UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated January 2021
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SECTION TABLE OF CONTENTS

DIVISION 09 - FINISHES

SECTION 09 90 00

PAINTS AND COATINGS

02/21

PART 1 GENERAL

1.1 RELATED REQUIREMENTS
1.1.1 Painting Included
1.1.1.1 Exterior Painting
1.1.1.2 Interior Painting
1.1.2 Painting Excluded
1.1.3 Mechanical and Electrical Painting
1.1.3.1 Fire Extinguishing Sprinkler Systems
1.1.4 Exterior Painting of Site Work Items
1.1.5 Miscellaneous Painting
1.1.5.1 Lettering [Building][Room Number(s)]
1.1.5.2 Obstructions To Aviation
1.2 REFERENCES
1.3 DEFINITIONS
1.3.1 Qualification Testing
1.3.2 Batch Quality Conformance Testing
1.3.3 Coating
1.3.4 DFT or dft
1.3.5 DSD
1.3.6 EXT
1.3.7 INT
1.3.8 Loose Paint
1.3.9 micron / microns
1.3.10 mil / mils
1.3.11 mm
1.3.12 MPI Gloss Levels
1.3.13 MPI System Number
1.3.14 Paint
1.3.15 REX
1.3.16 RIN
1.4 SCHEDULING
1.5 SUBMITTALS
1.6 QUALITY ASSURANCE
1.6.1 Regulatory Requirements
1.6.1.1 Environmental Protection

1.6.1.2 Lead Content
1.6.1.3 Chromate Content
1.6.1.4 Asbestos Content
1.6.1.5 Mercury Content
1.6.1.6 Silica
1.6.1.7 Human Carcinogens
1.6.1.8 Carbon Based Fibers / Tubes
1.6.2 Coating Contractor's Qualification
1.6.3 SSPC QP 1 Certification
1.6.4 Approved Products List
1.6.5 Paints and Coatings Indoor Air Quality Certifications
1.6.6 Field Samples and Tests
1.6.6.1 Sampling Procedure
1.6.6.2 Testing Procedure
1.6.7 Textured Wall Coating System
1.6.8 Sample Textured Wall Coating System Mock-Up
1.7 PACKAGING, LABELING, AND STORAGE
1.8 SAFETY AND HEALTH
1.8.1 Toxic Materials
1.9 ENVIRONMENTAL REQUIREMENTS
1.9.1 Coatings
1.9.2 Post-Application

PART 2 PRODUCTS

2.1 MATERIALS
2.2 COLOR CODING FOR SHORE-TO SHIP UTILITY CONNECTIONS
2.3 COLOR SELECTION OF FINISH COATS

PART 3 EXECUTION

3.1 PROTECTION OF AREAS AND SPACES NOT TO BE PAINTED
3.2 REPUTTYING AND REGLAZING
3.3 RESEALING OF EXISTING EXTERIOR JOINTS
3.3.1 Surface Condition
3.3.2 Backstops
3.3.3 Primer and Bond Breaker
3.3.4 Ambient Temperature
3.3.5 Exterior Sealant
3.3.6 Cleaning
3.4 SURFACE PREPARATION
3.4.1 Additional Requirements for Preparation of Surfaces With Existing Coatings
3.4.2 Existing Coated Surfaces with Minor Defects
3.4.3 Removal of Existing Coatings
3.4.4 Substrate Repair
3.5 PREPARATION OF METAL SURFACES
3.5.1 Existing and New Ferrous Surfaces
3.5.2 Final Ferrous Surface Condition:
3.5.2.1 Tool Cleaned Surfaces
3.5.2.2 Abrasive Blast Cleaned Surfaces
3.5.2.3 Waterjet Cleaned Surfaces
3.5.3 Galvanized Surfaces
3.5.4 Non-Ferrous Metallic Surfaces
3.5.5 Terne-Coated Metal Surfaces
3.5.6 Existing Surfaces with a Bituminous or Mastic-Type Coating
3.6 PREPARATION OF CONCRETE AND CEMENTITIOUS SURFACE
3.6.1 Concrete and Masonry
3.6.2 Gypsum Board, Plaster, and Stucco

3.6.2.1 Surface Cleaning
3.6.2.2 Repair of Minor Defects
3.6.2.3 Allowable Moisture Content
3.6.3 Existing Asbestos Cement Surfaces
3.7 PREPARATION OF WOOD AND PLYWOOD SURFACES
3.7.1 New[, Existing Uncoated,][and][Existing Coated] Plywood and Wood Surfaces, Except Floors:
3.7.2 Wood Floor Surfaces, Natural Finish
3.7.3 Interior Wood Surfaces, Stain Finish
3.7.4 Water Blasting of Existing Coated Wood Surfaces:
3.8 APPLICATION
3.8.1 Coating Application
3.8.2 Mixing and Thinning of Paints
3.8.3 Two-Component Systems
3.8.4 Coating Systems
3.9 COATING SYSTEMS FOR METAL
3.10 COATING SYSTEMS FOR CONCRETE AND CEMENTITIOUS SUBSTRATES
3.11 COATING SYSTEMS FOR WOOD AND PLYWOOD
3.12 PIPING IDENTIFICATION
3.13 INSPECTION AND ACCEPTANCE
3.14 WASTE MANAGEMENT
3.15 PAINT TABLES
3.15.1 Exterior Paint Tables
3.15.1.1 MPI Division 3: Exterior Concrete Paint Table
3.15.1.2 MPI Division 4: Exterior Concrete Masonry Units Paint Table
3.15.1.3 MPI Division 5: Exterior Metal, Ferrous and Non-Ferrous Paint Table
3.15.1.4 MPI Division 6: Exterior Wood; Dressed Lumber, Paneling, Decking, Shingles Paint Table
3.15.1.5 MPI Division 9: Exterior Stucco Paint Table
3.15.1.6 MPI Division 10: Exterior Cloth Coverings and Bituminous Coated Surfaces Paint Table
3.15.2 Interior Paint Tables
3.15.2.1 MPI Division 3: Interior Concrete Paint Table
3.15.2.2 MPI Division 4: Interior Concrete Masonry Units Paint Table
3.15.2.3 MPI Division 5: Interior Metal, Ferrous and Non-Ferrous Paint Table
3.15.2.4 MPI Division 6: Interior Wood Paint Table
3.15.2.5 MPI Division 9: Interior Plaster, Gypsum Board, Textured Surfaces Paint Table

-- End of Section Table of Contents --

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UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated January 2021

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SECTION 09 90 00

PAINTS AND COATINGS
02/21

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NOTE: This guide specification covers the requirements for painting of new and existing, interior and exterior substrates, including masonry, concrete, metal, wood, and other miscellaneous materials.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable item(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).

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NOTE: This guide specification includes tailoring for ARMY and NAVY projects, and for INTERIOR and EXTERIOR painting. Where an Editor's Note states a paragraph is tailored for a Service or painting type, the content of the paragraph, or a portion of the paragraph, is suited specifically to be included only for that Service or painting type.

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NOTE: This Guide Specification is used in the preparation of project specifications for Department of Defense facilities:
1. Buildings;
2. Related mechanical, electrical, and miscellaneous items; and

3. Shore-to-ship utility connections.

This guide specification has been prepared to address the requirements of routine maintenance painting when modified to include or utilize maintenance options.

This guide specification DOES NOT address high-performance or specialty coating requirements, or protective coating of industrial structures or facilities, including but not limited to:
1. Towers;
2. Pilings;
3. Pavement markings;
4. Items requiring specialized treatment due to peculiar usage;
5. Petroleum storage facilities;
6. Water storage facilities;
7. Waterfront facilities, except shore-to-ship utility connections; and
8. Hangars

If such items are in the project include in a separate section or modify this section accordingly. The following guide specifications are examples of those available for specific service conditions noted, and may be modified to provide for related service conditions:

1. Section 09 97 23 METALLIC TYPE CONDUCTIVE/SPARK RESISTANT CONCRETE FLOOR FINISH. This specification covers the requirements for metallic type conductive/spark resistant concrete floor finish for ordnance and other similar structures.

2. Section 09 97 02 PAINTING: HYDRAULIC STRUCTURES. This specification covers the painting of hydraulic structures located in fresh water such as locks and dams.

3. Section 09 97 13.27 HIGH PERFORMANCE COATING FOR STEEL STRUCTURES. This specification is usable for any steel structure exposed to weather, and is usable for other purposes as well, such as hangar structures, enclosed swimming pool structures, and most situations requiring high-performance protective coating systems.

4. Section 09 97 13.16 INTERIOR COATING OF WELDED STEEL WATER TANKS. This guide specification covers the requirements for polyamide epoxy coating system for interior of newly constructed Navy and Air Force water tanks, potable and non-potable, where shop applied coatings are not being considered.

5. Section 09 97 13.15 LOW VOC POLYSULFIDE INTERIOR COATING OF WELDED STEEL PETROLEUM FUEL TANKS. This covers the requirements for a Low VOC (less than 50 grams/liter) two-coat modified epoxy novolac

polysulfide coating system for interiors of newly constructed Navy bulk fuel storage tanks. With proper modification it can also be used for maintenance applications.

6. Section 09 97 13.26 COATING OF STEEL WATERFRONT STRUCTURES, ZERO VOC, (SZC) SPLASH ZONE COATING. This covers the requirements for a Low VOC two-coat modified epoxy novolac polysulfide coating system for newly constructed steel structures in a salt water environment especially exposed to the splash zone area. The system may also be applied to steel structures in a fresh water environment. With modification for specific location and requirements it can also be used for maintenance applications.

This guide specification generally contains only two types of coating systems, solvent based and water based. If different systems are required regionally, or for special needs, modify the guide accordingly.

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PART 1 GENERAL

1.1 RELATED REQUIREMENTS

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NOTE: Indicate type and extent of work on drawings. Specific quantities should not be cited in the specification. Indicate on the drawings the linear amount of existing putty, glazing compound, sealant or caulking to be replaced with new material and quantify the area of existing coating to be removed by methods specified for each substrate material.

****

1.1.1 Painting Included

Where a space or surface is indicated to be painted, include the following unless indicated otherwise.

a. Surfaces behind portable objects and surface mounted articles readily detachable by removal of fasteners, such as screws and bolts.

b. New factory finished surfaces that require identification or color coding and factory finished surfaces that are damaged during performance of the work.

c. Existing coated surfaces that are damaged during performance of the work.

1.1.1.1 Exterior Painting

****

NOTE: The following subparagraph is tailored for inclusion in projects with exterior painting.

Choose bracketed items according to scope of project.
****

Includes new surfaces[, existing coated surfaces,][and][existing uncoated surfaces,] of the building[s] and appurtenances. Also included are existing coated surfaces made bare by cleaning operations.

1.1.1.2 Interior Painting

****
NOTE: The following subparagraph is tailored for inclusion in projects with interior painting.

Choose bracketed items according to scope of project.
****

Includes new surfaces[, existing uncoated surfaces,][and][existing coated surfaces] of the building[s] and appurtenances as indicated and existing coated surfaces made bare by cleaning operations. Where a space or surface is indicated to be painted, include the following items, unless indicated otherwise.

a. Exposed columns, girders, beams, joists, and metal deck; and

b. Other contiguous surfaces.

1.1.2 Painting Excluded

Do not paint the following unless indicated otherwise.

a. Surfaces concealed and made inaccessible by panelboards, fixed ductwork, machinery, and equipment fixed in place.

b. Surfaces in concealed spaces. Concealed spaces are defined as enclosed spaces above suspended ceilings, furred spaces, attic spaces, crawl spaces, elevator shafts and chases.

c. Steel to be embedded in concrete.

d. Copper, stainless steel, aluminum, anodized aluminum, brass, and lead except existing coated surfaces.

e. Hardware, fittings, and other factory finished items.

[f. Do not paint surfaces in the following areas: [_____].

]1.1.3 Mechanical and Electrical Painting

****
NOTE: Choose bracketed items in paragraph below according to scope of project.
****

Includes field coating of [interior][and][exterior] new[and existing] surfaces.

a. Where a space or surface is indicated to be painted, include the following items unless indicated otherwise.

(1) Exposed piping, conduit, and ductwork;

(2) Supports, hangers, air grilles, and registers;

(3) Miscellaneous metalwork and insulation coverings.

[b. Do not paint the following, unless indicated otherwise:

[(1) New zinc-coated, aluminum, and copper surfaces under insulation

][(2) New aluminum jacket on piping

][(3) New interior ferrous piping under insulation.

]][1.1.3.1 Fire Extinguishing Sprinkler Systems

Clean, pretreat, prime, and paint new fire extinguishing sprinkler systems including valves, piping, conduit, hangers, supports, miscellaneous metalwork, and accessories. Apply coatings to clean, dry surfaces, using clean brushes.

][1.1.4 Exterior Painting of Site Work Items

****

NOTE: The following paragraph is tailored for inclusion in projects with exterior painting.

Insert list of Site Work Items to be painted in table below, such as hand rails, fire extinguishing systems, doors.

****

Field coat the following items:

	New Surfaces	Existing Surfaces
a.		
b.		
c.		

]1.1.5 Miscellaneous Painting

1.1.5.1 Lettering [Building][Room Number(s)]

Provide lettering [as scheduled on the drawings][block][Gothic] type, [black enamel][water-type decalcomania, finished with a protective coating of spar varnish]. Samples must be approved before application.

[1.1.5.2 Obstructions To Aviation

****

NOTE: Specify by name structures such as smokestacks, poles, and buildings which have been identified as obstruction to aviation. Verify that the structures so identified are not specified to be painted in the sections specifying the structures so

that painting will not be specified twice. Coordinate with FAA for alternate colors and patterns.
****

Paint the following obstructions to aviation in the pattern and color prescribed by FAA AC 70/7460-1: [smokestacks][poles][buildings][_____]

]1.2 REFERENCES

****
NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a Reference Identifier (RID) outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.
****

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)

ACGIH 0100	(2017; Suppl 2020) Documentation of the Threshold Limit Values and Biological Exposure Indices

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME A13.1	(2020) Scheme for the Identification of Piping Systems

ASTM INTERNATIONAL (ASTM)

ASTM C920	(2018) Standard Specification for Elastomeric Joint Sealants
ASTM D235	(2002; R 2012) Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent)
ASTM D523	(2014; R 2018) Standard Test Method for Specular Gloss
ASTM D2824/D2824M	(2018) Standard Specification for Aluminum-Pigmented Asphalt Roof Coatings,

	Non-Fibered, and Fibered without Asbestos
ASTM D4214	(2007; R 2015) Standard Test Method for Evaluating the Degree of Chalking of Exterior Paint Films
ASTM D4263	(1983; R 2018) Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method
ASTM D4444	(2013; R 2018) Standard Test Method for Laboratory Standardization and Calibration of Hand-Held Moisture Meters
ASTM D6386	(2016a) Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting
ASTM F1869	(2016a) Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

Intelligence Bulletin 65	(2013) Occupational Exposure to Carbon Nanotubes and Nanofibers

MASTER PAINTERS INSTITUTE (MPI)

MPI 1	(2012) Aluminum Paint
MPI 2	(2012) Aluminum Heat Resistant Enamel (up to 427 C and 800 F
MPI 3	(2016) Primer, Alkali Resistant, Water Based
MPI 4	(2016) Interior/Exterior Latex Block Filler
MPI 5	(2015) Primer, Exterior Alkyd Wood
MPI 6	(2015) Primer, Exterior Latex Wood
MPI 8	(2016) Alkyd, Exterior Flat (MPI Gloss Level I)
MPI 9	(2016) Alkyd, Exterior Gloss (MPI Gloss Level 6)
MPI 10	(2016) Latex, Exterior Flat (MPI Gloss Level 1)
MPI 11	(2016) Latex, Exterior Semi-Gloss, MPI Gloss Level 5
MPI 13	(2016) Stain, Exterior Solvent-Based, Semi-Transparent

MPI 16	(2016) Stain, Exterior, Water Based, Solid Hide
MPI 17	(2016) Primer, Bonding, Water Based
MPI 19	(2012) Primer, Zinc Rich, Inorganic
MPI 21	(2012) Heat Resistant Coating, (Up to 205°C/402°F), MPI Gloss Level 6
MPI 22	(2012) Aluminum Paint, High Heat (up to 590° C/1100° F)
MPI 23	(2015) Primer, Metal, Surface Tolerant
MPI 27	(2016) Floor Enamel, Alkyd, Gloss (MPI Gloss Level 6)
MPI 31	(2012) Varnish, Polyurethane, Moisture Cured, Gloss (MPI Gloss Level 6)
MPI 38	(2016) Elastomeric Coating, Exterior, Water Based, Non-Flat
MPI 39	(2018) Primer, Latex, for Interior Wood
MPI 42	(2012) Textured Coating, Latex, Flat
MPI 44	(2016) Latex, Interior, (MPI Gloss Level 2)
MPI 45	(2016) Primer Sealer, Interior Alkyd
MPI 46	(2016) Undercoat, Enamel, Interior
MPI 47	(2016) Alkyd, Interior, Semi-Gloss (MPI Gloss Level 5)
MPI 48	(2016) Alkyd, Interior, Gloss (MPI Gloss Level 6-7)
MPI 49	(2015) Alkyd, Interior, Flat (MPI Gloss Level 1)
MPI 50	(2015) Primer Sealer, Latex, Interior
MPI 51	(2016) Alkyd, Interior, (MPI Gloss Level 3)2
MPI 52	(2016) Latex, Interior, (MPI Gloss Level 3)
MPI 54	(2016) Latex, Interior, Semi-Gloss (MPI Gloss Level 5)
MPI 56	(2012) Varnish, Interior, Polyurethane, Oil Modified, Gloss
MPI 57	(2012) Varnish, Interior, Polyurethane, Oil Modified, Satin

MPI 59	(2016) Floor Paint, Alkyd, Low Gloss
MPI 60	(2016) Floor Paint, Latex, Low Gloss
MPI 68	(2016) Floor Paint, Latex, Gloss
MPI 71	(2012) Varnish, Polyurethane, Moisture Cured, Flat (MPI Gloss Level 1)
MPI 72	(2016) Polyurethane, Two-Component, Pigmented, Gloss (MPI Gloss Level 6-7)
MPI 76	(2016) Primer, Alkyd, Quick Dry, for Metal
MPI 77	(2015) Epoxy, Gloss
MPI 79	(2016) Primer, Alkyd, Anti-Corrosive for Metal
MPI 90	(2012) Stain, Semi-Transparent, for Interior Wood
MPI 94	(2016) Alkyd, Exterior, Semi-Gloss (MPI Gloss Level 5)
MPI 95	(2015) Primer, Quick Dry, for Aluminum
MPI 101	(2016) Primer, Epoxy, Anti-Corrosive, for Metal
MPI 107	(2016) Primer, Rust-Inhibitive, Water Based
MPI 108	(2015) Epoxy, High Build, Low Gloss
MPI 113	(2018) Elastomeric, Pigmented, Exterior, Water Based, Flat
MPI 116	(2012) Block Filler, Epoxy
MPI 119	(2016) Latex, Exterior, Gloss (MPI Gloss Level 6)
MPI 120	(2020) Epoxy, High Build, Self Priming, Low Gloss
MPI 134	(2015) Primer, Galvanized, Water Based
MPI 138	(2016) Latex, Interior, High Performance Architectural, (MPI Gloss Level 2)
MPI 139	(2016) Latex, Interior, High Performance Architectural, (MPI Gloss Level 3)
MPI 140	(2016) Latex, Interior, High Performance Architectural, (MPI Gloss Level 4)
MPI 141	(2016) Latex, Interior, High Performance Architectural, Semi-Gloss (MPI Gloss Level 5)

