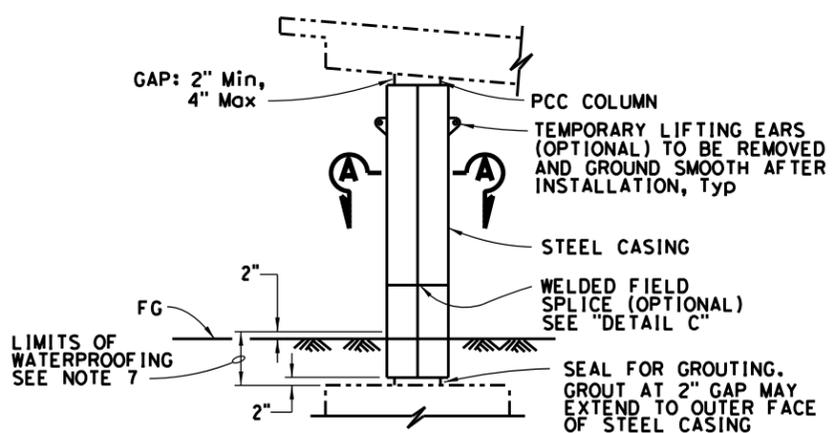


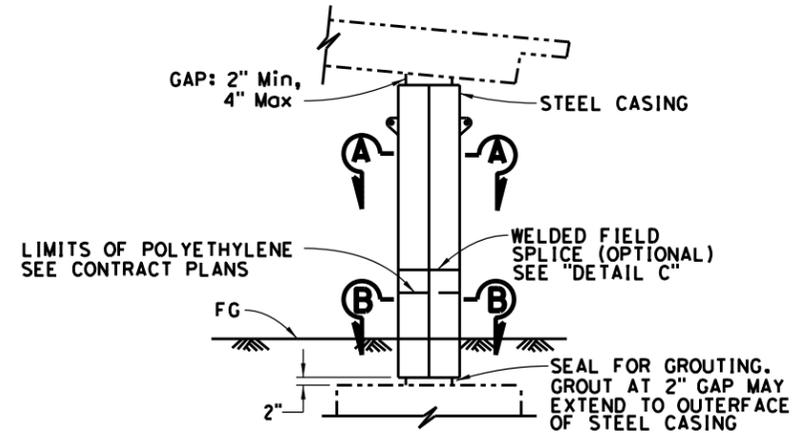
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
X	X	X	X	X	X

REGISTERED CIVIL ENGINEER	DATE	X
PLANS APPROVAL DATE		

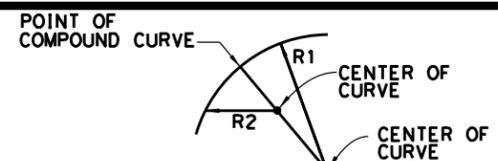
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



TYPE F COLUMN

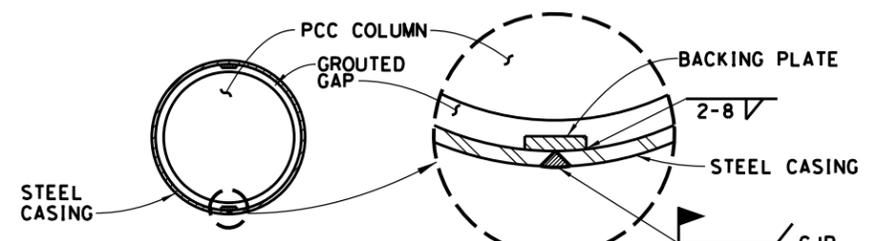


TYPE P/F COLUMN



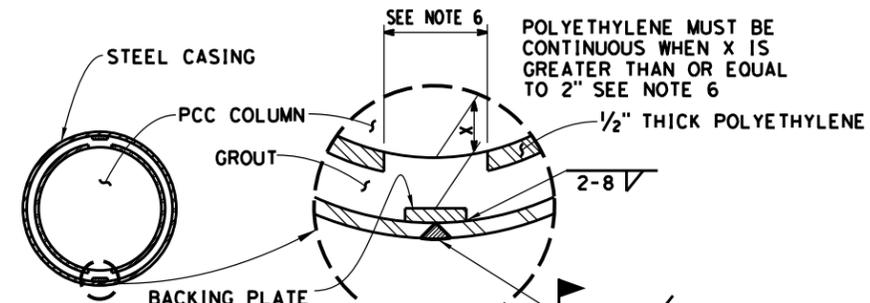
ELLIPTICAL CASING DETAIL TYPE F AND P/F COLUMN

RADII R1 AND R2 TO BE DETERMINED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE ENGINEER



