

STANDARD WATER SPECIFICATIONS & INFORMATION

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04/22/21

NOTICE! IMPORTANT INFORMATION...PLEASE READ!

This document contains extremely important information concerning the installation and maintenance of your private water service line. This entire document must be read and comprehended prior to installing or repairing your water service line. All requirements and recommendations contained herein are for YOUR benefit to help control water loss and monthly water bill costs.

THE PROPERTY OWNER IS RESPONSIBLE FOR ALL WATER THAT PASSES THROUGH THE WATER METER (at the standard rate) REGARDLESS IF THE WATER WAS USED, LOST, OR WASTED. Only the highest quality material and workmanship should be used when installing or repairing water service lines. All specified material or recommendations contained herein should be followed to significantly reduce the potential for water loss and additional operational costs.

A permit must be secured with the Sanitary Engineering Department prior to installing/connecting or repairing a water service line. *The issuance of a permit from the Sanitary Engineering Department does not relieve the permit holder of the responsibility of securing permits/approvals from the governmental agencies or private agencies that may be affected by the scope of work under the water permit. Permission must be secured prior to working in public or private right-of-ways or easement areas (i.e. Ottawa County Engineer's office, O.D.O.T., Townships, Villages, private associations...). The Ohio Utilities Protection Service (O.U.P.S.) shall also be contacted prior to excavating.*

Permits shall be valid for 180 days from the date of issuance. The expiration date of the permit shall be noted on the permit issued. If a permit expires and work has not been completed, all work shall be stopped by the project observer and the property owner or agent shall be required to complete an application for permit renewal provided by the Sanitary Engineering Department and submit it along with a permit renewal fee and any other applicable equalization fees and charges.

The contractor/installer shall verify all locations, elevations, and grades in the field prior to excavation. Any problems shall be reported to the Sanitary Engineering Department prior to construction. 24 hour notice must be given to the Sanitary Engineering Department prior to the start of construction of the water improvements.

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5.01 SERVICE LINE SPECIFICATIONS

- A. A water "service line" is the combination of a service connection (public portion) and a service lateral (private portion). A service connection is the conduit which conveys water from the public water main to the curb stop/meter pit (property line). A service lateral is the privately owned conduit which conveys water from the meter pit (located within three [3] feet of the property line) to the structure to be serviced.
- B. The service connection (public) portion of the service line shall be installed in strict accordance with these specifications as duly noted throughout this Section. It is required that the service lateral (private) portion of the service line be installed in accordance with the specifications of these Rules and Regulations, unless otherwise provided for in these "Rules and Regulations."

1. Property owners or licensed contractors installing/connecting a new service connection (public portion), including all public appurtenances, to a public main shall guarantee the workmanship and materials of said service connection and appurtenances for a period of one (1) year from the date of final inspection by the O.C.S.E. project observer. In the event a problem occurs within the one (1) year warranty period, the installer and/or property owner shall make all necessary repairs as soon as reasonably possible. If any problems occur that constitute an emergency which may jeopardize the public system, the O.C.S.E. may elect to make the emergency repairs and invoice the original installer of the service connection and/or the property owner for all labor, equipment, and materials cost incurred by the County. Said invoice shall be due and payable by the installer and/or property owner within 30 days of the date of said invoice. Invoices not paid in the designated time period shall be assessed a 10% penalty.
 2. Installation of service connections (public portion) requiring polyethylene tubing AWWA C901, SDR 9, Pressure Class 200 (CTS), ASTM D2737 shall have two (2) tracer wires, which shall be blue in color, directly over and on the center of the service connection for its entire length to provide for an inductive path to determine pipe location after installation. The wires shall be #12 AWG Copper Clad Steel Core, High Strength, with minimum 30 mil HDPE insulation thickness for lines installed by open-cut trenching methods. Directional drilled/bored lines (where permitted) shall have #12 AWG Copper Clad Steel Core, Extra High Strength with minimum 45 mil HDPE insulation thickness.
- C. Installation and maintenance of water service laterals (private portion) shall be the responsibility of the property owner. All construction shall be inspected for documentation purposes and to ensure integrity is maintained to the public water system. The property owner is responsible for all water, at the standard rate, that passes through the meter whether it is used, lost, wasted, or stolen. Therefore, the property owner shall ensure that the highest quality service lateral is installed to service the property. The installation or repair of private service laterals or private water mains shall be completed by the property owner or a professional plumber or contractor. If a professional plumber or contractor is utilized, it is highly recommended that you utilize a professional who is licensed (and bonded) by the Sanitary Engineering Department. A complete list of currently licensed contractors is available upon request from the Department.
- The installation of new service connections (public portion), public water mains, or any appurtenances of the public water distribution system (to be owned and operated by the County) shall be completed by a contractor who is licensed with the Sanitary Engineering Department unless the contractor is directly under contract with the Board of Commissioners to complete the work.
- D. Property owners installing or repairing service lines (or parts thereof) or increasing the use of the property shall be required to secure a permit with the Sanitary Engineering Department regardless if it is the public or private portion (See Chapter III, Section 3.02).
- E. All work shall be inspected by an authorized representative of the Sanitary Engineer. The property owner, or contractor, shall give the Department twenty-four (24) hours notice prior to commencing work. No work shall be covered until the project observer has reviewed, documented, and approved the work. Any work

covered prior to approval shall be uncovered as directed by the project observer by the property owner or contractor at their expense.

