



WOODMOOR

Water & Sanitation District No. 1

P. O. Box 1407 • Monument, Colorado 80132
Phone (719) 488-2525 • Fax (719) 488-2530

2025

STANDARD/MODIFIED NON-POTABLE WATER TAP PERMIT

1. PERMITTED PREMESIS/PERMITTED SIZE(S):

Street address: _____ Monument, CO 80132

Legal Description: Lot # _____, Block # _____, Subdivision _____.

Taps permitted to be installed (circle all that apply): Water

Water tap size: _____ (Inches)

Water Meter Size _____ (Inches)

2. PERMIT CONTACT INFORMATION:

Name of Prime Contractor

Name of Owner

Mailing Address

Mailing Address

City, State, Zip Code

City, State, Zip Code

3. PERMIT FEES PAID:

Equipment Fee: _____,

Processing / Inspection Fee: _____,

Tap Fees: Water: Service Line & Tap Size: _____, Fee: _____,

Total Fees: _____.

4. GENERAL PERMIT TERMS AND CONDITIONS:

- a. Owner agrees that the District may, at any time, and without notice, replace the source of the non-potable water with reclaimed water and require the customer (at his/her sole expense) to comply fully with the then current Colorado Department of Public Health and Environment (“CDPHE”) regulations regarding reclaimed water (currently Regulation 84) and impose such other limitations or require such

other improvements (at his/her sole expense) on the customer's service and/or usage to protect the health and wellbeing of those in contact or around the reclaimed water.

- b. Owner agrees to pay the water and sewer monthly fees and abide by the rules, regulations and policies of the District as may be amended from time to time which include, but are not limited to; signage indicating the premises or is utilizing non-potable water for specific purposes. A copy of these rules and regulations are available for inspection at the District office.
- c. Installation of taps, service lines and associated equipment shall be in accordance with all District rules and regulations and system specifications and shall adhere to and be in compliance with the service line plan as approved by the District.
- d. Owner shall be responsible for calling and scheduling inspections of the tap and service line installations as well as the meter and associated equipment installations prior to covering up any work. Partial inspections may be requested as the work commences. Once all tap, service line, meter and associated service equipment has been installed and has passed all tests and inspects by the District, the tap will be noted as complete (i.e. final inspection passing) and the District will begin reading the water meter.
- e. If construction is not completed and final inspection by the District is not made within 12-months from the date this permit is issued, the permitted premises will be subject to any increase in tap fees that takes effect prior to the time that final inspection is made. If a tap has not been made within the 12-month period, no tap will be allowed until any applicable increase in tap fees has been paid. Any tap fee prepaid prior to March 15, 1995, is not affected by this provision.
- f. Isolation valves and mandatory equipment that complies with District system specifications must be installed, including the necessary electrical and instrumentation wiring to the magnetic meter. An approved cross connection control device (Reduced Pressure) must be installed after each water meter and be above ground at minimum distances shown on the Districts Standard Details. The cost of installation, maintenance and annual testing in accordance with the Districts rules and regulations shall be the responsibility of the property owner.
- g. Commercial meters newly installed are owned and maintained by the District. Owner shall be liable to the District for any damages to or loss of a meter caused by Owner.
- h. Exclusive of the water curb stop box, the water service line from the main to the Owners property line or curb box, whichever is closer to the non-potable water main, is owned and maintained by the District. Owner shall be liable to the District for any damages or obstructions to this reach of service line caused by Owner.
- i. The Woodmoor Water and Sanitation District No. 1 is not responsible for any cost of installation, operation or maintenance of any private water service lines.
- j. The owner is responsible for contacting the District for water/sewer main locates.
- k. After the water tap is completed, the District will begin charging the minimum monthly water service fees as well as any other applicable fees. A meter reading will be taken by the District at or near the final inspection date, and the District will continue to read the meter and provide the occupant this reading on the monthly bill. The District has increasing block rates to discourage excessive water use.
- l. Owner shall be responsible for verifying that a final inspection has been performed by the District prior to any request and subsequent issuance of a certificate of occupancy (CO) or temporary certificate of occupancy (TCO) by the regional building department or building authority having jurisdiction, if applicable. If a CO/TCO is issued prior to the District conducting a final inspection and installing the water meter register(s), no refund of the tap fee deposit will be made and the District may disconnect service.
- m. This permit shall transfer ownership upon sale of the property. Water and sewer fees and charges also run with the property rather than the person. The owner understands and agrees that the District will bill the tenant as a

matter of courtesy to owner, however, if the tenant does not pay, the owner of the property is responsible for payment of any outstanding bills.

