

SECTION 099100 - PAINTING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
1. Provide all material, labor, equipment and services necessary to furnish and install Painting, accessories and other related items necessary to complete the Project as indicated by the Contract Documents unless specifically excluded.
 - a. Material and Equipment to be Painted: Paint all piping, unwrapped ductwork, electric conduits exposed to view. Prime and paint all factory finished mechanical and electrical equipment and accessories exposed to view.
 - b. Material and Equipment not to be Painted: Do not paint piping, ductwork, equipment and machinery located in attic spaces, above furred or suspended ceilings, in furred pipe or duct spaces. Do not paint factory finished equipment or machinery located in mechanical rooms or mechanical buildings, attics, furred or suspended ceilings.
- B. Related Sections: The following Project Manual Sections contain requirements that relate to this section:
1. ALL DIVISION 00 SPECIFICATION SECTIONS.
 2. ALL DIVISION 01 SPECIFICATION SECTIONS.

1.2 REFERENCES

- A. Standards:
1. In accordance with the following standards:
 - a. CA-CHPS California High Performance Schools
 - 1) 2011-CA-CHPS Addendum.
 - b. MPI Master Painters Institute
 - 1) MPI - Architectural Painting Specification Manual.
 - 2) MPI – Maintenance Repainting Manual.
 - a) MPI RSP Master Painters Institute Repaint Surface Preparation Standards, Chapter 6, Section 2.
 - 3) MPI – Glossary.
 - c. PDCA Painting and Decorating Contractors of America, latest edition of the Architectural Specification Manual, as prepared by Specification Services, Inc., Washington State Council of the PDCA.

1.3 DEFINITIONS

- A. The following definitions are just some of the more important definitions used within this section, and were taken from the MPI Glossary Manual, or used to simplify language used by the Architect. These definitions and others stated within the Manual apply for this Specification Section.

1. Acrylic Latex An aqueous dispersion of acrylic resins.
2. Acrylic Resin A/R - Synthetic resins made by polymerizing esters of acrylic acid.
3. A/U Aliphatic Urethane
4. A/A/U Aliphatic Acrylic Urethane
5. Blocking Sticking or bonding together of two painted surfaces that are in direct contact. Most often caused by stacking painted articles before dry or reaching a "block free" (or "non-blocking") stage.
6. DFT Dry Film Thickness – the depth or thickness of a coating in the dry state. Expressed in mils (1/1000 inch) or microns.
7. DRY FALL A Fog Paint designed to be applied by spray and dries fast enough that the overspray will be a dry powder after falling a certain distance. The dust can then be swept or vacuumed up.
8. ODFT "Overall Dry Film Thickness" – the depth or thickness of a complete coating system in the dry state. Expressed in mils (1/1000 inch) or microns.

1.4 SUBMITTALS

A. Submit in accordance with Specification Section - SUBMITTAL PROCEDURES:

1. Product Data.
 - a. Submit manufacturer's full color range (including any standard, premium and custom colors) for selection by the Architect.
 - b. Material Safety Data Sheets –will be turned over to the Owner in compliance with local rules and regulations, but will not be reviewed.
 - c. Materials Lists:
 - 1) Format in accordance with Article in this section titled "Paint Finish Schedule".
 - d. Additional submittals to substantiate proposed equivalent systems.
2. Samples.
 - a. Brushouts: In accordance with Specification Section - SUBMITTAL PROCEDURES.
 - b. For each color and finish selected provide paint brushouts showing color tint graduation of each coat to and including the final color coat.
 - 1) Selected colors and finishes:
 - a) Size: 8 1/2" x 11" boards.
 - b) Quantity: 3 boards of each color and finish.
 - c) Board material wherever possible and for transparent finishes shall be same as material to be finished. Opaque finishes may be on heavy card stock.
3. Closeout Submittals in accordance with the following:
 - a. Maintenance Data in accordance with Specification Section - PROJECT CLOSEOUT.
 - b. Project Documents in accordance with Specification Section - PROJECT DOCUMENTS.
 - c. Warranty in accordance with Specification Section - WARRANTIES.

1.5 QUALITY ASSURANCE

A. Qualifications:

1. Material Qualifications:

- a. Where possible (except for specified materials), paint materials shall be products of only one manufacturer.
 - b. All materials, preparation and workmanship shall conform to requirements of the specified edition of the Architectural Painting Specification Manual by the Master Painters Institute (hereafter referred to as the MPI Painting Manual), unless otherwise indicated.
 - c. Flame Spread Ratings in accordance with ASTM E 84 "Standard Test Method for Surface Burning Characteristics of Building Materials":
 - 1) Paint finishes in required exit stairways, corridors and exitways must meet flame spread ratings as required by regulatory agencies.
 - 2) Class A - Tunnel Test 0-25 for enclosed required exit stairways and other exit ways.
 - 3) No interior paint or wall finish will be permitted having a tunnel test in excess of 200. All paint materials must be certified that materials meet these requirements.
 - d. Manufacturer's Written Instructions - One for the Architect, Contractor and the Owner:
 - 1) Submit three (3) copies of manufacturer's written instructions.
 - e. Compatibility:
 - 1) Paint materials and equipment shall be compatible in use.
 - 2) Finish coats shall be compatible with prime coat.
 - 3) Prime coats shall be compatible with surface to be coated.
 - 4) Tools and materials shall be compatible with coating to be applied.
 - f. Air Quality:
 - 1) Paint materials and equipment used for application will comply with CARB Air Quality Control Standards in effect at the Project Site and at the time of application.
2. Installer Qualifications:
- a. Engage an experienced Installer who has successfully completed three (3) projects of similar scope and size to that indicated for this Project.
 - 1) Only qualified journeypersons, as defined by local jurisdiction, shall be engaged in painting and decorating work. Apprentices may be employed provided they work under the direct supervision of a qualified journeyperson in accordance with trade regulations.
3. Manufacturer/Supplier Qualifications:
- a. Firm experienced in successfully producing/supplying products similar to that indicated for this Project, with sufficient production/supply capacity to produce/supply required units without causing delay in the work.
- B. Regulatory Requirements:
- 1. In accordance with Specification Section - REGULATORY REQUIREMENTS, and the following:
 - a. CAL/OSHA California/Occupational Safety and Health Act
 - b. CARB Materials and equipment used for this Project shall comply with the current applicable regulations of the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA), in the area where the project is located.
 - c. CBC California Building Code (CBC 803.1.1)

C. Meetings:

1. Pre-Installation: Scheduled by the Contractor prior to the start of work.
 - a. Coordinate the work with all other related work.
 - b. Identify any potential problems that may impede planned progress and proper installation of work regarding quality of installation and warranty requirements.
2. Progress: Scheduled by the Contractor during the performance of the work.
 - a. Review for proper installation of work progress.
 - b. Identify any installation problems and acceptable corrective measures.
 - c. Identify any measures to maintain or regain project schedule if necessary.
3. Completion: Scheduled by the Contractor upon proper completion of the work.
 - a. Inspect and identify any problems that may impede issuance of warranties and guaranties.
 - b. Maintain installed work until the Notice of Substantial Completion has been executed.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site:

1. Products must be in manufacturer's original unopened containers with labels indicating brand name, model, and grade.
2. Damaged products will not be accepted.

