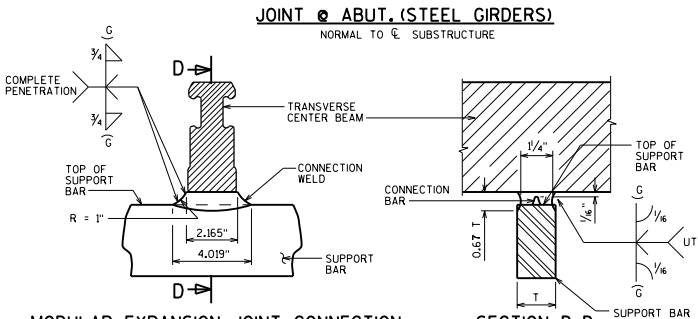
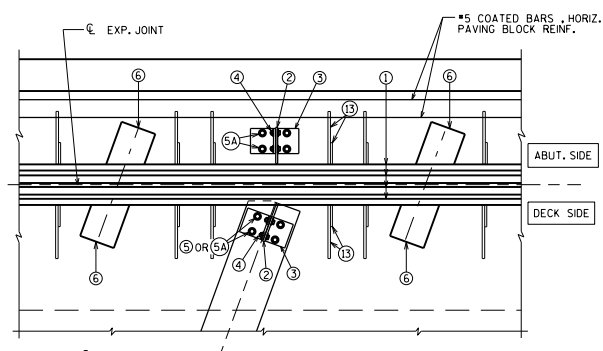


JOINT @ PIER (PRESTRESSED GIRDERS)
NORMAL TO ϵ SUBSTRUCTURE

- LEGEND**
- ① MODULAR EXPANSION JOINT DEVICE, \square CELLS.
 - ② 1/2" PLATE, ONE PER GIRDER MIN. PROVIDE 2 - 1" X 2" MIN. SLOTTED HOLES PLACED HORIZONTALLY FOR NO. 4.
 - ③ WT 6 X 29 OR EQUIVALENT BUILT UP T-SECTION, ONE PER GIRDER. PROVIDE 2 - 1" X 3" MIN. SLOTTED HOLES PLACED VERTICALLY IN WEB OF WT FOR BOLTS NO. 4.
 - ④ 3/4" DIA. HIGH STRENGTH BOLTS WITH NUTS & WASHERS. (A325 GALV.)
 - ⑤ 1/2" DIA. HIGH STRENGTH BOLTS WITH NUTS & WASHERS. FIELD DRILL HOLES IN GIRDER TOP FLANGE. (A325 GALV.)
 - ⑤A 3/4" DIA. THREADED ROD WITH 2 NUTS & WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES (GALV.)
 - ⑥ SUPPORT BOX ASSEMBLY FOR SUPPORT BAR (SPA. PER MANUFACTURER). FABRICATE BOX FROM 1/2" PLATES.
 - ⑦ 3/8" BULKHEAD PLATE. WELD TO NO. 1, NO. 8 AND NO. 14. WHEN CONDUIT IS PRESENT IN PARAPET OR SIDEWALK, ACCOMMODATE FOR BY PROVIDING OPENING IN NO. 7.
 - ⑧ INSIDE PLATE. FABRICATE FROM 3/8" PLATE.
 - ⑨ OUTSIDE PLATE. FABRICATE FROM 3/8" PLATE.
 - ⑩ 1/8" SQUARE BAR. WELD TO NO. 8 AS SHOWN.
 - ⑪ 3/4" DIA. X 4" LONG STUDS. WELD TO NO. 7, 8, & 14 AS SHOWN.
 - ⑫ 3/4" X 2" STAINLESS STEEL FLAT CTSK. SLOTTED HEAD CAP SCREWS W/ ANTI-SEIZE LUBRICANT. RECESS 1/16" BELOW PL. SURFACE.
 - ⑬ 1/2" PLATE WITH 3/8" DIA. LOOP ANCHOR FABRICATED AS SHOWN. SPACED AT MANUFACTURER'S SPEC.
 - ⑭ INSIDE PLATE. FABRICATE FROM 3/8" PLATE
 - ⑮ ADIPRENE BUTTON. SEE DETAIL. SET IN OUTSIDE PLATE.

