

BIDDING DOCUMENTS
FOR THE
VILLAGE OF BROCKPORT
WEST AVENUE WATER MAIN REPLACEMENT
WATER MAIN MATERIALS
MONROE COUNTY, NEW YORK

MARCH 2015

**BIDDING DOCUMENTS FOR THE
VILLAGE OF BROCKPORT
WEST AVENUE WATER MAIN REPLACEMENT
WATER MAIN MATERIALS**

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**DOCUMENT 00020
ADVERTISEMENT FOR BIDS**

NOTICE IS HEREBY GIVEN THAT separate sealed bids for the

**Contract for the
Village of Brockport
West Avenue Water Main Replacement
Water Main Materials**

will be received by the Village Board of Brockport, NY at Brockport Village Hall, 49 State Street, Brockport, NY 14420 until **11:00 a.m.** (Local Time) on **March 23, 2015**, and at that date and time then publicly opened and read aloud at Brockport Village Hall.

Bids will only be accepted via sealed envelope.

The Contract Documents may be examined at the following locations:

Brockport Village Hall, 49 State Street, Brockport, NY 14420

Chatfield Engineers, P.C., 2800 Dewey Avenue, Rochester, NY 14616

Electronic copies of the Contract Documents may be obtained by email by contacting:

smattison@chatfieldengineers.com

Copies of the Contract Documents may be obtained at:

Brockport Village Hall, 49 State Street, Brockport, NY 14420

upon payment of **\$10.00** for each set. Checks for Contract Documents shall be made out to Village of Brockport. Copies of Contract Documents will be mailed for an additional **\$5.00** per set. Checks for postage and handling fees shall be made out to Village of Brockport.

Each bid must be accompanied by cash, a certified check, or a bid bond in an amount not less than 5% of the bid and Certificate of Non-Collusion, and subject to the conditions and the furnishing of all materials as set forth in the Contract Documents and Instructions to Bidders.

Upon acceptance of the bid, if the successful bidder fails to enter into a contract pursuant to the requirements of said agency, then the sum deposited as aforesaid shall be forfeited to the Village of Brockport as liquidated damages, or the payment of the bond enforced for the benefit of the Village of Brockport.

BIDDERS ON THIS WORK WILL BE REQUIRED TO COMPLY WITH THE PRESIDENT'S EXECUTIVE ORDER NO.S, 11,246 AND 11,375 WHICH PROHIBIT DISCRIMINATION IN EMPLOYMENT REGARDING RACE, CREED, COLOR, SEX, OR NATIONAL ORIGIN.

The successful bidder must be an equal opportunity employer, must meet all appropriate State and Federal standards, and comply with all relevant governmental regulations.

Contract award is subject to budget appropriation.

By order of the Village Clerk, of the Village of Brockport.

Leslie Morelli, Village Clerk
Village of Brockport
49 State Street
Brockport, NY 14420

Date: March 2, 2015

**DOCUMENT 00300
BID FORM**

Project Identification: **Village of Brockport**

Contract Identification and Number: **West Avenue Water Main Replacement
Water Main Materials**

This Bid Is Submitted To: **Village of Brockport
49 State Street
Brockport, NY 14420**

1.01 The undersigned Bidder proposes and agrees, if this Bid is accepted, to provide all materials as specified or indicated in the Bidding Documents for the prices and within the times indicated in the Bid and in accordance with the other terms and conditions of the Bidding Documents.

2.01 The Bid will remain subject to acceptance for **45** days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER.

3.01 In submitting this Bid, Bidder represents, that:

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged.

Addendum No.	Addendum Date
_____	_____
_____	_____

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work and providing all materials.

C. Bidder is familiar with and is satisfied as to all Federal, State, and local Laws and Regulations that may affect cost, progress, performance of the Work and providing all materials.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site.

E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by the Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for providing materials at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of the Work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

I. Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by ENGINEER is acceptable to Bidder.

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the providing materials for which this Bid is submitted.