B. Storage and protection:

1. Products shall be stored above ground on level platforms, six (6) inches above ground, allowing air circulation under stacked units, in a locked, clean and neat, well ventilated area.
 - a. All receiving, opening and mixing shall be done in this area.
 - b. Oily rags and waste shall be removed from area each night and all other precautions shall be taken to avoid danger of fire.
 - c. Empty containers shall not be removed from site, unless otherwise approved by the Architect.
 - d. Cover materials with protective waterproof covering providing for adequate air circulation and ventilation.

1.7 PROJECT CONDITIONS

A. Environmental requirements:

1. Rain or Fog:
 - a. No work under this section shall be started or maintained under threat of rain.
 - b. Surfaces shall be painted only when they are free from moisture.
 - c. No painting of exterior surfaces shall be done less than 72 hours of actual drying weather after a rain or during periods of dew or fog.
 - d. Perform no painting or decorating work when the maximum moisture content of the substrate exceeds:
 - 1) 12 percent for concrete and masonry (clay and concrete brick / block).
 - 2) 15 percent for wood.
 - 3) 12 percent for plaster and gypsum board.

- e. Perform no painting or decorating work when the relative humidity is above 85 percent or when the dew point is less than 5 degrees F variance between the air / substrate temperature.
2. Temperature: No painting shall be done when ambient air and substrate temperatures are below 50 degrees F.
3. Alkalinity: An alkali level of between 7.0 and 8.5 pH is suitable for painting. Any reading above that level, then the surface shall be neutralized as required for the surface to be painted.
 - a. Methods shall be consistent with MPI - Architectural Painting Specification Manual, and shall not result in any adverse condition causing inadequate adhesion, improper curing and drying, or durability of paint system.
4. No exterior painting shall be done during winds or dusty conditions.
5. Perform no exterior painting and decorating work unless environmental conditions are within MPI and paint manufacturer's requirements or until adequate weather protection is provided.
 - a. Where required to meet project schedules, suitable weatherproof covering and sufficient heating facilities shall be in place to maintain minimum ambient air and substrate temperatures for 24 hours before, during and after paint application.
6. Perform no interior painting or decorating work unless adequate continuous ventilation and sufficient heating facilities are in place to maintain minimum ambient air and substrate temperatures above minimum requirements for 24 hours before, during and after paint application.
 - a. Where required to meet project schedules, provide supplemental ventilating and heating equipment if ventilation and heating from existing system is inadequate to meet minimum requirements.

B. Existing Conditions:

1. Examine site and compare it with the drawings and specifications. Thoroughly investigate and verify conditions under which the work is to be performed. No allowance will be made for extra work resulting from negligence or failure to be acquainted with all available information concerning conditions necessary to estimate the difficulty or cost of the work.
2. Concrete and masonry surfaces shall be installed at least 28 days prior to painting and decorating work and shall be visually dry on both sides.
3. Conduct all moisture tests using a properly calibrated electronic Moisture Meter, except test concrete floors for moisture using a simple cover patch test.
4. Test concrete, masonry and plaster surfaces for alkalinity as required.
5. Contractor shall provide a minimum lighting level of 323 Lux (30 foot candles) on surfaces to be painted or decorated.

1.8 WARRANTY

A. Contractor's General Warranty:

1. In accordance with Specification Section - WARRANTIES.
 - a. Original adherence of all materials and no evidence of any surface defect shall be maintained during warranty period.
 - b. Color at end of warranty period shall remain free from serious fading and any discernible variations shall be uniform.

B. Manufacturer's Warranty:

1. In accordance with manufacturer's written standard warranty:
2. Provide Paint Manufacturer's special ten (10) year Material Warranty co-endorsed by the installer for exterior paint application of cement plaster surfaces.
 - a. Warranty period: Ten (10) Years.
3. Provide Water-Repellent Manufacturer's special Weatherproofing Warranty co-endorsed by the installer for exterior sealer application of concrete or concrete block surfaces.
 - a. Warranty period: Ten (10) Years.

C. Installer's Warranty:

1. Paint Installer's Warranty:
 - a. Installer will certify that a Paint Manufacturer's Representative tested the substrate according to Paint Manufacturer's standard procedures and have submitted project information and test patch forms.
 - b. Installer shall certify that Paint Manufacturer's products were installed on the structure in accordance with manufacturer's specification requirements.
 - c. Installer further agrees that if installer fails to fulfill their obligation under this certification statement within 30 days notice of the complaint, Paint Manufacturer may proceed with the investigation and repairs and shall pay the entire material cost, providing it wasn't the installer's responsibility.
2. Water-Repellent Installer's Warranty:
 - a. Warranty period: Two (2) Years.
 - b. Installer will certify that a Water-Repellent Manufacturer's Representative tested the substrate according to Water-Repellent Manufacturer's standard procedures and have submitted project information and test patch forms.
 - c. Installer shall certify that Water-Repellent Manufacturer's products were installed on the structure in accordance with manufacturer's specification requirements.
 - d. Installer agrees:
 - 1) Investigate all complaints of leakage and/or water absorption on surfaces to which Water-Repellent Manufacturer's weatherproofing products were applied and provide a written report of the cause to Water-Repellent Manufacturer within thirty (30) days of the complaint.
 - 2) Re-apply Water-Repellent Manufacturer's weatherproofing products according to Water-Repellent Manufacturer's standard procedures at installer's cost for labor and material if the leakage and/or water absorption is due to improper surface preparation, application and/or improper use of material.
 - 3) Request authority from Water-Repellent Manufacturer to re-apply Water-Repellent Manufacturer's weatherproofing products at Water-Repellent Manufacturer's expense to areas, which were not rendered hydrophobic due to imperfect weatherproofing materials.
 - e. Installer further agrees that if installer fails to fulfill their obligation under this certification statement within 30 days notice of the complaint, Water-Repellent Manufacturer may proceed with the investigation and repairs and shall pay the entire cost, providing it wasn't the installer's responsibility.