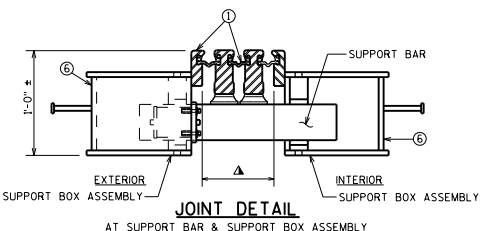


MODULAR EXPANSION JOINT CONNECTION
DETAIL AND WELD SPECIFICATION



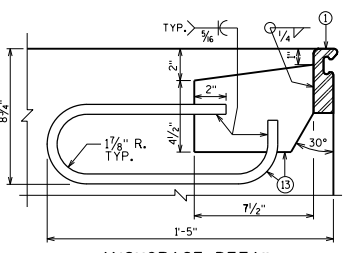
PART PLAN

- AT LOCATION WHERE EXT. GIR. IS ADJACENT TO A RAISED SIDEWALK (STD.30.07), CONC. DIAPH. DOES NOT EXTEND OUT TO EDGE OF DECK, BUT IS TERMINATED AT INSIDE FACE OF EXT. GIR.
- † #5 COATED BARS, + 8'-0" LONG, 1'-0" MIN. LAP. CUT IN FIELD TO CLEAR JOINT SUPPORT SYSTEM AS REQ'D.
- * POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH.
- ① DIMENSION IS PARALLEL TO ϵ GIRDER.
- ▲ MANUFACTURER'S RECOMMENDED JOINT OPENING BASED ON THE TEMPERATURE ON THE DAY OF PLACEMENT PER TEMPERATURE TABLE. THE MODULAR EXPANSION DEVICE SHALL HAVE THE NUMBER OF CELLS AS INDICATED IN (Q).
- ☆ (2) COATED L-SHAPED ADHESIVE ANCHORS NO. 5 BAR, EMBED 12" IN CONCRETE. SPACE AT 1'-0". PLACE ADHESIVE ANCHORS AFTER MODULAR JOINT IS IN POSITION.
- TOP FLANGE WIDTH WITHIN LIMITS OF CONC. DIAPH. SHALL BE $\leq 20^\circ$ FOR SKEWS $\leq 30^\circ$
- ▲ FOR PRESTRESSED GIRDERS, PLACE THE FOLLOWING NOTE ON PLANS: "JOINT MANUFACTURER SHALL INFORM AND PROVIDE NECESSARY DETAILS TO THE PRESTRESSED GIRDER FABRICATOR, WHEN FORM-OUT OF THE TOP FLANGE IS REQ'D. TO ALLOW PLACEMENT OF SUPPORT BOX ASSEMBLY."



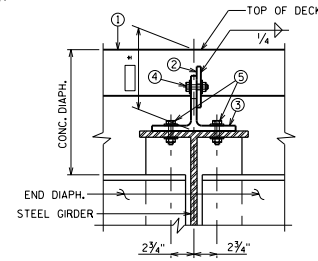
JOINT DETAIL

AT SUPPORT BAR & SUPPORT BOX ASSEMBLY

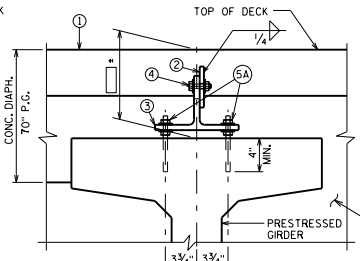


ANCHORAGE DETAIL

PLACE ADJACENT TO SUPPORT BOXES IN PAVING BLOCK @ ABUT. & IN DECK @ CONC. DIAPH.



