

STRUCTURAL STEEL NOTES

ALL INTERMEDIATE DIAPHRAGM STEEL AND CONNECTOR PLATES SHALL BE AASHTO M270 GRADE 50 OR APPROVED EQUAL.

TENSION ON THE ASTM F3125 GRADE A325 BOLTS THROUGH THE CHANNEL MEMBER SHALL BE CALIBRATED USING DIRECT TENSION INDICATOR WASHERS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

TENSION ON THE ASTM A449 BOLTS THROUGH THE GIRDER WEB SHALL BE SNUG TIGHTENED FOLLOWED BY AN ADDITIONAL 1/4 TURN.

THE PLATES, BENT PLATES, CHANNELS, AND ANGLES SHALL BE GALVANIZED OR METALLIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. FOR THERMAL SPRAYED COATINGS (METALLIZATION), SEE SPECIAL PROVISIONS.

FOR METALLIZATION, APPLY A THERMAL SPRAYED COATING WITH A SEAL COAT TO ALL STEEL DIAPHRAGM SURFACES IN ACCORDANCE WITH THE DEPARTMENTS THERMAL SPRAYED COATINGS (METALLIZATION) PROGRAM, THERMAL SPRAYED COATINGS SPECIAL PROVISION AND SECTION 442 OF THE STANDARD SPECIFICATIONS.

GALVANIZE THE HIGH STRENGTH BOLTS, NUTS, WASHERS AND DIRECT TENSION INDICATORS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

USE AN ASTM F436 HARDENED WASHER WITH STANDARD AND SLOTTED HOLES UNDER EACH BOLT HEAD AND NUT.

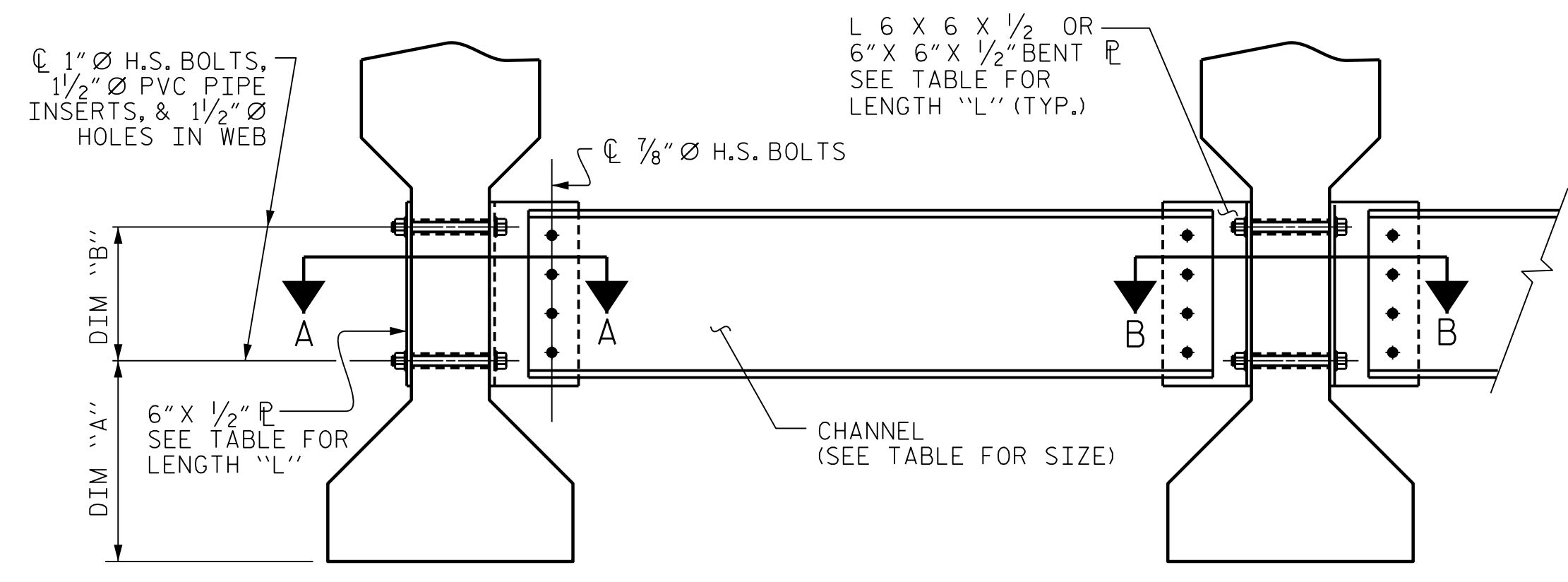
FOR BOLTS THROUGH THE GIRDER WEB, PROVIDE SUFFICIENT LENGTH OF THREADS ON ALL BOLTS TO ACCOMMODATE WASHERS AND THE THICKNESS OF CONNECTING MEMBER PLUS AT LEAST 1/4" PROJECTION BEYOND THE NUT.