1.9 MAINTENANCE

A. Extra Materials:

1. Quantity: 10 percent of quantity needed to paint Project, but not to exceed one gallon, of each type and color of finish coat used.

2. Identification: At project completion, provide an itemized list complete with manufacturer, paint type and color coding for all colors used, and locations within the Project for Owner's later use in maintenance.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. These products listed herein establish the size, pattern, color range and function selected by the Architect for this Project. Manufacturers that are listed as acceptable alternative manufacturers and substitutions must still comply with the requirements of this project and the products listed in order to be approved as an equivalent during the Submittal Process. If the acceptable alternative manufacturers listed or substitutions are not approved during the Submittal Process due to non-compliance with the contract documents, then the Contractor shall submit product specified.
 1. Specified paint coating product manufacturer, or approved equivalent:
 - a. KELLY MOORE PAINTS and PPG PAINTS.
 - 1) Composed of the following companies: AMERITONE PAINT, DECRATREND, DEFT, DEVOE COATINGS, DEVOE PAINT, FLOOD WOOD CARE, FULLER O'BRIEN, GLIDDEN, and SINCLAIR PAINT.
 - 2) This specification is based on KELLY MOORE PAINTS and PPG PAINTS. Merced College prefers KELLY MOORE PAINTS as their providers of choice.
 - b. Also specified: GEMINI and MONOPOLE.
 2. Specified water-borne Alkyltrialkoxo Silane water repellent product manufacturer, or approved equivalent:
 - a. EVONIK DEGUSSA CORPORATION.
 3. Specified Graffiti coating manufacturer, or approved equivalent:
 - a. Sacrificial:
 - 1) VISUAL POLLUTION TECH, INC.
 - b. Non-sacrificial:
 - 1) BASF HYDROZO.
 - 2) EVONIK DEGUSSA CORPORATION.
 - 3) THIS STUFF WORKS - TSW
 4. Specified Intumescent Paint Manufacturer, or approved equivalent:
 - a. ISOLATEK INTERNATIONAL
 5. Specified High Gloss Epoxy Pool Paint and Primer Manufacturer, or approved equivalent:
 - a. RAMUC.
- B. Products from other manufacturers not listed must submit in accordance with Specification Section - SUBSTITUTION PROCEDURES.

2.2 MATERIALS

- A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

1. Shop Primers or Coil-Coated Primers: It shall be assumed that all Shop Primed or Coil-Coated primed metals do not meet the requirements for primer material and mil thickness as defined herein. As such, all Shop Primed or Coil-Coated primed metals shall be field primed as indicated in the schedule.
- B. Material Quality: Provide manufacturer's best-quality coating material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
1. All materials used shall be lead and mercury free and shall have low VOC content to meet the applicable CARB standards in the area where the Project is located.
 2. All paint materials shall have good flowing and brushing properties and shall dry or cure free of blemishes, sags, air entrapment, etc.
 3. All Water-Repellant Coatings shall comply with the following:
 - a. Provide Alkyltrialkoxo Silane combination with a ratio concentration and application procedure as recommended by the manufacturer with the ability to cover in one or more applications for a ten year warranty in accordance with the following substrates:
 - 1) Thin Brick.
 - 2) Concrete.
 - 3) Concrete Masonry Units
 - 4) Split-Faced Concrete Masonry Units.
 - b. Color: Clear.
 - c. Active Substance: Alkyltrialkoxo Silane.
 - d. Active Content: 100 percent.
 - e. Solvent: Water.
 - f. Flash Point (Concentrate): 93 degrees F.
 - g. Flash Point (Mixed): 200 degrees F.
 - h. Density: 7.77 lbs./gallon.
 - i. VOC (19:1): 50 g/liter (Maximum).
 - j. VOC (9:1): 100 g/liter (Maximum).
 - k. VOC (6:1): 200 g/liter (Maximum).
 4. All Bituminous Paint:
 - a. Shall comply with Cold-Applied Asphalt-Mastic paint complying with SSPC-Paint 12 requirements, except containing no asbestos, formulated for 30-mil thickness per coat.

2.3 MIXES

- A. Mixing and Tinting:
1. Unless otherwise specified herein or pre-approved, all paint shall be ready-mixed and pre-tinted at the factory. Re-mix all paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and color and gloss uniformity.
 2. Paste, powder or catalyzed paint mixes shall be mixed in strict accordance with manufacturer's written instructions.
 3. Where thinner is used, addition shall not exceed paint manufacturer's written recommendations.
 4. Do not use kerosene or any such organic solvents to thin water-based paints.

5. Thin paint for spraying in strict accordance with paint manufacturer's written instructions. If directions are not on the container, obtain instructions in writing from the manufacturer and provide one copy of instructions to the Project Inspector.

2.4 FINISHES

A. Finish Colors:

1. Unless otherwise specified herein, all painting work shall be in accordance with MPI Premium Grade finish requirements as a minimum.
2. Determined by Architect prior to or as work progresses.
 - a. Colors to be selected from paint manufacturer's full color systems, including standard, premium and custom colors.
3. When deep or 'Ultra colors' are selected, submit to Architect proposed revision to specified system product numbers, according to manufacturer's written recommendations.
 - a. When deep or ultra colors are selected for use on walls or special color treatments such as graphics or many color changes are desired, the areas and extent of use will be clarified upon request of the Contractor.
4. Gloss standards, in accordance with MPI standards, using the ASTM D 523 "Test for Specular Gloss", are as follows:

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

PART 3 - EXECUTION

3.1 EXAMINATION

A. Site verification of conditions:

1. Prior to the execution of the work under this specification section, inspect the installed work executed under other sections of this Project Manual that affects the execution of work under this specification section.
 - a. Thoroughly examine (and test as required, if necessary) all conditions and surfaces to be painted and report in writing to the Contractor and the Architect any conditions or surfaces that will adversely affect the work of this section.
 - b. The Installer is responsible for verifying the compatibility of items primed by others and the finish coat or coats required by the Contract Documents. Should an incompatibility occur, the Installer (along with the manufacturer's technical representative) will recommend compatible alternatives for the Architect's approval.

2. Report unacceptable conditions to the Architect. Do not begin work until unacceptable conditions have been corrected.
3. Execution of work under this specification section shall constitute acceptance of existing conditions.

