

SECTION 09 90 00

PAINTING AND COATING

PART 1 - GENERAL

1.01 WORK INCLUDED

The work to be done consists of furnishing all labor, materials, tools, equipment, scaffolding, and all other necessary equipment and supplies for doing all the work involved in applying paint to buildings and miscellaneous structures (except pavement markings and street signs), as shown on the plans and as specified in these specifications, and as directed by the Engineer.

1.02 RELATED REQUIREMENTS

Not used.

1.03 REFERENCE STANDARDS

Not used.

1.04 QUALITY ASSURANCE

Paints shall be applied in accordance with manufacturer's printed directions.

1.05 MEASUREMENT AND PAYMENT

- A) Cleaning and painting shall be paid for on a Lump Sum price, unless otherwise specified in the Special Provisions. The Lump Sum price paid for shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work involved in the cleaning and painting of the work, as shown on the plans and as specified in these specifications and Special Provisions, and as directed by the Engineer.
- B) Where no separate payment is specified, costs for all work and materials specified herein shall be included in bid items requiring painting.

1.06 STORAGE OF MATERIALS

Paints shall be stored in a protected area with temperatures between forty degrees and one hundred degrees Fahrenheit (40°F-100°F). Materials shall not be used if storage conditions or minimum shelf life have been exceeded.

1.07 SUBMITTALS

- A) Before ordering materials, the Contractor shall submit two (2) samples of each material, including color charts, to be used for approval of the Engineer.
- B) The Contractor shall provide the City with Manufacturer's warranty on the product, and a certificate of compliance with the applicable ASTM or Federal Standards, where containers do not show such information.

PART 2 – PRODUCTS

2.01 PAINT FOR STEEL TANKS (EXTERIOR ONLY)

- A) Paint for steel tanks shall be products of Engard Coatings Corporation, or approved equal.

- a. Primer Engard 101 Quick Dry Primer 2 mils
- b. Second Coat Engard 352 H.B. Vinyl Coating 4 mils
- c. Third Coat Engard 362 Acrylic Vinyl Finish 2 mils

2.02 PAINT FOR CONCRETE TANKS (EXTERIOR ONLY)

- A) Paint for concrete tanks shall be products of Engard Coatings Corporation, or approved equal.
 - a. Filler for voids & cracks Engard 490 Epoxy Putty –
 - b. Primer Engard 424 Primer 2.0 mils
 - c. Second Coat Engard 230 Acrylic Finish 1.5 mils
 - d. Third Coat Engard 230 Acrylic Finish 1.5 mils

2.03 PAINT FOR BUILDINGS AND APPURTENANCES

- A) Paint for buildings and miscellaneous appurtenances shall be products of Dunn-Edwards, or comparable quality products of Glidden-Durkee, Sherwin Williams, Sinclair, Kelly-Moore, or approved equal. (The products listed below are Dunn-Edwards.)
- B) Exterior
 - a. Stucco, Concrete and Masonry:
 - i. Patching - Custom Patch
 - ii. Primer - W 709 Eff-Stop
 - iii. Second and Third Coats - W 701 Evershield
 - b. Wood:
 - i. Patching - Custom Patch
 - ii. Primer - 42-1 Compo
 - iii. Second and Third Coats - W 701 Evershield
 - c. Metal doors, gutters, flashing, rails, and metal trims:
 - i. Primer - QD 43-7 Galv-Alum
 - ii. Second and Third Coats - QD 2 Aristolite
 - d. Other ferrous, galvanized, and aluminum surfaces:
 - i. Primer - Van Prime W 711
 - ii. Second and Third Coats - W 701 Evershield
- C) Interior
 - a. Stucco, concrete, and masonry:
 - i. Crack Filler - Eternaflex Neoprene Sealing Compound
 - ii. Primer - W 101 Vinyl
 - iii. Second and Third Coats - W 450 Decoglo
 - b. Gypsum Drywall:
 - i. Crack Filler - Eternaflex Neoprene Sealing Compound
 - ii. Primer - W 101 Vinylastic
 - iii. Second and Third Coats - W 450 Decoglo
 - c. Wood (Painted Finish):
 - i. Crack Filler - Eternaflex Neoprene Sealing Compound
 - ii. Primer - W 707 Unikote
 - iii. Second and Third Coats - W 450 Decoglo
 - d. Wood (Varnish Finish):
 - i. First Coat - V 108 Stain
 - ii. Second Coat - V 106A Sanding Sealer
 - iii. Third Coat - V 198 Flat Varnish, or V 199 Pale Satin Varnish, or V 197 Pale Gloss Varnish

- e. Wood (Lacquer Finish):
 - i. First Coat - LW 120 Deco
 - ii. Second Coat - ELQ 101 Sanding Sealer
 - iii. Third and Fourth Coats - ELQ 104 Semi-Gloss Lacquer

