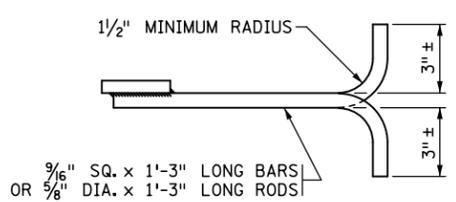
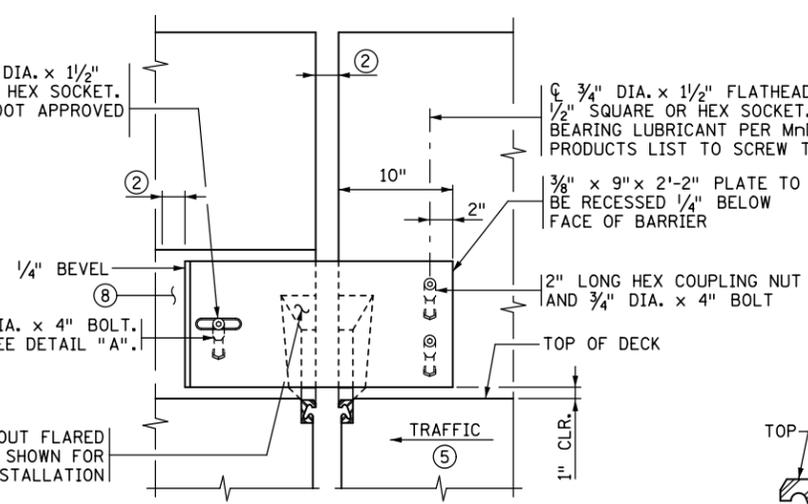


SECTION THROUGH BARRIER
TYPE S BARRIER

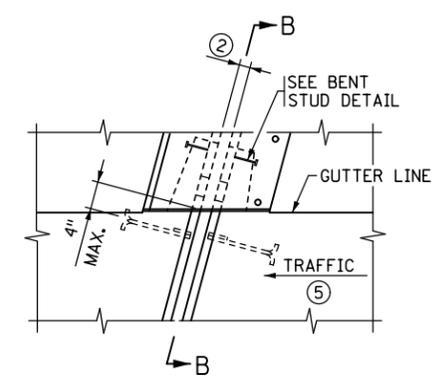


BAR-ROD DETAIL

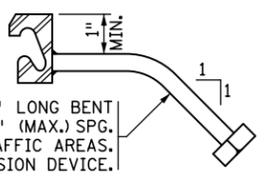
1" DIA. x 6" LONG SLOTTED HOLE FOR 3/4" DIA. x 1/2" FLATHEAD CAP SCREW WITH 1/2" SQUARE OR HEX SOCKET. APPLY BRIDGE BEARING LUBRICANT PER MnDOT APPROVED PRODUCTS LIST TO SCREW THREADS. (9)



