-92

52S313G1 1=1

FHWA REGION	STATE	PROJECT	
5	OHIO		

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GENERAL NOTES CONTINUED

ITEM SPECIAL – CONCRETE BRIDGE DECK

SURFACE PREPARATION USING

HYDRODEMOLITION:

In lieu of the requirements noted in the applicable sections of the proposal note for micro-silica modified concrete (MSC) overlay, the surface preparation and variable thickness removal shall be accomplished with the use of hydrodemolition equipment instead of conventional scarifying and hand chipping. Additionally, the entire top surface of the reinforced concrete bridge deck shall be completely removed to the depth as detailed on the plan. This depth shall be the nominal measurement from the original grade to the grade top of the remaining mortar line

This removal shall be made with the use of hydrodemolition equipment as described below. The intent of this project is to perform removal of unsound concrete using hydrodemolition equipment.

The Contractor may choose to use conventional scarifying equipment to make an initial pass across the deck to remove a portion of the total depth required. Special care shall be taken by the Contractor, if conventional scarifying equipment is used, to achieve a uniform removal thickness so that subsequent hydrodemolition removal will result in the desired total thickness. In any case, hydrodemolition equipment shall be used for the final pass. If conventional scarifying equipment is used for the first pass, it is imperative that reinforcing steel not be "snagged". If reinforcing steel is encountered, the conventional scarifying equipment shall be immediately removed from the deck, the damaged reinforcing steel shall be repaired at the Contractor's expense and the remaining removal shall be completed with hydrodemolition equipment.

The requirement to provide a minimum 3/4" clearance around all reinforcing bars that are more than 1/2 exposed is waived, providing that the concrete is sound and not fractured. Likewise, the bonding grout requirement is also waived. All other requirements of the proposal note for MSC not specifically waived or modified by this plan note shall remain in effect.

EQUIPMENT:

The Hydrodemolition Equipment shall be a self-propelled machine that utilizes a high pressure water jet stream capable of removing concrete to the depth specified herein and/or as shown on the plans and be capable of removing rust and concrete particles from the reinforcing steel. Hand held high pressure wands shall be used in areas that are inaccessible to the self-propelled machine or in patching areas that require minor "trim" work to remove the remaining unsound concrete.

SOURCES OF HYDRODEMOLITION EQUIPMENT

FIP
INTERNATIONAL MARKETING CORPORATION
CRAWER 147
SOMERDALE, NJ 08083
PHONE (609) 784-881 OR 783-6384

FLOW SYSTEMS
FLOW INTERNATIONAL CORP.
1009 EHERTON DRIVE
ST. LOUIS, MO 63126-1108

PHONE (314) 962-8855

HYDRO-TECH, INC.
1810 SOUTH FLOYD ST.
LOUISVILLE, KY 40217

PHONE (505) 637-5919

HLB SPIN-JET CONCRETE BUSTER
HLB CORP.
29830 BECK ROAD
WIXOM, MI 48096

PHONE (313) 624-5555

HY-JET
ALLIED HY JET
5800 HARPER ROAD
SOLON, OHIO 44139

PHONE (216) 248-2600

JET EDGE CONSTRUCTION, INC
825 RHODE ISLAND AVE. SOUTH
MINNEAPOLIS, MN 55426

PHONE (612) 545-1477

THE CONTRACTOR MAY CHOOSE TO USE OTHER MAKES OF
HYDRODEMOLITION EQUIPMENT PROVIDING THEY ARE MANUFACTURED
SPECIFICALLY FOR CONCRETE REMOVAL

WATER

Stream or lake water will not be permitted for use in the hydro-demolition equipment. All water used must be potable.

DRAINS

Scupper drains that are within 100 feet of the removal process shall be plugged or screened temporary to assure that removal material will not clog drains.

SHIELDS

The Contractor is responsible for shielding the hydrodemolition equipment and high pressure wand to control flying debris from maintained traffic (both on the bridge and below).

RESOUNDING

After the hydrodemolition operation has completed the initial pass, and the deck is allowed to surface dry, the deck shall be resounded to assure that all unsound material has been removed. The final sounding shall be done after the deck is dry and frost free. Additional removal shall be performed with the hand wand or a 15 lb. maximum jackhammer.

CLEANING

Cleaning shall be performed with a vacuum system capable of removing wet debris and water all in the same pass. The deck should then be blown dry with air to remove excess water.

ABRASIVE BLASTING

Not more than 24 hours prior to placing the overlay, all exposed steel surfaces, including resteel and structural steel, and the curb faces shall be cleaned as per the MSC Proposal Note.

MEASUREMENT

Measurement for pay purposes shall be based on the square yards of concrete removal at the contract unit price bid, which shall include the uniform removal to the minimum depth specified in the plans for each bridge and for the variable depth removal which occurs with the uniform removal and any additional removal to attain sound concrete as required by this note and the MSC Proposal Note. This shall include all labor, materials, and equipment necessary to complete the concrete removal. This shall include water, shielding, resounding, cleanup, abrasive blasting, jackhammer work, and all other materials and incidentals required to prepare the surface for overlay, in accordance with this plan note and the MSC Proposal Note and as directed by the Engineer.

PAYMENT SHALL BE MADE PER SQUARE YARD FOR:

ITEM SPECIAL – Concrete Bridge Deck Surface Preparation Using
Hydrodemolition

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9 BRIDGE OFFICE						6/20
GENERAL NOTES STRUCTURES OVER 20' SPAN						
DESIGNED D.W.S.	DRAWN D.W.S.	TRACED D.W.S.	CHECKED G.L.B.	REVIEWED Lawrence A. Wilko	DATE 3-18-92	REVISED

GENERAL NOTES CONTINUED

ITEM 516 STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC STRIP SEALS, AS PER PLAN

Contractor is to retrofit existing sliding plate expansion joints with an elastomeric strip seal system as manufactured by one of the suppliers listed in table below. All work shall be in accordance with the details shown in the plans and with the manufacturer's specifications.

STRUCTURAL EXPANSION JOINT SYSTEM MANUFACTURERS

E-POXY INDUSTRIES, INC.
14 WEST SHORE STREET
RAVENA, NEW YORK 12143-1698 (516) 756-6193

D.S. BROWN COMPANY
P.O.BOX 158
NORTH BALTIMORE, OHIO 45872 (419) 257-2200

WATSON-BOWMAN & ACME CORPORATION
95 PINEVIEW DRIVE
AMHERST, NEW YORK 14120 (716) 691-7566

STRUCTURAL ACCESSORIES, INCORPORATED
SOUTH MAIN STREET
P.O. BOX 10 TERRYVILLE,CT 06786 (203) 589-8826

TABLE "E" (PHYSICAL PROPERTIES OF SEAL ELEMENT)		
PROPERTY	REQUIREMENT	ASTM METHOD
TENSILE STRENGTH, MIN. P.S.I.	2000	D412
ELONGATION AT BREAK, MIN. PERCENT	250	D412
HARDNESS, TYPE A DUROMETER	50 MIN 65 MAX.	D2240 (MODIFIED)
OVEN AGING, 70 HR. AT 212° F TENSILE STRENGTH, LOSS, MAX, ELONGATION, LOSS, MAX. HARDNESS, TYPE A DUROMETER (POINTS CHANGE)	20 PERCENT 20 PERCENT 0 TO + 10	D573
OZONE RESISTANCE 20 PERCENT STRAIN,300 PPHM, IN AIR AT 104° F (WIPE WITH TOLUENE TO REMOVE SURFACE CONTAMINATION).	NO CRACKS	D1149

SPLICE OR JOINT IN GLAND:

Seal glands for bridge deck joints shall be furnished in one continuous piece unless a shop fabricated splice, field splice or a field butt joint is indicated on the plans or approved by the Engineer.

Completed splices shall have no offsets on exterior surfaces, and after installation, there shall be no evidence of bond failure at the splices.

INSTALLATION PROCEDURES:

RETAINER PLACEMENT

The retainer shall be installed as shown in the plans by a certified welder as recommended by the seal manufacturer.

GLAND PLACEMENT

To avoid the subsequent contamination of the prepared surfaces, all surfaces of the elastomeric strip seal glands shall be cleaned with methyl ethyl ketone (MEK), toluene (T) or other approved solvent using clean disposable cloths.

The bonding surfaces of the steel retainers (the interior of the anchor grooves) shall be prepared to Grade Sa 3, ASTM D2200. Preparation shall be accomplished not more than 24 hours prior to adhesive bonding.

Immediately prior to application of lubricant-adhesive, bonding surfaces shall be clean, dry, and warmer than 45 degrees F, and they shall be maintained at or above this temperature until the adhesive has cured.

Lubricant-adhesive shall be applied liberally to both steel and elastomeric bonding surfaces using a stiff brush if necessary to achieve a complete and relatively uniform coating. Then the bulbed edges of the elastomeric seal shall be inserted into the anchor grooves. After installation, excess lubricant-adhesive shall be removed from the exposed seal surfaces.

Seal glands shall be installed with equipment designed or specifically adapted for the installation of elastomeric joint seal glands. This equipment shall not elongate the seal gland or cause structural damage to the completed installation.

MEASUREMENT:

Measurement for pay purposes shall be based on the lineal feet of sealed joint system measured horizontally along the joint centerline and between the outer limits of the fabricated joint, furnished and placed, including all labor, materials and equipment necessary to complete the joints in place. which includes the joint armor, anchoring devices, temporary supports, strip seal gland and all other materials and incidentals required to place the sealed joint system according to the plans and manufacturer's specifications and as directed by the Engineer.

PAYMENT SHALL BE MADE PER LINEAL FOOT FOR:

ITEM 516 - Structural Expansion Joints Including Elastomeric Strip Seals, As Per Plan.

MATERIALS:

STEEL

A-36 structural steel shall be used for fabrication of retainer. No shop coat or field painting is required.

GLAND

The preformed strip seal gland shall be extruded polychloroprene material meeting the requirements of ASTM D2628. Due to the configurations of the Strip Seal the recovery tests are not applicable. Physical Properties shall meet the requirements specified in Table "E" this sheet.

Each lot of strip seal gland design, shall be tested by the manufacturer or an accredited laboratory to assure compliance with these provisions.

Two certified copies of the qualification test data indicating that the tested materials comply with these provisions shall be submitted to the testing laboratory.

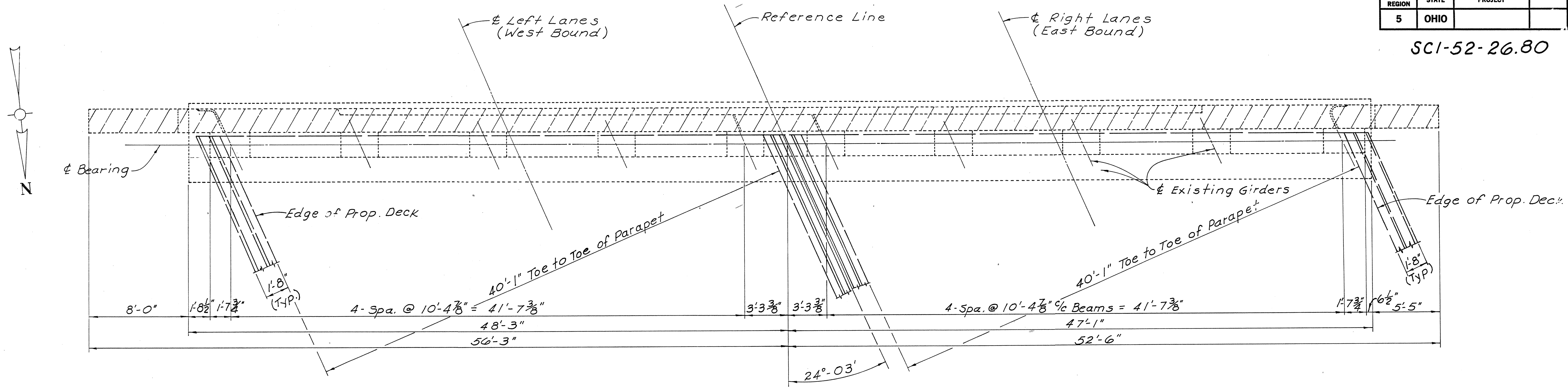
The strip seal gland design, shape, width, depth and thickness shall be approved by the Director. Material acceptance will be based upon laboratory evaluation of certified test data and TE-30 field inspection report.

LUBRICANT-ADHESIVE

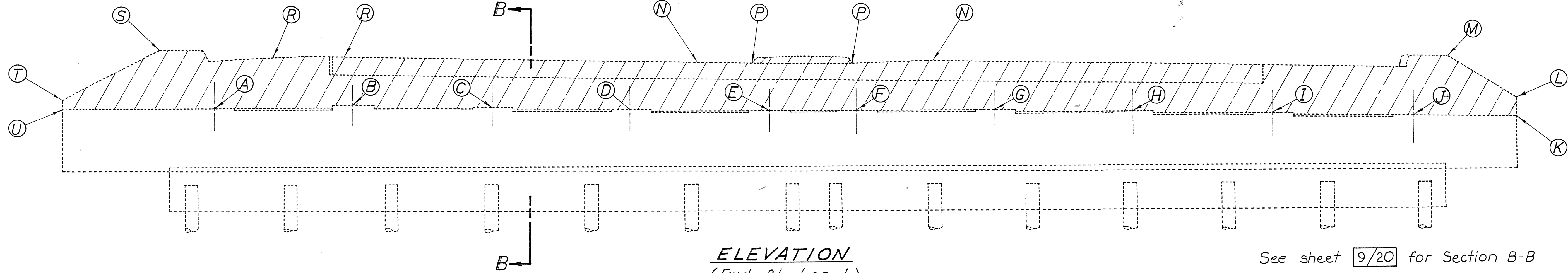
Lubricant-adhesive used to install the preformed strip seals shall be a polyurethane and hydrocarbon solvent mixture as specified by the seal manufacturer (unless otherwise approved by the Director). It shall have suitable consistency at the temperature at which the seals are installed and shall be compatible with the seals and the steel retainers.

