

WATER - STANDARD DETAILS

CONSTRUCTION DATA

PIPE SIZE (IN.)	L = MINIMUM LENGTH OF RESTRAINED PIPE (FT)							
	$\Delta$ - 90°		$\Delta$ - 45°		$\Delta$ - 22.5°		$\Delta$ - 11.25°	
	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.
6	30	60	15	25	10	15	5	10
8	40	80	15	35	10	15	5	10
10	50	100	20	40	10	20	5	10
12	55	115	25	50	11	25	5	11
16	97	139	40	58	19	28	10	14

VERTICAL OR HORIZONTAL BENDS

VERTICAL OR HORIZONTAL TEES

VERTICAL OR HORIZONTAL WYES

CONNECTION TO EXISTING WATER MAIN

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	FHWA REGION	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	3	VA.		720	0720-080-299,C-501	10(8)

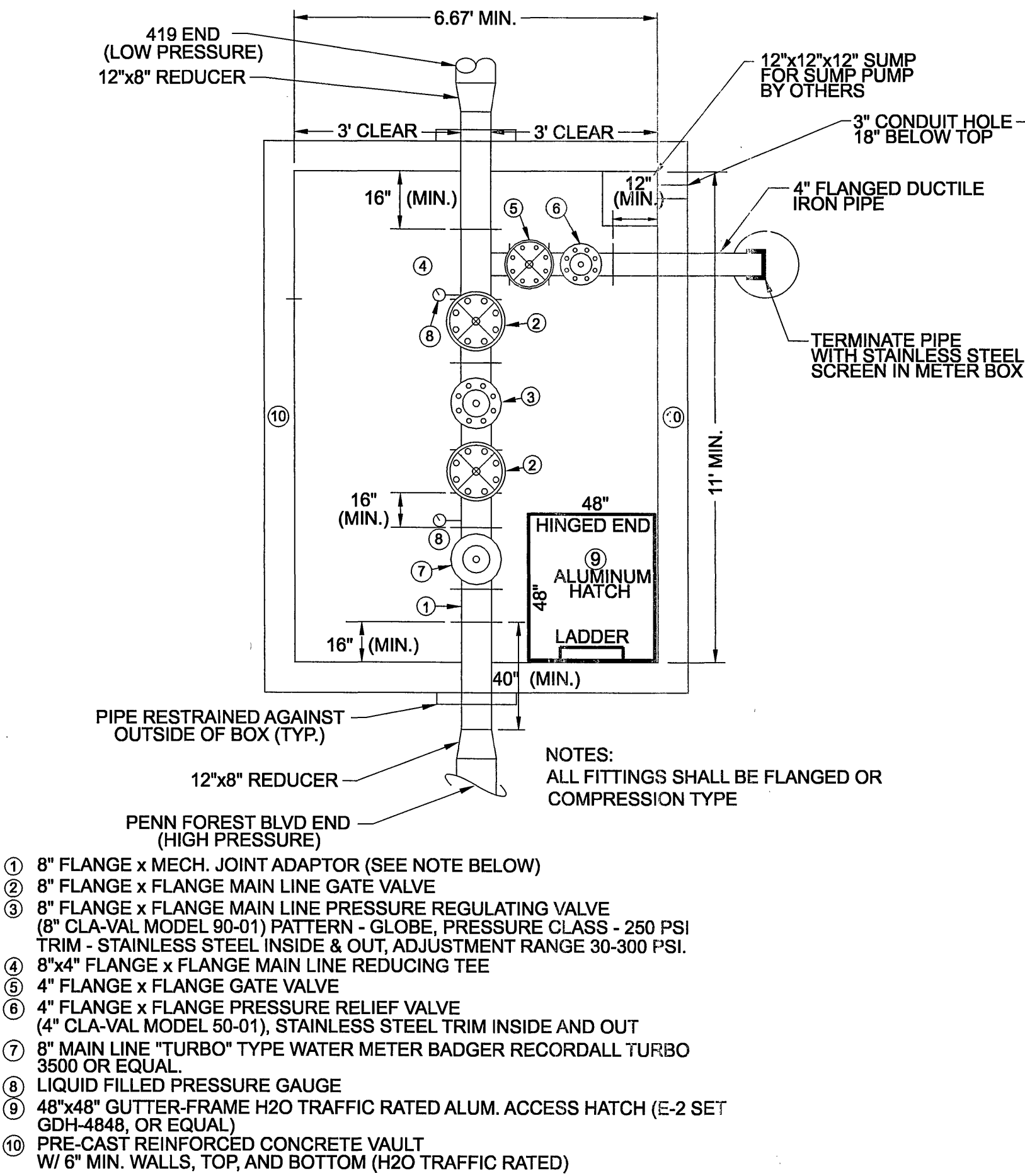
NOTE:

- MECHANICAL JOINT RESTRAINING DEVICES SHALL BE EBAA IRON, INC. MEGALUG, WITH A WORKING PRESSURE OF 250 PSI AND A MINIMUM DESIGN SAFETY FACTOR OF 2.
- THE RESTRAINED LENGTH OF WATER MAIN IS BASED ON THE FOLLOWING: AN INTERNAL PRESSURE OF 200 PSI, 3 FEET OF PIPE COVER, AND A SOIL TYPE CLASSIFICATION OF "MH"
- PLUGS SHALL BE RESTRAINED BASED ON THE RESTRAINED LENGTH FOR 90° VERTICAL BENDS.
- VALVES, TEES, AND WYES SHALL BE RESTRAINED BASED ON THE RESTRAINED LENGTH FOR 45° HORIZONTAL BENDS.
- EXISTING WATER MAIN ADJACENT TO PROPOSED BENDS, WYES, VALVES, TEES, AND PLUGS SHALL BE UNCOVERED AND THE EXISTING JOINTS SHALL BE RESTRAINED FOR THE LENGTH INDICATED, IF THE EXISTING WATER MAIN WILL NOT ACCEPT THE MECHANICAL JOINT RESTRAINING MECHANISM, THE EXISTING WATER MAIN SHALL BE REPLACED WITH DUCTILE IRON WATER MAIN FOR THE LENGTH INDICATED.