- F. All locations of service lines and appurtenances shall be subject to the approval of the Sanitary Engineer or his authorized representative.
- G. The service line shall not be installed within ten (10) feet horizontal distance of a sanitary sewer. If the ten (10) feet horizontal distance cannot be maintained, one of the following conditions shall be met:
 - 1. The service line shall be installed in a separate trench from the sanitary sewer and shall be maintained at eighteen (18) inches (minimum) vertical distance above the crown of the sanitary sewer (while maintaining service line depth requirements); or,
 - 2. The sanitary sewer pipe shall be constructed of (or encased in) water line quality pipe which will withstand a 50 p.s.i. water pressure test (i.e. PVC SDR 21 or 26).

The water service line shall also maintain a five (5) feet minimum horizontal distance from all other utilities (other than sanitary sewer).

- H. **Service Connections** (public portion) and **Public Water Mains** to be owned and operated by the County shall meet the following standard specifications (AWWA approved material):

NOTE: All brass fittings installed after January 4, 2014 shall be “No Lead” as defined by USEPA.

SIZE: Service connections shall not be less than three quarter (3/4”) of an inch in diameter.

DEPTH: Service connections shall have forty-eight (48) inches of cover over the pipe. In no case shall the service connection or main have less cover.

SERVICE SADDLES:

One-hundred (100) percent stainless steel service saddles as specified shall be required when tapping any PVC water main and have a minimum of two (2) bolts:

3/4” - 2” FORD METER CO., Romac 306 Series, FORD Style FS323
SMITH-BLAIR 372
- Double bolt only
- When water main is 12” diameter or less

FORD METER CO., Romac 305 Series, FORD Style FS323
& FS333
- When water main is greater than 12” diameter
- With minimum stainless steel double strap

* Or Equivalent as approved by Sanitary Engineering Department.

CORPORATION STOPS:

3/4” - 1” Mueller Company, Model H-15000N – Flare
Mueller Company, Model H-15008N – Compression

1 1/2” - 2” Mueller Company, Model H-15013N

3" & larger Mueller Company, Stainless Steel Tapping Sleeve (4"-24")
or as approved by the Department.

* Or Equivalent as approved by Sanitary Engineering Department

SERVICE CONNECTION AND PUBLIC WATER MAIN PIPE:

- $\frac{3}{4}$ " - 1" Type "K" Copper with flared or compression fittings only or Polyethylene Tubing (AWWA C901, SDR 9)
- Pressure Class 200 (CTS) ASTM D2737
- Mechanical compression connections
- Insert stiffeners for connections required
- 1 $\frac{1}{2}$ " - 2" Polyethylene Tubing (AWWA C901, SDR 9)
- Pressure Class 200 (CTS) ASTM D2737
- Mechanical compression connections
- Insert stiffeners for connections required
- 3" & larger PVC ASTM D2241, SDR 21 (3" diameter pipe only)
PVCO AWWA C-909 (4" and larger diameter),
- Gasketed joints (AWWA C111/A21.11)

CURB STOPS: All Curb Stops Shall be "Full Port" Valves (opening not restricted)

- $\frac{3}{4}$ " - 1" Mueller Company, Model H-15151N (Minneapolis Style)
- With copper tubing flared connections
Mueller Company, Model B-25155N
- CTS compression connection
- 1 $\frac{1}{2}$ " - 2" Mueller Company, Model B-25155N (Compression Style)
- With inlet to match the service connection pipe
- With outlet to match copper tubing
- 3" - 12" Kennedy, "Ken Seal II" Gate Valve
- Resilient wedge seated gate valve w/non-rising stems

CURB BOXES:

- $\frac{3}{4}$ " 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 $\frac{1}{2}$ " - 2" Mueller Company, Model H-10302-99007 (Minneapolis Style)
- Minimum of 54" extended length
- Lid shall read "WATER"
- 3" & larger Tyler Brand (Buffalo Style) or equal and as approved
- Lid shall read "WATER"

- I. It is highly recommended that **Service Laterals** (private portion) and **Private Water Mains** be installed in accordance with the following standard specifications to help ensure “long term” quality of the private systems. Although it is not recommended, property owners may vary, at their own discretion, from this list of standard specifications unless otherwise noted. If the property owner chooses to vary from the standard specifications, it is required that all materials and methods used meet, at a minimum, A.W.W.A. standards. The project observer will not disapprove variations unless it jeopardizes the integrity of the public water system or the materials or methods used do not meet A.W.W.A. standards. The project observer shall make note of all variations on a standard form which will be kept in the property’s (customer) file for future reference.

SIZE: Service laterals shall not be less than three quarters (3/4”) of an inch in diameter (No variations permitted).

