Part 1 GENERAL

1.1 GENERAL REQUIREMENTS

1. Division One, General Requirements, is a 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. Do not apply to frozen materials.

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 DESCRIPTION OF WORK

1. Supply and install vertical waterproof membrane at all foundation walls as indicated on drawings.

2. Supply and install horizontal waterproofing at Mechanical Attic 220 entire floor area and up walls to height of curb (min. 200mm).

1.6 DELIVERY AND STORAGE

1. Deliver materials to the site undamaged in original sealed containers and packaged with labels and seals intact. Cover materials if left outside.

2. Store solvent-based liquids away from excessive heat and open flame. Post "NO SMOKING" signs in storage area.

3. Store all materials in a dry, warm, protected area. Temperatures to be above 40°F (5°C) and not to exceed 90°F (32°C).

4. Store membrane cartons on pallets.

5. Keep away from sparks and flames.

6. Completely cover when stored outside. Protect from rain.

7. Protect materials during handling and application to prevent damage or contamination.

1.7 QUALIFICATIONS

1. Waterproofing to be applied by mechanics with a minimum 5 year's experience in installation of work of this Section and in accordance with manufacturer's instructions.

1.8 SUBMITTALS

1. Submit manufacturer's product data and application instructions.

1.9 ENVIRONMENTAL REQUIREMENTS

1. Product not intended for uses subject to abuse or permanent exposure to the elements.

2. Protect rolls from direct sunlight until ready for use.

3. Do not apply membrane when air or surface temperatures are below 40°F (4°C).

4. Do not apply to frozen concrete.

Part 2 PRODUCTS

2.1 SHEET APPLIED MEMBRANE SYSTEM (ADHESIVE APPLIED SHEETS)

2. Vertical and Horizontal Waterproofing Membrane: Sealtight MEL-ROL "Protected Waterproofing Membrane" 60 mils (1.524mm) thickness by W. R. Meadows.

3. Primer:

.1 Temperatures Above 40°F (4°C): Mel-Prime Water Base Primer
.2 Temperatures Above 20°F (-7°C): Mel-Prime VOC Compliant Solvent Base Primer or Standard Solvent Base Primer.

3. Flashing and Fillets: Mel-Rol Liquid Membrane.

4. Pointing Mastic: Pointing Mastic.

5. Corner Tape: Detail Strip.

6. Termination Bar: Sealtight Termination Bar.

7. Horizontal Waterproofing Protection Course: Vibraflex Waterproofing Protection Board by W. R. Meadows where the waterproofing is not protected by below grade rigid insulation or rolled applied membrane system.

8. Approved Alternative Manufacturer: W. R. Grace, Bituthene 3000 system.

2.2 ROLL APPLIED FOUNDATION DRAINAGE SYSTEM (BUBBLE BOARD ROLL, MECHANICALLY FASTENED)

1. Tile:

.1 4" Perforated PVC pipe. Provide required elbows, connections and end caps.
.2 4" Solid Non-Perforated PVC Pipe

2. Aggregate:

.1 Clear washed 3/4" diameter crushed stone.
.2 Bedding Sand (as required).

3. Mel-Drain foundation drainage - Type 5035 Rolled Matrix Drainage System: Pre-fabricated composite soil sheet drain system by W.R. Meadows of Canada, Milton, Ontario; 1-905-878-4122.

4. Pre-fabricated Termination Bar by W.R. Meadows of Canada, Milton, Ontario; 1-905-878-4122.

5. Filter Cloth (Fabric around weeping tile): Geofab Soil Stabilization-Type 1127 by Mercantile Development, Inc., Westport, CT, or "Terrafix 270R" geotextile

membrane by Terrafix filter fabrics, Rexdale, Ontario, or "Trevira Spunbound" by Spunbound Business Group, Spatanburg, SC; 1-800-845-7597-thickness to match above or equal by W. R. Meadows of Canada.

Part 3 EXECUTION

3.1 PROTECTION

4. Provide and install tarpaulins and coverings for the protection of adjacent wall finishes and surfaces where materials are being hoisted or being used.

5. Provide suitable platforms, wheeling stages, and/or similar protection against damage to the membrane by moving material or equipment.

