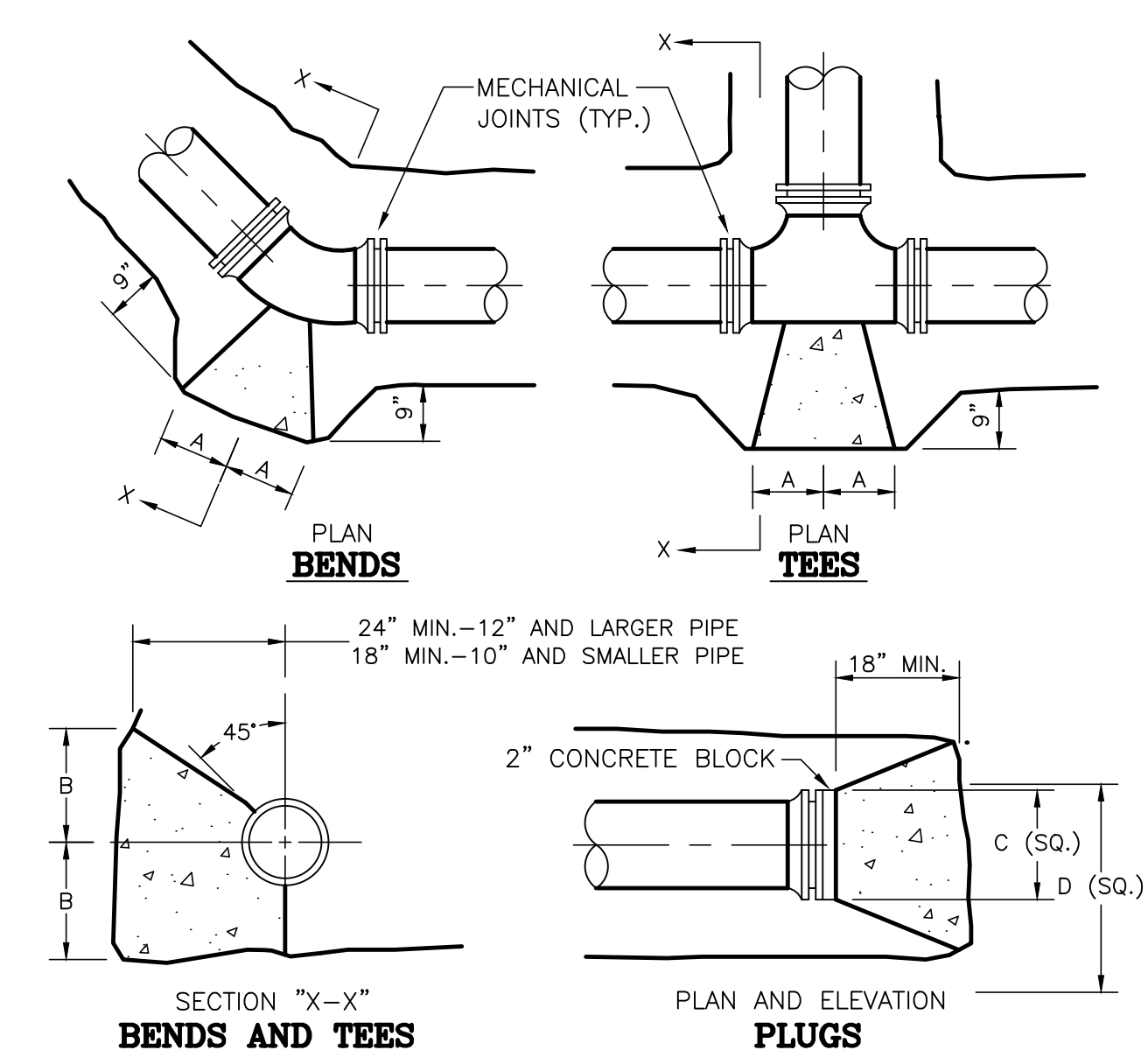
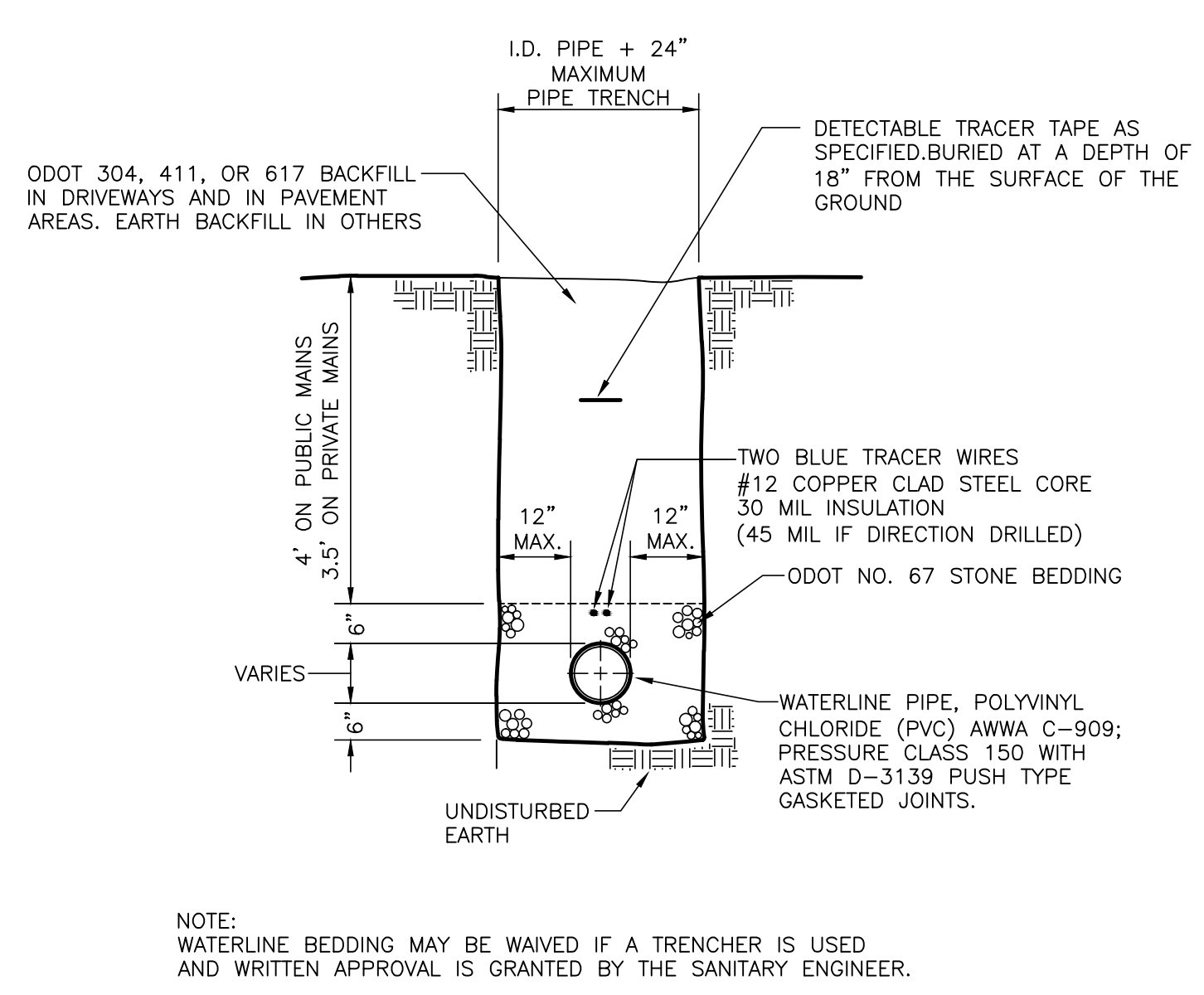


GATE VALVE AND BOX (FOR 3" to 12" MAINS)
NO SCALE

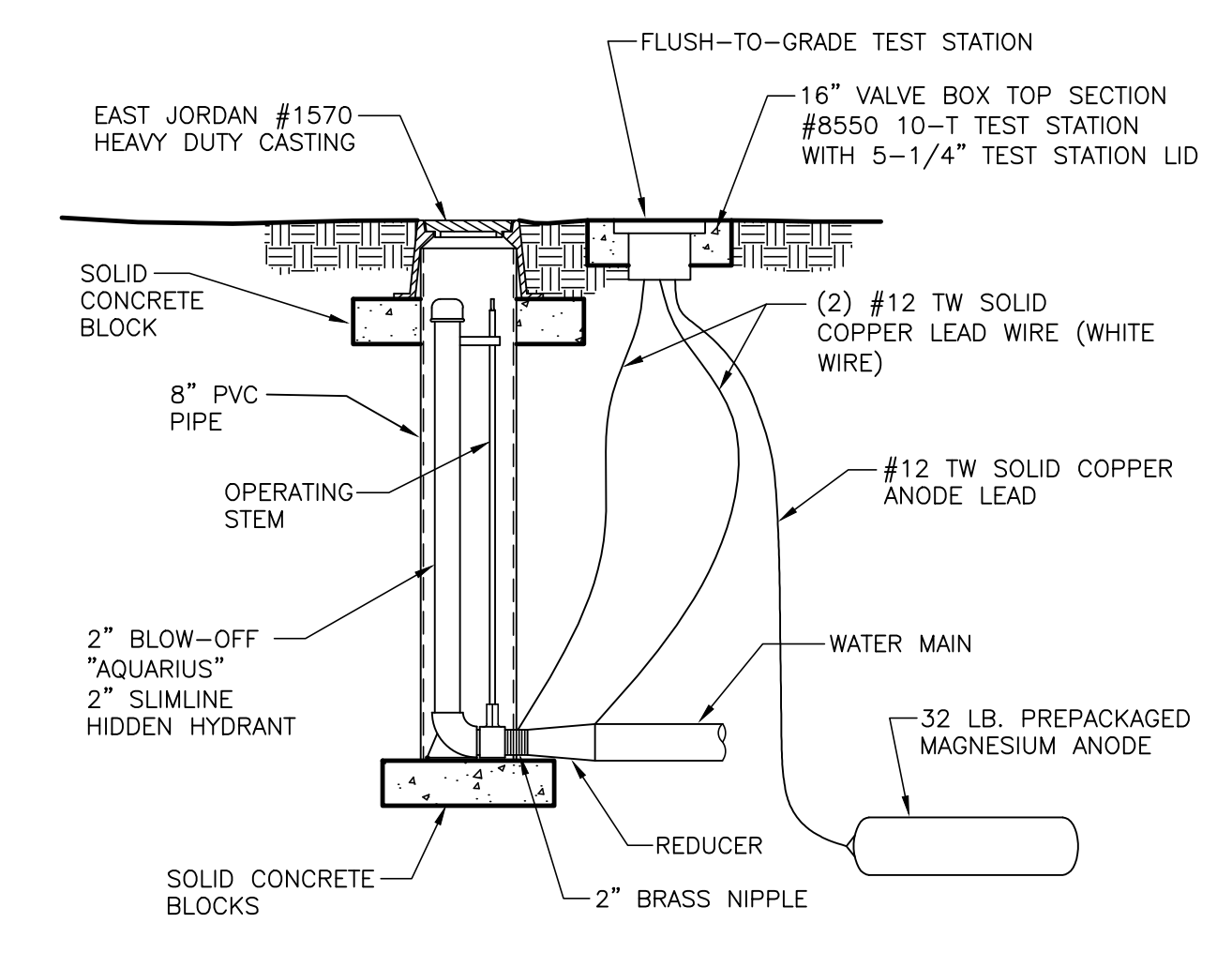


TYPE	SIZE	1/4 BENDS		1/8 BENDS		1/16 BENDS		TEES			
		A	B	A	B	A	B	A	B	C	D
2000 PSF SOIL	3"-6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"
	8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
	10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
	12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
	14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
	16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"
20"	46"	36"	25"	36"	15"	30"	30"	39"	24"	68"	

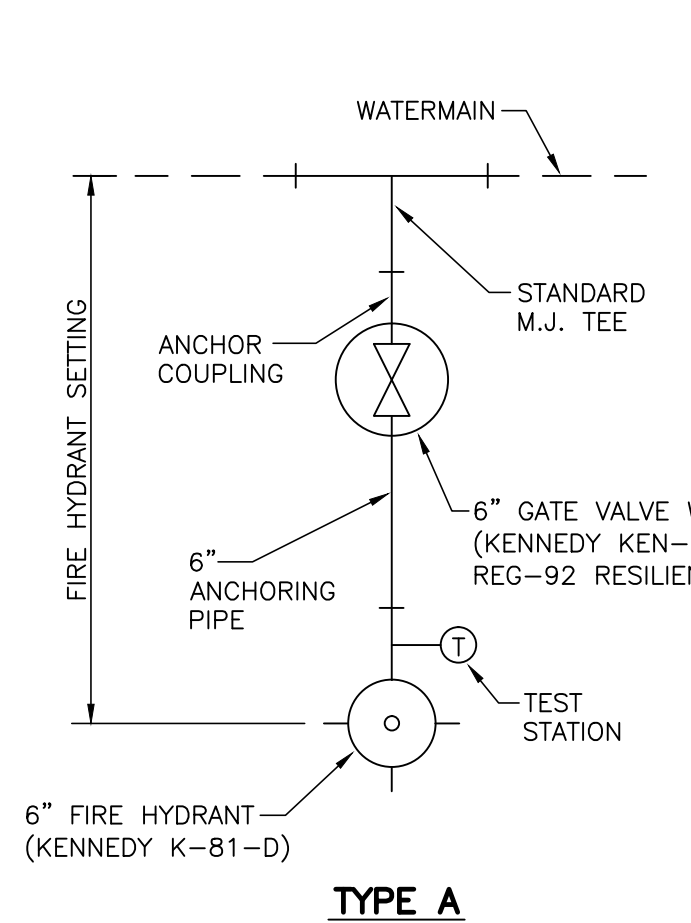
NOTE: BASED ON 100 P.S.I. STATIC PRESSURE PLUS A.W.W.A. WATER HAMMER. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.



