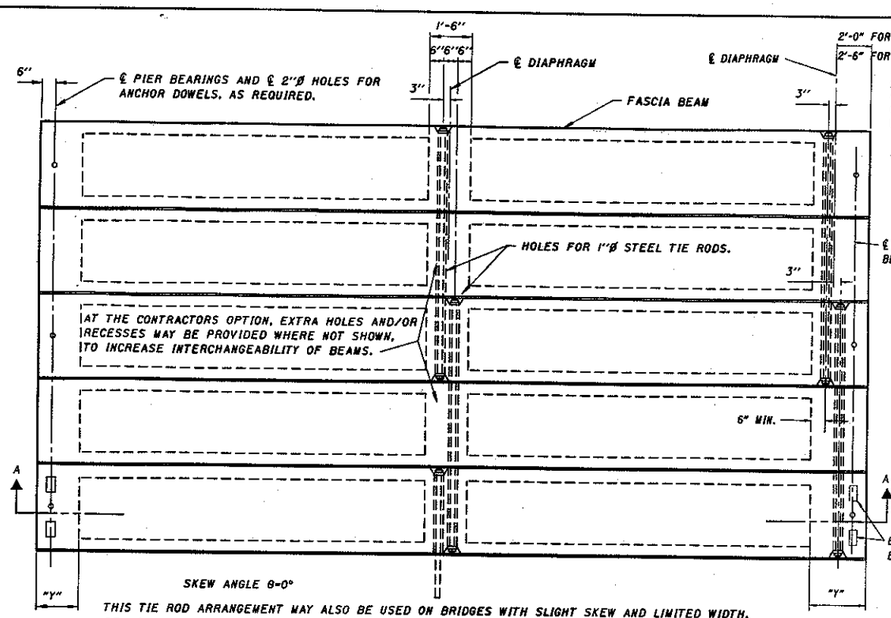
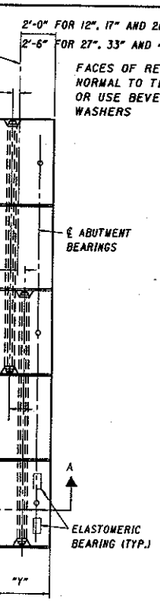
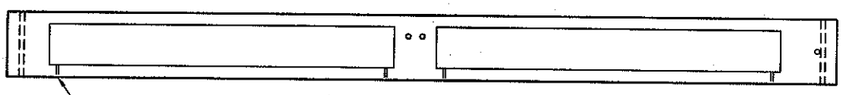
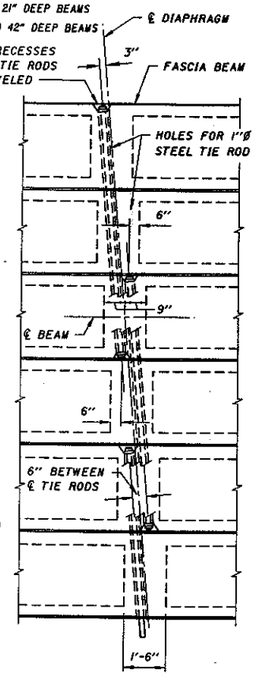


THIS TIE ROD ARRANGEMENT MAY ALSO BE USED ON BRIDGES WITH SLIGHT SKEW AND LIMITED WIDTH. BEAMS WILL NOT BE IDENTICAL IN THIS CASE.