MPI 144	(2016) Latex, Interior, Institutional Low Odor/VOC, (MPI Gloss Level 2)
MPI 145	(2016) Latex, Interior, Institutional Low Odor/VOC, (MPI Gloss Level 3)
MPI 146	(2016) Latex, Interior, Institutional Low Odor/VOC, (MPI Gloss Level 4)
MPI 147	(May 2016) Latex, Interior, Institutional Low Odor/VOC, Semi-Gloss (MPI Gloss Level 5)
MPI 149	(2016) Primer Sealer, Interior, Institutional Low Odor/VOC
MPI 151	(2016) Light Industrial Coating, Interior, Water Based (MPI Gloss Level 3)
MPI 153	(2016) Light Industrial Coating, Interior, Water Based, Semi-Gloss (MPI Gloss Level 5)
MPI 154	(2016) Light Industrial Coating, Interior, Water Based, Gloss (MPI Gloss Level 6)
MPI 161	(2016) Light Industrial Coating, Exterior, Water Based (MPI Gloss Level 3)
MPI 163	(2016) Light Industrial Coating, Exterior, Water Based, Semi-Gloss (MPI Gloss Level 5)
MPI 164	(2016) Light Industrial Coating, Exterior, Water Based, Gloss (MPI Gloss Level 6)
MPI 177	(2020) Epoxy, Semi-Gloss (MPI Gloss Level 5)
MPI 214	(2016) Latex, Exterior (MPI Gloss Level 2)
MPI ASM	(2019) Architectural Painting Specification Manual
MPI GPS-1-14	(2014) Green Performance Standard GPS-1-14
MPI GPS-2-14	(2014) Green Performance Standard GPS-2-14
MPI MRM	(2015) Maintenance Repainting Manual

SOCIETY FOR PROTECTIVE COATINGS (SSPC)

SSPC 7/NACE No.4	(2007) Brush-Off Blast Cleaning
SSPC Glossary	(2011) SSPC Protective Coatings Glossary
SSPC Guide 6	(2015) Guide for Containing Surface Preparation Debris Generated During Paint Removal Operations

SSPC Guide 7	(2015) Guide to the Disposal of Lead-Contaminated Surface Preparation Debris
SSPC PA 1	(2016) Shop, Field, and Maintenance Coating of Metals
SSPC QP 1	(2019) Standard Procedure for Evaluating the Qualifications of Industrial/Marine Painting Contractors (Field Application to Complex Industrial Steel Structures and Other Metal Components)
SSPC SP 1	(2015) Solvent Cleaning
SSPC SP 2	(2018) Hand Tool Cleaning
SSPC SP 3	(2018) Power Tool Cleaning
SSPC SP 6/NACE No.3	(2007) Commercial Blast Cleaning
SSPC SP 10/NACE No. 2	(2007) Near-White Blast Cleaning
SSPC VIS 1	(2002; E 2004) Guide and Reference Photographs for Steel Surfaces Prepared by Dry Abrasive Blast Cleaning
SSPC VIS 3	(2004) Guide and Reference Photographs for Steel Surfaces Prepared by Hand and Power Tool Cleaning
SSPC VIS 4/NACE VIS 7	(1998; E 2000; E 2004) Guide and Reference Photographs for Steel Surfaces Prepared by Waterjetting
SSPC-SP WJ-1/NACE WJ-1	(2012) Clean to Bare Substrate, Waterjet Cleaning of Metals
SSPC-SP WJ-2/NACE WJ-2	(2012) Very Thorough Cleaning, Waterjet Cleaning of Metals
SSPC-SP WJ-3/NACE WJ-3	(2012) Thorough Cleaning, Waterjet Cleaning of Metals
SSPC-SP WJ-4/NACE WJ-4	(2012) Light Cleaning, Waterjet Cleaning of Metals

SOCIETY OF AUTOMOTIVE ENGINEERS INTERNATIONAL (SAE)

SAE AMS-STD-595A	(2017) Colors used in Government Procurement

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2014) Safety and Health Requirements Manual

U.S. DEPARTMENT OF DEFENSE (DOD)

MIL-PRF-680	(2010; Rev C; Notice 1 2015) Degreasing Solvent
MIL-STD-101	(2014; Rev C) Color Code for Pipelines and for Compressed Gas Cylinders

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA Method 24	(2000) Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings

U.S. FEDERAL AVIATION ADMINISTRATION (FAA)

FAA AC 70/7460-1	(2016; Rev L; Change 2) Obstruction Marking and Lighting

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

FED-STD-313	(2018) Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.1000	Air Contaminants
29 CFR 1910.1001	Asbestos
29 CFR 1910.1025	Lead
29 CFR 1926.62	Lead

1.3 DEFINITIONS

1.3.1 Qualification Testing

Qualification testing is the performance of all test requirements listed in the product specification. This testing is accomplished by MPI to qualify each product for the MPI Approved Product List, and may also be accomplished by Contractor's third-party testing lab if an alternative to Batch Quality Conformance Testing by MPI is desired.

1.3.2 Batch Quality Conformance Testing

Batch quality conformance testing determines that the product provided is the same as the product qualified to the appropriate product specification. This testing must be accomplished by an MPI testing lab.

1.3.3 Coating

SSPC Glossary; (1) A liquid, liquefiable, or mastic composition that is converted to a solid protective, decorative, or functional adherent film after application as a thin layer; (2) Generic term for paint, lacquer, enamel.

1.3.4 DFT or dft

Dry film thickness, the film thickness of the fully cured, dry paint or coating.

1.3.5 DSD

Degree of Surface Degradation, the MPI system of defining degree of surface degradation. Five levels are generically defined under the Assessment sections in the MPI MRM, MPI Maintenance Repainting Manual.

1.3.6 EXT

****
NOTE: The following paragraph is tailored for inclusion in projects with exterior painting.
****

MPI short term designation for an exterior coating system.

1.3.7 INT

****
NOTE: The following paragraph is tailored for inclusion in projects with interior painting.
****

MPI short term designation for an interior coating system.

1.3.8 Loose Paint

Paint or coating that can be removed with a dull putty knife.

1.3.9 micron / microns

The metric measurement for 0.001 mm or one one-thousandth of a millimeter.

1.3.10 mil / mils

The English measurement for 0.001 in or one one-thousandth of an inch.

1.3.11 mm

The metric measurement for millimeter, 0.001 meter or one one-thousandth of a meter.

1.3.12 MPI Gloss Levels

MPI system of defining gloss. Seven gloss levels (G1 to G7) are generically defined under the Evaluation sections of the MPI Manuals. Traditionally, Flat refers to G1/G2, Eggshell refers to G3, Semigloss refers to G5, and Gloss refers to G6.

Gloss levels are defined by MPI as follows:

Gloss Level	Description	Units at 60 degree angle	Units at 80 degree angle
G1	Matte or Flat	0 to 5	10 max
G2	Velvet	0 to 10	10 to 35
G3	Eggshell	10 to 25	10 to 35
G4	Satin	20 to 35	35 min
G5	Semi-Gloss	35 to 70	
G6	Gloss	70 to 85	
G7	High Gloss		

Gloss is tested in accordance with ASTM D523. Historically, the Government has used Flat (G1 / G2), Eggshell (G3), Semi-Gloss (G5), and Gloss (G6).

1.3.13 MPI System Number

The MPI coating system number in each MPI Division found in either the MPI Architectural Painting Specification Manual or the Maintenance Repainting Manual and defined as an exterior (EXT/REX) or interior system (INT/RIN).

1.3.14 Paint

SSPC Glossary; (1) Any pigmented liquid, liquefiable, or mastic composition designed for application to a substrate in a thin layer that is converted to an opaque solid film after application. Used for protection, decoration, identification, or to serve some other functional purposes; (2) Application of a coating material.

1.3.15 REX

****
NOTE: The following paragraph is tailored for inclusion in projects with exterior painting.
****

MPI short term designation for an exterior coating system used in repainting projects or over existing coating systems.

1.3.16 RIN

****
NOTE: The following paragraph is tailored for inclusion in projects with interior painting.
****

MPI short term designation for an interior coating system used in repainting projects or over existing coating systems.

1.4 SCHEDULING

****
NOTE: This Article is tailored for inclusion in

NAVY projects only.

Materials that adsorb VOCs include carpets, textiles, unprimed gypsum wallboard, and acoustical ceiling panels. Add any of these materials that are included in the project and other adsorbing materials into the empty bracket.
****

Allow paint, polyurethane, varnish, and wood stain installations to cure prior to the installation of materials that adsorb VOCs, including[carpets,][textiles,][unprimed gypsum wallboard,][acoustical ceiling panels,][_____].

1.5 SUBMITTALS

****
NOTE: Review Submittal Description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list, and corresponding submittal items in the text, to reflect only the submittals required for the project. The Guide Specification technical editors have classified those items that require Government approval, due to their complexity or criticality, with a "G." Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a "G" to an item if the submittal is sufficiently important or complex in context of the project.

For Army projects, fill in the empty brackets following the "G" classification, with a code of up to three characters to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

The "S" classification indicates submittals required as proof of compliance for sustainability Guiding Principles Validation or Third Party Certification and as described in Section 01 33 00 SUBMITTAL PROCEDURES.

Choose the first bracketed item for Navy, Air Force, and NASA projects, or choose the second bracketed item for Army projects.
****

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are [for Contractor Quality Control approval.][for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

Samples of specified materials may be taken and tested for compliance with specification requirements.

SD-02 Shop Drawings

Piping Identification

SD-03 Product Data

Coating; G[, [_____]]

Product Data Sheets

Sealant

SD-04 Samples

Color; G[, [_____]]

Textured Wall Coating System; G[, [_____]]

[Sample Textured Wall Coating System Mock-Up; G[, [_____]]

] SD-07 Certificates

Qualification Testing laboratory for coatings; G[, [_____]]

Indoor Air Quality for Paints and Primers

[Indoor Air Quality for Consolidated Latex Paints

] SD-08 Manufacturer's Instructions

Application Instructions

Mixing

Manufacturer's Safety Data Sheets

SD-10 Operation and Maintenance Data

Coatings, Data Package 1; G[, [_____]]

1.6 QUALITY ASSURANCE

1.6.1 Regulatory Requirements

1.6.1.1 Environmental Protection

In addition to requirements specified elsewhere for environmental protection, provide coating materials that conform to the restrictions of the local Air Pollution Control District and regional jurisdiction. Notify Contracting Officer of any paint specified herein which fails to conform.

1.6.1.2 Lead Content

Do not use coatings having a lead content over 0.06 percent by weight of

nonvolatile content.

1.6.1.3 Chromate Content

Do not use coatings containing zinc-chromate or strontium-chromate.

1.6.1.4 Asbestos Content

Provide asbestos-free materials.

1.6.1.5 Mercury Content

Provide materials free of mercury or mercury compounds.

1.6.1.6 Silica

Provide abrasive blast media containing no free crystalline silica.

1.6.1.7 Human Carcinogens

Provide materials that do not contain ACGIH 0100 confirmed human carcinogens (A1) or suspected human carcinogens (A2).

1.6.1.8 Carbon Based Fibers / Tubes

Materials must not contain carbon based fibers such as carbon nanotubes or carbon nanofibers. Intelligence Bulletin 65 ranks toxicity of carbon nanotubes on a par with asbestos.

****
NOTE: Select only one of the following two bracketed paragraphs.
****

[1.6.2 Coating Contractor's Qualification

****
NOTE: When using the Contractor qualification clause rather than the SSPC Certification requirements, edit to require appropriate experience.
****

****
NOTE: Insert structure type comparable to those being painted in brackets.
****

Submit the name, address, telephone number, and e-mail address of the Contractor that will be performing all surface preparation and coating application. Submit evidence that key personnel have successfully performed surface preparation and application of coatings on [_____] on a minimum of three similar projects within the past three years. List information by individual and include the following:

a. Name of individual and proposed position for this work.

b. Information about each previous assignment including:

Position or responsibility

Employer (if other than the Contractor)

Name of facility owner

Mailing address and telephone number of facility owner

Name of individual in facility owner's organization who can be contacted as a reference

Location, size and description of structure

Dates work was carried out

Description of work carried out on structure

][1.6.3 SSPC QP 1 Certification

****
NOTE: For projects in continental U.S., Hawaii, Alaska, and Puerto Rico, require SSPC Certification. Use in other locations where qualified U.S. Contractor is desired. If project involves removal of paint containing hazardous materials, add requirement for SSPC QP 2 certification in section of specification where the hazardous paint removal is specified, generally Section 02 83 00 LEAD REMEDIATION.
****

****
NOTE: **WARNINGWARNING**WARNING**WARNING** Solicitations requiring SSPC Certification must point out the existence and location of the certification requirement, in the Project Information Form. To be enforceable, include the requirement in the solicitation documents. SSPC Certification is a special responsibility requirement pursuant to FAR 9.104-2 Special Standards. This is analogous to requiring bidders to have a specified level of experience or expertise and GAO has sustained these types of special requirements.**
****

****
NOTE: Use bracket option below concerning SSPC QP 1 only when industrial coatings are required. Painting qualifications for projects such as BEQ's, training facilities and general administration buildings do not require QP 1 certification.
****

Contractors that perform surface preparation or coating application on steel substrates must be certified by the Society for Protective Coatings (formerly Steel Structures Painting Council) (SSPC) to the requirements of SSPC QP 1 prior to Contract award, and must remain certified while accomplishing any surface preparation or coating application. If a Contractor's certification expires, the firm will not be allowed to

perform any work until the certification is reissued. Requests for extension of time for any delay to the completion of the project due to an inactive certification will not be considered. Notify the Contracting Officer of any change in Contractor certification status. Notify the Contracting Officer of all scheduled and unannounced on-site audits from SSPC and furnish a copy of all audit reports.

]1.6.4 Approved Products List

The current MPI, "Approved Product List" which lists paint by 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 a 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. Provide all coats on a particular substrate from a single manufacturer. No variation from the MPI Approved Products List is acceptable.

1.6.5 Paints and Coatings Indoor Air Quality Certifications

****

NOTE: The Governments's preference is for use of products that have been certified for indoor air quality by a third-party organization such as MPI's MPI GPS-1-14 and MPI GPS-2-14 Green Performance Standards. Research has shown that all paints except consolidated latex paints are available among three national manufacturers. Verify there is a certified product available when specifying consolidated latex paint that is both cost effective and appropriate for the project. Confirm local/regional availability of certified products when specifying consolidated latex paint that does not impact cost effectiveness.

****

Provide paint and coating products certified to meet indoor air quality requirements by MPI GPS-1-14, MPI GPS-2-14 or provide certification by other third-party programs. Provide current product certification documentation from certification body.

Provide certification of Indoor Air Quality for Paints and Primers. [Provide certification of Indoor Air Quality for Consolidated Latex Paints.]Submit required indoor air quality certifications in one submittal package.

1.6.6 Field Samples and Tests

The Contracting Officer may choose up to two coatings that have been delivered to the site to be tested at no cost to the Government. Take samples of each chosen product as specified in the paragraph SAMPLING PROCEDURE. Test each chosen product as specified in the paragraph TESTING PROCEDURE. Remove products from the job site which do not conform, and replace with new products that conform to the referenced specification. Test replacement products that failed initial testing as specified in the paragraph TESTING PROCEDURE at no cost to the Government.

****

NOTE: The following paragraph is tailored for

inclusion in ARMY projects only.

Only require the testing for large quantities of epoxy/polyurethane coatings or a single coating system that is used in large quantities on the project. A large quantity of epoxy/polyurethane coatings is considered to be 189 Liters 50 gallons or more, a large quantity of other coating systems is considered to be 757 Liters 200 gallons or more. List all coatings for testing by MPI or SSPC paint number in the following paragraph.

****

[Another required testing is Batch Quality Conformance Testing to prove conformance of the manufacturer's paint to the specified MPI standard. This testing is accomplished before the materials are delivered to the job site. Provide testing for [_____] paint products. Test paint products as specified in the paragraph TESTING PROCEDURE.
]

1.6.6.1 Sampling Procedure

Select paint at random from the products that have been delivered to the job site for sample testing. The Contractor must provide one liter one quart samples of the selected paint materials. Take samples in the presence of the Contracting Officer, and label, and identify each sample. Provide labels in accordance with the paragraph PACKAGING, LABELING, AND STORAGE.

1.6.6.2 Testing Procedure

Provide Batch Quality Conformance Testing for specified products, as defined by and performed by MPI. As an alternative to Batch Quality Conformance Testing, the Contractor may provide Qualification Testing for specified products above to the appropriate MPI product specification, using the third-party laboratory approved under the paragraph QUALIFICATION TESTING laboratory for coatings. Include the backup data and summary of the test results within the qualification testing lab report. Provide a summary listing of all the reference specification requirements and the result of each test. Clearly indicate in the summary whether the tested paint meets each test requirement. Note that Qualification Testing may take 4 to 6 weeks to perform, due to the extent of testing required.

Submit name, address, telephone number, FAX number, and e-mail address of the independent third party laboratory selected to perform testing of coating samples for compliance with specification requirements. Submit documentation that laboratory is regularly engaged in testing of paint samples for conformance with specifications, and that employees performing testing are qualified. If MPI is chosen to perform the Batch Quality Conformance testing, the above submittal information is not required, only a letter is required from the Contractor stating that MPI will perform the testing.

1.6.7 Textured Wall Coating System

Three complete samples of each indicated type, pattern, and color of textured wall coating system applied to a panel of the same material as that on which the coating system will be applied in the work. Provide samples of wall coating systems minimum 125 by 175 mm 5 by 7 inches and of

sufficient size to show pattern repeat and texture.

[1.6.8 Sample Textured Wall Coating System Mock-Up

****
NOTE: Include the following Mock-Up section when a textured wall coating system is included in the project.
****

After coating samples are approved and prior to starting installation, provide a minimum 2.43 m by 2.43 m 8 foot by 8 foot mock-up for each substrate and for each color and type of textured wall coating using the actual substrate materials. Use the approved mock-up samples as a standard of workmanship for installation within the facility. Submit at least 48 hour advance written notice to the Contracting Officer's Representative prior to mock-up installation.

]1.7 PACKAGING, LABELING, AND STORAGE

****
NOTE: The following paragraph includes tailoring for inclusion in Navy projects. Include the last two sentences for Navy projects only.

Materials with a high capacity to absorb VOC emissions include materials which are woven, fibrous or porous in nature, such as acoustical ceilings, carpet, and textiles. Include such materials being installed in brackets.
****

Provide paints in sealed containers that legibly show the Contract specification number, designation name, formula or specification number, batch number, color, quantity, date of manufacture, manufacturer's formulation number, manufacturer's directions including any warnings and special precautions, and name and address of manufacturer. Furnish pigmented paints in containers not larger than 20 liters 5 gallons. Store paints and thinners in accordance with the manufacturer's written directions, and as a minimum, stored off the ground, under cover, with sufficient ventilation to prevent the buildup of flammable vapors, and at temperatures between 4 to 35 degrees C 40 to 95 degrees F. Do not store paint, polyurethane, varnish, or wood stain products with materials that have a high capacity to absorb VOC emissions[, including [_____]]. Do not store paint, polyurethane, varnish, or wood stain products in occupied spaces.

