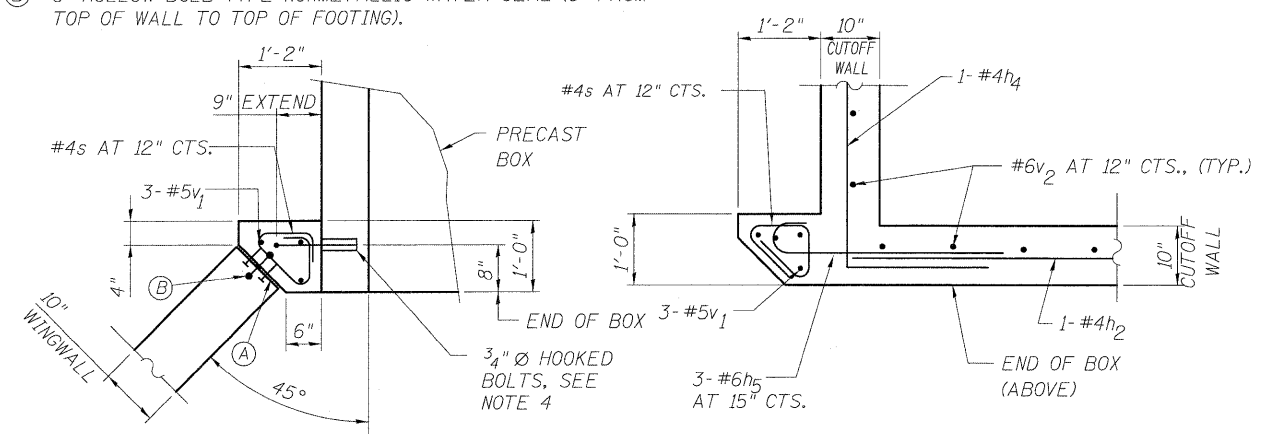


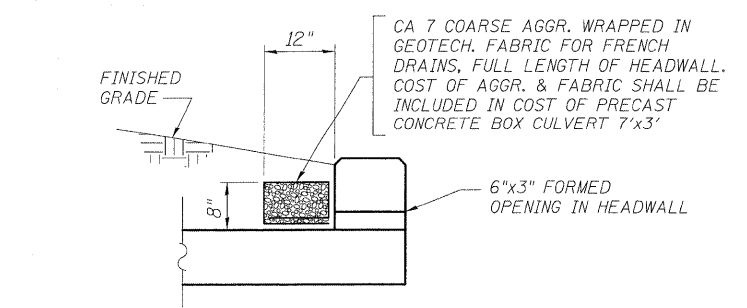
- (A) 1/2" PREMOULDED JOINT FILLER, INSTALL w/ 2 COLUMNS OF CONC. NAILS (FLAT HD. C.S.), 1" LONG, AT 12" CTS., VERTICAL.
- (B) 6" HOLLOW BULB TYPE NONMETALLIC WATER SEAL (6" FROM TOP OF WALL TO TOP OF FOOTING).

