

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>
3229-04	Roof Plan
3229-04 D1	Details

E2. MATERIALS

- E2.1 DIMENSIONAL LUMBER
- (a) This shall be construction pressure treated p.w.f. lumber of the dimensions as outlined under the Description of Work.
- E2.2 PLYWOOD SHEATHING
- (a) This shall be ½" pressure treated p.w.f. plywood.
- E2.3 VAPOUR BARRIER
- (a) This shall be one ply Soprema Elastophene Flam 2.2 and one ply Soprema Elastophene SP or approved equal.
- E2.4 ROOFING INSULATION
- (a) Expanded Polystyrene Type II with a minimum slope of 3/16" per foot and a minimum thickness of 1 ½" . Back slope shall be a minimum of ¾" to 12". This shall be as manufactured by Plastifab Ltd. Or Insulation Industries Ltd. Slopes are to be as per the attached Drawings.
- (b) 1 ½" Soprema Colgrip A polyisocyanurate insulation with acrylic facer or approved equal.
- E2.5 INSULATION ADHESIVE
- (a) This shall be Insta-Stik as manufactured by Flexible Products Company Roofing Group and distributed by Brock White or Coltack Adhesive as distributed by Soprema.
- E2.6 POURABLE SEALER
- (a) This is to be Lexcan 2 part Pourable EPDM Sealer or approved equal. This is to be used to fill all pitch boxes or as otherwise specified.

E2.7 MODIFIED BITUMEN MEMBRANE

- (a) **Membrane:** Soprema Colvent 810 self adhering base sheet membrane with a Brown colored Sopraply Cap-860 cap sheet (heavy traffice) or approved equal.
- (b) **Stripping:** Soprema Sopraflash Flam Stick self adhering base sheet with a Sopralene Flam 180 cap sheet or approved equal.

E2.8 MODIFIED PRIMER

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

E2.9 CAULKING

- (a) This shall be Tremco Dymonic FC or approved equal.

E2.10 ALUMINUM PAINT

- (a) This shall be Tremco Double Duty or approved equal.

E2.11 METAL FLASHING

- (a) The cap flashing shall be a minimum of 24 gauge in thickness. Finish is to match that already installed on the parapets of area A1.

E2.12 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.

E2.13 DRYWALL SHEATHING

- (a) This shall be ½" Dens-Deck as manufactured by Georgia Pacific or approved equal.

E2.14 DRYWALL FASTENERS

- (a) These are to be #12 Insul-Fix screws and 3" galvanized plates as manufactured by SFS Stadler or approved equal such as manufactured by Deck Fast.

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 roofing whatsoever during any inclement weather including when the temperature may fall lower than +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 roofing 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 are to be stored in such a manner as to prevent blow-offs during high winds as well as to protect from moisture.

- E3.6 Should the roofing operations be terminated during the day for unforeseen circumstances all exposed vapor barrier, felts or drywall **MUST** be fully glaze coated with bitumen prior to leaving the Site that day.
- E3.7 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 ¾" plywood. Materials nor debris shall be stored or stock piled on adjoining roof areas that are not being replaced.
- E3.8 Provide protection for the public using walkways, grounds, entrances, etc., by using proper warning signs, hoarding, shelters, or barricades as agreed by the Contract Administrator.
- E3.9 Where Work must or will continue over the finished roofing membrane, the Contract Administrator will protect it with plywood sheathing.
- E3.10 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.
- E3.11 Employ qualified Mechanical Tradesmen to disconnect existing roof top units and to move the units to allow complete installation of roofing membrane, insulation and vapor barrier as specified herein. The same trades people shall be responsible for any require alterations, such as extending ducts or electrical, as is required to properly reconnect of the units. The Contract Administrator shall be held responsible for any damage to mechanical units from the roofing operations. Contact building tenants prior to any disconnections.
- E3.12 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.
- E3.13 Inspect all roof decking prior to installation of roofing system and report all defects or unsuitable conditions of the roof to the Contract Administrator and correct deficiencies as directed.
- E3.14 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.
- E3.15 Use only equipment in good working order including all thermometers and gauges. Locate equipment as instructed by Contract Administrator. Maintain continuous supervision while kettles in operation.
- E3.16 All applicable safety regulations as indicated by Manitoba Health and Safety must be strictly followed at all times.

E4. DESCRIPTION OF WORK – ROOF AREA A2

- E4.1 The existing sheet metal flashing shall be removed and discarded from Site to an authorized grounds.
- E4.2 The existing roof assembly shall be removed to the deck and discarded from Site to an authorized nuisance grounds.
- E4.3 All existing curbs, perimeter blocking, sleepers and other lumber shall be discarded and replaced with new constructed from the specified lumber.

- E4.4 All loose vapor barrier shall be scraped from the deck and also discarded as above. The roof deck is to then be swept clean of all dirt and debris.

