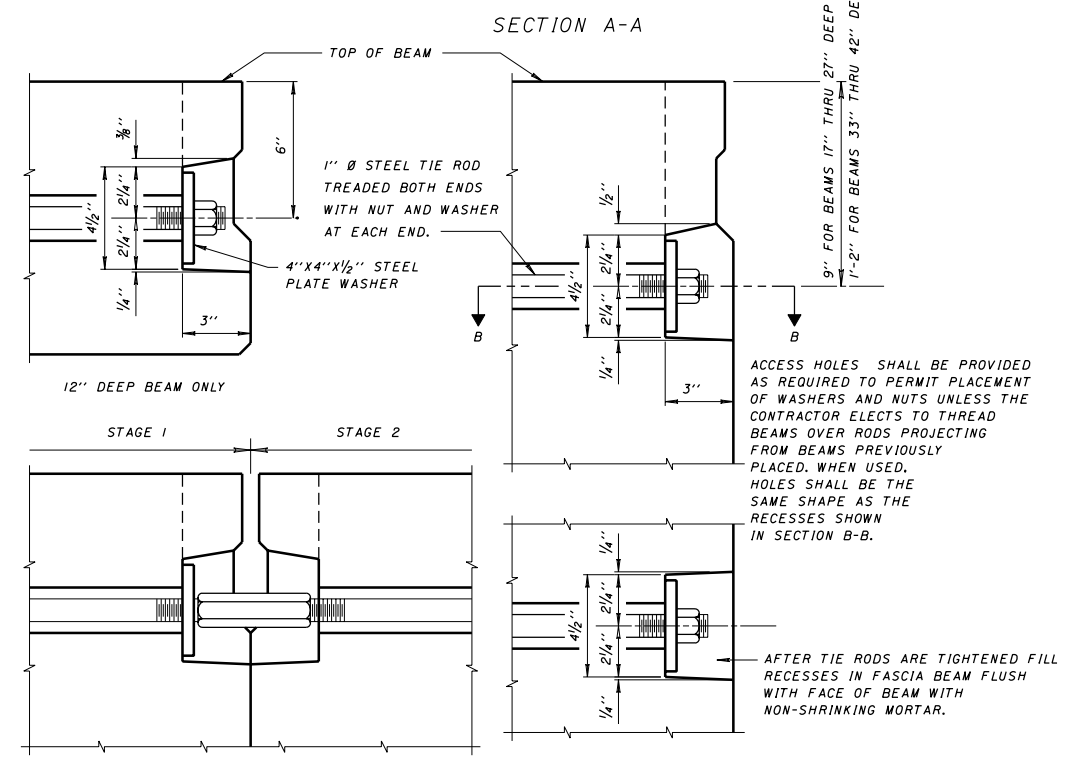


- θ=0° TO 5° FOR 3' WIDE BEAMS
 - θ OVER 5° TO 18° FOR 3' WIDE BEAMS
 - θ OVER 18° TO 30° FOR 3' WIDE BEAMS
 - θ=0° TO 4° FOR 4' WIDE BEAMS
 - θ OVER 4° TO 14° FOR 4' WIDE BEAMS
 - θ OVER 14° TO 26° FOR 4' WIDE BEAMS
 - θ OVER 26° TO 30° FOR 4' WIDE BEAMS
- AS AN OPTION THE FABRICATOR MAY MAKE PROVISION FOR GREATER INTERCHANGEABILITY OF INTERIOR BEAMS BY FURNISHING DOUBLE TIE ROD HOLES IN THE DIAPHRAGMS AND PERMITTING ONE TIE ROD TO TIE TWO BEAMS TOGETHER.



SLEEVE NUT 3" OR 5" LONG, WITH RIGHT HAND THREADS. (MADE FROM HEX. OR SQUARE STOCK, 1/2" MIN. ACROSS FLATS)

