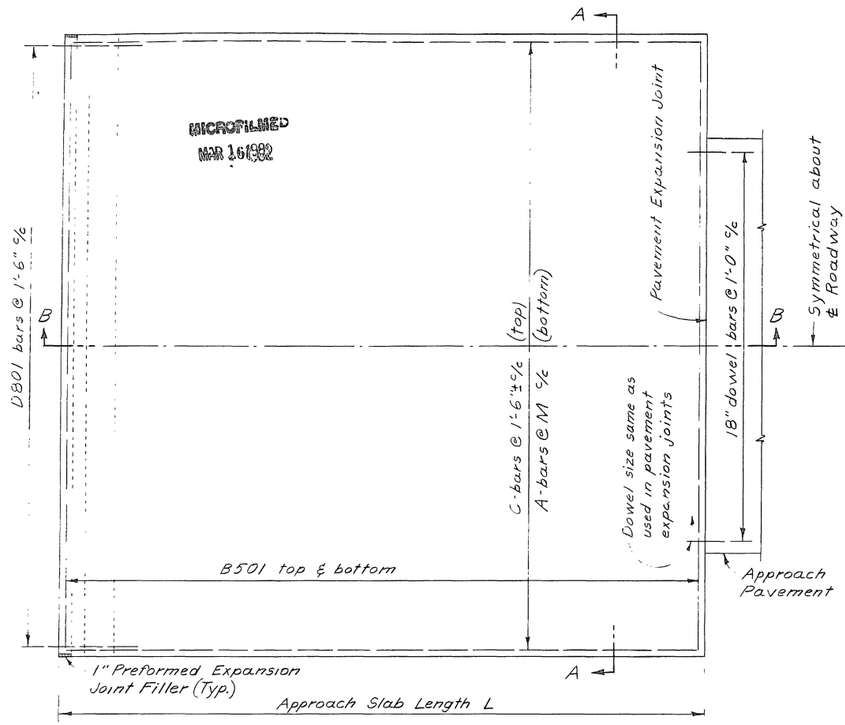
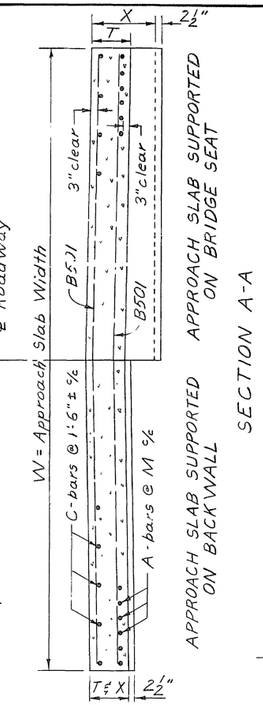
MICROFILMED
MAR 16 1982