n. Site Specific Provisions:

NON-POTABLE WATER TAP P E R M I T

Approved this ____ day of _____, 20__.

WOODMOOR WATER AND SANITATION DISTRICT NO. 1

By _____
For secretary

This Permit Form is effective the _____ day of _____, 20__ and supersedes all previous permits issued by this District for the premises.



WOODMOOR
Water & Sanitation District No. 1

**Non-Potable Water Meter & Service Line Sizing
Application & Forms for New or Modified Service**

Non-Potable Water SERVICE LINE (Tap) Sizing Review Process

Woodmoor Water and Sanitation District (the "District") accepts one method for **sizing non-potable water service lines**:

Standard Method

1. The Property Owner (or his assigned representative) shall be responsible for the accuracy of all data calculated and sent to the District for review.
2. The Owner works with an Architect/Professional Engineer to provide the necessary documentation for non-potable water service line sizing. (One form per tap)
3. The Owner submits the Architect/Professional Engineer's completed irrigation flow in accordance with standard engineering practice customary within the industry and anticipated peak demands for irrigation usage and other non-potable uses (if applicable). Peak flows (irrigation + other) are used for tap & service line size selection per table 1 or 2 on page 6 of this application. The Owner shall also submit one set of utility service line plans in accordance with the Districts "System Specifications" showing the piping layouts. Sample forms for irrigation system flows are contained in pages 5 and 7 of this document
4. The District will review the proposed non-potable water service line sizing documents in conjunction with the non-potable water meter sizing documents. The District will coordinate any comments/revisions with the Owner. Submittal will be reviewed within 21 calendar days.
5. If approved, the District will notify the Owner that the tap permit is available for pick up upon payment of all permit fees.

Non-Potable Water METER Sizing Review Process

Woodmoor Water and Sanitation District (the “District”) accepts two methods for sizing water meters:

Standard Method

1. The Property Owner (or his assigned representative) shall be responsible for the accuracy of all data calculated and sent to the District for review.
2. The Owner works with an Architect/Professional Engineer to provide the necessary documentation for non-potable water meter sizing. (One form per tap)
3. The Owner submits the Architect/Professional Engineer’s completed irrigation flow in accordance with standard engineering practice customary within the industry and anticipated peak demands for irrigation usage and other non-potable uses (if applicable) showing anticipated minimum and maximum demands for irrigation and other non-potable water usage (if applicable). Estimated peak flows are used for meter size selection per table 2 on page 6. The Owner shall also submit one set of utility service line plans in accordance with the Districts “System Specifications” showing the piping layouts. Sample forms for irrigation system flows are contained in pages 5 and 7 of this document.
5. The District will review the proposed non-potable water meter sizing documents in conjunction with the service line sizing documents. The District will coordinate any comments/revisions with the Owner. Submittal will be reviewed within 21 calendar days.
6. If approved, the District will notify the Owner that the tap permit is available for pick up upon payment of all permit fees.
7. The Owner/Applicant is responsible for the cost of the water meter and related equipment.