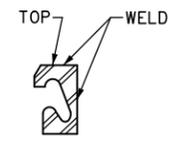
BARRIER ELEVATION



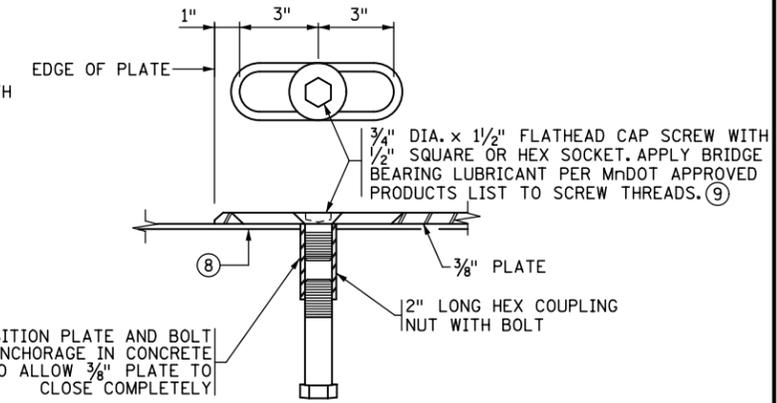
PLAN VIEW @ EXPANSION DEVICE
MEDIAN OR SIDEWALK ALTERNATE



BENT STUD DETAIL



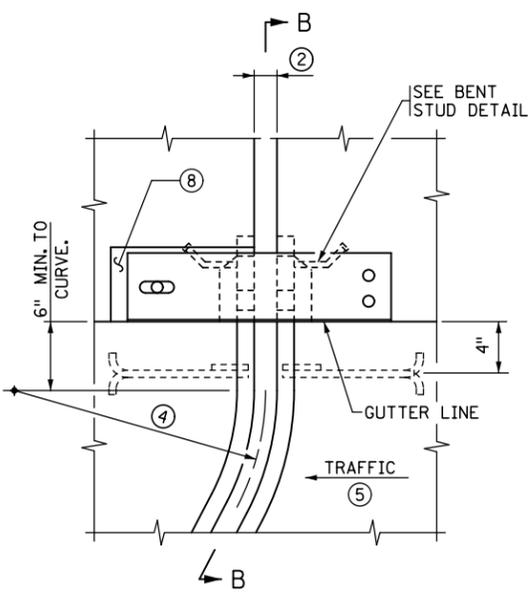
SECTION C-C



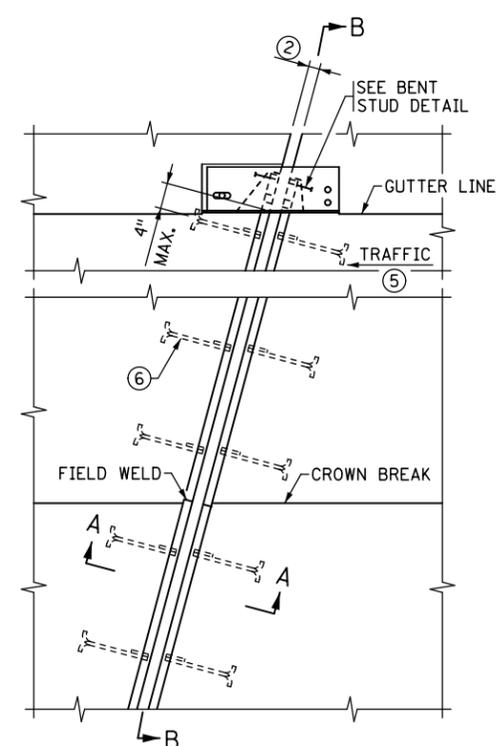
DETAIL "A"

GENERAL NOTES

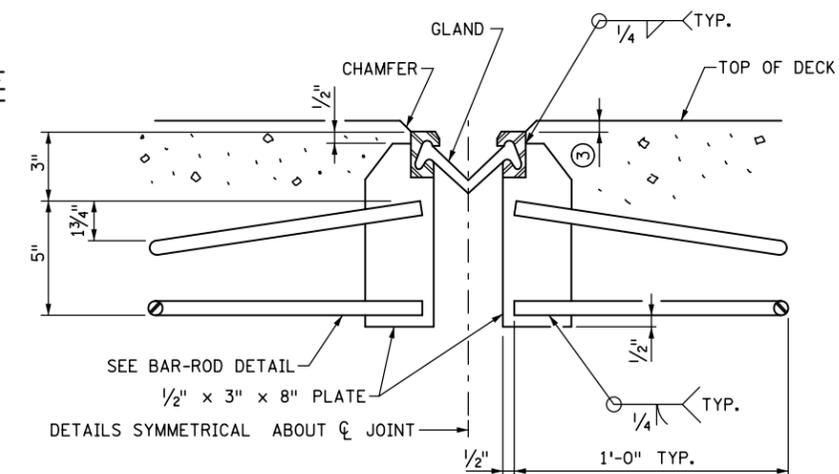
- GALVANIZE STRUCTURAL STEEL AFTER FABRICATION PER SPEC. 3394. GALVANIZE FASTENERS PER SPEC. 3392.
- LOCATE JOINTS IN EXTRUSION AT BREAKS IN TRANSVERSE PROFILE AND AS OTHERWISE REQUIRED, WITH CLOSE FIT, WELDED JOINTS. REPAIR AFTER WELDING PER SPEC. 2471.3.L.
- PROVIDE STRUCTURAL STEEL PER SPEC. 3306 OR SPEC. 3309.
- STRAIGHTEN EXPANSION DEVICE TO A TOLERANCE OF 1/8" IN 10 FT.
- 3/4" DIA. X 1/2" FLATHEAD CAP SCREW WITH 1/2" SQUARE OR HEX SOCKET PER SPEC 3391. COUNTERSINK CAP SCREWS 1/16" BELOW TOP OF PLATE. APPLY BRIDGE BEARING LUBRICANT PER MnDOT APPROVED PRODUCTS LIST TO SCREW THREADS. (9)
- PAYMENT LENGTH IS BASED ON THE HORIZONTAL DISTANCE BETWEEN THE OUTSIDE EDGES OF THE DECK MEASURED ALONG THE CENTERLINE OF JOINT.



