

SECTION 099123 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 M.S.U. ISSUES

A. LEED

1. For paints and coatings applied on the interior of buildings and applied on-site maximum VOC shall be in accordance with Green Seal Standard GS-11, Paints, First Edition, May 20, 1993.
  - a. Flat paints and coatings: VOC content of not more than 50 g/L
  - b. Non-flat paints and coatings: VOC content of not more than 150 g/L
2. Anticorrosive and anti-rust paints shall meet requirements of Green Seal Standard GC-03, Anti-corrosive Paints, Second Edition, January 7, 1997
  - a. Anticorrosive coatings: VOC content of not more than 250 g/L
3. Clear wood finishes, floor coatings, stains, and shellacs applied to interior elements shall meet requirements of South Coast Air Quality Managements District (SCAQMD Rule #1113).
  - a. Varnish: VOC content of not more than 350 g/L
  - b. Lacquer: VOC content of not more than 550 g/L
  - c. Floor coatings: VOC content of not more than 100 g/L
  - d. Shellacs (clear): VOC content of not more than 730 g/L
  - e. Shellacs (pigmented): VOC content of not more than 550 g/L
  - f. Stains: VOC content of not more than 550 g/L
  - g. Sealers (waterproofing sealers): VOC content of not more than 250 g/L
  - h. Sealers (sanding sealers): VOC content of not more than 275 g/L
  - i. Sealers: (other than above listed) VOC content of not more than 200 g/L
4. Paints and coatings shall have a maximum of 1.0% of Total Aromatic Compounds (hydrocarbon compounds containing one or more benzene rings).
5. Paints and coatings shall not contain any of the following:
  - a. Acrolein
  - b. Acrylonitrile
  - c. Antimony
  - d. Benzene
  - e. Butyl benzyl phthalate
  - f. Cadmium
  - g. Di(2-ethylhexyl) phthalate
  - h. Di-n-butyl phthalate
  - i. Di-n-octyl phthalate
  - j. 1,2-dichlorobenzene
  - k. Diethyl phthalate
  - l. Dimethyl phthalate
  - m. Ethylbenzene

- n. Formaldehyde
- o. Hexavalent chromium
- p. Isophorone
- q. Lead
- r. Mercury
- s. Methyl ethyl ketone
- t. Methyl isobutyl ketone
- u. Methylene chloride
- v. Napthalene
- w. Toluene (methylbenzene)
- x. 1,1,1-trichloroethane
- y. Vinyl chloride

B. Painting is not required on pre-finished items, finished metal surfaces, concealed surfaces, operating parts, and labels.

1. Pre-finished items NOT to be painted include the following factory-finished components:
  - a. Metal toilet enclosures
  - b. Acoustic materials
  - c. Architectural woodwork and casework
  - d. Elevator entrance doors and frames
  - e. Elevator equipment
  - f. Finished mechanical and electrical equipment
  - g. Light fixtures
  - h. Switchgear
2. Concealed surfaces NOT to be painted include wall or ceiling surfaces in the following generally inaccessible areas:
  - a. Foundation spaces
  - b. Furred areas
  - c. Utility tunnels
  - d. Pipe spaces
  - e. Duct shafts
  - f. Elevator shafts
  - g. Mechanical rooms
3. Operating parts NOT to be painted include moving parts of operating equipment such as the following:
  - a. Valve and damper operators
  - b. Linkages
  - c. Sensing devices
  - d. Motor and fan shafts
4. Finished metal surfaces NOT to be painted include:
  - a. Anodized aluminum
  - b. Stainless steel

- c. Chromium plate
  - d. Copper
  - e. Bronze
  - f. Brass
  - g. Galvanized steel (unless specifically designated to be painted)
5. Do not paint over Underwriter's Laboratories, Factory Mutual or other code-required labels or equipment name, identification, performance rating or nomenclature plates.
- C. Painting includes field painting exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and ironwork, and primed metal surfaces of mechanical and electrical equipment, in interior finished spaces only. Access panel covers must be painted separately, according to the following code: Electrical – orange, Communications – blue, Alarms – red.
- D. Paint exposed surfaces whether or not colors are designated in paint schedules, except where a specific designation indicates the surface or material is not to be painted or is to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces. If color or finish is not designated, the M.S.U. project representative will select from standard colors or finishes available.

