SECTION 099000
PAINTING AND COATING - LOW VOC PRODUCTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Use products specified in this section to finish all surfaces exposed to view, unless otherwise indicated, including but not limited to the following:
   1. Interior wall and ceiling surfaces.
   2. Interior wood doors and woodwork.
   3. Interior concrete floors.
   4. Opening frames and trim.
   5. Exterior wood.
   6. Exterior concrete and concrete masonry.
   7. Exterior metal items.
      a. Finish aluminum, stainless steel, copper, and bronze only if specifically indicated to receive field finish.
   8. Roof-mounted equipment, piping, ductwork, brackets, and hangers.

B. Do not paint the following:
   1. Items specified or provided with factory finish.
   2. Items indicated to receive other finish.
   3. Items indicated to remain naturally finished.
   4. Concrete masonry in utility, mechanical, and electrical spaces.
   5. Stainless steel, anodized aluminum, bronze, terne, or lead.
   6. Equipment nameplates, fire rating labels, and operating parts of equipment.
   7. Acoustical materials.
   8. Concealed piping, ductwork, and conduit.

C. Materials and products having factory-applied primer are not considered factory finished.

D. For colors, see Finish Schedule on Drawings, except for colors for mechanical and electrical color coding.

1.02 RELATED SECTIONS

A. Section 055000 - Metal Fabrications: Shop priming.

B. Section 062000 - Finish Carpentry: Back priming of trim.

C. Section 230553 - Mechanical Identification: Markers and color coding scheme.

D. Section 260553 - Electrical Identification: Markers and color coding scheme.

1.03 REFERENCES

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; Current Edition.

B. ANSI Z535.1 - American National Standard Safety Color Code; 2017.

C. ASME A13.1 - Scheme for the Identification of Piping Systems; 2023.

D. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2024.

E. SCAQMD 1113 - Architectural Coatings; 1977, with Amendment (2016).

1.04 DEFINITIONS

A. Conform to definitions of terms in ASTM D16 in interpreting requirements of this specification section.

1.05 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Manufacturer's descriptive literature for coating materials and coating application accessories.

C. Verification Samples: Two samples, minimum size 6 inches square, representing actual color and finish of each finish coating type, color, and finish to be applied.

D. Manufacturer's printed application instructions for each product, including product storage requirements and surface preparation requirements.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacture of coatings of quality specified with minimum of 10 years experience.

B. Installer Qualifications: Company specializing in commercial painting and finishing with 5 years documented experience and approved by the coating manufacturer.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Store products of this section in manufacturer's unopened packaging until installation.

B. Establish and maintain storage area conditions for products of this section in accordance with manufacturer's instructions until installation.

C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction over project.

1.08 PROJECT CONDITIONS

A. Do not apply coatings to exterior surfaces except under environmental conditions recommended by coating manufacturer.

B. Establish and maintain environmental conditions recommended by coating manufacturer before, during, and after application of coatings to interior surfaces.

C. During application of coating materials, post "WET PAINT" signs.

D. During application of solvent-based materials, post "NO SMOKING" signs.

1.09 SEQUENCING

A. Do not allow application of finish coats in an area until moisture-producing construction activities, dust-producing construction activities, and other construction activities which could impair performance or appearance of finish coatings, have been completed in that area.

1.10 EXTRA MATERIALS

A. See Section 016000 - Product Requirements, for additional provisions.

B. Extra Materials: Supply for each finish coating material, color, and finish specified two gallons of coating material, in sealed 1 gallon containers, marked with color and finish identification.

C. Custom Colors: Provide details of color formula and product availability.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Base Manufacturer: Sherwin-Williams Paint Company.

B. Substitutions: 016000 - Product Requirements.

C. Unless otherwise specified for an individual product or material, supply all products specified in this section from the same manufacturer.

2.02 MATERIALS

A. Paints and Coatings - General:
   1. Acceptable products: Indicated in Schedules at the end of this section.
   2. Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not dilute or thin coatings, except as instructed.
   3. Do not add additives, except as instructed or recommended by coating manufacturer.
   4. For opaque finishes, tint each coat, including primer coat and intermediate coats, one-half shade darker than succeeding coat, with final finish coat as base color.