1.8 SAFETY AND HEALTH

Comply with applicable Federal, State, and local laws and regulations, and with the ACCIDENT PREVENTION PLAN, including the Activity Hazard Analysis as specified in Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS and in Appendix A of EM 385-1-1. Include in the Activity Hazard Analysis the potential impact of painting operations on painting personnel and on others involved in and adjacent to the work zone.

1.8.1 Toxic Materials

To protect personnel from overexposure to toxic materials, conform to the

most stringent guidance of:

a. The applicable manufacturer's Safety Data Sheets (SDS) or local regulation.

b. 29 CFR 1910.1000.

c. ACGIH 0100, threshold limit values.

****
NOTE: Delete following paragraph if no lead is contained in existing coating systems.
****

[d. The appropriate OSHA standard in 29 CFR 1910.1025 and 29 CFR 1926.62 for surface preparation on painted surfaces containing lead. Removal and disposal of coatings which contain lead is specified in Section 02 83 00 LEAD REMEDIATION. Additional guidance is given in SSPC Guide 6 and SSPC Guide 7. Refer to drawings for list of hazardous materials located on this project. Coordinate paint preparation activities with this specification section.
]

****
NOTE: Delete following paragraph if no asbestos is contained in existing coating systems.
****

[e. The appropriate OSHA standards in 29 CFR 1910.1001 for surface preparation of painted surfaces containing asbestos. Removal and disposal of coatings which contain asbestos materials is specified in Section 02 82 00 ASBESTOS REMEDIATION. Refer to drawings for list of hazardous materials located on this project. Coordinate paint preparation activities with this specification section.

] Submit manufacturer's Safety Data Sheets for coatings, solvents, and other potentially hazardous materials, as defined in FED-STD-313.

1.9 ENVIRONMENTAL REQUIREMENTS

****
NOTE: Choose bracketed option in the following paragraph if high emission paints or coatings, such as epoxies or alkyds, will be used.
****

Comply, at minimum, with manufacturer recommendations for space ventilation during and after installation.[Isolate area of application from rest of building when applying high-emission paints or coatings.]

1.9.1 Coatings

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. Do not, under any circumstances, violate the manufacturer's application recommendations.

1.9.2 Post-Application

****
NOTE: The following paragraphs are tailored for inclusion in NAVY projects only.

Choose the most appropriate option(s) for ventilation. For instance, high-humidity regions may generate too much condensate when using 100 percent outside air.
****

Vacate space for as long as possible after application. Wait a minimum of 48 hours before occupying freshly painted rooms. Maintain one of the following ventilation conditions during the curing period, or for 72 hours after application:

a. Supply 100 percent outside air 24 hours a day.

b. Supply airflow at a rate of 6 air changes per hour, when outside temperatures are between 13 degrees C 55 degrees F and 29 degrees C 85 degrees F and humidity is between 30 percent and 60 percent.

c. Supply airflow at a rate of 1.5 air changes per hour, when outside air conditions are not within the range stipulated above.

PART 2 PRODUCTS

2.1 MATERIALS

****
NOTE: Reprocessed and consolidated latex paints are EPA designated products. Verify the availability of certified products within the region when specifying consolidated latex paint.
****

Conform to the coating specifications and standards referenced in PART 3. Submit Product Data Sheets for specified coatings and solvents. Provide preprinted cleaning and maintenance instructions for all coating systems. Submit Manufacturer's Instructions on Mixing: Detailed mixing instructions, minimum and maximum application temperature and humidity, pot life, and curing and drying times between coats.

[2.2 COLOR CODING FOR SHORE-TO SHIP UTILITY CONNECTIONS

****
NOTE: Include the following bracketed paragraph and Table if the project includes painting of Shore-To-Ship Utility connections
****

Color Coding For Shore-To-Ship Utility Connections: Paint hose connection fittings and shut-off valves the designated color. In addition to color coding provide 50 mm 2 inch high stenciled letters using black stencil paint, clearly designating service for each connection.

Color Coding for Shore-to-Ship Utility Connections		
Service	Color	SAE AMS-STD-595A No.
Potable Water*	Blue	15044
Water Provided for Fire Protection**	Red	11105
Chilled Water	Striped Blue/White	15044 / 17886
Oily Waste Water	Striped Yellow/Black	13528 / 17038
Sewer	Gold	17043
Steam	White	17886
High Pressure Air	Gray	16081
Low Pressure Air	Tan	10324
Fuels	Yellow	13655
* This includes connections serving domestic functions.		
** This includes non-potable salt water or, at some locations, fresh water connections provided for fire protection (may also include flushing and cooling requirements). Note: This does not include waterfront fire hydrants.		

]2.3 COLOR SELECTION OF FINISH COATS

Provide colors of finish coats as indicated or specified. Allow Contracting Officer to select colors not indicated or specified. Manufacturers' names and color identification are used for the purpose of color identification only. Named products are acceptable for use only if they conform to specified requirements. Products of other manufacturers are acceptable if the colors are approximately the colors indicated and the product conforms to specified requirements.

****

NOTE: On Navy projects, do not use Section 09 06 00 SCHEDULES FOR FINISHES. Provide color selection on the Contract drawings.

****

Provide color, texture, and pattern of wall coating systems [as indicated][in accordance with Section 09 06 00 SCHEDULES FOR FINISHES] [_____]. Submit manufacturer's samples of paint colors. Cross reference color samples to color scheme as indicated. Submit color stencil codes. Tint each coat progressively darker to enable confirmation of the number of coats.

PART 3 EXECUTION

****

NOTE: Exercise caution when deviating from paint

systems listed in tables of PART 3 EXECUTION. Verify compatibility and suitability of paint systems substituted by reviewing the Evaluation of Systems sections of the MPI Manuals.
****

3.1 PROTECTION OF AREAS AND SPACES NOT TO BE PAINTED

Prior to surface preparation and coating applications, remove, mask, or otherwise protect hardware, hardware accessories, machined surfaces, radiator covers, plates, lighting fixtures, public and private property, and other such items not to be coated that are in contact with surfaces to be coated. Following completion of painting, reinstall removed items by workmen skilled in the trades. Restore surfaces contaminated by coating materials, to original condition and repair damaged items.

[3.2 REPUTTYING AND REGLAZING

****
NOTE: Include this paragraph only for projects involving painting of existing windows but not including a glazing section. Reputtying work should be covered in glazing section if such a section is used in the project specifications. This is normally used in historical preservation. Avoid using linseed oil putty at building interior.
****

Remove cracked, loose, and defective putty or glazing compound on glazed sash and provide new putty or glazing compound. Where defective putty or glazing compound constitutes 30 percent or more of the putty at any one light, remove the glass and putty or glazing compound and reset the glass. Remove putty or glazing compound without damaging sash or glass. Clean rabbets to bare wood or metal and prime prior to reglazing. Provide linseed oil putty for wood sash. Patch surfaces to provide smooth transition between existing and new surfaces. Finish putty or glazing compound to a neat and true bead. Allow glazing compound time to cure, in accordance with manufacturer's recommendation, prior to coating application. Allow putty to set one week prior to coating application.

][3.3 RESEALING OF EXISTING EXTERIOR JOINTS

****
NOTE: The following Article is tailored for inclusion in projects with exterior painting.
****

3.3.1 Surface Condition

****
NOTE: Include this paragraph only for projects involving resealing of existing exterior joints but not including a sealant Section 07 92 00 JOINT SEALANTS. Such work should be covered in sealant section if such a section is used in the project specifications.
****

Begin with surfaces that are clean, dry to the touch, and free from frost

and moisture; remove grease, oil, wax, lacquer, paint, defective backstop, or other foreign matter that would prevent or impair adhesion. Where adequate grooves have not been provided, clean out to a depth of 13 mm 1/2 inch and grind to a minimum width of 6 mm 1/4 inch without damage to adjoining work. Grinding is not required on metal surfaces.

3.3.2 Backstops

In joints more than 13 mm 1/2 inch deep, install glass fiber roving or neoprene, butyl, polyurethane, or polyethylene foams free of oil or other staining elements as recommended by sealant manufacturer. Provide backstop material compatible with sealant. Do not use oakum and other types of absorptive materials as backstops.

3.3.3 Primer and Bond Breaker

Install the type recommended by the sealant manufacturer.

3.3.4 Ambient Temperature

Between 4 degrees C 38 degrees F and 35 degrees C 95 degrees F when applying sealant.

3.3.5 Exterior Sealant

For joints in vertical surfaces, provide ASTM C920, Type S or M, Grade NS, Class 25, Use NT. For joints in horizontal surfaces, provide ASTM C920, Type S or M, Grade P, Class 25, Use T. Color(s) will be selected by the Contracting Officer. Apply the sealant in accordance with the manufacturer's printed instructions. Force sealant into joints with sufficient pressure to fill the joints solidly. Apply sealant uniformly smooth and free of wrinkles.

3.3.6 Cleaning

Immediately remove fresh sealant from adjacent areas using a solvent recommended by the sealant manufacturer. Upon completion of sealant application, remove remaining smears and stains and leave the work in a clean condition. Allow sealant time to cure, in accordance with manufacturer's recommendations, prior to coating.

]3.4 SURFACE PREPARATION

****

NOTE: Define existing coating systems compositionally before recoating.

1. Hazardous Materials: Follow regulatory restrictions when planning either partial or full removal of existing coatings. Records establishing the composition of materials in the coating systems, if available, may assist in a preliminary review of planned surface preparation and disposal. Generally an overall assessment of applicable regulations for personnel and environmental protection will be required, with appropriate sampling and testing, followed by use of proper material control procedures.

2. Determine compatibility of the existing coating system with a planned repair or overcoating system by procedures such as the following:

a. Identification of the existing topcoat and any undercoats that will be exposed, by consulting local records.

b. If binder extraction is possible, ASTM D2621, "Infrared Identification of Vehicle Solids from Solvent-Reducible Paints," can be used for vehicle identification.

c. General compatibility considerations and chart listings of expected relationships between binder types are given in MPI Evaluation of systems, "Transition Coat and Architectural Paint Compatibility Chart". Consult coating specialist codes regarding questionable compatibilities indicated in the chart.

d. For some maintenance operations, use of ASTM D5064, "Standard Practice for Conducting a Patch Test to Assess Coating Compatibility," may be warranted. Interpretation of the results of patch testing is not always straight-forward, therefore, consult appropriate coating specialists when considering patch testing.

****

****

NOTE: Specify nonhazardous cleaning agents when possible.

****

Remove dirt, splinters, loose particles, grease, oil,[disintegrated coatings,] and other foreign matter and substances deleterious to coating performance as specified for each substrate before application of paint or surface treatments. Remove oil and grease prior to mechanical cleaning. Schedule cleaning so that dust and other contaminants will not fall on wet, newly painted surfaces. Spot-prime exposed ferrous metals such as nail heads on or in contact with surfaces to be painted with water-thinned paints, with a suitable corrosion-inhibitive primer capable of preventing flash rusting and compatible with the coating specified for the adjacent areas. Refer to MPI ASM and MPI MRM for additional more specific substrate preparation requirements.

[3.4.1 Additional Requirements for Preparation of Surfaces With Existing Coatings

****

NOTE: Delete inapplicable phrases or entire paragraph if no previously painted surfaces will be encountered.

****

Before application of coatings, perform the following on surfaces covered by soundly-adhered coatings, defined as those which cannot be removed with a putty knife:

a. Test existing finishes for lead before sanding, scraping, or removing. If lead is present, refer to paragraph Toxic Materials.

b. Wipe previously painted surfaces to receive solvent-based coatings, except stucco and similarly rough surfaces clean with a clean, dry cloth saturated with mineral spirits, ASTM D235 or as specified in MPI MRM. Wipe the surfaces dry with a clean, dry, lint free cloth. Wipe immediately preceding the application of the first coat of any coating, unless specified otherwise.

c. Sand existing glossy surfaces to be painted to reduce gloss. Brush, and wipe clean with a damp cloth to remove dust.

d. The requirements specified are minimum. Comply also with the application instructions of the paint manufacturer and specific surface preparation requirements as outlined in MPI MRM Exterior Surface Preparation and Interior Surface Preparation.

e. Thoroughly clean previously painted surfaces[specified to be repainted][damaged during construction] of all grease, dirt, dust or other foreign matter.

f. Remove blistering, cracking, flaking and peeling or otherwise deteriorated coatings.

g. Remove chalk so that when tested in accordance with ASTM D4214, the chalk resistance rating is no less than 8.

h. Roughen slick surfaces. Repair damaged areas such as, but not limited to, nail holes, cracks, chips, and spalls with suitable material to match adjacent undamaged areas.

i. Feather and sand smooth edges of chipped paint.

j. Clean rusty metal surfaces in accordance with SSPC requirements. Use solvent, mechanical, or chemical cleaning methods to provide surfaces suitable for painting.

k. Provide new, proposed coatings that are compatible with existing coatings.

][3.4.2 Existing Coated Surfaces with Minor Defects

****

NOTE: Delete inapplicable phrases or entire paragraph if no previously painted surfaces will be encountered.

****

[Sand, spackle, and treat minor defects to render them smooth. Minor defects are defined as scratches, nicks, cracks, gouges, spalls, alligatoring, chalking, and irregularities due to partial peeling of previous coatings.][Remove chalking by sanding[or blasting] so that when tested in accordance with ASTM D4214, the chalk rating is not less than 8.]

][3.4.3 Removal of Existing Coatings

****

NOTE: Delete this paragraph if project does not include removal of existing coatings.

****

Remove existing coatings from the following surfaces:

a. Surfaces containing large areas of minor defects;

b. Surfaces containing more than 20 percent peeling area; and

c. Surfaces designated by the Contracting Officer, such as surfaces where rust shows through existing coatings.

]3.4.4 Substrate Repair

a. Repair substrate surface damaged during coating removal;

b. Sand edges of adjacent soundly-adhered existing coatings so they are tapered as smooth as practical to areas involved with coating removal; and

c. Clean and prime the substrate as specified.

3.5 PREPARATION OF METAL SURFACES

3.5.1 Existing and New Ferrous Surfaces

****

NOTE: Surface preparation procedures must be compliant with any local or base restrictions. Specify use of nonhazardous cleaning agents when possible. For cleaning or blasting ferrous surfaces, select applicable options from the table below.

The considerations suggested here for painting over existing paint are covered in a Coating Condition Survey (CCS). Consult UFC 3-190-06 "Protective Coatings and Paints" for details. The intent of performing a CCS is to be able to design a maintenance coating project that carries minimum risk of coating failure.

Use the following table to help select a primer type and surface preparation to specify for steel surfaces. The table provides minimum requirements for mild or severe exposure. Mild exposure includes climate-controlled environments, project locations with Environmental Severity Classifications (ESC) C1 or C2, and low humidity locations. Severe exposure includes high humidity locations or project locations with ESC of C3 thru C5. Humid locations are those in ASHRAE climate zones 0A, 1A, 2A, 3A, 3C, 4C and 5C (as identified in ASHRAE 90.1). See UFC 1-200-01 for determination of ESC for project locations. Severe exposure also includes marine,

chemical, or immersion service, as well as application of heat resistant or nonslip floor coatings. A high-performing system may be a better choice for longer performance, even in mild exposure.

Ferrous Surface Preparation			
SSPC Blasting/Cleaning Levels[a] - Primer Types/Exposures			
Exposure			
	Mild		Severe[b]
Primer Type	alkyd/oil latex oleoresinous phenolic		epoxy silicone inorganic zinc-rich
Surface Condition			
Uncoated			
Oil, Grease, Dirt	SP 1		SP 10; (SSPC-SP WJ-2/NACE WJ-2) or SP 5; (SSPC-SP WJ-1/NACE WJ-1)
Localized corrosion - mill scale, rust	SP 2, SP 3, or SP 7; SP 11; (SSPC-SP WJ-4/NACE WJ-4)		SP 10; (SSPC-SP WJ-2/NACE WJ-2) or SP 5; (SSPC-SP WJ-1/NACE WJ-1)
Extensive deterioration	SP 6[c];(SSPC-SP WJ-3/NACE WJ-3)		SP 10; (SSPC-SP WJ-2/NACE WJ-2) or SP 5; (SSPC-SP WJ-1/NACE WJ-1)
Shop coated			
Oil, Grease, Dirt	[d]		SP 10; (SSPC-SP WJ-2/NACE WJ-2) or SP 5; (SSPC-SP WJ-1/NACE WJ-1)
Localized damage to be spot repaired	SP 2, SP 3, or SP 7; SP 11; (SSPC-SP WJ-4/NACE WJ-4)		SP 10; (SSPC-SP WJ-2/NACE WJ-2) or SP 5; (SSPC-SP WJ-1/NACE WJ-1)
Extensive deterioration	SP 6[c];(SSPC-SP WJ-3/NACE WJ-3)		SP 10; (SSPC-SP WJ-2/NACE WJ-2) or SP 5; (SSPC-SP WJ-1/NACE WJ-1)

Ferrous Surface Preparation			
Existing coating			
Oil, Grease	**d**	**d**	**SP 1**
Chalking, foreign matter other than oil or grease, localized deterioration	**e**		**f**
Extensive deterioration	**SP 6[c];(SSPC-SP WJ-3/NACE WJ-3)**		**SP 10; (SSPC-SP WJ-2/NACE WJ-2) or SP 5; (SSPC-SP WJ-1/NACE WJ-1)**

[a] If it is not possible to abrasive blast or use waterjetting, SP 11 is recommended. It is considered equivalent to SP 6. SP 11 is also preferred wherever SP 2 or SP 3 are shown in the Table.

[b] For marine, chemical, or immersion service, or application of heat resistant or nonslip floor coatings. SP 10 is preferred for zinc-rich primers, and for extremely severe environments where long-term performance is desired.

[c] Use water jetting to SSPC-SP WJ-3/NACE WJ-3, as alternate to SSPC SP 6 degree of cleanliness where abrasive blasting cannot be used.

[d] Use only the steam clean, or non-alkaline detergent solutions of SP 1.

[e] First, remove chalk and dirt with a non-alkaline detergent solution, and follow with power wash to SSPC-SP WJ-4/NACE WJ-4. Second, spot clean, in order of preference by SSPC SP 6, SSPC SP 11, SSPC SP 7, SSPC SP 3, or SSPC SP 2.

[f] First, remove chalk and dirt with a non-alkaline detergent solution, and follow with power wash to SSPC-SP WJ-4/NACE WJ-4. Second, spot clean, in order of preference, by SSPC SP 10, SSPC SP 6, or SSPC SP 11.

****

a. Ferrous Surfaces including Shop-coated Surfaces and Small Areas That Contain Rust, Mill Scale and Other Foreign Substances: [Solvent clean][or][detergent wash] in accordance with SSPC SP 1 to remove oil and grease. Where shop coat is missing or damaged, clean according to [SSPC SP 2,][SSPC SP 3,][SSPC SP 6/NACE No.3,] or [SSPC SP 10/NACE No. 2].[Brush-off blast remaining surface in accordance with SSPC 7/NACE No.4]; [Water jetting to SSPC-SP WJ-4/NACE WJ-4 may be used to remove loose coating and other loose materials. Use inhibitor as recommended by coating manufacturer to prevent premature rusting.] Protect shop-coated ferrous surfaces from corrosion by treating and touching up corroded areas immediately upon detection.

b. Surfaces With More Than 20 Percent Rust, Mill Scale, and Other Foreign Substances: Clean entire surface in accordance with [SSPC SP 6/NACE No.3 / SSPC-SP WJ-3/NACE WJ-3][SSPC SP 10/NACE No. 2 / SSPC-SP WJ-2/NACE WJ-2].

