

Staff Report

for the Board of Director's Meeting of April 13, 2016

TO: Board of Directors

FROM: Gary King, Engineering Manager
Doug Hobbs, Associate Engineer

DATE: March 21, 2016

SUBJECT: **New High Pressure (Over 150 PSI) Meter Assembly
Details SD11 HP and SD12 HP (Consent)**

ENGINEERING

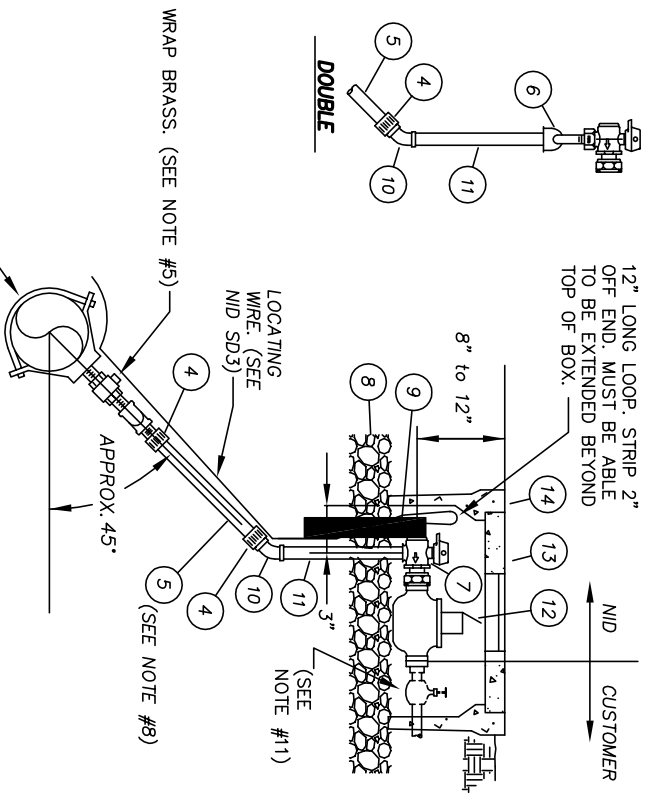
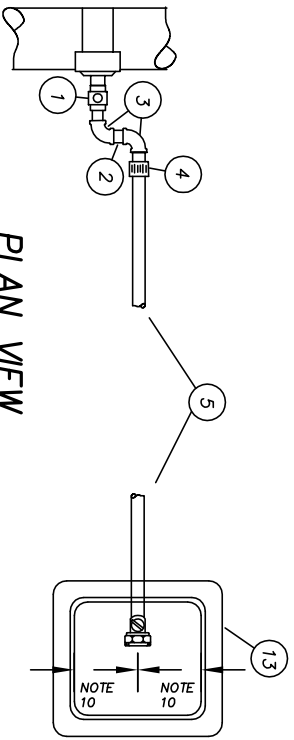
RECOMMENDATION: Accept the proposed details for high pressure services as recommended by the Engineering Committee on March 15, 2016.

BACKGROUND: Recent projects to extend treated water services to rural areas of the District have highlighted the need to serve customers at higher elevations above the pipelines. The use of high pressure services allows the District to serve these customers at a more affordable cost by avoiding the expense of NID and/or customer pumping facilities. Standard Details 11 and 12 can be used up to a working pressure of 150 PSI. The proposed high pressure service assembly details could be used for working pressures up to 250 PSI.

BUDGETARY IMPACT:

None

Attachments: SD11 HP
SD12 HP

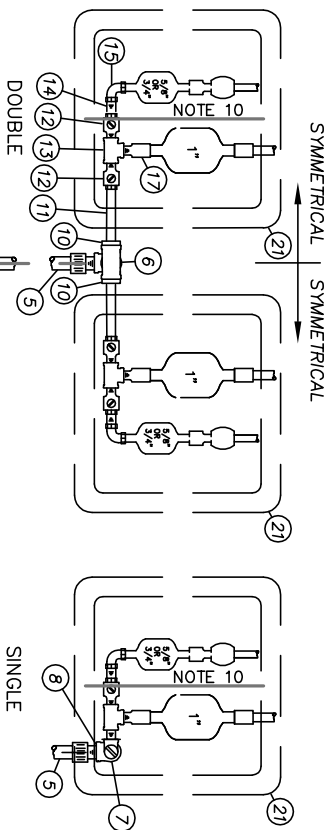


- NOTES:**
1. ALL MATERIALS AND INSTALLATION SHALL CONFORM TO "SERVICE ASSEMBLIES" IN THE SPECIFICATIONS. METER ASSEMBLIES SHOWN ARE FOR NON-TRAFFIC AREAS ONLY. ASSEMBLIES LOCATED IN TRAFFIC AREAS SHALL USE BOXES, LIDS, AND SLABS ALL RATED FOR AN H2O LOADING AND CONFORMING TO THE SPECIFICATIONS AND SHALL BE FLUSH W/GRADE.
 2. THE LOCATION OF METER BOXES SHALL BE AS SHOWN ON THE PLANS AND PER NID SD10.
 3. THE CONNECTION TO THE WATERMAIN SHALL CONFORM TO "WATERMAIN TAPS" IN THE SPECIFICATIONS. D.I. PIPE: ROMAC STYLE 202, FORD STYLE F202 OR APPROVED EQUAL PVC PIPE: ROMAC STYLE 202S OR 202N, FORD STYLE FS202 OR FC202 OR APPROVED EQUAL
 4. THE SADDLE, BRASS COUPLINGS, PIPE AND FITTINGS SHALL BE PRIMED AND WRAPPED FOR CORROSION PROTECTION AS DESCRIBED IN THE SPECIFICATIONS.
 5. REFER TO DRAWINGS NID SD1 FOR TRENCH DETAILS AND NID SD3 FOR LOCATING WIRE DETAILS EXCEPT COPPER PIPE REQUIRES 6" BEDDING AND COVER WITH CLASS #1 MATERIAL.
 6. FORD AND CHRISTY CATALOG NUMBERS ARE GIVEN FOR COMPARISON PURPOSES. SUBSTITUTES CONFORMING TO THE SPECIFICATIONS MUST BE APPROVED BY THE DISTRICT ENGINEER.
 7. SERVICE LINES SHALL BE ONE CONTINUOUS PIECE OF PIPE. REMNANT PIECES JOINED BY COUPLINGS WILL NOT BE ALLOWED.
 8. ALL METER VALVES SHALL BE SUPPLIED WITH LOCKING WINGS.
 9. METERS TO BE PARALLEL AND LEVEL RELATIVE TO CENTERLINE OF METER BOX.
 10. GATE VALVE TO MATCH METER SIZE EXCEPT USE 1/2" VALVE FOR 5/8" METER SERVICE.
 11. (EXCLUDING METER BOX)

I.D. NO.	DESCRIPTION	5/8", 3/4" & 1" METER ASSEMBLIES			
		SINGLE	DOUBLE		
		SIZE	FORD CAT. NO.	SIZE	FORD CAT. NO.
1.	CORPORATION STOP - MIP x MIP	1.50	FB500-6	1.50	FB500-6
2.	BRASS NIPPLE THD.	1.50		1.50	
3.	BRASS ELBOW	1.50		1.50	
4.	MIP x IPS 300 PSI PACK JOINT	1.50	C84-44-G-NL	1.50	C84-44-G-NL
5.	COPPER PIPE TYPE K	1.50		1.50	
6.	1-1/2" FIP x (TWO) 1" MIP "U" BRANCH w/ 9" SPACING	N/A		1.5x1	U18-64-9
7.	ANGLE BALL VALVE (FIP x METER SWIVEL NUT) 1/1	1.00	BA13-444W	1.00	BA13-444W
8.	6" COMPACTED AGG BASE				
9.	TEMPORARY 2" x 4" STAKE FOR VERTICAL AND SPACING				
10.	BRASS 45° ELBOW	1.50		1.50	
11.	BRASS SPOOL	1.50		1.50	
12.	METER: ZENNER HP OR EQUIV.	1.50		1.50	
5/8" & 3/4" METER ASSEMBLIES		SINGLE		DOUBLE	
13.	CHRISTY LID w/ READING LID	B16G w/ 5" x8"		B24E w/7"x13.5"	
14.	CHRISTY METER BOX	B16		B24	2/
1" METER ASSEMBLIES		SINGLE		DOUBLE	
13.	CHRISTY LID w/ READING LID	B30G w/5" x8"		B40M w/10" x16"	
14.	CHRISTY METER BOX	B30		B40	2/

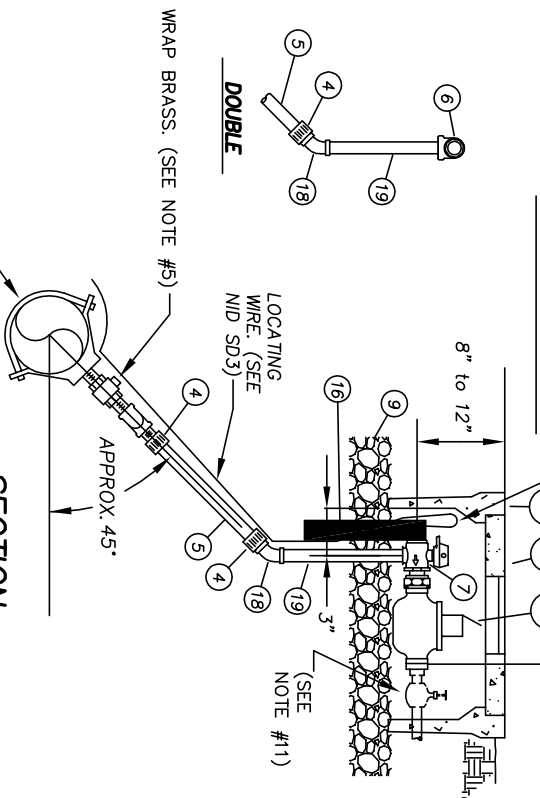
1/ SET METER VALVES PARALLEL TO METER BOX CENTERLINE.
 2/ SET BOX SO THAT LONG DIMENSION OF READING LID SETS PERPENDICULAR TO METERS.