DEPTH: For superior frost protection and increased protection from accidental damaging of private water mains and service laterals, forty-two (42) inches of cover shall be over the water conduit. Although it is not recommended, the property owner may vary, at their own discretion; from the forty-two (42) inch depth requirement if a “Depth Variance Form” is signed by the property owner (see Appendix “C”).

SERVICE LATERAL AND PRIVATE WATER MAIN PIPE:

3/4” - 1” Type “K” Copper with flared or compression fittings; or, Polyethylene Tubing AWWA C901, SDR 9
- Pressure Class 200 (CTS) ASTM D2737
- Mechanical compression connections
- Insert stiffeners for connections

1 1/2” - 2” Polyethylene Tubing AWWA C901, SDR 9
- Pressure Class 200 (CTS) ASTM D2737
- Mechanical compression connections
- Insert stiffeners for connections

3” & larger PVC ASTM D2241, SDR 21 (3” diameter pipe only)
PVCO AWWA C-909 (4” and larger diameter),
- Gasketed joints (AWWA C111/A21.11)

- J. **Meter Pits and Meter Pit Appurtenances** to be owned and operated by the County shall meet the following standard specifications:

LOCATION: All County read, owned, operated, and maintained meter pits shall be installed within three (3) feet of the curb stop/box (property line) unless otherwise approved by the Sanitary Engineer based on a location conflict.

3/4” - 1” Carson Meter Pit Housing (Old Castle Precast, Inc.)
- 5/8”, Carson 00182004, minimum 18” diameter and 36” depth (length)
- 3/4” & 1”, Carson 00242004, minimum 24” diameter and 36” in depth (length)
- 4” diameter cut outs in bottom to accommodate service line

5/8” Meter Box Covers, Inc. (M.B.C.), Model M32W frame/lid

	-Inner lid for Frost Protection with 2" recess, W3BPD 11- 1/2" Plastic
3/4" – 1"	Ford Meter Box Co., W32 with Extension Ring-EXT -1 -Lid opening shall be 11 1/2" in diameter minimum -Minimum 10" high "hat shaped" frame casting Carson (lid), 00004003 -MS-1L1-SN plastic meter lid w/radio read module -Inner lid for frost protection with 2" recess, W3BPD 11-1/2" Plastic
1 1/2" - 2"	PVC pipe or reinforced concrete pipe material Carson 00362003 - minimum 36" in diameter and 36" in depth (length) Ford Meter Box, Co. Model MC-36-MB-T for 2" -Inner Lid for frost protection -Radio reading ERTs hole (1 27/32" or 1 7/8")
3" & larger	Precast concrete manhole ASTM C478; or, Precast concrete vault ASTM C858 or ASTM C857 -Typical internal dimensions shall be 7'- 6" x 6'- 6" unless otherwise approved by the Operations Manager - shall have a concrete "solid" bottom - shall have water tight boots where pipes go through walls -Piping shall be ductile iron -East Jordan Model 1670 frame/lid or approved equal -Shall be able to accommodate a radio read ERTS for each meter in the manhole or vault. -Radio reading ERTS hole (1 27/32" or 1 7/8") -Lid shall read "WATER METER" or "WATER"

METER SETTING:

5/8", 3/4", & 1"	FORD METER BOX CO., Y-502 or Y-504 meter yoke - Shall have integral angle yoke ball valve inlet - Shall have cartridge style angle dual check valve outlet
1 1/2" - 2"	FORD METER BOX CO., 70 series copper 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)

METERS:

SEE SECTION 5.08 FOR METER SPECIFICATIONS

- K. The following are **Installation Standards** for water mains and service lines.
1. Service lines 3/4" - 3" in diameter shall be bedded with fine granular material (fine dirt, sand, fine stone) free of lumpy, frozen, sharp, or other large material that may cause damage to the service line.

Service lines and mains of four (4) inches in diameter or larger shall be installed as recommended by the pipe manufacturer. All service lines and mains shall be required to be bedded with at least four (4) inches of fine granular material (as described above) when the service line or main is being installed in areas with rock. The project observer shall have final determination in whether the bedding material meets the requirements set forth in this paragraph.

Water main and service line trenches shall be backfilled with material free of lumpy, frozen, sharp, or other large material that may cause damage to the pipe. Extreme care shall be taken when backfilling the trench so as to not damage the pipe.

Granular material used for bedding and backfill over, under, around the water line shall contain less than 1% gypsum by weight. The contractor shall supply the county with certification, which states the percentage of gypsum contained in the backfill material being used on the job. During construction random samples may be collected by the county as it is being placed in the trench. Each sample may be tested by the county at an independent laboratory. If the granular material has more than 1% gypsum the County shall have the right to require the contractor to remove and replace, with acceptable material, to the point which the last approved sample was collected.