TYPICAL DETAILS AND CONSTRUCTION DATA - MECHANICAL JOINT RESTRAINING DEVICES

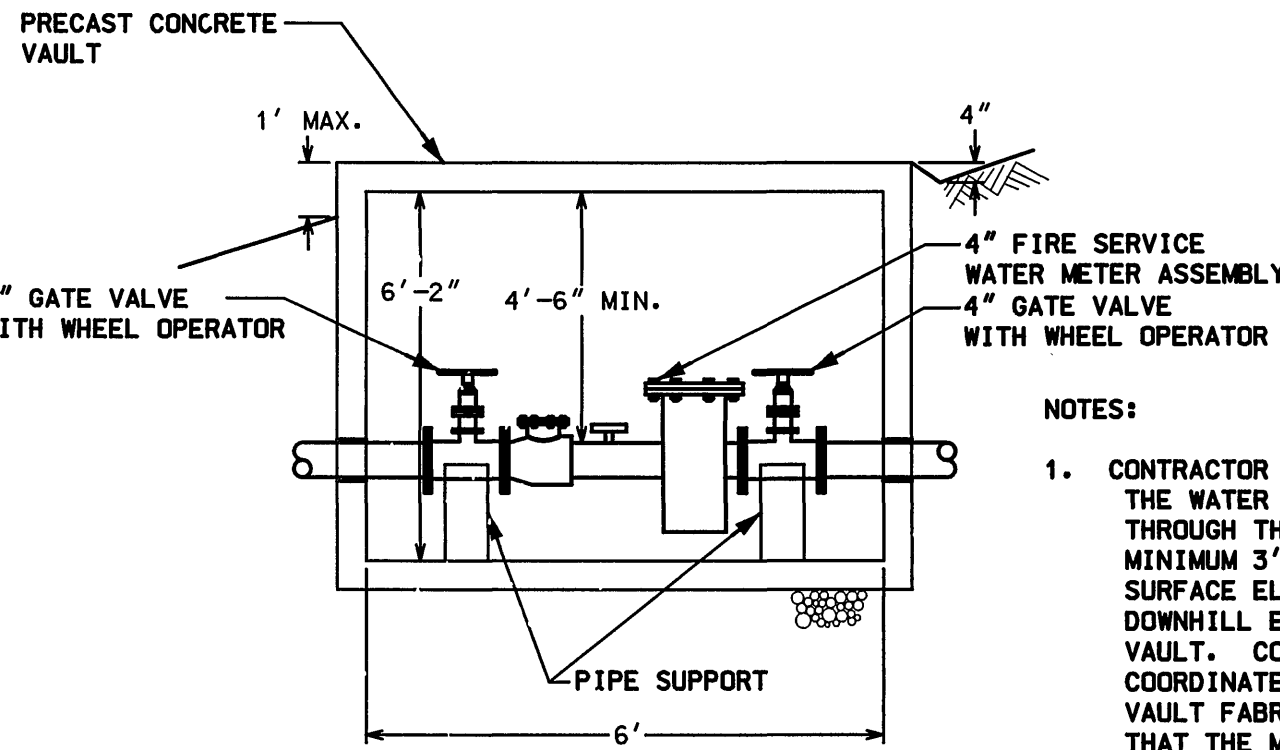
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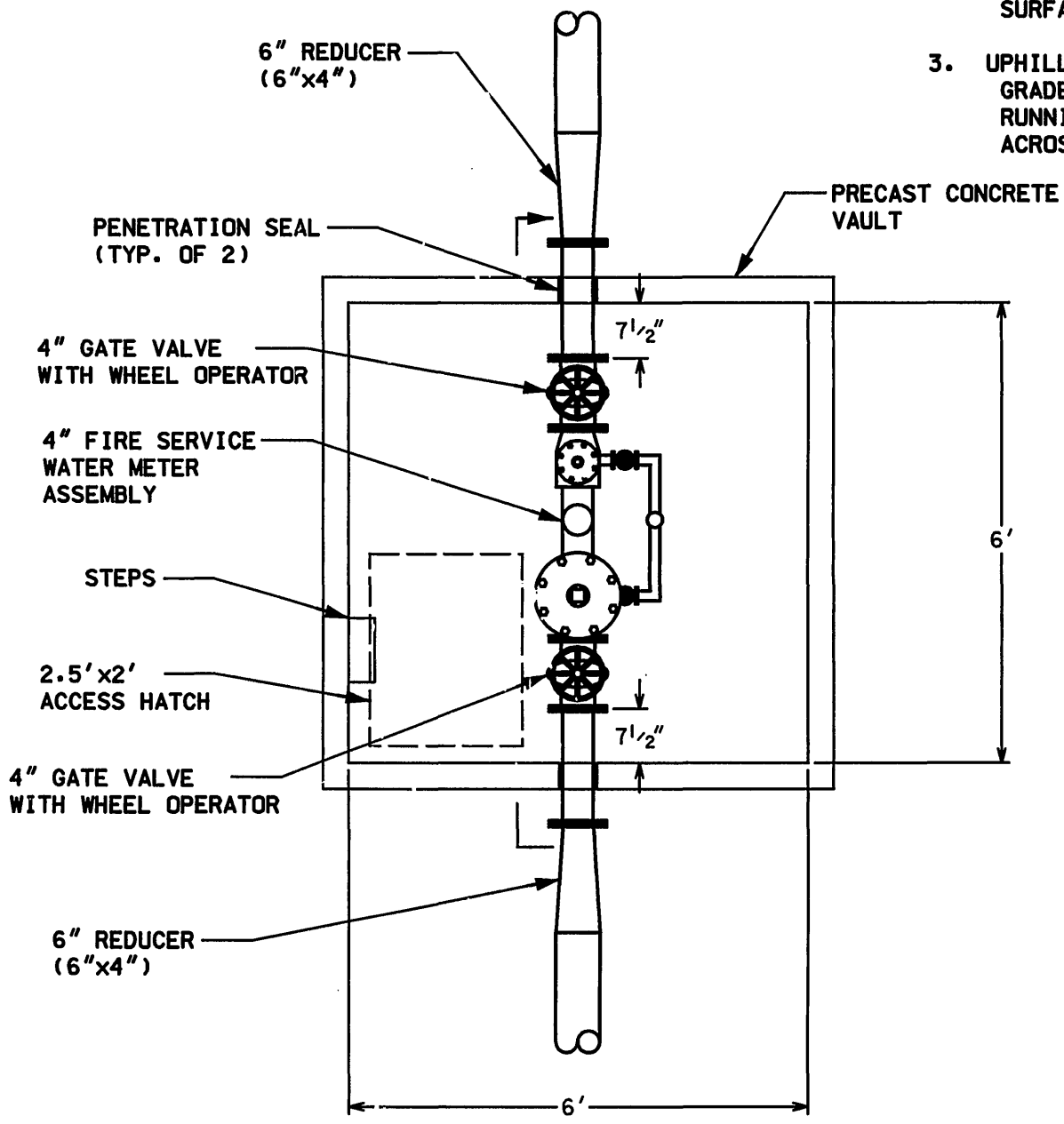