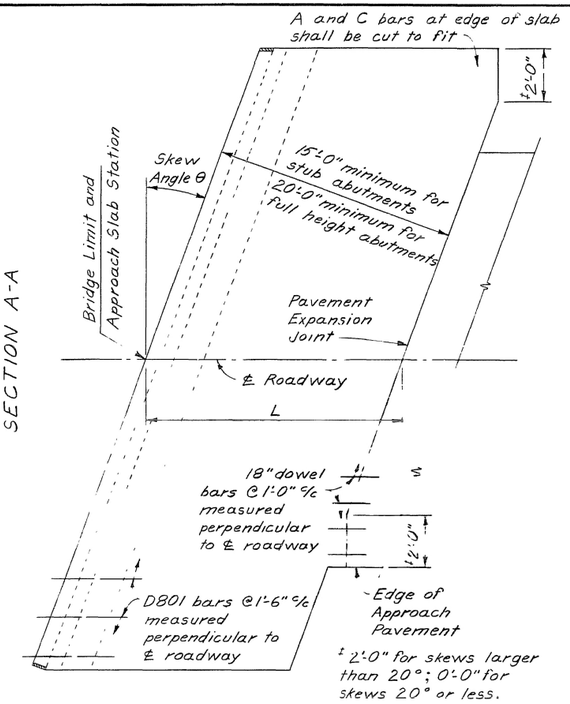


PLAN

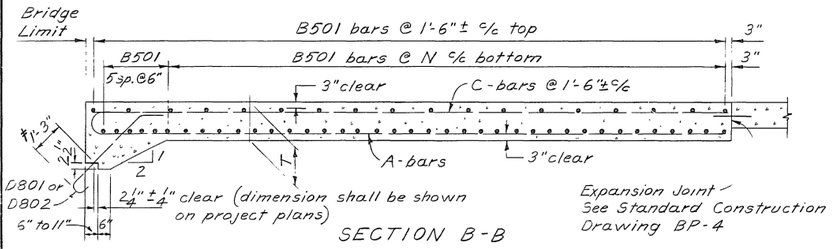


Note: X shall never be less than T

SECTION A-A



APPROACH SLAB FOR SKEWED BRIDGE



SECTION B-B

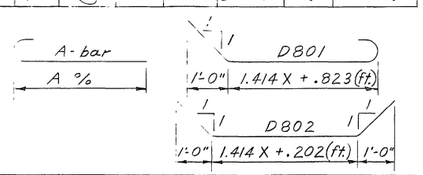
Expansion Joint
See Standard Construction Drawing BP-4

1'-3" embedment length is measured in the plane of the D801 bar.

REINFORCING STEEL
(For one approach slab)

Length L	Thickness T	A-BARS Sp'c'g M	A-BARS Mark	A-BARS Length	A-BARS Dimension A	A-BARS No. Req'd.	B501 (bottom) * Length	B501 (bottom) Sp'c'g N	B501 (bottom) No. Req'd.	B501 (top) * Length	B501 (top) No. Req'd.	C-BARS Mark	C-BARS Length	C-BARS No. Req'd.	D801 or D802 No. Req'd.
15'-0"	12"	10"	A1001	15'-11"	14'-6"	$\left[\frac{W-0.5}{M}+1\right]$	$(W-0.5)\sec\theta$	9"	22	$(W-0.5)\sec\theta$	11	C501	14'-6"	$\left[\frac{W-0.5}{18}+1\right]$	$\left[\frac{W-0.5}{18}+1\right]$
20'-0"	13"	7½"	A1002	20'-11"	19'-6"			8"	31		14	C502	19'-6"		
25'-0"	15"	7"	A1003	25'-11"	24'-6"			8"	39		18	C503	24'-6"		
30'-0"	17"	6½"	A1004	30'-11"	29'-6"	12		8½"	44		21	C504	29'-6"	12	12

W = Approach Slab Width, out-to-out, in feet
θ = Angle of Skew
M = A-bar spacing in inches
N = B-bar spacing in inches
X = Approach Slab Thickness at abutment end in feet.



GENERAL: This drawing provides design and general construction details. The project plans will show length, skew, curbs (if any), estimated quantity (sq. yds.), and special notes and details where necessary. For conditions other than those indicated hereon, the approach slab shall be adapted to fit the ends of the bridge and the approach pavement.

ANCHOR BARS D801 or D802 shall be detailed for the specific bridge and shall be included with Item 509 under abutments or superstructure for payment. D801 bars cannot be used as shown where approach slabs are supported on backwalls less than 14 inches thick. D802 bars shall be used on prestressed concrete box beam bridges where the approach slab is supported on an 11 inch thick backwall.

* At the option of the contractor, the B501 bars may be lapped 1'-8" minimum at the centerline of roadway, or where required for longitudinal construction joints.

DESIGN SPECIFICATIONS: This standard drawing conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1977, including the 1978, 1979, 1980 and 1981 Interim Specifications and the Ohio "Supplement" to these specifications.

DESIGN DATA
Design Loading: HS20-44 and the Alternate Military Loading

Concrete Class C: compressive strength 4000 p.s.i.

Reinforcing Steel: ASTM A615, A616 or A617 - Grade 60 minimum yield strength 60,000 p.s.i.

REINFORCING STEEL: For skewed bridges the A and C bars shall be placed parallel to the center line of roadway and the B bars shall be placed parallel to the abutments.

PREFORMED EXPANSION JOINT FILLER AND SEALER at the corners and sides of the approach slab shall be included in the price bid per sq. yd. for the approach slab.

PREFORMED ELASTOMERIC JOINT SEALER shown at the bridge limit end of the approach slab shall be included in the price bid per sq. yd. for the approach slab.