## 1.2 SUMMARY

- A. This Section includes surface preparation and the application of paint systems on the following interior substrates:
1. Concrete.
  2. Concrete masonry units (CMU).
  3. Steel.
  4. Galvanized metal.
  5. Aluminum (not anodized or otherwise coated).
  6. Wood.
  7. Gypsum board.
  8. Plaster.
  9. Cotton or canvas insulation covering.
- B. Surface preparation, priming and finish coats specified in this section are in addition to shop priming and surface treatment specified under other sections.
- C. Related Sections include the following:
1. Division 05 Sections for shop priming of metal substrates with primers specified in this Section.
  2. Division 08 Sections for factory priming windows and doors with primers specified in this Section.
  3. Division 09 Section EXTERIOR PAINTING for surface preparation and the application of paint systems on exterior substrates.

### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated, submitted to the M.S.U. Project Representative prior to project inception. List each material by the manufacturer's catalog number and general classification. The University retains the right to approve or disapprove any proposed equivalent paint products.
1. Submit printed VOC statements.
  2. Submit printed aromatic compound statements.
  3. Submit printed statements demonstrating that no restricted compounds are used.
- B. Samples for initial color selection: in the form of manufacturer's color charts. After color selection, the M.S.U. project representative will furnish color chips for surfaces to be coated. It is the contractor's responsibility to provide the M.S.U. project representative with three draw downs of each product and color combination to be used for final approval.
- C. Samples for Verification, when requested: For each type of paint system and each color and gloss of topcoat indicated.
1. Submit Samples on rigid backing, 8 inches square.
  2. Step coats on Samples to show each coat required for system.
  3. Label each coat of each Sample.
  4. Label each Sample for location and application area.
- D. An actual color sample, 4' X 4', shall be painted on one wall of the jobsite for verification of actual wall color prior to any other painting. Actual color samples of other selected paints shall be painted on appropriate surfaces for verification as directed by the M.S.U. project representative.
- E. Product List: For each product indicated, include the following:
1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.

### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
1. Product name or title of material.
  2. Product description (generic classification or binder type).
  3. Federal Specification number, if applicable
  4. Manufacturer's stock number and date of manufacture.
  5. Thinning instructions.
  6. Application instructions.
  7. Color name and number.
- B. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperature continuously maintained at not less than 45 deg F.
1. Maintain containers in clean condition, free of foreign materials and residue.

2. Keep storage area neat and orderly. Remove rags and waste from storage areas daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards from handling, mixing and application.
3. Paint/varnish removers shall be non-flammable.

#### 1.5 PROJECT CONDITIONS

- A. Apply water based paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 90 deg F.
- B. Apply solvent-thinned paints only when temperature of surfaces to be painted and ambient air temperatures are between 45 and 95 deg F.
- C. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by the manufacturer during application and drying periods.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  1. The Glidden Co./PPG
  2. O'Leary Paints (O'Leary
  3. Sherwin-Williams Company (The).
  4. Benjamin Moore & Co.
  5. PPG

If products by manufacturers not listed above are recommended, they must be approved by M.S.U. at least 2 weeks prior to bidding.

#### 2.2 PAINT, GENERAL

- A. Material Compatibility:
  1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
  2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