4.01 Bidder further represents that this Bid is genuine and not made in the interest of or on the behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

5.01 Bidder will provide materials in accordance with the Bidding Documents for the following prices:

**Base Bid Itemized Proposal
For the
Contract for the
Village of Brockport
West Avenue Water Main Materials**

PAYMENT ITEM NO.	APPROX. QUANTITY	ITEMS WITH UNIT PRICE WRITTEN IN WORDS	UNIT PRICE BID	AMOUNT
2610A	60 LF	4" CL. 51 DUCTILE IRON WATER MAIN, FOR _____ DOLLARS and _____ CENTS PER LF		
2610B	120 LF	6" CL. 51 DUCTILE IRON WATER MAIN, FOR _____ DOLLARS and _____ CENTS PER LF		
2610C	60 LF	8" CL. 51 DUCTILE IRON WATER MAIN, FOR _____ DOLLARS and _____ CENTS PER LF		
2610D	1,460 LF	12" CL. 51 DUCTILE IRON WATER MAIN, FOR _____ DOLLARS and _____ CENTS PER LF		

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PAYMENT ITEM NO.	APPROX. QUANTITY	ITEMS WITH UNIT PRICE WRITTEN IN WORDS	UNIT PRICE BID	AMOUNT
2610E	2 EA	12" x 4" ANCHOR TEE, FOR _____ DOLLARS and _____ CENTS PER EA		
2610F	7 EA	12" x 6" ANCHOR TEE, FOR _____ DOLLARS and _____ CENTS PER EA		
2610G	1 EA	12" x 8" ANCHOR TEE, FOR _____ DOLLARS and _____ CENTS PER EA		
2610H	1 EA	4" SOLID SLEEVE COUPLING, FOR _____ DOLLARS and _____ CENTS PER EA		
2610I	5 EA	6" SOLID SLEEVE COUPLING, FOR _____ DOLLARS and _____ CENTS PER EA		
2610J	1 EA	8" SOLID SLEEVE COUPLING, FOR _____ DOLLARS and _____ CENTS PER EA		
2610K	4 EA	4" RETAINER GLANDS W/ BOLTS, FOR _____ DOLLARS and _____ CENTS PER EA		

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PAYMENT ITEM NO.	APPROX. QUANTITY	ITEMS WITH UNIT PRICE WRITTEN IN WORDS	UNIT PRICE BID	AMOUNT
2610L	21 EA	6" RETAINER GLANDS W/ BOLTS, FOR _____ DOLLARS and _____ CENTS _____ PER EA		
2610M	3 EA	8" RETAINER GLANDS W/ BOLTS, FOR _____ DOLLARS and _____ CENTS _____ PER EA		
2610N	29 EA	12" RETAINER GLANDS W/ BOLTS, FOR _____ DOLLARS and _____ CENTS _____ PER EA		
2631A	20 EA	3/4" CORPORATION STOP, FOR _____ DOLLARS and _____ CENTS _____ PER EA		
2631B	1 EA	2" CORPORATION STOP, FOR _____ DOLLARS and _____ CENTS _____ PER EA		
2632A	600 LF	3/4" TYPE K COPPER TUBING, FOR _____ DOLLARS and _____ CENTS _____ PER LF		
2632B	50 LF	2" TYPE K COPPER TUBING, FOR _____ DOLLARS and _____ CENTS _____ PER LF		

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PAYMENT ITEM NO.	APPROX. QUANTITY	ITEMS WITH UNIT PRICE WRITTEN IN WORDS	UNIT PRICE BID	AMOUNT
2632C	20 EA	3/4" STRAIGHT COMPRESSION CONNECTION (CTS O.D.), FOR _____ DOLLARS and _____ CENTS _____ PER EA		
2632D	1 EA	2" STRAIGHT COMPRESSION CONNECTION (CTS O.D.), FOR _____ DOLLARS and _____ CENTS _____ PER EA		
2633A	20 EA	3/4" CURB STOP, FOR _____ DOLLARS and _____ CENTS _____ PER EA		
2633B	1 EA	2" CURB STOP, FOR _____ DOLLARS and _____ CENTS _____ PER EA		
2633C	20 EA	3/4" CURB BOX, FOR _____ DOLLARS and _____ CENTS _____ PER EA		
2633D	1 EA	2" CURB BOX, FOR _____ DOLLARS and _____ CENTS _____ PER EA		
2645	3 EA	FIRE HYDRANT WITH GASKET, NUTS AND BOLTS, FOR _____ DOLLARS and _____ CENTS _____ PER EA		