LONGITUDINAL CONSTRUCTION JOINTS required for stage construction shall be as per 511.09

CURBS, BRIDGES WITH SIDEWALKS: For bridges constructed with raised sidewalks, deflector parapets or other types of construction which retain roadway surface drainage, the approach slabs shall either include integral curbs or be constructed in conjunction with bridge curbs. Curb height shall be transitioned uniformly between bridge curb height and approach curb height in a length as follows: Where wingwall extends beyond end of approach slab, use a minimum length of 10 ft. beyond end of wingwall. Where the approach slab extends beyond the end of wingwall, transition in this length. However, the transition length shall not be less than 10 ft. and the transition shall extend beyond the end of approach slab if necessary.

APPROACH SLAB WIDTH (W): Generally approach slabs shall be the same width as the bridge roadway.

LENGTH of approach slabs shall be shown on project plans.

CROWN shall conform to that of the approach pavement and bridge deck. If the rate of crown of the bridge deck differs from that of the approach pavement, a smooth transition shall be provided within the limits of the approach slab.

WEARING SURFACE: Generally approach slabs shall have an asphalt concrete wearing surface only when both the approach pavement surface and the bridge wearing surface are asphalt concrete.

EXPANSION JOINT details at the appoach pavement end of the approach slab are used only in conjunction with concrete pavement or concrete base course. Payment for the expansion joint, including dowel bars, preformed expansion joint filler and joint sealer, is included in the price bid per sq. yd. for the approach slab.

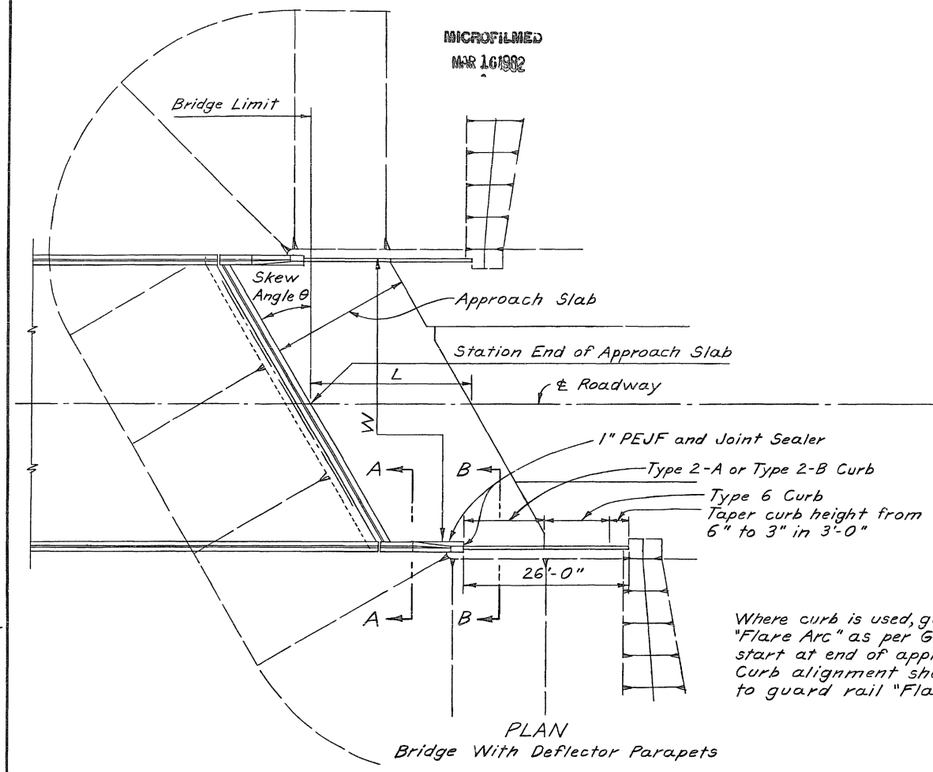
REVISIONS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

