

PART SECTION AT INTERMEDIATE DIAPHRAGM

CHANNEL:

(SEE TABLE FOR SIZE)

(TYP.)

— \* € 1/8"Ø H.S. BOLT, 2 HARDENED WASHERS AND

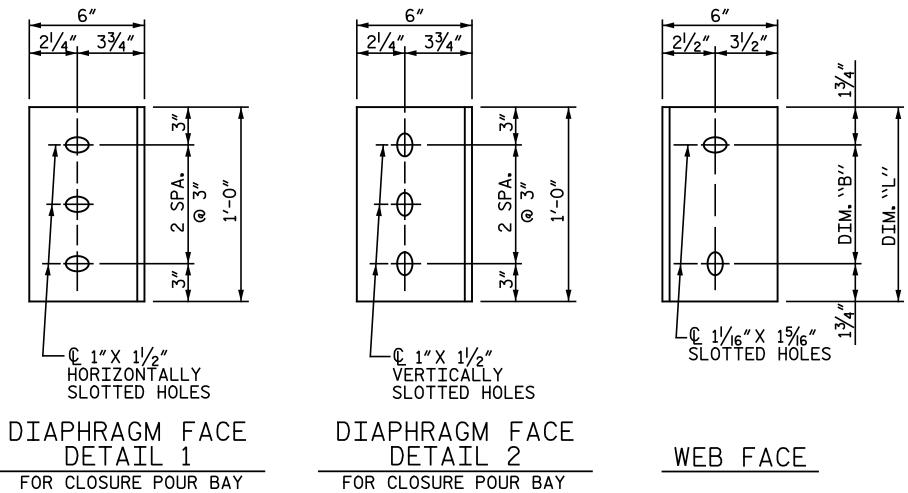
DTI (TYP.)

— ₡ 1″Ø H.S. BOLT AND — 2 HARDENED WASHERS (TYP.)

L 6 X 6 X 1/2 OR

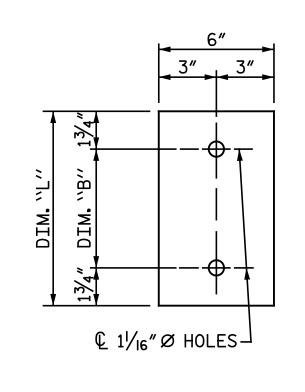
6"X 6"X 1/2" BENT P

SEE TABLE FOR LENGTH "L" (TYP.)



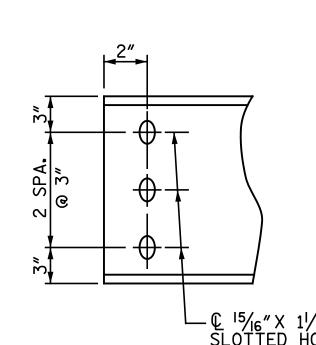
# CONNECTOR PLATE DETAILS

SIDE OF BEAM 6 & BEAM 11

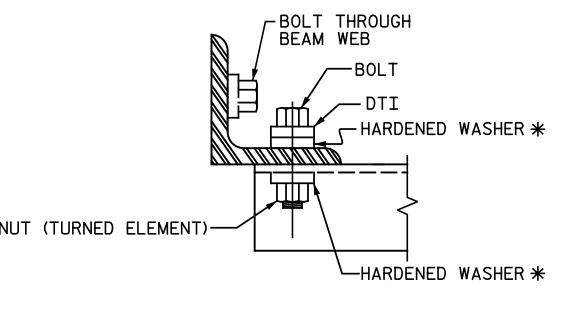


SIDE OF BEAM 5 & BEAM 12

FOR BOLT CONNECTION,
SEE TYPICAL BOLT WITH
DTI ASSEMBLY DETAIL



## CHANNEL END



### STRUCTURAL STEEL NOTES

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

TENSION ON THE ASTM 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 BEAM 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

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 BEAM 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 BEAMS 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 BEAMS.