5/8", 3/4" & 1" METER ASSEMBLY - SINGLE & DOUBLE NOT TO SCALE NID SD11 HP



12" LONG LOOP, STRIP 2" OFF END, MUST BE ABLE TO BE EXTENDED BEYOND TOP OF BOX.

PLAN VIEW



SECTION

CONNECTION TO WATER MAIN, (SEE NOTE #4)

(SEE NOTE #2)

1/ SET BOX SO THAT LONG DIMENSION OF READING LID SETS PERPENDICULAR TO METERS.

NOTES:

1. ALL MATERIALS AND INSTALLATION SHALL CONFORM TO "SERVICE ASSEMBLIES" IN THE SPECIFICATIONS.
2. METER ASSEMBLIES SHOWN ARE FOR NON-TRAFFIC AREAS ONLY. ASSEMBLIES LOCATED IN TRAFFIC AREAS SHALL USE BOXES, LIDS, AND SLABS ALL RATED FOR AN H2O LOADING AND CONFORMING TO THE SPECIFICATIONS AND SHALL BE FLUSH W/GRADE.
3. THE LOCATION OF METER BOXES SHALL BE AS SHOWN ON THE PLANS AND PER NID SD10.
4. THE CONNECTION TO THE WATERMAIN SHALL CONFORM TO "WATERMAIN TAPS" IN THE SPECIFICATIONS. D.I. PIPE: ROMAC STYLE 202, FORD STYLE F202 OR APPROVED EQUAL PVC PIPE: ROMAC STYLE 202S OR 202N, FORD STYLE FS202 OR FC202 OR APPROVED EQUAL
5. THE SADDLE, BRASS COUPLINGS, PIPE AND FITTINGS SHALL BE PRIMED AND WRAPPED FOR CORROSION PROTECTION AS DESCRIBED IN THE SPECIFICATIONS.
6. REFER TO DRAWINGS NID SD1 FOR TRENCH DETAILS AND NID SD3 FOR LOCATING WIRE DETAILS.
7. FORD AND CHRISTY CATALOG NUMBERS ARE GIVEN FOR COMPARISON PURPOSES. SUBSTITUTES CONFORMING TO THE SPECIFICATIONS MUST BE APPROVED BY THE DISTRICT ENGINEER.
8. ALL METER VALVES SHALL BE SUPPLIED WITH LOCKING WINGS.
9. METERS TO BE PARALLEL AND LEVEL RELATIVE TO CENTERLINE OF METER BOX.
10. ALL BRASS SHALL BE NO-LEAD.
11. GATE VALVE TO MATCH METER SIZE EXCEPT USE 1/2" VALVE FOR 5/8" METER SERVICE.

I/D. NO.	DESCRIPTION	SINGLE		DOUBLE	
		SIZE	FORD CAT. NO.	SIZE	FORD CAT. NO.
1.	CORPORATION STOP - MIP x MIP	1.50	FB500-6-NL	1.50	FB500-6-NL
2.	BRASS NIPPLE - THREADED	1.50		1.50	
3.	BRASS ELBOW	1.50		1.50	
4.	MIP x IPS 300 PSI PACK JOINT	1.50	C84-44-G-NL	1.50	C84-44-G-NL
5.	COPPER PIPE TYPE K	1.50		1.50	
6.	BRASS TEE	N/A		1.50	
7.	ANGLE BALL VALVE (FIP x FIP)	1.00	BA11-444W-NL	N/A	
8.	BUSHING	1.5x1		1.5x1	
9.	6" COMPACTED AGG BASE	N/A		1.5x1	
10.	BRASS BUSHING	1.00		1.00	
11.	BRASS SPOOL - 8" LONG - THREADED	1.00	B81-444W-NL	1.00	B81-444W-NL
12.	CURB STOP - FIP x FIP	1.00		1.00	
13.	BRASS TEE	1.00		1.00	
14.	BRASS NIPPLE - THREADED	1.00	L31-24-NL	1.00	L31-24-NL
15.	ANGLE METER COUPLING 1.00 x 0.75	1x.75		1x.75	
16.	TEMPORARY 2" x 4" STAKE FOR VERTICAL AND SPACING	1.00		1.00	
17.	METER COUPLING	1.50	SPM35	1.50	C38-24-1.5-NL
18.	BRASS 45° ELBOW	1.50	C3844-1.5	1.50	
19.	BRASS SPOOL	1.50		1.50	
20.	METER: ZENNER HP OR EQUIV	1.50		1.50	
21.	CHRISTY LID w/ READING LID	B24E w/ 7" x13.5"		B24E w/ 7" x13.5"	
22.	CHRISTY METER BOX	B24		B24	

5/8" & 3/4" METER ASSY WITH 1" FIRE SERVICE METER NOT TO SCALE NID SD12 HP