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PAYMENT ITEM NO.	APPROX. QUANTITY	ITEMS WITH UNIT PRICE WRITTEN IN WORDS	UNIT PRICE BID	AMOUNT
2660A	2 EA	4" GATE VALVE, FOR _____ DOLLARS and _____ CENTS PER EA		
2660B	7 EA	6" GATE VALVE, FOR _____ DOLLARS and _____ CENTS PER EA		
2660C	1 EA	8" GATE VALVE, FOR _____ DOLLARS and _____ CENTS PER EA		
2660D	3 EA	12" GATE VALVE, FOR _____ DOLLARS and _____ CENTS PER EA		
2660E	13 EA	VALVE BOX, FOR _____ DOLLARS and _____ CENTS PER EA		

TOTAL AMOUNT BASE BID \$ _____

AMOUNT BASE BID IN WRITING _____

6.01 Bidder agrees that the materials will be provided and ready for final payment by **within 30 days of the Notice of Award.**

6.02 Bidder and OWNER recognize that time is of the essence of this Contract and that the OWNER will suffer financial loss if the materials are not supplied within the times specified in paragraph 6.01 above, plus any extensions thereof allowed. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the material are not provided on time. Accordingly, instead of requiring any proof, OWNER and MATERIAL SUPPLIER agree that as liquidated damages for delay (but not as a penalty), MATERIAL SUPPLIER shall pay OWNER \$100 for each day that expires after the time specified in paragraph 6.01 for Substantial Completion until the materials are provided. After Substantial Completion, if MATERIAL SUPPLIER shall neglect, refuse, or fail to provide the remaining materials within the Contract Time or any proper extension thereof granted by OWNER, MATERIAL SUPPLIER shall pay OWNER \$100 for each day that expires after the time specified in paragraph 6.01 for completion and readiness for final payment until materials are provided and ready for final payment.

7.01 OWNER reserves the right to reject any or all Bids, including without limitation, nonconforming, non-responsive, unbalanced, or conditional Bids. OWNER further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsible. OWNER also reserves the right to waive all informalities not involving price, time, or changes in the materials and to negotiate contract terms with the Successful Bidder.

7.02 The following documents are attached to and made a condition of the Bid:

A. Required Bid security in the form of Bid Bond - Certified Check - Cash (circle type of security provided) in the amount of at least 5% of Bid.

B. A tabulation of Subcontractors, Suppliers, individuals and entities required to be identified in this Bid;

C. Required bidder qualifications statement with supporting data

D. Certificate of Non-Collusion; and

E. List other documents as pertinent.

8.01 OWNER is exempt from New York State sales and use taxes on materials and equipment to be incorporated in the Work. Section 1116 of Tax Law. Said taxes shall not be included in the Bid.

SUBMITTED on _____, _____

State Contractor License No. _____ (If applicable)

Employer's Tax ID No. _____

Corporation Name: _____
(SEAL)

State of Incorporation: _____

Type (General Business, Profession, Service, Limited Liability): _____

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Attest _____
(Signature of Corporate Secretary)

Business address: _____

Phone No. (____) _____ FAX No. (____) _____ E-Mail Address _____

IN WITNESS WHEREOF, OWNER and MATERIAL SUPPLIER have signed three (3) copies of this Document. On Counterpart a copy has been delivered to OWNER and MATERIAL SUPPLIER. All portions of the Contract Documents have been signed or identified by OWNER and MATERIAL SUPPLIER or on their behalf.

This Agreement will be effective on _____ (which is the Effective Date of the Agreement).

