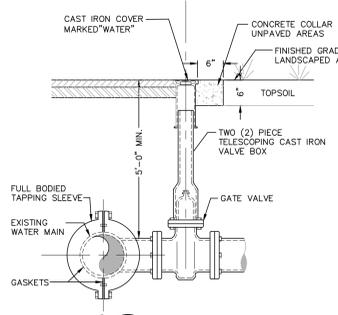


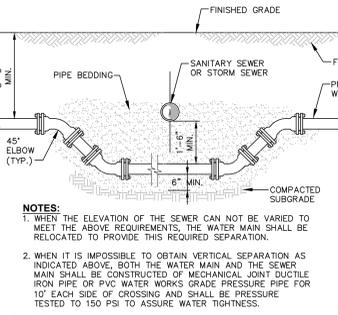
2 HYDRANT ASSEMBLY DETAIL  
SCALE: NOT TO SCALE

- NOTES:**
- PIPE BEDDING & PIPE ZONE BACKFILL SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) SAND OR A MIXTURE OF CRUSHED STONE AND GRAVEL, FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. TRENCH BACKFILL GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:
- | SEIVE DESIGNATION | % PASSING |
|-------------------|-----------|
| 3/4"              | 100%      |
| NO. 40            | 0-70%     |
| NO. 200           | 0-10%     |
- TRENCH BACKFILL SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) OR PROCESSED GRAVEL OR EXCAVATED MATERIAL FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. TRENCH BACKFILL GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:
- | SEIVE DESIGNATION | % PASSING |
|-------------------|-----------|
| 4"                | 100%      |
| NO. 40            | 0-70%     |
| NO. 200           | 0-10%     |
- IN NON-TRAFFIC UNPAVED AREAS TRENCH BACKFILL CAN BE MATERIALS EXCAVATED FROM THE TRENCH AS APPROVED BY THE ENGINEER AND COMPACTED TO 90% MODIFIED PROCTOR.
  - INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING. LOCATE TAPE 12" BELOW FINISHED GRADE, DIRECTLY OVER PIPING, EXCEPT 6" BELOW SUBGRADE UNDER PAVEMENTS & SLAB.
  - TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.
  - 5'-0" MIN COVER SHALL BE APPLIED TO WATER MAIN OR SANITARY SEWER FORCE MAINS ONLY.
  - WIDTH DIFFERS WHERE WATER LINE IS PLACED IN ROCK BELOW FIVE-FEET. REFER TO TECHNICAL SPECIFICATIONS.

1 PIPE TRENCH DETAIL (TYPICAL)  
SCALE: NOT TO SCALE



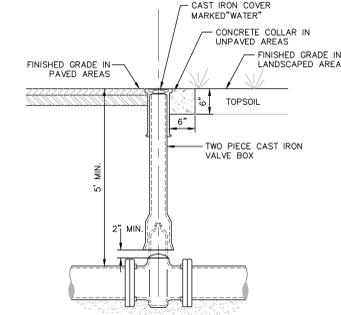
6 TAPPING SLEEVE AND VALVE DETAIL  
SCALE: NOT TO SCALE



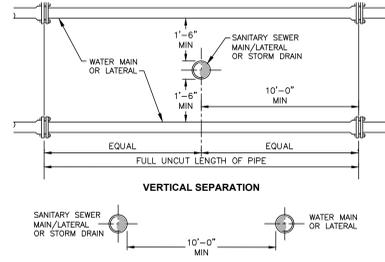
4 WATERLINE OFFSET DETAIL  
SCALE: NOT TO SCALE



5 COPPER WATER SERVICE  
SCALE: NOT TO SCALE



7 TYPICAL GATE VALVE DETAIL  
SCALE: NOT TO SCALE



3 SANITARY/STORM SEWER AND WATERMAIN SEPARATION DETAIL  
SCALE: NOT TO SCALE

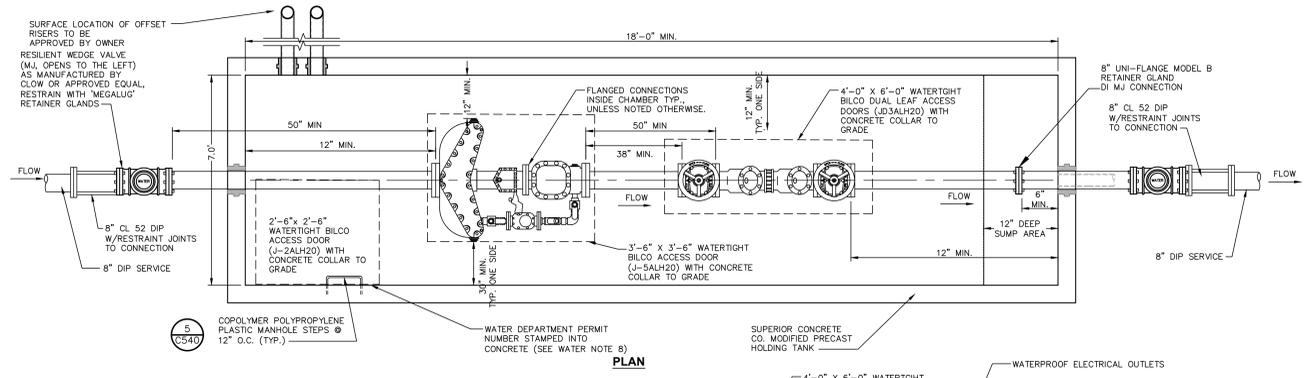
**NOTES:**

- THE LENGTH OF PIPE REQUIRING RESTRAINT IS BASED UPON THE FOLLOWING ASSUMPTIONS:

