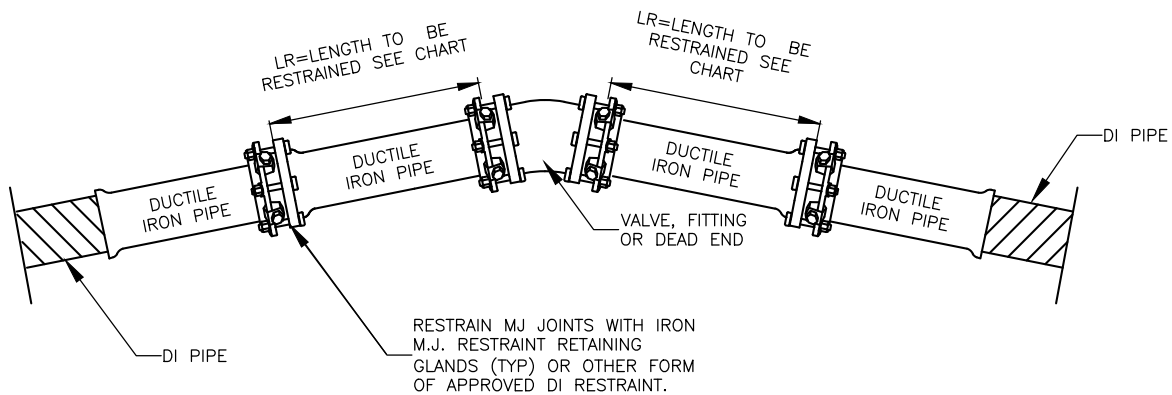


IRON RETAINING GLAND M.J. RESTRAINT			
NOMINAL PIPE SIZE	WEDGES QUANTITY	BOLTS QUANTITY	PRESS RATING
6"	3	6	350
8"	4	6	350
12"	8	8	350
16"	12	12	350

8" SIZE SHOWN 6" & 12" SIMILAR IRON RETAINING GLAND M.J. RESTRAINT

LR (MIN. LENGTH OF RESTRAINT EACH DIRECTION OF THRUST IN LINEAR FEET) Based on 200 psig pressure, Safety Factor of 2.0:1, BARE DI PIPE AND ML Soil, 3.5' cover Chart does not apply to pipes wrapped in polyethylene wrap					
PIPE SIZE	VALVES DEAD ENDS TEES	90° ELBOWS	45° ELBOW & CROSSES	22-1/2° ELBOWS	REDUCER
6"	55'	31'	13'	7'	6"X2" 67'
8"	72'	40'	17'	8'	8"X6" 30'
12"	102'	57'	24'	12'	12"X8" 54'
16"	130'	72'	30'	15'	12"X8" 54' 16"X8" 95'