****

NOTE: For rusted surfaces, modify surface preparation requirements to include near white blast cleaning in accordance with SSPC SP 10 or waterjetting equivalent of WJ-2 prior to coating application.

****

[c. Metal Floor Surfaces to Receive Nonslip Coating: Clean in accordance with [SSPC SP 10/NACE No. 2][SSPC-SP WJ-2/NACE WJ-2].

]3.5.2 Final Ferrous Surface Condition:

****

NOTE: Verify there are no local or base restrictions on use of abrasive blasting. Specify cleaning options as follows:

Type Coating	**Level of Cleaning, SSPC SP**
a. Latex or Alkyd	**2,3,6 or SP 12 WJ-2.(7 and 10, SSPC-SP WJ-2/NACE WJ-2 or SSPC-SP WJ-1/NACE WJ-1 may be left in as Contractor options)**
b. High Performance (i.e. Epoxy, Urethane, others)	**6,10**

****

3.5.2.1 Tool Cleaned Surfaces

Comply with SSPC SP 2 and SSPC SP 3. Use as a visual reference, photographs in SSPC VIS 3 for the appearance of cleaned surfaces.

3.5.2.2 Abrasive Blast Cleaned Surfaces

Comply with SSPC 7/NACE No.4, SSPC SP 6/NACE No.3, and SSPC SP 10/NACE No. 2. Use as a visual reference, photographs in SSPC VIS 1 for the appearance of cleaned surfaces.

3.5.2.3 Waterjet Cleaned Surfaces

Comply with SSPC-SP WJ-1/NACE WJ-1, SSPC-SP WJ-2/NACE WJ-2, SSPC-SP WJ-3/NACE WJ-3 or SSPC-SP WJ-4/NACE WJ-4. Use as a visual reference, photographs in SSPC VIS 4/NACE VIS 7 for the appearance of cleaned surfaces.

3.5.3 Galvanized Surfaces

****

NOTE: Choose bracketed items in paragraph below according to scope of project. Local restrictions may apply or limits imposed by project location.

****

a. New or Existing Galvanized Surfaces With Only Dirt and Zinc Oxidation Products: Clean with [solvent,][steam,][or][non-alkaline detergent solution]in accordance with SSPC SP 1. Completely remove coating by brush-off abrasive blast if the galvanized metal has been passivated or stabilized. Do not "passivate" or "stabilize" new galvanized steel to be coated. If the absence of hexavalent stain inhibitors is not documented, test as described in ASTM D6386, Appendix X2, and remove by one of the methods described therein.

****

NOTE: Delete the text below if there are no existing surfaces to receive coatings. Verify there are no local or base restrictions on the use of abrasive blasting.

****

b. Galvanized with Slight Coating Deterioration or with Little or No Rusting: Water jetting to SSPC-SP WJ-3/NACE WJ-3 to remove loose coating from surfaces with less than 20 percent coating deterioration and no blistering, peeling, or cracking. Use inhibitor as recommended by the coating manufacturer to prevent rusting.

****

NOTE: Delete the text below if there are no existing surfaces to receive coatings. Verify there are no local or base restrictions on the use of abrasive blasting.

****

c. Galvanized With Severe Deteriorated Coating or Severe Rusting: [Water jet to SSPC-SP WJ-3/NACE WJ-3 degree of cleanliness.][Spot abrasive blast rusted areas as described for steel in SSPC SP 6/NACE No.3, and waterjet to SSPC-SP WJ-3/NACE WJ-3 to remove existing coating.]

3.5.4 Non-Ferrous Metallic Surfaces

Aluminum and aluminum-alloy, lead, copper, and other nonferrous metal surfaces.

Surface Cleaning: Solvent clean in accordance with SSPC SP 1 and wash with mild non-alkaline detergent to remove dirt and water soluble contaminants.

3.5.5 Terne-Coated Metal Surfaces

Solvent clean surfaces with mineral spirits, ASTM D235. Wipe dry with clean, dry cloths.

3.5.6 Existing Surfaces with a Bituminous or Mastic-Type Coating

Remove chalk, mildew, and other loose material by washing with a solution of 0.20 liter 1/2 cup trisodium phosphate, 0.1 liter 1/4 cup household detergent, 1.6 liters one quart 5 percent sodium hypochlorite solution and 4.8 liters 3 quarts of warm water.

3.6 PREPARATION OF CONCRETE AND CEMENTITIOUS SURFACE

3.6.1 Concrete and Masonry

a. Curing: Allow concrete, stucco and masonry surfaces to cure at least 30 days before painting, and concrete slab on grade to cure at least 90 days before painting.

b. Surface Cleaning: Remove the following deleterious substances.

****
NOTE: Choose bracketed items in subparagraphs below according to scope of project that should be based on a coating condition survey.
****

(1) Dirt,[Chalking,] Grease, and Oil: Wash new[and existing uncoated] surfaces with a solution composed of 0.2 liter 1/2 cup trisodium phosphate, 0.1 liter 1/4 cup household detergent, and 6.4 liters 4 quarts of warm water. Then rinse thoroughly with fresh water.[Wash existing coated surfaces with a suitable detergent and rinse thoroughly.] For large areas, water blasting may be used.

(2) Fungus and Mold: Wash [new][, existing coated,] [and existing uncoated] surfaces with a solution composed of 0.2 liter 1/2 cup trisodium phosphate, 0.1 liter 1/4 cup household detergent, 1.6 liters one quart 5 percent sodium hypochlorite solution and 4.8 liters 3 quarts of warm water. Rinse thoroughly with fresh water.

(3) Paint and Loose Particles: Remove by wire brushing.

(4) Efflorescence: Remove by scraping or wire brushing followed by washing with a 5 to 10 percent by weight aqueous solution of hydrochloric (muriatic) acid. Do not allow acid to remain on the surface for more than five minutes before rinsing with fresh water. Do not acid clean more than 0.4 square meter 4 square feet of surface, per workman, at one time.

[(5) Removal of Existing Coatings: For surfaces to receive textured coating MPI 42, remove existing coatings including soundly adhered coatings if recommended by textured coating manufacturer.

] c. Cosmetic Repair of Minor Defects: Repair or fill mortar joints and minor defects, including but not limited to spalls, in accordance with manufacturer's recommendations and prior to coating application.

d. Allowable Moisture Content: Latex coatings may be applied to damp surfaces, but not to surfaces with droplets of water. Do not apply epoxies to damp vertical surfaces as determined by ASTM D4263 or horizontal surfaces that exceed 169.0 micrograms moisture per second, square meter 3 lbs of moisture per 1000 square feet in 24 hours as determined by ASTM F1869. In all cases follow manufacturer's recommendations. Allow surfaces to cure a minimum of 30 days before painting.

3.6.2 Gypsum Board, Plaster, and Stucco

3.6.2.1 Surface Cleaning

Verify that plaster and stucco surfaces are free from loose matter and that gypsum board is dry. Remove loose dirt and dust by brushing with a soft brush, rubbing with a dry cloth, or vacuum-cleaning prior to application of the first coat material. A damp cloth or sponge may be used if paint is water-based.

3.6.2.2 Repair of Minor Defects

Prior to painting, repair joints, cracks, holes, surface irregularities, and other minor defects with patching plaster or spackling compound and sand smooth.

3.6.2.3 Allowable Moisture Content

Latex coatings may be applied to damp surfaces, but not surfaces with droplets of water. Do not apply epoxies to damp surfaces as determined by ASTM D4263. Verify that new plaster to be coated has a maximum moisture content of 8 percent, when measured in accordance with ASTM D4444, Method A, unless otherwise authorized. In addition to moisture content requirements, allow new plaster to age a minimum of 30 days before preparation for painting.

[3.6.3 Existing Asbestos Cement Surfaces

****
NOTE: Delete entire paragraph if no asbestos cement surfaces will be encountered.
****

Remove oily stains by solvent cleaning with mineral spirits in accordance with MIL-PRF-680 or ASTM D235. Remove loose dirt, dust, and other deleterious substances by brushing with a soft brush or rubbing with a dry cloth prior to application of the first coat material. Do not wire brush or clean using other abrasive methods. Verify surfaces are dry and clean prior to application of the coating.

][3.7 PREPARATION OF WOOD AND PLYWOOD SURFACES

****
NOTE: Choose bracketed items in this Article according to scope of project.

Delete inapplicable phrases or entire Article if no wood surfaces will be encountered.
****

3.7.1 New[, Existing Uncoated,][and][Existing Coated] Plywood and Wood Surfaces, Except Floors:

a. Surface Cleaning: Clean wood surfaces of foreign matter. Verify that surfaces are free from dust and other deleterious substances and in a condition approved by the Contracting Officer prior to receiving paint or other finish. Do not use water to clean uncoated wood.[Scrape to remove loose coatings. Lightly sand to roughen the entire area of previously enamel-coated wood surfaces.]

[b. Removal of Fungus and Mold: Wash existing coated surfaces with a solution composed of 0.2 liter 3 ounces (2/3 cup) trisodium phosphate, 0.1 liter one ounce (1/3 cup) household detergent, 1.6 liters one quart 5 percent sodium hypochlorite solution and 4.8 liters 3 quarts of warm water. Rinse thoroughly with fresh water.

] c. Do not exceed 12 percent moisture content of the wood as measured by a moisture meter in accordance with ASTM D4444, Method A, unless otherwise authorized.

d. Prime or touch up wood surfaces adjacent to surfaces to receive water-thinned paints before applying water-thinned paints.

e. Cracks and Nailheads: Set and putty stop nailheads and putty cracks after the prime coat has dried.

f. Cosmetic Repair of Minor Defects:

(1) Knots and Resinous Wood[and Fire, Smoke, Water, and Color Marker Stained Existing Coated Surface]: Prior to application of coating, cover knots and stains with two or more coats of 1.3-kg-cut 3-pound-cut shellac varnish, plasticized with 0.14 liters 5 ounces of castor oil per liter gallon. Scrape away existing coatings from knotty areas, and sand before treating. Prime before applying any putty over shellacked area.

(2) Open Joints and Other Openings: Fill with whiting putty, linseed oil putty. Sand smooth after putty has dried.

(3) Checking: Where checking of the wood is present, sand the surface, wipe and apply a coat of pigmented orange shellac. Allow to dry before paint is applied.

g. Prime Coat For New Exterior Surfaces: Prime coat [wood doors,][windows,][frames,][and][trim] before wood becomes dirty, warped[or weathered].

3.7.2 Wood Floor Surfaces, Natural Finish

a. Initial Surface Cleaning: As specified in Article SURFACE PREPARATION.

[b. Existing Loose Boards and Shoe Molding: Before sanding, renail loose boards. Countersink nails and fill with an approved wood filler. Remove shoe molding before sanding and reinstall after completing other work. At Contractor's option, new shoe molding may be provided in lieu of reinstalling old. Provide new wood molding of the same size, wood species, and finish as the existing.

] c. Sanding and Scraping: Sanding of wood floors is specified in Section [09 64 29 WOOD STRIP AND PLANK FLOORING] [09 64 23 WOOD PARQUET FLOORING] [09 64 66 WOOD ATHLETIC FLOORING] [09 64 00 PORTABLE (DEMOUNTABLE) WOOD FLOORING]. Fill floors of oak or similar open-grain wood with wood filler recommended by the finish manufacturer and the excess filler removed.

d. Final Cleaning: After sanding, sweep and vacuum floors clean. Do not walk on floors thereafter until specified sealer has been applied and is dry.

3.7.3 Interior Wood Surfaces, Stain Finish

****
NOTE: The following paragraph is tailored for inclusion in projects with interior painting.
****

Sand interior wood surfaces to receive stain. Fill oak and other open-grain wood to receive stain with a coat of wood filler not less than 8 hours before the application of stain; remove excess filler and sand the surface smooth.

3.7.4 Water Blasting of Existing Coated Wood Surfaces:

****
NOTE: Require water blasting for existing wood surfaces only for architectural restoration work where the cost is justified.

Add surfaces to be water blasted, such as wood siding, in brackets.
****

Provide water blasting for the following surfaces: [_____].

a. Sample Panel: Prior to the initial surface cleaning, water blast a representative surface designated by the Contracting Officer. Provide surface cleaning of the remaining work to match the sample panel approved by the Contracting Officer.

b. Initial Surface Cleaning: Water blast surfaces to receive paint with a high pressure spray, to remove loose paint, dirt, and other foreign or deleterious materials. Provide working pressure less than 17 MPa 2500 pounds per square inch gage (psig). Do not flood vents or damage windows and floors. If the pressure specified will cause damage to existing wood, advise the Contracting Officer and obtain permission to vary the pressure. Direct the wash nozzle at the surface at an angle of approximately 75 degrees with the surface and at a distance not greater than 1500 mm 5 feet to apply water pressure required to remove loose paint, dirt, chalking, and other foreign matter.

c. Final Surface Cleaning: After allowing the surfaces to dry for a minimum of 24 hours, remove remaining dirt, splinters, loose particles, disintegrated and loose paint, grease, oil, and other foreign matter from the surface.

]3.8 APPLICATION

3.8.1 Coating Application

****
NOTE: Use the second bracket option when fire protection sprinkler systems including valve, piping, conduit, hangers and other miscellaneous items are to be painted.
****

a. Comply with applicable federal, state and local laws enacted to ensure

compliance with Federal Clean Air Standards. Apply coating materials in accordance with SSPC PA 1. SSPC PA 1 methods are applicable to all substrates, except as modified herein.

b. At the time of application, paint must show no signs of deterioration. Maintain uniform suspension of pigments during application.

c. Unless otherwise specified or recommended by the paint manufacturer, paint may be applied by brush, roller, or spray. Use trigger operated spray nozzles for water hoses. Use rollers for applying paints and enamels of a type designed for the coating to be applied and the surface to be coated. Wear protective clothing and respirators when applying oil-based paints or using spray equipment with any paints.

d. Only apply paints, except water-thinned types, to surfaces that are completely free of moisture as determined by sight or touch.

e. Thoroughly work coating materials into joints, crevices, and open spaces. Pay special attention to ensure that all edges, corners, crevices, welds, and rivets receive a film thickness equal to that of adjacent painted surfaces.

f. Apply each coat of paint so that dry film is of uniform thickness and free from runs, drops, ridges, waves, pinholes or other voids, laps, brush marks, and variations in color, texture, and finish. Completely hide all blemishes.

****

NOTE: USe broom cleaning when other means are not available.

****

g. Touch up damaged coatings before applying subsequent coats.[Broom clean and clear dust from interior areas before and during the application of coating material.]

****

NOTE: Delete inapplicable phrases or entire subparagraphs if no fire extinguishing sprinkler system surfaces will be encountered.

****

[h. Apply paint to new fire extinguishing sprinkler systems including valves, piping, conduit, hangers, supports, miscellaneous metal work, and accessories. Shield sprinkler heads with protective coverings while painting is in progress. Remove sprinkler heads which have been painted and replace with new sprinkler heads. Unfinished spaces include attic spaces, spaces above suspended ceilings, crawl spaces, pipe chases, mechanical equipment room, and space where walls or ceiling are not painted or not constructed of a prefinished material. Upon completion of painting, remove protective covering from sprinkler heads.

i. Piping in Unfinished Areas: Provide primed surfaces with one coat of red alkyd gloss enamel (MPI 9) applied to a minimum dry film thickness of 0.025 mm 1.0 mil in attic spaces, spaces above suspended ceilings, crawl spaces, pipe chases, mechanical equipment room, and spaces where

walls or ceiling are not painted or not constructed of a prefinished material.

j. Piping in Finished Areas: Provide primed surfaces with two coats of paint to match adjacent surfaces, except provide valves and operating accessories with one coat of red alkyd gloss enamel (MPI 9) applied to a minimum dry film thickness of 0.025 mm 1.0 mil or two component gloss polyurethane (MPI 72) in exterior applications.

k. Provide labeling on the surfaces of all feed and cross mains to show the pipe function such as "Sprinkler System", "Fire Department Connection", "Standpipe". For pipe sizes 100 mm 4-inch and larger provide white painted stenciled letters and arrows, a minimum of 50 mm 2 in in height and visible from at least two sides when viewed from the floor. For pipe sizes less than 100 mm 4-inch, provide white painted stenciled letters and arrows, a minimum of 18 mm 0.75 in in height and visible from the floor.

l. All fire suppression system valves must be marked with permanent tags indicating normally open or normally closed.

] m. Drying Time: Allow time between coats, as recommended by the coating manufacturer, to permit thorough drying, but not to present topcoat adhesion problems. Provide each coat in specified condition to receive next coat.

n. Primers, and Intermediate Coats: Do not allow primers or intermediate coats to dry more than 30 days, or longer than recommended by manufacturer, before applying subsequent coats. Follow manufacturer's recommendations for surface preparation if primers or intermediate coats are allowed to dry longer than recommended by manufacturers of subsequent coatings. Cover each preceding coat or surface completely by ensuring visually perceptible difference in shades of successive coats.

o. Finished Surfaces: Provide finished surfaces free from runs, drops, ridges, waves, laps, brush marks, and variations in colors.

p. Thermosetting Paints: Apply topcoats over thermosetting paints (epoxies and urethanes) within the overcoat window recommended by the manufacturer.

****

NOTE: Choose bracketed items in the subparagraph below according to scope of project.

Delete inapplicable phrases or entire subparagraph if nonslip surfacing to floors or ramps will not be encountered.

****

q. Floors: [For nonslip surfacing on level floors, as the intermediate coat is applied, cover wet surface completely with almandite garnet, Grit No. 36, with maximum passing U.S. Standard Sieve No. 40 less than 0.5 percent. When the coating is dry, use a soft bristle broom to sweep up excess grit, which may be reused, and vacuum up remaining residue before application of the topcoat.][For nonslip surfacing on ramps, provide MPI 77 with non-skid additive, applied by roller in accordance with manufacturer's instructions.]

3.8.2 Mixing and Thinning of Paints

Reduce paints to proper consistency by adding fresh paint, except when thinning is mandatory to suit surface, temperature, weather conditions, application methods, or for the type of paint being used. Obtain written permission from the Contracting Officer to use thinners. Verify that the written permission includes quantities and types of thinners to use.

When thinning is allowed, thin paints immediately prior to application with not more than 0.125 L one pint of suitable thinner per liter gallon. The use of thinner does not relieve the Contractor from obtaining complete hiding, full film thickness, or required gloss. Thinning cannot cause the paint to exceed limits on volatile organic compounds. Do not mix paints of different manufacturers.

3.8.3 Two-Component Systems

Mix two-component systems in accordance with manufacturer's instructions. Follow recommendation by the manufacturer for any thinning of the first coat to ensure proper penetration and sealing for each type of substrate.

