SECTION 09670

EPOXY FINISH ON CONCRETE

PART 1 GENERAL

1.01 DIVISION OF RESPONSIBILITIES TERMINOLOGY: **NOT USED**

1.02 SUMMARY: The Contractor shall provide the Epoxy Finish on Concrete, including integral Epoxy Cove Base with Top Edge Trim Cap, where scheduled, as specified in this Section, and as needed for a complete installation.

1.03 RELATED WORK:

A. Section 07190- Moisture Mitigation Systems.

B Section 09650- Resilient Flooring.

1. Vinyl Composition Floor Tile and Transition adjacent to the Aquarium Area must be completely installed prior to the installation of the Epoxy Flooring
2. Reference this Section for flooring layout procedure, based on obtaining a flooring layout CADfile from Petco's Tenant Improvement Architect

C Section 09660- Resilient Sheet Flooring. A similar Top Edge Trim Cap is also detailed and specified for use with Resilient Sheet Flooring.

1.04 SUBMITTAL: The Contractor shall provide Concrete Floor Testing results to the PETCO Product Manager per Section 01340 requirements This submittal is for the PETCO Project Manager's records only. No other product submittal is required for the work of this Section IF provided per the construction documents. Any Request for Product Substitution must be submitted per Section 01340- Submittals

1.05 QUALITY ASSURANCE:

A Concrete Floor Testing:

1. Moisture Emission Level Test: The Contractor shall provide testing to confirm moisture vapor emission levels, in accordance with ASTM F 1869.98 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride". This testing must be provided in an enclosed, temperature controlled building shell approximately 30 days prior to the epoxy flooring installation.

   a. Maximum Acceptable Moisture Emission Level: Moisture Vapor shall not exceed 3.0 pounds per 1000 square feet per 24-hour period.
   b. Note that the specified "acceptable" emission level for this flooring product is different than for other flooring products scheduled.

2 Alkali Test: The Contractor shall provide testing for alkalinity before the installation of epoxy flooring, to confirm pH between 5 and 9.

B. If required due to existing conditions, Moisture and pH Mitigation shall be provided per Section 07190-Moisture Mitigation Systems.

1.06 WARRANTY:

A. Manufacturer's Warranty: The Contractor shall provide the manufacturer's standard written warranty, in the Building Maintenance Manual submitted per Section 01700-Contract Closeout.

B. Building Maintenance Manual: Provide Product Manufacturer's written maintenance information in the Building Maintenance Manual submitted per Section 01700-Contract Closeout.

PART 2 PRODUCTS

2.01 EPOXY FINISH SYSTEM:

A. Provide products by The Sherwin-Williams Company, General Polymers Brand, Cincinnati OH. Contact Melinda Stein (800-543-7694 x3422; melinda.j.stein@sherwin.com). No substitution is acceptable.

B. Drawing Key Symbol "FC-04A": The Contractor shall provide "Ceramic Carpet #400" Epoxy Decorative Floor Finish product.

C. Drawing Key Symbol "WB-04": The Contractor shall provide "Ceramic Carpet #400" integral Epoxy Cove Base, 6 inches high with radiused cove.

D. Application: Primer, 3579 Standard Primer; Surfacer, 1/8" nominal thickness. Ceramic Carpet #400; Grout and Seal Coats, one and two coats of 3744 High Performance CR Epoxy.

E. Color shall be Ceramic Carpet 319 Sandpoint.

2.01 TOP EDGE TRIM, EPOXY SCREED FLOOR TRIM:

A. Where applicable, provide edge trims equal to Schluter Systems Inc., Plattsburgh NY (800-472-4588).

B. Top Edge Trim: Provide Schluter Model A30, Color Clear Anodized or Mill Finish (natural aluminum), sized to receive 1/8" flooring, in nominal 8-foot lengths, at epoxy wall base, at top edge of finish, prior to the epoxy flooring application.

C. Epoxy Screed Floor Trim (straight-edge): Provide Schluter-Scheine-AE, clear anodized aluminum finish, at the open perimeter edge of the floor epoxy prior to the epoxy flooring application.

D. Epoxy Screed Floor Trim (curved edge): Provide Schluter-Scheine-AE-R, clear anodized aluminum finish with a special perforated anchoring leg to allow the profile to be radiused, at the open perimeter edge of the floor epoxy prior to epoxy flooring application.

2.03 MECHANICAL ABRADING EQUIPMENT: The Epoxy Finish installer shall provide dry, dustless surface "shot-blast" mechanical abrading and integral vacuuming of the concrete floor surface. Mechanical abrading materials and methods shall be in compliance with pertinent regulations of the local jurisdiction. Chemical Stripping or other treatment of the concrete floor surface is NOT permitted.

2.04 MOISTURE MITIGATION: If the measured Moisture Emission Level and pH Level are above the flooring adhesive manufacturer's limits, then the Contractor shall provide concrete slab moisture mitigation treatment per Section 07190-Moisture Mitigation Systems.