2. Although it is not recommended, existing private water mains and service laterals may be used by property owners at their own risk/discretion. The property owner is responsible for all water loss costs after the meter at the standard rate regardless of service line materials used or whether the water is used, lost, stolen, or wasted.
3. Soldered connections are not recommended outside the building foundation, but their use will not be disapproved. No lead or lead soldered connections shall be allowed to be connected to any portion of the public or private water distribution systems.
4. All new service lines shall be installed (or caused to be installed) by the property owner. If the property owner hires a contractor to install the service line, the contractor installing the service connection (public portion) shall be licensed with the Sanitary Engineering Department. Although a non-licensed contractor may install the service lateral (private portion), it is highly recommended that the property owner hire a contractor who is licensed (and bonded) with the Department.

SERVICE CONNECTION (TAP): For standard $\frac{3}{4}$ " and 1" service connections, the property owner's licensed contractor shall excavate and carefully expose the public water main. The licensed contractor shall provide adequate shoring protection by proper slopes, bracing, or trench boxes and he shall provide proper dewatering equipment, etc. to provide a safe working environment in accordance with the Occupational Safety and Health Act (O.S.H.A.) and other applicable rules and regulations. Once the public water main has been exposed and proper safety precautions have been taken by the licensed contractor, the County shall physically make the tap on the water main by installing a saddle (if required) and a corporation stop. The licensed contractor shall be responsible for installing the proper piping and appurtenances from the corporation stop to the structure to be serviced. The property owner and licensed contractor shall ensure that County personnel will be available to make said tap on the public water main before excavating the water main. Arrangements shall be made with the County at least forty-eight (48) hours prior

to the work being done. Verification shall also be made in the morning of the day the tap is scheduled to be completed.

For service connections (taps) **1 ½” and larger**, the property owner shall contract with a contractor licensed with the Department to make the “tap” on the water main. The tapping method shall be in accordance with these Rules and Regulations and shall be pre-approved by the Department. The tap on the water main shall only be completed under the direct supervision of an authorized representative from the Department. Twenty-four (24) hours notice shall be given to the Department prior to making the tap on the public water main.

For service connections two (2) inches or less, tap needs to be made a minimum of eighteen (18) inches for water main pipe joint. For service connections larger than two (2) inches, taps needs to be made a minimum of twenty-four (24) inches from water main pipe joint.

5. It is recommended that property owners install and maintain a *pressure reducing valve* in their service lateral to reduce potential problems on their premises that may occur due to high and/or fluctuating pressures in the water distribution system.
6. It is recommended that property owner install and maintain a *pressure (expansion) tank* in their service lateral to control the potential build-up of pressure in their service lateral and/or hot water tank since pressure reducing valves and backflow prevention devices (in meter pit) will not allow for expansion of heated water back into the public water main.
7. It is recommended that the property owner install a “tracer” wire over top of any non-metallic service lateral conduit or private water main (i.e. polyethylene tubing, PVC...) so the service lateral can be “located” in the future, if needed. It is suggested that #12 AWG cooper clad steel core wire be installed over the conduit as stated in item 5.01-B.2.
8. Property owners should ensure the highest quality of workmanship and materials when installing and maintaining their service lateral. Any water that passes through the meter, whether used, wasted, lost, or stolen, shall be billed to the property owner, at the standard rate, for the water registered on the County water meter.
9. Property owners installing a new service line that is to be connected to a privately owned water main (such as a private subdivision) which is supplied by the Regional Water System shall first obtain written permission from the owner of the private water main prior to construction. Written authorization shall be presented to the Department before a permit will be issued from the Department. The County shall not be liable for issuing a permit to a property owner who has not received written permission from the owner of the private water main. The issuance of a permit from the Department simply allows the property owner to receive water from the Regional Water System.
10. Connections to private service lines and/or private water mains not intended to be utilized by multiple property owners shall not be permitted. Such connections that were installed prior to January 1, 1998 may remain until such time as a connection can be made directly into the public water main.
11. Water service laterals shall remain on the property of the permit holder only unless an easement has been signed and recorded by the adjoining property

owner granting permission to construct and maintain a water service lateral through the adjoining property. A copy of the recorded easement shall be submitted to the Department prior to the issuance of a permit. The County shall be held harmless from any property owner or property owner's contractor trespassing on private property where permission is not granted.