STANDARD
REINFORCED CONCRETE
APPROACH SLABS

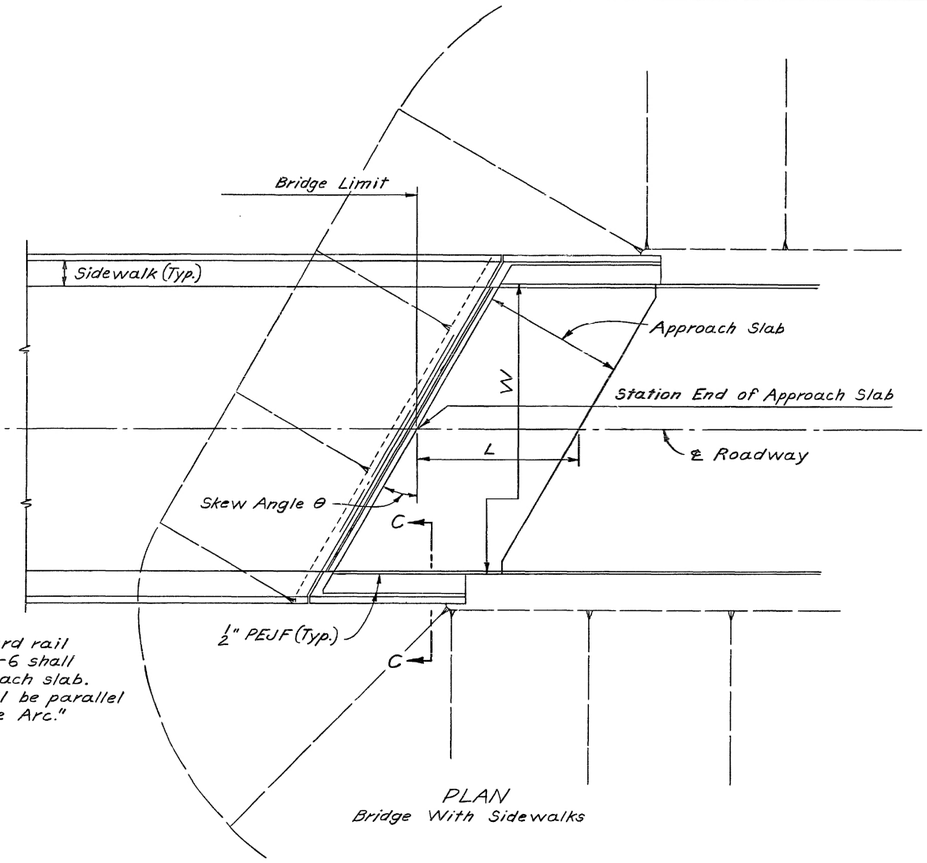
APPROVED: Robert J. Fuller ENGINEER OF BRIDGES DATE: 11-27-81				DRWG. NO. AS-1-81
PREPARED	TRACED	CHECKED	REVIEWED	SHEET NO. 1 OF 3 SHEETS
FFE		GSB	W.J.J.	

MICROFILMED
MAR 16 1982

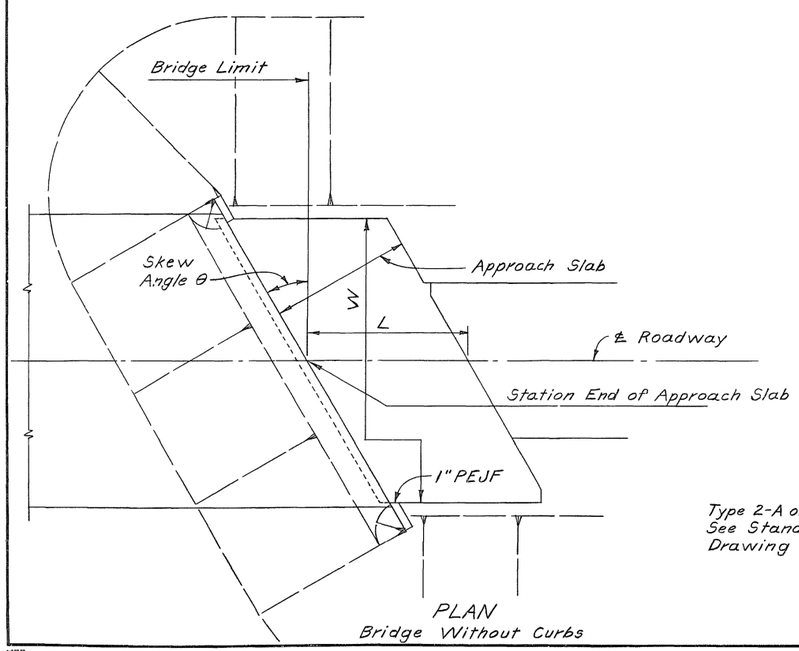


Where curb is used, guard rail "Flare Arc" as per GR-6 shall start at end of approach slab. Curb alignment shall be parallel to guard rail "Flare Arc."