## 2.3 BLOCK FILLERS

- A. High Performance Latex Block Filler: Used for filling open textured interior and exterior concrete block, above grade, before application of topcoats. This material should not be used in areas that are subject to continuous high moisture conditions such as daily washing, etc.
1. PPG: Devoe Bloxfill 4000-1000 Heavy Duty Acrylic Block Filler
  2. O'Leary Paints: C946-11 Industrial Latex Block Filler
  3. Sherwin-Williams Company (The): Heavy Duty Block Filler B42W46
  4. Benjamin Moore & Co.: 206 Super Spec Masonry 100% Acrylic Hi-Build Block Filler.
  5. PPG: Pitt-Glaze Interior/Exterior Block Filler 16-90
- B. Severe Duty Two Component Epoxy Block Filler: Epoxy block filler used for filling open textured interior concrete block, before the application of high performance top coats. This filler should be used in all high moisture areas such as kitchens, showers, animal rooms, custodial wash areas, etc.
1. Devoe Tru-Glaze 4015 H P water borne 4015-1000
  2. O'Leary Paints: 138-111-138-251B Acrylic Epoxy Block Filler
  3. Sherwin-Williams Company (The): B42-WA8 WA9 or W42200/B42V201-Cement Plex
  4. Benjamin Moore & Co.: M31/M32 Acrylic Epoxy Block Filler
  5. PPG: Amerlock 400 BF Two-component epoxy masonry block filler
- C. METAL PRIMERS
- D. Synthetic Int., Rust-Inhibiting Acrylic Primer: Quick drying, rust-inhibiting primer for priming galvanized and ferrous and non-ferrous metal on the interior under acrylic paints and odorless alkyd semigloss or alkyd gloss enamels.
1. PPG: Devoe Devflex 4020 PF
  2. O'Leary Paints: 36-11 180-11 Acrylic Metal Primer
  3. Sherwin-Williams Company (The): ProCryl-B66-W310 G
  4. Benjamin Moore & Co.: P04 Super Spec HP Acrylic Metal Primer
  5. PPG: Pitt-Tech Interior/Exterior Primer/Finish DTM 90-712/912 Series
- E. Alkyd-Type Zinc Metal Primer: Primers used for priming galvanized and ferrous metals under acrylic or alkyd enamel finishes.
1. PPG: Pitt-Tech Interior/Exterior Primer/Finish DTM 90-712/912 Series
  2. O'Leary Paints: 36-11 Acrylic Metal Primer
  3. Sherwin-Williams Company (The): ProCryl B66-W310
  4. Benjamin Moore & Co.: P04 Super Spec HP Acrylic Metal Primer
- F. Non-Ferrous Metal Primer: Bonding type primer used to prime interior non-ferrous metal surfaces:
1. PPG: Devoe Devflex 4020PF
  2. O'Leary Paints: 182 Industrial Acrylic DTM

3. Sherwin-Williams Company (The): DTM Bonding Primer ProCryl B66-W310
4. Benjamin Moore & Co.: (N023) Fresh Start Acrylic Primer
5. PPG: Pitt-Tech Interior/Exterior Primer/Finish DTM 90-712/912 Series

## 2.4 WOOD PRIMERS

- A. Interior Latex Enamel Undercoat: Ready-mixed latex primer for use as an undercoat over wood and hardboard under latex enamel topcoat.
1. PPG/Glidden: Gripper Interior/Exterior Primer Sealer 3210
  2. O'Leary Paints: L50 Block it
  3. Sherwin-Williams Company (The): Pro Block B51-600
  4. Benjamin Moore & Co.: (253) Super-Spec Latex Enamel Undercoater
  5. PPG: Seal Grip Interior/Exterior Acrylic Universal Primer/Sealer 17-921 Series

## 2.5 INTERIOR LATEX PRIMERS

- A. Interior 100% Acrylic Primer: Acrylic primer used on plaster under flat, semigloss and gloss finishes. This primer must be specifically designed for application to plaster, gypsum drywall, block and masonry surfaces and over all alkyd paints as primer for re-coat.
1. PPG/Glidden: Gripper Primer Sealer 3210-1200
  2. O'Leary Paints: L50 Block-it Acrylic Wall Primer
  3. Sherwin-Williams Company (The): Latex Primer A24W8300
  4. Benjamin Moore & Co.: N023 Fresh Start Acrylic Primer
  5. PPG: Seal Grip Interior/Exterior Acrylic Universal Primer/Sealer 17-921 Series
- B. Wall-covering Primer: New drywall and plaster surfaces that are to receive a wall-covering finish are to be primed with heavy-duty acrylic primer to allow easy stripping of wall-coverings off of surfaces.
1. PPG/Glidden: Vapor Barrier Interior Primer Sealer 1060-1200
  2. O'Leary Paints: Ultra-Prep L-490
  3. Sherwin-Williams Company (The): Pre Wallcovering Primer B28W8980
  4. Benjamin Moore & Co.: (N023) Fresh Start Acrylic Primer Sealer
  5. PPG: Seal Grip Interior/Exterior Acrylic Universal Primer/Sealer 17-921 Series

## 2.6 INTERIOR LATEX PAINTS

- A. Interior/Exterior Acrylic Machinery Enamel Gloss: Premium quality gloss 100% acrylic enamel for use on interior and exterior metal and concrete surfaces where abrasion is a problem. This product shall have excellent adhesion characteristics even to existing alkyd finish coats and provide a smooth brush-mark free surface. **TO BE USED ON METAL DOORS AND FRAMES.** Use deep base and ultra deep base in the same product line.