NOTE: ALL LOADS OF DEBRIS REMOVED FROM SITE SHALL BE PROPERLY TARPED

- E4.5 Temporarily disconnect and remove mechanical units as required to allow roofing operations to continue. Ensure all units are in working condition prior to removal. Should the unit be malfunctioning advise the Contract Administrator prior to removal. If this is not done the Contractor may be held responsible for the repair of the unit. Use only qualified mechanical trades people for these operations.
- E4.6 All plumbing vents shall be extended at this time. Existing cast hubs are to be removed (as required) and the appropriate length black ABS extensions securely clamped to the existing plumbing using Fernco couplers.
- E4.7 Install the ½" Dens-deck using 9 Deckfast fasteners and plates per 4' x 8' sheet. Install a continuous 8" wide strip of ½" pressure treated plywood where the parapets are to sit.
- E4.8 Torch adhere the new 2 ply vapour barrier to the Dens-deck. The bottom ply is to be the Elastophene Flam 2.2 and the top ply is to be the Elastophene SP (sanded side face up). All woodwork is to be completed after the both piles are installed. The new vapour barrier is to be folded 1" down the outside face of the exterior walls.
- E4.9 New parapets are to be constructed using 2 x 6 pressure treated studs and plates with ½" pressure treated plywood on both sides. The pony wall is to be fully insulated with batt insulation. The parapets shall be securely fastened in place with #12 Deck Fast screws 16" on center. The walls shall be fabricated with a level top plate. The new parapets are to be a minimum of 16" in height or to a height that ensures a minimum height of 6" above the top of the new roofing, whichever is greater.
- E4.10 All curb blocking is to be a minimum of 8" up above the top of the finished roofing.
- E4.11 Raise or lower the existing scuppers openings to ensure that proper drainage occurs with the finished roofing.
- E4.12 All pitch boxes shall be replaced with wood curbs wherever possible. These are to be constructed as detailed. All items entering the curbs shall do so through the sides. The curbs shall be designed so as to ensure any entry points are a minimum of 8" off the roof. The curbs shall be fully insulated and a plywood and metal cover installed.
- E4.13 Adhere the base layer of sloped insulation to the vapour barrier using the specified adhesive. The application of the adhesive must be done in strict accordance to the manufacturers guidelines so as to obtain a minimum uplift equal to 90 m.p.h. Slopes shall be as per the attached roof plan. The secondary back slope is to be adhered with a full coat of cool asphalt. Sloped foam layout shop drawings are to be approved by the Contract Administrator prior to any work starting.
- E4.14 Adhere the top layer of 1 ½" Colgrip insulation using the same adhesion guidelines as for the first layer.
- E4.15 Adhere the modified bitumen base sheet to the insulation. Ensure no wrinkles are present and that all side and end laps are properly sealed. Install screws and plates spaced 12" on centre around the perimeter edge of the roofs as well as 12" on centre around all curbs, sleepers, and other such projections. The membrane stripping is to cover all plates. Fasteners and fastening shall be as required by Soprema.

- E4.16 Install scupper hoppers. The scupper hoppers are to be cut through the top of the new parapets. The outside face of the hoppers are to have a 1" lip so as they can act as over flow scuppers if the down pipes ever become plugged.
- E4.17 Apply the modified bitumen base sheet stripping in strict accordance to manufacturers guidelines. All blocking is to first be coated with the appropriate primer. The stripping shall be terminated 1" down the outside face of the concrete wall panels. Corner gussets shall be installed on all inside and outside corners.
- E4.18 Set the base flanges of the Thaler Stackjacks in a bed of mastic. Seal in with a single ply of torch applied base sheet membrane. The ABS riser shall extend ½" above the top of the base and a bead of sealant is to then be applied to the top lip of the riser and the top cap installed.
- E4.19 Torch adhere the cap sheet to the base sheet once again ensuring no wrinkles are present and that a minimum of 1/8" asphalt flow is present along the edges of all laps. Excessive seepage is not acceptable.
- E4.20 Torch apply the cap sheet stripping in strict accordance to the manufacturers guidelines. The stripping shall be carried to the outside face of the concrete wall panels and 12" up the adjoining walls.
- E4.21 Install the new cap flashing and siding on all parapets in a similar manner as that already installed on area A1. Siding profile is to match that on area A1.
- E4.22 All vent curbs are to be filled with spray in place polyurethane foam insulation. The insulation is to be installed to the top of the curb so as to drain moisture out.
- E4.23 Reinstall all roof top units. Extend all duct work, gas lines, and electrical as required to allow proper installation.
- E4.24 Reconnect and insulate all ducts. Coat with an appropriate fibrated emulsion. Coat all surfaces with aluminum paint.
- E4.25 Install the new 4" x 4" closed face sheet metal down pipes from the scuppers and secure to the walls with a minimum of 2 straps with the straps being spaced no more than 48" on centre. Install sheet metal splash pans under the down pipes on area A2 and set on crushed limestone and sloped a minimum of 2" from the building wherever the pipes drain onto landscaped areas. Install structural steel bottom sections on the north side scuppers.