SPEC NOTE: This specification includes materials and installation procedures for the application of Durex® Durathane B500, a fluid applied pedestrian traffic and balcony waterproof coating. This high performance one coat application membrane consists of a two-component, high solids aliphatic urethane and is ideally suited to protect and waterproof wood and concrete slabs used for pedestrian walkways and balconies against harsh environmental conditions. This specification should be adapted to suit the requirements of individual projects. It is prepared in CSC-NMS three part format and should be included as a separate section under Division 7 – Thermal and Moisture Protection.

**PART 1 GENERAL**

**1.1 GENERAL REQUIREMENTS**

.1 All conditions of the contract and Division 1, General Requirements apply to this section.

 .2 Work shall meet applicable codes and standards, manufacturer’s recommendations and good building practice.

.3 Membrane Description

.1 Provide labour, materials and equipment necessary for the placement of the fluid applied pedestrian traffic and balcony coating membrane as specified and shown on the drawings.

.2 Prepare surfaces, treat cracks and joints, patch voids and install the fluid applied coating membrane to manufacturer’s recommended material thickness.

**1.2 COORDINATION**

.1 Ensure the Work of this section is coordinated with the Work of related sections.

**1.3 RELATED SECTIONS**

.1 Cast-In-Place Concrete Section 03 30 00

.2 Rough Carpentry Section 06 10 00

.3 Sealants Section 07 92 00

**1.4 REFERENCES**

.1 ASTM D 4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers

### .2 ASTM C 836 Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course

.3 ASTM D 5178 Standard Test Method for Mar Resistance of Organic Coatings

.4 ASTM D 638 Standard Test Method for Tensile Properties of Plastics

.5 ASTM D 624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers

.6 ASTM C1127 Standard Guide for Use of High Solids Content, Cold Liquid Applied Elastomeric Waterproofing Membrane with an Integral Wearing Surface

.7 ASTM D4258 Standard Practice for Surface Cleaning Concrete for Coating

.8 ICRI 310.2R Selecting and Specifying Concrete Surface Preparations for Sealers, Coatings, Polymer Overlays and Concrete Repair

.9 ASTM C920 Standard Specification for Elastomeric Joint Sealants

 .10 ASTM C1193 Standard Guide for use of Joint Sealants

 **1.5 SUBMITTALS**

.1 Product Data

.1 Submit published specifications and individual component technical data sheets to show compliance to the intent of the design specifications and installation instructions.

.2 Samples

.1 Prior to application of mock-up, submit duplicate 150mm x 200mm (6" x 8") representative colour samples of finish coat and texture.

.2 Maintain an approved sample at the project site.

**1.6 QUALITY ASSURANCE**

.1 Qualifications

.1 Work of this Trade shall be executed by a qualified applicators approved by Durabond Technical Coatings Ltd. Applicators shall have a minimum of 5 years of proven satisfactory experience in this type of work, having proper equipment and skilled personnel.

.2 Work of this Trade shall include minimum two (2) qualified applicators be present at any one time when applying the fluid applied pedestrian traffic and balcony coating membrane.

**1.7 DELIVERY, STORAGE, HANDLING & PROTECTION**

.1 Deliver all required materials to the job site in original unopened containers with all identifying labels and markers clearly visible and intact. Upon delivery inspect materials for damages and advise manufacturer in writing.

.2 Store and protect materials in a dry, vented, waterproof location, stacked off the ground, out of direct sunlight and other detrimental conditions. Store liquid materials at ambient temperatures above 5 degrees C and below 35 degrees C. Protect materials from freezing.

**1.8 WARRANTY**

.1 The warranty period stipulated in the General Conditions of the Contract shall be extended as follows:

.1 Durabond Technical Coatings Ltd. shall provide a two (2) year product warranty from the date of Substantial Completion against product defects.

**PART 2 PRODUCTS**

**2.1 MANUFACTURER**

 .1 Components and membrane materials must be obtained as a single-source from the materials manufacturer to ensure membrane compatibility and integrity.

 .2 Fluid Applied Pedestrian Traffic and Balcony Coating Manufacturer:

 **Durabond Technical Coatings** **Limited**

55 Underwriters Road

Scarborough, ON M1R 3B4

Tel: 1-877 387 2266

 Web Site: [www.durabond.com](http://www.durabond.com)

**2.2 COLOURS**

 .1 Colours to be selected or approved by the Architect [Consultant] based on colour chips supplied to Contractor.

**2.3 PEDESTRIAN TRAFFIC AND BALCONY WATERPROOFING MEMBRANE**

.1 Pedestrian Traffic and Balcony Waterproofing Coating shall be Durex® Durathane B500 manufactured by Durabond Technical Coatings Limited, a one-step fluid applied two-component, high solids elastomeric aliphatic UV stable urethane membrane with rubber crumbs for non-slip functionality engineered to waterproof and to protect wood and concrete surfaces such as balconies and walkways.

.2 Concrete primer shall be Durex Epotel 45 manufactured by Durabond, a high performance, solvent-based epoxy primer.

.3 Concrete repair material for voids and holes shall be Durex® Dur-A-Patch 100 with Durex® Dur-A-Patch Liquid Additive manufactured by Durabond, a two component non-shrink repair mortar used for the repair of concrete.

.4 Reinforcement mesh shall be Durex® Barrier Seam Tape, a thermally set, spun bonded polyester non-woven fabric made up of 100% continuous polyester filament fibres that are randomly arranged and reinforced with a 5 x 5 polyester scrim for added strength and stability and polyurethane crack sealant supplied by Durabond.

