

PART E
SPECIFICATIONS

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS, STANDARD DETAILS AND DRAWINGS

- E1.1 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.1.1 *The City of Winnipeg Standard Construction Specifications* is available in Adobe Acrobat (.pdf) format on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt>.
- E1.1.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.1.3 Further to GC:2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.2 The following Drawings are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing</u>
R1	Roof Plan

E2. MATERIALS

E2.1 Dimensional Lumber

- (a) This shall be construction grade spruce of the dimensions as outlined under the Description of Work.

E2.2 Plywood Sheathing

- (a) This shall be 5/8" fir plywood.

E2.3 Modified Bitumen Membrane

- (a) This shall be 2 ply Soprema Colphene 1500 base sheet with a Soprema Colphene HR Granular cap sheet.

E2.4 Modified Primer

- (a) Soprema Elastocol Stick for use with the self adhesive membranes.

E2.5 Rubberized Mastic

- (a) This shall be Polyroof as manufactured by Tremco Ltd. All exposed rubberized asphalt shall be coated with aluminum paint.

E2.6 Caulking

- (a) This shall be Tremco Dymonic FC.

E2.7 Aluminum Paint

- (a) This shall be Tremco Double Duty.

E2.8 Roof Drains

- (a) These shall be Scupper Retrodrains as manufactured by Olympic Manufacturing and distributed by Beacon Industries. These are to be used in 3 locations and the U-Flow Hercules – A (aluminum strainer dome) drain is to be used to replace the existing north

drain if the plumbing can be moved away from the wall if not then the Scupper Retrodrain is to be used. Size is to match existing plumbing.

E2.9 Vent Stacks

- (a) These shall be Insulated Stack Jack Flashings (with EPDM seal) SJ-45A as manufactured by Thaler. Slope of base flange of flashing is to match slope of roof and is to be sized to fit existing plumbing risers. Existing hubs are to be removed as required and new extensions added and clamped in place.

E2.10 Metal Flashing

- (a) The exposed flashing shall be a minimum of 24 gauge in thickness. Finish is to be Tan chosen from the standard in stock range of Stelco 8000 series of colors. Sample color is to be provided for the Contract Administrator for final approval.

E2.11 Accessories

- (a) All nails, bolts, screws and other fasteners etc. shall all be as recommended by the manufacturer of the materials for which they are to be used.

E2.12 Shingle Underlayment

- (a) The felt underlay shall be No. 15 Plain Asphalt Saturated.

E2.13 Shingles

- (a) These shall be BPCO Rampart twenty-five year warranty, three tab-self sealing asphalt shingles .

E2.14 Nails

- (a) Galvanized steel, sufficient length to penetrate through the underside of the deck at least 20 mm. STAPLES ARE NOT ACCEPTABLE.

E2.15 Tabbing Adhesive

- (a) Tabbing compound shall be plastic roofing cement – Plastic cement shall be CGSB-37-SMA. Caulking style tubes must be used.

E3. ROOFING PROCEDURES

E3.1 Protect all new Work and the existing building and its contents against inclement weather. Supply and install equipment and enclosures necessary to provide this protection from beginning to completion of the Work.

E3.2 Do not apply any self adhering roofing whatsoever during any inclement weather including when the temperature may fall lower than ten degrees above Celsius or as otherwise recommended by the Manufacturer. Shingles are not to be installed when temperatures are below – 10 Celsius.

E3.3 Do not expose roofing materials, vulnerable to water or sun damage, in quantities greater than can be weatherproofed in one day. Use only clean and dry materials and apply only during weather that will not introduce moisture into the roof system. This would include days of excessively high relative humidity. Undertake only that amount of roofing that can be completed as specified in the same day or prior to inclement weather forcing a shutdown of the operations.

E3.4 Apply roofing over clean and dry surfaces and in accordance to C.R.C.A. and/or manufacturers guidelines and as amended herein.

- E3.5 All materials on the roof shall be stored in such a manner as to prevent blow-offs during high winds.
- E3.6 Protect the surrounding surfaces against damage from the roofing operations. Where hoisting is necessary protect the buildings by hanging tarpaulins. Should equipment be parked on the surrounding lawn, it shall be protected with $\frac{3}{4}$ " plywood. Materials nor debris shall be stored or stock piled on adjoining roof areas that are not being replaced.
- E3.7 Provide protection for the public using walkways, grounds, entrances, etc., by using proper warning signs, hoarding, shelters, or barricades as agreed to by the Contract Administrator.
- E3.8 Where Work must or will continue over the finished roofing membrane, the Contractor will protect it with plywood sheathing.
- E3.9 Removal of (opening up) existing roof membrane shall be done only after consultation with and agreement by the Contract Administrator. Remove only that portion that can be fully completed as specified within the same day work period.
- E3.10 Employ qualified mechanical tradesmen for all plumbing.
- E3.11 Notify Contract Administrator and ensure he has proper time to appear on Site during application period. Failure to do so may result in the total rejection of all Work completed prior to notifying the Contract Administrator.
- E3.12 Inspect all roof decking prior to installation of roofing system and report all defects or unsuitable conditions to the Contract Administrator and correct deficiencies as directed.
- E3.13 The Site shall be inspected prior to commencement of Work to ensure no current anomalies are present such as lawn damage, asphalt on walls, broken windows, etc. All anomalies shall be reported to the Contract Administrator. They shall then be recorded and photographed by both parties at that time. Should no anomalies be reported prior to Work commencing it shall be assumed that none existed prior to commencement.
- E3.14 Use only equipment in good working order including all thermometers and gauges. Locate equipment as instructed by the Contract Administrator.
- E3.15 All applicable safety regulations as indicated by Manitoba Health and Safety must be strictly followed at all times.

