




Item No. 3 SECTION 01010 SUMMARY OF WORK, **Add** the following to the last sentence in Article 1.2 Paragraph A

“...and the piping in the valve vault and the steel access hatch (54”x54”) for the East Valley Reservoir.”

Item No. 4 **Add** the attached SECTION 09960 VALVE VAULT PREPARATION & PAINTING.

**DRAWINGS**

Item No. 1 **Add** the attached drawings V-1 and V-2 titled “ADDENDUM NO. 1 REPAINT EAST VALLEY RESERVOIR EXISTING VAULT PIPING.”

By:   
\_\_\_\_\_  
Jennifer Mannix,  
Contract Administrator

Date: May 15, 2012

Total number of pages contained within this Addendum: 11

## SECTION 09960 – VALVE VAULT PREPARATION & PAINTING

### PART 1-GENERAL

#### 1.1 RELATED DOCUMENTS

- A. General provisions of the Contract, including General and Supplementary Conditions;
- B. Section 09971 Welded Steel Water Tank Preparation & Painting; and
- C. Contract Drawings.

#### 1.2 SUMMARY

- A. Base Bid WORK under this section generally consists of surface preparation, priming and painting of the piping system in one underground water valve vault located at the East Valley Reservoir site.
- B. Use coating systems specified in this section to finish all ductile iron pipe components, unless otherwise indicated. Without restricting volume or generality, work to be performed under this section includes, but is not limited to:
  - 1. Ductile iron piping, fittings and valves located in reservoir valve vault.

#### 1.3 REFERENCES

- A. Standards, Specifications, Recommended Practices, and listed herein are part of this Section to extent referenced.
- B. The American Water Works Association:
  - 1. ANSI/AWWA D102 Painting Steel Water-Storage Tanks
  - 2. ANSI/AWWA C203 Coal-Tar Protective Coatings and Linings for Steel Water Pipelines - Enamel and Tape-Hot-Applied
- C. American Society for Testing and Materials:
  - 1. ASTM D16 Terminology Relating to Paint, Varnish, Lacquer, and Related Products
  - 2. ASTM D3359 Test Method for Measuring Adhesion by Tape Test
  - 3. ASTM D4541 Test Method for Strength of Coatings Using Portable Adhesion-Testers
  - 4. ASTM D1005 Test for determining dry film thickness
  - 5. ASTM D4417 Test for determining surface profile
- D. The Society for Protective Coatings:
  - 1. SSPC-SP1 Specification for Solvent Cleaning
  - 2. SSPC-SP2 Specification for Hand Tool Cleaning
  - 3. SSPC-SP3 Specification for Power Tool Cleaning
  - 4. SSPC-SP10 Specification for Near White Metal Blast Cleaning
  - 5. SSPC-SP11 Specification for Power Tool Cleaning to Bare Metal
  - 6. SSPC-PA1 Painting Application Specification
  - 7. SSPC-PA2 Measurement of Dry Paint Thickness with Magnetic Gages

## SECTION 09960 – VALVE VAULT PREPARATION & PAINTING

### 1.4 DEFINITIONS

- A. If used, terms such as PAINT shall in general refer to Alkyd, Acrylic, Epoxy and Zinc-rich primers, and Alkyd, Acrylic, Epoxy, and Polyurethane intermediate or topcoats.
- B. DRY FILM THICKNESS (DFT): Thickness, measured in mils (1/1000 inch), of a coat of paint in its cured state.

