

**SECTION 09 91 00  
PAINTING**

    SPEC WRITER NOTES:

1. Use this section only for NCA projects.
2. Delete between // \_\_\_\_\_// if not applicable to project. Delete, modify and add to text as required to suit information shown on the drawings and specified in Section 09 06 00, SCHEDULE FOR FINISHES.

**PART 1-GENERAL**

**1.1 DESCRIPTION**

- A. Section specifies field painting.
- B. Section specifies prime coats which may be applied in shop under other sections.
- C. Painting includes shellacs, stains, varnishes, and coatings specified.

**1.2 RELATED WORK**

- A. Shop prime painting of steel and ferrous metals: Division 05 - METALS, Division 08 - OPENINGS, Division 10 - SPECIALTIES, Division 11 - EQUIPMENT, Division 12 - FURNISHINGS, Division 13 - SPECIAL CONSTRUCTION, Division 21 - FIRE SUPPRESSION, Division 22 - PLUMBING, Division 23 - HEATING, VENTILATION AND AIR-CONDITIONING, Division 26 - ELECTRICAL, Division 27 - COMMUNICATIONS, and Division 28 - ELECTRONIC SAFETY AND SECURITY sections.
- B. Contractor Option: Prefinished flush doors with transparent finishes: Section 08 14 00, WOOD DOORS.
- C. Type of Finish, Color, and Gloss Level of Finish Coat: Section 09 06 00, SCHEDULE FOR FINISHES.

**1.3 SUSTAINABILITY REQUIREMENTS**

- A. Materials in this section may contribute towards contract compliance with sustainability requirements. See Section 01 81 11, SUSTAINABLE DESIGN REQUIRMENTS, for project // local/regional materials, // low-emitting materials, // recycled content, // certified wood // \_\_\_\_\_// requirements.
- B. Biobased Material: For products designated by the USDA's BioPreferred® program, provide products that meet or exceed USDA recommendations for biobased content, subject to the products compliance with performance requirements in this Section. For more information regarding the product categories covered by the BioPreferred® program, visit <http://www.biopreferred.gov>.

**1.4 REGULATORY REQUIREMENTS FOR RECYCLED CONTENT**

- A. Products and Materials with Post-Consumer Content and Recovered Materials Content:
1. Contractor is obligated by contract to satisfy Federal mandates for procurement of products and materials meeting recommendations for post-consumer content and recovered materials content; the list of designated product categories with recommendations has been compiled by the EPA - refer to <http://www.epa.gov/wastes/conserves/tools/cpg/products/>.
  2. Materials or products specified by this section may be obligated to satisfy this Federal mandate and Comprehensive Procurement Guidelines program.
  3. The EPA website also provides tools such as a Product Supplier Directory search engine and product resource guides.
- B. Fulfillment of regulatory requirements does not relieve the Contractor of satisfying sustainability requirements stipulated by Section 01 81 11, SUSTAINABLE DESIGN REQUIREMENTS, as it relates to recycled content; additional product and material selections with recycled content may be required, as determined by Contractor's Sustainability Action Plan.

**1.5 SUBMITTALS**

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Literature and Data:
1. Before work is started, or sample panels are prepared, submit manufacturer's literature, the current Master Painters Institute (MPI) "Approved Product List" indicating brand label, product name and product code as of the date of contract award, will be used to determine compliance with the submittal requirements of this specification. The Contractor may choose to use subsequent MPI "Approved Product List", however, only one list may be used for the entire contract and each coating system is to be from a single manufacturer. All coats on a particular substrate must be from a single manufacturer. No variation from the MPI "Approved Product List" where applicable is acceptable.
- C. Samples:

1. After painters' materials have been approved and before work is started submit samples showing each type of finish and color specified.
  2. Samples to show color: Composition board, 150 by 150 (6 inch by 6 inch).
  3. Panel to show transparent finishes: Wood of same species and grain pattern as wood approved for use, 100 by 250 by 3 mm (4 inch by 10 inch face by 1/4 inch) thick minimum, and where both flat and edge grain will be exposed, 250 mm (10 inches) long by sufficient size, 50 by 50 mm (2 by 2 inch) minimum or actual wood member to show complete finish.
- D. Manufacturers' Certificates indicating compliance with specified requirements:
1. Manufacturer's paint substituted for Federal Specification paints meets or exceeds performance of paint specified.
  2. High temperature aluminum paint.
  3. Epoxy coating.
  4. Intumescent clear coating or fire retardant paint.
  5. Plastic floor coating.

#### **1.6 DELIVERY AND STORAGE**

- A. Deliver materials to site in manufacturer's sealed container marked to show following:
1. Name of manufacturer.
  2. Product type.
  3. Batch number.
  4. Instructions for use.
  5. Safety precautions.
- B. In addition to manufacturer's label, provide a label legibly printed as following:
1. Federal Specification Number, where applicable, and name of material.
  2. Surface upon which material is to be applied.
  3. If paint or other coating, state coat types; prime, body or finish.
- C. Maintain space for storage, and handling of painting materials and equipment in a neat and orderly condition to prevent spontaneous combustion from occurring or igniting adjacent items.
- D. Store materials at site at least 24 hours before using, at a temperature between 18 and 30 degrees C (65 and 85 degrees F).

