

SPECIAL PROVISIONS

SECTION 5 OF THE STANDARD SPECIFICATIONS AND STANDARD PLANS

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501 GENERAL

501.1 Project Summary

- A. The District requires recoating of three (3) tank vessels, one (1) 20 ft x 20 ft metal/wood control building, related piping, four (4) flexible couplings, and seven (7) traffic bollards.
- B. Prior to or at the pre-construction meeting, the Contractor is required to provide the following:
 - A project schedule detailing all phases of work.
 - Four (4) bound sets of complete material submittals, assembled per District Standard Specifications.
- C. Prior to coating application, the Contractor shall:
 - Have exterior surfaces of vessel, tank, piping, and couplings prepared to SSPC SP1 solvent cleaning; and,
 - Have all repairs, as necessary, completed and prepared.

501.2 Project Schedule and Time of Completion

- A. The work covered under this project as defined in these Contract Documents shall be diligently prosecuted in accordance with the schedule proposed by the Contractor and approved by the Engineer to insure completion within **15 working days** from the date of the Notice to Proceed.
- B. Time for performance shall start running on the date of the Notice to Proceed, and shall run continuously thereafter, excluding Saturdays, Sundays, and District-Observed holidays.
- C. The vessel and tank to be painted are an integral element of the Soquel Creek Water District's water distribution system. Taking these systems off line for maintenance causes certain unavoidable risks for the customers and the District as well as additional maintenance responsibilities for District staff. To minimize the risks and hardships associated with taking the system offline, it is necessary to establish firm schedule requirements and set significant financial penalties if the contractor does not meet these scheduling requirements.
- D. Liquidated Damages shall be enforced per Section 108.09, "Assessment of Damages for Delay" of the SCWD Standard Specifications, if the work is not completed by the Contractor in the time specified herewith. The Contractor shall refer to Section 100, "General Conditions", of the SCWD Specifications for additional provisions.

SCHEDULE OF LIQUIDATED DAMAGES		
ORIGINAL AMOUNT OF CONTRACT		PER DIEM AMOUNT OF LIQUIDATED DAMAGES
FOR MORE THAN	UP TO AND INCLUDING	
\$0.00	\$100,000.00	\$250.00
\$100,000.00	\$500,000.00	\$500.00
\$500,000.00	\$1,000,000.00	\$750.00
\$1,000,000.00	\$2,000,000.00	\$1,000.00
OVER \$2,000,000.00		AS SPECIFIED

501.3 Protection of Property and Materials

- A. Section 106.13, "Protection of Property and Utilities" of the Standard Specifications is amended with the provisions of Section 501.3, "Protection of Property and Materials".
- B. The Contractor's attention is called to the proximity of private residences adjacent to the work site. Contractor shall conduct his operations with due care to avoid upsetting area residents. Contractor shall work with the District to appease all reasonable requests from area residents. The District's Chief Engineer will determine what requests from area residents are reasonable.
- C. The District Engineer shall provide a list to the Contractor of homeowners to be notified, at least two days prior to start of work. In accordance with the provisions of Section 106.13, "Protection of Property and Utilities" of the Standard Specifications, the Contractor shall contact each property owner near each work site at the District's direction.
- D. No work shall be permitted before 8 AM nor after 5 PM each working day except for emergencies as defined in the Standard Specifications and Standard Plans. No work shall be performed on weekends or holidays. For the purposes of this Section, the word "work" shall mean all noise producing activities including but not limited to starting of trucks or equipment, haulage, construction, and transiting the access roads.
- E. The Contractor shall protect all public and private road surfaces used during construction and shall restore said surfaces to an equivalent or better condition upon completion of all work. During the course of work, the Contractor shall make any interim repairs or maintenance to access road surfaces, as necessary, at the direction of the District Engineer, at no additional cost to the District.
- F. Facilities including but not limited to catch basins, retaining walls, curbs, gutters, and fences shall be protected from damage by construction activities. The Contractor shall repair or remove and replace damaged improvements as directed by the District Engineer at no additional cost to the District.
- G. Measurement and Payment:

All costs associated with the protection of property and materials adjacent to the work sites shall be considered as included in the contract unit or lump sum prices for other items of work. No additional compensation will be considered therefore.

