

CONTRACT T200411210.01

FEDERAL AID PROJECT NO. ESTP-S026(6)

**SR 26, ATLANTIC AVENUE FROM CLARKSVILLE
TO ASSAWOMAN CANAL**

APPENDIX B

Technical Specifications for Waterline Work

Item 614508 – Water Main and Accessories

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01000 GENERAL

1.1 GENERAL

- A. The following technical sections are generally divided into units of work for the purpose of ready reference. The division of work among the Contractor's subcontractors is the Contractor's responsibility and the ENGINEER and OWNER assumes no responsibility to act as arbiter to establish subcontract limits between sections of the work.
- B. The Contractor shall provide work under this section as shown or specified and in accordance with the requirements of the Contract Documents. This section is general to all units of work for the entire scope of the project.

01300 SUBMITTALS

1.3 AS-BUILT DRAWINGS AND DOCUMENTATION

- A. The Contractor shall provide to Tidewater Utilities a set of as-builts for the on-site water distribution system containing the following items:
 - 1. Manufactures literature on the materials installed including valves, hydrants, fittings and piping.
 - 2. A set of drawings showing the actual locations of the water main, hydrants, services and valves. The drawings shall be delivered to Tidewater Utilities on paper and as CADD (.dwg) drawing format on a disc.
 - 3. A summary sheet listing the length and size of the water main installed, number of hydrants, valves and blow-offs.
- B. As- built documentation shall be submitted within thirty (30) days of the completion of work performed as applied for payment under this contract. If as-built documentation is not submitted to the satisfaction of the Engineer within this time frame, the work will be performed by the Company (or others) and 10% of the cost for the project work will be deducted from payments to the Contractor as the cost to have the as-built information completed.

01400 QUALITY CONTROL

1.1 INSPECTION

- A. The Company may provide a construction inspector for the duration of the project. The Contractor shall coordinate operations with the Company to accommodate all required testing and inspection. Assistance for these inspections, as required, including traffic control, and access shall be included in the prices bid for construction work. No additional payment will be made for any testing or inspection assistance.
- B. The inspection of the Engineer or Inspector shall not relieve the Contractor of their responsibility to conform to the specification or contract documents.

1.2 DISINFECTION

- A. All work, equipment, and material (chemicals) needed for disinfecting all water main facilities shall be performed and supplied by the contractor.
- B. The method of disinfection shall comply with AWWA and Delaware Division of Public Health’s Office of Drinking Water standards and is subject to the approval of the engineer.

1.3 SAMPLING AND TESTING

- A. Contractor shall schedule all chlorinating and pressure testing with the Company. Only Company personnel shall operate Company valves.
- B. Contractor shall be responsible for chlorinating lines and pressure testing.
- C. Pressure testing must be witnessed by an inspector designated by the Company.
- D. The Company shall provide for bacteriological testing. If the test fails, the Contractor shall reimburse the Company for additional testing.
- E. The Company shall perform all water quality testing at a laboratory of its choice. The sample must meet the Company’s water quality standards.
- F. The work shall be rechlorinated as needed until the water quality is approved. No additional payment shall be made to the Contractor for this work.

01600 MATERIAL AND EQUIPMENT

1.3 SALVAGE

- A. All valves, fittings, pipe, hydrants, and appurtenances, either new or removed during construction, that the Company deems useful, shall be stored on-site by the Contractor for salvage by the Company. It shall be the Contractor’s responsibility to dispose of all unwanted material from the site at no additional cost to the Contract.

02221 EXCAVATION

3.3 Trench Width

- A. The trench width may vary with and depend upon the depth of trench, and the nature of the excavated material encountered; but in any case shall be of ample width to permit the pipe to be laid and jointed properly and the backfill to be placed and compacted properly. The minimum width of unsheeted trench shall be at least 12 inches greater than the nominal diameter of the pipe in order to provide a clearance of six inches on each side of the pipe except by consent of the Engineer. The maximum clear width of trench shall not be more than 30 inches greater than the nominal diameter of the pipe.

02222 BACKFILL/COMPACTION/DISPOSAL OF MATERIAL

Part 2 PRODUCT

2.2 Materials

- A. Backfill and Bedding - Type C Borrow, or existing material meeting Type C Borrow requirements as identified in DeIDOT Standard Specification 209.04(c).
- B. Foundation Material – Type B Borrow, or existing material meeting Type B Borrow requirements as identified in DeIDOT Standard Specification 209.04(b).