.5 Joint Sealant shall be Dymonic 100 Single Component, Non-Sagging polyurethane manufactured by Tremco Inc. as per ASTM C 920 Type NS Class 50

**PART 3 EXECUTION**

**3.1 EXAMINATION PROJECT/SITE CONDITIONS**

.1 Examination

.1 The substrate surface shall be free of dirt, dust debris and other foreign materials such as oil, dust, old paint, moisture, crumbling material, or loose joints, voids and projections that will adversely affect the execution and quality of work. Moisture content of concrete is to be tested in conjunction with the methods recommended by the manufacturer.

.2 Do not start work until unsatisfactory conditions have been corrected.

.3 Commencement of work shall indicate acceptance of substrate conditions.

.2 Climatic Conditions

.1 Do not proceed with applications of fluid applied coatings at ambient air temperatures below 5 degrees C without prior approval by Consultant, or above 35 degrees C. Substrate temperature must be 3 degrees C above dew point prior to application.

.2 Avoid applying fluid applied coatings on surfaces during periods where the surfaces are exposed to directly sun, or on surfaces where condensation has or will form due to presence of high humidity and lack of proper ventilation.

.3 In cold temperature conditions provide temporary enclosures and heat over the exterior work area. Heat and maintain the area to achieve an ambient air temperature for the application of materials, and provide heat for a minimum of 24 hours after application of coatings.

**3.2 SURFACE PREPARATION**

.1 Prepare substrate to be coated in accordance with ASTM C 1127.

2. All surfaces to be coated must be free of dirt, oils or any other contaminants the may prevent the proper adhesion of the fluid applied traffic coating in accordance to ASTM D4258.

.3 Prepare concrete substrate by mechanical shot blasting or mechanical abrasion to achieve a surface profile consistent with ICRI’s CSP 2-3.

.4 Prepare upturns, corners, surface protrusions and other areas not accessible with shot blasting equipment using detail grinding equipment.

.5 Treat voids and bug holes with suitable patching material as recommended by traffic coating manufacturer.

.6 Grind down surface irregularities within 1.5 mm (1/16 inch) of acceptable tolerance.

.7 Isolate all drains, expansion joints, surface protrusions and termination seams with a ¼” x ¼” saw cut.

**3.3 INSPECTION**

.1 Inspect prepared surfaces to ensure the complete removal of laitance, dust, moisture, oil, existing traffic lines and other contaminants that will adversely affect the execution and quality of work.

.2 Inspect prepared surfaces to ensure treatment of holes, cracks and surface irregularities are complete.

.3 Report deficiencies in writing to Consultant [General Contractor].

**3.4 PROTECTION OF WORK AREA**

.1 Prior to start of applications isolate and protect the work area from pedestrian or vehicular traffic and/or other trades.

.2 Protect adjacent surfaces from splash and/or spillage.

.3 Maintain protection of work area and applied coatings against detrimental weather conditions, blowing debris, traffic and/or other events that will adversely affect adhesion or the performance of the coatings for three to seven days after completion and/or the coating is properly cured and dry.

**3.5 PENETRATIONS & SEALANTS**

 .1 Prepare all joints and cracks in accordance with ASTM C1127 and manufacturers written instructions.

.2 All non-moving cracks less than 1/16” in width are to be coated with Durex® Uraflex 360 liquid membrane installed at 20 mils DFT, coating 75mm (3”) on each side.

3. Prepare all dynamic, moving and unreinforced cracks as well as non-moving cracks greater than 1/16” in accordance to ASTM C1127 section 10.4.4.2 and 10.4.4.3 (where applicable). Rout cracks to a minimum of ¼” x ¼”. Clean and prepare routed cracks according to ASTM D 4258.

4. Install Joint Sealants in accordance to ASTM C1193.

5. Fill routed cracks with joint sealant, installing a bond breaker at the bottom of the crack to ensure a two-sided bond, feathering the sealant to the substrate

6. Pre-stripe filled cracks with elastomeric two-component liquid membrane installed at 20 mils DFT, coating 75mm (3”) on each side.

7. Expansion joints and cracks with movement greater than 1/8” are to be filled with backer rod and joint sealant and are to be left uncoated.

8. Install joint cants at all floor to wall terminations and penetrations. Install cant with the use of a backer rod and joint sealant, tooling the sealant to 45 degrees

**3.6 APPLICATION OF PEDESTRIAN TRAFFIC AND BALCONY WATERPROOFING MEMBRANE**

.1 Carefully organize the work with sufficient tradesmen to complete an entire section at natural break points. Avoid stop and start lines within any one section. Mix materials in accordance with manufacturers published technical data sheets.

.3 Correct concrete repairs with crack repair materials and allow to dry.

.4 Prime prepared surface with recommended primer, installed at a wet film thickness of 5-6 mils.

.4 Apply pedestrian traffic and balcony waterproofing coating with a 13 mm phenolic core roller or squeegee at a uniform rate of 58 sq ft/gallon to achieve a wet film thickness of 28-30 mils. Use a wet film thickness gauge to measure and monitor material thickness. Immediately back-roll to finish.

**3.6 CLEANING**

.1 Wash all tools and equipment immediately with mineral Xylene or solvent-based cleaner. Allow any unused product to harden in container and discard according to local regulations.

**3.7 Protection of Work**

.1 Maintain a dust-free environment for the duration of work and until coating has fully cured.

.2 Erect suitable barriers to prevent through traffic or other trades from entering working area during installation of coating and protect adjacent surfaces from damage.

.3 Do not proceed with application of materials immediately prior to, during, or immediately after inclement conditions, nor if adverse weather is anticipated within 24 hours after application.

.4 Do not apply finish coat in areas where dust is being generated.

.5 Protect applied coating from rapid evaporation during dry and hot weather. Consult Durabond Technical Services for recommendations should adverse conditions exist.

END OF SECTION