This section includes a standard sheet of Ethylene Propylene Diene Monomer (EPDM) Adhered Roofing System, available in a variety of lengths, widths and thicknesses. Hi-Flex EPDM Standard membrane is available in black and white, 45, 60 and 90-mil (1.1, 1.5 and 2.3 mm) thicknesses, as well as widths up to 15m (50’) and lengths up to 60m (200’).

Adjoining sheets of membrane are overlapped approximately 3” and joined together with Hi-Flex EPDM T-325 Seam Tape. This system includes base Lexcan flashings, primary flashings to roof protrusions, and integral roofing control and expansion joints. Cant strips are not required for single ply applications.

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Word processing versions of this specification are available. Contact your Lexcan representative for further information.

Master Format 2012 categorizes this as 07 53 23 Ethylene-Propylene-Diene-Monomer Roofing

This specification is presented as a guide only. The specifying authority remains responsible to verify all requirements and installation methods, including the suitability of a product or system for a particular applied, other than those agreed upon in advance, made in writing and relating to a specific project.

Where [square] brackets appear, revise the components or assemblies that are intended to be part of the specification you are trying to achieve. In many cases there is more than one option. The Specifier needs to select the parts that they require.

# General

## SECTION INCLUDES

In this article, select the components or assemblies that are intended to be part of the content of this section and will not be included in other sections.

### Substrate preparation

### Sheathing over deck surface.

### Vapour retarder.

### Insulation.

### Membrane roofing.

### Membrane Accessories

### Membrane Flashings

### Roofing Accessories.

## RELATED SECTIONS

In this article, indicate those sections that inter-rely on this section. The listing below is only partial and should be edited to include those sections specific to the project that describes subjects or products that affect this section directly. No sections are listed for this is a Specification Guide and not part of a Building Specification. Typical Sections include: steel, concrete, wood deck roof deck, wood blocking and curbing: wood nailers, sheet metal flashing and trim, roof hatches, unit skylights, plumbing specialties: roof drains, sumps, hoppers, HVAC: prefabricated curbs for equipment, electrical lighting protection.

### Section [05 31 23 - Steel Roof Decking]: Roof deck substrate.

### Section 06 10 13 - Wood Blocking and Curbing: Wood nailers [and cant strips].

### Section 07 26 00 - Vapour Retarders.

### Section 07 27 00 - Air Barriers.

Include the following paragraph where reroofing is involved.

### Section 07 50 05 - Preparation for Re-roofing.

### Section 07 62 00 - Sheet Metal Flashing and Trim: Counter flashing and [\_\_\_\_\_].

### Section 07 63 00 - Sheet Metal Roof Specialties: Counter flashing and [\_\_\_\_\_].

### Section 07 72 33 - Roof Hatches: Counter flashing and [\_\_\_\_\_].

### Section 08 62 00 - Unit Skylights: Skylight frame [and integral curb]: Counter flashing and [\_\_\_\_\_].

### Section 08 45 23 - Translucent Panel Wall and Roof Assemblies: Counter flashing and [\_\_\_\_\_].

The following related work may be listed by Division rather than specific sections, due to the fact that the mechanical and electrical consultants are not necessarily "in-house" If section numbers are known, delete reference to Divisions.

### [Division 22 – Plumbing] [Section 22 42 01 - Plumbing Specialties]: Roof [drains] [hoppers] [sumps].

### [Division 23 – Heating, Ventilating, and Air-Conditioning (HVAC)] [Section [\_\_\_\_]]: Prefabricated curb for mechanical equipment.

### [Division 26 – Electrical] [Section [\_\_\_\_]]: Lightning protection.

## REFERENCES

Edit this article after editing the rest of this section. Only list reference standards below, that are included within the text of this section, when edited for a project specification - delete other references that do not apply. Comparable Canadian and US are listed for some products.

### [ASTM C578-13 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.]

### [ASTM C726-12 - Standard Specification for Mineral Fiber Roof Insulation Board.]

### [ASTM C728-13 - Standard Specification for Perlite Thermal Insulation Board.]

### [ASTM C1177/C1177M-13 - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.]

### [ASTM C1396/C1396M-13 - Standard Specification for Gypsum Board.]

### [ASTM D4637/D4637M-13 - Standard Specification for EPDM Sheet Used In Single Ply Roof Membrane.]

### [ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials]

### [ASTM D882-12 – Standard Test Methods for Tensile Properties of Thin Plastic Sheeting]

### [CAN/CGSB 51.33 – Vapour Barrier Sheet, Excluding Polyethylene, for Use in Building Construction]

### [CAN/CGSB 51.34 – Vapour Barrier, Polyethylene Sheet for Use in Building Construction]

### [CSA-A231.1-06/A231.2-06 (R2010) - Precast Concrete Paving Slabs/Precast Concrete Pavers.]

### [CSA-O121-08 (R2013) - Douglas Fir Plywood.]

### [CSA-O151-09 - Canadian Softwood Plywood.]

### [CAN/ULC-S107-10 - Methods of Fire Tests of Roof Coverings.]

### [CAN/ULC-S701-11 - Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.]

### [CAN/ULC-S702-09 - Standard for Mineral Fibre Thermal Insulation for Buildings (Includes Amendment 1, 2012).]

### [CAN/ULC-S704-11 - Standard for Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced.]

### [CRCA (Canadian Roofing Contractors' Association) - CRCA Roofing Specifications Manual.]

### [FM (Factory Mutual) - Roof Assembly Classifications.]

Edit the following paragraph to reference a provincial roofing association's manual.

### Province of [\_\_\_\_\_] Roofing Contractors Association - Roofing Specifications Manual.

### [ULC-BM-14 - Building Materials Directory (2014 Edition).]

## SYSTEM DESCRIPTION

### Assembly of components include Hi-Flex EPDM Loose Laid and Ballasted Roofing System with [vapour barrier][vapour retarder], insulation, and EPDM membrane, as well as all related roofing accessories and ballast cover in strict accordance with specifications and details approved by the roof system manufacturer.

## ADMINISTRATIVE REQUIREMENTS

### Section [ ]: Project management and coordination procedures.

### Coordination:

#### Coordinate with other work having a direct bearing on work of this section.

#### Coordinate the work with the installation of associated metal flashings, as the work of this section proceeds.

### Pre-installation Meetings:

#### Convene [one (1) week] [[\_\_\_\_] weeks] before starting work of this section.

#### Review preparation and installation procedures and coordinating and scheduling required with related work.

## SUBMITTALS

Do not request submittals if this specification section or drawings sufficiently describe the products of this section

### Section [ ]: Submission procedure

### Product Data: Provide characteristics on membrane materials, flashing materials, insulation, vapour retarders, [protective coating].

### Samples: Submit [two (2)], [<[\_\_\_\_\_] mm><<[\_\_\_\_\_] inch>>] in size illustrating [insulation] [coloured coating].

### Shop Drawings:

#### Tapered insulation, roof cricket infill, setting plan layout, and details.

#### Membrane layout on detailed roof plan, complete with full assembly section, vertical parapet details, joint or termination detail conditions, and conditions of interface with other materials.

### Manufactures field reports: Indicate procedures followed; ambient temperatures, humidity, wind velocity during application, [\_\_\_\_\_].

