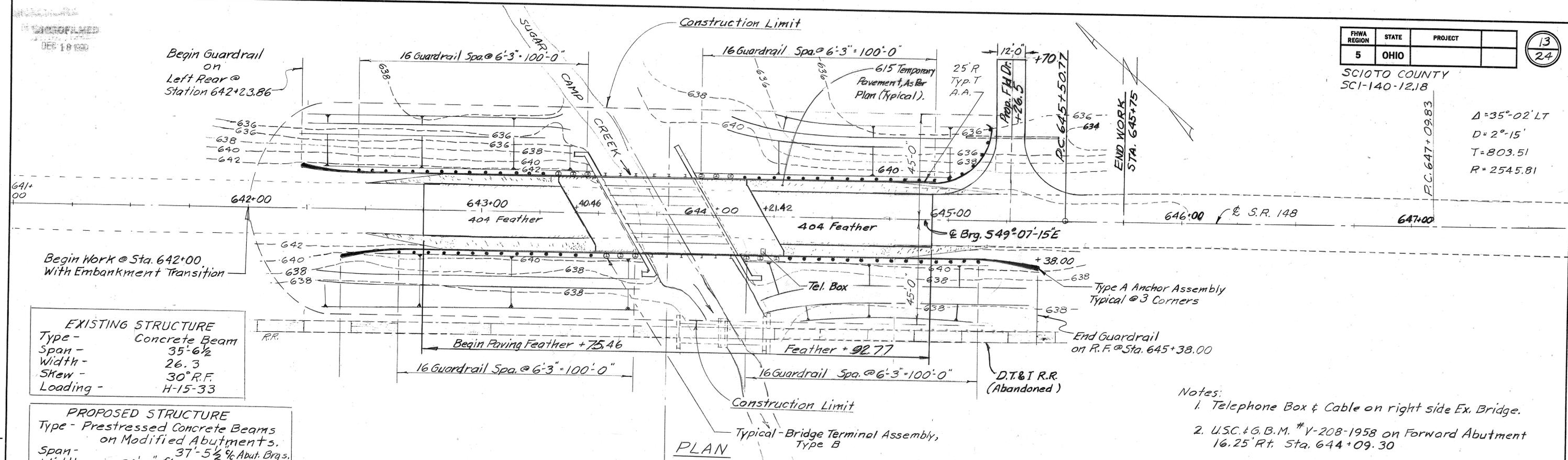


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DEC 18 1960

FHWA REGION	STATE	PROJECT	13 24
5	OHIO		

SCIOTO COUNTY
SCI-140-12.18

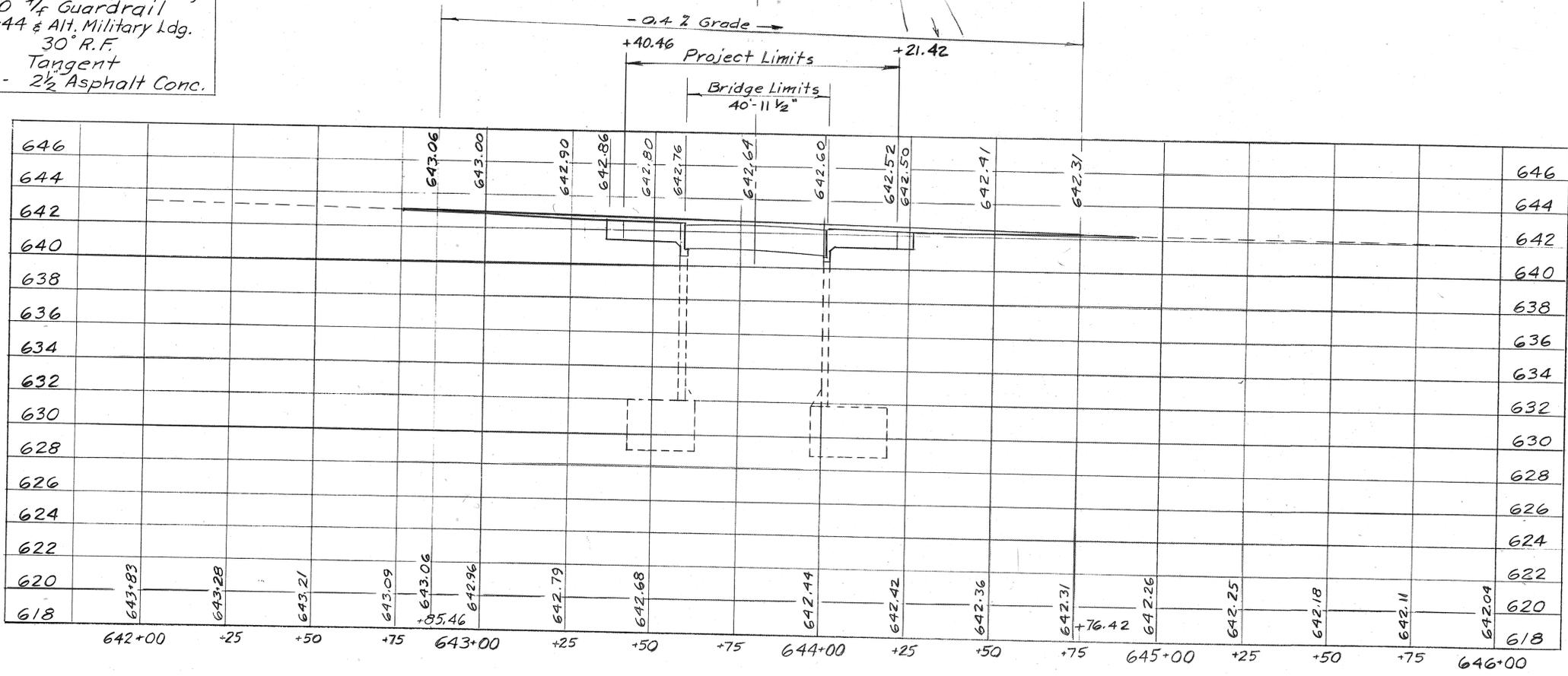
$\Delta = 35^{\circ}02'LT$
 $D = 2^{\circ}15'$
 $T = 803.51$
 $R = 2545.81$



EXISTING STRUCTURE
Type - Concrete Beam
Span - 35'-6 1/2"
Width - 26.3
Skew - 30° R.F.
Loading - H-15-33

PROPOSED STRUCTURE
Type - Prestressed Concrete Beams on Modified Abutments.
Span - 37'-5 1/2" Abut. Brgs.
Width - 32'-0" 1/4 Guardrail
Loading - HS-20-44 & Alt. Military Ldg.
Skew - 30° R.F.
Alignment - Tangent
Surface Course - 2 1/2" Asphalt Conc.

- Notes:
1. Telephone Box & Cable on right side Ex. Bridge.
 2. U.S.C. & G.B.M. #V-208-1958 on Forward Abutment 16.25' Rt. Sta. 644+09.30



Bench Mark - U.S.C. & G.B.M. #V-208-1958 on Forward Abutment 16.25 ft Right Sta. 644+09.30; El. 642.59

PROFILE ON ROADWAY

STATE OF OHIO		1/9	
DISTRICT 9		DEPARTMENT OF TRANSPORTATION BRIDGE OFC.	
SITE PLAN			
BRIDGE NO. SCI-140-1219 OVER SUGAR CAMP CREEK			
DESIGNED	DRAWN	TRACED	CHECKED
mse	mse	mse	CSW
REVIEWED	DATE	REVISION	

