STEEL EXTRUSION NOTES:

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL SHOP DRAWINGS OF THE EXPANSION DEVICES SHOWING LAYOUT, MATERIAL TO BE USED, AND PROVISIONS FOR THE HOLDING DEVICE DURING PLACEMENT OF CONCRETE.

THE EXPANSION DEVICE SHALL BE GALVANIZED AFTER WELDING. ALL CURB PLATES INCLUDING THEIR ANCHORAGES SHALL BE GALVANIZED.

THE EXPANSION DEVICE IS TO BE PARALLEL TO GRADE.

CAP SCREWS SHALL BE COUNTERSUNK $\frac{1}{16}$" BELOW TOP OF THE PLATE. THE MINIMUM GRADE OF STRUCTURAL STEEL FOR THE EXPANSION DEVICE SHALL BE ASTM A36.

BLOCKOUT DETAILS MAY BE ALTERED FROM THOSE SHOWN PROVIDED THE GLAND MAY BE INSTALLED AND REMOVED IF NECESSARY AND THE CURB AREA REMAINS WATERTIGHT.

SHOP SPLICES OF THE STEEL EXTRUSION WILL BE PERMITTED. PRIOR TO MAKING SHOP SPLICES STEEL EXTRUSION PIECES SHALL HAVE A MINIMUM LENGTH OF 15 FEET. THE INDIVIDUAL LENGTH OF PIECES SHALL BE CHOSEN SO THAT A MINIMUM NUMBER OF SPLICES IS REQUIRED. ALL PIECES SHALL BE JOINED WITH A PREQUALIFIED PARTIAL PENETRATION SINGLE GROOVE WELD DETAILED ON THE SHOP DRAWING. ALL SURFACES NOT IN CONTACT WITH CONCRETE ARE TO BE GROUND FLUSH. NO WELD SHALL BE PERMITTED IN THE INTERNAL SECTION OF THE EXTRUSION WHERE THE NEOPRENE GLAND IS TO BE INSTALLED.

THE NUMBER OF FEET OF STEEL EXTRUSION INSTALLED SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT BASED ON PLAN QUANTITIES. THE PRICE BID FOR "STEEL EXTRUSION JOINT W/NEOPRENE" SHALL INCLUDE THE COST OF FURNISHING BUT NOT THE COST OF INSTALLING THE NEOPRENE GLAND. THE CONTRACT PRICE BID FOR "STEEL EXTRUSION JOINT W/NEOPRENE" SHALL BE FULL COMPENSATION FOR FURNISHING AND INSTALLING STEEL EXTRUSIONS. THIS WORK WILL CONSIST OF FURNISHING ALL REQUIRED MATERIALS, (INCLUDING THE $\frac{3}{8}$" PLATES AT THE CURBS AND THEIR ANCHORAGE SYSTEMS), AND THE INSTALLATION AND ADJUSTMENT OF THE EXPANSION JOINTS IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. THE FURNISHING AND INSTALLATION OF ALL NECESSARY HARDWARE AND ACCESSORIES AS SUPPLIED BY THE EXPANSION JOINT MANUFACTURER ARE TO BE INCLUDED IN THIS WORK, INCLUDING THE ANCHORAGE SYSTEM AND ANY TEMPORARY ERECTION MATERIAL. ALL WORK AND MATERIALS FOR THE INSTALLATION OF THE EXPANSION JOINTS ARE TO COMPLY WITH THE WRITTEN RECOMMENDATIONS OF THE EXPANSION JOINT MANUFACTURER.

NEOPRENE GLAND NOTES:

THE NEOPRENE GLAND IS TO BE PLACED AS ONE CONTINUOUS PIECE FROM END TO END OF THE STEEL EXTRUSION.

THE NEOPRENE GLAND SHALL CONFORM TO ASTM-2628 MODIFIED TO EXCLUDE RECOVER TEST AND COMPRESSION SET.