501.4 Pre-construction Conferences

- A. A pre-construction conference will be scheduled after the contract has been awarded and before the actual work on the project. The arranged time and place will be mutually agreeable between the District Engineer and the Contractor. The Contractor, together with the person to be designated as the Contractor's Foreman for the project, shall attend the meeting.
- B. The Contractor shall submit a proposed construction schedule for review at the Pre-construction conference.
- C. The schedule shall specify tasks and time periods for completing each task.
- D. The Contractor shall supply the District with material submittals at the Pre-construction conference. The submittals shall be supplied per SCWD Section 107.10, "Submittals", and section 503.3 of these special provisions.

501.5 Superintendence

- A. The Contractor shall have on the job site at all times a competent superintendent/foreman with proper authority to represent the Contractor in his absence and all direction given to him by the District shall be as binding as given to the Contractor.
- B. The Contractor shall refer to SCWD Specification 106.05, "Superintendence" for additional information.

502 SITE WORK AND MOBILIZATION

502.1 General Description

- A. Property and Materials Protection shall extend to facility items on the site, roadway/driveway or other access into the site, and other associated materials. Property and Materials shall be protected during the entire duration of the project.

502.2 Execution

- A. The Contractor shall prepare the site for application of paint by removing vegetation and other debris and providing adequate overspray protection to prevent damage to District property and adjacent areas.
- B. The District Engineer shall determine the color of each item based on color samples to the provided by the Contractor.
- C. The Contractor shall remove all construction debris from the project site.

- D. After completion of exterior cleaning, the District Inspector shall inspect the vessel and tank for any holes or seams that may not have been previously visible or may have developed as a result of the cleaning.
- E. All repairs shall be seal welded in conformance to AWWA 103-97, Section 6, and additional repairs not known shall be considered extra work.

502.3 Measurement & Payment

- A. Under this item, the Contractor shall perform site work as described in these Special Provisions.
- B. Payment will be made on a lump sum with half being paid upon mobilization onto the job site and the balance provided after mobilization off the job site.

503 MAR VISTA CONTROL BUILDING PAINTING

503.1 Execution

- A. The Contractor shall provide all labor, materials, equipment and incidentals required to prepare and repaint the exterior of the 20 ft x 20 ft wood control building and adjacent above ground piping at the Mar Vista Site.
- B. The Contractor shall pressure wash, sand, or otherwise prepare the exterior of the existing control building and shall remove areas of rust and peeling paint.

503.2 Measurement And Payment

- A. Under this item, the Contractor shall prepare and repaint the control building at the Mar Vista Site.
- B. Payment will be made on a lump sum basis.

504 RE-COATING OF TANK EXTERIOR, PIPING, & COUPLINGS

504.1 Scope Of Work

- A. The District requires recoating of two (3) tank vessels, related piping, and four (4) flexible couplings.
- B. The dimensions (Diameter x Length) of each vessel is provided below:

Main Street Well Vessels: 8 ft x 28 ft

- C. The piping to be recoated includes the piping at the Main Street Well site and the Mar Vista Tank site.
- D. The four flexible couplings to be coated are located at the Crestline Tank site, the Mar Vista Tank site, and the two at Aqua View Tank site. The Couplings to be coated include piping, spools, valves, and bolts. A portion of coupling unit including the rubber parts and expansion joints shall not be coated. The District Engineer will direct specific areas to be coated.
- E. The Contractor shall recoat seven (7) bollards located adjacent to flexible couplings.
- F. The Contractor shall dispose of all wastes or debris generated during work. The Contractor shall sample and test wastes as required by regulatory agencies, and as necessary for classification of wastes prior to disposal. The Contractor shall bear all costs for waste sampling, testing, accumulation, transport, and disposal, including the cost for wastes classified as hazardous and non-hazardous.