5. Supply each coating material in quantity required for this section from a single production run.
6. Colors: Indicated on drawings.

B. Coating Application Accessories: Specified in this section or in coating manufacturer's application instructions, including but not limited to thinners, sealers, primers, cleaning agents, etching agents, cleaning cloths, sanding materials, and clean-up materials.

PART 3 EXECUTION

3.01 EXAMINATION

A. Immediately prior to coating application, ensure that surfaces to receive coatings are dry.

B. Ensure that moisture-retaining substrates to receive coatings have moisture content within tolerances allowed by coating manufacturer, using moisture measurement techniques recommended by coating manufacturer.

C. Immediately prior to coating application, examine surfaces to receive coatings for surface imperfections and for contaminants which could impair performance or appearance of coatings, including but not limited to, loose primer, rust, scale, oil, grease, mildew, algae, or fungus, stains or marks, cracks, indentations, or abrasions.

D. Correct the above conditions and other conditions which could impair performance or appearance of coatings in accordance with specified surface preparation procedures before proceeding with coating application.

3.02 PREPARATION

A. Do not start work until surfaces to be finished are in proper condition to produce finished surfaces of uniform, satisfactory appearance.

B. Stains and Marks: Remove completely, if possible, using materials and methods recommended by coating manufacturer; cover stains and marks which cannot be completely removed with isolating primer or sealer recommended by coating manufacturer to prevent bleed-through.

C. Mildew, Algae, and Fungus: Remove using materials and methods recommended by coating manufacturer.

D. Remove dust and loose particulate matter from surfaces to receive coatings immediately prior to coating application.

E. Remove or protect hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, and other items not indicated to receive coatings which are adjacent to surfaces to receive coatings.

F. Disconnect equipment adjacent to surfaces indicated to receive coatings.

G. Move equipment and fixtures adjacent to surfaces indicated to receive coatings to allow application of coatings.

H. Protect surfaces not indicated to receive coatings which are adjacent to surfaces indicated to receive coatings.

I. Do not allow coatings on surfaces not indicated to receive them.

J. Prepare surfaces in accordance with manufacturer's instructions for specified coatings and indicated materials, using only methods and materials recommended by coating manufacturer, and as follows:

K. Existing Coatings:
1. Remove surface irregularities by scraping or sanding to produce uniform substrate for coating application; apply one coat primer of type recommended by coating manufacturer for maximum coating adhesion.
2. If presence of lead in existing coatings is suspected, cease surface preparation of existing coating and notify Architect immediately.

L. Concrete and Concrete Masonry: Clean surfaces free of loose particles, sand, efflorescence, laitance, form oil, curing compounds, and other substances which could impair coating

performance or appearance.

M. Concrete Floors: Remove contaminants which could impair coating performance or appearance, acid-etch, flush with clean water; verify alkaline-acid balance recommended by coating manufacturer; mechanically abrade surface, if required, to achieve medium-sandpaper texture.

N. Restored Masonry Surfaces: Clean surfaces free of loose particles, sand, efflorescence, laitance, cleaning compounds, and other substances which could impair coating performance or appearance.

O. Ferrous Metals, Unprimed: Remove rust or scale, if present, by wire brush cleaning, power tool cleaning, or sandblast cleaning; remove grease, oil, and other contaminants which could impair coating performance or appearance by solvent cleaning, with phosphoric-acid solution cleaning of welds, bolts and nuts; spot-prime repaired welds with specified primer.

P. Ferrous Metals, Shop-Primed: Remove loose primer and rust, if present, by scraping and sanding, feathering edges of cleaned areas to produce uniform flat surface; solvent-clean surfaces and spot-prime bare metal with specified primer, feathering edges to produce uniform flat surface.

Q. Galvanized Steel: Wipe down surfaces using clean, lint-free cloths saturated with mineral spirits or lacquer thinner; wipe dry using clean, lint-free cloths.