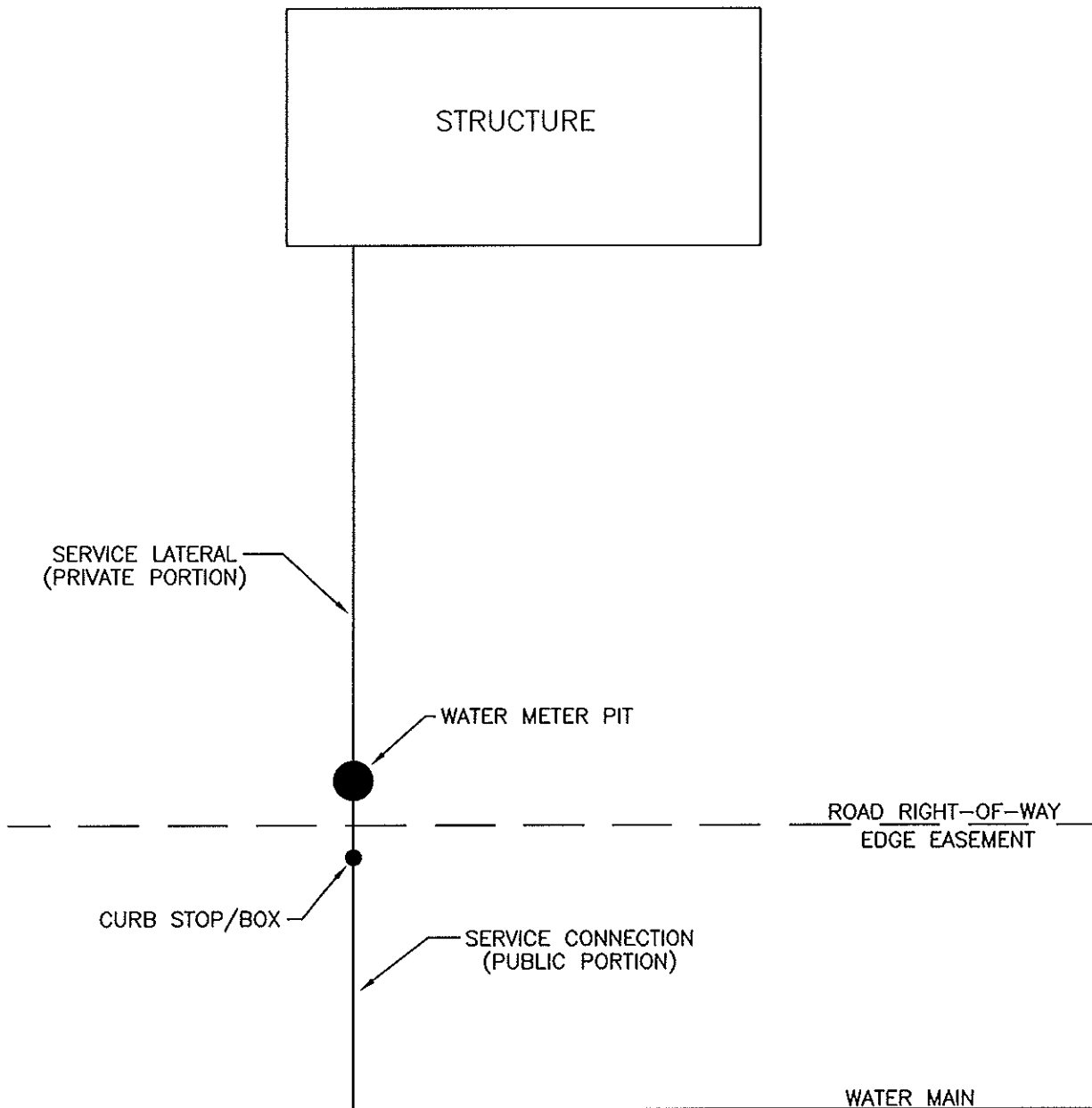
12. In extraordinary circumstances, two (2) adjacent property owners may share the same trench in order to install individual service laterals to their respective structures. The trench shall be excavated directly on the property line which must be established by the property owners according to their recorded property deeds. The project observer shall reasonably concur with the established property line to make sure that each service lateral is located on its respective property. The County shall not assume any liability and shall be held harmless for ensuring the service laterals are on their respective properties.
13. Contractors and property owners installing water mains and service lines shall abide by all safety standards in accordance with applicable O.S.H.A. and O.D.O.T. regulations. The County shall not be liable and shall be held harmless for property owners or contractors who violate safety standards. All trench excavations shall be adequately guarded with barricades, lights, and any other acceptable methods so as to protect the public from hazards.
14. Upon completion of the service line, the project observer shall visually inspect the service line and all fittings under normal operating system pressure as a test for leaks in the system. The project observer shall also observe the low water usage indicator on the meter to determine if there are any leaks in the water service line.
15. Upon completion of new public water mains, the project observer shall witness the standard testing and disinfection methods as set forth in Section 5.05.
16. Five (5) feet of horizontal clearance shall be maintained between water mains/service lines and any other public or private utility service structure, including but not limited to telephone, cable, electric, storm sewer, and gas piping. In the case of sanitary sewers and septic systems, a minimum of ten (10) feet horizontal clearance is required. If ten (10) feet of horizontal clearance cannot be maintained, see Section 5.0.1.(G).2.

All existing utilities, when encountered, shall be adequately supported, shored up, or otherwise protected whenever exposed in the excavation. Timber supports shall be a minimum of six (6) inches square. Supports shall extend into undisturbed earth a minimum of twelve (12) inches each side of the trench and the pipe, conduit, etc., banded or tied to the bridging for its full length. Where bridging cannot be supported by a firm foundation, the contractor shall provide vertical support for the bridging, including any lateral bracing necessary to provide a firm and substantial support.