### 1.5 SUBMITTALS

- A. Product Data:
  - 1. Submit manufacturer's literature describing products to be provided, giving manufacturer's name, product name, and product line number for each material.
  - 2. Submit technical data sheets for each coating, giving descriptive data, curing times, mixing, thinning, and application requirements.
  - 3. Submit color charts showing manufacturer's full range of standard colors.
- B. Quality Assurance Submittals:
  - 1. Certificates:
    - a. Provide manufacturer's certification that products to be used comply with specified requirements and are merchantable and suitable for intended application.
    - b. Submit listing of not less than 5 of applicator's most recent applications representing similar scope and complexity to Project requirements. List shall include information as follows:
      - i. Project name and address
      - ii. Name of OWNER
      - iii. Name of CONTRACTOR
      - iv. Name of engineer
      - v. Date of completion
  - 2. Manufacturer's Instructions:
    - a. Submit manufacturer's installation procedures, if not on product data sheets, which shall become the basis for accepting or rejecting intended installation procedures.

### 1.6 QUALITY ASSURANCE

- A. Qualifications:
  - 1. Applicator shall be trained in application techniques and procedures of coating materials and shall references from three similar projects that were successfully completed, including the project date, location, owner, and the name and phone number of an appropriate contact person.
  - 2. Applicator shall maintain, throughout duration of application, a crew of painters who are fully qualified.
  - 3. Single Source Responsibility:
    - a. Materials shall be products of a single manufacturer.
    - b. Other additional materials, which are produced or are specifically recommended by coating system manufacturer to ensure compatibility of system, may be used.

## SECTION 09960 – VALVE VAULT PREPARATION & PAINTING

### B. Pre-Construction Meeting:

1. A pre-construction meeting shall be held on-site before field application of coating systems begins.
2. Meeting shall be attended by OWNER, CONTRACTOR, OWNER's representative, and Engineer.
3. Topics to be discussed at meeting shall include:
  - a. A review of Contract Documents and deviations or differences that need to be resolved;
  - b. CONTRACTOR's schedule;
  - c. Items such as environmental conditions, surface conditions, surface preparation, application procedures, and protection following application; and
  - d. Establishment of areas on-site that will be made available for use as storage and working areas.
4. The OWNER's Representative shall prepare and submit, to all parties in attendance, a written report of pre-installation meeting. This report shall be submitted no more than 3 days following meeting.

### 1.7 DELIVERY AND STORAGE

#### A. A. Packing and Shipping:

1. Deliver products in manufacturer's original unopened containers. Each container shall have manufacturer's label, intact and legible.
2. Include on label for each container:
  - a. Manufacturer's name
  - b. Type of paint
  - c. Manufacturer's stock number
  - d. Color name and number
  - e. Instructions for thinning, where applicable

#### B. Storage and Protection:

1. Store materials in a designated protected area, per manufacturer's printed data sheet instructions.

### 1.8 PROJECT CONDITIONS

#### A. Environmental Requirements:

1. Apply coating materials per manufacturer's printed data sheet instructions:
  - a. Refer to specific product data sheets for minimum surface temperature requirements. Surface temperatures shall be at least 5 degrees F (2.8 degrees C) above dew point and rising.
  - b. Provide for proper ventilation and/or dehumidification using explosion proof equipment and allow operation during application and cure cycle of the coating systems as recommended by manufacturer.
  - c. Provide adequate illumination using explosion proof lights and equipment.
  - d. Provide work site free of airborne dust, debris, and other contaminants.
  - e. CONTRACTOR shall treat the underground vault for the East Valley Reservoir as a confined space and shall comply with all OSHA regulations regarding confined spaces.

## SECTION 09960 – VALVE VAULT PREPARATION & PAINTING

### PART 2- PRODUCTS

#### 2.1 ACCEPTABLE MANUFACTURERS

- A. This specification lists products manufactured by The Sherwin Williams Company Industrial & Marine Group and Tnemec Company Incorporated. Materials specified herein are cited as minimum standard of quality which will be acceptable.
- B. Materials specified herein shall not preclude the use of equivalent materials. Equivalent materials shall be submitted to Engineer for consideration and shall be made at least ten (10) days prior to the date of bids.
  - 1. Requests for substitution shall include evidence of satisfactory past performance on ductile iron pipe with asphaltic coating used for potable water systems.
  - 2. Substitutions will not be considered that change number of coats or do not meet specified total dry film thickness.
  - 3. CONTRACTOR shall state in the bid the amount of deduct to use equivalent materials to those specified.

