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 01 Specification Sections, apply to this Section.

1.2 SUMMARY
A. Section Includes:
   1. Epoxy floor coating for use where shown.
   2. Acrylic wall coatings for use where shown.
B. Related Sections:
   1. Division 09 Section “Interior Painting.”

1.3 QUALIFICATIONS
A. Installer: A firm with a minimum of 3 years successful experience in the installation of the specified materials and which is approved by the resin matrix flooring manufacturer. Employ only tradesmen experienced with the installation of the materials specified.

1.4 SUBMITTALS
A. Manufacturer's Data: Submit manufacturer's specifications, installation instructions and other data as may be required to show compliance with the Contract Documents.
B. Samples: Submit samples of each type of resin matrix flooring specified in colors as selected. Samples shall be 12 inches square on plywood and shall show the various stages of installation.
C. Maintenance Instructions: Submit manufacturer's written instructions for maintenance of each type of resin matrix flooring.
D. Guarantee: Upon completion of the resin matrix flooring work, submit guarantees stating that the resin matrix flooring systems installed will be waterproof and free from defects for a period of not less than five (5) years from date of final acceptance and that in the event any leaks occur within the period stipulated, the Contractor shall, at the convenience of the Owner, effect all repairs and replacements necessary to remedy defects.

1.5 PRODUCT HANDLING
A. Deliver materials in manufacturer's standard unopened packaging, fully identified.
B. Store materials above grade and protected from the weather, soiling or damage. Store in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

2.1 HIGH PERFORMANCE EPOXY FLOOR COATINGS

A. Epoxy Flooring: Water based catalyzed epoxy coating.

B. Manufacturers: Subject to compliance with requirements, provide product as shown on Finish Schedule or approved equal.

C. Miscellaneous Products: Provide miscellaneous products as specified and as required to fulfill the requirements of the systems to be used on the Project. Provide materials and products best suited for intended use.

1. Underlayments: Provide resinous cementitious underlayment materials, compatible with substrates indicated and resin matrix flooring system(s) specified, refer to Division 03 Section “Hydraulic Cement Underlayment.” Gypsum based underlayments are prohibited. Provide materials and systems for the following:

   a. Floor patching and crack repair.
   b. Floor leveling and sloping to pitch.

2. Primers and Sealers: Provide primers and sealers for substrates as selected by the resin matrix flooring manufacturer.

2.2 ACRYLIC WALL COATINGS

A. General: Provide spray or roll-applied, acrylic wall coating. System components include the following:

   1. Primer: Manufacturer recommended primer / sealer.
   2. Finish: Manufacturer’ base and textured finish coats.

B. Manufacturers: Subject to compliance with requirements, provide products shown on Finish Schedule or approved equal.

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 the Work.

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

      a. Concrete: 12 percent.
      b. Masonry (Clay and CMU): 12 percent.
c. Gypsum Board: 12 percent.

B. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Proceed with coating application only after unsatisfactory conditions have been corrected.
   1. Beginning coating application constitutes Contractor's acceptance of substrates 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 hardware, covers, plates, and similar items already in place that are removable and 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.

C. Clean substrates of substances that could impair bond of coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
   1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce coating systems indicated.

D. Concrete Substrates: Remove release agents, curing compounds, 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 1500 to 4000 psi at 6 to 12 inches.
   2. Abrasive blast clean surfaces to comply with SSPC-SP 7/NACE No. 4, "Brush-Off Blast Cleaning."

E. Masonry Substrates: Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed 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.

3.3 APPLICATION

A. Apply high-performance coatings according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."
   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.
4. Do not apply coatings over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.

B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of the same material are to be applied. Tint undercoats to match color of finish coat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.

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

D. 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 FIELD QUALITY CONTROL

A. Dry Film Thickness Testing: Owner will engage the services of a qualified testing and inspecting agency to inspect and test coatings for dry film thickness.

1. Contractor shall touch up and restore coated surfaces damaged by testing.
2. If test results show that dry film thickness of applied coating does not comply with coating manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with coating manufacturer's written recommendations.

3.5 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.

3.6 INTERIOR HIGH-PERFORMANCE COATING SCHEDULE

A. Concrete Substrates, Vertical Surfaces:

1. Acrylic Coating:
   a. Prime Coat: Epoxy, gloss, MPI #77.
   b. Intermediate Coat: Epoxy, gloss, MPI #77.
   c. Topcoat: Epoxy, gloss, MPI #77.

2. Epoxy-Modified Latex System:
a. Prime Coat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
b. Intermediate Coat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
c. Topcoat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.

B. Concrete Substrates, Horizontal Surfaces.

C. CMU Substrates:

1. Acrylic System:
   b. Intermediate Coat: Acrylic, gloss, MPI #77.
   c. Topcoat: Acrylic, gloss, MPI #77.

2. Epoxy-Modified Latex System:
   b. Intermediate Coat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
   c. Topcoat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.

END OF SECTION 099600