REPRODUCTION
DEC 18 1988

ESTIMATED QUANTITIES FOR STRUCTURES OVER 20 FT SPAN

FHWA REGION	PROJECT
5 OHIO	

14
24

SCIOTO COUNTY
SCI-140-12.18

202	LUMP		PORTIONS OF STRUCTURES REMOVED
403	8	C.Y.	ASPHALT CONCRETE, AC-20
404	5	C.Y.	ASPHALT CONCRETE, AC-20
503	57	C.Y.	UNCLASSIFIED EXCAVATION
503	LUMP		COFFERDAMS, CRIBS AND SHEETING
509	4304	LB.	REINFORCING STEEL, GRADE 60
510	78	EA.	DOWEL HOLES
511	46	C.Y.	CLASS C CONCRETE, ABUTMENTS, FOOTINGS AND WING WALL TOPS
512	38	SQ.YD.	TYPE B WATERPROOFING
512	157	SQ.YD.	TYPE D WATERPROOFING
515	8	EA.	PRESTRESSED CONCRETE BRIDGE MEMBERS (SEE PROPOSAL NOTE)
516	32	EA.	1" X 5" X 10" LAMINATED ELASTOMERIC BEARINGS
516	21	SQ.FT.	1/8" PREFORMED BEARING PADS
516	107	SQ.FT.	1" PREFORMED EXPANSION JOINT FILLER
516	80	LIN FT.	2" DEEP JOINT SEALER, AS PER PLAN
517	87.5	LIN FT.	RAILING [DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP, TYPE 2 STEEL POSTS AND BOLTS]
518	28	CY	POROUS BACKFILL
* 519	10	SQ.FT.	PATCHING CONCRETE STRUCTURES
SPECIAL	74	LIN FT.	SAWING AND SEALING BITUMINOUS CONCRETE JOINTS
SPECIAL	57	SQ.FT.	STEEL DRIP STRIP
SPECIAL	136	SQ.FT.	SEALING CONCRETE SURFACES [SEE PROPOSAL NOTE]
* 50 % FEDERAL PARTICIPATION			

INDEX OF SHEETS, STRUCTURES

SITE PLAN	13
ESTIMATED QUANTITIES	14
GENERAL NOTES	15
TRANSVERSE SECTIONS & PHASED CONSTRUCTION	16
ABUTMENT DETAILS FOR PHASED CONSTRUCTION	17
ABUTMENT DETAILS & REINFORCING STEEL LIST	18
SUPERSTRUCTURE DETAILS	19
MISCELLANEOUS CONSTRUCTION DETAILS	20
ABUTMENT JOINTS IN BITUMINOUS CONCRETE BOX BEAM BRIDGES	21
RIGHT OF WAY	22 THRU 24

STATE OF OHIO				2/9
DISTRICT 9 DEPARTMENT OF TRANSPORTATION				BRIDGE OFC
ESTIMATED QUANTITIES				
BRIDGE NO. SCI-140-1219				
OVER SUGAR CAMP CREEK				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE
MSC	MSC	MSC	CSW	

MICROFILMED
DEC 1-8-88

FHWA REGION	PROJECT
5 OHIO	

15
24

SCIOTO COUNTY
SCI-140-12.18

GENERAL NOTES , STRUCTURES OVER 20 FT SPAN

DESIGN SPECIFICATIONS: THIS STRUCTURE MODIFICATION CONFORMS TO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES AS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1987 INCLUDING 1984, 1985 AND 1986 INTERIM SPECIFICATIONS AND THE OHIO SUPPLEMENT TO THESE SPECIFICATIONS.

DESIGN DATA:
DESIGN LOADING-HS20-44, AND THE ALTERNATE MILITARY LOADING
CONCRETE CLASS C - UNIT STRESS 1333 PSI

REINFORCING STEEL- ASTM A615, A616, OR A617 GRADE 60- UNIT STRESS 24000 PSI
DECK PROTECTION METHOD- 512 TYPE D WATERPROOFING FOR DECK AND EPOXY COATED TOP AND BOTTOM REINFORCING STEEL.
STRUCTURAL STEEL - A36, UNIT STRESS 20,000 PSI.

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/OR 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.

CONCRETE FOR PRESTRESSED CONCRETE BEAMS
UNIT STRESS 2,200 PSI COMPRESSION
444 PSI TENSION

PRESTRESSING STRAND
ASTM A416 $f_c' = 270,000$ psi
INITIAL STRESS = $0.70 f_s'$

ABUTMENT BACKWALL & APPROACH SLAB REPLACEMENT:

THE EXISTING BACKWALLS SHALL BE REMOVED. MODIFICATIONS TO THE ABUTMENTS AS PREPARATION TO REPLACE THE BACKWALLS AND APPROACH SLABS AND INSTALL THE PRESTRESSED BEAMS **SHALL BE MADE.**

EXISTING BRIDGE PLANS: DETAIL DRAWINGS OF THE EXISTING BRIDGE MAY BE INSPECTED IN THE DISTRICT BRIDGE OFFICE IN CHILLICOTHE, AS BUILT.

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81	11-27-81	SHEETS 1, 2 @ 3
BP-5	10-1-87	
DBR-2-73	4-10-73	
GR-1	1-11-85	
GR-2B	2-5-82	
GR-3	1-81-85	
GR-4	2-5-82	
PSBD-1-81	9-18-81	SHEETS 1, 2, 3 @ 4

AND TO SUPPLEMENTAL SPECIFICATIONS: 824 DATED 10-8-82

PATCHING CONCRETE STRUCTURES: THIS ITEM IS POSSIBLE PROJECTED DAMAGE AND SHALL BE AS DIRECTED BY THE ENGINEER WHO MAY ALSO NON-PERFORM THIS ITEM.

ESTIMATED QUANTITIES: SPECIFIC LOCATIONS AND USAGE OF SOME OF THE ESTIMATED QUANTITIES SET UP ON THIS PLAN TO BE USED AS DIRECTED BY THE ENGINEER AND 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.

ITEM SPECIAL , SEALING OF CONCRETE SURFACES:
A CONCRETE SEALER, EITHER SILANE OR AN EPOXY SEALER, SHALL BE APPLIED TO THE FOLLOWING CONCRETE SURFACES: BEAM FASCIAS AS SHOWN IN DECK SECTION ON SHEET NO.16

CONCRETE PATCHING:

ONLY STRUCTURAL PATCHES EXPOSING PRIMARY REINFORCING STEEL (AFTER REMOVAL OF UNSOUND CONCRETE) SHALL BE MADE AS DIRECTED BY THE ENGINEER. SURFACE PREPARATION SHALL INCLUDE SANDBLASTING OF ALL REINFORCING STEEL AND CONCRETE TO BE PATCHED (STEEL CLEANED TO SA-1 QUALITY). PAYMENT SHALL INCLUDE ALL WORK , INCLUDING SANDBLASTING, NECESSARY TO COMPLY WITH ITEM 519

REMOVAL OF EXISTING CONCRETE:

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING DECK, APPROACH SLABS, ABUTMENT BACKWALLS AND DECK RAILING SHALL BE REMOVED. 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 IS INCLUDED FOR PAYMENT IN ITEM 202.

TRAFFIC CONTROL: ALL WORK ON THIS PROJECT SHALL BE SCHEDULED AND PERFORMED IN SUCH A MANNER AS TO PROVIDE A MINIMUM OF INTERFERENCE AND MAXIMUM PROTECTION OF THE TRAVELING PUBLIC.

REINFORCING STEEL SAMPLES:

REFER TO CMS SECTIONS 106.03, 700,709.01 THRU 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURE BY THIS ADDITIONAL STEEL, SPLICED IN ACCORDANCE WITH 509.08.

THE FOLLOWING SPECIFICATIONS FOR MORTAR AND PREPARATION OF SURFACES SHALL BE IN LIEU OF THAT DESCRIBED ON SHEET 1 OF 4 OF STANDARD DRAWING PSBD-1-81 AND SHALL BE INCLUDED FOR PAYMENT OF MATERIAL , LABOR AND INCIDENTALS IN THE PRICE BID FOR ITEM 515, PRESTRESSED CONCRETE BRIDGE MEMBERS:

NON-SHRINKING -MORTAR:

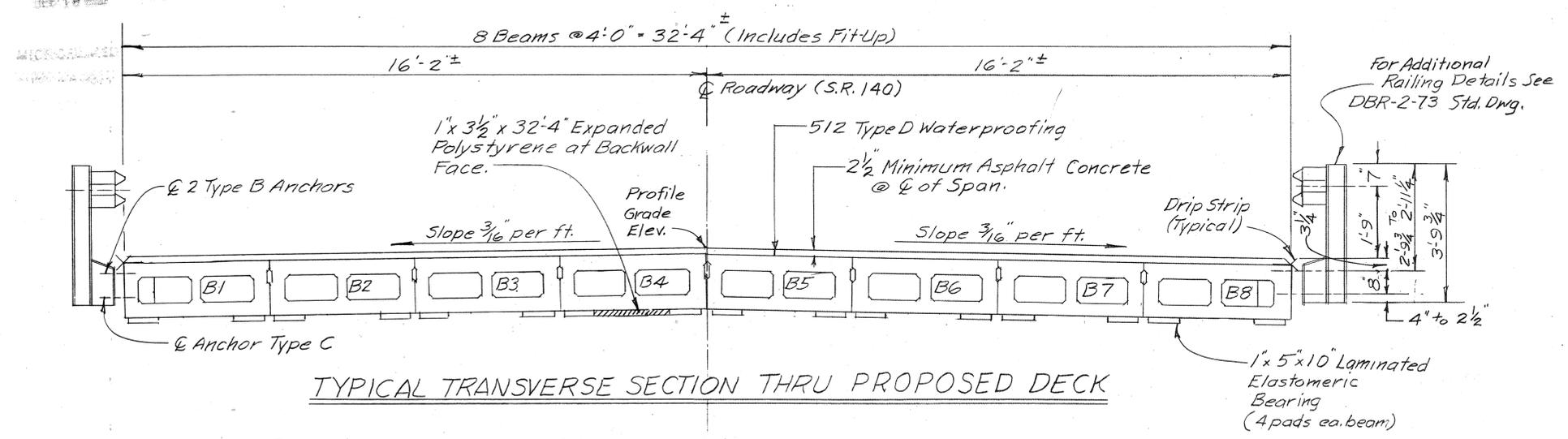
MORTAR OR GROUT FOR KEYWAYS BETWEEN PRESTRESSED CONCRETE BOX BEAMS, FOR TIE ROD RECESSES AND FOR ANCHOR DOWEL HOLES SHALL BE A NON SHRINKING NON METALLIC MORTAR HAVING A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 5000 PSI ACCORDING TO THE CORPS OF ENGINEERS SPECIFICATION CRD-C621-83 WHEN PREPARED TO A MODERATE FLUIDITY (124-145 PERCENT FLOW TABLE FLOW). THE MORTAR OR GROUT SHALL ALSO MEET ALL OTHER REQUIREMENTS OF SPECIFICATION CRD-C621-83. THE MORTAR SHALL BE PREPARED, PLACED AND CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AGAINST SURFACES AS SPECIFIED BELOW;

PREPARATION OF CONCRETE SURFACES IN CONTACT WITH NON-SHRINKING MORTAR:

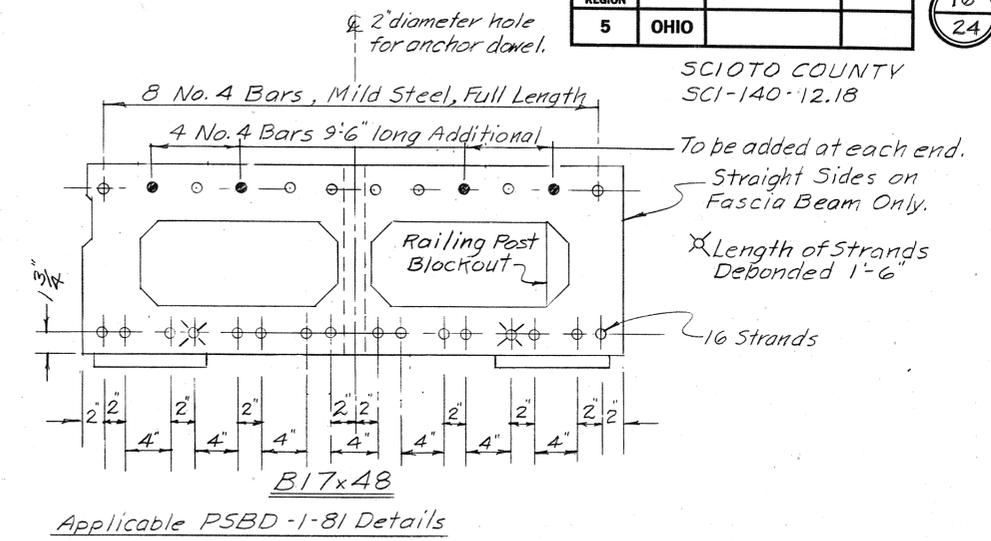
THE KEYWAY SURFACES SHALL BE GIVEN A MEDIUM SANDBLAST AT THE PLANT WITHIN FOUR DAYS BEFORE THE BEAMS LEAVE THE PLANT. BEFORE MORTARING THE KEYWAYS SHALL BE THOROUGHLY CLEAN OF ALL DIRT, DUST AND OTHER FOREIGN MATTER. THE KEYWAY SURFACES SHALL BE WETTED BUT NO FREE WATER SHALL BE ALLOWED TO REMAIN IN THE KEYWAYS.

STATE OF OHIO					3/9
DISTRICT 9 DEPARTMENT OF TRANSPORTATION					BRIDGE OFC
GENERAL NOTES					
BRIDGE NO. SCI-140-1219 OVER SUGAR CAMP CREEK					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
MSC	MSC	MSC	CSW		

