Part 1 GENERAL

1.1 GENERAL REQUIREMENTS

1. Division One, General Requirements, is part of this section and shall apply as if repeated here.

1.2 SITE CONDITIONS

1. Surfaces to receive waterproofing and surrounding air shall be at least 40 deg. f. (5 deg. c.) for a minimum period of 48 hours during waterproofing operations.

1.3 WARRANTY

1. The work under this section shall have a warranty in accordance with GC 12.3 of CCDC Document 2 - 2020 but for a period of two years from the date of Architect's Certificate of Substantial Completion.

1.4 QUALIFICATIONS

1. Chemical waterproofing to be applied by mechanics with a minimum of five years experience in installation of work of this Section and in accordance with manufacturer's instructions.

1.5 QUALITY ASSURANCE

1. Subcontractor to make an allowance for Chemical Waterproofing manufacturer to carry out full inspection during the application of products. Allowance for one inspection preferably first day of waterproofing application, followed by two other inspections during application. Manufacturer to submit written reports of inspections to the Architect.

1.6 SCOPE OF WORK

1. The work of this Section includes, without being limited to, (refer to Drawings) to provision of chemical waterproofing to elevator pit.

Part 2 PRODUCTS

2.1 MANUFACTURER

2. This specification is based on Permaquik Canada Ltd. products.

2.2 MATERIALS

1. Surface applied waterproofing compound consisting of a patented formula of chemicals, cement and special treated quartz which dampproofs by crystalline growth through the capillary voids in the concrete substance, preventing passage of water under pressure as follows:

1. Permaquik Super 200: Applied in slurry consistency or powder application on concrete wall and floor surfaces. Approved alternative Cem-Kote CW Plus by W.R. Meadows.

2. Permaquik Mortar 300: Mix to mortar consistency for filling of form tie holes, honeycombed areas, routed out cracks and junctions of all floor and walls and around elevator cylinder and other pipe locations at elevator pit. Approved alternative Meadow-Crete OV by W.R. Meadows.

3. Permaquik 400: Mix to stiff mortar consistency for filling of reglets and forming coves.

4. Approved Alternate: Cem-Kote CW Plus by WR Meadows.

Part 3 EXECUTION

3.1 SURFACE PREPARATION

1. Examine concrete surfaces to be waterproofed for visible structural defects. Report unacceptable surface conditions to General Contractor. Commencement of Work shall imply acceptance for application.

2. Ensure surfaces and surrounding air temperature will not be less than 5 C for a minimum period of 48 hours before, during and after the waterproofing applications.

3. Ensure that concrete surfaces are free of foreign materials, and are clean and absorbent for the treatment as specified.

3.2 HORIZONTAL CONCRETE SURFACES

1. Remove from concrete surfaces any floor hardener or curing agents prior to the application.

2. Route one minimum 3/4" (19 mm) deep all construction joints and visible cracks exceeding 0.01 inch (0.25 mm) thick. Remove laitance (cement scum), dirt, dust and thoroughly rinse with water concrete slab surfaces. Remove free laying water the day prior to the waterproofing material application. Concrete surfaces shall have damp appearance only at the time the slurry coating is applied.

3.3 VERTICAL CONCRETE SURFACES

1. Remove from scale, oil, form release agents and any other foreign materials likely to affect the bond, penetration and performance of the waterproofing. Include for steam cleaning, or light sandblasting if necessary.

2. Leave form tie holes approximately 1 inch (25 mm) back of surface.

3. Route out honeycombed pockets and faulty construction joints to sound concrete.

4. Route out ¾" (19 mm) deep construction joints and visible cracks in concrete surfaces exceeding hairline size (larger than 0.01 inch (0.25 mm)).

5. Rinse surfaces to be waterproofed thoroughly with water the day prior the application. Moisture must be present in the concrete strata to achieve maximum initial penetration of the activated waterproofing chemicals. Surfaces shall be moist only (not wet) when the coatings are applied. Check by rubbing hand over the surfaces. Hand should not become wet.

3.4 MIXING OF WATERPROOFING

1. Slurry consistency:

    1. Use separate containers for measuring by volume the powdery waterproofing materials. Use water free from mater deleterious to the materials. Add water to the waterproofing materials (not vice versa) and mix thoroughly. Measure 1 part water to 2.5 parts powder.
    2. Prepare only as much slurry mixture as can be applied within 20 - 30 minutes. Do not add more water when mixture starts to thicken. Stir mixture frequently.

2. Mortar consistency:

    1. Measure out Permaquik 300 and Super 200 4:1 and mix powder thoroughly with water to powdery mixture and work with trowel until a medium stiff consistency is reached.
    2. Prepare only as much mortar as can be applied within 10 - 15 minutes.

3. Stiff mortar at coves and reglets:

    1. Add just enough water to provide a stiff mortar consistency.

3.5 APPLICATION

1. General:

    1. Install the chemical waterproofing materials as outlined herein, and as shown on the drawings. Take special precautions to protect workers by using rubber gloves and goggles if required, during the application. Use rubber gloves when mixing waterproofing materials.

    2. Apply the slurry coatings by using a special masonry short or long handled brush supplied by waterproofing manufacturer.

    3. Carry out the powder applications by dry sprinkling Super 200 with a sieve (of fine mesh, holding approximately 2.27 kg of waterproofing material) on concrete surfaces as specified.

    4. Install waterproofing on elevator pit floor and at walls to top of first floor level.

3.6 PROTECTION AND CURING

1. When temperatures fall below freezing, cover treated surfaces with tarpaulins, or other means and maintain surface temperature above 40 F (5 C) for a minimum period of two days after completion of application.

2. Protect the freshly treated surfaces from rain for a minimum of 24 hours.

3. Moisture cure all treated surfaces for a minimum period of two (2) days, starting with fine water fog spraying the day following completion of the application

4. During extreme hot weather, if necessary, apply light water fog spray to the freshly applied slurry application in order to prevent dehydration of the coatings.

End of Section 07 14 20