### Sustainable Design:

#### Section[ ]: LEED documentation procedures.

#### Provide required LEED documentation for Product [recycled content] [regional materials] [low-emitting materials].

#### Manufacturer's Certificate: Certify that Products meet or exceed [specified requirements].

## QUALITY ASSURANCE

### Roofing Contractor shall be an approved applicator of the roofing system supplier. The Prequalified contractors are: [\_\_\_\_\_].

### Workmen shall be trained and experienced in the installation of this type of roofing system and shall be under full time competent supervision.

### Comply with all industry recommended safety practices during construction.

### Perform Work to [CRCA Roofing Specifications Manual] [manufacturer's written instructions] [[\_\_\_\_] Manual]. Maintain [one (1) copy] [[\_\_\_\_] copies] of document on site.

## DESIGN *[REGULATORY]* REQUIREMENTS

Only include this article when required by applicable code criteria.

### Conform to applicable code for roof assembly fire hazard requirements.

Edit the following paragraphs as appropriate to code, Owner, or Owner's Insurance Underwriter requirements. Insurance underwriters will assess an Owner's building for floor and roof assembly types and determine insurance premiums accordingly. Delete paragraphs if inapplicable.

### [CAN/ULC-S107]: Class [A] Fire Hazard Classification.

The following paragraph applies to metal deck assemblies only.

### The specified roofing assembly must have been successfully tested by a qualified testing agency to resist the design uplift pressures calculated according to

#### *ANSI/SPRI WD-1 "Wind Design Standard Practice for Roofing Assemblies” American Society of Civil Engineers (ASCE 7) International Building Code (IBC). Or*

#### *[FM]: Roof Assembly Classification, Class [1] Construction, wind uplift requirement of [1-60] [1-90], in accordance with FM 1-28 "Design Wind Loads" and complies with FMG Property Loss Prevention Data Sheet 1-29 for enhancements at the perimeter and corners.*

#### *CSA A123.21 and Provincial Building Code wind uplift requirements; obtain applicable wind isotachs and Building Code hourly wind velocity pressure for 1 in 50 year return value, necessary for the selection of the proper roof system design specific to this project.*

## DELIVERY, STORAGE, AND PROTECTION

### Deliver all roofing materials in original, unopened containers, complete with labels indicating brand name, contents, usage instructions and safety precautions. Membrane rolls are to be left in their unopened packaging until prior to install.

### Protect membranes from cuts, abrasion or other abuse that might adversely affect performance in service.

### Adhesives, sealants and flashing accessories are to be stored in a clean, dry area at a temperature between 5°C and 27°C. When the temperature is expected to fall below 5°C, outside heated storage boxes should be provided on the roof for temporary storage of adhesives and sealants.

### Protect insulation, vapour retarder and other materials subject to water damage while stored on the job-site by covering them with a weatherproof tarpaulin and keeping them a minimum 15 cm (6") off of the deck or ground.

## SITE CONDITIONS

### Ambient Conditions:

#### Do not apply roofing membrane during inclement weather or when ambient temperature falls below **-5** degrees C or above **30** degrees C.

#### Install each roof layer on a dry substrate, free of snow and ice. Use only dry materials and apply only during weather that will not introduce moisture into the system.

#### Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day.

### Schedule and execute work to prevent leaks and excessive traffic on completed roof sections. Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed section of the membrane system.

## WARRANTY

### Contractor's Warranty: Provide two (2) year warranty on roofing, dated from time of Substantial Performance. The contractor will repair, at their expense, any leaks in the roofing membrane and membrane flashing including any related Sheetmetal work.

### Manufacturer's Warranty: Roof System Manufacturer shall provide a written [Lexguard Classic, Essential, and Ultimate] warranty on supplier's standard form for a period of [5, 10, 20, 25, 30] years from the date of roofing system completion.

### Projects with extended wind speed warranty coverage greater than 90 km/h and projects requiring a 20 year or greater Lexguard Ultimate warranty will require a design review by Lexcan’s design department.

### All membrane and accessory components must be Lexsuco Corporation products or approved equal.

# Products

SPECIFIER: Rigid roof support panels are commonly used on steel roof decks to provide a smooth surface and leveling layer for the air/vapour retarder in a conventional roofing system and act as a thermal barrier under insulation products. Please ensure specified support panels are approved by roof system manufacturer.

## VAPOUR RETARDER SUPPORT PANELS

### GLASS FACED GYPSUM BOARD: Panels composed of gypsum core, reinforced, faced with glass mat conforming to ASTM C1177, Standard Specification for Glass Mat *(Gypsum Substrate for Use as Sheathing.)*

#### Thickness: [6.4 mm (¼ in)], [12.7 mm (½ in)], [15.9 mm (⅝ in)]

#### Specified product: [coated], [non-coated] Georgia-Pacific Gypsum LLC; DensDeck or comparable product as supplied by Lexsuco Corporation.

### LIGHTWEIGHT CEMENTITIOUS PANELS: Low density, fibre reinforced, water resistant cement support panels.

#### Thickness: 11.1 mm (7/16 in)

#### Specified product: Dexcell Cement Roof Board or comparable product as supplied by Lexsuco Corporation.

## VAPOUR RETARDER

SPECIFIER: Lexcor self-adhesive vapour retarder membranes do not require primer on metal decking. However, it is usually recommended to use primer for concrete decks. Self-adhered membrane cannot be used under insulation boards adhered with hot ashphalt, Permate Kraft paper products will have to be considered in this type of application.

SPECIFIER: Lexshield self-adhesive vapour retarder adheres very well to a clean metal deck surface, no support panel is required. All standards below are from the CRCA Specification Manual.

### PRIMER ADHESIVE: Synthetic elastomeric based liquid adhesive used to bond self-adhesive membrane to [steel, concrete, wood] wood deck.

#### Specified product: Lexcor Multigrip Fire Retardant Primer by Lexsuco Corporation.

### POLYETHYLENE SHEET VAPOUR RETARDER: to CAN/CGSB -51.34-M86, sheet with moisture vapour transmission rate less than 2.4 ng/Pa•s• m2 (0.04 perms) when tested in accordance with ASTM E-96, procedure B Construction.

#### Thickness: [0.15 mm (6 mil)], [0.25 mm (10 mil)]

#### Specified product: Lexcor PE-[6,10] Vapour Retarder sealed with Lexcor Lexshield Tape by Lexsuco Corporation. Use Lexshield peel & stick Air and Vapour Barrier Membrane for protrusions and openings to secure vapour barrier continuity.

### POLYETHYLENE SELF ADHERED AIR/VAPOUR RETARDER: shall be a ‘peel and stick’ membrane consisting of cross laminated, high density polyethylene film laminated to a high tack, all temperature adhesive, backed with a [silicone release liner], [plastic release liner]. Vapour Barrier shall demonstrate a typical moisture vapour transmission rate of [11.5 ng/Pa•s• m2 (0.2 perms) when tested in accordance with ASTM E-96, procedure A, a typical tensile strength in excess of 48 kPa in accordance with ASTM D-882 and a minimum 180° peel strength of 400 g/cm after 6 weeks adhered to stainless steel at 22°C.

NOTE: Vapour Barrier membrane shall be appoved by manufacturer for installation down to -20°C (-4°F) without the aid of primers.