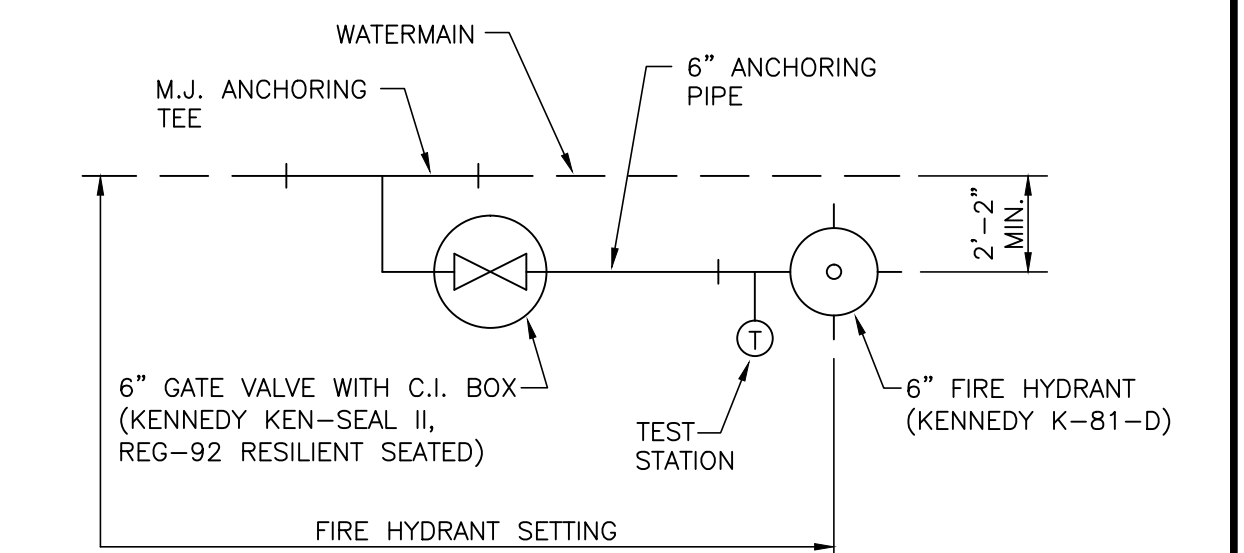
WATERLINE TRENCH DETAIL
NO SCALE



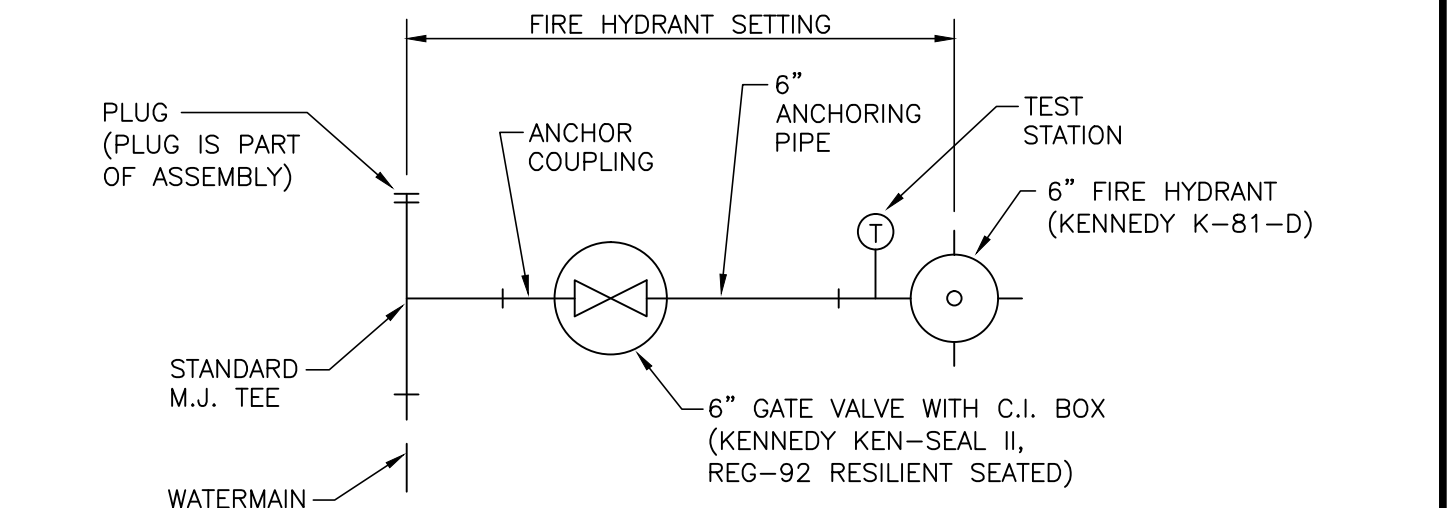
WATER MAIN BLOW-OFF DETAIL
NO SCALE



TYPE A

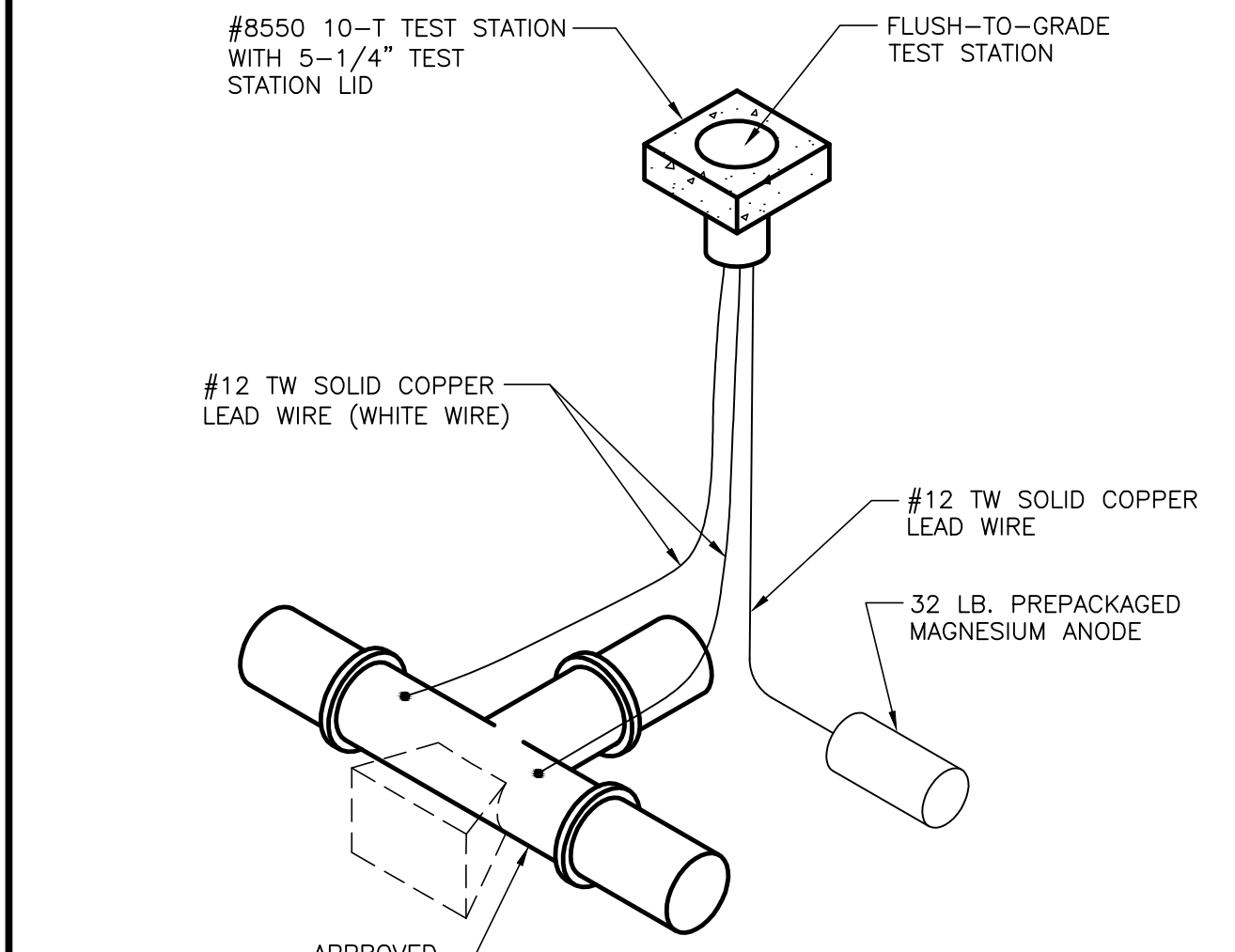


TYPE B - PARALLEL TO WATERMAIN

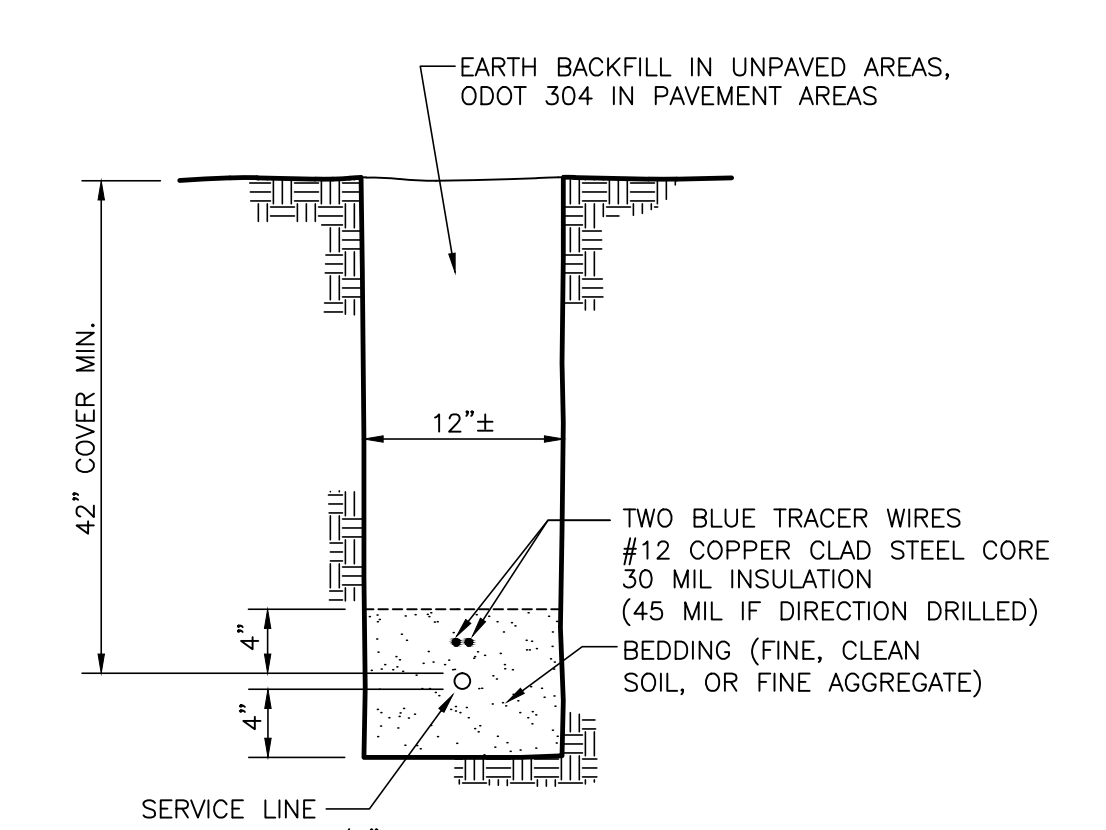


TYPE C (BLOW-OFF HYDRANT)