INTERMEDIATE DIAPHRAGM ASSEMBLY SHALL COMPLY WITH SECTION 1072 OF THE STANDARD SPECIFICATIONS.

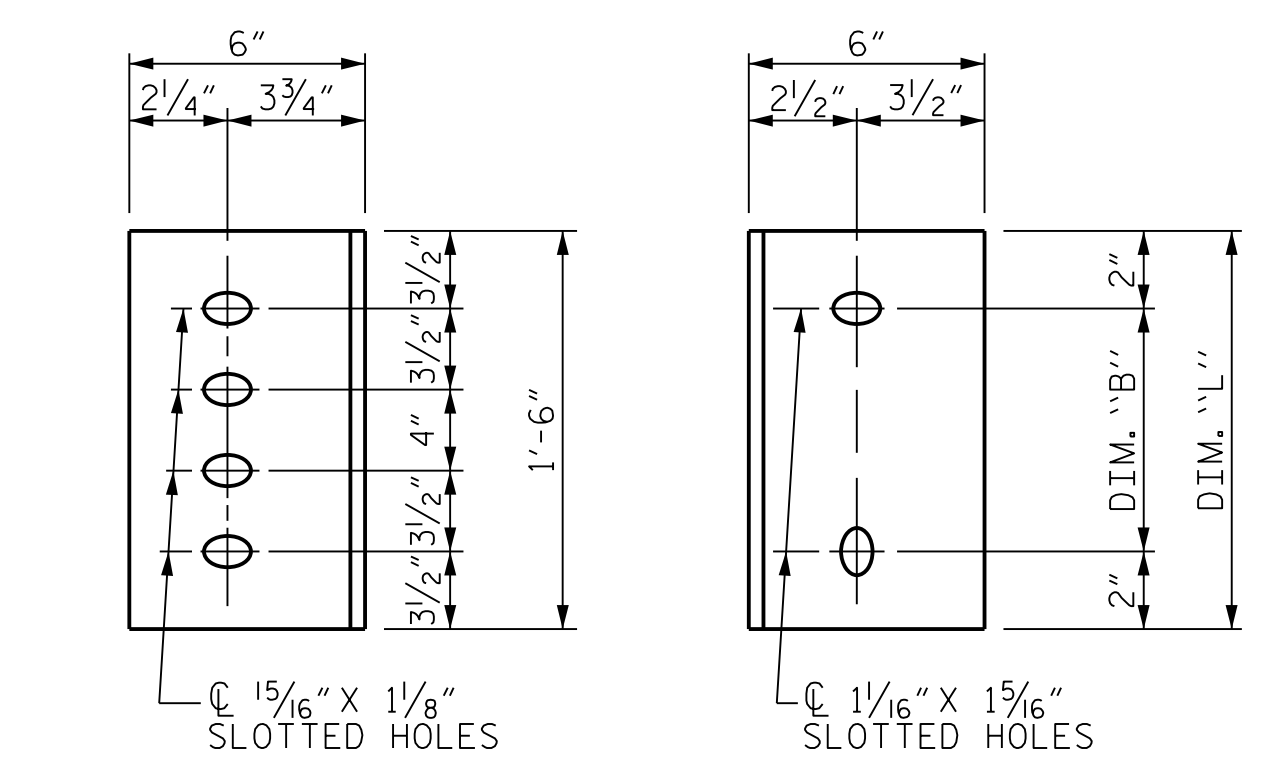
SUBMIT TWO SETS OF WORKING DRAWINGS FOR THE INTERMEDIATE DIAPHRAGM ASSEMBLY FOR REVIEW, COMMENTS AND ACCEPTANCE. AFTER REVIEW, COMMENTS, AND ACCEPTANCE, SUBMIT SEVEN SETS FOR DISTRIBUTION.