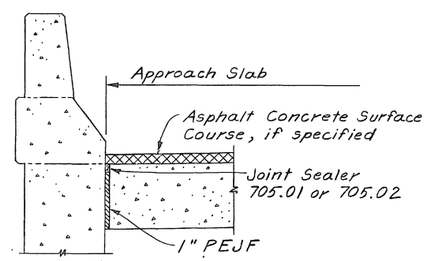
PLAN
Bridge With Deflector Parapets



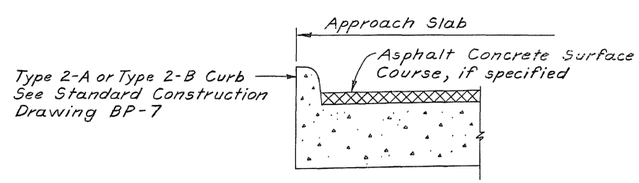
PLAN
Bridge With Sidewalks



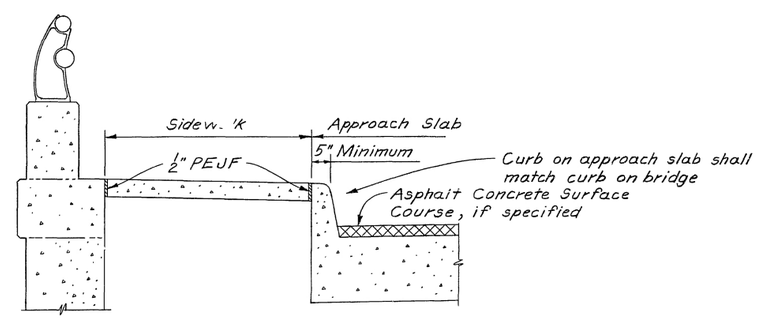
PLAN
Bridge Without Curbs



SECTION A-A



SECTION B-B



SECTION C-C

REVISIONS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

STANDARD

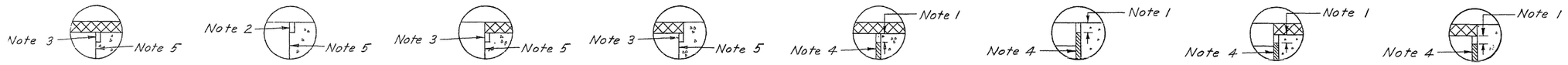
REINFORCED CONCRETE APPROACH SLABS

APPROVED: Robert B. Pfeifer
DATE: 11-27-81 ENGINEER OF BRIDGES

DRWG. NO. AS-1-81

PREPARED	TRACED	CHECKED	REVIEWED	SHEET NO. 3 OF 3 SHEETS
FFE		GSB	WJJ	

MICROFILMED
MAR 16 1982



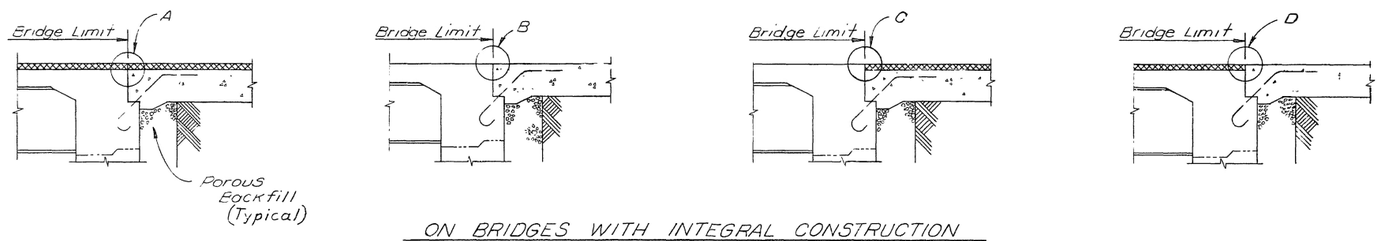
DETAIL A | DETAIL B | DETAIL C | DETAIL D | DETAIL E | DETAIL F | DETAIL G | DETAIL H