**1.7 APPLICABLE PUBLICATIONS**

A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by the basic designation only. Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified.

## SPEC WRITER NOTES:

1. Remove reference citations that do not remain in Part 2 or Part 3 of edited specification.
2. Verify and make dates indicated for remaining citations the most current at date of submittal; determine changes from date indicated on the TIL download of the section and modify requirements impacted by the changes.

B. American Conference of Governmental Industrial Hygienists (ACGIH):

ACGIH TLV-BKLT-2009      Threshold Limit Values (TLV) for Chemical Substances and Physical Agents and Biological Exposure Indices (BEIs)

ACGIH TLV-DOC-2009      Documentation of Threshold Limit Values and Biological Exposure Indices, (Seventh Edition)

C. Master Painters Institute (MPI):

No. 4-13	Interior/ Exterior Latex Block Filler
No. 5-13	Exterior Alkyd Wood Primer
No. 7-13	Exterior Oil Wood Primer
No. 8-13	Exterior Alkyd, Flat MPI Gloss Level 1 (EO)
No. 9-13	Exterior Alkyd Enamel MPI Gloss Level 6 (EO)
No. 10-13	Exterior Latex, Flat (AE)
No. 11-13	Exterior Latex, Semi-Gloss (AE)
No. 31-13	Polyurethane, Moisture Cured, Clear Gloss (PV)
No. 36-13	Knot Sealer
No. 43-13	Interior Satin Latex, MPI Gloss Level 4
No. 44-13	Interior Low Sheen Latex, MPI Gloss Level 2
No. 45-13	Interior Primer Sealer
No. 46-13	Interior Enamel Undercoat
No. 47-13	Interior Alkyd, Semi-Gloss, MPI Gloss Level 5 (AK)
No. 48-13	Interior Alkyd, Gloss, MPI Gloss Level 6 (AK)
No. 50-13	Interior Latex Primer Sealer
No. 51-13	Interior Alkyd, Eggshell, MPI Gloss Level 3
No. 52-13	Interior Latex, MPI Gloss Level 3 (LE)

No. 53-13	Interior Latex, Flat, MPI Gloss Level 1 (LE)
No. 54-13	Interior Latex, Semi-Gloss, MPI Gloss Level 5 (LE)
No. 60-13	Interior/Exterior Latex Porch & Floor Paint, Low Gloss
No. 68-13	Interior/ Exterior Latex Porch & Floor Paint, Gloss
No. 71-13	Polyurethane, Moisture Cured, Clear, Flat (PV)
No. 90-13	Interior Wood Stain, Semi-Transparent (WS)
No. 94-13	Exterior Alkyd, Semi-Gloss (EO)
No. 95-13	Fast Drying Metal Primer
No. 114-13	Interior Latex, Gloss (LE) and (LG)
No. 119-13	Exterior Latex, High Gloss (acrylic) (AE)
No. 134-13	Primer, Galvanized, Water Based
No. 138-13	Interior High Performance Latex, MPI Gloss Level 2 (LF)
No. 139-13	Interior High Performance Latex, MPI Gloss Level 3 (LL)
No. 140-13	Interior High Performance Latex, MPI Gloss Level 4
No. 141-13	Interior High Performance Latex (SG) MPI Gloss Level 5

D. Steel Structures Painting Council (SSPC):

SSPC SP 1-04	Solvent Cleaning
SSPC SP 2-04	Hand Tool Cleaning
SSPC SP 3-04	Power Tool Cleaning

**PART 2 - PRODUCTS**

SPEC WRITER NOTES:

1. Coordinate material requirements to agree with applicable requirements specified in the referenced Applicable Publications.
2. Update and specify only that which applies to the project in paragraphs 1.5 and 2.1 with paint schedule and Section 09 06 00, SCHEDULE FOR FINISHES for abbreviations and terminology. See appendix at the end of section.
3. Review USDA BiopREFERRED Categories for listed materials within the scope of the following paragraph and include

additional requirements, unless  
justification for non-use exists.