R. Copper: Clean surfaces by pressurized steam, pressurized water, or solvent washing.

S. Wood:
   1. Seal knots, pitch streaks, and sap areas with sealer recommended by coating manufacturer; fill nail recesses and cracks with filler recommended by coating manufacturer; sand surfaces smooth.
   2. Apply primer coat to back of wood trim and paneling.

T. Doors: Prior to finishing, apply additional primer or sealer coat to door tops and bottoms.

U. Field-Glazed Frames and Sash: Prior to glazing, apply primer or sealer coat to glazing channels.

V. Gypsum Board: Repair cracks, holes, indentations, and other surface defects using joint compound to produce surface flush with adjacent undamaged surface; sand to produce uniform flat surface when dry.

W. Polyvinyl Chloride (PVC) Pipe: Remove ink markings by wiping down with clean-lint-free cloths saturated denatured alcohol.

3.03 APPLICATION

A. Apply each coat to uniform coating thickness in accordance with manufacturer's instructions, not exceeding manufacturer's specified maximum spread rate for indicated surface; thins, brush marks, roller marks, orange-peel, or other application imperfections are not permitted.

B. Allow manufacturer's specified drying time, and ensure correct coating adhesion, for each coat before applying next coat. Two coat minimum.

C. Inspect each coat before applying next coat; touch-up surface imperfections with coating material, feathering, and sanding if required; touch-up areas to achieve flat, uniform surface without surface defects visible from 5 feet.

D. Remove dust and other foreign materials from substrate immediately prior to applying each coat.

E. Where coating application abuts other materials or other coating color, terminate coating, making clean sharp termination line without coating overlap.

F. Where color changes occur between adjoining spaces, through framed openings which are of same color as adjoining surfaces, change color at outside stop corner nearest to face of closed door.

G. Re-prepare and re-coat unsatisfactory finishes; refinish entire area to corners or other natural terminations.

3.04 MECHANICAL AND ELECTRICAL EQUIPMENT

A. Wood Equipment Panels: Apply primer coat to panel back before mounting; finish in accordance with requirements for interior wood, flat finish, including edges, before mounting equipment.

B. HVAC Ductwork: Finish interior surfaces visible through grilles and louvers with one coat acrylic flat wall paint, color black.

C. Piping, Ductwork, and Conduit Exposed to View in Finished Utility, Mechanical, and Electrical Spaces: Finish in accordance with requirements for unprimed ferrous metal items.
   1. Use colors specified in ASME A13.1 and ANSI Z535.1.
   2. Do not allow coatings on identification tags or markings.
   3. Replace identification markings when painted accidentally.

D. Access Panels, Electrical Panels, and Cover Plates: Finish in accordance with requirements for shop-primed ferrous metal items, including doors, door backs and sight-exposed cabinet surfaces, color matching adjacent surfaces unless otherwise indicated; do not allow coatings on identification plates, tags, or markings.

3.05 RE-INSTALLATION

A. Re-install hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, and other items which have been removed to protect from contact with coatings.

B. Reconnect equipment adjacent to surfaces indicated to receive coatings.

C. Relocate to original position equipment and fixtures which have been moved to allow application of coatings.

D. Remove protective materials.

3.06 CLEANING

A. Clean excess coating materials, and coating materials deposited on surfaces to indicated to receive coatings, as construction activities of this section progress; do not allow to dry.

3.07 PROTECTION

A. Protected completed coating applications from damage by subsequent construction activities.

B. Repair to Architect's acceptance coating applications which are damaged by subsequent construction activities in accordance with specified application procedures; re-apply finish coating to nearest adjacent change of surface plane, in both horizontal and vertical directions, where repairs cannot be made to Architect's acceptance.