SECTION A-A



SECTION B-B

NOTE: MODULAR EXPANSION DEVICE DESIGN AND DETAILS ARE SPECIFIC TO THE MANUFACTURER SELECTED FROM THOSE LISTED IN THE SPECIAL PROVISIONS.

▲ SUPPORT BOXES ARE SHOWN FOR GENERAL INFORMATION AND LOCATION MAY VARY ACCORDING TO FABRICATOR DESIGN. SPACE SUPPORT BOXES TO MISS GIRDER TOP FLANGES WHEN POSSIBLE, BUT NOT TO EXCEED MAXIMUM SPACING PER SPECIAL PROVISIONS.

TEMP. TABLE

TEMPERATURE TABLE FOR SETTING JOINT OPENINGS TO BE DETERMINED BY JOINT MANUFACTURER WITH THE FOLLOWING DESIGN DATA:

1. \square IN. OF MOVEMENT PER 10° F
2. MEDIAN TEMPERATURE OF 45° F
3. TEMP. RANGE IN TABLE FROM (5°F) TO (85°F) FOR PRESTRESSED CONCRETE GIRDERS AND FROM (-5°F) TO (+85°F) FOR STEEL GIRDERS.
4. ADJUST INITIAL JOINT OPENINGS BY A REDUCTION OF 1/2 IN. WHICH ACCOUNTS FOR SHRINKAGE (CREEP) OF THE SUPERSTRUCTURE OVER TIME, TO PRODUCE FINAL JOINT OPENINGS FOR TABLE.

A TABLE OF JOINT OPENINGS BASED ON ABOVE DATA SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INCLUDE ITEM 4. FOR PRESTRESSED GIRDER STRUCTURES ONLY. SEE CHAPT. 28 IN BRIDGE DESIGN MANUAL FOR ADJUSTMENT FACTOR.

- STANDARD COVERS:**
- SKEWS $\leq 30^\circ$
 - 2 OR 3 CELL MODULAR EXPANSION JOINTS
 - STEEL GIRDER BRIDGES
 - PRESTRESSED GIRDER BRIDGES (70", 36W", 45W", 54W", 72W" AND 82W" SECTION)

- NOTES**
- ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE GLAND.
 - AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.
 - NO EXPANSION JOINT PROTRUSIONS PERMITTED ABOVE ROADWAY SURFACE, ON PARAPET ROADWAY FACE OR ABOVE SIDEWALK SURFACE IF OR RAISED SIDEWALK.
 - THE EXPANSION JOINT SEALS SHALL BE PLACED, BONDED & SEALED AS RECOMMENDED BY THE MANUFACTURER. FORM WORK SHALL BE PLACED BETWEEN THE SUPPORT BOXES TO PREVENT CONCRETE INTRUSION INTO THE SUPPORT BOX. A TECHNICAL REPRESENTATIVE OF THE MANUFACTURER SHALL BE PRESENT DURING INSTALLATION. PRIOR TO SETTING THE JOINT ASSEMBLY INTO POSITION, THE PROJECT ENGINEER SHALL DETERMINE THE PROPER JOINT OPENING.
 - EXPANSION JOINT EXTRUSIONS SHALL BE FABRICATED TO CONFORM TO ROADWAY CROWN & GRADE. FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.
 - SANDBLAST BARS, PLATES, WT-SECTION, ANCHORAGE LOOP & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSQC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THIS ASSEMBLY SHALL BE HOT DIPPED GALVANIZED.
 - ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS, PARAPET PLATES, SIDEWALK PLATES, AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE MODULAR B-1", I.F.
 - BAR STEEL REINF. IN DECK AND CONC. DIAPHRAGM SHALL BE RESPAVED AS NECESSARY TO ALLOW PLACEMENT OF JOINT ASSEMBLY. TOP TRANSVERSE BARS, ADJACENT TO MOD. JT., TO BE CUT AND PLACED BETWEEN JT. SUPPORT SYSTEM.

MODULAR EXPANSION JOINT DETAILS

BUREAU OF STRUCTURES

APPROVED: *Bill Oliva* DATE: 1-21