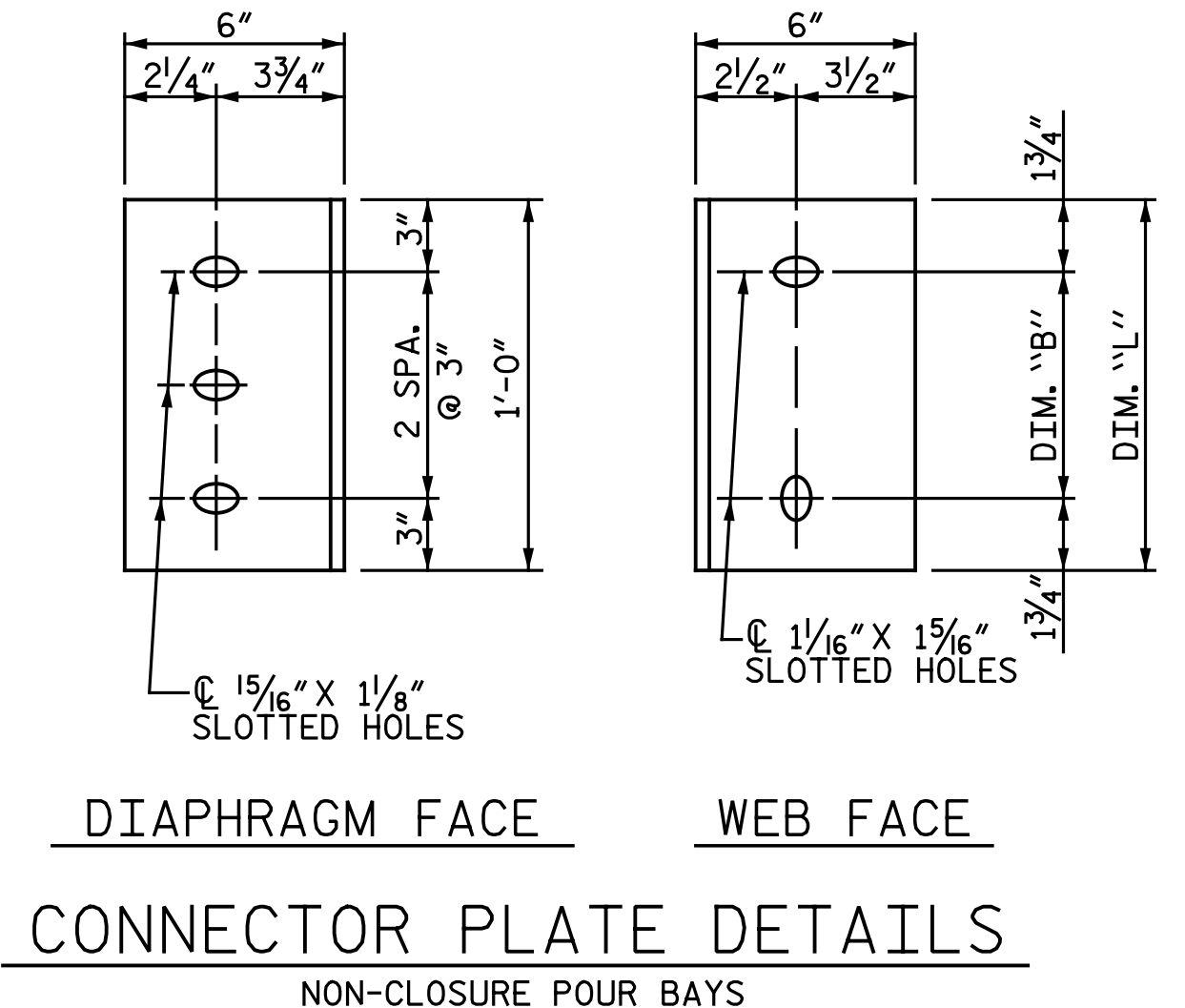
