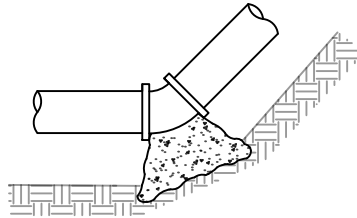
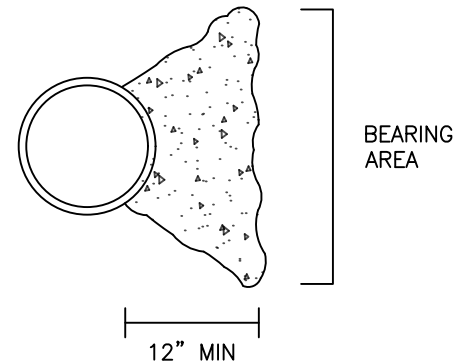


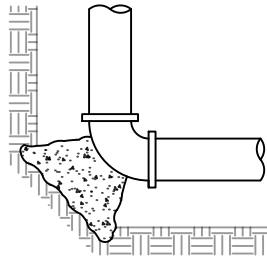
MINIMUM BEARING AREA (SQUARE FEET)					
FITTING SIZE	11.25° BEND	22.5° BEND	45° BEND	90° BEND	TEE, CROSS, OR DEAD END
	AREA	AREA	AREA	AREA	AREA
4"	1	1	1	2	1
6"	1	1	2	4	3
8"	1	2	4	7	5
10"	2	3	6	11	8
12"	2	4	8	16	11
14"	3	6	12	21	15
16"	4	8	15	28	20
18"	5	10	19	35	25
24"	9	17	34	62	44

THRUST CALCULATED USING $T=2PASIN(\Delta/2)$ FOR ANGLED FITTINGS AND $T=PA$ FOR TEES AND DEAD ENDS, WHERE: P= PIPE PRESSURE, A=PIPE AREA, AND Δ =ANGLE. BEARING AREA CALCULATED USING $BA=FS(T)/SB$, WHERE: FS=SAFETY FACTOR AND SB=SOIL BEARING STRENGTH

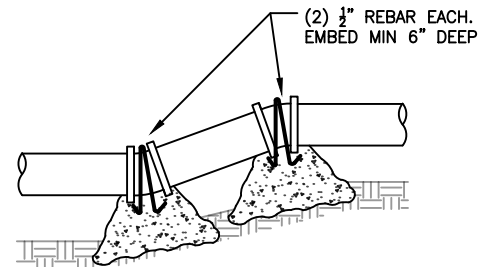
SECTION VIEW



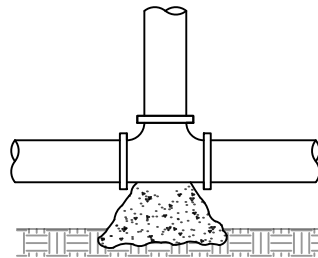
11.25° – 45° BEND



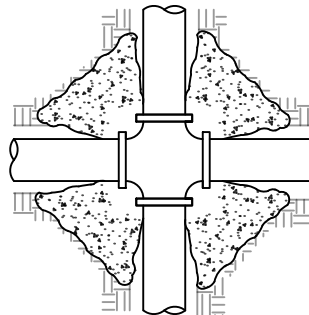
90° BEND



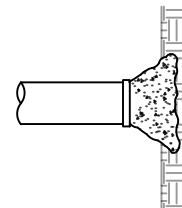
VERTICAL BEND



TEE



CROSS



DEAD END

NOTES:

1. THRUST BLOCKS ARE TO BE POURED AGAINST UNDISTURBED SOIL.
2. THRUST BLOCKS SHALL HAVE A MINIMUM DEPTH OF 12 INCHES.
3. THRUST BLOCKS ARE TO BE CONSTRUCTED OF CLASS B CONCRETE, MINIMUM 5 SACK MIX.
4. ALL FITTINGS MUST BE WRAPPED IN 8 MIL POLYETHYLENE WRAP BEFORE THE CONCRETE IS POURED.
5. THRUST BLOCKS ARE REQUIRED AT EVERY TEE, ELBOW, CROSS, OR DEAD END.
6. THRUST BLOCKS MUST BE KEYED INTO VERTICAL WALL OF THE TRENCH.
7. CONCRETE SHALL BE ALLOWED TO CURE FOR A MINIMUM OF 24 HOURS PRIOR TO BACKFILLING OF TRENCH.

FAIR OAKS WATER DISTRICT

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FAIR OAKS
WATER DISTRICT

THRUST BLOCK DETAILS

STANDARD DRAWING 1

APPROVED: B. CHETCUTI

DRAWN BY: D. LEE

DRAWING: STD-1

REVISED: JUNE 2026

SCALE: NONE

STANDARD SPECIFICATIONS