

SECTION 09900  
PAINTING

PART 1 - GENERAL

1.01 PROVISIONS INCLUDED

- A. The general provisions of the Contract, including General and Supplementary Conditions and Division 1 General Requirements, apply to this Section.

1.02 SUMMARY

- A. Work Included: Furnish painting equipment, labor and materials; prepare surfaces, and apply prime and finish coats.
1. Paint all new work under this Contract according to the finish schedule at the end of this Section.
  2. Repaint existing painted surfaces which are disturbed by work under this contract, including but not limited to areas disturbed by cutting and patching.
- B. Definitions: As used in this section,
1. "Paint," includes fillers, primers, intermediate and top coats.
  2. "Exposed" means "exposed to view" and includes areas visible through or behind built-in fixtures.
  3. "Semi-Exposed" means "partly exposed to view" or "partly obscured" and includes areas visible through grilles, perforated or louvered covers, air intake and exhaust registers and the like, and includes the interior of ductwork which is so visible.
- C. Related Work Specified in Other Sections:
1. Cutting and patching: Section 01731.
  2. Room Finish Schedule: Section 09000
  3. Shop-priming metal fabrications: Section 05500.
  4. Shop-finishing of architectural woodwork: Section 06400.
  5. Shop priming of steel door and sidelight frames: Section 08110.
  6. Shop-finishing of wood doors: Section 08210.
  7. Stencils for pipe and conduit identification: Division 15 and 16 sections.
  8. Temporary lighting and illumination levels during painting: Section 01500.

1.03 SUBMITTALS

- A. Product data: Manufacturer's technical information including label analysis and instructions for handling, storage, and application of each material proposed for use. List each material and cross-reference the specific coating, finish system, and application. Identify each material by the manufacturer's catalog number and general classification.

1. Include certification by the manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs).
- B. Samples for Verification: Of each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.
1. Provide stepped Samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.
  2. Provide a list of materials and applications for each coat of each sample. Attach to each sample a which clearly identifies each sample for location and application, and lists the materials applied for each coat.
  3. Submit Samples on the following substrates for the Architect's review of color and texture only:
    - a. Concrete: Two 4-inch-square samples for each color and finish.
    - b. Metal: Two 4-inch-square samples of flat metal and two 8-inch-long samples of solid metal for each color and finish.
    - c. Gypsum Board: Two 12 inch square samples of each color and material on hardboard.
- C. Qualification Data: For firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

#### 1.04 QUALITY ASSURANCE

- A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to those indicated for the Project that have resulted in a construction record of successful in-service performance.
- B. Source Limitations: For each type of paint system, obtain block fillers, primers, and undercoat materials from the same manufacturer as the finish coats. To the greatest extent possible, furnish all paint materials for the project from a single manufacturer.
- C. Field Samples: On actual surfaces at the Project, duplicate painted finishes of the prepared samples. On at least 300 sq. ft. of surface, where directed, provide full-coat finish samples until required sheen, color, and texture is obtained. Simulate finished lighting conditions for review of in-place work. Architect will approve sample panels or direct changes as desired. Painters shall be present and prepared to change sample panels to desired shade as directed.
  1. Final acceptance of colors will be from job-applied samples.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:
  1. Product name or title of material.

2. Product description (generic classification or binder type).
3. Manufacturer's stock number and date of manufacture.
4. Contents by volume, for pigment and vehicle constituents.
5. Thinning instructions.
6. Application instructions.
7. Color name and number.

- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Protect paint materials from freezing.
- C. Keep containers clean and keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

#### 1.06 SITE CONDITIONS

- A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 deg F (10 deg C) and 90 deg F (32 deg C).
- B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 deg F (7 deg C) and 95 deg F (35 deg C).
- C. Do not apply paint when the relative humidity inside the building exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.
- D. Do not begin priming or painting unless adequate general illumination is provided as specified in Section 01500.