3.2 PREPARATION

A. Protection before Application:

1. Protect all adjacent surfaces from drips, spray, air pollution of surrounding environment, and other damage from work under this specification section.
2. Removal of Hardware and Miscellaneous Items:
 - a. Coordinate the work with other trades so that they remove electrical outlet and switch plates, mechanical diffusers, escutcheons, registers, surface hardware, fittings, fastenings, and the like prior to starting work under this Section.
 - b. Store during painting work. Coordinate cleaning and reinstallation after painting work is finished.
 - c. Do not use solvent or cleaning agents detrimental to permanent finishes.
 - d. Remove doors before painting to paint bottom and top edges, and then re-hang.
3. Protect adjacent surfaces against damage from painting operations. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
 - a. Protective means include: Drop cloths, shields, masking templates, etc.
 - b. Exterior surfaces include: landscaping, walks, drives, adjacent building surfaces, glazing, aluminum surfaces, etc.
 - c. Interior surfaces include: rating and instruction labels on doors, frames, equipment, piping, etc.

B. Surface preparation:

1. General:
 - a. In accordance with MPI Standards.
 - b. Surfaces to be finished shall be clean, dry and free of dirt, passivators, oils, loose paint and any other contamination that would adversely affect adhesion, protective properties or appearance of the coating.
 - c. All oil, grease, dirt or other foreign matter shall be removed by washing with a solution of cleaner and water, rinse and allow to dry.
 - d. If efflorescence, alkali or glazed surfaces exist, neutralize with acid wash followed by thorough water rinsing.
 - 1) Protect all adjacent substrates or materials that could be affected by acid washing or water rinsing. Collect all washing & rinsing residue and dispose of away from structures.
2. Wood Substrates - (New and Repaint Surfaces):
 - a. Interior Surfaces: MPI Interior Surface Preparation, Chapter 3, Section 3.
 - b. Exterior Surfaces: MPI Exterior Surface Preparation, Chapter 2, Section 3.
 - c. Fill holes and other imperfections with putty or plastic wood to match natural finish before and after application of prime or seal coat.
 - d. Provide necessary extra treatment over knots, pitch pockets, sappy portions and other defects to produce a proper base for painting.
 - e. Sand down raised grain or rough surfaces.
 - f. Clean surfaces free of dust, soil and other foreign material.
3. Plaster Substrates - (New and Repaint Surfaces):

- a. Interior Surfaces: MPI Interior Surface Preparation, Chapter 3, Section 3.
 - b. Exterior Surfaces: MPI Exterior Surface Preparation, Chapter 2, Section 3.
 - c. Clean surfaces of dirt, laitance, excess mortar and foreign matter.
 - d. Neatly patch, flush and smooth, minor cracks, holes, pits and other imperfections in plaster or concrete surfaces.
4. Concrete Substrates - (New and Repaint Surfaces):
- a. Interior Surfaces: MPI Interior Surface Preparation, Chapter 3, Section 3.
 - b. Exterior Surfaces: MPI Exterior Surface Preparation, Chapter 2, Section 3.
 - c. Clean surfaces of dirt, laitance, excess mortar and foreign matter.
 - d. Neatly patch, flush and smooth, minor cracks, holes, pits and other imperfections in plaster or concrete surfaces.
5. Metal Substrates - (New and Repaint Surfaces):
- a. Interior Surfaces: MPI Interior Surface Preparation, Chapter 3, Section 3.
 - b. Exterior Surfaces: MPI Exterior Surface Preparation, Chapter 2, Section 3.
 - c. Shop Primed or Factory Primed Surfaces:
 - 1) Shop Primed or Factory Primed Surfaces are considered "un-primed" due to their mil thicknesses provided, and common incompatibility issues with specified coating system; and are suitable only for protection during transit (shipment and storage) until incorporated into the Project.
 - 2) Remove dust, oil and rust.
 - 3) Sand surface lightly.
 - 4) Touch up imperfections, scratches, surface damage, etc. with the appropriate primer.
 - 5) Field connection welds, soldered joints, burned and abraded portions shall be spot primed with the appropriate primer.
 - d. Coil-Coated Product Surfaces:
 - 1) Coil-Coated Product Surfaces are considered "un-primed" due to their mil thicknesses provided, and the common incompatibility issues with specified coating system; and are suitable only for protection during shipment and storage until incorporated into the Project.
 - 2) Remove dust, oil and rust.
 - 3) Touch up imperfections, scratches, surface damage, etc. with the appropriate primer.
 - 4) Field connection welds, burned and abraded portions shall be spot primed with the appropriate primer.
 - 5) Field apply manufacturer's written recommended primer coat over entire surface compatible with substrate finish and finish coats indicated on the paint schedule.
 - e. Un-primed Surfaces:
 - 1) Remove dust, rust, mill scale, grease and foreign matter by sand blasting or wire brushing.
 - 2) Surfaces to be smooth and ready to receive coatings.
 - f. Non-Ferrous Metal, Galvanized, Aluminum, and Copper Surfaces:
 - 1) Metal Etch and Solvent Clean per SSPC-SP 1 or clean with TSP or other appropriate cleaner followed by thorough water rinsing.
 - 2) Brush Blast to standards of SSPC-SP 16, or if blasting is not feasible, sand thoroughly, wipe clean and apply a test patch for the coating specified.
 - 3) Allow system to cure at least one week, then test adhesion per ASTM D 3359 "Standard Test Methods for Measuring Adhesion by Tape Test".
6. Concrete Block Surfaces - (New and Repaint Surfaces):
- a. Interior Surfaces: MPI Interior Surface Preparation, Chapter 3, Section 3.

- b. Exterior Surfaces: MPI Exterior Surface Preparation, Chapter 2, Section 3.
- c. Clean and free of all dirt, dust, rust, oil and free from all foreign matter.
- d. Test for moisture content.
 - 1) Do not coat if moisture is present.
 - 2) Concrete Blocks to be thoroughly dry and cured prior to coating.
- e. Do not coat Masonry wall if joints are not properly pointed, has excessive mortar drippings cracked units or shows signs of excessive efflorescence.
 - 1) Notify Architect promptly through General Contractor.
 - 2) Do not coat until unsatisfactory and unacceptable Concrete Block surfaces are corrected suitable for coating.
- f. Do not apply opaque finishes to Concrete Block with airless sprayer unless "backrolled".

3.3 APPLICATION

A. Standards:

1. In accordance with MPI Painting Manual.
2. In accordance with manufacturer's specifications.

B. Method:

1. Apply by brush, roller or spray in accordance with MPI Painting Manual and the coating manufacturer's written recommendations except where specified otherwise in Schedule of Paint Finishes.
2. Painting of doors by rollers shall only be allowed only if the applicator uses a 1/4 inch nap or less roller.