## 2.1 MATERIALS

- A. Wood Sealer: Thinned with thinner recommended by manufacturer at rate of about one part of thinner to four parts of varnish.
- B. Plastic Tape:
  - 1. Pigmented vinyl plastic film in colors as specified in Section 09 06 00, SCHEDULE FOR FINISHES or specified.
  - 2. Pressure sensitive adhesive back.
  - 3. Widths as shown.
- C. Interior/Exterior Latex Block Filler: MPI 4.
- D. Exterior Alkyd Wood Primer: MPI 5.
- E. Exterior Oil Wood Primer: MPI 7.
- F. Exterior Alkyd, Flat (EO): MPI 8.
- G. Exterior Alkyd Enamel (EO): MPI 9.
- H. Exterior Latex, Flat (AE): MPI 10.
- I. Exterior Latex, Semi-Gloss (AE): MPI 11.
- J. Polyurethane, Clear Gloss: MPI 31.
- K. Knot Sealer: MPI 36.
- L. Interior Satin Latex: MPI 43.
- M. Interior Low Sheen Latex: MPI 44.
- N. Interior Primer Sealer: MPI 45.
- O. Interior Enamel Undercoat: MPI 46.
- P. Interior Alkyd, Semi-Gloss (AK): MPI 47.
- Q. Interior Latex Primer Sealer: MPI 50.
- R. Interior Alkyd, Eggshell: MPI 51
- S. Interior Latex, MPI Gloss Level 3 (LE): MPI 52.
- T. Interior Latex, Flat, MPI Gloss Level 1 (LE): MPI 53.
- U. Interior Latex, Semi-Gloss, MPI Gloss Level 5 (LE): MPI 54.
- V. Interior/ Exterior Latex Porch & Floor Paint, Low Gloss: MPI 60.
- W. Interior/ Exterior Latex Porch & Floor Paint, gloss: MPI 68.
- X. Polyurethane, Moisture Cured, Clear, Flat (PV): MPI 71.
- Y. Interior Wood Stain, Semi-Transparent (WS): MPI 90.
- Z. Exterior Alkyd, Semi-Gloss (EO): MPI 94.
- AA. Fast Drying Metal Primer: MPI 95.
- BB. Interior latex, Gloss (LE) and (LG): MPI 114.
- CC. Exterior Latex, High Gloss (acrylic) (AE): MPI 119.
- DD. Waterborne Galvanized Primer: MPI 134.

- EE. Interior High Performance Latex, MPI Gloss Level 2 (LF): MPI 138.
- FF. Interior High Performance Latex, MPI Gloss Level 3 (LL): MPI 139.
- GG. Interior High Performance Latex, MPI Gloss Level 4: MPI 140.
- HH. Interior High Performance Latex (SG), MPI Gloss Level 5: MPI 141.

## 2.2 PAINT PROPERTIES

- A. Use ready-mixed (including colors), except two component epoxies, polyurethanes, polyesters, paints having metallic powders packaged separately and paints requiring specified additives.
- B. Where no requirements are given in the referenced specifications for primers, use primers with pigment and vehicle, compatible with substrate and finish coats specified.

## 2.3 REGULATORY REQUIREMENTS

- A. Paint materials must conform to the restrictions of the local Environmental and Toxic Control jurisdiction or the requirements of this section, whichever is most stringent.
  - 1. Lead-Based Paint:
    - a. Lead based paint is not permitted to be used.
    - b. For lead-paint removal, see Section 02 83 33.13, LEAD-BASED PAINT REMOVAL AND DISPOSAL.
  - 2. Asbestos: Materials must not contain asbestos.
  - 3. Chromate, Cadmium, Mercury, and Silica: Materials must not contain zinc-chromate, strontium-chromate, Cadmium, mercury or mercury compounds or free crystalline silica.
  - 4. Human Carcinogens: Materials must not contain any of the ACGIH-BKLT and ACGHI-DOC confirmed or suspected human carcinogens.
  - 5. Use high performance acrylic paints in place of alkyd paints, where possible.
  - 6. VOC content for solvent-based paints must not exceed specified performance requirement; aromatic hydro carbons contained in solvent-based paints must not exceed one percent by weight.

## PART 3 - EXECUTION

### 3.1 JOB CONDITIONS

- A. Safety: Observe required safety regulations and manufacturer's warning and instructions for storage, handling and application of painting materials.
  - 1. Take necessary precautions to protect personnel and property from hazards due to falls, injuries, toxic fumes, fire, explosion, or other harm.

2. Deposit soiled cleaning rags and waste materials in metal containers approved for that purpose. Dispose of such items off the site at end of each day's work.

B. Atmospheric and Surface Conditions:

1. Do not apply coating when air or substrate conditions are:
  - a. Less than 3 degrees C (5 degrees F) above dew point.
  - b. Below 10 degrees C (50 degrees F) or over 35 degrees C (95 degrees F), unless specifically pre-approved by the Contracting Officer and the product manufacturer.
2. Do not exceed application conditions recommended by the manufacturer.
3. Maintain interior temperatures until paint dries hard.
4. Do no exterior painting when it is windy and dusty.
5. Do not paint in direct sunlight or on surfaces that the sun will soon warm.
6. Apply only on clean, dry and frost free surfaces except as follows:
  - a. Apply water thinned acrylic and cementitious paints to damp (not wet) surfaces where allowed by manufacturer's printed instructions.
  - b. Dampened with a fine mist of water on hot dry days concrete and masonry surfaces to which water thinned acrylic and cementitious paints are applied to prevent excessive suction and to cool surface.
7. Varnishing:
  - a. Apply in clean areas and in still air.
  - b. Before varnishing vacuum and dust area.
  - c. Immediately before varnishing wipe down surfaces with a tack rag.