OWNER: **Village of Brockport**

MATERIAL SUPPLIER:

By: _____

By: _____

(CORPORATE SEAL)

(CORPORATE SEAL)

Attest _____

Attest _____

Address for giving notices:

Address for giving notices:

If OWNER is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of OWNER-MATERIAL SUPPLIER Agreement.)

License No. _____
(Where applicable)

Agent for service of process: _____

(If MATERIAL SUPPLIER is a corporation or a partnership, attach evidence of authority to sign.)

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER (Name and Address):

SURETY (Name, and Address of Principal Place of Business):

OWNER (Name and Address):

BID

Bid Due Date:

Description (Project Name— Include Location):

BOND

Bond Number:

Date:

Penal sum _____ \$ _____
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	(Seal)	SURETY	(Seal)
_____		_____	
Bidder's Name and Corporate Seal		Surety's Name and Corporate Seal	

By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title

Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Owner, or
 - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

SECTION 01000
MATERIAL SPECIFICATIONS

GENERAL PROVISIONS

1. WORK INCLUDED
 - A. The furnishing and delivering to the site of all pipe, fittings, materials, and appurtenances.
2. SUBMITTALS
 - A. Submit three (3) sets of shop drawings for items in each item.

ITEM 02610 - DUCTILE IRON PIPE, FITTINGS AND APPURTENANCES

1. DUCTILE IRON WATER MAIN PIPE
 - A. Ductile Iron Pipe shall be Class 51 and manufactured in USA.
 1. Pipe: ANSI/AWWA C150 and C151.
 2. Joints: ANSI/AWWA C111, rubber gasket.
 3. Cement Lined: ANSI/AWWA C104.
 4. Wall thickness: Class 51 minimum.
 5. Pipe/Lining NSF Approved.
 - B. Manufacturers
 1. American Pipe Product: Fastite Joint.
 2. U. S. Pipe Product: Tyton Joint.
 3. Griffin Pipe Product: Super Bell-Tite Joint.
 4. McWane/Clow/Atlantic States Tyton.
2. DUCTILE IRON FITTINGS
 - A. Fittings shall be manufactured in USA.
 1. Fittings: ANSI/AWWA C110 (full body) or ANSI/AWWA C153 (compact).
 2. Joints: ANSI/AWWA C111, rubber gasket, mechanical joint, unless otherwise specified.
 3. Cement Lined: ANSI/AWWA C104.
 4. Fitting/Lining: NSF Approved.
 5. Nuts and Bolts: "T" head bolts blue fluorocarbon coated with nuts.

- B. Manufacturers
 - 1. Tyler.
 - 2. Clow.
 - 3. Griffin Pipe.
 - 4. U.S. Pipe.
 - 5. Union Foundry.
- 3. MECHANICAL JOINT RESTRAINT
 - A. Fittings shall be manufactured in USA.
 - 1. MJ rubber gasket per ANSI/AWWA C111.
 - 2. Restraint (gripper) mechanism shall be hardened stainless steel gripping teeth welded to gripper gland or ductile iron gripping wedges heat-treated to a minimum hardness of 370 BHN with twist-off activation nuts.
 - 3. Glands shall be made of ductile iron.
 - 4. 350 psi operating pressure.
 - 5. Utilize standard T-bolt for MJ assembly (not restraint).
 - 6. Capable of being disassembled.
 - 7. Glands which closely resemble standard MJ glands shall be painted yellow.
 - 8. Nuts and Bolts: "T" head bolts blue fluorocarbon coated with nuts.
 - B. Manufacturers
 - 1. EBAA Iron Sales, Inc. Product: MEGALUG.
 - 2. Ford Meter Box Company Product: Uni-Flange, Series 1400.
- 4. DUCTILE IRON ANCHOR PIPE
 - A. Centrifugally cast, in accordance with ANSI/AWWA C151/A21.51. Shall be Manufactured in USA.
 - 1. Working pressure: 350 psi.
 - 2. Thickness: Class 53
 - 3. Joints: Mechanical Fittings with Anchor Joints
 - 4. Solid Anchor ring cast integrally with pipe by swivel gland.