PRESSURE REDUCING VALVE VAULT

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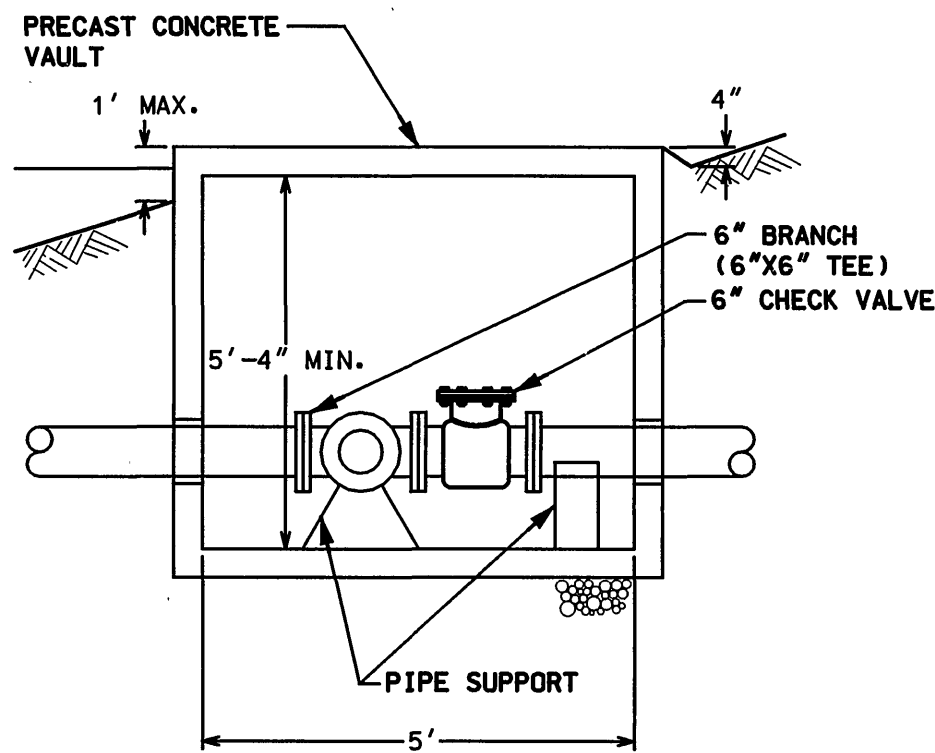
SECTION