Alternate Method

1. The Property Owner (or his assigned representative) shall be responsible for the accuracy of all data calculated and sent to the District for review.
2. An alternate engineered design for water meters may be submitted to the District, for consideration.
3. A registered design professional (architect or engineer) can submit sufficient technical data to substantiate an alternate design for non-potable water meter sizing. This data shall include, but not limited to, construction documents and calculations, to support the proposed alternate design of the water meter, for review and approval by the District. If a diversity factor is used in calculating the meter and service line size, then the engineer shall submit documentation justifying the diversity factor criteria.
4. The District will review the proposed water meter sizing documents. The District will coordinate any comments/revisions with the registered design professional. Submittal will be reviewed within 21 calendar days. If the alternative engineered design is not approved, a District representative shall notify the designer and request that the standard method be used.
4. If approved, the District will notify the Owner that the tap permit is available for pick up upon payment of all permit fees.
5. The Owner/Applicant is responsible for the cost of the water meter and related equipment.



WOODMOOR

Water & Sanitation District No. 1

Non-Potable Water Service Line, Tap & Meter Size Application (New & Modified Service):

All landowners relevant to this application must be included as applicants of this submittal. By signing this application and attaching a completed Statement of Authority, applicant and property owner attests that they are aware of this application and agree to its content.

The Owner/Applicant shall attach the water meter sizing documentation along with one set of drawings of the proposed water/plumbing mechanical plans for applicants system(s) to the Woodmoor Water and Sanitation District No. 1, (719) 488-2525, at 1845 Woodmoor Drive, Monument, CO 80132.

Owner/Applicant Name _____

Phone Number _____

Address of Facility _____

Legal Description Lot _____, Block _____, Subdivision _____, Filing _____

Name of Prime Contractor (if known) _____

Address _____

Phone Number _____

Use of Facility _____

(restaurant, retail, school, office, etc.)

(Denote Answer)

Irrigation Use Only: Y N

Combined Irrigation/Other: Y N

The undersigned hereby makes application to Woodmoor Water and Sanitation District No. 1 for approval of new or modified Non-Potable water tap and service size and meter size(s) requested per the attached documents. Applicant has read and understands the application instructions, and certifies that all information contained herein is accurate and true to the best of their knowledge and belief.

Owner/Applicant Signature

Date



Irrigation Demand Worksheet

Please choose method

Actual Demand Method (AD)

Design Criteria Method (DC)*

Example (AD)

(AD) Example illustrates a 3-zone system with zones A and B running simultaneously and C independently. To determine peak GPM: zone A + B operating together yields demand of 40 GPM (30 + 10); zone C yields demand of 30 GPM. Meter is sized to largest demand of 40 GPM for system. Appropriate meter size is 1-inch.

Zone	# Heads	GPM per Head	Total GPM per Zone
A	30	1	30
B	20	0.5	10
C	20	1.5	30
Totals	70		70

Example: Zone A + Zone B + Zone ____ = 30 GPM + 10 GPM + ____ GPM = 40 GPM Peak Irrigation System Demand

For AD Method, please provide requested information in table below

For DC Method, enter Value for maximum flow rate in box below

Zone	# Heads	GPM per Head	Total GPM per Zone

Determine maximum flow rate (GPM) by identifying which zones will be operating together ~or~ enter Design Criteria maximum flow rate (GPM)

Zone ____ + Zone ____ + Zone ____ = ____ GPM + ____ GPM + ____ GPM = _____ GPM Peak Irrigation Demand

AD

DC *

** By selecting the Design Criteria Method (DC) for Irrigation Demand reporting, Owner/Applicant agrees to have empowered the Applicant (if other) to submit the information on their behalf and to the accuracy of the irrigation peak demand value reported herein. The DC peak demand value will be used in lieu of Approved Final Irrigation Plan submittal for the purposes of this form.*

Determine minimum flow rate (GPM) by identifying which zones will be operating together.

Zone ____ + Zone ____ + Zone ____ = ____ GPM + ____ GPM + ____ GPM = _____ GPM Min. Irrigation Demand

I affirm that the information given is accurate and acknowledge that approval of meter size and maximum water capacity is based solely on the information provided above, and such determination is at the sole discretion of Colorado Springs Utilities.