SCIOTO COUNTY
SCI-140-12.18

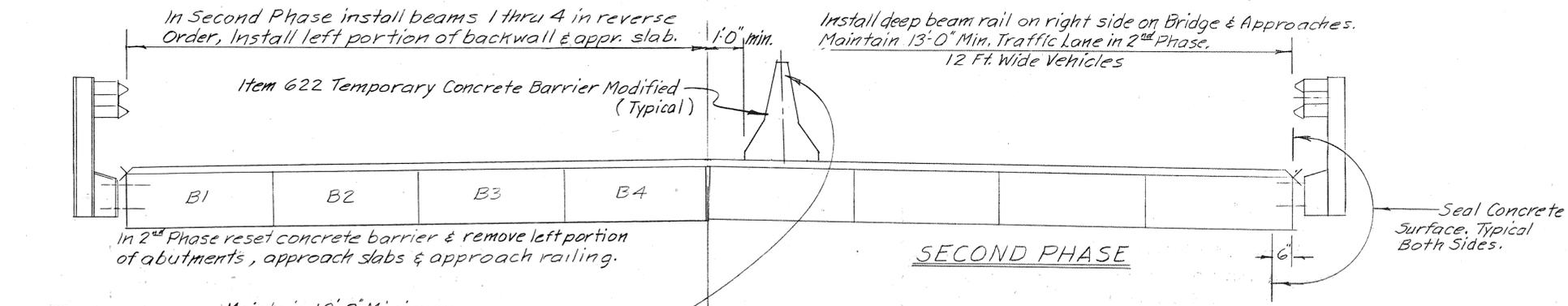


TYPICAL TRANSVERSE SECTION THRU PROPOSED DECK

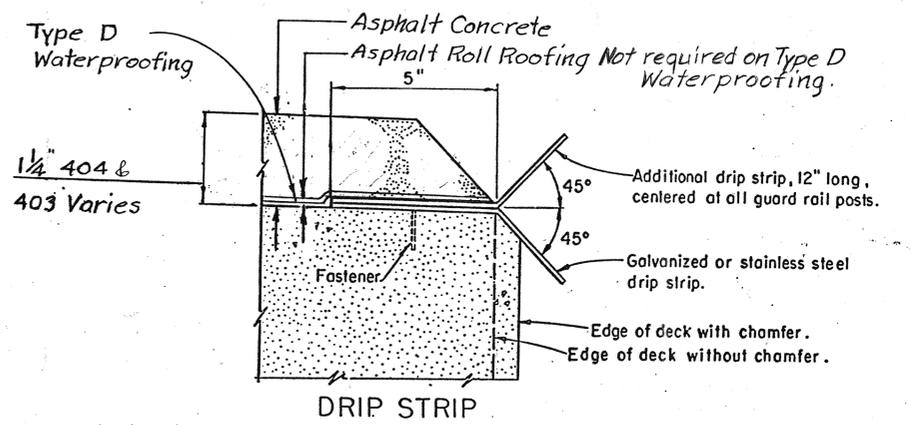


Applicable PSBD-1-81 Details

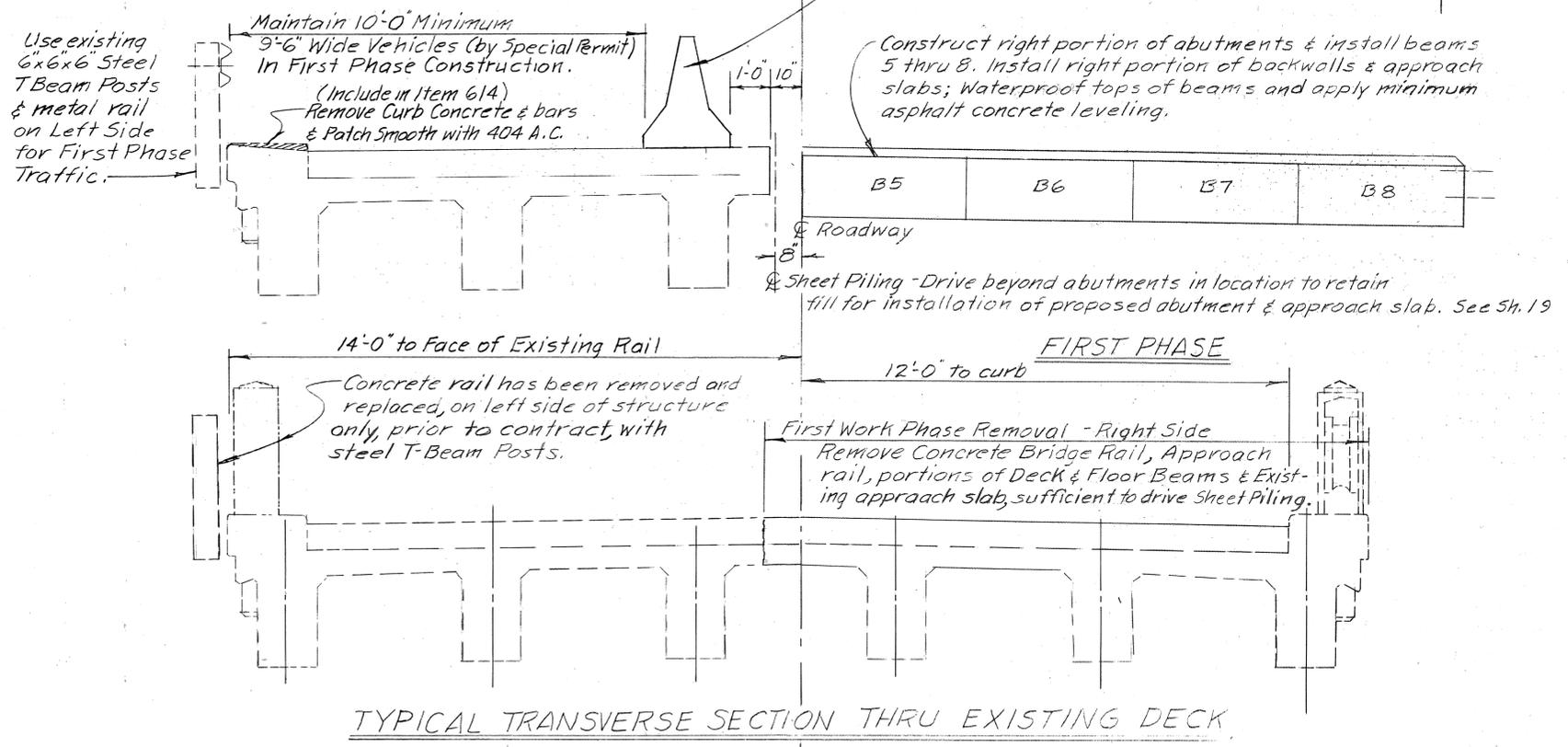
Section showing wall thickening at railing post anchors. Beam lifting inserts. Anchor dowels (fixed) & (expansion) Details of transverse tie rods. Normal crown treatment, joint at center roadway. Beam dimensional tolerances. 48" wide non-composite beams, B17x48 Details & reinforcement of beam ends. End details of transverse tie rod anchorage and wall thickening at railing post anchors.



SECOND PHASE



DRIP STRIP: Prior to applying deck membrane waterproofing, a bent drip strip shall be installed along the edges of the deck as shown. The strips shall be fastened at 1'-6" maximum with 1 1/4 x 5/8 x 1/4 flat head drive pin and washer. (Length x Shank Dia. x Head Dia.) or #10 galvanized screws and expansion anchors, subject to the approval of the Engineer. The strips shall be placed the full length of the deck, ending at the face of the abutment wingwall or steel end dam angle. Where splices are required a 3" (Min.) lap shall be used with a fastener through the lap. Steel for galvanized strips shall be 8"x0.105" and shall meet the requirements of ASTM A568. Galvanizing shall be in accordance with 711.02. Stainless steel shall be 20 gauge ASTM A167, Type 304, mill finish. Payment shall be of the contract price bid for item Special, Sq. Ft., Steel Drip Strip, which shall include all materials, labor, tools and incidentals necessary to complete the item.

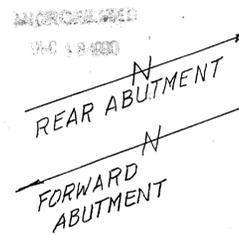


TYPICAL TRANSVERSE SECTION THRU EXISTING DECK

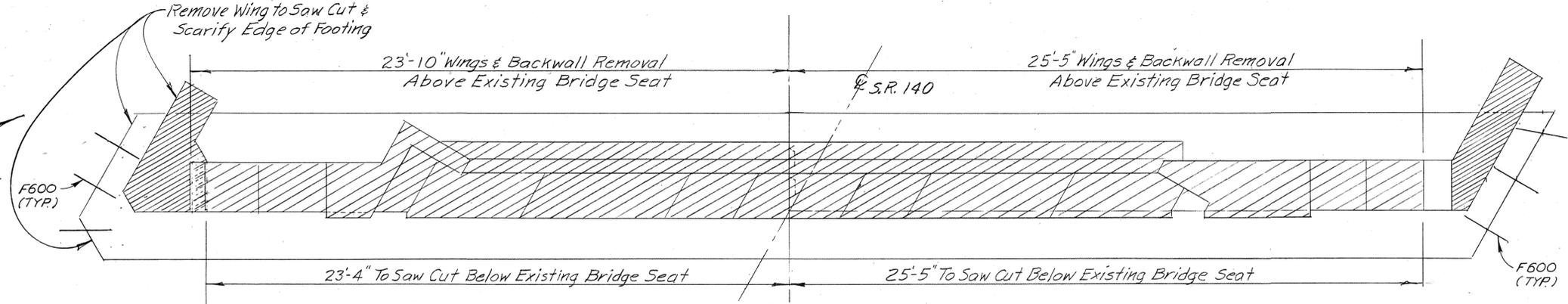
- Notes:
- Expanded Polystyrene shall be included with beams for payment.
 - 1x5x10 Laminated Elastomeric Bearings 50 Durometer, 711.23
 - 1 ~ 14 Gauge steel laminate.
 - 2 ~ Equal Layer Elastomers;
 - 3 ~ 1/8" side cover on laminate.