1. PPG: Devoe DevFlex 4208
  2. O'Leary Paints: L-8000 Duramax Acrylic Gloss
  3. Sherwin-Williams Company (The): DTM Gloss B66W111
  4. Benjamin Moore & Co.: P28 DTM Gloss
  5. PPG: Pitt-Tech Plus Interior/Exterior Gloss DTM 90-374 Series -or- Pitt-Tech Plus Interior/Exterior High-gloss DTM 90-1310- Series
- B. Interior/Exterior Acrylic Machinery Enamel Semi-Gloss: Premium quality semi-gloss 100% acrylic enamel for use on interior and exterior metal and concrete surfaces where abrasion is a problem. This product shall have excellent adhesion characteristics even to existing alkyd finish coats and provide a smooth brush-mark free surface. **TO BE USED ON METAL DOORS AND FRAMES.** Use deep base and ultra deep base in the same product line.
1. PPG: Devoe Devflex 4216 HP Acrylic DTM Semi-Gloss
  2. O'Leary Paints: L 9000 Duramax Acrylic Semi-Gloss
  3. Sherwin-Williams Company (The): DTM Semi-Gloss B66W211
  4. Benjamin Moore & Co.: P29 Semi
  5. Pitt-Tech Plus Int./Ext. Semi-gloss DTM Industrial Enamel 90-1210 Series
- C. Acrylic DTM Semi-Gloss: Weather resistant, exterior acrylic semi-gloss for use on metal ducts, galvanized metals and ferrous and non-ferrous. Use deep base and ultra deep base in the same product line.
1. PPG: Devoe DevFlex 4216 HP Acrylic DTM Semi-Gloss
  2. O'Leary Paints: 182 Industrial Acrylic DTM Semi G
  3. Sherwin-Williams Company (The): DTM Acrylic Semi-Gloss B66W211
  4. Benjamin Moore & Co.: P29 DTM Semi
  5. Pitt-Tech Plus Int./Ext. Semi-gloss DTM Industrial Enamel 90-1210 Series
- D. Latex Based Interior Semi-Gloss Latex Enamel: Low odor 100% acrylic or modified styrene acrylic, (NO VINYL ACRYLIC) latex enamel for use as a semi-gloss finish over primed concrete, concrete block, wood, plaster, and gypsum drywall. This product shall have abrasion resistance at least equal to 100% of the Leneta "C" Panel when tested in accordance with ASTM D2486. Use deep base and ultra deep base in the same product line.
1. PPG/Glidden: Diamond Semi-Gloss 7400
  2. O'Leary Paints: L-2607 Pro-Tech Interior Latex Semi Gloss
  3. Sherwin-Williams Company (The): Solo A76W53 100% Acrylic Semi-Gloss (Deep Base) 0 VOC B66-W663 (Ultra Deep Base) 0 VOC B66-T664
  4. Benjamin Moore & Co.: N376 Eco Spec WB Acrylic Semi Gloss
  5. PPG: Manor Hall Interior Semi-gloss 82-500 Series
- E. Latex Based Interior Eggshell Enamel: Low odor 100% acrylic or modified styrene acrylic, (NO VINYL ACRYLIC) latex enamel for use as an eggshell finish over primed concrete, concrete block, wood, plaster, and gypsum drywall. This product shall have abrasion resistance at least equal to 75% of the Leneta "C" Panel when tested in accordance with ASTM D2486. Use deep base and ultra deep base in the same product line.



1. PPG/Glidden: Diamond Eggshell 7200
2. O'Leary Paints: L-1007 Interior Latex Eggshell
3. Sherwin-Williams Company (The): Solo A75W53 100% Acrylic Eggshell (Deep Base) 0 VOC B66-W663 (Ultra Deep Base) 0 VOC B66-T664
4. Benjamin Moore & Co.: N374 Eco Spec WB Acrylic Egg Shell
5. PPG: Manor Hall Interior Eggshell 82-300 Series

F. Latex Based Interior Flat Paint: Ready mixed, latex based paint for use over primed concrete, concrete block, wood, plaster, and gypsum drywall, acoustical plaster surfaces and as a "size" on cotton or canvas covering over insulation, and on all ceilings. Use deep base and ultra deep base in the same product line.

1. PPG/Glidden: Diamond Flat 7100
2. O'Leary Paints: 1400 Flat Ceramic Coat Latex Flat
3. Sherwin-Williams Company (The): Solo Flat 100% Acrylic A74W51
4. Benjamin Moore & Co.: N373 Eco Spec WB Acrylic Flat
5. PPG: Manor Hall Interior Flat 82-100 Series

## 2.7 INTERIOR EPOXY FINISHES

A. Acrylic Epoxy Gloss: Catalyzed acrylic epoxy gloss for use in areas of very high abrasion or where repetitive cleaning will be necessary.