#### 1.07 SEQUENCING, SCHEDULING AND COORDINATION WITH OTHER TRADES

- A. The trades installing surfaces and items which are to be painted shall provide smooth, sound, fully cured surfaces suitable for painting, except to the extent specified in this section. Painting work is not intended to include more than minor spackling, caulking of gaps at changes of materials, light hand sanding of millwork and carpentry items.
- B. Allow plaster to dry thoroughly, at least 30 days, before painting. Test plaster surfaces with a moisture meter to determine whether the moisture content satisfies the recommendation of the respective paint manufacturer, and do not allow painting to proceed until it does.
- C. Allow concrete and concrete unit masonry to cure thoroughly, unless paint manufacturers specifications explicitly state otherwise.
- D. Schedule installation of finish hardware, wall plates, and similar applied items which are not being painted after painting is completed, or, if necessary to maintain the schedule and acceptable to Architect, until at least the first top-coat has been applied.
- E. After prime coat has been applied to gypsum board, require drywall trade to return to the job to repair imperfections in their work that became visible after the prime coat was applied. Make flush with adjoining surface, and spot prime spackled areas.

## 1.08 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied in the quantities described below. Package paint materials in unopened, factory-sealed containers for storage and identify with labels describing contents. Deliver extra materials to the Owner.
  - 1. Quantity: Furnish the Owner with an additional 5 percent, but not less than 1 gallon or 1 case, as appropriate, of each material and color applied.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. Furnish complying products by one of the following manufacturers:
  - 1. Benjamin Moore and Co. (Moore).
  - 2. PPG Industries, Pittsburgh Paints (PPG)
  - 3. The Sherwin-Williams Company (S-W).
  - 4. ICI Paint Stores, Inc., Dulux Paints (ICI)

### 2.02 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide primers, intermediate and finish coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by the manufacturer based on testing and field experience.
- B. Material Quality: Provide the manufacturer's best-quality professional paint materials.
- C. VOC Content: Furnish paint materials which comply with limits on volatile organic compounds (VOC) specified in Section 01600, "Product Requirements," or with applicable air quality regulations, whichever is the more stringent limitation. Naming of a paint in this specification which does not comply with the VOC limits, does not supersede the VOC content requirement; advise Architect of the discrepancy and submit a VOC-compliant product of similar type with equal or better performance.
- D. Performance: Provide paints which are washable and which will withstand scrubbing required to remove pencil marks, ink, ordinary soil, and similar stains, and which will show no discoloration, loss of gloss, staining, or other damage when subject to ordinary wear and maintenance procedures.
- E. Proprietary Names: Products named in Part 2 establish chemical composition, sheen and quality of product required for each application. Comparable products by one of the other named manufacturers will be acceptable.
- F. Color and Sheen: Architect will select colors and specify colors by reference to one manufacturer's color names. Match the selected color in the brand of materials proposed and submit samples as specified above.
  - 1. Architect may select more than one color in each room or space.
  - 2. Colors may include deep tones or premium colors for painting up to 10% of the surface area on the project.

## 2.03 INTERIOR PAINT SYSTEM

### A. Concrete Floors, 100% Solids Epoxy:

1. Primer: Tnemec Series 201 Epoxoprime; 6 to 8 mils dft.
2. Top Coats: Tnemec Series 280/281 Tneme Glaze, 2 coats at 6.0 to 8.0 mils d.f.t. per coat.

### B. Concrete Walls, Columns and Ceilings, Acrylic Epoxy: Self priming; 2 coats.

1. Primer: Same as top coat.
2. Top Coat: Moore: Moore's SuperSpec Acrylic Epoxy Coating #256.  
ICI: Devoe Coatings Tru-Glaze Acrylic Epoxy #4418  
PPG: Aquapon Waterborne Epoxy 98-1/98-98  
Tnemec: Series 113/114 Tneme Tufcoat

### C. Concrete Walls and Ceilings, Latex Paint:

1. Primer: Latex-based primer.  
Moore: Moore's SuperSpec Latex Enamel Undercoater and Primer Sealer #253  
PPG: Speedhide Int/Ext Acrylic Latex Alkali Resistant Primer 6-603  
S-W: PrepRite 200 Interior Latex Wall Primer B28W200.
2. Top Coats: Latex Paint, low-odor, low gloss:  
Moore: Moore's SuperSpec Latex Eggshell Enamel #274  
PPG: Speedhide Latex Eggshell Enamel 6-411 Series  
S-W: ProMar 200 Interior Latex Eg-Shel Enamel B20W200.