STATE OF OHIO						7/20
DEPARTMENT OF TRANSPORTATION						
DISTRICT 9 BRIDGE OFFICE						
GENERAL NOTES						
FOR STRUCTURES OVER 20 FEET						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.W.S.	D.W.S.	D.W.S.	G.L.B.	Lawrence A. Wilber	3-18-92	

SCI-52-26.80



PLAN
(Forward Abutment)



ELEVATION
(Fwd. Abutment)

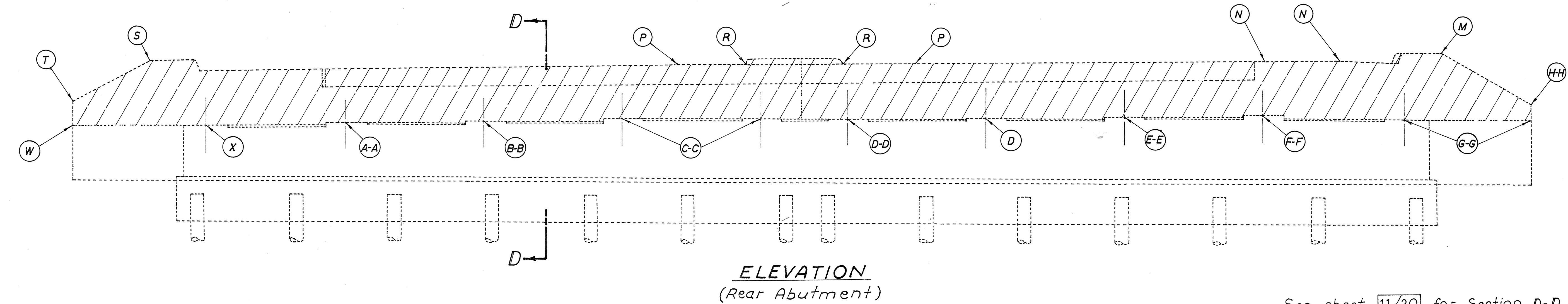
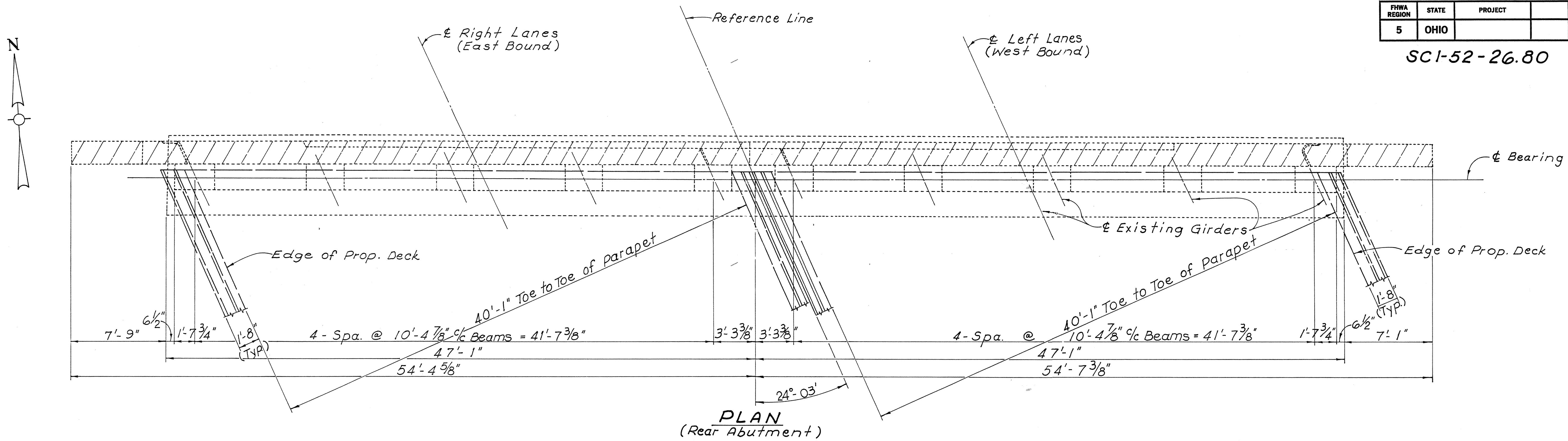
See sheet 9/20 for Section B-B

— Removal Areas

ELEVATIONS											
LOCATIONS		A	B	C	D	E	P	R	S	T	U
LEFT STRUCTURE	Forward Abutment	551.28	551.52	551.38	551.24	551.10	554.63	555.05	555.66	552.58	551.28
(West Bound)											
LOCATIONS		F	G	H	I	J	K	L	M	N	P
RIGHT STRUCTURE	Forward Abutment	551.10	551.12	550.97	550.83	550.69	550.69	552.58	555.08	554.64	554.63
(East Bound)											

(Forward Abut.)

STATE OF OHIO		8/20	
DEPARTMENT OF TRANSPORTATION			
ABUTMENT DETAILS			
BRIDGE NO. SCI-52-2859			
USR.52 OVER CENTER ST.			
SCIOTO COUNTY			
DESIGNED	DRAWN	TRACED	CHECKED
D.W.S.	D.W.S.	D.W.S.	G.L.B.
REVIEWED	DATE	REVIS	
3-18-92			



See sheet 11/20 for Section D-D

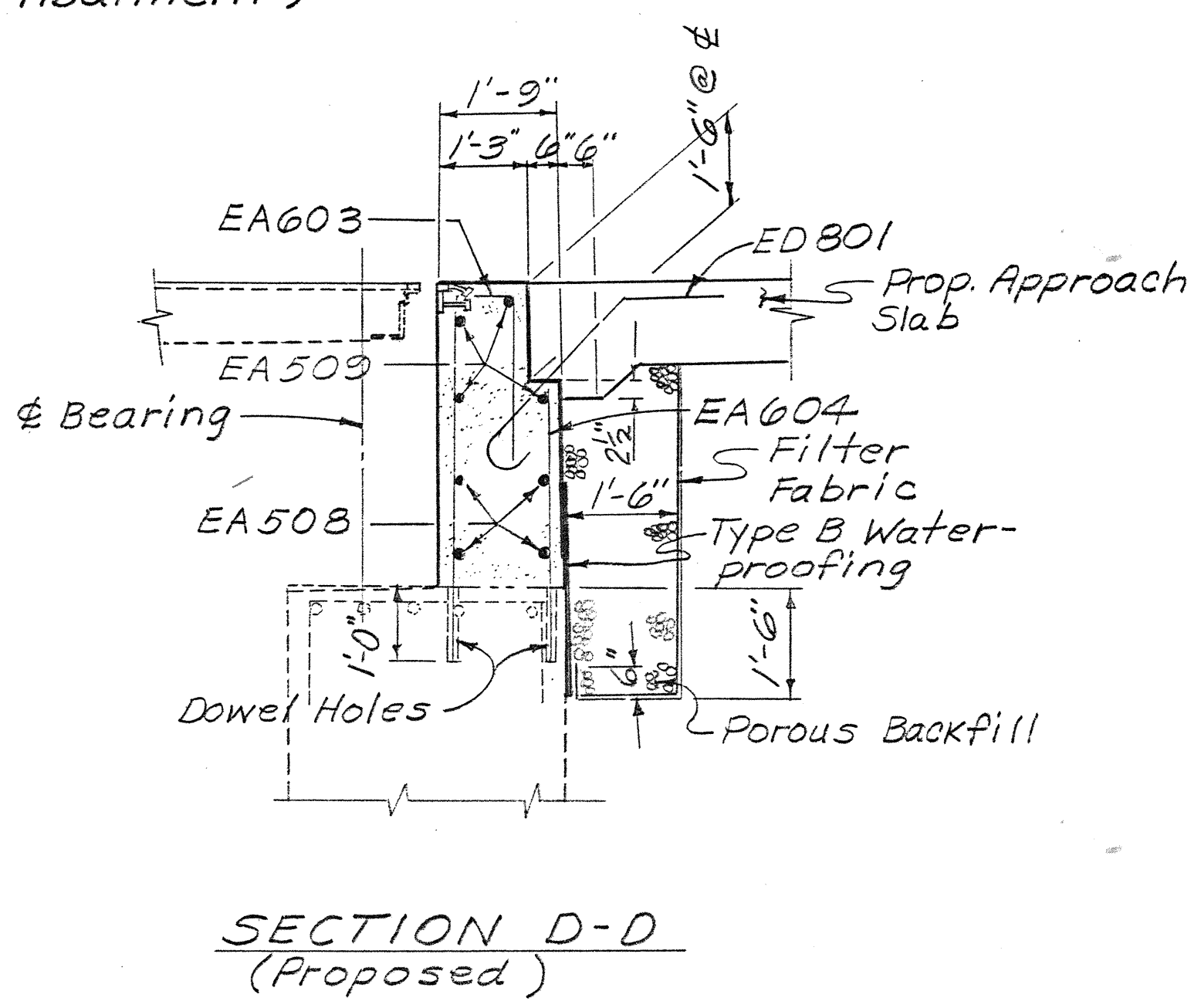
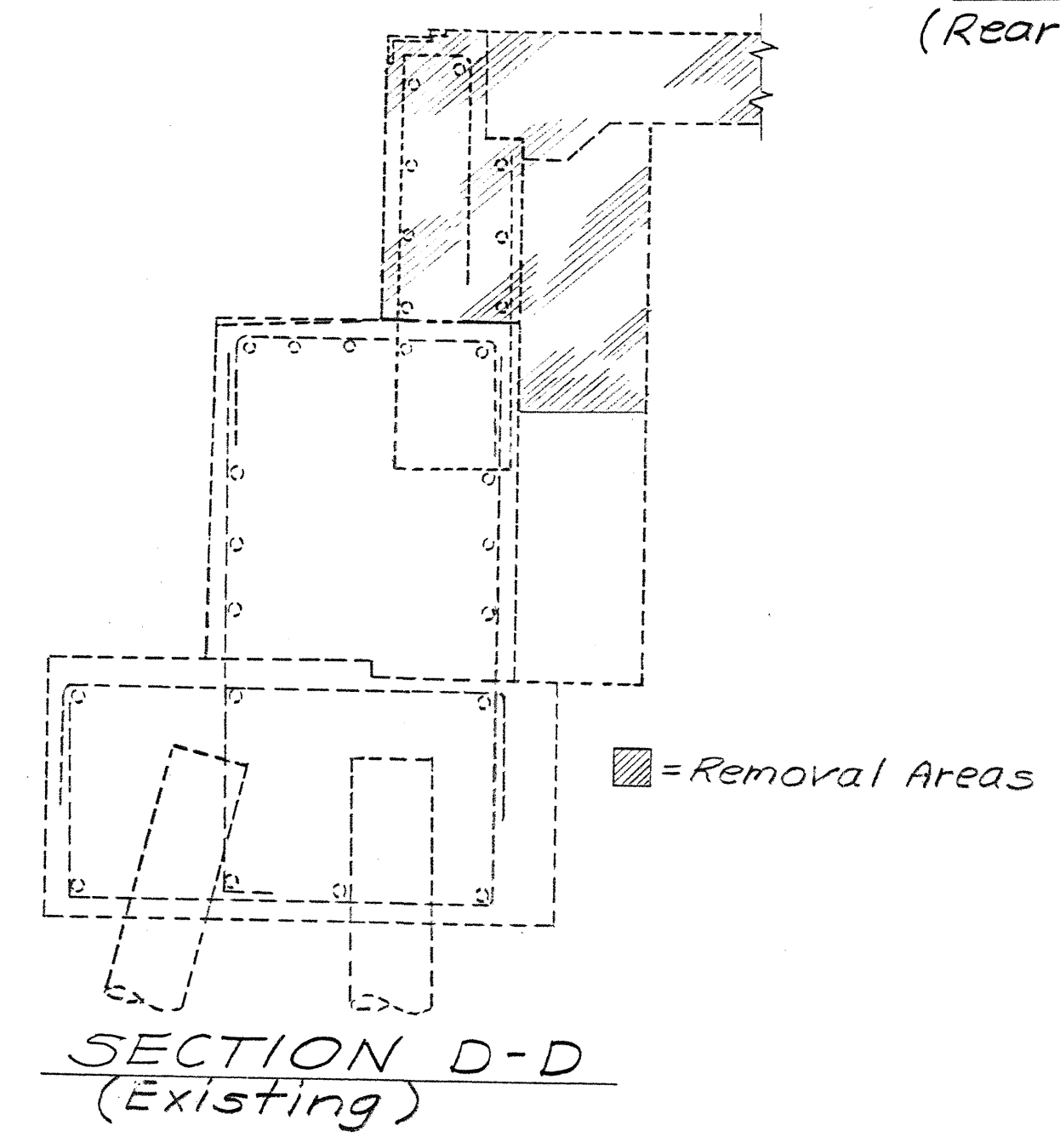
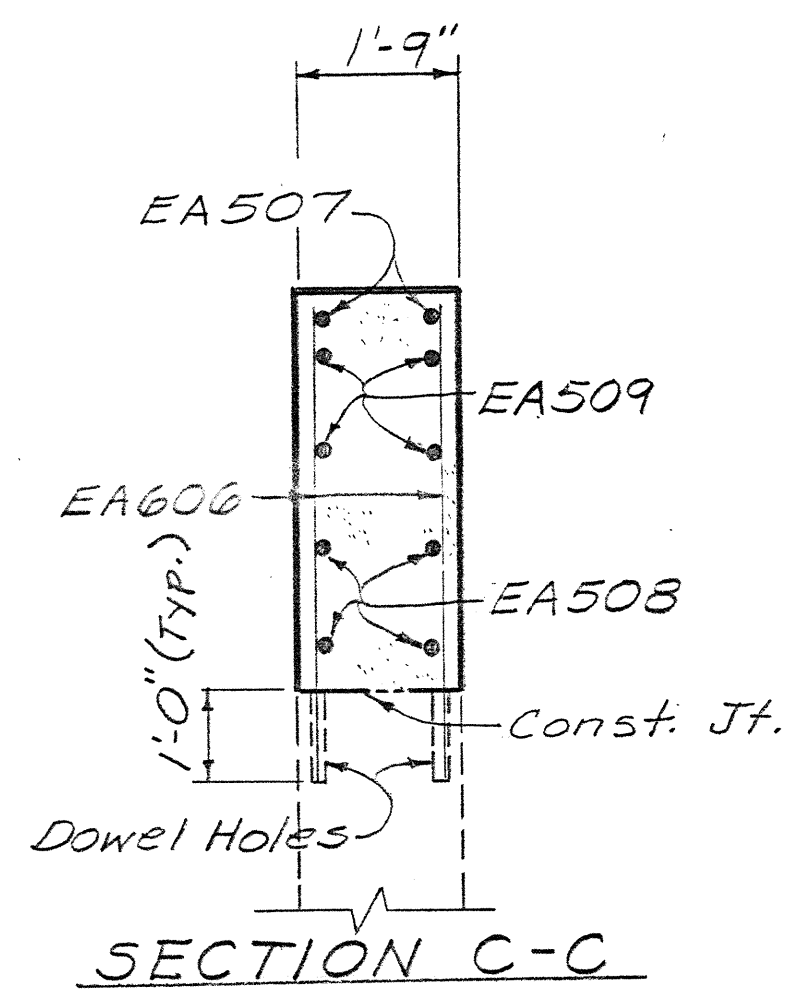
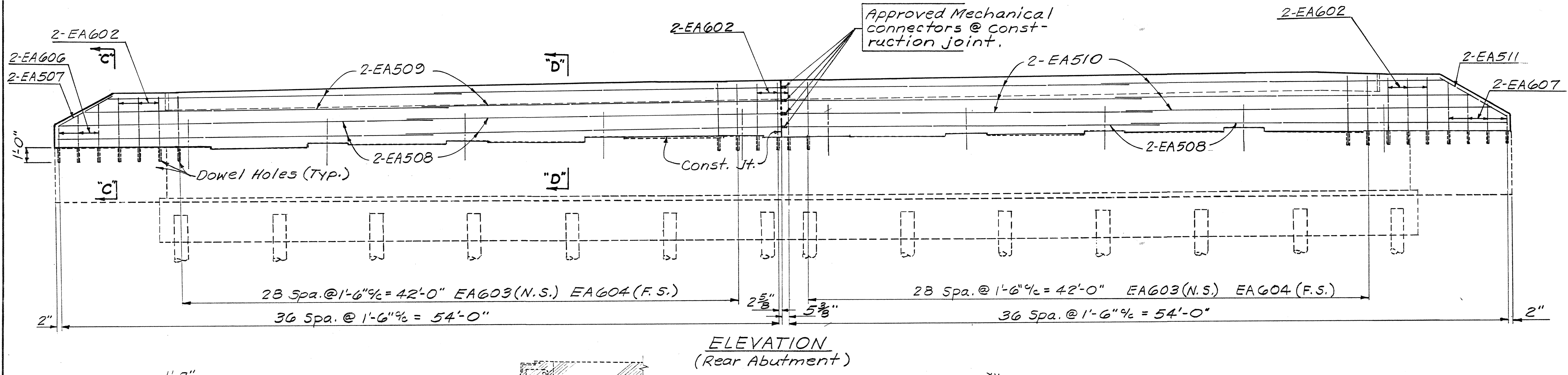
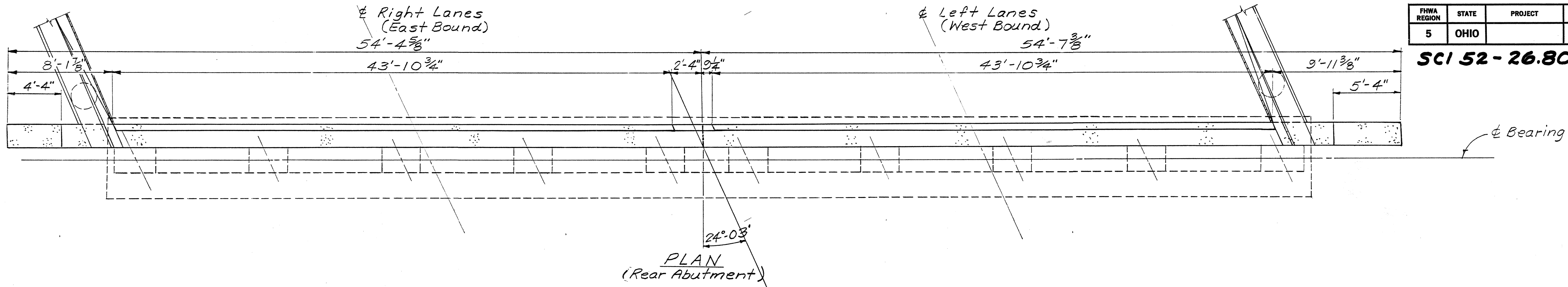
Removal Areas