2.3 Submittals

- A. Material Source

Part 3 EXECUTION

3.1 General

- A. All backfill shall comply with the appropriate detail as found in these specifications and approved by the Engineer. In all cases, pipe shall be bedded for the width of the trench to 6 inches above the top of the pipe. In areas where the trench bottom is hard, a 4-inch layer of ~~sand~~ Type B Borrow foundation material, or existing material meeting Type B borrow requirements, shall be provided to cushion the pipe barrel. A minimum of 4 inches of compacted ~~select material~~ Type C Borrow, or existing material meeting Type C borrow requirements, shall be placed prior to installation of the pipe in all other areas where the trench bottom is unsuitable.
- B. For all excavations, backfill material shall be deposited in the trench in 8-inch layers simultaneously on both sides of the pipe, for the full width of the trench as shown on Tidewater Plan Detail A-8, and shall be mechanically tamped and thoroughly compacted under and on each side of the pipe to provide solid backing against the external surface of the pipe in accordance with DeIDOT Standard Specification 208.04.
- C. Any deficiency in the quantity of selected approved material for backfilling the trenches, or for filling depressions caused by settlement, shall be the responsibility of the Contractor.

02660 WATER DISTRIBUTION PIPING AND APPURTENANCES

Part 1 GENERAL

1.1 General

- A. Provide work under this section as shown or specified and in accordance with the requirements of the Contract Documents.
- B. All material shall be installed as per the manufacturers' recommendations, the American Water Works Association, (AWWA), and the Ductile Iron Pipe Research Association's, (DIPRA), recommendations.

Part 2 PRODUCTS

2.1 Materials

- A. PVC pipe (4" & greater diameter) – Pressure Water Pipe, Class 150 AWWA C909 (C905, 16" & greater), 20 foot lengths, integral bells, NSF-PW approved.
- B. PVC pipe (2" diameter) – Class 200 (SDR 21) PVC Pressure Water Pipe.
- C. P.E. pipe (2" & less diameter) – AWWA C901 ASTM D1248 IPS SDR 9.
- D. Ductile Iron Pipe – Class 150, AWWA C151; AWWA C111 with cement lining and bituminous coating.
- E. Saddles – Ford Stainless Steel Banded Saddles FS202 Series, Mueller Stainless Steel equivalent, or approved equal
- F. Curb stops (less than 2" diameter) – Ford FB1700 Series, (2" or greater diameter) – Ford B11 series, Mueller equivalents, or approved equal
- G. Corporation Stops – (less than 2" diameter)-Ford F1000 Series, (2" or greater diameter)-Ford FB1700 Series, Mueller 300 Series equivalents, or approved equal
- H. Sch. 40 steel casing for road crossing.
- I. Restrained Joints – Mega-lugs series 2000 PV, by Ebba Iron, Inc., pipe restraints by Romac Industries, Inc., or approved equal
- J. Gate Valves (4" and greater) – AWWA C509 , AD#85 resilient seat type, Kennedy Kenseal II, American Flow Control resilient wedge type, Mueller , or approved equal
- K. Valve boxes – Cast Iron Tyler Union Model 564-S, Bingham & Taylor equivalent, or approved equal, including valve box adaptor for box centering
- L. Fire Hydrants – AWWA C502 American Darling B62B, Kennedy K-81D, or approved equal
- M. Fittings – Domestically manufactured Ductile Iron, Mechanical Joint with "Tee" type bolts.

- N. Tracing wire - #12 solid copper, blue color, with THHN or equal insulation by Performance Wire & Cable, Inc., Copperhead Industries, LLC, or approved equal.
- O. Detector tape – metal conductor type by Allen Systems, Terra-tape or approved equal; color – safety/pre-caution blue
- P. Concrete for Thrust Blocks – DeIDOT Class B per Standard Specification 812.03

Part 3 EXECUTION

3.1. Excavation, Trench Preparation, Compaction and Backfill

- A. All excavation and preparation of the trench shall comply with requirements contained in respective sections of these specifications. All Compaction and Backfill shall comply with specifications for this work contained in these specifications.