#### 2.2 COATING SYSTEMS PERFORMANCE

- A. Manufacturer shall verify that the following testing requirements are met by the product used as Exterior Primer:
  - 1. Abrasion
    - Method: ASTM D 4060, CS-17 Wheel, 1000 grams load
    - Requirement: No more than 123.2 milligrams average loss after 1000 cycles.
  - 2. Adhesion
    - Method: ASTM D 3359B Crosshatch Adhesion
    - Requirement: No less than a rating of 5.
  - 3. Salt Spray (Fog)
    - Method: ASTM B 117
    - Requirements: No blistering, cracking, spot rusting, of delamination of film.  
No rust creepage at scribe after 1500 hours.
- B. Manufacturer shall verify that the following testing requirements are met by the product used as Exterior Finish:
  - 1. Abrasion
    - Method: ASTM D 4060, CS-17 Wheel, 1000 grams load
    - Requirement: No more than 96 milligrams loss after 1000 cycles.
  - 2. Adhesion
    - Method: ASTM D 3359 Method B (Crosshatch Adhesion) Coating system applied to sandblasted steel panels, cured 30 days at 77 degrees F.
    - Requirement: Not less than a rating of 5, average of three tests.
  - 3. Graffiti Resistance
    - Method: The following graffiti materials applied to coating and allowed to dry for seven days: acrylic, epoxy-ester and alkyd spray paints, ballpoint ink, crayon, Markett marker, black shoe polish and lipstick. Removal first attempted with xylene, if graffiti remained then Methyl Ethyl Ketone was used.
    - Requirements: Complete and easy removal without loss of shine.

#### ADDENDUM NO. 1

EAST VALLEY RESERVOIR EXTERIOR AND  
LEMON CREEK RESERVOIR INTERIOR REPAINTING  
Contract No. E12-210

VALVE VAULT  
PREPARATION & PAINTING  
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## SECTION 09960 – VALVE VAULT PREPARATION & PAINTING

- 2.3 COATING SYSTEM FOR DUCTILE IRON PIPE WITH ORIGINAL ASPHALTIC COATING REMAINING
- A. Primer: all prepared ductile iron surfaces shall be primed with one coat of either:
    - 1. Tnemec 10 Tnemec Primer (3 mils DFT), or
    - 2. Sherwin-Williams Kem Kromik Universal Metal Primer (3 mils DFT).
  - B. Finish: all primed surfaces shall be finished with one coat of the same manufacturer's finish coat, either:
    - 1. Tnemec 2H-HB Tnemec-Gloss (3 mils DFT), or
    - 2. Sherwin-Williams B54 Series Industrial Enamel (3 mils DFT).
- NOTE: Minimum total dry film thickness shall be 6.0 mils.

### PART 3-EXECUTION

#### 3.1 EXAMINATION

- A. Site Verification of Conditions:
  - 1. Examine areas and conditions under which application of coating systems shall be performed for conditions that will adversely affect execution, permanence, or quality of coating system application.
  - 2. Correct conditions detrimental to timely and proper execution of Work.
  - 3. Do not proceed until unsatisfactory conditions have been corrected.
  - 4. Commencement of installation constitutes acceptance of conditions and responsibility for satisfactory performance.

#### 3.2 PROTECTION OF SURFACES NOT SCHEDULED TO BE COATED

- A. Electrical and control systems exist in the valve vault and shall be protected from contact with any solvents, tools, abrasives, or other preparation products or tools, or any components of the coating system during the Work.
- B. All surrounding areas and surfaces not scheduled to be coated shall be protected from damage during surface preparation and application of coatings.
- C. Any coatings that fall on surrounding areas and surfaces not scheduled to be coated shall be immediately removed.

