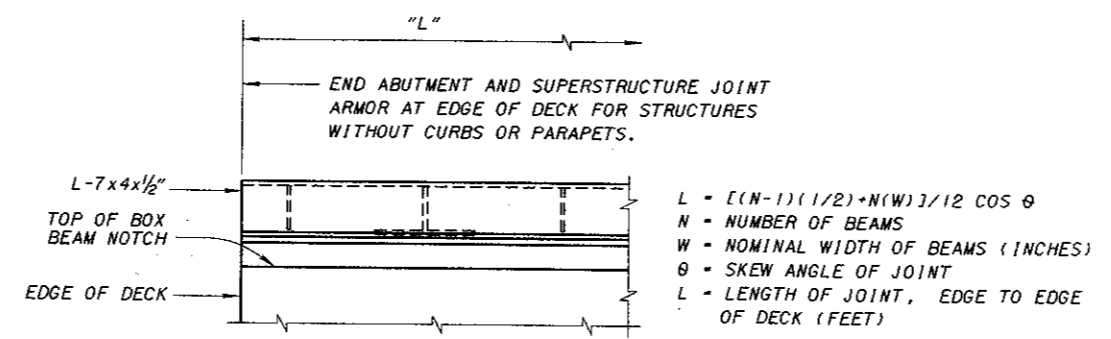


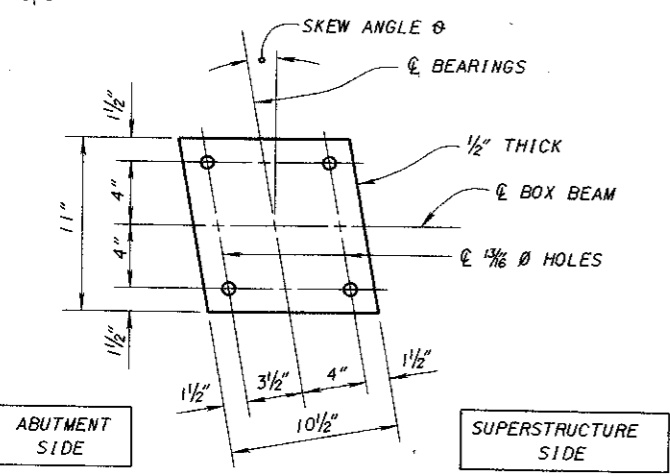
**JOINT PLAN - SUPERSTRUCTURE SIDE**



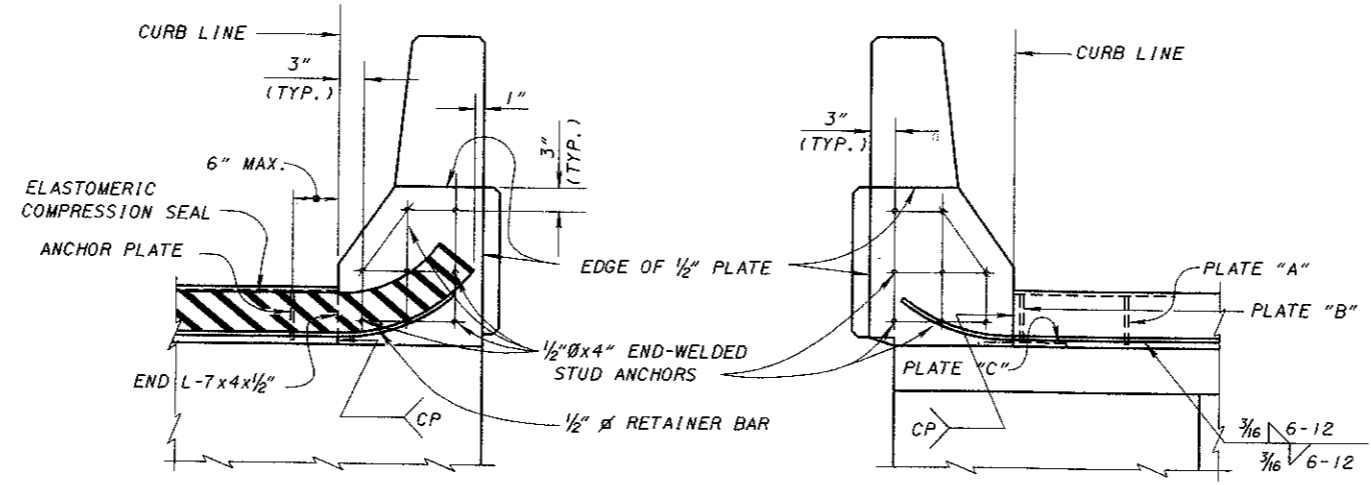
**PART ELEVATION FOR FULL WIDTH STRUCTURES**

**NOTE:** WHERE THE TOTAL WIDTH OUT TO OUT OF BOX BEAMS IS EQUAL TO THE BRIDGE ROADWAY WIDTH, JOINT ARMOR SHALL BE OF SUFFICIENT LENGTH TO ALLOW FIT-UP OF BEAMS. SEE FORMULA FOR LENGTH "L".

$L = [(N-1)(1/2) + N(W)] / 12 \cos \theta$   
 N - NUMBER OF BEAMS  
 W - NOMINAL WIDTH OF BEAMS (INCHES)  
 $\theta$  - SKEW ANGLE OF JOINT  
 L - LENGTH OF JOINT, EDGE TO EDGE OF DECK (FEET)



**PLATE "C" PLAN**



**SECTION B-B**

**SECTION C-C**

(FOR LOCATION SEE SHEET 1/4). SEE SECTION B-B FOR ADDITIONAL DETAILS (FOR LOCATION SEE SHEET 1/4).

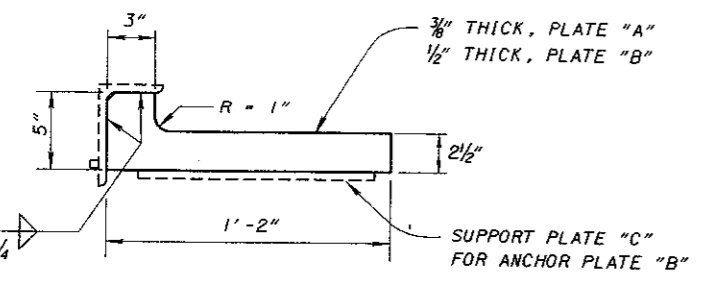
**NOTES TO DESIGNER**

**DESIGN LIMITS:** GENERALLY,  $\theta$  NOT GREATER THAN 15°;  $D_m$  (SEE CHART ON SHEET 1/4) NOT LONGER THAN 120 FEET. THIS DESIGN IS INTENDED FOR STRUCTURES WITH A FREE STANDING ABUTMENT SIMILAR TO THE ABUTMENT DETAIL SHOWN ON SHEET 2/4.

**ANCHOR BAR HOLES** IN ABUTMENT SEATS SHALL BE 2 1/2 INCH DIA. UNLESS OTHERWISE SHOWN ON PROJECT PLANS.

