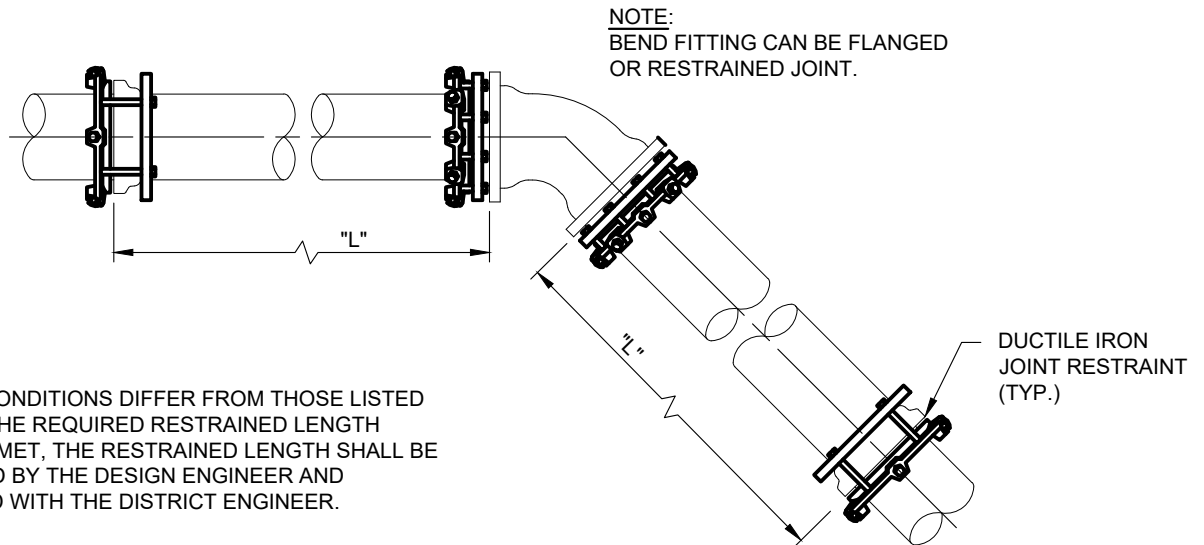


PIPE SIZE		4	6	8	12	16	18	20	24
BEND ANGLE	11.25°	3	5	6	7	9	10	11	13
	22.5°	7	9	12	15	19	21	23	26
	45°	14	19	25	31	39	43	47	54
	90°	33	46	59	74	94	104	113	131

RESTRAINED LENGTHS "L" IN FEET (SEE NOTE 1 FOR LIMITS ON USE)

## HORIZONTAL BEND



**NOTES:**

- IF ACTUAL CONDITIONS DIFFER FROM THOSE LISTED ABOVE OR THE REQUIRED RESTRAINED LENGTH CANNOT BE MET, THE RESTRAINED LENGTH SHALL BE DETERMINED BY THE DESIGN ENGINEER AND CONCURRED WITH THE DISTRICT ENGINEER.

PIPE SIZE		4	6	8	12	16	18	20	24
BEND ANGLE	11.25°	10	15	19	24	30	34	37	43
	22.5°	21	29	38	48	61	68	74	87
	45°	43	61	79	100	128	142	155	181

RESTRAINED LENGTHS "L" IN FEET (SEE NOTE 1 FOR LIMITS ON USE)

## VERTICAL BEND

REVISION	BY	APPR	DATE

**ELSINORE VALLEY**  
MUNICIPAL WATER DISTRICT

*Parag Kalaria*  
06/22/2023  
PARAG KALARIA R.C.E. 83927 DATE

**STANDARD RESTRAINT FOR  
DUCTILE IRON AND PVC PIPE**

STD. DWG. NO.  
**W-4B**