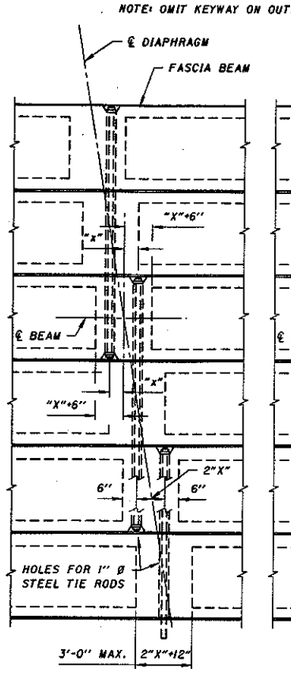


SECTION A-A

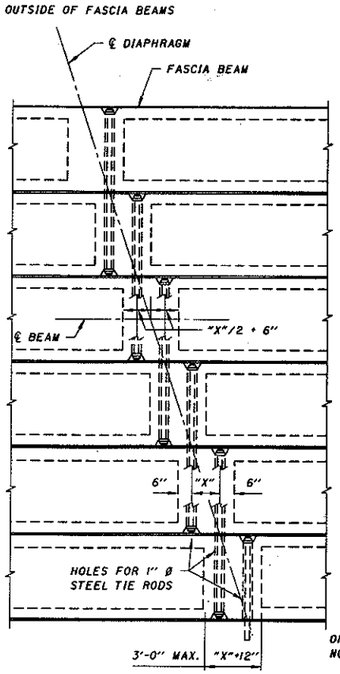


θ=0° TO 5° FOR 3' WIDE BEAMS *
θ=0° TO 4° FOR 4' WIDE BEAMS *

NOTE: OMIT KEYWAY ON OUTSIDE OF FASCIA BEAMS



θ OVER 5° TO 18° FOR 3' WIDE BEAMS *
θ OVER 4° TO 14° FOR 4' WIDE BEAMS *



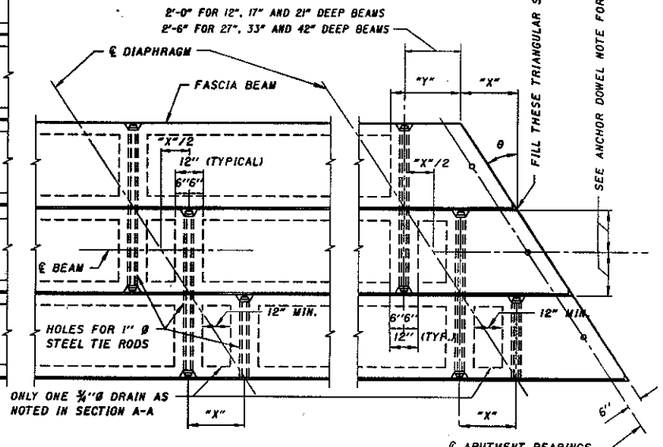
θ OVER 18° TO 33° FOR 3' WIDE BEAMS *
θ OVER 14° TO 26° FOR 4' WIDE BEAMS *

"Y": SEE SHEET 1 OF 4 FOR DETAILS OF BEAM ENDS.

"X"= BEAM WIDTH TIMES TAN θ

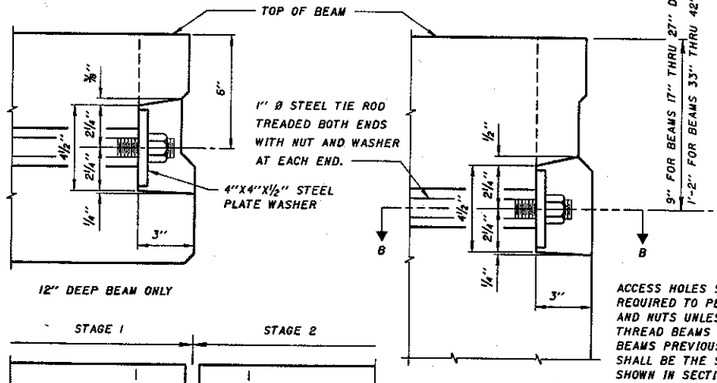
SEE PROJECT PLANS FOR THE NUMBER AND LOCATION OF DIAPHRAGMS.

VOIDS SHALL BE VENTED TO PREVENT HEAVING OF THE TOP FLANGE DURING CURING.

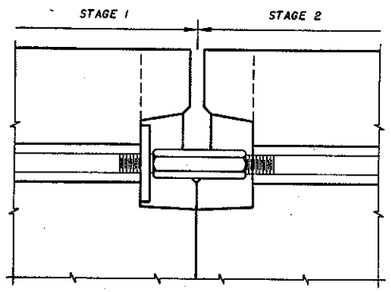


θ OVER 33° FOR 3' WIDE BEAMS *
θ OVER 26° FOR 4' WIDE BEAMS *

* 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.

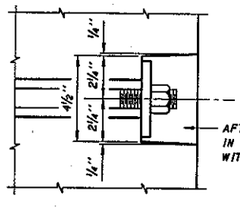


ACCESS HOLES SHALL BE PROVIDED AS REQUIRED TO PERMIT PLACEMENT OF WASHERS AND NUTS UNLESS THE CONTRACTOR ELECTS TO THREAD BEAMS OVER RODS PROJECTING FROM BEAMS PREVIOUSLY PLACED. WHEN USED, HOLES SHALL BE THE SAME SHAPE AS THE RECESSES SHOWN IN SECTION B-B.