504.2 Governing Standards

- A. The following standards (including the most recent update or version) shall govern the work unless specified otherwise in these specifications:

SSPC-Vol.1, Steel Structures Painting Manual, Good Painting Practice.

SSPC-Vol.2, Steel Structures Painting Manual, Systems and Specifications.

SSPC-SP5	White Metal Blast Cleaning
SSPC-SP6	Commercial Blast Cleaning
SSPC-SP7	Brush-Off Blast Cleaning
SSPC-SP10	Near White Blast Cleaning
SSPC-SP11	Power Tool Cleaning to Bare Metal
SSPC-AB1	Mineral and Slag Abrasives
SSPC-PA1	Shop, Field and Maintenance Painting
SSPS-PA2	Measurement of Dry Paint Thickness with Magnetic Gages
SSPS-PA Guide 3	Guide to Safety in Paint Application
SSPC-Guide to Vis 1-89	Visual Standard for Abrasive Blast Cleaned Steel
SSPC-V15 (3-93)	Visual Standard for Power and Hand-Tool Cleaned Steel

AWWA D102-97, Standard for Painting Steel Water-Storage Filters

AWWA C652, Disinfection of Water Storage Facilities.

All applicable OSHA and safety standards.

504.3 Submittals

- A. The Contractor shall prepare and submit all submittals in accordance with SCWD Section 107.10, "Submittals", and this section of the project special provisions.

- B. The Contractor shall provide a separate submittal for each material to be used in the work. At a minimum provide submittals for Abrasive materials, Paint systems, and Thinners and any other additives
- C. The Contractor shall include the following data in the coating system submittal:
- 1) Weight in pounds/gallon - ASTM D-2196
 - 2) 2% solids by volume - ASTM D-2369
 - 3) Percent solids by weight - ASTM D-2369
 - 4) Air cure dry time to re-coat - ASTM D-1640
 - 5) Adhesion to steel substrate - ASTM D-4541
 - 6) Adhesion between coats - ASTM D-4541
 - 7) Manufacturer's batch numbers and dates of manufacture for materials to be furnished as part of this project.
- D. The Contractor shall include technical data documenting that the material to be provided complies with these specifications. Submittals will not be accepted until all requirements of this specification have been confirmed.
- E. The Contractor shall include the following data in the manufacturer's recommended handling and installation instructions for the proposed paint system submittal:
- 1) Storage - including maximum and minimum storage temperatures
 - 2) Surface preparation
 - 3) Coating repair
 - 4) Application equipment
 - 5) Mixing and application of coating system - including a table of minimum and maximum time to re-coat as a function of temperature
 - 6) Curing - including curing time required before holiday testing, and curing time required before immersion as function of temperature and coating thickness.
 - 7) Minimum and maximum number of re-coats.
 - 8) Ventilation
 - 9) Acceptable temperatures at the time of application
- F. The Contractor shall include the following data in the equipment submittal:
- 1) Details of vacuum system for removing dust and abrasive from abrasive blast cleaned surfaces; and,
 - 2) The manufacturer's latest written operation instructions including recommendations for air filter maintenance and change interval for air compressors used for work.
- G. The Contractor shall include the following data in the disposal plan submittal:
- 1) Written permission to dispose of material from disposal site representative. Include name, address, and telephone number of disposal site and of representative.
 - 2) The District shall provide written approval of the disposal plan prior to disposal of any wastes.
- H. The Contractor shall submit a color sample for coatings for approval by the District Engineer prior to ordering material.

504.4 Quality Assurance

- A. Qualifications
- 1) The Contractor shall provide evidence of regular engagement in application of similar coatings for at least five years prior to commencement of this work.