PART 3 EXECUTION

3.01 SURFACE CONDITIONS:

A. The Contractor shall examine the areas and conditions under which work of this Section will be provided, shall correct conditions detrimental to timely and proper completion of the work, and shall NOT proceed until unsatisfactory conditions are corrected.

B. Prior to application of the Epoxy Finish, the area must be "dried-in", well ventilated, and finish lighting in place, and permanently heated with the temperature between 65 to 85 degrees F

C. The Contractor shall furnish either temporary or permanent phase 208V power (or other power source as may be required) for use by the Epoxy Finish Installer

D. Concrete must be free of curing compounds, sealers, old adhesives and all incompatible substances.

3.02 EPOXY FINISH INSTALLATION:

A. Preparation of Concrete Substrate: All preparation of concrete substrate shall be per ASTM D-4259 (Sec. 6 Mechanical Abrading, Sec 8 Abrasive Blast) and/ or ASTM D4260 (Chemical Preparation). Preparation of concrete substrate shall be in accordance with product manufacturer's written instructions. Remove all existing loose coatings if present and/or any sealer, bond breakers, oils and greases to expose a clean substrate followed by mechanical abrading with dustless equipment Substrate shall be sound and profiled meeting ICRI standard guidelines 03732 for coating of concrete with sealers, coatings, and polymer overlays. This profile is SCP-3 CSP3-5 (Concrete Surface Profile).

B Vinyl Composition Floor Tile and Transition adjacent to the Aquarium Area must be completely installed prior to installation of Epoxy Flooring. It is intended that the Vinyl Transition top surface be CAREFULLY and thoroughly taped off by the Contractor or the epoxy flooring installer, and used as a finishing screed for the epoxy flooring.

C Application of Epoxy Resinous Coating System shall be per product manufacturer's written instructions for each of the respective products.

D Coating Sequence: The Coating Sequence shall utilize 3579 Standard primer and Ceramic Carpet #400 Decorative Broadcast (1/8" floor system):

1. Prepare the surface by mechanical profile
2. Apply 3579 Standard Primer at a uniform rate of 250 sf / gal Allow to cure
3. Apply 3561 Epoxy Resin Glaze at a uniform rate of 140-145 sf. gal.
4. Broadcast 319 Sandpoint quartz at a uniform rate of approximately 1/2 lb. per sq. ft.
5. Cure (cure time may vary depending on hardener selection, from 2 to16 hours).
6. Sweep up excess broadcast quartz.
7. Apply 3561 Epoxy Resin Glaze at a uniform rate of approximately 65 to 7080 sf. per gal This application serves as a base coat for the second broadcast
8. Broadcast 319 Sandpoint Quartz at a uniform rate of approximately 1/2 lb. per foot.
9. Sweep up excess broadcast.
10. Apply Grout coat of 3744 High Performance CR Epoxy evenly with no puddles at 100 sf. per gal.
11. Apply a Seal Coat of 3744 High Performance CR Epoxy evenly with no puddles at 200 sf / gal.
12. Apply PAce-Cote 4844 in place of 3744 High Performance CR Epoxy in TUB and CAGE rooms.

13. Floor Transition: Provide a smooth flush epoxy transition from the installed Epoxy Finish to adjacent VCT by taping off the VCT edge. Remove the tape and clean the adhesive residue from the adjacent VCT after epoxy work is complete in this area.

E. Cracks and Joints: Correct surface voids with Aggregate and 3561 Epoxy Resin Glaze in accordance with the manufacturer's written instructions. Correct surface cracks, crazing, control joints with EPO-FLEX HD Epoxy or 3580 Crack & Joint Filler per the manufacturer's written instructions.

F. Integral Epoxy Cove Base: Provide integral Epoxy Cove Base, 6 inches high, radius cove, installed with Epoxy Cove Base 3561V materials in all areas scheduled to receive epoxy flooring unless specifically noted otherwise. Cove radius shall be not less than 3/4", and shall be applied directly to a sound wall surface. The same quartz color shall be used to match the floor and sealed to achieve a smooth surface.

G. Top Edge Trim Cap:

1. Secure Top Edge Trim Cap to wall, through FRP Wall Panel finish, with mechanical fasteners at 6 inches on center.
2. Provide concave-tooled white silicone sealant bead at top of Top Edge Trim Cap against FRP Wall Panel finish.

H. Integral Epoxy Cove Base: After installation of the Top Edge Trim Cap, provide integral Epoxy Cove Base, 6 inches high, radiused cove, installed with Epoxy Cove Base 3561V materials in all areas scheduled to receive epoxy flooring unless specifically noted otherwise. Cove radius shall be not less than 3/4", and shall be applied directly to a sound wall surface. The same quartz color shall be used to match the floor and sealed to achieve a smooth surface.

3.03 Finish resulting from any work provided by the Contractor's employees, or any subcontractor or subcontractor's employees, shall be repaired and replaced by the Contractor at no cost to PETCO.

END OF SECTION