**BEAM ENDS** FOR STRUCTURES ON GRADES OVER 2% SHALL BE MADE VERTICAL.

**COMPRESSION SEAL** AT THE FIXED ABUTMENT SHALL BE AS SHOWN WHERE DIM. "A" = 2 1/4" AT ANY AMBIENT TEMPERATURE.



**ARMOR ANCHOR PLATES**

**NOTE:** FOR JOINT ARMOR ANCHOR SPACING, A FIT-UP ALLOWANCE OF 1/2" PER BOX BEAM SHALL BE MADE.

**GENERAL NOTES**

**COMPRESSION SEAL:** MATERIAL REQUIREMENTS FOR THE COMPRESSION SEAL SHALL CONFORM TO ITEM 705.11. INSTALLATION SHALL FOLLOW THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE SUPERVISED BY HIM OR HIS DESIGNATED REPRESENTATIVE. THE LUBRICANT ADHESIVE USED SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

**ARMOR STEEL COATING:** ALL STEEL PARTS OF THE JOINT ASSEMBLY SHALL BE ASTM A709, GRADE 36. THE FINISHED STEEL ASSEMBLY SHALL BE METALIZED. THE THICKNESS OF THE COATING SHALL BE 6 TO 8 MILS. THE WIRE USED FOR THE METALIZING SHALL CONSIST OF 85% ZINC AND 15% ALUMINUM. SURFACE PREPARATION AND APPLICATION SHALL CONFORM TO SSPC COATING SYSTEM GUIDE NO. 23.00, "GUIDE FOR THERMAL SPRAY METALLIC COATING SYSTEMS". AN OPAQUE SEAL COAT MEETING SECTION 7.2, SEALERS AND TOPCOATS; SHALL BE APPLIED TO METALIZED SURFACES THAT WILL BE IN CONTACT WITH THE CONCRETE.