### D. Steel, Acrylic Epoxy Coating: Water-based epoxy over water-based rust-inhibitive primer.

1. Primer: Moore: Moore's Acrylic Metal Primer MO4  
ICI: Devoe Coatings Devflex 4020  
PPG: Porter Coatings DTM Acrylic primer/Finish #215  
Tnemec: Series 18 Enviro-Prime
2. Top Coat: Moore: Moore's SuperSpec Acrylic Epoxy Coating #256.  
ICI: Devoe Coatings Tru-Glaze Acrylic Epoxy #4418  
PPG: Aquapon Waterborne Epoxy 98-1/98-98  
Tnemec: Series 113/114 H.B. Tneme-Tufcoat

### E. Steel, Latex Paint, Semigloss: Latex enamel over water-based primer.

1. Primer: VOC compliant, rust-inhibiting primer; product recommended by topcoat manufacturer:  
Moore: IronClad Latex Low Lustre Enamel #363.  
ICI: Waterborne metal primer 4020  
PPG: Pitt-Tech 100% acrylic primer 90-712

2. Top Coats: Latex Enamel, semigloss  
 Moore: SuperSpec Latex Semi-Gloss Enamel 276-01  
 ICI: Dulux Professional S.G. Wall and Trim Enamel 1406  
 PPG: Speedhide Interior Semi-Gloss Acrylic Latex 6-500  
 S-W: ProMar 200 Interior Latex Gloss B21W252
- F. Galvanized Steel, Latex Paint, Semi-Gloss: Latex paint over galvanized metal primer.
1. Primer: VOC compliant primer for galvanized metal; product recommended by topcoat manufacturer.  
 ICI: Aquacrylic Gripper 3210.  
 PPG: Pitt-Tech 100% acrylic primer 90-712
2. Top Coats: Latex Enamel, semigloss  
 Moore: SuperSpec Latex Semi-Gloss Enamel 276-01  
 ICI: Dulux Professional S.G. Wall and Trim Enamel 1406  
 PPG: Speedhide Interior Semi-Gloss Acrylic Latex 6-500  
 S-W: ProMar 200 Interior Latex Gloss B21W252
- H. Gypsum Board, Acrylic Epoxy, Gloss finish:
1. Primer: Moore: Moorcraft Latex Undercoater & Primer Sealer 253-00 or Regal First Coat Latex Primer/Undercoater 216  
 ICI: Prep-N-Prime PVA Int. Wall Primer Sealer 1030-1200  
 PPG: Speedhide Int. Latex Primer Sealer 133  
 Tnemec: Series 51-792 PVA Sealer or Series 151 Elasto-Grip.
2. Top Coat: Moore: Moore's SuperSpec Acrylic Epoxy Coating #256.  
 ICI: Devoe Coatings Tru-Glaze Acrylic Epoxy #4418  
 PPG: Aquapon Waterborne Epoxy 98-1/98-98  
 Tnemec: Series 113/114 H.B. Tneme-Tufcoat
- I. Gypsum Board, Latex Paint, Low Sheen:
1. Primer: Vinyl acrylic; product consistent with top coats specified below:  
 Moore: SuperSpec Latex Enamel Undercoater and Primer 253  
 PPG: Speedhide 6-2 Latex Primer-Sealer  
 S-W: PrepRite 200 Latex Primer
2. Top Coats: Latex-Based Paint, Eggshell sheen  
 Moore: SuperSpec Latex Eggshell Enamel 274  
 PPG: Speedhide Eggshell Latex Enamel 6-411  
 S-W: Promar 200 Interior Latex Eg-Shel B20W200 Series
- J. Gypsum Board, Latex Paint, Flat:
1. Primer: Vinyl acrylic; product consistent with top coats specified below:  
 Moore: SuperSpec Latex Enamel Undercoater and Primer 253  
 PPG: Speedhide 6-2 Latex Primer-Sealer  
 S-W: PrepRite 200 Latex Primer

- 2. Top Coats: Vinyl acrylic or 100% acrylic; flat sheen.  
Moore: SuperSpec Latex Flat 6-70 Series  
PPG: Speedhide Eggshell Latex Enamel 6-411  
S-W: Promar 200 Interior Latex Flat B30W200 Series

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine substrates and conditions under which painting will be performed for compliance with paint application requirements. Surfaces receiving paint must be thoroughly dry before paint is applied.
  - 1. Gypsum Board: Sealing of gaps between gypsum board and abutting work such as hollow metal doors and frames, aluminum windows, masonry, and similar changes of materials with paintable sealant to fill gaps in preparation for painting is specified in Section 07920. Confirm that this work has been done.
  - 2. Do not begin to apply paint until unsatisfactory conditions have been corrected. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
  - 1. Notify the Architect of anticipated problems in using the materials specified over substrates primed by others.