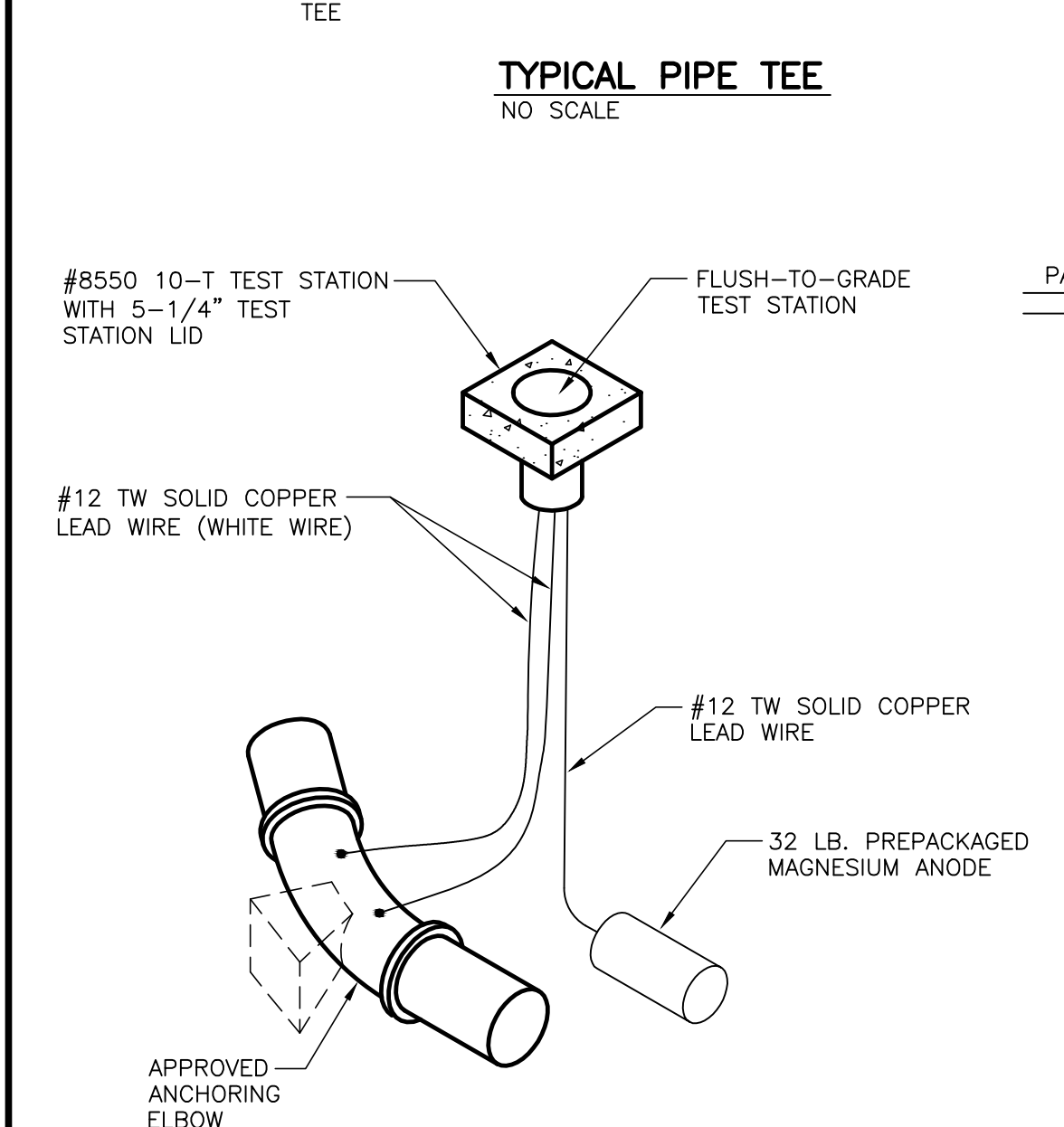
FIRE HYDRANT SETTING TYPES



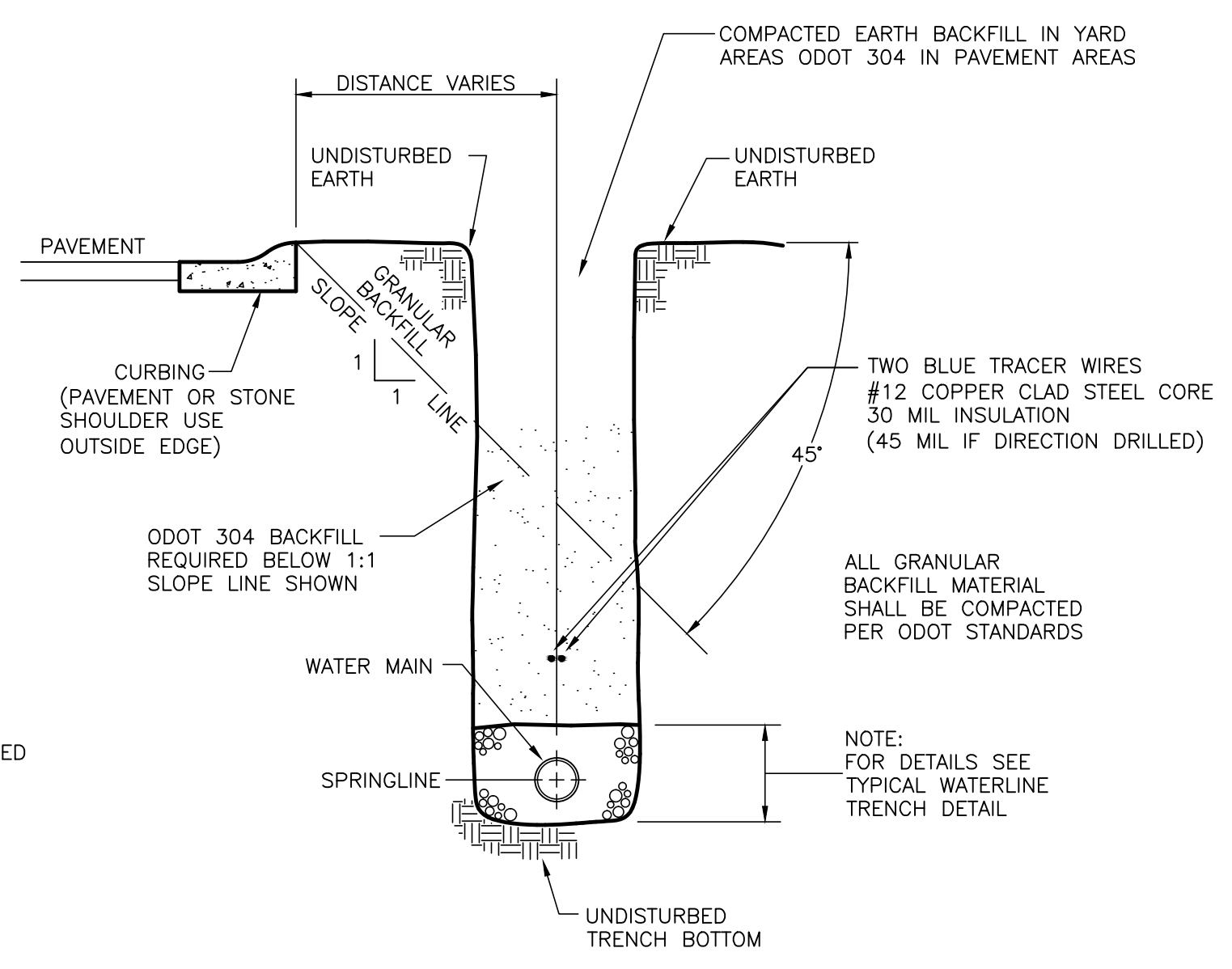
TYPICAL PIPE TEE
NO SCALE



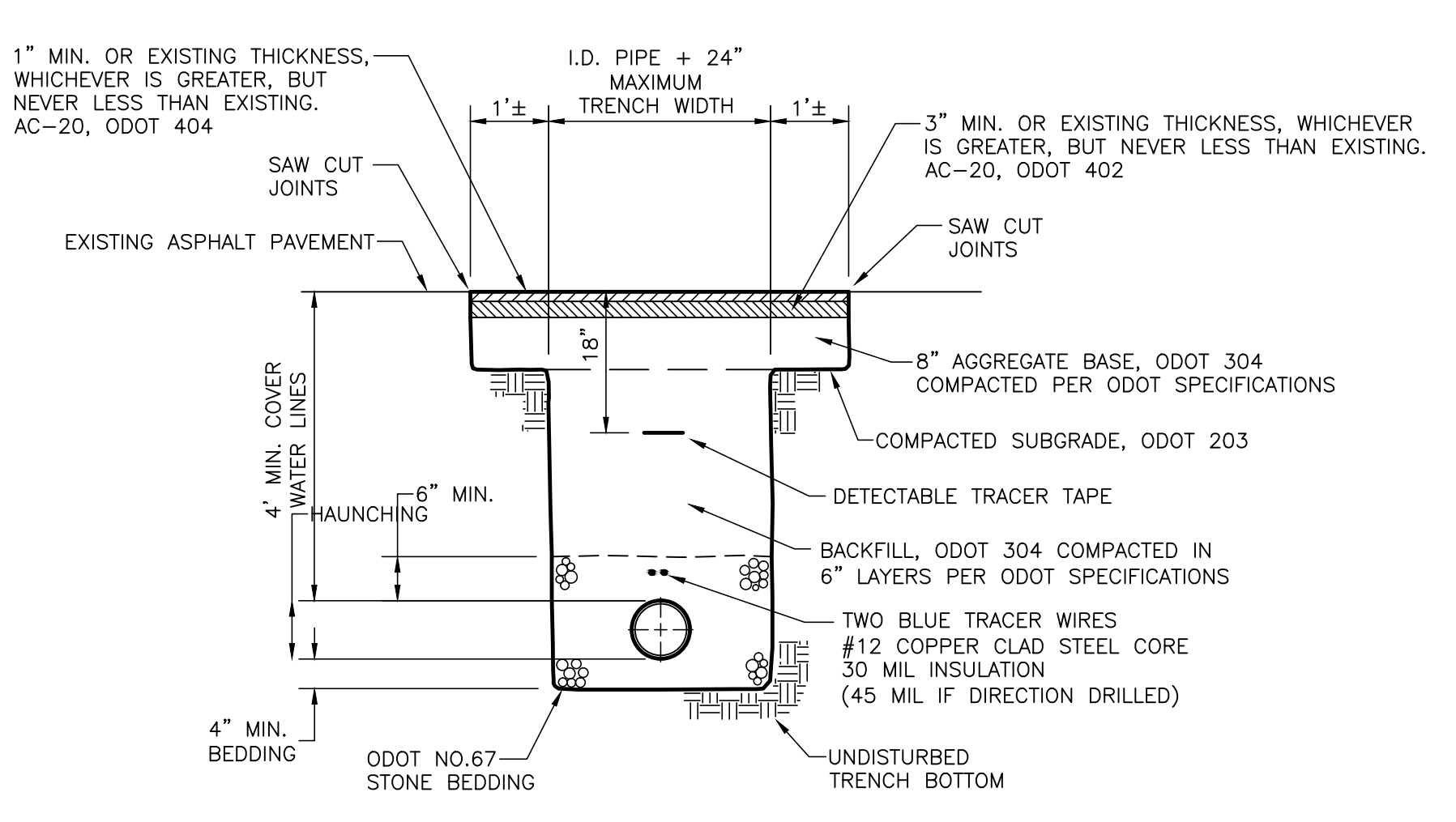
SERVICE WATERLINE TRENCH DETAIL
NO SCALE