- 2) The Contractor shall certify in writing that foremen and workers on-site shall be experienced and knowledgeable in preparation for and application of high performance industrial coatings.
- B. The Contractor's workmanship shall conform to standards and recommendations of SSPS Vol. 1, especially Chapters 5.1 and 6.
- C. The District may use any testing method deemed necessary by the District inspector to verify quality of work. The District intends to use a specialized coating inspection firm to perform inspections on behalf of the District and the District will monitor the quality of work pursuant to this section.
- D. The Contractor shall ensure proper handling and use of materials, including: all coating materials are labeled and used in accordance with SSPC-PA 1, Paragraphs 5.1.1 thru 5.1.5, except all coating system materials without a stated shelf life shall be delivered and used within six months of the date of manufacture; and certification, from any source, that the coating system materials are still suitable for use beyond the stated shelf life or beyond the six month period specified above will not be accepted.
- E. The Contractor shall perform the necessary quality assurance in accordance with an approved plan.
- F. The Contractor shall comply with the following conditions in collection and analysis of wastes:
 - 1) Any Laboratory performing analysis shall provide for comparison to TTLC, STLC, TCLP limits, and RCA limits, and to all other applicable regulatory limits. Laboratory shall retain samples at least ninety (90) calendar days after all analyses are complete.
 - 2) The Contractor shall ensure collection of as many representative samples as required by the representative of the disposal facility, but not less than 4 total.
 - 3) The Contractor shall ensure the following: each sample shall have an identifying sample number assigned when the sample is taken; each sample number shall be included on the sampling chain of custody and in all reports, correspondence, and other documentation related to the sample; each sample shall have a sampling chain of custody; and, each chain of custody shall show the name and organization of each person having custody of the sample, and also show the sample number, job name and location, time of day and date sample was taken, material sampled, and tests to be performed.
 - 4) The Contractor shall notify the District at least 24 hours prior to sampling collection for the purpose of District verification of samples collected.
- G. The Contractor shall, at no cost to the District, provide a qualified technical representative of the coating system manufacturer at the job-site as required by the District to resolve problems related to the coating system or the application of the system.

504.5 Delivery, Storage, and Handling

- A. The Contractor shall deliver materials as follows:
 - 1) Delivery of coating system materials shall be in original, unopened containers with seals unbroken and labels intact. Labels shall identify type of material, color, and batch number.
- B. The Contractor shall store materials as follows:
 - 1) Store materials in a single, approved location.
 - 2) Store coating system materials in enclosed, locked and ventilated structures, and maintain temperature inside the structure within the temperature range recommended by the manufacturer.

3) Keep storage location clean, neat, and free of fire hazards.

C. The Contractor shall handle materials as follows:

- 1) Avoid spilling thinners, solvents, paint products or other materials that contain toxic substances.
- 2) Remove discarded thinners, solvents, and paint products from the job-site daily.

504.6 Safety

A. The Contractor shall comply with all Federal, State, and Local applicable safety regulations and requirements.

504.7 Existing Exterior Coatings

- A. The District assumes present coating system is the original coating system provided at the time of vessel construction.
- B. The Contractor shall bear all cost associated with stripping, handling, storing, testing, transport, and disposal of all waste. It shall be the Contractors responsibility to estimate the quantity and classification of waste associated with work.

504.8 Warranty

- A. The District will provide an inspection report to the Contractor detailing the number and types of failures observed, the percentage of surface area where failures have occurred, and the names of the persons making the inspections.
- B. The District shall consider any location where coating has delaminated, peeled, blistered, or cracked, and any location where rusting is evident as failure of the coating system. In addition, the District shall consider photographs or reports of the coating imperfections or failures as acceptable evidence of failure.
- C. The Contractor shall be liable for all remedial work including repair of all failures by removing the deteriorated coating, cleaning the surface, and recoating with the same system in accordance with this Section. The District may allow surface preparation of small failures (areas less than 1 sq ft.) by cleaning to bare metal in accordance with appropriate SSPC-SP standards, however, the method of repair is at the sole discretion of the District.
- D. The District will prepare a schedule for remedial work completion, to be no more than thirty (30) calendar days after the submittal of the inspection report to the Contractor. Upon failure of the Contractor to commence remedial work within ten (calendar days) after the starting date established by the District, the District may at its option perform the remedial work, and the Contractor shall be liable for actual cost of all such remedial work, plus a 20 percent District administrative cost.
- E. The Contractor shall bear the expense of all warranty inspections of the remedial work required by the District.

