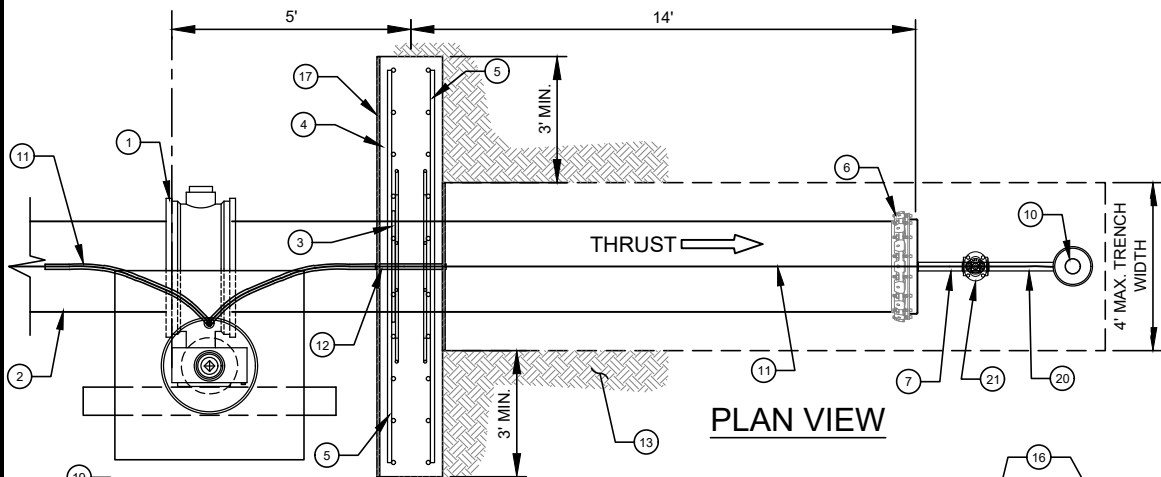
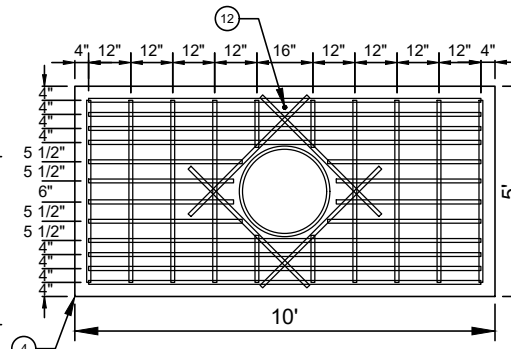
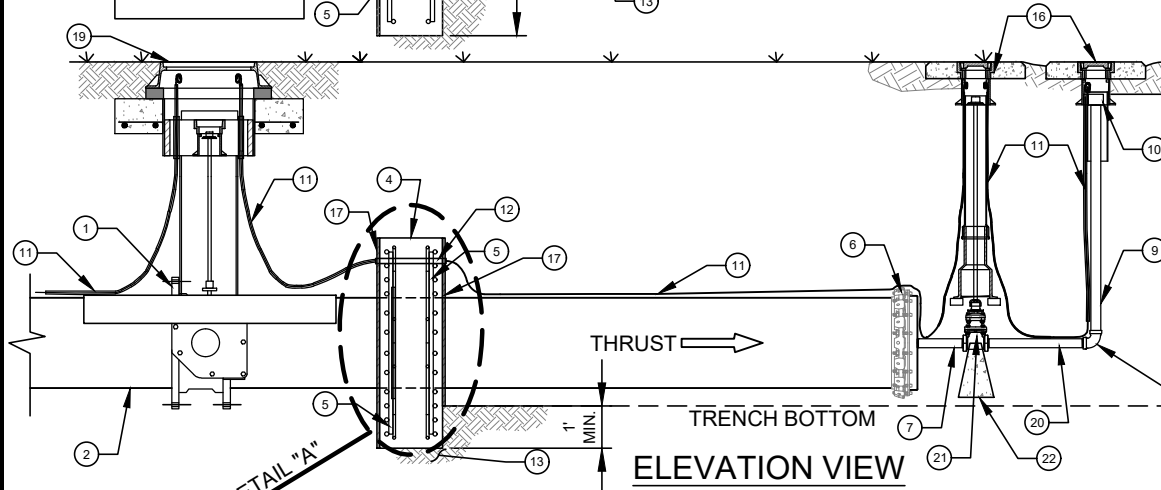