### TABLE

BEAM TYPE	CHANNEL SIZE	DIM "A"	DIM "B"	DIM "L"
45"F.I.B.	MC 12 × 31	2'-2"	8 <sup>1</sup> /2"	1'-0"

PROJECT NO. I-5986B JOHNSTON COUNTY 1391+19.65 -L-STATION:\_



UNLESS ALL SIGNATURES COMPLETED

INTERNATIONAL NC License No.: F-1084

Michael Baker

DOCUMENT NOT CONSIDERED FINAL

INTERMEDIATE

STEEL DIAPHRAGMS FOR 45"FLORIDA I-BEAMS

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE

SHEET NO. **REVISIONS** Michael Baker Engineering 8000 Regency Parkway, Suite 600 Cary, North Carolina 27518 NO. BY: S3-I7 BY: DATE: DATE: TOTAL SHEETS 44

NUTS ON BOLTS FOR CONNECTING CHANNELS TO CONNECTOR PLATES IN CLOSURE POUR BAYS SHALL BE LEFT LOOSE FOR PURPOSE OF ADJUSTMENT UNTIL BOTH SIDES OF SLAB HAVE BEEN POURED.

CONNECTION DETAILS

\* FOR CONNECTING CHANNELS TO CONNECTOR PLATES IN CLOSURE POUR BAYS, SQUARE HARDENED WASHERS SHALL BE USED IN LIEU OF CIRCULAR HARDENED WASHERS.

SECTION B-B

DRAWN BY : N. B. SPEAKS DATE : 7-18-19 CHECKED BY : T. M. GARRISON DATE : 4-17-20

6"X ½" ₱—— SEE TABLE FOR

LENGTH "L" (TYP.)

SECTION A-A

PROVISIONS. -© 1½6″X 15⁄6″ ' SLOTTED HOLES  $-\mathbb{Q}^{15}/_{16}$ " X  $1^{1}/_{8}$ " SLOTTED HOLES

DIAPHRAGM FACE

21/4" 33/4"

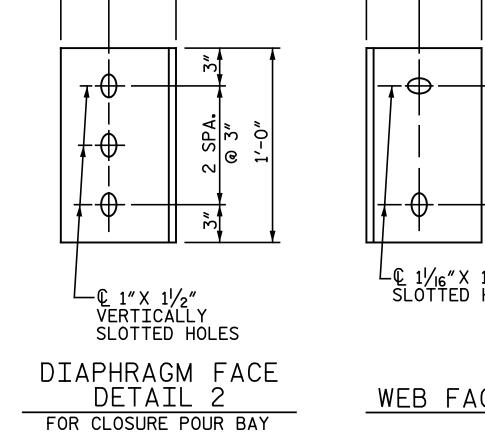
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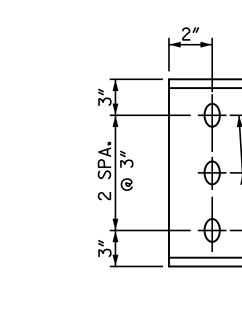
WEB FACE

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CONNECTOR PLATE DETAILS NON-CLOSURE POUR BAYS

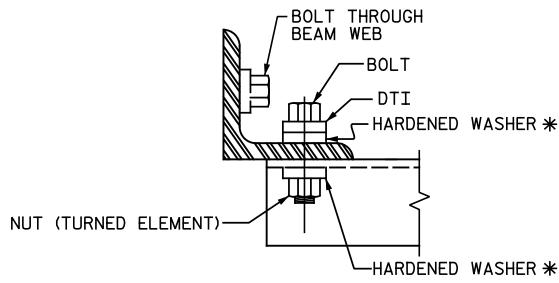


# CLOSURE POUR BAYS



└─ © <sup>15</sup>/<sub>16</sub>" X 1<sup>1</sup>/<sub>8</sub>" SLOTTED HOLES

## PLATE DETAILS



BOLT WITH DTI ASSEMBLY DETAIL