B. Coating and lining:

1. Inside: Double cement mortar lining, ANSI/AWWA C104/A21.4
2. Outside: Bituminous enamel, minimum thickness 1 mil.

C. Manufacturers

1. Tyler/Union Product: swivel by solid adapter and swivel-by-swivel adapter
2. Griffin Product: swivel by solid anchor coupling.

ITEM 02631 - CORPORATION STOPS

1. CORPORATION STOPS (3/4")

A. Material

1. Fabricated from "No-Lead Brass" UNS Copper Alloy C89520 or C89833 in accordance with ANSI/AWWA C800 and chemical and mechanical requirements of ASTM B584, ball valve, 300 PSI working pressure, AWWA CC inlet threads and compression outlet.

B. Manufacturers

1. Ford: FB-1000-3Q
2. Mueller: H-15008

2. CORPORATION STOPS (2")

A. Material

1. Fabricated from "No-Lead Brass" UNS Copper Alloy C89520 or C89833 in accordance with ANSI/AWWA C800 and chemical and mechanical requirements of ASTM B584, ball valve, 300 PSI working pressure, AWWA CC inlet threads and compression outlet.

B. Manufacturers

1. Ford: FB-800-5, FB-800-6, FB400-6 or FB400-7
2. Mueller: H-15008

ITEM 02632 - SERVICE TUBING AND FITTINGS

1. SERVICE TUBING

- A. Copper tubing: 3/4-inch minimum nominal diameter, seamless, type K virgin copper conforming to AWWA C-800, supplied in conformance with ASTM B88, suitable for underground installation.

2. SERVICE FITTINGS (3/4-INCH & 2-INCH STRAIGHT COMPRESSION CONNECTION FOR CTS O.D.)
 - A. Material
 1. Fabricated from No-Lead Brass" UNS Copper Alloy C89520 or C89833 in accordance with ANSI/AWWA C800 and chemical and mechanical requirements of ASTM B584, 300 PSI working pressure with compression-by-compression joint.
 - B. Manufacturers:
 1. Ford: Series C44
 2. Mueller: H-15403.

ITEM 02633 - CURB STOPS AND BOXES

1. CURB STOPS
 - A. Material
 1. Fabricated from No-Lead Brass" UNS Copper Alloy C89520 or C89833 in accordance with ANSI/AWWA C800 and chemical and mechanical requirements of ASTM B584, ball valve, 300 PSI working pressure with compression-by-compression joint.
 - B. Manufacturers:
 1. Ford: B44-G
 2. Mueller: B-25209.
2. CURB BOXES: FOR 3/4" CURB STOPS
 - A. Curb box: arch pattern extension type with a 5-foot bury, 60-inch maximum extended length and compressed minimum length of 48-inch. Bottom section arch must fit 3/4-inch and 1-inch ball valve curb stop, with a 1-inch upper section.
 - B. Lids: cast-iron 2 hole. "WATER" cast in raised letters on the lid.
 - C. Curb rods: stainless steel, 5/8-inch outside diameter "S" type, 29-inch length. Bottom clamp/yoke of stainless steel, welded onto rod and drilled for cotter pin.
 - D. Cotter Pin: stainless steel.
 - E. Manufacturers:
 1. Mueller H-10314
 3. Ford: EA1-50-40-30R
3. CURB BOXES: FOR 2" CURB STOPS
 - A. Curb box: Adaptable with lower section of 2-inch arch pattern curb boxes and sized to fit over 1½-inch and 2-inch ball curb stops.