Owner/Applicant: _____ Date: _____

Architect/Professional Engineer: _____ Date: _____

WATER METER, TAP & SERVICE SIZE SELECTION TABLES

Table 1 - Tap & Service Size Selection Table Maximum Allowable Water Flow Rate (gpm) for Various Lengths of Service Line

Service Length (Ft.)	25	50	100	150	200	250	300	350	400	450	500	550	600	650	
Service Line Size (In.)	2"	170	120	83	66	57	50	46	42	39	37	35	33	31	30
	2-1/2"	250	250	184	148	127	112	102	94	87	82	77	73	70	67
	3"	320	320	320	264	226	200	181	167	155	146	138	131	125	119
	4"	500	500	500	500	500	456	414	381	354	332	314	298	284	272
	6"	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	949	901	860	823

Notes (table 1):

- ⁽¹⁾ Max. Elevational Difference from main to booster pump = +10 feet
- ⁽²⁾ Tables incorporate friction losses from main to booster pump only
- ⁽³⁾ Tables do not account for length or friction losses nor elevational head loss associated with internal vault plumbing or sprinkler system configuration
- ⁽⁴⁾ Tables based on minimum available static pressure at the main of 20 psi.

Table 2 Water Meter Selection Table

Range of Flow	Min. (gpm)	Max. (gpm)
Magnetic Flow Meters		
1"	0.210	84
1-1/4"	0.390	157
1-1/2"	0.550	220
2"	0.940	378
2-1/2"	1.6	653
3"	2.21	883
4"	3.30	1320

Non-Potable Water Meter & Service Line Sizing Form Demand Summary Sheet

Flow:

Irrigation Flow (I): Maximum Flow Rate: _____ (gpm)

 Minimum Flow Rate: _____ (gpm)

Requested Meter Size for Irrigation = _____ Inch (from Table 2 on page 6)

Other Flow (O):

 Maximum Flow Rate: _____ (gpm)

 Minimum Flow Rate: _____ (gpm)

Requested Meter Size for Other (if applicable) = _____ Inch (use table 2 on page 6)

Other Max Flow Rate = _____ (if applicable).

Total Irrigation plus Other: Maximum Flow Rate: I + O = _____ (gpm)

Service Line & Tap Size Requested: _____ Inch (use table 1 on page 6)

Length of Service Line (Main to Meter): _____ Feet

Status: Proposed New Proposed Modification

If Proposed Modification:

Are you surrendering a potable water tap, the value of which is to be applied to your Non-Potable water tap? Y N

Size of existing potable tap to be surrendered _____ (inches)

Note: Unless separate taps are to be purchased for irrigation and other services, service line & tap size shall be based on maximum combined flow (i.e. max irrigation flow + Max Other Flow). Meter sizes may be dissimilar between irrigation, other and water tap & service size, however in no event shall any meter size be greater than the tap & service line size. In addition, if a potable water tap is proposed to be surrendered and the value applied to the Non-Potable water tap, the surrendered tap must be disconnected from the Districts main line in accordance with the Districts system specifications.

Additional Customer Comments:

Owner/Agent: _____

Date: _____

This sheet for District Internal use only:

Application received by _____ Date _____

New or Modified Service: New Modified

Existing Potable Tap To Be Surrendered (if applicable):

Size of Potable meter Irrigation _____ Type: Disc Compound

Size of Potable meter Other _____ Type: Disc Compound

Size of Potable tap & service line _____

New Non-Potable or as Modified:

Size of Non-Potable meter Irrigation _____ Type: Magnetic

Size of Non-Potable meter Other _____ Type: Magnetic

Size of Non-Potable tap & service line _____ Total Non-Potable Demand: _____ GPM

Comments:

WATER AND SEWER SERVICE LINE MATERIAL, METERS, AND MINIMUM REQUIRED EQUIPMENT

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
1. Piping material, tapping saddles, corporation stops, curb stops & boxes, water and sewer service line material, fittings, anti-hammer devices, meters, ball valves, check valves and associated water and sewer service line accessories.