HEADWALL ELEVATION



SECTION A-A

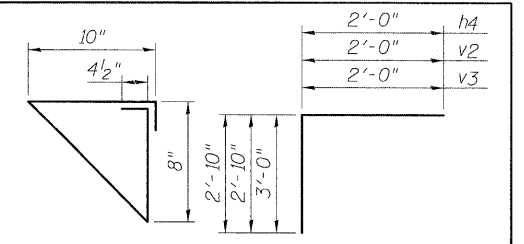
SECTION B-B



DRAINAGE DETAIL

NOTES

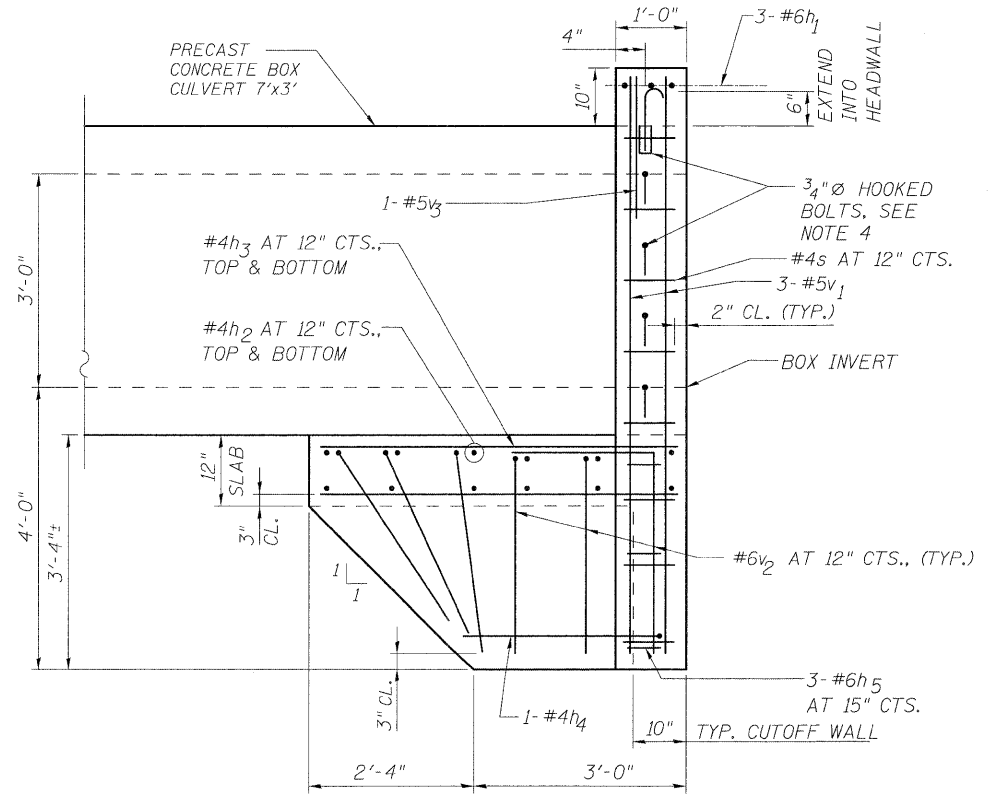
1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS BEFORE ORDERING MATERIALS.
 2. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS, EXCEPT AS NOTED.
 3. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
 4. TO CONNECT CAST-IN-PLACE COLLAR TO PRECAST BOX, PROVIDE 3/4" HOOKED BOLTS WITH EMBEDDED INSERTS AT 12" MAXIMUM CENTERS. HOOKED BOLTS SHALL EXTEND 6" INTO HEADWALL AND 9" INTO SIDES OF COLLAR. COST SHALL BE INCLUDED IN THE PRECAST CONCRETE BOX CULVERT 7'x3' ITEM.
 5. PROVIDE PROTECTIVE COAT ON TOP HORIZONTAL SURFACES AND TOP 6" ON INSIDE FACES OF HEADWALLS.
- PRECAST CONCRETE BOX CULVERT 7'x3' (TYP.), DESIGN AND FINAL DIMENSIONS BY CONTRACTOR, CONFORMING TO AASHTO M273



BAR s
BARS h4, v2 & v3
BAR h5
BAR n(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	52	#4	5'-8"	—
h ₁	6	#6	18'-11"	—
h ₂	26	#4	16'-6"	—
h ₃	68	#4	5'-0"	—
h ₄	4	#4	4'-10"	┘
h ₅	12	#6	3'-11"	┘
n(E)	28	#4	3'-5"	┘
s	36	#4	3'-4"	┘
t	48	#4	4'-2"	—
v	14	#4	11'-8"	—
v ₁	12	#5	8'-1"	—
v ₂	50	#6	4'-10"	┘
v ₃	4	#5	5'-0"	┘
v ₄	4	#4	11'-8"	—
w	32	#5	5'-8"	—
Item	Unit	Quantity		
CONCRETE BOX CULVERTS	CU YD	25.7		
REINFORCEMENT BARS	POUND	1975		
REINFORCEMENT BARS, EPOXY COATED	POUND	106		
STRUCTURE EXCAVATION	CU YD	140		
EARTH EXCAVATION	CU YD	116		
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	115		
COARSE AGGREGATE BACKFILL (SPECIAL)	CU YD	310		
FILTER FABRIC	SQ YD	48		
STONE RIPRAP, CLASS A4	SQ YD	26		
PRECAST CONCRETE BOX CULVERT 7'x3'	FOOT	92		
PROTECTIVE COAT	SQ YD	11		



SIDE ELEVATION