STATE OF OHIO		4/9	
DISTRICT 9 DEPARTMENT OF TRANSPORTATION BRIDGE OFC.			
TRANSVERSE SECTION & PHASED CONSTRUCTION			
BRIDGE NO. SCI-140-1219			
OVER SUGAR CAMP CREEK			
DESIGNED	DRAWN	TRACED	CHECKED
mse	mse	mse	CSW
REVIEWED	DATE	REVISED	

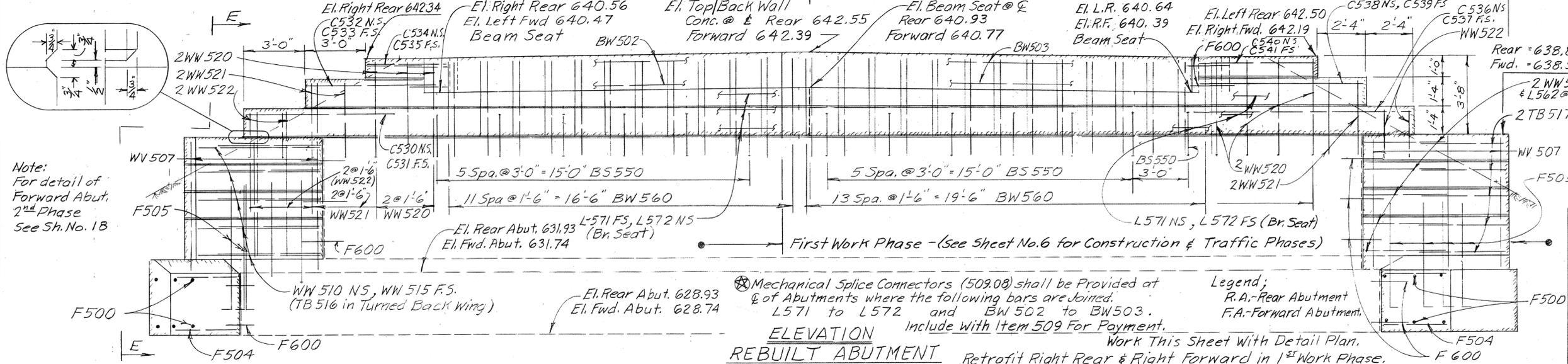
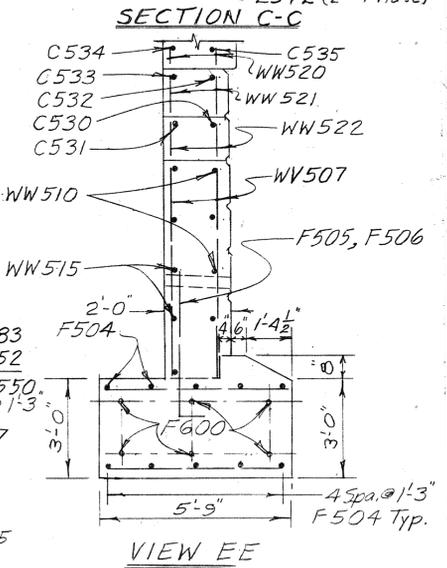
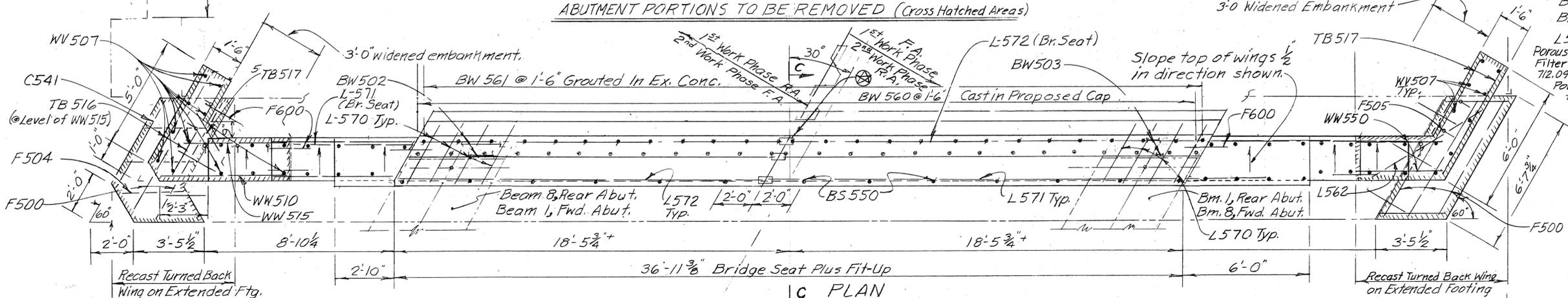
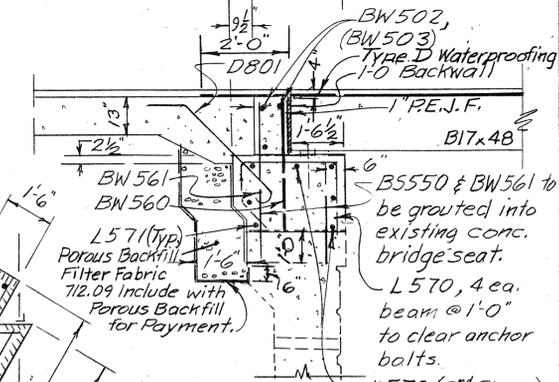
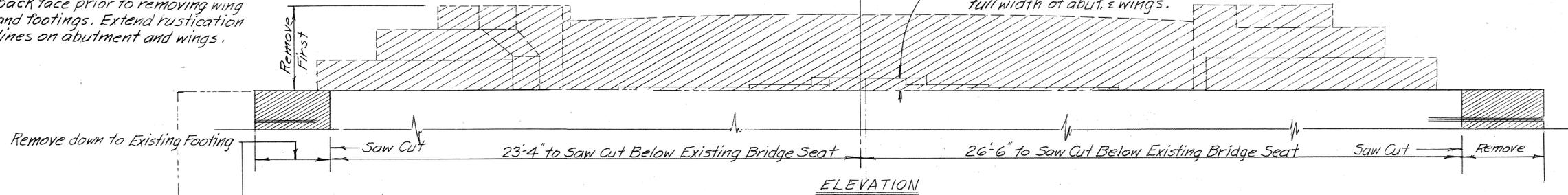
Note: For Details of Forward Abutment Second Phase See Sheet No. 18



Note: Make 1" deep, min. saw cut on surface of wing on front & back face prior to removing wing and footings. Extend rustication lines on abutment and wings.



Notes:
All concrete above existing bridge seat. Construction Joint shall be removed including 6" of concrete below bridge seat to a neat horizontal saw cut line where a rustication line can be restored. The surface shall be scarified as needed to bond with later concrete placement. The abutment below this elevation shall remain in place and be reused in the retrofit except that the existing turned back wings on each side of both abutments shall be removed and rebuilt after extending the footings as detailed below. Backwalls shall not be installed until after beams are in place.
For fixed bearing, apply Bridge Limit bond breaker to dowel above bridge seat.

