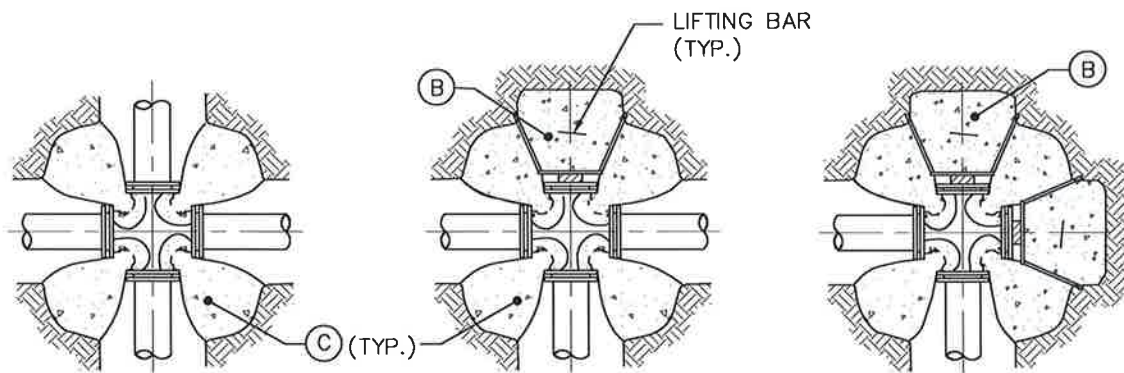
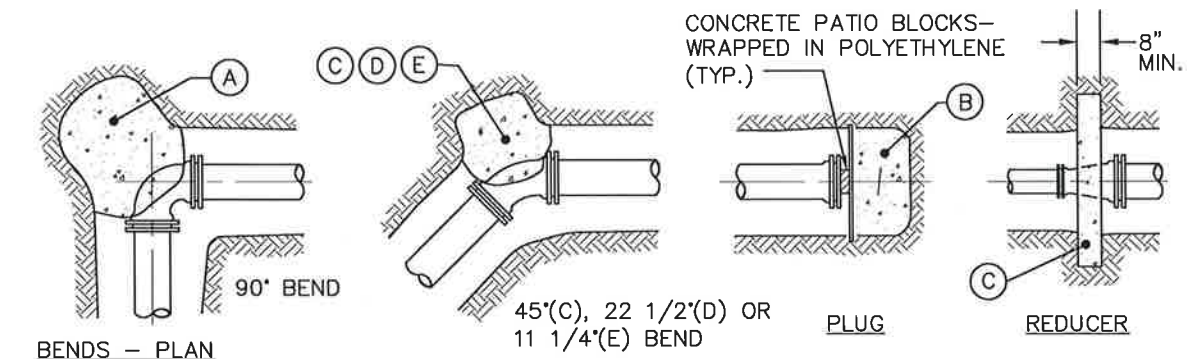