THE CONTRACTOR SHALL INSTALL THE GLAND ABOVE THE MINIMUM TEMPERATURE OF 45° AND THE MINIMUM JOINT OPENING AND CORRESPONDING MAXIMUM DECK TEMPERATURE SHOWN IN THESE PLANS. THE DECK TEMPERATURE SHALL BE MEASURED BY RECORDING THE SURFACE TEMPERATURES ON THE UNDERSIDE OF THE DECK ADJACENT TO THE JOINTS. IF THE DECK TEMPERATURE DOES NOT FALL WITHIN THE SPECIFIED TEMPERATURE RANGE BEFORE THE CONTRACTOR HAS COMPLETED ALL OTHER REQUIRED WORK, IT WILL BE NECESSARY FOR THE CONTRACTOR TO RETURN TO THE PROJECT SITE TO COMPLETE INSTALLATION AND TESTING OF THE NEOPRENE GLAND. IF THE CONTRACTOR IS REQUIRED TO RETURN TO THE PROJECT SITE AFTER ALL OTHER REQUIRED WORK HAS BEEN COMPLETED, THE CONTRACTOR SHALL COMPLETE INSTALLATION AND TESTING OF NEOPRENE GLAND AT NO EXTRA CHARGE TO THE STATE.

THE NUMBER OF FEET OF NEOPRENE GLAND INSTALLED SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT BASED ON PLAN QUANTITIES. THE PRICE FOR "NEOPRENE GLAND INSTALLATION AND TESTING" SHALL BE FULL COMPENSATION FOR INSTALLING AND TESTING OF THE NEW NEOPRENE GLAND. THIS WORK WILL CONSIST OF CLEANING THE EXTRUSION, INSTALLATION OF THE NEOPRENE GLAND AND WATER TIGHT TESTING OF THE EXPANSION JOINT SYSTEM. ALL WORK AND MATERIALS NECESSARY FOR THE INSTALLATION OF THE NEOPRENE GLAND SHALL COMPLY WITH THE RECOMMENDATIONS OF THE EXPANSION JOINT MANUFACTURER. THE PRICE BID FOR "NEOPRENE GLAND INSTALLATION AND TESTING" SHALL INCLUDE ALL WATERTIGHT INTEGRITY TESTING, LEAK REPAIRS AS DIRECTED BY THE ENGINEER, AND SUBSEQUENT WATERTIGHT TESTING UNTIL A LEAK FREE INSTALLATION IS ACHIEVED.

WATERTIGHT INTEGRITY TESTING AND REPAIR NOTES:

AFTER INSTALLATION OF EACH NEOPRENE GLAND, THE CONTRACTOR SHALL PERFORM WATERTIGHT INTEGRITY TESTS AT THE DECK LEVEL TO DETECT ANY LEAKAGE. THE TESTS ARE TO CHECK FOR LEAKAGE AT THE UPTURNED ENDS OF THE EXPANSION DEVICE AND FOR LEAKAGE ALONG THE EXPANSION DEVICE ACROSS THE DECK AND ANY MEDIANS OR SIDEWALKS. THE CONTRACTOR MAY CONDUCT A SINGLE TEST OF THE ENTIRE DEVICE INCLUDING UPTURNED ENDS OR MAY CONDUCT SEPARATE TESTS OF UPTURNED ENDS AND ONE OR MORE TESTS OF OVERLAPPING LENGTHS BETWEEN THE UPTURNED ENDS.

AT EACH UPTURNED END OF THE EXPANSION DEVICE, THE CONTRACTOR SHALL BLOCK OUT ON THE DECK AT LEAST 3 FEET OF THE EXPANSION DEVICE LEADING TO THE UPTURNED END AND FLOOD THE AREA. A MINIMUM WATER DEPTH OF 3" SHALL BE MAINTAINED AT THE GUTTERLINE FOR AT LEAST 30 MINUTES. DURING THE TEST, THE INSPECTOR SHALL OBSERVE FOR ANY OVERFLOW AT THE UPTURNED END. AT THE CONCLUSION OF THE TEST THE INSPECTOR WILL EXAMINE THE UNDERSIDE OF THE JOINT FOR LEAKAGE. THE EXPANSION DEVICE IS CONSIDERED WATERTIGHT IF THE INSPECTOR OBSERVES NO OVERFLOW DURING THE TEST AND IF NO DRIPPING WATER OR WATER DROPLETS ARE VISIBLE IN THE UNDERDECK AREAS NEAR THE UPTURNED END.