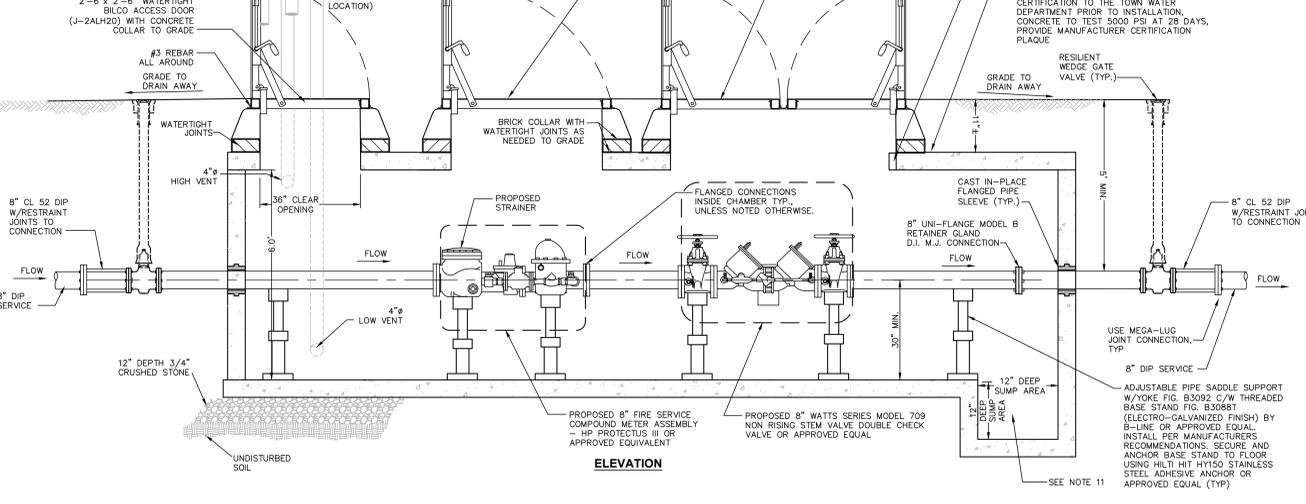
PIPE SIZE (INCHES)	FITTING TYPE													
	90°	45°	22 1/2°	TEE	VALVE	DEAD END	REDUCER	6"	8"	10"	12"	16"	18"	24"
6"	43	18	8	4	29	31	31							
8"	56	23	11	5	38	41	41							
10"	68	28	14	7	48	50	50	31	17					
12"	81	34	16	8	57	59	59	43	31	17				
16"	106	44	21	10	76	78	78	66	57	46	33			
18"	119	49	24	12	85	88	88	69	59	48	33			
24"	156	65	31	15	116	116	116					86	63	50
30"	192	80	38	19	142	144	144							91

- FOR END PLUGS, RESTRAIN PIPE LENGTH GIVEN FOR DEAD END FITTING.
- THE LENGTH OF NEW PIPE TO BE RESTRAINED IS THE LENGTH FOR EACH SIDE OF THE FITTING.
- THE ABOVE INFORMATION WAS PROVIDED USING THE THRUST RESTRAINT PROGRAM ISSUED BY THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) AND IS BASED ON THE ASSUMPTIONS LISTED IN NOTE 1. RESTRAINED LENGTH REQUIREMENTS FOR FIELD CONDITIONS AND PIPE SIZES DIFFERING FROM THOSE LISTED ABOVE SHOULD BE EVALUATED SEPARATELY.
- RESTRAINED JOINT PIPE AND FITTINGS SHALL BE USED ONLY AS ALLOWED BY THE PROJECT PLANS AND/OR SPECIFICATION.

