

2- REINFORCING BARS (PER TABLE BELOW)
SHAPED TO FIT FITTING,
COAT WITH 20 MILS MIN. OF PITTCHEM
TARGET COAT OR APPROVED EQUAL.

LINED DUCTILE IRON BEND

WATER MAIN

CONCRETE THRUST
BLOCK VOLUME PER
TABLE BELOW

1'-6" (TYP.)

PROFILE

TYPICAL VERTICAL RESTRAINT

COVER REBAR WITH A
MINIMUM OF 3" OF
CONCRETE

WATER MAIN

COVER REBAR WITH A
MINIMUM OF 3" OF
CONCRETE

LINED DUCTILE IRON BEND
WRAPPED W/8 MIL
POLYETHYLENE (TYP.) PER
SECTION 4.5 OF THE
ENGINEERS MANUAL.

WATER MAIN

2'-0"
L1
(SEE TABLE BELOW)

1'-0"

PROFILE

TYPICAL VERTICAL THRUST BLOCK

LINED DUCTILE IRON BEND

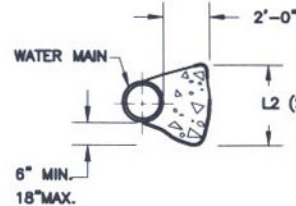
L1 (SEE TABLE BELOW)

WATER
MAIN



PLAN

TYPICAL THRUST BLOCK HORIZONTAL



SECTION A

TYPICAL THRUST BLOCK HORIZONTAL

NOTES:

1. BEARING SURFACE OF ALL THRUST
BLOCKS TO BE POURED AGAINST
FIRM UNDISTURBED EARTH. (FULL BEARING STRENGTH)
2. ALL CONCRETE TO BE 3000 P.S.I.
3. SPECIAL DESIGN REQUIRED FOR PRESSURES EXCEEDING 200 PSI,
SOIL PRESSURES LESS THAN 2000 PSF, AND FOR FITTINGS 18" AND LARGER.

THRUST BLOCK DIMENSIONS															
PIPE SZ.	0 ° TO 11 1/4°			11 1/4° TO 22 1/2°			22 1/2° TO 45°			45° TO 90°			DEAD ENDS & TEES		PIPE SZ
	HORIZ. L1 L2	VERT. VOL. CY	VERT. REBAR	HORIZ. L1 L2	VERT. VOL. CY	VERT. REBAR	HORIZ. L1 L2	VERT. VOL. CY	VERT. REBAR	HORIZ. L1 L2	VERT. VOL. CY	VERT. REBAR	HORIZ. L1 L2	VERT. VOL. CY	
6"	1.0 x 1.0	0.4	#6	1.0 x 1.5	0.8	#6	1.5 x 2.0	1.5	#6	2.0 x 3.0	2.7	#6	2.0 x 2.0	1.9	6"
8"	1.0 x 1.5	0.6	#6	1.5 x 2.0	1.3	#6	2.0 x 3.0	2.5	#6	3.0 x 3.5	4.7	#6	2.5 x 3.0	3.3	8"
10"	1.0 x 2.0	1.1	#6	2.0 x 2.0	2.1	#6	3.0 x 3.0	4.1	#6	4.0 x 4.0	7.6	#8	3.0 x 4.0	5.4	10'
12"	1.5 x 2.0	1.5	#6	2.0 x 2.0	3.0	#6	3.0 x 4.0	5.9	#6	4.5 x 5.0	10.8	#8	4.0 x 4.0	7.6	12"
14"	2.0 x 2.0	2.0	#6	3.0 x 3.0	4.0	#6	4.0 x 4.0	8.0	#8	6.0 x 5.5	14.7	#8	4.5 x 5.0	10.4	14'
16"	2.0 x 3.0	2.6	#6	3.0 x 3.5	5.2	#6	4.5 x 5.0	10.3	#8	7.0 x 5.5	19.0	#10	5.0 x 5.5	13.4	16"

TABLE BASED ON 200 PSI PRESSURE AND 2000 PSF ALLOWABLE SOIL BEARING PRESSURE.

Revision	By	Approved	Date
09/11/00	kal		
08/06/04	AC		

CITY OF OCEANSIDE

TYPICAL THRUST BLOCK

M. Tangle
CITY ENGINEER
Date
STANDARD
DRAWING NO. RW-20