1. O'Leary Paints: 138-1 Acrylic Epoxy Gloss G
2. Sherwin-Williams Company (The): B70W 211 B60 V-15, or Zero VOC WB Catalyzed Epoxy B73W311.
3. Benjamin Moore & Co.: P43 Super Spec HP Acrylic Epoxy Gloss

B. PPG: Pitt-Glaze WB Water-Borne Acrylic Epoxy 16-551 Series Polyamide Epoxy Gloss: Catalyzed polyamide epoxy gloss for use in areas where the maximum in abrasion, moisture and chemical resistance is required.

1. O'Leary Paints: 101 Polyamide Epoxy Gloss
2. Sherwin-Williams Company (The): B62-W101-V60 V70 Polyamide Epoxy Gloss, or WB Tile Clad B73W111.
3. Benjamin Moore & Co.: P36 Super Spec HP Acrylic Epoxy Gloss
4. PPG: Aquapon WB Water Base Epoxy 98-1 Series

## 2.8 INTERIOR WOOD FINISHING MATERIALS

A. Oil-Type Interior Wood Stain: Slow-penetrating oil-type wood stain for general use on interior wood surfaces under varnishes or was finishes.

1. PPG: Flood 1700 Wood Stain
2. O'Leary Paints: Old Masters, Finishes or Decorators Stains
3. Sherwin-Williams Company (The): Woodclassics 250 Stain A49 Series
4. Benjamin Moore & Co.: None
5. PPG: Deft Wood Stain

B. Paste Wood Filler: Solvent based, air-drying, paste type wood filler for use on open grain wood on interior wood surfaces.

1. O'Leary Paints: 50001 Old Master Wood Filler
  2. Sherwin-Williams Company (The): Sher-wood Fast-Dry Filler D70T1
  3. Benjamin Moore & Co.: (236) Benwood Paste Wood Filler
- C. Interior Waterborne Urethane Satin: Clear, non-yellowing, water thinned, urethane sating, with excellent abrasion and moisture resistance. This product for use on interior stained or natural finished woodwork.
1. PPG: Wood Pride1802 Satin Urethane
  2. O'Leary Paints: A4700-270 Waterborne Urethane
  3. Sherwin-Williams Co. (The): Woodclassics Waterborne Polyurethane A-68 series V91
  4. Benjamin Moore & Co.: (N423) Stays Clear Acrylic Urethane
  5. PPG: Deft WB Poly Satin
- 2.9 SURFACE PREPARATION AGENTS: Paint and varnish removers shall be non-flammable.
- A. Oil and Grease Emulsifier: Oil and grease emulsifier for cleaning walls, ceilings floors and equipment.
1. PPG: Devoe Devprep 88
  2. O'Leary Paints: Coronado 93-500
  3. Sherwin-Williams Company (The): Extra Muscle Cleaner
  4. Benjamin Moore & Co.: P83 Oil & Grease Emulsifier
  5. PPG: Duraprep Prep88 water-based alkaline cleaner
- B. Epoxy and Urethane Remover: For stripping old epoxy or urethane coatings from surfaces to be re-coated.
1. O'Leary Paints: Star to Paste Stripper
  2. Sherwin-Williams Company (The): Savagran Super-Strip
  3. PPG: Duraprep Prep220 Commercial Coating Remover
- C. Rust Removal and Metal Pre-treatment: For use in converting rust oxide and treatment of metal to promote coating adhesion.
1. O'Leary Paints: Coronado 93-300
  2. Sherwin-Williams Company (The): Macroproxy 920 Pre-Prime B58T101
  3. Benjamin Moore & Co.: None
  4. PPG: Amerlock Sealer penetrating epoxy primer sealer
- D. Concrete Etch: Concrete pre-treatment for use in removing the laitance and etching smooth concrete to improve coating adhesion.
1. O'Leary Paints: Coronado 93-400
  2. Sherwin-Williams Company (The): Startex Muriatic Acid
  3. Benjamin Moore & Co.: P85 Concrete Pre-treatment and Etch
  4. PPG: DuraPrep 100 Concrete Etch
- E. Rust Converter: For converting rust into a black protective film.

