

MINIMUM FEET OF RESTRAINED PIPE REQUIRED ON EACH SIDE OF BEND FOR DUCTILE IRON PIPE

INCREASE MINIMUM LENGTHS BY THE FOLLOWING
AMOUNTS IF PIPE IS WRAPPED IN POLYETHYLENE.

50% INCREASE ON ALL DEAD ENDS.
20% INCREASE ON ALL BENDS.

PIPE SIZE	7.0' COVER				7.5' COVER				8.0' COVER			
	22.5°	45°	90°	DEAD END	22.5°	45°	90°	DEAD END	22.5°	45°	90°	DEAD END
4"	2	3	8	18	2	3	8	18	1	3	8	17
6"	2	5	12	26	2	5	11	25	2	4	11	25
8"	3	6	15	34	3	6	15	33	3	6	14	32
12"	4	9	22	50	4	9	21	48	4	8	20	46
16"	6	12	29	65	5	11	27	63	5	11	26	61
20"	7	15	35	80	7	14	34	77	6	13	32	75
24"	8	17	41	95	8	16	40	92	8	16	38	89
30"	10	21	50	117	10	20	48	113	9	19	46	109
36"	12	24	59	138	11	23	57	133	11	22	54	129
42"	13	28	67	159	13	27	65	153	12	26	62	148
48"	15	31	75	179	14	30	72	173	14	29	69	167

THE TABLE WAS DEVELOPED FROM CRITERIA IDENTIFIED IN THE 1992 EDITION OF "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE", AS PUBLISHED BY THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA). THE TABLE ASSUMES COH-GRAN SOIL AND TYPE LAYING CONDITIONS. REFER TO DIPRA FOR MINIMUM LENGTHS IF DIFFERENT SOIL OR LATING CONDITIONS ARE ENCOUNTERED.



**CITY OF
CHANHASSEN**

RESTRAINED PIPE
REQUIREMENT FOR DIP

REVISED: 2-08

FILE NAME: G:\ENG\SPECS\1011

ENGINEERING DEPARTMENT

PLATE NO.:

1011