3.2 Alignment and Grade

- A. All pipe shall be laid and maintained to the required lines and grade; with fittings, valves and accessories at the required locations, and with joints centered and spigots home.
- B. The drawings show in a general way the proposed location of the pipeline. If, during the course of the work, unforeseen conditions arise, the location of the pipeline may be changed to meet such conditions as directed by the Engineer. All changes must be documented on the “AS-BUILT” documents.
- C. The trench shall be excavated to a depth as shown on plans. Excess excavation shall not be paid for where the Contractor, for his convenience, excavates a deeper trench than required. The minimum cover shall be four (4) feet. Should the designed bottom of pipe bedding or structure bedding elevation prove to be unstable, as agreed by the Engineer, any additional excavation required to achieve a stable bottom shall be measured and paid for separately in accordance with Table 207-A of the DeIDOT Standard Specifications. Item 208000 will be used for payment of this excavation, but only for the amount below the designed pipe bedding bottom. Backfill materials (#57 stone, Borrow, Type B, or Borrow, Type C) shall also be paid at their respective bid prices, but only for the amount required to backfill the area to the originally designed bottom of pipe bedding.

3.3 Pipe Laying

- A. All pipe shall be kept in broom swept, debris free condition at all times. At the end of each day’s work, the newly installed pipe shall be internally inspected and all debris, soil, sediment and water shall be squeegeed from the main.
- B. Proper implements, tools, and facilities satisfactory to the Engineer shall be provided and used by the Contractor for the safe and convenient prosecution of the work.
- C. All pipe, fittings, valves, and accessories shall be carefully lowered into the trench piece by piece by means of derrick, ropes, or other suitable tools or equipment, in such manner as to prevent damage to pipe. Under no circumstances shall pipe or accessories be dropped or dumped into the trench. All foreign matter or dirt shall be removed from the

inside of the pipe before it is lowered into its position in the trench and it shall be kept clean by approved means during and after laying.

- D. At times when pipe laying is not in progress, the open ends of pipe shall be closed by approved means and no trench water shall be permitted to enter the pipe. Unless otherwise directed by the Engineer, pipe shall be laid with bell ends facing in the direction of laying.
- E. Whenever necessary to deflect pipe from a straight line, either in the vertical or horizontal plane to avoid obstructions, to plumb stems, or where long radius curves are permitted, the degree of deflection shall be as allowed by AWWA, the manufacturer and approved by the Engineer. The pipe shall be laid with the aid of grade boards upon sound soil cut true and even, so that the barrel of the pipe will have a bearing for its full length.
- F. Under no circumstances may pipe or fittings be laid with standing or running water in the trench. When other trench conditions or the weather is unsuitable for such work permission from the Engineer must be obtained prior to commencing work.
- G. Wherever groundwater arises in the trench, well points shall be used to insure proper working conditions and proper installation of pipe. Wherever pipe crosses over private property, all topsoil shall be kept separately and used to restore property to its original fertility and condition.
- H. A night cap consisting of a ductile iron cap, or equivalent approved by the Engineer, shall be used whenever pipe installation is stopped for a period of time (including at night). The cap shall be securely attached to the new pipe to prevent contamination of the newly installed pipe.

3.4 Setting Valves, Valve Boxes, Fittings and Blow-offs

- A. These items shall be set and jointed to the pipe in accordance with the Standard Specifications of the manufacturer and the American Water Works Association insofar as they apply and as directed by the Engineer.
- B. Valve boxes shall be firmly supported and maintained, centered, and plumb over the wrench nut of the gate valves, with box cover flush with the surface of the finished pavement or at such other level as may be directed. All valves and fittings shall be properly jointed and restrained. Restrained joint/fittings will be used to restrain all mechanical joints.

3.5 Restraint of Bends, Tees and Plugs

- A. Reaction of thrust backing shall be applied on all tees, plugs, caps, and at bends deflecting 5 degrees or more, or movement shall be prevented by attaching suitable metal rods or straps, and retainer glands or megalugs as directed by the Company.
- B. Reaction or thrust backing shall be of concrete of a mix meeting the requirements of Class B as outlined in DelDOT Standard Specification 812.03. Backing shall be placed between solid ground and the fitting to be anchored; the area of bearing on pipe and on ground in each instance shall be that required by the Engineer. The backing shall, unless otherwise directed, be so placed that the pipe and fitting joints will be accessible for repair.

- C. Metal harness of tie rods and pipe clamps of adequate strength to prevent movement, or other suitable means, may be used instead of concrete backing, as directed by the Engineer. Steel rods and clamps shall be galvanized, or otherwise rustproof treated, or shall be painted as directed by the Engineer.