TYPICAL PIPE BEND
NO SCALE

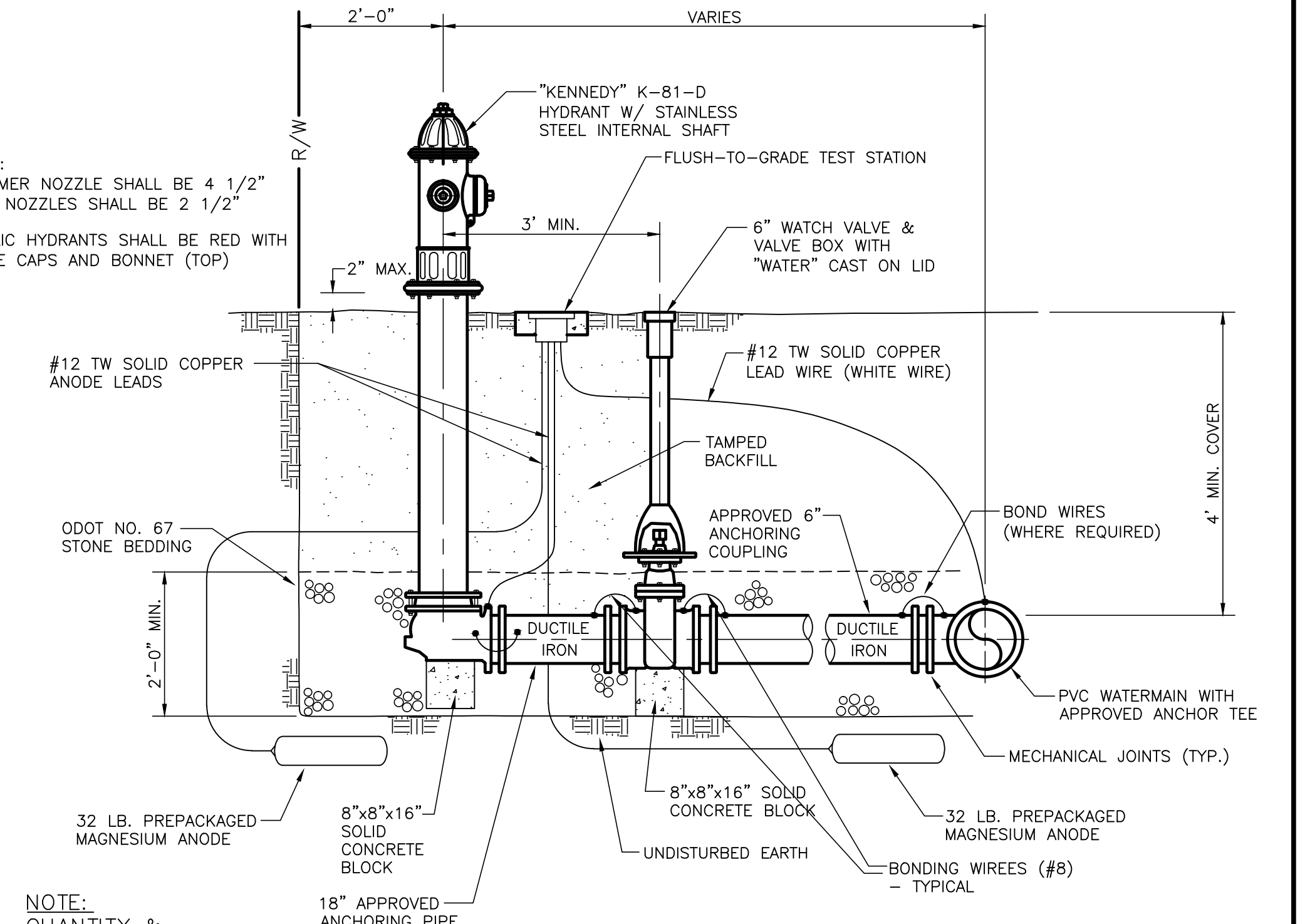


GRANULAR BACKFILL OF WATERLINE TRENCH ALONG PUBLIC STREET OR ROAD
NO SCALE



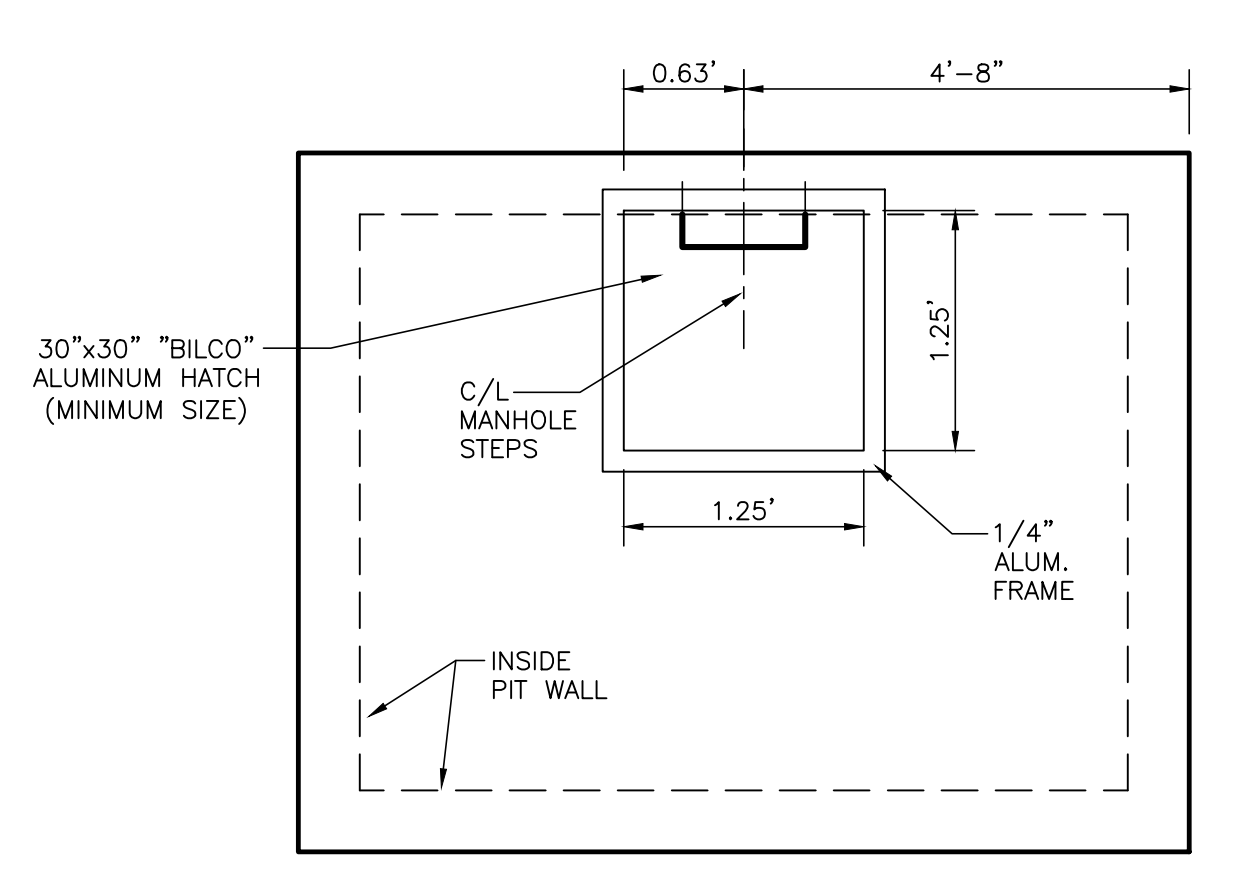
ASPHALT PAVEMENT REPAIR DETAIL
NO SCALE

NOTE: STEAMER NOZZLE SHALL BE 4 1/2" SIDE NOZZLES SHALL BE 2 1/2" PUBLIC HYDRANTS SHALL BE RED WITH WHITE CAPS AND BONNET (TOP)