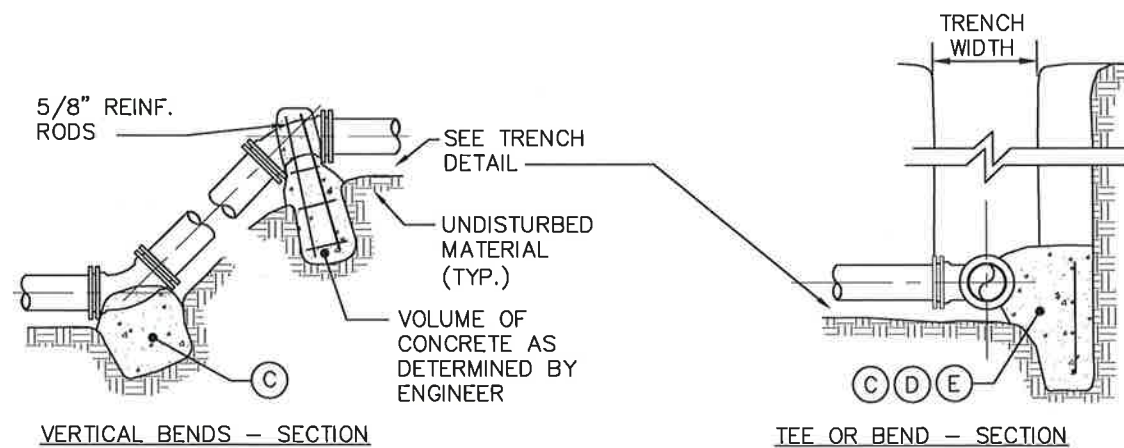
TEE - PLAN



CROSS - PLAN



BENDS - PLAN



VERTICAL BENDS - SECTION

TEE OR BEND - SECTION

THRUST BLOCK SCHEDULE SQUARE FEET OF CONCRETE
THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL

REACTION TYPE		PIPE SIZE											
		4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"
TEST PRESSURE = 100 PSIG	(A)	0.89	2.19	3.92	5.57	8.62	10.91	15.41	18.02	24.06	34.64	53.83	77.39
	(B)	0.65	1.55	2.76	4.19	6.09	8.37	10.89	13.87	17.01	24.49	38.06	54.72
	(C)	0.48	1.19	2.12	3.01	4.66	5.91	8.34	9.71	13.02	18.75	29.13	41.88
	(D)	0.25	0.60	1.08	1.54	2.37	3.01	4.25	4.97	6.64	9.56	14.85	21.35
	(E)	0.13	0.30	0.54	0.77	1.19	1.52	2.12	2.51	3.33	4.79	7.45	10.71
OTHER TEST PRESSURES FOR THE ABOVE REACTIONS		TEST PRESSURE TO BE 100 PSI MIN. AT HIGH END OF THE TEST SECTION. SQUARE FEET OF CONCRETE THRUST BLOCKING FOR OTHER TEST PRESSURES IS DIRECTLY PROPORTIONAL TO THE ABOVE TABLE. FOR INSTANCE, AT A 200 PSI TEST PRESSURE, THE REQUIRED THRUST BLOCK SQUARE FOOTAGE IS DOUBLE WHAT IS INDICATED IN THE ABOVE TABLE.											

NOTES:

1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
3. PLACE CONCRETE PATIO BLOCKS IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCK.
4. REQUIREMENTS OF THE ABOVE TABLE PRESUME MINIMUM SOIL BEARING OF 1 TON PER SQUARE FOOT, AND MAY BE VARIED BY THE ENGINEER TO MEET OTHER CONDITIONS ENCOUNTERED.
5. GRIP-RING RETAINER GLANDS ARE REQUIRED FOR ALL MECHANICAL JOINTS. THESE GLANDS DO NOT REDUCE THE REQUIREMENTS FOR THRUST RESTRAINT.
6. ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE OR BUILDING PAPER PRIOR TO INSTALLATION OF CONCRETE RESTRAINT.
7. THREADED ROD SHALL BE ANSI A242 FY50 PIPE RESTRAINT NUTS TO MATCH AWWA C111. THREADED RODS AND NUTS TO BE FIELD COATED WITH BITUMINOUS PAINT.
8. THRUST RESTRAINT IS REQUIRED FOR ALL TEES, BENDS, REDUCERS, CAPS, PLUGS, OR CROSSES.
9. INSTALL LIFT HOOKS INTO THRUST BLOCKS AT END CAPS AND PLUGS.
10. THE USE OF PRECAST THRUST BLOCKS SHALL BE CONSIDERED ON A CASE-BY-CASE BASIS. REQUIRED THRUST BLOCK SIZE MUST BE APPROVED BY THE SEWER SUPERINTENDENT.

DRAWN BY: D.K.P.
CHECKED BY: R.L.
APPROVED BY: R.L.
SCALE: AS SHOWN
DATE: NOV. 2003

TOWN OF MILFORD, NEW HAMPSHIRE
DESIGN SPECIFICATIONS
STANDARD THRUST BLOCK DETAILS
AND NOTES

REV. DESCRIPTION DATE
FIGURE: W-11 B