**REPAIRS** SHALL BE MADE PRIOR TO THE INSTALLATION OF THE SEAL. METALIZED SURFACES DAMAGED DURING FABRICATION SHALL BE REPAIRED BY REBLASTING AND METALIZING AS PER SSPC GUIDE 23.00. METALIZED SURFACES DAMAGED DURING SHIPMENT OR FIELD WELDING SHALL BE REPAIRED AS PER ASTM A 780-93a, ANNEX A1, REPAIR USING ZINC BASED ALLOYS. THIS FIELD PROCESS REQUIRES REMOVAL OF CONTAMINATES FROM THE SURFACE, PREHEATING THE SURFACE TO 600° F AND APPLICATION OF ZINC COATING BY EITHER RUBBING A PURE ZINC STICK OR SPRINKLING ZINC POWDER ON THE PREHEATED SURFACE. THE ZINC COATING THICKNESS SHALL BE THE SAME AS THAT SPECIFIED FOR THE METALIZING.

**NON-SHRINKING MORTAR** OR GROUT SHALL CONFORM WITH CORPS OF ENGINEERS SPECIFICATION CRD-C621-89A AND BE APPROVED BY THE ODOT LABORATORY.

**BATCH SIZE** SHALL BE LIMITED SO PLACEMENT CAN BE COMPLETED WITHIN 30 MINUTES. WATER SHALL NOT BE ADDED TO INCREASE FLOWABILITY WHICH HAS BEEN DECREASED BY DELAYED USE OF MORTAR.

**TEMPORARY SUPPORTS** SHALL BE INSTALLED THAT ARE CAPABLE OF SUPPORTING SHIPPING AND ERECTION FORCES WITHOUT DAMAGE TO THE EXPANSION DEVICE. FABRICATOR DESIGNED AND INSTALLED TEMPORARY SUPPORTS SHALL BE CAPABLE OF ADJUSTMENT FOR SETTING THE EXPANSION DEVICE IN THE FIELD AND SHALL BE INSTALLED AT THE FABRICATION SHOP AFTER FABRICATION AND COATING IS COMPLETED.

**SPLICE OR JOINT IN COMPRESSION SEAL:** COMPRESSION SEALS FOR BRIDGE DECK JOINTS SHALL BE FURNISHED IN ONE CONTINUOUS PIECE UNLESS A SHOP FABRICATED SPLICE OR FIELD SPLICE IS APPROVED BY THE DIRECTOR.

**MEASUREMENT** FOR PAY PURPOSES SHALL BE BASED ON LINEAR FEET OF SEALED JOINT SYSTEM, MEASURED HORIZONTALLY ALONG THE JOINT CENTERLINE AND BETWEEN THE OUTER LIMITS OF THE FABRICATED JOINT, FURNISHED AND PLACED. THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT IN PLACE, WHICH INCLUDES: THE JOINT ARMOR, ELASTOMERIC COMPRESSION SEAL, RETAINERS, ANCHORING DEVICES AND TEMPORARY SUPPORTS. THE 3/8" THREADED RODS CAST INTO BEAMS, ALONG WITH NUTS SHALL BE INCLUDED WITH BOX BEAMS FOR PAYMENT. PAYMENT WILL BE MADE PER LINEAR FOOT FOR ITEM 516, "STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC COMPRESSION SEAL".

**PRESTRESSED CONCRETE BOX BEAMS** SHALL BE MODIFIED AS FOLLOWS COMPRESSION SEAL INSTALLATION:

1. STIRRUP REINFORCING STEEL IN NOTCHED AREAS AT ENDS OF COMPOSITE BEAMS SHALL NOT PROJECT ABOVE THE TOP OF CONCRETE.
2. ENDS OF FASCIA BEAMS SHALL BE NOTCHED FULL WIDTH OF BEAMS.
3. 12 INCH DEEP BEAMS REQUIRE A SPECIAL DESIGN.
4. HOLES FOR ANCHOR BARS SHALL BE 2 1/2" DIAMETER.