1. PPG: Devoe Preprime 167
2. O'Leary Paints: Coronado 93-900
3. Sherwin-Williams Company (The): Oshpo Rust Converter.
4. Benjamin Moore & Co.: P85 Rust Converter

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates and conditions, with applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
  1. Concrete: 12 percent.
  2. Masonry (Clay and CMU): 12 percent.
  3. Wood: 15 percent.
  4. Plaster: 12 percent.
  5. Gypsum Board: 12 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
  1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

#### 3.2 PREPARATION

- A. Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, electrical panel box doors and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
  2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- B. Protect work of other trades, whether to be painted or not, against damage by painting. Correct damage by cleaning, repairing, replacing, and/or repainting, as acceptable to the M.S.U. project representative. Provide "Wet Paint" signs to protect newly painted finishes. At completion of construction activities of other trades, touch up and restore all damaged or defaced painted surfaces.

- C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
  - 1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall onto wet, newly painted surfaces.
  - 2. Provide barrier coats over incompatible primers or remove and re-prime. Notify M.S.U. project representative in writing of problems anticipated with use of specified finish coat material with substrates primed by others.
- D. Cementitious Material Substrates: Remove dust, dirt, grease, oil, release agents, curing compounds, efflorescence, and chalk.
  - 1. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation. Use abrasive blast-cleaning methods if recommended by the paint manufacturer.
  - 2. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
  - 3. Clean concrete floors to be painted with a five percent solution of muriatic acid or other etching cleaner. Flush the floor with clean water to remove acid, neutralize with ammonia, vacuum, rinse and allow drying before painting.
- E. Steel Substrates: Clean non-galvanized ferrous-metal surfaces that have been shop coated: remove oil, grease, dirt, loose mill scale and other foreign substances. Use solvent or mechanical cleaning methods that comply with recommendations of the Steel Structures Painting Council. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush; clean with solvents recommended by the paint manufacturer, and touch-up with the same primer as the shop coat.
- F. Galvanized-Metal Substrates: Clean galvanized surfaces with non-petroleum-based solvents so the surface is free of oil and surface contaminants. Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints. If galvanized metal is chromate passivated ("bonderized") consult manufacturers for appropriate surface preparation and primers.
- G. Aluminum Substrates: Remove surface oxidation.
- H. Wood Substrates:
  - 1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
  - 2. Sand surfaces that will be exposed to view, and dust off.
  - 3. Prime edges, ends, faces, undersides, and backsides of wood.
  - 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.
  - 5. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately upon delivery.
  - 6. Stripping and refinishing existing wood doors, trim, etc.
    - a. Contractors shall take care to achieve clean and clear surfaces that will take stain uniformly. In some instances bleaching of the wood may be necessary. All

existing varnish and stripping residue shall be removed and the surface neutralized and sanded smooth to assure a smooth and uniform finish.

- I. Plaster Substrates: Do not begin paint application until plaster is fully cured and dry.
- J. Exterior Gypsum Board Substrates: Do not begin paint application until finishing compound is dry and sanded smooth.
- K. Repainting: Prime coats may be omitted with the exception of patched or repaired areas that should be spot-primed to ensure a uniform finish. Special care should be taken in re-coating existing alkyd or epoxy surfaces to prevent inter-coat adhesion failures. Painting of patch and repair work shall be painted out to the nearest break line, including areas in corridors, as directed by the M.S.U. Project Representative.
- L. Paint: Carefully mix and prepare paint materials in accordance with manufacturer's directions. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials or residue. Stir material before application to produce a mixture of uniform density; stir as required during application. Remove any surface film and, if necessary, strain material before using. Do not stir surface film into material. Use only thinners approved by the paint manufacturer and only within recommended limits.
- M. Tinting: Where multiple coats of the same material are applied, tint undercoats to match the color of the finish coat, but in a sufficiently lighter shade to distinguish each separate coat.

### 3.3 APPLICATION

- A. Paint colors, surface treatments, and finishes are indicated in schedules. Provide finish coats that are compatible with primers used.
- B. Before application of finish coats, apply a prime coat of material as recommended by the manufacturer to material that is required to be painted or finished and has not been primed by others. Re-coat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.
- C. Apply materials at not less than the manufacturer's recommended spreading rate. Provide a total dry film thickness of the entire system as recommended by the manufacturer. Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.
- D. Apply paints according to manufacturer's written instructions. Use applicators and techniques best suited for paint and substrate indicated. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
- E. The number of coats and film thickness required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where sanding is required in order to produce an even, smooth surface in accordance with the manufacturer's directions. Sand lightly between each succeeding enamel or varnish coat