3.08 SCHEDULE - EXTERIOR PAINT SYSTEMS

A. Ferrous Metals:
   1. Unprimed:
      a. 1st Coat: S-W Pro Industrial Pro-Cryl® Primer, B66-310 Series
         1) 2-4 mils dry
      b. 2nd Coat: S-W Industrial Urethane Enamel, B54-150 Series
      c. 3rd Coat: S-W Industrial Urethane Enamel, B54-150 Series
         1) 2-4 mils dry per coat
   2. Shop-primed:
      a. Touch-up: as required.
      b. 1st Coat: S-W Pro Industrial Pro-Cryl® Primer, B66-310 Series
         1) 2-4 mils dry
      c. 2nd Coat: S-W Industrial Urethane Enamel, B54-150 Series
      d. 3rd Coat: S-W Industrial Urethane Enamel, B54-150 Series
         1) 2-4 mils dry per coat
   3. Galvanized:
      a. 1st Coat: S-W Pro Industrial Pro-Cryl® Primer, B66-310 Series
         1) 2-4 mils dry
      b. 2nd Coat: S-W Industrial Urethane Enamel, B54-150 Series

c. 3rd Coat: S-W Industrial Urethane Enamel, B54-150 Series
1) 2-4 mils dry per coat

B. Copper:
1. Alkyd-Urethane:
a. 1st Coat: S-W Pro Industrial Pro-Cryl® Primer, B66-310 Series
1) 2-4 mils dry
b. 2nd Coat: S-W Industrial Urethane Enamel, B54-150 Series
c. 3rd Coat: S-W Industrial Urethane Enamel, B54-150 Series
1) 2-4 mils dry per coat
2. Acrylic - Gloss Finish:
a. 1st Coat: S-W DTM Wash Primer, B71Y1
1) 0.7 - 1.3 mils dry - spray application recommended
b. 2nd Coat: S-W DTM Acrylic Coating, B66-100 Series
c. 3rd Coat: S-W DTM Acrylic Coating, B66-100 Series
1) 2.5 - 4.0 mils dry per coat

C. Wood - Transparent Finish:
1. New wood:
a. 1st Coat: S-W Superdeck Exterior Waterborne Clear Sealer, SD1T0100
b. 2nd Coat: S-W Superdeck Exterior Waterborne Clear Sealer, SD1T0100
1) 150-300 sq/ft gal

D. Wood - Semi-Transparent Finish:
1. 1st Coat: S-W Superdeck Exterior Waterborne Semi-Transparent Stain, SD3T00025
2. 2nd Coat: S-W Superdeck Exterior Waterborne Semi-Transparent Stain, SD3T00025
a. 100-350 sq ft/gal

E. Wood - Opaque Stain Finish - Solid Color:
1. 1st Coat: S-W Superdeck Exterior Waterborne Solid Color Stain, SD7W0015X series
2. 2nd Coat: S-W Superdeck Exterior Waterborne Solid Color Stain, SD7W0015X series
a. 200-400 sq ft/gal

3.09 SCHEDULE - INTERIOR PAINT SYSTEMS

A. Concrete Floors - Clear Sealer/Dustproofer:
1. 1st Coat: H&C Concrete & Masonry Waterproofing Sealer Clear
2. 2nd Coat: H&C Concrete & Masonry Waterproofing Sealer Clear
a. 100-250 sq ft/gal
3. Contractor to verify any sealer used in areas to receive adhered flooring material, that sealer is compatible with adhesive.
4. Contractor to coordinate any sealer used in areas to receive sheet vinyl flooring, that sealer will be of a dissipating type.

B. Concrete Masonry:
1. Flat finish:
a. 1st Coat: S-W PrepRite Block Filler, B25W25
1) 16 mils wet, 8 mils dry
b. 2nd Coat: S-W ProMar 200 Zero VOC Interior Flat, B30W12651 Series
c. 3rd Coat: S-W ProMar 200 Zero VOC Interior Flat, B30W12651 Series
1) 4 mils wet, 1.4 mils dry per coat
2. EggShell / Satin finish:
a. 1st Coat: S-W PrepRite® Block Filler, B25W25
1) 75-125 sq ft/gal
b. 2nd Coat: S-W ProMar 200 Zero VOC Interior Latex Eg-shel, B20W12651
c. 3rd Coat: S-W ProMar 200 Zero VOC Interior Latex Eg-shel, B20W12651
1) 4 mils wet, 1.7 mils dry per coat
3. Semi-gloss finish:
a. 1st Coat: S-W PrepRite® Block Filler, B25W25