3.8.4 Coating Systems

****
NOTE: Delete MPI Divisions from the Table listing below that are not required for the project.
****

a. Systems by Substrates: Apply coatings that conform to the respective specifications listed in the following Tables:

****
NOTE: The following Table is tailored for inclusion in projects with exterior painting.
****

Table for Exterior Applications	
MPI Division	Substrate Application
MPI Division 3	Exterior Concrete Paint Table
MPI Division 4	Exterior Concrete Masonry Units Paint Table
MPI Division 5	Exterior Metal, Ferrous and Non-Ferrous Paint Table
MPI Division 6	Exterior Wood; Dressed Lumber, Paneling, Decking, Shingles Paint Table
MPI Division 9	Exterior Stucco Paint Table
MPI Division 10	Exterior Cloth Coverings and Bituminous Coated Surfaces Paint Table

****
NOTE: The following Table is tailored for inclusion

in projects with interior painting.
****

Table for Interior Applications	
MPI Division	Substrate Application
MPI Division 3	Interior Concrete Paint Table
MPI Division 4	Interior Concrete Masonry Units Paint Table
MPI Division 5	Interior Metal, Ferrous and Non-Ferrous Paint Table
MPI Division 6	Interior Wood Paint Table
MPI Division 9	Interior Plaster, Gypsum Board, Textured Surfaces Paint Table

b. Minimum Dry Film Thickness (DFT): Apply paints, primers, varnishes, enamels, undercoats, and other coatings to a minimum dry film thickness of 0.038 mm 1.5 mil each coat unless specified otherwise in the Tables. Coating thickness, where specified, refers to the minimum dry film thickness.

c. Coatings for Surfaces Not Specified Otherwise: Coat unspecified surfaces the same as surfaces having similar conditions of exposure.

d. Existing Surfaces Damaged During Performance of the Work, Including New Patches In Existing Surfaces: Coat surfaces with the following:

(1) One coat of primer.

(2) One coat of undercoat or intermediate coat.

(3) One topcoat to match adjacent surfaces.

e. Existing Coated Surfaces To Be Painted: Apply coatings conforming to the respective specifications listed in the Tables herein, except that pretreatments, sealers and fillers need not be provided on surfaces where existing coatings are soundly adhered and in good condition. Do not omit undercoats or primers.

3.9 COATING SYSTEMS FOR METAL

Apply coatings of Tables in MPI Division 5 for Exterior and Interior.

a. Apply specified ferrous metal primer to steel surfaces on the same day that surface is cleaned, to surfaces that meet all specified surface preparation requirements at time of application.

b. Inaccessible Surfaces: Prior to erection, use one coat of specified primer on metal surfaces that will be inaccessible after erection.

c. Shop-primed Surfaces: Touch up exposed substrates and damaged coatings to protect from rusting prior to applying field primer.

d. Surface Previously Coated with Epoxy or Urethane: Apply MPI 101,

0.038 mm 1.5 mils DFT immediately prior to application of epoxy or urethane coatings.

e. Pipes and Tubing: The semitransparent film applied to some pipes and tubing at the mill is not to be considered a shop coat. Overcoat these items with the specified ferrous-metal primer prior to application of finish coats.

f. Exposed Nails, Screws, Fasteners, and Miscellaneous Ferrous Surfaces. On surfaces to be coated with water thinned coatings, spot prime exposed nails and other ferrous metal with latex primer MPI 107.

3.10 COATING SYSTEMS FOR CONCRETE AND CEMENTITIOUS SUBSTRATES

Apply coatings of Tables in MPI Division 3, 4 and 9 for Exterior and Interior.

3.11 COATING SYSTEMS FOR WOOD AND PLYWOOD

a. Apply coatings of Tables in MPI Division 6 for Exterior and Interior.

b. Prior to erection, apply two coats of specified primer to treat and prime wood[and plywood] surfaces which will be inaccessible after erection.

c. Apply stains in accordance with manufacturer's printed instructions.

[d. Wood Floors to Receive Natural Finish: Thin first coat 2 to 1 using thinner recommended by coating manufacturer. Apply all coatings at rate of 30 square meters per 4 liters 300 to 350 square feet per gallon. Apply second coat not less than 2 hours and not over 24 hours after first coat has been applied. Apply with lamb's wool applicators or roller as recommended by coating manufacturer. Buff or lightly sand between intermediate coats as recommended by coating manufacturer's printed instructions.

]3.12 PIPING IDENTIFICATION

****
NOTE: If pipe marking is to be covered in the mechanical section, delete this paragraph. Use the Activity preferred bracketed reference.
****

Piping Identification, Including Surfaces In Concealed Spaces: Provide in accordance with [MIL-STD-101][ASME A13.1]. Place stenciling in clearly visible locations. On piping not covered by [MIL-STD-101][ASME A13.1], stencil approved names or code letters, in letters a minimum of 13 mm 1/2 inch high for piping and a minimum of 50 mm 2 inches high elsewhere. Stencil arrow-shaped markings on piping to indicate direction of flow using black stencil paint.

3.13 INSPECTION AND ACCEPTANCE

In addition to meeting previously specified requirements, demonstrate mobility of moving components, including swinging and sliding doors, cabinets, and windows with operable sash, for inspection by the Contracting Officer. Perform this demonstration after appropriate curing and drying times of coatings have elapsed and prior to invoicing for final

payment.

3.14 WASTE MANAGEMENT

****
NOTE: Take-back programs refer to programs in which the product manufacturer "takes-back" scrap material or packaging associated with its product. Coordinate with Section 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL.
****

As specified in the Waste Management Plan and as follows. Do not use kerosene or any such organic solvents to clean up water based paints. Properly dispose of paints or solvents in designated containers. Close and seal partially used containers of paint to maintain quality as necessary for reuse. Store in protected, well-ventilated, fire-safe area at moderate temperature. Place materials defined as hazardous or toxic waste in designated containers.[Coordinate with manufacturer for take-back program. Set aside scrap to be returned to manufacturer for recycling into new product. When such a service is not available, contact local recyclers to reclaim the materials.][Set aside extra paint for future color matches or reuse by the Government.][Where local options exist for leftover paint recycling, collect all waste paint by type and provide for delivery to recycling or collection facility for reuse by local organizations.]

3.15 PAINT TABLES

****
NOTE: Choose coatings that meet the MPI Green Performance™ Standard (GPS-1-12), unless no such products are available for the specified application. An E3 rating is more stringent than an E2 rating, which is more stringent than an E1 rating. Where indoor air quality (odor) is an issue, use only MPI listed materials having a minimum E2 rating. Edit Interior Paint Tables to include only products that are listed in the MPI Green Approved Products List, available at http://www.specifygreen.com/APL/ProductIdxByMPInum.asp to maximize sustainability in all projects.
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****
NOTE: MPI Division Numbers are in accordance with MPI designated divisions and also follow the CSI MasterFormat. MPI number designations are from MPI Product List.
****

****
NOTE: These paint tables largely include MPI designated coating systems and materials. The specifier may find the the Master Painters Institute (MPI) Architectural Painting Specification resources helpful when specifying paint systems for the multiple architectural substrates (both interior and exterior). Note that not all coatings and systems

available in MPI are included in this specification. In the event of conflicts between MPI resources and these tables, use the paint materials specified in this table.

When using the MPI resources, such as the MPI Decision Tree, MPI designates systems for "Normal" or Aggressive" service and identifies the coating performance level which the specifier may find helpful when selecting from coating system options. When using the MPI resources, select "Normal" for locations defined as noncorrosive and select "Aggressive" for corrosive locations.

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NOTE: Where available, select more durable coatings for projects located in corrosive environments and humid locations. Some of the coating systems for substrates listed in this table are explicitly for aggressive environments. Corrosive locations are defined in UFC 1-200-01, section titled "Corrosion Prone Locations". For exterior painting of metallic surfaces, corrosive locations include project locations with Environmental Severity Classifications (ESC) of C3 thru C5, or humid locations. For exterior painting of nonmetallic surfaces, corrosive locations are project locations with ESC of C4 and C5, or humid locations. Humid locations are those in ASHRAE climate zones 0A, 1A, 2A, 3A, 3C, 4C and 5C (as identified in ASHRAE 90.1). Corrosive locations also includes marine, chemical, or immersion service as well as application of heat resistant or nonslip floor coatings. Interior high humidity areas such as bathrooms, locker rooms, laundry rooms, pools, and trainers are also considered as corrosive locations and require more durable coatings.

****

All DFT's are minimum values.[Use only materials with a MPI GPS-1-14 green check mark having a minimum MPI "Environmentally Friendly" [E1] [E2] [E3] rating based on VOC (EPA Method 24) content levels.] Acceptable products are listed in the MPI Green Approved Products List, available at http://www.specifygreen.com/APL/ProductIdxByMPInum.asp.

****

NOTE: Eliminate paint systems and gloss levels from the paint tables below that are not to be used for this project.

****

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NOTE: As guidance in selection of coating systems in the Paint Tables, VOC compliant materials may be selected, based on:

1. Regional air quality regulations for the site location,

2. The applicable rule, and

3. Any specialty or exemption category.

Environmentally acceptable coatings may be further ensured by avoiding hazardous materials and including, as a minimum, requirements in purchase order or bill of materials to prohibit coatings containing materials listed in paragraph entitled "Environmental Protection." ACGIH A1 confirmed human carcinogens include asbestos, benzene, chromates, and coal tar. ACGIH A2 suspected human carcinogens include cadmium and certain chromates. Specify new galvanized steel, in appropriate section, to be without hexavalent chromium stain inhibitors.

Where only topcoating for cosmetic purposes is required, select a compatible topcoat that hides substrate. There are proposed rules limiting VOC content in states other than California. These rules are for architectural and industrial maintenance paints and coatings. Check local and State regulations concerning allowable VOC limits. The most stringent govern.

Water-based paints and acrylic latex paints are lower in VOCs than solvent-based paints. Water-based paints are generally safer to handle and can be cleaned up with water, reducing health risks to workers and minimizing or avoiding hazardous waste.

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NOTE: Gloss levels are defined by MPI as follows:

Gloss Level	Description	Units at 60 degrees	Units at 80 degrees
G1	Matte or Flat	0 to 5	10 max
G2	Velvet	0 to 10	10 to 35
G3	Eggshell	10 to 25	10 to 35
G4	Satin	20 to 35	35 min
G5	Semi-Gloss	35 to 70	
G6	Gloss	70 to 85	
G7	High Gloss		

****

****
NOTE: The following paragraphs / Tables are tailored for inclusion in projects with exterior painting.
****

3.15.1 Exterior Paint Tables

****
NOTE: MPI paints No. 10 and No. 11 are mildew resistant paints. Specify these paints in the Tables for MPI Divisions 3, 4, 5, 6, 9, and 10 in high humidity locations or project locations with Environmental Severity Classifications (ESC) of C4 and C5. Humid locations are those in ASHRAE climate zones 0A, 1A, 2A, 3A, 4C and 5C (as identified in ASHRAE 90.1).
****

****
NOTE: Edit following tables as needed based on the scope of the project. Use lower gloss levels in non-contact areas such as ceilings. Use higher gloss levels where ease of cleanliness or impact and abrasion resistance are critical such as barrack walls and floors.
****

3.15.1.1 MPI Division 3: Exterior Concrete Paint Table

****
NOTE: MPI DIVISION 3: Exterior Concrete Paint Table. For applications of high-build glaze finishes over concrete masonry units requiring block filler that meets resistance to wind-driven rain or resistance to hydrostatic pressure, specify filler materials and applications of Section 09 96 59 HIGH-BUILD GLAZE COATINGS.

Color: The main reason for painting concrete and stucco is to obtain desired color. Before specifying paint systems, coordinate with other specification sections to confirm that concrete does not have special waterproof finish or applied, colored cementitious finish and that stucco does not have color pigment integral with mix.
****

A. Concrete; Vertical Surfaces, Undersides of Balconies and Soffits

(1) [New and uncoated existing][and][Existing, previously painted] concrete; vertical surfaces, including undersides of balconies and soffits but excluding tops of slabs

Latex					
New and uncoated existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI EXT 3.1A-G1 (Flat)	MPI REX 3.1A-G1 (Flat)	MPI 3	MPI 10	MPI 10	88 microns 3.5 mils
MPI EXT 3.1A-G2 (Velvet)	MPI REX 3.1A-G2 (Velvet)	MPI 3	MPI 214	MPI 214	88 microns 3.5 mils
MPI EXT 3.1A-G5 (Semigloss)	MPI REX 3.1A-G5 (Semigloss)	MPI 3	MPI 11	MPI 11	88 microns 3.5 mils
MPI EXT 3.1A-G6 (Gloss)	MPI REX 3.1A-G6 (Gloss)	MPI 3	MPI 119	MPI 119	88 microns 3.5 mils
Primer as recommended by manufacturer. Topcoat: Coating to match adjacent surfaces.					

(2) [New and uncoated existing][and][Existing, previously painted] concrete, textured system; vertical surfaces, including undersides of balconies and soffits but excluding tops of slabs

****

NOTE: Use MPI 10, MPI 11, or MPI 119 on new cast-in-place concrete walls. Use MPI 42, for accent panels, special effect, or ceilings.

****

Latex Aggregate					
New and uncoated existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI EXT 3.1B-G2 (Flat)	MPI REX 3.1A-G1 (Flat)	MPI 42	MPI 10	MPI 10	N/A
MPI EXT 3.1B-G5 (Semigloss)	MPI REX 3.1A-G5 (Semigloss)	MPI 42	MPI 11	MPI 11	N/A
MPI EXT 3.1B-G6 (Gloss)	MPI REX 3.1A-G6 (Gloss)	MPI 42	MPI 119	MPI 119	N/A
Texture - [Fine] [Medium] [Coarse]. Surface preparation and number of coats in accordance with manufacturer's instructions. Topcoat: Coating to match adjacent surfaces.					

(3) [New and uncoated existing][and][Existing, previously painted] concrete, elastomeric system; vertical surfaces, including undersides of balconies and soffits but excluding tops of slabs

****

NOTE: Use MPI 10, MPI 11, or MPI 119 on new cast-in-place concrete walls. Use MPI 42, for accent panels, special effect, or ceilings.

****

Elastomeric Coating					
New and uncoated existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI EXT 3.1F-G1 (Flat)	MPI REX 3.1F-G1 (Flat)	Per Manufacturer	MPI 113	MPI 113	400 microns 16 mils
MPI EXT 3.1F-G2/3 (Velvet)	MPI REX 3.1F-G2/3 (Velvet)	Per Manufacturer	MPI 38	MPI 38	400 microns 16 mils
Primer as recommended by manufacturer. Topcoat: Coating to match adjacent surfaces. Surface preparation and number of coats in accordance with manufacturer's instructions. NOTE: Apply sufficient coats to achieve a minimum dry film thickness of 400 microns 16 mils.					

B. Concrete; Swimming Pools

****

NOTE: If a project includes swimming pools, consult with a knowledgeable expert to select an appropriate coating. Identify the coating type, surface preparation, and thickness in this paint schedule. Chlorinated rubber coatings are common choices but due to their high VOC content may not be locally available.

****

(1) [New and uncoated existing][and][Existing, previously painted] concrete: Walls and bottom of swimming pools

Swimming Pool Paint					
New and uncoated existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
Per Manufacturer	Per Manufacturer	Per Manufacturer	Per Manufacturer	Per Manufacturer	Per Manufacturer
Primer as recommended by manufacturer. Surface preparation and number of coats in accordance with manufacturer's instructions.					

C. Cementitious Composition Board

(1) [New][and][Existing] Cementitious composition board (including Asbestos cement board)

Latex					
New and uncoated existing	Existing	Primer	Intermediate	Topcoat	System DFT
MPI EXT 3.3A-G1 (Flat)	MPI REX 3.3A-G1 (Flat)	MPI 10	MPI 10	MPI 10	N/A
MPI EXT 3.3A-G5 (Semigloss)	MPI REX 3.3A-G5 (Semigloss)	MPI 11	MPI 11	MPI 11	N/A
MPI EXT 3.3A -G6 (Gloss)	MPI REX 3.3A-G6 (Gloss)	MPI 119	MPI 119	MPI 119	N/A
Topcoat: Coating to match adjacent surfaces.					

3.15.1.2 MPI Division 4: Exterior Concrete Masonry Units Paint Table

****

NOTE: MPI Division 4: Exterior Concrete Masonry Units Paint Table. For applications of high-build glaze finishes over concrete masonry units requiring block filler that meets resistance to wind-driven rain or resistance to hydrostatic pressure, specify filler materials and applications of Section 09 96 59 HIGH-BUILD GLAZE COATINGS.

Color: The main reason for painting concrete masonry is to obtain desired color. Before specifying paint systems, coordinate with other specification sections to confirm that concrete masonry does not have special waterproof finish or applied, colored cementitious finish and that it does not have color pigment integral with mix.

****

A. [New][and][Existing] concrete masonry on uncoated surface

Latex						
New	Existing	Block Filler	Primer	Intermediate	Topcoat	System DFT
MPI EXT 4.2A-G1 (Flat)	MPI REX 4.2A-G1 (Flat)	MPI 4	N/A	MPI 10	MPI 10	275 microns11 mils
MPI EXT 4.2A-G5 (Semigloss)	MPI REX 4.2A-G5 (Semigloss)	MPI 4	N/A	MPI 11	MPI 11	275 microns11 mils
MPI EXT 4.2A-G6 (Gloss)	MPI REX 4.2A-G6 (Gloss)	MPI 4	N/A	MPI 119	MPI 119	275 microns 11 mils
Topcoat: Coating to match adjacent surfaces.						

B. [New][and][Existing] concrete masonry, textured system; on uncoated surface

Latex Aggregate					
New	Existing	Primer	Intermediate	Topcoat	System DFT
MPI EXT 4.2B-G1 (Flat)	MPI REX 3.1A-G1 (Flat)	MPI 42	MPI 42	MPI 10	N/A
MPI EXT 4.2B-G5 (Semigloss)	MPI REX 3.1A-G5 (Semigloss)	MPI 42	MPI 42	MPI 11	N/A
MPI EXT 4.2B-G6 (Gloss)	MPI REX 3.1A-G6 (Gloss)	MPI 42	MPI 42	MPI 119	N/A
Texture - [Fine] [Medium] [Coarse]. Surface preparation and number of coats in accordance with manufacturer's instructions. Topcoat: Coating to match adjacent surfaces.					

C. [New][and][Existing] concrete masonry, elastomeric system; on uncoated surfaces

Elastomeric Coating					
New and uncoated existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI EXT 3.1F-G1 (Flat)	MPI REX 3.1F-G1 (Flat)	Per Manufacturer	MPI 113	MPI 113	400 microns 16 mils
Primer as recommended by manufacturer. Topcoat: Coating to match adjacent surfaces. Surface preparation and number of coats in accordance with manufacturer's instructions. NOTE: Apply sufficient coats of MPI 113 to achieve a minimum dry film thickness of 400 microns 16 mils.					

3.15.1.3 MPI Division 5: Exterior Metal, Ferrous and Non-Ferrous Paint Table

A. Steel / Ferrous Surfaces

(1) New Steel that has been hand or power tool cleaned to SSPC SP 2 or SSPC SP 3

Alkyd					
New	Existing, uncoated	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.1Q-G5 (Semigloss	MPI REX 5.1D-G5 (Semigloss)	MPI 23	MPI 94	MPI 94	131 microns 5.25 mils

MPI EXT 5.1Q-G6 (Gloss)	MPI REX 5.1D-G6 (Gloss)	MPI 23	MPI 9	MPI 9	131 microns 5.25 mils
Topcoat: Coating to match adjacent surfaces.					