A complete set of the Ottawa County Sewer District Public Water Rules and Regulations are available for review in the Sanitary Engineering Department office during normal business hours or on the department's web-page at: <https://www.co.ottawa.oh.us/index.php/sanitary-engineer/regulations>

FIGURE #1

TYPICAL WATER SERVICE LINE



NOTE

THE SERVICE LINE = THE COMBINATION OF THE SERVICE CONNECTION (PUBLIC) AND THE SERVICE LATERAL (PRIVATE).

FIGURE 2- PE 5/8" X 3/4" METER PIT SETTING POLYETHYLENE TUBING

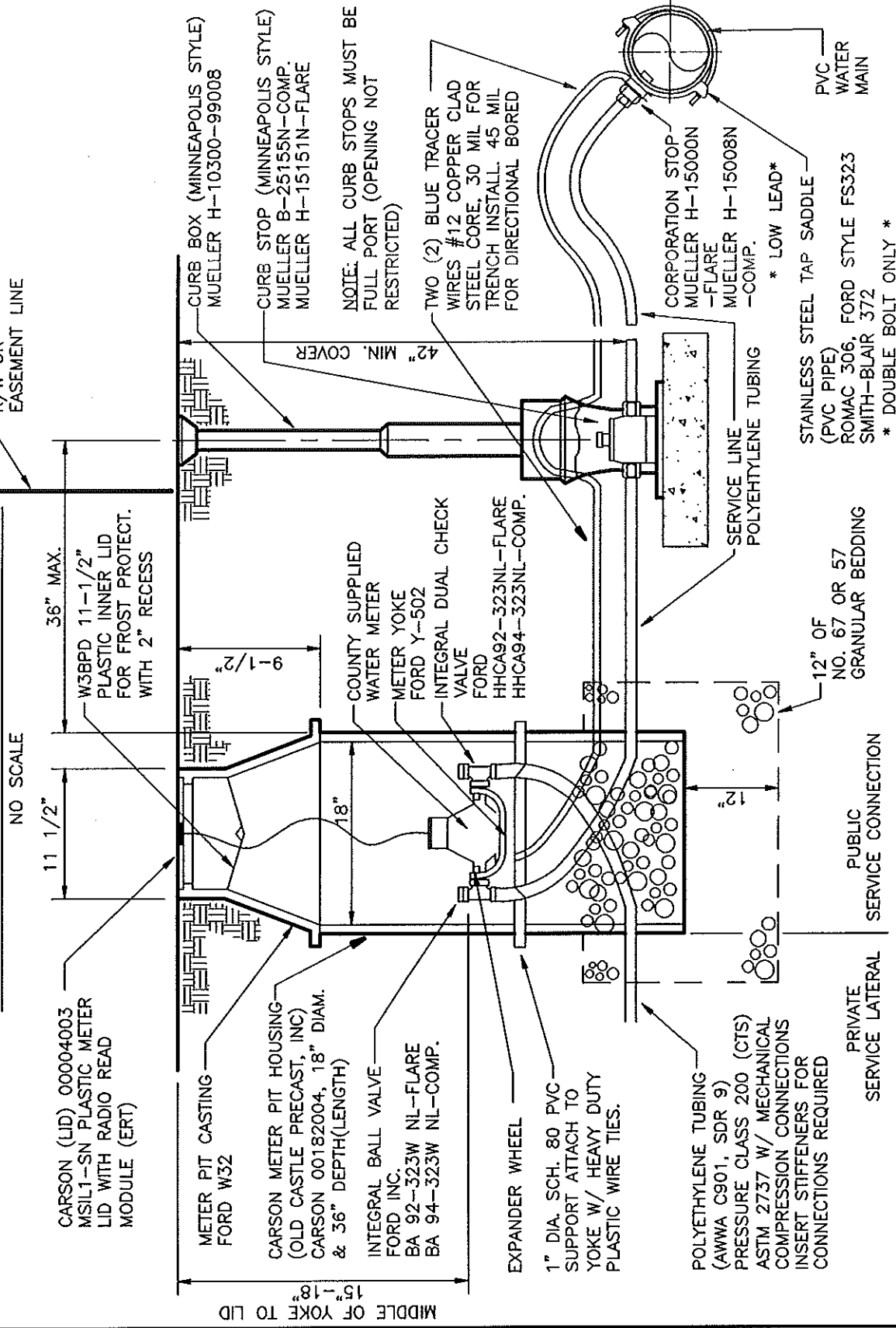
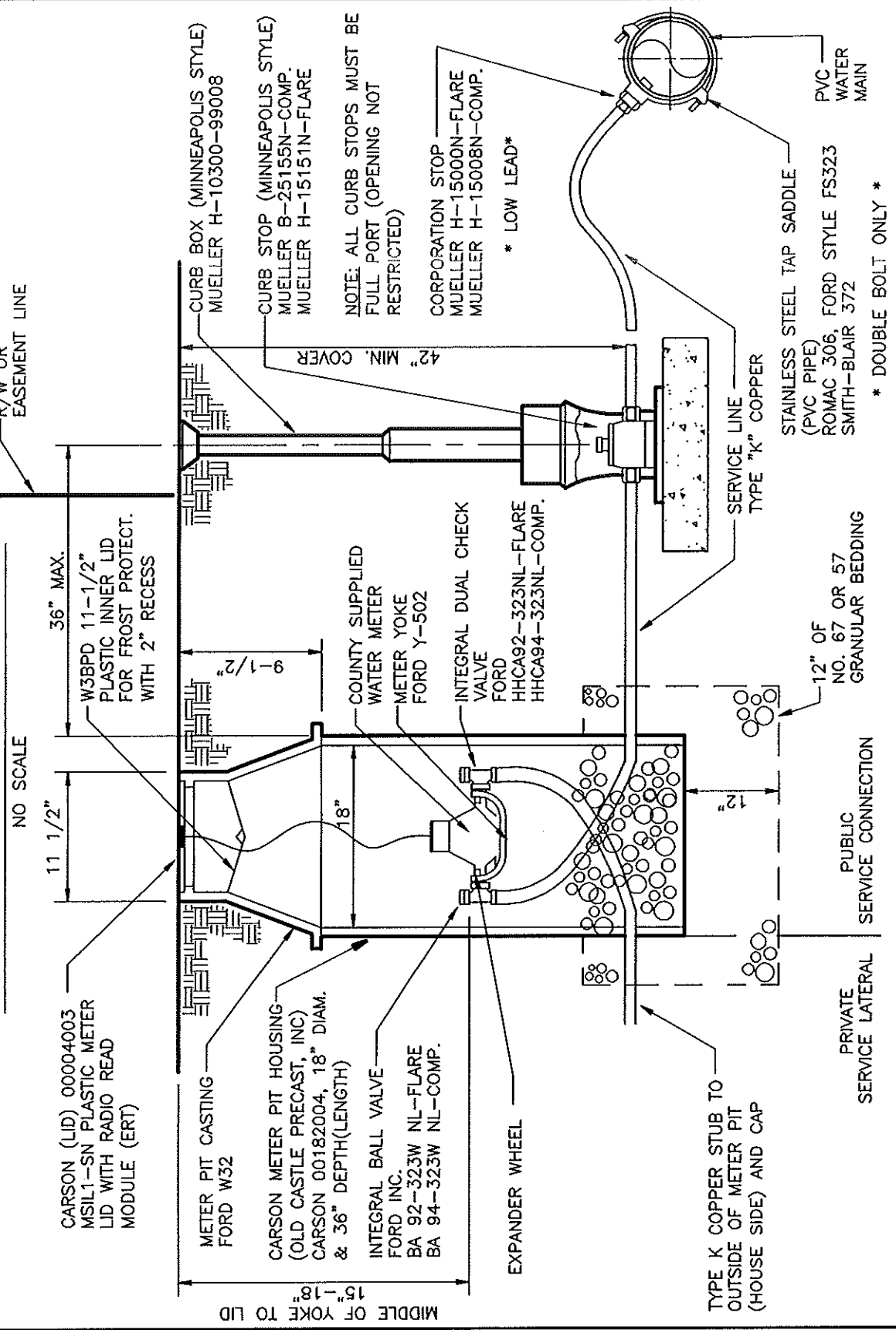


