

**PART 1 GENERAL**

## 1.1 REFERENCE

- .1 Comply with the General Conditions of the Contract, Supplementary General Conditions and the requirements of Division 1.

## 1.2 RELATED WORK SPECIFIED ELSEWHERE

- .1 Precast Concrete Planks Section 03400
- .2 Rough Carpentry Section 06100
- .3 Metal Flashing and Trim Section 07600

## 1.3 SCOPE OF WORK INCLUDED

- .1 Furnish and install a Lexcan EPDM Design B roofing system and related roofing accessories in strict accordance with specifications and details approved by Lexcan Limited. EPDM membrane sheets are to be loose laid over insulation and seamed together using the Lexseam method. Membrane and insulation are to be subsequently ballasted with washed river stone.
- .2 Section Includes:
  - 1. Substrate preparation
  - 2. Roofing Accessory installation
  - 3. Vapour retarder installation
  - 4. Insulation installation
  - 5. Membrane installation.
  - 6. Membrane flashing

## 1.4 SUBMITTALS

- .1 Submit shop drawings in accordance with Section 01340.
- .2 Clearly indicate fabrication details, plans, deviations, hardware and installation details.
- .3 Shop Drawings : Submit shop drawings detailing roof size, membrane sheet placement, location and type of penetrations, type of vapour retarder, insulation and ballast type ( weight ). Submit Lexcan approved drawings of details that differ from Lexcan standard details.
- .4 Submit current Lexcan installation instructions and detail drawings being used on this project.

## 1.5 WARRANTY

- .1 Provide a Warranty as stipulated in the General Conditions, but for an extended period of 10 years from the date of final completion and acceptance of the Work. Warranty shall be signed by both manufacturer and installer.
- .2 Roofing Contractor shall provide a written warranty against leaks or workmanship defects for a period of two years from the date of roofing system completion.

## 1.6 QUALITY ASSURANCE

- .1 Roofing contractor shall be an approved applicator of Lexcan roofing systems. Follow suggested guidelines as published by CRCA.
- .2 Workmen shall be trained and experienced in the installation of this type of roofing system and shall be under full time competent supervision.

## 1.7 DELIVERY, STORAGE, &amp; HANDLING

1. Deliver all roofing materials in original, unopened containers, complete with labels indicating brand name, contents, usage instructions and safety precautions.
2. Protect membranes from cuts, abrasion or other abuse that might adversely affect performance in service.
3. WHMIS safety bulletins on all hazardous products are to be readily available to the work crew at all times.
4. Adhesives, sealants and flashing accessories are to be stored in a clean, dry area at a temperature between 5 C and 27 C.
5. Do not work during period of rain, fog, sleet, snow or cold temperatures below - 15 C.

**PART 2 PRODUCTS**

## 2.1 MANUFACTURER

- .1 This specification is based on a complete roofing membrane system manufactured by Lexsuco - Design B.

- .2 Alternate manufacturers whose systems will be considered are:
  - .1 Carlisle
  - .2 Firestone
  - .3 Soprema
  - .4 Approved equal

## 2.2 VAPOUR RETARDER AND INSULATION

- .1 Vapour Retarder : Lexsuco Permamate Ultra vapour retarder sealed with Permamate adhesive.
- .2 Roof Insulation : Minimum of 3" thickness - R15
  - .1 Extruded Polystyrene Insulation conforming to CAN/ULC S701-05, Type 2 such as DECKMATE by Dow Chemical Canada ULC or equal. Base layer to have a minimum thickness of 4" (102mm) Tapered insulation to be located above base layer.
  - .2 Tapered "Dow" DECKMATE or equal with a minimum 3/16" per foot fall Accuplane layout required or equal.
  - .3 Conform to Dow specifications for installation of tapered roof insulation.
- .3 Acoustic Deck Flute Insulation : Supplied by Steel Roof Deck Section 05300

## 2.3 ROOFING MEMBRANE SYSTEM

- .1 Membrane: Lexcan 1.2 mm thick EPDM membrane conforming to Lexcan standard EPDM specification.
- .2 Flashing : Lexcan Lexflash Flashing.
- .3 Splice Cleaner : Lexcan SC-1 Seam Cleaner.
- .4 Splice Adhesive : Lexcan SA-747 Adhesive.
- .5 Splice Tape : Lexcan Standard Seam Tape.
- .6 Lap Sealant : Lexcan Lap Sealant.
- .7 Perimeter Bonding Adhesive : Lexcan BA-90 or SAS-8000 Adhesive.

- .8 Pourable Sealer : Lexcan Pourable Sealer.
- .9 Water Cut off Mastic : Lexcan Water Cut Off Mastic
- .10 Night Sealant : Lexcan FrothPak
- .11 Termination Sealer Tape : Lexcan 50 mm Termination Sealer Tape.
- .12 Termination Bar : Lexcan Termination Bar.
- .13 Protection Mat : Lexcan Protection Mat.
- .14 Pavers : Precast concrete roof pavers  
2' x 2' x 1 1/2"
- .15 Ballast : Smooth, 2 - 4 cm dia, washed river stone - 12 lbs per sq.ft generally & 15 lbs at roof perimeter to 6'- 0" from edge of roof.

