

MATERIALS

.01 DIMENSIONAL LUMBER

This shall be construction grade spruce of the dimensions as outlined under the Description of Work.

.02 PLYWOOD SHEATHING

This shall be 1/2" Standard Grade spruce plywood. Thickness is to be increased to 3/4" when installed over a concrete substrate.

.03 A2 & D2 DECK OVERLAY

This shall be 7/16" Super Panel cement board as manufactured by Bedrock and distributed by Patene.

.04 REMAINING ROOFS DECK OVERLAY

This shall be 1/2" DensDeck Prime as manufactured by Georgia Pacific or approved equal in accordance with B7.

.05 DECK OVERLAY FASTENERS

These are to be #12 Dekfast screws with Sentri XP coating and 2 7/8" Hexagonal Galvalume Steel Stress Plate for all Deck Types as manufactured by SFS Stadler or approved equal. Fasteners shall penetrate STEEL DECKING a minimum of 3/4" and wood a minimum of 1".

.06 VAPOUR BARRIER

Area A2 & D2 shall be 2 ply Siplast IREX 40

Remaining areas 1 ply Siplast IREX 40.

.07 ROOFING INSULATION

Expanded Polystyrene Type II with a minimum slope and thickness's as indicated on the roof plan. This shall be as manufactured by Plastifab Ltd., Co-Star Innovations or approved equal in accordance with B7.

Soprema Sopra-ISO polyisocyanurate insulation with fiberglass facer, IKO Isotherm, Siplast Paratherm or approved equal in accordance with B7. Thickness is as indicated on the roof plan.

NOTE: AVERAGE R-VALUE SHALL BE INCREASED AS REQUIRED TO MEET MANITOBA HYDRO R-30 POWERSMART REQUIREMENTS. THE CONTRACTOR IS TO BE RESPONSIBLE FOR OBTAINING AND FILLING IN ALL APPROPRIATE POWERSMART FORMS. POWERSMART APPROVAL MUST BE OBTAINED BEFORE START OF PROJECT.

.08 INSULATION ADHESIVE

This shall be Siplast Parafast Insulation Adhesive "C" or approved equal in accordance with B7.

.09 POURABLE SEALER

This is to be a two component pourable EPDM sealer. This is to be used to fill all pitch boxes or as otherwise specified.

.10 COVER BOARD

This shall be 1/4" IKO Protecto Board.

.11 MODIFIED BITUMEN MEMBRANE

This shall be the following:

Siplast Paradiene 20 EG TG base sheet with Siplast Parafor 50 TG cap sheet.

Stripping:

Siplast Paradiene 20 EG SA base sheet with Siplast Parafor 50 TG cap sheet.

.12 MODIFIED PRIMER

This is to be the primer recommended by the membrane manufacturer being used.

.13 **CAULKING**

This shall be Tremco Dymonic FC. Color is to be chosen by the Contract Administrator from the standard range of colors.

.14 **ALUMINUM PAINT**

This shall be Tremco Double Duty.

.15 **VENT STACKS**

These shall be Insulated Vandal Proof Stack Jack Flashings SJ-31 as manufactured by Thaler. Size is to match existing plumbing.

.16 **METAL FLASHING**

This shall be a minimum of 24 gauge in thickness. Metal is to be prefinished and is to be chosen from the standard in stock range of Stelco 8000 series of colors.

.17 **SIDING**

This shall be 22 gauge AD300 as manufactured by Vicwest, FWM Panel by All Metal Supply or approved equal. Color is to be selected from the standard Stelco 8000 color series. Color to be approved by the Contract Administrator prior to fabrication.

.18 **ACCESSORIES**

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.

.19 **SPLASH PADS**

Splash Pads shall be 51" natural # 45-41001 as manufactured by Barkman Concrete LTD.

.20 **GAS LINE SUPPORTS**

For a maximum gas line size of 2" use Clearline C-Port CXP series rubber gas line sleepers with a 3/4" rubber pad placed under. Pads shall extend a minimum of 2" out from under all sides of the sleeper.

For a greater than 2" gas lines use 12" x 12" Clearline C-Port CXW series rubber gas line sleepers c/w with appropriate Clearline accessories for height adjustments as required.

.21 **SPRAY FOAM INSULATION**

This shall be FROTH-PAK™ FS Portable Spray Foam as manufactured by DOW Chemical Corp.

