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DIVISION 7 – THERMAL AND MOISTURE PROTECTION
SECTION 07 18 13 PEDESTRIAN TRAFFIC COATINGS
PLYWOOD SURFACE(S)

PART 1 GENERAL

1.01 SUMMARY

A. Section includes Provide a complete acrylic modified cementitious waterproof system for plywood surfaces that meet the requirements for specific use indicated in the contract documents. Include all applicable substrate testing, surface preparation, and detail work.

1.02 RELATED SECTIONS

A. Specified elsewhere:
1. Section 07 24 00 Exterior Insulation and Finish Systems
2. Section 09 97 26 Cementitious Coatings
3. Section 07 01 10.81 Waterproofing Replacement
4. Section 07 10 00 Dampproofing and Waterproofing
5. Section 07 14 00 Fluid Applied Waterproofing
6. Section 07 14 16 Cold Fluid Applied Waterproofing
7. Section 07 16 13 Polymer Modified Cement Waterproofing
8. Section 09 09 00 Finishes
9. Section 09 94 00 Decorative Finishing

1.03 REFERENCES

A. IAPMO – ER-517
B. California Building Code (2021 CBC) & Residential Code (2021 CRC)
C. City of Los Angeles Building Code (2023 LABC) & Residential Code (2023 LARC)
D. Fire Hazard Severity Zone & Wildland Urban Interface (W.U.I)
E. Class I Vapor Retarder (ASTM E96)

1.04 SUBMITTALS

A. Submit under provisions of Section 013300.
B. Product Data: Submit manufacturer's product data sheets on each product and system to be used including:
1 Preparation instructions and recommendations.
2 Storage and handling requirements.
3 Installation methods.
4 Maintenance requirements.
C. Selection Samples: For each system specified, provide two sets of samples and color charts representing manufacturer's full range of colors and patterns.

1.05 QUALITY ASSURANCE

A. Cited Standards for reference:
1. Water Vapor Transmission (ASTM E 96)
2. Bond Strength (ASTM C297)
3. Accelerated Aging (ASTM D756)

4. Abrasion Resistance (ASTM D1242)
5. Water Absorption (ASTM D570)
6. Impact Resistance (ASTM D3746)
7. Freeze-Thaw (ASTM C67)
8. Surface Burning (ASTM E84)
9. Chemical Resistance (ASTM D2299)
10. Fire Tests of Roof Coverings (ASTM E108)
11. One-Hour Fire Test (ASTM E119)
12. Static Coefficient of Friction (ASTM C1028-96)
13. Compressive Strength (ASTM C109)
14. Tensile Strength (ASTM C190)
15. Chemical Resistance (ASTM D2299)
16. Fire-Test-Response of Deck Structures to Burning Brand (ASTM 2726-12a)
17. Under-Deck Fire Test Response of Deck Materials (ASTM E2632)

B. All materials used in the pedestrian traffic system shall be manufactured and provided by a single manufacturer to ensure compatibility and proper bonding.

C. Use adequate numbers of skilled workmen thoroughly trained and experienced in the necessary crafts and completely familiar with the specified requirements and methods needed for proper performance of the work of this section.

D. Contractor shall have a minimum of 3 years' experience installing pedestrian traffic coatings of this type which is required for this project and who is acceptable to the manufacturer.
   1. Applicator shall designate a single individual as project foreman who shall be on site at all times during installation.
   2. Contractor must show and have QCA Qualified Contractor/Applicator paperwork from the manufacturer of the coating system, as required to obtain a long-term jobsite specific warranty.

E. Convene a pre-application meeting before the start of application of coating system. Require attendance of parties directly affecting work of this section, including: Architect, contractor, applicator, and authorized representative of the coating system manufacturer and interfacing trades. Review the following:
   1 Drawings and specifications affecting work of this section.
   2 Protection of adjacent surfaces.
   3 Surface preparation and substrate conditions.
   4 Application.
   5 Field quality control.
   6 Protection of coating system.
   7 Repair of coating system.
   8 Coordination with other work.

1.06 DELIVERY, STORAGE & HANDLING

A. Delivery: Materials shall be delivered to the job site in sealed, undamaged containers. Each container shall be clearly marked with manufacturer's label showing type of material, color, and lot number.

B. Storage: Store all materials in a clean, dry place with a temperature range in accordance with manufacturer's instructions.

C. Handling: Handle products carefully to avoid damage to the containers. Read all labels and Material Safety Data Sheets prior to use.

1.07 PROJECT SITE CONDITIONS

A. Maintain environmental conditions (temperature and weather) within the limits recommended by the manufacturer.

B. Schedule coating work to avoid rain and excessive dust and airborne contaminates. Protect work areas from moisture and excessive airborne contaminates during coating application.

C. Before any work is started, the applicator shall examine all surfaces for any deficiencies. Should any deficiencies exist, the architect, owner or general contractor shall be notified in writing and any corrections necessary shall be made.

1.08 WARRANTY

A. Upon completion of the work in this section provide a written warranty from the manufacturer against defect of materials for a period of 5 (five) years. To obtain project specific warranty the coating system applicator must be a Mer-Ko by Westcoat Qualified Contractor/ Applicator and apply for warranty.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable manufacturer: Mer-Ko by Westcoat; 4007 Lockridge Street, San Diego, CA 92102. Telephone 844-537-7203. Website: mer-ko.com

2.02 MATERIALS

A. As basis of design Mer-Ko Shur Deck (no substitutions will be accepted): A multi-layer, cementitious roof and walking deck system designed for use over plywood or concrete substrates.