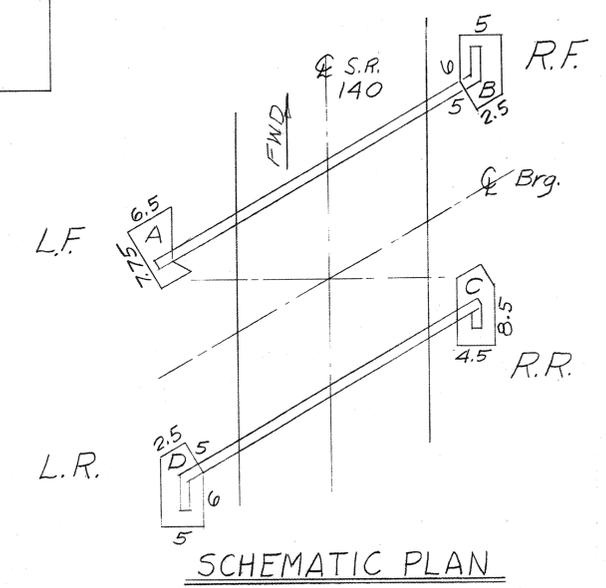
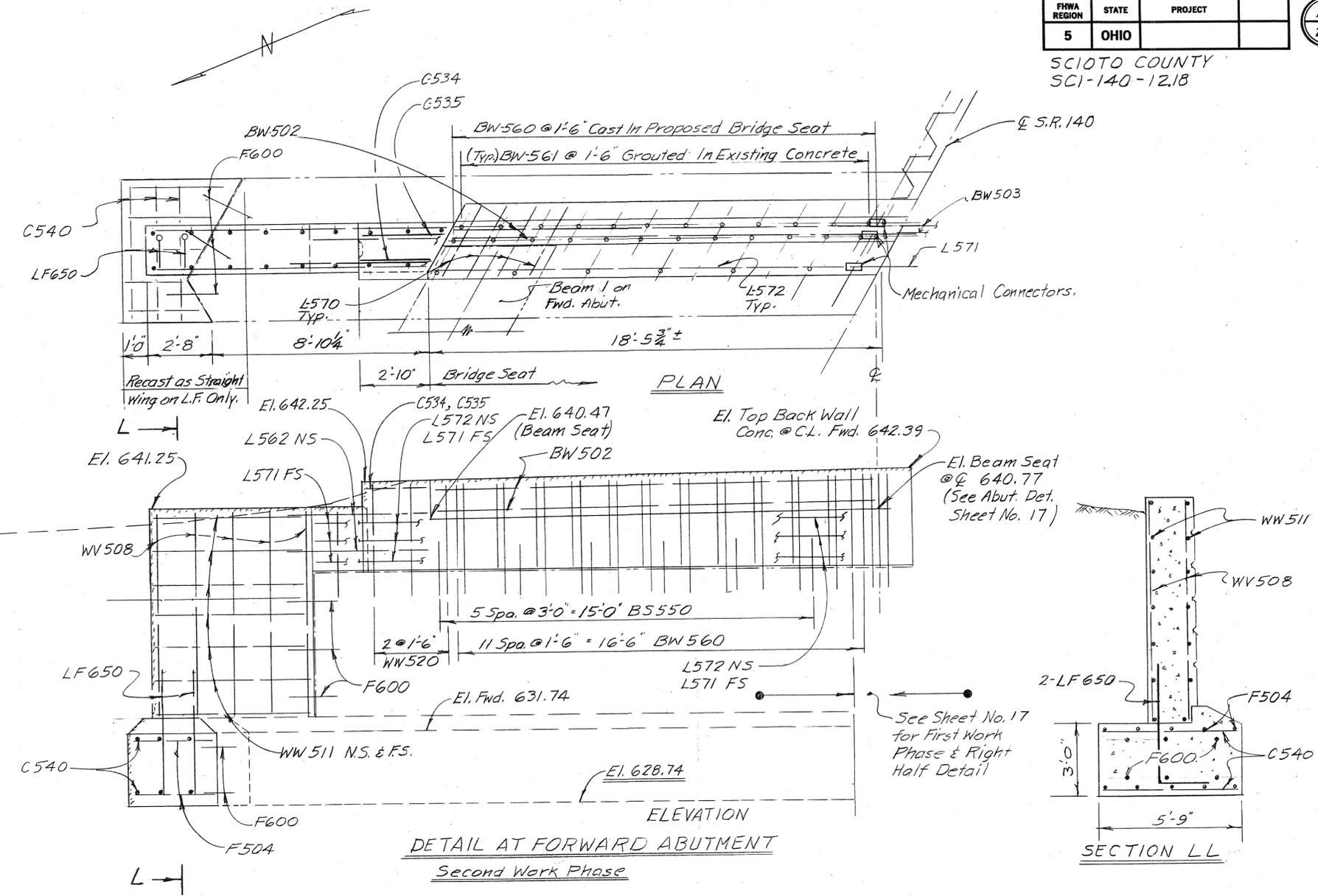
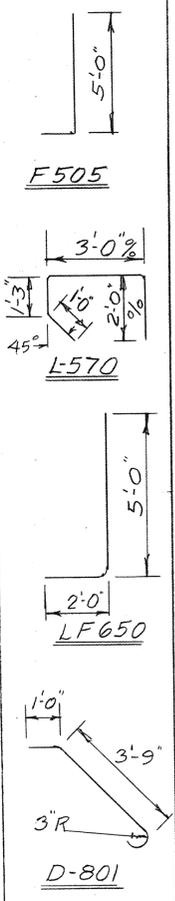


Note: For detail of Forward Abut, 2nd Phase See Sh. No. 18

Mechanical Splice Connectors (509.08) shall be Provided at & of Abutments where the following bars are joined.
L571 to L572 and BW502 to BW503.
Include With Item 509 For Payment.
Legend:
R.A.-Rear Abutment
F.A.-Forward Abutment.
Work This Sheet With Detail Plan.
Retrofit Right Rear & Right Forward in 1st Work Phase.

STATE OF OHIO 5/9
DISTRICT 9 DEPARTMENT OF TRANSPORTATION BRIDGE OFF.
ABUTMENT DETAILS FOR PHASED CONSTRUCTION
BRIDGE NO. SCI-140-1219
OVER SUGAR CAMP CREEK
DESIGNED: MSC DRAWN: MSe TRACED: MSe CHECKED: C.S.W. REVIEWED: DATE REVISED:

STEEL LIST-REINFORCING						
Mark	Rear	Fwd.	Total	Length	Weight	Description
BS-550	13	13	26	2'-0"	54	
BW-502	4	4	8	17'-1"	143	
BW-503	4	4	8	19'-1"	159	
C-530	1	1	2	7'-0"	15	
C-531	1	1	2	8'-0"	17	
C-532	1	1	2	5'-6"	11	
C-533	1	1	2	6'-6"	14	
C-534	1	1	2	2'-6"	5	
C-535	1	1	2	3'-6"	7	
C-536	1	1	2	10'-0"	21	
C-537	1	1	2	9'-2"	19	
C-538	1	1	2	7'-8"	16	
C-539	1	1	2	6'-10"	14	
C-540	1	7	8	5'-4"	45	
C-541	2	1	3	4'-6"	14	
F-500	10	6	16	6'-0"	100	
F-504	20	20	40	3'-3"	136	Bent
F-505	7	6	13	6'-0"	81	
L-562		2	2	6'-0"	13	Bent
L-570	32	32	64	7'-0"	467	
L-571	7	7	14	23'-0"	336	
L-572	7	7	14	20'-0"	292	Bent
TB-516	10	10	20	4'-8"	97	
TB-517	5	5	10	2'-6"	26	
TB-518	10	10	20	5'-8"	118	
WV-507	27	13	40	6'-6"	271	
WV-508	4	10	10	9'-4"	94	
WW-510	4	0	4	5'-9"	24	
WW-515	5	0	5	5'-0"	26	
WW-520	13	5	18	4'-6"	85	
WW-521	8	8	16	3'-6"	58	
WW-522	8	8	16	2'-2"	36	
WN-550	10	10	20	4'-0"	83	
WW-511	0	14	14	6'-2"	90	
BW-560	26	26	52	3'-6"	190	
BW-561	26	26	52	4'-7"	248	
F-600	24	24	48	2'-0"	144	
LF-650		2	2	6'-10"	21	
D-801	22	22	44	6'-1"	714	Bent



503 UNCLASSIFIED EXCAVATION				
LOCATION	PLAN AREA	AVG. HEIGHT	CU. FT.	CU. YDS.
L.F. - A	42.38	7.39	313.19	11.60
R.F. - B	50.37	11.8	594.43	22.01
R.R. - C	43	7.39	317.77	11.77
L.R. - D	43	7.08	304.5	11.28
TOTAL			56.66 USE	57 CU.YD. FOR 503 (STRUCTURES)

LEGEND:
L.F. ~ Left Forward
R.F. ~ Right Forward
L.R. ~ Left Rear
R.R. ~ Right Rear

STATE OF OHIO
DISTRICT 9 DEPARTMENT OF TRANSPORTATION BRIDGE OFF.
6/9

ABUTMENT DETAILS & REINFORCING STEEL LIST
BRIDGE NO. SCI-140-1219
OVER SUGAR CAMP CREEK

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MSE	MSE	MSE	C.S.W.			