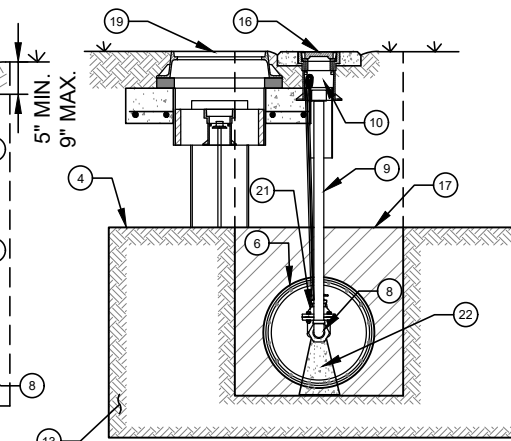
PLAN VIEW



REBAR DETAIL



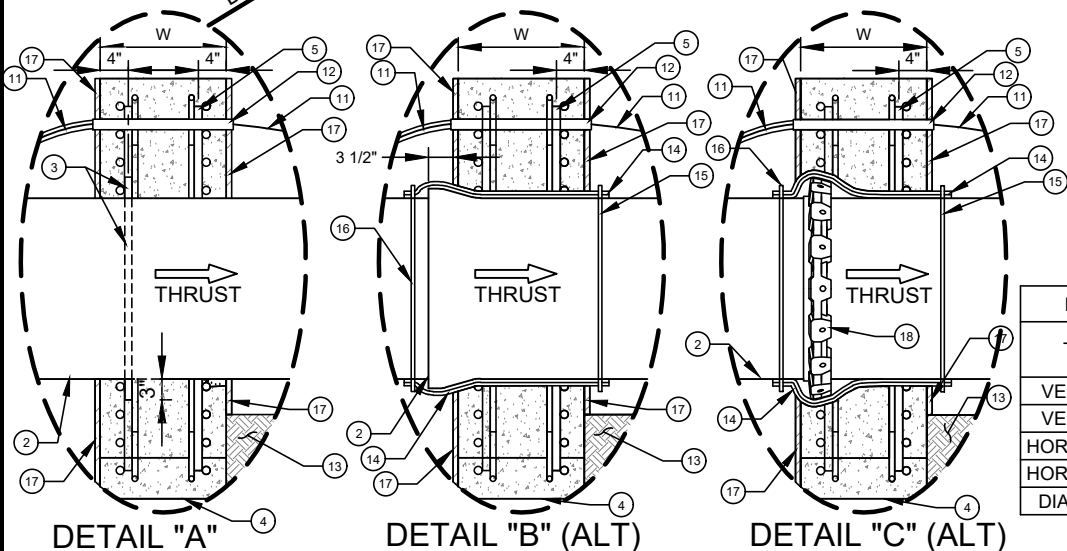
ELEVATION VIEW



END VIEW

- NO. DESCRIPTION:
1. END OF LINE VALVE - GATE VALVE (MJ X MJ).
 2. DIP - (PE X PE) - REMOVE BELL - LENGTH = 17" ~ 19'.
 3. 1" THICK X 3" WIDE STEEL THRUST RING - FACTORY WELDED TO PIPE.
 4. CONCRETE WALL BLOCK (F'c = 3,600 PSI MIN.) 10' X 5' X WIDTH (W).
 5. REBARS - GRADE 60 PER ASTM A615 - SEE REBAR SCHEDULES, CUT WHEN REQUIRED.
 6. MJ CAP - WITH WEDGE ACTION RESTRAINT GLAND, TAP 2" THREADED OUTLET (FNPT).
 7. 2" RED BRASS (OR 304 S.S.) NIPPLE SCH 40 (MNPT X MNPT) - LENGTH = 12".
 8. 2" RED BRASS (OR 304 S.S.) 90° BEND (FNPT X FNPT).
 9. 2" RED BRASS (OR 304 S.S.) NIPPLE SCH 40 (MNPT X MNPT) - LENGTH AS REQUIRED.
 10. 2" SCH 40 RED BRASS OR 2" DUCTILE IRON (FUSION BONDED EPOXY COATED) THREADED COUPLING (FNPT).
 11. AWG #12 GAUGE SOLID COPPER TRACER WIRE - WITH BLUE INSULATION (30 MILS HDPE) TERMINATE WITH 24" EXCESS WIRE (COILED) IN VALVE BOX (TYP.).
 12. 1" ALUMINUM ELECTRICAL CONDUIT - LENGTH AS REQUIRED.
 13. UNDISTURBED SOIL.
 14. HIGH DENSITY CROSS LAMINATED POLYETHYLENE FILM TUBE (HDCLPE) AWWA C105 - 4 MILS EACH X 2 LAYER - 8 MILS TOTAL.
 15. HDPE ADHESIVE TAPE OR HDPE ZIP LOCK TIES.
 16. STANDARD VALVE BOX ASSEMBLY - SEE DETAIL.
 17. PLYWOOD FORM.
 18. WEDGE ACTION THRUST RESTRAINT GLAND.
 19. LARGE VALVE BOX FRAME AND COVER ASSEMBLY, PER STD DETAIL.
 20. 2" RED BRASS OR 304 S.S. NIPPLE SCH 40 (MNPT X MNPT) - LENGTH = 36" (MIN.)
 21. 2" GATE VALVE (FNPT X FNPT).