(2) New Steel that has been blast-cleaned to SSPC SP 6/NACE No.3

Alkyd					
New	Existing, uncoated	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.1D-G5 (Semigloss)	MPI REX 5.1D-G5 (Semigloss)	MPI 79	MPI 94	MPI 94	131 microns 5.25 mils
MPI EXT 5.1D-G6 (Gloss)	MPI REX 5.1D-G6 (Gloss)	MPI 79	MPI 9	MPI 9	131 microns 5.25 mils
Topcoat: Coating to match adjacent surfaces.					

(3) Existing steel that has been spot-blasted to SSPC SP 6/NACE No.3

****

NOTE: Use MPI 72 in severe environments for a durable, glossy appearance. Use latex systems where MPI 20, MPI 101, or MPI 108 is not allowed. MPI 72, urethane is allowed in California. For selection of top coats, use the first bracketed option for geographic areas that do not have harsh environmental conditions. Use the second bracketed option for areas that have harsh corrosive environments.

****

(a) Surface previously coated with alkyd or latex

Waterborne Light Industrial Coating				
Existing, previously coated with alkyd or latex	Primer	Intermediate	Topcoat	System DFT
MPI REX 5.1C-G5 (Semigloss)	MPI 79	MPI 163	MPI 163	125 microns5 mils
MPI REX 5.1C-G6 (Gloss)	MPI 79	MPI 164	MPI 164	125 microns5 mils
Topcoat: Coating to match adjacent surfaces.				

(b) Surfaces previously coated with epoxy

Waterborne Light Industrial Coating				
Existing, previously coated with epoxy	Primer	Intermediate	Topcoat	System DFT
MPI REX 5.1L-G5 (Semigloss)	MPI 101	MPI 163	MPI 163	125 microns5 mils
MPI REX 5.1L-G6 (Gloss)	MPI 101	MPI 164	MPI 164	125 microns5 mils
Topcoat: Coating to match adjacent surfaces.				

Pigmented Polyurethane				
Existing, previously coated with epoxy	Primer	Intermediate	Topcoat	System DFT
MPI REX 5.1H-G6 (Gloss)	MPI 101	MPI 108	MPI 72	212 microns8.5 mils
Topcoat: Coating to match adjacent surfaces.				

(4) New [and existing] steel blast cleaned to SSPC SP 10/NACE No. 2

Waterborne Light Industrial					
New	Existing	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.1R-G5 (Semigloss)	MPI EXT 5.1R-G5 (Semigloss)	MPI 101	MPI 108	MPI 163	212 microns 8.5 mils
MPI EXT 5.1R-G6 (Gloss)	MPI EXT 5.1R-G6 (Gloss)	MPI 101	MPI 108	MPI 164	212 microns 8.5 mils
Topcoat: Coating to match adjacent surfaces.					

Pigmented Polyurethane					
New	Existing	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.1J-G6 (Gloss)	MPI EXT 5.1J-G6 (Gloss)	MPI 101	MPI 108	MPI 72	212 microns 8.5 mils

Topcoat: Coating to match adjacent surfaces.

(5) Metal floors (non-shop-primed surfaces or non-slip deck surfaces) with non-skid additive (NSA), load at manufacturer's recommendations

Epoxy					
New	Existing	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.1S-G5 (Semi Gloss)	MPI EXT 5.1S-G5 (Semi Gloss)	MPI 120	MPI 177	MPI 177	131 microns 5.25 mils
MPI EXT 5.1S-G6 (Gloss)	MPI EXT 5.1S-G6 (Gloss)	MPI 120	MPI 77	MPI 77	131 microns 5.25 mils
Topcoat: Coating to match adjacent surfaces. Load Non-Skid Additive at manufacturer's recommendations.					

B. Exterior Galvanized Surfaces

(1) New Galvanized surfaces

****

NOTE:For overcoating existing alkyd, latex or epoxy systems refer to Evaluation Section of MPI Repaint Manual.

In the first option, select appropriate top coat. Use first top coat option for geographic areas that do not have harsh environmental conditions. Use the second top coat option for areas that have harsh, corrosive environments.

****

Waterborne Primer / Latex				
New Galvanized Surfaces	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.3H-G1 (Flat)	MPI 134	MPI 10	MPI 10	112 microns4.5 mils
EXT 5.3H-G5 (Semigloss)	MPI 134	MPI 11	MPI 11	112 microns4.5 mils
MPI EXT 5.3H-G6 (Gloss)	MPI 134	MPI 119	MPI 119	112 microns4.5 mils
Topcoat: Coating to match adjacent surfaces.				

Waterborne Primer / Waterborne Light Industrial Coating				
New Galvanized Surfaces	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.3J-G5 (Semigloss)	MPI 134	MPI 163	MPI 163	112 microns4.5 mils
MPI EXT 5.3J-G6 (Gloss)	MPI 134	MPI 164	MPI 164	112 microns4.5 mils
Topcoat: Coating to match adjacent surfaces.				

Epoxy Primer / Waterborne Light Industrial Coating				
New Galvanized Surfaces	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.3K-G5 (Semigloss)	MPI 101	MPI 163	MPI 163	125 microns5 mils
MPI EXT 5.3K-G6 (Gloss)	MPI 101	MPI 164	MPI 164	125 microns5 mils
Topcoat: Coating to match adjacent surfaces.				

Pigmented Polyurethane				
New Galvanized Surfaces	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.3L-G6 (Gloss)	MPI 101	N/A	MPI 72	125 microns5 mils
Topcoat: Coating to match adjacent surfaces.				

(2) Galvanized surfaces with slight coating deterioration; little or no rusting

****

NOTE: For overcoating existing alkyd, latex or epoxy systems refer to Evaluation Section of MPI Repaint Manual.

****

Waterborne Light Industrial Coating				
Galvanized Surfaces with slight coating deterioration	Primer	Intermediate	Topcoat	System DFT

MPI REX 5.3J-G5 (Semigloss)	MPI 134	N/A	MPI 163	112 microns4.5 mils
Topcoat: Coating to match adjacent surfaces.				

Pigmented Polyurethane				
Galvanized Surfaces with slight coating deterioration	Primer	Intermediate	Topcoat	System DFT
MPI REX 5.3D-G6 (Gloss)	MPI 101	N/A	MPI 72	125 microns5 mils
Topcoat: Coating to match adjacent surfaces.				

(3) Galvanized surfaces with severely deteriorated coating or rusting

Waterborne Light Industrial Coating				
Galvanized surfaces with severely deteriorated coating or rusting	Primer	Intermediate	Topcoat	System DFT
MPI REX 5.3L-G5(Semigloss)	MPI 101	MPI 108	MPI 163	212 microns8.5 mils
MPI REX 5.3L-G6(Gloss)	MPI 101	MPI 108	MPI 164	212 microns8.5 mils
Topcoat: Coating to match adjacent surfaces.				

Pigmented Polyurethane				
Galvanized surfaces with severely deteriorated coating or rusting	Primer	Intermediate	Topcoat	System DFT
MPI REX 5.3D-G6(Gloss)	MPI 101	MPI 72	MPI 72	125 microns5 mils
Topcoat: Coating to match adjacent surfaces.				

C. Exterior Surfaces, Other Metals (Non-Ferrous)

(1) Aluminum, aluminum alloy and other miscellaneous non-ferrous metal items not otherwise specified except hot metal surfaces, roof surfaces, and new prefinished equipment

Alkyd				
New Galvanized Surfaces	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.4F-G1 (Flat	MPI 95	MPI 8	MPI 8	125 microns5 mils
MPI EXT 5.4F-G5 (Semigloss)	MPI 95	MPI 94	MPI 94	125 microns5 mils
MPI EXT 5.4F-G6 (Gloss)	MPI 95	MPI 9	MPI 9	125 microns5 mils
Topcoat: Coating to match adjacent surfaces.				

Waterborne Light Industrial Coating				
New Galvanized Surfaces	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.4F-G1 (Flat	MPI 95	MPI 161	MPI 161	125 microns5 mils
MPI EXT 5.4F-G5 (Semigloss)	MPI 95	MPI 163	MPI 163	125 microns5 mils
MPI EXT 5.4F-G6 (Gloss)	MPI 95	MPI 164	MPI 164	125 microns5 mils
Topcoat: Coating to match adjacent surfaces.				

(2) Existing roof surfaces previously coated

Aluminum Pigmented Asphalt Roof Coating				
Existing roof surfaces previously coated	N/A	Intermediate	Topcoat	System DFT
Non-MPI System	ASTM D2824/D2824	N/A	N/A	200 microns8 mils

Sufficient coats to provide not less than 200 microns 8 mils of finished coating system (without asbestos fibers).

Aluminum Paint				
Existing roof surfaces previously coated	Primer	Intermediate	Topcoat	System DFT
MPI REX 10.2D	MPI 107	MPI 1	MPI 1	88 microns3.5 mils
Topcoat: Coating to match adjacent surfaces.				

(3) Surfaces adjacent to painted surfaces; [Mechanical,] [Electrical,] [Fire extinguishing sprinkler systems including valves, conduit, hangers, supports,][exposed copper piping,] [and miscellaneous metal items] not otherwise specified except floors, hot metal surfaces, and new prefinished equipment

Alkyd				
New	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.1D-G1 (Flat)	MPI 79	MPI 8	MPI 8	131 microns5.25 mils
MPI EXT 5.1D-G5 (Semigloss)	MPI 79	MPI 94	MPI 94	131 microns5.25 mils
MPI EXT 5.1D-G6 (Gloss)	MPI 79	MPI 9	MPI 9	131 microns5.25 mils
Topcoat: Coating to match adjacent surfaces.				

Waterborne Light Industrial Coating				
New	Primer	Intermediate	Topcoat	System DFT
MPI EXT 5.1C-G3(Eggshell)	MPI 79	MPI 161	MPI 161	125 microns5 mils
MPI EXT 5.1C-G5(Semigloss)	MPI 79	MPI 163	MPI 163	125 microns5 mils
MPI EXT 5.1C-G6(Gloss)	MPI 79	MPI 164	MPI 164	125 microns5 mils
Primer as recommended by manufacturer. Topcoat: Coating to match adjacent surfaces.				

D. Exterior Hot Surfaces

(1) Hot metal surfaces [including smokestacks] subject to temperatures up to 205 degrees C 400 degrees F

****

NOTE: Heat Resistant Paints may require a high heat cure cycle to achieve proper cure. Determine curing requirements before specifying so that the supplier will be aware of requirements.

Consider hot dip galvanizing, aluminum metallizing, and zinc metallizing alternatives to the specified coating systems.

****

Heat Resistant Enamel				
New	N/A	Intermediate	Topcoat	System DFT
MPI EXT 5.2A	MPI 21	N/A	N/A	Per Manufacturer
Surface preparation and number of coats per manufacturer's instructions.				

(2) Ferrous metal subject to high temperature, up to 400 degrees C 750 degrees F

****

NOTE: Heat Resistant Paints may require a high heat cure cycle to achieve proper cure. Determine curing requirements before specifying so that the supplier will be aware of requirements.

Consider hot dip galvanizing, aluminum metallizing, and zinc metallizing alternatives to the specified coating systems.

****

Inorganic Zinc Rich Coating				
New	N/A	Intermediate	Topcoat	System DFT
MPI EXT 5.2C	MPI 19	N/A	N/A	Per Manufacturer
Surface preparation and number of coats per manufacturer's instructions.				

Heat Resistant Aluminum Enamel				
New	N/A	Intermediate	Topcoat	System DFT

MPI EXT 5.2B	MPI 2	N/A	N/A	Per Manufacturer
Surface preparation and number of coats per manufacturer's instructions.				

(3) [New surfaces][and][Existing surfaces] made bare subject to temperatures up to 593 degrees C 1100 degrees F

****

NOTE: Heat Resistant Paints may require a high heat cure cycle to achieve proper cure. Determine curing requirements before specifying so that the supplier will be aware of requirements.

Consider aluminum metallizing alternative to the specified coating system.

****

(1) [New surfaces][and][Existing surfaces] made bare cleaning to SSPC SP 10/NACE No. 2 subject to temperatures up to 593 degrees C 1100 degrees F

Heat Resistant Coating					
New	Existing	N/A	Intermediate	Topcoat	System DFT
MPI EXT 5.2D	MPI REX 5.2D	MPI 22	N/A	N/A	Per Manufacturer
Surface preparation and number of coats per manufacturer's instructions.					

3.15.1.4 MPI Division 6: Exterior Wood; Dressed Lumber, Paneling, Decking, Shingles Paint Table

A. New [and Existing, uncoated] Dressed lumber, Wood and plywood, trim, [including top, bottom and edges of doors] not otherwise specified

Alkyd					
New	Existing, uncoated	Primer	Intermediate	Topcoat	System DFT
MPI EXT 6.3B-G5 (Semigloss)	MPI EXT 6.3B-G5 (Semigloss)	MPI 5	MPI 94	MPI 94	125 microns 5 mils
MPI EXT 6.3B-G6 (Gloss)	MPI EXT 6.3B-G6 (Gloss)	MPI 5	MPI 9	MPI 9	125 microns 5 mils
Topcoat: Coating to match adjacent surfaces.					

Latex

New	Existing, uncoated	Primer	Intermediate	Topcoat	System DFT
MPI EXT 6.3A-G1 (Flat)	MPI EXT 6.3A-G1 (Flat)	MPI 5	MPI 10	MPI 10	125 microns5 mils
MPI EXT 6.3A-G5 (Semigloss)	MPI EXT 6.3B-G5 (Semigloss)	MPI 5	MPI 11	MPI 11	125 microns5 mils
MPI EXT 6.3A-G6 (Gloss)	MPI EXT 6.3B-G6 (Gloss)	MPI 5	MPI 119	MPI 119	125 microns5 mils
Topcoat: Coating to match adjacent surfaces.					

Waterborne Solid Color Stain					
New	Existing, uncoated	Primer	Intermediate	Topcoat	System DFT
MPI EXT 6.3K	MPI EXT 6.3K	MPI 5	MPI 16	MPI 16	106 microns 4.25 mils
Topcoat: Coating to match adjacent surfaces.					

B. Existing, dressed lumber, Wood and plywood, trim, [including top, bottom and edges of doors] previously coated with an alkyd / oil based finish coat not otherwise specified

Alkyd				
Existing, previously coated	Primer	Intermediate	Topcoat	System DFT
MPI REX 6.3B-G5 (Semigloss)	MPI 5	MPI 94	MPI 94	125 microns5 mils
MPI REX 6.3B-G6 (Gloss)	MPI 5	MPI 9	MPI 9	125 microns5 mils

Latex				
Existing, previously coated	Primer	Intermediate	Topcoat	System DFT
MPI REX 6.3A-G1 (Flat)	MPI 5	MPI 10	MPI 10	125 microns5 mils
MPI REX 6.3B-G5 (Semigloss)	MPI 5	MPI 11	MPI 11	125 microns5 mils
MPI REX 6.3B-G6 (Gloss)	MPI 5	MPI 119	MPI 119	125 microns5 mils

C. Existing, dressed lumber, Wood and plywood, trim, [including top, bottom and edges of doors] previously coated with a latex / waterborne finish coat not otherwise specified

Latex				
Existing, previously coated	Primer	Intermediate	Topcoat	System DFT
MPI REX 6.3L-G1 (Flat)	MPI 6	MPI 10	MPI 10	112 microns4.5 mils
MPI REX 6.3L-G5 (Semigloss)	MPI 6	MPI 11	MPI 11	112 microns4.5 mils
MPI REX 6.3L-G6 (Gloss)	MPI 6	MPI 119	MPI 119	112 microns4.5 mils
Topcoat: Coating to match adjacent surfaces.				

Waterborne Solid Color Stain				
Existing, previously coated	Primer	Intermediate	Topcoat	System DFT
MPI EXT 6.3K	MPI 6	MPI 16	MPI 16	100 microns 4 mils
Topcoat: Coating to match adjacent surfaces.				

D. Wood Siding

(1) New, Uncoated wood siding

Semi-Transparent Stain				
New	Primer	Intermediate	Topcoat	System DFT
MPI EXT 6.3D	N/A	MPI 13	MPI 13	N/A
Topcoat: Coating to match adjacent surfaces.				

(2) Existing, previously stained wood siding

Latex				
Existing, previously stained	Primer	Intermediate	Topcoat	System DFT
MPI REX 6.2K-G1 (Flat)	MPI 5	MPI 10	MPI 10	112 microns4.5 mils
MPI REX 6.2K-G5 (Semigloss)	MPI 5	MPI 11	MPI 11	112 microns4.5 mils
Topcoat: Coating to match adjacent surfaces.				

(3) Existing Uncoated or previously semitransparent stained wood siding

Semi-Transparent Stain				
Existing	Primer	Intermediate	Topcoat	System DFT
MPI REX 6.3D	N/A	MPI 13	MPI 13	Per Manufacturer
Topcoat: Coating to match adjacent surfaces.				

E. Wood: [Steps,] [platforms,] [floors of open porches,] and [_____] [with non-skid additive (NSA), load at manufacturer's recommendations.]

Latex Floor Paint				
New	Primer	Intermediate	Topcoat	System DFT
MPI EXT 6.5A-G2 (Flat)	MPI 5	MPI 60 [plus NSA]	MPI 60 [plus NSA]	112 microns4.5 mils
MPI EXT 6.5A-G6 (Gloss)	MPI 5	MPI 68 [plus NSA]	MPI 68 [plus NSA]	112 microns4.5 mils
Topcoat: Coating to match adjacent surfaces. Load non-skid additive (NSA) at manufacturer's recommendations.				

Alkyd Floor Paint				
New	Primer	Intermediate	Topcoat	System DFT
MPI EXT 6.5B-G2 (Flat)	MPI 59	MPI 59 [plus NSA]	MPI 59 [plus NSA]	125 microns5 mils
MPI EXT 6.5B-G6 (Gloss)	MPI 27	MPI 27 [plus NSA]	MPI 27 [plus NSA]	125 microns5 mils
Topcoat: Coating to match adjacent surfaces. Load non-skid additive (NSA) at manufacturer's recommendations.				

3.15.1.5 MPI Division 9: Exterior Stucco Paint Table

****
NOTE: (MPI DIVISION 9: EXTERIOR STUCCO PAINT TABLE)

Color: The main reason for painting stucco is to obtain desired color. Before specifying paint systems, coordinate with other specification sections to confirm that stucco does not have special waterproof finish or applied, colored cementitious finish and that stucco does not have color pigment integral with mix.
****

A. [New][and Existing] stucco

Latex					
New	Existing	Primer	Intermediate	Topcoat	System DFT
MPI EXT 9.1A-G1 (Flat)	MPI REX 9.1A-G2 (Flat	MPI 10	MPI 10	MPI 10	112 microns 4.5 mils
MPI EXT 9.1A-G5 (Semigloss)	MPI REX 9.1A-G5 (Semigloss)	MPI 11	MPI 11	MPI 11	112 microns 4.5 mils
MPI EXT 9.1A-G6 (Gloss)	MPI REX 9.1A-G6 (Gloss)	MPI 119	MPI 119	MPI 119	112 microns 4.5 mils
Primer as recommended by manufacturer. Topcoat: Coating to match adjacent surfaces. On existing stucco, apply primer based on surface condition.					