3.6 Tracing Wire

- A. All non-metallic water mains, blow-offs and services shall be installed with a continuous #12 solid copper trace wire within THHN or equal insulation by Performance Wire & Cable, Inc. Copperhead Industries, LLC, or approved equal. The wire shall be a blue color and placed directly on top of the pipe. All connections shall be made using a domestically manufactured copper Split Bolt Connector with Spacers approved by the Company. Each trace wire shall be extended into the valve box with an additional 3 feet of excess wire measured from the grade. Each trace wire on a blow-off line or service shall be extended into the meter or terminating box with an additional one-foot of excess wire.

3.7 Detector Tape

- A. Detector tape shall be placed directly over the pipe one foot below the finished grade. The ends of the tape shall be brought up within all valve boxes for future access.

3.8 Hydrostatic Testing

- A. When a section of pipe is determined to be ready for testing the Contractor shall notify the Engineer that the pipe is ready to be tested and submit a plan and schedule for the testing to the Engineer for approval.
- B. All piping shall be tested prior to connection to existing piping unless approved by the Engineer.
- C. The Contractor shall completely fill the line with potable water at controlled slow rate, expelling all air, in preparation for a hydrostatic pressure test. The Contractor shall be responsible for expelling all air from high points in the lines by installing as many corporations as necessary and approved by the Engineer.
- D. All furnishing of equipment for testing and testing shall be performed by the Contractor.
- E. The testing shall be in accordance with AWWA C-600 for ductile iron main and AWWA C-605 for PVC main. The test duration shall be for a period of 4 hours.
- F. The test pressure shall be 150 psi.
- G. Allowable leakage shall be as calculated by AWWA C-600 for ductile iron and AWWA C-605 for PVC. In addition, no visible leakage will be accepted.
- H. In the event of a failure to pass the test the Contractor shall be responsible to locate the leakage and make repairs as approved by the Engineer.
- I. The test shall be repeated as many times as necessary to meet the allowable leakage specified herein.
- J. The following table is a reprint from AWWA C-605 for leak allowance:

Allowable leakage for a system per 50 joints at 150 psi shall not exceed the following quantities:

4" pipe – 0.33 gallons per hour

6" pipe – 0.50 gallons per hour

8" pipe – 0.66 gallons per hour

10" pipe – 0.83 gallons per hour

12" pipe – 0.99 gallons per hour

- K. Suitable means shall be provided by the Contractor for determining the quantity of water lost by leakage under normal operating pressure. The pipe installation will not be accepted until the required leakage for the whole line or for any section of the line tested, is below the limits described above.
- L. Leakage is defined as the quantity of water to be supplied into the newly laid pipe, or any valved section of it, necessary to maintain the specified leakage test pressure after the pipe has been filled with water and the air expelled. Pipes may be subject to Hydrostatic pressure, inspected and tested for leakage at any convenient time after completion of backfill.

3.9 Flushing & Chlorination

- A. Upon the successful completion of the pressure test, all mains shall be flushed and disinfected in accordance with the recommendations of Standard for Disinfecting Water Mains (AWWA C651) and mandated by the Delaware Division of Public Health.
- B. Upon the completion of disinfection, the newly laid mains shall be thoroughly flushed of the chlorinated water with fresh potable water from the permanent supply of the newly installed main.
- C. Samples of the newly flushed water shall be obtained for testing after the water has stood in the main for at least 24 hours. A bacteriological test then shall be made by the Division of Public Health or a laboratory certified by the Board of Health. Bacteriological tests must show the complete absence of coliform bacteria. In addition, the tested water shall show no results of air, contaminants, chemical, or particulate mater which does not exist in the source water of the newly installed main.
- D. Should the initial chlorination and flushing result in samples, which do not pass water quality testing, the chlorination and flushing process will be redone until acceptable samples of water are obtained.
- E. The contractor shall be responsible for the disposal of all chlorinated water in accordance with AWWA C651 Section 1.09 and in conformance to all regulations governing this disposal. This shall include any permitting that may be related to this work.
- F. The water to be used for testing and flushing shall be based on available supply and pressure.

02661 CASING PIPE

Part 1 GENERAL

1.1 General

- A. Provide work under this section as shown or specified and in accordance with the requirements of the Contract Documents.
- B. All materials shall be installed as per the manufacturer's recommendations.