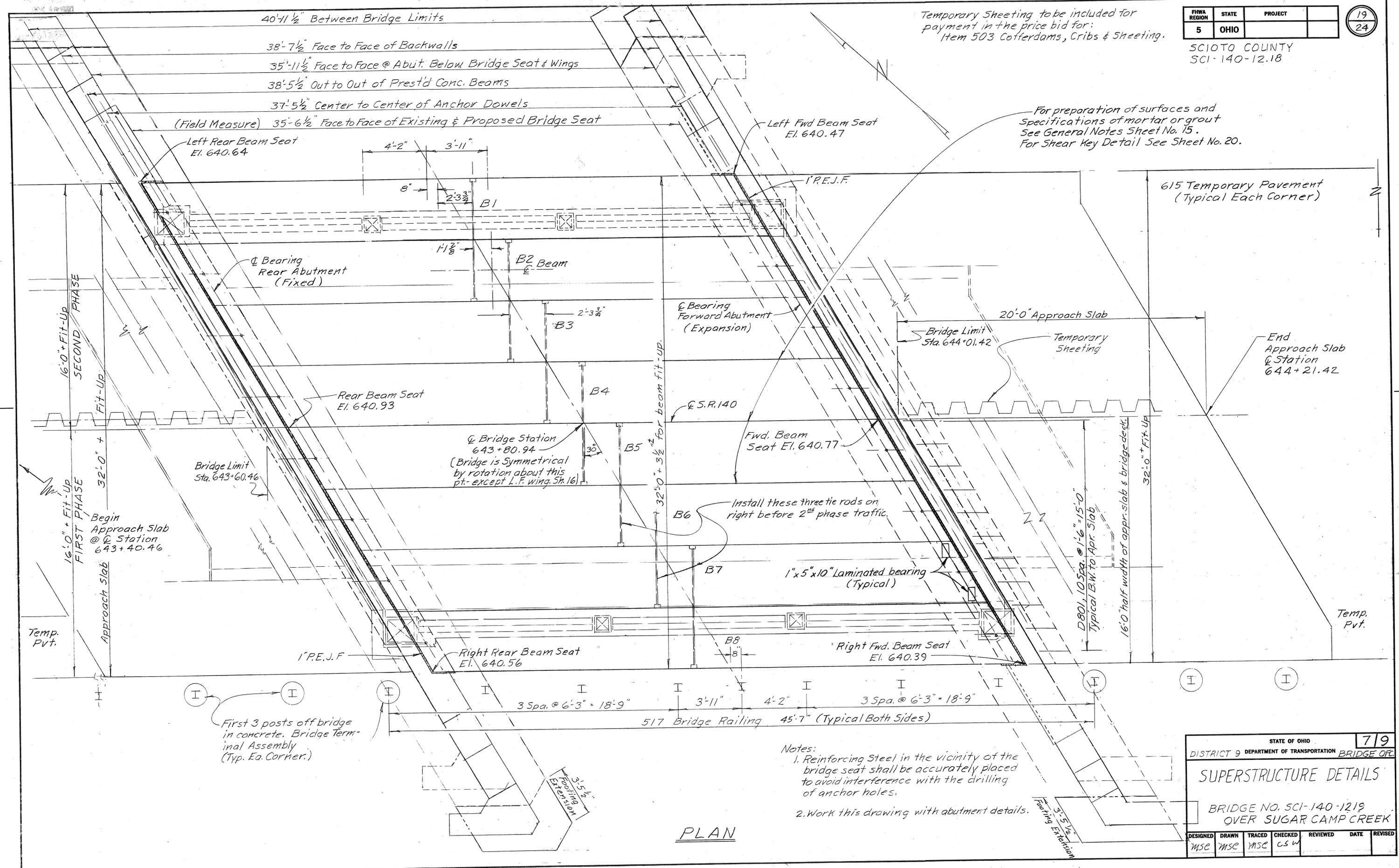
FHWA REGION	STATE	PROJECT
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SCIOTO COUNTY
SCI-140-12.18

Temporary Sheeting to be included for payment in the price bid for:
Item 503 Cofferdams, Cribbs & Sheeting.

For preparation of surfaces and Specifications of mortar or grout See General Notes Sheet No. 15.
For Shear Key Detail See Sheet No. 20.



615 Temporary Pavement (Typical Each Corner)

End Approach Slab @ Station 644+21.42

Bridge Limit Sta. 644+01.42

Bridge Limit Sta. 643+60.46

Bridge Station 643+80.94
(Bridge is Symmetrical by rotation about this pt. - except L.F. wing, Sta. 16)

- Notes:
- Reinforcing Steel in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of anchor holes.
 - Work this drawing with abutment details.

STATE OF OHIO 719
DISTRICT 9 DEPARTMENT OF TRANSPORTATION BRIDGE OFF.

SUPERSTRUCTURE DETAILS

BRIDGE NO. SCI-140-1219
OVER SUGAR CAMP CREEK

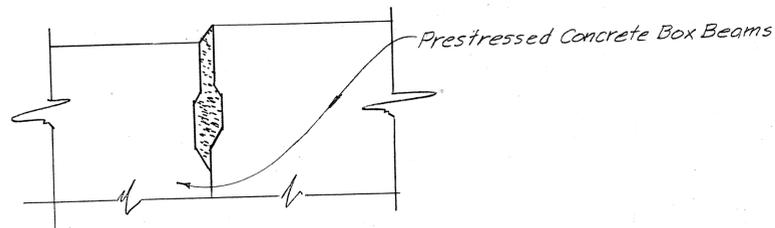
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MSE	MSE	MSE	CSW			

PLAN

FHWA REGION	STATE	PROJECT	
5	OHIO		

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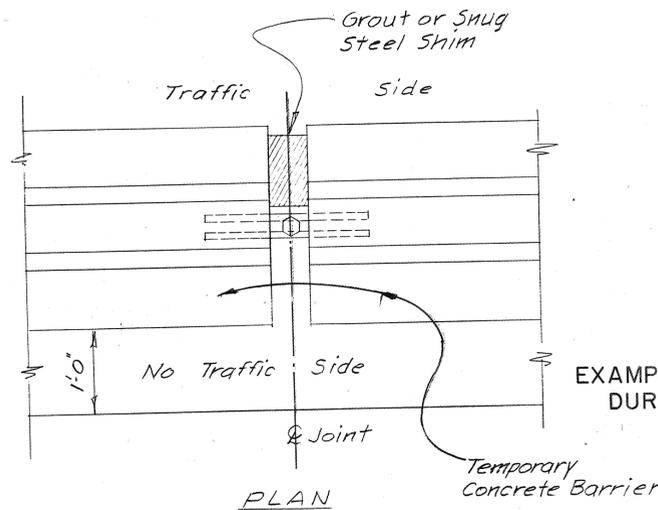
SCIOTO COUNTY
SCI-140-12.18



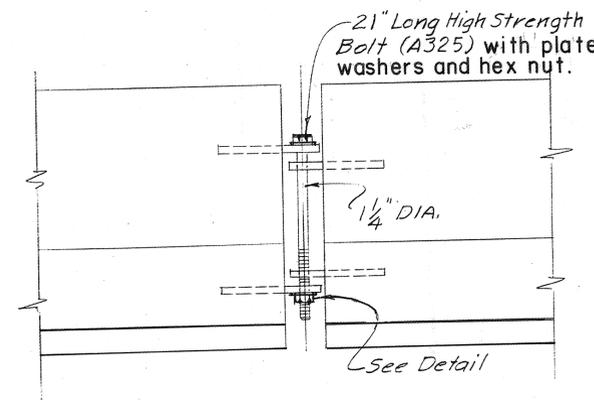
Detail of shear key mortar where adjacent beams have vertical offset due to different camber, skew effect.

Notes:

1. Prestressed Concrete Box Beam Prestressing Strands are ASTM A416 $\frac{1}{2}$ " T Wire uncoated, stress-relieved strands with an ultimate strength of 270,000 P.S.I. and an initial tension of 28,900 LBS. per strand.
2. Calculated camber at time of paving including $\frac{1}{16}$ " allowance for camber growth due to creep is $\frac{1}{2}$ ". Net final camber of beams is $\frac{1}{2}$ ". This is $\frac{1}{2}$ " in excess of the amount required to place the top of the beam parallel to profile grade. This excess amount shall be compensated for by thickening the 403 leveling course from $\frac{1}{4}$ " at center of span to $2\frac{3}{4}$ " at ends of span.
3. Asphalt concrete surface course shall consist of a variable thickness of 403 and a $\frac{1}{4}$ " thickness of 404. The 403 shall be placed in two operations. The first course shall be of $\frac{1}{4}$ " uniform thickness. The second course shall be feathered to place the surface parallel to and $\frac{1}{4}$ " below final pavement surface elevation.

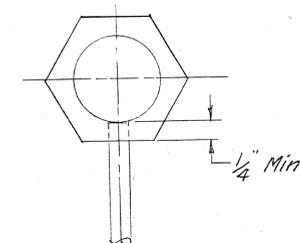


PLAN



ELEVATION

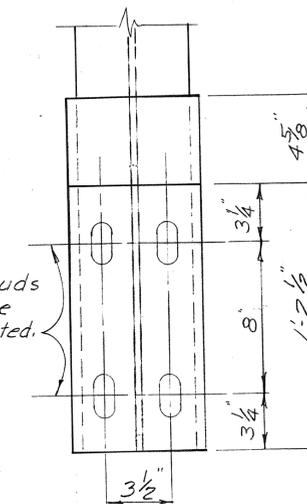
MODIFICATION DETAILS
FOR TEMPORARY CONCRETE BARRIER.