		ELEVATIONS									
LOCATIONS		X	A-A	B-B	C-C	P	R	T	W	S	
RIGHT STRUCTURE (East Bound)	Rear Abutment	550.61	550.76	550.92	551.08	555.24	555.16	551.97	550.61	554.97	
LOCATIONS		D-D	D	E-E	F-F	G-G	P	R	M	N	H-H
LEFT STRUCTURE (West Bound)	Rear Abutment	551.09	551.24	551.40	551.55	551.34	555.24	555.16	555.72	555.10	551.97

(Rear Abutment)

STATE OF OHIO		10/20	
DEPARTMENT OF TRANSPORTATION			
ABUTMENT DETAILS BRIDGE NO. SCI-52-2859 USR. 52 OVER CENTER ST.			
SCIOTO COUNTY			
DESIGNED D.W.S.	DRAWN D.W.S.	TRACED D.W.S.	CHECKED G.L.B.
REVIEWED 3-18-92	DATE	REVISED	

SCI 52-26.80



(Rear Abutment)

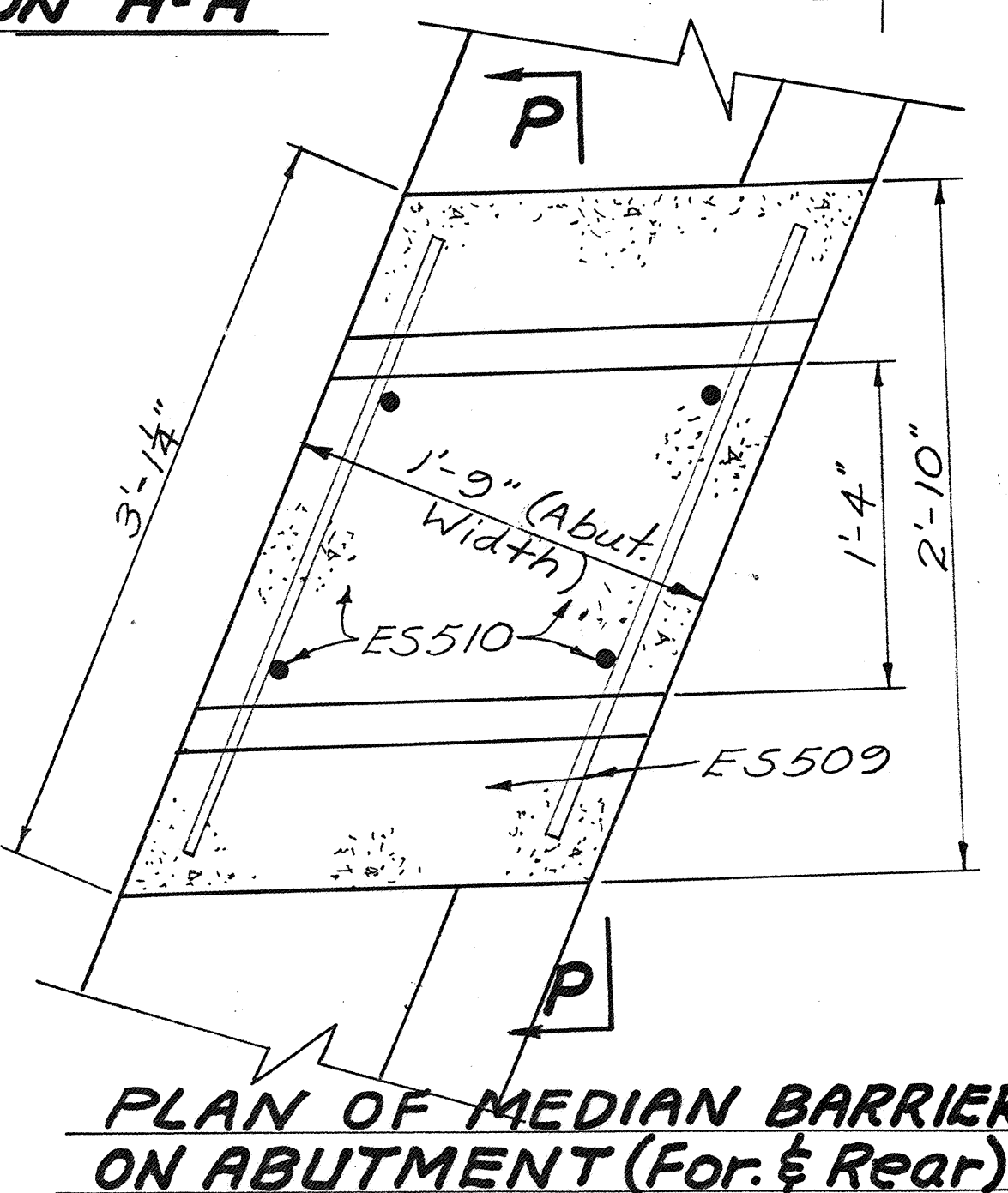
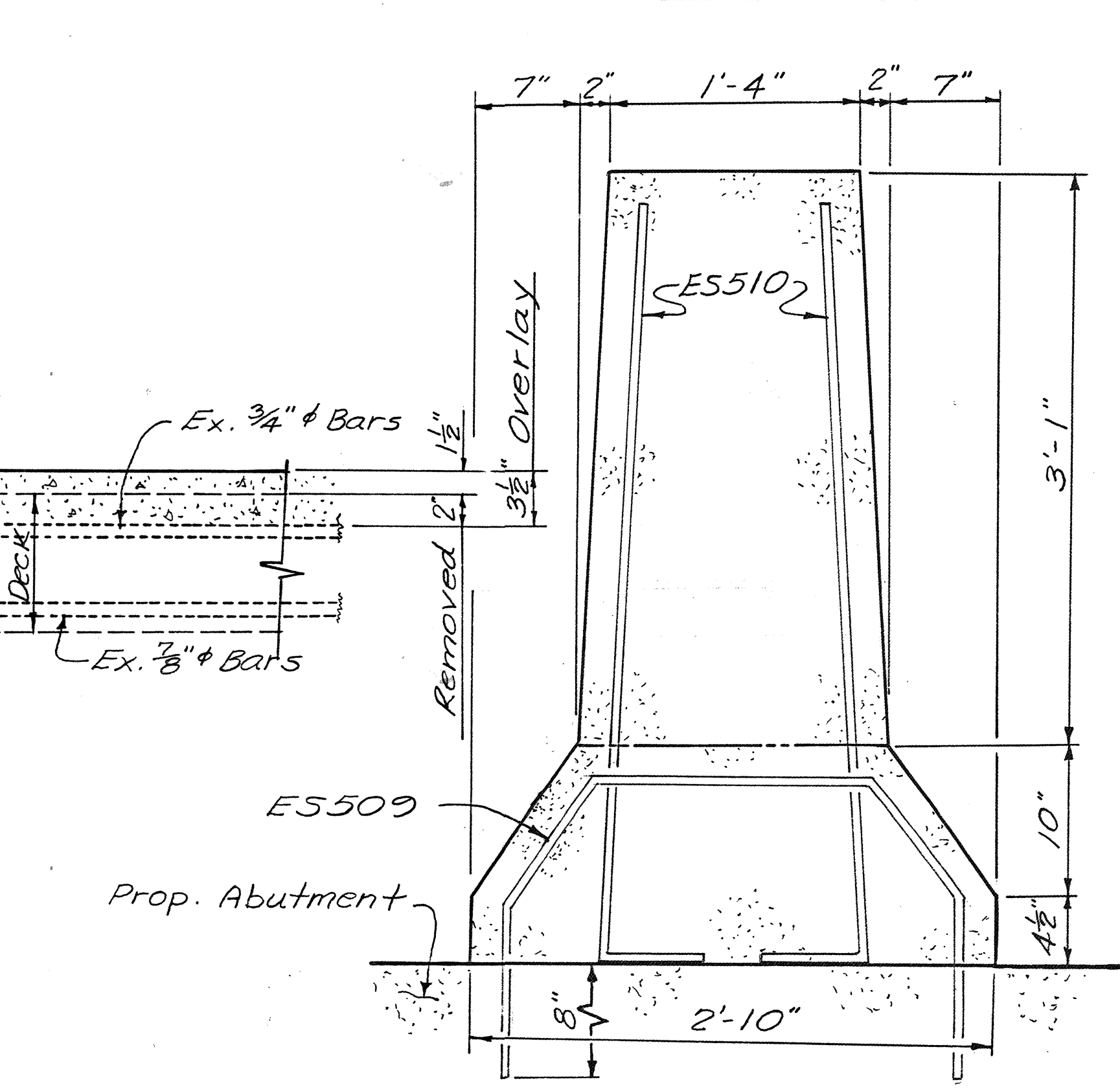
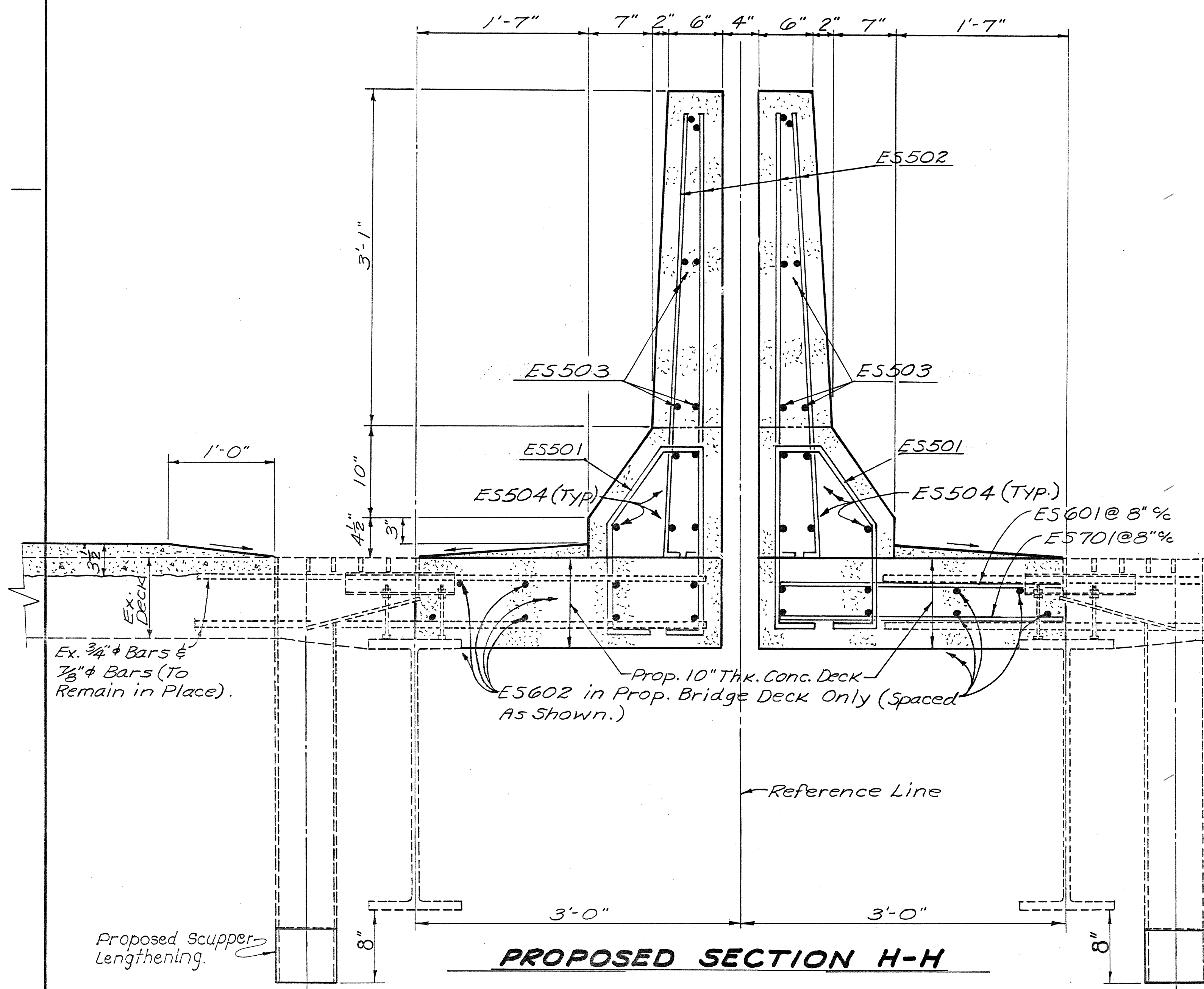
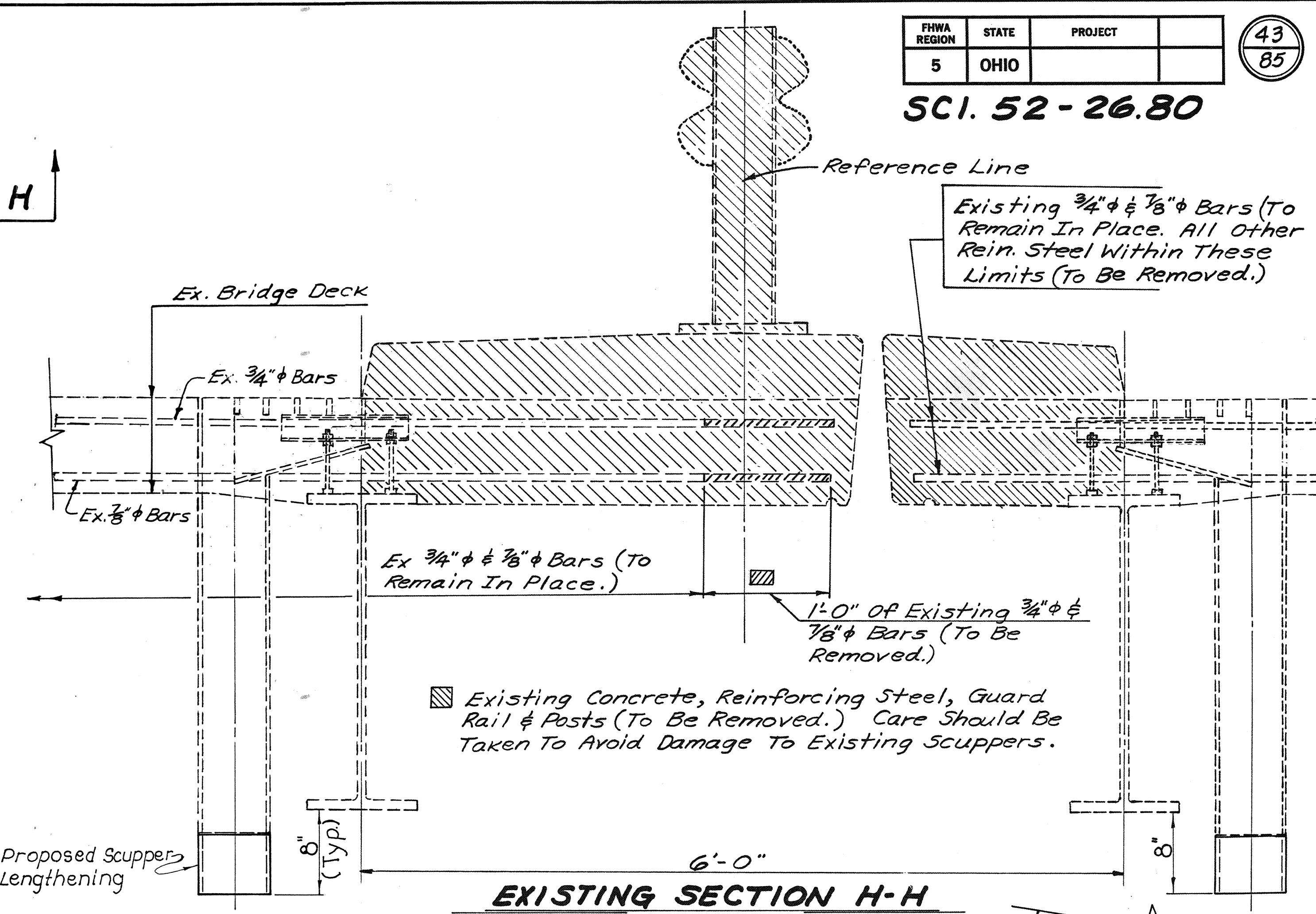
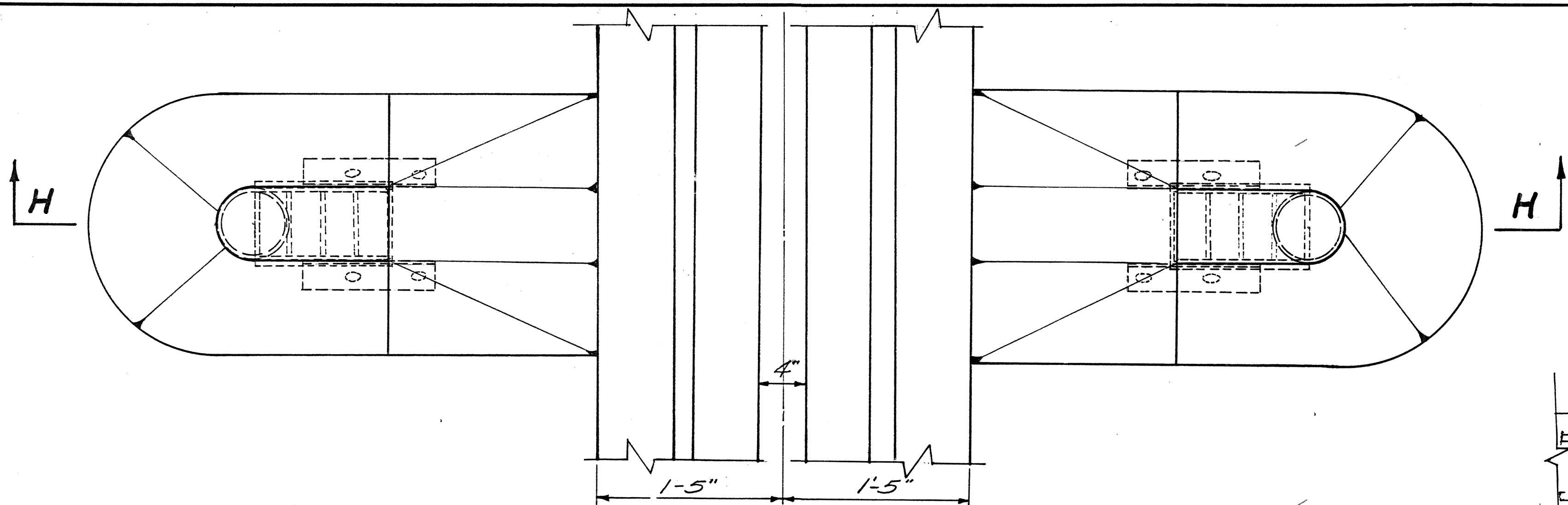
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

ABUTMENT DETAILS
BRIDGE NO. SCI. 52- 2859
USR 52 OVER CENTER ST.

SCIOTO COUNTY

DESIGNED D.W.S.	DRAWN D.W.S.	TRACED D.W.S.	CHECKED G.L.B.	REVIEWED J. A. Wicks	DATE 3-18-92	REVISED
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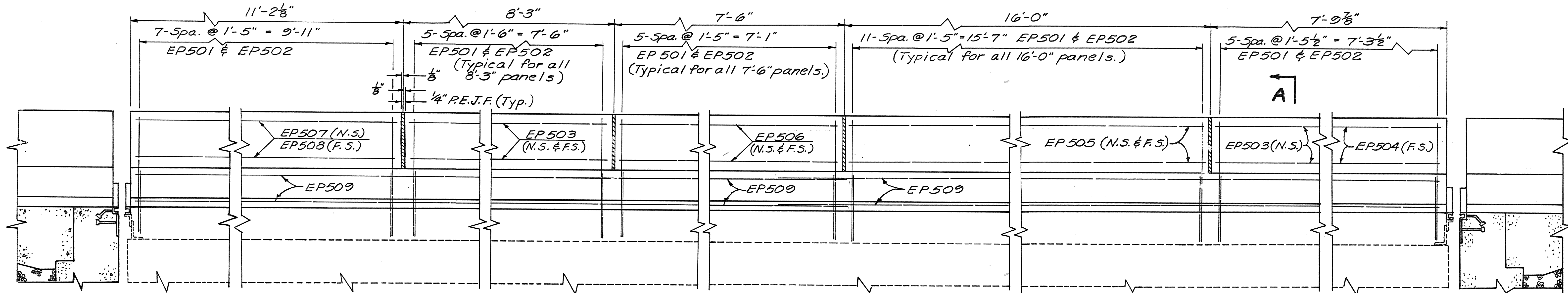
SCI. 52-26.80



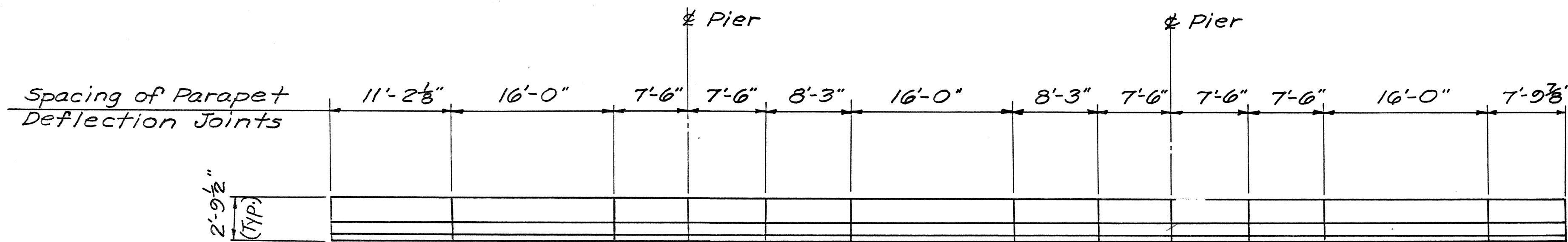
STATE OF OHIO						13/20
DEPARTMENT OF TRANSPORTATION						
PROPOSED 51 1/2" HIGH CONC- RETE MEDIAN BARRIERS & PROPOSED CONCRETE DECK BRIDGE NO. SCI. 52-28.59 OVER CENTER ST. SCIOTO COUNTY						
DESIGNED D.W.S.	DRAWN D.W.S.	TRACED D.W.S.	CHECKED G.L.B.	REVIEWED J. Williams	DATE 3-18-92	REVISED