#### Thickness: 0.2 mm (8 mil)

#### Specified product: Lexcor LexShield™ Air/Vapour Barrier Membrane by Lexsuco Corporation.

### TEXTURED POLYETHYLENE SELF ADHERED VAPOUR RETARDER: Reinforced membrane with weaved polypropylene laminated to a non-weaved polyester top layer: moisture vapour transmission rate less than 2.4 ng/Pa•s• m2 (0.04 perms) when tested in accordance with ASTM E-96, procedure B Construction.

#### Thickness: 0.15 mm (6 mil)

#### Specified product: Lexcor Permate Stick Peel n’ Stick Type 1 Vapour Barrier, by Lexsuco Corporation.

### ASPHALT LAMINATED REINFORCED KRAFT PAPER VAPOUR RETARDER: Fibreglass edge reinforced kraft Fibreglass edge reinforced Kraft vapour retarder conforming CAN/CGSB-51.33M89, Type II, *Vapour Barrier Sheet Excluding Polyethylene* to for Use in Building Construction.

#### Specified product: Lexcor Permate Vapour Barrier, by Lexsuco Corporation.

## INSULATION

### EXPANDED POLYSTYRENE INSULATION (EPS): An unfaced styrene polymer material produced by a mold/expansion process that results in coarse closed cells containing air. Insulation shall conform to CAN/ULC-S701, Type [1,2,3].

#### Thickness: [Base Layer size], [Top Layer size] [ ] *(can be specified as thick as 24”, typical sheet size is 48”x 48” or 48”x 96”. Shiplap can be added ½” or ⅝”.)*, [fully adhered]

#### Specified product: Izolon expanded polystyrene insulation board by Fransyl Ltd.

NOTE: EPS should not be used under an adhered membrane when a solvent based adhesive is used. Consult a Lexcan Technical Representative for special installation instructions where solvent adhesives are used. EPS is available in the following strengths: 12 psi, 18 psi, 23 psi, 30psi, 40 psi and 60 psi.

### EXPANDED POLYSTYRENE PREFABRICATED INSULATION BOARD: High density panels composed of high-density closed-cell polyisocyanurate foam core with coated fibreglass facers. Panels shall conform to CAN/ULC S-704, factory laminated to an unfaced styrene polymer material produced by a mold/expansion process that results in coarse closed cells containing air. Insulation shall conform to CAN/ULC-S701, Type [1,2,3].

#### Thickness: Base Layer Board Size: 1220mm x 2440mm (4’- 0” x 8’- 0”) [mechanically attached, (4,6,8,10,12,16,20 fasteners/ board)] [fully adhered]. Thickness, [50mm (2 inches)] [610mm (24” inches)] [shiplapped edges all 4 sides]

#### Specified product: Izolon R+ (2 in 1) prefabricated insulation panel by Fransyl Ltd.

### POLYISOCYANURATE INSULATION: A rigid foam insulation produced from a chemical reaction between polyol and polymeric isocyanate that results in closed cells containing captive blowing agents. The foam core is integrally laminated to [organic felt paper, or inorganic fibreglass-reinforced facers]. Insulation shall conform to CAN/ULC S-704, *Standard for Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced.*

#### Thickness: Base Layer Board Size: [1220mm x 2440mm (4’- 0” x 8’- 0”) [1220mm x 1220mm (4’- 0” x 4’- 0”)], [mechanically attached, 4,6,8,10,12,16,20 fasteners/ board] [fully adhered]. Thickness, [25mm (1”) - 115mm (4-1/2”].

#### Specified product: [Lexcor Isolex™ or Lexcor Isolex™ II] by Lexsuco Corporation.

### TAPERED [CRICKET] INSULATION: Insulation panels are to measure 1220 mm (4') square and are to slope at the rate of 2%, with a minimum thickness of [50mm (2”)] [101.6 mm (4")] at the drains. Shiplapped edge 2”x 2”, panels are to be positioned and installed in accordance with the shop drawings.

#### Specified product: [Bizolon or Bizolon R+ (2 in 1) prefabricated insulation panel by Fransyl Ltd.], [Lexcor Isolex™ or Lexcor Isolex™ II] by Lexsuco Corporation.

### EXTRUDED POLYSTYRENE INSULATION: ASTM C-578-92 Type III extruded polystyrene insulation panels, [1”; 1.5”; 2”; 3”; 4”] thick, with a minimum R-Value of 5.0 per inch and a minimum compressive strength of 25 psi. Panels are to be installed with staggered joints in [one; two] layers.

#### Specified product: Owens Corning Thermapink 25, supplied by Lexsuco Corporation.

## COVERBOARDS

### HIGH DENSITY POLYISOCYANURATE PANEL: High density panels composed of high density closed cell polyisocyanaurate foam core with coated fibreglass facers. Panel shall be compliant with ASTM C 1289. Panels shall conform to CAN/ULC S-704, Standard for Thermal Insulation, Polyurethane, and Polyisocyanurate Boards, Faced.

### Thickness: 6.4 mm (1/4 in)

### Specified product: Lexcor Lexboard by Lexsuco Corporation.

## MEMBRANE MATERIALS

SPECIFIER: Hi-Flex EPDM Standard membrane is available in black and white, 45, 60 and 90-mil (1.1, 1.5 and 2.3 mm) thicknesses, as well as widths up to 15m (50’) and lengths up to 60m (200’). Hi-Flex EPDM Reinforced membrane is available in 45, 60 and 75-mil (1.1, 1.5, 1.9 mm) thicknesses, with a standard sheet size of 3m x 30m (10’ x 100’). Hi-Flex Fleece-backed CA EPDM is available in 45, 60 and 90-mil (1.1, 1.5 and 2.3 mm); moreover, the fleece-backing on each thickness is 55-mil (1.4 mm).

.

### Membrane: Ethylene propylene diene monomer (EPDM) roofing membrane.

1. Description: Prefabricated membrane, conforming to ASTM D 4637 – Standard Specification for EPDM sheet used in Single-Ply Roof Membrane [standard] [reinforced] [fleece-backed]

2. Thickness: [1.1 mm (45 mil)] [1.5 mm (60 mil)] [2.2 mm (90

mil)]

 3. Colour: [black] [white]

4. Width: [1.37 m (4.5 feet)] [2.44 m (8 feet)] [3.5 m (10 feet)] [5.0 m (16.5 feet)] [6.1 m (20 feet)] [7.6 m (25 feet)] [9.14 m (30 feet)] [12.2 m (40 feet)] [15.25 m (50 feet)]

5. Length: [30.5 m (100 feet)] [61.0 m (200 feet)]

6. Specified product: [Lexcan Hi-Flex EPDM Standard Membrane] [Lexcan Hi-Flex EPDM White Membrane] by Lexsuco Corporation.

## ADHESIVE MATERIALS

SPECIFIER: Lexcan Hi-Flex EPDM BA-90 Bonding Adhesive – 5.6 m᷾² (60 ft²) per gallon finished surface. Coverage rates are average and may vary due to conditions on the job site.

LEXCOR INSULTAC II: a two component, essentially VOC free, all purpose, low rise, polyurethane foamable adhesive that contains no solvents and sets in minutes. Application is quick and easy resulting in significant labour savings for the roofing contractor. See Lexcor Product Data sheet for packaging, coverage rates and list of dispensing equipment. In roof retrofit applications approved substrates shall be tested in conformance with “ANSI/SPRI IA-1 2010-Standard field test procedure for determining the mechanical uplift resistance of Insulation adhesives over various substrates.” Contact your Lexcan Representative for details.