1.2 REFERENCES

- A. Referenced Standards
1. ANSI B31.9-Building Service Piping
 2. NSF 61-Drinking Water System Components-Health Effects
 3. ASTM D1784 – Rigid Polyvinyl Chloride (PVC) Compounds and Chlorinated Polyvinyl Chloride (CPVC) Compounds
 4. ASTM D2321 – Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe
 5. ASTM D3034 – TYPE PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
 6. ASTM D3212 – Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
 7. ASTM F477 – Elastomeric Seals (Gaskets) for Joining Plastic Pipe
 8. AWWA C509-Resilient Seated Gate Valves 3 in through 12 in NPS, for Water and Sewage Systems
 9. AWWA C515-Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service
 10. AWWA C504-Rubber Seated Butterfly Valves

1.3 ACTION SUBMITTALS

- A. For items specified as “or equal”, owner/contractor shall determine if the product being installed meets the minimum requirements specified herein and no product submittals are required by the District.
- B. For products without an “or equal” statement or that are listed herein with specific model or manufacturer’s numbers, only those products specifically listed shall be installed. Owner/contractor may submit product data on alternate materials desired that illustrates the product desired to be used meets or exceeds the specified products attributes in all respects for approval or rejection by the District prior to installation.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with all applicable codes and regulations.

1.5 REGULATORY REQUIREMENTS

- A. Conform to all municipal codes and ordinances, laws, and regulations of the State.
- B. In case of apparent conflict, state and local requirements govern over these specifications.
- C. In absence of state and local regulations, International Plumbing Code applies.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect and handle products according to manufacturer's recommendations.
- B. Deliver and store valves and accessories in shipping containers with labeling in place in accordance with AWWA C509/515.
- C. Provide temporary end caps and closures on all fittings. Maintain in place until installation.
- D. Seal valve ends to prevent entry of foreign materials into valve body
- E. During loading, transporting, and unloading, exercise care to prevent damage to material.

PART 2 PRODUCTS (WATER SERVICE LINES)**2.1 SERVICE LINE PIPING & FITTINGS (2" AND SMALLER)**

- A. Manufacturer and Product
 - 1. Type "K" soft copper, coils or standard 10 and 20 foot lengths, Mueller Streamline Co, or equal. Copper or lead free brass fittings in accordance with NSF 61.
 - 2. PE 4710 SDR-9 200 psi HDPE, copper tubing size (CTS), continuous coil, JM Eagle or equal. Stainless steel stiffening inserts of sufficient strength at all connection points. HDPE service lines shall be upsized one nominal CTS from Type K Copper tubing such that the inner diameter (ID) is no less than Type K Copper ID. All HDPE service pipe must have washed pea gravel or squeegee bedding 3" below and 6" above, and tracer wire from saddle to foundation. Reference Woodmoor Water and Sanitation District System Specifications Sections 33 11 00 and 33 12 00 for additional information.

- B. Water tubing: Buried, ASTM B88; FS WW-T-799, Type K soft (annealed); or FS WW-T-775
- C. Water tubing: Exposed or above grade, ASTM B88; Type L, hard drawn
- D. Flanges: Cast bronze, 150 psig, brazed joints, ANSI B16.24:
 - 1. Flange bolts and nuts: As specified for steel pipe
 - 2. Flange gaskets: As specified for steel pipe, except full face
 - 3. 1/16-inch-thick preformed neoprene gaskets

2.2 SERVICE LINE PIPING & FITTINGS (2-1/2" AND 3")

- A. Manufacturer and Product
 - 1. Type "K" soft copper, Mueller Streamline Co, or equal. Copper or lead free brass fittings in accordance with NSF 61.
 - 2. PVC pipe, gasketed bell and spigot, ASTM D2241, IPS size, SDR 21 with 200 psi working pressure rating, JM Eagle "IPS Pressure" pipe or equal.
 - 3. Ductile Iron gasketed push on fittings (i.e. PVC ends), IPS size, ASTM A536, AWWA C153, 250 psi pressure rated, Harrington Corporation or equal. All fittings and valves must be restrained using ductile iron fitting restraints, Harrington Corporation Ductile Iron IPS restraints or equal.
 - 4. Ductile Iron or PVC pipe material and fittings in accordance with section 33 11 00 Water Utility Distribution Piping.