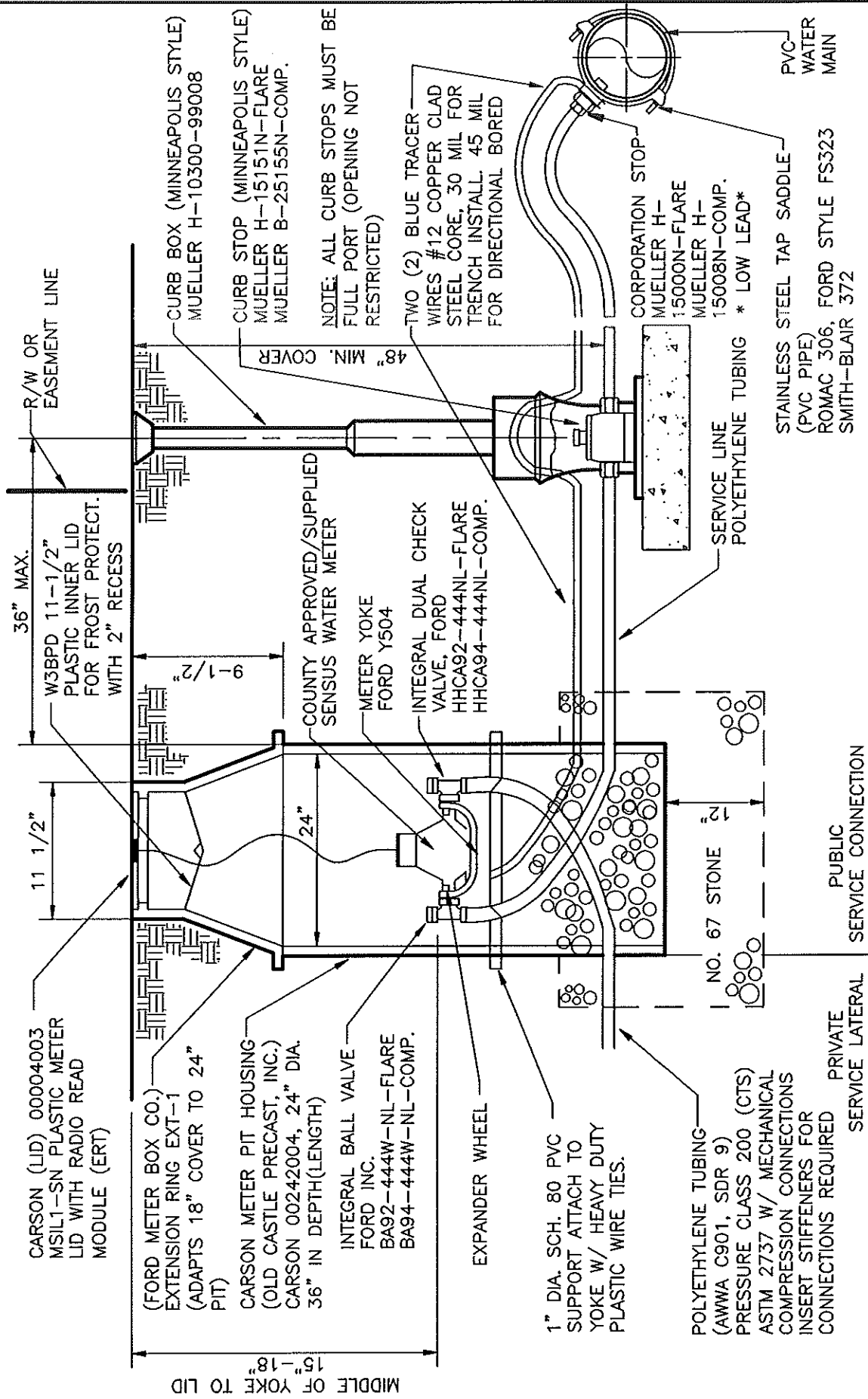
FIGURE 2 - COP 5/8" X 3/4" METER PIT SETTING COPPER TUBING



