PART 1 GENERAL

1.1 SECTION INCLUDES

.1 High build, high solids, epoxy wall system with glaze like, orange peel finish.

1.2 SUMMARY

A. Definitions: Resinous wall system includes a penetrating, two-component, epoxy polyamide primer and a two-component, high performance, high solids, pigmented epoxy glaze coating.

B. Application Method:

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include manufacturer's technical data, application instructions, and recommendations for each resinous flooring component required.

B. Samples for Verification: For each resinous wall system required, 5 inches (150 mm) square, applied to a rigid backing for color verification and texture. Separate from site Mock up sample required.

C. Product Schedule: Use resinous wall designations indicated in Part 2 and room designations indicated on Drawings in product schedule.

D. Installer Certificates: Signed by manufacturer certifying that installers are certified and comply with specified requirements. To be presented to Contract Administrator at Pre- Award Meeting.

E. Maintenance Data: For resinous wall system to include in maintenance manuals.

1.4 QUALITY ASSURANCE

A. No request for substitution shall be considered that would change the generic type of wall coating system specified (i.e. primary resinous wall coating system). Equivalent materials of other manufacturers may be substituted only on approval of City of Winnipeg Contract Administrator in writing. Request will be subject to specification requirements described in this section.

B. Installer Qualifications: General Contractor must engage an experienced installer (applicator) who is experienced in applying resinous wall systems similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance, and who is acceptable to the resinous wall coating manufacturer listed.
1. Engage a resinous wall coating installer who is currently certified in writing by resinous wall coating manufacturer as qualified to apply the resinous wall coating systems indicated.
2. Resinous wall coating installer must have a minimum 5-7 years of experience installing specified products, and shall have completed at least 5 projects of similar size and complexity.

C. Source Limitations: Obtain primary resinous wall materials, including primers, resins, hardening agents, aggregates, finish, or sealing coats, through one source from a single manufacturer, with not less than ten years of successful experience in manufacturing and installing principal materials described in this section. Provide secondary materials, including patching and fill material, joint sealant, and repair materials, of type and from source recommended by manufacturer of primary materials.

D. Manufacturer Field Technical Service Representatives: Resinous wall system manufacture shall retain the services of Field Technical Service Representatives who are trained specifically on installing the system to be used on the project.

1. Field Technical Services Representatives shall be employed by the system manufacture to assist in the quality assurance and quality control process of the installation and shall be available to perform field problem solving issues with the installer.

E. Mockups: Apply site mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials, installation methods and execution.

1. Apply full-thickness mockups on 48-inch- (1200-mm-) square wall area selected by Contract Administrator.

2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

F. Pre-installation Conference:

1. General contractor shall arrange a meeting not less than thirty days prior to starting work.

2. Attendance:

a. General Contractor

b. City of Winnipeg Contract Administrator.

c. Manufacturer/Installer's Representative.

.3 ISO 9001: All materials, including primers, resins, curing agents, finish coats, aggregates and sealants are manufactured and tested under an ISO 9001 registered quality system.

1.5 DELIVERY, STORAGE AND HANDLING

A. Material shall be delivered to job site and checked by wall coating contractor for completeness and shipping damage prior to job start.

B. All materials used shall be factory pre-weighed and pre-packaged in single, easy to manage batches to eliminate on site mixing errors. No on site weighing or volumetric measurements allowed.

C. Material shall be stored in a dry, enclosed area protected from exposure to moisture. Temperature of storage area shall be maintained between 60 and 85^{o}F/16 and 30^{o}C.

1.6 PROJECT CONDITIONS

A. Concrete or masonry substrates shall be properly cured for a minimum of 30 days and shall be tested to ensure relative humidity or water vapour emission rates are in accordance with Manufacturer's recommendations. A vapor barrier or exterior applied waterproofing membrane must be present for concrete walls below grade.

B. Cement board substrates shall be finished to a Level 3 finish (Paint Ready). All joint compound shall be setting type compound and shall be dried for the minimum period as per Manufacturer's recommendations prior to over coating.

C. Utilities, including electric, water, heat (air temperature between 60 and 85^{o}F/16 and 30^{o}C) and finished lighting to be supplied by General Contractor.

D. Job area to be free of other trades during, and for a period of 24 hours, after wall coating installation.

E. Protection of finished wall coating from damage by subsequent trades shall be the responsibility of the General Contractor.

1.7 WARRANTY

A. Manufacturer shall furnish a single, written warranty covering both material and workmanship for a period of one (1) full year from date of installation.