2.3 SERVICE LINE PIPING & FITTINGS (4" AND LARGER)

- A. Manufacturer and Product
 - 1. Ductile Iron or PVC pipe material and fittings in accordance with section 33 11 00 Water Utility Distribution Piping.

2.4 GATE VALVES (2" THROUGH 12")

- A. Manufacturers:
 - 1. American AVK – Series 45 or 65
 - 2. American Flow Control – Series 2500
 - 3. Or equal.
- B. AWWA C515 or AWWA C509, minimum working pressure of 250 psi., ductile iron body, lead free, stainless steel stem, two O-ring stem seals, non-rising stem with square nut, single wedge fully encapsulated with EPDM rubber, resilient seat, mechanical joint ends, control rod, and extension box.
- C. Rotation: Open left (counter clockwise) with the word "OPEN" and an arrow indicating the direction to open cast on valve body.

2.5 ISOLATION VALVES (BALL)

- A. **Manufacturers**
 - 1. Nibco - T-595-CS-R-66-LL
 - 2. Velan V3P-1000
 - 3. Or accepted substitution.
- B. **Description**
 - 1. For use on 4 inch and smaller non-buried piping.
 - 2. Three-piece, carbon steel body, threaded ends, full port with blowout proof stem.
 - 3. 316 SS trim w/vented ball, certified to NSF 61.
 - 4. 300 lbs minimum working pressure rating.

2.6 ISOLATION VALVES (BUTTERFLY – OPEN ACCESS)

- A. **Manufacturers**
 - 1. Nibco
 - 2. Apollo
 - 3. Or equal
- B. **Description**
 - 1. For use as isolation valves on 3 inch and larger non buried piping.
 - 2. 200 lbs minimum working pressure rating.
 - 3. Lead free, certified to NSF 61

2.7 TAPPING SADDLES

- A. **Manufacturers and Products**
 - 1. Romac Model SS1 Stainless Steel Repair Clamp with Tapping Saddle.
 - 2. Ford Style FS1 Stainless Steel Repair Clamp with Tapping Saddle.
 - 3. PowerSeal Model 3450AS Stainless Steel SaddleCorp.
 - 4. Or accepted substitution.
- B. **Description**
 - 1. Stainless Steel.
 - 2. Minimum dual 304 stainless steel straps, washers, and nuts.
 - 3. Rubber seating gasket.
 - 4. 250 psi minimum pressure rating.
- C. No direct taps.

2.8 CORPORATION STOPS

- A. **Manufacturer and Products (2" and smaller)**
 - 1. Ford ball corporation valve, Model FB600-X- XX, AWWA taper inlet X Flare, Ford quick joint compression or pack outlet, 300 psi. working pressure.

2. Mueller 300 ball corporation valve, AWWA taper X Flare, Mueller 110 compression or pack outlet, 300 psi. working pressure
3. For HDPE Service lines, the inlet of the corporation stop will be the size of the tap, and the outlet of the corporation stop will be the size of the equivalent HDPE tubing. For instance, a 3/4" tap with an HDPE service line will have a 3/4" x 1" corporation stop of the manufacturer and products listed in this section.
4. Or accepted substitution.

2.9 CURB STOPS

- A. Manufacturers and Products (2" and smaller)
1. Ford "B" Series Ball Curb Valve (Non Minneapolis style), Flare inlet X Flare, ford quick joint compression or pack outlet 300 psi. working pressure
 2. Mueller 300 Ball Curb Valve (Non Minneapolis style), Flare inlet X flare, Mueller 110 compression or pack outlet, 300 psi. working pressure
 3. Curb stop size to match service line size.
 4. Or accepted substitution.

2.10 CURB STOP BOXES (2" AND SMALLER CURB VALVES)

- A. Manufacturers and Products
1. Tyler Union 6500 series, 3/4" through 1 1/2" curb valves: Arched style base, cast iron sections, slip or screw type extensions, with asphalt bituminous coating, 27/32" standard lid with pentagon head plug. For curb stop valves 2" in size, use "enlarged" box base.
 2. Or accepted substitution.