E4. DESCRIPTION OF WORK

- E4.1 Existing shingles are made from asbestos and all removal must be done in strict accordance to all applicable safety and health guidelines pertaining to the safe removal and disposal of asbestos products.
- E4.2 All shingles shall be removed from the roof in such a manner as not to damage or expose the building interior to damage (physical or weather).
- E4.3 All shingles shall be removed from the Site and all nails or staples picked up and disposed at a legal dump site. Magnets are to be used to ensure all nails and staples are picked up.
- E4.4 Upon the removal of the shingles, inspect the building structure for dry rot damage or deterioration of existing roof sheathing, fascia boards, trimmers plates and trusses. Report any rot to Contract Administrator immediately prior to the installation of any shingles.
- E4.5 No more shingles shall be removed in one day than can be recovered with new shingles and made weather proof.

- E4.6 All existing sheet metal flashing shall be removed and discarded.
- E4.7 Remove and discard the existing modified bitumen roofing and any underlaying insulation.
- E4.8 Install the new plywood sheeting in the bottom of the valley areas and up and overtop of the eave parapets. Install plywood up the inside face of the west parapet wall from the deck to the underside of the coping. Install a 22 ga. Sheet metal angle flashing at the east end of the valleys and extend 12" up the wall and 6" onto the roof deck in the area only in which the self adhering membrane is to be applied. This is to provide a clean substrate for the new membrane stripping.
- E4.9 Remove the existing roof drains and install the new roof drains. Fasten securely to existing plumbing. Alter plumbing as required to accommodate new drains.
- E4.10 Coat the new plywood, support flashing and existing deck (where membrane is to be installed) with the specified primer.
- E4.11 Install the 2 ply base sheet and cap sheet in strict accordance top manufacturers guidelines. The membrane is to extend a minimum of 6' up the roof slope. The shingles are to overlap 12". Note that primer is to be applied between each of the 3 plies of the membrane. The membrane stripping is to extend a minimum of 1" down the outside face of the parapets. Install the new plumbing vent flashing in conjunction with the base sheet membrane application. The existing plumbing vent hub is to be removed and a new ABS riser attached with a Fernco coupler. The coupler is to be located below the roof deck.
- E4.12 Install 1 ply felt over the remaining roof.
- E4.13 A starter strip shall be installed along the lower edge of the roof. Such starter strip shall not be less than Type M mineral surfaced roll roofing not less than 304 mm wide, or shingles of the same weight and quality of those used as a roof covering with tabs facing up the roof slope.
- E4.14 Install the shingles so as a minimum of 2 thickness exist over the entire roof area. Each shingle strip shall be nailed with six (6) 1 ¼" long large headed roofing nails. When a nail penetrates a crack or knothole, another nail shall be driven along side into sound wood. Care is to be taken to ensure that the nails are driven in straight and that the heads do not penetrate the shingle.
- E4.15 Shingle tabs shall be adhered with 1" dabs of shingle adhesive. **The adhesive is to be applied the same day as the shingles are installed.**
- E4.16 All remaining installation procedures shall be done in strict accordance to the manufacturers guidelines and applicable codes.
- E4.17 Install all new step flashing and new counter flashing. All counter flashing is to be replaced with new on all attic vent curbs. Counter flashing in the gable end parapets is to fit under the inside lip of the new cap flashing.
- E4.18 All existing vent hoods are to be cleaned, coated with appropriate primer and painted with a good quality enamel paint to match the color of the new metal flashing.
- E4.19 Install all new metal cap and counter flashing on the west gable end wall parapet and cap flashing only on south and north wall parapets. The new cap flashing is to cover the existing coping in its entirety.
- E4.20 Cut a reglet in the east wall a minimum of 8" up above the roof deck. Install a new counter flashing that extends 1" out onto the roof over the shingles and fits into the new reglet. Secure with Tapcon screws spaced no more than 16" on centre. Caulk the top edge of the flashing.

Note: Sample sections of flashing may have to be installed for approval by the Contract Administrator.