504.9 Products For Exterior Coating System Materials

- A. The Contractor shall provide one of the following new exterior coating systems consisting of high solids epoxy recommended for corrosion protection: #233H, by Devoe; 140 Porta-Pox Plus by Tnemec; or #400 by Ameron. Solids content shall not be less than 65% by weight. Volatile organic compounds concentration shall be less than 340 grams per liter.
- B. The materials shall consist of a three-coat system in accordance with DOD-C-24654, and including a primer that shall contrast with the white or special colors selected for the intermediate and finish coats as described in the AWWA standard D102.97 4.3.3.
- C. The Contractor shall provide coating "certified non-lead" (less than 0.06 percent lead by weight in the dried film) as defined in Part 1303 of the Consumer Products Safety Act.

504.10 Quality Control

- A. The Contractor shall verify at a minimum of two times daily that air supply is free of oil and moisture contamination. The Contractor shall use effective oil and water separators in all main compressor airlines and shall be placed as close as practicable to the equipment. Prior to using compressed air, the Contractor shall test the quality of air downstream of the separators at suitable outlets by blowing the air on clean white blotter for 2 minutes to check for any contamination, oil, or moisture.
- B. The Contractor shall maintain a written record of measurements, dew points, and time that measurements were taken. This record is to be kept on-site and available to the District Inspector upon request.
- C. The Contractor shall furnish 4 rolls of Testex tape 1.5 to 2.5 mils X-course prior to the start of cleaning. The District Inspector may evaluate surface preparation using field cleaning standards and testex tape. Evaluation may include inspection of surfaces for dust and residue using clear adhesive coated tape. Evaluation will be made immediately prior to coating application.
- D. The Contractor shall verify cleanliness of all spray application equipment prior to, or no later than, time of mixing coating material.
- E. The Contractor shall measure wet film thickness during coating application of coating to ensure adequate coating thickness, taking at least one measurement for each 100 square feet of application area.
- F. The Contractor shall measure dry film thickness after each coat using a non-destructive magnetic dry film thickness gauges, as follows:
 - 1) Measure in accordance with SSPC-PA 2 except: Delete paragraph 3.1.1 through 3.1.3 and replace with: "for each 1,000 square feet area, three 100 square feet areas shall be randomly selected and measured."
 - 2) Inspector may also measure coating thickness, at random locations, after each coat.
 - 3) Inspector may evaluate cleanliness of coated surface immediately prior to application of a subsequent coat.
- G. The Contractor shall test all coated surfaces for pinholes and holidays after application of the final coat in accordance with the following:
 - 1) Perform test in presence of Inspector.

- 2) Perform test after coating has cured as recommended by the manufacturer.
- 3) Use an appropriate detector, such as a D.E Sterns Model 14/20 or as approved by the District representative.
- 4) Re-test after coating repairs.

504.11 Preparation

- A. The Contractor shall prepare surfaces to be coated in accordance with the coating manufacturer's instructions but not less than specified herein.
- B. The Contractor shall clean surfaces including: removal of all visible oil, grease, dirt, welding residue, and other contaminants from areas to be coated; inspection using a black light to locate oil and grease; and removal of slag and weld metal accumulation and splatters by chipping or grinding as required.
- C. The Contractor shall ensure all surfaces to be blast cleaned are electrically grounded during blast cleaning.
- D. The Contractor shall mask-off and protect all exposed machined metal surfaces, plastic, and other surfaces not to be painted or that may be damaged by cleaning.