2.11 CURB STOP BOXES (2-1/2" AND LARGER GATE VALVES)

- A. Manufacturers and Products
1. Tyler Union 6500 series, 3/4" through 1 1/2" curb valves: Arched style base, cast iron sections, slip or screw type extensions, with asphalt bituminous coating, 27/32" standard lid with pentagon head plug. For curb stop valves 2" in size, use "enlarged" box base.
 2. McDonald Manufacturing Co Arch Pattern with brass cotter pin and pentagon bolt lid with tracer wire terminal, 3/4" to 1" curb valves: Model 5607. For 1 1/2" to 2" curb valves: Model 5606.
 3. Or accepted substitution.
- B. Description
1. Threaded type.
 2. Cast iron box, base, extensions, and lid.
 3. Minimum inside diameter 5 inches.
 4. Minimum wall thickness 3/16 inch.

5. All parts coated by dipping in asphalt varnish.
6. Minimum lid depth 3”.
7. Lid is drop type and marked with “WATER”.

2.12 WATER METERS

- A. Manufacturers and Products
 1. Kamstrup or Diehl Ultrasonic Meters
 2. AquaCell End Points
- B. Supplied by District, size shall be as indicated on tap permit.

2.13 ANTI-HAMMER ARRESTORS

- A. Manufacturers and Products
 1. Precision Plumbing Products, Inc.
 2. Watts
 3. Or equal
- B. Metallic body, NSF 61 certification with 0-200 psi static pressure rating.
- C. Size and surge pressure rating: Per manufacturer’s recommendations for specific pressure and flow application

2.14 BACKFLOW PREVENTION DEVICES

- A. Manufacturers and Products
 1. Watts
 2. Febco
 3. Or equal
- B. ¾” Residential Configurations
 1. Copper or lead-free brass
 2. Two positive seating dual check modules
 3. Test cocks not required
 4. 150 psi. minimum working pressure rating
 5. One (1) supplied by District
 6. Larger than ¾” residential application– See non health hazard configurations below
- C. Non-Health Hazard Configurations
 1. Copper or lead-free brass
 2. AWWA C510
 3. Two positive seating check modules
 4. Minimum of three test cocks
 5. 150 psi. minimum working pressure rating
 6. Size: per tap permit

7. Commercial application – supplied by Owner
- D. Health Hazard/Potential Health Hazard Configurations
1. Copper or lead free brass
 2. AWWA C511
 3. Two positive seating check modules with internal pressure differential relief valve
 4. Minimum of three test cocks
 5. 150 psi. minimum working pressure rating
 6. Size: per tap permit
 7. Commercial application – supplied by Owner

2.15 PRESSURE REDUCING VALVES

- A. Manufacturers and Products
1. Wilkins
 2. Watts
 3. Or equal
- B. Metallic body, NSF 61 certification
1. Lead free
 2. 200 psi. minimum upstream working pressure rating
 3. Size: per tap permit
 4. Adjustable pressure range downstream : 0 psi. minimum to 75 psi. maximum. or if plumbing code requires more stringent standards, per plumbing code.

PART 3 PRODUCTS (SEWER SERVICE LINES)

3.1 SERVICE LINE PIPING & FITTINGS

- A. Products
1. Cast Iron Soil Pipe, ASTM A74, extra heavy or service type, bell and spigot or plain end.
 2. Cast Iron Soil Pipe Fitting – ASTM C564 or CISPI Standard 310
 3. Plastic Pipe and fittings – ASTM D3034, type PSM, Poly Vinyl Chloride (PVC) material, bell and spigot or glue joint style, SDR 35, Schedule 40 or 80
- B. Sanitary Sewer Service Connection
1. “In Line” Wye
 - a. Wye fitting with gasketed joint per Section 33 31 00.
 - b. Schedule
 - 1) For use when installing proposed service line connections to proposed mains. (New Construction)
 2. Saddle Tap