IN THE EXTERIOR BAYS, PLACE TEMPORARY STRUTS BETWEEN PRESTRESSED GIRDERS ADJACENT TO THE STEEL DIAPHRAGMS. STRUTS SHALL REMAIN IN PLACE 3 DAYS AFTER CONCRETE IS PLACED.

THE COST OF THE STEEL DIAPHRAGMS AND ASSEMBLIES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE GIRDERS.



EXTERIOR GIRDER
INTERIOR GIRDER
PART SECTION AT INTERMEDIATE DIAPHRAGM
(EXTERIOR BAY SHOWN)



DIAPHRAGM FACE
WEB FACE
CONNECTOR PLATE DETAILS

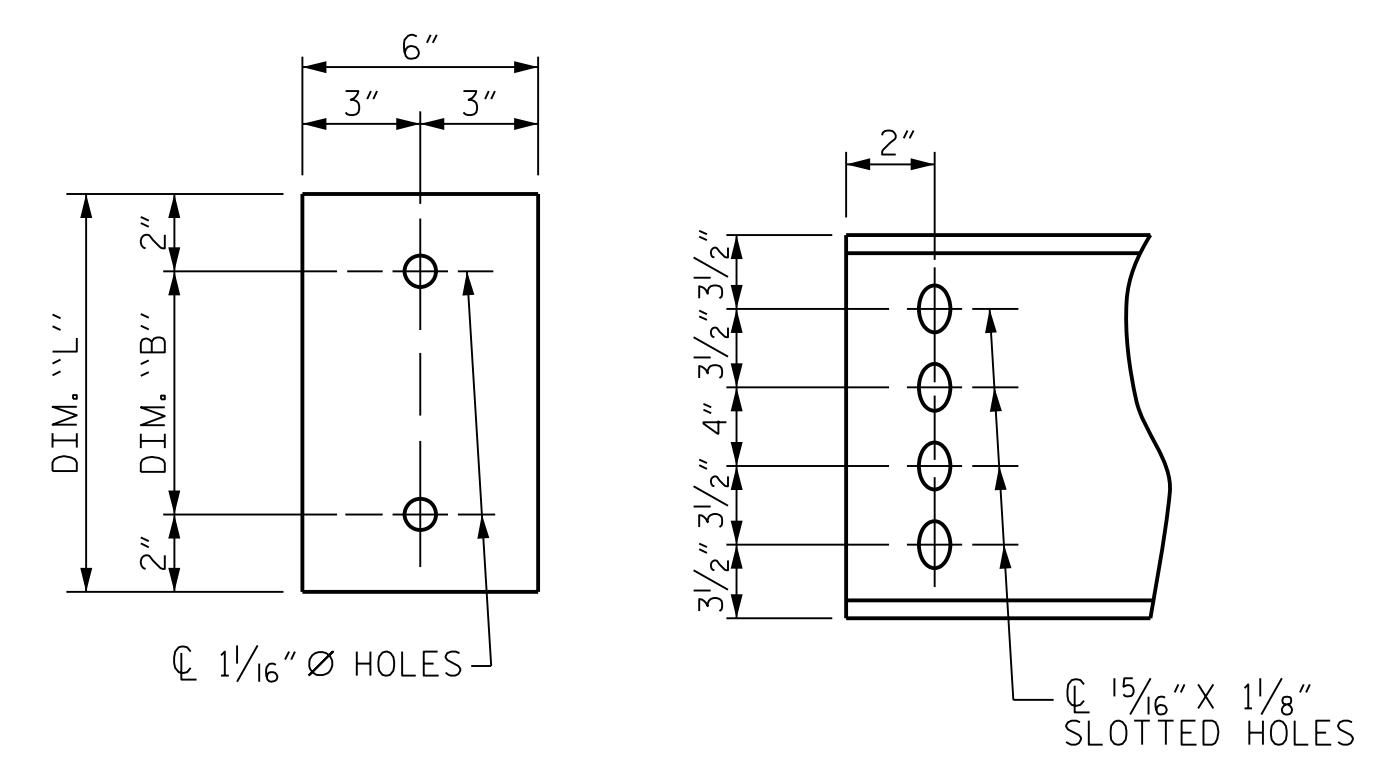
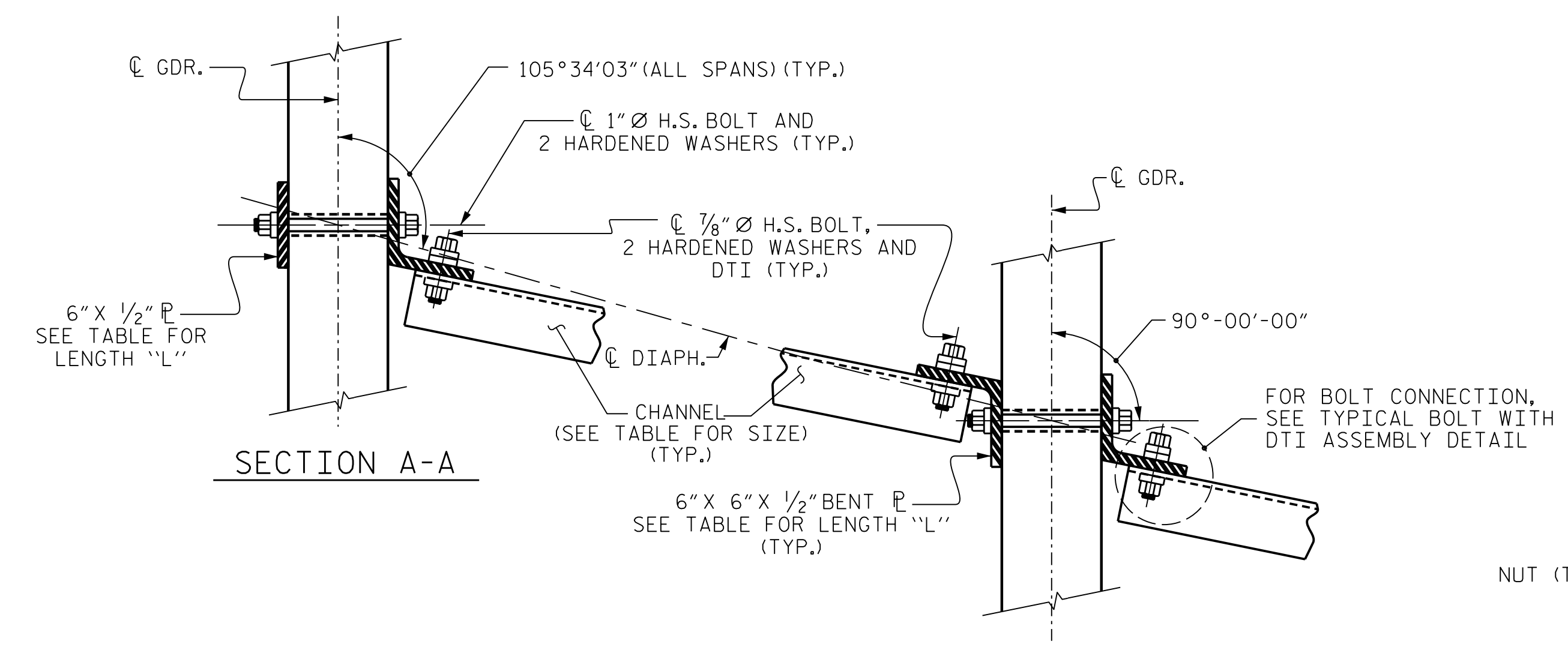
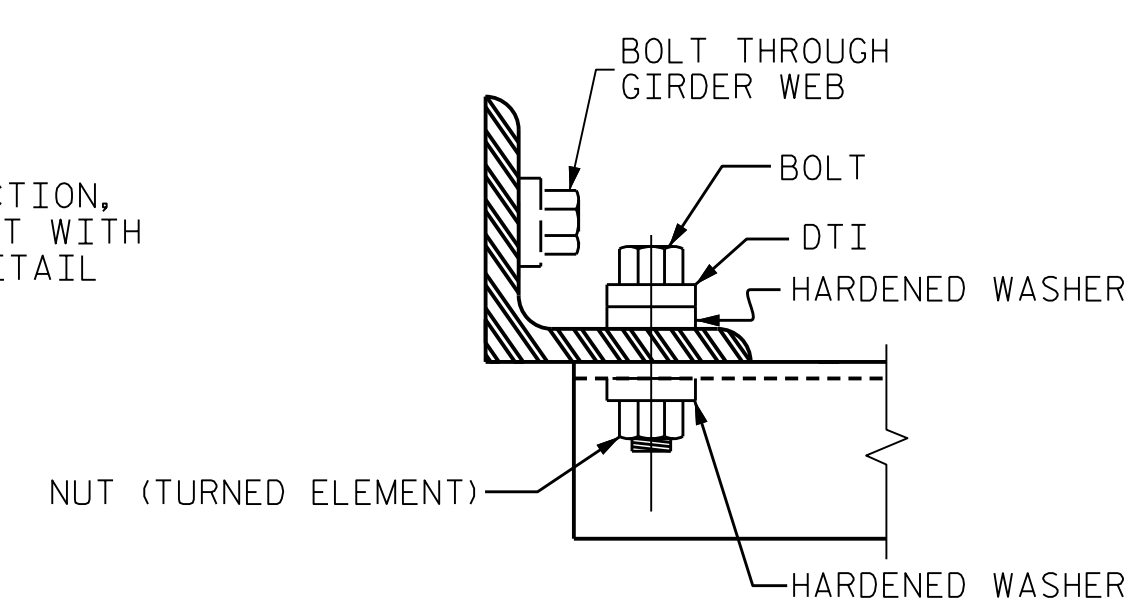