Hole in nut may be round & tapped or shaped to receive rod of same shape.

NOTE: Any other method may be used.

DETAIL
Hex. Nut for $\frac{1}{4}$ " Bolt
EXAMPLE OF METHOD FOR HOLDING NUT
DURING THREADED ROD INSTALLATION



SLOTTED HOLE
DETAIL FOR PLATE
ON RAIL POST

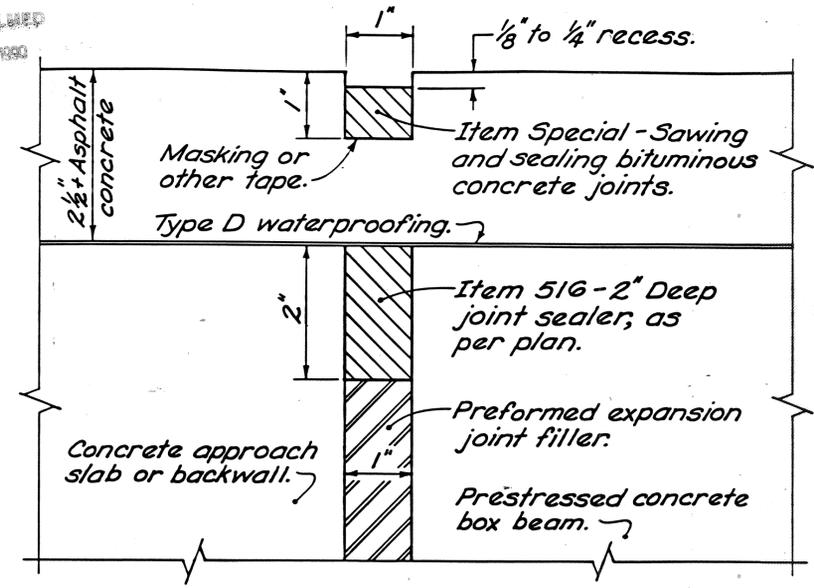
STATE OF OHIO						8 / 9
DISTRICT 9 DEPARTMENT OF TRANSPORTATION						BRIDGE OFC.
MISCELLANEOUS CONSTRUCTION DETAILS						
BRIDGE NO. SCI-140-1219 OVER SUGAR CAMP CREEK						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MSE	MSE	MSE	CSW			

MICROFILMED
DEC 18 1980

FHWA REGION	STATE	PROJECT
5	OHIO	SCI-140-12.18

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SCIOTO COUNTY
SCI-140-12.18



SEALING OF JOINTS AT ABUTMENTS

ITEM SPECIAL - SAWING AND SEALING BITUMINOUS CONCRETE JOINTS

1) Description:

This work shall consist of cutting and sealing transverse joints on the new bituminous concrete overlay of box beam bridges. Bituminous concrete joints shall be constructed directly over, and in line with, the existing underlying transverse abutment joint of the box beams.

2) Materials:

The joint sealant shall meet the requirements of ASTM Specification D3405, Joint sealants, Hot-poured, for Concrete and Asphalt Pavements. Acceptable alternate materials are:

Roof-Flex 176, polyurethane, as produced by the Carboline Company, 350 Hanley Industrial Court, St. Louis, Missouri 63144 (Roger Zubal, 614-877-3406); a silicone sealant meeting Federal Specifications TT-S-001543A Class A (one-part silicone sealants) and TT-S-00230C Class A (one-component sealants), such as those manufactured by General Electric, Silicone Products Division, 6155 Rockside Rd., Rockside Square 1, Independence, Ohio 44131 (John Fromholtz, 216-447-1750) or Dow Corning, 3737 Park East, Beachwood, Ohio 44122 (Robert Ruppel, 216-464-2330); or Sof-Seal, a cold-applied, low-modulus, two-component polymeric compound horizontal sealant as manufactured by W. R. Meadows, Inc., P.O. Box 543, Elgin, Illinois 60121 (Robert Cameron, 312-683-4500). Sealant will be accepted on the basis of the manufacturer's certification that it conforms to the requirements of these specifications.

3) Construction Details:

A) General: The contractor shall conduct his operation so that the cutting, cleaning and sealing of transverse joints is a continuous operation that will be performed as soon as practical after the paving, but no later than four (4) days after placement of the asphalt concrete surface course. Traffic shall not be allowed to knead together or damage the joint cut prior to sealing.

B) Cutting of Transverse Joints: The contractor shall saw or rout transverse joints to the dimensions shown in the details on this sheet. The cut joints shall lie directly above each box beam abutment joint. The joint location shall be marked on the new asphalt surface with a chalk line, or by some other acceptable method, before cutting. Details of the method for locating and accurately marking the proposed cuts shall be subject to the approval of the Engineer prior to starting any surfacing or paving operations.

The blade or blades shall be of such size that the full width and depth of the cut can be made with one pass. Dry or wet cutting will be allowed. Joints shall extend the full width of the bridge.

C) Cleaning Joints: Dry sawed joints shall be thoroughly cleaned with a sufficient amount of compressed air to remove any dirt, dust, or deleterious matter. Wet sawed joints shall be washed clean of all cuttings by flushing with a jet of water and with other tools as necessary. After flushing, the joint shall be blown out with compressed air. When the surfaces are thoroughly clean and dry, and just prior to placing the joint sealer, compressed air having a pressure of at least 90 p.s.i. shall be used to blow out the joint and remove all traces of dust.

In the event freshly cut joints become contaminated before they are sealed, they shall be recleaned of all foreign material by high pressure water jet.

D) Sealing Joints: The joint shall be thoroughly dried before the sealant is placed. After cleaning and drying, a bond-breaker (tape) shall be applied to the bottom of the groove.

Hot-poured joint sealant material shall be heated in a kettle or melter constructed as a double boiler, with the space between the inner and outer shells filled with oil or other heat transfer medium. Positive temperature control and mechanical agitation shall be provided. Heating must be in strict accordance with the manufacturer's recommendation. Joint sealer material shall never be kept heated at the pouring temperature for more than four (4) hours and shall never be reheated. Sealer left in the applicator at the end of a day's work shall be removed and discarded.

Hot-poured sealant shall be applied immediately through a nozzle, which must project into the sawed joint, filling from the bottom up. The seal shall completely fill the joint in such a manner that, after cooling, the level of the sealer will not be higher than 1/8" below the pavement surface. Any depression in the cooled seal greater than 3/16" shall be brought up to the specified limit by further addition of hot-poured sealant. Care shall be taken in the sealing of the joints so that the final appearance will present a neat fine line.

The cold applied sealant materials (polyurethane, silicone, and polymeric compounds) shall be installed as per manufacturers' recommendations, or as directed by the Engineer. The sealant shall be installed when the ambient temperature is 40 degrees F or higher. Traffic shall not be allowed on the joint for one hour after application of the sealant.

4) Method of Measurement:

The quantity to be paid for under this item will be the number of linear feet of joints sawed and sealed as per the above requirements.

5) Basis of Payment:

The unit price per linear foot for Item Special - "Sawing and sealing bituminous concrete joints" shall include the cost of all labor, materials, and equipment necessary to complete the work, including the furnishing and placing of the joint sealer material.

ITEM 516 - 2" DEEP JOINT SEALER, AS PER PLAN

This item shall meet the material (para. 2) and sealing (para. 3D) specifications of Item Special - Sawing and sealing bituminous concrete joints.

REVISIONS	DISTRICT 9	STATE OF OHIO	9 / 9
2-8-84		DEPARTMENT OF TRANSPORTATION	
3-10-87		BUREAU OF BRIDGES AND STRUCTURAL DESIGN	
4-14-87		ABUTMENT JOINTS IN BITUMINOUS CONCRETE, BOX BEAM BRIDGES	
6-16-87		BRIDGE NO. SCI-140-1219 OVER SUGAR CAMP CREEK	
DESIGNED	DRAWN	TRACED	CHECKED
JEB	MJB		WTF
REVIEWED	DATE		
WJJ	2-2-84		