SPEC WRITER NOTES:

1. Insure other technical sections specify acceptable surface conditions to receive paint including patching and repair of new and existing surfaces.
2. Check structural sections specifying ferrous metal; mechanical and electrical sections of the specifications for proper surface condition and compatible prime coats to suit finishes specified. For instance, finish on concrete required to have cementitious coating; type of shop coat on bar joists required to be painted; will any parts of mechanical



equipment have to be field painted;  
what kind of primers are specified, if  
any.

### 3.2 SURFACE PREPARATION

- A. Method of surface preparation is optional, provided results of finish painting produce solid even color and texture specified with no overlays.
- B. General:
  - 1. Remove prefinished items not to be painted such as lighting fixtures, escutcheon plates, hardware, trim, and similar items for reinstallation after paint is dried.
  - 2. Remove items for reinstallation and complete painting of such items and adjacent areas when item or adjacent surface is not accessible or finish is different.
  - 3. See other sections of specifications for specified surface conditions and prime coat.
  - 4. Clean surfaces for painting with materials and methods compatible with substrate and specified finish. Remove any residue remaining from cleaning agents used. Do not use solvents, acid, or steam on concrete and masonry.
- C. Wood:
  - 1. Sand to a smooth even surface and then dust off.
  - 2. Sand surfaces showing raised grain smooth between each coat.
  - 3. Wipe surface with a tack rag prior to applying finish.
  - 4. Surface painted with an opaque finish:
    - a. Coat knots, sap and pitch streaks with Knot Sealer before applying paint.
    - b. Apply two coats of Knot Sealer over large knots.
  - 5. After application of prime or first coat of stain, fill cracks, nail and screw holes, depressions and similar defects with wood filler paste. Sand the surface to make smooth and finish flush with adjacent surface.
  - 6. Before applying finish coat, reapply wood filler paste if required, and sand surface to remove surface blemishes. Finish flush with adjacent surfaces.
  - 7. Fill open grained wood such as oak, walnut, ash and mahogany with Wood Filler Paste, colored to match wood color.
    - a. Thin filler in accordance with manufacturer's instructions for application.

- b. Remove excess filler, wipe as clean as possible, dry, and sand as specified.

SPEC WRITER NOTES:

- 1. Review USDA BiopREFERRED Categories for listed materials within the scope of the following paragraph and include additional requirements, unless justification for non-use exists.

D. Ferrous Metals:

- 1. Remove oil, grease, soil, drawing and cutting compounds, flux and other detrimental foreign matter in accordance with SSPC-SP 1 (Solvent Cleaning).
- 2. Remove loose mill scale, rust, and paint, by hand or power tool cleaning, as defined in SSPC-SP 2 (Hand Tool Cleaning) and SSPC-SP 3 (Power Tool Cleaning). Exception: where high temperature aluminum paint is used, prepare surface in accordance with paint manufacturer's instructions.
- 3. Fill dents, holes and similar voids and depressions in flat exposed surfaces of hollow steel doors and frames, access panels, roll-up steel doors and similar items specified to have semi-gloss or gloss finish with TT-F-322D (Filler, Two-Component Type, For Dents, Small Holes and Blow-Holes). Finish flush with adjacent surfaces.
  - a. This includes flat head countersunk screws used for permanent anchors.
  - b. Do not fill screws of item intended for removal such as glazing beads.
- 4. Spot prime abraded and damaged areas in shop prime coat which expose bare metal with same type of paint used for prime coat. Feather edge of spot prime to produce smooth finish coat.
- 5. Spot prime abraded and damaged areas which expose bare metal of factory finished items with paint as recommended by manufacturer of item.

SPEC WRITER NOTES:

- 1. Review USDA BiopREFERRED Categories for listed materials within the scope of the following paragraph and include additional requirements, unless justification for non-use exists.

- E. //Zinc-Coated (Galvanized) Metal, // Aluminum, // Copper and Copper Alloys // Surfaces Specified Painted:

1. Clean surfaces to remove grease, oil and other deterrents to paint adhesion in accordance with SSPC-SP 1 (Solvent Cleaning).
  2. Spot coat abraded and damaged areas of zinc-coating which expose base metal on hot-dip zinc-coated items with Organic Zinc Rich Coating. Prime or spot prime with MPI 134 (Waterborne Galvanized Primer) depending on finish coat compatibility.
- F. Masonry, Concrete, Cement Board, Cement Plaster and Stucco:
1. Clean and remove dust, dirt, oil, grease efflorescence, form release agents, laitance, and other deterrents to paint adhesion.
  2. Use emulsion type cleaning agents to remove oil, grease, paint and similar products. Use of solvents, acid, or steam is not permitted.
  3. Remove loose mortar in masonry work.
  4. Replace mortar and fill open joints, holes, cracks and depressions with new mortar specified in Section 04 05 13, MASONRY MORTARING // Section 04 05 16, MASONRY GROUTING//. Do not fill weep holes. Finish to match adjacent surfaces.
  5. Neutralize Concrete floors to be painted by washing with a solution of 1.4 Kg (3 pounds) of zinc sulfate crystals to 3.8 L (1 gallon) of water, allow to dry three days and brush thoroughly free of crystals. Achieve appropriate CSP (Concrete Surface Profile as recommended by manufacturer based on the system being applied.
  6. Repair broken and spalled concrete edges with concrete patching compound to match adjacent surfaces as specified in CONCRETE Sections. Remove projections to level of adjacent surface by grinding or similar methods.
- G. Gypsum Plaster and Gypsum Board:
1. Remove efflorescence, loose and chalking plaster or finishing materials.
  2. Remove dust, dirt, and other deterrents to paint adhesion.
  3. Fill holes, cracks, and other depressions with CID-A-A-1272A [Plaster, Gypsum (Spackling Compound) finished flush with adjacent surface, with texture to match texture of adjacent surface. Patch holes over 25 mm (1-inch) in diameter as specified in Section for plaster or gypsum board.