6. Backfilling should be done immediately using care and caution to avoid damaging the waterproofing application.

3.2 WORKMANSHIP

1. This contractor shall, at all times, maintain their workmanship at the highest quality in accordance with the best standard practices for this class of work. Only competent mechanics skilled in the various trades specified shall be used and all work shall be executed in accordance with the drawings, specifications and manufacturer's recommendations, to produce a waterproof system.

3.3 EXAMINATION

1. Before commencing work, examine all areas and report in writing to the Architect and General Contractor, any conditions which will adversely affect successful waterproofing. Do not begin work until these conditions have been corrected.

2. Commencement of work shall imply acceptance of prepared surfaces.

3.4 APPLICATION OF WATERPROOFING

1. Preparation

1. Protect adjacent surfaces not designated to receive waterproofing.

2. All concrete surfaces will have been cured for a minimum of 14 days prior to application. Clean all surfaces of laitance, frost, dirt, oil, grease, curing compounds and other foreign matter detrimental to adhesion of the waterproofing membrane.

3. Voids, cracks, holes, or other damaged surfaces shall be treated in accordance with the manufacturer's directions, including priming, coating and/or fabric reinforcing as required.

4. Do not apply waterproofing to surfaces unacceptable to manufacturer.

5. Concrete surfaces must be clean, smooth and free of standing water.

3.5 VERTICAL AND HORIZONTAL MEMBRANE WATERPROOFING INSTALLATION

1. Prior to application, prime all surfaces to be covered in one working day with applicable MEL-PRIME Primer. Uncovered, primed surfaces must be reprimed the next day.

2. All inside and outside corners must be smooth, free of voids with sharp edges removed. Form fillet of MEL-ROL Liquid Membrane on all inside corners or place a MEL-ROL detail strip on inside and outside corners, and run the material 6" (150 mm) on each side of the corner. Place MEL-ROL over top of the detail strip to the corner and butt edges where the terminations meet.

3. Horizontal Applications: apply MEL-ROL Membrane horizontally in lengths approximately 8' (2.4 m) long from top of curb down and over floor slab. Install membrane from low to high points so laps shed water. Overlap all seams at least 2 ½" (63.5 mm). To top of all vertical surfaces of membrane install MEL-ROL Liquid Membrane at least ⅛" (3.2 mm) thick and 1" (25 mm) wide. Masonry walls must be parge coated with an asphaltic foundation coating material. Install a double thickness of MEL-ROL membrane over construction, control and expansion joints and cracks greater than 1/16" (1.6mm) wide.

4. Vertical Wall Applications: Masonry walls must be parged-coated with a cementitious material before priming and applying MEL-ROL. Apply vertically in lengths of approximately 2.4m (8') long over the top of the horizontal Detail Strips at the footing. Overlap all seams at least 63.5mm (2.5"). Tightly butt edges of membrane and apply POINTING MASTIC in corner applications.

5. Once positioned the MEL-ROL Membrane should immediately be firmly hand-rubbed into the surface, followed by a pressure-applied roll pressing of the complete surface to assure positive adhesion.

6. All protrusions should be sealed with 2 layers of MEL-ROL Membrane applied at least 6" (150 mm) in all directions. Seal all terminations with MEL-ROL Mastic. Around drains apply 2 layers of MEL-ROL Membrane and put a bead of MEL-ROL Mastic between the membrane and put a bead of MEL-ROL Mastic between the membrane and clamping rings and at all terminations. If desired, protrusions may be sealed with MEL-ROL Liquid Membrane applied to a 60 mil thickness and overlapped at least 2 ½" (63.5 mm) with MEL-ROL Membrane.

7. Inspect and repair immediately before covering. Tears and inadequate overlays should be covered with MEL-ROL Membrane slit fishmouths and patch. Seal patch edges with MEL-ROL Pointing Mastic.

8. Perform flood testing of horizontal applications, as required. Mark leaks and repair when membrane dries.

9. Avoid use of products which contain tars, solvents, pitches, polysulfide polymers, or PVC materials that may come into contact with waterproofing membrane system.

3.6 PROTECTION

1. Protect membrane at all horizontal applications with immediate application of Vibraflex waterproofing protection board and at vertical surfaces, if no drainage system is used, or rolled matrix drainage system. Use pointing mastic as an adhesive.

2. Backfill or install concrete topping immediately using care to avoid damaging waterproofing membrane system.

End of Section 07 11 10