B. [New][and][Existing] stucco, elastomeric system

Elastomeric Coating					
New	Existing	Primer	Intermediate	Topcoat	System DFT
MPI EXT 9.1C-G1 (Flat)	MPI REX 9.1C-G1 (Flat)	N/A	MPI 113	MPI 113	400 microns 16 mils
Primer as recommended by manufacturer. Topcoat: Coating to match adjacent surfaces. Surface preparation and number of coats in accordance with manufacturer's instructions Apply sufficient coats of MPI 113 to achieve a minimum dry film thickness of 400 microns 16 mils.					

3.15.1.6 MPI Division 10: Exterior Cloth Coverings and Bituminous Coated Surfaces Paint Table

A. Insulation and surfaces of insulation coverings (canvas, cloth, paper): (Interior and Exterior Applications)

Latex				
New	Primer	Intermediate	Topcoat	System DFT
MPI EXT 10.1A-G1 (Flat)	N/A	MPI 10	MPI 10	80 microns3.2 mils
MPI EXT 10.1A-G5 (Semigloss)	N/A	MPI 11	MPI 11	80 microns3.2 mils
MPI EXT 10.1A-G6 (Gloss)	N/A	MPI 119	MPI 119	80 microns3.2 mils
Topcoat: Coating to match adjacent surfaces.				

3.15.2 Interior Paint Tables

****
NOTE: The following Tables / paragraphs are tailored for inclusion in projects with interior painting.
****

****
NOTE: Consider latex paint options for occupied buildings and where strong odors would be objectionable. Where allowable, consider eggshell or semigloss enamel in lieu of flat paint for areas subject to soiling where gloss is not desired.

For existing surfaces with alkyd enamel coating, do not specify latex paint which does not bond well to enamel.
****

****
NOTE: MPI paint No. 54 is mildew resistant paint. Specify this paint in the Tables for MPI Division 3 and 5 in high humidity locations or project locations with Environmental Severity Classifications (ESC) of C4 and C5. Humid locations are those in ASHRAE climate zones 0A, 1A, 2A, 3A, 4C and 5C (as identified in ASHRAE 90.1).
****

3.15.2.1 MPI Division 3: Interior Concrete Paint Table

A. [New and uncoated existing][and Existing, previously painted] Concrete, vertical surfaces, not specified otherwise

Latex					
New, uncoated Existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 3.1A-G2 (Flat)	MPI RIN 3.1A-G2 (Flat)	MPI 3	MPI 44	MPI 44	100 microns4 mils
MPI INT 3.1A-G3 (Eggshell)	MPI RIN 3.1A-G3 (Eggshell)	MPI 3	MPI 52	MPI 52	100 microns4 mils
MPI INT 3.1A-G5	MPI RIN 3.1A-G5 (Semigloss)	MPI 3	MPI 54	MPI 54	100 microns4 mils
Topcoat: Coating to match adjacent surfaces.					

High Performance Architectural Latex

New, uncoated Existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 3.1C-G2 (Flat)	MPI RIN 3.1J-G2 (Flat)	MPI 3	MPI 138	MPI 138	100 microns4 mils
MPI INT 3.1C-G3 (Eggshell)	MPI RIN 3.1J-G3 (Eggshell)	MPI 3	MPI 139	MPI 139	100 microns4 mils
MPI INT 3.1C-G4 (satin)	MPI RIN 3.1J-G4	MPI 3	MPI 140	MPI 140	100 microns4 mils
MPI INT 3.1C-G5 (Semigloss)	MPI RIN 3.1J-G5 (Semigloss)	MPI 3	MPI 141	MPI 141	100 microns4 mils
Topcoat: Coating to match adjacent surfaces.					

Institutional Low Odor / Low VOC Latex					
New, uncoated Existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 3.1M-G2 (Flat)	MPI RIN 3.1L-G2 (Flat)	MPI 149	MPI 144	MPI 144	100 microns4 mils
MPI INT 3.1M-G3 (Eggshell)	MPI RIN 3.1L-G3 (Eggshell)	MPI 149	MPI 145	MPI 145	100 microns4 mils
MPI INT 3.1M-G4 (satin)	MPI RIN 3.1L-G4	MPI 149	MPI 146	MPI 146	100 microns4 mils
MPI INT 3.1M-G5 (Semigloss)	MPI RIN 3.1L-G5 (Semigloss)	MPI 149	MPI 147	MPI 147	100 microns4 mils
Topcoat: Coating to match adjacent surfaces.					

B. Concrete Ceilings, Uncoated

****

NOTE: For hiding imperfections in new concrete ceilings. Do not specify in wet or humid areas or for previously painted surfaces.

****

Latex Aggregate				
New, uncoated	Primer	Intermediate	Topcoat	System DFT
MPI INT 3.1N-G1 (Flat)	N/A	N/A	MPI 42	Per Manufacturer

Texture - [Fine] [Medium] [Coarse].
Surface preparation, number of coats, and primer in accordance with manufacturer's instructions.
Topcoat: Coating to match adjacent surfaces.

C. [New and uncoated existing][and][Existing, previously painted] Concrete in [toilets,] [food-preparation,] [food-serving,] [restrooms,] [laundry areas,] [shower areas,] [areas requiring a high degree of sanitation,] [_____] [and other high-humidity areas] not otherwise specified except floors

****
NOTE: List other high humidity areas requiring enamel finishes. For tile-like finishes, filler materials, and applications, refer to Section 09 96 59 HIGH-BUILD GLAZE COATINGS. These high performance coatings are normally used to meet exposure-resistant requirements and can be applied to wood, metal, and concrete substrates.
****

Waterborne Light Industrial Coating					
New, uncoated Existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 3.1L-G3(Eggshell)	MPI RIN 3.1C-G3(Eggshell)	MPI 3	MPI 151	MPI 151	120 microns 4.8 mils
MPI INT 3.1L-G5(Semigloss)	MPI RIN 3.1C-G5(Semigloss)	MPI 3	MPI 153	MPI 153	120 microns 4.8 mils
MPI INT 3.1L-G6(Gloss)	MPI RIN 3.1C-G6(Gloss)	MPI 3	MPI 154	MPI 154	120 microns 4.8 mils
Topcoat: Coating to match adjacent surfaces.					

Alkyd					
New, uncoated Existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 3.1D-G3 (Eggshell)	MPI RIN 3.1D-G3 (Eggshell)	MPI 3	MPI 51	MPI 51	112 microns 4.5 mils
MPI INT 3.1D-G5 (Semigloss)	MPI RIN 3.1D-G5 (Semigloss)	MPI 3	MPI 47	MPI 47	112 microns 4.5 mils
MPI INT 3.1D-G6 (Gloss)	MPI RIN 3.1D-G6 (Gloss)	MPI 3	MPI 48	MPI 48	112 microns 4.5 mils
Topcoat: Coating to match adjacent surfaces.					

Epoxy

New, uncoated Existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 3.1F-G6 (Gloss)	MPI RIN 3.1E-G6 (Gloss)	MPI 77	MPI 77	MPI 77	100 microns4 mils
Note: Primer may be reduced for penetration per manufacturer's instructions.					

D. [New and uncoated existing][and Existing, previously painted] concrete walls and bottom of swimming pools

****

NOTE: If a project includes swimming pools, consult with a knowledgeable expert to select an appropriate coating. Identify the coating type, surface preparation, and thickness in this paint schedule. Chlorinated rubber coatings are common choices but due to their high VOC content may not be locally available.

****

Chlorinated Rubber					
New and uncoated existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
Chlorinated Rubber	Per Manufacturer	Per Manufacturer	Per Manufacturer	Per Manufacturer	Per Manufacturer
Note: Primer may be reduced for penetration per manufacturer's instructions.					

Epoxy					
New, uncoated Existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 3.1F	MPI RIN 3.1E	MPI 77	MPI 77	MPI 77	100 microns4 mils
Note: Primer may be reduced for penetration per manufacturer's instructions.					

E. [New and uncoated existing][and Existing, previously painted] concrete floors in following areas [_____]

Latex Floor Paint

New, uncoated Existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 3.2A-G2 (Flat)	MPI RIN 3.2A-G2 (Flat)	MPI 60	MPI 60	MPI 60	125 microns5 mils

Alkyd Floor Paint					
New, uncoated Existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 3.2B-G2 (Flat)	MPI RIN 3.2B-G2 (Flat)	MPI 59	MPI 59	MPI 59	125 microns5 mils
Note: Primer may be reduced for penetration per manufacturer's instructions.					

Epoxy					
New, uncoated Existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 3.2C-G6 (Gloss)	MPI RIN 3.2C-G6 (Gloss)	MPI 77	MPI 77	MPI 77	125 microns5 mils
Note: Primer may be reduced for penetration per manufacturer's instructions.					

3.15.2.2 MPI Division 4: Interior Concrete Masonry Units Paint Table

****

NOTE: Use MPI 4 or MPI 116 block filler if smooth surface is required on CMU surfaces.

****

A. New[and uncoated Existing] Concrete Masonry

High Performance Architectural Latex					
New, uncoated Existing	Filler	Primer	Intermediate	Topcoat	System DFT
MPI INT 4.2D-G2 (Flat)	MPI 4	N/A	MPI 139	MPI 138	275 microns 11 mils
MPI INT 4.2D-G3 (Eggshell)	MPI 4	N/A	MPI 139	MPI 139	275 microns 11 mils
MPI INT 4.2D-G4 (Satin)	MPI 4	N/A	MPI 140	MPI 140	275 microns 11 mils
MPI INT 4.2D-G5 (Semigloss)	MPI 4	N/A	MPI 141	MPI 141	275 microns 11 mils

Fill all holes in masonry surface

Institutional Low Odor / Low VOC Latex					
New, uncoated Existing	Filler	Primer	Intermediate	Topcoat	System DFT
MPI INT 4.2E-G2 (Flat)	MPI 4	N/A	MPI 144	MPI 144	100 microns4 mils
MPI INT 4.2E-G3 (Eggshell)	MPI 4	N/A	MPI 145	MPI 145	100 microns4 mils
MPI INT 4.2E-G4 (Satin)	MPI 4	N/A	MPI 146	MPI 146	100 microns4 mils
MPI INT 4.2E-G5 (Semigloss)	MPI 4	N/A	MPI 147	MPI 147	100 microns4 mils
Fill all holes in masonry surface					

B. Existing, Previously Painted Concrete Masonry

High Performance Architectural Latex					
Existing, previously painted	Filler	Primer	Intermediate	Topcoat	System DFT
MPI RIN 4.2K-G2 (Flat)	N/A	MPI 138	MPI 138	MPI 138	112 microns 4.5 mils
MPI RIN 4.2K-G3 (Eggshell)	N/A	MPI 139	MPI 139	MPI 139	112 microns 4.5 mils
MPI RIN 4.2K-G4	N/A	MPI 140	MPI 140	MPI 140	112 microns 4.5 mils
MPI RIN 4.2K-G5 (Semigloss)	N/A	MPI 141	MPI 141	MPI 141	112 microns 4.5 mils

Institutional Low Odor / Low VOC Latex					
Existing, previously painted	Filler	Primer	Intermediate	Topcoat	System DFT
MPI RIN 4.2L-G2 (Flat)	N/A	MPI 144	MPI 144	MPI 144	100 microns4 mils
MPI RIN 4.2L-G3 (Eggshell)	N/A	MPI 145	MPI 145	MPI 145	100 microns4 mils

MPI RIN 4.2L-G4 (Satin)	N/A	MPI 146	MPI 146	MPI 146	100 microns4 mils
MPI RIN 4.2L-G5 (Semigloss)	N/A	MPI 147	MPI 147	MPI 147	100 microns4 mils

C. New[and uncoated Existing] Concrete masonry units in [toilets,] [food-preparation,] [food-serving,] [restrooms,] [laundry areas,] [shower areas,] [areas requiring a high degree of sanitation,] [_____,] [and other high humidity areas] unless otherwise specified

****

NOTE: List other high humidity areas requiring enamel finishes. For tile-like finishes, filler materials, and applications, refer to Section 09 96 59 HIGH-BUILD GLAZE COATINGS. These high performance coatings are normally used to meet exposure-resistant requirements and can be applied to wood, metal, and concrete substrates.

****

Waterborne Light Industrial Coating					
New, uncoated Existing	Filler	Primer	Intermediate	Topcoat	System DFT
MPI INT 4.2K-G3(Eggshell)	MPI 4	N/A	MPI 151	MPI 151	275 microns 11 mils
MPI INT 4.2K-G5(Semigloss)	MPI 4	N/A	MPI 153	MPI 153	275 microns 11 mils
MPI INT 4.2K-G6(Gloss)	MPI 4	N/A	MPI 154	MPI 154	275 microns 11 mils
Fill all holes in masonry surface					

Alkyd					
New, uncoated Existing	Filler	Primer	Intermediate	Topcoat	System DFT
MPI INT 4.2K-G3(Eggshell)	MPI 4	MPI 50	MPI 51	MPI 51	300 microns 12 mils
MPI INT 4.2K-G5(Semigloss)	MPI 4	MPI 50	MPI 47	MPI 47	300 microns 12 mils
MPI INT 4.2K-G6(Gloss)	MPI 4	MPI 50	MPI 48	MPI 48	300 microns 12 mils
Fill all holes in masonry surface					

Epoxy					
New, uncoated Existing	Filler	Primer	Intermediate	Topcoat	System DFT
MPI INT 4.2G-G6 (Gloss)	MPI 116	N/A	MPI 77	MPI 77	250 microns 10 mils
Fill all holes in masonry surface					

D. Existing, previously painted, concrete masonry units in [toilets,] [food-preparation,] [food-serving,] [restrooms,] [laundry areas,] [shower areas,] [areas requiring a high degree of sanitation,] [_____,] [and other high humidity areas] unless otherwise specified

Waterborne Light Industrial Coating					
Existing, previously painted	Filler	Primer	Intermediate	Topcoat	System DFT
MPI RIN 4.2G-G3(Eggshell)	N/A	MPI 151	MPI 151	MPI 151	112 microns 4.5 mils
MPI RIN 4.2G-G5(Semigloss)	N/A	MPI 153	MPI 153	MPI 153	112 microns 4.5 mils
MPI RIN 4.2G-G6(Gloss)	N/A	MPI 154	MPI 154	MPI 154	112 microns 4.5 mils

Alkyd					
Existing, previously painted	Filler	Primer	Intermediate	Topcoat	System DFT
MPI RIN 4.2C-G3 (Eggshell)	N/A	MPI 17	MPI 51	MPI 51	112 microns 4.5 mils
MPI RIN 4.2C-G5 (Semigloss)	N/A	MPI 17	MPI 47	MPI 47	112 microns 4.5 mils
MPI RIN 4.2C-G6 (Gloss)	N/A	MPI 17	MPI 48	MPI 48	112 microns 4.5 mils

Epoxy					
Existing, previously painted	Filler	Primer	Intermediate	Topcoat	System DFT
MPI RIN 4.2D-G6 (Gloss)	N/A	MPI 77	MPI 77	MPI 77	125 microns 5 mils

3.15.2.3 MPI Division 5: Interior Metal, Ferrous and Non-Ferrous Paint Table

A. Interior Steel / Ferrous Surfaces

(1) Metal,[Mechanical,][Electrical,][Fire extinguishing sprinkler systems including valves, conduit, hangers, supports,][Surfaces adjacent to painted surfaces (Match surrounding finish),][exposed copper piping,][and miscellaneous metal items] not otherwise specified except floors, hot metal surfaces, and new prefinished equipment

High Performance Architectural Latex				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 5.1R-G2 (Flat)	MPI 76	MPI 138	MPI 138	125 microns 5 mils
MPI INT 5.1R-G3 (Eggshell)	MPI 76	MPI 139	MPI 139	125 microns 5 mils
MPI INT 5.1R-G5 (Semigloss)	MPI 76	MPI 141	MPI 141	125 microns 5 mils
Topcoat: Coating to match adjacent surfaces.				

Alkyd				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 5.1E-G2 (Flat)	MPI 76	MPI 49	MPI 49	131 microns5.25 mils
MPI INT 5.1E-G3 (Eggshell)	MPI 76	MPI 51	MPI 51	131 microns5.25 mils
MPI INT 5.1E-G5 (Semigloss)	MPI 76	MPI 47	MPI 47	131 microns5.25 mils
MPI INT 5.1E-G6 (Gloss)	MPI 76	MPI 48	MPI 48	131 microns5.25 mils
Topcoat: Coating to match adjacent surfaces.				

(2) Metal floors (non-shop-primed surfaces or non-slip deck surfaces) with non-skid additive (NSA), load at manufacturer's recommendations

Alkyd (over q.d. Alkyd Primer)				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 5.1E-G5 (Semi-Gloss)	MPI 76	MPI 47	MPI 47	131 microns5.25 mils
Topcoat: Coating to match adjacent surfaces.				

Epoxy				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 5.1L-G6 (Gloss)	MPI 101	MPI 101	MPI 101	131 microns5.25 mils
Topcoat: Coating to match adjacent surfaces.				

(3) Metal in[toilets,][food-preparation,][food-serving,][restrooms,][laundry areas,][shower areas,][areas requiring a high degree of sanitation,][_____,][and other high-humidity areas] not otherwise specified except floors, hot metal surfaces, and new prefinished equipment

****

NOTE: List other high humidity areas requiring enamel finishes. For tile-like finishes, filler materials, and applications, refer to Section 09 96 59 HIGH-BUILD GLAZE COATINGS. These high performance coatings are normally used to meet exposure-resistant requirements and can be applied to wood, metal, and concrete substrates.

****

Alkyd				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 5.1E-G3 (Eggshell)	MPI 76	MPI 51	MPI 51	131 microns5.25 mils
MPI INT 5.1E-G5 (Semigloss)	MPI 76	MPI 47	MPI 47	131 microns5.25 mils
MPI INT 5.1E-G6 (Gloss)	MPI 76	MPI 48	MPI 48	131 microns5.25 mils
Topcoat: Coating to match adjacent surfaces.				

Alkyd; For Hand Tool Cleaning				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 5.1T-G3 (Eggshell)	MPI 23	MPI 51	MPI 51	131 microns5.25 mils
MPI INT 5.1T-G5 (Semigloss)	MPI 23	MPI 47	MPI 47	131 microns5.25 mils
MPI INT 5.1T-G6 (Gloss)	MPI 23	MPI 48	MPI 48	131 microns5.25 mils

Topcoat: Coating to match adjacent surfaces.

(4) Ferrous metal in concealed damp spaces or in exposed areas having unpainted adjacent surfaces as follows: [_____]

Aluminum Paint				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 5.1M	MPI 76	MPI 1	MPI 1	106 microns 4.25 mils
Topcoat: Coating to match adjacent surfaces.				

(5) Miscellaneous non-ferrous metal items not otherwise specified except floors, hot metal surfaces, and new prefinished equipment. Match surrounding finish

High Performance Architectural Latex				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 5.4F-G2 (Flat)	MPI 95	MPI 138	MPI 138	125 microns 5 mils
MPI INT 5.4F-G3 (Eggshell)	MPI 95	MPI 139	MPI 139	125 microns 5 mils
MPI INT 5.4F-G4 (Satin)	MPI 95	MPI 140	MPI 140	125 microns 5 mils
MPI INT 5.4F-G5 (Semigloss)	MPI 95	MPI 141	MPI 141	125 microns 5 mils
Topcoat: Coating to match adjacent surfaces.				