PART 2- PRODUCTS

2.1 COLORS

A. Color: Custom Color to match Benjamin Moore #OC-17 White Dove.

2.2 RESINOUS WALL SYSTEM

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include:

1. Must be a roll-on wall application using a 9mm nap roller.

B. Acceptable Manufacturers:

1. Stonhard Basis of design.

C. Products: Subject to compliance with requirements:

1. Stonhard, Inc.; Stonglaze VSR®. Stonglaze VSR as distributed by Stonhard division, RPM Canada, is a nominal 10-12 mil (250 to 300 micron) thick system comprised of a two-component, general service, polyamide epoxy primer and a two-component, high performance, high solids, epoxy glaze coating. High Gloss Finish.

D. System Characteristics:

1. Primer: 4-6 mils
2. VSR Colored base coat: 5-7 mils
3. VSR Colored top coat: 5-7 mils

(Based on using a 9mm nap roller)

Note: Components listed above and below are the basis of design intent; all bids will be compared to this standard including hardness, wearing surface, bond strength, and installation procedures. General Contractor shall be required to comply with all the requirements of the Specifications and all of the components required by the Specifications, whether or not such products are specifically listed above.

E. Physical Properties: Provide wall coating system in which physical properties of wall primer and topcoat, when tested in accordance with standards or procedures referenced below, are as follows:

Hardness	80-85
(ASTM D-2240/ Shore D Durometer)	
Bond Strength	>300 psi
(ASTM D-7234)	(100% concrete failure)
Impact Resistance	Exceeds 80 in. lbs.
(ASTM D-2794)	(No cracking, crazing or loss of adhesion)
Abrasion Resistance	0.08 gm max weight loss
(ASTM D-4060, Taber Abrader CS-17 wheel)	

Fire Resistance of Dry Film ..... Class A
(ASTM E-84 / CAN/ ULC S102) Flame Spread 10
Smoke Developed 20
Heat Resistance Limitation..... 140°F/60°C
(for continuous exposure)
..... 200°F/93°C
(for intermittent exposure)
Cure Rate allow .....24 hours for normal operations
(at 70°F/21°C)
VOC .....70 g/ L
(ASTM D-2369)

2.3 JOINT SEALANT MATERIALS

A. Type produced by manufacturer of resinous wall coating system for type of service and joint condition indicated.

PART 3- EXECUTION

3.1 PREPARATION

A. Concrete Substrate: Concrete preparation shall be by mechanical means and may include use of grinder and / or sander for removal of bond inhibiting materials such as curing compounds, dust, form release agents or laitance. Other contaminants not otherwise removed by means of mechanical surface preparation shall be removed by scrubbing with a heavy duty industrial degreaser (Stonkleen TD9) and rinsing with clean water. General contractor shall approve concrete preparation to ICRI Concrete Surface Profile 1 minimum prior to coating application.

B. Drywall / Gypsum/ Cement Board Substrate: Drywall or Cement Board shall be level, true, plumb and finished to a Level 3 standard prior to application of wall coatings. The surface shall be inspected with critical lighting to ensure the substrate is ready for wall coating application. The surface shall be prepared by mechanical means and may include sanding, wiping and / or vacuuming for removal of bond inhibiting materials such as dust or other bond inhibiting material(s). Level 4 or Level 5 drywall finishes shall not be coated with Stonglaze VSI and shall be removed by mechanical means to a Level 3 finish. General contractor shall approve wall finish to Level 3 and suitability for high gloss finish prior to coating application.

3.2 APPLICATION

A. General: Apply each component of resinous wall coating system in compliance with manufacturer's directions to produce a uniform monolithic surface of thickness indicated, uninterrupted except at expansion joints or other types of joints (if any), indicated or required.

B. Primer: Mix and apply primer over properly prepared substrate with strict adherence to manufacturer's installation procedures and coverage rates. Coordinate timing of primer application with application of wall coating system to ensure optimum inter-coat adhesion. Product to be Stonhard Standard Primer, 4-6 mils.

C. Topcoat: Mix material according to manufacturer's recommended procedures. Topcoat

material should be applied in two coats at 5-7 mils per coat immediately after mixing using high quality medium nap rollers, or airless sprayer. Strict adherence to manufacturer's coverage rates is imperative.

3.3 FIELD QUALITY CONTROL

A. Final Resinous Wall applications must match approved site mock up samples.

3.4 CURING, PROTECTION AND CLEANING

A. Cure resinous wall coating materials in compliance with manufacturer's directions, taking care to prevent contamination during stages of application and prior to completion of curing process. Close area of application for a minimum of 24 hours.

B. Protect resinous wall coating materials from damage and wear during construction operation. Where temporary covering is required for this purpose, comply with manufacturer's recommendations for protective materials and method of application. General Contractor is responsible for protection and cleaning of surfaces after final coats.

C. Cleaning: Remove temporary covering and clean resinous wall coating just prior to final inspection. Use cleaning materials and procedures recommended by resinous wall coating manufacturer.

END OF SECTION 099659