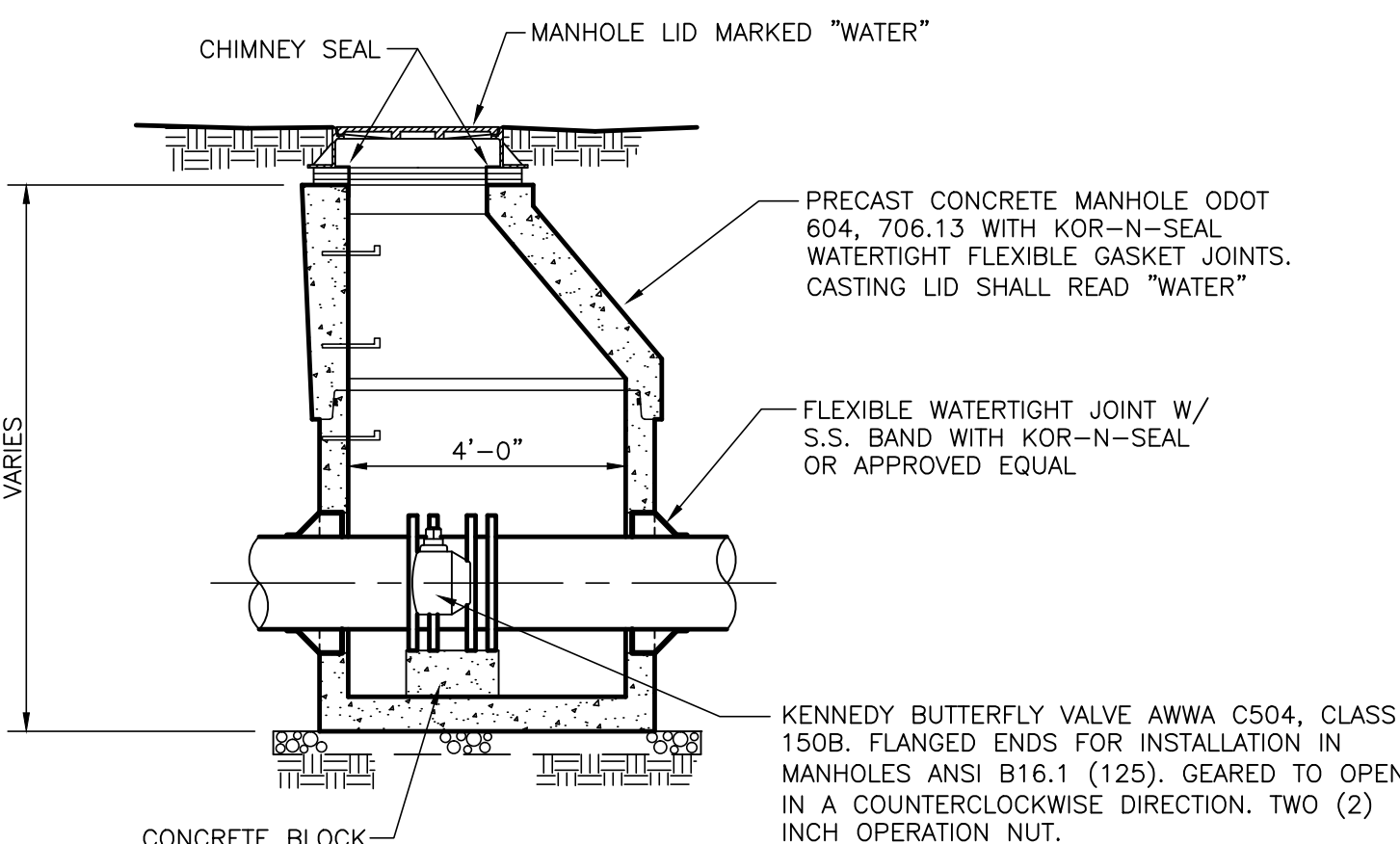


HYDRANT ASSEMBLY-TYPE A
NO SCALE

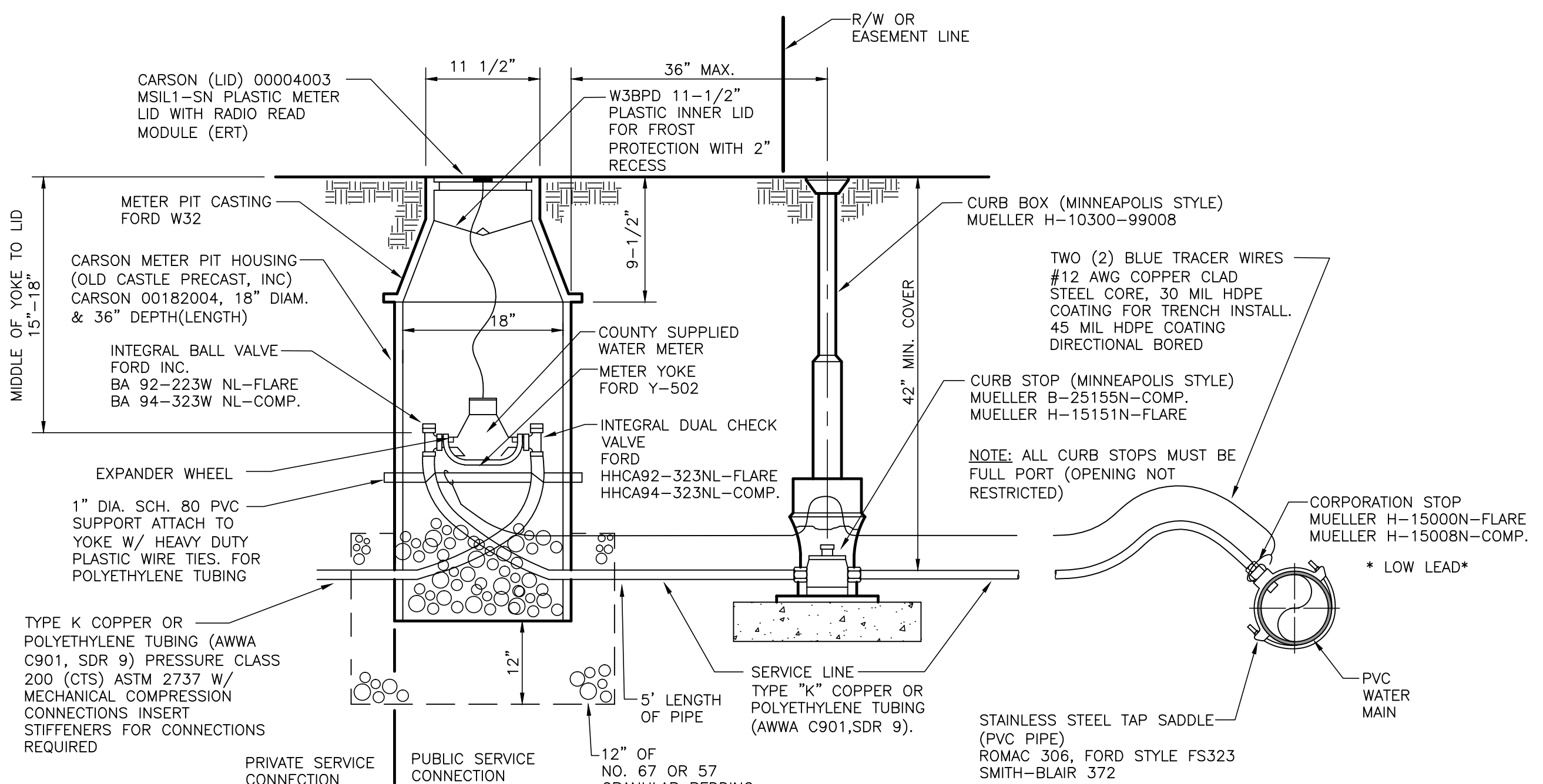
NOTE: QUANTITY & LOCATION SHALL BE CONFIRMED W/ LOCAL FIRE AUTHORITY



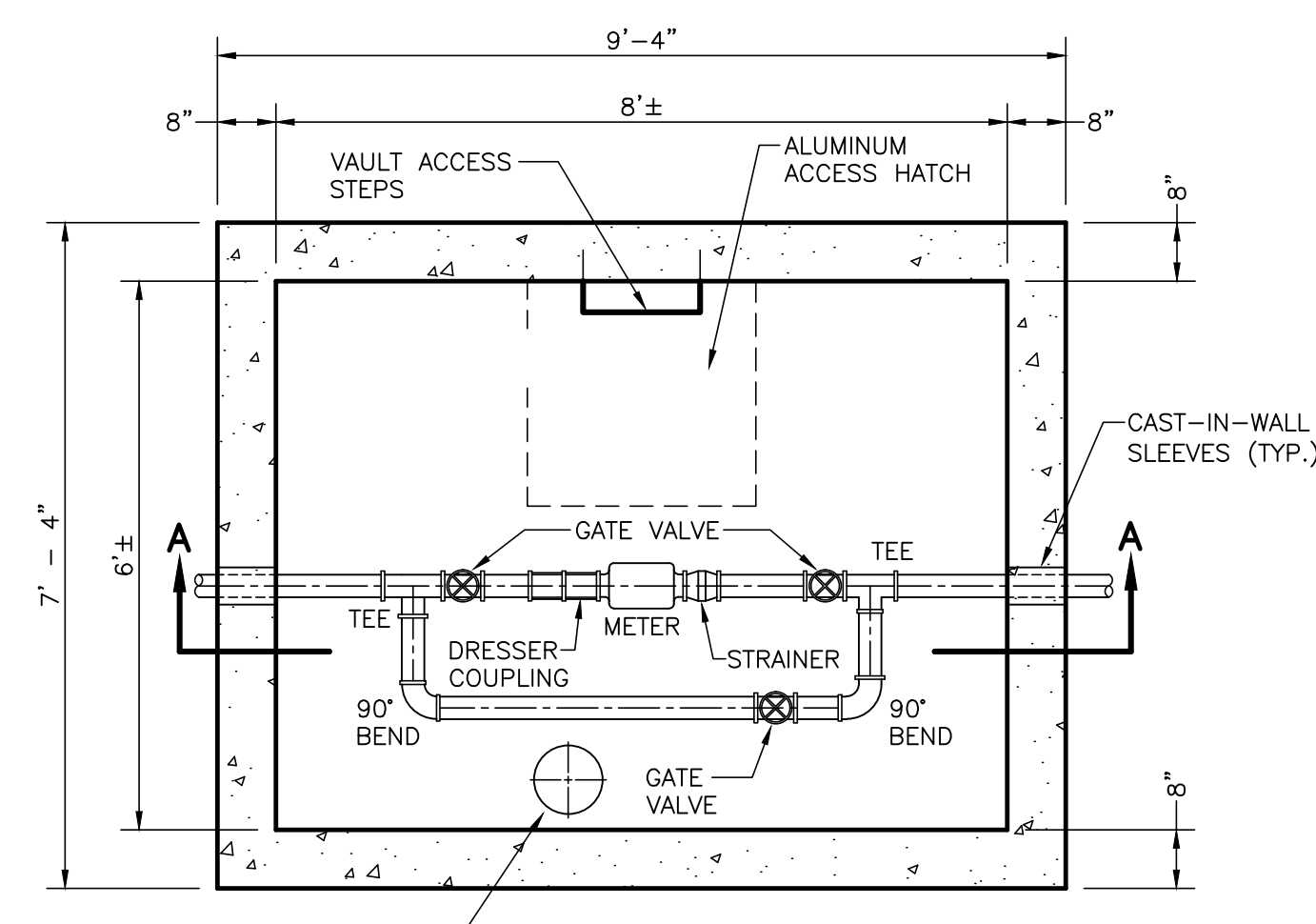
TOP PLAN
NOT TO SCALE



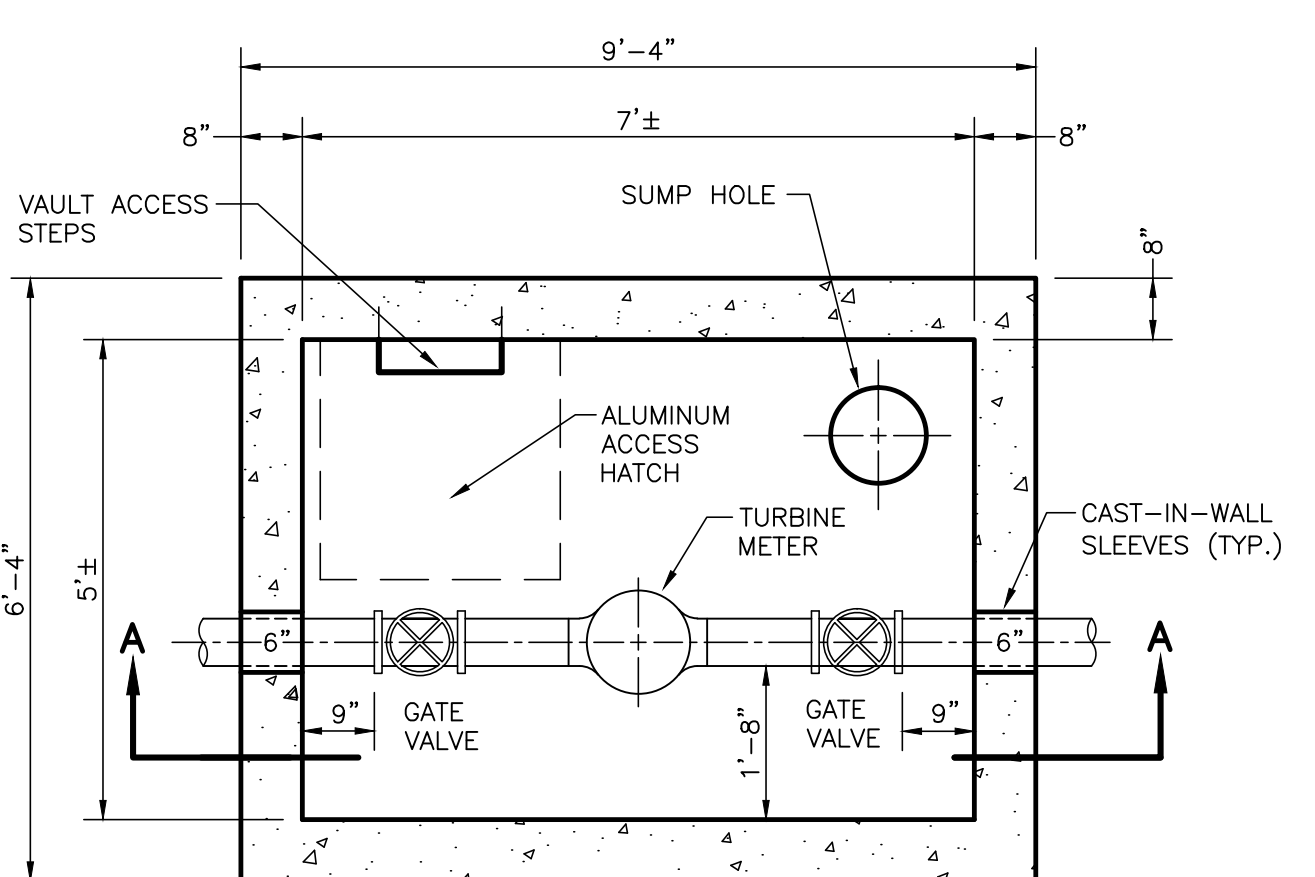
STANDARD WATER VALVE MANHOLE (FOR 16" MAINS AND LARGER)
NO SCALE



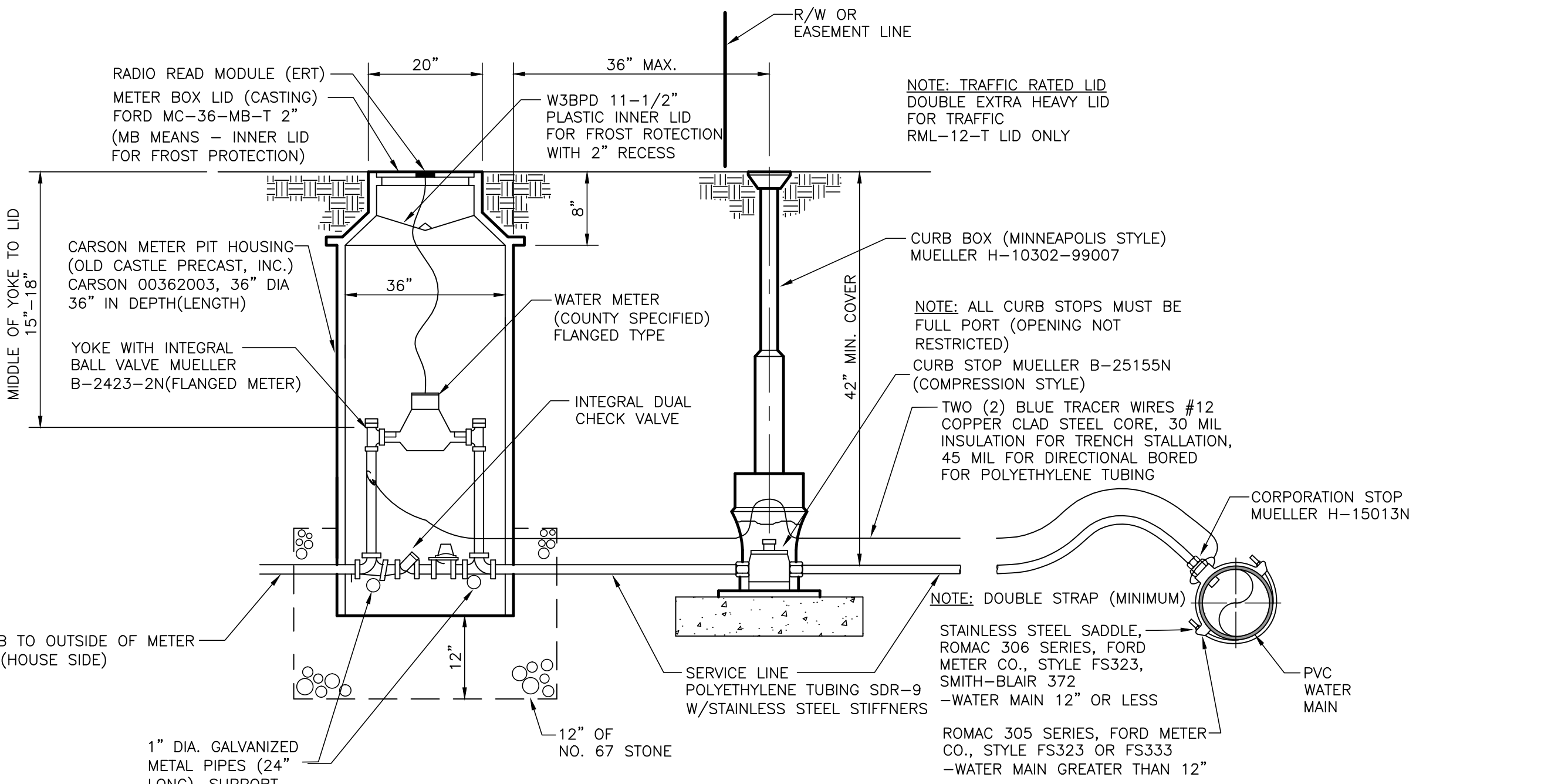
5/8" X 3/4" METER PIT SETTING
NO SCALE



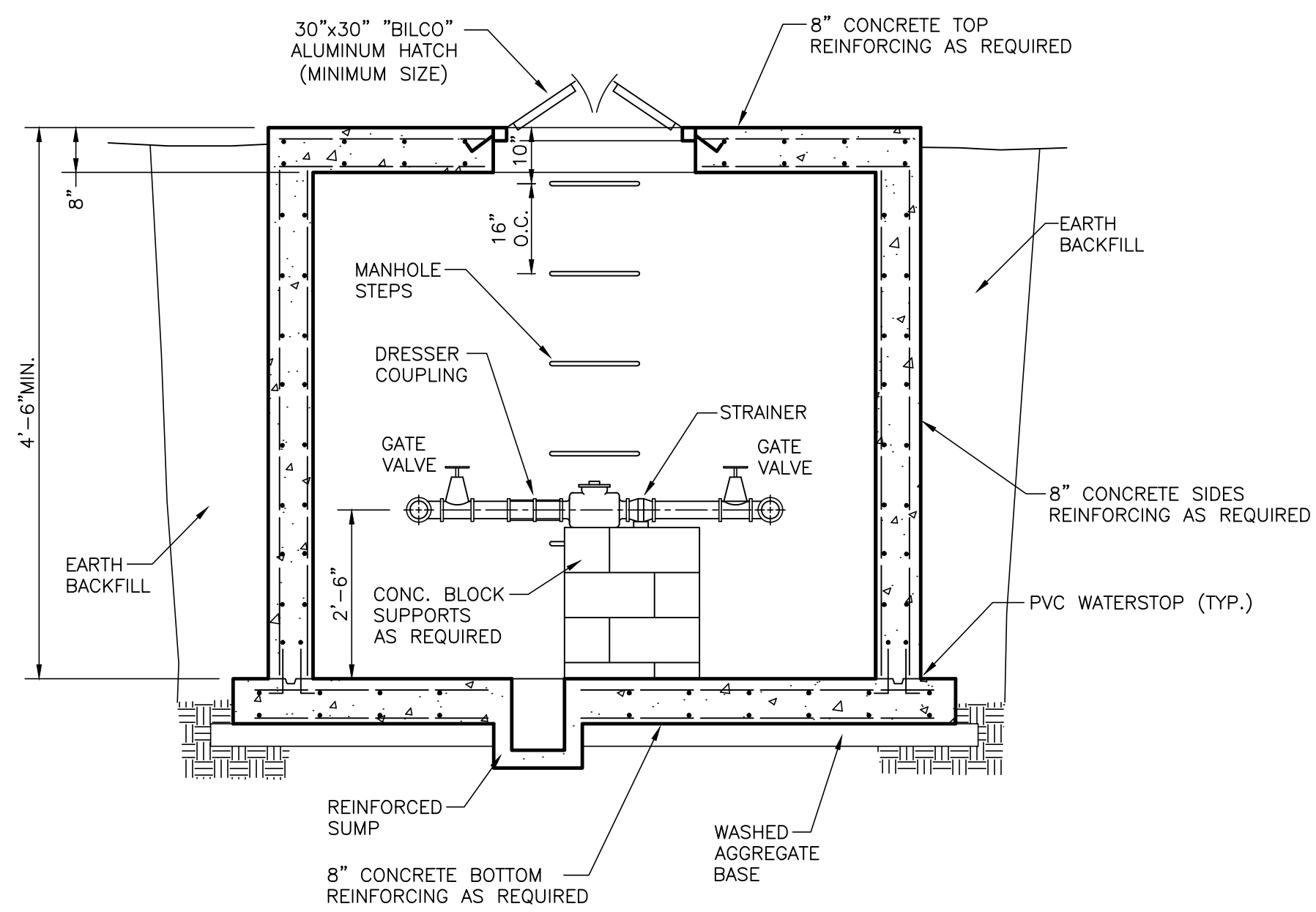
PIPING PLAN
NOT TO SCALE



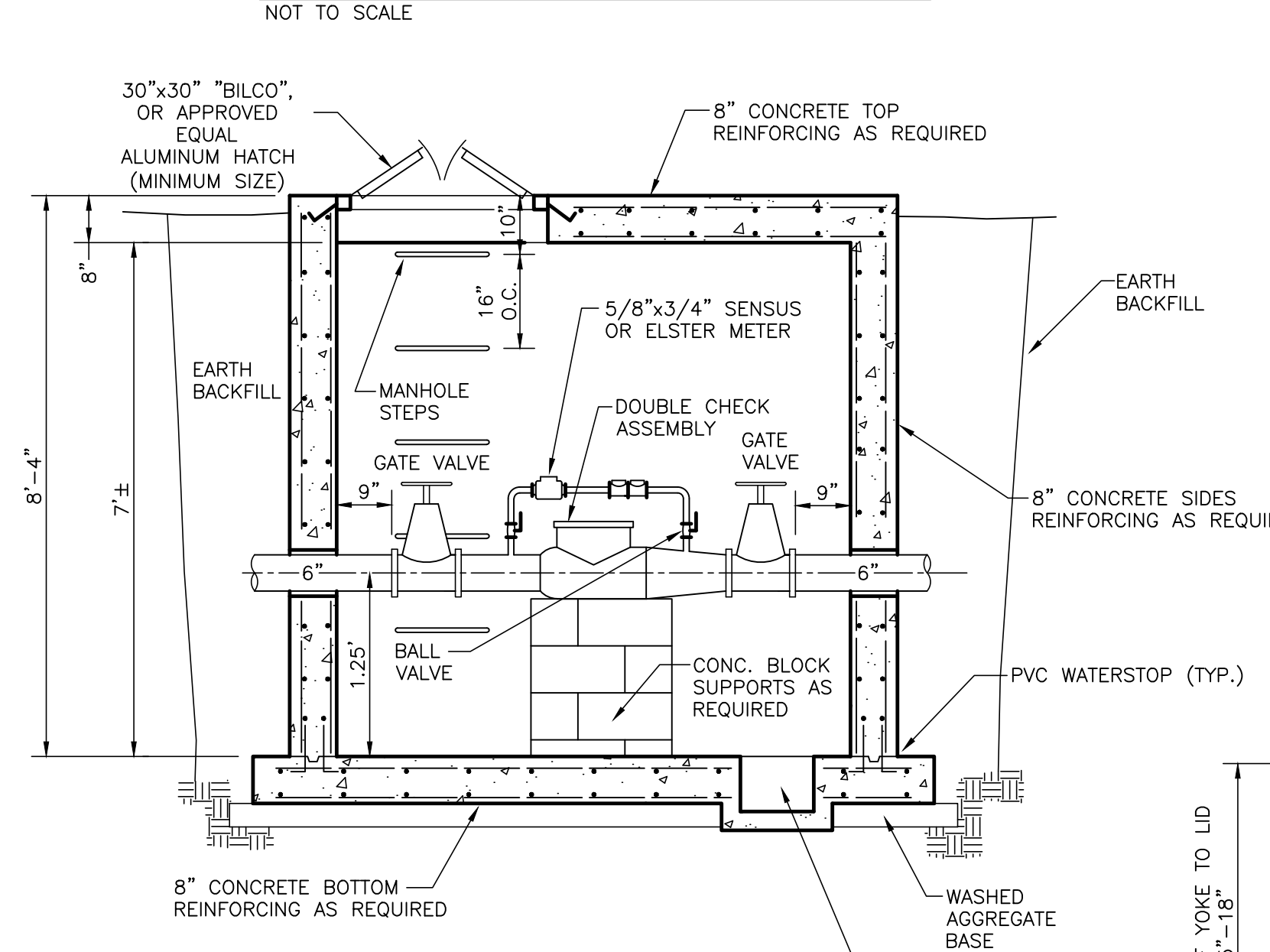
FIRE LINE DETECTOR CHECK PIPING PLAN
NOT TO SCALE



TYPICAL 1 1/2" OR 2" METER PIT SETTING
NO SCALE



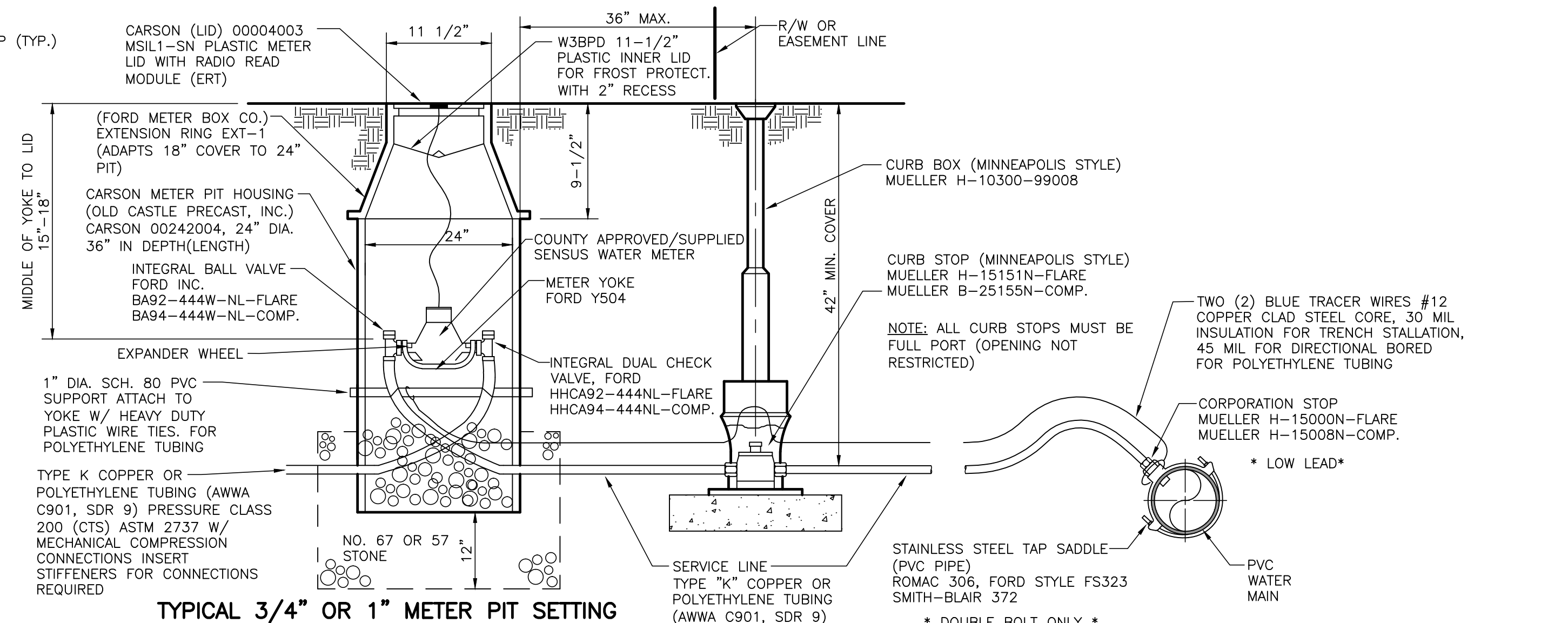
SECTION A-A
NOT TO SCALE



SECTION A-A
NOT TO SCALE

- GENERAL NOTES**
- ALL PIPING, VALVES, AND APPURTENANCES WITHIN VAULT ARE THE SAME DIAMETER/SIZE OF SERVICE LINE.
 - VAULTS FOR 8" DIAMETER SERVICE LINES AND LARGER SHALL REQUIRE A LARGER VAULT THAN THE ONE SHOWN, TO BE DETERMINED BASED ON LAYING LENGTH OF APPURTENANCE TO BE INSTALLED.
 - SHOP DRAWINGS FOR THE VAULT AND ALL APPURTENANCES MUST BE SUBMITTED FOR APPROVAL PRIOR TO THE ISSUANCE OF A PERMIT.
 - ALL VAULTS SHALL HAVE A CONCRETE FLOOR UNLESS OTHERWISE APPROVED BY THE OTTAWA COUNTY SANITARY ENGINEER.
 - ALL FLANGE SHALL BE PRE FAB OR MEGA FLANGE.

- GENERAL NOTES**
- HATCH: 30"x30" "BILCO" ALUMINUM (MINIMUM SIZE)
 - VAULT: 5'-0" WIDE X 7'-0" HEIGHT WITH SUMP.
 - SUMP: 12" DIAMETER x 9" DEEP SUMP HOLE.
 - GATE VALVES: 6" KENNEDY WITH NON RISING STEMS AND WITH WHEEL HANDLE.
 - DOUBLE CHECK DETECTOR CHECK ASSEMBLY: AMES 1048, e.g. 3000s OR APPROVED EQUAL. BACK FLOW DEVICE TO BE APPROVED BY OTTAWA COUNTY SANITARY ENGINEER.
 - A 2" FIP THREADED TEST PROT SHALL BE INSTALLED AFTER THE DOUBLE DETECTOR ASSEMBLY
 - ALL FLANGE SHALL BE PRE FAB OR MEGA FLANGE.



TYPICAL 3/4" OR 1" METER PIT SETTING
NO SCALE

GENERAL

1. ALL WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE OTTAWA COUNTY SEWER DISTRICT PUBLIC WATER AND WASTEWATER RULES AND REGULATIONS, TEN STATE STANDARDS, O.D.O.T. STANDARDS, AND THE REQUIREMENTS OF THE OHIO E.P.A. ALL CONTRACTORS INSTALLING WATER IMPROVEMENTS MUST BE LICENSED WITH THE OTTAWA COUNTY SANITARY ENGINEERING DEPARTMENT (O.C.S.E.).