 22. CAST-IN-PLACE CONCRETE SUPPORT PAD.

- NOTES:
- A. WHEN DIRECTED BY THE ENGINEER, THE CONCRETE WALL BLOCK SIZE MAY BE ADJUSTED, BASED ON ACTUAL SOIL CLASSIFICATION AND PIPE DIAMETER.
 - B. FULLY RESTRAINED JOINT PIPE MAY BE USED IN LIEU OF THIS DETAIL AS CALCULATED BY ENGINEER. LENGTH OF RESTRAINT SHALL BE BASED UPON ACTUAL SOIL CONDITIONS. LENGTH OF RESTRAINT SHALL BE CALLED OUT ON PLANS - SEE RESTRAINED JOINT PIPE DETAILS.
 - C. ALTERNATE DETAIL "B" (USING A REVERSED BELL) MAY BE USED IN LIEU OF DETAIL "A".
 - D. ALTERNATE DETAIL "C" (USING WEDGE ACTION RESTRAINT GLAND) MAY BE USED IN LIEU OF DETAIL "A".
 - E. 2" PIPE AND FITTINGS TO BE ALL BRASS OR ALL STAINLESS STEEL, DO NOT MIX MATERIAL.



DETAIL "A"

DETAIL "B" (ALT)

DETAIL "C" (ALT)

APPROX. DEAD END THRUST (DIPRA) AT 200 PSI WATER PRESSURE		UNDISTURBED SOIL BEARING AREA	APPROX. SOIL PRESSURE	W (WIDTH) (MINIMUM)	CONCRETE VOLUME (APPROXIMATE)	
PIPE DIAMETER (INCHES)	TOTAL THRUST (POUNDS)	SQUARE FEET	BEARING LOAD (LB/SQ FT)	INCHES	FT ³	CY
16	47,558	30	1,585	16	32	1.19
18	59,730	30	1,991	16	32	1.19
20	73,288	30	2,443	18	36	1.33
24	104,558	30	3,485	18	36	1.33
30	160,850	30	5,362	20	40	1.48

REBAR SCHEDULE PER MAT		
TYPE	LENGTH (INCHES)	NUMBER REQUIRED
VERTICAL	52	6
VERTICAL	20	4
HORIZONTAL	112	10
HORIZONTAL	48	4
DIAGONAL	48	4

REBAR DIAMETER SCHEDULE				
PIPE DIAMETER	BAR SIZE	TOTAL REBAR LENGTH (FT)	TOTAL REBAR WEIGHT (LB) ONE MAT	TOTAL REBAR WEIGHT (LB) TWO MATS
16"	#5	158	165	330
18"	#5	158	165	330
20"	#5	158	165	330
24"	#5	158	165	330
30"	#7	158	323	646