- F. Apply first coat to surfaces that have been cleaned, pre-treated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
- G. The term “exposed surfaces” includes areas visible when a permanent or built-in fixture, convector covers, covers for finned tube radiation, grilles, and similar components are in place. Extend coatings in these areas as required to maintain the system integrity and provide desired protection. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, nonspecular black paint. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
- H. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
- I. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.
- J. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance. Give special attention to ensure that surfaces, including edges, corners, crevices, welds and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
- K. All materials will be applied under adequate lighting, evenly spread and flowed on smoothly. Cut in sharp lines and color breaks.
  - 1. Pigmented (opaque) finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance, and overage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, or other surface imperfections will not be acceptable.
  - 2. Transparent (clear) finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, cloudiness, color irregularity, runs, brush marks, orange peel, nail holes, or other surface imperfections. Provide satin finish for final coats.

### 3.4 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

### 3.5 INTERIOR PAINTING SCHEDULE

- A. Concrete and Masonry (other than Concrete Masonry Units):

1. Semi-Gloss Latex Finish:
    - a. Two coats latex semi-gloss over a primer. This system for use on surfaces that are not subject to high abrasion or continuously moist conditions.
      - 1) Prime Coat: Interior 100% Acrylic Primer
      - 2) Intermediate Coat: Latex Based Interior Semi-Gloss Latex Enamel
      - 3) Intermediate Coat: Latex Based Interior Semi-Gloss Latex Enamel
  2. Polyamide Epoxy Gloss Finish:
    - a. Two coats over epoxy sealer, total dry film thickness of the two finish coats not less than 4.0 total mils. This system to be used in all areas that are exposed to chemical attract, constant moisture or frequent washing.
      - 1) Prime Coat: Epoxy Sealer
      - 2) Intermediate Coat: Polyamide Epoxy Gloss
      - 3) Intermediate Coat: Polyamide Epoxy Gloss
- B. Concrete Masonry Units Substrates:
1. Semi-Gloss Latex Enamel Finish:
    - a. Two coats over block filler. This system for use on surfaces that are not subject to high abrasion or continuously moist conditions.
      - 1) Prime Coat: High Performance Latex Block Filler
      - 2) Intermediate Coat: Latex Based Interior Semi-Gloss Latex Enamel
      - 3) Topcoat: Latex Based Interior Semi-Gloss Latex Enamel
  2. Semi-Gloss Alkyd Enamel Finish:
    - a. Two coats over block filler with total dry film thickness not less than 3.5 mils, excluding the block filler.
      - 1) Prime Coat: High Performance Latex Block Filler
      - 2) Intermediate Coat: DTM Alkyd Semi-Gloss Enamel
      - 3) Topcoat: DTM Alkyd Semi-Gloss Enamel
  3. Polyamide Epoxy Gloss Finish:
    - a. Two coats over block filler, total dry film thickness of the two finish coats not less than 4.0 mils. This system to be used in all areas that are exposed to constant moisture or frequent washing.
      - 1) Prime Coat: Severe Duty Two Component Epoxy Block Filler
      - 2) Intermediate Coat: Polyamide Epoxy Gloss
      - 3) Topcoat: Polyamide Epoxy Gloss
- C. Ferrous (and Non-Ferrous, Galvanized, and Aluminum) Metal Substrates:
- a. Semi-Gloss Acrylic System

- 1) Two coats over primer with total dry film thickness not less than 2.5 mils.
  - a) Prime Coat: Acrylic Zinc Metal Primer
  - b) First Coat: DTM Acrylic Semi-Gloss Enamel
  - c) Second Coat: DTM Acrylic Semi-Gloss Enamel

D. Gypsum Drywall Systems:

1. Lusterless (Flat) Emulsion System

- a. Two coats. Flat latex finish with good washability and excellent touch-up characteristics. This system to be used only on ceilings, or on wall surfaces that are above eight feet high.
  - 1) Prime Coat: Interior 100% Acrylic Primer
  - 2) Topcoat: Latex Based Interior Flat Paint

2. Latex Interior Eggshell System

- a. Two coats over primer
  - 1) Prime Coat: Interior 100% Acrylic Primer
  - 2) Intermediate Coat: Latex Based Interior Eggshell Enamel
  - 3) Topcoat: Latex Based Interior Eggshell Enamel