SLEEVE NUT 3" OR 5" LONG, WITH RIGHT HAND THREADS. (MADE FROM HEX. OR SQUARE STOCK, 1½" MIN. ACROSS FLATS)

FOR STAGE CONSTRUCTION

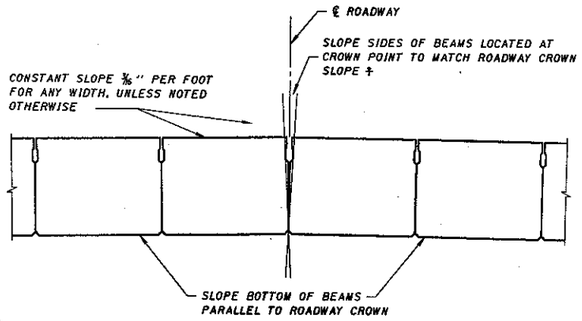


SECTION B-B (ALL BEAMS)

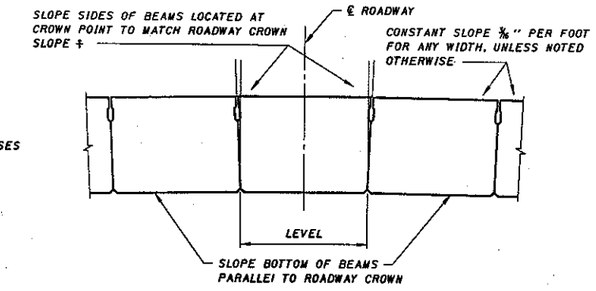
AFTER TIE RODS ARE TIGHTENED FILL RECESSES IN FASCIA BEAM FLUSH WITH FACE OF BEAM WITH NON-SHRINKING MORTAR.

END DETAILS OF TRANSVERSE TIE ROD ANCHORAGE

TYPICAL PLANS OF DIAPHRAGMS AND TRANSVERSE TIE RODS



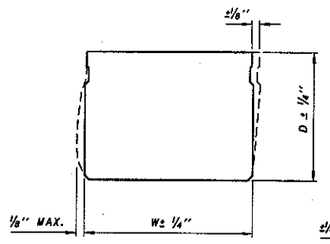
JOINT AT ℄ ROADWAY



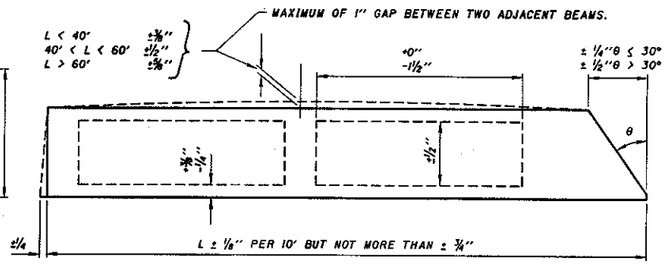
JOINT OFFSET FROM ℄ ROADWAY

‡ REQUIRED ONLY FOR ROADWAY CROWN SLOPES OF 1/4" PER FOOT OR GREATER.

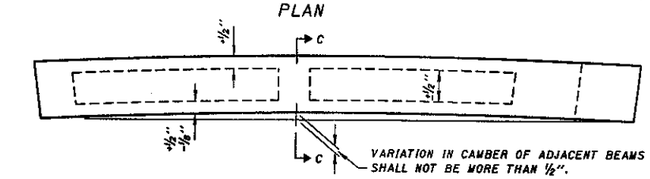
NORMAL CROWN TREATMENT AT ℄ ROADWAY



SECTION C-C



PLAN



DIMENSIONAL VARIATION IN EXCESS OF THE TOLERANCES SHOWN MAY BE CAUSE FOR REJECTION OF THE MEMBER. GENERALLY THE DIMENSIONS SHOULD BE WELL WITHIN THE TOLERANCE LIMIT.

ELEVATION

BEAM DIMENSIONAL TOLERANCES

ADDITIONAL TOLERANCES
POSITION OF HOLES FOR ANCHOR DOWELS AND TIE RODS ±½"
POSITION OF GUARDRAIL ANCHORS ±½"
POSITIONS OF LIFTING INSERTS ±6"
CENTER OF GRAVITY OF STRAND GROUP ±¼"
CENTER OF GRAVITY OF DRAPED STRAND GROUP AT END OF BEAM ±½"
SPACING OF STIRRUP BARS ±1"
LONGITUDINAL SCUPPER LOCATION ±6"

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.

REVISIONS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

STANDARD

PRESTRESSED CONCRETE BOX BEAM BRIDGE DETAILS

APPROVED: B. D. Shuttleworth
DATE: 7-4-96
ENGINEER OF BRIDGES

DRAWING NO. PSBD-1-93

PREPARED	DRAWN	CHECKED	REVIEWED	SHEET NO. 2 OF 4 SHEETS
MRG	REF	SEM	LMW	