SECTION P-P THRU
MEDIAN BARRIER ON
ABUTMENTS (For. & Rear)

SCI. 52-26.80



ELEVATION OF DEFLECTOR PARAPET

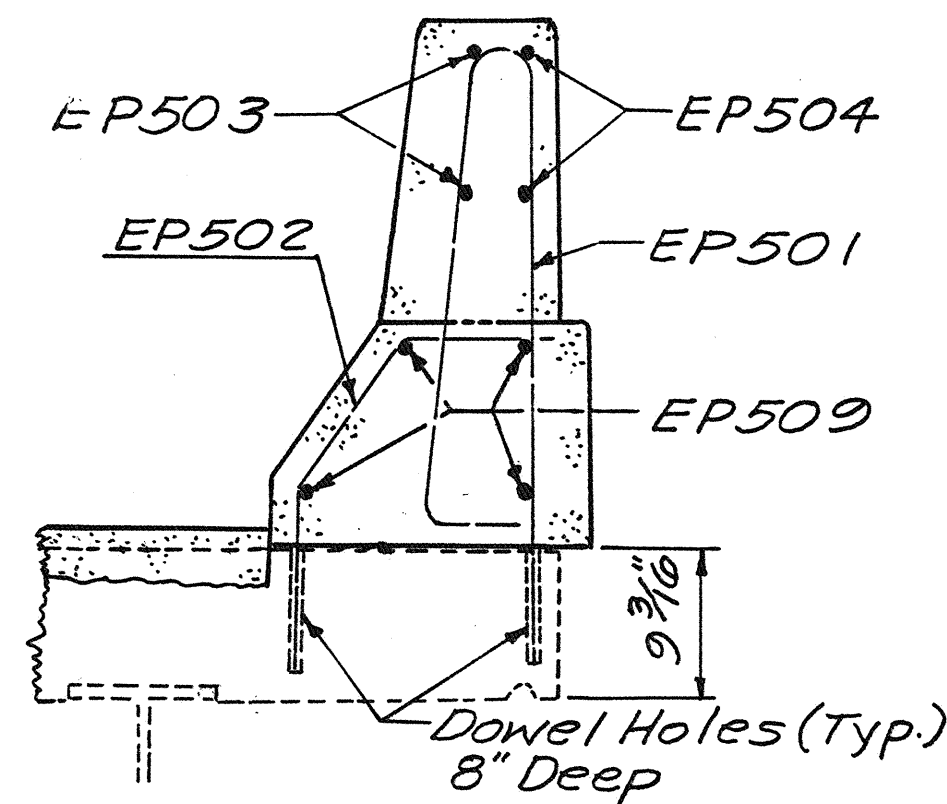


DEFLECTOR PARAPET ELEVATION

LEGEND
 P.E.J.F. = Preformed Expansion Joint Filler
 N.S. = Near Side
 F.S. = Far Side

Minimum Reinforcing Bar Splice Lap Length
 No. 5 bar = 2'-5"

NOTE:
 For additional parapet details and notes,
 See STD. DWG. No. BR-1.



SECTION A-A
 (This Sheet & Sheet No. 15 of 20)

STATE OF OHIO DEPARTMENT OF TRANSPORTATION					
DEFLECTOR PARAPET DETAILS BRIDGE NO. SCI. 52-28.59 L/R OVER CENTER STREET SCIOTO COUNTY					
DESIGNED D.W.S.	DRAWN D.W.S.	TRACED D.W.S.	CHECKED G.L.B.	REVIEWED J.W.S.	DATE 3-18-92

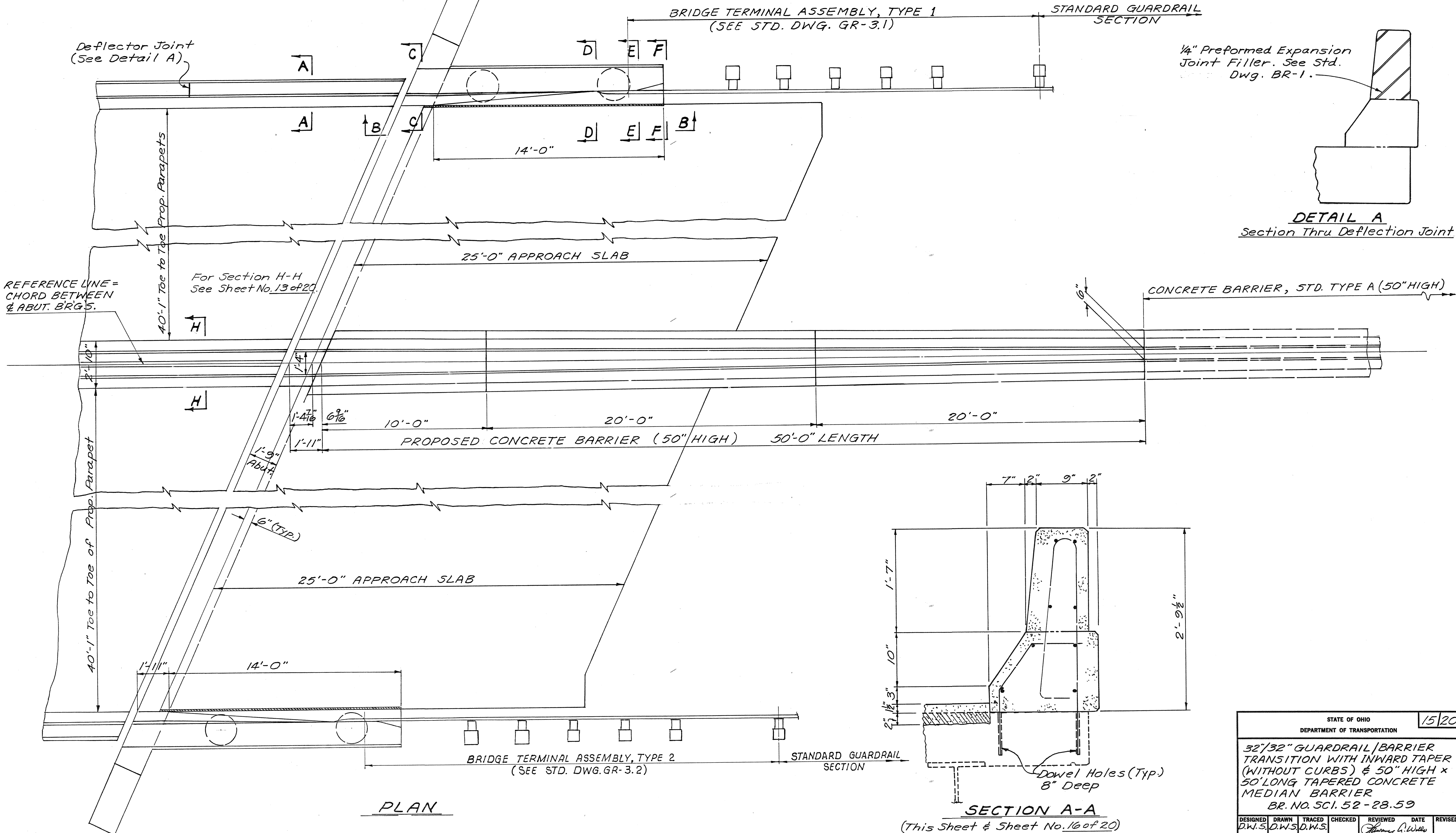
14/20

NOTE: For Sections B-B, C-C, D-D, E-E, & F-F, See Sheet No. 16 of 20.