C. Coatings:

1. All coatings shall be applied without reduction except as specifically required by label directions, or required to be reduced by this Specification. In such cases, reduction shall be the minimum permitted and shall not exceed VOC limits.
2. Apply each coat evenly and allow each coat to dry prior to applying succeeding coats. Each coat to have enough consistency to conceal work to which it is applied.
 - a. Follow manufacturer's recommendations for recoat windows when using high performance coatings, epoxies, and urethanes.
3. Cut into a true line and leave smooth and clean without overlapping. Coat doors and windows in open position.
4. Sand finishes on smooth surfaces to assure proper adhesion of subsequent coats.
5. Tint each undercoat a lighter shade to facilitate identification of each coat, if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
6. Apply coating systems so as to obtain not less than the dry film mil thickness recommended by the manufacturer.
7. Sand metal work only as necessary to provide for the complete bonding of coats.
8. Project Inspector to inspect and approve each coat and operation before succeeding coats are applied.
9. Finish work to be free from runs, sags, defective application and improper workmanship.
10. Back prime all woodwork and casework coming in contact with plaster, masonry or concrete immediately upon delivery to project.
11. Post sign promptly following application of coatings.

3.4 FIELD QUALITY CONTROL

- A. All surfaces, preparation and paint applications shall be inspected by the Project Inspector:
1. Painted exterior and interior surfaces shall be considered to lack uniformity and soundness if any of the following defects are apparent to the Painting Inspection by the Project Inspector:
 - a. Brush / Roller marks, streaks, laps, runs, sags, drips, heavy stippling, hiding or shadowing by inefficient application methods, skipped or missed areas, and foreign materials in paint coatings.
 - b. Evidence of poor coverage at rivet heads, plate edges, lap joints, crevices, pockets, corners and re-entrant angles.
 - c. Damage due to touching before paint is sufficiently dry or any other contributory cause.
 - d. Damage due to application on moist surfaces or caused by inadequate protection from the weather.
 - e. Damage and / or contamination of paint due to blown contaminants (dust, spray paint, etc.).
 2. Painted surfaces shall be considered unacceptable if any of the following are evident under natural lighting source for exterior surfaces and final lighting source (including daylight) for interior surfaces:
 - a. Visible defects are evident on vertical surfaces when viewed at normal viewing angles from a distance of not less than 39 inches.
 - b. Visible defects are evident on horizontal surfaces when viewed at normal viewing angles from a distance of not less than 39 inches.
 - c. Visible defects are evident on ceiling, soffit and other overhead surfaces when viewed at normal viewing angles.
 - d. When the final coat on any surface exhibits a lack of uniformity of color, sheen, texture, and hiding across full surface area.
 3. Painted surfaces rejected by the Project Inspector shall be made good at the expense of the Contractor. Small affected areas may be touched up; large affected areas or areas without sufficient dry film thickness of paint shall be repainted. Runs, sags of damaged paint shall be removed by scraper or by sanding prior to application of paint.

3.5 CLEANING

- A. Clean in accordance with Specification Section - TEMPORARY FACILITIES AND CONTROLS and PROJECT CLOSEOUT.
1. Remove all paint where spilled, splashed, splattered or sprayed as work progresses using means and materials that are not detrimental to affected surfaces.
 2. Keep work area free from unnecessary accumulation of tools, equipment, surplus materials and debris.
 3. Remove combustible rubbish materials and empty paint cans each day and safely dispose of same in accordance with requirements of authorities having jurisdiction.
 4. Clean equipment and dispose of wash water / solvents as well as all other cleaning and protective materials (e.g., rags, drop cloths, masking papers, etc.), paints, thinners, paint removers / strippers in accordance with the safety requirements of authorities having jurisdiction in the place where the Project is located.
 5. Protect and safeguard work of other trades.

3.6 PROTECTION

- A. Protection from Weather:
 - 1. Protect newly installed work from moisture for a period of time as recommended by the manufacturer after application.
- B. Protection from Traffic:
 - 1. Erect barriers or screens and post signs to warn of or limit or direct traffic away or around work area as required.
- C. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer, which ensures the work of this section being without damage or deterioration until the time of Substantial Completion.

3.7 SCHEDULES

- A. Refer to Exterior Finish Schedules for applicable finishes used. This is a guide only and paint sub-contractor is responsible to check all drawings and be responsible for all paint work required to cover the complete painting and finishing of the interior and exterior including specialty items.
- B. It is the intent of the specifications and drawings to cover the complete painting and finishing of the Project whether or not it is specifically called for in the Specifications, Schedule of Paint Finishes, or indicated on the Drawings. Surfaces not specified in Paint Finishes Schedule shall be in accordance with manufacturer's written recommendations.
 - a. The following schedule was compliant with CARB Air Quality Standards at press time.
 - 1) Inform the Architect of any changes caused by stricter Air Quality Standards as part of the submittal process.
 - 2) Provide products compliant with CARB Air Quality Standards and Local Air Quality Control District requirements at the time of installation.
- C. Exception: When the Project involves remodel work, the scope of work is limited to the remodel area and adjacent existing substrates to minimize visible color incompatibility.
- D. Provide coating system minimum ODFT specified.
 - 1. Provide DFT per coat specified.
 - a. Do not apply thicker coats than specified to achieve ODFT. Apply additional coats if necessary.
 - 2. "Ultra Color" Note: A fourth and/or fifth coat may be required to achieve uniform chromatic hue without ghosting from undercoat or substrate.
 - a. The Contractor shall consider all Metal Paint Finishes noted "Ultra-color" as requiring as many as five (5) total coats.
- E. EXTERIOR PAINT FINISHES
 - 1. EXTERIOR WOOD
 - a. EW-1 Flat 100 percent Acrylic Minimum ODFT 5.5 MILS.
 - 1) 1st Coat 100 percent Acrylic Primer KM 255 DFT 1.7 mils.
 - 2) 2nd Coat 100 percent Acrylic Flat KM 1200 DFT 1.9 mils.
 - 3) 3rd Coat 100 percent Acrylic Flat KM 1200 DFT 1.9 mils.
 - b. EW-2 Semi-Gloss percent Acrylic Minimum ODFT 5.9 MILS.