### SOLVENT-BASED BONDING ADHESIVE: Neoprene-based formulated for compatibility with EPDM membrane and substrate materials.

#### Specified Product: Lexcan Hi-Flex EPDM BA-90 Bonding Adhesive by Lexsuco Corporation.

### WATER BASED BONDING ADHESIVE: Lexcan Hi-Flex EPDM BA-160 Bonding Adhesive by Lexsuco Corporation.

### POLYURETHANE FOAMABLE ADHESIVE: Two part, urethane based, low rise foaming adhesive [bead applied][spray applied] used for bonding fleeceback membrane to various surfaces. Insultac Adhesive can also be used as an insulation adhesive over compatible substrates. To attach insulation boards and Membrane Adhesive to manufacturers approved substrates.

#### Specified Product: Lexcor InsulTac II Insulation Adhesive by Lexsuco Corporation.

### LOW-RISE POLYURETHANE FOAM: A low rise polyurethane foam used to attach insulation to manufacturers approved substrates. Consult membrane manufacturer for application rates.

#### Specified Product: Lexcor Lexphalt Foamed Polyurethane Adhesive by Lexsuco Corporation.

## INSULATION FASTENERS

### Description: Insulation securement screws are to be Factory Mutual listed and approved #12 diameter with round or flat head, corrosion treated to withstand 30 cycles of the Kesternich test with only a minimum amount of red rust showing. Fasteners must penetrate a minimum 19 mm (3/4") into steel decks or 25 mm (1") into wood decks. Holes for concrete anchors must be pre-drilled not less than 21 mm (1/2") deeper than the penetration depth of the fastener, with a drill bit recommended by the fastener manufacturer. Stress plates are to be 76 mm (3") diameter galvalume metal to fit screw.

### Specified Product: Lexcor Lexgrip™ Insulation Fasteners or [Lexcor Lexgrip™ Pre-Assembled Insulation Fasteners] treated with Cx-5 coating, complete with metal stress plate.

## WOOD NAILERS

### Description: Blocking and rough framing. No.1 Spruce conforming to National Grades Authority, Standard Grading Rules for Canadian Wood to CSA 0141-05. Wood for roofing to be pressure treated to CSA 080-97, Series (R2002). Plywood Sheathing to be exterior grade conforming to CSA 0121-M1978 or CSA 0151-M1978, select grade, good one side, thickness as indicated.

Select flashings compatible with membrane and associated materials.

## ACCESSORIES

### FLASHING: Lexcan Hi-Flex EPDM Lexflash II by Lexsuco Corporation.

### PERIMETER FASTENING: Lexcan Hi-Flex EPDM Stripbond II by Lexsuco Corporation.

### SEAM TAPE: Lexcan Hi-Flex EPDM [3”, 6”] T-325 Seam Tape by Lexsuco Corporation.

### PRIMER ADHESIVE: Lexcan Hi-Flex EPDM PA-100 Primer Adhesive by Lexsuco Corporation.

SA-747 Primer Adhesive is what you would use during winter months.

### PRIMER ADHESIVE: Lexcan Hi-Flex EPDM SA-747 Splice Adhesive by Lexsuco Corporation.

### OVERLAY TAPE: Lexcan Hi-Flex EPDM T-610 Overlay Tape by Lexsuco Corporation.

### PRE-CUT CORNERS: Lexcan Hi-Flex EPDM Lexflash II Corners

### MEMBRANE CLEANER: Lexcan Weathered Membrane Cleaner by Lexsuco Corporation.

### LAP SEALANT: Lexcan Hi-Flex EPDM Lap Sealant by Lexsuco Corporation.

### WATER CUT-OFF MASTIC: Lexcan Water Cut-off Mastic by Lexsuco Corporation.

### POURABLE SEALER: Lexcan Pourable Sealer by Lexsuco Corporation.

### PIPE FLASHINGS: Lexcan Hi-Flex EPDM Pipe Boot or Split Pipe Boot by Lexsuco Corporation.

### TRAFFIC PADS: Lexcan Lexpad 300 Walkway Pad by Lexsuco Corporation.

### TERMINATION SEALER TAPE: Lexcan Water Cut-off Tape by Lexsuco Corporation.

### TERMINATION BAR: Lexcan Termination Bar by Lexsuco Corporation.

### PERIMETER SECUREMENT BAR: Lexcan PS Batten Bar by Lexsuco Corporation.

### PROTECTION MAT: Lexcan Protection Mat by Lexsuco Corporation.

## ROOF SYSTEM FLASHING ACCESSORIES

SPECIFIER: Most Lexcor accessories can be custom fabricated to suit the projects unique features. Roof drains can be pre-assembled complete with flow control inserts and maxflow seal to seal a retrofit roof drain to an existing drainpipe rapidly and efficiently. Vent stack flashings can be ordered extra long so that they can be fastened to roof deck to make up the length for R-30 insulation thicknesses. If standard sizes are used wood blocking curb shall need to be shown on a detail to the construction documents. Refer to online data sheets for up to date model numbers.

### VENT STACK FLASHING: Vent caps shall be sealed to the pipe with Lexcor Flash-Tite™ Drain and Vent Seals. Vent pipes shall be flashed to the roof membrane with two part, telescoping vent stack covers featuring an 18” high base flange and a 127mm (5”) Cap. Vent Stack flashing shall be fabricated from seamless spun aluminum. Caps and base flanges are to match the size of vent pipe. Install in strict accordance with manufacturer’s directions and flash into the roof membrane in accordance with the roofing membrane manufacturer’s directions and good roofing practice. Vent Stack Flashing as supplied by Lexsuco Corporation, Lexcor Flash-Tite™ Standard Vent Stack Covers (Seamless spun mill finish VB-418-Cap model SCA-4).

### VENT STACK FLASHING (B VENT): B-Vent Flashings shall be fabricated from a single piece of spun aluminum metal this is free from joints. Flashing stack is to be fourteen inches (12,14,18”) high complete with Rain Collar. Base flanges are to match the size of vent pipe. Install in strict accordance with manufacturer’s directions and flash into the roof membrane in accordance with the roofing membrane manufacturer’s directions and good roofing practice. B-Vent Stack Flashing as supplied by Lexsuco Corporation, Lexcor Flash-Tite™ B-Vent Flashings.

### ROOF DRAINS: New Construction drain hoppers shall be 2 mm thick seamless spun aluminum and feature a 430 mm (17") diameter flashing flange, 250 mm (10") downspout, membrane stop and clamping ring studs. [Drains shall also include an integral deck clamp assembly composed of a 65 mm thick cast aluminum hopper reinforcement ring welded to the hopper and adjustable aluminum deck clamp mounted on 4 stainless steel rods]. Drains shall come complete with separable cast aluminum membrane clamping ring, 178 mm (7”) high cast aluminum strainer [and spun aluminum Flow Control Insert].

#### Specified Product: Lexcor Flash-Tite™ NC Aluminum Super Drains [with: Flash-Tite™ Integral Deck Clamp; Flash-Tite™ Flow Control Insert; Mechanical Joint Connector] by Lexsuco Corporation. Drain sizes to match drain pipe diameters.