#### 3.3 SURFACE PREPARATION OF PIPING

- A. All piping component surfaces shall receive a surface preparation using SSPC-SP1 Solvent Cleaning. Surface is to be clean, dry and free of contaminants except the original asphaltic pipe coating system.
- B. Solvent Cleaning (SSPC-SP1): Removal of oil, grease, soil, salts, and other soluble contaminants by cleaning with solvent, vapor, alkali, emulsion, or steam.
- C. All pitted and rusted areas shall receive a Power Tool Cleaning in accordance with SSPC SP-11. All "popped" or loose paint and rusted areas shall be DA sanded to remove all loose or flaking paint.

## SECTION 09960 – VALVE VAULT PREPARATION & PAINTING

### 3.4 INSPECTION AND TESTING

- A. CONTRACTOR shall perform holiday inspection per NACE Standard SP 0188 Holiday Detection Standards.
- B. If test results indicate noncompliance with the specification, the following corrective action may be required of the CONTRACTOR.
  - 1. Removal of non-compliant systems or components;
  - 2. Replacement of system or components in (1), above; and
  - 3. Assumption of responsibility for all testing expenses.
- C. Minimum requirements of the potable steel tank lining system shall be that it be free of the following.
  - 1. Uncured material;
  - 2. Inadequate thickness;
  - 3. Pinholes;
  - 4. Blisters;
  - 5. Delamination;
  - 6. Foreign matter; and
  - 7. Unspecified materials.

### 3.5 APPLICATION

- A. General Requirements:
  - 1. Apply coating systems in compliance with manufacturer's instructions and using application method best suited for obtaining full, uniform coverage and hide of surfaces to be coated without runs, sags, and discontinuities.
  - 2. Work shall be implemented in compliance with applicable sections of AWWA D102.
  - 3. Apply prime, and finish coats to comply with wet and dry film thicknesses and spreading rates for each type of material as recommended by manufacturer and in accordance with SSPC-PA2.
  - 4. The number of coats specified shall be minimum number acceptable. Apply additional coats as needed to provide a smooth, even application and achieve the specified DFT.
  - 5. Closely adhere to re-coat times recommended by manufacturer. Allow each coat to dry thoroughly before applying next coat.
  - 6. Employ only application equipment that is clean, properly adjusted, and in good working order, and of type recommended by coating manufacturer.
- B. Thinning:
  - 1. Thinning requirements for specified products are to be found in the paint manufacturer's printed data sheets and are to be strictly adhered to.

### 3.6 REPAIR / RESTORATION

- A. At completion of Work, touch-up and restore finishes where damaged.
- B. If stain, dirt, or undercoats show through final coat, correct defects and cover with additional coats until coating is of uniform finish, color, appearance and coverage.



## **SECTION 09960 – VALVE VAULT PREPARATION & PAINTING**

- C. Touch-up of minor damage shall be acceptable where result is not visibly different from surrounding surfaces. Where result is visibly different, either in color, sheen, or texture, recoat entire surface.

### **3.7 QUALITY CONTROL**

- A. A representative of the paint manufacturer shall be available to provide technical assistance, and guidance for application of the paint system as needed.

### **3.8 PROTECTION**

- A. Protect painted areas against damage until paint system is fully cured.

### **3.9 WASTE MANAGEMENT**

- A. General Requirements:

1. Place materials defined as hazardous or toxic waste in designated containers.
2. Return solvent and oil soaked rags for contaminant recovery and laundering or for proper disposal.
3. Do not dispose of paints or solvents by pouring on ground. Place in designated containers for proper disposal.

- B. Containment/Disposal Requirements:

1. Existing valve vault piping finishes have been tested and shown to be free of lead-based paint.
2. 1. Surface Preparation Debris Containment:
  - a. Refer to SSPC 61 Guide for Containing Debris Generated during Paint Removal Operations.
3. Disposal of Surface Preparation Debris:
  - a. Surface preparation debris shall be disposed of in compliance with applicable federal, state and local regulations.
4. Containment/Disposal Costs:
  - a. CONTRACTOR shall be responsible for costs associated with containment and waste disposal that may result from execution of this Project.