- 1) 1st Coat 100 percent Acrylic Primer-KM 255 DFT 1.7 mils.
- 2) 2nd Coat 100 percent Acrylic Semi-Gloss KM 1250 DFT 2.1 mils.
- 3) 3rd Coat 100 percent Acrylic Semi-Gloss KM 1250 DFT 2.1 mils.
- c. EW-3 100 percent Acrylic Resin (A/R) Stain Minimum ODFT 3.0 MILS.
 - 1) 1st Coat 100 percent A/R Stain Coat FLOOD SWF DFT 1.5 mils.
 - 2) 2nd Coat 100 percent A/R Stain Coat FLOOD SWF DFT 1.5 mils.
2. EXTERIOR SOFFIT BOARD
 - a. ESB-1 Lo-Sheen 100 % (A/R)-Heavy Stipple Minimum ODFT 5.9 MILS.
 - 1) 1st Coat 100 percent Acrylic Primer-KM 255 DFT 1.7 mils.
 - 2) 2nd Coat* 100 percent A/R Heavy Stipple 2406G N/A DFT 2.1 mils.
 - 3) 3rd Coat: 100 percent A/R Lo Sheen 2406G N/A DFT 2.1 mils.
 - 4) *Note: 2nd Coat to have medium size aggregate added to achieve heavy stipple texture.
3. EXTERIOR CEMENT PLASTER
 - a. EP-1 Flat 100 percent Acrylic Minimum ODFT 5.5 MILS.
 - 1) 1st Coat 100 percent Acrylic Primer- KM 247 DFT 1.7 mils.
 - 2) 2nd Coat 100 percent Acrylic Flat KM 1200 DFT 1.9 mils.
 - 3) 3rd Coat 100 percent Acrylic Flat KM 1200 DFT 1.9 mils.
 - b. EP-2 Semi-Gloss 100 percent Acrylic Minimum ODFT 9.5 MILS.
 - 1) 1st Coat 100 percent Acrylic Primer-KM 247 DFT 1.5 mils.
 - 2) 2nd Coat 100 percent Acrylic Semi-Gloss KM 1250 DFT 4.0 mils.
 - 3) 3rd Coat 100 percent Acrylic Semi-Gloss KM 1250 DFT 4.0 mils.
 - c. EP-3 Gloss Acrylic Minimum ODFT 9.7 MILS.
 - 1) 1st Coat 100 percent Acrylic Primer-KM 247 DFT 1.7 mils.
 - 2) 2nd Coat Gloss Acrylic PITT-TECH PLUS 90-1310 DFT 4.0 mils.
 - 3) 3rd Coat Gloss Acrylic PITT-TECH PLUS 90-1310 DFT 4.0 mils.
 - d. EP-4 Smooth Elastomeric, Lo Sheen (A/R) Minimum ODFT 11.0 MILS.
 - 1) 1st Coat 100 percent Acrylic Primer-KM 247 DFT 1.7 mils.
 - 2) 2nd Coat Smooth Elastomeric KM 1128 DFT 7.2 mils.
 - a) Spray and Backroll
 - 3) 3rd Coat 100 percent Acrylic Resin Satin KM 1212 DFT 2.1 mils.
 - e. EP-5 Satin Elastomeric, S/G Acrylic/Resin (A/R) Minimum ODFT 9.6 MILS.
 - 1) 1st Coat 100 percent Acrylic Primer-KM 247 DFT 1.7 mils.
 - 2) 2nd Coat KM 1128 Kel-Seal Urethane Elastomeric DFT 5.8 mils.
 - a) Spray and Backroll
 - 3) 3rd Coat 100 percent Acrylic Satin KM 1212 DFT 2.1 mils.
 - f. EP-6 Coarse Elastomeric, Satin (A/R) Minimum ODFT 16.8 MILS.
 - 1) 1st Coat 100 percent Acrylic Primer-KM 247 DFT 1.7 mils.
 - 2) 2nd Coat Elastomeric Finish 2290 N/A DFT 13.0 mils.
 - a) Spray and Backroll
 - 3) 3rd Coat 100 percent Acrylic Satin KM 1212 DFT 2.1 mils.
4. EXTERIOR CONCRETE OR CONCRETE MASONRY UNITS:
 - a. ECB-1 Clear Water Repellent Sealer:
 - 1) One Coat Alkyltrialkoxo Silane:
 - a) EVONIK DEGUSSA "Aqua-Trete®CONCENTRATE".
 - 2) Provide manufacturer's 10 year warranty for Concrete Masonry Units and Split Faced Concrete Masonry Units.
 - b. ECB-2 Flat 100 percent Acrylic Minimum ODFT 10.9 MILS.
 - 1) 1st Coat W/B Acrylic Block Filler KM 521 DFT 7.1 mils.
 - a) Omit at concrete surfaces
 - 2) 2nd Coat 100 percent Acrylic Flat KM 1200 DFT 1.9 mils.

- 3) 3rd Coat 100 percent Acrylic Flat KM 1200 DFT 1.9 mils.
- c. ECB-3 Flat 100 percent Acrylic Minimum ODFT 5.5 MILS.
- 1) 1st Coat 100 percent Acrylic Primer-KM 247 DFT 1.7 mils.
- 2) 2nd Coat 100 percent Acrylic Flat KM 1200 DFT 1.9 mils.
- 3) 3rd Coat 100 percent Acrylic Flat KM 1200 DFT 1.9 mils.
5. EXTERIOR METAL
- a. PRIMER NOTE: Metals shop primed shall be considered "un-primed" and shall be primed with appropriate primer and thicknesses listed below:
- 1) Ferrous Metal, Type 1 Typical:
- a) KM 5725 DTM "Red" Multi-Purpose Metal Primer DFT 3.0 mils.
- 2) Ferrous Metal, Type 2 as specified in Specification Section – STEEL AND FABRICATIONS:
- a) AMERCOAT 68HS Reinforced Inorganic Zinc-Rich Urethane Metal Primer DFT 5.0 mils.
- 3) Ferrous Metal, Type 3 when Urethane is used as a finish:
- a) AMERLOCK 2VOC/400 VOC Epoxy Metal Primer DFT 6.0 mils.
- 4) Non-Ferrous Metal, Type 4 Galvanized Metal or Aluminum:
- a) KM 5725 DTM "White" Multi-Purpose Metal Primer DFT 3.0 mils.
- 5) Non-Ferrous Metal, Type 5 Galvanized Metal or Aluminum, when Urethane is used as a finish.
- a) AMERLOCK 2VOC/400 VOC Epoxy Metal Primer DFT 6.0 mils.
- b. COIL-COATED PRODUCTS NOTE: Metal products primed with coil-coated products are to be assumed to be unprimed products and shall be re-primed as follows:
- 1) Coil-Coated Products:
- a) Field apply manufacturer's recommended primer coat and mil thickness over entire surface compatible with substrate finish and finish coats indicated on paint schedule.
- c. EM-1 Flat 100 percent Acrylic Minimum ODFT 6.8 MILS.
- 1) 1st Coat Primer See primer note above.
- 2) 2nd Coat 100 percent Acrylic Flat KM 1200 DFT 1.9 mils.
- 3) 3rd Coat 100 percent Acrylic Flat KM 1200 DFT 1.9 mils.
- d. EM-2 Semi-Gloss "Ultra Color" 100 percent Acrylic Minimum ODFT 7.2 MILS.
- 1) 1st Coat Primer See primer note above.
- 2) 2nd Coat 100 percent Acrylic Semi-Gloss KM 1215 DFT 2.1 mils.
- 3) 3rd Coat 100 percent Acrylic Semi-Gloss KM 1215 DFT 2.1 mils.
- e. EM-3 Gloss "Ultra Color" 100 percent Acrylic Waterborne Minimum ODFT 11.0 MILS.
- 1) 1st Coat Primer See primer note above.
- 2) 2nd Coat Gloss Acrylic Rust-Oleum Beyond Gloss DFT 4.0 mils.
- 3) 3rd Coat Gloss Acrylic Rust-Oleum Beyond Gloss DFT 4.0 mils.
- f. EM-4 Gloss "Ultra Color" Aliphatic Acrylic Urethane (A/A/U) Finish, Spray Applied, Deep Tone, Custom Color Minimum ODFT 16.0 MILS.
- 1) 1st Coat Primer See primer note above.
- 2) 2nd Coat A/A/U Gloss Color AMERSHIELD VOC DFT 5.0 mils.
- 3) 3rd Coat A/A/U Gloss Color AMERSHIELD VOC DFT 5.0 mils.
- g. EM-5 Gloss "Ultra Color" Aliphatic High Solids Finish, Spray Applied, Deep Tone, Custom Color with clear protective coats Minimum ODFT 18.0 MILS.
- 1) 1st Coat Primer See primer note above.
- 2) 2nd Coat A/A/U Gloss Color AMERSHIELD VOC DFT 3.0 mils.
- 3) 3rd Coat A/A/U Gloss Color AMERSHIELD VOC DFT 3.0 mils.
- 4) 4th Coat A/A/U Gloss Clear AMERSHIELD VOC DFT 3.0 mils.