### 3.3 PAINT PREPARATION

- A. Thoroughly mix painting materials to ensure uniformity of color, complete dispersion of pigment and uniform composition.

- B. Do not thin unless necessary for application and when finish paint is used for body and prime coats. Use materials and quantities for thinning as specified in manufacturer's printed instructions.
- C. Remove paint skins, then strain paint through commercial paint strainer to remove lumps and other particles.
- D. Mix two component and two part paint and those requiring additives in such a manner as to uniformly blend as specified in manufacturer's printed instructions unless specified otherwise.
- E. For tinting required to produce exact shades specified, use color pigment recommended by the paint manufacturer.

### 3.4 APPLICATION

- A. Start of surface preparation or painting will be construed as acceptance of the surface as satisfactory for the application of materials.
- B. Unless otherwise specified, apply paint in three coats; prime, body, and finish. When two coats applied to prime coat are the same, first coat applied over primer is body coat and second coat is finish coat.
- C. Apply each coat evenly and cover substrate completely.
- D. Allow not less than 48 hours between application of succeeding coats, except as allowed by manufacturer's printed instructions, and approved by RE/COR.
- E. Finish surfaces to show solid even color, free from runs, lumps, brush marks, laps, holidays, or other defects.
- F. Apply by brush, roller or spray, except as otherwise specified.

#### SPEC WRITER NOTES:

1. Do not allow spray painting at existing buildings occupied during the course of the work. Spray painting may be allowed in certain areas of new additions or separate buildings.

- G. Do not spray paint in existing occupied spaces unless approved by RE/COR, except in spaces sealed from existing occupied spaces.

#### SPEC WRITER NOTES:

1. Check application requirements with manufacturer of materials specified to determine if Subparagraphs 1 and 2 is applicable.
1. Apply painting materials specifically required by manufacturer to be applied by spraying.
2. In areas, where paint is applied by spray, mask or enclose with polyethylene, or similar air tight material with edges and seams

continuously sealed including items specified in WORK NOT PAINTED, motors, controls, telephone, and electrical equipment, fronts of sterilizers and other recessed equipment and similar prefinished items.

- H. Do not paint in closed position operable items such as access doors and panels, window sashes, overhead doors, and similar items except overhead roll-up doors and shutters.

### **3.5 PRIME PAINTING**

- A. After surface preparation, prime surfaces before application of body and finish coats, except as otherwise specified.
- B. Spot prime and apply body coat to damaged and abraded painted surfaces before applying succeeding coats.
- C. Additional field applied prime coats over shop or factory applied prime coats are not required except for exterior exposed steel. Apply an additional prime coat.
- D. Prime rebates for stop and face glazing of wood, and for face glazing of steel.
- E. Wood and Wood Particleboard:
  - 1. Use same kind of primer specified for exposed face surface.
    - a. Exterior wood: MPI 7 (Exterior Oil Wood Primer) for new construction and MPI 5 (Exterior Alkyd Wood Primer) for repainting bare wood primer except where Interior Wood Stain, Semi-Transparent (WS) is scheduled. . Use MPI #39 (interior) or MPI #6 (Exterior) for a waterbased version in VOC restricted areas.
    - b. Interior wood except for transparent finish: MPI 45 (Interior Primer Sealer) or MPI 46 (Interior Enamel Undercoat), thinned if recommended by manufacturer. . Use MPI #39 (interior) or MPI #6 (Exterior) for a waterbased version in VOC restricted areas.
    - c. Transparent finishes as specified under Transparent Finishes on Wood.
  - 2. Apply one coat of primer MPI 7 (Exterior Oil Wood Primer) or MPI 5 (Exterior Alkyd Wood Primer) or sealer MPI 45 (Interior Primer Sealer) or MPI 46 (Interior Enamel Undercoat) as soon as delivered to site to surfaces of unfinished woodwork, except concealed surfaces of shop fabricated or assembled millwork and surfaces specified to have varnish, stain or natural finish. Use MPI #39

(interior) or MPI #6 (Exterior) for a waterbased version in VOC restricted areas.

3. Back prime and seal ends of exterior woodwork, and edges of exterior plywood specified to be finished.

F. Metals:

1. Steel and Iron: MPI 95 (Fast Drying Metal Primer). Use MPI #107 where a waterbased alternative is needed in VOC restricted areas.
2. Zinc-coated Steel and Iron: MPI 134 (Waterborne Galvanized Primer).
3. Machinery Not Factory Finished: MPI 9 (Exterior Alkyd Enamel (EO)).