* DOUBLE BOLT ONLY *

FIGURE 2A - PE TYPICAL 3/4" OR 1" METER PIT SETTING POLYETHYLENE TUBING

NO SCALE



CARSON (LID) 00004003
MSL1-SN PLASTIC METER
LID WITH RADIO READ
MODULE (ERT)

(FORD METER BOX CO.)
EXTENSION RING EXT-1
(ADAPTS 18" COVER TO 24"
PIT)

CARSON METER PIT HOUSING
(OLD CASTLE PRECAST, INC.)
CARSON 00242004, 24" DIA.
36" IN DEPTH (LENGTH)

INTEGRAL BALL VALVE
FORD INC.
BA92-444W-NL-FLARE
BA94-444W-NL-COMP.

EXPANDER WHEEL

1" DIA. SCH. 80 PVC
SUPPORT ATTACH TO
YOKE W/ HEAVY DUTY
PLASTIC WIRE TIES.

POLYETHYLENE TUBING
(AWWA C901, SDR 9)
PRESSURE CLASS 200 (CTS)
ASTM 2737 W/ MECHANICAL
COMPRESSION CONNECTIONS
INSERT STIFFENERS FOR
CONNECTIONS REQUIRED

PRIVATE
SERVICE LATERAL
PUBLIC
SERVICE CONNECTION

36" MAX.
W3BPD 11-1/2"
PLASTIC INNER LID
FOR FROST PROTECT.
WITH 2" RECESS

R/W OR
EASEMENT LINE

MIDDLE OF YOKE TO LID
15'-18"

COUNTY APPROVED/SUPPLIED
SENSUS WATER METER

METER YOKE
FORD Y504

INTEGRAL DUAL CHECK
VALVE, FORD
HHCA92-444NL-FLARE
HHCA94-444NL-COMP.

CURB BOX (MINNEAPOLIS STYLE)
MUELLER H-10300-99008
CURB STOP (MINNEAPOLIS STYLE)
MUELLER H-15151N-FLARE
MUELLER B-25155N-COMP.

NOTE: ALL CURB STOPS MUST BE
FULL PORT (OPENING NOT
RESTRICTED)

TWO (2) BLUE TRACER
WIRES #12 COPPER CLAD
STEEL CORE, 30 MIL FOR
TRENCH INSTALL, 45 MIL
FOR DIRECTIONAL BORED

CORPORATION STOP
MUELLER H-
15000N-FLARE
MUELLER H-
15008N-COMP. * LOW LEAD*

SERVICE LINE
POLYETHYLENE TUBING

STAINLESS STEEL TAP SADDLE
(PVC PIPE)
ROMAC 306, FORD STYLE FS323
SMITH-BLAIR 372

* DOUBLE BOLT ONLY *

PVC
WATER
MAIN

FIGURE 2A - COPPER TYPICAL 3/4" OR 1" METER PIT SETTING

NO SCALE