#### 2.4 ACCESSORIES

- .1 Vent Stack & Mastic Pan Flashing : Lexsuco Standard Insulated Vent Stack Cover, Lexsuco spun aluminum Mastic Pans.
- .2 Roof Drains Lexsuco Model SP Roof Drains, complete with U-Flow seal.

### **PART 3 EXECUTION**

#### 3.1 GENERAL

- .1 Only install as much vapour retarder and insulation as can be completely and properly covered by waterproofing membrane by the end of each day.
- .2 Comply with current Lexcan published installation details throughout the roofing membrane installation.

#### 3.2 INSPECTION

- .1 Examine roof deck to verify proper placement of all roof openings, roof anchors, pipes, curbs, sleeves, ducts, vents and drains. Ensure all wood blocking is installed where required. Ensure roof deck is clean, dry and free from debris that might be detrimental to the performance of the vapour retarder, insulation or membrane.

### 3.3 VAPOUR RETARDER INSTALLATION

- .1 Install vapour retarder membrane according to the vapour retarder manufacturer's installation instructions.

### 3.4 INSULATION INSTALLATION

- .1 Loose lay insulation panels over vapour retarder ensuring panels are butted together with a maximum separation of 2mm.

### 3.5 POSITIONING MEMBRANE SHEETS

- .1 Ensure substrate is clean, flat and free from dirt or debris that might be detrimental to the performance of the membrane.
- .2 Unroll membrane sheets and position according to the shop drawings, allowing a minimum 10 - 15 cm overlap with adjoining sheets. Let sheets relax for a minimum of 30 minutes before performing work.

### 3.6 SPLICING MEMBRANE SHEETS

- .1 Fold top sheet of splice area back and clean seam area with SC-1 Seam Cleaner. Apply SA-747 adhesive to both mating surfaces with a paint brush using straight painting strokes. Allow adhesives to dry until it is tacky but does not stick to a dry finger touch.
- .2 Apply standard Seam Tape to folded edge of membrane, overlapping the edge 5-8mm. Roll back of tape heavily with a steel roller. Remove paper backing and allow upper membrane to fall into place, without stretching. Roll seam with steel hand roller.  
Apply Lap Sealant to all membrane edges and feather with tool provided.
- .3 Thoroughly inspect all seams for proper adhesion prior to proceeding with ballast application.

### 3.7 PERIMETER SECUREMENT

- .1 Insulation around roof perimeter and near large protrusions is to be mechanically fastened to the deck with appropriate insulation fasteners. Fasteners are to be located one row on 60 cm o.c., 15 cm out from the perimeter.

- .2 EPDM membrane is to be fully bonded with BA 90 Bonding Adhesive to a minimum 23 cm wide strip of the insulation or substrate extending out from the roof perimeter and any large roof protrusions. Apply adhesives to both mating surfaces according to the adhesive application instructions. Membrane is also to be fully bonded to all vertical surfaces including walls, curbs and parapets.
- .3 Unless approved detail shows otherwise, membrane must either terminate in a reglet, or be carried overtop of wall or parapet and counter flashed with sheet metal.
- .4 If terminating membrane part way up a wall or parapet, apply Termination Sealer Tape or 50 mm wide bead of Cutoff Mastic to backside of membrane edge. Press membrane against wall and roll with steel head roller. Position Lexbar Termination Bar over the upper edge of the membrane and fasten into the wall with appropriate fasteners. Ensure a minimum separation between Lexbar strips of 2 cm. Apply Water Cut off Mastic caulking along upper edge of Lexbar and overtop of all fastener heads.

### 3.8 FLASHING & ACCESSORY INSTALLATION

- .1 Installed by Section 07600 preformed metal flashing , drain hoppers etc. according to the manufacturer's installation instructions.
- .2 Flash all corners, vent pipes, posts, curbs and preformed flashing in strict accordance with current Lexcan installation instructions and details. Use either EPDM membrane or Lexflash flashing applied with SA-747 adhesive and formed in place with a hot air gun. Flashing edges are to be caulked with Lexcan Lap Sealant. Drains are to be sealed with Water Cut off Mastic or Termination Sealer Tape as per Lexcan details.

### 3.9 PAVER INSTALLATION

- .1 Position rigid insulation 6" x 6" x 1" D paver pads at each corner of pavers and adjust for proper height.
- .2 Position pavers (on pads) neatly on membrane conforming to paving diagram. Install pavers as shown on roof plan.

## 3.10 BALLAST INSTALLATION

- .1 Apply washed river stone ballast over top of membrane at the minimum rate of 50kg/m<sup>2</sup>. If washed river stone is available, gravel or slag may be substituted provided Lexcan protection mat is placed over top of the EPDM membrane. Protection mat sheets are to be loose laid and lapped a minimum of 15 cm on all sides.

## 3.11 CLEAN UP

- .1 Remove all cut pieces, wrappings, waste and debris from job site.

## 3.12 WARRANTY INSPECTION

- .1 Upon completion of the roofing system, an authorized Lexcan representative will make an inspection of the installation for warranty acceptance.
- .2 Final cleaning in accordance with Division 1.

END OF SECTION