2. PERMITS SHALL BE SECURED FOR WATER IMPROVEMENTS FROM THE O.C.S.E. PRIOR TO COMMENCING CONSTRUCTION. THE PROPERTY OWNER SHALL BE REQUIRED TO SECURE ALL REQUIRED PERMITS. COPIES OF SAID PERMITS SHOULD BE KEPT ON THE CONSTRUCTION SITE AND AVAILABLE FOR REVIEW AT ANYTIME. CONTRACTORS SHALL BE REQUIRED TO PROVIDE A VALID PERMIT NUMBER WHEN REQUESTING INSPECTIONS.

3. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE AND LOCAL SAFETY STANDARDS AND REGULATIONS. CONTRACTORS SHALL BE RESPONSIBLE FOR KEEPING THE CONSTRUCTION SITE SAFE FOR ITS EMPLOYEES, EMPLOYEES OF OTTAWA COUNTY, AND THE GENERAL PUBLIC.

4. ALL WATER IMPROVEMENTS SHALL BE INSPECTED AND APPROVED BY THE OTTAWA COUNTY SANITARY ENGINEERING FIELD OBSERVER PRIOR TO BACKFILLING THE IMPROVEMENTS. FORTY-EIGHT(48) HOURS NOTICE OF COMMENCING CONSTRUCTION SHALL BE GIVEN TO THE FIELD OBSERVER PRIOR TO STARTING WORK. O.C.S.E. NOTIFICATIONS:

FIELD OPERATIONS:
DANBURY WASTEWATER TREATMENT PLANT;
AND REGIONAL WATER DIST. SYSTEM
5783 E. VON GLAHN RD.
LAKESIDE/MARBLEHEAD, OHIO 43440
PHONE 419-734-5953
FAX 419-734-7072

OFFICE OPERATIONS:
OTTAWA COUNTY SANITARY
ENGINEERING (OFFICE)
315 MADISON ST. ROOM 105
PORT CLINTON, OHIO 43452
PHONE 419-734-6725
FAX 419-734-6858

5. OTTAWA COUNTY RESERVES THE RIGHT TO REQUIRE FIELD CHANGES THAT ARE NOT NOTED IN THE IMPROVEMENT DRAWINGS, APPROVAL LETTER(S), OR IN THE RULES AND REGULATIONS TO INSURE THE INTEGRITY AND COMPATIBILITY OF THE PUBLIC WATER AND WASTEWATER TREATMENT SYSTEMS.

6. CONNECTIONS OF DWELLINGS OR OTHER TYPE OF STRUCTURES SHALL NOT BE PERMITTED UNTIL THE WATER MAINS ARE INSTALLED, INSPECTED, AND APPROVED FOR USE UNLESS OTHERWISE STATED ON THE PERMIT ISSUED BY THE OTTAWA COUNTY SANITARY ENGINEERING DEPARTMENT. CROSS-CONNECTIONS WITH AUXILIARY WATER SOURCES ARE PROHIBITED. WHERE APPLICABLE, OHIO EPA APPROVED BACKFLOW PREVENTERS ARE REQUIRED WITH INSTALLATION AND TESTING IN ACCORDANCE WITH THE COUNTY'S BACKFLOW PREVENTION REGULATIONS.

7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ANY INFORMATION ON EXISTING WATER AND SANITARY SEWER IMPROVEMENTS OR ANY GENERAL FIELD INFORMATION PROVIDED BY THE O.C.S.E. PRIOR TO STARTING CONSTRUCTION OF THE IMPROVEMENTS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY RESTORING ANY DISTURBED AREAS AROUND EXISTING WATER AND/OR SANITARY SEWER INFRASTRUCTURE AS SOON AS REASONABLY POSSIBLE AFTER WORK HAS BEEN COMPLETED IN THAT IMMEDIATE AREA.