2.03 COMPONENTS

A. Shur Deck System over Plywood: Waterproof walking deck system for use over plywood substrates, IAPMO # 517.
   1. Apply MK-62 6-inch Sheet Membrane to all plywood joints.
   2. Lath: MK-70 Shur Deck Metal Lath or MK-71 Shur Deck Glass Lath may be used.
   3. Staples: Minimum 1 inch crown by $^{5}/_{8}$ inch long, 16-gauge non-corrosive.
   4. Base Coat: Combine one 50lb bag of MK-5 Shur Deck Cement with 1 gallon of water. Apply by trowel at a rate of 45 ft^2 per batch over the MK-70 and 30 ft^2 per batch over MK-71.
   5. Mer-Ko Membrane with Fabric Reinforcement (Flashing): Apply a coat of MK-25 Mer-Ko Membrane onto the vertical and adjacent horizontal surface using a brush or roller at a rate of 100-150 ft^2 per gallon. While the material is still wet, place the MK-80 Mer-Ko Burlap fuzzy side down into the wet MK-25, overlapping successive runs of fabric edges and ends a minimum of 2 inches.
   6. Mer-Ko Membrane with Fabric Reinforcement (Deck): Install the MK-75 Mer-Ko Lath to the horizontal surfaces. Pour the MK-25 Mer-Ko Membrane onto the MK-75, trowel, and back roll at 65 ft2 per gallon to completely cover the MK-75. Apply an additional coat of the MK-25 over the entire surface at a rate of 150 ft^2 per gallon by trowel or roller.
   7. Body Coat: Combine 1 gallon of water to one 50 lb. bag of MK-5 Shur Deck Cement. Trowel the material over the dry membrane surface at a rate of 90 ft^2 per mix. Allow the first coat to dry for a minimum of 2 hours before applying the second coat. Repeat the process for the 2nd coat as mentioned above.
   8. Topcoat: Apply desired color of the MK-40 Mer-Ko Topcoat in two coats. Apply first coat at the rate of 300 ft^2 per gallon. Allow to dry for 2 hours at 70°F, 50 percent relative humidity. The 2nd coat must be applied neat. Apply the second coat of the MK-40 perpendicular to the first at the rate of 200 ft^2 per gallon.

2.04 ACCESSORIES

A. Supplemental Materials:
   1. Flashing shall be minimum 26 gauge bonderized sheet metal. 4” x 6” inch at wall to deck juncture and 4” x 2” drip edge at outside perimeter of deck. Caulk all flashing seams

and overlaps using MK-90 Polyurethane Caulking. (Note: If the flashing is not bonderized, it must be prepared in accordance with SSPC-SP11 surface preparation standards, in order for the coating to adhere properly).

2. Drains shall be WP-35 ALX Deck Drain available through Thunderbird.
3. Optional Slip Resistance: MK-86 Mer-Ko Slip Resistant Additive can be added into the MK40 Mer-Ko Topcoat to enhance skid resistance. 1 quart of MK-86 to 5 gallons of MK-40 Topcoat.
4. Optional Texture Coat: Combine 1 gallon of water with each bag of MK-5 Shur Deck Cement. Apply at a rate of 200 ft^2 per bag. For a smoother Texture Coat, MK-6 Shur Deck Fine Cement may be used in lieu of MK-5. The same application instructions and coverage rates from the MK-5 apply to the MK-6 Shur Deck Fine Cement.
5. Optional sheet Membrane: MK-62 Sheet Membrane may be applied over the entire deck surface, using 36˝rolls.
6. Optional Sheet Membrane Primer: MK-61 Sheet Membrane Primer may be used for maximum adhesion of the MK-62 Sheet Membrane.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of conditions.
   1. Inspect all surfaces to receive the pedestrian traffic system. Verify that surfaces are dry, clean, and free of contaminates that would prevent coating system from properly adhering to the surface.
   2. Verify that substrates have ¼ inch slope per linear foot.
   3. Before starting work, report in writing to the owner any unsatisfactory conditions.

3.02 SURFACE PREPARATION

A. General:
   1. Prepare surfaces using methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

B. Plywood substrate:
   1. Provide minimum 5/8 inch CDX exterior grade plywood.
   2. Plywood shall have a maximum joist span of 16 inches.
   3. Deflection should be less than L/360.

3.03 INSTALLATION

A. Install coatings in accordance with manufacturer’s instructions.
B. Mix all materials in accordance with manufacturer’s instructions.
C. Use application equipment, tools, and techniques in accordance with manufacturer’s instructions.
D. Uniformly apply coatings at spread rates and in number of coats to achieve specified coverage.
E. Adhere to all limitations, instructions, and cautions for pedestrian coatings as stated in the manufacturer’s published literature.

3.04 FIELD QUALITY CONTROL

A. Verify coatings and other materials are as specified.
B. Verify coverages and finish of the system as work progresses.
C. Manufacturer’s representative shall provide technical assistance and guidance for surface preparation and application of coating systems.

3.05 PROTECTION AND CLEAN-UP

A. Installation areas must be kept free from traffic and other trades during the application procedure and cure time.
B. Protect finished surfaces of coating system from damage during construction.
C. Touch-up, repair or replace damaged coating system after substantial completion.
D. Clean area and remove all debris upon completion of work. Dispose of empty containers properly according to current Local, State and Federal regulations.
E. Allow material to cure 4 to 6 hours before light pedestrian traffic is permitted, 24 hours before heavy traffic and an additional 48 hours before heavy objects are placed on the surface.

3.06 MAINTENANCE

A. Contractor shall provide to owner, maintenance, and cleaning instructions for the waterproof decking system upon completion of work. Owner is required to clean and maintain the surfaces to maintain manufacturer's warranty.

END OF SECTION

This guide specification has been prepared by Mer-Ko by Westcoat to assist design professionals in developing a project specific specification. This guide is a template that must be reviewed and adapted by specifiers to comply with project requirements. This guide specification is not to be copied directly into a project specification manual without review.