PART 3 – EXECUTION

3.01 SURFACE PREPARATION

- A) All surfaces to be painted shall be cleaned free of loose dirt and dust. All loose, chalking or scaling paint shall be removed by sanding, wire brushing, or scraping. Holes, cracks, and damaged spots shall be patched, filled, finish flush to adjoining surfaces.
- B) All surfaces shall be sterilized before repainting to remove mildew. These surfaces shall be cleaned by high pressure water washing with the following solution:
 - a. Tri-sodium Phosphate ("TSP") = 2/3 cup
 - b. Household Bleach ("Clorox") = 1 quart
 - c. Powdered Detergent = 1/3 cup
 - d. Add warm water to make one (1) Gallon
- C) Rinse surface applied with solution and allow to dry completely.
- D) All sterilizing solution wash water and rinse water shall be contained for disposal into the sanitary sewer system and must not be allowed to enter City storm drains.
- E) Wood surfaces shall be uniformly abraded by hand or power sanding and shall be roughened sufficiently to ensure a good bond with the base surface.
- F) Metal surfaces shall be uniformly abraded by hand or power sanding or by sandblasting. Power impact tools shall remove stratified rust. Loose mill scale, loose rust, and loose paint shall be removed by power wire brushing, power grinding, or sandblasting. Remove all dust and loose matter from the surface by vacuuming. Blast cleaning shall conform to Section 59-2.03, "Blast Cleaning," of the State Specifications. Newly cleaned surfaces shall be prime-coated the same day. All blast material removed shall be properly collected and disposed as solid waste.
- G) New concrete surfaces shall cure at least thirty (30) calendar days and have a moisture content below eight percent (8%) prior to coating. Concrete surface shall be cleaned by abrasive "brush-off" blast or etched with ten percent (10%) hydrochloric acid. Acid solution shall be applied at the rate of one and one-half (1-1/2) pints per Square Yard to obtain a total wetting of the substrate, and thoroughly worked into the surface by stiff bristled brushes until the bubbling reaction has subsided. Thoroughly wash and scrub etched surfaces by high-pressure water hosing to remove all salts and loose particles. Wash water shall be collected, then neutralized to a pH value between 5 and 9, and then disposed of, in the sanitary sewer system. Wash water shall not be allowed to flow into the City storm drain system.
- H) Previously painted concrete surfaces or old unpainted concrete surfaces shall be stiff-brush cleaned and sterilized with a solution as described in Paragraph 28-3.01 B. Rinse surface and allow to dry completely. Sterilizing solution and rinse shall be contained for disposal into the sanitary sewer system and must not be allowed to enter the City storm drain system.

- I) Remove all hardware and accessories not to be painted, or provide surface protection. Following completion of painting of each area, reinstall all removed items, by workers skilled in the trades involved.
- J) All stucco and concrete blocks shall be water-blasted to remove dust and dirt.
- K) Fill hairline cracks, small holes, and imperfections on plaster surfaces with patching plaster. Smooth off to match adjacent surfaces. Wash and neutralize high-alkali surfaces where they occur.

3.02 APPLICATION

- A) Paint shall be applied only on thoroughly dry surfaces during periods of favorable weather. Painting will not be permitted in rainy, damp, misty, or frosty weather, or then the temperature is below thirty-five degrees Fahrenheit (35°F) or when the relative humidity exceeds eighty five percent (85%) at the job site. Exterior blast cleaning or spray painting of solvent-borne paint will not be permitted when the wind velocity is more than fifteen miles per hour (15 mph).
- B) Paint shall be applied by brush, spray, roller, or any combination of these methods.
- C) No coating shall be applied during rain or fog, during periods of high humidity, when condensation of the cleaned surface could occur, or when conditions are present that could create the adherence of dust, debris, or insects to freshly painted surfaces.
- D) Surfaces shall be primed the same day that the blast cleaning is done.
- E) Each application of paint shall be thoroughly cured and subject to inspection with holiday detector. Any skips, holidays, thin areas or other deficiencies shall be corrected before the succeeding application. The surface of the paint being covered shall be free from moisture, dust, grease, or deleterious material, which would prevent the bond of succeeding applications.
- F) Each coating shall be checked for the desired dry film thickness where thickness is indicated. Use a "Mikrotest" on ferro-magnetic substrates, and an "Elcometer" on non-ferrous metallic substrates. Work that does not meet the required dry film thickness, or which is uneven or blotchy, shall be recoated at the Contractor's expense, as directed by the Engineer.
- G) First finish coat shall be of a different shade from second finish coat in order to evaluate and observe application of the second finish coat. The Contractor shall leave two (2) gallons of unopened finish coats of each color for touch-up.

3.03 CLEANUP

- A) The Contractor shall remove all dropped and splattered paint and other stains and blemishes resulting from his operations. If such stains or blemishes cannot be satisfactorily removed from surfaces painted by the Contractor, or from existing finished surfaces, such surfaces shall be repainted or refinished at Contractor's expense in such manner that it shall match satisfactorily with the adjacent existing surfaces, and in a manner satisfactory to the Engineer.
- B) The Contractor shall dispose of all latex paint wash water into the sanitary sewer. Oil based paint waste shall be properly disposed of as hazardous waste.

-END OF SECTION-