### ROOF DRAINS: Retrofit drain hoppers shall be 2 mm thick seamless spun aluminum and feature a 430 mm (17") diameter flashing flange, 305 mm (12") downspout, membrane stop and clamping ring studs. Drains shall come complete with separable cast aluminum membrane clamping ring, 178 mm (7”) high cast aluminum strainer, stainless steel hardware [and spun aluminum Flow Control Insert].

#### Specified Product: Lexcor Flash-Tite™ RR Aluminum Super Drains [with: Flash-Tite™ Integral Deck Clamp; Flash-Tite™ Flow Control Insert; Flash-Tite™ Drain and Vent Seal; U-Flow Pipe Seal] by Lexsuco Corporation. Drain sizes to match drain pipe diameters.

### SUPPORTS: for Gas pipes; Structural Support Base shall consist of a Pressure moulded using a one or two part mix, utilising milled, sieved and graded Styrene Butadiene Rubber (SBR-Recycled Rubber). Accessory must be complete with 40mm x 20mm Aluminium Channel supplied recessed and bonded into the top face of the foot and BBJ insulclamps to support piping. Specified Product: Fix-it Foot Low 250 (250mm x 130mm x 50mm) supplied by Lexsuco Corporation.

### CONDUIT/PIPE SPLIT FLASHING: Two part stainless steel base and floating rain collar, complete with selvedge style seam, pre-applied seam sealant, stainless steel screws and nuts and EPDM rubber pipe seal strip. [Base flashing is to be insulated on the jobsite with moisture resistant rubber foam].

#### Specified Product: Lexcor Flash-Tite™ Conduit (Split) Flashing, model no. \_\_\_\_\_\_\_ by Lexsuco Corporation.

### HVAC & ELECTRICAL FLASHINGS : To be fabricated from seamless spun aluminum, complete with primer coated flanges. Use appropriate flashing for each application.

#### Specified Products: Lexcor Flash-Tite™ Electrical Wire Outlet Post [ 30 cm; 46 cm] high base, complete with rigid PVC cap fitting. Model no. \_\_\_\_\_\_ by Lexsuco Corporation.

#### Specified Products: Lexcor Flash-Tite™ Electrical Wire Socket or Switch Posts [ 30 cm; 46 cm] high base, complete with rigid PVC cap fitting. Model no. \_\_\_\_ by Lexsuco Corporation.

#### Specified Products: Lexcor Flash-Tite™ B-Vent Flashing, diameter to match chimney diameter, complete with adjustable galvanized steel rain collar by Lexsuco Corporation.

#### Specified Products: Lexcor Flash-Tite™ pre-fabricated mastic sealer pockets ("pitch pockets"). [130 mm (5"); 230 mm (9")] high x appropriate diameter to exceed diameter or width of protrusion by 50 mm (2"). Pockets to be sealed with Lexcan Pourable Sealer, a two-part urethane, self-levelling sealant by Lexsuco Corporation.

### ROOF HATCH UNIT[S]: Single leaf type, 762 mm x 914 mm [2’-6” x 3’-0”] inch size, listed by Lexcor: R-100 (Ladder Access) Roof Hatch.

This can be used for simple specifications, Short Form Specification sample. R-100G/DD/VG/SB/R20 (signifies a 30” x 36” galvanized steel hatch with double clear acrylic dome glazing, vandalproof grid, safety bar handle and R-20 insulation system.

**Metal Fabrication Alternatives:**

**G:** Grey primer coated Galvanized Steel; 14 ga. curb & door(s), 22 ga. door liners.

**A:** Mill finished Aluminum; 11 ga. curb & door(s), 18 ga. door liners.

**S:** Stainless Steel.

**C:** Copper (24 oz)

**F**: Galvanized Curb with Aluminum Lid.

**Other Options:**

**SB**: Safety Bar Handle.

**VG**: Vandal Guard.

**SS:** Stainless Steel Hardware.

**D:** Single clear acrylic dome glazing.

**DD**: Double clear acrylic dome glazing.

**DW**: Single white acrylic dome glazing.

**DDW:** Double dome; clear over white glazing.

16”: 16” (406 mm) high curb

18”: 18” (457 mm) high curb

24”: 24” (610 mm) high curb

**SR:** Safety Rail System

**R20**: R-20 Insulation System

**WGC**: Wind Gust Control Unit,

Minimum height the curb should be above the roof system is 8” I recommend that you go 12”

**Piston Forces**: Depending on the wind forces on the hatch if the force is pushing the door open from below then you want to choose the piston that (pulls the door closed)

#### Specified Product: Lexcor R-100G/WGC/SB/R30 by Lexsuco Corporation.

#### Steel Cover and Curb: 2.95 mm [11 gauge] thick primer coated galvanized steel and shall be neatly welded and ground at corners. Door shall have two layers of 66.1mm [2.6 inches] polyisocyanurate insulation; door liner shall be 18 gauge primer coated galvanized steel. Curb shall be *[<305mm; [12 inch]; 457mm [18 inch]; 610mm [24 inch] >> ]* high with two layers of 66.1mm [2.6 inch] polyisocyanurate insulation secured to the curb exterior. Curb shall have 89 mm [3.5 inch, pre-punched flanges. Curb and cap assembly shall be complete with extended flanges ready to receive roof flashings.

#### Roof Hatches Hardware:

##### Wind Gust Control Unit: shall be mounted on the inside of the hatch opposite to the steel hold open arm. Piston forces shall pull the door closed; or [push door open.

##### Roof hatch shall be completely assembled with heavy duty pintle, torsion bar operated doors, latching mechanism, *interior and/or [exterior]* padlock hasps and neoprene draft seal. Door shall be equipped with an steel hold open arm with foam rubber grip handle. All hardware shall be cadmium plated.

##### Hatch shall be equipped with 35mm [1’-3/8”] diameter Safety Bar coated with mil PVC colour coated roof safety green. Safety Bar shall be mounted on the *[right; left]* corner of hatch curb with out impeding operation of the door.

### OTHER ROOFING PRODUCTS:

#### Pavers: Pre-formed concrete roof pavers, minimum dimensions: 610 mm x 610 mm (24" x 24"). Minimum weight: 50 kg/m2. Pavers are to be square and free of chips, spalls or cracks.

#### PAVER PEDESTALS: Pave-El Pedestals, Model No. [5X, 6X, 7X], complete with levelling plates where required to ensure the walkway is smooth and level.

#### Ballast: Smooth, river washed stone with a nominal diameter of 35 mm (1-1/2"). The stones shall not exceed a maximum 65 mm (2-1/2") diameter and shall be 95% retained by a 13 mm (1/2") screen.

#### Wood nailers shall be new, #2 wood or better wood, factory treated for rot resistance. Creosote or asphalt treated wood is not acceptable. Nailers are required at all roof edges or gravel stops and shall be installed so that the top is flush with the top of the membrane underlayment, ± 5 mm (1/4").

#### COUNTER-FLASHING: Galvanized steel sheet metal, minimum 0.61 mm (24 ga.) thick, prefinished with modified silicone, Baycoat 5000 series. Colour as selected and approved by the specifier [to match colour of existing metal flashing]. or

#### COUNTER-FLASHING: to ASTM A606-75 high strength low alloy rolled architectural grade sheet steel, minimum 0.61 mm (24 ga.) thick, pre-painted to the colour approved by the specifier [to match colour of existing metal flashing].