ASPHALT CONCRETE WEARING SURFACE ON BRIDGE DECK AND APPROACH SLAB

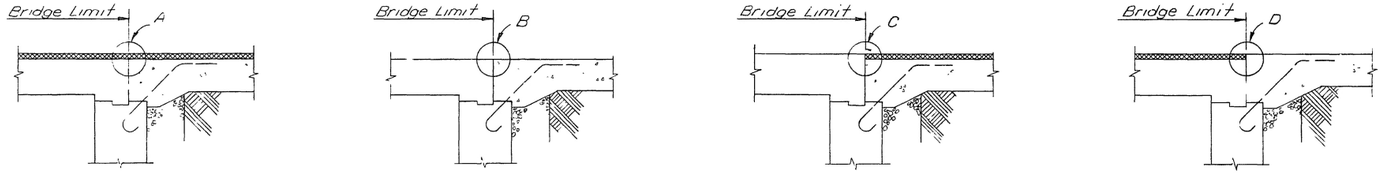
CONCRETE WEARING SURFACE ON BRIDGE DECK AND APPROACH SLAB

CONCRETE WEARING SURFACE ON BRIDGE DECK ONLY

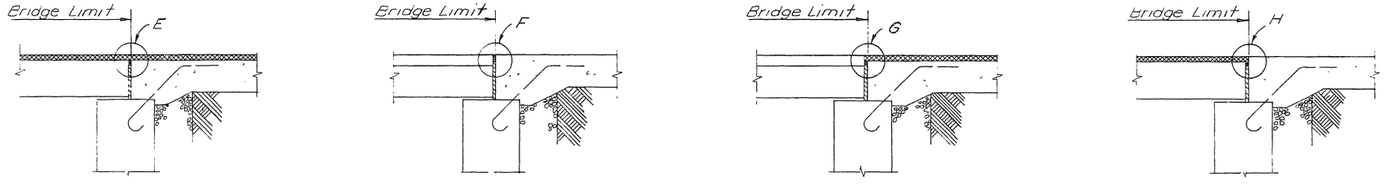
ASPHALT CONCRETE WEARING SURFACE ON BRIDGE DECK ONLY



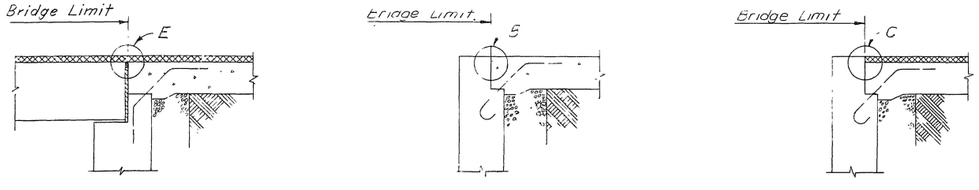
ON BRIDGES WITH INTEGRAL CONSTRUCTION



ON SLAB BRIDGES



ON PRESTRESSED CONCRETE BOX BEAM BRIDGES



APPROACH SLAB SUPPORTED ON ABUTMENT BACKWALL

Note: Approach slab seat on prestressed concrete box beam bridges is shown at same elevation as beam seat. However, it may actually be higher or lower than the beam seat depending on box beam depth.

Note 1: 2" joint sealer 705.01 or 705.02

Note 2: Preformed elastomeric joint sealer 705.11 ($1\frac{1}{4}$" for $\frac{1}{2}$" joint) depressed $\frac{1}{8}$" below roadway, placed in $\frac{1}{2}$"x$2\frac{1}{4}$" groove.

Note 3: Preformed elastomeric joint sealer 705.11 ($1\frac{1}{4}$" for $\frac{1}{2}$" joint) placed in $\frac{1}{2}$"x$2\frac{1}{8}$" groove.

Note 4: 1" preformed expansion joint filler.

Note 5: Type A waterproofing.

Type A waterproofing shall not extend above the bottom of the groove into which the preformed elastomeric joint sealer is to be placed. It shall be applied to the entire area of the abutment or superstructure which comes into contact with the approach slab.

For prestressed concrete box beam bridges with asphalt concrete on both bridge deck and approach slab, the top of approach slab at the bridge end shall be constructed to the level of the top of the beams to facilitate waterproofing of the joint. The thickness of asphalt concrete at the approach end shall be the thickness of asphalt concrete used on the roadway pavement. The thickness of asphalt concrete shall vary uniformly, if necessary, in the length of the approach slab. The base shall be graded to permit the bottom of the approach slab to be parallel to the top.

For structures having asphalt concrete wearing surface on both bridge deck and approach slabs and where no deck expansion devices are provided, the deck membrane waterproofing shall extend beyond the bridge limits a distance of 2'-0".

REVISIONS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

STANDARD

REINFORCED CONCRETE APPROACH SLABS

APPROVED: Robert B. Pfeifer ENGINEER OF BRIDGES DATE: 11-27-81				DRWG. NO. AS-1-81
PREPARED	TRACED	CHECKED	REVIEWED	SHEET NO. 2 OF 3 SHEETS
FFE		GSB	WJJ	

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