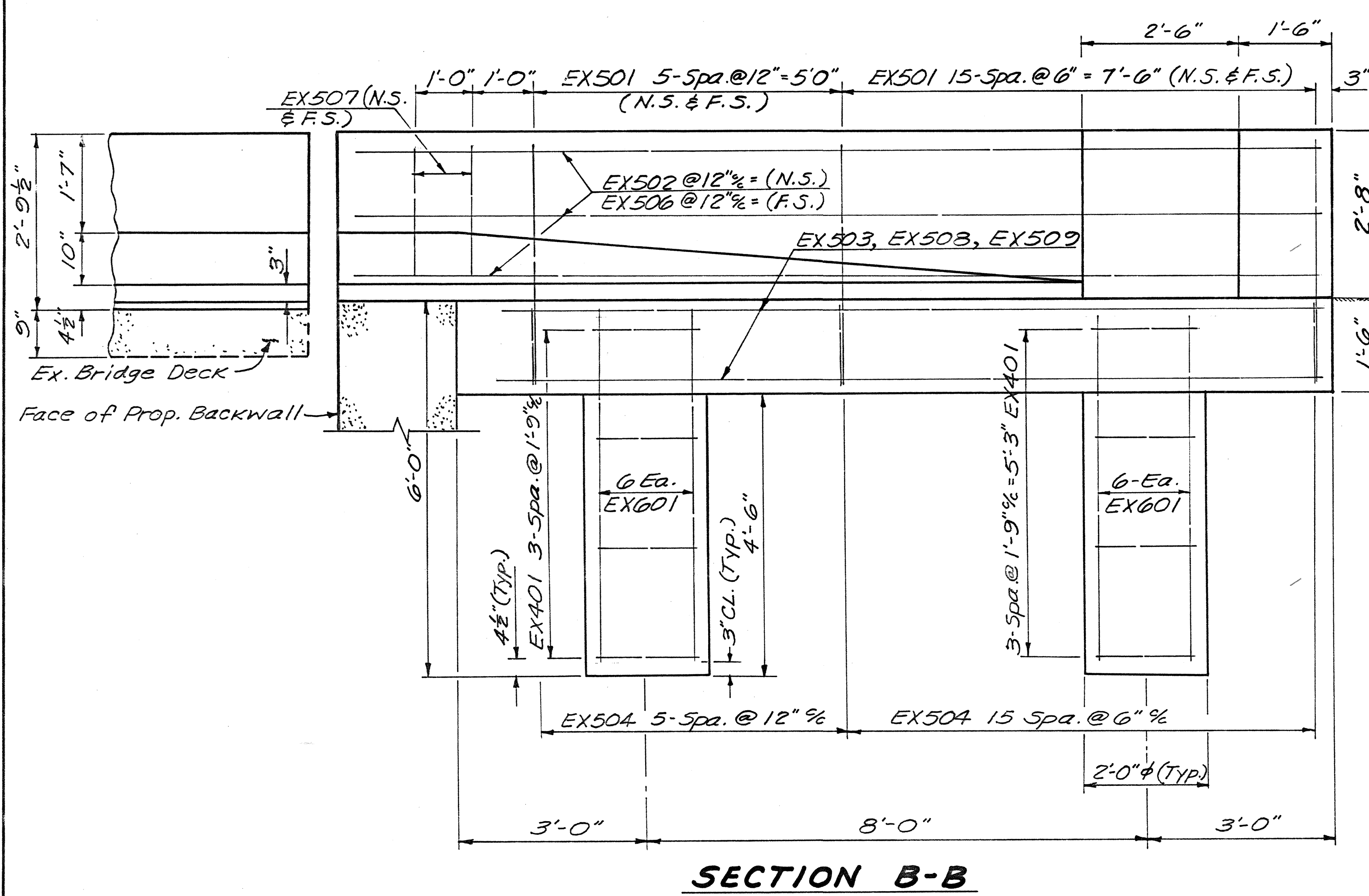
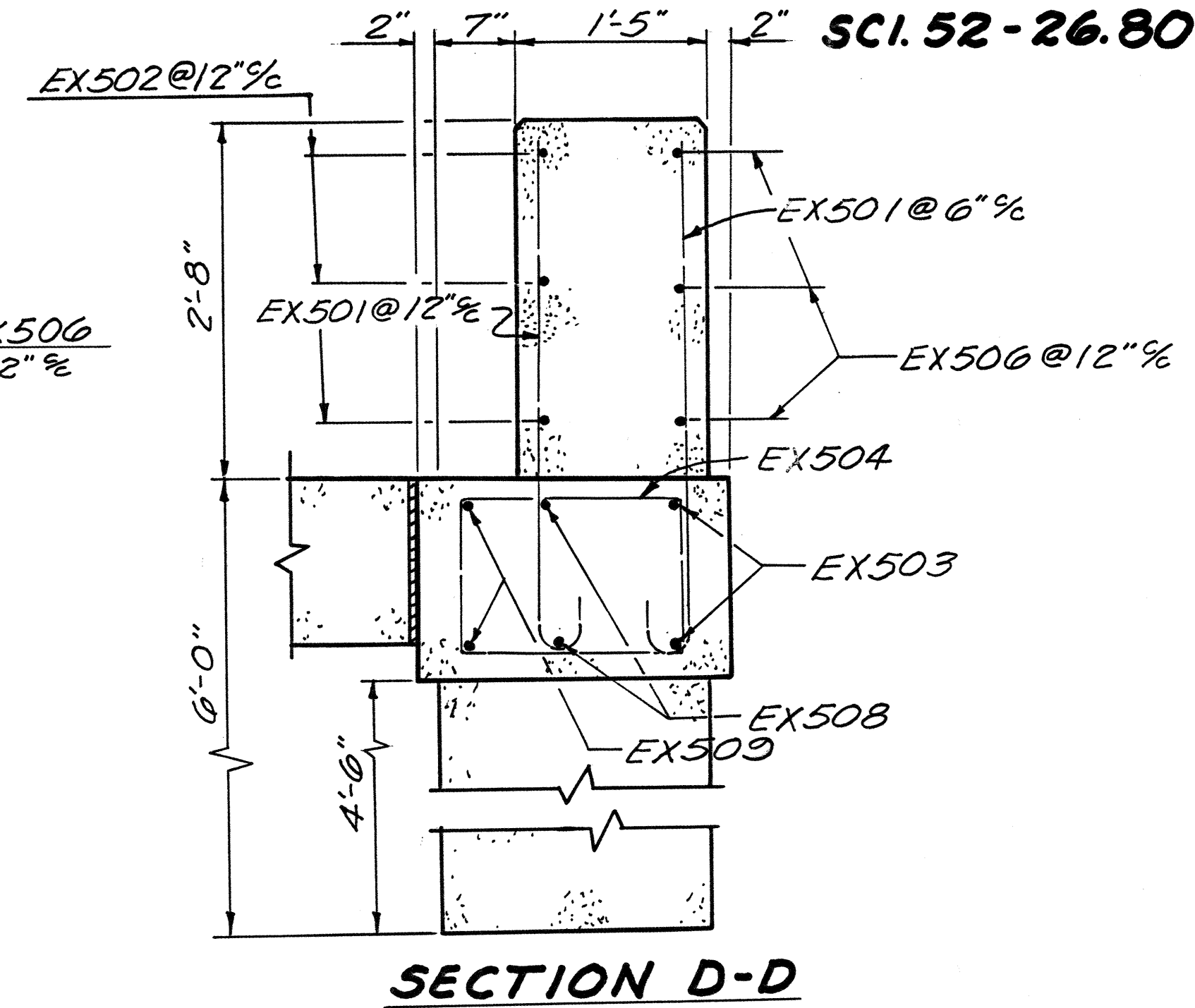
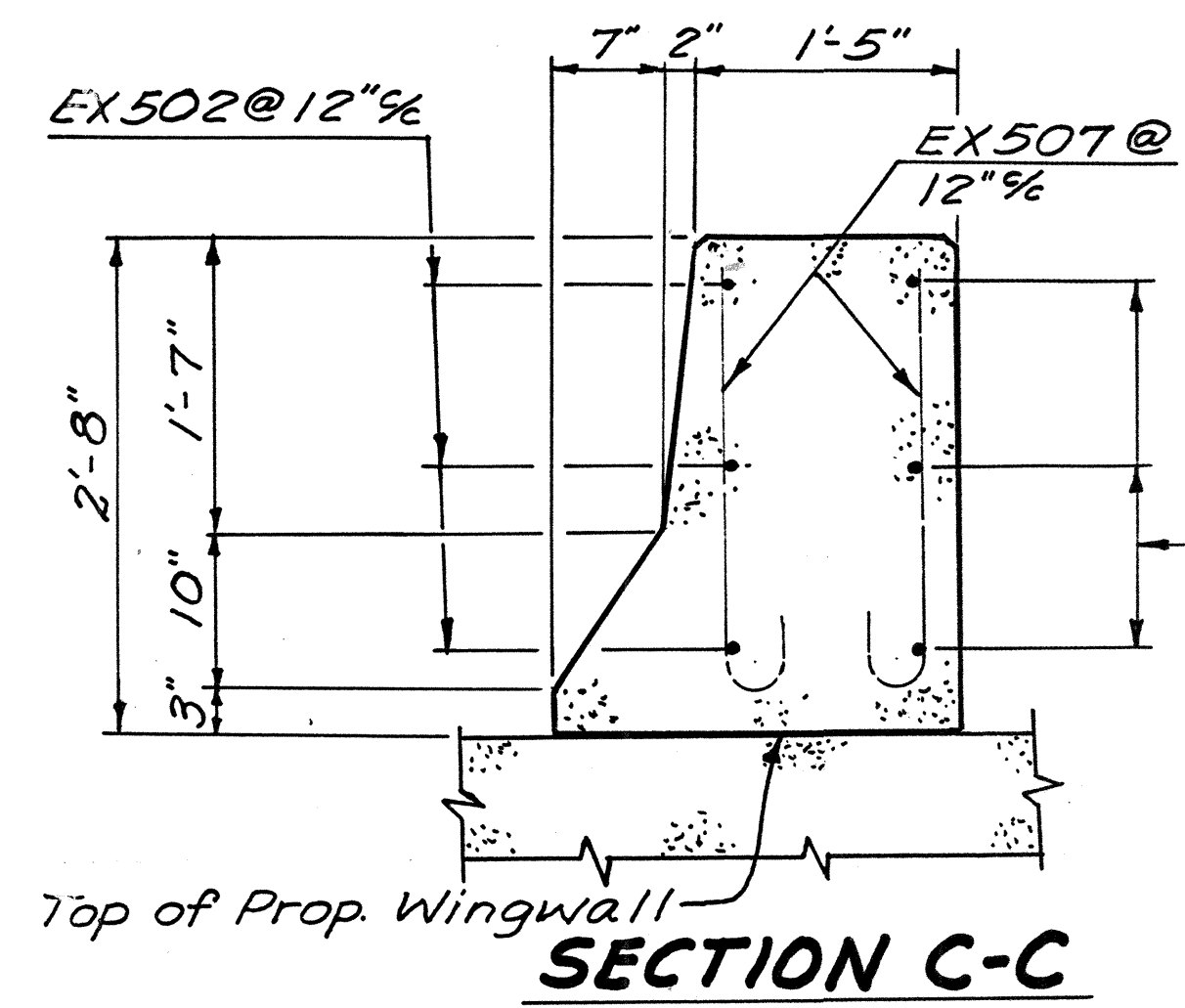
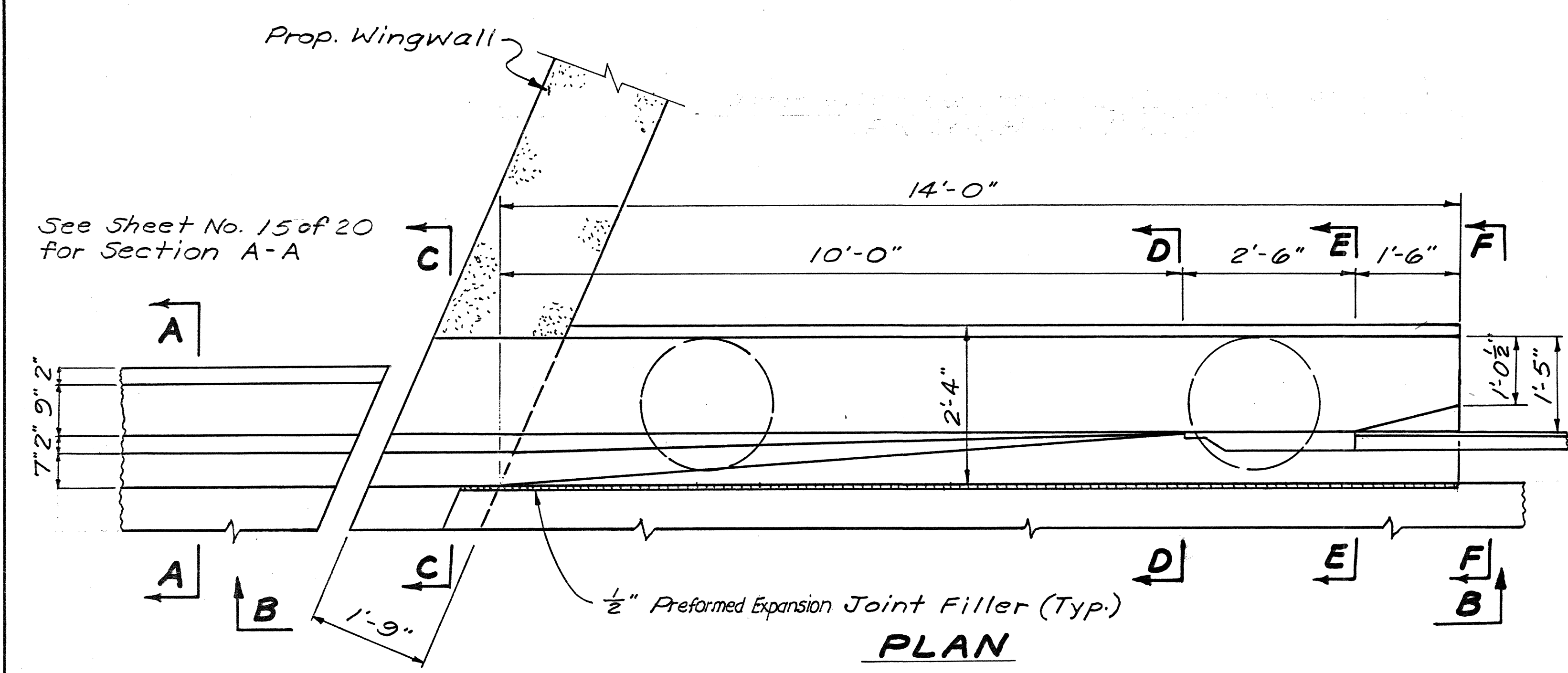