DATE: 07/14/2025 WD DWG. NO. 03-1

SCALE: NOT TO SCALE

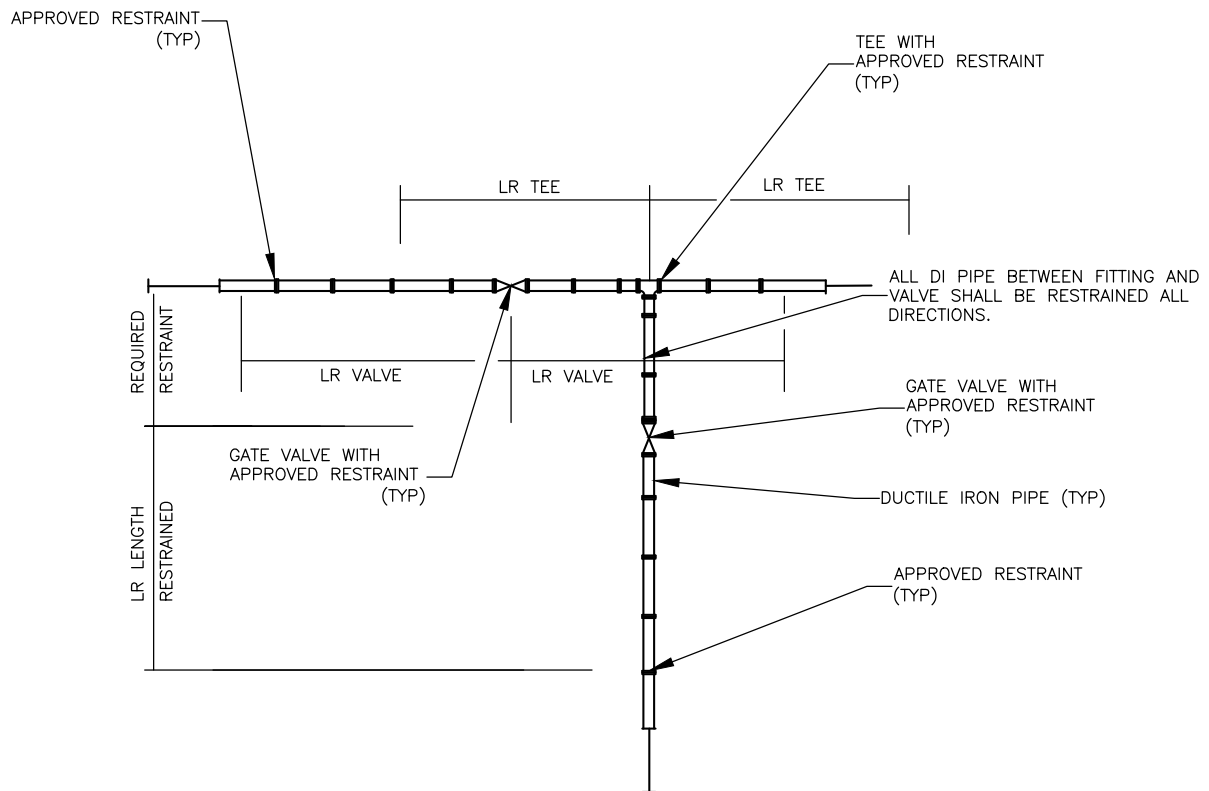
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## DUCTILE IRON PIPE RESTRAINT

SHEET 1 OF 2





RESTRAINED JOINT DETAIL FOR TYPICAL TEE INTERSECTION  
4 WAY INTERSECTION SIMILARLY RESTRAINED

NOTES:

1. THE MINIMUM LENGTH OF RESTRAIN INDICATED SHALL REQUIRE ALL JOINTS WITHIN THE LR DISTANCE TO BE RESTRAINED.
2. THRUST RESTRAINT SHALL BE INSTALLED ON DUCTILE IRON WATER DISTRIBUTION LINES 6" THRU 14" DIAMETER IN THE MANNER SHOWN.
3. PIPE GREATER THAN 14" DIAMETER SHALL REQUIRE RESTRAINED JOINT PIPE FOR THE PROPER LENGTH.
4. COMPACT FITTINGS ARE ACCEPTABLE FOR USE WITH IRON RETAINING GLAND M.J. RESTRAINT AND OTHER FORMS OF DI RESTRAINT.
5. RESTRAINT SYSTEM SHALL BE INSPECTED AND APPROVED PRIOR TO BACKFILLING.
6. RESTRAINT SYSTEMS MAY VARY BASED UPON THE ENGINEER'S DESIGN AS SHOWN ON THE PLAN AND PROFILE SHEETS.
7. GRIPPER RING AND FIELD LOK GASKETS ARE AN ACCEPTABLE METHOD OF RESTRAINT ON DUCTILE IRON PIPE ONLY. GASKET MANUFACTURER MUST MATCH PIPE MANUFACTURER.

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SCALE: NOT TO SCALE

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## DUCTILE IRON PIPE RESTRAINT

SHEET 2 OF 2