### **3.10 ONE YEAR ANNIVERSARY INSPECTION**

- A. OWNER shall set a date for a one year inspection.
- B. Inspection will be attended by an OWNER's PROJECT MANAGER, the CBJ Water Utility, and the CONTRACTOR..
- C. Any deficiencies in the coatings system will be repaired at the CONTRACTOR's expense.

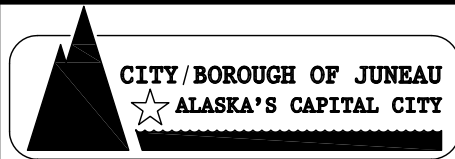
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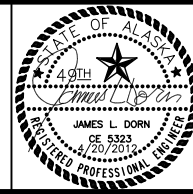
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 CHECKED JLD  
 DATE APR 2012



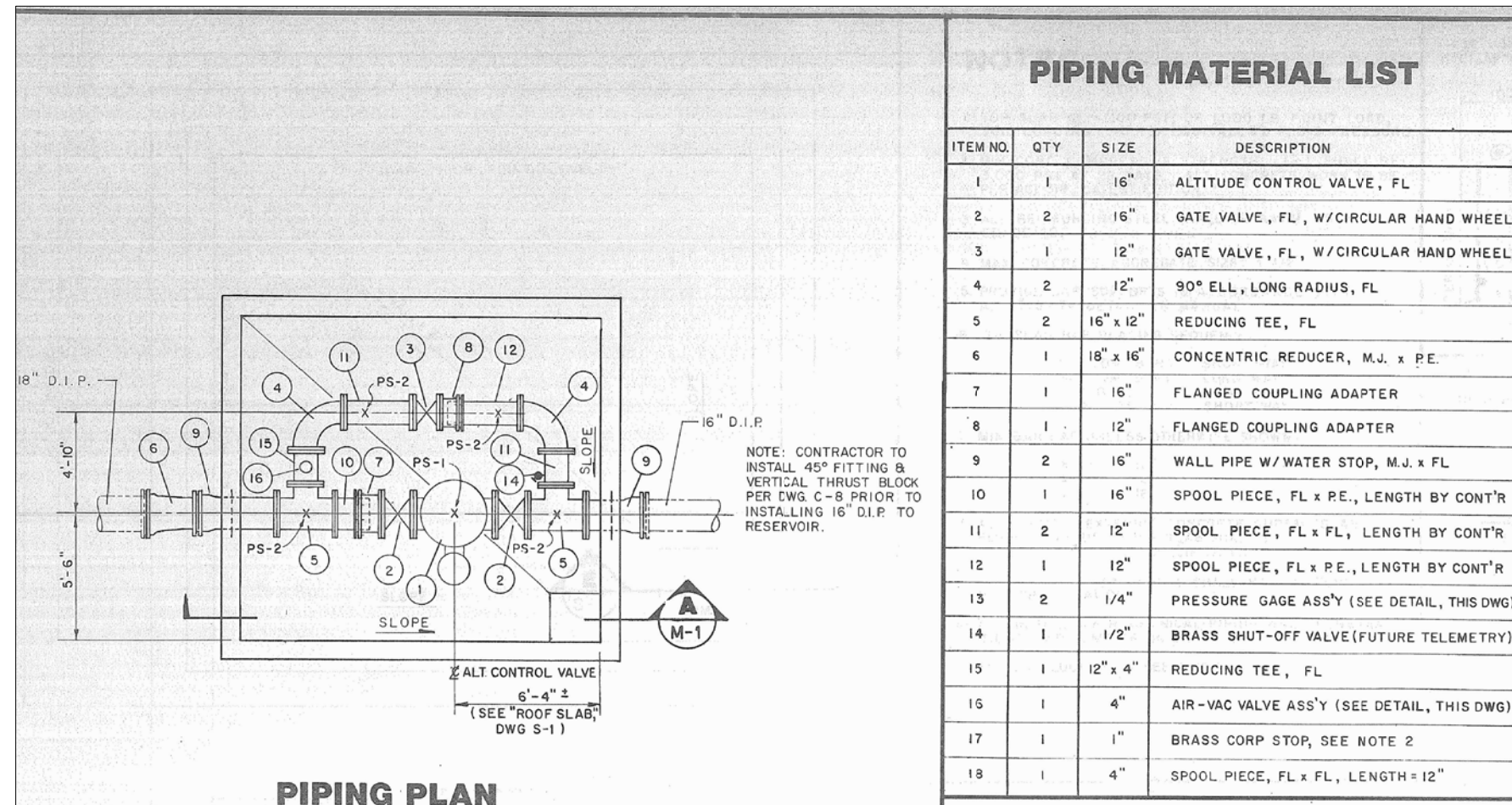
EAST VALLEY RESERVOIR EXTERIOR  
 AND  
 LEMON CREEK RESERVOIR INTERIOR  
 REPAINTING  
 CONTRACT NO. E12-210