G. Gypsum Board // and Hardboard //:

1. Surfaces scheduled to have // MPI 10 (Exterior Latex, Flat (AE))//MPI 11 (Exterior Latex, Semi-Gloss (AE)) // MPI 119 (Exterior Latex, High Gloss (acrylic) (AE)) // or // MPI 53 (Interior Latex, Flat) //, MPI Gloss Level 1 LE)) // MPI 52 (Interior Latex, MPI Gloss Level 3 (LE)) // MPI 54 (Interior Latex, Semi-Gloss, MPI Gloss Level 5 (LE)) // MPI 114 (Interior Latex, Gloss (LE) and (LG)) finish: Use // MPI 10 (Exterior Latex, Flat (AE)) // MPI 11 (Exterior Latex, Semi-Gloss (AE)) // MPI 119 (Exterior Latex, High Gloss (acrylic) (AE)) or // MPI 53 (Interior Latex, MPI Gloss Level 3 (LE)) // MPI 52 (Interior Latex, MPI Gloss Level 3 (LE)) // MPI 54 (Interior Latex, Semi-Gloss, MPI Gloss Level 5 (LE)) // MPI 114 (Interior Latex, Gloss (LE) and (LG)) respectively //.

SPEC WRITER NOTES:

1. List the names of other spaces, where steam will be generated or that have high humidity for pigmented sealer.
2. Primer: MPI 50 (Interior Latex Primer Sealer) except use MPI 45 (Interior Primer Sealer) or MPI 46 (Interior Enamel Undercoat) in shower and bathrooms. Use MPI #254 as a topcoat where a waterbased alternative is needed for bathrooms in VOC restricted areas.

H. Gypsum Plaster and Veneer Plaster:

1. MPI 45 (Interior Primer Sealer), except use MPI 50 (Interior Latex Primer Sealer) when an alkyd flat finish is specified. Use MPI #3 as a primer where a waterbased alternative is needed in VOC restricted areas for bare plaster.
2. Surfaces scheduled to have MPI 10 (Exterior Latex, Flat (AE)) // MPI 11 (Exterior Latex, Semi-Gloss (AE)) // MPI 119 (Exterior Latex, High Gloss (acrylic) (AE)) // or // MPI 53 (Interior Latex, Flat, MPI Gloss Level 1 LE)) // MPI 52 (Interior Latex, MPI Gloss Level 3

(LE)) // MPI 54 (Interior Latex, Semi-Gloss, MPI Gloss Level 5 (LE))  
 // MPI 114 (Interior Latex, Gloss (LE) and (LG)) // finish: Use MPI  
 10 (Exterior Latex, Flat (AE)) // MPI 11 (Exterior Latex, Semi-Gloss  
 (AE)) // MPI 119 (Exterior Latex, High Gloss (acrylic) (AE)) or //  
 MPI 53 (Interior Latex, Flat, MPI Gloss Level 1 LE)) // MPI 52  
 Latex, MPI Gloss Level 3 (LE)) // MPI 54 (Interior Latex, Semi-  
 Gloss, MPI Gloss Level 5 (LE)) // MPI 114 (Interior Latex, Gloss  
 (LE) and (LG)) // respectively.

I. Concrete Masonry Units except glazed or integrally colored and decorative units:

1. MPI 4 (Block Filler) on interior surfaces.

J. Cement Plaster or stucco // Concrete Masonry, Brick Masonry // and Cement board // Interior Surfaces of Ceilings and Walls:

1. //MPI 53 (Interior Latex, Flat, MPI Gloss Level 1 LE)) // MPI 52 (Interior Latex, MPI Gloss Level 3 (LE)) // MPI 54 (Interior Latex, Semi-Gloss, MPI Gloss Level 5 (LE)) // MPI 114 (Interior Latex, Gloss (LE) and (LG)) // except use two coats where substrate has aged less than six months.

### 3.6 EXTERIOR FINISHES

A. Apply following finish coats where specified in Section 09 06 00, SCHEDULE FOR FINISHES.

B. Steel and Ferrous Metal, // Including Tern //:

1. Two coats of MPI 8 (Exterior Alkyd, Flat (EO)) // MPI 9 (Exterior Alkyd Enamel (EO)) // MPI 94 (Exterior Alkyd, Semi-Gloss (EO)) on exposed surfaces, except on surfaces over 94 degrees C (200 degrees F)  
 2. Use MPI #161, #163, and #164 as Light Industrial topcoats where a waterbased alternative is needed in VOC restricted areas.

C. Machinery without factory finish except for primer: One coat MPI 8 (Exterior Alkyd, Flat (EO)) // MPI 9 (Exterior Alkyd Enamel (EO)) // MPI 94 (Exterior Alkyd, Semi-Gloss (EO)) //.

### 3.7 INTERIOR FINISHES

A. Apply following finish coats over prime coats in spaces or on surfaces specified in Section 09 06 00, SCHEDULE FOR FINISHES.