FHWA REGION	STATE	PROJECT
5	OHIO	

45
85

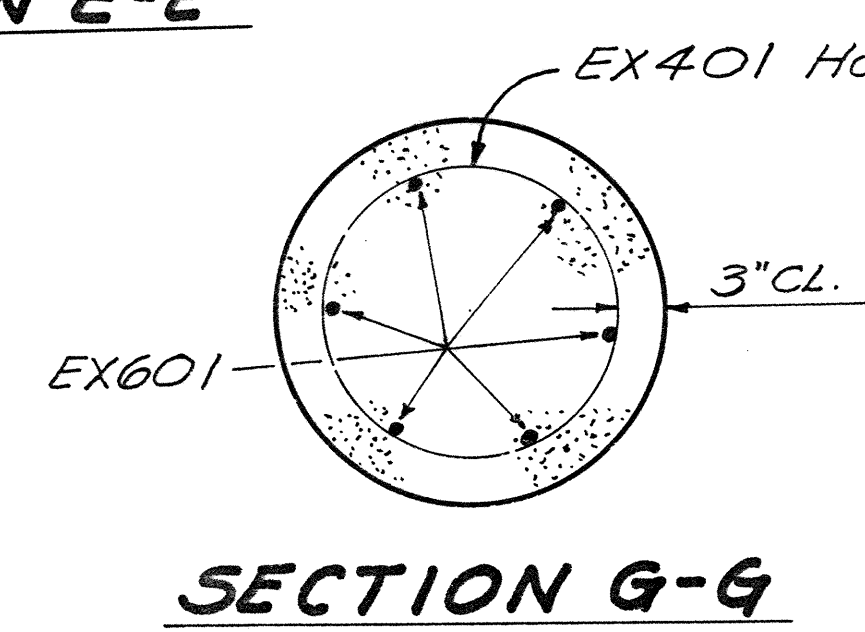
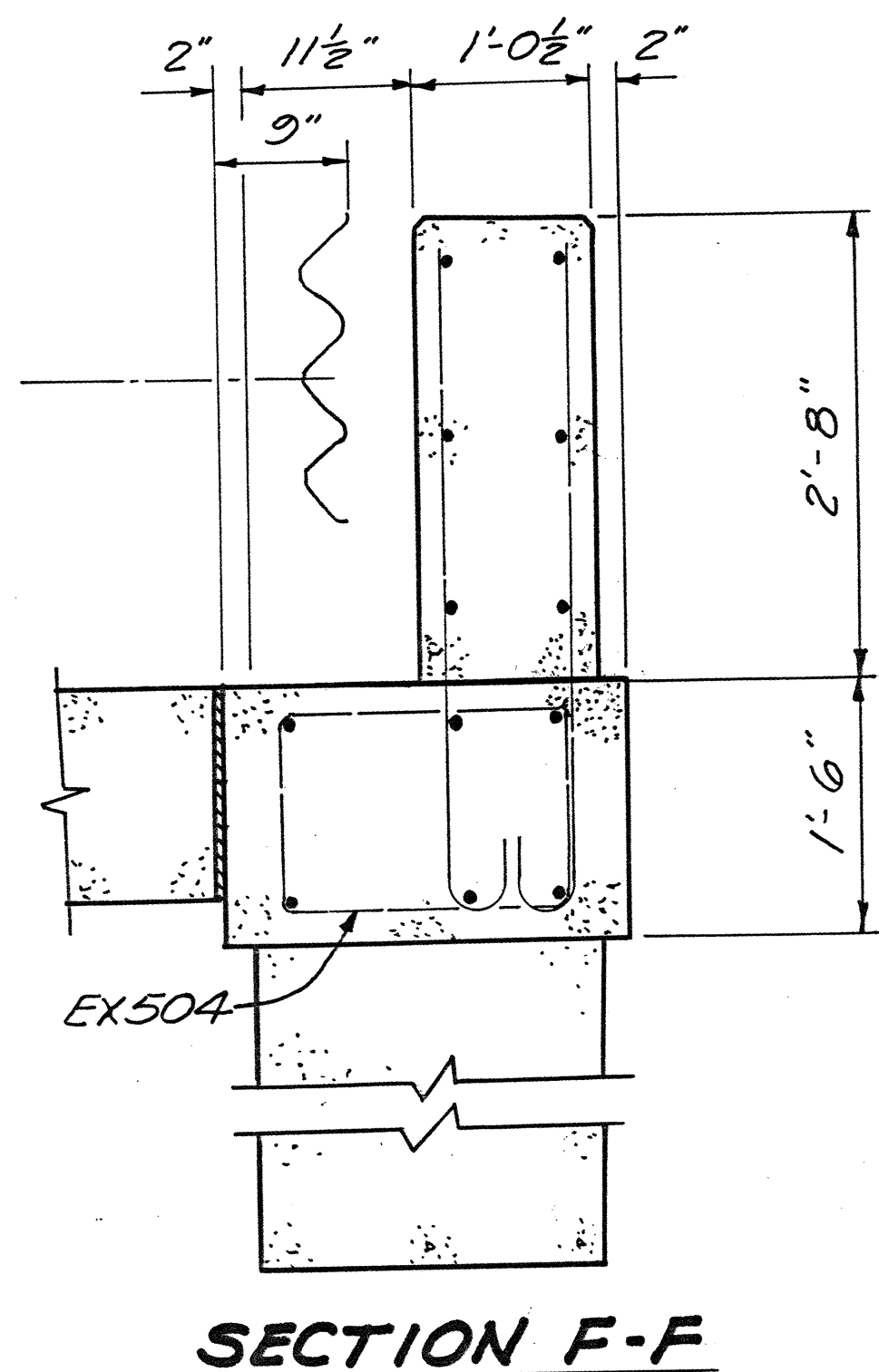
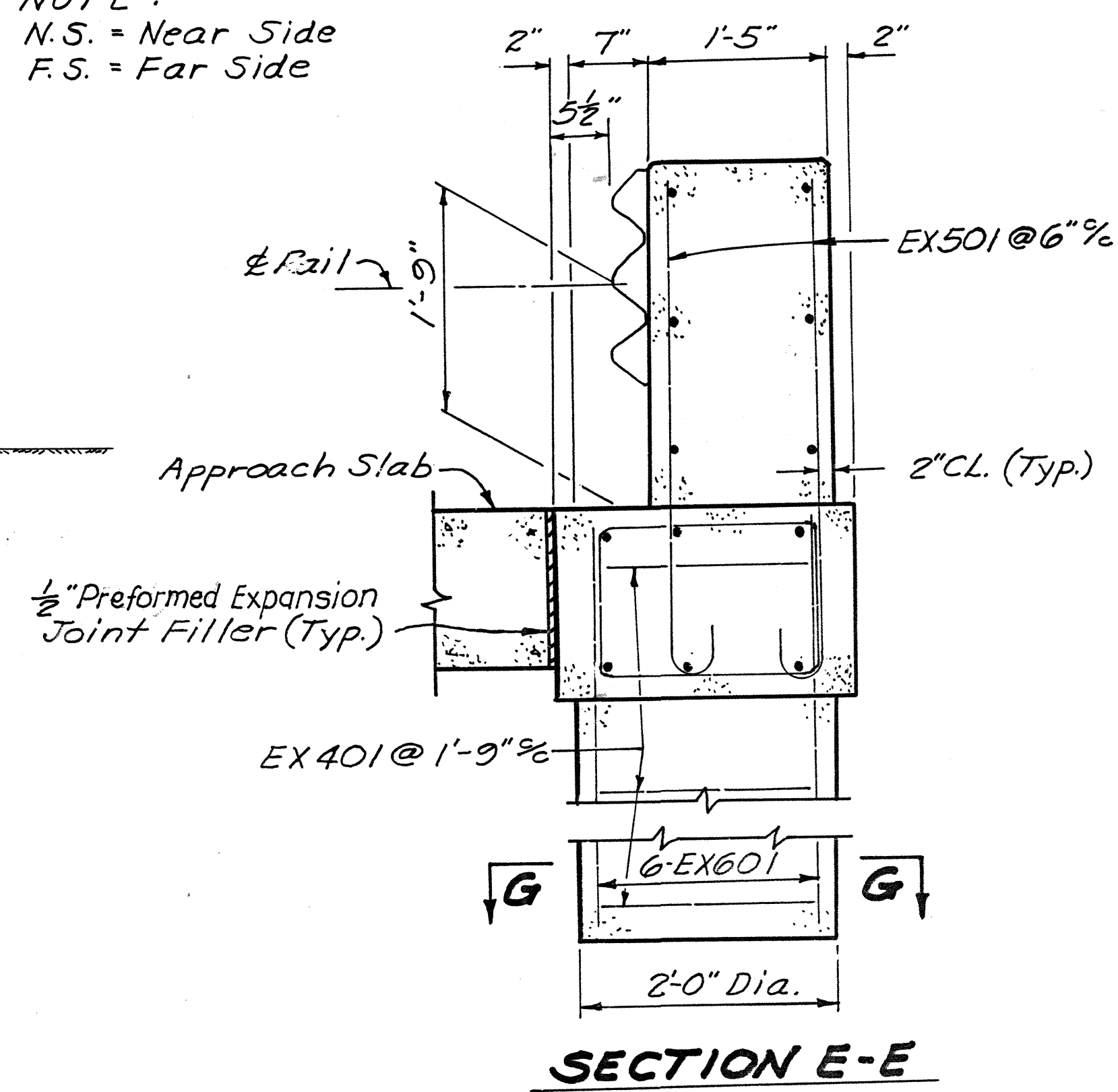
SCI. 52-26.80