### 3.02 PREPARATION

- A. Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted, or provide surface-applied protection prior to surface preparation and painting. Remove these items, if necessary, to completely paint the items and adjacent surfaces. Following completion of painting operations in each space or area, have items reinstalled by workers skilled in the trades involved.
- B. Prepare interior drywall surfaces to be painted by sealing cracks and gaps at perimeter of drywall, around hollow metal frames and at similar locations to seal out dust and provide a smooth surface for finish painting. Use acrylic latex sealant and apply in accordance with the manufacturer's recommendations. Tool beads to insure full, firm contact with both faces of the joint, strike off excess sealant and finish to a smooth, wrinkle-free, slightly concave surface.
- C. Cleaning: Before applying paint or other surface treatments, clean the substrates to remove substances that could impair the bond of the various coatings. Remove oil and grease prior to cleaning. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

- D. Surface Preparation, General: Clean and prepare surfaces to be painted according to the manufacturer's instructions for each particular substrate condition and as specified. Provide barrier coats over incompatible primers or remove and reprime. Notify Architect in writing about anticipated problems using the specified finish-coat material with substrates primed by others.
- E. Concrete: Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen, as required, to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
  - 1. Use abrasive blast-cleaning methods if recommended by the paint manufacturer.
  - 2. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not paint surfaces where moisture content exceeds that permitted in manufacturer's printed directions.
- F. Ferrous Metals, Shop Primed: Remove oil, grease, dirt, and other foreign substances. Use solvent or mechanical cleaning methods that comply with primer manufacturer's recommendations.
  - 1. Touch-up of bare areas and shop-applied prime coats that have been damaged during installation is the responsibility of the fabricator.
- G. Ferrous Metals, Unprimed: Remove oil, grease, dirt, loose mill scale, and other foreign substances. Use mechanical cleaning methods and pre-treatment that comply with recommendations of the primer manufacturer for type of exposure and condition of substrate, and with Steel Structures Painting Council (SSPC). As a minimum, prepare unprimed surfaces according to requirements of SSPC-SP 3, Power-Tool Cleaning.
- H. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so that the surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
  - 1. Touch-up of damaged galvanizing is responsibility of the fabricator.
- I. Previously Painted Surfaces:
  - 1. Remove loose paint, rust and corrosion.
  - 2. Spackle, fill and sand, as appropriate, to make surface smooth and even for application of new paint.
  - 3. Touch-up bare surfaces with primer.
  - 4. Sand lightly if necessary to clean the surface or promote adhesion.
  - 5. Test specified paint system on the surface to verify compatibility and adhesion. Apply barrier coat if old coating is not compatible with scheduled top-coat material, or remove existing finish entirely and reprime as required.

### 3.03 MIXING AND TINTING

- A. Mix and prepare paint materials according to manufacturer's directions. Keep containers used in mixing and applying paint clean and uncontaminated with foreign material. Stir paint before



application to produce a mixture of uniform density and pigment; and stir again as necessary during application to maintain uniformity.

1. Do not stir surface film into material. Remove film and, if necessary, strain material before using.
2. If thinners are used, use only thinners approved by the paint manufacturer and only within recommended limits.

- B. Tinting: Tint each undercoat a lighter shade to facilitate identification of each coat where multiple coats of the same material are applied. Tint undercoats same color as the finish coat, but with sufficient difference in shade to distinguish each separate coat.