**CDI Carson Dorn Inc.**  
 712 WEST 12TH STREET  
 JUNEAU, ALASKA 99801  
 (907) 586-4447

ADDENDUM NO. 1  
 REPAINT EAST VALLEY RESERVOIR  
 EXISTING VAULT PIPING

DRAWING  
**V-1**  
 SHEET NO.  
 1 of 2

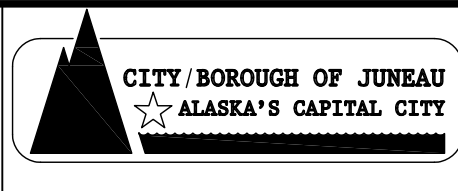


PIPING MATERIAL LIST			
ITEM NO.	QTY	SIZE	DESCRIPTION
1	1	16"	ALTITUDE CONTROL VALVE, FL
2	2	16"	GATE VALVE, FL, W/CIRCULAR HAND WHEEL
3	1	12"	GATE VALVE, FL, W/CIRCULAR HAND WHEEL
4	2	12"	90° ELL, LONG RADIUS, FL
5	2	16" x 12"	REDUCING TEE, FL
6	1	18" x 16"	CONCENTRIC REDUCER, M.J. x P.E.
7	1	16"	FLANGED COUPLING ADAPTER
8	1	12"	FLANGED COUPLING ADAPTER
9	2	16"	WALL PIPE W/ WATER STOP, M.J. x FL
10	1	16"	SPOOL PIECE, FL x P.E., LENGTH BY CONT'R
11	2	12"	SPOOL PIECE, FL x FL, LENGTH BY CONT'R
12	1	12"	SPOOL PIECE, FL x P.E., LENGTH BY CONT'R
13	2	1/4"	PRESSURE GAGE ASS'Y (SEE DETAIL, THIS DWG)
14	1	1/2"	BRASS SHUT-OFF VALVE(FUTURE TELEMETRY)
15	1	12" x 4"	REDUCING TEE, FL
16	1	4"	AIR-VAC VALVE ASS'Y (SEE DETAIL, THIS DWG)
17	1	1"	BRASS CORP STOP, SEE NOTE 2
18	1	4"	SPOOL PIECE, FL x FL, LENGTH = 12"

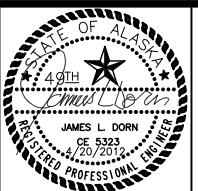
EXISTING VAULT PIPING

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DATE	APR 2012		
REV	DATE	BY	DESCRIPTION



EAST VALLEY RESERVOIR EXTERIOR  
AND  
LEMON CREEK RESERVOIR INTERIOR  
REPAINTING  
CONTRACT NO. E12-210



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ADDENDUM NO. 1  
REPAINT EAST VALLEY RESERVOIR  
EXISTING VAULT PIPING

DRAWING  
V-2  
SHEET NO.  
2 of 2