# Execution

## EXAMINATION

Select and edit the following paragraphs as appropriate to the deck type and project conditions.

### Section [01 70 00]: Verify existing conditions before starting work.

Select and edit the following paragraphs as appropriate to the deck type and project conditions.

### Verify that surfaces and site conditions are ready to receive work.

### Verify deck is supported and secured.

### Verify deck is clean and smooth, free of depressions, waves, or projections, properly sloped to [valleys] [drains] [eaves].

### Verify adjacent precast concrete roof members do not vary more than [<6 mm><<1/4 inch>>] in height. Verify grout keys are filled flush.

### Verify deck surfaces are dry and free of snow or ice. Verify flutes of metal deck are clean and dry.

Include the following paragraph where a moisture absorptive deck requires testing for moisture content.

### Confirm dry deck by moisture meter with [12%] moisture maximum.

### Verify roof openings, curbs, pipes, conduit, sleeves, ducts, and vents through roof are solidly set, and [reglets] [wood nailing strips] [wood cant strips] are in place.

## PREPARATION - WOOD DECK

### Verify flatness and tight joints of wood decking.

### Seal joints of plywood with tape.

### Fill knot holes with latex filler.

## PREPARATION - CONCRETE DECK

### Fill surface honeycomb and variations with latex filler.

## PREPARATION - METAL DECK

### Install preformed sound absorbing glass fibre insulation strips supplied by Section [05 31 13], in acoustic deck flutes; to manufacturer's instructions.

The acceptability of applying gypsum sheathing to steel roof decks will be determined by local codes or ULC or requirements.

### Install deck sheathing onto the steel deck.

### Install deck sheathing onto steel deck [to Factory Mutual requirements, bulletin 1-28 for installation of boards to roof perimeters and corners, to meet [1-60] [1-90]].

### Lay with long side at right angle to flutes; stagger end joints; provide support at ends.

Select either of the following paragraphs OR in combination.

### Install sheathing on metal deck [using continuous mopping of adhesive on each flute].

### Mechanically fasten sheathing at [perimeter] [full roof area] of roof deck, to a distance of [<1500 mm><<60 inches>>] using [six (6)] [eight (8)] fasteners with washers per board.

### Cut sheathing cleanly and accurately at roof breaks and protrusions to provide smooth surface. Tape joints.

## VAPOUR RETARDER SUPPORT PANELS INSTALLATION

### Mechanically Fastened Support Panels:

#### Mechanically fasten panels to [wood] [steel] [concrete] deck using fasteners and plates recommended by the membrane manufacturer.

#### On steel decks, ensure that the fasteners engage the top rib of the steel deck and penetrate through the deck a minimum of 19 mm (3/4 in).

#### On steel decks, place the long edge of the board parallel to and located on top rib of the deck for continuous support.

#### Follow the membrane manufacturer’s recommendation for number and spacing of fasteners.

#### Stagger end joints of adjacent boards and butt joints so that they are in moderate contact with each other.

#### Where slopes change direction cut boards cleanly. Avoid breaking boards to conform to the deck.

#### All concrete fasteners and anchors shall have a minimum penetration of 32mm (1 1/4 in) and shall be approved for such use by the membrane manufacturer.

#### All miscellaneous wood fasteners and anchors shall have a minimum penetration of 20 mm (13/16 in) and shall be approved for such use by the membrane manufacturer. Where the deck is less than 20 mm (13/16 in) the fastener should be long enough to penetrate the full thickness of the deck or through the deck

### Adhered Support Panels:

#### Use only adhesive recommended by the support panel manufacturer to secure panel to the deck. Apply adhesive using tools and equipment as recommended by the membrane manufacturer.

## INSTALLATOIN OF VAPOUR RETARDER

### Primer: Apply primer in accordance with manufacturer's written instructions for system specified. Allow to dry.

SPECIFIER: Wood nailers shall be installed at the perimeter of the entire roof and around such

other roof projections and penetrations as specified on project drawings. Thickness of nailers

must match the total assembly thickness to achieve a smooth transition with the roofing

membrane. Thickness shall be as required to match substrate and/or insulation height to allow

a smooth transition.

### Application of Self-Adhesive Vapour Retarder:

#### Where the self-adhesive vapour retarder is applied to a support panel, use only vapour barrier support panels approved by the self-adhesive vapour retarder manufacturer.

#### Where the self-adhesive vapour retarder is to be adhered to glass faced gypsum board support panel, apply primer in accordance with the instructions of the gypsum board panel and vapour retarder manufacturers.

#### All surfaces to be primed must be free of dust, or any residue that may hinder adhesion of the vapour retarder. Cover primed surfaces with vapour retarder as soon as possible.

Note: Consult membrane manufacturer for cold weather installation limitations and instructions.

#### When applied directly to steel deck, align the roll parallel to the flutes of the deck. Ensure that the vapour retarder overlaps are positioned on the top ribs of the deck and supported along their entire length.

#### Unroll vapour retarder onto the substrate for alignment. Do not immediately remove the release sheet.

#### Overlap vapour retarder sheet by 75 mm (3 in) at the side laps and 150 mm (6 in) at end laps. Stagger end laps by a minimum of 300 mm (12 in).

#### Once aligned peel back one end of the release sheet and adhere the exposed membrane to the substrate. Peel back the remaining release sheet at a 45º angle to avoid wrinkles in the membrane.

#### If the vapour retarder is not properly aligned, do not adjust it. Instead, cut the roll and start again, making sure that it is properly aligned and that it overlaps the end of the misaligned piece by 150 mm (6 in).

#### Roll the self-adhesive vapour retarder onto the substrate with a 34 kg (75 lb) roller. Finish by aligning the edge of the roller with the lower end of the side laps and rolling up the membrane. Do not cut the membrane to remove air bubbles trapped under the laps. Squeeze out air bubbles by pushing the roller to the edge of the lap.

### Application of Polyethylene Vapour Retarder:

#### Lay vapour retarder loose over support panel, or directly onto steel deck. Overlap all edges a minimum of 100 mm (4 in) and seal with tape or compatible sealant.

#### Where the polyethylene vapour retarder is applied directly to steel deck, align the roll parallel to the flutes of the deck. Ensure that the vapour barrier overlaps are positioned on the top ribs of the deck and are supported along their entire length.

#### Ensure continuity by extending vapour retarder to perimeter and deck Penetrations.

#### Seal vapour retarder membrane at all perimeters, transitions and around each penetration to ensure continuity.

#### Seal the vapour retarder to the vertical surfaces at all roof penetrations, curbs and parapets.

### Application of Kraft Laminated Vapour Retarder

Consult the manufacturer as needed for required instructions related to specified vapour retarder.

#### Apply vapour retarder to substrate with specified adhesive in conformance with the manufacturer's recommendations.

#### Overlap side laps a minimum of 100 mm (4 in) and end laps a minimum of 150 mm (6 in).

#### Seal side laps and end laps with recommended adhesive in conformance with manufacturer's recommendations.

#### Seal vapour retarder membrane at all perimeters, transitions and around each penetration to ensure continuity.

## INSULATION APPLICATION

Only include the following paragraph if a manufacturer actually publishes installation instructions - many do not. If the manufacturer does NOT publish such a document, ensure all install criteria that is important to the project, is specified below.