Part 2 PRODUCTS

2.1 Materials

- A. Steel Casing Pipe – shall be 3/8" diameter fully welded and continuous. Steel pipe shall be constructed in accordance with AWWA C-200.
- B. Casing Spacers – shall be by RACI, CCI Pipeline Systems, Inc, or approved equal. For PVC water main pipe, polyethylene spacers may be used. Contractor shall ensure that the spacer runner is a greater diameter than the pipe bell or the diameter of the restrained fittings. For ductile iron pipe, stainless steel or fusion bond coated steel spacers shall be used.
- C. End Seals – shall be by Advance Products, PSI, CCI Pipeline Systems, or approved equal

2.2 Submittals

- A. Manufacturers literature for all casing pipe, casing spacers and end seals.
- B. Details regarding the equipment, materials and method of operation of the jacking operation.

Part 3 EXECUTION

3.1 Jacking

- A. The steel pipe encasement conduit shall be installed by the jack boring method. The boring shall consist of pushing the pipe into the fill with the boring auger rotating within the pipe to remove the spoil. When augers or similar devices are used for pipe emplacement, the front of the pipe shall be provided with mechanical arrangement or devices that will positively prevent the auger and cutting head from leading the pipe so that there will be no unsupported excavation ahead of the pipe. The auger and cutting head arrangement shall be removed from within the pipe in the event an obstruction is encountered.
- B. The overcut by the cutting head shall not exceed the outside diameter of the pipe by more than 1/2 inch. The face of the cutting head shall be arranged to provide reasonable obstruction of the free-flow of the soft material. The use of water or other fluids to facilitate carrier pipe emplacement and spoil removal is prohibited.
- C. If an obstruction is encountered during installation to stop the forward action of the pipe and it becomes evident that it is impossible to advance the pipe, operations will cease and the pipe shall be abandoned in place and filled completely with grout.

- D. Bored or jacked installations shall have a bored hole essentially the same as the outside diameter of the pipe. If voids should develop or if the bored hole diameter is greater than the outside diameter of the pipe by more than approximately one inch, grouting or other methods, reviewed by the Engineer, shall be employed to fill such voids.
- E. When water is encountered, pumps of sufficient capacity to handle the flow shall be maintained at the site and be operated to handle the flow of water. They shall be constantly attended on a 24-hour basis until the operation can be safely halted. When dewatering, close observation shall be maintained to detect any settlement or displacement of highways, embankments, and facilities.
- F. At all times when the work is in progress, a field supervisor for the work, having no less than twelve (12) months, experience in the use of the equipment being used shall be present. If boring, drilling or similar machines are being used, the machine operator shall have no less than twelve (12) months experience in the operation of the equipment being used.
- G. Blasting shall not be permitted on this job.

3.2 Water Pipe Installation through Casing

- A. The water pipe shall be installed through the casing with the use of spacers.
- B. For full length pipes 18-20' in length, a spacer shall be placed within 1 foot on each side of the bell or flange and one centered between the two joints. For shorter length, spacers shall be no more than 8' apart. Any pipe longer than 6' shall have at least two spacers.
- C. Restrained joints shall be used for water main within the casing pipe.

3.3 Hydrostatic Testing

- A. Water main within the casing pipe shall be hydrostatically tested in accordance with Section 02660, 3.8 Hydrostatic testing.

3.4 Flushing and Chlorination

- A. Water main within the casing pipe shall be flushed and disinfected in accordance with Section 02660, 3.9 Flushing and Chlorination.

02662 WATER SERVICE LINE PIPING AND APPURTENANCES

Part 1 GENERAL

1.1 General

- A. Provide work under this section as shown or specified and in accordance with the requirements of the Contract Documents.
- B. All material shall be installed as per the manufacturer's recommendations and the American Water Works Association (AWWA) standards (including C800 and recommendations).

1.2 Terms and Definitions

- A. The term "Water Service" or "Service" shall mean the Company-owned service pipe from the tap at the distribution pipe to the curbstop valve at the limit of the public right-of-way. This is the property and responsibility of the Owner or Company.
- B. The term "Customer's Service" shall mean the service pipe from the curbstop into the utility customer's premises. This is the property and responsibility of the utility customer.

Part 2 PRODUCTS

2.1 Material (Provided by Company)

- A. Polyethylene (PE) – PE pipe shall be in accordance with AWWA C901. The pipe shall be SDR9, Class 160
- B. Curb stops (less than 2" diameter) – Ford FB1700 Series, (2" or greater diameter) – Ford B41/44 series, Mueller equivalents, or approved equal
- C. Corporation Stops – (1" diameter)-Ford F1000-4Q Series, (2" or greater diameter)-Ford FB1700 Series, Mueller 300 Series equivalents, or approved equal
- D. Saddles – Ford FS202 Series, Mueller SS Series Stainless Steel, or approved equal
- E. Tapping Sleeve – Ford FTSS, Mueller Stainless Steel, or approved equal
- F. PE Stiffener Insert – (1" diameter)- Ford 52 Series, (2" or greater diameter)-Ford 55 Series, A. Y. McDonald Mfg. Co., or approved equal
- G. Meter Valve – Single: Ford KV43-341W Series (5/8" single), Ford KV43-441 Series (1"single); Double : Ford UV43-41W Series, Mueller 300 Series equivalent, or approved equal
- H. Electronic Marker Ball – 3M Company, Tempo, or approved equal
- I. Marking Stake – 3' Wooden Stake (painted blue)