Alkyd				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 5.4J-G2 (Flat)	MPI 95	MPI 49	MPI 49	125 microns 5 mils
MPI INT 5.4J-G3 (Eggshell)	MPI 95	MPI 51	MPI 51	125 microns 5 mils

MPI INT 5.4J-G5 (Semigloss)	MPI 95	MPI 47	MPI 47	125 microns 5 mils
MPI INT 5.4J-G6 (Gloss)	MPI 95	MPI 48	MPI 48	125 microns 5 mils
Topcoat: Coating to match adjacent surfaces.				

B. Hot Surfaces

(1) Hot metal surfaces [including smokestacks] subject to temperatures up to 205 degrees C 400 degrees F

****

NOTE: Heat Resistant Paints may require a high heat cure cycle to achieve proper cure. Determine curing requirements before specifying so that the supplier will be aware of requirements.

Consider hot dip galvanizing, aluminum metallizing, and zinc metallizing alternatives to the specified coating systems.

****

Heat Resistant Enamel				
New	N/A	Intermediate	Topcoat	System DFT
MPI INT 5.2A	MPI 21	N/A	N/A	Per Manufacturer
Surface preparation and number of coats per manufacturer's instructions.				

(2) Ferrous metal subject to high temperature, up to 400 degrees C 750 degrees F

****

NOTE: Heat Resistant Paints may require a high heat cure cycle to achieve proper cure. Determine curing requirements before specifying so that the supplier will be aware of requirements.

Consider hot dip galvanizing, aluminum metallizing, and zinc metallizing alternatives to the specified coating systems.

****

Inorganic Zinc Rich Coating				
New	N/A	Intermediate	Topcoat	System DFT

MPI INT 5.2C	MPI 19	N/A	N/A	Per Manufacturer
Surface preparation and number of coats per manufacturer's instructions.				

Heat Resistant Aluminum Enamel				
New	N/A	Intermediate	Topcoat	System DFT
MPI INT 5.2B (Aluminum Finish)	MPI 2	N/A	N/A	Per Manufacturer
Surface preparation and number of coats per manufacturer's instructions.				

(3) New and Existing Surfaces made bare subject to temperatures up to 593 degrees C 1100 degrees F

****

NOTE: Heat Resistant Paints may require a high heat cure cycle to achieve proper cure. Determine curing requirements before specifying so that the supplier will be aware of requirements.

Consider aluminum metallizing alternative to the specified coating system.

****

(1) [New surfaces][and][Existing surfaces] made bare cleaning to SSPC SP 10/NACE No. 2 subject to temperatures up to 593 degrees C 1100 degrees F:

Heat Resistant Coating					
New	Existing	N/A	Intermediate	Topcoat	System DFT
MPI INT 5.2D	MPI RIN 5.2D	MPI 22	N/A	N/A	Per Manufacturer
Surface preparation and number of coats per manufacturer's instructions.					

3.15.2.4 MPI Division 6: Interior Wood Paint Table

A. Interior Wood and Plywood

(1) New[and Existing, uncoated] Wood and plywood not otherwise specified

High Performance Architectural Latex				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT

MPI INT 6.4S-G3 (Eggshell)	MPI 39	MPI 139	MPI 139	112 microns4.5 mils
MPI INT 6.4S-G4 (Satin)	MPI 39	MPI 140	MPI 140	112 microns4.5 mils
MPI INT 6.4S-G5 (Semigloss)	MPI 39	MPI 141	MPI 141	112 microns4.5 mils
Topcoat: Coating to match adjacent surfaces.				

Alkyd				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.4B-G3 (Eggshell)	MPI 45	MPI 51	MPI 51	112 microns 4.5 mils
MPI INT 6.4B-G5 (Semigloss)	MPI 45	MPI 47	MPI 47	112 microns 4.5 mils
MPI INT 6.4B-G6 (Gloss)	MPI 45	MPI 48	MPI 48	112 microns 4.5 mils
Topcoat: Coating to match adjacent surfaces.				

Institutional Low Odor / Low VOC Latex				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.3V-G2 (Flat)	MPI 39	MPI 144	MPI 144	100 microns4 mils
MPI INT 6.3V-G3 (Eggshell)	MPI 39	MPI 145	MPI 145	100 microns4 mils
MPI INT 6.3V-G4 (Satin)	MPI 39	MPI 146	MPI 146	100 microns4 mils
MPI INT 6.3V-G5 (Semigloss)	MPI 39	MPI 147	MPI 147	100 microns4 mils

(2) Existing, previously painted Wood and plywood not otherwise specified

High Performance Architectural Latex				
Existing, previously painted	Primer	Intermediate	Topcoat	System DFT

MPI RIN 6.4B-G3 (Eggshell)	MPI 39	MPI 139	MPI 139	112 microns4.5 mils
MPI RIN 6.4B-G4 (Satin)	MPI 39	MPI 140	MPI 140	112 microns4.5 mils
MPI RIN 6.4B-G5 (Semigloss)	MPI 39	MPI 141	MPI 141	112 microns4.5 mils
Topcoat: Coating to match adjacent surfaces.				

Alkyd				
Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI RIN 6.4C-G3 (Eggshell)	MPI 46	MPI 51	MPI 51	112 microns 4.5 mils
MPI RIN 6.4C-G5 (Semigloss)	MPI 46	MPI 47	MPI 47	112 microns 4.5 mils
MPI RIN 6.4C-G6 (Gloss)	MPI 46	MPI 48	MPI 48	112 microns 4.5 mils
Topcoat: Coating to match adjacent surfaces.				

Institutional Low Odor / Low VOC Latex				
Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI RIN 6.4D-G2 (Flat)	MPI 39	MPI 144	MPI 144	100 microns4 mils
MPI RIN 6.4D-G3 (Eggshell)	MPI 39	MPI 145	MPI 145	100 microns4 mils
MPI RIN 6.4D-G4 (Satin)	MPI 39	MPI 146	MPI 146	100 microns4 mils
MPI RIN 6.4D-G5 (Semigloss)	MPI 39	MPI 147	MPI 147	100 microns4 mils

B. Interior New [and Existing, previously finished or stained] Wood and Plywood, except floors; natural finish or stained

Natural finish, oil-modified polyurethane					
New	Existing	Primer	Intermediate	Topcoat	System DFT

MPI INT 6.4J-G4	MPI RIN 6.4L-G4	MPI 57	MPI 57	MPI 57	100 microns4 mils
MPI INT 6.4J-G6 (Gloss)	MPI RIN 6.4L-G6 (Gloss)	MPI 56	MPI 56	MPI 56	100 microns4 mils

Stained, oil-modified polyurethane						
New	Existing	Stain	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.4E-G4	MPI RIN 6.4G-G4	MPI 90	MPI 57	MPI 57	MPI 57	100 microns4 mils
MPI INT 6.4E-G6 (Gloss)	MPI RIN 6.4G-G6 (Gloss)	MPI 90	MPI 56	MPI 56	MPI 56	100 microns4 mils

Stained, Moisture Cured Urethane						
New	Existing	Stain	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.4V-G2 (Flat)	MPI RIN 6.4V-G2 (Flat)	MPI 90	MPI 71	MPI 71	MPI 71	100 microns4 mils
MPI INT 6.4V-G6 (Gloss)	MPI RIN 6.4V-G6 (Gloss)	MPI 90	MPI 31	MPI 31	MPI 31	100 microns4 mils

C. Interior New[and Existing, previously finished or stained] Wood Floors; Natural finish or stained

Natural finish, oil-modified polyurethane					
New	Existing, previously finished or stained	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.5C-G6 (Gloss)	MPI RIN 6.5C-G6 (Gloss)	MPI 56	MPI 56	MPI 56	100 microns4 mils

Natural finish, Moisture Cured Polyurethane					
New	Existing, previously finished or stained	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.5K-G6 (Gloss)	MPI RIN 6.5D-G6 (Gloss)	MPI 31	MPI 31	MPI 31	100 microns4 mils

Stained, oil-modified polyurethane						
New	Existing, previously finished or stained	Stain	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.5B-G6 (Gloss)	MPI RIN 6.5B-G6 (Gloss)	MPI 90	MPI 56	MPI 56	MPI 56	100 microns 4 mils

Stained, Moisture Cured Urethane						
New	Existing, previously finished or stained	Stain	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.4V-G6 (Gloss)	MPI RIN 6.4V-G6 (Gloss)	MPI 90	MPI 31	MPI 31	MPI 31	100 microns4 mils

D. New [and Existing, previously coated] Wood floors; pigmented finish

Latex Floor Paint					
New	Existing, previously finished	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.5G-G2 (Flat)	MPI RIN 6.5J-G2 (Flat)	MPI 45	MPI 60	MPI 60	112 microns 4.5 mils
MPI INT 6.5G-G6 (Gloss)	MPI RIN 6.5J-G6 (Gloss)	MPI 45	MPI 68	MPI 68	112 microns 4.5 mils
Topcoat: Coating to match adjacent surfaces.					

Alkyd Floor Paint					
New	Existing, previously finished	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.5A-G2 (Flat)	MPI RIN 6.5A-G2 (Flat)	MPI 59	MPI 59	MPI 59	112 microns 4.5 mils

MPI INT 6.5A-G6 (Gloss)	MPI RIN 6.5A-G6 (Gloss)	MPI 27	MPI 27	MPI 27	112 microns 4.5 mils
Topcoat: Coating to match adjacent surfaces.					

E. Interior New[and Existing, uncoated] wood surfaces in[toilets,][food-preparation,][food-serving,][restrooms,][laundry areas,][shower areas,][areas requiring a high degree of sanitation,][_____][and other high humidity areas] not otherwise specified

****
NOTE: List other high humidity areas requiring enamel finishes. For tile-like finishes, filler materials, and applications, refer to Section 09 96 59 HIGH-BUILD GLAZE COATINGS. These high performance coatings are used for exposure-resistant requirements and can be applied to wood, metal, and concrete substrates.
****

High-Build Glaze Coatings
As specified in Section 09 96 59 HIGH-BUILD GLAZE COATINGS.

Waterborne Light Industrial				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.3P-G5 (Semigloss)	MPI 45	MPI 153	MPI 153	112 microns4.5 mils
MPI INT 6.3P-G6 (Gloss)	MPI 45	MPI 154	MPI 154	112 microns4.5 mils
Topcoat: Coating to match adjacent surfaces.				

Alkyd				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.3B-G5 (Semigloss)	MPI 45	MPI 47	MPI 47	112 microns4.5 mils
MPI INT 6.3B-G6 (Gloss)	MPI 45	MPI 48	MPI 48	112 microns4.5 mils
Topcoat: Coating to match adjacent surfaces.				

F. Existing, previously painted wood surfaces in[toilets,][food-preparation,][food-serving,][restrooms,][laundry areas,][shower areas,][areas requiring a high degree of sanitation,][_____][and other high humidity areas] not otherwise specified

****
NOTE: List other high humidity areas requiring enamel finishes. For tile-like finishes, filler materials, and applications, refer to Section 09 96 59 HIGH-BUILD GLAZE COATINGS. These high performance coatings are used for exposure-resistant requirements and can be applied to wood, metal, and concrete substrates.
****

High-Build Glaze Coatings
As specified in Section 09 96 59 HIGH-BUILD GLAZE COATINGS.

Waterborne Light Industrial				
Existing, previously finished	Primer	Intermediate	Topcoat	System DFT
MPI RIN 6.3P-G5 (Semigloss)	MPI 39	MPI 153	MPI 153	112 microns4.5 mils
MPI RIN 6.3P-G6 (Gloss)	MPI 39	MPI 154	MPI 154	112 microns4.5 mils
Topcoat: Coating to match adjacent surfaces.				

Alkyd				
Existing, previously finished	Primer	Intermediate	Topcoat	System DFT
MPI RIN 6.3B-G5 (Semigloss)	MPI 46	MPI 47	MPI 47	112 microns4.5 mils
MPI RIN 6.3B-G6 (Gloss)	MPI 46	MPI 48	MPI 48	112 microns4.5 mils
Topcoat: Coating to match adjacent surfaces.				

G. Interior New [and Existing, previously finished or stained] Wood Doors; Natural Finish or Stained

Natural finish, oil-modified polyurethane					
New	Existing, previously finished or stained	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.3K-G4	MPI RIN 6.3K-G4	MPI 57	MPI 57	MPI 57	100 microns4 mils

MPI INT 6.3K-G6 (Gloss)	MPI RIN 6.3K-G6 (Gloss)	MPI 56	MPI 56	MPI 56	100 microns4 mils
Note: Sand between all coats per manufacturers recommendations.					

Stained, oil-modified polyurethane						
New	Existing, previously finished or stained	Stain	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.3E-G4	MPI RIN 6.3E-G4	MPI 90	MPI 57	MPI 57	MPI 57	100 microns 4 mils
MPI INT 6.5B-G6 (Gloss)	MPI RIN 6.5B-G6 (Gloss)	MPI 90	MPI 56	MPI 56	MPI 56	100 microns 4 mils
Note: Sand between all coats per manufacturers recommendations.						

Stained, Moisture Cured Urethane						
New	Existing, previously finished or stained	Stain	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.4V-G2 (Flat)	MPI RIN 6.4V-G2 (Flat)	MPI 90	MPI 71	MPI 71	MPI 71	100 microns4 mils
MPI INT 6.4V-G6 (Gloss)	MPI RIN 6.4V-G6 (Gloss)	MPI 90	MPI 31	MPI 31	MPI 31	100 microns4 mils
Note: Sand between all coats per manufacturers recommendations.						

H. New [and Existing, uncoated] Wood Doors; Pigmented finish

Alkyd				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.3B-G5 (Semigloss)	MPI 45	MPI 47	MPI 47	112 microns4.5 mils
MPI INT 6.3B-G6 (Gloss)	MPI 45	MPI 48	MPI 48	112 microns4.5 mils
Note: Sand between all coats per manufacturers recommendations.				

Pigmented Polyurethane

New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 6.1E-G6 (Gloss)	MPI 72	MPI 72	MPI 72	112 microns4.5 mils
Note: Sand between all coats per manufacturers recommendations.				

I. Existing, previously painted Wood Doors; Pigmented finish

Alkyd				
Existing, previously finished	Primer	Intermediate	Topcoat	System DFT
MPI RIN 6.3B-G5 (Semigloss)	MPI 46	MPI 47	MPI 47	112 microns4.5 mils
MPI RIN 6.3B-G6 (Gloss)	MPI 46	MPI 48	MPI 48	112 microns4.5 mils
Note: Sand between all coats per manufacturers recommendations.				

3.15.2.5 MPI Division 9: Interior Plaster, Gypsum Board, Textured Surfaces Paint Table

A. Interior New[and Existing, previously painted][Plaster][and][Wallboard] not otherwise specified

Latex					
New	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 9.2A-G2 (Flat)	RIN 9.2A-G2 (Flat)	MPI 50	MPI 44	MPI 44	100 microns4 mils
MPI INT 9.2A-G3 (Eggshell)	RIN 9.2A-G3 (Eggshell)	MPI 50	MPI 52	MPI 52	100 microns4 mils
MPI INT 9.2A-G5 (Semigloss)	RIN 9.2A-G5 (Semigloss)	MPI 50	MPI 54	MPI 54	100 microns4 mils
Topcoat: Coating to match adjacent surfaces.					

High Performance Architectural Latex - High Traffic Areas					
New	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 9.2B-G2 (Flat)	MPI RIN 9.2B-G2 (Flat)	MPI 50	MPI 138	MPI 138	100 microns4 mils

MPI INT 9.2B-G3 (Eggshell)	MPI RIN 9.2B-G3 (Eggshell)	MPI 50	MPI 139	MPI 139	100 microns4 mils
MPI INT 9.2B-G5 (Semigloss)	MPI RIN 9.2B-G5 (Semigloss)	MPI 50	MPI 141	MPI 141	100 microns4 mils
Topcoat: Coating to match adjacent surfaces.					

Institutional Low Odor / Low VOC Latex, New

Institutional Low Odor / Low VOC Latex				
New	Primer	Intermediate	Topcoat	System DFT
MPI INT 9.2M-G2 (Flat)	MPI 149	MPI 144	MPI 144	100 microns4 mils
MPI INT 9.2M-G3 (Eggshell)	MPI 149	MPI 145	MPI 145	100 microns4 mils
MPI INT 9.2M-G4 (Satin)	MPI 149	MPI 146	MPI 146	100 microns4 mils
MPI INT 9.2M-G5 (Semigloss)	MPI 149	MPI 147	MPI 147	100 microns4 mils
Topcoat: Coating to match adjacent surfaces.				

Institutional Low Odor / Low VOC Latex, Existing, previously painted

Institutional Low Odor / Low VOC Latex				
Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI RIN 9.2M-G2 (Flat)	MPI 144	MPI 144	MPI 144	100 microns4 mils
MPI RIN 9.2M-G3 (Eggshell)	MPI 144	MPI 145	MPI 145	100 microns4 mils
MPI RIN 9.2M-G4 (Satin)	MPI 144	MPI 146	MPI 146	100 microns4 mils
MPI RIN 9.2M-G5 (Semigloss)	MPI 144	MPI 147	MPI 147	100 microns4 mils
Topcoat: Coating to match adjacent surfaces.				

B. Interior New[and Existing, previously painted][Plaster][and][Wallboard] in[toilets,][food-preparation,][food-serving,][restrooms,][laundry areas,][shower areas,][areas requiring a high degree of sanitation,][_____][and other high humidity areas] not otherwise specified

****
NOTE: List other high humidity areas requiring enamel finishes. For tile-like finishes, filler materials, and applications, refer to Section 09 96 59 HIGH-BUILD GLAZE COATINGS. These high performance coatings are normally used to meet exposure-resistant requirements and can be applied to wood, metal, and concrete substrates.
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Waterborne Light Industrial Coating					
New, uncoated Existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 9.2L-G5(Semigloss)	MPI RIN 9.2L-G5 (Semigloss)	MPI 50	MPI 153	MPI 153	100 microns4 mils
Topcoat: Coating to match adjacent surfaces.					

Alkyd					
New, uncoated Existing	Existing, previously painted	Primer	Intermediate	Topcoat	System DFT
MPI INT 9.2C-G5 (Semigloss)	MPI RIN 9.2C-G5 (Semigloss)	MPI 50	MPI 47	MPI 47	100 microns4 mils
Topcoat: Coating to match adjacent surfaces.					

Epoxy, New, uncoated Existing

Epoxy				
New, uncoated Existing	Primer	Intermediate	Topcoat	System DFT
MPI INT 9.2E-G6 (Gloss)	MPI 50	MPI 77	MPI 77	100 microns4 mils
Topcoat: Coating to match adjacent surfaces.				

Epoxy, Existing, previously painted

Epoxy				
Existing, previously painted	Primer	Intermediate	Topcoat	System DFT

MPI RIN 9.2D-G6 (Gloss)	MPI 17	MPI 77	MPI 77	100 microns4 mils
Topcoat: Coating to match adjacent surfaces.				

-- End of Section --