#### SPECS WRITER NOTES:

1. List other metals and finish coats required for field painting in Section 09 06 00, SCHEDULE FOR FINISHES.

B. Metal Work:

1. Apply to exposed surfaces.

2. Omit body and finish coats on surfaces concealed after installation except electrical conduit containing conductors over 600 volts.
3. Ferrous Metal, Galvanized Metal, and Other Metals Scheduled:
  - a. Apply two coats of MPI 47 (Interior Alkyd, Semi-Gloss (AK)) unless specified otherwise. Use MPI #153 as a topcoat where a waterbased alternative is needed in VOC restricted areas.
  - b. Two coats of // MPI 48 (Interior Alkyd Gloss (AK)) // MPI 51 (Interior Alkyd, Eggshell (AK)). Use MPI #154 (Gloss) or MPI #151 (Eg-Shel) as topcoats where a waterbased alternative is needed in VOC restricted areas.
  - c. Machinery: One coat MPI 9 (Exterior Alkyd Enamel (EO)).

C. Gypsum Board:

1. One coat of // MPI 45 (Interior Primer Sealer) // MPI 46 (Interior Enamel Undercoat) / Use MPI #50 as a primer where a waterbased alternative is needed in VOC restricted areas.  
/ plus one coat of MPI 139 (Interior High Performance Latex, MPI Gloss level 3 (LL)).
2. Two coats of MPI 138 (Interior High Performance Latex, MPI Gloss Level 2 (LF)).
3. One coat of // MPI 45 (Interior Primer Sealer) // MPI 46 (Interior Enamel Undercoat) / Use MPI #50 as a primer where a waterbased alternative is needed in VOC restricted areas.  
/ plus one coat of MPI 54 (Interior Latex, Semi-Gloss, MPI Gloss Level 5 (LE)) or MPI 114 (Interior Latex, Gloss (LE) and (LG)).
4. One coat of // MPI 45 (Interior Primer Sealer) // MPI 46 (Interior Enamel Undercoat) / Use MPI #50 as a primer where a waterbased alternative is needed in VOC restricted areas.  
/ plus one coat of MPI 48 (Interior Alkyd Gloss (AK)). Use MPI #154 as a topcoat where a waterbased alternative is needed in VOC restricted areas.

D. Plaster:

1. One coat of MPI 50 (Interior Latex Primer Sealer).
2. Two coats of MPI 51 (Interior Alkyd, Eggshell) (AK). Use MPI #52 as a topcoat where a waterbased alternative is needed in VOC restricted areas.
- 3.

E. Masonry and Concrete Walls:



1. Over MPI 4 (Interior/Exterior Latex Block Filler) on CMU surfaces. Use MPI #3 as a primer for non-porous masonry (concrete other than block/cmu).
2. Two coats of // MPI 53 (Interior Latex, Flat, MPI Gloss Level 1 (LE)) // MPI 52 (Interior Latex, MPI Gloss Level 3 (LE)) // MPI 54 (Interior Latex, Semi-Gloss, MPI Gloss Level 5 (LE)) // MPI 114 (Interior Latex, Gloss (LE) and (LG)) //.

F. Wood:

1. Sanding:
  - a. Use 220-grit sandpaper.
  - b. Sand sealers and varnish between coats.
  - c. Sand enough to scarify surface to assure good adhesion of subsequent coats, to level roughly applied sealer and varnish, and to knock off "whiskers" of any raised grain as well as dust particles.
2. Sealers:
  - a. Apply sealers specified except sealer may be omitted where pigmented, penetrating, or wiping stains containing resins are used.
  - b. Allow manufacturer's recommended drying time before sanding, but not less than 24 hours or 36 hours in damp or muggy weather.
  - c. Sand as specified.
3. Paint Finish:
  - a. One coat of // MPI 45 (Interior Primer Sealer) // MPI 46 (Interior Enamel Undercoat) / Use MPI #39 as a primer where a waterbased alternative is needed in VOC restricted areas.  
/ plus one coat of MPI 47 (Interior Alkyd, Semi-Gloss (AK)) (SG). Use MPI #153 as a topcoat where a waterbased alternative is needed in VOC restricted areas.
  - b. One coat of MPI 45 Interior Primer Sealer. Use MPI #39 as a primer where a waterbased alternative is needed in VOC restricted areas.
  - c. Two coats of MPI 51 (Interior Alkyd, Eggshell) (AK)). Use MPI #153 as a topcoat where a waterbased alternative is needed in VOC restricted areas.
4. Transparent Finishes on Wood Except Floors.
  - a. Natural Finish:

- 1) One coat of sealer as written in 2.1 E.
- 2) Two coats of //MPI 71 Polyurethane, Moisture Cured, Clear Flat (PV)// Polyurethane, Moisture Cured, Clear Gloss (PV) /There are zero products listed in this category in MPI.  
/MPI 31 Polyurethane, Moisture Cured, Clear Gloss (PV)//.

