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 **COVER BOARD**

This shall be Soprema Sopraboard, IKO Protecto Board or approved equal in accordance with B7. Thickness is to be 1/4" and maximum sheet size is to be 4'x4'

.04 **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.

.05 **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.

.06 **MODIFIED BITUMEN MEMBRANE**

This shall be the following:

B3 & C3 Membrane:

Siplast Paradiene 20 EG TG base sheet with Siplast Parafor 30 TG cap sheet.

A3 Membrane:

Siplast Paradiene 20 EG SA base sheet with Siplast Parafor 30 TG cap sheet.

Stripping:

Siplast Paradiene 20 EG SA base sheet with Siplast Parafor 30 TG cap sheet.

.07 **MODIFIED PRIMER**

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

.08 **CAULKING**

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

.09 **ALUMINUM PAINT**

This shall be Tremco Double Duty.

.10 **VENT STACK FLASHINGS**

These shall be Insulated Stack Jack Flashing (with EPDM seals) SJ-38A, 13" (330 mm) high as manufactured by Thaler.

.11 **METAL FLASHING**

The base and cap flashing shall be a minimum of 24 gauge in thickness. Metal is to be prefinished and is to be chosen from the range of Stelco 8000 series that most closely matches the existing being replaced.

.12 **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.

.13 **SPLASH PADS**

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

.14 **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.

.15 **SPRAY FOAM INSULATION**

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

.16 **LIQUID MEMBRANE**

This shall be PARAPRO 123 FLASHING Resin as manufactured by Siplast or Soprema Alsans.

.17 **SIDING**

This shall be 24 gauge CL6025R as manufactured by Vicwest or approved equal in accordance with B7. Metal is to be prefinished and is to be chosen by the Contract Administrator from the standard in stock range of Stelco 8000 series of colors.

.18 **SYNTHETIC BUILDING WRAP**

This shall be Tyvek by DuPont.

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 All appropriate precautions must be taken to eliminate damage to any structures on site, landscaping including trees, shrubs and other plants. All site conditions must be carefully documented prior to the start of the project. Any damage to existing landscaping must be repaired/replaced and left in a condition matching or better prior to the start of the project.

END OF SECTION

DESCRIPTION OF WORK

Notes:

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. 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.

Polyisocyanurate insulation must be double wrapped with heavy duty tarps to protect from moisture at all times. Any not properly covered will be rejected and have to be removed from the site.

Sheet metal flashing mock-ups will be required for approval by the Contract Administrator prior to installation.

All roof repairs are to comply with the Standards and Guidelines for the Conservation of Historic Places in Canada – particularly Section 4.3.3 Roofs

ROOF AREA A3, B3 & C3

.01 The existing sheet metal flashing counter and cap flashing are to be removed and discarded from site to an authorized nuisance grounds.

.02 The existing roof assembly on area A3 is to be removed to the deck and discarded from site to an authorized nuisance grounds.

.03 The existing gravel cover is to be removed on areas B3 and C3 and discarded from site to an authorized nuisance grounds.

.04 Remove the existing cant strip and stripping on area B3. Spray foam any existing voids around the perimeter edge. Install strip of matching thickness cover board or plywood to bring the cant strip area up flush with top of existing roof membrane.

.05 Remove and discard the stucco on the inside face of the parapet adjoining area B3. Cut in a neat vertical line at the outside corner.

.06 All necessary precautions must be taken to ensure no excessive dirt or debris enters the building interior and protect building contents from dust etc.

.07 Temporarily disconnect any electrical, telecommunications equipment, gas lines, etc. to allow for the proper installation of the new roofing.

.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 1/2" plywood sheeting on the inside face of all parapets and up the base of adjoining walls. Plywood sheeting on the base of walls is to extend a minimum of 12" up above the top of the new roofing. Remove or alter siding on walls to accommodate the new sheeting and membrane. (all sheeting is to be installed prior to the vapor barrier stripping). If fiberboard or drywall is present on the walls or the inside face of parapets it is to be removed to allow for the installation of the plywood sheeting.

.11 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.

.12 Install the 7/16” OSB sheeting over the existing decking on area A3. Securely fasten with 2” sheeting nails. Secure using 5 rows of nails with 9 nails per row.

.13 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.

.14 Fabricate and install new 15” x 15” wood attic vent curbs in the locations indicated on area A3 on the roof plan. 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.

.15 The height of the existing scuppers is to be adjusted as required to accommodate the new roofing. The new scuppers are to be set about 1” below the top of the new roofing on area B3. Scuppers from A3 to B3 are to be enlarged to a minimum of 12” x 12”. Scuppers draining off area B3 are to be enlarged to approximately 12” wide x 8” high.