1) 75-125 sq ft/gal
b. 2nd Coat: S-W ProMar200 Zero VOC Interior Latex Semi-Gloss, B31W02651 Series
c. 3rd Coat: S-W ProMar 200 Zero VOC Interior Latex Semi-Gloss, B31W02651 Series
1) 4 mils wet, 1.5 mils dry per coat
4. Gloss finish:
a. 1st Coat: S-W Pro Industrial Heavy Duty Block Filler, B42W150
1) 8.0-10.5 mils dry per coat
b. 2nd Coat: S-W Pro Industrial Acrylic Gloss, 866-600 Series
c. 3rd Coat: S-W Pro Industrial Acrylic Gloss, 866-600 Series
1) 2.1-4.2 mils dry per coat

C. Concrete Masonry - Epoxy Finish:
1. Dry areas, gloss finish:
a. 1st Coat: S-W Pro Industrial Heavy Duty Block Filler, B42W150
1) 8.0-10.5 mils dry per coat
b. 2nd Coat: S-W Pro Industrial Waterbased Catalyzed Epoxy, B73-300 Series
c. 3rd Coat: S-W Pro Industrial Waterbased Catalyzed Epoxy, B73-300 Series
1) 2.5-5.0 mils dry per coat
2. High-moisture areas, gloss finish:
a. 1st Coat: S-W Pro Industrial Heavy Duty Block Filler, B42W150
1) 8.0-10.5 mils dry per coat
b. 2nd Coat: S-W Macropoxy® 646-100 Fast Cure Epoxy, B58-620 Series
c. 3rd Coat: S-W Macropoxy® 646-100 Fast Cure Epoxy, B58-620 Series
1) 5-10 mils dry per coat

D. Ferrous Metals:
1. Unprimed:
a. 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-01310 Series
1) 5-10 mils wet, 2-4 mils dry
b. 2nd Coat: S-W Pro Industrial Zero VOC Gloss Acrylic, B66-600 Series
c. 3rd Coat: S-W Pro Industrial Zero VOC Gloss Acrylic, B66-600 Series
2. Shop-primed:
a. Touch-up: as recommended by finish coating manufacturer for colors of finish coats.
b. 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-01310 Series
1) 5-10 mils wet, 2-4 mils dry
c. 2nd Coat: S-W Pro Industrial Zero VOC Gloss Acrylic, B66-600 Series
d. 3rd Coat: S-W Pro Industrial Zero VOC Gloss Acrylic, B66-600 Series
3. Galvanized:
a. 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-01310 Series
1) 5-10 mils wet, 2-4 mils dry
b. 2nd Coat: S-W Pro Industrial Zero VOC Gloss Acrylic, B66-600 Series
c. 3rd Coat: S-W Pro Industrial Zero VOC Gloss Acrylic, B66-600 Series

E. Wood - Paint (Opaque) Finish:
1. Gloss finish:
a. 1st Coat: S-W PrepRite® ProBlock® Latex Primer, 851W00620 Series
1) 4 mils wet, 1.4 mils dry
b. 2nd Coat: S-W ProClassic Waterborne Acrylic Gloss, B21-51 Series
c. 3rd Coat: S-W ProClassic Waterborne Acrylic Gloss, B21-51 Series
1) 4 mils wet, 1.6 mils dry per coat
2. Semi-gloss finish:
a. 1st Coat: S-W PrepRite ProBlock Latex Primer, 851W00620 Series
1) 4 mils wet, 1.4 mils dry
b. 2nd Coat: S-W ProClassic Waterborne Acrylic Semi-Gloss, B31 Series
c. 3rd Coat: S-W ProClassic Waterborne Acrylic Semi-Gloss, B31 Series
1) 4 mils wet, 1.4 mils dry per coat

