

## SECTION 33 12 12

### WATER SERVICES

#### PART 1 GENERAL

##### 1.01 SUMMARY

###### A. Section Includes

1. Construction of water service pipe, corporation stops, curb stops and boxes, and all appurtenances.

###### B. Related Sections

1. Section 33 05 05 - Trenching and Backfilling.
2. Section 33 10 00 - Water Utilities.

##### 1.02 PRICE AND PAYMENT PROCEDURES

###### A. Measurement and Payment

1. Copper Water Service Pipe: Shall be paid for at the contract unit price per lineal foot, for each diameter of pipe furnished, measured from the centerline of pipe to the centerline of curb box. The unit price shall include all pipe, fittings, laying, excavation, backfilling and testing.
2. Corporation Stop: shall be paid for at the contract unit price for each size furnished and installed and shall include the saddle where required and the tap or connection to the watermain.
3. Curb Stops & Boxes: shall be paid for at the contract unit price for each size furnished and installed and shall include necessary fill when required. Payment shall include boxes and extensions when required
4. Service Saddle: shall be paid for by each type installed.
5. Reconnect to Existing Water Service: Measurement shall be based on each connection made, including the removal of existing plugs. Payment at the Bid Unit Price shall include all items required to complete the Work, including sleeves, reducers and soldering.
6. Remove Concrete Floor / Concrete Pavement Special
  - a. The Contractor shall remove and replace portions of the existing concrete floor for the purpose of sanitary sewer and water service work in buildings as directed by the Engineer. Payment shall be at the contract unit price per square foot measured in place upon completion.
    - 1) All edges shall be neatly saw-cut.
    - 2) The concrete removal area shall be as small as possible to complete the work. Replacement of the floor shall be performed by a qualified craftsman and shall meet or exceed the thickness, quality, finish, and appearance of the existing floor, which is typically 4" crushed aggregate base with a minimum Portland cement concrete (PCC).
    - 3) The Contractor shall be responsible for the removal of rubble, excess dirt, protection of existing property from dust accumulation or other damage and cleanup for a complete patch, satisfactory to the Engineer and homeowner.
    - 4) All materials, labor, rubble and excavated material disposal, cleanup, or other required items are incidental.
    - 5) Any hours spent by the plumber on removing or replacing concrete floor will not be included in the common laborers pay item.
  - b. The Contractor shall be responsible for coordinating the schedule and other items relevant to this work with the homeowner such that adequate notice is available to allow removal of carpet, furniture, etc. by the homeowner.

7. Common Laborers Hours (Connect Services in Building)
  - a. Payment for sanitary sewer and/or water service work from the location of the pipe in the floor opening to the meter, sewer stack, or other required location on the inside of the building shall be on a time and material basis.
    - 1) Actual hours worked in the building will be counted and rounded to the nearest ¼ hour.
    - 2) No hours shall be charged for preparation work such as remove and replace concrete floor, excavation, removal, etc. Materials shall be paid at the invoice cost plus 15% markup. A currently licensed plumber shall perform the work. Hours shall be based on one licensed plumber. Payment shall be at the contract unit price per man-hour.
    - 3) The Contractor shall provide itemized receipts for each service indicating property address, crew, dates, times work performed, materials used and total hours.
8. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. AWWA C-651 shall apply to the disinfecting of water mains, except as modified herein.
- B. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

### 1.04 SUBMITTALS

- A. Submit the Product Data for the following items consistent with Section 01 33 00:
  1. Pipe and fittings.
  2. Corporation stop and curb boxes.
  3. Service saddles.

## **PART 2 PRODUCTS**

### 2.01 SERVICE PIPE AND FITTINGS

- A. Water service pipe and fittings shall conform to the provisions of 2611.2D, AWWA C800 and the following:
  1. Valves and fitting models to vary according to water main pipe size. See mfg. catalogue data.
  2. Saddles shall be provided for all corporation stops larger than 1½ inches.
  3. Curb boxes shall be adjustable and 8 feet in length with Minneapolis Pattern. Stationary rods are required.
  4. All fittings shall be compression style fittings.
  5. Any curb boxes that are located within concrete (sidewalks, driveways, etc.) shall have a PowerSeal Single Cover Water top or approved equal installed.
- B. Copper Service Pipe Notes & Specifications:
  1. Copper pipe shall conform to ASTM B88, Seamless Copper Water Tubing, Type K, Soft Annealed Copper.
  2. Copper water service pipe connections shall be flared type.