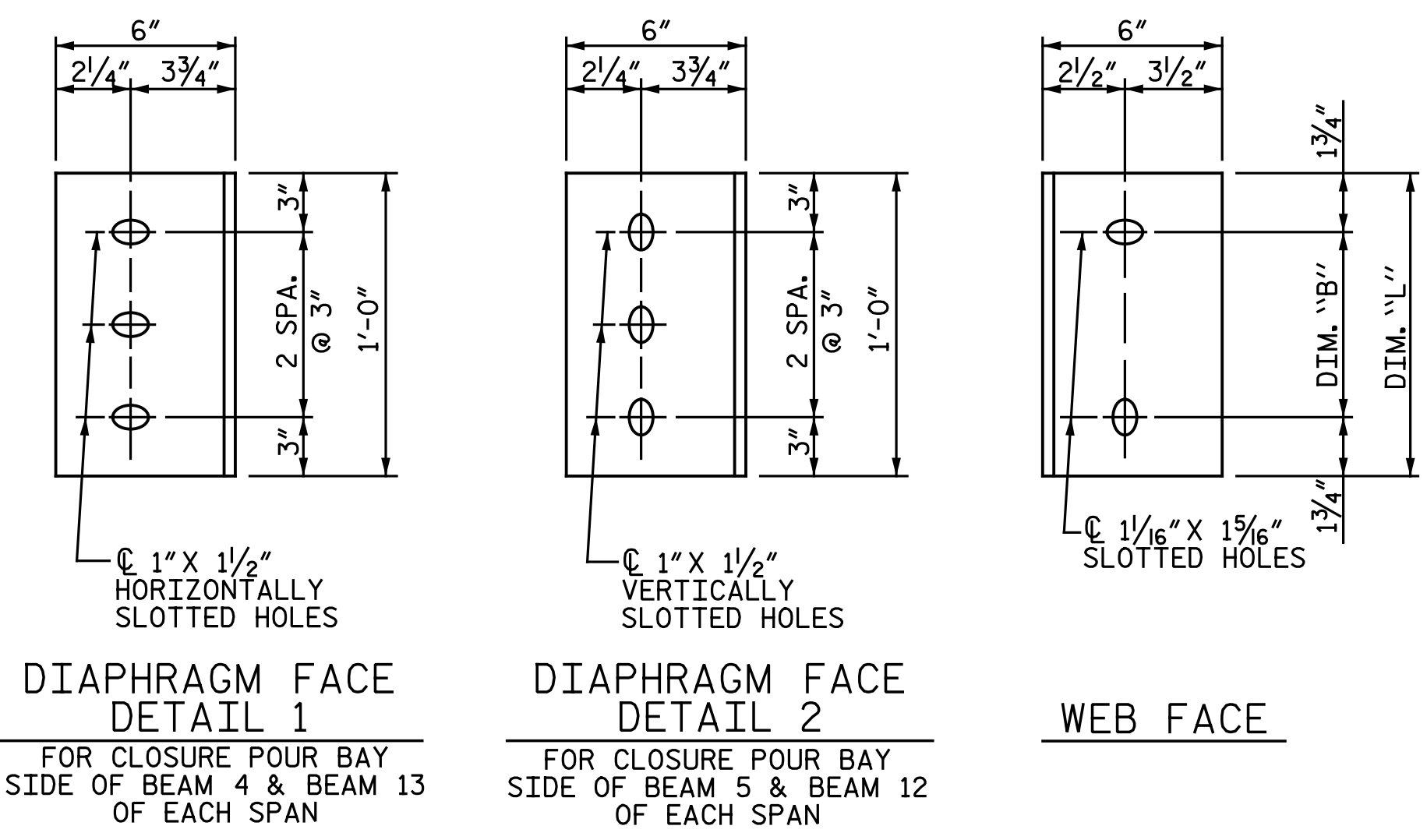