SPEC WRITER NOTES:

1. Stain may be used when transparent finishes are specified to change the color of sapwood to match heartwood, and to enhance or even the color of the wood as required to match the finish specified.
2. Verify requirements for stain with Section 09 06 00, SCHEDULE FOR FINISHES and woods used.
3. Coordinate Article.

b. Stain Finish:

- 1) One coat of MPI 90 Interior Wood Stain, Semi-Transparent (WS).
- 2) Use wood stain of type and color required to achieve finish specified. Do not use varnish type stains.
- 3) One coat of sealer as written in 2.1 E.
- 4) Two coats of //MPI 71 Polyurethane, Moisture Cured, Clear Flat (PV)// MPI 31 Polyurethane Moisture Cured, Clear Gloss (PV)//. Use MPI #128 (Satin) or MPI#129 (Semi-Gloss) as a topcoat where a waterbased alternative is needed in VOC restricted areas.

c. Varnish Finish:

- 1) One coat of sealer as written in 2.1 E.
- 2) Two coats of // MPI 71 Polyurethane, Moisture Cured, Clear Flat (PV) // MPI 31 Polyurethane Moisture Cured, Clear Gloss (PV)//. Use MPI #128 (Satin) or MPI#129 (Semi-Gloss) as a topcoat where a waterbased alternative is needed in VOC restricted areas.

### 3.8 REFINISHING EXISTING PAINTED SURFACES

- A. Clean, patch and repair existing surfaces as specified under surface preparation.
- B. Remove and reinstall items as specified under surface preparation.
- C. Remove existing finishes or apply separation coats to prevent non-compatible coatings from having contact.

- D. Patched or Replaced Areas in Surfaces and Components: Apply spot prime and body coats as specified for new work to repaired areas or replaced components.
- E. Except where scheduled for complete painting apply finish coat over plane surface to nearest break in plane, such as corner, reveal, or frame.
- F. In existing rooms and areas where alterations occur, clean existing stained and natural finished wood retouch abraded surfaces and then give entire surface one coat of // Polyurethane, Moisture Cured, Clear Gloss // Polyurethane, Moisture Cured, Clear Flat (PV) //.
- G. Refinish areas as specified for new work to match adjoining work unless specified or scheduled otherwise.
- H. Coat knots and pitch streaks showing through old finish with Knot Sealer before refinishing.
- I. Sand or dull glossy surfaces prior to painting.
- J. Sand existing coatings to a feather edge so that transition between new and existing finish will not show in finished work.

### **3.9 PAINT COLOR**

- A. Color and gloss of finish coats is specified in Section 09 06 00, SCHEDULE FOR FINISHES.
- B. For additional requirements regarding color see Articles, REFINISHING EXISTING PAINTED SURFACE and MECHANICAL AND ELECTRICAL FIELD PAINTING SCHEDULE.
- C. Coat Colors:
  - 1. Color of priming coat: Lighter than body coat.
  - 2. Color of body coat: Lighter than finish coat.
  - 3. Color prime and body coats to not show through the finish coat and to mask surface imperfections or contrasts.
- D. Painting, Caulking, Closures, and Fillers Adjacent to Casework:
  - 1. Paint to match color of casework where casework has a paint finish.
  - 2. Paint to match color of wall where casework is stainless steel, plastic laminate, or varnished wood.

### **3.10 PROTECTION CLEAN UP, AND TOUCH-UP**

- A. Protect work from paint droppings and spattering by use of masking, drop cloths, removal of items or by other approved methods.
- B. Upon completion, clean paint from hardware, glass and other surfaces and items not required to be painted of paint drops or smears.

C. Before final inspection, touch-up or refinished in a manner to produce solid even color and finish texture, free from defects in work which was damaged or discolored.

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**APPENDIX**

Coordinate the following abbreviations used in Section 09 91 00, PAINTING, with other Sections, especially Section 09 06 00, SCHEDULE FOR FINISHES and other COATING SECTIONS listed. Use the same abbreviation and terms consistently.

Paint or coating	Abbreviation
Acrylic Emulsion	AE (MPI 10 - flat/MPI 11 - semigloss/MPI 119 - gloss)
Alkyd Gloss Enamel	G (MPI 48)
Alkyd Semigloss Enamel	SG (MPI 47)
Aluminum Paint	AP)
Cementitious Paint	CEP (TT-P-1411)
Exterior Latex	EL?? (MPI 10 / 11 / 119)
Exterior Oil	EO (MPI 9 - gloss/MPI 8 - flat/MPI 94 - semigloss)
Fire Retardant Paint	FR
Fire Retardant Coating (Clear)	FC (intumescent type)
Heat Resistant Paint	HR
Latex Emulsion	LE (MPI 53, flat/MPI 52, eggshell/MPI 54, semigloss/MPI 114, gloss Level 6
Latex Flat	LF (MPI 138)
Latex Gloss	LG (MPI 114)
Latex Semigloss	SG (MPI 141)
Latex Low Luster	LL (MPI 139)
Plastic Floor Coating	PL
Polyurethane Varnish	PV
Rubber Paint	RF (CID-A-A-3120 - Paint for Swimming Pools (RF))
Water Paint, Cement	WPC (CID-A-A-1555 - Water Paint, Powder).
Wood Stain	WS

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