.16 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. MEMBRANE STRIPPING IS TO BE INSTALLED PRIOR TO THE VAPOR BARRIER TO ALLOW A TORCH SEAL TO THE STRIPPING.

.17 Base sheet membrane is to be carried up and over the wall between areas A3 and B3.

.18 Apply a full coat of primer to the OSB sheeting on area A3 and install the self-adhering base sheet.

.19 Torch adhere the base sheet membrane on areas B3 and C3. Take all appropriate precautions to prevent fire.

.20 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.

.21 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.

.22 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.

.23 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.

.24 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.

.25 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.

.26 Cap sheet stripping is to be carried up and over the wall between area A3 and B3.

.27 Install all new pitch boxes to replace existing. Fill with the specified pourable sealer.

.28 Install new 6” x 6” closed face down pipes. Securely fasten to the walls with matching color straps. All joints and connections of sheet metal down pipes are to be connected using waterproof pop rivets.

.29 Install all new cap flashing to replace existing. Color is to be chosen by the Contract Administrator. Cap flashing is to be installed on top of wall between areas A3 and B3.

.30 All existing vent hoods are to be replaced with new galvanized sheet metal hoods. The hoods are to face directly downwards with the opening being no less than24” up off the roof. The hoods are to be fully insulated on the inside and incorporate appropriate bird screens. The hoods are to also incorporate an interior perimeter support angle to sit on the curb. The angles are to be fabricated from a minimum 24 gauge galvanized sheet metal and are to be set approximately 2” up from the bottom of the hood. Secure the angles to the hoods with pop rivets. Hoods are to be insulated on the interior with a minimum 1 1/2” thick insulation. Secure insulation in place with stick pins. Any existing ducts that are directly attached to hoods are to be altered to a separate curb and separate hood. New curbs shall be fabricated as required to accommodate any new hoods. Hoods are to be fabricated from minimum 24 gauge galvanized sheet metal.

.31 The existing hoods on the inside of the northeast parapet of area A3 are to also be replaced. Fabricate new to match existing. Fabricate from pre-finished sheet metal of a similar color as the existing painted hoods.

.32 **All caulking must be properly tooled to a neat finish.**

.33 Install 4 – 2'x2' sidewalk pavers on ¾" rubber matting in front of the penthouse door.

.34 Install synthetic building wrap and metal siding on the inside of the high north parapet of area B3.

CORNICES

.01 All old flashing is to be extensively photographed prior to removal for reference purposes.

.02 Sections of existing metal from all locations is to be saved for reference purposes for fabrication of new.

.03 The existing metal flashing on the top of all cornices is to be removed and discarded.

.04 The existing metal flashing is to be removed and discarded from the top of the hip cornice and upper cornice over the front entrance. (see photo C-1)

.05 The existing hall covering between the top of the cornices and the top of the roof parapets is to be removed and discarded.

.06 The bottom row of existing wall covering adjoining the cornice above the main front entrance will also have to be removed, cleaned and later reinstalled.

.07 Install 2 plies of self-adhering Blueskin SA membrane over the underlying lumber substrate and fold down the outside edge. Carry the membrane up the adjoining wall and onto the top of the parapets. Coat all lumber surfaces with the manufacturers recommended primer.

.08 Install a new prefinished cap flashing on the top of the cornices and fold a minimum of 3" up wall. Closely match the profile of the existing flashing.

.09 Fabricate and install new wall panels and all other related flashing. All shall be fabricated to match the profile of the existing being removed.

.10 Mockups of all different sections of metal being installed are to be fabricated and installed on site for review and approval.

TOWER LOWER WALL FLAT PANEL REPLACEMENT

.01 Remove and discard the old cream colored flat metal panels from the lower approximate 10' of the penthouse. This is to include all four sides, (arrow in photo T-1 shows top elevation of the siding).

.02 Install 7/16" OSB sheeting over the existing walls. Each sheet is to be secured in place with a minimum of 4 rows of 2" nails spaced no more than 6" on centre running the length of the sheets. Sheets are to be installed horizontally.

.03 Cover with synthetic building wrap such as Tyvek.

.04 Fabricate and install new flat wall panels to replace existing. Each panels are to be s-locked on 2 sides and secured with minimum #10 pancake head screws spaced no more than 6" on centre. Incorporate small corner flashings to eliminate wind lift at the outer corners. Corner flashings are to incorporate hidden fasteners as well.

END OF SECTION