SECTION 02435
FIRE HYDRANT ASSEMBLIES

PART I: GENERAL

1.1 GENERAL REQUIREMENTS
- A. Fire hydrants.
- B. Adjustment of fire hydrants and gate valves.

1.2 MEASUREMENT AND PAYMENT
- A. Unit Prices:
  1. Payment is on a unit price basis for each fire hydrant assembly, including six inch (6 In) gate valve and box, installed regardless of barrel depth.
  2. Payment for fire hydrant branches (leads) is on linear foot basis for each branch installed. Separate pay items are used for open-cut and augered branches.
  3. No separate payment for salvaged fire hydrants returned to the City's Public Works yard.
  4. Refer to Section 01270 – Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum):
  1. If Contract is Stipulated Price Contract, payment for work in this Section is included in Total Stipulated Price.

1.3 REFERENCES
- A. AWWA – American Water Works Association.
  1. AWWA C550 – Standard for Protective Epoxy Interior Coatings for Valves and Hydrants
  2. AWWA C502 – Standard for Dry-Barrel Fire Hydrants
  3. AWWA C503 – Standard for Wet-Barrel Fire Hydrants
- B. CFTS – City of Friendswood Technical Specifications.
- C. Federal Standard A-A-2962A – Enamel, Alkyd, Solvent Based Low VOC.

1.4 SUBMITTALS
- A. Conform to requirements of Section 01330 – Submittal Procedures.
- B. Submit name of hydrant manufacturer, type of bonnet paint and engineering control drawing number for hydrant proposed for use.

PART II: PRODUCTS

2.1 HYDRANTS
- A. Provide approved fire hydrants.
- B. The Project Manager may, at any time prior to or during installation of hydrants, randomly select furnished hydrant for disassembly and

laboratory inspection, at the Contractor expense, to verify compliance with the Specifications. When hydrant is found to be non-compliant, replace, at the Contractor's expense, all hydrants with new hydrants that comply with the Specifications.

C. Provide lower hydrant barrel fabricated from Ductile Iron Pipe (DIP) as single piece, connected to upper hydrant barrel by means of joint coupling that shall provide three hundred sixty degree (360°) rotation of upper barrel.

D. Fire Hydrants shall be American Flow Control B-84-B-5 or Mueller Super Centurion 250, 3 nozzle fire hydrants (2 each 2 1/2” NST hose nozzles and 1 each 5” Storz quick connection pumper nozzle. Storz shall be factory installed and have matching cap with cable tether and be free of louvers.) Factory coated RED. NO EXCEPTIONS.

2.2 LEADS

A. Branches (Leads): Conform to requirements of Section 02501 – Ductile Iron Pipe (DIP) and Fittings, Section 02250 – Steel Pipe and Fittings and Section 02235 – Polyvinyl Chloride Pipe (PVC).

2.3 AUDITING

A. Cycle Fire Hydrant and Valve to seals, Plugs, etc.

B. Flow-test each hydrant in accordance with AWWA C502, AWWA C503, and AWWA Manual M17 – Installation, Field Testing and Maintenance of Fire Hydrants.

C. Lubricate hydrant internals and connections following manufacturers’ specifications for maintenance and lubrication.

D. Top Coat Repair/Repaint hydrant as needed in accordance with 2.4 of this Specification.

2.4 HYDRANT PAINTING

A. New hydrants and refurbished hydrants shall be coated as specified herein.

B. Exterior Above Traffic Flange (Including Bolts & Nuts).

1. Thoroughly clean and wash off any dirt or lose debris.
2. Remove surface rust by wire brushing, sandblasting, or other approved method.
3. Roughen shinny surfaces with light sanding to improve adhesion.
4. Spot prime areas with one of the following spray primers:
    a. Rust-Oleum brand Clean Metal Primer;
    b. Rust-Oleum brand Profession Primer;
    c. Rust-Oleum brand Rusty Metal Primer;
    d. Rust-Oleum brand Rust Reformer Rust Converting Primer; or
    e. Krylon brand Rust Tough Rust Fix Converting Primers
    f. Primer color shall be Gray.
5. After recommended drying time for the Primer, the top coat shall

be as follows:

a. Hydrant Barrels – All hydrant barrels shall be painted

using Sherwin-Williams Polane SP Polyurethane Enamel Paint. Total dry film thickness (DFT) of two (2) mils to three (3) mils. Barrel color shall be: RED.

b. Bonnet – All hydrant bonnets shall be painted using Sherwin-Williams Polane SP Polyurethane Enamel Paint. Total dry film thickness (DFT) of two (2) mils to three (3) mils. Bonnet color shall be: SILVER

PART III: EXECUTION

3.1 INSTALLATION

A. Set fire hydrant plumb and brace at locations and grades as shown on the Drawings.

B. Place twelve inch by twelve inch (12 In x 12 In) yellow indicators (plastic, sheet metal, plywood or other material approved by the Project Manager) on pumper nozzles of new or relocated fire hydrants installed on new water lines not in service. Remove indicators after new water line is tested and approved by the Project Manager.

C. Do not cover drain ports when placing concrete thrust block.

D. Place pea gravel from top of pipe to six inches (6) above barrel connection as shown in the City of Friendswood Standard Details.

E. Obtain the Project Manager's approval in writing prior to installation of hydrants which require changes in bury depth due to obstructions not shown on the Drawings. Unit price adjustments shall not be allowed for changes in water line flow line or fire hydrant barrel length caused by obstructions.

F. Plug branch lines to valves and fire hydrants shown on the Drawings to be removed. Deliver fire hydrants designated for salvage to Public Works Facility.

G. Install branches (leads) in accordance with Section 02400 – Water Lines.

H. Coating Requirements:

1. Shall be Sherwin-Williams Polane SP Polyurethane Enamel Paint. NO EXCEPTIONS.
2. Apply coatings in strict accordance with manufacturer's recommendations. No requirements of this Technical Specification shall cancel or supersede written directions and recommendations of the specific manufacturer so as to not jeopardize the integrity of an applied system.
3. Furnish affidavit of compliance that coatings furnished complies with requirements of this Technical Specification and referenced standards, as applicable.

I. Remove and dispose of unsuitable materials and debris in accordance with requirements of Section 01580 – Waste Material Disposal.

END OF SECTION