3 JOINT RESTRAINT SCHEDULE AND NOTES  
SCALE: NOT TO SCALE



9 WATER METER AND BACKFLOW PREVENTION PIT DETAIL  
SCALE: NOT TO SCALE



9 WATER METER AND BACKFLOW PREVENTION PIT DETAIL  
SCALE: NOT TO SCALE

- NOTES:**
- WATER METER PIT AND ASSEMBLY SHALL BE SUBJECT TO REVIEW AND FINAL APPROVAL BY THE TOWN OF Poughkeepsie WATER DEPARTMENT. WATER METER SHALL BE A SENSUS OMNI OR APPROVED EQUIVAL.
  - WATER METER SHALL BE PROVIDED WITH A REMOTE READING SYSTEM WITH BRONZE WATER TIGHT ENCLOSURE. WATER PROOF REOSTERS SHALL BE PROVIDED. LOCATION SHALL BE APPROVED BY THE TOWN OF Poughkeepsie WATER DEPARTMENT PRIOR TO CONSTRUCTION.
  - AN ALLUMINUM WARNING PLATE SHALL BE RIVETED OR OTHERWISE PERMANENTLY ATTACHED TO THE MANHOLE COVER. THE PLATE SHALL BE A MINIMUM OF 12"x12" AND SHALL BE ENGRAVED WITH THE FOLLOWING LANGUAGE: "WARNING: CONFINED SPACE - ENTRY PROHIBITED WITHOUT AUTHORIZATION - CALL OWNER FOR APPROVAL TO ACCESS". VENTILATION SHALL CONFORM TO EXISTING LOCAL AND/OR STATE CODES AND AS PER SECTION 6.2.5 OF "RECOMMENDED STANDARDS FOR WATER WORKS - 1997" (TEN STATES STANDARDS).
  - PREPARED SURFACE (I.E., BOTTOM) OF EXCAVATION FOR PLACEMENT OF WATER METER PIT SHALL CONSIST OF A MINIMUM 6" DEPTH OF 3/4" CRUSHED STONE, LEVELLED AND LAID OVER STABLE NATIVE SOIL. IF EXCAVATION REVEALS UNSTABLE SOIL MATERIAL, THIS BEDDING REQUIREMENT SHALL BE MODIFIED BY THE PROJECT ENGINEER.
  - WHEN INSTALLING TURBO METERS WITH A STRAINER, A MINIMUM OF FIVE (5) PIPE DIAMETERS OF STRAIGHT RUN PIPE OR EQUIVALENT FULL OPEN COMPONENTS IS REQUIRED UPSTREAM OF THE METER INLET FLANGE. A MINIMUM OF THREE (3) PIPE DIAMETERS OF STRAIGHT PIPE OR EQUIVALENT IS REQUIRED DOWN STREAM OF THE METER.
  - DO NOT INSTALL ELBOWS, BENDS, NONCONCENTRIC REDUCERS, CHECK VALVES, BACK FLOW PREVENTORS AND/OR PRESSURE REDUCING DEVICES WITHIN TEN (10) PIPE DIAMETERS UPSTREAM OR FIVE (5) PIPE DIAMETERS DOWNSTREAM OF THE METER.
  - EXTERIOR OF METER PIT SHALL RECEIVE TWO COATS OF BITUMINOUS COATING.
  - WITHIN 30 DAYS OF INSTALLATION, THE BACKFLOW PREVENTION DEVICE SHALL BE TESTED BY A CERTIFIED TESTER. FOLLOWING TESTING, A NYS DOH-1013 REPORT MUST BE COMPLETED AND SUBMITTED TO THE TOWN OF Poughkeepsie, TOWN CLERK AND DUTCHESS COUNTY HEALTH DEPARTMENT TO CERTIFY THAT DEVICE WAS INSTALLED PER APPROVED PLANS.
  - ALL BACKFLOW PREVENTION DEVICES MUST BE TESTED AT LEAST ANNUALLY BY A NYS CERTIFIED TESTER WITH A COPY OF THE INSPECTION AND TEST REPORT (DOH-1013) FORWARDED TO TOWN OF Poughkeepsie, TOWN ADMINISTRATOR OF PUBLIC WORKS AND THE DUTCHESS COUNTY DEPARTMENT OF HEALTH.
  - REINFORCEMENT FOR MANHOLE COMPONENTS SHALL BE DESIGNED BY A LICENSED NEW YORK STATE PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW. STRUCTURE SHALL BE DESIGNED FOR HS20-44 VEHICULAR LOADING PLUS 25% IMPACT.
  - PROVIDE WATERPROOF ELECTRIC OUTLET FOR SUMP PUMP IN THE EVENT WATER ACCUMULATES IN SUMP AREA.

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 Office Locations:  
 • Glen Falls, NY  
 • Troy, NY  
 • Poughkeepsie, NY  
 • White Plains, NY  
 • New York City, NY  
 Hudson Valley Office  
 21 Fox Street  
 Poughkeepsie, New York 12601  
 www.chazencompanies.com  
 8880 838-9073

1998 SOUTH ROAD - STORAGE FACILITY  
 WATER SYSTEM DETAILS & NOTES  
 TOWN OF Poughkeepsie, DUTCHESS COUNTY, NEW YORK

rev.	date	description
1	03/29/22	REVISED PER TOWN COMMENTS

designed LTN  
 checked CPL  
 date 11/22/21 AS SHOWN  
 scale  
 project no. B2133.00  
 sheet no. C541

ISSUED FOR SITE PLAN APPROVAL