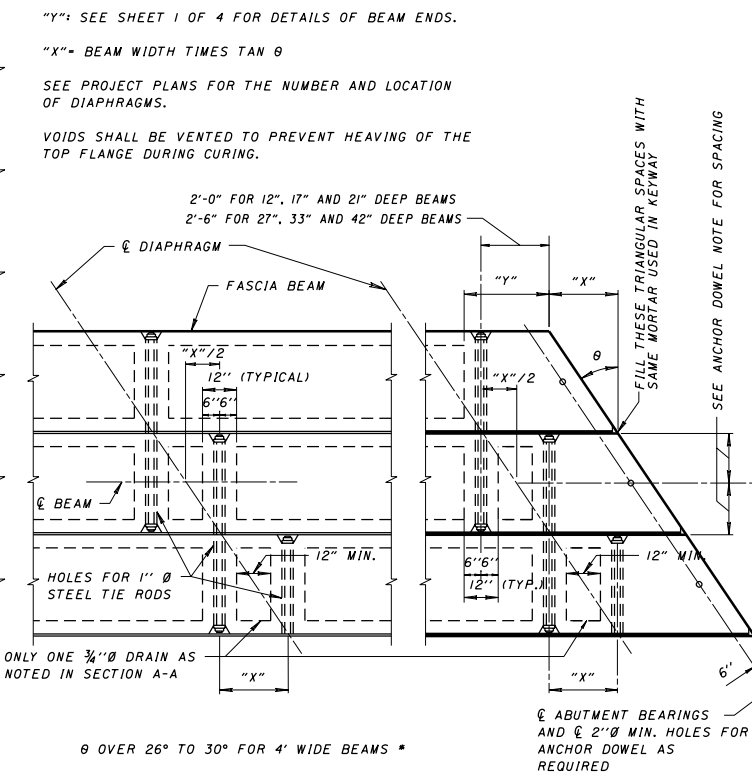
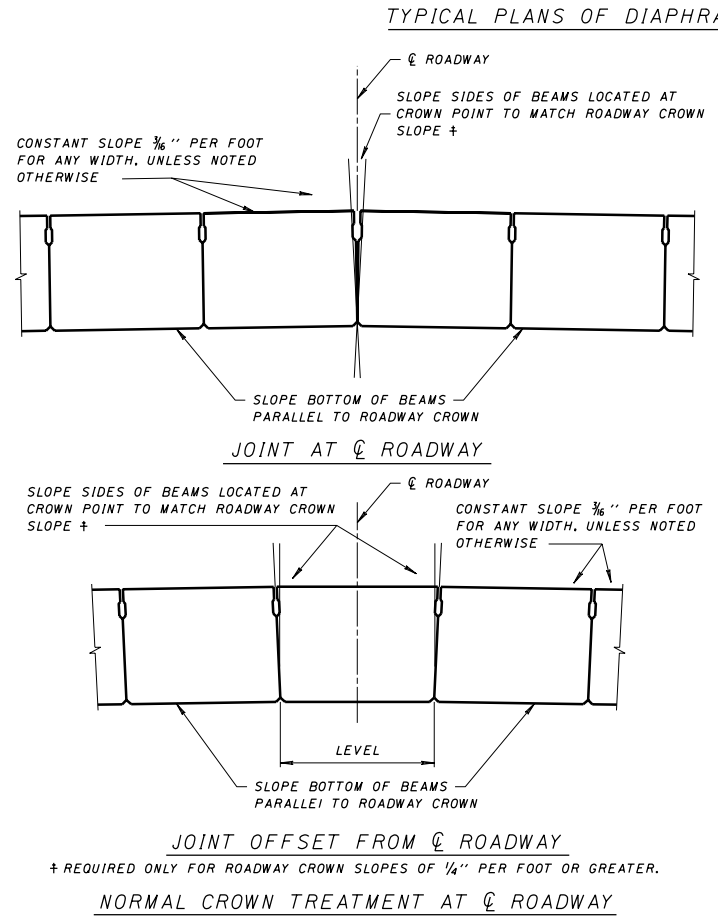
FOR STAGE CONSTRUCTION

END DETAILS OF TRANSVERSE TIE ROD ANCHORAGE

SECTION B-B (ALL BEAMS)

Holes in beams for transverse tie rods shall be not less than 2"Ø and not more than 3"Ø.

Dimensions of recesses in fascia beams and shear keys and vertical location of transverse tie rods may vary from the dimensions shown hereon, subject to approval by the Director.



DESIGN AGENCY	OFFICE OF STRUCTURAL ENGINEERING
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	DATE 03-04-94
DESIGNED BY	ENGINEER OF BRIDGES
CHECKED BY	PSBD-1-93
DESIGNED	REF
REVISIONS	07-19-02 07-21-06 04-20-07
STANDARD	PRESTRESSED CONCRETE BOX BEAM BRIDGE DETAILS
2	4