### 3.04 APPLICATION

- A. Apply paints according to paint manufacturer's printed instructions, including recommendations for application rate for best performance, drying time between coats, and compatibility of different coating materials. Comply with these specifications where these are more stringent than manufacturer's instructions.
- B. Match approved samples for color, texture, and coverage. Remove, refinish, or recoat work not complying with specified requirements.
- C. Apply paint by brush or roller, unless the Painting Schedule in these specifications of manufacturer's directions specifically require spray application. Select brush or roller material best suited for the type of paint being applied.
- D. Apply the number of coats specified for the paint system. Comply with paint manufacturer's recommendations for optimum coverage. Allow each coat to dry before applying the succeeding coat. Sand between coats with fine sandpaper or rub surfaces with pumice stone where required to produce an even, smooth surface.
- E. Apply additional coats when undercoats, stains, or other conditions show through the final coat of paint, until the paint film is of uniform finish, color and appearance.
- F. Paint heating equipment and pipes only when cold. Do not turn heat on until paint has dried.
- G. Prime Coats: Before application of finish coats, apply a prime coat or sealer (as scheduled) to material which is required to be field painted.
1. Touch up or recoat with primer where there is evidence of suction spots in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.
- H. Top Coat: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage. Apply the specified number of top coats. Apply additional top coats if surface shows skips or holidays, or if additional hiding is required over an existing finish.
- I. Labels: Do not paint over Underwriters Laboratories, Factory Mutual or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

### 3.05 CLEANING

- A. Cleanup: At the end of each work day, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
- B. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

### 3.06 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
- B. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.
- C. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

### 3.07 PAINTING SCOPE, GENERAL

- A. The schedule at the end of this Section identifies the principal items and surfaces to be painted and the paint systems to be applied to them. This schedule is not exhaustive; paint all exposed and semi-exposed surfaces not specifically scheduled to receive another finish and not specifically excluded from painting. Paint unscheduled surfaces with the paint system for the most similar substrate listed, or confer with the Architect to decide upon the actual paint materials.
  - 1. Paint all new work under this Contract according to this finish schedule.
  - 2. Repaint existing painted surfaces which are disturbed by work under this contract, including but not limited to areas disturbed by cutting and patching. Prepare surfaces as specified under surface preparation, and apply 2 top coats.
  - 3. Painting includes surface preparation.
  - 4. Painting includes priming, except where system explicitly indicates "self priming" topcoat or otherwise excludes priming. Apply one coat of field-applied primer on steel door frames (shop primer is only for temporary protection during shipping and installation).
  - 5. Paint piping, ductwork, conduit and hangers where noted on the room finish schedule; at other locations these items need not be painted.
  - 6. Paint access panels and electric load center panel covers to match the surrounding surfaces. Panels mounted on unpainted surfaces do not have to be painted.
  - 7. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces.

8. Top coats may be omitted on wall surfaces which will be covered with permanently-fixed casework or equipment.

3.08 INTERIOR PAINT SCHEDULE

Surface	Paint System
Concrete floor on 5th floor:	100% Solids Epoxy; shot blast or mechanically abrade floor prior to painting.
Concrete walls and columns on 5th floor:	Waterborne epoxy paint; 2 coats, self priming.
Concrete walls and columns other locations:	Latex paint; eggshell finish.
Exposed Structural Steel:	Waterborne epoxy paint; 2 coats over primer.
Exposed Steel Deck:	Waterborne epoxy paint; 2 coats over primer.
Steel gate and railings:	Interior acrylic enamel, semigloss; 2 coats over rust-inhibitive primer.
Steel Door and Window Frames:	Interior acrylic enamel, semigloss; 2 coats over rust-inhibitive primer. Apply by spray.
Access Panels:	Paint to match surrounding surfaces. Panels located in mechanical rooms do not have to be painted.
Gypsum Board Walls 4th floor:	Water-borne epoxy paint, gloss finish.
Gypsum Board Walls floors 2 and 5:	Latex paint, eggshell sheen; 2 top coats over 1 coat of PVA primer.
Gypsum Board Ceilings:	Latex paint, flat; 2 top coats over 1 coat of PVA primer.
Telephone and electrical backboards:	Latex-based paint, flat or low sheen; 1 coat over 1 coat of primer.
Piping and pipe hangers:	Waterborne epoxy paint; 2 coats over primer.
Ductwork and duct hangers:	Waterborne epoxy paint; 2 coats over primer.
Conduit:	Waterborne epoxy paint; 2 coats over primer.
Electric load center panel covers:	Paint to match surrounding surfaces. Paint sides, top, and bottom of exposed panel tubs. Panels located in mechanical rooms do not have to be painted.

END OF SECTION 09900