F. Wood - Transparent finish:
   1. Untinted, urethane:
      a. 1st Coat: S-W Minwax Performance Series Waterbased Oil-Modified Polyurethane Varnish, 0014373XX Series
      b. 2nd Coat: S-W Minwax Performance Series Waterbased Oil-Modified Polyurethane Varnish, 0014373XX Series
         1) 4 mils wet, 1.0 mil dry per coat
   2. Tinted, urethane:
      a. 1st Coat: S-W Superdeck Exterior Waterborne Semi-Transparent Stain, SD3T00025
      b. 2nd Coat: S-W Superdeck Exterior Waterborne Semi-Transparent Stain, SD3T00025
         1) 100-350 sq ft/gal

G. Wood - Opaque Stain Finish - Solid Color:
   1. 1st Coat: S-W Minwax Performance Series Tintable 250 VOC Stains, 65106XXXX Series
   2. 2nd Coat: S-W Minwax Performance Series Waterbased Oil-Modified Polyurethane Varnish, 0014373XX Series
   3. 3rd Coat: Minwax Performance Series Waterbased Oil-Modified Polyurethane Varnish, 014373XX Series
      a. 4 mils wet, 1.0 mil dry per coat
   4. Rough-surfaced, flat finish:
      a. 1st Coat: S-W Minwax Performance Series Tintable 250 voe Stains, 65106XXXX Series

H. Gypsum Board:
   1. Flat finish:
      a. 1st Coat: S-W ProMar 200 Zero VOC Interior Latex Primer, 828W2600
         1) 4 mils wet, 1.5 mils dry per coat
      b. 2nd Coat: S-W ProMar 200 Zero VOC Interior Flat, 830W12651 Series
      c. 3rd Coat: S-W ProMar 200 Zero VOC Interior Flat, 830W12651 Series
         1) 4 mils wet, 1.4 mils dry per coat
   2. Eggshell / Satin finish:
      a. 1st Coat: S-W ProMar 200 Zero VOC Interior Latex Primer, B28W2600
         1) 4 mils wet, 1.4 mils dry per coat
      b. 2nd Coat: S-W ProMar 200 Zero VOC Interior Latex Eg-Shel, 820W12651 Series
      c. 3rd Coat: S-W ProMar 200 Zero VOC Interior Latex Eg-Shel, 820W12651 Series
         1) 4 mils wet, 1.7 mils dry per coat
   3. Semi-gloss finish:
      a. 1st Coat: S-W ProMar 200 Zero VOC Interior Latex Primer, 828W2600
         1) 4 mils wet, 1.4 mils dry per coat
      b. 2nd Coat: S-W ProMar 200 Zero VOC Interior Latex Semi-Gloss, 831W02651 Series
      c. 3rd Coat: S-W ProMar 200 Zero VOC Interior Latex Semi-Gloss, 831W02651 Series
         1) 4 mils wet, 1.5 mils dry per coat
   4. Gloss finish:
      a. 1st Coat: S-W ProMar 200 Zero VOC Interior Latex Primer, 828W2600
         1) 4 mils wet, 1.4 mils dry per coat
      b. 2nd Coat: S-W ProMar 200 Zero VOC Interior Latex Gloss, B21W12651
      c. 3rd Coat: S-W ProMar 200 Zero VOC Interior Latex Gloss, B21W12651
         1) 4.0 mils wet, 1.4 mils dry per coat

I. Fire-Retardant Intumescent Coating (Class A):
   1. Over combustible materials, flat finish:
      a. One coat primer, type recommended by finish coating manufacturer for substrate material.
      b. One coat Flame Control Number 20-20 Flat Latex Intumescent Fire Retardant Paint, manufactured by Flame Control Coatings, Inc., applied at spread rate of 190 sq ft per gallon, maximum.

2. Over combustible materials, low-gloss washable finish:
    a. One coat primer, type recommended by finish coating manufacturer for substrate material.
    b. One coat Flame Control Number 20-20 Flat Latex Intumescent Fire Retardant Paint, manufactured by Flame Control Coatings, Inc., applied at spread rate of 190 sq ft per gallon, maximum.
    c. One coat Flame Control Number 40-40 Low-Gloss Latex Fire Resistant Coating, manufactured by Flame Control Coatings, Inc., applied at spread rate of 625 sq ft per gallon, maximum.

END OF SECTION