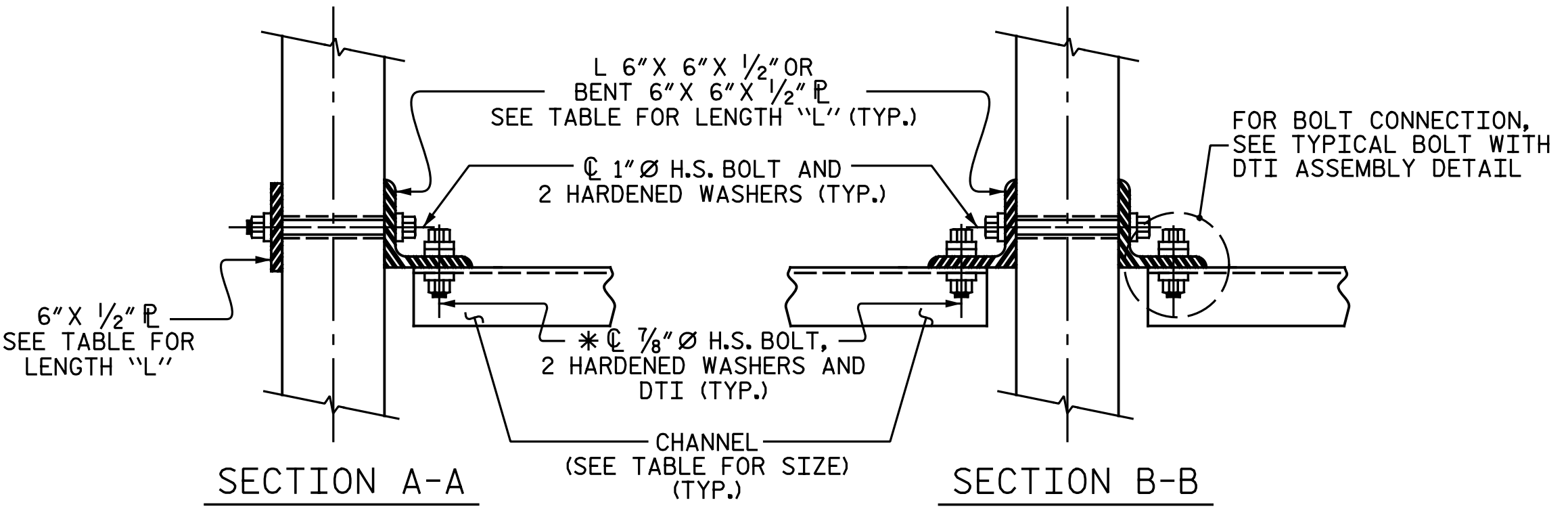
PART SECTION AT INTERMEDIATE DIAPHRAGM



CONNECTOR PLATE DETAILS
NON-CLOSURE POUR BAYS



CONNECTOR PLATE DETAILS
CLOSURE POUR BAYS



CONNECTION DETAILS

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.