- 5) 5th Coat A/A/U Gloss Clear AMERSHIELD VOC DFT 3.0 mils.
- h. EM-6 Semi-Gloss "Ultra Color" Aliphatic Urethane (A/U) Finish, Spray Applied, Deep Tone, Custom Color Finish Minimum ODFT 16.0 MILS.
- 1) 1st Coat Primer See primer note above.
- 2) 2nd Coat A/A/U Semi-Gloss AMERCOAT 450HSG A/U DFT 5.0 mils.
- 3) 3rd Coat A/A/U Semi-Gloss AMERCOAT 450HSG A/U DFT 5.0 mils.

F. SPECIALTY PAINT FINISHES:

1. PROVIDE SPECIALTY PAINT FINISHES AS SHOWN OR AS FOLLOWS:

- a. Finish No. X-1: Minimum ODFT 15.0 MILS.
- 1) Lines on Concrete or Asphaltic Concrete Paving Exit and Entrance Signs - 10" width lines, maximum. Reflectorize as required.
- 2) Traffic Paint KM 1472 Traffic Paint DFT 15.0 mils.
- b. Finish No. X-2: Minimum ODFT 15.0 MILS.
- 1) Lines on Walk Top. Colors as selected by Architect.
- 2) Line Paint KM1472 Traffic Paint DFT 15.0 mils.
- c. Finish No. X-3: Minimum ODFT 1.9 MILS.
- 1) Space above Vents or Grilles.
- 2) 1st Coat 100 percent Acrylic Flat Black KM 1240 DFT 1.9 mils.
- d. Finish No. X-4: Minimum ODFT 5.1 MILS.
- 1) Piping Black Steel or Cast Iron.
- 2) 1st Coat Multi-Purpose Metal Primer:
- a) KM 5725 DTM "Red" DFT 3.0 mils.
- 3) 2nd Coat Rust-Oleum Beyond Gloss DFT 2.1 mils.
- e. Finish No. X-5: Minimum ODFT 7.0 MILS.
- 1) Piping Galvanized.
- 2) 1st Coat General Purpose Metal Primer.
- a) KM 5725 DTM "White" DFT 3.0 mils.
- 3) 2nd Coat Gloss Enamel Finish:
- a) Rust-Oleum Beyond Gloss DFT 4.0 mils.
- f. Finish No. X-6: Minimum ODFT 11.0 MILS.
- 1) Machinery and Equipment (Coil Coated Products):
- 2) 1st Coat General Purpose Metal Primer:
- a) KM 5725 DTM "White" DFT 3.0 mils.
- 3) 2nd Coat Rust-Oleum Beyond Gloss DFT 4.0 mils.
- 4) 3rd Coat Gloss Enamel PITT-TECH PLUS 90-1310 DFT 4.0 mils.
- g. Finish No. X-7: Minimum ODFT 7.0 MILS.
- 1) Sheet Metal Ducts:
- 2) 1st Coat General Purpose Metal Primer:
- a) KM 5725 DTM "White" DFT 3.0 mils.
- 3) 2nd Coat 100 percent Acrylic Flat
- a) KM 1200 100% Acrylic Flat DFT 4.0 mils.
- h. Finish No. X-8: Minimum ODFT 7.0 MILS.
- 1) Fire Hydrants:
- 2) 1st Coat General Purpose Metal Primer
- a) KM 5725 DTM "White" DFT 3.0 mils.
- 3) 2nd Coat 100 percent Acrylic Flat
- a) KM 1200 Acrylic Flat DFT 4.0 mils.
- i. Finish No. X-9: Minimum ODFT 6.8 MILS.
- 1) Following items listed will receive Finish No. X-9 (including, but not limited to), Louvers, Grilles, or Access Panels.