- a. Manufacturer
 - 1) Geneco
 - 2) Or Accepted Substitution
- b. Product
 - 1) Sealite Multi Range Sewer Saddle
 - 2) Configuration: Wye or Tee
 - 3) Model:
 - a) Wye: Type E
 - b) Tee: Type U
 - 4) Base: ASTM A-48 Class 30 Cast Iron dip-coated in water-based bituminous coating
 - 5) Gasket: O-Ring ASTM C-367-77 Tubular Polyisoprene
 - 6) PVC Adapter: ASTM D-3034 SDR-35 gasketed bell cemented to cast iron base with two-part urethane adhesive
 - 7) Strap: One or Two 24 gauge 2.5 inch wide Type 304 Stainless Steel
 - 8) Strap Pins: 0.75 inch diameter Type 303 Stainless Steel
 - 9) T-Bolts: 0.375 inch diameter-16 Type 304 Stainless Steel
 - 10) Nuts and Washers: Type 18-8 Stainless Steel
- c. Schedule
 - 1) For use when connecting to existing mains.

3.2 TRACER WIRE

- A. Manufacturers and Products
 1. Material: # 10 AWG copper clad steel, high strength with minimum 600 lb. break load.
 2. Coating: Minimum 30 mil HDPE insulation thickness for direct bury.
 3. Color: Blue
 4. Connectors: Moisture displacement and corrosion resistant connectors.
 - i. Copperhead Snakebite
 - ii. 3M DBR
 - iii. Or approved substitution
- B. Terminal Stations
 1. Copperhead 2" two-terminal switchable lid, model SP-SWLID-*2 or approved substitution
 2. Color: Blue
 3. Text: WATER
 4. Installed at minimum every 500 feet along pipeline, and at all fire hydrants and water valves.
- C. Grounding
 1. Magnesium anode, 1.5 pounds minimum, securely grounded and connected to terminal lid

PART 4 EXECUTION**4.1 INSTALLATION**

- A. Install all components per manufacturers recommendations.
- B. All water and sewer service lines must be visible for inspection. Directional boring is not allowed on service lines. All service lines must be bedded per Section 31 00 00 in the Woodmoor Water and Sanitation District No 1 System Specifications.
- C. Water service lines must be of consistent material from the tap to the meter assembly. Pipeline/tubing materials shall not be mixed on service lines.
- D. Install 1-1/2" plastic pipe insert, minimum 5 feet in length, into curb stop valve cans, centered on curb stop valve.
- E. For buried underground water service lines utilizing type K soft copper, use brass compression or flare fittings to connect/couple joints, no sweating, soldering or brazed connection permitted underground.
- F. For interior or non-buried copper, soldering, brazing and sweating of copper fittings is permitted in accordance with the local plumbing code.
- G. No backflow prevention device shall be installed in such a configuration that would allow for submergence of the device (i.e. non-draining underground vaults, non-draining basements below grade, etc.). All backflow prevention devices shall be installed at locations where the area in and around the installed device is free draining.

4.2 FIELD QUALITY CONTROL

- A. Service lines from (and including) the curb stop valve/service line shut off valve to the building are the property of the lot owner. Field quality control shall be as provided/mandated by International Plumbing Code or Owner. The District performs inspections on service lines and equipment only to verify location, proper configuration of mandatory components, size of service lines and associated appurtenances. The District does not assume any responsibility or liability for product or installation quality, integrity, or longevity of private system components. Manufactures and products for private system improvements and components listed herein are listed in general and/or generic format with minimum attributes that must be complied with.
- B. Service lines from the water main up to (but not including) the curb stop valve to the property are installed at the expense of owner but are owned and maintained by the District. Field quality control shall be as provided/mandated by International Plumbing Code or the District. The District performs inspections on

this portion of service lines and equipment to verify location, material, proper configuration and installation of equipment and associated appurtenances. Products in this reach of service line(s) are specifically listed by manufacturer's part number and shall be used unless a substitute item is otherwise approved (in writing) by the District,

END OF SECTION