504.12 Application

- A. The Contractor shall adhere to general application requirements as follows: Mix and apply all coatings in accordance with the manufacturer's recommendations and instructions, the applicable requirements of SSPC-PA 1, and as specified herein.
- B. Obtain Inspector's evaluation and approval of steel surface preparation immediately prior to application of first coat.
- C. Obtain Inspector's evaluation and approval of cleanliness of previous coat immediately prior to application of a subsequent coat.
- D. Stripe coat all welds, bolts, nuts, washers, and edges by brush only, between the first coat and second coat.
- E. Re-stripe all welds, bolts, nuts, washers, and edges by brush only, between the second coat and finish coat.
- F. Apply coatings by airless spray except: areas of less than 6 square inches may be brushed.
- G. Apply coatings at a temperature recommended by manufacturer. Prior to mixing, coating materials shall be not less than 60°F. Use explosion-proof inline heaters, as necessary.
- H. Discard all catalyzed coatings at the end of each working day or at the end of manufacturer's recommended pot life, whichever is first.

- I. After each coat and immediately prior to application of a subsequent coat, clean surface as required to remove dirt, dust, over-spray, and other contaminants that may affect adhesion of the subsequent coat.
- J. Each coat shall be a different color than the preceding coat. Additional coats, where required, shall be tinted to provide color contrast but finish coat shall be color specified.
- K. Finish coat shall be uniform in color and gloss over the entire surface. Finish coat shall be smooth to touch with no sags, runs, over-spray, cracks, pinholes or other surface defects.
- L. The Contractor shall provide color as follows:
 - 1) First coat: White
 - 2) Second coat: Different than first and finish coats
 - 3) Finish coat: Match Existing coating color found on-site.
- M. The Contractor shall provide a Dry Film Thickness (DFT) as follows:
 - 1) First coat: 5.0 mils minimum to 6.0 mils maximum
 - 2) Second coat: 5.0 mils minimum to 6.0 mils maximum
 - 3) Finish coat: 5.0 mils minimum to 6.0 mils maximum

Minimum total DFT: 15.0 mils
Maximum total DFT: 18.0 mils

Note: The Contractor shall provide additional coats to achieve specified minimum dry film thickness or may be required to remove areas of paint in excess of allowable mils specified.

- N. The Contractor shall provide application equipment as follows:
 - 1) Airless spray pump in compliance with manufacturer's requirements, having an anti-freeze device, and fluid filter.
 - 2) Use fluid tip size recommended by manufacturer.
 - 3) Use 3/8" minimum exterior diameter fluid hose.
 - 4) Use clean fluid lines not previously used to apply zinc-rich or water-based coating materials.
 - 5) Clean equipment using only products recommended by the coating manufacturer.
 - 6) Blow lines to remove all thinners prior to painting.
- O. The Contractor shall provide coating repairs as follows:
 - 1) Touch-up or refinish all chipped, abraded, or otherwise unsatisfactory portions of the work in accordance with the manufacturer's recommendations.
 - 2) Re-coats, touch-ups, or areas that have cured beyond the maximum time recommended by the manufacturer require special preparation.
 - Sweep blast area and 3-inches into the surrounding area. Sweep blast under low pressure to uniformly abrade surface and feather edges. Feather edges by sanding or other means acceptable to the Inspector.
 - Remove abrasive blast residue from blasted area with special attention to marginal areas of intact coating.
 - Clean area with a bond solvent recommend by the manufacturer.

504.13 Clean-Up

- A. Upon completion of the work, the Contractor shall make a detailed inspection of all work.
- B. The Contractor shall be solely responsible for all paint over-spray or dust fallout claims.

- C. The Contractor shall remove all spattering, spits, and blemishes.
- D. Upon completion, of work, the Contractor shall remove all staging, tarps, scaffolding, and containers from the site, including but not limited to: paint and thinner containers and excess paint and thinners (to be disposed of in conformance to all current regulations); paint spots removed and the entire job site cleaned; all damage to surfaces resulting from the work from this section to be cleaned, repaired or refinished to the complete satisfaction of the District. All clean up shall be completed within 7 calendar days starting at the last day of holiday testing of the Reservoir.
- E. The Contractor shall bear all costs associated with site clean up.

504.14 Measurement and Payment

- A. Payment will be made on a lump sum basis per location.

505 Appendix

A-1 Vicinity/Site Map

A-2 Pictures