END OF SECTION

ROOFING PROCEDURES

(BUILT UP ROOFING)

- .01 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.
- .02 Do not apply any roofing whatsoever during any inclement weather including when the temperature may fall lower than twenty degrees below Celsius or when the wind-chill is equal to or greater than 1700.
- .03 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.
- .04 Apply roofing over clean and dry surfaces and in accordance to C.R.C.A. and /or manufacturers guidelines and as amended herein.
- .05 All materials on the roof shall be stored in such a manner as to prevent blow-offs during high winds.
- .06 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.
- .07 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 3/4" plywood. Materials nor debris shall be stored or stock piled on adjoining roof areas that are not being replaced.
- .08 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.
- .09 Where Work must or will continue over the finished roofing membrane, the Contractor will protect it with plywood sheathing.
- .10 Removal of (opening up) existing roof membrane shall be done only after consultation and with agreement by the Contract Administrator. Remove only that portion that can be fully completed as specified within the same day work period.
- .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 Contractor shall be responsible for any required alterations, such as extending ducts or electrical, as is required to properly reconnect of the units. The Contractor shall be held responsible for any damage to mechanical units from the roofing operations. Contact Contract Administrator prior to any disconnection's.
- .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.
- .13 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.
- .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.
- .15 Use only equipment in good working order including all thermometers and gauges. Locate equipment as instructed by the Contract Administrator. Maintain continuous supervision while kettles in operation.
- .16 Propane bottles must be removed from the roof and site each night.
- .17 All applicable safety regulations as indicated by Manitoba Health and Safety must be strictly followed at all times.
- .18 Any damage to the existing lawn is to be repaired with new sod. Topsoil and seed will not be accepted.

END OF SECTION

DESCRIPTION OF WORK

Notes:

The Contract Administrator has been informed that there is a risk of fasteners hitting hidden conduit. The Contractor must take all necessary precautions to eliminate this risk.

The Contractor is responsible for obtaining asbestos testing documents from the Contract Administrator. The Contract Administrator is responsible for any asbestos testing.

The specified 2 part pourable sealer must be used. No single component sealers will be accepted. Any pitch boxes filled with non-specified sealer will have to be removed and replaced.

The Contractor is to view the work premises prior to the start of any roofing or set up with the Contract Administrator. The Contractor is to document any existing interior water damage. Any existing damage is to be photographed and the locations documented. This is to minimize any conflicts between the Contract Administrator and Roofer should any leaks occur during construction. A copy of the report is to be submitted to both the Consultant and the Contract Administrator.

The contractor shall be responsible for preparing forms for Hydro Power Smart rebates.

Contractors must be certified by Siplast before installing any specified Siplast products.

ALL AREAS

- .01 The existing sheet metal flashing are to be removed and discarded from site to an authorized grounds.
- .02 The existing roof assembly is to be removed to the deck and discarded from site to an authorized nuisance grounds.
- .03 The existing perimeter blocking is to remain in place.
- .04 Remove and discard all existing stucco on walls between roof elevations. Remove any underlying fiberboard that may be on walls. Report any rot to the Contract Administrator. Install new 1/2" plywood on the walls.
- .05 All necessary precautions must be taken to ensure no excessive dirt or debris enters the building interior and protect building contents from dust etc.
- .06 Temporarily disconnect any electrical, telecommunications equipment, gas lines, etc. to allow for the proper installation of the new roofing.
- .07 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 Consultant 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.
- .08 Remove all non-used items such as old curbs, electrical, chimneys, gas lines etc. Patch the roof deck in a structurally sound manner. Gas lines and electrical are to be capped just inside the building interior.
- .09 **ALL** loose vapor barrier is to 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

- .10 Install the decking cover sheeting using 9 Dekfast fasteners and plates per 4' x 8' sheet. Increase fasteners to 12 on the perimeter 4' of the lower roofs and 8' on the upper roofs.
- .11 Raise all parapet blocking with solid lumber blocking of the same width as the existing to obtain a minimum height of 4" above the top of the new roofing.
- .12 Install 1/2" plywood sheeting on the inside face of all parapets.
- .13 Install self-adhering base sheet membrane stripping up and over all parapets and on all curbs, dividers and elevation changes. This will also provide fire protection for the installation of the vapor barrier. Install torch applied corner gussets. Stripping is to

extend a minimum of 12" up adjoining walls above the elevation of the new roofing. MEMBRANE STRIPPING IS TO BE INSTALLED PRIOR TO THE VAPOR BARRIER TO ALLOW A TORCH SEAL TO THE STRIPPING.