3. Latex Interior Semi-Gloss System

- a. Two coats over primer
  - 1) Prime Coat: Interior 100% Acrylic Primer
  - 2) Intermediate Coat: Latex Based Interior Semi-Gloss Latex Enamel
  - 3) Topcoat: Latex Based Interior Semi-Gloss Latex Enamel

4. Odorless Acrylic Enamel Semi-Gloss System

- a. Three coats with total dry film thickness not less than 2.5 mils.
  - 1) Prime Coat: Interior 100% Acrylic Primer
  - 2) Intermediate Coat: DTM Acrylic Semi-Gloss Enamel
  - 3) Topcoat: DTM Acrylic Semi-Gloss Enamel

5. Polyamide Epoxy Gloss System

- a. Two coats over Interior 100% Acrylic Primer, total dry film thickness of the two finish coats not less than 2.5 mils. This system to be used for drywall and plaster surfaces that are exposed to constant moisture or frequent washing.
  - 1) Prime Coat: Interior 100% Acrylic Primer
  - 2) Intermediate Coat: Polyamide Epoxy Gloss
  - 3) Topcoat: Polyamide Epoxy Gloss

E. Plaster Systems:



1. Lusterless (Flat) Emulsion System
    - a. Two coats. Flat latex finish with good washability and excellent touch-up characteristics. This system to be used only on ceilings, or on wall surfaces that are above eight feet high.
      - 1) Prime Coat: Interior 100% Acrylic Primer
      - 2) Finish Coat: Latex Based Interior Flat Paint
  2. Latex Interior Eggshell System
    - a. Two coats over primer
      - 1) Prime Coat: Interior 100% Acrylic Primer
      - 2) Intermediate Coat: Latex Based Interior Eggshell Enamel
      - 3) Topcoat: Latex Based Interior Eggshell Enamel
  3. Latex Interior Semi-Gloss System
    - a. Two coats over primer
      - 1) Prime Coat: Interior 100% Acrylic Primer
      - 2) Intermediate Coat: Latex Based Interior Semi-Gloss Latex Enamel
      - 3) Topcoat: Latex Based Interior Semi-Gloss Latex Enamel
  4. Polyamide Epoxy Gloss System
    - a. Two coats over Interior 100% Acrylic Primer, total dry film thickness of the two finish coats not less than 4.0 mils. This system to be used for drywall and plaster surfaces that are exposed to constant moisture or frequent washing.
      - 1) Prime Coat: Interior 100% Acrylic Primer
      - 2) Intermediate Coat: Polyamide Epoxy Gloss
      - 3) Topcoat: Polyamide Epoxy Gloss
- F. Woodwork and Hardboard System:
1. Semi-Gloss Enamel Finish:
    - a. Three coats
      - 1) Undercoat: Acrylic Enamel Undercoat
      - 2) First Coat: DTM Acrylic Semi-Gloss Enamel
      - 3) Second Coat: DTM Acrylic Semi-Gloss Enamel
- G. Stained Woodwork System:
1. Three finish coats over stain
    - a. Stain Coat: Oil-Type Interior Wood Stain
    - b. First Coat: Interior Waterborne Urethane Satin
    - c. Second Coat: Interior Waterborne Urethane Satin

d. Third Coat: Interior Waterborne Urethane Satin

H. Problem Areas:

1. Glazed Tile, Ceramic, Porcelain, Tile, Glass, and Marble
  - a. First Coat: Acrylic Bonding Primer
  - b. Second Coat and Top Coat (required): Use appropriate systems as specified.
2. Damp Areas, Boiler Rooms, etc./ Pipes, Concrete, Walls, and Ceilings
  - a. First Coat: Acrylic Moisture Bond Primer
  - b. Second Coat: Acrylic Moisture Bond Enamel
3. Commercial Kitchens, Public Restrooms, Animal Care Areas, Shower Rooms, etc. Areas where high abuse and daily cleaning occur.
  - a. Primer/First Coat:
    - 1) Masonry surfaces: Severe Duty Two Component Epoxy Block Filler
    - 2) Plaster and Drywall Surfaces: Interior 100% Acrylic Primer
  - b. Second and third coats: Acrylic Epoxy Gloss or Polyamide Epoxy Gloss
4. Handicap ramps, steps, areas where anti-slip coatings may be required:
  - a. Surface preparation: Acid-etch concrete if required. Prime if previously painted.
  - b. First Coat: Epoxy Modified Acrylic Anti-slip Coating
  - c. Second Coat: Epoxy Modified Acrylic Anti-slip Coating

END OF SECTION 099123