- 2) 1st Coat General Purpose Metal Primer:
 - a) KM 5725 DTM "White" DFT 3.0 mils.
- 3) 2nd Coat 100 percent Acrylic Flat KM 1200 DFT 1.9 mils.
- 4) 3rd Coat 100 percent Acrylic Flat KM 1200 DFT 1.9 mils.
- j. Finish No. X-10: Minimum ODFT 1.9 MILS.
 - 1) Striping under Acoustical Board Surrounding Structure:
 - 2) 1st Coat 100 percent Acrylic Flat Black KM 1240 DFT 1.9 mils.
- k. Finish No. X-11: Minimum ODFT 1.9 MILS.
 - 1) Acoustical Board and Exposed Striping and Structural:
 - 2) 1st Coat 100 percent Acrylic Flat Black KM 1240 DFT 1.9 mils.
- l. Finish No. X-12:
 - 1) Minimum ODFT as recommended by graffiti coating manufacturer.
 - 2) Graffiti Coating, non-toxic, liquid, sacrificial wax-based Coating:
 - 3) 1st Coat Graffiti Coating:
 - a) Graffiti-Pruf by VISUAL POLLUTION TECH, INC.
 - 4) 2nd Coat Graffiti Coating:
 - a) Only if recommended by manufacturer for substrate material type.
 - b) Graffiti-Pruf by VISUAL POLLUTION TECH, INC.
- m. Finish No. X-13 (NOT APPLICABLE).
- n. Finish No. X-14 (NOT APPLICABLE).
- o. Finish No. X-15:
 - 1) Clear Graffiti Coating, non-toxic, liquid, multi-polymer, non-sacrificial, single component sealer by BASF, or approved equivalent: One Coat
 - a) **NOTE #1:** Test a small area of the existing substrate in an out-of-the-way spot, as determined by the Architect, for compatibility. Inform the Architect if an incompatibility is found for further direction. If found to be compatible, proceed as follows:
 - 2) 1st Coat Clear, flat matte coat TAGGUARD by BASF.
 - a) **NOTE #2:** Follow manufacturer's recommendations for proper installation over various substrates. Applicator must be certified by the manufacturer as an approved applicator for this product over various substrate materials. Protect at least 24 hours minimum the treated surface until manufacturer's recommended curing time has been achieved against graffiti.
 - 3) REMOVAL COAT TAGGUARD Cleaner.
 - a) **NOTE #3:** Provide remover in small containers equal to 8-16 oz. containers of material for the Owner's use. Instruct the designated representative of the Owner as to proper application of the remover, and all procedures for removing graffiti.
- p. Finish No. X-16: Non-sacrificial, aqueous, silane chemistry, ready-to-use, zero VOC high performance anti-graffiti treatment for masonry, concrete and natural stone, dries clear and will not yellow.
 - 1) Follow manufacturer's printed recommendations prior to use.
 - 2) Do not apply to wet surfaces. If surface is wet, let dry for a minimum of 24 hours prior to application. Do not use if temperature is below 40 degrees F or above 100 degrees F.
 - 3) Protect non-porous surface substrates from overspray. Always do a test patch to confirm the treatment before using to determine if there is any problems prior to full coverage of the porous surfaces.

- 4) Concrete shall be allowed to cure a minimum of 28 days. All pointing or re-pointing shall be completed and allowed to cure for at least 3 days prior to coverage. All patching materials, caulking, sealing materials and traffic paint shall be fully cured before application.
 - 5) 1st Coat Clear, flat matte coat PROTECTOSIL ANTIGRAFFITI.
 - a) 175 to 250 sq. ft. per gallon, diluted by 14 parts of water, using a 1" nap roller.
 - 6) 2nd Coat Clear, flat matte coat PROTECTOSIL ANTIGRAFFITI.
 - a) 175 to 250 sq. ft. per gallon, un-diluted, using a 1" nap roller.
 - 7) 3rd Coat Clear, flat matte coat PROTECTOSIL ANTIGRAFFITI.
 - a) 175 to 250 sq. ft. per gallon, un-diluted, using a 1" nap roller.
 - b) 3rd Coat shall always be figured in as part of the Base Bid. 3rd Coat may be deleted if it is determined by all concerned that the two coats were sufficient to protect the surfaces. If not needed, then figure on a credit back to the Owner.
 - 8) Most graffiti removal can be achieved with standard non-hazardous cleaners and low-pressure waterblasting. Contact manufacturer for stubborn markings for removal.
- q. Finish No. X-17: Non-sacrificial, 100 percent active silane treatment with oleophobic additive, clear penetrating breathable VOC Compliant (400 g/L) surface treatment for use on concrete, brick masonry, concrete masonry units and natural stone.
- 1) For flat (horizontal) concrete walks.
 - a) Manufacturer's printed recommendations for rate of coverage, and type of application method to protect porous surfaces from graffiti and for ease of walk-way clean-up.
 - b) Follow manufacturer's printed recommendations prior to use.
 - c) Do not apply to wet surfaces. If surface is wet, let dry for a minimum of 24 hours prior to application. Do not use if temperature is below 40 degrees F or above 100 degrees F.
 - d) Protect non-porous surface substrates from overspray. Always do a test patch to confirm the treatment before using to determine if there is any problems prior to full coverage of the porous surfaces.
 - e) Concrete surfaces shall be allowed to cure a minimum of 28 days. All pointing or re-pointing shall be completed and allowed to cure for at least 3 days prior to coverage. All patching materials, caulking, sealing materials and paint shall be fully cured before application.
 - 2) 1st Coat Clear, flat matte coat PROTECTOSIL BHN PLUS.
- r. Finish No. X-18: Non-sacrificial, Graffiti Coating, non-toxic, liquid, semi-permanent, acrylic based Coating - Minimum ODFT as recommended by graffiti coating manufacturer.
- 1) For application on sealed surface, including but not limited to CMU scheduled to be sealed, verify compatibility with sealer manufacturer prior to application of Sealer.
 - a) Only if recommended by manufacturer for substrate material type.
 - b) For application on natural porous surface, thin first coat with 40 percent water. All other coats shall be full strength.
 - 2) 1st Coat Graffiti Coating TSW4.
 - 3) 2nd Coat Graffiti Coating TSW4.
 - 4) 3rd Coat Graffiti Coating TSW4.

- 5) 4th Coat Graffiti Coating TSW4.
 - 6) Provide Manufacturer's recommended TSW2G Graffiti Removal Kit.
- s. Finish No. X-19 Intumescent Paint - Minimum ODFT per fire rating required.
- 1) Primer: Per manufacturer's Written Recommendations, ODFT as required.
 - 2) 1sr Coat Water Based Polymer, ISOLATEK INTERNATIONAL "CAFECO Spray Film WB3".
 - 3) 2nd Coat As required if needed - no greater than 62 mils per coat.
 - 4) 3rd Coat As required if needed - no greater than 62 mils per coat.
 - 5) 4th Coat Premium Exterior Latex Semi-Gloss GL68XX in thickness as recommended by manufacturer, and in color as selected by the Architect.
- t. Finish No. X-20 - NOT USED.
- u. Finish No. X-21 Tile Fascia Paint on both Surfaces: Manufacturer's recommended ODFT for both Primer and Acrylic Coats.
- 1) Primer: XIM Primer
 - 2) 1st Coat: 100% Acrylic
 - 3) 2nd Coat: 100% Acrylic

END OF SECTION