STATE OF OHIO DEPARTMENT OF TRANSPORTATION					
32"/32" GUARDRAIL/BARRIER TRANSITION WITH INWARD TAPER (WITHOUT CURBS) & 50" HIGH x 50' LONG TAPERED CONCRETE MEDIAN BARRIER					15/20
BR. NO. SCI. 52-28.59					
DESIGNED D.W.S.	DRAWN D.W.S.	TRACED D.W.S.	CHECKED G.L.B.	REVIEWED Thomas A. Wells	DATE 3-18-92



NOTE:
N.S. = Near Side
F.S. = Far Side



Three beam guard rail and terminal connector and approach slab not shown in above section. (See Plan View)

STATE OF OHIO DEPARTMENT OF TRANSPORTATION					
32"/32" GUARDRAIL BARRIER TRANSITION WITH INWARD TAPER (WITHOUT CURBS) BRIDGE NO. SCI.52-2859 L/R U.S.R.52 OVER CENTER ST. SCIOTO COUNTY					
DESIGNED D.W.S.	DRAWN D.W.S.	TRACED D.W.S.	CHECKED G.L.B.	REVIEWED Thomas A. Wells	DATE 3-18-92

REINFORCING STEEL																		
MARK	BAR N ^o	LENGTH	TOTAL NUMBER BARS	WEIGHT	SHAPE	SPACING	FORWARD ABUTMENT & WINGWALLS	REAR ABUTMENT & WINGWALLS	DEFLECTOR PARAPETS		MEDIAN BARRIERS		CONCRETE DECK	MEDIAN BARRIER ON ABUTMENTS		BRIDGE GUARDRAIL BARRIER TRANSITION WITH INWARD TAPER		
									Left	Right	Left	Right		Forward	Rear	Left	Right	
EA 601	6	2'-2½" to 4'-5½" 9" Increments	2-Series of 4	40	Str.	1'-6" 9/c	2-Series of 4											
EA 602	6	5'-1"	34	260	Str.	1'-6" 9/c	16	18										
EA 603	6	8'-2"	116	1423	Bent	1'-6" 9/c	58	58										
EA 604	6	3'-8"	116	639	Str.	1'-6" 9/c	58	58										
EA 605	6	2'-9" to 4'-5¾" 10⅝" Incr.	2-Series of 3	33	Str.	1'-6" 9/c	2-Series of 3											
EA 606	6	2'-9" to 4'-5" 10" Incr.	2-Series of 3	32	Str.	1'-6" 9/c		2-Series of 3										
EA 607	6	2'-0½" to 4'-8" 10½" Incr.	2-Series of 4	40	Str.	1'-6" 9/c		2-Series of 4										
EA 501	5	6'-0"	2	13	Str.	As Shown	2											
EA 502	5	28'-10"	4	120	Str.	As Shown	4											
EA 503	5	26'-7" to 28'-7" 1'-0" Incr.	4-Series of 3	345	Str.	As Shown	4-Series of 3											
EA 504	5	4'-3"	2	9	Str.	As Shown	2											
EA 505	5	27'-5⅝"	8	229	Str.	As Shown	8											
EA 506	5	26'-0⅜" to 26'-10⅝" 10¼" Incr.	4-Series of 2	221	Str.	As Shown	4-Series of 2											
EA 507	5	4'-7"	2	10	Str.	As Shown	2											
EA 508	5	28'-2¼"	12	353	Str.	As Shown	12											
EA 509	5	26'-1" to 27'-6" 1'-5" Incr.	4-Series of 2	224	Str.	As Shown	4-Series of 2											
EA 510	5	26'-1" to 27'-9½" 10¼" Incr.	4-Series of 3	337	Str.	As Shown	4-Series of 3											
EA 511	5	5'-9"	2	12	Str.	As Shown	2											
ED 801	8	5'-1½"	108	1478	Bent	1'-6" 9/c	54	54										
EP 501	5	6'-4"	184	1215	Bent	As Shown			92	92								
EP 502	5	2'-7"	184	496	Bent	As Shown			92	92								
EP 503	5	7'-10"	20	163	Str.	1'-0" 9/c			10	10								
EP 504	5	8'-0"	4	33	Str.	1'-0" 9/c			2	2								
EP 505	5	15'-8"	24	392	Str.	1'-0" 9/c			12	12								
EP 506	5	7'-2"	40	299	Str.	1'-0" 9/c			20	20								
EP 507	5	10'-5"	4	44	Str.	1'-0" 9/c			2	2								
EP 508	5	10'-3"	4	43	Str.	1'-0" 9/c			2	2								
EP 509	5	25'-9"	40	1074	Str.	As Shown			20	20								
ES 501	5	4'-5"	184	848	Bent	8" 9/c					92	92						
ES 502	5	4'-3"	368	1631	Bent	8" 9/c					184	184						
ES 503	5	7'-10"	12	98	Str.	As Shown					6	6						
ES 504	5	25'-9"	50	1343	Str.	As Shown					25	25						
ES 505	5	15'-8"	36	588	Str.	As Shown					18	18						
ES 506	5	7'-2"	60	449	Str.	As Shown					30	30						
ES 507	5	7'-11"	24	198	Str.	As Shown					12	12						
ES 508	5	11'-2"	12	140	Str.	As Shown					6	6						
ES 509	5	5'-1"	4	21	Bent	As Shown							2	2				
ES 510	5	4'-10"	8	40	Bent	As Shown							4	4				
ES 601	6	2'-8"	181	725	Str.	8" 9/c							181					
ES 602	6	25'-9"	80	3094	Str.	As Shown							80					
ES 701	7	2'-8"	181	987	Str.	8" 9/c							181					

FHWA REGION	STATE	PROJECT	47 85
5	OHIO		

SCI-52-26.80

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

17/20

REINFORCING STEEL LIST

BRIDGE N^o. SCI-52-28.59
OVER CENTER STREET
SCIOTO COUNTY

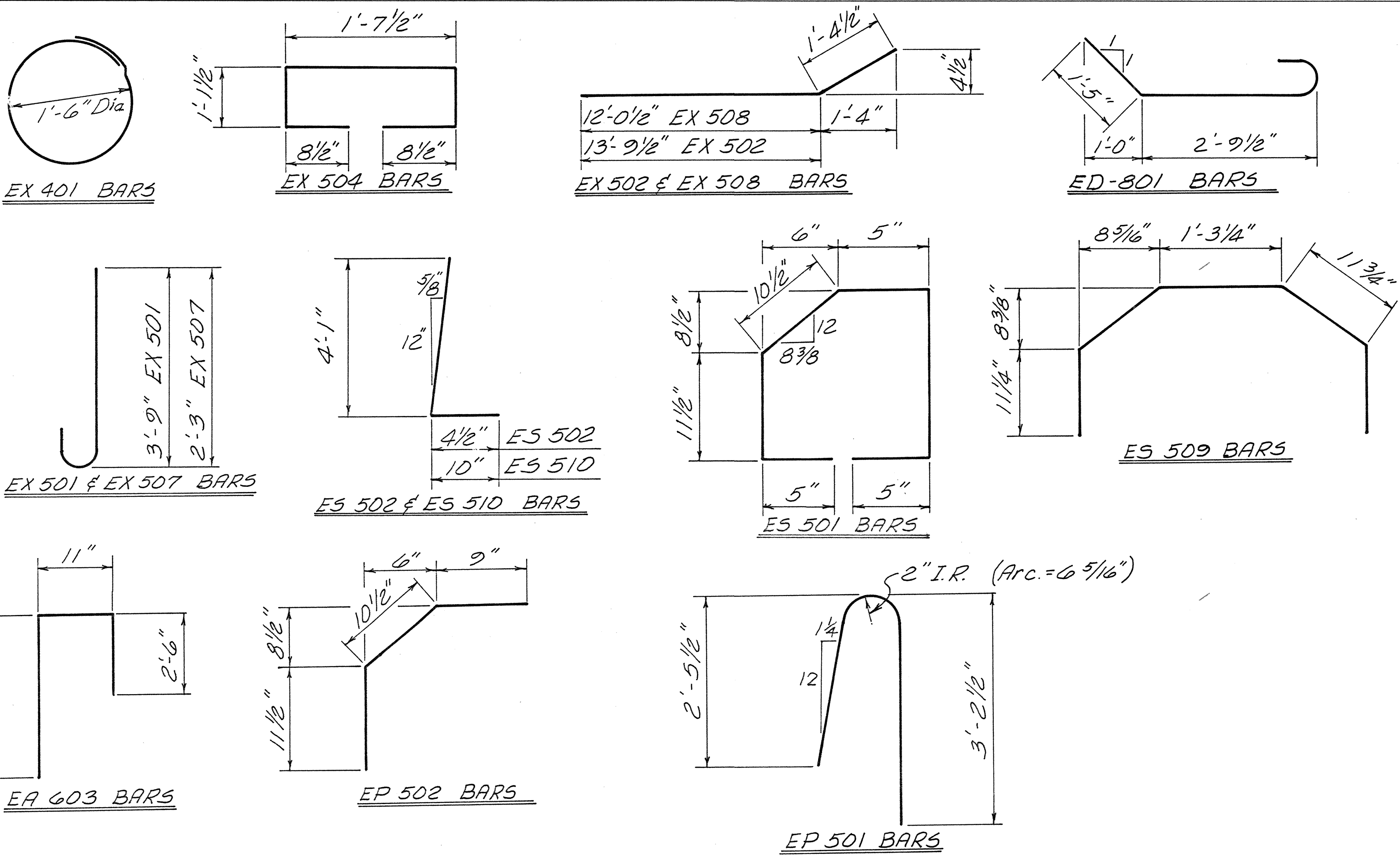
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.W.S.	D.W.S.	H	G.L.B.	Thomas A. Wiley	3-18-92	