PLATE DETAILS
CHANNEL END



SECTION A-A
SECTION B-B
CONNECTION DETAILS



BOLT WITH DTI ASSEMBLY DETAIL

TABLE

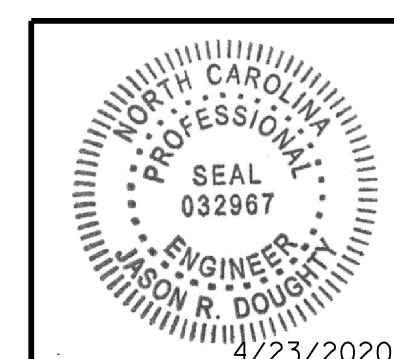
| GIRDER TYPE | CHANNEL SIZE | DIM "A" | DIM "B" | DIM "L" |
|-------------|--------------|-----------|---------|---------|
| IV | MC 18 x 42.7 | 1'-9 1/2" | 1'-2" | 1'-6" |

PROJECT NO. R-2233BB
RUTHERFORD COUNTY
STATION: 20+88.94 -Y19-

4/22/2020 403_029_R2233BB_SML.GSD_800662.dgn

| | | | | | | | |
|------------------------|-----------------|--------------------|----------------|-----------------------|-----------------|---------------------------------------|----------------|
| DESIGNED BY: J. BORUTA | DATE: JUNE 2019 | DRAWN BY: K. WHITE | DATE: MAR 2019 | CHECKED BY: B. LOFLIN | DATE: JUNE 2019 | DESIGN ENGINEER OF RECORD: J. DOUGHTY | DATE: NOV 2019 |
| DRAWN BY: TLA | 6/05 | CHECKED BY: VC | 6/05 | REV. 5/1/06RRR | KMM/GM | REV. 10/1/11 | MAA/GM |
| | | | | REV. 12/17 | MAA/THC | | |

MODJESKI and MASTERS
Experience great bridges.
333 FAYETTEVILLE STREET, SUITE 500
RALEIGH, NC 27601
NC LICENSE NO. C-2979



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
INTERMEDIATE
STEEL DIAPHRAGMS FOR
TYPE IV PRESTRESSED
CONCRETE GIRDERS

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | 34 |
| 2 | | | 4 | | | |

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

DocuSigned by:
Jason R. Doughty
SF73FA2DEA974E8...