- .14 Torch adhere the new vapor barrier. Take all appropriate precautions to prevent fire.
- .15 All plumbing vents are to 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.
- .16 Fabricate and install new wood curbs to replace all existing wood curbs. Curbs are to be fabricated from 1 1/2" lumber stacked on edge to obtain a minimum height of 8" above the top of the new roofing.
- .17 Adhere the base layer of sloped insulation / polyisocyanurate to the vapour barrier using the specified adhesive.
- .18 Adhere the layer of back slope insulation on area A2.
- .19 Adhere the layer of polyisocyanurate insulation using the specified adhesive.
- .20 Adhere the layer of recovery board using the specified adhesive.
- .21 Any gaps between insulation sheets wider than 1/8" are to be filled with fiberglass insulation.
- .22 The application of the adhesive must be done in strict accordance to the manufacturers guidelines with maximum spacing of adhesive ribbons not exceeding those listed below:
 - Outside 12' x 12' corners is not to exceed 4" on centre.
 - Perimeter 8' is not to exceed 6" on centre.
 - Remaining main field is not to exceed 12" on centre.
- .23 **Insulation sheets and recovery board sheets shall be placed immediately into the wet adhesive. If left open, the adhesive can skin over within several minutes. Once skinned over, adhesive will not wet into the insulation board, creating a weak bond. Do not allow the adhesive to skin over.**
- .24 Install 6" fire stop membrane along all parapet roof connections as well as around all curbed openings. The membrane is to extend 3" up the vertical and 3" onto the top of the recovery board. The fire stop membrane is to tie into the roof vapor barrier on the inside face of the parapets.
- .25 Torch adhere the modified bitumen base sheet to the recovery board wool insulation. Ensure no wrinkles are present and that all side and end laps are properly sealed.
- .26 Install an approximate 8" width of torch grade base sheet stripping and extend 4" onto the flat and 4" up the previously installed self-adhering membrane stripping.
- .27 Ring top nails are to be installed on all base sheet stripping in a 12" grid pattern with the first row being approximately 3" up off the roof.
- .28 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 1/2" 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.
- .29 The new scuppers are to set approximately 1" lower than the roof insulation to insure positive drainage. New scuppers are to be sized for a down pipe drop that will fit properly into the structural steel bottom sections. All new scupper locations must be such that they are clear of windows or other obstructions. Straight down pipes must be used. Back slope must be adjusted as required. Review on site with the Contract Administrator as required before installation.
- .30 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.
- .31 All base sheet and cap sheet rolls are to be relaxed a minimum of 4 hours prior to installation. This will help to greatly reduce any buckling in the membrane.
- .32 Torch apply the cap sheet stripping in strict accordance to the manufacturers guidelines. The stripping shall be carried to the outside face of the parapets and 12" up adjoining walls.
- .33 Install the new cap flashing on all parapets in a manner as the enclosed details. Install the new siding on all walls between roof elevations. Install complete with Tyvek underlayment. The new vertical siding is to incorporate all appropriate corner and drip flashing. Fasten to meet all local wind loads.

- .34 Reinstall all roof top units. Extend all duct work, gas lines, and electrical as required to allow proper installation.
- .35 Install new structural steel down pipe bottom sections.
- .36 Install new closed face down pipe drops. Securely fasten to the walls with matching color straps and fit into lower structural steel sections. All joints and connections of sheet metal down pipes are to be connected using waterproof pop rivets.
- .37 Install all new 22 gauge galvanized skirt flashing and storm collars on all chimneys. The skirt flashing flange is to fold a minimum of 1" down the outside face of the curbs. The connection between the skirt and base flanges are to be lock seamed. Extend chimneys as required to accommodate the height of the new roofing.
- .38 Any curbs with interior ducting are to be filled with spray foam insulation to obtain an air tight seal.
- .39 **All caulking must be properly tooled to a neat finish.**
- .40 A new access ladder is to be installed between areas A1 and B2. The exact location for the ladder shall be decided upon on site by the Contract Administrator. Engineer approved shop drawings are to be submitted for approval prior to fabrication and installation. The ladders are to be permanently wall mounted in a structurally sound manner. Ladders are to be fabricated in a similar manner as detailed. Ladders are to be hot dipped galvanized.
- .41 Install 4 – 2'x2' sidewalk pavers on ¾" rubber matting in front of all ladder landings.
- .42 Set new splash pads in place under all down pipes.

END OF SECTION