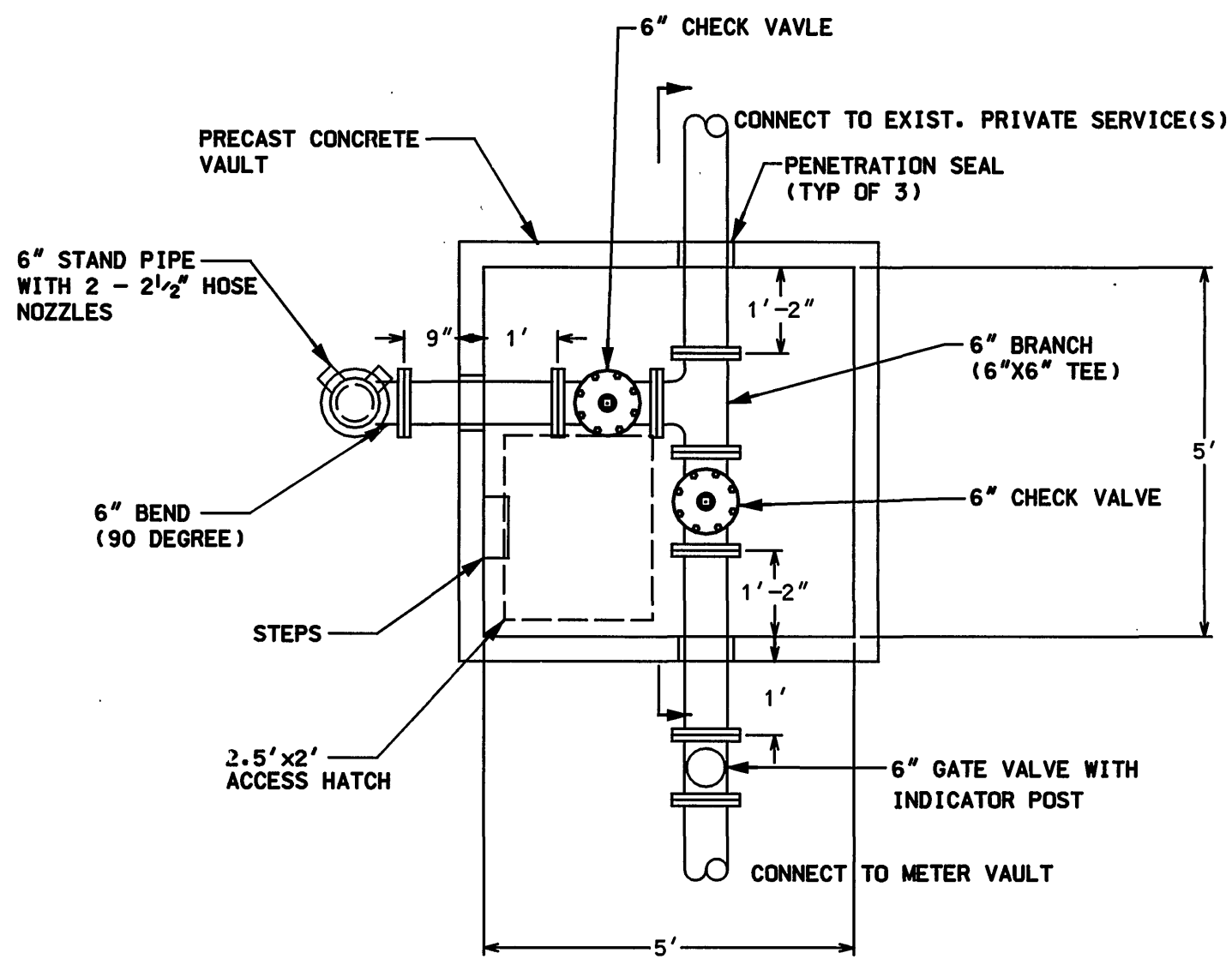
PLAN

WATER SERVICE VAULT

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SECTION



PLAN

PRIVATE FIRE SERVICE VAULT

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