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

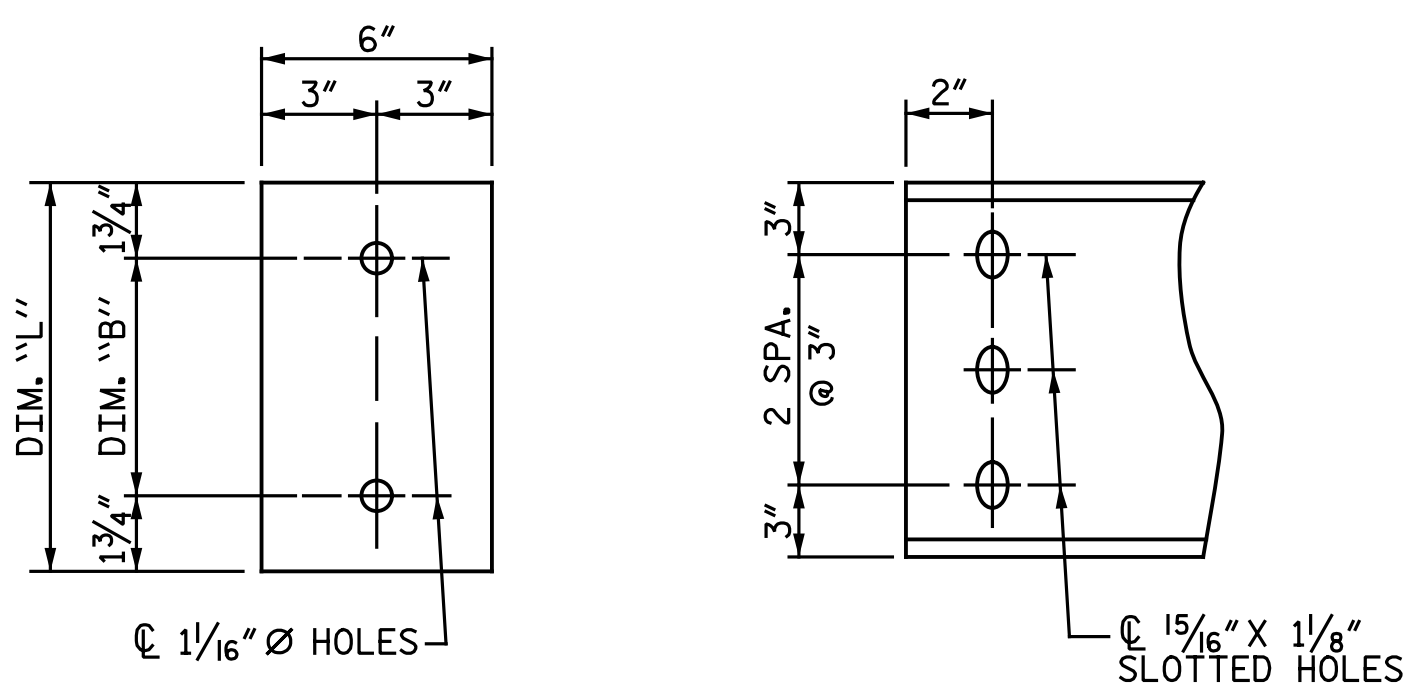
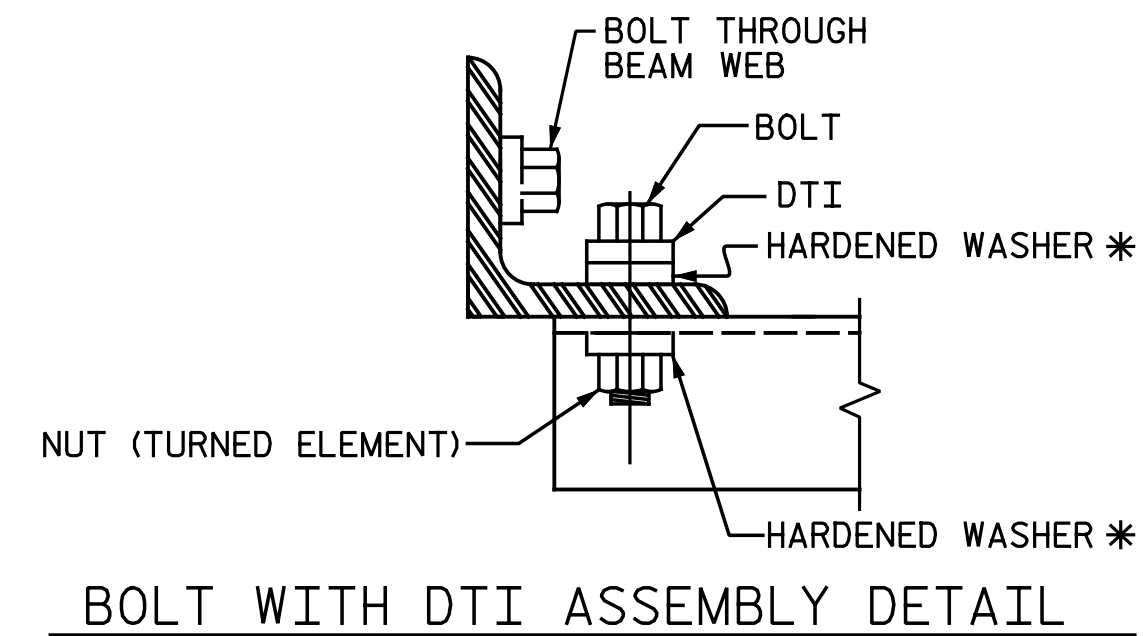


PLATE DETAILS CHANNEL END



BOLT WITH DTI ASSEMBLY DETAIL

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 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 BEAM WEB, PROVIDE SUFFICIENT LENGTH OF THREADS ON ALL BOLTS TO ACCOMMODATE WASHERS AND THE THICKNESS OF CONNECTING MEMBER PLUS AT LEAST 1/4 INCH 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.

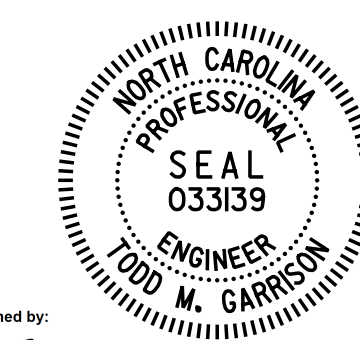
IN THE EXTERIOR BAYS, PLACE TEMPORARY STRUTS BETWEEN PRESTRESSED BEAMS ADJACENT TO THE STEEL DIAPHRAGMS. STRUTS SHALL REMAIN IN PLACE 3 DAYS AFTER CONCRETE IS PLACED.

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 x 31	2'-2"	8 1/2"	1'-0"

PROJECT NO. I-5986B
JOHNSTON COUNTY
STATION: 1260+34.00 -L-



DocuSigned by:
Todd M. Garrison
4/21/2020

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
INTERMEDIATE
STEEL DIAPHRAGMS FOR
45" FLORIDA I-BEAMS

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	SI-27 TOTAL SHEETS 57
2			4	

DRAWN BY: N. B. SPEAKS DATE: 6-4-19
CHECKED BY: J. M. GARRISON DATE: 4-20-20