### Install insulation to manufacturer's written instructions.

### Loose Laid Insulation Installation:

#### On steel decks install insulation so that long dimensions of the board are parallel with the flutes of the steel deck and fully supported on the top rib.

#### Butt edges in moderate contact with each other.

#### Stagger joints in insulation courses.

#### Insulation shall be neatly cut to fit around penetrations and projections.

#### Install tapered insulation around drains creating a drain sump.

#### Use at least 2 layers of insulation when the total insulation thickness exceeds 64 mm (2 1/2 in). Offset joints of each succeeding layer at least 300 mm (12in).

#### Do not install more insulation board than can be covered with membrane by the end of the day or the onset of inclement weather.

## INSTALLATION OF COVER BOARD

### Loose Laid Installation of Cover Board:

#### Where specified, loosely lay cover board over insulation.

#### Offset joints of cover board from the joints of the insulation below.

#### Butt edges in moderate contact with each other.

#### Stagger joints in cover board courses.

#### Boards shall be neatly cut to fit around penetrations and projections.

## INSTALLATION OF EPDM MEMBRANE

Only include the following paragraph if a manufacturer actually publishes installation instructions - many do not. If the manufacturer does NOT publish such a document, ensure all install criteria that is important to the project, is specified below.

### [*Apply membrane [and primer] to manufacturer's written instructions*.]

### The surface of the insulation, or cover board substrate shall be inspected prior to the installation of the roofing membrane.

### The substrate shall be clean, dry, free from debris and smooth with no surface roughness or contamination.

### Broken, delaminated, wet or damaged insulation and cover boards shall be removed and replaced.

### Beginning at low point of roof, place membrane without stretching over substrate. Allow to relax at least 30 minutes before attachment or splicing; in colder weather allow for longer relax time.

### Position adjoining membrane sheets in similar manner.

### Lay out the membrane sheets so that field and flashing splices are installed to shed water.

### Allow for minimum seam overlaps in accordance with the membrane manufacturer’s requirements.

## PERIMETER SECUREMENT

SPECIFIER:Alternative Perimeter Securement methods are presented in general order of preference. Consult Lexcan over limitations and recommendations with respect to selecting the best perimeter securement method for the project.

NOTE: Perimeter Securement is not required around field protrusions with their largest plan dimension less than 60 cm (2').

NOTE: The Batten Bar method is the only acceptable method of perimeter securement around existing curbs, if all of the following are true:

1. the curb is already in place
2. the curb is in the field of the roof and is not part of the roof perimeter.
3. a hole will be cut in the membrane to fit around the curb (i.e.: a field splice will not hit the curb).

### FLATBOND METHOD: Insulation around roof perimeter and near large protrusions (skylights, roof hatches) is to be mechanically fastened to the deck with appropriate insulation fasteners. Fasteners are to be located in one row on 450 mm (18") centres, 150 mm (6") out from the perimeter. In lieu of mechanically fastening, an approved adhesive may be used to adhere the insulation. The insulation must be fully adhered a minimum of 1250 mm (4') out from the perimeter.

### EPDM membrane is to be fully bonded with Bonding Adhesive to a minimum 30 cm (12") wide strip of the insulation or substrate extending out from the roof perimeter and any large roof protrusions (hatches, skylights, equipment curbs, etc.). Apply adhesive 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.

### STRIPBOND METHOD: Position Perimeter Securement Strips around the perimeter, overlapping ends a minimum of 100 mm (4"). If fastening into the wall, 230 mm (9") plain or 150 mm(6") pre-taped Strips may be used. If fastening into the flat, 15 cm (6") wide plain Strips are acceptable.

### Fasten the Perimeter Securement Strips into the [vertical substrate; structural deck] on 30 cm (12" centres using approved insulation fasteners and plates appropriate for the type of substrate. In all cases, the fastener must be specifically approved by the roofing system supplier for the type of substrate.

### Clean the underside of the roofing membrane where it is to be mated to the Perimeter Securement Strips. If using a plain Strip, adhere the EPDM membrane is to Perimeter Securement Strip with Seam Adhesive, applied in accordance with the. Apply Primer Adhesive to underside of the roofing membrane according to the primer application instructions and allow the primer to dry completely. Roll the EPDM membrane onto the Stripbond Strip avoiding folds or wrinkles and brush it well with a heavy duty push broom to ensure complete contact.

### BATTEN BAR METHOD: Membrane must be mechanically fastened at the horizontal / vertical juncture of the parapet with Perimeter Securement Bar, fastened on 15 cm (6") centres with fasteners approved by the roofing system supplier. Bar may be fastened into the base of the curb flush to the top of the insulation or to a nailable deck, immediately adjacent to the curb. Field membrane must extend a minimum of 25 mm beyond bar. Bars shall be spaced between 1.5 to 2.5 cm (1/2" - 1") apart.

## PERIMETER TERMINATIONS

### Roof Edge Termination: Apply bonding adhesive to both the underside of the membrane and the substrate in accordance with the application instructions of the adhesive. Let adhesive dry until it is tacky but does not string to the touch, before pressing the membrane into the substrate. Extend membrane over roof edge 8 cm (3") and nail into edge blocking with 25 mm (1") diameter round top roofing nails, on 30 cm (12") centres. Apply roof edge system, gutter or gravel stop in accordance with the manufacturer's directions. Counter flash metal flange with Overlay Tape as per standard roofing system supplier details.

### Parapet/Wall Terminations: Unless approved detail shows otherwise, membrane must either terminate in a reglet, be fastened according to paragraph 3.10.3 below, or be carried over top of wall or parapet and counter flashed with sheet metal or capped with stone.

### If terminating membrane partway up a wall or parapet, apply Termination Sealer Tape or 25 mm (1") wide bead of Water Cut-off Mastic to backside of membrane edge. Press membrane against wall and roll with a steel hand roller. Position Termination Bar over the upper edge of the membrane and fasten into the wall with approved termination bar anchors. Separation between termination bars should be 2 cm (3/4"). Apply Lap Sealant along upper edge of termination bar and overtop of all fastener heads.

## SEAM OVERLAPS

### Pre-clean the seam areas of the EPDM membrane with SC-1 Seam Cleaner. Ensure the splice areas are free of surface talc, dirt, grease, asphalt or other contaminants.

### Ensure the Primer Adhesive is stirred well and stirred every fifteen minutes while in use. Apply the Primer Adhesive to seam areas of the membrane by scrubbing the membrane with a scrubby pad. Replace with a fresh pad when the scrubby becomes soiled. Allow the Primer Adhesive residue to thoroughly dry before applying the seam tape. Discard any remaining Primer Adhesive after use or if it gels.

### Position membrane to allow for required splice overlap. Mark the bottom sheet approximately 6.4 to 12.7 mm (¼ to ½ in) from the top sheet edge to provide a guide for the positioning of the splice tape.

