



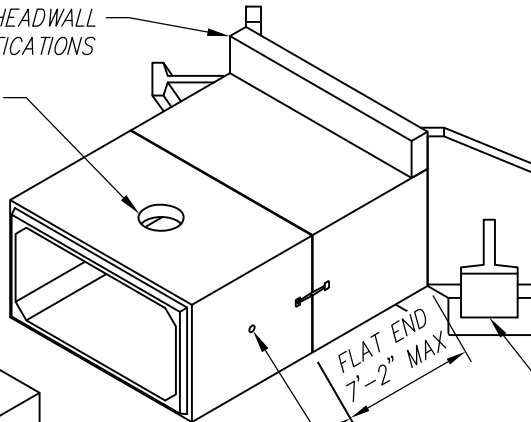
Concrete Systems Inc.
9 Commercial St., Hudson, NH, 03051
Phone 603-889-4163
Fax 603-889-2417

PRECAST BOX CULVERT WITH ANCHOR TYPE WINGWALLS - SINGLE CELL

OPTIONAL HEADWALL
PER JOB SPECIFICATIONS

MANHOLE ACCESS OPENING AS
REQUIRED PER JOB SPECIFICATIONS
CSI CAN PROVIDE 48"Ø OR 30"Ø RISER
AS WELL AS 24"Ø OR 30"Ø GRADE RINGS

PIPE PENETRATION
PER JOB CONDITIONS

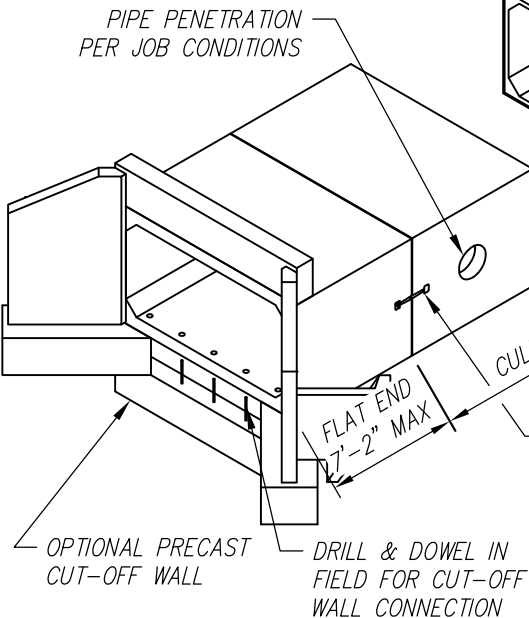


GENERAL NOTES:

1. REFERENCE STANDARDS:
AASHTO "LRFD BRIDGE DESIGN SPECIFICATIONS"
ASTM C1577
2. DESIGN PARAMETERS:
LIVE LOAD: AS SPECIFIED
EARTH COVER: PER JOB CONDITIONS
CONCRETE: DESIGN STRENGTH $f'_c = 5000$ PSI
UNIT WEIGHT = 150 PCF
REINFORCING: ASTM A615 (REBAR) GR 60
ASTM A1064 (WWF) $F_y = 65$ KSI
SOIL UNIT WEIGHT = 120 PCF
MINIMUM LATERAL PRESSURE = 30 PCF
MAXIMUM LATERAL PRESSURE = 60 PCF
COVER TO REINFORCING: 1 1/2" U.N.O.
3. EXTERIOR DAMPROOFING CAN BE SUPPLIED BY CSI.

ANCHOR TYPE WINGWALL WITH
PRECAST OR C.I.P. FOOTING

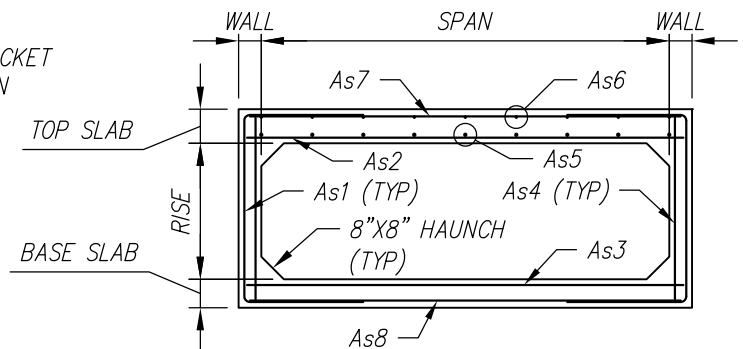
WEEP HOLES AS REQUIRED



OPTIONAL PRECAST
CUT-OFF WALL

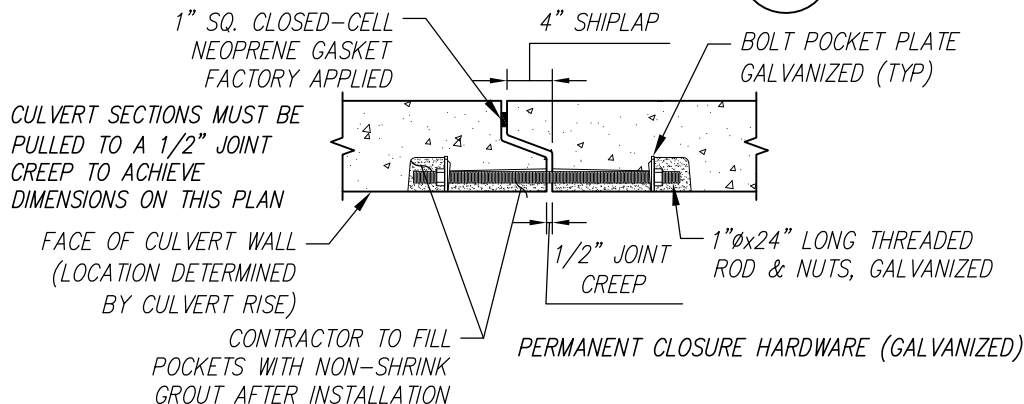
DRILL & DOWEL IN
FIELD FOR CUT-OFF
WALL CONNECTION

RECESSED BOLT POCKET
PLATED CONNECTION
AT EACH JOINT



REINFORCING SECTION

Scale: N.T.S.



CULVERT SECTIONS MUST BE
PULLED TO A 1/2" JOINT
CREEP TO ACHIEVE
DIMENSIONS ON THIS PLAN

FACE OF CULVERT WALL
(LOCATION DETERMINED
BY CULVERT RISE)

CONTRACTOR TO FILL
POCKETS WITH NON-SHRINK
GROUT AFTER INSTALLATION

PERMANENT CLOSURE HARDWARE (GALVANIZED)



CONNECTION HARDWARE DETAIL

Scale: N.T.S.