SECTION 099600 - HIGH-PERFORMANCE COATINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes surface preparation and application of high-performance coating systems on the following substrates:

1. Interior Substrates:

a. Concrete masonry units (CMU) as noted.
b. Gypsum board as noted.
c. Steel stairs, pipe and tube railings (typical).

B. Related Sections include the following:

1. Division 5 Sections for shop priming of metal substrates with primers specified in this Section.
2. Division 9 painting Sections for special-use coatings and general field painting.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Product List: For each product indicated. Cross-reference products to coating system and locations of application areas. Use same designations indicated on Drawings and in schedules.

1.4 QUALITY ASSURANCE

A. Master Painters Institute (MPI) Standards:

1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and coating systems indicated.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.6 PROJECT CONDITIONS

A. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 50 and 95 deg F.

B. Do not apply coatings 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.

PART 2 - PRODUCTS

2.1 HIGH-PERFORMANCE COATINGS, GENERAL

A. Material Compatibility:

1. Provide materials for use within each coating 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. Provide products of same manufacturer for each coat in a coating system.

B. Colors: As selected by Architect from manufacturer's full range. See color schedule on drawings.

2.2 BLOCK FILLERS

A. Interior/Exterior Latex Block Filler: MPI#4.

1. Products: Subject to compliance with requirements, provide products by Sherwin-Williams Company or the equivalent products by one of the following:

a. Sherwin-Williams Company (The); PrepRite, Int/Ext Block Filler, B25W25

b. Benjamin Moore & Co.; Moorcraft, Super Craft Latex Block Filler, 285-01.
c. Columbia Paint & Coatings; High Performance, Int/Ext Acrylic Latex Block Filler, 05-055-PP.
d. Coronado Paint; Super Kote 5000, Commercial Latex Block Filler, 946-11.
e. General Paint; Block Filler, 70-224.
f. ICI Paints; Devoe Coatings, Bloxfil Acrylic Block Filler, 4000.
g. Miller Paint; Ext. Block Filler, 6015.
h. PPG Architectural Finishes, Inc.; Interior/Exterior Latex Block Filler, 6-12.
i. Vista Paint; Block Kote, 040.

2.3 EPOXY COATINGS

A. Epoxy, Cold-Cured, Gloss: MPI #77.

1. Products: Subject to compliance with requirements, provide products by Sherwin-Williams Company or the equivalent products by one of the following:

a. Sherwin-Williams Company (The); Pro Industrial High Performance, (Basis-of-Design).
b. Benjamin Moore & Co.; Polyamide Epoxy Coating, CM36/CM37.
c. Columbia Paint & Coatings; Insl-x, Insl-Tile II, EP-5300.
d. Coronado Paint; Polyamide Epoxy Coating, 101 Line.
e. ICI Paints; Devoe/Fuller, Guardcote, DP34UXX.
f. Miller Paint; PPG Aquapon, Epoxy Cold Cured - Gloss, 95-1.
g. PPG Architectural Finishes, Inc.; Aquapon, Epoxy Cold Cured Gloss, 95-1.
h. Spectra-Tone; Insl-x, Insl-Tile II, EP5300 Series.
i. Tower Paint; Epoxy High Gloss Enamel, T8700.

B. Water-Based Epoxy (Interior and Exterior): MPI #115.

1. Products: Subject to compliance with requirements, provide products by Sherwin-Williams Company or the equivalent products by one of the following:

    a. Sherwin-Williams Company (The); Industrial & Marine, Water Based Catalyzed Epoxy, B70W Series (Basis-of-Design).

    b. Benjamin Moore & Co.; Acrylic Epoxy Gloss "A", Hardener "B", M43/M44.
    c. Columbia Paint & Coatings; Dupont, Corlar Waterborne Acrylic Epoxy, 76P.
    d. Coronado Paint; Water-Based Amine Adduct Epoxy, 142 Line.
    e. General Paint, Ameron; Amercoat 335, 96 Line.
    f. ICI Paints; Devoe Coatings, Tru Glaze WB Epoxy Coating, 4418.
    g. Miller Paint; Waterborne Epoxy Gloss, 4300/4440.
    h. PPG Architectural Finishes, Inc.; Aquapon, Waterborne Epoxy, 98-1/98-98.
    i. Spectra-Tone; Insl-x Aqua-Tile W.B. Epoxy, ATA 100 Series.
    j. Tower Paint, Sierra, Wall & Trim Enamel, S50.

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.

1. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

    a. Masonry (Clay and CMU): 12 percent.

2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
4. Coating application indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Remove plates, machined surfaces, and similar items already in place that are not to be coated. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and coating.

1. After completing coating operations, reinstall items that were removed; use workers skilled in the trades involved.

C. Clean substrates of substances that could impair bond of coatings, including dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers as required to produce coating systems indicated.

D. Clay Masonry Substrates: Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.

1. Clean surfaces with pressurized water. Use pressure range of 100 to 600 psi at 6 to 12 inches.

E. CMU Substrates: Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.

3.3 APPLICATION

A. Apply high-performance coatings according to manufacturer's written instructions.

1. Use applicators and techniques suited for coating and substrate indicated.
2. Coat surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, coat surfaces behind permanently fixed equipment or furniture with prime coat only.
3. Coat back sides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.

B. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance.

C. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Produce sharp glass lines and color breaks.

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 coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, 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 coated surfaces.

3.5 INTERIOR HIGH-PERFORMANCE COATING SCHEDULE

A. CMU / Glazed CMU Substrates:

1. Water-Based Epoxy Coating System:

a. Prime Coat: Interior/exterior latex block filler, MPI #4.
b. Intermediate Coat: Water-based epoxy (interior and exterior), MPI #115.
c. Topcoat: Water-based epoxy (interior and exterior), MPI #115.

B. Gypsum Board Substrates:

1. Epoxy System:

a. Prime Coat: Primer sealer, latex, interior, MPI #50.
b. Intermediate Coat: Epoxy, gloss, MPI #77.
c. Topcoat: Epoxy, gloss, MPI #77.

C. Steel Substrates:

1. Pigmented Polyurethane over High-Build Epoxy System:

a. Prime Coat: Primer, epoxy, as recommended in writing by topcoat manufacturer.
b. Intermediate Coat: Epoxy, high-build, low gloss, MPI #108.
c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.

END OF SECTION 099600