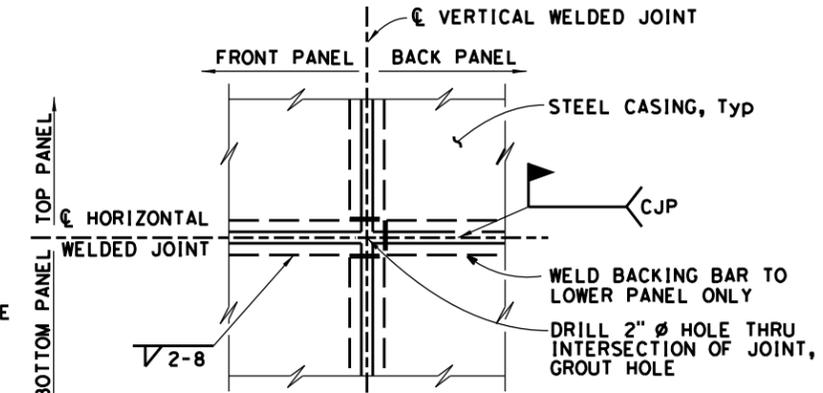
SECTION A-A

MINIMUM INSIDE DIAMETER OF STEEL CASING = 1 1/2" GREATER THAN NOMINAL COLUMN DIAMETER FOR TYPE F AND 2 1/2" FOR TYPE P/F



SECTION B-B

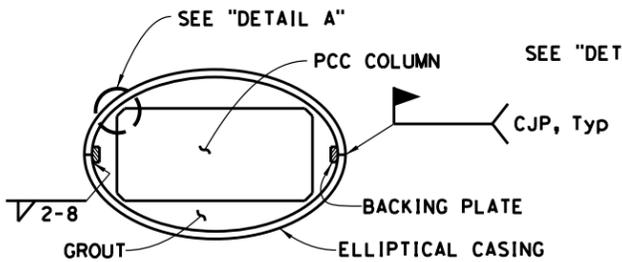
MINIMUM INSIDE DIAMETER OF STEEL CASING = 2 1/2" GREATER THAN NOMINAL COLUMN DIAMETER FOR TYPE P/F



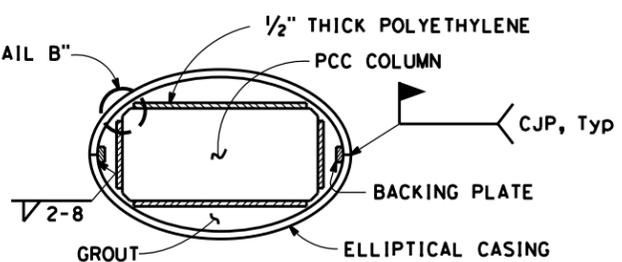
WELD FIELD SPLICE (OPTIONAL) DETAIL C

LEGEND:
 - - - - - Indicates Existing structure
 _____ Indicates new structure

ROUND COLUMN



SECTION A-A



SECTION B-B

RECTANGULAR COLUMN

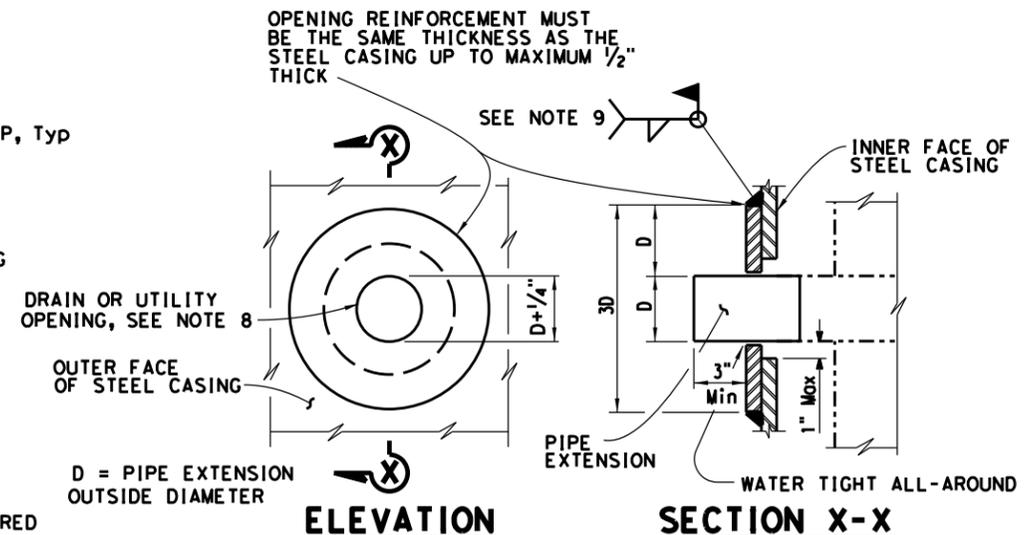


DETAIL A



DETAIL B

NOTE: THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



ELEVATION

SECTION X-X

CASING OPENING

NOTE: OPENING REINFORCEMENT REQUIRED FOR DRAIN OR UTILITY OPENINGS LARGER THAN 4"

- NOTES:**
- For varying thickness, steel casing inside surface to remain flush. Minimum clearance from PCC column to casing shall be maintained.
 - Appropriate injection nozzles to be provided on casing, but removed and ground flush following completion of grouting operation.
 - All voids between steel casing and polyethylene (TYPE P/F), and steel casing and PCC column (TYPE F) to be filled with grout.
 - Location and number of vertical and horizontal welds to be determined by the Contractor and subject to the approval of the Engineer. The location of casing welds are for illustration. No skip welds allowed.
 - Circular steel casing to be 1/4" thick minimum for casings with a 4'-4" diameter or less; all other steel casings to be 3/8" thick unless noted differently on contract plans. Backing plates to be the same thickness as casing up to maximum 3/8" thick.
 - Contractor must remove 12" polyethylene strip behind backing plate if backing plate is closer than 2" from face of column.
 - Waterproof limits for steel casings. Typical for TYPE "F" and TYPE "P/F".
 - For pipe extensions, opening must be no more than 1/4" greater than the pipe extension diameter. For other openings, the opening diameter to be determined by the Engineer.
 - Minimum size of fillet weld must not be less than thickness of opening reinforcement.

NO SCALE

STANDARD DRAWING	
FILE NO. x87-010	APPROVAL DATE October 2015

STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES
DEPARTMENT OF TRANSPORTATION	

BRIDGE NO. X	POST MILE X	COLUMN CASING - STEEL
CONTRACT NO.: X		