Reinforcing Steel Continued on Sheet N^o 18 of 20

SCI-52-26.80

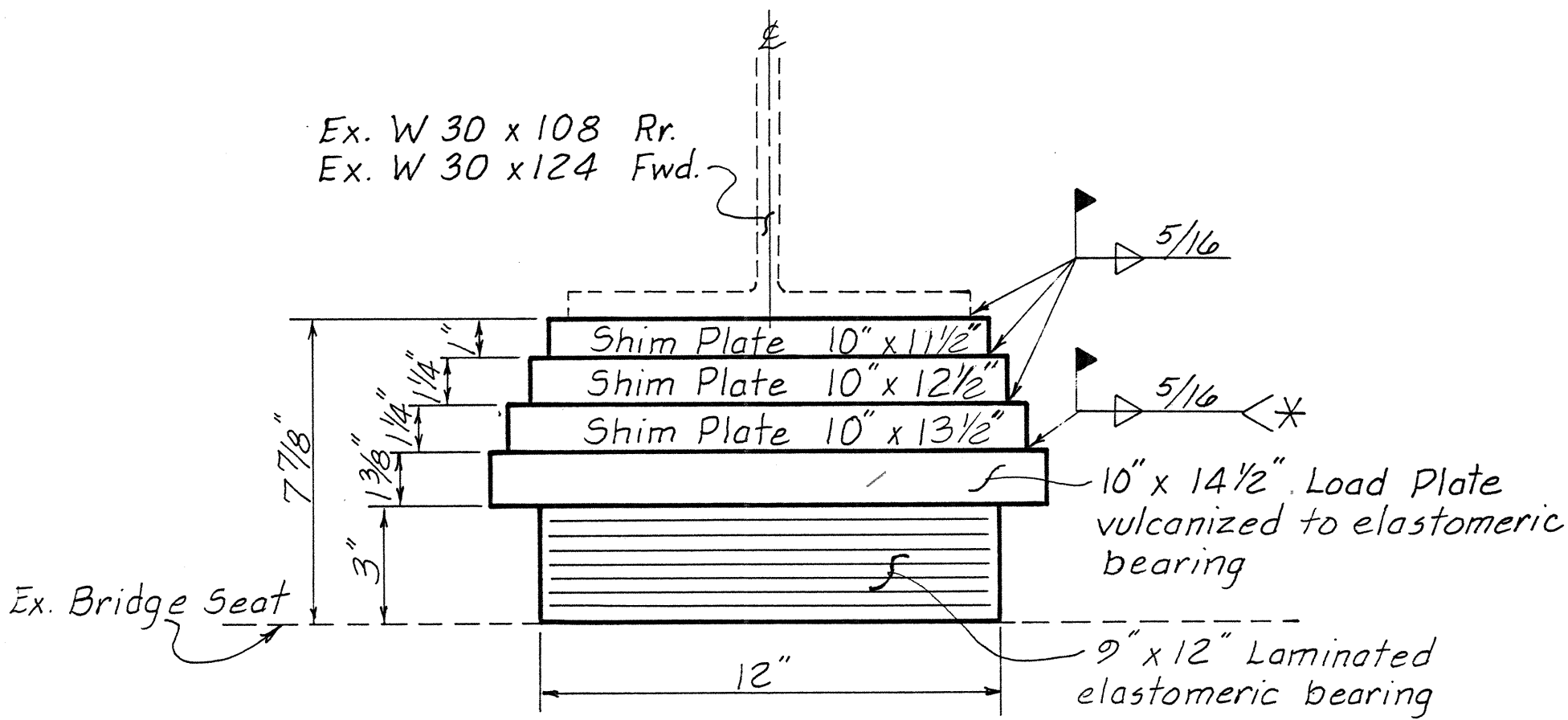
REINFORCING STEEL (Continued)																		
MARK	BAR No.	LENGTH	TOTAL NUMBER BARS	WEIGHT	SHAPE	SPACING	FORWARD ABUTMENT & WINGWALLS	REAR ABUTMENT & WINGWALLS	DEFLECTOR PARAPETS		MEDIAN BARRIERS		CONCRETE DECK	MEDIAN BARRIER ON ABUTMENTS		BRIDGE GUARDRAIL BARRIER TRANSITION WITH INWARD TAPER		
									Left	Right	Left	Right		Forward	Rear	Left	Right	
EX 401	4	6'-0"	32	128	Bent	1'-9" 9/16										16	16	
EX 501	5	4'-4"	168	759	Bent	As Shown										84	84	
EX 502	5	15'-2"	12	190	Bent	1'-0" 9/16										6	6	
EX 503	5	12'-8"	8	106	Str.	As Shown										4	4	
EX 504	5	5'-0 1/2"	84	442	Bent	As Shown										42	42	
EX 506	5	14'-6"	12	182	Str.	1'-0" 9/16										6	6	
EX 507	5	2'-10"	16	47	Bent	As Shown										8	8	
EX 508	5	13'-5"	8	112	Bent	As Shown										4	4	
EX 509	5	13'-6"	8	113	Str.	As Shown										4	4	
EX 601	6	5'-6"	48	397	Str.	As Shown										24	24	
TOTAL REINFORCING STEEL (BOTH SHEETS) = 22,215 lbs.																		

NOTE: All Reinforcing Steel Is To Be Epoxy Coated.

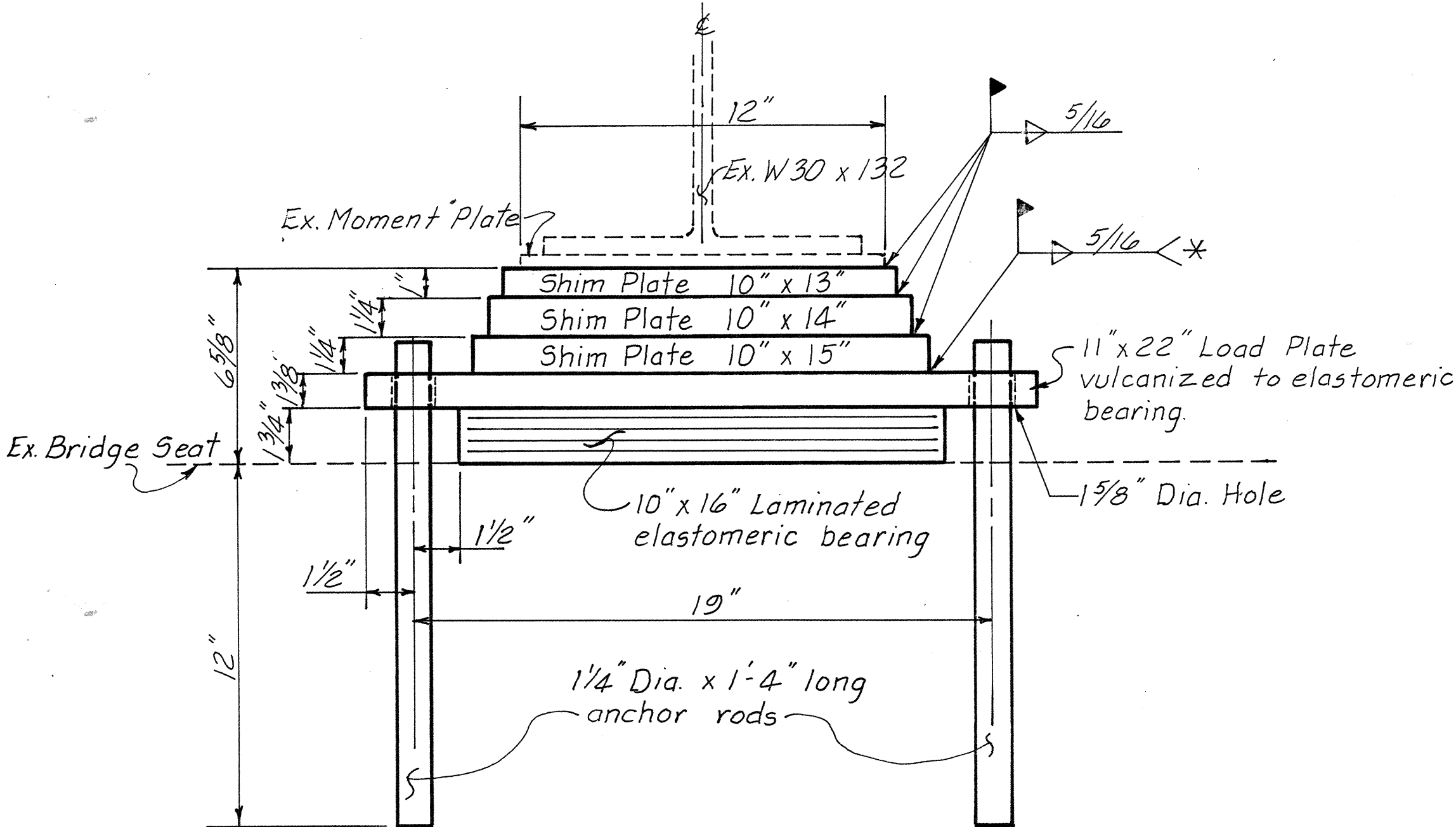


REINFORCING STEEL BENDING DIAGRAM

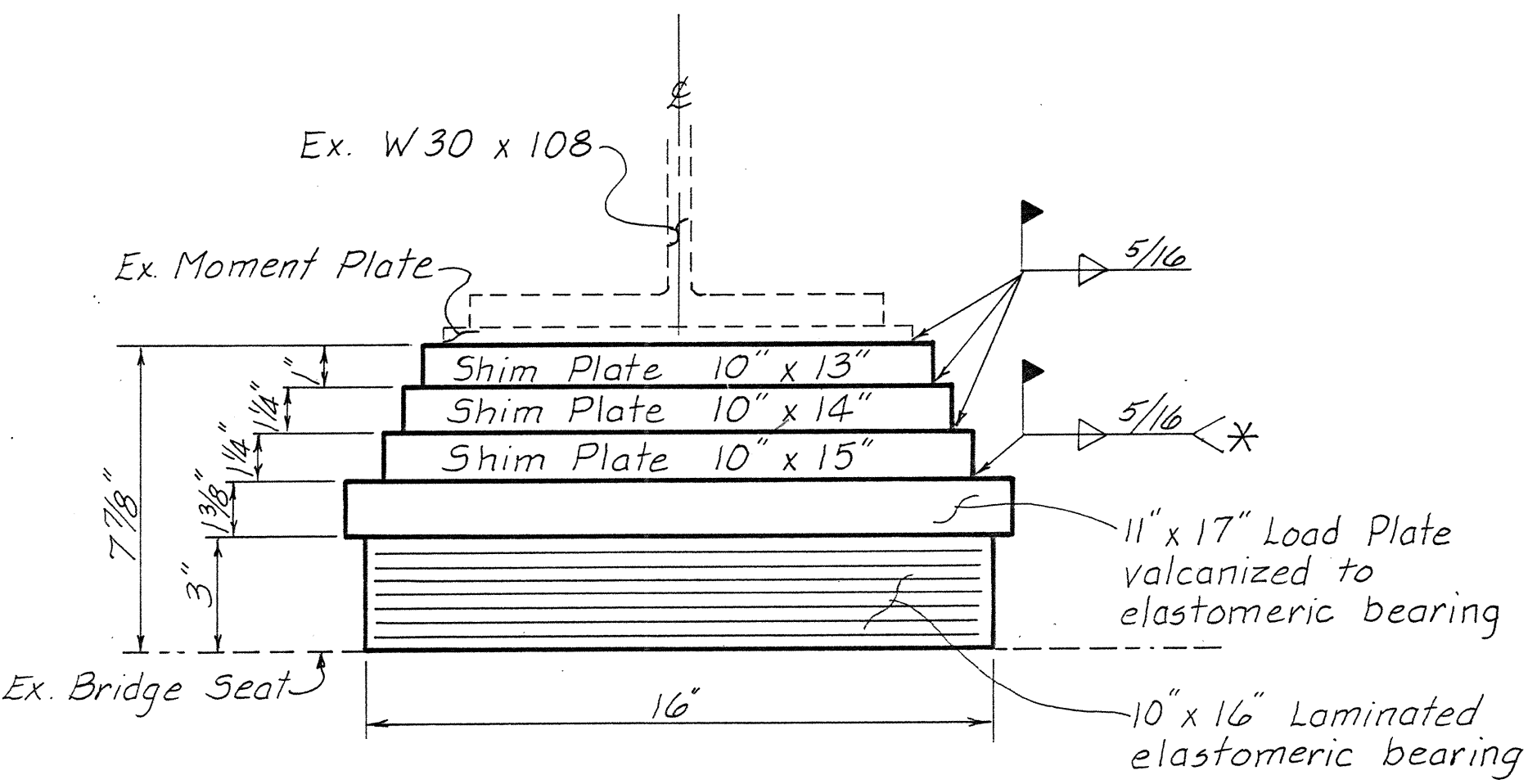
STATE OF OHIO						18/20
DEPARTMENT OF TRANSPORTATION						
REINFORCING STEEL LIST						
BRIDGE No. SCI-52-28.59						
OVER CENTER STREET						
SCIOTO COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.W.S.	D.W.S.	JL	G.L.B.	Thomas R. Wills	3-18-92	



ABUTMENT BEARINGS



FORWARD PIER BEARINGS



REAR PIER BEARINGS

* NOTE:
Welding of the load plate to the superstructure shall be controlled so that the plate temperature at the elastomeric bonded surface shall not exceed 400°F as determined by the use of pyrometric sticks or other temperature monitoring device.