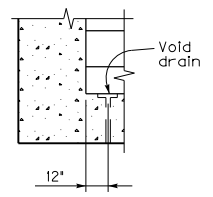


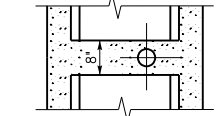
NOTE: Void omitted on 12" beams.

**TYPICAL STRAIGHT END**



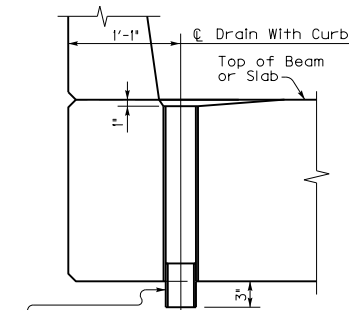
**VOID DRAIN DETAIL**

Locate two drains at each end of each void. Provide 1"Ø drains of a type approved by the Division of Materials.



**SECTION THRU BEAM**

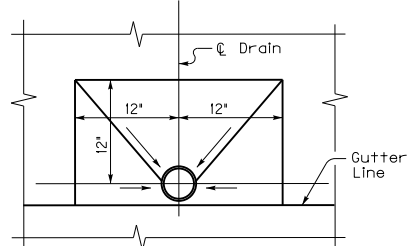
Diaphragms may be omitted if void is cut to allow drain to be encased with a minimum 2" of concrete.



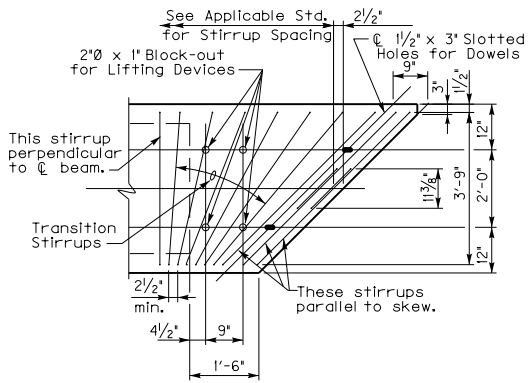
**SECTION THRU DRAIN EXTERIOR BOX BEAM**  
(Showing coupling in barrier)

NPS Designation 4 Standard coupling and nipple in accordance with ASTM A53. Nipple to be installed in field.

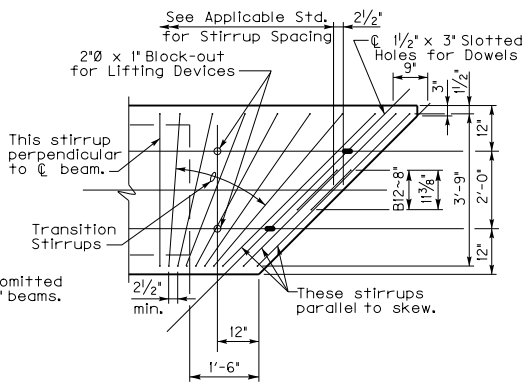
Provide drains on both sides of bridge with normal crown and on low side only for super-elevated bridges. Space drains at maximum 12'-6" on centers with a minimum of one placed each gutter line per span. Omit drains when span crosses over a highway or railroad. Include the cost of pipe and fittings in the price of beam.



**TOP VIEW OF DRAIN DRAIN DETAILS**  
(For Spans With Curbs)

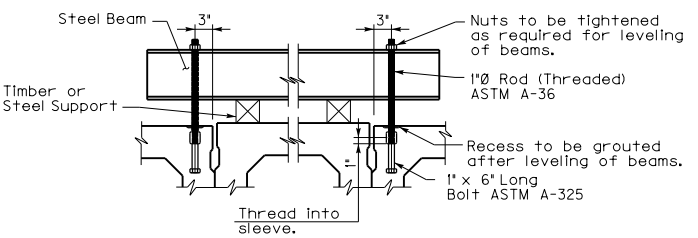
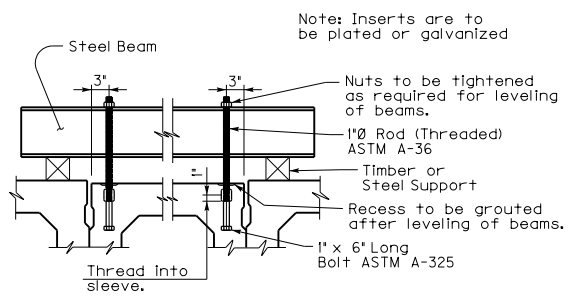


**TYPICAL SKEWED END FOR BEAMS OVER 50 FEET**  
(Right Skew Shown, Left Opposite Hand)



NOTE: Void omitted on 12" beams.

**TYPICAL SKEWED END FOR BEAMS 50 FEET OR LESS**  
(Right Skew Shown, Left Opposite Hand)

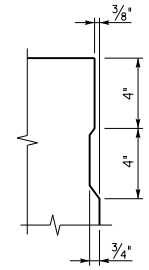


**LEVELING DEVICE DETAILS**

Locate inserts at the center of beams up to 50 ft. and at diaphragm locations of beams over 50 ft. Include the cost of materials and labor involved in leveling beams in the price for beams. Submit alternate leveling devices to the Division of Bridge Design for approval.

Note: Inserts are to be plated or galvanized

NOTE: Omit shear key on exterior face of exterior beam.



**SHEAR KEY DETAIL**

<b>KENTUCKY DEPARTMENT OF HIGHWAYS</b>		
<b>BOX BEAM MISCELLANEOUS DETAILS</b>		
STANDARD DRAWING NO. BDP-003-03		
SUBMITTED	<i>W. Frank</i> DIRECTOR DIVISION OF BRIDGE DESIGN	11-21-07 DATE
APPROVED	<i>Matthew M. [Signature]</i> STATE HIGHWAY ENGINEER	11-21-07 DATE