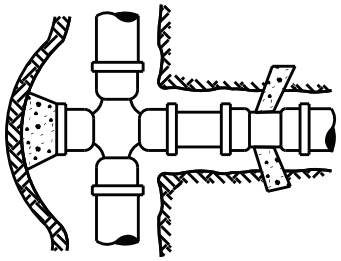
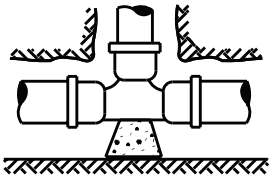
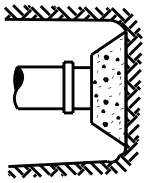
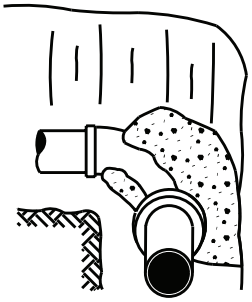
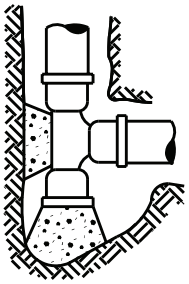


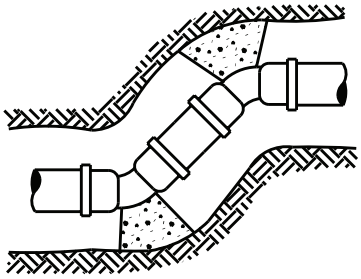


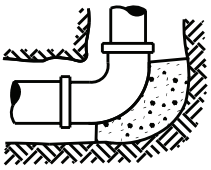


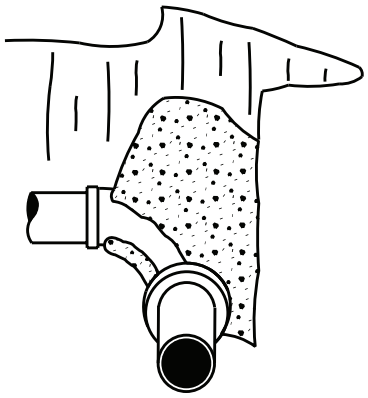


FOR SMALL PIPE









FOR LARGE PIPE

LOCATION OF HORIZONTAL THRUST BLOCKS

TABLE "A"					
THRUST BLOCK FACE AREA IN SQ. METRES AT FITTING FOR CL150 PIPE @ 1000kPa & SOIL BEARING CAPACITY OF 100 kPa					
PIPE SIZE	DEAD ENDS & TEES	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
100	0.12	0.17	0.10	0.10	0.10
150	0.25	0.35	0.19	0.10	0.10
200	0.43	0.60	0.33	0.17	0.10
250	0.70	0.99	0.54	0.27	0.14
300	1.00	1.40	0.75	0.39	0.19
350	1.35	1.90	1.03	0.52	0.26
400	1.75	2.47	1.34	0.68	0.34
450	2.24	3.15	1.72	0.87	0.44
500	2.77	3.90	2.12	1.07	0.54
600	4.00	5.64	3.07	1.55	0.78
750	6.26	8.83	4.81	2.44	1.22
900	9.03	12.70	7.58	3.51	1.76

TABLE "B"	
SOIL TYPE	SAFE BEARING LOAD - kPa
SOFT CLAY: LOOSE SAND	50
MED. SOFT CLAY: DENSE SAND	100
DENSE CLAY TILL & GRAVEL	150
HARD SHALE	500

NOTE: - CONCRETE THRUST BLOCKS ARE TO BE PLACED AT ALL TEES, BENDS, PLUGS, CAPS, PIPE DEFLECTIONS AND REDUCERS.

- CONCRETE THRUST BLOCKS SHALL EXTEND INTO UNDISTURBED SOIL. THRUST BLOCKS IN SOFT UNSTABLE SOILS WILL REQUIRE REMOVAL OF SOIL & REPLACEMENT WITH COMPACTABLE FILL OF SUFFICIENT STABILITY TO RESIST THRUST TO THE SATISFACTION OF THE ENGINEER.
- THRUST BLOCKS SHALL BE OF CONCRETE OBTAINING A COMPRESSIVE STRENGTH OF AT LEAST 30 MPa @ 28 DAYS. CEMENT TO BE TYPE 50 (SULPHATE RESISTANT).
- CONCRETE SHALL BE KEPT CLEAR OF BELLS AND SHALL NOT CONTACT THE PIPE. USE A MINIMUM OF 6 mil POLYETHYLENE BETWEEN CONCRETE AND ALL FITTING SURFACES.
- ALL THRUST BLOCKS SHALL HAVE A MINIMUM FACE OF 0.10 m2
- REDUCERS SHALL HAVE A TOTAL BEARING AREA EQUAL TO THAT OF AN 11 1/4° BEND BASED UPON THE LARGEST DIAMETER OF THE REDUCER.

REVISED	CITY OF Lethbridge INFRASTRUCTURE SERVICES	DRAWN P.R.A.
		CHECKED
		APPROVED
		SCALE N.T.S.
	HORIZONTAL THRUST BLOCKING	DATE 97/02/12
		DWG NO W-05