<b>WATER SERVICE PIPE &amp; APPURTENANCES</b>						
<b>ITEM:</b>	<b>SERVICE</b>	<b>COMPRESSION TYPE Valves &amp; Fittings</b>				
		<b>For TYPE K COPPER &amp; POLYETHYLENE PIPE</b>				
	<b>PIPE SIZE</b>	<b>FORD MODEL #</b>	<b>A.Y. McDONALD / SMITH BLAIR MODEL #</b>	<b>MUELLER MODEL #</b>		
		<b>FORD</b>	<b>A.Y. McDONALD</b>	<b>MUELLER</b>		
Corporation Stop	3/4"	FB1000-3-Q	74701BQ	B-25008		
	1"	FB100-4-Q	74701BQ	B-25008		
	1.25"	FB1000-5-Q	74701BQ	B-25008		
	1.5"	FB1000-6-Q	74701BQ	B-25008		
	2"	FB1000-7-Q	74701BQ	B-25008		
Tapping Saddle		FORD for DIP WMN	FORD for PVC WMN	SMITH-BLAIR for DIP WMN	SMITH-BLAIR for PVC WMN	MUELLER
	3/4"	F202	FS303	313	372	N/A
	1"	F202	FS303	313	372	N/A
	1.25"	F202	FS303	313	372	N/A
	1.5"	F202	FS303	313	372	N/A
	2"	F202	FS303	313	372	N/A
Curb Stop		FORD	A.Y. McDONALD	MUELLER		
	3/4"	B44333MQ	76104Q	P-25155		
	1"	B44444MQ	76104Q	P-25155		
	1.25"	B44555MQ	76104Q	P-25155		
	1.5"	B44666MQ	76104Q	P-25155		
	2"	B44777MQ	76104Q	P-25155		
Curb Box	1.25" Diam. for 3/4" to 1.25" Curb Stops	FORD 8'- EM2-80-56	A.Y. MCDONALD 5614	N/A		
Curb Box	2" Diam. for 1.5" to 2" Curb Stops	FORD 8'- EM2-80-57	A.Y. MCDONALD 5615	N/A		

**PART 3 EXECUTION**

**3.01 GENERAL**

- A. Water services shall be constructed to the right-of-way line at a minimum and to houses as directed by the Engineer.
- B. Water services shall be installed in the same trench as the sanitary sewer service to the greatest extent possible.
- C. The connection of the new service to the existing service shall be considered incidental and should be figured into the price for the wye or curb stop and box.
- D. A water service will be installed to the right-of-way as a minimum or to the building as directed by the Engineer.

- E. Services installed to the building shall be brought beyond the foundation to an opening in the basement floor.
- F. A separate water service (1") shall be installed from the mainline pipes for each unit of multiple family housing structures such as double bungalows, triplexes, quads, etc.
  - 1. A variance from these requirements is acknowledged only in the event that a revised service layout detail is drawn on the plans and receives written approval by the City Engineer.
- G. Boring, pneuma-gophering, tunneling, insertion inside existing services or other means of service installation will be required in some cases for water and sewer line installations.
  - 1. All surfaces will be restored to their original condition.
- H. Sewer and water service work on the interior of the buildings from the point of floor openings to the water meter, sewer stack, or other required locations shall be performed by a licensed plumber.
  - 1. The Contractor is responsible for the protection of all property not scheduled for replacement in the building.
  - 2. Work shall be performed in conformance to all applicable codes.
  - 3. The Contractor shall be responsible for coordination with the homeowner for the protection of private property on the exterior and interior of the home, including trees.
  - 4. When is it required to bring a new service into the structure and to the water meter, the line must consist of an approved State Plumbing Code material. Galvanized steel or lead pipe is prohibited on City of Northfield Reconstruction Projects.
  - 5. If the new service line is connected to an existing service other than at the meter and the existing material consists of galvanized steel, a brass fitting or approved bimetal connector is required to make this connection.

**END OF SECTION**