9. IT SHALL BE THE PROPERTY OWNER AND CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL NECESSARY PERMITS OR APPROVALS ARE SECURED FROM ANY OTHER GOVERNMENTAL AGENCY, ASSOCIATION, OR ORGANIZATION THAT MAY HAVE THEIR JURISDICTION EFFECTED BY THE WATER AND/OR SANITARY SEWER IMPROVEMENTS.

10. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE EXACT LOCATION OF ALL UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL NOTIFY ALL UTILITIES TO LOCATE THEIR EXISTING FACILITIES AT LEAST TWO (2) WORKING DAYS PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO UTILITIES CAUSED BY HIS OPERATIONS. THE OHIO UTILITIES PROTECTION SERVICE (OUPS) TOLL FREE TELEPHONE NUMBER IS: 1-800-362-2764.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO ALL O.S.H.A. SAFETY STANDARDS. OTTAWA COUNTY SHALL NOT BE HELD LIABLE FOR CONTRACTORS NOT ADHERING TO SAID STANDARDS.

WATERLINE NOTES:

1. ALL WATER LINES AND ALL APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE OTTAWA COUNTY REGIONAL WATER SYSTEM SPECIFICATIONS, TEN STATE STANDARDS, OHIO EPA, AWWA, AND THE DETAILS AND SPECIFICATIONS AS SHOWN ON THE WATERLINE DETAIL SHEET(S).

2. ALL WATER LINE PIPING FROM 4-INCHES IN DIAMETER TO 12-INCHES IN DIAMETER SHALL BE AWWA C-909, MOLECULARLY ORIENTED POLYVINYL CHLORIDE (PVC0) PRESSURE CLASS 150 WITH GASKETED JOINTS MEETING THE REQUIREMENTS OF AWWA C-1111/A-21.11.

3. PIPING SHALL BE LAID TO A DEPTH WHICH WILL INSURE A MINIMUM COVER ABOVE THE PIPE NOT LESS THAN FOUR (4) FEET FROM THE PROPOSED GRADES ON PUBLIC MAINS AND NOT LESS THAN THREE AND ONE HALF (3.5) FEET FROM THE PROPOSED GRADES ON PRIVATE MAINS.

4. ALL WATER LINE FITTINGS SHALL BE DUCTILE CAST IRON CONFORMING TO ANSI A21.10 WITH A MINIMUM CLASS OF 250 WITH MECHANICAL JOINT ENDS AS SPECIFIED IN ANSI A21.10.

5. A SIX (6) INCH HYDRANT ASSEMBLY SHALL INCLUDE THE TEE, VALVE, ANCHOR COUPLING, A STANDARD SIX (6) INCH HYDRANT, THRUST BLOCKING AND NECESSARY OFFSET TO SET HYDRANT TO PROPER GRADE. HYDRANTS SHALL BE KENNEDY MODEL K-80-D AND SHALL HAVE STAINLESS STEEL INTERNAL SHAFT, AND BE PAINTED RED WITH WHITE TOP AND CAPS. STORZ FITTINGS PER LOCAL FIRE DEPARTMENT REVIEW.

6. GATE VALVES 12-INCHES IN DIAMETER OR LESS SHALL BE COMPRESSION RESILIENT SEATED WITH MECHANICAL JOINTS AND NON RISING STEMS. VALVES SHALL TURN COUNTER-CLOCK WISE, "LEFT" WITH A TWO (2) INCH OPERATING NUT TO OPEN AND SHALL BE KEN SEAL II FWC509 AS MANUFACTURED BY KENNEDY.

7. VALVE BOXES SHALL BE PROVIDED FOR ALL GATE VALVES. VALVE BOXES SHALL BE BUFFALO STYLE, TYLER BRAND, LID SHALL READ "WATER".

8. CORROSION CONTROL THROUGH THE USE OF MAGNESIUM ANODES SHALL BE INSTALLED ON ALL DUCTILE CAST IRON COMPONENTS OF THE WATERLINE INCLUDING ALL FITTINGS, VALVES AND HYDRANTS. TEST STATIONS SHALL BE INSTALLED AT ALL OF THE ANODE LOCATIONS FOR MONITORING PURPOSES. (SEE DETAILED DRAWINGS)

9. MEGA-LUGS SHALL BE INSTALLED AT ALL BENDS, TEES, END CAPS, AND VALVES.

10. THE CONTRACTOR SHALL BE REQUIRED TO INSTALL A DETECTABLE TRACER TAPE AND TRACER WIRE DIRECTLY OVER AND IN THE CENTER OF THE PVC MAIN FOR ITS ENTIRE LENGTH TO PROVIDE A REFLECTION PATH (INDUCTIVE) TO DETERMINE PIPE ALIGNMENT AND LOCATION AFTER INSTALLATION. DETECTABLE TRACER TAPE SHALL BE THREE (3) INCHES WIDE PIGMENTED IN BLUE WARNING COLORS AND SHALL READ "BURIED WATERLINE BELOW". WARNING TAPE SHALL BE MADE OF TIGHT, HIGH DENSITY, CROSS LAMINATED PLASTIC FILMS. THE MAXIMUM DEPTH OF THE BURIED TAPE IS 18 INCHES. TWO (2) #12 AWG COPPER-CLAD STEEL, HIGH STRENGTH, WITH MINIMUM OF 30 MIL HDPE INSULATION, BLUE IN COLOR FOR OPEN TRENCH INSTALLATION AND 45 MIL HDPE INSULATION, BLUE IN COLOR FOR DIRECTIONALLY DRILLED/BORED INSTALLATION. TRACER WIRES SHALL BE TERMINATED INSIDE OF ALL VALVE BOXES, INCLUDING FIRE HYDRANT WATCH VALVES. CONTRACTOR SHALL PERFORM A CONTINUITY TEST ON TRACER WIRE TO ENSURE CONTINUITY OF THE TRACER WIRE OVER THE LENGTH OF THE ENTIRE WATERLINE.

11. MAINTAIN A MINIMUM OF 18 INCH VERTICAL SEPERATION AND MINIMUM 10 FEET HORIZONTAL SEPERATION BETWEEN ALL WATER MAINS AND ALL SANITARY SEWER, PER OCPA REQUIREMENTS. ALL OTHER UNDERGROUND UTILITIES REQUIRE A MINIMUM OF FIVE (5) FEET HORIZONTAL SEPERATION.

12. CONTRACTOR SHALL BE RESPONSIBLE FOR HYDROSTATIC PRESSURE TESTING AND DISINFECTION OF WATER MAINS AS REQUIRED BY THE OTTAWA COUNTY SANITARY ENGINEER PRIOR TO FINAL ACCEPTANCE. AFTER MAIN HAS BEEN DISINFECTED AND TESTED FOR LEAKAGE, BACTERIOLOGICAL SAMPLES SHALL BE COLLECTED PER COUNTY REGULATIONS.

13. THE OHIO ENVIRONMENTAL PROTECTION AGENCY REQUIRED CONFORMANCE TO THE LATEST EDITION OF THE "RECOMMENDED STANDARDS FOR WATER WORKS" (TEN STATE STANDARDS). THIS STANDARD SHALL BE EQUALLED OR EXCEEDED FOR WATER LINES. SPECIAL ATTENTION SHALL BE GIVEN TO THE FOLLOWING SECTIONS OF PART 8:

- 8.0.1. MATERIALS CONFORM TO AWWA STANDARDS
- 8.1.2. MINIMUM 6 INCH DIAMETER FIRE PROTECTION
- 8.5.3. MINIMUM 4 FEET GROUND COVER
- 8.5.5. PRESSURE TESTING AWWA C-600-RESPONSIBILITY*
- 8.5.6. DISINFECTION AWWA C-651-RESPONSIBILITY*
- 8.6.2. 10 FEET HORIZONTAL SEPERATION WATER MAIN/SEWER
- 8.6.3. 18 INCH VERTICAL SEPERATION WATER MAIN/SEWER
- 8.6.6. NO ENTRY AND/OR CONTACT WITH SEWER MANHOLE.

ANY DEVIATION FROM THE ABOVE WILL NOT BE PERMITTED UNLESS SPECIFICALLY INCLUDED IN THE SPECIFICATIONS OR OTHERWISE SHOWN ON THESE PLANS.

*NOTE: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM THE TEST PROPERLY. RESPONSIBILITY FOR SUPERVISION AND APPROVAL RESTS WITH THE WATER SUPPLIER OR LOCAL GOVERNMENTAL AGENCY.

IN CASES WHERE ONE OR MORE OF THE ABOVE MENTIONED OHIO EPA STANDARDS FALL SHORT OF LOCAL STANDARDS, THE LATTER SHALL GOVERN. ALL WATERLINE PIPING SHALL BE LAID TO A DEPTH WHICH WILL INSURE A MINIMUM COVER ABOVE THE PIPE NOT LESS THAN FOUR (4) FEET FROM THE PROPOSED GRADES.

WATER SERVICE LINES AND CONNECTIONS

1. SERVICE LATERALS: FOR 3/4" AND 1" DIAMETER SERVICE LINES TYPE "K" COPPER WITH FLARED OR COMPRESSION FITTINGS OR POLYETHYLENE TUBING AWWA C901. SDR9, PRESSURE CLASS 200 (CTS), ASTM D2737, WITH MECHANICAL COMPRESSION FITTINGS AND INSERT STIFFENERS FOR CONNECTIONS SHALL BE USED. FOR ALL 1 1/2" AND 2" DIAMETER SERVICE LINES POLYETHYLENE TUBING AWWA C901. SDR9, PRESSURE CLASS 200 (CTS), ASTM D2737, WITH MECHANICAL COMPRESSION FITTINGS AND INSERT STIFFENERS FOR CONNECTIONS SHALL BE USED.

2. SADDLES: SERVICE SADDLES ARE REQUIRED WHEN TAPPING ANY PVC MAIN LINE. ALL SERVICE SADDLES SHALL BE ALL STAINLESS STEEL, INCL. FLANGE, TYPE 304 GRADE 18-8 AND AS RECOMMENDED BY THE PIPE MANUFACTURER. SERVICE SADDLES SHALL BE A MINIMUM OF 6" WIDE WITH A DOUBLE BOLT. WELDS USED IN THE SADDLE CONSTRUCTION SHALL CONFORM TO ALL AWS CODES AND BE CHEMICALLY PASSIVATED. SERVICE SADDLES USED WITH 12" DIAMETER AND UNDER PVC PIPE SHALL BE ROMAC "306" SERIES, STYLE FS323 AS MANUFACTURED BY FORD METER BOX COMPANY OR APPROVED EQUAL.

3. CORPORATION STOPS: ALL SERVICES 3/4" TO 2" SHALL HAVE A CORPORATION STOP UNLESS OTHERWISE NOTED. ALL CORPORATION STOPS MUST BE FULL PORT VALVE (OPENING NOT RESTRICTED) CORPORATION STOPS SHALL BE:

3/4"-1" MUELLER COMPANY, MODEL H-15000N-FLARE OR MODEL H-15008N-COMP.

1 1/2"-2" MUELLER COMPANY, MODEL H-15013N

3" AND LARGER: MUELLER COMPANY, STAINLESS STEEL TAPPING SLEEVE (4"-24"), OR AS APPROVED BY THE COUNTY

4. CURB STOPS: ALL SERVICES 3/4" TO 2" SHALL HAVE A CURB STOP UNLESS NOTED. CURB STOPS SHALL BE:

3/4"-1" MUELLER COMPANY, MODEL H-15151N-FLARE OR MODEL B-25155N-COMP.

1 1/2"-2" MUELLER COMPANY, MODEL B-25155N (COMPRESSION STYLE)

3"-12" KENNEDY, "KEN SEAL II" GATE VALVE

5. CURB BOXES: EACH STOP SHALL BE PROVIDED WITH A CURB BOX. CURB BOXES SHALL BE:

3/4" MUELLER COMPANY, MODEL H-10300-99008 (MINNEAPOLIS STYLE). MINIMUM OF 54" EXTENDED LENGTH. LID SHALL READ "WATER"

1" MUELLER COMPANY, MODEL H-10300-99008 (MINNEAPOLIS STYLE). MINIMUM OF 54" EXTENDED LENGTH. LID SHALL READ "WATER"

1 1/2"-2" MUELLER COMPANY, MODEL H-10302-99007 (MINNEAPOLIS STYLE). MINIMUM OF 54" EXTENDED LENGTH. LID SHALL READ "WATER"

3" AND LARGER: TYLER BRAND (BUFFALO STYLE) OR EQUAL AND AS APPROVED. LID SHALL READ "WATER"

6. METER PITS: ALL COUNTY, OWNED, OPERATED, AND MAINTAINED METER PITS SHALL BE LOCATED WITHIN 3 FEET OF THE CURB STOP AND BOX UNLESS OTHERWISE APPROVED BY THE SANITARY ENGINEER AND SHALL MEET THE FOLLOWING SPECIFICATIONS:

*5/8"-3/4" CARSON METER PIT HOUSING (OLD CASTLE PRECAST, INC) CARSON 00182004, 18" DIAMETER, 36" DEPTH(LENGTH) WITH FORD W32 METER PIT CASTING. CARSON (LID) 00004003 MS-1L1-DN PLASTIC METER LID WITH RADIO READ MODULE (ERT).

*3/4"-1" CARSON METER PIT HOUSING (OLD CASTLE PRECAST, INC.) CARSON 00242004, 24" DIAMETER, 36" DEPTH(LENGTH) WITH FORD METER BOX CO. EXTENSION RING EXT-1 CASTING. CARSON (LID) 00004003 MS-1L1-SN PLASTIC METER LID WITH RADIO READ MODULE (ERT).