### Fold back the upper sheet and apply Primer Adhesive to both sides of the seam area as per [\_\_\_\_] above. Unroll and apply the Seam Tape to the underside of the upper membrane. Tape edge should extend between 2 to 7 mm (1/8" to 1/2") beyond the upper sheet edge along the entire seam length. Roll the tape heavily with a steel hand roller across the seam. Cut tape ends on a 45° angle and lap a minimum of 75 mm (3"). When the tape has been applied along the length of the seam, remove the paper backing and unfold the upper sheet overtop of the base membrane avoiding air bubbles or fishmouths.

### Roll completed seams heavily with a steel hand roller across the seam to ensure complete contact.

### Apply Flashing membrane to all seam tape splices, seam 'T' junctions and horizontal / vertical transitions with Primer Adhesive as per the roofing system supplier's flashing instructions and details. Roll flashing with a rubber hand roller to ensure complete contact without air bubbles or voids.

### Apply Lap Sealant to all flashing edges and feather with the tool provided.

The following paragraphs are required for Extended Warranties:

### Seam Overlayments: Apply a 20 cm (8") wide strip of Primer Adhesive centred over the seam edge as per 3.9.2 above. Allow the Primer Adhesive to completely dry. Centre the Overlay Seam Tape roll over the seam and unroll the tape. Lap Overlay Tape ends a minimum of 25mm (1").

### Roll completed seams heavily with a steel hand roller across the seam to ensure complete contact.

### When adhering membrane, ensure that there are no fishmouths or wrinkles at the overlaps.

## MEMBRANE FLASHINGS AND ACCESSORIES

Verify compatibility of flashing materials with roofing system materials.

### Flashing shall consist of cured EPDM, or where approved by the membrane manufacturer, self-adhering flashing membrane. Use the largest pieces of membrane practical.

### Flashing shall be adhered to compatible, dry, smooth, and solvent-resistant surfaces.

### All flashings shall extend a minimum of 200 mm (8 in) above the finished roof unless otherwise accepted in writing by the membrane manufacturer.

### All flashing membranes shall be consistently adhered to substrates.

### Flashings shall be terminated according to the membrane manufacturer’s recommended details.

### Wherever feasible, use pre-fabricated seals to flash pipe penetrations, sealer pockets, inside and outside corners. Follow the membrane manufacturer’s instructions when installing pre-fabricated accessories.

### All vertical flashing splices and membrane T-joints must be overlaid with uncured flashing strips. Follow the membrane manufacturer’s instructions when installing overlay strips.

### For hot pipes exceeding 60 °C (180 °F) consult membrane manufacturer for special installation instruction

Edit the first paragraph below for proprietary control and expansion joints; edit the second paragraph for site built joints.

### Install prefabricated roofing [control joints] [expansion joints] to isolate roof into areas [as indicated] [to manufacturer's written instructions].

### Fabricate roofing [control joints] [expansion joints] to isolate roof into areas as indicated.

### Coordinate installation of [roof drains] [roof sumps] and related flashings.

### Seal flashings and flanges of items penetrating membrane.

## MECHANICAL ROOF DRAINS

### Provide a smooth transition from the roof surface to the drain clamping ring. Prepare the substrate around each roof drain to avoid membrane bridging at the sump area and possible distortion at the drain clamping ring.

### The mating surfaces between the clamping ring and drain base must be clean and have a smooth finish.

### Field splices at roof drains must be located at least 150 mm (6 in) outside the drains.

### Cut membrane so it extends approximately 12.7 mm (1/2 in) beyond the attachment points of the clamping ring. The hole in the membrane must not restrict water flow or be smaller than the drain pipe.

### Apply a water barrier sealant to the clamping ring flange in accordance with the membrane manufacturer’s instructions.

### All bolts and/or clamps must be in place to provide compression on the water barrier sealant.

### Install roof membrane as prescribed and secure strainer basket and bolt assembly.

## BALLASTING

In addition to mechanical fastening, ballast may be required to counteract wind uplift. Depth and weight of ballast should be calculated accordingly. Increased ballast may be required at building corners where wind scouring of ballast is more severe. 18 lbs/sf patio slabs can be ordered and connected on site with batten bars for increase wind up lift.

### Apply ballast to each roof section at the coverage rates specified by the membrane manufacturer as each is completed Place cushion sheet over sheet membrane prior to placing ballast.

### Do not stockpile ballast on the roof.

### Round, River Washed Ballast: Apply round washed gravel with minimum nominal diameter of 19 to 38 mm (¾ to 1 ½ in) at a minimum rate of 50 kg/m² (10 lb/ft²) throughout the field of the roof. If washed river stone is unavailable, gravel or slag may be substituted provided Protection Mat is placed over top of the EPDM membrane first. Protection Mat sheets are to be loose laid and lapped a minimum of 30 cm (12") on all sides.

### Aggregate Ballast: Apply dry at [<490 kg/10 sq m><<1000 lb/sq>>], evenly distributed.

SPECIFIER: Minimum coverage requirements for ballast depend on the size and gradation of

the aggregate. Consult Lexcan for minimum coverage rates for ballast gradations. .

### Crushed Stone: Where crushed stone is used as ballast, loosely lay a layer of protection mat approved by the membrane manufacturer over the membrane.

### Overlap all edges a minimum of 150 mm (6 in).

### Extend the protection mat a minimum of 50 mm (2 in) above the anticipated ballast level at the perimeter and around all penetrations (excluding roof drains). Install additional layer of protection mat where required to prevent direct contact between crushed stone and pavers.

Include the following two paragraphs for precast paver ballast.

### Paver Ballast: Place pavers [at roof areas indicated].

### Install pavers directly on membrane. Provide approximately [<6 mm><<1/4 inch>>] [<10 mm><<3/8 inch>>] space between pavers to permit surface water drainage.

## WALKWAY INSTALLATION

### Concrete Pavers:

#### Install protection mat under concrete pavers as recommend by Lexcan.

## TEMPORARY CUT-OFF

### When flashings and terminations are not completed by the end of the working day, temporary water cut-off seals shall be installed to maintain a watertight condition as the work progresses.

### All temporary waterstops shall be constructed to provide a watertight seal.

### The membrane shall be carried into the waterstop and the waterstop shall be sealed to the deck and/or substrate so that water cannot travel under the roofing.

### The edge of the membrane shall be sealed in a continuous heavy application of sealant.

### Membrane contaminated with sealant shall be cut out when work resumes.

## FIELD QUALITY CONTROL

Only include this article if special field inspection services will be involved.

### Section [01 45 00]: Field [inspection] [testing].

### Require site attendance of roofing [and insulation] material manufacturers [daily] during installation of the Work.

Include the following paragraph if the provincial roofing association has specific warranty requirements.

### Provide inspection services to [\_\_\_\_\_] warranty requirements.

### Monitor and report installation procedures, unacceptable conditions and [\_\_\_\_\_].

### Correct identified defects or irregularities.

## CLEANING

This article is intended to supplement cleaning requirements specified in Division 01 sections. Edit this article to supplement Division 01 statements.

### Section 01 74 00: Cleaning installed work.

### In areas where finished surfaces are soiled by Work of this section, consult manufacturer of surfaces for cleaning advice and conform to their [documented] instructions.

### Repair or replace defaced or disfigured finishes caused by Work of this section.

## PROTECTION OF FINISHED WORK

### Section 01 78 40: Protecting installed work.

### Protect building surfaces against damage from roofing work.

### Where traffic must continue over finished roof membrane, protect surfaces.

END OF SECTION