THE CONTRACTOR SHALL TEST THE EXPANSION DEVICE BETWEEN UPTURNED ENDS BY BLOCKING OUT AND COVERING THE DEVICE WITH PONDED OR FLOWING WATER TO A DEPTH OF AT LEAST 1" AT ALL POINTS, FOR AT LEAST 30 MINUTES. VERTICAL CURB SURFACES MAY BE TESTED WITH AN UNNOZZLED HOSE DELIVERING APPROXIMATELY ONE GALLON PER MINUTE DIRECTED TO FLOW OVER THE ENTIRE CURB HEIGHT FOR 30 MINUTES. AT THE CONCLUSION OF THE TEST, THE INSPECTOR WILL EXAMINE THE UNDERSIDE OF THE JOINT FOR LEAKAGE. THE EXPANSION DEVICE IS CONSIDERED WATERTIGHT IF NO DRIPPING WATER OR WATER DROPLETS ARE VISIBLE IN THE UNDERDECK AREAS ALONG THE FULL LENGTH OF THE EXPANSION JOINT. DAMP CONCRETE THAT DOES NOT SHOW DRIPPING WATER OR WATER DROPLETS IS NOT CONSIDERED A SIGN OF LEAKAGE.

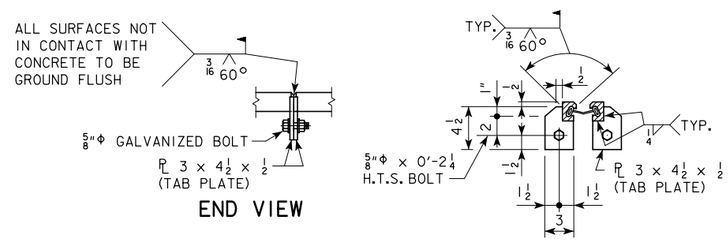
IF THE EXPANSION DEVICE LEAKS AT AN UPTURNED END OR ALONG ITS LENGTH, THE CONTRACTOR SHALL LOCATE THE LEAK(S) AND TAKE REPAIR MEASURES TO STOP THE LEAKAGE. THE REPAIR MEASURES SHALL BE AS RECOMMENDED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER PRIOR TO BEGINNING CORRECTIVE WORK.

IF MEASURES TO ELIMINATE LEAKAGE ARE TAKEN, THE CONTRACTOR SHALL PERFORM SUBSEQUENT WATERTIGHT INTEGRITY TESTS SUBJECT TO THE SAME CONDITIONS AS THE ORIGINAL TEST.

FIELD CONSTRUCTION NOTES:

IF THE STEEL EXTRUSION IS SPLICED IN THE FIELD, THE SPLICE LOCATION SHALL BE DETAILED ON THE SHOP DRAWINGS. THE CONNECTION DETAILS SHALL INCLUDE TAB PLATES AND PREPARED ENDS TO ACCOMMODATE THE NECESSARY WELDING. SEE DETAILS IN THESE PLANS.

GALVANIZED COATING DAMAGE BY FIELD WELDING SHALL BE REPAIRED IN ACCORDANCE WITH MATERIALS I.M. 410.



FIELD SPLICE DETAIL

DESIGN FOR 0° SKEW ON 3,300' RADIUS CURVE

566'-6 X VARIES CONTINUOUS WELDED GIRDER BRIDGE

171'-0, 226'-0, 169'-6 SPANS

STRIP SEAL JOINT DETAILS

STA. 2543+48.27 (℄ RAMP B) APRIL 2018

JOHNSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 23 OF 31 FILE NO. 30864 DESIGN NO. 420

REVISION 08-13 - STEEL EXTRUSION NOTE WAS ADDED TO SHOW A WELD DETAIL ON THE SHOP DRAWINGS FOR SPLICES.
AN ADDITIONAL NEOPRENE GLAND NOTE ABOUT THE CORRESPONDING MAXIMUM DECK TEMPERATURE WAS ADDED.
ENGLISHDECKRAILBRIDGES.DGN - 1026s2 - THIS SHEET ISSUED 11-08.