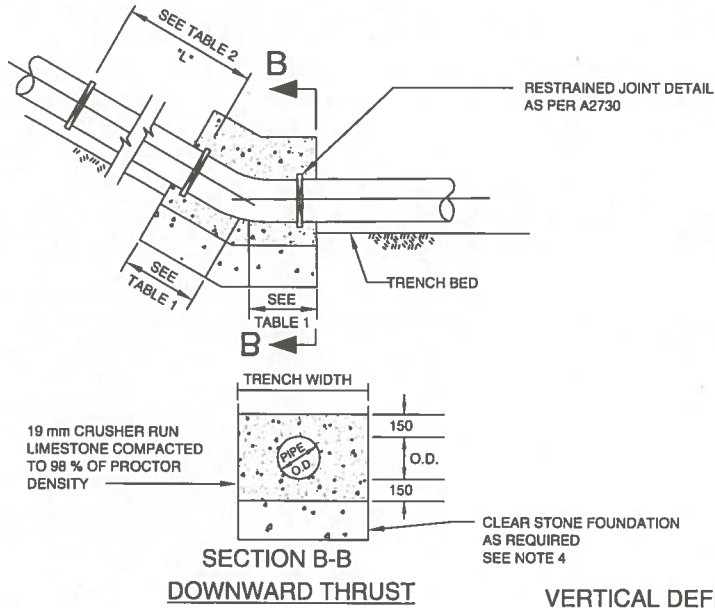
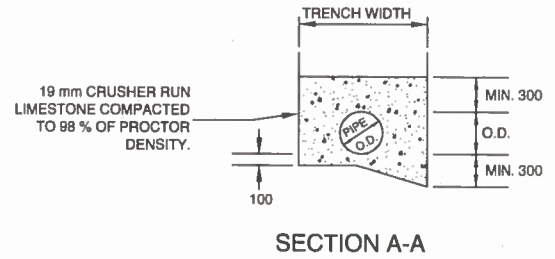
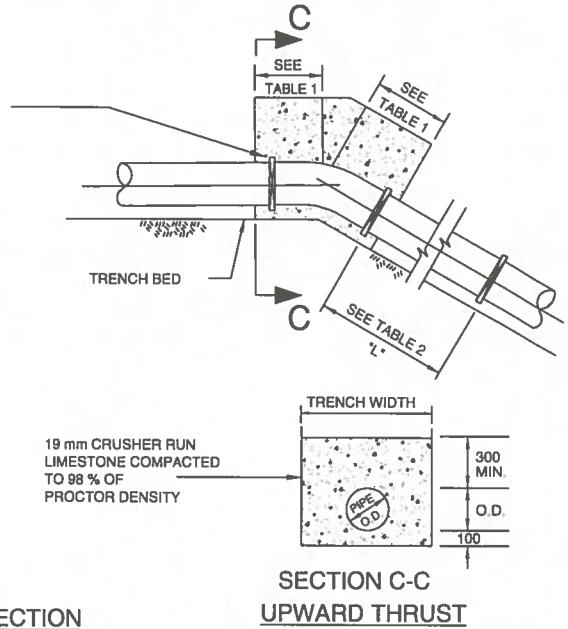


HORIZONTAL DEFLECTION



**SECTION B-B
DOWNWARD THRUST**

VERTICAL DEFLECTION



**SECTION C-C
UPWARD THRUST**

NOTES

1. ALL JOINTS ENCOUNTERED WITHIN THE SPECIFIED RESTRAINING LENGTH 'L' SHALL BE RESTRAINED ON EACH SIDE OF THE FITTING.
2. GRANULAR THRUST BLOCKS SHALL BE FULLY EXTENDED AND COMPACTED AGAINST TRENCH WALLS.
3. GRANULAR THRUST BLOCKS SHALL BE ENCLOSED WITH FILTER FABRIC IF GROUND WATER TABLE IS ABOVE THE TRENCH BED OR IF GROUND WATER IS SEEPING THROUGH TRENCH WALLS.
4. IF THE BEARING CAPACITY OF TRENCH BED RESISTING DOWNWARD THRUST IS LESS THAN 100KN/m², CLEAR STONE FOUNDATION SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.
5. WHEN FITTINGS ARE PARTIALLY OR FULLY EXPOSED UNDER PRESSURE, ALL JOINTS MUST BE RESTRAINED.
6. ALL PIPE AND FITTING JOINTS SHALL BE RESTRAINED IN EARTH FILL APPLICATIONS.
7. REFER TO DWG A2730 FOR JOINT RESTRAINING DETAIL.
8. ALL METALLIC FITTINGS AND RESTRAINERS TO BE CATHODICALLY PROTECTED AS PER DWG A2732.

TABLE NO. 1

DEFL. ANGLE	MINIMUM DIMENSION FOR GRANULAR THRUST BLOCKS		
	PIPE DIAMETER (mm)		
	100&150	200	300
11.25°	400	500	600
22.5°	400	500	600
45°	450	550	650
90°	600	700	850

TABLE NO. 2

PIPE DIA. (mm)	MINIMUM RESTRAINING LENGTH (m)									* ON EACH SIDE OF FITTING
	VERTICAL DEFLECTION						HORIZONTAL DEFLECTION			
	DOWNWARD THRUST			UPWARD THRUST						
	11.25°	22.5°	45°	11.25°	22.5°	45°	11.25°	22.5°	45°	90°
100&150	1.5	2.8	4.9	4.9	7.5	10.1	1.5	2.8	4.9	8.1
200	2.0	3.7	6.3	6.3	9.6	13.1	2.0	3.7	6.3	10.5
300	2.8	5.2	9.0	8.8	13.4	18.3	2.8	5.2	9.0	14.9

ALL DIMENSIONS IN MILLIMETRES EXCEPT WHERE NOTED

PETERBOROUGH UTILITIES COMMISSION

TITLE		No.	REVISION	DATE
JOINT RESTRAINING LENGTH FOR PVC PIPE (IN COMBINATION WITH GRANULAR THRUST BLOCK)		1.		
		2.		
DRAWN BY	SCALE NOT TO SCALE	DRAWING No.		
DESIGNED	JOB COST	CADD A2731		
APPROVED	DATE 23 JULY 2008			