*1 1/2"-2" CARSON METER PIT HOUSING (OLD CASTLE PRECAST, INC.) CARSON 00362003, 36" DIAMETER, 36" DEPTH(LENGTH) WITH 2" METER BOX LID (CASTING) FORD MC-36-MB-T

*3" AND LARGER PRECAST CONCRETE METER VAULT 8.0'x 6.0' +/- (PER COUNTY REVIEW).

7. METER SETTING: THE METER SETTING SHALL MEET THE FOLLOWING SPECIFICATIONS:

*5/8", 3/4" & 1" - FORD METER BOX CO., Y-500 SERIES METER YOKE. SHALL HAVE INTEGRAL ANGLE YOKE BALL VALVE INLET. SHALL HAVE INTEGRAL ANGLE DUAL CHECK VALVE OUTLET.

*1 1/2"-2" - MUELLER B-2423-2N SERIES METER SETTER. SHALL HAVE INTEGRAL ANGLE YOKE BALL VALVE. SHALL HAVE ANGLE DUAL CHECK VALVE OUTLET.

*3" & LARGER: AS AGREED UPON BY THE METER MANUFACTURER AND THE COUNTY. TYPICALLY A FLANGED CONNECTION ON EACH END. SHALL HAVE AN INLET AND OUTLET GATE VALVE (SEE CURB VALVES). SHALL HAVE AN APPROVED DUAL TYPE CHECK VALVE (SEPARATE)

8. WATER METERS: THE OTTAWA COUNTY REGIONAL WATER SYSTEM UTILIZES A RADIO READ METERING SYSTEM AND ALL METERS ARE TO REGISTER IN U.S. GALLONS. THE METERS MEET THE FOLLOWING SPECIFICATIONS:

*5/8"-1 1/2" INVENSYS, MODEL SR POSITIVE DISPLACEMENT METERS

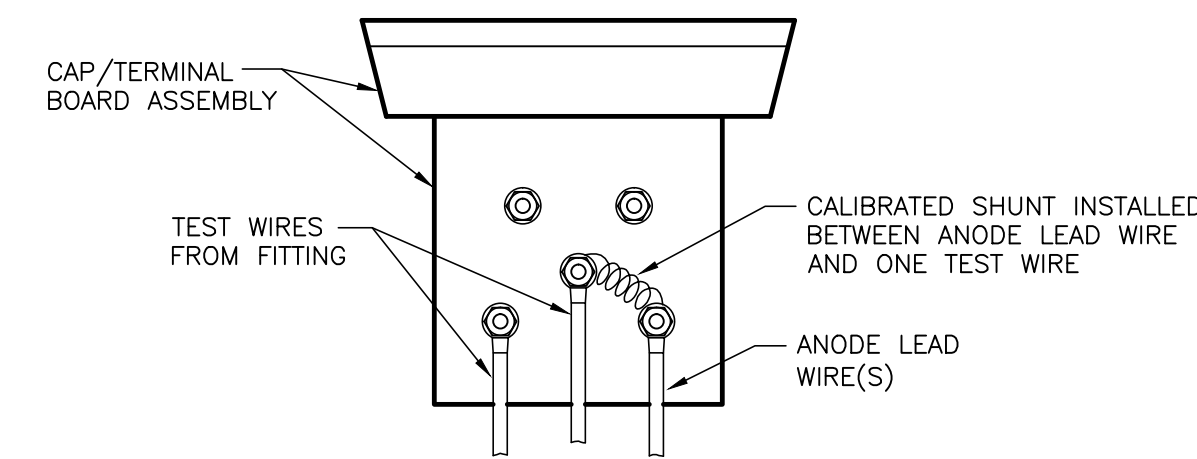
*2"-6" INVENSYS, MODEL SRH, COMPOUND METER

9. REMOTE SYSTEM- A REMOTE SYSTEM. INVENSYS MODEL ECR WP,TR-PL WITH FACTORY ASSEMBLED ITRON AND END CAP AND CABLE FOR USE WITH A 50 W ITRON RADIO READ PIT ERT SYSTEM AND COMPATIBLE WITH THE ONE IN USE BY THE OTTAWA COUNTY SANITARY ENGINEERING DEPARTMENT SHALL BE FURNISHED AND INSTALLED WITH EACH WATER METER.

MAGNESIUM ANODE SCHEDULE

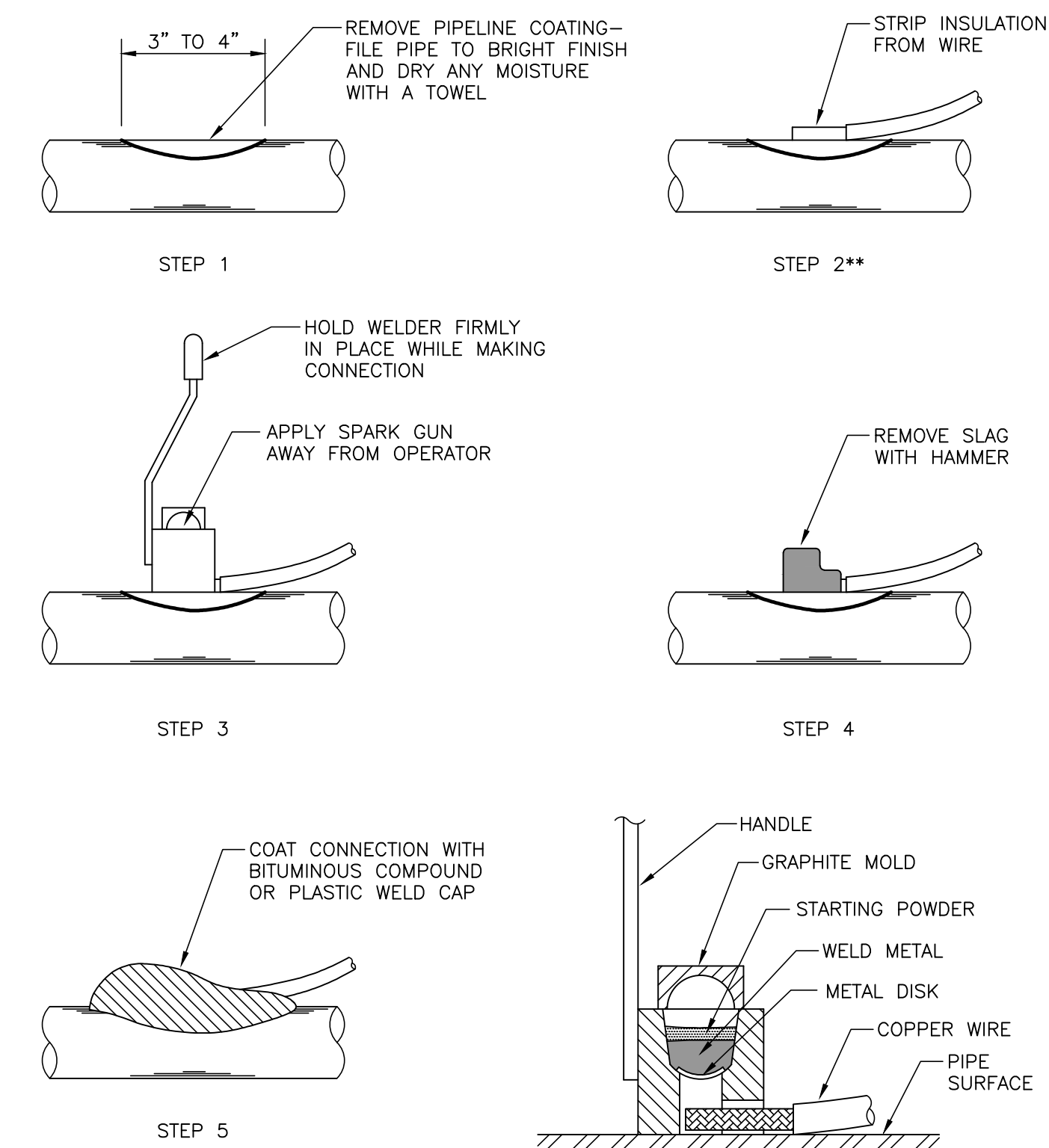
OTTAWA COUNTY REGIONAL WATER SYSTEM
OTTAWA COUNTY, OHIO

No.	DESCRIPTION OF COMPONENTS	32# MAGNESIUM ANODE NO. OF ANODES REQUIRED
PVC PIPE		
1.0	8" MAINLINE VALVE	1
2.0	12" MAINLINE VALVE	1
3.0	HYDRANT ASSEMBLY (TEE, VALVE, COUPLING AND HYDRANT)	2
4.0	8" & 12" FITTINGS (TEE, BENDS, ETC...)	1
DUCTILE IRON PIPE		
5.0	8" MAINLINE VALVE (INCLUDES 2 PIPE JOINTS - 1 EACH SIDE OF VALVE)	2
6.0	12" MAINLINE VALVE (INCLUDES 2 PIPE JOINTS - 1 EACH SIDE OF VALVE)	3
7.0	16" MAINLINE VALVE (INCLUDES 2 PIPE JOINTS - 1 EACH SIDE OF VALVE)	3
8.0	20" MAINLINE VALVE (INCLUDES 2 PIPE JOINTS - 1 EACH SIDE OF VALVE)	4
9.0	24" MAINLINE VALVE (INCLUDES 2 PIPE JOINTS - 1 EACH SIDE OF VALVE)	4
10.0	HYDRANT ASSEMBLY (TEE, VALVE, AND HYDRANT) 8" & 12" PIPE	4
11.0	HYDRANT ASSEMBLY (TEE, VALVE, AND HYDRANT) 16" PIPE	4
12.0	HYDRANT ASSEMBLY (TEE, VALVE, AND HYDRANT) 20" PIPE	5
13.0	HYDRANT ASSEMBLY (TEE, VALVE, AND HYDRANT) 24" PIPE	5
14.0	16"-24" DUCTILE IRON PIPE JOINTS (18' LENGTHS) IN LOW SOIL RESISTIVITY AREAS. (DEPENDS ON SOIL RESISTIVITY & PIPE DIAMETER)	1-2



**TYPICAL TEST STATION
TERMINAL BOARD**
NO SCALE

NOTE:
THIS EXAMPLE IS ONE CONFIGURATION
TO CONNECT ANODES THROUGH A SHUNT.
OTHER CONFIGURATIONS ARE POSSIBLE.



** WHEN NO. 12 TO NO. 10 AWG SOLID WIRE IS USED IT WILL BE NECESSARY TO INSTALL A COPPER SLEEVE (CAB-133-1H) OVER THE BARE SECTION OF WIRE BEFORE THE CONNECTION IS ATTEMPTED. WIRE SHOULD PROTRUDE 1/8" BEYOND END OF SLEEVE

1. WHEN USING No.12 TO No. 10 AWG SOLID WIRE, IT WILL BE NECESSARY TO INSTALL A COPPER SLEEVE (CAB-133-1H) OVER THE BARE END OF THE WIRE AND CRIMP IN PLACE BEFORE ATTEMPTING TO MAKE THE CONNECTION. FOR No.10 AWG STRANDED WIRE, USE CAB-133-1K. THE WIRE SHOULD PROTRUDE AT LEAST 1/8" FROM THE END OF THE SLEEVE.
2. INSERT THE CONDUCTOR INTO MOLD NOTING ANY SPECIAL INFORMATION UNDER "POSITIONING" FOR APPLICATION TYPE IN THE MANUFACTURERS INSTRUCTIONS PACKAGED WITH THE WELDER.
3. INSERT STEEL DISK IN BOTTOM OF CAVITY INSIDE MOLD. DUMP THE WELD METAL INTO MOLD BEING CAREFUL NOT TO UPSET THE STEEL DISK. TAP THE BOTTOM OF THE TUBE TO LOOSEN ALL THE STARTING POWDER AND SPREAD IT EVENLY OVER THE WELD METAL. PLACE A SMALL AMOUNT OF STARTING POWDER ON THE TOP EDGE OF MOLD UNDER COVER OPENING FOR EASY IGNITION.
4. CLOSE COVER AND IGNITE WITH THE FLINT GUN. MOVE FLINT GUN AWAY QUICKLY TO PREVENT FOULING. IF FLINT GUN SHOULD BECOME FOULED, SOAK IT IN HOUSEHOLD AMMONIA.
5. AFTER IGNITION, HOLD THE WELDER IN PLACE FOR A MOMENT TO ALLOW THE WELD TO SOLIDIFY. AFTER THE WELD HAS COOLED, REMOVE THE SLAG WITH A CHIPPING HAMMER OR WIRE BRUSH.
6. COAT THE CONNECTION AND THE ENTIRE PREPARED SURFACE WITH BITUMASTIC COMPOUND (KOPPERS No.50 OR EQUAL) OR PLASTIC WELD CAPS.
7. REMOVE ALL SLAG FROM THE WELDER BEFORE MAKING THE NEXT WELD. CLEAN THE COVER EVERY 6 TO 10 WELDS.
8. WET OR DAMP MOLDS WILL PRODUCE POROUS WELDS. MOLDS MUST BE DRIED OUT BEFORE ATTEMPTING TO WELD.
9. CONNECTIONS ARE TO BE PLACED A MINIMUM OF 3 INCHES APART. UNSUCCESSFUL WELDS ARE TO BE ABANDONED AND MOVED TO ANOTHER PREPARED SURFACE NOT LESS THAN 3 INCHES AWAY.

PROCEDURE FOR MAKING CADWELD TYPE "HA" CONNECTIONS