PLAN VIEW @ EXPANSION DEVICE
WITH CURVED DEVICE ALTERNATE



PLAN VIEW @ EXPANSION DEVICE
WITH STRAIGHT DEVICE

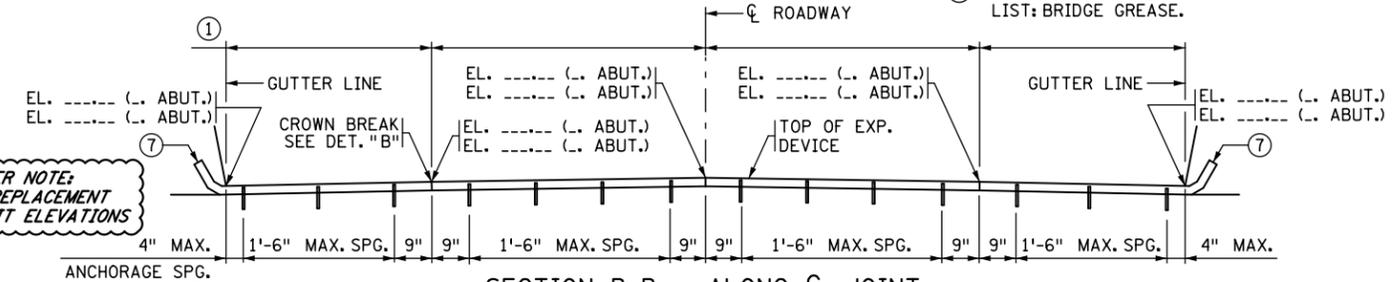


SECTION A-A

DESIGNER NOTE:
CHOOSE ONE JOINT
OPENING NOTE AND
DELETE OTHER.

- (1) DIMENSIONS ARE ALONG CENTERLINE OF JOINT.
- (2) -- AT 45° F; -- AT 90° F. 2" AT ALL TEMPS.
- (3) 1/8" (1/4" MAX.), 1/2" (5/8" MAX.) WHEN SNOWPLOW FINGERS ARE USED. SNOWPLOW FINGERS ARE REQUIRED FOR SKEWS OVER 15° AND LESS THAN 50°.
- (4) SEE SUPERSTRUCTURE DETAILS FOR RADIUS.
- (5) SEE SHEET NO. ... FOR DIRECTION OF TRAFFIC.
- (6) PLACE BAR-ROD NORMAL TO JOINT ON NEW BRIDGES AND JOINT REPLACEMENTS. ON JOINT REPLACEMENTS WHEN SKEW IS OVER 15° AND LESS THAN 50° BEND RODS PARALLEL TO CL ROADWAY.
- (7) EXTEND GLAND 1" MIN. BEYOND THE TOP OF THE EXTRUSION.
- (8) PROVIDE SMOOTH CONCRETE FINISH BENEATH PLATE WITH 0" MIN. TO 1/8" MAX. GAP BETWEEN CONCRETE AND UNDERSIDE OF PLATE. PROVIDE BOND BREAKER (DUCT TAPE, ETC.) TO UNDERSIDE OF COVER PLATE.
- (9) LUBRICANT PER MnDOT APPROVED/QUALIFIED PRODUCTS LIST: BRIDGE GREASE.

DESIGNER NOTE:
ON JOINT REPLACEMENT
PROJECTS OMIT ELEVATIONS



SECTION B-B ~ ALONG CL JOINT

ELEVATIONS SHOWN ARE 1/8" BELOW TOP OF SLAB @ CL JOINT
ELEVATIONS SHOWN ARE 1/2" BELOW TOP OF SLAB @ CL JOINT

REVISION: 01-05-2017
APPROVED: AUGUST 24, 2016
Kevin Westrom
STATE BRIDGE ENGINEER

CERTIFIED BY _____
LICENSED PROFESSIONAL ENGINEER DATE _____
NAME: _____ LIC. NO. _____

TITLE: WATERPROOF EXPANSION DEVICE (WITH TYPE S BARRIER)

DES: _____ DR: _____
CHK: _____ CHK: _____
APPROVED: _____
SHEET NO. OF SHEETS BRIDGE NO. _____

FIG. 5-397.627(B)