Part 3 EXECUTION

3.5 Tracing Wire and Detector Tape

- A. See Section 2660

3.6 Flushing & Chlorination

- A. All service lines shall be thoroughly flushed and disinfected at completion of the work in accordance with AWWA standards.

02663 WATER FIRE HYDRANTS AND APPURTENANCES

Part 1 GENERAL

1.1 General

- A. Provide work under this section as shown or specified and in accordance with the requirements of the Contract Documents.
- B. All material shall be installed as per the manufacturer's recommendations and the American Water Works Association (AWWA) standards and recommendations.

Part 2 PRODUCTS

2.1 Material

- A. Hydrants shall be American Darling #B62B, Kennedy K-81D, or approved equal.
- B. Hydrants shall meet the specifications of the local fire district in which the hydrant is located.
- C. Hydrant Paint – Primer- Rust-o-leum # 5281 gray primer. Intermediate & final coat – Rust-o-leum # 7564 Safety Red Professional Grade Oil Based Enamel. Equivalents shall be by Sherwin Williams or approved equal and meet all requirements as Rust-o-leum paint products.
- D. Reflective Tape – 2” wide, water proof

Part 3 EXECUTION

3.2 Setting Hydrant Assemblies

- A. Setting hydrant assemblies complete includes the hydrant tee, valve, valve box and pipe to the hydrant assembly as well as the hydrant assembly.
- B. The Contractor shall install all hydrants in accordance with the Standard Specifications of the manufacturers and the American Water Works Association insofar as they apply.
- C. Hydrants shall be set plumb, with the steamer nozzle facing the roadway. The distance between grade and the steamer nozzle nut must be between 16-22 inches, unless otherwise directed by the Engineer. Each hydrant shall be installed with a 6-inch branch and gate valve. The branch consists of the standard tee, valve, and all piping from the existing main to the hydrant. The hydrant, pipe, valve, and fittings shall be restrained using tie rods and/or retaining glands as directed by the Engineer.
- D. A drainage pit, measuring 2 feet x 2 feet x 2 feet under and around the hydrant, and the drains shall be excavated and filled with ¾-inch clean stone to a level 6 inches above the drains. The Contractor shall supply all excavation, hauling material, required select backfill material, backfill compaction, shoring, dewatering, thrust restraint, anchorage, all site restoration, and the removal and disposal of existing hydrants, for the installation of new hydrants as directed by the Engineer.

3.3 Painting of Hydrants

- A. The contractor responsible for the installation of the water main, valves and fire hydrants shall under all Tidewater water main contracts and/or developer contracts associated with

Tidewater Water Service Agreements provide hydrants that have been pre-painted "Safety Red" from the supplier. However, if necessary at the discretion of the Engineer, the contractor is required to paint all fire hydrants installed as specified in this section at the sole cost to the contractor.

- B. Fire hydrants are not to be painted unless the air temperature is above 50 degrees F. and the weather conditions remain favorable for painting. If the paint begins to peel or flake within a one-year period, the contractor will be responsible for repainting the fire hydrant according to these specifications.
- C. Upon completing the installation of the fire hydrant, the contractor is to remove all rust, scale and dirt from the hydrant body using a power wire brush or sand blaster. Any excess dirt, grease or dust is to be removed using a water free cleaning or degreasing solution followed by a dry wiping.
- D. Immediately after the fire hydrant is cleaned, the contractor is to apply one coat of Rust-O-Leum #5281 gray primer to all metal and painted surfaces using a paintbrush. After allowing the primer to dry for a period of not less than 2 hours, the contractor is to apply an intermediate and final coat of Rust-O-Leum #7564 Safety Red Professional Grade Oil Based Enamel paint allowing 3 hours of drying time between coats. Application of the paint or primer by method of spray will not be acceptable. Alternative paint manufacturer can be Sherwin Williams or approved equal following all guidelines set forth in this section.