- B. Lids: cast-iron 2 hole. "WATER" cast in raised letters on the lid.
- C. Curb rods: stainless steel, 5/8-inch outside diameter "S" type, 29-inch length. Bottom clamp/yoke of stainless steel, welded onto rod and drilled for cotter pin.
- D. Cotter Pin: stainless steel.
- E. Manufacturers:
 - 1. Mueller H-10336
 - 3. Ford: CB-7

ITEM 02645 - FIRE HYDRANTS

- A. Hydrants
 - 1. Standard: ANSI/AWWA C502 - Dry Barrel fire hydrants.
 - 2. 5¼ inch valve opening.
 - 3. 5 foot bury for a standard hydrant.
 - 4. Counterclockwise direction of opening.
 - 5. Red paint conforming to Federal lead standards (one primer coat and two finish coats).
 - 6. Pentagon-shaped operating nuts, 1½ inch point to flat with weather cap or shield.
 - 7. "O" Ring packing.
 - 8. Bronze to bronze seat rings.
 - 9. Nozzles
 - a. 1 - 4½ inch inside diameter with 5¾ inch outside diameter, male, 4 threads per inch.
 - b. 2 - 2½ inch inside diameter with 3-1/16 inch outside diameter, male, 7½ threads per inch.
 - c. Mechanically attached nozzles with National Standard Threads.
 - d. Threaded female caps with chains.
 - e. Color above ground: Red
 - f. Orientation: Two smaller nozzles 180° apart with large nozzle located equidistant between them.
 - 10. 6 inch, mechanical joint inlet with connecting gland, mechanical joint gasket and "T" head bolts blue fluorocarbon coated with nuts.

11. Manufacturers
 - a. Mueller Super Centurion 250 only.
- B. Anchor Pipe & Mechanical Joint Fittings
 1. In accordance with Section 02610.
- C. Anchoring Tees, Mechanical Joint
 1. MJ by MJ on run by integrally attached MJ gland on branch.
 2. Manufacturers:
 - a. Tyler/Union: MJ by Swivel Tee.
 - b. Griffin: MJ by Swivel Tee.
 - c. U.S. Pipe: MJ valve and hydrant tee or MJ by swivel hydrant.
 - d. McWane/Clow/Atlantic States: MJ by swivel tee.
- D. Anchoring Elbows, Mechanical Joint
 1. Specifications: integrally attached female swivel gland by integrally attached MJ female swivel gland.
 2. Manufacturers:
 - a. Tyler/Union: 90° swivel-by-swivel elbow.
 - b. McWane/Clow/Atlantic States: 90° swivel-by-swivel hydrant elbows.
- E. Guard Valve
 1. 6-inch gate valve in accordance with Section 02660.

ITEM 02660 - GATE VALVE & BOX

1. RESILIENT-WEDGE GATE VALVES
 - A. Standards
 1. ANSI/AWWA C509, including factory production testing.
 2. Rated working pressure 250 PSI.
 - B. Design Options
 1. Non-rising stem.
 2. Counterclockwise direction of opening.
 3. Epoxy coated interior and exterior complying with AWWA C550

4. Mechanical joint by mechanical joint except for tapping valves, which shall be MJ, by tapping flange.
5. Double O-ring stem seal.
6. Two-inch square operating nut.
7. 304 stainless steel body and bonnet bolts.

C. Manufacturers

1. Clow:
MJ x MJ 4"-12" Model 2639 or 2640 Figure F6100.
MJ x tapping flange 4"-12" Model 2639 or 2640 Figure F6114.
2. Mueller:
MJ x MJ 4"-12" Model A-2360-20.
MJ x tapping flange 4"-12" Model T-2360-16.
3. U.S. Pipe:
MJ x MJ 4"-12" Model A-USPO-20.
MJ x tapping flange 4"-12" Model T-USPO-16
4. Kennedy:
MJ x MJ 4"-12" Style 8571.
MJ x tapping flange 4"-12" Style 8950.

2. VALVE BOXES

A. Standards

1. Boxes shall be 5-1/4 inch diameter.
2. Boxes shall be coated with a petroleum-asphaltic material.
3. All box tops shall have the word "Water" cast into them.

B. Manufacturers - Gate and Tapping Valve Boxes

1. Bibby-Ste-Croix
 - a. Two piece slide style, no flanges, 38"-58": V682
 - b. Covers: V878
2. Bingham & Taylor
 - a. Two piece slide style, no flanges: 5664-S
 - e. Covers: 5¼ inch.

END OF SECTION